

## **ASX Release**

17 October 2023

# Coronation drilling complete, Liontown drilling underway

#### **Highlights**

- The first planned RC drilling program at the Coronation Au-Cu target has been completed with 8 holes (1,220m) testing 6 gravity anomalies, where rock chip samples up to 13.8 g/t Au have been recorded.
- A significant quartz barite vein system was intersected providing encouragement for a potential gold fertile structure. Assays are now pending and are expected in November.
- Drilling has commenced at the Liontown Project where the Cu-Au rich Carrington Lode will be targeted. The program will comprise an initial 11 holes for 1,135m.
- The drilling will be included in a Resource update in December 2023, which will also incorporate a further 96 holes previously drilled and not part of the current 4.94mt @ 12.0% ZnEq Resource.
- Following Liontown, drilling will continue at untested gold targets including the NE corner of the Plateau breccia pipe (50koz Au Resource) and shear zones at Cardigan Dam.

Sunshine Metals Limited (ASX:SHN, "Sunshine") has completed first pass drilling at Coronation and commenced RC drilling targeting the Au-Cu Carrington Lode at Liontown. The drilling is part of a larger drill program at the wider Ravenswood Consolidated Project (100%), North Queensland.

Sunshine Managing Director, Dr Damien Keys, commented "The analogous Highway-Reward Cu-Au Mine (3.9Mt @ 5.4% Cu & 1.1g/t Au mined) consisted of barite hosted gold overlaying Cu-Au massive sulphide pipes at depth. This program has successfully identified a significant quartz barite vein system at CorG2 that extends beneath outcrop that sampled 5.33g/t Au. Assays are pending and this intersection provides encouragement for continuity and thickness of a gold fertile structure.

Further encouragement was seen at CorG3 and CorG5. At CorG3, pyritic jasper identified in drill pad was sampled at surface and intersected at 12m in drilling.

At CorG5, an historic IP chargeable anomaly correlated with a large silica-sericite alteration system and contained traces of chalcopyrite, sphalerite and galena. Follow up IP and downhole EM surveys will be completed in the vicinity of CorG1, CorG2 and CorG5 to ensure we understand off hole and depth opportunities.

The rig has now moved to Liontown to test extensions to the footwall, Au-Cu rich Carrington Lode. Drilling will then occur at Cardigan Dam and Plateau. The program represents an exciting period of activity, and we look forward to keeping the market abreast of developments throughout."



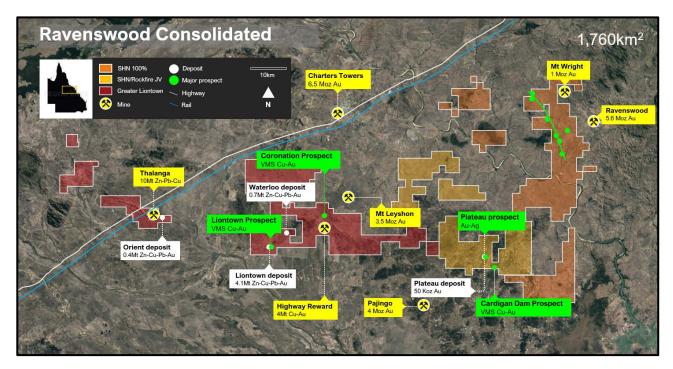


Figure 1: Ravenswood Consolidated Project with prospects in current drill program (green) and major nearby mines (yellow).

### **Drilling Overview**

The Ravenswood Consolidated Project drill program will test 4 prospect areas – Coronation Cu-Au (100% SHN), Liontown Zn-Ag-Pb/Au-Cu (100% SHN), Cardigan Dam Au (Lighthouse Farm-In), and Plateau Au (Lighthouse Farm-In). The program is anticipated to take 6 weeks to complete.

#### **Coronation Cu-Au RC Drill Program**

Coronation is located 2.7km north of the Highway-Reward Cu-Au Mine (3.9Mt @ 5.4% Cu & 1.1g/t Au mined) and ~32km by sealed road south of the mining centre of Charters Towers. Highway-Reward was mined as a gold open pit from 1987 - 1989. Separately, massive sulphide Cu-Au pipes were discovered later in 1987 & 1990 and mined as Cu-Au open pits and underground mines until 2005. The barite hosted gold overlaid these deeper Cu-Au massive sulphide pipes.

The RC program tested 6 gravity anomalies (CorG1 to CorG6) with 7 holes drilled (1,235m, averaging 176m depth). One further RC hole (41m) at CorG3 tested a 3m thick, pyritic jasper that was exposed during drill pad clearing.



