

# ASSAYS CONFIRM LARGE CU-AG-MO SYSTEM AT TITOV

Sunshine Gold Limited (ASX:SHN, "Sunshine Gold", "the Company") is pleased to announce the assay results of RC drilling and an update on the deep diamond drill hole at Titov Cu-Ag-Mo prospect ("Titov"), Ravenswood West.

#### **HIGHLIGHTS**

 Assays have now been returned for the remaining 6 RC holes drilled at Titov. Assays confirm a large Cu-Au-Ag-Mo system with zones of high-grade copper and molybdenum present. Best results include:

21TVRC006	<b>10m @ 1.32 % Cu, 2.11 g/t Ag</b> , from 115m
Including	2m @ 5.93 % Cu, 0.13 g/t Au, 6.87 g/t Ag, from 123m
21TVRC007	158m @ 0.37 % Cu, 0.07 % Mo, 2.25 g/t Ag, from surface
Including	<b>18m @ 0.50 % Cu, 0.12 % Mo, 2.89 g/t Ag</b> , from 38m
And	17m @ 0.65 % Cu, 0.15 % Mo, 4.00 g/t Ag, from 128m
21TVRC008	112m @ 0.44 % Cu, 0.08 % Mo, 2.48 g/t Ag, from surface
Including	<b>15m @ 0.62 % Cu, 0.02 % Mo, 2.38 g/t Ag</b> , from surface
And	17m @ 0.58 % Cu, 0.21 % Mo, 3.34 g/t Ag, from 50m
21TVRC004	<b>66m @ 0.38 % Cu, 0.42 % Mo, 2.22 g/t Ag</b> , from 26m
Including	6m @ 0.42 % Cu, 3.02 % Mo, 3.94 g/t Ag, from 70m
	Including 21TVRC007 Including And 21TVRC008 Including And 21TVRC004

- Previously announced results included:
  - o 21TVRC001 **121m @ 0.35 % Cu, 0.11 % Mo, 1.99 g/t Ag**, from 1m
- Commencement of first diamond drilling at Titov target in over 50 years. One 500m diamond hole is expected to
  intersect the target zone at approximately 350m depth. The diamond hole (21TVDD001) is currently at 270m and
  has intersected zones of pervasive potassic alteration containing disseminated chalcopyrite and quartz veins
  containing both chalcopyrite and molybdenite.



Figure 1. Chalcopyrite in altered and brecciated granite 21TVDD001 (89.5m).

#### SUNSHINE GOLD LIMITED (ASX:SHN)

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

Postal Address:
PO Box 572
Floreat WA 6014
Queensland Office:
3/50 Tully Street
South Townsville QLD 4810

# Contact:

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: 88,000,000 (24m Esc) Deferred shares: 100,000,000 (24m Esc) Unlisted options:71,000,000 (24m Esc) Unlisted plan options: 2,000,000 Perf Rights: 17,000,000 (24m Esc)



Sunshine Gold's Managing Director, Damien Keys commented: "The RC drilling has provided valuable geological and geochemical information at Titov. We are especially enthused by the zones of high-grade copper (to 5.93%) and molybdenum (to 3.02%) within the broader mineralised envelope. In particular, copper appears to be increasing in grade to the east of the drilled area and at depth (21TVRC006).

The diamond hole is testing changes in metal zonation, extensions to high-grade zones and an IP chargeability conductor at depth. The core is already looking encouraging with zones of pervasive potassic alteration with disseminated chalcopyrite and quartz veins containing both chalcopyrite and molybdenite. We are still 80m from the anticipated target zone and looking forward to seeing the next 230m of core."

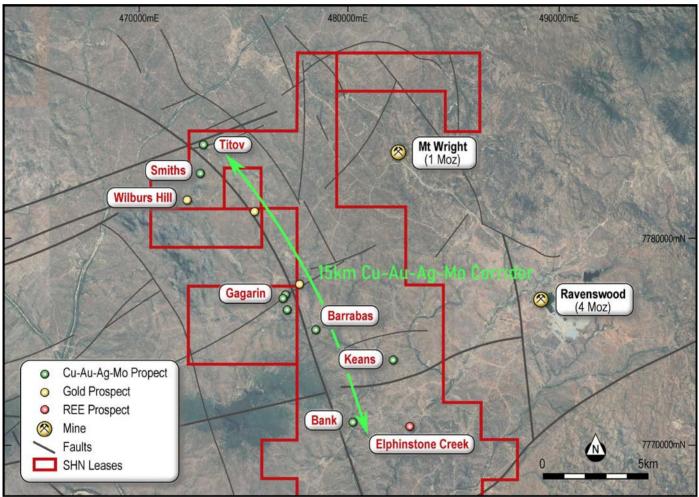


Figure 2. Map of the >15km long Cu-Au-Ag-Mo corridor at Ravenswood West.

