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The Mineral Industry of Burma

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In 2011, Burma, also known as Myanmar, produced a variety of mineral commodities, including cement, coal, copper, lead, natural gas, petroleum, petroleum products, precious and semiprecious stones, tin, tungsten, and zinc. On March 24, a 6.8-magnitude earthquake struck the eastern part of the country just north of Tachileik town in Shan State close to the border with Laos and Thailand. Production of such commodities as brine salt and some semiprecious stones dipped during the period following the earthquake, but the mineral industry in general was not affected, and mineral production overall increased for the year (table 1; CNN.com, 2011; Huffington Post, 2011).

Bangladesh, Burma, and India were involved in maritime boundary disputes concerning their respective sovereignty in the Bay of Bengal. For many years, these countries had attempted to negotiate and delimit their claims in the disputed area. In December 2009, Bangladesh and Burma accepted the jurisdiction of the International Tribunal for the Law of the Sea (ITLOS) for the settlement of the dispute concerning their maritime boundary delimitation. At the time, although accepting ITLOS jurisdiction, the countries had not agreed on a bilateral solution regarding the delimitation principle to be used, and negotiations continued between the countries. ITLOS is an independent judicial body established by the United Nations Convention on the Law of the Sea (UNCLOS) that has jurisdiction to arbitrate disputes arising out of the interpretation and application of the Law of the Sea. UNCLOS establishes a legal framework to regulate ocean space and its resources and uses. In meetings held in January 2010, Bangladesh and Burma agreed to delimit the area by combining the equidistance and equity demarcation principles. In October, Burma and India reached an informal understanding to cooperate with each other on the settlement of their maritime dispute with Bangladesh (Durham University, 2010; International Tribunal for the Law of the Sea, 2010; Priyo.com, 2010).

In September 2011, representatives from Bangladesh and Burma met with the ITLOS in Germany for a final round of pleadings regarding the delimitation of the maritime boundary between the two countries. ITLOS determined that a final judgment would be delivered by March 14, 2012. Burma's border-dispute points with neighboring Bangladesh meet at Rakhine State (Xinhuanet.com, 2011b).

Although Bangladesh and Burma's maritime border dispute had gone on for several years, bilateral trade between the countries has remained at an estimated $140 million per year. The boundary delimitation dispute affected the ability of either country to grant exploration permits for oil and gas in the disputed area, however (Xinhuanet.com, 2011b).

In May 2011, Italian-Thai Development Plc. (ITD), which was a construction company based in Thailand, announced that it had started to build a deep-sea port and industrial estate at a cost of $10 billion. The port was to be located in a 40,000-hectare area in Dawei, Tanintharyi Division, in southern Burma, which is located about 186 kilometers (km) west of Thailand's capital city of Bangkok. The industrial facilities were to include oil and gas pipelines, railways, and roads. The expected commissioning date of the project was not available. In November 2010, the Government of Burma signed a 75-year concession contract with ITD, although no further details were available. The Governments of Burma and Thailand declared the project to be significant for international trade, as it would serve not only countries of Southeast Asia, but also other countries of the Asia and the Pacific region, as well as the countries of Africa, Europe, and the Middle East (BBC News, 2011).

By the end of 2011, the Burmese Government announced that it was suspending the construction of the Myitsone Dam, which was originally proposed to be built in Kachin State and was to become part of a network of dams that would have provided power to southern China. The dam had a projected cost of $3.6 billion, which was to be covered by Chinese investors. The suspension of the project was mainly because of environmental concerns and pressure by the communities that would be directly affected by the structure. China had numerous contracts and investments already in place in Burma; however the Government of Burma was concerned that the suspension of the construction of the dam not affect other projects (Irrawaddy, The, 2011b; International Cement Review, 2012, p. 120).

Government Policies and Programs

The Government of Burma seeks to encourage the participation of foreign and local investors in part to draw in industry experts who have the knowledge to develop the country's mineral industry. The Union of Myanmar's Mineral Law went into effect in September 1994, and the rules related to the law were implemented in December 1996. The Ministry of Mines is the Government entity responsible for implementing the Government's mineral policy, for planning, and for enforcing the laws and regulations related to the mining sector. The Ministry evaluates and processes all license applications for the prospecting for and production and beneficiation of minerals in accordance with the Mineral Law and regulations; it also monitors production operations and promotes investment in the mineral sector. According to the Mineral Law, any naturally occurring minerals found on or under Burmese soil and on Burma's Continental Shelf belong to the state (Ministry of Mines, undated a, b).

