

THE MINERAL INDUSTRY OF

BRUNEI

By John C. Wu¹

Brunei, on the northwest coast of Borneo Island, had extensive reserves of petroleum and natural gas and despite its small size, was the world's fourth largest producer of liquefied natural gas (LNG). Brunei remained the sixth largest producer of crude petroleum, the seventh largest producer of natural gas, and the fourth largest producer and exporter of LNG in the Asia and the Pacific region.

Brunei's mineral industry was comprised of an oil and gas company engaging in the production of crude petroleum, refined petroleum products, and natural gas; an LNG company involving production and marketing of LNG; and several small-scale companies producing crude construction materials, such as sand and gravel and stone. The oil and gas sector, which employed about 6,000 workers, or 7% of the total labor force, contributed about 65% of Brunei's gross domestic product (GDP) and provided about 55% of Government revenues. Brunei's GDP was estimated to have grown by 1% to \$4 billion² in 1994. The economic growth of this small sultanate was almost entirely dependent on increased production and exports of crude petroleum and natural gas. Brunei's per capita income is among the highest in the region.

Exports of crude petroleum, natural gas (in the form of LNG), and refined petroleum products accounted for about 96% of Brunei's export earnings. In 1994, Brunei's export earnings were estimated at \$2.6 billion, of which about 45% was from exports of LNG, 44% from exports of crude petroleum, and 7% from exports of refined petroleum products. In 1994, Japan remained the dominant importer of Brunei's crude petroleum and LNG. South Korea, Singapore, and Thailand were other major export markets of Brunei's crude petroleum and refined petroleum products.

Production of oil and gas by Brunei Shell Petroleum Co. Sdn. Bhd. (BSP) was from seven offshore fields—South West Ampa, Champion, Magpie, Fairley, Fairley-Baram, Gannet, and Iron Duke—and from two onshore fields in Serai and Rasau. BSP, the sole oil and gas producer in Brunei, was a 50-50 joint venture of Royal Dutch Shell Group Co. and the Government of Brunei. In 1994, BSP completed development of a new offshore field called West Champion with estimated reserves of 40 million barrels (Mbbbl) of oil and 28.3 billion cubic meters (m³) of natural gas. Following the discoveries of oil and gas on blocks A and B, Elf Aquitaine Offshore Asia BV (EAOA) planned to invest \$150 million in the next 5 years to develop the oil and gasfields on the two blocks, about 50 kilometers offshore the

coast of Brunei. The estimated reserves were 100 Mbbbl of oil and 28.3 billion m³ of natural gas. EAOA is a joint venture of Elf Aquitaine of France, Jasra International Petroleum of Brunei, and other local partners.³

Production of crude petroleum by BSP increased from an average of 157,800 barrels per day (bbl/d) in 1993 to an estimated average of 162,300 bbl/d in 1994, of which about 68% was from the South West Ampa and Champion Fields. Production of natural gas was estimated to have increased slightly to about 9.8 billion m³, of which more than 95% was from the South West Ampa, Champion, and Fairley Fields.

To meet domestic demand for refined petroleum products, BSP operated a 8,600-bbl/d petroleum refinery at Seria. Major refined petroleum products included gasoline, distillate fuel oil, and jet fuel. Brunei LNG Sdn. Bhd. purchased natural gas from BSP and produced LNG at the Lumut LNG plant with a capacity of 5 million metric tons per year (Mmt/a). The company had made considerable investment to upgrade its LNG production facilities and constructed a new side-loading berth for LNG export to South Korea and other countries. Exports of LNG were about 5.5 Mmt and valued at about \$1.25 billion in 1994. Most of the LNG output was exported to Japan under a new 20-year contract, effective April 1993. Under this long-term contract, Brunei is to export 5.54 Mmt/a of LNG to Japan.

In early 1994, a letter of intent was signed by the Korea Gas Corp. of South Korea to import LNG from Brunei. According to the letter of intent, Brunei Coldgas Sdn. Bhd., a marketing arm of Brunei LNG, was to negotiate with Korea Gas Corp. for the supply of LNG starting in 1994, beginning with a small quantity and gradually increase to 700,000 mt/a in 1995 and in 1996. The two firms are also to discuss the possibility of continuing supply from 1997 to 2001.⁴

According to the U.S. Oil and Gas Journal, Brunei's estimated proven reserves of crude petroleum and natural gas, as of January 1995, were 1.35 billion bbl and 396.44 billion m³, respectively.

¹Text prepared May 1995.

²Where appropriate, values have been converted from Brunei dollars (B\$) to U.S. dollars at the rate of B\$1.60=US\$1.00 in 1994. Brunei dollars are convertible at par with Singapore dollars.

³Petroleum Economist (London). "Focus, Offshore Developments Lean Towards Natural Gas." V. 61, No. 8, Aug. 1994, p. 22.

⁴South-East Asia Mining Letter (London). "Brunei LNG to Supply Korea Gas." V. 6, No. 3, Feb. 11, 1994, p. 8.

TABLE 1
BRUNEI: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity 3/	1990	1991 e/	1992 e/	1993 e/	1994 e/
Gas, natural:					
Gross e/ million cubic meters	9,450	9,200	9,500	9,600	9,800
Marketed do.	8,690	8,240	8,700	8,800	9,000
Natural gas liquids: e/					
Condensate thousand 42-gallon barrels	3,810	4,000	4,500	4,600	4,700
Natural gasoline do.	290	290	290	290	290
Liquefied petroleum gas do.	90	90	90	90	90
Total do.	4,190	4,380	4,880	4,980	5,080
Petroleum:					
Crude do.	49,000	59,100	59,700 r/	57,600 r/	59,200
Refinery products: e/					
Gasoline do.	630	630	620	630	620
Distillate fuel oil do.	440	450	430	440	430
Residual fuel oil do.	10	10	10	10	10
Other including refinery losses do.	340	350	330	340	330
Total do.	1,420	1,440	1,390	1,420	1,390

e/ Estimated. r/ Revised.

1/ Table includes data available through May 12, 1995.

2/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.

3/ In addition to the commodities listed, crude construction materials such as sand and gravel and other varieties of stone presumably are produced, but available information is inadequate to make reliable estimates of output levels.

4/ Includes refinery fuel and losses.