

Sunshine Metals Limited ABN 12 063 388 821 1/23 Mackley Street, Garbutt, Qld 4814

# **ASX Release**

13 November 2024

## Significant sulphides intersected at Highway East

## Highlights

- An exploration RC drill program (9 holes, 1,830m) has been completed at Truncheon and Highway East. The program targeted copper and gold mineralisation analogous to that mined from the nearby Highway Reward Mine (3.9Mt at 5.4% Cu & 1.1g/t Au produced).
- One hole from Highway East was fast tracked for assay to assist with identification of a fine black sulphide (sphalerite) within heavily pyritic<sup>1</sup> and chlorite altered volcanics. The intersection returned:
  - o 14m @ 0.87% Zn from 40m (24HERC002)
- This result is significant as zinc forms a halo to the chalcopyrite-pyrite mineralisation at the Highway Reward Mine analogue and is considered a proximal pathfinder mineral. Sphalerite has been observed in 4 of the 6 holes from Highway East<sup>1</sup>.

Results for the 8 remaining holes are expected in November-December 2024.

 Next phase exploration at Highway East will incorporate an electromagnetic geophysical survey in early 2025 designed to discriminate semi-massive/massive chalcopyrite bodies from pyrite dominant mineral assemblages. This data was valuable in targeting potential massive sulphide pipes at Highway Reward.

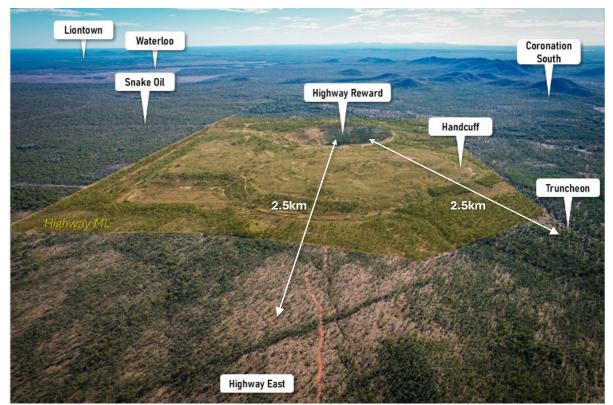
Sunshine Metals Limited (ASX:SHN, "Sunshine") has intersected semi-massive sulphide containing zinc at Highway East, part of the Ravenswood Consolidated Project. Zinc forms a halo to high-grade Cu-Au mineralisation at the analogous Highway Reward Mine, 2.7km west of Highway East.

**Sunshine Managing Director, Dr Damien Keys**, commented "The broad spaced reconnaissance drilling is the first serious test of the Highway East IP and soil anomaly. The intersection of both semimassive pyrite and a coherent zone of highly anomalous zinc mineralisation is analogous to the halo to mineralisation at Highway Reward and is considered extremely encouraging.

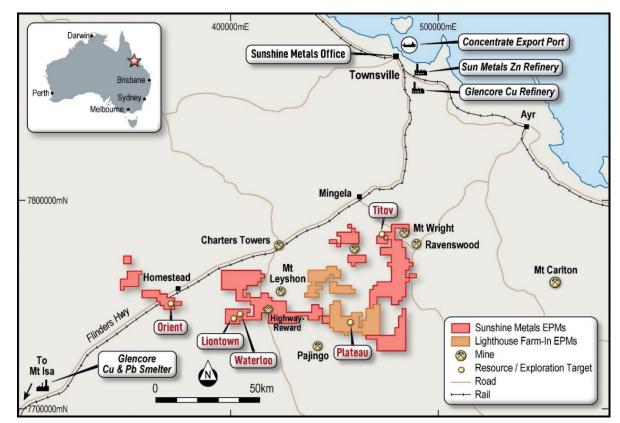
Electromagnetic geophysical surveys are efficient at discriminating chalcopyrite (copper mineralisation) from pyrite. EM surveys across the broader Highway East and Truncheon area will commence in early 2025."

<sup>&</sup>lt;sup>1</sup> Cautionary statement: The Company draws attention to the inherent uncertainty in reporting visual results. Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Tables of sulphide type and abundance on page 8.





*Figure 1.* Aerial image of the Truncheon and Highway East targets relative to the high-grade Highway Reward Cu-Au Mine. Other nearby Sunshine targets/deposits are also highlighted.



*Figure 2.* Sunshine's Ravenswood Consolidated Project is near the mining hub of Charters Towers in Queensland. This map shows the easily accessed Highway-Reward district which includes Truncheon and Highway East.

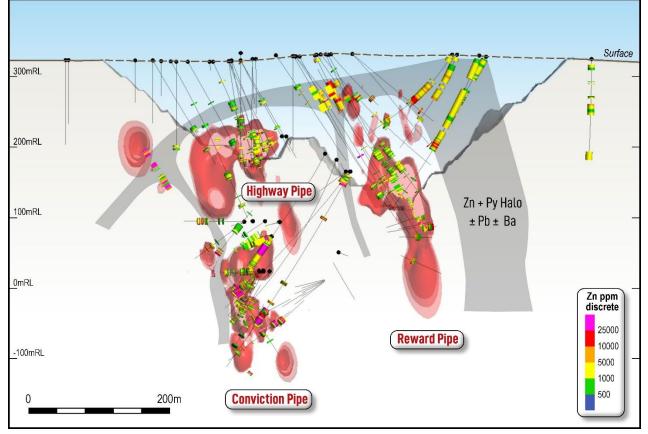


#### **Highway Reward Mine - Analogue**

Sunshine's exploration model at Highway East is based on Highway Reward as an analogue. Highway Reward is considered a pipe-style volcanogenic massive sulphide ("**VMS**") deposit and is located 35km south of Charters Towers. The first massive sulphide pipe, Reward, was discovered in 1987. A second pipe, Highway, was discovered 150m to the northwest in 1990 under ~100m of weathered and Au-barite-bearing gossanous rhyolite.

