



# 2011 Minerals Yearbook

---

## CAMBODIA

---

# THE MINERAL INDUSTRY OF CAMBODIA

By Yadira Soto-Viruet and Yolanda Fong-Sam

Cambodia's mineral industry was dominated by the production of industrial minerals, which included crushed stone, limestone, and sand and gravel. The country's undeveloped mineral resources included bauxite, copper, gold, offshore oil and gas, and titanium. The country's exports to the United States were valued at about \$2.7 billion in 2011 compared with about \$2.3 billion in 2010. Advanced iron and steel products accounted for about \$359,000 of these exports. Imports from the United States were valued at about \$186 million in 2011 compared with about \$154 million in 2010. These included nearly \$2.2 million of excavating machinery and \$639,000 of drilling and oilfield equipment (U.S. Census Bureau, 2012a, b).

## Government Policies and Programs

The Ministry of Industry, Mines and Energy (MIME), which implements Cambodia's mineral law and policy, is the Government entity that leads the effort to promote and develop the industrial sector in the country. The Department of Geology and Mines and the Department of Energy, which are both under the MIME, coordinate the development of the energy and mineral sectors. The policy governing foreign direct investment (FDI) in the country is based on the Law on Investment of the Kingdom of Cambodia, which was enacted in 1994. The objective of the law is to manage foreign investments in the country efficiently. The investment law provides incentives for private investment, as well as comparable treatment for domestic and foreign investors, except with respect to land ownership. In accordance with Cambodia's Constitution, foreign investors may not own land but may lease the land for a period of up to 70 years with the option to renew from then on. The Government also provides guarantees that the foreign-owned assets will not be nationalized and that the prices for goods produced and services provided by the investor will not be regulated. The investment law also allows foreign investors to own 100% of their mining investments and to employ skilled workers from overseas in the cases where workers cannot be found in the domestic labor force. Under the investment law, the Government created the Council for the Development of Cambodia (CDC), which oversees the investment policy and assists investors in all regulatory aspects of doing business in the country. The CDC, through the Cambodian Investment Board, processes and evaluates all proposals for exploration and is required to respond to each application within 45 days of submittal; if the application is approved, the CDC grants an exploration license. If exploration is successful, the CDC is responsible for granting the mining license to the investors; a mining project plan or proposal is required as a condition for acquiring a mining license (Investincambodia.com, 2012, 2013).

## Production

In 2011, laterite production decreased by 7% to 1.5 million metric tons (Mt) from about 1.6 Mt in 2010. Production data for other mineral commodities included in table 1 were estimated for 2011.

## Structure of the Mineral Industry

In 2011, the MIME issued exploration and mining licenses to 24 domestic and foreign companies, which included companies from Australia, China, Thailand, the United States, and Vietnam. As of December, the country had granted mining licenses to a total of 128 domestic and foreign companies (People's Daily Online, 2012). Table 2 is a list of major mineral industry facilities.

## Commodity Review

### Metals

**Bauxite and Alumina.**—Vietnam National Coal and Mineral Industries Holding Corp. Ltd. (Vinacomin) continued with its plans to explore for bauxite resources in an area of Mondol Kiri Province that covers about 1,500 square kilometers (km<sup>2</sup>). The area is located in eastern Cambodia adjacent to the border with Vietnam's Dak Nong Province. The company planned to complete a resource assessment for the area by 2013 (Vietnam National Coal and Mineral Industries Holding Corp. Ltd., 2011).

**Gold.**—Southern Gold Ltd. of Australia held a total of seven exploration licenses for gold and base metals in areas totaling 1,500 km<sup>2</sup> located in several Provinces in eastern Cambodia. The company held a 49% interest in the Kratie South project, which included the O'Khtung and the Preak Khlong prospects. In May, Japan Oil, Gas and Metals National Corp. (JOGMEC) earned 51% interest in the Kratie South project as part of a joint-venture agreement signed in 2008. In June, the company reported gold assays of up to 5 meters at an average grade of 5.22 grams per metric ton at the Preak Khlong northwest prospect. During the year, JOGMEC reported that it was to write off its earning interest in the Kratie North project; as a result of the writeoff, ownership of the project returned to Southern Gold (100% interest). Southern Gold also held 100% interest in the Memot, the Phnum Romdul, and the Srae Pok projects (Southern Gold Ltd., 2011, p. 5, 12–13, 17).

Other companies exploring for gold in the country included Australian companies Brighton Mining Group Ltd., Indochine Mining Ltd., and OZ Minerals Ltd., and Canadian company Angkor Gold Corp.

