



LION ONE DISCOVERS NEW BONANZA GRADE GOLD LODE 1 KM NORTH OF TUVATU

Surface sampling returns multiple high-grade results up to 92.55 g/t gold

North Vancouver, B.C., August 24, 2023 - Lion One Metals Limited (TSX-V: LIO) (OTCQX: LOMLF) (ASX: LLO) (“Lion One” or the “Company”) is pleased to announce the discovery of a new mineralized structure carrying bonanza grade gold 1 km to the north of the company’s 100% owned Tuvatu Alkaline Gold Project in Fiji.

The new mineralized structure was discovered on surface by Lion One’s regional exploration team and has been named the Lumuni occurrence. The structure is located 1 km north of Tuvatu, approximately along strike from lodes UR1, UR2, and UR3. The Lumuni structure exhibits a width at surface of approximately 0.5 m to over 1 m and is manifested as two mapped zones of what may be a single continuous feature. This includes a north-south striking zone that dips steeply to the west, and a northwest-southeast striking interval that dips steeply to the southwest. High-grade gold results were returned from close-spaced channels and outcropping zones separated by up to 30 m strike length. The overall feature was traced on surface for a length of over 150 m and remains open to the south-east where it is obscured under vegetation. The high-grade mineralized structure also appears to be coincident with a large steeply-dipping CSAMT resistivity low, which may be indicative of a deeply-rooted structure.

Highlights of Lumuni channel sampling:

- **66.83 g/t Au over 0.7 m** (CH3850)
- **48.45 g/t Au over 0.7 m** (including 92.55 g/t Au over 0.3 m) (CH3851)
- **15.18 g/t Au over 1.1 m** (including 31.25 g/t Au over 0.3 m) (CH3849)
- **14.66 g/t Au over 1.1 m** (including 16.78 g/t Au over 0.7 m) (CH3855)
- **17.04 g/t Au over 0.6 m** (including 30.59 g/t Au over 0.3 m) (CH3853)
- **10.30 g/t Au over 0.9 m** (including 13.89 g/t Au over 0.6 m) (CH3852)
- **Strike length of over 150 m observed on surface**

Lion One Chairman and CEO Walter Berukoff commented: “We’re very pleased with the discovery of the Lumuni occurrence. This discovery was made as part of our ongoing regional mapping and sampling program throughout the Navilawa Caldera. What makes this discovery so outstanding is the continuity of the high-grade material. It is not a single bonanza-grade sample, but rather a traceable lode of high to very-high grade material that can be followed along at surface. The fact that these high-grade samples coincide with a steeply dipping resistivity low is even more compelling as it provides us with immediate drill targets to pursue. We can now add Lumuni to our growing list of high-priority regional exploration targets.”

Table 1. Highlights of channel sampling in the Lumuni area. For full results see Table 2 in the appendix.

Channel ID		From	To	Interval (m)	Au (g/t)
CH3848		0.9	1.3	0.4	4.24
CH3849		1	2.1	1.1	15.18
	<i>including</i>	1	1.45	0.45	4.54
	<i>and</i>	1.45	1.75	0.3	31.25
	<i>and</i>	1.75	2.1	0.35	15.09
CH3850		0.6	1.3	0.7	66.83
	<i>including</i>	0.6	1	0.4	64.62
	<i>and</i>	1	1.3	0.3	69.77
CH3851		0.9	1.6	0.7	48.45
	<i>including</i>	0.9	1.3	0.4	15.38

	<i>and</i>	1.3	1.6	0.3	92.55
CH3852		0	0.9	0.9	10.3
	<i>including</i>	0	0.6	0.6	13.89
	<i>and</i>	0.6	0.9	0.3	3.13
CH3853		0.6	1.2	0.6	17.04
	<i>including</i>	0.6	0.9	0.3	30.59
	<i>and</i>	0.9	1.2	0.3	3.48
CH3855		0.9	2	1.1	14.66
	<i>including</i>	0.9	1.3	0.4	10.95
	<i>and</i>	1.3	2	0.7	16.78
CH3903		1	1.7	0.7	2.32