The mineralisation typically comprised massive pyrite-chalcopyrite in subvertical pipe-like bodies. The massive pyrite-chalcopyrite pipes are enveloped by a halo of sphalerite (low-moderate grade zinc). Doyle and Huston (1999)<sup>2</sup> refer to the zinc halo at Highway Reward:

"Sphalerite-rich halo: The pyrite-chalcopyrite pipes are surrounded by a Zn-Pb-Barich halo up to 500m wide in an east-west direction and around 225m long from north to south. Within this halo there are four subtypes of Zn  $\pm$  Pb  $\pm$  Ba ore: (1) veins and veinlets of sphalerite  $\pm$  galena  $\pm$  barite; (2) **disseminated**, **patchy**, **and spotty sphalerite within sericite-chlorite \pm quartz-altered rocks at the tops of the pipes**; (3) strata-bound massive pyrite-sphalerite-chalcopyrite-galena-barite ore hosted by volcaniclastic mass-flow units in the hanging wall to the Reward pipe; (4) **discordant zones of massive to semi-massive pyrite-sphalerite \pm chalcopyrite \pm quartz \pm barite at the margins of the main pyrite pipes."** 



*Figure 3.* Cross section through Highway Reward, showing modelled chalcopyrite-pyrite pipes, the halo of sphalerite mineralisation and zinc in drill results.

<sup>&</sup>lt;sup>2</sup> Doyle, M.G., Huston, D.L., 1999, The Subsea-Floor Replacement of the Ordovician Highway-Reward Volcanic-Associated Massive Sulfide Deposit, Mount Windsor Subprovince Australia, Economic Geology, Vol 94, pp 825-844.



## Highway East RC Drilling – Historic

Highway East is located 2.5km east of Highway Reward and 2.5km south of Truncheon. Highway East is expressed as a 1km long density anomaly with coincident Pb (>200ppm) and Zn (>500ppm) in soil.

In addition, a recent IP survey returned a strong chargeability zone (>30msec) coinciding with part of the density and soil anomalism. Historic, shallow RC drilling results included broad zinc intercepts including 51m @ 0.30% Zn (from surface to end of hole, MWHE916) and elevated silver to 690g/t Ag (1m width, from 70m, HE129). Gold was not assayed.

Subsequently, a deeper RC program (6 holes, 1,212m) was drilled across ~500m of strike length as a first pass test of the strongest IP anomalism. Results from the 6 holes included:

- heavily pyritic and chlorite-sericite-silica altered volcanics in all 6 holes;
- minor rhyolite and sediments in 5 of the holes;
- semi-massive pyrite (10-35%) in 4 of the holes; and
- fine-grained sphalerite (zinc sulphide) in 4 of the holes.

This provides further support for a substantial halo to potential chalcopyrite-pyrite mineralisation which can be used as a proximal pathfinder mineral.

## Highway East RC Drilling – Visual Results from Recent Drilling

In the recent drill program, quantification of the concentration of sphalerite was difficult due to the dark nature of the mineral, found within fine-grained dark chlorite alteration and abundant pyrite. Accordingly, RC hole 24HERC002 was sent for rapid assay and confirmed the presence of zinc, with an intersection returning:

o 14m @ 0.87% Zn from 40m (24HERC002)

From the assay data, the pyrite content in the rock mass was also calculated at:

o 154m @ 9.3% pyrite from 26m (24HERC002)

As per Doyle and Huston's Highway Reward observations (above), the presence of **discordant zones of massive to semi-massive pyrite-sphalerite ± chalcopyrite ± quartz** provide encouragement for a nearby, fertile, VMS system.

Electromagnetic geophysical surveys are efficient at discriminating chalcopyrite (copper mineralisation) from pyrite and provide discrete drill ready targets. EM surveys will be designed once final assays are received and are expected to be completed over Highway East and Truncheon early in 2025.

Summary geological logs and visual sulphide estimates can be found in Appendix B on page 8.



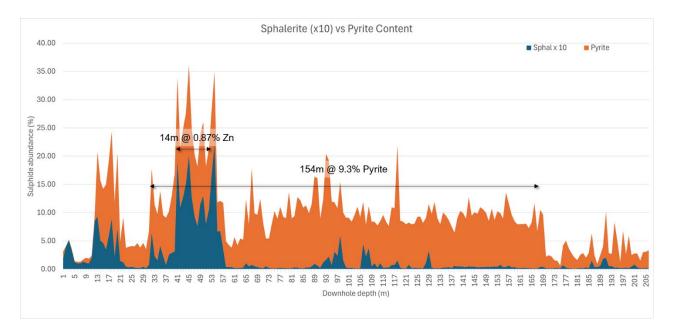
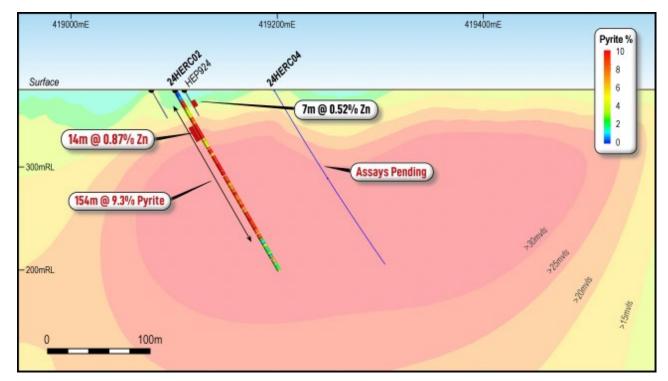


Figure 4. Graph of calculated sphalerite (x10) and pyrite contents within 24HERC002.



*Figure 5.* Cross section showing IP anomalism, calculated pyrite abundance and zinc mineralisation in 24HERC002.

## Truncheon (3 RC holes, 580m)

Truncheon is located 2.5km northeast of Highway Reward. Truncheon presents as two strong gravity anomalies (East and West) with the western gravity feature coincident with robust geochemical anomalism in soil – notably a 200m coherent zone of Au (>50ppb), Cu (>250ppm), Pb (>300ppm) and Zn (>1,000ppm).



The gravity anomalies are separated by a magnetic break across which the soil geochemistry changes. The western anomaly has seen only limited historic drilling with the majority of that drilling focussed on the eastern gravity anomaly. Historical drilling in the west returned up to 5m @ 2.20% Zn (from 18m, HT119) and was not assayed for Au.