# TITOV RC DRILL PROGRAM (Sunshine Gold 100%)

Titov is a swarm of Mo-bearing quartz veins hosted within a malachite (Cu carbonate) stained granodiorite. The prospect is located on a hill and is a devoid of trees, owing to the elevated Cu in soils. A shaft and series of shallow workings are spread across the 300m x 120m surface anomaly.

Sunshine Gold completed RC drilling (8 holes, 1550m) at Titov in September 2021. The program's objectives were to:

- Confirm large thickness intervals of Cu and Mo;
- Define zones of high-grade mineralisation within the broader mineralised envelope;
- Assess potential for Au-Ag mineralisation within the Cu-Mo; and
- Test the nature of the emerging IP chargeability anomaly at depth with downhole geophysics on the deepest drilling.



The RC drilling program provided geological and geochemical information over 200m of strike extent. The drilling program intersected broad zones of copper, molybdenum and silver mineralisation in all drill holes (see Table 1). The thickest intersections (estimated 100m true thickness) coincide with the some of the highest copper grades in the easternmost holes drilled by Sunshine Gold; 21TVRC007 and 21TVRC008 (Figure 4). However the highest grade copper interval, 10m @ 1.32% Cu, 0.02% Mo and 2.11g/t Ag, was intersected in the deepest RC hole of the program. Diamond drill hole, 21TVDD001, is interpreted to intersect the Titov lode 230m down dip of this intersection.

The highest molybdenum grade interval intersected was 6m @ 3.02% Mo, 0.42% Cu and 3.94g/t Ag (21TVRC004, 70m).

A detailed review of the multi-element geochemistry is planned following the completion of the deep diamond drill hole. This information will be important in determining mineral zonation and vectoring toward higher grade Cu-Mo and/or Au bearing mineralisation. The diamond hole will add further information regarding the metal zonation at depth. To date, broad relationships observed include;

- More elevated Mo in the western end of the Titov lode grading to moderate Mo grades in the east.
- Most elevated Cu grades and thickness of intercept in the eastern end of the tested Titov lode system, grading to moderate grades and thinner widths in the west.
- Increasing Cu grades at depth

A >10ppb gold in soil anomaly is present to the east of the station track at Titov (Figure 3). The elevated Cu grades and increased thickness of lode on the east of the RC program, coupled with the soil gold anomalism present an obvious follow up drilling opportunity for testing in 2022.

Hole ID	From	То	Width	Cu_%	Mo_%	Ag_ppm
21TVRC001	1	122	121	0.35%	0.11%	1.99
21TVRC002	0	91	91	0.25%	0.06%	1.37
21TVRC003	87	173	86	0.27%	0.02%	1.28
21TVRC004	26	92	66	0.38%	0.42%	2.22
including	70	76	6	0.42%	3.02%	3.94
21TVRC005	38	84	46	0.23%	0.08%	1.34
21TVRC005	166	187	21	0.31%	0.02%	1.50
21TVRC006	115	125	10	1.32%	0.02%	2.11
including	123	125	2	5.93%	0.13%	6.87
21TVRC007	0	158	158	0.37%	0.07%	2.25
including	38	56	18	0.50%	0.12%	2.89
including	128	145	17	0.65%	0.15%	4.00
21TVRC008	0	112	112	0.44%	0.08%	2.48
including	0	15	15	0.62%	0.02%	2.38
including	50	67	17	0.58%	0.21%	3.34

Table 1. Significant intersections from Sunshine Gold RC drilling at Titov Cu-Ag-Mo, Ravenswood West. (LME Copper Price : US\$9,500/t, Molybdenum Price : US\$44,750)



