LION ONE ANNOUNCES ROBUST UPDATED PEA FOR TUVATU

North Vancouver, B.C., September 25, 2020 – Lion One Metals Limited (TSX-V: LIO) (OTCQX: LOMLF) (ASX: LLO) **("Lion One" or the "Company")** is pleased to announce that it has completed an updated Preliminary Economic Assessment (the "Report" or the "PEA") for the Company's 100% owned Tuvatu Gold Project ("Tuvatu" or the "Project") located on the island of Viti Levu in Fiji. The Report has been prepared in connection with the Company's Annual Information Form for the year ended June 30, 2020.

The Report represents an update of the Project to comply with applicable disclosure regulations and is not the attainment of a new milestone for the development of the Project. In particular, the mineral resource estimate used in the PEA is from 2018 and does not include any new drilling completed by the Company in its 2019 – 2020 drill programs. Furthermore, the potential development model set out in the PEA is confined to the current mineral resource inside the permitted mine lease area (SML 62) and does not reflect the expanded Project area following the grant of the adjoining Navilawa Caldera tenement (SPL 1512) in 2019.

"The PEA for Tuvatu demonstrates robust economic potential for a low-cost, high-grade gold operation with low upfront capital costs, enabling rapid payback of capital even at a gold price of US $1,400 per ounce ," stated Lion One Chairman and CEO Walter Berukoff. "We are encouraged about Tuvatu's potential for a near-term development and production opportunity, with further exploration and expansion potential as we continue our current drill programs to extend the known mineralization of Tuvatu and the surrounding Navilawa Caldera."

PEA Highlights (all amounts are quoted in USD utilizing a base case gold price of $1,400 per oz.):

- **Pre-tax Net Present Value ("NPV") of $155.8 million (5% discount rate)**
- **Pre-tax Internal Rate of Return ("IRR") of 60.3%**
- **Operating costs of $503 per oz.; All-in sustaining costs (AISC) of $586 per oz. (pre-tax)**
- **1.5 year payback period (pre-tax) on $66.8 million capex**
- **Gold production of 331,369 oz. at an average grade of 8.6 g/t Au**

PEA Summary

Production Mine Life (Years)	**5**
Total Au Produced (oz.)	**331,369**
Average Au Annual Production (oz.)	**77,969**
Average Au Head Grade LOM (g/t)	**8.6**
Total Mill Feed Mined (tonnes)	**1,384,000**
Nominal Production Rate (tonnes/annum)	**330,000**
Average Gold Recovery	**87.3%**

Summary Economics at USD$1,400 per oz. Gold Price

Total Initial LOM Revenue (millions)	$463.9
Total LOM Pre-Tax Cash Flow (millions)	$202.8
Average Annual Pre-Tax Cash Flow (millions)	$47.7
Total LOM After-Tax Cash Flow (millions)	$160.8
Average Annual After-Tax Cash Flow (millions)	$37.8

Cash Costs per oz. Au (Pre-tax)	$503
All-In Sustaining Cash Costs per oz. Au (Pre-tax)	$586
All-In Costs per oz. Au (Pre-tax) including initial capital costs	$788

Pre-Tax NPV (millions, 5% discount rate)	$155.8
Pre-Tax IRR	60.3%
Pre-Tax Payback (Years)	1.5
After-Tax NPV (millions, 5% discount rate)	$121.7
After-Tax IRR	50.9%
After-Tax Payback (Years)	1.7

A PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. Furthermore, there is no certainty that the PEA will be realized. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Production Summary

		Year 1	Year 2	Year 3	Year 4	Year 5	Totals
Total Mill Feed Mined	t	330,000	331,000	330,000	330,000	63,000	1,384,000
Gold Grade Milled	g/t	7.60	8.93	10.49	7.70	6.42	8.57
Gold Milled	oz.	80,588	94,985	111,238	81,643	13,078	381,532
Gold Recovery	%	86.5	87.5	87.5	87.5	87.5	87.3
Gold Recovered, including refining loss	**oz.**	**69,359**	**82,696**	**96,847**	**71,081**	**11,385**	**331,369**

