



Relinquishment Report

for
License PL795

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1. History of the production license

Total applied for PL795 during the 2014 APA. PL795 was awarded to Total E&P Norge (40% operator), Statoil – now Equinor (20%), Centrica -now Spirit Energy (20%) and Petoro (20%) on 6th February 2015 with a Drill or Drop decision had to be made within two years. The license DoD deadline was firstly extended to the 06th February 2018, to integrate the results of the Jasper well since it was believed that could have impact on both prospect de-risking and business case scenarios. Subsequently, additional 4 months extension was requested to authorities to have sufficient time to fully integrate the results of Jasper well (dry gas discovery with CO₂).

The license PL795 is located in the Norwegian Sea, in the Haltenbanken Platform. The License covers an area of 868 km² in water depth of approximately 350m. All commitments (3D seismic acquisition and G&G studies) were fulfilled.

Considering the prospective evaluation update on the PL795 license, following Jasper well results; neither materiality nor value was highlighted on the license. Therefore, TEPN proposed to the partnership not to drill in PL795 and as a consequence recommended to surrender the license. A map showing the licence outline of PL795 with outer boundaries of prospects can be found in **Figure 1**.

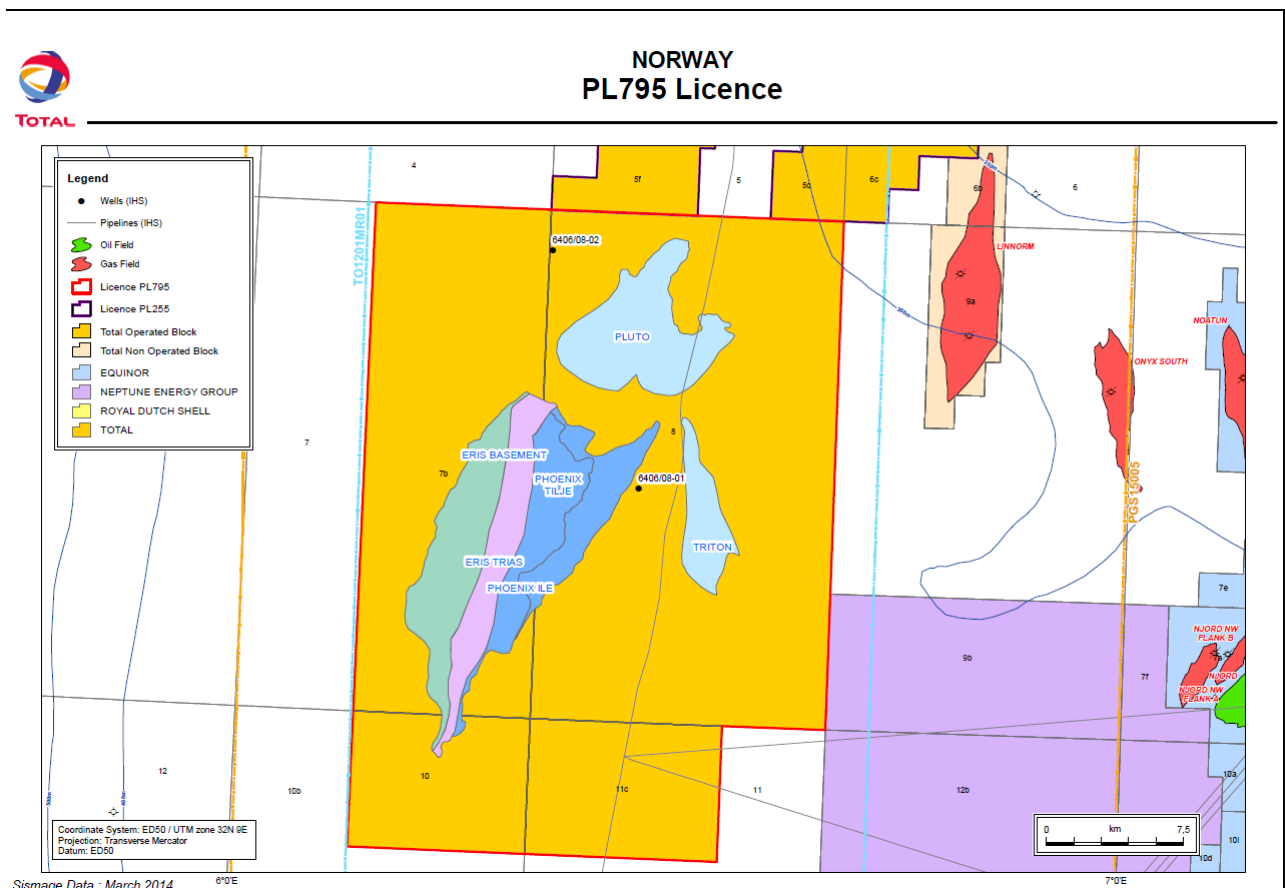


Figure 1: Map showing license outline, prospects and discoveries outlines.

For an overview of license meetings, see **table 1**:

Date	Meeting		
	EC	MC	WM
16.04.2015		x	
11.11.2015	x	x	
08.01.2016			x
14.01.2016			x
26.05.2016	x		
23.06.2016		x	
02.11.2016	x	x	
15.02.2017			x
16.06.2017	x	x	
05.10.2017			x
21.11.2017	x	x	
05.06.2018	x	x	
27.11.2018	x		
06.12.2018		x	
14.05.2019	x	x	

Table 1: Overview of license meetings held

2. Database overviews

The common license database, agreed by the license partners, consists of semi regional well data and different vintages of 3D seismic data. The common license database is itemized in **Figure 2** and includes the following:

- 1- Thirteen wells, see list in **table 2** here below

Wells	Name	Comple-ted date	Drilling Operator	TD (m, TVD RKB)	TD stratigraphy	Content	Content stratigraphy
6406/8-1	Grete	1988	Elf	4910	Åre	dry	Mid-Lower Juras.
6406/8-2	Hans	2007	TOTAL	4700	Tilje	dry	Mid-Lower Juras.
6406/11-1S		1991	Saga	4131	Red bed	oil shows	Mid-Lower Juras.
6406/12-1S		1991	Dan Norsk	3891	Melk	dry	Upper Juras.
6406/12-2		1995	Dan Norsk	4363	Melk	dry	Upper Juras.
6406/12-3S	Pil	2014	VNG	3788 (md)	Mid Juras.	Gas, Oil	Upper Juras.
6406/12-3A	Bue	2014	VNG	4356 (md)	Mid Juras.	Oil	Upper Juras.
6406/12-3B	Pil Appr.	2014	VNG	4315 (md)	Mid Juras.	Oil	Upper Juras.
6406/5-1-T2	Tott east	2002	Shell	4684	Tilje	Gas Cond.	Mid-Lower Juras.
6406/9-1	Linnorm	2005	Shell	5077	Åre	Gas	Mid-Lower Juras.
6407/10-1		1987	Norsk Hydro	3346	Gray bed	dry	Upper Juras.
6407/10-2		1990	Norsk Hydro	3824	Tilje	dry	Upper Juras.
6507/11-11	Zumba	2015	Tullow	2900	Mid Juras.	dry	Upper Juras.

