



# Relinquishment Report

**License: PL969 & 969B**

**Blocks: 1/6 & 1/9**

**Area: Norwegian Southern North Sea**

**May 2024**

**A/S Norske Shell**

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## 1. EXECUTIVE SUMMARY

Licence PL969 (Blocks 1/6 & 1/9) was awarded to Faroe Petroleum Norge A/S (operator), A/S Norske Shell and Spirit Energy Norge A/S in the APA 2018 Round. Norske Shell and Spirit Energy Resources Limited retained 40% and 15% equity respectively, with Faroe Petroleum Norge Limited holding 45% and retaining operatorship. Faroe Petroleum Norge was acquired by DNO in Q2 2019, with Faroe Petroleum's equity moving directly to DNO. Shell was made operator of the licence in 2020 following the pre-agreement that this would be the case in the event of the licence moving to a drill decision on the Edinburgh prospect. This decision was taken by the Joint Venture with the Edinburgh well being drilled in Q2 2022. In 2022 Sval Energi acquired the equity from Spirit Norway. The Edinburgh well was plugged and abandoned with gas shows observed.

The PL969 licence began on 1<sup>st</sup> March 2019 with an initial 2 year study phase following which a drill commitment would be required to go into the next 2 year phase of the licence. There was no specified work commitment as part of the study phase. An initial drill or drop decision was required for March 2021, however a 2 year extension was granted until March 2023 for this decision

PL969B Extension was requested by the licence operator in APA 2021 with approval from the NPD in Q1 2022. Figure 1.1 highlights the licence summary on the location map. In 2023 the JV requested a 1 year extension to the Decision to Drill until 1<sup>st</sup> March 2024 with an associated 3 year extension to the Decision to Concretise until March 2026. This extension allowed evaluation of prospectivity across the PL969 and PL969B licences in light of the new data gained from the Edinburgh well.

As a result of the Edinburgh well failure the prospectivity review of all associated licences, including PL969/B, was assessed and reviewed. The conclusion of the partnership is that the Edinburgh structure was the most attractive prospect in the licence area and remaining prospectivity is inherently riskier as a result of insufficient data.

Shell, with partners, elected to recommend the relinquishment/surrender of PL969/B and subsequently informed the NPD. The licence was effectively relinquished on 1<sup>st</sup> March 2024.

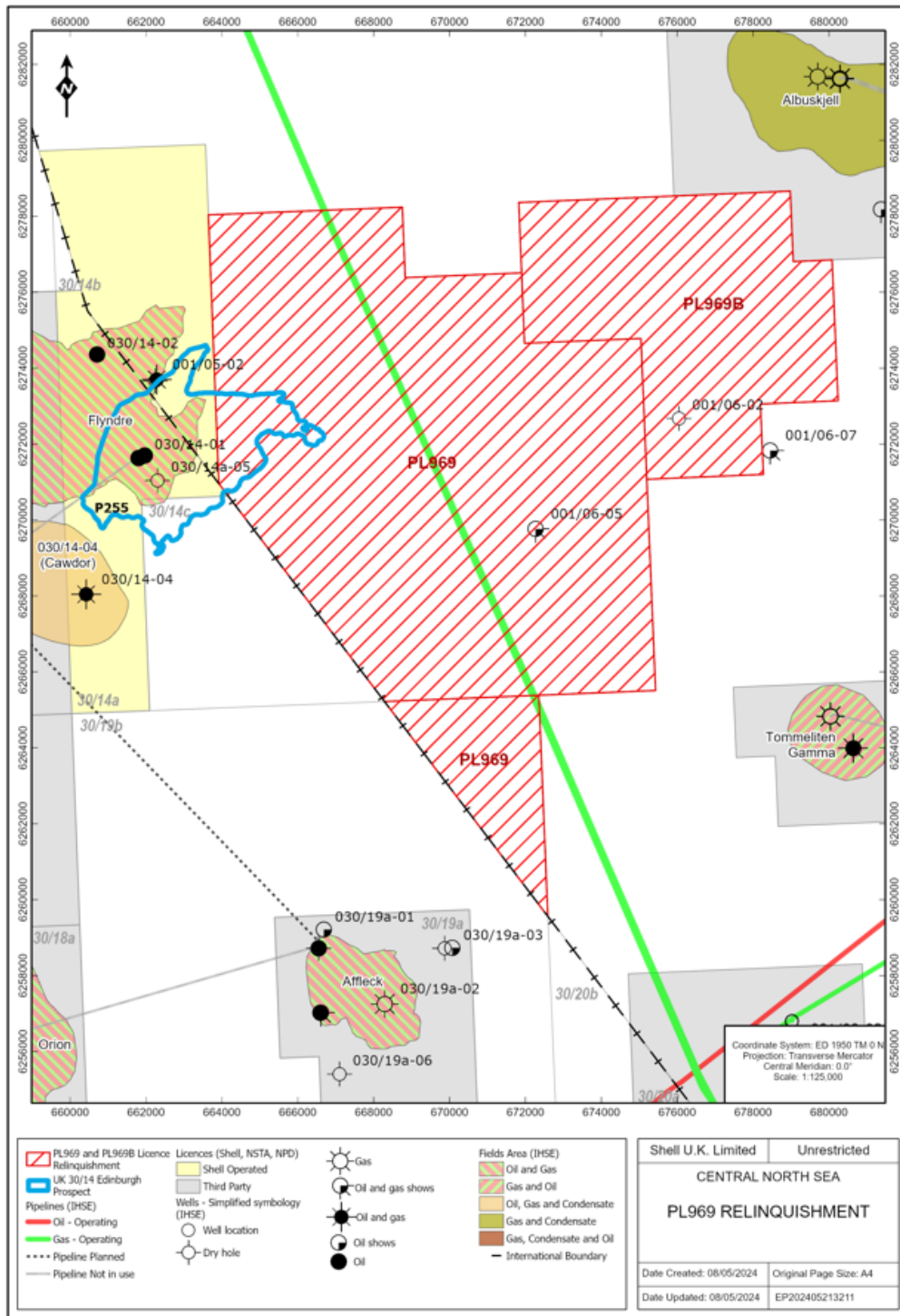


Figure 1.1 – PL969/B in the context of adjacent fields and infrastructure with the pre-drill Edinburgh polygon (blue) displayed

2.



## 2. History of Licence

Table 2.1 displays the summary of licence parameters for both the initial licence PL969, as well as the licence extension of PL969B.

