Norwegian Continental Shelf

Lapse Status Report

(Relinquishment Report)

PL 917 B

May 2023

Partners:

Contents

List of Figures

List of Tables

1 History of the production license

PL917 B (area: 48 Km2) was awarded on the 14th of February 2020 (APA 2019) as protection acreage for PL917. It is located south of the PL917 and, in the Southern Viking Graben and lies north of the prolific Utsira High, covering part of the block 25/10. Water depth is around 140 m.

At the time of award, The JV was composed as such: ConocoPhillips Skandinavia AS 40% (Op), Lundin Norway AS 20%, Suncor Energy Norge AS 20%, Vår Energi AS 20%.

Work program was G&G studies with Drill or Drop within one year (deadline 14.02.21).

In December 2020 the MPE granted a one-year extension to the drill or drop milestone (deadline 14.02.2022) for PL917B due to the subsequent drilling of Enniberg (25/7-8S) and Hasselbaink (25/7-9S) wells in PL917.

in December 2021, two transactions were approved by the PL917 and PL917B license partners and submitted to the MPE for their consent: ConocoPhillips Skandinavia AS (ConocoPhillips) had entered into an agreement with Lundin Energy Norway AS (Lundin) to assign their 40% working interests in PL917 and PL917B to Lundin. Lundin had also entered into a back-to-back agreement with Vår Energi AS (Vår) to assign a 20% interest in each of the two licenses to Vår. The management committee recommended that operatorship is transferred to Vår upon completion of the assignments. A one-year work program was proposed to mature Palaeocene and Eocene prospectivity analogous to the recent 25/8-20S-B-C (King/Prince) discovery in PL027 (operated by Vår in 2021) with consideration towards drilling a future exploration well.

The one-year extension was granted by MPE in March 2022. New DoD date 14.02.2023.

In March 2022 Suncor Energy Norge was acquired by Sval Energi AS.

In January 2023, the JV had the following composition: Vår Energi ASA 40% (Operator), Aker BP ASA 40% and Sval Energi AS 20%.

The work commitment for the initial phase of the licence was fulfilled as PL917B didn't have any additional G&G commitment when awarded (PL917B awarded as protection acreage for PL917, with PL917 commitments fulfilled). The JV had to take the decision to drill an exploration well or drop the licence, with a Deadline of 14/02/2023.

Vår Energi performed an evaluation of the prospectivity of the license, identified and matured two stratigraphic prospects:

Flaggermus, the main prospect in the License also for the previous Operator (as "Rokken"), is characterized by an amplitude anomaly at the Top Balder Fm. level, and Lille Tussa, potential Palaeogene injectites within the Lower Horda Fm. The prospect Flaggermus is considered oil-filled with a gas cap and Lille Tussa is considered gas-filled.

EC/MC meetings held:

23/06/2020 MC

28/10/2020 EC

25/11/2020 EC/MC

15/06/2021 EC/MC

01/12/2021 EC/MC

27/06/2022 EC/MC

02/09/2022 EC/MC

28/11/2022 MC

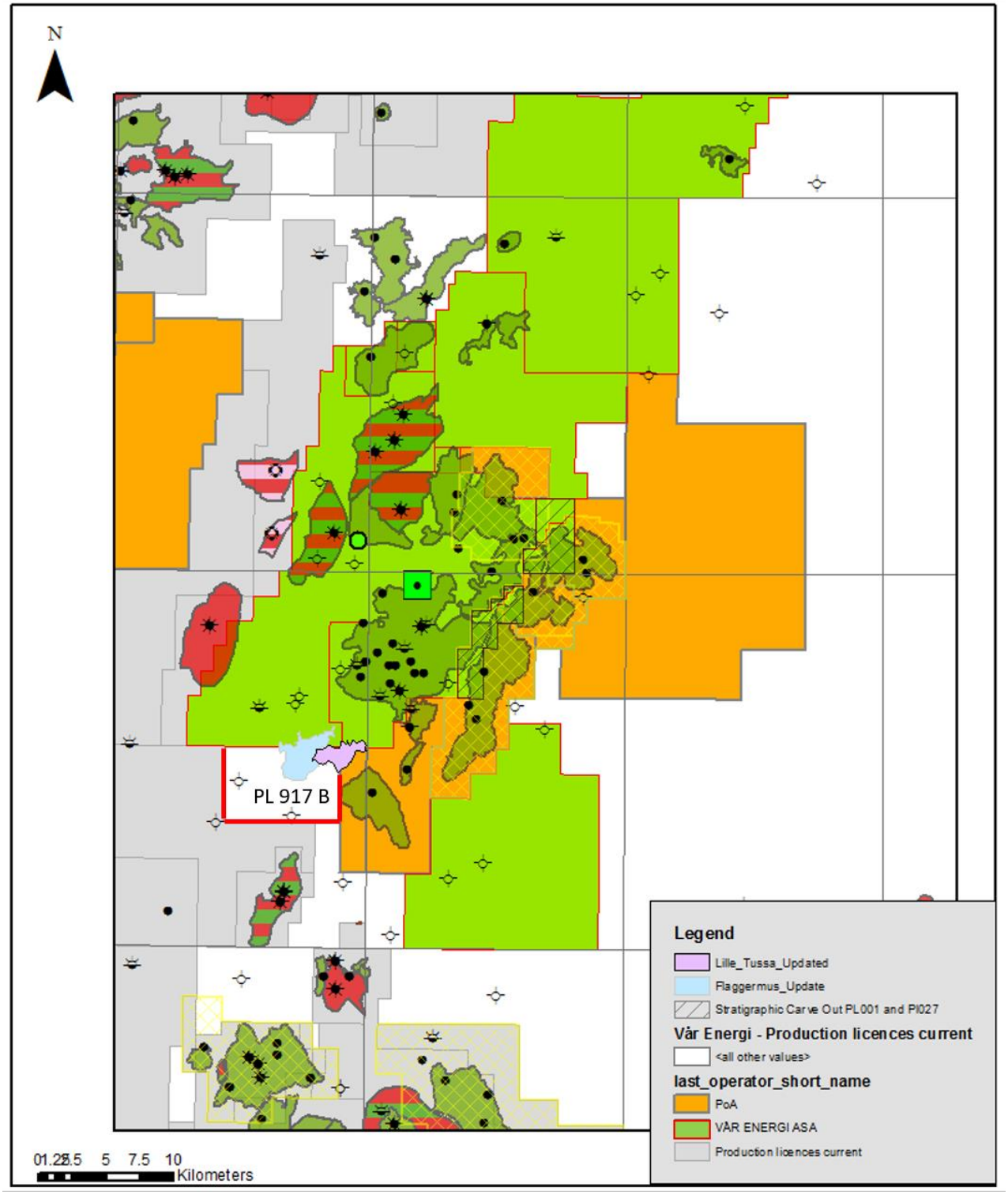

Figure 1.1: Location Map PL917B

2 Database overviews

Purchasing of the 3D seismic dataset PGS16M01 covering both PL 917 and PL 917B fulfilled the initial commitment of the License.

