Lion Copper and Gold Corp. Announces Positive PEA Results for Its Yerington, Nevada Copper Project That Includes the Use of Rio Tinto's Nuton Technologies

Post-Tax NPV7% of US$356 Million and 17.4% IRR

January 30, 2024 8:00 AM EST | Source: Lion Copper and Gold Corp. (/company/1020/Lion-Copper-and-Gold-Corp.)

Vancouver, British Columbia--(Newsfile Corp. - January 30, 2024) - **Lion Copper and Gold Corp.** (TSXV: LEO) (OTCQB: LCGMF) ("**Lion CG**" or the "**Company**") is pleased to announce the positive results of a Preliminary Economic Assessment ("**PEA**") on its Yerington Copper Project ("**Project**") located in Lyon County, Nevada. The PEA envisions an open pit mining strategy followed by a heap leach operation, enhanced by the application of Rio Tinto's Nuton technologies to process primary sulfide copper materials.

Given the multitude of advantages offered by Nuton compared to conventional sulfide processing, it serves as the Project's preferred and foundational approach, forming the cornerstone of this PEA. The PEA was completed with funding in accordance with the agreement between the Company and Nuton LLC ("**Nuton**"), a wholly-owned subsidiary of Rio Tinto (see news release dated January 5, 2023 (https://api.newsfilecorp.com/redirect/Eyz5yCmy7q)).

A technical report on the PEA, prepared in accordance with the requirements set forth by Canadian National Instrument 43-101 ("**NI 43-101**") and subpart 1300 of Regulation S-K under U.S. rules, will be filed by the Company on SEDAR+ and on the SEC website within 45 days of this news release. All currency references in this news release and the PEA are in U.S. Dollars.

Highlights:

- **Post-tax NPV7% of $356 million and IRR of 17.4%, calculated at a copper price of $3.85/lb (Table 1)**
- **Utilization of cutting-edge Nuton technologies for recovering cathode copper from primary sulfide materials, negating the need for concentrator, tailings impoundment and smelter operations**
- **12-year open pit mine life encompassing operations at Yerington and MacArthur, with projected lifetime copper (Cu) production of 1.4 billion pounds, averaging 117 million pounds per year**
- **Initial capital expenditure ("CAPEX") of $413 million including all mine pre-production costs, with sustaining capital of $653 million**
- **Post-tax payback period of 5.0 years**
- **Average cash operating costs of $2.20/lb copper payable**
- **Cumulative cashflow of $1.00 billion post-tax and $1.24 billion pre-tax on base case assumptions**
- **Exceptionally low overall open pit strip ratio at 0.3:1.0 (waste:feed)**
- **Synergistic co-location of processing facilities within a single legacy-affected site, servicing both the Yerington Mine and the MacArthur Mine, effectively minimizing environmental impacts in the region**
- **Dewatering of the Yerington pit lake, involving the pumping of approximately 43,000 acre-feet of water at a cost of $50 million, which not only facilitates pit expansion but also unlocks water for alternative beneficial use in Mason Valley**

Travis Naugle, CEO and co-chairman of Lion CG, states, *"We are very pleased with the results of this Preliminary Economic Assessment, which outlines a compelling path forward for advancing the integrated Yerington Copper Project. The projected economics showcase the tremendous value that can be unlocked by adopting an innovative and sustainable approach centered around Nuton technologies for primary sulfide processing. We are dedicated to advancing the Yerington Copper Project in a positive manner that prioritizes environmental stewardship, water conservation, and benefits for tribal and local communities. The minimal footprint of our optimized strategy, with its consolidated infrastructure sited within the brownfield Yerington area, exemplifies our commitment to sustainable development that benefits all stakeholders. This PEA marks an important milestone, and we look forward to advancing the Yerington Copper Project with Nuton in a manner aligned with our ethos of creating shared value."*

Project Overview

The Yerington Copper Project PEA merges the Yerington and MacArthur projects into a cohesive, integrated mining operation. The development strategy begins with the reprocessing of legacy rock stockpiles and tailings at the Yerington Mine, followed by mining activities within the base of the legacy Yerington pit once the pit has been dewatered.

To facilitate the processing of primary sulfide and oxide materials, these materials will be mined and transported to separate lined heap leach pads to be located at the legacy Yerington Mine. The leaching process will utilize sulfuric acid delivered via rail from a reputable regional supplier.

