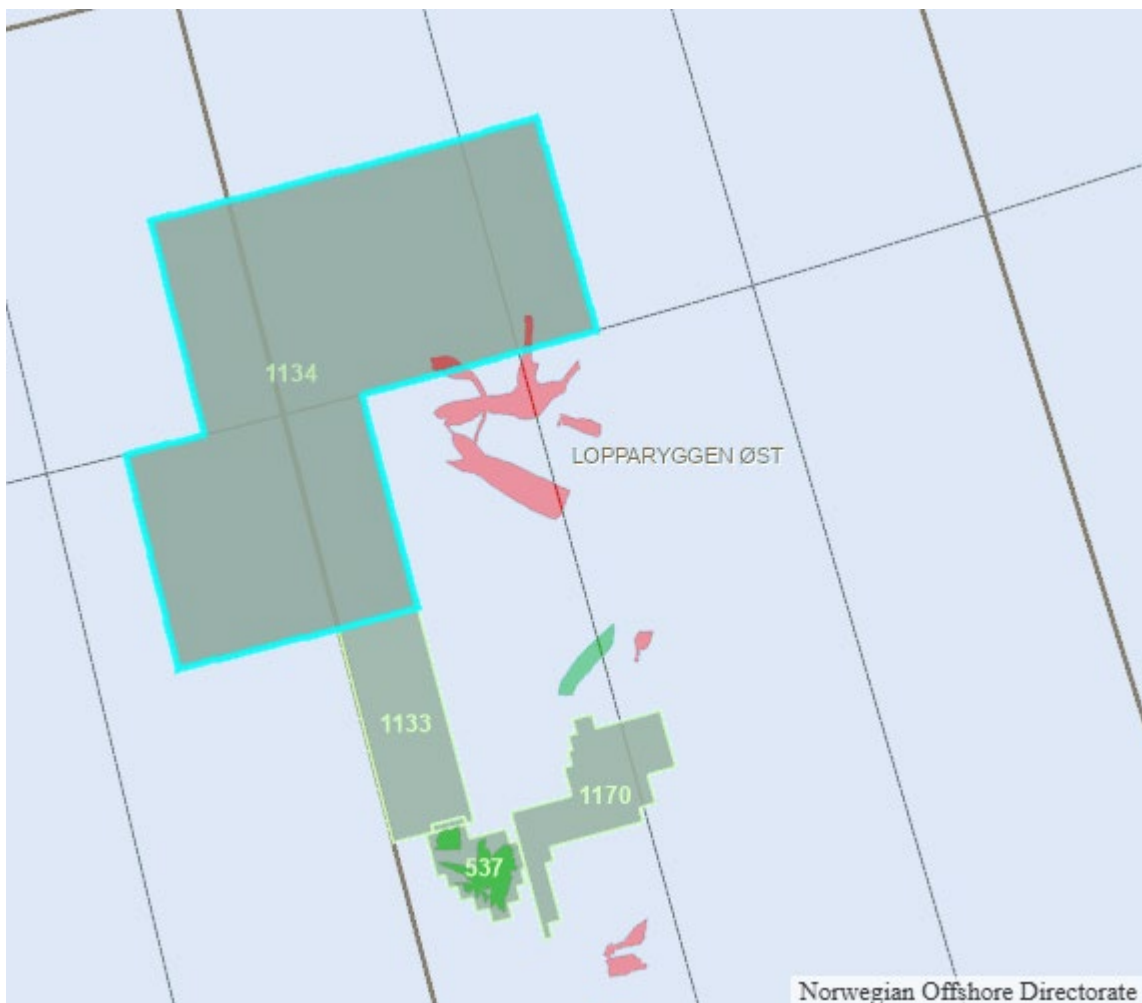


PL1134 Status Report Relinquishment



1 License history

PL1134 was awarded September 17th, 2021 as part of 25th application round. The licence group consists of

- Aker BP ASA (O) 35%
- Equinor Energy AS 45%
- Petoro AS 20%

The goal of the exploration licence was to find additional resources for a potential Wisting development.

Work commitments

- Within 3 years:
 - Acquire and reprocess 3D seismic, and G&G studies (Minimum 600 km2 of TGS HFC11 and 200 km2 of TGS HF13)
 - Decision: Acquire new 3D seismic or drill wildcat well or drop

The work program has been completed, and a unanimous drop decision was made in Q3 2024. In addition to the firm work program, the operator has done re-evaluation of the existing Electro Magnetic Survey, BSTEN01 (Buran Prospect) and BSMC12K (Discovery Prospect).

Held meetings in the licence

An overview of licence meetings is given in Table 1.1.

Table 1.1 License Meetings

Date	Activity	Description
2021		
October 22	ECMC#1	Start up meeting
December 1	ECMC#2	
2022		
November 10	ECMC#3	
2023		
December 6	ECMC#4	EM evaluation
2024		
March 21	EC Work Meeting	AVO work ABP
November 28	ECMC#5	Notified Relinquishment

Reason for surrender

Remaining prospects have too little resource potential and too high risk to justify a drilling decision.

2 Database

Fig. 2.1 gives an overview of CSEM surveys, seismic 3D data and wells used in the evaluation of PL1134.

