



2015 Minerals Yearbook

SOLOMON ISLANDS [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF THE SOLOMON ISLANDS

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The Solomon Islands is a country in the South Pacific Ocean that consists of large and small volcanic islands and hundreds of islets and atolls. About 80% of the country's population depends on agriculture, fishing, and forestry for at least a portion of its livelihood. The mineral resources that are the most significant to the economy were gold and silver. The country's undeveloped mineral resources include bauxite, lead, nickel, and zinc (Secretariat of the Pacific Community, 2008, p. 1; Asian Development Bank, 2015).

Minerals in the National Economy

Although the closure of the Gold Ridge Mine and the flood of April 2014 weakened the economy of the country, the country's gross domestic product (GDP) increased by 3.3% in 2015 compared with an increase of 1.5% (revised) in 2014. Economic growth was driven mainly by the agriculture, fishing, and logging forestry industries (International Monetary Fund, 2016, p. 3).

The value of total trade decreased by a combined 5% to \$42.3 million (SBD6.24 billion)¹ in 2015 from \$44.6 million (SBD6.59 billion) in 2014, of which exports totaled \$19.7 million (SBD2.91 billion) in 2015 compared with \$23.7 million (SBD3.12 billion) in 2014, and imports totaled \$22.6 million (SBD3.33) in 2015 compared with \$26.4 million (SBD3.47) in 2014. As of June 2015, the value of mineral exports had decreased by 18% to \$81,285 (SBD12 million) in 2015 from \$98,920 (SBD13 million) (revised) in 2014 owing to the closure of the Gold Ridge Mine. The value of mineral fuel imports increased by 37% to \$1.2 million (SBD183 million) in 2015. The Solomon Islands' major export partners were, in terms of the value of exports in 2014, China (57.5%), Australia (10.6%), the United Kingdom (6.3%), and Italy (5.9%). The major import partners were Australia (27.6%), Singapore (24.2%), China (12.0%), and Malaysia (8.4%) (Australian Department of Foreign Affairs and Trade, 2015; Central Bank of Solomon Islands, 2015a; 2015b, p. 10).

Government Policies and Programs

In July 2014, the National Parliament of the Solomon Islands put into force the Mines and Minerals (Amendment) Act 2014 (formerly the Mines and Minerals Act 1996), which states that all mining companies that hold mining licenses in the Solomon Islands are expected to invest in infrastructure improvements in the country. The Mining Royalty Special Fund, which was established in 2014, is responsible for collecting royalty payments on such mineral commodities as lead, phosphate rock, and zinc. The consolidated revenues of the Government of the Solomon Islands would include the

¹ Where necessary, values have been converted from Solomon Islands dollars (SBD) to U.S. dollars (US\$) at an average rate of SBD141.22=US\$1.00 for 2015 and SBD131.12=US\$1.00 for 2014.

royalty payments for bauxite, copper, gold, iron ore, nickel, and silver, of which 10% would be paid to the Government of the Solomon Islands as a trustee for the government of the Province in which the licensed area is located and 40% would be paid to the Government of the Solomon Islands as a trustee for the landowner of the licensed area (National Parliament of Solomon Islands, 2014, p. 4–6).

Production

In 2015, the country did not produce any gold or silver owing to the closure of the Gold Ridge Mine in 2014. Data on mineral production are in table 1.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Commodity Review

In 2015, Nautilus Minerals Inc. of Canada signed a contract with Gardline CGG Pte Ltd. (Gardline) of Singapore for exploration of Nautilus' seafloor massive sulfide (SMS) prospect. The company hoped to discover mineralized systems within its wholly owned Solomon Islands exploration licenses by using multibeam echo sounder and plume hunting techniques. The contract with Gardline was for a 43-day period. Gardline was a joint venture between Compagnie Générale de Géophysique (CGG) of France and Gardline Group of the United Kingdom. The major shareholders of Nautilus Minerals were MB Holding Company LLC of Oman (28.14%), Metalloinvest MC LLC of Russia (20.89%), and Anglo American plc of the United Kingdom (5.99%) (Asia Miner News, 2015, p. 56; Thomson Reuters, 2015).