Above are identified key wells. All other public well information in the area are also part of the common license data base

Table 2: List of wells included in the common database

2- 3D seismic data

Two 3D seismic data

PGS15005 (PSDM and PSTM full stack, angle stacks): 1000 km² covering the PL795 license and connecting to PGS14005 (indicated by purple outline in **Figure 2**).

PGS14005 (PSTM full stack and angle stacks): 500 km² covering the Pil and Bue discoveries (Fenja Field) as important calibration for the upper Jurassic prospect (indicated by light green outline in **Figure 2**).

3- Studies

“South Halten Terrace and Møre Basin Stratigraphic database” by Ichron/RPS.

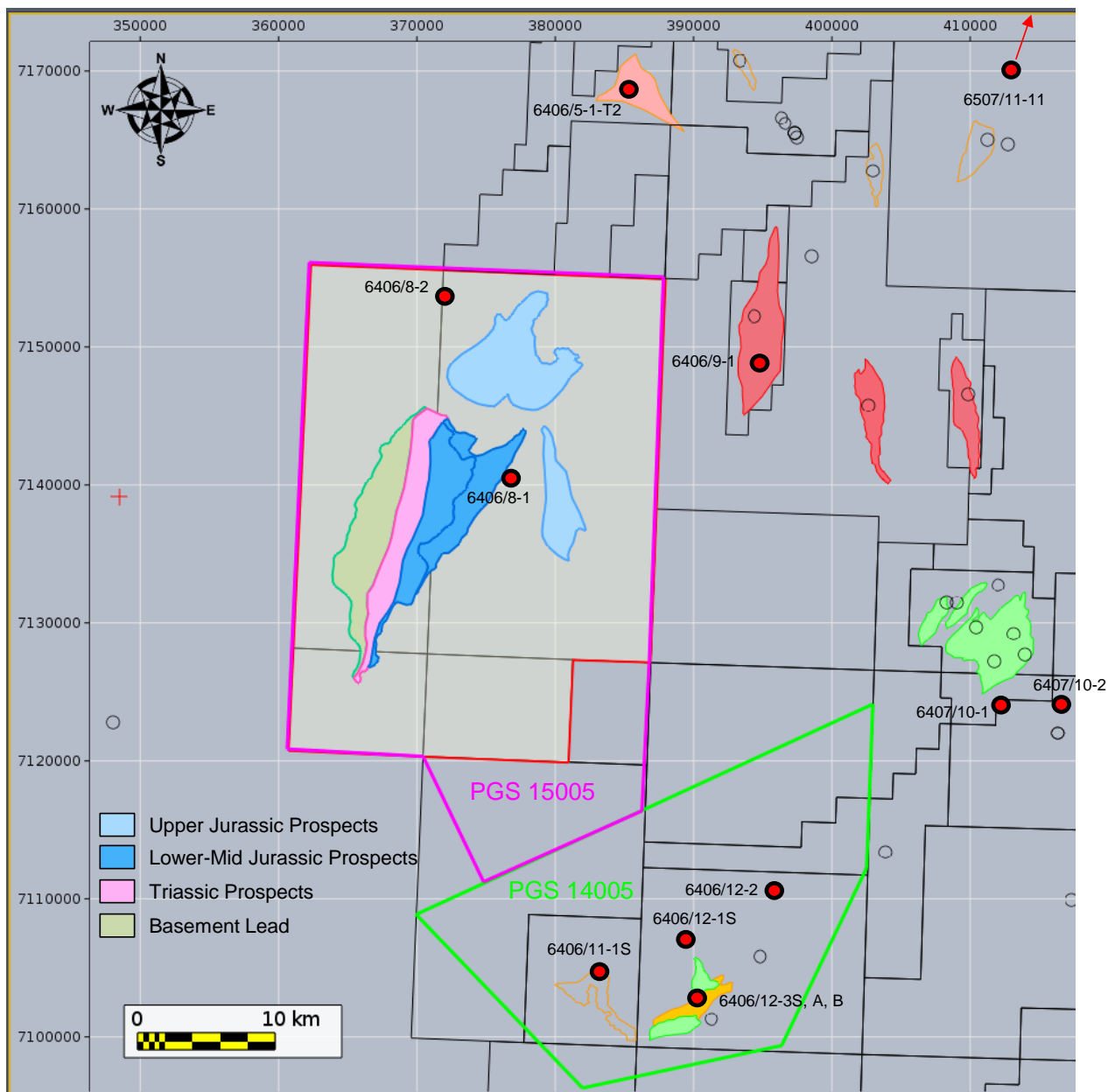


Figure 2: Common license database including seismic outlines and wells.

2.1. Seismic data

Due to the quality of the existing data on the license upon license award, the PL795 partnership licensed the geostreamer PGS15005 dataset which fully covers the license. The survey was acquired by PGS in 2015 and then processed to PSDM in 2017. Despite it being a multi-client product, TOTAL followed the processing closely and had an input in the final velocity model build to satisfy the pre-BCU target objectives within the license. The seismic is generally of very good quality with only local degradation due to complex geology (severe faulting) and masking effects (gas cloud). Angle stacks up to 55° are available.

Below (**table 3**) is a list of studies both geological and geophysical that have been carried out on the license since the award of the license in 2015.

Date	Action or study
02/2015	PL795 Award
04/2015	First License meeting
06/2015	Approval of Work Program by partnership
05-08/2015	PGS15005 Seismic acquisition (1000km ² over common License database area)
08/2015	PGS15005 Processing Kick of Meeting
09/2015	Delivery of PGS 14005 Data processing report
12/2015	Rock Physic Modeling over Upper Jurassic Interval completed and provided to partners
05/2016	Priority area PSTM Project completion
05/2016	AVO Mid Jurassic and Upper Jurassic study preliminary results
08/2016	Full Area PSTM (Kirchoff) completion
09/2016	Ichron Regional Biostratigraphy Study (upper Jurassic) completed
09/2016	Full Area PSDM (Beam & Kirchoff) completion
11/2016	Sonic validation and PEM delivery
10/2016	Full and sub stacks delivery
01/2017	PGS 15005 Data processing report & Final Full Stack denoised cubes delivery
01/2017	AVO Upper Jurassic Study completion
03/2017	Seismic Interpretation on Final cubes launched (for Basement, Triassic, Mid Jurassic and Upper Jurassic prospects assessment)
10/2017	AVO Mid Jurassic Phoenix Prospect completion

10/2017	Revised prospect volumetrics based on final PSDM presentation to partners
11/2017	CSEM feasibility Study over Mid Jurassic Phoenix prospect
11/2017	Phoenix Field development preliminary Study
11/2017	AVO 2017 Cube provided to partners
01/2018	Phoenix Prospect Preliminary development Study
01/2018	Request for One year extension submitted
04/2018	One year extension granted by MPE
11/2018	Seismic Inversion Study completed
01/2019	Request for 4 months extension submitted
02/2019	Inversion Feasibility Study
03/2019	Quality Control Review of Prospects assessment with Total HQ
04/2019	Update on Business Case focused on Gas Triassic and Tilje prospects
06/2019	Notification on drop decision

Table 3: Studies (geological and geophysical) carried out on license.