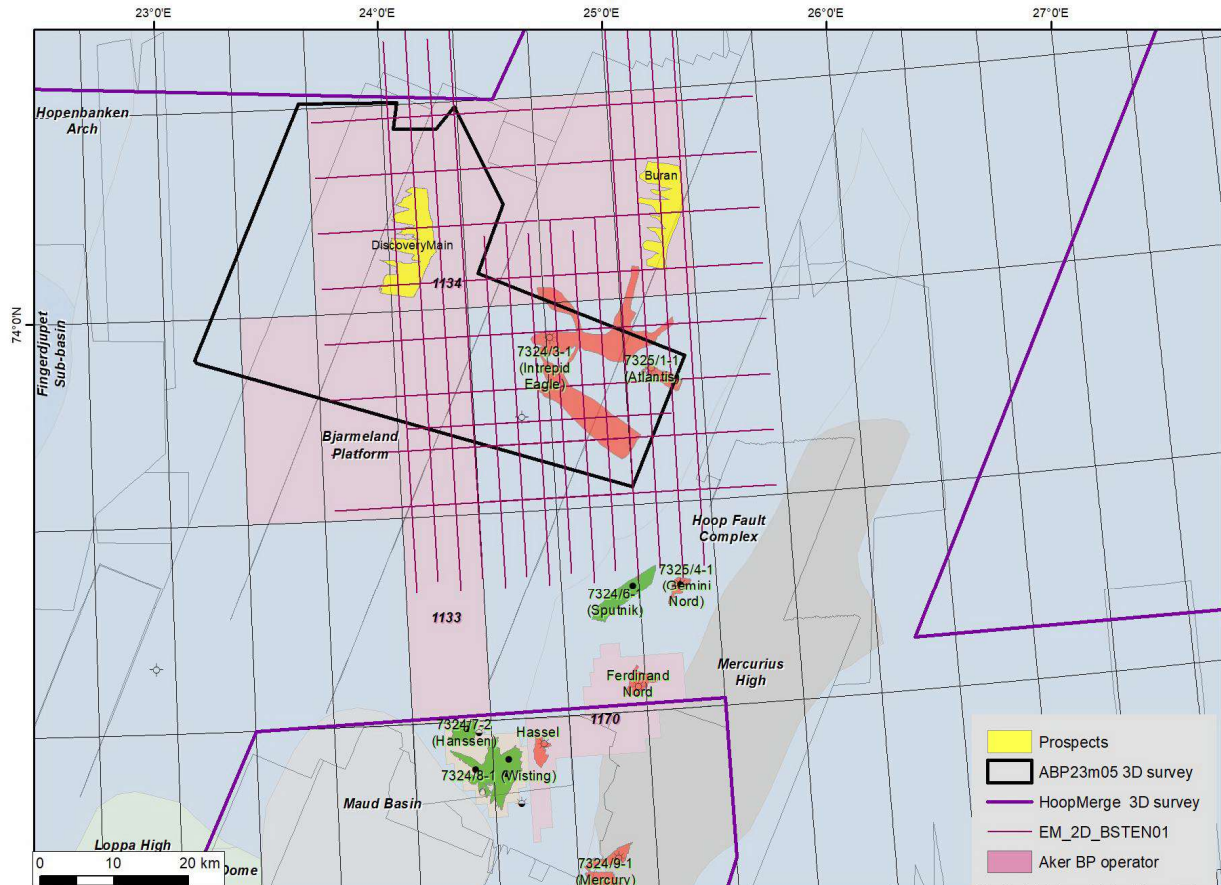


Fig. 2.1 PL1134 Overview Map The figure gives an overview of the licence area, Well- Seismic and EM databases in addition to the structural elements in the PL1134 area.

2.1 Seismic data

The main dataset used in the evaluation is the newly reprocessed survey ABP23m05 (Fig. 2.1 and Table 2.1). The base for the reprocessing is shown in Fig. 2.2.

Table 2.1 Seismic Database

Survey Name	Type	Owner	Year	Offset Data	Entitlement	NPD ID
ABP23m05	3D		2023	Yes		
TGS0901 (HFC09)	3D	TGS	2009	Yes	Purchase	7060
HFCW11	3D	TGS	2011	Yes	Purchase	7424
HFCN13	3D	TGS	2013	Yes	Purchase	7786
HF13	3D	TGS	2013	Yes	Purchase	7791
TGS14001 (HF14)	3D	TGS	2014	Yes	Purchase	7987

