

Database

There was no new seismic acquired during the evaluation of the license. The 3D seismic used to evaluate PL378B was the merged cube: SG9603MN9201MR06. The merged seismic survey is of moderate to good quality and allows fairly accurate mapping of individual Upper Jurassic reservoirs and the top of the Brent Gp reservoirs. No wells were drilled in the PL378B license. Two new wells were drilled in PL378B which are key to the evaluation of the prospectivity in PL378B. Firstly, the (dry) 35/12-3S well, which tested the Sognefjord Fm in the Gnatcatcher prospect (Fig. 2) and secondly, the 35/12-4S and A which appraised the Grosbeak discovery to the north.

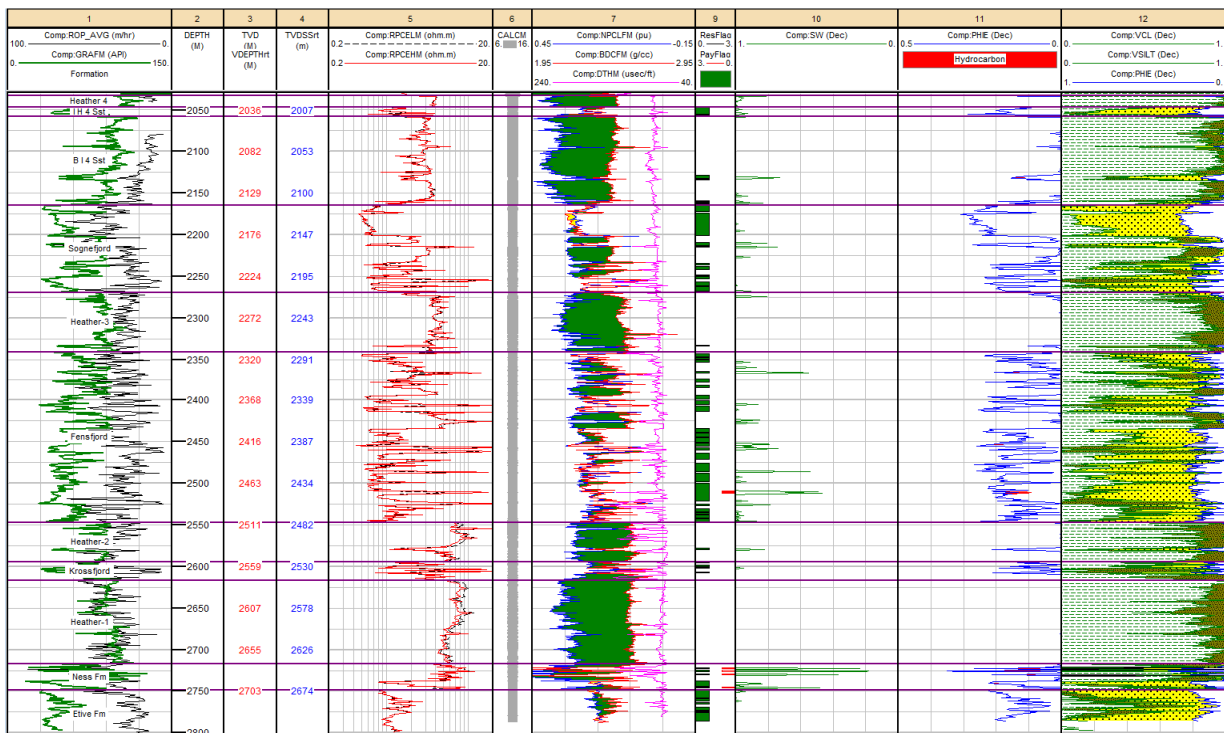


Figure 2 Petrophysical evaluation of well 35/12-3S 'Gnatcatcher'.