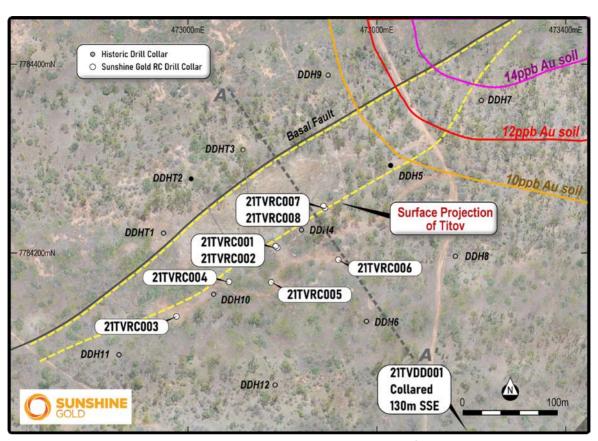


Figure 3. Collar positions and interpreted lode at surface, Titov.

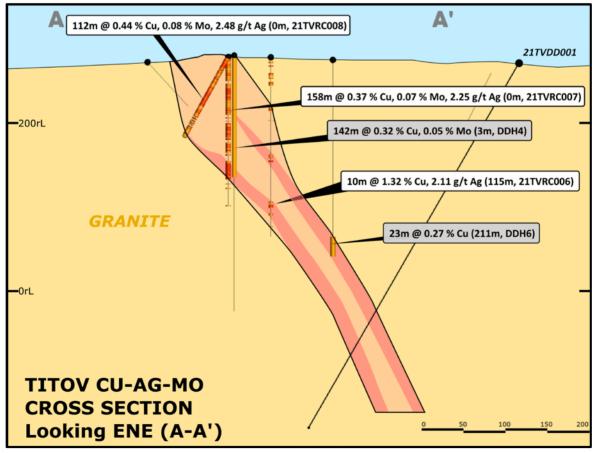


Figure 4. Cross Section displaying eastern RC holes and current diamond hole, Titov.



# **TITOV DIAMOND DRILL HOLE (Sunshine Gold 100%)**

Diamond drilling commenced at Titov on 1 December 2021. The rig has completed 270m (4 December 2021) of a planned 500m. The drill hole is planned to test:

- Test the down dip extension to the Titov Cu-Ag-Mo system;
- Determine vein orientations, confirm broad envelope orientation and refine the geological model;
- Assess metal (-geochemical) zonation at depth, that may assist future vectoring toward higher-grade mineralisation; and
- Determine the nature of a deep Pole-Dipole IP Chargeability anomaly.

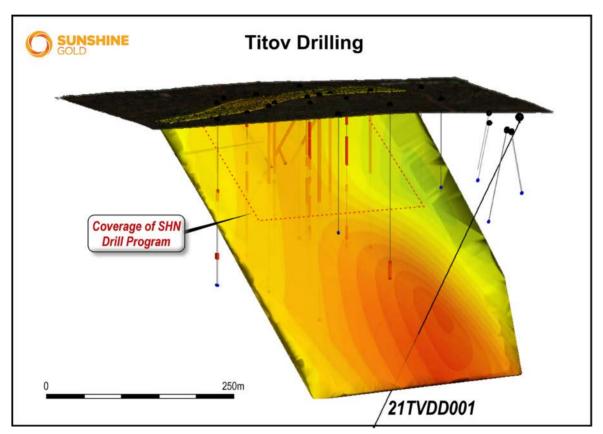


Figure 5. Oblique view of the Titov interpreted lode (looking NNW) displaying deep diamond hole and IP Chargeability draped over wireframe.

Encouragingly the drilling has already intersected a series of chalcopyrite (copper) and molybdenite (molybdenum) bearing quartz veins. The mineralised veins commonly have a potassic selvedge and vary in width from 1cm to 20cm thick. Both vein thickness and degree of potassic alteration appears to be increasing with drilling depth (Figure 6). The projected Titov lode position is interpreted to be intersected in 80m (330m downhole depth).





