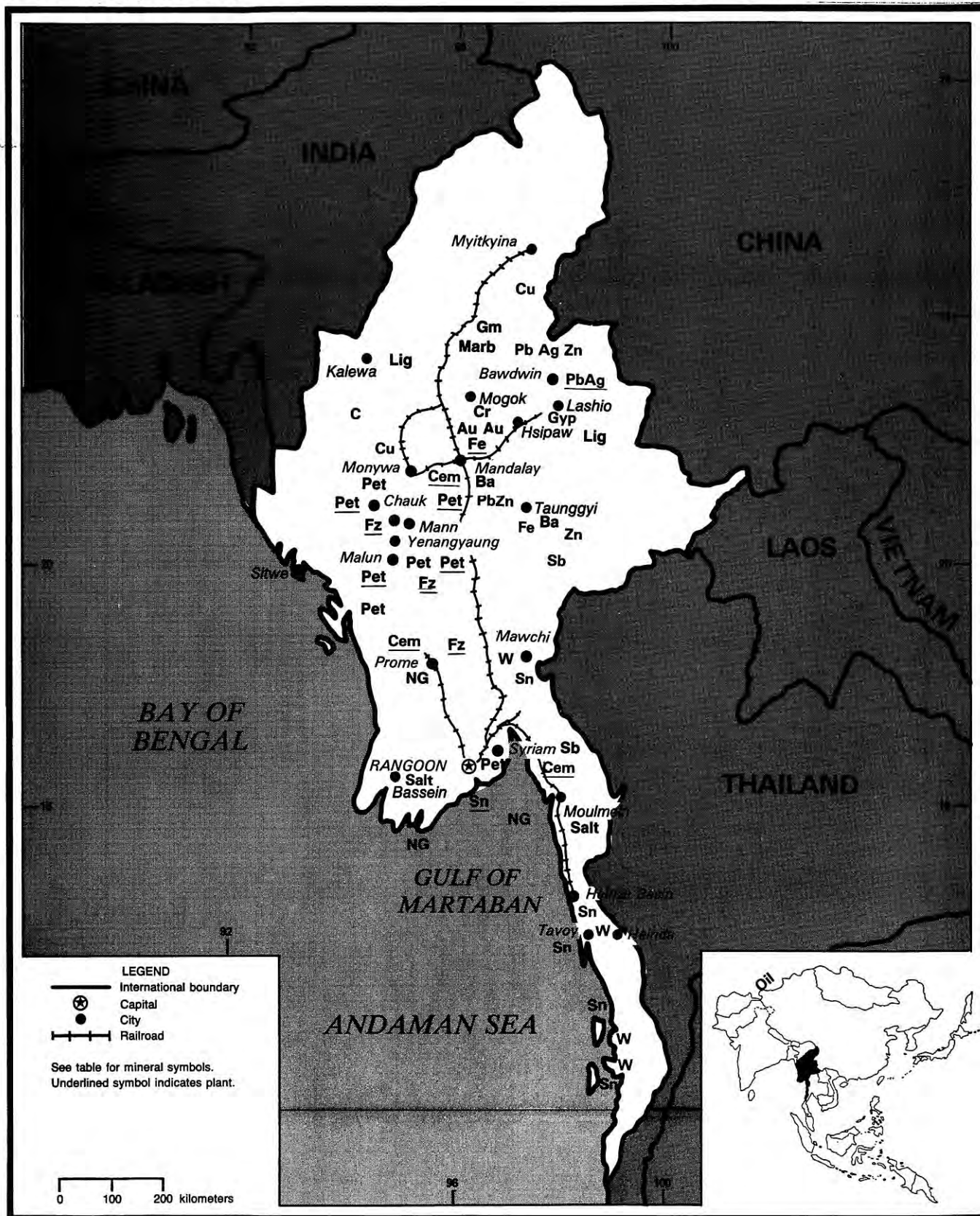


BURMA

AREA 678,600 km²

POPULATION 42 million



THE MINERAL INDUSTRY OF BURMA

By David B. Doan

The State Law and Order Restoration Council (SLORC), indistinguishable from an ordinary military junta, continued to dominate the political scene of Burma. It failed to recognize legitimate national elections during the year, continued its repression of the civil population, and, with one exception, did little to foster the growth and development of Burma's mineral industry. The exception was the decision by SLORC to open certain areas of the country to petroleum exploration by foreign firms.