Licence Type	:	APA 2018 (Initial), APA 2021 (Extension)
Licence Sub-type	:	Initial 3 year phase with DoD
Licence Number	:	PL969 & 969B
Blocks	:	1/6 & 1/9
Block Area	:	Norwegian Southern North Sea
Licence Start Date	:	1 <sup>st</sup> March 2019
Phase 1 Initial (2 years)	:	1 <sup>st</sup> March 2021
Phase 1 Extended (3 Years)	:	1 <sup>st</sup> March 2024
Phase 2 (2 years) (Ext)	:	1 <sup>st</sup> March 2026
Phase 3 (2 years)	:	1 <sup>st</sup> March 2028
Phase 4 (1 year)	:	1 <sup>st</sup> March 2029
Relinquished	:	01 March 2024 – 100%
Commitments	:	Geological Studies
Operator	:	A/S Norske Shell
Participation	:	A/S Norske Shell – 40%; DNO – 45% & Sval Energi – 15%

Table 2.1 - Summary of PL969/B licence parameters

### 2.1. Status of Work Commitment

The following studies were carried out within the Studies Phase of the PL969 licence:

- Pore pressure Study
- Structural Restoration of the Edinburgh structure

### 2.2. Licence Meetings

The following PL969/B Management and Exploration Committee meetings have been held:

- 2019, 10<sup>th</sup> December, EC/MC Meeting, Greater Edinburgh Joint Meeting
- 2020, 13<sup>th</sup> February, EC Meeting, Edinburgh well progress review
- 2020, 23<sup>rd</sup> November, EC/MC Meeting, Subsurface evaluation
- 2021, 11<sup>th</sup> February, EC/MC Meeting, Edinburgh Well SCM
- 2021, 2<sup>nd</sup> June, EC/MC Meeting, Critical document (well delivery) review
- 2021, 10<sup>th</sup> November, MC Meeting, JV Technical Meeting
- 2021, 15<sup>th</sup> December, EC/MC Meeting, JV Technical Meeting



- 2022, 24<sup>th</sup> February, EC/MC Meeting, Pre-drill review
- 2022, 10<sup>th</sup> October, EC/MC Meeting, Initial well results
- 2023, 29<sup>th</sup> July, EC/MC Meeting, Full review of well analysis
- 2023, 26<sup>th</sup> September, EC/MC Meeting, review of remaining prospectivity
- 2023, 5<sup>th</sup> December, EC/MC Meeting, agreement to relinquish on basis of risk of remaining prospectivity





### 3. DATABASE OVERVIEW

#### 3.1. Seismic Inventory

The PL969/B licence is covered by several surveys as outlined in table 3.1.

Input Seismic	NPDID	Area [sq km]	Year of Acquisition	Type	Contractor
CN193	3577	960	1993	3D	Conoco Norway
CGG Cornerstone	-	281	2014	3D	CGG
PGS15908CGR	-	5,408	2013	3D	PGS

Table 3.1 - Summary of the surveys used in the Greater Edinburgh area

The areal coverage of the seismic surveys listed above in relation to the PL969/B licence area is shown in figure 3.1.

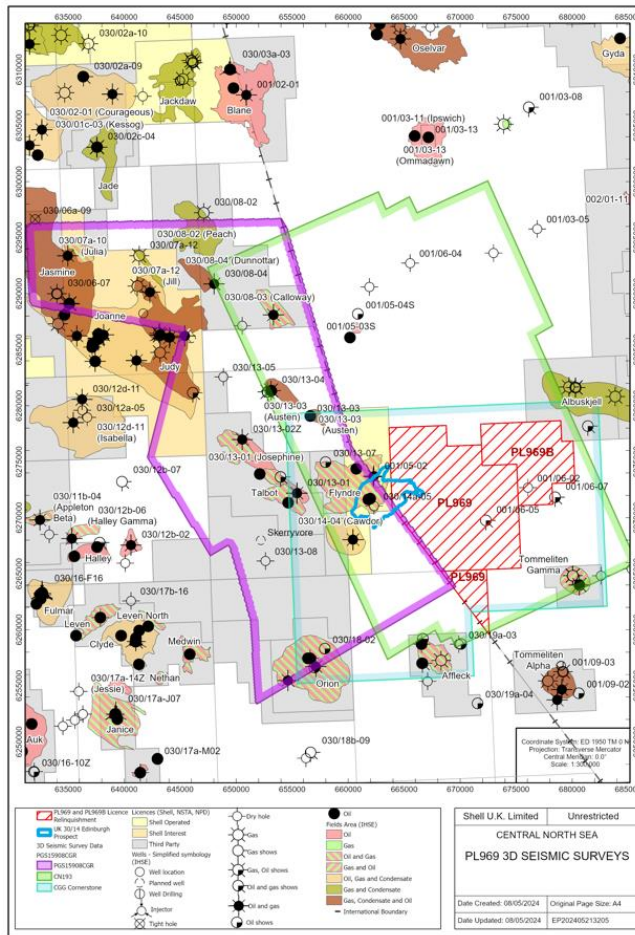


Figure 3.1 – Areal coverage of the CN193 and CGG Cornerstone surveys used in the interpretation project to mature the Edinburgh exploration well primarily. PL969/B are covered by both surveys.



### 3.2. Well Inventory

There are three well penetrations in the licence area which are summarised in table 3.2 below.

Well	NPDID	Result - Field/Discovery	Year	Stratigraphy at TD	Primary Target
1/6-2	240	Dry (some shows)	1972	Hod	Paleocene - Forties
1/6-5	1508	Dry (Some shows)	1990	Zechstein	Chalk Group
1/6-7	1928	Dry (Some shows)	1992	Pentland	Jurassic - Fulmar

**Table 3.2** - Summary of well penetrations in the licence area

#### 3.2.1. Regional Wells

A number of wells across the region were used throughout the Edinburgh project and are summarised in table 3.3 below.

Well	Result - Field/Discovery	Year	Stratigraphy at TD	Primary Target
UK				
30/8-1	HC Shows	1982	Pentland	Jurassic - Fulmar
30/8-2	Gas/Condensate Discovery - Peach	1995	Maureen	Palaeocene - Forties
30/12-1	Dry	1969	Skagerrak	Jurassic - Fulmar
30/12b-2	Oil Discovery	1980	Skagerrak	Jurassic - Fulmar
30/13-1	Oil Discovery - Josephine	1970	Skagerrak	Cretaceous - Hod
30/13-2	Oil Discovery - Josephine	1972	Skagerrak	Triassic - Skagerrak
30/13-3	Gas/Condensate Discovery - Austen	1990	Skagerrak	Jurassic - Freshney
30/13-4	Gas/Condensate Discovery - Austen	1992	Skagerrak	Jurassic - Fulmar
30/13-5	Dry	1996	Skagerrak	Triassic - Skagerrak
30/13-6	Gas/Condensate Discovery - Austen	1996	Skagerrak	Jurassic - Freshney
30/13-7	Oil Development - Flyndre	1997	Skagerrak	Jurassic - Freshney
30/13a-8	Dry	2004	Tor	Paleocene - Mey
30/14a-5	Edinburgh Prospect	2022	Skagerrak	Jurassic - Fulmar
30/17b-5	Oil Development - Medwin	1979	Skagerrak	Jurassic - Fulmar
30/18-2	Oil Development - Orion	1971	Pentland	Jurassic - Fulmar