Figure 6. Chalcopyrite and molybdenite bearing quartz vein with discrete alteration halo (48.6m)



Figure 7. Disseminated chalcopyrite in pervasive potassic altered granite around molybdenite filled fracture (149.4m)

#### **NEXT STEPS**

Sunshine Gold will now await completion of the deep diamond hole. The hole will be geologically logged (to determine alteration – metal associations) and structurally logged (measuring vein and fault orientations). Further interpretation will require assay information, likely to be received in February 2022.

A complete review of all Titov geological data, including structural data and geochemical assays, will be completed before 2022 drill plans are finalised.

### **PLANNED ACTIVITIES**

• December 2021:

• December 2021: Complete deep diamond drilling at Titov Cu-Au-Ag- Mo.

• December 2021: RC JORC Resource drilling at Triumph Gold Project.

• January 2022: 31 December 2021 Quarterly Report.

• January -February 2021: Results from RC JORC Resource drilling at Triumph Gold Project.

Results from RC drilling at Keans Cu-Au-Ag- Mo.

10-11 February 2022: Presentation at the Australian Gold Conference, Sydney.
 15-17 February 2022: Presentation at the RIU Explorers Conference, Fremantle.
 15 March 2022: Financial Statements for half year ended 31 December 2021.

• March 2022: Triumph maiden JORC Resource estimate.



#### **ENDS**

For further information:

Dr Damien Keys Managing Director

Telephone: +61 428 717 466

E-mail: <u>dkeys@shngold.com.au</u>

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 Molybdenum**

Mo is a silvery metal with the sixth-highest melting point of any element, can withstand extremely high temperatures without softening and has powerful anti-corrosive properties — meaning it can be used to make important alloys. In steel, for example, moly can increase strength, hardness, resistance to corrosion, and electrical conductivity. Molysteel alloys have important uses in the industrial and construction sectors, as well as a wide range of applications in products such as engines, air conditioners, and drill heads. The strength of the metal also makes it crucial in military equipment and defence products.

Mo is typically found in quantities of 0.01%-0.25% in porphyry or skarn deposits and is often associated with larger copper and tungsten occurrences. China is the world's biggest consumer of molybdenum. The current Mo price is US\$44.75kg. The current molybdenum price exceeds the current copper price of \$9500t by ~5 times.

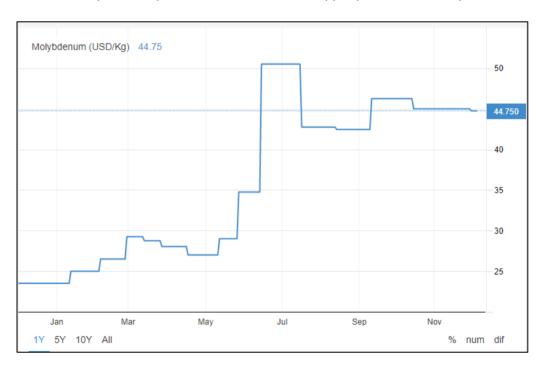


Figure 8: 5-year Mo price chart (source Trading Economics)

#### FIVE THINGS TO MOLYBDENUM KNOW ABOUT MOLYBDENUM Extremely strong Primarily used as an Mostly mined Used in almost Important material as a by-product of and resistant to alloy to strengthen every form of energy for many key defence creation, including corrosion other metals copper and tungsten products, including emerging green weapon nozzles, technologies warheads, and airplanes

Figure 9: Mo Infographic (source: The Market Herald, Holy moly: Molybdenum demand on the rise - The Market Herald)



