

Wouter Hartman

2016

Principal Geotechnical Engineer RPEQ, MAusIMM(CP), BSc (Hons), MSc, MBA

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Nationality: Australian

Year of Birth: 1968

KEY EXPERIENCE

Wouter established GEOHART Consultants in 2008 with the intention to consult to the civil and mining industry on a range of issues. Wouter has 28 years industry experience of which 24 years have been dedicated to mining and civil engineering geotechnical projects for civil infrastructure, underground / open-cut mining operations / civil tunnelling and dams/tailings consulting in Mongolia, Vietnam, China, Australia, Chile, UAE, Dubai, Indonesia and South Africa. Wouter has a range of deep, intermediate and shallow mining experience in the following commodities: Gold, copper, lead/zinc, shallow / intermediate / deep platinum, copper, lead/zinc, gold, brown and black coal mining experience. The mining and civil geotechnical experience is coupled with project management of a number of small to large projects. Wouter has in recent times being involved in driving change to Ground Control Management Plans / TARP's / Dams/Tailings Consequence Categories and have provided advice to minor and major organisations. Wouter has extensive experience in risk management, monitoring and damage assessment and stability for various civil and mining excavations. Wouter has been involved with research activities associated with the shear rigidity of rock reinforcement elements in association with the Mining Research Centre UNSW-Sydney-Australia and ACARP. Wouter has also been instrumental in the development of a world first field shotcrete shear testing device and has extensive experience in shotcrete applications for open cut mines, civil rock and soil slopes, underground mine and tunnel excavations.

Project Management

Wouter has successfully managed a number of consulting projects locally and internationally. He has demonstrated ability in managing the technical, budget and time aspects of projects, resulting in high quality outcomes for key project stakeholders.

Team Development

Wouter has successfully integrated multidisciplinary consulting teams by conforming to client's requirements and leading teams to achieve agreed goals. As a consultant, he has coached/trained a number of consultants to work and value their contribution to the team.

Communication

As a consultant and business manager, Wouter's verbal and written communication skills have developed extensively by working with operations personnel, senior management and interpreters of international clients. These roles developed his communication skill to be clear, concise and effective to achieve outcomes.

Operating Systems

Wouter has developed new KPI's based on key drivers to monitor and manage senior consultant's performance, resulting in improved productivities and delivering reduced unit costs. KPI's for mine planning programs were also introduced to ensure projects can be executed efficiently in the scheduled areas.

Change Management

He has implemented changes to operating practices to increase technical services and consultant's productivity and transforming small projects to substantially larger projects and particular with regards to Geohart's business practice. Key areas of changes were implementing Geohart's operating systems, safety programs and ethical culture. This enabled the provision of high quality services to clients.

EDUCATION AND PROFESSIONAL STATUS

- MAusIMM(CP) / RPEQ
- Advanced Tailings and Mine Waste Facility Design, Construction, Operation, and Closure Training – Jack Caldwell
- PhD Candidate (Ground Support Subject Shear Loading): Geomechanics, Advance Geomechanics, Risk Management Courses – UNSW (NSW Australia) – (2002-2005)
- MSc (Rock Engineering), University of Pretoria (SA), 2000
- MBA – Strategic Management – University of Potchefstroom (SA), 2000
- BSc (Hons) – Strata Control - University of Pretoria (SA), 1998
- Advanced Certificate in Rock Mechanics, 1998 – COM – SA
- Certificate in Rock Mechanics, 1997 – COM - SA
- BSc (Geology) - University of Pretoria (SA), 1990
- Bowtie XP Training Risk Assessment Software;
- CABA Training (Drager, & Sabre CABA, FSR, CSE) – Singleton – HV 29510
- Working from heights certified training - Queensland
- Coffey International Frontline Management – Course (2007)
- QMS 1, 2, 3 – Quarrying & Mining Safety Management, National On Site Training – (QLD - 2003)

