

THE MINERAL INDUSTRIES OF

INDONESIA AND EAST TIMOR (TIMOR-LESTE)

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Indonesia's economy has shown remarkable growth in the first three quarters of 2002. During the fourth quarter, however, it was set back by the attacks in Bali in October. The currency and stock market reacted sharply, but public confidence quickly recovered because of the increase in political stability in 2002 and the improvement of security after the bombings. The bombings, however, caused a great impact on Bali's tourism sector especially and the economy more broadly. The country's economy benefited from macroeconomic stability and recorded a modest growth of 3.7% in 2002 compared with that of 2001, and the value of the gross domestic product (GDP) at current market price was 1,610.0 trillion rupiahs (\$177 billion). Government and private consumption expenditures, which were supported by wage increases and the expansion of bank credit, contributed to the growth. Private consumption grew by 4.7%, and Government consumption increased by 12.8%. All sectors showed positive growth; the transportation and communication sector was the largest with 7.83%, and the mining and quarrying sector increased by only 2.25%. In terms of percentage distribution of GDP, the share of the mining and quarrying sector declined to 11.9% in 2002 from 13.2% in 2001. Nevertheless, the pace of recovery was still slow compared with other East Asian countries (Bank Indonesia, 2003, p. 4; Central Bureau of Statistics, 2003).

Investment suffered from the slowdown of global economic activities. Investment contracted by 0.2%; this was consistent with weaker construction activity and lower imports on capital goods. The value of approved domestic and foreign investments dropped by 57.0% and 35.5%, respectively. The total value of investment in the mining sector declined to \$63 million in 2002 from \$1.4 billion in 1999 and \$2.6 billion in 1997. According to the Indonesian Mining Industry Survey 2002, which was conducted by PricewaterhouseCoopers International Limited, the planned investment in Indonesia's mining declined by 15% from the previous year, and the actual spending dropped by 80% from the average expenditure in the past 5 years. The declining investment trend was obvious in the coal sector. The Government estimated that the total value of investment in the first three-generation coal contracts could be \$777.4 million in 2002; the actual amount, however, was \$14.4 million. Only one new oil and gas production share contract was signed in 2002. The declining investment was correlated with the World Investment Report 2002 issued by the United Nations Conference on Trade and Development. Indonesia was ranked 138 out of 146 countries surveyed based on regulations, taxes, infrastructure, and manpower (Bank Indonesia, 2003, p. 4; Petrominer, 2003h; World Bank, 2003, p. 17).

East Timor [Democratic Republic of Timor-Leste (Timor of the rising sun)] is located on the eastern part of the island of Timor. On the west is the Indonesian Province of Nusa Tenggara Timur; Australia is situated 500 kilometers south across the Timor Sea. East Timor became independent on May 20, 2002, following more than 400 years under Portuguese rule; 25 years of conflict, a violent transition from Indonesian rule; and 2½ years of United Nations (U.N.) administration. Under East Timor's constitution, Portuguese and Tetum (the local dialect) are the country's official languages, but the Government recognizes English and Indonesian as working languages. The country's infrastructure was seriously damaged, and people were relocated to other places. Since the U.N. administration began in late 1999, the economy has recovered; owing to the scarcity of economic data, however, making precise estimates of GDP is an almost impossible task. The gradual withdrawal of the United Nations civil administration and peacekeeping operations from early 2002 led to a decline of economic activities. This decline was most noticeable in the construction and service sectors. East Timor has substantial oil and gas potential, and the Government counted on the oil and gas sector to contribute a significant portion of its revenues to the budget. The ratification of the Timor Sea Treaty between Australia and East Timor will be significant for Timor's future by allowing the exploitation of the Bayu-Undan oil and gasfield and the development of the Sunrise gasfield. In 2002, however, agriculture was the backbone of the country's economy with such commodities as coffee, maize, and rice (Wall Street Journal, 2002).

Government Policies and Programs

At yearend 2002, the investment climate in the Indonesian mining and other sectors remained cloudy. Since 1997, business investments in new plants and equipment were slower than expected. Weak investment reduced the long-term potential for growth and higher income employment. The political changes from decades of authoritarian rule toward a market-oriented economy and democratic political institutions created uncertainty with respect to decisionmaking, which discouraged new commitments from domestic and foreign investors. Investment was also hindered by the country's weak banking sector and poor legal framework. As part of the continuous support of the International Monetary Fund, the Indonesian Government signed a new letter of intent in 2002 to extend funds to enhance the financial system stability and to improve the investment climate through legal and other structural reforms. The Government intended to develop further the Commercial Court, which has jurisdiction over bankruptcy and intellectual

property rights cases and to establish a Judicial Commission to strengthen the governance and administration of the judiciary. The Anti-Corruption Commission was expected to be operational by yearend 2003 (Asian Chemical News, 2002).

The implementation of the decentralization laws No. 22/1999 and No. 25/1999, which took effect in 2001, affected the investment climate. The incomplete regulations created confusion between the Central and regional governments on such issues as investment approval, land, mining licenses, and taxes. Despite the fact that law No. 22/1999 assigned the right to approve foreign investments to the regional governments, the Central Government retained the right to approve foreign investments by Presidential Decree. Some regional governments issued their own mining laws and collected additional taxes on mining activities in their regions. The Central Government revoked 68 bylaws that had been issued by regional governments and that were related to the energy and mineral sectors because they were in conflict with laws and contracts between the Central Government and investors. The Government considered to issue several bills to improve the implementation of regional autonomy in 2003 (Far Eastern Economic Review, 2002; Jakarta Post, 2002§,¹ 2003d§).

