



Relinquishment Report

PL825

Table of Contents

1 Key Licence History	1
2 Database	3
3 Results of geological and geophysical studies	5
4 Prospect Update	8
5 Conclusions	13

List of Figures

1.1 PL 825 Location Map.....	1
2.1 Seismic database map.....	3
3.1 Amplitude maps over Rungne structure.	6
3.2 Rungne Discovery seismic, geoseismic and depth map	7
4.1 PL 825 Prospectivity Map	8
4.2 Structure map and seismic lines through Mjød Prospect	10
4.3 Top Etive and top Statfjord depth structure maps.....	11

List of Tables

1.1 PL 825 current licence partnership	1
2.1 Common Seismic Database.....	3
2.2 Well database	4
3.1 Rungne Discovery Volumes	5
4.1 Recoverable resources (MMBOE) and probability of geological success.....	12

1 Key Licence History

Licence Details

PL 825 is located in blocks 30/3 and 30/6 in the northern part of the North Sea between the Oseberg, Veslefrikk and Huldra fields, see Fig. 1.1. PL 825 was awarded to Faroe Petroleum Norge AS as Operator in February 2016 as part of the 2015 APA licensing round. The licence partnership on award of PL 825 was Faroe (40% and Operator), Centrica Energy (30%) and Fortis Petroleum (30%). Several changes to the partnership occurred throughout the licence period, and the current partnership is shown in Table 2.1.

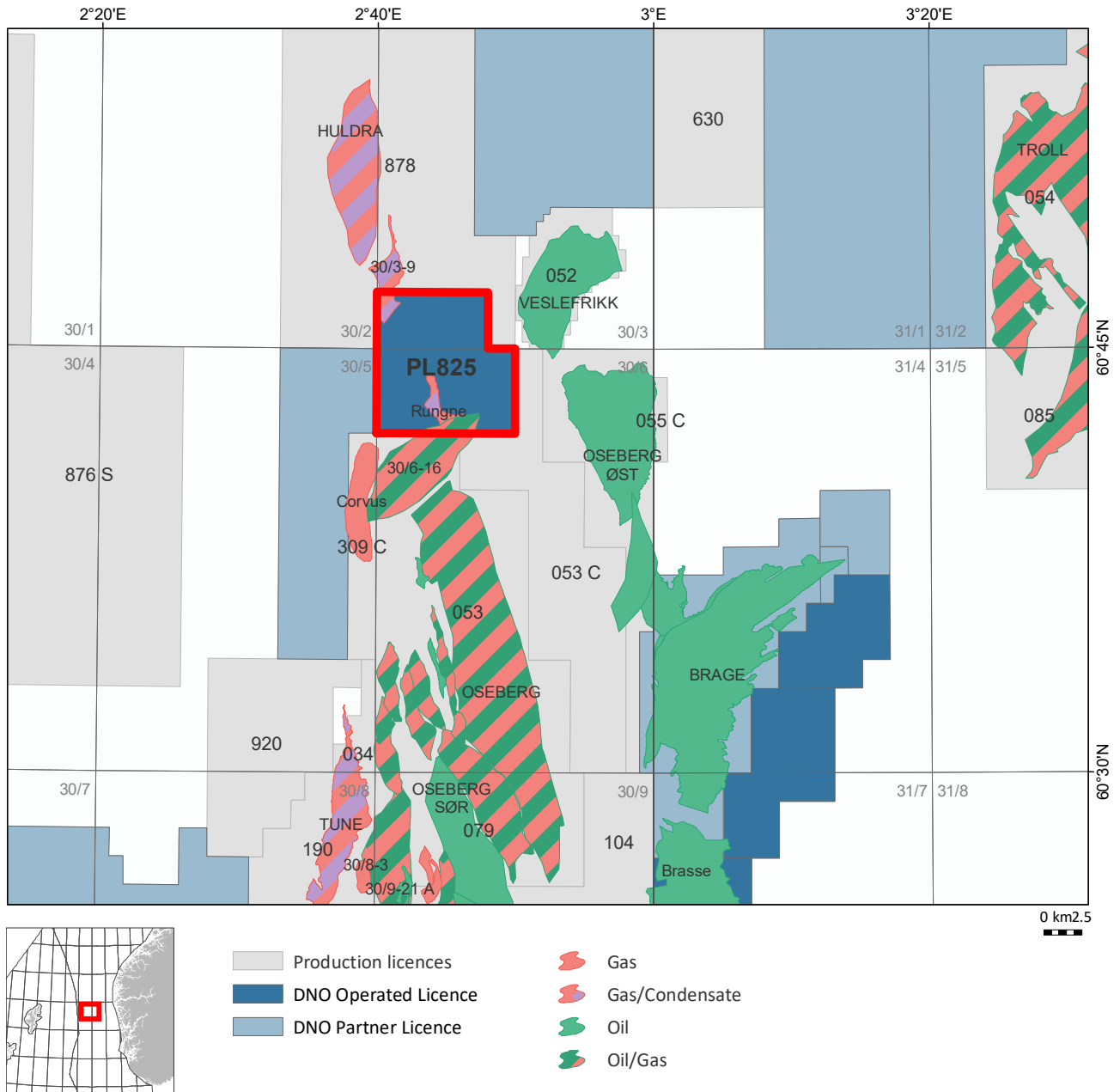


Fig. 1.1 PL 825 Location Map

Table 1.1 PL 825 current licence partnership

Company	Equity
DNO Norge AS	50% and Operator
Equinor Energy AS	30%
Spirit Energy Norway AS	20%

Licence Meetings

The following meetings were held in the licence:

2016

- Exploration / Management Committee Meeting 15.04.2016
- Exploration / Management Committee Meeting 15.12.2016

2017

- Exploration Committee Work Meeting 05.04.2017
- Exploration Committee Meeting 17.10.2017
- Management Committee Meeting 12.11.2017

2018

- Exploration Committee Work Meeting 30.01.2018
- Exploration Committee Work Meeting 08.02.2018
- Exploration Committee Work Meeting 20.03.2018
- Exploration Committee Meeting 06.09.2017
- Exploration Committee Work Meeting 11.12.2018
- Exploration / Management Committee Meeting 15.12.2016

2019

- Exploration / Management Committee Meeting 09.12.2019

Presentations and minutes from the meetings are on L2S.

