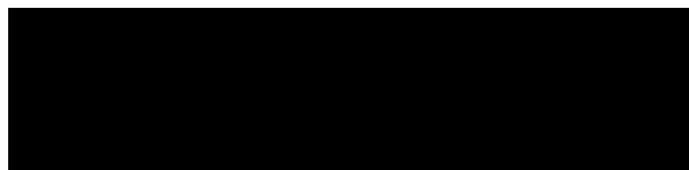


# Relinquishment Report

PL486S

22.04.2010



## PL 486S Recommendation

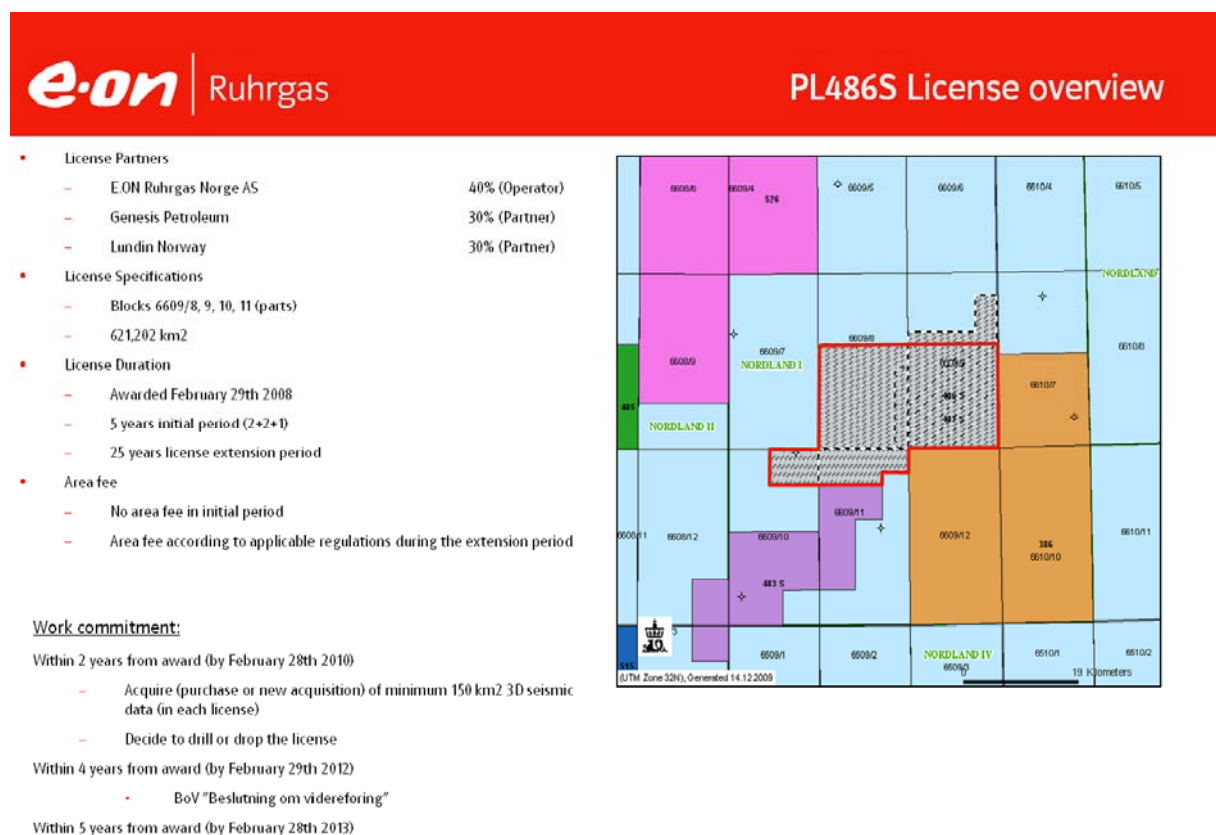
The evaluation of PL486S shows that licence has only one small prospect - Safir. The GCF is 12%. The key risk factors are mainly the seal and reservoir presence. The P50 recoverable resources are 2.2Mm<sup>3</sup> OE. A technical/economical evaluation performed on the Safir prospect resulted in a negative EMV.