2.2. Well data

A significant number of wells have been drilled in the vicinity of the license and two wells drilled within the license: 6406/8-1 (Grete) 6408/8-2 (Hans). The main targets were classically the Middle Jurassic Garn and Ile Formations and the Lower Jurassic Tilje and Åre Fm. Those wells have been used for calibrating the seismic data and to derive reservoir properties and HC columns.

The Grete well, dry hole 6406/8-1 (4000m burial & HPHT, 785 bar/160°C) drilled downdip of the Phoenix tilted panel is the main analog. It found shally Garn and water bearing Ile. A DST was performed in Ile that has flowed Gas with CO², which is considered as dissolved in reservoir conditions. Ile has been fully cored and shows fair porosity (14.5% average) but average very low permeability (<0,5mD). Tilje presents fair to good porosity (16% average). Pressure pre-tests show good mobility in Lower Tilje while Upper Tilje appears tight.

The key wells for the license and prospect evaluation are listed in **table 2** in the database section.

3. Results of geological and geophysical studies

3.1. Geological Studies

3.1.1. Source Rock

PL795 is located in a proven O&G province. The SR maturity, fetch area and likelihood to produce CO₂ were considered during the license prospectivity assessment. There are at least two proven SR that can source all the prospects (**Figure 3**):

a) The Lower Jurassic Åre with widespread distribution and located in Gas or overmature window. This SR, Type III, is gas prone and is assumed having contributed to the charging of dry gas discoveries (GCR >50000 Sm³/m³).

b) The Upper Jurassic Spekk/Melke SR, mostly located in paleo lows created during Jurassic Rift. These SR are today in Gas, G&C windows and are at the origin of the charging of G&C important fields, like Lavrans, Kristin and small discoveries (Tot-East) GCR~1000 Sm³/m³.

c) The Cretaceous SR could also be considered even if more unlikely. It is inferred to have generated oil by a few wells calibrations (the closest one being Ellida) from biomarkers and maturity. Cretaceous SR could be present west of the Sklinna ridge in the deeper Møre Basin developing to the west of the License PL795, however it is likely on the Gas window in the license near vicinity.

A contribution of both Åre and UJ SR is expected for all the prospects. This dual contribution initially seemed to have been confirmed by Jasper well.

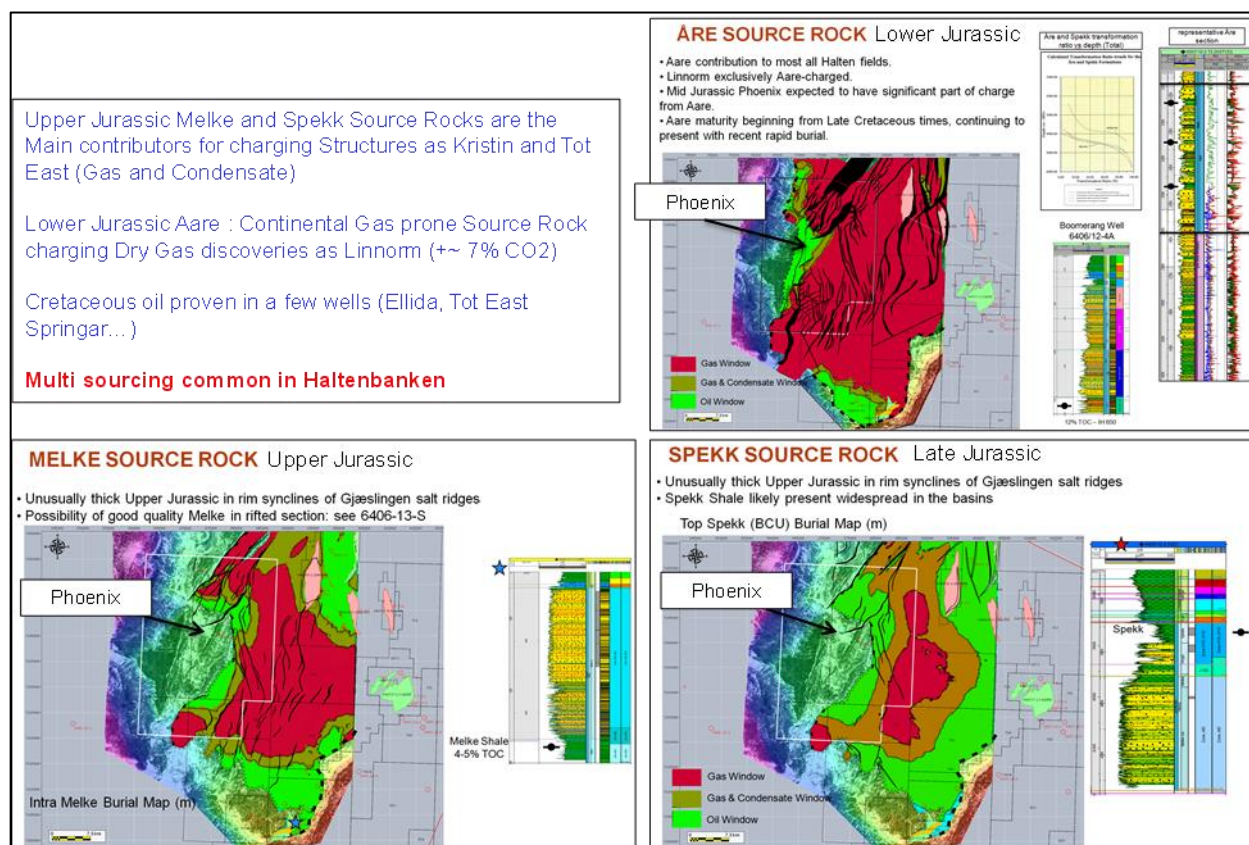


Figure 3: Result of SR maturity assessment with respect to Source Rock presence and maturity

The near-by discoveries (ex: Noatum, Onyx S, Linnorm and Jasper) have proved lean gas with CO₂ (5-7,5%), Linnorm being a significant Gas discovery with stacked reservoirs filled to Spill. The discoveries share likely the same kitchen and are believed to have been charged mainly by the Åre Source Rock. This SR is invoked to MJ/LJ fluid assessment as more likely source.

