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The Mineral Industry of Indonesia

By Susan Wacaster

The Indonesian archipelago is composed of about 17,500 islands that contain at least 15% of Earth's historically active volcanoes. About 80% of Indonesia's Cenozoic volcano-plutonic arc complexes are reported to contain mineral deposits, and the country's metallogeny is dominated by porphyry copper and epithermal gold deposits. Indonesia also has resources of commodities such as bauxite, coal, nickel, and tin, for which the country has been a regionally or globally top-ranked producer and exporter (Sillitoe, 1994, p. 1).

In 2014, a ban on exports of unrefined ores, which was implemented gradually by regulations imposed through the Mining Law of 2009, came into full effect. The Indonesian Government now requires that the beneficiation of ores take place domestically in order to make the country a producer of higher value finished goods rather than an exporter of raw materials. By January 2014, few mining companies in Indonesia had complied with the requirement to incorporate processing plants into their operations. Plans for about 100 smelter projects were submitted to the Government, but only 28 had broken ground and only one had been commissioned (Winzenried and Adhitya, 2014).

Exploration for hydrocarbons in Indonesia's sedimentary basins has taken place since the early 1900s and was officially promoted since the 1970s. The organic matter of Indonesia's main petroleum basins, which are an integral part of a group of paleogene and neogene basins that developed throughout southeast Asia, originated primarily from land plants and (or) algal lacustrine source materials, as opposed to marine sources, whereas important coal deposits in the country developed within interfingered marine and continental sediments (Doust and Noble, 2008, p. 106).

In 2014, Indonesia accounted for 36% of the crude petroleum produced by the leading petroleum-producing countries of southeast Asia, including Malaysia (29%), Thailand (19%), and Vietnam (16%). Among the region's natural-gas-producing countries, Indonesia led production with 30% of the total, followed by Malaysia (27%), Thailand (17%), Bangladesh (10%), Brunei (5%), and Vietnam (4%) (BP p.l.c. 2015, p. 8).

Minerals in the National Economy

Preliminary figures released by Indonesia's statistical agency (Badan Pusat Statistick) show that Indonesia's year-over-year real gross domestic product (GDP) rate of growth was 5.1% in 2014 and that the rate of growth had decreased each year since 2011 when it was 6.5%. The manufacturing sector, which includes liquefied natural gas (LNG) and petroleum refinery products processing but not production of mineral commodities, accounted for 26% of the GDP in 2014 and continued to be the leading sector of the Indonesian economy. Manufacturing of LNG and petroleum refinery products alone accounted for 1.5% of the GDP. The value of mining and quarrying of all mineral commodities accounted for 6.7% of the GDP in 2014 compared with 5.6% in 2013, and the mining sector accounted for about 15% to 20% of Indonesian exports on an annual basis in recent years (Badan Pusat Statistick, 2015).

Government Policies and Programs

In 2009, the Indonesian Parliament passed a new Mining Law [Law No. 4 of 2009 on Mineral and Coal Mining (Law No. 4)]. Prior to the passage of Law No. 4, foreign-owned companies seeking to conduct mining activities in Indonesia signed production-sharing contracts directly with the Government. The Contract of Work (COW) system was replaced with a two-stage permitting process [Izin Usaha Pertambangan (IUP) or permit to carry on mining business] that includes the issuance of an Exploration IUP and an Exploitation IUP. COWs that remained in effect were supposed to be adjusted to comply with the requirements of the new mining law. Among the requirements were the prohibition of exporting unprocessed minerals and the obligation to process and refine their product in Indonesia. Also, foreign shareholders in companies with an Exploitation IUP are required to divest shares within 10 years from the commencement of commercial production in order that the Government of Indonesia may achieve majority ownership. In 2012, the Government established a team to evaluate the adjustment of COWs and Coal Contracts of Work (CCOW) required by the 2009 law. In addition, the evaluation team was to enforce COW and CCOW holders' obligations regarding processing and refining of minerals and coal (Surowidjojo, 2012a, Scott and Tan, 2014).

