

RELINQUISHMENT REPORT PL 374 S

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1 Summary of licence history

The PL 374 S licence (Fig. 1.1) was awarded following the 2005 APA licensing round to BG Norge (45% and Operator) and licence partners Wintershall AS (formerly Revus Energy) (20%), Petoro AS (20%) and Premier AS (15%) with an effective date of 6th January 2006.

The initial work program was:

- Reprocess a minimum of 300km² of 3D seismic
- Drill or drop (DoD) decision within 2 years
- BoV or relinquishment within 4 years
- Submit PDO or relinquishment within 6 years

The drill or drop decision was extended to 6th January 2009 at which point a decision was taken to drill the Blåbær exploration well (34/5-1 S). The well was sidetracked (34/5-1 A). An application to extend the PL 374 S licence was submitted to the MPE on 22nd December 2010. As part of this application the partnership proposed acquisition and processing of 3D long-offset seismic data that covered the Blåbær prospect (BG1102). The application was granted with the BoV decision postponed to 6th January 2013, and submission of PDO development scheme also postponed to 6th January 2015.

A further application to extend the BoV decision was accepted by the MPE to extend the BoV decision to 6th January 2014, with submission of a PDO development scheme also extended to 6th January 2016.

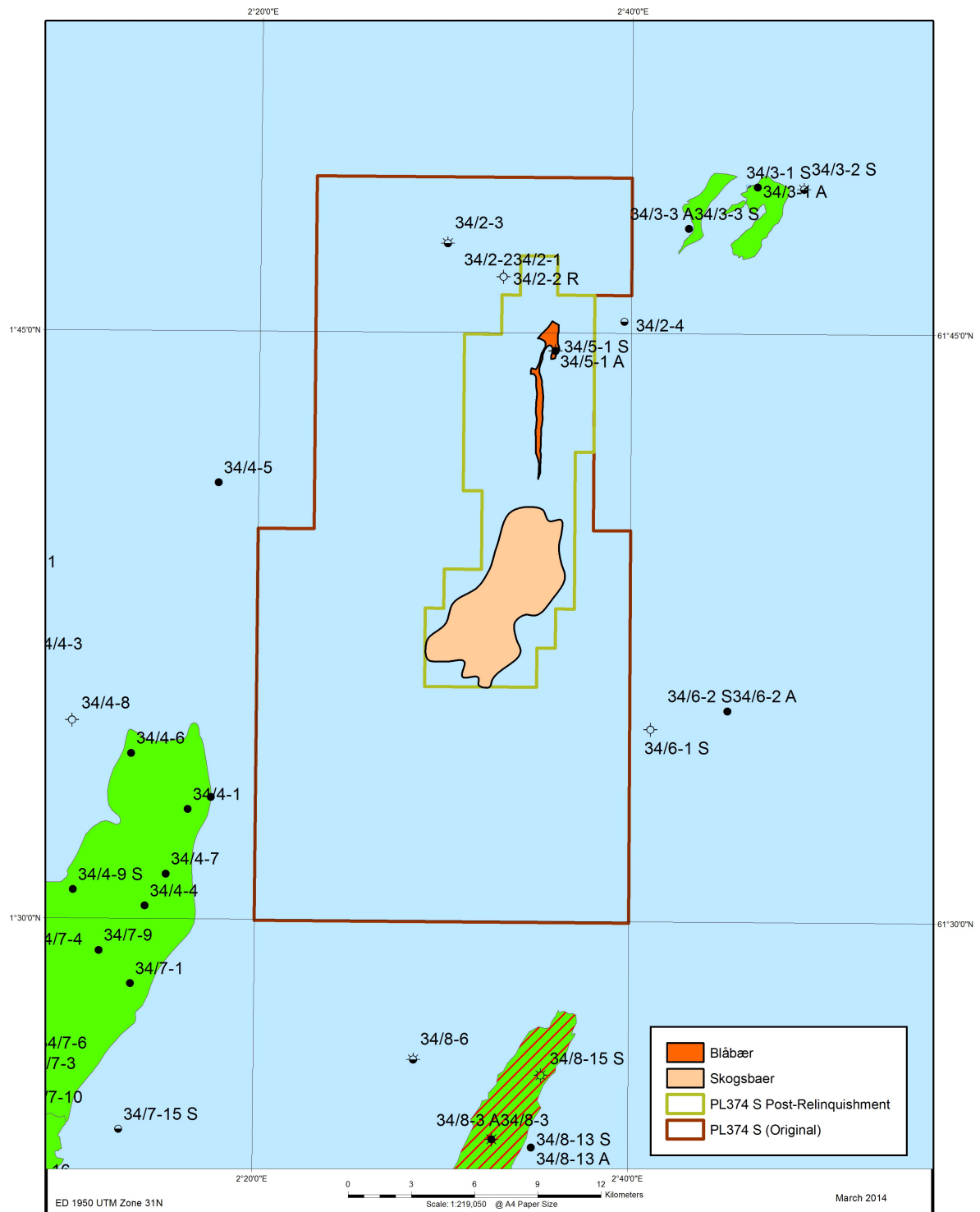
The original licence area covered 559.5km². In January 2013, the partnership relinquished 454.6km² leaving the remaining licence area at 104.9km².

There was a stratigraphic split within the awarded block, with PL 374 S being restricted to below Base Pliocene.

The voting rules for the licence were three companies and more than 50%. Regular licence meetings were held to discuss the subsurface evaluation, the seismic acquisition & processing, and drilling of the Blåbær exploration well & sidetrack.

The key prospect in the licence was the Lower Jurassic Cook Fm Blåbær prospect, which was drilled by the 34/5-1 S & sidetrack 34/5-1 A wells in 2010. The 34/5-1 S well targetted a rotated fault block containing the Lower Jurassic Cook Formation. The well encountered oil throughout the whole Cook Fm of similar composition to the Knarr field, located 12km east, but reservoir quality was significantly lower. A subsequent side-track (34/5-1 A) was drilled into a deeper adjacent fault block to the east, encountering water-bearing Cook Fm sands at a different pressure.

Due to the small size of the Blåbær discovery and the poor quality of the Cook Fm reservoir, the licencees made a unanimous decision to relinquish the licence at the 6th January 2014 BoV deadline following the conclusion of an extensive licence work programme.



Norway: North Sea PL 374 S (Blåbær)



Fig. 1.1 PL 374 S Location Map

2 Database

Well database

In 2010 the PL 374 S partnership drilled the 34/5-1 S Blåbær exploration well and subsequent sidetrack 34/5-1 A to test the Lower Jurassic Cook Fm in adjacent tilted fault blocks. The licence partnership also traded the key offset wells relevant to the licence including 34/3-1 S &-1 A; 34/3-2 S & 34/3-3 S &-3 A from the adjacent PL 373 S licence to the east. All released wells in the area were also part of the common database.

The evaluation of the licence benefitted from the operator's experience on the adjacent PL 373 S licence and due to the similarities in prospectivity between the licences, a large number of studies performed were integrated across both licences.

Seismic database

The key seismic surveys used in the evaluation of the PL 374 S licence are BG06M01 and BG1102. The database also includes all released 2D & 3D seismic data.

BG06M01 is a reprocessed/merged version of various pre-stack surveys covering the PL 374 S, PL 373 S and the previously relinquished PL 372 S licences. The seismic data were reprocessed and merged pre-stack in 2006-2007 by Geotrace to produce four angle cubes and one full fold cube. The sub-area of BG06M01 that lies within PL 374 S is ~502 km².

