

# Marimaca Announces Updated Mineral Resource Estimate for the Marimaca Oxide Deposit

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44% increase in M&I Resource tonnes to 200Mt at 0.45% CuT for 900kt of Contained Copper

Inferred Resource of 37Mt at 0.38% CuT for 141kt of Contained Copper

86% of Total Resource Tonnes in Measured and Indicated Categories

VANCOUVER, British Columbia, May 18, 2023 -- [Marimaca Copper Corp.](#) ("Marimaca Copper" or the "Company") (TSX: MARI) is pleased to announce an updated Mineral Resource Estimate ("MRE") for the Marimaca Oxide Deposit (the "MOD" or the "Project") located in the Antofagasta region of northern Chile.

The 2023 MRE incorporates 28,374m of new drilling data completed since the 2022 MRE released in October 2022. The MOD database now consists of 139,164m of drilling completed since discovery in 2016. New drilling data captured following the 2022 MRE was largely targeted at conversion of Inferred Resources to the Measured and Indicated categories.

The 2023 MRE was prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards and National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101").

## Highlights

- Measured and Indicated Resources of 200.3Mt at 0.45% CuT for 900kt of contained copper
- Inferred Resources of 37.3Mt at 0.38% CuT for 141kt of contained copper
- 86% of the MOD's total resource tonnes now contained in the Measured and Indicated categories
  - Significantly de-risks the Marimaca ore body ahead of the planned Definitive Feasibility Study (DFS)
  - Majority of new drilling focused on areas of the northern MOD which previously contained lower density of drilling (see Figure 1)
- Unique characteristics of the MOD maintained in the 2023 MRE:
  - Low strip ratio maintained in the constraining pit shell
  - All mineral resources captured in a single continuous pit
- Represents the final phase of oxide resource definition at the MOD ahead of the planned DFS
  - Ongoing exploration workstreams will focus on the Marimaca sulphide target and the delineation of near-mine satellite oxide targets (Mercedes, Cindy, Mititus)

*Hayden Locke, President & CEO of Marimaca Copper, commented:*

*"The 2023 MRE represents the culmination of an exceptionally successful two years of infill drilling at the Marimaca Oxide Deposit led by Sergio Rivera and his team. We are very pleased with our conversion ratio of Inferred Resources to Measured and Indicated categories, and today's result drives significantly improved confidence in the geological model and understanding of the Marimaca ore body."*

*"The M&I resource estimate at the MOD now stands at approximately 900,000 tonnes of contained metal, and this will support the assessment of a larger operation in terms of copper cathode production and mine life extension during the Definitive Feasibility Study. Despite the significant resource growth demonstrated at*

*Marimaca since 2019, the ore body's core, unique attributes have been preserved as the deposit has grown - very low strip ratio; a shallow higher-grade core expected to be accessible in the early mining years; and limited pre-stripping or significant cutbacks expected during operation.*

*"We continue to progress rapidly forward with development workstreams at the MOD including preparation for our permitting submissions and the Feasibility Study. Additionally, the first phase of the 2023 sulphide exploration program has been completed with assays pending and results expected in the near term."*

#### Summary of 2022 Mineral Resource Estimate

The 2023 MRE was completed by independent consultants NCL Ingeniería y Construcción SpA ("NCL") and verified by Luis Oviedo of NCL, a qualified person and independent of Marimaca (within the meaning of such terms under NI 43-101). The 2023 MRE incorporates 139,164m of drilling across 554 drill holes completed between 2016 and 2022 and is reported with an effective date of May 17, 2023. An overview of the infill drilling completed in 2022 and captured in both the 2023 MRE and the 2022 MRE is presented in Figure 1. The Whittle Optimisations were run using the same operating cost parameters as the 2022 MRE and a US\$4.00/lb copper price assumption.