Review of geological framework

No major changes in the understanding of the geological framework have arisen since the application for PL378B. The additional wells 35/12-3S, 4S and 4A show that horizons are correctly picked and that all Upper and Middle Jurassic reservoirs are present. The Grosbeak and Gnatcatcher wells show that the risk on reservoir effectiveness for Sognefjord Fm increases towards the north. Well 35/12-2 shows mainly tight Sognefjord reservoir, which indicates a transition zone setting for Sognefjord at the Grosbeak location. The top is eroded by the Volgian Unconformity, however, so the depositional environment of part of the Sognefjord Fm at Grosbeak is unknown. The 35/12-3S Gnatcatcher well shows much better reservoir thickness and properties (Fig. 2) both for Sognefjord and Fensfjord. The reason for failure of Gnatcatcher Sognefjord is most likely no access to charge, with failure of the trap being less likely. There is no mature source rock directly underneath Gnatcatcher, so hydrocarbons need to migrate towards the

structure. The spill route from Grosbeak in the north to Gnatcatcher in the south does not seem to work (Fig. 3). Finally, The 35/12-4S&A showed that the top of the Brent in this area is formed by the Ness Formation, which is channelized and has a greatly varying N/G laterally. Reservoir quality for Gnatcatcher Brent may therefore be an additional risk, with the top 30 m of Brent being ineffective reservoir.

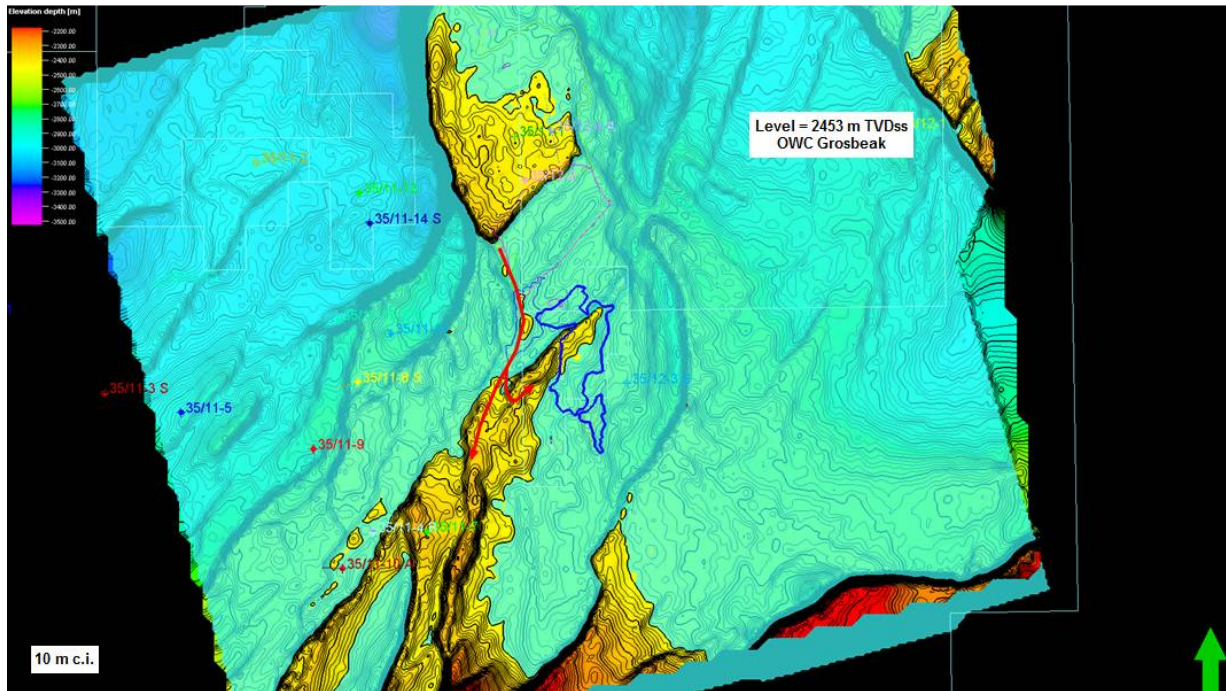


Figure 3 The most likely spill route from Grosbeak to Gnatcatcher Brent bypasses the Gnatcatcher Fensfjord and Sognefjord structures. Also at Base Draupne and BCU level, hydrocarbons spilling from Grosbeak do not charge Gnatcatcher. Blue outline shows Gnatcatcher Fensfjord.

