

# World Copper Updates & Expands Resource Estimate for the Zonia Copper Oxide Deposit, Arizona

23.02.2023 | [Newsfile](#)

Vancouver, February 23, 2023 - [World Copper Ltd.](#) (TSXV: WCU) (OTCQX: WCUFF) ("World Copper" or the "Company") announces the results of an updated mineral resource estimate for the Zonia copper-oxide deposit in Arizona, USA ("Zonia" or the "Project"). The updated mineral resource estimate includes 75.7 million short tons grading 0.30% total-copper (Indicated Resources) containing 450.5 million pounds of copper and 122.0 million short tons grading 0.24% total-copper (Inferred Resources) containing 575.4 million pounds of copper (the "Updated Resource Estimate"), which is a significant expansion of the Historical Resource Estimate (as defined below).

CEO Nolan Peterson states: "The Updated Resource Estimate for Zonia is a critical first milestone since World Copper's acquisition of the project, representing our best understanding of the resource as it is, and an expansion over past resources. As we advance the project on the engineering front, we will simultaneously aim to expand the resource even further by targeting the high potential Zonia Norte target northeast of the main resource deposit. Zonia is a key component of our development portfolio, and we look forward to continued positive developments at the site."

## Highlights:

- Updated Resource Estimate with:
  - Indicated Resources of 75.7 million short tons grading 0.30% total-copper containing 450.5 million pounds of copper; and
  - Inferred Resources of 122.0 million short tons grading 0.24% total-copper containing 575.4 million pounds of copper.
- Low strip ratio of 0.8:1 waste to mineralized material in base case mineral resource estimate.
- Significant expansion of the Zonia resource estimate compared to the Historical Resource Estimate.
- Zonia Norte confirmed as next exploration target at the Project.

The classified resources are outlined in detail in Table 1 at the base case total-copper cut-off grade of 0.125 - 0.130% and at a range of total-copper cut-off grades in Table 2. Figure 1 is a 3D view looking north, showing resource blocks at various copper grades that are constrained within the optimized pit shell.

The Updated Resource Estimate was completed by Richard A. Schwering P.G., SME-RM, of Hard Rock Consulting, LLC of Lakewood, Colorado ("HRC"), an independent qualified person as defined by National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101"), for World Copper as part of the Company's overall exploration plan for Zonia (see news release dated May 22, 2022).

## Table 1. Updated Resource Estimate for Zonia

To view an enhanced version of this graphic, please visit:

[https://images.newsfilecorp.com/files/3653/155876\\_worldcoppertable1\\_.jpg](https://images.newsfilecorp.com/files/3653/155876_worldcoppertable1_.jpg)

## Notes:

1. The effective date of the Updated Resource Estimate is September 1, 2022.
2. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Inferred Mineral Resources are that part of the mineral resource for which quantity and grade or quality are estimated on the basis of limited geologic evidence and sampling, which is sufficient to imply but not verify grade or quality continuity. Inferred Mineral Resources may not be converted to mineral reserves. It is reasonably expected, though not guaranteed, that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration (see "Cautionary Note to United States Investors").
3. Mineral resources are reported using a variable total-copper cut-off. The cut-off grade for blocks was

calculated based on the following assumptions: a long-term copper price of US\$3.60/lb., assumed combined operating ore costs of US\$6.25/ton (low grade re-handle, process, and general and administrative costs), refining & shipping costs of US\$0.15/lb. of copper, and copper metallurgical recoveries of 73% for blocks coded as oxide and 70% for blocks coded as transition.

4. Mineral resources are captured within an optimized pit shell and meet the test of reasonable prospects for economic extraction by open pit. The optimization used the same mining costs of US\$4.75/Ton mined and a 50° pit slope.

5. Mineral resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding.

#### Table 2. Mineral Resources Over a Range of Cut-off Grades

To view an enhanced version of this graphic, please visit:

[https://images.newsfilecorp.com/files/3653/155876\\_worldcoppertable2\\_.jpg](https://images.newsfilecorp.com/files/3653/155876_worldcoppertable2_.jpg)

#### Notes:

1. Please see the notes to Table 1.

Figure 1. View of Pit Constrained Resources Above Cut-off Looking North and Rotated Down 60 Degrees (Hard Rock Consulting, 2022).

