

ASX Release 26 November 2024

# Gap Zone grows, EM delineates next growth target - Liontown (100%)

#### Highlights -

- Final assays have been received from the latest Gap Zone diamond drilling program (6 holes, 2,323.4m). The Gap Zone is located outside of the current Resource. Results include:
  - 4.9m @ 2.08% Cu, 1.29g/t Au, 2.02% Zn (from 302.1m, 24LTDD035)
     Including 1.6m @ 4.41% Cu, 3.76g/t Au, 3.54% Zn (from 302.1m, 24LTDD035)
  - o 1.0m @ 4.95g/t Au, 1.57% Zn (from 327m, 24LTDD034)
  - 2.1m @ 1.14% Cu, 0.67g/t Au, 2.71% Zn, 1.08% Pb (from 350.9m, 24LTDD034)
- Gap Zone diamond drilling now comprises 9 holes (3,634.2m) that contain 20 intersections
  greater than Resource cut-off grade (5% ZnEq¹). The Gap Zone was previously only lightly drilled
  and is expected to significantly grow the Resource update/upgrade in early December 2024.
- In addition, an electromagnetic ("EM") conductor identified ~100m beyond the current Resource at Liontown West provides a significant Cu-Au step off target for 2025 Resource growth.
- Work involving Cu:Zn ratios to map out potential mineralisation "hot zones" is well progressed, has already validated the Liontown West EM target and will be used for future drill targeting.

Sunshine Metals Limited (ASX:SHN, "Sunshine") is on track to announce a Resource update/upgrade in early December 2024 at Liontown, part of the Ravenswood Consolidated Project, after receiving more positive assays.

The Gap Zone represents an area between the Liontown (2.94Mt @ 10.55% ZnEq) and Liontown East (1.47Mt @ 10.96% ZnEq) Resources that is ~400m long and contains only limited historic and recent drilling.

Sunshine Managing Director, Dr Damien Keys, commented "We took control of the Greater Liontown Project ~14 months ago. Within that time at Liontown, we have processed and assayed 14,764m (77 holes) of drilling, delineated a high-grade gold panel within a broader under-drilled footwall zone, improved gold-copper metallurgical recoveries and now identified our next Resource target growth area with targeted geophysics. This is a huge volume of successful work in a short timeframe.

The Gap Zone diamond drilling (9 holes, 3,634.2m) has provided 20 significant intercepts (> Resource cut-off grade) in an area  $\sim$ 160m long x  $\sim$ 200m deep, between the Liontown and Liontown East Resources.

Our next significant milestone is to update/upgrade the Liontown Resource. The Resource update will be a culmination of the 14 months work and is scheduled for release in early December 2024."

<sup>&</sup>lt;sup>1</sup> Recoverable Zinc Equivalent. Assumptions can be found in Table 1, Section 2, Data Aggregation methods.



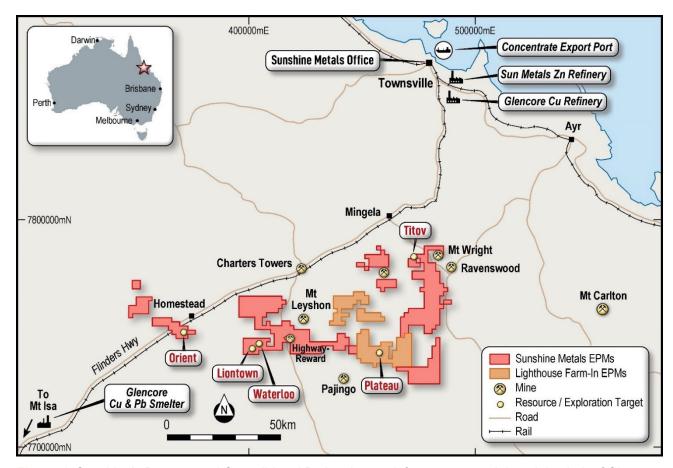


Figure 1: Sunshine's Ravenswood Consolidated Project is near infrastructure and the mining hub of Charters Towers in Queensland. This map shows the easily accessed Liontown prospect ~35km south of Charters Towers.