After many years of self-imposed isolation from the normal channels of international investment, development, and trade, Burma's centrally planned economy disintegrated to the point of crisis in 1987 when the Government repudiated and demonetized all banknotes of more than 15 kyat, nominally about \$2.35. The real or black-market rate was about \$0.30 to \$0.35, however, and the citizens of Burma found their savings destroyed.

This was the last straw in General Ne Win's "Burmese Way To Socialism," begun in 1962, which turned a comparatively rich nation into one of the world's poorest. Amidst intense civil unrest and brutal suppression of demonstrations, Ne Win stepped down in July 1988. By September of that year, after chaos and bloodshed, General Saw Maung emerged as the leader of the military group, SLORC, that established itself as the Government of Burma. Rumors persist that Ne Win is still the real power, operating effectively but totally in the background.

With an economy in disarray, inflation exceeding 40%, and a deteriorating position with respect to both Government deficit and foreign debt, there were nonetheless signs of a weak recovery from the recessionary lows of the previous year, based on a slight improvement in gross domestic product. Objective economic analysis was difficult, however, because the vast overvaluation of the kyat continues to the present time. During 1990, the official

rate was quoted at 5.9 kyat to the U.S. \$1.00, but the open-market rate was about 70 kyat to the dollar and climbing.

The various ethnic areas such as the Shan State¹ of eastern Burma and the Kachin State of northern Burma took issue with SLORC's attempts to govern and began to behave independently. Karen rebels, for example, announced the prohibition of mining or logging by the Government in Rangoon, or its contractors, in Karen territory. A provisional alliance of several ethnic and territorial groups has joined forces, under the aegis of The Democratic Alliance of Burma, to resist the SLORC.

National elections held throughout Burma in May 1990 resulted in an overwhelming defeat for SLORC, which stonily refused to accept this result. After many days' delay, the SLORC leadership solemnly announced that power could not be transferred to the winning faction, the National League for Democracy (NLD), until Burma had a constitution. Moreover, SLORC would devise such a constitution but all this would require a long and probably unforeseeable period of time. No palpable progress was evident by the end of the year, and SLORC seemed to be playing for time. Potential opposition leaders and many of the successful candidates in the national election were arrested and incarcerated by SLORC, including the charismatic Aung San Suu Kyi, daughter of a national hero and the one visible figure representing the resistance. Aung San Suu Kyi's fame spread rapidly in 1990 after the "elections." Awarded the prestigious Sakharov Prize and rumored to be nominated in 1991 for the Nobel Peace Prize, she was becoming a symbol for a cause that SLORC could not control.

One tentative factor for initiating recovery of the country from its potential financial collapse was invoked by SLORC in 1989, more or less as an abrupt attempt to retain power by abandoning its xenophobic policies. Realizing the need for cash-flow and foreign-exchange credits, the junta entered into exploration agreements

with foreign companies in a series of on-shore concession blocks. As a matter of conjecture, it was thought SLORC hoped that quick and significant oil production and related income could be realized before the continuing repression of the citizens precipitated another civil upheaval.

GOVERNMENT POLICIES AND PROGRAMS

With the failure of previous isolationist and statist policies came SLORC's decision to invite foreign capital, technology, and expertise to come to Burma and develop its mineral resources. The new foreign investment law was worded to permit enterprises with between 35% and 100% foreign ownership, income-tax holidays of at least 3 years, accelerated depreciation, relief from customs duties and other internal taxes, credit for foreign-country research and development expenses, and the repatriation of profits in hard currency.

Foreign investments were to be approved by the new Burmese Foreign Investment Commission, which was given wide latitude in arbitrating questions and disputes and extending discretionary benefits. Many operational, technical, and legal details were not yet addressed by the new law, but it was a major step in the direction of a market economy and a business environment that the other nations of the world could understand. Increasingly, however, other countries were declining to do business with Burma for reasons based on the oppressiveness of the regime.

