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Relinquishment Report of Licence PL 477/477B in Block 6506/11

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1 Key License History

License PL477 covering block 6506/11 was awarded on the 29th of February 2008 following an application in APA2007 with an intial period lasting until 1st of March 2014. An extension to the inital period was granted and the current date of expiry is 1st of March 2015.

License PL477B was awarded as extension acreage following an application in APA2009 with work program and inital period same as PL477. The extension of the inital period also included this license. The partnership has been the same since the license was awarded; Centrica is operator with 40% equity, Faroe and Suncor (previously called Petro-Canada) with 30% equity each.

The work program for PL477/477B was as follows:

WORK PROGRAM:	COMMENT:
Acquisition of 3D seismic covering prospective areas, G&G studies	CE0801 acquired in 2008 covering the main prospectivity in the license. G&G studies (details in 3 Review of Geological Framework)
Drill or drop within 3 years	Decision to drill exploration well on the Cooper prospect taken in Q4 2011.
Drill well and BoV or relinquishment within 5 years	Well 6506/11-9S drilled in 2012. Classified as dry with shows in the Middle Jurassic section.
PDO or relinquishment within 6 years	Remaining prospectivity has been evaluated with no drillable prospects identified. License to be relinquished upon expiry of inital period.

There are no outstanding issues in the work program and it is considered fulfilled for both PL477/477B.

Overview of Managment Committee (MC) and Exploration Committee (EC) meetings held in PL477/477B:

Meeting	Main topic	Date
MC and EC	Kick-off meeting. License formalitites, prospectivity briefing, common database, G&G studies proposal, 3D survey	09.05.2008
work meeting	Adressing which surveys to be merged and reprocessed with CE0801	16.06.2009
MC and EC	Update of merge-project, WP&B 2010, status on G&G studies	27.10.2009
work meeting	Seismic merge project - status meeting	14.01.2010
work meeting	Status on G&G studies (fault seal analysis, structural restoration)	05.05.2010
MC and EC	Prospect assessment and economics	13.10.2010
MC and EC	Decision to drill Cooper	16.12.2010
work meeting	Cooper target selection	25.01.2011
work meeting	DST discussion	15.02.2011
work meeting	Cretaceous and updip Jurassic potential to be targeted via side track - discussion	07.12.2011

work meeting	DST	13.12.2011
MC and EC	Budget 2012 and well planning	15.12.2011
work meeting	DST decision tree	15.03.2012
work meeting bilateral with Faroe	Cooper well trajectory	18.04.2012
work meeting	Cretaceous section in Cooper -results and impact	11.06.2012
EC work meeting	Cooper DST summary	14.09.2012
MC and EC	Cooper post well status, WP&B 2012, budget update 2012	21.11.2012
EC work meeting	Cooper post well studies	26.09.2013
EC Peer Review	Cooper post-well peer review and remaining prospectivity	06.11.2013
NPD Cooper post-well meeting	Cooper post-well	12.11.2013
MC and EC	Extension application, 2013 budget and WP&B 2014	03.12.2013
MC and EC	Recommendation to relinquish license - proposal	08.12.2014

The partnership agreed in the MC meeting in December 2014 not to apply for an extension to the license as the remaining prospectivity in PL477/477B is seen as limited with no drillable candidates left. The partnership is therefore giving up the license upon expiry of the inital period 1st of March 2015.

2 Database

The common license database in PL477/477B is part of a large semi-regional database agreed among PL433, PL478 and PL477 partners that all had the same partnership as in PL477.

Seismic data:

A 3D seismic dataset consisting of the Centrica-acquired CE0801 merged with several other surveys and reprocessed was used as the main dataset for the license group. The Cooper prospect was matured to drilling and evaluation of the remaining prospectivity in the license was done using this new dataset. In addition, a fast-track cube of the newly acquired and reprocessed OMV13M01 was used to update the Zappa prospect in PL477B (Fig. 4.1). However, this dataset is not part of the current common seismic database as Suncor did not support purchasing this. As such, any information about the Zappa Prospect presented here cannot be shared with Suncor.

Wells:

The common well database consisted of all released wells in the area at the time of license award (Fig. 2.1) and has been expanded as more wells have been released into the public domain. Wells 6507/7-14S, 6507/7-15S and 6506/11-8 were traded by the partnership and included in the database. Wells 6506/9-2S (Fogelberg) and 6506/11-9S (Cooper) drilled in 2010 and 2012, respectively, were also included in the evaluation of the prospectivity. Morvin Field production wells were included as they were released in the public domain.