#### **Diamond Drilling Program - Gap Zone**

The latest assays include:

- 4.9m @ 2.08% Cu, 1.29g/t Au, 2.02% Zn (from 302.1m, 24LTDD035)
   Including 1.6m @ 4.41% Cu, 3.76g/t Au, 3.54% Zn (from 302.1m, 24LTDD035)
- 1.0m @ 4.95g/t Au, 1.57% Zn (from 327m, 24LTDD034)
- 2.1m @ 1.14% Cu, 0.67g/t Au, 2.71% Zn, 1.08% Pb (from 350.9m, 24LTDD034)

Significant Resource growth within the Gap Zone is expected with 20 intercepts above Resource cutoff grade (>5% ZnEq) intersected in an area ~160m long x ~200m deep. Other recent results from the Gap Zone, beyond the current Resource include:

- 16.2m @ 4.54g/t Au, 1.11% Cu (from 319m, 24LTDD024)
   Including 6.2m @ 9.00g/t Au, 2.52% Cu (from 329m, 24LTDD024)
- 16.7m @ 3.73g/t Au, 0.53% Cu (from 229m, 24LTDD011)
   Including 7.7m @ 6.43g/t Au, 0.85% Cu (from 238m, 24LTDD011)
- 7.6m @ 3.91g/t Au, 1.82% Cu (from 416.9m, LTDD18012)
   Including 1.75m @ 16.40g/t Au, 6.27% Cu (from 419.05m, LTDD18012)



- o 3.0m @ 0.45% Cu, 0.20g/t Au, 5.06% Zn, 1.50% Pb (from 327m, 24LTDD033)
- 6.0m @ 2.01% Cu, 0.29g/t Au, 1.72% Zn, 0.70% Pb (from 343m, 24LTDD033)
   Including 2.2m @ 4.48% Cu, 0.45g/t Au, 2.98% Zn, 1.80% Pb (from 343.8m, 24LTDD033)
- 1.0m @ 1.34% Cu, 18.95g/t Au (from 360m, 24LTDD033)
- o 1.1m @ 0.34% Cu, 0.26g/t Au, 7.12% Zn, 3.22% Pb (from 260.1m, 24LTDD032)

In addition to the results from all 9 holes into the Gap Zone, successful gold focussed RC drilling<sup>2</sup> and metallurgical test work will be included into the Resource update/upgrade in early December 2024.

### **Liontown Electromagnetic Survey – 2025 Resource Growth Target**

One of the many opportunities at Liontown is a historical versatile time domain electromagnetic ("**VTEM**") anomaly situated off the western end of the current Resource.

A small, ground-based fixed loop electromagnetic ("**FLEM**") survey to confirm the position and magnitude of the anomaly has recently been completed. A moderate conductor, typically indicative of chalcopyrite (copper sulphide) or pyrrhotite mineralisation, was identified ~100m west of the current Resource at ~50m depth. Importantly, no pyrrhotite has been previously identified at Liontown.

A previous RC hole finished at the approximate target depth and intersected gold mineralisation in the last metre drilled (end of hole). The intersection is:

o 1.0m @ 1.84g/t Au (from 99m to end of hole, LLRC078)

Amongst the nearest drilling to the FLEM target, results include:

- o 6.0m @ 8.54g/t Au, 0.80% Cu, 2.70% Zn (from 73m, 24LTRC028)
- o 5.0m @ 27.91g/t Au, 1.75% Cu (from 20m, LRC018)
- o **2.0m @ 6.81g/t Au** (from 12m, 24LTRC023)

The Liontown West EM target appears to be an extension of the historic Carrington gold workings and is a clear opportunity for shallow Resource growth in 2025. (Figures 3,4).

#### Mapping Cu-Zn ratios to identify "hot zones" for future Resource growth targeting

Sunshine is well advanced on applying a ratio of copper to zinc to map out "hot zones", interpreted to be most likely to host Cu-Au rich mineralisation, for drill targeting.

Two main "hot zones" have already been identified, coinciding with the historic Carrington workings and the Au rich panel that has returned results including 17m @ 22.1 g/t Au (from 67m, 23LTRC002) and 20m @ 18.21g/t Au (from 114m, 24LTRC005) (Figure 3). This represents an early validation of the "hot zone" concept.

A third "hot zone" is inferred on the western end of the Liontown Resource. The projected target zone coincides with the Liontown West EM target underscoring this as an exciting drill target (see Figure 3,4).

