

THE MINERAL INDUSTRY OF

KENYA

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Kenya, with its cement plants, petroleum refinery, and steel mills, was the most industrialized country in eastern Africa. Mineral and mineral-based commodities produced in Kenya included cement, fluorspar, gemstones, gold, gypsum, lime, petroleum products, salt, soda ash and steel products. Mining and quarrying in this East African nation of 29.6 million people accounted for less than 1% of the country's gross domestic product (GDP), which was \$9.96 billion in 1998 (Central Bank of Kenya, September 1999, Monthly economic reviews, accessed September 21, 1999, at URL <http://home.centralbank.go.ke/Tables/review/133-6943323.html>). The country's economic performance continued to slow in 1998. Real GDP growth was 1.8% in 1998 compared with 2.3% in 1997 and 4.6% in 1996 (Central Bank of Kenya, September 1999, Monthly economic reviews, accessed September 21, 1999, at URL <http://home.centralbank.go.ke/Tables/review/133-6943323.html>). Reasons cited by the Central Bank for the downturn included the poor condition of Kenya's infrastructure and eroded investor confidence (Central Bank of Kenya, March 1999, Monthly economic reviews—Economic growth update, accessed September 21, 1999, at URL <http://home.centralbank.go.ke/MonthlyReviews/ShowReview.asp?DocumentID=723>). The cement, steel, and construction material sectors suffered from lack of demand as activity in the building and construction industry contracted. Inexpensive cement and steel imports also adversely affected demand for local production (Metal Bulletin, 1998).

Kenya's major trading partners in Africa and the European Union received about 80% of the nation's exports. Agricultural products dominated the export market, but fluorspar, gemstones, petroleum products, soda ash, and steel products were notable sources of foreign exchange earnings. Petroleum products, refined primarily from crude oil imported from the United Arab Emirates, were reexported to neighboring African countries, particularly Uganda.

Gold production was mainly artisanal. Depressed gold prices dampened international gold exploration activity in Kenya. Early in the year, Anglo American Prospecting Services Ltd., a subsidiary of Anglo American Corp. of South Africa, relinquished its exploration option on the Lolgorien and the Akala concessions held by International Gold Exploration AB of Sweden (IGE). In 1998, exploratory drilling resulted in the discovery of the Teng-Teng deposit on the Lolgorien concession, and exploration continued on the Sekerr gold concession. Throughput at IGE's gold mine dump tailings retreatment on the Lolgorien property was increased to 12,000 metric tons per year.

Tanganyika Gold NL of Australia acquired Panorama Resources NL of Australia and its subsidiary, Auvista Minerals NL. Exploration activity was cut back on the Migori gold prospect, where the joint venture of Tanganyika (60%) and Mio Migori Mining Co. Ltd. of Kenya (40%) held two special prospecting licenses. In October 1997, Panorama had reported estimated resources of 7.4 million metric tons (Mt) grading 2.37 grams per ton of gold (Tanganyika Gold NL, [undated], Migori gold project—Kenya, accessed September 20, 1999, at URL <http://www.tangold.com.au/annual/other.html>).

Pan African Resources Corp., a wholly owned subsidiary of Golden Star Resources Ltd. of Canada, held the option to acquire a 75% interest in the Ndori gold prospect in southwestern Kenya from San Martin Mining Research and Investment Co. Ltd. of Switzerland and San Martin 96 S.A. Exploration activity was significantly reduced on the prospect owing to Golden Star's budget prioritization.

Tiomin Resources Inc. of Canada continued work on its special prospecting licenses covering, from north to south, the Sabaki, the Mambriui, the Kilifi (formerly the Sokoke), the Mombasa, and the Kwale titanium-bearing heavy mineral sand concessions. A feasibility study was begun on the Kwale permit. The resource of mineralized sands at Kwale was 200 Mt containing an estimated 3.8 Mt of ilmenite, 1.0 Mt of rutile, and 600,000 metric tons (t) of zircon at a 1% heavy-mineral cutoff grade (Canada NewsWire, November 30, 1998, Tiomin Resources Inc.—Third quarterly report 1998, sent November 30, 1998, from e-mail portfolio@newswire.ca). Resources at Mambriui were 700 Mt of sand containing an estimated 14 Mt of ilmenite, 700,000 t of rutile, and 700,000 t of zircon. Resources at Kilifi were estimated to be 1,700 Mt of sand containing an estimated 18.7 Mt of ilmenite, 1.7 Mt of rutile, and 1.7 Mt of zircon. Tiomin continued to lease property for the proposed \$98 million Kwale project; however, the leasing negotiations and Tiomin's proposed port facility at Shimoni, 35 kilometers south of Kwale, were becoming controversial. Local officials were not satisfied with the lease terms offered farmers and squatters (Industrial Minerals, 1997; Mining Journal, 1997; Africa Energy & Mining, 1999; Tiomin Resources Inc., 1999; Daily Nation, May 15, 1998, Feud over titanium project rages in Kwale, accessed May 15, 1998, at URL <http://www.nationaudio.com/News/DailyNation/Today/News/News21.html>; Daily Nation, July 4, 1998, Titanium mining firm given conditions, accessed July 6, 1998, at URL <http://www.nationaudio.com/News/DailyNation/Today/040798/News/News12.html>). Pangea Goldfields Inc. of Canada held a 20% interest in the mineral sand concessions.

