



# 2014 Minerals Yearbook

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**FIJI**

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# THE MINERAL INDUSTRY OF FIJI

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The mineral industry was of minor importance to Fiji's economy and accounted for less than 1% of the country's gross domestic product (GDP) in recent years. Gold had been the major mineral produced in Fiji since the first gold discovery in the 1930s. Recently, a number of bauxite deposits had been identified, and foreign investments in these projects had added some value and diversity to the mineral industry (table 1; Fiji Bureau of Statistics, 2015, p. 24; Ministry of Lands and Mineral Resources, 2015a).

## Government Policies and Programs

The Ministry of Lands and Mineral Resources is the Government agency that manages all state land initiatives related to the country's mineral sector and groundwater resources. The total area under state land leases that is managed by the Ministry of Lands and Mineral Resources accounted for about 4% of the total land mass of Fiji. The Mineral Resources Department (MRD), which is a subunit of the Ministry of Lands and Mineral Resources, is Fiji's national geological survey and mining organization. The MRD develops mining policies, provides geologic information, assists mining investors, and facilitates the exploration for and the development of mineral and petroleum resources in the country. The Ministry of Lands and Mineral Resources performs its duties as authorized by such relevant laws and regulations as the Mining Act, the Oil and Petroleum Act, the Quarry Act, the Surveyors Act, the Land Use Decree 2010, the Land Use Regulations, and the Environment Management Act (Ministry of Lands and Mineral Resources, 2015a–c).

## Production

Silver production decreased by 22% to about 360 kilograms (kg) (estimated) in 2014 from 462 kg (revised) in 2013. Gold production decreased by 4.8% to about 1,160 kg (estimated) in 2014 from 1,218 kg (revised) in 2013. The decrease in silver and gold production was attributed to the decrease in the amount of ore produced at the Vatukoula gold mine. Bauxite production, which was estimated based on trade data, increased by about 6.7% to 640,000 metric tons (t) from 600,000 t (revised) in 2013. Cement production increased by about 5% to 190,000 t (estimated) owing to the production added by the new Tengy cement factory in Lami (table 1; Guenioui, 2014; Fiji Bureau of Statistics, 2015, p. 24, 35; Lal, 2015).

## Structure of the Mineral Industry

Table 2 is a list of the major mineral industry facilities in Fiji. The table provides the location and production capacities of these facilities. Most of the producing mining companies in Fiji were privately owned. International companies, mainly

from China, started investing in Fiji during recent years. As of yearend 2014, a Chinese company owned 66% interest in the Vatukoula gold mine and another wholly owned bauxite mining business in Fiji. In August, Chinese investors opened a new cement plant, the Tengy cement factory, in Fiji (Guenioui, 2014; Tengy Cement Fiji Ltd., 2015).

## Mineral Trade

The value of Fiji's exported goods decreased by 9.9% in 2014 compared with that of 2013. The value of exports of mineral products increased by 12.3% in 2014. The leading export partners were the United States, which received 12.6% of Fiji's total exports; Australia, 12.1%; the United Kingdom, 8.7%; China, 5.9%; and Japan and New Zealand, 4.5% each. Fiji's major mineral commodity export was gold. In 2014, 1,232 kg of gold was exported compared with 1,307 kg in 2013. Gold exports contributed 8.2% to total domestic exports in 2014 compared with 9.9% in 2013; bauxite contributed 1.5% for both 2013 and 2014 (Fiji Bureau of Statistics, 2015, p. 85, 87, 89).

In 2014, the value of the country's imports increased by 3.4% compared with that of 2013. The value of imports of mineral products increased by 13.7%. The leading import partners were Singapore, which supplied 28.4% of Fiji's total imports; Australia, 14.2%; New Zealand, 13.6%; and China, 12.4%. Fiji's major mineral commodity imports were petroleum products, which accounted for 27.8% of the country's total imports in 2014 compared with 23.5% in 2013 (Fiji Bureau of Statistics, 2015, p. 81, 89, 91).

## Commodity Review

### Metals

**Bauxite and Alumina.**—China's Shangdong Xinfu Aluminum & Electricity Group (Xinfu) operated the Nawailevu Mine in Lekutu District, Bua Province. About 1.2 million metric tons (Mt) of bauxite had been shipped to China in the period 2011 to 2014. The Nawailevu Mine was closed by the end of November, and rehabilitation of the mine site was started in 2014. In November, a 20-year land lease was approved by the Government. The lease allowed Xinfu to develop a new bauxite mining site at Votua in Lekutu District, Bua Province. A projected 400,000 t of bauxite would be extracted from this site, which is located 500 meters from the Nawailevu site (Butabua, 2014).

