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ASX Release

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904koz AuEq Resource at Ravenswood Consolidated

57% increase in contained gold, 28% increase in total tonnes

Highlights

- Ravenswood Consolidated Project ("Ravenswood") total VMS Resource has increased 28% (tonnes) since the February 2024 Resource to 6.99mt @ 4.0g/t AuEq (11.1% ZnEq¹)
 - 904koz AuEq recoverable (42% Indicated),
- The increased Resource is mainly attributable to Liontown where the independent Resource (completed by Measured Group) increased 53% to **4.5mt** @ **3.6g/t** AuEq¹ (or **9.8%** ZnEq¹)
 - o 511koz AuEq recoverable (49% Indicated)
- Gold now accounts for 36% of the <u>contained metal</u> value at Liontown, surpassing contained zinc at 28% resulting in the Resource being stated in recoverable gold equivalent ("AuEq"). This is due to successful gold focussed drill programmes at Liontown and substantially increased metallurgical recoveries optimised on gold-copper.
- Since acquisition in September 2023, there has been a 42% increase in the Ravenswood Resource (see Figure 1).
- 2025 work will commence with drilling on the western extensions to Liontown where recent geophysical surveys have confirmed anomalism in extensional positions.

Sunshine Metals Limited (ASX:SHN, "Sunshine") reports that its 100% owned Ravenswood Consolidated Project near Charters Towers, hosts a high-grade and shallow Resource of 904koz AuEq recoverable after significantly upgrading the Liontown Resource.

Sunshine Metals Managing Director, Dr Damien Keys, commented: "The Liontown Resource is large, shallow and high-grade and has driven this substantial Resource upgrade. We have focussed our drilling on Liontown's copper and gold-rich footwall across 2023 and 2024. Similarly, metallurgical recoveries have been optimised on gold-copper. Accordingly, gold now surpasses zinc as the dominant metal in the system and the Liontown Resource is now reported in recoverable gold equivalent terms.

Ravenswood Consolidated at 904Koz @ 4.0g/t AuEq, compares favourably to other large-scale producers and pre-producers in north-east Queensland including Twin Hills (999koz Au @ 1.3g/t Au^2), Pajingo (923koz Au @ 5.8g/t Au^3) and Ravenswood Gold Mine (5.92Moz Au @ 0.7g/t Au^4).

⁴ Last public release 2019, Resolute (ASX:RSG) ASX release: 22 July 2019, "Major Gold Resource and Reserve Upgrade for Ravenswood"

¹ The metal equivalent assumptions can be found in "Recoverable Metal Equivalent calculations" (pg 7). Supporting information for the Resource is summarised in "Liontown Resource - Supporting Information" (pg 10-15) and in Sections 1, 2 & 3 (pg 20-53).

² Refer GBM Resources Limited (ASX:GBZ) ASX release: 5 December 2022, Twin Hills Gold Project Upgrades to ~1Moz Mineral Resource ³ Last public release 2016, Evolution Mining Pajingo Fact Sheet: evolutionmining.com.au/wp-content/uploads/2016/03/Pajingo-Fact-Sheet_March-2016_web-1.pdf



"Sunshine will focus on western extensions to the Liontown mineralisation when drilling returns in 2025. The system is practically un-explored to Cougartown and Tigertown (~1.5km west of Liontown) where historic drilling has returned 17m @ 3.1g/t Au from 22m (LLRC003, Tigertown).

We are excited with the progress we have made in the 15 months since taking control and look forward to further Resource growth in 2025."



Figure 1: Sunshine has increased the total VMS Resource at Ravenswood by 42% since acquisition in September 2023 from 4.94mt to 6.99mt @ 4.0g/t AuEq recoverable⁵.

⁵ Differences may occur in totals due to rounding.



Prospect	Lease Resou		Tonnage	Gold	Copper	Zinc	Silver	Lead	Zinc Eq.	Gold Eq.	Gold Eq.
	Status	Class	(kt)	(g/t)	(%)	(%)	(g/t)	(%)	(%)	(g/t)	(oz)
Liontown Oxide	ML/MLA	Inferred	133	1.9	0.7	0.7	24	2.3	5.7	2.1	8,742
Liontown Transitional	ML/MLA	Inferred	228	1.8	0.9	2.7	28	2.7	6.9	2.5	18,071
	ML/MLA	Total	360	1.8	0.8	2.0	26	2.5	6.4	2.3	26,813
Liontown Fresh	ML/MLA	Indicated	2,191	1.5	0.6	5.0	37	1.8	10.5	3.8	266,288
	ML/MLA	Inferred	1,929	1.9	1.2	2.3	15	0.7	9.8	3.5	218,304
		Total	4,120	1.7	0.9	3.7	27	1.2	10.1	3.7	484,592
Liontown Total Resource			4,480	1.7	0.9	3.6	27	1.4	9.8	3.6	511,405

Table 1: Resource for Liontown, part of the Ravenswood Consolidated Project⁶. Contained metal estimates can be found in Table 2, on page 6.



Figure 2: Ravenswood Project is near infrastructure and the mining hub of Charters Towers in Queensland. This map shows the easily accessed Liontown ~35km south of Charters Towers.

⁶ Differences may occur in totals due to rounding.



Extended and Upgraded Liontown Resource

In September 2023, Sunshine acquired Greater Liontown (including the Liontown, Liontown East, Waterloo and Orient deposits). On-ground activities commenced with a clear focus on Au-Cu at Liontown. In the 15 months since Sunshine has:

- completed geological reinterpretation of Liontown targeting high-grade Au-Cu zones resulting in the identification of three conceptual feeder zones (Main Feeder, Carrington Feeder and the Gap Zone Feeder);
- released an update for the Liontown Resource (February 2024) incorporating 5,904m of acquired diamond core (previously unreleased) and 1,515m of completed diamond/RC drilling;
- completed a further three drilling campaigns (39-holes RC/diamond, 7,419.6m) which successfully intersected high-grade Au-Cu, beyond Resource limits in the Gap Zone and identified new mineralisation at the Sapindinus Lode;
- completed sighter metallurgical studies on the Au-Cu rich footwall mineralisation resulting in recoveries of 92.6% Cu and 86.1% Au, producing a Au-Cu concentrate grading 23.5% Cu and 71.6g/t Au; and
- delineated geophysical EM target areas on the western end of the Liontown Resource.

Based on these activities, the Liontown/Gap Zone component of the Resource has increased 53% since February 2024 to:

4.5mt @ 3.6g/t AuEq⁷ for 511koz AuEq recoverable (or 9.8% ZnEq)

Liontown now contains 64% of the tonnes in the total Ravenswood VMS Resource. Gold constitutes 36% of the contained metal value at Liontown, hence the necessity to dual report a gold equivalent and zinc equivalent grade.



Figure 3: Proportionate contained metal values for Liontown (left) and the combined Liontown/Liontown East (right) demonstrating gold's significant and increasing contribution to value.

⁷ The metal equivalent assumptions can be found in "Recoverable Metal Equivalent calculations" (pg 7). Supporting information for the Resource is summarised in "Liontown Resource - Supporting Information" (pg 10-15) and in Sections 1, 2 & 3 (pg 20-53).



The Gap Zone, an ~400m long zone at the eastern extent of Liontown located adjacent to Liontown East Resource areas, has been added to Resource. The Liontown/Liontown East Resource now totals:

5.9mt @ 3.6g/t AuEq for 700koz AuEq recoverable (or 10.0% ZnEq)

The Liontown Resource growth equates to a 28% increase in total tonnes for the total Ravenswood VMS Resource since February 2024. The VMS Resource now totals:

7.0mt @ 4.0g/t AuEq for 904koz AuEq recoverable (or 11.1% ZnEq)

Since the acquisition in September 2023, Sunshine has increased total tonnes at the Ravenswood VMS Resource by 42% and significantly grown the contained Au metal in the Resource by 68%.

The Liontown Resource contains multiple, stacked lodes that are amenable to both open pit and underground mining scenarios. Scoping level studies will commence in 2025.

For the avoidance of doubt, this Resource upgrade only includes drilling completed in 2024 at Liontown including drilling in the Gap Zone (the eastern area of Liontown that joins Liontown with Liontown East). No drilling was undertaken at Liontown East, Waterloo or Orient. New Resource estimation was only undertaken at Liontown. No new Resource estimation was undertaken at Liontown East, Waterloo or Orient⁸. Resources for all deposits are now reported in both ZnEq and AuEq using metal equivalent calculations (see page 7).

Significant Metallurgical Improvements - Liontown

Further refinements have been made to preliminary metallurgical results previously announced⁹. Specifically, metallurgical recoveries have been optimised on gold-copper.

The introduction of an additional cleaner stage in flotation testing has improved concentrate grades achieved from Gap Zone samples. A selective copper collector proved valuable as a low mass recovery (3.89%) was obtained. In turn, this led to an increase in concentrate grades for copper (92.6% recovery, 23.5% Cu in concentrate) and gold (69.7% recovery, 71.6g/t Au in concentrate).

The rougher flotation tails were then conventionally leached returning Au recoveries to 86.1%.

Next test work will incorporate an extra collector stage which may further increase copper (and possibly gold) recoveries.

⁸ For Liontown East, Waterloo and Orient original estimation parameters can be found in Table 1, Section 3. For further information, refer SHN ASX Announcement, 8 May 2023, "Fully Funded Acquisition of Greater Liontown".

⁹ Refer SHN ASX Announcement, 8 Nov 2024: "Excellent Gold and Copper Recoveries from Liontown".

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	Prospect	Lease	Resource	Tonnage	Gold	Copper	Zinc	Silver	Lead	Zinc Eq	Gold Eq	Gold Eq	Contained	Contained	Contained	Contained	Contained
	Liteopool	Status	Class	(kt)	(g/t)	(%)	(%)	(g/t)	(%)	(%)	(g/t)	(oz)	Gold (oz)	Copper (t)	Zinc (t)	Silver (oz)	Lead (t)
	Liontown Oxide	ML/MLA	Inferred	133	1.9	0.7	0.7	24	2.3	5.7	2.1	8,742	8,017	902	981	100,595	3,011
	Liontown Transitional	ML/MLA	Inferred	228	1.8	0.9	2.7	28	2.7	6.9	2.5	18,071	13,096	2,048	6,076	206,096	6,076
		ML/MLA	Total	360	1.8	0.8	2.0	26	2.5	6.4	2.3	26,813	21,113	2,950	7,057	306,691	9,087
	Liontown Fresh	ML/MLA	Indicated	2,191	1.5	0.6	5.0	37	1.8	10.5	3.8	266,288	102,148	13,366	108,680	2,581,165	38,564
5		ML/MLA	Inferred	1,929	1.9	1.2	2.3	15	0.7	9.8	3.5	218,304	117,835	22,762	44,752	940,196	12,924
ň			Total	4,120	1.7	0.9	3.7	27	1.2	10.1	3.7	484,592	219,982	36,128	153,433	3,521,361	51,488
5	Liontown East	ML/MLA	Inferred	1,462	0.7	0.5	7.4	29	2.5	11.1	4.0	188,266	34,162	7,136	108,936	1,375,350	37,081
_			Total	1,462	0.7	0.5	7.4	29	2.5	11.1	4.0	188,266	34,162	7,136	108,936	1,375,350	37,081
ע	Waterloo	ML/MLA	Indicated	406	1.4	2.6	13.2	67	2.1	23.2	8.4	109,379	17,883	10,612	53,633	876,881	8,503
		ML/MLA	Inferred	284	0.4	0.7	6.6	33	0.7	9.0	3.3	29,747	3,642	2,095	18,651	301,215	2,109
			Total	690	1.0	1.8	10.5	53	1.5	17.4	6.3	139,127	21,525	12,707	72,284	1,178,095	10,613
り	Orient	EPM	Indicated	331	0.2	1.1	10.9	55	2.5	15.2	5.5	58,191	2,152	3,537	36,030	584,686	8,271
5		EPM	Inferred	33	0.2	0.9	14.2	50	2.2	17.5	6.3	6,582	234	298	4,642	52,779	717
5			Total	363	0.2	1.1	11.2	55	2.5	15.4	5.5	64,773	2,386	3,836	40,672	637,464	8,988
	Total VMS Resource			6,996	1.3	0.9	5.5	31	1.7	11.1	4.0	903,571	299,168	62,756	382,382	7,018,963	117,256
)																	
-	Plateau [#]	EPM	Inferred	961	1.7	-	-	10.7	-				49,960	-	-	329,435	-
	Global Resource			7,957							3.7		349,128	62,756	382,382	7,348,398	117,256

 Table 2: Ravenswood Consolidated total Resource displaying contained metal by deposit and category. Recoverable zinc equivalent is calculated as per the formula on page 7. Sunshine is earning into the Plateau Resource via a Farm-In agreement with Rockfire Resources (SHN ASX release, 20 January 2023, Consolidation of High Grade Advanced Au

 Prospects, RW).



Liontown - Strong Potential for Future Growth

A high level of prospectivity remains at Liontown, in the immediate surrounds (especially to the west of Liontown) and regionally. Sunshine has revised the Liontown geological model, specifically around metal distribution and zonation, structure and detailing the footwall lithologies.

The result of the revised geological model highlights growth targets at:

- Liontown West extensions to Au-Cu mineralisation immediately to the west of the Resource and along strike from the historic Carrington workings. Elevated Cu:Zn ratios suggest a mineralising fluid entry point to the VMS system and a higher likelihood of encountering elevated Au-Cu.
- The Tigertown and Cougartown prospects located ~1km west of Liontown. There is only sparse, shallow drilling at the two prospects and in the zone between the prospects and Liontown. However, the limited drilling at the prospects is encouraging and includes:
 - o 17m @ 3.05 g/t Au from 22m (LLRC003), Tigertown
 - **33m @ 1.95 g/t Au** from 12m (MWR037), Tigertown
 - o 2m @ 1.81 g/t Au, 9.54% Zn, 2.06% Pb from 54m (LCP501), Cougartown
- Gap Zone of Liontown located adjacent to Liontown East further drilling in the Gap Zone to understand metal distribution. Drilling in the Gap Zone provided encouragement for Au-rich zones during 2024, with intersections including:
 - o 16.2m @ 4.54 g/t Au, 1.11% Cu (from 319m, 24LTDD024)

Including 6.2m @ 9.00g/t Au, 2.52% Cu (from 329m, 24LTDD024)

- Liontown East footwall is under-explored and sampling has commenced. High-grade drill intersections not currently included in the Liontown East Resource include:
 - o 7.7m @ 3.4 g/t Au, 1.2% Cu from 557m (LTED07)

Recoverable Metal Equivalent calculations

The gold and zinc equivalent grades for Greater Liontown (g/t AuEq, % ZnEq) are based on the following prices: US\$2,900t Zn, US\$9,500t Cu, US\$2,000t Pb, US\$2,500oz Au, US\$30oz Ag. MR

Metallurgical metal recoveries are broken into two domains: copper-gold dominant and zinc dominant. Each domain and associated recoveries are supported by metallurgical test work and are: <u>Copper-gold dominant</u> – 92.3% Cu, 86.0% Au, <u>Zinc dominant</u> 88.8% Zn, 80% Cu, 70% Pb, 65% Au, 65% Ag.

The AuEq calculation is as follows: AuEq = (Zn grade% * Zn recovery * (Zn price /t * 0.01/ (Au price /oz / 31.103))) + (Cu grade % * Cu recovery % * (Cu price /t/ (Au price /oz / 31.103))) + (Pb grade % * Pb recovery % * (Pb price /t/ (Au price /oz / 31.103))) + (Au grade g/t / 31.103 * Au recovery %) + (Ag grade g/t / 31.103 * Ag recovery % * ((Ag price /oz / 31.103))) + (Au price /oz / 31.103))) + (Au grade g/t / 31.103 * Au recovery %) + (Ag grade g/t / 31.103 * Ag recovery % * ((Ag price /oz / 31.103)))))))

The ZnEq calculation is as follows: ZnEq = (Zn grade % * Zn recovery) + (Cu grade % * Cu recovery % * (Cu price /t/Zn price /t * 0.01))) + (Pb grade % * Pb recovery % * (Pb price /t/Zn price /t * 0.01)) + (Au grade g/t/31.103 * Au recovery % * ((Au price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /oz / 31.103) / Zn price /t * 0.01))) + (Ag grade g/t/31.103 * Ag recovery % * ((Ag price /t * 0.01))) + (Ag grade g/t/31.103 * (Ag price /t * 0.01))) + (Ag grade g/t/31.103 * (Ag price /t * 0.01))) + (Ag grade g/t *

For Waterloo transition material, recoveries of 76% Zn, 58% Cu and 0% Pb have been substituted into the ZnEq formula. For Liontown oxide material, recoveries of 44% Zn, 40% Cu and 35% Pb have been substituted into the ZnEq formula. Further metallurgical test work is required on the Liontown oxide domain. It is the opinion of Sunshine and the Competent Person that the metals included in the ZnEq formula have reasonable potential to be recovered and sold.





Figure 4: Long section of December 2024 Resources at Liontown and Liontown East showing significant infill of Resource between the two deposits. 2025 Growth will target areas west of Liontown and at depth.





Figure 5: Long section of February 2024 Resources (for comparison) at Liontown and Liontown East showing two distinctly separate Resource areas.



Liontown Resource - Supporting Information

Geology and Geological Information

Greater Liontown (Liontown, Liontown East, Waterloo and Orient)

The Project area is located within the Charters Towers Province which extends inland from the coast at Townsville to 150km west of Charters Towers. The rocks are typically Neoproterozoic to Palaeozoic age. It is bound in the southeast by the New England Orogen and to the north by the Broken River Province of the Mossman Orogen.

The known VMS deposits, including Liontown, are hosted within the stratigraphy of the Mt Windsor Sub-province, which encompasses the dismembered remnants of a thick volcanic and sedimentary succession predominantly of Late Cambrian and Early Ordovician age located within the northern part of the Tasman Orogenic Zone (Henderson, 1986). The succession comprises of four identified formations collectively known as the Seventy Mile Range Group, which outcrop discontinuously in an east-west belt south of the Ravenswood Batholith.

The Seventy Mile Range Group (499 – 479 Ma) ranges from Late Cambrian to Early Ordovician and is represented by the Puddler Creek Formation at the base, followed by the Mt Windsor Volcanics, the Trooper Creek Formation and the Rollston Range Formation at the top.

The Puddler Creek Formation comprises continentally derived siltstone, sandstone and greywacke and mafic dykes. The Mt Windsor Volcanics overlie the Puddler Creek Formation and are a thick succession of rhyolitic to dacitic lavas, autoclastic and reworked breccia facies, and minor andesite and sedimentary rocks (Henderson, 1986). The transition from Mt Windsor Volcanics to the overlying Trooper Creek Formation appears to represent a change from felsic to intermediate-mafic volcanism. The Trooper Creek Formation consists of intermediate lavas, volcaniclastics (including mass flow deposits), minor felsics and marine sediments (Henderson, 1986). The facies assemblage has been interpreted as being deposited proximal to submarine volcanic centres and is known to host VMS deposits, such as Thalanga, Liontown and Highway-Reward. The Rollston Range Formation consists of laminated volcaniclastic siltstones and sandstones, with rare intercalations of vitric tuff (Henderson, 1986).