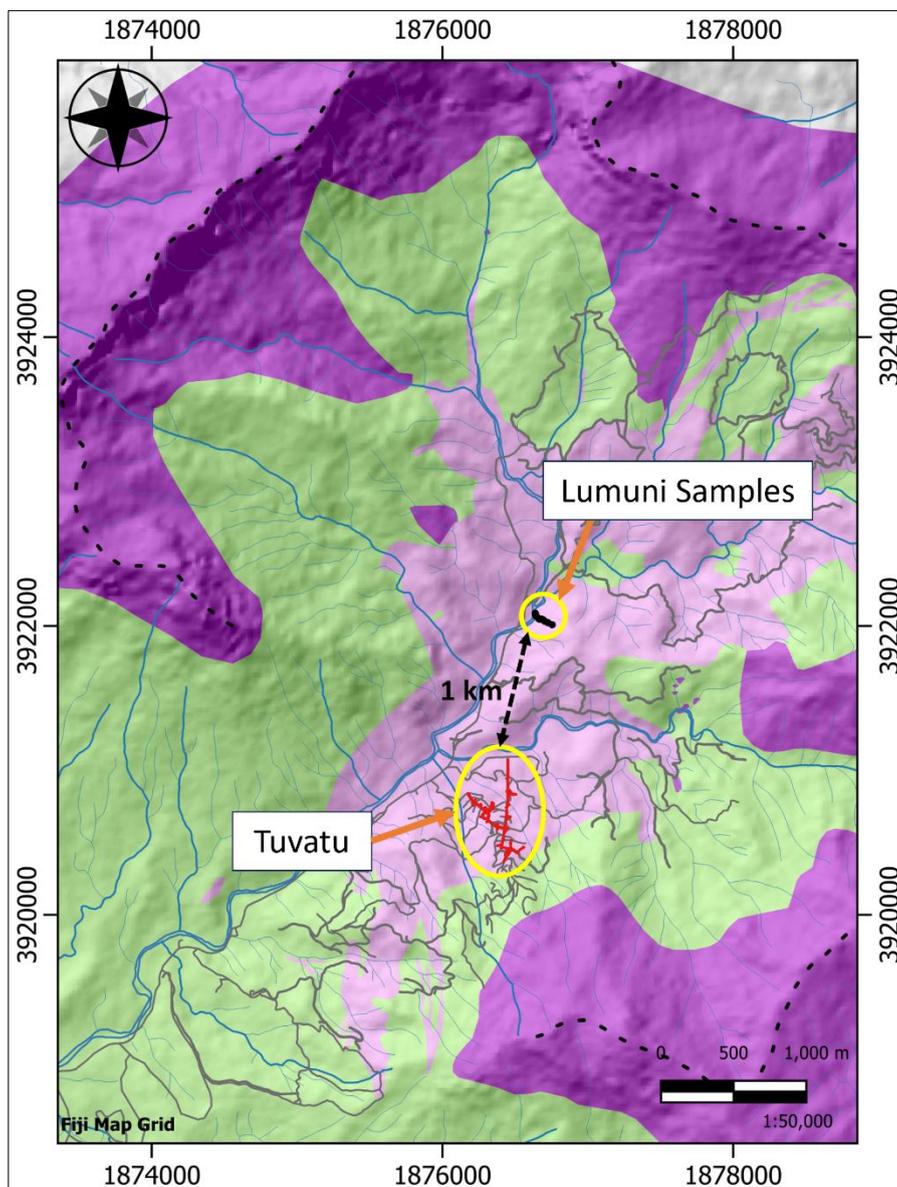


Figure 1. Location of Lumuni surface samples in relation to Tuvatu. The Lumuni discovery is approximately 1 km NNE of Tuvatu. Underground developments at Tuvatu are shown in red and the Lumuni surface samples are identified by the black dots. Background colours represent surface geology, with Navilawa Monzonite in pink, Nadele Breccia in green, and Sabeto volcanics in dark purple.