In the past 5 years, very few new investors considered investing in Indonesia. The Capital Investment Coordinating Agency urged the Government to provide a tax holiday to attract mining investors. The investment climate in Indonesia was unattractive compared with other countries. The mining sector was one of the backbones of the state's tax income. Most mining companies that were operating in Indonesia were foreign. The tax holiday would create job opportunities and would help the economy to recover sooner (Petrominer, 2002a).

Law No. 41/1999 banned open cast mining in protected forest areas; according to the law, however, the House of Representatives could grant a special permit to allow mining in protected forest areas. At yearend 2002, at least 150 companies with a total investment of \$32 billion have ceased their operations. The House of Representatives and the Ministry of Energy and Mineral Resources jointly established a team to evaluate how the forest law affected mining companies. The team recommended that 22 mining companies be allowed to mine in protected forest areas. The recommendation was based on their stage of mining, disbursed investment value, and the impact of their operations on the environment. The House of Representatives and the Ministry of Forestry agreed to allow six mining companies to resume the operations for which their mining licenses had been issued before law No. 41/1999 was enacted and changed their operating areas to limited production forest areas from protected forest areas. The six companies were PT Gag Nickel in Papua Province, PT Weda Bay Nickel and PT Nusa Halmahera in North Maluku Province, PT Galuh Cempaka in South Kalimantan Province, PT Jorong Barutama Greston in Papua Province, and PT Barisan Tropical Mining in South Sumatra Province. Other companies were still being studied (Petrominer, 2002i). The House of Representatives is considering amendments to law No. 41/1999 because it is unfriendly to mining investors and too weak in penalizing violators; the World Bank, however, warned that foreign donors might reduce their environmental grants to Indonesia if the Government allowed mining companies to operate in protected forests (Jakarta Post, 2003c§).

The Ministry of Finance issued a decree that allows regional governments to seek foreign loans to accelerate development in their regions. According to the decree, a regional government must receive approval from the Ministry before seeking foreign loans (Jakarta Post, 2003f§).

Trade

Indonesia liberalized its trade regime and taken a number of important steps to reduce protectionism. In the early 1990s, the Government began a series of annual deregulation packages designed to lower tariff rates gradually. As of January 2003, about 70% of Indonesia's tariff rates ranged between 0% and 5%. In the Uruguay Round market access negotiations, Indonesia committed to bind 94.6% of its tariff schedule; most tariffs were bound at 40%. Products for which tariff bindings exceeded 40% or that remained unbound included automobiles, iron and steel, and some chemical products. On January 1, 2002, Indonesia will fully implement the final stage of its commitments under the Association of Southeast Asian Nations (ASEAN) Free Trade Area Agreement. Indonesia has reduced tariffs for all products to 5% or less for products of at least 65% ASEAN origin. Indonesia will reduce rates on 66 remaining tariff lines, mostly in chemicals and plastics sectors, to 5% by 2003 (Jakarta Post, 2003a§).

The Government continued to reduce the number of products subject to import restrictions and special licensing requirements. The number of restriction declined to 141 in 2002 from 1,112 in 1990. In March 2002, the Ministry of Industry and Trade issued a decree on Special Importer Identification Code Numbers that required importers of certain product categories to apply for a special importer identity card. The majority of them were agricultural and textile products. In May 2002, the Ministry issued a decree to add the export control on sea sand to the 1998 decree (Petrominer, 2002b).

Indonesian total trade increased by 1.0% to \$88.2 billion in 2002. The values of imports and exports inclined in 2002, and the trade surplus increased to \$25.8 billion. In 2001, exports increased by 1.2% to \$57.0 billion, and imports increased by 0.9% to \$31.2 billion. The value of non-oil and gas exports was \$44.9 billion. For the mining sector, the total export value for Indonesian minerals increased by 5.6%. Imports of iron and steel increased to \$1.2 billion. In 2002, the top five sources of Indonesian imports were Japan, the United States, Singapore, Australia, and Germany (Ministry of Industry and Trade, 2003§).

¹References that include a section mark (§) are found in the Internet References Cited section.

Commodity Review

Metals

Aluminum.—Continuous inadequate power-generation capacity at Lake Toba in Sumatra forced PT Indonesia Asahan Aluminum's smelter to operate below its designed capacity in 2002. The company was exploring alternate sources to secure an alternative power supply for the smelter. The company was considering building a 90-megawatt hydroelectric powerplant near the smelter. The cost for the investment was estimated to be \$400 million, which was expected to be financed by its major shareholder Nippon Asahan Aluminium, and required approval from the Government. Another alternative was to use the hydroelectric power supply from the nearby Renum River; this plan, however, required solving a lot of technical and environmental problems (Metal Bulletin, 2002c).

PT Aneka Tambang Tbk (PT Antam) completed all mandated studies for the Tayan chemical-grade alumina project in Tayan, West Kalimantan Province. The social aspect study in reference to the International Finance Corp. provisions has also been completed. The mining license covered an area of 13,000 hectares (ha). The financing arrangements were still being discussed. The schedule for finalizing of the generation VIII contract of work has not been arranged because the House of Representatives has not passed the new mining law. Therefore, the establishment of a joint-venture company between Antam and a Japanese investor was also on hold (Petrominer, 2002e).

