



2008 Minerals Yearbook

CHAD

THE MINERAL INDUSTRY OF CHAD

By Philip M. Mobbs

Hydrocarbons remained the leading segment of the economy of Chad. In 2008, Chad's oil revenue jumped by nearly 54% to \$1.87 billion and accounted for about 80% of Government revenue. In 2008, income from crude oil again increased, despite the decline in output, owing to the dramatic rise in the average price of exported oil to \$104.30 per barrel from \$60.80 per barrel in 2007 (table 1; Banque des États de l'Afrique Centrale, 2009a, b; Esso Exploration and Production Chad, Inc., 2009, p. 73).

The Petroleum Revenue Management Law (law No. 001/PR/99 of 1999) and amendments, such as law No. 002/PR/06 of 2006, defined the allocation of petroleum revenues. Mining of solid minerals, which was a negligible contributor to the national economy, was regulated by the Mining Code (law No. 011/PR/1995 of 1995).

Most official international trade with landlocked Chad was channeled through seaports in Cameroon and Nigeria. Petroleum produced in the Doba Basin was exported by way of the Chad-Cameroon pipeline to an export terminal at Kribi, Cameroon.

Production

Production of crude oil far exceeded the output of the country's limited suite of other mineral commodities, which included clay, gold, lime, limestone, salt, sand, soda ash (natron), and stone. For the third year in a row, national oil production declined slightly. Estimates of Chad's mineral production are in table 1.

Structure of the Mineral Industry

The Ministère des Mines et de l'Énergie and the Ministère du Pétrole monitored the activity of various sectors of the mineral industry. Société des Hydrocarbures du Tchad S.A. was the national oil company.

Small-scale domestic mining operations produced most of the country's nonfuel minerals. International companies were involved in the exploration for and the production of crude oil and the exploration for uranium. Esso Exploration and Production Chad, Inc. (Esso Chad) and Tchad Oil Transportation Co. S.A. operated about 200 kilometers (km) of the 1,070-km crude oil pipeline that originated in Chad and ended at an offshore terminal in Cameroon.

Commodity Review

Potential mineral exploration activity was inhibited by armed factions that engaged in hostilities primarily in eastern Chad, and the February invasion of the capital disrupted exploration companies' office activity in N'Djamena. Field exploration activity also was inhibited in eastern Chad by social instability, which was associated with ongoing military action in the Darfur region of western Sudan.

Mineral Fuels and Related Materials

Petroleum.—Esso Chad reported that its oil output from Chad continued to decline to an average of 127,200 barrels per day (bbl/d) in 2008 from 143,600 bbl/d in 2007. The company drilled an additional 60 wells in its Doba Basin oilfields, started the second phase of a high-pressure water-injection project to maintain reservoir pressure, and continued stimulations of existing wells in 2008. Without the additional production wells and the reservoir pressure maintenance and the well stimulation programs, Esso Chad estimated that production would have dropped to about 56,000 bbl/d in 2008 (Esso Exploration and Production Chad, Inc., 2008, p. 8; 2009, p. 7-8).

CNPC International Ltd. of Chad, which was a subsidiary of China National Petroleum Corp., drilled successful exploration wells on the Baobab, the Kubla, the Mimosa, and the Ronier prospects in the Permit H concession. In October, CNPC (60% interest) and the Government (40% interest) began the initial stage of construction of a 53,000-bbl/d-capacity petroleum refinery near N'Djamena. Phase 1 of the project (which was a planned 21,000-bbl/d-capacity refinery) was expected to be completed in 2011 (Industrial Info Resources, 2008).

Uranium.—In 2007, UraMin Inc. of South Africa held the Fada Itou, the Madazang, the Sodje Mbaye, and the Yedri Ténéré exploration permits. Areva Resources Southern Africa was formed after Areva NC of France acquired UraMin. Areva Resources Southern Africa subsequently focused its attention on exploration in the Central African Republic, Namibia, and South Africa. In March 2008, Signet Mining Services Ltd. of South Africa, acquired licenses to explore for uranium at Madazang and Sodje Mbaye. Also in 2008, Brinkley Mining Plc acquired three exploration licenses but relinquished them in September after completing airborne and ground surveys.

Outlook

Esso Chad's production enhancement program that included new oil wells, a high-pressure water injection system, and workovers of existing oil wells have slowed the production decline observed since 2004. Development of CNPC International's Bongor Basin oil reservoirs would provide input feedstock for the proposed N'Djamena oil refinery, which would reduce Chad's reliance on imported refined petroleum products.

References Cited

- Banque des États de l'Afrique Centrale, 2009a, Tchad—Tableau des opérations financières de l'Etat: Banque des États de l'Afrique Centrale. (Accessed May 16, 2009, at <http://www.beac.int/stateco/deofetch.pdf>.)
- Banque des États de l'Afrique Centrale, 2009b, Tchad—Données statistiques de base: Banque des États de l'Afrique Centrale. (Accessed May 16, 2009, at <http://www.beac.int/stateco/dedsbtch.pdf>.)
- Esso Exploration and Production Chad, Inc., 2008, Chad/Cameroon development project—Project update no. 23—Annual report 2007: Houston, Texas, Esso Exploration and Production Chad, Inc., 89 p.

TABLE 1
CHAD: ESTIMATED PRODUCTION OF MINERAL COMMODITIES^{1,2}

(Thousand metric tons unless otherwise specified)

Commodity ³	2004	2005	2006	2007	2008
Aggregate, sand, and stone	300	300	300	300	300
Gold, mine output, Au content	150	150	150	150	150
Petroleum, crude ⁴	61,400	63,300	55,900	52,400	49,400
Salt	9	10	10	10	10
Soda ash, natron	12	12	12	12	12

¹Estimated data are rounded to no more than three significant digits.

²Table includes data available through May 18, 2009.

³In addition to the commodities listed, other industrial minerals and construction materials (clay, lime, and limestone) are produced, but information is inadequate to make reliable estimates of output.

⁴Reported figure. Production volume from the Doba Basin in Chad was metered on the floating storage-and-offloading vessel, which was located offshore Kribi, Cameroon.

TABLE 2
CHAD: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Gold	Artisanal placer operations	Mayo Dala Department	150
Petroleum, crude	Esso Exploration and Production Chad, Inc. (Esso Chad) (Exxon Mobil Corp., 40%; Petronas Carigali Overseas Sdh. Bhd., 35%; Chevron Overseas Petroleum Inc., 25%)	Bolobo, Kome, Maikeri, Miandoum, Moundouli, and Nya Fields, Doba Basin	79
Salt	Various local operators	Various locations	10,000
Soda ash	do.	Lake Chad, near Liwa	12,000
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