

Offshore Exploration

All eyes on Africa as Ghana starts oil output

The African continent is growing in importance for producers looking to tap its vast natural reserves



Barry Parker — New York

AS OIL exploration reaches previously untapped areas, the spotlight has turned to the African continent. West African waters, which share geological characteristics with offshore Brazil, will be seeing the first oil production from Ghana during the final days of 2010.

Ghana's national oil company has a 13.8% interest in the Jubilee Field, where operator Tullow Oil has a 35% stake, with Anadarko and private equity-backed Kosmos Energy each having 23.5% interest.

Oil will initially flow at 55,000 barrels per day, into the floating storage, production and offloading unit Kwame Nkrumah.

Ultimately, the Mitsui Ocean Development & Engineering Co-owned unit will be able to process 120,000 bpd of oil and 160m cu ft of gas per day, to be fed by nine subsea production wells drilled in water depths of roughly 1,300 m.

The gas will be re-injected into the field, except for a portion that will provide power to the floating production, storage, offloading vessel.

Storage capacity is rated at 1.6m barrels. Tullow anticipates shuttle tanker loadings of approximately 1m barrels, once a week. Landside support for the FPSO will be based at Takoradi.

Jubilee, with an estimated 450m barrels of oil and located about 50 km south of Ghana's western tip, is part of a series of larger crude-bearing formations. In mid-November, a consortium of Anadarko (the operator, with a 65% stake), Repsol (25%), and Tullow (10%) announced an oil strike in the Sierra Leone-Liberian Basin.

The US Geological Service has identified a group of formations,

stretching from the north of Namibia up to Mauritania, could hold as much as 71.7bn barrels of oil as yet undiscovered, and 187.2 trn cu ft of undiscovered gas. The findings, part of US Geological Survey's World Petroleum Resources Project, are in line with US policy objectives of discovering and developing new oil sources.

Angola, now ranked as Africa's largest oil producer by the Energy Information Administration, eased ahead of Nigeria in the 2009 production league.

According to the EIA, offshore oil accounts for more than 80% of Angola's gross national product. Of the roughly 1.8m barrels per day produced in 2009, some 1.7m barrels per day has been exported, with China and the US getting 547,000 barrels per day and 500,000 barrels per day respectively.

Sonangol, formed in the 1970s, acts as the offshore oil concessionaire, entering into joint ventures with big name major oil companies. In recent years, Chevron, BP, Total, ENI and ExxonMobil, and, lately, China National Offshore Oil Corp, have been active in Angola.

The EIA sees a potential doubling of Angola's oil production, by 2015, with much of the incremental barrels bound for the US. At present, gas is reinjected or flared off, but a consortium of oil companies led by Chevron and Sonangol is now building an liquefied natural gas



African calling: the *Belford Dolphin*, above, on charter to Anadarko until 2013, has found gas off the coast of Mozambique while Eirik Raud has been busy with drilling activities at Tullow's Jubilee field off Ghana.

facility at Kwanda Island in northern Angola. Sonangol holds a 20% in an LNG import terminal under construction at Pascagoula, in the US Gulf.

In a deepwater area designated as Block 17 (where Total is the operator), the Girassol Field has been producing oil since 2001, followed by the Dalia Field, which came online in 2006. Both produce oil from subsea wells tied into purpose-built FPSOs. Lately, the tract has been a hotbed for deepwater exploration. Two big projects, Pazflor and CLOV, are set to come online in 2011. In mid 2010, Seadrill's *West Gemini*, newly delivered from Samsung, began a two-year charter to Total at \$445,000 a day.

West Africa has played an important



role in the fortunes of Ocean Rig; its semi-submersible Eirik Raude, winding down its drilling activities at the Jubilee Field, has been given high marks by Tullow Oil. Meantime, its Ocean Rig Corcovado has is set to begin work for Houston-based Vanco Energy, and its consortium partner Lukoil, drilling five wells in the waters off Ghana and the Ivory Coast.

African oil and gas exploration is not confined to Atlantic waters. The 1999-built semi-submersible *Pride North America*, working for BP at \$496,000 per day, has made a significant gas discovery while drilling in the West Nile Delta, northwest of Alexandria. In East Africa, the Fred. Olsen-owned *Belford Dolphin*, on charter to Anadarko until 2013, has found gas off the coast of Mozambique.

In late November, after its third major gas strike in the Rovuma Basin, Anadarko said: "We expect to keep *Belford Dolphin*

the basin for the foreseeable future to continue a very active exploration and appraisal programme."