In January 2011, the Government announced its plans to privatize approximately 90% of the state-owned industries within 1 year. The remaining 10% was to be held by the Government. In addition to state-owned industries, the other state-owned properties that were listed for privatization included buildings, bridges, enterprises, ports, recreation centers, roads, and gas stations, among others. According to the Government, in 2010, a total of 246 gas stations, 110 state-owned enterprises, 32 buildings, and 8 wharves in the Yangon Port were sold

(Irrawaddy, The, 2011a; South-East Asia & South Asia Infoport, 2011).

Production

During 2011, Burma's mineral industry reported estimated sharp increases and decreases in the production of minerals compared with that of 2010. The data marked as estimated for year 2011 in table 1 are based on the latest available data published in the Central Statistical Organization's "Selected monthly economic indicators," which includes data only for the first 9 months of 2011. Therefore, estimates are based mostly on the performance of the industry until September 2011 and assume that the rate of production continued until December 2011. In the metals mining sector, major increases in production were estimated for mined lead and mined tin (in tin ores and concentrates) whereas decreases were estimated for copper, manganese, and tungsten (in tin-tungsten concentrate). In the industrial minerals sector, production of barite, jade, and sapphire were estimated to have increased whereas production of dolomite, gypsum, and ruby were estimated to have decreased. Production of coal, natural gas, and petroleum refinery products were also estimated to have increased (table 1).

Mineral Trade

Trade data for 2011 discussed in the following paragraphs are from information reported by the Government of Burma through its Central Statistical Organization and cover the months of from January through September, which is the latest period for which data were available. Burma's total trade value for the first 9 months of 2011 was $14.11 billion,[1] of which exports totaled $7.048 billion and imports totaled $7.066 billion. Although the data represented only 9 months of the year, the trade value increase is noticeable when compared with the total value of trade for the full 12 months of 2010 of $13.74 billion (Central Statistical Organization, 2011, p. 1, 50).

For the first 9 months of 2011, the value of natural gas exports was about $2.6 billion; that for base metals and ores was about $38.2 million. The main mineral commodities imported by Burma in 2011 were base metals and manufactured goods, which as of September represented 8.7% of total imports and were valued at $614.2 million; cement imports, which represented 2% of total imports and were valued at $144.2 million; and coal and coke imports, which represented about 1% of total imports and were valued at $6.5 million (Central Statistical Organization, 2011, p. 5–7, 16).

Thailand remained Burma's primary export partner in 2011, followed by China, India, Hong Kong, and Singapore; these countries received, about 84% of Burma's total exports. For the first 9 months of 2011, the value of Burmese exports to Thailand was estimated to be $2.85 billion (or about 40% of the country's total exports); China, $1.2 billion (about 17% of total exports); India, $820.7 million (about 12% of total exports); Hong Kong, $541.9 million (about 8% of total exports); and Singapore, $484.6 million (about 7% of total exports). China remained Burma's major import partner; for the first 9 months of 2011, the value of imports from China was estimated to be $2.2 billion (about 31% of total imports); Singapore, $2.1 billion (about 30% of total imports); and Thailand, $532.6 million (about 7.5% of total imports) (Central Statistical Organization, 2011, p. 9–10, 18–19).

For the first 9 months of 2011, foreign direct investment in Burma totaled $4.12 billion distributed among 21 projects, including 5 in the oil and gas sector, 3 in the mining industry, and 1 in a power generation project; as well as projects in the agricultural and manufacturing sectors. Burma's main foreign investor was China, which invested about $3.2 billion in the power generation sector; Hong Kong invested approximately $400.6 million in a total of three mining projects, which the Burmese Government reported as including Myanmar Yang Tse Copper Ltd.'s project ($396.4 million) and Myanmar Tah Hsin Industrial Co. Ltd.'s project ($1.5 million); Singapore and the Republic of Korea invested $186.1 million and $181.3 million respectively, in the oil and gas sector (Central Statistical Organization, 2011, p. 52–59).

Structure of the Mineral Industry

Table 2 is a list of Burma's major mineral industry facilities.