Table 2. Significant Intersections

Cutoff	Hole ID	From	То	Width	Ag_ppm	Cu_%	Mo_ppm
0.1 Cu	21TVRC003	0	1	1	0.52	0.11%	31
0.1 Cu	21TVRC003	4	17	13	0.83	0.14%	50
0.1 Cu	21TVRC003	26	27	1	0.38	0.12%	223
0.1 Cu	21TVRC003	35	36	1	2.16	0.26%	772
0.1 Cu	21TVRC003	57	71	14	0.78	0.20%	66
0.1 Cu	21TVRC003	83	84	1	0.72	0.17%	28
0.1 Cu	21TVRC003	87	173	86	1.28	0.27%	164
0.1 Cu	21TVRC003	178	186	8	0.58	0.12%	8
0.1 Cu	21TVRC003	191	193	2	1.32	0.27%	42
0.1 Cu	21TVRC003	196	198	2	2.59	0.36%	109
0.1 Cu	21TVRC003	201	202	1	0.51	0.14%	3
0.1 Cu	21TVRC003	204	205	1	1.59	0.22%	10
0.1 Cu	21TVRC004	0	17	 17	0.61	0.15%	63
0.1 Cu	21TVRC004	21	23	2	0.65	0.17%	123
0.1 Cu	21TVRC004	26	92	66	2.22	0.38%	4,173
1000 Mo	including	26	28	2	2.68	0.55%	1,715
1000 Mo	and	37	40	3	3.06	0.36%	2,007
1000 Mo	and	44	47	3	1.41	0.26%	3,369
1000 Mo	and	53	80	27	3.01	0.44%	8,534
5000 Mo	including	70	76	6	3.94	0.42%	30,222
1000 Mo	and	86	92	6	2.05	0.50%	2,542
0.1 Cu	21TVRC004	104	150	46	0.81	0.18%	407
0.1 Cu	21TVRC004	155	160	5	1.04	0.18%	122
0.1 Cu	21TVRC004	164	167	3	2.47	0.46%	12
0.1 Cu	21TVRC004	170	171	1	0.95	0.15%	19
0.1 Cu	21TVRC005	1	17	16	0.77	0.18%	228
0.1 Cu	21TVRC005	21	22	10	0.89	0.18%	228
0.1 Cu	21TVRC005	25	36	11	0.50	0.14%	269
0.1 Cu	21TVRC005	38	84	46	1.34	0.23%	838
500 Mo	inc	57	71	14	2.79	0.43%	2307
0.1 Cu	21TVRC005	100	103	3	0.40	0.15%	344
0.1 Cu	21TVRC005	135	146	11	1.10	0.23%	329
0.1 Cu	21TVRC005	166	187	21	1.50	0.31%	161
0.1 Cu	21TVRC005	199	200	1	0.65	0.31%	29
0.1 Cu	21TVRC005	205	207	2	1.05	0.11%	3
0.1 Cu	21TVRC005	211	219	8	0.61	0.13%	5
0.1 Cu	21TVRC005	222	224	2	0.72	0.11%	4
0.1 Cu	21TVRC005	241	242	1	0.33	0.13%	5
0.1 Cu	21TVRC005 21TVRC005	241	242	2	0.67	0.12%	4
0.1 Cu	21TVRC003	3			0.86	0.14%	72
0.1 Cu <b>0.1 Cu</b>	21TVRC006 21TVRC006	1 <b>5</b>	13 <b>35</b>	10 <b>20</b>	1.24	0.21%	353
0.1 Cu 0.1 Cu			<b>35</b>	1	0.69		120
0.1 Cu 0.1 Cu	21TVRC006	38 42	43	1	0.89	0.16% 0.10%	16
	21TVRC006	44	43 45		+	+	
0.1 Cu	21TVRC006			1	1.33	0.11%	229 EE0
0.1 Cu	21TVRC006	<b>51</b>	<b>66</b>	<b>15</b>	1.23	0.20%	<b>550</b>
0.1 Cu	21TVRC006	70	80	10	0.97	0.14%	220
0.1 Cu	21TVRC006	83	91	8	0.66	0.11%	87 156
0.1 Cu	21TVRC006	115	125	10	2.11	1.32%	156
0.5 Cu	inc	123	125	2	6.87	5.93%	48
1.0 Cu	inc	123	124	1	12.64	11.04%	16
0.1 Cu	21TVRC006	163	164	1	0.28	0.11%	10



Cutoff	Hole ID	From	То	Width	Ag_ppm	Cu_%	Mo_ppm
0.1 Cu	21TVRC006	172	206	34	1.03	0.18%	242
0.1 Cu	21TVRC006	209	211	2	0.38	0.13%	6
0.1 Cu	21TVRC007	0	158	158	2.25	0.37%	733
500 Mo	inc	12	13	1	4.12	0.42%	1157
500 Mo	and	19	28	9	2.3	0.43%	910
500 Mo	and	38	56	18	2.89	0.50%	1191
500 Mo	and	83	90	7	4.1	0.58%	2111
500 Mo	and	<i>97</i>	98	1	6.79	0.97%	6517
500 Mo	and	122	146	24	3.29	0.54%	1491
0.5 Cu	inc	128	145	17	4	0.65%	1727
0.1 Cu	21TVRC007	174	178	4	0.64	0.14%	11
0.1 Cu	21TVRC008	0	112	112	2.48	0.44%	827
0.5 Cu	inc	0	15	15	2.38	0.62%	246
0.5 Cu	and	50	67	17	3.34	0.58%	2146
0.5 Cu	and	73	77	4	6.79	1.02%	2186
0.5 Cu	and	98	99	1	2.76	0.52%	110
0.5 Cu	and	105	107	2	6.87	1.05%	2397

