

9 NOVEMBER 2023

Bramaderos Project, Southern Ecuador

# Large Exploration Target shows Limon on track to be a substantial gold-silver deposit

Mineralisation modelled from surface to 400m deep; Drilling will now target growth and Resource conversion

- Significant Exploration Target outlined at the Limon epithermal gold-silver discovery within the Bramaderos project
- Initial Exploration Target comprises the Limon 'Central Shoot', the surrounding mineralised area measuring 800m x 300m, and 3 of the additional 6 satellite targets outlined to date
- The Exploration Target extends from surface to depths of up to 400m below surface
- The Exploration Target is in addition to the December 2022 Resource of 2.7Moz AuEq<sup>1</sup> for Brama-Alba gold-copper-silver porphyry mineralisation
- It is also in addition to the December 2022 porphyry gold-copper-silver Exploration Target of 3.3 to 8.6Moz AuEq<sup>1</sup> from Brama-Alba, Melonal, and a small porphyry at Limon
- Excellent metallurgy from Limon has been confirmed with recoveries of over 90% for both gold and silver
- Next steps include surface exploration at all targets to expand the gold-silver system and to define the next phase of drilling to enable a Mineral Resource estimate

Sunstone Metals Ltd (ASX: STM) is pleased to announce the initial Exploration Target for the Limon goldsilver discovery, that is within the Bramaderos Project.

The Limon Exploration Target has been prepared and reported in accordance with the JORC Code (2012) and consists of **between approximately 30 and 44 million tonnes at a grade of between 0.9 and 1.2g/t AuEq\***, **for between 0.9 and 1.7mill oz AuEq (see Table 1).** The AuEq calculation for Limon is provided below and comprises contribution from gold and silver only.

The potential tonnage, grade and quantity of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource for the target area reported. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

\*The gold equivalent calculation formula is AuEq(g/t) = Au(ppm) + (Ag (ppm)/82). The prices used were US\$1,800/oz gold and US\$22/oz silver. Recoveries are estimated at over 90% for gold and 90% for silver from metallurgical studies. In Sunstone's opinion all the elements included in the metal equivalents calculation have reasonable potential to be recovered and sold.

<sup>1</sup> See qualifying statements in the About Sunstone Metals section on page 12.

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Sunstone Managing Director Malcolm Norris said the Exploration Target showed Limon was a large discovery with significant development potential.

"This initial Exploration Target highlights the scope for a substantial resource and a significant development at Limon," Mr Norris said.

"We believe there is every potential for a staged development at Bramaderos with Limon being the higher grade, lower cost, first off development that paves the way for a larger development across multiple porphyry deposits of gold, copper and silver. These options will be further assessed as we complete more drilling and infrastructure studies.

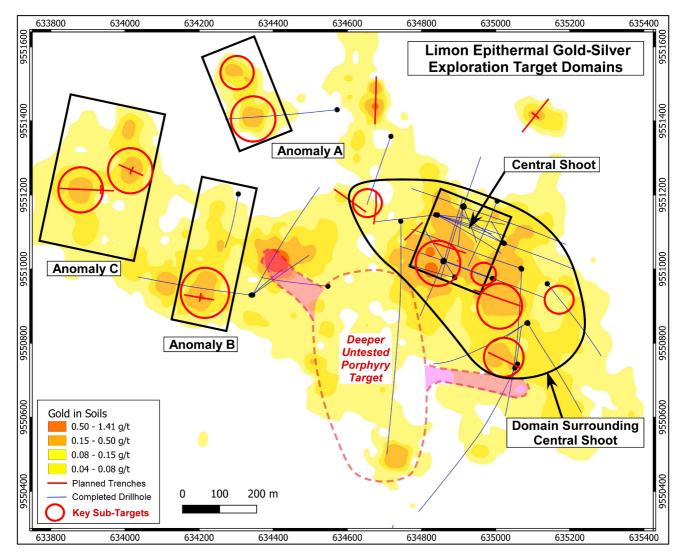
"The total inventory is growing at Bramaderos, and we are moving towards our stated goal of a 10Moz gold district.

"And it must be emphasized that Limon, and other areas of mineralisation at Bramaderos, are ideally located for a mining development. There is existing grid power (93% renewable), the Pan American Highway is within 3 km of the gold-silver-copper deposits, the area is between 900 – 1,100m above sea level, and Ecuador has a clearly defined process for moving from exploration to development".