New "commercial" taxes were announced in 1990, applicable to both producers and importers. As they affected mineral commodities, these taxes were listed as follows (SIC): "no commercial tax—coal, coke, natural gas, petroleum crude; 10% tax—grease, oils, lubricants, other petroleum products not elsewhere specified, petroleum coke, gypsum, barite, graphite, white clay, fire clay, clay powder,

soapstone, dolomite stone ochre, bentonite, tarazo [terrazo?] stone, washed clay, lead slag, chipping stone, marble, limestone, road-building stone and sand, tin concentrates, tungsten concentrates, tin/tungsten/scheelite and mixed ores, refined lead, zinc concentrates, copper matte, nickel speiss; antimonial lead, antimony ores, lead sulphide, salt, aluminum circles and plates; 20% tax—marble products, cement, brick, brick tiles and products, fire brick, lime and lime powder, iron and steel products, miscellaneous metallic goods other than silver and platinum not elsewhere specified, silver, furnace oil; 80% tax—kerosene; 90% tax—diesel oil; 100% tax—pearl, jade, other precious stones; 115% tax—jet fuel; 170% tax—motor spirit (petrol); 180%—earth oil [sic].” How “earth oil” differs from petroleum crude is not clear. The 20% tax rate is also applied to “commodities, not elsewhere specified.” A tax on gold under consideration was to be announced later after determination of the rate.

PRODUCTION

Although Government reports noted that the production of mineral commodities improved in 1990 following a similar improvement in 1989, it was not immediately clear what the degree of improvement was in either case. What was generally accepted, however, was that production was close to

rock bottom during the year of civil upheaval in 1988.

Burma's production of mineral commodities had declined to a point at which, in 1988, it was believed to have reached between 10% and 20% of pre-World War II output. In spite of adequate mineral reserves and plentiful labor, the problem involved overall deterioration of the country's infrastructure and facilities required to mine, process, refine, and transport mineral products. Lack of up-to-date technology, a shortage of fuels, and an increasing problem of foreign exchange had progressively crippled Burma's mineral industry.

While most of these factors did not improve in 1990, and in some cases became considerably worse, the indications were that some effort was exerted to stimulate production for the survival of the economy. Reliable production data were not generally available, so estimates have had to be made for the principal mineral commodities.

TRADE

Normally Burma has been a producer and exporter of gemstones, tin, and tungsten, but it is probable that, in 1990, most of the traffic in gemstones and jade was by smuggling them into China, India, and Thailand without benefit to the Government. By this means, insurgent groups have raised capital to finance

weapons and operations against the central Government. Tin, likewise, was believed to have been smuggled primarily into Thailand and possibly into other neighboring countries. Otherwise, Japan was Burma's principal vendor of goods imported while China was the largest purchaser of Burmese exports. Minerals and gems were thought to be second to forest products in export value, but details were not yet available.

Despite a temporary recovery in its foreign-exchange reserves during 1990, Burma imported what it could, but its preliminary gross trade statistics showed only a modest improvement in its external trade deficit compared to that of 1989. The Government has kept tight control of foreign exchange for nonmilitary imports. Its continuing refusal to change an unrealistically overvalued currency has perpetuated trade distortions and hindered much-needed capital inflow from sources of foreign investment.

STRUCTURE OF THE MINERAL INDUSTRY

The Government controls all mineral exploration, extraction, regulation, and planning through the Ministry of Mines, which includes six enterprises and two departments, all headquartered in Rangoon. Specifically, as listed by the Government,

TABLE 1
BURMA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	1986	1987	1988	1989 ^a	1990 ^a
METALS					
Chromium: Chromite, gross weight	—	1,000	5,000	*5,000	1,000
Copper:					
Mine output, Cu content	'10,100	'10,600	4,700	5,080	5,100
Matte, gross weight	144	234	224	200	200
Gold, mine output ^c kilograms	100	100	100	126	150
Iron and steel: Pig iron	2,669	'624	688	3,500	4,000
Lead:					
Mine output, Pb content	'6,600	'4,600	6,000	5,200	4,400
Metal:					
Refined	5,359	3,985	4,402	3,443	1,531
Antimonial lead (18% to 20% Sb)	299	305	160	300	300

See footnotes at end of table.

