

INVESTIGATION INFORMATION RELEASE

DATE: 4 September 2019

Improving rehabilitation, sediment and erosion controls at Castillo Copper exploration project

Overview

The NSW Resources Regulator's pro-active inspection program detected a range of alleged contraventions of the conditions of exploration licences associated with the Castillo Copper exploration project near Grafton, NSW. The inspection identified significant environmental concerns including inadequate sediment and erosion controls, soil erosion, migration of sediment into the environment and inadequate rehabilitation. The contravention of a condition of an exploration licence (EL) is an offence pursuant to section 378D of the *Mining Act 1992*.

This information release aims to provide guidance about improving rehabilitation, sedimentation and erosion controls.

Castillo Copper exploration project

Castillo Copper Limited is a base metal explorer that promotes exploration around the historic copper mine at Cangai, about 40 kilometres north west of Grafton in northern NSW.

Total Minerals Pty Ltd and Total Iron Pty Ltd are subsidiaries of Castillo. Total Minerals Pty Ltd carries out exploration activities under EL No. 8625 and Total Iron Pty Ltd carries out activities under EL No. 8635. These two exploration licences are adjoined.

Sedimentation and Erosion concerns

In November 2018 and March 2019, inspectors conducted site inspections at both exploration licences. Inspectors observed waste mounted on topsoil and inadequate erosion and sedimentation controls resulting in tunnel, rill and gully erosion. Inspectors also observed the migration of sediment into the environment, including waterways, which created potential harm to the environment.

Figure 1 below shows inadequate provisioning of sediment and erosion controls resulting in tunnel, rill and gully erosion and associated migration of sediment into the environment, including waterways.

Figure 1 Inadequate sediment and erosion controls



Figures 2, 3 and 4 below show poor management and storage of drill cuttings and associated plastic sample bags with evidence that cuttings have migrated into the environment, including waterways resulting in potential harm to the environment.

Figure 2 Poor drill cutting management and substandard erosion and sediment controls near a watercourse



Figure 3 Poor drill cutting management



Figure 4 Poor drill cutting management



NSW Resources Regulator suspends exploration licences

Both EL8625 and EL8635 were suspended by the Regulator on 19 December 2018. The Regulator also issued statutory notices to the licence holders pursuant to section 240(1)(c) of the *Mining Act 1992* requiring the immediate implementation of controls to rectify environmental impacts associated with the exploration operations.

Remediation

Extensive remedial works have been completed since the licence suspension and the issuing of the statutory notices. This has included installation of erosion and sediment control features, such as:

- low flow drains, swales across access tracks and installation of geofabric
- placing rock piles and sand bags to slow water flow in areas such as long road lengths and low flow drains
- application of vegetation (branches, leaves) across batters, slopes and disused access tracks to slow water flow, control erosion and accumulate resources for rehabilitation (e.g. soil, leaf litter and seeds).

Figures 5, 6 and 7 below show some of the remediation works undertaken.

Figure 5 Effective use of sediment and erosion controls, application of vegetation (branches) across slopes



Figures 6 and 7 Effective use of sediment and erosion controls in the form of rock checks and geofabric



The Regulator is continuing to closely monitor and enforce compliance obligations across both exploration licences in accordance with the *Mining Act 1992*.

Enforceable undertaking

The Regulator accepted an [enforceable undertaking](#) from Total Iron Pty Ltd and Total Minerals Pty Ltd on 22 August 2019 in relation to the alleged contraventions of the Mining Act. The reasons for the decision can be found [here](#).

Recommendations

The Regulator expects titleholders to comply with their obligations under the *Mining Act 1992* when undertaking exploration activities. This includes:

- obtaining the relevant statutory approvals under section 23A of the *Mining Act 1992* before commencing exploration
- complying with the terms of an exploration activity approval, including the statutory obligations to protect the environment
- ensuring adequate sediment and erosion controls are in place
- undertaking rehabilitation progressively after exploration is finished
- maintaining rehabilitation records.

Further information

- [NSW Resources Regulator, Exploration code of practice: Rehabilitation](#)
- [NSW Resources Regulator, Exploration code of practice: Environmental Management](#)
- [NSW Resources Regulator, ESG2: Guideline for preparing a review of environmental factors](#)
- [NSW Resources Regulator Exploration and mining rehabilitation fact sheet](#)
- [NSW Resources Regulator, ESG5: Assessment Requirements for exploration activities](#)

About this information release

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the NSW Resources Regulator or the user's independent advisor.

Visit www.resourcesregulator.nsw.gov.au to:

- learn more about your obligations under the *Mining Act 1992*
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