Zone	Min Tonnage (mill)	Max Tonnage (mill)	Min Grade g/t AuEq	Max Grade g/t AuEq	Min. kAuEq Ounces	Max. kAuEq Ounces	<b>Notes</b> (Tonnage estimates use a Specific Gravity of 2.7g/cc)
Central Shoot	20	31	0.9	1.2	580	1,200	~170 x ~170 x 250m and x 400m for tonnage range; assumes 2 higher grade sub-shoots within Central Shoot area
Domain surrounding Central Shoot	5	7	0.9	1.2	145	270	including holes 33, 39, 41; plus 2 areas of mineralisation ~60m x 60m x 250-350m
Anomaly A	1.7	2	0.9	1.2	50	75	each area min 50m x 50m x 250m-300m vert
Anomaly B	1.7	2	0.9	1.2	50	75	each area min 50m x 50m x 250m-300m vert
Anomaly C	1.7	2	0.9	1.2	50	75	each area min 50m x 50m x 250m-300m vert
	30.1	44	0.9	1.2	875	1,700	
					0.9	1.7	million ounces AuEq

**Table 1:** Limon Epithermal Exploration Target components showing approximate grade and tonnage ranges.





**Figure 1:** Limon gold in soils map showing extensive anomalous gold over an area of 1.7km x 700m. The black outlined areas are those referred to in Table 1 and form the basis of the Exploration Target. Red circled areas are key sub-targets. The red dashed line shows the deeper Limon porphyry target outline with fingers that extend to surface to the NW and the East. Follow-up exploration activities are discussed in the text.

#### The Limon gold-silver discovery

The Limon gold-silver epithermal discovery has moved from discovery to Exploration Target in less than 10 months. The epithermal system was first identified in hole LMDD012 drilled in January 2023. The discovery hole for the Limon gold-silver epithermal system was hole LMDD017 which intersected 176.7m at 1.1g/t AuEq\* (0.97g/t gold and 10.1g/t silver), from 6.8m, and was drilled in February 2023.

The Limon gold-silver discovery is classified as an Intermediate Sulphidation epithermal deposit (ISE). It is expected that multiple shoots will be discovered within the broad 1.7km x 700m Limon alteration system.

The Limon deposit also sits adjacent to and above the Limon porphyry target. Drill hole LMDD010 drilled what is interpreted to be a shallow finger of a much larger porphyry system intersecting 79m at 0.52g/t gold, 0.195 copper and 9.4g/t silver, below a trench that returned 98m at 0.71g/t gold and 0.23% copper. The very large compelling porphyry target (Figure 1), interpreted to sit below these shallow ISE intersections, will be drilled in 2024.



#### Data used for the Exploration Target

The Exploration Target was estimated on Target Prospects where there was a combination of diamond drilling (by Sunstone), geological mapping, trenching, geochemistry (soils) and to a lesser extent geophysical data (magnetics) that support the geological and mineralisation concept model.

Approximately 9,530m of diamond drilling in 31 holes (LMDD012 – 015, and LMDD017 – 043) has been completed during 2023 focussed on the Limon gold-silver epithermal system. Of these 31 holes, 27 have been drilled into the central shoot area. Two have been drilled to the SE of the central shoot (LMDD039 and 041), one to the NW (LMDD033), and one well to the NW (LMDD042). Two holes drilled by Sunstone in late 2022, LMDD008 and 009, also intersected epithermal-related gold and silver mineralisation.

The Limon alteration area has been covered with soil sampling on a 50m x 50m grid. This survey is an important exploration method which identified several gold-in soil anomalies that are primary targets for drilling. The soil geochemical data is further interpreted using related element associations typical of epithermal systems, such as areas of coincident or overlapping gold, silver, zinc, lead, copper, tellurium, and arsenic anomalies.

Target areas have also been strengthened using alteration mineralogy from a hand-held Terraspec instrument. These data assist in mapping the alteration zones most likely to be associated with epithermal mineralisation.

Standard geological mapping and rock chip sampling has also been undertaken across the Limon target area.

Some trenching has been completed, and more trenching is currently in progress (Figure 1).

#### **Exploration Target estimation methodology**

The volume ranges for the initial Exploration Target in the Central Shoot were estimated using cross sections and 3-D modelling in Leapfrog software, based upon an analysis of drilling, mineralised rock types, grade distribution, potential for extrapolation of mineralisation continuity and interpreted geological risk.

The volume ranges for the other components were estimated from geological interpretation and guided by extent of surface geochemical anomalism, supplemented by preliminary drilling. A conservative approach was taken to the potential distribution of gold and silver bearing veins.

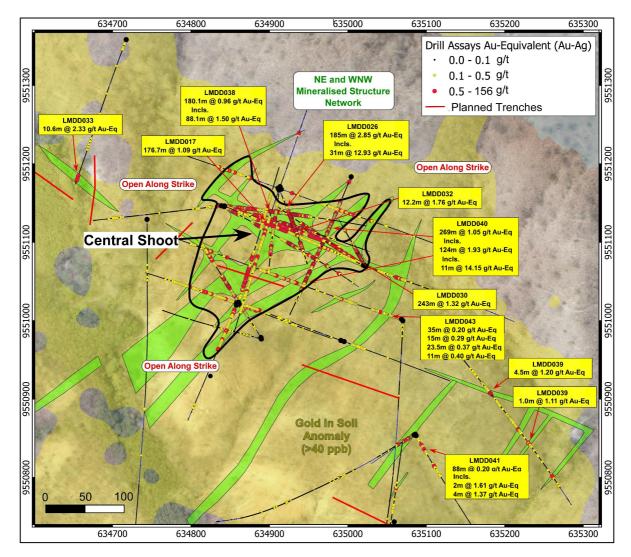
The Central Shoot has been outlined based on the geological interpretation of the gold- and silver- bearing mineralised fault and vein networks with both NE and NW trending trends, and dissemination of gold and silver into various host rocks. Within the Central Zone there are sub-domains of very high grade – as seen in holes LMDD017, 026, 038, and 040 (Table 3). These very high grades are interpreted to be associated with hydrothermal breccias at fault intersections. The Exploration Target assumes that at least one other sub-domain of high grade will be drilled during subsequent drill programs. This will likely increase the overall grade and increase contained ounces.