**Iron Ore.**—Hoang Anh Gia Lai Group of Vietnam held a cooperation agreement with the MIME to survey an iron ore mine in the country, which is located in the Quayday District in the Province of Rotanokiri. During the year, the company submitted all the required documents to the MIME for the

exploitation of the iron mine site, which covers an area of about 154 km<sup>2</sup> and had estimated reserves of 30 Mt of iron ore (Hoang Anh Gia Lai Group, 2010, 2011).

By yearend 2010, the Wai Chun Mining Industry Group Co. Ltd. of the Cayman Islands entered into a heads of agreement (HOA) with Guangxi Non-Ferrous Metal Group Co. Ltd. of China and Guangxi Sincerity Investments & Trading Co. Ltd. of China to acquire the entire interest in two iron mines in the Kohkeo and the Phnom Thmar regions. The HOA included the possible acquisition of the mines from Guangxi Non-Ferrous Metal at a cost of about \$259 million. In March, the companies announced the end of the HOA, stating that they were unable to agree on the final structure and terms of the definitive agreements (Wai Chun Mining Industry Group Co. Ltd., 2010; 2012, p. 4).

### **Industrial Minerals**

**Cement.**—In 2010, state-owned Chip Mong Group signed a memorandum of agreement with Siam City Cement Plc. (SCCC) of Thailand for the construction of a new cement plant in the Province of Kampot, at a cost of about \$150 million. The plant, which would have a production capacity of about 1 million metric tons per year (Mt/yr) of cement, was expected to be operational within 5 years. At yearend 2011, the feasibility study for the construction was extended into 2012 (Cemnet.com, 2011a, b; Siam City Cement Public Co. Ltd., 2011, p. 9).

### **Mineral Fuels**

**Natural Gas and Petroleum.**—Chevron Corp. of the United States operated the offshore oilfield Block A, which is located about 200 kilometers (km) off the coast of Cambodia in the Gulf of Thailand. The company held a 30% interest in Block A, which covers 4,709 km<sup>2</sup>. In 2010, Chevron submitted a request to the Government for a 30-year production permit; the company expected to receive the approval and final investment decision by yearend 2012. The development included a wellhead platform and a floating storage and offloading vessel. As of yearend 2011, no proven reserves had been determined. Chevron also held other offshore interests in the Cambodia-Thailand overlapping claim zone in the Gulf of Thailand, which was under a maritime boundary dispute between the countries. The company's interests in the zone ranged from 30% to 80%, but owing to the unresolved boundary issue, the area remained inactive as of 2011 with the exception of Block A (Chevron Corp., 2012, p. 26–27).

In 2010, the Cambodian National Petroleum Authority and JOGMEC signed an agreement for a study and survey program in Block 17 onshore Cambodia. Block 17 covers an area of about 6,500 km<sup>2</sup> and is located about 200 km northwest of Phnom Penh in the Province of Kampong Thum. In June, the joint venture completed a geological survey and sample analysis onshore in northern Cambodia. An environmental impact assessment for the two-dimensional (2-D) seismic survey in Block 17 was conducted by International Environmental Management Co. Ltd. of Thailand and was approved by the Ministry of Environment in January 2012. The joint venture

expected to begin the 2-D seismic survey by February 2012. The joint venture also selected Moeco Cambodia Oil and Gas Co. Ltd. to be the operator (Japan Oil, Gas and Metals National Corp., 2011, p. 5, 9; 2012, p. 9; Coordinating Committee for Geosciences Programmes in East and Southeast Asia, 2012, p. 2, 6).

The joint venture among Cambodian Petrochemical Co., China National Automation Control System Corp., and Sino March Co. of China planned to build the first crude oil refinery in the country at a cost of about \$2 billion. The refinery would have a production capacity of about 37 million barrels per year (5 Mt/yr) of crude oil and would be located on the boundary of Kampot and Sihanoukville Provinces. The construction of the new refinery was expected to begin in April 2012 (CBRE Group, Inc., 2011).

### **Outlook**

The construction of the first crude oil refinery represents an important step in the future development of Cambodia's mineral fuels sector. In the longer run, new projects in the nonfuel mineral sector, such as the possibility of developing bauxite, gold, and iron ore deposits, are likely to provide significant revenue to the Government. The country's lack of proper infrastructure will continue to present challenges to investors in the short run. The country's infrastructure is likely to be revamped in the next 5 to 10 years if proposed infrastructure developments, such as the construction of a hydroelectric powerplant, railroads, and roads, come to fruition as part of the planned investments. These projects will likely increase consumption of construction materials, including cement, crushed stone, and sand and gravel. These developments are likely to attract FDI in the mineral sector and to increase interest in nonfuel mineral prospecting.