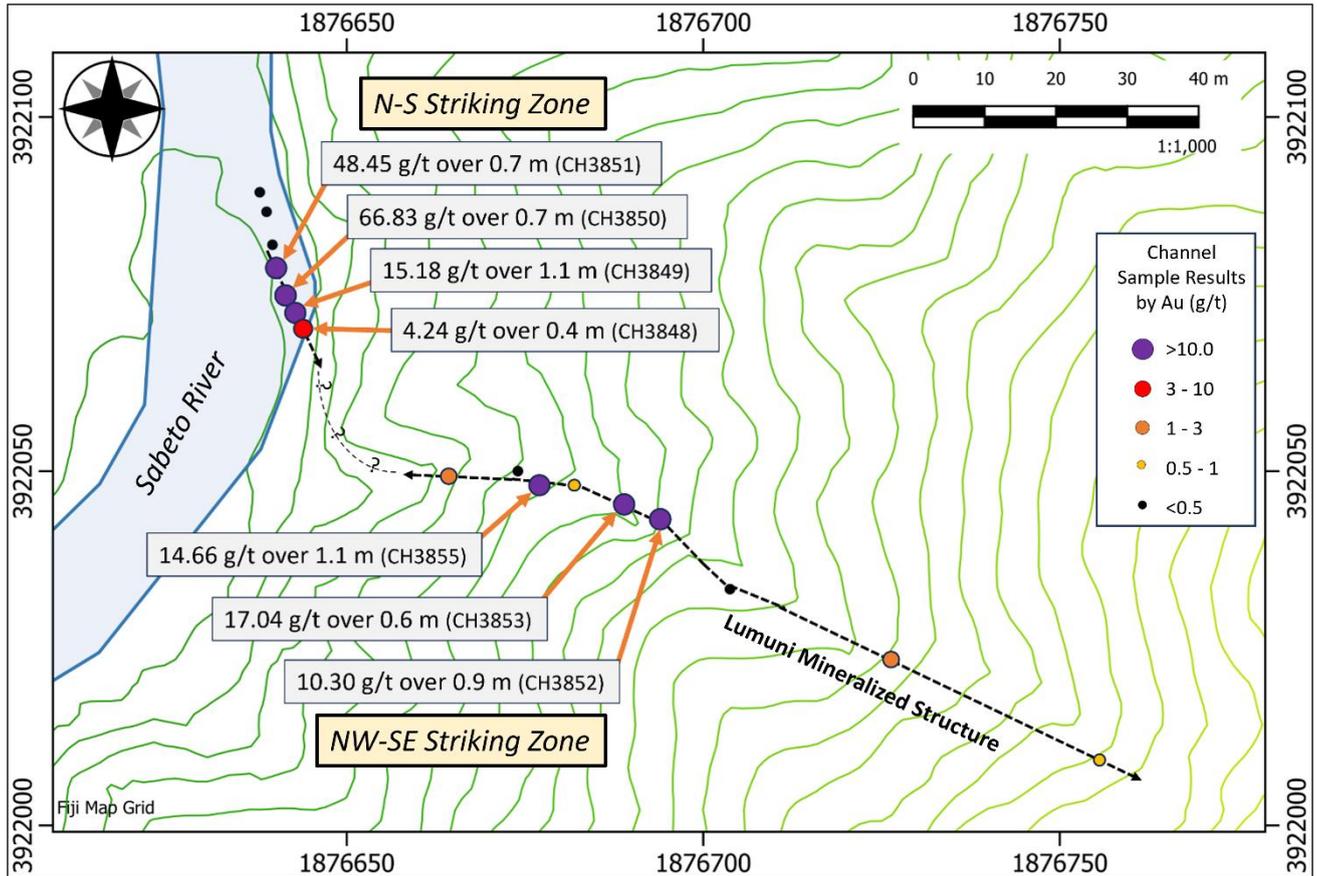


Figure 2. Location of Lumuni channel samples. Composite results of channel sampling in the Lumuni area in g/t gold. The dashed line represents the trace of the mineralized lode on surface.