Note: Numbers may not total due to rounding

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Cash Flow Summary at US $1,400 per oz. Gold Price

Project Cash Flow	Cash costs ($ millions)	Cost per tonne	Cost per oz. Au
Mine Operating Costs	65.39	47.24	197.33
Processing Cost	58.64	42.37	176.97
G&A and Site Service Cost	11.66	8.43	35.20
Smelting and Refining Costs	0.96	0.70	2.91
Royalties	30.15	21.79	91.00
Total Cash Operating Cost	**166.81**	**120.52**	**503.40**
Revenue	463.92	335.18	1,400.00
Operating Cash Flow	**297.11**	**214.66**	**896.60**
Initial Capital Cost	66.82	48.28	201.65
Sustaining Capital Costs	27.44	19.83	82.82
Total Capital Cost	**94.27**	**68.11**	**284.47**
All in Sustaining Cost (Pre-tax)	**194.26**	**140.35**	**586.22**
All in Costs (Pre-tax)	**261.08**	**188.63**	**787.88**
Estimated Income Tax	42.02	30.36	126.82
All in Sustaining Cost (After-tax)	**236.28**	**170.71**	**713.04**
All in Costs (After-tax)	**303.10**	**218.99**	**914.69**

Note: Numbers may not total due to rounding

Sensitivity of NPV and IRR to Variations in Gold Price

Tetra Tech prepared an economic evaluation of the Project using the gold price of US$1,400/oz (base case), the following financial parameters were calculated:

- Pre-tax IRR of 60.3% and After-tax IRR of 50.9%
- Pre-tax NPV of $155.8 million and After-tax NPV of $121.7 million (5% discount rate)
- 1.5-year payback (pre-tax) and 1.7-year (after-tax) on $66.8 million of initial capital

The economic evaluation of the Project includes a sensitivity analysis to variations in gold price (see table below). At $2,000 per Au oz., the following financial parameters were calculated:

- Pre-tax IRR of 99.3% and After-tax IRR of 85.0%
- Pre-tax NPV of $307.9 million and After-tax NPV of $243.4 million (5% discount rate)
- 0.88-year payback (pre-tax) and 1.04 year (after-tax) on $66.8 million of initial capital

Sensitivity of Pre-tax and After-tax NPV and IRR to Variations in Gold Price:

Gold Price per oz.	Pre-Tax NPV5% $ millions	Pre-Tax IRR	After-Tax NPV5% $ millions	After-Tax IRR	Years Payback After-tax	Pre-Tax Cash Flow undiscounted $ millions	After-Tax Cash Flow undiscounted $ millions
1,000	54.4	27.1%	40.0	22.1%	2.61	79.0	61.1
1,200	105.1	44.7%	80.9	37.4%	2.09	140.9	111.1
1,400	**155.8**	**60.3%**	**121.7**	**50.9%**	**1.67**	**202.8**	**160.8**
1,600	206.5	74.4%	162.2	63.2%	1.38	264.7	210.3
1,800	257.2	87.3%	202.8	74.5%	1.19	326.6	259.9
2,000	**307.9**	**99.3%**	**243.4**	**85.0%**	**1.04**	**388.5**	**309.4**
2,200	358.7	110.5%	284.0	94.9%	0.91	450.4	358.9
2,400	409.4	121.1%	324.5	104.3%	0.80	512.3	408.4

Mineral Resources

The Mineral Resource models and estimates, and the site visit were conducted by Mr. Ian Taylor, B.Sc. (Hons), G.Cert. Geostats, M.AusIMM (CP) (Qualified Person [QP]) of Mining Associates Pty Ltd. ("MA"). The Mineral Resource estimate was completed in January 2018 following the completion of the 2016/2017 diamond drilling program and field exploration. This Mineral Resource estimate does not include the 2019-2020 diamond drilling program.