The leaching process at the Yerington Mine benefits from the application of Nuton technologies, delivering copper recoveries from sulfide materials reaching 74%. This enhanced leaching method, powered by Nuton technologies, also beneficially eliminates the necessity for a concentrator, tailings impoundment and resource-intense smelter operations.

The resulting copper-rich leach solutions, sourced from both the sulfide and oxide Heap Leach Facilities ("**HLFs**"), will be collected and routed to a single solvent extraction and electrowinning ("**SX-EW**") plant and culminating with the on-site production of LME Grade A cathode copper.

In a subsequent phase of operations, the MacArthur Mine will complement the continued activity at the Yerington Mine, focusing on the extraction of oxide material. The oxide material from the MacArthur Mine will be transported by conveyor to the oxide HLF to be located at the legacy-affected Yerington Mine, utilizing the existing infrastructure set up during the initial Yerington phase.

The Yerington Mine spans a legacy-affected site situated on a combination of private and public (unpatented) mining claims administered by the Bureau of Land Management ("**BLM**"), while the MacArthur Mine is exclusively on BLM lands. As such, the Project falls under federal jurisdiction, necessitating compliance with Mine Plan of Operations and Reclamation Plan Permit Application requirements, along with other supporting studies, all subject to analysis under the National Environmental Protection Act. Furthermore, prior to commencing mining activities, other State and local permits will also be required.

A New Vision for the Yerington Copper Project

We are unwavering in our dedication to the development of the Yerington Copper Project, a commitment deeply rooted in an awareness of the environmental, water conservation, and tribal and social context within which we operate. From the inception of this venture, our guiding principle has been to minimize our footprint while maximizing the positive outcomes for the tribal and other communities living in proximity to the Yerington Copper Project. This ethos remains the bedrock of our core operating values.

The strategic alliance with Nuton LLC, a Rio Tinto Venture, as both a technology provider and earn-in partner is a testament to our Project's aspiration to serve as a catalyst for positive change in the Mason Valley. This collaboration strengthens our resolve to realize a sustainable and responsible future.

Traditionally, the processing of primary sulfide copper resources has necessitated a resource-intensive route, involving concentrators, long-route transportation and smelter operations. This approach incurs substantial demands on water, land and power resources, often entailing intricate global supply chains and significant capital expenditure. In contrast, the heart of our Project lies in the utilization of Rio Tinto's innovative Nuton technologies - a proprietary catalytic bio-heap leaching innovation. Nuton technologies are being evaluated to enable the unlocking of primary sulfide copper resources in a more cost-efficient, environmentally friendly manner, and affording the unique opportunity to produce copper cathode on-site for domestic consumption. The technologies also eliminate the need for permitting, constructing and managing a tailing storage facility, thereby mitigating associated costs and risks.

Beyond the environmental merits inherent in the adoption of Nuton technologies, we have undertaken comprehensive trade-off studies to enhance both the positive societal and environmental impacts of our endeavor. These studies underscore our commitment to prioritizing long-term value over short-term financial metrics. For a comprehensive understanding of our approach, please consult the complete PEA Technical Report.

We are deeply committed to transparent and continual communication with all stakeholders who stand to be affected by the Yerington Copper Project. We pledge to share project updates as they evolve, ensuring that stakeholders can form informed and fact-based opinions about our initiatives. Stakeholder engagement remains a pivotal element as we progress with the Project, and our ultimate objective is to advance this important endeavor with the full involvement of the community and stakeholders alike, while keeping the end goal in sight.

Financial Analysis

The base case copper price of $3.85/lb Cu generates a post-tax net present value ("**NPV**") of $356 million at a discount rate of 7% and Internal Rate of Return ("**IRR**") of 17.4%. Capital payback after tax is 5.0 years. Before taxes, the Project NPV (7%) is $482 million with an IRR of 20.3% and payback of 4.7 years.

