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2020–2021 Minerals Yearbook

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The Mineral Industry of Chad

By Philip A. Szczesniak and Meralis Plaza-Toledo

Note: In this chapter, information for 2020 is followed by information for 2021.

In 2020, the leading mineral commodity produced in Chad continued to be crude petroleum; other mineral commodities produced included cement and refined petroleum. It was thought that aggregate, clay, gold, lime, limestone, petroleum products, salt, sand, soda ash (natron), and crushed stone were produced, but available information was inadequate to make reliable estimates of output. Data on mineral production are provided in table 1. Chad also had undeveloped mineral resources that included bauxite, diamond, silver, titanium, uranium, and wolframite. Bauxite resources had been identified near Moundou in southern Chad. Alluvial diamond was reported in the Guera, Logone Oriental, Ouaddai, and Wadi-Fira Regions, and silver, titanium, uranium, and wolframite resources had been identified in the Tibesti Region (Bakamoso, 2018; Extractive Industries Transparency Initiative, 2021).

Minerals in the National Economy

Hydrocarbons were a leading segment of the economy, accounting for most of the goods exported from Chad and providing most of the Government revenues. The economy was negatively affected by the decrease in international petroleum prices in 2020 owing to the coronavirus disease 2019 (COVID-19) pandemic. The sustained low prices in 2020 contributed to the decrease in the real gross domestic product (GDP), which decreased by 0.9% in 2020 compared with an increase of 3.0% in 2019. The nominal GDP of Chad in 2020 was estimated to be $10.7 billion. The country's dependence on petroleum revenues made economic growth prospects vulnerable to lower-than-expected international petroleum prices (International Monetary Fund, 2020, p. 12, 16; 2021; World Bank, The, 2020).

Government Policies and Programs

Exploration and production of hydrocarbons in Chad were governed by Law No. 006 of May 2, 2007 (the Petroleum Code). The Petroleum Code was amended by Ordinance No. 001 of September 10, 2010, and implemented by Decree No. 796 PR/PM/MPE. Under the Petroleum Code, hydrocarbon resources are the exclusive property of the state. The Ministry of Energy and Petroleum is responsible for the design, coordination, implementation, and monitoring of Government policy with respect to the hydrocarbon sector. The Ministry issues permits for pipeline transport, production, and research. The National Commission for the Negotiation of Petroleum Contracts, which is tasked with negotiating all upstream and downstream contracts, was created in January 2008 (Cameron McKenna LLP, 2017; African Petroleum Legislation Atlas, 2020).

The Ministry of Mines, Industrial Development, Trade and Private Sector Promotion is responsible for overseeing the activities of the mining sector, including activities related to the closure and rehabilitation of mines and quarries, and the development, mining, marketing, ownership, processing, prospecting, research, storage, taxation, transportation, and treatment of mineral substances. Ordinance No. 004/PR/2018 of February 21, 2018 (the Mining Code) regulated the nonfuel minerals sector—a sector of the economy that contributed only a negligible amount to the national economy (African Mining Legislation Atlas, 2020).

Chad joined the Extractive Industries Transparency Initiative (EITI) in 2010 and was designated compliant in 2014. The EITI is an international effort to promote transparency in the management of natural resources, such as metals, natural gas, petroleum, and other minerals. The EITI organization noted that Chad was the first country to include crude petroleum transport (the Chad-Cameroon pipeline) and refining (the Djermaya refinery) in its EITI reporting. This additional reporting had led to better public understanding of Chad's midstream hydrocarbon sector (Extractive Industries Transparency Initiative, 2021).

Production

In 2020, production of cement (hydraulic) decreased by 5% (revised) and that of crude petroleum decreased slightly. These decreases were due to the global economic downturn caused by the COVID-19 pandemic (table 1).

Structure of the Mineral Industry

The state-owned national energy company, Société des Hydrocarbures du Tchad S.A. (SHT, Hydrocarbons Company of Chad), was established in August 2006. The company produced crude petroleum in joint ventures with international companies, such as CEFC China Energy Co., China National Petroleum Corp. (CNPC), CPC Corp. of Taiwan, Exxon Mobil Corp. of the United States, Glencore plc of Switzerland, and Petroliam Nasional Berhad (Petronas) of Malaysia. The Société National de Raffinage de N'Djamena (SRN) operated the Djermaya refinery [located 30 kilometers (km) north of N'Djamena], which was owned by SHT in a joint venture with CNPC. The Société Nationale de Ciment [National Cement Company] (SONACIM) was the state-owned national cement company, which also mined limestone. Artisanal and small-scale domestic mining and quarrying operations produced the country's other nonfuel minerals. Table 2 is a list of major mineral industry facilities (Cameron McKenna LLP, 2017; Global Cement, 2019; Nako, 2020; Oung, 2020; Extractive Industries Transparency Initiative, 2021).

