CRUDE OIL

Introduction

In 1999, Indonesia ranked sixteenth among world oil producers, with approximately 2.0 percent of the world's daily production. Pundits have been forecasting Indonesia's imminent shift from net oil exporter to net importer since at least the early 1970's. New discoveries and technological advances, such as enhanced oil recovery and deep-water exploitation, have successively postponed the timing of this change in status, but Indonesia is now forecast to become a net oil importer early in the 21st century. With substantial reserves of natural gas and coal, Indonesia could still remain a net energy exporter for a substantially longer period. To do so, however, the government has to implement legislation and policies that will rationalize use of Indonesia's energy resources.

Energy policy reform will prolong Indonesia's status as a net oil exporter and enhance efficient use of energy resources. Ideally, key measures would include:

- Proper incentives to encourage industry to expand the domestic use of natural gas and coal;
- General enhancement of the terms of Indonesia's production sharing contracts (PSCs) vis-à-vis other oil producing countries to make the PSC's more competitive;
- Tax consolidation and improvement of the fiscal terms for oil and gas production; and
- Increases in electricity tariffs and elimination of fuel subsidies so that domestic energy pricing is based on costs of production and market conditions.

The pending draft legislation for oil and gas, electricity, and mining gives Indonesia the opportunity to implement some of the changes necessary to allow the country to rationalize its use of energy resources.

The rapid expansion of non-oil and gas economic activity prior to the Asian economic crisis had brought about a decline in the oil and gas sector's relative contribution to government revenues. In FY 1998/99, oil and gas contributed 26 percent to domestic revenues, which increased to 28 percent in FY 1999/2000. Totaling $12.2 billion in FY 1999/2000, oil and gas exports (including LNG) accounted for 21.9 percent of Indonesia's export earnings, up from 14.9 percent in FY 1998/99.

Robust world oil prices caused the Indonesian government's oil subsidy bill to balloon to an estimated Rp 43.24 trillion (US $5.3 billion) for the nine-month 2000 fiscal year (April-December). The huge subsidy emboldened the government to raise fuel prices in October, after canceling its first attempt to do so in April.

Reserves

The GOI places Indonesia's crude oil reserves at 9.8 billion barrels, with proven reserves of 5.2 billion barrels, and potential reserves 4.6 billion barrels. Of an estimated 60 oil basins, over 22 have been extensively explored. Most oil exploration is currently being carried out in the basins of Western Indonesia under PSCs. The bulk of Indonesia's oil reserves are located onshore and offshore in Central Sumatra and Kalimantan. The Government has placed increased emphasis on developing oil reserves in remote locations, such as Papua, where proven reserves are estimated at 85 million barrels.

The reserves-to-production ratio and consumption levels suggest that Indonesia will eventually be a net importer of oil. To maintain its net exporter position, Indonesia should improve its fiscal terms for oil and gas production, for both mature and frontier areas. In mature fields, the 85/15 (government/contractor) split for oil and 70/30 split for gas make thresholds higher than in other parts of the world. In frontier areas, where the split is 60/40 for gas and 65/35 for oil, the balance between risk and reward is generally viewed as insufficient to attract major exploration funds. These problems are exacerbated by small reserve accumulations and high infrastructure costs.

In 1999, Indonesian oil production, including condensate, declined by 3.6 percent to an average of 1.50 million B/D from 1.56 million B/D in 1998. Crude oil production, excluding condensate, peaked at 1.391 million B/D in February 1999. Condensate is chiefly produced at the Arun field in North Sumatra as a by-product of the oil and natural gas production process. However, because of dwindling gas reserves in the Arun field, smaller volumes of gas result in less produced condensate. Production of condensate fell to 149.1 thousand B/D in 1999 from 155.3 thousand B/D in 1998 and 162.8 thousand B/D in 1997.