Well Name	Completion Date	Data Status	Petrophysics study
6406/1-1	2001	Released	X
6406/1-2	2003	Released	
6406/1-3	2005	Released	
6406/1-4	2005		
6406/2-1	1995	Released	
6406/2-1 R	1996	Released	
6406/2-2	1996	Released	
6406/2-3	1997	Released	X
6406/2-4 S	1997	Released	
6406/2-4 SR	1999	Released	
6406/2-5	1997	Released	X
6406/2-5 A	1998	Released	
6406/2-6	1998	Released	X
6406/2-6 A	2000	Released	
6406/2-6 R	2000	Released	
6406/2-7	1999	Released	X
6406/3-1	1984	Released	
6406/3-2	1986	Released	X
6406/3-3	1986	Released	
6406/3-4	1987	Released	X
6406/3-5	1988	Released	X
6406/3-6	2002	Released	
6406/3-7	2006		
6406/5-1	2002	Released	
6406/6-1	1985	Released	
6407/1-2	1983	Released	
6407/1-3	1984	Released	X
6407/1-4	1996	Released	
6506/11-1	1988	Released	X
6506/11-2	1991	Released	X
6506/11-3	1992	Released	X
6506/11-4 S	1996	Released	X
6506/11-5 S	2001	Released	
6506/11-6	1998	Released	X

Well Name	Completion Date	Data Status	Petrophysics study
6506/11-7	2001	Released	X
6506/11-8	2006		
6506/12-1	1985	Released	X
6506/12-3	1985	Released	X
6506/12-4	1985	Released	X
6506/12-5	1986	Released	X
6506/12-6	1986	Released	
6506/12-7	1987	Released	
6506/12-8	1988	Released	
6506/12-9 S	1993	Released	
6506/12-10	1995	Released	
6506/12-10 A	1995	Released	
6506/12-11 S	1996	Released	
6506/6-1	2000	Released	
6507/10-1	1982	Released	
6507/11-4	1987	Released	
6507/11-6	2001	Released	
6507/11-7	2007		
6507/5-1	1998	Released	
6507/5-3	2000	Released	
6507/7-1	1984	Released	
6507/7-2	1985	Released	
6507/7-3	1985	Released	
6507/7-4	1986	Released	
6507/7-5	1986	Released	
6507/7-5 A	1986	Released	
6507/7-6	1986	Released	
6507/7-8	1987	Released	
6507/7-10	1993	Released	
6507/7-11 S	1997	Released	
6507/7-12	1999	Released	
6507/7-13	2001	Released	
6507/7-13 A	2001	Released	

Fig. 2.1 Well database at time of license award.

3 Review of Geological Framework

PL 477/B is located on the Haltern Terrace, immediately west of the Smørbukk Field and south west of Centrica's 2010 Fogelberg Discovery. The Cooper (Jurassic) and Foreigner (Cretaceous) prospects were identified and applied for in the initial application for acreage in APA 2007. The PL477 license was extended with the 'B' segment in APA 2009 with the identification of the Zappa (Jurassic) Prospect.

Summary of Studies Performed

RDR Fault Seal Modelling
A fault seal study undertaken by RDR was undertaken prior to drilling of the Cooper Prospect. Additionally, an update was made post-well with use of core calibration of permeability measurements across minor core-scale faults from 6506/11-9 S. The main conclusion relevant for the Cooper Prospect of these studies showed that the fault pattern of the north-south trending faults (including the crestal boundary fault) is composed of many smaller faults that have grown together and formed either hard linkages (with low throw at the connection points) or soft linking relay ramps. This results in a high risk for poor fault seal potential of a significant hydrocarbon column in the Cooper structure before spill occurs cross-fault into the dry 6506/11-1 well area. Additionally, any trapped hydrocarbons in the Cooper Prospect are likely to be compartmentalised over production timescales, having a negative effect on ultimate recovery.

Garn Fm Regional Diagenesis Study
Following the disappointing reservoir quality found in the Garn Fm in 6506/11-9 S (compared to the deeper buried Morvin Field wells) a regional study was initiated to better understand the controls on diagenesis within the Garn Fm. The results of the study indicated that whilst depth of burial is the most important control on Garn Fm diagenesis (and hence porosity and permeability) there are also other factors such as chlorite grain-coatings, grain size, sorting and facies that are important. The conclusion was that the remaining updip Garn Fm reservoir above the 6506/11-9S has potential for preservation of porosity and permeability but any Garn Fm in the Cooper area buried as deep, or deeper than the 6506/11-9 S well will be too tight to be producible reservoir. The results of this study also had impact when evaluating the Zappa Prospect.