Grade ranges in Table 1 have been selected based on average intervals from existing drilling over broad intersections (see Table 3 and Figure 2 to support these selections).

**Table 2:** Summary of Exploration Targets at the Bramaderos Project - in addition to the published Brama-Alba MRE (see ASX announcement dated 13 December 2022)

Zone	Min Tonnage (mill)	Max Tonnage (mill)	Min Grade g/t AuEq	Max Grade g/t AuEq	Min. AuEq Ounces	Max. AuEq Ounces
Brama-Alba-Melonal-Limon						
Porphyry Exploration Target	255	360	0.4	0.74	3,300,000	8,600,000
gold-copper-silver porphyry style; geological definition						
Limon Epithermal Exploration						
Target	30	44	0.9	1.2	900,000	1,700,000
gold-silver epithermal style; geological definition						

#### 4,200,000 10,300,000



**Figure 2:** Limon epithermal gold-silver system in plan view, showing multiple mineralised structures in green. Highgrade domains are at intersections of NE and WNW trending structures. Several additional targets have been defined based on gold-in soil and zinc-in-soil anomalies, and structural interpretation and follow-up drilling will be undertaken on these targets in 2024. See Figure 1 for a broader context within the very large Limon target area.

#### **About Bramaderos**

The Limon target area is located 2.7km north-east of the Brama-Alba-Melonal gold-copper deposits. The Bramaderos Project currently hosts a porphyry gold-copper-silver Mineral Resource estimate of 2.7Moz AuEq at Brama-Alba, and a porphyry Exploration Target of between 3.3Moz and 8.6Moz AuEq within 255 to 360Mt at a grade between 0.40 and 0.74g/t AuEq (Figure 3; see ASX announcement dated 13 December 2022, and qualifying statements in the 'About Sunstone Metals' section on page 12 of this announcement).

The Bramaderos project straddles the Pan American highway (Figure 3), and is close to available hydroelectric power, supporting the economics of potential development opportunities. Ecuador sources 93% of its power from renewables and is ideally placed to participate in the global demand for clean energy sourced metals. The project is also supported by nearby commercial airports and significant cities (Loja, population 200,000) and has strong community support. The project area is covered by 3 valid concessions and exploration plans are in place to continue to explore multiple gold-silver epithermal and gold-copper-silver porphyry opportunities.

Drill Hole	EOH (m)	From (m)	To (m)	Interval (m)	AuEq (g/t)	Au (g/t)	Ag (g/t)	Zn (%)	Cu (%)
LMDD043	370.03	0.0	35.0	35.0	0.20	0.14	4.9	0.20	0.01
		74.0	81.0	7.0	0.23	0.12	8.3	0.25	0.01
		94.0	109.0	15.0	0.29	0.09	16.1	0.16	0.00
		169.0	173.0	4.0	0.77	0.44	27.4	0.25	0.01
		182.5	183.5	1.0	0.68	0.60	6.8	0.14	0.00
		189.5	190.5	1.0	0.56	0.48	6.7	0.08	0.00
		201.5	225.0	23.5	0.37	0.32	4.0	0.19	0.03
	incl.	215.5	225.0	9.5	0.39	0.37	1.8	0.03	0.04
		280.0	281.0	1.0	0.56	0.55	0.9	0.01	0.00
		304.0	315.0	11.0	0.40	0.35	4.2	0.18	0.00
		333.0	339.0	6.0	0.15	0.15	0.4	0.05	0.01
LMDD042	359.26	241.8	259.0	17.2	0.17	0.16	0.4	0.01	0.00
LMDD041	398.43	0.0	88.0	88.0	0.20	0.19	0.8	0.06	0.01
	incl.	18.0	20.0	2.0	1.61	1.60	0.8	0.01	0.00
	and	63.0	67.0	4.0	1.37	1.37	0.3	0.01	0.00
LMDD040	407.50	15.0	17.0	2.0	1.05	1.01	2.9	0.03	0.02
		74.0	343.0	269.0	1.05	0.82	18.5	0.29	0.02
	incl.	78.0	80.0	2.0	1.80	0.92	72.2	0.89	0.15
	and	190.0	314.0	124.0	1.93	1.54	31.8	0.15	0.01
	incl.	191.0	217.0	26.0	1.53	1.21	26.1	0.27	0.01
	incl.	212.3	213.0	0.7	9.73	8.53	98.2	0.08	0.01
	and	256.0	265.5	9.5	1.07	0.69	30.9	0.06	0.01
	and	280.0	291.0	11.0	14.15	12.33	149.3	0.02	0.00
	incl.	283.0	285.0	2.0	72.04	62.95	745.5	0.01	0.00
	and	304.0	314.0	10.0	1.37	0.66	58.0	0.09	0.01
	and	328.0	332.5	4.5	0.64	0.52	9.8	0.29	0.10
		364.8	365.8	1.0	0.26	0.14	10.1	0.03	0.54
LMDD039	340.84	72.0	75.0	3.0	0.21	0.17	3.4	0.002	0.00