Work Programme

The licence programme involving acquiring reprocessed data over PL 825. The work programme was fulfilled by licensing the merged and reprocessed dataset ST06M01 (details in 2 Database). In addition, geological and geophysical studies including AVO and fault seal analysis were carried out using this dataset.

On completion of the technical and economic evaluation, a decision was made in the licence to drill the Rungne Prospect. The well was drilled in November 2018 and resulted in a sub-commercial gas condensate discovery.

Relinquishment

Following an evaluation of the Rungne Discovery and all remaining prospectivity, the partnership made the decision to relinquish the licence.

2 Database

Seismic Database

The primary seismic dataset used in the interpretation of this area is the ST06M01 3D survey. The underlying data over the Rungne discovery was acquired in 2002 (ST0207) and formed a key part of the reprocessing and merge carried out in 2006 by Statoil. Data quality is generally good although several potential artefacts created by overburden geology and multiples were identified during the evaluation. The seismic database is shown in Fig. 2.1 and listed in Table 2.1.

Table 2.1 Common Seismic Database

Survey	Type	Status	Year	Quality
ST06M01	3D	Proprietary	2006	Good
ST0207	3D	Proprietary	2002	Moderate
SH9106	3D	Proprietary	1991	Moderate
NH0402	3D	Proprietary	2004	Moderate
ST98M7	3D	Proprietary	1998	Moderate

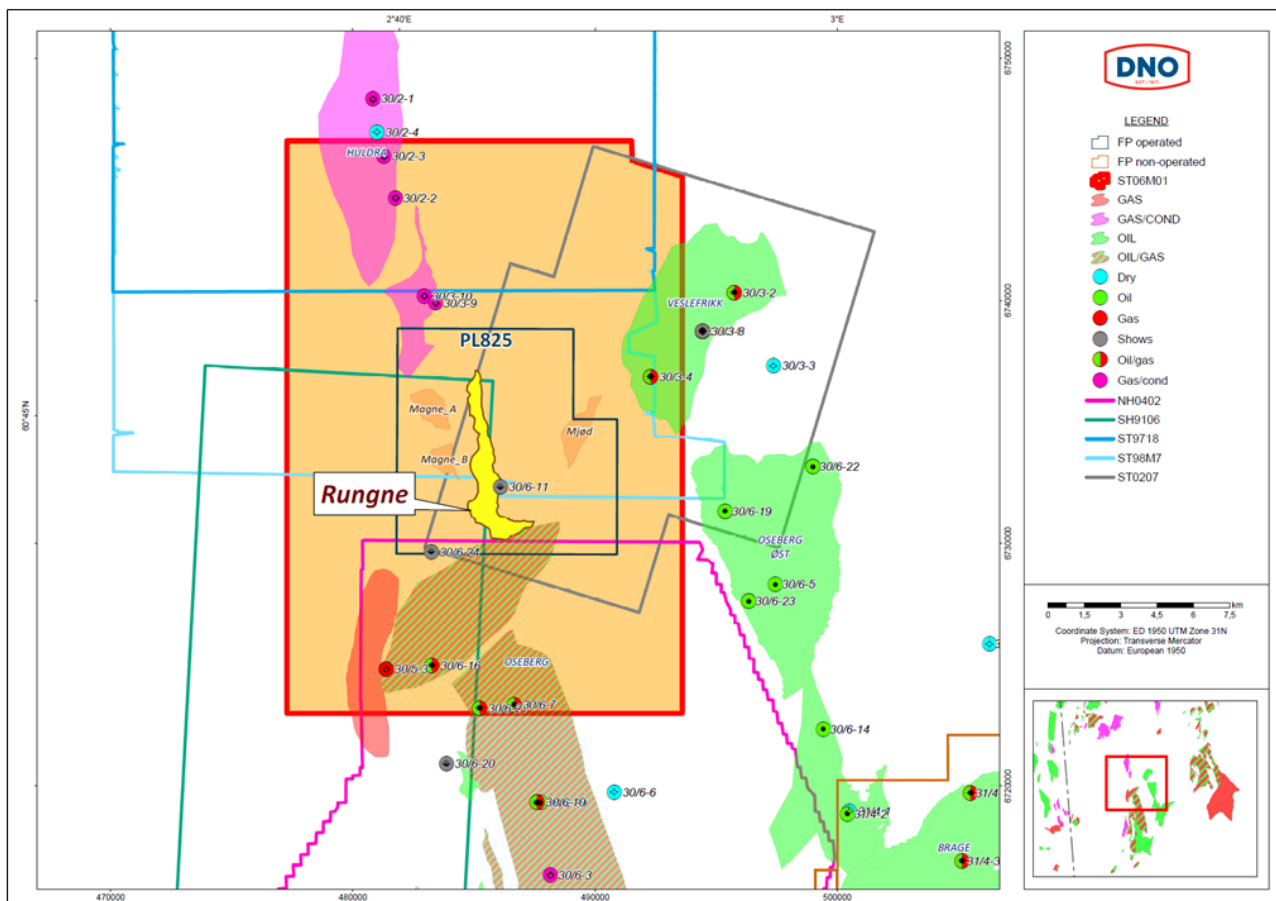


Fig. 2.1 Seismic database map

Well Database

The well database includes all released well data from the NPD and was sourced through the DISKOS database. The key wells and their use in the licence evaluation are tabulated in Table 2.2. The most important well for the Rungne Prospect pre-drill was 30/6-11 located immediately down-dip of the prospect.

