

FIJI

By I. Nagata

There are increasing signs of an upturn in Fiji's economy despite the current weak global economic and financial conditions. This is largely due to increasing confidence in the newly-elected government and a return to what is regarded as stable longer-term policies. Low global gold prices continued, however, to have an adverse impact on mineral exploration and mine development investment in Fiji during 2001.

Following the political upheaval of 2000 and with a view to assist a vital national industry, Emperor Gold Mining Co. was granted fiscal relief from gold export tax, and reduced taxes on fuel and imported goods for an interim period to enhance mine development and productivity. This was extended later in the year. The 2002 budget, handed down in November 2001, also saw the development of a new taxation package for the mining sector which has significant advantages for the industry. This includes the removal of the earlier 3% export tax on gold, reduced import duties on items specific to the industry (including fuel for power generation) and the introduction of a new royalty regime for gold with a rate variable on gold price. The intention of government is to have a consistent and relatively favourable fiscal policy for all projects.

The mining sector continued to perform well given the global and local constraints and remains an integral part of the country's economy. Emperor continued to be the only company operating a mine, and recorded a total production amounting to 123,208 oz of gold and 64,482 oz of silver, valued at F\$75.7 million. Prospecting for gold, copper and industrial minerals (marble) remains the main focus of mineral exploration in Fiji. Mineral exploration expenditure for the year was F\$3.97 million, compared with F\$2.5 million in the previous year. This figure, although an

improvement, is constrained by the fact that it is limited to only a handful of companies.

Fiji's central geographical and geological location along the boundary between the Pacific and Indo-Australian tectonic plates has hitherto attracted multinational exploration companies to prospect for mineral deposits in Fiji. The recent decline in exploration has been a concern of government and a number of initiatives are in the pipeline to address this. The latest initiative includes completion of a comprehensive review of the Mining Act and the development of a compensation policy to address landowner concerns.

Mining companies exploring for gold, copper and industrial minerals in Fiji during 2001 included Emperor, Nittetsu Mining, Wing Investment, Asia Pacific Resources, Burdekin Resources, Geopacific, Nationwide Mine, Britannia Gold, Oribi, Climax, Algen, Aurun Exploration, Pacmin, Beta, A Tora, Ratu Vunibula, Tuvatu and Oceania. Dampier Oil Ltd of Australia has been granted licences to explore for hydrocarbons in the offshore areas of Fiji. At the end 2001, a total of 39 (33 in 2000) licences were in existence for mineral exploration. The total area covered is 329,906 ha for mineral exploration and 52,416 km² for oil exploration, and the total expenditure during the year was F\$3.97 million.

Tenement Information:

Year	Expenditure F\$ million	Area (‘000 ha)	Licences
1995	3.69	279.5	25
1996	7.13	390.4	33
1997	12.11	490.8	39
1998	4.13	586.6	49
1999	4.02	374.5	35
2000	2.50	217.7	33
2001	3.97	329.9	39

At Namosi, Nittetsu Mining Co. Ltd continued exploring for potential high-grade copper mineralisation in areas surrounding the known extensive low-grade copper deposits at Waisoi previously evaluated by Placer. The exploration programme included a detail geochemical survey (stream, soil and rock-chip sampling), geophysical survey (IP method), geological mapping and diamond drilling. The results of the geochemical surveys looks promising, and the best copper grade obtained was 2.9% to 3.8% from a skarn outcrop. Analysis of the geophysical survey proved there is high resistivity at depth which could indicate the presence of porphyry-type mineralisation. The area was drill tested further to define the geology and mineralisation at depth. Out of the 1,200 m initial proposed, only 600 m was drilled owing to poor ground conditions. In the same area, Amax Exploration recorded a mineral occurrence with a drilling result of 1.4% Cu over 110 m. Nittetsu also conducted an environmental baseline study to identify the impact of pre- and post-exploration activities in the area.

Prospecting for industrial minerals (marble) has been undertaken by a few companies. Wing Investment (WI) continued prospecting for marble at the Qalimare prospect and undertook detailed geochemical surveys. Asia Pacific Resources (APR) continued to evaluate the potential of marble deposits and has also shown interest in re-opening the old Wainivesi gold mine in Tailevu. APR intends to lodge an application for a mining licence in early 2002. The oxide ore zone has been estimated at 100,000 t at 1.5 g/t Au, within an area 80 m wide, 110 m long and to a depth of 30 m. It is likely that the oxide zone will contain between 300,000 t and 400,000 t of low-grade ore.

