Lion One Announces New High-Grade, Near-Surface Gold in Drill Results from Phase 2 Infill Program at Tuvatu, Fiji

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North Vancouver, September 8, 2022 - Lion One Metals Ltd. (TSXV: LIO) (OTCQX: LOMLF) (ASX: LLO) ("Lion One" or the "Company") is pleased to announce the results from 20 additional drill holes, as part of ongoing infill drilling at its high-grade, fully permitted Tuvatu Alkaline Gold Project in Fiji.

Drill results for 20 holes totalling approximately 3,900m of diamond drilling in Zone 5 cover a portion of the Tuvatu gold project, part of the Navilawa volcanic caldera which is host to numerous gold occurrences. outcropping mineralization, as well as the high-grade Tuvatu Alkaline gold deposit.

The drill program represents a significant improvement to the extent of known mineralization; additions are highlighted in blue in Table 1. The main orebody (Figure 1), is scheduled to enter production in Q2 of 2023. Its dimensions and continuity are further defined and expanded with the infill program which adds to the 11 earlier holes in Zone 5 (Lion One news release: May 31, 2022). The additional data outlines high-grade to bonanza-grade mineralized lode swarms <100m from surface. Vein-hosted mineralization remains open along strike and at depth. Lion One is upgrading its resource model which is expected to be significantly improved by this round of drill results. The mineralization reported here is a significant development which is expected to upgrade the resource model, as it represents a critical addition of gold mineralisation to the resources model that grades well above the average resource grade, at relatively shallow levels. As a result, the newly identified mineralization will enhance the economic model, likely upgrading the production stream at Tuvatu.

Top Intercepts include:

- 20.59 g/t Au over 3.9m from 98.4-102.3m, including 52.89 g/t Au over 1.5m, including 171.5 g/t Au over 0.3m, and 79.18 g/t Au over 0.3m from TUG-144
- 12.22 g/t Au over 3.3m from 54.9-58.2m, including 32.08 g/t Au over 0.6m, 24.08 g/t Au over 0.6m from TUG-143
- 56.90 g/t Au over 1.8m from 144.6-146.4m, including 163.19 g/t Au over 0.6m from TUDDH-604
- 35.98 g/t Au over 1.8m from 53.0-54.8m, including 194.00 g/t Au over 0.3m from TUDDH-609
- 9.13 g/t Au over 3.3m from 60.3-63.6m, including 44.85 g/t Au over 0.6m from TUG-146, as well as 8.15 g/t Au over 5.1m from 97.5-102.6m, including 19.70 g/t Au over 1.8m from 99.3-101.7 including 13.28 g/t Au over 0.6, 11.73 g/t Au over 0.6m, and 34.08 g/t Au over 0.6m also from TUG-146
- 9.33 g/t Au over 1.5m from 10.5-12.0m, including 37.42 g/t Au over 0.3m from TUG-144
- 7.14 g/t Au over 3.0m from 107.5-110.5m, including 28.56 g/t Au over 0.3m, 10.54 g/t Au over 0.3m, and 28.74 g/t Au over 0.3m from TUDDH-591
- 6.80 g/t Au over 4.2m from 92.1-96.3m including 10.39 g/t Au over 0.3m, 24.57 g/t Au over 0.6m, and 9.62 g/t Au over 0.6m from TUDDH-596
- 17.85 g/t Au over 0.6m from 127.9-128.5m including 26.79 g/t Au over 0.3m, 5.52 g/t Au over 2.7m from 161.8-164.5m incl. 36.81 g/t Au over 0.3m from TUDDH-605

Results are summarized below in Table 1, with vertical sections including all of the newly reported drill holes presented as Figures 2-8. Highlighted in blue on Table 1 are drill intercepts outside of the mineralized lodes that define the existing resource model. Each additional intercept will likely add width, grade, and continuity to the resource in the near-surface portion of the Tuvatu orebody.