Table 3. Drill Hole Collar Information at Titov (Projection: GDA94, Zone 55)

Hole_ID	NAT_East	NAT_North	NAT_RL	Dip	<b>Azimuth Grid</b>	Max_Depth
21TVRC001	473097	7784205	283.8	-60	310	178
21TVRC002	473097	7784205	283.8	-90	0	202
21TVRC003	472987	7784131	276.1	-90	0	214
21TVRC004	473041	7784176	278.2	-90	0	202
21TVRC005	473087	7784164	277.1	-90	0	250
21TVRC006	473148	7784191	278.9	-90	0	214
21TVRC007	473144	7784249	282.5	-90	0	178
21TVRC008	473144	7784249	282.5	-60	310	112
21TVDD001	473311	7783945	270.2	-60	327	In progress



#### **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 (392 km2) of highly prospective gold-copper ground within 5 kms of the Ravenswood Mining Centre (4 Moz Au produced, a further 4.3 Moz Au in Resource and 1.8 Moz in Ore Reserves). 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 ~\$200m 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 (9.8 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. 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.

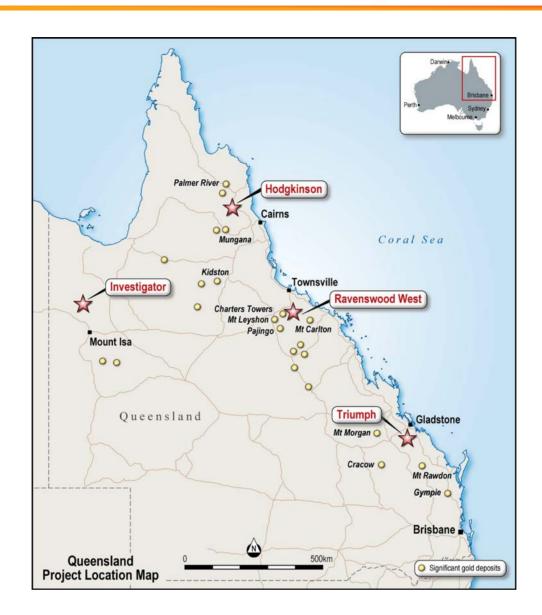
# Hodgkinson Gold Copper Project (EPM18171, EPM19809, EPM25139, EPM27539, EPM27574, EPM27575: 100%)

Hodgkinson is located 100km north east 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.







# **JORC Code, 2012 Edition TABLE 1**

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurementtools or systems used.</li> <li>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.</li> </ul>	Reverse circulation (RC) drilling was used to obtain samples for geological logging and assaying.  All holes were assayed in their entirety as individual 1m samples.  Individual samples were collected from the cyclone using an 87.5/12.5 rig-mounted splitter.  Once received by the laboratory, sample preparation consisted of the drying of the sample, the entire sample being crushed to 70% passing 6mm and pulverised to 85% passing 75 microns in a ring and puck pulveriser.  RC samples were assayed for gold by 50g fire assay with OES finish and multielement analysis was completed using an 4AE ICP-MS 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.).	Sunshine Gold RC Drilling:  All holes were collared using an 8" bit to 10m, and then drilled using Reverse Circulation utilising a 5.5" face sampling Rehammer.  Sunshine Gold Diamond Drilling:  The hole was collared at PQ size to 14m. Beyond 14m drilling has been HQ sized.



