

2024/2025

Collaboration, Trust, and Delivery



About Company

PEJUNI is a mining and geotechnical consulting and contracting company born in Australia and registered in Tanzania.

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PEJUNI can provide on site evaluation of underground mining as well as the creation and interpretation of three-dimensional linear and nonlinear numerical model for shallow and deep or high extraction ratio mines. With vast experience from geotechnically challenging projects, PEJUNI will help to improve your mine design and thereby increase the net value of the project.



www.pejuni.com



our **Client**

Company name	Project	Activities and current status
Shanta Gold Mine-Tanzania	New Luika Gold Mine	 Training of geotechnical engineers On progress Pit design Geotechnical Audit
Tembo Nickel- Tanzania Lifezone /BHP	Kabanga Nickel Project (project and operational readiness)	 Third part geotechnical review of the completed design Geotechnical data collection Test pit for the TSF and, waste dump and process plant design SPT testing and soil sampling for the design of TSF facilities, waste dump and process plant Supervision of geotechnical data collection Geotechnical mine design
	Kahama project (smelting plant and TSF)	In situ testing of soil and rock for the design of TSF, and the smelting plant
Centamin - Egypt	Sukari Gold Mine	 Training of geotechnical engineers, this work is being completed in collaboration with Dynamic Geotech which is an Australian Company. On progress



Our **Service**

PEJUNI offers a focused technical advice and solution to the mining industry in areas of

- ▶ Mining engineering
- ▶ Geotechnical engineering for civil and mining projects
- ▶ Mine design,
- ▶ Geotechnical modeling,
- ▶ Data collection,
- Numerical modelling,
- Secondment,
- ▶ Training and mentorship of geotechnical engineers.

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Geotechnical

Engineering services

- ▶ Geotechnical inspections for underground and open pits
- ► Rock mass assessment and response to excavation,
- ▶ Portal evaluation, design, and construction management
- ground support scheme performance evaluation and design,
- ▶ Dilution modelling and evaluation of open stoping operations
- ► Rock mass assessment and geotechnical data collection
- Ground support QA/QC and auditing
- ▶ Stope design assessment and analysis
- ▶ Seismic system installation, maintenance, and analysis
- ▶ Instrumentation installation and assessment
- ► Legislative compliant audits and geotechnical system reviews
- ▶ raining and Mentoring programs for Geotechnical Engineers
- ▶ Rock fall and incident investigations
- ▶ Project management, coordination, monitoring and supervision of geotechnical drilling
- Contractor management

Geotechnical Engineering services offered in Construction Industry (roads, bridges, building and tunnels)

- Geological mapping
- Borehole drilling
- ► Test pit excavation
- ► Conducting Standard Penetration test (SPT) in the borehole
- Conducting Dynamic Cone Penetration test (DCP) in the test pit
- Soil and rock core logging
- ► Test pit stratigraphic mapping
- Disturbed and Undisturbed samples collection
- ▶ Providing laboratory test schedule accordingly and supervising
- Foundation depth recommendation
- ▶ Foundation type recommendation
- Foundation design
- Slope stability analysis and designing

Civil engineering geotechnical work

- ► Geotechnical investigation for tunnel design
- ▶ Rock mass assessment for tunnelling and ground support design
- Geotechnical drilling and test pitting
- ► Conduct Standard Penetration Testing (SPT) in boreholes for undisturbed and disturbed samples.
- ► Geotechnical logging and undisturbed sample collection, preservation, and transport to international standards for testing



Technical studies

- ► Mine planning and design
- Development of 3D geotechnical and structural model
- ▶ Numerical modelling (3D, 2D, Linear and Non-linear),
- ► Third part independent technical review of completed geotechnical work
- **▶** Geotechnical audit and compliance
- ▶ Geotechnical audits (as per Western Australian DMIRS compliance, technical reviews and gap analysis) and ground control management plans
- ▶ Preparation and development of the site specific ground control management plan

Project management and

government relation

- ▶ Project management, planning, coordination with stakeholders, monitoring and compliance with health, safety and security
- ► Supervision of geotechnical drilling work, tracking of progress as per the site project requirement
- ► Compliant with the local content legislation with approved local content plan.
- ▶ Preparing and application of permits to export mineral samples in accordance with the Mining Act,123 in a compliant and time efficient manner.