The BG1102 3D seismic survey was acquired by CGGVeritas in May-August 2011 jointly by the PL 374 S & PL 373 S licence partnerships. The survey includes a full fold area of 235km² within PL 374 S. PSTM and PSDM processing were undertaken by Geotrace with final volumes delivered in April 2012 and April 2013 respectively.

The key seismic data used in the evaluation of PL 374 S are listed in the table below and shown in Fig. 2.1.

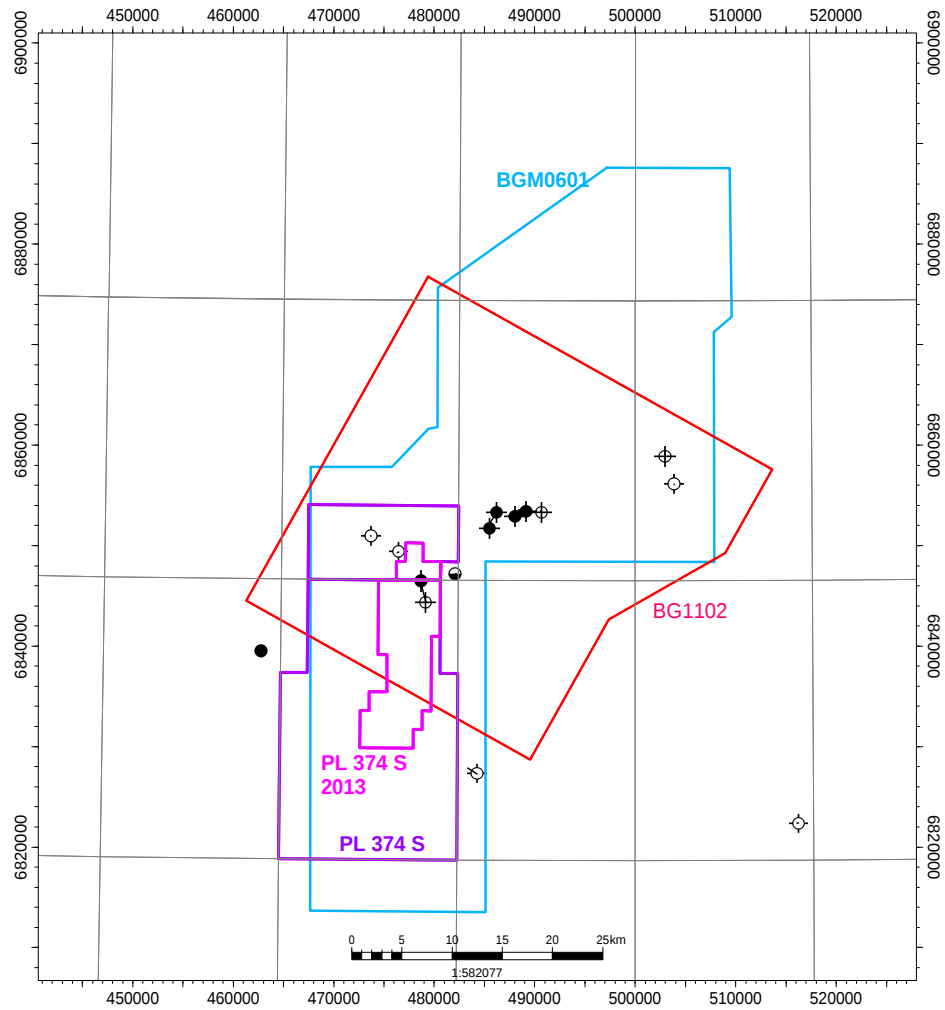


Fig. 2.1 PL 374 S- extent of key seismic surveys used in licence evaluation

Survey Name
BG06M1-12.5-22.5-DEGREE_ANGLE_STACK
BG06M1-20-30-DEGREE_ANGLE_STACK
BG06M1-25-37.5-DEGREE_ANGLE_STACK
BG06M1-5-15-DEGREE_ANGLE_STACK
BG06M1-FULL-OFFSET
BG1102-FULL-OFFSET-PSTM
BG1102-INV-AVO-GRADIENT-10-30DEG-TIME
BG1102-INV-AVO-INTERCEPT-10-30DEG-TIME
BG1102-INV-BAYESIAN-FACIES-CLASS-TIME
BG1102-INV-BAYESIAN-PROB-BRINE-SAND-TIME
BG1102-INV-BAYESIAN-PROB-OIL-SAND-TIME
BG1102-INV-VPVS-TIME
BG1102-INV-ZP-TIME
BG1102-PSDM-FULL-OFFSET-DEPTH
BG1102-PSDM-FULL-OFFSET-TIME
BG1102-PSTM-ANGLE-STK-10-15-TIME
BG1102-PSTM-ANGLE-STK-15-20-TIME
BG1102-PSTM-ANGLE-STK-20-25-TIME
BG1102-PSTM-ANGLE-STK-25-30-TIME
BG1102-PSTM-ANGLE-STK-30-35-TIME
BG1102-PSTM-ANGLE-STK-35-40-TIME
BG1102-PSTM-ANGLE-STK-40-45-TIME
BG1102-PSTM-ANGLE-STK-45-50-TIME
BG1102-PSTM-ANGLE-STK-5-10-TIME
BG1102-PSTM-STK-VEL-RMS-TIME
BG11M02-16-24-DEG-STACK
BG11M02-24-32-DEG-STACK
BG11M02-32-40-DEG-STACK
BG11M02-40-48-DEG-STACK
BG11M02-8-16-DEG-STACK
BG11M02-FULL-OFFSET
BG11M02-STACKING-VELOCITY

3 Review of Geological and Geophysical framework

The subsurface evaluation of the PL 374 S licence was focussed on the Lower Jurassic Cook Fm, with additional potential identified in the Lower Jurassic Statfjord Fm and the Upper Jurassic Draupne Fm.

The key changes to the subsurface interpretation were the result of the 2010 Blåbær exploration well which showed that the Cook Fm was poorer reservoir quality than hoped, and that the charge model was significantly more complicated, with more limited hydrocarbon volumes available to charge the structure than initially expected at the time of licence award.

Numerous sub-surface studies have been carried out on the licence. The main conclusions from the key studies are:

Reservoir

There is a relatively rapid lateral variation in Cook Fm reservoir quality between Blåbær and the 34/3-3 S well located 8km north-east. The Lower Cook Fm is deposited in a tidal delta environment with tidally influenced distributary channels (Fig. 3.1). The highest quality sands drilled in the Blåbær structure are in the lowermost Cook Fm, biostratigraphically called the J14 sandstone, and most likely deposited in a tidally influenced delta. Shoreline transgression resulted in the shoreline shifting to the east, with Blåbær being located in a more offshore, shelfal environment with some isolated sands in the well likely from offshore tidal sand bars (Fig. 3.2). The tidal sand bars are orientated perpendicular to the north-south orientated shoreline. The Upper-Lower Cook boundary is a widely correlatable maximum flooding surface. The Upper Cook at Blåbær is an offshore transition zone/ shelfal setting with a high quality Cook Fm shoreface depositional environment located just to the east over the Knarr field (Fig. 3.3). The Cook Fm is not modelled to show significant improvements in reservoir quality elsewhere within the PL 374 S licence.