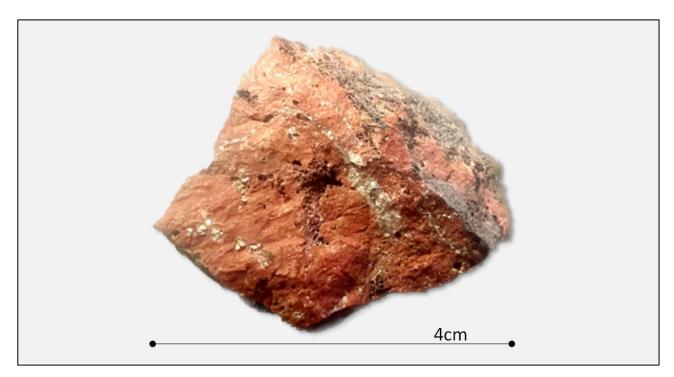


Figure 2: Sample of jasper from drill pad 23CORC006 and tested by 23CORC0073, Coronation Cu-Au.

The nature of the gravity anomalies in the drilling requires further consideration however they appear to have delineated a transition from felsic rhyolitic rocks to intermediate andesitic volcanics rather than massive sulphides. The transition between the two lithologies is often brecciated and associated with elevated pyrite content.

The historic Induced Polarisation chargeablility anomaly **(CorG5)** coincided with a 146m thick, sericite-pyrite altered zone<sup>3</sup>. Chalcopyrite and galena were observed in veining<sup>3</sup> within the altered zone. This assemblage was known to be part of the peripheral alteration around Highway Reward. The area presents as the most likely for a "near miss" and will be a focus for follow up geophysical surveys.

Barite was most abundant in CorG1, CorG2 and CorG5. In **CorG2**, a 13m zone of barite veining<sup>3</sup> was encountered from 9m depth. The barite zone occurred beneath surface rock chip samples to 5.33g/t Au (CORX082). The encouraging intersection in CorG2 is the only test of the structure and remains a significant gold target.

A sulphide-rich jasper horizon was exposed at surface during drill pad clearing at **CorG3**. Jasper is often associated as an exhalite within volcanogenic massive sulphide systems. A shallow hole (23CORC007) was drilled to test the down dip extents of the jasper with a 3m horizon successfully intersected at 12m depth. The rock chip samples and drill intersection assays are pending.

<sup>&</sup>lt;sup>3</sup> Cautionary statement: Information in this announcement contains references to visual results. The Company draws attention to the inherent uncertainty in reporting visual results. There is no direct relationship between pyrite content and gold content. Visual estimates of mineral abundance should ever be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. A table of visual sulphide abundances can be found on Page 9.



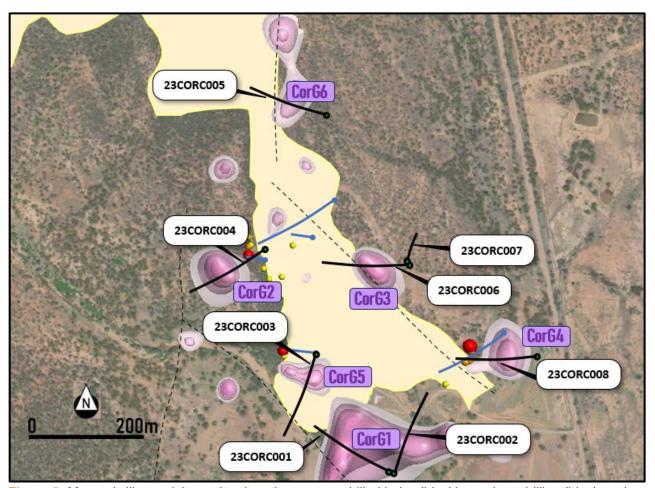


Figure 3: Mapped silica-sericite-pyrite alteration system, drilled holes (black), previous drilling (blue), rock chip sampling (dots) and 6 dense gravity anomalies (CorG1 to CorG6).

#### **Liontown drilling commenced**

The rig has now moved around 20km to the south-east of Coronation to the Liontown prospect to test extensions to the footwall Au-Cu rich Carrington Lode. The program comprises 11 holes over 1,135m with results expected to be included in a Resource update in December 2023.

The Liontown Resource (4.9mt @ 12.0% ZnEq) is comprised of both Cu-Au rich and Zn-Pb rich lodes within a VMS) system. The hangingwall lodes, such as Main Lode and New Queen, trend towards more Pb-Zn dominant; whereas the footwall lodes, such as Carrington, Western Footwall and the Gap, are more Cu-Au enriched.

Following Liontown, drilling will continue at Plateau and Cardigan Dam. Drilling will test gold targets including the NE corner of the Plateau breccia pipe (50koz Au Resource) and shear zones at Cardigan Dam.