Lion One Drilling Programs in Progress
Lion One reports that in addition to its Zone 5 infill drilling it is progressing with deep extensional drilling on the 500 Zone, where TUDDH-608, targeting the high-grade intersection of TUG-141 and TUDD-601, has been terminated at a depth of 678.1m. Visible veining and sulphide mineralization has been recorded from approximately ~530m to 645m depth along the drill hole. Assay results for TUDDH-608 have been

commissioned from the Lion One Lab with preliminary results expected soon. Drilling on TUG-147 from the underground decline, targeting the same dilational zone further to the north and deeper has also commenced this week.

The Company has also mobilized a drill rig 2km northeast of Tuvatu to test the Batiri Creek occurrence, the new regional discovery in the Navilawa Caldera (see news release dated August 29, 2022), and underground development continues toward the near-surface Zone 2 of the Tuvatu resource with the No. 2 decline having advanced >80m. Finally, results from a separate batch of 6 PQ diameter diamond drill holes aimed at collecting a 300 kg composite sample for metallurgical testing of Zone 2 mineralization have also been received and compiled. The company will continue to provide further progress updates and results on these activities.

Lion One CEO, Walter Berukoff, stated, "We are confident that the high-grade intercepts indicated by our infill programs and the increased drilling density will lead to a more robust resource model. The high-grade near-surface infill results, along with the continuing success of the deep-drilling program, underscores the potential of Tuvatu to be a multi-million-ounce, high-grade Au producer. Lion One is well positioned to continue advancing all three tiers of our exploration strategy: ongoing, near-surface infill drilling; extensions of deep, high-grade feeder targets, and from our pipeline of regional targets in the surrounding Navilawa caldera."

Infill Drilling Program
Two phases of infill drilling have been planned at Tuvatu with the aim of infilling areas within the current resource and thus augmenting the data density, to further improve the resolution of the geological model in portions of the deposit scheduled for earliest production. Phase 1 infill drilling was completed over Zone 2 (Figure 1) in mid-February 2022, adding over 8,400m of new data from drill core, including 7,475m of new drilling and 955m of sampling of previously unsampled historic drill core (see Feb. 23, 2022 News Release).

This release presents final assay data from 20 previously unreported drill holes completed as part of the Phase 2 infill program, which is planned for approximately 8,200m of diamond drilling from surface and underground, and which is aimed at upgrading the resource database in Zone 5 of the Tuvatu orebody. The Phase 2 program as planned includes 30 holes totalling 5,475m carried out from 4 separate drill stations at surface, and 35 holes totalling 2,695m carried out from 6 underground drill stations. Phase 2 infill drill program began February 17, 2022, with drill hole TUDDH-577, and is expected to require 8-9 months of drilling using three rigs (two from surface and one from underground) to complete.

Results from the initial approximately 6,200m of drilling in Zone 5, represent approximately 75% of the planned program total, indicating and indeed confirming consistent high-grade to locally bonanza-grade Au mineralization for known mineralized lodes in this portion of the current resource, as well as new high-grade mineralization that was not identified prior to this drill program (Table 1, highlighted), and therefore not included in the current resource model.

Numerous high-grade mineralized intervals occur outside of existing modelled lodes. These notably include 35.98 g/t Au over 1.8m which includes a bonanza grade intercept of 194.00 g/t Au from a downhole depth of only 53.0m in hole TUDDH-609, as well as 19.70 g/t Au over 1.8m from only 99.3m downhole depth in hole TUG-146. These additional near-surface intercepts will add significantly to the overall inventory of high-grade mineralization slated for early production at Tuvatu.

Figure 1: A) Oblique view looking N060° and down 17° showing the current conceptual mine plan ore panels (gold) highlighting the location of Zone 2 and Zone 5, the exploration decline (yellow) and the planned Zone 5 infill drilling program (blue). The planned drilling consists of 4 surface and 6 underground drill stations. B) Oblique view looking N060° and down 40° showing the UR1 to UR5, URW1A, URW1C, and URW3 lodes (transparent grey), exploration decline (yellow) and the planned Zone 5 infill drilling program (blue).