Table 2.2 Well database

Well name	Operator	Year	Result	Field/Discovery	TD		Purpose in Evaluation		
					MD m RKB	Fm/Gp	Well tie	Depth conversion	Petrophysics
30/2-1	Den norske stats oljeselskap a.s	1982	GAS/CONDENSATE	HULDRA	4243	STATFJORD GP	X	X	
30/2-2	Den norske stats oljeselskap a.s	1984	GAS/CONDENSATE	HULDRA	4172	DRAKE FM	X	X	X
30/2-3	Den norske stats oljeselskap a.s	1992	GAS/CONDENSATE	HULDRA	4325	EIRIKSSON FM	X	X	X
30/3-1 R	Den norske stats oljeselskap a.s	1982	SHOWS	HULDRA	4421	STATFJORD GP			
30/3-2 R	Den norske stats oljeselskap a.s	1980	OIL/GAS	VESLEFRIKK	3567	HEGRE GP	X	X	
30/3-3	Den norske stats oljeselskap a.s	1983	DRY		3419	STATFJORD GP			
30/3-4	Den norske stats oljeselskap a.s	1985	OIL/GAS	VESLEFRIKK	3287	STATFJORD GP	X	X	X
30/3-9	Den norske stats oljeselskap a.s	2000	GAS/CONDENSATE	30/3-9	4015	DRAKE FM	X	X	X
30/3-7 A	Den norske stats oljeselskap a.s	1998	GAS/CONDENSATE	V.FRIKK A SEGMENT	6678	BRENT GP	X	X	X
30/6-6	Den norske stats oljeselskap a.s	1982	DRY	OSEBERG	3225	COOK FM	X	X	
30/6-7	Norsk Hydro Produksjon AS	1982	OIL/GAS	OSEBERG	3236	STATFJORD GP	X	X	X
30/6-10	Norsk Hydro Produksjon AS	1982	OIL/GAS	OSEBERG	2656	DRAKE FM		X	
30/6-11	Norsk Hydro Produksjon AS	1982	SHOWS		4001	STATFJORD GP	X	X	X
30/6-14	Norsk Hydro Produksjon AS	1983	OIL	OSEBERG ØST	2900	STATFJORD GP			
30/6-16	Norsk Hydro Produksjon AS	1984	OIL/GAS	30/6-16	3300	HEGRE GP	X	X	
30/6-19	Norsk Hydro Produksjon AS	1986	OIL	OSEBERG ØST	3301	EIRIKSSON FM	X	X	
30/6-20	Norsk Hydro Produksjon AS	1986	SHOWS		3046	STATFJORD GP			
30/6-21	Norsk Hydro Produksjon AS	1987	OIL	OSEBERG	3100	STATFJORD GP	X	X	
30/6-23	Norsk Hydro Produksjon AS	1990	OIL	OSEBERG ØST	3209,5	EIRIKSSON FM			
30/6-24 S	Norsk Hydro Produksjon AS	1991	SHOWS		3986	LUNDE FM	X	X	X
30/6-30	Faroe Petroleum Norge AS	2017	GAS	RUNGNE	3493	DUNLIN GP	X	X	X

3 Results of geological and geophysical studies

Geological Setting

PL 825 is located on the Flatfisk Slope, a fault terrace on the eastern margin of the North Viking Graben. A map indicating the main faults, fields, wells and identified prospectivity is shown in Fig. 4.1.

Well results

Operator of PL 825, Faroe Petroleum Norge AS, now DNO Norge AS, drilled exploration well 30/6-30 on the Rungne Prospect. The well was spudded on 19th October 2018 and was permanently plugged and abandoned on the 18th of November 2018 as a small gas condensate discovery. This well was drilled in 119m water depth and reached a total depth of 3493m MD in the Dunlin Group.

The Rungne structure is comprised of a rotated and truncated Jurassic fault block located in a down-faulted position relative to the Oseberg and Veslefrikk fields. The primary target for the Rungne well was the Middle Jurassic Oseberg Formation with secondary potential in the overlying Ness and Etive formations. The structure is located immediately up-dip of well 30/6-11 drilled in 1982 (Fig. 3.2.) The expected hydrocarbon phase was light oil similar to Veslefrikk, however gas condensate as found in Huldra was considered possible. Pre-drill mean recoverable reserves were 74 Mmboe (oil case) with a chance of geological success of 49%, with main risk considered to be seal effectiveness.

Evaluation of wireline log and pressure data indicated the primary Oseberg Formation target to be water bearing. This was confirmed by the acquisition of a water sample in the Oseberg at 3363m MD. The Oseberg Formation is 86 metres thick with very good reservoir properties. The overlying Etive Formation also has very good reservoir quality and was proven to be in pressure communication with the Oseberg.

Sandstones of the Ness Formation proved to be hydrocarbon bearing, confirmed by the acquisition of gas condensate samples at 3314 m and 3326 m MD. Reservoir quality was better than prognosed with higher net to gross and thicker individual sand units. 17 metres of net hydrocarbon pay was found within the gross 56 metre column. The Ness Formation is interbedded (sands, shales and coals) and pressure data demonstrate that the three hydrocarbon bearing sands are not in pressure communication with each other. Each sand exhibits hydrocarbons down to the base of the reservoir i.e. no hydrocarbon-water contact was seen in the Ness Formation. A depth structure map and geoseismic section highlighting contacts used in the volume assessment is shown in Fig. 3.2.