30/18-3		Oil Development - Orion	1985	Skagerrak	Jurassic - Fulmar
30/18-6Z		Oil Development - Orion	1998	Maureen	Paleocene - Mey
30/19a-4		Oil Discovery - Affleck	1987	Zechstein	Jurassic - Fulmar
30/19a-5X		Dry	1992	Smith Bank	Jurassic - Fulmar
30/19a-6		Oil Discovery - Affleck	1996	Zechstein	Jurassic - Fulmar
Well	NPDID	Result - Field/Discovery	Year	Stratigraphy at TD	Primary Target
Norway					
1/5-2	238	Oil Development - Flyndre	1974	Zechstein	Jurassic - Fulmar
1/6-6	1839	Dry (Some shows)	2011	Skagerrak	Jurassic - Fulmar
1/9-7	4652	Dry	2003	Skagerrak	Jurassic - Fulmar

Table 3.3 - List of wells used in regional and prospect evaluation



## 4. RESULTS OF GEOLOGICAL AND GEOPHYSICAL STUDIES

### 4.1. Pore Pressure Study

One of the key challenges in reaching the drill or drop decision on the Edinburgh prospect related to pore pressure. There were two distinct aspects to the study related to different issues being i) HPHT nature of the Jurassic target, and ii) drilling through the pressure depleted Flyndre field.

HPHT Drilling - The Edinburgh target was predicted at between 14,000 - 16,000ft TVDSS with a significant degree of overpressure (~7000psi) predicted from observations of offset wells. Due to the large uncertainty range of top reservoir, shoe placement of the 13 3/8" string as deep as possible before encountering hydrocarbon bearing reservoir was paramount. As such Managed Pressure Drilling (MPD) was implemented to ensure well integrity. This strategy was deemed suitable to move forward with the drilling of the Edinburgh well with the MPD system providing a safety margin when drilling unknown formations at depth.

Depleted drilling - Communication with the operator of the Flyndre field allowed for the sharing of pressure data which was subsequently used to plan mud weights to ensure the integrity of the well. Following this review a mud weight strategy was devised that allowed well planning to continue with a low risk.

### 4.2. Structural Reconstruction

Significant halokinesis in the Edinburgh area made a pre-drill interpretation of the stratigraphy below the BCU challenging with correlation of nearby offset wells not providing a confident interpretation. Therefore several structural outcomes were generated which resulted in a range of top reservoir depths (at the well location in P255) from between 14,174 - 16,587 ft TVDSS. This resulted in a pre-drill depth range of a similar range for the top reservoir location within the PL969/B licence areas.

### 4.3. Edinburgh Exploration Well (30/14a-5)

The structural crest of the Edinburgh prospect is situated in the P255 licence, directly Northwest of PL969/B, with the licence area acquired in the event of an Edinburgh success case with - dependent on volumes encountered - a contact could be expected in the PL969/B area.

Subsequently the Edinburgh exploration well was drilled to target depth, safely, in Q2 2022 in licence P255 with shows observed. The well was logged with hydrocarbon and water samples collected. Following an evaluation of the data the well was plugged and abandoned.



## 5. PROSPECT UPDATE REPORT

### 5.1. Portfolio Summary

Discovery/ Prospect/ Lead Name	D/ P/ L	Case (Oil/Gas/ Oil&Gas)	Unrisked resources inplace			Unrisked resources recoverable			Probability of discovery (0.00 – 100.0)	Resources of acreage applied [%] (0.0 – 100.0)	Reservoir		Nearest Relevant Infrastructure	
			Gas [10 <sup>6</sup> Sm <sup>3</sup> ]			Gas [10 <sup>6</sup> Sm <sup>3</sup> ]					Litho-/ Chrono- stratigraphic level	Reservoir Depth [m MSL] (>0)	Name	Km (>0)
			Low (P90)	Base (Mean)	High (P10)	Low (P90)	Base (Mean)	High (P10)						
Beck	L	Oil	0.5	3.8	10	-	-	-	-	-	Maureen	3,350	Shearwater	65
Edinburgh Updip	P	Gas	0.3	4.4	7	0.25	1.6	4.8	27	3	Oxfordian	4,216	Shearwater	62
Fossekall North	P	Gas	0.8	7.6	22.7	0.5	5.1	18.9	28	100	Oxfordian	4,665	Shearwater	75
Fossekall South	P	Gas	0.5	8.1	25.1	0.3	5.2	20.8	28	100	Oxfordian	4,604	Shearwater	77

Below is the portfolio summary table for the PL969/B area, table 5.1

Table 5.1 Prospectivity portfolio volumetric and risking summary table

As a result of the Edinburgh well failure the remaining updip opportunity was assessed with the majority of the potential volume situated in the UK P255 licence area. This opportunity was assessed as a sidetrack option when drilling the Edinburgh well and was subsequently not drilled.

Fossekall North and South are Jurassic Fulmar opportunities downdip of the Edinburgh structure and juxtaposed against a salt wall. As a result of severe salt overhang there is significant risk related to volumes, risking and, looking forward, well placement if these prospects were carried forward. These two prospects are the most attractive opportunities currently in the portfolio for the PL969 area.

Beck is a lead that is carried over from the initial application with no updates applied due to no new information from the Edinburgh well.

### 5.2. Fulmar Play

#### Edinburgh Up-dip

This opportunity was assessed upon the Edinburgh well reaching TD and encountering gas shows in the Fulmar. It appears as an attic opportunity at the Edinburgh structure that has a Probability of Success of hydrocarbons in place of 27%. There is a significant reservoir recovery risk with Edinburgh updip due to the tight nature of the rock identified in the original exploration well. This is associated with permeability blocking clays and cements. There is a chance that the Edinburgh structure is blown (key pre-drill risk) with the initial well results unable to prove this conclusively. Pressure data would suggest pore pressure is close to the fracture gradient at the crest.



Volumetrically only a small proportion of potential volumes could be situated in PL969, assuming the maximum contact for Edinburgh updip exists at, or close to, the Fulmar penetration at the Edinburgh well of 15,457 Ft TVDSS, as shown in figure 5.1. This would infer a transition zone is encountered at the Edinburgh well.

