Rehabilitation Report

SINOSTEEL AUSTRALIA PTY LTD

Rehabilitation work on the Carpentaria Manganese Project
Borroloola, NT

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2 Introduction

2.1 Introduction

Sinosteel Australia (Sinosteel) contracted CSA Global (CSA) to carry out rehabilitation work on their Carpentaria Manganese Exploration Project near Borroloola in the Northern Territory. The project took place at two sites, Managoora Station and Seven Emu Station which are approximately 50km and 100km east of Borroloola respectively. The work was carried out by the author during October 2012.

2.2 Scope

The project involved the rehabilitation of forty drill sites and associated tracks on tenements EL26556, EL26557 and EL26539 in October 2012.
3 Drill Pad Rehabilitation

3.1 Drill holes

Drill holes were rehabilitated in accordance with the Construction and Rehabilitation of Exploration Drill Sites advisory note. PVC collars were cut to a depth of 40cm with a manual PVC pipe cutter. The holes were then plugged with concrete hole plugs and back filled. Soil was mounded over the hole in accordance with the guidelines.

Photo 1: Drill hole SERC001 after rehabilitation

3.2 Drill Pad Rehabilitation

No hazardous material was reported in the drill spoil and no evidence of hazardous material was identified. Small drill spoil piles were spread with a grader where possible and at some sites by hand to aid dispersion. The spoil mostly consisted of a fine powder that was easily dispersed. In some cases the drill spoil had set hard. These piles were broken up and dispersed. A few large spoil heaps which were created under the drilling rig cyclone were too large to remove by hand but they were sufficiently broken up to aid dispersion by the “wet season” rains.
All sites consisted of soft sandy soil. No compaction had occurred so the sites did not need to be ripped. Scarification was also not necessary, in many cases regrowth was already occurring. A grader was used to rehabilitate shallow sumps where they had been dug, but no other earthworks were required. The only exception was drill site SERC030. The sump on this site could not be rehabilitated as a machine was not available to do the work. Plans have been made for the pastoralist to rehabilitate this site with a loader when one becomes available. The drill spoil at this site will be spread at the same time.

All rubbish was removed from each site along with the wooden marker peg. Vegetation was re-spread where available.

Photo 2: Drill pad SERC028 after rehabilitation – vegetation already returning to site
Photo 3: Drill pad CARC008 – Available vegetation re-spread across site, sump filled
4 Tracks

4.1 Tracks

Raised blade clearing was used to create tracks where necessary. Most of the tracks held up well. Some sections required grading to mend and level ridges caused by heavy vehicles.

As the soil consists of soft sand, no compaction occurred as a result of exploration activities. The area of drilling is mostly covered by a thin 0.5-3m thick veneer of Quaternary fine sands overlying a 1-2m thick Tertiary lateritic duricrust developed at the top of 0-45m of Cretaceous sediments. Some areas of the drill access tracks consisted of powdery sand and are only negotiable with high ground clearance 4WD.

One of the existing tracks on Seven Emu Station that was already in poor condition may require some minor work and gravel fill may be needed to level some sections of this track. This can be done in liaison with the local station owner.

At the time of rehabilitation, a loader was not available to carry out this work so it will need to be completed at a later date. An example of this track surface can be seen in Photo 5 below.

Photo 4: Track in good condition
Photo 5: Fine powdery sands on section of pre-existing access track at Seven Emu Station
5 Conclusions and Recommendations

Thirty nine drill sites have been rehabilitated and one drill site requires further work. Some tracks required levelling and this was completed with a grader. A few sections of pre-existing track may require gravel fill at Seven Emu Station and plans were arranged with the station owner to do this when he has a loader available. This gravel fill work could not be arranged during this rehabilitation phase due to the non-availability of a suitable loader and a grader would not be suitable for this type of work.

To conclude:

- All drill pads except SERC030 have been rehabilitated in accordance with the Construction and Rehabilitation of Exploration Drill Sites advisory note to the extent that was possible.

- SERC030, requires a loader to complete its rehabilitation. Plans have been made for the pastoralist to rehabilitate this site with a loader when one becomes available.

- Some fine powdery sands on sections of pre-existing access track tracks may require gravel infill at Seven Emu Station.

- Some pads did not have vegetation spread across them as very little vegetation was available that could be spread by hand. Vegetation growth is already occurring at sites across the project so this is not expected to be a problem.

- Tracks have not been scarified or seeded, however this does not appear to be an issue. The soil has not been compacted and natural vegetation regrowth is already occurring.