Regulation No. 7 of 2012 on increasing the added value of minerals through processing and refining was passed on February 6, 2012, with the aim of developing the country's domestic mineral-processing industry and deriving more revenue from its mineral sector. Value-added minerals affected by the regulation included metals, nonmetallic minerals, coal, and stone. The regulation set out minimum levels of processing that the minerals must be subjected to prior to export and prohibits the export of minerals in raw form. The ban on unprocessed mineral exports was to be imposed gradually, beginning in May 2012, with full implementation in 2014. The regulation provides for cooperation among the holders of mining permits and other parties with respect to the sale and purchase of ores or concentrates, activities to undertake processing and (or) refining, and the joint development of processing and (or) refining facilities or infrastructure (Surowidjojo, 2012a, b).

On May 6, 2012, to discourage massive exports of raw minerals before the export ban came into full force, the Government also imposed a 20% duty on exports of 14 mineral ores that were not yet subject to the export ban, including copper, gold, and nickel. Later in the year, the list was extended to include 21 other mineral commodities. In total, 65 specific types of mineral ores and concentrates, not including coal, were

subject to the duty. The duty was designed to increase revenues from the mining sector and was part of the Government's effort to push mining companies to process raw ore domestically and export higher value finished metals (Scott and Tan, 2014).

The Federal Government appealed to the Parliament to amend the Mining Law in order to extend the date for compliance with the processing requirement, but the appeal was denied, and the Government implemented a two-tier solution through the creation of new regulations. Government Regulation No. 1 of 2014, which addresses the value added through domestic processing and refining (GR1/2014), decreased the purity threshold for many minerals (excluding bauxite, chromium, gold, nickel, silver, and tin for which smelting capacity existed) for 3 years to allow the continued export of partially processed minerals. Commodities for which the purity level was decreased included copper, ilmenite, lead, manganese, titanium, and zinc. Under GR1/2014, the purity requirement for copper was reduced to 15% from 99%; ilmenite, to 56% from 98%; lead, to 57% from 99.8%; manganese, to 49% from various previous purity requirements; titanium, to between 56% and 58% from 98%; and zinc, to 52% from 90% (Scott and Tan, 2014).

According to the second regulation, Ministry of Finance Regulation No. 6 of 2014 (MoFR 6/2014), which addresses the determination of export goods that are subject to export duty and the export duty tariff, partially processed minerals are subject to an export duty during the 3-year period of reduced purity thresholds at a progressive rate commencing at 25% (for copper concentrates) and 20% for other specified concentrates and increasing to 60% after the 3-year period. Both GR1/2014 and MoFR 6/2014 apply to all mining companies, regardless of whether the company holds a COW or an IUP. It remained unclear, however, what would happen when the terms of any still-active COWs were in conflict with new regulations, and there were other inconsistencies that needed to be clarified regarding the compromises brought into effect through GR1/2014 and MoFR 6/2014. Also, the Ministry of Trade (MOT) and the Ministry of Energy and Mineral Resources (ESDM) announced an export regime on February 3, 2014, that requires all mineral exporters to be registered at the MOT and to undergo preshipment verification that the exporter has met the processing level of purity for processed minerals (Scott and Tan, 2014).

In December 2014, the Government issued GR 77/2014, which was the third amendment to the principal regulations of the mining law that described the maximum foreign share of ownership allowed by the type of mining license held by a mining company. For those businesses with an IUP or an Exploration Special Mining Business license (IUPK), a 75% ownership share is allowed. For foreign companies with Production Operation Mining Business Licenses (Production Operation IUP) or Production Operation Special Mining Business Licenses (Production Operation IUPK) that do not carry out their own processing and (or) refining activities, a 49% maximum share of ownership is allowed. A company with a Production Operation IUP or a Production Operation IUPK that carries out its own processing and (or) refining activities is allowed to hold a 60% share of ownership, and a foreign company with a Production Operation IUP that conducts underground mining is allowed to hold a 70% share of ownership. GR 77/2014 also sets out the progressive divestment requirements for foreign mining companies, which, for the previously described license holders, varies from 20% divestment by the 6th year to 51% divestment by the 10th year, as well as some instances whereby divestment is not required (Prior and Rifdaan, 2014).

Production

Data on mineral production are in table 1.