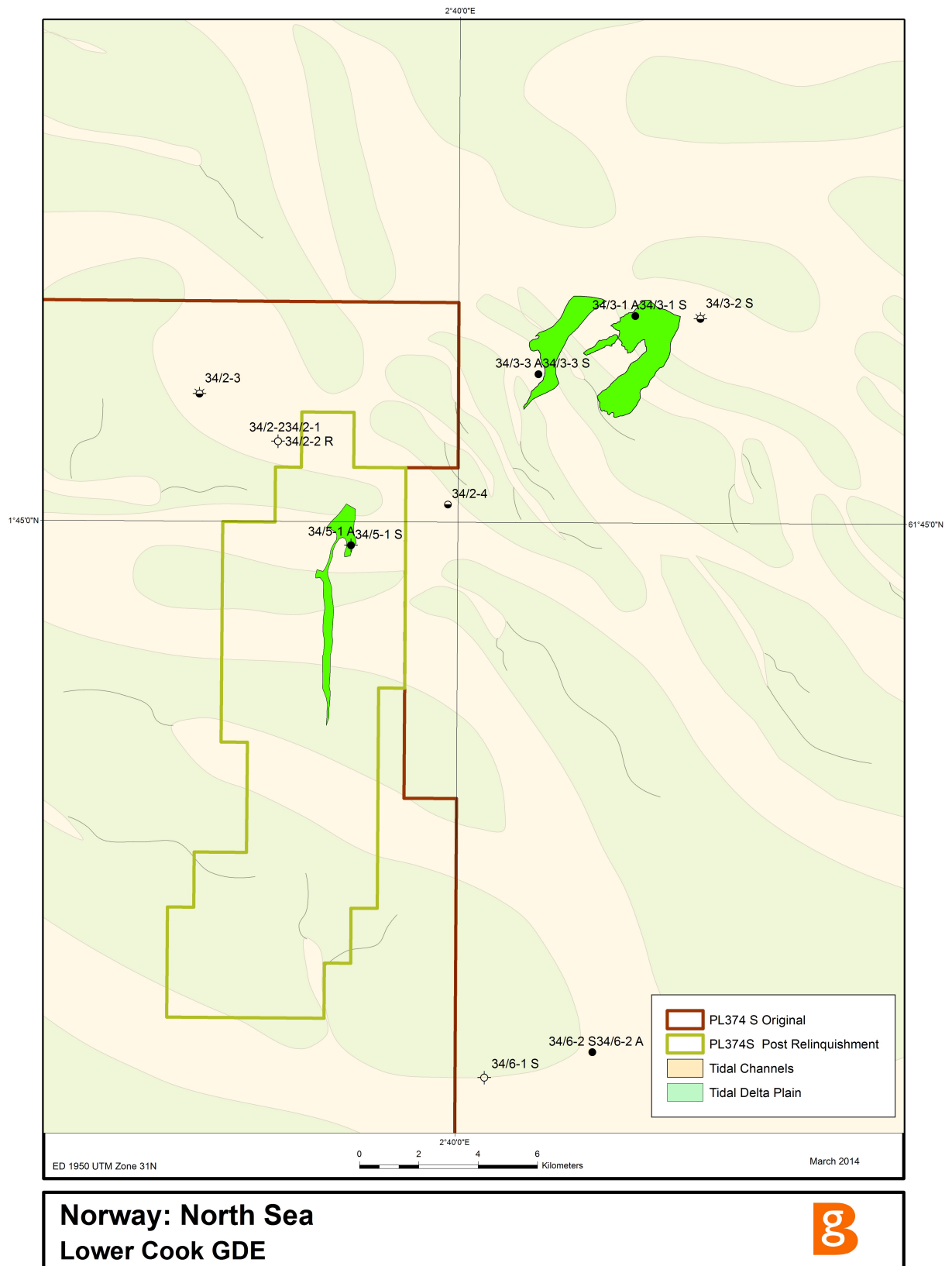


Fig. 3.1 Lower Cook GDE map.

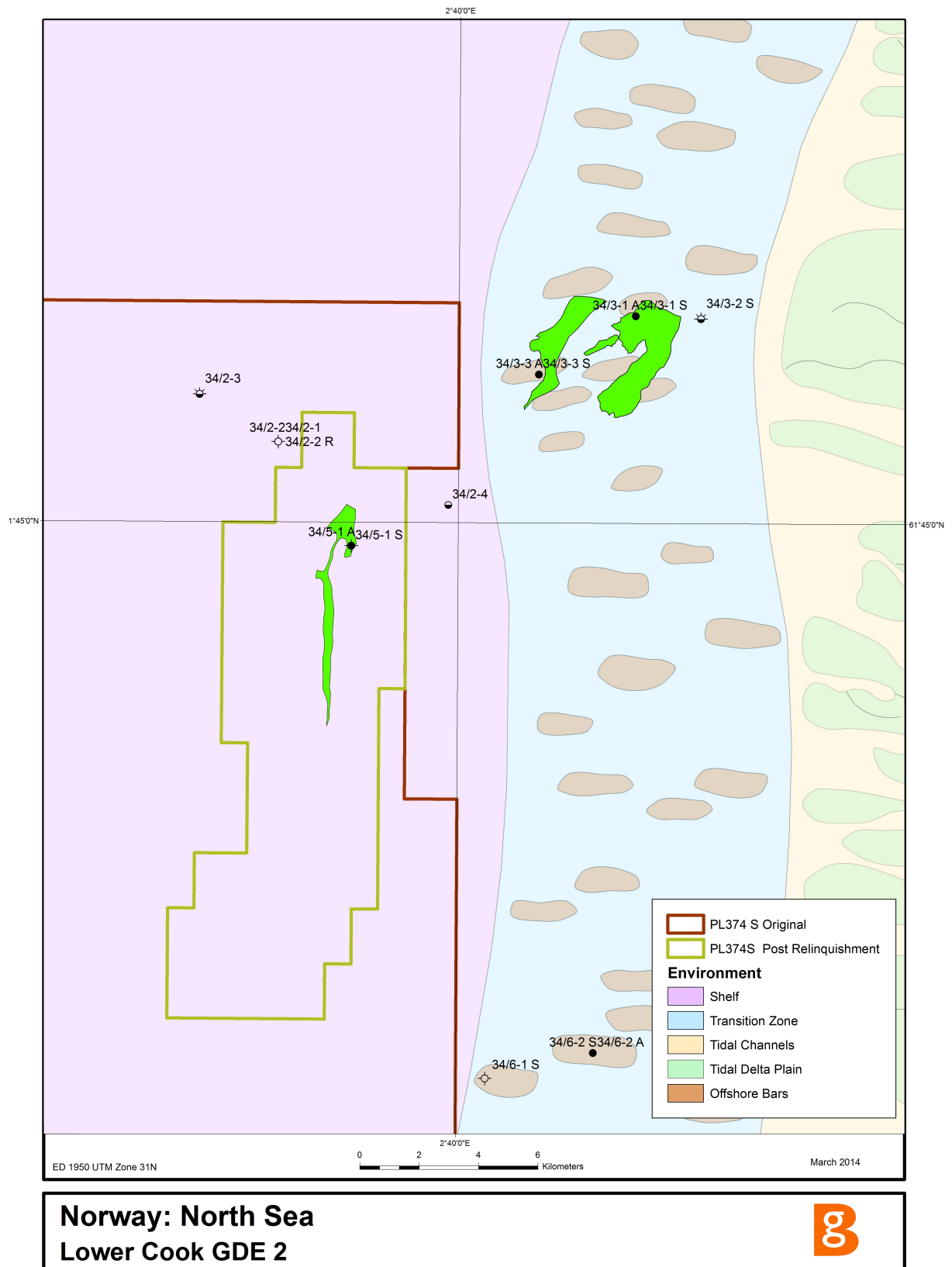


Fig. 3.2 Lower Cook GDE 2.