Mineral Resource Category and Type	Quantity (kt)	CuT (%)	CuS (%)	CuT (t)	CuS (t)
Total Measured	96,954	0.49	0.28	473,912	268,628
Total Indicated	103,358	0.41	0.21	425,797	219,690
Total Measured and Indicated	200,312	0.45	0.24	899,709	488,319
Total Inferred	37,289	0.38	0.15	141,252	55,802

Table 1. 2023 Mineral Resource Estimate (reported at 0.15% CuT cutoff)

\* Pit shell constrained resources with demonstrated reasonable prospects for eventual economic extraction (RPEEE) are generated using series of Lerchs-Grossmann pit shell optimizations completed by NCL  
 \* CuT means total copper and CuS means acid soluble copper. Technical and economic parameters include: copper price US\$4.00/lb; base mining cost of US\$1.51/t with a mining cost adjustment factor of US\$0.04/t-10m bench; Heap Leach "HL" processing cost US\$5.94/t (incl. G&A); Run-of-Mine "ROM" processing cost US\$1.65/t (incl. G&A); SX-EW processing cost and selling cost US\$0.16/lb Cu; heap leach recovery 76% of CuT; ROM recovery 40% of CuT; and 42°-52° pit slope angle  
 \* Mineral resources which are not mineral reserves do not have demonstrated economic viability. Due to the uncertainty which may attach 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

Cut-off grade (% CuT)	Measured			Indicated			Measured + Indicated			Inferred	
	Quantity kt	CuT [%]	CuS [%]	Quantity kt	CuT [%]	CuS [%]	Quantity kt	CuT [%]	CuS [%]	Quantity kt	CuT [%]
0.40	44.0	0.77	0.44	37.5	0.69	0.38	81.6	0.73	0.41	12.1	0.64
0.30	60.2	0.65	0.38	55.5	0.58	0.31	115.7	0.62	0.35	18.8	0.54
0.22	77.8	0.56	0.32	77.0	0.49	0.26	154.9	0.53	0.29	27.2	0.45
0.20	83.0	0.54	0.31	83.8	0.47	0.25	166.8	0.50	0.28	30.2	0.43
0.18	88.3	0.52	0.30	91.3	0.44	0.23	179.6	0.48	0.26	33.0	0.41
0.15	97.0	0.49	0.28	103.4	0.41	0.21	200.3	0.45	0.24	37.3	0.38
0.10	113.3	0.44	0.24	127.6	0.36	0.18	241.0	0.39	0.21	46.6	0.33
0.00	146.1	0.35	0.19	178.2	0.27	0.14	324.3	0.31	0.16	72.0	0.24

Table 2. Mineral Resource Sensitivity

\* Pit shell constrained resources with demonstrated reasonable prospects for eventual economic extraction

(RPEEE) are generated using series of Lerchs-Grossmann pit shell optimizations completed by NCL

\* CuT means total copper and CuS means acid soluble copper. Technical and economic parameters include: copper price US\$4.00/lb; base mining cost of US\$1.51/t with a mining cost adjustment factor of US\$0.04/t-10m bench; Heap Leach "HL" processing cost US\$5.94/t (incl. G&A); Run-of-Mine "ROM" processing cost US\$1.65/t (incl. G&A); SX-EW processing cost and selling cost US\$0.16/lb Cu; heap leach recovery 76% of CuT; ROM recovery 40% of CuT; and 42°-52° pit slope angle

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Figure 1. Plan View of Resource Pit and Infill Drilling

Figure 2. 2023 MRE Block Model Plan View - Resource Category and Block Model

Figure 3. 2023 MRE North-South Long Section - Resource Category and Block Model

#### Metallurgy Commentary

Marimaca has completed 5 phases of extensive metallurgical test work at Marimaca. A 6<sup>th</sup> phase of metallurgical testing is underway which is expected to define the optimized process design flowsheet ahead of the planned DFS. Results from Phase 5 were announced on June 15, 2022 following a rigorous program including full-scale column testing, mini-column testing, container-leach testing, sulfation tests, acid sensitivity testing, Iso-pH testing, and head characterization for heap leach ("HL") and run-of-mine ("ROM") samples. In-line with results from Phases 1-4, Phase 5 recoveries in the column and bottle roll tests generally exceeded the solubility ratio (CuS/CuT) and leaching potential of the samples, indicating a potentially larger proportion of total copper will be recovered in industrial-scale operations. The leaching potential of copper ores is defined as acid soluble copper (CuS) plus cyanide soluble copper (CuCN) divided by total copper (CuT). The acid solubility ratio (CuS/CuT) for copper oxides such as atacamite, brochantite and chrysocolla, which dissolve quickly when exposed to acid, is a good predictor of leachability. However, where the mineralization has several copper bearing minerals with different dissolution characteristics under these leaching conditions (such as Marimaca's black oxide (wad) component), the copper acid solubility ratio may materially underestimate the acid leaching potential for heap leach operations, especially where soluble copper sulphides such as chalcocite, covellite and bornite are present.

