

TECHNICAL SOLUTIONS **CONSULTING**

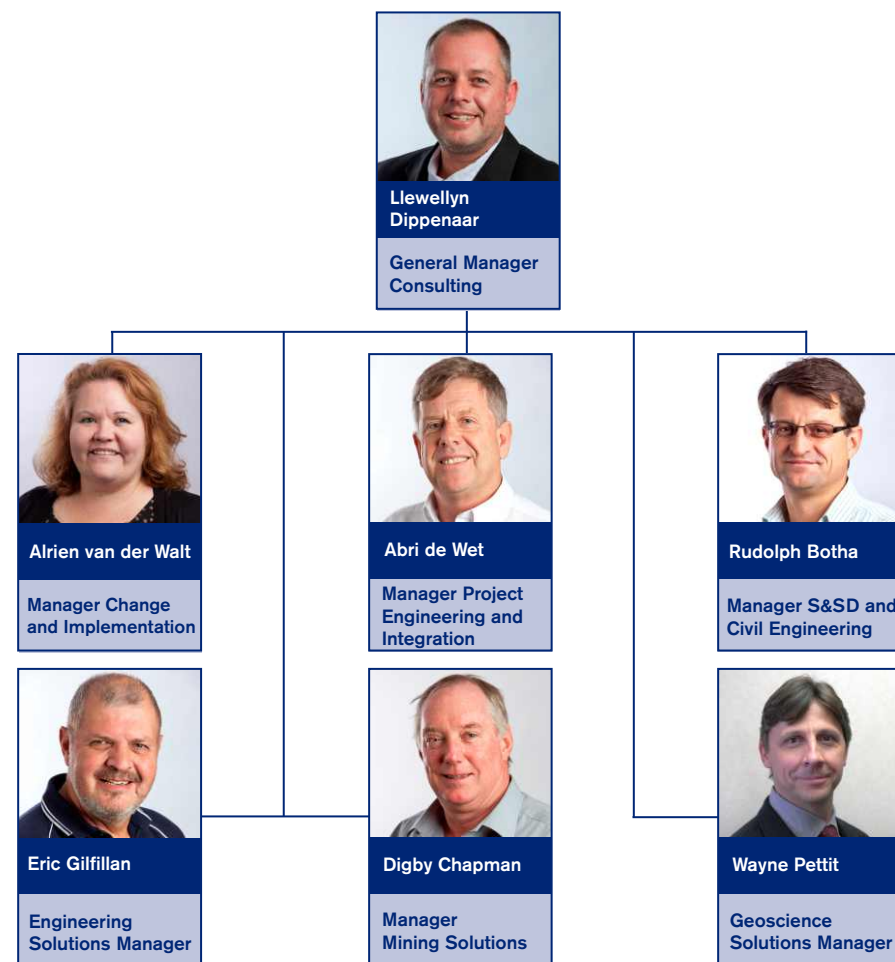


TECHNICAL SOLUTIONS: DRIVING VALUE FROM EXPLORATION TO MINE CLOSURE



CONSULTING

Consulting supports operational and project excellence by providing multidisciplinary techno-economic solutions and products, focused on sustainable mining, from exploration to mine closure. Our areas of specialisation include geosciences, project engineering and integration, safety and sustainable development, mining, drilling and blasting, comprehensive engineering services, quality assurance and change management specific to improved operational performance.



GEOSCIENCE SOLUTIONS

Manager: Wayne Pettit

Telephone +27 (0)11 638 2644

Email wayne.pettit@angloamerican.com

Geoscience Solutions provides Anglo American with comprehensive geoscientific services and support. It plays a key role in providing the exploration and geoscientific technologies essential for the discovery of potential ore bodies and for better characterisation of known ore bodies.