Soil lab and rock testing

- For your added convenience, we provide advanced geotechnical tests through our associated
- laboratory in Tanzania or at your preferred Lab
- ▶ We organize data collection and ensure timely testing of the results as per the project schedule
- ▶ We handle the samples and reporting just the same as your samples with our laboratory



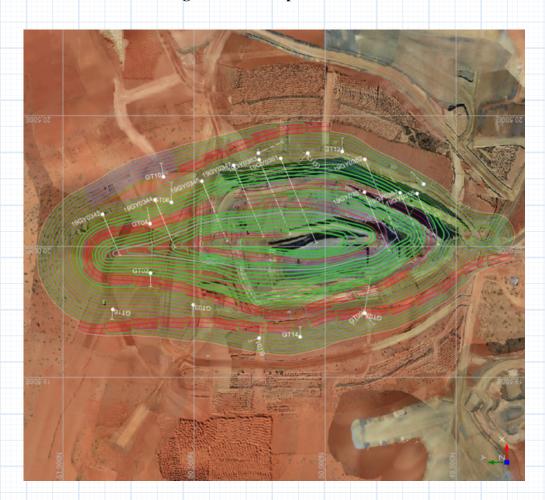
Geotechnical Services

- PEJUNI RESOURCES can provide the following services and solution in Geotechnical Engineering
 - Geotechnical Scoping, Pre-Feasibility and Feasibility studies for open pit and underground operations specifically focusing on hard rock mass settings
 - Geotechnical and geological logging services including supervision of the geotechnical data collection
 - Training of client workforce with implementation of improved geotechnical assessment systems (core logging and exposure mapping) with associated documentation
 - Operational support and geotechnical projects
 - ▶ Rock mass assessment and response to excavation,
 - portal evaluation, design, and construction management
 - ▶ ground support scheme performance evaluation and design,
 - ▶ dilution modelling and evaluation of open stopping operations
 - **>** seismic monitoring systems review and improvement,
 - ▶ Seismic hazard evaluation, and
 - **▶** paste fill process and improvement
- Geotechnical audits (as per Western Australian DMIRS compliance, technical reviews and gap analysis) and ground control management plans,
- Assist in the management of slope failures for open pits and fall of ground investigations for underground workings,
- Third part independent technical review of completed geotechnical work

Slope stability and

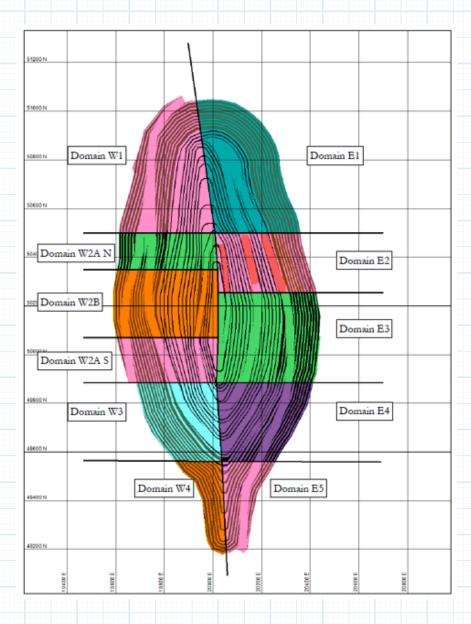
pit design

- ▶ Pit design from data collection and data analysis to detailed design level and report writing. Slope stability monitoring of pit walls, waste dumps and tailings dams' using both manual and automated systems like Quick Slope.
- **▶** Development of Slope Management Plans and other Geotechnical Hazard Management plans.
- ▶ Risk management to ensure safe mining under geotechnical-related hazards;
- **▶** Dewatering, depressurization monitoring and communicating the effects of the ground and surface water on the degradation of slopes.