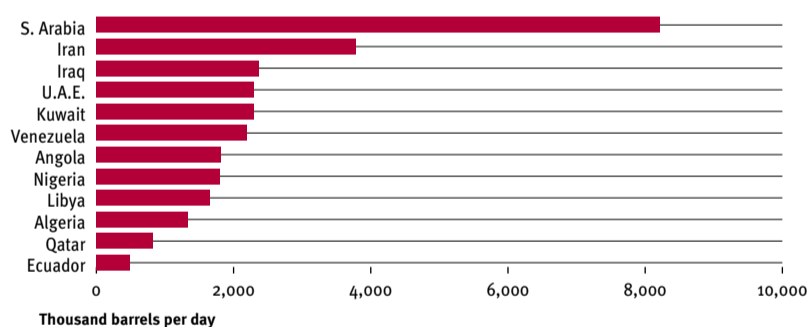
It added that it was considering developing LNG export capabilities. Anadarko has also set its sights further to the north; it is evaluating seismic data for blocks along the coast of Kenya, thought to have a similar geology to the Rovuma Basin. ■

www.lloydslist.com/offshore

More online...

Track your topic: To access the latest energy shipping news, customise your email alerts. Go to www.lloydslist.com/mylloydslist

OPEC CRUDE OIL PRODUCTION BY COUNTRY, 2009



Source: EIA

China flexes its financial muscle in the natural resources game

CHINA National Offshore Oil Corp has been figuring prominently in the oil business, including the offshore sector, writes Barry Parker.

More often than not, the context of the conversations is resource nationalism and security of oil supply, both coloured by a tinge of commodity price speculation.

Most recently, CNOOC was in the news with its \$2.2bn investment in a 33.3% interest in Chesapeake Energy's shale leases in the Eagle Ford shale project.

In 2005, CNOOC unsuccessfully sought to buy US independent Unocal, and was forced to withdraw an \$18.4bn bid due to political pressure. Unocal was then absorbed into Chevron, which paid \$17.3bn. Five years on, CNOOC, in partnership with Ghana National Petroleum Corp, attempted to buy the stake of Kosmos Energy, a Texas-based independent exploration company, in the Jubilee Field. In September, CNOOC and GNPC, were jointly bidding \$5bn, in an effort to acquire Kosmos's 23.5% share.

Reports suggest the deal was turned down by Kosmos, but there was little in the way of official comment.

Kosmos, whose private equity backers include Blackstone Group, had been negotiating with ExxonMobil over the same interest, two months earlier. A tentative \$4bn deal for Kosmos's crown jewel had been broken off in August 2010 against the backdrop of continued successful Kosmos exploration off the African coast, and, intense opposition from GNPC.

Besides the production wells at Jubilee, Kosmos has seen success at a group of adjacent oil and gas prospects; after early drilling by the drillship *Songa Saturn* and more recent appraisals conducted by the drillship *Aban Abraham*, and the semi-submersible *Atwood Hunter*, chartered at \$538,000 per day.

China is readily paying to play in the natural resources game; in September 2010, the China Export Import Bank has loaned Ghana more than \$10bn, with a 20-year term, while its China Development Bank

provided a \$3bn credit for developing Ghana's energy infrastructure.

Oil company majors contemplating investment in the Kosmos stake will run a gauntlet of challenges in the form of governmental connections between China and Ghana. The present administration in Ghana, which must grant approvals to foreign investors, has suggested that the previous government offered too good a deal for Jubilee's concession holders.

Kosmos, with its focus on West Africa (it holds licences in offshore Cameroon and Morocco, besides Ghana), has consistently been able to attract debt finance, even during the dark days of early 2009. With a \$350m tranche of project finance debt added in late August 2010, its total debt with a group of banks including Standard Chartered and BNP Paribas tallied \$1.3bn. The commercial lending to Kosmos (along with Jubilee operator Tullow) was jump started by a co-investment from the International Finance Corp. ■

Japanese owners want slice of offshore action

THE connection between shipping and offshore energy continues to grow closer. Most recently, Japanese shipping and logistics stalwart NYK has moved further into the energy supply chain club with the announcement that it was taking a 50% stake in Norwegian shuttle tanker operator Knutsen Offshore Tankers, writes Barry Parker.

NYK first entered the business in 2009, when it took a large minority position in the Brazilian drillship owner Etesco, along with Mitsui, Kawasaki, and others. *Etesco VIII*, a \$820m drillship under construction at Samsung Heavy Industries, will begin a charter with Petrobras in early 2012.

Mitsui is also a long-time player in the offshore space. Modec, a leader in the floating production, storage and offloading sector, whose fleet includes Kwame Nkrumah, converted from a vessel built at Mitsui's Chiba yard in 1991 and now moored at Ghana's Jubilee Field, was

established in the late 1960s, and listed on the Tokyo Exchange in 2003. It is still 65% owned by companies within the Mitsui Group - including the shipyard.

K Line, another large Japanese owner, has already made a move into the offshore sector. Its K Line Offshore has taken delivery of *KL Brevikfjord*, set for a four-year contract with Petrobras, the first of four Norwegian PSV newbuildings for K Line from STX.

But other deals have not been so successful. Tsakos Energy Navigation back away from a drillship investment alongside Marine Subsea. The Deepwater Horizon incident occurred just as TEN began talking publicly about the deal, which contemplated a unit going on charter to Sonangol. Adverse reaction from shareholders, and concerns about a tighter regulatory paradigm, caused the Greek owner to pull out. ■

www.lloydslist.com/offshore