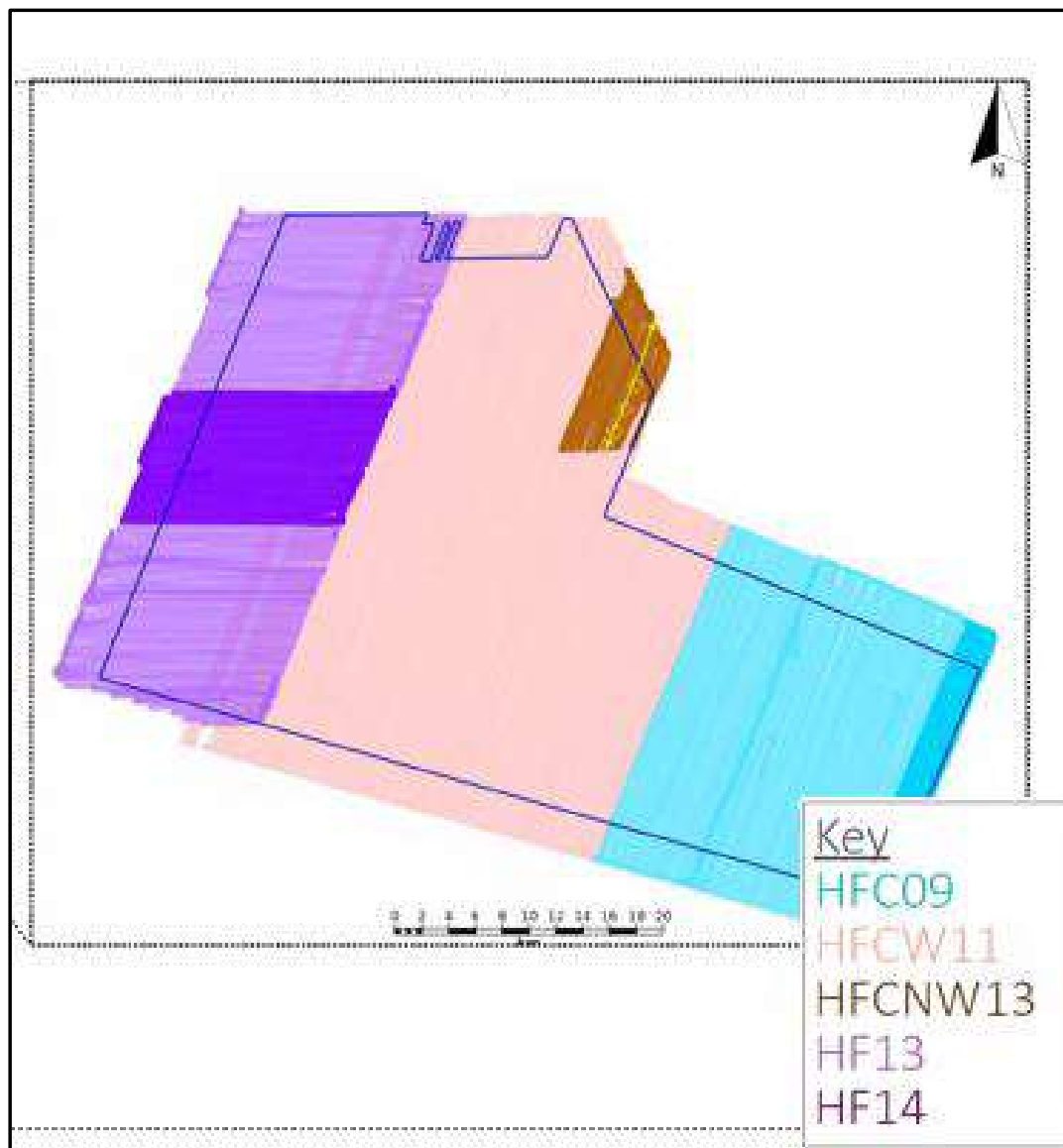


Fig. 2.2 ABP23m05 Survey Overview The Figure shows the seismic surveys that form the basis for the reprocessing.

2.2 Well data

The exploration wells included in the geological and geophysical evaluation are displayed in Table 2.2 and shown in Fig. 2.1

The well database has been used for stratigraphic framework, seismic to well tie, prospect and risk assessment.

Table 2.2 Well Database (in chronological order)

Well	Operator	Year	Content	TD [m MD RKB]	TD Stratigraphy Age/ Formation	NPDID
7324/8-1 (Wisting Main)	OMV	2013	OIL (Stø)	930	Triassic Snadd Fm.	7221
7324/7-1S (Wisting Alternative)	OMV	2013	Dry/Shows	2535	Triassic Kobbe Fm.	7222
7324/2-1 (Apollo)	Statoil	2014	DRY	1090	Triassic Snadd Fm.	7481
7324/7-2 (Hanssen)	OMV	2014	OIL (Stø)	1730	Triassic Snadd Fm.	7450
7325/1-1 (Atlantis)	Statoil	2014	GAS (Snadd)	2865	Triassic Havert Fm.	7501
7324/9-1 (Mercury)	Statoil	2014	GAS (Stø)	1100	Triassic Snadd Fm.	7527
7324/8-2 (Bjaaland)	OMV	2015	Dry/shows	3812	Triassic Snadd Fm.	7681
7324/7-3S (Wisting Appraisal)	OMV	2016	OIL (Stø)	2354	Jurassic Stø Fm.	7875
7325/4-1 (Gemini Nord)	Statoil	2017	GAS (Stø) OIL (Snadd)	1210	Triassic Snadd Fm.	8211
7324/8-3 (Wisting II)	OMV	2017	OIL (Stø)	840	Triassic Fruholmen Fm.	8239
7324/3-1 (Intrepid Eagle)	Equinor	2018	GAS (Snadd/Stø)	1709	Triassic Snadd Fm.	8568
7324/6-1 (Sputnik)	Equinor	2019	OIL (Snadd Fm)	1600	Triassic Snadd Fm.	8741
7324/6-2 (Ferdinand Nord)	Aker BP	2024	Gas (Stø)	1280	Triassic Snadd Fm.	10097
7324/8-4 (Hassel)	Aker BP	2024	Gas (Stø)	815	Triassic Snadd Fm.	10096

2.3 CSEM data

Aker BP has used CSEM in its exploration strategy in the Barents Sea for over 10 years. In the Hoop/Bjarmeland area, this technology has a unique position for evaluating Jurassic prospectivity as it has not failed so far. All Jurassic prospects drilled in the area are associated with elevated seismic amplitudes; however, only those with EM anomalies have led to discoveries. Direct Hydrocarbon Indicators (DHI) in the seismic is of that reason crucial but not sufficient. The seismic DHI can be set up by low saturation hydrocarbons, but EM anomalies prove hydrocarbon-filled structures with high saturation. Aker BP has EM survey available in PL1134 (Table 2.3 and Fig. 2.1) and has conducted its own 2D inversion in addition to compare EMGS's evaluation.

