



# 2006 Minerals Yearbook

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## CAMBODIA

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# THE MINERAL INDUSTRY OF CAMBODIA

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In 2006, Cambodia's mineral resources remained, to a large extent, unexplored. During the past 3 years, however, foreign investors from Australia, China, the Republic of Korea, Thailand, and the United States began to express their interest in Cambodia's mineral potential for offshore oil and gas as well as such land-based metallic minerals as bauxite, copper, gold, and iron ore, and such industrial minerals as gemstones and limestone.

The identified mineral resources in Cambodia were bauxite, carbonate rocks, natural gas, gemstones, gold, manganese, petroleum, phosphate rock, salt, silica, and zircon. With the exception of carbonate rocks and gemstones, the country's mineral resources were largely unexploited. To attract domestic and foreign mining companies to invest in the mining sector, the Law of Minerals Management and Mining of Cambodia was promulgated by the Government on July 13, 2001 (United Nations, 2002).

The Ministry of Industry, Mines and Energy (MIME) is the main Government agency that implements the country's mineral law and policy. The MIME's Department of Geology and Mines and Department of Energy are responsible for developing the country's mineral resources, providing mining assistance to the private sector, and administering mining-related regulations and inspections. The Cambodian Development Council (CDC) is the Government agency that grants exploration licenses to investors. If exploration is successful, investors are required to present a master project plan to the CDC before being granted a mining license. The amount of investment approved for mining projects by the CDC totaled \$181 million in 2005 (Asian Journal of Mining, 2000; World Investment News, 2004; International Monetary Fund, 2006a, p. 57).

## Minerals in the National Economy

The mining and quarry sector contributed only 0.39% of the country's gross domestic product in 2005. The sector employed an estimated 19,000 people and accounted for only 0.2% of the country's total employment in 2005 (the latest year for which data were available) (National Institute of Statistics, Cambodia 2006).

## Production

According to official statistics of the Department of Geology and Mines, the mining activities in Cambodia during the past 2 years involved the production of laterite blocks (red soil), limestone for cement manufacturing, sand and gravel, and crude stone for construction material (table 1). Other minerals, such as gemstones and gold, reportedly were mined in the central Province of Kampong Cham and the northeastern Provinces of Mondol Kiri and Rotano Kiri. Production data for gemstones, gold, and limestone, however, were not available.

## Structure of the Mineral Industry

Cambodia's mineral industry was still in its infant stage, and most mining companies were small-scale quarries that produced such construction materials as limestone, sand and gravel, and other construction aggregates. Production capacity data were not available for each of these small miners. During the past 12 years, the MIME had granted a total of 19 mineral exploration licenses to local and foreign companies, of which 11 projects were to explore for metallic minerals; 3, for iron ore; 2, for gold; 2, for bauxite; and 1, for coal. Since 2005, the MIME had granted mining licenses to 11 companies; five of the licenses were for gemstone (zircon) projects, five were for limestone projects, and one was for a granite project (table 3).

## Commodity Review

### *Metals*

**Gold.**—In February 2006, 100% of Liberty Mining International PTY. Ltd., which had 100% interest in two gold projects in the Ban Lung and the Oyadav (Oyadao)/Amdong Meas areas in Ranttanakiri (Rantanakiri) Province, was acquired by Great Australian Resources Ltd. (GAR). During 2006, GAR reportedly undertook and completed an aeromagnetic survey of the two project areas and carried out an extensive soil geochemical sampling program in the Ban Lung area and a diamond drilling program in the Oyodav area (Great Australian Resources Ltd., 2006a, b; Minebox.com, 2006).

### *Industrial Minerals*

**Cement.**—An \$80 million project to build a cement plant in Kampot Province, which was proposed by Siam Cement Group of Thailand, was approved by the Government in late 2005. In January 2006, construction work on the 800,000 metric-ton-per-year cement plant was begun by Thai Siam Cement Industry in the Touk Mesa District, Kampot Province. The cement plant, which was located 130 kilometers (km) south of Phnom Penh, was scheduled to begin production during the second quarter of 2007. Kampot Cement Co. Ltd. and Tahi Boon Roon Cement Co. Ltd., which were licensed to quarry limestone in the areas of Tatung and Phnom Laag, would supply limestone to the cement plant (Associated Press, 2005; Ministry of Industry, Mines and Energy, 2006, p. 3; Siam Cement Industry Co. Ltd., 2006).