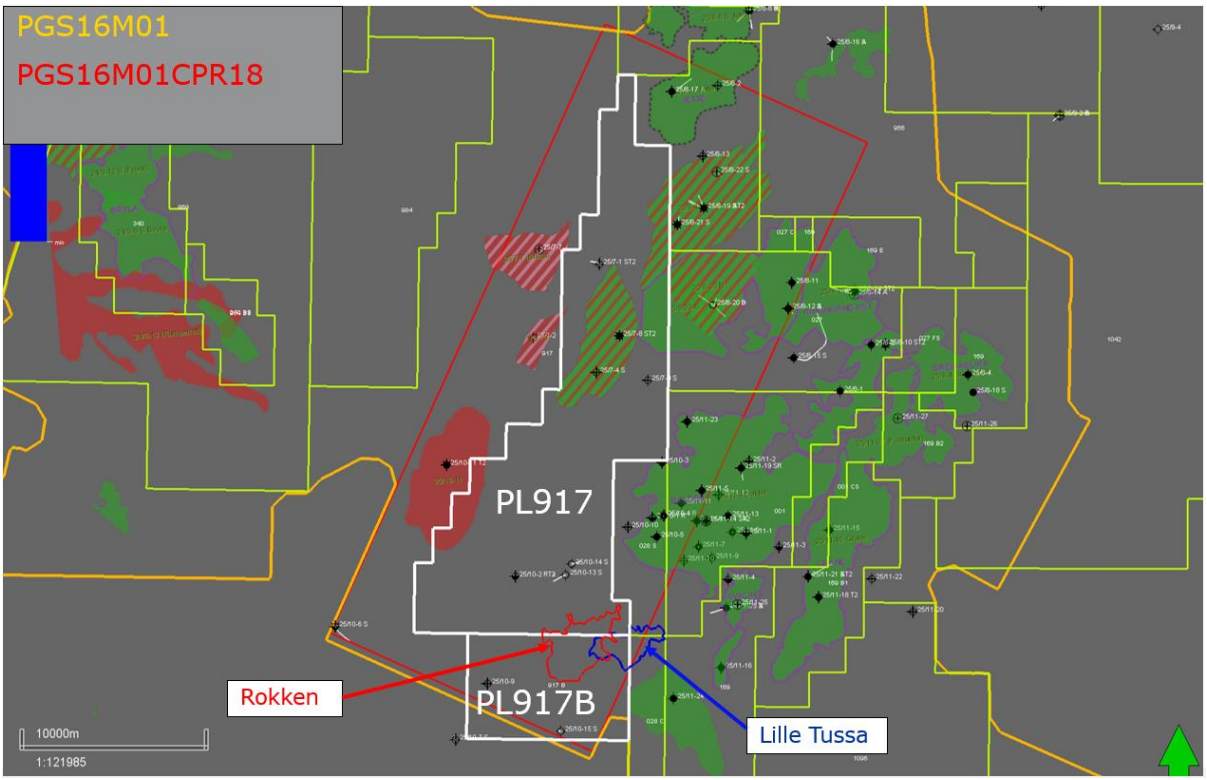

Figure 2.1: 3D Seismic Database PL917 B

Survey Name	Processing type	Comments
PGS16M01	PSDM	2016. time and depth cubes. Full offset, angle stacks and velocities
PGS16M01CPR18	PSDM	2018. Reprocessing by ConocoPhillips

Table 2.1: 3D Seismic Database

Well	Drilling Year	Well Status	NPD Status	TD Age	TD (m)	Field/Discovery	Relevance / Use
24/12-1	1978	Traded	Dry	Early Cretaceous	3966		Seismic tie
24/9-12 AT2	2018	Traded	Oil/gas	Paleocene	3000	Frosk Discovery	Injectite reservoir analogue, Reservoir properties and Rock physics modelling
24/9-12 S (*)	2018	Traded	Oil/gas	Paleocene	2285	Frosk Discovery	Injectite reservoir analogue, Reservoir properties and Rock physics modelling
24/9-12 ST2	2018	Traded	Oil/gas	Paleocene	2336	Frosk Discovery	Injectite reservoir analogue, Reservoir Properties and Rock physics modelling
24/9-7	2004	Relinquished	Oil/Gas	Eocene	2280	Volund Field	Injectite reservoir analogue, Reservoir properties
24/9-7 A	2004	Relinquished	Oil/Gas	Eocene	2277	Volund Field	Injectite reservoir analogue, Reservoir properties
24/9-7 B	2004	Relinquished	Oil/Gas	Eocene	2230	Volund Field	Injectite reservoir analogue, Reservoir properties
24/9-P-7 AH	2016	Partner	Oil	Paleocene	4658	Viper - Alvheim Field	Injectite reservoir analogue
24/9-P-8 AY1H	2016	Partner	Oil	Paleocene	5114	Kobra deep well - Alvheim Field	Injectite reservoir analogue
24/9-P-8 AY2H	2016	Partner	Oil	Paleocene	6088	Kobra shallow well - Alvheim Field	Injectite reservoir analogue
25/10-10	2010	Relinquished	Dry	Late Permian	2513		Seismic tie
25/10-13 S	2015	Relinquished	Dry	Triassic	2925		Seismic tie. Shale point control (seal)
25/10-14 S	2016	Traded	Dry	Triassic	2474		Seismic tie
25/10-3	1970	Relinquished	Oil	Paleocene	1921	Balder Field	Seismic tie. Injectite depositional model. HC migration & charge story
25/10-7S (*)	1996	Traded	Dry	Paleocene	2617		Seismic tie. Shale point control (seal)
25/10-9 (*)	2009	Traded	Dry	Early Jurassic	2985		Seismic tie. HC migration & charge story (HC shows in Balder Fm.)
25/11-10	1981	Traded	Shows	Paleocene	1988		Seismic tie
25/11-23 (*)	1999	Relinquished	Oil	Early Jurassic	2014	Balder Field	Injectite reservoir analogue, Reservoir properties, HC migration & charge story
25/11-7	1978	Relinquished	Oil	Late Cretaceous	1944	Balder Field	Injectite reservoir analogue. HC migration & charge story
25/8-15 S	2004	Relinquished	Oil	Early Jurassic	4804		Seismic tie

