



(“Tertiary” or “the Company”)

**AIM Announcement**

**16 October 2023**

## **NEW SOIL SAMPLING RESULTS MUSHIMA NORTH COPPER PROJECT, ZAMBIA**

Following the recent release of soil sampling results from the C1 target area at its Mushima North Copper Project in Zambia, the Company is now pleased to report further positive portable X-Ray fluorescence (“pXRF”) analytical results from targets A1 and A2.

---

### **Key Points: Subheading**

- Areas A1 & A2 are targets for traditional Copperbelt sediment-hosted mineralisation where known deposits in Zambia and the DRC range in size up to supergiant size (>25mt contained copper).
  - 248 soil samples were initially collected on a 200m x 200m spaced grid at the A1 and A2 targets. A further 311 samples were taken as an infill of the A1 grid at 100m x 100m spacing and at 50m spacing along three east-west lines.
  - pXRF analytical results at target A1 have outlined a significant open-ended copper anomaly with soil samples above 80ppm covering an area of 3 km long by up to 1.5 km wide, peaking at 280ppm copper.
  - A high-grade area within the A1 copper-in-soil anomaly with values above 200ppm and averaging 231ppm copper has dimensions of 400m x 150m.
  - pXRF results at target A2 show very high copper values, up to 1,239ppm copper in organic-rich samples from the perimeter of a marsh (dambo). The copper in this hydromorphic anomaly is likely transported and may be linked to the source of the A1 copper-in-soil anomaly.
  - A new copper prospect was discovered during field evaluation of a historic electromagnetic target to the west of target A1. Values up to 0.43% (4,300ppm) copper were returned from average pXRF analysis of surface rocks showing visible oxide copper mineralisation.
- 

### **Commenting today, Executive Chairman Patrick Cheetham said:**

*“I am delighted to be announcing the delineation of a second large soil anomaly at Mushima North. This is another compelling drill target. The discovery of outcropping copper mineralisation elsewhere on the project highlights the potential for new discoveries that may not necessarily give a soil response.*

*The completion of soil sampling at Mushima North means we have now met a key objective to complete soil sampling on all five of the projects where we hold an interest with our local partner, Mwashia Resources. All five projects are now at a stage where drilling priorities can be developed. One of these, Konkola West, is now subject to a term sheet for a joint venture and other projects have been subject to unsolicited joint venture interest from major companies.*

*Nearly US\$10 billion of investment into new copper mine development in Zambia has been announced in recent times as a direct result of the Hitchilema government's more mining-friendly policies. This is generating a high level of interest in copper exploration in Zambia and we are well placed to benefit from this."*

**For more information please contact:**

---

**Tertiary Minerals plc**

Patrick Cheetham, Executive Chairman

**Tel: +44 (0)1625 838 679**

**S P Angel Corporate Finance LLP**

**Nominated Adviser & Broker**

Richard Morrison/Harry Davies-Ball

**Tel: +44 (0)203 470 0470**

**Peterhouse Capital Limited**

**Joint Broker**

Lucy Williams/Duncan Vasey

**Tel: +44 (0)207 469 0930**

---

## **Market Abuse Regulation**

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018 ('MAR'). Upon the publication of this announcement via Regulatory Information Service ('RIS'), this inside information is now considered to be in the public domain.

## **Background Information**

The Mushima North Copper Project ("Mushima North" or the "Project") comprises Exploration Licence 27068-HQ-LEL. It covers 701 km<sup>2</sup> and is located in Zambia's Northwest Province. Tertiary Minerals plc's 96% owned subsidiary, Tertiary Minerals (Zambia) Limited, is currently earning up to a 90% interest in the Project from local partner Mwashia Resources Limited.

Mushima North is one of five projects in Zambia where Tertiary is exploring for copper and one of two projects which benefit from the Company's technical cooperation and data sharing agreement with leading copper producer First Quantum Minerals ("FQM").

The Project lies 20 km to the east of the Kalengwa copper mine (past production 4 million tons grading 5.2% Cu and 40 g/t Ag and pre-mining reserve of 600,000 tons grading 16% copper) believed to be one of the highest-grade copper deposits ever to be mined in Zambia. In the 1970s high grade ore in excess of 26% copper, making up approximately 20% of the orebody, was trucked for direct smelting at other mines in the Copperbelt. Kalengwa was discovered by drill testing a coincident copper-in-soil anomaly and gravity anomaly and has characteristics of the Iron-Oxide-Copper-Gold ("IOCG") class of deposits.