The Chad-Cameroon export pipeline was used to move crude petroleum produced in Chad, including that which was produced in the Doba Basin by Esso Exploration and Production Chad, Inc. (Esso Chad), to an export terminal at Kribi, Cameroon. Crude petroleum produced on Permit H (Block H) by CNPC and SHT was moved by pipeline for refining at the Djermaya refinery and to be exported through the Chad-Cameroon export pipeline (Petroleum Africa, 2014; Exxon Mobil Corp., 2018).

Commodity Review

Metals

Gold.—In 2020, IronRidge Resources Ltd. of Australia continued to develop its five gold exploration projects in areas of the Ouaddai Region in southeastern Chad where there had been sporadic artisanal gold-mining operations. IronRidge acquired the projects in 2017 for $3.5 million from Tekton Minerals Pte Ltd. of Singapore. In November 2020, IronRidge announced that it had renewed exploration licenses for three of the five projects for a second 4-year term; these included licenses for the Am Ouchar, Dorothe, and Echbara projects. The Am Ouchar project was located 50 km southeast of Goz Beida (the capital of Sila Region), the Dorothe project was located 40 km north of Goz Beida, and the Echbara project was located 30 km west of the Dorothe project. IronRidge's licenses for its other two gold projects in southeastern Chad, the Kalaka and Nabagay projects, were due for renewal in March 2022. Both the Kalaka and the Nabagay projects were located about 20 km north of the Dorothe project (RNS News Service, 2017, 2020).

Industrial Minerals

Cement.—Cement production decreased by 5% in 2020 to 390,000 metric tons (t) (estimated) compared with 410,000 t in 2019. This decrease was due primarily to the temporary closure of SONACIM's Baore plant, which had an annual capacity of 210,000 metric tons per year and was located in Mayo-Kebbi Ouest Region in southern Chad. In November 2020, the President of Chad announced that the Government had paid $9 million to SONACIM to restart the Baore plant owing to cement shortages and price increases; the Baore plant had been closed since early in the year (table 2; Global Cement, 2019, 2020).

Mineral Fuels

Petroleum.—Crude petroleum production decreased slightly in 2020, to 46.2 million barrels (Mbbl) from 46.3 Mbbl (revised) in 2019. In March 2020, the Badila and Mangara oilfields, which were operated by PetroChad Mangara Ltd.—a joint venture of Glencore (85%) and SHT (15%)—were placed on care-and-maintenance status owing to concerns related to the global COVID-19 pandemic. These oilfields are located in southern Chad and had a combined production capacity of about 8 million barrels per year (Mbbl/yr) of crude petroleum. The approximately 3 Mbbl decrease in production in 2020 from the Badila and Mangara oilfields was mostly offset by increases in production at the other existing oilfields in Block H and the Doba Basin and the startup of the Oryx Oilfield (OTFiP Observatoire, 2020, p. 4; 2021, p. 5–6; Glencore plc, 2021, p. 69, 161).

In February 2020, the joint venture of CEFC China Energy Co. (35%), CPC Corp. (35%), and SHT (30%) began operating the Oryx Oilfield near Benoy in southern Chad. During the year, the oilfield produced nearly 1.5 Mbbl, most of which was exported to Taiwan. The oilfield had an annual production capacity of 3.5 Mbbl/yr of crude petroleum. In 2017, the joint venture signed a 25-year license to develop the field. Based on CPC Corp.'s estimate, the oilfield contained about 34 Mbbl of crude petroleum (Shihua, 2018; Oung, 2020; Taiwan Today, 2020).

MINERAL INDUSTRY HIGHLIGHTS IN 2021

In 2021, the real GDP of Chad decreased by 0.3%. Supply chain disruptions caused by the COVID-19 pandemic, the decrease in petroleum prices, and the suspension of crude petroleum production by major companies continued to slow down the economy throughout 2021. In April 2021, the President of Chad unexpectedly died, adding more uncertainty to the economic and political outlook of the country (World Bank, The, 2021, p. 19; International Monetary Fund, 2022).

Production of cement (hydraulic) increased by 31% in 2021, and that of crude petroleum decreased by 8%. The increase in cement production was due likely to the restart of operations at SONACIM's Baore cement plant in December 2020 (table 1).

In 2021, Atlantic Lithium (formerly IronRidge Resources Ltd.) of Australia announced plans to demerge the company's gold assets in Chad and Côte d'Ivoire into a new unlisted public company named Ricca Resources Ltd. of Australia. The demerger would allow Atlantic Lithium to focus exclusively on its lithium portfolio (Atlantic Lithium Ltd., 2022).

Glencore oilfields remained on care-and-maintenance status throughout 2021 owing to the COVID-19 pandemic, which had disrupted and restricted mobility in Chad. In August, Glencore reached an agreement to sell its upstream oilfields in Chad to Perenco S.A. of France. The sale was expected to be completed in the first quarter of 2022 but was conditional upon regulatory approvals by the Government (Glencore plc, 2021, p. 161; 2022, p. 66, 192).