Commodity Review

Metals

Copper.—In August 2011, Ivanhoe Mines Ltd. of Canada announced that it had received $103 million from the Monywa Trust in partial payment of a promissory note for Ivanhoe Mines' interest in the Monywa Copper Project. The Monywa Copper Project, which was Burma's main copper asset, had been a 50-50 joint venture between Ivanhoe Myanmar Holdings Ltd. (a wholly owned subsidiary of Ivanhoe Mines) and state-owned Mining Enterprise No. 1. In February 2007, however, ownership of the project was transferred to an independent third party trust to await the sale of Ivanhoe Mines' interest in the property; in exchange, the trust issued Ivanhoe Mines a promissory note. The Canadian company operated in Burma through Myanmar Ivanhoe Copper Co. Ltd. (Monywa JVCo.). Ivanhoe Mines reported that it had not been involved in the Monywa Copper Project since the transfer of the company's interest in the property in 2007 (Ivanhoe Mines Ltd., 2011).

In April 2011, a production-sharing contract for copper mining at Monywa was signed between the Chinese company China North Industries Corp. (NORINCO) and state-owned Union of Myanmar Economic Holdings Ltd. during a visit of top-ranking officials from China. The contract was for the development of the copper mine at Monywa; additional details on the terms of the contract were not available (Guardian, The, 2011).

Nickel.—On March 27, the Ministry of Mines announced the opening of the Tagaung Taung nickel ore project, which would include a mine and a smelter, at Thabeikying, Mandalay Division, in central Burma. The project was jointly owned by China Nonferrous Metal Mining Group Co. Ltd. (CNMC) of China and Taiyuan Iron and Steel Co. (TISCO) of China, and was operated by CNMC under a production-sharing contract with state-owned Mining Enterprise No. 3. The smelter was

[1]Where necessary, values have been converted from Myanmar kyat (K) to U.S. dollars (US$) at the rate of K 5.38=US$1.00 for 2011.

expected to start operation sometime during 2012. According to the Ministry of Mines, the project would have the capacity to produce 85,000 metric tons per year (t/yr) of ferronickel and about 20,000 t/yr of nickel when fully operational (Myanmar Times, The, 2011; Xinhuanet.com, 2011a).

In September, the Ministry of Mines announced that it was working with various Government ministries and private companies to improve power generation in some areas of the country, especially those areas with great potential for the development of nickel and chromite deposits. The Ministry stated that there was great potential for mining in Chin State (in western Burma) once reliable power sources are available to sustain the demand for electricity by nickel and chromite producers. Nickel deposits had been identified within Chin State in such areas as Hachalay, Mwe Hill, Nat Hill, and Webula Hill; chromite deposits had been identified in such areas as Bopibun, Falam, Hachalay, Maungtaw-Hnamataw, Muwelut, Mwe Hill, Nat Hill, and Webula Hill. According to the Ministry of Mines, these deposits could yield more than 100 million metric tons of nickel ore and 38,000 metric tons of chromite. Several mining companies, including China Nonferrous Metal Industry's Foreign Engineering & Construction Co. Ltd., Guilin Research Institute of Geology for Mineral Resources, and Kingbao Mining Ltd. of Hong Kong, were working with the Ministry to conduct preliminary surveys and exploration studies of the identified areas (Myanmar Business Network, 2011).

Zinc.—In September 2009, South East Asia Metals Co., Ltd. (SEAMET), which was a subsidiary of Padaeng Properties Co., Ltd. of Thailand, entered into an agreement with Mayflower Mining Enterprises Ltd. (MME) in which SEAMET obtained the operating rights to a mining concession owned by MME. MME had rights to the concession until 2015. In April 2011, Padaeng announced that SEAMET had entered into a $4 million service agreement for the mining concession with Mali Mining & Metallurgy Pte. Ltd. (Mali). According to the agreement, Mali would upgrade the zinc facility so it could process low-grade material to a concentrate grading a minimum of 30% zinc. SEAMET submitted an initial payment of $984,000 to Mali in October. Future plans for the project included an exploration program in 2012 to assess the remaining resources of zinc contained in the deposits and exploration activities in search of new deposits. The project is located in Burma, but no further details were available regarding the exact location of the zinc project (Padaeng Industry Public Co., Ltd., 2011, p. 25, 62).

