

ASX Release 5 February 2024

Drilling Recommences at Liontown to Test Extensions to the recent 17m @ 22.0 g/t Au Intersection

Highlights

- Drilling has recommenced at Liontown, part of the Ravenswood Consolidated Project
- Liontown hosts a high grade polymetallic JORC Resource of 4.94Mt @ 12.0% ZnEq with a Resource update to be released in February incorporating 108 new holes
- A key objective of this new program will be to test the recently identified gold-rich pumice breccia zone which intersected <u>17m @ 22.05 g/t Au</u>
- The program will also test:
 - a copper rich zone where the nearest hole returned 4.65m @ 5.48% Cu, 2.05 g/t Au from 188m & 2.35m @ 3.75% Cu from 197m (LTDD19029) and 6m @ 4.49% Cu from 252m (LTDD19008) (see Figure 1); and
 - a gold and copper rich zone with nearest intersections grading 5.6m @ 2.06% Cu,
 7.45 g/t Au, 2.99% Zn from 99.7m (LTDD19030).

Sunshine Metals Limited (ASX:SHN, Sunshine) has recommenced drilling at the Liontown Prospect near Charters Towers in North Queensland. The drilling focuses on gold and copperrich targets at the 2.3mt volcanogenic massive sulphide (VMS) Resource, with a recent intersection in the last drilling program in a newly identified gold-rich pumice breccia zone returning 17m @ 22.05 g/t Au.

The high-impact campaign over five holes (1,000m) will test three targets, as noted above, and follows first pass drilling in December 2023 which intersected both structure and high-grade gold.

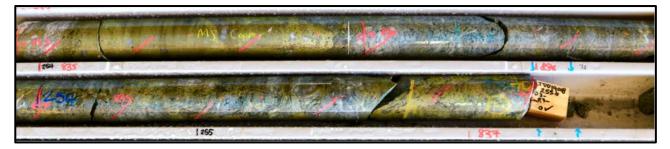


Figure 1: Copper-rich intersection from Carrington Lode footwall zone of 6m @ 4.49% Cu in LTDD19008 (252m-253m shown). Intersection is beyond current Resource limits. Planned drilling will test for a potential copper feeder fault zone ~60m along strike.



Sunshine Managing Director, Dr Damien Keys, commented:

"We are excited to recommence activities at Liontown. The small, first-pass, 2023 drilling campaign demonstrated the potential for high-grade gold within the Liontown VMS system. The campaign also provided critical geological and geochemical information to refine the geology model.

This campaign will look to extend the gold-rich pumice breccia zone hosting intersections including 17m @ 22.05 g/t Au (23LTRC002) and 8m @ 10.65 g/t Au (LTDD22055) (Figure 5). Success will extend this pumice breccia zone to ~120m x 120m in dimension.

Drilling will also target a copper-rich lens and/or potential feeder fault zone in the Carrington Lode footwall zone (Figure 6), on the western end of the Liontown Resource. The lens/potential feeder zone have been identified through a combination of geological relogging and geochemical analysis. Nearest drill holes suggest that the zone will be copper-rich with nearest holes grading 4.65m @ 5.48% Cu, 2.05 g/t Au from 188m & 2.35m @ 3.75% Cu from 197m (LTDD19029) and 6m @ 4.49% Cu from 252m (LTDD19008). The 6m @ 4.49% Cu intersection is outside of the current Resource.

Results from this high impact campaign will tie in with an IP geophysical survey, scheduled for early February 2024, to guide a broader 2024 drill campaign at Liontown."

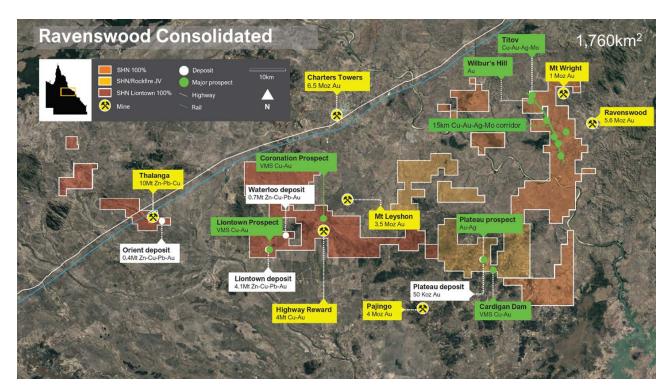


Figure 2: Ravenswood Consolidated Project with key prospects (green) and major nearby mines (yellow).