Lumuni Channel Sampling

A total of 16 channel samples were collected in the Lumuni area. The channel samples were collected by taking rock chip samples along a line oriented perpendicular to the observed structure, with overlap into the wall rock (see Figure 3).

The Lumuni structure is composed of two intervals; a northern portion trending approximately north-south and dipping sub-vertically to steeply to the west, and an eastern portion trending approximately northwest-southeast and dipping steeply to the southwest. The area between the two sections is covered in thick vegetation. It is hypothesized that the two portions are part of the same curvi-linear structure, though the eastern portion may be a splay off the northern section. The northern section is located on the margins of the Sabeto River while the eastern portion climbs up a dry creek bed to the top of a ridge, where it becomes obscured by overburden. While the northern portion appears to pinch out to the north where a series of channel samples failed to return any grade, the eastern portion may remain open to the east with mineralization observed along its entire length. The mineralized strike length of the entire Lumuni structure is currently >150 m, including both portions.

The Lumuni structure has an average estimated true width of 0.6 m, though it pinches and swells locally with observed widths reaching approximately 1 m. It is hosted in monzonite and is composed of variably white to gray chalcedonic banded and locally recrystallized quartz, with abundant heavily oxidized sulphides, giving the lode a bright red, gossanous appearance. Pyrite is the most dominant sulphide, with trace sphalerite (zinc sulphide) and galena (lead sulphide) visible locally. Alteration is intense and consists predominantly of white clays and micas. Coarse roscoelite (a vanadium mica observed in high-grade parts of Tuvatu) is also observed locally. The north-south portion of the lode is structurally controlled forming sinistral, sigmoidal shapes suggesting a north-south strike-slip foliation as well as northwest-southeast foliations.