Indonesian crude and condensate production during the first five months of 2000 averaged 1.442 million B/D (1.297 million B/D crude and 144.8 thousand B/D condensate), 3.9 percent less than the 1999 level of 1.500 million B/D. Except for Exspan, Pertamina and Total, most of the country's major producers -- such as Caltex, BP, Maxus, ExxonMobil, Vico, Gulf Resources and Unocal -- experienced a downward trend in output. On a monthly basis, crude production declined from 1.385 million B/D in January 1999 to 1.326 million B/D in December and to 1.276 million B/D in May 2000. Officials said that low production levels would continue in 2000 since no large oil fields had been discovered in recent years, and new oil-field development would be concentrated in smaller fields (on and offshore) in the relatively well explored provinces of Sumatra, Java, and Kalimantan.

Production by Major Producers (1000 b/d)

Company	1998	1999	2000 Jan-May
Caltex	759.5	746	719.3
Maxus	148.2	140.1	126.2
Total	79.2	81.2	86.4
Arco	74.4	71.5	65.7
Exspan	26.6	37.5	61.9
Conoco	84.4	64.4	57.4
Unocal	75.6	63.9	59.9
Vico	60.8	54.7	49.2
Others	247.9	241.0	216
Total	**1,556.6**	**1,500.3**	**1,442.0**

Source: Oil industry

Production Sharing Contractors

Caltex retained its position as Indonesia's number one oil producer in 1999 with 50 percent of crude output, followed by Maxus (9 percent), BP (5 percent), Conoco (4 percent), and Unocal (4 percent). Pertamina's crude and condensate production accounted for 44,200 B/D, or 3 percent, up 13.7 percent from 38,900 B/D in 1998. Total Indonesie, with 58,800 B/D, eclipsed ExxonMobil in 1999 as the largest producer of condensate (in second place with 42,300 B/D).

The number of new production sharing contracts dropped sharply to 4 in 1999, from 22 in 1998 and the record 29 signed in 1997. Three existing contracts were extended. The size of the fields, investment commitments and the number of companies awarded the contracts remained relatively small. In May 2000, Pertamina awarded seven new contracts -- three production sharing contracts (PSCs) and four Technical Assistance Contracts (TACs) for oil and gas exploration and development. The three new PSCs are Energy Equity Pty. Ltd. for Bone block offshore Sulawesi, Kalrez Petroleum Ltd. for Seram/Bula block in onshore Maluku and Kuffec Indonesia Ltd. for Seram offshore Maluku. The four TACs are Energy Equity Pty. Ltd. for Gajah Besar oil field in South Sumatra, PT. Indama Putra Kayapratama for Kaya oil field in South Sumatra, PT. Binatek Reka Kruh for Kruh field in South Sumatra and a joint venture between PT. Wahana Sad Karya and First Union Resources for Jatirangon oil field in West Java. The contractors have agreed to invest a total of US $112.3 million for exploration during the first ten years and to pay US $1.1 million as an information bonus. With these signings, the number of oil contracts currently active rose to 172.

A total of 175,258 kilometers of seismic (government data combine 2-D and 3-D) activities was carried out in 1999, down from 1998 levels. The number of exploration and appraisal wells drilled dropped to 89. The number of wildcat wells drilled at 46 was the lowest since 1970 . Traditionally high, the associated success ratio (successful wells versus wells drilled) reached 56 percent, up from 52 percent in 1998, but down from 58 percent in 1995. In 1999, the total number of development wells rose to 847.

In 1999, petroleum company expenditures on exploration, development and production were forecast to reach $5.3 billion. Actual expenditures, at $4.0 billion, fell from $4.8 billion in 1998. Projected expenditures for 2000 are $5.2 billion.

Drilling Services

Presidential Decree No. 96 of July 2000 revised the "negative" list of sectors restricted to foreign investment. In the oil and gas sector, foreign investors can directly provide drilling services only for offshore drilling. To provide onshore drilling services, investors will still need to act on a joint-venture basis with Indonesian drilling firms.

Merger and Takeover Activities

Mergers of oil companies in 1999 and 2000 are likely to lessen competition for new exploration rights in Indonesia and will put exploration and development budgets in fewer hands.