The Group is invariably overlain by Tertiary and Quaternary cover sequences, including the Campaspe Formation which comprises immature and pebbly sandstone and minor siltstone interbeds and is interpreted to represent erosive channel fill and fluvial sheet deposition.

Liontown Geology

The Liontown deposit is located within the Trooper Creek Formation sediments and volcaniclastics of the Seventy Mile Range Group. The deposit stratigraphy comprises (in a general order from footwall to hangingwall) of dacite pumice breccia, siltstones, three distinct black shale units and a dacite intrusive unit.

The dacite pumice breccia and immediately overlying siltstones are the main host of mineralisation at Liontown. Mineralisation and alteration do not persist above the lower black shale, suggesting this unit may have been deposited pre/syn-mineralisation and acted as an aquiclude. The dacite pumice breccia is interpreted as a volcaniclastic flow breccia of dacitic composition, where pumice clasts have been altered to chlorite during low-grade metamorphism.



The Seventy Mile Group units in the area have undergone tilting and deformation, leading to a general steep southerly dip to the package at about 70 degrees. The sequences are variably deformed with localised shearing and parasitic-style folding seen within both the sediments and volcanic units. It remains unclear whether these folds are related to broader-scale folding or a result of the uplift and tilting of the package, likely caused by the emplacement of the Ravenswood Batholith. The sequences are overlain to the north, south and east of the deposit by the Tertiary Campaspe Formation sediments, which comprise of poorly consolidated sandstone, claystone, conglomerate.

The Liontown deposit is considered a volcanogenic massive sulphide deposit (VMS). The mineralisation at Liontown comprises of both stratiform sulphide lenses and cross-cutting vein style sulphide. The primary mineralisation comprises of varying proportions of sphalerite, galena, with associated silver, pyrite and chalcopyrite. Gold is present as free gold and spatially associated with the sulphides.

Alteration associated with mineralisation is not particularly well-defined and comprises of chloritic to sericitic alteration assemblages. The entire package of Trooper Creek Formation has undergone weak, broad-scale metamorphism to lower greenschist facies, resulting in widespread weak chlorite development. Furthermore, localised shearing has produced strong, Fe-rich chlorite shear zones. Silica flooding is also present locally and is more commonly seen closer to the hangingwall contact between PBX and the overlying sediments and volcanics.

Mineralisation is believed to have been deposited syn-genetically at or near the seafloor. The standard genetic model for VMS deposits is that hydrothermal fluids are driven by convection around a deeper magmatic body. The mineralisation can be zoned as ascending hydrothermal fluids deposit the Cu-Au at higher temperatures (~300C) compared to the zinc, lead and silver (~250C) which can lead to a vertical zonation of the ore body. Laterally, the model suggests that still cooler temperatures deposit other gangue such as barite and silica.

Metal zonation studies by Sunshine Metals Ltd suggest that stratiform Pb-Zn-Ag dominant sulphide lenses were likely fed by the Cu-Au enriched vein style mineralisation.



Figure 6: Typical Stratiform Zn-Pb-Ag mineralisation (left), Typical Vein style Cu-Au mineralisation (right).





Figure 7: Schematic cross section looking west displaying broad mineralised trends, the 3 black shale marker units and the vein style mineralisation deep in the dacite pumice breccia footwall.

Sampling and sub-sampling techniques

Geological logging was carried out applying industry standard practices. RC samples were collected on a 1m interval and split using a rig-mounted cone splitter to collect samples of 3-5kg in size. Drill core was sampled to mineralised boundaries and sawn in half longitudinally while onsite with sample lengths targeting 1m with 97.5% of sample ranging from 0.3 to 2.0m. The samples from 2016 to 2022 drilling programmes were sent to Intertek Laboratories in Townsville for analysis. Samples from 2022 to 2024 were sent to ALS Laboratories in Townsville for analysis.



Drilling techniques

Diamond drilling (DD) and reverse circulation (RC) techniques were used to obtain samples during 14 major drilling programmes between 1970-2024:

Programme	Year	Drilling Method	Hole Count	Metre Count
Nickel Mines	1970-1973	DD	59	7,669
Fasa	1982-1983	DD	3	527
ESSO	1982-1983	RC	31	8,896
Great Mines	1987	RC	50	3,302
Denerationatel	1994	DD	4	834
Pancontinentai	1994-1996	RC	120	13,482
Liontown Resources	2007-2008	DD	41	13,438
	2017	DD	4	578
	2018	RC/DD	23	10,252
Red Diver Deseuros	2019	DD	36	5,281
Red River Resources	2020	MR	8	412
	2021	RC/DD	63	10,385
	2022	RC/DD	37	8,305
Supering Matala	2023	RC/DD	13	1,515
Sunshine Metals	2024	RC/DD	38	7,344
TOTAL:			530	92,220

Table 3: Total Drilling completed at the Ravenswood Project.

Classification Criteria

The Resources have been reported above a 5% ZnEq cut-off, a value considered appropriate for potential economic extraction (as used for the UG mining cut-off grade at the nearby Thalanga Mine).

Resources have been classified according to the sample spacing and demonstrated continuity and consistency of the mineralised thickness and grade for each lode. A higher confidence in sample data is given to more recent drilling programmes and used as Points of Observation for classification. Typically, the lodes are classified as Indicated where sufficient continuity of samples <50m spacing is present. Indicated and Inferred blocks have been reported.

At Liontown East, material considered not sufficiently defined for Inferred classification includes lesser Zn-Pb-Cu stringer sulphide mineralisation of undetermined continuity below the footwall contact of the current Resource and Cu-Au mineralisation within the footwall pumice breccia. The Cu-Au mineralisation has similarities to the Carrington Lode along strike at the Liontown deposit. Further drilling at closer spacing may provide sufficient continuity for Resource in these areas.

Due to the age of some data and the multiple project owners, complete records are not always available. In these circumstances, lower confidence is placed on the results and is reflected in the Resource classification. In general, the drilling programmes overlap spatially allowing for the comparison of programmes between each other and eliminating the dominance of one sampling programme in any specific area of the Resource.



Sample analysis method

Between 2016 and 2022, drill core samples were sent to Intertek Laboratories in Townsville. Samples from 2022 to 2024 were sent to ALS Laboratories in Townsville for analysis. Samples were crushed to sub-6mm, split and pulverised to sub-75 µm in order to produce a representative sub-sample for analysis. Analysis consisted of a four-acid digest and Inductively Coupled Plasma Optical Emission Spectrometry for the following elements: Ag, As, Ba, Bi, Ca, Cu, Fe, K, Mg, Mn, Na, Pb, S, Sb, Ti, Zn & Zr. Samples were assayed for Au using a 25g Fire Assay technique. Standards were submitted at an overall rate of 1 in 20 with greater than 90% of results for mineralised standards returning within 3 standard deviations of certified values for Zn, Pb, Cu and Ag.

For earlier sampling programmes, industry practices of the day were applied. In general, samples were crushed to sub-6mm, split and pulverised to sub-75 µm in order to produce a representative sub-sample for analysis. Most samples were analysed following a three or four-acid digest by either Atomic Absorption Spectrum (AAS) or Inductively Coupled Plasma Optical Emission Spectrometry for the base metal analysis. For gold analysis, a Fire Assay method using either a 25g, 30g or 50g charge with an AAS finish was used.

Estimation methodology

Geological and geochemical interpretation including sectional assessment of hangingwall and footwall strata was completed and 3D wireframes of the mineralised domains were created. The mineralised domains are defined by continuous and consistent mineralisation style and grade continuity.

The New Queen domains are similar but contain a larger portion of sheared and low-grade mineralisation. The Gap, Carrington and Western Footwall domains are modelled with Au and Cu as the dominant mineralisation style. A 0.5g/t Au domain was used for estimation of the oxide Au Resource.

The Resource for Liontown was undertaken using inverse distance and ordinary kriging estimation methods depending on data availability for the generation on variograms and 3D estimation software.

The Resource for Liontown East was undertaken using inverse distance estimation methods and 3D estimation software. 3D wireframes of the mineralised envelope were filled with modelled blocks of appropriate size. Drill samples were top capped where appropriate to reduce the impact of extreme high-grade samples. Samples were composited to 1m to reduce sample size bias. Estimation of copper, zinc, lead, silver, gold, iron and barium grades in the model blocks was undertaken using sample limitations and octant requirements to reduce sample distribution bias. Multiple increasing search distances for sample selection were used. The mineralised domain envelopes were considered a hard boundary for estimation purposes.



Cut-off grades, including the basis for the selected cut-off grades

The sulphide ("fresh") Resource has been reported above a 5% ZnEq cut-off into Inferred and Indicated categories. The basis for cut-off grade is that a 5% ZnEq grade was assessed as the lower cut-off for definition of potential economic mineralisation using a proposed underground mining methodology. The 5% ZnEq cut-off grade was used as the economic cut-off at the underground Thalanga Mine (operated by Red River Resources).

The oxide Inferred Resource has been reported above a 0.5g/t Au cut off as this is assessed as appropriate for the mineralisation style and the likelihood of providing a potentially economic, shallow open pit. The oxide Inferred Resource is shallow and located above the sulphide lodes and further drilling may allow conversion of this material to an Indicated Resource.

Mining and metallurgical methods and parameters, and other material modifying factors considered

Density values were reviewed for each lode and non-mineralised waste rock across fresh, transitional, and oxide material. These density values were applied to the block model for the various zoned types. The density calculation incorporates void and porosity influences through an assigned gangue density.

The density calculation was validated by a regression assessment against empirical test work on the Liontown and Liontown East core following the Archimedes principle. The densities are reported on a dry basis.

The Resource has been estimated with the intent of being mined by selective mining methods such as underground drive development and long hole stoping techniques. For conversion to Ore Reserve, material that is sub 2m thick will require a higher cut-off grade to accommodate the additional minimum mining width dilution.

It is assumed that the Resource would be treated via crushing, milling and conventional flotation to produce concentrates containing Zn, Pb, Cu, Ag and Au. Historic metallurgical test work exists across all deposits and recoveries are used in the zinc equivalent calculation. The historical metallurgical test work was optimised for the existing Thalanga Mill. Recent metallurgical studies have focussed on the Au-Cu rich Liontown footwall mineralisation. Treatment of rougher concentrate tail via leaching has yielded significant improvements in gold recovery. Further metallurgical test work is planned and will incorporate float and leaching studies on contact lode Zn-Cu-Au-Pb-Ag resource.



Planned activities

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

- December 2024: RC Drilling Results, Highway East & Truncheon
- o January 2025: Fieldwork update, Mt Windsor & Coronation South
- January 2025: Results from geophysical surveys, Coronation
- Feb March 2025: Drilling recommencing, Liontown

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

For more information, please contact:

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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 Australasian Code for Reporting of Mineral Resources. Mr Price consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Liontown is based on information compiled and reviewed by Mr Chris Grove who is a Member of the Australian Institute of Mining and Metallurgy (AusIMM) and is a Principal Geologist employed by Measured Group Pty Ltd. Mr Grove has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Mineral Resources. Mr Grove consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Waterloo and Orient is based on information compiled and reviewed by Mr Stuart Hutchin, who is a Member of the Australian Institute of Geoscientists (AIG) and is a Principal Geologist employed by Mining One Pty Ltd. Mr Stuart Hutchin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Mineral Resources. Mr Stuart Hutchin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Liontown East is based on information compiled and reviewed by Mr Peter Carolan, who is a Member of the Australasian Institute of Mining and Metallurgy and was a Principal Geologist employed by Red River Resources Ltd. Mr Peter Carolan has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Mineral Resources. Mr Peter Carolan consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



About Sunshine Metals

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:

- 7.0mt @ 4.0g/t AuEq (or 11.1% ZnEq) for 904koz AuEq recoverable (46% Indicated, 54% Inferred);
- 26 drill ready VMS Zn-Cu-Pb-Au IP geophysical targets where testing of a similar target has already led to the Liontown East discovery which hosts a current Resource of 1.47Mt @ 4g/t AuEq (100% Inferred);
- advanced Au-Cu VMS targets at Coronation analogous to the nearby Highway-Reward Mine (4Mt @ 6.2% Cu & 1.0g/t Au mined); and
- overlooked orogenic, epithermal and intrusion related Au potential with numerous historic gold workings and drill ready targets.

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

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

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



Section 1 - Sampling Techniques and Data

	Criteria	Explanation	Commentary							
(Ino	Sampling techniques	 Analysis Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'in dustry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for Fire Assay'). In other cases, more explanation may be required, such as where there is a correct of the product o	•	 No new drilling was undertaken at Liontown East, Waterloo or Orient. Diamond drilling (DD), reverse circulation (RC) and mud rotary (MR) techniques were used to obtai samples during 14 programmes of drilling undertaken between 1970 and 2024 for a total of 530 dr holes and 92,220 metres. The company, year, drilling method, hole count, and metres drilled count outlined below: 						
Se				Programme	Year	Drilling method	Hole count	Metres drilled count		
al u				Nickel Mines	1970-1973	DD	50	711		
0D				Esso	1982-1983	DD	25	274		
rsc				Great Mines Limited	1987	RC	43	623		
pe				Pancontinental	1994	DD	8	100		
OL	problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.		Pancontinental	1994-1996	RC	26	341			
Ľ			Liontown Resources	2007-2008	DD	35	269			
				Red River Resources	2017	DD	4	578		
				Red River Resources	2018	RC/DD	23	10252		



	Criteria	Explanation				Commentary				
				Red River Resources	2019	DD	34	5281		
				Red River Resources	2020	MR	8	412		
)				Red River Resources	2021	DD	14	4510		
)				Red River Resources	2022	RC/DD	41	9008		
				Sunshine Metals	2023	RC/DD	13	1515		
•				Sunshine Metals	2024	RC/DD	38	7345		
)				TOTAL:			530	92,220		
)			Hist	oric					•	
,			 Historic Industry standard preparation and analysis methods were used. RC samples were typically collected in 1m intervals with all samples sent for assay. Diamond core was reviewed with specific zones selected for assay by the Geologist. These zones were then sawn longitudinally in half, with the half core sample sent for analysis. Core sizes ranged from NQ to HQ. The majority of the samples were analysed following a three- or four- acid digest and either via Atomic 							
			RVR	for the analysis of bas with an AAS finish.	se metals. Gold	was analysed via	Fire Assay using ei	ther 25g, 30g or 50g ch	arge	
				 Industry standard pre Reverse circulation d mounted cone splitter were collected in calid 	paration and ar rill holes were r to create a 12 co sample bags	nalysis methods we sampled as indivi .5% split weighing	ere used. dual 1m length san approximately 3 to	nples derived through a 5kgs. Individual RC sam	rig- iples	



	Criteria	Explanation	Commentary
use only			 Drill core sample intervals were selected by company geologists based on visual mineralisation and geological boundaries with an ideal sample length of one (1) metre. Downhole sampling at 1m intervals provides comprehensive insights into mineralisation characteristics. Drill core samples were sawn longitudinally in half (or quarters for duplicates) onsite using an automatic core saw with half used for analysis and half retained. Independent certified assay laboratories were used for analysis. Samples were analysed at Intertek Genalysis Laboratory in Townsville where samples were crushed to <6 mm, split and pulverised to <75 µm and a sub-sample was collected for analysis via four-acid digest and Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) analysis of the following elements: Ag, As, Ba, Bi, Ca, Cu, Fe, K, Mg, Mn, Na, Pb, S, Sb, Ti, Zn, & Zr. Samples were assayed for Au using a 30g Fire Assay technique.
al			 Industry standard preparation and analysis methods were used. Reverse circulation drill holes were sampled as individual 1m length samples derived through a rig- mounted cone splitter to create a 12.5% split weighing approximately 3-5 kgs. Individual RC samples
NO			were collected in calico sample bags and approximately five were secured in each polyweave bag for sample dispatch.
Oers			 Diamond drift holes were predominantly collared with PCD drifting and changed over to HQS diamond drilling for completion of the hole. Drill core sample intervals were selected by company geologists based on visual mineralisation and geological boundaries with an ideal sample length of one (1) metre. Downhole sampling at 1m intervals provides comprehensive insights into mineralisation
L C			characteristics. The samples were sawn longitudinally in half (or quarters for duplicates) using a Corewise auto core saw, with half used for analysis and half retained.
Fo			 Samples are analysed at Australian Laboratory Services (ALS) in Townsville where samples were crushed to <6 mm, split and pulverised to <75 µm. 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 also assayed for Au using a 30 g or 50 g Fire Assay technique with AAS finish. Assays returning over 100 g/t Au from this technique were re-assayed using gravimetric analysis. Ba over 1% was re-analysed using XRF. S assays over 10% were re-assayed using induction furnace/IR.
	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	 Historic Reverse circulation drill holes utilised a 4 ¼ to 5 ½ inch hammer bit. Conventional and wireline diamond drilling techniques were used through the various programmes. Core extraction utilised a conventional coring system. Historical core was not oriented.



	Criteria	Explanation		Commentary
		of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	RVR • Revers • Diamo sampli orienta SHN • Revers	se circulation drill holes were between 4 ¼ and 5 ½ inch hole diameter. nd drill core sizes were NQ and HQ. Core extraction utilised a triple tube system with face- ng bits for precise sample collection. Select holes were orientated using an industry-standard ation tool. se circulation drilling utilised an 8 inch open-hole hammer for the first 10 m (pre-collar) and a 5 ½
			inch R • Diamo comple sample	C hammer for the remainder of the drill hole. nd drill holes were predominantly collared using PCD before switching to HQ3 core size until etion of the hole. Core extraction utilised a triple tube system with face-sampling bits for precise e collection. All holes were orientated using a Reflex ACT tool.
	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.	Historic No info RVR Reverse noted. Diamo holes, depth, SHN Reverse geolog to have Moistu campa achiev	brmation is available on historical drilling recoveries. See circulation drill hole recoveries were not routinely recorded but intervals of no return were and drilling recoveries were measured on 50 holes. Overall recoveries were 92.7% across the with most core loss occurring near surface and at a lesser extent around structures. Below 50m recoveries averaged 97.2%. See circulation drill hole sample recoveries of less than approximately 80% were noted in the gical/sampling log with a visual estimate of the actual recovery. Very few samples were deemed e recoveries of less than 80%. No significant mineralised intercepts had recovery <80%. Inter categorisation was recorded. Some wet RC samples were collected during the 2024 drill hign. The results of the wet samples were reviewed to ensure appropriate sample recovery was ed and no smearing of grades was evident.
-			 Diamo have b 	nd drill core recoveries are recorded as part of the geological logging. All SHN diamond holes been measured for recovery and reported an overall recovery of 99.1%.
	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.	The fo o The lo thorou for ma studies	llowing logging was completed on the drill holes: Qualitative logging includes lithology, alteration and textures. Quantitative logging includes visual estimate of sulphide and gangue mineral percentages. ogging process, encompassing both qualitative and quantitative data collection, enables a gh understanding of the geological features present in the drill holes. This information is critical aking informed decisions regarding exploration, resource estimation, mining and metallurgical s.