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Figures 2-8: Composite vertical sections through Zone 5 at Tuvatu, showing the UR1 to UR5, URW1A, URW2A, and URW3 lodes (labelled) and the traces of the infill drilling reported in this release (drill holes are labelled). Grade legend is as follows: orange = >3g/t Au; red = >10 g/t Au; magenta = >30 g/t Au. All figures are at the same scale with views as indicated.

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Table 1: Drilling intervals returning >0.5 g/t Au (intervals > 3.0 g/t Au cutoff are shown in red, and intervals >9.0 g/t Au or longer than 1.2m are bolded). Intercepts that are outside of the current geological model are highlighted in light blue.

Hole ID	From (m)	To (m)	Interval (m)	Grade (g/t Au)
TUDDH-589	19.1	19.4	0.3	0.91
	85.1	85.4	0.3	0.81
	89.6	91.4	1.8	1.44
	113	113.6	0.6	17.33
	170.9	171.2	0.3	7.36
	209.3	209.6	0.3	0.96
	210.8	224	13.2	3.79
Incl.	213.2	213.5	0.3	17.03
Incl.	213.8	214.1	0.3	7.85
Incl.	215.6	215.9	0.3	7.17
Incl.	216.5	216.8	0.3	11.41
Incl.	218	218.3	0.3	33.30
Incl.	222.5	222.8	0.3	7.21
Incl.	223.7	224	0.3	15.34
TUDDH-591	73.4	74.0	0.6	1.04

	102.3	102.6	0.3	9.28
	103.7	104.6	0.9	0.93
	106.1	106.6	0.5	2.01
	107.5	110.5	3.0	7.14
Incl.	107.5	107.8	0.3	28.56
Incl.	108.1	108.4	0.3	10.54
Incl.	109.0	109.3	0.3	28.74
	112.0	112.6	0.6	0.73
	113.2	113.5	0.3	0.84
	117.7	118.6	0.9	2.02
	126.3	127.8	1.5	1.29
	129.0	130.2	1.2	0.65
	132.9	134.1	1.2	0.88
	142.7	143.6	0.9	1.71
TUDDH-592	14.6	14.9	0.3	1.83
	18.5	18.8	0.3	0.55
	75.2	75.5	0.3	0.55
	101.6	102.2	0.6	15.24
	147.5	148.7	1.2	0.74
	158.9	159.2	0.3	7.76
	184.1	184.7	0.6	8.32
Incl.	184.4	184.7	0.3	10.36
TUDDH-593	9.9	11.7	1.8	4.49
Incl.	10.5	11.1	0.6	8.98
	28.2	29.4	1.2	0.54
	34.5	34.8	0.3	0.69
	88.5	89.7	1.2	4.31
	140.1	140.4	0.3	3.50
	152.7	154.2	1.5	0.78
	168.9	170.4	1.5	1.42
TUDDH-594	105.0	105.3	0.3	13.10
	189.9	191.1	1.2	8.01
	195.0	195.3	0.3	1.80
	203.4	207.6	4.2	0.85
	203.4	203.7	0.3	3.67
TUDDH-595	54.9	56.1	1.2	0.64
	112.2	112.8	0.6	0.85
	114.0	114.3	0.3	80.65
	121.8	123.9	2.1	1.61
	190.2	191.1	0.9	2.20
	194.4	194.7	0.3	3.75
	201.3	201.6	0.3	1.31
	209.7	211.5	1.8	1.88
	213.6	213.9	0.3	2.18
	224.4	225.9	1.5	1.46
	234.9	235.5	0.6	0.52
	236.7	238.2	1.5	3.19
	247.5	247.8	0.3	1.10
TUDDH-596	77.1	77.4	0.3	0.8
	88.8	91.2	2.4	1.35
	92.1	96.3	4.2	6.8
Incl.	92.1	92.4	0.3	10.39
Incl.	93.3	93.9	0.6	24.57
Incl.	94.8	95.4	0.6	9.62
	102.3	102.9	0.6	7.77
TUDDH-597	91.1	91.7	0.6	1.24
	137.9	138.5	0.6	8.59

