



Compelling Desktop Study Results on Proposed Commercial Pilot Plant at Ancuabe Graphite Project

Highlights:

- Desktop study by CPC Project Design who have been engaged by Triton to assist with the investigation into the development and construction the Commercial Pilot Plant (**CPP**) at the Ancuabe Graphite Project which has returned positive results:
 - The CPP Desk Top Study envisages a 250,000 tpa plant capable of producing 10,000tpa of graphite concentrate.
 - Initial Capital expenditure of between US\$32m to \$52m which is significantly less than the US\$99m estimate for the 60ktpa plant in the DFS¹.
 - Operating costs estimated of between \$711 to \$750 per tonne of concentrate, which compares to a unit cost of \$634/tonne in the 60ktpa plant in the DFS. This is a very pleasing result as it is still significantly lower than the basket prices used in the 2017 DFS¹ of US\$1,435/tonne.
 - Triton will seek to significantly reduce this capex by investigating the use of alternative funding models rather than 100% equity purchase, such as the use of contractors (crushing and screening), vendor financing arrangements for certain parts of the processing plant and leasing for mobile equipment.
 - Modular design and construction of the CPP is expected to enable significant efficiencies when scaling up from CPP to larger scale 60ktpa plant.
 - CPP provides a shorter time frame to production and revenue generation – development and construction is expected to take 18 months and have other positive benefits such as providing validation of the process for potential funding partners and to generate further interest from potential offtake partners across a number of industries and geographical locations.
- Significant progress has been made since the Strategic Review of Ancuabe Graphite Project commenced in late October 2021, focused on bringing the Company's flagship project into production in the short term, at a small scale, low capex and on a commercially viable basis:
 - Offtake: Signed Binding Offtake Agreement for up to 100% of CPP graphite production, with a binding offtake agreement executed with Chinese graphite products specialist battery anode manufacturer and one of the largest producers of high value expandable graphite globally - Yichang Xincheng Graphite Co Ltd².
 - EPC contractor: Secured the support of Metallurgical Corporation of China (MCC) - for construction of the CPP. MCC are Triton's engaged EPC Contractor for the large scale Ancuabe Graphite Project. During the development and construction of the CPP Triton will endeavor to utilise MCC as the preferred equipment supplier which will assist with equipment finance which the Company expects will be sourced at attractive rates.

¹ Triton refers to the Announcement titled 'Triton delivers robust Ancuabe Definitive Feasibility Study and declares maiden Ore Reserve' dated 15 December 2017 and confirms that all of the material assumptions underpinning the production target, or the forecast financial information derived from the production target in the initial public report continue to apply and have not materially changed.

² Triton refers to the Announcement titled Binding Offtake Agreement Secured for Ancuabe Commercial Pilot Plant dated 9 November 2021

- Contractors: Actively seeking mine services contractors who have experience in graphite developments in Mozambique and Africa in general.
- Approvals: Commenced review of the applicability of current approvals already granted for large scale Ancuabe Graphite Project.
- Funding: Actively exploring alternative funding models and options such as the use of contractors, build-own-operate-transfer arrangements and offtake linked funding. Triton has commenced discussions with Western debt providers which was not initiated in the past.

Triton Minerals Limited (ASX: TON, **Triton** or the **Company**) is pleased to provide an update of its **Strategic Review** of the Ancuabe Graphite Project, focused on bringing the Company's flagship project into production in the short term, at a small scale, for low capex and on a commercially viable basis.

The primary objective is to establish a CPP, which can be brought into production in the near term, which will produce commercially viable quantities of concentrate which will prove the viability of both the product and of the large-scale project (60ktpa) in the longer term.

Pleasingly, the planned modular design and construction of the CPP is expected to enable significant efficiencies when scaling up from the CPP to the large scale 60ktpa plant, with the incremental cost of upgrading the plant to the large scale 60k tpa or beyond being significantly reduced.

The Company's ultimate goal for the Ancuabe project is the development of a large-scale project as planned in the DFS and previously approved by the regulatory authorities. The CPP is proposed to be located at the Ancuabe site in Mozambique.

In the DFS for the Ancuabe Graphite Project, Triton established the project as a globally significant graphite development project with strong returns (US\$298m, IRR 37%), targeting production of 60ktpa of high purity large flake graphite concentrate over a long mine life (27 years), with short payback period (3.7 years).