TABLE 1—Continued

BURMA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	1986	1987	1988	1989 ^p	1990 ^e
METALS—Continued					
Nickel:					
Mine output, Ni content ^e	20	20	26	'20	23
Speiss, gross weight	47	50	104	80	90
Silver, mine output kilograms	'13,800	26,096	9,207	6,843	6,718
Tin, mine output, Sn content:					
Of tin concentrate	600	256	102	172	191
Of tin-tungsten concentrate	895	683	427	329	443
Total	1,495	939	529	501	634
Metal: Refined	'649	'309	110	500	400
Tungsten, mine output, W content:					
Of tungsten concentrate	102	25	14	8	7
Of tin-tungsten concentrate	613	468	293	225	304
Total	715	493	307	233	311
Zinc, mine output, Zn content	4,643	2,561	1,600	1,400	2,152
INDUSTRIAL MINERALS					
Barite ³	'11,578	'17,243	12,678	9,144	9,000
Cement, hydraulic	433,811	389,605	348,981	394,000	375,208
Clays: ³					
Ball clay	'132	'218	247	203	200
Bentonite	'853	'297	418	711	700
Fire clay ⁴	'2,490	'2,193	3,473	3,150	3,000
Industrial white clay	'1,130	(⁵)	600	—	—
Feldspar ³	'3,077	'5,620	4,938	4,257	2,500
Graphite ³	722	—	—	—	—
Gypsum ³	'25,858	'22,895	31,716	31,534	30,000
Nitrogen: N content of fertilizer	133,130	117,501	112,178	120,000	125,000
Precious and semiprecious stones: Jade ³ kilograms	'60,333	'98,623	'131,777	54,266	60,000
Salt, all types: ⁶ thousand tons	'246	'257	246	262	260
Stone: ³					
Dolomite	'2,398	'4,612	938	1,930	2,000
Limestone, crushed and broken thousand tons	'813	'1,321	1,118	1,219	1,200
Talc and related materials: Soapstone ³	56	(⁵)	—	—	—
MINERAL FUELS AND RELATED MATERIALS					
Coal, lignite	'38,100	'39,334	30,258	37,594	38,000
Gas, natural:					
Gross ^e million cubic meters	'1,120	'1,188	'1,108	'1,133	1,034
Marketed ³ do.	'1,075	'1,140	1,064	1,088	993
Petroleum:					
Crude (gross wellhead) ³ thousand 42-gallon barrels	'8,300	'6,200	4,800	5,600	4,745
Refinery products ^e ³ do.	'4,495	'3,849	'3,137	'3,287	3,200

^eEstimated. ^pPreliminary. ^rRevised.¹Table includes data available through Apr. 15, 1991.²In addition to the commodities listed, pottery clay, common sand, glass sand, other varieties of crude construction stone, and other varieties of gemstones are produced, but available information is inadequate to make reliable estimates of output levels.³Data are for fiscal years beginning Apr. 1 of that stated.⁴Includes fireclay powder.⁵Revised to zero.⁶Brine salt production (in metric tons) as reported by the Burmese Government was as follows: 1986—47,249; 1987—57,847; 1988—59,768; and 1989—60,229.

they are Mining Enterprise No. 1 (ME1)—lead, zinc, silver, and copper; Mining Enterprise No. 2 (ME2)—tin, tungsten, and gold; Mining Enterprise No. 3 (ME3)—iron, steel, coal, nickel, and industrial minerals; Myanma Gems Enterprise (MGE)—precious and semiprecious gemstones and jade; Myanma Salt and Marine Enterprise—salt and potash; Myanma Pearl Enterprise—pearls; Department of Geological Survey & Exploration

(DGSE); Department of Planning & Inspectorate—planning, mine survey, and licensing.

Each of the various enterprises is responsible for the development of its respective minerals throughout Burma. Each receives a yearly operating budget from the central Government, and all revenues from production revert to the latter. The individual enterprises have some latitude in administration of their own operations, but the central

Government sets policy and authorizes major decisions such as the approval of foreign participation and joint-venture partners.

COMMODITY REVIEW

Metals

Gold.—Official interest in facilitating gold mining has increased to the point at