**Table 3:** Summary of mineralised epithermal intersections in selected Limon drill holes. AuEq is calculated using gold and silver only, there is no contribution from base metals.



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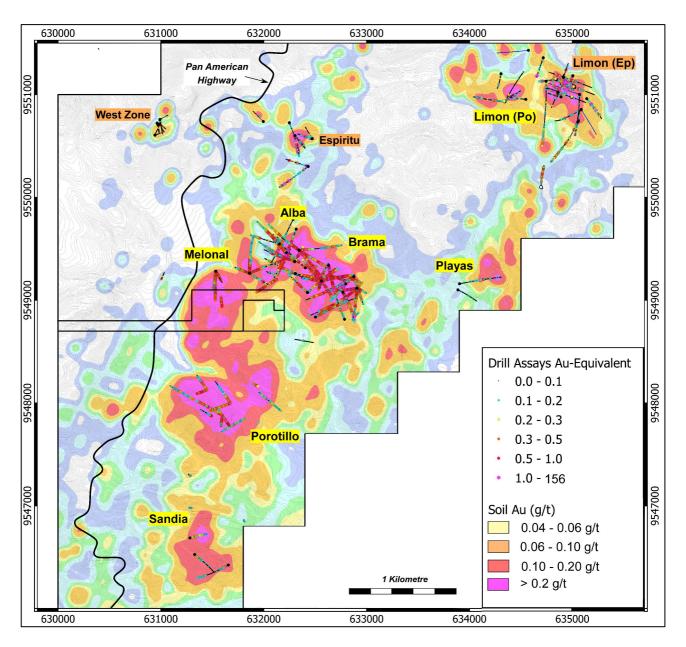
		88.0	90.0	2.0	0.35	0.27	6.9	0.03	0.00
		94.5	99.0	4.5	1.20	0.94	21.3	2.57	0.27
		177.0	179.0	2.0	0.59	0.47	9.7	1.11	0.02
		183.0	188.0	5.0	0.35	0.31	3.1	0.07	0.00
		207.0	209.0	2.0	0.60	0.51	7.5	0.59	0.01
		211.0	212.0	1.0	1.11	1.05	4.9	0.53	0.00
		279.0	280.0	1.0	0.59	0.56	2.7	0.37	0.01
		282.0	284.0	2.0	0.42	0.22	16.3	1.59	0.02
LMDD038	312.58	6.0	186.1	180.1	0.96	0.87	7.7	0.22	0.01
	incl.	6.0	74.0	68.0	0.57	0.51	4.8	0.29	0.03
	incl.	29.0	34.0	5.0	1.07	1.04	2.4	0.41	0.07
	incl.	51.6	59.6	8.0	1.13	1.06	5.5	0.05	0.00
	incl.	61.6	64.0	2.5	1.14	1.05	7.4	0.44	0.01
	incl.	69.0	71.0	2.0	1.09	0.81	23.2	1.13	0.07
		82.0	86.0	4.0	0.26	0.22	3.1	0.86	0.01
		98.0	186.1	88.1	1.50	1.36	11.6	0.17	0.00
	incl.	99.0	107.0	8.0	4.43	3.72	58.5	0.79	0.01
	incl.	102.0	107.0	5.0	6.27	5.29	80.6	1.07	0.01
	and	112.0	122.6	10.6	1.78	1.59	15.4	0.05	0.00
	and	136.0	144.0	8.0	2.10	2.07	2.1	0.01	0.00
	incl.	138.0	140.0	2.0	6.53	6.48	4.3	0.03	0.00
	and	150.0	166.0	16.0	2.83	2.66	14.3	0.14	0.00
	incl.	158.0	163.4	5.3	5.74	5.41	27.4	0.16	0.00
	incl.	158.0	159.0	1.0	16.51	15.30	98.8	0.24	0.00
LMDD037	303.17	33.0	40.0	7.0	0.20	0.19	0.6	0.00	0.01
		220.0	221.0	1.0	0.26	0.26	0.1	0.00	0.01
LMDD036	235.70	7.0	8.0	1.0	0.54	0.52	1.8	0.12	0.02
		18.0	22.0	4.0	0.17	0.15	1.5	0.49	0.05
		40.0	44.0	4.0	0.19	0.18	0.7	0.08	0.02
		180.3	186.3	6.0	0.20	0.19	0.8	0.01	0.11
LMDD035	237.48	51.0	146.0	95.0	0.58	0.52	4.5	0.04	0.02
		71.8	77.8	6.0	3.30	2.70	48.9	0.10	0.03
		98.0	101.1	3.1	0.99	0.98	1.1	0.03	0.01
		120.0	128.0	8.0	1.02	1.01	1.2	0.01	0.00
		183.0	204.1	21.1	0.54	0.52	1.3	0.12	0.00
LMDD033	277.86	0.0	10.0	10.0	0.21	0.17	3.2	0.01	0.01
		16.0	20.0	4.0	0.29	0.28	1.1	0.06	0.01
		261.4	272.0	10.6	2.34	2.33	0.6	0.01	0.02
		261.4	262.5	1.1	2.48	2.47	0.9	0.01	0.09
		270.0	272.0	2.0	9.35	9.35	0.1	0.01	0.00
	343.26	6.0	215.0	209.0	0.58	0.51	5.7	0.23	0.02
LMDD032	545.20	••••							0.08
LMDD032	545.20	26.0	41.0	15.0	0.77	0.65	9.8	0.35	0.00
LMDD032	545.20		41.0 84.0	15.0 8.0	0.77 1.50	0.65 1.40	9.8 8.5	0.35 0.30	0.03
LMDD032	545.20	26.0							
LMDD032	343.20	26.0 76.0	84.0	8.0	1.50	1.40	8.5	0.30	0.03
LMDD032	343.20	26.0 76.0 106.0	84.0 115.0	8.0 9.0	1.50 1.05	1.40 0.94	8.5 8.6	0.30 0.15	0.03 0.00