Post drill gas and condensate recoverable volume for the discovery in the Ness Formation is likely to be in the range of 15 - 27 bscf and 0.3 - 0.6 MMbbls (combined 3.1 - 5.4 mmboe) and considered to be sub-commercial (Table 3.1). Further details can be found in the "30/6-30 Rungne Discovery Evaluation Report" delivered to the NPD. Please note a revision in volumes between this relinquishment report and those in the discovery evaluation report. This is the result of finalising the evaluation and carrying out an internal peer review / QC process.

Table 3.1 Rungne Discovery Volumes

Rungne Discovery	P90	P50	P10	PMean
Inplace (MMBOE)	5.5	7.5	9.5	7.5
Recoverable resources (MMBOE)	3.1	4.2	5.4	4.3

Rock physics / AVO study

The presence of a potential Direct Hydrocarbon Indicator (DHI) on the base of the Oseberg Formation was a major factor in the decision to drill the Rungne Prospect. The base Oseberg / Top Dunlin reflector brightens significantly up-dip of 30/6-11, consistent with the presence of hydrocarbon charged Oseberg reservoir (Fig. 3.1). In addition, amplitude brightening and Class III AVO response was observed at the BCU in the area where the Brent Group reservoirs sub-crop the unconformity. A seismic inversion project was carried out in addition to the in-house studies, the conclusion of which was that the amplitude observations were consistent with a hydrocarbon charged reservoir.

Well results proved the Oseberg Formation to be water bearing. High gas readings were however observed while coring (8-10% throughout the Oseberg Formation) and petrophysical analysis calculated around 7% hydrocarbon saturation in the formation. In addition the Vp/Vp ratio is very similar in both the Ness Formation sands (live hydrocarbons) and the Oseberg (residual zone). Fluid substitution modelling indicates brightening could be expected

with relatively low saturation of gas in the formation. All these observations indicate that residual gas is present within the Oseberg and is considered the likely cause of the amplitude brightening observed on seismic data.

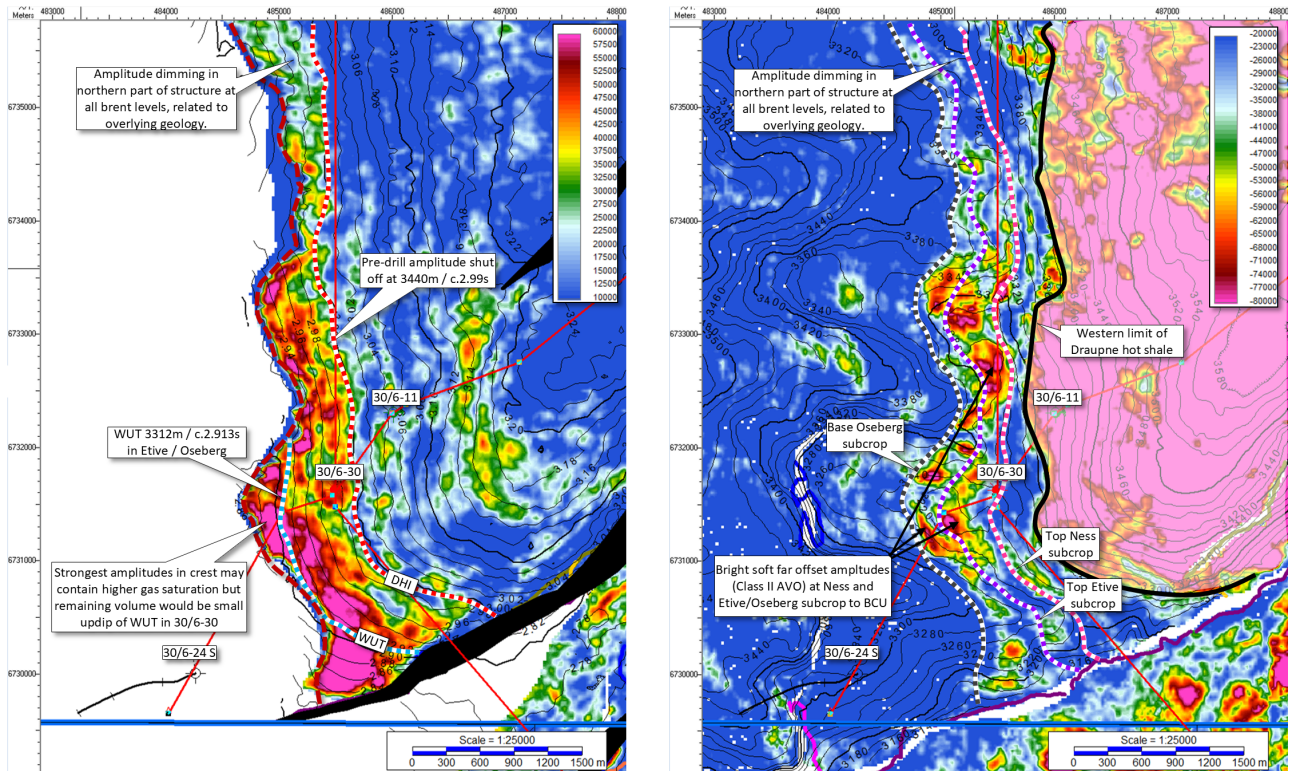


Fig. 3.1 Amplitude maps over Rungne structure. Left: Full offset seismic amplitude maps on the base of the Oseberg Formation reservoir. Right: Full offset amplitude map on the base Cretaceous unconformity.

