

PL 752 Relinquishment report

Table of contents

1	Key license history	3
2	Database	4
3	Review of Geological and Geophysical studies	5
4	Prospect update report	6
5	Technical evaluations.....	9
6	Conclusions	9

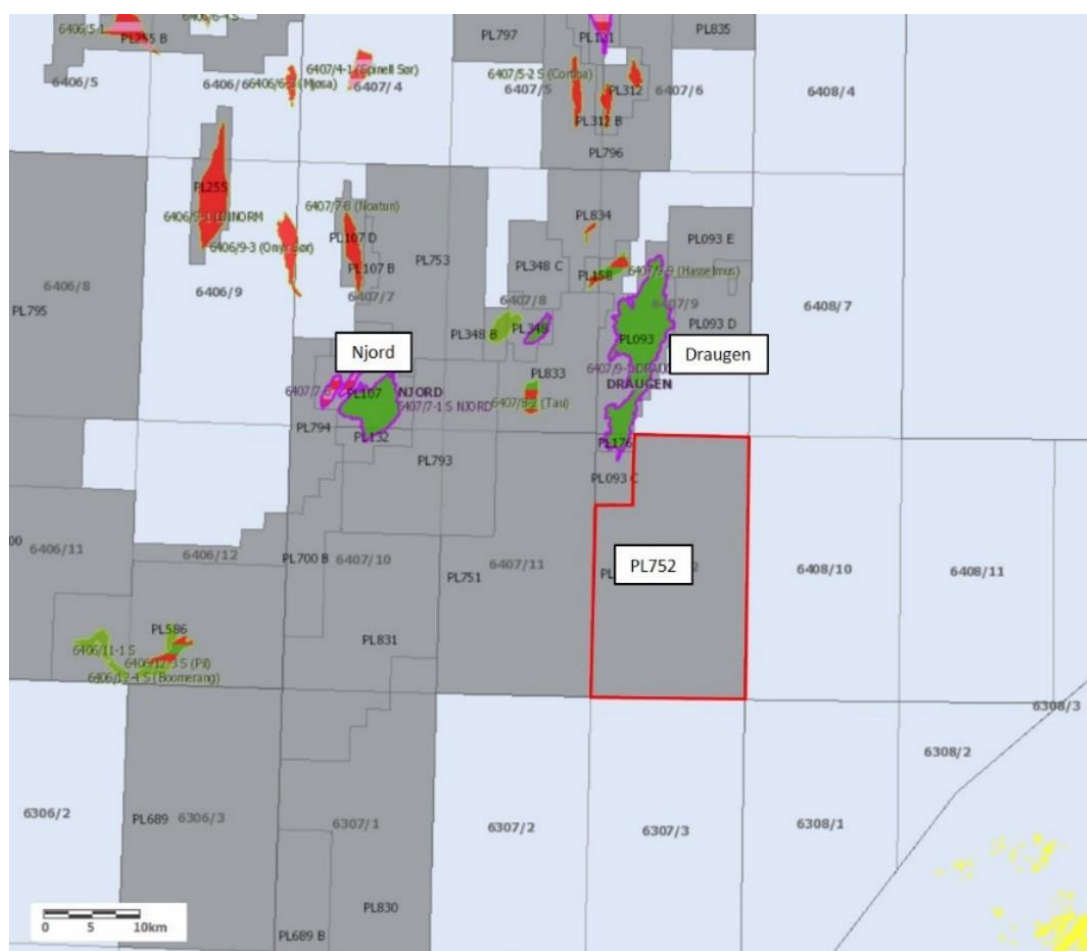


Figure 1: Area map with licenses, Njord and Draugen fields, and surrounding discoveries.

1 Key license history

License: PL752 – Block 6407/12 (Figure 1)

Awarded: February 07.02.2014 (APA 2013 award)

License period: Expires 07.02.2022 (Initial period: 8 years)

License group:

Licensee valid from date	Licensee valid to date	Company longname	Interest [%]
30.10.2015		Statoil Petroleum AS	85.000000
		Suncor Energy Norge AS	15.000000
30.09.2014	30.10.2015	Statoil Petroleum AS	45.000000
		Wintershall Norge AS	40.000000
		Suncor Energy Norge AS	15.000000
07.02.2014	30.09.2014	Statoil Petroleum AS	60.000000
		Wintershall Norge AS	40.000000

License area: 422.445 km²

Work programme: Technical G&G work: Fulfilled, confirmed by the NPD
 Acquire 3D seismic: Fulfilled, confirmed by the NPD
 Drill or drop by 07.02.2017, three years after award

Work performed:

2014: License awarded and license start-up. The license purchased approximately 982.6 km² of 3D seismic data covering the PL 752 license area in 2015, the PGS14005 survey acquired by PGS between May and September 2014. Fast track seismic was delivered in August 2015.