Table 2.3 CSEM Database (Electro Magnetic Surveys)

Name	Type	Company	Year	Area	NPDID
BSTEN01(part of EMGS1001)	3D Multi Client	EMGS	2010	Bjarmeland Platform	7191

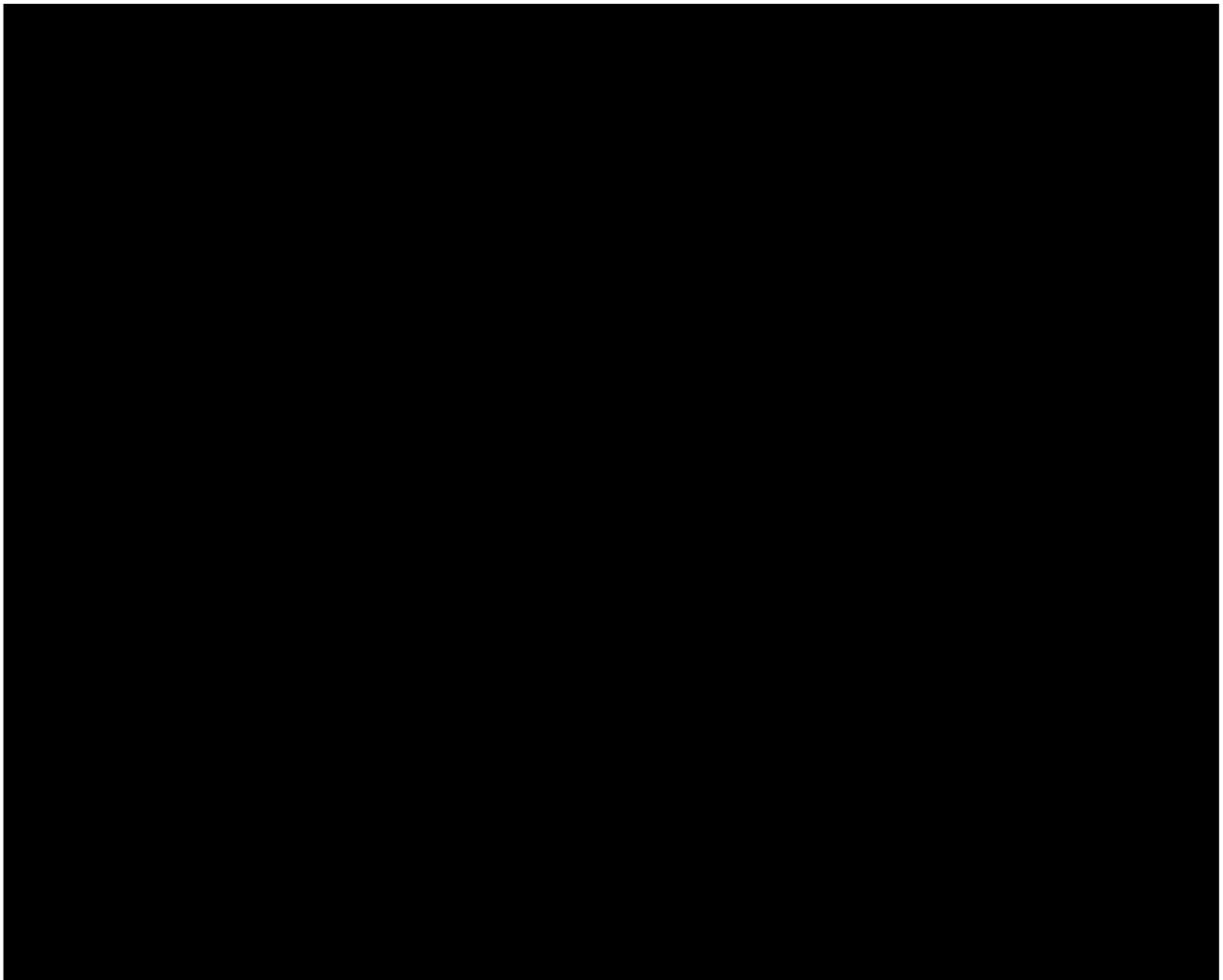
3 Geological and geophysical studies

The following studies have been carried out

- Reprocessing of 3D seismic surveys (2.1 Seismic data)
- CSEM interpretation of BSTEN01
- AVO study (both external (Dig Science) and internal work

3D seismic survey ABP23m05

A seismic re-processing done by DUG was carried out in 2022. The main purposes were to focus on better amplitude imaging and also to get a continues dataset across the Dicovery Prospects. The relevant 3D surveys used in the reprocessing are shown in Fig. 2.2.



AVO study

PCube Methodology (Aker BP)

To investigate AVA (Amplitude vs Angle) behaviour of the area of interest, a Bayesian-based inversion called PCube, was performed. In PCube, probabilities for different lithology-fluid classes from seismic data and geological knowledge are calculated.

The method combines stochastic rock physics relations between the elastic parameters and the different lithology-fluid classes, with the results from a fast Bayesian seismic simultaneous inversion from seismic data to elastic parameters integrating knowledge generated by different subsurface disciplines. Thus, it enables the maximum synergy.

The process involves the following major steps:

- Define a lithology-fluid class dictionary & Simultaneous inversion of Angle stacks
- Compute the probability for each of the lithology-fluid classes in the dictionary at every point in the subsurface

The conclusion from the internal study is that it is possible to distinguish the HC footprint from brine; however, it is difficult to distinguish between oil and gas fluids. It is also difficult to distinguish low saturation from high saturation gas accumulations.