	Criteria	Explanation			Commentary	
			•	Almost 100% logging assessments in subsec	coverage ensures a thorough dataset, supporting accurate a quent studies.	nd reliable
			•	All drill hole logs are s logs or scans of them. database. SHN person which has been set u Geobank data is then of Pty Ltd., for loading int	tored in a Datashed database platform. Historic data was digitised fr RVR logging was undertaken in Microsoft Excel then imported into t nel entered logging data directly into Geobank for Field Teams 202 p and customised to SHN requirements with appropriate validation exported to CSV files and sent to an external database consultant, Sa o the Datashed database platform.	om original the inhouse 4 software, n. The SHN ample Data
))			•	Reverse circulation ch that facilitates robust r SHN core facility.	ip samples were sieved and placed into chip trays and are logged t esource estimation and comprehensive study. Chip trays are stored	to a degree d within the
5			•	Drill holes were logg inconsistencies in logg	ed to a level of detail to support this Mineral Resource Estiming or log availability is reflected in the Mineral Resource classificatio	nation. Any on.
			•	All drill core from 2007	has been photographed – this captures essential details for further a	analysis.
	Sub- sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.		In both reverse circu practices to ensure rep specific drilling method	lation and diamond drilling, samples were collected following ind presentativeness and quality. The sampling techniques used were tail is and to each programme:	dustry best lored to the
	preparation	and whether sampled wet or dry.	Pr	ogramme	Sampling Method	
		For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling	Ni	ckel Mines	Longitudinal half core, size unknown (hand split) – sampled to contacts predominately 1 or 5ft in length. Imperial lengths were subsequently converted to metric for use in the database.	
•		stages to maximise representivity of samples.	Es	SO	Longitudinal half NQ core (core saw) – non-selective samples predominantly 1m in length.	
		Weasures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.		reat Mines Limited	RC split (riffle splitter) using non-selective samples predominately 1m in length.	
				incontinental	4 ¹ / ₄ to 5 ¹ / ₂ inch RC split (riffle splitter) using non-selective samples predominantly 1m in length.	
		the material being sampled.				



	Criteria	Explanation	Commentary				
					Longitudinal half NQ core (core saw) – selective samples predominantly 1m in length.		
				Liontown Resources	Longitudinal half NQ2 core (core saw) – sampled to geological contacts predominantly 1m in length.		
5				Red River Resources	4 $\frac{1}{2}$ to 5 $\frac{1}{2}$ inch RC split using a rig-mounted cone splitter, proportion 12.5%, on 1m intervals.		
					Longitudinal half NQ2 core, half HQ3 core and quarter HQ3 core (automatic core saw) – sampled to geological contacts predominantly 0.5m to 1m in length.		
				Sunshine Metals	5 ½ inch RC split using a rig-mounted cone splitter to produce a 12.5% sub-sample on 1m intervals and comprised approximately 3 to 5kg.		
					Longitudinal half HQ3 core (automatic core saw) – sampled to geological contacts predominantly 0.5m to 1m length.		
5							
2				 Sub-sampling and sam considered appropriate mineralisation style. Rig accurately reflects the 	ple preparation documentation is available for all programmes from e for the characteristics of the mineralisation and sufficient to re- gorous care during sample collection and handling ensures the deliv- drilled interval. Sample preparation since 2007 comprised crushing	2007 and is epresent the ered sample ng to <6mm	
5				split and pulverising to information is limited, standards of the time.	<75 µm in order to produce a representative sub-sample for analys however, it is considered the samples would have been prepared	is. Pre-2007 to industry	
-				 Reverse circulation dril a 12.5% sub-sample circulation drill samples 1996. Collection data subsequently split usin Diamond drill core w longitudinally in half us which drill core was sp 	I samples since 2018 were collected via a rig-mounted cone splitter on 1 m intervals and comprised approximately 3 to 5kg. Previo s were collected in 1987 by Great Mines Limited and by Pancontiner on these samples is limited but were likely collected from the or g a separate riffle splitter, the industry standard at the time. as placed in core trays for logging and sampling. Diamond co sing a core saw in all programmes except that of Nickel Mines (19 lit by hand.	r to produce ous reverse ntial in 1994- cyclone and pre was cut 970-1973) in	
				 Diamono onii core sam Limited programme. Th 	his produced a degree of smoothing in that data, as expected.	Great wines	



	Criteria	Explanation	Commentary
λ			 Diamond drill core sample lengths varied between 0.3m and 2m in length (98% of samples) with 78% ranging from 1m to 2m in length. Mean sample length is 0.94m and so 1m intervals are considered appropriate for mineral resource estimation at the Liontown Project.
			 No data is available on historical field duplicate samples. No field duplicates were utilised in RVR drill programmes. Field duplicates were collected by SHN an average rate of one (1) per thirty samples.
Iai use c	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.	 Various assay methods were employed at the Liontown Project in the different drill programmes. Assay methods are considered appropriate for mineral resource estimation of the style and type of mineralisation. Various degrees of Quality Assurance and Quality Control (QAQC) procedures were implemented in the different drill programmes. Records are available from 2007. Since 2007 it is considered that acceptable levels of accuracy and precision have been established. Given that reputable licensed laboratories were utilised pre-2007 it is considered that acceptable levels of accuracy and precision were established for the purposes of mineral resource estimation. Historic (pre-2007)
10010		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.	 The majority of the samples were analysed following a three- or four- acid digest and either via Atomic Absorption Spectrum (AAS) or Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) for the analysis of base metals. Gold was analysed via Fire Assay using either 25g, 30g or 50g charge with an AAS finish. No information regarding QAQC data is available. Historic (post-2007)
n po			 The majority of the samples were analysed following a three- or four- acid digest and either via Atomic Absorption Spectrum (AAS) or Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) for the analysis of base metals. Gold was analysed via Fire Assay using either 25g, 30g or 50g charge with an AAS finish.
			 Commencing on drillhole LTD0014, blanks were inserted on either side of observed mineralised intersections and standards were inserted at the rate of about 1 in 30. In 2015 RVR conducted a review into the QAQC procedures and concluded that there were enough results to meet the JORC 2012 requirements for verification of source data. QAQC for blanks was typically good, with two samples analysing slightly high for Au and review of the CRMs suggested that Cu showed a general slight elevation in reporting and Pb showed a slight underreporting (deemed within acceptable limits), and zinc reporting was considered accurate.
			RVR
			 Independent certified assay laboratories were used for analysis. Samples were analysed at Intertek Genalysis Laboratory in Townsville where samples were crushed to <6 mm, split and pulverised to <75 um and a sub-sample was collected for analysis via four-acid digest and Inductively Coupled Plasma



	Criteria	Explanation	Commentary
			Optical Emission Spectrometry (ICP-OES) analysis of the following elements: Ag, As, Ba, Bi, Ca, Cu, Fe, K, Mg, Mn, Na, Pb, S, Sb, Ti, Zn, & Zr. Samples were assayed for Au using a 30g Fire Assay technique.
1 1 1			 The QAQC procedures involved insertion of blanks at a rate of 1 in 40 and Certified Reference Materials (CRMs) inserted at a rate of 1 in 20, before moving to 1 in 25 after Feb 2022. Banks and CRMs returned results within an acceptable range. No field duplicates were submitted for reverse circulation or diamond drilling.
)			SHN
)			 Samples are analysed at Australian Laboratory Services (ALS) in Townsville where samples were crushed to <6 mm, split and pulverised to <75 µm. 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 also assayed for
)			Au using a 30 g or 50 g Fire Assay technique with AAS finish. Assays returning over 100 g/t Au from this technique were re-assayed using gravimetric analysis. Ba over 1% was re-analysed using XRF. S assays over 10% were re-assayed using induction furnace/IR.
,))			 The QAQC procedures involved Blanks, Field Duplicates and CRMs inserted at a rate of 1 in 10 and it is considered that acceptable levels of accuracy and precision were established for the purposes of mineral resource estimation.
)			 Blank material comprised of "play sand" sourced from a local hardware store. Approximately 0.5kg was inserted into a numbered bag and entered into the sample stream. No significant contamination was reported from blank material.
)			 All CRMs were sourced from the reputable industry suppliers OREAS and Geostats Pty Ltd. A 2024 review of CRMs concluded that data quality was "good throughout the programme", however, a limited number of zones were re-assaved due to CRMs returning results outside of three (3) standard
)			deviations. The re-assaying of these outliers showed original assays were within acceptable levels of accuracy and precision, however, some Au-bearing zones may illustrate localised variability.
I			• Field duplicates were collected as a second split direct from the drill rig for reverse circulation drilling and as longitudinally cut quarter drill core to be compared with the half core original drill core sample. Duplicates were found to be repeatable within acceptable limits.
	Verification of sampling	The verification of significant intersections by either independent or alternative company personnel.	• Company geologists conduct meticulous reviews of mineralised intercepts observed in reverse circulation chip trays and diamond core, ensuring a thorough examination of geological features.
	and assaying	The use of twinned holes.	Historic
			 Documentation and information regarding data entry procedures, data verification, and data storage (physical and electronic) protocols is very limited. Available geological logging sheets comprise originals



	Criteria	Explanation	Commentary
>		Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	and scanned copies were digitised into RVR's database and subsequently into SHN's Datashed database. A series of twin holes were carried out by Esso of original Nickel Mines holes. On that basis the original drill holes were considered as "likely erroneous" and excluded by Esso and future operators.
		Discuss any adjustment to assay data	RVR
e or			 RVR data entry procedures, data verification and data storage (physical and electronic) comprised of Microsoft Excel logs and database exports and which have been incorporated into SHN's Datashed database. RVR reportedly twinned several historical drill holes, however it is unclear which holes were specifically designed as twins.
S			SHN
			• SHN twinned one (1) historic RC drill hole also with RC drilling (LLRC187). The replication of mineralised width and grade were considered reasonable.
sona			• SHN on-site Geologist's logged directly into Geobank for Field Teams 2024 software, which has been set up and customised to SHN requirements. The Geobank data is then exported to CSV files and sent to an external database consultant for loading into the Datashed database platform. The Sunshine Metals Ravenswood Consolidated Project drillhole assay database is managed by Sample Data Pty Ltd and each sample records the laboratory analysis method ensuring that suitable methods are utilised.
r pers			• Additional data validation procedures take place within the Datashed database platform and Leapfrog software. Within Datashed, this entails a meticulous process of querying and integrating multiple tables to identify any missing samples and assay results. Simultaneously, Leapfrog, upon importing the assays into the software, employs algorithms to detect and highlight any errors, overlaps, or duplications in intervals, ensuring an accurate dataset.
For			 Assay files are received electronically from the laboratory and securely filed on the company's server. These files are then provided to the database manager who loads the data into the company's database. Rigorous validation checks are performed at this stage, ensuring that the integrity and accuracy of the assay data are maintained throughout the entire process. SHN high-grade assays are routinely re-analysed: assays returning over 100 g/t Au from Fire Assay were routinely re-assayed using gravimetric analysis, Ba over 1% was re-analysed using XRF and S assays over 10% were re- assayed using induction furnace/IR.
	Location of	Accuracy and quality of surveys used to locate drill holes	Historic
	data points	(collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	• Historic drill collar locations were determined by a variety of methods in different programmes and included DGPS pickup of all 105 historical collars by Liontown Resources in 2007.



	Criteria	Explanation	Commentary
onal use only		Specification of the grid system used. Quality and adequacy of topographic control.	 Historic down hole surveys were taken using Eastman single shot cameras. RVR All survey activities were executed by an in-house certified surveyor using RTKGPS with <30mm horizontal and vertical accuracy. Down hole surveys used an industry-standard Reflex singleshot/multishot tool. All survey activities have been executed by a certified surveyor, Burton Exploration Services, using PPKGPS with <30mm horizontal and vertical accuracy. This included all new and available historical drill collars. Any historical collars collected superseded previous collar pickups. Downhole surveys employed an industry-standard Reflex Sprint-IQ gyroscopic survey tool under the management and calibration procedures of Eagle Drilling NQ Pty Ltd. The grid system applied is UTM MGA 1994 Zone 55. A 20m sterilization buffer zone was generated around the digitised workings of the historic Carrington Mine. The digitised workings were generated from historic level plans and survey pick ups of surface shaft locations in the 2020 resource estimate and provided for use as sterilization for the current Mineral Resource Estimate.
For pers	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.	 Historic Drill hole spacing ranges from 15 to approximately 30. Most holes were angled and drilled roughly due north. Most historic holes have drilled within a 1 m eastwest trend. RVR & SHN Drill hole spacing ranges from 5m to approximately 25m. Most holes were angled and drilled roughly due north. Most holes were angled and drilled roughly due north. Mean length of recorded samples is approximately 0.99 metres across all samples. The choice of designating 1 metre as the composite length is based on the data's distribution and practicality, given the prevalence of one (1) metre samples. The drill spacing provides evidence of mineralised zone continuity for the purposes of resource estimation and is reflected in the classification level. Samples were composited within the mineralisation interpretation. See Section 3.



	Criteria	Explanation	Commentary
e only	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.	 Where possible, holes were orientated to ensure drill intersections were approximately perpendicular to the strike of the ore lenses and overall geological sequence. Dip intersections to the plane of mineralisation generally occur between 45° and 80°. Objective of drilling was directly to intercept mineralised lenses and structures. Drill spacing is considered regular although as expected the most well-defined zones are shallower and central to the orebody. No potential sampling bias is expected. The drilling pattern and orientation is deemed to have appropriately intercepted the ore lenses and stratigraphy.
I S	Sample	The measures taken to ensure sample security.	Historic
	security		Sample security for historic programmes lack information and cannot be validated.
r personal			 RVR Samples were acquired on-site by competent geologists, each labelled with a unique sample ID, with five (5) samples grouped into a labelled polyweave big and transported securely to Intertek Genalysis Laboratory in Townsville establishing a rigorous chain of custody in accordance with industry standards. SHN Samples were acquired on-site by competent geologists, each labelled with a unique sample ID, with five (5) samples grouped into a labelled polyweave big and transported securely to ALS Townsville establishing a rigorous chain of custody in accordance with industry standards.
FOI	Audits or reviews	The results of any audits or reviews of sampling techniques and data.	 Pre-2008 reviews were carried out and documented by the various previous owners of the project including: A review of the assay data was completed by McDonald Speijers Consultants in 2008. Data review for resource estimation was completed by Mining One Consultants in November 2015.
			RVR
			 Data review and due diligence reviews for previous resource estimations by RVR were completed by Mining One Consultants in November 2015.
			SHN



Criteria	Explanation	Commentary
		 Sampling techniques and data processes of SHN have been reviewed by AHD Resources (2023) and Measured Group Pty Ltd (Measured Group) in 2024.

O Section 2 - Reporting of Exploration Results

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

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	 Ravenswood Consolidated Exploration Permits are: EPMs 10582, 12766, 14161, 16929, 18470, 18471, 18713, 25815, 25895, 26041, 26152, 26303, 26304, 26718, 27537, 27520, 27824, 27825, 28237, 28240, Mining Lease 10277 and Mining Lease Applications 100221, 100290 and 100302 for a total of 1,326km². The tenements are in good standing and no known impediments exist. These leases are held in their entirety by Sunshine (Ravenswood) Pty Ltd and Sunshine (Triumph) Pty Ltd, 100% owned subsidiaries of Sunshine Metals Ltd.
		 The Liontown Resource is located in its entirety on ML 10277 and EPM 14161 and under Mining Lease Applications MLA 100290 and MLA 100302.
to op		 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.
		 Liontown exists on the recognised native land of the Jangga People #2 claim.
		 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 from EPM 14161.
Exploration done by	Acknowledgment and appraisal of exploration by other parties.	 The Liontown deposit was discovered in 1905 by William Fredrick Carrington, whilst searching for his horses "Lion and Noble".
other parties		 The Cu-Au enriched zone was mined using underground development from 1905 to 1911, producing 28,000 ounces of gold at an average grade of 22g/t Au (Levingston, 1972).



	Criteria	Explanation	Commentary
only			 A second phase of mining occurred from 1951 to 1954 after Parsons and Jansen discovered the Pb-Zn-Ag enriched stratiform sulphide lenses, producing 54,000 ounces of silver and 9 tonnes of lead (Levingston, 1972). 1952 – 1953: Broken Hill South Limited drilled 3 diamond drill holes at Liontown, intersecting high-grade Pb-Zn-Ag (total of 292m drilling). 1957 - 1961: Queensland Mines Department completed 21 diamond drill holes at Liontown (1034m). In 1952 & 1959 EM surveys were carried out. 1960-1961 8 DD holes (896m) were drilled to test the EM anomalies but poor results were encountered.
sonal use			 1967 - 1968: Carpentaria Exploration Company conducted geochemical and geophysical surveys. 1970 - 1972: Jododex Australia held ground surrounding the Nickel Mines Lease with Shelley (1973) recognising that mineralisation is conformable with stratigraphy and exhibits features seen in volcanic ore deposits. 1970 - 1971: Nickel Mines drilled 59 diamond drill holes for 7669m in total at Liontown. The programme was poorly documented and is now considered to be unreliable. As such, they have not been used within the current resource update. 1982 - 1984: Esso Minerals carried out an extensive exploration programme across the region, under a JV agreement with Great Mines. The programme consisted of extensive RAB drilling, soil sampling, geophysics, RC drilling and diamond drilling holes at Liontown. A total of 30 lines of IP and 2.1 km2 of EM were also completed over the Liontown area.
For per			 1987: Great Mines Limited drilled 50 shallow RC drill holes 1994 -1996: Pancontinental drilled 124 holes for 14,316m. Most of the drilling was conducted at Liontown and along the Liontown horizon looking for repeat lenses. 2004-2009: the project was acquired by Bullion Minerals Ltd, subsequently, Uranium Equities Limited and then Liontown Resources Ltd, Uranium Equities undertook a programme of 580 soil samples and a VTEM survey within the broader Liontown area before following up with RC and Diamond Drilling at Liontown, which was continued by Liontown Resources. A JORC 2004 compliant Mineral Resource Estimate (MRE) was reported in 2008 of; 1.64Mt @ 7.4% Zn, 0.49% Cu, 2.3% Pb, 0.5g/t Au & 28g/t Ag (sulphide) & 0.2Mt 7.4 % Zn, 1.12% Cu, 3.1% Pb, 0.96g/t Au & 31g/t Ag (oxide). Limited work was conducted following this period and the project was subsequently joint ventured to Ramelius Resources (2010 – 2013) and Kagara Ltd (2013 -2014) both of which conducted desktop reviews. The tenure was acquired by Red River Resources in 2015 who subsequently reported a JORC 2012 compliant MRE update of; 2.04Mt @ 4.60% Zn, 0.50% Cu, 1.6% Pb, 0.8g/t Au & 26g/t Ag (sulphide) & 0.22mt 4.65 % Zn, 0.95% Cu, 1.33% Pb, 0.95g/t Au & 15g/t Ag (oxide). IP reprocessing of historical data and followed up with 9-lines of dipole-dipole IP within the tenure area. The reprocessing of the bistorical data aided follow-up targeting at Liontow Rest at which mineralisation was successfully drilled



	Criteria	Explanation	Commentary
only			 in 2017. Further drilling occurred at Liontown in 2018 through to 2020 and included a second Red River Resources JORC 2012 compliant MRE update for Liontown and Liontown East combined of; 4.1Mt @ 5.9% Zn, 0.6% Cu, 1.9% Pb, 1.1g/t Au & 29g/t Ag (sulphide) & 0.1Mt @1.9g/tAu & 24g/t Ag (oxide) in 2020. The tenure was acquired by Sunshine Metals Ltd in 2023. Sunshine reported a JORC 2012 compliant MRE update Liontown and Liontown East combined using different metal price assumptions to report; 3.9Mt @ 6.1% Zn, 0.65% Cu, 1.99% Pb, 1.2g/t Au & 31g/t Ag (sulphide) & 0.15Mt @2.1g/t Au & 30g/t Ag (oxide) in February 2024.
For personal use	Geology	Deposit type, geological setting and style of mineralisation.	 Regional Geology and Setting: The Project area is located within the Charters Towers Province which extends inland from the coast at Townsville to 150km west of Charters Towers. The rocks are typically Neoproterozoic to Palaeozoic age. It is bound in the southeast by the New England Orogen and to the north by the Broken River Province of the Mossman Orogen. The known VMS deposits, including Liontown, are hosted within the stratigraphy of the Mt Windsor Sub-province, which encompasses the dismembered remnants of a thick volcanic and sedimentary succession predominantly of Late Cambrian and Early Ordovician age located within the northern part of the Tasman Orogenic Zone (Henderson, 1986). The succession comprises of four identified formations collectively known as the Seventy Mile Range Group, which outcrop discontinuously in an east-west belt south of the Ravenswood Batholith. The Seventy Mile Range Group (499 – 479 Ma) ranges from Late Cambrian to Early Ordovician and is represented by the Puddler Creek Formation at the base, followed by the Mt Windsor Volcanics, the Trooper Creek Formation and the Rollston Range Formation at the top. The Trooper Creek Formation consists of intermediate lavas, volcaniclastics (including mass flow deposits), minor felsic rocks and marine sediments (Henderson, 1986). The facies assemblage has been interpreted as being deposited proximal to submarine volcanic centres and is known to host VMS deposits, such as Thalanga, Liontown and Highway-Reward. The Group is variably overlain by Tertiary and Quaternary cover sequences, including the Campaspe Formation which comprises immature and pebbly sandstone and minor siltstone interbeds and is interpreted to represent erosive channel fill and fluvial sheet deposits, which typically are exhibited as lense-like massive to stringer sulphide (VMS) base metal style deposits, which typically are exhibited as lense-like massive to stringer sulphides comprised of sphalerite, galena, chalcopyrite and pyrite.