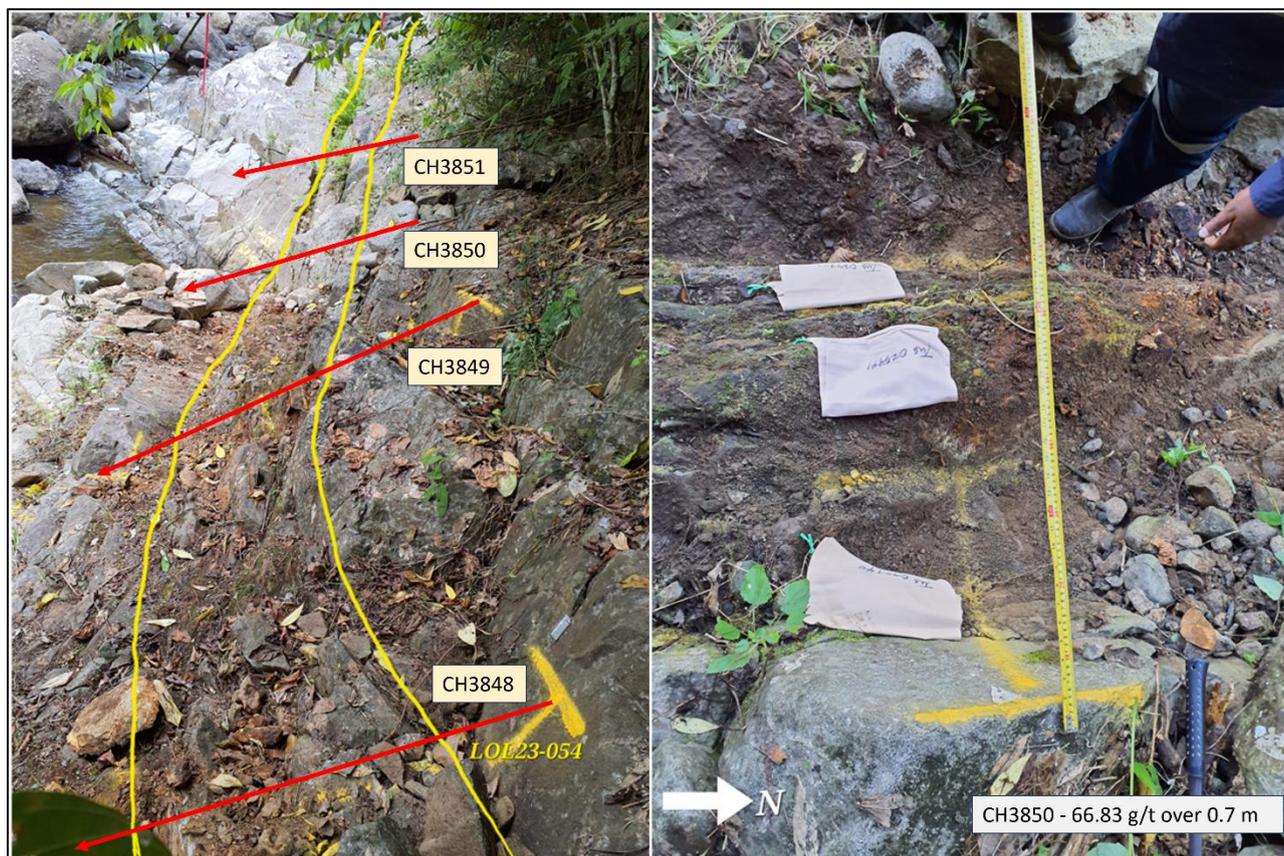


Figure 3. Example Lumuni channel samples. Left: Channel samples CH3848 to CH3849. Red arrows represent the approximate location of channel samples (sample lines CH3850 and CH3851 are obscured by boulders). The approximate location of Lumuni structure is represented by the yellow lines. North is up. Right: Channel sample CH3850. The Lumuni lode is visible as the reddish-brown oxidized structure in the middle of the photo. Sample bags indicate the location of samples along the channel, which is marked with yellow spray paint. North is to the right.



Figure 4. Example of Mineralization from the Lumuni Outcrop. Chalcedonic, locally banded and recrystallized comb quartz forming on the walls of open vugs, and abundant strongly oxidized sulphides in intensely altered medium-grained monzonite. Pen for scale.



CSAMT

The newly discovered Lumuni structure overlies a prominent resistivity gradient identified in the 2019 CSAMT survey as a potential drill target (Figure 5). CSAMT is a ground geophysical method that measures the electrical resistivity of rocks down to depths of several kilometers. It is highly efficient in identifying subsurface structures, such as lithological contact zones, faults, fracture systems, and potential upflow zones especially if these are deep-rooted structures. In alkaline gold deposits such as Tuvatu, such deep-rooted structures provide the principal conduits for hydrothermal fluid flow from which gold and other metals are deposited.

The fact that the Lumuni structure not only appears to be sub-vertically dipping but that it also corresponds to a steeply-dipping resistivity gradient provides credence to the suggestion that the mineralization observed at surface may be associated with a deep-rooted structure, in similar fashion to the mineralized lodes at Tuvatu. The CSAMT survey data thereby provides viable drill targets to follow up the bonanza-grade surface sampling described in this news release. Note that the CSAMT data shown here is based on the 2019 CSAMT survey. As reported on [June 20, 2023](#), additional CSAMT lines were completed in 2023, the results of which once interpreted, will provide higher resolution imaging of the resistivity characteristics of the survey area. Due to some delay in processing, the 2023 CSAMT data is not yet available. Once it is available, the higher resolution data will be beneficial in further refining drill targets to follow up the Lumuni occurrence.

