

PETROLEUM REPORT INDONESIA  
2005 – 2006



JUNE 2006  
EMBASSY OF THE UNITED STATES OF AMERICA  
JAKARTA

## Foreword

The Embassy would like to thank the Ministry of Energy and Mineral Resources, particularly the Directorate General of Oil and Gas (MIGAS), for supplying statistics, without which this report would not have been possible. The Embassy would also like to acknowledge the cooperation of Indonesia's production sharing contractors for current data and helpful suggestions to improve the accuracy of this report.

The intent of this report is to provide a summary of Indonesia's oil and gas sector in an effort to assist government policy makers and private sector companies better understand this important market. The report does not necessarily reflect the view of the U.S. Government. The Embassy has attempted to obtain the most accurate data from Indonesian Government sources. However, statistics drawn from different sources often display inconsistencies. This is the case between several tables in the appendices. To the extent possible, we have tried to indicate the source of the information. This report uses an exchange rate of Rp 9,830 to one U.S. dollar, unless otherwise indicated. Finally, statistics are often revised at a later date. The Embassy plans to publish a mid-year supplement to this report in 2007, containing end of year oil and gas data for 2006.

The full report is also available on the U.S. Embassy website, [www.usembassyjakarta.org](http://www.usembassyjakarta.org).

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## GLOSSARY

ADB	Asian Development Bank
ADO	Automotive Diesel Oil
Avgas	Aviation Gasoline
Avtur	Aviation Turbine fuel used by turboprops and jet aircraft.
<i>BBM</i>	Oil-Based Fuel
<i>BPS</i>	<i>Badan Pusat Statistik</i> (National Statistical Bureau)
BCF	Billion Cubic Feet
B/D	Barrels per Day
BI	Bank Indonesia (Indonesia's central bank)
BLC	Bonny Light Crude
BOE	Barrels of Oil Equivalent
BTU	British Thermal Unit
CIF	Cost, Insurance and Freight
CNOOC	China National Offshore Oil Company
DPK	Dual Purpose Kerosene
EIB	European Investment Bank
EOR	Enhanced Oil Recovery – contract used for established producing fields with the intent of applying advanced technology to increase recovery in reservoirs
FO	Furnace Oil
FOB	Free on Board
GDP	Gross Domestic Product
HOMC	High Octane Motor Component
HSFO	High Speed Fuel Oil
IDO	Industrial Diesel Oil
ILC	Iranian Light Crude
JOA/JOB	Joint Operating Area/ Joint Operating Body – joint venture arrangements where the contractor participates as a 50:50 partner with Pertamina
JP4/JP5	Jet Fuel
LNG	Liquefied Natural gas
LOMC	Low Oil Motor Gas Component
LPG	Liquefied Petroleum Gas
LSWR	Low Sulphur Waxy Residue
MBTU	Million British Thermal Unit
<i>MIGAS</i>	Directorate General of Oil and Gas in the Ministry of Energy and Mineral Resources
Mogas	Motor Gasoline
MT	Metric Tons
On/Off	Onshore/Offshore
OPEC	Organization of Petroleum Exporting Countries
<i>Pertamina</i>	<i>Perusahaan Tambang Minyak Negara</i> (Indonesia's National Oil Company)
<i>PGN</i>	<i>Perusahaan Gas Negara</i> (Indonesia's National Gas Company)
PSC	Production Sharing Contract – cooperation contract for oil and gas exploration and exploitation between BPMigas and private investors (which can include private foreign and domestic companies as well as PT Pertamina)
SPBX	Special Point Boiling X (type of fuel oil)
SSWJ	South Sumatra West Java
SLC	Sumatran Light Crude
TAC	Technical Assistance Contract - variation of a PSC used for established producing areas, usually covering exploitation only.
TCF	Trillions of Cubic Feet
WB	World Bank

## INSTITUTIONAL FRAMEWORK

*“All natural resources in the soil and the waters of the country are under the jurisdiction of the State and shall be used for the greatest benefit and welfare of the People.”*

-Article 33, Indonesian Constitution

The Indonesian Parliament (Dewan Perwakilan Rakyat – DPR) passed the oil and gas bill into law on October 23, 2001. The new law replaced Oil and Gas Law No. 44/1960 and Law for Pertamina No. 8/1971. It reduces the government's power over the petroleum sector and allows for open competition in the downstream oil and gas distributing and marketing area. The new law authorizes the establishment of an implementation agency ("badan pelaksana") and regulatory agency ("badan peraturan") to assume state oil and gas company Pertamina's roles. The implementation agency has replaced Pertamina in managing Production Sharing Contract (PSCs) with private oil and gas companies, thus eliminating the conflict-of-interest inherent when upstream producer Pertamina regulated the activity of its competitors. The law also removed Pertamina's monopoly in the downstream sector with the regulatory agency assuming the responsibility for managing natural gas and domestic fuel distribution and supply.

The GOI generally met the law's stipulation that the two new agencies be established within one year of the law's enactment, and that Pertamina establish itself as a limited liability company ("persero") within two years (see below).

Pertamina will maintain its overall responsibility for domestic fuel supply and distribution until December 31, 2006. Existing PSC's will be grandfathered and in effect until expiration of the contract. By the end of 2003, the GOI had issued three of five required implementing regulations under the law covering Pertamina's transition to a limited liability company, and the establishment of the implementing and regulatory agencies. By October 2004, the government issued the remaining two implementing regulations, on the upstream and downstream sectors.

All energy activities dealing with petroleum and gas fall under the Ministry of Energy and Mineral Resources, which is charged with creating and implementing Indonesia's energy policy. The Ministry of Energy and Mineral Resources is divided into several directorates, with the Directorate General of Oil and Gas (MIGAS) responsible for all aspects of petroleum industry development, including employee training and promulgating regulations.

### **BP Migas**

On July 16, 2002, President Megawati signed Government Regulation No 42/2002, establishing an implementing body for oil and gas upstream operations, Badan Pelaksana Minyak dan Gas Bumi (BP Migas), as required by Oil and Gas Law No 22/2001. This upstream implementing body has taken over Pertamina's regulatory functions and responsibilities in managing oil and gas contractors.

BP Migas has managed upstream regulatory activities since mid-2002.

However it lacked implementing regulations until 2004 when the GOI issued Regulation 35 under the Oil and Gas Law 22/2001.

BP Migas' main responsibilities are to: 1) provide recommendations to the Minister in preparing and offering work areas and cooperation contracts; 2) sign cooperation contracts; 3) control upstream business operations and 4) appoint sellers of the government's share of oil and gas. BP Migas is a non-profit state legal entity and acts on behalf of the government as party to the cooperation contract with business entities. At the same time it also controls all oil and gas business operations.

BP Migas is led by a chairman and vice chairman, assisted by five expert staff and four main operational divisions—planning, operations, finance and marketing, and general affairs. The chairman is appointed by the President, based on the recommendation of the Minister of Energy and Mineral Resources after approval by the House of Representatives (DPR). The Chairman must periodically report to the President (every six months or as requested), via the Minister of Energy and Mineral Resources. The agency must also report and gives copies of signed Production Sharing Contracts to the DPR.

## **BPHMigas**

On December 30, 2002 President Megawati Sukarnoputri signed Government Regulation (PP) 67/2002 establishing a new downstream regulatory body, the Badan Pengatur Hilir Minyak dan Gas Bumi (BPH Migas), which assumed the role of Pertamina in controlling downstream activities. BPH Migas was given the responsibility to regulate, develop and supervise the downstream industry. However BPH Migas lacked implementing regulations until 2004 when the GOI issued Regulation 36 for

the downstream activities laid out in Oil and Gas Law 22/2001.

BPH Migas' broad responsibilities are to: 1) regulate and determine the supply and distribution of oil-based fuel, 2) regulate the transmission and distribution of natural gas, 3) allocate fuel to meet national fuel oil reserve goals, 4) plan the use of oil and gas transportation and storage facilities, 5) set gas pipeline tariffs, 6) set natural gas prices for household and small consumers, 7) recommend pipeline levies, and 8) set the price of pipeline rights.

BPH Migas has the regulatory and development responsibilities to: 1) issue business licenses, 2) determine fuel types and standards for retail sale, 3) formulate strategic reserves policies, 4) determine price formulas for subsidized fuel, 4) protect occupational health and safety, 5) ensure environmental protection, and 6) promote community development. The agency is also charged with developing the master plan for national gas transmission and distribution. It also ensures the availability and distribution of fuel oil, and monitors reserves, market share and trading volumes.

BPH Migas is a smaller body than its upstream counterpart, BP Migas. BPH Migas consists of a committee of nine (one Chairman and eight members). Committee members are appointed by the President, based on the recommendation of the Minister of Energy and Mineral Resources after approval by the House of Representatives (DPR). The Chairman must periodically report to the President (every six months or as requested), via the Minister of Energy and Mineral Resources.

## **Pertamina**

On June 18, 2003, President Megawati Sukarnoputri signed government regulation (PP) No. 31/2003 to transform the state oil and gas company Pertamina into a limited liability company (Persero). The objective of the new regulation was to establish a competitive and efficient entity, thereby increasing economic activity and the welfare of the people.

Under the new regulation, all state assets belonging to Pertamina are to serve as the capital of the new entity. The Minister of Finance based on a joint evaluation by the Minister of Energy and Mineral Resources and the Minister of Finance determined the amount of capital allocated to the new entity. The restructured Pertamina has authority from the government to supply fuel oils for domestic consumption, with compensation to be provided by the government. The regulation also gave Pertamina all the state's geothermal power assets with the proviso that they be handed over within two years to a new subsidiary. Pertamina said it plans to form a new subsidiary this year, PT Geothermal Energy, to manage those assets.

Pertamina significantly contributes to Indonesia's petroleum output. It ranks 6th in crude oil production and was Indonesia's 3rd largest producer of natural gas in 2004. Pertamina executives have expressed their determination to enhance Pertamina's position in the newly deregulated upstream sector.

In the down stream sector, Pertamina will maintain its monopoly on the distribution of subsidized fuel products throughout the archipelago until December 31, 2006. President Susilo Bambang Yudhoyono delayed full downstream fuel market deregulation by issuing Regulation 71/2005 on November 16, 2005 which extended Pertamina's public service

obligation (PSO) due to the lack of interest by other qualified companies.

In 2004, Pertamina suspended its operation in Block 3, Western Desert, Iraq due to political uncertainty. The company however, says that it wishes to resume exploration activity there as soon as the contract is ratified and the environment is permissive. Pertamina also ventured into Libya, where it won two exploration contracts in October 2005 for Block 17-3 on the Mediterranean Sea and Block 123-3 on the Sahara desert. Pertamina said it targeted Libya for investment to increase its resource base and to develop professionalism and credibility in the global oil business. The company reported provisional earnings of Rp 11.3 trillion (\$120 million) in 2005, almost double its annual target. The company said its upstream subsidiary, Pertamina E&P plans to invest up to \$100 million and drill 120 wells in 2006 to boost its oil and gas production.

## **Government Agreements and Contracts**

Indonesia has two categories of agreements and contracts for its petroleum industry. The first category refers to the bundle of rights and obligations granted to an investor to invest in cooperation with the GOI in oil and gas exploration and exploitation. These types of contracts are the Production Sharing Contract (PSC), the Technical Assistance Contract (TAC), and the Enhanced Oil Recovery (EOR) contract, defined as follows:

### **Production Sharing Contracts:**

- A cooperation contract for oil and gas exploration between BP Migas

and a private investor (which includes foreign and domestic companies, as well as PT Pertamina);

- BP Migas is the supervisor or manager of the PSC;
- Investors are participating interest holders and Contractors;
- The government take is under a production sharing arrangement whereby the GOI and the Contractors take a split of the production measure in revenue based on PSC-agreed percentages;
- Operating costs are recovered from production through Contractor cost oil formulas as defined by the PSC;
- The Contractor has the right to take and separately dispose of its share of oil and gas;
- Title of the hydrocarbons passes to the Contractor at the export or delivery point.

- Variation of a cooperation contract, or PSC;
- Used for established producing fields with the intent of applying advanced technology to increase the recovery of hydrocarbons in the reservoirs;
- Pertamina is usually a participant, along with investors; collectively they are the Contractor;
- BP Migas is the supervisor and manager of the EOR;
- Operating costs are recovered from production and typically capped at a percentage. In some cases, the incremental oil lifted from an EOR operation may be shared on a production sharing basis;
- In many cases, the EOR may also include provisions concerning how the parties will conduct petroleum operations.

#### **Technical Assistance Contracts:**

- Variation of a cooperation contract, or PSC;
- Typically used for established producing areas and therefore usually covers exploitation only;
- BP Migas is the supervisor or manager of the TAC;
- Operating costs are recovered from production;
- The Contractor does not typically share in production;
- The TAC can cover both exploitation and exploration if it involves an area where the GOI has encouraged exploration;
- In accord with Oil and Gas Law 22/2001, existing TACs will not be extended.

In addition to contracts that give bundles of rights to explore and exploit, the participants in the PSC, TAC or EOR may also enter into separate agreements to discuss how they are going to conduct petroleum operations. These are known as Joint Operating Agreements (JOA) and Joint Operating Bodies (JOB), defined as follows:

#### **Joint Operating Agreements:**

- A separate agreement in addition to the cooperation contract;
- Governs the relations of the participating interest holders, defining their rights and obligations, and describing the procedures the Contractors will abide by;
- The JOA typically includes: 1) the scope of operations; 2) designation, rights and obligations of the

#### **Enhanced Oil Recovery:**

operator; 3) establishment of an Operating Committee; 4) production disposition; 5) relinquishment, withdrawal and assignment; 6) confidentiality; 7) force majeure; and 8) dispute resolution and choice of law.

### **Joint Operating Bodies:**

- Typically part of the JOA;
- Governs the operations on behalf of the participating interest holders by establishing a non-legal entity, the JOB, to conduct petroleum operations;
- Representatives of the participating interest parties appoint representatives to the JOB;
- The JOB prepares an operating work program and budgets and carries out operations pursuant to the JOB agreement and the cooperation contract;
- Participating interest holders remain the Contractors;
- JOAs are supervised by BP Migas.

### **Fiscal Decentralization Law**

With implementation of a new fiscal decentralization law in January 2001, revenue-sharing formulas came into effect that directed 15 percent of the Indonesian Government's net oil revenues and 30 percent of its net natural gas revenues to provincial and district governments. The GOI's net oil and gas revenues refer to profit after cost recovery and deduction of the PSC share. Of the 15 percent of the oil revenue flowing to the regions, 6 percentage points will go to the regency of origin (where the PSC is located), 6 percentage

points will be shared among the other regencies in the province, and 3 percentage points will go to the provincial government. The same relative shares apply to gas revenues – 12 percent to the regency of origin, 12 percent among the remaining regencies and 6 percent to the provincial government.

### **OPEC**

Indonesia joined OPEC in 1962 as active member and hosted important OPEC conferences in 1964, 1976, 1980 and 1997. OPEC member countries meet at least twice a year to coordinate their production policies in light of market fundamental. Organization of Petroleum Exporting Countries (OPEC) produce about 38 percent of the world's oil and 50 percent of the oil traded internationally. During 2004, Indonesian Minister of Energy and Mineral Resources Purnomo Yusgiantoro held the rotating OPEC presidency.

In an effort to control oil price volatility and anticipate strengthening crude prices, the Extraordinary Consultative Meeting of the Conference of the OPEC Oil Ministers in June 2005 agreed to raise production by 500,000 barrels per day to 28 million barrels per day, effective July 1, 2005. This was due to concern of possible shortages due to shortage of effective refining capacity and based on a forecast increase in oil demand in 2005. In addition, OPEC has also called upon non-OPEC members to join efforts in maintaining market stability. OPEC, through five increases, raised production quota by 4.5 million b/d from 23.5 million b/d to 28.0 million b/d since April 2004. Indonesia received a 233,000 b/d quota

increase to 1.451 million b/d, although actual output is closer to 1 million b/d.

**OPEC quota  
(in million b/d)**

Members	Apr-04	Jul-04	Agust-04	Nop-04	Mar-05	Jul-05
Algeria	750	814	830	862	878	894
<b>Indonesia</b>	<b>1.218</b>	<b>1.322</b>	<b>1.347</b>	<b>1.399</b>	<b>1.425</b>	<b>1.451</b>
Iran	3.450	3.744	3.817	3.964	4.037	4.110
Iraq	-	-	-	-	-	-
Kuwait	1.886	2.046	2.087	2.167	2.207	2.247
Libya	1.258	1.365	1.392	1.446	1.473	1.500
Nigeria	1.936	2.101	2.142	2.224	2.265	2.306
Qatar	609	661	674	700	713	726
S.Arabia	7.638	8.288	8.450	8.775	8.937	9.099
UAE	2.051	2.225	2.269	2.356	2.400	2.444
Venezuela	2.704	2.934	2.992	3.107	3.165	3.223
<b>Total</b>	<b>23.500</b>	<b>25.500</b>	<b>26.000</b>	<b>27.000</b>	<b>27.500</b>	<b>28.000</b>

Source: OPEC

The Ministry of Energy and Mineral Resources has stated that Indonesia intends to remain an OPEC member despite its falling net oil export volumes. As Indonesia finds it increasingly difficult to maintain a net exporter status, industry observers will likely continue to question whether the country should keep its OPEC membership.

## Other Professional Bodies

### IPA

Indonesian and foreign oil companies operating in Indonesia established the Indonesian Petroleum Association (IPA) in 1971 in response to growing foreign interest in the Indonesian oil sector. Contractors and the government meet frequently to discuss matters such as production ventures and energy economics. The IPA's objective is to use public information to promote the exploration, production, refining and marketing aspects of Indonesia's petroleum industry.

### IGA

Pertamina and key gas producers Mobil and Huffco sponsored the establishment of the Indonesian Gas Association (IGA) in 1980. The main objective of IGA is to provide a forum to discuss matters relating to natural gas and to advance knowledge, research and development in the areas of gas technology. IGA also aims to promote the development of infrastructure and cooperation among producing, transporting, consuming and regulatory segments of the gas industry.

The IGA and the IPA sponsored Indonesia's membership in the Permanent Council of the World Petroleum Congress (WPC).

## CRUDE OIL

### Reserves and Production

In 2005 Indonesia ranked twentieth among world oil producers, with approximately 1.4 percent of the world's daily production. The GOI places Indonesia's crude oil reserves at 8.6 billion barrels, with proven reserves of 4.3 billion barrels and potential reserves of 4.3 billion barrels. These figures are 5 percent lower than in 2003. Oil exports were an unofficial \$8.2 billion in 2005. Preliminary total oil and gas exports (including LNG) were \$19.2 billion in 2005, compared with \$16.3 billion in 2004—24.5 percent of Indonesia's export earnings, up from 23.8 percent in 2003.

In 2005, Indonesia's overall crude oil production continued to decline to an unofficial 1.06 million b/d, falling short of its 1.08 million b/d target. Indonesia produced well below its OPEC crude production quota of 1.451 million b/d (without condensate), as a result of declining investment and maturing oil fields.

In 2004 Indonesia produced 1.094 million b/d, consisting 0.966 million b/d of crude and 128,600 b/d of condensate. This was a 4.6 percent drop from the 2001 level of 1.147 million b/d (1.013 million b/d for crude and 133,800 b/d for condensate). Almost all oil producers (Chevron, CNOOC, BP, Petrochina, Pertamina, Vico, and ConocoPhillips) reported declines. Continued sluggish investment and a decrease in new exploration were key factors behind the decline. PT Chevron Pacific Indonesia's production, which accounted for 46.3 percent of the country's crude oil production in 2004, remained stable during 2003 and 2004 at almost 506,900

b/d. Total Indonesia took over from Chinese National Offshore Oil Corporation (CNOOC) as second largest oil producer in 2004 with 7.5 percent of production.

The GOI is renewing its commitment to increase output in its energy blueprint. It has set a target of 1.3 million b/d production target by 2009. BPMIGAS believes new production from several existing PSCs will reverse the decline, citing amongst others, Pertamina (Salawati), Petrochina (Jabung and Sukowati), Total Indonesia (Peciko) in the short term and ExxonMobil (Cepu) and Santos (Jeruk) in the medium term.

**Table: Crude and Condensate Production by major producers (1,000 Barrels/Day)**

Company	2003	2004	Change (%)
Caltex*	506.9	507.0	0.0
Total	81.1	81.8	0.8
CNOOC	94.9	81.5	-14.2
Unocal*	53.9	55.7	3.3
Exspan	66.4	54.0	-18.6
Pertamina	43.6	48.4	10.9
ConocoPhillips	51.4	44.1	-14.2
Petrochina	40.5	36.6	-9.7
BP	38.8	31.3	-19.4
Bumi Siak Pusako	32	30.0	-6.2
Vico	32.3	28.8	-10.8
ExxonMobil	25.4	21.2	-16.5
Others	79.6	74.1	-6.9
<b>Total Indonesia</b>	<b>1146.8</b>	<b>1,094.4</b>	<b>-4.6</b>

Note: \*Changed to Chevron after merger.

### Exploration and Investment

Of an estimated 60 oil basins, approximately 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 GOI has placed increased emphasis on developing oil reserves in remote locations, such as

Papua, where proven and potential reserves are estimated at 109.1 million barrels.

The oil and gas industry today faces several crucial problems, particularly in the upstream sector, due to aging oil and gas assets and investment climate uncertainties. Officials hope oil contractors will aggressively increase exploration activities to look for new reserves. With no significant oil discoveries in western Indonesia in the last 10 years, the government hopes eastern Indonesia's frontier and deep-sea areas may contain sizable oil reserves.

The number of exploration drilling wells completed in 2004 dropped sharply to 36, consisting of 12 wildcat wells and 22 appraisal wells. The associated success ratio (successful wells versus wells drilled) reached 61.1 percent, up from 42.4 percent in 2003 and 33 percent in 2002.

Pertamina and BP Migas reported that several oil companies shelved a number of investment plans in 2004 due to issues including contract sanctity, regional autonomy, security, manpower, taxes, and uncertainty surrounding the implementing regulations for the Oil and Gas Law. Oil companies' expenditures have slowly moved up again since 2002 owing mainly to increases in production expenditures. According to the Energy Ministry's Oil and Gas Directorate

(MIGAS), oil companies spent a total of \$5.6 billion in 2004, a 4.8 percent increase from the 2003 total of \$5.3 billion.

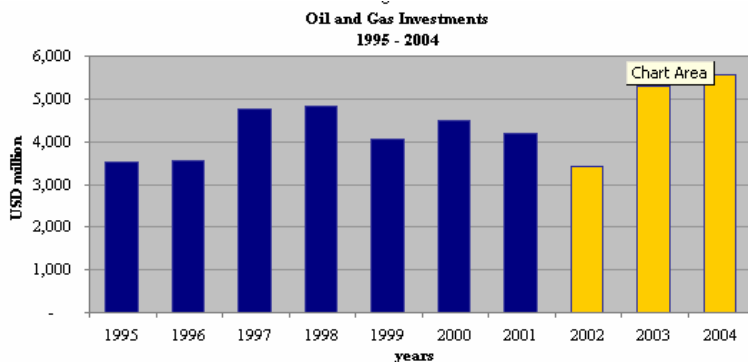
### Seismic Activities

According to MIGAS, a total of 15,041 kilometers of combined 2-D and 3-D seismic activities were carried out in 2004, continuing the steady downward trend since the 1997 peak.

### Exploration Blocks Awarded

The government awarded 9 oil and gas exploration blocks in 2005, compared with sixteen in 2004 and fifteen in 2003. All of the blocks awarded in August 2005 were through a direct bidding process. Four of the 13 direct offer blocks remain unsold:

North East Madura V, North Bali II, Taritip and Amborip V. Winners in the direct bidding round were



predominantly local oil companies, some with little previous experience.

The nine contracts in 2005 went to Lhokseumawe (Zaratex NV), West Kampar (Sumatra Persada Energi), Bungamas (Erry Guna), Bengkulu (Commissioning Services Indonesia), Citarum (Bunga Parahyangan Ranhill Energia), NE Madura IV (Energi Timur Jauh), Sebatik (Star Energy), Amborip VI (ConocoPhillips), and Wailawi (BUMD Benuo Taka). Exploration commitments by the winners totaled \$102.5 million with

signing bonuses to the government totaling \$7.9 million.

In June 2005, the government offered 14 oil and gas blocks through regular tender and 13 through direct tender. On June 2, 2006 the GOI announced winners for seven of the 14 regular tender. The GOI said it received 15 bids for the 7 blocks, as well as three non-conforming bids on the Cakalang, Buton I and Buton II blocks. There were no bidders on the other seven blocks.

The direct bidding round is one of the Government's revamped procedures for exploration and production contracts in a bid to increase their attractiveness. Previously, oil and gas companies could only receive a concession through an official tender. Now, the government accepts proposals for blocks without waiting for a formal bidding session. Under this special bidding process, after a company applies to acquire a new exploration block, the government invites other bidders to participate. If no other bidder emerges within a set timeframe, the government grants the block to the sole bidder. The government also offered new, more attractive terms and conditions for new exploration blocks in 2005. Winning PSCs would get between 20 and 35 percent splits for oil and between 30 and 40 percent for gas. Under previous PSC terms, companies generally receive a 15 percent split for oil and 30 percent split for gas. The government also set first tranche petroleum (FTP) obligations at 10 percent.

### **Mergers and Acquisitions**

US based Chevron acquired Unocal in August 2005, strengthening its position as Indonesia's largest oil producer.

Caltex and Unocal both assumed the Chevron name but continue to conduct operational activities under separate subsidiaries.

In August 2004, Indonesia's largest oil and gas company, Medco Energi International completed acquisition of Novus Petroleum Limited, a company listed in the Australian Stock Exchange with assets in the Middle East, United States, Australia and Indonesia. The acquisition led to the change of Novus' directors as it cut its global assets.

### **Mergers:**

- Chevron and Unocal, Aug 2005.
- Conoco & Phillips - ConocoPhillips, Sept 2002.
- Chevron & Texaco – ChevronTexaco, Sept 2001
- Santa Fe Snyder & Devon – Devon Energy Corp, Aug 2000.
- BP Amoco & Arco – BP, Apr 2000.
- TotalFina & Elf – TotalFinaElf Sam, Feb 2000.
- Exxon & Mobil – ExxonMobil Corp, Nov 1999.
- El Paso & Sonat – El Paso Energy Corp, Oct 1999.
- Total & Fina – TotalFina, 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.

#### Takeovers:

- Medco Energi – Novus Petroleum, August 2004
- Conoco - Gulf Indonesia Resources, July 2002
- CNOOC - YPFMaxus, Jan 2002.
- PetroChina - Devon Energy, April 2002
- Husky Oil Ltd. – Renaissance energy, Aug 2000.
- Canadian Natural Resources – Ranger Oil, July 2000.
- Fortune (Indo Pacific) – GFB Resources (Java) Ltd, Jul 2000.
- Agip – British Borneo, May 2000.
- Singapore Petroleum Company Ltd – LL&E Indonesia, Jan 2000.
- Maple/Matrix – GFB Resources (Langsa) Ltd, Jan 2000.

#### The Future

Pundits had forecast Indonesia's imminent shift from net oil exporter to net importer for several years. Those predictions were finally realized on a monthly basis in 2004. A steady decline in production, coupled with lower exploration investment levels, accelerated the transition ahead of consensus forecasts. However, with substantial reserves of natural gas and coal, Indonesia remains a net energy exporter. The March 2006 agreement between ExxonMobil and Pertamina to begin development of the Cepu bloc and the nine percent drop in domestic petroleum consumption following the October 2005 price hikes may bring Indonesia back into the net exporter camp when official figures for 2005-2006 are released. To maintain momentum, however, industry observers encouraged the GOI to implement legislation and policies that will rationalize use of Indonesia's energy resources.

A 2005 industry survey conducted by the IPA and PricewaterhouseCoopers

concluded that Indonesia's oil and gas industry is at a critical juncture. Survey participants lauded positive government efforts toward improving the investment climate in the upstream industry, such as improved fiscal incentives, the development of an overall energy blueprint, and an improving gas pipeline infrastructure.

Industry representatives said, however, that Indonesia should improve its fiscal terms for oil and gas production for both mature and frontier areas. Often 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. To address these concerns, the Minister of Energy and Mineral Resources issued Regulation 8/2005 in April 2005, which gave contractors developing marginal oil field an additional 20% reimbursement in cost recovery. In its 2005 bidding round the government offered also a more favorable contractor production split of 70/30 (government/contractor) and 60/40 for oil and gas respectively.

As part of its Energy Blueprint, Indonesia renewed its intention to achieve a production target of 1.3 million b/d by 2009. Industry leaders say that five actions by the GOI are crucial to reach this production target:

- Harmonizing conflicting laws and regulations, including the timely implementation of regulations;
- Improved teamwork, coordination and cooperation amongst GOI entities;
- Implementing judicial reform;
- Changing the regulatory paradigm to a "shared economic interest" model;

- Completely eliminating fuel subsidies and implementing an effective gas regulatory environment.

## PSC Update

**CHEVRON** consolidated and renamed its Indonesian business unit to Chevron IndoAsia in 2005, which includes former Caltex and Unocal operations. Both Caltex and Unocal now operate under the Chevron brand names, Chevron Pacific Indonesia (CPI) and Chevron East Kalimantan (CEK), respectively.

CPI is the single largest crude oil producer in Indonesia, accounting for almost 50 percent of the country's total production. CPI averaged 507,900 b/d and produced 34.8 BCF of gas in 2004. Most of CPI's production and operations are located in Riau province, Central Sumatra. The majority of the firm's production came from the Rokan PSC in the Duri and Minas fields. CPI also holds a 100% interest in the Kisaran block, which it acquired from the government in 2001. Outside Central Sumatra, Chevron has a 25% non-operating interest in the South Natuna Sea Block B, operated by ConocoPhillips.

In contrast with CPI, Chevron East Kalimantan (previously Unocal) leads in the exploration of Indonesia's deepwater resources with the majority of its operations located offshore. Following the merger, Chevron strengthened its position as the country's leading producer for both onshore and offshore exploration. During 2004, CEK produced 55,700 b/d of oil and condensate and a total of 124.2 BCF of gas. The

acquisition added interests in 12 offshore PSCs in areas covering approximately 7 million acres and a supply contract with Bontang LNG plant.

CEK continues exploration and appraisal drillings to add to its oil and gas reserves. CEK operated Indonesia's first deep water project, the West Seno field, in the Makassar Strait PSC, offshore East Kalimantan. The field began production in 2003 and is expected to peak at 60,000 bpd and 150 mmcf/d of gas when the second phase of the project is completed. The field produced 16,700 b/d of oil and 3.3 BCF of natural gas in 2004. Chevron also plans to develop the Sadewa gas field (150-600 BCF reserves), which is expected to come online in 2007 – 2008. In the mid-term, CEK hopes to begin production at Gendalo in 2007 and Gehem in 2008.

CEK currently pipes about 150 mmcf/d to the Bontang LNG plant, but, the company predicts gas production could reach 800 mmcf/d or greater by 2011. A variety of sources could absorb future gas production: Bontang's planned ninth LNG production train, a proposed LNG regasification facility in Java, or a proposed East Kalimantan-Java gas pipeline (2010).

Chevron's downstream activities include sales of paraxylene, benzene and fuel catalysts to refineries in Java, and the company enjoys a sizable domestic market share of lubricants and fuel additives. Chevron is currently assessing the impact of recent deregulation for possible new opportunities in refining, distributing, and marketing its downstream products.

In the electric power business, Chevron Geothermal and Power replaced Amoseas Indonesia in 2004 as operator of the Darajat geothermal plant in West Java. In 2005 Chevron inaugurated the construction of its Darajat complex expansion, the 110 megawatt Darajat III. Darajat III is expected to start operation in the third quarter of 2006 and sell power to PLN. From the Unocal merger, Chevron acquired another geothermal facility in Gunung Salak, Central Java. In addition, the company also operates a 270 MW co-generation facility in North Duri to support its Central Sumatra activities.

**EXXONMOBIL** was created from the merger of Exxon and Mobil in November 1999, leading to the consolidation of Exxon, Esso, and Mobil operations in Indonesia. ExxonMobil (EM) celebrated 100 years of doing business in Indonesia in 1998, including 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.

One of ExxonMobil's largest endeavors during 2004 - 2006 was its effort to extend its TAC for the Cepu block in East Java. In March 2006, ExxonMobil and Pertamina signed a joint operating agreement which will pave the way to begin production in the block, possibly as early as 2008. Through purchases and acquisitions, ExxonMobil holds and operates a 100% participating interest under a production sharing arrangement awarded by Pertamina in 1990. ExxonMobil has invested over \$400 million in Cepu. EM has made a significant discovery at Banyu-Urip, with estimated resources in excess of 300 million barrels of oil and significant

volumes of gas. ExxonMobil proposes a \$2.6 billion capital investment to fully develop the block. The company estimates peak crude oil production will be 171,000 b/d. Major gas supplies could be available for sale to meet existing shortfalls in East and Central Java. The company estimates the project would generate annual gross revenues between \$700 million and \$1.2 billion at peak production.

Cepu extension talks between ExxonMobil, Pertamina and the GOI lagged for the past five years. In 2005, Pertamina and ExxonMobil made progress, signing a new cooperation contract for the Cepu block, where each holds 45 percent interest in the block. In March 2006, ExxonMobil and Pertamina resolved a disagreement with EM securing the lead to develop the project and Pertamina executives playing key roles. The successful conclusion of the Cepu deal will provide substantial economic benefits to Indonesia and East and Central Java and will send a positive signal to foreign investors.

In North Sumatra, ExxonMobil's natural gas operations include the Arun, Pase, South Lhoksukon, and North Sumatra Offshore fields, which supply gas to the Arun LNG plant. Gas supply from the field is declining and not sufficient to meet export commitments and supply the local fertilizer industry in Sumatra. The government has requested that ExxonMobil divert some of its production to supply the fertilizer plants even at the cost of the GOI having to purchase LNG cargoes from the world spot market to meet its contractual export commitments.

ExxonMobil has a 50 percent participating interest in A-Block (ConocoPhillips is

operator). In 2005, ExxonMobil announced plan to divest its interest in A-Block. The company also sold its 68 percent interest in the Madura Strait PSC to Husky Energy in 2004.

BP is one of the largest foreign investors in Indonesia. Through partnerships with upstream authority BP Migas, BP has invested over \$5 billion in its Indonesian operations over the last 34 years. After acquiring Arco's assets in 2000, every BP business stream—exploration and production, chemicals, downstream and solar—is represented in the company's Indonesia operations.

In Java, BP realigned its strategy to concentrate on its West Java assets. BP operates the Offshore North West Java PSC (with a 46% interest), which averaged 30,000 b/d of crude oil and 225 mmbtu/d of gas during 2004. BP currently supplies 65% of the West Java gas market. In 2004 BP shed almost all of its East Java assets, including its 100 percent interests in Kangean and Muriah PSC.

BP is the major shareholder and operator of the Tangguh LNG project, which encompasses three PSCs in the Berau-Bintuni Bay region of western Papua. The Tangguh gas fields contain 14.4 trillion cubic feet (TCF) of proven and certified natural gas reserves. The planned LNG processing plant will produce 7.6 million metric tons of LNG per year from two initial processing trains starting in 2008 - 2009.

Following final Indonesian government approval in March 2005, BP appointed a consortium of Kellogg Brown Root (KBR), JGC Corporation, and PT Pertamina, as contractors to build the

Tangguh project. The project has already obtained four market commitments for 7.65 million tons (MT) of Tangguh LNG per annum -- 2.6 MT of LNG per year to China's Fujian province for a 25 year term beginning 2007, 1.35 MT of LNG per year to South Korea's K Power and POSCO for a 20-year term beginning 2006, and 3.7 MT of LNG per year to Sempra Energy's proposed LNG receiving terminal in the West Coast for a 20-year term beginning in 2008. (Until Tangguh becomes operational LNG will likely come from the Bontang LNG facility in East Kalimantan). The GOI and BP also hope to ink new LNG supply contracts with Japan.

Through a joint venture with ENI, BP also has a 50 percent interest in VICO, Indonesia's fourth largest gas producers with gross production of 330 BCF and 28 mmbd. VICO operates the Sanga Sanga PSC in East Kalimantan, which supplies 20 percent of the gas for the Bontang LNG facility. In the downstream sector, BP distributes lubricants under the Castrol brand and produces purified terephthalic acid (PTA) in cooperation with Mitsui Chemicals and Mitsui & Co.

**CONOCOPHILLIPS** continues to streamline and refocus its Indonesian operations following the August 2002 merger of Conoco Inc. and Phillips Petroleum. The merger followed then-Conoco Inc.'s acquisition of Gulf Canada Resources in 2001. The company since changed its investment criteria to focus on three core areas in Indonesia: South Sumatra, South Natuna Sea and East Java. In 2003, Conoco Phillips Indonesia sold its share of the Kakap PSC (31.25 percent interest), Sebuku PSC, Makassar Strait (100 percent) and Tungkal PSC, South Sumatra (100 percent). Currently

ConocoPhillips owns 13 production sharing contracts (PSCs), eight of which are operated by the company, and a 14 percent participating interest in the Transgasindo pipeline in South Sumatra.

ConocoPhillips is the largest supplier of pipeline gas in Indonesia through the South Sumatra pipeline and West Natuna pipeline. In August 2003, ConocoPhillips began supplying natural gas from its south Sumatra Corridor PSC to Singapore's PowerGas, via the Grissik-Batam-Singapore gas pipeline. The company has also supplied natural gas to Singapore's Sembawang Gas from its West Natuna gas fields since 2001 and to Petronas' Duyong Complex offshore Malaysia from South Natuna Sea Block B since August 2002. ConocoPhillips has been a major player in the pipeline gas business since 1998, when it began supplying gas from the South Sumatra Corridor Block PSC to the Chevron-operated Duri steamflood in Central Sumatra.

ConocoPhillips holds a 40 percent operating interest in the offshore Block B PSC, South Natuna Sea. The Belanak floating production, storage and offloading (FPSO) project at the Block B PSC, started oil production in December 2004. The FPSO has a capacity to process 100,000 b/d of oil and 430 million cubic feet of gas per day. Natural gas production from the field is exported via pipeline to Singapore and Malaysia.

In offshore East Java, ConocoPhillips has an operating interest in the Ketapang block. The company believes the block has significant oil potential and plans an additional 5 wells in 2006. Malaysia's Petronas has an equal, non-operating interest in the block. ConocoPhillips plans to drill to invest over \$3 billion in

projects in the Natuna Sea and Ketapang over the next 4 years.