Criteria	Explanation	Commentary
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 elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case 	 Raw interval length varies from 0.5 m to 2m. Drill intersections from 294 drill holes were used in the estimation 49 of which were drilled by Sunshine Metals Ltd. Tables with drill hole collar and survey are in Appendix A containing Hole IDs, location, elevation (m), hole type, etc.
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.	 No reported exploration results. For all previous exploration results refer to ASX releases. The dominant composite length is 1m. The gold and zinc equivalent grades for Greater Liontown (g/t AuEq, % ZnEq) are based on the following prices: US\$2,900t Zn, US\$9,500t Cu, US\$2,000t Pb, US\$2,500oz Au, US\$30oz Ag. Metallurgical metal recoveries are broken into two domains: copper-gold dominant and zinc dominant. Each domain and associated recoveries are supported by metallurgical test work and are: <u>Copper-gold dominant</u> – 92.3% Cu, 86.0% Au, <u>Zinc dominant</u> 88.8% Zn, 80% Cu, 70% Pb, 65% Au, 65% Ag. The AuEq calculation is as follows: AuEq = (Zn grade% * Zn recovery * (Zn price \$/t * 0.01/ (Au price \$/oz / 31.103))) + (Cu grade % * Cu recovery % * (Cu price \$/t/ (Au price \$/oz / 31.103))) + (Pb grade % * Pb recovery % * (Pb price \$/t/ (Au price \$/oz / 31.103))) + (Pb grade % * Pb recovery % * (Pb price \$/t/ (Au price \$/oz / 31.103))) + (Cu grade g/t / 31.103 * Ag recovery % * ((Ag price \$/oz / 31.103 / (Au price \$/oz / 31.103))) The ZnEq calculation is as follows: ZnEq = (Zn grade% * Zn recovery) + (Cu grade % * Cu recovery % * (Cu price \$/t/ 2n price \$/t/ 2n price \$/t * 0.01))) + (Au grade g/t / 31.103 * Ag recovery % * ((Ag price \$/oz / 31.103))) + (Pb grade % * Cu recovery % * (Cu price \$/t/ Zn price \$/t * 0.01))) + (Au grade g/t / 31.103 * Au recovery % * ((Au price \$/oz / 31.103 / Zn price \$/t * 0.01))) + (Au grade g/t / 31.103 * Au recovery % * ((Au price \$/oz / 31.103 / Zn price \$/t * 0.01))) + (Ag grade g/t / 31.103 * Au recovery % * ((Ag price \$/oz / 31.103 / Zn price \$/t * 0.01))) No top-cut or capping was applied. Instead, a clamping method at specific search distances and value thresholds was employed to reduce statistical bias.



Criteria	Explanation	Commentary
Relationship between mineralisation widths and intercept length	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	 The stratiform mineralisation is interpreted to be dipping at approximately 70 degrees towards a bearing of 180 degrees. A variety of drill hole angles have been drilled with the majority intercepting the strike of mineralisation perpendicular and the plane of mineralisation at angles between 90 and 45 degrees. Interpreted feeder structures are interpreted to dip more steeply between at 80 to 90 degrees at a similar bearing of approximately 180 degrees. True widths of intercepts are likely to be between 40% and 80% of down hole widths. Lode mineralisation widths are generally between 0.1m and 12m true width and averaging 1.7m. Sample lengths are most commonly 1m of downhole length. Note some smaller true widths are observes to assist in controlling mineralisation interpretation. These areas are considered in the classification.
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.	 Maps and sections showing drill hole intercepts are contained within the body of the release and the Appendices.
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.	 The Sunshine Metals Liontown Project 2024 MRE was produced by Measured Group based on information provided by Sunshine Metals. The resource report contains summary information for all historic drilling and sampling campaigns within the Project area and provides a representative range of grades intersected in the relevant drill holes. No new exploration results are reported here. The application of estimation reduces anomalous grade bias in the representation of mineralisation interpretation of Liontown.
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.	 Geological observations: Historical mapping has validated the stratigraphy in the area, although limited outcrop is present. Historical shafts have been located and sighted by SHN confirming the presence of the historical mining activities and validating the location of the workings. Geophysical survey results: Induced Polarisation has been shown to be an effective exploration tool at Liontown and was used in targeting for the discovery of the Liontown East deposit. Geochemical survey results: Historical mining has affected the reliability of soil sampling in the immediate Liontown area, however base metal (Cu, Pb, Zn) and Au anomalism in soil is deemed to be a useful exploration technique for VMS deposits within the region. Bulk density: Samples were collected by SHN during its core drilling programme at a rate of 1 in 10m for unmineralised rock and 1 in 2m to 5m for mineralised rock. Future drill programmes will also collect additional bulk density data.



Criteria	Explanation	Commentary
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	 Further drilling will be required to test geological interpretation and targeting of additional lenses and increase resource confidence.

Section 3 - Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

	Criteria	Explanation	Commentary
))	Criteria Database integrity	a Explanation Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	LIONTOWN RESOURCE Measures to ensure data integrity in the Mineral Resource Estimation (MRE) for the Liontown Project in Sunshine Metals (SHN): • Data supply and compilation: Sunshine Metals initiated the MRE project in September 2024, providing raw drill data in various computerised formats, including MS Access, CSV, Excel, and PDF.
)			 Legacy data, including topography in DXF format, was also supplied. All data, including updates and legacy information, were compiled into the Access database from September to early October 2024.
1			 Initial database management was outsourced, revealing critical errors, and prompting the transition of data management to MG in mid-October 2024.
			 Data management transition: SHN's database used in the MRE contains: All standard samples from the recent drilling and their assay results All available historical and assay results obtained from the recent drilling campaign
			 Available Geological logging data



	Criteria	Explanation	Commentary
			 Historical drilling data and assays
			 Other pertinent data essential for the MRE process
			 Data processing: MG imported all data into Leapfrog (LF) software, including historical and recent data. DXF topo data underwent pre-processing and was loaded into LF in DXF format.
			 Data integrity and validation: MG relied on the basic integrity of the supplied data, particularly on the legacy data. MG conducted comprehensive data checking and validation of the drilling data collected from the recent drilling campaign to ensure its integrity.
			• Surveys: MG plotted the holes in LF and validated their locations by comparison with various historical collar plots.
			Assays: Assay values were checked for downhole interval integrity and statistical errors.
			Additional verification processes performed on the database include:
			 Loading error-checking identified depth errors, nonnumerics, and missing intervals, resolving minor discrepancies attributed to typographic errors.
			 Simple statistics revealed some errors, which were easily fixed.
			 Verification included reporting, visual inspection, plan and section plotting, and comparisons with historical plans and sections.
_			 Continuous checks during geological interpretation confirmed broad data integrity, particularly in continuity in assay patterns.
			 Topographic data underwent thorough validation through comparison with ground observations and limited GPS checks, with MG consultants verifying its adequacy.
			 The measures undertaken by MG encompass comprehensive data validation, systematic error-checking, and thorough verification processes, ensuring the integrity of the data throughout its journey from initial collection to use in the Mineral Resource Estimation project.
			LIONTOWN EAST RESOURCE
			 The survey, sampling and logging data was electronically imported into the resource database. Checks were made of the original lab sample sheets and the database to ensure that transcription errors were not present. A visual check was made of the drill traces, assay and logging data in the 3D environment of Datamine to ensure that results correlated between drill holes and were in line with the geological interpretation. Exclusion of Au and Ag assays from the first drill programme by Nickel Mines was carried out due to uncertainty of their resorded values. These other drill holes are eveluded from the resource optimate due to accurate leasting.



	Criteria	Explanation	Commentary
			and/or assay records.
enly			WATERLOO RESOURCE
	6		 The survey, sampling and logging data was electronically imported into the resource database. Checks were also made of the original lab sample sheets and the database to ensure that transcription errors were not present. A visual check was also made of the drill traces, assay and logging data in the 3D environment of Surpac to ensure that results correlated between drill holes and were in line with the geological interpretation and mineralisation continuity.
Se			ORIENT RESOURCE
nal us			 The survey, sampling and logging data was electronically imported into the resource database. Checks were also made of the original lab sample sheets and the database to ensure that transcription errors were not present. A visual check was also made of the drill traces, assay and logging data in the 3D environment of Surpac to ensure that results correlated between drill holes and were in line with the geological interpretation and mineralisation continuity.
Ο	Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	LIONTOWN RESOURCE
)ers			 A site visit was undertaken by the Competent Person Chris Grove. The purpose of this visit was to ensure that his exploration procedures were conducted in the correct scientific method. This included all aspects of the exploration process from initial drill hole planning to database consolidations. The outcomes of this visit proved highly valuable and operations on site were deemed by Chris to have been conducted in the professional nature required.
			LIONTOWN EAST RESOURCE
For			 Site visits to Liontown, Liontown East and Thalanga Mine Site Core Facility were undertaken by the competent person in April and June 2018. A review of the data collection processes was undertaken No material issues were identified.
			WATERLOO RESOURCE
			• A site visit was completed by Stuart Hutchin during 2013 where the Waterloo prospect and core samples were inspected.
			ORIENT RESOURCE
			A site visit was completed by Stuart Hutchin on 16/10/2013 where Orient core samples were inspected.



Criteria	Explanation	Commentary
Geological interpretation	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology 	 LIONTOWN RESOURCE Mineralised boundaries for the current resource estimate have been determined on mineral grades from both RC and DD holes. Exploratory data analysis was carried out to ensure that the observed grade-derived mineralisation was reflective of the lithology, alteration and mineralogy. A First-pass interpretation of Zn + Pb dominate zones was completed and followed up by Cu + Au zones. These were then compared and combined appropriately to reflect the interpretation of stacked mineralised lodes. A final check on boundary domains was completed on the Zn Eq value, calculated on the drilling samples (Zn Eq outlined below). This was to ensure that no excessive waste was included internally in the wireframes. Mineralised intercepts from drill holes were spatially correlated, considering the stratigraphic sequence and the structural characteristics of the deposit. 3D solid wireframes (lodes) were created from selected intervals using the Geological Model tool in Seequent Leapfrog Geo (Leapfrog). Wireframes were snapped into the boundaries of the mineralised intercepts. Factors affecting the continuity of grade and mineralisation are related to the pinching nature of the VMS lenses. In some cases, the continuity of structures can be observed in the drilling, but is not supported by assay results, leading to the termination of one lode and the development of another along strike, in line with results in the assay
		 LIONTOWN EAST RESOURCE Confidence in the geological interpretation of the mineral deposit as a VMS is high based on its characteristics and their affinities with other well-known deposits within the Seventy Mile Range Group Consistency of the host sequence between holes through and around the Mineral Resource is high. The sequence continues along strike and is well drilled in both Liontown and Liontown East where mineralisation is located within the same horizons. This repetition is a function of contemporaneous deposition. The assumption that mineralisation is continuous between holes within the resource area is fair considering the consistency of host and mineralisation and the drill hole spacing defining them. There is moderate potential for local discontinuities of the mineralised system from depositional facies variations, faulting and dykes interruptions. There is a low potential for these to have a major impact on the global Mineral Resource. The main lens of mineralisation is contained between a fine-grained siltstone and a thick package of rhyodacite pumice breccia. A mineralised envelope containing massive, banded and network stringer sulphide mineralisation (sphalerite, calone, calone,



	Criteria	Explanation	Commentary
enly e			 At Liontown East, within the immediate footwall lesser Zn Pb Cu stringer sulphide mineralisation of undetermined continuity has been excluded from this resource estimate. Similarly, Cu-Au mineralisation within the footwall pumice breccia below the defined resource has not been included in the estimate. This Cu-Au mineralisation has similarities to the Carrington Lode mined at the Liontown deposit. Further drilling at closer spacing may prove the continuity of these areas. Little recent data has been collected in the Oxide domain and the Western Footwall domain of the Resource and as such a lower confidence in the interpretation of these areas exists.
S			WATERLOO RESOURCE
n			• The confidence in the overall geological interpretation is high given the continuity of the mineralised zone defined at the 40m x 40m drill spacing.
a			• The dacite, quartz-eye volcaniclastics and rhyolite geological units have been modelled to define general areas of rock types within the deposit. The mineralised zones typically occur within the quartz eye volcaniclastics.
OD			• The mineralised lenses occur within the quartz-eye volcaniclastic package, they are discrete pods of massive sulphide and stringer mineralisation.
S			ORIENT RESOURCE
)e			• The confidence in the overall geological interpretation is high given the continuity of the mineralised zone defined at the 40m x 40m drill spacing.
Jr p			 The dacite, quartz-eye volcaniclastics and rhyolite geological units have been modelled and are used to define general areas of rock types within the deposit. The mineralised zones typically occur within the quartz-eye volcaniclastics
F			 The mineralised lenses occur within the quartz eye volcaniclastic package, they are discrete pods of massive sulphide and stringer mineralisation.
	Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or	LIONTOWN RESOURCE
		otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	 An East-West striking and moderately (70°) south dipping mineralised sequence is interpreted as 18 separate lodes. The Zn-Pb-Ag dominant mineralisation consists of 3 individual stacked narrow sulphide lenses (domains HW 01, HW02, HW03, LTE HW01) hosted within sediments, comfortably overlying a pumice breccia unit. The Zn-Au dominant mineralisation consists of 2 individual sulphide lenses (domains FW 04 & FW 14) situated entirely within the pumice breccia unit but displaying a geometry conforming to the overall dip of the sequence (~70° to 180°). The remaining 13 wireframes represent Cu-Au and or Au-only dominant mineralisation occurring



	Criteria	Explanation			C	commentary		
			as subv feeder s FW 13,	vertical, quartz-sulp structures to the str FW 15, FW 17, FW	hide veins/lodes, cu ratiform mineralisation 18, FW 19 & FW 22	utting across the strong the strong (domains FW 02, 2).	ratigraphy at a high angle, inter FW 03, FW 05, FW 07, FW 10, F	oreted as the W 11, FW 12,
))			Dimensi	ions for the interpre	eted mineralisation a	are outlined in the ta	ble below:	
OL				Lode	Length (m)	Width (m)	Average Thickness (m)	
()				FW 02	600	310	1.30	
U				FW 03	350	240	1.70	
S				FW 05	510	270	1.75	
				FW 04	440	170	2.90	
				FW 07	250	100	1.75	
R				FW 10	390	250	1.30	
CU				FW 11	260	140	2.10	
				FW 12	410	250	2.20	
$\overline{\mathbf{O}}$				FW 13	190	140	0.90	
				FW 14	300	120	1.90	
5				FW 15	160	150	2.30	
				FW 17	260	350	0.65	
Û				FW 18	240	230	2.50	
				FW 19	540	330	2.65	
				FW 22	310	280	1.00	
<u> </u>				HW 01	170	120	1.90	
\mathbf{O}				HW 02	220	35	2.10	
\sim				HW 03	160	60	0.75	
ш			LIONTOWN EAS The def degrees The extended The Mirror of 5.1 m	ST RESOURCE Fined Mineral Resol to the southeast. ent of the Mineral F heral Resource rang	urce has dimension Resource span 250m ges from 0.5m to 14	s of a narrow lens t n in strike and 480m m in true thickness	hat strikes at a bearing of 075 a down plunge with an area-weighted average t	nd dips at 60 rue thickness
			The Min	neral Resource is d	efined between 170	m and 570m belows	surface level.	
			The Res	source is open at d	epth.			



	Criteria	Explanation	Commentary
use only			 WATERLOO RESOURCE The strike length of the overall mineralised zone is 600m, the thickness of the zones ranges from 5m to 10m. The resource domains are located from 50m below the surface topography and extend to a depth of 200m below the surface. ORIENT RESOURCE The strike length of the overall mineralised zone is 340m, the thickness of the zones ranges from 5m to 10m. The resource domains are located from 150m below the surface topography and extend to a depth of 500m below the surface.
For personal	Estimation	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	 LIONTOWN RESOURCE The mode of the original sampling interval for the geochemistry assaying corresponds to 1m (77.3% of the samples). Thus, compositing was carried out at 1 m interval considering mineralised model boundary breaks. To increase the coverage of the specific gravity (SG) dataset, a regression model using the multielement geochemistry plus the spatial coordinates was fitted to predict SG in the absence of experimental data. A gradient boosting model was used, considering a 5-fold cross validation to prevent overfitting and to calculate the performance of the model on a test dataset. The performance of this model was measured by the root mean squared error (RMSE=0.18) and the coefficient of determination (R2 = 0.65). Considering the different sample support between the two datasets (1m interval for geochemistry and ~0.3m for SG), the performance of the model was considered appropriate. Declustering scenarios by varying the cell size were calculated using the cell method, oriented accordingly to the global geometry of the mineralised system. The optimal declustering mesh size was obtained at 86 m x 86 m x 4m. These declustered weights were used to calculate the experimental distribution of the grades. Subsequently, to evaluate outliers, declustered probability plots were examined per analyte/domain to determine population breaks around the 98th percentile, in cases where no clear break was observed the value of the 98th percentile was used. Interpolation was performed using ordinary kriging for the following analytes; Au, Ag, Cu, Pb, Zn and specific gravity. Due to the large number of domains (18) and the narrow width (~2m) of the mineralised structures, some domains lacked a sufficient number of samples (<50) to produce robust variogram estimates. To address this, the lenses were grouped into five clusters based on their geochemical signatures and their structural orientation. Directional variograms were then calculated for each group.



