



# 2014 Minerals Yearbook

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## CAMBODIA

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# THE MINERAL INDUSTRY OF CAMBODIA

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In 2014, Cambodia produced cement, gravel, laterite, sand, and stone, which were mostly consumed domestically. According to the World Bank, in 2014, the nominal gross domestic product was \$16.71 billion. Real growth was estimated to be 7.1%. The Asian Development Bank estimated that the industrial sector (which included mining) grew by 9.8%, and the construction sector saw an unspecified increase in business funded mainly by foreign direct investment (table 1; Asian Development Bank, 2015, p. 212; World Bank, The, 2015a, b).

In 2014, the National Bank of Cambodia reported that the country's total trade increased by 13% to \$18.3 billion<sup>1</sup> from \$16.2 billion in 2013. The country's exports were valued at \$7.5 billion compared with \$6.5 billion in 2013. In terms of imports, the total value in 2014 increased by 11.3% to \$10.8 billion from \$9.7 billion in 2013. Imports of petroleum were valued at \$1.05 billion and represented 9.8% of the country's total import value. Cambodia's exports to the United States were valued at \$2.85 billion. Imports from the United States had a total value of \$327.9 million. Imports of aluminum and alumina, fertilizers, iron and steel products, and other nonferrous metals, nonmetallic minerals, petroleum products, and precious metals (not including gold) from the United States were valued at about \$8.3 million, which represented 2.5% of total imports (National Bank of Cambodia, 2015, p. 8, 60; U.S. Census Bureau, 2015a, b).

According to the General Department of Mineral Resources of Cambodia, in 2013 (the latest year for which data were available), a total of 91 domestic and foreign companies (from Australia, China, Thailand, and Vietnam) held exploration licenses in the country for a total of 139 exploration projects. Minerals under exploration included antimony, bauxite, chromite, coal, copper, gold, iron, kaolin, and silica sand. Of the 91 companies, 13 (from China, 5; Thailand, 3; and domestic, 5) were licensed to develop mining projects for coal, gold, iron, limestone, and phosphate rock. The status of many of these projects was unknown (Royal Embassy of Cambodia to the United Kingdom, 2014, p. 14).

In July 2014, the Government announced that it had started the reconstruction of a cross-border railway between Cambodia and Thailand. The project included the reconstruction of a 43-meter (m)-long bridge close to the border with Thailand, and the construction of a 42-kilometer (km) railway between the towns of Sisophon and Poipet. An additional 6 km of rail was also planned for reconstruction that would reach the rail network of the State Railway of Thailand in Aranyaphrathet. The Governments of Cambodia and Thailand considered the upgrade of the railway system necessary to facilitate trade between their countries, which included the trade of mining and

mineral goods. No further details were released in terms of costs and estimated date for commencement of the projects (Railway Gazette, 2014).

The demand for electricity generating capacity in Cambodia is projected to increase at a rapid pace—to about 1,650 megawatts (MW) in 2015; about 2,300 MW in 2018; and about 2,800 MW in 2020. To meet the demand, the Government developed a power expansion plan under the Power Development Plan for the Period 2008–20. Cambodia depended on electricity imports to meet its domestic needs; this lack of reliable electricity sources had been a challenge for investors interested in the mining sector. The Government expected to provide electricity to 100% of the villages in the country by 2020 and to about 70% of all rural areas by 2030 (Council for the Development of Cambodia, undated).

## Production

In 2014, the production of commodities in the industrial minerals sector of Cambodia performed similarly to that of 2013, with slight increases in the production of gravel, sand, and stone, which were commodities mainly consumed by the construction industry. The production of cement was estimated to be about 1 million metric tons (Mt) in 2014 (table 1).

## Structure of the Mineral Industry

In general, the mining sector in Cambodia is considered undeveloped, and most active mining operations consisted of small-scale quarries that produced industrial minerals to be used for construction, such as granite, gravel, laterite, limestone, marble, and sand. In addition, the mineral sector also consisted of artisanal and small-scale miners that seasonally run small operations to extract gold and gemstones. Because artisanal mining is done informally, output levels are difficult to determine. As of August 2014, mining extraction of precious minerals at an industrial scale was nonexistent in the country, although some companies had been granted exploration and mining licenses to mine these minerals (Open Development Cambodia, 2014).

Cambodia had only one active cement plant, Kampot Cement, which was located in Kampot Province. The plant was owned by Siam City Cement Co. of Thailand (90%) and Khaou Chuly Group (10%) and had a production capacity of 960,000 metric tons per year (t/yr).

Table 2 is a list of major mineral industry facilities in the country.