Industrial Minerals

Cement.—Based on industry estimates, Burma has the capacity to produce approximately 3.46 million metric tons per year (Mt/yr) of cement, although most of the facilities lack the ability to operate at full capacity. In 2011, four cement plant proposals were approved for development by the Myanmar Investment Commission (MIC); three out of the four projects started construction before the end of the year. (The MIC is under the Ministry of National Planning and Economic Development and is the Government agency responsible for evaluating domestic and foreign investment proposals). Each of the projects would have the capacity to produce 1,000 metric tons per day of cement. Two of the plants were to be located in central Burma at Pyinyaung in the Mandalay Region and were owned by Htoo Cement Co. Ltd. and Shwe-Taung Cement Co. Ltd., respectively. Another plant was proposed to be built between the towns of Taungyi and Hopone in Shan State by Kanbawza Cement Ltd.; this project was expected to be commissioned in early 2013. The fourth plant was proposed to be built in Naungcho in northern Shan State (about 100 km east of Mandalay) by Ngwey Yi Pale Mining Co. Several other cement project proposals were under consideration by the MIC. In 2011, Siam City Cement Plc. (SCCC) of Thailand indicated that the company was still considering the construction of a cement plant in Burma, following an official announcement made in November 2010 in which the company released the results of a feasibility study that it had conducted earlier in the year. PT Semen Gresik of Indonesia was also considering building a cement plant in Burma as the cement was in high demand in Burma. Some companies were proceeding cautiously, however, and decisions on investment were likely to depend on changes in the Government investment and mine ownership policy (International Cement Review, 2012).

Mineral Fuels

Oil and Gas.—The construction of the Shwe gas pipeline continued through 2011. The oil and gas pipeline, which was projected to cost an estimated $1.5 billion, was to run from the Bay of Bengal in Arakan State in west Burma, through the central and the northeastern part of the country, to Yunnan Province in China. The project, which was expected to be commissioned in mid-2013, was to be built and operated by China National Petroleum Corp. (CNPC) and unspecified partners from India and the Republic of Korea. When finished, the pipeline would total 3,900 km in length, of which 2,800 km would have the capacity to carry 12 million cubic meters per year of natural gas and 1,100 km would have the capacity to carry 22 Mt/yr of crude oil that had been transported to the coast of Burma by tanker from Africa and the Middle East. The pipeline would increase China's energy supply and also shorten the distance for transporting oil from Africa and the Middle East by creating a shortcut to bypass the Strait of Malaca. CNPC held the right to purchase and export all the natural gas generated in the Shwe gasfield through a 30-year exclusive purchase agreement signed during Burma's previous Administration. In addition to the pipeline, China was also building a deep-sea port to unload crude oil and an oil storage facility on the island of Maday, which is located off the coast of Arakan State. When completed, the port will provide China with access to the Indian Ocean (Corben, 2011; Irrawaddy, The, 2011b).

On January 6, Sinopec International Petroleum Corp. (SIPC), which was a subsidiary of China Petroleum & Chemical Corp. (Sinopec), announced that it had discovered proven reserves of about 25.74 billion cubic meters of natural gas (reported as 909 billion cubic feet) and 7.16 million barrels of condensate in the Pahtolon oilfield in central Burma. The discovery was made by SIPC Myanmar Petroleum Co. Ltd., which was a joint venture between state-owned Myanma Oil and Gas Enterprise (MOGE) and Sinopec (Reuters.com, 2011).

On February 14, SIPC Myanmar Petroleum announced another gas deposit discovery; this new discovery is located about 835 km northwest of Yangon in the Mahutaung region. The discovery was made by conducting tests on six wells in onshore Block D. According to company estimates, the deposit had a capacity to yield approximately 59,500 cubic meters per day of gas (reported as 2.1 million cubic feet per day) (Gas and Oil, 2011).

Outlook

Following the elections of November 2010 and the appointment of a new President in January 2011, Burma has begun instituting notable political and economic reforms. In an effort to boost the country's economy, the Government has sought to have the economic sanctions imposed by the European Union and the United States lifted. The effort may yield some results in the near future as several countries have demonstrated interest in investing in Burma and held talks with the new Government. The private sector involvement in the country's mineral exploration business has increased since 2009 owing to the effort of the Government to privatize many of its industries, including mining. The country is in a political and economic transition that is opening opportunities for business competition, especially as foreign direct investment increases.