TABLE 2
BURMA: STRUCTURE OF THE MINERAL INDUSTRY FOR 1990

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity ^a
Cement	Ceramic Industries Corp. China Hsin Cement Corp.	Kyangin, southern outskirts of Mandalay	240
Do.	do.	Pa-an, 160 kilometers east of Rangoon (under repair)	240
Do.	do.	Thayetmyo, 300 kilometers north-north-east of Rangoon on Irrawaddy River	200
Copper, in concentrate	Mining Enterprise No. 1	Monywa	12
Fertilizer, N content	Petrochemical Industries Corp.	Kyaw Zwa, 230 kilometers north-northwest of Rangoon	91
Do.	do.	Pagan, south of Yenangyung	31
Do.	do.	Sale, 190 kilometers southwest of Mandalay	31
Iron	Mining Enterprise No. 3	Anisakan, 15 kilometers from Maymyo, 45 kilometers east of Mandalay	40
Steel	do.	do.	35
Lead, silver, and zinc ore	Mining Enterprise No. 1	Bawdwin	390
Lead and silver metal:			
Lead	do.	do.	10
Silver kilograms	do.	do.	122,000
Petroleum, refined	Petrochemical Industries Corp.	Mann	25,000
Do.	do.	Syriam, across river east of Rangoon	26,000
Tin:			
Concentrate	Mining Enterprise No. 2	Heinda	1
Metal	do.	Syriam, across river east of Rangoon	1
Tin and tungsten concentrate:			
Tin	do.	Heinze Basin	.6
Do.	do.	Tavoy	1
Do.	do.	Tenasserin Division coastline (five mines under development)	.9
Tungsten	do.	Heinze Basin	NA
Do.	do.	Tavoy	1
Do.	do.	Tenasserin Division coastline (five mines under development)	NA
Tungsten and tin concentrate:			
Tungsten	do.	Mawchi	.2
Tin	do.	do.	NA

^aEstimated. NA Not available.

which efforts were planned and undertaken for systematic development, particularly of "hard-rock" or lode deposits requiring organized exploration and extraction utilizing skilled miners and heavy equipment. Following a feasibility study assisted by Australia, development was begun of the Kyaukpahtoe gold mine in Sagaing Division with technical help from Invest Import of Belgrade, Yugoslavia. Although startup of actual extraction had been projected for March 1990, the \$50 million venture agreed to in 1987 was delayed while assembly of equipment continued. With a new target date of the first quarter of 1991 for starting production, the Government aimed at production of 2 mt/a of gold from the new mine.

Lead, Zinc, and Silver.—The lead-silver deposits of Bawdwin and adjacent Namtu, in the northern part of the Shan State, were long considered the richest in the world. Together with less extensive zinc deposits, these ores have enabled an open pit mining operation at Bawdwin for the past 80 years.

A concentrator and lead smelter were built at nearby Namtu during the 1930's which, in 1989, were little changed from their original configuration. Another concentrator of comparatively modern design was built at Bawdwin in 1981, but a lack of process-control equipment has led to a variety of metallurgical problems. The lack of spare parts has hurt Namtu and Bawdwin production to such a degree that it was reported to be 10% of pre-World War II output and about 60% of present capacity of 10,000 tons of concentrates per year. A Burmese official described the operation as not profitable but useful in creating foreign-exchange credits. Even the exports were essentially unprofitable, however, because of the overvalued Burmese exchange rate. A move toward increased open pit mining was invoked as a cost-reduction measure.

At the Namtu underground mine, the reserves were stipulated at 3.5 Mmt grading 7.5% lead, 3.5% zinc, and approximately 93 to 124 g/mt of silver. The open pit mine at Bawdwin had an estimated 10 Mmt grading 5.1% lead, 4% zinc, and 93 g/mt of silver. A significant quantity of tailings dumped along a riverbank was estimated to contain 3% to 4% lead, 2% to 3% zinc, and 85 g/mt of silver.

Remarkably, further reserves comprised roughly 2.6 million tons of slag extracted since 1911 from the Bawdwin blast furnace and containing 17.2% zinc, 2.5% lead, and

591 g/mt of silver. It is believed that reprocessing of this slag led to the peak silver production of about 26 tons reported for 1987.

Nickel.—Burma has been a very small producer of nickel, on the order of 100 mt/a or less. Two new deposits were discovered that may signal improvement provided the development capability could be organized, primarily in terms of capital. One of the newly found deposits was at Dagaungtaung, of uncertain location but probably 50 km or less north of Mogok, comprising 40 Mmt grading approximately 2% nickel in lateritic material. The other deposit was found near Kalewa with an estimated 80 Mmt grading 1.2% to 2% nickel combined with silicates. These deposits were known first in 1989 but were still being reported in 1990, as if to stimulate interest from foreign investment sources.