Table 1: Yerington Copper Project Analysis

Parameter	Units	Pre-Tax	Post-Tax
Copper Price	$US/lb	3.85	
Economic Indicators			
Net Present Value (7%)	$US M	482	356
IRR	%	20.3	17.4
Payback Period	Years	4.7	5.0
Copper Revenue less Royalties	$US M	5,297	5,297
Total Operating Cost	$US M	2,987	2,987
Life of Mine Capital Cost	$US M	1,067	1,067
Net Taxes	$US M	-	243
Net Cash Flow	$US M	1,244	1,001
Cash Costs	$US/lb payable	2.20	2.37
AISC	$US/lb payable	2.96	
Copper - Payable	Mlb	1,402	
Mine Life	Years	12	
Operating Costs			
	$US M	**$/t Feed**	**$/lb payable**
Open Pit Mining	1,254	2.79	0.90
Processing	1,501	3.55	1.15
G & A	67	0.30	0.10
Total	**2,823**	**6.63**	**2.14**
Capital Costs			

Initial Capital		$US M	413	
~~Sustaining Capital~~		$US M	~~653~~	
Total Capital		$US M	1,066	
		$/lb payable	0.76	
Production Summary				
		Yerington Area	**MacArthur Area**	**Total**
Heap Feed	Mtons	246.1	204.2	450.4
Copper Grade	%	0.24	0.18	0.21
Waste	Mtons	78.2	58.6	136.8
Strip Ratio	W:F	0.32	0.29	0.30
Copper Pounds (millions)	In situ	1,298.8	831.5	2,130.3
	Recovered	861.2	547.4	1,408.6

The Project generates cumulative cashflow of $1.00 billion on a post-tax basis and $1.24 billion pre-tax with the base copper price of $3.85/lb.

Table 2 below shows the sensitivity of the base case Project economics to the copper price on a pre-tax and post-tax basis.

Table 2: Yerington Copper Project - Sensitivity to Copper Price

Copper Price $US/lb **Variance**	$3.08 -20%	$3.47 -10%	**$3.85** **Base**	$4.24 10%	$4.62 20%	$5.00 30%
Pre-tax						
NPV @7% $M	-$89.8	$201	**$482**	$771	$1,051	$1,332
IRR	3.7%	13.2%	**20.3%**	26.5%	31.8%	36.7%
Post-tax						
NPV @7% $M	-$129	$122	**$356**	$589	$812	$1,035
IRR	2.1%	11.0%	**17.4%**	22.9%	27.6%	32.0%

The PEA is preliminary in nature, includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Capital and Operating Costs

The capital and operating cost estimates for the Project are summarized below. Initial CAPEX is $413 million and Sustaining CAPEX over the life of the mine is an additional $653 million. All in Sustaining Cost ("**AISC**") is $2.87/lb Cu.

Table 3: Yerington Copper Project Capital Cost Estimate

Area	**Initial Capital (M$)**	**Sustaining Capital (M$)**	**Total Capital (M$)**
Open Pit Mining	74.5	93.7	168.2
Processing	72.7	184.3	257.0
Infrastructure	118.1	178.8	296.8
Dewatering	45.0	4.8	49.7
Environmental	7.0	42.5	49.5
Indirects	35.5	51.0	86.5
Contingency	60.8	98.1	158.8
Total	**413.4**	**653.1**	**1,066.5**

Table 4: Yerington Copper Project Operating Costs - Life of Mine

Area	**Life of Mine ($/t moved)**	**Life of Mine ($/t process feed)**	**Life of Mine ($/lb copper payable)**
Open Pit Mining	2.14	2.79	0.90
Processing		3.55	1.15
G&A		0.30	0.10
Total Operating Cost		**6.63**	**2.14**

Mining

The Mineral Resource for the Project includes the Yerington Deposit, W-3 Stockpile, Vat Leach Tailings ("**VLT**") and the MacArthur Deposit. The mine schedule for open pit mining totals 450 Mtons of heap leach feed grading 0.21% copper over a processing life of just over 12 years. The sulfide tonnage of 148.5 Mtons grading 0.29% TCu will be crushed and agglomerated before placement on the heap leach pad, while the remaining 301.9 Mtons at 0.18% TCu will be placed in a separate oxide HLF. Waste rock from open pit operations totals 136.8 Mtons and will be placed into waste storage facilities adjacent to the open pits. The overall open pit strip ratio is very low compared to other mining operations, at 0.3:1.0 (waste:feed).

Metallurgy & Processing

Extensive hydrometallurgical testing has examined both the Yerington and MacArthur materials. This valuation encompasses full-scale production data from Arimetco Inc's legacy heap leach operations and multiple iterations of laboratory testing focused on the MacArthur material. The PEA Technical Report provides a detailed account of these operations and testing outcomes.