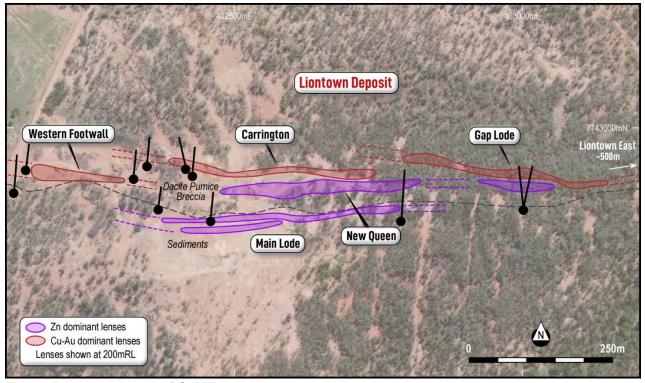


Figure 4: Liontown current RC drilling.

#### **Recoverable Zinc Equivalent calculation**

The zinc equivalent grades for Greater Liontown (% ZnEq) are based on the following prices: US\$2,500t Zn, US\$8,500t Cu, US\$2,000t Pb, US\$1,900oz Au, US\$20oz Ag Metallurgical metal recoveries are supported by metallurgical test work undertaken and are: 88.8% Zn, 80% Cu, 70% Pb, 65% Au, 65% Ag

#### The ZnEa calculation is as follows:

ZnEq = Zn grade% \* Zn recovery + (Cu grade % \* Cu recovery % \* (Cu price \$/t/ Zn price \$/t)) + (Pb grade % \* Pb recovery % \* (Pb price \$/t/ Zn price \$/t \* 0.01)) + (Au grade g/t /31.103 \* Au recovery % \* (Au price \$/oz/ Zn price \$/t)) + (Ag grade g/t /31.103 \* Ag recovery % \* (Ag price \$/oz/ Zn price \$/t \* 0.01)).

It is the opinion of Sunshine and the Competent Person that all elements and products included in the ZnEq formula have reasonable potential to be recovered and sold.

#### **Planned activities**

The Company has a busy period ahead including the following key activities and milestones:

Oct - Nov 2023: Drilling commences Cardigan Dam Au, Plateau Au (Lighthouse Farm-In)
 Ravenswood Consolidated

October 2023: Quarterly Activities Report

31 Oct – 2 Nov 23: IMARC 2023, Sydney

14 Nov 2023: Melbourne Mining Club Presentation

• 15 – 17 Nov 23: Noosa Mining Conference

21 Nov 2023: Annual General Meeting

December 2023: Liontown JORC Resource update, Ravenswood Consolidated



#### Sunshine's Board has authorised the release of this announcement to the market.

For more information, please contact:

Dr Damien Keys Mr Alec Pismiris

Managing Director Director & Company Secretary

Phone: +61 428 717 466 Phone +61 402 212 532

dkeys@shnmetals.com.au alec@lexconservices.com.au

#### **Competent Person's Statement**

The information in this report that relates to Exploration Results is based on, and fairly represents, information compiled by Mr Matt Price, a Competent Person who is a Member of the Australian Institute of Geoscientists (AIG) and the Australian Institute of Mining and Metallurgy (AuslMM). Mr Price 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. Mr Price consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Waterloo and Orient is based on information compiled and reviewed by Mr Stuart Hutchin, who is a Member of the Australian Institute of Geoscientists (AIG) and is a Principal Geologist employed by Mining One Pty Ltd. Mr Stuart Hutchin 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 'Australasian Code for Reporting of Mineral Resources. Mr Stuart Hutchin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Liontown and Liontown East is based on information compiled and reviewed by Mr Peter Carolan, who is a Member of the Australasian Institute of Mining and Metallurgy and was a Principal Geologist employed by Red River Resources Ltd. Mr Peter Carolan 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 'Australasian Code for Reporting of Mineral Resources. Mr Peter Carolan 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 Metals**

#### Two projects. Big System Potential.

*Triumph Project (Au):* More than 85% of Triumph's Inferred Resource of 118,000oz @ 2.03g/t Au<sup>4</sup> (100% Inferred) is <100m deep and largely located within 1.2km of strike within a 6km long trend. Recent drilling has confirmed Triumph's intrusion-related gold system is analogous to the large Ravenswood Mine (5.6Moz Au Resource).

Ravenswood Consolidated Project (Zn-Cu-Pb-Au-Ag-Mo): Located in the Charters Towers-Ravenswood district which has produced over 20Moz Au and 14mt of VMS Zn-Cu-Pb-Au ore. The project comprises:

- a Zn-Cu-Pb-Au VMS Resource of 4.94mt @ 12.0% ZnEq (32% Indicated, 68% Inferred);
- 26 drill ready VMS Zn-Cu-Pb-Au IP geophysical targets where testing of a similar target has already led to the Liontown East discovery which hosts a current Resource of 1.47mt @ 11.0% ZnEq (100% Inferred);
- the under-drilled Carrington Au Lode in the footwall of the Liontown VMS deposits with significant intersections including **3m** @ **46.2g/t Au from 20m** (LRC0018) and **2m** @ **68.6g/t Au from 24m** (LRC0043);
- advanced Au-Cu VMS targets at Coronation analogous to the nearby Highway-Reward Mine (4mt @ 6.2% Cu & 1.0g/t Au mined);
- overlooked orogenic, epithermal and intrusion related Au potential with numerous historic gold workings and drill ready targets; and
- o a Mo-Cu Exploration Target at Titov of 5-8mt @ 0.07-0.12% Mo & 0.28-0.44% Cu<sup>5</sup>.