**With this resource basis ERN is recommending to drop the PL486S by end February 2010.**

The evaluation of PL486S was presented to the license partners, who supported the recommendation given by ERN

## Licence overview and work-commitment

PL 486S comprising parts of 6609/8, 9, 10, 11 blocks (621,202 km<sup>2</sup>) was awarded in the APA 2007 on 29.2.2008 with 5 years initial period. The licence was awarded to ERN (40%) as operator with Genesis Petroleum (30%) and Lundin Norway (30%) as partners. The licence commitment comprises acquisition of minimum 150 km<sup>2</sup> 3D seismic covering part of awarded acreage within the first 2-years period. A drill or drop decision is due end February 2010. Processing and prestack merging with pre-existing seismic surveys, seismic interpretation, seismic AVA inversion feasibility study and rock physics, petrophysics, sequence stratigraphy, geochemistry & maturation and migration model, attribute analysis, volume calculations, risking and technical/economical evaluation have been performed.



## Location, structural setting and reservoirs

PL 486S is located on the eastern margin of the Nordaland Ridge and in Hegeland basin. Reservoir anticipated and Safir prospects defined in the licence is of Ypresian age. There are neither discoveries nor ypresian sand systems encountered by nearby wells.

## Prospects description, volumes and risking

The **Safir** is a stratigraphic trap prospect with potential reservoir at Ypresian level. It is located in the eastern part of the licence on fault block systems which formed during the late Tertiary extension. Safir forms a channel shaped stratigraphic trap trending in S-N direction interpreted as elongated turbidite channel/slope fan in Eocene with high structural relief related to differential compaction.

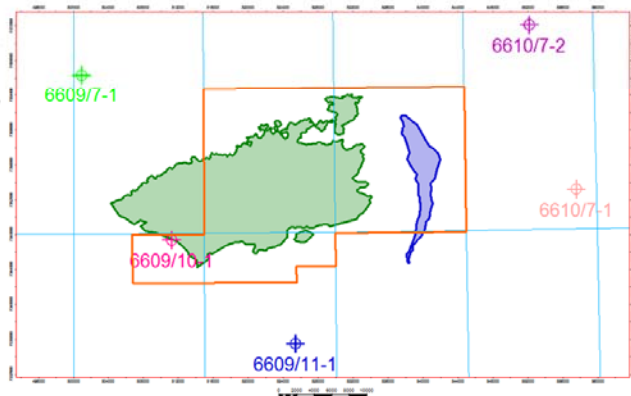
It is limited to the west and east by termination of sandy system and shaling out within Ypresian level. To the North and South it is limited by structural spill. Top of the reservoir is defined beneath the prominent diatomite reflective package which acts as a top seal for the prospect. No analogues reservoir facies has been drilled in adjacent areas.