<sup>&</sup>lt;sup>2</sup> ASX: 14 August 2024, 4 June 2024, 27 May 2024, 13 March 2024



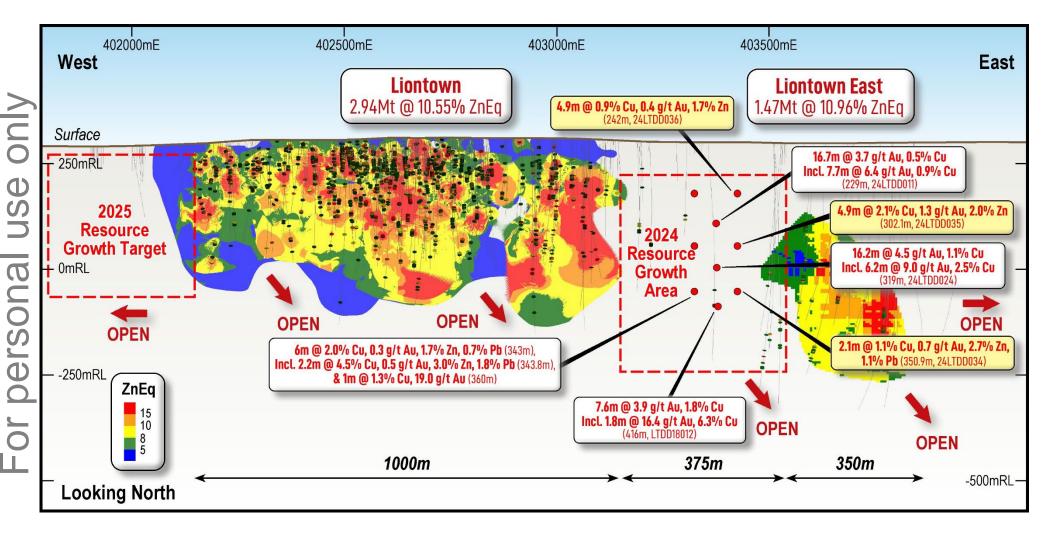


Figure 2: Long section of the ~1,600m long Liontown Resource showing the location of the recent 9 hole diamond drilling program (red dots) within the Gap Zone.

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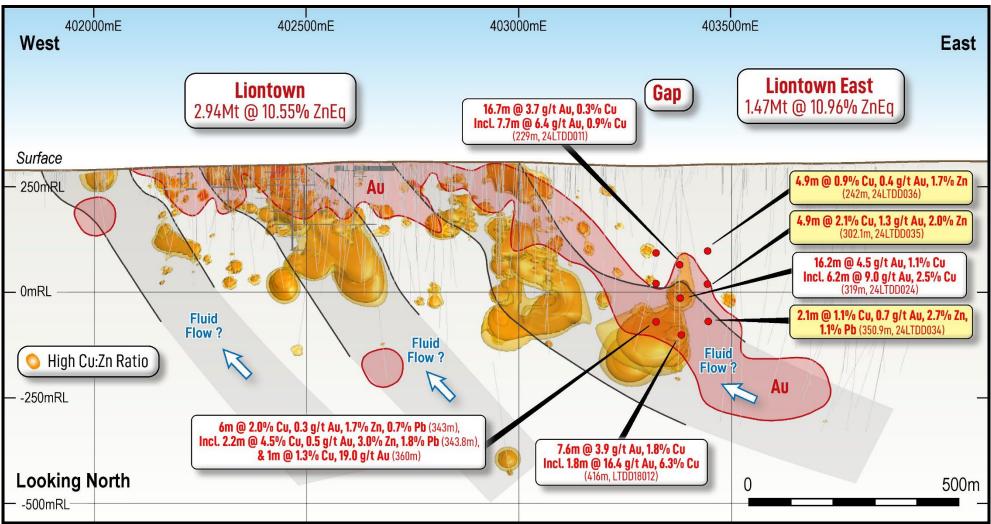


Figure 3: Long section of the footwall horizon at Liontown showing pathways of likely fluid flow into the system. Fluid pathways (grey shaded areas) are interpreted from elevated Cu:Zn ratios or 'hot zones" (orange contours). The location of high-grade Au shoots (red shaded areas) also overlap the fluid pathways.