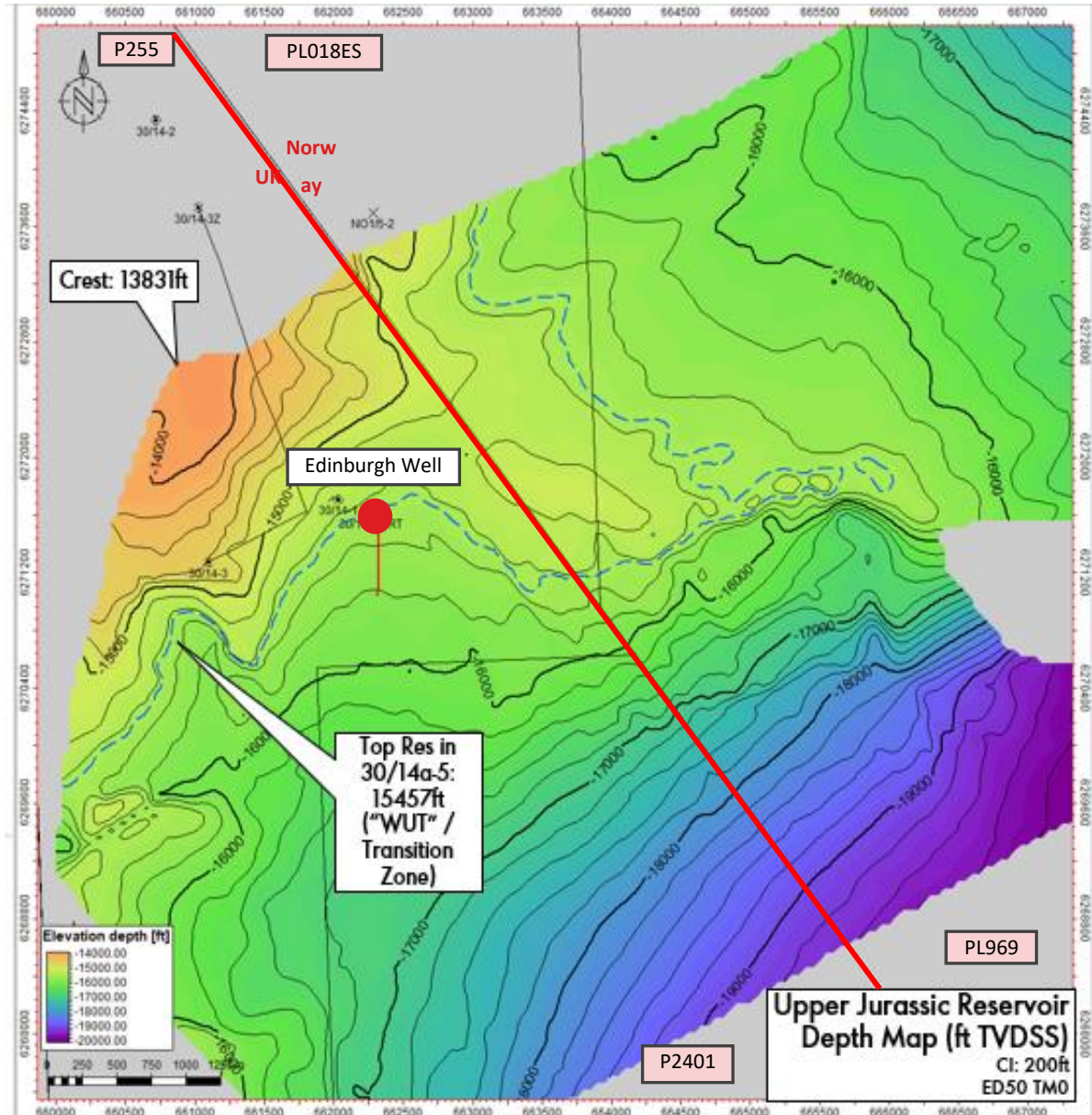


Figure 5.1 - Fulmar structure map (depth) showing the potential contact for Edinburgh updip at 15,457ft TVDSS i.e. the top Fulmar penetration identified in the Edinburgh exploration well

### Fossekall North and South

Through the failure of the Edinburgh well the Fulmar downdip of the Edinburgh structure was assessed with Fossekall South and North being derived. A breakdown of the risking for both is shown in table 5.2.



Element	PoS
Closure	0.85
Charge/Migration	0.8
Reservoir	0.85
Seal/Retention	0.6
<b>POS (In-Place)</b>	<b>0.34</b>
Recovery	0.8
<b>POS</b>	<b>0.28</b>

Table 5.2 Risking table associated with both Fossekall North and South

Fossekall North and South are shown on figure 5.2 with both juxtaposed against the salt diapir identified by 1/6-5. Figure.5.3a highlights a key NE - SW line through both prospects which are both juxtaposed against the salt diapir, albeit on opposite sides. There are clear imaging issues - especially towards Fossekall South - as a result of the salt overhang. This has made interpretation challenging with several possible interpretations. These are highlighted in figure 5.3 b-d and comprise a series of potential interpretations depending on the salt scenario invoked. Note that the volumes associated with each scenario is largely similar due to having similar GRV as a result of the spill point effectively moving between each scenario.

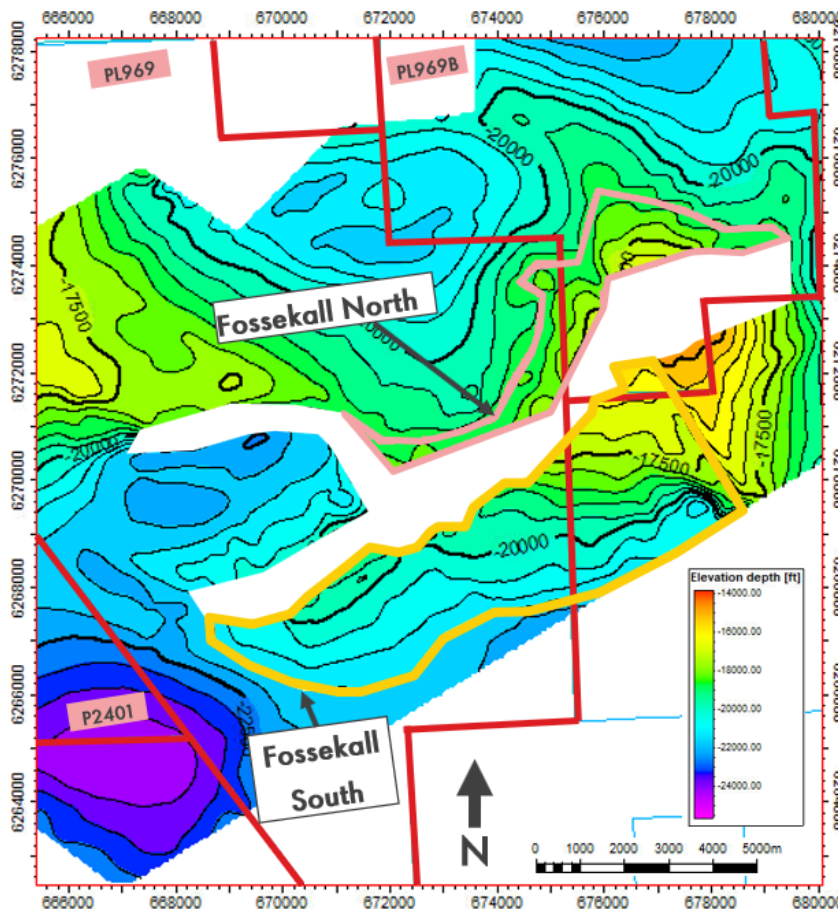


Figure 5.2a - Fulmar structure map in depth (ft TVDSS) with Fossekall North and South outlined