Prospect update

Before drilling exploration well 35/12-3S, Gnatcatcher was defined as a prospect on Sognefjord, Fensfjord and Brent level. 35/12-3S was drilled on the crest of Gnatcatcher Sognefjord. Both Gnatcatcher Sognefjord and Fensfjord are combined structural/stratigraphic traps with structural closure in the SE and the truncation of the Volgian Unconformity as stratigraphic element. Gnatcatcher Brent is a structural trap, bounded by a fault in the NW and structural closure towards SE. The crests of Fensfjord and Brent are located progressively westwards, out of reach of the 35/12-3S exploration well (Fig. 4, 5 & 6). Although the bulk of Gnatcatcher Fensfjord is not within the Gnatcatcher Sognefjord closure (Figs. 4 & 5), there is some overlap between the structures. The Heather in between Fensfjord and Sognefjord is unlikely to provide an effective seal. Communication between Fensfjord and Sognefjord is seen on e.g. Grosbeak. Only a minor part of the Fensfjord structure is shallower than the crest of the Sognefjord structure, leaving likely only a small attic volume for Gnatcatcher Fensfjord, with the main risk on charge given that Sognefjord is dry. Gnatcatcher Brent is independent from Gnatcatcher Sognefjord and has potential access to charge, but without further upside this structure is too small to be economical (Tab. 1). The main risk is charge and reservoir effectiveness.