#### The Marimaca Deposit Commentary

Figure 3 (long section) demonstrates the continuity of the oxide mineralization across the N-S extent of the deposit. Mineralization is hosted consistently by east-dipping fracture sets with higher grades concentrated along controlling NW-SE structures and splays. Higher grade green oxide mineralization (brochantite, atacamite, chrysocolla) dominates the core of the deposit and is located near-surface. High grade zones of oxides, mixed and enriched mineralization extend at depth beneath the green oxide zones. The MOD is exposed at surface which is expected to drive a low strip ratio during the mine's potential operational phase.

Exploration for sulphide mineralization down-dip of the MOD to the east is ongoing and results will be released when available. The MOD oxide potential remains open to the east and southeast and further exploration may be planned in due course. Satellite oxide discoveries made in 2021 (Mercedes, Cindy, Roble) have not received sufficient drilling to be included in the 2023 MRE.

#### 2023 MRE Estimation Parameters

Grade estimates were completed using ordinary kriging with nominal block size measuring 5m by 5m by 5m.

Resources have been classified by their proximity to sample locations and number of drill holes and samples within different search ellipsoids, and are reported according to the CIM Definition Standards for Mineral Resources and Mineral Reserves and NI 43-101. The technical and economical parameters used for the 2023 MRE are identical to the 2022 MRE and were informed by the 2020 Preliminary Economic Assessment ("PEA") assumptions. Although the PEA no longer reflects the current economic potential of the project and should be seen as historical in nature and should not be relied upon, the 2020 PEA cost assumptions are still considered to be the most relevant cost assumptions for the 2023 MRE at this stage.

Mineral Resource Category and Type	Quantity (kt)	CuT (%)	CuS (%)	CuT (t)	CuS (t)
<b>Measured</b>					
Brochantite	31,293	0.62	0.45	194,890	141,442
Chrysocolla	24,252	0.44	0.33	105,594	79,863
Wad/Black oxides	10,727	0.29	0.15	30,599	16,116
Mixed	18,626	0.51	0.13	95,159	23,431
Enriched	12,056	0.40	0.06	47,669	7,776
<b>Total Measured</b>	<b>96,954</b>	<b>0.49</b>	<b>0.28</b>	<b>473,912</b>	<b>268,628</b>
<b>Indicated</b>					
Brochantite	29,084	0.56	0.41	162,753	117,847
Chrysocolla	13,591	0.38	0.28	51,332	37,674
Wad/Black oxides	19,880	0.28	0.15	56,382	29,649
Mixed	17,193	0.41	0.11	71,109	18,654
Enriched	23,611	0.36	0.07	84,221	15,867
<b>Total Indicated</b>	<b>103,358</b>	<b>0.41</b>	<b>0.21</b>	<b>425,797</b>	<b>219,690</b>
<b>Measured and Indicated</b>					
Brochantite	60,376	0.59	0.43	357,643	259,290
Chrysocolla	37,843	0.41	0.31	156,927	117,536
Wad/Black oxides	30,607	0.28	0.15	86,981	45,765
Mixed	35,819	0.46	0.12	166,268	42,085
Enriched	35,667	0.37	0.07	131,891	23,643
<b>Total Measured and Indicated</b>	<b>200,312</b>	<b>0.45</b>	<b>0.24</b>	<b>899,709</b>	<b>488,319</b>
<b>Inferred</b>					
Brochantite	4,950	0.46	0.32	22,892	15,710
Chrysocolla	4,488	0.36	0.26	16,250	11,695
Wad/Black oxides	8,727	0.29	0.15	25,180	12,799
Mixed	5,979	0.36	0.11	21,548	6,541
Enriched	13,145	0.42	0.07	55,381	9,057
<b>Total Inferred</b>	<b>37,289</b>	<b>0.38</b>	<b>0.15</b>	<b>141,252</b>	<b>55,802</b>

