

Lack of FPSOs in US Gulf limits appeal of shuttle tankers in region

THE US Gulf of Mexico has seen drilling move into ultra-deepwater, but both lengthy regulatory processes and the risk preferences of different field operators have limited the use of floating production, storage and offloading vessels, and, therefore, the penetration of shuttle tankers.

Two Petrobras-operated fields, Chinook (where Total is a partner) and Cascade, some 250 miles south of New Orleans in a geological region known as

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Lower Tertiary in the Walker Ridge leasing area, are set to begin production in 2011, presumably after ongoing regulatory issues are resolved.

The two fields, drilled at water depths of 8,200 ft, link subsurface production wells into the FPSO *BW Pioneer*. The FPSO was previously the *Sarasota*, a 1992-built Aframax, sold to BW in late 2007, and subsequently converted at Keppel.

One of the original partners at Cascade was Devon Energy, a 50/50 joint venture with Petrobras. In June 2009, Devon decided to exit the offshore sector altogether, selling its interest to Petrobras. The Macondo spill occurred 10 months after Devon's decision to exit offshore and divest its extensive portfolio in ultra

deepwater Gulf of Mexico, and also in Brazil and China. Devon's exit was based on a shift in corporate strategy; there is no evidence that it was based on advance concerns of deepwater well risk.

Peter Lovie, a Houston based expert advisor on floating production systems who worked with Devon Energy in its deepwater planning and project management office, was one of hundreds laid off when Devon exited the offshore sector. From his new consulting business, he explained to Lloyd's List that the FPSO *BW Pioneer* is an early production system, on a five-year charter with further options and may not be the ultimate production tool for the Cascade/Chinook complex.

The FPSO's design, with a turret and detachable buoy, is predicated on its ability to disconnect quickly if any hurricane enters the Gulf of Mexico or develops in the Gulf of Mexico. A unique facet of the US regulatory scheme is the requirement that tankers hauling oil from production facilities anywhere on the US Continental shelf, to shoreside refineries, be Jones Act compliant — requiring construction in a US yard, US crewing and minimum 75% US ownership. This requirement does not apply to FPSOs. US shuttle tankers thus are much more expensive to own and operate than international counterparts.

In line with with EPS philosophy, and in the face of the high cost of building in the US, the optimal solution was to piggyback two shuttle tankers on to an existing series of 10 Jones Act ships being built for Overseas Shipholding Group at the Aker

Philadelphia yard. In late 2009, OSG exercised options and purchased *Overseas Cascade* and *Overseas Chinook*, for approximately \$115m each. After conversion to shuttle tankers with the addition of a controllable pitch propeller, bow thrusters and a bow loading system, the ships' charters to Petrobras will parallel its FPSO deal.

Overseas Cascade, delivered in the US Gulf to Petrobras in the second quarter 2010 after conversion work at Detyens

Shipyard, at Charleston, South Carolina. It performed a unique form of sea trials in the Deepwater Horizon cleanup efforts — shuttling recovered oil to a refinery in Mobile, Alabama. *Overseas Chinook* is set for second quarter 2011 delivery. Knutsen's shuttle tanker *Evi Knutsen* also assisted in oil storage efforts.

Mr Lovie, a speaker at Informa's 25th annual conference on Floating Production Systems in London this week, told Lloyd's List: "At present, I am not aware of any

fields in the Gulf of Mexico where FPSO and shuttle tanker solutions are under serious consideration."

This view contrasts with the ultra-deepwater euphoria of 2006 and 2007, when as many as a dozen fields in the Walker Ridge region of the Gulf of Mexico, beyond the reach of existing pipeline networks, were being touted by many as potential candidates for floating production served by tankers.

Mr Lovie said that some offshore field operators had already made choices away from FPSO/shuttle tanker solutions, even before the Deepwater Horizon incident, telling Lloyd's List that the FPSO/shuttle tanker/pipeline debate is complex. He further explained that formations out in the Lower Tertiary may often be difficult to produce and lack many analogues to companies' previous experience adding that access to wells can be an overall big consideration and can over-ride obvious export choices.

It is possible for field operators with pipeline experience and even ownership interests to influence field development and export choices. Different operators might develop the same field differently, according to their risk outlook and development philosophies.

As an example, **Mr Lovie** explained: "The Petrobras operated Cascade/Chinook development is phased, starting with the *BW Pioneer* as an EPS while the Chevron operated Jack St Malo development is done as a full field development, planned from the outset with a semi-submersible floating production system." ■

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LOWER TERTIARY/WALKER RIDGE FIELDS IN THE GULF OF MEXICO



Source: US Department of the Interior