Incl.	137.9	138.2	0.3	16.50
	152.9	153.5	0.6	1.37
	176.6	178.4	1.8	0.81
	189.5	190.4	0.9	0.55
	194.9	195.8	0.9	8.89
TUDDH-598	96.7	97	0.3	0.84
	139.6	140.5	0.9	1.85
	144.1	144.7	0.6	9.19
	170.2	173.8	3.6	4.68
Incl.	170.2	170.5	0.3	12.89
Incl.	171.4	172.6	1.2	8.37
	209.5	209.8	0.3	0.65
TUDDH-600	65	65.3	0.3	0.55
	73.4	77	3.6	2.66
Incl.	74	74.3	0.3	5.75
Incl.	74.9	75.2	0.3	10.95
	78.8	79.4	0.6	0.96
	147.8	148.7	0.9	1.26
TUDDH-602	127.4	127.7	0.3	2.73
	152	153.2	1.2	0.79
	182.3	182.6	0.3	1.03
	209.6	210.5	0.9	3.12
Incl.	210.2	210.5	0.3	7.45
	214.4	214.7	0.3	1.10
	225.2	225.5	0.3	7.12
TUDDH-603	28.7	30.5	1.8	1.64
TUDDH-604	84.6	84.9	0.3	0.64
	144.6	146.4	1.8	56.90
Incl.	144.6	145.2	0.6	163.19
	167.1	170.7	3.6	8.75
Incl.	167.1	167.7	0.6	45.36
TUDDH-605	127.9	128.5	0.6	17.85
Incl.	127.9	128.2	0.3	26.79
Incl.	128.2	128.5	0.3	8.90
	157.6	158.5	0.9	4.10
Incl.	158.2	158.5	0.3	10.21
	161.8	164.5	2.7	5.52
Incl.	164.2	164.5	0.3	36.81
	190	190.6	0.6	1.21
	193.9	194.5	0.6	0.71
	197.2	199	1.8	0.64
	201.1	201.7	0.6	2.05
	214	214.3	0.3	1.09
TUDDH-606	66.0	66.6	0.6	0.88
	98.4	98.7	0.3	1.00
TUDDH-609	53.0	54.8	1.8	35.98
Incl.	53.9	54.2	0.3	194.0
Incl.	54.2	54.8	0.6	9.32
TUG-143	14.7	15.3	0.6	2.96
	17.1	17.7	0.6	0.89
	30.3	30.9	0.6	0.93
	32.4	33.0	0.6	1.29
	54.9	58.2	3.3	12.22
Incl.	54.9	55.5	0.6	32.08
Incl.	57	57.6	0.6	24.08
Incl.	57.6	58.2	0.6	8.82
	60.9	61.2	0.3	17.23

