2008 Minerals Yearbook

LIBERIA

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The Mineral Industry of Liberia

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Liberia continued to recover from a 14-year-long civil war that ended in 2003 and that had brought the country's political system and economic sector to a standstill. In 2008, the country made significant progress in the rehabilitation of the mining sector, which before 1990 had contributed more than 65% of export earnings and represented about 25% of the country's gross domestic product. During the civil war, all major mines were closed and these contributions were reduced to negligible levels. Proceeds from small-scale mining, mainly diamond, were used to a large extent to finance the war. In 2008, the only mineral commodities being produced in the country were cement, crushed stone, diamond, gold, and sand; the mineral sector generated about $6.43 million in revenues for the Government and employed an estimated 2,508 people (Ministry of Lands, Mines and Energy, 2008b; 2009; Central Bank of Liberia, 2009, p. 35).

Liberia resumed exporting rough diamond in September 2007, and in November of the same year, the country participated in the Kimberley Process Certification Scheme plenary meeting in Brussels. In an effort to reorganize the diamond sector, the Government converted the Diamonds Office into the Office of Precious Minerals, and the Presidential Task Force on Diamonds into the Liberian Diamond Board. The Government also completed the draft of a new mineral policy and was working on the establishment of a mining cadastre (United Nations Security Council, 2008a; 2008b, p. 9, 16).

The United Nations Security Council (UNSC) estimated that in the absence of a proper mining cadastre, there was an increasing possibility of conflict between local artisanal miners and mining concession holders. This was especially true given that the activities related to artisanal gold mining were numerous and located in remote and inaccessible areas that made it easy for young males, who were often ex-combatants, to maintain their former command structures, especially in the absence of other employment alternatives. The UNSC estimated that the majority of gold mined in Liberia was unregulated and not subject to payment of royalties to the Government (United Nations Security Council, 2008a; 2008b, p. 5).

Government Policies and Programs

The Ministry of Lands, Mines, and Energy was the Government agency responsible for the administration of the mining sector and had statutory oversight for the energy, land, mineral, and water sectors. The new draft Mineral Policy was undergoing a validation process and was to be presented to the Cabinet for endorsement by April 2009. A total of 33 mineral exploration licenses were issued in 2008 (Ministry of Lands, Mines and Energy, 2009).

A tender process for the mining of the Western Cluster Iron Ore (WIOC) project was initiated in 2008. A procedural error in the evaluation of bids forced the tender to be reissued during the year, and the selection process was expected to be completed in 2009. A tender for the Bong Range iron ore project in central Liberia was issued, and China Union Investment Ltd. was the company selected to develop the project (Central Bank of Liberia, 2009, p. 32-33).

Production

Cement production decreased by 40% to 94,037 metric tons (t) in 2008 from 157,200 t in 2007. The decrease in cement production was a result of insufficient production capacity from the country's sole cement plant. Diamond production, which was resumed in April 2007 after the UNSC lifted the more than 3-year-old ban on diamond imports from the country, increased by 179% to 60,536 carats. The significant increase in diamond production was attributable to a shift in human and capital resources from gold production to diamond production owing to the higher financial returns obtained from the mining of diamond compared with that of gold. Production of gold was not affected by the shift, increasing by 100% to 624 kilograms (kg) compared with 311 kg produced in 2007. The increase in gold production, although seemingly contradictory, was the result of an increase in the number of artisanal miners operating in the country and of an increase in the number of industrial gold mining operations (Central Bank of Liberia, 2009, p. 31-33). Data on mineral production are in table 1.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Mineral Trade

Liberia's exports to the United States were valued at about $143 million in 2008 compared with about $115 million in 2007 and $140 million in 2006; $1.6 million of these exports was from rough diamond. Imports from the United States were valued at about $157 million in 2008 compared with $76 million in 2007 and $68 million in 2006. These included nearly $17 million for railway transportation equipment; $3.2 million for excavating machinery; $131,000 in specialized mining equipment, and $97,000 for drilling and oilfield equipment. Liberia's total proceeds from diamond sales increased fourfold to $9.8 million in 2008 from $2.7 million in 2007; receipts from gold more than doubled to $12.1 million for the same period (U.S. Census Bureau, 2008a, b; Central Bank of Liberia, 2009, p. 39).