Next Steps

Following the drilling campaign, an IP geophysical survey in February 2024 will assess the Liontown footwall stratigraphy to highlight the high-grade gold areas including the sulphide-rich, pumice breccia horizons and the sulphide-rich portions of feeder fault zones.

Results from the drilling campaign and the IP geophysical survey will be used to inform a broader drill program at Liontown soon after.

Meanwhile, a Resource upgrade at Liontown will be released in February 2024 and will incorporate 108 holes drilled since the last Resource estimate in March 2020.

Background

Sunshine reviewed the metal distribution within the Liontown Au-Cu-Zn-Pb VMS system (Figure 3 & 4) and determined the gold-rich zones occur within footwall pumice breccia units adjacent to significant fault zones. The fault zones are interpreted to be conduits/feeders for mineralising fluids into the pumice breccia stratigraphy.

In December 2023, a small, first-pass drill campaign was completed to test the feeder concept (one diamond & one effective RC hole, 272.24m). The drilling intersected both structure and high-grade gold with results including:

- O 17m @ 22.05 g/t Au from 67m (23LTRC002) supported by 8m @ 10.65 g/t Au from 152.2m (LTDD22055) both in a pumice breccia unit; and
- o **2m @ 3.84 g/t Au, 0.45% Cu, 4.43% Zn from 107m** in diamond hole 23LTRD001 which also intersected two faults at 78-87m & 106-110m

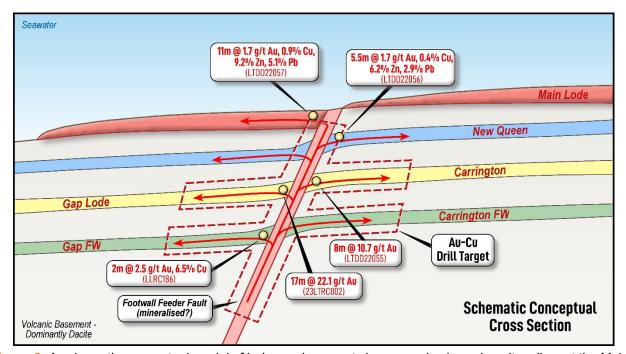


Figure 3: A schematic conceptual model of lode emplacement shows pumice breccia units adjacent the Main Feeder fault grading from Cu-rich at depth, through Au rich (23LTRC002, 23LTRD001 position), into more Zn-Pb-Ag rich lodes near surface.



Planned activities

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

February 2024: Liontown Resource upgrade, Ravenswood Consolidated
 February 2024: Geophysical surveys commence, Liontown & Truncheon

February 2024: Geophysical surveys commence, Liontown & Truncheon
 February 2024: Results from geophysical surveys, Liontown & Truncheon