In 1998, Athi River Mining Ltd. started up its third cement

kiln and opened a second lime kiln in Mombasa. Bamburi Cement Ltd. of Mombasa built a \$40 million cement clinker grinding mill at Athi River, near Nairobi, and began operations in August. The mining of limestone from the Ortum area in the West Pokot District and the export of the rock to Tororo, Uganda, continued to be disputed. Local leaders wanted a cement factory to be built in the West Pokot area instead of just a quarrying operation (Daily Nation, July 20, 1998, Government stops limestone shipments, accessed July 20, 1998, at URL <http://www.nationaudio.com/News/DailyNation/Today/News/Business2.html>).

Salt production in eastern Kenya had been adversely affected by the late 1997 rains that flooded the salt ponds. Local production was supplemented by imports; however, salt imports from Eritrea dried up when Ethiopia and Eritrea went to war in May 1998, forcing salt companies to seek yet another source of imports.

In September 1998, Soda Ash Investments Plc of the United Kingdom acquired Brunner Mond Plc of the United Kingdom, and its Kenyan subsidiary, Magadi Soda Co. Ltd. Magadi Soda, Africa's largest soda ash producer, exported most of its production to India, South Africa, Southeastern Asia and Tanzania.

Petroleum exploration faltered in 1998 when Tornado Resources Ltd. of Canada, holding production-sharing agreements on blocks L-1 and L-10, ran into financial difficulty (Tornado Resources Ltd., 1998).

Refined petroleum products were moved from the Mombasa refinery and through the Mombasa petroleum import terminal to the interior by the pipeline of the Government-owned Kenya Pipelines Co. Ltd. and by trucks. In 1998, the Government banned oil transport by truck to Ethiopia, Somalia, and Sudan. Some petroleum cargo bound for Burundi, Rwanda, and Uganda continued to be moved across Kenya by truck despite the road conditions (J. A. Emojong, September 30, 1998, Kenya impounds heavy trucks to save the roads, Monitor, accessed March 4, 1999, at URL <http://www.africanews.com/monitor/freeissues/30Sep98/business.html>).

The Kenya Railways Corp. single-track line runs from the west near Tororo, Uganda, passes through Nairobi, and terminates at the Indian Ocean port of Mombasa, connecting key mining districts along the route. In February, the World Food Programme agreed to fund a \$1.3 million program to rehabilitate 10 locomotives for the Kenya Railways (World Food Programme, 1998). In May, Brunner Mond commissioned three locomotives for the Magadi Railway Co., Kenya's first private railroad company. Magadi Railway completed an \$8.9 million reconstruction of the track from Magadi to Konza, formerly maintained by Kenya Railways (Barrack Otieno, May 1998, Kenya's first private railway,

African Business, accessed November 21, 1998, at URL <http://dialspace.dial.pipex.com/icpubs/ab/may98/abts0501.htm>). CPCS Transcom Ltd. of Canada continued a study of the Kenya Railways privatization options for the Government.

Kenya's 68,000-kilometer road system was in poor condition. Maintenance problems were exacerbated by overloaded trucks and the heavy rains of late 1997 that washed away bridges and roadbeds.

The state-owned Kenya Electricity Generating Co. produced electricity, and the state-owned Kenya Power and Light Co. distributed the power; however, electricity demand continued to outpace supply (Indian Ocean Newsletter, 1997). Primarily derived from hydroelectric sources, Kenya had an electric generating capacity of about 806 megawatts (MW) (Indian Ocean Newsletter, 1998). An additional 30 MW was imported from Uganda. Construction of a 75-MW powerplant at Kipevu in Mombasa continued. Ormat International Ltd. of the United States contracted to build the Olkaria III powerplant, a 64-MW geothermal facility. Negotiations for the construction of a 60-MW hydroelectric powerplant at Sondu Miriu, near Kisumu, and 55-MW thermal plants at Eldoret and at Nakuru, were underway.