## Commodity Review

### Metals

**Copper and Gold.**—In December 2014, Angkor Gold Corp. of Canada received approval from the Ministry of Mines and Energy of Cambodia (MIME) to proceed with an environmental

<sup>1</sup>Where necessary, values have been converted from Cambodian riel (KHR) to U.S. dollars (US\$) at the rate of KHR4,036=US\$1.00 for 2014 and KHR4,043=US\$1.00 for 2013.

impact assessment for the company's gold mine project in Phum Syarung. The mining permit for the project covers an area of 12 square kilometers (km<sup>2</sup>) and included two prospects—the Blue Lizard and the Phum Syarung. The project was operated by Mescos Gold (Cambodia) Ltd., a subsidiary of Mescos Steel Ltd. of India. During 2015, Mescos planned to drill the Blue Lizard prospect to define its mineralization. Mescos also planned to move forward with the construction and development of the Phum Syarung prospect. According to the company, the feasibility of the prospect was determined by sample drilling the area; the company was not required to report on the identified resources, however, and no additional details were released. If approved, a mining license would be issued by the Cambodian Development Council and the Ministry of Environment to Mescos upon completion of the environmental impact statement, which would allow Mescos to start production. No timeline was released regarding completion of the study (Angkor Gold Corp., 2014).

Brighton Mining Group of Australia held a joint interest (70%) in the Antrong gold project in Mondul Kiri Province, which is located about 230 km northwest of Phnom Penh. The Antrong project includes three separate concessions—the Antrong, the Kang Roland North, and the Ropoah. The mineral license for the Antrong project was originally granted to Sun Hill Minerals of Cambodia for which Brighton held a 70% share. During 2014, the company carried several studies within the project, including geophysical studies, drill sampling, and trenching to test for gold anomalous zones. The company did not release details regarding the results of the studies. By the end of 2013, the company completed the construction of a road that would provide access to the Antrong project (Asia Miner News, 2014).

During 2014, Geopacific Resources Ltd. of Australia was exploring a potential copper-gold zone within the Kou Sa copper-gold project. The project was located in the Chep District of Preah Vihear Province and consisted of an area of 158 km<sup>2</sup>. In 2013, Geopacific conducted an exploration campaign, which included soil sampling, drilling, and soil geochemistry analysis that identified copper, copper-gold, and gold-molybdenum mineralization; however, the company had yet to outline the deposit's area and define reserves and resources. Geopacific's interest in the Kou Sa project was through Royal Australian Resources, which was Geopacific's subsidiary company in Cambodia. Royal Australian Resources had an option to acquire 100% tenement in the project; the company was owned by Geopacific (85%) and Geopacific's joint-venture partner Royal Group (15%) (BBY Ltd., 2014; Geopacific Resources Ltd., 2015).

In October 2014, Renaissance Minerals Ltd. of Australia announced the results of a scoping study for the development of an operation at its wholly owned Okvau deposit within the Okvau gold project. The Okvau Mine was projected to produce 1.5 million metric tons per year (Mt/yr) of ore. The project, which had an estimated cost of \$133 million, is located in Mondul Kiri Province approximately 265 km northeast of Phnom Penh and covers an area of approximately 400 km<sup>2</sup>. The scoping study revealed the potential for the project to yield an average of 2,900 kilograms (kg) per year of gold (reported as

93,000 troy ounces per year) during an estimated mine life of 8 years. The Okvau deposit had an estimated mineral resource of 11 Mt at a grade of 2.3 grams per metric ton (g/t) gold for an estimated 24,700 kg of gold (reported as 794,000 troy ounces). Renaissance held a 100% interest in the Okvau exploration license through its 100%-owned subsidiary Renaissance Minerals (Cambodia) Ltd. (Renaissance Minerals Ltd., 2014).

**Iron and Steel.**—As of April 2014, no work had been done for the construction of the steel plant to be built in Preah Vihear Province in northern Cambodia. Plans included building a port in Koh Kong Province on the southwestern coast of the country and the construction of a 405-km-long railway to connect the steel plant to the seaport. The company in charge of building the railway portion of the project, the China Railway Group, stated that construction was expected to begin in 2013, but that the project was delayed owing to the inability to source funding. According to the Government of Cambodia, the signing of the construction contract took place in December 2013, although the project was announced in December 2012. The contract was valued at \$11.2 billion, of which \$9.6 billion was for the construction of the rail system and \$1.6 billion was for the steel plant. The permits were granted to the lead developer, Cambodia Iron & Steel Mining Industry Group of China (CISMIG) (de Carteret, 2014; SB Wire, 2014).