The exploration for and production of metals and industrial minerals is expected to increase as new developments and expansion projects progress and mines and plants start being commissioned in the next few years. This increase will be noticeable particularly in the cement production sector, as many foreign direct investments have been approved by the Government for the construction of new plants. The increase in cement demand will be directly influenced by the Government's infrastructure plans, which include the construction of oil and gas pipelines to China, highways and transportation projects, and a number of deep-sea ports. The development of other mining projects will also be subject to the continuing demand for mineral commodities from neighboring countries and will depend on world market prices. The supply of natural gas for domestic use is expected to increase in the next 2 years following major pipeline projects coming on stream and because of the recent gasfield discoveries made in 2011.

In the near future, it is expected that the country will increase its ties with countries in the West. The financial sanctions against Burma are likely to ease if the country continues its path toward a more democratic and open society. An increase in business between Burma and neighboring countries, such as China, India, and the Republic of Korea, is likely to continue, particularly as these countries have already established mining investments in Burma. The privatization of about 90% of the state-owned industries and the continuing openness of the country to promote its mineral industry have contributed to increased investment in Burma.

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TABLE 1
BURMA: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons unless otherwise specified)

Commodity[2]		2007	2008	2009	2010	2011
METALS						
Copper:						
Mine output, Cu content		13,900	--	3,500	12,000	10,000
Matte, gross weight[e, 3]		80	80	80	80	80
Metal, refined		13,900	--	3,500	12,000	10,000
Lead:						
Mine output, Pb content[e, 4]		1,000 [r]	1,000 [r]	5,000 [r]	7,000	8,700
Metal:						
Refined		165	202	200	--	--
Manganese, mine output, Mn content[e]		19,400 [r]	142,600 [r]	242,900 [r]	299,900 [r]	234,400
Silver, mine output, Ag content[4]	kilograms	218	--	249	--	--
Tin, mine output, Sn content:[5, 6]						
Of tin ores and concentrates		8,000	800	1,000	4,000	11,000
Metal, refined[e]		30	30	30	30	30
Total		8,030	830	1,030	4,030	11,030
Tungsten, mine output, W content:[4]						
Of tungsten concentrate		4	5	4	2	--
Of tin-tungsten concentrate		179	131	83	161	140 [e]
Total		183	136	87	163	140
Zinc, mine output, Zn content[4]		10,000	7,000	6,000	7,000	7,000
INDUSTRIAL MINERALS						
Barite		6,813	5,679	7,623	8,975	30,000 [e]
Cement, hydraulic		608,192	675,788	669,941	534,034	538,000 [e]
Clays, bentonite[e, 3]		971	1000	1,000	1,000	1,000
Feldspar[e, 3]		10,000	10,000	10,000	10,000	10,000
Gypsum		75,116	82,224	97,518	81,051	50,000 [e]
Nitrogen, N content of ammonia[e]		30,000	30,000	30,000	30,000	30,000
Precious and semiprecious stones:						
Jade	kilograms	20,003,409	30,896,440	25,427,237	38,990,035	45,000,000 [e]
Diamond[e]	carats	5	5	5	5	5
Rubies	do.	1,394,939	1,868,696	1,674,579	1,612,070	870,000 [e]
Sapphires	do.	608,008	1,129,039	795,228	1,311,327	1,500,000 [e]
Spinel	do.	843,680	572,308	296,956	618,730	620,000 [e]
Salt, brine		71,323	54,355	133,358	97,136	100,000 [e]
Stone:						
Dolomite		4,674	4,264	4,390	3,119	2,000 [e]
Limestone, crushed and broken[e]	thousand metric tons	3,800	4,000	4,000	3,200	3,200
MINERAL FUELS AND RELATED MATERIALS						
Coal, lignite		283,703	249,442	245,418	217,650	300,000 [e]
Gas, natural, marketed	million cubic meters	13,315	12,445	11,555	12,425	12,500 [e]
Petroleum:						
Crude	thousand 42-gallon barrels	7,625	7,242	6,881	6,806	6,400 [e]
Refinery products[7]	do.	4,885	4,661	4,139	4,851	5,000 [e]

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

[1]Table includes data available through January 10, 2013.

[2]In addition to the commodities listed, construction aggregates, gold, iron and steel, lead (antimonial), nickel, sand and gravel, and silica sand are produced, but available information is inadequate to make reliable estimates of output.

[3]Data are for fiscal year ending March 31 of the following year.

[4]Data are for the production by the state-owned mining enterprises under the Ministry of Mines.