Table 2.2: PL917 B Well Database

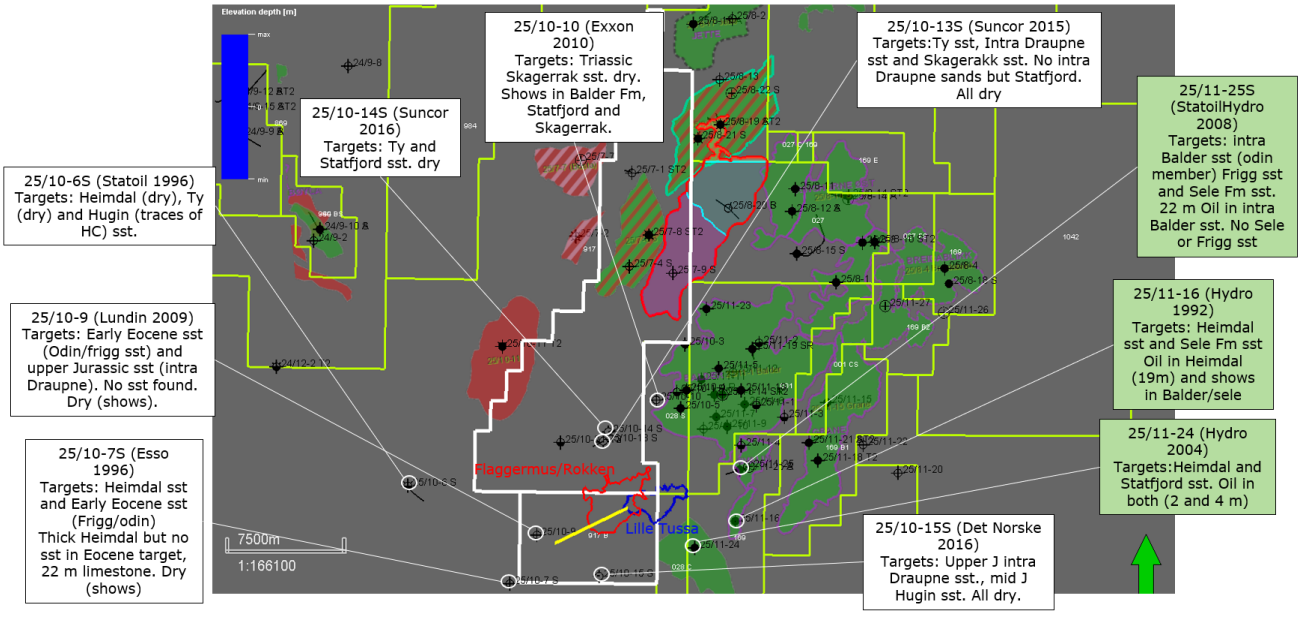

Figure 3.2: Key wells for PL 917 B evaluation

3 Geological and Geophysical Studies

Rock Physics and Avo modelling was carried on behalf of the PL 917 and 917 B by Ikon science in 2021, but did not help to de-risk the Flaggermus prospect. PGS16M01 Pre-stack gather conditioning was performed by Sharp Reflections on behalf of Vår as operator and inhouse AVO was performed in 2022 (discussed in chapter 4 below).

4 Prospect Update

Flaggermus Prospect:
Flaggermus prospect is defined by a single loop amplitude anomaly at Top Balder Fm surface, and it is a full stratigraphic trap prospect (Fig. 4.1). The prospect was applied for the APA 2019, as injection/extrusion (from underneath Heimdal sands) on top Balder level (Fig 4.2).

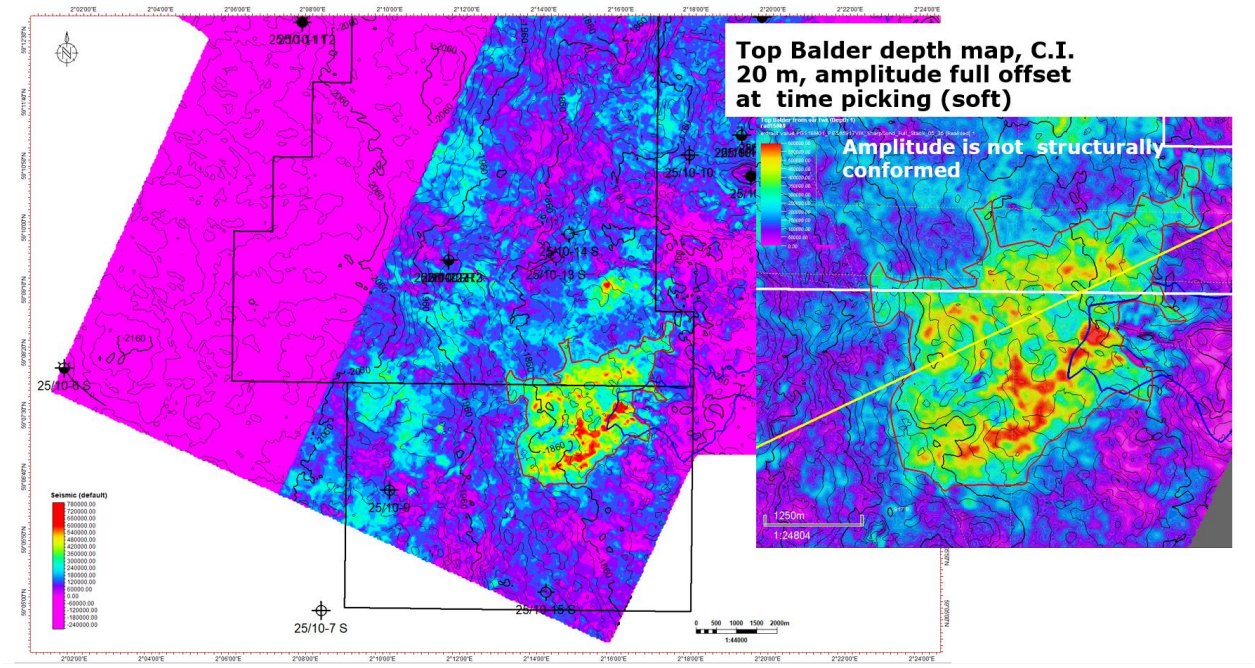

Figure 4.1: Top Balder depth map and amplitude at picking

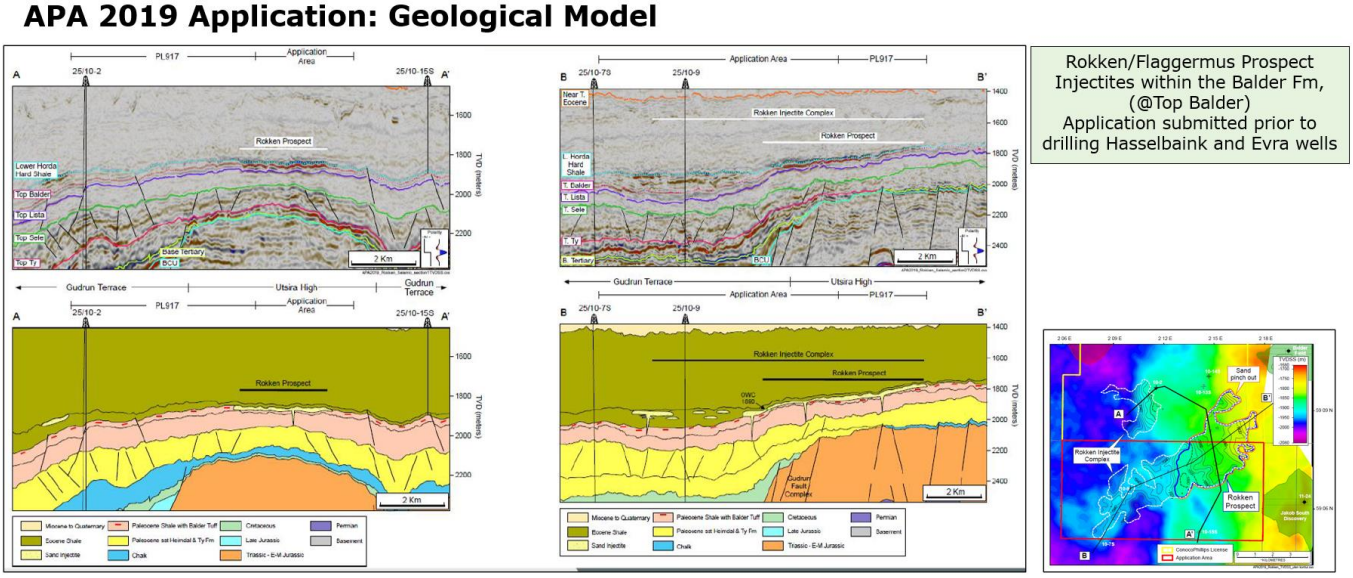

Figure 4.2: APA2019 application geological model

Seismically, the top reservoir is represented by a prominent hard top and underneath soft event (trough). This sequence has been penetrated already down deep in the well 25/10-9 consisting of calcareous Lower Horda hard shale unit. (Figs 4.3 and 4.4)