Member AUSIMM, Member of Latrobe Valley Geotechnical Group (LVGTG); Member of IQA, Committee Member of ATS 2004 - 2011 Committee), Member ATS, Member EAGCG, Member AGS (ISRM), Member SANIRE; Member of CIM

ROLES AND EXPERIENCE

- **Principal Geotechnical Engineer & Director | Geohart Consultants (Australia) / Geohart Limited (Australia/New Zealand) - September 2008 – Current**
- **Principal Geotechnical Group Leader | Halcrow Pacific Pty Limited - May 2008 - September 2008**
- **Principal Geotechnical Engineer | Coffey Mining: September 2007 - May 2008**
- **Associate Geotechnical Engineer | Coffey Mining: January 2006 - September 2007**
- **Senior Geotechnical Consultant | GHD: Sept '04 - Dec '05**
- **Senior Geotechnical Consultant | AMC – Consultants: July 2003 - September 2004**
- **Senior Geotechnical Engineer | Newmont Australia – Pajingo Operations: December 2002 - July 2003**
- **PhD Candidate; Rock Engineering / Geotechnical Consultant | The University of New South Wales: November 2000 - December 2002**
- **Senior Rock Engineer (Projects) | Impala Platinum Mines, South Africa: May 1999 - November 2000**
- **Act. Rock Engineering Manager | Impala Platinum Mines: August 1999 - June 2000**
- **Rock Engineering Officer | Impala Platinum Mines, South Africa: January 1997 - April 1999**
- **Acting Rock Mechanics Officer | Vaal Reefs Exploration and Mining Company Limited, Anglo American Corporation (Anglo Gold) May 1996 - January 1997**
- **Strata Control Officer | Vaal Reefs Exploration and Mining Company Limited, Anglo American Corporation (Anglo Gold) – South Africa: March 1994 - April 1996**
- **Project Assistant | Vaal Reefs Exploration and Mining Company Limited, Anglo American Corporation (Anglo Gold) – South Africa: August 1993 - March 1994**
- **Field Assistant | De Beers Consolidated Mines Transvaal Diamond Exploration (TDE) – South Africa: March 1992 - December 1992**
- **Student Field Assistant | De Beers (Transvaal Diamond Exploration): October 1988 - January 1992**

PUBLICATIONS (REFEREED PAPERS)

- Building a Strata Instability Principal Hazard Management Plan – AUSIMM Conference (August 2014 – New Zealand)
- Filling the Cracks (Co-Author) – Mine subsidence Conference in Hunter Valley (May, 2014 - Australia)
- Is Mining Coal at a 900M Below Surface at the Xuandong Coal Mine in China Challenging or Just Interesting Rock Mechanics? – 31st Ground Control Conference, Morgan Town, US, 2012.

- Block modelling for the purpose of visualising geotechnical borehole data at Tritton Mines – Melbourne, Australia, ANZ 2012 Conference.
- Managing Geotechnical Risk through Non-Destructive Rock Reinforcement Testing Trialed at the George Fisher Mine, Mt. Isa. Second Ground Control in Mining Conference. Sydney, 2010.
- Non-Destructive Testing at Sunrise Dam Gold Mine, ITA Conference Vancouver, May 2010.
- Non-Destructive Testing of Rock Reinforcement in Australian Mines – February Coal 2010 Coal Operators Conference, Wollongong.
- An integrated Geotechnical Service at Endeavor Mine, ACG News Letter, August 2006.
- Development of a laboratory facility for testing shear performance of installed rock reinforcement tendons, Virginia, Coal Ground support conference, Morgan Town, 2005.
- Risk Management Process for Practicing Geotechnical Engineers, AUSIMM, Bulletin, 2004.
- Understanding the Performance of Rock Reinforcement Elements under shear Loading through Laboratory Testing – A 30 Year History – Ground Control in Mining Technology and Practice, 10-13 November 2003.
- Application of the Q-System in Mine Tunneling on a South African Platinum Mine – October – SAIMM 2001 – Mining Journal, South Africa.
- Application of the Q-System in Mine Tunneling on a South African Platinum Mine – October – SANIRE 2000 – Bushveld Conference, South Africa.
- Lessons Learnt in Decline Support Design - October – SANIRE 2000 – Bushveld Conference, South Africa.

