# A TASTE OF THE ATLANTIC FRONTIER

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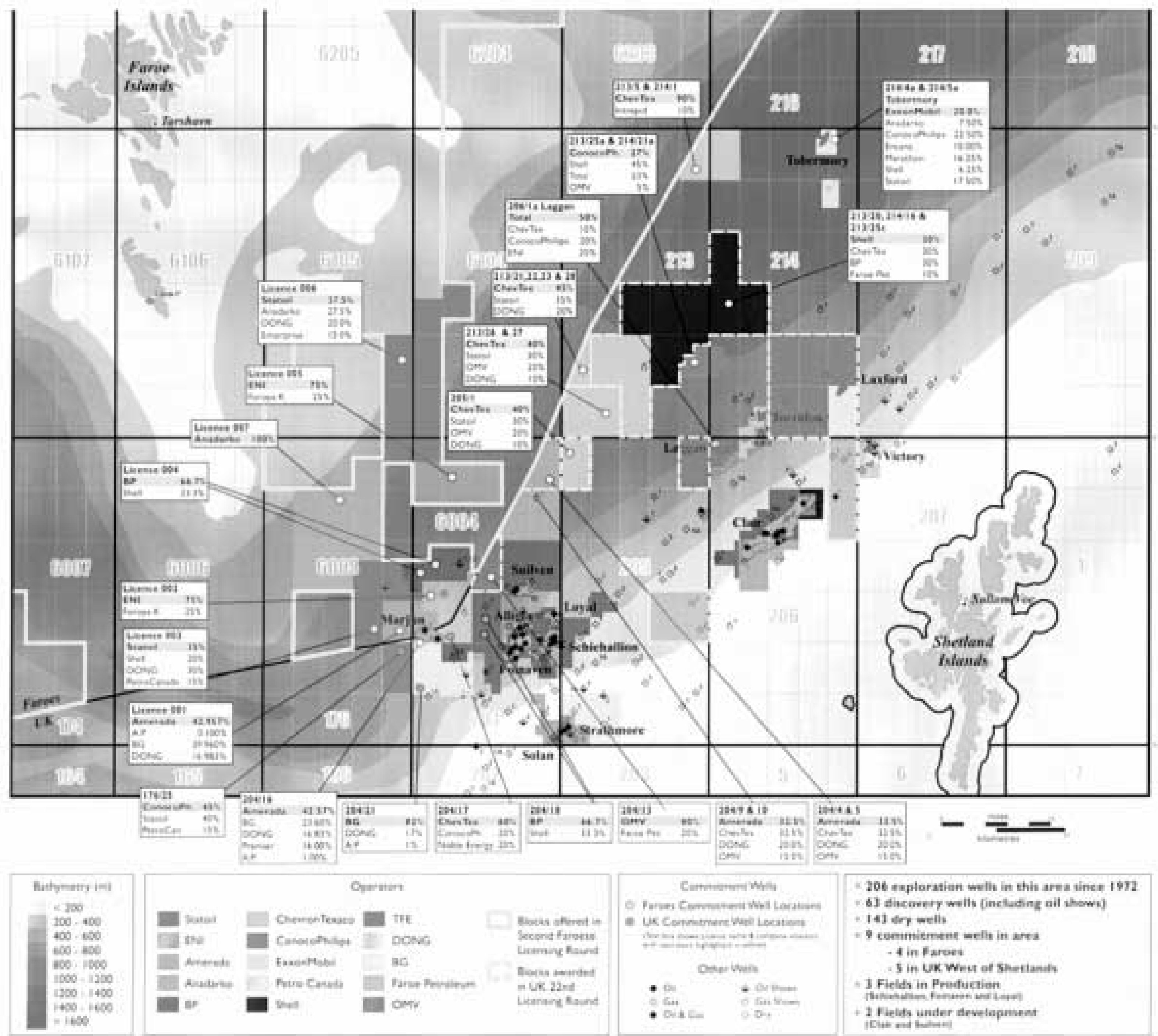


Progress remains slow on Big Oil's North-west Europe Atlantic Frontier with the exception of UK west of Shetland where 2004 has turned out to be one of the better years for that sector and where momentum appears to be building.

Indeed, with at least one new discovery - Lochnagar, appraisal drilling confirming the commerciality of the Laggan gas discovery, the Clair field close to first oil as we wnet to press, and the majors reaffirming their commitment via the 22nd UK offshore and Frontier licensing rounds, west of Shetland almost has a buzz about it.

It is a pity that the same cannot be said for the Irish, Faroese and even Norwegian sectors. Nonetheless there has been progress in each. In Ireland, the last major obstacle to Shell's Corrib development has fallen; the 2nd Faroese licensing round has attracted a respectable bid and, in Norway, the huge Ormen Lange gasfield development has taken significant further steps forward.