Copper.—PT Freeport Indonesia Co. continued to explore the area of block A immediately surrounding the Grasberg mining complex known as Deep Ore Zone Northwest Extension. As a result of the company's effort, an addition of 1.2 million metric tons (Mt) of recoverable copper and 31.1 metric tons (t) of gold were discovered by yearend 2002. In 2003, Freeport will focus its exploration effort on the block A targets that have high potential to add reserves. The Government rejected Freeport's application to expand its tailing sedimentation area to 450 square kilometers (km²). On August 31, 2002, a shooting near Freeport's Grasberg Mine left 3 people dead and more than 10 people injured. Operations at the Grasberg Mine were unaffected. Field exploration activities outside the mining area were suspended because of safety and security issues. The uncertainty relating to Freeport's mining and exploration rights in certain forest areas covered by a contract of work and law No. 41/1999, which prohibits open pit mining in protected forest areas. The suspensions were granted for a 1-year period; operations ended for block B and PT Babire Bakti Mining (a contractor of Freeport) on March 31, 2003, and for Eastern Minerals on November 15, 2003 (Metal Bulletin, 2002a). PT Smelting (a subsidiary of Freeport) was waiting for its shareholders to approve the expansion of its cathode production capacity to 240,000 metric tons per year (t/yr) from 210,000 t/yr by adding more electrolytic cells and/or increasing current density in its refinery (Metal Bulletin, 2003a; Petrominer, 2002j, 2003e).

The Batu Hijau Mine in Sumbawa Island, West Nusa Tenggara Province, was the second largest copper- and gold-producing mine in Indonesia. In 2002, owing to the improvement of efficiency, the mill throughput increased by 7% to 51.8 Mt, which offset a 4% lower input copper grade (0.71% copper); the average recovery rate was 89.0%. Newmont Mining Corp. of the United States through its subsidiary PT Newmont Nusa Tenggara in Indonesia had a 45% equity interest in Batu Hijau; Sumitomo Corp. of Japan held 35%, and PT Pukuafu Indah of Indonesia held 20%. Under the contract of work agreement, Newmont had the right to continue operating the mine for 30 years from operational startup or longer if approved by the Government. The mine began production in late 1999, and by the end of the 10th year, the total equity of Newmont and Sumitomo would be reduced to 49% by 2010. Under the contract of work, foreign investors must divest 15% equity in the sixth year and 8% in the following year. Because PT Pukuafu Indah held a 20% share, the divestment obligation (3%) will begin in 2006 (Newmont Mining Corp., 2003, p. 22, 29).

Gold.—Illegal gold mining has increased dramatically in Central Kalimantan Province. In the Takaras village of Bukit Batu district in Palangkaraya, illegal miners have destroyed more than 1,000 ha of forest. For example, the PT Suka Budi Mulia concession area became a desert. About 12,000 families of miners began moving into the Takaras area. Environmentalists feared that if illegal mining activities were not controlled, then environmental damage in the forest would be worsened. Illegal miners used diesel oil and mercury in their gold operations, and wastes were discharged randomly. Environmentalists urged the local government to take action to protect the forest, otherwise one-fourth of protected forest area would be damaged (Petrominer, 2003j).

Kalimantan Gold Corp. Ltd. of Canada resumed its exploration work on the Mansur copper/gold prospect in August 2002. The Mansur prospect, which is located in central Kalimantan, was discovered in 1984. Geophysical data indicated the area potentially contained a high metal (copper and gold) content at depth. High-grade gold [up to 7 gram per metric ton (g/t)] has been recovered from drill core. The company objective was to intersect greater than 1% high-grade equivalent porphyry copper gold over intersections of greater than 100 meters in one or more drill holes. The company hoped to raise to up \$500,000 to finance the project. Kalimantan Gold also held 1,242-km² concession area in central Kalimantan. The Baroi prospect was under the sixth generation contract of work. During the early reconnaissances in 1985 and 1997, the company discovered high-grade mineralization in the area. The company, which restarted exploring the prospect in November 2002, identified high-grade copper and gold mineralization over an area that covered 26 km². One of the samples contained 16.4% copper, 17.8 g/t gold, and 460 g/t silver. The company believed that the potential for high-grade gold deposits may exist in the area (Kalimantan Gold Corp. Ltd., 2003).

Local communities in the Kambuno Mountain Range in Central Sulawesi Province objected to PT Citra Palu's plan to mine gold in the Poboyo-Panchi area; PT Citra Palu was a joint venture between PT Citra Mineral and Rio Tinto Ltd. The Indonesian Forum for the Living Environment estimated that the environmental impact was beyond restoration. Concerns have been raised that mining in the Poboyo-Panchi area could disturb the hydrological cycle by dramatically reducing ground and surface waters (Petrominer, 2002c).