Cretaceous Rock Physics Modelling
In light of Centrica's portfolio of several Cretaceous Prospects on the Halten Terrace a regional petrophysical analysis and rock physics modelling study has been undertaken. The results of this have been used directly in the re-evaluation of the Foreigner Prospect.

The forward modelling of wells was undertaken to understand the seismic response that should be expected for gas, oil and water sands. Only a handful of Halten Terrace wells have penetrated good Lange sands and even fewer also have a shear log. Therefore the database was augmented with penetrations from the Dønna Terrace and the response of the Cretaceous Lysing Fm was also investigated.

A relatively consistent modelled response was observed through the Lange Fm and Lysing Fm sands and between the wells on the Halten and Dønna Terraces. Good quality gas bearing sands tend to show a class IIP, II or III AVO response and hence give soft topped anomalies that brighten with increasing offset and are usually visible on full offset stacks. The contrasting responses of water and gas sands can be observed at the Snadd Discovery where there is a phase reversal across the GWC at top Lysing Fm.

4 Prospect Update

The main prospect originally identified in PL 477 was the Middle Jurassic Cooper prospect, which was proven dry by well 6506/11-9 S in 2012. Post-well evaluation was presented to the NPD in November 2013.

The remaining prospectivity is located in the western part of PL 477 and covers most of PL 477B; with main prospects being the Middle Jurassic Zappa-prospect and the Cretaceous Aerosmith-prospect. The Cretaceous Foreigner-prospect which was potentially tested by well 6506/11-9S, is located in the east (Fig. 4.1).

