## **MINING**

**2003** Calga Sands, Calga Hydrogeological assessment and modelling for quarry extension – for Rocla Ltd.

**2002 Kables Sand Quarry, Clarence** Hydrogeological Review, assessment of long-term impacts.

**Bowdens Silver Prospect** Groundwater resource, mine inflow and impact assessment – for Silver Standard Pty Ltd

Running Stream Coal Mine Initial hydrogeological assessment

**Kelian Gold Mine, East Kalimantan.** Review of site hydrogeology and groundwater contamination risks, installation of an extensive groundwater monitoring network with dedicated low-flow pumps, and design and implementation of a groundwater monitoring program, including local staff training. - for Kelian Equitorial Mining Pty Ltd.

Silica Sand Mine, Port Stephens, NSW. Hydrogeological study in support of litigation concerning development approval for silica sand extraction. The work involved an extensive review of potential environmental impacts, a monitoring bore drilling and sampling program, presentation of oral evidence in the Land and Environment court and liaison with regulatory authorities - for ACI Industrial Minerals

**Proposed Sulcor Limestone Mine, Tamworth.** Hydrogeological investigation in support of an EIS and Development Application to re-open and extend a high-quality chemical limestone mine. The project involved a hydrogeological review, preparation of management plans and installation of a monitoring borehole network - for David Mitchell Pty Ltd.

1999 Enhance Place Coal Mine, Blackmans Flat, NSW. Assessment of dewatering requirements, long-term mine-water inflows, and mine water geochemistry in support of an application to mine-out a coal barrier – for Enhance Place Pty Ltd.

Groundwater Resources, Prospective Silver Mine, Blayney, NSW. A local hydrogeological study to assess the availability of groundwater to meet mining and processing requirements – for Golden Cross Resources.

**Exeter Quarry Extension, Exeter, NSW.** Hydrogeological study in support of an Environmental Impact Statement to extend a basalt quarry in the Southern Highlands. The work required assessment of impact on streamflows in the area, and involved a drilling and permeability testing program.

1998 Assessment Of Water Composition In Mine Pit, Cobar, NSW. Mineral weathering geochemistry, acid generation potential and final water quality – for Burdekin Resources and Pells Sullivan Meynink Pty Ltd.

Hydrogeological Review, lead-free aggregate quarry and hard rock processing plant, **Broken Hill, NSW** - for R. W. Corkery Pty Ltd.

**Groundwater Investigation, Peak Hill Gold Mine, NSW**. Assessment of availability of groundwater resources for gold mine, identification and development of most cost-effective supply - for Peak Hill Gold.

1997 Groundwater resource assessment, Cargo Gold Prospect, NSW – for Golden Cross Resources NL.

Assessment of impact on springs, Exeter Quarry, NSW – for R. W. Corkery Pty Ltd.

Weipa Bauxite Mine, Queensland. Assessment of remedial options and dewatering requirements following failure of the Andoom loading station. Design and installation of an airlift-powered 12-well dewatering system capable of pumping 500/litres/second - for Comalco Ltd.

**Golden Cross Mine, Waihi, New Zealand.** Assessment of dewatering and depressurisation options to control ground instability below tailings dam - for Coeur Gold.

**Kangaloon Sand Quarry, Moss Vale, NSW.** Assessment of groundwater-related stability problems, input to EIS for extension area.

Clay Quarry, Kempsey, NSW. Preparation of groundwater and acid sulphate soil management plan, installation of groundwater monitoring network.

1995 Shale Quarry Extension and Landfill, Bowral, NSW. Review of hydrogeological conditions and assessment of groundwater inflow to extension - for Bowral Bricks Pty Ltd.

**Review of aspects of EIS for sand dredging, NSW South Coast.** Review of acid-sulphate soil aspects of EIS for sand dredging and processing - for NSW Department of Urban Affairs and Planning.

**Limestone Quarry, Attunga, NSW.** Assessment of hydrogeological conditions, available alluvial and hard-rock groundwater resources, and environmental impacts of quarry extension for EIS - for David Mitchell-Melcann.

**Sand and Gravel Extraction, Dunmore, NSW.** Assessment of hydrogeological conditions for EIS - for Dunmore Sand and Soil.

Cobar Mines, Cobar, NSW. Design and installation of piezometers in and below tailings embankment.

- **Stuart Oil Shale, Gladstone, Qld.** Assessment of acid mine drainage and treatment options for mine water for Southern Pacific Petroleum Ltd.
- 1990 Westland Ilmenite Project, Barrytown, New Zealand. Assessment of surface water resources and development of a conjunctive surface / ground water abstraction scheme for a mineral sands mine, key inputs to an Environmental Impact Statement for Murray North Limited.
- 1987 90 Oaklands Mine Feasibility Study, Oaklands, NSW. Detailed feasibility study of the water management aspects of a large open-cut coal mine development. Included drilling and well testing, detailed field hydrochemical surveys, and modelling. The project involved the reinjection of large volumes of mine water into Murray Basin aquifers; a study tour of borehole recharge and waste disposal projects in the United States, Europe and Israel was undertaken, followed by design, construction and testing of a trial reinjection bore for the CRA Mitsubishi Oaklands Joint Venture: Project Manager.

Kelian Coal Mine, Kalimantran. Desk review of groundwater inflows to mine.

**Locheil Coal Mine, SA.** Design and costing for long-term dewatering requirements - for Electricity Trust, South Australia.

**Tom's Gully Gold Mine, Mount Bundey, NT.** Geotechnical and hydrogeological assessment of the site of a new open cut gold mine. The project included assessment of dewatering requirements, estimation of seepage losses from proposed tailings and waste rock disposal areas, and assessment of the acid leachate generation potential of the arsenopyrite bearing tailings and waste rock - for Carpentaria Gold Pty Ltd.

**Fosterville Gold Mine, Bendigo, Vic.** Assessment of acid generation potential of tailings and waste rock; design of groundwater reinjection scheme - for Bendigo Gold Pty Ltd.

**Red Dome Gold Mine, Chillagoe, Qld.** Assessment of acid generation potential of tailings; assessment of leakage of tailings leachate from impoundment - for Elders Resources Ltd.

**Tallawang Magnetite Mine, Gulgong, NSW.** Siting additional water supply borehole, lining leaking water storage lagoon and assessment of the effect of groundwater seepage on pit stability - for Australian Magnetite Pty Ltd.

**WIM 150 Mineral Sands Project, Horsham Vic.** Review of the effects of mining on groundwater, leading to preparation of an Environmental Impact Statement - for Wimmera Industrial Minerals Pty Ltd: Senior Hydrogeologist.

**Hird's Prospect Gold Mine, Bendigo, Vic.** Feasibility study and design of reinjection scheme for disposal of groundwater produced during sinking of a trial shaft - for New Holland Mining N.L.: Senior Hydrogeologist.

**Durness Mineral Sands Project, NSW.** Baseline hydrogeological study for a sand-mining project, including hydrochemical and water resources implications, leading to preparation and review of Environmental Impact Statement; later completed a post-mining review of the effect of sand mining on groundwater resources - for Mineral Deposits Ltd: Project Manager.