Structure of the Mineral Industry

State-owned PT Antam Tbk (Antam) produced bauxite, gold, nickel, and silver. Other state-owned companies—PT Krakatau Steel, PT Pertamina, PT Tambang Batubara Bukit Asam, and PT Tambang Timah Tbk—were engaged in the production of steel, oil, coal, and tin, respectively. Privately owned PT Indocement Tunggal Prakarsa Tbk was the leading cement producer in the country. International companies were active in Indonesia's metals mining and processing industries. Partially foreign-owned PT Freeport Indonesia Co. and PT Newmont Nusa Tenggara were engaged in the mining of copper and gold. PT Vale Indonesia Tbk produced nickel ore and matte, and PT Koba Tin produced tin ore and tin metal (table 2).

Mineral Trade

In 2014, the value of Indonesia's exported goods decreased for the third straight year to $173.8 billion compared with $180.3 billion in 2013. Owing in part to the ban on exports of unfinished ores, the value of exported mining products (including bauxite, coal, copper ore, natural gas, crude petroleum, and other unspecified mining products) decreased by 21% to $46.6 billion in 2014. The value of bauxite exports decreased by 96% to $47.7 million in 2014 compared with that of 2013 and nickel ore exports decreased by 95% to $85.9 million. Exports of copper ore decreased by 44% in 2014 compared with 2013 to $1.7 billion, and coal exports decreased by 15% to $20.8 billion. The value of natural gas and crude petroleum exports decreased in 2014 by 14.3% to $28.8 billion compared with that of 2013. Japan, Singapore, the Republic of Korea, and Taiwan were the leading recipients of Indonesia's gas and oil exports, accounting for 21%, 20%, 15%, and 14%, respectively, of the total or a combined 70% of the total (Bank of Indonesia, 2015).

The value of imported goods received by Indonesia decreased by 5% to $168 billion in 2014 compared with that of 2013. The value of imported mining products (including bauxite, coal, copper ore, natural gas, crude petroleum, and other unspecified mining products) increased by 17% in 2014 to $1.5 billion compared with that of 2013, but the increase was related primarily to a 258% increase in the value of coal imports, which amounted to $296 million in 2014. The value of bauxite and copper ore imports decreased by 66% and 71%, respectively, to $43 million and $280,000, and there was no imported nickel ore in 2014. China, Japan, Singapore, and Thailand were the leading suppliers of mining products, accounting for 24%, 13%, 8%, and 8%, respectively, or a combined 53% of the total

value of imported goods. Owing to lower international prices for natural gas and crude petroleum, the value of Indonesia's gas and oil imports decreased by 6.3% to $40.6 billion in 2014 compared with that of 2013. The leading suppliers of gas and oil to Indonesia were Singapore, Saudi Arabia, Malaysia, and the Republic of Korea accounting, respectively, for 36%, 13%, 12%, and 10% of the total or a combined 71% of the total value of gas and oil imports (Bank of Indonesia, 2015).

Commodity Review

Metals

Bauxite and Alumina.—In 2013, Indonesia was the second-ranked bauxite producer in the world after Australia and the source of about 50% of the bauxite imported by China on an annual basis. Owing to Indonesia's ban on exporting bauxite ore, and a resultant 95% decrease in the country's bauxite production in 2014, global bauxite production decreased by more than 13% compared with that of 2013. In anticipation of the export ban, bauxite production in Indonesia increased by 81% in 2013 compared with that of 2012, and Indonesia's exports of bauxite ore to China increased by 18% in 2013 as China stockpiled about a 1-year supply of bauxite (Bray, 2015, 2016; Sedgman, 2014).

Production of bauxite and coal, combined, which made up one of Antam's five operating units, accounted for 2% of the company's total sales in 2014. Antam's bauxite ore was produced by the Bauxite Mining Business Unit, which operated the Tayan bauxite mine in Kalimantan. In accordance with Law No. 4 of 2009, Antam did not export bauxite ores in 2014, and the company's production was 267,292 metric tons (t) in 2014 compared with 570,721 t in 2013 (Aneka Tambang PT Persero Tbk, 2015, p. 6, 133).

