

## YEMEN

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If most of the kidnappings that have plagued Yemen in the past have been relegated to brief and unobtrusive news reports, the bombing of the USS Cole in Aden last October catapulted the country onto the front pages. It was not encouraging news for a country that has got over its civil war, and is trying to look ahead and encourage investment just when the frequency of attacks on the Hunt Oil pipeline in the Marib region of eastern Yemen was beginning to decline.

The blow to the US Navy was a public relations disaster for Yemen at least in the West, although Yemen has so far arrested a dozen suspects over the attack and believes the main one has fled to Afghanistan. This legendary home of the Queen of Sheba and perhaps even King Solomon's mines in the north can clearly be a dangerous place for unsuspecting foreigners. It can also be a fascinating one that has difficulty in keeping extremist groups in check and is giving democracy something of a try. Against a backdrop of shootings, the country held its first local elections in February. They sought pro-government votes for a referendum on a series of constitutional amendments held the same day to postpone parliamentary elections due in April until 2003. This would extend President Ali Abdullah Saleh's time in office and keep the Yemeni Socialist Party at bay and possibly even buy time to prepare his son Ahmad Saleh, who is head of central security services, to succeed him.

In the meantime, the West hopes he can keep the lid on any turbulence even if his democracy is somewhat tenuous. The government for its part is trying to continue the implementation of economic reform that includes banking reform, privatisation of state-run industries, major infrastructure investment and reduction or elimination of government subsidies, a programme which it

agreed to in 1995 as a condition for lending from the International Monetary Fund (IMF). Yemen is a poor country with a GDP of only US\$500 a head and needs a boost. Fortunately its economic situation has been improving in the past two years, partially owing to the recovery in oil prices: real gross domestic product grew 6.2% in 2000, and it is projected to grow 5.4% in 2001. The new deepwater container terminal on the north shore of Aden, one of the world's largest natural harbours, has been seen as a way to restore Aden to its former position as a regional service and distribution centre and as a key element in the country's economic development which will attract investment for infrastructure development and industrial activities. Adair International was awarded a contract for a 21 MW plant near the port in January.

With proven oil reserves of 4 billion barrels, Yemen produced 440,000 bbl/d last year and has offered incentives for oil sector investment. October 1999 saw its first petroleum licensing round. Five areas host proven recoverable reserves of 1.7 Bbbl and include: Marib-Jawf Block 18 (490 Mbbl) in the north, East Shabwa Block 10A (180 Mbbl) and the most productive Masila Block 14 (500+ Mbbl in the south), and the Jannah Block 5 (345 Mbbl) and Iyad Block 4 (135 Mbbl) in central Yemen; smaller fields include Jannah, Haliwah, Iyad and East Shabwa; the output from the latter has increased since production began at Block 10 in January last year. Oil production is split between five operators: Hunt Oil, Hunt/Jannah, TotalFinaElf, Nimir Petroleum and Nexen (formerly Canadian Occidental). Nexen, which owns 52% of the Masila block, and Hunt Oil (operator of Marib) are the largest producers, accounting for around 230,000 bbl/d and 160,000 bbl/d, respectively. TotalFinaElf produces around 30,000 bbl/d

from its East Shabwa concession. Nimir Petroleum recently announced its intention to leave Yemen, owing to unsuccessful efforts to expand production, and has relinquished drilling rights in Blocks 16, 29, and 33. It is to divest its interest in Block 4, where production has fallen to 700 bbl/d, possibly to the Yemeni Government.

In November 2000, TransGlobe Energy started oil production on Block 32 and Tasour #1 produced clean oil at a rate of about 4,000 bbl/d; the well's rate will be increased and Tasour #3 and #4 wells were to be brought into production to raise the rate to about 10,000 bbl/d.

Since 1997, oil exploration activity has really accelerated and has been an international affair involving companies such as Nexen, Kerr-McGee Yemen, Algeria's Sonatrach, Italy's ENI, Australia's Oil Search Ltd, the UAE's Mohammed al-Otaibi Group, Adair International Oil and Gas of Houston, Norwegian independent DNO, and Dove Energy of Britain; the latter reported a discovery in December 2000 in Block 53 in eastern Yemen, which tested at a rate of 16,000 bbl/d and the company expects to announce a reserve estimate for the field in the first half of 2001. Nexen signed a memorandum of understanding with Yemen in January 2001 covering Block 59, located adjacent to the Saudi border. Nexen will hold a 60% interest, with the other 40% held by Occidental Petroleum (of which Nexen is no longer a subsidiary). In June 2000 Yemen and Saudi Arabia resolved their longstanding border dispute which is expected to open up opportunities for increased Saudi trade and investment in Yemen, as well as to make possible the award of oil and gas exploration rights for areas in Yemen adjacent to previously disputed areas of the border. Four new blocks have been demarcated along the border, and several companies have expressed interest in exploring them.