Sunshine drilled 3 first pass deep RC holes (618m) into the western gravity anomaly where it was coincident with strong surface geochemistry.

Drilling intersected zones of strong silica-sericite within otherwise chloritized volcanics. Moderate amounts of pyrite, occasional chalcopyrite and sphalerite were seen in holes 24TRRC001 and 24TRRC002. Summary geological logs and visual sulphide estimates can be found in Appendix B on page 8.

As per Doyle and Houston (see Highway Reward section), the **disseminated**, **patchy**, **and spotty sphalerite within sericite-chlorite ± quartz-altered rocks** are similar those **at the top of the Highway Reward pipes**.

Given the tops of the Highway and Reward pipes were gold-rich, any indication of gold in pending assay data will be highly encouraging.

## **Planned activities**

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

- > 13-15 November 2024: Noosa Mining Conference
- November 2024: Remaining diamond drilling results for the Gap Zone
- November 2024: Geophys surveys: Coronation South and Liontown
- Nov-Dec 2024: RC drilling results Highway East and Truncheon
- November 2024: Annual General Meeting
- December 2024: Liontown Resource Update



#### 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 A : Significant Intersections from 24HERC002

Cut off	HoleID	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)
0.5 Zn	24HERC002	11	13	2	0.0	1.5	0.02	0.28	0.57
0.5 Zn	24HERC002	17	18	1	0.0	0.7	0.02	0.24	0.57
0.5 Zn	24HERC002	40	54	14	0.0	1.2	0.02	0.14	0.87
1 Zn	inc	40	41	1	0.0	2.0	0.02	0.81	1.24
1 Zn	inc	44	45	1	0.0	2.9	0.02	0.07	1.29
1 Zn	and	52	54	2	0.0	0.6	0.00	0.01	1.26



#### Appendix B : Summary Geological Logs and Visual Sulphide Estimates from RC drilling

**Cautionary statement:** The Company draws attention to the inherent uncertainty in reporting visual results. Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest.

Hole Id	From	То	Lithology Description	Alteration Description	Sulphide 1	Sulph 1 %	Sulphide 2	Sulph 2 %	Ox Description
24HERC001	0.00	1.00	Gossan	Iron Oxide/ Hematite					Completely Weathered
24HERC001	1.00	5.00	Rhyolite	Iron Oxide					Strongly Weathered
24HERC001	5.00	10.00	Rhyolite/ Dacite	Iron Oxide/ Sericite/ Chlorite	Pyrite	0.5			Strongly Weathered
24HERC001	10.00	14.00	Andesite	Iron Oxide/ Sericite/ Chlorite	Pyrite	0.5			Weakly Weathered
24HERC001	14.00	40.00	Dacite	Sericite/ Chlorite	Pyrite	0.5			Weakly Weathered
24HERC001	40.00	42.00	Vein Zone/ Dacite	Sericite/ Chlorite	Pyrite	0.5			Fresh Rock
24HERC001	42.00	44.00	Dacite	Sericite/ Chlorite	Pyrite	0.5			Fresh Rock
24HERC001	44.00	46.00	Dacite	Sericite/ Chlorite	Pyrite	0.5			Fresh Rock
24HERC001	46.00	51.00	Vein Zone/ Dacite	Sericite	Pyrite	0.5			Fresh Rock
24HERC001	51.00	121.00	Dacite	Sericite	Pyrite	0.5			Fresh Rock
24HERC001	121.00	126.00	Dacite	Silica/ Chlorite	Pyrite	1.0			Fresh Rock
24HERC001	126.00	132.00	Dacite	Silica/ Chlorite	Pyrite	5.0			Fresh Rock
24HERC001	132.00	170.00	Dacite	Silica/ Chlorite	Pyrite	1.0			Fresh Rock
24HERC001	170.00	177.00	Dacite	Silica/ Chlorite	Pyrite	0.1			Fresh Rock
24HERC001	177.00	178.00	Dacite	Silica/ Chlorite	Pyrite	5.0			Fresh Rock
24HERC001	178.00	202.00	Dacite	Silica/ Chlorite	Pyrite	1.0			Fresh Rock
24HERC002	0.00	3.00	Andesite	Iron Oxide					Moderately Weathered
24HERC002	3.00	12.00	Rhyolite	Iron Oxide/ Hematite					Strongly Weathered
24HERC002	12.00	15.00	Dacite	Sericite	Pyrite	1.0			Fresh Rock
24HERC002	15.00	20.00	Dacite	Sericite	Pyrite	4.0			Fresh Rock
24HERC002	20.00	22.00	Dacite	Silica/ Chlorite	Pyrite	4.0			Fresh Rock
24HERC002	22.00	52.00	Dacite	Silica/ Chlorite	Pyrite	15.0	Sphalerite	1.0	Fresh Rock
24HERC002	52.00	53.00	Dacite	Sericite	Pyrite	5.0	Sphalerite	3.0	Fresh Rock
24HERC002	53.00	151.00	Dacite	Sericite	Pyrite	8.0			Fresh Rock
24HERC002	151.00	162.00	Dacite	Sericite	Pyrite	0.1			Fresh Rock
24HERC002	162.00	166.00	Dacite	Sericite	Pyrite	5.0			Fresh Rock
24HERC002	166.00	170.00	Dacite	Silica/ Chlorite/ Sericite	Pyrite	0.1			Fresh Rock
24HERC002	170.00	202.00	Dacite	Sericite	Pyrite	0.3			Fresh Rock
24HERC003	0.00	1.00	Tertiary Cover	Iron Oxide					Moderately Weathered
24HERC003	1.00	3.00	Andesite	Iron Oxide					Moderately Weathered