Fault seal study

The pre-drill fault seal study comprised the construction of Allen diagrams and assessment of fault seal probability along the southern bounding fault. The Oseberg Formation is juxtaposed against the Dunlin Group which is generally shale dominated except for the Cook Formation sands, which are not well developed in 30/6-11. Studies of shale gouge ratio (SGR) suggested a high probability of fault membrane seal.

Petrophysical Analysis

Pre-drill petrophysical evaluation focussed on the Brent Group reservoirs was carried out on numerous offset wells. As expected, the 30/6-30 well encountered good reservoir properties and similar reservoir quality is expected in the remaining Brent Group prospects.

Sedimentology

Post well studies focussed on the core (216m) and image log data from 30/6-30. A detailed description of the sedimentology is described in the "30/6-30 Rungne Discovery Evaluation Report" delivered to the NPD.

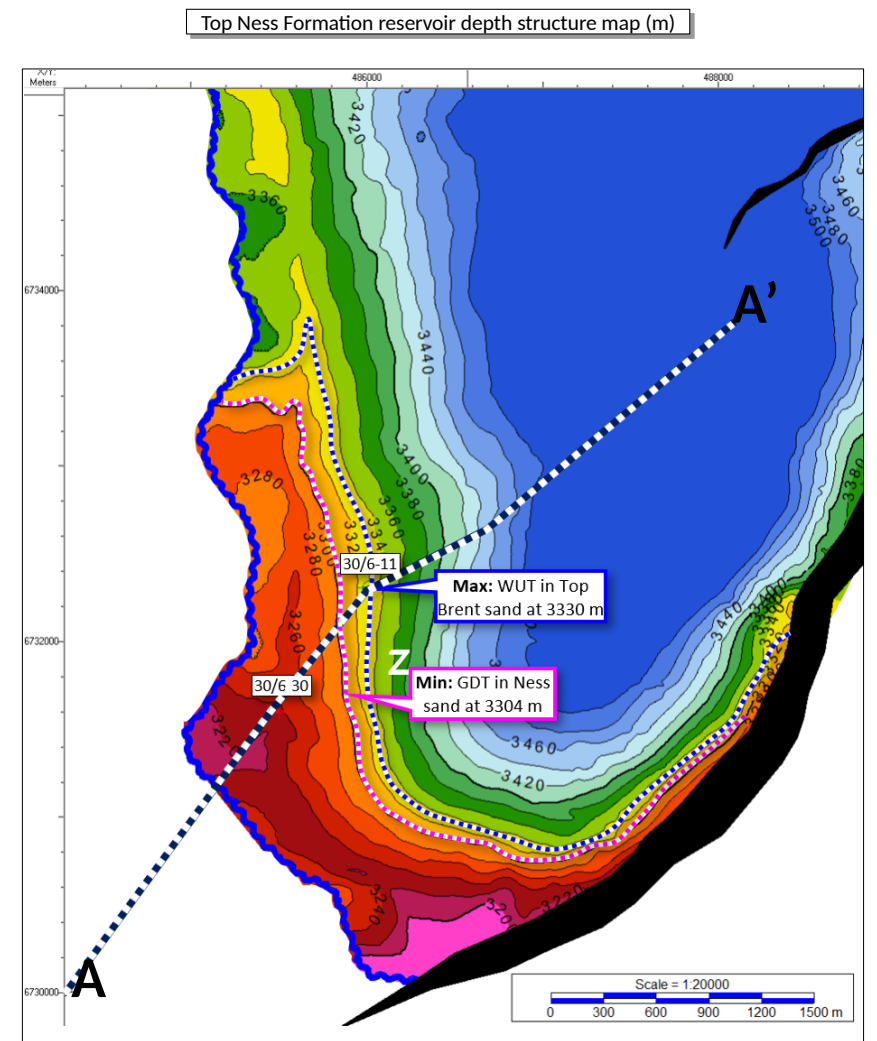
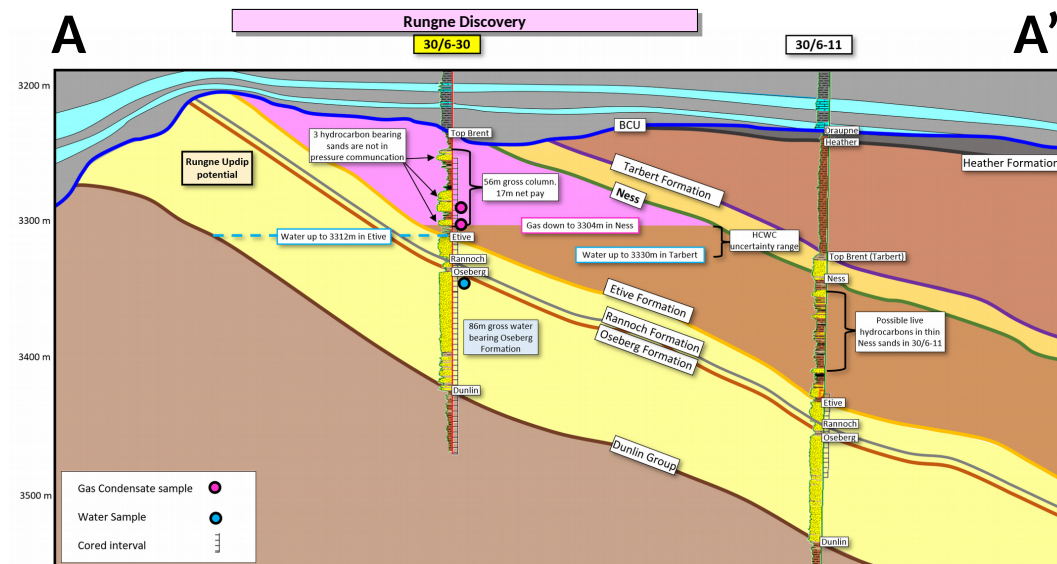
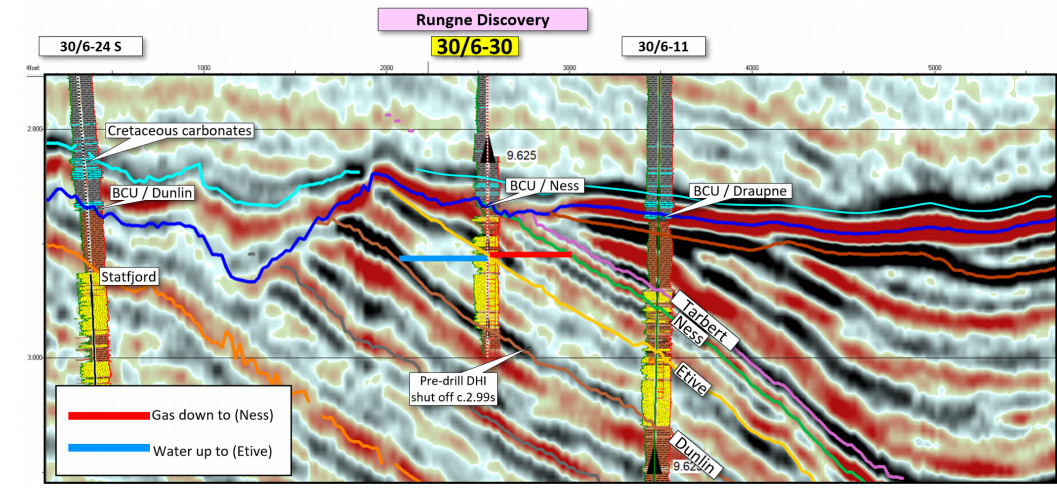