## **Mushima North Project**

FQM has provided Tertiary with an extensive exploration database for Mushima North which includes airborne magnetic and electromagnetic geophysical data, as well as 500m spaced reconnaissance soil sample analytical results. Additional historical data for the area was made available by JAW Consulting LLC ("JAW") of Golden, Colorado which was commissioned by the Company to compile historical data and provide a detailed interpretation and targeting report. The JAW targeting report has drawn on historical exploration from the 1970s onwards by Roan Consolidated Mines, African Minerals, Zamanglo Prospecting Ltd and BHP Billiton. The latter was exploring for IOCG deposits (a class of mineral deposit that includes some of the largest in the world, including Olympic Dam in South Australia). BHP planned two holes to

test for IOCG mineralisation at target C1 but terminated all exploration in Zambia in 2012 without drilling the planned holes.

Further details of the targets generated by this report can be found in the Company's news release of 1 June 2023.

Targets A1 and A2 were identified from wide spaced reconnaissance soil sampling carried out by FQM.

### **Soil Sampling Programme**

In September 2023, the Company contracted Geo-Junction Consulting Limited to perform a soil sampling programme at Mushima North to cover the C1, A1 and A2 targets. Positive results from target C1 were released on 5 October 2023. This release details the pXRF analytical results from targets A1 and A2.

A total of 184 samples were collected on or around target A1 with a sample spacing of 200m. Soil samples were collected from the B-horizon<sup>1</sup>, dried and sieved to -180 micron. The sieved soil samples were placed into a sample cup and analysed using a pXRF instrument. Based on preliminary field pXRF analysis infill sampling was then carried out on 100mx 100m spacing with three 400m spaced lines sampled at 50m spacing.

pXRF results from target A1 indicate a broad northeast striking copper-in-soil anomaly which, at a 80ppm copper cut off, covers an area approximately 3km long by up to 1.5 km wide. Within this area soil samples average 148ppm and peak at 280ppm copper. The A1 soil anomaly has a high-grade core at its north end where all soil values are in excess of 200ppm copper over an area 400m x 150m and average 231ppm copper.

pXRF results from target A2 show very high copper-in-soil values of up to 1,239ppm. However, the high values are confined to organic rich sediments at the edge of a dambo (an area of shallow wetland). It is most likely that copper in these sediments is a result of hydromorphic concentration of copper in groundwater sourced from a copper-rich area, possibly the sources of the A1 copper anomaly some 3km distant.

The A1 and A2 copper-in-soil anomalies have a favourable structural setting for mineralisation and the A1 anomaly is a further high priority for follow up drilling.

During the field work at targets A1 and A2, samples containing visible spotty copper minerals malachite and chrysocolla were found when field checking an area 2 km west of target A1 where an electrical conductor had been identified by a previous explorer in an area underlain by iron-rich conglomerates. These conglomerates stretch over a 6 km strike length and are coincident with a low-level gravity anomaly. Surface samples contained up to 0.43% copper (average of three pXRF readings per sample). Soil samples around this new occurrence were not anomalous but the new find warrants further follow-up mapping and sampling.

*A map illustrating the features of the A1 and A2 targets is available on the Mushima North Project page on the Company's website:*