Iron and Steel.—Indonesia produced about 3 million tons per year (Mt/yr) of steel and consumed about 4 Mt/yr. State-owned PT Krakatau Steel was largest steel producer and accounted for about 80% of the country total output. In November 2002, the Ministry of Industry and Trade issued a decree to limit the quantity of imported steel products. Steel producers were allowed to import hot-rolled and cold-rolled coils as raw materials or as supplements for production purposes. Imported coils were not be allowed to be sold in domestic markets or to be transferred to other companies. This aim was to prevent imported coils, which were cheaper than local coils, to enter the domestic market. The Government also increased the tariff rates for hot-rolled and cold-rolled coils to 20% and 25%, respectively, for 1 year. Steel products were mainly from Japan, the Republic of Korea, and Russia (Metal Bulletin, 2002b).

PT Essar Dhanajaya, which was a joint venture between Essar Steel of India (92% equity) and PT Garama Adipratama of Indonesia (8% equity), expanded its cold-rolled mill capacity to 330,000 t/yr from 200,000 t/yr. The company purchased a 100,000-t/yr cold-rolled mill from California Steel Industries of the United States and reinstalled at Essar Dhanajaya's Bekasi in West Java Province. The mill was scheduled to be in operation in early 2003. Another 30,000-t/yr capacity would come through debottleneck. The hot-rolled coil feed would be supplied mainly from Essar Steel. The cold-rolled steel products will be sold in the domestic market (Metal Bulletin, 2002d).

Nickel.—The supply-demand for nickel continued to tighten in 2002. The stainless steel sector was the largest nickel end user. China was the driving force for the growth of demand because its stainless steel demand and production continued to expand during the past couple of years. Market price of nickel increased by nearly 14% in 2002 compared with that of 2001. Owing to the rebuilding of No. 3 electric furnace, the nickel matte output of PT International Nickel Indonesia Tbk (PT Inco) (a subsidiary of Inco Ltd. of Canada) declined slightly. The company's net earnings, however, increased more than tripled in 2002 compared with that of 2001 because of the reduction of production costs and higher nickel price (Inco Ltd., 2003, p. 15).

PT Inco and PT Antam jointly planned to invest \$380 million for the development of nickel reserves in east Pomalaa, Kolaka regency, Southeast Sulawesi Province. Exploration was scheduled to begin in 2003, and production was expected to begin in 2005. The nickel ore will be used by PT Antam's FeNi III processing plant. PT Inco also agreed to supply 10 Mt (wet) of nickel ore to Antam in 2005. PT Antam had two ferronickel smelters in East Pomalaa, and the feed for both smelters was supplied from PT Antam's Pomalaa Mine, which was expected to shut down in 2005. PT Antam planned to build a 15,000-t/yr-capacity smelter in East Pomalaa, which would consume around 1 Mt/yr of nickel ore. The \$380 million FeNi III smelter would be financed from syndicated export credit from IKB Hemes of Germany, loan credit from Bank Mandiri, and internal funds (Petrominer, 2003a, d).

Tin.—The Indonesian Government decided to ban the export of tin ore and concentrates effective June 1, 2002. In 2001, traders exported 43,450 t of tin ore illegally. The Government had difficulty in controlling tin smuggling because of the long coast line especially along Bangka-Belitung Province. Illegal trading was caused by tin price differences in Indonesia and Singapore. Tin ore was sold for \$3.6 per kilogram in Singapore, but local miners sold to PT Tambang Timah Tbk (PT Timah) for \$2.8 per kilogram. The rampant smuggling was also caused by the existence of unlicensed mining activities in Bangka-Belitung Province where about 13% (130,000) of its provincial population depended on unlicensed mining to support their families. It was also a source of revenue for the regional government. These miners preferred to sell their tin exporters rather than to PT Timah or local tin smelting company (CV Donna Kembarjaya) (Petrominer, 2002c, 2003b).

In 2002, the sale of PT Koba Tin (PT Koba) by Iluka Resources Ltd. of Australia to Malaysia Smelting Corp. was completed. The sale included a \$13.7 million cash payment and a deferred contingent component of up to \$6 million within 3 years to be based upon London Metal Exchange tin prices. PT Koba operated under a contract of work from the Indonesian Government that covered an area of 417 km² in the southern corner of Bangka Island. The contract of work was scheduled to expire in 2003, but the Government agreed to extend it for 10 years to 2013 (Metal Bulletin, 2002e).

Despite of increase tin metal production, the largest tin producer in the world PT Timah faced revenue decline in 2002 because of the lower tin price in the world market and the depreciation of Indonesian rupiah against the U.S. dollar. In 2004, the company planned to build a 8,000-t/yr smelter on Kundur Island in Riau Province to process tin ore dredged in the area to reduce transportation costs. Tin concentrates were shipped from the Kundur Island to PT Timah's smelter on Bangka Island (Metal Bulletin, 2003b).

