For 35 years, Unocal has worked in partnership with the Government and people of Indonesia to explore for and develop the country’s extensive oil and gas reserves. Indonesia has become one of Unocal’s core areas for its international operations and represents a significant contributor to the company’s reserve and production base. The company has invested a total of approximately US $5 billion (43,655 billion rupiah) to support its activities in Indonesia. Unocal’s proven track record in Indonesia also has served as a cornerstone for its expanding operations throughout Southeast Asia.

Unocal’s operations in Indonesia are entering an exciting growth stage as new production from the West Seno field – Indonesia’s first deepwater production project – began in August. West Seno is the first in a series of major development projects that will lead the company’s growth over the next decade. With several recent deepwater discoveries, Unocal’s exploration program is building upon the company’s expertise and experience in deepwater drilling. The company also is seeking to become a major gas supplier to the liquefied natural gas (LNG) plant at Bontang – the world’s largest LNG facility – by supplying about 40% of the plant’s gas needs by 2015. In addition, Unocal continues to provide geothermal energy supplies to help meet Indonesia’s electricity needs.

**West Seno Begins Production**

As Indonesia’s first production project in deepwater, Unocal’s West Seno field launches a new era for the country’s oil and gas industry. Discovered by Unocal in 1998, West Seno also represents the company’s first development project in its deepwater exploration program, initiated in 1997.

West Seno is located in the Makassar Strait production sharing contract (PSC) area, about 118 miles (190 kilometers) northeast of Balikpapan in water depths of approximately 3,200 feet (975 meters). Unocal Makassar, Ltd., a subsidiary of Unocal Corporation, operates the PSC with a 90% working interest; Pertamina Upstream, the state-owned oil and gas company, holds the remaining interest.
Unocal Makassar expects to ultimately recover 210 to 320 million barrels (29 to 44 million metric tons) of oil equivalent in reserves from West Seno. Given the complex field structure, the company is developing West Seno in two phases with two tension leg platforms and a floating production unit. The field marks the first in Southeast Asia to be developed with a tension leg platform, which significantly improves the field’s economics and reserve recovery.

In Phase 1, 28 development wells will be drilled on the field’s northern section. Production from Phase 1 began in August 2003 and is expected to reach 35,000 to 40,000 barrels (4,795 to 5,480 metric tons) of oil per day by year-end.

Phase 2 will include a second tension leg platform and up to 24 additional development wells on the field’s southern section. Production from Phase 2 is slated to commence about two years after production from Phase 1 has started. With the completion of Phase 2, West Seno is expected to reach a peak production level of 60,000 barrels (8,220 metric tons) of oil and 150 million cubic feet (Mmcf) (4.2 million cubic meters (Mmcm)) of gas daily in 2005.

Approximately US $740 million gross (6,461 billion rupiah) will be invested to develop the West Seno project, making it one of Unocal’s largest investments in Indonesia. West Seno will generate significant benefits for Indonesia, including more than US $1 billion (8,731 billion rupiah) in revenues and taxes over the project’s lifetime, jobs, expanded opportunities for local businesses, new oil production to replace declining output in other areas, and encouragement for additional deepwater investments by the energy sector.

Southwest of West Seno, development plans also are underway for Unocal’s offshore Merah Besar field, which will be developed separately from West Seno. Unocal drilled the Merah Besar-1 well in 1,700 feet (518 meters) of water to a total depth of 6,533 feet (1,991 meters) in 10 days in 1996. With more than 80 million barrels (11 metric tons) of oil equivalent, Merah Besar represented Indonesia’s first commercial deepwater discovery. Production from the field currently is anticipated to begin by 2007.

During the next decade, Unocal will bring the West Seno field and additional development projects onstream, all of which will contribute significantly to the company’s global production profile.
Exploration Program Builds on Deepwater Success

For 2003, Unocal is pursuing an active deepwater exploration program with about 15 wells offshore East Kalimantan. The aggressive exploration campaign builds upon Unocal’s successful deepwater track record in Indonesia.

The company is using a state-of-the-art drilling rig for a series of wells thousands of feet deeper than previously possible at several of Unocal’s existing discoveries. The first well in the series was drilled in July and was a significant discovery. The Gehem-1 well, drilled to 15,241 feet (4,645 meters) encountered 617 feet (188 meters) of net gas and 18 feet (5 meters) of net oil. Unocal believes the Gehem structure, located offshore East Kalimantan in the Kutei Basin, has the potential for significant oil pay in several zones which will be tested in subsequent appraisal wells.

A major 3-D seismic acquisition effort is under way in the East Kalimantan PSC and additional deepwater wells are planned for the Kutei and Tarakan basins. Building on more than 110 deepwater wells already drilled in East Kalimantan, Unocal clearly has its eye on being the leading deepwater explorer, developer and producer in Indonesia.

During 2003, wells are being drilled to further study the company’s discoveries at the offshore Ranggas and Sadewa fields. Seven successful wells have been drilled at Ranggas, where water depths are about 5,200 feet (1,585 meters). The Ranggas complex has been estimated to hold 200 to 350 million barrels (28 to 48 million metric tons) of unrisked exploration potential. Discovered in 2002, the Sadewa field may begin production as early as 2003 to provide supplies for the Bontang LNG plant. Further appraisal drilling in 2003 will help to determine both fields’ commercial viability.

