

SARRA HAYES



Personal details

Nationality	South African / Permanent Australian Resident
Profession	Senior Geotechnical Engineer
Specialisation	Mining Geotechnical Engineer
Year of birth	1973
Home Address	Melbourne, Australia

Key Experience

Sarra is a qualified rock mechanics engineer with approximately 8 years deep tabular mining experience in South Africa. During this time Sarra worked full time on site at various mines. She was responsible for all rock engineering aspects of a section including mine design, support system design, analysis of seismicity and its relationship to the mining. Sarra has also worked as a consultant. During this time most of her work has focused around numerical analysis as a tool to aid in mine planning and support design. She is currently working as a part time consultant.

Education and professional status

Graduate Diploma in Engineering (GDE), 1999
Advanced Certificate in Rock Engineering, 1998
Chamber of Mines certificate in Rock Engineering, 1996
Elementary Certificate in Rock Mechanics, 1995
BSc (Hons) in Geology, 1994
BSc Majoring in Geology and Chemistry, 1993

Software Application

Surpac
Rockscience Unwedge®

Software Application

SWedge®
Map3D
SLIDE®
Phase²
JDi / Trace / JMTS

Language ability

English - fluent

Experience Record

May 2009 – Current	Senior Rock Mechanics Engineer - Geohart Consultants
	<ul style="list-style-type: none"> ➤ Wiluna Gold Mine (Australia) – Seismic Damage Review; Seismic Data reviews ➤ Straits Resources (Australia) – Tritton Copper Mines underground mine – Geotechnical site assistance ➤ Kumba Resources / Anglo American – Iron Ore Mine (SA) - Geotechnical review of open pit mine design ➤ Cortona Resources (Australia) – Dargues Reef Underground Goldmine – Geotechnical feasibility study including stope design criteria and development support design ➤ Xuandong Underground Coal Mine – (China – Hebei Province) – Assist with regional and local strata review and presentation to mine personnel on findings. Development of Map3D model. ➤ Citi Gold Limited (Australia) – Geotechnical design of bord and pillar layout. Site investigation of local strata conditions. ➤ Report writing ➤ Numerical modelling (Phase2, Map 3D) ➤ Tender preparation
March 2007 – May 2009	Contract Senior Geotechnical Engineer – Mining One Consultants
	<ul style="list-style-type: none"> ➤ Geotechnical data analysis ➤ Map3D modelling set up, analysis and reporting as per project requirements

Experience Record

March 2006 – Dec 2006	Contract Senior Rock Engineer - MIDDindi Consulting
	<ul style="list-style-type: none"> ➤ Sub contracted by MIDDindi Consulting to write rock engineering related training material for the South African Qualifications Authority (SAQA) ➤ Research and compilation of training material for registered unit standards. Credits are awarded to candidates who are assessed to be competent in each unit standard. These credits count towards eventual qualification in a specific field.
March 2005 – March 2006	Rock Engineer – Coffey Mining
	<ul style="list-style-type: none"> ➤ Map3D modelling set up, data analysis and reporting.
March 2003 – August 2004	Rock Engineering Consultant – Groundwork Consulting
	<ul style="list-style-type: none"> ➤ Design of statistics course and handbook on quality assurance methods for Rock Engineering practitioners ➤ Numerical modelling of shaft pillar extraction for various mines ➤ Quality assurance monitoring for mining timber suppliers
June 2002 – October 2002	Project Assistant – Geodata CC
	<ul style="list-style-type: none"> ➤ Work with TNTmips GIS software ➤ Enhance satellite imagery
March 2001 – May 2002	Senior Rock Engineer – AngloGold Ashanti – Western Deep Levels (TauTona)
	<ul style="list-style-type: none"> ➤ Responsible for all Rock Engineering issues in the Upper Carbon Leader Section of TauTona Mine ➤ Design of regional and local support systems ➤ Design of optimal mining layouts based on numerical modelling in conjunction with mine planning departments ➤ Investigation of all rock related accidents ➤ Attending of and input to all monthly planning meetings ➤ Compilation and monitoring of seismic information
Nov 2001 - March 2001	Senior Rock Engineer – AngloGold Ashanti – Regional
	<ul style="list-style-type: none"> ➤ Design of a support costing model ➤ Compilation of a training programme and career development path for Rock Engineering staff

Experience Record

Jan 1997 – Oct 1999	Senior Rock Engineer – AngloGold Ashanti – Western Deep Levels West (Savuka)
	<ul style="list-style-type: none"> ➤ Responsible for all Rock Engineering issues at Savuka Mine but reporting to the Rock Engineering Manager ➤ Design of regional and local support systems ➤ Design of optimal mining layouts based on numerical modelling in conjunction with mine planning departments ➤ Investigation of all rock related accidents ➤ Attending of and input to all monthly planning meetings ➤ Design of a support costing model ➤ Compilation of a training programme and career development path for Rock Engineering staff
Oct 1995 – Dec 1996	Strata Control Officer – AngloGold Ashanti – Western Deep Levels East
	<ul style="list-style-type: none"> ➤ Calculate Energy Release Rate from numerical modelling on a monthly basis ➤ Calculate Face Shape Index on mining faces ➤ Assess local ground conditions and recommend appropriate support types and blasting practices ➤ Attend monthly planning meetings with Senior Rock Engineering Officer
June 1995 – Sept 1995	Assistant Strata Control Officer – AngloGold Ashanti – Western Deep Levels East
	<ul style="list-style-type: none"> ➤ Digitizing of monthly face advance and numerical modelling on the mining faces to calculate Energy Release Rates. ➤ Calculate Face Shape Index on mining faces ➤ Assess ground conditions and recommend support ➤ Calculate support costs