Mergers

Companies	Present Name	Date
Santa Fe Snyder & Devon	Devon Energy Corp.	Aug 2000
BP Amoco & Arco	BP	Apr 2000
TotalFina & Elf	TotalFinaElf SA	Feb 2000
Exxon & Mobil	ExxonMobil Corp.	Nov 1999
El Paso & Sonat	El Paso Energy Corp.	Oct 1999
Total & Fina	TotalFina SA	Jun 1999
Lasmo & Monument	Lasmo Plc	Jun 1999
Santa Fe & Snyder	Santa Fe Snyder Corp	May 1999
Nisseki & Mitsubishi Oil Co.	Nisseki Mitsubishi Abushild	Apr 1999
Kerr McGee & Oryx	Kerr McGee Corp	Feb 1999
BP & Amoco	BP Amoco Plc	Jan 1999
British Borneo & Hardy	British Borneo Oil & Gas Plc	Oct 1998
Ocean Energy & Seagull	Ocean Energy Inc	Jun 1997

Source: Arthur Andersen

Takeovers

Company	**Company acquired**	**Date**
Husky Oil Ltd.	Renaissance Energy	Aug 2000
Canadian Natural Resources	Ranger Oil	Jul 2000
Fortune (Indo Pacific)	GFB Resources (Java) Ltd	Jul 2000
Agip	British Borneo	May 2000
Singapore Petroleum Company	LL&E Indonesia	Jan 2000
Maple/Matrix	GFB Resources (Langsa) Ltd	Jan 2000
Talisman Energy	Rigel	Sep 1999
Repsol	YPF	Jan 1999
Continental	Apex	Aug 1998
Arco	Union Texas	Jun 1998
Veba	Deminex	198
Burlington Resources	LL&E	Oct 1997
Gulf Canada Resources	Clyde Pteroleum	Feb 1997
Premier	Discovery Petroleum	Dec 1996
Saga Pteroleum	Santa Fe from Kuwait petroleum	Jun 1996
YPF	Maxus	Jun 1995

Source: Arthur Andersen

New Discoveries and Fields Coming on Line

Many production sharing contractors held back on exploration spending amid low global oil prices and uncertainty surrounding a year of mergers and acquisitions in the oil sector worldwide. Exceptions to this were Unocal and ExxonMobil, which maintained an active drilling campaign in Indonesia. Other companies, however, continued to develop older discoveries.

UNOCAL announced in June 1999 that it had made another significant discovery in the Kutai Basin, Rapak Block PSC with the successful drilling of the Janaka North 1 well. The Rapak PSC is located east of the Makassar Straits PSC, site of the 1998 West Seno field hydrocarbon discovery. Unocal officials said that the Janaka North I well contains high-quality oil.

The Rapak field discovery is Unocal's third recent discovery. In October 1997, Unocal discovered hydrocarbon reserves in the Merah Besar structure and again in March 1998 in the adjacent Seno structure. Currently, Unocal estimates its current offshore discoveries at three sites at between 210 to 320 million barrels-of-oil equivalent (MMBOE). Unocal is 100-percent owner/operator of the East Kalimantan PSCs. In 2000, Unocal bought out ExxonMobil's 50-percent share in the Makassar Straits PSC, where they had been equal partners since September 1996 when Unocal first acquired a 50-percent interest and operatorship from then Mobil. Additionally, Unocal bought back ExxonMobil's 30-percent share of the Rapak PSC, leaving Lasmo with its 30 percent share. In May 1999, Unocal assigned 20 percent of its working interest in the Ganal and Sesulu PSCs to Lasmo while retaining an 80-percent share. Unocal remains operator of these PSCs.