Table 3. 2023 MRE by Mineralization Type

\* Pit shell constrained resources with demonstrated reasonable prospects for eventual economic extraction (RPEEE) are generated using series of Lerchs-Grossmann pit shell optimizations completed by NCL

\* CuT means total copper and CuS means acid soluble copper. Technical and economic parameters include: copper price US\$4.00/lb; base mining cost of US\$1.51/t with a mining cost adjustment factor of US\$0.04/t-10m bench; Heap Leach "HL" processing cost US\$5.94/t (incl. G&A); Run-of-Mine "ROM" processing cost US\$1.65/t (incl. G&A); SX-EW processing cost and selling cost US\$0.16/lb Cu; heap leach recovery 76% of CuT; ROM recovery 40% of CuT; and 42°-52° pit slope angle

\* Mineral resources which are not mineral reserves do not have demonstrated economic viability. Due to the uncertainty which may attach 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

Mining cost (US\$/t mined)	\$1.51 base (\$1.76 avg.)	\$1.51 b
Mining Cost Adjustment Factor (US\$/t-10m bench)	\$0.04	\$0.04
Heap Leach Cost (including G&A and mining cost component from pit to Heap Leach)	US\$5.94/t processed	US\$5.9
Run-of-Mine Cost (including G&A and mining cost component from pit to ROM)	US\$1.65/t processed	US\$1.6
SX-EW processing cost and selling cost (US\$/lb Cu)	\$0.16	\$0.16
Heap Leach Recovery (% CuT)	76%	76%
ROM Recovery (% CuT)	40%	40%
Pit Slope angle	42 - 52°	42 - 52

Table 4. Summary of Inputs - 2023 MRE (no changes from 2022 MRE)

The Company intends to file an updated technical report to support the updated 2023 MRE on SEDAR within 45 days of this news release or such earlier time in accordance with NI 43-101.

#### Qualified Person

The technical information in this news release, including the information related to geology, drilling, mineralization, modeling and estimation has been reviewed and approved by Luis Oviedo, an independent Consulting Geologist with more than 45 years of experience. Mr. Oviedo is a member of the Colegio de Geólogos and the Institute of Mining Engineers of Chile and is independent and a qualified person (within the meaning of such terms under NI 43-101).

Mr. Oviedo confirms he has visited the project area, has reviewed relevant project information, is responsible for the information contained in this news release, and consents to its publication.

#### Contact Information

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#### Forward Looking Statements

This news release includes certain "forward-looking statements" under applicable Canadian securities legislation. There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. Forward-looking statements reflect the beliefs, opinions and projections on the date the statements are made and are based upon a number of assumptions and estimates that, while considered reasonable by Marimaca Copper, are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors, both known and unknown, could cause actual results, performance or achievements to be materially different from the results, performance or achievements that are or may be expressed or implied by such forward-looking statements and the parties have made assumptions and estimates based on or related to many of these factors. Such factors include, without limitation: risks related to share price and market conditions, the inherent risks involved in the mining, exploration and development of mineral properties, the uncertainties involved in interpreting drilling results and other geological data, fluctuating metal prices, the possibility of project delays or cost overruns or unanticipated excessive operating costs and expenses, uncertainties related to the necessity of financing, uncertainties relating to regulatory procedure and timing for permitting reviews, the availability of and costs of financing needed in the future as well as those factors disclosed in the annual information form of the Company dated March 27, 2023 and other filings made by the Company with the Canadian securities regulatory authorities (which may be viewed at [www.sedar.com](http://www.sedar.com)). Statements regarding the Company's planned DFS on the Project and the Company's plans and expectations regarding the 6<sup>th</sup> phase of its metallurgical test work at the Project are forward-looking information and may not be realized. Accordingly, readers should not place undue reliance

on forward-looking statements. Marimaca Copper undertakes no obligation to update publicly or otherwise revise any forward-looking statements contained herein whether as a result of new information or future events or otherwise, except as may be required by law.

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