4 Prospect update

Two prospects (Buran and Discovery) and several leads formed the basis for the 25th Round application that led to the award of PL1134. Only the Discovery Prospect has been covered by new, reprocessed seismic data (AKB23m05) (Fig. 2.1) and therefore underwent a full re-evaluation of volume and risk. Regarding the Buran Prospect, only the risk analysis has been re-evaluated, based on the new drilling results of Hassel and Ferdinand prospects (PL1170). The PL1134-prospects belongs to the Jurassic play-model, the same model that defines almost all the discoveries in the Wisting area. The Triassic leads, presented in the 25th Round application, are not re-evaluated due to little confidence in the exploration model, which was also reinforced by drilling the Ferdinand well.

Jurassic Reservoir

The reservoir consist of Stø Formation, deposited in a fluviodeltaic to shallow marine setting comprising tidally influenced channels, tidal flat and shoreface deposits. These reservoir units are encountered in all nearby wells and show very good reservoir properties.

Trap

Both prospects are bounded to the east by a large north-south trending fault and is internally compartmentalised by minor faults.

Source

The main source of the hydrocarbons is expected to be the Steinkobbe Formation, a source rock that has been confirmed by all nearby discoveries.

Discovery Prospects (Main Segment)

Discovery Prospect was originally divided in 4 segments (South, West, Main and North). In this report, Discovery Prospect is referred to as the main segment. The main segment is heavily compartmentalized by minor faults trending both north-south and east-west (Fig. 4.1 and Fig. 4.2). The Re-mapping of the Discovery Prospect has not resulted in major changes since the 25th round interpretation. The prospect definition and segmentation remain the same, but the re-processed seismic has increased confidence in the interpretation and provided a basis for better attribute maps. As Fig. 4.1 shows, there is no convincing correspondence between seismic anomalies and the structural trap, as the strongest are randomly distributed among the segments and somewhere strongest in structural lows. The most likely explanation for these observations is a trap that has leaked hydrocarbons and residual saturation is seen in reservoir zones with varying reservoir properties. The Discovery Prospect assessment is shown in Table 4.2.

Buran Prospect

Buran Prospect consists of six segments and has associated seismic anomalies (Fig. 4.3). Segment 3-5 have better depth conformed seismic amplitudes than the others and only one seismic shut-off is observed across the prospect, indicating only one potential hydrocarbon phase. The prospect area was not included in the seismic re-processing project, so no updated interpretation exists since the 25th Round application. The Buran Prospect assessment is shown in Table 4.3

Volumetric

An overview of the prospect resources are given in Table 4.1

Table 4.1 Resource Potential *Only oil is of interest since gas is considered as a failure. Gas/oil likelihood is 70/30*

Prospect	Phase	In Place (mmbls)	Recoverable (mmbls)	COS
		P90-P50-Mean-P10		
Buran	Oil	204-259-263-327	77-103-106-138	12 %
Discovery	Oil	269-415-426-600	103-165-171-248	7 %

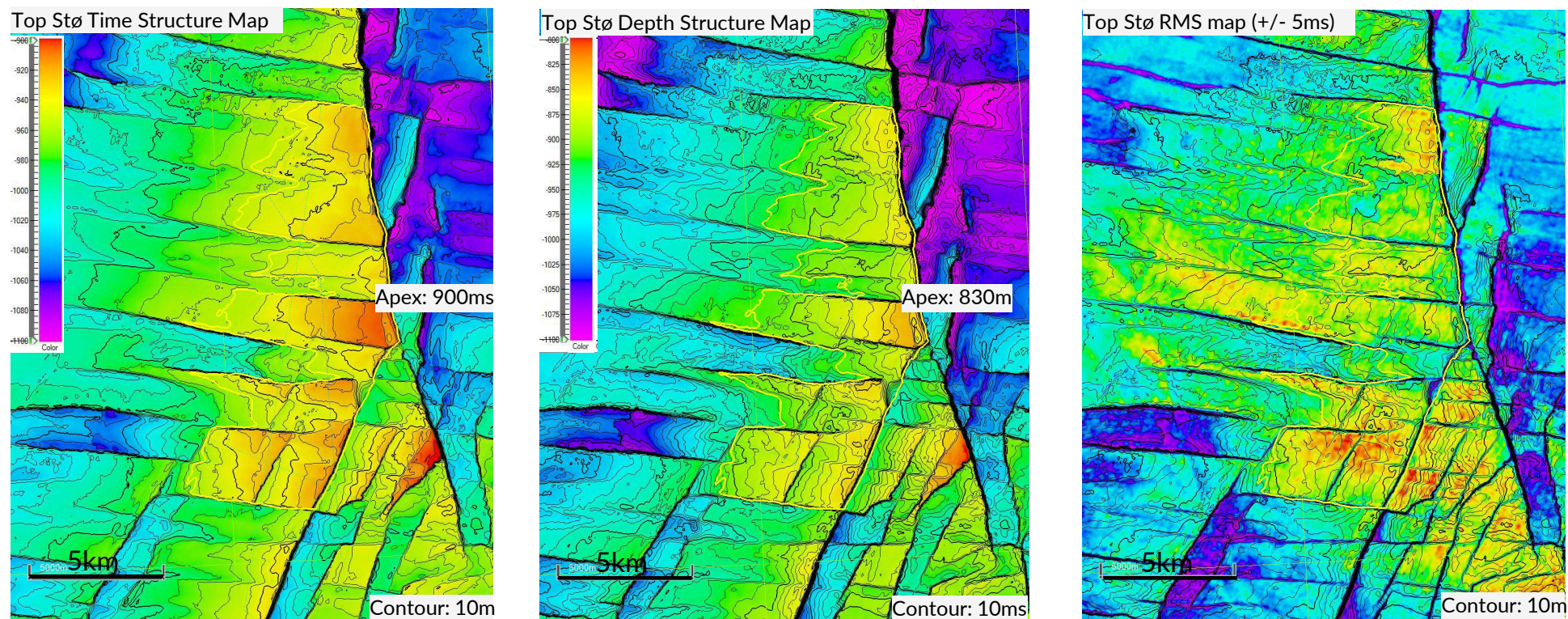


Fig. 4.1 Discovery Prospect Maps Time, depth and RMS maps of the Discovery Prospect (yellow outline)