Pertamina has approved the development plan for the West Seno oil and gas discovery in the Makassar PSC. Unocal announced in September 2000 that its development plans for West Seno include expenditures of US $700 million in the expectation of producing 70,000 B/D of oil and gas from the field. Once in production, the field, at 3,000 feet of water, will be Indonesia's first very deep water site. In addition, a plan for the development of the Merah Besar oil and gas discovery, which straddles the Makassar and East Kalimantan PSC (Unocal), has been approved by Pertamina. Natural gas from both discovery areas is eligible for participation in the gas supply packages for the Bontang LNG plant.

EXXONMOBIL was created from the merger of Exxon and Mobil in December 1999, leading to the consolidation of Exxon, Esso, and Mobil operations in Indonesia. As Mobil, ExxonMobil celebrated 100 years of doing business in Indonesia in 1998, 30 years as a production-sharing contractor, 20 years as a producer of liquefied natural gas and 10 years as a producer of liquefied petroleum gas.

ExxonMobil natural gas operations in North Sumatra include the Arun, Pase, and South Lhoksuokon fields, and a 50-percent interest in A-Block (Gulf is operator). In June 1999, ExxonMobil affiliates brought its North Sumatra offshore natural gas production platform on stream. This field will supplement production from ExxonMobil's existing operations, providing supply flexibility. The NSO field, which sits 100 km offshore from the Arun LNG plant in approximately 108 meters of water, is the deepest offshore production platform in Indonesia.

In June 2000, in Central/East Java, through its subsidiary Mobil Cepu Limited, ExxonMobil acquired a 51 percent interest in the Cepu block and a Technical Assistance Contract from PT Humpus Patragas. Ampolex Cepu Pte. Limited, another ExxonMobil subsidiary, owns the remaining 49 percent interest. Also in Central/East Java, ExxonMobil owns 30 percent in the Blora TAC and 68 percent in the Madura PSC.

MAXUS discovered 230 billion SCF (BSCF) of natural gas and 7.0 million barrels of condensate in its Joint Operation Agreement Contract area at Musi Banyuasin block in South Sumatra. The discovery well, PGD-3, located in Bayung Lincir regency, is expected to produce 11.3 MMSCF/D of natural gas and 522 B/D of condensate.

CALTEX (a joint venture of Chevron Corporation and Texaco Inc.) started operation of its $50 million light oil steam flood (LOSF) project in Minas, Central Sumatra in February 1999. The LOSF Area-1 project, the first of its kind in Asia, is a field trial and, if successful and implemented field-wide, will prolong the life of the Minas (Indonesia's signature crude) oil field well into the future. The Minas oil field currently produces 170,000 B/D. The LOSF project follows the successful Duri steamflood enhanced oil recovery (EOR) project.

The future operation of the Coastal Plains Pekanbaru (CPP) PSC, expiring in August 2001, is still up in the air. Pertamina and the Indonesian Government have not yet decided how to accommodate the demands of Riau Province in any new contract arrangement.

CONOCO Indonesia announced in 1998 that it had struck oil in the offshore West Natuna Block "B" area in the South China Sea. U.S.-based Conoco is operator and has a 40-percent share in the "B" block. Other shareholders are Inpex of Japan (35 percent) and Texaco (25 percent). Conoco partnered with adjacent PSC operators Gulf Resources and Premier to contract to supply natural gas from this area to consumers in Singapore.

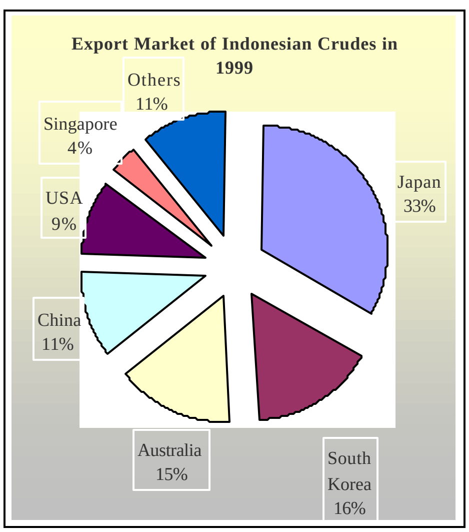
GULF INDONESIA RESOURCES, a subsidiary of Gulf Canada Resources Ltd., recently confirmed a successful delineation well (Suban-3) on its Suban field onshore Sumatra, with a flow rate of 272 b/d of crude and condensate and 27.8 MMCF/D. Suban field was discovered in January 1999 and is located 20 kilometers southwest of Gulf's producing Dayung field and 64 kilometers from the Corridor project's central gas plant at Grissik. Gulf focused its activities during the first six months of 2000 on the Bentayan field, drilling six wells in the main area of the field and six wells in an area to the southeast, following up on the successful Bentayan 53 well drilled in late 1999. Partners in the Corridor Block are Gulf (54 percent), Talisman Energy (36 percent) and Pertamina (10 percent).