Copper.—In July 2014, PT Freeport Indonesia Co. (PT–FI) entered into a Memorandum of Understanding (MOU) with the Government of Indonesia by which the parties agreed to negotiate amended provisions of the company's COW related to the size of PT–FI's concession area, royalties and taxes, domestic processing and refining, divestment, and the continuation of operations from 2022 through 2041. Other negotiations of the amended COW were to address the development of new copper smelting and refining capacity in Indonesia and the divestment of ownership to the Government and (or) Indonesian nationals of up to 30% interest in PT–FI. Execution of the MOU allowed for the resumption of concentrate exports, which had been suspended since January 2014, but PT–FI remained involved in discussions with the Government regarding an amended COW. Effective with the signing of the MOU, PT–FI provided a $115 million assurance bond for smelter development, agreed to increase royalties to 4% for copper and 3.75% for gold from the previous rates of 3.5% for copper and 1% for gold, and to pay yet-to-be-determined export duties. Under the MOU, no terms of the COW other than those related to export duties, the smelter bond, and royalties would be changed until the completion of an amended COW. PT–FI's recoverable copper production in 2014 was 295,268 t (Freeport McMoRan Inc., 2014, p. 8).

Gold.—PT–FI was the leading gold producer in Indonesia in 2014. The company produced 35,205 kilograms (kg) of gold, or 51% of the country's total reported gold production in 2014, which was a decrease of 0.7% compared with that of 2013. The processing and refining unit of the Logam Mulia Refinery was Indonesia's only precious metals refinery, which had a capacity of 60,000 kg of gold. In 2014, ANTAM's gold production volume from Pongkor and Cibaliung decreased by 9% to 2,335 kg compared with that of 2013 owing to lower grades of gold ores at the mines (Aneka Tambang PT Persero Tbk, 2015, p. 6).

Tin.—Indonesia accounted for 32% of world tin production in 2013 and 27% in 2014, and the country was the world's leading exporter of tin metal in 2014. Exports from Indonesia, however, decreased to their lowest level since at least 2006 owing to the combined effects of Indonesia's export restrictions and decreasing global tin prices. Shipments decreased by 17% to 75,925 t in 2014 from 91,613 t in 2013 (Anderson, 2015, 2016; Rusmana, 2015).

Mineral Fuels

Coal.—In January 2015, the Indonesian Coal Mining Association advised the Government to decrease production by at least 50 million metric tons (Mt) in 2015 and to limit exports to 300 Mt after global coal prices decreased to record lows in 2013, and the annual average price of Indonesia's coal decreased by about 42% between 2011 and yearend 2014. The Government had set a production limit of 400 Mt in 2014, and typically set annual coal production limits, but these were exceeded as miners attempted to offset low coal prices by increasing production. At the same time that the country was implementing production caps, the Government planned to offset the state budget revenue lost from the petroleum and gas sector by increasing royalties for coal mining companies. Royalty fees were proposed to increase to 9% from 5% for coal with a calorific content between 5,100 kilocalories per kilogram (kcal/kg) and 6,100 kcal/kg. Royalty fees for coal with a calorific content greater than 6,100 kcal/kg would increase to 13.5% from 7%. The country expected to produce 425 Mt of coal in 2015 with 333 Mt projected for export compared with the production of 435 Mt and the export of 359 Mt in 2014 (Oxford Business Group, 2015).

Petroleum.—Indonesia is a former member of the Organization of the Petroleum Exporting Countries and was once the leading oil producer in Southeast Asia. The main oil-producing regions include the Java Sea, East Kalimantan, and Sumatra. Of Indonesia's 60 sedimentary basins, 14 are in production. Another 39 basins have been identified as having strong potential for hydrocarbon resources, but a lack of exploration has resulted in dwindling reserves.

In October 2014, petroleum production commenced at the Banyu Urip field in Indonesia's Cepu Block in Central Java and East Java. The Cepu Block was owned by Mobil Cepu Ltd. (a subsidiary of Exxon Mobil Corp. and Ampolex Cepu PTE Ltd.), 45%; PT Petamina EP Cepu Pt., 45%; and the Cepu Block Cooperation Body (which was made up of four local government companies), 10%. The Banyu Urip field was expected to have peak production of 165,000 barrels per day of petroleum from 49 wells (ExxonMobil Corp., 2015; Wulandari, 2014).