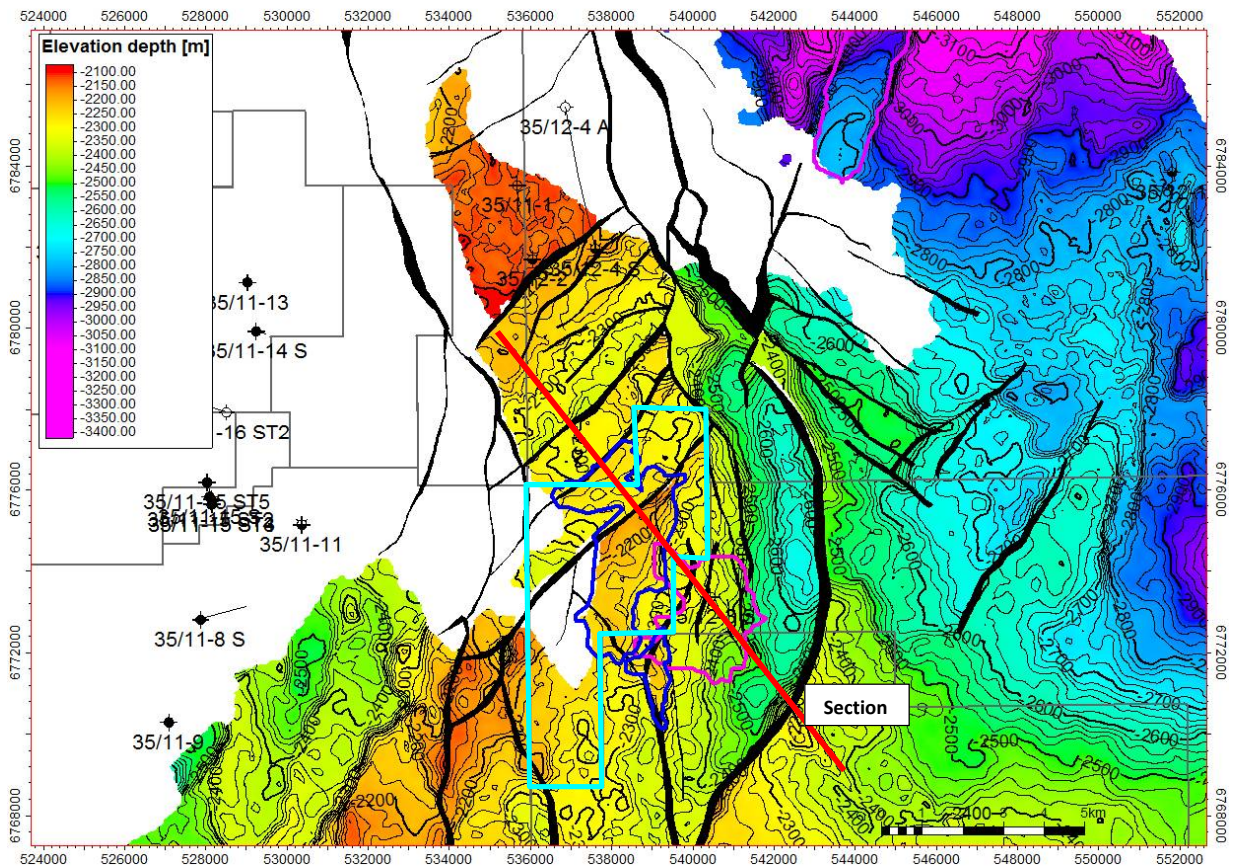


Figure 4 Base Fensfjord Depth map, showing the outlines of Gnatcatcher Sognefjord (purple), Fensfjord (blue). Fensfjord is eroded by the Volgian Unconformity in the white areas. PL378B in light blue.

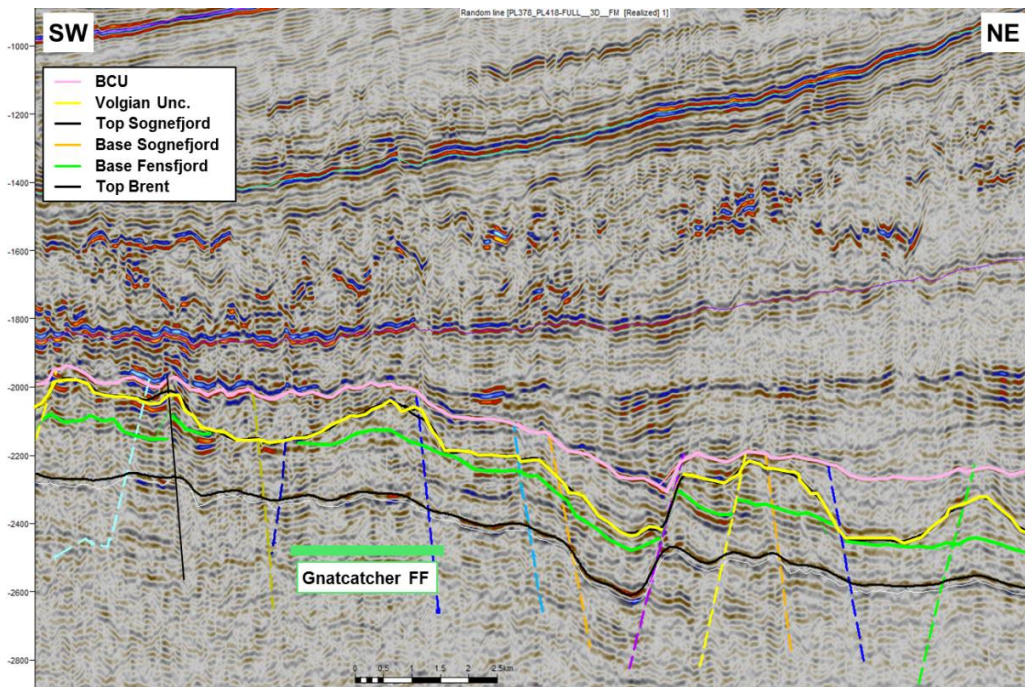


Figure 5 Seismic section through Gnatcatcher Fensfjord.