MEDCO, Indonesia's largest private oil company, began exporting crude oil in 2000 and formally changed its name to "PT Medco Energi Internasional Tbk." The company operates eight exploration and production working areas and holds two PSC licenses in Burma. In Indonesia, it acquired 75-percent working interests in the West Simenggaris and West Madura blocks from subsidiaries of Australia-based City View Energy Corporation and purchased Union Texas' shares in Senoro-Toili Ltd., an oil company in Sulawesi working the Senoro Toili block. Also in 2000, Medco farmed out a 50-percent working interest in the frontier Pasemah block, South Sumatra, to Malaysian state oil company Petronas and discovered the Soka oil and gas field in South Sumatra. As of year-end 1999, Medco's proved reserves were reported to be 181.2 million barrels of oil and 169.8 billion cubic feet of gas. In November 1999, Medco concluded a debt restructuring agreement, converting 40 percent of its debt to equity and extending payment terms of the remainder.

Marketing the Crude

Indonesia, through Pertamina and its foreign partners, sells crude oil under one-year contracts, which include a price adjustment mechanism. Indonesian crude generally commands a premium because of its low sulfur content. Indonesia's representative Minas crude (in crude marketing terms it is referred to as Sumatra Light Crude) produced in Central Sumatra has an American Petroleum Institute (API) gravity of 34.5 degrees at 60°F and a sulfur content of between 0.06 percent and 0.10 percent by weight.

Effective October 1, 1999, Pertamina changed the pricing formula for official export prices of Indonesian crudes. The Indonesian Crude Price (ICP) formula has three components: the Asian Petroleum Price Index (APPI), Rim Intelligence Company, and Platts. The APPI component is derived from twice weekly APPI price assessments adjusted by a basket of regionally traded crude oils (including Indonesian Sumatra Light Crude and Malaysian Tapis) using a 52-week moving average. Pertamina lowered the portion of the APPI panel quotes from 33.3 percent to 20.0 percent and increased the portion of spot assessments of Platt and RIM to 40.0 percent each. The purpose of the adjustment was to better reflect prices in the world market by putting more emphasis on the spot market. The Minister of Energy and Mineral Resources has decided to extend the ICP formula until March 2001.



Asian countries are the largest markets for Indonesian crude. Japan accounted for 33 percent of Indonesian crude oil exports in 1999, followed by South Korea (16 percent), Australia (15 percent), China (11 percent) and the United States (9 percent).

Imports

Indonesia remains a significant importer of crude oil. In 1999, Indonesia imported over 232,000 B/D of crude (an annual total of 84.7 million barrels), at a cost of $1.5 billion for the year, mainly from Saudi Arabia (42 percent), Malaysia (15 percent), Vietnam (12 percent) and Nigeria (10 percent). Oil product imports also rebounded sharply, by almost 50 percent to 80 million barrels for the year.

Pertamina established a new trading division to handle crude oil and fuel product imports. In November 1998, Pertamina and Malaysian state oil company Petronas signed a one-year term contract for the supply of 20,000 B/D of Malaysian crude oil (MCO) to Indonesia, effective January 1999, with the option to take an additional 600,000 barrels per month. The oil deal was the first direct business arrangement concluded between the two state oil companies.