Fig. 3.2 Rungne Discovery seismic, geoseismic and depth map Top Left: South-west to north-east seismic well tie line highlighting the Rungne Ness Fm discovery and the remaining updip potential in the Etive and Oseberg reservoirs 4 Prospect Update. Bottom Left: Geoseismic depth section illustrating the Rungne discovery in the Ness Formation with the range of uncertainty in the hydrocarbon water contact in the volumetric calculation. The update potential in the Etive and Oseberg is also highlighted. Right: Top Ness Formation depth map in metres for Rungne Discovery.

4 Prospect Update

Two prospects, three leads and one play concept have been identified within the licence.

- Middle Jurassic (Brent Group) Mjød Prospect
- Middle Jurassic (Brent Group) Rungne updip Prospect
- Lower Jurassic (Statfjord Group) Magne A, B and C Leads
- Upper Jurassic (Viking Group) play concept

An overview of the prospectivity is shown in Fig. 4.1

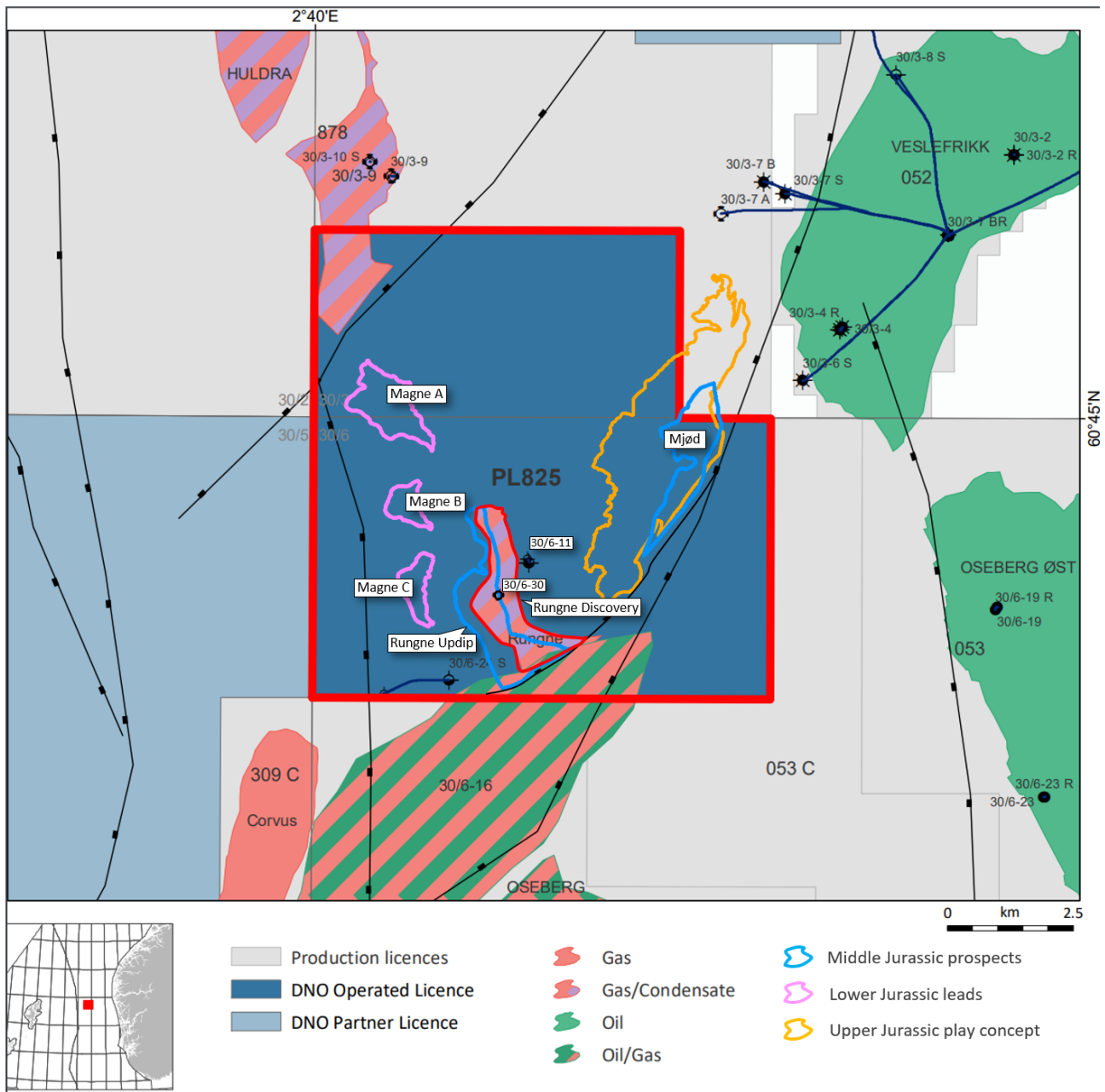


Fig. 4.1 PL 825 Prospectivity Map

Mjød Prospect

The Mjød Prospect is a dip and fault bounded closure located in a down-faulted position relative to the Veslefrikk field with reservoir targets in the Middle Jurassic Brent Group. A depth map of the top Brent Group and intersecting seismic sections through the Mjød Prospect are shown in Fig. 4.2. The northern part of the structure is located in licensed acreage outside of PL 825.

Recoverable resource range is estimated between 1.6 and 9.2 MMBOE (P90 to P10), with a mean of 5 MMBOE. Chance of geological success has been assessed as 0.3 with the only risk considered to be the fault seal.

- **Trap (100%)**

The prospect has been mapped at the Top Brent Group and near top Etive, with robust seismic picks tied into the 30/6-11 well located 4km to the south-west.

- **Reservoir (100%)**

Effective reservoirs of the Brent Group have been proven in the nearby Rungne wells and confidently tied into Mjød. For the prospect evaluation, stacked reservoirs have been considered, with a Tarbert and Upper Ness Formation section above a deeper Etive and Oseberg Formation reservoir.

- **Charge (100%)**

