



11 August 2021

ASX ANNOUNCEMENT

## **TGME Project Development Update**

Theta Gold Mines Limited ("Theta Gold" or "Company") (ASX: TGM | OTC: TGMGF | FSE: 3LM) is pleased to provide an update on the development work that is planned to commence at the TGME Underground Project over the second half calendar year of 2021. The work program largely comprises the upgrading of the Maiden Underground Prefeasibility Study ("PFS") to a Definitive Feasibility Study ("DFS") and commencement of trial mining. Further details are provided below.

### **HIGHLIGHTS**

#### **Trial Mining, DFS and Resource upgrade**

- **Definitive Feasibility Studies** are to be completed for Beta, Frankfort, CDM and Rietfontein underground mines, completion is expected by the second quarter of 2022.
- **The historic Frankfort mine** (last operated in 2014) will be reopened during the quarter where trial mining will commence on the Frankfort Bevetts reef.
  - Trial mining will focus on drilling and blasting techniques in order to refine the long-hole open stoping mining method.
  - No development is necessary in order to undertake the trial mining as the stopes are easily accessible through the existing horizontal adits and old mine development.
  - A mechanical Boart Longyear S36 drill rig will be utilized to drill the blast holes.
  - The Theta team will work with several reputable explosives suppliers in order to participate in the explosive trial of pumpable emulsion explosives.
- **An additional study** will be commenced to identify, sample and test numerous surface sources of historic waste and tailings dumps which are believed to contain payable limits of gold.
- **A planned underground exploration drilling program** is to be undertaken at the Beta North, Frankfort and Rietfontein mines.
- **The Beta Mine South section** (which is not included in the company's resource statement) is to be sampled from underground.
- **Further metallurgical test work** will continue on both Frankfort and Beta mines.

#### **Environmental, Social & Governance (ESG)**

- **Permitting activities** to focus on the updating of the Mine Works Program and complete the biodiversity studies in order to strengthen the mining rights' and environmental authorisation application process.
- **In support of the permitting and legislative applications** the detailed engineering design for the integrated waste management system, focusing on waste classification to final tailing dam design, will be completed.
- **The stakeholders engagement process** will commence during this period and include access agreements with landowners. Kongiwe environmental engagement specialists will be appointed to assist with this project activity.

- Footprint cleanups at Beta North and site preparation of the existing old process plant have started.

**Chairman Mr Bill Guy stated,** *“Recently I had an exciting trip to South Africa. I’ve spent many hours with the team onsite and in Johannesburg working on future strategies and mine developments.*

*On site, we walked many kilometers through underground workings at the TGME underground mines, including new accessible areas such as Beta Mine South which is not yet in our Resource Statement. The team was very keen to share new discoveries, closed-concreted portals that can be used to access the Frankfurt Mine reefs (Figure 1) and upper levels of Peach Tree and Iota reef systems.*

*While I was on site, new power lines were been installed by the government (Eskom) (Figure2) passing close to the Northern sections of our mining permits and not far from the Frankfurt Mine, this will allow easy access to electricity across our entire Northern tenement package (Frankfurt and Vaalhoek mines).*

*The planned work for the next three quarters should deliver another resource upgrade and increasing mining reserves. The current phase 1 underground project PFS will be converted into a DFS, and the environmental studies and designs will continue as per project plan.”*



**Figure 1** – Frankfurt Mine (Left to right: Bill Guy – TGM Chairman, Terrence Mokale – TGME Director)





**Figure 2** – Government funded new power line installation across the Northern section of our Mining Rights (close to Vaalhoek and Frankfort mines). The powerline will add to the required capacity for the new gold plant and extends from north to south over 20 km within the current Mining Rights area.

## Summary

On-site focus will be on mine pre-production activities and resource upgrading work that is expected to be completed within the next 6 months. The recent funding will enable the progress of the phase 1 underground project that includes Beta, CDM, Frankfort and Rietfontein mines. Minxcon will be appointed as the Mine design engineers for the phase 1 underground project with a Definitive Feasibility Study completed by Q2 2022. The inclusion of the Rietfontein Mine into the DFS is likely to give this mine its first ore Reserve and lead to an updated Resource Statement for the Company.

The planned trail mining at the Frankfort Mine will consist of long-hole mechanised mining utilizing modern underground mining methods and technologies. The initial drill holes will be drilled with a Boart Longyear S36 drill rig. Various South African explosive suppliers will participate in the explosive trails of pumpable emulsion explosives. The trail mining data (drill hole size, drill pattern and explosive charge rate, etc.) will inform the DFS and provide proof of concept.

The exploration of the Beta Mine South section has initiated (*Figure 3*). This will include sampling and mapping of the reef within the old stopes and development ends. The initial sampling of this section of the mine will consist of a 12 meter sampling grille which will add to the existing Resource Tables.



**Figure 3** – Beta Mine South Section – Old Stope (not yet in the Resource Statements)  
(Left to right: Freddy Mocketla – Mine Manager, Jacques Du Trio – COO, Mitford Mundell – CEO)

The Theta Environmental Social Governance (“ESG”) program will be progressed with the continuation of environmental studies and engineering designs as part of the Environmental Management Plan (“EMP”). The license to operate project will be future strengthened with the appointment of Kongiwe environmental engagement specialists to lead the stakeholder engagement program. As part of the current biodiversity studies, a land compensation strategy and catchment rehabilitation plan will be tabled.

Environmental rehabilitation will continue with old mining footprint cleanups at the Beta Mine North and the site preparation of the old process plant, which may entail the demolition of old and unnecessary equipment. These environmental activities will be performed using local community enterprises.

Engineering work on the tailing dam extension and final design will be completed by Q4 2021. This engineering design of the tailings dam, subject to final approval, should firm up the initial tailings capacity to 2.1 million tons. The tailings dam will have a life of mine of 9 years and support the current phase 1 underground project.

This announcement was authorised for release by the Board of Directors.

For more information please visit [www.thetagoldmines.com](http://www.thetagoldmines.com) or contact:

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## **ABOUT THETA GOLD MINES LIMITED**

Theta Gold Mines Limited (ASX: TGM | OTC: TGMGF | FSE: 3LM) is a gold development company that holds a range of prospective gold assets in a world-renowned South African gold mining region. These assets include several surface and near-surface high-grade gold projects which provide cost advantages relative to other gold producers in the region.

Theta Gold's core project is located next to the historical gold mining town of Pilgrim's Rest, in Mpumalanga Province, some 370km northeast of Johannesburg by road or 95km north of Nelspruit (Capital City of Mpumalanga Province). Following small scale production from 2011 – 2015, the Company is currently focussing on the construction of a new gold processing plant within its approved footprint at the TGME plant, and for the processing of the initial ore reserves.

The Company aims to build a solid production platform to over 160kozpa based primarily around shallow, open-pit or adit-entry shallow underground hard rock mining sources. Theta Gold has access to over 43 historical mines and prospect areas that can be accessed and explored, with over 6.7Moz of historical production recorded.

Theta Gold holds 100% issued capital of its South African subsidiary, Theta Gold (SA) Pty Ltd ("TGSA"). TGSA holds a 74% shareholding in both Transvaal Gold Mining Estates Limited ("TGME") and Sabie Mines (Pty) Ltd ("Sabie Mines"). The balance of shareholding is held by Black Economic Empowerment ("BEE") entities as part of the country's ESG initiatives. The BEE shareholding in TGME and Sabie Mines is comprised of a combination of local community trusts, an employee trust and a strategic entrepreneurial partner.