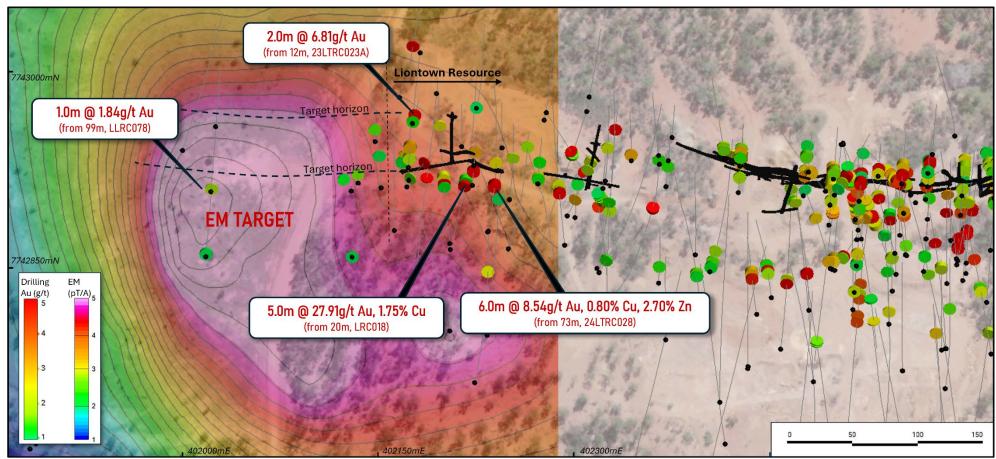


Figure 4: Plan view of the exciting Liontown West EM target showing nearby key intersections and target horizons. The target has been further validated by a "hot zone" on the western end of the Liontown Resource



#### **Planned activities**

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

November 2024: Geophysical surveys commence at Coronation/Coronation South

Nov - Dec 2024: Completion of Triumph divestment

29 November 2024: Annual General Meeting

December 2024: Liontown Resource update/upgrade

December 2024: RC drilling results Highway East and Truncheon

January 2025: Geophysical survey results from Coronation/Coronation South

#### 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.



Appendix 1: Completed DD drill collar, orientation and depth

Hole_ID	Hole_Type	Max_Depth	NAT_East	NAT_North	NAT_RL	Dip	Grid Azi
24LTDD031	DD	285.60	403345	7742796	289	-55	343
24LTDD032	DD	351.70	403345	7742796	289	-71	339
24LTDD033	DD	473.20	403377	7742745	289	-69	327
24LTDD034	DD	465.00	403377	7742745	289	-70	030
24LTDD035	DD	393.70	403377	7742745	289	-62	027
24LTDD036	DD	354.20	403382	7742773	289	-55	027

Appendix 2: Significant intercepts from diamond drilling

Cut off	Hole ID	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	ZnEq (%)
1 ZnEq	24LTDD034	323.0	324.0	1.0	0.45	1	0.21	0.01	0.11	1.41
1 ZnEq	24LTDD034	326.1	334.0	7.9	0.76	3	0.48	0.05	0.29	2.84
2 ZnEq	including	327.0	334.0	7.0	0.79	3	0.52	0.06	0.31	3.03
5 ZnEq	including	327.0	328.0	1.0	4.95	8	0.27	0.32	1.58	10.29
1 ZnEq	24LTDD034	338.9	341.0	2.1	0.10	2	0.10	0.07	0.93	1.32
1 ZnEq	24LTDD034	344.0	345.1	1.1	0.03	5	0.11	0.88	0.71	1.54
1 ZnEq	24LTDD034	350.9	353.0	2.1	0.67	15	1.14	1.07	2.71	7.40
2 ZnEq	including	350.9	352.2	1.3	1.04	21	1.74	1.37	3.44	10.53
1 ZnEq	24LTDD034	357.0	359.0	2.0	0.04	3	0.11	0.23	0.87	1.30
1 ZnEq	24LTDD034	366.0	369.0	3.0	0.62	5	0.16	0.24	0.72	2.28
1 ZnEq	24LTDD034	378.0	379.0	1.0	0.45	2	0.15	0.06	0.68	1.78
1 ZnEq	24LTDD034	382.0	385.0	3.0	0.61	2	0.04	0.11	0.56	1.66
2 ZnEq	including	382.0	383.0	1.0	1.69	1	0.08	0.05	0.25	3.16
1 ZnEq	24LTDD034	388.0	389.0	1.0	2.59	1	0.05	0.02	0.06	4.32
1 ZnEq	24LTDD034	394.0	395.0	1.0	0.04	2	0.41	0.05	0.57	1.75
1 ZnEq	24LTDD034	403.0	404.0	1.0	0.06	2	1.42	0.00	0.03	4.01
1 ZnEq	24LTDD034	414.0	415.0	1.0	0.06	7	0.50	0.15	0.90	2.44
1 ZnEq	24LTDD034	419.0	420.0	1.0	0.05	4	0.49	0.15	0.75	2.22
1 ZnEq	24LTDD034	423.0	424.0	1.0	0.04	3	0.62	0.14	0.48	2.30
1 ZnEq	24LTDD034	442.0	444.0	2.0	0.03	3	0.30	0.03	0.63	1.47
1 ZnEq	24LTDD034	447.0	450.0	3.0	0.02	2	0.09	0.37	0.79	1.22
1 ZnEq	24LTDD035	293.0	294.0	1.0	2.39	3	0.07	0.06	0.41	4.42
1 ZnEq	24LTDD035	296.0	298.0	2.0	0.55	2	0.05	0.05	0.20	1.26
1 ZnEq	24LTDD035	302.1	307.0	4.9	1.29	14	2.08	0.43	2.02	9.96
5 ZnEq	including	302.1	305.0	2.9	2.14	21	3.36	0.62	2.90	15.79
10 ZnEq	including	302.1	303.7	1.6	3.76	27	4.41	0.93	3.54	22.04
1 ZnEq	24LTDD035	311.0	314.0	3.0	0.18	11	0.21	0.19	1.91	2.84
2 ZnEq	including	312.0	313.0	1.0	0.36	29	0.46	0.41	3.03	5.21
1 ZnEq	24LTDD035	319.0	322.0	3.0	0.03	2	0.10	0.04	1.35	1.56
2 ZnEq	including	321.0	322.0	1.0	0.06	3	0.14	0.07	1.94	2.27