ConocoPhillips is also a major player in the \$900 million South Sumatra to West Java gas development project. The project includes a 660-kilometer pipeline from ConocoPhillips Suban gas field in the Corridor Block to the state-owned electricity utility PLN gas-fired power plants in West Java. The company signed a gas sales agreement in August 2004 with state gas company PGN for 2.3 TCF of gas to supply industrial customers in West Java and Jakarta over a 17 year period commencing 2007. Gas supply will come from the Suban gas field on Corridor Block PSC, South Sumatra and will be transported via the South Sumatra-West Java pipeline.

**AMERADA HESS** consolidated its holdings in Indonesia and sold most of its Indonesian assets during 2002 – 2003. Amerada Hess' present assets in Indonesia are a 78 percent operating interest in Pangkah PSC and a 25 percent working interest in the Jambi Merang JOB.

Amerada Hess has focused its operations in Indonesia on the development of the Ujung Pangkah gas field located in the Madura Strait, offshore East Java. The company is also constructing an offshore well head platform and an onshore gas processing facility in Gresik. Amerada Hess plans to pipe gas from the Ujung Pangkah gas field to PLN's Gresik power plant. In December 2004, the company signed a 400 BCF gas supply contract with PLN for 20 years starting at the end of 2006.

**MEDCO**, Indonesia's largest private oil company, began exporting crude oil in 2000. It also formally changed its name

to “PT Medco Energi Internasional Tbk.” at that time. Medco is 50.7 percent owned by Encore International Ltd, which is affiliated with the Panigoro family. On January 2005, Encore signed conditional sales purchase agreements to buy out 40 percent and 19.9 percent share ownerships in New Links Energy Resources from Thailand’s PTTEP and Cumin Limited respectively. Encore is now the sole shareholder of New Links. In 2005, Medco launched a secondary public offering, which increased public investors’ shareholding in Medco up to 42.6 percent. Medco, through its subsidiaries, owns 14 oil and gas blocks throughout Indonesia, seven of which are in production, while the rest are in the exploration phase.

Medco is the third largest crude oil producer in Indonesia. However, its crude production dropped almost 14 percent to 57,500 b/d in 2004 despite additional production from Kakap block and overseas assets. An ongoing production decline in Medco’s largest fields, Kaji Semoga in Rimau PSC, South Sumatra, is the primary reason for drop off. Medco plans to utilize waterflood optimization and enhanced oil recovery (EOR) to slow down the decline rate in its Sumatra fields. Medco’s proven oil reserves now stand at 99 million barrels, while proven and probable reserves stand at 176 million barrels.

In late 2003, Medco assumed the sole risk in exploration drilling in Jeruk in the Sampang PSC. They struck oil in 2004. Other interest holders in the PSC, Singapore Petroleum Company and Cue Energy, decided to reinstate their rights to the Jeruk field at that time. Consequently, Medco will receive full reimbursement of its expenses in

developing the field and additional compensation when the field comes online in 2007.

In August 2004 Medco completed its takeover of Novus Petroleum Limited, a listed Australian oil and gas company with assets in the Middle East, Australia, US and Indonesia. Through the acquisition, Medco gained interests in two Indonesian producing fields, Brantas and Kakap. Shortly there after, Medco began consolidation and shed some of Novus’ assets. The company sold Novus’ Pakistani, US, and Australian assets, as well as 18 percent and 6.25 percent of Brantas and Kakap PSCs in Indonesia.

The company believes its future lies in natural gas development. Medco’s gas reserves stand at 221 BCF proven and 629 BCF proven and probable. Medco’s gas production, more than doubled to 192 mmcf/d during 2004, owing to additional production from Novus’ assets.

In addition to gas blocks in south Sumatra, Medco’s Exspan Tomori Sulawesi holds a 50 percent operating stake in the Senoro-Toili JOB with PT Pertamina. The block has estimated natural gas reserves of 2.5 TCF. In January 2006, Medco shipped its first oil from the Senoro’s Tiaka field to Pertamina’s Plaju refinery.

In July 2005 Medco entered into an Exploration Joint Venture Agreement with the US-based Anadarko Petroleum’s Indonesian subsidiary. Under the agreement Anadarko will provide \$80 million over three years in exchange for up to 40 percent interest in Medco’s exploration assets. Medco also acquired 100 percent of the Sembakung Technical Assistance Contract (TAC), a mature

producing field in Perkasa Equatorial Sembakung and signed a PSC agreement with Libya's National Oil Company for the Area 47 concession, Northwest Libya. In 2006, Medco plans \$300 million in capital expenditures to continue with its acquisition strategy, of both domestic and international assets.

**EMP**, Energi Mega Persada, Indonesia's second largest oil and gas company, was incorporated in October 2001 and has been listed on the Jakarta Stock Exchange since June 2004. EMP is controlled by PT Kondur Indonesia and PT Brantas Indonesia, with each holding 30.1 percent shares and is affiliated with the Bakrie Group. EMP operates three exploration blocks and has proven and probable reserves of 91 million barrels of oil and 3.3 trillion cubic feet (TCF) of gas as of 2005.

One of EMP's strategies is to strengthen its position in East Java market, mainly capitalizing on lack of gas supply in the region. EMP is a leading player in the East Java gas market after purchasing BP's 100 percent interest in the offshore Kangean PSC and Pan Asia Enterprise's 50 percent interest in the Brantas PSC, both in 2004. EMP inked gas sales agreements totaling over 970 trillion cubic feet from its Kangean block to supply PLN, PGN, petrochemicals firm Petrokimia Gresik, Pertamina, and local gas distributor Indogas. EMP is continuously seeking expansion of its portfolio via asset acquisitions. In December 2005, EMP obtained shareholder approval to acquire PT Tunas Harapan Perkasa (THP), a local oil and gas company with interests in five exploration assets mainly in located in Sumatra.

**CNOOC**, the China National Offshore Oil Company, is currently Indonesia's largest offshore oil producer (over 81,500 b/d) following its acquisition of RepsolYPF Indonesia in January 2002. CNOOC's holdings now include an operating 65.34% interest in the Offshore South East Sumatra PSC, a 36.72 percent interest in the Offshore Northwest Java PSC, a 25 percent interest in the West Madura PSC offshore East Java, a 50 percent interest in the Poleng TAC in East Java, and a 39.51 percent interest in the Malacca Strait PSC. CNOOC's Indonesian operation had net proved reserves of 155 million boe, accounting for approximately 7 percent of total company reserves. In 2004, the company produced and 81.5 thousand b/d of oil and 18.8 BCF of gas.

CNOOC's Indonesia strategy is to tap into the export market as well as get more involved in the domestic natural gas industry. CNOOC entered the LNG export business when it bought a 12.5 percent stake in the \$3 billion Tangguh LNG project in late 2002.

Production in CNOOC's South East Sumatra PSC continued to decline over the past 2 years by almost 30 percent compared to 2002. Main oilfields Cinta and Widuri are already 30 years old and are steadily declining. However, the company is optimistic that it will be able to maintain production level through the development of marginal fields and new gas fields in the area. In April 2005, CNOOC received increased financial incentives from the government for its 6 marginal fields. CNOOC secured a gas sales agreement with PLN in 2004 to supply 80 billion BTU to PLN's proposed Cilegon Power plant in West Java starting in 2006 and lasting 12 years. They will

supply the gas mainly from the newly developed Zelda and Banuwati fields in the Southeast Sumatra PSC.

### Crude Oil Marketing

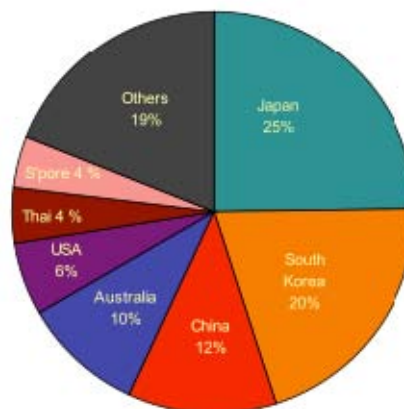
Indonesia, through Pertamina, BP Migas and its foreign partners, sells crude oil using the Indonesia Crude Price (ICP) formula. Indonesian crude is generally low sulfur and waxy. Indonesia's representative Minas crude (often referred to in marketing terms as Sumatra Light Crude or SLC) produced in Central Sumatra has an American Petroleum Institute (API) gravity of 34.5 degrees at 60 degrees F and a sulfur content of between 0.06 percent and 0.10 percent by weight.

Effective October 1, 1999, Pertamina changed the ICP pricing formula for official export prices of Indonesian crude. The ICP formula has three components: the Asian Petroleum Price Index (APPI), the Rim Intelligence Company price, and the Platts price. 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 quota from 33.3 percent to 20.0 percent and increased the portion of the spot assessments of Platt and RIM to 40.0 percent each. The purpose of the adjustment was to better reflect world prices through more emphasis on the spot market. The Ministry of Energy and Mineral Resources reviews the oil pricing formula semi-annually.

Asian countries are the largest markets for Indonesian crude. Japan accounted

for 25 percent of Indonesian crude oil exports in 2004, followed by South Korea (20 percent), China (12 percent), Australia (9.7 percent) and the United States (5.7 percent).

Indonesia 2004 Crude Export Destinations



Pertamina has an office in Singapore through its wholly owned Hong Kong-based subsidiary Pertamina Energy Trading (ex-Perta Oil). The company promotes and facilitates trade in crude oil and fuel between Singapore and Indonesia, offers logistical services to Pertamina, and represents Pertamina's interests.

### Imports

Indonesia remains a significant importer of crude oil. In 2005, Indonesia imported an unofficial 118 million barrels. In 2004, Indonesia imported 148.5 million barrels (an average of 406.9 thousand b/d), mainly from Saudi Arabia (25.5 %), Nigeria (18 %), Malaysia (7 percent), Vietnam (6.4 percent) and Angola (6 %). Oil product imports rose to an unofficial 160 million barrels in 2005, up from 154 million in 2004 and 106 million barrels in 2003.

# PETROLEUM PRODUCT CONSUMPTION AND REFINING

## Overview

Indonesia became a net petroleum importer on a monthly basis in July 2004. As a result, Indonesia became a net importer of fuel products for the entire year. Oil trade deficits reached 29 million barrels or almost 81,000 b/d in 2004. Full year official statistics for 2005 are likely to indicate a continued trend toward net importer status. However, the GOI move in October 2005 to remove substantial subsidies for domestic fuels, raising average fuel prices by an unweighted 126 percent, will provide a strong balance to the continued decline in domestic production and stagnant refining capacity. Fuel consumption increased 8 percent in 2004 to 64.7 million kiloliters (KL), up from 59.9 million KL in 2003 and 57.8 million KL in 2002. The GOI is projecting 41.6 million kiloliters of domestic fuel consumption in 2006, a drop of 36 percent from 2004.

Consumption in 2004 increased in each category of fuel except for kerosene and industrial diesel oil. A significant part of the increase likely resulted from the smuggling of subsidized fuel products to neighboring countries and domestic adulteration activities. In 2004, fuel product imports increased to 422,000 b/d from 292,000 in 2003.

The majority of domestic consumption is for transportation (46.7 percent), industry (24.6 percent), household use (18.2 percent) and electric power (10.5 percent). The transportation sector uses largely automotive diesel oil (ADO), while households are the largest consumers of kerosene.

Pertamina's Downstream Directorate is responsible for the distribution of fuel

products to end-users from 174 storage depots throughout Indonesia. The Directorate has established eight regional representative offices to market the products. Fuel products are transported via an elaborate pipeline network and by tank trucks, rail tank wagons, tank vessels and barges. Pertamina controls the sale of gasoline and automotive diesel by direct ownership and franchise of close to 3,000 gasoline stations nationwide. Pertamina itself only owns 2% of the retail stations. The private sector also sells kerosene. The selling price of fuel oil on the domestic market, excluding industry fuels, is determined by the government. Starting in 2005, the government began to adjust prices for high grade automotive fuels and industry fuels according to market prices.

**Domestic Fuel Consumption**  
(Million Liters)

Products	2000	2001	2002	2003	2004
Auto					
Diesel	21,735	23,014	24,213	25,636	26,488
Gasoline	12,422	13,057	13,732	14,112	17,027
Kerosene	12,455	12,279	11,678	12,262	11,846
Fuel Oil	6,013	6,121	6,260	6,321	5,755
IDO	1,451	1,420	1,360	1,403	1,093
Avtur	744	n/a	553	124	2,438
Avgas	5	n/a	n/a	8	3

## Oil Refining

In 2004, Indonesia's production of petroleum-based fuels and non-fuels from domestic refineries dropped to just under 1 million b/d, largely due to a decreased supply of domestic crude. Most of the petroleum products refined in Indonesia are destined for domestic consumption. Indonesia has nine oil refineries, all owned and operated by state oil and gas company Pertamina, with a combined installed capacity of 1.06 million b/d. The nine refineries are located in Sumatra, Java, East Kalimantan and Irian Jaya. They produce a mix of oil fuels (diesel,

fuel oil and kerosene), liquefied natural gas, secondary fuels (such as naphtha) and non-fuels (such as asphalt and lubricants).

According to government figures, on average Pertamina's refineries operated at 95% of their combined capacity of 1.056 million b/d in 2004. During a period of fuel scarcity in mid-2005, Pertamina was forced to delay maintenance of its Dumai refinery and operate its Cilacap facility above normal capacity. The lack of spare capacity also means that Indonesia must seek overseas imports when its larger refineries are closed for maintenance.

Oil Refinery Production (1000b/d)

Refinery	Installed Capacity	Crude Processed	
		2003	2004
Pangkalan Brandan	5.0	2.6	2.3
Dumai	120.0	28.9	22.1
Sungai Pakning	50.0	47.0	48.6
Musi	133.7	113.3	107.4
Cilacap	348.0	351.4	332.5
Balikpapan	260.0	246.5	264.3
Balongan	125.0	114.8	111.9
Kasim	10.0	8.4	8.4
Cepu	3.8	2.3	2.2
<b>TOTAL</b>	<b>1,055.5</b>	<b>1,015.2</b>	<b>999.8</b>

Source: MIGAS

In light of high global prices, Pertamina began using more domestic crude oil in its refineries in 2004 and 2005.

## Refinery Projects

**Pangkalan Brandan:** this small, aging refinery consists of a simple (primary) distillation unit, with no secondary processing unit. Its products are premium fuels, diesel, LSWR and asphalt. Pangkalan has a processing capacity of 5,000 b/d.

**Dumai:** The refinery has both a primary and a secondary processing unit (Hydro Cracker), which can produce up LPG, naphtha, HVGO and green coke. Its processing capacity is 120,000 b/d.

**Sungai Pakning:** Built around 1957, the plant refines heavy paraffin crude oil to produce diesel and paraffin and has a capacity of 50,000 Bb/d.

**Plaju:** The aged refinery was built by Shell in 1930. It consists of both a primary unit and a secondary processing unit. The secondary unit, a Fuel Catalytic Cracker Unit or FCCU, can process up to 135,000 b/d and was designed to produce PTA and Polytam. In August 2003, operating problems at Plaju forced its closure for one month, delaying maintenance on the Balongan refinery. Pertamina has proposed converting the facility into a petrochemical plant by 2008.

## Cilacap

Indonesia's largest refinery, Cilacap is located in Central Java and has a 348,000 b/d capacity. Its products are premium fuel, kerosene, diesel, fuel oil, and naphtha. Its secondary processing unit is nearly the same as that of the Plaju FCCU and produces lube base products. The bulk of crude supplies (up to 75%) for the refinery are imported from Asia and the Middle East.

Pertamina has signed a long-term import contract with Saudi Aramco to supply the refinery's crude needs. Pertamina has also continued examining the cheaper option of purchasing crude from local producers. In 2005, Pertamina agreed to purchase 250,000 barrels of crude from BP's Ardjuna field, in West Java. The short

term agreement was valid for 3 months starting December 2005.

### **Balikpapan II:**

The Balikpapan II refinery in East Kalimantan is more modern than Cilacap and Dumai, and consists of both a primary unit and a secondary processing (Hydro Cracker) unit. The plant has a refining capacity of 220,000 b/d. Bechtel upgraded the refinery in 1983. Due to the facility design, the plant cannot process crude from nearby domestic producers (Total, Chevron, Talisman, and VICO).

### **Balongan**

Indonesia's newest state-owned refinery at Balongan in West Java has the capacity to process 125,000 b/d of domestic crude. It has two production units: the crude distillation unit (CDU) and the residue catalytic cracking unit (RCCU). The CDU processes crude oil into naphtha, kerosene, automotive diesel and residue; the RCCU turns the residue from CDU into LPG and Premium, Super TT and Premix gasoline. The RCCU, one of the world's largest, has a processing capacity of 83,000 B/D, but has experienced problems since its commissioning in 1994. The refinery was initially designed to supply export markets, which is why it is also called the Exor (export oriented) I refinery. Balongan supplies about 70% of Jakarta's refined product demand. The plant processes Duri crude (70%), Minas crude (20%) and Jatibarang crude (10%). Pertamina closed the plant for routine maintenance during September-October 2003. However, a crude pipeline leak required Pertamina to run the refinery at 80% capacity for another month.

Balongan was upgraded in 2005 with additional capacity to produce 52,000 b/d High Octane Motor Component (HOMC) and increase LPG production by 200 tons/day. The upgrade was also part of a government effort to increase the use of unleaded fuel. Pertamina's new diesel fuel, Pertamina DEX is produced at this refinery.

### **Kasim**

This is a small refinery located in Irian Jaya and has only a simple primary distillation unit. Its main products are premium fuel, diesel and kerosene.

### **New Refinery Projects?**

Prior to the October 2005 fuel price hikes, the Energy Ministry estimated that Indonesia needed about \$15 billion in refinery investment through 2009 to reduce the country's growing reliance on fuel imports, which accounted for 30 percent of consumption. Prior to the price hikes, domestic demand for fuel increased by 7 percent annually, but refining capacity has remained stagnant for the more than a decade.

Local firm PT Intanjaya Agromegah Abadi (backed by Saudi investors) and its joint venture partner, Texas-based Inter Global Technologies (IGT) are slated to begin construction of the country's first privately-owned refinery in early 2006. The Parepare oil refinery in South Sulawesi was initially approved nine years ago, but development stalled during the 1997-98 economic crises. IAA holds a 30% stake in PT Kilang Minyak Nusantara, owner of the proposed refinery, while IGT holds the remaining 70%. The proposed refinery will have a capacity of 300,000 barrels per-stream

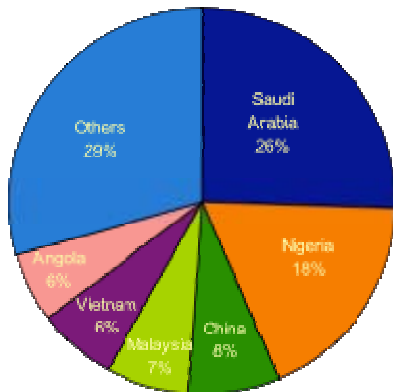
day (BSPD) and expects to start production in 2010.

In July 2005, Pertamina signed a memorandum of understanding (MOU) with China's Sinopec to construct a refinery in Tuban, East Java with a capacity between 150,000 to 200,000 b/d. Pertamina postponed the initial groundbreaking date in December 2005 and is reportedly considering seeking another partner to develop the project due to delays by Sinopec in moving forward with the deal.

### Fuel Imports

Indonesia remained a net exporter of crude oil and products in 2004, although it became a net importer on a monthly basis in July 2004. The gross output of Indonesia's nine refineries is now insufficient to meet domestic consumption. As a result Indonesia must import around 30 percent of its refined fuel products and crude oil for blending.

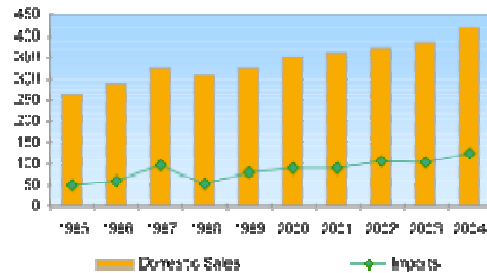
Indonesia 2004 Crude Import Suppliers



In 2004, fuel product imports increased 44.5 percent to 422,000 b/d from 2003's 292,000 b/d. The largest category of imported product was automotive diesel oil (52 percent) followed by High Octane

Mogas Component (22 percent) and kerosene (11 percent).

Domestic Sales and Imports of Fuel Products (In Million Barrels)



Pertamina has adopted a four-pronged approach to source adequate supplies of fuel for Indonesia's domestic market:

- Production from Pertamina refineries;
- Time-limited contracts for fuel imports from the Middle East;
- Spot product purchases from Singapore; and
- Overseas crude processing deals (CPD).

### Pricing and Subsidies

The government continues to administer petroleum product prices, which remains a matter of great political sensitivity. Over the past four years, the GOI has pursued a policy to reduce fuel subsidy costs, thereby increasing fuel prices. However in the past two years, fuel subsidies have jumped back from Rp 30 trillion in 2003 to Rp 59.2 trillion in 2004. The government planned to continue significant reductions in 2005, initially budgeting only Rp 19 trillion to cover 59.6 million kiloliters (KL) of consumption. However, with the

unexpected surge in global crude prices up to \$70/barrel (triple the \$24/barrel budget assumption), the subsidy required skyrocketed, placing a major strain on the state budget and the currency. During 2005 the government revised the fuel subsidy budget to Rp 76.5 trillion and later to Rp 89.2 trillion. This was coupled with two increases in subsidized fuel prices during. In 2006, the Government plans to allocate Rp 54.3 trillion in fuel subsidies, based on budget assumptions of a world oil price of \$57/barrel and domestic fuel consumption of 41.6 million kiloliters.

Indonesia continues to phase out its fuel subsidy policy and move towards a market pricing mechanism. In 2005, the government managed to completely phased out subsidies for industrial fuel users and high-octane transportation fuels (Pertamax and Pertamax Plus). Prices for these fuels are administered monthly by Pertamina. In its Energy Blueprint, the government plans full subsidy removal for premium and diesel fuels by 2006 and kerosene by 2007. The blueprint also envisions more efficient use of fossil fuels and encourages alternative energy source development.

#### **Subsidized Fuel**

The latest fuel price increase in October 2005 raised subsidized fuel prices by an average of 105 percent. Further to Presidential Decree No. 55/2005, subsidized fuels are for the use of the following customers:

- Households (kerosene)
- Fishing boats of a maximum 30 tons in size with a maximum gasoil consumption of 25 kiloliters (KL) per month

- Transportation, including private and government vehicles, public transport and domestic route ships (premium and gasoil)
- Public services facilities, including hospitals, places of worship, education facilities, crematorium and government offices (gasoil).

#### **Subsidized Fuel Price Changes (2004 – 2005) (in Rupiah per liter)**

Fuel Type 2004	% Chng		% Chng	
	Mar-05	Oct-05	Mar-05	Oct-05
Premium	1,810	2,400	32.6	87.5
Gasoil	1,650	2,100	27.3	104.8
Kerosene	700	900	28.6	122.2

Source: Pertamina

The transportation and household sectors account for approximately 48 percent and 18 percent of total national fuel consumption. The price hike has been effective in suppressing domestic fuel consumption. Following the October 2005 price hike, Pertamina reported an average consumption decline of 20 percent in October and November. Premium and gasoil consumption declined by almost 36 percent and 30 percent respectively and by the end of the year, total fuel consumption fell below its national quota of 59.6 KL.

#### **Non-Subsidized Fuels**

##### ***Industry Fuels***

In July 2005, Indonesia began to set its industrial fuel prices according to market forces. The market price is calculated by adding 15 % to the average monthly Mid Oil Platt Singapore (MOPS) price, plus 15% for the costs associated with administering the market mechanism and an additional 10% for the Value Added

Tax (VAT). Pertamina announces price changes at the end of each month.

**Industry Fuel Price Changes (2004 – 2005)**  
(in Rupiah per liter)

Fuel Type	2004	Mar-05	% Chng	2005*	% Chng
Premium	2,100	2,870	36.7	5,150	79.4
Gasoil	2,100	2,700	28.6	5,340	97.8
Kerosene	2,200	2,790	26.8	6,480	132.3
Diesel Oil	2,050	2,660	29.8	5,180	94.7
Fuel Oil	1,560	2,300	47.4	3,680	60.0

\* Price as of December 2005. Prices are adjusted several times during the year. Refer to appendix 10.5 for detailed price changes during 2005.  
Source: Pertamina

The government defines industrial users as all of those who are not specifically identified otherwise in Presidential Decree No. 55/2005. The price disparity between subsidized and industry fuels has sparked increased smuggling activity and fuel adulteration with subsidized fuels, especially for kerosene (as of July 2005 the subsidized price was Rp 900 as opposed to Rp 4,940 for industry). The government has increased efforts to combat smuggling but reports of illicit transactions persist. Arbitrage and rent seeking remain powerful economic phenomena the world over wherever significant price disparities exist between subsidized and non-subsidized commodities.

In anticipation of downstream market liberalization and to secure its market share, Pertamina also began offering discounts to its industrial customers starting November 2005. They have offered one to four percent discounts to industrial customers willing to sign one-year contracts for a minimum of 100 KL of fuel per month.

**Other Transportation Fuels**

Indonesia has three high grade fuels available to the transportation sector, Pertamina Plus, Pertamina and most recently Pertamina DEX. Pricing for these fuels are also adjusted according to market forces. Consumption of high-grade fuels declined considerably since Pertamina raised prices more than 50 percent in mid December 2004. Average daily consumption of these fuels fell to around 500 KL per day from 2000 KL. Consumption for these fuels accounts for less than 1 percent of national fuel consumption.

**High Grade Fuel Price Changes (2004 – 2005)**  
(in Rupiah per liter)

Fuel Type	Mar-04	Dec-04	% Chng	2005*	% Chng
Pertamax	2,450	4,000	63.3	5,400	35.0
Pertamax Plus	2,750	4,200	52.7	5,600	33.3
Pertamina DEX	n.a	n.a	n.a	5,900	n.a

\* Price as of December 2005. Prices are adjusted several times during the year. Refer to appendix 10.5 for detailed price changes during 2005.  
Source: Pertamina

**Unleaded Gasoline Phase-in**

Indonesia's effort to phase out unleaded gasoline began almost a decade ago and has received significant assistance from the U.S Environment Protection Agency and USAID. The government failed to meet its original 2005 target for a complete phase-out of leaded fuel and has not yet announced a new target date as this report went to press.

Pertamina also failed to comply with the Energy Ministry's Decree No.1585/1999,

which mandated that unleaded gasoline be available nationwide by January 2003. Insufficient facilities and funding constraints have limited Pertamina's ability to supply unleaded fuel nationwide. Pertamina completed the upgrade of the Balongan refinery in 2005, which produces a high-quality diesel fuel, Pertamina DEX.

Currently ULG is supplied to five areas, the greater Jakarta area (July 2001), Cirebon in West Java (October 2001), Bali (November 2002), Batam (June 2003) and Surabaya (September 2004). These areas represent more than 40 percent of the national market. The Jakarta governor announced plans in February 2006 to implement Regional Regulation No. 2/2005 on Air Pollution Control, which include provisions for an emission test for four-wheeled motor vehicles.

### **Downstream Market Liberalization**

Beginning in 1997, the GOI has moved slowly but surely to encourage greater capacity and efficiency in the downstream sector. In the early 1990's, the GOI determined that Pertamina did not have the funds to build additional refining capacity and undertook a series of measures to attract private investment in that sector. Under Presidential Decree (PD) No. 31/1997, the GOI loosened Pertamina's monopoly on refining by allowing private refineries to market their products domestically through Pertamina.

Highlights of PD 31 include:

- Private refineries may be set up by Indonesian companies in partnership with foreign firms or with Pertamina;

- Pertamina buys oil fuels and other refinery products from private companies on a long-term trade contract basis in line with Pertamina's needs and absorption capability and considering the economics of the private corporation's refinery products;
- Pertamina's offer price for fuel from those private refineries is based on the international market price;
- Oil products produced by private refineries which are not needed domestically may be sold by private companies to international markets;
- Pertamina will remain the sole distributor in the domestic market.

Oil and Gas Law 22/2001 marked another step toward liberalizing the downstream sector. The Law originally envisioned a downstream sector which:

- Eliminates Pertamina's monopoly position by November 2005;
- Ensures that investors and participants are given equal regulatory and legal treatment;
- Establishes a transparent pricing regime based on market prices;
- Rationalizes and streamlines downstream administration;
- Allows local and private investors to enter the downstream sector in four areas: processing, transportation, storage and marketing.

In 2004, the government issued implementing Regulation No. 36/2004 on the sector. The regulation stipulated that:

- The Minister of Energy and Mineral Resources is in charge of issuing licenses for businesses wishing to engage in downstream activities.
- The Ministry of Energy and Mineral Resources determines types, standard and quality of fuel oil, gas and other fuels that can be marketed domestically.
- Downstream authority BPH Migas regulates the provision, distribution, and supply of fuel products.
- BPH Migas will appoint companies with “special rights” as gas pipeline operators and determine tariffs for other pipeline users.
- BPH Migas sets prices for households and small industrial users. In addition, BPH MIGAS will supervise pricing for fuel products and gas.
- Downstream businesses can be operated by corporate entities that have obtained a business license issued by the Ministry of Energy and Mineral Resources
- Downstream activities include the processing of crude oil and gas into oil fuel and gas fuel, LPG and LNG; the transport of processed oil/gas products via pipeline and other means; the storage of such products; and the sale, purchase, export and import of such products.
- Processing of oil and gas products into lubricant and petrochemical products are categorized as downstream activities and are jointly regulated by the Ministry of Energy and Mineral Resources and Ministry of Industry
- There are separate licenses for processing, transportation, storage and trading. There are two types of fuel trading licenses: wholesale and limited trading. Wholesale licenses are for companies that intend large-scale sale/import/export of processed oil and gas products and have their own storage facilities. Limited trading licenses are for companies that do not have storage facilities.
- Wholesale license holders can distribute their commodities to end users, while limited trading license holders can only sell their commodities to users with storage facilities or receiving terminals.
- The government sets policy on the national Strategic Fuel Reserve, and can obligate downstream license holders to contribute to the reserve. The government determines the size of each company’s contribution.

Foreign investors are starting to enter the downstream market. In November 2005, Shell became the first private investor to open a retail fuel station, in Jakarta’s edge city Tangerang. Malaysia’s Petronas followed suit and opened a retail station in Cibubur in December 2005. Shell and Petronas have announced plans to open several other outlets throughout the country.

The downstream market is now liberalized, but Pertamina will continue at least through 2006 to carry out its public service obligation (PSO) to distribute fuel to the whole nation. Presidential Decree No.71/2005 allows BPH Migas to appoint other companies to distribute fuels through an open bidding process. The tender award for subsidized fuel is based

on MOPS prices plus a premium on distribution costs and a small profit margin. Any company wishing to distribute subsidized fuel must also distribute fuel to remote areas. No companies beside Pertamina expressed interest in bidding on the PSO in 2005, and it is unclear whether foreign investors are interested in this segment of the market.

Pertamina has been girding itself for increased downstream sector competition. In 2005, the company changed its corporate logo, renewed its fuel station franchising procedures, and remodeled its existing fuel stations. In conjunction with partners, Pertamina plans to add another 500 fuel stations to its existing 2,500 fuel stations jointly. Pertamina also signed a \$6 billion MOU with Canada Accelion Energy to build a 28 million barrel per year synthetic diesel fuel factory in East Kalimantan. Under the MOU, Pertamina secured exclusive rights to the Euro-4 standard diesel fuel for 15 years starting 2008.

## **Lube Oil**

The downstream liberalization is also expected to change market trends and brings benefits to consumers in lube oils. Industry players estimate that more than 250 brands of imported and local lubricants currently exist in market. Pertamina remains the market leader with 55 percent although its share is declining from the 70 percent it enjoyed prior to liberalization. Pertamina operates 3 lube oil blending plants--in Jakarta, Cilacap and Surabaya--with a combined capacity of 573,000 liters. Other prominent players in market include Pennzoil, Evalube, BP, Shell, and Petronas. Motor

vehicles manufacturers, such as Toyota, Honda and Suzuki have also entered the motor lubricant market distributing their own brands.

Three years after the start of liberalization, the industry is plagued by excess supply and production capacity. In 2005, domestic production capacity reached 1.2 million KL per year, while demand is estimated at around 700,000 KL per year. Current market competition is intense and is expected only to increase after the government decided to reduce import tariffs for mineral based lubricants from 30% to 15% starting March 2006. The Indonesian Lube Association (Aspelindo), whose members' production capacity account for half of the national production, praised the decision. As more imported products enter the market, local producers are gradually losing market share. Lubricating oil imports increased more than six times in value during the past 2 years, rising from \$12.6 million in 2002 to \$76.8 million in 2004. In terms of volume, import tripled from 36.3 tons in 2002 to 103.2 tons in 2004 in volume.

## NATURAL GAS

### *Production*

Indonesia has almost 190 trillion cubic feet (TCF) of natural gas reserves (proven and probable), the thirteenth largest in the world. In 2004, the country produced 3.03 trillion cubic feet (TCF) of gas, ranking eighth in world gas production. Gas reserves are equivalent to almost four times Indonesia's oil reserves and can supply the country for 62 years at current production rates. According to the GOI, over 71 percent of natural gas reserves are located offshore, with the largest reserves found off Natuna Island (28.8 percent), East Kalimantan (25.2 percent), South Sumatra (13 percent) and Irian Jaya (12.8 percent). However, not all of these reserves are commercially viable, due to both the quality of the gas and the distance to market.

In 2004, Indonesia supplied 19 percent of the world's LNG, down from 26 percent in 2003. LNG accounts for 43 percent of the country's total natural gas production and is exported mainly to Japan, South Korea and Taiwan. Pipeline gas exports to Singapore began in 2001, reaching 129 BCF last year. A new Sumatra-Singapore pipeline was inaugurated in late 2003. Revenues from gas exports are substantial -- \$8.1 billion in 2004, about 11 percent of Indonesia's total export revenues. Domestically, gas demand comes primarily from fertilizer and petrochemical plants (34 percent) and the power industry (25 percent). Most of Indonesia's gas comes from East Kalimantan (47 TCF in reserves) and Sumatra (42 TCF in reserves), but there are large reserves in Papua (24 TCF) and other areas in the archipelago (75 TCF). Six major companies dominate the

industry and account for 90 percent of all production.

**Gross Natural Gas Production by Major Producers (MMSCF)**

Company	2002	2003	2004	% Change
Total	835,031	877,523	909,932	3.69
ExxonMobil	557,873	601,673	507,096	-15.72
Vico	438,982	392,625	329,511	-16.07
BP	272,113	245,296	182,209	-25.72
Pertamina	258,012	263,194	383,870	45.85
Unocal	149,317	144,844	124,199	-14.25
ConocoPhillips	233,411	297,922	319,317	7.18
Others	297,134	332,166	273,998	-17.51
<b>Total</b>	<b>3,041,873</b>	<b>3,155,243</b>	<b>3,030,132</b>	<b>-3.97</b>

Source: MIGAS

Roughly 55 percent of Indonesia's natural gas was marketed as LNG or liquefied petroleum gas (LPG) for export, 5.6 percent for electricity, 6.4 percent for fertilizer and 3.4 percent for city gas. Less than six percent was flared.

Indonesia still maintains its lead as the world's top LNG exporter; however its share in the global LNG markets is declining. Questions over supply reliability, low investment in the energy sector and uncertainty over domestic gas supply policy have contributed to Indonesia's declining market share. As a result, Oman, Qatar, Russia, and Australia are displacing Indonesian LNG on world markets. Domestically, the reduction of fuel subsidies in October 2005 eased fuel price distortions and made natural gas increasingly competitive as a fuel alternative. The GOI has indicated that gas will play a significant role in meeting the country's growing electric power demands.

As new LNG producers, Indonesia's a regional gas transmission network is developing, creating new gas markets and sources of revenue. Pipeline exports of natural gas have offset in part the greater competition in LNG markets. Pipeline

gas exports increased over 131 percent between 2003 and 2004, reaching 129 BCF, accounting for 8 percent of gas export volume. Indonesia began exporting 325 mmcf/d to Singapore via a subsea pipeline from West Natuna under a 22-year contract in 2001. Deliveries of natural gas to Malaysia's Duyong gas platform began in August 2002, under a 20-year contract for 250 million cubic feet per day (mmcf/d). Gas sale revenues will likely total \$14.2 billion over the life of both contracts. In August 2003, the South Sumatra-Singapore gas pipeline was completed; it will eventually supply 350 mmcf/d over a 20-year contract.

### *Lower Subsidies, New Laws Stimulate Domestic Demand*

The phasing out of domestic fuel subsidies should also stimulate gas demand. The government eliminated the subsidy for industry fuels in 2005 and plans to completely phase out premium fuel and gasoil subsidies by the end of 2006. In October 2005, state gas company PGN raised industrial gas prices to \$4.5 per mmbtu from \$3.9 per mmbtu. In January 2006 PGN raised prices again to \$5 per mmbtu. Even at this price, however, gas is still equivalent to only about 21 cents per liter of diesel oil compared to industrial diesel oil price of 56 cents/liter.

The Oil and Gas Law of 2001 introduced other changes that encourage domestic gas use. The new law permits direct "free market" negotiations of gas contracts between buyer and seller. Previously, production sharing contractors (PSCs) had to sell their gas to the state-owned petroleum company, Pertamina, which in turn sold the gas to the final buyer. Several PSCs report that the GOI's new direct negotiation

mechanism is working well and that the upstream authority BP Migas has generally stayed out of the negotiations, except in cases where either the buyer or seller requested its participation.

These provisions have raised domestic demand estimates and led to a number of new gas sales agreements. In December 2004, PSCs and gas buyers signed 18 gas and LPG agreements worth \$4.02 billion. During 2005, gas producers signed at least 17 agreements under the direct marketing mechanism that will supply gas to power, industry and petrochemical buyers. PGN projects conservatively that between now and 2015, Indonesia's domestic gas demand will increase by as much as 60 percent to 3.7 bcf/d.

### *Growing Power Needs Will Drive Gas Demand*

Power generation needs in Java and Bali will also drive growing domestic gas demand. Over the last several years, peak power demand grew by an average of six percent annually, while power capacity did not increase. Peak loads on the Java-Bali grid (which accounts for 80 percent of Indonesia's power demand) reached a record high of 14,821 MW in April 2005. As a result, the actual reserve margin has declined from 16 percent in 2001 to a razor-thin 6 percent in 2004 in (Note: desired reserve margins are normally between 25 and 30 percent).

