



## **COMPANY OVERVIEW, SERVICES AND KEY PERSONNEL**

Bastion Geotechnical Pty Ltd was established in 2019 to offer high quality and timely hard-rock geotechnical engineering consultancy services to the mining industry for both open pits and underground projects across all commodities.

Bastion Geotechnical offers a holistic approach to management of geotechnical duties based on our personnel's 25+ years of experience in the mining industry and is pleased to offer the following services to complement and enhance operations existing management practices.

### **GENERAL DUTIES AND TECHNICAL REVIEWS**

- Facilitation of geotechnical hazard and risk management assessments.
- Expert review and technical audits.
- Peer and technical reviews.

### **CORE COMPETENCIES**

- Mentoring and training of professionals and workforces.
  - Geotechnical hazard awareness training.
  - Geotechnical and structural core logging training.
  - Cell and scanline mapping training.
  - Photogrammetry interpretation training.
  - Software training (Dips, RocLab, Slide, Phase2, Map3D, Vulcan, GEM4D, Survey123, SQL Server, WellCAD).
- Preparation of video and competency/training material.
- Supervision of geotechnical data collection activities.

### **GEOTECHNICAL DATA**

- Geotechnical data collection and interpretation.
  - Cell, scanline and large structure mapping.
  - Geotechnical and structural core logging.
  - Geophysics, including televiewer and gamma logs.
- Core-photo logging.
- Photogrammetric model construction and interpretation.
- Large structure modelling.
- Forensic back-analysis of falls-of-ground.
- Geotechnical laboratory sample selection, preparation, results interpretation and reporting.
- Data compilation, conversion, validation and review.
- Geotechnical database setup, maintenance and review.



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### **GEOTECHNICAL DESIGN**

- Structural and rock mass domaining.
- Rock mass and structural (Large scale and fabric) characterization.
- Preparation of histograms, empirical charts and borehole logs.
- Geotechnical design and reporting for open pit and underground excavations.

### **OPERATIONAL**

- General contract works and leave coverage.
- Review of procedures, documentation and management plans.
- Fall of Ground incident investigations.
- Review of monitoring and data.



## COMPANY OVERVIEW, SERVICES AND KEY PERSONNEL

### KEY PERSONNEL



#### **Joe Seery**

Director and Principal Geotechnical Engineer

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LinkedIn: <https://www.linkedin.com/in/joe-seery-136842193>

MEngSc (Mining Geomechanics) Curtin University Western Australian School of Mines, Kalgoorlie, Western Australia  
BEng (Mineral Exploration and Mining Geology) Curtin University Western Australian School of Mines, Kalgoorlie, Western Australia

Joe Seery entered the mining industry in 1993, commencing studies at the Curtin University – Western Australian School of Mines, graduating in 1996 with a Bachelor of Engineering in Mineral Exploration and Mining Geology. During his time at the school, Joe was exposed to vacation work at the Western Australian operations of Bluebird open pit gold mine, Bellevue Gold Project (underground) and completed an undergraduate thesis for the Scuddles underground copper-zinc mine.

After graduation, Joe completed a transition from open pit and underground geologist through to geotechnical engineer over four and a half years at the Kanowna Belle Gold Mine located near Kalgoorlie Western Australia, culminating in the completion of his Master of Engineering Science in Mining Geomechanics postgraduate thesis.

Joe then worked in the Pilbara region of Western Australia in the open cut iron ore operations now operated by Rio Tinto Iron Ore in a number of roles in the geotechnical discipline.

Joe joined the consultancy Pells Sullivan Meynink and consulted on a number of projects including the commodities of Iron Ore, Gold, Lithium/Tantalum and Coal. Joe gained some international exposure providing services to mines in Mali and Papua New Guinea.

Prior to launching Bastion Geotechnical, Joe worked at AngloGold Ashanti for over five years. Notable achievements included the conception and maintenance of a world-class geotechnical data management system, completion of a number of geotechnical studies and provision of advice and training in geotechnical competencies. Joe gained the bulk of his global experience in the countries of Argentina, Brazil, Colombia (including porphyry copper), Ghana, and Tanzania as well as supporting three operations/projects located in Western Australia. The operations and projects spanned the spectrum from Scoping Study through Conceptual Study, Pre-Feasibility, Implementation to Operations.



