

CHAD

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Located in north-central Africa, Chad, which is a landlocked country, is bordered by Cameroon, Central African Republic, Libya, Niger, Nigeria, and Sudan. The country's economy is largely based on agriculture. Because the country is relatively unexplored, its mining sector is underdeveloped, although many mineral deposits have been documented (Direction de Recherches Géologiques et Minières, undated). In 1999, alluvial gold, gravel, natron (soda ash), kaolin and sand were produced in modest amounts. Diamond, gold, kaolin, limestone, petroleum, and salt are among the most promising resources; considerable deposits of tin and uranium may also exist in the Aouzou region. Columbium (niobium), tantalum, tin, and tungsten resources have been reported in the Tibesti mountains, and gold and alluvial diamond deposits in the southern region of Mayo Kebbi (Green Growth Ltd., 2000, Chad mining sector, Chad Mining, accessed September 27, 2000, at URL <http://www.newafrica.com/mining/chad.asp>). The country produces approximately 120 kilograms per year of alluvial gold, as well as 300,000 metric tons of sand and gravel (Mining Journal, 2000). Diamond is also occasionally produced by artisanal methods.

In 1999, Chad's gross domestic product (GDP) decreased by an estimated 0.7% according to World Bank data (World Bank Group, September 7, 2000, Chad at a glance, accessed November 2, 2000, at URL http://www.worldbank.org/data/countrydata/aag/tcd_aag.pdf). The decline in the GDP was attributed to the return to normal levels of food production, which had increased during 1998, and the decline in cotton ginning caused by the fall of seed cotton output during that same year (Green Growth Ltd., May 14, 1999, Chad economic development & indicators—Chad economy, accessed September 27, 2000 at URL <http://www.newafrica.com/economy/chad.asp>).

Most gold occurrences in Chad consist of alluvial and eluvial placers. Chad's potential gold-bearing deposits are located along the country's border with Cameroon and Central African Republic. Afko Corea Ltd. was evaluating its 16 exploration licenses and 3 mining leases (Mining Journal, 2000).

Charcoal and wood were the primary fuel sources of the country. The Société Tchadienne d'Eau et d'Electricité (STEE) operated the two oil-powered plants that generated electricity in Chad. In 1998, Chad confronted an energy crisis because of frequent shortages in the supply of petroleum imported from Cameroon and Nigeria, and in 1999, STEE was earmarked for privatization by the first quarter of 2000 (U.S. Energy Information Administration, February, 2000, Chad, accessed November 2, 2000 at URL <http://www.eia.doe.gov/emeu/cabs/chad.html>).

Chad's recoverable crude oil resources were estimated to be 1 billion barrels (U.S. Energy Information Administration,

February 2000, Chad, accessed November 2, 2000, at URL <http://www.eia.doe.gov/emeu/cabs/chad.html>). Two major field development projects in the oil sector, the Doba basin and the Sedigui projects, remained on hold in 1999 pending the construction of an export pipeline. Petroleum had been discovered in the Lake Chad basin during the 1970's and the Doba basin in 1989 by two consortia that included Continental Oil Corp. (now Conoco Inc.), Exxon Corp., Shell Oil Co. (now a subsidiary of the Royal Dutch Petroleum/Shell Transport and Trading Co. Group), and Standard Oil Co. of California (now Chevron Corp.). The 1979 civil war had forced the suspension of development plans. In November 1996, a memorandum of understanding (MOU) that provided the terms of the development of the Doba basin fields was signed by the Government of Chad and one of the consortia, which now consists of Exxon (40%), Petroliam Nasional Bhd. (35%), and Chevron (25%). Among the terms in the MOU is the construction of a 1,050-kilometer pipeline through Cameroon to offshore export facilities in Kribi, Cameroon. The total cost of field development and the pipeline has been estimated to be \$3.5 billion, and the pipeline was forecasted to carry petroleum for 25 to 30 years at volumes that could reach a maximum of 225,000 barrels per day (bbl/d). The Chadian portion of the pipeline will be built and owned by Tchad Oil Transport Co. in which the Government of Chad held a 15% interest. The project's export facilities will be owned by the Cameroon Oil Transport Co. in which the Government of Cameroon held 8.5% interest and the Government of Chad with 5% interest (U.S. Energy Information Administration, February, 2000, Chad, accessed November 2, 2000 at URL <http://www.eia.doe.gov/emeu/cabs/chad.html>). Chad and Cameroon requested \$115 million in loans from the World Bank to finance each country's equity interest in the oil pipeline; in September 1999, however, environmental and human rights groups called for a 2-year moratorium on the project by claiming negative economic and political affects. By yearend, the World Bank had delayed the approval of loans to support the project owing to environmental considerations. Production was scheduled to start in the last quarter of 2001 or the first quarter of 2002 upon approval of the World Bank. Also in 1999, the proposed plan to build a pipeline from the Sedigi oilfield to a refinery in N'Djamena was considered. Operations had ceased in the area during 1979 owing to the outbreak of the civil war.

Because of Chad's distance from the sea and the absence of a railroad or pipeline to import fuel in bulk, it depended on petroleum products imported by truck from such nearby countries as Nigeria and Cameroon. The oil and gas industry in Chad is regulated by the Ministry of Mines, Energy and Oil. In addition to exploration activities at the Doba and the Lake Chad basins, the Government of Chad signed an oil exploration

agreement with Trinity Energy Resources, Inc. (formerly Trinity Gas Corp.), of the United States, the Carlton Energy Group of the United States, and Oriental Energy Resources Ltd. of Nigeria. The three-company consortium will explore for crude oil on block H, which was a 430,000-square-kilometer concession. At yearend, Trinity farmed out its interest in the concession to Clivden Petroleum, Ltd. (Trinity Energy Resources, Inc., January 14, 2000, Status of 10SB filing and company audit, accessed January 25, 2001, at URL

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