Other accumulations, oil bearing, are located at the edge of the Haltenbanken : Njord (Mid Jurassic), Draugen and Pil/Bue, Upper Jurassic, charged by Upper Jurassic SR which is of lower maturity at the edge of the basin. Therefore, the UJ prospects, directly interbedded within this SR, are believed to hold G&C fluids.

3.1.2. Pressures and Column height

A semi-regional review of well results in term of column height and pressure was carried out. Since, a considerably large amount of wells targeting Middle and Lower Jurassic reservoir have failed in the area, encountering only small columns or residual HC. The main reason of failure is, without ambiguity, due to seal failure that breached during the Plio-Pleistocene Post glaciation uplift.

The pressure measured in these wells allowed to build a Maximum Pressure Trend (MPT) curve above which the crest have blown and the traps leaked. Sealing remains the main risk for MJ/LJ prospects as their crests are very close to the MPT (**Figure 4**). This is not the case for UJ prospects even though the seal is still risky for these prospects for other reasons.

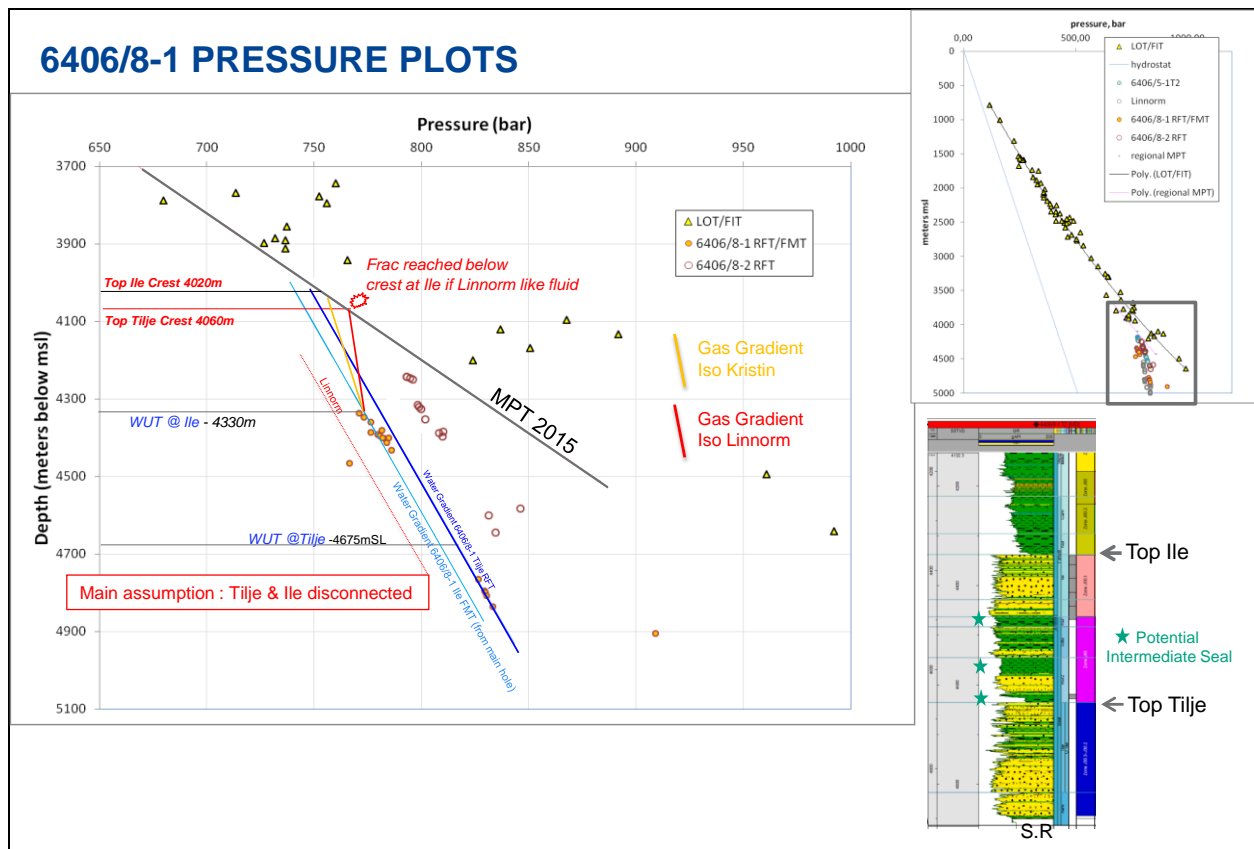


Figure 4: MPT Pressure Trend – illustration of expected MJ/LJ crest and expected HC columns in Phoenix Ile Prospect

3.2. Geophysical Studies

An Elastica inversion intended to discriminate reservoir quality and possibly fluid effects was carried out in Q3/Q4-2018 using PGS15005 dataset, previously an AVO discrimination study was carried out in 2017.

The main calibration point for both studies was the 6406/8-1 well. What it was highlighted is that the top Ile reflector shows a weak amplitude/AVO anomaly up-dip from this well (**Figure 5**). On PGS15005 data the amplitude dims up-dip on the Nears and changes the polarity on the Fars (i.e. IIP AVO Class). The 1D modelling shows that this polarity reversal could be observed with either the presence of up-dip gas column or a significant increase in porosity (main pitfall). The observed AVO seismofacies anomaly is fairly weak and patchy, with some anomalies outside of the closure.

The inversion results allowed to remove the wavelet effects from the seismic response and tie it more directly to the well log response on Linnorm (6406/9-1 and 6406/9-2), Hans (6406/8-2) and Grete (6406/8-1) wells. While the absolute inversion results contain a strong imprint of the burial effect, the relative inversion results showed that Ile in the up-dip position from the Grete well:

- a) does not develop into blocky Lower Ile sand, however
- b) shows elongated feature associated with the presence of a possible tidal channels. Moreover, and to the same effect, a pseudo-porosity cube from the elastic inversion also indicates this potential for improved reservoir quality up-dip (**Figure 6**), which has been incorporated in the risking as well as porosity distribution aspects of prospect evaluation.