2015: Seismic interpretation, evaluation of the prospectivity. Petroleum Systems Analysis completed.

2016: Seismic interpretation and evaluation of the prospectivity of the license area.

2017: Drop

Meetings:

EC/MC - Start-up of license: 19.05.2014
 EC/MC - Status geological work: 22.01.2015
 EC/MC - Status interpretation: 29.10.2015
 EC/MC - Prospectivity summary: 16.11.2016

Reason for relinquishment

The main driving force of this relinquishment, based on the technical evaluation which has been carried out, is lack of economically viable prospectivity within the acreage.

2 Database

2.1 Seismic data

The common license database was approved after ECMC meeting No 3. The seismic data that was utilized in the technical evaluation of PL 752 are shown in Figure 2, and comprise the 3D seismic PGS14005 (982.6 km²), together with 2D lines. For some 2D lines, only part of the line is included in the common database for the license. The extent of each 2D line is listed in Table 1.

Table 1: Seismic data included in common database

Survey	NPDID	Type	SP (first-last)	Survey	NPDID	Type	SP (first-last)
PGS14005 (parts)	8054	3D		MNR09-447	7001	2D	8217-20722
MNR06-7110	4364	2D	6585-19250	MNR09-7098	7001	2D	3488-18897
MNR06-7124	4364	2D	4846-19200	MNR10-444	7224	2D	9685-20030
MNR07-440	4450	2D	8900-17210	MNR10-451	7224	2D	9500-19554
MNR07-7092	4450	2D	16760-17880	MNR10-7114	7224	2D	1488-18740
MNR07-7104	4450	2D	16315-18255	MNR11-90446	7389	2D	13646-29861
MNR07-7118	4450	2D	16734-18733	MNR11-90471	7389	2D	12926-29628
MNR08-436	4571	2D	7460-27353				

2.2 Well data

The well database in PL752 is given in Table 2. Well 6407/12-2 and 6407/12-3 are located within the license. Well 6407/12-3 and 6407/10-3 were used for well ties.

Table 2: Wells included in common database

Well	NPDID	Well	NPDID
6407/8-2	2434	6407/9-6	871
6407/8-3	3092	6407/10-1	1054
6407/9-1	133	6407/10-2	1497
6407/9-2	449	6407/10-3	1927
6407/9-3	469	6407/12-1	3781
6407/9-4	480	6407/12-2	6191
6407/9-5	492	6407/12-3	6370

2.3 Special studies

No special studies were carried out solely for the license, however parts of an in-house basin model and petroleum system study were included in the common database.

