

THE MINERAL INDUSTRY OF

FIJI

By Travis Q. Lyday

Metallic mineralization was widespread in Fiji, occurring as polymetallic base metal sulfide deposits, disseminated porphyry copper deposits, epithermal precious-metal deposits, residual bauxite deposits, and manganese and heavy-mineral sand deposits. However, gold along with associated silver was the only mineralization mined during 1995. Fiji's mineral industry also consisted of a cement plant next to the harbor at Suva, and several quarries for the production of stone and crushed gravel, limestone, and coral and river sands. The cement plant was opened in 1961 by Fiji Industries Ltd. and, until 1993 when cement production was begun at Lae in Papua New Guinea, was the region's only producer.

Although gold has been produced in Fiji since shortly after its discovery, the only significant mines have been the Emperor Mine and the Tavua Basin Mine, both owned and operated by the Emperor Gold Mining Co. Ltd. (EGM). The Emperor Mine is adjacent to the town of Vatukoula, meaning "Rock of Gold," about 100 kilometers (km) northwest of the capital at Suva and eight km inland from the coast, in the Nakauvadra Mountains at the northern tip of the main island of Viti Levu. The Tavua Basin Mine is inland from the coastal town of Tavua, about 2.5 km south of the Emperor Mine. The Emperor Mine has been in continuous production since 1935, while production from the Tavua Basin Mine began in 1987. Both mines also produced byproduct silver. The Emperor Mine also recovered until 1980 significant amounts of selenium and tellurium oxides from the ore.

EGM announced an increase of 39% in its gold resources, to a total of about 106 metric tons (mt), in the third quarter of the year. The previous figure was about 75 mt.

Because of the exhaustion of the open pit resources in 1992, and the subsequent return to mining exclusively underground, the underground workings at the Emperor Mine have expanded immensely. With increasing heat conditions at the lower levels preventing mining activities from progressing deeper, in conjunction with the existing ventilation capacity already operating nearly at full capacity, EGM began construction at yearend of a new ventilation shaft in order to open up deeper levels of the operation to

mining. The new shaft will have a 2-lift configuration, with a 60-m horizontal offset between them. The upper shaft will descend from the surface to level eight (209-m) and the lower shaft will extend from level eight to level 16 (529-m).

Sydney, Australia-based Placer Pacific Ltd.'s local subsidiary, Placer Pacific Namosi Ltd., and the Government reached agreement at yearend on a range of issues relating to Placer Pacific's Namosi low-grade porphyry copper-gold prospect. Namosi is about 30 km northwest of Suva, 20 km from the coast. Placer Pacific and its predecessors have delineated 930 million metric tons (Mmt) of measured resources grading 0.43% copper and 0.14 gram per mt gold using a cut off grade of 0.3% copper since 1991. Although the resource is large, it remained sub-economic primarily due to the low grades of copper and gold. The agreement provided a fiscal regime that will bestow the best opportunity for exploration and assessment leading eventually to mine development. The agreement related to various concerns, including import duties, royalties, depreciation, and taxation.

Mount Kasi Ltd., a wholly owned subsidiary of Australia's Pacific Islands Gold NL, began production late in the year at its Mount Kasi gold project at Savusavu near the Yanawai River on the south coast of Vanua Levu, Fiji's second-largest island. Initial production was to be about 1,000 kilograms per year (kg/a) of gold; this was to increase to about 1,500 kg/a within the first three years of the mine's 9-year life. Reportedly, however, the project had the potential to continue for 20 years. It was at the Mount Kasi site that gold was first found in Fiji, in 1929. Production at Mount Kasi began in the early 1930's, continuing until the mine was closed in mid-1943.

Major Source of Information

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TABLE 1
 FIJI: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity		1991	1992	1993	1994	1995 e/
Cement, hydraulic		78,800	84,400	79,500	93,600 r/	78,200
Gold, mine output, Au content	kilograms	2,743	3,701	3,784	3,440	3,775
Silver, mine output, Ag content	do.	477	1,258	1,112	1,386	1,765
Stone, sand and gravel:						
Coral sand for cement manufacture		71,664	61,465	65,303	66,939	70,000
River sand for cement manufacture		19,386	20,000 e/	13,186	15,000 e/	15,000
River sand and gravel, n.e.s.	cubic meters	800,000 e/	73,395	426,880	148,049	200,000
Quarried stone	do.	73,771	63,412	84,670	63,154	70,000

e/ Estimated. r/ Revised.

1/ Table includes data available through Apr. 2, 1996.