**Gold.**—The Vatukoula gold mine, which was the only producing gold mine in Fiji, was owned by Vatukoula Gold Mines plc (VGM), a company registered in the United Kingdom. The mine is located in the northern part of Fiji's main island, Viti Levu. According to VGM, the mine's resources contained 126 t of gold and its reserves contained 23 t of gold.

The mine had both open pit and underground operations and was expected to operate predominantly as an underground mine in the future. In 2014, VGM produced an estimated 1,160 kg of gold compared with 1,218 kg in 2013. About 180,000 t of ore was mined during the second half of 2014, of which about 138,000 t was from the underground mine. The average grade of ore from the underground mine for the period was 5.6 grams per metric ton (g/t) gold (table 1; Lal, 2015; Vatukoula Gold Mines plc, 2015a).

Zhongrun International Mining Co. Ltd. of China increased its total holding in VGM to about 66% in 2014 and became the controlling entity. Additional financing of \$30 million was expected to be necessary for the company to reach its long-term production targets (Vatukoula Gold Mines plc., 2015b, p. 1, 2, 15).

Lion One Metals Ltd. (Lion One) of Canada owned the Tuvatu gold project, which is located 50 kilometers south of the Vatukoula Mine. The total indicated resource of the Tuvatu project was estimated to be about 1.1 Mt at a grade of 8.17 g/t gold for a total of about 9,000 kg of gold, and the inferred resource was 1.3 Mt at a grade of 10.6 g/t gold for a total of about 13,800 kg of gold. In October, the construction and operation environmental management plan of the project was approved by the Government. The plan allowed for the construction of an underground or open pit mine, a processing plant, onsite roads and infrastructure, pipelines, a tailings impoundment, and water-management facilities. The environmental impact assessment for this project was approved by the Government in 2013. The project was expected to have a mine life of 6.16 years, an average recovery rate of 86.3%, and average annual production of 1,782 kg of gold (Northern Miner, The, 2014; Freudigmann and others, 2015, p. 1.12).

### **Industrial Minerals**

**Cement.**—Fiji Industries Ltd. had a production capacity of 200,000 metric tons per year of cement. In May, the company was renamed Pacific Cement Ltd. (PCL). Before September, PCL was a joint venture between Fijian Holdings Ltd. Corp. (51%) and South Pacific Cement Ltd. In September, South Pacific Cement sold its 47% share to Vinod Patel Group of Fiji. According to PCL, during the fiscal year ending in June 2014, more than 37% of its production was exported to countries in the Asia and the Pacific region, including New Zealand (Global Cement, 2014; Valemei, 2014).

In 2012, Tengy Cement Company Ltd. of China acquired an operating license to operate a cement factory in Fiji. In August 2014, the Tengy cement factory (a \$50 million investment) was officially opened at Veisari near Lami. The main products of the plant included general purpose portland cement and general purpose blended cement. According to the Government, the new cement factory would help address the short supply of cement, reduce the price, and contribute to Fiji's economy. The production capacity of the plant was estimated to be 50,000 t. From February to August, the plant produced 20,000 t of cement. The first exports to other Pacific island countries were scheduled to be shipped in September (Gueniou, 2014; Tengy Cement Fiji Ltd., 2015).

### **Outlook**

Gold production by VGM is expected to decrease as the company actively pursues financing solutions to reduce its operating costs. The development of an underground mine is likely to be delayed owing to the company's challenging financial situation. The Tuvatu gold project is expected to add production capacity, once implemented. Cement production and exports are expected to increase as the Tengy cement factory enters its first full year of operation in 2015. Bauxite production is expected to decrease as the Nawailevu Mine was closed.