Hole Id	From	То	Lithology Description	Alteration Description	Sulphide 1	Sulph 1 %	Sulphide 2	Sulph 2 %	Ox Description
24HERC003	3.00	7.00	Rhyolite/ Andesite	Iron Oxide					Strongly Weathered
24HERC003	7.00	10.00	Dacite	Iron Oxide					Slightly Weathered
24HERC003	10.00	14.00	Dacite	Iron Oxide					Slightly Weathered
24HERC003	14.00	20.00	Dacite	Sericite/ Chlorite	Pyrite	0.5			Fresh Rock
24HERC003	20.00	73.00	Dacite	Potassium Feldspar	Pyrite	0.3			Fresh Rock
24HERC003	73.00	80.00	Dacite	Silica/ Chlorite/ Sericite	Pyrite	1.0			Fresh Rock
24HERC003	80.00	101.00	Dacite	Silica/ Chlorite/ Sericite	Pyrite	0.3			Fresh Rock
24HERC003	101.00	107.00	Dacite	Silica	Pyrite	0.3			Fresh Rock
24HERC003	107.00	108.00	Dacite	Silica	Pyrite	1.0			Fresh Rock
24HERC003	108.00	137.00	Dacite	Silica	Pyrite	0.5			Fresh Rock
24HERC003	137.00	160.00	Dacite	Silica	Pyrite	0.3			Fresh Rock
24HERC003	160.00	172.00	Dacite	Silica/ Chlorite	Pyrite	0.3			Fresh Rock
24HERC003	172.00	176.00	Dacite	Silica/ Chlorite	Pyrite	1.0			Fresh Rock
24HERC003	176.00	202.00	Dacite	Silica/ Chlorite	Pyrite	0.3			Fresh Rock
24HERC004	0.00	5.00	Tertiary Cover	Iron Oxide					Strongly Weathered
24HERC004	5.00	7.00	Dacite	Silica/ Sericite					Strongly Weathered
24HERC004	7.00	10.00	Dacite	Silica/ Sericite					Slightly Weathered
24HERC004	10.00	60.00	Dacite	Silica/ Sericite	Pyrite	5.0			Fresh Rock
24HERC004	60.00	84.00	Chert	Silica/ Sericite	Pyrite	4.0	Chalcopyrite	1.0	Fresh Rock
24HERC004	84.00	137.00	Dacite	Silica/ Sericite	Pyrite	5.0	Sphalerite	1.0	Fresh Rock
24HERC004	137.00	139.00	Dolerite	Chlorite					Fresh Rock
24HERC004	139.00	157.00	Dacite	Silica/ Sericite	Pyrite	5.0	Galena	1.0	Fresh Rock
24HERC004	157.00	158.00	Dolerite	Chlorite					Fresh Rock
24HERC004	158.00	202.00	Dacite	Silica/ Sericite	Pyrite	10.0	Galena	1.0	Fresh Rock
24HERC005	0.00	1.00	Alluvium	Sericite					Completely Weathered
24HERC005	1.00	4.00	Dacite	Sericite/ Iron Oxide					Strongly Weathered
24HERC005	4.00	9.00	Dacite	Sericite/ Iron Oxide	Pyrite	0.1			Moderately Weathered
24HERC005	9.00	22.00	Dacite	Chlorite/ Silica	Pyrite	0.5	Sphalerite	0.5	Fresh Rock
24HERC005	22.00	26.00	Siltstone	Chlorite/ Sericite	Pyrite	0.1			Fresh Rock
24HERC005	26.00	65.00	Semi-Massive Sulphide/ Siltstone	Chlorite/ Pyrite	Pyrite	25.0	Sphalerite	5.0	Fresh Rock
24HERC005	65.00	202.00	Dacite	Chlorite/ Silica	Pyrite	1.0	Sphalerite	1.0	Fresh Rock
24HERC006	0.00	5.00	Dacite	Clay					Moderately Weathered
24HERC006	5.00	6.00	Andesite	Silica	Pyrite	0.5	Sphalerite	0.1	Fresh Rock
24HERC006	6.00	8.00	Dacite		Pyrite	8.0	Sphalerite	2.0	Moderately Weathered



Hole Id	From	То	Lithology Description	Alteration Description	Sulphide 1	Sulph 1 %	Sulphide 2	Sulph 2 %	Ox Description
24HERC006	8.00	9.00	Rhyolite	Silica	Pyrite	8.0	Sphalerite	2.0	Fresh Rock
24HERC006	9.00	64.00	Dacite/ Andesite	Silica	Pyrite	8.0	Sphalerite	2.0	Fresh Rock
24HERC006	64.00	65.00	Andesite	Silica	Pyrite	1.0	Sphalerite	1.0	Fresh Rock
24HERC006	65.00	78.00	Dacite	Silica	Pyrite	10.0	Sphalerite	1.0	Fresh Rock
24HERC006	78.00	79.00	Dolerite	Silica/ Chlorite Silica/	Pyrite	0.5			Fresh Rock
24HERC006	79.00	81.00	Dacite	Chlorite Silica/	Pyrite	0.5			Fresh Rock
24HERC006	81.00	91.00	Dacite	Chlorite	Pyrite	2.0			Fresh Rock
24HERC006	91.00	92.00	Dacite	Silica/ Chlorite	Pyrite	0.1			Fresh Rock
24HERC006	92.00	93.00	Mafic Dyke	Silica/ Chlorite	Pyrite	0.1			Fresh Rock
24HERC006	93.00	127.00	Dacite	Silica/ Chlorite	Pyrite	1.0			Fresh Rock
24HERC006	127.00	128.00	Dacite	Silica/ Chlorite	Pyrite	8.0			Fresh Rock
24HERC006	128.00	130.00	Dacite	Silica/ Chlorite	Pyrite	3.0			Fresh Rock
24HERC006	130.00	133.00	Dacite	Silica/ Chlorite	Pyrite	0.5			Fresh Rock
24HERC006	133.00	146.00	Dacite	Silica/ Chlorite	Pyrite	2.0			Fresh Rock
24HERC006	146.00	148.00	Dacite	Chlorite	Pyrite	5.0			Fresh Rock
24HERC006	148.00	161.00	Dacite	Chlorite	Pyrite	2.0			Fresh Rock
24HERC006	161.00	169.00	Dacite	Chlorite	Pyrite	7.0			Fresh Rock
24HERC006	169.00	175.00	Dacite	Chlorite/ Silica	Pyrite	7.0			Fresh Rock
24HERC006	175.00	202.00	Dacite	Chlorite/ Silica	Pyrite	0.5			Fresh Rock
24TRRC001	0.00	2.00	Tertiary Cover	Iron Oxide/ Clay					Completely Weathered
24TRRC001	2.00	3.00	Rhyolite	Iron Oxide/ Clay					Completely Weathered
24TRRC001	3.00	10.00	Rhyolite	Iron Oxide					Moderately Weathered
24TRRC001	10.00	15.00	Rhyolite	Iron Oxide					Moderately Weathered
24TRRC001	15.00	70.00	Andesite	Silica/ Sericite	Pyrite	1.0			Fresh Rock
24TRRC001	70.00	75.00	Andesite	Sericite/ Chlorite	Pyrite	5.0	Sphalerite	2.0	Fresh Rock
24TRRC001	79.00	82.00	Andesite	Chlorite	Pyrite	0.5			Fresh Rock
24TRRC001	82.00	90.00	Dacite	Silica/ Chlorite	Pyrite	1.0			Fresh Rock
24TRRC001	90.00	94.00	Andesite	Chlorite	Pyrite	0.1			Fresh Rock
24TRRC001	94.00	96.00	Dacite	Silica/ Chlorite	Pyrite	0.5			Fresh Rock
24TRRC001	96.00	98.00	Andesite	Chlorite/ Hematite	Pyrite	0.5			Fresh Rock
24TRRC001	98.00	100.00	Gossan/ Andesite	Chlorite/ Hematite	Pyrite	5.0			Fresh Rock
24TRRC001	101.00	110.00	Dacite	Chlorite/ Hematite	Pyrite	2.0			Fresh Rock
24TRRC001	110.00	116.00	Andesite	Chlorite	Pyrite	0.5			Fresh Rock
24TRRC001	116.00	117.00	Andesite	Chlorite	Pyrite	5.0			Fresh Rock
24TRRC001	117.00	127.00	Andesite	Chlorite	Pyrite	1.0			Fresh Rock
24TRRC001	127.00	129.00	Dacite	Silica/ Chlorite	Pyrite	5.0			Fresh Rock
24TRRC001	129.00	130.00	Dacite	Silica/ Chlorite	Pyrite	10.0	Sphalerite	2.0	Fresh Rock