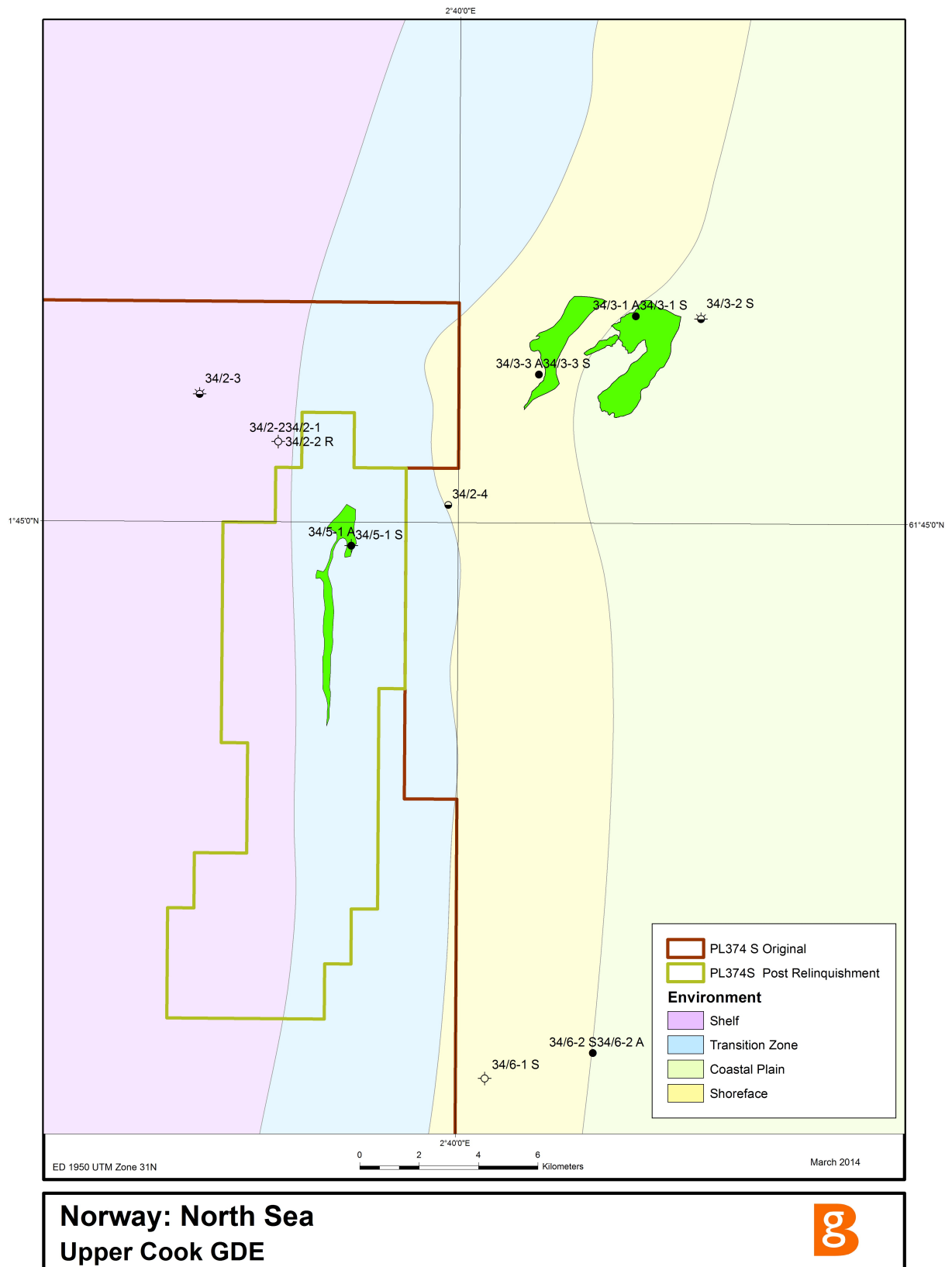


Fig. 3.3 Upper Cook GDE.

Fault Seal Analysis

Analysis of pressure data from the 34/5-1 S & 34/5-1 A wells shows that the Cook reservoirs in these two adjacent fault compartments are not in communication and each form isolated pressure cells within the basin. In general, a lithostatic parallel gradient represents the shale pressure build up with depth. An offset from this trend is observed in both 34/5-1 S and 34/5-1 A which may indicate inflated pressures due to buoyancy or lateral transfer (Fig. 3.4). Lateral transfer of overpressure from downdip is interpreted to be the most likely cause of overpressure in the Cook Fm, but the depth at which pressures have been transferred is only approximately 300m deeper than the crest of the Blåbær structure. This means that a connection to the deep Pancake Basin downdip is not deemed likely, and this in turn limits the volume of hydrocarbon charge available to the Blåbær structure. As the pressure data shows that faults are sealing, no cross-fault charging into Blåbær is envisaged. In addition, a 4 bar pressure difference is observed within the 34/5-1 S well which is interpreted to be caused by a 2m thick shale interval in the Cook Fm. If this shale is laterally extensive, this indicates there may be some challenges in producing the Cook Fm (Fig. 3.5).