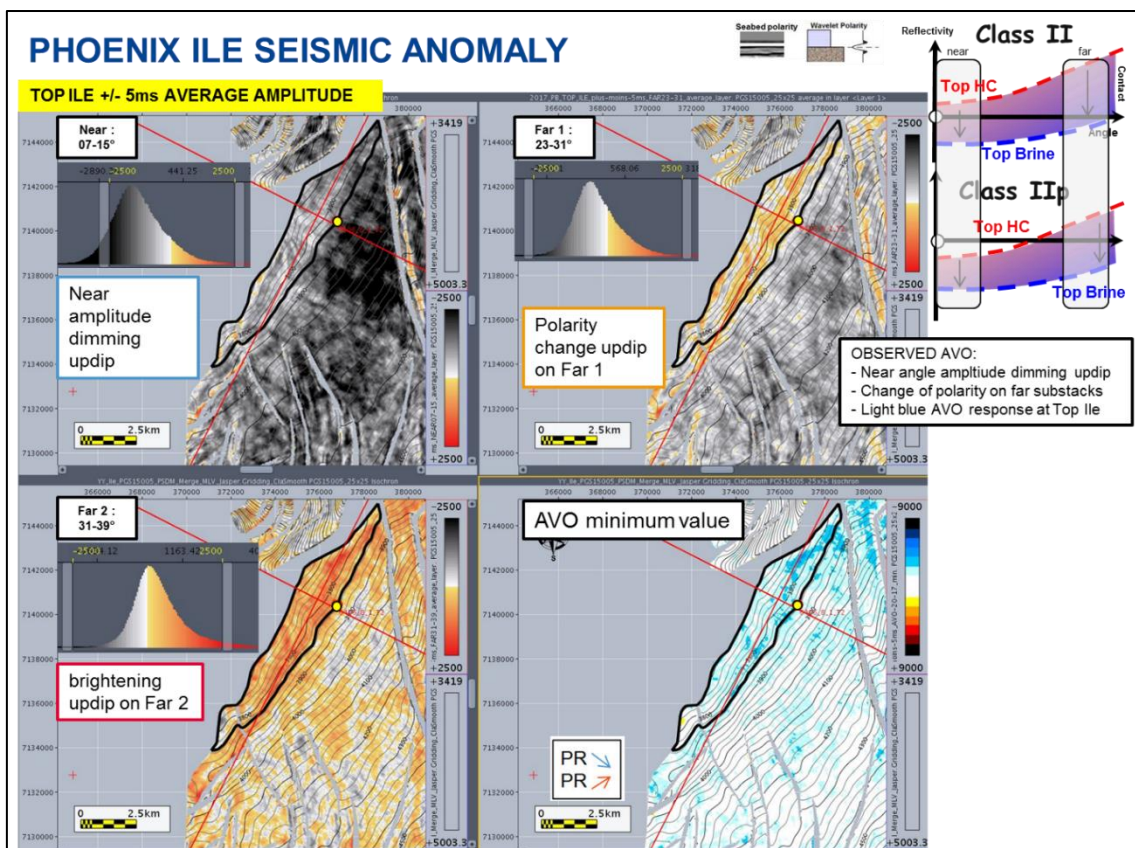


Figure 5: Result of AVO investigation over Phoenix Ile prospect

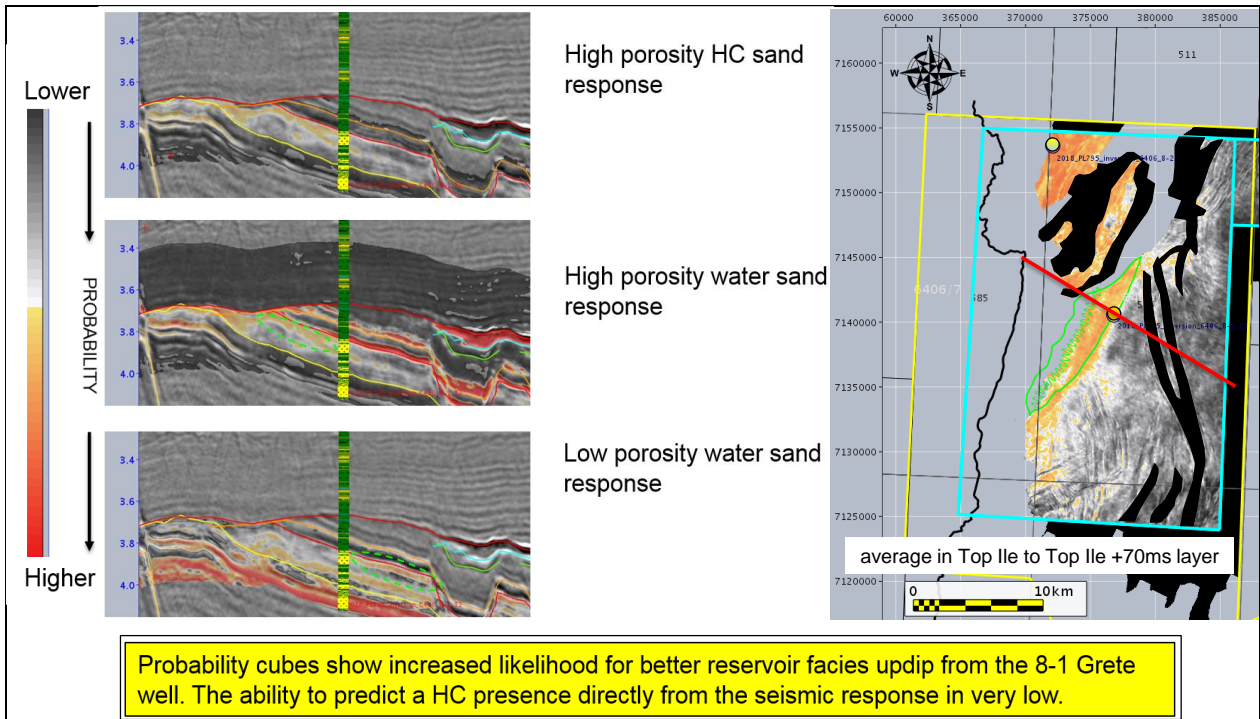


Figure 6: Elastic inversion result over Phoenix Ile prospect : Pseudo porosity and fluid cubes

4. Prospect update

The identified prospectivity at the beginning of the license from the partner companies was presented at the first MC meeting held in 2015 (**Table 4**). The key prospectivity was identified in the Jurassic intervals. Following the early 2014, significant oil discovery of Pil/Bue (Fenja) made in Upper Jurassic reservoirs by VNG in the nearby License PL586, approximately 40km SE 6406/8-1 well, decision was taken to concentrate on the maturation of this prospectivity.

Prospect name	Fluid	UMR (Mboe) (P90/P50/P10 – Mean)	PG (%)	Main Risk
UJ Phoenix Rogn North (PLUTO)	G&C	86/ 170 / 302 – 185	15	Reservoir Presence
UJ Phoenix Rogn South (CHARON)	G&C	53 / 102 / 178 - 110	12	Reservoir Presence
MJ Phoenix ILE	G&C	69/ 121/ 204 – 130	22	Seal & Reservoir quality
LJ Phoenix TILJE	G	55 / 120 / 204 - 126	17	Seal
Phoenix Grey Beds (Eris Trias)	G&C	86 / 185 / 339 - 202	4	Seal & Reservoir Presence
Phoenix Bst (Eris Basement)		Notional-No Evaluation		

Table 4: Initial Resources (All values are based on P90-P50-P10 volumes as reported in the APA application for the licence in 2014).