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		176.4	188.5	12.2	1.38	1.23	12.1	0.07	0.00
		184.5	188.5	4.0	2.98	2.68	24.6	0.10	0.00
LMDD031	397.13	6.0	161.0	155.0	0.47	0.37	7.9	0.59	0.03
	incl.	17.4	20.3	2.9	1.61	1.32	24.0	2.13	0.09
	and	41.0	49.0	8.0	1.99	1.69	24.3	0.61	0.03
	and	106.5	125.0	18.5	1.17	0.89	22.9	0.26	0.04
		175.0	181.0	6.0	0.22	0.17	4.0	0.89	0.05
		195.0	200.2	5.2	0.12	0.05	5.7	0.94	0.04
		295.2	328.7	33.5	0.15	0.11	3.4	1.83	0.05
LMDD030	406.25	46.0	289.0	243.0	1.32	1.11	16.9	0.36	0.02
		48.0	224.0	176.0	1.49	1.27	18.0	0.22	0.01
		152.0	194.0	42.0	3.90	3.37	43.3	0.29	0.01
LMDD026	334.30	90.0	275.0	185.0	2.85	2.67	15.0	0.50	0.02
		106.0	207.0	101.0	4.88	4.65	18.9	0.14	0.00
		146.0	177.0	31.0	12.93	12.53	32.7	0.16	0.00
		171.4	179.0	7.6	42.69	42.15	43.9	0.26	0.01
		201.0	207.0	6.0	2.60	2.38	18.2	0.19	0.00
		235.0	252.0	17.0	1.01	0.59	34.3	1.81	0.10
		268.0	275.0	7.0	1.11	0.92	15.6	2.78	0.20
LMDD017	214.92	6.8	183.5	176.7	1.09	0.97	10.1	0.20	0.11
	incl.	81.2	96.2	15.0	4.00	3.91	7.69	0.34	0.01
	incl.	81.2	82.9	1.7	22.28	22.20	6.8	0.09	0.00
	and	157.5	183.5	26.0	2.46	2.02	36.2	0.14	0.00
LMDD009	414.89	138.0	171.7	33.7	0.28	0.27	1.0	0.13	0.01
	incl.	140.0	159.7	19.7	0.36	0.34	1.3	0.06	0.01





**Figure 3:** Bramaderos concession showing the location of Limon and other gold-copper porphyry (yellow) and goldsilver epithermal targets (orange). The background image is gold-in-soil highlighting the potential scale increase to be delivered with more drilling at Bramaderos across multiple targets. Drilling activity during 2023 has been focussed on the Limon gold-silver epithermal opportunity.





Figure 4: Location of Sunstone's Bramaderos and El Palmar projects, Ecuador.



**Table 4:** Limon drill hole location details for LMDD030 – 043. Collars for all holes have been surveyed with differential GPS.