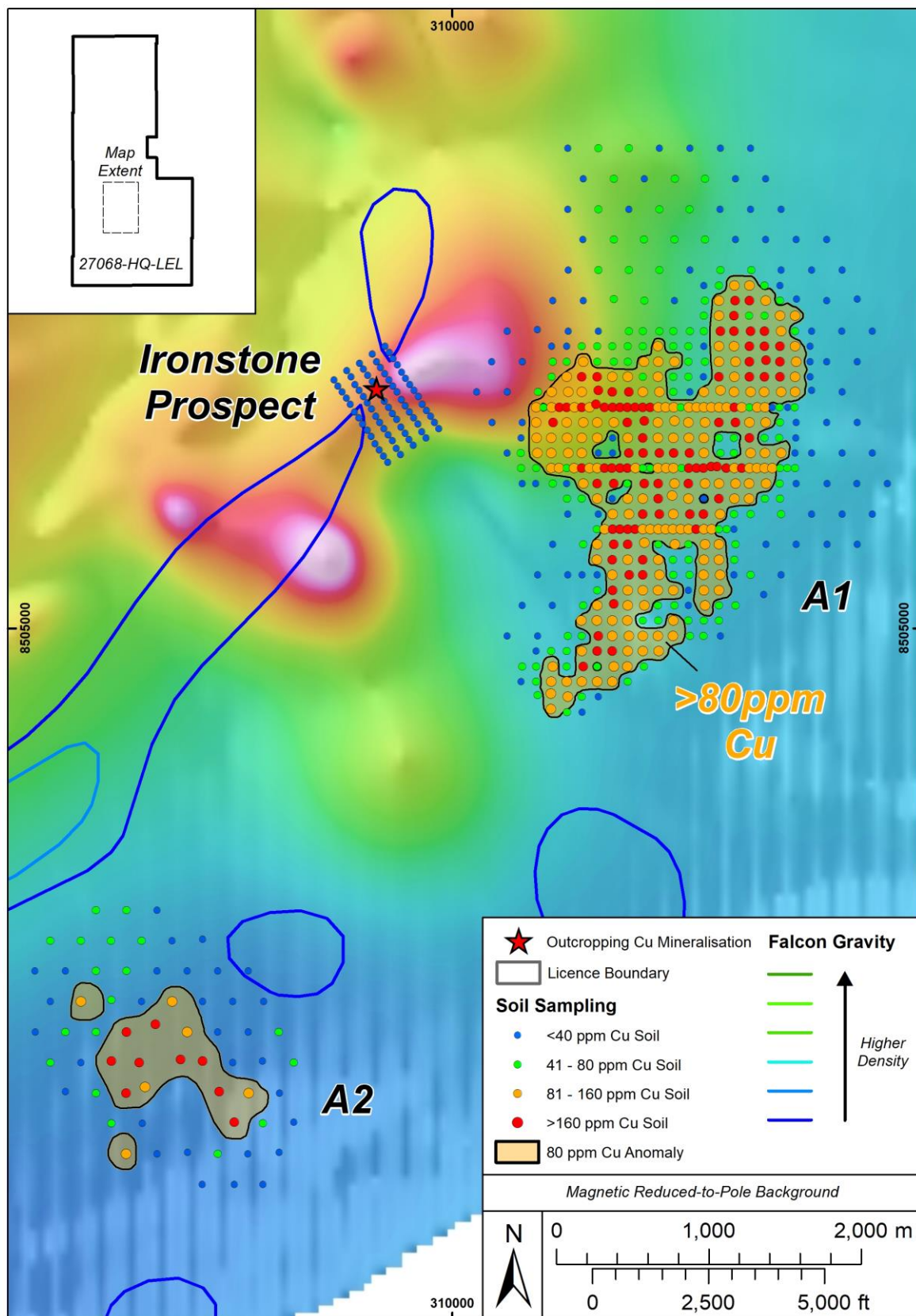
<https://www.tertiaryminerals.com>

### **Notes:**

1. Soil samples were collected from the B-horizon (at an approximate depth of 25-30cm) at each sample site. Samples were dry sieved to minus 180 micron with approx. 100 grammes retained and placed in a plastic sample pot and analysed using a Drawell DW-EX7000 portable x-ray fluorescence analyser ("pXRF"). A certified reference material (AMIS0592) was analysed once between every 10 soil samples to monitor for instrument drift.