Industrial Minerals

Cement.—The Indonesian cement sector was dominated by the following producers: PT Semen Gresik Group, which included PT Semen Padang and PT Semen Tonasa; PT Semen Cibinong; PT Indocement Tunggul Prakarsa; and PT Semen Andalas Indonesia. They accounted for 93% of the country's cement production. The Government held 51% equity of PT Semen Gresik, which was the largest producer in Indonesia; the company was listed on the Jakarta Stock Exchange in 1991. In 1985, the Government ordered PT Semen Gresik to acquire PT Semen Padang in West Sumatra Province and PT Semen Tonasa as a strategic effort to consolidate the three state-owned cement companies into a single unit. The move was supposed to generate better efficiency in procurement and marketing. After more than a decade, despite the consolidation, PT Semen Padang and PT Semen Tonasa remained autonomous companies. During the economic crisis in 1997, PT Semen Padang wanted to be a independent company, and the Government desperately needed cash and sold a 25.5% share in PT Semen Gresik through a competitive bid. Cemex Mexicanos S.A. de C.V. paid 127% premium on the share price in 1998. Since 1999, PT Semen Padang has become a burden for PT Semen Gresik because local politicians interfered in the management decision on PT Semen Padang's operation. In November 2001, the Government decided to restore PT Semen Padang as a stand-alone state company by acquiring the majority of its shares from PT Semen Gresik. The three cement units under PT Semen Gresik must undergo legal and financial audits to determine their share values, and this may take at

least 1 year to complete. The Government also will need to make decision how to deal with minority owners (Jakarta Post, 2003b§, g§).

Diamond.—BM Diamondcorp Inc. of Canada performed a feasibility study at the Cempaka diamond project which is located in the Danau Seran area of Borneo Island in southeastern Kalimantan. PT Galuh Cempaka (Diamondcorp, 80%, and PT Antam, 20%) would be the operator for this project. Diamondcorp brought the asset from Rio Tinto and Malaysian Mining Corp. Under the terms of agreement, Diamondcorp would pay a total of 1.6% of gross earnings to these companies. The feasibility study concluded that the Cempaka project could be economically developed. The area was projected to have recoverable diamond of 715,000 carats to support 16 years of mining. Diamondcorp also conducted feasibility study on the Bobaris Block property, which was discovered by the Netherlands in 1920-30 in the Sungai Pinang area of the Meratus Range in southeastern Kalimantan. Under the terms of joint venture agreement, Diamondcorp will earn 70% interest in the property by refunding PT Indo Mineratama's bond and application fees of \$22,000; paying \$75,000 to Promega Co. Ltd. of Hong Kong by December 31, 2002; and spending \$500,000 on exploration in next 5 years. Upon completion of this expenditure, Diamondcorp will have 70% equity of the joint venture; Promega, 20%; and Indo Mineratama, 10%. The Bobaris Block property covers an area of 15,000 ha (BM Diamondcorp Inc., 2002).

Mineral Fuels

The electricity crisis in Indonesia became worse in 2002. The affected areas increased to 28 from 21 in 2001. The shortage of electricity was expected to become more critical in 2003. The state-owned utility company Perusahaan Listrik Negara (PLN) was unable to add more powerplants in 2003. In 2002, the Government approved the PLN plan to develop the 6- by 100-megawatt Muara Tawar powerplant in Bekasi, West Java Province, so that it would have an adequate transmission network to enter the Java-Bali system in 2004. PLN estimated that the company required at least \$1 billion for transmission network and at least \$15 billion to develop more powerplants to meet the electricity demands of the country in 2005. To raise revenue, PLN increased the electricity basic tariff every 3 months; PLN, however, remained in financial crisis. In 2002, the Parliament passed the electricity law, which liberalized the power sector. Under the law, Bali, Batam, and Java will be opened to free competition by 2007, and the Government will focus on developing electrical power in other parts of the country. The law also allowed local governments to invite investors to build powerplants in their respective areas. Availability of electricity was expected to improve by 2010 (Petrominer, 2003c).

Coal.—Indonesia is rich in coal resources. According to the Department of Energy and Mineral Resources, the country has coal resources of 33.9 billion metric tons (Gt), of which 5.4 Gt is proven reserves. Indonesia coal sector was dominated by foreign investors. In 2002, the total coal output was 103 Mt, of which foreign companies produced 87 Mt. The Government set coal production targets at 108 Mt in 2003, 113 Mt in 2004, 117 Mt in 2005, and 120 Mt in 2006. Domestic coal consumption was estimated to be 26 Mt in 2002, 28 Mt in 2003, 34 Mt in 2004, 35 Mt in 2005, and 39 Mt in 2006. Powerplants and cement plants were Indonesia's major consumers and accounted for about 90% of the total consumption. The Government also projected that coal export would reach to 81 Mt in 2006 from 65 Mt in 2001. The international coal market became more competitive because China increased its coal exports to the Asian market within the past several years, and the trend was expected to continue in the future (Petrominer, 2003g).

Indonesia's second largest coal producer PT Kaltim Prima Coal Co. (KPC), which was jointly owned by PT Rio Tinto Indonesia (50%) and British Petroleum Amoco (50%), agreed to divest a total of 51% share to local buyers. The share offer was to be based on the fair market value. The 100% share price was finally valued at \$822 million. The East Kalimantan Provincial Government and the East Kutai Regency government offered to buy the whole 51%. KPC resisted the offer because the purchase would transfer control to local governments. The Government decided that it should control 20% and appointed state-owned coal company PT Tambang Batubara Bukit Asam (PTBA) to acquire the share. The East Kutai Regency's company Perusahaan Daerah Pertambangan Energi Kutai Timur and the East Kalimantan Province's company Melati Bhakti Satya jointly acquired the remaining 31% share. PTBA offered 15% of its shares through the Jakarta and Surabaya Stock Exchanges. The procedure offering was under the supervision of the Government (Petrominer, 2002d, f).

