

MINING, EXPLORATION & GEOSCIENCE ADVICE RESPONSE

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Dear Clay

Project: Tritton Copper Mine – Modification 8 (Budgerygar Underground Deposit)
Stage: Modification Report and Resource & Economic Assessment
Development Application: DA41/98-Mod-8

I refer to Department of Planning and Environment correspondence dated 23 February 2022 inviting the Department of Regional NSW – Mining, Exploration & Geoscience (MEG) to provide comments on the Tritton Copper Mine – Modification 8 (Budgerygar Underground Deposit) (the Modification or the Budgerygar deposit) submitted by Tritton Resources Pty Ltd (the Proponent).

Executive summary

The Modification is proposed to allow for the extraction of the Budgerygar deposit, surface infrastructure changes and an extension of mine life of the existing Tritton Copper Mine (Tritton Mine).

Table 1: MEG determination estimate of total royalties

Parameter	\$m (2022 dollars)
Total Royalties received	5.9
Net Present Value (NPV) royalties (7% discount rate real)	4.6
Annual estimated royalties (average)	1.3 (approximate)

The Modification will generate:

- 223 additional full-time equivalent (FTE) jobs during operations from 2022 to 2028
- a production value around \$196 million in current dollars, with the NPV of this revenue stream at around \$154 million
- capital investment of about \$24 million
- an extended Life-of-Mine (LOM) of four years until 2028.

MEG considers the Modification will provide an appropriate return to the NSW Government

The Modification is considered to be an efficient use of resources. If the Modification does not proceed the economic and social benefits outlined above will not be realised.

Economic benefits of the Modification

The Modification is seeking an approval to extend the current LOM of the operating Tritton Mine from the current approved date of 31 December 2024 to 31 December 2028. The extension would allow mining to continue to at least the end of 2028, enabling an additional six years of production, producing copper ore for the Tritton processing plant.

The Modification would provide 223 additional jobs, and includes both FTE employees and FTE contractors, for the Tritton Mine over the period 2022 to 2028.

Over the life of the Modification, MEG has estimated that the value of the copper produced would be of the order of \$196 million in current dollars, with the net present value of this revenue stream at around \$154 million at a discount rate of seven per cent.

As the Modification forms part of an extension to the existing Tritton Mine, it is able to use much of the existing infrastructure. It is expected that copper from the Modification would be processed similarly onsite into copper concentrate which would then be transported by truck to the existing Hermingdale rail siding. The copper concentrate produced onsite would be transported by train to either Port Kembla or the Port of Newcastle for further refining in smelters in East Asia.

Capital expenditure for the Modification is approximately \$24 million.

Royalty calculation - assumptions

The Modification is an extension to an existing mine that produces copper. In general MEG agrees with the metals price assumptions provided by the Proponent for the years 2022 and 2023, however some downwards price adjustments have been made based on MEG's view of copper prices going forward.

Another important aspect of future royalty calculation for a proposed metallics Modification is the estimation of future annual production of each of the metals to be produced as a result of the Modification. After a rigorous analysis of the geological information provided by the Proponent, MEG is of the opinion that if the Modification is approved, the metals output in each of the Modification years as provided by Aeris could be achieved.

Explanatory note - A royalty rate of four percent applies to the value of all metals produced. The metals deductions are allowed on the price received and include: onsite treatment expenses, realisation expenses, onsite administration and depreciation. The net value after these deductions is referred to as the ex-mine value; the four percent royalty rate is applied to the ex-mine value amount. One of the most important assumptions in the calculation of future royalty is the estimate of future metals prices over the life of a modification.

Resource Assessment

Background

The Proponent is approved to extract approximately 10.2 Million tonnes (Mt) of copper ore by underground mining methods from the Tritton Mine. Tritton is expected to be exhausted by 2024 with reserves of about 5,000 tonnes (contained) copper remaining.

The Modification is to extract approximately 2.2 Mt of copper ore by underground mining at the nearby Budgerygar deposit. This would provide a four-year extension to the current LOM and allow for ongoing mining operations until 22 December 2028. The orebody footprint would be 100 metres x 50 metres — compared to the existing orebody footprint of 225 metres x 110 metres.

Size and quality of the resource

Since resources were reported in 2009 further drilling has intersected a folded sequence of lower greenschist facies pelites / psammopelites and greywackes of the Cambro – Ordovician Girilambone Formation. Lithologies are similar to the Tritton Mine area, with mafic volcanoclastics identified in both the hanging wall and foot wall of the deposit. Pyrite is the dominant sulphide with chalcopyrite the overwhelmingly predominant copper ore mineral. Mineralisation is controlled by an F4/D4 deformation corridor challenging the volcanic-associated massive sulphide (VAMS) deposit-style paradigm.