PLN estimates that Indonesia needs over 23,000 MW in new capacity between 2005 and 2015 to prevent a long-term power crisis and restore its power reserve margin. Much of that new capacity will be fueled by gas and coal. PLN plans to raise natural gas use by the power sector from 17 percent in 2004 to 40 percent by

2015. By volume, this means an increase from 483 mmcf/d to 1.7 billion cubic feet per day (bcfd) in 2015. Presently PLN plans for three new power plants to come online in 2006, including the 740 MW gas turbine combined cycle (GTCC) Cilegon.

Increasing gas consumption in the energy mix makes strong economic sense, particularly with current crude oil price levels. About 2,700 MW of PLN's GTCC plants in Java are running on fuel oil because of declining gas supply and transmission problems in East Java. Petroleum-based fuels are expensive – about 6.2 cents per kilowatt hour (kWh), or 2.5 times more costly than gas. PLN spends about \$1.6 billion annually on oil-based fuels and estimates it can save up to \$1 billion per year by switching to gas. This however, requires a reliable gas infrastructure and security of gas supply. The switch, when coupled with the power utility's plans to raise electricity tariffs, is an important element in restoring the financial health of Indonesia's power industry. At the same time, it also has significant implications for Indonesia's export revenues derived from natural gas.

### *Impediments to Domestic Gas Growth*

In its Energy Blueprint, the Ministry of Energy and Mineral Resources plans to increase gas's proportion in the national energy mix to 30.6% by 2025 from the current 26.5%. However despite changes spurring gas demand, impediments limit domestic gas growth. The primary obstacles include a limited transmission and distribution system, financing limitations, and continued regulatory uncertainty. To address the inadequate state of gas transmission and distribution

networks, state gas utility PGN plans four new transmission projects to meet rising power sector demands for gas, as follows:

Projects	Length (km)	Capacity (mmscfd)	Completion
Grissik – W.Java	661	400	2007
Duri – Medan	521	250	2007
E.. Kalimantan - Central Java	1,219	1,100	2007/2010
E.Java-W.Java	680	350	2008/2010

Source: PGN

In addition to these projects, the GOI is proposing to build an LNG receiving terminal in West Java, to process and distribute gas from existing LNG plants (Bontang), as well as future plants in Papua (Tangguh) and South Sulawesi (Donggi). PGN is extending its distribution network and plans to ship compressed natural gas (CNG) over short to medium distances to remote areas. In addition, PGN is also investigating the feasibility of developing an integrated mini-LNG transportation system. The project will involve a mini-LNG receiving terminal located in Makassar, South Sulawesi, which will ship LNG from the Bontang LNG plant.

Many producers require explicit financial guarantees to sell gas domestically. The government's reluctance to provide such guarantees poses another obstacle to domestic gas growth, according to industry observers. In the power industry, a number of PSCs have requested that PLN provide standby letters of credit (SBLC) before investing in long-term gas supply agreements. According to industry analysts, PLN's credit availability with government-linked banks is limited. PLN has asked Bank Indonesia to exclude SBLCs from the legal lending limit to get around this obstacle. Some power analysts suggest that if PLN would permit higher returns on investment, companies

would be willing to assume more of this risk themselves.

Another constraint to gas development is the absence of a competitive gas pricing system. Under the historic system, prices for gas supply contracts are negotiated on a field-by-field basis between Pertamina and individual producers after the discovery of the gas field. Prices are fixed for a designated supply for the duration of the contract. Hence, the producer's price for gas is different for each PSC. Consumer prices are set on a cost-plus basis.

Currently, the negotiated gas price for power generation is far below the global average, in the range of \$2.45 to \$3 per MMBTU, compared to current global natural gas prices, which currently averages at around \$7 per mmbtu in early 2006. The World Bank and the Asian Development Bank (ADB) have urged Indonesia to adopt a pricing regime that creates greater incentives for companies to find and produce gas. A competitive domestic gas price would allow Indonesia to realize the full value and potential of its gas reserves. Without pricing changes, the domestic gas market provides few incentives for the exploration and development of gas fields that are too small to support LNG but more than adequate for domestic gas customers. A second major constraint is the absence of a predictable basis for forecasting the future value of gas, such as an indexed price formula. A final constraint has been the subsidy provided for alternative fuels.

### *Regulations Require Clarification*

The current regulatory environment sends mixed signals to investors which inhibits

the exploration and development of potential gas reserves. Despite domestic market obligation (DMO) provisions in the 2001 Oil and Gas law promoting gas use and the issuance of downstream Regulation 36, industry players still do not see a clear set of "rule of the game." Industry players say that they want clarification of the exact DMO quantity and whether the government will honor existing PSC contracts. In addition, doubts about contract sanctity, contract extensions, security, and taxation hurt the gas investment climate.

The end result of this uncertainty, and the consequent lack of exploration, is stark: According to the American Chamber of Commerce, gas blocks signed before 1971 still account for nearly 60 percent of Indonesia's commercial reserves. Blocks signed after 1990 account for only 14 percent of commercial reserves.

### *Expanding Future Production*

Indonesia is blessed with abundant reserves, although there is a geographical mismatch between location of gas reserves and energy needs. The Ministry of Energy and Mineral Resources estimates total gas demand between 2008-2018 will reach 22,200 BSCF, while supply is estimated at 13,231 BSCF. In the long-term, Java's additional gas supply will rely on the development of gas fields outside the island and completion of pipeline projects.

In addition to geographical constraints, other barriers to developing Indonesia's gas resources include the availability of financing, long project lead-time, and the lack of incentives to explore and exploit gas reserves.

Private sector participants identified the following key areas to increase development in the gas sector:

- Increase incentives to find and produce natural gas;
- Harmonize conflicting laws and eliminate the lengthy bureaucratic process for project approval;
- Clarify the gas DMO obligation;
- Promote private investment and ownership, through price stability, an equitable cost recovery mechanism;
- Address gas reliability concerns for those firms that invest in major gas facilities; and
- Government guarantees for gas payment by state owned enterprises.

### *A Trans-ASEAN Gas Pipeline?*

ASEAN's Energy ministers signed a memorandum of understanding on July 5, 2002 to push ahead with a \$7 billion natural gas pipeline project in a bid to alleviate concerns over supply shortages and to improve economic development. Minister of Energy and Mineral Resources Purnomo Yusgiantoro said the project's masterplan has been completed, and a council will soon be established to oversee the completion of the gas grid. Purnomo said more than 1,000 kilometers of the grid have already been constructed. ASEAN has identified the need for 4,500 kilometers of pipeline to complete the project, which might reach 6,000 kilometers, if the necessary new Indonesian domestic pipelines are included.

Purnomo said Indonesia will be a major player in the trans-ASEAN gas pipeline

project because of its enormous gas reserves. ASEAN members have previously said that a regional natural gas pipeline, as well as an electricity grid, is the most efficient way for ASEAN countries to prevent a future energy crisis. Indonesia has already developed several pipelines - from West Natuna to Singapore, West Natuna to Malaysia, and from South Sumatra to Singapore. It is also studying a possible pipeline from West Natuna to Thailand.

ASEAN members will develop regulations and frameworks for the cross-border supply, transportation and distribution of natural gas throughout the region. This will be supervised by a future ASEAN Gas Consultative Council. The key reason behind the gas grid is the need to reduce oil consumption and to provide backup energy sources for ASEAN members. ASEAN members hope to complete the gas grid by 2020.

### *Integrated Transmission System*

The South Sumatra pipeline is part of state gas company PGN's plan for an integrated gas transmission pipeline system, known as the Integrated Gas Transportation System (IGTS). The IGTS will eventually link the islands of Sumatra, Java, and Kalimantan via a 4,200-kilometer integrated gas pipeline. Reputed to be Southeast Asia's longest, the pipeline is being funded by the World Bank, ADB, other institutions, as well as PGN's own internal funding. PGN's network will flow 2.2 BCFD of natural gas after its scheduled completion in 2010.

**Project One - Grissik-Duri Pipeline**  
Phase One became operational in 1998. The 544-kilometer Grissik/Duri gas transmission pipeline transports 310

mmscfd of natural gas from the Grissik gas plant in ConocoPhillips Indonesia's Corridor PSC in South Sumatra. The project will supply Caltex's Duri Steam Flood Project in Central Sumatra for 15 years. ConocoPhillips is the producer, Caltex is the buyer, and PGN is the pipeline network owner.

The Grissik/Duri pipeline project is the first part of an 850-kilometer gas transmission pipeline to link South Sumatra to Singapore. Phase Two, which covers a 530-kilometer leg from Grissik to Singapore by way of Batam Island was completed in August 2003. Both the Grissik/Duri pipeline and the Grissik/Singapore pipeline have been included in the TransgasIndo pipeline consortium, jointly owned and operated by PGN and a joint venture among ConocoPhillips, Petronas, Talisman, and Singapore Petroleum.

**Project Two: South Sumatra–West Java Pipeline:** This 1,100-kilometer pipeline project will provide gas from ConocoPhillips and Pertamina fields in Sumatra to West Java power plants and industrial users. The pipeline will be funded by a combination of JBIC loans and proceeds from a PGN bond and IPO offerings. All parties hope to complete the project and have the first gas flowing in mid 2007.

Phase I of the project involves construction of a 450 kilometers pipeline from Pagardewa, South Sumatra to Cilegon and Serpong, West Java. Phase I will provide 250 mmcf of gas from Pertamina's Pagardewa gas field and ConocoPhillips' Grissik field to the Muara Tawar, Tanjung Priok and Muara Karang gas-fired power plants in Jakarta. Currently, Phase I completion date is scheduled for March 2007.

Phase II will connect Grissik to Pagardewa via a 270 km pipeline, a parallel line from Pagardewa to Labuhan Maringgai and a 190 km pipeline from Labuhan Maringgai to Muara Bekasi, and Rawamaju in West Java. Phase II will provide 400 mmcf (ramping up to 600 mmcf). PGN completed the procurement tender for the project in 2005 and aims for project completion in December 2007. This pipeline will supply natural gas from Pertamina's gas fields in Prabumulih to West Java industrial users. Pertamina and PGN have already agreed to provide 250 mmcf to West Java once the pipeline becomes operational.

**Project Three: East Kalimantan–Central Java:** The most ambitious of the five projects, the 1,200-kilometer East Kalimantan-Java pipeline would transport up to 1.1 bcf of gas through a combined offshore and onshore pipeline stretching from Kuala Badak, East Kalimantan to Semarang, Central Java. PGN would partially fund the project from a bond and IPO offering. At an estimated cost of \$1.2 billion, PGN will need substantial outside financing. PGN completed the feasibility study of the project and announced the tender in December 2005. Presently, PGN plans for project construction to begin in 2007 with first gas flowing in 2010.

**Project Four: East/West Java Pipeline:** This proposed project will involve construction of a 730 kilometers pipeline stretching from Gresik (East Java) to Cirebon and Muara Bekasi (West Java) along with a 300-kilometer East and Central Java distribution link. The pipeline will have the capacity to transport about 700 mmcf of natural gas and cost an estimated \$540 million. Currently PGN plans for project construction to start in 2008 with completion in 2010.

**Project Five: Duri – Dumai – Medan Pipeline:** An extension of the Grissik-Duri project, the 521-kilometer pipeline will transport gas from Duri, Riau to Medan, North Sumatra. The project will be the northern extension of an integrated Sumatra transmission network and supply gas to Asahan Power. PGN, Kondur Petroleum and Asahan Power signed MOU in October 2004 for the sale of 80-140 mmcf/d gas through the pipeline. PGN plans to finance the estimated \$574 million project via internal and external finance lending. Currently, PGN plans for project completion in 2007.

## LNG AND LPG

Through the end of 2004, Indonesia remained the world's leading exporter of LNG, with about 18.8 percent market share in the world and over 33 percent share in Asia and the Pacific. Currently, Indonesia has the capacity to produce a total of 31.6 million tons of LNG at the Arun plant in North Sumatra and the Badak (Bontang) plant in East Kalimantan. However, actual production in 2004 reached only 25.2 million MT, compared to a peak of 29.8 million MT in 1999. LNG is still one of the country's significant foreign exchange earners. LNG exports were valued at \$7.7 billion in 2004, a 17 percent increase compared with the \$6.6 billion earned in 2003. Japan remained Indonesia's top market for LNG, with 64 percent of the total, followed by South Korea (21 percent) and Taiwan (16 percent).

**World LNG Trade 2004**

Exporting	billion m3	percent
Indonesia	33,49	18,8
Malaysia	27,68	15,6
Algeria	25,75	14,5
Qatar	24,06	13,5
Trinidad & Tobago	13,99	7,9
Nigeria	12,59	7,1
Australia	12,17	6,8
Brunei	9,50	5,3
Oman	9,03	5,1
UAE	7,38	4,1
USA	1,68	0,9
Libya	0,63	0,4
<b>Total</b>	<b>177,95</b>	<b>100,0</b>

Source: BP statistical review

Indonesia signed its first long-term LNG contract in 1973, with the first shipment from Bontang in 1977 and the first shipment from Arun in 1978. Indonesia signed a number of additional LNG contracts between 1973 and 1995. Indonesia's LNG exports are under long-

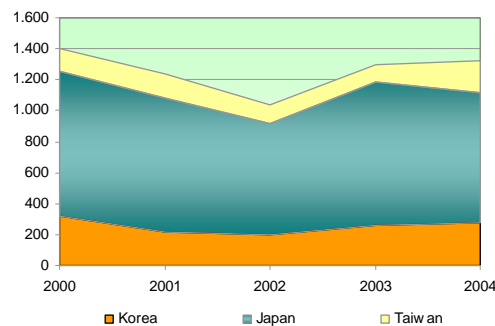
term contracts between Pertamina and its customers. Pertamina's role was reinforced in June 2004 when BP Migas appointed Pertamina as the sole sales agent for LNG sales to South Korea and Taiwan.

### New LNG Sales and Contract Extensions

LNG prices are on an upward trend. Average import prices for Japan, the world's largest LNG importer, increased by 9 percent to \$5.18/mmbtu in 2004 from the 2003 price of \$4.77 – almost double the benchmark negotiated prices for the Guangdong and Fujian LNG terminals in China, which were agreed in 2002 for prices between \$2.40-\$3.00/mmbtu.

Indonesia did not gain the full benefit from rising global prices, as LNG exports have declined due to falling production and a costly domestic fertilizer policy. In 2006, the government planned to cut delivery of a total of 61 cargoes, 52 from Bontang and 9 from Arun. The downward trend in LNG exports is expected to continue at least until 2007.

**LNG Export (in million mmbtu)**



Indonesia finalized two LNG contracts for its Tangguh project in 2004 to supply a

total of 1.3 million MT per year to South Korea's K Power and POSCO. Future LNG contracts are likely to be affected if the government continues with its plan to implement a 25 percent domestic gas obligation. In 2005, a negotiation with a Japanese buyer for a 2010-delivery date LNG contract extension was halted pending a government decision on its gas supply policy.

## *Arun*

The Arun LNG plant is operated by the PT Arun Natural Gas Liquefaction Company, of which 55 percent is owned by Pertamina, 30 percent by Mobil LNG Indonesia Inc. (an ExxonMobil affiliate) and 15 percent by Japan Indonesia LNG Company (JILCO). ExxonMobil/BP Migas is the sole supplier of natural gas to Arun, whose production capacity is now about 6.4 million MT per annum. Aceh gas production peaked in 1995 and gas deliveries to the six-train PT Arun LNG plant have started on a steady decline. ExxonMobil has extracted about 90 percent of the gas reserves in the field and committed reserves will run out entirely in 2018. The Arun facility produced 5.6 million MT in 2004, a decline from 6.6 million MT in 2003, and is expected to discontinue operations in 2014.

Due to the normal decline in the Arun fields there is insufficient gas to supply all domestic fertilizer plants. The government requested that ExxonMobil divert part of its gas production to fertilizer firm Pupuk Iskandar Muda (PIM). The result was a cut in Arun's delivery of export cargoes, which required the GOI to turn to the spot LNG market to meet its contractual

commitment to export buyers. Arun's export commitment was 75 cargoes in 2005. The government needed to acquire between eight and ten LNG cargoes from abroad in 2005 to maintain gas supply to fertilizer plants and still comply with its LNG contractual requirements.

The Arun area fields include: the original Arun field; the South Lhoksukon A and D gas fields, located 15 kilometers from Arun; the Pase A and B gas fields, located north of Arun; and the North Sumatra Offshore (NSO) gas field. The NSO field sits 100 km offshore from the Arun LNG plant.

## *Bontang*

The eight-train (A through H) Bontang facility in Badak, East Kalimantan is the largest LNG plant in the world and has 21.6 million MT of production capacity. The facility marked its 600<sup>th</sup> LNG shipment in November 2005.

The plant is operated by PT Badak NGL Company, which is 55-percent owned by Pertamina, 20-percent by Vico (which in turn is 50-percent owned by BP), 10-percent by TotalFinaElf, and 15-percent by Japan Indonesia LNG Company (JILCO). Gas is supplied from a production sharing arrangement among Pertamina, Chevron, Vico and Total. LNG production from the Bontang facility in 2004 declined to 19.6 million MT from 20.1 million MT in 2003.

In 1995, Pertamina signed two 20-year contracts for Bontang's "H" train with the Korea Gas Company and the Chinese Petroleum Corporation (Taiwan). Indonesia also advanced plans to build a ninth LNG train (train I) at the Bontang

facility. The 3 million MT per year train is scheduled for 2007 and will increase annual production by 25 million MT.

Bontang experienced a variety of challenges that constrained its ability to provide gas for both LNG production and feedstock for national fertilizer plants in East Kalimantan. The three gas suppliers (Total, Vico and Chevron) experienced problems with underproduction or inconsistent production due to maintenance, accidents or low field performance, all of which led to gas supply shortages to the plant. Despite shortfalls, the GOI diverted gas from Bontang's producers so that Pertamina could sell subsidized gas to a national fertilizer plant group and two small Japanese-owned plants. In 2005, the GOI renegotiated Bontang contracts, cutting 42 cargoes and leaving Bontang with 335 cargoes for export.

## *Tangguh*

BP is the major shareholder and operator of the Tangguh LNG project, which encompasses three PSCs in the Berau-Bintuni Bay region of western Papua. The Tangguh gas fields contain 14.4 trillion cubic feet TCF of proven and certified natural gas reserves. The LNG processing plant will produce seven million MT of LNG per year from two initial processing trains. Following final Indonesian government approval in March 2005, BP appointed a consortium, composed of Kellogg Brown Root (KBR), JGC Corporation, and PT Pertamina, as contractors to build the Tangguh project. BP Indonesia holds a 37.16% stake, with the balance shared by CNOOC (16.96%), Mitsubishi (16.30%), Nippon (12.23%), KG (10.00%), and LNG Japan (7.35%).

The Indonesian government and BP have secured four market commitments for 7.65 million MT of Tangguh's LNG. In July 2004, the project won a contract to supply 550,000 MT of LNG per year to South Korean steel maker POSCO for 20 years. In August 2004, the project also signed another supply contract of 800,000 MT of LNG per year to South Korea's K Power for a 20-year term starting 2006. In addition, in 2002 the project won the contract to supply 2.6 million MT of LNG per year to China's Fujian province for a 25-year term beginning in 2007. It also signed a HoA in 2003 with the U.S. firm Sempra Energy to supply 3.7 million MT of LNG for a 20-year term beginning in 2007. Until Tangguh becomes operational LNG will likely come from the Bontang LNG facility in East Kalimantan. Tangguh's developers are also considering a PLN-proposed LNG regasification facility in Java as another target for LNG sales.

## **Sulawesi - The Fourth LNG Center?**

Plans to develop another LNG project and gas processing facility in Central Sulawesi still linger despite a failure to discover sufficient reserves to justify greenlighting the development. Pertamina continues with its exploration plan in an attempt to find new gas and increase reserves to at least 3.5 TCF. Pertamina is also still mulling over building a 2 million MT per year LNG plant to use gas from the Matindok block, Central Sulawesi. Matindok consists of the Donggi gas block, which is operated by Pertamina, and the Senoro-Toili gas block, which is jointly operated by Pertamina and Medco's Exspan Nusantara.

Donggi's potential initially captured the interest of foreign companies, including Chevron, Royal Dutch/Shell, Marathon Oil, Mitsui, CNOOC, PetroChina and Petronas. However a few years without significant discoveries of gas combined with a lack of clarity for LNG management and regulation resulted in several companies deciding to withdraw their expressions of interest in the project.

In 2005, Australia's LNG Limited announced a plan to build a 850,000 MT per year mini-LNG plant in Luwuk, Central Sulawesi close to the Senoro-Toili fields. Its 50 percent subsidiary, PT LNG Energi Utama, obtained foreign capital investment approval from the Investment Coordinating Board. Its joint venture partner, Maleo Energi Utama is a private Indonesian company with operations in Sulawesi area. During the year, Medco signed an exclusive agreement with LNG Limited to conduct a feasibility study for an 800 BCF, 20 year gas supply plan to the proposed LNG plant from the Senoro fields. The estimated \$240 million project is planned for start up in 2007.

LPG extraction plant since 2000. It produced 216,000 MT in 1999. Indonesia exported around 57 percent of its LPG production in 2004, valued at \$366 million, mainly to Japan (86 percent).

## **Liquid Petroleum Gas**

Total liquid petroleum gas (LPG) production declined slightly in 2004 to 1.9 million MT from 2.0 million MT in 2003. LPG production at five of Pertamina's refineries declined 1.6 percent to 896,400 MT in 2004 from 911,200 MT in 2003. LPG production dropped due to problems at the Balikpapan refinery coupled with decreased utilization of the Cilacap refinery. The Arun LNG plant has reported no LPG production from its

## PETROCHEMICALS AND FERTILIZERS

### Introduction

The Indonesian petrochemical industry is progressing slowly towards recovery after the late-1990s economic crisis. The industry has relied in the past on an abundant natural resources base of crude oil and natural gas and a large and growing market of more than 240 million people. It has been constrained by a lack of integration between the petroleum and petrochemical industries. The Asian economic crisis damaged the petrochemical industry. Many of the remaining companies have heavy debts. Furthermore, Indonesia's anemic investment climate significantly limits interest in this sector. In 2005, petrochemical producers also faced high prices for basic materials as a result of soaring global crude prices.

The sector players have called for additional production capacity as growing demand and limited capacity have translated into increased imports of a number of key petrochemicals. They contend that the country is missing opportunities for job creation, foreign exchange revenues and a domestic buffer from international price changes. The industry got a boost as construction of the Tuban petrochemical project resumed in 2004. Once in operation, the complex will add to Indonesia's production capacity of paraxylenes, benzene and toluene.

In 2005, PT Petrokimia Nusantara Interindo (PENI), Indonesia's largest polyethylene producer was acquired by Malaysia's Titan Chemical Corp, an integrated petrochemical producer controlled by Malaysia's state-owned asset management company Permodalan Nasional Bhd. Japan's Marubeni Corporation also divested its shareholding in Chandra Asri Petrochemical Complex

(CAPC) to Commerzbank International Trust Singapore in 2005. CAPC was one of the companies restructured as a result of the financial crisis. CAPC owed \$463.6 million to the Indonesian Bank Restructuring Agency (IBRA) and \$731 million to private lenders, led by Marubeni Cooperation of Japan. In 2002, Marubeni agreed to convert \$147 million of its loans into a 24.59 percent equity share in CAPC. CAPC produces ethylene, propylene and polyethylene.

### Tariff reduction postponed

The GOI had previously committed to reduce tariffs of petrochemical products to comply with the Common Effective Preferential Tariff (CEPT) and ASEAN Free Trade Agreement (AFTA) schemes. In 1998, the government lowered import tariffs on petrochemical products (ethylene, propylene, styrene, polyethylene, polypropylene, polystyrene and polyvinyl chloride) and their derivatives from 25-35 percent down to 10-20 percent, effective January 1, 1999.

Ministry of Finance Decree No. 187/2000 in May 2000 went a step further by reducing import tariffs for 708 items, including upstream and midstream petrochemical products. This decree lowered import duties on selected petrochemical products (ethylene, propylene, styrene, polyethylene, polypropylene, and their derivatives) as of June 1, 2000. In 2003 the GOI decided to postpone further reductions, however, saying that current rates already were quite low at a range between 0-10 percent.

**Import Tariffs Selected Petrochemical Products  
(percent)**

Products	Pre 1- Jan-99	1-Jan- 99	1-Jun- 00
Ethylene	25	10	0
Propylene	25	10	5
Polyethylene	35	20	5
Polypropylene	35	20	5
Polystyrene	25	20	10
Polyvinyl Chloride	35	20	10

**Benzene & Paraxylene**

Benzene and paraxylene are currently produced by Pertamina's Cilacap refinery with a production capacity of 123,000 tons per year and 270,000 tons per year, respectively. Production rates of the two products are insufficient to meet domestic demand, which must be met through imports. Compared to 2003, imports of Benzene and paraxylene in 2004 increased by 1.2 percent and 38 percent respectively to 301,500 tons and 778,200 tons. The country will increase its paraxylene production by 500,000 tons once the Tuban Petrochemical's project comes online in 2006.

**Pure Terephthalic Acid (PTA)**

Since 1998, five PTA plants have been in operation -- Pertamina Plaju Aromatic, Bakrie Kazei PTA, Amoco Mitsui PTA Indonesia, Polysindo Eka Perkasa and Polyprima Karya Reksa, with a combined capacity of 1.98 million MT per year. PTA is produced from paraxylene and is used as raw material for polyester production in the textile industry. The growth of Indonesia's textile industry and the demand for polyester raw materials provided the stimulus for Pertamina and private investors to enter into PTA production. The bulk of production is

sold to Indonesian polyester makers and for export purposes. In 2004 PTA production increased to 1.68 million tons from 1.58 million tons in 2003. In the last 5 years, PTA export has more than doubled from 244,800 tons in 2000 to 512,572 tons in 2004.

Three Japanese partners led by Mitsubishi Kasei Corp. own Bakrie Kasei, the largest PTA producer in Indonesia with a total capacity of 640,000 tons per year. (PT Bakrie Brothers sold its 20 percent share in the company to its former partners in late 2000) Bakrie Kasei's first PTA production unit commenced operation in 1994 and the second unit in 1996. Amoco-Mitsui PTA Indonesia, a joint venture of Amoco Chemical (50 percent), now incorporated into BP, Mitsui Petrochemical Industries (45 percent) and Mitsui Company (5 percent), commissioned a PTA factory in Merak, West Java, in February 1998, with an annual production capacity of 420,000 MT per year. PT Polysindo Eka Perkasa of the Texmaco Group started a PTA plant operation in April 1997 with a capacity of 340,000 MT per year. PT Polyprima Karyareksa of the Napan group commenced commercial production in 1997 with an annual capacity of 350,000 tons. Pertamina Plaju Aromatics has an annual capacity of 225,000 tons.

**Polypropylene (PP)**

Three plants, with a combined production capacity of 605,000 tons per year, produce polypropylene, which is a basic feedstock for plastic packaging material made from propylene. The three are Pertamina's plant in Plaju, South Sumatra (annual production capacity of 45,000 tons), Tri Polyta Indonesia's plant in Cilegon, West Java (annual capacity of 360,000 tons)

and Polytama Propindo, Indramayu, West Java (annual capacity of 180,000 tons). PP's production increased 4 percent to 507,600 tons in 2004 or 84 percent of the country's total capacity.

### **Ethylene**

Chandra Asri Petrochemical Center (CAPC) is the only ethylene producer in Indonesia, with an annual capacity of 550,000 tons. Actual production in 2004 of 408,000 tons (74 percent utilization) is below the country's annual demand of over 900,000 tons. As a result more than half of Ethylene demand is supplied through imports. In 2004, Ethylene import rose to 475,000 tons from 405,000 tons in 2003.

### **Polyethylene (PE)**

Indonesia has a PE production capacity of 750,000 tons from its 2 producers, PT Petrokimia Nusantara Interindo (PENI) and CAPC. Indonesia's first polyethylene plant, PT PENI in Merak, West Java, came on stream in 1993, with an annual production capacity of 250,000 MT. In August 1998, the company completed its expansion project and increased its annual capacity to 450,000 MT. In 1999, CAPC increased the country's total polyethylene production capacity to 750,000 MT.

Total imports of PE were 267,800 tons in 2004, and will likely increase as a result of insufficient production and growing demand. Although national production increased slightly to 445,000 tons, plant utilization is only 59 percent. Current demand for propylene is around 620,000 tons and demand for raw materials of plastics in Indonesia is growing around 8 percent per year.

### **Methanol**

The country produced almost 788,000 tons of methanols in 2004, down 2 percent from 2003's production of 792,000 tons. Prior to 1998, methanol was produced only by Pertamina's Bunyu Refinery, now operated by PT Medco Methanol Bunyu. PT Kaltim Methanol Industry in Bontang, East Kalimantan, came on stream in 1998, and brought Indonesian methanol annual production capacity to 990,000 MT. PT Kaltim Methanol has plans to be a major methanol supplier to Asia. The first shipment of methanol to Japan was in March 1998. PT Kaltim Methanol is 85 percent owned by Japan's Sojitz Corporation (formerly Nissho Iwai Corporation). The plant has an annual production capacity of 660,000 MT.

A gas supply shortage also affected the upstream chemical industry. In June 2005, Medco's methanol plant in Kalimantan temporarily ceased operation as a result of the lack of gas from Medco's Tarakan PSC and Pertamina's Bunyu gas fields.

### **The Projects**

The long-suspended \$2.3 billion Trans Pacific Petrochemical Indonesia (TPPI) project in Tuban, East Java resumed construction in June 2004 following approvals from Japanese creditors and a GOI guarantee letter for the project in 2003. The loan facility provides Pertamina with \$400 million to fund the remainder of the project.

The Tuban Petrochemical Project is owned by Trans Pacific Petrochemical Indonesia (TPPI), a subsidiary of the Tirtamas Group which transferred majority ownership of the project to the state asset management company PPA

(formerly IBRA) in 1998 after the conglomerate failed to repay \$635 million in bank loans. At time of suspension, Tirtamas had already completed 65 percent of construction. PPA and Tirtamas set up a new company, Tuban Petro, to manage the restructuring process. Consequently through Tuban Petro, PPA and Pertamina hold 59.5 percent and 15 percent respectively in the project. Other stakeholders include Siam Cement of Thailand, Sojitz Corporation (formerly Nissho Iwai) and Itochu Corporation.

When completed, the plant will have an annual production capacity of 3.6 million tons per year. The complex will produce aromatic products consisting of paraxylene (500,000 tons), benzene (200,000 tons), and toluene (150,000 tons). It will greatly reduce imports of these products and carry a potential savings of \$1 billion per year to country. In addition to the above products, the complex will also produce 1 million tons of naphtha and 1.6 million tons of kerosene and diesel. Presently the project is scheduled to come online in 2006.

## **Fertilizers**

Installed production capacity at Indonesia's 12 fertilizer plants operated by six companies (five state-owned companies and one ASEAN joint venture) is 8.7 million MT of urea and 5.7 million MT of ammonia per year. Fertilizer production in 2003 and 2004 remained stagnant at 5.7 million tons (54 percent total capacity) after falling from 6 million tons in 2002.

Starting in 2004, fertilizer production was affected by the suspension of production at the two large fertilizer plants in Aceh

(ASEAN Aceh Fertilizer or AAF and Pupuk Iskandar Muda or PIM I). Designated a strategic commodity, the government directs state-owned fertilizer companies to meet domestic demand first with the remainder be exported. Urea exports fell dramatically to 465,400 tons in 2004 from 946,800 tons in the previous year with main export destinations being Thailand, Australia and Malaysia.

Domestic demand for fertilizer continues to increase at average of 3.0 percent per year. With insufficient production to meet domestic demand, Indonesia imported fertilizer amounting to 2.15 million tons valued at \$386 million in 2004, an increase of almost 47 percent from 2003. The largest Indonesian fertilizer import is potassium chloride, which is used as an additive to enhance the performance of other fertilizers. It is mainly used by soybeans, tobacco and tea producers.

The fertilizer industry uses about 194 BSCF of natural gas per year. It purchases gas in U.S. dollars at a government subsidized price ranging from \$1 to \$3 per mmbtu. Despite Indonesia's abundant supply of natural gas and strong domestic and foreign demand for fertilizer, the industry is struggling for survival. Trouble in obtaining adequate gas supplies for fertilizer plants in Indonesia has become more severe in the past few years, leading ultimately to the shuttering of the production line at AAF in 2004 and its liquidation in August 2005. AAF began production in 1983 and had a capacity of 1.6 million tons per year.

Pupuk Iskandar Muda (PIM) also suspended its operation in September 2005. During 2004 PIM operated at only 28.7 percent of its total capacity and

produced just 336,300 tons of fertilizers. The government plans to resume production at the plant in 2006 by diverting ExxonMobil's Arun gas to the facility. In turn, the government will replace ExxonMobil's gas deficit from Pupuk Kaltim's gas supply from East Kalimantan. Industry experts consider the GOI's plan to be detrimental to the robust development of the natural gas industry. With the halt in production from these two producers, current production comes from PT Pusri, PT Pupuk Kaltim, PT Pupuk Kujang and PT Petrokimia Gresik.