PTBA was looking for financial assistance from China National Technology Import Export Corp. (CNTIEC) to develop the underground coal project in Ombilin area, West Sumatra Province. Open cast coal resources in the Ombilin area have been gradually depleted. PTBA laid out the following options to finance the project: build, operate, and transfer; an export credit loan; and a commercial loan. With the financial assistance, coal production in the Ombilin area could increase to 1.3 Mt/yr (Petrominer, 2002f).

Oil and Gas.—In 2002, Indonesia's oil production continued to decline to an average of 1.20 million barrels per day (Mbb/d), and the Government set the oil production target at 1.27 Mbb/d in 2003. PT Caltex Pacific Indonesia was the largest oil producer in Indonesia and produced about 700,000 barrels per day. Badan Pelaksana Migas (BP Migas) was established in 2002 under law No. 22/2001 as part of the oil and gas reform. The agency took over the authority to manage and supervise the upstream oil and gas sector from the state-owned oil company Pertamina. The Government also planned to establish a regulatory agency to manage the downstream oil sector, such as refinery and retail petroleum products. Of the 130 production-sharing contracts, 40 were in production stage, and the others remained in the exploration stage. Each contractor was required to submit its annual production/exploration and funding plans to the Government for approval (Petrominer, 2003f).

If all goes according to the Government plan, Pertamina will become a state-owned limited company in 2 years. The company will divest ownership of its noncore assets under the governmental regulations. The Government plan was to transfer Pertamina into a

upstream oil and gas company that would concentrate on exploration, mining, and refining to compete with foreign oil and gas companies in the world. As the Indonesian economy continues to improve in the next several years, domestic demand for oil and gas was expected to increase. The Government hoped that Pertamina will discover more oil and gas to avoid the country from becoming a net oil importer by 2010 as many analysts have predicted (Jakarta Post, 2003e§).

In September 2002, Pertamina and China National Offshore Oil Co. Ltd. (CNOOC Ltd.) (a subsidiary of China National Offshore Oil Corp.) signed a sale and purchasing liquefied natural gas (LNG) agreement. The 2.6-Mt/yr LNG supply will come from the British Petroleum Plc. (BP)-operated Tangguh gasfield in Papua Province to Fujian Province in China beginning in 2007 for 25 years. Analysts predicted that Fujian Province may require imports of between 4.5 and 6.6 Mt of LNG in 2010. The Tangguh gasfield has proven reserves of 410 billion cubic meters and was scheduled to be put into operation in 2003. The LNG plant was designed to produce 7 Mt/yr during the first phase in 2007. CNOOC Ltd. signed a purchase agreement with BP to take a 12.5% stake in the Tangguh LNG project. In August, Indonesia lost the 3-Mt/yr LNG bid to supply the Australian consortium Australian LNG, which was led by Woodside Petroleum Ltd., to Guangdong Province, China (Petrominer, 2002g).

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Major Sources of Information

Ministry of Energy and Mineral Resources

Jalan Merdeka, Selatan 18, Jakarta, Indonesia

Ministry of Industry and Trade

Jl. Gatot Subroto Kav. 52-53, Jakarta 12950, Indonesia

Directorate of Geology and Natural Resources

Jl. Supomo 10, Jakarta, Indonesia

Directorate General of Oil and Gas

Plaza Centris, Jl. HR. Rasuna Said, Kav B/5, Juningan, Jakarta, Indonesia

TABLE 1
INDONESIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	1998	1999	2000	2001	2002	
METALS						
Aluminum:						
Bauxite, wet basis, gross weight	thousand tons	1,055	1,116	1,151	1,237	1,283
Metal, primary ^e		133,000	106,000	160,000	180,000	160,000
Chromite sand, dry basis ^e		4,700	6,400	1,000	1,000	1,000
Copper:						
Mine, Cu content		780,780	766,027	1,012,054	1,048,694 ^r	1,171,726
Metal						
Smelter, primary		--	126,700	173,800	217,500	211,200
Refinery, primary		--	90,800	158,400	212,500	192,400
Gold, mine output, Au content ²	kilograms	124,018	127,184	123,994 ^r	162,605 ^r	142,238
Iron and steel:						
Iron sand, dry basis		560,524	584,428	489,126	469,126	378,587
Metal:						
Ferroalloys:						
Ferronickel		41,543 ^r	44,068 ^r	47,749 ^r	47,769 ^r	42,306
Ferromanganese ^e		13,000	12,000	12,000	12,000	12,000
Pig iron, direct reduced iron	thousand tons	1,640	1,740	1,820	1,480	1,500
Steel, crude ^e	do.	2,700	2,890	2,850	2,780	3,000
Manganese, ore		900	--	--	--	--
Nickel:						
Mine output, Ni content ³		74,063	89,100	98,200	102,000	123,000
Matte, Ni content		35,697	45,400	59,200	63,471	59,000
Ferronickel, Ni content		8,452	9,225	10,111	10,302	8,807
Silver, mine output, Ag content	kilograms	348,987	288,200	255,578	269,825 ^r	293,520
Tin:						
Mine output, Sn content		57,562 ^r	51,761 ^r	55,624 ^r	61,863 ^r	88,142
Metal		53,665 ^r	49,709 ^r	47,129 ^r	53,796 ^r	67,455
INDUSTRIAL MINERALS						
Cement, hydraulic	thousand tons	22,000 ^e	23,925	27,789	31,100	33,000 ^e
Clays:						
Bentonite ^e		840 ⁴	5,213 ⁴	5,000	5,000	5,000
Fireclay ^e	thousand tons	1,800	1,850	1,900	1,900	1,900
Kaolin powder ^e		8,567 ⁴	21,389 ⁴	15,000	15,000	15,000
Diamond:^e						
Industrial stones	thousand carats	22	23	23	23	23
Gem	do.	6	7	7	7	7
Total	do.	28	30	30	30	30
Feldspar ^e		40,434 ⁴	23,236 ⁴	24,000	24,000	24,000
Gypsum ^e		405 ⁴	5,707 ⁴	6,000	6,000	6,000
Iodine ^e		65 ⁴	74 ⁴	75	75	75
Nitrogen, N content of ammonia	thousand tons	3,500 ^e	3,457	3,617	3,665	4,200
Phosphate rock ^e		752 ⁴	617 ⁴	630	600	600
Salt, all types ^e	thousand tons	660	650	650	680	680
Stone:						
Dolomite ^e		20,115 ⁴	2,907 ⁴	3,500	3,000	3,100
Granite	thousand tons	4,801	4,107	5,941	3,975	4,966
Limestone	do.	6,575	15,540 ⁵	16,000 ⁵	16,000 ^{e,5}	16,000 ^{e,5}
Marble ^e	cubic meters	142,147 ⁴	702 ⁴	1,000	1,000	1,000
Quartz sand and silica stone ^e		144,953 ⁴	140,428 ^{4,5}	145,000 ⁵	145,000 ⁵	145,000 ⁵
Sulfur, elemental ^e		3,400	3,450	3,500	3,600	3,600
Zeolite ^e		-- ⁴	569 ⁴	400	400	400