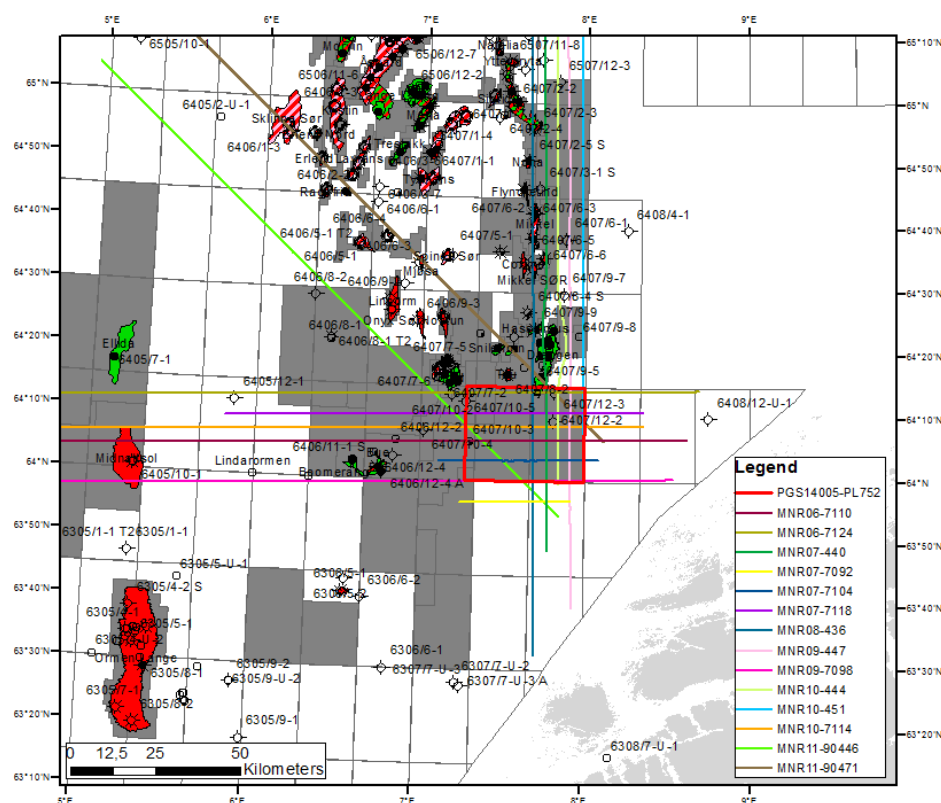


Figure 2: 2D lines and outline for 3D survey included in common database.

3 Review of Geological and Geophysical studies

A regional geological framework was described in the APA 2013 application. As part of the APA 2013 work and the following initial PL752 license work, a petroleum systems analysis and a basin modelling study were carried out. No other geological studies have been performed beside evaluation of prospectivity at all stratigraphic levels within the license area. The understanding of the petroleum system in PL752 is summarized in Figure 3

Only two wells have been drilled within the area of the license, however the Draugen-wells and a few others are located to the north and northwest of the license. Stratigraphy down to Middle Jurassic have been tested in the nearest wells and sandstones have been reported in some intervals. A fairly good understanding of the behaviour of seismic amplitudes in the area is achieved through extensive rock physics and AVO/LFP work in the neighbouring license (PL751), however, the prospective intervals in PL752 is at a shallower stratigraphic level. The PGS14005 3D seismic is not specifically acquired for the Jurassic level. The previous prospectivity in the area was mapped on 2D seismic. Key horizons from the whole stratigraphy (seabed to basement) has been interpreted on new PGS14005 3D seismic dataset.