Drill Hole Number	Easting (PSAD56)	Northing (PSAD56)	RL (m)	Dip (degrees)	Azimuth (PSAD56 Grid) (degrees)	EOH (m)
LMDD030	635020.368	9551070.371	919.359	-70	303	406.25
LMDD031	635021.456	9551070.536	919.286	-80	330	397.13
LMDD032	634842.587	9551146.089	863.942	-55	105	343.26
LMDD033	634717.431	9551358.275	902.284	-45	199	277.86
LMDD034	634842.333	9551145.384	863.91	-55	120	346.10
LMDD035	634889.235	9550978.497	887.91	-50	330	237.48
LMDD036	634848.567	9551146.506	863.756	-45	263	235.70
LMDD037	634889.702	9550976.625	887.794	-65	286	303.17
LMDD038	634842.58	9551146.291	863.798	-55	95	312.58
LMDD039	635139.27	9550960.247	899.685	-45	142	340.84
LMDD040	635004.168	9551183.445	945.382	-63	202	407.5
LMDD041	635086.932	9550853.415	901.045	-45	152	398.43
LMDD042	634572.279	9551430.164	858.952	-35	264	359.26
LMDD043	635068.241	9551002.011	898.341	-35	290	370.03

For further information, please visit www.sunstonemetals.com.au

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#### **About Sunstone Metals**

Sunstone has an advanced portfolio of exploration projects in Ecuador. The portfolio comprises:

**The Bramaderos Gold-Copper Project** where Sunstone owns an 87.5% interest, and SolGold Canada, Inc. (formerly Cornerstone Capital Resources) a subsidiary of SolGold, holding 12.5% (loan carried through to start of commercial production) (see ASX announcement dated 10th April 2017, 28th August 2019, and 7 January 2020). The Bramaderos gold-copper project is located in Loja province, southern Ecuador, and is highly prospective for the discovery of large porphyry gold-copper systems, and high-grade epithermal gold systems. The Bramaderos concession is host to multiple fertile mineralised systems with significant discovery potential.

The Brama-Alba deposit, within the Bramaderos concession contains an initial Mineral Resource estimate of 156Mt at 0.53g/t AuEq for 2.7Moz gold-equivalent\*. In addition to this is the Bramaderos project Exploration Target of between 3.3Moz and 8.6Moz AuEq within 255 to 360Mt at a grade between 0.40 and 0.74g/t AuEq (see ASX release dated December 13, 2022).

JORC Classification	Tonnage (Mt)	Au (g/t)	Cu (%)	Ag (g/t)	AuEq (g/t)	AuEq (Mozs)
Indicated	9	0.38	0.09	1.1	0.53	0.2
Inferred	147	0.35	0.11	1.3	0.53	2.5
Total	156	0.35	0.11	1.3	0.53	2.7

The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement for the Mineral Resource estimate and Exploration Target referred to above and, that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource for the target area reported. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

\*The gold equivalent calculation formula is AuEq(g/t) = (Au grade x Au price x Au recov / 31.1035) + (Ag grade x Ag price x Ag recov / 31.1035) + (Cu grade x Cu price x Cu recov / 100)) / (Au price x Au recov / 31.1035). The prices used were US\$1,800/oz gold and US\$9,500/t copper and US\$22/oz silver. Recoveries are estimated at 89% for gold, 85% for copper, and 60% for silver based on metallurgical studies. In Sunstone's opinion all the elements included in the metal equivalents calculation have reasonable potential to be recovered and sold.

**The El Palmar Copper-Gold Project** where Sunstone holds 70% of the highly prospective 800ha El Palmar gold-copper porphyry project in Ecuador. Sunstone can acquire 100% through a Staged Acquisition Agreement. A Staged Acquisition Agreement to acquire the nearby Verde Chico Project has also been signed. The El Palmar and Verde Chico gold-copper projects are located in Imbabura province, northern Ecuador, within the same geological belt that includes the giant Alpala, Tandayama-America and Llurimagua porphyry copper-gold and copper-molybdenum deposits.



#### **Competent Persons Statement**

The information in this report that relates to exploration results is based upon information reviewed by Dr Bruce Rohrlach who is a Member of the Australasian Institute of Mining and Metallurgy. Dr Rohrlach is a full-time employee of Sunstone Metals Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr Rohrlach consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Mr Malcolm Norris, Managing Director of Sunstone Metals Ltd., has authorised this announcement to be lodged with the ASX.

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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 downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	The results announced here are from diamond drilling samples. The drill core sampling was carried out using half core, generally at 1-2m intervals.
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• Core recovery was good, and core aligned prior to splitting.
	• Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	• Diamond drilling, rock chip and channel sampling points have been guided by geological mapping. The drill samples from Limon were dried, crushed to 70% passing 2mm, Split 1000g and pulverised to 85% passing 75microns. A 20g portion of this sample was used for multi-element analysis (IMS-230) and a 30g sample for Fire Assay Au (FAS-111).
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• Current drilling by Sunstone is diamond core drilling and has drilled to various depths up to 720m. The diamond core was drilled delivering either HTW (70.9mm) or NTW (56mm) core. Drill core is oriented using a Reflex ACT II tool for bottom of hole.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed.	• Diamond core recovery data for the Limon drilling was measured for each drill run and captured in a digital logging software package. The data has been reviewed and core recovery was approximately 100% throughout.
	• Measures taken to maximise sample recovery and ensure representative nature of the samples.	• Core recovery at Limon was good, no extra measures were taken to maximise sample recovery.
	• 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.	• No relationship between sample recovery and grade has been established.
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.	• Drill samples, trench samples and rock chips were logged for lithology, weathering, structure, mineralogy, mineralisation, colour, and other features. Logging and sampling were carried out according to Sunstone's internal protocols and QAQC procedures which comply with industry standards.
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	• Drill samples, and trench and rock chip samples are logged for lithology, weathering, structure, mineralogy, mineralisation, colour, and other features.
	• The total length and percentage of the relevant intersections logged.	• The drill holes and trenches are logged in full, from start to finish of the excavation.
Sub-sampling techniques and sample	• If core, whether cut or sawn and whether quarter, half or all core taken.	<ul> <li>Half core was used to provide the samples that were submitted for assay. Quarter core samples were taken ~1 in every 28 samples for duplicate sampling. The remaining core is left in the core trays.</li> </ul>
preparation	• If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	• N/A.
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	<ul> <li>Surface and drill core samples from Limon were sent to the LAC y Asociados Cia. Ltda. Sample Preparation Facility in Cuenca, Ecuador for sample preparation. The standard sample preparation for drill core samples (Code PRP-910) is: Drying the sample, crushing to size fraction 70% &lt;2mm and splitting the sample to a 250g portion by riffle or Boyd rotary splitter. The 250g</li> </ul>