Emperor, the only operating gold-mining company, owns a few exploration licences. These are adjacent to the mine lease and elsewhere in Fiji, including the Tuvatu gold prospect near Nadi international airport. Total surface drilling in 2001 was 1,264 m (4,562 m in 2000) but the results were discouraging.

However, rock chip samples included 58.5 g/t and 23.25 g/t Au. Soil samples obtained in the mine area also returned some good results but these are thought to be due to contamination from mine mullock. Underground diamond drilling totalled 18,842 m (16,326 m in 2000) and was concentrated mainly in the Decline, R1/Cayser and Smith sections of the mine. The best results obtained were 460.0 g/t over 0.23 m, and 273.6 g/t over 2.43 m from the R1/Cayser structures, while drilling at the Matanagata NE structures returned 91.6 g/t over 0.25 m, and 37.0 g/t over 0.39 m. Encouraging results were also encountered from drilling at the Decline structures with the best results including 80.0 g/t over 0.40 m and 62.7 g/t over 0.26 m.

The Tuvatu gold prospect has an estimated resource of 1.6 Mt of ore at an average grade of 8.5 g/t, containing 446,000 oz of gold. A follow-up geochemical programme (including soil, rock-chip sampling and geological mapping) was carried out adjacent to the known resource areas, and showed encouraging results. A review of exploration targets in the vicinity of current gold-mining areas has led to the recognition of new targets in the Vatukoula region.

The Mt Kasi mine, with an estimated mineral resource of 362,000 oz, ceased operation in June 1998. The company's activities continued to be limited to essential care-and-maintenance. During 2001, the company undertook a regional augering programme but no results are available yet.

To the southwest of Nadi, at the Nabila and Kakavukavu gold prospects, Millennium Mining continued its search for gold mineralisation. The company undertook detail geochemical surveys. However, most other companies continued to suspend their work programme owing to the ongoing political instability.

Dampier Oil Ltd has shown interest in exploring for oil in Fiji. A total of seven licences (OEL) were granted covering a total area of 5,241 km². The company's areas of

interest include the Baravi Basin, Great Sea Reef, Bligh Waters, Bau Waters, Beqa Waters, Northern Lau and Southern Lau where other companies have previously undertaken oil exploration.

Mining Operations

Mining operation at Emperor recorded a 1.8% increase in combined total gold and silver production to 186,820 oz during the calendar year with a total value of F\$75.7 million. The results were attributed to good mine management and improved mill recovery. Emperor's surface and underground exploration continued on major known structures for improvement of ore reserve and mineral resources (including 166N, the 2000N Flatmake, Matanagata, Prince/Dolphin, Prince William, the R1, Shatter and Steep Structures).

Gold production at the end of the 2000/01 financial year was 113,389 oz compared with 143,039 oz in the previous year. A total of 520,575 t of underground ore was treated, at a grade of 7.71 g/t Au compared with 568,903 t at 9.01 g/t Au in 1999/00. The decrease in production is related to lower grades experienced in the Matanagata orebody, coupled with geotechnical and geological difficulties at Philip Shaft. Gold recovery improved by 2% from 86% to 88% during the year, reflecting improved milling and flotation efficiency.

Emperor hedged 446,986 oz of gold, a decrease of almost 15% from the previous year. Reserves as at June 30, 2001, stood at 2.27 Mt at an average grade of 10.2 g/t Au containing 747,600 oz of gold, including 5.1 Mt of tailings averaging 1.5 g/t Au. The updated mineral resource stood at 9.67 Mt at an average grade of 10.1 g/t including 5.18 Mt of tailings at an average grade of 1.5 g/t. At Tuvatu, the total identified mineral resources totalled 1.6 Mt averaging 8.5 g/t Au.

Production Statistics

	1997	1998	1999	2000	2001
Emperor Gold Mining:					
Ore treated ('000 t)	707	586	509	569	521
Gold produced (kg)	3,727	3,501	3,881	3,841	4,907
Silver produced (kg)	2,583	1,804	2,159	1,474	2,109
*Mt Kasi:					
Ore treated ('000 t)	404	170	0	0	0
Gold produced (kg)	944	384	0	0	0
Silver produced (kg)	70.2	43.0	0	0	0

**The mine ceased operation in June 1998.*

Exchange rate as at April 17, 2002: F\$1.00 = US\$0.4527.