A Legacy of Firsts in Indonesia

• Developed West Seno field – first deepwater production project in Indonesia and first tension leg platform installed in Southeast Asia
• Discovered Merah Besar – Indonesia’s first commercial deepwater discovery
• Drilled first deepwater well offshore East Kalimantan – used Unocal’s advanced exploration technology
• Completed Indonesia’s first subsea well
• Conducted first 3-D seismic survey offshore East Kalimantan
• Drilled first horizontal well in Indonesia
• Discovered Attaka field – Indonesia’s largest offshore oil and gas field
• Signed first joint operations and energy sales contracts for geothermal exploration and development in Indonesia
At Unocal’s giant deepwater Gendalo-Gandang offshore complex, the company continues to evaluate the field’s significant condensate and gas reserves and review future development plans. A successful appraisal well drilled in 2002 had an estimated potential production rate of 90 Mmcf (2.5 Mmcm) of gas and 6,000 barrels (822 metric tons) of condensate per day.

In early 2003, Unocal expanded its exploration holdings with two new ventures offshore East Kalimantan. Both are situated near previous discoveries by the company.

Unocal’s exploration teams in Indonesia also are involved in the company’s holdings in Australia, where it has interests in two offshore blocks that cover about 1.9 million acres. Over 1,000 line kilometers of 2-D seismic and 350 square kilometers of 3-D seismic were acquired on these blocks in late 2002. Processing of this data was recently completed and interpretation is underway. In late 2003, exploration drilling is slated to begin in the deep waters of Australia’s Otway Basin.

Providing Gas to the World’s Largest LNG Plant

Since 1979, Unocal has supplied gas to the LNG plant at Bontang in East Kalimantan. With a capacity of nearly 22 million tons per annum (about 2.8 billion cubic feet or 79 Mmcm per day), Bontang is the world’s largest LNG facility. LNG from Bontang is sold to buyers in Japan, Korea and Taiwan. Unocal currently provides about 8% of Bontang’s gas requirements. By bringing West Seno on production as well as additional development projects, Unocal’s goal is to become a major gas supplier to the LNG plant, supplying about 40% of the facility’s gas needs by 2015.

Offshore East Kalimantan, Unocal currently operates 11 producing fields, including Indonesia’s largest offshore oil and gas field, Attaka. Gross production from the company-operated fields averaged 63,000 barrels (8,666 metric tons) of oil and condensate and 269 Mmcf (7.5 Mmcm) of gas per day in 2002.

Unocal also operates the Santan and Lawe-Lawe terminals, and other associated facilities on East Kalimantan, which process oil and gas from the company’s fields. In addition, the company supplies gas to Bontang Industrial Estate, which includes four urea fertilizer units, two ammonia plants for the export market, and a methanol facility. Unocal also sells gas to Pertamina’s refinery in Balikpapan.
for the country’s domestic gas market. The company is actively seeking new opportunities to provide gas to meet Indonesia’s growing need for electricity.

**Geothermal Energy for Domestic Electricity Needs**

Working in partnership with Pertamina and PLN, the state electricity company, Unocal pioneered the exploration and development of Indonesia’s vast geothermal energy resources, which supply steam that generates electricity for power plants. The company currently has two existing geothermal energy projects in West Java that have a combined installed capacity of 440 megawatts.

Unocal Geothermal Indonesia (UGI) and an affiliate, Dayabumi Salak Pratama, Ltd. (DSPL), reached an agreement with Pertamina and PLN that lowered the selling cost of electricity delivered by DSPL and steam supplied by UGI to PLN. Under this agreement, PLN also committed to accept as much steam and electricity from UGI and DSPL as possible to meet increased demand in the Java-Bali electricity distribution system.

As one of the world’s largest producers of geothermal energy, Unocal recognizes the significant environmental benefits from geothermal projects. A parallel positive step for the company is the growing interest within developed countries in purchasing greenhouse gas emission credits under the Kyoto Protocol on climate change. Recently, the Government of the Netherlands announced its intention to purchase greenhouse gas emission credits from a proposed geothermal project in West Java to be operated by Unocal subsidiaries and Pertamina. Value derived from the sale of these greenhouse gas emission credits will be used to lower the price of electricity from the project. Execution of a contract is contingent on several factors, including financing, successful re-negotiation of energy sales contracts with PLN and project permits. Unocal also is pursuing development of several other geothermal and oil and gas projects that will reduce emissions of greenhouse gases.

**Creating a Strong Employee Team**

Unocal is committed to hiring, training and providing advancement opportunities for local citizens in the countries where it does business. As of September 2003, Indonesian nationals represented 93% of the company’s 2,141 employees in its operations in Indonesia. Many of the local citizens hold professional, technical and managerial positions.

To meet the company’s future hiring needs, Unocal launched a training program in 2002 for positions at its various field operations. Fifty candidates, including seven women, were selected to participate in the 2002-2003 training program. Unocal expects to require about 300 new employees between 2002 and 2010 for its field operations.

**Supporting Our Communities and Neighbors**

In cooperation with local community and government members as well as non-governmental organizations (NGOs), Unocal supports numerous community programs in Indonesia with an emphasis on education, health care, self-help and environmental projects. For example, the
company has worked with a local NGO and university to assist villages in developing sustainable social and economic programs for local citizens. Among Unocal’s many recent health-related initiatives are the renovation of a floating hospital to serve people along river communities and training for more than 1,700 health care workers to help prevent dengue fever in Balikpapan. The company also has funded a micro-credit loan program for women’s groups and skills training for local fishermen. In addition, Unocal is proud to be a long-time sponsor of a conservation program for orangutans.

As the company moves forward with its new oil and gas development activities in Indonesia, we will work with local communities and key stakeholders to continue to demonstrate that oil and gas development truly can “improve the lives of people wherever we work.”

About Unocal Corporation

Unocal is one of the world’s leading independent natural gas and crude oil exploration and production companies with principal operations in North America and Asia. Unocal is one of the world’s largest producers of geothermal energy with operations in Indonesia and the Philippines. For more information about Unocal and its activities, visit the company’s web site at www.unocal.com.

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