

Market Forces

Buzzard bites

Buzzard's inclusion in the North Sea Forties system is rocking international pricing mechanisms. Dated Brent — the physical benchmark off which are priced most crudes traded in the international spot market, as well as a fair chunk of barrels sold on a term basis — has recently seen an erosion in its differential against screen or forward paper. The reason? The January start-up of Buzzard, the 550 million barrel field developed by Canadian independent Nexen (EC Jan.12,p10).

Buzzard, a 32°-33°API, 1%-1.4% sulfur crude, had widely been expected to lower the quality of the 44.6°, 0.20% sulfur Forties blend. Forties is one of three crude oil blends deliverable into the 21-day Brent-Forties-Oseberg (BFO) forward contract. The cheapest is used to determine the price of dated Brent and in February, for the first time, Forties was consistently used as the proxy. Since Forties previously traded at a premium to Brent for most of the time, this caused quite a shock to the system.

The trading fraternity's concerns have been compounded by the reluctance of Nexen and BP, custodian of the Forties Pipeline System (FPS) through which Buzzard is brought to market, to divulge just how the commingling of Buzzard will affect the future quality of Forties. A change in the Forties blend, or even a more-or-less permanent switch to Forties as the principal underlying crude for dated Brent assessments, would not in itself necessarily present a problem, provided quality proved stable. But fluctuations in quality, and hence value, would result in a degree of uncertainty that could ultimately undermine the BFO contract. If market nerves are to be calmed, industry sources say Nexen and BP must profile the future quality and relative value of Forties blend. This is not just for refiners who need, say, two months of hand-to-mouth information, but to meet the longer-term requirements of traders using Brent-BFO-related derivatives markets for hedging or speculative purposes, where contracts frequently have a longevity of five years or more.

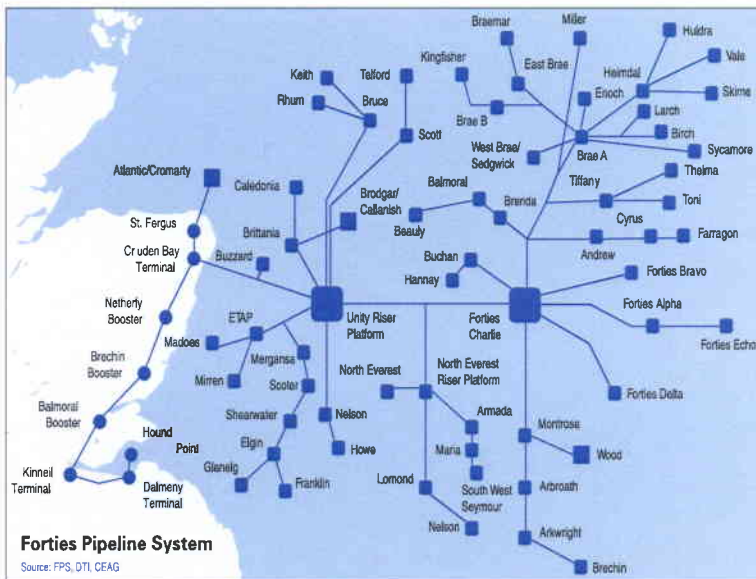
That's not all. According to a study by energy consultancy Consilience Energy Advisory Group (CEAG) — *A User's Guide to the Future of the World Price Marker* — the uncertainties have been compounded by the fact that early production experience shows the Buzzard reservoir contains unexpectedly high levels of hydrogen sulfide (H₂S) in its deeper strata. H₂S is the most harm-

ful of the sulfur compounds found in crude oil, and exposure is usually fatal.

Pipeline entry quality specifications typically place strict limits on the amount of H₂S that will be accepted — in the case of FPS, a maximum of 0.1 parts per million by weight. Accordingly, CEAG says, Nexen will have to remove H₂S offshore. If so, Forties blend quality will be protected against the direct impact of any increase in Buzzard's H₂S levels, but it may affect the volume of Buzzard production and therefore other Forties blend quality attributes, such as API gravity and sulfur content. Output began at around 65,000 barrels per day, and sources say early production will come from five wells each producing about 35,000 b/d, which suggests a cap of around 175,000 b/d. Nexen still anticipates reaching capacity of 200,000 b/d mid-year, for an initial four to five-year-long peak.

Industry sources say the Buzzard platform can't accommodate H₂S removal facilities, and construction of a new platform is under consideration. Nexen has declined to comment, beyond reiterating a statement from President and Chief Executive Charlie Fischer on the company website that Nexen has "experienced more well-to-well variability in the concentration of hydrogen sulfide than previously seen" but that the company is "confident that existing equipment and processes will allow us to manage this variability for at least the first two to three years of production." The statement says preliminary analysis indicates any additional equipment would cost a maximum of around \$250 million.

Buzzard's start-up also makes Forties vulnerable for other reasons. Buzzard is the only field in the FPS downstream of the Unity Riser hub, a key piece of equipment installed in 1992 (see map). If the riser had to close for maintenance or other reasons, Forties blend would consist predominantly of Buzzard crude. If the shutdown didn't last long, quality could be managed by blending in-tank from stored production. If it went on for some time, the resulting Forties blend would not sit easily as a deliverable grade in the BFO contract. Forties Charlie is another crucial hub of the Forties infrastructure, east of Unity. It started production in 1975. A shutdown of Forties Charlie would affect output from a large number of fields, including the Forties fields, the Brae area, Miller, Montrose and Arbroath.



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