o Feb-March 2024: Results from drilling, Liontown Au-Cu

o February 2024: RIU Explorers Conference, Fremantle

o March 2024: Brisbane Mining Investor Conference



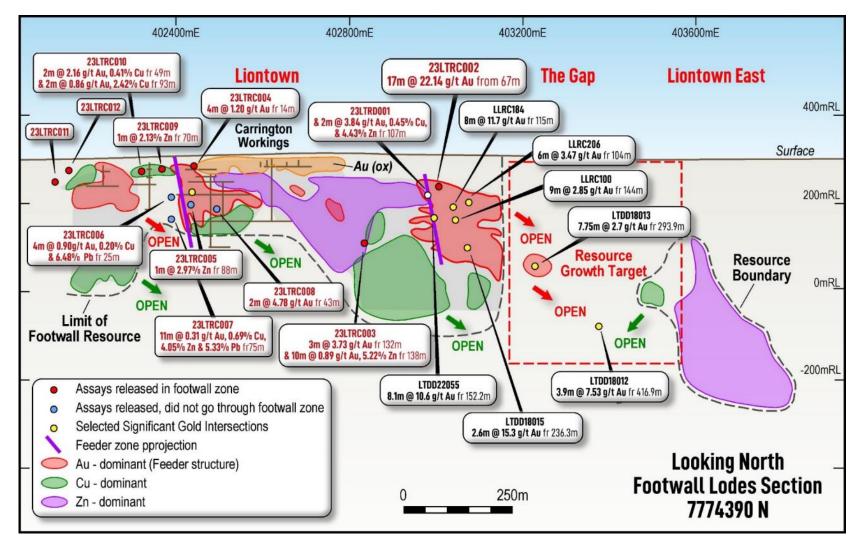


Figure 4: Long section of footwall of the Liontown Resource showing the position of the interpreted feeder zones (purple lines). Dominant metal zones are also highlighted: Au dominant (red); copper dominant (green); and zinc dominant (purple). Domains calculated from >50% contribution to overall ZnEq Resource block grade.



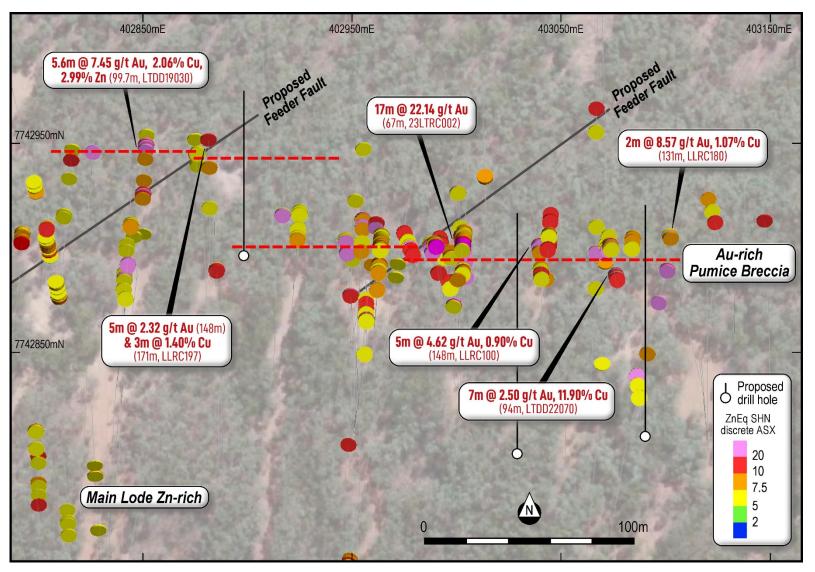


Figure 5: Planned holes testing extensions to the gold-rich pumice breccia horizon hosting 17m @ 22.05 g/t Au and planned hole testing footwall feeder-pumice breccia intersection near historic hole LTDD19030.



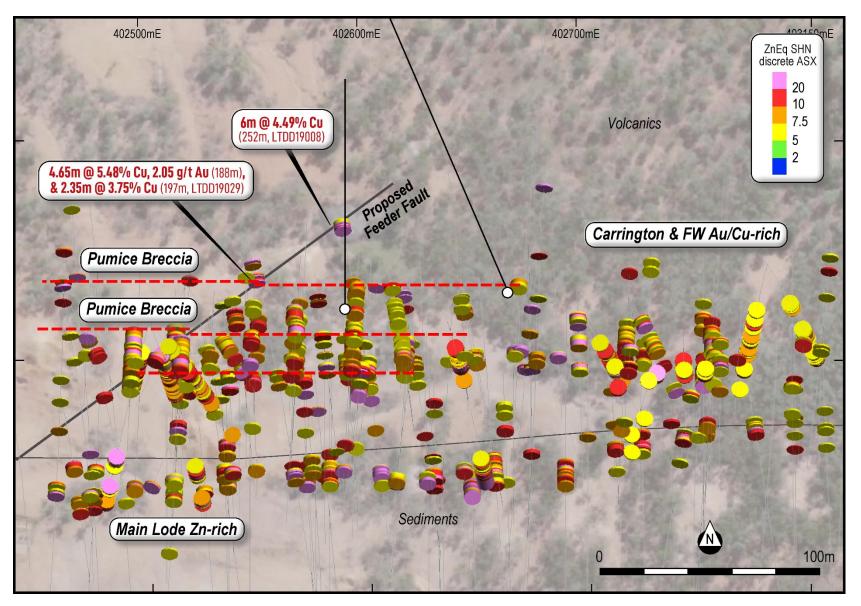


Figure 6: Planned holes testing proposed copper-rich lens and/or potential feeder fault zone, in the footwall of the Carrington Lode.