Triton is working towards establishing Ancuabe Graphite Project as the global graphite-industry benchmark by aiming to offer lowest cost production globally via diversified graphite product range. Ancuabe graphite is suitable to both the high-tech expandable graphite markets and battery grade graphite products.

Triton's Executive Director, Mr Andrew Frazer said:

"I am pleased with the rapid progress our renewed board has been able to deliver in a short period of time since the strategic review commenced in late October.

We are working tirelessly to become the second ASX listed graphite producer in Mozambique.

The modular design of the proposed commercial pilot plant is critical as it will enable shorter timeline to first production, with the ability to scale up to the large scale 60,000tpa of concentrate production as envisaged in the DFS.

Pleasingly, the graphite sector is seeing a renewed interest due to its use in batteries and the flame retardant foil and flame retardant building cladding.

What is important now is that Triton constructs the CPP in Mozambique as soon as possible so that we can commence production of large flake, high purity graphite for both fire retardant and battery markets.

Triton is delighted to have someone the caliber of Adrian Costello join the company to lead the strategic review, his considerable experience in the development and execution of projects will be invaluable as we push to unlock the value of our assets”

Strategic Review Works Completed and Results

As announced on ASX on 4 November 2021, the Company has engaged CPC Project Design (**CPC**) to assist with Strategic Review and Desktop Study of the Ancyabe Graphite Project. CPC’s engagement is to provide technical services to support the Triton Strategic Review team primarily in the area of processing and non-process infrastructure.

Triton is pleased to announce the appointment of Adrian Costello, to lead its Strategic Review team. Adrian is a well experienced CEO and has previously worked for companies such as Newmont, Normandy, Grange and recently was the CEO of GWR Group and was instrumental in successfully developing the C4 project at Wiluna, which made its first shipment recently. Adrian has long and extensive career, with 25 years in the resources sector and has experience in working on resource projects at all stages of the project life cycle ranging from studies/feasibilities, development and construction, operations, optimisation and closure.

CPC’s scope of works includes the estimation of capital expenditure and operating costs for the CPP and also the down scaling of non-process infrastructure and services requirements for a CPP. To this end CPC have completed the following work:

- Review of the 2017 DFS data
- Established a Process Design Criteria
- Process Flow Design and Equipment Listing
- Methodology was to use the factors derived from the Lycopodium DFS capex for the 1Mt/a plant

Following on from the above work complete, CPC have completed a desktop study incorporating capital and operating costs as follows:

Key Performance Indicator	DFS	Desktop Study
Ore Capable of being Processed (1)	1,000,000	250,000
Grade TGC (1)	6.2%	6.2%
Concentrate Capable of being Produced (1)	60,000	10,000
Initial Capex USD	\$99M	\$32M to \$52M
Graphite Price - USD/Tonne of Concentrate (2)	\$1,435	\$1,435
Opex - USD/Tonne of Concentrate	\$632	\$711 to \$750
Notes		
1 - Average Per Annum Life of Mine		
2 - Graphite Concentrate Basket Price as per DFS		

Initial Capital expenditure of between US\$32m to \$52m is significantly less than the US\$99m estimate for the 60ktpa plant in the DFS³. It must be noted the DFS estimated is nearly 4 years old and significant inflationary pressures in this time have been experienced.

Operating costs estimated of between \$711 and \$750 per tonne of concentrate, compared to \$634/tonne of concentrate in the 60ktpa plant in the DFS. This is significantly lower than the basket prices used in 2017 DFS.

Modular design and construction of CPP is expected to enable significant efficiencies when scaling up from Commercial Pilot Plant to the larger scale 60ktpa plant.

The CPP provides a shorter time frame to production and revenue generation, development and construction is expected to take 18 months and have other positive benefits such as providing validation of the process for potential funding partners and to generate further interest from potential offtake partners across a number of industries and geographical locations.

Offtake

Triton on 9 November 2021 announced it had signed a Binding Offtake Agreement for up to 100% of the CPP with Chinese graphite products specialist and one of the largest producers of high value expandable graphite globally and Battery Anode Manufacturers - Yichang Xincheng Graphite Co Ltd (**YXGC**). This agreement covers offtake for up to 10,000 tpa commercial production from CPP and materially advances and significantly de-risks the Strategic Review. Triton will continue working with other offtake partners in order to procure a wider geographical mix of customers.

