



2005 Minerals Yearbook

CHAD

THE MINERAL INDUSTRY OF CHAD

By Philip M. Mobbs

In 2005, Chad's gross domestic product (GDP) at current prices was estimated to have increased to about \$5.43 billion.¹ The real GDP increased at an annual rate of 5.6% compared with 30.7% in 2004, which was the first full year of oil production. The International Monetary Fund (2006²) reported that Chad's GDP based on purchasing power parity was more than \$13.7 billion in 2005 and that the GDP per capita based on purchasing power parity was \$1,519. The impact of the mineral sector on employment was minimal; subsistence agriculture employed about 80% of the total population, which was estimated to be more than 9.9 million in 2005.

Landlocked Chad was the fifth largest country in Africa with an area of 1,284,999 square kilometers. Crude oil was exported via the Chad-Cameroon pipeline to an export terminal at Kribi, Cameroon. Agricultural products (primarily livestock) were moved across the borders into neighboring central African countries (Cameroon, the Central African Republic, Nigeria, and Sudan); additional informal cross-border trade with Libya and Niger was also conducted. Most formal international trade with Chad was funneled through seaports in Cameroon and Nigeria.

Structure of the Mineral Industry

In Chad, the Ministère du Plan, du Développement et de la Coopération; the Ministère des Mines et de l'Énergie; and the Ministère du Pétrole were responsible for developing policy that affected various sectors of the mineral industry. The Direction de la Recherche Géologique et Minière organized mineral sector investigations, and the Direction du Pétrole was responsible for the administration of the petroleum sector.

Since the initiation of petroleum exports from Chad in 2003, oil has overshadowed the limited suite of other produced mineral commodities, which included aggregates, clay, gold, lime, limestone, natron (soda ash), salt, sand, and stone. Most of these solid minerals were produced by small-scale local miners. Independent and major international oil companies were involved in the exploration for and production of crude oil. 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 Chad-Cameroon crude oil pipeline that was located in Chad.

Government Policies and Programs

The President of Chad was in the final year of his second term of office. In June 2005, Chad's Constitution was amended to eliminate the two-term limit for the Presidency.

¹Where necessary, values have been converted from Communauté Financière Africaine francs (XAF) to U.S. dollars (US\$) at the average rate of XAF532.7=US\$1.00 for 2005 and XAF534.4=US\$1.00 for 2004. The implied purchasing power parity conversion rate was XAF204.927=US\$1.00 for 2005.

²References that include a section mark (§) are found in the Internet References Cited section.

On December 29, 2005, the National Assembly passed amendments to the Petroleum Revenue Management law (PRML) (law 001PR/99 dated January 11, 1999, as amended by law 016/PR/2000 dated August 1, 2000). The amendments extended the coverage of the PRML beyond the initial three oilfields (the Bolobo, the Kome, and the Miandoum Fields) developed by Esso Chad to include all producing oilfields in Chad. The amendments eliminated the Future Generation Fund, which previously had received 10% of direct oil revenues (which included dividends and royalties). The amendments added additional priority sectors (the energy and oil sector, and the justice, security, and territorial administration sector) to the original priority sector list, which included the education, the environment and water resources, the health and social services, the infrastructure, and the rural development sectors; and reduced the direct oil revenues dedicated to the expanded group of priority sectors to 63% of dividends and 58.5% of royalties. Previously, the original priority sectors were allocated 72% of direct oil revenues. The amendments also allocated 27% of direct oil revenues to the Government's general budget for the remaining life of the crude oil production compared with 13.5% through December 2007 under the original PRML.

The loan agreement for the Chad-Cameroon oil export pipeline between the Government of Chad and the World Bank stated that the Government was not to amend the PRML in such a way as to adversely affect the revenue stream to the original priority sectors. The World Bank objected to the new amendments, which were promulgated in January 2006, and subsequently suspended disbursements of funds to Chad on January 6, 2006 (Blustein, 2005; World Bank Group, 2006§).

