



("Tertiary" or "the Company")

**AIM Announcement**

**25 November 2022**

## **UPDATE - COPPER PROJECTS, ZAMBIA**

Tertiary Minerals plc is pleased to announce that its local partner and licence holder Mwashia Resources Ltd ("Mwashia") has now received approval of Environmental Project Briefs ("EPBs") from the Zambian Environmental Management Agency ("ZEMA") for the Konkola West and Lubuila Copper Projects where the Company is earning up to a 90% interest.

The Company is also providing a project update for the Mukai and Mushima North Projects following a preliminary data review and first meetings with global copper producer First Quantum Minerals Ltd ("FQM") with whom the Company has a data sharing and technical cooperation agreement (the "Data Sharing and Technical Cooperation Agreement").

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### **Highlights:**

#### ***EPB Approvals***

- ZEMA has now approved EPBs for the Konkola West & Lubuila Licences.
- The approval process for the Mukai & Mushima North Project EPBs is at an advanced stage.
- EPB approval is required before exploration can take place.

#### ***Project Updates***

- Initial prospectivity reviews completed by consultant Remote Exploration Services (RES) of South Africa, based on historical data.
- First meetings held with FQM under the Data Sharing and Technical Cooperation Agreement. Data transfer from FQM to the Company is currently in progress.
- Exploration targeting underway with initial priority areas already defined by RES at:
  - Mukai, where the host stratigraphy for FQMs nearby Enterprise Nickel Mine and giant Sentinel Copper Mine can be traced into the Mukai Licence where there are both copper and nickel geochemical anomalies.
  - Mushima North, where historical drilling in the 1960s encountered wide zones of low-grade copper-sulphide mineralisation and which is prospective for iron-oxide-copper-gold ("IOCG") deposits.

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

*"I am delighted to report that, following a recent series of positive updates for the Jacks Copper Project in Zambia where we have now earned a 90% interest, the necessary EPBs are now starting to be issued for the other Zambian projects where we have similar earn-in rights.*

*I am also pleased and excited to be reporting progress in our data sharing and technical cooperation agreement with FQM along with the definition of several exploration targets from a desktop study of historical exploration results commissioned with RES prior to our agreement with FQM."*

**For more information please contact:**

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## **Market Abuse Regulation (MAR) Disclosure**

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 which forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018 ('MAR'). Upon the publication of this announcement via a Regulatory Information Service ('RIS'), this inside information is now considered to be in the public domain.

## **Additional Information**

### *Background*

Tertiary is exploring in Zambia through its local subsidiary Tertiary Minerals (Zambia) Limited ("TMZ") which is 96% owned by Tertiary Minerals plc. TMZ now holds 90% of the Jacks Copper Project with the remaining 10% held by local company and licence holder Mwashia Resources Ltd ("Mwashia"). TMZ holds an option to purchase Mwashia's 10% interest in the Jacks exploration licence for US\$3.5 million at any time.

TMZ also holds options to earn up to a 90% interest in four other licences held by Mwashia, namely the Mukai, Mushima North, Lubuila and Konkola West exploration licences. Further details of Tertiary's agreements with Mwashia are given in the Company's news releases of 2 August 2021 and 18 November 2021.

The Mukai and Mushima North licences are covered by a Data Sharing and Technical Cooperation Agreement with First Quantum Minerals Limited ("FQM"). Further details of the Agreement can be found in the Company's news release of 15 September 2022.

### **EPB Approvals**

Before exploration can be carried out on a licence in Zambia, an Environmental Project Brief ("EPB") must be submitted for approval by the Zambian Environmental Management Agency ("ZEMA").

An approved EPB is already in place for the Jacks Copper Project and Mwashia has now advised that EPBs have been approved for the Lubuila and Konkola West Licences and that the process for EPB approvals for Mukai and Mushima North is at an advanced stage within ZEMA.

### **Project Updates**

The Company and FQM have now held their first meeting and data transfer is underway from FQM's proprietary regional exploration programmes that included the Mukai and Mushima North project areas. This includes extensive geological, geophysical and geochemical data.

Prior to reaching its agreement with FQM the Company had commissioned South African company Remote Exploration Services (“RES”) to conduct a desktop study on the exploration history and prospectivity of the four Mwashia licences held under option.