Tin.—ME2 continued to seek interest in tin extraction from foreign entities through joint-venture arrangements. Tin concentrates recovered from any programs that were to go forward would be shared between the contractor (60%) and ME2 (40%) after deduction of a 10% royalty. During the life of the contract, the contractor would be exempt from most ordinary taxes and duties payable to Burma. ME2 indicated official interest in opening inland areas to tin mining by foreign companies through proposals by the latter rather than formal open bidding. As of midyear, three production-sharing contracts had been signed with Thai companies. One of these, with Thailand's Sea Exploration and Mining Co., was to prospect for tin in southernmost Burma at Victoria Point.

Industrial Minerals

In March 1990, SLORC abandoned the State monopoly on gem and jade mining for the first time in many years, if not decades. MGE began awarding private concessions in the vicinity of Mogok Township, north of Mandalay, that totaled more than 200 near the end of the year. The official press reported that 159 mines were started by private operators during the summer of 1990, many involving signature bonuses of 250,000 kyat or more, the highest reportedly being 21 million kyat. Only one private mine was a drift into the subsurface, the remainder being vertical pits that were intermittently pumped dry for deeper digging.

Eight MGE mines have been operating at Mogok, seven for rubies and sapphires and the other for peridot, the gem form of olivine. An attractive moss-green crystal, peridot is not produced in large quantities because of limited world recognition and, hence, markets. Two of the ruby and/or sapphire mines as well as the peridot mine were lode deposits involving drilling and blasting several times daily. The other MGE mines were wet-pit operations utilizing potential ore dumped into partially water-filled pits and pumped out as sludge across separation screens. The Government's rich ruby and sapphire mines also produce a number of other varieties of gemstone, including spinel and amethyst. The "SLORC Ruby" was found in alluvium in a seasonally dry riverbed. Weighing 496.5 carats, it was thought to be the largest in the world, but had to be retrieved by Burmese authorities after being smuggled and nearly lost to entrepreneurs across the border in Thailand. MGE also reported the finding of the world's largest sapphire, weighing 979 carats, in its Mogok operations.

In the winter dry season of 1990, power availability at the mining sites was inadequate because of low water in a small nearby impoundment and hydroelectric plant. Several mines were shut down, and more were jeopardized by the lack of electricity to operate drills and pumps and to move sludge through screens. Greater generating capacity would probably be needed to sustain both the Government and private mining operations, but the Government clearly looked toward sales of gem stones in international markets as a source of revenue and foreign exchange.

Mineral Fuels

Petroleum Crude.—Burma's domestic demand of 35,000 bbl/d of petroleum crude overwhelmed the shrinking supply of approximately 13,000 bbl/d during 1990. The country's delicate position with respect to its meager foreign-exchange reserves did nothing to improve the prospects of importing ample quantities of crude for satisfying the need for refinery products.

In 1989, agreements had been signed by Myanma (Burma) Oil and Gas Enterprise (MOGE) with (1) Yu Kong Ltd. of the Republic of Korea to explore and produce petroleum in onshore Block C in the Chindwin basin about 970 km north of Rangoon, (2) Dutch Shell Exploration BV for a joint venture in onshore Block G

(lower Irrawaddy Valley), (3) BHP of Australia in onshore Block H (parallel to Block G in the lower Irrawaddy Valley), (4) Amoco in onshore Block B of the northern Chindwin basin, and (5) Britain's Clyde and Croft for onshore Block I in the Irrawaddy Valley and Block J around Moulmein. Other signed agreements involved Japan's Idemitsu in Block D in midcountry, west of the Irrawaddy, and Petro-Canada venturing with Unocal in Block F, contiguous with the south end of Block D. The chief object of exploration interest is a major crustal rift basin extending from the upper Chindwin River, in the Hukawng Valley of northern Burma, southward through west-central Burma past Mandalay to Moulmein at the beginning of the southern peninsula.

Exploration activity was hindered by an extended monsoon season and generally poor logistics up country. Most of the effort was devoted to shooting seismic lines for locating exploratory drilling operations.

Late in the year it was made public that the Petroleum Authority of Thailand Exploration and Production Co. Ltd. (PTTEP) would join with Unocal in exploring the 6,200-km² area of Block F, taking a 10% position. It was not clear whether Unocal's previous partner, Petro-Canada Ltd., was still involved in the development of Block F.