Criteria	a Explanation	Commentary
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	• During variogram modelling, the minor axis (across the width of the lodes) was modelled considering a range equal to the semi-major, after the pair count was zero (generally after a lag of 5m). This was done to avoid interpolation artifacts caused by short-ranged variogram structures under local variations in dip and strike.
-	Any assumptions behind modelling of selective mining units.	Variable sample search was used to rotate the search according to local variations in the structures, azimuth and dips.
	Any assumptions about correlation between variables.	LIONTOWN EAST RESOURCE
	Description of how the geological interpretation was used to control the resource estimates.	 The resource model was constructed using Datamine Studio RM software. A mineralised envelope containing continuity of massive, banded and network stringer sulphide mineralisation (sphalerite galena chalcopyrite and pyrite) was used to constrain the resource estimate. This envelope equates to ~ 5% ZnEq cut-off
	Discussion of basis for using or not using grade cutting or capping.	 Extrapolation of mineralised envelope beyond the extent of the drill hole confirmed mineralisation was ~1/3 of drill spacing.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data	 Top capping of high-grade Cu, Pb, Ag and Au samples was applied to raw assay data. 9 Cu samples (>2% Cu), 7 Pb composites (>10% Pb), 5 Ag samples (>140ppm Ag) and 5 Au samples (>4ppm Au) were top capped to their population means. The sample data was composited to a length of ~1m.
	ii avaliable.	 An inverse distance squared estimate was carried out using a multiple pass method with sample limitations and octant requirements and increasing search distances. A block size 1/3 of the sample spacing was used. This method is suitable for an Inferred Resource estimation at Liontown East given the style and orientation of the mineralisation and the current drill spacing.
-		 The estimation process was validated by comparing global block grades with the average composite grades, visual checks comparing block grades with raw assay data, volume checks of the ore domain wireframe vs the block model volume and comparison of composites and block grades by RL.
		• The validation steps taken indicated that the block estimates are a realistic representation of the source assay data and that the block model volumes are valid in comparison to the modelled interpretation.
		WATERLOO RESOURCE
		• The resource model was constructed using Surpac software. Mineralised domain wireframes were constructed by modelling the geological cut-off seen in the logging for both the massive sulphide zone and the stringer zone. A minimum domain thickness of 2m was used, this corresponds to the minimum practical mining width within an underground operation.
		 High-grade Zn, Cu, Pb, Ag and Au were top cuts were applied using the 95th percentile method. For the Central massive sulphide zone, a total of 8 copper assay values were cut and 7 for lead and zinc. A composite file was created using an average composite length of 1m. The average sample length within the



	Criteria	Explanation	Commentary
e only			 assay dataset is also 1m. Variograms were not created due insufficient quantity of sample pairs within the relatively small dataset, meaningful variograms were not created. An inverse distance estimate was run given the lack of variograms. This method is however deemed to be suitable given the style and orientation of the mineralization. A 12.5m x 12.5m x 2.5m (RL) parent block size was used with sub-blocking to 0.78125m x 0.78125m x 0.15625m (RL) used.
r personal use			 The resource model was constructed using Surpac software. Mineralised domain wireframes were constructed by modelling the geological cut-off seen in the logging for both the massive sulphide zone and the stringer zone. A minimum domain thickness of 2m was used, this corresponds to the minimum practical mining width within an underground operation. High-grade Zn, Cu, Pb, Ag and Au were applied using the 95th percentile method. For the massive sulphide zone, a total of 8 assay values were cut for all metals except zinc where 7 were cut. For the stringer zone, a total of eight samples were cut for all metals. A composite file was created using an average composite length of 1m. The average sample length within the assay dataset is also 1m. Variograms were not created due insufficient quantity of sample pairs within the relatively small dataset, meaningful variograms were not created. An inverse distance estimate was run given the lack of variograms. This method is however deemed to be suitable given the style and orientation of the mineralization. A 10m x 10m x 5m (RL) parent block size was used with sub blocking to 1.25m x 1.25m x 0.625m (RL) used. This is deemed appropriate in relation to the style of mineralization, ore zone geometry and potential future mining methods.
БO	Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	 LIONTOWN RESOURCE The resource tonnages have been estimated on a dry basis.
			 LIONTOWN EAST RESOURCE The resource tonnages have been estimated on a dry basis
			 WATERLOO RESOURCE The resource tonnages have been estimated on a dry basis



Criteria	Explanation	Commentary
		 ORIENT RESOURCE The resource tonnages have been estimated on a dry basis
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	 ALL RESOURCES The sulphide ("fresh") Resource has been reported above a 5% ZnEq cut-off into Inferred and Indicated categories. The basis for cut-off grade is that a 5% ZnEq grade was assessed as the lower cut-off for definition of potential economic mineralisation using a proposed underground mining methodology. The 5% ZnEq cut-off grade was used as the economic cut-off at the underground Thalanga Mine (operated by Red River Resources). The oxide Inferred Resource has been reported above a 0.5g/t Au cut off as this is assessed as appropriate for the mineralisation style and the likelihood of providing a potentially economic, shallow open pit. The oxide Inferred Resource is shallow and located above the sulphide lodes and further drilling may allow conversion of this material to an Indicated Resource. The gold and zinc equivalent grades for Greater Liontown (g/t AuEq, % ZnEq) are based on the following prices: US\$2,900t Zn, US\$9,500t Cu, US\$2,000t Pb, US\$2,500oz Au, US\$30oz Ag. Metallurgical metal recoveries are broken into two domains: copper-gold dominant and zinc dominant. Each domain and associated recoveries are supported by metallurgical test work and are: <u>Copper-gold dominant</u> – 92.3% Cu, 86.0% Au, <u>Zinc dominant</u> 88.8% Zn, 80% Cu, 70% Pb, 65% Au, 65% Ag. The AuEq calculation is as follows: AuEq = (Zn grade% * Zn recovery * (Zn price \$/t * 0.01/ (Au price \$/oz / 31.103))) + (Cu grade % * Cu recovery % * (Cu price \$/t/ (Au price \$/oz / 31.103))) + (Au grade g/t / 31.103 * Au recovery % * (Cu price \$/t/ Au price \$/oz / 31.103))) + (Du grade % * Cu recovery % * Zn recovery * (Cu grade % * Cu recovery % * (Cu price \$/t/ Au price \$/oz / 31.103))) The ZnEq calculation is as follows: ZnEq = (Zn grade% * Zn recovery) + (Cu grade % * Cu recovery % * (Cu price \$/t/ Au price \$/oz / 31.103))) The ZnEq calculation is as follows: ZnEq = (Zn grade% * Zn recovery) + (Cu grade % * Cu recovery % * (Cu price \$/t/ Zn price \$/t * 0.01)) + (Au g
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider	 LIONTOWN RESOURCE The anticipated Liontown mining method for extraction of the majority of the Mineral Resource is via underground long hole stoping techniques on 20m level spacing. Potential for an initial Open cut, mining the Oxide Au and shallow parts of the sulphide Resource to a limited depth is also an option.



	Criteria	Explanation	Commentary
only		potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions.	 The minimum mining width is approximately 2m and while some lodes present thin interpretations, they are considered a potential for extraction with their proximity to adjacent lodes reducing development costs to access potential ore. The mining process would involve level development at which time, geological mapping, face sampling and underground drilling would be required for grade control. This data would be used to refine the mineralised domains and to create a grade control/short term mining model from which final stope designs could be generated.
rsonal use			 LIONTOWN EAST RESOURCE The Resource has been estimated with the intent of being mined by selective mining methods such as underground drive development and long hole stoping techniques. A minimum mining extraction thickness of 2m would be likely. For conversion to Reserve, material that is sub-2m thick will require a higher cutoff to accommodate the additional minimum mining width dilution. ~5% of the reported resource is of sub-2m thickness and no exclusion of this material has been made. Potential for an initial open cut mining the Oxide Au and shallow parts of the sulphide Resource to a limited depth exists.
Ð			WATERLOO RESOURCE
For p			• The resources have been estimated using a minimum thickness of 2m for each of the domain shapes, this minimum thickness therefore accounts for any dilution in zones that are less than this thickness. The proposed mining method is via underground long hole stoping techniques, the model parameters are therefore deemed to be suitable for this type of potential mining operation.
			ORIENT RESOURCE
			• The resources have been estimated using a minimum thickness of 2m for each of the domain shapes, this minimum thickness therefore accounts for any dilution in zones that are less than this thickness. The proposed mining method is via underground long hole stoping techniques, the model parameters are therefore deemed to be suitable for this type of potential mining operation.



	Criteria	Explanation	Commentary
al use only	Criteria Metallurgical factors or assumptions	Explanation The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	 LIONTOWN RESOURCE The assumed processing is via crushing and milling and conventional flotation for base metals to produce a Znrich or Cu-rich concentrate, and gravity and leaching of oxide ore and fresh "gold-only" domains. Previous production has shown that a saleable concentrate can be produced from the Greater Liontown style ores. Metallurgical Recoveries are derived from test work on Liontown samples and the known metallurgical recoveries of ores in the area. Recent metallurgical test work recoveries by Independent Metallurgical Operations for SHN on Cu-Au and Au-only domains have been incorporated into this resource and its recoverable metal equivalencies. Further metallurgical test work will be required on Zn-dominant domains and to confirm the processing metrics of the ore material.
For person			 LIONTOWN EAST RESOURCE The assumed processing is via crushing and milling and conventional flotation to produce concentrates containing Zn, Pb, Cu, Au and Ag. Further metallurgical test work will be required to confirm the processing metrics of the ore material. Ore sorting may be applicable WATERLOO RESOURCE The ore is planned to be crushed and a concentrate containing Zn, Pb, Ag and Cu produced. Metallurgical test work has shown that a saleable concentrate can be produced from the Waterloo ore. ORIENT RESOURCE The ore is planned to be crushed and a concentrate containing Zn, Pb, Ag and Cu produced. Metallurgical test work has shown that a saleable concentrate can be produced from the Waterloo ore.
	Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining	 LIONTOWN RESOURCE Government approvals would need to be obtained for mining at Liontown. Department of Environment approvals will also need to be sort for tailings storage and mine waste rock storage. Waste rock would likely be required as stope fill following ore extraction.



	Criteria	Explanation	Commentary
1		and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project,	 Mining Lease applications have been submitted over the Liontown deposits and a Mining Lease renewal has been lodged for ML 10277. Note that this is a previously disturbed site with contemporary mining of the Liontown deposits by previous
		may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been	operators and as such provides a precedent to mining over the existing disturbance footprint.
		considered this should be reported with an	
)		explanation of the environmental assumptions	 Government approvals would need to be obtained for mining at Liontown and Liontown East. Department of Environment approvals will also need to be sought for tailings storage and mine waste rock storage.
		maue.	Waste rock would likely be required as stope fill following ore extraction.
)			Mining Lease applications have been submitted over the Liontown and Liontown East deposits.
5			WATERLOO RESOURCE
			Government approvals would need to be obtained for mining at Waterloo.
			• Department of Environment approvals will also need to be sort for tailings storage and mine waste rock storage.
			Waste rock would likely be required as stope fill following ore extraction.
			A Mining Lease application has been submitted over the Waterloo deposit.
			ORIENT RESOURCE
			 Government approvals would need to be obtained for mining at Orient. Department of Environment approvals will also need to be sort for tailings storage and mine waste rock storage.
)			Waste rock would likely be required as stope fill following ore extraction
	Bulk density	Whether assumed or determined. If assumed,	LIONTOWN RESOURCE
		the method used, whether wet or dry, the frequency of the measurements, the nature,	 The bulk densities of samples representative of the ore and waste rock types were measured using the Archimedes method, that is (Dry Weight / (Dry Weight – Wet Weight)).
		The bulk density for bulk meterial must have	 Samples were selected on average at a rate of 1 in 10m for unmineralised samples, 1 in 5m for low grade samples
		been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and	 A review was conducted on historic bulk density measurements and samples were omitted if deemed erroneous.
		alteration zones within the deposit.	LIONTOWN EAST RESOURCE



	Criteria	Explanation	Commentary
		Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	 The bulk density of the Mineral Resource was calculated from content estimates of dense minerals based on modelled block grades of Zn, Pb, Cu, Fe and Ba and measured gangue densities. The density calculation incorporates void and porosity influences through an assigned (and validated) gangue density. The density calculation was validated by empirical test work on the Liontown East core following the Archimedes principle. 16% of samples within the resource area were tested. Oxide Resource blocks were allocated a density of 2.3 as supported by limited sampling. The densities are reported on a dry basis.
)			WATERLOO RESOURCE
)			 The bulk densities for the ore and waste rock types were estimated using the Archimedes method, that is (Dry Weight / (Dry Weight – Wet Weight). Bulk density measurements were obtained for all sample intervals within the diamond drill holes with a total 1,174 samples collected.
)			
)))			The bulk densities for the ore and waste rock types were estimated using the Archimedes method, that is (Dry Weight / (Dry Weight – Wet Weight). Bulk density measurements were obtained for all sample intervals submitted for assays within the diamond drill holes.
	Classification	The basis for the classification of the Mineral Resources into varying confidence categories	LIONTOWN RESOURCE
, , ,		Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit.	 The resources have been classified according to the sample spacing and confidence in the modelled continuity of both the thickness and grade of the mineralised. Both Indicated and Inferred blocks have been reported. No Measured is classified within this resource. There is additional unclassified inventory that can be upgraded with additional drilling.
,			• The resource classification is deemed appropriate in relation to the drill spacing and geological continuity of the mineralised domains. Each of the lodes was assessed for drill hole spacing, and the Competent Person delineated the boundary of sufficient geological continuity (confidence) to classify blocks as Indicated.
			• Typically, the drill hole spacing for the classification of Indicated is 50m across the lodes but was reviewed on a lode by lode basis.
			Classification is applied to the ore blocks only. No waste is classified.
			• The classification appropriately reflects the Competent Persons confidence of the estimate of the ore body, that being that there is sufficient geological evidence to support and verify tonnes and grade for Indicated classification. And that there is sufficient geological evidence to imply grade and tonnes for Inferred classification.



	Criteria	Explanation	Commentary
e only			 LIONTOWN EAST RESOURCE The resources have been classified according to the drill density and the modelled continuity of both the thickness and grade of the mineralised zones in the view of the competent geologist. The Liontown East Resource classification of Inferred is deemed appropriate in relation to the drill spacing, likely geological continuity of the mineralised domains and the reliability of supporting data. With the reliability being demonstrated through quality assessment processes.
r personal use			 WATERLOO RESOURCE The resources have been classified according to the drill density and the modelled continuity of both the thickness and grade of the mineralised zones in the view of the resource geologist. Only indicated and inferred blocks have reported for the resource, no measured blocks are reported. The resource classification is deemed appropriate in relation to the drill spacing and geological continuity of the mineralised domains.
			 ORIENT RESOURCE The resources have been classified according to the drill density and the modelled continuity of both the thickness and grade of the mineralised zones in the view of the resource geologist. Only indicated and inferred blocks have reported for the resource, no measured blocks are reported. The resource classification is deemed appropriate in relation to the drill spacing and geological continuity of the mineralised domains.
Fo	Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	 LIONTOWN RESOURCE The Liontown Resource is an updated Resource, previously estimated by various parties. Recently collected additional data has been incorporated into the estimate which has increased the area of definition, Resource size and refined the accuracy of the estimate. The estimate includes new drill hole data and a revised geological interpretation but has not drastically changed the fundamentals (e.g. orientation, mineralisation type) of the deposit. A cross check of this updated interpretation and grade estimate basis was completed against the previous estimate and deemed to be comparable. There is a material change (>10%) in tonnes and grade between this current and previous resources which is related to new drilling and is expected.



	Criteria	Explanation	Commentary
			• The Mineral Resource Estimation process has been overseen by Measured Group, however no further external reviews or audits have been carried out on this MRE. However, previous Mineral Resources were subject to review.
			 LIONTOWN EAST RESOURCE The Liontown Resource is an updated Resource, previously estimated by various parties. The Liontown East Resource has not been externally reviewed or audited.
			WATERLOO RESOURCE
)			• Mining One consultants completed a review of the Waterloo resource as part of a due diligence programme. No critical flaws were highlighted with the source data set or the modelling methodology.
			 ORIENT RESOURCE Mining One consultants completed a review of the Orient resource as part of a due diligence programme. No critical flaws were highlighted with the source data set or the modelling methodology.
)	Discussion of	Where appropriate a statement of the relative	LIONTOWN RESOURCE
)	relative accuracy/ confidence	Resource estimate using an approach or procedure deemed appropriate by the	• The estimates included in this report are global estimates. Predicted tonnages and grades made from such block estimates are useful for feasibility studies, and long-, medium- and short-term mine planning.
	connucinoc	Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy	• Variography was completed for all elements. Directional anisotropies for variable and domain were identified on variogram maps. Variogram maps showing the directional anisotropies on the horizontal plane are included.
)		of the resource within stated confidence limits,	Validation checks have been completed on raw data, composited data, model data and Resource estimates.
		appropriate, a qualitative discussion of the factors that could affect the relative accuracy	• The model is checked to ensure it honours the validated data and no obvious anomalies exist which are not geologically sound.
		and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if	• The mineralised zones are based on actual intersections. These intersections are checked against the drill hole data. The competent person has independently checked laboratory sample data. The picks are sound and suitable to be used in the modelling and estimation process.
		should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	• The global resource estimate is deemed to be an accurate reflection, to the precision allowable via the current data spacing of both the geological interpretation and the deposits' potential economic tonnage and grade distribution at a reported cut-off grade of 5% ZnEq.



	Criteria	Explanation	Commentary
		These statements of relative accuracy and confidence of the estimate should be	• Within the Resource model, local smoothing of grade occurs with the estimation process. Comparison between the input composites and resultant blocks was reviewed as part of the modelling process and deemed appropriate.
		compared with production data, where available.	• Selective infill drilling from surface and updated geological interpretation and modelling in 3D will add further confidence to the local scale geometry of the mineralisation and grade distributions in the resource model.
5			• The detail captured in this mineral resource estimate maximises the data available currently on the project and the Competent Person is satisfied that the model is representative of the drilling data available to date.
)			
)			LIONTOWN EAST RESOURCE
5			• The Resource estimate is deemed to be an accurate reflection, to the precision allowable via the current data spacing of both the geological interpretation and the deposits potentially economic tonnage and grade distribution.
3			 The Resource is reported at a 5% 2/LEq cutoff. Within the Resource model local smoothing of grade occurs The Resource area is open at donth and featural minoralization has been evaluated from the Lightburg Feature.
5			 The Resource area is open at depth and tootwait inheralisation has been excluded from the Liontown East Resource estimate. Further drilling will allow inclusion of Resources from these areas. No production bistory occurs at Liontown East
5			
			WATERLOO RESOURCE
2			 The resource estimate is deemed to be an accurate reflection of both the geological interpretation and tenure of mineralization within the deposit.
-			ORIENT RESOURCE
			• The resource estimate is deemed to be an accurate reflection of both the geological interpretation and tenure of mineralization within the deposit.