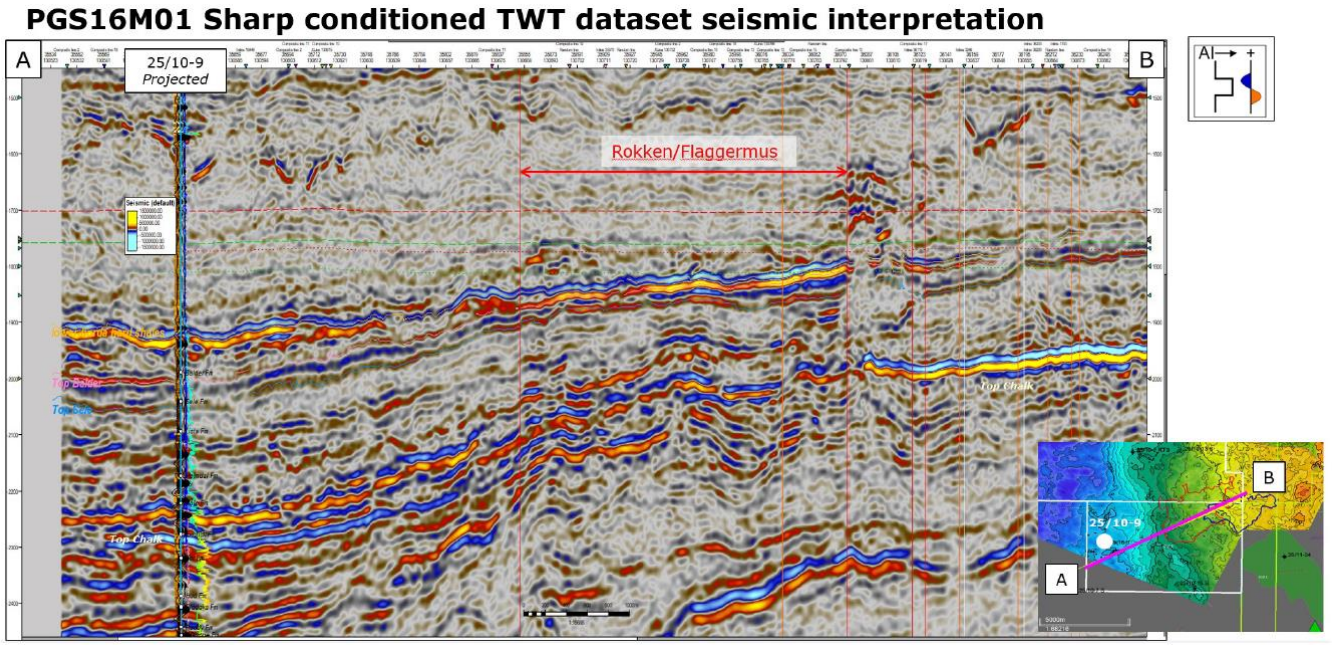

Figure 4.3: SW-NE seismic section

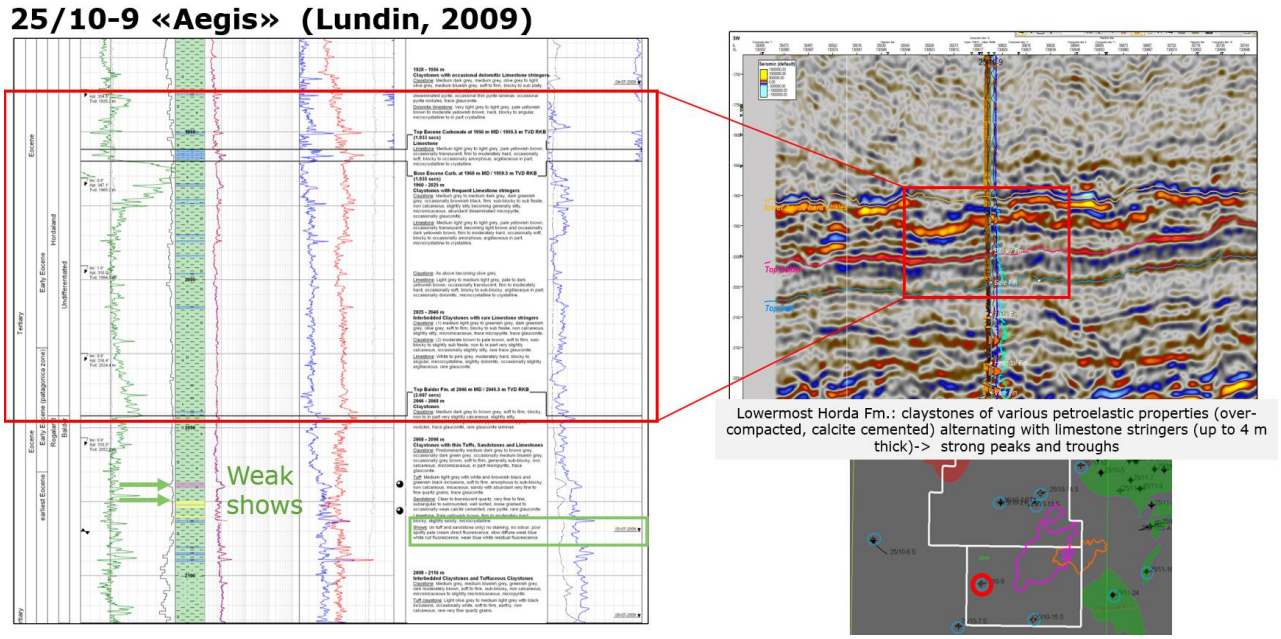

Figure 4.4: Well 25/10-9 Lower Horda Hard shales

The Lower Horda hard shale unit is thinning down towards Flaggermus with a possible tuning effect, enhancing the existing impedance contrast between Lower Horda hard shales and Balder shales (Fig. 4.5). Relative acoustic impedance attribute (Fig 4.6) also supports the dominance of the Lower Horda hard shales seismic response with regards to the underneath Top Balder Soft response.

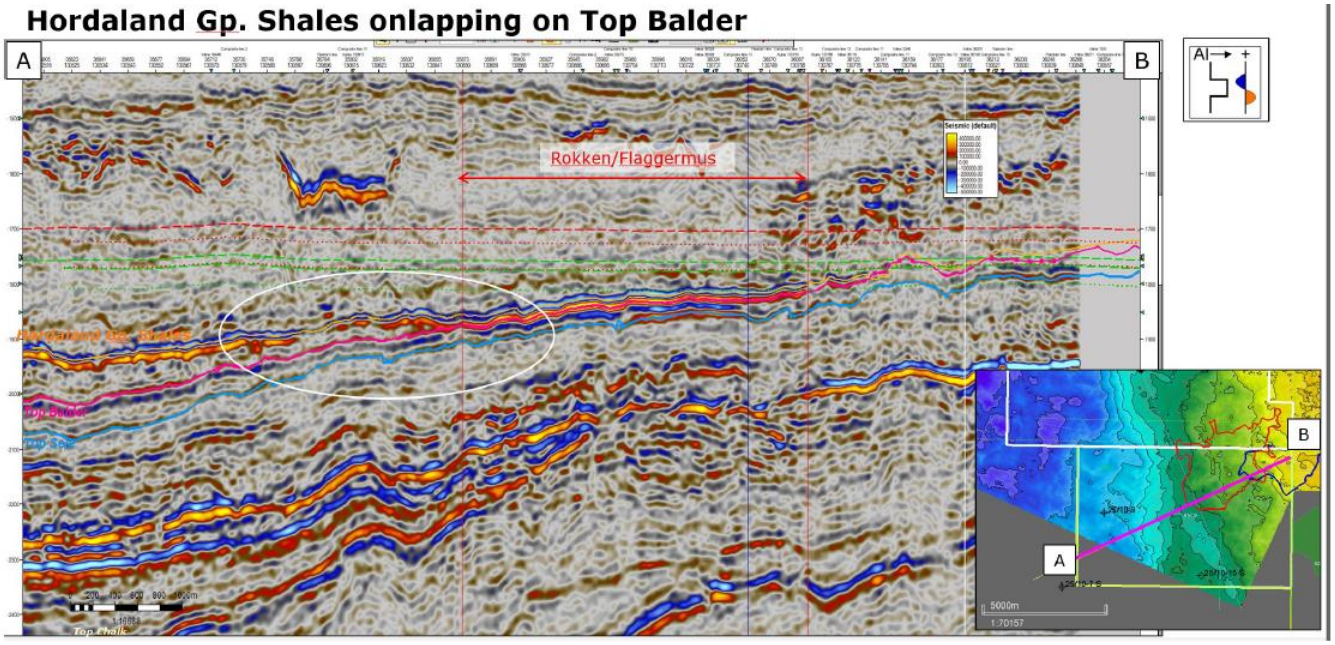

Figure 4.5: Lower Horda shales onlapping Top Balder Fm.