To view an enhanced version of this graphic, please visit:

[https://images.newsfilecorp.com/files/3653/155876\\_c449f53b44876b0f\\_004full.jpg](https://images.newsfilecorp.com/files/3653/155876_c449f53b44876b0f_004full.jpg)

#### Estimation Methodology in Detail

The Updated Resource Estimate was completed in a manner consistent with the "CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines" adopted by CIM Council on November 29, 2019, and the mineral resources are classified in accordance with "CIM Definition Standards for Mineral Resources and Mineral Reserves", prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council on May 10, 2014 ("CIM Standards"). Classification of the resources reflects the relative confidence of the grade estimates. Mr. Schwering estimated the mineral resources for the Project based on wireframe modeling and to a maximum search distance of 960 feet using an ordinary kriging interpolant. Geostatistics and mineral resource estimation were done with Leapfrog EDGE®. Three-dimensional wireframes and model visualization was done with Leapfrog Geo® software, and the mineral resources were constrained with a Lerch-Grossman pit optimization. The metal of interest at the Project is copper, and the effective date of the Updated Resource Estimate is September 1, 2022.

A variable copper cut-off was chosen for reporting the Updated Resource Estimate based on the oxidation model. The cut-off grade for blocks was calculated based on the following assumptions: a long-term copper price of US\$3.60/lb., assumed combined operating ore costs of US\$6.25/ton (handling, process, and general and administrative costs), refining & shipping costs of US\$0.05/lb. of copper, and copper metallurgical recoveries of 73% for blocks coded as oxide and 70% for blocks coded as transition.

Mineral resources that are not mineral reserves do not have demonstrated economic viability and may be materially affected by modifying factors including but not restricted to mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors. Inferred Mineral Resources are that part of the mineral resource for which quantity and grade, or quality are estimated based on limited geologic evidence and sampling, which is sufficient to imply but not verify grade or quality continuity. Inferred Mineral Resources may not be converted to mineral reserves. It is reasonably expected, though not guaranteed, that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. Table 1 shows the Updated Resource Estimate by oxidation state.

Data verification efforts for the Updated Resource Estimate carried out by HRC included discussions with World Copper personnel, personal inspection of the Project area with the collection and submission of check samples to an external laboratory, a mechanical audit of the exploration drillhole database received from World Copper, and a detailed review of additional information obtained from historical reports and information provided by the Company. HRC also completed a partial validation of the database geologic

information as compared to the paper logs, and a partial validation of the assay values contained in the exploration database as compared to assay certificates provided by World Copper. A statistical analysis was also completed on 46 twinned drill holes completed by previous operators.

A technical report to support the Updated Resource Estimate for the Project, prepared in accordance with NI 43-101, will be filed on SEDAR ([www.sedar.com](http://www.sedar.com)) within 45 days of this news release.

#### Comparison to Historical Resource Estimate

[Cardero Resource Corp.](#) filed a technical report on SEDAR entitled "Preliminary Economic Assessment, NI 43-101 Technical Report Zonia Copper Project Yavapai County, Arizona, USA", which report was prepared by Global Resource Engineering with an Effective Date of March 22, 2018, and an Issue Date of April 17, 2018 (the "PEA"). The historical mineral resource estimate used for the PEA (the "Historical Resource Estimate") was prepared in accordance with the requirements of NI 43-101 with an effective date of November 30, 2015. The qualified person for the Historical Resource Estimate was Rex C. Bryan of Tetra Tech Inc. Total copper grades were estimated for the Project using an ordinary kriging algorithm based on three-dimensional wireframe modeling and a maximum search distance of 600 feet. Three-dimensional wireframes and model visualization was done with GemCom® software. Geostatistics and resource estimation was done with MicroModel®. Additional statistical analysis was done with Statistica®, and Excel®. The Historical Resource Estimate was stated within a Lerch-Grossman optimized pit shell and met the test of reasonable prospects for economic extraction using the following parameters: a metal price of \$2.50/lb. copper, mining costs of \$1.50/ton, processing costs of \$3.40/ton, general and administrative costs of \$0.45/ton, oxide recovery of 73%, transition zone recovery of 70% and an average pit slope of 45 degrees.

The Historical Resource Estimate was classified as Measured, Indicated, and Inferred in accordance with CIM Standards. The Historical Resource Estimate is superseded by the Updated Resource Estimate disclosed by the Company in this news release. A qualified person has not done sufficient work to classify the Historical Resource Estimate as current, and the Company is not treating the Historical Resource Estimate as current mineral resources.

A comparison between the Updated Resource Estimate and the Historical Resource Estimate is shown below in Table 3, and a comparison of the two base cases at a similar cut-off is made in Table 4.