Hole Id	From	То	Lithology Description	Alteration Description	Sulphide 1	Sulph 1 %	Sulphide 2	Sulph 2 %	Ox Description
24TRRC001	130.00	133.00	Dacite	Silica/ Chlorite	Pyrite	0.5			Fresh Rock
24TRRC001	133.00	134.00	Dacite	Silica/ Chlorite	Pyrite	5.0			Fresh Rock
24TRRC001	134.00	137.00	Dacite	Silica/ Chlorite	Pyrite	0.5			Fresh Rock
24TRRC001	137.00	143.00	Andesite	Chlorite	Pyrite	0.5			Fresh Rock
24TRRC001	143.00	145.00	Andesite	Chlorite	Pyrite	5.0			Fresh Rock
24TRRC001	145.00	148.00	Andesite	Silica/ Sericite	Pyrite	5.0			Fresh Rock
24TRRC001	148.00	185.00	Andesite	Silica/ Sericite	Pyrite	0.5			Fresh Rock
24TRRC001	185.00	187.00	Dacite	Silica/ Chlorite	Pyrite	0.1			Fresh Rock
24TRRC001	187.00	188.00	Andesite	Chlorite/ Sericite	Pyrite	0.1			Fresh Rock
24TRRC001	188.00	191.00	Andesite/ Quartz Vein	Chlorite/ Sericite	Pyrite	5.0			Fresh Rock
24TRRC001	191.00	194.00	Mafic - Undifferentiated	Magnetite/ Chlorite	Pyrite	0.5			Fresh Rock
24TRRC001	194.00	205.00	Andesite	Chlorite	Pyrite	0.5			Fresh Rock
24TRRC001	205.00	208.00	Andesite	Silica/ Sericite	Pyrite	30.0			Fresh Rock
24TRRC001	208.00	210.00	Quartz Vein/ Andesite	Silica/ Sericite	Pyrite	10.0			Fresh Rock
24TRRC001	210.00	218.00	Andesite	Silica/ Sericite	Pyrite	30.0			Fresh Rock
24TRRC001	218.00	219.00	Hydrothermal Breccia	Silica/ Sericite	Pyrite	15.0	Chalcopyrite	5.0	Fresh Rock
24TRRC001	219.00	222.00	Andesite	Silica/ Sericite	Pyrite	8.0	Chalcopyrite	2.0	Fresh Rock
24TRRC001	222.00	232.00	Andesite	Sericite	Pyrite	1.0			Fresh Rock
24TRRC002	0.00	5.00	Rhyolite	Iron Oxide					Moderately Weathered
24TRRC002	5.00	6.00	Rhyolite	Clay/ Iron Oxide					Moderately Weathered
24TRRC002	6.00	16.00	Rhyolite	Iron Oxide					Moderately Weathered
24TRRC002	16.00	45.00	Andesite	Sericite	Pyrite	0.5			Fresh Rock
24TRRC002	45.00	114.00	Andesite	Sericite/ Chlorite	Pyrite	0.3			Fresh Rock
24TRRC002	114.00	115.00	Gossan/ Andesite	Sericite/ Chlorite	Pyrite	5.0			Fresh Rock
24TRRC002	115.00	130.00	Andesite	Sericite/ Chlorite	Pyrite	0.5			Fresh Rock
24TRRC002	130.00	132.00	Mafic - Undifferentiated/ Andesite	Sericite/ Chlorite	Pyrite	5.0			Fresh Rock
24TRRC002	132.00	134.00	Quartz Vein/ Andesite	Sericite/ Chlorite	Pyrite	0.5			Fresh Rock
24TRRC002	134.00	136.00	Andesite	Sericite/ Chlorite	Pyrite	0.5			Fresh Rock
24TRRC002	136.00	137.00	Quartz Vein/ Andesite	Sericite/ Chlorite	Pyrite	5.0			Fresh Rock
24TRRC002	137.00	168.00	Andesite	Sericite/ Chlorite	Pyrite	0.3			Fresh Rock
24TRRC002	168.00	169.00	Fault Zone	Sericite/ Clay					Fresh Rock
24TRRC002	169.00	202.00	Andesite	Epidote					Fresh Rock
24TRRC003	0.00	1.00	Tertiary Cover	Iron Oxide/ Clay					Strongly Weathered
			Rhyolite/	Iron Oxide/	Durito	2.0			Strongly
24TRRC003	1.00	7.00	Andesite	Clay	Pyrite	2.0			Weathered