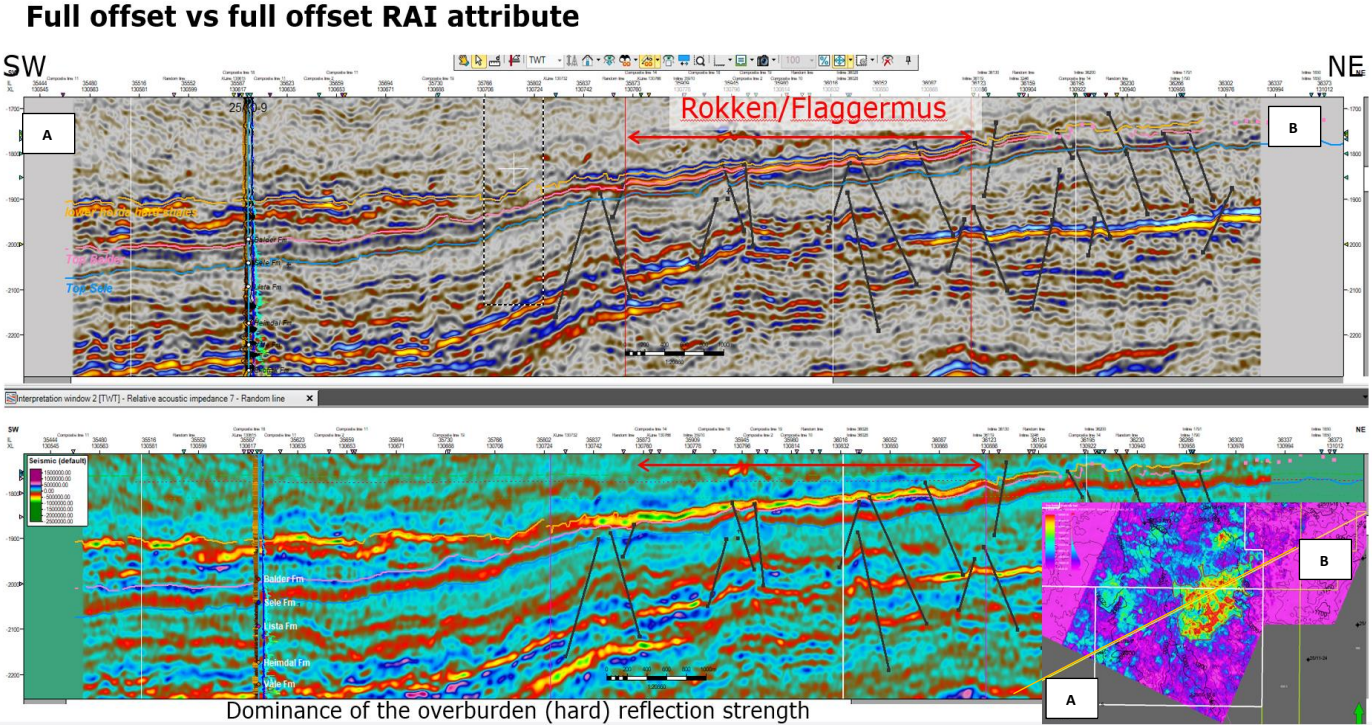

Figure 4.6: Overburden (Hard shales) dominance

An AVO study was performed (showing an overall Class IV response for Top Balder (soft kick) coupled with a Class I AVO response for the Lower Horda shales hard kick (Fig. 4.7).
Conclusion from this quick AVO analysis: No clear/encouraging AVO response and different AVO signature from the modelled Balder Injectites (class II/III).

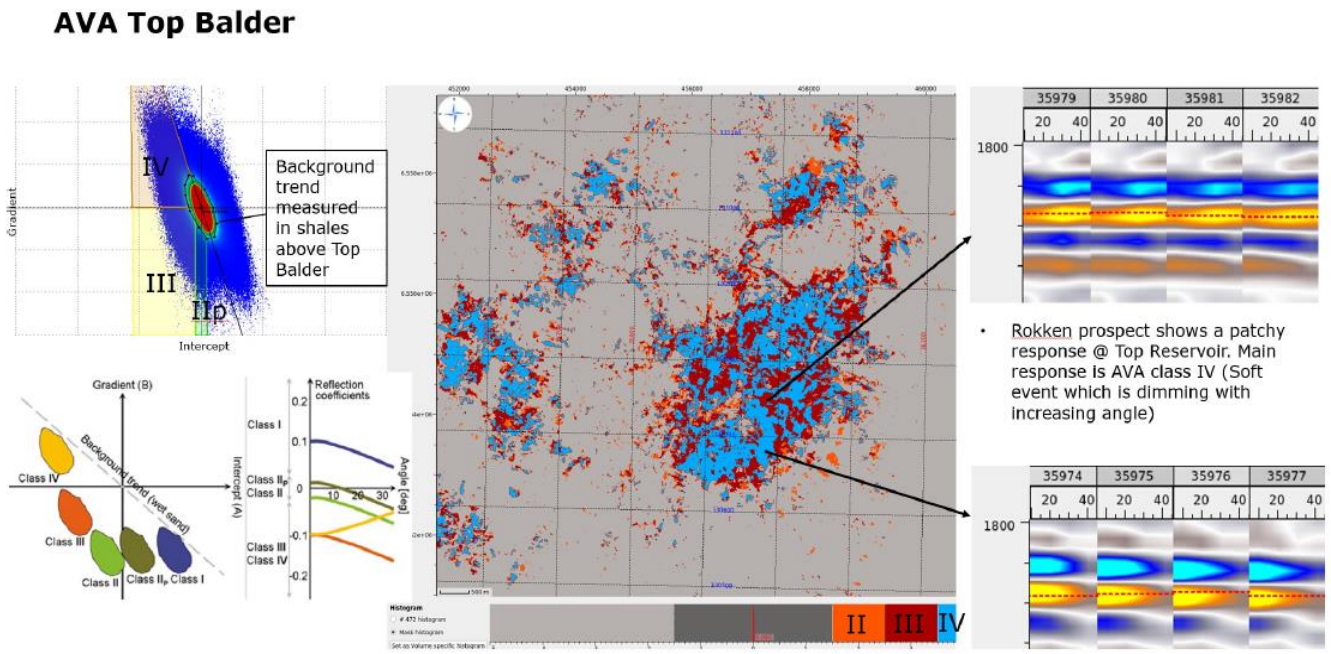

Figure 4.7: AVO at top Balder

Lille Tussa Prospect:

Lille Tussa prospect, consisting of injectite-like features, lies at the East of Flaggermus and evidence support a trap failure risk for Flaggermus.

The prospect is defined by strong seismic amplitude anomalies above Balder Fm. (with a chaotic pattern and distribution). Fig. 4.8.

