GEOVERT

GROUND
ENGINEERING
PROJECT

GE

STATE HIGHWAY 4, MILFORD
DIAMOND FEATURE ROCK REMOVAL

MILFORD, NEW ZEALAND

GEOVERT

EXCEPTIONALLY DEMANDING PROJECT IN ALPINE CONDITIONS ..... GREAT KIWI SCENERY

PROJECT OVERVIEW:
Geovert assessed the feature with NZTA engineer's Opus, and determined the rock mass was failing in a combination sliding rotational toppling mechanism with less than 10% of the toe area providing the only point of attachment. As a result of this inspection the road was closed to all traffic until the drill and blast removal of a 25m high 2000 tonne unstable rock mass was removed. This was located 900m vertical above the western portal of the Homer Tunnel at 1800mASL and the contract period began in May which meant dealing with severe alpine weather conditions.

Several storm events resulted in 200km/h winds, minus 18deg temperatures, numerous snow events with over 2m falling during the contract period and over 500ml of rain.

SOLUTION:
The rockmass was deemed highly unstable and a drill and blast programme was implemented under urgency to remove it. A series of extensometer points were installed to monitor for any movement during drilling and for post blast inspection. The blast design was engineered to maximise fragmentation and reduce damage to existing highway furniture including the newly completed temporary portal extension structure. Drilling was completed for 23 holes, with 300kg of high velocity explosives used. Post blast scaling and inspection was completed to allow the road to reopen.

Services related to this project

Drill & Blast
Rock Bolting
Scaling
Geotechnical Investigation

More information is available online at www.geovert.com

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