[5]Production of tin, mine output, Sn content production, in metric tons, reported by the Government was 2007—499; 2008—499; 2009—518; 2010—374; and 2011—350 (estimated).

[6]Data compiled from the United Nations Comtrade database for tin ores and concentrates imported from Burma by China, Malaysia, and Thailand.

[7]Includes diesel, distillate fuel oil, gasoline, jet fuel, kerosene, and residual fuel oil.

Sources: Ministry of Mines and Central Statistical Organization (Yangon), Statistical Yearbook 2009; Selected Monthly Economic Indicators, May 2008, January 2009, January 2010, December 2010, and September 2011.

TABLE 2
BURMA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement		AAA Cement International Co. Ltd.	Cement plant in Kyaukse, Mandalay Division	180,000
Do.		Dragon Cement	Cement plant in Pinlaung, Shan State	180,000
Do.		Mandalay Cement Industries Co. Ltd.	Cement plant in Kyaukse, Mandalay Division	135,000
Do.		Max Cement	Cement plant in Aung Nan Cho Village, Lewe, Naypyidaw Township, Mandalay Division	150,000
Do.		Myanma Ceramic Industries	Cement plant in Kyangin, Ayeyarwady	363,000
Do.		do.	Cement plant in Kyaukse, Mandalay Division	120,000
Do.		do.	Cement plant in Thayet, Magway Region	170,000
Do.		Myanmar Economic Co. Myaing Galay 1	Cement plant in Hpa An, Kayin	240,000
Do.		Myanmar Economic Co. Myaing Galay 2	do.	1,200,000
Do.		Naypyidaw Development Committee	Cement plant in Naypyidaw Township, Mandalay Division	150,000
Do.		Tiger Head Cement (Myanmar)	Cement plant in Kyaukse, Mandalay Division	90,000
Do.		Union of Myanmar Economic Holdings Ltd. Sin Min 1	do.	330,000
Do.		Union of Myanmar Economic Holdings Ltd. Sin Min 2	do.	NA
Do.		Yangon City Development Committee	Myodaw cement plant in Thazi Mandalay Division	150,000
Coal		Mining Enterprise No. 3 (ME–3)	Kalewa coal mine in Sagaing Division, near Kalewa	13,000
Copper		Mining Enterprise No. 1	Monywa copper project, S&K Mine, and Monywa refinery, in Monywa region, central Burma	40,000
Fertilizer, N content		Myanma Petrochemical Enterprise (Government, 100%)	No. 1 fertilizer plant at Sales, 190 kilometers southwest of Mandalay	94,900
Do.		do.	No. 2 fertilizer plant at Kyun Chaung, central Burma	75,555
Do.		do.	No. 3 fertilizer plant at Kyaw Zwar, central Burma	219,000
Natural gas	million cubic meters	Total E&P Myanmar, 31.2%; Chevron Corp., 28.26%; PTT Exploration and Production Public Co. Ltd. (PTTEP), 25.5%; Myanma Oil and Gas Enterprise (MOGE), 15%	Yadana gasfield in Moattama, Gulf of Martaban	7,227
Do.	do.	Petronas Carigali Myanmar Inc., 40.91%; Myanma Oil and Gas Enterprise (MOGE), 20.45%; PTT Exploration and Production Public Co. Ltd. (PTTEP), 19.32%; Nippon Oil Exploration (Myanmar) Ltd., 19.32%	Yetagun gasfield in Tanintharyi, Gulf of Martaban	4,635
Do.	do.	Myanmar Petroleum Resources Ltd. and Myanma Oil and Gas Enterprise (MOGE)	Mann oilfield, south of Yangon	37

See footnotes at end of table.

TABLE 2—Continued
BURMA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Petroleum:				
Crude	thousand 42-gallon barrels	Myanmar Petroleum Resources Ltd. and Myanma Oil and Gas Enterprise (MOGE)	Mann oilfield, south of Yangon	876
Refined	do.	Myanma Petrochemical Enterprise (Government, 100%)	No. 1 refinery at Thanlyin (near Yangon)	9,490
Do.	do.	do.	No. 2 refinery at Chauk, central Burma	2,190
Do.	do.	do.	No. 3 refinery at Thanbayakan, central Burma	9,125
Steel		Pohang Iron and Steel Co. (POSCO) (70%)	Pohang Iron and Steel Co. (POSCO) steel plant in Yangon	30,000

Do., do. Ditto. NA Not available.