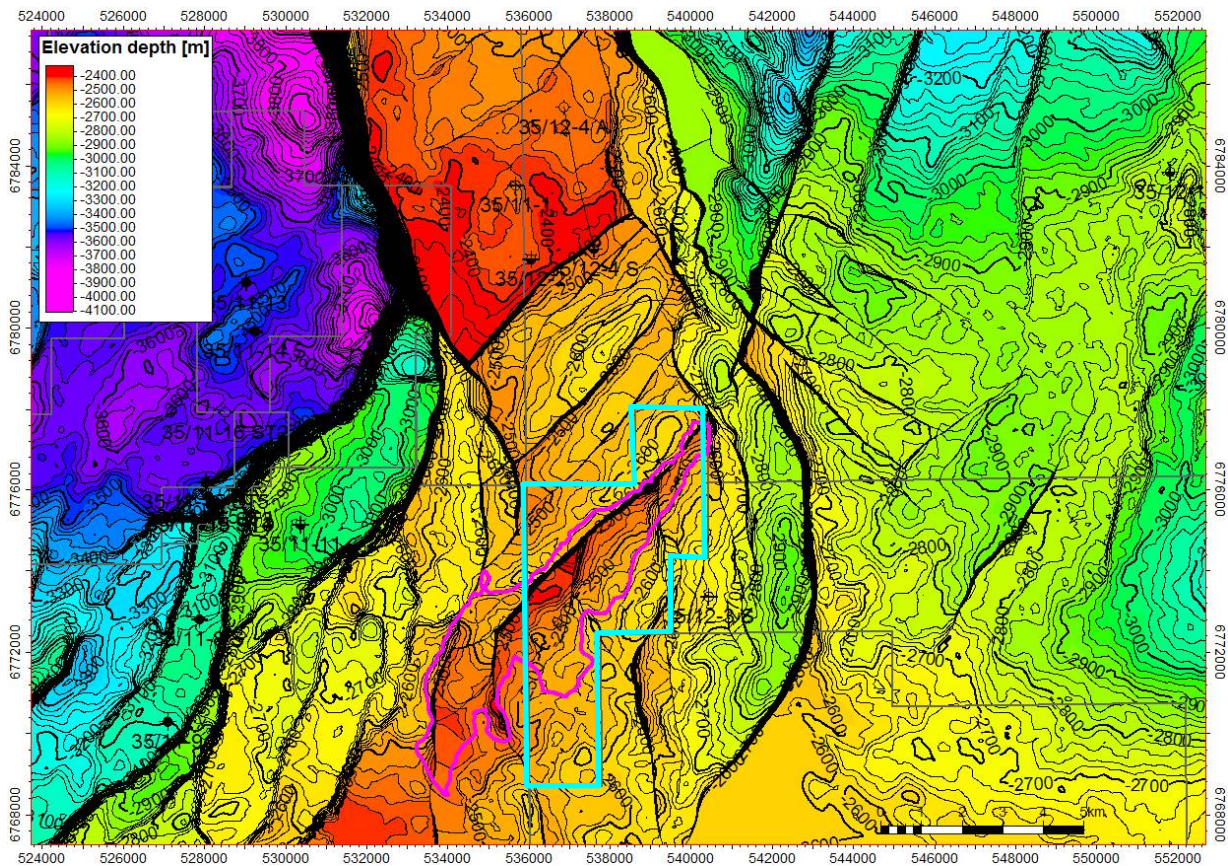


Figure 6 Top Brent Depth map, showing the outlines of Gnatcatcher Brent (purple). PL378B in light blue.

Technical evaluation

No discovery has been made in PL378B and the remaining prospectivity is deemed to carry too small a volume, therefore no technical evaluations for development have been made. Minimum economic field size for a template development with a tie-back to Gjøa for example would have been 25 mmbœ recoverable at a \$ 90,- / bbl price scenario. Even at that price the mean cases are sub-commercial.

Conclusions

Having considered the remaining petroleum potential in the license, which is identified solely in the Brent Group, the volumes in place are too small to be of economic interest. The decision was therefore made to relinquish the license, which was accepted by all partners.

| 1e6 m3 | P90 | P50 | P10 | Mean | POS |
|-----------|------|------|------|------|------|
| Fensfjord | 0.02 | 0.23 | 1.16 | 0.46 | 8 % |
| Brent | 0.29 | 1.41 | 4.53 | 2.02 | 34 % |

Table 1 Estimated recoverable reserves for Gnatcatcher Fensfjord and Brent.