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### **Rezvan (Rose) Mirabedini**

Geotechnical Engineer (MIEAust)

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BSc (Civil Engineering) Shahrood University of Technology, Shahrood, Iran.

After graduation in 2011 Rose started working in one of the first-grade geotechnical consulting engineers in Iran, Zaminkavan company. she passed some courses, focusing on in situ and laboratory tests on soil and rock, geotechnical concepts, and applications.

Rose started new position as a geotechnical engineer and was in charge of soil characterisation, geotechnical report writing, shallow and deep foundation design in a wide spectrum projects in infrastructure, Dams, and Gas&Oil, in Iran.

After 3 years she started new role as a geotechnical design engineer in Geoparsian Company. She involved geotechnical data interpretation, Soil and rock excavation, Slope stability analysis, designing retaining walls and soil stabilization across the Middle East.

Prior to working for Bastion Geotechnical, Rose was assessed as a professional engineer by engineers Australia.



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### EXPERIENCE

- 1998 – 2002 Numerical modelling of stress re-distribution as a result of mining the Kanowna Belle orebody.
- 2005 – 2006 Paraburdoo 4 West below water table geotechnical drilling and design. Collaboration with Pells Sullivan Meynink.
- 2008 Paraburdoo (Eastern Ranges) geotechnical drilling and design. Collaboration with Coffey Mining.
- 2008 – 2009 Paraburdoo (Channar Mining Area) geotechnical drilling and design.
- 2010 – 2011 Setup the acQuire geotechnical database and reporting tools.
- 2011 – 2014 Geotechnical design works for Rio Tinto Iron Ore
  - Paraburdoo Mining Area
  - Brockman Mining Area
  - Western Turner Syncline Mining Area
- 2011 – 2014 Geotechnical design works for BHP Billiton Iron Ore (Mining Area C)
- 2011 – 2014 Operational support and advice for
  - Greenbushes Tantalum/Lithium Mine
    - Geotechnical risk assessment workshop
    - Managing a Fall of Ground
  - Premier Coal Collie Mine
    - Managing instability adjacent to a public highway
- 2014 – 2019 Development and maintenance of the GeotAgg geotechnical database and reporting systems.
- 2016 – 2017 Gramalote Pre-Feasibility Study geotechnical design.
- 2016 La Colosa geotechnical design revision.
- 2017 Tropicana Long Island Study geotechnical data compilation, and validation.
- 2018 Butcher Well Scoping Study geotechnical data compilation, evaluation and contribution to study report.
- 2019 Siguiri Remote Lease Project geotechnical design.
- 2019 Map3D Training Professional Development.
- 2019 Trouser Legs JV Operational Support.
- 2020 Limit Equilibrium Slope Stability Analyses for a Pilbara Iron Ore mine.
- 2020 Geotechnical Design Verification for Bootu Creek Mine Masai 2B Stage 2 open pit.
- 2020 Geotechnical Design Specification for Bootu Creek Mine Chugga Far North open pit.
- 2020 Geotechnical Design Specification for Bootu Creek Mine Shekuma open pit.
- 2020 Technical Assurance Review of bowtie risk assessment for Boddington Bauxite Mine.
- 2020 Geotechnical Design Review of Kalana and Kalanako Open Pits, Mali.
- 2020 Provision of technical advice and GCMP support for Nathan River Resources Roper Bar Iron Ore Mine.
- 2020 Provision of technical and operational support for Bootu Creek Mine Tourag geotechnical design data acquisition.
- 2021 Back-Analysis and Geotechnical Design Specification for Hounde Gold Mine, Burkina Faso.
- 2021 Provision of technical advice for Nathan River Resources Roper Bar Iron Ore Mine.
- 2021 Geotechnical Design Specification for Fetekro Open Pit, Côte D'Ivoire.