In early 2022, Nuton embarked on an analysis of the Yerington and MacArthur rock types. The initial emphasis was placed on assessing the MacArthur and Yerington legacy residuals, as well as fresh material, to ascertain the compatibility of Nuton technologies for copper recovery from primary copper sulfide minerals, including chalcopyrite. It has become evident that the technologies are well-suited for processing Yerington primary sulfide rock types, demonstrating recoveries that reach a projected copper recovery rate of over 74%. The metallurgical recovery estimates for the Project are provided in the table below,

recognizing that these preliminary figures are subject to refinement as additional data becomes available. The Nuton test work remains ongoing and the quality is expected to improve, leveraging preliminary data and optimization of operational parameters. Further testing of Nuton technologies is slated to confirm metallurgical performance through replicate trials, with completion anticipated in 2024.

Table 5: Yerington - MacArthur Recovery Projections by Processing Method

Deposit	Heap Material Type	Pit Phase	TCu Recovery	Notes:
MacArthur	Oxide	MacArthur	82%	Sized to 6" minus
		Gallagher	54%	Sized to 6" minus
		North Area	53%	Sized to 6" minus
Yerington	Oxide	Yerington	70%	ROM
		W3	68%	ROM
		VLT	75%	ROM
	Sulfide-Nuton	Yerington	74%	Tertiary Crushed Agglomerated Conveyor Stacked: Nuton Process

Two separate heap leach facilities will be utilized for the generation of copper solutions for the SX-EW facility. In one processing stream, the Nuton process will harness the leaching of sulfide feed extracted from the Yerington Mine, with the Nuton facility attaining a peak feed rate of 17 million short tons per annum (Mtpa) through the crushing and agglomeration system.

Simultaneously, the other processing stream will employ conventional oxide copper leaching technology, encompassing a blend of run-of-mine ("**ROM**") material and appropriately-sized material. Oxide materials sourced from the Yerington pit, alongside those from the W-3 and VLT stockpiles, will be consolidated within a single heap leach pad, alongside the MacArthur Mine material. Meanwhile, the oxide material from the MacArthur Mine is designed to undergo sizing on-site before being conveyed, agglomerated and stacked at the oxide HLF to be located at the Yerington Mine. The MacArthur material sizing facility is designed to have a peak capacity of 25 Mtpa.

Infrastructure

The core infrastructure elements encompass HLFs designed for both sulfide and oxide material, Waste Rock Storage Facilities, an overland conveying system for transporting oxide feed from the MacArthur Mine to the oxide HLF at the Yerington Mine, SX-EW facility, ponds and a dedicated twelve-mile rail spur to the Yerington Mine. The placement of new infrastructure has been prioritized to be located within the legacy-affected Yerington Mine area to minimize the creation of fresh disturbance zones.

An important component of the infrastructure strategy is the dewatering of the Yerington pit lake, required to enable the expansion of mining activities and unlock the valuable utility of water in Mason Valley. This pit lake, containing approximately 43,000 acre-feet of clean water, necessitates a highly-engineered pumping operation for its complete emptying. Over a two-year timeline and at a cost of over $50 million, the water may be made available to offset existing irrigation demands and recharge the groundwater aquifer in the Mason Valley. Notably, comprehensive water quality assessments spanning more than three decades have demonstrated a steady improvement in the Yerington pit lake's water quality, which presently aligns with or closely approaches drinking water standards, rendering it suitable for a multitude of beneficial applications. By way of scale, the volume of water planned to be provided from the pit dewatering and directed toward aquifer recharge surpasses the Yerington Copper Project's projected annual water consumption requirements by more than tenfold. During mining operations, maintenance dewatering is expected in order to maintain a dry pit, further serving mining and mineral processing needs.

Mineral Resource Estimate

The Mineral Resources for the Yerington Copper Project are composed of the Yerington Deposit, W-3 Stockpile, Vat Leach Tailings and the MacArthur Deposit.

The Yerington Copper Project Mineral Resource estimate described below is classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014).

Yerington Deposit - The Mineral Resource estimate utilizes validated historic drill hole data generated by Anaconda Copper Mining Company ("**Anaconda**") and recent drilling results by the Company in 2011, 2017 and 2022. The updated Mineral Resources for the Yerington Deposit are: Measured Resources of 62.9 Mtons at 0.30% TCu; Indicated Resources of 94.7 Mtons at 0.27% TCu; and Inferred Resources of 113.2 Mtons at 0.22% TCu (Table 6).