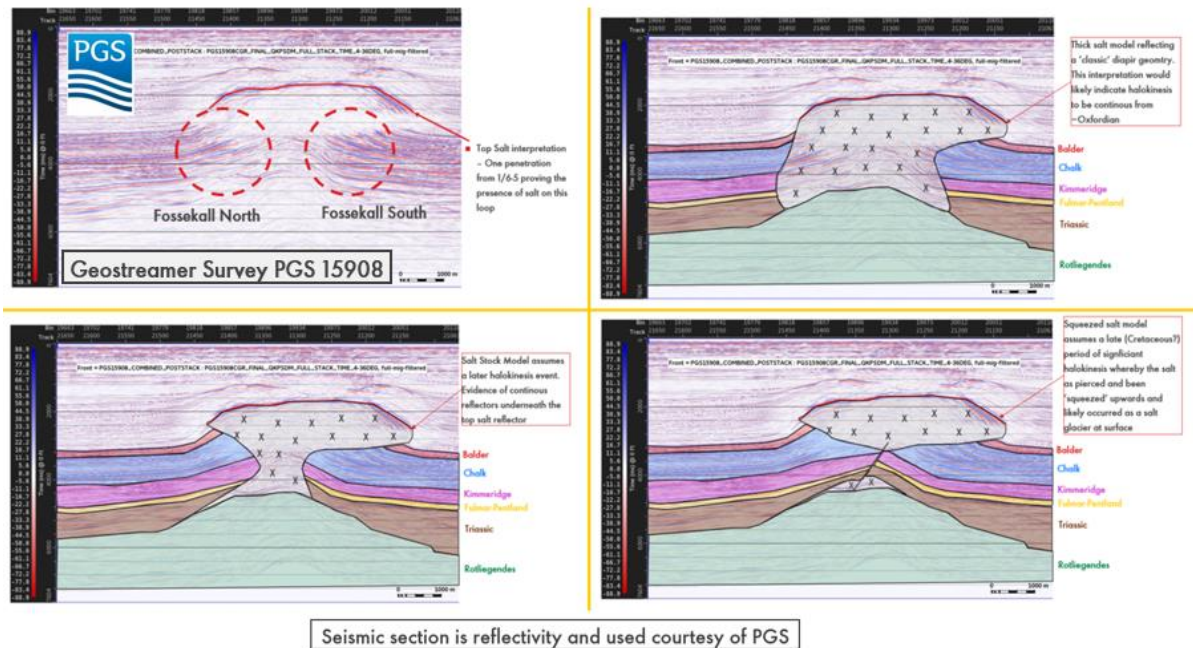


Figure 5.3a – Key line through Fossekal North and South exhibiting the imaging issues caused by the salt overhang of the significant diapir in the area. B-d represent a series of salt interpretations that would impact Fulmar presence underneath the salt overhang feature.

**Reservoir:** The Edinburgh well proved the presence of Fulmar reservoir to the NW of the licence area while well 1/6-7 also proved reservoir in close proximity to the salt diapir. Chance of encountering Fulmar reservoir at both Fossekal prospects is high based on these well results. This would indicate that salt movement is likely most active through the Kimmeridgian/Volgian.

**Charge:** Gas shows at the Edinburgh well (possible transition zone) indicate possible in situ charge and possible migration from deeper in the basin. Charge access through lateral migration would occur on a East – West trend i.e. past Fossekal. This makes migration a low risk for both Fossekal prospects as they are deep enough to induce in situ charge as well as being present on the migration pathway to Edinburgh.

**Seal:** This represents the key risk for both prospects for two reasons. Firstly, if Edinburgh is a blown trap – as well as 1/6-7 failing also from a blown trap – then there is a history of this failure mechanism in the licence area. Potential aquifer pressures at both Fossekal prospects could induce high enough pressures to overcome the confining top seal pressure. However, there is a chance that if Edinburgh is indeed a blown trap, this may form a protected trap elements for both Fossekal wells as shown in figure 5.4, assuming these structures lie in the same pressure cell.





There is also a lateral sealing elements with some form of seal required with reservoir juxtaposed against (very likely) salt. This area is likely heavily faulted due to the halokinesis in this area. Due to the apex nature of these traps if there is a seal failure at any point of juxtaposition there is likely a large volume impact.

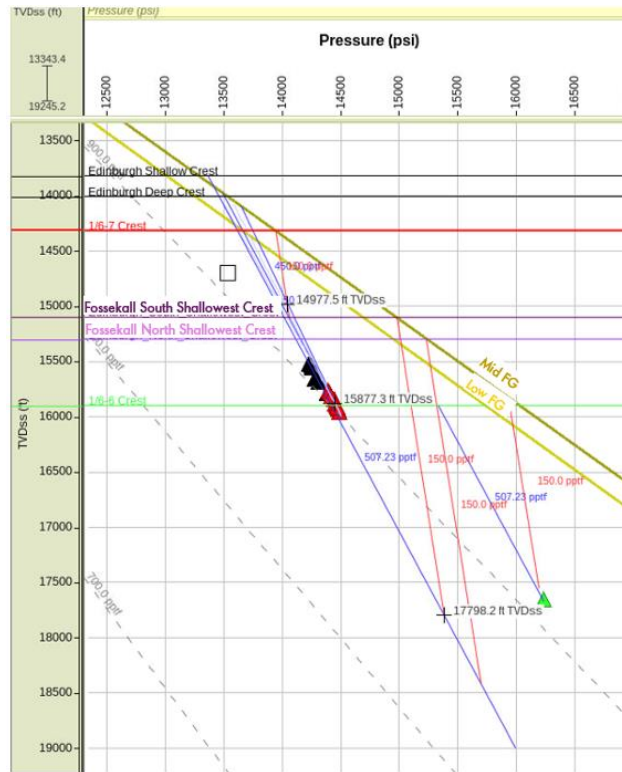


Figure 5.4 – Pore pressure chart showing the Edinburgh pore pressure points (Black) with extended water gradients to a predicted fracture gradient. Assuming a similar pressure cell for both Fossefall prospects and extending gradients there is potential for a significant column size at both prospects