Commodity Review

Metals

Gold.—During the second quarter of 2008, Mano River Resources Inc. (MRR) of Canada completed a drilling program for the New Liberty Gold Mine (NLG) deposit, which is located about 90 kilometers (km) north of the capital city of Monrovia. The results obtained from the drilling program indicated the potential to expand the resources that had been estimated by a feasibility study conducted in early 2007, which envisioned an open pit operation. The 2007 feasibility study, which was conducted by MDM Engineering Pty Ltd. of South Africa and Lower Quartile Solutions of Australia, estimated total measured and indicated mineral resources at NLG to be about 13.5 million metric tons (Mt) of ore at an average grade of 3.18 grams per metric ton gold. In September 2008, AMC Consultants Ltd. of the United Kingdom undertook a conceptual mining study on the potential of developing an underground operation at NLG. The consultants concluded that infill drilling work of up to 300 meters (m) depth was needed to reevaluate the underground resource. MRR planned to conduct additional drilling in 2009 and to complete a revised feasibility study for an underground mine by 2010. MRR also held ownership in the Weaju gold concession, which is located 30 km to the northeast of the NLG concession. Soil geochemistry and geologic mapping had been conducted at Weaju, and the company planned to conduct a resource definition drilling program in the second half of 2009 (African Aura Mining Inc., 2008b; Mano River Resources Inc., 2009, p. 4-5).

Diamond Fields International Ltd. (DFI) of Canada held exploration licenses for several properties in western Liberia that were prospective for diamond and gold; these included the Gbapolu (Gran Cape) property and the Grand Gedeh property. Gbapolu is subdivided into the Grand Cape and Henry Town Blocks. In 2008, the company collected 7,000 soil samples from Henry Town based on a 5-m by 25-m grid infilling program and identified two types of mineralization at the Barteajam target within Gran Gedeh. DFI planned to commission a drilling rig to begin an extensive evaluation of the Barteajam and the Henry Town gold prospects in 2009 (Diamond Fields International Ltd., 2008, p. 3-6).

Iron Ore.—ArcelorMittal, which was granted a mining development contract for the western iron ore deposits in Nimba County in April 2007, began the process of rehabilitating the 267-km rail track that connects the old Yekepa Mine in Nimba County with the city of Buchanan in Grand Bassa County. The rehabilitation of the rail track was expected to be completed by June 2009. In March, the company hired the services of a Liberian construction company (name not disclosed) to rehabilitate and maintain the 220-km stretch of the road that connects the town of Gorblee in Grand Bassa County to the town of Ganta in Nimba County. The rehabilitation of the road was estimated to cost $2 million. The company also completed the construction of 188 housing units in Buchanan and Yekepa (AllAfrica Global Media, 2008b, d).

On May 7, 2007, the Government had put up for tender the WIOC, which consisted of several iron ore deposits covering about 208 square kilometers near the coast in northwestern Liberia. These deposits included the Bomi Hill and the Mano River iron ore deposits, which were mined from the early 1960s but closed during the late 1980s owing to the beginning of the civil war; and the Bea Mountains iron ore deposits, which remained undeveloped. Seven companies placed bids for the WIOC, including Luxembourg-based ArcelorMittal, Bahlodi Group Holdings of South Africa, Companhia Vale do Rio Doce of Brazil, Sinosteel Zhejiang Co. Ltd. of China, Tata Steel Ltd. of India, and Xingxing Group Co. of China. In early January 2008, Delta Mining Consolidated Ltd. of South Africa was announced as the winner of the tender and was to invest $1.6 billion in the development of the WIOC. Questions concerning the Government's decision to select a junior South African exploration and mining company instead of major players in the industry, such as Tata Steel, which had offered to invest $2 billion in the project, began to surface early in the year, and by September, the Government announced that it was canceling Delta Mining's contract for the WIOC and launching a new bidding round. Delta Mining and Tata Steel were barred from participating in the new bidding round, reportedly owing to violations related to external influence and impropriety during the selection process (no further details were provided). In November, Delta Mining and Tata Steel were cleared to participate in the new tender after Delta filed a complaint against its disqualification, and in December, Delta filed suit against the Government for the loss of its contract, stating that the Government's reasons for disqualifying the company had no basis in law. The new deadline set by the Government for the submission of sealed bids for the second WIOC bidding round was February 23, 2009 (AllAfrica Global Media, 2008e; Bax, 2008; Derby, 2008; Mukumbira, 2008; Toweh, 2008).