Hole Id	From	То	Lithology Description	Alteration Description	Sulphide 1	Sulph 1 %	Sulphide 2	Sulph 2 %	Ox Description
24TRRC003	19.00	20.00	Andesite	Sericite	Pyrite	2.0			Fresh Rock
24TRRC003	20.00	29.00	Andesite	Sericite	Pyrite	0.1			Fresh Rock
24TRRC003	29.00	31.00	Gossan/ Andesite	Sericite	Pyrite	3.0			Fresh Rock
24TRRC003	31.00	38.00	Andesite	Sericite/ Silica					Fresh Rock
24TRRC003	38.00	39.00	Andesite	Sericite/ Silica					Fresh Rock
24TRRC003	39.00	41.00	Andesite	Sericite/ Silica					Fresh Rock
24TRRC003	41.00	54.00	Andesite	Sericite/ Silica	Pyrite	0.5			Fresh Rock
24TRRC003	54.00	55.00	Andesite	Sericite/ Silica	Galena	0.3	Pyrite	0.2	Fresh Rock
24TRRC003	55.00	99.00	Andesite	Sericite/ Silica	Pyrite	0.1			Fresh Rock
24TRRC003	99.00	100.00	Andesite	Sericite	Pyrite	2.0			Fresh Rock
24TRRC003	100.00	127.00	Andesite	Sericite					Fresh Rock
24TRRC003	127.00	184.00	Andesite	Sericite/ Chlorite	Pyrite	1.0			Fresh Rock

## Appendix B : Collar and survey details for RC drilling

Prospect	Hole_ID	Max Depth	Easting	Northing	RL	Dip	Azmuth
Highway East	24HERC001	202.00	419099	7747998	376	-60	090
Highway East	24HERC002	202.00	419106	7747902	371	-60	090
Highway East	24HERC003	202.00	419193	7747907	377	-60	090
Highway East	24HERC004	202.00	418999	7747501	364	-60	090
Highway East	24HERC005	202.00	419152	7747803	374	-60	090
Highway East	24HERC006	202.00	419096	7748099	381	-60	090
Truncheon	24TRRC001	232.00	418547	7749428	376	-50	005
Truncheon	24TRRC002	202.00	418547	7749424	379	-60	325
Truncheon	24TRRC003	184.00	418612	7749560	360	-60	335
		•		•	<b>-</b>		



## 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
- o 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.

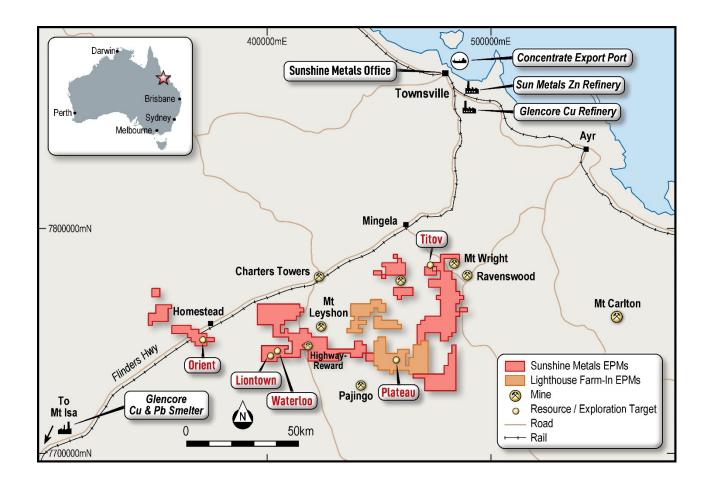
Dart Mining NL: The Triumph Gold Project was divested to Dart in August 2024. Upon completion, Sunshine will own ~14% of Dart's issued capital.

\*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

## 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.	<b>GEOCHEMISTRY</b> <b>Esso</b> – 1975 & 1981 – Soils were taken over a 1km trend at HWE, with eleven 100m spaced lines of various lengths between 30m and 600m, with 15m sample spacings. Soils were reportedly collected from bedrock with the -80-mesh fraction assayed for Cu, Pb and Zn. In 1981, a broad grid of 1.5km by 1.5km was sampled over HWE using 20m sample spacings. At TR, the survey comprised of a 500m x 750m grid with 50m spaced lines and 10m sample spacings. The samples are believed to have been sampled as -80-mesh fractions. The survey was part of a broader survey over the Highway, Handcuff and Truncheon trends.
	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.	<ul> <li>GEOPHYSICS</li> <li>Esso – 1975 &amp; 1981 – Six lines of dipole-dipole IP were surveyed at HWE using 120m dipole spacings in 1975. Three lines were subsequently resurveyed using 60m dipole spacings. In 1981, a further six lines of 50m spacing dipole-dipole IP were completed at both HWE and TR. No details are provided on the measuring or reporting of the IP effect (phase shift) tenor and as such should be used as an indicator of anomalism only.</li> <li>RGC – 1997 – Approximately 23 sq. km were surveyed on a 100m x 100m grid using real time kinematic GPS and a Scintrex CG-3 automatic gravimeter. Some stations were infilled to 50m. Some data was reportedly used from a 1987 survey undertaken by City Resources.</li> <li>SHN – 2024 – IP geophysics at Truncheon comprised of a Pole-Dipole array comprising five receiver lines each of 750m length using 50m spaced potential electrodes and spaced 200m apart. The array used a transmitter line offset 100m from the receiver line with current electrodes spaced at 100m. The lines were oriented at 326°. At Highway East, a pole-dipole array comprised of 50m spaced potential electrodes on eight lines up to 700m long, with current electrodes spaced at 100m along the same lines. Line spacing varied between 100m and 200m. Lines were oriented at 090°. At Liontown, a single line of Dipole-Dipole array was completed consisting of 50m dipole and receiver spacing. The line was oriented at 000° and was 700m long.</li> </ul>
		<ul> <li>DRILLING</li> <li>Esso – Utilised both percussion and diamond coring at Highway East although no distinction is made between the two. Drill holes were sampled in 5ft intervals and assayed for Cu, Pb, Zn and Ag. No details on analytical methods have been located.</li> <li>RGC – RPHY816 was drilled as a Reverse Circulation hole. No sample information has yet been located.</li> <li>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). SHN samples are analysed at Australian</li> </ul>



