

THE MINERAL INDUSTRY OF

GHANA

By George J. Coakley

Ghana is a West African country with an area of 238,540 square kilometers, 18 million people, and a per-capita gross domestic product based on purchasing power parity of about \$2,000.¹ The economy is led, in order of export revenue importance, by cocoa, gold, and timber production. Ghana was the second-largest gold producer in Africa, after South Africa. It also was the third-largest African producer of aluminum metal and manganese ore and a significant producer of bauxite and diamond. (*See table 1.*) In 1997, officially reported output of newly mined gold was 54.4 metric tons with a market value of about \$545 million. Aluminum exports were valued at \$258 million, less the value of alumina and other raw material imports used in its production. Diamond production was valued at \$16 million; bauxite, at \$10.5 million; and manganese ore, at \$8.8 million. Ashanti Goldfields Company Ltd. accounted for about 60% of the gold production. (*See table 2.*) During 1997, Ranger Minerals NL of Australia's Damang Mine (December startup with no 1997 production reported) and Resolute Ltd. of Australia's Obotan gold mines were brought into production, with Ashanti's Bibiani Mine, Gold Fields (Ghana) Ltd. of South Africa's major new Tarkwa open pit, and Glencar Explorations Plc. of Ireland's Wassa Mine scheduled to startup in 1998. The largest of these, the \$125 million Tarkwa open pit, heap leach project, which involved the relocation of 20,000 Ghanaian villagers, will produce 15,500 kilograms per year of gold by 2000 from a resource of over 404,000 kilograms.

After a 5-year decline in production, the Ghana Manganese Company Ltd. significantly increased output from its Nsuta Mine in 1996 and 1997 as it shifted from mining manganese oxide to mining the deeper manganese carbonate ores. Power supply problems continued to beleaguer the Volta Aluminum Company Ltd.'s aluminum smelter, owned by Kaiser Aluminum Corp. of the United States. The smelter operated at 70% of capacity in 1997 and was expected to drop to 20% of capacity in 1998. In early 1998, Alcan Aluminium Ltd. of Canada increased its equity share in Ghana Bauxite Company Ltd. from 45% to 80% and

planned to expand capacity at the Awaso bauxite mine in the Western Region to 1 million metric tons per year.

Declining annual rainfall levels, combined with a steady surge in load requirements, has exerted pressure on Ghana's hydroelectric power generation capacity and is serving as a constraint on new industrial development. In response, the Ghana National Petroleum Corporation (GNPC), in cooperation with Chevron Overseas Petroleum Inc., have initiated plans to build a West African gas pipeline that would supply Benin, Ghana, and Togo with Nigerian natural gas. Plans call for doubling Ghana's power generating capacity to 2,600 megawatts by 2001, through the construction of several new gas-fueled powerplants. Until the gas pipeline is built, natural gas can be supplied from GNPC's offshore Tano gasfield. For more extensive coverage of the mineral industry of Ghana, see the 1996 Minerals Yearbook, Volume III, Mineral Industries of Africa and the Middle East.

Major Sources of Information

Geological Survey Department

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Accra, Ghana

Telephone: 233-21-228-093 or 226-490

Minerals Commission

P.O. Box M 248

Accra, Ghana

Telephone: 233-21-772-783/772-786

Fax: 233-21-773-324

Mines Department

P.O. Box 3634

Accra, Ghana

Telephone: 233-21-77-536/776-802

Fax: 233-31-24-344 (Takoradi office)

Ghana Chamber of Mines

P.O. Box 991

Accra, Ghana

Telephone: 233-12-760-652 or 761-893

Fax: 233-12-760-653

¹ Where necessary, values for 1997 have been converted from Ghanaian cedis (C) to U.S. dollars at the rate of C2,050=US\$1.00.