A poorly developed Quartz-Magnetite-Hematite (QMH) horizon, containing hydrothermal quartz, hematite, pyrite and magnetite, was identified towards the top of the primary mineralisation in the deeper holes. This zone is similar in appearance to the QMH alteration capping the Tritton deposit. Oxide mineralisation also occurs in the upper parts of the deposit. Previous drilling of oxide material was by reverse circulation (RC) methods and is not part of this resource estimate.

Since the last estimate in 2019, an additional 76 holes have been drilled. The Budgerygar mineral resource comprises an indicated and inferred resource of 2.6 Mt @1.5% Cu, or 39 Kt Cu utilising a cut-off grade of 0.8% (mineralised lodes are first delineated to a cut-off grade of 0.5%).

Table 2: December 2021 Budgerygar Mineral Resource (reported at a 0.8% copper cut-off grade)

December 2021 Budgerygar Mineral Resource							
Resource Category	Tonnage (kt)	Cu (%)	Cu metal (kt)	Au (g/t)	Au metal (koz)	Ag (g/t)	Ag metal (koz)
Measured	-	-	-	-	-	-	-
Indicated	720	1.7	12	0.4	10	10.3	240
Inferred	1,900	1.4	27	0.1	6	5.3	320
TOTAL	2,600	1.5	39	0.2	15	6.7	560

The deposit is narrow and steeply plunging. Drilling at the Budgerygar deposit has traced the mineralised system 750 metres down plunge to date and it remains open in that direction. The elongated geometry of the high-grade copper mineralisation and long down plunge dimension is a characteristic shared with other copper deposits discovered within the Tritton district (Figure 1).

The deeper, inferred portion of the resource contains considerably fewer holes with >1.5% Cu. Declining grades with depth is a feature of several of the deposits around Tritton. At 73%, the inferred component of the resource is relatively large resulting in a lower confidence overall. However, the upper part contains good grades at current prices. Additional drilling is planned over the remainder of the Inferred Mineral Resource at depth. The nature of the deposit and the ongoing method of drilling has in the past tended to upgrade grade and resource confidence.

Resource recovery

There will be no substantial change to the processing rate to produce copper concentrate at the existing mill. The style of ore is very similar to that currently mined and grade is also similar

While drilling in the deeper, lower confidence (indicated) portion of the resource is relatively sparse – analogous drilling methodology has been utilised successfully to upgrade resources for the nearby Tritton deposit.

JORC code considerations

The Proponent has completed resource and reserve estimations for the Modification in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC code) produced by the Australasian Joint Ore Reserves Committee. The JORC Code is an industry-standard professional code of practice that sets minimum standards for public reporting of mineral exploration results, mineral resources and ore reserves. Reserves are the economically mineable portion of a resource. A JORC compliant reserves report assists in independently assessing the commercial viability of the Modification and the proposed mining method.