APPENDIX A – LIONTOWN DRILL HOLE INFORMATION

Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
23LTRC001	402995.3	7742857.0	301	167.0	-63.0	353.5
23LTRC002	402995.6	7742859.5	301	143.0	-50.6	7.9
23LTRC003	402783.6	7742824.4	301	167.0	-55.2	7.2
23LTRC004	402417.3	7742932.1	302	95.0	-51.0	351.4
23LTRC005	402393.7	7742860.8	299	119.0	-61.0	2.7
23LTRC006	402365.2	7742835.9	297	83.0	-60.5	2.5
23LTRC007	402370.5	7742794.9	294	119.0	-60.8	0.2
23LTRC008	402450.2	7742828.3	298	125.0	-62.2	351.6
23LTRC009	402342.1	7742931.7	300	71.0	-60.2	358.9
23LTRC010	402325.1	7742916.3	299	107.0	-60.7	5.7
23LTRC011	402131.2	7742914.5	290	95.0	-60.8	358.9
23LTRC012	402146.4	7742947.0	290	95.0	-60.6	359.8
23LTRD001	402993.2	7742855.7	301	129.2	-63.2	355.5
24LTDD010	403034.7	7742766.7	294	339.6	-66.1	4.3
24L1DD011	403382.4	7740700.0	290	348.5	-56.9	309.7
24LTDD024	403373.9	7742732.3	290	403.3	-00.7	242.0
24LTDD031	403347.2	77/279/ /	209	265.5	-55.0	343.0
24LTDD032	403378.4	7742734.4	209	473.2	-69.0	328.0
24LTDD000	403380 1	7742744.6	290	468.7	-70.2	31.0
24LTDD035	403380.6	7742744.1	290	393.6	-62.0	27.2
24LTDD036	403383.2	7742772.9	289	354.7	-55.6	27.4
24LTRC001	402591.7	7742955.0	304	184.0	-74.8	359.1
24LTRC002	402664.1	7742967.5	305	184.0	-60.1	321.7
24LTRC003	402892.6	7742890.8	303	160.0	-60.5	354.7
24LTRC004	403019.5	7742807.0	298	244.0	-60.6	355.9
24LTRC005	403005.8	7742830.3	300	150.0	-53.6	1.4
24LTRC006	403106.8	7742834.2	296	226.0	-67.4	350.2
24LTRC007	403166.9	7742805.2	293	232.0	-65.1	6.6
24LTRC008	403384.0	7742795.9	290	90.0	-60.0	1.0
24LTRC009	403242.4	7742808.1	290	184.0	-58.0	20.0
24LTRC012	402841.3	7742957.2	306	64.0	-60.6	359.8
24LTRC013	402850.6	7742929.1	306	124.0	-60.0	0.5
24LTRC014	402894.7	7742898.2	303	82.0	-50.0	351.2
24LTRC015	402992.0	77/2016.0	301	52.0	-51.5	350.0
24LTRC010	403072 3	7742886.8	299	83.0	-69.0	4 1
24LTRC018	403167.4	7742913.2	298	83.0	-59.9	359 7
24LTRC019	403229.9	7742936.0	297	100.0	-60.4	351.8
24LTRC020	403227.7	7742955.5	297	53.0	-59.8	357.6
24LTRC021	402277.3	7742963.3	295	118.0	-59.4	11.1
24LTRC022	402225.4	7742972.4	291	130.0	-65.5	12.8
24LTRC023	402166.4	7742980.6	290	130.0	-65.6	25.7
24LTRC023A	402176.4	7742960.7	290	38.0	-60.1	15.5
24LTRC025	402182.2	7743014.9	290	112.0	-55.9	187.8
24LTRC026	402205.3	7742864.1	292	203.0	-60.4	15.3
24LTRC027	402249.8	7742864.6	294	202.0	-68.9	17.3
24LTRC028	402234.5	7742878.2	293	214.0	-65.0	8.9
24L1RC028A	402233.9	7742877.5	293	4.0	-64.0	18.0
24LTRC029	402319.5	77/28/06	290	190.0	-01.2	31.1 11.9
	4011034	7743331 6	200	215.3	-55.4	192.1
CGRC001	401059.0	7743185.0	290	106.0	-57.0	359.8
CGRC002	401090.0	7743148.0	290	202.0	-60.0	359.8
CGRC003	401134.0	7743147.0	290	160.0	-55.0	359.8
CGRC004	401143.0	7743173.0	290	88.0	-55.0	359.8
LCD101	401087.4	7743134.6	290	200.0	-60.0	0.0
LCP501	401093.5	7743185.6	293	102.0	-61.0	0.0
LCP502	401176.4	7743154.6	289	108.0	-61.0	0.0
LCR201	401352.4	7743363.6	287	15.0	-90.0	0.0
LCR202	401348.4	7743313.6	287	12.0	-90.0	0.0
LCR203	401345.4	7743263.6	287	43.0	-90.0	0.0
LCR204	401341.4	7743213.6	288	33.0	-90.0	0.0
LCR205	401339.5	7743188.6	287	33.0	-90.0	0.0
LCR206	401337.4	7743163.6	287	30.0	-90.0	0.0
LCR207	401335.5	7742142.6	207	15.0	-90.0	0.0
	401333.4	77/30226	201	30.0 30.0	-90.0	0.0
L CR210	401328 5	7743039 6	287	39.0	-90.0	0.0
LCR211	401429.4	7743056.6	288	36.0	-90.0	0.0
				- 5.0		



Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
LCR212	401433.4	7743106.6	288	42.0	-90.0	0.0
LCR213	401437.4	7743156.6	288	36.0	-90.0	0.0
LCR214	401441.5	7743206.6	287	39.0	-90.0	0.0
LCR215	401442.4	7743231.6	287	15.0	-90.0	0.0
LCR216	401444.4	7743255.6	287	18.0	-90.0	0.0
LCR217	401627.4	7743016.6	288	9.0	-90.0	0.0
LCR218	401629.4	7743041.6	287	30.0	-90.0	0.0
LCR219	401631.4	7743066.6	288	30.0	-90.0	0.0
LCR220	401633.4	7743091.6	294	24.0	-90.0	0.0
LCR221	401634.4	7743116.6	296	27.0	-90.0	0.0
LCR222	401661.5	7743139.6	299	42.0	-90.0	0.0
LCR223	401663.4	7743164.6	298	45.0	-90.0	0.0
LCR224	401665.5	7743189.6	297	45.0	-90.0	0.0
LCR225	401667.4	7743214.6	294	44.0	-90.0	0.0
LCR226	401694.5	7743237.6	289	45.0	-90.0	0.0
LCR227	401695.4	7743262.6	288	51.0	-90.0	0.0
LCR228	401697.4	7743287.6	288	48.0	-90.0	0.0
LCR229	401330.4	7743064.6	287	36.0	-90.0	0.0
LCR230	401326.4	7743014.6	286	27.0	-90.0	0.0
LCR231	401625.4	7742991.6	287	12.0	-90.0	0.0
LEB01	403208.3	7742492.4	288	29.0	-90.0	0.0
LEB02	403812.8	7743359.6	293	41.0	-90.0	0.0
LED101	403625.9	7742927.5	292	235.0	-60.0	0.0
LEP501	403526.1	7742934.9	292	110.0	-60.0	0.0
LER201	403143.3	7743179.1	299	27.0	-90.0	0.0
LER202	403139.6	7743129.3	300	12.0	-90.0	0.0
LER203	403135.9	7743079.4	300	9.0	-90.0	0.0
LER204	403132.2	7743029.5	300	2.0	-90.0	0.0
LER205	403128.4	7742979.7	302	2.0	-90.0	0.0
LER206	403124.7	7742929.8	300	8.0	-90.0	0.0
LER207	403121.0	7742880.0	299	31.0	-90.0	0.0
LER208	403117.2	7742830.1	298	18.0	-90.0	0.0
LER209	403113.5	7742780.3	296	51.0	-90.0	0.0
LER210	403109.8	7742730.4	291	69.0	-90.0	0.0
LER211	403106.1	7742680.6	290	36.0	-90.0	0.0
LER212	403320.4	7742865.1	291	26.0	-90.0	0.0
LER213	403324.1	7742914.9	294	10.0	-90.0	0.0
LER214	403327.8	7742964.8	294	7.0	-90.0	0.0
LER215	403331.6	7743014.6	295	27.0	-90.0	0.0
LER216	403335.3	7743064.5	296	24.0	-90.0	0.0
LER217	403339.0	7743114.3	296	10.0	-90.0	0.0
LER218	403342.8	7743164.2	296	12.0	-90.0	0.0
LER219	403346.5	7743214.0	296	27.0	-90.0	0.0
LER220	403350.2	7743263.9	296	12.0	-90.0	0.0
LER221	403353.9	7743313.8	297	27.0	-90.0	0.0
LER222	403357.7	7743363.6	298	33.0	-90.0	0.0
LER223	403527.3	7742949.9	291	48.0	-90.0	0.0
LER224	403531.0	7742999.7	292	51.0	-90.0	0.0
LER225	403534.7	7743049.6	292	48.0	-90.0	0.0
LER226	403538.5	7743099.4	294	36.0	-90.0	0.0
LER227	403477.4	7742953.6	294	65.0	-90.0	0.0
LER228	403481.1	7743003.5	297	66.0	-90.0	0.0
LER229	403479.3	7742978.5	297	66.0	-90.0	0.0
LER230	403580.9	7742996.0	293	66.0	-90.0	0.0
LER231	403582.7	7743020.9	292	51.0	-90.0	0.0
LER232	403632.6	7743017.2	293	54.0	-90.0	0.0
LER233	403630.7	7742992.3	293	63.0	-90.0	0.0
LER234	403680.6	7742988.5	292	72.0	-90.0	0.0
LER235	403682.4	7743013.5	293	66.0	-90.0	0.0
LER236	403684.3	7743038.4	293	69.0	-90.0	0.0
LER237	403736.0	7743059.6	293	84.0	-90.0	0.0
LER238	403480.2	7742991.5	298	42.0	-90.0	0.0
LER239	403581.8	7743009.0	292	54.0	-90.0	0.0
LER240	403631.7	7743005.2	293	48.0	-90.0	0.0
LER241	403673.4	7743027.2	293	54.0	-90.0	0.0
LER242	403837.6	7743077.1	295	73.0	-90.0	0.0
LER243	403841.3	7743126.9	295	89.0	-90.0	0.0
LER244	403839.1	7743097.0	294	91.0	-90.0	0.0
LER245	404044.5	7743161.9	299	96.0	-90.0	0.0
LER246	404048.2	7743211.7	299	96.0	-90.0	0.0
LER247	404050.8	7743246.6	299	89.0	-90.0	0.0
LER250	404041.8	7743127.0	298	96.0	-90.0	0.0



Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
LER251	404046.3	7743186.8	299	34.0	-90.0	0.0
LER252	404049.7	7743231.7	299	89.0	-90.0	0.0
LER253	403838.3	7743087.0	294	81.0	-90.0	0.0
LER254	403839.8	7743107.0	294	89.0	-90.0	0.0
LER255	403734.9	7743044.6	293	89.0	-90.0	0.0
LLD001	402154.5	7742914.5	292	50.3	-45.0	7.8
LLD002	402164.4	7742898.7	292	126.0	-68.0	7.8
LLD003	402193.2	7742895.6	293	68.6	-68.0	7.8
LLD004	402210.4	7742897.3	294	81.7	-68.0	7.8
LLD005	402225.4	7742897.2	294	59.7	-68.0	7.8
LLD006	402224.1	7742892.3	294	119.9	-68.0	7.8
LLD007	402228.0	7742864.9	293	208.5	-72.0	7.8
LLD008	402240.3	7742894.1	295	121.9	-68.0	7.8
LLD009	402254.4	7742896.0	295	51.8	-68.0	7.8
LLD010	402253.0	7742890.1	295	121.0	-68.0	7.8
LLD011	402269.2	7742891.9	296	121.9	-68.0	7.8
LLD012	402285.3	7742892.7	297	54.0	-68.0	7.8
LLD013	402283.8	7742886.8	297	121.9	-68.0	7.8
LLD014	402299.0	7742888.7	298	119.2	-68.0	7.8
LLD015	402316.7	7742883.4	299	115.9	-08.0	7.8
LLD010	402345.0	7742881.2	300	120.0	-68.0	7.8
	402352.3	7742770.4	294	220.3	-00.0	7.0
	402375.0	7742000.0	300	122.4	-00.0	7.0
	402404.4	7742878.6	302	121.0	-68.0	350.8
	402420.0	77/2870/	302	124.4	-68.0	3/0.8
	402436.3	7742874.4	302	121.0	-68.0	7.8
LLD022	402467.3	7742872.1	301	216.7	-68.0	7.8
LLD024	402497.1	7742868.9	300	140.5	-68.0	7.8
LLD025	402521.0	7742867.1	300	120.7	-68.0	7.8
LLD026	402553.2	7742868.7	300	124.7	-68.0	7.8
LLD027	402551.7	7742861.8	300	121.6	-68.0	7.8
LLD028	402568.9	7742863.5	300	146.9	-68.0	7.8
LLD029	402585.1	7742865.3	301	125.9	-68.0	7.8
LLD030	402584.6	7742859.3	300	123.4	-68.0	7.8
LLD031	402585.8	7742753.9	293	228.0	-75.0	7.8
LLD032	402572.6	7742779.0	294	234.6	-68.0	7.8
LLD033	402555.1	7742706.1	292	303.0	-68.0	7.8
LLD034	402626.3	7743000.6	303	135.5	-90.0	7.8
LLD035	402615.4	7742936.2	305	168.3	-90.0	7.8
LLD036	402598.7	7742860.3	301	121.9	-68.0	7.8
LLD037	402612.0	7742863.3	302	120.4	-68.0	7.8
LLD038	402611.5	7742856.3	300	125.0	-68.0	7.8
LLD039	402479.3	7743032.7	298	31.4	-68.0	7.8
LLD040	402645.1	7742863.8	303	90.8	-68.0	7.8
LLD041	402644.7	7742857.8	301	119.5	-68.0	7.8
LLD042	402659.9	7742860.7	302	122.2	-68.0	7.8
LLD043	402675.4	7742866.6	302	96.8	-68.0	7.8
LLD044	402675.0	7742860.6	302	123.4	-08.0	7.8
	402090.3	77/2867 2	201	92.1 117 <i>A</i>	-00.0	/.0 7 Q
	402705.0	7742861 3	301	121.0	-68.0	7.0
	402718.5	7742866.4	300	115.2	-68.0	7.8
LLD049	402691.5	7742786 1	297	341.1	-68 0	7.8
LLD050	4026737	7742696 2	298	51.8	-68.0	7.8
LLD051	402729.0	7742925.7	307	145.4	-90.0	7.8
LLD052	402733.3	7742862.2	300	95.1	-68.0	7.8
LLD053	402767.8	7742867.7	303	122.8	-45.0	7.8
LLD054	402831.1	7742924.1	307	155.2	-90.0	7.8
LLD055	402823.4	7742873.6	304	111.3	-68.0	7.8
LLD056	402892.1	7742813.3	302	205.8	-75.0	7.8
LLD057	402944.1	7742879.6	303	146.6	-68.0	7.8
LLD059	403150.6	7742824.0	296	164.4	-68.0	7.8
LLD060	403224.5	7742900.7	296	31.4	-50.0	347.8
LLD101	402701.7	7742864.0	301	215.5	-65.0	4.8
LLD102	402588.9	7742861.5	301	220.5	-65.0	4.8
LLD103	402717.7	7742995.3	306	287.1	-60.0	184.8
LLD104	402691.7	7742691.6	298	333.4	-62.0	4.8
LLD105	402229.4	7742863.0	293	192.8	-60.0	4.8
LLD106	402230.5	7742894.5	294	187.5	-60.0	4.8
LLD107	402576.1	7740744.0	294	187.5	-00.0	4.8
LLD108	402210.1	1142141.0	292	394.5	-00.0	4.ð



Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
LLD109	402237.3	7742966.2	293	218.3	-60.0	184.8
LLD110	402810.4	7742698.7	296	325.5	-60.0	4.8
LLD111	402821.1	7742864.8	303	235.0	-60.0	4.8
LLD112	402480.0	7742863.0	300	181.2	-60.0	4.8
LLD113	402360.1	7742840.1	298	256.0	-60.0	2.8
LLD114	402697.5	7742786.4	297	293.8	-60.0	2.8
LLD115	402515.0	7742800.7	296	271.8	-60.0	4.8
LLD116	402433.1	7742777.7	294	320.7	-60.0	4.8
LLD117	402117.3	7742851.2	291	247.8	-60.0	4.8
LLD118	402607.4	7742664.0	294	388.5	-61.0	4.8
LLD119	402814.7	7742773.0	302	252.5	-59.0	4.8
LLD120	402914.5	7742790.7	300	260.5	-60.0	4.8
LLD121	402503.6	7742672.3	291	490.5	-60.0	4.8
LLD122	403067.2	7742806.0	298	295.3	-60.0	4.8
LLD123	403311.9	7742835.5	291	243.0	-60.0	4.8
LLD124	402692.6	7742688.7	298	406.0	-75.0	0.0
LLD125	402377.2	7742599.5	290	385.6	-60.0	0.0
LLD126	402825.4	7742598.1	290	439.5	-60.0	0.0
LLD127	402911.8	7742524.2	288	721.3	-72.0	4.8
LLD128	402743.1	7742631.9	292	399.3	-60.0	0.0
LLD129	402607.4	7742694.2	295	284.9	-60.0	5.8
LLD130	402428.8	7742727.6	292	232.0	-60.0	6.8
LLD131	402897.7	7742563.2	290	419.5	-60.0	4.8
LLD132	402670.8	7742880.0	306	120.6	-70.0	4.8
LLD133	402671.0	7742882.9	305	102.2	-50.0	4.8
LLD134	402961.2	7742876.3	303	111.0	-70.0	4.8
LLD135	402758.2	7742842.3	301	165.0	-70.0	4.8
LLD136	402781.8	7742822.5	301	219.0	-70.0	4.8
LLD137	402839.3	7742787.2	302	339.0	-70.0	4.8
LLR201	402032.9	7743058.0	289	37.0	-90.0	7.8
LLR202	402029.2	7743008.1	288	30.0	-90.0	7.8
LLR203	402025.4	7742958.3	288	45.0	-90.0	7.8
LLR204	402023.6	7742933.3	288	39.0	-90.0	7.8
LLR205	402021.7	7742908.4	288	42.0	-90.0	7.8
LLR206	402019.8	7742883.5	288	45.0	-90.0	7.8
LLR207	402018.0	7742858.5	288	36.0	-90.0	7.8
LLR208	402014.3	7742808.7	288	30.0	-90.0	7.8
LLR209	402010.5	7742758.8	288	57.0	-90.0	7.8
LLR210	402006.8	7742709.0	288	60.0	-90.0	7.8
LLR211	402003.1	7742659.1	287	60.0	-90.0	7.8
LLR212	401999.3	7742609.2	287	60.0	-90.0	7.8
LLR213	401995.6	7742559.4	288	39.0	-90.0	7.8
LLR214	401991.9	7742509.5	288	48.0	-90.0	7.8
LLR215	401892.2	7742517.0	287	49.0	-90.0	7.8
LLR216	401895.9	7742566.8	289	36.0	-90.0	7.8
LLR217	401899.6	7742616.7	287	45.0	-90.0	7.8
LLR218	401903.4	7742666.6	287	63.0	-90.0	7.8
LLR219	401907.1	7742716.4	287	51.0	-90.0	7.8
LLR220	401910.8	7742766.3	287	43.0	-90.0	7.8
LLR221	401912.7	7742791.2	287	33.0	-90.0	7.8
LLR222	401914.5	7742816.1	287	42.0	-90.0	7.8
LLR223	401916.4	7742841.1	287	45.0	-90.0	7.8
LLR224	401918.3	7742866.0	286	45.0	-90.0	7.8
LLR225	401920.1	7742890.9	287	45.0	-90.0	7.8
LLR226	401922.0	7742915.9	287	42.0	-90.0	7.8
LLR227	401923.9	7742940.8	288	9.0	-90.0	7.8
LLR228	401925.7	7742965.7	288	60.0	-90.0	7.8
LLR229	401929.4	7743015.6	288	51.0	-90.0	7.8
LLR230	401933.2	7743065.5	288	45.0	-90.0	7.8
LLR231	401799.9	7742624.1	299	39.0	-90.0	7.8
LLR232	401803.6	7742674.0	295	42.0	-90.0	7.8
LLR233	401807.4	7742723.9	289	39.0	-90.0	7.8
LLR234	401811.1	7742773.7	287	27.0	-90.0	7.8
LLR235	401814.8	7742823.6	286	27.0	-90.0	7.8
LLR236	401818.5	7742873.5	286	15.0	-90.0	7.8
LLR237	401833.4	7743072.9	288	15.0	-90.0	7.8
LLRC001	401031.9	7743082.7	289	100.0	-60.0	12.8
LLRC002	401028.2	7743032.8	289	100.0	-60.0	23.8
LLRC003	401024.5	7742983.0	289	94.0	-60.0	12.8
LLRC004	401020.7	7742933.1	290	100.0	-60.0	15.8
LLRC005	401017.0	7742883.2	292	100.0	-60.0	12.8
LLRC006	401013.2	7742833.4	294	100.0	-60.0	12.8



Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
LLRC007	401009.6	7742783.5	294	100.0	-60.0	12.8
LLRC008	401442.0	7743202.4	287	88.0	-60.0	7.8
LLRC009	401434.6	7743102.7	288	88.0	-60.0	7.8
LLRC010	401427.1	7743003.0	290	100.0	-60.0	7.8
LLRC011	401419.6	7742903.3	288	63.0	-60.0	7.8
LLRC012	401423.4	7742953.1	290	103.0	-60.0	7.8
LLRC013	401415.9	7742853.4	287	73.0	-60.0	7.8
LLRC014	401412.2	7742803.6	285	57.0	-60.0	7.8
LLRC015	401408.5	7742753.7	285	100.0	-60.0	7.8
	401404.7	7742654.0	284	103.0	-60.0	7.0
	401401.0	7742054.0	286	Q1 0	-60.0	7.0
LLRC019	401393.6	7742554.2	285	96.0	-60.0	7.0
LLRC020	401389.8	7742504.2	285	97.0	-60.0	7.8
LLRC021	401386.1	7742454.5	285	97.0	-60.0	7.8
LLRC023	400945.4	7742998.9	291	91.0	-60.0	7.8
LLRC024	401102.0	7742947.1	288	80.0	-60.0	7.8
LLRC025	401099.0	7742907.2	289	80.0	-60.0	4.8
LLRC026	401096.1	7742867.3	289	80.0	-60.0	4.8
LLRC027	401093.1	7742827.4	290	80.0	-60.0	4.8
LLRC028	401090.1	7742787.5	293	80.0	-60.0	4.8
LLRC029	401087.1	7742747.6	294	80.0	-60.0	4.8
LLRC030	401600.5	7742639.1	286	100.0	-60.0	4.8
LLRC031	401596.7	7742589.2	285	100.0	-60.0	4.8
LLRC032	401593.0	7742124 5	200	100.0	-00.0	4.8 1 °
LLRC033	400874.0	77/3001.6	293	100.0	-60.0	4.0
LLRC035	400949.9	7743058.7	293	100.0	-60.0	4.8
LLRC036	400987.3	7743021.8	290	100.0	-60.0	4.8
LLRC037	401382.4	7742404.7	285	100.0	-60.0	4.8
LLRC038	401378.6	7742354.8	285	100.0	-60.0	4.8
LLRC039	401374.9	7742304.9	285	100.0	-60.0	4.8
LLRC040	401589.3	7742489.5	287	98.0	-60.0	4.8
LLRC041	401585.5	7742439.6	286	100.0	-60.0	4.8
LLRC042	401581.8	7742389.7	285	100.0	-60.0	4.8
LLRC043	401578.1	7742339.9	286	89.0	-60.0	4.8
LLRC044	401574.4	7742290.0	286	100.0	-60.0	4.8
LLRC045	401570.6	7742240.2	285	100.0	-60.0	4.8
LLRC046	401785.0	7742424.7	286	100.0	-60.0	4.8
	401701.3	77/252/ 0	207	100.0	-60.0	4.0
LLRC040	401780.5	7742024.9	296	100.0	-60.0	4.0
LI RC050	401770.1	7742225.3	292	72.0	-60.0	4.8
LLRC051	400871.6	7743084.6	293	114.0	-60.0	4.8
LLRC052	400947.7	7743028.8	291	100.0	-60.0	4.8
LLRC053	401212.7	7742818.5	287	100.0	-60.0	4.8
LLRC054	401209.0	7742768.6	289	100.0	-60.0	4.8
LLRC055	401205.3	7742718.7	292	100.0	-60.0	4.8
LLRC056	401201.6	7742668.9	293	100.0	-60.0	4.8
LLRC057	401197.8	7742619.0	290	100.0	-60.0	4.8
LLRC058	401194.1	7742569.2	289	100.0	-60.0	4.8
LLRC059	400738.3	7743179.8	292	102.0	-60.0	4.8
	400742.1	77/3270 6	292	100.0	-00.0	4.0
	400745.8	7743004 9	293	102.0	-60.0	4.0
LI RC063	400868 6	7743044 7	293	100.0	-60.0	4.8
LLRC065	402684.8	7743059.4	301	100.0	-60.0	4.8
LLRC066	402681.1	7743009.5	304	100.0	-60.0	4.8
LLRC067	402677.4	7742959.7	307	100.0	-60.0	4.8
LLRC068	402674.4	7742919.8	306	100.0	-60.0	4.8
LLRC069	402761.6	7742879.2	303	103.0	-70.0	4.8
LLRC070	402842.1	7742882.2	304	103.0	-70.0	4.8
LLRC071	402922.1	7742880.2	303	109.0	-70.0	4.8
LLRC072	402801.8	7742880.2	305	100.0	-70.0	4.8
LLRC073	402882.2	7742882.2	304	100.0	-70.0	4.8
LLRC0/4	402962.3	7742881.2	303	90.0	-70.0	4.8
	402501.0	7742872 1	290 300	90.0 90.0	-70.0	4.0 4 8
LIRC077	4020254	7742958.3	288	90.0	-60.0	4.8
LLRC078	402018.0	7742858 5	288	100.0	-60.0	4.8
LLRC079	402021.7	7742908.4	288	103.0	-60.0	4.8
LLRC080	402959.3	7742841.3	301	144.0	-70.0	4.8



Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
LLRC081	403000.7	7742858.3	300	126.0	-70.0	4.8
LLRC082	402758.6	7742839.3	300	162.0	-70.0	4.8
LLRC083	403042.6	7742882.2	301	104.0	-70.0	4.8
LLRC084	403082.5	7742879.3	299	90.0	-70.0	4.8
LLRC085	402839.1	7742842.3	303	150.0	-70.0	4.8
LLRC086	403120.9	7742856.3	298	120.0	-70.0	4.8
LLRC087	403205.2	7742910.2	297	100.0	-70.0	4.8
LLRC088	403287.9	7742944.1	296	100.0	-70.0	4.8
LLRC089	403534.7	7743026.0	294	72.0	-70.0	4.8
LLRC090	402498.6	7742848.7	299	100.0	-70.0	4.8
LLRC091	402598.2	7742840.2	298	140.0	-70.0	4.8
LLRC092	402638.6	7742843.2	299	140.0	-70.0	4.8
LLRC093	402678.5	7742840.3	300	140.0	-70.0	4.8
LLRC094	402719.4	7742851.2	299	140.0	-70.0	4.8
LLRC095	402840.6	7742862.2	303	132.0	-70.0	4.8
LLRC096	402920.6	7742860.3	305	132.0	-70.0	4.8
LLRC097	402960.8	7742861.3	304	120.0	-70.0	4.8
LLRC098	402965.7	7742926.1	306	100.0	-70.0	184.8
LLRC099	402999.2	7742838.4	300	140.0	-70.0	4.8
LLRC100	403039.6	7742842.3	297	168.0	-70.0	4.8
LLRC101	403081.0	//42859.3	297	120.0	-70.0	4.8
LLRC107	403638.5	7743073.4	293	135.0	-60.0	4.8
LLRC142	402942.7	7742826.1	300	40.0	-90.0	7.8
LLRC100	402374.3	7743322.0	292	90.0	-60.0	350.8
LLRC100	402374.3	7740000	290	60.0	-60.0	350.8
LLRC170	403130.0	7742009.0	290	04.0	-59.0	309.0
LLRC179	403133.4	77/2837 1	290	94.0	-01.0	348.8
	403170.0	77/2802.6	290	88.0	-58.0	355.8
LLRC182	403150.2	7742839.9	295	172.0	-62.5	358.8
LLRC183	403041.4	7742881 2	300	77.0	-60.0	0.5
LLRC184	403040.5	7742845.3	296	136.0	-64 0	0.5
LLRC185	403052.6	7742794 1	296	148.0	-58.0	359.8
LLRC186	403002.8	7742895.2	301	89.0	-58.0	359.8
LLRC187	402995.4	7742854.4	300	136.0	-60.0	1.8
LLRC188	403003.2	7742818.6	299	158.0	-60.0	358.8
LLRC189	402999.2	7742775.7	295	83.0	-55.0	359.8
LLRC190	402958.6	7742911.0	304	71.0	-58.0	358.8
LLRC191	402950.7	7742808.3	299	178.0	-61.0	9.8
LLRC192	402942.7	7742826.0	300	118.0	-60.0	8.0
LLRC193	402917.0	7742909.3	305	71.0	-60.0	0.8
LLRC194	402910.7	7742828.5	299	130.0	-60.0	6.8
LLRC195	402886.7	7742796.5	301	142.0	-55.0	359.8
LLRC196	402881.8	7742884.9	303	137.0	-61.0	1.8
LLRC197	402879.9	7742847.9	300	178.0	-59.0	1.8
LLRC198	402799.2	7742915.3	306	77.0	-55.0	359.8
LLRC199	402749.6	7742935.8	307	40.0	-52.0	179.8
LLRC200	402749.2	7742944.3	307	70.0	-52.0	179.8
LLRC201	402715.9	7742939.8	307	71.0	-52.0	175.8
LLRC202	402544.1	7742832.1	296	133.0	-55.0	359.8
LLRC203	402541.5	1142806.9	295	130.0	-55.0	359.8
LLRC204	402480.3	7742074 5	296	160.0	-55.0	359.8
	403013.0	7742971.3	204 206	172.0	-01.0	101.0 252.0
	403060.0	77/2005 0	202	124.U 88 0	-01.0	22.0
	402499.0	7742003.0	201	88 0	-50.0	30.0 200 B
	402365.6	7742000.0	301	88.0	-55.0	35/ 8
LLRC210	402303.0	7742923.4	295	88.0	-55.0	12.8
LLRC211	402295.0	7742889.8	297	70.0	-50.0	27.8
LLRC212	402250.7	7742902.4	295	94.0	-55 0	7.8
LLRC213	402173.5	7742917 2	292	58.0	-45.0	42.8
LLRC214	402152.3	7742911.3	291	94.0	-58.0	359.8
LLRC215	402129.4	7742908.8	290	94.0	-58.0	327.8
LLRC216	402309.9	7742969.9	296	202.0	-62.0	199.8
LLRC217	402130.1	7742858.3	290	208.0	-63.0	23.8
LLRC218	402194.7	7742983.6	290	208.0	-58.0	185.8
LLRC219	402404.3	7742847.0	299	166.0	-60.0	14.8
LLRC220	402365.0	7742936.1	301	202.0	-65.0	179.8
LLRC221	402440.2	7742814.4	297	100.0	-55.0	349.8
LLRC223	402739.0	7742929.7	306	136.0	-55.0	187.8
LLRC224	402762.4	7742941.3	307	142.0	-53.0	187.8
LLRC225	402734.2	7742921.3	306	136.0	-55.0	187.8



Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
LLRCD194	402913.6	7742893.5	187	170.9	-55.9	356.4
LRC001	402426.1	7742907.7	299	85.0	-60.0	4.8
LRC002	402427.4	7742927.9	299	65.0	-60.0	4.8
LRC003	402480.0	7742923.5	299	60.0	-60.0	4.8
LRC004	402475.9	7742905.3	299	80.0	-60.0	4.8
LRC005	402518.8	7742901.0	299	80.0	-60.0	4.8
LRC006	402533.3	7742920.2	300	50.0	-60.0	4.8
LRC007	402571.5	7742922.6	301	50.0	-60.0	4.8
LRC008	402569.7	7742902.5	300	80.0	-60.0	4.8
LRC009	402624.0	7742924.2	303	50.0	-60.0	4.8
LRC010	402622.2	7742903.3	302	80.0	-60.0	4.8
LRC011	402672.1	7742919.5	303	60.0	-60.0	4.8
LRC012	402672.3	7742899.6	303	80.0	-60.0	4.8
LRC013	402724.3	7742919.2	303	50.0	-60.0	4.8
LRC014	402721.9	7742910.6	303	80.0	-60.0	4.8
LRC015	402173.2	7742927.0	289	50.0	-60.0	4.8
LRC016	402172.1	7742912.0	289	50.0	-60.0	4.8
	402223.4	7742928.2	290	50.0	-60.0	4.8
	402222.3	7742913.3	290	53.U 70.0	-00.0	4.0
LRC019	402272.0	7742914.5	293	70.0	-60.0	4.0
	402322.3	77/20/0 0	295	50.0	-00.0	4.0
	402373.4	77/2022.2	208	50.0	-00.0	4.0
LRC022	402372.3	77/2012 3	290	50.0	-60.0	4.0
LRC023	402516.7	7742851.4	297	50.0	-60.0	4.8
L RC025	402515.1	7742831.4	295	50.0	-60.0	4.8
LRC026	402677.9	7742939 3	304	59.0	-60.0	4.8
LRC027	402774.2	7742922.0	303	47.0	-60.0	4.8
LRC028	402772.7	7742902.1	303	50.0	-60.0	4.8
LRC029	402824.8	7742928.3	303	50.0	-60.0	4.8
LRC030	402823.3	7742908.3	303	65.0	-60.0	4.8
LRC031	402875.4	7742934.5	303	47.0	-60.0	4.8
LRC032	402873.9	7742914.5	303	60.0	-60.0	4.8
LRC033	402574.9	7742937.0	301	78.0	-60.0	4.8
LRC034	402620.5	7742914.0	302	26.0	-60.0	4.8
LRC035	402571.4	7742912.2	300	81.0	-60.0	4.8
LRC036	402597.6	7742905.2	301	93.0	-60.0	4.8
LRC037	402571.1	7742887.3	299	90.0	-60.0	4.8
LRC038	402596.4	7742890.2	301	93.0	-60.0	4.8
LRC039	402570.0	7742872.2	299	84.0	-60.0	4.8
LRC040	402515.7	7742887.1	299	85.0	-60.0	4.8
LRC041	402568.2	7742847.2	298	80.0	-60.0	4.8
LRC042	402516.9	7742871.6	298	88.0	-60.0	4.8
LRC043	402593.6	7742852.4	298	80.0	-60.0	4.8
LRC044	402499.1	7742918.0	299	80.0	-60.0	4.8
LRC045	402619.5	7742803.4	298	93.0	-60.0	4.8
	402495.7	7742002.0	299	74.0	-60.0	4.0
	402010.0	7742023.0	290	69.0	-60.0	4.0
	402551.5	77/2801 8	200	78.0	-00.0	4.0
LRC050	402496 5	7742898.2	299	48.0	-50.0	4.0
L SR203	403452 7	7741952.8	292	29.0	-90.0	0.0
LSR204	403469.1	7742172.1	292	45.0	-90.0	0.0
LSR205	403471.4	7742202.1	292	51.0	-90.0	0.0
LSR206	403473.6	7742232.0	293	54.0	-90.0	0.0
LTB03	401883.3	7742719.6	286	86.0	-90.0	0.0
LTB04	401883.2	7742711.1	286	89.0	-90.0	0.0
LTB05	401887.7	7742715.1	286	59.0	-90.0	0.0
LTB06	402128.4	7742154.3	284	5.0	-90.0	0.0
LTB07	402121.9	7742153.6	284	29.0	-90.0	0.0
LTB08	402125.3	7742147.8	284	74.5	-90.0	0.0
LTCD18001	403529.0	7742770.8	291	306.0	-60.0	346.8
LTCD18002	403602.1	7742805.8	292	276.0	-60.0	350.0
LTCD18003	403688.6	7742837.7	295	318.7	-60.0	349.8
LTCD18004	403758.6	7742891.9	295	209.0	-60.8	346.8
LICD18004A	403758.6	//42891.9	295	417.8	-60.8	346.8
LICD18005	403839.4	//42847.6	296	429.5	-61.5	351.0
	403761.5	7742804.1	297	399.4	-00.0	343.7
	402729.8	77427744	300	1/4.0	-03.0	0.0
	402433.0	77/0770 8	293	212.0	-60.0	0.0
	402758 7	7742838.6	290	159.0	-00.0	0.0
LIDUUUT	402100.1	1142000.0	000	100.0	10.0	0.0



Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
LTD0005	402811.0	7742872.1	304	135.0	-70.0	0.0
LTD0006	402600.6	7742845.8	299	150.0	-58.0	0.0
LTD0007	402584.7	7742757.4	293	219.0	-65.0	9.8
LTD0008	402674.2	7742780.4	296	231.1	-56.0	11.8
LTD0009	402693.9	7742688.1	298	327.0	-64.0	4.8
LTD0010	402835.5	7742796.8	303	216.2	-60.0	4.8
LTD0011	402837.9	7742832.1	303	186.2	-60.0	4.8
LTD0012	402832.8	7742757.8	301	264.0	-60.0	4.8
LTD0013	402829.2	7742710.7	296	309.2	-60.0	4.8
LTD0014	402822.8	7742626.2	292	333.1	-60.0	4.8
LTD0015	402818.1	7742555.8	289	449.0	-60.0	4.8
	402815.0	7742518.2	288	454.2	-60.0	4.8
	402000.7	7742019.7	292	221.0	-00.0	4.0
	4027527	7742759.6	301	221.3	-60.0	4.8
LTD0020	402751.4	7742699.0	297	389.5	-60.0	4.8
LTD0021	402737.3	7742570.3	290	389.0	-60.0	4.8
LTD0022	402950.9	7742728.8	296	383.6	-60.0	4.8
LTD0023	402671.8	7742741.5	295	287.7	-60.0	4.8
LTD0024	402928.7	7742414.6	287	892.8	-60.0	4.8
LTD0025	402806.6	7742424.0	287	624.0	-60.0	4.8
LTD0026	402630.6	7742735.3	294	317.7	-60.0	4.8
LTD0027	403062.5	7742812.9	298	510.4	-60.0	4.8
LTD0028	403199.5	7742845.2	294	252.3	-60.0	4.8
LTD0029	402945.6	7742666.9	293	534.2	-60.0	4.8
LTD0030	402001.2	7742483.4	287	024.2	-60.0	4.8
LTD0031	403195.8	7742893 3	295	159.3	-63.0	4.0
LTD0032	403070.6	7742729.8	293	375.6	-63.0	4.8
LTD0034	402233.6	7742798.3	292	291.3	-60.0	4.8
LTD0035	402494.5	7742536.7	289	529.6	-60.0	4.8
LTD0036	402509.7	7742721.0	292	297.3	-60.0	4.8
LTD0037	402404.1	7742693.4	290	339.5	-60.0	11.8
LTD0038	402346.7	7742701.7	292	315.4	-60.0	11.8
LTD0039	402224.0	7742762.0	292	300.4	-60.0	11.8
LTD0040	402412.0	7742747.0	292	224.8	-50.0	0.0
	402000.0	7742940.0	200	200.3	-60.0	351.8
LTDD18007	403531.2	7742764.6	292	459.8	-77.0	343.8
LTDD18009	403510.1	7742663.2	292	540.7	-69.0	0.0
LTDD18010	403509.8	7742661.7	292	627.8	-76.0	3.8
LTDD18011	403510.5	7742660.7	292	59.5	-77.0	23.8
LTDD18011A	403510.5	7742660.0	292	680.0	-77.0	23.8
LTDD18012	403363.0	7742673.3	289	570.6	-65.0	2.8
LTDD18013	403224.3	7743055.3	296	460.5	-56.0	175.8
LTDD18014	403961.3	7742820.4	295	598.4	-63.1	359.6
LTDD18015	403069.8	7743021.4	301	484.2	-59.9	178.6
LTDD19001	402404.7	7742709.7	291	257 7	-49.0	185.0
LTDD19002	402483.7	7742344.0	293	176.5	-61.0	352.8
LTDD19004	402458.6	7742787.8	295	214.2	-50.0	7.8
LTDD19005	402506.6	7742944.8	300	224.0	-47.0	168.8
LTDD19007	402585.5	7742788.2	294	173.4	-54.0	355.8
LTDD19008	402620.0	7742784.0	294	278.6	-61.0	351.8
LTDD19010	402641.9	7742948.0	306	222.5	-51.0	171.8
LTDD19011	402506.4	7742945.6	300	158.8	-48.0	157.8
LTDD19012	402558.2	7742905.8	302	83.9	-51.0	316.8
LTDD19013	402641.7	7742948.3	306	144.5	-58.0	171.8
I TDD19014	402090.4	7742057.0	299	20/ 7	-47.0	161 g
LTDD19016	402496 7	7742849.5	299	112.9	-55.0	347 0
LTDD19017	402626.7	7742894.0	304	95.4	-58.0	347.8
LTDD19018	402500.1	7742848.1	299	127.2	-55.0	32.8
LTDD19019	402554.3	7742860.0	299	108.5	-53.0	352.8
LTDD19020	402555.1	7742859.4	299	159.5	-66.0	357.0
LTDD19021	402667.0	7742857.4	301	117.5	-52.0	345.0
LTDD19022	402787.9	7742976.3	306	148.9	-48.0	189.0
LTDD19023	402667.1	7742856.9	301	150.7	-63.0	345.0
LTDD19024	402787.4	7742970.0	300 201	197.4	-57.0	100.U 326 8
LTDD19025	402765.8	7742874 1	301	93.6	-57.0	1.8
LTDD19027	402703.7	7742863.9	300	104.1	-48.0	358.0



Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
LTDD19028	402639.0	7742829.8	297	162.5	-52.0	350.0
LTDD19029	402584.9	7742788.1	294	203.3	-47.0	349.0
LTDD19030	402846.9	7742884.9	304	114.5	-53.0	5.0
LTDD19031	402805.8	7742875.5	302	123.5	-50.0	9.8
LTDD19032	402594.3	7742855.4	299	134.3	-50.8	11.3
LTDD19033	402721.3	7742882.8	302	78.5	-50.0	6.8
LTDD19034	402694.1	7742901.2	305	81.4	-53.0	354.8
LTDD19035	402651.2	7742904.7	305	145.0	-56.0	355.8
LTDD19036	402626.7	7742893.9	304	116.5	-71.0	346.8
LTDD21037	402669.9	7742647.7	295	363.0	-57.0	0.0
LTDD21037A	402664.5	7742650.0	295	57.8	-59.0	2.8
LTDD21038	402695.7	7742596.8	290	369.3	-57.2	19.7
LTDD21039	402696.8	7742600.0	291	210.9	-60.0	5.0
LTDD21040	402728.0	7742633.6	292	333.1	-54.0	2.0
LTDD21041	402695.8	7742600.7	291	366.1	-57.0	2.8
LTDD21042A	402813.4	7742641.3	291	304.8	-55.0	348.0
LTDD21043	402812.9	7742639.0	291	312.0	-54.0	3.0
LTDD21044	402812.6	7742638.8	291	357.0	-59.0	353.0
LTDD21045	402795.1	7742589.3	289	396.0	-59.0	2.8
LTDD21046	402637.9	7742619.4	291	344.2	-54.0	359.0
LTDD21047	402633.3	7742609.4	290	362.4	-60.0	0.0
LTDD21048	402596.9	7742643.8	292	310.7	-54.0	0.0
LTDD21049	402596.9	7742643.8	292	326.4	-58.0	349.0
LTDD22050	402563.9	7742632.6	291	125.0	-61.0	348.2
LTDD22050A	402563.4	7742633.1	291	361.3	-61.0	348.0
LTDD22051	402601.0	7742611.7	292	353.8	-55.0	0.0
LTDD22052	403004.2	7742817.3	299	328.4	-76.0	2.0
LTDD22053	403003.5	7742817.3	299	304.9	-71.9	352.0
LTDD22054	403003.9	7742817.9	299	243.2	-64.0	8.0
LTDD22055	403003.9	7742817.9	299	176.9	-59.0	354.8
LTDD22056	402734.1	7742702.4	297	227.1	-54.0	358.8
LTDD22057	402663.6	7742684.1	297	51.0	-57.0	0.7
LTDD22057A	402654.8	7742758.1	294	211.1	-77.0	6.0
LTDD22058	402654.9	7742757.4	294	158.4	-59.0	357.0
LTDD22059	402583.2	7742688.0	292	233.1	-55.0	0.0
LTDD22060	402546.1	7742644.9	290	280.7	-55.0	357.0
LTDD22061	402950.7	7742808.1	299	302.2	-75.1	7.0
LTDD22062	402951.2	7742805.1	299	281.7	-67.0	7.0
LTDD22063	402951.3	7742805.5	299	242.2	-62.0	7.0
LTDD22064	402950.7	7742808.1	299	215.2	-52.0	7.0
LTDD22065	402539.2	7742729.3	292	213.8	-57.0	6.0
LTDD22066	402466.3	7742689.8	290	251.0	-56.0	6.0
LTDD22067	402417.1	7742716.7	291	235.9	-59.0	351.8
LTDD22068	402296.2	7742867.5	296	203.1	-60.0	355.0
LTDD22069	403090.0	7742802.0	297	39.8	-83.0	355.0
LTDD22069A	403090.0	7742802.0	297	337.2	-83.0	355.0
LTDD22070	403082.7	7742853.7	296	180.2	-71.0	353.0
LTDD22071	402400.5	7742815.2	297	213.2	-54.7	358.1
LTDD22072	402279.0	7742969.0	295	157.9	-54.0	147.5
LTDD22073	402324.2	7742826.6	295	308.3	-76.0	359.0
LTDD22074	402325.7	7742826.0	296	296.4	-64.0	357.9
LTDD22075	402162.0	7742882.1	291	156.8	-61.0	359.8
LTDD22076	402206.5	7742801.6	291	326.0	-65.0	350.8
LTDD22078	402291.6	7742812.8	295	275.0	-62.0	353.5
LTDD22080	402204.0	7742868.1	292	210.4	-52.0	358.9
LTDD22179	403133.3	7742859.4	296	74.0	-60.5	359.0
LTDD22179A	403133.3	7742855.6	296	174.6	-60.5	358.0
LTDD22181	403120.5	7742802.8	294	82.0	-58.0	356.0
LTDD22181A	403120.3	7742808.4	294	252.0	-62.0	0.0
LTDD22195A	402886.5	7742796.5	302	221.4	-60.0	359.0
LTED01	403788.0	7742679.0	297	576.0	-65.0	0.0
LTED02	403786.4	7742678.0	297	570.0	-64.5	19.7
LTED03	403699.8	7742679.7	294	474.6	-57.0	6.5
LTED04	403790.0	7742679.0	297	162.8	-60.0	3.3
LTED05	403788.0	7742679.0	297	530.7	-68.0	3.3
LTED05W1	403782.6	7742795.1	8	445.8	-67.6	2.6
LTED06	403790.0	7742679.0	297	727.2	-72.5	352.0
LTED07	403790.0	7742679.0	297	600.4	-74.0	330.0
LTED07W1	403790.0	7742679.0	297	582.4	-74.0	330.0
LTED08	403889.5	7742554.6	298	255.3	-76.0	330.5
LTED08W1	403889.5	7742554.6	298	701.1	-76.0	330.5
LTED08W2	403889.5	7742554.6	298	697.0	-76.0	330.5



Hole Id	Easting	Northing	RL	Total Depth	Dip	Azimuth
LTED08W3	403889.5	7742554.6	298	673.0	-76.0	330.5
LTED08W4	403889.5	7742554.6	298	693.6	-76.0	330.5
LTED08W5	403889.5	7742554.6	298	400.5	-76.0	330.5
LTED08W6	403889.5	7742554.6	298	492.6	-76.0	330.5
1 TED09	403694.2	7742678.0	294	508.0	-66.6	358.2
L TED10	403694.6	7742675.7	294	453.0	-56.0	343.8
LTED10	403699.6	7742676.4	201	139.4	-61.0	337.8
	403697.6	7742675 3	294	501 5	-61.0	337.8
	403697.8	77/267/ 9	204	507.0	-72.5	337.0
	403607.0	7742677.0	204	574 7	76.0	1 9
	403034.0	7742077.0	234	24.0	-70.0	1.0
1 TD202	401322.4	7742904.0	200	5.0	-90.0	0.0
	401315.4	7742914.0	200	15.0	-90.0	0.0
L TR203	401313.4	7742004.0	201	10.0	-90.0	0.0
	401311.4	7742014.0	200	6.0	-90.0	0.0
LIR203	401307.4	7742704.0	207	0.0	-90.0	0.0
	401414.4	7742007.0	200	10.0	-90.0	0.0
LTR207	401418.4	7742907.6	288	39.0	-90.0	0.0
LIR208	401422.4	7742956.6	289	12.0	-90.0	0.0
LTR209	401426.4	7743006.6	290	18.0	-90.0	0.0
LIR210	401411.4	//42807.6	285	27.0	-90.0	0.0
LTR211	401407.4	7742757.6	285	21.0	-90.0	0.0
LTR212	401405.5	7742732.6	287	21.0	-90.0	0.0
LTR213	401403.4	7742707.6	284	21.0	-90.0	0.0
LTR214	401401.5	7742682.6	286	24.0	-90.0	0.0
LTR215	401400.4	7742657.6	286	24.0	-90.0	0.0
LTR216	401398.5	7742632.6	287	30.0	-90.0	0.0
LTR217	401396.4	7742607.6	286	27.0	-90.0	0.0
LTR218	401394.5	7742582.6	286	15.0	-90.0	0.0
LTR219	401392.4	7742558.6	285	21.0	-90.0	0.0
LTR220	401388.4	7742508.6	285	27.0	-90.0	0.0
LTR221	401522.5	7742949.6	287	21.0	-90.0	0.0
LTR222	401518.5	7742899.6	287	18.0	-90.0	0.0
LTR223	401514.4	7742849.6	286	15.0	-90.0	0.0
LTR224	401510.4	7742799.6	286	12.0	-90.0	0.0
LTR225	401507.5	7742749.6	286	9.0	-90.0	0.0
LTR226	401505.4	7742725.6	286	12.0	-90.0	0.0
LTR227	401503.4	7742700.6	285	18.0	-90.0	0.0
LTR228	401501.4	7742675.6	285	12.0	-90.0	0.0
LTR229	401499.4	7742650.6	285	12.0	-90.0	0.0
LTR230	401497.4	7742625.6	285	12.0	-90.0	0.0
LTR231	401496.5	7742600.6	285	15.0	-90.0	0.0
LTR232	401494.4	7742575.6	285	18.0	-90.0	0.0
LTR233	401492.4	7742550.6	286	15.0	-90.0	0.0
LTR234	401488.4	7742500.6	286	24.0	-90.0	0.0
LTR235	401621.5	7742941.6	288	18.0	-90.0	0.0
LTR236	401618.4	7742892.6	287	21.0	-90.0	0.0
LTR237	401614.4	7742842.6	287	30.0	-90.0	0.0
LTR238	401610.5	7742792.6	287	17.0	-90.0	0.0
LTR239	401606.5	7742742.6	287	28.0	-90.0	0.0
LTR240	401603.4	7742692.6	287	24.0	-90.0	0.0
LTR241	401601.4	7742667.6	287	22.0	-90.0	0.0
LTR242	401624.4	7742640.6	286	30.0	-90.0	0.0
LTR243	401673.4	7742286.6	285	33.0	-90.0	0.0
LTR244	401676.5	7742336.6	285	39.0	-90.0	0.0
LTR245	401680.4	7742386.6	286	45.0	-90.0	0.0
LTR246	401684.4	7742435.6	286	42.0	-90.0	0.0
LTR247	401686.4	7742460.6	290	30.0	-90.0	0.0
I TR248	401687.5	7742485.6	297	33.0	-90.0	0.0
LTR249	401613.4	7742491.6	286	21.0	-90.0	0.0
LTR250	401615.4	7742516.6	285	12.0	-90.0	0.0
LTR251	401613.4	7742491 6	286	15.0	-90 0	0.0
LTR252	401618.4	7742566.6	285	39.0	-90 0	0.0
LTR253	401620.4	7742591.6	285	21.0	-90.0	0.0
LTR254	401622.4	7742616.6	286	21.0	-90 0	0.0
LTWB 001	403001 4	7742897 1	302	75.0	-90 0	0.0
MFT01	402546 1	7742861 1	299	98.9	-50 0	344.8
MET02	402600.9	7742853 7	299	128.2	-50.0	356.0
MWR002	401038.0	7743279.0	297	152.0	-60.0	359.8
MWR003	401039.0	7743233.0	295	152.0	-60.0	359.8
MWR004	401034.8	7743184.0	293	152.0	-60.0	359.8
MWR005	401034.0	7743140.0	291	80.0	-60.0	359.8
MWR006	401037.0	7743158.0	292	80.0	-60.0	359.8
111111000	101001.0	1110100.0	202	00.0	30.0	300.0



Hole Id	Easting	Northing	PI	Total Depth	Din	Azimuth
MW/R007	401100 0	7743263.0	200	150.0	-60.0	359.8
MWR008	401088.5	7743223 0	200	80.0	-60.0	353.8
MWR009	401138.0	7743159.0	290	80.0	-60.0	359.8
MWR010	401186.0	7743134.0	288	100.0	-60.0	359.8
MWR011	400877.5	7743157.0	293	80.0	-60.0	359.8
MWR012	400944.5	7743105.0	291	80.0	-60.0	359.8
MWR016	400879.1	7743389.0	293	60.0	-60.0	359.8
MWR017	400879.0	7743351.0	295	80.0	-60.0	359.8
MWR020	400795.1	7743350.0	293	100.0	-60.0	359.8
MWR021	401092.1	7743250.0	297	80.0	-60.0	269.8
MWR022	401185.0	7743185.0	289	80.0	-60.0	359.8
MWR023	401185.0	7743160.0	289	53.0	-60.0	359.8
MWR024	401185.0	7743110.0	288	80.0	-60.0	359.8
MWR025	401185.0	7743085.0	287	80.0	-60.0	359.8
MWR026	401185.0	7743060.0	287	80.0	-60.0	359.8
MWR027	401187.1	7743033.0	287	36.0	-60.0	0.0
MWR028	401098.0	7743186.0	293	80.0	-60.0	359.8
MWR029	401098.0	7743156.0	291	98.0	-60.0	359.8
MWR030	401097.0	7743124.0	290	80.0	-60.0	359.8
MWR031	401141.0	7743211.0	293	80.0	-60.0	359.8
MWR032	400905.0	7742822.0	292	80.0	-60.0	32.8
MWR033	400933.0	7742859.0	293	80.0	-60.0	32.8
MWR034	400948.0	7742914.0	292	46.0	-60.0	32.8
MWR035	400975.0	7742935.0	291	50.0	-60.0	32.8
MWR036	400982.0	7742949.0	290	80.0	-60.0	32.8
MWR037	401006.0	7742990.0	290	50.0	-60.0	32.8
MWR038	401025.0	7743013.0	289	30.0	-60.0	32.8
MWR039	401600.0	7743400.0	287	71.0	-60.0	359.8
MWR043	402401.0	7743192.0	292	38.0	-60.0	358.8
NS01	402589.0	7742871.0	302	85.4	-45.0	359.8
NS02	402550.0	7742875.0	301	90.9	-45.0	359.8
NS03	402518.0	7742879.0	301	86.3	-45.0	359.8
NS04	402672.0	7742848.0	301	80.5	-45.0	359.8
NS05	402586.0	7742838.0	298	116.2	-45.0	359.8
NS06	402582.0	7742787.0	294	97.7	-45.0	359.8
NS07	402214.0	7742943.0	293	46.6	-45.0	359.8
NS08	402547.0	7742845.0	298	89.1	-45.0	359.8
NS09	402552.0	7742771.0	294	117.9	-45.0	359.8
NS10	402245.0	7742942.0	295	49.7	-45.0	359.8
NS11	402514.0	7742818.0	297	85.9	-45.0	359.8
NS12	402640.0	7742815.0	298	93.9	-45.0	359.8
NS15	401197.0	/743138.0	289	91.4	-45.0	359.8
NS16	401176.0	/742989.0	288	91.7	-45.0	359.8
NS17	401000.0	7742932.0	290	94.5	-45.0	29.8
NS18	400999.0	7743077.0	289	94.4	-45.0	29.8
NS19	401036.0	7742811.0	293	93.6	-45.0	359.8
NS21	401188.0	1143249.0	294	91.8	-45.0	1/9.8