Recovery: The Edinburgh well result indicates poor recovery, however well 1/6-6, to the East of both Fossefall prospects, encountered productive Fulmar – albeit water bearing – producing at 6000 bwpd. This is likely related to depositional history differences related to the two areas. It is likely that the Fulmar at Edinburgh deposited in an upper shoreface – coastal setting, evidenced by the significant amount of clays encountered. This is due to the Edinburgh structure being a paleo-high during the Oxfordian as a result of early halokinesis. The 1/6-6, and Fossefall area, is likely deposited in a lower-upper shoreface setting and depositing a much cleaner Fulmar with no significant permeability reducing clays present. Therefore reservoir recovery risk is low for the Fossefall area, however without knowing the structural configuration at depth to obtain a full structural history due to the salt overhang preventing interpretation, it is difficult to put full confidence in this assessment.

Table 5.3a and b displays the ‘Prospect Data’ for Fossefall North and South respectively.



Block	1/6	Prospect name	Fossekall North	Discovery/Prospect/Lead	Prospect	Prospect ID (or New!)	NOD will insert value	NPD approved (Y/N)		
Play name		NOD will insert value		New Play (Y/N)		Outside play (Y/N)				
Oil, Gas or O&G case:	Gas	Reported by company	A/S Norske Shell	Reference document				Assessment year	2023	
This is case no.:	1 of 1	Structural element	Southern North Sea	Type of trap	3 way fault bound	Water depth [m MSL] (>0)	71	Seismic database (2D/3D)	3D	
<b>Resources IN PLACE and RECOVERABLE</b>										
<b>Volumes, this case</b>										
		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 <sup>9</sup> Sm <sup>3</sup> ] (>0.00)									
	Gas [10 <sup>9</sup> Sm <sup>3</sup> ] (>0.00)	0.80		7.60		22.70				
Recoverable resources	Oil [10 <sup>9</sup> Sm <sup>3</sup> ] (>0.00)									
	Gas [10 <sup>9</sup> Sm <sup>3</sup> ] (>0.00)	0.50		5.10		18.90				
Reservoir Chrono (from)	Oxfordian	Reservoir litho (from)	Fulmar	Source Rock, chrono primary	Kimmeridgian	Source Rock, litho primary	Kimmeridge	Seal, Chrono	Kimmeridgian	
Reservoir Chrono (to)	Oxfordian	Reservoir litho (to)	Fulmar	Source Rock, chrono secondary	Kimmeridgian	Source Rock, litho secondary	Kimmeridge	Seal, Litho	Kimmeridge	
<b>Probability [fraction]</b>										
Total (oil + gas + oil & gas case) (0.00-1.00)	0.34	Oil case (0.00-1.00)		Gas case (0.00-1.00)	0.34	Oil & Gas case (0.00-1.00)				
Reservoir (P1) (0.00-1.00)	0.85	Trap (P2) (0.00-1.00)	0.85	Charge (P3) (0.00-1.00)	0.80	Retention (P4) (0.00-1.00)	0.60			
<b>Parameters:</b>										
		Low (P90)	Base	High (P10)	Comments					
Depth to top of prospect [m MSL] (> 0)				5335						
Area of closure [km <sup>2</sup> ] (> 0)		0.2	1.9	2.7						
Reservoir thickness [m] (> 0)		70	94	122						
HC column in prospect [m] (> 0)		87	290	467						
Gross rock vol. [10 <sup>9</sup> m <sup>3</sup> ] (> 0.000)		9.790	108.700	367.400						
Net / Gross [fraction] (0.00-1.00)		1.00	1.00	1.00						
Porosity [fraction] (0.00-1.00)		0.16	0.19	0.22						
Permeability [mD] (> 0)										
Water Saturation [fraction] (0.00-1.00)		0.23	0.20	0.18						
Bg [Rm3/Sm3] (< 1.0000)		0.0035	0.0030	0.0027						
1/Bg [Sm3/Rm3] (< 1.00)										
GOR, free gas [Sm <sup>3</sup> /Sm <sup>3</sup> ] (> 0)										
GOR, oil [Sm <sup>3</sup> /Sm <sup>3</sup> ] (> 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)		0.55	0.67	0.83						
Recov. factor, liquid ass. phase [fraction] (0.00-1.00)										
<b>For NPD use:</b>										
Temperature, top res [°C] (>0)					Innrap. av geolog-int:	NOD will insert value	Registrert - init:	NPD will insert value	Kart oppdatert	NPD will insert value
Pressure, top res [bar] (>0)					Dato:	NOD will insert value	Registrert Dato:	NPD will insert value	Kart dato	NPD will insert value
Cut off criteria for NiG calculation		1.	2.	3.				Kart nr		NPD will insert value