Table 6: 2023 Yerington Deposit Mineral Resource estimate

Material	Cutoff Grade (TCu%)	Tons	Grade (TCu%)	Contained Copper (lbs)
Measured Oxide	0.038	20,230,000	0.25	99,367,000
Measured Sulfide	0.126	42,671,000	0.32	274,578,000
Measured Total		**62,901,000**	**0.30**	**373,945,000**
Indicated Oxide	0.038	13,749,000	0.22	60,166,000
Indicated Sulfide	0.126	80,960,000	0.28	457,921,000
Indicated Total		**94,709,000**	**0.27**	**518,087,000**
Measured + Indicated Oxide	0.038	33,979,000	0.23	159,533,000
Measured + Indicated Sulfide	0.126	123,631,000	0.30	732,499,000
Measured + Indicated Total		**157,610,000**	**0.28**	**892,032,000**
Inferred Oxide	0.038	33,347,000	0.18	122,221,000
Inferred Sulfide	0.126	79,881,000	0.24	385,938,000
Inferred Total		**113,229,000**	**0.22**	**508,159,000**

Notes:

1. Effective date for this Mineral Resource estimate is May 1, 2023.
2. The 2023 Mineral Resource estimate uses a variable break-even economic cut-off grade of 0.038% TCu and 0.126% TCu based on assumptions of a net

copper price of $4.08/lb (after processing, transportation and royalty charges), 70% recovery in oxide material, 75% recovery in sulfide material.
3. Mineral Resources are not Mineral Reserves and do not demonstrate economic viability.
4. Mineral Resource estimate reported from within resource pit shell.
5. There is no certainty that all or any part of the Mineral Resource estimate will be converted into Mineral Reserves.
6. All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

W-3 Stockpile - W-3 is a rock disposal stockpile that lies north-northwest of the current Yerington pit and was derived from subgrade copper oxide material mined during historical Anaconda mining operations. The Inferred W-3 Stockpile Mineral Resource is 14.1 million tons at 0.11% TCu (Table 7).

Table 7: 2023 W-3 Stockpile Mineral Resource Statement

Class	Cutoff Grade (TCu%)	Tons	Grade (TCu%)	Contained Copper (lbs)
Inferred Oxide	>= 0.04	14,100,000	0.11	30,571,000

Notes:

1. Effective date for this W-3 Stockpile Mineral Resource estimate is July 31, 2023.
2. The 2023 Mineral Resource estimate uses a variable break-even economic cut-off grade of 0.040 % TCu based on assumptions of a net copper price of $4.08/lb (after processing, transportation, and royalty charges), and 70% recovery in oxide material.
3. Mineral Resource are not Mineral Reserves and do not demonstrate economic viability.
4. Mineral Resource estimate reported from within resource pit shell.
5. There is no certainty that all or any part of the Mineral Resource estimate will be converted into Mineral Reserves.
6. All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

Vat-Leached Tailings - Vat-Leached Tailings, in the form of oxide tailings, are the leached products of Anaconda's vat leach copper extraction. The oxide tailings, located north of the Process Areas, contain the crushed rock at the base of the leach vats that remained following the extraction of copper in the vat-leaching process. The Inferred VLT Mineral Resource is 33.2 million tons at 0.09% TCu (Table 8).

Table 8: 2023 VLT Mineral Resource Statement

Class	Cutoff Grade (TCu%)	Tons	Grade (TCu%)	Contained Copper (lbs)
Inferred Oxide	>= 0.04	33,160,000	0.09	62,622,000

Notes:

1. Effective date for this VLT Mineral Resource estimate is July 31, 2023.
2. The 2023 Mineral Resource estimate uses a variable break-even economic cut-off grade of 0.040 % TCu based on assumptions of a net copper price of $4.08/lb (after processing, transportation and royalty charges), and 70% recovery in oxide material.
3. Mineral Resource are not Mineral Reserves and do not demonstrate economic viability.
4. Mineral Resource estimate reported from within resource pit shell.
5. There is no certainty that all or any part of the Mineral Resource estimate will be converted into Mineral Reserves.
All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

MacArthur Deposit - The Mineral Resource estimate of the MacArthur Deposit encompasses three principal domains: Main MacArthur, Gallagher and North Ridge. An overview of Section 14 from the Technical Report, titled "MacArthur Copper Project, Mason Valley, Nevada, USA, Mineral Resource Estimate," is presented in the following tables. There have been no subsequent updates to the MacArthur Mineral Resource following the publication of the Technical Report on February 25, 2022.