As far as refining is concerned, Yemen has a crude capacity of 130,000 bbl/d from two old

and small refineries, one in Aden with a capacity of 120,000 bbl/d (Aden Refinery Co.) and one at Marib (Yemen Hunt Oil Co.) with a capacity of 10,000 bbl/d. The former was damaged during the 1994 civil war and has had problems with its renovation; current production is about 90,000 bbl/d with 30,000 bbl/d going to Petronas of Malaysia and the rest to the domestic market. The Yemeni Government has recently indicated that Aden Refinery Co. will be included in the next round of privatisations, with a majority stake in the company to be sold. Yemen granted regulatory approval for an export-orientated refinery in Hadramaut with a capacity of 60,000 bbl/d. The consortium backing the project includes China Petroleum Engineering Corp. and the Al-Kuthairi Group of the United Arab Emirates. The US\$500 million project is scheduled for completion in 2003, with China as the intended market for the refinery's production. Another refinery project planned for Ras Issa on the Red Sea has not moved forward.

Yemen also has a good potential for natural gas with reserves of 16.9 trillion cubic feet mainly in the Marib-Jawf fields operated by the Yemen Exploration and Production Co. There is currently no production of natural gas in Yemen, and the gas which Hunt Oil extracts as a by-product of oil production at these fields is re-injected. In 1996, France's Total and Yemen's General Gas Corp. set up Yemen Liquefied Natural Gas Co. made up of TotalFina, Yemen Gas, Hunt Oil, Exxon, and Yukong to operate a US\$5 billion liquefied natural gas project to develop natural gas from the Marib-Jawf and Jannah fields and transport it via pipeline to a natural gas processing plant and export terminal in Bal Hal on the southern coast; it would supply the planned Trombay LNG terminal in Bombay. Planned completion date is 2003 and it is the country's largest single energy project. Yemen continues to face serious power shortages, and has announced plans to reform the country's power sector, and to double power generating capacity. It also plans to invite offers on the country's first

private power station. Current plans call for the construction of a 400 MW privately-owned gas-fired plant near the Marib oil and gas field. Yemen's government has held talks on the project with Delma Power of the US. Adair International was awarded a contract for a 21 MW plant near the port of Aden in January 2001.

On the mining scene, Cantex Mine Development Corp. has been encouraged by its drill results and announced last June that it had completed the second phase of its diamond drilling programme on the 3,100 km<sup>2</sup> Suwar nickel-copper-cobalt-platinum group metal project, part of a 41,000 km<sup>2</sup> concession located in northwestern Yemen some 60 km west of the capital Sana'a. The Yemeni Prime Minister even commissioned the surveying and planning of a new 42 km access road to the Suwar property that joins the highway about 145 km from the shipping port of Hodeidah on the Red Sea. A month later, in July, Cantex Mine Development Corp.'s wholly owned subsidiary Canadian Mountain Minerals (Yemen) Ltd and Falconbridge International (Investments) Ltd signed an agreement to develop the Suwar property. Last January results were received from 455 bulk heavy-mineral drainage samples with 280 found to be anomalous in platinum group metals and 80 of those in copper, nickel and cobalt, with even more interesting anomalies in samples north of the main mineralisation. Later that month,

however, Falconbridge advised that it intended to terminate its work in Yemen because it considered the country too inhospitable and dangerous to its employees and contractors.

Cantex disagreed with this assessment and pointed out that Nexen Inc. (formerly Canadian Occidental Petroleum) as well as Hunt Oil collectively produce oil in the region, have built an infrastructure there worth well over US\$1.0 billion, and remain committed to Yemen. Cantex will carry on its fieldwork and wishes to develop the discovery with or without a joint-venture partner. Last February, while the resources will be verified by an independent expert, field crews at its Al Hariqah gold project reported that a major gossan zone formation had been identified with outcrops in the wadi drainages giving the highest platinum group element heavy mineral results so far encountered in Yemen. Cantex's geologists were encouraged by the similarity of the geology to the Sukhaybarat gold mine in Saudi Arabia.

While crude oil production remains the dominant player in Yemen with hopes for other rich mineral deposits, more modest mineral output includes cement, dimension stone (limestone, marble, clay, basalt and granite), gypsum (at Salif and Khulalah), and salt (at Salif), which may contribute to the infrastructure improvements ahead.