

THE MINERAL INDUSTRY OF

CAMBODIA

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The only mineral commodities produced and consumed in Cambodia during 1994 were construction materials (brick clays, gravel, and stone), gemstones (ruby and sapphire), phosphate rock (apatite), and salt. No Cambodian mineral commodities were known to have been exported legally, although gemstones may have been smuggled lucratively. Mineral imports included petroleum products and clinker for cement manufacture.

The Government enacted in September a new foreign investment law implementing incentives and safeguards for foreign investment in the country. The incentives included accommodation of foreign equity ownership, freedom to repatriate profits, and the option of bringing in skilled foreign workers as necessary. The law also provided guarantees against nationalization.

Simultaneously, the Government issued a revised petroleum agreement based on a production-sharing contract (PSC) in which most of the terms and conditions could be negotiated. Apparently, the only aspects of the agreement that were not negotiable were the exploration period of 6 years and the 30-year maximum duration of the PSC.

Cambodia's mineral industry was distributed erratically and operated irregularly. One small plant of unknown capacity was thought to produce cement intermittently at Charey Ting, about 70 kilometers (km) southwest of Phnom Penh. Highly localized utilization of clays for making brick represented an industry of sorts. The technology used was simple and widely applied in many districts and Provinces.

Cambodia has gem-quality corundum mineralization in several parts of the country, ranging from Pailin, near the western border with Thailand, to the eastern border area between Stung Treng in Cambodia and Pleiku in Vietnam. High-quality rubies have been found, but cornflower-blue sapphire has been the most valuable gemstone produced in Cambodia.

A phosphate plant at Tuk Meas, Kampot Province, was essentially a grinding and roasting operation for locally dug apatite. The treatment enhanced the solubility of the contained phosphate for application as fertilizer.

Little information was available on salt production, which was from numerous small operations. Estimated production for the past several years was about 40,000 metric tons per year (mt/a).

Dellcom Cambodia, and affiliate of Malaysia's Dellcom Malaysia, signed in April with the Government what may prove to be the country's first gold mining contract. The PSC

with the Ministry of Industry, Mines, and Energy provided for an investment of at least US\$3 million for gold exploration work at Phnom Krovar in Kompong Thom Province and at Phnom Dek in Preah Vihear Province. Although Dellcom was to focus on a gold exploration program, the Phnom Dek region has been known for its low-grade iron ore deposits.²

Herald Resources Ltd. of Australia was planning to invest US\$20 million in a gold prospecting program with the private Cambodian firm, Royal Group. A new joint-venture company, Royal Herald Resources, was to be formed that would manage the exploration project in central Kompong Thom and eastern Mondol Kiri Provinces.³ Approval from the Cambodian Investment Board still was a requisite at yearend.

Eastern Steel Industry Corp. commissioned in January its 12,000-mt/a hot-dipped galvanizing plant in Phnom Penh, 12 months after work began. The steelworks, the first to be constructed in more than two decades, produced both flat-rolled sheet and corrugated sheet. Eastern Steel was a joint venture owned by a private Cambodian entrepreneur (32.5%), Japan's Sumitomo Corp. (27.5%), the Japan International Development Organization (20%), and private Thai and Indonesian investors (20%).⁴

Cambodian Petroleum Exploration Co. (Campex), a joint venture comprised of the Japanese firms Japan National Oil Corp., manager with 60% interest, Japan Petroleum Exploration Co. (20%), and Nissho Iwai Corp. and Taiyo Oil Co. (10% each), has been exploring since 1991 for petroleum off Kompong Som Port (also known as Sihanoukville) in the Gulf of Thailand. Campex was one of several consortia awarded an exploration concession in 1991 when the Government reopened after a 16-year lapse its upstream oil and gas sector to foreign investment. Campex was the first to drill a well, the Apsara-1 wildcat in December 1993, after Elf Aquitaine of France withdrew from the area in 1975.

Following the spudding of Apsara-1, classified as a noncommercial oil and gas discovery well, three other wells were drilled in 1994: The Devada-1, also by Campex, was completed in March and was a dry hole; the Angkor-1 wildcat was a noncommercial discovery well completed in April by the Enterprise Oil Exploration Ltd.-led consortium linking Britain's Enterprise (50%) and British Gas PLC (20%) with France's Cie. Europeene des Petroles and Total Exploration Production (15% each) that was the first to sign

for exploration blocks in 1991 when the southern Khmer Trough fields were reopened for licensing; and Britain's Premier Consolidated Oilfields PLC's Kaoh Tang-1 wildcat well completed in June. The Kaoh Tang-1 well also was a noncommercial oil and gas discovery well.⁵

Most of Cambodia's offshore hydrocarbon prospects occur just east of Thailand's major gas-producing province in the Gulf of Thailand. If any commercial oil discoveries were to be made, all production would have to be exported since the country has no active refineries.⁶

Additional information on the mineral resources of Cambodia was scant. The country was known to have coal, copper, iron, and manganese deposits, but their quality and quantity have not yet been determined. Reportedly, the country also has deposits of lead and zinc to the east and northeast of Stung Treng, but the prospects discovered years ago never have been evaluated. Essential elements of the communications-transportation infrastructure consisted of 13,351 km of roads, including 2,622 km with bituminous pavement; 7,105 km of crushed stone, gravel, or other loose surface; and 3,624 km of unimproved earth or dirt track. Many of the roads were in disrepair, both from neglect and the ravages of war. Inland waterways included 3,700 km navigable all year to craft drawing 0.6 meter (m) and 282 km navigable part of the year to craft drawing 1.8 m. The Government-owned railway consisted of 612 km of 1-m

gauge track. Its operating condition was uncertain. There were six principal airports with permanent-surface runways out of an aggregate of 13 in operating condition in the country. Two had runways 2,440 to 3,659 m in length, and eight had runways 1,220 to 2,439 m long. Principal ports were Kompong Som on the coast of the Gulf of Thailand, and Phnom Penh, inland on the Mekong River.

Cambodia had an electric power generating capacity of 35 megawatts and produced power at the approximate level of 9 kilowatt-hours per capita.⁷

¹Text prepared June 1995.

²Mining Journal (London). V. 322, No. 8275, May 13, 1994, p. 345.

³_____. V. 323, No. 8300, Nov. 4, 1994, p. 324.

⁴Metal Bulletin (London). No. 7852, Feb. 3, 1994, p. 19.

⁵The Petroleum Economist Ltd., London: Asian Energy Yearbook 1995, p. 127.

⁶Oil and Gas Journal (Tulsa, Oklahoma). V. 92, No. 8, Feb. 21, 1994, p. 42.

⁷U.S. Central Intelligence Agency, Washington, DC: The World Factbook 1994, pp. 69-70.

Major Source of Information

Ministry of Industry, Mines, and Energy
Phnom Penh, Cambodia