Hydrocarbon charge into this fault terrace has been proven by the 30/6-30 Ness Formation discovery with both gas and oil shows observed in the Oseberg Formation. Phase prediction is uncertain and in the assessment of volumes was a 60% chance of gas, 40% chance of oil.

- **Seal (30%)**

Top seal is expected to be present and likely to be effective. The critical risk for the prospect is the cross-fault seal effectiveness, particularly given the failure of the Etive and Oseberg Formation reservoir targets at the Rungne Prospect.

Rungne Updip Prospect

Within the Etive and Oseberg Formation reservoirs, a small structural dip and sub-crop closure against the BCU (area of 0.5km²) can be mapped with spill towards the southern bounding fault at 3250m. Some bright amplitudes are present at the BCU in the crestal area which may be indicative of hydrocarbon presence within the small dip and sub-crop closed area. The deepest possible contact (maximum in volumetric cases) is at 3312m defined by the water up to the top Etive in 30/6-30. The Top Etive depth structure map is shown in Fig. 4.3 with seismic and geoseismic lines highlighting the updip potential shown in Fig. 3.2.

Recoverable resource range is estimated between 0.5 and 4.3 MMBOE (P90 to P10), with a mean of 1.9 MMBOE, assuming gas condensate as the hydrocarbon phase. The probability of geological success has been assessed as 0.6 and is discussed below.

- **Trap (100%)**

Confidently mapped combined intra-Brent and BCU top reservoir surface. Robust 3 way dip and subcrop trap.

- **Reservoir (100%)**

Very good quality reservoirs of the Etive and Oseberg Formations were penetrated in the 30/6-30 well immediately downdip.

- **Charge (100%)**

Hydrocarbon charge into the structure has been proven by the 30/6-30 Ness Formation discovery. There is uncertainty on hydrocarbon phase, but a gas condensate case has been run, consistent with the hydrocarbons in the Ness Formation in well 30/6-30.

- **Seal (60%)**

Within the small dip and sub-crop closure, only sub-crop seal is required. This has most likely been proven to be effective within the Rungne Ness Formation Discovery, and so is considered more likely than not. Fault seal in the upside cases is considered very unlikely in light of the Rungne well results.