In December 2021, Savannah Energy PLC of United Kingdom (Savannah) signed a share purchase agreement (SPA) with Exxon Mobil Corp., ExxonMobil International Holdings, Inc., and Esso Exploration Holdings, Inc. Savannah separately signed an SPA with PETRONAS (E&P) Overseas Ventures SDN. BHD of Malaysia that was related to the purchase of its entire upstream and midstream asset portfolio in Chad. Upon completion, Savannah would acquire a 75% participating interest in the Doba petroleum project, which comprised the following seven producing oilfields: Bolobo, Kome, Maikeri, Miandoum, Moundouli, Nya, and Timbre, and an effective 70% indirect controlling interest in the Chad-Cameroon export transportation system (ETS). The ETS comprised the Chad and Cameroon export pipeline, the *Komé Kribi 1* floating storage and offloading unit, and related infrastructure (Savannah Energy PLC, 2021; 2022, p. 6).

Outlook

The GDP of Chad was expected to increase by about 2.9% in 2022 as a result of the recovery in crude petroleum production and in agriculture and livestock farming. This outlook is dependent on whether there is a resurgence of the COVID-19 pandemic, and on weather conditions, and the maintenance of political stability at both the national and international levels (World Bank, The, 2021, p. 19; African Development Bank, 2022).

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TABLE 1
CHAD: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons, gross weight, unless otherwise specified)

Commodity[2]		2017	2018	2019	2020	2021
INDUSTRIAL MINERALS						
Cement, hydraulic	thousand metric tons	350 r	370 r	410 r	390	510
MINERAL FUELS AND RELATED MATERIALS						
Petroleum:						
Crude	thousand 42-gallon barrels	35,920 r	42,159 r	46,310 r	46,200	42,500
Refinery[e]	do.	7,000	7,000 r	7,000	7,000	7,000

[e]Estimated. [r]Revised. do. Ditto.

[1]Table includes data available through May 9, 2022. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

[2]In addition to the commodities listed, aggregate, clays, gold, lime, limestone, salt, sand, soda ash (natron), and crushed stone may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2
CHAD: STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Metric tons unless otherwise specified)

Commodity		Major operating companies and and major equity owners	Location of main facilities	Annual capacity
Cement		Ciments de L'Afrique (CIMAF) (Addoha Group SA)	Lamadji plant, N'Djamena	500,000
Do.		Ciment du Tchad [Société Nationale de Ciment (SONACIM)]	Baore plant, Bisi Keda, Mayo-Kebbi-Ouest Region	210,000
Gold	kilograms	Artisanal placer operations	Mines in Mayo-Kebbi-Ouest Region Province	150 e
Do.	do.	do.	Mines in Tibesti and Ouaddai Region	NA
Petroleum:				
Crude	million 42-gallon barrels	CNPC International (Chad) Co., Ltd. [China National Petroleum Corp. (CNPC)]	Block H, which includes the Koudalwa, Ronier, and Grand Baobab Fields, onshore, Mayo-Kebbi-Est and Chari-Baguirmi Regions	32 e
Do.	do	Esso Exploration and Production Chad, Inc. (Esso Chad) [ExxonMobil Corp., 40%; Petronas Carigali Overseas Sdn. Bhd., 35%; Société des Hydrocarbures du Tchad S.A. (SHT), 25%]	Bolobo, Kome, Maikeri, Miandoum, Moundouli, Nya, and Timbre Fields, Doba Basin, onshore, Logone Oriental Region	26 e
Do.	do.	PetroChad Mangara Ltd. [Glencore plc, 85%, and Société des Hydrocarbures du Tchad S.A. (SHT), 15%]	Badila and Mangara Fields, onshore, Logone Oriental Region[1]	8 e
Do.	do.	CEFC China Energy Co., 35%; CPC Corp., 35%; Société des Hydrocarbures du Tchad S.A. (SHT), 30%;	Oryx Field, near Benoy, Logone Oriental Region	3.5 e
Refined products	do.	Société National de Raffinage de N'Djamena (SRN) [China National Petroleum Corp. (CNPC), 60%, and Société des Hydrocarbures du Tchad S.A. (SHT), 40%]	Djermaya refinery, about 30 kilometers north of N'Djamena, Hadjer-Lamis Region	7
Limestone		Ciment du Tchad [Société Nationale de Ciment (SONACIM)]	Baore plant, Bisi Keda, Mayo-Kebbi-Ouest Region	NA
Salt		Various local operators	Various locations	NA
Soda ash (natron)		do.	Lake Chad, near Liwa, Lac Region	NA
Stone, crushed		Société Tchadienne d'Exploitation des Carrières (SOTEC)	Mani rhyolite quarry, Dandi, Hadjer-Lamis Region	600,000

[e]Estimated. Do., do. Ditto. NA Not available.

[1]Placed on care-and-maintenance status in 2020.