The Mineral Resource estimate for the MacArthur Deposit are: Measured Resources of 116.7 Mtons at 0.18% TCu; Indicated Resources of 183.7 Mtons at 0.158% TCu; and Inferred Resources of 156.5 Mtons at 0.151% TCu.

Table 9: MacArthur Deposit - Summary of Mineral Resource

Classification	Ktons	Grade (Total Cu%)	Contained Copper Pounds x 1000
Measured	116,666	0.180	420,929
Indicated	183,665	0.158	579,479
Measured + Indicated	300,331	0.167	1,000,408
Inferred	156,450	0.151	471,714

Notes:

1. The effective date of the MacArthur Mineral Resource estimate is February 25, 2022.
2. Cutoff grade: 0.06% TCu for Leach Cap, Oxide & Transition
3. Cutoff grade for Sulfide: 0.06% TCu for MacArthur & North Ridge, 0.08% TCu for Gallagher.
4. Total resource shell tonnage = 628,831 ktons

Table 10: Mineral Resource by Domain

Domain	Total Copper Cutoff, %	MEASURED Ktons & Grade Above Cutoff			INDICATED Ktons & Grade Above Cutoff			MEASURED & INDICATED Ktons & Grade Above Cutoff		
		Ktons	TCu, %	Contained Cu Pounds x 1000	Ktons	TCu, %	Contained Cu Pounds x 1000	Ktons	TCu, %	Contained Cu Pounds x 1000
MacArthur	0.06	82,983	0.184	305,303	77,171	0.151	233,446	160,154	0.168	538,749
North Ridge	0.06	25,149	0.176	88,507	78,305	0.166	259,558	103,454	0.168	348,065
Gallagher	0.06/0.08	8,534	0.159	27,119	28,189	0.153	86,475	36,723	0.155	113,594
Total		**116,666**	**0.180**	**420,929**	**183,665**	**0.158**	**579,479**	**300,331**	**0.167**	**1,000,408**

		INFERRED

Domain	Total Copper Cutoff, %	Ktons & Grade Above Cutoff		
		Ktons	TCu, %	Contained Cu Pounds x 1000
MacArthur	0.06	30,815	0.158	97,490
North Ridge	0.06	62,593	0.154	192,187
Gallagher	0.06/0.08	63,042	0.144	182,037
	Total	**156,450**	**0.151**	**471,714**

Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

Qualified Persons

The Qualified Persons (QPs), as that term is defined in NI 43-101, responsible for the preparation of the PEA Technical Report, include:

- Gordon Zurowski, P.Eng., Principal Mine Engineer (AGP Mining Consultants Inc.)
- Tim Maunula, P.Geo, Principal Resource Geologist (T. Maunula & Associates Consulting Inc.) - Yerington Mineral Resource estimate
- Herb Welhener, MMSA-QPM, Vice President (Independent Mining Consultants, Inc.) - MacArthur Mineral Resource estimate
- Adrien Butler, P.E., Senior Civil Engineer (NewFields)
- Jeff Woods, QP, Principal Process Engineer (Woods Process Services, LLC)

The respective QPs have reviewed and accept the data handling protocols followed for the historical drill hole and assay data, along with the QA/QC analysis of drilling results by standards, blanks and duplicate assays, and the incorporation of this data into the Yerington and MacArthur Mineral Resource estimates presented in the Technical Report.

The base case copper price assumption of $3.85/lb Cu was selected by the QPs based on a review of independent market analyst consensus pricing during the time the economic analysis was prepared. This pricing reflects the mid-range of expected real long-term copper pricing to provide a representative and reasonable base case scenario.

Each QP has reviewed and verified the content of this news release.

Non-IFRS Financial Measures

The Company has included certain non-IFRS financial measures in this news release, such as Initial Capital Cost, Cash Operating Costs, Total Cash Cost, All-In Sustaining Cost, Expansion Capital, Capital Intensity, and Effective Cash Tax Rate which are not measures recognized under IFRS and do not have a standardized meaning prescribed by IFRS. As a result, these measures may not be comparable to similar measures reported by other corporations. Each of these measures used are intended to provide additional information to the user and should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS.