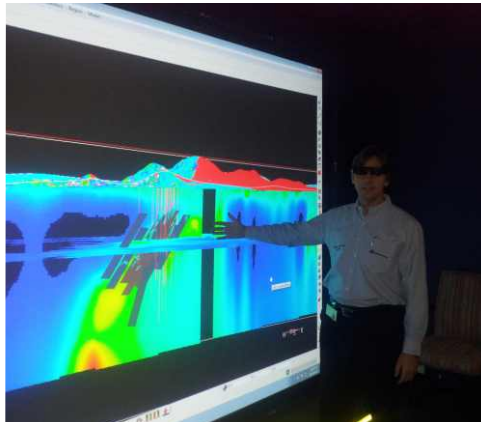
Sophisticated geophysical and hydrogeological services are provided to manage water ingress into mines, solve geotechnical challenges, assess water resources and monitor environmental impacts.

Geoscience Solutions partners with business units to support operations in complying with Group Technical Standards, the water performance standard and Anglo American's Environmental Way.

Besides offering specialist in-house geoscience services, Geoscience Solutions also provides essential oversight and assurance of geoscience programmes. The team processes and interprets data in line with benchmarked standards and liaises between contractors, mine staff and the corporate centre, assisting with specialised tenders.

Current offerings include:

- airborne surveys
- proprietary SQUID technology
- borehole geophysics
- in-mine geophysics (GPR and borehole radar)
- remote sensing and spectral geology
- seismic services consultancy and interpretation
- mine hazard mapping
- mine hydrogeological expertise, water alternatives and water resource assessment, geochemical assessments, and water management
- 3D integration, modelling and visualisation
- and spatial data management.



PROJECT ENGINEERING AND INTEGRATION

Manager: Abri de Wet

Telephone +27 (0)11 638 3900

Email abri.dewet@angloamerican.com

Project Engineering and Integration (PE&I) provides integrated project engineering and management support. PE&I works closely with business units and on project owners' teams, providing multidisciplinary, techno-economic solutions. The project management component ensures that all work, documentation and deliverables comply with Anglo American's Projects Way.

The team offers a number of differentiators including ongoing support to business units and projects, managed and implemented by appropriate specialists who deliver integrated engineering solutions backed by relevant documentation.

PE&I supports:

- project and engineering management
- project, implementation, technology integration and project cost engineers
- project co-ordinator
- discipline specialists
- and discipline project engineers.



CHANGE AND IMPLEMENTATION

Manager: Alrien van der Walt

Telephone +27 (0)11 638 2417

Email alrien.vanderwalt@angloamerican.com

Change and Implementation assists operations, business units, projects and departments to improve performance by guiding managers to use results as the way to build implementation capacity, empower the workforce and promote innovation.

Sustainable improvement is achieved by collaborating with clients in a process that includes identifying and jumpstarting critical opportunities; establishing cross-disciplinary, multilevel teams; and building a culture of on-site ownership of business challenges and solutions.

Value add

Rapid Results aligns performance to strategy one project at a time

2012 Applaud Award winner in the partnership category

+28% improvement in pit and haul road conditions rating at Debswana: Jwaneng mine

+50% reduction in operator related operational losses: Kolomela mine

Record production – Kolomela, Thabazimbi, De Beers' Voorspoed and Kimberley mines

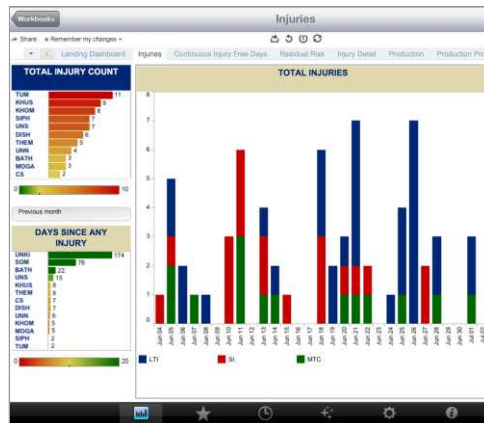
Platinum review – helping accelerate implementation

+\$500m value implemented using Rapid Results (AO register 2010-2012)

'Speed' is used to address issues and focused performance improvements are achieved in seemingly impossible timeframes, often less than 100 days. These rapid achievements are leveraged through continuous project cycles, accelerating improvement and effecting culture change.