### **References Cited**

- CBRE Group, Inc., 2011, Cambodia's first oil refinery: CBRE Group, Inc., December 13. (Accessed January 17, 2013, at <http://www.cbre.com.kh/2011/12/cambodias-oil-refinery/>.)
- Cemnet.com, 2011a, Siam City Cement sets sights on Cambodia: Cemnet.com, November 28. (Accessed January 16, 2013, at <http://www.cemnet.com/News/story/127314/siam-city-cement-sets-sights-on-cambodia.html>.)
- Cemnet.com, 2011b, Siam City proceeds with Cambodia plant: Cemnet.com, February 14. (Accessed January 16, 2013, at <http://www.cemnet.com/News/story/129602/siam-city-proceeds-with-cambodia-plant.html>.)
- Chevron Corp., 2012, 2011 supplement to the annual report: Chevron Corp., 62 p. (Accessed January 16, 2012, at <http://www.chevron.com/documents/pdf/chevron2011annualreportsupplement.pdf>.)
- Coordinating Committee for Geosciences Programmes in East and Southeast Asia, 2012, Member country report of Cambodia: Langkawi, Malaysia, Coordinating Committee for Geosciences Programmes in East and Southeast Asia, 7 p. (Accessed January 18, 2013, at [http://www.ccop.or.th/48as.59sc/48as3.04\\_Cambodia.2012.pdf](http://www.ccop.or.th/48as.59sc/48as3.04_Cambodia.2012.pdf).)
- Hoang Anh Gia Lai Group, 2010, More than 50 investors attended the actual tour iron mines in Cambodia: Hoang Anh Gia Lai Group, September 24. (Accessed January 24, 2013, at [http://www.hagl.com.vn/Mining\\_Posts/DetailPost/201103111439563956](http://www.hagl.com.vn/Mining_Posts/DetailPost/201103111439563956).)
- Hoang Anh Gia Lai Group, 2011, Project of exploiting and processing iron mines in Kachoak, Rotanokiri Province: Hoang Anh Gia Lai Group, March 25. (Accessed January 24, 2013, at [http://www.hagl.com.vn/Mining\\_Posts/DetailPost/20110325105507557](http://www.hagl.com.vn/Mining_Posts/DetailPost/20110325105507557).)
- Investincambodia.com, 2012, Mineral resources: Invest in Cambodia. (Accessed February 4, 2013, at <http://investincambodia.com/minerals.htm>.)
- Investincambodia.com, 2013, Investing in Cambodia: Invest in Cambodia. (Accessed February 4, 2013, at <http://www.investincambodia.com/investing/investing.htm>.)