	66.6	67	0.4	2.26
	67.8	68.4	0.6	1.24
	71.1	73.2	2.1	0.86
	74.4	74.7	0.3	7.19
	80.4	80.7	0.3	2.2
	89.4	89.7	0.3	8.48
TUG-144	6.9	8.4	1.5	6.82
Incl.	6.9	7.5	0.6	8.07
Incl.	7.5	7.8	0.3	9.77
	10.5	12.0	1.5	9.33
Incl.	11.1	11.4	0.3	37.42
	30.6	31.5	0.9	4.25
Incl.	30.6	31.2	0.6	5.77
	43.5	43.8	0.3	0.9
	45.6	45.9	0.3	0.9
	51	51.6	0.6	0.95
	52.8	54	1.2	2.03
	64.2	66.6	2.4	0.81
	68.4	69.9	1.5	3.93
Incl.	68.4	68.7	0.3	8.35
Incl.	69.6	69.9	0.3	11.08
	75.3	76.2	0.9	1.83
	77.7	78.3	0.6	0.78
	84.3	86.7	2.4	1.52
	93.9	95.1	1.2	8.3
Incl.	93.9	94.5	0.6	12.48
	98.4	102.3	3.9	20.59
Incl.	98.4	99.9	1.5	52.89
which includes	98.4	98.7	0.3	11.35
and	99.0	99.3	0.3	171.5
and	99.6	99.9	0.3	79.18
	103.8	106.8	3.0	4.76
Incl.	104.4	104.9	0.5	17.11
Incl.	105.3	105.9	0.6	5.80
	115.5	115.8	0.3	0.64
	119.1	121.5	2.4	1.46
TUG-146	3.3	3.6	0.3	3.86
	10.8	11.4	0.6	1.73
	12.9	13.5	0.6	6.30
	38.4	39.3	0.9	5.48
Incl.	38.4	38.7	0.3	10.97
	60.3	63.6	3.3	9.13
Incl.	60.3	60.9	0.6	44.85
	68.4	70.8	2.4	1.41
	97.5	102.6	5.1	8.15
which includes	99.3	101.7	1.8	19.70
Incl.	99.3	99.9	0.6	13.28
and	99.9	100.5	0.6	11.73
and	101.1	101.7	0.6	34.08
	105	109.5	4.5	3.95
Incl.	106.5	107.1	0.6	8.29
Incl.	107.7	108	0.3	7.62
	110.7	111	0.3	9.37
	111.9	113.1	1.2	1.44
	114.3	119.4	5.1	2.76
Incl.	115.5	115.8	0.3	8.27
	144.3	145.2	0.9	5.59
Incl.	144.3	144.6	0.3	14.63

Table 2: Survey details of diamond drill holes referenced in this release

Hole No	Coordinates (Fiji map grid)		RL	final depth	dip	azimuth
	N	E		m		(TN)
TUDDH-589	1876513	3920435	348.5	266.6	-65	255
TUDDH-591	1876442	3920520	314.0	149.3	-65	297
TUDDH-592	1876513	3920435	348.6	221.6	-55	220
TUDDH-593	1876513	3920435	348.6	224.4	-45	220
TUDDH-594	1876527	3920502	309.6	239.3	-45	200
TUDDH-595	1876527	3920502	309.6	265.9	-56	225
TUDDH-596	1876442	3920520	314.0	132.0	-55	297
TUDDH-597	1876527	3920502	309.6	227.3	-42	200
TUDDH-598	1876527	3920502	309.6	296.3	-52	280
TUDDH-600	1876442	3920519	311.1	150.8	-71	251
TUDDH-602	1876530	3920503	309.8	251.4	-54	275
TUDDH-603	1876529	3920503	309.8	234.6	-40	290
TUDDH-604	1876529	3920503	309.9	212.4	-45	291
TUDDH-605	1876530	3920503	309.7	254.5	-57	288
TUDDH-606	1876442	3920519	311.1	142.5	-65	249
TUDDH-609	1876442	3920519	311.4	in progress	-54	250
TUG-142	3920486	1876411	102.0	85.8	-12	090
TUG-143	3920486	1876412	103.7	97.7	+30	087
TUG-144	3920486	1876411	101.3	156.3	-40	089
TUG-146	3920486	1876411	101.3	163.9	-45	089

Qualified Person
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 analysed 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 80% 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-analysed 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. For samples with multiple fire assay runs, the average of duplicate runs is presented. 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 analysed by the same methods (Au-AA26, and Au-GRA22 where applicable). ALS also analyses for 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 Ltd.
"Walter Berukoff"
Chairman and CEO

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