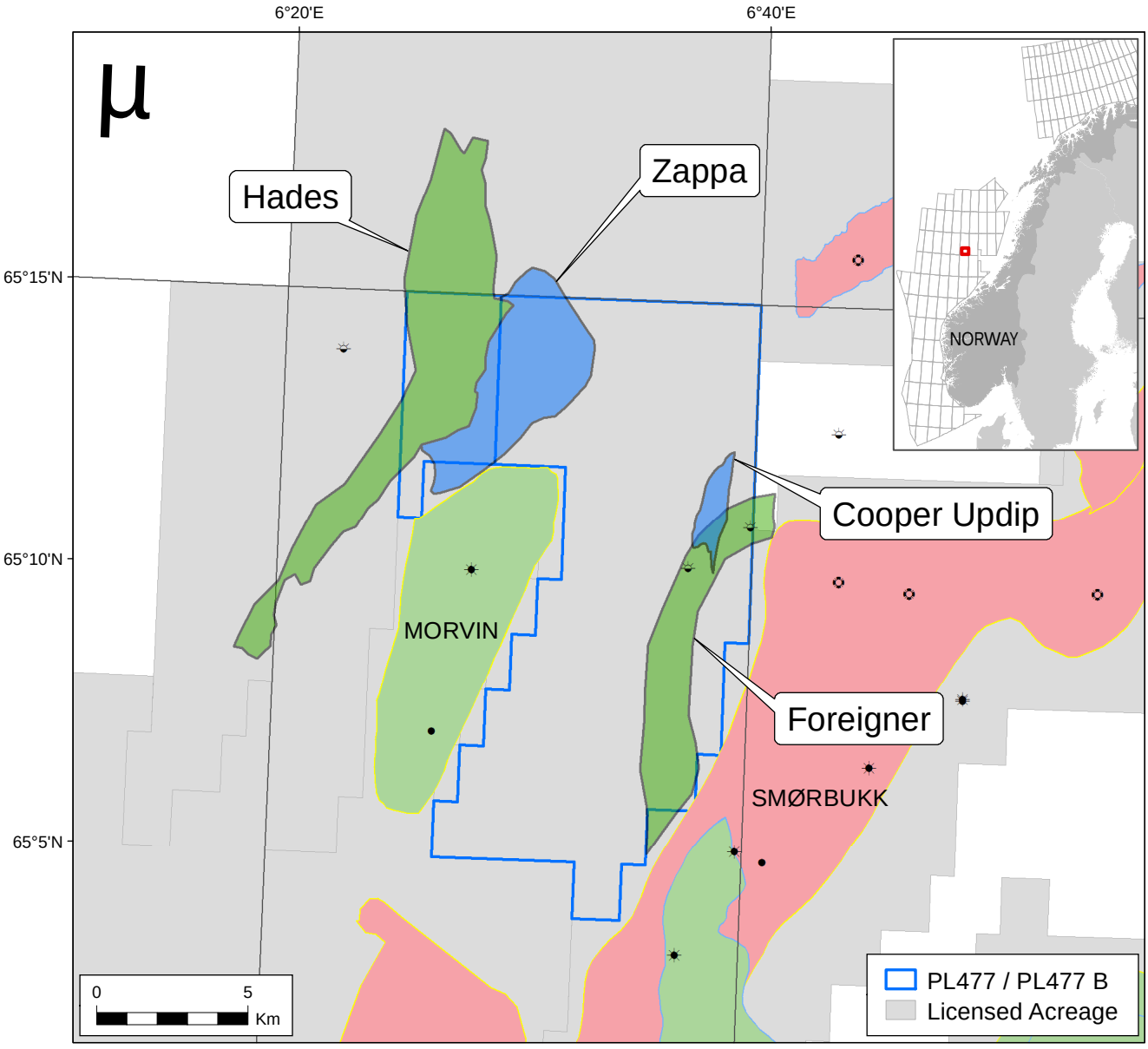

Fig. 4.1 Remaining prospectivity in PL477/477B

Zappa

The Zappa Prospect was identified as a downthrown (from the Morvin Field) Jurassic fault fault block and applied for as an extension to the initial PL 477 license area. The seismic quality has remained too poor to progress the prospect to a drill or drop decision until the recent acquisition of OMV1301 through PL 644 (where Centrica is partner). Whilst the final data is still not yet available an intermediate 3D cube has been utilised for re-evaluation of Zappa due to the uplift in seismic quality at the Jurassic level. The preliminary interpretation suggest that the boundary fault defining the crest of the Zappa Prospect might be an array of smaller faults that have hard linked together; the resulting fault has several areas of very low throw with an increased risk of fault seal failure providing a leak pathway updip to the dry 6506/11-3 well. Additionally, the Zappa Prospect itself seems to be segmented by north-south trending faults (Fig. 4.2. Whilst the Garn Fm permeability is found at producible levels in the Morvin Field, just to the south of Zappa the majority of the Zappa prospect is buried significantly deeper. The learnings from the regional diagenesis study suggest that deeper parts of the Garn Fm reservoir in the Zappa Prospect will be challening. For these reasons the preliminary volumetric potential for the Zappa Prospect is somewhat reduced and the geological risk increased (Table 4.1). However, it is important to note that this evaluation is based on a fastrack seismic cube of the OMV13-survey.