Outlook

The outlook for Indonesia's mineral industry is characterized by high risk in terms of foreign investment. The Fraser Institute ranked Indonesia as the lowest of the 96 countries that it evaluated in terms of its policy potential index, which ranks the relative friendliness of Government policies towards the mining sector, compared with a ranking of 85 out of 96 in 2013. The strategies applied by the Government to retain more of the value of the country's mineral resources combined with divestment rules, dwindling global commodity prices, and decreased consumption by China may all combine to discourage new long-term investment in Indonesia or additional investment by companies that have already made significant financial commitments in the country (Winzenried and Adhitya, 2014; Jackson and Green, 2015, p. 9).

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TABLE 1
INDONESIA: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons unless otherwise specified)

Commodity[2]		2010	2011	2012	2013	2014
METALS						
Aluminum:						
Bauxite, wet basis, gross weight	thousand metric tons	27,410	40,644	31,443	57,024 r	2,555
Metal, primary		253,300	244,100	248,000	255,300	210,500
Chromite sand, dry basis[e]		4,000 r	12,000 r	10,000 r	19,000 r	7,000
Cobalt, mine, Co content[e]		1,600	3,200	3,600	4,700	329
Copper:						
Mine, Cu content		878,376	535,000	394,000	504,000	405,600
Metal:						
Smelter, primary		262,700	276,200	198,400	217,700	175,000 e
Refinery, primary		278,892	276,000	197,200	214,300	175,000 e
Gold, mine output, Au content	kilograms	106,316 r	77,722 r	69,291	59,804 r	69,100
Iron and steel:						
Iron sand, dry basis	thousand metric tons	8,976	11,815	11,546	11,500 e	11,000 e
Metal:						
Ferroalloys:						
Ferronickel		93,300 *	98,200 *	91,600 *	91,000 *	84,000 *
Ferromanganese[e]		12,000	12,000	13,000	12,000	12,000
Silicomanganese[e]		8,000	8,000	9,000	8,000	8,000
Pig iron, direct-reduced iron	thousand metric tons	1,274	1,228	524	757	600 e
Steel, crude	do.	3,664	3,621	2,254	2,644	3,000
Steel, semimanufactured[e]	do.	4,900	5,100	5,000	5,000	5,000
Manganese:						
Ore and concentrate, gross weight		207,400	119,100	138,000	120,000 e	120,000 e
Mn content		72,600	41,700	39,500	38,000 e	38,000 e
Nickel:						
Mine output, Ni content		300,800	564,400	648,400	834,200	55,284
Matte, Ni content		78,400 r	67,800 r	69,000 r	78,800 r	78,700
Ferronickel, Ni content		18,688	19,700	18,400	22,800	20,000 e
Silver, mine output, Ag content	kilograms	288,717 r	227,173	247,827 r	123,109 r	116,045
Tin:						
Mine output, Sn content		46,078	43,258	49,300	45,800	38,545
Metal[3]		51,418	43,832	51,400	48,800	58,233
INDUSTRIAL MINERALS						
Cement, hydraulic	thousand metric tons	37,800	52,000	60,600	65,000 e	65,000 e
Diamond:[e]						
Industrial	thousand carats	30	30	31	30	30
Gem	do.	7	7	7	7	7
Total	do.	37	37	38	37	37
Nitrogen, N content of ammonia[e]	thousand metric tons	4,800	5,000	5,100	5,000	5,000
Stone, Granite	do.	2,172	3,317	3,500 e	4,000 e	4,000 e
Coal:	do.	224,677 r	291,165 r	361,028	377,847 r	435,000
Gas, natural:	million cubic meters	82,000	75,900	71,100	70,400	75,000
Petroleum, crude including condensate	thousand 42-gallon barrels	341,228 r	329,249	314,666	301,199 r	289,100

[e]Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. [r]Revised. do. Ditto.

[1]Table includes data available through July 30, 2015.

[2]In addition to the commodities listed, Indonesia also produced dolomite, feldspar, gypsum, ilmenite, limestone, marble, nitrogen from ammonia, phosphate rock, quartz sand, salt, silica stone, sulfur, zeolites, and zirconium but available information is inadequate to make reliable estimates of output.

[3]Tin output from small tin smelters is not available but may be as much as 40,000 metric tons per year.

*Correction posted on January 18, 2017.