Slope stability and pit design

Geotechnical domain development for open pit slope optimization



Geotechnical data collectio

- Core logging is the key for getting the data which is used for any geotechnical design
- Pejuni has the necessary the resource and expertise to help you and improve your geotechnical design



Geotechnical training and mentorship

- The training support provided by PEJUNI RESOURCES is comprehensive with enhanced development intervention that begin with a structured programmed adopted to your developmental needs and align to the site as well as general understanding of the geotechnical aspects.
- The geotechnical engineers will be able to learn and acquire the required technical knowledge and skills necessary to perform and execute your duty on any geotechnical challenge. The training programme involves lectures, fields work, case studies and projects and we believe this will enhance the learning from theory to practices

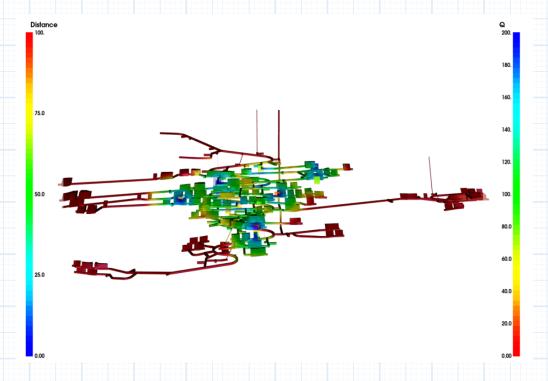


Geotechnical training and mentorship

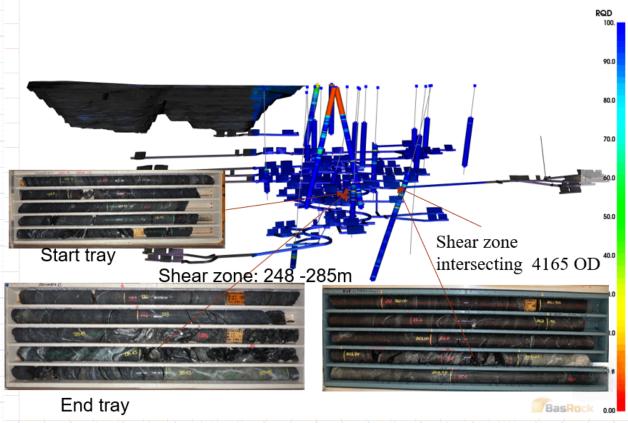
- · Field training of geotechnical engineers
- · Relating theory and practices in real life open pit



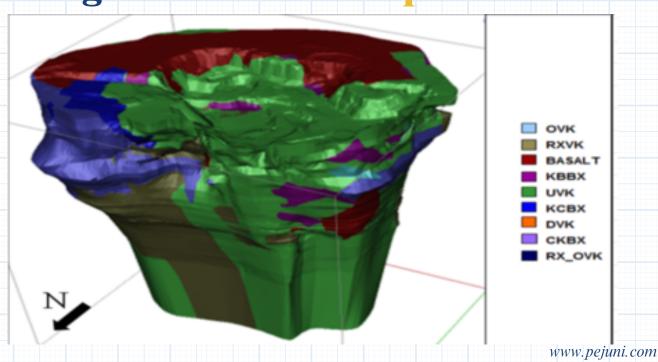
- Gap analysis in geotechnical collection



RQD model indicating shear zones



Geological model development



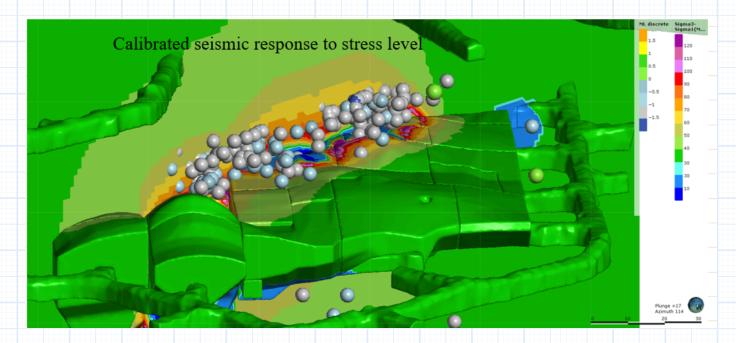
Numerical modelling

• Advanced numerical analyses of a wide range of problems with elastic andinelastic continuum modelling using software such as:

FLAC3D

RS3D, MAP3D, EX3D

- To evaluation of extraction sequence
- Ground support design and other excavation design strategy
- Back analysis of rock mass failure and forward analysis for the future design



Geotechnical investigations

Geotechnical investigation program design and management

- On-site geotechnical data collection, interpretation, and management and staff supervision of geotechnical drilling strategy
- · Core logging, geotechnical and geological mapping
- Rock mass classification using the geological strength index and rock mass, mining rock mass, and Q ratings
- Structural geology evaluation, rock mass structural fabric analysis, and geotechnical domain evaluation

Get In Touch



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