TABLE 1
GHANA: PRODUCTION OF MINERAL COMMODITIES 1/

(Thousand metric tons unless otherwise specified)

Commodity 2/	1993	1994	1995	1996	1997 e/
Aluminum:					
Bauxite, gross weight	424 r/	426 r/	513 r/	473 r/	504 3/
Metal, smelter, primary	175	141	135	137	152 3/
Arsenic, trioxide 4/	902	3,897	4,409	5,443	5,500
Cement, hydraulic 5/	1,200	1,350	1,300 e/	1,300 e/	1,400
Diamond:					
Gem e/	473	592	506	572	664
Industrial e/	118	148	126	143	166
Total 6/	591	740	632	715	830 3/
Gold 7/	38,911	43,478	53,087	49,211	54,662 3/
Manganese:					
Ore, processed	295 e/	265	217	448 r/	437 3/
Mn content e/	115	101	82 r/	152 r/	140
Petroleum:					
Crude 7/	--	--	--	2,600	2,600
Refinery products:					
Liquefied petroleum gas	40	365	400 e/	400 e/	400
Gasoline	325	1,825	1,900 e/	1,900 e/	1,900
Jet fuel	100	365	400 e/	400 e/	400
Kerosene	200	1,095	2,000 e/	2,000 e/	2,000
Distillate fuel oil e/	400	1,460 3/	1,500	1,500	1,500
Residual fuel oil	475	2,190	2,200 e/	2,200 e/	2,200
Other including refinery fuel and losses e/	210	365	400	400	400
Total	1,750 8/	7,665	8,800 e/	8,800 e/	8,800
Salt e/	50	50	50	50	50
Silver, content of gold ore e/	1,960	2,230	2,660	2,450	3,200
Steel, crude e/	25	25	25	25	25

e/ Estimated. r/ Revised.

1/ Table includes data available through June 23, 1999.

2/ In addition to the commodities listed, a variety of crude construction materials (clays, sand and gravel, and stone) were produced, as was limestone for processing of some gold ore. Output of these commodities is not reported and information is inadequate to make reliable estimates of output levels.

3/ Reported figure.

4/ Reported data from Ashanti Goldfields. Bogosu roaster capable of producing arsenic before closing in 1996.

5/ All from imported clinker.

6/ Production, in thousand carats, includes that of Akwatia Mine [1993--214; 1994--356; 1995--294; 1996--271; and 1997--300 (estimated)], and PMMC purchases of artisanal production [1993--376; 1994--406; 1995--337; 1996--443; and 1997--400 (estimated)]. Estimates of unreported artisanal production are not included.

7/ Does not include estimate of smuggled production.

8/ Refinery was reported closed for maintenance for much of the year.

TABLE 2
GHANA: GOLD PRODUCTION BY COMPANY AND MINE

(Kilograms)

Company	Mine	1993	1994	1995	1996	1997
Amansie Resources (Resolute Ltd.)	Obotan, open pit	--	--	--	--	2,151
Ashanti Goldfields Company Ltd.	Ayanfuri, open pit 1/	--	139	1,744	1,717	1,807
Do.	Iduapriem, open pit 2/	3,835	3,689	3,866	3,669	4,560
Do.	Obuasi Complex, open pit and underground	23,831	26,548	29,138	26,761	26,687
Barnex (Prestea) Ltd.	Prestea, underground 3/	654	612	840	1,062	1,011
Billiton Bogosu Gold Ltd.	Bogosu, open pit	2,784	3,402	3,349	3,327	3,464
Bonte Gold Mines Ltd.	Esaase, placer	227	508	567	668	879
Dunkwa Continental Goldfields Ltd.	Dunkwa, placer 4/	122	97	104	173	118
Gold Fields (Ghana) Ltd.	Tarkwa, underground 5/	1,221	1,224	1,382	1,476	1,672
Obenemasi Gold Mines Ltd.	Konongo/Obenemasi, open pit	--	--	690	588	176
Precious Minerals Marketing Corp.	Artisanal workings 6/	1,107	1,772	3,898	2,913	3,331
Prestea Sankofa Gold Ltd.	Prestea, tailings 7/	--	--	184	540	626
Teberbie Goldfields Ltd.	Teberbie, open pit	5,129	5,487	7,325	6,317	8,180
Total		38,911 8/	43,478	53,087	49,211	54,662

1/ Acquired in purchase of Cluff Resources in 1996; 1,659 kilograms attributed to Ashanti in 1996.

2/ Acquired in merger with Golden Shamrock in 1996; 590 kilograms attributed to Ashanti in 1996.

3/ Acquired from SGMC in 1996.

4/ Acquired from SGMC in 1995.

5/ Acquired from SGMC in 1993.

6/ Includes 8 to 110 kilograms per year byproduct gold from Ghana Consolidated Diamonds Ltd.'s Akwatia Mine.

7/ Acquired from SGMC in 1994.

8/ Data does not add to total shown due to independent rounding.

Source: Ghana Minerals Commission