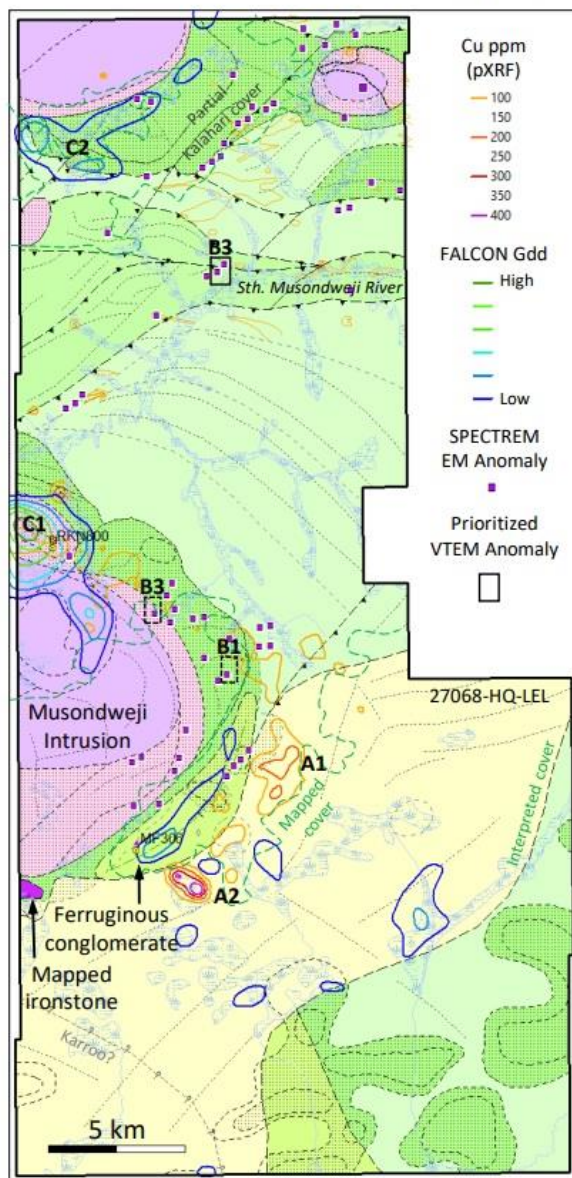
2. *The information in this release has been reviewed by Mr. Patrick Cheetham (MIMMM, M.Aus.IMM), Executive Chairman of Tertiary Minerals plc, who is a qualified person for the purposes of the AIM Note for Mining and Oil & Gas Companies. Mr. Cheetham is a Member of the Institute of Materials, Minerals & Mining and also a member of the Australasian Institute of Mining & Metallurgy.*
3. *The news release may contain certain statements and expressions of belief, expectation or opinion which are forward looking statements, and which relate, inter alia, to the Company's proposed strategy, plans and objectives or to the expectations or intentions of the Company's directors. Such forward-looking statements involve known and unknown risks, uncertainties, and other important factors beyond the control of the Company that could cause the actual performance or achievements of the Company to be materially different from such forward-looking statements. Accordingly, you should not rely on any forward-looking statements and save as required by the AIM Rules for Companies or by law, the Company does not accept any obligation to disseminate any updates or revisions to such forward-looking statements.*

*Two maps follow on the next pages.*

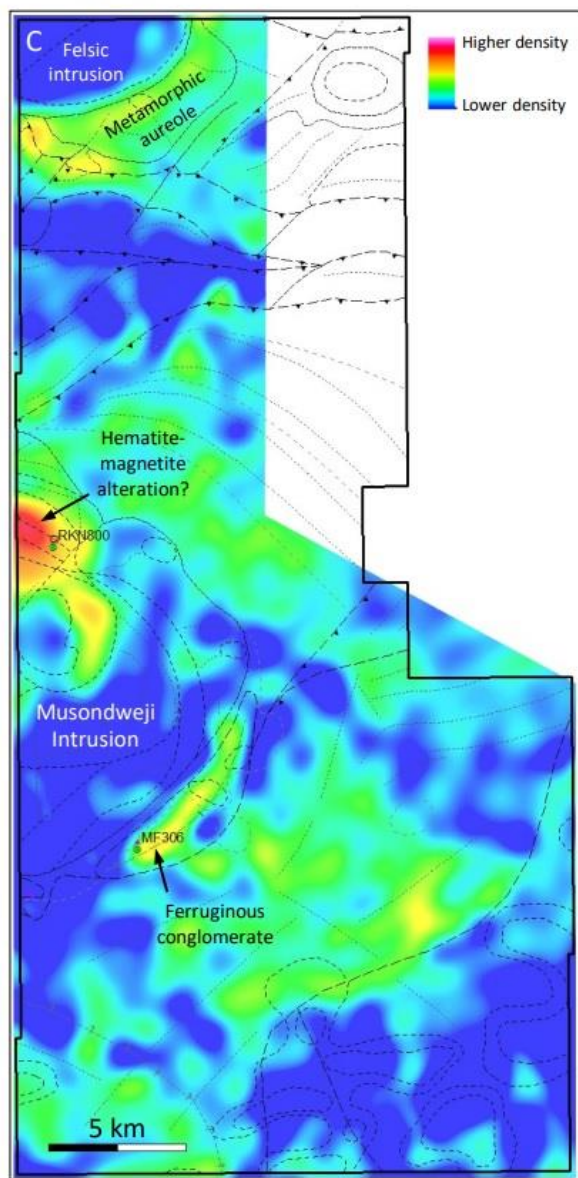




## Mushima North Project Exploration Targets



Interpreted geology with targets



Falcon Gravity Survey: Vertical gravity gradient