However, based on detailed evaluation of UJ prospects using AVO with the latest PDSM data, this prospectivity was downgraded, as there was no AVO support for those prospects and volumes reduced. The focus then moved to the original license prospectivity, the MJ Phoenix prospect. Additional prospectivity was evaluated during the license period on the Basement.

After the drilling of Jasper well the prospectivity of the block was re-evaluated, as the well provided a valuable calibration point in the near vicinity in terms of fluid type. Furthermore, it had an impact on the column assessment of the license prospects.. The remaining prospectivity considered on the license is presented in the sections below (Figure 7) and in **table 5**.

Prospect name	Reservoir (objective)	Fluid*	UMR (Mboe) (P90/P50/P10 – Mean)	PG (%)	PO fluid (%)	Main Risk
TRITON	Rogn - Upper Jurassic	G&C	13/ 41 / 97 - 49	36	100	Reservoir P. - Seal
PLUTO	Rogn - Upper Jurassic	G&C	4 / 29 / 134 - 52	15	100	Reservoir P.
PHOENIX	Ile - Middle Jurassic	Lean G	14 / 59 / 126 - 66	20	70	Reservoir Q. / Seal
PHOENIX	Lower Tilje - Lower Jurassic	Lean G	22 / 75 / 197 - 96	40	100	Seal
ERIS	Triassic	Lean G	22 / 82 / 192 - 97	14	100	Reservoir P. / Seal
ERIS	Weathered Basement	Lean G	2 / 13 / 42 - 19	11	100	Reservoir P & Q.
ERIS	Fractured Basement	Lean G	2 / 21 / 67 - 29	11	100	Reservoir P & Q.

* G&C – Gas & Condensate iso Kristin – Lean Gas: Intermediate Linnorm/Kristin

Table 5: Prospective resources considered remaining on PL795 at time of surrender.

Sea-Bed to Cretaceous:

No prospectivity has been identified in the License in this interval.

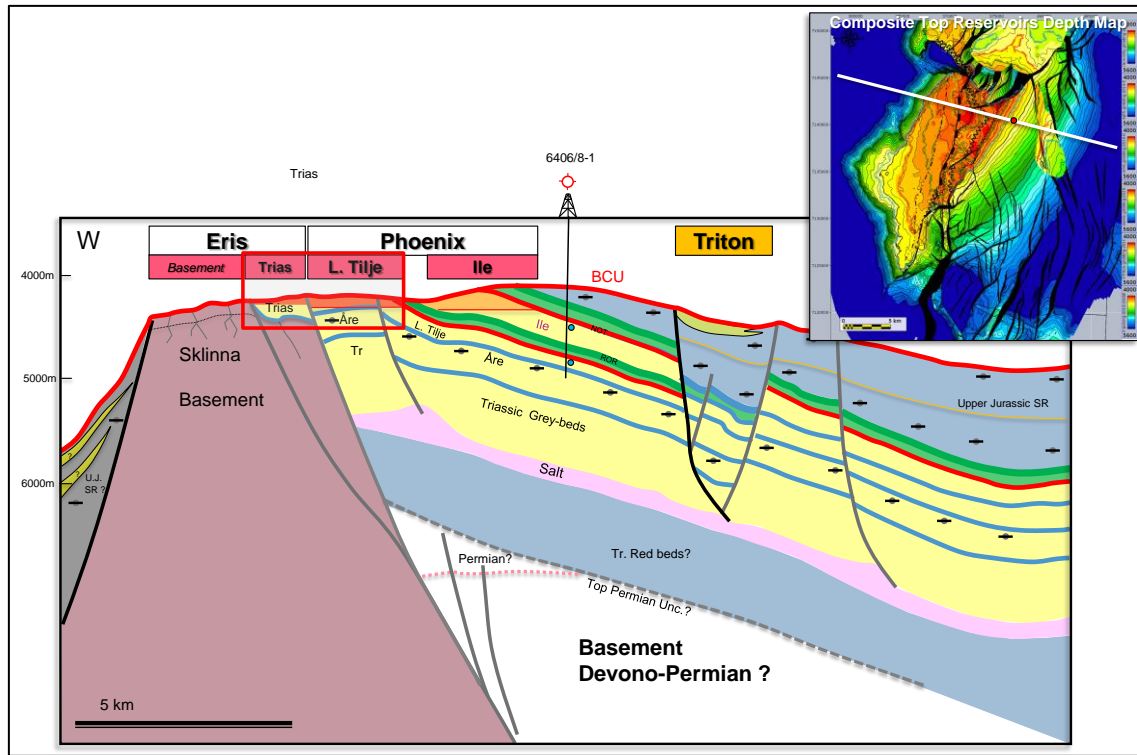


Figure 7: PL795 License pre-BCU prospectivity - Geosection

Upper and Middle Jurassic

PL795 contains the following Jurassic prospects:

Triton and Pluto Prospects UJ Reservoir (Rogn Sands): The new Broadband PGS15005 PSDM, and all the available data (logs, cores pictures, reports) from Pil/Bue wells were used for seismic facies calibration. Amplitude and spectral decomposition maps show that Volgian Rogn sand could be present in PL795, fringing the East of Sklinna Ridge and could be preserved in the Paleo depressions (see **Figures 7 & 8**). Two prospects were matured (Pluto and Triton) and one prospect discarded (former Charon) as the Volgian interval at its location appears clearly eroded by the BCU on the new seismic dataset.

Combined low AI and low V_p/V_s ratio values from the elastic inversion, which are considered diagnostic of sand presence, have indeed been observed to largely coincide with the interpreted extent of Pluto and Triton prospect. However, due to the limited well control as well as band limited seismic resolution problems (top reservoir just below the BCU), the elastic inversion results cannot provide a significant uplift on the perceived reservoir presence risk element.

Even though, reservoir presence and quality remain the main risk of these prospects, since similar amplitude anomalies in Upper Jurassic Shale SR have been targeted in multiple basins without encountering any reservoirs (Pankacke basin, Intra-Melke Unc. drilled by Jasper recently).

Sedimentology and seismic indicate that the Melke Oxfordian sand encountered by Pil/Bue wells are likely geographically restricted to the area along the Vingleia Fault system (coarse grained and gravels slope apron deposits). Melke Sand presence seems then unlikely in PL795. Using this information the prospects have been assessed as stratigraphic traps, with the risk of sand presence being the most important.