Metals

Bauxite and Alumina.—Southwest Pacific Bauxite Pty Ltd. of Australia held a 75% interest in Solomon Bauxite Ltd., which in turn owned 100% of the Vaghena Island bauxite project. As of 2014, the mine was estimated to contain about 30.1 million metric tons (Mt) of bauxite. A feasibility study for the project was completed in August 2014. The projected production capacity of the mine was 1.2 million metric tons per year (Mt/yr) of bauxite and could be expanded to 2 Mt/yr after several years. The project was located on the northeastern portion of Vaghena Island and was expected to employ between 200 and 250 people. The company planned to accelerate the project; however, no information on when the project would be commissioned was available (Solomon Bauxite Ltd., 2014; Southwest Pacific Bauxite Pty Ltd., 2014; Solomon Islands Broadcasting Corp., 2015c).

In December 2014, the Ministry of Mines, Energy and Rural Electrification canceled PT Mega Bintang Borneo Ltd. of

Indonesia's mining licenses and ordered it to stop operations at the bauxite area on Rennell Island in Renbel Province. The Ministry of Mines, Energy and Rural Electrification awarded PT Mega Bintang Borneo's licensed area to Asia Pacific Investment and Development Ltd. (APID) of Indonesia because PT Mega Bintang Borneo's licensed area fell under APID's prospecting licenses, which had been renewed in 2012. In 1971, Mitsui Mining and Smelting Co. of Japan estimated the total bauxite reserves on the southern half of Rennell Island to be 36 Mt. In October 2014, APID held a groundbreaking ceremony on western Rennell Island. The company had moved some equipment and was expected to move 80 more motorized machines for operations to the development area; it was also expecting to employ 200 local workers. In 2015, the Ministry of Mines, Energy and Rural Electrification issued a notice to APID that the company's licenses for bauxite mining on Rennell Island would probably be canceled owing to APID's failure to meet conditions required by the Mines and Minerals Board (Stock, 1970, p. 972; Theonomi, 2014a, b; Solomon Islands Broadcasting Corp., 2015a; Solomon Times Online, 2015).

Copper, Gold, and Silver.—The operations at the Gold Ridge Mine in Guadalcanal Province—the only gold and silver mine in the country—were stopped owing to escalating security concerns, damage caused by severe flooding of the only access road to the mine, lack of food supply and fuel for electricity, and the flooding of open pit mines; the mine remained closed for all of 2015. In May 2015, St Barbara Ltd. sold the mine to Goldridge Community Investment Ltd. (GCIL), which was owned by landowners of the Gold Ridge area, for about \$73 (AUD100).²

The Government declared the area around the mine a disaster area owing to the possibility of collapse of a tailings dam that contains concentrated levels of arsenic and other heavy minerals, and cyanide. As of June 2014, total reserves at the mine were estimated to be 14.6 Mt at a grade of 1.4 grams per metric ton (g/t) gold for a total of 21 metric tons (t) of gold; mineral resources were estimated to be 64.2 Mt at a grade of 1.5 g/t gold for a total of 99 t of gold (Radio New Zealand, 2014; Solomon Times Online, 2014b–e; Swanepoel, 2014; Armbruster, 2015a, b; Central Bank of Solomon Islands, 2015b, p. 11; Solomon Islands Broadcasting Corp., 2015b; St Barbara Ltd., 2015, p. 107, 110).

Australian Resource Management Pty Ltd. of Australia (a wholly owned subsidiary of SolGold plc of Australia—formerly Solomon Gold plc.) renewed its exploration licenses for the Kuma copper-gold project and the Fauro Island project. In 2014 and 2015, SolGold conducted geochemical and spectral studies for copper and gold at the Kuma project. In 2015, the Fauro Island prospect, the Lower Koloula project, and the Malukuna project were deemed not to be as prospective as the Kuma project, and exploration of these three projects ceased. The Kuma project is a porphyry copper-gold system located about 40 kilometers (km) south-southeast of the capital, Honiara. The area of the Kuma project is 43 square kilometers (km²). In September 2014, SolGold completed the collection of 184 soil samples at the Kuma project for TerraSpec spectral analysis, and 3 rock chip samples. The geochemical results indicated a central zone of manganese depletion [<200 parts per million (ppm)

Mn], a zinc halo (>75 ppm Zn) around the central zone, and molybdenum (>4 ppm Mo) along the margins of the manganese-depleted zone, indicating the potential for porphyry copper-gold mineralization at depth (Asia Miner News, 2013; SolGold plc, 2013a, p. 24; 2013b; 2014, p. 8, 37, 41; 2015, p. 23).