Commodity Review

Mineral Fuels

Petroleum.—Esso Chad, which was a joint venture of Exxon Mobil Corp. of the United States (40% equity interest), Petronas Carigali Overseas Sdn. Bhd. of Malaysia (35%), and Chevron Overseas Petroleum Inc. of the United States (25%), operated the Bolobo, the Kome, the Miandoum, and the Nya Fields. The four-well Nya Field began production in mid-2005.

Esso Chad drilled an additional 75 infill wells in the Bolobo, the Kome, and the Miandoum Fields owing to unanticipated reservoir conditions. Several additional water injector wells also were drilled for the disposal of the higher-than-expected water content in the produced oil. Development of the 25-well Moundouli Field continued in 2005; initial production was expected in early 2006. In 2005, Esso Chad's successful exploration drilling program in the Maikeri-Poutougouem area led the company to apply for the rights to develop an oilfield on the prospect (Esso Exploration and Production Chad, Inc., 2006, p. 9-14).

In 2005, EnCana Corp. of Canada, which controlled 50% interest in the Permit H concession, bought seismic data that had previously been acquired on the concession and, in October, began its own seismic surveys. In 2006, EnCana planned additional two-dimensional and three-dimensional seismic surveys and proposed to drill six to eight exploration wells.

In December 2004, Energem Petrol Corp. Chad Ltd. (a subsidiary of Energem Resources Inc. of Canada) was awarded the Chari West concession in the Doba Basin and the Largeau oil and gas concession in central and northern Chad. In early 2005, Energem Resources acquired 51% interest in Financial Development Corp. plc. In February, Financial Development changed its name to FirstAfrica Oil plc and entered into an agreement to acquire the petroleum exploration concessions in Chad from Energem. FirstAfrica subsequently obtained previously acquired seismic and exploration drilling data on the Chari West concession from ExxonMobil.

Outlook

Potential mineral industry development could be negatively affected by the social instability in eastern Chad that was associated with the military action in the Darfur region of Sudan. Several armed factions engaged in hostilities along the eastern border, including the Chad army; the Socle pour le Changement, l'Unité et la Démocratie; the Front Unique pour le Changement Démocratique au Tchad; and various Darfur rebel groups and Janjaweed militias from Sudan.

Exploration activity in Chad could be adversely affected by residual unrest in the north and leftover antipersonnel and antitank land mines in the Borkou-Ennedi-Tibesti, the Guera, the Moyen Chari, and the Salamat regions. In 2005, another peace accord was signed between the Government and the Mouvement pour la Démocratie et la Justice au Tchad, which operated in the Borkou-Ennedi-Tibesti region of northern Chad. The parties previously had signed peace agreements in January 2002 and December 2003.

Potential mineral industry investment in Chad continue to be adversely affected by the nation's political instability, poor infrastructure, and high energy costs (U.S. Department of State, 2005§).

References Cited

- Blustein, Paul, 2005, Chad may alter its pledge on oil funds: The Washington Post, The, December 27, p. D1, D3.
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Major Sources of Information

Ministère des Mines et de l'Énergie
Direction de la Recherche Géologique et Minière
B.P. 906
N'Djamena, Chad
Ministère du Pétrole
Direction du Pétrole
B.P. 94
N'Djamena, Chad
Telephone: +(235) 52-25-66
Fax: +(235) 52-25-65
E-mail: depl.minpetrole@intnet.td

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

(Thousand metric tons unless otherwise specified)

Commodity ³	2001	2002	2003	2004	2005
Aggregate, sand, and stone	500	500	300	300	300
Gold, mine output, Au content kilograms	150	150	150	150	150
Natron (soda ash)	12	12	12	12	12
Petroleum, crude thousand 42-gallon barrels	--	--	8,600 ⁴	61,400 ⁴	63,300 ⁴
Salt	9	9	9	9	10

-- Zero.

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

²Table includes data available through June 12, 2006.

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 was metered on the floating, storage, and offloading vessel offshore Kribi, Cameroon.