# PL621 Relinquishment report

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### 1 Key Licence History

PL621 was awarded in APA2012 with Faroe Petroleum as an operator with a 75% interest and Noreco as a partner with 25% interest. The License covers a 27.56 km2 area in block 9/2 next to the Yme field. The work commitment was to reprocess 3D data and decide whether to drill a well within 1 year.

A ECMC meeting was held in the license on the 26th of march 2012, where the license was formally established and we decided on the work program for the license.

On the 18th of October an EC meeting was held with an update on the Epsilon prospect evaluation and the way forward. The operator indicated that at Drop decision would be recommended for the license.

A short meeting was held with the partners on the 27th of November 2012 where we finally recommended to drop the license.

The results of the work program did not give any derisking of the prospect and hence the license decided to drop the license.

#### 2 Database

The database used in the evaluation was as defined in the Application with the only new addition being the reprocessing performed on the ST9413 survey. Fig. 2.1

The work program consisted of reprocessing of the ST9413 over the license area. A Prestack time migration reprocessing of the survey was done to try and enhance the resolution and enhance the resolution for fault interpretation close to the salt dome.



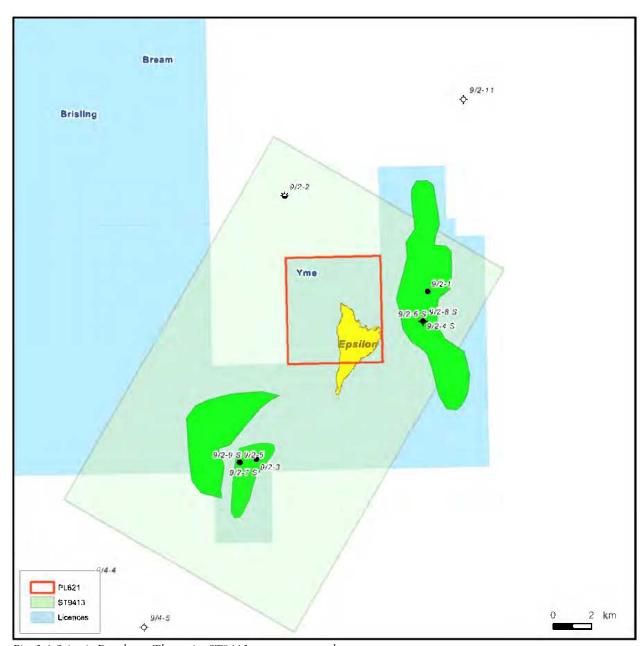


Fig. 2.1 Seismic Database. The entire ST9413 was reprocessed

### 3 Review of geological framework

Reinterpretation of the structure based on the reprocessed data was performed to try and define the presence of fault separating the 9/2-8 S well from the Yme field. The new seismic did not give any encouraging signs of a fault separating the well from Yme.

To de risk the prospects a modelling was preformed to try and evaluate if the observed low pressure in 9/2-8 S could be explained by depletion during Yme production. From the studies done we found the pressure to be within the range expected from depletion during Yme production. Hence we find it likely that 9/2-8 S is in pressure communication with Yme.



## 4 Prospect update

Based on the work performed the risk has increased for the Epsilon prospect as the prospect defining fault could not be seen on the reprocessed data. This together with the modelling showing a likely pressure communication between 9/2-8 S and Yme has resulted in an increased retention risk for the Epsilon prospect. Fig. 4.1 Fig. 4.2 Fig. 4.3 Fig. 4.4