Gold, the forgotten commodity

The Charters Towers area is a prolific minerals production centre with an endowment of over 20Moz Au and 14Mt of Zn-Au-Cu-Pb-Ag VMS ore.

Mining at Carrington was initially commenced in 1905 and was of sufficient scale that its owner, Carrington United was listed on the Charters Towers Stock Exchange. While production records are unclear, the Au-Cu mine involved the 3 shafts (Main, Carrington No 1 and East), two mills and two smelters. The Main Lode extended to ~190m while the other shafts went to ~150m. These activities supported four hotels, two stores, a school and a post office.

Mining ceased in 1911 and was later re-opened in 1936 as a Ag-Pb mine. Between 1936-61, the Liontown No 3 and 4 shafts were sunk and produced some 3,000oz Au, 54,000oz Ag and 520t Pb.

Public access historical company reports for Liontown and immediate surrounds, date back to the mid 1960's. The Carpentaria Exploration Company (Company Report 2567, 1968) completed extensive stream sediment and rock chip sampling in the Mt Windsor Volcanics from Liontown to Highway Reward. The extensive sampling campaign was only assayed for copper, zinc and lead.

Subsequent explorers followed suit. Jododex, Pennaroya and Esso Australia Ltd have been arguably the most productive explorers across the Mt Windsor Volcanics having held leases between 1972 and 1986. None of the ~6,600 stream samples collected across the Mt Windsor area during the period were assayed for Au. Esso Australia collected ~26,500 soil samples during and assayed only 640 (2.4%) for gold. Furthermore, Esso Australia drilled in excess of 2,100 holes (1,905 RAB/AC, 119 RC, 74 DD), sampled 19,022 intervals and only assayed 8,951 for Au.

Historic mining of gold-copper lodes, together with high-grade results (5m @ 13.56 g/t Au (LLD135); 8m @ 4.24 g/t Au (LLRC003)) indicated the potential for Au mineralisation not associated with base metals in massive sulphides. Notwithstanding this potential, gold has not previously been a prime focus of exploration. This is seen as an opportunity to use fresh thinking and modern exploration techniques to define targets and to explore specifically for gold mineralisation.

Conceptual Model for Feeder/Footwall Mineralisation

VMS systems form beneath the ocean when hot, metal-rich fluids rise through cracks in the sea floor stratigraphy. These fluids cool rapidly as they encounter cold seawater causing sulphide mineralisation to precipitate and accumulate. Over time, layers of sulphide minerals build up, forming VMS deposits. These deposits often contain metals like copper, zinc and lead.

Copper and gold are often prominent components in VMS deposits, forming near the venting areas where hot hydrothermal fluids rich in metals interact with the surrounding rocks (Figure 7). The distribution of copper and gold is typically concentrated in the central parts of the VMS deposits.



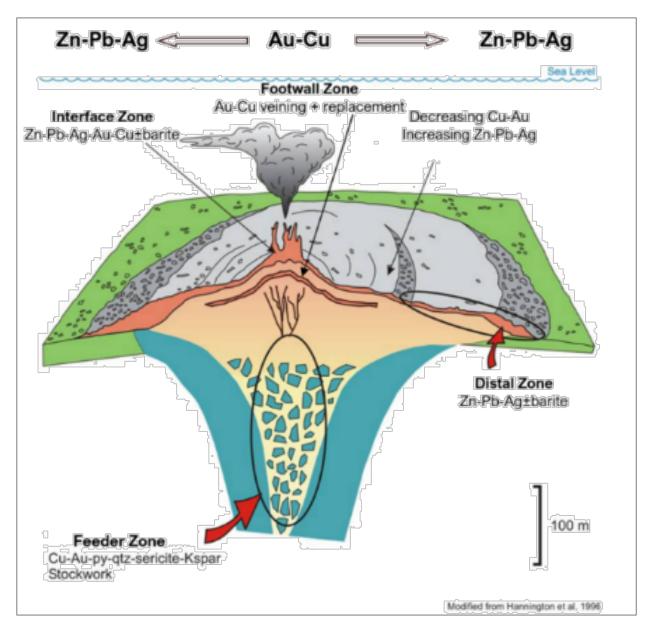


Figure 7: VMS conceptual model cross section (modified from Hannington et al., 1996).