Criteria	Explanation	Commentary
		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 are re-assayed using gravimetric analysis. Ba over 1% is re-analysed using XRF.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	<ul> <li>DRILLING</li> <li>Historic – No details on drilling techniques have been located, other than that Esso drilled both percussion and diamond holes at Highway East in 1975 (MWHE916) and percussion at Truncheon in 1982 (MWHT119). RGC undertook RC drilling at Conviction in 1996 (RPHY816). No further details on the techniques have been located.</li> <li>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.</li> </ul>
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.	<ul> <li>DRILLING</li> <li>Historic – No records on sample recovery have been located for the historic drilling.</li> <li>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.</li> </ul>
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.	GEOCHEMISTRY & GEOPHYSICS         Historic – No known geological records of samples are believed to have been taken.         DRILLING         Historic – Esso holes were logged in their entirety for lithology, alteration and mineralisation, largely qualitatively. The RGC hole referred to in this release was likely logged in its entirety (based on other holes drilled at similar times) but no report has yet been located to confirm this.         SHN – The drill core chip samples from SHN exploration drilling has been geologically logged to a level to support appropriate mineral resource estimation, mining studies and metallurgical studies. Chip tray photography is available.
Sub- sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.	GEOCHEMISTRY Historic – No sub-sampling or QC procedures are reported within the historical reports. DRILLING



Criteria	Explanation	Commentary
and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	<b>Esso</b> – Drill holes from the 1975 program were sampled in 5ft intervals, with later holes (e.g. 1982 program) assayed metre by metre. It is not known how diamond core was sampled.
preparation	For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of	<ul> <li>RGC – Drill holes from the period by RGC were typically assayed in 2 – 4m composites, although it has not been verified on how drill hole RPHY816 was sampled.</li> <li>SHN – 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.</li> </ul>
Quality of assay data and Laboratory tests	the material being sampled. 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.	<ul> <li>GEOCHEMISTRY Historic – No reporting of the quality of data is available and as such all results should be considered as approximations.</li> <li>GEOPHYSICS Esso – No reporting of the data collection, quality or processing has been located as such all results should be considered as approximations.</li> <li>RGC – Data was collected using real time kinematic GPS and a Scintrex CG-3 automatic gravimeter. Data was then processed in four stages: 1) reprocessing of historical (1987) data was undertaken, including conversion of coordinates from local to AMG grid; 2) Digital terrain data was obtained and used to produce four DTM models, with one used for the 1987 survey and one for the 1997 survey; 3) the survey area was divided into nine tiles to compute the complete Bouguer Anomaly; 4) cover thickness was obtained using a map supplied by Aberfoyle Resources (which showed logged depths from historic RAB, RC and DD holes); 5) model of the Campaspe Fm overburden was developed using the data; and 6) gravity field of the Campaspe model was computed using block modelling.</li> <li>SHN – IP surveys utilised a GGD TX4 transmitter and 16 channel receiver. Data was reviewed daily for QAQC and processed by third party consultants. Data quality was reportedly good across each survey, with one line (Tx20100) reread at Truncheon.</li> </ul>



Criteria	Explanation	Commentary
Criteria Verification of sampling and assaying	Explanation         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	Commentary         Historic – No reporting on assaying or laboratory procedures have been located for Esso or RGC 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 are 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.         Initial QAQC review indicates that all CRMs in and around the major mineralised intersections returned results within acceptable limits. No blanks or duplicates reported results outside of acceptable limits however a review is ongoing.         GEOCHEMISTRY         Historic – Historical reports have been reviewed and utilised in the development of the geochemical anomalies. No onground sampling has been utilised by SHN to verify historical assay results.         GEOPHYSICS         Historic – Geophysical anomalism is considered approximate and has been located through review of historical reporting.         SHN – The Liontown dipole-dipole survey has confirmed the validity of a previous IP survey conducted in 2017. Historical chargeability anomalism at Highway East has been confirmed on the western side of the grid, however high chargeability which appeared to coincide with historical anomaly. The Truncheon survey roughly validated historical surveying over the area from several piecemeal historical surveys within the 1980s.         DRILLING       Historic – No drill hole assays reported in this document have been verified by SHN and are quoted as per the containing
		report or using the assays provided by the report. <b>SHN</b> – 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.
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.	<b>GEOCHEMISTRY, GEOPHYSICS &amp; DRILLING</b> <b>Historic</b> – All survey anomalies, points and drill collars within are from historical sources are considered approximate only. No on-ground validation of collar or other points has been undertaken by SHN.



Criteria	Explanation	Commentary
		<b>SHN</b> – All transmitter and receiver locations were accurately surveyed using DGPS. Drill hole collars are surveyed using handheld GPS. Coordinates are displayed within GDA94, Zone 55 format. Downhole surveys were conducted with an industry-standard gyroscopic survey tool.
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.	GEOCHEMISTRY         Esso – Soil samples collected between 1975 & 1981 were subject to 15m and 20m spaced samples on 100m spaced lines at HWE respectively, and by 10m spaced samples and 50m spaced lines at TR.         GEOPHYSICS         Esso – Undertook DDIP using 120m dipole spacings on six lines in 1975 and a further six lines of DDIP using 50m spacings in 1981.         RGC – Gravity was surveyed using 100m x 100m station spacings in an area covering 23 sq km. Some infill to 50m was undertaken.         SHN – Truncheon used an offset PDIP array comprising 50m spaced receivers on 200m spaced lines with transmitter lines offset 100m and spaced 100m along the line. HWE used a PDIP array comprising of 50m spaced receivers with transmitters spaced at 100m along the same lines. Line spacing varied between 100 and 200m. One line of Dipole-Dipole IP was undertaken at Liontown using 50m dipole and receiver spacing. The line was oriented at 000° and was 700m long.         DRILLING       Historic & SHN – All drilling referred to within this report is of exploratory nature and as such no consistent spacing applied at Truncheon or Highway East.
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.	GEOCHEMISTRY & GEOPHYSICS         Historic – Geochemical and geophysical surveys were designed to be perpendicular to known/interpreted geology, such as major stratigraphy and structures.         SHN – Truncheon, Highway East and Liontown IP surveys were oriented at 326°, 090° and 000° respectively and were designed to be perpendicular to known/interpreted geology, such as major stratigraphy and structures.         DRILLING         Historic & SHN – It is understood that drill holes were oriented perpendicular to the perceived strike of the target. Drill holes were drilled at a dip based on the logistics and dip of target to be tested.
Sample security	The measures taken to ensure sample security.	<ul> <li>GEOCHEMISTRY &amp; DRILLING</li> <li>Historic – No sample security measures were reported during the historic campaigns.</li> <li>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.</li> </ul>