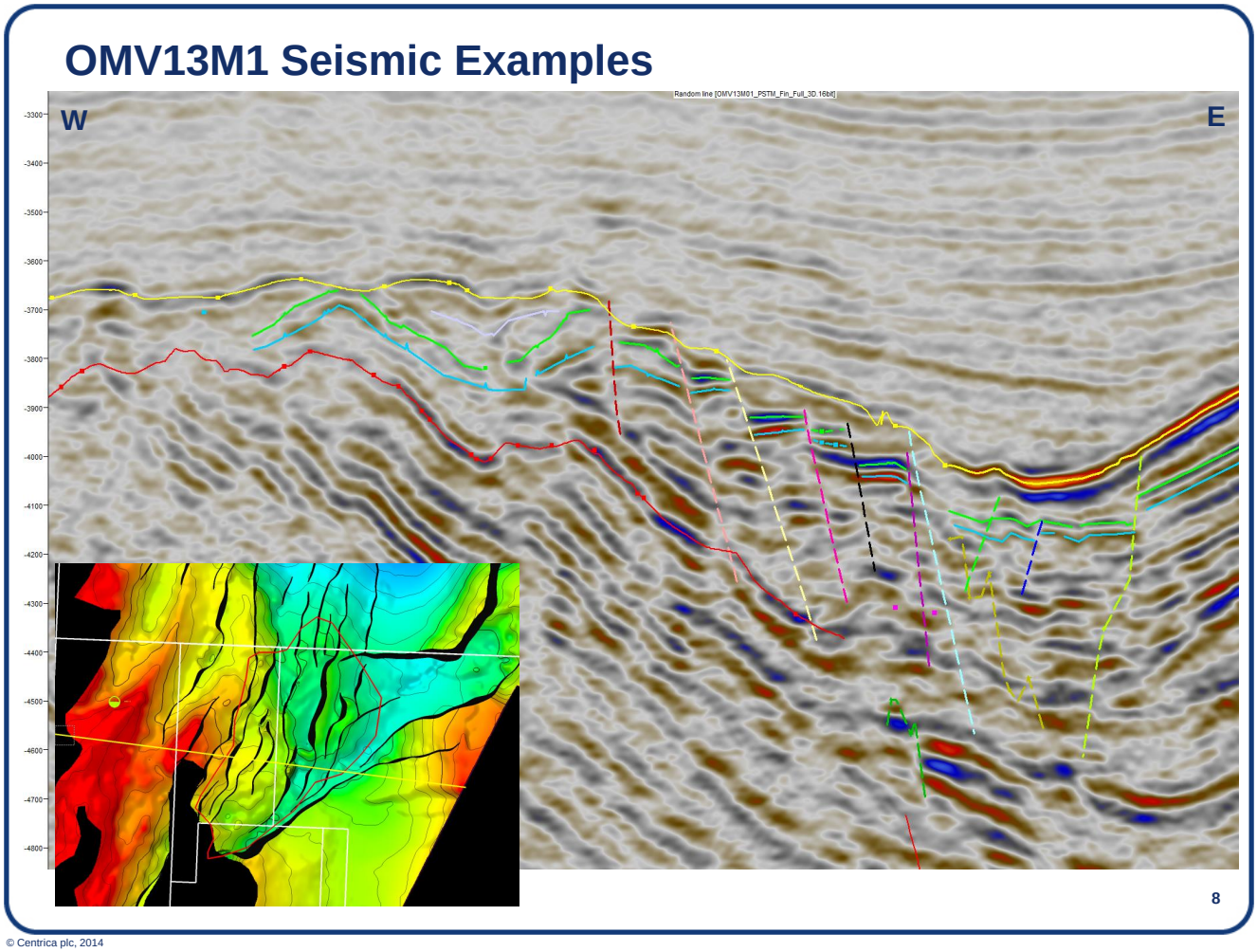

Fig. 4.2 Seismic section from OMV13 3D survey showing the Zappa Prospect. The map shows Top Garn Depth.

Table 4.1 Updated prospect data Zappa Prospect

Table 5: Prospect data (Enclose map)

Block	6506/11	Prospect name	Zappa	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)	No	Outside play (Y/N)	No				
Oil, Gas or O&G case:	Gas	Reported by company	Centrica	Reference document	Relinquishment of PL477/B			Assessment year	2015
This is case no.:	1 of 1	Structural element	Halten Terrace	Type of trap	Downfaulted trap	Water depth [m MSL] (>0)	380	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)								
	Gas [10^9 Sm^3] (>0.00)	2,05	3,03	7,52	15,07				
Recoverable resources	Oil [10^6 Sm^3] (>0.00)					0,13	0,18	0,49	1,00
	Gas [10^9 Sm^3] (>0.00)	1,24	1,84	4,59	9,21				
Reservoir Chrono (from)	Pliensbachian	Reservoir litho (from)	Tilje Fm	Source Rock, chrono primary	Oxfor. To Tith.	Source Rock, litho primary	Spekk Fm	Seal, Chrono	Bathonian To Oxfordian
Reservoir Chrono (to)	Bajocian	Reservoir litho (to)	Garn Fm	Source Rock, chrono secondary	Bath. To Oxfor.	Source Rock, litho secondary	Melke Fm	Seal, Litho	Melke Fm
Probability [fraction]									
Technical (oil + gas + oil & gas case) (0.00-1.00)	0,18	Oil case (0.00-1.00)	0,20	Gas case (0.00-1.00)	0,80	Oil & Gas case (0.00-1.00)	0,00		
Reservoir (P1) (0.00-1.00)	0,60	Trap (P2) (0.00-1.00)	1,00	Charge (P3) (0.00-1.00)	1,00	Retention (P4) (0.00-1.00)	0,30		
Parametres:	Low (P90)	Base	High (P10)	*Comments*					
Depth to top of prospect [m MSL] (> 0)		4530		*Reservoir parameters are an amalgamation of reservoir parameters for the Garn, Ile, Tofte & Tilje Fms.*					
Area of closure [km^2] (> 0.0)	1,6	3,7	12,8						
Reservoir thickness [m] (> 0)	40	65	200						
HC column in prospect [m] (> 0)	185	250	500						
Gross rock vol. [10^9 m^3] (> 0.000)									
Net / Gross [fraction] (0.00-1.00)	0,30	0,65	0,90						
Porosity [fraction] (0.00-1.00)	0,07	0,09	0,13						
Permeability [mD] (> 0.0)	0,1	1,0	10,0						
Water Saturation [fraction] (0.00-1.00)	0,20	0,30	0,45						
Bg [Rm3/Sm3] (< 1.0000)	0,0027	0,0028	0,0030						
1/Bo [Sm3/Rm3] (< 1.00)									
GOR, free gas [Sm^3/Sm^3] (> 0)	6897	8696	14286						
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)	0,35	0,50	0,75						
Recov. factor, liquid ass. phase [fraction] (0.00-1.00)				For NPD use:					
Temperature, top res [°C] (>0)	168			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)	830			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. <0.5 Vsh	2. >0.1 mD	3.					Kart nr	NPD will insert value