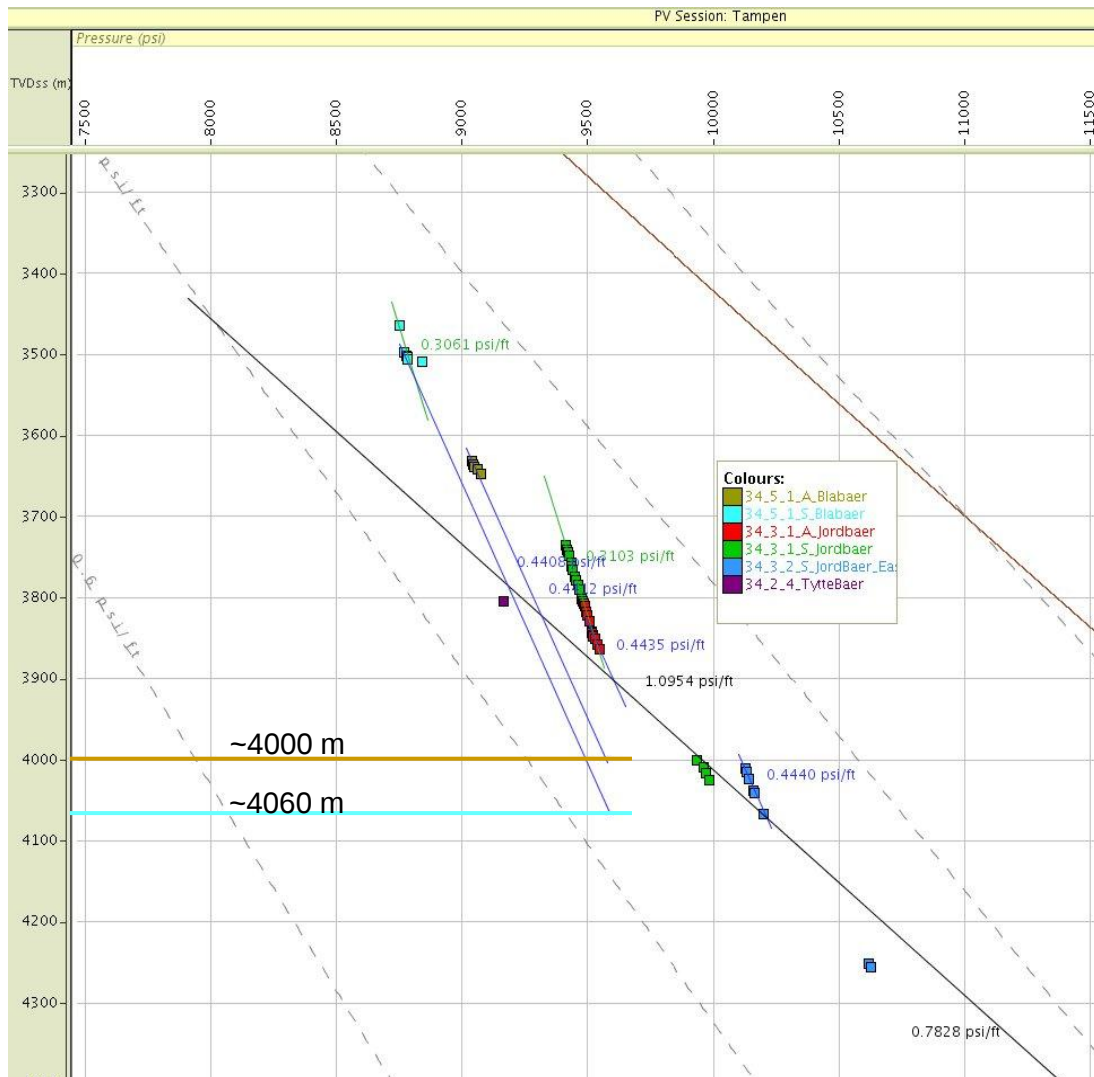


Fig. 3.4 Pressure analysis of 34/5-1 S & 34/5-1 A

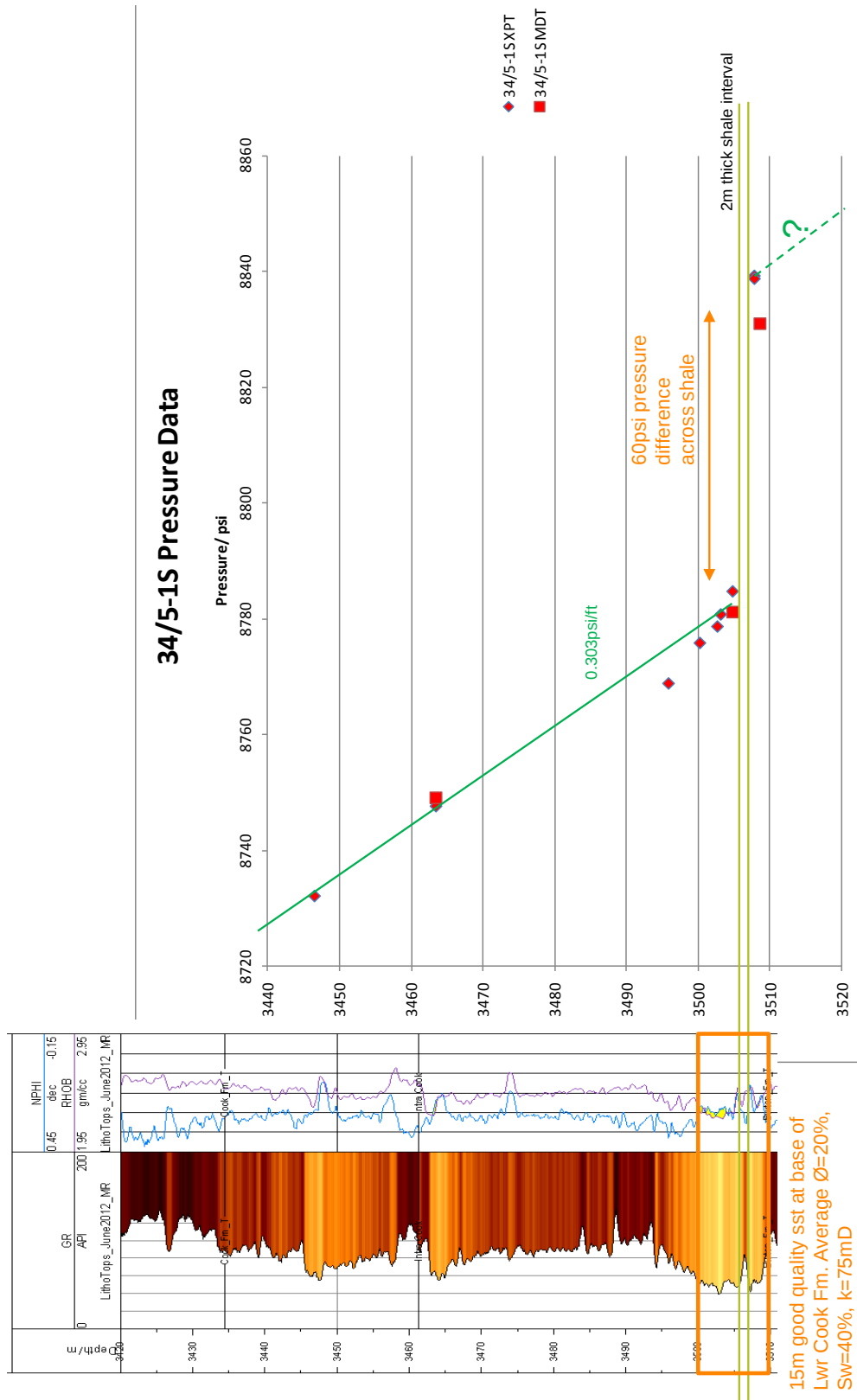


Fig. 3.5 Pressure data 34/5-1 S.

Geochemistry & Basin Modelling

A number of geochemical studies have been undertaken in order to identify the likely source of the Blåbær oil, its relationship to other Tampen oils and the potential of the Lower Jurassic Drake Fm as a source rock. Geochemically the Blåbær oil is unlike Upper Jurassic Draupne and Heather Fm sourced oils, and it is therefore most likely sourced from the on-structure Lower Jurassic Drake Fm directly overlying the Blåbær discovery.

The most recent basin model for the licence was updated in 2013 and covers 1000km². The Drake Fm is modelled as a type II source rock with original TOC of 2.5% and HI of 300 and is modelled to be in the early oil window over the PL 374 S licence present day (Fig. 3.6). Oil expulsion from the Drake Fm commenced in the early Tertiary, with the main phase of charge in the Pliocene and continuing present day. Running the model with varying Drake TOC has little impact on modelled volumes within the Cook Fm as the Drake is just into the oil window which limits the amount of expulsion which is possible. The model shows that the Blåbær structure can be charged downwards from the overlying Drake Fm, but charge volumes are limited with approximately 30mmmbbl from the Drake Fm available to charge, and therefore it is not believed it is possible for the Blåbær structure to be filled-to-spill. The fault seal analysis further shows that Blåbær has limited communication with the deeper Pancake Basin and therefore available volumes are limited to sourcing from the on-structure Drake Fm. For the remaining untested Blåbær segments there is limited potential for significant charge due to the small size of the on-structure Drake Fm fetch areas which are available to charge the individual segments.