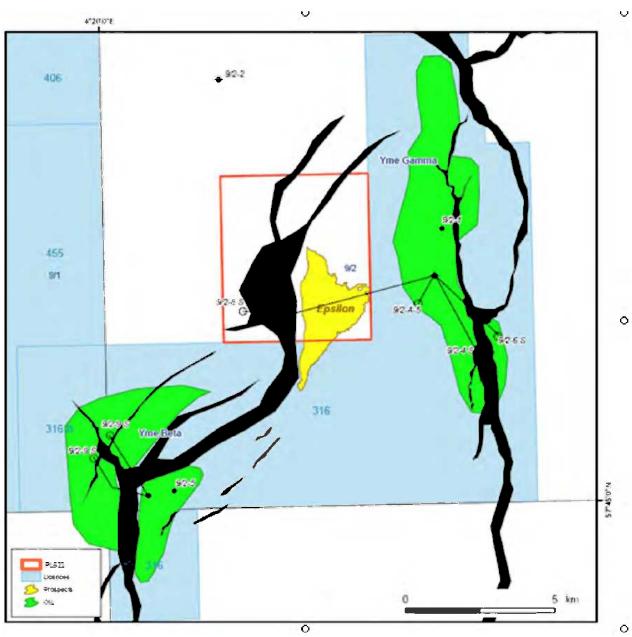


Fig. 4.1 Prospect map



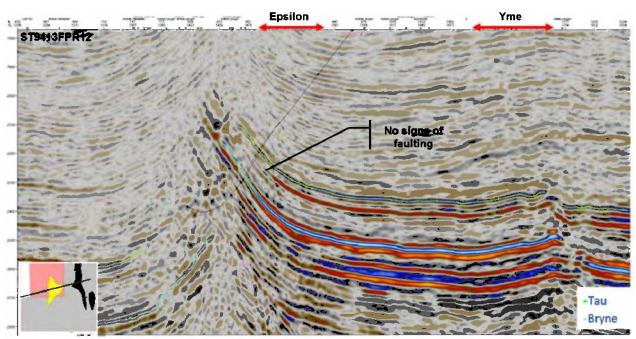


Fig. 4.2 Cross section through Epsilon and Yme

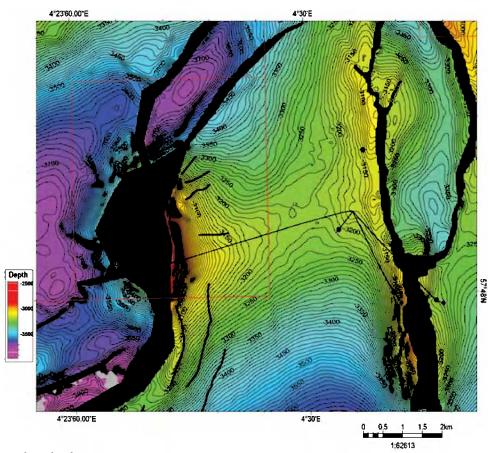


Fig. 4.3 Top Sandnes depth map



| Block                               | Pros                  | pect name                                 | Discovery             | Discovery/Prosp/Lead |                             | NPD approved?    |
|-------------------------------------|-----------------------|---|-----------------------|----------------------|-----------------------------|------------------|
| 9/2 (part)                          | Epsilon               |   | Prospect              |                      | NPD will insert data        | NPD will trasert |
| Play (name / new)                   | Structural element    |   | Company reported by   |                      | Ref. doc.                   | Year             |
| NPD will invest data                | Eger                  | sund Basin                                |                       |                      |                             |                  |
| Oil Gas case                        |                       |   |                       |                      |                             |                  |
| Oil                                 | Main phase            |   |                       |                      | Ass. phase                  |                  |
|                                     | Low                   | Base                                      | High                  | Low                  | Base                        | High             |
| Oil 10 <sup>6</sup> Sm <sup>3</sup> | 5,52                  | 14.65                                     | 27.62                 |                      |                             |                  |
| Gas 10 <sup>9</sup> Sm <sup>3</sup> |                       | 1   |                       |                      |                             |                  |
|                                     | Resources RECOVERABLE |   |                       |                      |                             |                  |
|                                     |                       | Main phase                                | Ass phase             |                      |                             |                  |
|                                     | Low                   | Base                                      | High                  | Low                  | Base                        | High             |
| Oil 10 <sup>6</sup> Sm <sup>3</sup> | 1.92                  | 5.10                                      | 9.79                  | 200                  | Bust                        | ******           |
|                                     | 1,74                  | 3.10                                      | 3,13                  | 0.10                 | 0.28                        | 0.55             |
| Gas 10 <sup>9</sup> Sm <sup>3</sup> | 1176.5.6              | -3  |                       | 377                  | -577                        | 75.7             |
|                                     |                       | tiles are used as:                        | Low.                  | P90                  | High:                       |                  |
| Type of trap                        | Wate                  | er depth (m) Reservoir Chrono (from - to) |                       |                      | Reservoir Litho (from - to) |                  |
| Downthrown Structure                | 93                    |   | Callovian - Oxfordian |                      | Sandnes - Egersund          |                  |
| Source Rock Chrono                  | Source Rock, Litho    |   | Seal, Chrono          |                      | Seal, Litho                 |                  |
| Kimmeridgian                        |                       | Tau                                       | Oxfordian - K         | immendgian           | Egersund - Tau              |                  |
| Seismic database                    | e (2D/3D):            | 2D/3D                                     |                       |                      |                             |                  |
|                                     |                       | Pro                                       | obability of discover | v:                   |                             |                  |
| Technical (oil+s                    | gas case)             | 15%                                       |                       | Prob for             | oil gas case                | 100%             |
|                                     |                       | Reservoir (P1)                            | Trap (P2)             | Charge (P3)          | Retention (P4)              |                  |
| Probability (fra                    | action):              | 0.9                                       | 0.9                   | 0.6                  | 0.3                         |                  |
| Parametres:                         |                       | Low                                       | Base                  | High                 | Comm                        | nents            |
| Depth to top of prospe              | ect (m)               | 2900                                      | 2900                  | 2900                 |                             |                  |
| Area of closure (km²)               |                       | 1,2                                       | 3                     | 6                    |                             |                  |
| Reservoir thickness (m              | )                     | 60  | 90                    | 140                  |                             |                  |
| HC column in prospect               | (m)                   | 180                                       | 270                   | 310                  | 1                           |                  |
| Gross rock vol. (10° m              |                       |   | 0.121                 | 0.286                |                             |                  |
| Net / Gross (fraction)              |                       | 65  | 78                    | 90                   | 1                           |                  |
| orosity (fraction)                  |                       | 15  | 20                    | 25                   |                             |                  |
| Water Saturation (fraction)         |                       | 25  | 30                    | 40                   |                             |                  |
| Bg. (<1)                            |                       |   |                       |                      |                             |                  |
| Bo. (>1)                            |                       | 0.75                                      | 0.77                  | 0.79                 |                             |                  |
| GOR, free gas (Sm3 /Sm              | n <sup>3</sup> )      |   | 1                     |                      |                             |                  |
| GOR, oil (Sm³/Sm³)                  |                       | 47  | 55                    | 61                   |                             |                  |
| Recovery factor, main phase         |                       | 30  | 35                    | 40                   |                             |                  |
| Recovery factor, ass. p             |                       |   | 4 7 10                |                      |                             |                  |
| Temperature, top res (              | deg C):               | 95  | Pressure, top res (t  | oar):                | 320                         |                  |

Fig. 4.4 Prospect Data:. Retention risk and overall risk has increased since the application



## 5 Technical evaluation

No new development evaluation was done in the license as the prospect could not be significantly de risked geologically.

#### 6 Conclusions

We consider the remaining potential in the PL621 license to be of to high risk to drill a well at this time. The license program has increased the risk on the Epsilon prospect which was the only prospect identified in the license.