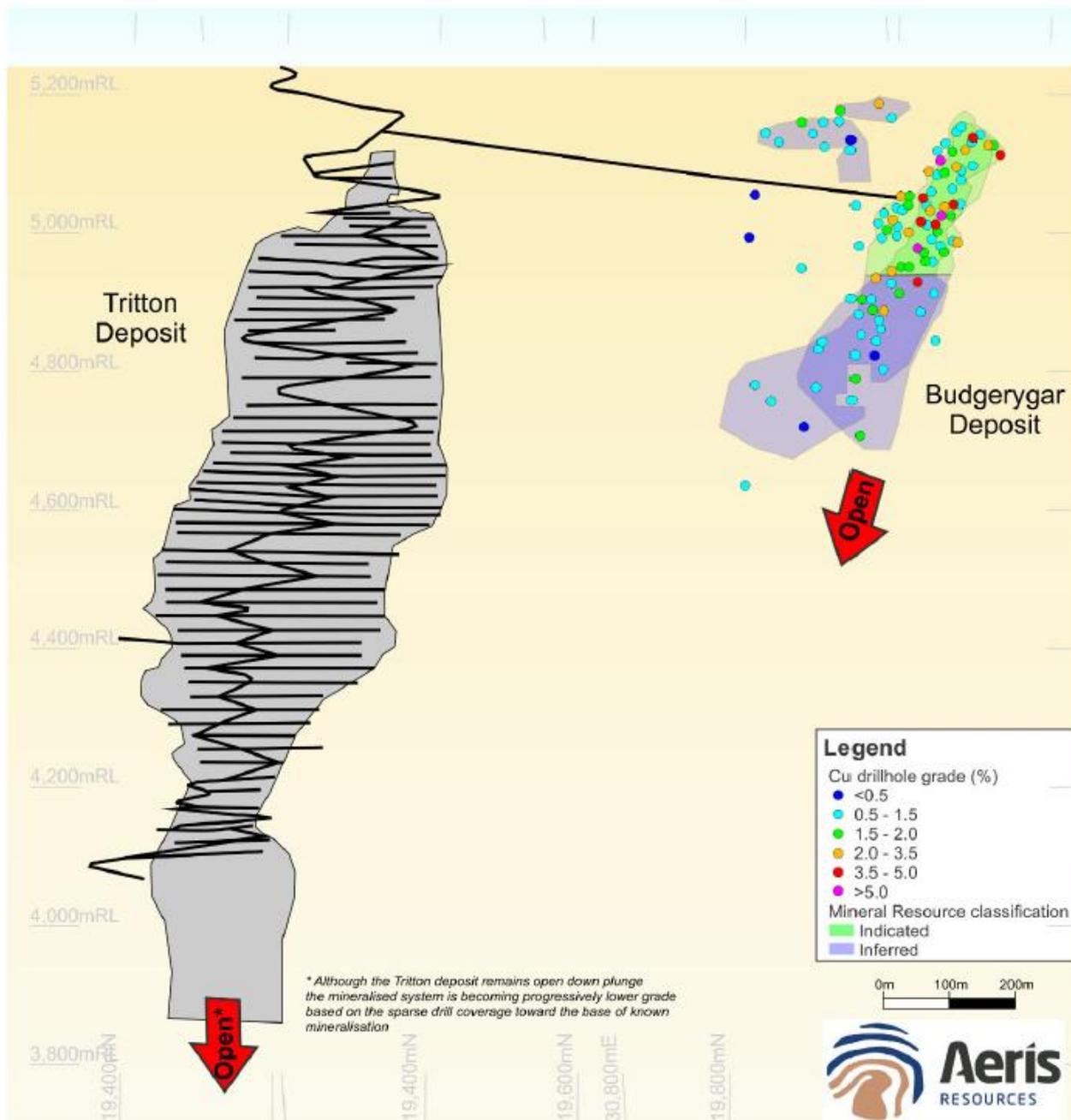


Figure 1. Section through Tritton and Budgerygar deposits (Aeris Resources Limited – ASX Media Release 1 December 2021).

In view of the opportunities and constraints outlined in the Proponent's Modification and based on the information currently available, MEG considers that the Modification is consistent with the objects of the *Mining Act 1992*. In addition, in relation to clause 2.21 of the State Environmental Planning Policy (Resources and Energy) 2021, the Modification represents an efficient development and utilisation of minerals resources which will foster significant social and economic benefits.

MEG is satisfied that, should the operational outcomes be achieved, the proposed mine design and mining method submissions adequately recover resources and will provide an appropriate return to the state.

The requirement for a mining authority and royalty liability

The requirement for a mining lease

Based on current title information MEG advises that the Proponent holds the appropriate titles as required for mineral extraction, with current rights including Cobalt, Copper, Galena, Gold, Iron Minerals, Lead, Silver, Sulphur and Zinc.

Based on current authority information MEG advises that the Proponent holds the appropriate authorities as required for mining operations as relating to the Modification.

Royalty Liability

The holder of a mining lease is also liable to pay a royalty for both publicly and privately-owned minerals (refer to section 282-285 of the Act).

Biodiversity offset assessment

MEG requests that the Proponent consider potential resource sterilisation should any future biodiversity offset areas be considered. The Proponent must consult with MEG and any holders of existing mining or exploration authorities that could be potentially affected by the proposed creation of any such biodiversity offsets, prior to creation occurring. This will ensure there is no consequent reduction in access to prospective land for mineral exploration or potential for the sterilisation of mineral and extractive resources.

Summary of review

MEG considers that should the Modification be approved; efficient and optimised resource outcomes can be achieved.

MEG requests that it be provided with an opportunity to review the draft conditions of approval before finalisation and any granting of development consent.

For enquiries on this matter, please contact Adam Banister, Senior Advisor Industry Advisory & Mining Concierge – Industry Development on 02 4063 6860 or mining.concierge@regional.nsw.gov.au.

Yours sincerely



Scott Anson
Manager Industry Advisory & Mining Concierge
Industry Development
Department of Regional NSW – Mining, Exploration & Geoscience
24 March 2022

For
Anthony Keon
Executive Director Strategy, Performance & Industry Development
Department of Regional NSW – Mining, Exploration & Geoscience