On-site training and facilitation is provided, including knowledge sharing, workshops and coaching opportunities while solutions are implemented.

The applied process originated from Rapid Results and Work-Out (Schaffer) and has been tailored for the Group's needs and strategy.



SAFETY & SUSTAINABLE DEVELOPMENT

Manager: Rudolph Botha

Telephone +27 (0)11 638 2254

Email rudolph.botha@angloamerican.com

Safety & Sustainable Development (S&SD) facilitates the Group's sustainable development initiatives, standards and guidelines, eg. Anglo American's Mine Closure Toolbox, Environment Way and guidelines. It performs specialised environmental consulting work, technical audits and reviews. The specialised staff supports the development

and implementation of best practice environmental guidelines and standards for the Group.

Key offerings include:

- tailings and mineral waste management
- water management, efficiency, innovation
- mine closure planning and support
- technical investment and operation reviews
- environmental management, biodiversity and land management
- and health and safety management.

MINING SOLUTIONS

Manager: Digby Chapman

Telephone +27 (0)11 638 2479

Email digby.chapman@angloamerican.com

Mining Solutions provides the Group with specialised support services and solutions in mining engineering, and survey and mapping - with a primary focus on drilling and blasting. Innovations currently on offer and/or in development include the Nomad solutions:

"PlanWise", "BenchWise", "LabWise" and "BlastWise"; as well as slope stability monitoring for coal mines and mobile mapping in the open pit environment.

Service level agreements (SLAs) or 'call-down' contracts can be structured according to client requirements, or work can be commissioned on an ad hoc basis.



ENGINEERING SOLUTIONS

Manager: Eric Gilfillan

Telephone +27 (0)11 638 3230

Email eric.gilfillan@angloamerican.com

Engineering Solutions provides a unique value-adding service – supplying comprehensive expertise in engineering disciplines that is not easily found in the open market. The team comprises highly specialised engineers who combine expert skills with experience gained on Anglo American operations worldwide. As an in-house service, the team prioritises the values and interests of Anglo American.

Engineering Solutions provides services in the mechanical, electrical, industrial engineering, energy, control and instrumentation (C&I), quality assurance, structural and materials handling fields, as well as equipment monitoring services.

Besides these offerings, Engineering Solutions focuses on the development of innovative systems and products with specific application in the mining field.



Structural Engineering

Stelios Achilleoudes

Telephone +27 (0)11 638 2334

Email stelios.achilleoudes@angloamerican.com

Structural Engineering provides techno-economic, innovative and appropriate structural engineering solutions and support to the Group's operations, ensuring the safety, maintainability and operability of structures within the Group.

Offerings include:

- structural design
- consulting
- oversight and assurance
- technology development
- failure and problem investigation
- design audits and reviews
- and feasibility studies and structural inspection services for plants, shafts and underground structures, also known as structural inspection maintenance management (SIMM).

The team's knowledge of SIMM is unique to the Group, where the concept originated, and has been outlined in a set of guidelines for the Group's use, as well as in an automated plant builder and data capture tool that was developed in-house. The structural department has extensive experience in conducting structural SIMM inspections, including SIMM repair and implementation work across the business units.

The expert Structural Engineering team, which comprises senior structural engineers and a structural draughtsman, addresses the structural design, maintenance and requirements of the Group.

Mechanical and Materials Engineering

Jose Prozzi

Telephone +27 (0)11 638 2998

Email jose.prozzi@angloamerican.com

Mechanical and Materials Engineering provides innovative engineering solutions and services for the mining and production processes of Anglo American's operations.

