MINING HYDROGEOLOGY

GCS offers a wide range of mining related hydrogeological expertise. It has extensive experience in a vast variety of different mining environments and operational methods throughout Africa.

Due to recent changes in legislation and corporate awareness environmental management is becoming increasingly important, particularly in the mining sector. GCS has undertaken local and international water-related studies for gold, coal, chrome, platinum, copper, nickel, cobalt, and diamond mines as well as heavy mineral sands. Our water-related services to the mining industry include:

ENVIRONMENTAL IMPACT ASSESSMENTS/FEASIBILITY STUDIES

Here the impacts from mining on the surrounding groundwater, surface water and general environment during the various stages of mine life are identified and quantified. These impacts typically include lowering of groundwater levels and the associated zone of influence, contaminant migration through the environment and decant control.

MINE DEWATERING STUDIES

This includes the planning, implementation, evaluation and management of dewatering programs for both open and underground mines. Experience has been gained throughout Africa in various lithologies and climates. In conjunction with dewatering studies we offer expertise in water management, well field development and risk management plans.

MINE RELATED WATER QUALITY & CONTAMINATION IMPACTS

Mine water quality and associated contamination impacts are assessed and quantified. Aspects that are taken into account include leachate potential, leachate quality, acid mine drainage formation, and salt-balances. Geochemical testing and modelling, water monitoring programmes as well as contaminant transport modelling is often employed to quantify risks and in designing management measures

OTHER

Water and waste management plans (best practice guidelines), audits, mine water supply, mine closure plans, waste characterisation and classification, water modelling, input into mitigation design, geotechnical studies, mine and waste facility design.

From Scoping to Design to Operations to Closure, GCS has solutions to better manage your water.
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<th>Year</th>
<th>Client</th>
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