Non-IFRS financial measures used in this news release and common to the copper mining industry are defined below.

Total Cash Costs and Total Cash Costs per Pound - Total Cash Costs are reflective of the cost of production. Total Cash Costs reported in the PEA include mining costs, processing & water treatment costs, general and administrative costs of the mine, off-site costs, refining costs, transportation costs and royalties. Total Cash Costs per Pound is calculated as Total Cash Costs divided by payable copper pounds.

Total Operating Costs and Total Operating Costs per Pound - Total Operating Costs are reflective of the cost of mine operations. Total Operating Costs reported in the PEA include mining costs, processing & water treatment costs, and general and administrative costs of the mine. Total Operating Cost per Pound is calculated as Total Operating Costs divided by payable copper pounds.

All-in Sustaining Costs ("AISC") and AISC per Pound - AISC is reflective of all of the expenditures that are required to produce a pound of copper from operations. AISC reported in the PEA includes total cash costs, sustaining capital, expansion capital and closure costs, but excludes corporate general and administrative costs and salvage. AISC per Pound is calculated as AISC divided by payable copper pounds.

About Lion CG (www.lioncg.com (https://api.newsfilecorp.com/redirect/x3yK3Iexge), nuton.tech/partnerships (https://api.newsfilecorp.com/redirect/7WVXWuXaG8))

Lion Copper and Gold Corp. is a Canadian-based company advancing its flagship copper assets at Yerington, Nevada through an Option to Earn-in Agreement with Nuton LLC, a Rio Tinto Venture.

About Nuton LLC (nuton.tech (https://api.newsfilecorp.com/redirect/eLp0Lf2aoo))

Nuton is an innovative venture that aims to help grow Rio Tinto's copper business. At the core of Nuton is a portfolio of proprietary copper leaching related technologies and capability - a product of almost 30 years of research and development. Nuton offers the potential to economically unlock copper from primary sulfide resources through leaching, achieving market-leading recovery rates, contributing to an increase in copper production from copper-bearing waste and tailings, and achieving

higher copper recoveries on oxide and transitional material. One of the key differentiators of Nuton is the ambition to produce the world's lowest footprint copper while having at least one Positive Impact at each of our deployment sites, across our five pillars: water, energy, land, materials and society.

Nuton™ Technologies

The Nuton™ technologies are proprietary Rio Tinto-developed copper heap leach related processing and modelling technologies, capability and intellectual property.

On behalf of the Board of Directors,
Stephen Goodman
President

For more information please contact:
Email: info@lioncg.com (mailto:info@lioncg.com)

Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

The technical information in this news release has been reviewed and approved by C. Travis Naugle, QP MMSA, CEO of Lion Copper and Gold Corp. and a qualified person as defined in NI 43-101.

Certain information in this news release constitutes forward-looking statements under applicable securities laws. Any statements that are contained in this news release that are not statements of historical fact may be deemed to be forward-looking statements. Forward-looking statements are often identified by terms such as "may", "expect", or the negative of these terms and similar expressions. Forward-looking statements in this news release include, but are not limited to, statements with respect to resource estimates, estimate of future production, costs of production and other assumptions used in a preliminary economic assessment, future exploration or production activities and anticipated results. Forward-looking statements necessarily involve known and unknown risks, including, without limitation, risks associated with extraction based on resource estimates including inferred resources, grades and recoveries not being realized; delays or failures in obtaining necessary permitting or other project approvals, delays in the development of projects, results of additional exploration activity; general economic conditions; adverse industry events; marketing costs; loss of markets; future legislative and regulatory developments; inability to access sufficient capital from internal and external sources, and/or inability to access sufficient capital on favorable terms; the ability of Lion CG to implement its business strategies; competition; currency and interest rate fluctuations, inflation and other risks. These statements are subject to known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from those suggested by the forward-looking statements. Shareholders and prospective investors are cautioned not to place undue reliance on forward-looking information. By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and various future events will not occur. The Company undertakes no obligation to update publicly or otherwise revise any forward-looking information whether as a result of new information, future events or other such factors which affect this information, except as required by law.

To view the source version of this press release, please visit https://www.newsfilecorp.com/release/196154 (https://api.newsfilecorp.com/redirect/85zD5ceWx3)

SOURCE: Lion Copper and Gold Corp. (/company/1020/Lion-Copper-and-Gold-Corp.)