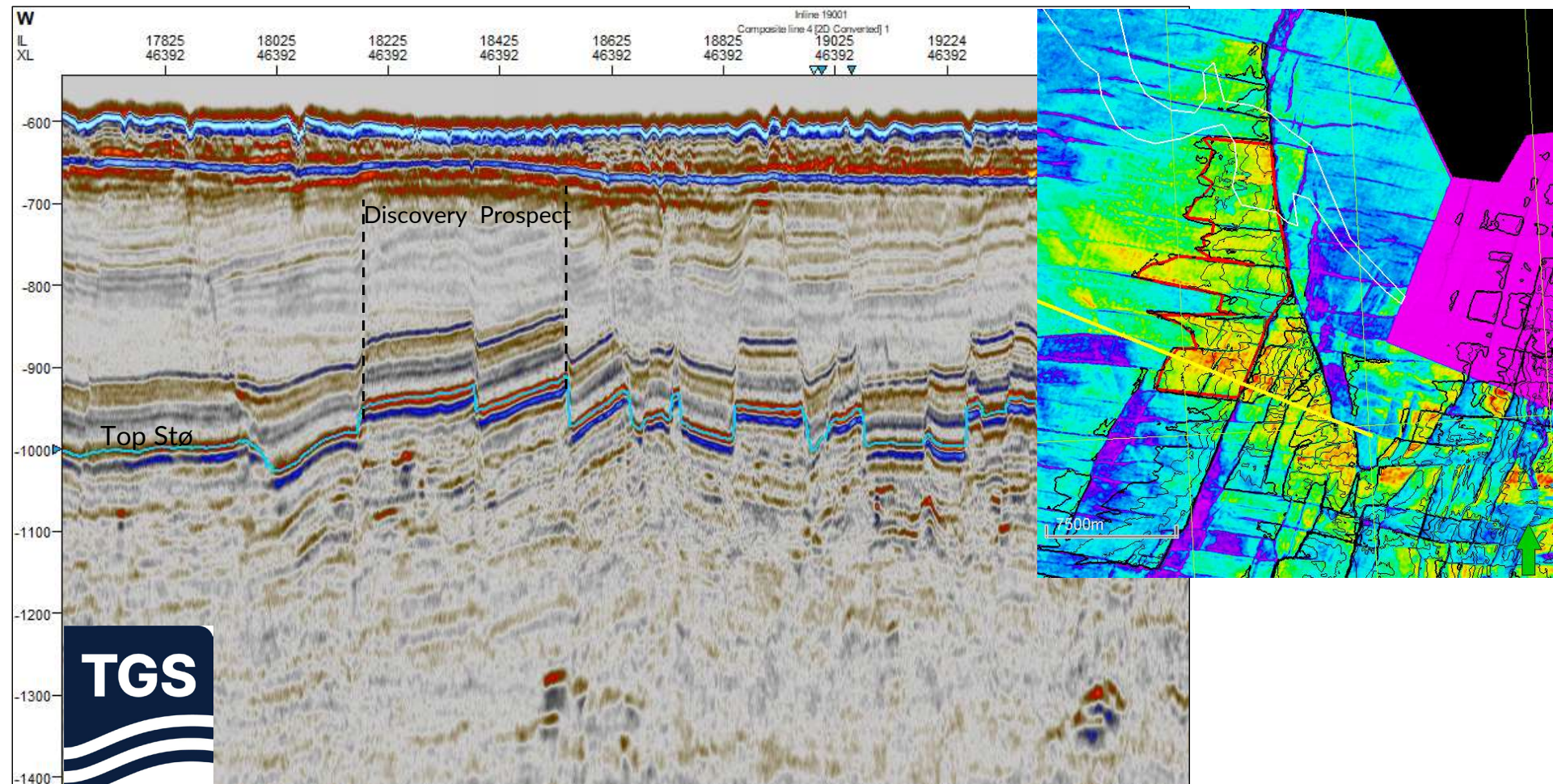


Fig. 4.2 Discovery Prospect Seismic line Seismic arbitrary line from ABP23m05 showing outline of the main segment

