Mining, Exploration and Geoscience
Department of Regional NSW

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ADVICE RESPONSE: Crescent Head Ilmenite Stockpile Rehabilitation Project - SSD-30956841

Dear Rose-Anne,

I refer to Department of Planning and Environment correspondence dated 29 July 2022 inviting the Department of Regional NSW – Mining, Exploration and Geoscience (MEG) to provide comments on the Crescent Head Ilmenite Stockpile Rehabilitation Project - SSD-30956841 (the Project), submitted by Greencoast Environmental rehabilitation (the Proponent).

MEG position

The Project has adequately addressed MEG's environmental assessment requirements submitted in November 2021.

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

Executive summary

The Proposed Project involves the removal and rehabilitation of an abandoned ilmenite stockpile located on Crown Land near the township of Crescent Head. The Project is proposed to be completed over a 130-day operational period.

Table 1: MEG estimate of total royalties

Resource parameter	$m (2022 dollars)
Total royalties received	$0.55m

The Proponent has not indicated that the Project will require any capital expenditure.

The Proponent has highlighted the project would result in the following economic benefits:

- a peak operational workforce of 50 full time equivalent (FTE) staff (based on 40 FTE for truck drivers, maintenance, and service staff, 5 FTE at Port and 5 FTE for site supervision)
- up to $12,690,000 anticipated operational expenditure, including, stockpile recovery and rehabilitation, road haulage, port operations, royalties and project expenditure

- MEG has estimated royalties of $550,000 over the life of the Project, as compared to the proponents estimate of $590,000. Given the uncertainties associated with commodity prices, exchange rates and resource recovery, the Proponent's estimate is considered reasonable
- total expected project revenue of $14,500,000.

Royalty Projections

Assumptions

The scoping study shows total product tonnes are expected to be 105,729 tonnes of ilmenite product at 35.9 percent TiO2 (ilmenite).

The Proponent has used an average sale price as $US104.5 per tonne for the stockpiled material, which is consistent with Consensus Forecasts' July 2022 ilmenite prices[1], given the current resource grade and considering price variations due to potential deleterious elements. The Proponent has calculated potential royalty returns at $590,000.

MEG have assumed an exchange rate of AUD $0.70, resulting in a total value of A$15,753,600 in sales. This will generate royalty returns of $550,000 over a one-year period using a royalty return of 3.5% including assumed allowable deductions. Assumed royalty rates will be similar to comparable projects such as Gingko/Snapper that used a 3.5% royalty return after deductions.

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

[1] US$104.5/0.359 = US$291.08; Consensus Economics' July 2022 Ilmenite forecast for 2022-23 is US$270

Resource Assessment

Project overview

The proposal is to remove and rehabilitate an abandoned ilmenite stockpile from mining during the 1960-1980's. Ilmenite ores are now economically mined and stockpiles such as the one present at Crescent Head are routinely marketable.

The stockpile covers an area of approximately two hectares on the site of a former mineral separation plant that ceased operation in 1985. Ilmenite is an iron-titanium mineral that was a common by-product of former mineral sand mining and processing operations along much of coastal NSW and Queensland.

Raw Ilmenite is typically processed offshore to become a titanium-based product, including flux core welding wire and rods and of titanium sponge, used in a wide variety of applications including aerospace industries, high grade electronics, sunscreen, and high gloss paints.

Size and quality of the resource

The proponent previously estimated and provided a JORC 2012 to MEG as below.

Table 2: JORC compliant mineral resource

Classification	Stockpile	Tonnes	Grade (%TiO2)
Probable Reserves	Northern	58,329	42.6
	Southern	47,400	27.6
Total		**105,729**	**35.9**

Resource recovery

The material is 100% ilmenite with no processing required.

No heavy minerals other than ilmenite are reported (for example, leucoxene or rutile). However, they are likely to be in very low abundance after mineral separation and no significant resource sterilisation would be expected.

JORC code considerations

The Proponent has completed resource and reserve estimations for the Project 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 Project and the proposed mining method.

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

MEG notes that a minor quantity of monazite, a mineral common in sand, may be present in the stockpiled ore. Monazite is classified as a "radioactive substance" under the *NSW Radiation Control Act 1990*. While the stockpiles may contain small traces of monazite, the site has previously been surveyed for radiation levels and independently assessed. Radiation levels will be unlikely to be above approvable limits/classified as radioactive material under the Environment Protection Authority "Waste classification guidelines - Part 3: Waste containing radioactive material".

The requirement for a mining authority and royalty liability

The requirement for a mining lease

As Ilmenite is a prescribed mineral under the *Mining Act 1992*, the Proponent is required to hold appropriate mining title(s) allowing for mineral extraction, such as a mining lease, to undertake mining.

MEG notes that the Proponent has lodged a mining lease application (Mining Lease Application 588 (Act 1992)) (MLA 588) over their existing Exploration Licence 8085 and the project area.

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).

Application of section 65 of the *Mining Act 1992* – development consents under the *Environmental Planning and Assessment Act 1979*

A development application under the Environmental Planning and Assessment Act 1979 must be approved before a mining lease can be granted. A mining lease will only be granted for activities specified in the development consent.

Section 65 states:

> *The Minister must not grant a mining lease over land if development consent is required for activities to be carried out under the lease unless an appropriate development consent is in force in respect of the carrying out of those activities on the land.*

The Mining Lease boundary *must be within* the project boundary of the development consent. Evidence of this should be submitted with any Mining Lease Application made to MEG, including a diagram that shows the location of the boundaries.

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 Project 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 and further information on this matter, please contact Adam Banister, Senior Advisor Industry Advisory & Mining Concierge Unit within the Industry Development Branch on 02 4063 6860 or mining.concierge@regional.nsw.gov.au.

Yours sincerely,

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for

Tony Linnane
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