Cooper Updip

The Cooper Prospect (Fig. 4.1) was drilled with exploration well 6506/11-9 S in 2012 with disappointing and uncertain results, consequently an extensive post-well studies programme was initiated, some of which are summarised above. The major uncertainty in the well results concerns whether the hydrocarbons found in the Garn Fm at the well location represent residual oil within a tight Garn Fm or a transition zone of live oil within a tight Garn Fm. In either case, the remaining prospectivity exists updip of the well location. The 6506/11-9 S core data results in addition to the Garn Fm diagenesis study led to a new understanding of the depth to which the Garn Fm in the PL 477 area can be buried before all permeability is completely destroyed. What remains defines the Cooper Updip Prospect. Whilst there is a viable updip structure the results of the updated fault mapping and fault seal study in light of the 6506/11-9 S well results suggest that only a very modest hydrocarbon column (in the hangingwall) is likely to be trapped before spill occurs across a relay ramp to the dry 6506/11-1 well (in the footwall). Additionally, any discovered hydrcoarbons are likely to be highly segmented with resulting modest recovery factor expected (Table 4.2).

Table 4.2 Updated prospect data Cooper Updip Prospect.

Table 5: Prospect data (Enclose map)

Block	6506/11	Prospect name	Cooper Updip	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	Centrica	Reference document	Relinquishment of PL477/B			Assessment year	2013
This is case no.:	1 of 1	Structural element	Halten Terrace	Type of trap	Downfaulted trap	Water depth [m MSL] (>0)	249	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)	7,88	11,36	33,88	70,27				
	Gas [10^9 Sm^3] (>0.00)								
Recoverable resources	Oil [10^6 Sm^3] (>0.00)	2,18	3,16	9,12	18,81				
	Gas [10^9 Sm^3] (>0.00)					1,09	1,55	5,03	10,57
Reservoir Chrono (from)	Pliensbachian	Reservoir litho (from)	Tilje Fm	Source Rock, chrono primary	Oxfor. To Tith.	Source Rock, litho primary	Spekk Fm	Seal, Chrono	Bathonian To Oxfordian
Reservoir Chrono (to)	Bajocian	Reservoir litho (to)	Garn Fm	Source Rock, chrono secondary	Bath. To Oxfor.	Source Rock, litho secondary	Melke Fm	Seal, Litho	Melke Fm
Probability [fraction]									
Technical (oil + gas + oil & gas case) (0.00-1.00)	0,23	Oil case (0.00-1.00)	1,00	Gas case (0.00-1.00)	0,00	Oil & Gas case (0.00-1.00)	0,00		
Reservoir (P1) (0.00-1.00)	0,75	Trap (P2) (0.00-1.00)	1,00	Charge (P3) (0.00-1.00)	1,00	Retention (P4) (0.00-1.00)	0,30		
Parametres:	Low (P90)	Base	High (P10)	*Comments*					
Depth to top of prospect [m MSL] (> 0)		4050		*Reservoir parameters are an amalgamation of reservoir parameters for the Garn, Ile, Tofte & Tilje Fms.*					
Area of closure [km^2] (> 0.0)	6,0	10,5	21,3						
Reservoir thickness [m] (> 0)	60	90	180						
HC column in prospect [m] (> 0)	140	210	310						
Gross rock vol. [10^9 m^3] (> 0.000)									
Net / Gross [fraction] (0.00-1.00)	0,55	0,70	0,95						
Porosity [fraction] (0.00-1.00)	0,09	0,12	0,18						
Permeability [mD] (> 0.0)	0,1	1,0	10,0						
Water Saturation [fraction] (0.00-1.00)	0,20	0,30	0,40						
Bg [Rm3/Sm3] (< 1.0000)									
1/Bo [Sm3/Rm3] (< 1.00)	0,44	0,46	0,48						
GOR, free gas [Sm^3/Sm^3] (> 0)									
GOR, oil [Sm^3/Sm^3] (> 0)	400	532	700						
Recov. factor, oil main phase [fraction] (0.00-1.00)	0,15	0,25	0,35						
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)	150			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)	780			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. <0.5 Vsh	2. >0.1 mD	3.					Kart nr	NPD will insert value

Foreigner

The Foreigner prospect is a Cretaceous Intra-Lange prospect defined by an amplitude anomaly that was potentially tested by well 6506/11-1, but with low flow rates (. The Cooper well was positioned just at the maximum amplitude anomaly and saw no signs of hydrocarbons in very thin sandstringers (Fig. 4.3). The main remaining risk is reservoir quality and net sand. The Solberg appraisal well 6407/1-7 and A, which is an analogue to Foreigner, discovered only thin net sand. This has reduced the volumes in Foreigner and increased the risk on reservoir and seal and it is not considered a drilling candidate.