Contractor Engagement

On 18 November 2021, Triton announced that it has held constructive discussions with Metallurgical Corporation of China (MCC) in relation to the CPP planned to be built at the Ancuabe Graphite Project in Mozambique.

The appointment of CPC to construct the CPP is in addition to the execution of an Engineering, Procurement and Construction (**EPC**) contract with MCC for the mineral processing facility and infrastructure for the large scale, circa 60,000 tonne per annum Ancuabe Graphite Project in Mozambique (as announced on ASX 24 September 2018).

Triton has confirmed with MCC that they are supportive of Triton's initiative for CPC to construct the Commercial Pilot Plant. These developments pave the way for Triton to bring the Ancuabe project initially into production on a small scale in the near term, prior to commencement of the large-scale project. In addition to the engagement of MCC as the EPC contractor to the postponed larger scale Ancuabe Graphite Project, Triton will endeavor to utilise MCC as preferred equipment supplier which may assist with equipment finance which the Company expects will be sourced at attractive rates.

³ Triton refers to the Announcement titled 'Triton delivers robust Ancuabe Definitive Feasibility Study and declares maiden Ore Reserve' dated 15 December 2017 and confirms that all of the material assumptions underpinning the production target, or the forecast financial information derived from the production target in the initial public report continue to apply and have not materially changed.

Triton has commenced engaging with mine services contractors who have had experience in both graphite, developments in Mozambique and Africa in general. An expression of interest process from contractors for services such as mining, crushing and processing plant will commence in the near future.

Approvals

While the large scale Ancuabe Graphite Project has all the necessary approvals in place for production, Triton has commenced a review of the applicability of these current approvals for the CPP to determine if any changes for approvals are required.

Triton will keep the market informed of developments in this regard.

CPP Funding

Triton is currently undertaking a partially underwritten capital raising where it is offering eligible shareholders a non-renounceable entitlement offer of up to approximately 238,835,383 New Shares on the basis of four (4) New Shares for every nineteen (19) Shares held, on the record date, at \$0.041 per Share to raise up to approximately \$9.79 million (**Entitlement Offer**).

Participants in the Entitlement Offer will be issued with free attaching options over Shares (**TONO Options**) on the basis of one (1) new TONO Option for every one (1) Share issued, for a total of up to approximately 238,835,383 TONO Options, with each TONO Option having an exercise price of \$0.09 and expiring on 31 December 2023.

As announced on 12 November 2021, the Entitlement Offer has been underwritten by Lazarus Corporate Finance to \$4.33m. The Entitlement Offer closes on Tuesday 30 November 2021 and shareholders can contact the Company if they have not received offer documentation yet.



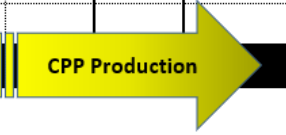
In addition to the Entitlement Offer, the Company Triton will seek to significantly reduce this capex by investigation of the use of alternative funding models as opposed to 100% equity purchase such as the use of contractors (crushing and screening), vendor financing arrangements for certain parts of the processing plant and leasing for mobile equipment and off-take linked funding as well as traditional debt.

Triton has commenced discussions with Western debt providers which was not initiated in the past.

It is planned to undertake a project financing package on a 70/30 debt to equity ratio significantly reducing the equity funding requirements for Triton.

Timeline and next steps

Triton is aiming to bring the CPP into production within 18 months or July 2023. Project works in December 2021 will focus on completing the strategic review and desktop study, then moving to a definitive feasibility study for the CPP, to enable a final investment decision to be made by the end of the March quarter 2022. Moving forward the following key works are planned to be conducted as per the schedule:

Activity	2021	2022				2023				2024	2025
	Dec Q	Mar Q	June Q	Sept Q	Dec Q	Mar Q	June Q	Sept Q	Dec Q		
Strategic Review/Desktop Study											
Definitive Feasibility Study											
Design and Engineering											
Request for Quotation											
Funding											
Approvals											
Decision To Proceed											
Project Development and Execution											
FEED and Detailed Design											
Tender/Procurement											
Early Works											
Construction											
Commissioning											
Operations											

This ASX release was authorised by the Board of Directors.

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