### *Industrial Minerals*

**Cement.**—In June 2014, Huaxin Cement Co. of China announced the acquisition of a 40% stake of the Chakrey Ting Factory Co. (owned by Cambodia Cement) at a cost of \$24 million. The Chakrey plant, which was located in Kampot Province, was developed at a total cost of \$100 million and had a projected production capacity of 1.1 Mt/yr of cement. The plant was still under construction in 2014 (FICO Cement, undated; Global Cement News, 2014).

### *Mineral Fuels*

**Petroleum and Natural Gas.**—Cambodia had only one identified oil discovery, Block A, which covers an area of 4,709 km<sup>2</sup> in the Khmer Basin in the Gulf of Thailand. In October 2014, KrisEnergy Ltd. (registered in the Cayman Islands) announced the completion of the purchase of all share capital of Chevron Overseas Petroleum (Cambodia) Ltd. (COPCL) in Block A. In September, KrisEnergy received acknowledgment from the Government authorizing the company to finalize the transaction. COPCL held a 30% interest in Block A, which was transferred to KrisEnergy's wholly owned subsidiary KrisEnergy (Aspara) Ltd. [formerly known as KrisEnergy (Asia) Ltd.] in the transaction. After the completion of the purchase transaction, KrisEnergy's total interest in Block A added up to 55% (KrisEnergy Ltd., 2014).

In November 2014, the MIME announced the Government's plan to open concession bids for 19 onshore oil and gas exploration blocks located in the Gulf of Thailand, although no timeframe was given. In 2013, Cambodia was planning to build its first oil refinery on the southeastern coast of the country in Sihanoukville. The project was to be built jointly by

Petrochemical Co. of Cambodia and Sinomach China Perfect Machinery Industry Corp. of China at a cost of \$2.3 billion. As of 2014, the project was expected to be delayed from its commencement projection of 2018 owing to unspecified changes in Cambodia's petroleum regulations (KrisEnergy Ltd., 2014; Thomson Reuters, 2014).

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

(Metric tons)

Commodity <sup>2</sup>	2010	2011	2012	2013 <sup>c</sup>	2014 <sup>c</sup>
Cement	789,025	906,711	980,000 <sup>c</sup>	1,000,000	1,000,000
Gravel	82,500	38,438	43,000 <sup>c</sup>	45,000	50,000
Laterite, blocks	1,612,500	355,000	412,500	415,000	415,000
Sand, construction material	38,367,500	8,296,590	8,800,000 <sup>c</sup>	8,800,000	9,000,000
Stone, crushed	6,331,000	5,223,345	5,850,000 <sup>c</sup>	5,850,000	6,000,000

<sup>c</sup>Estimated; estimated data are rounded to no more than three significant digits.

<sup>1</sup>Table includes data available through November 9, 2015.

<sup>2</sup>In addition to the commodities listed, clay, gemstones, gold, iron ore, limestone, and salt were presumably produced, but available information was inadequate to make reliable estimates of output.

Source: Cambodia's Ministry of Industry, Mines and Energy, General Department of Mineral Resources.

TABLE 2  
CAMBODIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Thousand metric tons)

Commodity	Main operating companies and main equity owners	Location of main facilities	Annual capacity <sup>c</sup>
Cement	Kampot Cement Co. Ltd. (Siam City Cement Co. of Thailand, 90%, and Khaou Chuly Group, 10%)	Phnom Tatung, Touk Meas District, Kampot Province	960
Gemstones	Jireh International Cambodia Construction and Import-Export Co. Ltd.	Anlong Krapeu-Preak Bey, Samlot District, Battambang Province	NA
Do.	Seoul Digem Cambodia Co. Ltd.	Lumphat District, Ratanakiri Province	NA
Do.	Sonuba Cham Industries Co. Ltd.	Phnom Trop, Pailin City	NA
Do.	Ultra Marine Kiri (Cambodia) Ltd.	Pating Thom Village, Ting Chak Commune, Borkeo District, Ratanakiri Province	NA
Do.	do.	Sen Chauv, Samlot District, Battambang Province	NA
Granite	TTY-Rithy Mexico Co. Ltd.	Svay Chreas District, Kracheh Province	NA
Limestone	Kampot Cement Co. Ltd. (Siam City Cement Co. of Thailand, 90%, and Khaou Chuly Group, 10%)	Phnom Tatung, Touk Meas District, Kampot Province	1,500
Do.	Thai Boon Roong Cement Co. Ltd.	Phnom Laang Laan Commune, Dongtung District, Kampot Province	NA
Do.	United International (Cambodia) Foreign Investment Group Co. Ltd.	East Touk Meas, Banteay Meas District, Kampot Province	NA

<sup>c</sup>Estimated. Do., do. Ditto. NA Not available.