# APPENDIX 1: KEY ECONOMIC INDICATORS

## APPENDIX 1.1: DOMESTIC ECONOMY, TRADE AND INVESTMENT

	2001	2002	2003	2004
Population (Mln)	208	211	213	216
GDP at current prices (Rp Trillion)	1,684.30	1,897.80	2,086.80	2,303.03
Real GDP growth (%)	3.4	4.3	4.5	5.1
Avg. Exchange Rate (Rp/\$)	10,265	9,220	8,520	8,939
GDP (\$Bln)	141	174.7	209.7	257.64
GDP per capita (\$)	679	829	984.5	1,181.6
Gov't Spending (as % of GDP)	20.2	20.4	18.1	18.6
Consumer Price Inflation (%)	12.6	10	6	6.4
Foreign and Domestic Debts (\$Bln)	135.6	147.6	138.2	134.9
- Foreign Debts	71.4	74.7	81.7	77.8
- Domestic Debts	63.4	72.9	56.6	57.1
Debt to GDP Ratio (%)	93	72	58.3	53.9
US Economic Aid (\$Mln)	n/a	n/a	n/a	n/a
Unemployment (%)	9	10	9.5	9.7
<b>International Trade (US\$Million)</b>				
<b>Exports – Total</b>	<b>57,365.0</b>	<b>59,165.4</b>	<b>64,108.9</b>	<b>72,164.4</b>
- Growth Rate of Total Exports (%)	-12.3	3.1	6.8	12.6
- Oil and Gas	12,560.0	12,858.2	15,233.5	17,684.0
- Oil and Gas as % to total	21.9	21.7	23.8	24.5
- Non-Oil and Gas	44,805.0	44,896.0	47,380.4	54,482.0
- Major Export Markets				
Japan	13,010.0	12,045.0	13,603.5	15,962.1
USA	7,749.0	7,559.0	7,373.7	8,767.1
Singapore	5,364.0	5,349.0	5,349.1	5,997.9
China	2,200.7	2,902.9	3,802.5	4,604.7
European Union	7,745.0	7,898.0	7,956.8	8,969.4
Growth Rate of Imports from US (%)	-9.4	-1.3	-2.5	18.9
<b>Imports – Total</b>	<b>34,668.0</b>	<b>35,652.0</b>	<b>39,546.9</b>	<b>50,615.0</b>
- Growth Rate of Total Imports (%)	2.6	2.8	10.9	28.0
- Major Country of Origin				
Japan	4,690.0	4,409.0	4,228.3	6,081.6
USA	3,207.0	2,640.0	2,694.8	3,225.9
Singapore	3,147.0	4,100.0	4,155.1	6,082.8
China	1,842.7	2,427.4	2,957.5	4,101.3
European Union	4,047.0	3,576.0	3,554.2	5,359.0
Growth Rate of Imports from US (%)	-5.9	-18.8	2.1	19.7
<b>Trade Balance</b>	<b>22,697.0</b>	<b>23,513.4</b>	<b>24,562.0</b>	<b>21,549.4</b>
<b>Foreign Investment (US\$Mln) (a)</b>				
- Japan	772	510	1,252.2	1,684.7
- UK	723	720	966.1	1,317.1
- Singapore	1,141.00	3,328.00	518.9	604.3
- Hong Kong	40	1,712.00	169.5	20.2
- Taiwan	72	38	136.7	68.6
- USA	73	468	173.5	133.2
- Australia	779	232	125.4	481.2
- S. Korea	369	370	122.1	402.7
- Malaysia	2,240.00	72	155.3	481.5

## APPENDIX 1: KEY ECONOMIC INDICATORS

	2001	2002	2003	2004
- Germany	43	36	170.8	30.1
- Netherlands	89	244	99.4	258.7
- China	6,055.00	33	247.6	21.7
- Others	2,649.00	1,981.00	9,069.70	4,830.30
<b>TOTAL INVESTMENT APPROVALS</b>	<b>15,045.00</b>	<b>9,744.00</b>	<b>13,207.20</b>	<b>10,334.30</b>
<b>Oil and Gas Investment (b)</b>	<b>4,202.00</b>	<b>3,418.00</b>	<b>5,305.00</b>	<b>5,558.00</b>

Sources: Migas, Bank Indonesia, National Statistical Bureau, State Budget

(a) Figures are investment approval and do not include investment in the oil and gas sector

(b) Petroleum company expenditures

### APPENDIX 1.2: GOVERNMENT BUDGET (Rp TRILLION)

	2001 Budget	2002 Budget	2003 Budget	2004 Budget	2005 Budget	2005 Budget-R(a)
Total Revenues	300.6	301.9	341.1	403.7	380.4	491.6
Tax revenues	185.5	219.3	248.5	279.2	297.8	331.8
Non-tax revenues	100.7	82.2	94	124.5	82.5	159.8
Natural resources (b)	85.7	63.2	67.1	92.4	50.9	121.8
Oil and gas	66.6	58.5	61.6	87.7	47.1	116.4
Non-oil and gas	9.6	4.6	5.5	4.8	3.8	5.4
Others (c)	15.0	19.0	32	32.1	31.6	38.0
Expenditures	340.3	332.5	374.8	430.0	397.8	511.9
Central Government	264.2	242.1	254.1	300.0	266.2	364.9
Routine	218.7	195	189.1	228.1	206.0	286.0
Subsidies (d)	77.4	40	43.9	69.9	31.2	96.6
Development (e)	45.5	47.1	65.0	72.0	60.2	78.9
Transfer to Region	76.1	90.4	120.7	130.0	131.5	147.0
<b>Balance</b>	<b>-39.7</b>	<b>-30.6</b>	<b>-33.7</b>	<b>-26.3</b>	<b>-17.4</b>	<b>-20.3</b>

Source: Ministry of Finance

Note: 2001 – 2004 figures are from revised budgets each year

(a) 2005 revised budget

(b) Revenues originated from profit sharing, land rent and royalties

(c) Includes SOE's profit transfers and grants

(d) Includes fuel subsidy

(e) Beginning in 2005, includes capital and social assistance expenditures

## APPENDIX 1: KEY ECONOMIC INDICATORS

### APPENDIX 1.3: BALANCE OF PAYMENTS (US\$ BILLION)

	2000	2001	2002	2003	2004
Exports (fob)	65.4	57.4	59.2	64.1	72.2
- Oil/Gas	15.1	12.6	12.9	15.2	17.7
- Non-Oil\Gas	50.3	44.8	46.3	48.9	54.5
Imports (fob)	-40.4	-34.7	-35.7	-39.5	-50.6
- Oil/Gas	-6.0	-15.8	-6.7	-7.8	-11.2
- Non Oil/Gas	-34.4	-28.9	-29.0	-31.7	-39.5
Services	-9.8	-9.9	-9.9	-11.7	-10.9
- Transportation	-4.3	-4.2	-4.1	-4.0	-3.2
- Travel	1.8	1.9	2.0	1.0	1.3
- Other	-7.2	-7.6	-7.8	-8.7	-8.9
Income (net)	-8.4	-6.9	-7	-6.1	-8.8
- Direct Investment	-3.6	-3.2	-3.2	-2.7	-5.4
- Portfolio Investment	1.1	1.2	0.8	0.7	0.7
- Other Investment 1)	-6	-5	-4.6	-4.1	-4.0
Current Transfers	1.2	1.0	1.3	1.5	1.1
<b>CURRENT ACCOUNT</b>	<b>8.0</b>	<b>6.9</b>	<b>7.8</b>	<b>8.1</b>	<b>3.1</b>

Source: Bank Indonesia

### APPENDIX 1.4: SELECTED FOREIGN EXCHANGE RATE AGAINST RUPIAH

End of period	US\$	Yen	Aus\$	Sing\$	Can\$	UK	
						Pound	Euro
1996	2,383	21	3,310	1,705	1,745	4,037	-
1997	4,650	36	4,923	2,773	3,247	7,709	-
1998	8,025	70	4,923	4,836	5,182	13,336	-
1999	7,100	70	4,622	4,260	4,886	11,495	7,148
2000	5,995	84	5,319	5,539	6,389	14,300	8,912
2001	10,400	79	5,309	5,620	6,544	15,080	9,188
2002	8,940	75	5,065	6,454	5,672	14,335	9,369
2003	8,465	79	6,347	4,977	6,541	15,076	10,643
2004	9,290	95	7,242	5,686	7,717	17,889	12,652
2005							
January	9,165	93	7,093	5,591	7,377	17,273	11,042
February	9,260	93	7,310	5,687	7,494	17,813	11,266
March	9,480	93	7,313	5,749	7,790	17,815	11,302
April	9,570	95	7,442	5,811	7,644	18,274	11,582
May	9,495	92	7,175	5,710	7,532	17,231	11,951
June	9,713	93	7,416	5,764	7,898	17,544	12,652
July	9,819	92	7,461	5,910	7,979	17,231	11,937
August	10,240	97	7,664	6,080	8,588	18,307	12,297
September	10,310	96	7,858	6,105	8,800	18,166	12,249
October	10,090	92	7,567	5,967	8,578	17,913	12,362
November	10,035	88	7,414	5,925	8,583	17,243	11,768
December	9,830	88	7,207	5,907	8,448	16,947	11,733

Source: Bank Indonesia (middle exchange rate at the end of period)

## APPENDIX 2: OIL AND GAS CONTRIBUTION TO THE ECONOMY

### APPENDIX 2.1: OIL AND GAS CONTRIBUTION TO DOMESTIC REVENUES VS FUEL SUBSIDY EXPENDITURE (Rp TRILLION)

FY	Domestic Revenues	Oil/Gas Revenues (a)	Oil /Gas as %total Revenue	Fuel Subsidy	Fuel Subsidy to Expenditure (%)
1992/93	48.9	15.3	31.4	0.7	1.4
1993/94	56.1	12.5	22.3	1.3	2.3
1994/95	66.4	13.5	20.4	0.7	1
1995/96	71.6	16.1	22	-	-
1996/97	78.2	20.1	25.7	1.4	1.8
1997/98	108.2	35.4	32.7	9.8	9.1
1998/99	157.5	41.4	26.3	27.2	18.2
1999/00	187.8	58.5	31.2	35.8	17.8
2000 (b)	204.9	85.3	41.6	51.1	25.0
2001	286.8	89.7	31.3	68.4	23.8
2002	301.9	74.2	24.6	30.3	10.0
2003	340.7	80.4	23.6	30	8.0
2004 (c)	403.0	87.6	21.7	59.2	25.9
2005 (d)	379.6	47.1	12.4	19.0	5.0
2005 R (e)	484.5	116.4	24.0	76.5	23.7

Source: Ministry of Finance

(a) Non-tax revenue

(b) April – December

(c) Provisional budget turnout

(d) Budget

(e) Budget Revision

### APPENDIX 2.2: OIL AND GAS CONTRIBUTION TO FOREIGN TRADE (US\$ MILLION)

Year	Exports (FOB)			Imports (CIF)		
	Oil & Gas	Total	Oil & Gas (%)	Oil & Gas	Total	Oil & Gas (%)
1995	10,464	45,418	23	2,911	40,629	7.2
1996	11,722	49,815	23.5	3,596	42,929	8.4
1997	11,623	53,444	21.8	3,924	41,680	9.4
1998	7,872	48,848	16.1	2,654	27,337	9.7
1999	9,792	48,665	20.1	3,681	24,003	15.3
2000	14,367	62,124	23.1	6,020	33,515	18.0
2001	12,636	56,321	22.4	5,472	30,962	17.7
2002	12,858	59,165	21.7	7,241	38,310	18.9
2003	15,234	64,109	23.8	8,457	42,196	20.0
2004	17,682	72,164	24.5	12,136	55,009	22.1

Source : BPS and BI

Note : Import figures are CIF vs FOB in Appendix 1

## APPENDIX 3: SUMMARY OF OIL AND GAS STATISTICS

### APPENDIX 3: STATISTICS SUMMARY

	2000	2001	2002	2003	2004
<b>RESERVES</b>					
<b>Oil ( Million Barrels)</b>	<b>9,612.90</b>	<b>9,753.40</b>	<b>9,746.40</b>	<b>9,094.20</b>	<b>8,613.00</b>
Proven	5,122.70	5,094.60	4,721.80	4,436.60	4,300.70
Potential	4,490.10	5,521.55	5,024.60	4,657.60	4,312.30
<b>Gas (TSCF)</b>	<b>170.3</b>	<b>168.2</b>	<b>176.6</b>	<b>168.16</b>	<b>188.34</b>
Proven	94.7	91.9	90.3	92.1	97.77
Potential	75.6	75.5	86.3	76.06	90.57
<b>EXPLORATION</b>					
New contracts signed	5	10	1	15	17
Contracts extended	2	2	-	-	1
Totally relinquished contracts	10	8	-	-	-
Seismic (1000 Km)	165,932	284,300	n/a	12,086	15,041
No. of exploration wells drilled	82	80	73	33	36
Oil and gas discoveries	34	17	12	14	22
No. exploration rigs	32	24	29	20	38
Total development wells	949	854	736	766	447
No. of development rigs	93	59	65	n.a	118
Oil firms expenditures (US\$Mln)	3,605	4,202	3,418	5,305	5,558
Exploration & development	758	1,158	1,076	1,409	1,744
Production	2,433	2,615	1,676	3,458	3,204
Administrative	413	429	666	438	610
<b>PRODUCTION</b>					
Crude&condensate (1,000 Barrels)	517,547	489,306	456,944	418,582	401,110
Average (1,000 B/D)	1,414	1,344	1,252	1,147	1,094
Crude oil	1,272	1,214	1,120	1,013	966
Condensate	142	130	132	134	129
Natural gas (BCF)	2,901	28,071	3,036	3,155	3,030
LPG (1000 MT)	2,088	2,188	2,099	2,024	1,947
LNG (1000 MT)	26,990	23,883	26,215	27,392	25,238
<b>EXPORTS</b>					
<b>Export Volume (1,000 Barrels)</b>					
Crude oil	195,266	216,474	185,925	158,045	149,042
Condensate	28,234	25,138	31,349	31,040	30,324
Refined products	67,085	55,118	55,490	56,267	64,501
LPG (1,000 MT)	1,306	1,484	1,268	1,085	1,034
LNG (MMBTU)	1,400,024	1,238,785	1,035,543	1,369,603	1,322,415
<b>Export Values (US\$Million)</b>	<b>15,155</b>	<b>12,663</b>	<b>11,996</b>	<b>13,941</b>	<b>16,264</b>
Crude& Condensate	6,282	5,650	4,929	5,402	6,458
Refined products	1,676	1,249	1,060	1,623	1,750
LNG	6,802	5,375	5,595	6,586	7,722
LPG	394	389	412	330	334
<b>IMPORTS</b>					
<b>Import Volume (1,000 Barrels)</b>	<b>170,004</b>	<b>202,500</b>	<b>230,076</b>	<b>241,619</b>	<b>273,309</b>
Crude oil	79,978	112,878	124,148	135,238	148,490
Oil products	90,026	89,622	106,928	106,381	124,819
<b>Import Values (US\$Million)</b>	<b>5,290</b>	<b>5,430</b>	<b>6,526</b>	<b>7,480</b>	<b>11,646</b>
Crude oil	2,304	2,852	3,217	4,085	5,792

## APPENDIX 3: SUMMARY OF OIL AND GAS STATISTICS

	2000	2001	2002	2003	2004
Oil products	2,986	2,577	3,309	3,395	5,854
<b>FUEL CONSUMPTION</b>					
<b>Fuel Consumption by Sector (Million Liters)</b>	<b>54,825</b>	<b>55,891</b>	<b>57,797</b>	<b>59,865</b>	<b>64,651</b>
Transport	25,548	26,248	27,329	28,596	32,572
Industry	11,862	12,384	12,338	12,254	13,495
Household	12,407	12,242	11,625	12,318	11,787
Electricity	5,008	5,017	6,505	6,696	6,797
<b>REFINING</b>					
<b>Refinery Input (1000 Barrels)</b>	<b>373,167</b>	<b>375,668</b>	<b>365,861</b>	<b>370,578</b>	<b>375,560</b>
Domestic crude/condensate	285,290	256,300	234,119	223,558	216,682
Imported crude (a)	74,941	105,096	123,852	135,033	147,028
Feedstocks/others	12,936	431	7,890	11,987	11,850
<b>Refinery Output (1000 Barrels)</b>	<b>373,167</b>	<b>375,668</b>	<b>365,861</b>	<b>370,548</b>	<b>375,560</b>
<b>Subtotal Fuels</b>	<b>276,697</b>	<b>283,389</b>	<b>278,658</b>	<b>278,203</b>	<b>283,153</b>
Automotive diesel oil (ADO)	95,903	95,928	93,985	94,509	98,645
Kerosene	57,897	57,992	56,301	58,556	56,820
Mogas	70,645	73,150	73,287	72,690	75,277
Fuel oil	32,482	35,087	37,302	33,877	30,962
Industrial diesel oil (IDO)	8,140	9,109	8,431	7,795	10,202
Avtur	8,441	8,620	9,319	72	11,215
Avgas	6	51	33	10,704	32
JP4/JP5	-	-	-	-	-
<b>Subtotal Non-Fuel</b>	<b>96,300</b>	<b>92,515</b>	<b>86,310</b>	<b>92,345</b>	<b>92,407</b>
LSWR	38,618	34,211	28,363	32,185	29,189
Naptha	16,647	20,180	16,230	18,154	18,737
LOMC	1,666	143	-	-	-
LPG	8,378	8,160	8,191	8,698	9,380
Asphalt	2,730	2,341	2,399	3,267	3,290
Lub base oil	2,676	2,712	2,252	2,867	2,823
Cokes	2,188	2,573	1,773	2,637	2,410
Others	3,083	3,244	2,659	2,716	3,584
Balance (b)	20,314	18,951	24,443	21,820	22,994

Sources: MIGAS – Exploration, Trade and Refining, Production and Revenue  
Bank Indonesia – Economy and Monetary Statistics

Note : (a) Figures differ slightly from crude import figures above because some imported crude is stored before processing.

(b) Intermediate, Fuel and Gas Refining, Losses

## APPENDIX 4: OIL RESOURCES AND RESERVES

### APPENDIX 4.1: DISTRIBUTION OF HYDROCARBON RESERVES

Location	1-Jan-03			1-Jan-04		
	Proven	Potential	Total	Proven	Potential	Total
<b>Oil and Condensate (million barrels)</b>	<b>4,727.9</b>	<b>4,092.5</b>	<b>8,820.4</b>	<b>4,300.7</b>	<b>4,312.3</b>	<b>8,613.0</b>
Aceh & North Sumatera	n/a	n/a	328.6	n/a	n/a	253.2
Natuna	n/a	n/a	406.4	n/a	n/a	377.2
Central Sumatera	n/a	n/a	4104.7	n/a	n/a	4564.1
South Sumatera	n/a	n/a	1195	n/a	n/a	883.1
West Java	n/a	n/a	1132.3	n/a	n/a	741.6
E/C. Java	n/a	n/a	254.0	n/a	n/a	583.5
E/S. Kalimantan	n/a	n/a	1066.4	n/a	n/a	920.1
South Sulawesi	n/a	n/a	21.7	n/a	n/a	81.0
Irian Jaya/Maluku	n/a	n/a	311.3	n/a	n/a	209.2
<b>Natural Gas (trillion SCF)</b>	<b>91.2</b>	<b>87.0</b>	<b>178.1</b>	<b>97.8</b>	<b>90.6</b>	<b>188.3</b>
Aceh & North Sumatera	n/a	n/a	9.7	n/a	n/a	8.6
Natuna	n/a	n/a	54.3	n/a	n/a	54.2
Central Sumatera	n/a	n/a	1.1	n/a	n/a	8.2
South Sumatera	n/a	n/a	33.4	n/a	n/a	24.5
West Java	n/a	n/a	6.8	n/a	n/a	6.0
E/C. Java	n/a	n/a	5.4	n/a	n/a	10.3
E/S. Kalimantan	n/a	n/a	44.1	n/a	n/a	47.4
South Sulawesi	n/a	n/a	4.1	n/a	n/a	4.2
Irian Jaya	n/a	n/a	19.3	n/a	n/a	24.1

Source: Migas-Exploration

### APPENDIX 4. 2: OIL AND GAS RESERVES AND RESOURCES

Reserves and Resources	1-Jan-03		1-Jan-04	
	Oil (Bln Brl)	Gas (TSCF)	Oil (Bln Brl)	Gas (TSCF)
<b>Reserves</b>	<b>8.82</b>	<b>178.1</b>	<b>8.61</b>	<b>188.3</b>
Onshore	n/a	n/a	n/a	n/a
Offshore	n/a	n/a	n/a	n/a
<b>Resources</b>	<b>137.7</b>	<b>295.3</b>	<b>137.7</b>	<b>295.3</b>
Onshore	n/a	n/a	n/a	n/a
Offshore	n/a	n/a	n/a	n/a

Source: Migas-Exploration

Note: Resources are an estimate of unproven potential natural resources based on interpretation from seismic, geological and geophysical surveys.

## APPENDIX 5: EXPLORATION

### APPENDIX 5.1: SEISMIC ACTIVITY (KMS)

Year	Pertamina	PSC Onshore	PSC Offshore	Total
1995	1,795.0	6,086.0	54,667.0	63,547.0
1996	292.0	10,638.0	50,408.0	61,338.0
1997	1,064.0	96,951.0	371,183.0	469,198.0
1998	1,625.0	26,270.0	279,877.0	307,772.0
1999	2,023.0	27,334.0	145,901.0	175,258.0
2000	656.0	13,184.0	152,086.0	165,926.0
2001	3,613.3	3,769.3	7,502.2	14,884.7
2002	-	11,070.0	8,867.0	19,937.0
2003	1,923.0	10,518.0	1,568.7	14,009.7
2004	5,185.4	3,511.2	6,344.0	15,040.6

Source: Migas-Exploration

Note: Data include 2D, 3D and 4D seismic activity

### APPENDIX 5.2: EXPLORATION DRILLING

Year	No. of Wells Completed	Discovery Wells		Success Ratio of Wells (%)	Exploration Rigs
		Oil	Gas		
1995	80	16	16	53.3	43
1996	100	18	11	43.3	45
1997	100	14	14	40.6	40
1998	145	16	5	30	60
1999	89	10	9	41.3	46
2000	82	19	15	50	32
2001	80	11	6	36.2	24
2002	88	12	17	33	29
2003	33	8	6	42.4	20
2004	36	10	12	61.1	38

Source: Migas-Exploration

## APPENDIX 6: PRODUCTION

### APPENDIX 6.1: WORLD OIL PRODUCTION (1000 B/D)

	2000	2001	2002	2003	2004	% Share (2004)
<b>TOTAL WORLD</b>	<b>74,574</b>	<b>74,350</b>	<b>74,065</b>	<b>76,777</b>	<b>80,260</b>	<b>100.0</b>
<b>OPEC</b>	<b>30,974</b>	<b>30,105</b>	<b>28,503</b>	<b>30,384</b>	<b>32,927</b>	<b>41.0</b>
Saudi Arabia	9,297	8,992	8,664	9,817	10,584	13.2
Iran	3,766	3,680	3,420	3,852	4,081	5.1
Venezuela	3,321	3,210	3,218	2,987	2,980	3.7
UAE	2,492	2,429	2,159	2,520	2,667	3.3
Kuwait	2,105	2,069	1,871	2,238	2,424	3.0
Nigeria	2,104	2,199	2,013	2,185	2,508	3.1
Iraq	2,583	2,371	2,030	1,344	2,027	2.5
Algeria	1,579	1,562	1,681	1,857	1,933	2.4
Libya	1,475	1,425	1,376	1,488	1,607	2.0
Indonesia	1,456	1,389	1,288	1,179	1,126	1.4
Qatar	796	779	783	917	990	1.2
<b>Non-OPEC</b>	<b>43,600</b>	<b>44,245</b>	<b>45,562</b>	<b>46,393</b>	<b>47,333</b>	<b>59.0</b>
Russia	6,536	7,056	7,698	8,543	9,285	11.6
USA	7,733	7,670	7,626	7,454	7,241	9.0
Mexico	3,450	3,560	3,585	3,789	3,824	4.8
China	3,252	3,306	3,346	3,396	3,490	4.3
Norway	3,346	3,418	3,329	3,260	3,188	4.0
Canada	2,721	2,712	2,838	2,986	3,085	3.8
UK	2,657	2,476	2,463	2,245	2,029	2.5
Brazil	1,268	1,337	1,499	1,552	1,542	1.9
Others	12,637	12,710	13,178	13,168	13,649	17.0

Source: OPEC and BP Statistical Review 2004

## APPENDIX 6: PRODUCTION

### APPENDIX 6.2: INDONESIAN CRUDE AND CONDENSATE PRODUCTION BY COMPANY (1000 B/D)

Company	2000	2001	2002	2003	2004
Amerada Hess/Energy Eq.	0.2	0.1	0.1	-	-
Babat Kukui Energy	-	0.1	-	0	0.0
Binatek Kruh	-	-	-	0.1	0.1
Binawahana Petrindo	1.1	1.5	1.8	1.9	2.2
BP	62.6	50.8	46.5	38.8	31.3
Bumi Siak Pusako	-	-	11.2	32	30.0
Caltex	705.9	643.2	577.3	506.9	507.0
CNOOC	126.6	125.7	114.9	94.9	81.5
ConocoPhilips	87.9	83.2	69.3	51.4	44.1
Exspan	67.2	77	85.5	66.4	54.0
ExxonMobil	28.2	13.4	25.3	25.4	21.2
Golden Spike/Kodel	0.6	0.4	0.4	0.4	0.3
Haliburton/Citra PNP	2	2.8	2.2	1.7	1.5
Haurgeulis	-	-	-	-	0.0
Indo Pacific (GFB) Resources	-	0.8	0.3	0.5	0.2
Intermega	0.7	0.7	0.6	0.5	0.5
Costa/Japex	0.6	0.4	0.3	0.2	0.2
Kalrez Pet./Santos	0.6	0.5	0.5	0.5	0.5
Kodeco	4.2	6.5	13.5	14.4	14.3
Kondur Pet.	14.9	13.8	11.1	10.6	9.9
Kufpec Indonesia	-	-	-	3.9	2.5
Lirik Petroleum	1.5	1.6	1.8	1.6	1.5
Matriks	-	-	1.1	-	-
Mitrasani Gelam	-	-	-	-	0.2
Patrindo Persada Maju	0.2	3.9	2.5	0.2	0.1
Pearl Oil (Jambi EOR)	-	-	-	4.2	4.0
Perkasa Equatorial	3.1	5.3	5.5	6.3	5.4
Perkasa M Senami	-	-	-	-	0.1
Pertamina *	46.3	45.1	40.1	43.6	48.4
Petrochina	37.6	45.8	42.4	40.5	36.6
Petronusa Bumibakti	-	0.1	-	0	0.0
Petroselat	-	-	-	-	0.0
PilonaTanjung Lontar	1.5	1.2	1	1.5	1.0
Premier Oil/Amoseas	4.4	4.5	3.8	3.6	3.1
Radian Ramok	-	-	0.1	0.1	0.1
Ranya Energi Pamanukan	-	-	-	-	0.0
Retko Prima/Western Nusantara	0.3	0.4	0.5	0.7	0.7
Sea Union Energy/ Husky	6.2	6	5.6	5.3	5.4
Semco	-	-	-	-	0.4
Star Energy (CoPi Kakap)	-	-	-	8.6	8.2
Surya Raya Teladan	1.5	1.4	1.4	1.3	1.2
Talisman	14.6	13.8	12.7	11.7	10.6
Total	85.5	90	79.8	81.1	81.8
Unocal	59.4	59.3	56.2	53.9	55.7
Vico	48.4	40.8	36.2	32.3	28.8
<b>TOTAL</b>	<b>1,414.1</b>	<b>1,344.0</b>	<b>1,251.5</b>	<b>1,146.8</b>	<b>1,094.4</b>

Source: Migas-Exploitation

\* Pertamina-owned fields

## APPENDIX 6: PRODUCTION

### APPENDIX 6.3: CRUDE AND CONDENSATE PRODUCTION BY AREA (B/D)

Company/	Block/Area	Jan-Dec 2003			Jan-Dec 2004		
		Crude	Conden	Total	Crude	Conden	Total
Amerada Hess	Lematang, S. Sumatra – PSC				-	-	0
Babat Kukui Energy	Babat Kukui, Jambi – TAC	35	-	35	43	-	43
Binatek Reka	Kruh, S. Sumatra – JOB	114	-	114	76	-	76
Binawahana Petrindo	Meruap - Jambi – TAC	1,900	-	1,900	2,183	-	2,183
BP	Kangean, East Java – PSC	-	1,269	1,269	-	1,066	1,066
	North West Java Sea - PSC	32,318	5,167	37,485	26,356	3,852	30,208
Bumi Siak Pusako	CPP, Riau – PSC	31,986	-	31,986	30,023	-	30,023
Caltex	CPP, Riau – PSC	-	-	-	-	-	0
	MFK, Riau – PSC	497	-	497	485	-	485
	Rokan, Riau – PSC	492,566	11,532	504,098	494,685	9,169	503,854
	Siak, Riau – PSC	2,336	-	2,336	2,614	-	2,614
CNOOC	SE Sumatra Off. – PSC	94,871	-	94,871	81,461	-	81,461
ConocoPhillips	Aceh – PSC	-	-	-	-	-	0
	Grissik – PSC	3,539	3,705	7,244	2,881	4,695	7,576
	Jambi – EOR (Pearl Oil)	-	-	-	-	143	143
	Kakap - PSC (Star Energy)	-	-	-	-	-	0
	Natuna Sea, Off. – PSC	35,670	-	35,670	30,234	-	30,234
	Ramba – TAC	8,477	-	8,477	6,170	-	6,170
Exspan	Kampar – PSC	7,499	74	7,573	9,230	505	9,735
	Lematang – PSC	79	-	79	68	-	68
	Rimau – PSC	52,842	-	52,842	38,472	-	38,472
	Tarakan – PSC	725	-	725	666	-	666
	Tarakan, E.Kalimntn TAC	5,271	-	5,271	5,099	-	5,099
ExxonMobil	Aceh – PSC	-	25,376	25,376	-	21,218	21,218
Golden Spike	Pendopo – JOB	320	39	359	279	28	307
Halliburton Energy	South Sumatra – JOB	1,699	-	1,699	1,456	-	1,456
Haurgeulis	Haurgeulis - TAC	-	-	-	12	-	12
HED Indo. /Citra P.	Abad/Raja – EOR	-	-	-	-	-	0

## APPENDIX 6: PRODUCTION

Company/	Block/Area	Jan-Dec 2003			Jan-Dec 2004		
		Crude	Conden	Total	Crude	Conden	Total
Indo Pacific Res.	Bawean, E. Java Off. PSC	527	-	527	205		205
Intermega	Irian Jaya – TAC	300	-	300			0
	Salawati – TAC	16	-	16	320		320
	Sele/Linda – TAC	177	-	177	154		154
Costa/Japex	Gebang – JOB	-	-	-	175		175
Kalrez Petroleum	Bula Seram, Maluku – PSC	521	-	521	462		462
Kodeco	Poleng, Java Sea – TAC	5,244	-	5,244	3,942		3,942
	West Madura, Off – JOA	9,013	171	9,184	10,176	144	10,320
Kondur Petroleum	Malacca Str, Riau - PSC	10,567	-	10,567	9,860		9,860
Kufpec	Seram, Maluku – PSC	3,933	-	3,933	2,465		2,465
Lirik Petroleum	Lirik- EOR	1,604	-	1,604	1,542		1,542
Matriks	N. Sumatra-TAC		-	-	0	0	0
Mitrasani Gelam	Sungai Gelam - TAC				193		193
Patrindo Persada Maju	Wasian, I. Jaya - TAC	185	-	185	55		55
Pearl Oil	Jambi – EOR	4,151	-	4,151	4,001	-	4,001
	Tungkal PSC	-	-	-	8	-	8
Perkasa Equatorial	Sembakung – TAC	6,286	-	6,286	5,427		5,427
Perkasa M Senami	Betung – JOB	37	-	37	74		74
Pertamina	Cepu (East Java)	2,186	-	2,186	2,320		2,320
	Cirebon (West Java)	16,189	-	16,189	18,852		18,852
	Jambi (Mid Sumatra)	3,712	-	3,712	3,025		3,025
	Kalimantan	4,671	-	4,671	5,250		5,250
	Prabumulih (South Sumatra)	12,221	-	12,221	14,637		14,637
	Rantau (North Sumatra)	3,669	32	3,701	3,433		3,433
	Sorong (Irian)	973	-	973	853		853
Petrochina	Irian Jaya – PSC	6,317	653	6,970	6,160	489	6,649
	Jabung, Jambi - PSC	19,729	-	19,729	16,680	0	16,680
	Salawati – JOB	4,361	-	4,361	3,946		3,946
	Tuban – JOB	9,504	-	9,504	9,309		9,309
Petronusa Bumibakti	Selat Panjang, Riau - PSC	48	-	48	36		36

## APPENDIX 6: PRODUCTION

Company/	Block/Area	Jan-Dec 2003			Jan-Dec 2004		
		Crude	Conden	Total	Crude	Conden	Total
Petroelat	Selat Panjang, Riau - PSC				38		38
Pilona Petro	Tanjung Lontar - TAC	1,466	-	1,466	1,042		1,042
Premier Oil	Anoa, Natuna Sea - PSC	2,509	1,037	3,546	2,183	887	3,070
Radian Ramok	Senabing – TAC	114	-	114	128		128
	Sukatani – TAC	3	-	3	0		0
Ranya Energy Pamanukan	S. Pamanukan TAC				6		6
Retko Prima/Western Nusantara	S. Sumatra – TAC	651	-	651	725		725
Sea Union Energy	Limau – JOB	5,333	-	5,333	5,395		5,395
Semco	Semberah - TAC				399		399
Star Energy	Kakap – PSC	7,780	854	8,634	7,245	990	8,235
Surya Raya Teladan	Benakat – EOR	1,257	-	1,257	1,205		1,205
Talisman	OK – JOB	4,749	187	4,936	4,285	206	4,491
	Tanjung – JOB	6,737	-	6,737	6,086		6,086
Total Fina/Elf	Mahakam, E. Kalimantan Off. – PSC	17,152	63,957	81,109	17,841	63,920	81,761
UNOCAL	East Kalimantan – PSC	45,851	4,475	50,326	35,127	3,790	38,917
	Makassar – PSC	3,521	7	3,528	16,705	30	16,735
VICO	Sanga-sanga, E.Kalimtn – PSC	17,012	15,286	32,298	11,325	17,491	28,816
<b>TOTAL</b>		<b>1,013,020</b>	<b>133,821</b>	<b>1,146,841</b>	<b>965,787</b>	<b>128,623</b>	<b>1,094,410</b>

Source: Migas-Production

### APPENDIX 6.4: INDONESIA: CRUDE AND CONDENSATE PRODUCTION (1,000 B/D)

Year	Crude	Condensate	Total
1995	1,434.2	170.8	1,605.0
1996	1,421.7	172.9	1,594.6
1997	1,417.9	162.8	1,580.7
1998	1,401.3	155.3	1,556.6
1999	1,351.3	149.1	1,500.3
2000	1,271.7	142.4	1,414.1
2001	1,212.3	131.9	1,344.1
2002	1,119.9	131.8	1,251.9
2003	1,013.0	133.8	1,146.8
2004	965.8	128.6	1,094.4

Source: Migas-Production

## APPENDIX 7: EXPORTS AND PRICES

### APPENDIX 7.1: INDONESIA: CRUDE AND CONDENSATE EXPORTS BY VOLUME (1,000 BARRELS)

	2000	2001	2002	2003	2004
<b>Total Volume</b>	<b>223,500.0</b>	<b>241,612.0</b>	<b>217,274.2</b>	<b>189,094.8</b>	<b>179,365.9</b>
Crude	195,266.0	216,474.0	185,924.9	158,045.0	149,041.9
Daily average	533.5	593.1	509.4	433	408
Condensate (a)	28,234.3	25,138.0	31,349.3	31,049.9	30,324.0
Daily average	77.1	68.9	85.9	85.1	83.1
<b>Total Daily Average</b>	<b>610.6</b>	<b>662</b>	<b>595.3</b>	<b>518.1</b>	<b>491.4</b>
<b>Annual Export Value (USD million)</b>	<b>6,282.5</b>	<b>5,650.0</b>	<b>4,928.6</b>	<b>5,401.6</b>	<b>6,458.3</b>

Source: Migas-Trade

(a) Including condensate sales to local petrochemical industries.

### APPENDIX 7.2: EXPORTS BY CRUDE STREAM (1,000 BARRELS)

Crude streams	2000	2001	2002	2003	2004
<b>Crude Oil</b>	<b>195,085.8</b>	<b>214,110.7</b>	<b>185,925.0</b>	<b>158,045.0</b>	<b>149,041.9</b>
Duri-Caltex	60,502.7	70,954.2	50,817.0	44,702.9	45,936.0
Minas/SLC-Caltex	60,937.4	57,887.1	48,686.1	40,682.2	32,908.4
Widuri-CNOOC	17,542.1	19,239.8	19,340.7	14,377.9	12,284.4
Cinta-CNOOC	12,674.7	11,857.3	13,808.3	12,806.9	12,275.6
Belida - ConocoPhillips	6,601.3	13,285.4	9,255.7	6,818.7	7,270.6
Jatibarang - Pertamina	-	-	724.8	4,742.1	5,387.4
West Seno-Unocal				855.6	5,005.0
Geragai – Synergy	837.7	6,161.5	6,013.4	5,408.5	4,194.4
Attaka-Union	5,271.3	5,552.8	5,892.5	4,563.9	4,132.2
Handil-Total	1,830.0	2,36.8	4,085.6	3,413.4	3,253.6
Arjuna-BP	2,684.4	4,727.1	4,656.1	2,157.3	3,133.3
Madura	-	-	986.2	3,324.2	2,473.0
Mudi	2,676.5	3,923.0	3,133.0	3,249.8	1,947.4
Badak - Vico	4,138.9	3,166.4	3,689.8	2,507.2	1,650.8
Sepinggan-Union	2,177.2	2,490.6	2,286.6	1,948.4	1,415.7
Walio-Trend	2,662.5	1,613.6	1,894.4	1,211.8	1,356.4
Kerapu - Clyde P.	3,878.7	2,588.9	1,924.8	2,165.8	1,165.6
Lalang – Kondur Pet	1,840.1	1,543.3	1,459.8	989.8	858.8
Sukowati-Petrochina					778.7
Anoa – Pertamina	1,106.4	1,144.7	1,271.3	606.6	710.3
Oseil-Kufpec				298.5	411.6
Bakapai-Total	381.2	555.1	452.4	457.7	335.4
Sembilang – ConocoPhillips	603.3	499.7	470.3	188.2	157.5
Kaji/Semoga-Exspan	6,739.4	6,819.2	4,628.5	567.6	0.0
Langsa	-	101.0	447.7	0.0	0.0
Bunyu-Pertamina	-	-	-	-	0.0
<b>Condensate</b>	<b>28,010.6</b>	<b>25,138.0</b>	<b>31,349.3</b>	<b>31,049.9</b>	<b>30,324.1</b>
Senipah – Marathon	8,324.0	11,637.7	12,311.5	13,285.2	12,084.8
Bontang Mix-Vico	9,909.3	9,990.2	9,821.6	10,286.2	9,618.4
Arun – Mobil	9,777.3	3,510.1	9,216.2	7,478.5	8,620.9
<b>TOTAL (CRUDE + CONDENSATE)</b>	<b>223,500.00</b>	<b>241,612.40</b>	<b>217,274.30</b>	<b>189,094.82</b>	<b>179,366.0</b>

Source: Migas-Trade

## APPENDIX 7: EXPORTS AND PRICES

### APPENDIX 7.3: CRUDE AND CONDENSATE EXPORTS BY DESTINATION (1,000 BARRELS)

Country	2000	2001	2002	2003	2004
Japan	74,807.2	77,866.1	61,751.5	62,375.2	52,040.3
South Korea	37,407.5	51,965.1	43,976.7	36,888.0	42,110.4
China	33,781.1	19,030.1	22,064.0	26,483.5	25,426.1
Australia	20,539.9	37,461.9	34,468.7	23,488.7	20,430.2
USA	14,152.8	15,349.0	15,863.9	11,572.7	11,929.8
Thailand	9,932.7	5,496.0	10,558.3	9,643.2	9,140.6
Singapore	15,655.6	20,516.8	14,648.2	10,943.3	8,761.0
Taiwan	9,156.9	8,167.2	7,023.1	4,981.2	6,029.1
New Zealand	165.0	760.0	1,063.9	569.4	285.0
Philippines	1,110.4	1,145.7	410.3	1,127.7	278.0
Others	6,790.9	3,854.1	5,445.7	1,022.0	2,935.5
<b>TOTAL</b>	<b>223,500.0</b>	<b>241,612.0</b>	<b>217,274.3</b>	<b>189,094.8</b>	<b>179,366.0</b>

Source: Migas-Trade

### APPENDIX 7.4: EXPORTS OF CRUDE OIL AND REFINED PRODUCTS

Volume: 1,000 Barrels

Value: US\$ Million

Year	Crude and Condensate		Refined Products		Total Value
	Volume	Value	Volume	Value	
1994	324,378	5,075.7	63,238	928.8	6,004.5
1995	300,722	5,148.0	79,347	1,286.8	6,434.8
1996	283,741	5,711.8	77,349	1,510.5	7,373.7
1997	289,932	5,458.1	71,786	1,291.2	6,749.3
1998	280,365	3,444.9	58,897	695.4	4,140.3
1999	285,400	4,949.5	56,496	912.2	5,861.7
2000	223,500	6,282.5	67,085	1,676.0	7,958.5
2001	241,612	5,650.0	55,118	1,249.1	6,899.1
2002	217,274	4,928.6	55,490	1,059.7	5,988.3
2003	189,095	5,401.6	56,267	1,622.6	7,024.2
2004	179,869	6,458	64,501	1,750.3	8,208.6

Source: Migas-Trade

### APPENDIX 7.5: REFINED PRODUCT EXPORTS (1000 BARRELS)

Products	2000	2001	2002	2003	2004
LSWR	45,646.2	32,831.2	35,938.0	34,236.5	42,287.2
Naphtha	11,390.1	13,448.4	10,993.3	11,319.8	11,763.1
Decant Oil	3,469.1	3,104.7	3,253.2	3,210.2	4,939.9
Cokes	1,896.1	2,622.4	1,654.4	2,534.5	2,589.6
LOMC	1,087.8	611.5	-	-	0.0
Others	3,595.2	2,499.9	3,650.8	4,966.2	2,920.6
<b>TOTAL</b>	<b>67,084.5</b>	<b>55,118.1</b>	<b>55,489.7</b>	<b>56,267.0</b>	<b>64,500.5</b>
<b>Values (\$Mln)</b>	<b>1,676.0</b>	<b>1,249.1</b>	<b>1,059.7</b>	<b>1,622.6</b>	<b>1,750.3</b>

Source: Migas-Trade

## APPENDIX 7: EXPORTS AND PRICES

### APPENDIX 7.6: NET OIL EXPORTS (1000 BARRELS)

Exports/ Imports	2000	2001	2002	2003	2004
<b>Exports</b>	<b>290,584.5</b>	<b>296,730.5</b>	<b>272,764.0</b>	<b>245,361.9</b>	<b>243,866.5</b>
Crude and Condensate	223,500.0	241,612.4	217,274.3	189,094.8	179,366.0
Refined Products	67,084.5	55,118.1	55,489.7	56,267.0	64,500.5
<b>Imports</b>	<b>170,003.8</b>	<b>202,500.2</b>	<b>231,075.3</b>	<b>241,619.1</b>	<b>273,309.3</b>
Crude and Condensate	79,978.1	112,878.1	124,147.7	135,237.9	148,489.9
Refined Products	90,005.7	89,622.1	106,927.6	106,381.2	124,819.0
<b>Net Exports</b>	<b>120,580.7</b>	<b>69,092.3</b>	<b>41,688.7</b>	<b>3,742.8</b>	<b>-29,442.8</b>