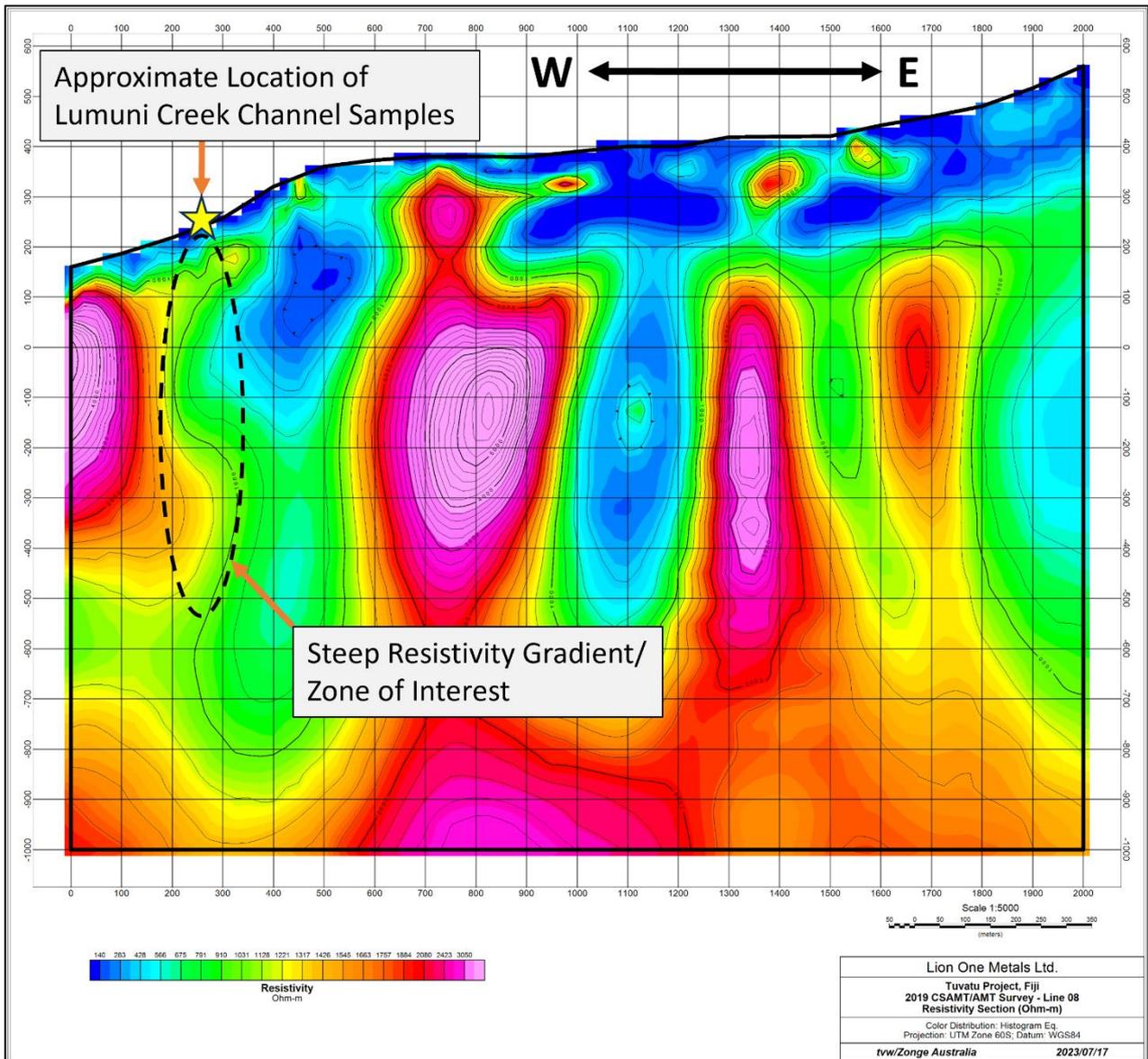


Figure 5. CSAMT gradient underlying bonanza grade Lumuni surface samples. Line 08 from the 2019 CSAMT survey. The Lumuni channel samples overly a steeply dipping resistivity gradient that was identified in the 2019 CSAMT survey as a potential drill target. Once available, results from the 2023 CSAMT survey will provide enhanced resistivity data in this area and further refine drill targeting in the Lumuni area.