The Mano River deposits, which were formerly mined by the National Iron Ore Co., are located about 140 km to the northwest of Monrovia. The Government estimated the iron ore reserves at Mano River to be 80 Mt containing 51.4% Fe. The Bomi Hills deposits, which were formerly mined by the Liberia Mining Co., are located in Bomi County about 70 km northwest of Monrovia. Iron ore reserves were estimated to be about 50 Mt containing 68% iron. The Bea Mountain deposits are located about 100 km to the northwest of Monrovia. Reserves were estimated to be about 900 Mt containing 37% iron (Ministry of Lands, Mines and Energy, 2008a).

The contract for the redevelopment of the Bong Range iron ore deposits (formerly known as the Bong Mines) was awarded to China Union Company Ltd. in late 2008. The Inter-ministerial Mineral Technical Committee (IMTC), which awarded the contract to China Union, was chaired by the National Investment Commission and comprised representatives from the Ministries of Finance; Justice; Labor; Lands, Mines and Energy; and State. China Union's bid included a total investment of $2.6 billion and an upfront payment of $40 million compared with $36 million offered by Vedanta Resources plc of India and $20 million offered by BSG Resources Ltd. of Israel, which were the two other companies competing for the contract. Belleh Resource Co. of Liberia did not meet the requirements established by the Government and was disqualified from the process. China Union's development plans for the Bong Range included the construction of a 130-megawatt hydroelectric powerplant on the St. Paul River, a modern residential area for employees of the company, an agricultural site to grow rice and other crops, and a park to raise livestock. About 3,000 direct jobs and 5,000 indirect jobs were expected to be created within a 5-year period. No timeframe as to when the project was expected to begin production or additional details of other investments were provided as of yearend (Africa Mining Intelligence, 2008; AllAfrica Global Media, 2008a, c, d).

In October 2008, the Government granted MRR a 2-year exploration license extension for the Putu iron ore prospect in Grand Gedeh County, eastern Liberia. The Putu prospect consists of two prominent iron ore ridges, namely Mt. Ghi and Mt. Jideh, which potentially hosted 500 Mt of iron ore containing 60% iron as reported by Liberian-American-Swedish Mining Co. and Bong Mining Co. in the 1950s and 1960s. In 2007, an independent technical report for Putu, which was conducted by SRK Consulting Ltd., concluded that the prospect's potential iron ore resource was likely to contain 400 Mt more than was estimated during the 1950s and 1960s, therefore raising the iron ore resource potential of the Putu prospect to 900 Mt. In December 2008, MRR signed development and financial agreements with OAO Severstal Resources of Russia (Severstal) under which Severstal was to pay $12.5 million for a 25% share in African Iron Ore Group (AIOG), which was MRR's subsidiary in Liberia. Severstal paid MRR $8.3 million in December, and the balance of $4.2 million was deferred until December 2010. AIOG was renamed Severstal Liberia Iron Ore Ltd. (SLIO). Following the purchase, Severstal held a 61.5% interest in SLIO and MRR held the remaining 38.5% interest. A 3,960-m drilling program for geologic characterization was completed at Putu as of yearend. Assays from 9 out of the 11 holes drilled included the intersection of hematite mineralization of 63 m at an average grade of 63.5% iron and the intersection of magnetite mineralization of 367 m at an average grade of 39% iron. MRR planned to initiate talks with the Government in 2009 to apply for a 25-year mineral development agreement. The company envisioned beginning work on the development of the Putu prospect by 2012 with production of 20 million metric tons per year of magnetite concentrate targeted for 2015 (African Aura Mining Inc., 2007, 2008a).