PRESENTATIONS

- No. 2-Shaft, Stope Panel Risk Rating System, Anglo Gold, 1995
- No. 2-Shaft, Tunnel Risk Rating System, Anglo Gold, 1995
- Lessons Learnt in Decline Support Design - October – SANIRE 2000 – Bushveld Conference, South Africa
- Application of the Q-System in Mine Tunneling on a South African Platinum Mine – October – SANIRE 2000 – Bushveld Conference, South Africa.
- Understanding the Performance of Rock Reinforcement Elements under shear loading through Laboratory Testing – A 30 Year History – Ground Control in Mining Technology and Practice, 10-13 Sydney, November 2003.
- Performance of rock reinforcement elements subject to shear loading, AGS, Melbourne - July 2005.
- How critical is mix design for your shotcrete applications, EAGCG, Melbourne - November, 2005.
- Shaft Stability Pillars – Geotechnical Risk Management Process, EAGCG, Townsville – May 2007.
- Non-Destructive Testing of Rock Reinforcement in Australian Mines – COAL 2010, Wollongong - February 2010.
- Non-Destructive Testing at Sunrise Dam Gold Mine, ITA Conference Vancouver, May 2010.

- Developments in Ground Control and Strata Control – UnderMine 2010 – June 2010.
- Managing Geotechnical Risk through Non-Destructive Rock Reinforcement Testing Trialed at the George Fisher Mine, Mt. Isa. Second Ground Control in Mining Conference. Sydney, 2010.
- Is Mining Coal at a 900M Below Surface at the Xuandong Coal Mine in China Challenging or Just Interesting Rock Mechanics? – 31st Ground Control Conference, Morgan Town, US, 2012
- Latrobe Valley Geotechnical Group Meeting 2014 – Brown Coal Structural Geological Mapping with I-Site.

WORKSHOPS / TRAINING ORGANISED

- Barro Group: Senior Management / Site Management / Operational Staff – Training workshop in Dam/Tailings Hazard Identification Process – 2015.
- GDFSuez: Hazelwood Mine Hazard Identification processes – Operational Staff / Management – 2014.
- Straits Resources: Hazard Identification Process for Senior Management / Technical Services.
- ATS – Technical Meeting on Rock Reinforcement Durability – 2009.
- Collingwood Mine – Bluestone Tin - Geotechnical Training for Mining Engineers and Geologists in aspects of rock mass classifications and ground support requirement assessments.
- Inspector of Mines – Geotechnical Training Orange 2007 (25 NSW mines Inspectors).
- Pajingo Geotechnical Hazard Awareness Training – Presentations 2003.
- Exploration Geotechnical Logging – Importance and Physical Parameters – Pajingo – 2003.
- Impala Training centre rock mechanics training refresher course and examinations – 1998.
- Impala Strata Control Observers – Setting the Impala Rock Mechanics Entry and Strata Control Exam 1997-1999.
- Miners hazard identification training following fall of ground fatality – Anglo Gold – Vaal River Operations – 1995.
- Shiftboss Strata Control Training Anglo Gold – Vaal River Operations – 1996.

HONOURS / MASTERS GRADUATE STUDENT SUPERVISION / MENTORING

- Luke Mahoney (BE Mining Engineering Honours thesis) 2002 “Analysis and understanding of the issues that affect the performance of Friction Stabiliser Bolts”.
- Luke Mahoney (ME Mining Engineering Master’s thesis) 2005 “Development of a laboratory facility for testing shear performance of installed rock reinforcement tendons.