#### Table 3. Comparison of Mineral Resource Estimates at Base Case Cut-off Grades

To view an enhanced version of this graphic, please visit:  
[https://images.newsfilecorp.com/files/3653/155876\\_worldcoppertable3\\_.jpg](https://images.newsfilecorp.com/files/3653/155876_worldcoppertable3_.jpg)

#### Table 4. Comparison of Mineral Resource Estimates at 0.20% Cut-off Grades

To view an enhanced version of this graphic, please visit:  
[https://images.newsfilecorp.com/files/3653/155876\\_worldcoppertable4.2\\_.jpg](https://images.newsfilecorp.com/files/3653/155876_worldcoppertable4.2_.jpg)

#### Notes:

1. The effective date of the Historical Resource Estimate is November 15, 2015. The qualified persons for the Historical Resource Estimate were Rex C. Bryan and D. Eric Spiller of Tetra Tech Inc.
2. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Inferred Mineral Resources are that part of the mineral resource for which quantity and grade or quality are estimated on the basis of limited geologic evidence and sampling, which is sufficient to imply but not verify grade or quality continuity. Inferred Mineral Resources may not be converted to mineral reserves. It is reasonably expected, though not guaranteed, that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
3. The Historical Resource Estimate was stated within a Lerch-Grossman optimized pit shell using the following parameters; a metal price of \$2.50/lb. copper, mining costs of \$1.50/ton, processing costs of \$3.40/ton, general and administrative costs of \$0.45/ton, oxide recovery of 73%, transition zone recovery of 70% and an average pit slope of 45 degrees.
4. Mineral resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding.

## Zonia Norte Exploration Potential

Building from the resource expansion from the Updated Resource Estimate, the next step and largest potential for a new discovery at Zonia is to the north-northeast of the current open pit and resource, where a large (2.5 x 1.5 kilometres) coincident copper-molybdenum-manganese geochemical anomaly has been identified (Zonia Norte; Figure 2). Historical surface rock geochemical sampling has delineated a copper-molybdenum anomaly that is spatially coincident and similar in size/shape with a broad zone of manganese depletion consistent with typical porphyry-copper mineralization. This anomaly is situated 1.5 kilometres to the north-northeast of the Zonia deposit, which exhibits the same pattern of geochemical anomalism and is comparable in size to the northeast target. It is significant that the anomaly is open to the north where outcrops are covered by post-mineral cover. This large geochemical footprint is interpreted to represent a second porphyry centre. Nearby historical drill holes indicate the area is deeply weathered and copper-oxide mineralization is present.

The Zonia Norte porphyry target was fully permitted by the previous operator and is drill-ready once the permitting process is re-started. The drill programme will be comprised of 18 shallow, near-surface holes targeting copper oxide mineralization and will total over 5,000 metres (18,000 feet). Further mapping over the target and adjacent areas is planned. High-grade historical copper occurrences (Copper Crown and others) along the north and east edges of the Zonia Norte anomaly will be mapped and sampled as part of the ongoing target delineation exploration program at Zonia. These occurrences of high-grade copper have geological similarities to volcanogenic massive sulphide and/or replacement-type deposits.

For further details on the Zonia Norte target please refer to news releases from, May 2, 2022 (<https://worldcopperltd.com/world-copper-provides-exploration-and-development-update-on-the-zonia-copper-oxide-pro>) and February 1, 2018 ([Cardero Resource Corp.](https://www.sedar.com/), <https://www.sedar.com/>).

Figure 2. Zonia gridded rock geochemical anomalies. The large anomaly at the north-east end of the claims, Zonia Norte, is interpreted to be another copper oxide porphyry ([Cardero Resource Corp.](https://www.sedar.com/), 2021).

To view an enhanced version of this graphic, please visit:  
[https://images.newsfilecorp.com/files/3653/155876\\_c449f53b44876b0f\\_007full.jpg](https://images.newsfilecorp.com/files/3653/155876_c449f53b44876b0f_007full.jpg)

## PDAC CONFERENCE

World Copper is participating in the PDAC 2023 Conference in Toronto, Ontario from March 5-8, 2023 at The Metro Toronto Convention Centre. World Copper will be in booth 3139 at the Investors Exchange. Team members will be available to answer questions. Interested parties that wish to schedule a meeting, or who would like more information regarding the conference and events noted above, please contact Michael Pound at (604) 638-3287, or email [mpound@worldcopperltd.com](mailto:mpound@worldcopperltd.com). Corporate presentation and fact sheet information materials are available on the Company's website at [www.worldcopperltd.com](http://www.worldcopperltd.com).

## ABOUT ZONIA

Zonia is in the Walnut Grove Mining District, Yavapai County, Arizona, and consists of 261 patented (96) and unpatented (185) mineral claims, and 566.85 acres of surface rights acquired from the State of Arizona, all totaling 4,279.55 acres.