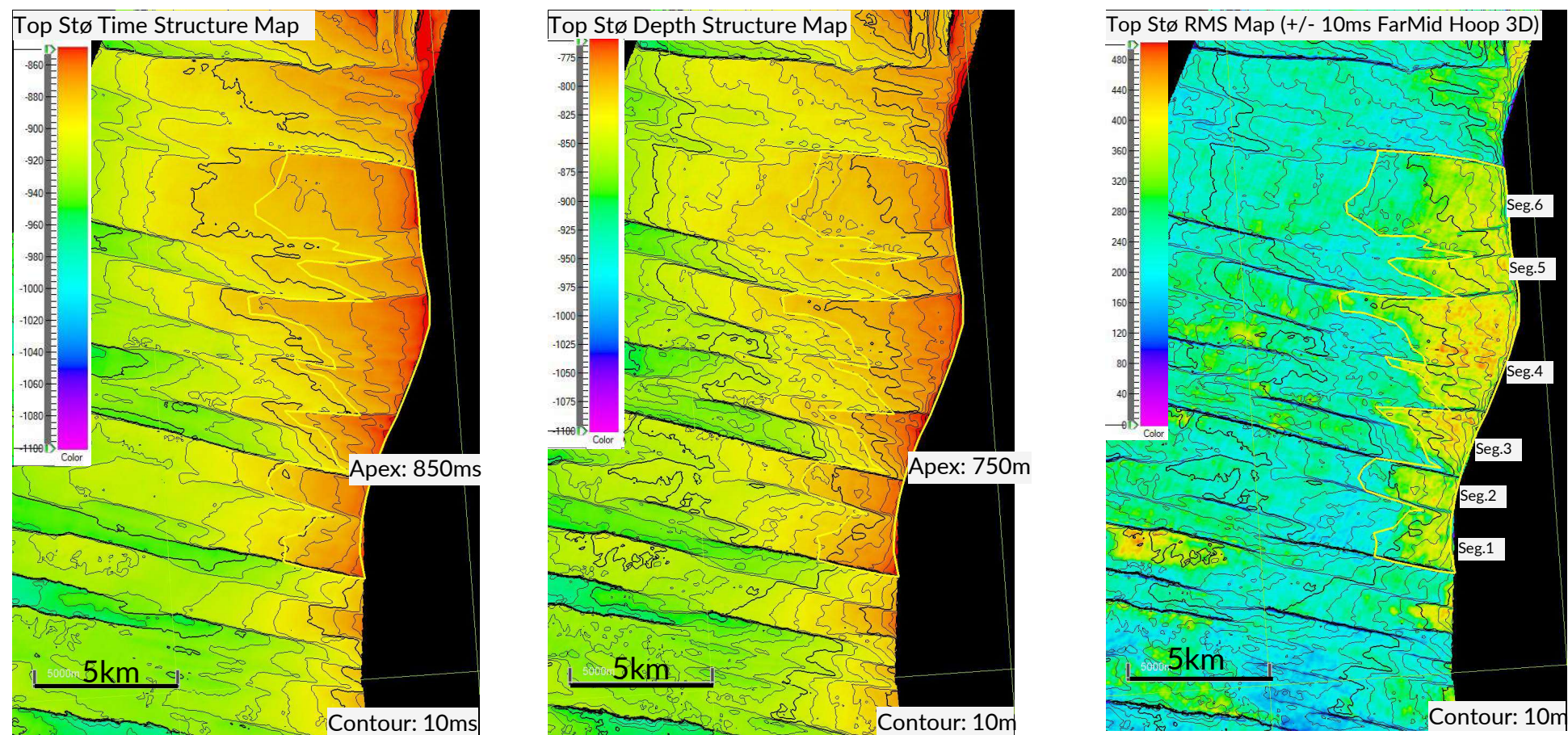


Fig. 4.3 Buran Prospect Maps Time, depth and RMS map of the Buran Prospect (Yellow outline).

Table 4.2 Discovery Prospect (Table 5)

Block	Prospect name	Discovery	Discovery/Prospect/Lead	Prospect	Prospect 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:	Oil	Reported by company	Reference document				Assessment year	
This is case no.:		Structural element	Bjarmeland	Type of trap	1.1.1 Up-thrown tra	Water depth [m MSL] (>0)	448	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)	42.73	62.03	67.73	95.39			
	Gas [10 ⁹ Sm ³] (>0.00)					2.00	2.75	3.23
Recoverable resources	Oil [10 ⁶ Sm ³] (>0.00)	16.43	23.26	27.23	39.47			4.62
	Gas [10 ⁹ Sm ³] (>0.00)					0.72	1.07	1.30
Reservoir Chrono (from)	Norian	Reservoir litho (from)	Stø fm	Source Rock, chrono primary	Anisian	Source Rock, litho primary	Steinkobbe fm	Seal, Chrono
Reservoir Chrono (to)		Reservoir litho (to)	Stø fm	Source Rock, chrono secondary		Source Rock, litho secondary		Seal, Litho
								Fuglen fm
Probability [fraction]								
Technical (oil + gas + oil & gas case) (0.00-1.00)	0.07	Oil case (0.00-1.00)	0.07	Gas case (0.00-1.00)	0.00	Oil & Gas case (0.00-1.00)	0.00	
Reservoir (P1) (0.00-1.00)	0.90	Trap (P2) (0.00-1.00)	0.30	Charge (P3) (0.00-1.00)	0.27	Retention (P4) (0.00-1.00)	1.00	
Parameters:		Low (P90)	Base	High (P10)	Comments:			
Depth to top of prospect [m MSL] (> 0)					Mean values have here been used as the base case for the input parameters.			
Area of closure [km ²] (> 0.0)		33.2	47.7	61.7				
Reservoir thickness [m] (> 0)		15.9	18.0	20.1	In the petrophysical evaluation of the reservoir parameters for the reference wells, the Thomas Stieber (1975) method was utilised for most of the wells. This method utilises cut-offs for net res fraction and porosity. (Net res fraction is the fraction of the desired facies that is of reservoir quality; net reservoir rock/ net sand).			
HC column in prospect [m] (> 0)								
Gross rock vol. [10 ⁹ m ³] (> 0.000)		0.450	0.693	0.949	Gross rock volume is the HC-bearing gross volum, that is the GRV calculated down to the HCW contact			
Net / Gross [fraction] (0.00-1.00)		0.75	0.80	0.85				
Porosity [fraction] (0.00-1.00)		0.16	0.17	0.19				
Permeability [mD] (> 0.0)								
Water Saturation [fraction] (0.00-1.00)		0.15	0.20	0.25				
Bg [Rm3/Sm3] (< 1.0000)								
1/Bo [Sm3/Rm3] (< 1.00)		0.86	0.88	0.90				
GOR, free gas [Sm ³ /Sm ³] (> 0)								
GOR, oil [Sm ³ /Sm ³] (> 0)		42	48	55	Retention (P4) after accumulation, is part of the trap risk.			
Recov. factor, oil main phase [fraction] (0.00-1.00)		0.35	0.40	0.45				
Recov. factor, gas ass. phase [fraction] (0.00-1.00)		0.30	0.40	0.50				
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)								
Pressure, top res [bar] (>0)					Innrappr. av geolog-init:	NPD will insert value	Registrert - init:	NPD will insert value
Cut off criteria for N/G calculation		1.	2.	3.	Dato:	NPD will insert value	Registrert Dato:	NPD will insert value
							Kart oppdatert	NPD will insert value
							Kart dato	NPD will insert value
							Kart nr	NPD will insert value