About Tuvatu

The Tuvatu Alkaline Gold Project is located on the island of Viti Levu in Fiji. The January 2018 mineral resource for Tuvatu as disclosed in the technical report “Technical Report and Preliminary Economic Assessment for the Tuvatu Gold Project, Republic of Fiji”, dated September 25, 2020, and prepared by Mining Associates Pty Ltd of Brisbane Qld, comprises 1,007,000 tonnes indicated at 8.50 g/t Au (274,600 oz. Au) and 1,325,000 tonnes inferred at 9.0 g/t Au (384,000 oz. Au) at a cut-off grade of 3.0 g/t Au. The technical report is available on the Lion One website at www.liononemetals.com and on the SEDAR website at www.sedar.com.

Qualified Person (NI43-101)

In accordance with National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43- 101”), Sergio Cattalani, P.Geo, Senior Vice President Exploration, is the Qualified Person for the Company and has



reviewed and is responsible for the technical and scientific content of this news release.

QAQC Procedures

Lion One adheres to rigorous QAQC procedures above and beyond basic regulatory guidelines in conducting its sampling, drilling, testing, and analyses. The Company utilizes its own fleet of diamond drill rigs, using PQ, HQ and NQ sized drill core rods. Drill core is logged and split by Lion One personnel on site. Samples are delivered to and analyzed at the Company's geochemical and metallurgical laboratory in Fiji. Duplicates of all samples with grades above 0.5 g/t Au are both re-assayed at Lion One's lab and delivered to ALS Global Laboratories in Australia (ALS) for check assay determinations. All samples for all high-grade intercepts are sent to ALS for check assays. All samples are pulverized to 85% passing through 75 microns. Gold analysis is carried out using fire assay with an AA finish. Samples that have returned grades greater than 10.00 g/t Au are then re-analyzed by gravimetric method. For samples that return greater than 0.50 g/t Au, repeat fire assay runs are carried out and repeated until a result is obtained that is within 10% of the original fire assay run. Lion One's laboratory can also assay for a range of 71 other elements through Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES), but currently focuses on a suite of 9 important pathfinder elements. All duplicate anomalous samples are sent to ALS labs in Townsville QLD and are analyzed by the same methods (Au-AA26, and Au-GRA22 where applicable). ALS also analyses 33 pathfinder elements by HF-HNO₃-HClO₄ acid digestion, HCl leach and ICP-AES (method ME-ICP61).

About Lion One Metals Limited

Lion One's flagship asset is 100% owned, fully permitted high grade Tuvatu Alkaline Gold Project, located on the island of Viti Levu in Fiji. Lion One envisions a low-cost high-grade underground gold mining operation at Tuvatu coupled with exciting exploration upside inside its tenements covering the entire Navilawa Caldera, an underexplored yet highly prospective 7km diameter alkaline gold system. Lion One's CEO Walter Berukoff leads an experienced team of explorers and mine builders and has owned or operated over 20 mines in 7 countries. As the founder and former CEO of Miramar Mines, Northern Orion, and La Mancha Resources, Walter is credited with building over \$3 billion of value for shareholders.

On behalf of the Board of Directors of Lion One Metals Limited

"Walter Berukoff", Chairman and CEO

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Appendix 1: Full Sample Results and Collar Information

