

## WATER RESOURCES EVALUATION

- 2004**     **Hydrogeological component of Integrated Water Cycle Management Study, Parkes, NSW.** Assessment of hydrogeological conditions in the Upper Lachlan Valley (upstream Jemalong), including revision of MODFLOW numerical model. – for Montgomery Watson.
- Hydrogeological component of Integrated Water Cycle Management Study, Broken Hill, NSW.** Assessment of hydrogeological conditions in the area around Broken Hill and identification of potential groundwater resources – for Australian Inland.
- Groundwater resources assessment – Lithgow Valley Springs, Lithgow NSW.** Pumping test analysis and regional hydrogeological assessment for mineral water abstraction operation. – for Lithgow Valley Springs.
- 2003**     **Groundwater investigation for vineyard irrigation, Bathurst, NSW.** Pumping test analysis and resource assessment.
- 2002**     **Review of borehole performance, Forbes, NSW.** Analysis of bore construction and development problems
- 2001**     **Nanima Groundwater, Forbes.**         Assessment of groundwater resources, borehole siting, review of bore construction and development problems – for John Bruce
- 1999**     **Hydrogeological assessment of conditions near four properties north of Brocklehurst, NSW** – for Terra Sciences/Dubbo City Council.
- 1997 - 98**   **Hydrogeological Investigation, Parkes, NSW.** Assessment of borefield water supply, numerical modelling (MODFLOW) of borefield behaviour and regional water resources - for Parkes Shire Council.
- 1997**     **Groundwater Assessment, Peats Ridge, NSW.** Yield assessment and quality analysis of groundwater - for Sydney International Fresh Fruit & Juices.
- 1996**     **Groundwater Resource Assessment, Mungeribar, NSW.** Assessment of availability of groundwater resources for cattle feedlot and irrigation. Work included reinterpretation of high-resolution aeromagnetic data, geoelectrical survey, and an extensive drilling and pump testing program - for a confidential client.
- Groundwater Resource Evaluation, Lower Macquarie and Bogan Valleys, NSW.** Assessment of groundwater resources for a number of landholders in this area. To date six separate investigations involving data review, aeromagnetic interpretation, geophysical survey and test drilling.
- 1995**     **Assessment of Groundwater Resources for a Tailings Reprocessing Project, Tomingley, NSW.** Assessment of potential groundwater resources, ranking of prospects, geophysical survey and recommendations for development of shallow alluvial groundwater using an infiltration gallery.
- 1994**     **Water Quality Monitoring in Australia.** A comprehensive review of the status of water quality monitoring programs in Australia, and recommendations for future direction and emphasis. In association with Aquatech, for the Commonwealth Environment Protection Agency.
- 1993**     **Environmental Flows, Lower Darling River.** Assessment of groundwater - surface water inter-relationships and environmental flow requirements in the Lower Darling River - for the NSW Department of Water Resources.
- 1990**     **Horizons Resort, Salamander Bay, NSW.** Assessment of the groundwater resources available for a large international resort and golf course complex located on coastal sandbeds - for Gutteridge Haskins and Davey Pty Ltd.

- Westland Ilmenite Project, Barrytown, New Zealand.** Assessment of surface water resources and development of a conjunctive surface / groundwater abstraction scheme for a mineral sands mine - for Murray North Limited.
- 1988 Crookwell Additional Water Supplies, NSW.** Geophysical logging and pump testing of bores in a fissured basalt aquifer - for Public Works Department, NSW.
- Fire Protection Bores, Botany Bay, NSW.** Construction and testing of bores for emergency water supply in a petroleum storage depot, including assessment of corrosion hazard and hydrocarbon contamination of groundwater - for Esso Australia Ltd.
- 1985 - 86 Wollo Water Development Project, Ethiopia.** Project leader of a water development team and adviser to the Ethiopian Water Works Construction Authority in Wollo. Managed a small team of local and expatriate staff; trained Ethiopian counterpart staff in the siting, construction and testing of spring developments, hand-dug wells and boreholes; provided advice to Oxfam and other donor agencies on future material and staff inputs - for Oxfam: Team Leader.
- 1985 Geophysical Surveys, Sultanate of Oman.** An assessment of existing well performance and available water resources, followed by geophysical surveys to locate new wells - for the Oman Mining Company and the Ministry of Defence, Sultanate of Oman.
- 1984 - 85 Feasibility Study For A Water Supply to Bilad Bani bu Ali, Sultanate of Oman.** Appraisal of alluvial aquifers - for the Ministry of Electricity and Water, Sultanate of Oman.
- 1983 - 84 Victoria Province Drought Relief and Rural Water Supply Project, Zimbabwe.** Project to drill nearly 300 low-cost water supply boreholes in southern Zimbabwe. Air-photo interpretation and surface geophysics were used to site boreholes and hand-dug wells in variably weathered granitic terrain. Construction of the small-diameter boreholes, designed for handpumps, was then supervised - for the European Development Agency.
- 1982 - 83 Groundwater for Reverse Osmosis, Bahrain.** Evaluation of a brackish water, fissured carbonate aquifer as the raw water source for a large reverse osmosis desalination plant in Bahrain. The project included sampling and analysis to detect possible hydrocarbon contamination resulting from oilfield operations in underlying formations - for the Ministry of Works, Power and Water, Bahrain: Senior Hydrogeologist / Deputy Project Manager.
- 1982 Water Resources for Agriculture, Sultanate of Oman.** A survey of a number of alluvial aquifers in northern Oman to assess the resources available for irrigated agriculture - for the Ministry of Agriculture, Sultanate of Oman.
- 1981 Sohar Copper Project, Sultanate of Oman.** Water resources and environmental impact assessment for three new copper mines in northern Oman - for the Oman Mining Company Ltd.
- 1980 Dammam Aquifer Model.** A finite difference numerical model of the multi-layered Dammam aquifer complex in eastern Saudi Arabia and Bahrain. Responsible for program development, model calibration and operation, and presentation of the results - for the Ministry of Agriculture and Water, Saudi Arabia.
- 1978 - 79 Umm Er Radhuma Study, Bahrain and Saudi Arabia.** Evaluation of the water resources of the Tertiary carbonate aquifers of eastern Saudi Arabia and Bahrain - for the Ministry of Agriculture and Water, Saudi Arabia.
- 1978 Bahrain Agricultural Potential Survey.** A multi-disciplinary study involving liaison with a wide variety of agricultural and economic specialists, and consultation with the Bahrain government up to ministerial level - for the Ministry of Agriculture, State of Bahrain.
- Marada Sabkah Brine Project, Libya.** A feasibility study of mineral extraction from a magnesium rich brine.
- 1976 Stour Valley Nitrates Study, England.** Field installation and operation of sampling equipment for the assessment of nitrate pollution of an unconfined sandstone aquifer.

**1975 - 76 Hydrogeological studies throughout Central England**, comprising:

- investigation of waste disposal sites;
- bore licence applications;
- analysis of aquifer tests;
- river gauging and bank storage analyses.

**1974 - 75 Shropshire Groundwater Investigation, England.** Interdisciplinary studies of the ecological effects of borehole discharges on surface waters; regional investigation of the extent of nitrate pollution and high natural iron concentrations in the Triassic sandstone aquifer of northern Shropshire, England.