Table 4.3 Buran Prospect (Table 5)

Block	7425/10	Prospect name	Buran	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:	Oil	Reported by company		Reference document				Assessment year	2024
This is case no.:		Structural element	Bjarmeland	Type of trap	1.1.1 Up-thrown trap	Water depth [m MSL] (>0)	440	Seismic database (2D/3D)	3D
Resources IN PLACE and RECOVERABLE Volumes, this case		Main phase			Associated phase				
		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)	32,48	39,12	41,88	52,06	1,52	1,89	2,01	2,55
	Gas [10 ⁹ Sm ³] (>0.00)								
Recoverable resources	Oil [10 ⁶ Sm ³] (>0.00)	12,19	15,96	16,81	21,89	0,57	0,72	0,80	1,07
	Gas [10 ⁹ Sm ³] (>0.00)								
Reservoir Chrono (from)		Reservoir litho (from)	Stø fm	Source Rock, chrono primary	Anisian	Source Rock, litho primary	Steinkobbe fm	Seal, Chrono	Callovian
Reservoir Chrono (to)		Reservoir litho (to)	Stø fm	Source Rock, chrono secondary		Source Rock, litho secondary		Seal, Litho	Fuglen fm
Probability [fraction]									
Technical (oil + gas + oil & gas case) (0.00-1.00)	0,12	Oil case (0.00-1.00)	0,12	Gas case (0.00-1.00)	0,00	Oil & Gas case (0.00-1.00)	0,00		
Reservoir (P1) (0.00-1.00)	0,90	Trap (P2) (0.00-1.00)	0,50	Charge (P3) (0.00-1.00)	0,27	Retention (P4) (0.00-1.00)	1,00		
Parameters:		Low (P90)	Base	High (P10)	Comments:				
Depth to top of prospect [m MSL] (> 0)			750		Mean values have here been used as the base case for the input parameters.				
Area of closure [km ²] (> 0.0)	29,3		34,8	40,7					
Reservoir thickness [m] (> 0)	15,9		18,0	20,1	In the petrophysical evaluation of the reservoir parameters for the reference wells, the Thomas Stieber (1975) method was utilised for most of the wells. This method utilises cut-offs for net res fraction and porosity. (Net res fraction is the fraction of the desired facies that is of reservoir quality; net reservoir rock/ net sand).				
HC column in prospect [m] (> 0)			55						
Gross rock vol. [10 ⁹ m ³] (> 0.000)	0,333		0,404	0,481	Gross rock volume is the HC-bearing gross volum, that is the GRV calculated down to the HCW contact				
Net / Gross [fraction] (0.00-1.00)	0,75		0,80	0,85					
Porosity [fraction] (0.00-1.00)	0,17		0,18	0,20	Retention (P4) after accumulation, is part of the trap risk.				
Permeability [mD] (> 0.0)	95,8		162,2	230,5					
Water Saturation [fraction] (0.00-1.00)	0,15		0,20	0,25	For NPD use:				
Bg [Rm3/Sm3] (< 1.0000)									
1/Bo [Sm3/Rm3] (< 1.00)	0,86		0,88	0,90	Innrapp. av geolog-init:	NPD will insert value	Registrert - init:	NPD will insert value	Kart oppdatert
GOR, free gas [Sm ³ /Sm ³] (> 0)					Dato:	NPD will insert value	Registrert Dato:	NPD will insert value	Kart dato
GOR, oil [Sm ³ /Sm ³] (> 0)	42		48	55					
Recov. factor, oil main phase [fraction] (0.00-1.00)	0,35		0,40	0,45					
Recov. factor, gas ass. phase [fraction] (0.00-1.00)	0,35		0,40	0,45					
Recov. factor, gas main phase [fraction] (0.00-1.00)									
Recov. factor, liquid ass. phase [fraction] (0.00-1.00)									
Temperature, top res [°C] (>0)									
Pressure, top res [bar] (>0)	82								
Cut off criteria for N/G calculation	1.	2.	3.					Kart nr	NPD will insert value

5 Technical evaluation

Since the distance to Wisting is too great for a possible future tie-in, the prospects in PL1134 are dependent on being large enough for independent development. For these reasons, there are currently no good development solutions for the prospects in the licence.

6 Conclusion

- Empirical evidence suggests that the observation of only one seismic anomaly shut-off indicates gas only. All oil discoveries in the area have two seismic anomaly shut-off in addition to a clear EM-anomaly. [REDACTED]
- After drilling of Ferdinand Nord and Hassel prospects (PL1170) in 2024, the likelihood of finding gas (versus oil) has increased
- The PL1134 prospects have a very low COS for oil but relatively large volume potential. However, the distance from Wisting is too far for a tie-in solution, and the volume potential is far below the requirement for a commercial stand-alone development in the Barents Sea