Open Pit Geotechnical Data Collection

Geotechnical Data Collection

Data Collection
• Geotechnical drill hole design for pre-feasibility and feasibility studies
• Drill rig supervision, oriented core logging and training loggers
• Piezometer installation, monitoring and piezometric analysis
• Provision of experienced loggers, geologists and hydrogeologists
• Collection, packing, storage and management of soil and rock coresamples for laboratory testing
• On-site point load testing service
• Rock mass and structural characterisation, domain modelling, stability analysis and pit design
• Provide QA/QC and validation of the geotechnical data
• Submit factual report, drillhole and core logging database, core photographs and laboratory test results

Photogrammetry and Structural Mapping
• 3D photogrammetry pit wall mapping data collection
• Scanline and window mapping data collection
• Data processing, analysis and structural interpretation using Adam Tech 3DM Analyst software
• Stereoplot analysis using DIPS software and structural interpretation

Microseismic Monitoring
• ESG (Engineering Seismology Group), an extensive suit of equipment, software and services
• Delivering real-time feedback on stress conditions, fracture migration, extraction methods
• Determine location, time and size of seismic events
• Optimize ground support design

Relevant Projects
• Rio Tinto Iron Ore Mines (WA) – Site geotechnical support, slope stability analysis, preparation of procedures and systems, training and mentoring
• BHPBIO Whaleback and Area C Iron Ore (WA) - Acting Superintendent /Senior Geotechnical Engineer: site support including geotechnical pit designs and mine operations support, establishment of Ground Control Management Plan and reporting systems, Detailed geotechnical open pit design for Area C (various pits), Whaleback Mine, geotechnical engineering support
• ERA Ranger Mine (NT) - Structural study, photogrammetry data collection, processing using Adam Tech 3DM Analyst software, major and minor structural interpretations
• Newcrest Gold Wafi-Golpu (PNG) - Drill rig supervision, geotechnical core logging and sampling, core logging
• BHPBIO Marillana Iron Ore (WA) - Drill rig supervision and geotechnical core logging and sampling, program planning, rock mass data analysis, sample lab testing
• BGL Bullabulling – Gibraltar (WA) - Geotechnical site investigation, reduction of historical geotechnical core logging data, geotechnical rock mass and structural data analysis, stability analysis, pit design and pre-feasibility study report