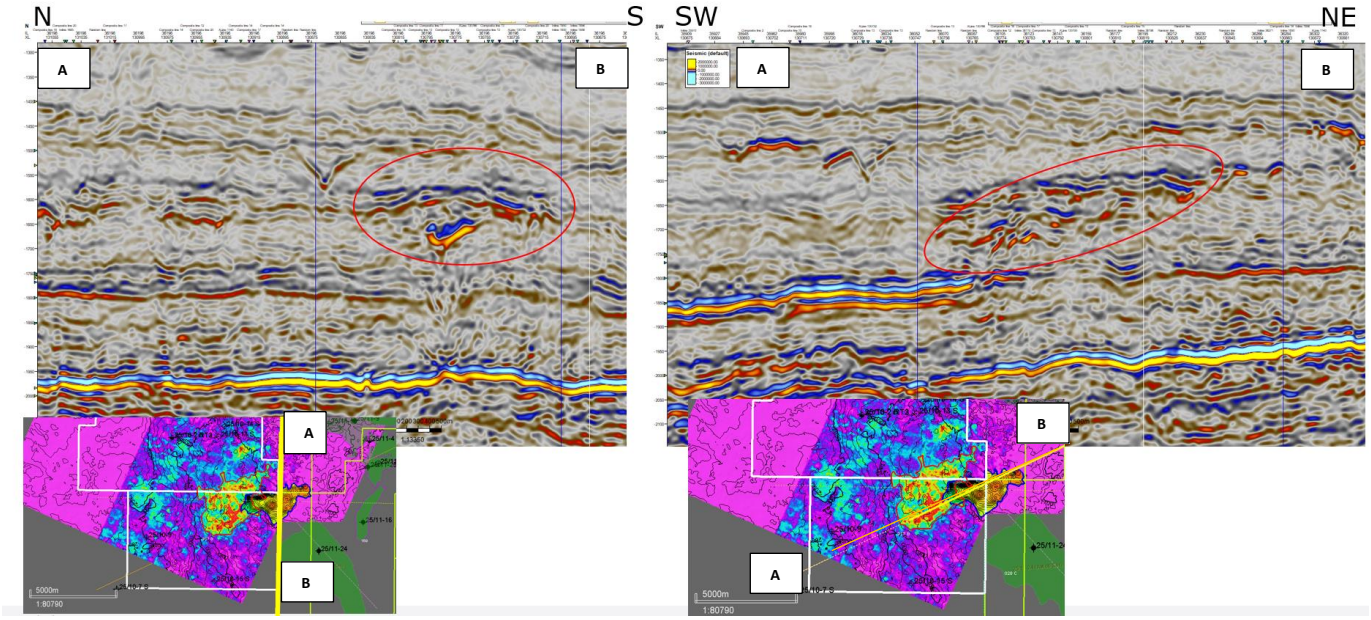

Figure 4.8: Lille Tussa prospect

Mounded geometry above the Lille Tussa Prospect has been considered as an indication of potential sand injection. Fig 4.9.

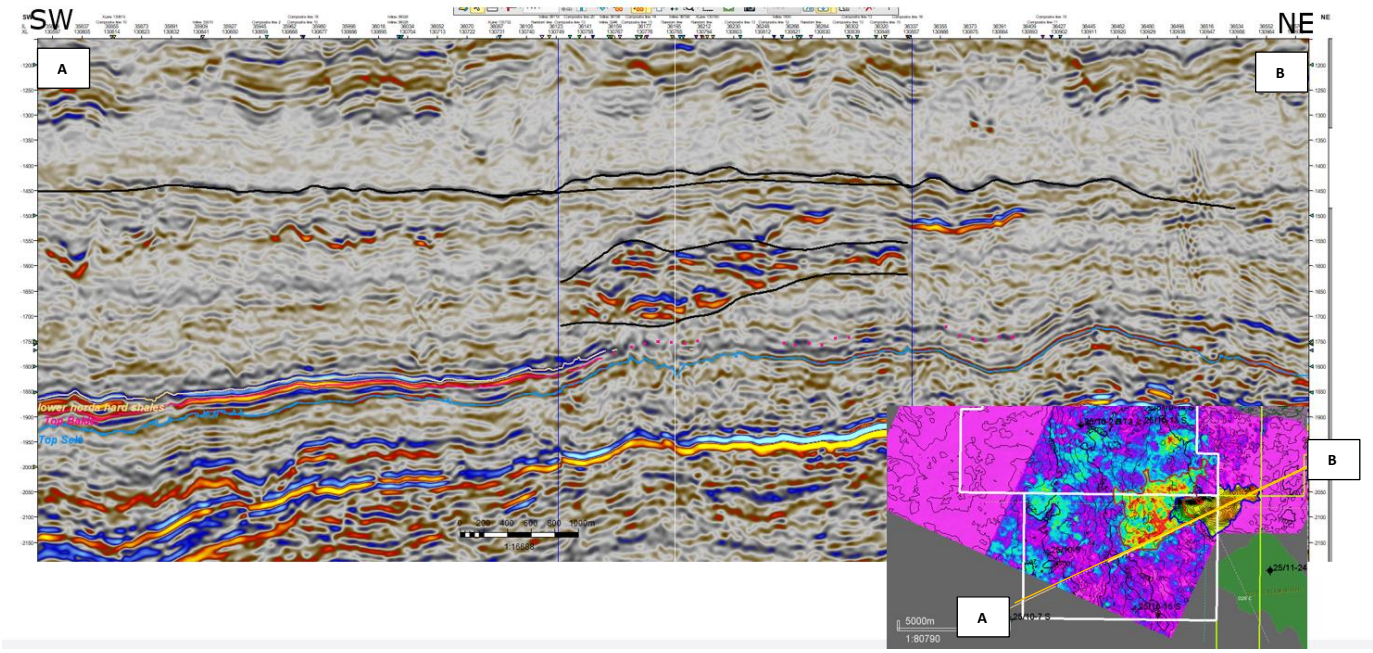

Figure 4.9: Definition of the mounded geometry above Lille Tussa

Reservoir presence remains the main risk, and so does trapping/seal, with presence of Vbrights tight sands at the Top and North of Lille Tussa Fig 4.10.