\*Investigator Project (Cu): Located 100km north of the Mt Isa, home to rich copper-lead-zinc mines that have been worked for almost a century. Investigator is hosted in the same stratigraphy and similar fault architecture as the Capricorn Copper Mine, located 12km north.

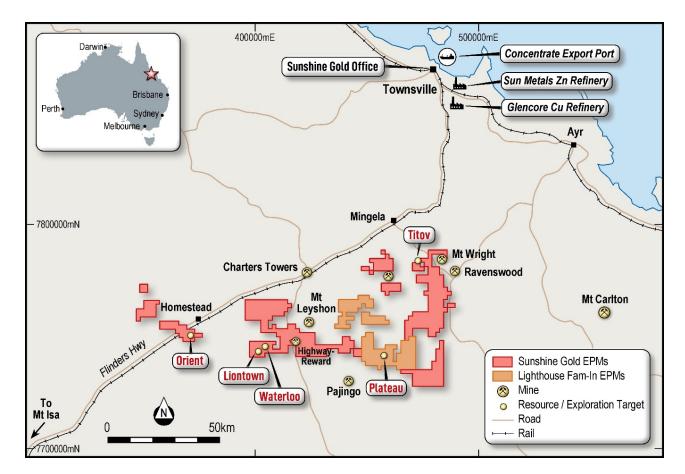
\*Hodgkinson Project (Au-W): Located between the Palmer River alluvial gold field (1.35 Moz Au) and the historic Hodgkinson gold field (0.3 Moz Au) and incorporates the Elephant Creek Gold, Peninsula Gold-Copper and Campbell Creek Gold prospects.

\*A number of parties have expressed interest in our other quality projects (Investigator Cu and Hodgkinson Au-W). These projects will be divested in an orderly manner in due course.

<sup>&</sup>lt;sup>4</sup> SHN ASX Release, 31 March 2022, "Robust Maiden Resource at Triumph Gold Project". No new information has been collected and all material assumptions remain unchanged.

<sup>5</sup> Cautionary statement: The Exploration Target has been prepared and reported in accordance with the 2012 edition of the JORC Code. The potential quantity and grade of the Exploration target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource. Exploration Target for Titov based on several factors discussed in the corresponding Table 1 which can be found with the original ASX release 21 March 2023 "Shallow High Grade Titov Cu-Mo Exploration Target".







Appendix A: Coronation drill collar and survey information

Hole ID	East	North	RL	Dip	Azimuth	Max Depth
23CORC001	416014	7750423	345.0	-60.0	295	227
23CORC002	416018	7750427	339.0	-60.0	10	179
23CORC003	415888	7750640	358.0	-50.0	205	215
23CORC004	415758	7750816	335.0	-50.0	240	197
23CORC005	415856	7751091	366.0	-60.0	295	119
23CORC006	416033	7750787	270.0	-60.0	270	149
23CORC007	416036	7750783	270.0	-60.0	17	41
23CORC008	416278	7750639	389.0	-60.0	270	149