TABLE 2
INDONESIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Locations of main facilities	Annual capacity[e]
Aluminum:				
Bauxite		PT Antam Tbk (Government, 65%)	Kijang, Bintan Island, Riau	1,300
Do.		do.	Kalimantan, Borneo	600
Metal		PT Indonesia Asahan Aluminum (Nippon Asahan Aluminum Co. Ltd., 59%, and Government, 41%)	Kual Tanjun, North Sumatra	250
Cement		PT Indocement Tunggal Prakarsa Tbk	Cirebon and Citeureup, West Java; Tarjun, South Kalimantan	18,600
Do.		PT Semen Andalas Indonesia (Lafarge S.A., 99%)	Besar, Aceh	1,400
Do.		do.	Lhok, Aceh	1,600
Do.		PT Semen Baturaja	Baturaja-Ogan Komering Ulu, South Sumatra	1,250
Do.		PT Semen Bosowa Maros	Kabupaten Maros, Sulawesi Selatan	1,800
Do.		PT Holcim Tbk	Narogong, East Java	9,700
Do.		PT Semen Gresik Tbk	Gresik and Tuban, East Java	10,700
Do.		PT Semen Padang	West Sumatra	5,440
Do.		PT Semen Tonasa	Pangkep and Tonasa, South Sulawesi	6,000
Coal		PT Adaro Indonesia (New Hope Corp., 50%; PT Asminco Bara Utama, 40%; Mission Energy, 10%)	Paringin and Tutupan, South Kalimantan	35,000
Do.		PT Arutmin Indonesia (PT Bumi Resources Tbk, 80%, and Bakrie Group, 20%)	Mulia, Senakin, and Satui, South Kalimantan, and Asam-Asam, East Kalimantan	20,000
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 Sitrade Coal, 32.4%; Bhira Investments Ltd., 30%; Sangatta Holding Ltd., 9.5%; Kalimantan; Coal Ltd., 9.5% Kutai Timur Sejahtera, 5%)	East Kutai Regency, East Kalimantan	55,000
Do.		PT Kideco Jaya Agung (Samtan Co. Ltd., 100%)	Pasir, East Kalimantan	12,000
Do.		PT Tambang Batubara Bukit Asam (stateowned)	Tanjung Enim and Ombilin, South Sumatra	19,000
Do.		United Tractors	Central Kalimantan and East Kalimantan	6,500
Copper:				
Concentrate		PT Freeport Indonesia Co. (Freeport-McMoRan Copper & Gold Inc., 90.64%, and Government, 9.36%)	Grasberg Mine, Papua	600
Do.		PT Newmont Nusa Tenggara (Nusa Tenggara Partnership B.V., 56%; PT Multi Daerah Bersaing, 24%; PT Pukuafu Indah, 17.8%; PT Indonesia Masbaga Investama, 2.2%)	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	270
Gas:				
Natural	millon cubic meters per day	ExxonMobil Oil Indonesia	Arun and Aceh, North Sumatra	48
Do.	do.	Roy M. Huffington (subsidiary of HUFFCO Group)	Badak, East Kalimantan	28
Do.	do.	Total Indonesia	Offshore East Kalimantan	59
Liquefied		PT Arun LNG Co. Ltd. (Government, 55%; Mobil Oil Co., 30%; Japan Indonesia LNG Co., 15%)	Balang Lancang amd Aceh, North Sumatra	12,500
Do.		PT Badak LNG Co. Ltd. (Government, 55%; HUFFCO Group, 30%; Japan Indonesia LNG Co., 15%)	Bontang, East Kalimantan	22,500
Coalbed methane		Ephindo Energy Pvt. Ltd. (PT Pertamina, 52%, and Dart Energy Ltd., 24%)	Sangatta, East Kalimantan	22,600
Gold	metric tons	Bluenose Gold Corp., 80%, and Zinton Investments Ltd., 20%	Buduk, Mine East Kalimantan	NA
Do.	do.	G Resources Group Ltd., 95%	Martabe Mine, Sumatera Utara	8
Do.	do.	Indo Resources Pacific Inc., 75%	Woyla Mine, Aceh	1
Do.	do.	Kingrose Mining Ltd., 85%, and private Indonesian investors, 15%	Way Linggo Mine, Lampung	1
Do.	do.	Newcrest Mining Ltd., 75%, and PT Antam (Persero) Tbk, 25%	Gosowong Mine, Maluku Utara	14

See footnotes at end of table.

