

Groundwater Supplies, ENB, PNG

Rabaul and Simpson Harbour, East New Britain, PNG; test pumping of a successful water bore.

Following a devastating volcanic eruption in 1994, Rabaul, the provincial township in East New Britain province, on the island of New Britain, required Douglas Partners' hydrogeological expertise in the development of groundwater supplies for various resettlement areas, infrastructure and community facilities.

A World Bank sponsored project in Papua New Guinea is supplying potable fresh water to village communities in East New Britain Province, relocated after extensive damage to the township of Rabaul by volcanic eruptions in 1994.

Acting under the direction of the Gazelle Restoration Authority (GRA), the PNG Government agency responsible for restoration of the area, Douglas Partners (DP) was commissioned by New Britain Drillers Ltd to provide hydrogeological expertise for the development of groundwater supplies for various resettlement areas, villages, the new Tokua airport, community schools and hospitals in the Gazelle Peninsula of East New Britain.

Geologically, the region is underlain by pumiceous ash deposits with minor lava flows, with depths estimated from 1,000m to 5,000m. The relatively high permeability of these deposits allows rapid infiltration of rainfall and substantial recharge of the underlying aquifers, which has resulted in the pumiceous ash containing significant fresh groundwater resources.

DP's scope of work for the various water supply projects included drilling supervision, lithological and geophysical logging of bores up to 300 m deep, production bore design, field and laboratory analysis for potability, test pumping and analysis, and assessment of the bores' long term sustainable yield.



"The projects were a great success in establishing clean fresh, and uncontaminated water supplies to village communities across East New Britain."

Carl Deegan - Senior Associate / Hydrogeologist

CLIENT Gazelle Restoration Authority

YEAR 1998 - 2009

SCOPE OF WORK

- Groundwater exploration
- Geophysical logging
- Production bore design
- Test pumping and analysis