Cut off	Hole ID	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	ZnEq (%)
1 ZnEq	24LTDD035	325.0	333.0	8.0	0.06	3	0.07	0.25	1.59	1.88
2 ZnEq	including	326.0	328.0	2.0	0.10	6	0.05	0.55	2.54	2.93
2 ZnEq	and	331.8	333.0	1.2	0.09	4	0.25	0.16	3.12	3.73
1 ZnEq	24LTDD035	337.0	338.0	1.0	0.03	1	0.04	0.00	0.95	1.00
1 ZnEq	24LTDD035	340.0	341.0	1.0	0.05	2	0.04	0.14	1.60	1.71
1 ZnEq	24LTDD035	371.0	373.0	2.0	0.03	2	0.14	0.06	0.74	1.13
1 ZnEq	24LTDD036	241.0	253.0	12.0	0.19	6	0.41	0.23	1.15	2.66
2 ZnEq	including	242.0	246.8	4.8	0.39	11	0.89	0.35	1.75	4.96
1 ZnEq	24LTDD036	259.0	260.0	1.0	0.25	3	0.05	0.20	2.21	2.66
1 ZnEq	24LTDD036	265.0	266.0	1.0	0.02	7	0.09	0.29	1.11	1.52
1 ZnEq	24LTDD036	269.0	270.5	1.5	0.02	1	0.05	0.07	1.17	1.25
1 ZnEq	24LTDD036	307.0	309.0	2.0	0.18	2	0.31	0.09	0.34	1.49
1 ZnEq	24LTDD036	317.0	318.0	1.0	0.09	5	0.41	0.16	0.74	2.09
1 ZnEq	24LTDD036	327.0	328.0	1.0	0.03	3	0.27	0.04	0.31	1.12
1 ZnEq	24LTDD036	329.0	330.0	1.0	0.04	1	0.35	0.02	0.09	1.12
1 ZnEq	24LTDD036	332.0	334.0	2.0	0.04	1	0.65	0.01	0.08	1.90
2 ZnEq	including	332.0	333.0	1.0	0.04	1	0.87	0.02	0.07	2.52



