

## The Single Biggest Exploration Commitment

After an absence of 30 years, BP has recently announced that it is returning to Libya - and in a very big way.

BP recently announced that it is returning to Libya, a country it left 30 years ago. According to Chief Executive Tony Haywood, BP and its Libyan partner, the Libya Investment Corporation, signed a major exploration and production agreement with Libya's National Oil Company at the end of May. This covers an area of about 54,000 km<sup>2</sup>, equivalent to more than ten of BP's deep-water blocks in Angola, or more than 2,000 Gulf of Mexico deepwater blocks. Gas is the primary target in all areas.

### Onshore Ghadames and offshore Sirte Basins targeted

BP originally started exploring in Libya in 1956, and was one of the first companies to see the potential of the prolific Sirte Basin. This basin is believed to hold known reserves of 43.1 Bboe (6.8 Bm<sup>3</sup>) and has about 40 known fields, including 16 giants with more than 500 Mboe. The Upper Cretaceous Sirte Shale provides the primary hydrocarbon source, and reservoirs range in age and rock type from fractured Precambrian basement to Paleocene and Eocene carbonates.

More than 20 Bboe (3.2 Bm<sup>3</sup>) have already been produced from the onshore Sirte Basin, where BP was previously involved in both onshore and shallow water offshore exploration. Much of this new acreage, however, is in the deep offshore basin, 300 km from the coast in water depths exceeding 2,000m. This area is essentially unexplored, and is thought to comprise a buried rift with multiple play opportunities, on trend geologically with the onshore part of the basin.

Another focus of interest for the company is the large onshore Ghadames Basin in the west of the country. This is similar to and possibly geologically part of the prolific Illizi and Berkine basins in Algeria, where about 6 Bboe has been discovered in the last 10 years, mainly from Devonian and Triassic sandstone reservoirs. The key to these discoveries was an understanding of the plays and use of 3-D seismic. The Ghadames Basin has not yet produced in Libya, but previous drilling in the 1970's and 80's was based on early vintage 2D seismic data, so BP plans to acquire extensive 3D seismic data using the latest technologies.



BP have taken acreage in the unexplored deepwater Sirte Basin as well as the onshore, to date unproductive Ghadames Basin. The total acreage is over 54,000 km<sup>2</sup>, with the North Ghadames block alone covering an area the size of Kuwait.

According to Press Officer Robert Wine, BP will commence a seismic programme in the Sirte Basin later this year, intending initially to shoot 12,000 km 2D and about 15,000 km<sup>2</sup> 3D in the area. About five exploration wells are planned, followed on exploration success by a possible 6 appraisal wells, with first production anticipated for 2018. In the Ghadames Basin 7,000 km of 2D and 5,000 km<sup>2</sup> 3D will be shot, with plans in place for an ambitious 12 exploration wells, followed by up to 14 appraisal holes.

### Education and Training Projects

In recent months, BP has grown its team of both nationals and expatriate staff in Tripoli. The company is keen to help build up Libyan capabilities, and the deal includes more than US\$50 million for education and train-

ing in Libya, with more money available after hydrocarbon production has commenced. The NOC's two primary Petroleum Training Centres will be upgraded, to enhance the skills of local technicians and operators, while programmes to help Libyans grow in technical, professional and management roles will be developed. Training programmes for Libyan suppliers and service companies are also planned, to help them increase their abilities to compete for contracts with international oil companies.

The estimate of US\$900 million is expected to be the minimum exploration expenditure on these projects, with significant further sums to be spent on appraisal and production. As such, it represents BP's single biggest exploration commitment, and demonstrates the company's faith in the potential of Libya and its new relationship with the country.

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