

## LIBYA

*By Neil Scott*

The Libyan hydrocarbons industry, substantially represented by the state-owned National Oil Co (NOC), contributes some 95% to Libya's export earnings and 75% of government receipts. Despite - or possibly because of - this position of dominance, the Libyan government's opinion is that NOC has failed to perform adequately and the company's downstream facilities, at least, are consequently due to be privatised.

Over the past year, Libya has broadly respected its OPEC production quota of 1.36 Mbbbl/d, half of which is produced NOC or its subsidiaries. However, the government is keen to raise oil output to 1.7 Mbbbl/d and to increase it to 3 Mbbbl/d over the next 15 years. This should be possible given its new attitude to private sector involvement in the oil industry coupled with the recent easing of US economic sanctions against Libya. This move followed Colonel Gaddafi's surprise decision late last year to destroy the country's banned chemical weapons stockpiles, and his subsequent high-profile acceptance into the international community. Although the US still exercises an arms embargo against Libya, the return of its oil companies to the country cannot be far away.

With proved oil reserves of 36 billion barrels at the end of 2003, Libya has the largest reserves in Africa. Nonetheless, industry experts are all-but unanimous in their opinion that the country is still grossly under-explored. This view is reflected in the fact that Libya was again ranked second (behind the UK) in the 2004 Fugro-Robertson New Ventures Survey, which asks international oil executives to name the countries outside North America most favoured for exploration.

Libya's largest oil fields are ENI's el-Bouri (60,000 bbl/d) and the 150,000 bbl/d Elephant field, acquired by ENI in 2001 and scheduled to begin production in 2004. Total's offshore al-Jurf field began production in 2003, where output is expected to reach 40,000 bbl/d.

There has been some frustration amongst European companies over the leisurely pace with which oil concessions have been granted in recent years, and the fact that only about 25% of the country's oil fields have been awarded to foreign operators. But this perception appears likely to change with exploration deals covering 30 blocks currently under negotiation and improved investment terms and incentives being offered. In 2003, the NOC finalised exploration contracts with Woodside Petroleum of Canada, Repsol YPF, Austria's OMV and Germany's RWE-Dea. Similar exploration agreements are believed imminent with the Ukrainian oil and gas company, Naftogaz Ukrainy, and a number of European companies. Several existing concessions are due for renewal in 2005, including those owned by US companies (the Oasis Group) and operated 'in trust' by NOC subsidiary

companies since 1986 - albeit at levels well below their combined production potential of 100,000 bbl/d. If US companies return to Libya, it is assumed that they will initially take up these concessions again.

In contrast to the oil sector, the country's natural gas resources have remained virtually untouched. With proved reserves of 1.3 trillion m<sup>3</sup>, they are the fourth largest in Africa after Algeria, Nigeria and Egypt but output is low - at only 7.2 billion m<sup>3</sup> in 2002. The NOC is seeking to redress this situation through a number of large projects including the Libya Gas Project, a joint venture between NOC and ENI. This project is forecast to start production in late 2004 although full output is not expected until late 2005, at the earliest.

The five-phase, US\$30 billion Great Man Made River project supplies coastal cities with fresh groundwater from the south of the country through some 4,500 kms of pipeline. This huge project has been suffered technical and financial problems since its inception in 1984 but, once completed, should reduce the country's water shortage and boost agricultural output. Bids for the fourth phase - involving the construction of a further 700 kms of pipeline - closed in mid-2003. It is expected to take seven years to complete.

Solid mineral production in Libya is miniscule by comparison with the hydrocarbon sector. It is confined to aggregates and the cement industry, for which an estimated 150,000 t/y of gypsum is used in addition to the basic feedstock of limestone and clay. Some 40,000 t/y of salt is produced by solar evaporation in coastal pans near Benghazi and Tripoli and approximately 15,000 t/y of sulphur is recovered from petroleum and natural gas refining. Unexploited mineral deposits include marble, bentonite and silica sand, and there is exploration potential for gold and base metals.

The principal undeveloped mineral project in Libya is the Wadi Shatti iron ore deposit where measured resources of 795 Mt are reported at an average grade of 51.7% Fe, but with high phosphorus content. The deposit comprises three horizons of magnetite with minor siderite up to 12 m thick, and is amenable to open pit mining. The project has the potential to produce 10 Mt/y of sinter fines and is seen by the government as a potential supplier to the Misurata steel complex on the coast. This is presently served with imported ore.