The following information is intended as a preliminary update of the prospectivity of the two licences that are covered by the FQM agreement and is based on the earlier RES project review which has already defined priority targets. Target generation is ongoing and will incorporate the FQM data. The Company aims to be in a position to commence field exploration as soon as possible.

### ***Mukai Copper Project, 27066-HQ-LEL***

Exploration Licence 27066-HQ-LEL covers 55.4 sq. km. and is located 125km west of Solwezi in the north-western Province of Zambia. Geologically it is in the Domes Region of the Central African Copperbelt and it encompasses Lower Roan Group rocks on the southern flank of the highly prospective Kabompo Dome.

The licence is directly adjacent to FQM’s Trident Project licences which includes the recently opened Enterprise Nickel Mine and the giant producing Sentinel (Kalumbila) Copper Mine, located 8km south and 18km southeast of the licence, respectively. FQM has invested US\$2.1 billion in the Sentinel copper mine where the plant has the capacity to treat 55 million tonnes of ore per annum.

Enterprise is a sediment-hosted nickel-sulphide deposit with a total measured and indicated resource of 40 million tonnes of ore containing 431,000 tonnes of nickel from which FQM envisages processing some 4 million tonnes per year of nickel ore making Enterprise the largest nickel mine in Africa.

Just west of Mukai is Arc Minerals Ltd.’s Zambia Copper-Cobalt Project where Anglo American plc has the option to earn a 70% interest from Arc Minerals through expenditure of US\$88.5 million including US\$14.5 million in cash payments to Arc Minerals.

Historic exploration in the Mukai licence area has been carried out for copper by Roan Selection Trust (“RST”) in the 1960s, for uranium by Agip in the 1980s, and by an Equinox-Anglo American JV (“Zamanglo”) in the early 2000s. Most of this work was of a regional nature comprising stream sediment sampling and soil sampling.

To date, FQM has provided Tertiary with licence-wide geophysical data including magnetic data, radiometric data and electromagnetic data. FQM’s mapping, in part based on this data, has traced the Enterprise and Sentinel host rocks into the Mukai Licence where they occur in similar proximity to the deep seated Kalumbila Fault Zone.

A copper soil anomaly was identified within the Mukai licence by RST in the 1960s close to the boundary with FQM’s licences and is seen to continue into FQM’s adjacent licence as a copper and copper:scandium anomaly (high copper:scandium ratios are seen as an indicator of copper sulphide mineralisation as opposed to enhanced background level of copper in the rock). This is a high priority target for follow-up exploration.

Nickel anomalies have also been identified in the licence area, in soils by Zamanglo and in stream sediments by the Zambian Geological Survey. Data interpretation and targeting is ongoing.

The Mukai Licence contains an area of designated forest, which, although affording a higher level of environmental protection, does not exclude exploration or mining.

### ***Mushima North Copper Project, 27068-HQ-LEL***

Exploration Licence 27068-HQ-LEL covers 701.3 sq. km. and is located 100km east of Manyinga.

The licence encompasses basement rocks outside of the traditional Copper Belt and the region is a focus of exploration for copper-gold in so called Iron-Oxide-Copper-Gold ("IOCG") deposits, best exemplified by the giant Olympic Dam copper-gold-uranium deposit in South Australia.

The past producing Kalengwa Copper Mine is situated approximately 20km west of the licence and is believed to be one of the highest-grade copper deposits ever 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 Copper Belt mines.

Historical exploration at Mushima North has been carried out by RST in the 1960s, African Minerals Corporation in the early 2000s and by BHP Group Limited later in the 2000s. BHP flew their proprietary Falcon gravity gradiometer over the licence area, defining geological structures and targets for further exploration.

Historical exploration has focused on the eastern margin of a series of syenitic-granitic intrusives. A number of historic copper prospects occur within the licence and soil anomalies have been identified in RST soil sampling programmes in the 1960's. One of these anomalies was followed up with a 154m deep drill hole, RKN 800, which intersected pyritic siltstone and sandstone containing chalcopyrite (copper sulphide) in association with calcite veins. Sampling of drill cores was very rudimentary with random samples taken at the end of each core run. Nevertheless, copper values were anomalous throughout with many samples grading more than 0.3% copper (0.3% being the upper limit on the graphical scale of analytical results presented with the drill log). This is an immediate target for follow-up exploration.

FQM has so far provided the Company with airborne magnetic and VTEM electromagnetic survey data for the Mushima North licence. This data will be processed with a view to additional target generation and data compilation and reviews are ongoing.