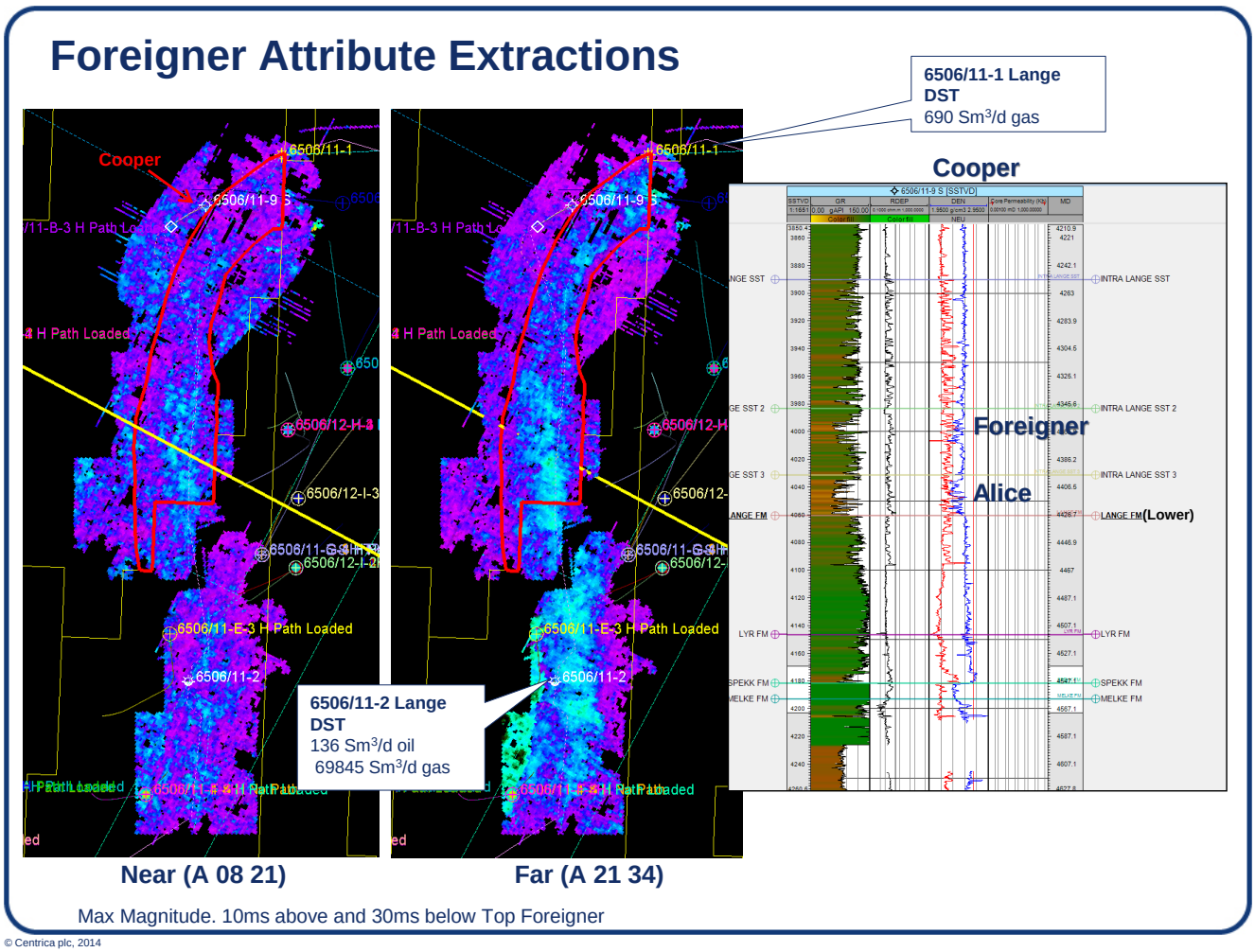

Fig. 4.3 Foreigner amplitude map and findings in 6506/11-9S.