### **References Cited**

- Butabua, Watisoni, 2014, Land lease approved for new bauxite mining site in Bua: Fijivillage.com, November 7. (Accessed August 26, 2015, at <http://fijivillage.com/news/Land-lease-approved-for-new-bauxite-minning-site-in-Bua-k2s5r9/>.)
- Fiji Bureau of Statistics, 2015, Key statistics—March 2015: Suva, Fiji, Fiji Bureau of Statistics, May, 165 p.
- Freudigmann, Stacy, Taylor, Ian, Woodward, Anthony, Lee, David, and Morgan, David, 2015, Lion One Metals Tuvatu gold project preliminary economic assessment: AMC Consultants Pty Ltd., July 14, 219 p. (Accessed August 26, 2015, via [http://www.liononemetals.com/assets/pdf/Tuvatu\\_Gold\\_Project\\_-\\_Preliminary\\_Economic\\_Assessment\\_.pdf](http://www.liononemetals.com/assets/pdf/Tuvatu_Gold_Project_-_Preliminary_Economic_Assessment_.pdf).)
- Global Cement, 2014, Fiji Industries changes name to Pacific Cement: Global Cement, May 13. (Accessed August 26, 2015, at <http://www.globalcement.com/news/item/2491-fiji-industries-changes-name-to-pacific-cement>.)
- Gueniou, Katherine, 2014, New cement plant opens in Fiji: WorldCement.com, August 12. (Accessed August 26, 2015, at <http://www.worldcement.com/asia-pacific-rim/12082014/New-cement-plant-opens-in-Fiji-278/>.)
- Lal, Rachna, 2015, Vatukoula Gold Mines in funding discussions with investors: Sun [Fiji] News Ltd., April 20. (Accessed August 26, 2015, at <http://fijisun.com.fj/2015/04/20/vatukoula-gold-mines-in-funding-discussions-with-investors/>.)
- Ministry of Lands and Mineral Resources, 2015a, Department of Mineral Resources: Ministry of Lands and Mineral Resources Web page. (Accessed August 26, 2015, at <http://www.lands.gov.fj/index.php/department/department-of-mineral-resources>.)
- Ministry of Lands and Mineral Resources, 2015b, Legislation: Ministry of Lands and Mineral Resources Web page. (Accessed August 26, 2015, at <http://www.lands.gov.fj/index.php/department-6/legislation>.)
- Ministry of Lands and Mineral Resources, 2015c, Welcome: Ministry of Lands and Mineral Resources Web page. (Accessed August 26, 2015, at <http://www.lands.gov.fj/>.)
- Northern Miner, The, 2014, Lion One moves permitting forward in Fiji: The Northern Miner, October 29. (Accessed August 26, 2015, at <http://www.northernminer.com/news/lion-one-moves-permitting-forward-in-fiji/1003314439/>.)
- Tengy Cement Fiji Ltd., 2015, Home: Tengy Cement Fiji Ltd. Web page. (Accessed August 26, 2015, at <http://www.tengycement.com.fj/index.html>.)
- Vatukoula Gold Mines plc., 2015a, Home page: Vatukoula Gold Mines plc (Accessed August 26, 2015, at <http://www.vgmplc.com/>.)
- Vatukoula Gold Mines plc., 2015b, Report and financial statements for the 16 months ended 31 December 2014: Vatukoula Gold Mines plc., 36 p. (Accessed August 26, 2015, at <http://www.vgmplc.com/downloads/VGM%20December%202014%20Financials%20Final%20Version%201%20200.pdf>.)
- Valemei, Ropate, 2014, Cement company sells stake: Fiji Times Ltd., September 18. (Accessed August 26, 2015, at <http://www.fjitime.com/story.aspx?id=280604>.)

TABLE 1  
FIJI: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity <sup>2</sup>		2010	2011	2012	2013	2014
Bauxite <sup>e</sup>		--	50	500	600 <sup>r</sup>	640
Cement, hydraulic		163 <sup>r</sup>	170 <sup>r</sup>	150 <sup>r</sup>	181 <sup>r</sup>	190 <sup>e</sup>
Gold, mine output, Au content	kilograms	1,903 <sup>r</sup>	1,572 <sup>r</sup>	1,453 <sup>r</sup>	1,218 <sup>r</sup>	1,160 <sup>e</sup>
Limestone <sup>e</sup>		50	50	50	60	60
Silver, mine output, Ag content	kilograms	328 <sup>r</sup>	418 <sup>r</sup>	342 <sup>r</sup>	462 <sup>r</sup>	360 <sup>e</sup>

<sup>e</sup>Estimated data are rounded to no more than three significant digits. <sup>r</sup>Revised. -- Zero.

<sup>1</sup>Table includes data available through August 28, 2015.

<sup>2</sup>In addition to the commodities listed, crushed and dimension stone, coral sand, marble, and other construction materials are produced, but available information is inadequate to make reliable estimates of output.

TABLE 2  
FIJI: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity <sup>e</sup>
Bauxite		Shandong Xinfu Aluminum & Electricity Group	Nawailevu Mine in Lekutu District, Bua Province	800
Cement		Pacific Cement Ltd. (PCL) (Fijian Holding Ltd. Corp., 51%, and Vinod Patel Group, 47%)	Lami, Suva	200
Do.		Tengy cement factory (Tengy Cement Company Ltd.	do.	50
Gold	kilograms	Vatukoula Gold Mines plc. (Zhongrun International Mining Co. Ltd., 66%)	Vatukoula, Viti Levu	2,000
Silver	do.	do.	do.	500

<sup>e</sup>Estimated. Do., do. Ditto.