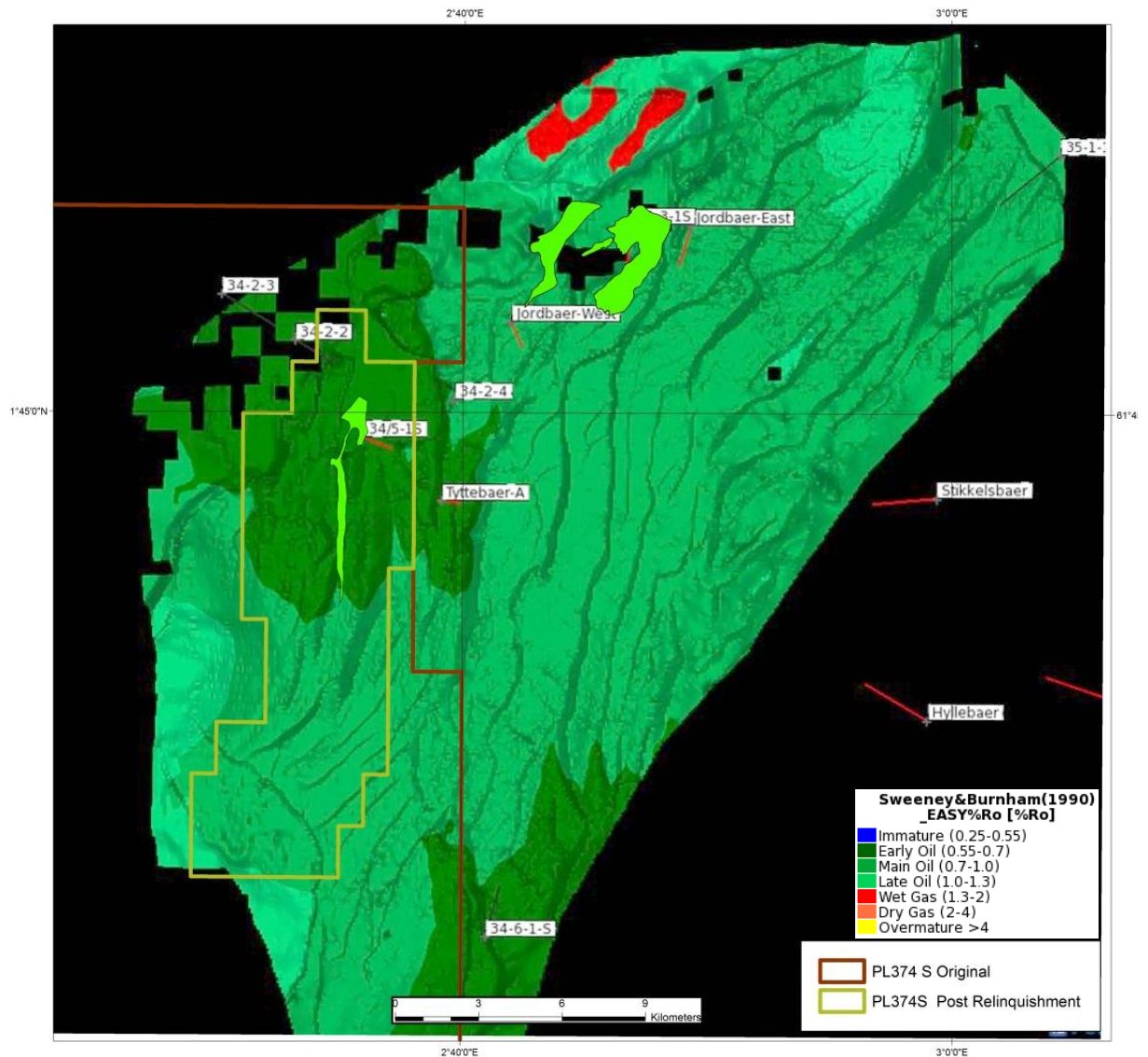


Fig. 3.6 Present day maturity of Drake Fm source rock. Modelled as type II source rock with TOC=2.5% & HI=300

Structural Modelling

Interpretation of the high quality 3D seismic survey BG1102 which was acquired subsequent to the drilling of the Blåbær exploration well highlights additional faults which were not apparent on previous data. This new interpretation provided further insight on down-dip Blåbær connectivity and explanation for the dry sidetrack. There are a number of additional faults mapped on the Blåbær structure which were not previously identified which increases complexity of Blåbær, and reduces the hydrocarbon charge into the prospects.

Rock Physics

A number of advanced geophysical studies were undertaken on the BG1102 seismic volume including prestack inversion for acoustic impedance, Vp/Vs, Bayesian facies and fluid volumes, and AVO volumes. The acoustic impedance volume appears to tie well to the Blåbær well and

sidetrack (Fig. 3.7), with the oil sands in the main bore having a distinctly different response to the water bearing sands in the sidetrack. However, the conclusions of the project are not definitive and while good quality porous sands can be identified, the acoustic impedance volume is not a conclusive hydrocarbon indicator. However, over Blåbær there is an apparent conformance with structure and this has been used to define the most likely contact for the Blåbær discovery. There are no other clear seismic anomalies identified on the acoustic impedance volume within the licence, and therefore the remaining undrilled Blåbær segments are no longer recognised as viable prospects.