The Foreigner Prospect was identified as a Cretaceous Intra-Lange Fm channel within PL 477. The prospect was identified as a far stack amplitude anomaly on the CE0801 and ST0808 seismic surveys. The fringe of the channel was penetrated by 6506/11-1 with minor amounts of gas produced from a DST of thin sands. Hence the Foreigner Prospect was defined on the hope that within the centre of the far stack anomaly the net sand thickness increased significantly. A test of this play concept has recently taken place with the drilling of a bright, far stack amplitude anomaly defining the Solberg Prospect with the 6406/1-7 S & A wells (Centrica partner). Whilst an increase in net sand thickness did occur into the channel axis, the increase was not as great as hoped for. In light of these results a re-evaluation of the Foreigner Prospect has taken place with a reduction of volume potential and an increase in geological risk; related to reservoir quality (Table 4.3).

Table 4.3 Updated prospect data Foreigner Prospect.

Table 5: Prospect data (Enclose map)

Block	6506/11	Prospect name	Foreigner	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)	No	Outside play (Y/N)	No				
Oil, Gas or O&G case:	Oil	Reported by company	Centrica	Reference document	Relinquishment of PL477/B			Assessment year	2014
This is case no.:	1 of 1	Structural element	Halten Terrace	Type of trap	Structural-strat.	Water depth [m MSL] (>0)	246	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)	2,63	3,94	8,79	17,17				
	Gas [10^9 Sm^3] (>0.00)								
Recoverable resources	Oil [10^6 Sm^3] (>0.00)	0,58	0,84	2,40	4,94				
	Gas [10^9 Sm^3] (>0.00)					0,26	0,37	1,22	2,58
Reservoir Chrono (from)	Albian	Reservoir litho (from)	Intra-Lange Fm	Source Rock, chrono primary	Oxfor. To Tith.	Source Rock, litho primary	Spekk Fm	Seal, Chrono	Cenomanian
Reservoir Chrono (to)	Cenomanian	Reservoir litho (to)	Intra-Lange Fm	Source Rock, chrono secondary	Bath. To Oxfor.	Source Rock, litho secondary	Melke Fm	Seal, Litho	Lange Fm
Probability [fraction]									
Technical (oil + gas + oil & gas case) (0.00-1.00)	0,19	Oil case (0.00-1.00)	0,80	Gas case (0.00-1.00)	0,20	Oil & Gas case (0.00-1.00)	0,00		
Reservoir (P1) (0.00-1.00)	0,40	Trap (P2) (0.00-1.00)	0,90	Charge (P3) (0.00-1.00)	0,90	Retention (P4) (0.00-1.00)	0,60		
Parametres:	Low (P90)	Base	High (P10)	*Comments*					
Depth to top of prospect [m MSL] (> 0)		3650		*Net sand thickness used rather than a reservoir thickness and net to gross.*					
Area of closure [km^2] (> 0.0)	3,9	7,3	20,0						
Reservoir thickness [m] (> 0)	7	11	15						
HC column in prospect [m] (> 0)	150	250	350						
Gross rock vol. [10^9 m^3] (> 0.000)									
Net / Gross [fraction] (0.00-1.00)		1,00							
Porosity [fraction] (0.00-1.00)	0,13	0,18	0,25						
Permeability [mD] (> 0.0)	1,0	10,0	100,0						
Water Saturation [fraction] (0.00-1.00)	0,15	0,25	0,40						
Bg [Rm3/Sm3] (< 1.0000)									
1/Bo [Sm3/Rm3] (< 1.00)	0,46	0,50	0,56						
GOR, free gas [Sm^3/Sm^3] (> 0)									
GOR, oil [Sm^3/Sm^3] (> 0)	300	550	700						
Recov. factor, oil main phase [fraction] (0.00-1.00)	0,15	0,25	0,40						
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)	130			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)	530			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. <0.5 Vsh	2. >10% Porosity	3.					Kart nr	NPD will insert value

5 Technical Evaluations

At the time of application the assumed development of a discovery in PL477 was seen in connection to a successful exploration campaign including Fogelberg and prosepcts in PL478 (Manilow). A new stand-alone hub (FPSO) was considered and all discoveries would have subsea production templates tied back to this facililty (See APA2007 Application for further detail). Alternative development solutions were subsea tie-backs to Åsgard or Heidrun facilities.

The technical evaluations have not been substantially updated following the unsuccessful well on the Cooper Prospect and the latest downgrading of the remaining potential in PL477 and 477B.

6 Conclusions

The remaining potential in PL477 and 477B is considered to be limited (see 4 Prospect Update) and the license partnership has therefore decided to hand back the license to the authorities on the date of expiry of the inital extended period (1st of March 2015).