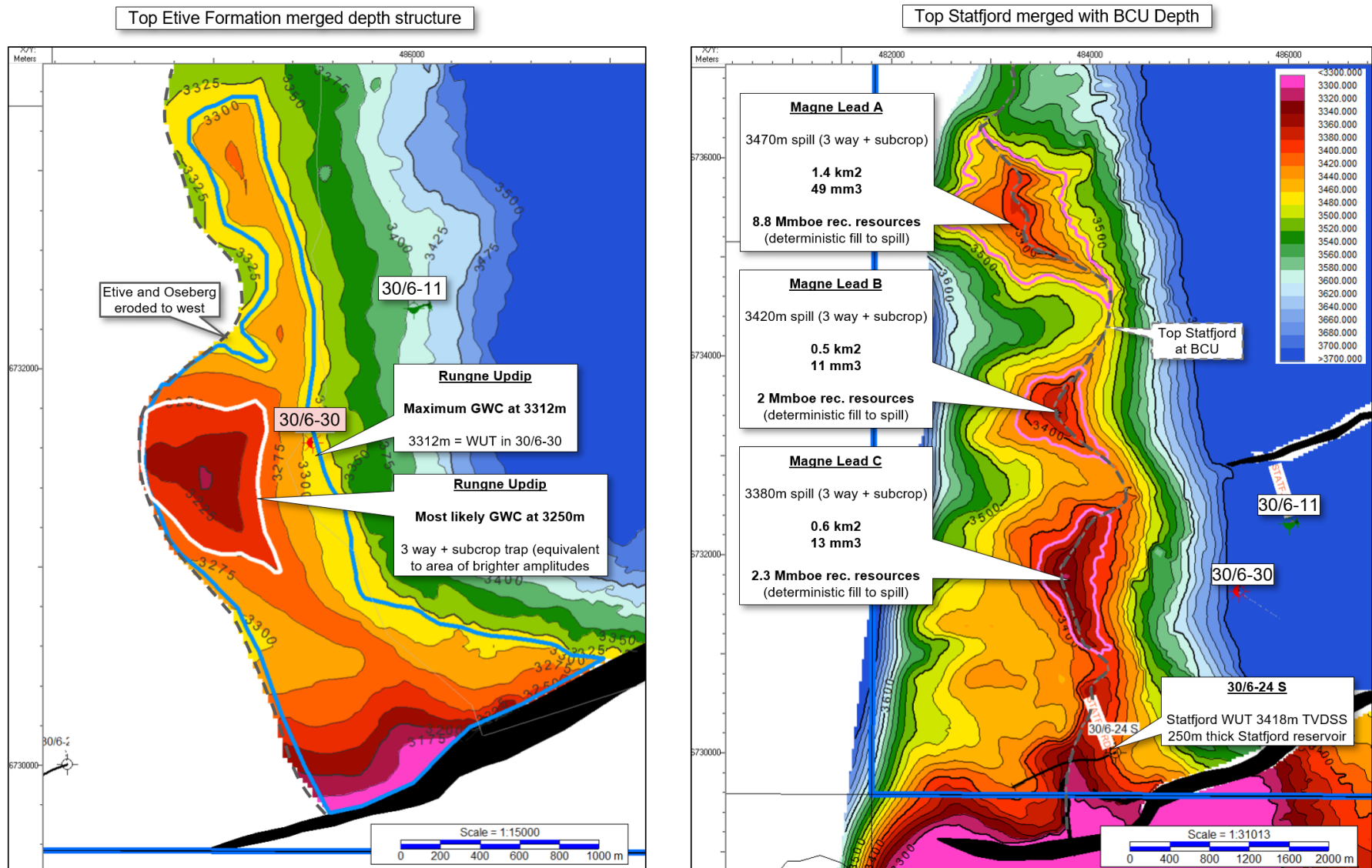


Fig. 4.3 Top Etive and top Statfjord depth structure maps Left: Top Etive Formation depth structure map. Highlighted are the most likely and maximum contours for potential in the Etive and Oseberg Formations updip of the 30/6-30 well. Right: Top Statfjord Group depth map, merged with BCU west of the mapped Top Statfjord subcrop line. The Magne A, B and C are shown along with filled to spill deterministic volumetric cases.

Magne Leads

The Magne leads are a series of combined structural dip and sub-crop closures below the BCU as shown in Fig. 4.3(Right). The larger down-faulted closure at Staffjord Group level was tested by the 30/6-24 S well drilled in 1991. The presence of water bearing reservoir in this well limits the extent of the Magne leads to the small subcrop closures mapped. The probability of geological success for each of the leads has been assessed as 0.42 and is discussed below. Deterministic filled to spill volumetric cases have been carried out assuming an oil phase.

- **Trap (100%)**

Confidently mapped combined top Staffjord Group / BCU top reservoir surface. Robust structural dip and subcrop traps.

- **Reservoir (100%)**

A thick section of moderate quality sandstones of the Staffjord Group is found in the 30/6-24 S, just south of the Magne Leads.

- **Charge (70%)**

Hydrocarbon charge into the Middle Jurassic is proven by the 30/6-30 Ness Formation discovery and charge into the Lower Jurassic Staffjord Group is also considered likely. Oil shows are observed in thin sands towards the base of the Oseberg Formation in 30/6-30 demonstrating the uncertainty on hydrocarbon phase prediction.

- **Seal (60%)**

Within the small dip and sub-crop closure, only sub-crop seal is required. This has most likely been proven to be effective within the Rungne Ness Formation Discovery, and so is considered more likely than not.

Upper Jurassic play concept

A potential play exists within the Upper Jurassic, Draupne Formation equivalent section. An untested, thickened package of Draupne can be mapped downdip of the 30/6-11 well and is highlighted in the seismic section in Fig. 4.2. An outline of the package is shown in Fig. 4.1. Significant erosion of the Rungne and Oseberg footwall occurred in the Upper Jurassic and some of those sediments may have been redeposited along the fringes of the dip slope. In order to mature this idea further a complete regional evaluation of the Upper Jurassic play would be required and this was not possible in the time line of the PL 825. Volumes or risk have therefore not been assessed.

Volumes and Risking Summary

Volumes and risk for the prospects are summarised in Table 4.1.

Table 4.1 Recoverable resources (MMBOE) and probability of geological success

Prospect or lead	P90	P50	P10	PMean	POS
Mjørd Prospect	1.6	4.3	9.2	5	0.3
Rungne Updip Prospect	0.5	1.3	4.3	1.9	0.6
Magne A Lead			8.8*		0.42
Magne B Lead			2*		0.42
Magne C Lead			2.3*		0.42

* For the Magne leads only deterministic, filled to spill volumetric cases have been carried out.

5 Conclusions

Following a thorough evaluation, the volumes in the Rungne Discovery and the remaining prospects are considered too low to be of commercial interest. Therefore, the licensees have come to a unanimous decision to relinquish PL 825.