The Mineral Resource has been estimated for each vein individually using Ordinary Kriging (OK) of width and grade, the latter using accumulations, into a three-dimensional (3D) block model. The Mineral Resource has been estimated for each vein individually based on the current drill hole database, historic block models, and geological wireframes. The effective date for the Mineral Resource estimate is January 8, 2018 (See sensitivity of Mineral Resource to cut-off grade in Table Below).

Cut off (g/t Au)	Indicated Resource			Inferred Resource		
	Tonnes	g/t Au	oz. Au	Tonnes	g/t Au	oz. Au
2.0	1,283,000	7.2	296,400	1,822,000	7.2	423,300
3.0	**1,007,000**	**8.5**	**274,600**	**1,325,000**	**9.0**	**384,000**
5.0	687,000	10.60	234,300	788,000	12.5	317,500

The reader is cautioned that the Report includes the use of Inferred Mineral Resources, which are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and as such, there is no certainty the economic results presented in the Report will be realized. The PEA is preliminary in nature and uses Inferred mineral resources.

Capital Cost Estimates

Tetra Tech prepared a capital cost estimate for the PEA with inputs from Entech, Wood, and Lion One. Tetra Tech established the capital cost estimate using a hierarchical work breakdown structure. The accuracy range of the estimate is +35%/-30%. The base currency of the estimate is Canadian dollars. The total estimated initial capital cost for the design, construction, installation, and commissioning of the Project is USD$66.8 million (CDN$89.1 million), including an average contingency of approximately 16% of the total direct costs. See Estimated Capital Costs table below:

Estimated Initial Capital Costs

Direct Costs	**($millions)**
Underground Mining	20.8
Process	13.7
Tailings Storage Facility	4.1
Overall Site	3.2
On-site Infrastructure	1.8
Direct Costs Subtotal	**43.6**
Project Indirect Costs	11.5
Owner's Costs	4.8
Indirect Costs Subtotal	**16.3**
Contingencies	**6.9**
Total Capital Costs	**$66.8**

Operating Cost Estimates

The on-site average operating costs, at a mill feed rate of 1,000 t/d were estimated to be USD$97.35/t (CDN$129.81/t) of material processed. The operating costs are defined as the direct operating costs including mining, processing, site servicing, and G&A costs, including related freight costs.

The cost estimates in this section are based on the consumable prices and labour salaries/wages from Q2 2020, or information from Tetra Tech and other consulting firms' in-house database. The expected accuracy range of the operating cost estimate is +35%/-30%. It is assumed that operation personnel will reside in towns or villages nearby. There will be no accommodation or catering services provided at site. Personnel will be bussed to site by the Owner. The operating costs exclude shipping and refining charges for the doré produced; these costs are included in the financial analysis.

Operating Cost Estimates (per tonne milled)

Description	Operating Cost ($per tonne)
Mining**	47.24
Process	41.49
Reclaim Water Handling	0.30
G&A	6.66
Site Services	1.66
Total Operating Cost Estimate *	**97.35**

Notes: *Numbers may not total due to rounding.
**LOM average, excluding pre-production related costs.

Preliminary Economic Assessment Parameters – Cautionary Statement

A PEA should not be considered a prefeasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. Furthermore, there is no certainty that the conclusions or results reported in the Technical Report will be realized. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

The Report is based on low accuracy level technical and economic assessments and is insufficient to support estimation of mineral reserves or to provide assurance of an economic development case at this stage; or to provide certainty that the conclusions of the Preliminary Economic Assessment will be realized.

Qualified Person

The scientific and technical content of this news release has been reviewed, prepared, and approved by Mr. Stephen Mann, P. Geo, Managing Director of Lion One, who is a qualified person pursuant to National Instrument 43-101 – Standards of disclosure for Mineral Projects (“NI-43-101).

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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