# **About Sunshine Metals** 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 5.45mt @ 12.0% ZnEq (47% Indicated, 53% Inferred<sup>3</sup>);
- 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 (1.47mt @ 11.0% ZnEq, 100% Inferred);
- the under-drilled Liontown Au-rich footwall with significant intersections including:
  - o 5.0m @ 27.9g/t Au, 1.7% Cu (20m, LRC018)
  - O 2.0m @ 68.6g/t Au (24m, LRC0043)
  - o 20.0m @ 18.2g/t Au (109m, 24LTRC005)
  - o 17.0m @ 22.1g/t Au (67m, 23LTRC002)
  - o 8.0m @ 11.7g/t Au & 0.9% Cu (115m, LLRC184)
  - o **8.1m @ 10.7g/t Au** (154m, LTDD22055)
  - o **16.2m @ 4.54g/t Au, 1.11% Cu (**from 319m, 24LTDD024)
- advanced Au-Cu VMS targets at Coronation and Highway East, 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
- a Mo-Cu Exploration Target at Titov of 5-8mt @ 0.07-0.12% Mo & 0.28-0.44% Cu<sup>4</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.

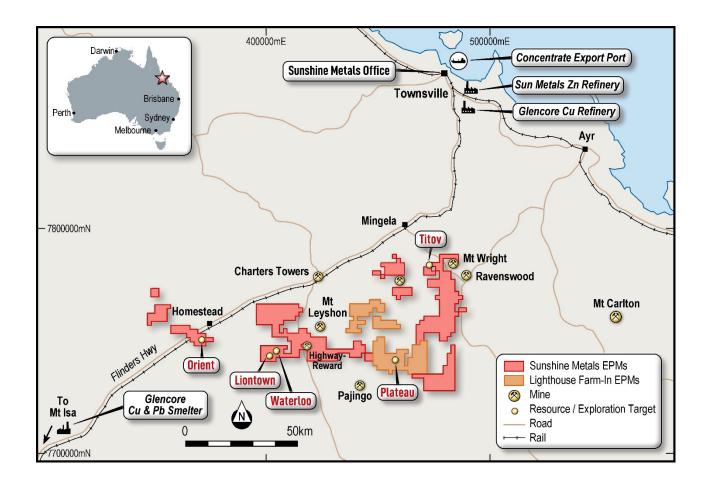
Dart Mining NL: The Triumph Gold Project was divested to Dart in August 2024. Upon completion, Sunshine will own ~14% of Dart's issued capital.

\*A number of parties have expressed interest in our other quality projects. These projects will be divested in an orderly manner in due course.

<sup>&</sup>lt;sup>3</sup> SHN ASX Release, 7 February 2024, "Significant Increase in Liontown Resource".

<sup>&</sup>lt;sup>4</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".







## Table 1, 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.	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 polyweave bags for dispatch (approximately five per bag).  Diamond holes were pre-collared as open-hole 8" PCD through the cover sequence before casing off and drilling as HQ3 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 (Prep & Au) and Brisbane (ME) 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 48 elements, including Ag, Cu, Pb and Zn. Samples were assayed for Au using a 30g Fire Assay technique. Assays over 100g Au using this technique were re-assayed using gravimetric analysis. Ba over 1% was reanalysed using XRF.
	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.	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 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-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.  GEOPHYSICS  SHN – The survey consisted of a 400x225m fixed loop using north-south lines spaced 100m apart on 50m station spacings. Three infill lines were completed during the program to bring line spacing to 50m in the area of identified conductivity. The survey utilised a DRTX transmitter and SmarTEM24 receiver at 1Hz.
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,	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 holes were pre-collared as open-hole 8" PCD through the cover sequence before casing off and drilling as HQ3 for completion of the hole.



Criteria	Explanation	Commentary
	whether core is oriented and if so, by what method, etc.).	<b>Historic</b> – 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.
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 SHN - RC sample recoveries of less than approximately 80% are noted in the geological/sampling log with a visual estimate of the actual recovery. No such samples were reported within the significant intercept zones. Moisture categorisation was also recorded. No wet samples were noted during the program. Diamond drilling recoveries were complete (100%) across the reported significant intercepts.  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. 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.	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
	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.  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.	DRILLING SHN – Samples are assayed using a 30g 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.  An internal QAQC review indicated that three zones should be re-assayed due to potential under-reporting of Au and Cu identified from SHN's CRM program. The zones re-reported within acceptable limits. One sample from 24LTDD033 returned an Au assay returning significantly lower the original sample, which may indicate some minor nugget effect. Screen fire testing of some Au samples is recommended.  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.  GEOPHYSICS  SHN – Readings were taken using a SmarTEM24 receiver at 1Hz. The data was reviewed daily by a consulting geophysicist for QAQC purposes. The data was deemed of good quality and no repeats were required.
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 – No new drill holes reported within this document have been twinned or were designed as twinned holes. Verification of significant intercepts has been undertaken internally by alternative company personnel.  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.  GEOPHYSICS SHN – The fixed-loop EM survey (FLEM) was undertaken on an area of interpreted anomalous conductivity identified in a historical airborne versatile time-domain electromagnetic survey (VTEM). No comparisons can be drawn between the two surveys.