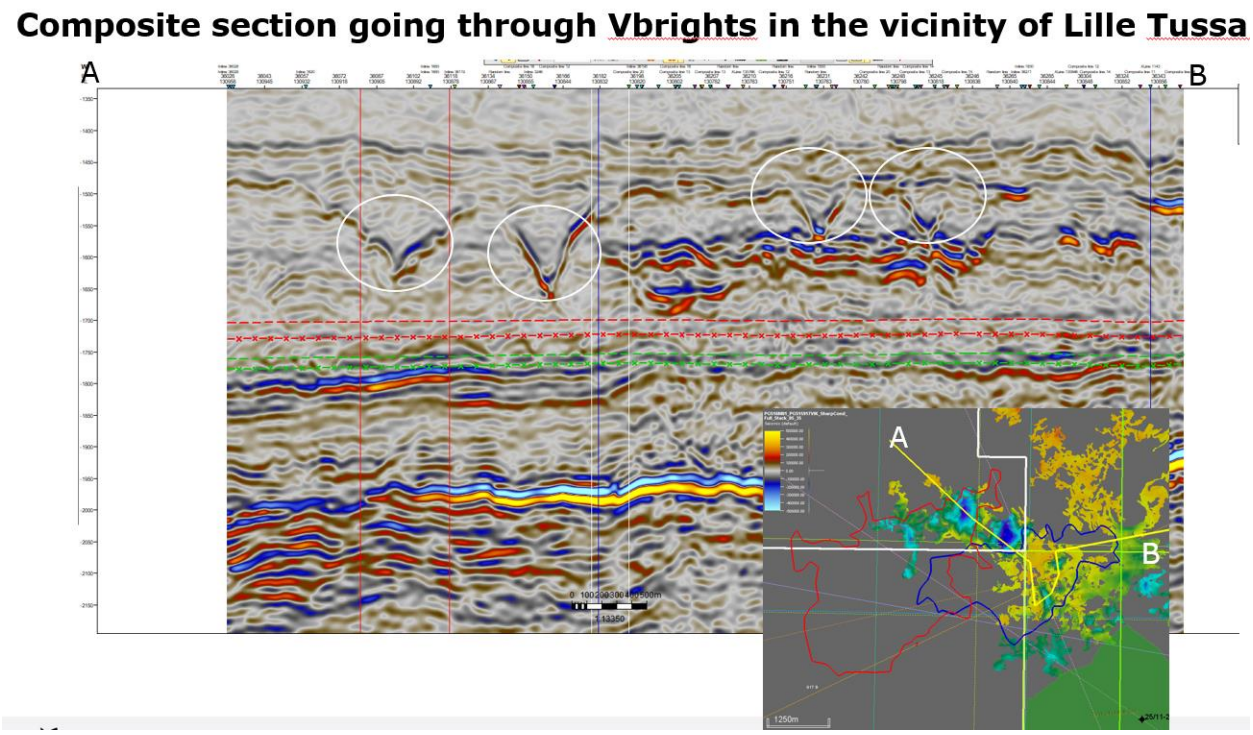

Figure 4.10: Vbrights around Lille Tussa

AVO study also performed for Lille Tussa, with non-encouraging results. Fig 4.11.

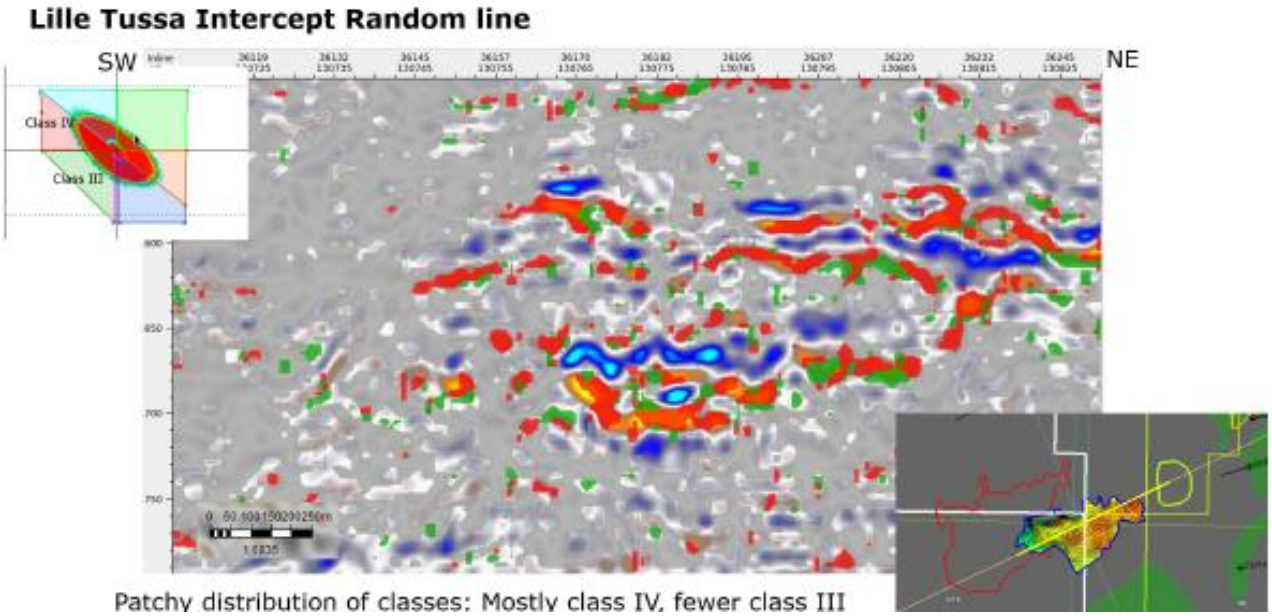

Figure 4.11: Lille Tussa AVO

HIIP and POS are reported in the tables below:

Validated Evaluation														
Hydrocarbons Initially in Place														
Prospect	Target	Segment	GAS (GSm3)				OIL (Mbbls)				Cond.(Mbbls)	sol.GAS (GSm3)	PRES N°
			P90	P50	P10	Pmean	P90	P50	P10	Mean	Mean	Mean	
Flaggermus	Balder	0	0.05	0.10	0.19	**0.11**	39.70	66.03	97.69	**67.60**	**0.14**	**0.58**	91808
Lille Tussa	Paleogene injectites	0	0.97	2.98	5.15	**3.11**					**0.69**		91036

Table 4.1: Volumetrics for Flaggermus and Lille Tussa

VALIDATED PROBABILITY OF SUCCESS																							
PROSPECT	TARGET	SEGMENT	PLAY CHANCES				LOCAL CHANCES					OVERALL CHANCES						OVERALL CHANCES					
			RESERV PLAY	SEAL PLAY	SOURCE PLAY	PLAY	RESERV LOCAL	SEAL LOCAL	TRAP	CHARGE		RESRV	SEAL	SOURCE	TRAP	CHARGE	POS	RESRV	SEAL	SOURCE	TRAP	CHARGE	POS
Flaggermus	Balder	0	100 %	100 %	100 %	100 %	30 %	70 %	60 %	85 %	*11 %*	30 %	70 %	100 %	60 %	85 %	**11 %**	26 %	67 %	100 %	59 %	81 %	**8 %**
Lille Tussa	Paleogene injectites	0	100 %	100 %	100 %	100 %	30 %	70 %	60 %	80 %	*10 %*	30 %	70 %	100 %	60 %	80 %	**10 %**	27 %	68 %	100 %	59 %	76 %	**8 %**