Source: Migas-Trade

### APPENDIX 7.7: GOVERNMENT CRUDE OIL SELLING PRICES (US\$/BARREL)

Crude	2000	2001	2002	2003	2004	2005
SLC/Minas	30.2	27.8	27.1	18.0	36.3	53.1
Duri	28.3	25.8	25.7	26.5	30.4	46.0
Cinta	29.6	25.8	26.3	27.1	35.0	51.1
Widuri	29.6	29.0	26.2	27.1	35.0	51.2
Attaka	30.2	27.6	25.6	29.9	37.6	56.7
Arjuna	29.7	27.1	26.7	29.3	36.9	55.1
Belida	30.2	27.6	27.0	29.5	37.3	56.5
Senipah Condensate	30.0	27.0	27.2	29.4	-	-
Lalang	30.2	27.9	27.2	28.1	36.4	52.3
Walio Mix	30.0	27.6	26.9	27.8	36.1	53.2
Arun Condensate	30.0	27.0	27.2	29.4	37.4	55.5
Badak/Bekapai	30.2	27.6	27.6	29.9	37.6	56.7
Anoa	30.6	28.0	28.0	30.3	38.0	57.1
Kerapu	29.9	27.2	26.7	29.2	-	-
Sepinggan/Yakin	29.7	27.1	26.7	29.3	-	-
Kaji	30.9	28.2	27.5	28.4	-	-
Handil Mix	29.8	27.2	26.9	29.5	37.1	55.2
Bunyu Mix	30.2	27.8	27.1	18.0	36.3	53.1
BRC	27.5	26.3	27.0	29.2	37.2	50.4

Source: Pertamina

## APPENDIX 8: IMPORTS

### APPENDIX 8.1: INDONESIAN CRUDE OIL IMPORTS (1,000 BARRELS)

Country	Crude	2000	2001	2002	2003	2004
<b>Saudi Arabia</b>	ALC	36,182.3	40,005.6	34,472.5	41,339.2	37,879.6
<b>Algeria</b>	Saharan	-	10,443.1	5,492.3	8,068.4	3,588.0
<b>Iran</b>	ILC	3,667.6	5,538.6	-	-	-
<b>China</b>	Nanghai	5,983.1	6,573.4	6,682.1	3,644.7	-
	Wenchang	-	-	-	2,250.79	4,208.9
	Xijiang	-	1,813.3	1,169.7	4,699.3	7,186.7
<b>Malaysia</b>	Tapis	-	627.9	-	2,635.7	7,134.1
	Bunga Kekwa	-	-	-	-	346.3
	Dulang	-	-	-	-	-
	Bintulu	467.9	-	-	-	-
	Miri	4,618.8	3,168.1	1,746.7	-	-
	Labuhan	2,222.3	1,754.3	5,203.5	6,345.16	2,903.6
	Palm	-	989.1	-	-	-
	Masa	470.7	-	-	-	-
<b>Australia</b>	Varnard	-	-	-	-	-
	North W.S.	-	-	-	-	-
	Gipsland	-	-	-	1,354.50	658.9
	Cossack	-	-	-	1,273.29	1,304.8
	Barrow	-	-	-	-	-
	Skua	-	-	-	-	-
	Jabiru	-	-	-	-	-
	Challis	-	-	-	-	-
Legendre	-	548.9	661.9	3,660.1	1,928.2	
<b>Libya</b>	Sarir Light	-	-	989.2	3,646.7	-
<b>Vietnam</b>	Bach Ho	3,026.0	6,518.5	3,548.1	3,384.6	7,510.0
	Dai Hung	1,170.7	-	-	-	0.0
	Ruby	470.8	-	574.7	1,026.7	1,102.2
	Rang Dong	472.4	-	-	3,954.4	962.7
<b>Nigeria</b>	Qua Iboe	919.1	2,006.5	15,307.4	11,344.1	10,444.4
	Odudu	-	7,625.2	9,446.7	10,486.5	0.0
	Escravos	12,784.4	1,797.3	3,827.4	947.2	9,554.1
	Varanus	-	362	-	-	0.0
	Bonny LC	-	10,443.10	7,787.00	3,840.50	5,681.7
	Brass LC	-	925.8	6,568.60	2,775.55	1,017.6
<b>Brunei</b>	Light Crude	599.6	-	-	-	-
	Seria	-	-	659.9	3,674.7	4,873.7
<b>PNG</b>	Kutubu	-	-	-	3,134.8	1,860.6
<b>Yemen</b>	Marib LC	-	-	1,979.6	1,939.9	-
<b>Iraq</b>	BLC	1,972.0	-	3,889.8	-	2,004.1
<b>Pakistan</b>	Badin	2,406.4	2,532.9	1,505.8	-	-
<b>Thailand</b>	Tantawan/Benchamas	2,544.1	4,474.4	-	4,929.0	8,596.29
<b>Oman</b>	Oman	-	-	2,096.6	-	-
<b>Rwanda</b>	Zafiro	-	-	1,939.9	1,938.9	6,821.4
<b>Angola</b>	Nemba	-	-	-	2,943.3	7,720.2
	Palanca	-	-	-	-	995.3

## APPENDIX 8: IMPORTS

Country	Crude	2000	2001	2002	2003	2004
Others	Cham	-	601.5	-	-	-
	BIS	-	183.4	-	-	-
	Kitina	-	-	1,887.3	-	-
	PPT	-	479.5	-	-	-
	Bebatik	-	1,310.5	649.8	-	-
	Nile Blend					4,463.6
	Azeri					4,986.9
Champion					2,756.0	
TOTAL	Volume	79,978.1	112,878.1	124,147.7	135,237.9	148,489.9
	Value (\$Mln)	2,303.5	2,852.3	3,216.9	4,085.5	5,791.9

Source: Migas-Trade

### APPENDIX 8.2: IMPORTS OF CRUDE OIL AND REFINED PRODUCTS

Volume: 1,000Barrels

Value: US\$ million

Year	Crudes		Refined Products		Total Value
	Volume	Value	Volume	Value	
1995	68,326.9	1,229.1	50,765.0	978.8	2,207.9
1996	71,791.0	1,506.7	60,905.9	1,576.9	3,083.6
1997	62,882.0	1,292.0	94,994.2	2,296.8	3,588.8
1998	72,476.0	976.7	54,053.8	807.7	1,784.4
1999	84,692.0	1,501.2	79,902.0	1,656.4	3,157.6
2000	79,978.0	2,303.5	90,025.3	2,986.9	5,290.4
2001	112,878.1	2,852.3	89,622.1	2,577.4	5,429.7
2002	124,147.7	3,216.9	106,927.6	3,308.7	6,525.6
2003	135,237.9	4,085.4	106,381.2	3,395.2	7,480.7
2004	148,489.9	5,792.0	124,819.3	5,854.4	11,646.3

Source: Migas-Trade

### APPENDIX 8.3: IMPORTS OF OIL PRODUCTS (1,000 BARRELS)

Oil Products	2000	2001	2002	2003	2004
Gas Oil (ADO)	45,248.1	49,555.9	60,609.6	55,133.6	77,604.8
Fuel Oil	12,712.6	4,586.4	7,750.0	6,921.8	11,927.1
Kerosene/DPK	18,651.4	17,096.0	17,100.3	14,611.7	18,285.3
HOMC	12,477.2	15,158.9	19,838.9	18,797.3	36,504.2
IDO	1,914.2	-	-	-	-
Avgas	-	-	6.5	-	-
Avtur	-	-	1,234.6	2,055.2	4,269.1
HSFO	-	2,744.70	-	-	-
Paraxylene (PYGas)	181.3	-	-	80.8	-
Premium				7,067.7	-
Gasoline					-
Others (incl. LPG)	755.0	479.3	387.7	1,713.2	5,832.6
<b>TOTAL – Volume</b>	<b>90,025.3</b>	<b>89,622.10</b>	<b>106,927.60</b>	<b>106,381.19</b>	<b>154,423.0</b>
<b>Value (US\$Mln)</b>	<b>2,986.9</b>	<b>2,577.40</b>	<b>3,308.76</b>	<b>3,395.24</b>	<b>5,854.4</b>

Source: Migas-Trade

## APPENDIX 9: DOWNSTREAM REFINERY

### APPENDIX 9.1: CURRENT REFINERY CAPACITY (1000 B/D)

Refinery/Location	Installed Capacity 2003/2004	Effective Capacity 2003/2004	2003 Crude Processed	2004 Crude Processed	Crude Input
Pangkalan Brandan (North Sumatra)	5	5	2.6	2.3	Ketapa/NSC
Dumai (Central Sumatra)	120	120	128.9	122.1	Minas, Duri
Sungai Pakning (Central Sumatra)	50	50	47	48.6	Minas, Lalang, Lirik
Musi (South Sumatra)	133.7	133.7	113.3	107.4	Jene, Ramba, SPD, Talang Akar, Geragai
Cilacap (Central Java)	348	348	351.4	332.5	Minas, Arjuna, Badak, Belida, Handil, Madura, Imported Crudes
Balikpapan (East Kalimantan)	260	260	246.5	264.3	Minas, Sepinggan, Widuri, Lalang, Bunyu, Sanga-sanga, Belida, Bekapai, Imported Crudes
Balongan (West Java)	125	125	114.8	111.9	Duri (50%), Minas(50%)
Kasim (Irian Jaya)	10	10	8.4	8.4	Walio, Salawati
Cepu (Central Java)	3.8	3.8	2.3	2.2	Cepu crude
<b>TOTAL</b>	<b>1,055.5</b>	<b>1,055.5</b>	<b>1,015.2</b>	<b>999.8</b>	--

Source: Migas-Refining

### APPENDIX 9.2: REFINERY INTAKE (1000 BARRELS)

Sources	2000	2001	2002	2003	2004
Crude Oil	279,807.8	251,284.1	233,888.3	223,452.2	216,682.1
Condensate	5,482.4	5,015.8	230.6	105.5	2,322.6
Imported Crudes	74,941.4	105,096.0	123,851.8	135,033.3	147,028.2
Others	12,935.1	430.7	7,889.8	11,986.8	9,527.5
<b>TOTAL</b>	<b>373,166.7</b>	<b>375,668.6</b>	<b>365,860.5</b>	<b>370,577.8</b>	<b>375,560.4</b>

Source: Migas-Refining

## APPENDIX 9: DOWNSTREAM REFINERY

### APPENDIX 9.3: REFINERY OUTPUT (1000 BARRELS)

Refinery	2000	2001	2002	2003	2004
<b>A. Total Fuel Oils (BBM)</b>	<b>276,696.5</b>	<b>283,389.4</b>	<b>278,658.0</b>	<b>278,203.00</b>	<b>283,153.4</b>
Pangkalan Brandan	725.7	531.8	558.0	563.0	457.0
Dumai	39,896.0	43,949.9	36,738.6	41,974.4	41,517.1
Sungai Pakning	5,144.8	5,438.9	5,195.7	5,109.8	5,597.3
Musi	31,882.7	34,205.2	35,621.0	31,008.1	30,916.7
Cilacap	93,360.4	96,142.4	95,362.7	101,516.5	98,611.2
Balikpapan	64,035.7	61,029.6	65,352.8	60,407.0	65,723.2
Balongan	39,039.8	40,068.1	38,170.8	35,401.5	38,109.0
Kasim	2,195.2	1,526.5	1,208.9	1,827.6	1,831.5
Cepu	416.4	499.1	449.8	395.1	390.5
<b>B. Total Other Products</b>	<b>96,470.2</b>	<b>92,278.9</b>	<b>87,202.1</b>	<b>92,344.80</b>	<b>92,407.0</b>
Pangkalan Brandan	532.7	407.6	422.9	398.6	381.1
Dumai	5,211.4	3,685.0	6,959.4	5,063.7	5,067.0
Sungai Pakning	11,705.9	12,141.6	12,739.8	12,030.4	12,132.9
Musi	12,727.5	8,211.5	8,612.3	10,345.3	8,565.5
Cilacap	24,872.8	27,433.5	20,722.9	26,770.2	25,544.7
Balikpapan	35,836.4	35,051.3	29,718.0	29,582.9	31,397.3
Balongan	4,734.4	3,763.4	6,561.7	6,489.9	7,556.8
Kasim	359.8	1,073.6	999.0	1,236.8	1,329.5
Cepu	489.1	509.2	456.2	427.0	432.2
<b>C. GRAND TOTAL (A+B)</b>	<b>373,166.7</b>	<b>375,668.3</b>	<b>365,860.5</b>	<b>370,547.8</b>	<b>375,560.4</b>
Pangkalan Brandan	1,258.4	939.4	980.9	961.6	838.1
Dumai	45,107.4	47,634.9	43,698.0	47,038.1	46,584.2
Sungai Pakning	16,850.7	17,580.5	17,935.5	17,140.2	17,730.2
Musi	44,610.2	42,416.7	44,233.3	41,353.4	39,482.2
Cilacap	118,233.2	123,575.9	116,085.6	128,286.7	124,155.9
Balikpapan	99,872.1	96,080.9	95,070.8	89,989.9	97,120.4
Balongan	43,774.2	43,831.5	44,732.5	41,891.4	45,665.8
Kasim	2,555.0	2,600.1	2,207.9	3,064.4	3,161.0
Cepu	905.5	1,008.3	916.0	822.1	822.7

Source: Migas-Refining

## APPENDIX 9: DOWNSTREAM REFINERY

### APPENDIX 9.4: REFINERY OUTPUT BY PRODUCT (1000 BARRELS)

Oil Products	2000	2001	2002	2003	2004
<b>a. Fuel Oils</b>	<b>276,696.5</b>	<b>283,389.4</b>	<b>278,658.4</b>	<b>278,203.0</b>	<b>283,153.4</b>
Automotive Diesel Oil	95,902.5	99,379.9	93,985.3	94,508.7	98,644.8
Mogas (a)	70,644.7	76,600.9	73,287.3	72,689.7	75,276.8
Kerosene	57,896.5	57,991.9	56,300.8	58,556.1	56,819.9
Fuel Oil	32,481.5	35,087.1	37,302.2	33,877.4	30,962.1
Industrial Diesel Oil	8,140.4	9,108.9	8,430.6	7,795.1	10,202.3
Aviation Turbine	8,441.20	8,619.9	9,319.4	72.4	11,215.1
Avgas	6.4	51.8	32.8	10,703.6	32.2
Jet Petrol (JP-5)	-	-	-	-	-
<b>b. Secondary Fuel</b>	<b>56,930.8</b>	<b>54,534.4</b>	<b>44,592.6</b>	<b>50,338.7</b>	<b>47,925.6</b>
LSWR	38,617.8	34,211.2	28,362.5	32,185.0	29,188.6
Naptha	16,647.4	20,180.5	16,230.1	18,153.7	18,736.9
LOMC	1,665.6	142.7	-	-	-
HOMC	-	-	-	-	-
<b>c. Non Fuel</b>	<b>19,225.9</b>	<b>18,793.3</b>	<b>18,165.5</b>	<b>20,185.7</b>	<b>21,487.1</b>
LPG	8,377.6	8,160.3	8,198.9	8,697.9	9,379.6
Asphalt	2,730.3	2,340.6	2,398.6	3,267.4	3,290.5
Green Coke	2,187.9	2,573.3	1,772.5	2,637.3	2,410.5
Lube Base Oil	2,676.1	2,711.5	2,252.5	2,867.2	2,822.5
Residual	387.0	319.4	291.5	247.3	246.7
Polytam	275.7	-	-	-	-
Wax	182.4	231.4	253.4	22.1	57.7
SPBX 40B	175.9	86.9	212.7	191.6	283.0
Minarex	150.1	126.4	127.6	130.0	151.0
Others	2,082.9	2,243.5	2,658.8	2,124.9	2,845.7
<b>d. Balance (b)</b>	<b>20,313.5</b>	<b>18,951.2</b>	<b>24,443.0</b>	<b>21,820.2</b>	<b>22,994.3</b>
<b>GRAND TOTAL</b>	<b>373,166.7</b>	<b>375,668.3</b>	<b>365,860.5</b>	<b>370,547.6</b>	<b>375,560.4</b>

Source: Mgas-Refining

(a) Premium, Pertamina and Pertamina plus

(b) Intermediate, Fuel and Gas Refining, Losses

## APPENDIX 10: SUPPLY AND DEMAND OF OIL PRODUCTS

### APPENDIX 10.1: SUPPLY AND DEMAND OF OIL PRODUCTS (MILLION BARRELS)

Supply/Demand	2000	2001	2002	2003	2004
<b>Supply</b>	<b>460.2</b>	<b>465.3</b>	<b>472.6</b>	<b>476.9</b>	<b>530.0</b>
Domestic Refineries	373.2	375.7	365.7	370.5	375.6
Imports	87	89.6	106.9	106.4	154.4
<b>Demand</b>	<b>418.4</b>	<b>413.2</b>	<b>412.4</b>	<b>437.8</b>	<b>471.1</b>
Domestic Sales	351.3	358.1	370.3	381.5	406.6
Exports	67.1	55.1	42.1	56.3	64.5

Source: Migas-Trade & Refining

### APPENDIX 10.2: SUPPLY OF REFINED PRODUCT (MILLION BARRELS)

Products	2000	2001	2002	2003	2004
<b>Total Refinery Output</b>	<b>370.0</b>	<b>375.7</b>	<b>365.9</b>	<b>370.5</b>	<b>375.6</b>
Automotive Diesel Oil	95.9	95.9	94	94.5	98.6
Gasoline	70.6	73.2	73.3	72.7	71.9
Kerosene	57.9	58	56.3	58.6	56.8
Fuel Oil	32.5	35.1	37.3	33.9	31.0
Industrial Diesel Oil	8.1	9.1	8.4	7.8	10.2
Avtur	8.4	8.6	9.3	0	11.2
LSWR	38.6	34.2	28.4	32.2	29.2
Naptha	16.6	20.2	16.2	18.2	18.7
Others/ Refining Fuel/ Losses	41.4	19.8	52.7	52.8	47.9
<b>Total Imports</b>	<b>91.9</b>	<b>89.6</b>	<b>106.9</b>	<b>106.4</b>	<b>154.4</b>
Automotive Diesel Oil	45.1	49.6	60.6	55.1	77.6
Fuel Oil	12.7	4.6	7.8	6.9	11.9
Diesel Oil	1.9	-	-	-	-
Kerosene	18.6	17.1	17.1	14.6	18.3
Avtur	-	-	1.2	2.1	4.3
HOMC	12.5	15.2	19.8	18.8	36.5
Others	1.1	3.2	0.4	8.9	5.8
<b>Total Supply (Output + Import)</b>	<b>460.2</b>	<b>465.3</b>	<b>472.8</b>	<b>477.1</b>	<b>530.0</b>
Automotive Diesel Oil	141.0	145.5	154.6	149.6	176.2
Gasoline	70.6	73.2	73.3	72.7	71.9
Kerosene	76.5	75.1	73.4	73.2	75.1
Fuel Oil	45.2	39.7	45.1	40.8	42.9
Industrial Diesel Oil	10.0	9.1	8.4	7.8	10.2
Avtur	8.4	8.6	10.5	2.1	15.5
LSWR	38.6	34.2	28.4	32.2	29.2
Naptha	16.6	20.2	16.2	18.2	18.7
HOMC	12.5	15.2	19.8	18.8	36.5
Others	42.5	23.0	53.1	61.7	53.7

Source: Migas-Trade & Refining

## APPENDIX 10: SUPPLY AND DEMAND OF OIL PRODUCTS

### APPENDIX 10.3: CONSUMPTION OF REFINED PRODUCT (MILLION LITERS)

Products	2000	2001	2002	2003	2004
<b>Fuel Oils</b>	<b>54,824.7</b>	<b>55,890.9</b>	<b>57,797.3</b>	<b>59,865.6</b>	<b>64,650.6</b>
Auto Diesel	21,734.7	23,013.7	24,212.9	25,635.5	26,487.8
Gasoline	12,421.8	13,056.7	13,732.4	14,112.4	17,027.4
Kerosene	12,455.2	12,279.0	11,678.4	12,262.1	11,846.1
Fuel Oil	6,013.1	6,121.2	6,260.3	6,321.3	5,754.5
Industrial Diesel	1,451.2	1,420.3	1,360.3	1,402.7	1,093.4
Avtur	744.1	n/a	552.9	123.5	2,437.9
Avgas	4.6	n/a	-	8.2	3.4
<b>Others (1000 MT)</b>	<b>1767.5</b>	<b>1957.5</b>	<b>-</b>	<b>-</b>	<b>-</b>
LPG	982.7	1,022.00	n/a	n/a	n/a
Asphalt	416.1	577.3	n/a	n/a	n/a
Lube Oil	368.7	358.2	n/a	n/a	n/a

Source: Migas-Trade & Refining

### APPENDIX 10.4: DOMESTIC FUEL CONSUMPTION BY SECTORS (MILLION LITERS)

Year	Household	Transportation	Electricity	Industry	Total	Change (%)
1990	7,853	13,315	4,304	6,704	32,176	13.1
1991	7,987	14,396	5,260	7,183	34,826	8.2
1992	8,459	15,271	5,869	8,121	37,721	8.3
1993	8,533	16,069	6,834	8,862	40,298	6.8
1994	8,804	17,990	3,831	9,197	39,822	-1.2
1995	9,145	19,640	2,969	9,926	41,680	4.7
1996	9,682	21,824	3,331	10,292	45,129	8.3
1997	9,861	23,877	5,898	10,698	50,334	11.5
1998	10,055	23,207	4,379	10,453	48,094	-4.5
1999	11,852	23,396	3,956	11,573	50,776	5.6
2000	12,407	25,548	5,008	11,862	54,825	8.0
2001	12,242	26,248	5,017	12,384	55,891	1.9
2002	11,625	27,329	6,505	12,338	57,797	3.4
2003	12,318	28,596	6,696	12,254	59,865	3.5
2004	11,787	30,130	6,797	15,936	64,651	8.0

Source: Migas-Trade & Refining

## APPENDIX 10: SUPPLY AND DEMAND OF OIL PRODUCTS

### APPENDIX 10.5: CHANGES IN DOMESTIC FUEL PRICES (1993 – 2005) (Rp/LITER)

#### A. RETAIL AND INDUSTRY FUEL

Effective Date	Premium	Kerosene	ADO	IDO	FO	Notes
7-Jan-93	700	280	380	360	240	
5-May-98	1,200	350	600	500	350	
15-May-98	1,000	280	550	500	350	
1-Oct-00	1,150	350	600	550	400	
15-Jun-01	1,450	400	900	1,000	900	Price A
	1,450	1,275	1,285	1,250	945	Price B
	2,180	2,550	2,570	2,500	1,890	Price C
1-Jul-02	1,750	1,320	1,350	1,320	1,110	75 % Market price
		1,750	1,790	1,760	1,480	100 % Market price
1-Jun-03	1,810	1,800	1,650	1,650	1,560	Retail price
	2,100	2,200	2,100	2,050	1,600	Market Price
1-Jan-04	1,810	1,800	1,650	1,650	1,560	Retail price
	2,100	2,200	2,100	2,050	1,560	Market Price
1-Jun-04	1,810	1,800	1,650	1,650	1,560	Retail price
	2,100	2,200	2,100	2,050	1,600	Market Price
14-Mar-05	2,400	2,200	2,100	2,300	2,300	Retail price
	2,870	2,790	2,700	2,660	2,300	Market Price
1-Apr-05	2,400	2,200	2,100	2,300	2,160	Retail price
	2,870	2,790	2,700	2,660	2,360	Market Price
1-Jul-05	2,400	2,200	2,100	2,300	2,360	Retail price
	4,060	4,940	4,740	4,560	2,900	Market Price
1-Aug-05	2,400	2,200	2,100	2,300	2,300	Retail price
	4,640	5,490	5,350	4,250	3,150	Market Price
1-Sep-05	2,400	2,200	2,100	2,300	2,360	Retail price
	5,160	5,600	5,350	5,130	3,150	Market Price
1-Oct-05	4,500	2,000	4,300	-	-	Retail price
	6,290	6,400	6,000	5,780	3,810	Market Price
1-Nov-05	4,500	2,000	4,300	-	-	Retail price
	5,890	6,480	6,170	5,940	3,870	Market Price
1-Dec-05	4,500	2,000	4,300	-	-	Retail price
	5,150	6,480	5,340	5,180	3,680	Market Price

#### B. OTHER TRANSPORTATION FUELS

Effective Date	Pertamax Plus	Pertamax	Pertamina DEX
1-Jan-03	2,600	2,300	-
1-Mar-04	2,750	2,300	-
19-Dec-04	4,200	4,000	-
1-Sep-05	5,900	5,700	6,300
21-Nov-05	5,600	5,400	5,900

Source: Pertamina

Note: a: Retail prices are actual selling price, which are subsidized and determined by the government.

b: Market price = MOPS (Mid Oil Platts Singapore) + 15% + 10% VAT. Industry must now pay at this price.

## APPENDIX 11: NATURAL GAS

### APPENDIX 11.1: NATURAL GAS PRODUCTION BY MAJOR PRODUCERS (MILLION SCF)

Company	2000	2001	2002	2003	2004	% Change
Total	841,419	880,237	835,031	877,523	909,932	3.69
ExxonMobil	458,929	268,109	557,873	601,673	507,096	-15.72
Vico	452,456	464,049	438,982	392,625	329,511	-16.07
BP	293,034	294,972	272,113	245,296	182,209	-25.72
Pertamina	285,692	276,791	258,012	263,194	383,870	45.85
Gulf Resources	165,226	163,751	-	-	-	0.00
Unocal	166,316	159,313	149,317	144,844	124,199	-14.25
ConocoPhillips*	20,924	41,378	233,411	297,922	319,317	7.18
Petrochina/Devon						
Energy	30,901	45,091	58,587	80,826	73,668	-8.86
Caltex	57,753	50,306	45,656	40,640	34,757	-14.48
Exspan	33,060	40,990	41,854	47,476	37,520	-20.97
Premier/Amoseas	12,572	29,238	40,371	51,254	56,357	9.96
CNOOC/YPF/Maxus	24,894	27,611	27,258	21,526	18,813	-12.60
Kodeco	12,392	11,034	23,570	35,095	8,355	-76.19
Talisman	5,768	7,668	14,023	8,517	-	-100.00
Energy Equity/Amerada	8,090	8,508	9,680	8,215	-	-100.00
Lapindo	2,687	4,221	7,690	17,786	23,617	32.78
Sea Union/Husky	7,934	7,458	7,454	4,506	-	-100.00
Hed Ind./Citra Patenindo	6,561	5,800	4,968	3,873	-	-100.00
Japex	6,448	5,082	3,458	-	-	-
Costa International	-	-	-	-	-	100.00
Others	8,323	24,042	12,565	12,452	20,911	67.94
<b>TOTAL</b>	<b>2,901,379</b>	<b>2,807,150</b>	<b>3,041,873</b>	<b>3,155,243</b>	<b>3,030,132</b>	<b>-3.97</b>

Source: Migas-Exploitation

### APPENDIX 11.2: MARKETED NATURAL GAS (MILLION SCF)

	2000	2001	2002	2003	2004	% change
<b>A. Exports</b>	<b>1,592,660.0</b>	<b>1,524,312.0</b>	<b>1,741,565.0</b>	<b>1,842,894.0</b>	<b>1,607,970.5</b>	<b>-12.7</b>
Exports to Singapore	-	31,967.0	82,619.0	118,112.4	145,473.9	23.2
LNG for Exports	1,588,512.0	1,489,935.0	1,656,472.0	1,719,127.1	1,462,496.6	-14.9
LPG for Exports	4,148.0	2,410.0	2,474.0	5,654.5	0.0	-100.0
<b>B. Domestic Use*</b>	<b>744,045.0</b>	<b>738,986.0</b>	<b>763,507.0</b>	<b>805,981.2</b>	<b>977,319.5</b>	<b>21.3</b>
Electricity	223,564.0	254,238.0	195,300.0	187,186.5	169,456.6	-9.5
Fertilizer /Petrochemical						
Plants	255,178.0	230,141.0	265,701.0	256,730.6	253,707.7	-1.2
City Gas	62,561.0	78,389.0	82,743.0	157,477.9	253,229.5	60.8
Oil Refinery	32,277.0	29,437.0	30,892.0	22,772.8	20,496.7	-10.0
LPG Plants	10,788.0	10,397.0	26,611.0	31,459.3	33,058.0	5.1
Cement Plants	2,822.0	3,420.0	2,751.0	2,872.3	0.0	-100.0
Others	156,855.0	132,964.0	159,509.0	147,481.8	247,371.1	67.7
<b>TOTAL</b>	<b>2,336,705.0</b>	<b>2,263,325.0</b>	<b>2,505,072.0</b>	<b>3,454,856.4</b>	<b>2,585,290.0</b>	<b>-0.3</b>

Source: Migas-Production

\*Exclude own use by the producers.

## APPENDIX 11: NATURAL GAS

### APPENDIX 11.3: GAS PIPELINE DEVELOPMENT PROJECT

No	Trans. Projects	Sub Transmission Projects	Size; length	Flowrate MMSCFD	Funding Sources	Status/Schedule
1	SSWJ – Phase 1 (\$424.40 mln)	Pagardewa - Terbanggi Besar	32" ; 170 km	250	JBIC, PGN	PMC appointed, land acquisition/ completion midyear 2006
		Terbanggi Besar - labuhan Maringgai	32" ; 105 km	250	JBIC, PGN	PMC appointed, land acquisition/ completion midyear 2006
		Labuhan Maringgai - Cilegon	32" ; 100 km	250	JBIC, PGN	PMC appointed, land acquisition/ completion midyear 2006
		Cilegon - Serpong	24" ; 70km	250	JBIC, PGN	PMC appointed, land acquisition/ completion midyear 2006
2	SSWJ Phase 2 (\$541.9 mln)	Grissik - Pagar Dewa	36" ; 185 km	400	Eurobond, PGN	Survey and Permit/completion midyear 2006
		Pagardewa - Terbanggi Besar - Labuhan Maringgai (Loop)	32" ; 275 km	400	Eurobond, PGN	Survey and Permit/completion end 2007
		Labuhan Maringgai - Muara Bekasi - Tegal Gede	32" ; 189 km	400	Eurobond, PGN	Survey and Permit/completion end 2007
		Tegal Gede Transmission	16"-24" ; 40 km	400	Eurobond, PGN	Survey and Permit/completion end 2007
3	Banten & West Java (\$241 mln)	Banten & Cilegon Expansion	6"-16" ; 172.7 km	1000	JBIC, WB	Survey and Permit/completion in 2008
		Greater Jakarta Distribution	4"-16" ; 250 km	1000	WB, PGN	Study and Permit/ completion 2006
		West Java distribution	8"-16" ; 212 km	1000	Loan, PGN	Study and Permit/ completion 2008
4	Duri - Dumai - Medan (\$405 mln)	Dumai - Simpang Dumai	28" ; 173 km	350	Loan, PGN	Study and Permit/completion in 2006
		Simpang Dumai - Kwala Tanjung	28" ; 314 km	350	Loan, PGN	Study and Permit/completion in 2007
		Kwala Tanjung - Asahan Power	20" ; 20 km	350	Loan, PGN	Study and Permit/completion in 2007
		Kwala Tanjung - Simpang Dumai	28" ; 179 km	350	Loan, PGN	Study and Permit/completion in 2008
		North Sumatra Distribution Extension	16" ; 200 km	150 - 250	Loan, PGN	Study and Permit/completion in 2009
5	East Kalimantan - Central Java (\$1220 mln)	Kuala Badak - Balikpapan	42" ; 100 km	1100	ADB, EIB, WB, Grants, PGN	Feasibility study/completion in 2008
		Balikpapan - Banjarmasin	42" ; 519 km	1100	ADB, EIB, WB, Grants, PGN	Study/completion in 2010

## APPENDIX 11: NATURAL GAS

No	Trans. Projects	Sub Transmission Projects	Size; length	Flowrate MMSCFD	Funding Sources	Status/Schedule
		Banjarmasin - Semarang	42" ; 600 km	1100	ADB, EIB, WB, Grants, PGN	Study/completion in 2010
		Balikpapan, Samarinda & Banjarmasin Distribution	4'-6'; 152 km	n.a	ADB, EIB, WB, Grants, PGN	Study/completion in 2010
6	East Java - West Java (\$540 mln)	Gresik - Semarang	28" ; 250 km	700	ADB, Grants, PGN	Study/completion 2010
		Semarang - Cirebon	42" ; 230 km	700	ADB, Grants, PGN	Study/completion 2010
		Cirebon - Muara Bekasi	42" ; 220 km	700	ADB, Grants, PGN	Study/completion 2010
		East & Central Java Distribution	4"-6" ; 300 km	700	ADB, Grants, PGN	Study/completion 2010
7	Sengkang - Makassar (\$110 mln)	Kampung Baru - Pare Pare - Makassar	10"-18" ; 210 km	63 - 88	Loan, PGN	Feasibility study/completion in 2011

Source: PGN

## APPENDIX 12: LNG AND LPG

### APPENDIX 12.1: LNG PRODUCTION AND EXPORT (1,000 MT)

	2000	2001	2002	2003	2004
<b>Production</b>	<b>27,321.00</b>	<b>24,343.70</b>	<b>26,253.65</b>	<b>26,771.62</b>	<b>25,237.8</b>
PT. Arun	6,706.10	2,999.80	6,375.41	6,633.98	5,660.3
PT. Badak	20,614.90	21,343.90	19,878.24	20,137.64	19,577.5
<b>Exports</b>	<b>26,990.10</b>	<b>23,882.50</b>	<b>26,214.50</b>	<b>26,433.34</b>	<b>25,494.8</b>
PT. Arun	6,747.00	2,822.80	6,249.70	6,429.20	5,855.3
PT. Badak	20,243.10	21,059.70	19,964.80	20,004.15	19,639.5

Source: Migas-Production & Trade

Note: Exports may exceed production because of drawdowns of reserves/storage.