Lead and zinc often show zonation within VMS deposits. Zinc is commonly found in the outer parts of the deposits, while lead may occur both in the outer zones and within the central copper-rich regions. These variations are a result of differences in the chemical conditions during mineral deposition and the relative ability of some metals to "travel" further than others.

A broad zonation in metal distribution was recognised at Liontown from Zn-Pb rich mineralisation observed on a stratigraphic contact, to Au-Cu dominated mineralisation in the footwall of the stratigraphic contact. Further investigation showed coherent, steeply plunging zones of gold dominant mineralisation that correlated with zones of low magnetic susceptibility in ground magnetic surveys. The main gold dominant zone occurs on the eastern end of the Liontown Resource in the Gap Lode. The zone has been intersected in diamond holes including LTDD22055 (80m below 23LTRC002), where 8.1m @ 10.65 g/t Au was intersected (ASX 8 May 2023). The mineralised intersection manifest as a foliated volcanic with sporadic barite veining and disseminated sulphide throughout.



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

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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 (AusIMM). 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.

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:

- o 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
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- the under-drilled Carrington Au Lode in the footwall of the Liontown VMS deposits with significant intersections including **3m** @ **46.2 g/t Au from 20m** (LRC0018) and **2m** @ **68.6 g/t Au from 24m** (LRC0043);
- advanced Au-Cu VMS targets at Coronation analogous to the nearby Highway-Reward
 Mine (4mt @ 6.2% Cu & 1.0 g/t Au mined);
- o 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% Cu¹.

Triumph Project (Au): More than 85% of Triumph's Inferred Resource of 118,000oz @ 2.03 g/t Au² (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).

*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.

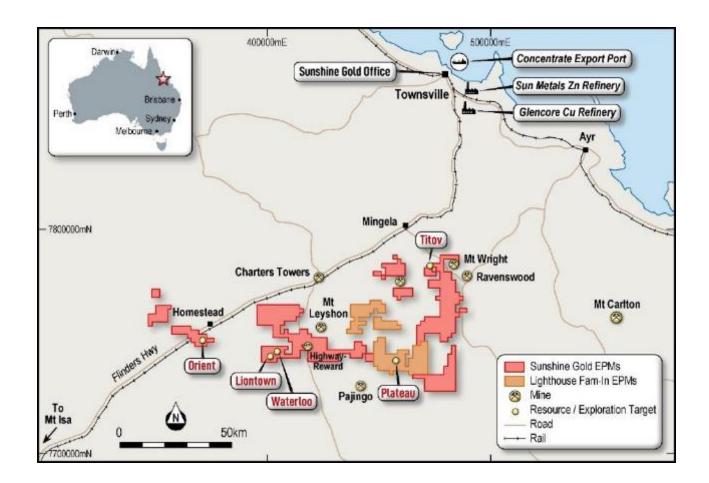
*Hodgkinson Project (Au-W): Located between the Palmer River alluvial gold field (1.35 Moz Au) and the historic Hodgkinson gold field (0.3 Moz Au) and incorporates the Elephant Creek Gold, Peninsula Gold-Copper and Campbell Creek Gold prospects.

*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.

¹ 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".

² 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.