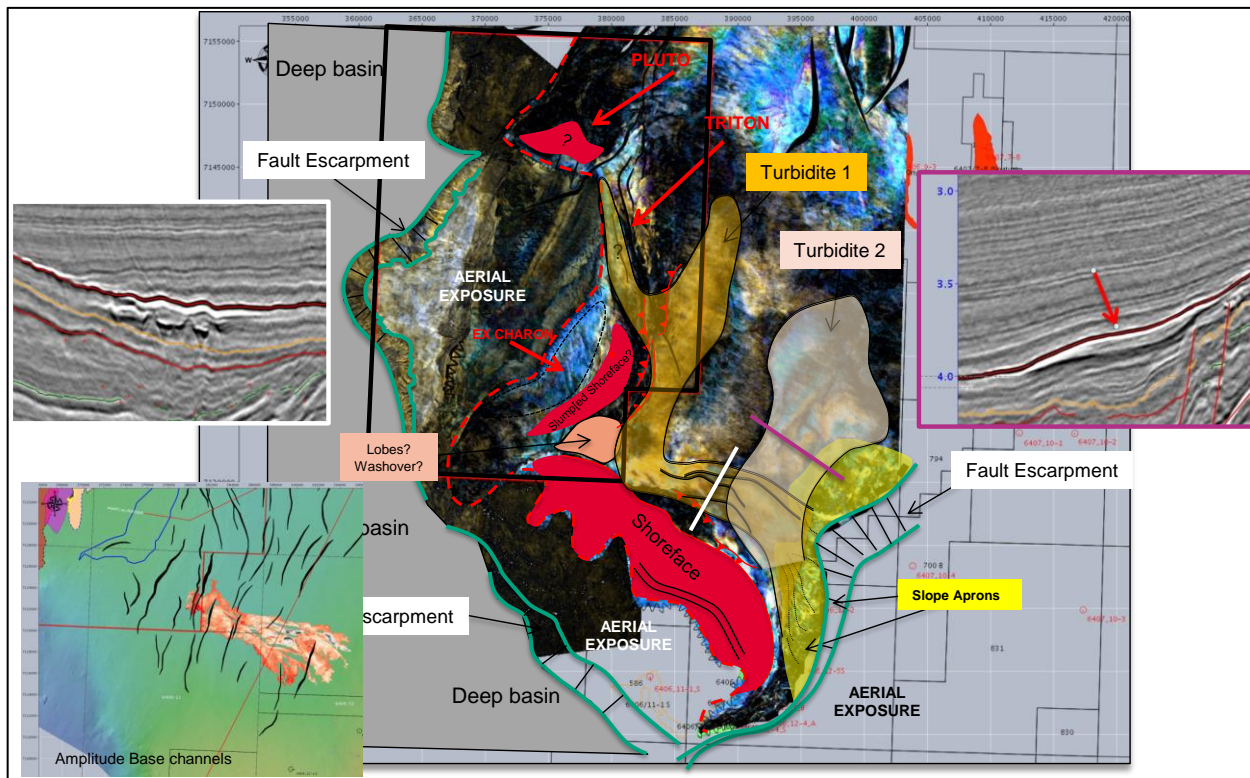


Figure 8: Upper Jurassic spectral decomposition map overlain by interpreted depositional environments and indicating that Upper Jurassic Sands could be present in PL795.

Phoenix MJ Ile reservoir: The Middle Jurassic “Phoenix Ile” prospect is the attic to 1986 Elf dry hole 6406/8-1 with very risky reservoir quality and vertical seal, **Figure 9**. The well encountered water bearing Ile with gas shows and produced water with dissolved gas from a DST. The pressures measured are uncertain due to the low reservoir mobility. Nevertheless they show a global alignment toward a water gradient and are in line with the pressure measured during the DST. Considering those pressures, and accounting for the calculated crest depth, a HC column could still be possible updip of the well (~250m P10).

The well encountered porous Ile reservoir (14% average) but with low permeability (0.5 mD average). This degraded reservoir quality seems related to Ile facies (tidal flat with low tidal channels development), while the channel facies, displaying regionally good permeability above 10mD are generally well developed and quite thick in nearby wells. Inversion results showed the possibility of the development of a tidal channel updip of the well. This observations were the basis for the current prospect assessment.

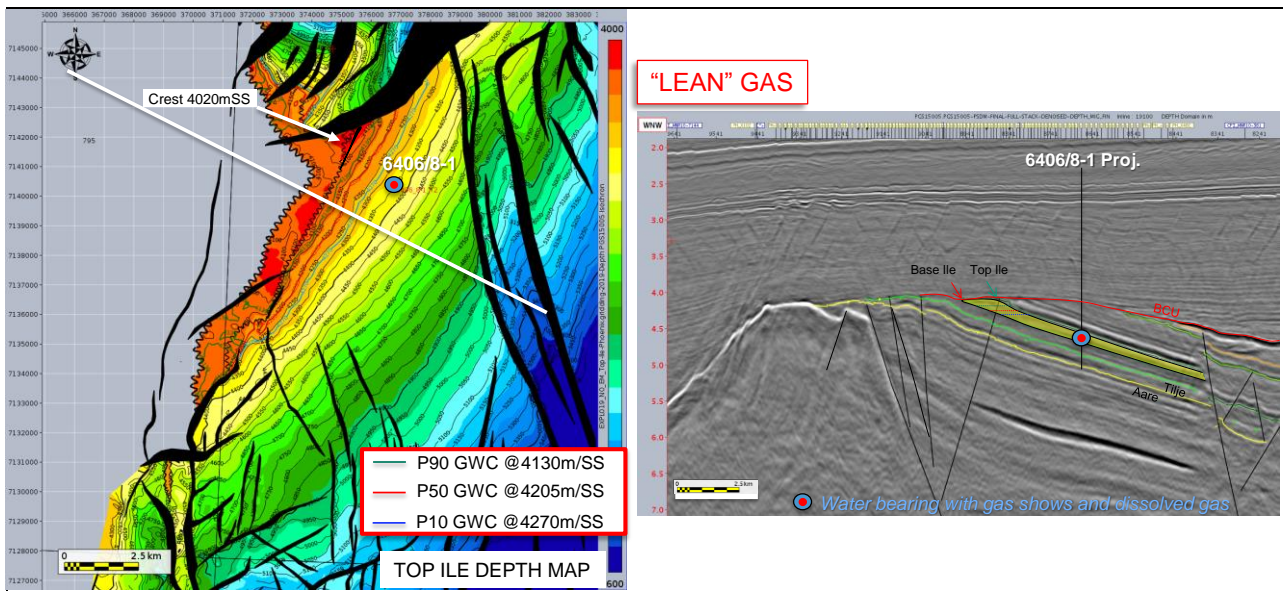


Figure 9: Phoenix Ile Prospect

Phoenix LJ Tilje reservoir: This prospect also represents the attic potential (280m P10) of 6406/8-1, **Figure 10.**

Phoenix Tilje main risk is vertical seal (risk of breached vertical seal at frac pressure). Lateral seal due to its juxtaposition to Triassic through a fault is not considered as the accumulations are described as sharing the same contact and the same vertical seal. Tilje reservoir is widely distributed and 6406/8-1 well the development of good reservoir properties in the Lower part of the formation. Main reason why Tilje is considered the most attractive prospect in the License.