See footnotes at end of table.

TABLE 1--Continued
INDONESIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	1998	1999	2000	2001	2002
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Anthracite	57,741	72,795	25,000 ^r	40,807 ^r	42,690
Bituminous	61,146	72,618	77,015 ^r	92,500 ^r	103,329
Gas, natural:					
Gross	84,333	86,863	82,334	79,470	90,200
Marketed ^c	48,700	49,500	45,100	44,000	51,000
Petroleum, crude including condensate	568,159	547,610	516,070	489,460	432,000

^cEstimated; estimated data are rounded to no more than three significant digits. ^rRevised. -- Zero.

¹Table includes data available through August 30, 2003.

²Includes Au content of copper ore and output by Government-controlled foreign contractors' operations. Gold output by operators of so-called people's mines and illegal small-scale mines is not available but may be as much as 20 metric tons per year.

³Includes a small amount of cobalt that was not recovered separately.

⁴Reported figure.

⁵Cubic meters.

TABLE 2
INDONESIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2002

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Locations of main facilities	Annual capacity ^e
Aluminum:			
Bauxite	PT Aneka Tambang (Government, 65%)	Kijang, Bintan Island, Riau	1,300
Metal	PT Indonesia Asahan Aluminium (Nippon Asahan Aluminum Co. Ltd. of Japan, 59%; Government, 41%)	Kual Tanjung, North Sumatra	250
Cement	PT Indocement Tunggul Prakarsa	Cirebon and Citeureup, West Java; Tarjun, South Kalimantan	15,400
Do.	PT Semen Andalas Indonesia	Aceh Besar	1,000
Do.	PT Semen Baturaja (Persero)	Baturaja-Ogan Komering Ulu, South Sumatera	1,250
Do.	PT Semen Bosowa Maros	Kabupaten Maros, Sulawesi Selatan	2,200
Do.	PT Semen Cibinong	Narogong, East Java	11,800
Do.	PT Semen Gresik (Persero)	Gresik and Tubar, East Java	5,000
Do.	PT Semen Padang (Persero)	Indarung, West Java	2,200
Do.	PT Semen Tonasa (Persero)	Pangkep, Sulawesi Selatan	3,590
Coal	PT Adaro Indonesia (New Hope Corp, 50%; PT Asminco Bara Utama, 40%; Mission Energy, 10%)	Paringin and Tutupan, South Kalimantan	22,000
Do.	PT Arutmin Indonesia (PT Bumi Resources Tbk, 80%; Bakrie Group, 20%)	Mulia, Senakin, and Satui, South Kalimantan	11,000
Do.	PT Berau Coal (PT United Tractor, 60%; PT Armadian, 30%; Nissho Iwai, 10%)	Berau, East Kalimantan	13,000
Do.	PT Kaltim Prima Coal Co. (PT Rio Tinto Indonesia and BP Amoco, 49%; Government of East Kutai Regency, 31%; PT Tambang Batubara Bukit Asam, 20%;)	Samarinda, East Kalimantan	18,000
Do.	PT Kideco Jaya Agung (Samtan Co. Ltd. of the Republic of Korea, 100%)	Pasir, East Kalimantan	12,000
Do.	PT Tambang Batubara Bukit Asam (State-owned)	Tanjung Enim and Ombilin, South Sumatra	19,000
Copper:			
Concentrate	PT Freeport Indonesia Co. (Freeport-McMoRan Copper & Gold Inc. of the United States, 81.28%; Government, 9.36%; others, 9.36%)	Ertsberg and Grasberg, Papua	800
Do.	PT Newmont Nusa Tenggara (Newmont Gold Mining Co. of the United States, 45%; Sumitomo Corp., 35%; PT Pukuafu Indah, 20%)	Sumbawa Island, West Nusa Tenggara	300
Metal	PT Smelting Co. (Mitsubishi Materials Corp., 60.5%; PT Freeport Indonesia Co., 25%; others, 14.5%)	Gresik, East Java	210
Gas:			
Natural million cubic feet per day	ExxonMobil Oil Indonesia	Arun, Aceh in North Sumatra	1,700
Do.	Roy M. Huffington (subsidiary of HUFFCO Group of the United States)	Badak, East Kalimantan	1,000
Do.	Total Indonesia	Offshore of East Kalimantan	2,100
Liquefied	PT Arun LNG Co. Ltd. (Government, 55%; Mobil Oil, 30%; Japan Indonesia LNG Co., 15%)	Balang Lancang, Aceh in North Sumatra	10,000
Do.	PT Badak LNG Co. Ltd. (Government, 55%; HUFFCO Group, 30%; the Japan Indonesia LNG Co., 15%)	Bontang, East Kalimantan	7,900
Gold metric tons	Aurora Gold Ltd. (100%)	Balikpapan, Central Kalimantan	60
Do.	PT Freeport Indonesia Co. (Freeport-McMoRan Copper & Gold Inc. of the United States, 81.28%; Government, 9.36%; others, 9.36%)	Ertsberg and Grasberg, Papua	110
Do.	PT Kelian Equatorial Mining (Rio Tinto Ltd, 90%; PT Harita Jaya Raya of Indonesia, 10%)	Sangatta, East Kalimantan	15
Do.	PT Newmont Minahasa Raya (Newmont Mining Corp., 80%; PT Tanjung Serapung, 20%)	Manado, North Sulawesi	1
Do.	PT Newmont Nusa Tenggara (Newmont Gold Mining Co. of the United States, 45%; Sumitomo Corp., 35%; PT Pukuafu Indah, 20%)	Sumbawa Island, West Nusa Tenggara	16
Do.	PT Prima Lirang Mining (Billiton BV of the Netherlands, 90%; PT Prima Maluku Indah of Indonesia, 10%)	Lerokis, Wetar Island	3