Zonia is a near-surface, copper-oxide resource and a brownfields site having already been mined in the late 1960s and '70s. The project has been significantly de-risked with over 50,000 metres of drilling completed to date and with substantial amounts of detailed engineering completed. The PEA based on the Historical Resource Estimate indicated that the project could be advanced utilizing low-cost open pit mining and heap leach with SX-EW processing to produce pure copper cathode (a copy of the PEA technical report is available on Cardero's SEDAR profile at [www.sedar.com](http://www.sedar.com)).

Zonia was pre-stripped during mining in the late 1960s and 1970s so that, as described in the PEA, the strip ratio is a low 1:1. Furthermore, the PEA outlines a mine plan and development strategy entirely on private land, which significantly reduces the timeline for permitting. At a copper price of \$3.00/lb., Zonia shows an

after-tax NPV@6% of \$225 million, and an internal rate of return ("IRR") of 29.0%.

The PEA is preliminary in nature, it 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, as such, there is no certainty that the PEA results will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability as there is no certainty that all or any part of the resources will be converted into reserves.

In addition to the established resource, the Zonia land position contains a copper-molybdenum geochemical anomaly (associated with depressed manganese values) that is similar in intensity and scale (1000 by 1500 metres) to the main resource, and within the same prospective geology. This anomaly is located two kilometres northeast of the resource and represents a high-priority copper-oxide porphyry exploration drill target.

#### QUALIFIED PERSONS

The Updated Resource Estimate was prepared by Mr. Richard Schwering, P.G., of HRC, a qualified person as defined by NI 43-101.

John Drobe, P.Geo., a qualified person as defined by NI 43-101, has reviewed the scientific and technical information that forms the basis for this news release and has approved the disclosure herein. Mr. Drobe is not independent of World Copper as he is a consultant of World Copper.

#### ABOUT WORLD COPPER LTD.

[World Copper Ltd.](#), headquartered in Vancouver, BC, is a Canadian resource company focused on the exploration and development of its copper porphyry projects: Escalones and Cristal in Chile, and Zonia in Arizona. Two of these projects have estimated resources with significant soluble copper mineralization, and there are at least two other copper porphyry targets with exciting potential to expand the resource base.

On Behalf of the Board of Directors of

[World Copper Ltd.](#)

"Nolan Peterson"

Nolan Peterson  
Chief Executive Officer

For further information, or to schedule a Zoom meeting with Management, please contact:

Nolan Peterson or Michael Pound  
Phone: 604-638-3287  
E-mail: [info@worldcopperltd.com](mailto:info@worldcopperltd.com)

For all Investor Relations inquiries, please contact:

John Liviakis  
Liviakis Financial Communications Inc.  
Phone: 415-389-4670

For all Public Relations inquiries, please contact:

Nancy Thompson  
Vorticom, Inc.  
Office: 212-532-2208 | Mobile: 917-371-4053

Follow Us:

Twitter: <https://twitter.com/WorldCopperLtd>  
Facebook: <https://www.facebook.com/WorldCopperLtd>  
LinkedIn: <https://www.linkedin.com/company/worldcopperltd>

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

#### Cautionary Note Regarding Forward-Looking Statements

This news release contains forward-looking statements and forward-looking information (collectively, "forward-looking statements") within the meaning of applicable Canadian and U.S. securities legislation. All statements, other than statements of historical fact, included herein including, without limitation, statements with respect to anticipated exploration program results from exploration activities (including the expansion of the Updated Resource Estimate), the filing of a technical report for the Updated Resource Estimate, the discovery and delineation of mineral deposits/resources/reserves and the anticipated business plans and timing of future activities of World Copper are forward-looking statements. Although World Copper believes that such statements are reasonable, it can give no assurance that such expectations will prove to be correct. Forward-looking statements are typically identified by words such as: "believes", "expects", "anticipates", "intends", "estimates", "plans", "may", "should", "would", "will", "potential", "scheduled" or variations of such words and phrases and similar expressions, which, by their nature, refer to future events or results that may, could, would, might or will occur or be taken or achieved. In making the forward-looking statements in this news release, World Copper has applied several material assumptions, including without limitation, market fundamentals will result in sustained copper demand and prices, the receipt of any necessary permits, licenses and regulatory approvals in connection with the future development of Zonia in a timely manner, the availability of financing on suitable terms for the development, construction and continued operation of World Copper's projects and its ability to comply with environmental, health and safety laws.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of World Copper to differ materially from any future results, performance or achievements expressed or implied by the forward-looking information. Such risks and other factors include, among others, operating and technical difficulties in connection with mineral exploration and development activities, actual results of exploration activities, including on Zonia, the estimation or realization of mineral reserves and mineral resources, the timing and amount of estimated future production, the costs of production, capital expenditures, the costs and timing of the development of new deposits, requirements for additional capital, future prices of copper, changes in general economic conditions, changes in the financial markets and in the demand and market price for commodities, lack of investor interest in future financings, accidents, labour disputes and other risks of the mining industry, delays in obtaining governmental approvals, permits or financing or in the completion of development or construction activities, risks relating to epidemics or pandemics such as COVID-19, including the impact of COVID-19 on World Copper's business, financial condition and results of operations, changes in laws, regulations and policies affecting mining operations, title disputes, the inability of World Copper to obtain any necessary permits, consents, approvals or authorizations, the timing and possible outcome of any pending litigation, environmental issues and liabilities, and risks related to joint venture operations, and other risks and uncertainties disclosed in World Copper's continuous disclosure documents. All of World Copper's Canadian public disclosure filings may be accessed via [www.sedar.com](http://www.sedar.com) and readers are urged to review these materials.