References Cited

- Africa Energy & Mining, 1999, Headway for Tiomin's project: Africa Energy & Mining, no. 243, January 6, p. 7.
Indian Ocean Newsletter, 1997, British barometer: Indian Ocean Newsletter, no. 767, May 31, p. 6.
———1998, New power plants: Indian Ocean Newsletter, no. 810, May 2, p. 5.
Industrial Minerals, 1997, Tiomin edges closer to minsands production: Industrial Minerals, no. 361, p. 21.
Metal Bulletin, 1998, Kenyan producers see difficult start to 1998: Metal Bulletin, no. 8305, August 27, p. 27.
Mining Journal, 1997, Kenya titanium: Mining Journal, v. 328, no. 8434, June 20, p. 484.
Tiomin Resources Inc., 1999, Tiomin Resources Inc.: Toronto, Tiomin Resources Inc. press release, February, 26 p.
Tornado Resources Ltd., 1998, [untitled]: Calgary, Tornado Resources Ltd. press release, October 7, 1 p.
World Food Programme, 1998, WFP signs US\$1.3 million agreement with Kenya Railways to improve food transport to the Great Lakes: Nairobi, World Food Programme press release, February 2, 2 p.

Major Sources of Information

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TABLE 1
KENYA: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1994	1995	1996	1997	1998
Aluminum, secondary e/	2,400	2,400	2,400	2,400	2,000
Barite e/	20 3/	20	20	20	10
Carbon dioxide gas, natural	5,605	7,982	9,119	9,214 r/	8,498
Cement, hydraulic thousand tons	1,182	1,566 r/	1,816 r/	1,506 r/	1,200 e/
Clays, kaolin	69	300	595	500 e/	500 e/
Diatomite	592	457	415	297 r/	468
Feldspar e/	1,200	500	100	100	100
Fluorspar (acid grade)	53,400	80,230	83,000	68,700 r/	60,854
Gemstones, precious and semiprecious:					
Amethyst e/ kilograms	303	310	300	104 r/ 4/	166 4/
Aquamarine do.	14	50 e/	50 e/	12 r/ 4/	15 4/
Cordierite (Iolite) e/ do.	15	15	15	19 r/ 4/	34 4/
Garnet do.	42	119	120 e/	18,181 r/ 4/	5,186 4/
Ruby do.	200	1,200	1,200 e/	5,175 r/	4,001
Sapphire e/ do.	2,310	2,300	2,300	615 r/ 4/	3,313 4/
Tourmaline do.	43	224	250 e/	6,969 r/	3,790
Gold, mine output, Au content e/ do.	155	170	300	440 r/ 4/	388 4/
Gypsum and anhydrite e/	500 r/	500 r/	1,000 r/	1,000 r/	1,000
Lead, mine output, Pb content	350	4	5 e/	-- r/	--
Lime e/	12,000	12,000	15,000	15,000	16,000
Petroleum refinery products e/ thousand 42-gallon barrels	16,200	14,600 r/	13,000 r/	13,000 r/	12,000
Salt, crude	70,500	71,400	41,000	6,280 r/	21,742
Soda ash	226,150	218,450	223,000	257,640 r/	242,910
Steel, crude e/ thousand tons	20	20	30 r/	33 r/	25
Stone, sand and gravel:					
Coral e/ do.	1,600	1,600	1,000	500 r/	500
Granite for dimension stone	50	50	100	500 4/	1,619 4/
Limestone for cement thousand tons	300	300	600	700	700
Limestone for dimension stone do.	30	31	32	32	32
Marble for dimension stone	100	100	100	966 4/	84 4/
Sand, industrial (glass) e/	12,300	12,300	13,000	13,000	12,000
Shale e/	150,000 r/	120,000 r/	120,000 r/	200,000 r/	180,000
Vermiculite	1,113 e/	457	734	1,418 r/	353

e/ Estimated. r/ Revised.

1/ Includes data available through September 19, 1999.

2/ In addition to the commodities listed, a variety of minerals and construction materials [brick clays, coal, gravel, iron ore, kyanite, meerschaum, mica, murrum (laterite), crushed rock, and construction sand] may be produced, but quantities are not reported, and information is inadequate to make reliable estimates of output.

3/ Reported figure.

4/ Reported export figure.