	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	Sunshine Gold Drilling:  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.  Wet samples are also recorded in the geological/sampling log. Any significant wet zones (>6m) were to be flagged; however no such zones were identified in the drilling.  No relationship has been observed between sample recovery and grade.
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>	Sunshine Gold Drilling:  All drill holes are geologically logged in full.  Geology logs include lithology, alteration, mineralisation, veining and weathering types, styles and intensities.  All RC chip trays are photographed.
Sub- sampling techniques, 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> <li>Measures taken to ensure that the sampling is representative of the insitu 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>	Sunshine Gold Drilling:  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.  Sample sizes and preparation techniques are considered appropriate. The sample sizes are considered appropriate for the nature of mineralisation within the project area.



Criteria	JORC Code explanation	Commentary
Quality of 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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	Sunshine Gold Drilling:  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  No geophysical tools, spectrometers or handheld XRF instruments have been used to determine assay results for any elements.  Monitoring of results of blanks and standards is conducted regularly. QAQC data is reviewed for bias prior to inclusion in any subsequent Mineral Resource estimate.  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
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative companypersonnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	Sunshine Gold Drilling:  Significant intersections are routinely monitored through review of drill chip and by site visits by the Exploration Manager.  Data is verified and checked in Leapfrog software.  No drill holes were twinned.  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.  No adjustments have been applied to assay data and is loaded directly from the laboratory deliverable.



Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	Sunshine Gold Drilling:  Drill hole collar locations are initially set out (and reported) using a hand-held GPS with a location error of +/- 3m. All completed holes are capped and marked and will be accurately surveyed via DGPS at a later date. The drill rig was aligned at the collar location by the site Geologist using a sighting compass.  Down hole surveys were completed using a Reflex digital survey system routinely at intervals of 15m hole depth, 30m hole depth, and every 30m thereafter to end of hole. Measurements were taken as a pull back from the RC hammer at the midpoint of a non-magnetic stainless-steel rod. All drilling is conducted on MGA94 Zone 55 grid system.  A topographic survey of the project area has partially been conducted using an in-house drone survey. Collar elevations have not been adjusted to this surface and use the elevation as
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>	Sunshine Gold Drilling:  The drilling has been conducted to determine exploration potential at the prospect and is of insufficient density to establish geological and grade continuity appropriate for a Mineral Resource. No subsequent sample compositing has been applied on the raw assay results for the reported intervals.
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 deposittype.</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>	Sunshine Gold Drilling:  Drilling is targeting mapped veining in two orientations. Drilling is designed to intersect interpreted veins as orthogonally (perpendicular) as possible. Future drilling is likely to include diamond core to further assess structural relationships.



Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	Sunshine Gold Drilling:  Samples were collected daily in pre-numbered Calico sample bags by the on-site Field Technician and subsequently stored in sealed plastic bags. These were then transported to laboratory upon the completion of 2 – 5 drill holes via field staff.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sunshine Gold Drilling:  The sampling techniques are regularly reviewed during the program and further review will take place prior to future drilling.

Section 2 – Reporting of Exploration Results (Criteria in this section apply to all succeeding sections.)

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>	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.  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).  All of EPM 26303 and part of EPM 26041 are situated within the Burdekin Falls Dam catchment area.



Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	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.
Geology	Deposit type, geological setting and style of mineralisation.	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.
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:  O easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar  O dip and azimuth of thehole  O down hole length and intercept depth  hole length.	Refer Table 2  Note, collar coordinates are reported in GDA94, Zone 55.  Grid azimuth is 7 degrees positive from magnetic azimuth



Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Historical drilling results are reported as previously reported in open file data.  As SHN samples are metre intervals only, no weighting calculations have been made. Cut-off grades for reported significant intercepts are labelled in Table 1. Intervals can include a maximum of 3m consecutive dilution providing grade is carried.  No metal equivalents are used in the reporting of intersections.
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 (e.g. 'down hole length, true width not known').</li> </ul>	The geometry of the mineralisation is subject to ongoing interpretation and as such intervals are reported in downhole length only.  Refer JORC Table 1, Section 1.
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>	Refer to figures contained within this report.
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>	All results are presented in figures and tables contained within this report.



Criteria	JORC Code explanation	Commentary
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; bulk samples — size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Geophysical data — Historical geophysical data has been approximately registered in GDA94 Zone 55, using the available open-file information. These approximations have then been use to determine geological interpretations, some of which will be the target of this drilling campaign.