### APPENDIX 12.2: LNG EXPORT

Year	Total	Total	Total
	(Mln MBTU)	(1000MT)	(USD million)
1995	1,287	24,899	3,856
1996	1,370	26,505	4,730
1997	1,388	26,896	4,735
1998	1,396	26,974	3,390
1999	1,502	28,956	4,489
2000	1,400	26,990	6,802
2001	1,239	23,883	5,375
2002	1,360	26,215	5,595
2003	1,370	26,433	6,586
2004	1,322	25,495	7,722

Source: Migas-Trade

### APPENDIX 12.3: LNG EXPORT BY DESTINATION (1,000 MBTU)

Destination	2000	2001	2002	2003	2004
Japan	933,660	870,978	714,426	923,707	841,969
Korea	320,766	212,323	200,884	263,015	275,594
Taiwan	145,398	155,484	120,232	114,132	204,852
<b>TOTAL</b>	<b>1,400,024</b>	<b>1,238,785</b>	<b>1,035,543</b>	<b>1,300,854</b>	<b>1,322,415</b>

Source: Migas-Trade

## APPENDIX 12: LNG AND LPG

### APPENDIX 12.5: LPG PRODUCTION (MT)

	2000	2001	2002	2003	2004
<b>Total Refineries (Oil+Gas)</b>	<b>2,087,669</b>	<b>2,187,677</b>	<b>2,099,756</b>	<b>2,023,981</b>	<b>2,016,001</b>
<b>Oil Refinery</b>	<b>766,632</b>	<b>772,143</b>	<b>814,177</b>	<b>911,188</b>	<b>896,395</b>
Dumai	76,195	60,810	43,416	n/a	63,250
Musi	69,721	101,963	121,070	n/a	134,276
Cilacap	144,975	146,347	144,768	n/a	148,113
Balikpapan	127,969	94,513	104,437	n/a	120,315
Balongan	347,772	368,510	400,486	n/a	430,441
<b>Gas Refinery</b>	<b>1,321,037</b>	<b>1,415,534</b>	<b>1,285,579</b>	<b>1,112,793</b>	<b>1,119,606</b>
Arun/ExxonMobil	-	-	-	-	-
Badak/Vico	862520	1063022	823434	879049	854,136
Arjuna/Bp	204,913	114,101	161,172	25,266	147,224
Santan/Union	177,084	173,494	172,525	156,322	0
Mundu/Pertamina	11,544	9,314	9,533	9,255	9,457.00
Arar	4,433	4,072	678	566	1,474
Pangkalan Brandan	60,542	51,531	48308	42335	38,337
Jabung	-	-	-	-	68,978

Source: Migas-Production

### APPENDIX 12.6: LPG PRODUCTION, DOMESTIC SALES AND EXPORTS

Year	Production (MT)	Domestic Sales (MT)	Exports Volumes (MT)	Exports Value US\$Mln	Price (\$/MT)
1990	2,745,884	317,419	2,602,057	378	145.4
1991	2,756,504	361,593	2,528,844	345	136.5
1992	2,785,009	413,852	2,470,334	356	144.0
1993	2,872,072	506,055	2,548,056	329	129.0
1994	2,894,219	548,250	2,566,495	343	133.6
1995	2,941,345	629,354	2,493,301	468	187.5
1996	3,227,664	810,436	2,709,320	547	202.0
1997	2,786,651	828,930	2,132,917	516	242.1
1998	2,343,944	799,900	1,761,305	257	146.0
1999	2,263,518	906,326	1,745,383	339	194.3
2000	2,087,669	982,700	1,306,318	394	301.4
2001	2,187,677	1,022,000	1,484,484	389	261.8
2002	2,099,756	830,044	1,269,712	312	245.4
2003	2,023,981	917,557	1,106,424	330	297.8
2004	2,016,001	981,731	1,034,270	334	345.0

Source: Migas-Trade

## APPENDIX 12: LNG AND LPG

### APPENDIX 12.7: LPG EXPORTS BY DESTINATION (MT)

Volume in 1,000 MT	Value in US\$ 1,000				
	2000	2001	2002	2003	2004
<b>Volumes (1,000 MT)</b>	<b>1,306.3</b>	<b>1,484.5</b>	<b>1,269.7</b>	<b>1,106.6</b>	<b>1,034.3</b>
Japan	943.8	1,169.2	879.4	882.3	836.2
HongKong	90.5	35.7	-	-	-
Taiwan	1.7	93.5	10.6	-	-
Australia	30.4	51.8	8.5	7.0	9.2
Singapore	3.5	13.3	1.6	21.7	-
Philippines	31.5	17.1	57.3	34.9	35.2
China	151.8	21.8	243.3	82.0	45.8
Others	53.1	82.1	69.0	78.7	108.0
<b>Values (US\$ '000)</b>	<b>393,708</b>	<b>388,605</b>	<b>411,571.0</b>	<b>137,743.8</b>	<b>333,676.9</b>
Japan	290,332	309,793	n/a	n/a	n/a
HongKong	25,110	10,517	n/a	n/a	n/a
Taiwan	479	20,566	n/a	n/a	n/a
Australia	8,472	13,532	n/a	n/a	n/a
Singapore	1,061	6,310	n/a	n/a	n/a
Philippines	10,329	7,044	n/a	n/a	n/a
Others	57,925	20,843	n/a	n/a	n/a

Source: Migas-Trade

## APPENDIX 13: PRIMARY ENERGY

### APPENDIX 13.1: PRIMARY ENERGY CONSUMPTION (MILLION BARRELS OF OIL EQUIVALENT)

Year	Oil		Natural Gas		Coal		Hydro		Geothermal		Total
	Oil	%	Gas	%	Coal	%	Hydro	%	mal	%	
1995	286.6	52.7	198.6	36.5	41.8	7.7	12.5	2.3	4.2	0.8	543.6
1996	310.8	52.5	212.4	35.9	50.6	8.6	13.2	2.2	4.5	0.8	591.5
1997	336.4	54.2	210.4	33.9	60.1	9.7	8.8	1.4	5.4	0.9	621.2
1998	318.9	53.7	183.4	30.9	68.2	11.5	16.1	2.7	7.4	1.2	593.9
1999	343.0	51.9	209.8	31.7	85.0	12.9	15.4	2.3	7.5	1.1	660.7
2000	368.0	52.0	213.1	30.1	100.4	14.2	16.9	2.4	9.2	1.3	707.5
2001	380.4	50.4	221.0	29.3	122.4	16.2	19.1	2.5	11.8	1.6	754.7
2002	389.2	50.0	227.6	29.3	131.9	17.0	16.9	2.2	12.2	1.6	777.8
2003	395.1	50.9	220.3	28.4	131.2	16.9	17.6	2.3	12.3	1.6	776.5
2004	401.0	49.1	222.3	27.2	162.7	19.9	18.3	2.2	12.3	1.5	816.6

Source: BP Statistical Review of World Energy and MIGAS

## APPENDIX 14: PETROCHEMICALS

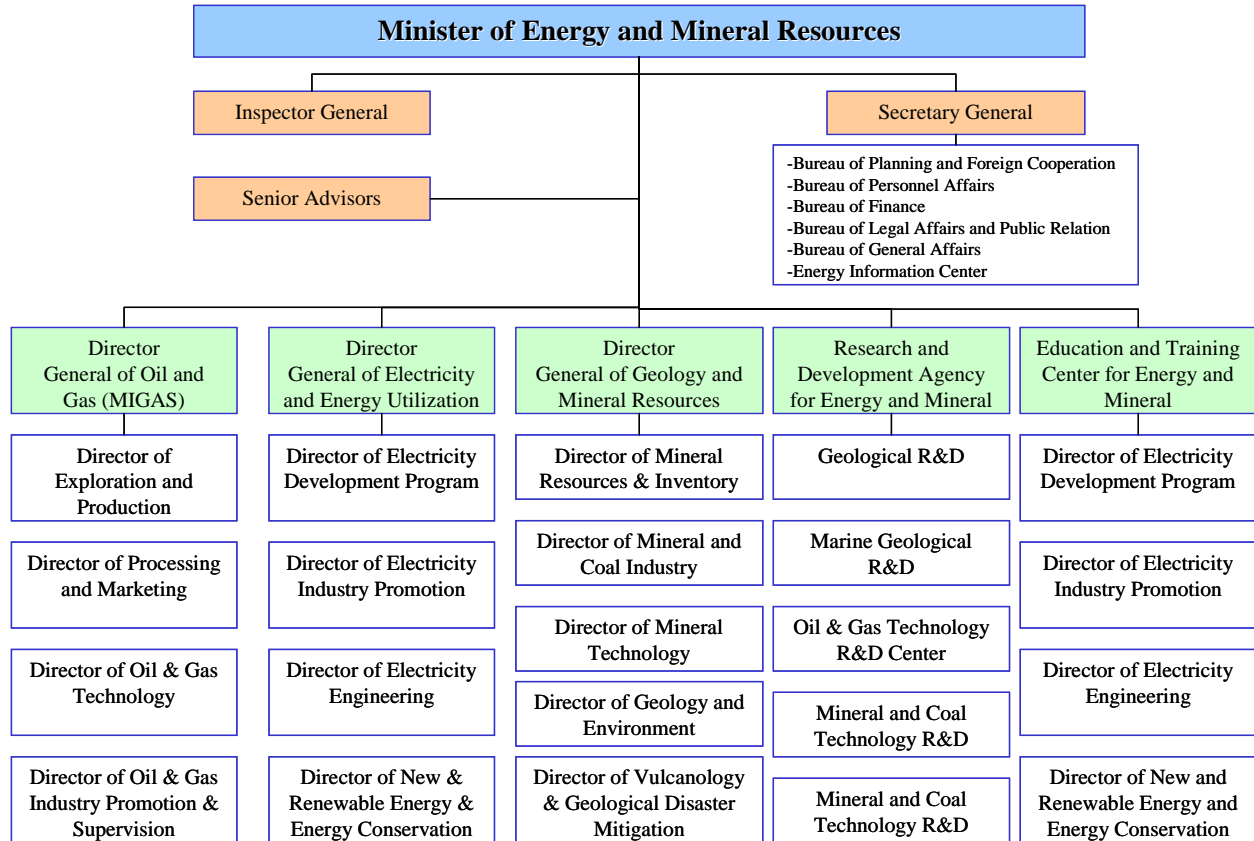
### APPENDIX 14.1: PETROCHEMICAL INDUSTRY IN INDONESIA (1000 MT)

Product Name	Annual Capacity	Production				Utilization
		2001	2002	2003	2004	2004
<b>Upstream Chemical</b>						
Ethylene	550	385	402	395	409	74.3%
EDC	467	388	400	398	412	88.2%
VCM	500	390	395	398	412	82.4%
Polyethylene (PE)	750	408	435	430	445	59.3%
Poly Vinyl Chloride (PVC)	589	336	346	350	362	61.5%
Ethylene Glycol	220	198	202	203	210	95.5%
Propylene and derivatives						
Propylene and derivatives	530	327	337	340	352	66.5%
Polypropylene (PP)	605	472	481	450	508	83.9%
Polyol	35	31	32	35	36	103.6%
<b>Aromatics</b>						
Benzene and derivatives						
Benzene	123	105	108	110	114	92.7%
AB Styrene	15	15	12	12	13	83.3%
Styrene Monomer	220	140	144	146	151	68.8%
Polystyrene	116	65	67	68	70	60.7%
Styrene Acrylonitrile (SAN)	20	17	18	19	20	97.9%
NTC	46	34	35	37	38	83.3%
Alkyl Benzene (AB)	220	183	188	189	196	89.0%
AB Sulfonat	180	153	157	156	162	89.6%
<b>Paraxylene and derivatives</b>						
Paraxylene and derivatives	270	202	208	211	219	81.0%
Pure Terephthalic Acid (PTA)	1,975	1,530	1,576	1,580	1,637	82.9%
Malaic Anhydride (PA)	15	11	11	10	10	69.1%
Phthalic Anhydride (PA)	70	59	61	59	61	87.3%
Polyethylene Terephthalane (PET)	166	139	161	159	165	99.4%
Alkyd Resin	68	55	58	55	57	84.4%
Synthetic Resin Dispersin (SRD)	154	90	95	93	96	62.6%
DOP	97	83	84	83	86	88.6%

Source: MOIT-Upstream Chemical

# APPENDIX 15: GOVERNMENT ORGANIZATION

## APPENDIX 15.1: ORGANIZATION CHART OF THE MINISTRY OF ENERGY AND MINERAL RESOURCES



\*) Formerly Ministry of Mines and Energy  
Name changed in August 2000

## APPENDIX 15: GOVERNMENT ORGANIZATION

### APPENDIX 15.2: SELECTED KEY OFFICIALS OF THE MINISTRY OF ENERGY AND MINERAL RESOURCES

Head Office: Jalan Merdeka Selatan 18, Jakarta

Tel: (021) 380-4242 Fax: (021) 381-0839

[www.esdm.go.id](http://www.esdm.go.id)

**Minister: Dr. Purnomo Yusgiantoro, MSc, MA**

Tel: 381-3232 Fax: 384-6596

[www.mesdm.net](http://www.mesdm.net)

**Dr. Ir. Luluk Sumiarso**

**Secretary General**

Tel: (021) 384-0686, Fax: (021) 384-1896

[www.setjen.esdm.go.id](http://www.setjen.esdm.go.id)

Drs. Djoko Darmono

Inspector General

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[www.itjen.esdm.go.id](http://www.itjen.esdm.go.id)

Dr. Ir. Thamrin Sihite, ME

Head of Planning & Foreign Cooperation Bureau

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Sutisna Prawira SH. .

Head of Legal and Public Relation Bureau

Tel: (021) 381-0848 Fax: (021) 348-1308

Dra. Nenny Sri Utami Poerwoto

Expert Staff for Economy and Finance

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Dr. Ir. Sukmasaleh Hasibuan, M.E

Head of Information Center for Energy

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Teguh Pramudji SE, MBA

Secretary to Directorate General of Oil and Gas

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Ir. Novian M. Thaib, MM

Director, Upstream Development

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Erie Soedarmo, ME, PhD

Director, Downstream Development

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Ir. Indrayana C. SE, MSi

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Ir. Wayan Suryana

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## APPENDIX 15: GOVERNMENT ORGANIZATION

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**Director General**

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Director of Electricity Program Supervision

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Ir. J. Purwono

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Ir. Johnni R. Simanjuntak

Director of Electricity Engineering

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Ir. Ratna Ariati FL., MSc

Director of New and Renewable Energy and  
Energy Conservation

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Head of Research and Dev Agency

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### **Education and Training Agency for Energy and Mineral (Balitbang)**

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Telp : (021)522-8424 Fax: (021)522-8316

[www.diklat.esdm.go.id](http://www.diklat.esdm.go.id)

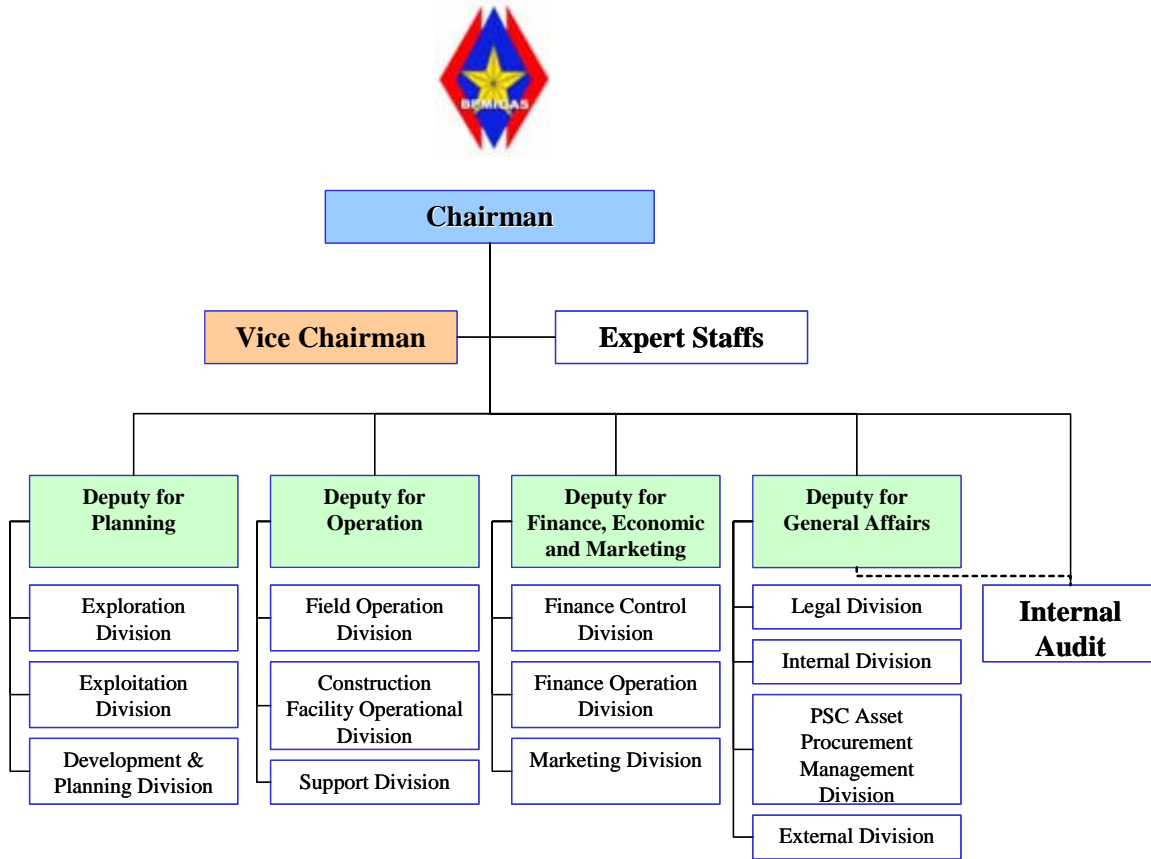
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# APPENDIX 15: GOVERNMENT ORGANIZATION

## APPENDIX 15.3: ORGANIZATION CHART OF BP MIGAS



## APPENDIX 15: GOVERNMENT ORGANIZATION

### APPENDIX 15.4: SELECTED KEY OFFICIALS OF OIL AND GAS EXECUTIVE BOARD (BP MIGAS)

Address: Gedung Patra Jasa Lantai 1,2,13,14,16,21,22

Jl Gatot Subroto Kav 32-34, Jakarta

Tel: 529-00245 – 48

[www.bpmigas.com](http://www.bpmigas.com)

**Dr. Kardaya Warnika**

**Chairman**

Tel. 5290-0090 Fax: 5290-0119

Ir. R S Trijana Kartoatmodjo, MSc, Phd.

Vice Chairman

Tel. 5290-0092 Fax: 5290-0011

Achmad Luthfi

Deputy for Planning

Tel. 5290-0091 Fax: 5290-0009

Dodi Hidayat

Deputy for Operation

Tel. 5290-0092 Fax: 5290-0011

Ir. Eddy Purwanto, MBA

Deputy for Economy, Finance and Marketing

Tel. 5290-0248 Fax: 5290-0119

Bangun Usman Harahap

Deputy for General affairs

Tel. 5290-0013 Fax: 5290-1166

vacant

Head of Exploration Division

Tel. 5290-0002 Fax: 5290-0009

Ir. Kuswo Wahyono

Head of Exploitation Division

Tel.5290-0245 Ext 6441 Fax: 5290-0009

vacant

Head of Development and Planning

Tel. 5290-0245 Fax: 5290-0009

Sumitro Kardi R

Head of Field Operation Division

Tel. 5290-0247 Fax: 5290-0119

I Gede Pradnyana

Head of Facility and Construction

Tel. 5290-0245 Fax: 5290-0119

Mulyani Wahyono

Head of Operational Supports

Tel. 5290-0246

Dra. Ingrid PL Tobing MM

Head of Financial Control Division

Tel. 5290-0878 Fax: 5290-0019

Sudjarjono

Head of Finance Operation Division

Tel. 5290-0245 Fax: 5290-0119

Ir. Djoko Harsono

Head of Marketing Division

Tel. 5290-0245 Fax: 5290-0119

Allan Frederick SH

Head of Legal Affairs Division

Tel. 5290-0248 Fax: 5290-0119

Hardiono

Head of Internal Affairs Division

Tel. 5290-0246 Fax: 5290-0119

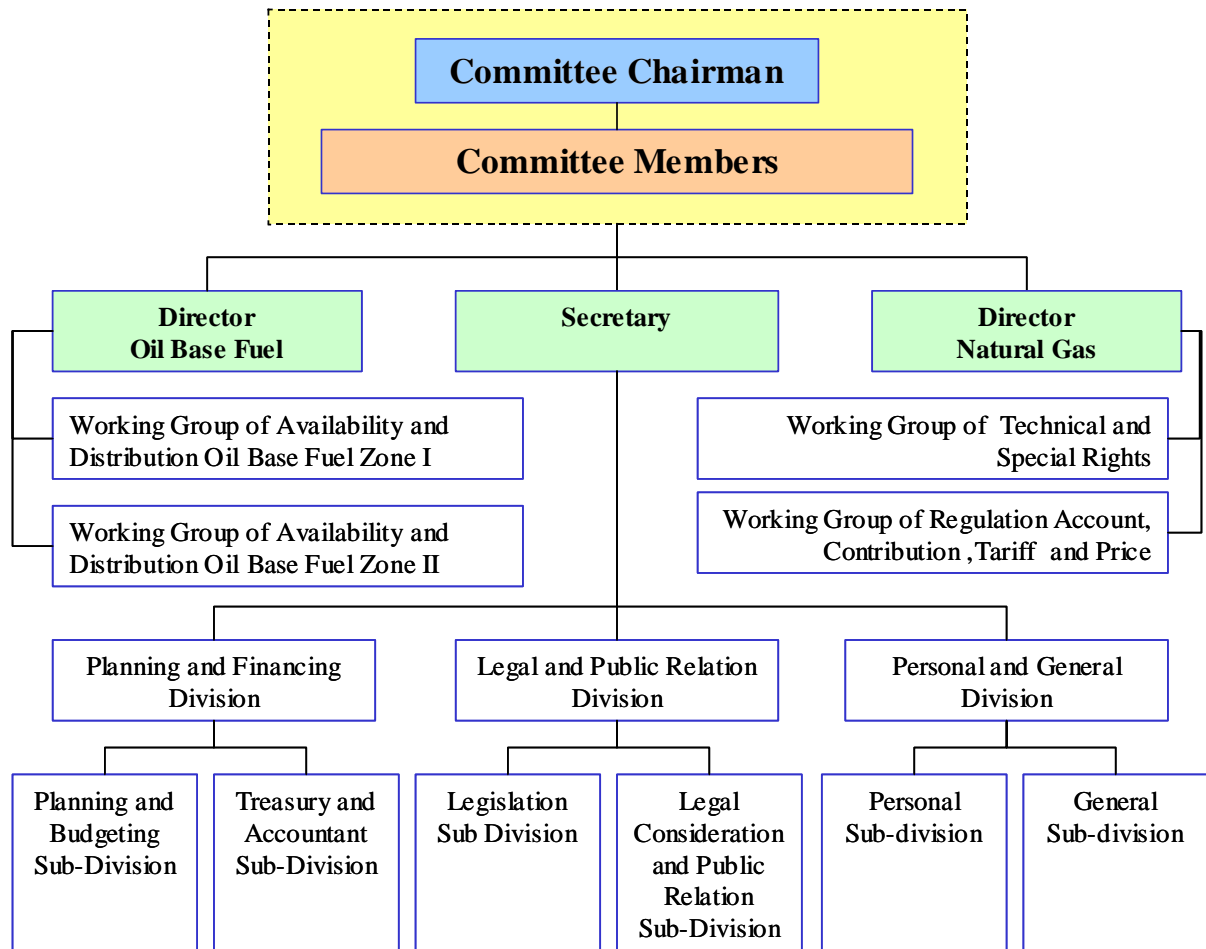
Bambang Kartika

Head of External Affairs Division

Tel. 5290-0892

# APPENDIX 15: GOVERNMENT ORGANIZATION

## APPENDIX 15.5: ORGANIZATION CHART OF DOWNSTREAM REGULATORY BODY (BPH MIGAS)



## APPENDIX 15: GOVERNMENT ORGANIZATION

### APPENDIX 15.6: REGULATORY BODY FOR OIL AND GAS DOWNSTREAM ACTIVITY (BPH MIGAS)

Office: Jl Gatot Subroto Kav 49, 4th Floor, Jakarta 12950

Tel: (021) 525-4269, Fax: (021)

[www.bphmigas.go.id](http://www.bphmigas.go.id)

**Tubagus Haryono**

**Head of BPH MIGAS/ Committee Chairman**

Tel. (021) 525-1180

Dra. Lubna Amir

Committee Member

Tel. (021) 525-1180

Dr. Amal Ramlan Ginting

Committee Member

Tel. (021) 525-4269 Fax. (021) 525-0319

Eri Purnomohadi

Committee Member

Tel. (021) 525-1180

Iwan Faldi

Committee Member

Tel. (021) 525-1180

Ir. Hanggono T Nugroho

Committee Member

Tel. (021) 525-1180

Shahabudin

Committee Member

Tel. (021) 525-4249

Ir. Hairiyati

Committee Member

Tel. 525-0319 Fax. 525-0319

Adi Subagyo Subono

Director of Oil Base Fuel

Tel. 525-4269 Fax. 525-0319

Nafrizal Sikumbang

Director Natural Gas

Tel. 527-7602 Fax. 525-0319

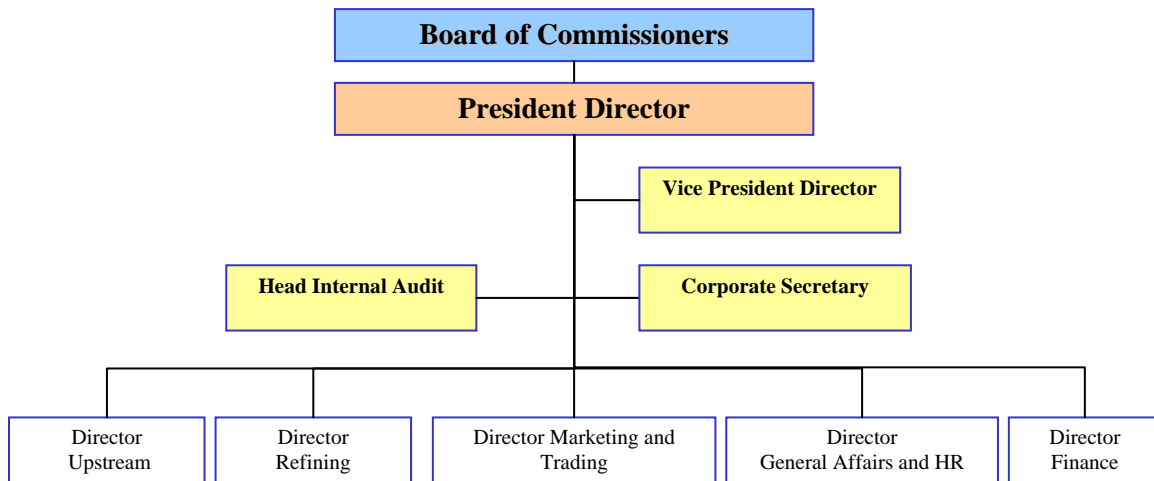
Ir. Heru Wahyudi

Secretary to the Regulatory Agency

Tel. (021) 525-1180

## APPENDIX 15: GOVERNMENT ORGANIZATION

### APPENDIX 15.7: PERTAMINA ORGANIZATION CHART



### Appendix 15.8: Pertamina Board of Commissioner

President Commissioner

Martiono Hadianto

Tel. (021) 381-5053

Commissioners :

Ir. Roes Aryawijaya  
Deputy State Minister for State Enterprises  
Wisma Danamon, Aetna Life 26th Fl  
Jl. Jendral Sudirman Kav 45-46, Jakarta  
Tel. 577-2776 Ext. 1126, Fax: 577-0961

J. Purwono  
Expert staff to the Minister of State Owned  
Enterprise  
Tel. (021) 351-0491, Fax. (021) 351-0491

Muhammad Abduh  
Tel. (021) 381-5040

Dr. Umar Said  
Lemigas No.8  
Kebon Nanas, Jakarta 12210  
Tel: (021) 548-3764, Fax: (021) 535-7446

## APPENDIX 15: GOVERNMENT ORGANIZATION

### APPENDIX 15.9: SELECTED KEY PERTAMINA OFFICIALS

#### Indonesia State Oil and Gas Company (PERTAMINA)

Head Office: Jalan Merdeka Timur 1A, Jakarta  
Tel: 381-5111, 381-611, Fax: 384-3882, 384-68651  
[www.pertamina.com](http://www.pertamina.com)

#### **President Director: Arie H Soemarno**

Tel: 381-5200, 384-7246, Fax: 384-6859  
a\_soemarno@pertamina.com

Iin Arifin Takhyan  
Deputy President Director/VP  
Tel. (021) 3815410

Sukusen Sumarinda  
Director of Upstream  
Tel. (021) 381-5410

Suroso Atmomartoyo  
Director of Refining  
Tel. (021) 381-5410

Achmad Faisal  
Director – Marketing and Trading  
Tel: (021) 381-5500

Frederick ST Siahaan  
Director of Finance  
Tel: 345-7585, 381-6000, Fax: 345-2958

Sumarsono  
Director of General Affairs and Human  
Resources  
Tel. (021) 381-5700

Sudradjat  
Corporate Secretary  
Tel. (021) 381-5200

Luhur Budi Djatmiko  
Head of Internal Auditor  
Tel. (021) 381-5200

## APPENDIX 15: GOVERNMENT ORGANIZATION

### APPENDIX 15.10: PERTAMINA OVERSEAS REPRESENTATIVES

Tokyo: Mr. Soekono Wahjoe  
Imperial Tower 12F  
1-1-1 Uchisaiwai-cho, Chiyoda-ku  
Tokyo 100-0011 Japan  
Tel: +81-3-3502 8221/5, Fax: +81-3-3502-5637

### APPENDIX 15.11: PERTAMINA AFFILIATE MARKETING OFFICES AND SELECTED JOINT VENTURE COMPANIES

#### **Arun NGL Co**

Aknasio Sabri, President Director  
Wisma Nusantara 11st Fl  
Jl. MH Thamrin No. 59, Jakarta  
Tel. : (021) 314-3107 Fax : (021) 330-351

East Tower 11F, Akasaka Twin Tower, 17-22  
Akasaka 2-Chome, Minato-ku, Tokyo, Japan  
Tel: +81-3-5562-6500  
Fax: +81-3-5562-6504

#### **Badak NGL Co**

Wahjudi Suhartono, President Director  
Wisma Nusantara 9th Fl  
Jl. MH Thamrin No. 59, Jakarta  
Tel. : (021) 3193-6317, Fax : (021) 314-2974  
[www.badaklng.co.id](http://www.badaklng.co.id)

Jakarta Representative Office  
Didid Purwoko, Chief Rep  
Skyline Building, 14th Floor  
Jl. M. H. Thamrin 9, Jakarta  
Tel: 314-3415, 314-1708, Fax: 314-0732

#### **KIPCO (Korea-Indonesia Petroleum Company Ltd.)**

4th Floor, Building 221-5 Nonhyun-  
Dong Kangnam-Ku, Seoul, Korea 135-010  
Tel: (822) 518-1390-2 Fax: (822)518-3204

#### **Pertamina Energy Trading Ltd. (PETRAL)**

Hanung Budya, President Director  
Suite 608 Dah Sing Financial Center  
108 Glougestor Road  
Wanchai, Hong Kong  
Tel: +852-2802-2108, 2824-9802

#### **Jakarta Office**

Wisma Nusantara, 25th Floor  
Jl. M.H. Thamrin 59, Jakarta  
Tel: 326-784, 331-608 Fax: 331-264

#### **Jakarta Liaison Office**

Sudirman Tower, 7th Floor  
Jl. Jend. Sudirman Kav 60, Jakarta  
Tel: 521-2850, Fax: 521-2858

#### **Nusantara Gas Services Co.**

Nakanoshima Center Bldg. 23F, 6-2-27  
Nakanoshima, Kita-ku, Osaka City, Japan

#### **Permindo Trading Co.**

Wisma Bakrie Bld. 3rd Floor  
Jl. H.R. Rasuna Said Kav B1, Jakarta  
Tel: 525-0120, 525-0810, Fax: 525-3480

#### **Pacific Petroleum and Trading Co. Ltd.**

Burhanuddin Hassan, President Director

## APPENDIX 15: GOVERNMENT ORGANIZATION

### APPENDIX 15.12: SELECTED KEY PGN OFFICIALS

Indonesia State Gas Company (PGN):  
Head Office: Jl. K. H. Zainul Arifin No. 20, Jakarta 11140  
Tel : 633-4838, Fax: 633-3080

#### **President Director**

**Drs. W M P Simandjuntak**

Tel: 633-9524 Fax: 633-7784

Ir. Adil Abas Reksoatmodjo  
Director, Corporate Dev  
Tel: 633-9525 Fax: 633-1304

Drs. Djoko Pramono MBA  
Director, Financial Affairs  
Tel: 633-4860 Fax: 633-1303

Ir. Uji Subroto Santoso MM  
Head, Planning & Engineering Division  
Tel. 633-1302 Ext. 2110

Ir. Hari Pratoyo MM  
Head, Transmission and Distribution  
Division  
Tel. 633-4868 Ext 3200

Dra. Sri Budi Mayaningsih MM  
Head, Business Risk Management  
Tel. 633-4868 Ext. 4100

Drs. Sutikno MSi  
Director, General Affairs  
Tel: 633-9526 Fax: 633-1109

Ir. Nursubagio Prijono, MSc  
Director, Business Affairs  
Tel. 634-1203 Fax: 634-8616

Ir. Herman Usman MBA  
Head, Dev Division  
Tel. 633-4868 ext. 2200

Ir. Bambang Ismantono  
Head, Marketing Division  
Tel. 633-4868 Ext 3100

## APPENDIX 16: OIL CONTRACTS

### APPENDIX 16.1: ACTIVE OIL CONTRACTS

No.	Sign Date	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current)	Exp. Expenditure (US \$Mln)	Contract Type/ Status
	(ext)				(Km2)		
<b>Sumatra and Surrounding Areas</b>							
1	Sep-61	<b>ConocoPhilips</b> (50%)	Block A	Ons, Aceh	3,133	N/A	PSC
	(07-89)	ExxonMobil (50%)			(1,803)		
2	Feb-81	<b>ExxonMobil</b> (100%)	Pase	Ons, Aceh	2,305 (920)	12	PSC Prod
3	May-97	<b>Medco Moeco</b> (70%)	East Aceh	Offs, East Aceh	77	25.4	TAC
		Pertamina (30%)	Langsa				
4	Dec-04	<b>Transworld Exp.</b> (100%)	Seruway	Offs, Aceh	N/A	N/A	PSC
5	Oct-05	<b>Zarutex NV</b> (100%)	Lhokseumawe	Ons/ Offs, Aceh	5,908	N/A	PSC
6	Sep-67 (07-89)	<b>ExxonMobil</b> (100%)	B Block	Ons, North Sumatra	3,745 (1,496)	8.4	PSC Prod
7	Oct-68 (08-92)	<b>ExxonMobil</b> (100%)	North Sumatra Offs (NSO)	Offs, North Sumatra	35,767 (15,695)	5.5	PSC Prod
8	Aug-70 (12-97)	<b>Kondur</b> (34.46%)	Malacca Strait	Ons/ Offs, North Sumatra	39,550 (9,492)	11	PSC Prod
		CNOOC (39.51%)					
		PT. Imbang Tata Alam (26.03%)					
9	Nov-85	<b>Costa Int.</b> (0%)	Gebang	Ons/ Offs, North Sumatra	4,905 (980)	35	JOB Prod
		Pertamina (50%)					
10	Jun-95	<b>Putra Kencana</b>	Basilam	Ons, North Sumatra	N/A	4.7	TAC Prod
11	Dec-96	<b>Serica</b> (55%)	Glagah Tambuna	Ons, North Sumatra	351	52.9	TAC
		Gunakarsa (10%)					
		Duinord (25%)					
		Jagen					
		Greevest					
12	Dec-96	<b>Serica</b> (58.8235%)	Asahan	Ons, North Sumatra	4,200 (2,185)	73.7	PSC Dev
		Medco (15%)					
		Risjad Salim (10%)					
		Greevest (4.045%)					

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
		Jagen (12.132%)					
13	Sep-97	<b>Sinopec Int</b> (80%) Telaga Binjai Energy (20%)	Binjai	Ons, North Sumatra	3,889	17.7	PSC
14	May-97	<b>Putra Batu Mandi Petroleum</b> (100%)	Batumandi	Ons, North Sumatra	22.5	6	TAC
15	Nov-98	<b>PT Putra Kencana Petroleum</b> (61%) Tradewinds (29%)	Diski	Ons, North Sumatra	20	9.9	TAC
16	Sep-99	<b>ENI Lasmo</b> (100%)	Krueng Mane	Offs, North Sumatra	N/A	39.1	PSC
17	May-00	<b>Chevron</b> (100%)	Kisaran	Ons, North Sumatra	4,357	n.a	PSC
18	Sep-98	<b>CNOOC</b> (45%) Lundin (45%)	South Sokang	Offs, Riau	11,250	46.5	PSC
19	Apr-73 (8-01) (8-02)	<b>Pertamina</b> PT Bumi Siak Pusako Ex. Caltex	Coastal Plain Pekanbaru (CPP)	Ons, Riau	21,975 (9,857)	15	PSC Prod
20	Jan-75	<b>Chevron</b> (90%) Pertamina (10%)	Mountain Front, Kuantan (MFK)	Ons, Riau	6,865 (875)	10	PSC Prod
21	May-91	<b>Kalila Bentu</b> (100%)	Bentu	Ons, Riau	3,450 (1,043)	39	PSC - To be developed
22	Sep-91	<b>Petronusa</b> (51%) Petro China (45%) Int. Mineral Resources (4%)	Selat Panjang	Ons, Riau	3,785	19	PSC Prod
23	May-97	<b>Kalila Korinci</b> (100%)	Korinci Baru	Ons, Riau	1,263 (1,069)	19.7	PSC
24	Nov-83 (10-92)	<b>Chevron</b> (100%)	Rokan	Ons, Riau	9,898 (6,264)	n.a	PSC Prod
25	Sep-63 (03-91)	<b>Chevron</b> (100%)	Siak	Ons Central Sumatra	8,314 (2,484)	10	PSC Prod
26	Sep-63 (07-89)	<b>Exspan</b> (100%)	Kampar	Ons, Central & South Sumatra	10,209 (4,470)	10	PSC Prod

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
27	Oct-05	<b>Sumatra Persada Energi</b> (100%)	West Kampar	Ons, Central Sumatra	4,471	n.a	PSC
28	Feb-89	<b>Pertamina</b> (50%)	Merang	Ons, Jambi	3,892 (2,914)	26	JOA/JOB
		YPF-Maxus (25%)					
		Amerada Hess (25%)					
29	Aug-92	<b>PEARL Energy</b> (70%)	Tungkal	Ons, Jambi	9,155 (2,288)	41.5	PSC Prod
		Fuel-X (30%)					
30	Feb-93	<b>PetroChina</b> (45%)	Jabung	Ons, Jambi	8,214 (5,339)	48.8	PSC
		Petronas (45%)					Prod
		Pertamina (10%)					
31	Jan-90	<b>ConocoPhillips</b> (45%)	South Jambi, 'B'	Ons, Jambi	3,850 (1,538)	12	PSC Exp
		PetroChina (30%)					
		Pertamina (25%)					
32	Jul-94	<b>Binawahana</b>	Meruap	Ons, Jambi	246	12.3	TAC
		<b>Petrindo</b> (100%)					Prod
33	Feb-95	<b>PetroChina</b> (50%)	Bangko	Ons, Jambi	3,846	27.9	PSC
		Coastal Indonesia (25%)					
		SK Corp. (25%)					
34	May-97	<b>PT Akar Gilindo</b> (100%)	Tuba Obi Timur	Ons, Jambi	55	38.9	TAC
35	May-97	<b>Petronas</b> (90%)	Tanjung Jabung	Offs, Jambi	8,350	129.7	PSC
		Wirabuana Group (10%)					
36	Oct-03	<b>Exspan</b> (61%)	Merangin I	Ons, Jambi	3,227	n.a	PSC
		PTTEP (39%)					Exp
37	Oct-03	<b>Sele Raya, PT</b>	Merangin II	Ons, Jambi	2,847	n.a	PSC
38	Oct-05	<b>Endeavour Energy</b> (100%)	Bengkulu	Ons/Offs, Bengkulu	6,277	n.a	PSC

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km <sup>2</sup> )	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
39	Oct-68	<b>ConocoPhilips</b> (60%)	Corridor Block	Ons, South Sumatra	1,154  (481)	n.a	TAC
	Amend . 83 (04-89)	Talisman (40%)					Prod
40	Apr-73	<b>Exspan</b> (95%)	Rimau	Ons, South Sumatra	3,504 (1,577)	6	PSC
		S.Sumatra Region (5%)					Prod
41	Feb-88	<b>Talisman</b> (50%)	Ogan Koming	Ons, South Sumatra	4,630 (1,155)	40	JOA
		Pertamina (45.75%)					Prod
		Tradewinds (4.25%)					
42	Jul-89	<b>Golden Spike</b> (50%)	Pendopo & Raja	Ons South Sumatra	2,134	37	JOA/JOB
		<b>Pertamina</b> (50%)					Prod
43	Nov-89	<b>Talisman</b>	Tanjung Raya	Ons, South Sumatra	n.a	n.a	EOR Prod
44	Mar-91	<b>Lirik Petroleum</b> (100%)	Lirik	Ons South Sumatra	400	17	EOR Prod
45	Feb-93	<b>Exspan</b> (100%)	Pasemah	Ons, South Sumatra	8,560 (5,130)	20.5	PSC
		Petronas (50%)					
46	Jul-89	<b>Sea Union Energy</b>	Limau	Ons, South Sumatra	213	36	EOR
		Pertamina					Prod
47	May- 01	<b>Buana Sadpetra Sebasa</b>	Mambang Sebasa	Ons, South Sumatra	N/A	N/A	TAC
48	Jun-93	<b>HED Indonesia Inc.</b>	Abab, Raja, Dewa	Ons, South Sumatra	N/A	175	EOR Prod
49	Jan-95	<b>Tradewinds</b> (100%)	Ramok & Senabing	Ons, South Sumatra	26	30.9	TAC Prod
50	Oct-96	<b>Pilona Petro</b>	Tanjung Lontar	Ons, South Sumatra	N/A	28.9	TAC Prod
51	Dec-96	<b>Retco Prima Energy</b> (65%)	Tanjung Miring	Ons, South Sumatra	N/A	23	TAC
		Pertamina (35%)					