Criteria	Explanation	Commentary
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.	DRILLING SHN – Drilled holes have been surveyed using a handheld GPS. Coordinates are displayed within GDA94, Zone 55 format. Downhole surveys were conducted with an industry-standard gyroscopic survey tool.  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.  GEOPHYSICS SHN – All transmitter and receiver locations were accurately surveyed using DGPS.
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.	DRILLING  24LTDD011 and 024 were spaced approximately 100m apart vertically, with 24LTDD024 approximately 90m vertically above historical hole LTDD18012. Drill holes 24LTRC007, 009 and 011 were spaced laterally (E-W) approximately 100m apart.  Holes 24LTDD031, 032 and 033 were targeted on section ~80m west of the section containing drill holes 24LTDD011 and 024. Holes 24LTDD034, 035 and 036 were targeted on section ~80m east of the section containing drill holes 24LTDD011 and 024.  No samples compositing has been applied to the intersections reported.  GEOPHYSICS  SHN – The survey consisted of a 400x225m fixed loop using north-south lines spaced 100m apart on 50m station spacings. Three infill lines were completed during the program to bring line spacing to 50m in the area of identified
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.	DRILLING 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). One drill hole, 24LTRC025, was drilled from north to south due to logistics of the drill pad placement.  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.  GEOPHYSICS



Criteria	Explanation	Commentary
		SHN – Survey lines were oriented north-south in order to transect the known local mineralisation and stratigraphy as perpendicular as possible.
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.  GEOPHYSICS SHN - Data was collected on site by the geophysical contractor and is reviewed on site for data quality. The collected data is then sent digitally to SHN and the Geophysical Consultant who will undertake further data review, quality control and processing.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	DRILLING  No audits have been carried out on the newly reported drill or geophysics results herein.



# **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	ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, parties title interests, historical sites	Greater Liontown Exploration Permits are: EPMs 10582, 12766, 14161, 16929, 26718, 27168, 27221, 27223, 27357, 27520 and 27731, Mining Lease 10277 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
	wilderness or national park and environmental settings.	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.
	The security of the tenure held at the time of reporting along with any known impediments	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 Ian Doxford).
	to obtaining a licence to operate in the area.	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 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 Metals has the option to earn 75% of the project.
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



Criteria	Explanation	Commentary
		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 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.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:  • easting and northing of the drill hole collar	All new drill data presented in this release is compiled in Appendix 1.
	<ul> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	
	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	
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of	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.
	high grades) and cut-off grades are usually Material and should be stated.	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.
	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 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)).



Criteria	Explanation	Commentary
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	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.
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 typically east-west and either stratabound and interpreted to be dipping at ~70 degrees roughly south or potentially related to feeder structures exhibiting a sub-vertical dip The exact orientation of any feeder structures to the VMS lenses remain under interpretation. 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;	All II meaningful and material data is reported within the body of the report.  For the latest resource update at the Liontown deposit, please refer to:  • ASX: SHN, 7 <sup>th</sup> February 2024, Significant Increase in Liontown Resource  For the most recent previous releases outlining SHN drill assay results please refer to:  • ASX: SHN, 24 <sup>th</sup> November 2023, 17m @ 22.1g/t Au Confirms Liontown Feeder Zone  • ASX: SHN, 13 <sup>th</sup> March 2024, 20m @ 18.21g/t Au Extends Au-Cu Rich Footwall at Liontown  • ASX: SHN, 27 <sup>th</sup> May 2024, New, High Grade Copper Lode - Liontown  • ASX: SHN, 4 <sup>th</sup> June 2024, Step Out Holes Hit Thick High-Grade Gold-Copper Liontown  For a detailed summary on the historical Liontown and Liontown East Mineral Resource Estimates, please refer to:  • ASX: SHN, 8 <sup>th</sup> May 2023, Fully Funded Acquisition of Greater Liontown



Criteria	Explanation	Commentary
	potential deleterious or contaminating substances.	
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 Zone and Sapidinus Lode for future resource definition.