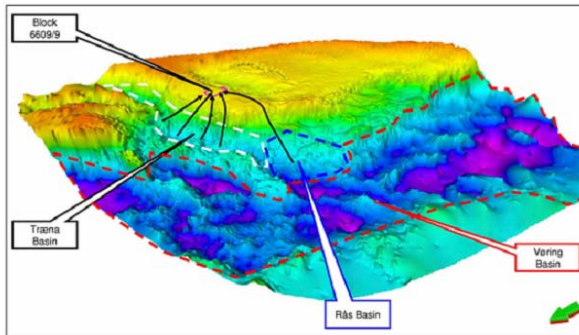
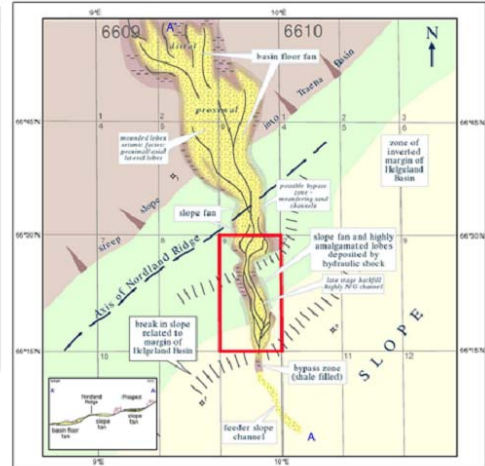
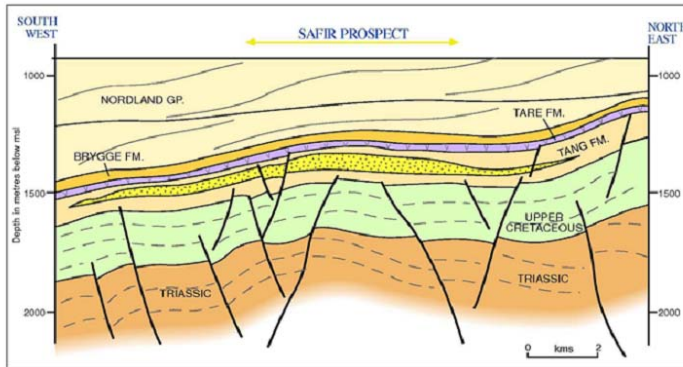
The volume-calculations are based on direct input of GRV from the thickness map between Top Safir reflection and the Intra Tang regional marker. The areal extend of the trap is 27km<sup>2</sup> and the gross reservoir thickness varies from 0-88m inside the four-way dip closure. The shallowest point of the trap is at 1312m and the deepest contour is at 1400m. The main risks are attached to seal (top, lateral and bottom seal to the south), reservoir presence and charge (long distance migration). The overall GCF is calculated to be 12% with a P50 potential recoverable resource of 1.96 MSm<sup>3</sup> oil and 0,178 BSm<sup>3</sup> gas.

Tertiary:

- **Myklebust** Dome structure interpreted initially as Palaeocene turbidites with strong amplitude support conformable to the structural closure. Further detailed work revealed that the presence of diatomaceous ooze sediments generates the seismic anomaly hence no longer considered as prospect.
- **Safir** (S-N elongated turbidite channel/slope fan in Eocene with high structural relief related to differential compaction ) GCF 12 % P50 recoverable 2.2 MSm<sup>3</sup>.