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
52	May-97	<b>PT. Insani Mitrasani Gelam</b> (100%)	Sungai Gelam A,B,D	Ons, South Sumatra	55.6	12.8	TAC
53	Sep-97	<b>Energy Equity</b>	Biru Field	Ons, South Sumatra	N/A	n.a	TAC
54	Sep-97	<b>Energy Equity</b>	Talang Babat	Ons, South Sumatra	N/A	n.a	TAC
55	Feb-98	<b>Golden Spike</b> (60%) Pertamina (40%)	Pasiriaman	Ons, South Sumatra	2,280	24	PSC
56	Aug-92	<b>Suryaraya Teladan</b> (100%)	Benakat Block	Ons, South Sumatra	47	35.5	EOR Prod
57	Dec-83 (10-96)	<b>ConocoPhillips</b> (54%) Talisman (36%) Pertamina (10%)	Corridor	Ons, South Sumatra	11,151 (2,359)	n.a	PSC Prod
58	Apr-87	<b>Exspan</b> (74%) Lundin (15%) Serica Energy (11%)	Lematang	Ons, South Sumatra	1,137 (228)	120	PSC Prod
59	Jul-94	<b>Babat Kukui Energy</b> (70%) GFB Resources (30%)	Babat-Kukui	Ons, South Sumatra	9	17.7	TAC Prod
40	05-00	<b>Energy Equity</b>	Gajah Besar	Ons, South Sumatra	39.42	N/A	TAC
41	May-00	<b>Idama Putra Kayapratama</b>	Kaya	Ons, South Sumatra	N/A	N/A	TAC
42	May-00	<b>Binatek Reka Kruh</b>	Kruh	Ons, South Sumatra	N/A	N/A	TAC
43	Nov-01	<b>ConocoPhillips</b> (70%) Pertamina (30%)	Sakakeman g	Ons, South Sumatra	2,683	N/A	JOB
44	Dec-04	<b>Sele Raya</b> (100%)	Belida	Ons, South Sumatra	N/A	N/A	PSC
45	Dec-04	<b>Cahaya Batu Raja</b> (100%)	Air Komeri ng	Ons, South Sumatra	N/A	N/A	PSC

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km <sup>2</sup> )	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
46	Dec-04	<b>Tropik Energi Pandan</b> (100%)	Pandan	Ons, South Sumatra	N/A	N/A	PSC
47	Sep-68 (02-92)	<b>CNOOC</b> (65.54%)	South East Sumatra (SES)	Offs, South Sumatra (Java Sea)	123,995 (11,046)	22.5	PSC Prod
		Inpex Sumatra (13.08%)					
		KNOC (8.9%)					
		MC Oil (5%)					
		Paladin (7.48%)					
48	Oct-05	<b>Erry Guna</b> (100%)	Bungamas	Ons, South Sumatra	2,232	N/A	PSC
<b>Java, Madura, Bali and Surrounding Areas</b>							
49	Jan-67 (04-91)	<b>BP</b> (46%)	Offs North West Java	Offs, West Java	27,677 (11,052)	7.5	PSC Prod
		CNOOC (36.72%)					
		Inpex (7.25%)					
		MC Oil (5%)					
		Itochu (2.58%)					
		Paladin (2.45%)					
50	Jan-95	<b>Tradewinds</b> (100%)	Sukatani	Ons, West Java	12	8.2	TAC
51	Jun-95	<b>KNOC Ltd</b> (90%)	Sambidoyong	Ons, West Java	25	16.9	TAC
		Putra Bakti Mahkota (10%)					
52	Nov-95	<b>Pelangi Haurgelis Resources</b>	Haurgeulis	Ons, West Java	N/A	9.8	TAC
53	Dec-96	<b>Indospec Asia Petroleum</b>	Banga Dua	Ons, West Java	N/A	11.8	TAC
54	Dec-96	<b>Ranya Energy</b>	Pamanukan	Ons, West Java	49	5.2	TAC
55	Sep-97	<b>Kumoco Energy</b> (75%) Pertamina (25%)	Jatiluhur	Ons, West Java	6,374	60.5	JOA/JOB
56	Oct-05	<b>Ranhill</b> (100%)	Citarum	Ons, West Java	4,440	N/A	PSC
57	May-00	<b>Ellipse Energy</b> (100%)	Jatirarangan	Ons, West Java	N/A	N/A	TAC
58	May-01	<b>Star Energy</b> (50%)	Banyumas	Ons, Central Java	5,379	N/A	PSC Exp
		Lundin (25%)					

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
		ConocoPhillips (25%)					
59	Oct-03	<b>Orna Int.</b>	Rembang	Offs, North Central Java	4,220	N/A	PSC
60	Oct-03	<b>Pearl Energy</b> (85%)	Bulu	Offs, North Central Java	3,495	N/A	PSC Exp
		Satria Energindo (10%)					
		Satria Wijaya Kusuma (5%)					
61	May-91	<b>Petronas Carigali</b> (100%)	Muriah	Offs, Java Sea	14,300	75	PSC Dev
62	Dec-93	<b>Kodeco</b> (50%)	Poleng	Offs, Java Sea	41	142	TAC Prod
		CNOOC (50%)					
63	Nov-01	<b>BP Bawean Ltd</b> (55%)	Bawean	Offs, Java Sea	9,559	N/A	PSC
		Santos Bawean (45%)					
64	Dec-03	<b>Serica Energy</b> (90%)	Biliton	Offs, Java Sea	6,575	N/A	PSC Exp
		Mitra, PT (10%)					
65	Feb-81	<b>Camar Resources</b> (70%)	Bawean	Ons/Offs, E. Java	15,130 (3,025)	40	PSC Prod
		Fortune O&G (30%)					
66	Feb-88	<b>PetroChina</b> (25%)	Tuban	Ons, E. Java	7,391 (1,462)	35	PSC/JOB Prod
		Pertamina (50%)					
		Exspan (25%)					
67	Apr-90 (Sep-05)	<b>ExxonMobil</b> (45%)	Cepu	Ons, East/Central Java	1,670	28	PSC
		Pertamina (45%)					
		<i>East &amp; West Java Regional Government</i> (10%)					
68	Oct-96	<b>Lundin BV</b> (40%)	Blora	Ons, E. Java	5,720	27	PSC
		Kufpec (40%)					
		CNOOC (16.7%)					
69	May-	<b>Medco</b> (65%)	North	Ons, E. Java	2,728	63.5	PSC/JOB

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
	97	Pertamina (35%)	Madura				Exp
70	Nov-80 (12-04)	<b>EMP Kangean Ltd</b> (100%)	Kangean	Offs, E. Java	18,035 (4,508)	44	PSC Prod
71	Oct-82	<b>Husky Energy</b> (100%)	Madura Strait	Offs, E. Java	13,970 (2,795)	47.9	PSC - Evaluation for Dev
72	Apr-90	<b>Lapindo</b> (50%) Exspan (32%) Santos (18%)	Brantas	Ons/Offs, E. Java	14,950 (3,050)	56	PSC Prod
73	May- 96	<b>Amerada Hess</b> (66%) ConocoPhillips (12%) Dana Petro. (12%)	Pangkah	Offs, E. Java	3,500 (2,928)	27.1	PSC Dev
74	Dec-97	<b>Santos</b> (45%) SPC (40%) Cue Pty. Ltd. (15%)	Sampang	Offs, E. Java	2,677	39.6	PSC Production
75	Dec-97	<b>Unocal</b> (80%) Eni Lasmo (20%)	Rapak	Offs, E. Java	2,937	27.5	PSC Exp
76	Jun-98	<b>Rims Energy</b> (50%) Petronas Carigali (50%)	Karapan	Offs, E. Java	4,000	49.9	PSC
79	Oct-03	<b>Eksindo Petroleum</b> (100%)	South Madura	Offs, E. Java	1,586	N/A	PSC
77	Oct-03	<b>KNOC</b> (80%) PetroVietnam (20%)	NE Madura I	Offs, E. Java	3,434	10	PSC
78	Oct-03	<b>KNOC</b> (50%) PetroVietnam (20%) SK Corp (30%)	NE Madura II	Offs, E. Java	4,617	N/A	PSC
81	Dec-04	<b>Anadarko</b> (100%)	NE Madura III	Offs E. Java	3,750	N/A	PSC
80	Dec-04	<b>Petronas Carigali</b> (100%)	NE Madura IV	Offs E. Java	3,750	N/A	PSC

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
82	Dec-04	<b>Easco</b> (100%)	East Sepajang	Offs E. Java	N/A	N/A	PSC
83	Oct-05	<b>Greenstar Assets</b> (100%)	East Kangean	Offs, E. Java	5,448	N/A	PSC
84	Dec-97	<b>Santos</b> (75%)	Madura Offs	Offs, Madura	4,246	59.7	PSC Dev
		Petronas Carigali (25%)					
85	May-81	<b>Kodeco</b> (25%)	Java Sea	Offs, West Madura	6,460 (1,607)	63.4	JOA Prod
		CNOOC (25%)					
		Pertamina (50%)					
86	Oct-03	<b>Santos</b> (61.1%)	North Bali I	Offs, Bali	3,869	N/A	PSC
		Total (39.9%)					
87	Jan-91	<b>ConocoPhillips</b> (100%)	Sakala Timur	Offs, West Lombok	10,319 (7,730)	101.5	PSC
<b>Kalimantan and Surrounding Areas</b>							
88	Feb-93	<b>Tradewinds</b> (100%)	North Tanjung	Ons, South and Central Kalimantan	6,564 (3,285)	29.1	PSC
89	Dec-04	<b>ALTAR SA</b> (100%)	Barito	Ons, Central Kalimantan	n.a	n.a	PSC
90	Aug-68 (04-90)	<b>Vico</b> (7.5%)	Sanga Sanga	Ons, E. Kalimantan	11,920 (5,782)	5.5	PSC Prod
		Opic Oil (20%)					
		Universe (4.4%)					
91	Oct-68 (03-89)	<b>Exspan</b> (100%)	Sang-Sanga, Tarakan, Samboja	Ons, E. Kalimantan	180	N/A	TAC Prod
92	Oct-88	<b>Total</b> (25%)	Tengah	Ons, E. Kalimantan	1,534	11	JOA/JOB Prod
		Inpex (25%)					
		Pertamina (50%)					
93	Dec-93	<b>Exspan</b> (100%)	Sembakung	Ons, E. Kalimantan	23.37	34	TAC Prod
94	Nov-95	<b>Sembrani Persada Oil</b> (100%)	Semberah	Ons, E. Kalimantan	40.5	83.2	TAC
95	Oct-96	<b>Garis Asta Tunggal</b> (100%)	Bangkudulis	Ons, E. Kalimantan	19	7.3	TAC
96	Oct-68 (01-91)	<b>Unocal</b> (92.5%)	West Pasir	Offs, E. Kalimantan	25,635	4	PSC Prod
		Inpex (7.5%)					

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
97	Mar-67  (01-91)	<b>TotalFinaElf</b> (50%)	Offs Mahakam	Offs, E. Kalimantan	16,330	3.8	PSC Prod
		Inpex (50%)			(6,294)		
98	Jan-90	<b>Unocal</b> (90%)	Makassar Strait Block A&B	Offs, E. Kalimantan	5,880	49.2	PSC
		Pertamina (10%)			(3,516)		
99	Oct-68 (01-91)	<b>Unocal</b> (50%)	Attaka	Offs, E. Kalimantan	145	30	PSC Prod
		Inpex (50%)					
100	May- 97	<b>Total</b> (50%)	Saliki	Offs, E. Kalimantan	404	14.7	PSC - In process of termination
		Inpex (50%)					
101	Sep-97	<b>Pearl Resources</b> (50%)	Sebuku	Offs, Makasar Strait	8,773	27	PSC Exp
		Fuel-X (50%)					
102	Sep-97	<b>Unocal</b> (80%)	Sesulu	Offs, E. Kalimantan	2,797	17.5	PSC Exp
		Eni Lasmo (20%)					
103	Feb-98	<b>Unocal</b> (80%)	Ganal	Offs, E. Kalimantan	5,050	37	PSC Exp
		Eni Lasmo (20%)					
104	Feb-98	<b>Medco</b> (62.5%)	Simenggari s	Offs, E. Kalimantan	2,734	64	PSC/JOB - Exp
		Pertamina (37.5%)			(2,046)		
105	Feb-98	<b>Eni Ltd</b> (55%)	Bukat	Offs, E. Kalimantan	6,250	48	PSC
		Unocal (45%)					
106	Jun-98	<b>ConocoPhillips</b> (50 %)	Ketapang	Offs, North Madura	4,433	43.9	PSC
		Petronas (50%)			(3,322)		
107	Nov-98	<b>Unocal</b> (100%)	Lompa	Offs, Makasar Strait	10,268	24.5	PSC Exp
108	Sep-99	<b>Exspan</b> (95%)	Bengara-I	Offs E. Kalimantan	4,614	25	PSC - Exp
		Satria Energindo (5%)			(3,649)		
		GeoPetro (40%)					
109	Dec-97	<b>Continental</b> (60%)	Bengara-II	Ons/Offs E. Kalimantan	4,867	N/A	PSC Exp

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
110	Sep-99	<b>ENI (55%)</b>	Ambalat	Offs, E. Kalimantan	N/A	16.5	PSC
		Unocal (45%)					
111	Nov-01	<b>Amerada Hess</b>	Tanjung Aru	Offs, Makassar Strait	4,160	N/A	PSC
		Petronas					
		Unocal					
		Pertamina					
112	Nov-01	<b>Unocal (19.55%)</b>	Donggala	Offs, Makassar Strait	N/A	N/A	PSC
		Santos (65.45%)					
		Pertamina (15%)					
113	Nov-01	<b>Zodan NV (31%)</b>	Popodi	Offs, Makassar Strait	5,420	18	PSC Exp
		Santos (20%)					
		Agip (25%)					
		Unocal (24%)					
114	Nov-01	<b>Unocal (24%)</b>	Papalang	Offs, Makassar Strait	4,200	17	PSC
		Santos (20%)					
		Zudavi NV (31%)					
		ENI (25%)					
115	Dec-02	<b>ENI Lasmo (50%)</b>	Muara Bakau	Offs, Makassar Strait	N/A	N/A	PSC
116		Unocal (50%)					
117	Oct-03	<b>Medco E&amp;P (100%)</b>	Tarakan	Offs, E. Kalimantan	639 (180)	N/A	PSC Prod
118	Dec-04	<b>Medco E&amp;P (100%)</b>	Nunukan	Offs, NorthE. Kalimantan	4,917	N/A	PSC Exp
119	Dec-04	<b>Unocal (100%)</b>	East Ambalat	Offs, E. Kalimantan	N/A	N/A	PSC
120	Dec-04	<b>ENI (100%)</b>	Bulungan	Offs, E. Kalimantan	N/A	N/A	PSC
121	Dec-04	<b>Kutai Etam Petroleum (100%)</b>	Seinangka- Senipah	Offs, E. Kalimantan	N/A	N/A	PSC
122	Oct-05	<b>Star Energy (100%)</b>	Sebatik	Ons/Offs, E. Kalimantan	2,132	N/A	PSC
123	Oct-05	<b>BUMD Benuo Taka (100%)</b>	Wailawi	Ons, E. Kalimantan	2,132	N/A	Cost and Fee
<b>Sulawesi and Surrounding Areas</b>							
124	Nov-69	<b>Kalrez Energy</b>	Bula,Seram	Ons, Maluku	107,870	N/A	PSC

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
	(05-00)	(100%)			(7,620)		Prod
125	Nov-69	<b>Kufpec</b> (97.5%)	Seram Non-Bula	Ons, Maluku	7,260	N/A	PSC Prod/ Dev
	(10-99)	Kalrez Petroleum (2.5%)					
126	Oct-70 (06-95) (10-05)	<b>Energy Equity</b> (100%)	Sengkang	Ons, South Sulawesi	5,697 (3,803)	7.5	PSC Prod
127	Dec-97	<b>Exspan</b> (50%)	Senoro- Toili	Offs, Central Sulawesi	475 (451)	22	PSC/JOB Prod
		Pertamina (50%)					
128	Nov-98	<b>Unocal</b> (100%)	Sangkarang	Offs, South Sulawesi	7,957	24.5	PSC Exp
129	May- 00	<b>Energy Equity</b> (100%)	Bone	Offs, Sulawesi	4,451	N/A	PSC
<b>Natuna Island</b>							
130	Oct-68 (08-90) (01-99)	<b>Conoco Philips</b> (40%)	Block B, Natuna Sea	Offs, South China Sea	103,286  (11,162)	14	PSC Prod
		Chevron (25%)					
		Inpex (35%)					
131	Mar-75 (09-99)	<b>Star Energy</b> (31.25%)	Kakap	Offs, Natuna (South China Sea)	3,041 (2,000)	N/A	PSC Prod
		Premier (18.75%)					
		SPC (15%)					
		Exspan (25%)					
132	Oct-79 (09-99)	<b>Premier Oil</b> (28.67%)	Natuna Sea A (Anoa)	Offs, Natuna (South China Sea)	23,920 (5,000)	80.3	PSC Prod
		Kufpec (33.33%)					
		Amerada Hess (23%)					
		Petronas (15%)					
133	Jan-80	<b>ExxonMobil</b> (76%)	Natuna D- Alpha	Offs, Natuna (South China Sea)	5,700  (4,165)	44	PSC  Prod
		Pertamina (24%)					
134	May- 97	<b>Titan Resources</b> (85%)	Off., North East	Offs, Natuna (South China	2,944	39.5	PSC

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
		Binatek Reka Energy Natuna (10%)	Natuna	Sea)			
		GFB Resources (5%)					
135	Nov-01	<b>ConocoPhillips</b> (40%)	Nila	Offs, Natuna Sea	5,271	N/A	PSC – Under Exp
		Inpex (35%)					
		Talisman (25%)					
136	Dec-04	<b>Sanyen</b> (100%)	Anambas	Offs, Natuna Sea	2,989	N/A	PSC
137	Dec-04	<b>Genting Oil</b> (100%)	Northwest Natuna	Offs, Natuna Sea	N/A	N/A	PSC
<b>Irian Jaya and Others</b>							
138	Oct-70  (10-96)	<b>Petrochina</b> (30%)	Kepala Burung/ Salawati Basin	Ons, Irian Jaya	5,158 (872)	5.35	PSC Prod
		Ludin Int (25.94%)					
		Pertamina (10%)					
		Pearl Oil (34.06%)					
139	May- 87	<b>ConocoPhillips</b> (80%)	Warim	Ons, Irian Jaya	45,096 (15,250)	98.1	PSC Dev
		Santos (20%)					
140	Dec-87	<b>BP</b> (48%)	Berau	Ons, Irian Jaya	22,650 (11,222)	50	PSC Dev
		MI Berau (22.9%)					
		Nippon Oil (17.1)					
		KG Berau (12%)					
141	Apr-90	<b>PetroChina</b> (17.02%)	Salawati Kepala Burung/ Salawati Island	Ons/Offs, Irian Jaya	4,400  (1,097)	23	PSC/JOB  Prod
		<b>Pertamina</b> (50%)					
		Lundin (18.7%)					
		Pearl Oil (11.11%)					
142	Aug-90	<b>BP</b> (80%)	Babo	Ons, Irian Jaya	15,875 (15,875)	70	PSC - Dev
		Kanematsu (20%)					
143	Aug-92	<b>CNOOC</b> (64.77%)	Muturi	Ons, Irian Jaya	6,750	50.2	PSC
		BP (1%)					
		Indonesia Natural Gas Resources (34.23%)					

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
144	Feb-93	<b>BP</b> (37.6%)	Wiriagar	Ons/Offs, Irian Jaya	304	15	PSC - evaluation for Dev
		CNOOC (42.4%)					
		KG Petroleum Kanematsu (20%)					
145	Jul-94	<b>Patrindo Persada Maju</b> (100%)	Wasian/Mo goi	Ons, Irian Jaya	198	91.9	TAC Prod
146	Jan-95	<b>Intermega Sabaku</b>	Salawati A, D, Sabaku	Ons/Offs, Irian Jaya	7	8.2	TAC Prod
147	Jan-95	<b>Intermega Salawati</b>	Salawati C,E, F	Ons/Offs, Irian Jaya	23	8.2	TAC Prod
148	Dec-97	<b>KNOC</b> (1000%)	Wokam	Ons/Offs, Irian Jaya	13,237	30	PSC Exp
149	Feb-98	<b>Lundin</b> (100%)	Sareba	Ons/Offs, Irian Jaya	4,290	27.7	PSC Exp
150	Jun-98	<b>Eni Lasmo</b> (60%)	Malagot	Ons, Irian Jaya	4,235	67.4	PSC/JOB
		Pertamina (40%)					
151	Jun-98	<b>Irian Jaya Gas</b> (60%)	Semirak	Ons, Irian Jaya	2,757	82	PSC/JOB
		Pertamina (40%)					
152	Nov-98	<b>BP</b> (80%)	East Arguni	Ons/Offs, Irian Jaya	4,865	69	PSC
		Inpex (20%)					
153	Nov-98	<b>BP</b> (80%)	West Arguni	Ons/Offs, Irian Jaya	3,495	84	PSC
		Inpex (20%)					
154	Nov-98	<b>Inpex</b> (100%)	Masela	Offs, Timor Sea	5,725	84	PSC
155	Nov-98	<b>Ramu Int.</b> (80%)	Rombebai	Ons/Offs, Irian Jaya	11,590	31	PSC
		Sri Gas Energy (20%)					
156	Nov-98	<b>Intermega</b>	Linda and Sele	Ons, Irian Jaya	12	7.3	TAC
157	Sep-99	<b>Nations Energy Co.</b> (85%)	Yapen	Offs, Irian Jaya	9,500 (7,000)	18	PSC Exp
		Medco E&P (15%)					
158	Dec-04	<b>Pearl</b> (50.01%)	West Salawati	Offs, Irian Jaya	4,852	n.a	PSC Exp
		Genting Oil (49.99%)					

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date (ext)	Operator (bold) and Other Interest Holders	Block Name	Location	Area (current) (Km2)	Exp. Expendi- ture (US \$Mln)	Contract Type/ Status
159	Dec-04	<b>Waropen Perkasa</b> (100%)	Manokwari	Ons/Offs, Irian Jaya	8,945	n.a	PSC
160	Dec-04	<b>Inparol</b> (100%)	Asmat	Ons, Irian Jaya	14,700	n.a	PSC

### Other Contracts

No.	Signing Date (ext)	Operator	Block Name	Location	Area (current) (Km2)	Expl. Expendtr (US \$Mln)	Contract Type/ Status
1	May-85	Mainline	Bunyu Island		10	N/A	SRC
2	Oct-92	Permindo Perlak	Perlak Field	N. Sumatra	N/A	50.7	EOR
3	Oct-92	Tesada Arkindo	Telaga Said	N. Sumatra	252	55	EOR
4	Dec-86	Japex	West & Central Java	Java	7,800	N/A	Loan Agreemnt

### Extended Contract

No.	Sign Date	Operator	Block Name	Location	Area (km2)	Exp. Expend. (US\$ million)	Status
1	Jul-89	Asamera (1961)	Block "A"	N. Sumatra	3,910	14	Producing
2	Jul-89	Stanvac (1963)	Kampar	S. Sumatra	15,950	10	Producing
3	Apr-90	Arco (1967)	North West Java Sea	Offs, Java Sea	27,677	100	Producing
4	Jul-89	Mobil (1967)	Bee	N. Sumatra	3,745	46.4	Producing
5	Apr-90	Vico (1968)	Sanga-Sanga	Offs, E. Kalimantan	12,617	55	Producing
6	Apr-89	Asamera (1968)	Tempino	S. Sumatra	785	75.1	Producing
7	Mar-90	ConocoPhillips (1968)	Natuna Sea B	Offs, Natuna Sea	103,286	30	Producing
8	Mar-89	Tesoro (1968)	Tarakan	NE. Kalimantan	359	20.5	Producing
9	Jan-91	Total/Inpex (1967)	Mahakam	E. Kalimantan	16,870	63	Producing
10	Jan-91	Unocal (1968)	Balikpapan	E. Kalimantan	6,825	57.1	Producing
11	Mar-91	Inpex (1968)	Attaka	E. Kalimantan	145	30	Producing
12	Mar-91	Caltex (1963)	Rokan	C. Sumatra	8,314	21	Producing
13	Feb-92	Maxus (1968)	South East Sumatra	Java Sea	14,734	60	Producing

## APPENDIX 16: OIL CONTRACTS

No.	Sign Date	Operator	Block Name	Location	Area (km <sup>2</sup> )	Exp. Expend. (US\$ million)	Status
14	Aug-92	Mobil (1968)	Off., North Sumatra	N. Sumatra	14,942	N/A	Producing
15	Oct-92	Caltex (1971)	Rokan Block	Riau	N/A	N/A	Producing
16	Jun-95	Energy Eguity(1970)	Sengkang	On, S. Sulawesi	5,697	21.5	Producing
17	Oct-96	Santa Fe (1970)	Klamono	Irian Jaya	5,158	10.2	Producing
18	Oct-96	Asamera (1983)	Block A	N. Sumatra	11,151	65	Producing
19	Dec-97	Kondur Petrleum	Malaca Strait	Aceh	N/A	N/A	Producing
20	Sep-99	ConocoPhillips	Block B PSC	Offs, Natuna Sea	N/A	N/A	Producing
21	Sep-99	Star Energy	Kakap PSC	Offs, Natuna Sea	2,000	20.5	Producing
22	Sep-99	Premier Oil	West Natuna	Offs, Natuna Sea	5,000	80.3	PSC Producing
23	May-00	Kufpec	Seram, Non Bula	Ons, Kalimantan	N/A	N/A	PSC
24	May-00	Kalrez Petroleum	Bula, Seram	Ons, Maluku	N/A	N/A	PSCProducing
25	Dec-05	EMP Kangean	Kangean	Offs, E. Java	N/A	N/A	PSC

### APENDIX 16.2: TOTALLY RELINQUISHED CONTRACTS

No.	Contract Signed	Last Operator	Block Name	Area	Expl. Commit.	Contract Relinq.
1	Nov-68	IFPC	S. China Sea "C"	N/A	N/A	71
2	Nov-68	Agip	S. China Sea "B"	105,000	14	Jun-72
3	Mar-68	Refican/Mobil	Aru Block, Sumatra	20,250	10.5	Aug-72
4	Mar-69	Dearbon	Maluku/Halmahera	47,500	N/A	Dec-70
5	Mar-69	Jenny	S.China Sea, Karimata	47,250	11.9	Aug-73
6	Mar-69	Jenny	Mentawai, Sumatra	69,250	11.9	Aug-74
7	Jan-71	Shell	S. Java Sea	9,500	18	Sep-74
8	Sep-67	Conoco/Union	Barito, Kalimantan	13,987	12	Oct-75
9	Oct-71	Conoco/Amoseas	Mimika, IrianJaya	53,000	17.5	Dec-75
10	Feb-70	Amoseas	Lombok Sea	55,250	9.8	Jan-76
11	Feb-70	Wendel/Phillips	NE Irian Jaya	32,000	17.5	Feb-76
12	Jul-68	Gulf	S. China Sea "D"	161,125	11.3	Mar-76
13	Nov-68	Total	Java Sea	170,000	0.6	Mar-76

## APPENDIX 16: OIL CONTRACTS

No.	Contract Signed	Last Operator	Block Name	Area	Expl. Commit.	Contract Relinq.
14	Mar-72	Champlin	West Irian Jaya	74,075	13.2	Mar-76
15	Aug-68	Total	Jambi, C. Sumatra	21,175	10.5	Jul-76
16	Oct-68	Redco/Bow Valley	Subarijerigi	285	5.5	Jul-76
17	Jul-72	Total	Pamai Mantulik	31,085	3	Jul-76
18	Jan-67	Kyushu/Ashland	South Kalimantan	126,960	25.8	May-77
19	Apr-68	Intl. Oil	On./Off., Timor	25,805	2.5	May-77
20	May-68	Phillips	Irian Jaya, Arafura	320,320	17	Apr-78
21	Dec-69	Total	Jambi	14,000	10	Apr-78
22	Mar-70	BP	NE Kalimantan	29,000	8.5	Apr-78
23	Jan-68	Union Oil	West Sumatra	125,374	4.6	May-78
24	Dec-68	Agip	South China Sea "A"	102,729	21	Dec-78
25	Oct-66	Refican/Aquit.	SE Kalimantan, Off.	70,825	7.5	Feb-79
26	Aug-69	Asia Oil/Pexamin	Lampung & Banten	75,000	17.5	May-79
27	Oct-67	Austr. Drill. Co	Java Sea	154,700	7.5	Oct-79
28	Dec-69	Shell/Amoseas	East Kalimantan, On.	32,175	20.9	Nov-79
29	Mar-64	Refican/Aquit.	North Sumatra, Off.	16,220	N/A	May-80
30	Oct-70	Whitestone/Esso	Bomberai, Irian Jaya	15,450	10.2	Oct-80
31	Mar-67	Japex/Total	Bunyu, East Kalimantan	17,100	7.5	Aug-81
32	Aug-68	Huffco	Mangunjaya, South Sumatra	5,160	5.5	Apr-82
33	Mar-76	Houston Oil	East Java Sea	20,390	10.8	Sep-82
34	Jan-75	Phillips	East Kalimantan	3,094	17.1	Oct-82
35	Jan-80	Phillips	Waipona, Irian Jaya	15,250	17	Jan-83
36	Nov-80	Agip	N. Sakala, Java Sea	16,925	35.5	Oct-83
37	Oct-73	P.Trend/Marathon	Bintuni, Irian Jaya	16,360	9.9	Jan-84
38	Aug-81	Amoco	Barito C, East Kalimantan	7,220	77	Jan-84
39	Feb-80	Husky Oil	Banggai, East Sulawesi	17,795	15	Feb-84
40	Nov-80	Conoco	Karimun, Java Sea	17,000	120	Apr-84
41	Oct-68	Phillips	Teluk Berau, Irian Jaya	15,000	17	Jul-84
42	Aug-71	Arco	Sembangkung, NE. Kalimantan	16,000	19.8	Jul-84
43	Jan-74	Union Oil	Teweh, SE. Kalimantan	23,775	15.5	Aug-84
44	Jul-78	Japex	South Lampung	21,000	22	Aug-84
45	Dec-79	Mobil	Natuna Sea D II	5,040	71.2	Dec-84
46	Jun-80	Conoco	Mahato/Mandian	6,500	100.5	Jan-85
47	Feb-82	Union Texas	Cilacap, South Java	13,640	31.5	Feb-85
48	Feb-81	Union	Java Sea, NE Madura	13,002	59	Mar-85
49	Feb-81	Caltex	Singkarak, West Sumatra	7,265	90.6	Mar-85

## APPENDIX 16: OIL CONTRACTS

No.	Contract Signed	Last Operator	Block Name	Area	Expl. Commit.	Contract Relinq.
50	Oct-79	Amoco	Panai, NE. Sumatra	8,209	13	Nov-85
51	Oct-82	Sceptre	Java Sea A	13,320	50	Jan-86
52	Oct-82	Sceptre	Java Sea B	17,740	47	Mar-86
53	Apr-86	Jasmine	East Madura	1,600	40	Apr-86
54	Dec-79	Shell	Memberamo, Irian Jaya	14,675	127.5	Jul-86
55	Dec-79	Mobil	Natuna Sea D I	5,240	67.2	Jul-86
56	Feb-82	Getty Oil	Pelabuhan Ratu	9,275	33	Jul-86
57	Feb-82	Mobil	Kutai, Semayang	18,460	142	Oct-86
58	Dec-79	Conoco	Nauka, IrianJaya	42,755	12	Jun-87
59	May-81	CaltexChevron	Langsa, NE. Sumatra	7,080	175.1	Jun-87
60	Jun-82	Amoco	Lombok	26,640	68	Jul-87
61	Apr-84	Shell	Podena, Irian Jaya	9,430	110	Aug-87
62	Apr-84	BP	Merangin, South Sumatra	5,895	60	Oct-87
63	Jun-78	Jambi Oil	Jambi A	5,535	20	Nov-87
64	Jul-83	Elf Aquitaine	East Melawi, West Kalimantan	8,920	54	Dec-87
65	Oct-79	Total	Muturi, Irian Jaya	8,890	25	Apr-88
66	Feb-79	Marathon	Siri, East Java Sea	11,180	9.3	Apr-88
67	Jul-83	Total Quest/Inpex	West Melawi, West Kalimantan	13,295	48.5	Apr-88
68	Oct-82	Promet	Arafura Sea	18,315	55	5-May
69	May-80	Total	Natuna Sea DIII	5,125	15	Feb-89
70	Jan-80	Amoco	Kamura, Irian Jaya	22,305	18	Mar-89
71	Jun-78	Deminex/BP	Simenggaris	4,285	16.5	Apr-89
72	Feb-82	Elf-Aquitaine	Ritan, C.Kalimantan	18,260	50.2	Jul-89
73	Feb-82	Elf-Aquitaine	Maruwai, C.Kalimantan	19,535	60.5	Jul-89
74	Aug-81	Petroz N.L.	Asahan, North Sumatra	7,445	54.9	Sep-89
75	Feb-79	Shell	NE Jambi	19,030	14	Nov-89
76	May-80	Total	Sepasu, East Kalimantan	905	11.5	Nov-89
77	Feb-79	Caltex	Jambi Selatan B	5826	18	Jan-93
78	Jun-82	Mobil	Adang, East Kalimantan	10,140	40	Jan-90
79	Oct-78	P. Trend	Pamai Taluk A, C. Sumatra	18,684	15.5	Mar-90
80	Mar-73	Mobil	Makassar Strait A	20,914	9	Jun-90
81	Nov-86	Esso	Dumai, C. Sumatra	4,585	64	Sep-90
82	Oct-86	Total	M. Kampar, C. Sumatra	10,885	64	Oct-90
83	Oct-77	Conoco	KBSB A, Irian Jaya	9,200	40.6	92

## APPENDIX 16: OIL CONTRACTS

No.	Contract Signed	Last Operator	Block Name	Area	Expl. Commit.	Contract Relinq.
84	Jun-79	Mobil	Peusangan, North Sumatra	3,440	12	92
85	Dec-85	Maxus	Aru, Irian Jaya	110,018	60	92
86	Jun-87	Shell B.V.	Asem-Asem	12,630	27	92
87	Dec-87	Brit Oil	Sula, East Sulawesi	14,986	35	92
88	Dec-87	Amoseas	Manui	12,032	33.5	92
89	Feb-88	Pertamina/Esso	Gundih, East Java	8,190	15	92
90	Mar-88	Pertamina/Esso	Musi Klingi	1,310	9.5	92
91	Jul-88	Pertamina/Shell	Madura Block	5,720	40.5	92
92	Nov-88	Pertamina/Teikoku	Sembangkung, East Kalimantan	11,005	34	92
93	Jul-87	Fina/Enterprise	Bengkulu	16,800	70	92
94	Jul-89	Pertamina/Repsol	Tanggerang	10,500	58.2	92
95	Jul-89	Pertamina/Esso	Surulangun	2,870	14	92
96	Dec-87	Conoco	Buton, SE Sulawesi	18,903	67.9	93
97	Feb-89	Enterprise Oil	Panai	7,210	37	93
98	Jul-89	Pertamina/Total	Lahat, South Sumatra	2,720	64.5	93
99	Nov-89	Petrocorp	Bandar Jaya	11,500	50.4	93
100	Apr-90	Huffco	Kahayan, East Kalimantan	18,569	23	93
101	Mar-91	BP	Sailus, Flores Sea	10,268	56.4	93
102	Nov-88	Amoco	NE Java Sea V	11,773	105.1	94
103	Feb-89	Inpex	NE Java Sea VI	11,467	62.5	94
104	Dec-90	YPF/Maxus	Fifi/Zaitun, Java Sea	9,755	15.25	94
105	Mar-91	Shell	Masalembo, East Java	10,000	32.5	94
106	May-80	Union Texas	Tomori, East Kalimantan	5,700	14.5	Jun-95
107	Aug-81	Trident Petroleum	Barito B, South Kalimantan	7,725	59	Jun-95
108	Aug-85	Sceptre/BP/Esso	Bunyu, East Kalimantan	9,445	63.7	Jun-95
109	Sep-91	Amoseas/Caltex	Kalumpang, South Sulawesi	8,043	40	84
110	Oct-88	Mobil/BHP	E. Lengguru, Irian Jaya	9,296	55	83
111	Jan-90	Apache	Block IV, Off., East Java	8,815	40.5	Dec-95
112	Mar-91	BP	Satengar, Flores Sea	10,266	59.5	Feb-96
113	Nov-89	Amoseas	Misool, On./Off.	23,570	53.6	Feb-96
114	Apr-90	Amoseas	Soe Island, East Nusa Tenggara	18,481	54	Mar-96
115	Sep-91	Apache	Padang Panjang, On., West Sumatra	8,984	30	Mar-96
116	Sep-91	Talisman	Teso, On., Riau	10,360	15.7	Jul-96
117	Nov-82	Apex	Muara Enim, South Sumatra	290		Oct-96

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No.	Contract Signed	Last Operator	Block Name	Area	Expl. Commit.	Contract Relinq.
118	Dec-90	GFB Resources	Kampar, South Sumatra	9,901	88.3	Jan-97
119	Oct-88	Mobil/BHP	West Lengguru, Irian Jaya	11,920	65	Feb-97
120	Jun-82	Inpex/Mobil	North Aceh, Off., North Sumatra	29,905	88	Apr-97
121	Feb-95	Union Texas	Barakan, Arafuru, Off., Maluku	400	12.9	Sep-97
122	May-91	Union Texas/Total	Tanimbar, On./Off., Maluku	23,800	27.4	Oct-97
123	Jun-93	Canadian Oxy Ltd/	Sintang, On., West Kalimantan	20,000	26	Oct-97
124	May-91	Union Texas/Total	Rebi, Off., Maluku	22,260	28.2	Oct-97
125	Nov-89	Maersk Oil (85%)	Maratua, On./Off.,	13,435	70.5	1999
126	Feb-95	Arco (54%)	Sepanjang, Off., East Java	6,670	23.5	1999
127	Feb-95	Talisman (100%)	Cenako, On., Riau	650	2.8	1998
128	Jun-95	Caltex	Lariang, On.,	4,086	25	1998
129	Sep-91	Arco	Kalosi, On., Sulawesi	11,038	32.5	1998
130	May-96	OPIC Corp.	Peudada, Off.,	5,252	70	1999
131	May-91	Union Texas	Kai, On./Off., Maluku	24,570 (18,421)	41.8	1999
132	Apr-90	Gulf Resources	W. Natuna, Off., Riau	6,689 (4,456)	46	2000
133	Mar-91	Chevron	Nias, On./Off.,	16,116	39.5	2000
134	Feb-92	Risjad Salim	Bontang, On./Off.,	2,070	36.3	2000
135	Feb-85	Unocal	Teweh, On., C. Kalimantan	10,495 (3,265)	43	2000
136	Jul-94	Maersk Oil	Karang Besar, Off., East Kalimantan	980	35	2000
137	Nov-95	British Gas E&P	Malimping, Off.,	3,354	34.8	2000
138	May-97	Japex (60%)	Sabo Block, Off., South Timor	4,571	157.9	2000
139	May-97	Indonesia Petroleum Ltd.	Rabe Block, East Timor	6,500	96	2000
140	Dec-93	Gulf Resources	Merangin, South Sumatra	4,000	41.9	2000
141	Oct-96	Caltex	Sibolga, North Sumatra	9,821	22.8	2000
142	May-97	Total	Sebawang II, Off., East Kalimantan	4,982	35.3	2001
143	Nov-95	Gulf Resources	Halmahera, Off., Maluku	3,150	27.5	2001