These services include:

- cutting edge technologies for discovering and implementing solutions to mechanics and materials of construction problems

- state-of-the-art simulation technologies
- on site measurement and testing
- materials services
- failure investigation, analysis and solutions
- structural mechanics analysis
- mechanical design and review
- and continuous condition monitoring and capabilities to validate simulations, improve reliability, throughput and performance of new and existing equipment.

ENGINEERING SOLUTIONS continued

Electrical Engineering

Mubanga Mofu (acting)

Telephone +27 (0)11 638 3860

Email mubanga.mofu@angloamerican.com

The Electrical Engineering team provides electrical power distribution and drives; control systems integration; underground automation; and energy management to Anglo American's global operations and business units.

- Electrical Engineering comprises three pillars: electrical, energy, and control and instrumentation (C&I).

- Electrical provides specialised electrical design, oversight and assurance services, and a team of world class specialists in drives and HV and MV reticulation.
- Energy delivers improvement studies and consulting services.
- C&I offers expert assistance to operations and project teams in areas such as optimisation and de-bottlenecking, project reviews, and best practice.

Bulk Materials Handling

Pieter Coetzer

Telephone +27 (0)11 638 4841

Email pieter.coetzer@angloamerican.com

Bulk Materials Handling provides specialised services for developing solutions to improve and optimise materials handling and conveying in Anglo American. Our team includes industrial, material handling and fluid handling engineers.

The team is able to simulate and analyse complex, dynamic processes and systems to evaluate alternative solutions across the entire value chain. Typical applications include operational projections and long-term planning; short-term production and mine planning; equipment matching; fleet optimisation; de-bottlenecking; bunker and stockpile sizing;

verification of operational rules; scenario testing and throughput analysis.

Materials handling engineering is mainly focused on developing solutions and optimising the design of conveyor systems and chutes through discrete element modelling (DEM); material flow-, blockage-, spillage-, wear-, system throughput- and configuration analysis; system design review and optimisation.

Fluid handling engineering capabilities include the analysis and continuous improvement of pump systems. Additional services include maintenance and reliability engineering, system engineering and the development of custom materials handling related systems for operational and safety optimisation.

Quality Assurance

Gary Dryden

Telephone +27 (0)11 638 3820

Email gary.dryden@angloamerican.com

Quality Assurance assists Anglo American with ensuring that suppliers of critical and major products and services comply with the Group's specifications and standards. The service is based on the '4C principle': criticality of equipment or service; clear requirements; competent suppliers; check what you are getting.

The service comprises:

- guidance in determining equipment criticality
- assistance in developing clear specifications and standards
- performance of supplier technical and quality assessments
- and inspection oversight, using inspection and test plans and schedules, ensuring equipment complies with agreed specifications.

Compliance is achieved globally using a wide network of approved inspection agencies operating in all areas where equipment is sourced.

Listen, connect, deliver.

"Our multidisciplinary solutions provide bottom-line implemented value, in response to your needs and expectations. We achieve this through listening to our operations and connecting with the right people and teams; to ensure sustainable delivery."

Llewellyn Dippenaar, general manager: Consulting



Real Mining. Real People. Real Difference.

CONSULTING'S AREAS OF DELIVERY

Driving value from exploration to mine closure

Safety, benchmarking, water management, energy and sustainable development

**Exploration
and
geosciences**

**Projects, mine
design and
planning**

Drill and blast

Load and haul

Ore processing

Mine closure

Geosciences, geohydrology, project engineering, survey, LOM planning, drill & blast, mechanical, systems, electrical, C&I, materials handling, industrial, civil, structural, energy, tailings design and management, environmental, health, safety, change management and implementation (Rapid Results)

CONSULTING

General Manager: Llewellyn Dippenaar

Johannesburg, 45 Main Street, 6th floor, office 610

Telephone +27 (0)11 638 2748

Mobile +27 (0)83 464 2414

Email llewellyn.dippenaar@angloamerican.com

technicalsolutions@angloamerican.com

www.angloamerican.com