Appendix B: Visual logs from Coronation RC drilling

B: Visual log	ıs from Coro	nation RC	drilling				
Hole_ID	Depth_From	Depth_To	Interval (m)	Lith	Sul	Sul %	Alt
23CORC001	27	28	1	FD	PY	0.5	EP CL
23CORC001	36	40	4	FD	PY	0.5	EP CL
23CORC001	53	59	6	FD	PY	0.5	EP CL
23CORC001	59	60	1	FD	PY	40	EP CL
23CORC001	76	77	1	FD	PY	3	EP CL
23CORC001	123	129	6	FD	PY	1	EP CL
23CORC001	163	166	3	FD	PY	2	EP CL
23CORC001	176	186	10	FD	PY	2	EP CL FS
23CORC001	216	218	2	FRD	PY	0.5	EP CL
23CORC002	29	49	20	FD	PY	0.5	EP CL FE
23CORC002	57	59	2	FD	PY	0.5	EP CL FE
23CORC002	88	100	12	FD	PY	0.5	EP CL
23CORC002	123	127	4	FRD	PY	0.5	EP CL
23CORC002	140	147	7	FD	PY	0.5	EP CL KF
23CORC003	21	167	146	FRD	PY	1.5	SE CL
23CORC003	21	26	5	FRD	PY	0.5	SE CL
23CORC003	26	35	9	FRD	PY	1	SE CL
23CORC003	37	38	1	FRD	PY	3	SE CL HE
23CORC003	38	46	8	FRD ZFZ	PY	1	SE CL HE
23CORC003	46	47	1	FRD	PY	3	SE CL HE
23CORC003	47	67	20	FRD	PY	2	SE CL HE
23CORC003	67	80	13	FRD	PY	0.5	SE CL HE
23CORC003	80	86	6	FRD	PY	2	SE CL HE
23CORC003	86	88	2	FRD	PY	5	SE CL
23CORC003	88	90	2	FRD	PY	3	SE CL
23CORC003	90	92	2	FRD	PY CP	15	SE CL
23CORC003	92	110	18	FRD	PY	0.5	SE CL
23CORC003	110	111	1	FRD	PY	3	SE CL
23CORC003	111	119	8	FRD	PY	0.5	SE CL
23CORC003	119	120	1	FRD	PY	2	SE CL
23CORC003	120	149	29	FRD	PY	0.5	SE CL HE
23CORC003	149	150	1	FRD	PY	3	SE CL HE
23CORC003	150	153	3	FRD	PY	0.5	SECL HE
23CORC003	153	161	7	FRD	PY	3	SE CL HE
23CORC003	163	167	4	FRD	PY	7	SE CL HE
23CORC003	172	178	6	FRD	PY	0.5	EP CL
23CORC003	186	208	22	FRD	PY	0.5	EP CL
23CORC004	23	24	1	IA	PY	0.5	FE CL
23CORC004	36	37	1	IA	PY	10	CL
23CORC004	40	66	26	IA	PY	0.5	CL EP
23CORC004	79	82	3	IA	PY	2	CL EP
23CORC004	82	90	8	IA	PY	0.5	CL EP
23CORC004	111	120	9	<u>IA</u>	PY	2	CL EP
23CORC004	120	121	1	IA	PY CP	3	CL EP
23CORC004	121	127	6	<u>IA</u>	PY	0.5	CL EP
23CORC004	159	161	2	IA IA	PY	0.5	CL EP
23CORC004	175	178	3	IA EDD	PY	0.5	CL
23CORC004	178	186	8	IA FRD	PY	1	CL
23CORC004	189	195	6	FRD	PY	1	CL
23CORC005	18	31	13	IA IA	PY	0.5	CL EP
23CORC005	39	40	1	IA IA	PY	1	CL EP
23CORC005	51	60	9	IA	PY	. 1	CL



Hole_ID	Depth_From	Depth_To	Interval (m)	Lith	Sul	Sul %	Alt
23CORC005	63	65	2	IA	PY	0.5	CL
23CORC005	70	71	1	IA	PY	1	CL
23CORC005	79	95	16	IA	PY	0.5	CL EP
23CORC005	99	115	16	IA	PY	0.5	CL
23CORC005	27	28	1	FD	PY	1	SE
23CORC005	81	95	14	IA FD	PY	2	SI CA CL
23CORC005	106	107	1	IA	PY	0.5	CA
23CORC005	110	111	1	FD VQ	US	5	CL CA
23CORC005	111	137	26	FD	PY	1	CL SI
23CORC007	19	41	22	FD	PY	0.5	CL CY
23CORC008	23	37	14	FD	PY	0.5	CY
23CORC008	62	82	20	FD	PY	0.5	SI CY
23CORC008	91	120	29	IA FD	PY	1	SI CY
23CORC008	120	121	1	FD	PY	3	CY
23CORC008	121	140	19	IA	PY	0.5	CY SI

## Appendix C: Logging codes

Lith Code	Lithology	Sul Code	Sulphide	Alt Code	Alteration
FD	Dacite	CP	Chalcopyrite	CA	Carbonate
FRD	Rhyodacite	PY	Pyrite	CL	Chlorite
IA	Andesite	US	Black, undifferentiated sulphide	CY	Clay
VQ	Quartz Vein			EP	Epidote
ZFZ	Fault Zone			FE	Iron Oxides
				FS	Feldspar (general)
				HE	Haematite
				KF	K-Feldspar
				SE	Sericite
				SI	Silica



**Section 1 - Sampling Techniques and Data** 

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.	GEOCHEMICAL SAMPLING  Esso (1980, Soils) – No record of sampling methodology was reported. Samples were sent to ALS and assayed for Cu, Pb, Zn and Ag, although assay methodology is unknown.  SHN – Rocks were selected by the field geologist and recorded as either in situ (outcrop), float (alluvial) or from working spoil. A standard geopick hammer is utilised to collect a sample typically of 1 – 2kg size along the required outcrop ensuring care is taken to only sample the required unit.
	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 'in dustry 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	DRILLING  Coronation (current) - SHN RC drill holes were sampled as individual, 1 m length samples from the rig split. Individual metre samples were collected as a 12.5% split collected from the drill rig.  Individual RC samples were collected in calico sample bags and grouped into green plastic bags for dispatch (approximately five per plastic bag). These were then taken by SHN to ALS laboratory, Townsville.  Coronation (historic) – Drillholes are reported from Esso (1984) and Thalanga Copper (2002). Esso sampled in metre intervals with Thalanga Copper in 4m composites. Esso assayed for Cu, Zn, Pb and Ag (method unknown) and Thalanga Copper for Cu, Pb, Zn, As, Ag, Fe, Mg, S, Na2O using ICP; Ba, Ti and Zr using XRF; and 30g fire assay with AAS finish for Au.
D ::::	mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	DRILLING
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.).	Coronation (current) – Reverse circulation drilling utilising an 8inch open-hole hammer for first 10m (pre-collar) and a 5.5inch RC hammer for the remainder of the drill hole.  Coronation – Only RC was reported used by both Esso and Thalanga Copper.