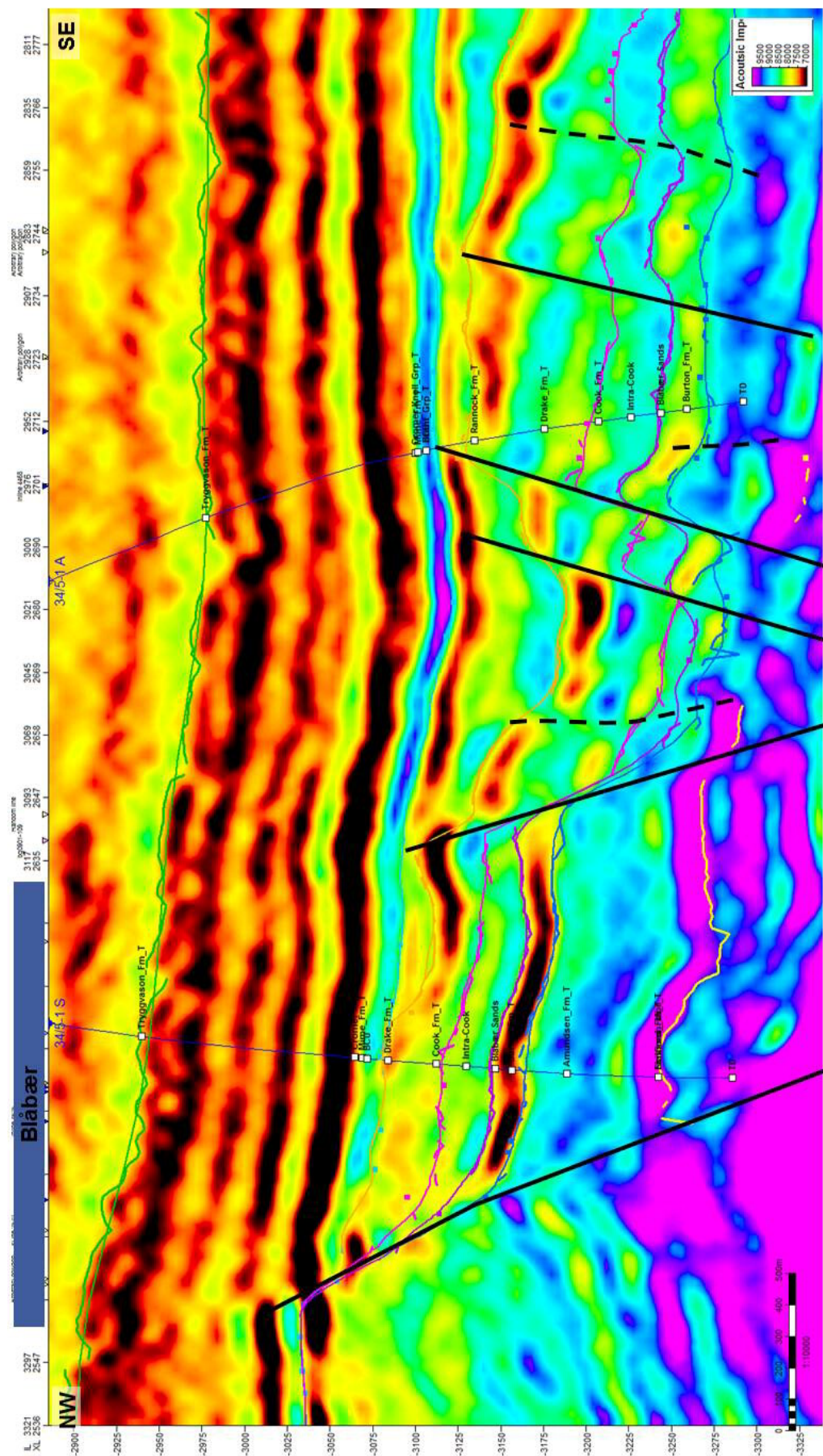


Fig. 3.7 Acoustic impedance over Blåbær structure & well tie. The response in the Cook Fm sands within the Blåbær main bore and sidetrack is clearly different. Given the similar calculated porosities, the data appears to indicate fluid fill.

4 Update of Resource Potential

At the time of licence application, the Blåbær structure was the key prospect within the licence (Fig. 4.1). Blåbær was interpreted to be a 0.8Tcf gas prospect with stacked Cook, Statfjord and Lunde Fm reservoirs. Additional Lower Cretaceous and Upper Jurassic leads were also identified. Following the 2008 discovery of the Knarr oil field in the Cook Fm in the adjacent PL 373 S licence, the Blåbær prospect was high-graded and reclassified as an oil prospect.

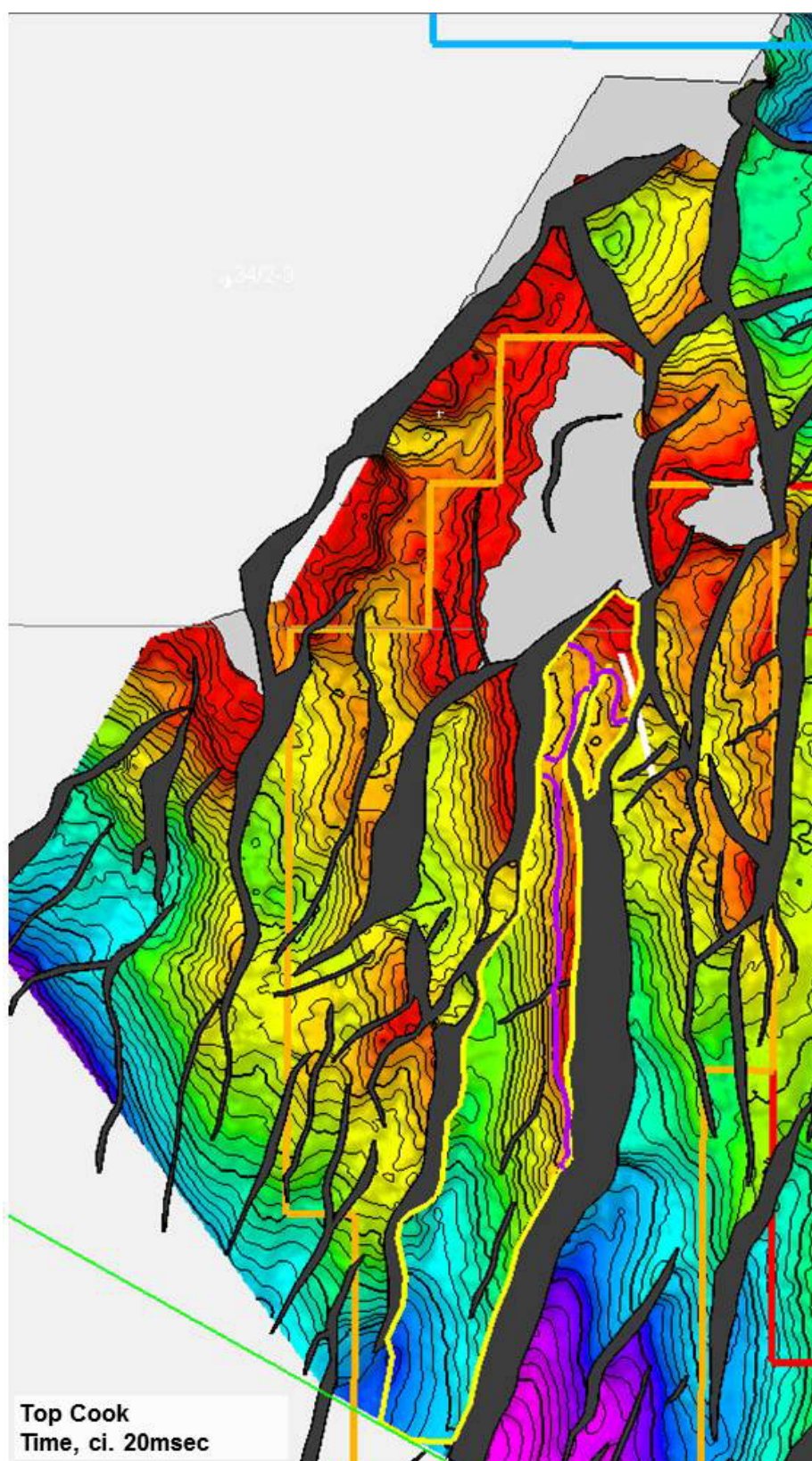


Fig. 4.1 Top Cook (time) over PL 374 S licence. PL 374S 2013 outline is shown by the orange polygon. The Blåbær central main structure tested by the 34/5-1 S exploration well is shown by the yellow polygon. The most likely Blåbær contact determined from post well analysis is shown in purple. There are a number of smaller fault bounded segments around this which comprise the greater Blåbær structure.

Well Results

The 34/5-1 S Blåbær well was spudded in January 2010 as a deviated exploration well. The primary target of the well was the Lower Jurassic Cook Fm, with the Lower Jurassic Statfjord Fm considered to be a secondary target. Oil was encountered in the Cook Fm with a 65m TVD oil column. MDT sampling confirmed moveable light oil in the Upper and Lower Cook, with the oil having a similar composition to the Knarr discovery. A full suite of LWD and wireline logs were acquired and the Cook was also cored from 3640.5m MD to 3702m MD. No DST was performed and an OWC was not encountered. No hydrocarbons were observed in the Statfjord Fm. TD was reached on 27th February 2010 and the well was sidetracked (34/5-1 A) into an adjacent eastern fault block in order to further evaluate the Cook Fm within the greater Blåbær structure, however no hydrocarbons were encountered in the sidetrack.