TABLE 2—Continued
INDONESIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Locations of main facilities	Annual capacity[e]
Gold—Continued	metric tons	Newcrest Mining Ltd., 85%, and PT Antam (Persero) Tbk, 15%	Toguraci Mine, Maluku	NA
Do.	do.	PT Freeport Indonesia Co. (Freeport-McMoRan Copper & Gold Inc., 81.28%, and others, 9.36%)	Ertsberg and Grasberg, Papua	110
Do.	do.	Private Indonesian investors, 55%	Mirah Mine, Kalimantan	1
Do.	do.	Private owner, 100%	Manado Mine, Sulawesi Utara	NA
Do.	do.	PT Antam (Persero) Tbk, 100%	Logam Mulia Refinery Jakarta Raya, Jakarta	60
Do.	do.	do.	Cibalung Mine, Banten and	1
Do.	do.	do.	Pongor Mine, Jawa Barat	3
Do.		PT Newmont Nusa Tenggara (Newmont Mining Corp., 45%; Sumitomo Corp., 35%; PT Pukuafu Indah, 20%)	Sumbawa Island, West Nusa Tenggara	NA
Do.	do.	PT J Resource Asia Pasifik Tbk, 100%	Seruyung Mine, Kalimantan Timur	2
Do.	do.	PT J Resource Asia Pasifik Tbk, 80%	Bakan Mine, Sulawesi Utara	46
Do.	do.	PT Rajawali Corp., 100%	Toka Tindung Mine, Sulawesi Utara	5
Do.	do.	Straits Resources Ltd., 100%	Mt Muro Mine, Kalimantan Tengah	6
Do.	do.	PT J Resource Asia Pasific Tbk, 79.10%, and local interest, 0.90%	North Lanut Mine, Sulawesi Utara	NA
Nitrogen		PT Asean-Aceh Fertilizer (Government, 60%, and other members of the Association of Southeast Asian Nations, 40%)	Lhokseumawe, North Sumatra	500
Do.		PT Pupuk Iskandar Muda (Government, 100%)	do.	500
Do.		PT Pupuk Kalimantan Timur (Government, 100%)	Bontang, East Kalimantan	1,850
Do.		PT Pupuk Kujang	Cikampek, West Java	330
Do.		PT Pupuk Sriwijawa (Government, 100%)	Palembang, South Sumatra	1,440
Petroleum:				
Crude	thousand barrels per day	BP Indonesia (a subsidiary of BP p.l.c.)	Arjuna and Arimbi, offshore West Java	170
Do.	do.	China National Offshore Oil Co.	Offshore southeastern Sumatra	100
Do.	do.	Maxus Southeast Asia Ltd. (subsidiary of Maxus Energy)	Cinta and Rama, offshore southeast Sumatra	95
Do.	do.	Mobil Cepu Ltd., 45%; Ampolex Cepu PTE Ltd., 45%; Cepu Block Cooperation Body, 10%	Cepu Block, Central Java and East Java	165
Do.	do.	PT Pertamina (Government, 100%)	Jatibarang, West Java, and Bunyu, offshore East Kalimantan	80
Do.	do.	PT Caltex Pacific Indonesia (Texaco Inc., 50%, and Chevron Corp., 50%)	Minas, Duri, and Bangko, central Sumatra	700
Do	do.	Total Indonesie (subsidiary of Total S.A.)	Handi and Bakapai onshore and offshore East Kalimantan	180
Refined	do.	PT Pertamina (Government, 100%)	6 locations	1,000
Silver		PT Antam Tbk (Government, 65%)	Bogor, West Java	25
Do.		PT Freeport Indonesia Co. (Freeport-McMoRan Copper & Gold Inc., 81.28%; Government, 9.36%; others, 9.36%)	Ertsberg and Grasberg, Papua	220
Do.		PT Kelian Equatorial Mining (Rio Tinto Group, 90%, and PT Harita Jaya Raya, 10%)	180 kilometers west of Samarinda	10
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%, and PT Tambang Timah Tbk, 25%)	Koba, Bangka Island	25
Do.		PT Tambang Timah Tbk (Government, 65%)	Onshore and offshore islands of Bangka, Belitung, and Singkep	60
Metal		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	25

[e]Estimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available.