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. 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 mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	DRILLING 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). One diamond tail hole has been completed. The drill hole collared as an RC drill hole, before switching to HQ3 diamond drilling for completion of the hole. The hole was sampled in full as half core, with sample intervals selected by the SHN Geologist. The samples were sawn longitudinally in half using the onsite core saw. SHN samples are analysed at Australian Laboratory Services (ALS) in Townsville where samples were crushed to sub 6mm, split and pulverised to sub 75µm. A sub sample was collected for a four-acid digest and ICP-OES/MS analysis of 61 elements, including Ag, Cu, Pb and Zn. Samples were assayed for Au using a 50g Fire Assay technique. Assays over 100g Au using this technique were re-assayed using gravimetric analysis. Ba over 1% was re-analysed using XRF. A number of batches were sent to Adelaide for full processing and analyses due to capacity limits in Townsville. Historic – Diamond core holes were sampled as half core. The sample intervals were selected by the company geologists based on visual mineralisation and geological boundaries and could range from 0.20m to 1.50m. Samples were sawn longitudinally in half using an onsite core saw and dispatched to Intertek Townsville for analysis. Samples were sawn longitudinally in half using an onsite core saw and dispatched to Intertek Townsville for analysis. Samples were crushed to sub-6mm, split and pulverised to sub-75µm to produce a representative sub-sample for analysis. Analysis consisted of 30g fire assay with AAS finish for Au and 4-acid digest with ICP-OES analysis all other elements. RC samples were split using a rig-mounted cone splitter on 1m intervals to obtain a sample for assay. Samples were pulverised to sub-
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.).	DRILLING SHN – 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. Diamond tail holes were drilled as per RC, before switching to HQ3 sized drill core until end of hole. Historic – Diamond drilling typically comprised of using a PCD bit through the cover sequence (open hole, no recovery), HQ diameter core for parent hole drilling and NQ2 diameter core for daughter holes. Reverse circulation drilling was completed using a 5.5" bit. Hole diameters for RC prior to RVR are unknown.



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.	SHN - 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% and in two cases these did include samples within the interpreted ore zone (i.e. 45 – 47m in 23LTRC008; 29 – 30m in 23LTRC006). Significant intercepts did not include these intervals. Moisture categorisation was also recorded. No significant zones of wet RC samples were recovered from within the mineralised intervals reported in 23LTRC002. Drill holes 23LTRC001 was notably wet and low recovery, and as such was twinned utilising a RC/diamond tail hole 23LTRD001. Minor zones of core loss were reported within 23LTRD001, totalling 3.1m (or 4.48%), one of which was within the proposed mineralised zone at 106.7 – 107.m. No significant intercepts reported extend over core loss intervals. Historic – Diamond core sample recovery is measured and recorded by RVR Field Technicians. Negligible sample loss was reported. In RC drilling, moisture content and sample recovery were reportedly recorded for each sample, with no significant sample loss recorded. Significantly wet samples were recorded in drill hole LLRC187 and as such has not been previously reported by SHN.
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.	DRILLING SHN – 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. Historic – Qualitative logging included lithology, alteration and textures; and Quantitative logging includes sulphide and gangue mineral percentages. All drill core was reportedly fully logged and photographed, although each hole has not yet been individually validated by SHN.
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 subsampling stages to maximise representivity of samples.	DRILLING SHN & Historic – RC samples were split using a rig-mounted cone splitter on 1m intervals to obtain a sample for assay, of approximate weight 3 – 5kg. Samples were pulverised to sub-75μm to produce a representative sub-sample for analysis. Core samples were sawn longitudinally in half using an automated core saw and dispatched to the laboratory for analysis. Samples were crushed to sub-6mm, split and pulverised to sub-75μm to produce a representative sub-sample for analysis.