Readers are cautioned not to place undue reliance on forward-looking statements. World Copper does not undertake any obligation to update any of the forward-looking statements in this news release or incorporated by reference herein, except as otherwise required by law.

#### Cautionary Note to United States Investors

World Copper prepares its disclosure in accordance with the requirements of securities laws in effect in

Canada, which differ from the requirements of U.S. securities laws. Terms relating to mineral resources in this news release are defined in accordance with NI 43-101 under the guidelines set out in CIM Standards. The U.S. Securities and Exchange Commission (the "SEC") has adopted amendments effective February 25, 2019 (the "SEC Modernization Rules") to its disclosure rules to modernize the mineral property disclosure requirements for issuers whose securities are registered with the SEC under the U.S. Securities Exchange Act of 1934.

As a result of the adoption of the SEC Modernization Rules, the SEC will now recognize estimates of "measured mineral resources", "indicated mineral resources" and "inferred mineral resources", which are defined in substantially similar terms to the corresponding CIM Standards. In addition, the SEC has amended its definitions of "proven mineral reserves" and "probable mineral reserves" to be substantially similar to the corresponding CIM Standards.

U.S. investors are cautioned that while the foregoing terms are "substantially similar" to corresponding definitions under the CIM Standards, there are differences in the definitions under the SEC Modernization Rules and the CIM Standards. Accordingly, there is no assurance any mineral resources that World Copper may report as "measured mineral resources", "indicated mineral resources" and "inferred mineral resources" under NI 43-101 would be the same had World Copper prepared the resource estimates under the standards adopted under the SEC Modernization Rules.

In accordance with Canadian securities laws, estimates of "inferred mineral resources" cannot form the basis of feasibility or other economic studies, except in limited circumstances where permitted under NI 43-101.

To view the source version of this press release, please visit <https://www.newsfilecorp.com/release/155876>

---

Dieser Artikel stammt von [Rohstoff-Welt.de](https://www.rohstoff-welt.de)

Die URL für diesen Artikel lautet:

<https://www.rohstoff-welt.de/news/436488--World-Copper-Updates-und-Expands-Resource-Estimate-for-the-Zonia-Copper-Oxide-Deposit-Arizona.html>

Für den Inhalt des Beitrages ist allein der Autor verantwortlich bzw. die aufgeführte Quelle. Bild- oder Filmrechte liegen beim Autor/Quelle bzw. bei der vom ihm benannten Quelle. Bei Übersetzungen können Fehler nicht ausgeschlossen werden. Der vertretene Standpunkt eines Autors spiegelt generell nicht die Meinung des Webseiten-Betreibers wieder. Mittels der Veröffentlichung will dieser lediglich ein pluralistisches Meinungsbild darstellen. Direkte oder indirekte Aussagen in einem Beitrag stellen keinerlei Aufforderung zum Kauf-/Verkauf von Wertpapieren dar. Wir wehren uns gegen jede Form von Hass, Diskriminierung und Verletzung der Menschenwürde. Beachten Sie bitte auch unsere [AGB/Disclaimer!](#)

---

Die Reproduktion, Modifikation oder Verwendung der Inhalte ganz oder teilweise ohne schriftliche Genehmigung ist untersagt!  
Alle Angaben ohne Gewähr! Copyright © by Rohstoff-Welt.de -1999-2026. Es gelten unsere [AGB](#) und [Datenschutzrichtlinien](#).