Criteria	Explanation	Commentary
		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.
		GEOPHYSICS
		<b>SHN</b> – 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.	SHN has undertaken data validation of the historical geochemical surveying through check sampling of one line each at Truncheon and Highway East. The results of these check lines showed were comparable to the historical survey and as such the historical surveys were determined to be reliable for targeting purposes. No audits were taken on the historical geophysical or drilling campaigns mentioned within this report. No third-party audit has been undertaken on the raw data or inversion modelling of the geophysical programs undertaken by SHN in 2024.

## **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	tenement and land tenure status 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 Ian 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 subsidiaries of S									
		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 wholly owned subsidiary of Rockfire Resources Limited. No current Mining Leases exist on the tenure. South-easter on EPM 26705 are situated within the Burdekin Falls Dam catchment area. Sunshine Metals has the option to east the project.						n-eastern blocks			
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Exploration activities have been carried out within the target areas by Carpentaria Exploration (1967 – 1969, 1978), Jododex (1972 – 1974), Esso (1972 – 1986), City Resources (1987 – 1988), Barrack Mine Management (1988 – 1991), Aberfoyle (1991 – 1996), RGC Exploration (1996 – 1998), Thalanga Copper (1998 – 2010), Natural Resources Exploration (2013 – 2014) and Red River Resources (2015 – 2023).									
Data pertinent to this release has been referenced in the text and in					in the JORC Table 1.						
Geology	Deposit type, geological setting and style of mineralisation.	TRUNCHEON AND HIGHWAY EAST The Truncheon and Highway East prospects are located within the Cambro-Ordovician marine volcanic and volcano- sedimentary sequences of the Mt Windsor Volcanic sub-province, namely the Trooper Creek Formation. The prospects are considered volcanogenic massive sulphide (VMS) base metal style targets, either exhibited as lens-like massive sulphides and stringers (e.g. Liontown, Thalanga) or as pipe-like massive pyrite-chalcopyrite bodies (e.g. Highway-Reward). The two prospects are considered to share similar stratigraphy as part of the general Highway syncline geology in which Trooper Creek sediments fold from a northeast-southwest trend at Truncheon to a north-south trend at Highway East. Alteration on the southeastern flank of Truncheon has historically been described as Advanced Argillic style, indicating potential for high- sulphidation epithermal mineralisation, although no such mineralisation has yet been identified.									
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	a									
	drill holes:	Hole_ID	Hole_Type	Max_Depth (m)	NAT_East	NAT_North	Dip	MGA Azi	Area		
	• easting and northing of the drill hole collar	HM051	PC/DD	202.6	416840	7747633	-65	327	Reward		
	elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	HM061	PC/DD	153.6	416844	7747667	-90	000	Reward		
	<ul> <li>dip and azimuth of the hole</li> </ul>	MWHE129	PC	196	419072	7748167	-60	097	Highway East		



Criteria	Explanation	Commentary							
	down hole length and interception depth	MWHE916	PC/DD	51.8	419131	7748212	-60	090	Highway East
	hole length.	MWHT119	PC	150	418556	7749477	-60	320	Truncheon
	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	RPHY816 Due to the histo verification of the				nknown – located at Co			Conviction y as no groun
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.							
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').	Mineralisation ori reported. At Liontown, the Liontown area an interpretation, bu structural underst	mineralisation i d steepening to t are proposed	s largely strata the east. The I to originate	abound and inter e exact orientation north of the main	preted to be dipp n of any feeder st n lenses and pot	ning at ~70 de ructures to th entially strike	egrees south ne VMS lens e NNE-SSW.	n within the main es remain unde . Geological and
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should	All diagrams are I	ocated within t	ne body of this	s 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 recorded within the body of this report are as historically reported unless stated otherwise
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<ul> <li>ASX:SHN releases pertinent to this release are as per below:</li> <li>13 March 2024: 20m @ 18.21g/t Au Extends Au-Cu Rich Footwall at Liontown</li> <li>19 February 2024: Au-Cu Focussed Geophysical Surveys Commence</li> <li>7 February 2024: Significant Increase in Liontown Resource</li> <li>Historical and Technical Reports referenced within this release are as per below:</li> <li>CR_5601 – Esso, 1975 – AtoP 1352M, 1402M, 1403M, Annual Report for period ending Dec 31, 1975</li> <li>CR_9859 – Esso, 1981 – AtoP 1352M, Project 348, Mt Windsor, Annual Report for period ending Dec 31, 1981</li> <li>CR_11661 – Esso, 1982 – AtoP 1352M, Project 348, Mt Windsor, Annual Report for period ending Dec 31, 1981</li> <li>CR_30385 – RGC Exploration, 1998, Annual Report, EPM 3380, 17 Dec 1996 to 16 Dec 1997</li> <li>CR_30836 – RGC Exploration, 1999, Annual Report, EPM 3380, 17 Dec 1997 to 16 Dec 1998</li> <li>Doyle, M &amp; Huston, D., 1999, Subsea Floor Replacement Origin of the Ordovician Highway-Reward Volcanic-Associated Massive Sulphide Deposit, Mount Windsor Sub-province, Australia, Economic Geology, vol. 94, pp. 825-844</li> </ul>
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Data collected within the drill programs will be reviewed by SHN. Any areas considered of interest will be followed up on ground through field visits, geophysics and potential further drill targeting.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	