Natural Gas.—Production of natural gas declined from approximately 1,133 Mm³ in 1989 to 1,034 Mm³ in 1990. PTTEP negotiated plans with SLORC for construction of a 500-km natural gas pipeline from Martaban, 15 km north of Moulmein through Three Pagoda Pass on the border to Kanchanaburi in Thailand. It was expected that the gasfield in the Gulf of Martaban could provide at least 250 thousand m³ of gas per day, and perhaps twice that much, to feed the power generators at the other end.

Reserves

Data on mineral reserves are from local sources at various times and are not uniformly current. Moreover, some reserves may increase manyfold in the future as exploration, assisted by foreign capital and expertise, concentrates on new target areas. The reserve estimates expressed in the accompanying table are largely by various industry observers having at least some direct experience in development of specific minerals in Burma.

No good way is known for projecting Burma's probably large reserves of jade and gemstones, the latter known to include amethyst, aquamarine, citrine, peridot, ruby, sapphire, spinel, and zircon.

TABLE 3
BURMA: RESERVES OF MAJOR MINERAL COMMODITIES FOR 1990

(Thousand metric tons unless otherwise specified)

Commodity	Reserves
Copper	20,000
Lead, in ore	300
Lignite	30,000
Nickel, in ore	22,000
Petroleum, crude, thousand barrels	51,300
Petroleum, natural gas million cubic feet	9,430,000
Silver, in ore kilograms	750
Tin, in ore	20
Zinc, in ore	500

INFRASTRUCTURE

Burma's road network, comprising 3,200 km of hard-surface and 18,000 km of improved secondary roads, affords fair access to most of the country. In many areas, however, tracks or trails must be utilized for the final 10 to 60 km of travel to remote sites, as might be necessary for mineral exploration. The country has slightly more than 4,300 km of meter-gauge railroad providing access northward from Rangoon through Mandalay to Bawdwin, and also from Mandalay farther north to the Namponmao area, more than 1,000 km north of Rangoon. Not the least part of Burma's transportation system is the 3,200 km or so of inland waterways maintained for large commercial vessels. These navigable waters are utilized for moving petroleum crude to refineries and some of the resulting refinery products back into the hinterland. Some crude is normally moved by pipelines, whose present condition may be deteriorating.

The major seaports are Rangoon; Bassein, more than 150 km west of Rangoon in the Irrawaddy Delta; and Sitwe, roughly

100 km south of the Bangladesh border. The principal air facilities are at Rangoon; Meiktila in Mandalay State about 100 km south of the town of Mandalay; and at Namponmau, about 10 km southwest of Myitkyina.

Burma was negotiating with the World Bank for support of infrastructure rehabilitation and upgrading, including a high earth-filled dam, canals, and irrigation distribution systems. Significantly, the plans involved inland-waterway improvement, upgrading of locomotives and railway cars, improved maintenance of trucks and buses, and also water supply, sewerage, and road facilities in Rangoon and as many as 40 other towns. Projects were being reappraised in view of the country's situation, and SLORC's refusal to honor the results of the national elections clearly did not inspire confidence on the part of international lenders.

OUTLOOK

Burma's governmental decisionmaking has been preempted by SLORC, many feel illegally, and those at the top are not well-versed in the ways of business and economics. SLORC, thus far, had little or nothing in the way of previous experience and no obvious record of accomplishment.

Unrealistic exchange rates combined with an inconvertible currency do not attract investment or trade. Deficit spending by printing money will stimulate increasing inflation. It may not be inaccurate to speculate that the rice crop in 1990, fortunately a good year, was not only enabling survival but holding the economy together through export of surplus. Otherwise, the Burmese economy is that of a poor nation and the present Government is financially hard-pressed. There are no domestic investment resources, let alone current technology and expertise, to develop the resources with which this country has been endowed. The door that has been opened to the outside world cannot now be closed if Burma is to survive as a viable economy, or even as a nation in view of the Kachin and Karen movements toward autonomy. Problems undoubtedly remain, but the first step has been taken in terms of petroleum concessions. This could be a rich mineral economy, benefiting from petroleum, coal, base metals, and precious metals, if the means of development can be brought about.

¹Burma is divided into mutually exclusive States (Shan, Kayah, Kachin, and Kawthule), Districts (Sagaing, Arakan, Magwe, Mandalay, Irrawaddy, Pegu, Tenasserim), and one other, the Chin Special District. States tend to be ethnically distinguished whereas districts are not recognizably so.

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