But, in this review, we shall concentrate on the UK portion of the Frontier because it appears broadly analogous with the Faroese sector in geological terms, with the exception of the basalts that overlay much of the latter.

## LUCKY LAGGAN

The hottest news is arguably Laggan. It was in September that Total declared that the 206/1a-4A and 206/1a-4AZ wells drilled 70km west of the Shetland Islands during the 2004 summer campaign successfully tested the original 206/1-2 Laggan gas discovery made in 1986, but it stopped short of revealing a reserves estimate.

However, word on the street is that more than 1trillion cu.ft of gas gas been proved up and that flows of up to 35million cu.ft per day were achieved on test.

Whatever the results are, they must be encouraging as the company is inviting supply chain interest in its development. While they should be regarded as indicative at this stage, Total has unveiled two core development scenarios, both of which would involve subsea production architecture tied back to a platform.

The key difference is the export route … one via Shetland and the BP Magnus platform in the East Shetland Basin to St Fergus gas terminal in North-east Scotland; the other via existing Total North Sea infrastructure to St Fergus.

Scenario 1 indicates a six-slot subsea template located in 640m of water tied back to a host platform in 140m of water, with export infrastructure comprising an 18-in gas line to Sullom Voe oil terminal and then into the existing Magnus EOR (extended oil recovery) link, thence FLAGS pipeline to St Fergus.

Scenario 2 would also involve a six-slot subsea template in 640m of water, but with the host platform in a different location. This in turn would link to a 24-inch pipeline direct to the Total-operated Alwyn field hub and link to St Fergus. In this case, an 80km, five-inch condensate line laid to Sullom Voe.

It is likely that a multi-phase solution similar to the recently inaugurated and pioneering North Sea Goldeneye project will be employed. It is the first ever UK development where output from the field is sent directly to the beach for process. A multiphase solution would see Laggan gas processed at Sullom Voe.

Total has told contractors that it would like to get to project sanction during Q4 2005/Q1 2006 with a view to achieving first production in Q3/4 2008.

On a note of history, Laggan was discovered in 1986 by Shell. But there was no further exploration activity until Total secured a licence to explore on the quadrant 206 block following the 16th licensing round in 1995.

Total moved quickly, drilling an appraisal well in 1996, but then leaving the field for a further eight years. The mid 1990s was the time of the Aurora project, the aspiration of which was to clear the decks for a multi-field development to achieve the economies of scale needed before west of Shetland gas could become viable.

The Aurora study was funded by Conoco, Texaco and Total, each of which had finds that, individually, did not satisfy criteria applied at the time. But the oil price slump of late 1997 through 1999 put paid to the dream. But now it appears to be coming back to life in all but name.

It is already clear from Total's rhetoric that Laggan will become a hub into which further future developments can be tied-in to create a multi-trillion cu.ft development in the same spirit as Aurora. Quite which at this stage can only be an educated guess due to the scarcity of hard facts.

Potential candidates could include 208/21, 208/26, 214/12, 214/25 and 214/29. All are on the DTI's 'promote' licence listing.

208/21 is located 50km North-east of Laggan. Estimated in-place reserves are 248-649bcf of gas of which 188-495bcf might be recoverable. It has been drilled once.

Discovery 208/26 is 40km south of Laggan and is described as a stratigraphic trap. In place reserves are estimated at 202-574bcf, with recoverables judged around 149-430bcf. It has been drilled once.

214/12 is described as a "four-way dip closure with potential for stratigraphic upside". It has never been drilled but the DTI 'promote' datasheet notes an in-place reserves potential of 328-549-890bcff and recoverables of 247-411-666 bcf

214/25 is a prospect that is reckoned to have a gas potential of up to 1.64tcf, suggesting recoverables in the range 550bcf to 1.2tcf.

214/29 has been drilled once and the in-place reserves estimate is 469 - 680 - 970 bcf, with recoverables of 350 - 512 - 723bcf. The DTI 'promote' sheet notes that the discovery of gas in the neighbouring block (214/30-1) should enhance the prospects for 214/29 though that acreage was relinquished.

## BOLD EXPLORERS

Turning to Chevron-operated Lochnagar, while the company and its partners in the licence have revealed nothing, apparently due to sensitivities regarding the US super-major's Faroese 2nd round bid, rumours persist that the Smedvig drillship West Navigator really did score with the block 213/27 probe drilled in 1,115m of water.

Indications are that a "significant" find has been made and that it could open up a new play fairway straddling the UK and Faroes Islands median line.

Before drilling began on 10 July, the P50 reserve estimate for the two target plays that are believed to have been intercepted by the 213/27-1 wildcat was about 530 million barrels in total.

*Framhald á s. 34*