Table 2. Channel and rock sample results from the Lumuni area

Channel ID	Sample ID	From	To	Interval (m)	Au (g/t)
CH3848	TUS025730	0	0.9	0.9	0.51
CH3848	TUS025732	0.9	1.3	0.4	4.24
CH3848	TUS025733	1.3	1.7	0.4	0.32
CH3848	TUS025734	1.7	2.2	0.5	<0.01
CH3849	TUS025735	0	1	1	0.04
CH3849	TUS025736	1	1.45	0.45	4.54
CH3849	TUS025737	1.45	1.75	0.3	31.25
CH3849	TUS025738	1.75	2.1	0.35	15.09
CH3849	TUS025739	2.1	2.8	0.7	0.02
CH3850	TUS025740	0	0.6	0.6	0.04
CH3850	TUS025741	0.6	1	0.4	64.62
CH3850	TUS025742	1	1.3	0.3	69.77
CH3851	TUS025743	0	0.9	0.9	0.72
CH3851	TUS025744	0.9	1.3	0.4	15.38
CH3851	TUS025745	1.3	1.6	0.3	92.55
CH3851	TUS025746	1.6	2	0.4	0.69
CH3852	TUS025747	0	0.6	0.6	13.89
CH3852	TUS025748	0.6	0.9	0.3	3.13
CH3853	TUS025749	0	0.6	0.6	0.24
CH3853	TUS025851	0.6	0.9	0.3	30.59
CH3853	TUS025852	0.9	1.2	0.3	3.48
CH3854	TUS025853	0	0.6	0.6	0.23
CH3854	TUS025854	0.6	0.9	0.3	0.56
CH3855	TUS025855	0	0.9	0.9	0.15
CH3855	TUS025856	0.9	1.3	0.4	10.95
CH3855	TUS025858	1.3	2	0.7	16.78
CH3856	TUS025859	0	1	1	0.1
CH3856	TUS025860	1	1.6	0.6	0.09
CH3892	TUS025887	0	0.4	0.4	<0.01
CH3892	TUS025888	0.4	0.7	0.3	<0.01
CH3892	TUS025889	0.7	1.2	0.5	<0.01
CH3893	TUS025890	0	0.7	0.4	<0.01
CH3893	TUS025891	0.7	1	0.3	<0.01
CH3893	TUS025892	1	1.7	0.7	<0.01
CH3894	TUS025893	0	0.7	0.7	<0.01
CH3894	TUS025894	0.7	1	0.3	<0.01
CH3894	TUS025895	1	1.3	0.3	<0.01
CH3894	TUS025896	1.3	1.6	0.3	<0.01
CH3903	TUS023003	0	0.6	0.6	0.24
CH3903	TUS023004	0.6	1	0.4	<0.01
CH3903	TUS023005	1	1.7	0.7	2.32
CH3903	TUS023006	1.7	2.3	0.6	<0.01
CH3904	TUS023008	0	0.9	0.9	<0.01



CH3904	TUS023009	0.9	1.1	0.2	<0.01
CH3904	TUS023010	1.1	1.4	0.3	<0.01
CH3904	TUS023011	1.4	1.7	0.3	<0.01
CH3905	TUS023012	0	0.8	0.8	<0.01
CH3905	TUS023013	0.8	1.5	0.7	<0.01
CH3905	TUS023014	1.5	2.4	0.9	<0.01
CH3905	TUS023015	2.4	2.7	0.3	1.28
CH3906	TUS023019	0	1	1	<0.01
CH3906	TUS023020	1	1.6	0.6	0.62

Table 3. Collar coordinates (channel start) for channel samples reported in this release. Coordinates are in Fiji Map Grid.

Channel ID	Easting	Northing	Elevation	Length (m)
CH3848	1876644	3922070	167.2	2.2
CH3849	1876643	3922072	167.3	2.8
CH3850	1876642	3922075	166.3	1.3
CH3851	1876640	3922079	165.4	2.0
CH3852	1876694	3922043	205.5	0.9
CH3853	1876689	3922045	199.5	1.2
CH3854	1876682	3922048	196.0	0.9
CH3855	1876677	3922048	193.5	2.0
CH3856	1876674	3922050	190.5	1.6
CH3892	1876640	3922082	166.5	1.2
CH3893	1876639	3922087	166.5	1.7
CH3894	1876638	3922089	166.8	1.6
CH3903	1876664	3922049	183.5	2.3
CH3904	1876704	3922033	218.0	1.7
CH3905	1876726	3922024	231.0	2.7
CH3906	1876756	3922009	256.0	1.6