Criteria	JORC Code explanation	Commentary
	• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	<ul> <li>sample is then pulverised to &gt;85% passing 75 microns and then split into two 50g pulp samples. Then one of the pulp samples was sent to the MS Analytical Laboratory in Vancouver (Unit 1, 20120 102nd Avenue, Langley, BC V1M 4B4, Canada) for gold and base metal analysis.</li> <li>The sample preparation is carried out according to industry standard practices using highly appropriate sample preparation techniques.</li> <li>Sunstone used an industry standard QAQC programme involving Certified Reference Materials "standards" and blank samples, which were introduced in the assay batches.</li> <li>Standards (Certified Reference Materials) or analytical blanks were submitted at a rate of 1 in 28 samples. Field duplicates were also taken at a rate of approximately 1 in 28 samples.</li> <li>The check or duplicate assay results are reported along with the sample assay values in the final analysis</li> </ul>
	• Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	<ul> <li>report.</li> <li>For diamond core, the routine sample procedure is to always take the half/quarter core to the right of the orientation line (looking down hole) or the cut line (in cases where the orientation line was not reliable).</li> <li>Once assay results are received the results from duplicate samples are compared with the corresponding routine sample to ascertain whether the sampling is representative.</li> </ul>
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	• Sample sizes are considered to be appropriate for the style of sampling undertaken and the grainsize of the material, and correctly represent the style and type of mineralisation at the exploration stage.
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.	<ul> <li>Sunstone uses a fire assay gold technique for Au assays (FAS-111) and a four acid multi element technique (IMS-230) for a suite of 48 elements. FAS-111 involves Au by Fire Assay on a 30-gram aliquot, fusion and atomic absorption spectroscopy (AAS) at trace levels. IMS-20 is considered a near total 4 acid technique using a 20g aliquot followed by multi-element analysis by ICP-AES/MS at ultra-trace levels.</li> <li>This analysis technique is considered suitable for this style of mineralisation.</li> </ul>
	• 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.	• Handheld XRF data, together with detailed geological logging, are used as a guide to areas of potential mineralisation and samples from these areas are sent for laboratory analysis as described above.
	• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>Standards, blanks and duplicates are inserted ~1/28 samples. The values of the standards range from low to high grade and are considered appropriate to monitor performance of values near cut-off and near the mean grade of the deposit.</li> <li>The check sampling results are monitored, and performance issues are communicated to the laboratory if necessary.</li> </ul>
Verification of sampling and	• The verification of significant intersections by either independent or alternative company personnel.	• Procedure checks have been completed by the Competent Person for exploration results for this announcement.
assaying	<ul> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul> <li>Twin holes have not been drilled in these areas.</li> <li>Sunstone sampling data were imported and validated using Excel.</li> </ul>



Criteria	JORC Code explanation	Commentary		
	• Discuss any adjustment to assay data.	• Assay data were not adjusted. Core loss intervals are assigned assay values of zero where present.		
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	• Sample co-ordinates are located by GPS and for trench samples measured along the length of the trench.		
	• Specification of the grid system used.	Ecuador projection parameters:		
		Parameter Value		
		Reference Ellipsoid International 1924		
		Semi Major Axis		
		Inverse Flattening (1/f)		
		Type of ProjectionUTM Zone -17S (Datum PSAD56)		
		Central Meridian: -81.0000		
		Latitude of Origin 0.0000		
		Scale on Central Meridian 0.9996		
		False Northing 10000000		
		False Easting 500000		
	Quality and adequacy of topographic control.	• The topographic control was compared against published maps and satellite imagery and found to be good quality.		
Data spacing and	• Data spacing for reporting of Exploration Results.	• The drill core samples were collected from diamond drill holes from the Limon target, and with sample length generally ranging between 1.0 – 2.0m.		
distribution	• 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.	• The data from these samples does not contribute to any resource estimate nor implies any grade continuity.		
	• Whether sample compositing has been applied.	No sample compositing was done.		
Orientation of data in relation to geological	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	<ul> <li>Drilling orientations were appropriate for the interpreted geology providing representative samples.</li> <li>Trench orientations and rock chip locations were appropriate for the interpreted geology providing representative samples.</li> </ul>		
structure	• 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.	• No sampling bias is expected at this stage.		
Sample security	The measures taken to ensure sample security.	<ul> <li>Sunstone sampling procedures indicate individual samples were given due attention.</li> <li>Sample security was managed through sealed individual samples and sealed bags of multiple samples for secure delivery to the laboratory by permanent staff of the joint venture.</li> <li>MS Analytical is an internationally accredited laboratory that has all its internal procedures heavily scrutinised in order to maintain their accreditation. MS Analytical is accredited to ISO/IEC 17025 2005 Accredited Methods.</li> </ul>		
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• Sunstone's sampling techniques and data have been audited multiple times by independent mining consultants during various project assessments. These audits have concluded that the sampling techniques		