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.	DRILLING  Coronation (current) - RC sample recoveries of less than approximately 80% are noted in the geological/sampling log with a visual estimate of the actual recovery. Very few samples were recorded with recoveries of less than 80%. No significant zones of wet RC samples were recovered.
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.	GEOCHEMICAL SAMPLING SHN – Rocks have been logged for lithology, alteration, mineralisation and veining and recorded in the SHN Geochemistry Database. Photos are taken of all submitted samples.  Esso (1980, Soils) – No geology was recorded against the samples.  DRILLING Coronation (current) – The drill core and chip samples from SHN exploration drilling has been geologically and geotechnically logged to a level to support appropriate mineral resource estimation, mining studies and metallurgical studies. Core is logged both qualitatively and quantitatively. Core and chip tray photography is available.  Coronation (historic) – Drill holes were group logged (i.e. not metre by metre) for lithology, alteration and mineralisation.
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.	GEOCHEMICAL SAMPLING  SHN: Sample size of 1 – 2kg is deemed representative as a "point sample" within a referenced outcrop or location. They are not deemed representative of the entire outcrop or prospect as a whole. No SHN QC procedures are used for rock chips. Samples have utilised the laboratory in-house QAQC protocols.  Esso (1980, Soils) – No sub-sampling techniques were recorded.  DRILLING  Coronation (current) – The entire program was sampled using 1m intervals.  Coronation (historic) – Esso sampled using 1m intervals. Thalanga Copper used 4m composites with the aim of returning for 1m individual samples if required.



Criteria	Explanation	Commentary
	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/second-half sampling.	
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of	The nature, quality and appropriateness of the	GEOCHEMICAL SAMPLING
assay data and Laboratory	assaying and laboratory procedures used and whether the technique is considered partial or total.	SHN – Rock chips were assayed using a 50g fire assay for gold with AAS finish, which is considered appropriate for this style of mineralisation. Fire assay is considered total assay for gold. All other elements were assayed using an ICP-MS/OES.
tests	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining	Esso (1980, Soils) – No assay methodology or QAQC information is known.
	the analysis including instrument make and model, reading times, calibrations factors applied and their	GEOPHYSICS
	derivation, etc.  Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy	RVR Gravity 2020 - The data was collected by Atlas Geophysics along 16 traverses orientated at 30 degrees east of north. Data station spacing 50m with most lines spaced 50m apart and the outer survey lines collected with 100m separation. No detail on the sampling equipment has yet been located. There are no stations from this survey coincident with known observations, however the observed data reportedly sat well within the national gravity image and that repeated stations within the survey correlated well. Resultant products from processing (profile and grid) were coherent and the data was considered fit for purpose.
	(i.e. lack of bias) and precision have been established.	Esso (1983, IP, EM) – No details are reported on data quality of the original survey, however subsequent review by RGC in 1998 reported that the anomalism identified in the original surveys were repeated.
		DRILLING
		Coronation – SHN samples will be assayed using a 50g fire assay for gold with AAS finish, which is considered appropriate for this style of mineralisation. Fire assay is considered total assay for gold. All other elements will be assayed using an ICP-MS/OES. No QAQC or reports on data quality have been reviewed.
		Highway-Reward – Some samples appear to have repeat samples for Au undertaken. No review on these values has been undertaken at this stage.



Criteria	Explanation	Commentary
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	GEOCHEMICAL SAMPLING SHN – All rock chips are considered valid for that point location only if outcrop, or as an example of ore/waste material if mullock. Esso (1980, Soils) – Data utilised is open-file data only, as provided by the GSQ geochemical data. No subsequent verifications have taken place.  GEOPHYSICS RVR Gravity 2020 – The raw data was reviewed for quality by Montana GIS and subsequently modelled for Bouguer Anomaly, including corrections for terrain. Esso (1983, IP, EM) – A review by RGC in 1998 reported that the anomalism identified in the original surveys were repeated.  DRILLING Coronation – No drill holes were twinned. All data is as is historically reported. Highway-Reward – Verification of assays would have been undertaken during production of the Highway-Reward mineral deposit.
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.	GEOCHEMICAL SAMPLING SHN – Sample locations are located as points using handheld GPS in GDA94, Zone 55 format Esso (1980, Soils) – Data points were reported in a historic, local grid. These have been converted by GSQ to UTM coordinates which were then imported by SHN. No further validation against these coordinates has taken place.  GEOPHYSICS RVR Gravity 2020 – The data was collected utilising DGPS in GDA94, Zone 55 format, although equipment is unknown. Esso (1983, IP, EM) – Dipoles were spaced 50m apart, however no record of how sample points were measured are present.  DRILLING Coronation – SHN drilled holes have been located using a hand held GPS. Esso drill hole collars were collected on a local grid and subsequently converted; Collars in later drilling by Thalanga Copper were collected in AGD84, Zone 55.  Highway-Reward – Drill hole collars were collected on a local grid.