TABLE 2--Continued
INDONESIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2002

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Locations of main facilities	Annual capacity ^e
Nickel:			
In ore	PT Aneka Tambang (Government, 65%)	Pomalaa, South Sulawesi and on Gebe Island	80
Do.	PT International Nickel Indonesia (Inco Ltd. of Canada, 59%; Sumitomo Metal Mining Co. Ltd. of Japan, 20%; others, 21%)	Sorowako, South Sulawesi	70
In matte	PT Aneka Tambang (Government, 65%)	Pomalaa, South Sulawesi	24
Do.	PT International Nickel Indonesia (Inco Ltd. of Canada, 59%; Sumitomo Metal Mining Co. Ltd. of Japan, 20%; others, 21%)	Sorowako, South Sulawesi	68
Nitrogen	PT Aseah-Aech Fertilizer (Government, 60%; other members of Association of Southeast Asian Nations, 40%)	Lhokseumawe, North Sumatra	506
Do.	PT Pupuk Iskandar Muda (Government, 100%)	do.	506
Do.	PT Pupuk Kalimantan Timur (Government, 100%)	Bontang, East Kalimantan	1,010
Do.	PT Pupuk Sriwijawa (Government, 100%)	Palembang, South Sumatra	1,440
Petroleum, crude thousand barrels per day	Atlantic Richfield Indonesia, Inc. (subsidiary of Arco of the United States)	Arjuna and Arimbi, offshore, West Java	170
Do.	Maxus Southeast Asia Ltd. (subsidiary of Maxus Energy of the United States)	Cinta and Rama, offshore, Southeast Sumatra	95
Do.	Pertamina (Government, 100%)	Jatibarang, West Java, and Bunyu, offshore East Kalimantan	80
Do.	PT Caltex Pacific Indonesia (Texaco Inc., 50%; Chevron Corp., 50%, both of the United States)	Minas, Duri, and Bangko, central Sumatra	700
Do.	Total Indonesia (subsidiary of Compagnie Francaise des Petroles of France)	Handi and Bakapai onshore and offshore East Kalimantan	180
Steel, crude	PT Ispat Indo	Sidoarjo, Surabaya	700
Do.	PT Krakatau Steel (Government, 100%)	Cilegon, West Java	2,400
Do.	PT Komatsu Indonesia Tbk	Jakarta	8
Do.	PT Wahana Garuda Lestari	Pulogadung, Jakarta	410
Tin:			
In ore	PT Koba Tin (Malaysia Smelting Corp., 75%; PT Tambang Timah Tbk, 25%)	Koba, Bangka Island	11
Do.	PT Tambang Timah Tbk (Government, 65%)	Onshore and offshore islands of Bangka, Belitung, and Singkep	60
Metal, refined	Mentok Tin Smelter (PT Tambang Timah Tbk)	Mentok, Bangka Island, South Sumatra	68
Do.	Koba Tin Smelter (PT Koba Tin)	Koba, Bangka Island, South Sumatra	14

^eEstimated; estimated data are rounded to no more than three significant digits.