Table 5.3a Prospect Data for Fossekall North

Block	1/6	Prospect name	Fossekall South	Discovery/Prospect/Lead	Prospect	Prospect ID (or New!)	NOD will insert value	NPD approved (Y/N)		
Play name		NOD will insert value		New Play (Y/N)		Outside play (Y/N)				
Oil, Gas or O&G case:	Gas	Reported by company	A/S Norske Shell	Reference document				Assessment year	2023	
This is case no.:	1 of 1	Structural element	Southern North Sea	Type of trap	3 way fault bound	Water depth [m MSL] (>0)	71	Seismic database (2D/3D)	3D	
<b>Resources IN PLACE and RECOVERABLE</b>										
<b>Volumes, this case</b>										
		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 <sup>9</sup> Sm <sup>3</sup> ] (>0.00)									
	Gas [10 <sup>9</sup> Sm <sup>3</sup> ] (>0.00)	0.50		8.10		25.10				
Recoverable resources	Oil [10 <sup>9</sup> Sm <sup>3</sup> ] (>0.00)									
	Gas [10 <sup>9</sup> Sm <sup>3</sup> ] (>0.00)	0.30		5.20		20.80				
Reservoir Chrono (from)	Oxfordian	Reservoir litho (from)	Fulmar	Source Rock, chrono primary	Kimmeridgian	Source Rock, litho primary	Kimmeridge	Seal, Chrono	Kimmeridgian	
Reservoir Chrono (to)	Oxfordian	Reservoir litho (to)	Fulmar	Source Rock, chrono secondary	Kimmeridgian	Source Rock, litho secondary	Kimmeridge	Seal, Litho	Kimmeridge	
<b>Probability [fraction]</b>										
Total (oil + gas + oil & gas case) (0.00-1.00)	0.34	Oil case (0.00-1.00)		Gas case (0.00-1.00)	0.34	Oil & Gas case (0.00-1.00)				
Reservoir (P1) (0.00-1.00)	0.85	Trap (P2) (0.00-1.00)	0.85	Charge (P3) (0.00-1.00)	0.80	Retention (P4) (0.00-1.00)	0.60			
<b>Parameters:</b>										
		Low (P90)	Base	High (P10)	Comments					
Depth to top of prospect [m MSL] (> 0)				4800						
Area of closure [km <sup>2</sup> ] (> 0)		0.3	1.5	3.5						
Reservoir thickness [m] (> 0)		70	94	122						
HC column in prospect [m] (> 0)		84	246	410						
Gross rock vol. [10 <sup>9</sup> m <sup>3</sup> ] (> 0.000)		19.200	323.000	1223.000						
Net / Gross [fraction] (0.00-1.00)		1.00	1.00	1.00						
Porosity [fraction] (0.00-1.00)		0.16	0.19	0.22						
Permeability [mD] (> 0)										
Water Saturation [fraction] (0.00-1.00)		0.23	0.20	0.18						
Bg [Rm3/Sm3] (< 1.0000)		0.0035	0.0030	0.0027						
1/Bg [Sm3/Rm3] (< 1.00)										
GOR, free gas [Sm <sup>3</sup> /Sm <sup>3</sup> ] (> 0)										
GOR, oil [Sm <sup>3</sup> /Sm <sup>3</sup> ] (> 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)		0.55	0.67	0.83						
Recov. factor, liquid ass. phase [fraction] (0.00-1.00)										
<b>For NPD use:</b>										
Temperature, top res [°C] (>0)					Innrap. av geolog-int:	NOD will insert value	Registrert - init:	NPD will insert value	Kart oppdatert	NPD will insert value
Pressure, top res [bar] (>0)					Dato:	NOD will insert value	Registrert Dato:	NPD will insert value	Kart dato	NPD will insert value
Cut off criteria for NiG calculation		1.	2.	3.				Kart nr		NPD will insert value

Table 5.3b Prospect Data for Fossekall South

### 5.3. Additional Prospectivity

Beck Lead – A discontinuous reflector with a strong peak (soft) amplitude is observed in the seismic reflector above the Top Chalk reflector which downlaps onto the Top Chalk at several points, figure.6.3. This reflector appears in the Maureen formation. There is no evidence for a Maureen clastic fan system from offset wells in the area making it likely that this feature relates to porous chalk rafts detached from the Top Ekofisk. Figure.5.5 also shows the areal extent of the anomaly in PL969, with the feature juxtaposing against the salt diapir to the East. Stratigraphic trapping with top seal provided by shales of the Maureen formation would be required.



There are no analogues for a discovery of this nature in the area, as such no further work was carried out, including risking and volumetrics.

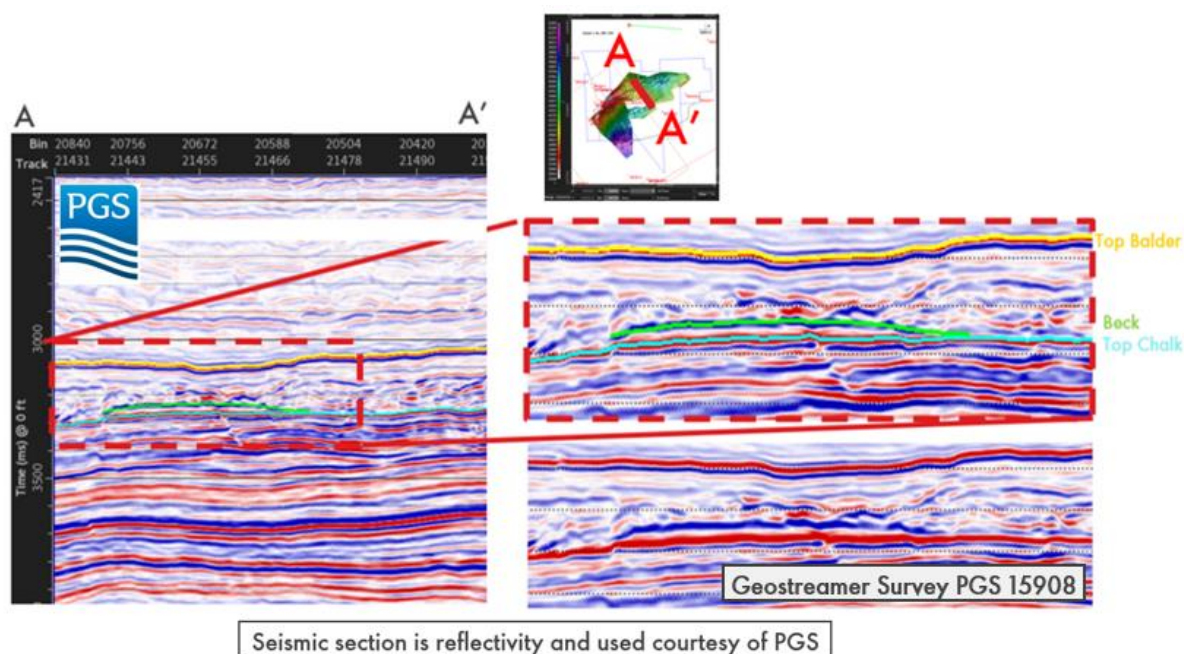


Figure. 5.5 – Seismic sections through PL969 showing the high amplitude loop downlapping onto the Top Chalk. Map also displays areal extent this feature within the PL969 licence area.

The other significant plays in this area are the Paleocene (Balmoral sands) and the formations within the Chalk Group.

Paleocene – The Flyndre field sits just updip to the Northwest of this licence in the P255 licence area. It is defined by a structural closure – directly above the Edinburgh prospect. Figure 5.6 shows the structural map for the Top Balder which shows that all structural closures within PL969/B have already been tested by the current well stock.

Chalk Group – Hydrocarbons have been recorded throughout the Ekofisk, Tor and Hod formations in offset wells to the East of the licence area, and as such there are several fields and discoveries in the Chalk Group. Figure.5.7 displays a structure map of the Top Ekofisk (Top Chalk). Wells within the licence area display shows only in the Chalk making it unlikely for substantial accumulations related to trapping against the salt.

There are no other identified prospective stratigraphic layers that have been evaluated as part of this analysis.