Criteria	Explanation	Commentary
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.	GEOCHEMICAL SAMPLING SHN – No data spacing has been applied to the rock chip samples due to the nature of the technique Esso (1980, Soils) – Samples were spaced 200m x 25m on a NNE-trending local grid.  GEOPHYSICS RVR Gravity 2020 - The data was collected by Atlas Geophysics along 16 traverses orientated at 30 degrees east of north. Data station spacing 50m with most lines spaced 50m apart and the outer survey lines collected with 100m separation.  Esso (1983, IP, EM) – Two lines trending northeast were surveyed, spaced approximately 300m apart with 50m dipole spacing.  DRILLING Coronation – Due to the exploratory nature of the drilling, spacing of holes currently varies between 70m and 350m.  Highway-Reward – Drill holes reported were likely part of a mineral resource development program and likely to be closely spaced (no direct information provided).
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.	GEOCHEMICAL SAMPLING SHN – Rock samples are collected as "point" samples with no bearing on overall orientation of the possible structure. Esso (1980, Soils) – Samples likely run oblique to stratigraphy, but the close sample density and pipe-like target of mineralisation implies this is less critical than if exploring for strata-bound VMS-styles.  GEOPHYSICS RVR Gravity 2020 - The detailed 50m x 50m spacing over the majority of the survey area provides unbiased sampling grid. The 50m x 100m spacing in the far north of the survey area was slightly oblique to the likely stratigraphy but is not deemed material at this time.  Esso (1983, IP, EM) – IP survey ran northeast and EM survey north-south, both of which are sub-parallel to interpreted stratigraphy.



Criteria	Explanation	Commentary
		DRILLING
		Coronation (current) – Drill holes have been designed predominantly to intersect gravity anomalies. The holes are exploratory in nature.
		Coronation (historic) – Drill holes from both the Esso and Thalanga Copper campaigns were oriented perpendicular to interpreted vein strike to limit bias.
		Highway-Reward – Drill holes reported were likely part of a mineral resource development program and specifically targeting a pipe-like mineralised body, thus true widths of mineralisation may vary to apparent widths.
Sample	The measures taken to ensure sample security.	GEOCHEMICAL SAMPLING
security	The measures taken to ensure sample security.	SHN – Samples were numbered in the field at the time of collection. The samples are photographed at the time of collection and are then transported by SHN to the laboratory. No third party was involved with the handling of the sample between collection and drop off.
		Esso (1980, Soils) – No known sample security protocols are available.
		GEOPHYSICS
		RVR Gravity 2020 - The data was collected by Atlas Geophysics and stored immediately on the measuring equipment.  Data was likely uploaded and transferred electronically to Montana GIS for review.
		Esso (1983, IP, EM) – No known methods for security of data are reported.
		DRILLING
		Coronation & Highway-Reward – No known methods for security of data are reported.
Audits or	The results of any audits or reviews of sampling	GEOCHEMICAL SAMPLING
reviews	techniques and data.	SHN will continue geochemical sampling of outcrops and soils in due course.
		GEOPHYSICS
		RVR Gravity 2020 – No review on the raw data or modelling techniques has been undertaken at this stage.
		Esso (1983, IP, EM) – A review by RGC in 1998 reported that the anomalism identified in the original surveys were repeated. SHN has not conducted a review at this stage.
		DRILLING



Criteria	Explanation	Commentary
		Coronation (current) - SHN – Samples were numbered in the field at the time of collection. The samples are photographed at the time of collection and are then transported by SHN to the laboratory. No third party was involved with the handling of the sample between collection and drop off.
		Coronation – No audit has been undertaken on historical drill data.
		Highway-Reward – The deposits have since been mined, off-lease and SHN does not intend to conduct auditing on this data.