### *Mineral Fuels*

**Natural Gas and Petroleum.**—To further understand and expand the oil resources in Block A, which is located about 130 km off the west coast of Cambodia, Chevron Overseas Petroleum (Cambodia) Ltd. (COPCL) (an affiliated company

of Chevron Corp. of the United States) and the Cambodian Government signed a joint study agreement (JSA) in 2006. Under the JSA, COPCL was expected to drill five offshore exploration wells in Cambodia in 2006 and an additional five wells in 2007. Block A, which covers a 6,278-square-kilometer (km<sup>2</sup>) area of the Khmer Basin in the Gulf of Thailand, was owned by COPCL (55%), Moeco Cambodia Ltd. (an affiliate company of Japan's Mitsui Oil exploration Co.) (30%), and the Republic of Korea's GS Caltex Corp. (15%) (Schlumberger Ltd., 2006).

In September 2006, French Total SA (TOT) and an unidentified Chinese oil company reportedly were competing for the rights to explore for potentially rich oil and gas reserves in Block B, which covers a 6,557-km<sup>2</sup> area offshore the southeastern coast of Cambodia. According to a report by local press (the Cambodia Daily), officials from Chinese National Petroleum Offshore Oil Co. (CNOOC) met with Cambodia's prime minister in July 2006 and expressed interest in Block B. According to an official of Cambodian National Petroleum Authority's petroleum exploration department, TOT was interested in the offshore field, but negotiations were slow (Rigzone.com, 2006).

## Outlook

The Cambodian mining sector, which was still in its infant stage, is expected to grow slowly during the next 2 to 3 years before the gold, iron ore, and other metallic and nonmetallic mines are developed. The mining sector is expected to remain small relative to other sectors of the Cambodian economy for the next 2 to 3 years unless the economically viable reserves of oil and natural gas in Block A are developed by Chevron and begin to produce oil and gas by 2008. Cambodia's economy as measured by the GDP was forecasted to grow by 6.5% in 2007 (International Monetary Fund, 2006b).

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

(Metric tons unless otherwise specified)

Commodity <sup>2</sup>	2002	2003	2004	2005	2006 <sup>c</sup>
Gravel	9,800	13,800	--	22,500 <sup>r</sup>	23,000
Laterite, blocks	381,400	240,700	118,400	62,400 <sup>r</sup>	65,000
Phosphate fertilizer	115	--	--	--	--
Quartz sand	--	1,000	--	-- <sup>r</sup>	--
Salt	72,500	36,000	40,000	-- <sup>r</sup>	--
Sand, construction material	505,960	248,400	363,700 <sup>r</sup>	763,900 <sup>r</sup>	765,000
Stones, crude construction material	642,500	786,100	501,600	1,079,400 <sup>r</sup>	1,100,000

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

<sup>1</sup>Table includes data available through May 8, 2007.

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

Source: Cambodia's Ministry of Industry, Mines and Energy; U.S. Geological Survey Minerals Questionnaires for Cambodia 2002-05.

TABLE 2  
CAMBODIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2006

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity <sup>c</sup>
Cement	Kampot Cement Co. Ltd. <sup>1</sup> (an affiliate of Siam Cement Industry Co. Ltd. of Thailand)	Touk Meas District, Kampot Province	800
Gemstone	carat Jirech International Cambodia Construction and Import-Export Co. Ltd.	Anlong Krapeu-Preak Bey, Samlot District, Battambang Province	NA
Do.	Seoul Digem Cambodia Co. Ltd.	Loamphat District, Ratanakiri 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, Ratanakiri Province	NA
Do.	do.	Sen Chauv, Samlot District, Battambang Province	NA
Granite	TTY-RITHYMEXICO	Svay Chreas District, Kratie Province	NA
Limestone	Kampot Cement Co. Ltd.	Tatung, Kampot Province	NA
Do.	Thai Boon Roon Cement Co. Ltd.	Phnom Laang Laan Commune, Dongtung District, Kampot Province	NA
Do.	United International (Cambodia) Foreign Investment Group Company Ltd.	East Touk Meas, Banteay Meas District, Kampot Province	NA

<sup>c</sup>Estimated. NA Not available.

<sup>1</sup>Cement plant was scheduled to begin production in the second quarter of 2007 with a designed capacity of 3,000 metric tons per day.

