

Stacker-reclaimer Rail Re-levelled

INDUSTRY

Mining

STRUCTURE

Stacker-reclaimer rail

PROBLEM

Ground subsidence

LOCATION

Western Australia, Australia

DURATION / YEAR

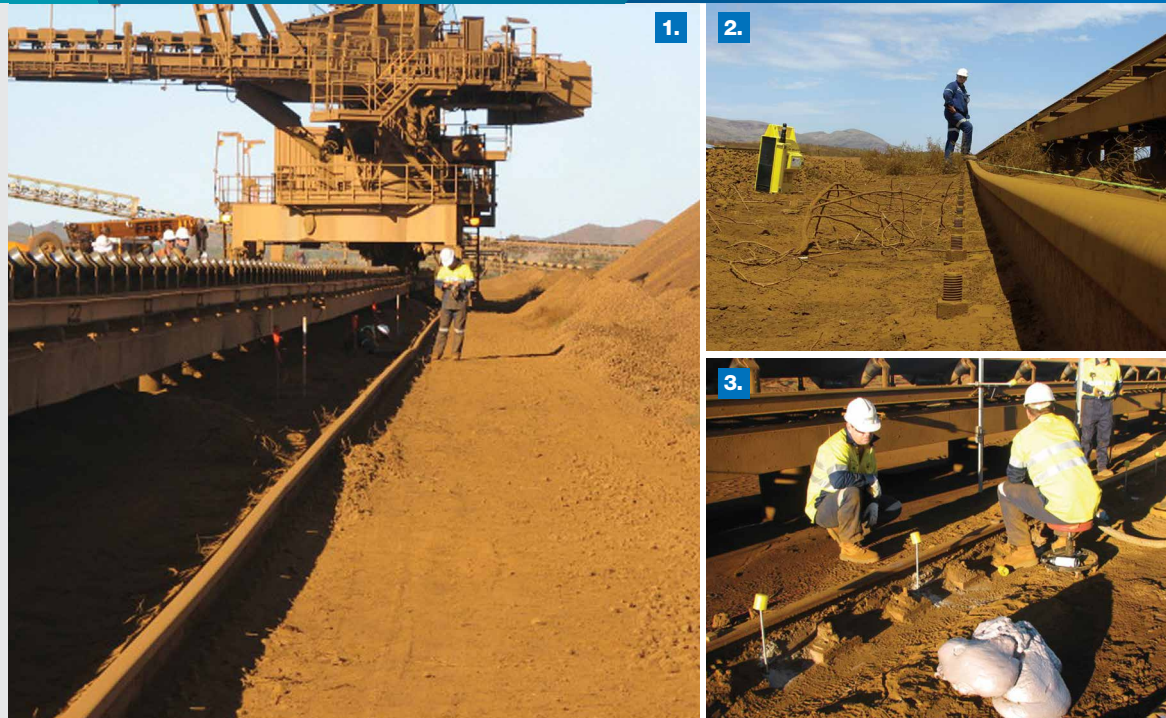
15 days / 2009

TECHNOLOGY

Uretek Slab Lifting &
Uretek Deep Injection

BUSINESS UNIT

Mainmark Australia



Summary

Following unusually heavy rainfall, subsidence had become evident. The rail had subsided and deflected beyond safe tolerances during operation of the stacker-reclaimer.

In 15 days Uretek Deep-Injection and Uretek Slab-Lifting had the rail re-levelled and fully re-supported.

Objectives

To re-level the stacker-reclaimer rail and to densify the sub-grade and re-support the affected portions of the rail and its concrete base.

Solution

Over a 15 day period, our team surveyed the rail, undertook DCP testing of the sub-grade, drilling and injected the foundation ground, and successfully re-established support of the rail. Re-levelling was achieved as required under the various affected parts of the rail.

All levels were monitored daily and submitted to the Client's engineers on a metre by metre basis. Densification of the sub-grade was checked by mine engineers by running the extremely heavy stacker-reclaimer backward and forward over the re-supported sections of rail, whilst monitoring deflection.

Following the works, the rail was surveyed as level, within original design tolerances and observed not to deflect under operational load conditions.

Pictured above: 1. This rail had deflected due to heavy rainfall and the continuous traffic of the extremely heavy reclaimer. 2. String lines indicate the subsidence. 3. Tubes (with yellow caps) inserted ready for injection beneath rail slab.