## **Section 2 - Reporting of Exploration Results**

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

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	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.	Greater Liontown Exploration Permits are: EPMs 10582, 12766, 14161, 16929, 26718, 27168, 27221, 27223, 27357, 27520 and 27731 and Mining Lease Applications 100221, 100290 and 100302 (Cromarty) for a total of 463km²; and EPMs 18470, 18471, 18713, 25815 and 25895 (Hebrides) for a total of 221km². The tenements are in believed to be in good standing and no known impediments exist.  The Thalanga mill and mining operation was abandoned by administrators to Red River Resources. A restricted area has been placed over the mill, dumps and tailings facilities. The Queensland Department of Environment is now responsible for the rehabilitation of the aforementioned facilities. There are no known other Restricted Areas located within the tenure.  Five third-party Mining Leases are present exist on the Exploration Permits – named MLs 1571, 1734, 1739 and 10028 (Thalanga Copper Mines Pty Ltd) and 100021 (Clyde lan Doxford).  Liontown, Waterloo and the majority of tenure exist on the native land of the Jangga People #2 claim, with northwestern tenure located on the native land of the Gudjala People.  A 0.8% Net Smelter Return (NSR) royalty is payable to Osisko Ventures Ltd and a 0.7% NSR royalty payable to the Guandong Guangxin Mine Resources Group Co Ltd (GMRG) on sale proceeds of product extracted form EPM 14161.



Criteria	Explanation	Commentary
		The Ravenswood West Project consists of EPMs 26041, 26152, 26303,26404, 27824 and 27825. The latter two EPMs are operated by Sunshine (Ravenswood) 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.  The Lighthouse Project consists of EPMs 25617 and 26705. All EPMs are owned 100% by BGM Investments Pty Ltd, a wholly owned subsidiary of Rockfire Resources Limited. No current Mining Leases exist on the tenure. South-eastern blocks on EPM 26705 are situated within the Burdekin Falls Dam catchment area. Sunshine Gold has the option to earn 75% of the project.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	CORONATION  Exploration activities have been carried out in the area by Carpentaria, Esso, Electrolytic Zinc, Barrack / Nede, Aberfoyle, RGC Exploration, Thalanga Copper Mines and Red River Resources. Work programs included surface mapping, and sampling, drilling and geophysics. The most detailed exploration activities at the prospect have been referred to in the body of this report.
Geology	Deposit type, geological setting and style of mineralisation.	CORONATION  The Coronation prospect is an exploration prospect with many unknowns. Current geological interpretation suggests mineralisation present could take the form of a pipe-like volcanogenic massive sulphide deposit, similar to the nearby Highway – Reward deposit, hosted by Cambro-Ordovician volcanic and volcano-sedimentary sequences.
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:	CORONATION  All drill hole information pertaining to Coronation and Highway Reward is listed as follows (MGA94, Z55):
		Hole ID         East         North         RL         Dip         Azi_Grid         Max Depth           23CORC001         416014         7750423         345.0         -60.0         295         227           23CORC002         416018         7750427         339.0         -60.0         10         179
	<ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> </ul>	23CORC002 416016 7750427 335.0 -00.0 10 179 23CORC003 415888 7750640 358.0 -50.0 205 215 23CORC004 415758 7750816 335.0 -50.0 240 197 23CORC005 415856 7751091 366.0 -60.0 295 119 23CORC006 416033 7750787 270.0 -60.0 270 149
	dip and azimuth of the hole	23CORC007 416036 7750783 270.0 -60.0 17 41



Criteria	Explanation	Commentary
	<ul> <li>down hole length and interception depth</li> <li>hole length.</li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case</li> </ul>	23CORC008 416278 7750639 389.0 -60.0 270 149
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.	All grades and intercepts referred to in this document are as reported in their associated historical documents. No further adjustments or assumptions have been made.  The zinc equivalent grades for Greater Liontown (Zn Eq) are based on zinc, copper, lead, gold and silver prices of US\$2500/t Zinc, US\$8500/t Copper, US\$2000/t Lead, US\$1900/oz Gold and US\$20/oz Silver with metallurgical metal recoveries of 88.8% Zn, 80% Cu, 70% Pb, 65% Au and 65% Ag and are supported by metallurgical test work undertaken.  The zinc equivalent calculation is as follows: Zn Eq = Zn grade% * Zn recovery + (Cu grade % * Cu recovery % * (Cu price \$/t/ Zn price \$
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').	Geometry of mineralisation to any reported historic intervals within this document are unknown, and all intersections should be considered as down-hole length only, as true width is not known.  All diagrams are located within the body of this report
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should	An diagrams are located within the body of this report



Criteria	Explanation	Commentary
	include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
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 drill intercepts are recorded within the body of 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.	All meaningful and material data is reported within the body of the report.  For further reading on historic data results referred to in the report, open-file reports are listed here:  • CR 7957, CR 12381, CR 14497, CR 19167, CR 30386, CR 33969  Further reading on Highway-Reward includes:  • Beams et al., 1998, The Exploration History, geology and geochemistry of the polymetallic Highway-Reward deposit, Mt Windsor Subprovince, 14th Australian Geological Convention, Townsville, 1998
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.	Further drilling will be required to test possible extensions to mineralisation.  Exploration will continue within the target VMS horizons