Table 4.2: Risk for Flaggermus and Lille Tussa

Table 4.3: Flaggermus Prospect data

Block	25/10	Prospect name	Flaggermus/Rokker	Discovery/Prosp/Lead	Prospect	Prosp ID (or New!)	NPD will insert value	NPD approved (Y/N)	
Play name	NPD will insert value	New Play (Y/N)		Outside play (Y/N)					
Oil, Gas or O&G case:		Reported by company	Vår Energi ASA	Reference document	PL917B relinquishment report			Assessment year	2022
This is case no.:	1 of 1	Structural element	Utsira high	Type of trap	stratigraphic	Water depth [m MSL] (>0)	140	Seismic database (2D/3D)	3D
Resources IN PLACE and RECOVERABLE		**Main phase**				**Associated phase**			
Volumes, this case		Low (P90)	Base, Mode	Base, Mean	High (P10)	Low (P90)	Base, Mode	Base, Mean	High (P10)
In place resources	Oil [10^6 Sm^3] (>0.00)	6,31	10,50	10,75	15,85			0,02	
	Gas [10^9 Sm^3] (>0.00)	0,05	0,10	0,11	0,19			0,58	
Recoverable resources	Oil [10^6 Sm^3] (>0.00)								
	Gas [10^9 Sm^3] (>0.00)								
Reservoir Chrono (from)	Early Eocene	Reservoir litho (from)	Balder Fm	Source Rock, chrono primary	Late Jurassic	Source Rock, litho primary	Draupne Fm	Seal, Chrono	Eocene
Reservoir Chrono (to)	Early Eocene	Reservoir litho (to)	Balder Fm	Source Rock, chrono secondary	Late Jurassic	Source Rock, litho secondary	Heather Fm	Seal, Litho	Horda Fm
Probability [fraction]									
Total (oil + gas + oil & gas case) (0.00-1.00)	0,08	Oil case (0.00-1.00)	0,00	Gas case (0.00-1.00)	0,00	Oil & Gas case (0.00-1.00)	1,00		
Reservoir (P1) (0.00-1.00)	0,26	Trap (P2) (0.00-1.00)	0,59	Charge (P3) (0.00-1.00)	0,81	Retention (P4) (0.00-1.00)	0,67		
Parametres:	Low (P90)	Base	High (P10)	*Comments*					
Depth to top of prospect [m MSL] (> 0)		1762							
Area of closure [km^2] (> 0.0)									
Reservoir thickness [m] (> 0)	15	20	25						
HC column in prospect [m] (> 0)	115		144						
Gross rock vol. [10^9 m^3] (> 0.000)									
Net / Gross [fraction] (0.00-1.00)	0,15	0,35	0,55						
Porosity [fraction] (0.00-1.00)	0,25	0,30	0,35						
Permeability [mD] (> 0.0)									
Water Saturation [fraction] (0.00-1.00)	0,10	0,20	0,30						
Bg [Rm3/Sm3] (< 1.0000)	0,0049	0,0059	0,0071						
1/Bo [Sm3/Rm3] (< 1.00)	0,81	0,85	0,88						
GOR, free gas [Sm^3/Sm^3] (> 0)									
GOR, oil [Sm^3/Sm^3] (> 0)	41	53	68						
Recov. factor, oil main phase [fraction] (0.00-1.00)									
Recov. factor, gas ass. phase [fraction] (0.00-1.00)									
Recov. factor, gas main phase [fraction] (0.00-1.00)									
Recov. factor, liquid ass. phase [fraction] (0.00-1.00)				For NPD use:					
Temperature, top res [°C] (>0)	65			Innrapp. av geolog-init:	NPD will insert value	Registrert - init:	NPD will insert value	Kart oppdatert	NPD will insert value
Pressure, top res [bar] (>0)	162			Dato:	NPD will insert value	Registrert Dato:	NPD will insert value	Kart dato	NPD will insert value
Cut off criteria for N/G calculation	1.	2.	3.					Kart nr	NPD will insert value

Table 4.4: Lille Tussa Prospect data

Block	25/10	Prospect name	Lille Tussa	Discovery/Prosp/Lead	Prospect	Prosp ID (or New!)	NPD will insert value	NPD approved (Y/N)	
Play name	NPD will insert value	New Play (Y/N)		Outside play (Y/N)					
Oil, Gas or O&G case:		Reported by company	Vår Energi ASA	Reference document	PL917B relinquishment report			Assessment year	2022
This is case no.:	1 of 1	Structural element	Utsira high	Type of trap	stratigraphic	Water depth [m MSL] (>0)	140	Seismic database (2D/3D)	3D
Resources IN PLACE and RECOVERABLE		**Main phase**				**Associated phase**			
Volumes, this case		Low (P90)	Base, Mode	Base, Mean	High (P10)	Low (P90)	Base, Mode	Base, Mean	High (P10)
In place resources	Oil [10^6 Sm^3] (>0.00)							0,11	
	Gas [10^9 Sm^3] (>0.00)	0,97	2,98	3,11	5,15				
Recoverable resources	Oil [10^6 Sm^3] (>0.00)								
	Gas [10^9 Sm^3] (>0.00)								
Reservoir Chrono (from)	Eocene	Reservoir litho (from)	Horda Fm	Source Rock, chrono primary	Late Jurassic	Source Rock, litho primary	Draupne Fm	Seal, Chrono	Eocene
Reservoir Chrono (to)	Eocene	Reservoir litho (to)	Horda Fm	Source Rock, chrono secondary	Late Jurassic	Source Rock, litho secondary	Heather Fm	Seal, Litho	Horda/Grid fm
Probability [fraction]									
Total (oil + gas + oil & gas case) (0.00-1.00)	0,08	Oil case (0.00-1.00)	0,00	Gas case (0.00-1.00)	1,00	Oil & Gas case (0.00-1.00)	0,00		
Reservoir (P1) (0.00-1.00)	0,27	Trap (P2) (0.00-1.00)	0,59	Charge (P3) (0.00-1.00)	0,76	Retention (P4) (0.00-1.00)	0,68		
Parametres:	Low (P90)	Base	High (P10)	*Comments*					
Depth to top of prospect [m MSL] (> 0)		1520							
Area of closure [km^2] (> 0.0)									
Reservoir thickness [m] (> 0)	60		190						
HC column in prospect [m] (> 0)	48		190						
Gross rock vol. [10^9 m^3] (> 0.000)									
Net / Gross [fraction] (0.00-1.00)	0,05	0,18	0,50						
Porosity [fraction] (0.00-1.00)	0,25	0,30	0,35						
Permeability [mD] (> 0.0)									
Water Saturation [fraction] (0.00-1.00)									
Bg [Rm3/Sm3] (< 1.0000)	0,0050	0,0054	0,0060						
1/Bo [Sm3/Rm3] (< 1.00)									
GOR, free gas [Sm^3/Sm^3] (> 0)	23679		33311						
GOR, oil [Sm^3/Sm^3] (> 0)									
Recov. factor, oil main phase [fraction] (0.00-1.00)									
Recov. factor, gas ass. phase [fraction] (0.00-1.00)									
Recov. factor, gas main phase [fraction] (0.00-1.00)									
Recov. factor, liquid ass. phase [fraction] (0.00-1.00)				For NPD use:					
Temperature, top res [°C] (>0)	60			Innrapp. av geolog-init:	NPD will insert value	Registrert - init:	NPD will insert value	Kart oppdatert	NPD will insert value
Pressure, top res [bar] (>0)	145			Dato:	NPD will insert value	Registrert Dato:	NPD will insert value	Kart dato	NPD will insert value
Cut off criteria for N/G calculation	1.	2.	3.					Kart nr	NPD will insert value

5 Technical Evaluations

Vår Energi team has evaluated the potential development of the Flaggermus prospect.

The Flaggermus prospect is considered a potential sub-horizontal injectites, although the project team has estimated very unlikely the chances of finding reservoir. The prospect is located about 15 km SW from the position of the relocated Jotun FPSO. A main sill of the King/Prince injectites complex is considered a very representative analog for development scenarios for the Flaggermus prospect. Reservoir performance as estimated from the nearby king/prince discovery and from analogue in the Balder field and used to derive the recoverable resources for Flaggermus. The envisaged development foresees a subsea tie back to the Jotun A Fpso and related cost are based on the nearby Balder field and King/Prince development project. The Flaggermus project resulted in a negative EMV.

6 Conclusions

Two stratigraphic trap prospects have been identified: Flaggermus (Balder Fm.) and Lille Tussa (Palaeogne injectites in Lower Horda Fm.). Both prospects have validated through technical assurance review resulting in high-risk moderate/marginal volume. The validated HIIP are respectively 72.35 Mboe for Flaggermus and 21.4 MBOE for Lille Tussa and related POS are: 8% for both.

Economic evaluation of the PL 917 B is based on Flaggermus while Lille Tussa is considered as upside potential potential gas bearing prospect.

The Flaggermus prospect has a marginal negative EMV and high geological risk, therefore Vår supported by the JV, has decide to drop the drilling opportunity and relinquish PL 917 B.