In 2014, Axiom Mining Ltd. of Australia was granted an exploration license for the West Guadalcanal project. The project is an epithermal gold and copper-gold system that covers an area of 485 km². The West Guadalcanal project consisted of three prospects—Mt. Tanijili, Polo, and Taho. In 2014, Axiom Mining planned to carry out initial drilling to a depth of 2,500 meters (m) at the Taho prospect. A total of 1,529 m was drilled with nine holes. The drilling results included 4.35 m containing 0.91 g/t gold and 7.22 g/t silver. Trenching results indicated that the surface mineralization zone could be extended to 1.5 km. In 2015, the company applied for renewal of exploration licenses for the West Guadalcanal project (Axiom Mining Ltd., 2015a, p. 12, 18; 2015b; 2015c, p. 6, 17; 2015d; 2016, p. 11).

Nickel.—In 2014, the Solomon Islands High Court dismissed Sumitomo Metal Mining Co., Ltd. (SMM) of Japan's claims for an exploration license for the Isabel nickel project and ruled in favor of Axiom Mining. Axiom Mining was awarded a 50-year lease through its subsidiary Axiom KB Ltd., which was a joint venture of the Bungusule and the Kolosori Tribes (20%) and Axiom Mining (80%). In 2014, Axiom Mining resumed exploration activities on the Isabel prospect. Axiom KB conducted a drilling survey at the Kolosori area (Isabel nickel project) to determine the grade of nickel in saprolite beneath the limonite mineralization and to verify the historical data compiled by International Nickel Company Ltd. (INCL) (formerly known as Inco) of Canada and Kaiser Engineering International Inc. (Kaiser Engineering) of the United States. The drilling results showed nickel concentrations of more than 2% and a depth of mineralization that was deeper than indicated by the INCL and Kaiser Engineering data (Axiom Mining Ltd., 2015a, p. 2, 11; 2015b; 2016; Garrett, 2014).

In 2014, Axiom Mining partnered with Anitua Ltd. of Papua New Guinea. Anitua provided a loan of AUD5 million (\$3.644 million)² for the development of the Isabel nickel project. Anitua also agreed to provide services, such as exploration drilling, construction, camp management, and contract mining. Axiom KB Ltd. conducted drilling on the Kolosori area (Isabel nickel project) and intersected high-grade nickel laterite. As of December 2015, the laterite resources at the Kolosori area (including measured, indicated, and inferred resources) were estimated to be 7.7 Mt of saprolite resource at grades of 1.5% nickel and 0.03% cobalt (at 1.0% cutoff grade) and 8.4 Mt of limonite resource at grades of 1.0% nickel and 0.11% cobalt (at an 0.7% nickel cutoff grade). In 2015, Axiom Mining was awarded prospecting licenses to the San Jorge area on San Jorge Island. In mid-2015, the company started preparations for initial exploration of the San Jorge area (Axiom Mining Ltd., 2014; 2016, p. 9–10; Solomon Times Online, 2014a).

² Where necessary, values have been converted from Australian dollars (AUD) to U.S. dollars (US\$) at an average rate of AUD1.372=US\$1.00 for 2015.

Outlook

The Solomon Islands' GDP growth rate is expected to remain at about 3% in 2016 owing to investment in communication, construction, and manufacturing. The recovery of the mineral industry will likely depend on if and how quickly gold production resumes at the Gold Ridge Mine and on the future of mining projects, such as those for bauxite, gold, and nickel (International Monetary Fund, 2016).

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TABLE 1
SOLOMON ISLANDS: PRODUCTION OF MINERAL COMMODITIES¹

(Kilograms)

Commodity	2011	2012	2013	2014	2015
Gold, mine output, Au content	1,641	2,180	1,886	1,403	--
Silver, mine output, Ag content	612	932	413	280	--

-- Zero.

¹Table includes data available through March 8, 2016.

TABLE 2
SOLOMON ISLANDS: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(Kilograms)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Gold:			
Ore	Goldridge Community Investment Ltd. (GCIL), 100%	Gold Ridge Mine, ¹ Guadalcanal, Guadalcanal Province	NA
Refined	Meekom Gold Exchange and Refinery Corp. Ltd.	NA	600
Silver, in ore	Goldridge Community Investment Ltd. (GCIL), 100%	Gold Ridge Mine, ¹ Guadalcanal, Guadalcanal Province	NA

NA Not available.

¹ The mine was closed from July 2014 through 2015.