BATHURST
RESOURCES LIMITED

Stockton Geotechnical Executive Summary

Buller Plateaux Continuation Project

February 2026

1. Executive Summary

A geotechnical review of the Stockton Mine was undertaken to support Bathurst Resources Limited's Fast Track Approval (FTA) application. The Stockton Mine area comprises both brownfield and historically underground mined areas and is an operational opencast pit. Stockton Mine is located within the Stockton Coal Mining Licence 37150 (and Ancillary Coal Mining Licences), Mining Permit 41810 and Mining Permit 52937.

Mine design focuses on extracting the [redacted] coal seam which is the middle and thickest of [redacted] coal seams [redacted] and includes seven open cut pits, associated stormwater sump excavations, ex-pit overburden engineered landforms (ELFs) and in-pit ELFs which are sequenced to partially backfill the open pits during mining. Access to the Stockton Mine area is from the Millerton Track Road that links to the 2 – 5 Stockton Mine haul road which is overland with minor cut and fill.

Geotechnical assessments have been completed to assess the stability of key highwall / sump cut and ELF fill profiles. [redacted]

Geotechnical models were developed for the Stockton Mine area using existing drillhole database information including lithology and geotechnical log data in conjunction with interpolated / triangulated lithological contact surfaces. In addition, down-hole geophysical data (Sonic / ATV/ Density) was collated to determine orientated drill core defects/fault intersects using WellCAD software. Extensive geotechnical laboratory test data exists across Stockton Mine to create a representative rock mass model and strength parameters. The use of back analysis of failures at Stockton are also used in a 2D limit equilibrium stability models to determine parameters that have been unknown.

A structural model was developed based on mapped / inferred fault intersections across the Stockton plateau. In conjunction with the collated rock mass defects, a kinematic assessment was completed to assess possible planar sliding, toppling and wedge failure interactions using generalised highwall cut orientations, which identified all failure types are feasible with sliding being the worst case as expected.

The stability of pit, sump, and ELF fill slopes were assessed for short term and long-term stability considering static loading, variable groundwater conditions and seismic loading depending on expected life span. In addition, stability of the pit slopes, sumps, and ELFs were considered around potential collapse/migration of historical underground workings.

Considering the proposed mine sequencing includes buttressing against most highwalls with the construction of in-pit ELFs, the short-term stability case during operations is the critical analysis. The primary short-term stability risk, which is common to coal measure deposits is sliding along pre-existing bedding planes shear (BPS) associated with the roof / floor of the coal seams. [redacted] deposits are generally near horizontal, draping and overstepping of these BPS surfaces can occur locally near faulting. The existing drillhole dataset defining BPS is limited as such this operational risk persists. However, it is a common geotechnical risk at most fault bound coal mines in New Zealand with risks mitigated through the implementation of ground control management plans (GCMP) and trigger actions response plans (TARP).

Slope failures (highwall / ELF) are typically expected to be local with limited displacements and retention within the cut footprint of the Stockton Mine operations areas.

In summary, Stockton Mine has an extensive drilling and lab test data set allowing for a good geotechnical model for most pits. The next stage of mine design will encourage ongoing investigation to fill in gaps in the geotechnical model around large-scale faults and analysis to resolve any residual geotechnical risks.