Criteria	Explanation	Commentary			
	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 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.	DRILLING SHN – Samples are 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. Assays reporting over 100g/t Au were re-assayed using gravimetric methods to report a final assay. All other elements are assayed using an ICP-MS/OES, with overrange Ba reported by XRF. QAQC review indicates that all CRMs in and around the mineralised intersections returned results within acceptable limits. One CRM outside of the zone of interest reported an Au assay lower than 3SD than the certified value. As other, acceptable CRMs are between this sample and the zone, this result likely has no bearing on reported intersections. Nevertheless, this outlier will be followed up in due course. No blanks or duplicates reported results outside of acceptable limits however a review is ongoing.			
	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.	Historic – Only certified reference material (CRMs) were used in the QAQC program during the RVR diamond drilling. All reportedly returned results within an acceptable range. SHN has not validated this statement to date. There is no report of Blanks material or field duplicates used in the program. RC drilling used CRMs which reportedly returned results within an acceptable range. Field duplicates were taken as 1 in 40 samples. No sample method or review of these duplicates is reported. No information has been provided or located on historical QAQC programs.			
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	DRILLING SHN – Diamond tail hole 23LTRD001 has twinned RC drill hole 23LTRC001, the latter which showed significantly wet samples in a zone reporting 5m @ 3.31g/t Au from 104m (using a 0.5g/t Au cut-off). Hole 23LTRC001 was designed to twin historic hole LLRC187 which reported significantly wet and compromised samples that assayed 11m @ 97.9/t Au from 91m (using a 1.0g/t Au cut off), which are not reported nor used by SHN. The diamond tail hole 23LTRD001 reported assays comparable to that seen in 23LTRC001, assaying 2m @ 3.84g/t Au from 107m and will be the results reported by SHN. Historic – Laboratory results were reviewed by RVR Geologists. Raw assay files were stored on the Company Server and no adjustments were made to assay data.			
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.	DRILLING SHN – Drilled holes have been located using a handheld GPS within GDA94, Zone 55 format. Downhole surveys were conducted with an industry-standard gyroscopic survey tool. Collar locations will be digitally surveyed by DGPS at a later date. Collar locations for 23LTRC001, 23LTRD001 and 23LTRC002 have been revised since the previously released ASX report on 24th November 2023. Historia - Drill hole collar popular popular appropriate ware popular and particular particular and particular particular and particular par			
	Quality and adequacy of topographic control.	Historic – Drill hole collar coordinates were captured using RTK GPS in GDA94, Zone 55 format. Downhole surveys were conducted with a digital magnetic multi-shot camera, typically every 20 – 40m. Topographic control was based on a detailed 3d Digital Elevation Model. The basis of this model is not currently known.			



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.	DRILLING Current drill spacing for resource area is typically between 50 – 100m. Drill holes 23LTRD001 and 23LTRC002 are spaced approximately 30m apart at the ore zone location. No samples compositing has been applied to the intersections reported.			
	Whether sample compositing has been applied.				
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.	SHN – Drill holes have been designed predominantly to intersect the approximate east-west trend of the known lenses at Liontown at an optimal angle as possible (i.e. perpendicular). Further drilling may take place in future to ascertain the orientation of a potential feeder zone which may exhibit a more north-south characteristic. Historic – Drill holes were oriented perpendicular to the perceived strike of the host lithologies. Drill holes were drilled at a dip based on the logistics and dip of target to be tested. Orientation of drilling was designed to not bias sampling. Orientation of drill core was determined using a digital orientation tool.			
Sample security	The measures taken to ensure sample security.	DRILLING SHN – RC drill samples were collected by the Drill Contractor and then collected on site by the SHN Field Technician. The sample was then validated against a pre-prepared sample sheet to ensure the sample matched the correct interval. Samples were then collected into groups of five and placed in a labelled polyweave bag. The samples were then dispatched from site directly to the lab by SHN field personnel. Diamond core samples are collected at the time of cutting by the SHN Field Technician and validated against a pre-prepared sample sheet. In both cases, samples were then collected into groups of five and placed in a labelled polyweave bag. The samples were then dispatched from site directly to the lab by SHN field personnel. Historic - Drill samples were reportedly overseen by RVR staff during transport from site to the laboratory.			
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	DRILLING No audits were carried out by RVR or SHN on drill hole sampling practise and assaying.			



