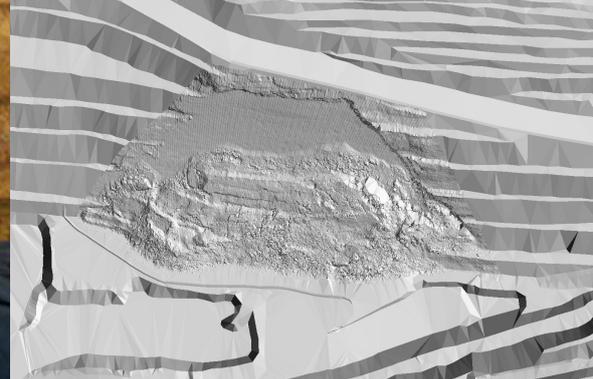




## WEST ANGELAS IRON ORE SLOPE STABILISATION D&C OPEN PIT HIGHWALL

WESTERN AUSTRALIA, AUSTRALIA



## GEOVERT STABILISE SIGNIFICANT HIGHWALL FAILURE ALLOWING ACCESS TO PREVIOUSLY QUARANTINED ORE

### PROJECT OVERVIEW

Rio Tinto contacted Geovert after the West Angelas pit suffered a significant high wall failure on the north wall of the Centre Pit North (CEPN). The strike of slip at the CEPN was 150m wide at the top and 270m wide at the toe and the crest was approximately 180m above the pit floor. The overhang remaining from the failure caused mining operations to cease in this section of the pit as the Ore was quarantined beneath as not safe to access. Not wanting to leave such a valuable commodity in the ground, Rio Tinto were looking for a safe and innovative engineered methodology to allow mining operations to continue safely and profitably for the mine.

### SOLUTION

After several detailed risk assessments between Geovert and Rio Tinto, we provided a detailed specification and engineered

design for the installation of rockfall protection and slip remediation to be installed on the north wall of the CEPN, removing the overhanging Geohazard. Prior to establishing onsite a detailed installation and safety plan were submitted for review outlining how the engineered design will be implemented in a safe manner. To complete the construction 5 drills and drill crews were established and were used for both rock anchoring of the crest and the slope but also for the installation of the TDR cabling for future monitoring. A significant amount of hand and mechanical scaling was also completed by roped access crews removing any hanging blocks. The engineered mesh was installed and tensioned over the crest area of the north wall of CEPN. Over 6000m<sup>2</sup> of mesh was installed with nearly 1000No. rockbolts completed using cranes, advanced rigging and roped access

techniques. Geovert provided 'as-built' documentation for the installations of the engineered design, verification and sign-off that the implemented rockfall protection met with the requirements of the design specification.

### RESULT

The end result was the total stabilisation of the remaining overhang and crest along with installing TDR's for continued monitoring of the planar failure. The client is now able to resume safe mining operations beneath the CEPN at West Angeles. Zero LTI's were recorded on this milestone project for Rio Tinto.

### Services related to this project

- Ground Support
- Rock Bolting
- Active Slope Stabilisation
- Scaling
- Geotechnical Investigation

More information is available online at [www.geovert.com](http://www.geovert.com)