Criteria	JORC Code explanation	Commentary
		<ul><li>and data management are to industry standards.</li><li>All historical data has been validated to the best degree possible and migrated into a database.</li></ul>

# TABLE 1 – Section 2: Exploration Results

Criteria	JORC Code 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 Bramaderos Exploration Concession is located in the Loja Province of southern Ecuador. The concession was granted to La Plata Minerales S.A. ("PLAMIN") in January 2017. PLAMIN is a subsidiary of Sunstone Metals Ltd. The concession is subject to a Joint Venture between SolGold Canada Inc. (12.5%) and Sunstone Metals Ltd. (87.5%). There are no declared wilderness areas or national parks within or adjoining the concession area. There are no established native title interests.
	• 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.	• The Bramaderos Exploration Concession was granted to La Plata Minerales S.A. ("PLAMIN") in January 2017. PLAMIN is now a subsidiary of Sunstone Metals Ltd. The Bramaderos Concession is subject to a Joint Venture between Sunstone Metals and SolGold. Sunstone has an 87.5% interest in the JV. SolGold's 12.5% interest is loan carried.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The historic exploration at Bramaderos was completed by various groups over the period 1970-1984, 2001-2002 and 2004-2007. Most of the readily available historic data has been acquired and compiled into databases and a GIS project. Exploration by other parties has included stream sediment surveys, geological mapping, rock chip sampling (888 samples) and grid-based soil sampling (1324 samples), trenching and channel sampling (17 trenches), ground magnetic surveys (31 line kilometres), electrical IP surveys and diamond drilling (10426m).
Geology	• Deposit type, geological setting and style of mineralisation.	• The deposit style being explored for includes intrusion- related and stockwork hosted porphyry Au-Cu systems plus epithermal gold-silver-polymetallic veins. The setting at Limon is a volcanic arc setting of Cretaceous age intrusions.
Drill hole Information	<ul> <li>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:         <ul> <li>a. easting and northing of the drill hole collar</li> <li>b. elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>c. dip and azimuth of the hole</li> <li>d. down hole length and interception depth</li> <li>e. hole length.</li> </ul> </li> </ul>	<ul> <li>Details of the samples discussed in this announcement are in the body of the text.</li> <li>See Figures 1-3 for the location of soil sampling and drilling activities at Limon, and nearby areas.</li> </ul>
	• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• Information included in announcement.
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.	<ul><li>Weighted averages were calculated over reported intervals according to sample length.</li><li>No grade cut-offs were applied.</li></ul>



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Criteria	JORC Code explanation	Commentary
	• 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.	• No aggregating of intervals undertaken at this stage.
	• The assumptions used for any reporting of metal equivalent values should be clearly stated.	<ul> <li>During 2023, preliminary metallurgical studies were performed at Base Metal Laboratories in Kamloops, Canada, and are indicating a standard grind with flotation circuit followed by cyanide leaching. Depending on grind size, this initial testwork has demonstrated that overall estimated recoveries for the combined process are in excess of 90% for both gold and silver.</li> <li>Preliminary metallurgical studies for the gold-coppersilver porphyry mineralisation are indicating a standard grind with a flotation circuit. Stage one will recover copper and the majority of gold as a saleable concentrate. Stage two is a finer grind with a cyanide leach for gold on site. Current, overall estimated recoveries for the combined process are 86% for copper and 89% for gold.</li> </ul>
Relationship between mineralisation widths and intercept lengths	• If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.	• Figures 1-3 show the interpreted strike orientation of the mineralised lodes based on mapping and interpretation of detailed magnetic data.
	• 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').	• True widths of mineralised lodes are not well defined at this stage.
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.	• See Figures 1-2 for maps showing distribution of samples.
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.	• Figures 1-2 show the current interpretations of geology.
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.	• Figures 1-2 above show various datasets that are being used to identify target areas and to guide current and future drilling.
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).	• The planned exploration program is outlined in the announcement.
	<ul> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	• See Figures 1-3 which show areas for further exploration.