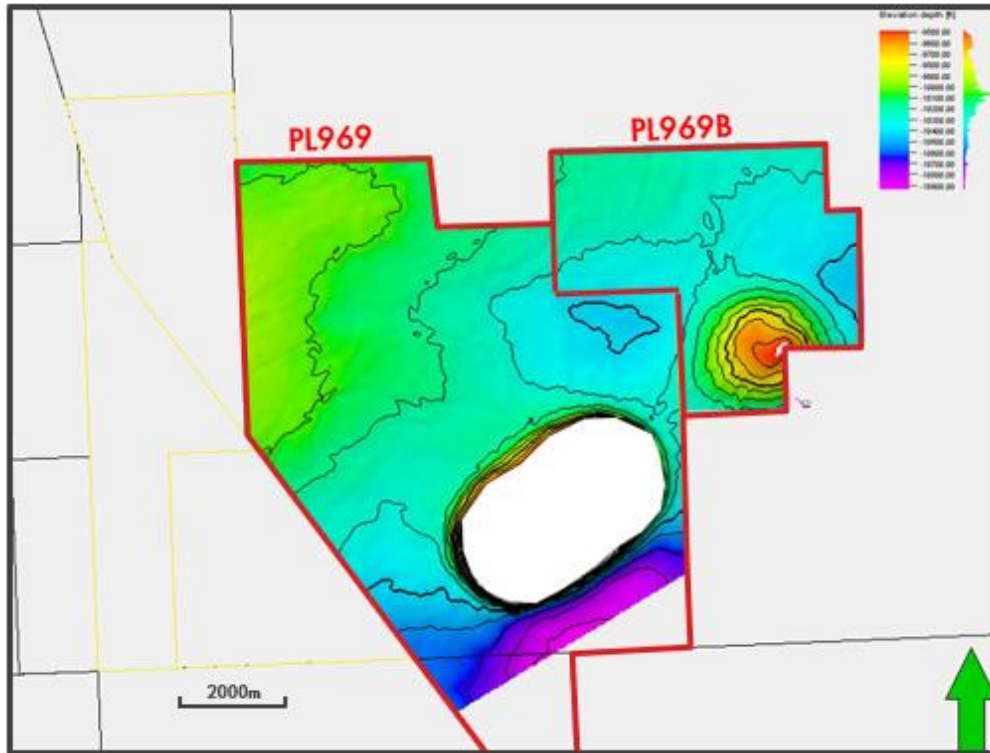


Figure.5.6 – Depth map of the Top Balder in the PL969/B licence area

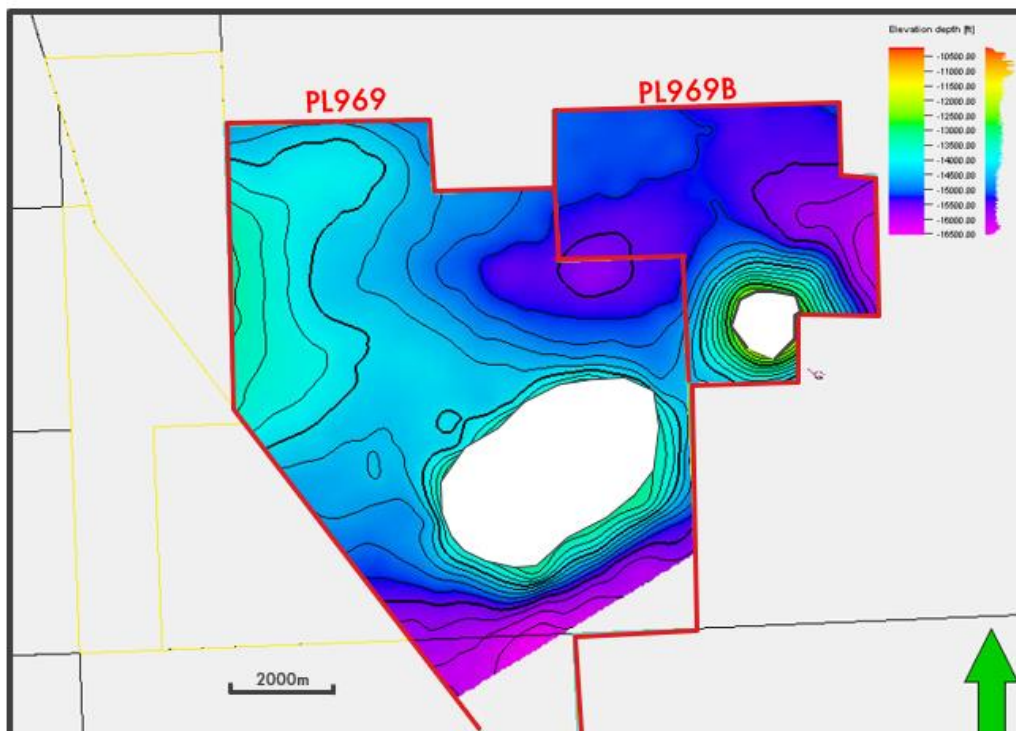


Figure.5.7 – Depth map of the Top Ekofisk (Chalk) in the PL969/B licence area



## 6. TECHNICAL ASSESSMENT

The technical assessment of the PL969/B licence areas focused on the remaining prospectivity following the Edinburgh exploration well failure. Following a re-interpretation, using the Edinburgh well penetration for correlation, a technical assessment of the remaining potential was undertaken.

### Pre-identified prospectivity

Remaining volume potential exists in the undrilled updip segment of the Edinburgh structure, however volumes are very likely to be small, with poor recovery, to meet a commercially viable development.

No further insight was gained on the Beck Lead as a result of the Edinburgh well with the initial idea being that it could potentially add additional volume to a larger Jurassic discovery in the area i.e. Edinburgh. This lead was not commercially viable as a stand alone prospect from both a volume and risk perspective.

### Additional Prospectivity

Fossekall North and South have been assessed with P50 inplace volumes of 48 & 51 mboe respectively, while both were risked at 28%. There is significant risk associated with these prospects as a result of the severe salt overhang that makes imaging very challenging. To unlock these prospects to the next stage, assessing drillability, a significant uplift in the seismic image would be required. Seismic re-processing and OBN seismic opportunities were considered, however due to the costs and time associated the decision was taken, on a commercial basis, to stop any further work on these prospects.

### Final Assessment

Due to the inherent associated technical risk of the remaining prospectivity within the portfolio, and the lack of a clear route to commerciality, the partnership has opted to recommend the relinquishment of the licence area having fulfilled the current technical assessment.



## 7. CONCLUSIONS

- (a) The main prospect in the area at the time of application, Edinburgh, was tested by the 30/14a-5 (Edinburgh) exploration well.
- (b) No zones of interest were identified in the 30/14a-5 (Edinburgh) exploration well – drilled in P255, beyond the Balmoral formation (Flyndre development)
- (c) The remaining Jurassic prospectivity in PL969/B has a high associated risk as a result of salt overhang making seismic interpretation difficult. No current route to commerciality.

No commercially viable prospects have been identified on the licences, consequently the partnership recommends the relinquishment of PL969/B.