- Japan Oil, Gas, and Metals National Corp., 2011, 2011 annual report: Tokyo, Japan, Japan Oil, Gas, and Metals National Corp., 41 p. (Accessed January 18, 2012, at [http://www.jogmec.go.jp/english/aboutus/docs/annual\\_2011\\_E.pdf](http://www.jogmec.go.jp/english/aboutus/docs/annual_2011_E.pdf).)
- Japan Oil, Gas, and Metals National Corp., 2012, 2012 annual report: Tokyo, Japan, Japan Oil, Gas, and Metals National Corp., 41 p. (Accessed January 18, 2012, at [http://www.jogmec.go.jp/english/aboutus/docs/annual\\_2012\\_E.pdf](http://www.jogmec.go.jp/english/aboutus/docs/annual_2012_E.pdf).)
- People's Daily Online, 2012, Cambodia grants mine exploratory licenses to 24 firms in 2011—Government report: Phnom Penh, Cambodia, People's Daily Online, March, 2 p. (Accessed January 24, 2013, <http://english.people.com.cn/90777/7753471.html>.)
- Siam City Cement Public Co. Ltd., 2011, Annual report—2011: Bangkok, Thailand, Siam City Cement Public Co. Ltd., 115 p. (Accessed January 16, 2013, [http://www.siamcitycement.com/downloads/yearly\\_reports/2011/AR-ENG.pdf](http://www.siamcitycement.com/downloads/yearly_reports/2011/AR-ENG.pdf).)
- Southern Gold Ltd., 2011, Annual report—2011: North Adelaide, South Australia, Australia, Southern Gold Ltd., 52 p. (Accessed January 23, 2013, at [http://southyu.customers.hosting-toolkit.net/assets/docs/investors/20111011-SAU-Annual-Report\\_1351645539.pdf](http://southyu.customers.hosting-toolkit.net/assets/docs/investors/20111011-SAU-Annual-Report_1351645539.pdf).)
- U.S. Census Bureau, 2012a, U.S. exports to Cambodia from 2002 to 2011 by 5-digit end-use code: U.S. Census Bureau. (Accessed January 15, 2013, at <http://www.census.gov/foreign-trade/statistics/product/enduse/exports/c5550.html>.)
- U.S. Census Bureau, 2012b, U.S. imports from Cambodia from 2002 to 2011 by 5-digit-end-use code: U.S. Census Bureau. (Accessed January 15, 2013, at <http://www.census.gov/foreign-trade/statistics/product/enduse/imports/c5550.html>.)
- Vietnam National Coal and Mineral Industries Holding Corp. Ltd., 2011, Vinacomin explores the exploitation of bauxite in Cambodia: Vietnam National Coal and Mineral Industries Holding Corp. Ltd. press release, April 19, 1 p. (Accessed January 25, 2013, at <http://www.vinacomin.net.vn/temps/home/template2/defaultE.asp?Newid=17415&rootcate=1247>.)
- Wai Chun Mining Industry Group Co. Ltd., 2010, Wai Chun Mining entered into heads agreement with Guangxi Non-Ferrous Metals in respect of possible acquisitions of a manganese mine and two iron mines: Hong Kong, China, Wai Chun Mining Industry Group Co. Ltd. press release, 2 p. (Accessed January 24, 2013, at [http://www.0660.hk/eng/press/Wai\\_Chun\\_Possible\\_Acquisitions\\_20101124\\_E\\_Final.pdf](http://www.0660.hk/eng/press/Wai_Chun_Possible_Acquisitions_20101124_E_Final.pdf).)
- Wai Chun Mining Industry Group Co. Ltd., 2012, Annual report—2011: Grand Cayman, Cayman Islands [United Kingdom], Wai Chun Mining Industry Group Co. Ltd., 90 p. (Accessed January 24, 2013, at [http://www.0660.hk/eng/financial/ew\\_0660frp-20120329q4.pdf](http://www.0660.hk/eng/financial/ew_0660frp-20120329q4.pdf).)

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

(Metric tons)

Commodity <sup>2</sup>	2007	2008	2009	2010	2011
Cement	86,990	772,029	933,900	789,025	800,000 <sup>c</sup>
Gravel	36,250	37,500 <sup>c</sup>	41,875	82,500	82,500 <sup>c</sup>
Laterite, blocks	312,718	454,750	631,000	1,612,500	1,500,000
Salt	76,651	78,000 <sup>c</sup>	NA	NA	NA
Sand, construction material	329,028	6,581,500	14,035,775	38,367,500	40,000,000 <sup>c</sup>
Stones:					
Crude construction material	1,433,086	2,039,336	2,819,804	6,331,000	6,300,000 <sup>c</sup>
Limestone <sup>c</sup>	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000

<sup>c</sup>Estimated; estimated data are rounded to no more than three significant digits. NA Not available.

<sup>1</sup>Table includes data available through January 10, 2013.

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

Source: Cambodia's Ministry of Industry, Mines and Energy, General Department of Mineral Resources; U.S. Geological Survey Minerals Questionnaires for Cambodia, 2007 through 2010.

TABLE 2  
CAMBODIA: STRUCTURE OF MINERAL INDUSTRY IN 2011

(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. (a joint venture between Siam Cement Group of Thailand, 90%, and Khaou Chuly Group, 10%)	Touk Meas District, Kampot Province	1,000
Gemstones	Jirech International Cambodia Construction and Import-Export Co. Ltd.	Anlong Krapeu-Preak Bey, Samlot District, Batdambang Province	NA
Do.	Seoul Digem Cambodia Co. Ltd.	Loamphat District, Rotanakiri Province	NA
Do.	Sonuba Cahm Industries Co. Ltd.	Phnom Trop, Pailin City	NA
Do.	Ultra Marine Kiri (Cambodia) Ltd.	Pating Thom Village, Ting Chak Commune, Borkeo District, Rotanakiri Province	NA
Do.	do.	Sen Chauv, Samlot District, Batdambang Province	NA
Granite	TTY-Rithy Mexico	Svay Chreas District, Kracheh Province	NA
Limestone	Kampot Cement Co. Ltd.	Tatung, Kampot Province	1,500
Do.	Thai Boon Roon Cement Co. Ltd.	Phnom Laang Laan Commune, Donghtung 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.