TABLE 3  
MINERAL EXPLORATION AND MINING PROJECTS IN CAMBODIA AS OF JUNE 2006

Commodity	Activity	Company	Type of company <sup>1</sup>	Location	Year license granted
Bauxite	Exploration	AZ Distribution Co. Ltd.	L	Tou Poy, O Raing District, Mondulakiri Province	2005.
Do.	do.	Sonuba Paul Cham Co. Ltd.	L	O Raing District, Mondulakiri Province	2004.
Coal	do.	Ratanak Stone Cambodia Development Co. Ltd.	JV	Pharv, Anglong Veng-Trapaing Prasath District, Oudor Mean Chey Province	April 2006.
Gemstone	Mining	Jirech International Cambodia Construction and Import-Export Co. Ltd.	JV	Anlong Krapeu-Preak Bey, Samlot District, Battambang Province	2005.
Do.	do.	Seoul Digem Cambodia Co. Ltd.	JV	Lomphat District, Ratanakiri Province	Mid-2005.
Do.	do.	Sonuba Cham Industries Co. Ltd.	L	Phnom Trop, Pailin City	2005.
Do.	do.	Ultra Marine Kiri (Cambodia) Ltd.	JV	Pating Thom Village, Ting Chak Commune Borkeo District, Ratanakiri Province	Mid-2005.
Do.	do.	do.	JV	Sen Chauv, Samlot District, Battambang Province	Early 2006.
Gold	Exploration	Decom Cambodia Co. Ltd.	JV	Phnom Dek, Rovieng District, Preheah Province	1994.
Do.	do.	Vannimex Co. Ltd.	JV	Phnom Chi, Sandan District, Kampong Thom Province	2000.
Gold and other metallic minerals	do.	Angkor Wat Cement Co. Ltd.	JV	Andong Bor area-2, Ampil District Oudor, Meanchey Province	2001.
Granite	Mining	TTY-RITHYMEXICO	F	Svay Chreas District, Kratie Province	2006.
Iron ore	do.	Ratanak Stone Cambodia Development Co. Ltd.	JV	Phnom Koh Keo, Rovieng District, Preh Vihear Province	2004.
Do	do.	do.	JV	Phnom Thmar, Rovieng District, Preh Vihear Province	2005.
Do.	do.	Try Pheap Co. Ltd.	L	Thalaborivath, Stung Treng Province	2005.
Limestone	Mining	Kampot Cement	JV	Tatung, Kampot Province	2006.
Do.	Feasibility study	Khou Chuly Development Co. Ltd. & Tong Yang	L	West Touk Meas, Banteay Meas District, Kampot Province	2006.
Do.	do.	Pheapimex Co. Ltd.	L	Kampong Trabek, Kampot Province	2006.
Do.	Mining	Thai Boon Roon Cement Co. Ltd.	F	Phnom Laang Laan Commune, Dongtung District, Kampot Province	2006.
Do.	do.	United International (Cambodia) Foreign Investment Group Company Ltd.	F	East Touk Meas, Banteay Meas District, Kampot Province	2006.
Metallic minerals	Exploration	Anqing (Cambodia) Invest Company Ltd.	JV	Phnom Kus and Keo Seima, Mondulakiri Province	2005.
Do.	do.	China Forwin International Investment Phnom Penh Mining Co. Ltd.	F	Phnom Rohal, Keo Seima District, Mondulakiri Province	2005.
Do.	do.	Chhung Kor Chean Pean Co. Ltd.	L	Koh Khnge, Sambo District, Kratie Province	2001.
Do.	do.	Liberty Mining International PTY Ltd.	F	Ban Lung District, Ratanakiri Province	2005.
Do.	do.	do.	F	Oyadav District, Ratanakiri Province	Mid-2006.
Do.	do.	Mom Good Luck Mining Co. Ltd.	L	Thalabarivat, Stung Treng Province	2006.
Do.	do.	Oksan Cambodia Ltd.	F	Antrong, Keo Seima District, Modulkiri Province	2003.
Do.	do.	Oxiana Cambodia Ltd.	F	Okhvao and Ochhung, Koe Seima District, Mondulakiri Province	Late 2006.
Do.	do.	Zhong Xin Industrial Investment (Cambodia) Co. Ltd.	F	Me Som, Mondulakiri Province	2004.
Do.	do.	do.	F	O Click, Kratie Province	2004.

<sup>1</sup>Type of company, L--local, F--foreign, JV--joint venture

Source: Ministry of Industry, Mines and Energy, Kingdom of Cambodia, June 2006.