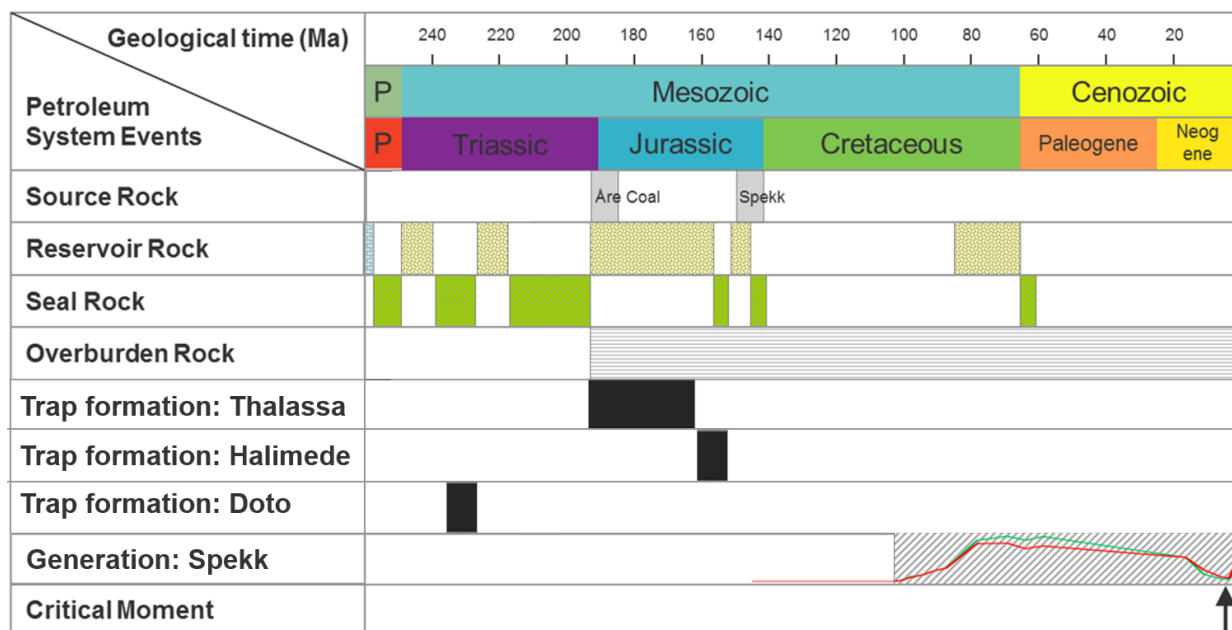


Figure 3: Petroleum system chart

4 Prospect update report

Thalassa Prospect

The Upper and Lower Jurassic plays have been the main exploration target in the PL752 license area. Identification of robust closures in the PL752 area has been difficult. The main structure is called the Thalassa prospect and is defined by two crossing faults setting up a possible closure at the Jurassic level (Figure 4 and Figure 5). The evaluated reservoir units for the Thalassa prospect include the Garn, Ile, Tilje and Åre Formations. Two scenarios for source rock and migration has been evaluated. One scenario is Spekk Formation as source rock which implies long distance migration from the Gimsan Basin. The other scenario is considering a local older source rock in the Froan Basin. Both of these source and migration scenarios will carry a high risk in the prospect evaluation. A fault seal evaluation was also carried out and this shows that trap seal also constitutes a key risk for the prospect. No DFIs have been observed and the prospect ends up with a medium volume carrying a high risk (Pg~5%, 6.8 MSm³ mean rec (oil case)).

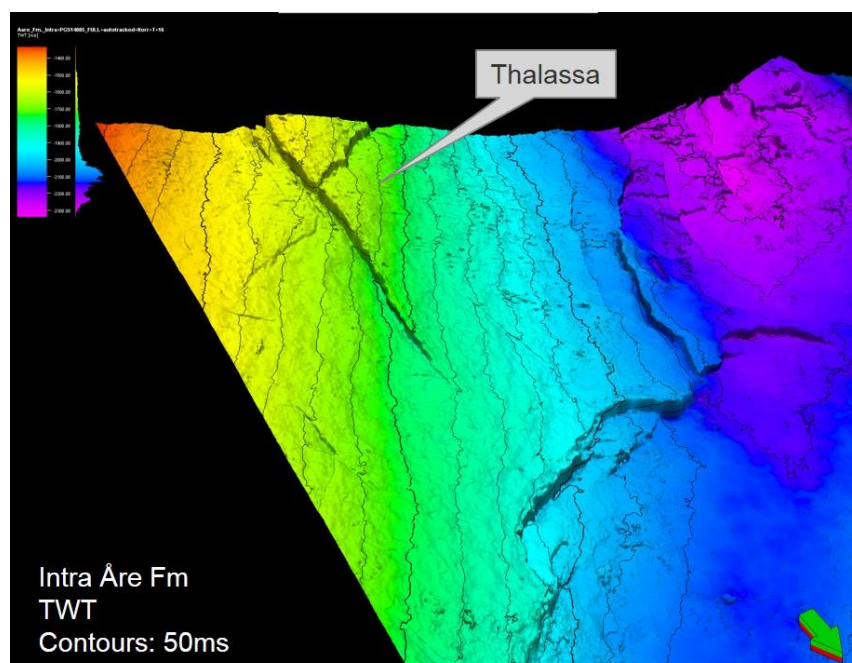


Figure 4: The Thalassa prospect is defined by two crossing faults

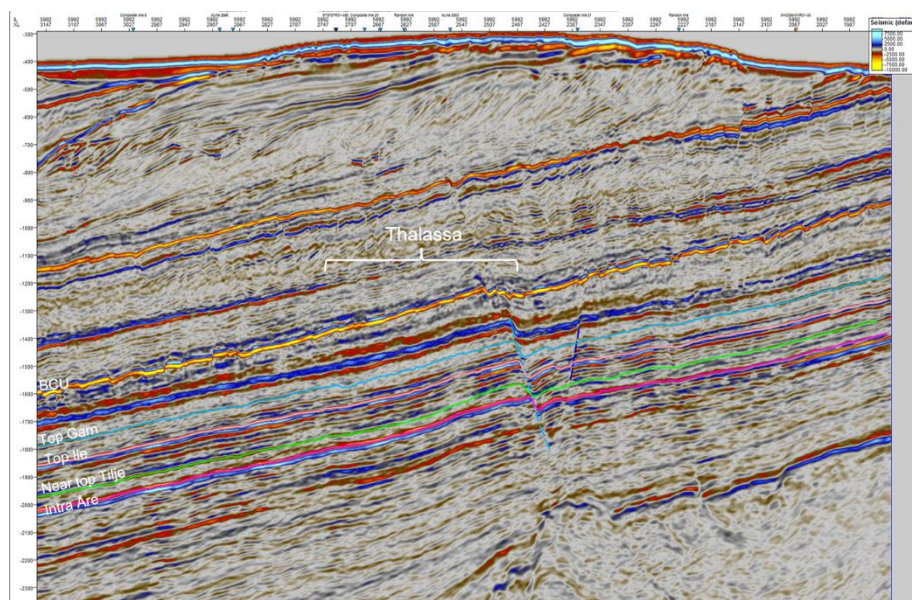


Figure 5: The Thalassa concept. Possible closure on several Jurassic levels.