## APPENDIX 16: OIL CONTRACTS

No.	Contract Signed	Last Operator	Block Name	Area	Expl. Commit.	Contract Relinq.
144	Feb-98	South Makasar Petroleum Eploration	Kapoposang, Off., Makasar Strait	10,280	31	2001
145	Dec-90	Lasmo	Runtu, On., East Kalimantan	12,880	60.9	2001
146	Jan-82	Exspan	Tarakan, On., NE. Kalimantan	61,361 (44,503)	8	2001
147	Dec-97	PT.Pancacitra Multi Jaya	Ibul Tenggara, South Sumatra	N/A	N/A	2001
148	Dec-96	Amerada Hess	Pagatan, South Kalimantan	8,595	25.8	2001
149	Nov-98	PT Insani	Selo, South Sumatra	N/A	17.1	2001
150	Oct-79	Caltex	Natuna Sea B, Off.	24,605	62	2002
151	Oct-79	Caltex	Natuna Sea Block C, Off.	29,415	18.5	2002
152	May-91	Exspan	Cumi-Cumi, Off., Natuna Sea	4,970	34	2002
153	Sep-91	Marathon	Tiram, Off., West Natuna	1,494	17.2	2002
154	Feb-92	ConocoPhilips	Block II, Off., Natuna Sea	5,675	47	2002
155	Jun-95	Gulf Resources	Calik, On., S. Sumatra	542	7.2	2002
156	Sep-97	Premier Oil	North West Natuna Block I, Off.	5,765	27	2002
157	Sep-97	Nexen Petroleum	Mana, On., Bengkulu	11,115	29.8	2002
158	Sep-97	Total	North Sokang Block, Off., Natuna	10,260	64.8	2002
159	Jun-98	Total	Walio, Off. Irian Jaya	6,865	29.2	2002
160	Jan-91	ConocoPhillips	Sakala, Off., West Lombok	10,319	101.5	2003
161	Nov-98	ConocoPhillips	Tabong, Natuna Sea	4,400	24.7	2003

## APPENDIX 16: OIL CONTRACTS

### APPENDIX 16.3: EXPLORATION AREAS OFFERED IN 2004 AND 2005

No	Block	Location	Status
<b>2003-2004 Tender Offer</b>			
1	Lhokseumawe	Off. Aceh	Awarded to Zaratex NV (08/04/05)
2	Ujung Kulon	Off. West Java	New acreage – no bidders
3	NE Madura III	Off. Madura	Sold to Anadarko (12/12/04)
4	NE Madura IV	Off. Madura	Sold to Petronas Carigali Sdn. (12/12/04)
5	NE Madura V	Off. Madura	Unsold - Open for direct offer 2005
6	Rote I	Off. NTT	New acreage
7	Rote II	Off. NTT	New acreage – no bidders
8	Babar	Off. Maluku	New acreage
9	Selaru	Off. Maluku	New acreage – no bidders
10	Manokwari	On. West Irian Jaya	Awarded to PT Waropen Perkasa (12/12/04)
<b>2004 Direct Offer</b>			
1	Bulungan	Off. East Kalimantan	Awarded to Eni Indonesia Ltd. (12/12/04)
2	Nunukan	Off. East Kalimantan	Awarded to Medco Energy (12/12/04)
3	Seruway	Off. Aceh	Awarded to Transworld E&P Inc. (12/12/04)
4	Pandan	On South Sumatra	Awarded to PT Tropik Energi (12/12/04)
5	Barito	On Middle Kalimantan	Awarded to ALTAR Sociedade (12/12/04)
6	East Ambalat	Off. East Kalimantan	Awarded to Unocal (12/12/04)
7	Sei Nangka - Senipah	On. East Kalimantan	Awarded to PT Kutai Etam Petroleum (12/12/04)
8	Air Komering	On. South Sumatra	Awarded to PT. Binakarindp (12/12/04)
9	Belida	On. South Sumatra	Awarded to PT Sele Raya (12/12/04)
10	East Sepanjang	Off. East Java	Awarded to PT. Easco (12/12/04)
11	Northwest Natuna	Natuna Sea	Awarded to Genting Oil (12/12/04)
<b>2005 Tender Offer</b>			
1	Cakalang	Offshore Natuna	Unsold
2	Kerapu	Offshore Natuna	No bidder
3	Baronang	Offshore Natuna	No bidder
4	East Bawean I	Off. East Java	No bidder
5	East Bawean II	Off. East Java	Awarded to Husky Energy (05/06/06)
6	Lampung I	Off. Lampung	No bidder
7	Lampung II	Off. Lampung	Awarded to Petronas Carigali (05/06/06)
8	Buton I	On/Off. Buton	Unsold
9	Buton II	On/Off. Buton	Unsold
10	Damplas	Makassar Strait	No bidder
11	Baleisang	Makassar Strait	No bidder
12	Pasangkayu	Makassar Strait	Awarded to Marathon and Talisman (05/06/06)
13	Surumana	Makassar Strait	Awarded to ExxonMobil (05/06/06)
14	Kamrau	On/Off. West Papua	No bidder
<b>2005 Direct Offer</b>			
1	Lhokseumawe	Off. Aceh	Awarded to Zaratex NV (08/04/05)
2	West Kampar	Riau	Awarded to PT Sumatera Persada Energi (08/04/2005)
3	Bungamas	South Sumatra	Awarded to PT Erry Guna (08/04/05)
4	Bengkulu	Bengkulu	Awarded to PT Commissioning Services Indonesia (08/04/05)

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No	Block	Location	Status
5	Citarum	West Java	Awarded to PT Bumi Parahyangan Ranhill Energia (08/04/05)
6	NE Madura V	Off. Madura	Unsold
7	North Bali II	Off. Bali	Unsold
8	East Kangean	Off. East Java	Awarded to Energi Mega Persada (08/04/05)
9	Taritip	Makassar Strait	Unsold
10	Sebatik	East Kalimantan	Awarded to PT Star Energy (08/04/05)
11	Amborip VI	Off. Papua	Awarded to ConocoPhillips (08/04/05)
12	Amborip V	Off. Papua	Unsold
13	Wailawi	East Kalimantan	Awarded to BUMD Benuo Taka (08/05/04)

For further information, contact:

Working Area Bidding Team - Directorate General of Oil and Gas

Plaza Centris 1st Floor

Jl. H.R. Rasuna Said Kav. B-5, Kuningan, Jakarta Selatan 12910

Phone: 62-21-5268963, 62-21-5268910 ext. 136, Fax: 62-21-5269129

### APPENDIX 16.4: CURRENT CONTRACT ARRANGEMENTS

**Government Granting Agreements (Cooperation Contracts):** The bundle of rights and obligations granted to an investor to invest in cooperation with the GOI in oil and gas Exp and exploitation.

- Production Sharing Contract (PSC)
  - Cooperation Contract for oil and gas Exp and exploitation between BP Migas and a private investor (which includes foreign and domestic companies as well as P.T. Pertamina).
  - BP Migas is the supervisor or manager of the PSC
  - The investors are participating interest holders and Contractors
  - Government take is under a production sharing arrangement whereby the GOI and the Contractors take a split of the production measure in revenue based on PSC agreed percentages. Operating costs are recovered from production through Contractor cost oil formulas as defined by the PSC
  - Contractor has the right to take and separately dispose of its share of oil and gas
  - Title of the hydrocarbons passes to the Contractor at export or delivery point
- Technical Assistance Contract (TAC)
  - Variation of a Cooperation Contract or PSC
  - Typically used for established Prod areas and therefore covers exploitation only
  - BP Migas is the supervisor or manager of the TAC
  - Operating costs are recovered from production
  - Contractor does not typically share in all production
  - For areas where Exp was being encouraged the TAC includes Exp and exploitation.
  - GOI has announced that existing TACs will not be extended
- Enhanced Oil Recovery (EOR)
  - Variation of a Cooperation Contract or PSC (i.e. a Cooperation Contract for oil and gas exploitation between BP Migas and a private investor, which includes foreign and domestic companies as well as PT Pertamina).

## APPENDIX 16: OIL CONTRACTS

- Used for established Prod fields with the intent of applying advanced technology to increase the recovery of hydrocarbons in the reservoirs
- Pertamina is usually a participant along with investors; collectively the Contractor
- BP Migas is the supervisor or manager of the EOR
- Operating costs are recovered from production and typically capped at a percentage. In some cases the incremental oil lifted from the enhanced recovery operation may be shared on a production sharing basis.
- In many cases, the EOR may also include provisions concerning how the parties will conduct petroleum operations.

### **Agreements Governing the Conduct of Operations:**

- Joint Operating Agreement (JOA)
  - A separate agreement in addition to the Cooperation Contract
  - Governs the relations of the participating interest holders, defining their rights and obligations, and describing the procedures the Contractors will abide by to conduct petroleum operations.
  - The JOA typically includes: (1) the scope of operations; (2) the designation, rights and obligations of the operator; (3) the establishment of an Operating Committee including voting rights, meeting procedures and subcommittees; (4) operations by less than all the participating interest parties; (5) production disposition; (6) relinquishment, withdrawal and assignment; (7) confidentiality; (8) force majeure; (9) dispute resolution and choice of law
- Joint Operating Body (JOB)
  - Typically part of the Joint Operating Agreement
  - Governs the operations on behalf of the participating interest holders by establishing a non-legal entity, the Joint Operating Body, to conduct the petroleum operations
  - Representatives of the participating interest parties appoint representatives to the JOB.
  - The JOB prepares operating work program and budgets and carries out the operations pursuant to the JOB Agreement and the Cooperation Contract.
  - The participating interest holders remain the Contractors, and like all Cooperation Contracts, the arrangement is supervised by BP Migas.

## APPENDIX 17: OIL COMPANIES IN INDONESIA

### APPENDIX 17.1: SELECTED PRODUCTION SHARING CONTRACTORS IN INDONESIA (name of Working Areas)

#### **ANADARKO PETROLEUM INDONESIA**

(PSC: N.E Madura III)

Mr. Gregory A Lanham, President and General Manager  
Jakarta Stock Exchange Bld. Tower 1, Level 29,  
Suite # 2902,  
Jl. Jend. Sudirman Kav. 52-53, Jakarta 12190  
Tel: (021) 3006-1600, Fax: (021) 3006-1699

Head Office:

1201 Lake Robbins Drive  
The Woodlands, Texas 77380  
Tel: 832-636-1000  
[www.anadarko.com](http://www.anadarko.com)



#### **AMERADA HESS INDONESIA**

(PSCs: Pangkah, Natuna A; Merang JOB)

Colin Munro, General Manager  
Sentral Senayan, 15<sup>th</sup> floor  
Jl. Asia Afrika No. 8, Jakarta 10220  
Tel: 572-5744, Fax: 572-5733

Head Office:

Amerada Hess International  
33 Grosvenor Place  
London, England SW1X 7HY  
Tel: (171) 823-2626, Fax: (171) 887-2089  
[www.hess.com](http://www.hess.com)

#### **BABAT KUKUI ENERGI**

(Babat Kukui TAC)

Mr. Effendi Siradjuddin, President Director  
Cilandak Resort Apt., 1<sup>st</sup> floor  
Jl. Letjen. T.B. Simatupang Kav. 17  
Jakarta 12014  
Tel: 7581-6232, Fax: 7581-6232

#### **BINA WAHANA PETRINDO**

(Meruap)

Mr. H. Koswara, President Director  
Gelael Bldg, 2<sup>nd</sup> floor  
Jl. Tebet Raya 8-10, Jakarta 12810  
Tel. (021) 8370-3620, Fax. (021) 8370-3621



#### **BP**

(PSCs: Offs North West Java – ONWJ, Berau,  
Muriah, Wiriagar, W. Arguni, E. Arguni, Bab)

Mr. Anne Drinkwater  
President and Resident Manager  
Perkantoran Hijau Arkadia, Tower D  
Jl. Letjen. TB Simatupang, Kav. 88, Jakarta 12520  
Tel: 7883-8000, Fax: 7883-8333

Head Office:

British Petroleum  
Uxbridge 1, Hariefield Road, Uxbridge,  
Middlesex UB8 1PD, United Kingdom  
Tel: (01895) 877-007, Fax: 01895-877-877  
[www.bp.com](http://www.bp.com)



#### **BUMI SIAK PUSAKO**

(Coastal Plain Pekanbaru – CPP JOB)

Mr. Karsani Aulia, General Manager  
Menara Bank Danamon Lt. 20  
Jl. Prof. Dr. Satrio Kav. E IV / 6, Kawasan Mega  
Kuningan, Jakarta 12950  
Tel. 5799-1552, Fax: 5799-1553

#### **CHEVRON INDO ASIA**



Mr. Chris Prattini

Managing Director

Central Senayan I, 18th Floor  
Jl. Asia Afrika No. 8, Jakarta 10270  
Tel. (021) 573-1020, Fax. (021) 573-1030

Subsidiaries:

#### **Chevron Pacific Indonesia (CPI)**

(PSCs: Rokan, MFK, Kisaran, Siak)

Suwito Anggoro, President Director  
Sarana Jaya Building, 17<sup>th</sup> floor  
Jl. Budi Kemuliaan 1/1, Jakarta 10111  
Tel: 351-2151, Fax: 351-2065

#### **Unocal Indonesia**

(PSCs: Sesulu, W. Pasir, Rapak, Lompa/Makassar St,  
Sangkarang, Ganal)

Mr. David Stangor, Managing Director  
Sentral Senayan I, Office Tower, 11<sup>th</sup> floor  
Jl. Asia Afrika No. 8, Jakarta 10270  
Tel: 573-1020, Fax: 573-1030

Head Office:

6001 Bollinger Canyon Rd.  
San Ramon, CA 94583, U.S.A.  
Tel. +1-925-842-1000

## APPENDIX 17: OIL COMPANIES IN INDONESIA



### **CNOOC**

(PSCs: Wiriagar, Berau, Salawati, Jabung, Bangko, SE Sumatra, Sokang)

Mr. Fang Zhi, President & Gen. Manager  
Jakarta Stock Exchange Bld.7<sup>th</sup> Floor  
Jl. Jendral Sudirman Kav. 52, Jakarta 12190  
Tel: 515-1001, Fax: 515-9525  
[www.cnooltd.com](http://www.cnooltd.com)



### **CONOCO PHILLIPS INDONESIA**

(PSCs: South Jambi, Block A, Bentu, Korinci Baru, Block B, Nila, Pangkah, Ketapang, Banyumas, Warim; Corridor TAC/PSC; Sakakemang JPB)

Mr. William L Bullock, President & GM  
Wisma 46, Kota BNI, 21st floor  
Jl. Jend. Sudirman Kav. 1  
Jakarta 10220  
Tel: 574-2120, Fax: 574-2112/3  
[www.conocophillips.com](http://www.conocophillips.com)



### **CONTINENTAL - WISDOM**

(PSC: Bengara II)  
Mr. Richard L. McAdoo, President & CEO  
Jl. Kenanga 6, Cilandak, Jakarta 12560  
Tel. 781-7055, Fax: 781-7055  
[www.continentalenergy.com](http://www.continentalenergy.com)



### **PT ENERGI MEGA PERSADA Tbk (EMP)**

(PSCs: Brantas, Malacca Strait, Kangean, Korinci Baru, Bentu; Gebang JOB/PSC; Sungai Gelam TAC, Semberah TAC)

Mr. Chris B Newton, President Director  
Wisma Mulia 33<sup>rd</sup> Fl, Suite 3301  
Jl. Jend. Gatot Subroto Kav. 42,  
Jakarta 12710  
Tel. (021) 5290-6260, Fax. (021) 5290-6254  
[www.energi-mp.com](http://www.energi-mp.com)

#### Subsidiaries:

- Costa International (Gebang)
- Lapindo Brantas (Brantas)
- Kalila (Bentu)
- Kalila (Korinci)
- Insani Mitra Gelam (Sungai Gelam)
- Semberani Persada (Semberah)
- Kondur Petroleum (Malacca Strait)

- EMP Kangean (Kangean)

### **ENERGY EQUITY**

(PSCs: Bone, Sengkang; TACs: Gajah Besar, Biru, Talang Babat)

Mr. Paul Ivan Edwards, President  
Plaza 89, 8<sup>th</sup> Floor, Suite 802  
Jl. H.R. Rasuna Said Kav. X-7/No.6  
Jakarta 12940  
Tel: 522-2806, Fax: 522-2807

#### Head Office:

Energy Equity Corporation Ltd.  
1162 Hay Street, West Perth WA 6005  
Perth 6000, Western Australia  
Tel: (619) (9) 366-4777, Fax: 366-4778

### **ENI INDONESIA LTD**

(PSCs: Ambalat, Bukat, Bulungan, Ganal, Krueng Mane, Muara Bakau, Rapak, Sesulu; Malagot PSC/JOB)



Mr. Luca Bertelli, Managing Director  
Plaza Kuningan, South Tower, 9<sup>th</sup> floor  
Jl. H.R. Rasuna Said Kav. C11-14  
Jakarta 12940  
Tel: 3000-3200, Fax: 3000-3230  
[www.eni.it](http://www.eni.it)

### **ExxonMobil EXXONMOBIL OIL INDONESIA**

(PSCs: Block 'A', Cepu, Natuna; Langsa JOB, Pase, Madura St.)

Mr. Peter Coleman, President & GM  
Wisma GKBI, 29<sup>th</sup> floor  
Jl. Jendral Sudirman 28, Jakarta 10210  
Tel: 574-0707 Ext. 1000, Fax: 574-0606  
[www.exxonmobil.com](http://www.exxonmobil.com)

#### Head Office:

ExxonMobil Oil Corp.  
5959 Las Colinas Blvd  
Irving, Texas 75039  
Tel: (972) 444-1107/8/9



### **GENTING OIL & GAS**

(PSCs: Northwest Natuna, Anambas)

H.J Smith, General Manager  
Bapindo Plaza, Citibank Tower 25<sup>th</sup> Fl  
Jl. Jend. Sudirman Kav 54-55, Jakarta  
Ph. (021) 270-0410, Fax. (021) 720 – 4504  
[www.gentingoil.com](http://www.gentingoil.com)

## APPENDIX 17: OIL COMPANIES IN INDONESIA

### **GOLDEN SPIKE LTD (PT. KODEL)**

*(Raja-Pendopo JOA/JOB, Pasiriaman PSC)*

Mr. Maher Algadri, General Manager

Menara Rajawali, 19th floor

Jl. Mega Kuningan-Lot 5.1, Jakarta 12950

Tel. (021) 576-1333, Fax. (021) 576-1737

**HALLIBURTON**

### **HALLIBURTON ENERGY**

*(Abab/Raja)*

Mr. Steve Jacobs, Chief Executive Director

Graha Simatupang Tower 2B, 6<sup>th</sup> floor

Jl. Letjen. TB Simatupang Kav. 38

Jakarta 12540

Tel. 782-9420, Fax: 782-9422

**INPEX**

### **INPEX CORPORATION**

*(PSCs: Attaka, Offs Mahakam)*

Mr. Sadafumi Tanigawa, General Manager

Mid Plaza I, 7<sup>th</sup> floor

Jl. Jendral Sudirman Kav. 10-11,

Jakarta 10220

Tel: 570-0557, 570-0540, Fax: 570-0575

[www.inpex.co.jp](http://www.inpex.co.jp)

Head Office:

INPEX Corporation

17<sup>th</sup> Fl. Ebisu Neonato No 1-18

Ebisu 4-Chome

Shibuya-ku, Tokyo 150, Japan

Tel: (03) 5448-1201, Fax: (03) 5448-1242

### **INDOSPEC ASIA**

*(Banga Dua TAC)*

Mr. Widiyanto, President Director

JL. Panglima Polim 14 No. 9, Jakarta

Tel: (021) 726-4611, Fax. (021) 722-7377

### **KALREZ PETROLEUM**

*(PSCs: Bula/Seram, Seram non-Bula)*

Mr. Russell E. Brimage, General Manager

Wisma Pondok Indah Room 306, 3rd Fl

Jl. Sultan Iskandar Muda Kav. VTA

Pondok Indah, Jakarta 12310

Tel. 769-6977, Fax: 769-7012

Head Office:

Kalrez Energy

Level 2, 8 Parliament Place

West Bird Perth WA 6005, Australia

Tel: N/A, Fax: N/A

[www.kalrez.com.au](http://www.kalrez.com.au)

### **KODECO ENERGY COMPANY**

*(PSC: Java Sea; Poleng TAC)*

Hong Soon Yong, President Director

JSX Building Tower I 23<sup>rd</sup> Floor

Jl. Jend. Sudirman Kav. 52, Jakarta

Tel: (021) 515-1170 Fax: (021) 515-1175

Head Office:

Kodeco Energy Company Ltd

10<sup>th</sup> Fl Donghwa Bld 58-7

Susomun- Dong, Joong Ku, South Korea

Tel: 822-318-2831, Fax: 822-318-2975



### **KOREA NATIONAL OIL CORPORATION (KNOC)**

*(PSCs: SES, NE Madura I, NE Madura II, Wokam; Sambidoyong TAC)*

Mr. Nam Kung Yong, General Manager

Wisma Nusantara, 21st floor

Jl. M.H. Thamrin 59, Jakarta 10350

Tel: 390-7240, Fax: 390-7238

[www.knoc.co.kr](http://www.knoc.co.kr)



### **KUFPEC INDONESIA**

*(Seram)*

Mr. D.G.S. Lamb, President

Menara Citibank, 6<sup>th</sup> floor

Jl. Metro Pondok Indah Kav. II BA

Jakarta 12310

Tel: 766-2840, Fax: 766-2845

[www.kufpec.com](http://www.kufpec.com)

### **LIRIK PETROLEUM**

*(Lirik EOR)*

Mr. Adi Satrya Sulisto, General Manager

Satmarindo Bldg. 2<sup>nd</sup> floor

Jl. Ampera Raya 5, Jakarta 12560

Tel. (021) 780-4468, Fax: (021) 780-4492



### **LUNDIN BV**

*(Blora, Banyumas, Sareba)*

Mr. Hendrew Halber, General Manager

Plaza Great River 9th floor,

Jl. HR Rasuna Said Kav. X-2, Jakarta 12950

Tel. (021) 526-2611, Fax. (021) 536-622

[www.lundin-petroleum.com](http://www.lundin-petroleum.com)



### **MEDCO ENERGI**

## APPENDIX 17: OIL COMPANIES IN INDONESIA

(PSCs: Sanga-Sanga, C and S. Sumatra, Pasemah, Barisan/Rimau, Tomori, Samboja, Toili, Yapen, Bengara I Senoro-Toili JOB)

Mr. Lukman Mahfoedz, President Director  
Menara Bidakara, 8<sup>th</sup> Floor  
Jl. Jend. Sudirman Kav. 71-73,  
Jakarta 12190  
Tel: (021) 8399-1010, Fax: (021) 8399-1011  
[www.medcoenergi.com](http://www.medcoenergi.com)

Subsidiary:

### **EXSPAN NUSANTARA**

Mr. Darmoyo Doyoatmojo, President Director  
Bidakara Bldg., 17<sup>th</sup> floor  
Jl. Jend. Gatot Subroto Kav. 71-73  
Jakarta 12870  
Tel: 8399-1010, Fax: 8399-1011  
[www.exspan.co.id](http://www.exspan.co.id)

### **PEARLOIL**

(PSCs: Salawati Basin, Salawati Island, West Salawati, Sebuku, Tungkal, Bulu; Jambi JOB/EOR)

Keith Cameron, Managing Director  
Graha Simatupang Tower 1A, 6<sup>th</sup> Floor  
Jl. TB Simatupang Kav. 38, Jakarta, 12540  
Tel: (021) 781-9978, Fax: (021) 782-8417  
<http://pearlenergy.com>

### **PELANGI HAURGEULIS RESOURCES**

(Haurgeulis)

Mr. Shandika Putra, President Director  
Bumi Daya Plaza, 23<sup>rd</sup> floor  
Jl. Imam Bonjol No. 21, Jakarta 10310  
Tel: (021) 390-2905/6, Fax: (021) 230-5722

### **TRADEWINDS OIL AND GAS**

(PSC: N. Tanjung; TACs: Ramok & Senabing, Diski, Sukatani; Ogan Komering JOA)

Mr. Andi Rahmanudin Noor, General Manager  
Wisma Pondok Indah, Suite 508  
Jl. Sultan Iskandar Muda Block V TA,  
Jakarta 12310  
Tel: 769-7386, 769-7387, Fax: 769-7388  
[www.tradewindsoilandgas.com](http://www.tradewindsoilandgas.com)

Subsidiaries:

- Permintracrer Petroleum
- Gulfstream Resources
- Radiant Energi
- Putra Kencana (Diski)



### **PETRONAS CARIGALI TG. JABUNG LTD.**

Mr. Abdul Rahim Hanifiah, General Manager  
Bapindo Plaza, Citibank Tower, 27<sup>th</sup> floor  
Jl. Jend. Sudirman Kav. 54-55, Jakarta 10270  
Tel: 526-6661, Fax: 526-6670  
[www.petronas.com.my](http://www.petronas.com.my)

### **PETRONAS CARIGALI RIMS**

Mr. Nyoman Damantra, General Manager  
Jl. Tulodong Bawah No. 1A,  
Kebayoran Baru, Jakarta 12180  
Tel.: (021) 526-6782, Fax. (021) 527-7228



### **PETROCHINA INTERNATIONAL COMPANIES IN INDONESIA**

(PSCs: Bangko, Selat Panjang, Salawati Basin, Salawati Island, Bangko, Jabung, South Jambi B; Tuban JOB)

Mr. Wei Zhigang, President  
Mulia Tower, 8<sup>th</sup> floor  
Jl. Jend. Gatot Subroto Kav. 9-11  
Jakarta 12930  
Tel: 250-0222, Fax: 250-1188  
[www.petrochina.com.cn](http://www.petrochina.com.cn)



### **PREMIER OIL**

(PSCs: Natuna Block A, Kakap)

Mr. Ron Aston, President  
Plaza City View, 5<sup>st</sup> floor  
Jl. Kemang Timur No 22, Jakarta 12560  
Tel. 718-2001, Fax: 718-2010

Head Office:

Premier  
23rd Lower Belgrave St.  
London SW1W OMR  
Tel: (171) 730-1111, Fax: (171) 730-4696  
[www.premier-oil.com](http://www.premier-oil.com)



### **SANTOS PTY LTD**

(PSCs: Bawean, Brantas, Donggala, Madura Offshore, North Bali I, Papalang, Popodi, Sampang, Warim),

Mr. Gary Christenson, General Manager  
Ratu Plaza Office Tower, 9<sup>th</sup> floor  
Jl. Jend., Sudirman Kav. 9, Jakarta 12970  
Tel: 270-0410, Fax: 270-4503  
[www.santos.com.au](http://www.santos.com.au)

## APPENDIX 17: OIL COMPANIES IN INDONESIA

### **SEA UNION ENERGY**

(Limau)

Mr. Zacky Shebubakar, General Manager  
Bidakara Bldg., 5<sup>th</sup> floor  
Jl. Jend. Gatot Subroto Kav. 71-73  
Jakarta 12870  
Tel: 8379-3288, 8379-3001, Fax: 8379-3009



### **SERICA ENERGY**

(PSCs: Asahan, Biliton, Lematang; Glagah Tambuna TAC)

Mr. John Grant, Managing Director  
Artha Graha Building, 16th Fl., Suite 1602  
Jl. Jenderal Sudirman Kav. 52-53,  
Jakarta 12190  
Tel: (021) 515-2247, Fax: (021) 515-2248  
[www.serica-energy.com](http://www.serica-energy.com)



### **SHELL COMPANIES OF INDONESIA**

Mrs. Carol Seymour, Country Chairman  
Gedung Ratu Prabu  
Jl. Letjen. TB Simatupang Kav. 20,  
Jakarta 12560  
Tel: 7883-8838, Fax: 7884-3536, 7884-9676

Head Office:  
Shell Petroleum Maatschappij  
30, Carel Van Bijlandtlaan  
The Hague, The Netherlands  
Tel: (00131) 703-779-111  
Fax: (00131) 703-776-540  
[www.shell.com](http://www.shell.com)



### **SINOPEC INT. PETROLEUM**

(PSC: Binjai)

Mr. Wang Zhong Ying, General Manager  
Mandiri Tower, 19<sup>th</sup> fl. Bapindo Plaza  
Jl. Jend. Sudirman Kav. 54 – 55  
Jakarta 12190  
Tel. 526-7511, Fax: 526-7512  
<http://english.sinopec.com/index.jsp>



### **STAR ENERGY**

(PSCs: Banyumas, Kakap)  
Supramu Santosa, President  
Wisma Mulia 50th Floor  
Jl. Jendral Gatot Subroto No.42  
Jakarta 12710

Tel: (021) 5290-6060, Fax : (021) 52906050  
[www.starenergy.co.id](http://www.starenergy.co.id)

### **TALISMAN (ASIA)**

(Nila PSC, Corridor PSC/TAC, Ogan Komering JOB, Tanjung Raya EOR)

Mr. Michael Cleere, General Manager  
Setiabudi Atrium, 4<sup>th</sup> Fl, Suite 410  
Jl. H.R. Rasuna Said Kav. 62, Jakarta 12920  
Tel: 521-0650, Fax: 521-0660, 521-0732  
[www.talisman-energy.com](http://www.talisman-energy.com)

Head Office:  
Talisman Energy Inc  
Suite 2400-855, 2<sup>nd</sup> Street S.W  
Calgary, Alberta, T2P 4J9, Canada  
Tel: (0011) 403-2371234  
Fax: (0011) 403-2371902



### **TOTAL E & P INDONESIA**

(PSCs: Offshore Mahakam, Saliki, North Bali ;Tengah JOB)

Mr. Roland Festor, President & GM  
Kuningan Plaza 9th Fl, N. Tower, Suite 901  
Jl. H.R. Rasuna Said C11-14, Jakarta 12940  
Tel: 252-2970, Fax: 252-0814  
[www.total.com](http://www.total.com)

Head Office:  
Total Indonesie Paris  
Tour Total 24 Cours Michevet  
La Defence, Puteaux 92069, Paris  
La Defence Cedex, France  
Tel: (331) 4135-4000; Fax: (331) 4135-4291



### **VIRGINIA INDONESIA CO (VICO)**

(Sanga-sanga PSC)

Mr. Roberto Rolato, President & CEO  
Kuningan Plaza, South Tower, 11<sup>th</sup> floor  
Jl. H.R. Rasuna Said Kav. C11-14  
Jakarta 12940  
Tel: 523-0000; Fax: 523-6871

## APPENDIX 17: OIL COMPANIES IN INDONESIA

### APPENDIX 17.2: SELECTED OIL FIELD SERVICE COMPANIES

#### **APEXINDO PRATAMA DUTA TBK**

Ir. Hertriono Kartawisastro  
President Director  
Medco Building, 2nd -3rd Floor  
Jl. Ampera Raya No. 20, Jakarta 12560  
Tel.: (021) 780-4766, Fax:(021) 7884 6453  
[www.apexindo.com](http://www.apexindo.com)

#### **BAKER ATLAS INDONESIA**

Mr. Victor Merkulov, President Director  
The Garden Centre, 6th floor, Suite 07  
Cilandak Commercial Estate  
Jl Cilandak KKO, Jakarta 12560  
Tel: 7800-0737, Fax: 780-0790  
[www.bakerhughes.com](http://www.bakerhughes.com)

#### **BINAKARINDO YACO AGUNG**

Mr. Tjahyadi Sukinata, Director  
Jl. P. Jayakarta No. 42, Jakarta 10730  
Tel. 629-6166, Fax: 639-8111

#### **BORMINDO NUSANTARA**

Mr. Harly Saleh, President Director  
Jl. Pakubuo VI No. 1A, Jakarta 12120  
Tel. 722-9986, Fax: 722-9987

#### **DOWELL SCHLUMBERGER**

Mr. Steve Orr, President Director  
16th Floor Sentra Mulia  
Jl.H.R.Rasuna Said Kav X-6 No 8  
Jakarta 12940  
Tel: (021) 252-0546, Fax: (021) 522-9157  
[www.slb.com](http://www.slb.com)

#### **ELNUSA GEOSAINS**

J.J Pattinasaranny, President Director  
Jl. Letjen. T.B. Simatupang Kav. IB  
Jakarta 12560  
Tel: 7883-0866, Fax: 7883-1072  
[www.elnusa.co.id](http://www.elnusa.co.id)

#### **GEOSERVICES INDONESIA**

H.L. Ong, DSc., Representative  
Jl. Setiabudi 79-81, Bandung 40153  
Ph. (022) 203-1316, Fax. (021) 203-1198  
[www.geoservices.co.id](http://www.geoservices.co.id)

#### **GRANT GEOPHYSICAL INDONESIA**

Mr. Craig Walker, Regional Manager  
Ratu Plaza Office Tower, 30th Floor  
Jl. Jendral Sudirman 9, Jakarta 10270  
Tel: (021) 720-7509, Fax. (021) 720-7689  
[www.grantgeo.com](http://www.grantgeo.com)

#### **HALLIBURTON INDONESIA**

Mr. Jeff Miller, President Director  
Cilandak Commercial Estate  
Jl. Raya Cilandak 3 KKO, Jakarta 12560  
Tel: (021) 780-1100 Fax: (021) 780-1154,  
[www.halliburton.com](http://www.halliburton.com)

#### **HITEK NUSANTARA**

Mr. Dan Mundro, President Director  
Sentra Mulia Bldg., 18<sup>th</sup> floor  
Jl. HR. Rasuna Said Kav. X- 6 No 8  
Jakarta 12940  
Tel. (021) 522-7250, Fax: (021) 522-7331

#### **IMECO INTER SARANA**

Mr. Tanu Wijaya, Director  
Jl. Ampera Raya No. 9-10, Jakarta 12550  
Tel. 780-8068, Fax: 780-8064 780-8055/64

#### **MCDERMOTT INDONESIA**

Asan Sofian, Area Manager  
Wisma Tugu II, 5th Floor  
Jala J.R. Rasuna Said Kav C-7  
Kuningan, Jakarta 12940, Indonesia  
Phone: (021) 5208611/8628

#### **PATRA DRILLING CONTRACTOR**

Mr. Hasanudin, President Director  
Jl. Kemang Raya No. 59, Jakarta 12730  
Tel: 7179-1478, Fax: 7179-1263

#### **SANTA FE SUPRACO**

Mr. J.R. Smith, President  
Jl. Melawai IX No. 2, Jakarta  
Tel: 721-1700, Fax: 721-1714

#### **TRIPATRA ENGINEERS & CONSTRUCTORS**

Mr. Pandri Probono  
Jl. RA. Kartini No. 34, Jakarta 12430  
Ph : (021) 750-0701, Fax. (021) 750-0700

## APPENDIX 17: OIL COMPANIES IN INDONESIA

### APPENDIX 17.3: INDONESIAN OIL AND GAS ASSOCIATION



#### **Indonesian Petroleum Association (IPA)**

Wisma Kyoei Prince, 17<sup>th</sup>, Suite NO. 1701  
Jl. Jendral Sudirman Kav. 3, Jakarta 10220  
Tel: 572-4284, 572-4285, 572-4286 Fax: 572-4259  
Website: [www.ipa.or.id](http://www.ipa.or.id)

#### **IPA Board Members**

President : Chris B. Newton (Energi Mega Persada)  
Vice Presidents : W. Yudiana Ardiwinata (Chevron)  
Supramu Santosa (Star Energy)  
Secretary : Luca Bertelli (ENI)  
Treasurer : Rashid I. Mangunkusumo (Medco)  
Directors : S.M. Hari Kuntoro (Pertamina)  
Roland Festor (Total)  
Anne Drinkwater (BP)  
William L. Bullock Jr. (ConocoPhillips)  
Peter Coleman (ExxonMobil)  
Sadafumi Tanigawa (INPEX)  
Fang Zhi (CNOOC)  
Exec Director : Suyitno Patmosukismo (Energi Mega Persada)  
Exec. Assistant : Marentie Tabusalla



#### **Indonesian Gas Association**

Mr. Anton Tjahjono, Chairman  
C/o Pertamina Upstream Directorate  
Kwarnas Pramuka Building, 9th floor  
Jl. Medan Merdeka Timur no.6  
Phone: (021) 3502150 ext 1517 - Fax : (021) 3508021  
Website: [www.gas.or.id](http://www.gas.or.id) Email: [info@gas.or.id](mailto:info@gas.or.id)



#### **The Society of Petroleum Engineers (SPE)**

David McCullough, Chairman  
Sentra Mulia Building, 16<sup>th</sup> floor  
Jl. H.R. Rasuna Said Kav. X-6 No. 8, Jakarta 12940  
Phone: (62-21) 252 0543 or 252 0546 ext. 253 Fax: (62-21) 522 9157  
Website: <http://java.spe.org> ; email: [spe@jakarta.oilfield.slb.com](mailto:spe@jakarta.oilfield.slb.com)



#### **INDONESIAN ASSOCIATION OF GEOLOGISTS (IAGI)**

Mr. Achmad Luthfi, President  
Geologi & Sumberdaya Mineral Building, 4th Floor  
Jl. Prof. Dr. Soepomo, SH., No. 1, Jakarta 12870  
Phone/Fax: (62-21) 8370-2848  
Website: [www.iagi.or.id](http://www.iagi.or.id); email: [iagisek@cbn.net.id](mailto:iagisek@cbn.net.id)

#### **Oil and Gas Drilling Association**

Ir. Hertiono Kartowisastro, Chairman  
Jl. Gandaria III/5, Kebayoran Baru, Jakarta 12130  
Tel: 722-2088, Fax: 725-3539