No drilling candidate recommended





Key points about the play concept

- Slope channel complex of highly amalgamated deposits

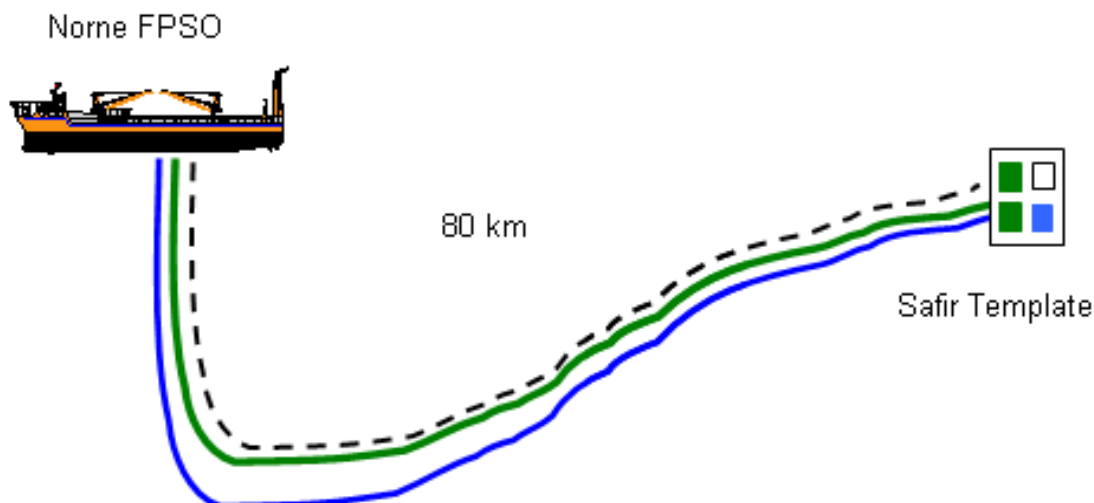
Reservoir

- Turbidite sand-rich system sourced from the SE

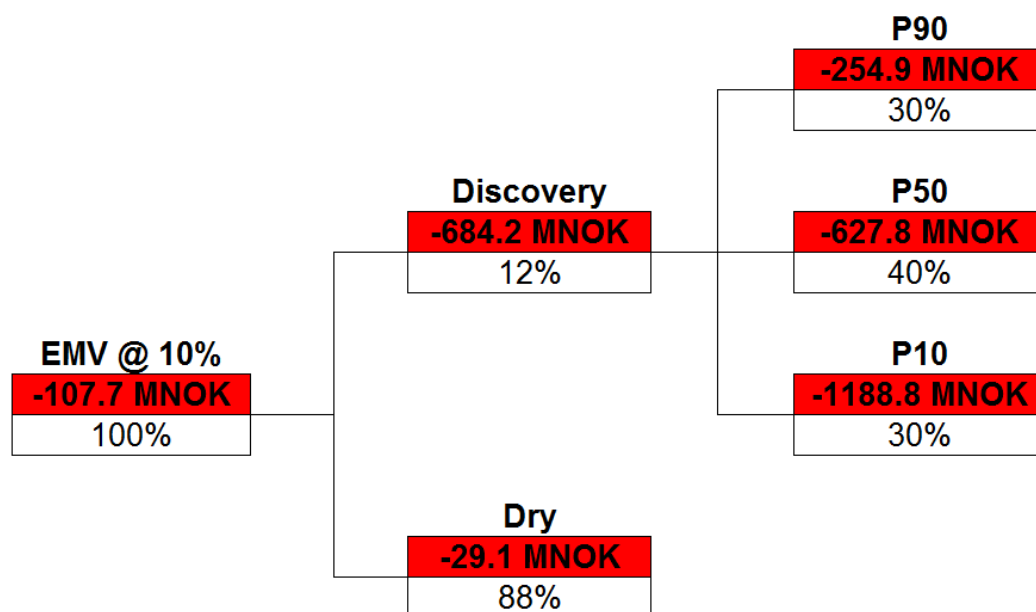
The **Myklebust Prospect** is a dome structure initially believed to be Palaeocene turbidite body with strong amplitude support. Further detailed rock physics and seismic interpretation work revealed the presence of impermeable diatomaceous ooze sediments which caused the amplitude anomaly hence it was no longer considered as a prospect.

### Technical/economical evaluation of the Safir Prospect

As the largest prospect economics have run for the Safir Prospect. The development is assumed to be a simple template (water-depth 225m) with water-injection, production and umbilical tied back to the Norne Field located approx 80km to the SE. Such a long tieback to Norne would be challenging with regards to flow assurance due to the distance and cold temperatures. Modifications would be required on Norne in order to provide the necessary chemicals or other means of hydrate mitigation. There is a risk that technology qualifications would be required on new equipment or technology.



For the P50 volume case economic it is assumed that an exploration is drilled in 2012 followed shortly by an appraisal, and with production start in 2018. General oil/gas price assumptions have been used. The IRR is set to 10%. Tariffs for oil are 100NOK/Sm<sup>3</sup>. The evaluation of the P50 case gives a negative EMV (-107,7 MNOK) with an IRR of 10%.



### Conclusion and recommendation

The evaluation of PL486S shows that licence has one small prospect.

- GCF is 12%
- P50 recoverable resources 2.2 MSm<sup>3</sup>
- Due to sub-economic volumes and high risk the prospect is not considered as a viable drilling target
- Negative economics of -107,7 MNOK EMV with 10% discount rate and with current risk

**With this resource basis ERN is recommending to drop the PL486S by end February 2010.**