Halimede Lead

The Halimede lead (Figure 6) was described in the 2013 APA application and is located in the southern part of block 6407/12. At the time of the 2013 APA application the Halimede lead was only covered by 2D seismic. The lead was defined by an AVO Class 3 at the Base Spekk horizon. The reservoir in the Halimede lead was defined as Melke Formation sandstones, stratigraphically trapped within Melke Formation shales. Migration was identified as the key risk, as the Halimede lead is located in the eastern

part of the area. This area was believed to be located in the migration shadow from basin modelling and general basin understanding. The Halimede lead was identified on poor 2D data and there was great uncertainty and low confidence in the observed AVO response. The new 3D seismic (PGS14005) is of better quality than the previous 2D seismic and gives a better picture of the area. The AVO class 3 response defining Halimede has not been observed and the Halimede lead has not been identified on the new 3D seismic (PGS14005).

Doto Lead

The Doto lead (Figure 6) was in the 2013 APA application described as a sub-salt lead developed from the conceptual idea of sands deposited in the hanging-walls of intra-Triassic half grabens, akin to the onshore analogues that developed in east Greenland. Such intra-Triassic half grabens are mapped on seismic from the Froan Basin. In northeast Greenland, the early Triassic represents a period of active rifting (Seidler, 2000; Oftedal et al. 2005). Within the Griesbachian Wordie Creek Formation, shallow to deep marine sandstones are accumulated in the hanging-wall of intra-basinal faults. Bugge et al. (2002) and Muller et al. (2005) interpret similar sandstones to be present in the Helgeland and Froan basins where they can act as reservoir rocks. A mentioned the Doto lead was based on a conceptual idea, the new 3D seismic does not give more information supporting the concept and the Doto lead has therefore not been identified on the PGS14005 dataset.

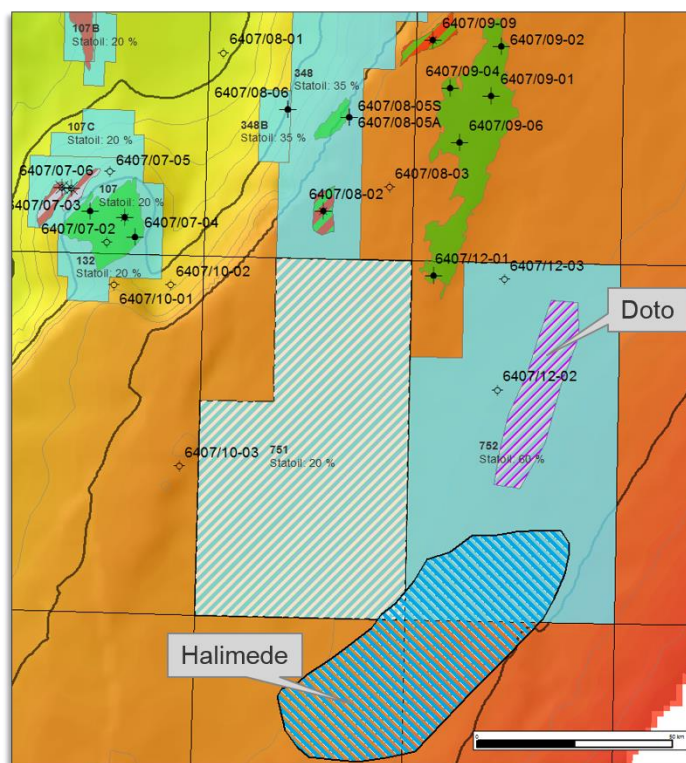


Figure 6: Halimede and Doto leads.

5 Technical evaluations

The closest infrastructure to tie-in a discovery in PL752 would be the Draugen Field. No technical economical evaluation has been performed on the Thalassa prospect due to a medium volume potential and a low probability for a discovery.

6 Conclusions

The Upper and Lower Jurassic has been the main target of exploration in PL752. Identification of robust closures within the license has proven difficult. The main prospect Thalassa is defined by two crossing faults making a possible closure at the Jurassic level. No DFIs have been observed, and the prospect has a general high risk. The Halimede and Doto leads described in the 2013 APA application have not been identified on the new PGS14005 3D seismic. Due to the lack of economically viable prospects, it has been decided to drop the PL752 license.