To be noticed that both prospects have not been aggregated as not fully vertically stacked, the apex being laterally shifted, both could not be targeted by a single well.

Triassic

PL795 is characterized by the presence of a large basement high, called Sklinna Ridge (~120km²). The top of the basement is strongly and sharply eroded indicating that this area has likely been emerged during a long period of time (peneplanation surface). Along the Eastern edge of the ridge and overlying the top basement, a clear transparent package can be distinguished. Seismic interpretation shows that this layer could correspond to Trias deposits stratigraphically equivalent to post salt sediment observed in the basin eastward.

Triassic wells analogs can be found in the Frøya High, ~30km from Eris and a well 6406/1-2 drilled on the Ridge that can represent a likely good analog of PL795 Basement high. Trias in this well corresponds to fluvial deposits. Core data shows that porosity and permeability could be preserved at Eris Trias burial. However, other well penetrations show also tight reservoir. Reservoir quality is then a risk (40%). Vertical Seal risk is also high, as for the Ile and Tilje prospects. Triassic prospect is described as communicating with Tilje prospect and share the same contacts and seal risk. Both Tilje and Trias prospects are included in a large 4 way dip closure (**Figure 10**).

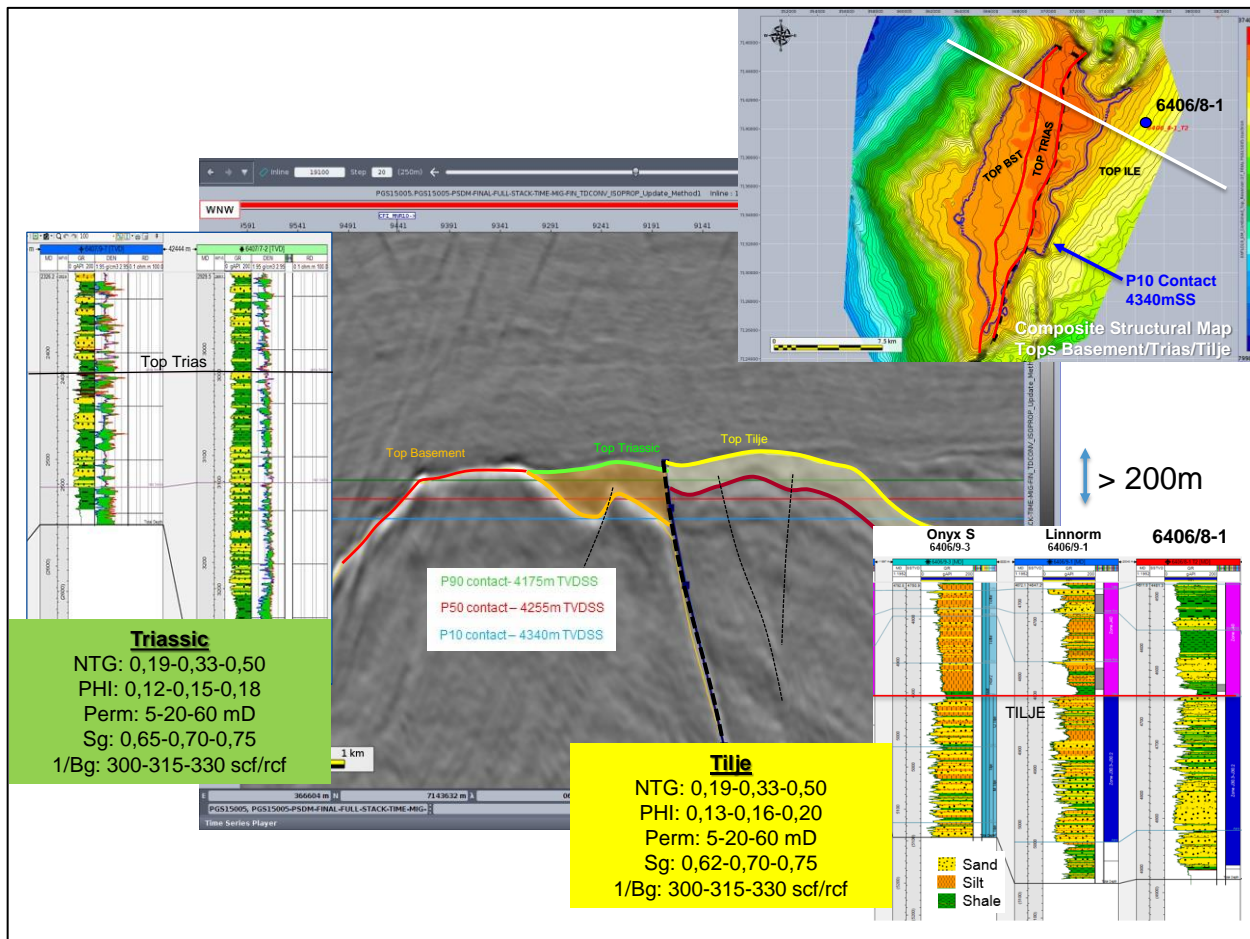


Figure 10: Triassic and Tilje Structural Setting and Petrophysic Summary

Basement

PL795 is characterized by the presence of a large basement high, called Skinna Ridge (~120km²) that has never been targeted and that could be the focus point of migrated HC. The top is very flat, likely corresponding to a peneplanation surface, results of erosion during a long exposure. Seismic attributes clearly show presence of faults and fracturation indicating that Fractured basement reservoir could be present in PL795. For assessment purposed, a comun contact with Eris Triassic prospect was considered.

5. Technical evaluation

Following the final prospectivity assessment, Tilje prospect appears to be the most attractive in term of risked Mean resources. Thus, a development study and business case was performed based on this prospectivity. Main challenge on the development side is the high amount of CO₂ carried by the prospectivity.

Main development concept is a tie back to Kristin host, located approx. 75Km to the north. An alternative scenario was also studied, it included the possibility of a shared development with Linnorm tie-backed to Kristin as well. Both solutions appeared non-economic.

The study also included the Triassic upside, an option to side track to the Triassic in case of positive exploration well at the Tilje objective was considered. This case did not have a substantial impact on the overall project economics.

The development study was based on exploration drilling in 2021 (1 well + Side Track to Trias if success at Tilje), appraisal in 2023 (2 wells + ST), development from 2027 and Production star up in 2028. The

associated resources of P90/P50/P10//Mean of 20/54/120 //64 Mboe for Tilje and 16/43/87 //48 Mboe for Trias, restricted to the northern “sweet spots”.

6. Conclusion

Grounds for full surrender of the PL795 licenses are the following:

- Main target, Phoenix and Eris prospects, carry high risk and low volumes. The risk of finding high contents of CO₂ is also detrimental. In the area there is no economical development foreseen at this stage.