



Résumé

Peter Jenkins

**Principal Geotechnical
Engineer**

Qualifications

**BSc (Hons) (Geology)
University of Durham 1980**

**MSc, DIC (Engineering
Rock Mechanics)
Royal School of Mines,
University of London 1990**

**Certificate in Rock Mechanics
Chamber of Mines of South
Africa 1995**

Professional Registrations

**MAusIM
MISRM**

Expertise

Peter's expertise as a geotechnical engineer covers project feasibility, mine design, operational issues and due diligence, mostly in underground hard rock metalliferous mines, but also with experience of open pit slope stability, design and operations. This includes

- Geotechnical investigations rock mass characterisation and determination of geotechnical parameters for mining design, layouts and support requirements
- Analysis and interpretation of monitoring data for underground and open pit mines and rock mass failures
- Raise bored shaft assessments and shaft pillar layouts
- Ground support strategies, support design including backfill, stope stability/design and regional stability
- Hydro scaling and in-cycle shotcrete
- Ground control management for underground mines and open pits
- Major hazard standards, audits and reviews

Experience

Peter has over 30 years' experience working in the mining industry on projects in Australia, Botswana, Bolivia, South Africa, Papua New Guinea and Zimbabwe. He has worked on a range of operational projects from greenfields and near-mine exploration through feasibility studies, to operational underground and open pit mines, as well abandonment and mine site rehabilitation activities. He has worked in a consulting capacity for 15 years. Project experience includes:

- **Geotechnical Investigations** - For underground and open pit mines including borecore logging, discontinuity surveys, pillar surveys and structural/geological analyses. Data interpretations for structural and behavioural characteristics of rock masses and using 3-D Mining Rock Mass Models (MRMM) to define design criteria. Numerical modelling and sensitivity analyses to establish critical design parameters.
- **Feasibility Studies** – Geotechnical input for new underground and open pit mines and new mining areas.
- **Underground Mine Design** - Designs for mining layouts, pillar systems, stope stability and stope support for various mines and different mining methods. Also for the protection of undermined tailings dams and rock dumps. Shaft pillar layouts and raise bore investigations.
- **Underground mine operations** – Experience ranges from shallow tabular open stoping, LHOS and narrow vein to deep seismically active longwall mining and caving operations. Backfill studies, implementation and supervision for hydraulic, cemented aggregate, paste fill and stoping under rock fill (SURF). Ground support strategies, trials and monitoring including hydro scaling and in-cycle shotcrete.
- **Subsidence** – Determination of subsidence risk for undermining permissions for operational underground mines, land hazard zoning above historical underground workings, subsidence monitoring and predictions for caving operations.
- **Open Pit Slope Stability** – Operational geotechnical experience includes the monitoring and management of large scale slope failures and mining through underground voids.
- **Geotechnical Risk Assessment** – Drafting, implementation and auditing of Major Hazard Standards for U/G Ground Control, Slope Stability, Inrushes and Subsidence, Code of Practice to Combat Rockfall and Rockburst Accidents (South Africa).

Background

As a graduate Peter initially worked for 5 years in mine geology and near-mine exploration in Botswana before developing his career in geotechnical engineering and gaining tertiary qualification. After working in the Bushveld platinum and Witwatersrand gold mines, Peter then moved to Australia as the Geotechnical Superintendent at WMC's Leinster Nickel Operation and then at Gold Fields' Agnew Gold Mine, before joining Dempers & Seymour Pty Ltd in 2004.