Industrial Minerals

Cement.—Scancem International ANS of Norway, through Liberia Cement Corp. (Cemenco), was the sole producer of cement in Liberia. The company, which had held the monopoly on cement production since 1978, operated one grinding plant in Monrovia that produced portland cement and employed at least 63 people. Scancem held a 62% interest Cemenco. The nameplate production capacity of the plant was 220,000 metric tons per year.

Diamond.—Trans Hex Group Ltd. of South Africa in joint venture with Stellar Diamond Ltd. completed bulk sampling of five of the six known kimberlites on the Kpo Range diamond concession in 2008. Tran Hex reported that after initial analysis of the bulk samples, the kimberlite pipes proved to be uneconomical. The joint-venture partners planned to continue exploration work on new kimberlite targets in 2009 (Trans Hex Group Ltd., 2009, p. 14).

Mineral Fuels

Petroleum.—The Government opened a second petroleum licensing round for exploration acreage offshore Liberia. Three international petroleum companies—Texas-based Anadarko Petroleum Corp., Mittal Investments S.A.R.L. of Luxembourg, and Hong Kong Tong Tai Petroleum International Corp.—bid for a total of five blocks. Anadarko and Hong Kong Tong Tai emerged as the winners of the round; Anadarko obtained the rights to explore Block LB-10 and Hong Kong Tong Tai obtained the rights to explore Blocks LB-6 and LB-7. United Kingdom-based European Hydrocarbons Ltd., Repsol YPF S.A. of Spain, and Woodside Petroleum Corp. of Australia entered into production-sharing contracts with the National Oil Company of Liberia for Blocks LB-15, LB-16, and LB-17. The companies were granted petroleum exploration agreements in August 2008. Other companies exploring for petroleum offshore Liberia included Broadway Consolidated plc of the United Kingdom and Oranto Petroleum Ltd. of Nigeria. Broadway Consolidated was granted exclusive petroleum exploration rights to Block LB-13 and Oranto Petroleum was given the rights to Blocks LB-11 and LB-12 and for in 2007 (AllAfrica Global Media, 2008f; Ministry of Lands, Mines and Energy, 2008b; 2009; National Oil Company of Liberia, undated).

Outlook

If plans to redevelop the country's iron ore resources and to develop its diamond, gold, and petroleum resources come to fruition, the mineral sector in Liberia is likely to become one of the country's main sources of foreign exchange and of employment in the next 5 to 10 years. The Government's plans to establish a new mineral policy and to develop a mining cadastre suggest that the country is on its way to establishing a transparent investment climate, which is likely to attract foreign direct investments in the mineral sector. The presence of multinational corporations engaged in petroleum exploration, such as Repsol YPF and Woodside Petroleum, among others, suggest that foreign direct investment in the mining sector is likely to continue to grow in the coming years. This, however, will depend on the implementation of a predictable and transparent legal framework that adequately defines the rights and obligations of investors and on guarantees from the Government on the security of tenure of mining permits.

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TABLE 1
LIBERIA: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons unless otherwise specified)

Commodity		2004	2005	2006	2007	2008
Cement, hydraulic		121,059	143,847	135,486	157,200	94,037
Diamond	carats	10,000 e	NA 2	NA 2	21,700 3	60,536 4
Gold, mine output, Au content	kilograms	110 5	27	9	311	624
Sand		213,892 5	222,274 5	220,000 e	220,000 e	220,000 e
Stone, crushed		NA	5,964 5	6,000 e	6,000 e	6,000 e

[e]Estimated; estimated data are rounded to no more than three significant digits. NA Not available.
[1]Table includes data available through October 6, 2009.
[2]Exports of diamond under United Nations Security Council sanctions.
[3]Source: Kimberley Process Certification Scheme.
[4]Source: Central Bank of Liberia.
[5]Source: Ministry of Lands, Mines, and Energy of Liberia.

TABLE 2
LIBERIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	Liberia Cement Corp. Ltd. (Scancem International ANS, 62%, and Government, 29%)	Monrovia	220
Iron ore	Kkaf Nigeria Ltd.	Bong Mines (under discussions for redevelopment)	NA

NA Not available.