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 (previously Cromarty) for a total of 463km²; and EPMs 18470, 18471, 18713, 25815 and 25895 (previously Hebrides) for a total of 221km². The tenements are in believed to be in good standing and no known impediments exist. These leases are now held in their entirety by Sunshine (Ravenswood) Pty Ltd, a 100% owned subsidiary of Sunshine Metals Ltd. 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 these 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. The Ravenswood West area consists of EPMs 26041, 26152, 26303, 26404, 27824 and 27825, owned by wholly owned subsidiaries of Sunshine Metals 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 1024 (Delour) and ML 10315 (Podosky). One further current, third party Mining Lease exists on EPM 26075. All EPMs are owned 100% by BGM Investments Pty Ltd, a who
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Exploration activities have been carried out by Nickel Mines (1970-1973), Esso (1982-1983), Great Mines (1987), Pancontinental (1994-1995), and Liontown Resources (2007). Work programs included surface mapping, and sampling, costeans, drilling and geophysics. Historic exploration was carried out by Esso Exploration and Pancontinental Mining. This included drilling and geophysics. Historic drilling over the Liontown East area is shallow and did not intercept the current Mineral Resource mineralisation.
Geology	Deposit type, geological setting and style of mineralisation.	LIONTOWN AND LIONTOWN EAST RESOURCE The Liontown and Liontown East deposits are hosted within Cambro-Ordovician marine volcanic and volcano-sedimentary sequences of the Mt Windsor Volcanic sub-province. The Liontown and Liontown East deposits are volcanogenic massive sulphide (VMS) base metal style deposits, which typically are exhibited as lense-like massive to stringer sulphides comprised of sphalerite, galena, chalcopyrite and pyrite. The main lenses are in and around the contact a sequence of marine sediments



Criteria	A summary of all information material to the understanding of the exploration results	Commentary								
Drill hole		and a rhyodacite pumice breccia. SHN is currently focussing on the zonation of the deposit, with aim of identifying potential Cu-Au rich zones which could represent feeder zones to the overlying stratiform sulphide lenses.								
		All d	All drill hole information pertaining to this release is as follows (GDA94, Z55):							
	including a tabulation of the following		Hole_ID	Hole_Type	Max_Depth	NAT_East	NAT_North	NAT_RL	Dip	Grid Azi
	information for all Material drill holes:		23LTRC002	RC	143	402997	7742859	300	-51	008
	easting and northing of the drill hole collar		23LTRD001	RD	129.24	402994	7742856	322	-63	355
	elevation or RL (Reduced Level – elevation above and level in matters) of the drill balance		LTDD19008	DD	278.6	402619.96	7742784.03	294	-61	352
	above sea level in metres) of the drill hole collar		LTDD19029	DD	203.3	402584.92	7742788.12	293.76	-47	349
	dip and azimuth of the hole		LTDD19030	DD	114.5	402846.89	7742884.87	303.75	-53	005
	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		LLRC100	RC	168	403039.63	7742842.34	297.28	-70	005
			LLRC180	RC	160	403116.59	7742837.14	295.64	-58	349
			LLRC197	RC	178	402879.92	7742847.89	300.38	-59	002
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 \$/t)) + (Pb grade % * Pb recovery % * (Pb price \$/t/Zn price \$/t/)) + (Au grade g/t /31.103 * Au recovery % * (Au price \$/oz/Zn price \$/t* 0.01)) + (Ag grade g/t /31.103 * Ag recovery % * (Ag price \$/oz/Zn price \$/t* 0.01)). It is the opinion of Sunshine Metals and the Competent Person that all elements and products included in the metal equivalent formula have a reasonable potential to be recovered and sold.								



Criteria	Explanation	Commentary				
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').	At Liontown, the mineralisation is largely stratabound and interpreted to be dipping at ~70 degrees within the main Liontown area and steepening to the east. The exact orientation of any feeder structures to the VMS lenses remain under interpretation, but are proposed to originate north of the main lenses and potentially strike NNE-SSW. Geological and structural understanding is an ongoing process and observations and interpretations within may be modified over time. Drill holes have been designed to intercept the mineralisation as close to perpendicular as possible and where down hole intercepts are reported, true widths are likely to be ~75%. The typical drill sample interval is 1m in length. At Liontown East the average downhole thickness of the mineralised zone is 8.2m.				
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 diagrams are located within 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 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.	ASX: SHN,, 24 th November 2023, 17m @ 22.1g/t Au Confirms Liontown Feeder Zone				



Criteria	Explanation	Commentary
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 geological interpretation and targeting of potential Au-rich feeder structures and to provide more data within the Gap for future resource definition. A Mineral Resource Estimate update is currently in progress.