

## NEW ZEALAND

*By Richard Barker  
Consulting Geologist*

The Labour Party was returned to power at the general election in July 2002 increasing its share of seats in the 120-seat parliament from 49 to 52, and continues to govern with the support of minor parties. Support for the major opposition National Party declined again from 30% to 21%, and the opposition is now split among three main parties. Economic growth has been maintained at a relatively high rate of 4.4% for 2002, due mainly to a low exchange rate, good growing conditions for agriculture and relatively high commodity prices boosting exports. An appreciating exchange rate and international uncertainties are predicted to lead to a slowing growth rate to 2.7% and 1.9% over the next two years.

Mineral exploration activity has been at a low level for the past decade, being confined mainly to the expansion of existing operations and the development of known resources. The industry, through the NZ Minerals Industry Association, which represents the main companies in all sectors of the mining industry, is pressing on with its strategy to re-invigorate the minerals sector. Geological and economic research shows that mining has the potential to more than double its contribution to GDP within ten years. Crown Minerals, the agency that administers rights to explore and mine, has released a prospectivity study for mesothermal gold deposits as an aid to exploration, and is working on a data package on epithermal gold-silver deposits due for release later this year. These have been prepared in collaboration with the Institute of Geological and Nuclear Sciences.

The country's largest gold operation, the Macraes mine (Gold and Resource Developments Ltd) in Otago in the South Island, maintained its gold output at 162,000 oz during 2002. An upgrade of the milling capacity at Macraes from 3.9 Mt/y to 4.5 Mt/y was completed, and the company is planning to add a 0.5 Mt/y plant to handle oxide ore.

The company's Reefton project has received regulatory approval, but its development has been delayed by difficulties in financing a bond to cover its environmental obligations. The treatment of Reefton ore at the Macraes plant will lead to an increase in gold output to about 250,000 oz/y once the new mine is on stream. The company is also investigating re-opening the Blackwater mine at Reefton, and is expecting to increase its gold production to 350,000 oz/y within five years. Exploration spending of NZ\$3 million per year (US\$1 = NZ\$1.8) over the next three years is planned at Macraes and Reefton, and the company has recently resumed drilling at its Sams Creek gold prospect in NW Nelson, with encouraging results.

Gold output from the open pit Martha mine (Newmont) at Waihi in the North Island reached record levels as a result of its recently completed expansion project, which included the open-pit, ore treatment and tailings storage

facilities. The mine produced 127,700 oz of gold and 916,000 oz of silver in 2002, and the mine life has been extended until 2007. Normandy/Newmont is continuing with efforts to take over Otter Gold Mines, which would give it 100% ownership of the mine.

Recent exploration drilling of prospects located near the Martha mine delineated a buried epithermal gold-silver deposit at Favona, adjacent to the Martha ore-treatment plant. A new underground mine is proposed that would produce about 100,000 oz/y gold from 300,000 t of ore. The aim is to operate the Favona mine as an extension of the existing Martha mine, and to commence production well before the open pit closes in 2007. The company is carrying out a comprehensive exploration programme in the Waihi district.

Placer gold mining in the west and south of the South Island contributed about 43,000 oz in 2002 from operations in the West Coast, Otago and Southland regions. L & M Mining Ltd has been the main producer, but ceased production during 2002. The company's Earnsclough placer gold project in Otago has been granted approvals to work the deposit, but two appeals need to be heard before work can commence. The company's operation at Waikaka in Southland commenced production in April 2001 and closed in 2002 when gold recovery failed to reach anticipated levels.

New Zealand produces a range of specialist industrial minerals of volcanic origin for export and domestic use including: high-quality white halloysite exported for use in pottery and ceramics (Imerys Tableware, formerly NZ China Clays); amorphous silica as a cement additive (Microsilica NZ Ltd, a subsidiary of Golden Bay Cement within the Fletcher Building group); bentonite (Omya NZ Ltd); zeolite which has a wide range of applications (Resource Refineries Ltd); and perlite (Industrial Processors Ltd).

New Zealand Steel has continued to produce more than 2 Mt of titanomagnetite ironsand concentrate each year from North Island coastal deposits, about equally divided between exports from Taharoa 150 km south of Auckland, and for steel-making at the integrated Glenbrook steel mill 50 km south of Auckland. Production from Taharoa has been down for the past two years, reducing the total output.

Sub-bituminous coal is produced in the Waikato region of the North Island, mainly for steel making at the Glenbrook mill (700,000 t/y), and for thermal power generation at the Huntly power station (200,000 t/y). Bituminous coal produced in the West Coast region, South Island is the main source of export coal, while sub-bituminous coal and lignite are produced in Southland and Otago for industrial and domestic use.

The government-owned Solid Energy NZ Ltd, which produces about 70% of the coal mined in New Zealand, has reported a record profit for 2002, having implemented a successful rescue plan. The 1998/99 Asian economic crisis, foreign exchange losses and mining problems had made the company technically insolvent in 1999. The company is planning to double its combined domestic and export production from the present level of about 3.5 Mt to 6.5

Mt/y over the next few years. The company is developing new mines and is investigating the feasibility of building a new 100 – 150 MW coal-fired power station in the South Island to be operating by 2006.

Pike River Coal Co. (72%-owned by NZ Oil and Gas) is seeking approvals for its Pike River underground export coal mine, located 30 km north of Greymouth. The field has recoverable reserves of 15.5 Mt of high-quality coking coal and the company is planning a 650,000 t/y operation.

**Mineral Production Statistics**

	<b>2000</b>	<b>2001</b>	<b>2002</b>
Gold (t)	9.8	9.85	9.77
Silver (t)	22.9	26.9	28.7
Ironsand concentrate (Mt)	2.7	1.6	1.7
Coal (Mt)	3.6	3.9	4.5