The reservoir properties of the Cook Fm are summarised in the table below and in Fig. 4.2. The net pay attributed to the Upper Cook is likely optimistic due to low permeabilities indicated by limited success in acquiring XPT and MDT pressures.

34/5-1 S	Top MD (m)	Base MD (m)	Thickness (m)	Net Sand (m)	Net Pay (m)	NTG	Porosity (%)	Sw (%)
Upper Cook	3629.1	3678.7	49.6	12.2	12.2	0.25	14.5	39.2
Lower Cook	3678.7	3694.9	16.2	13.1	13.1	0.81	18.9	38.5

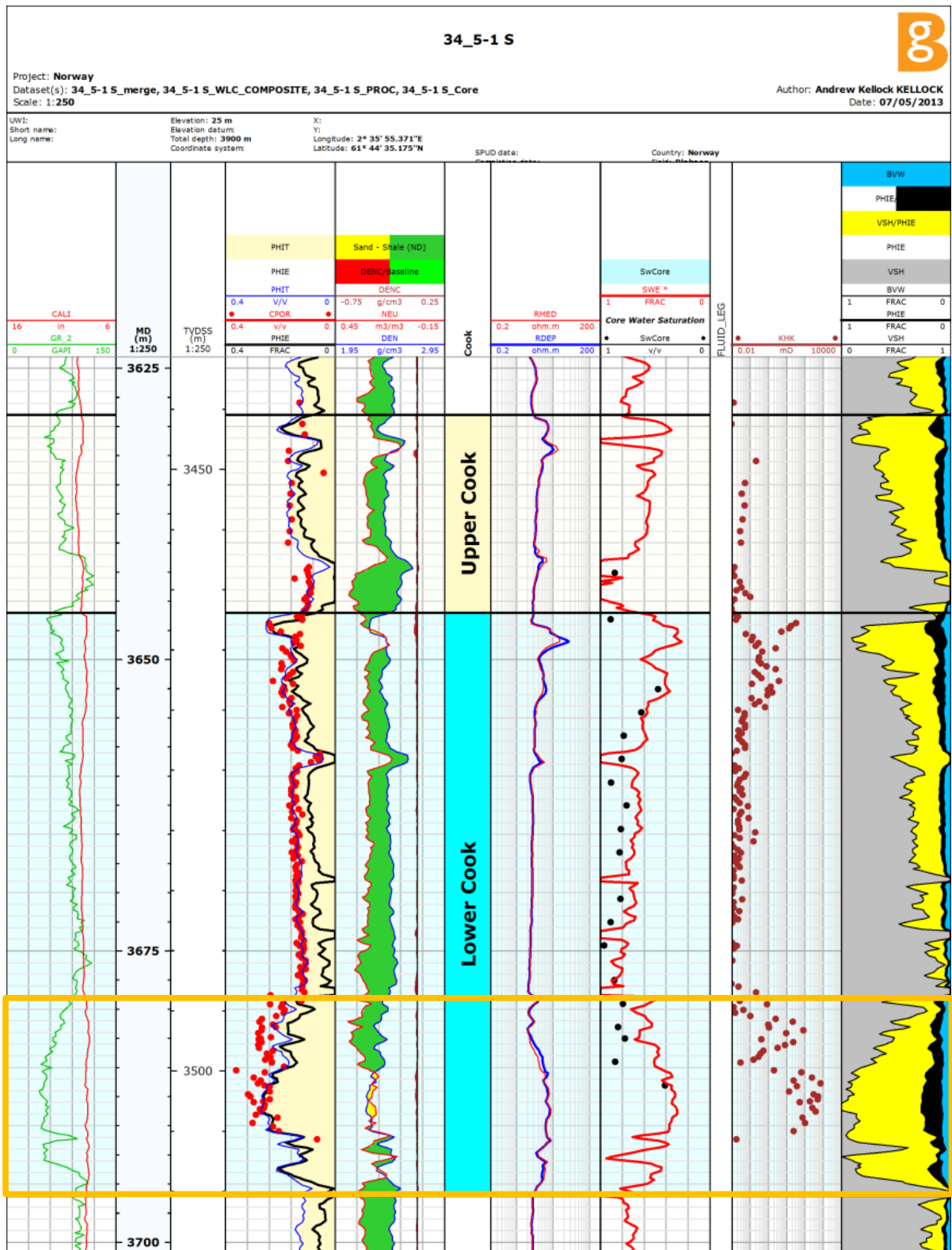


Fig. 4.2 34/5-1 S CPI. The J14 sandstone is highlighted by the orange box.

Post Well Analysis

While the entire Cook interval in the well is oil bearing, only the lower 16m (J14 sand) is considered to be producible because the upper 50m of the Cook Fm was observed to be a very low porosity-permeability reservoir. Production of the Upper Cook would require horizontal wells and, potentially, hydraulic fracturing due to the exceptionally low permeabilities recorded.

The Blåbær discovery well saw only an oil-down-to and this, combined with a complicated and heavily faulted structure and no well test, has resulted in Blåbær having considerable uncertainty relating to the OWC, and therefore a wide range in STOIP. The current volume distribution incorporates information from a number of technical studies including pressure data analysis, basin modelling, fault seal analysis and seismic inversion studies. These provide the following key pieces of information:

- From basin modelling, approximately 30mmmbbl of oil can be generated by an on-structure Drake Fm source rock.
- Depth of lateral pressure transfer into the structure suggests a maximum contact approximately 300m deeper than the crest of the Blåbær structure.
- Seismic anomalies that may indicate fluid fill fit to structure and agree with well penetrations (Fig. 4.3, Fig. 4.4).

Therefore, the range of OWC for the Blåbær structure is defined as:

Minimum: Oil-Down-To in well

Most Likely: Defined by amplitude response on seismic (Fig. 4.5)

Maximum: 300m down-dip from crest (based on pressure analysis)

For Blåbær volume calculations, the reservoir is treated as two separate intervals (Fig. 4.6).

Upper Cook: Low net-to-gross (NTG), non-productible

Lower Cook J14 sand: high NTG with good reservoir properties, producible. A COS of 64% is applied.

The table below shows a comparison of the most recent Blåbær volumes & COS compared to pre-drill and 2005 licence application estimates.

Recoverable Resource Sm ³	P90	Mean	P10	CoS
Blåbær J14 producible sandstone (Blåbær Central Main segment)	0.64	1.27	2.07	0.64
Blåbær Cook non-productible (Blåbær Central Main segment)	1.75	3.02	4.45	-
Pre-Drill Volumes (Blåbær Central Main segment)	1.75	3.33	5.09	0.39
Licence Application volumes (Blåbær all segments)	2.1	12.3	27.7	0.13

The Blåbær discovery has also been evaluated for any potential upside. The geological model and seismic volumes do not suggest an improvement in reservoir quality away from the wellbore. It is possible that there may be a minor thickening of the J14 sand down-dip from the well (Fig. 4.7) and this is captured in the volumetric model, however the largest uncertainty is the contact which has a large range applied.

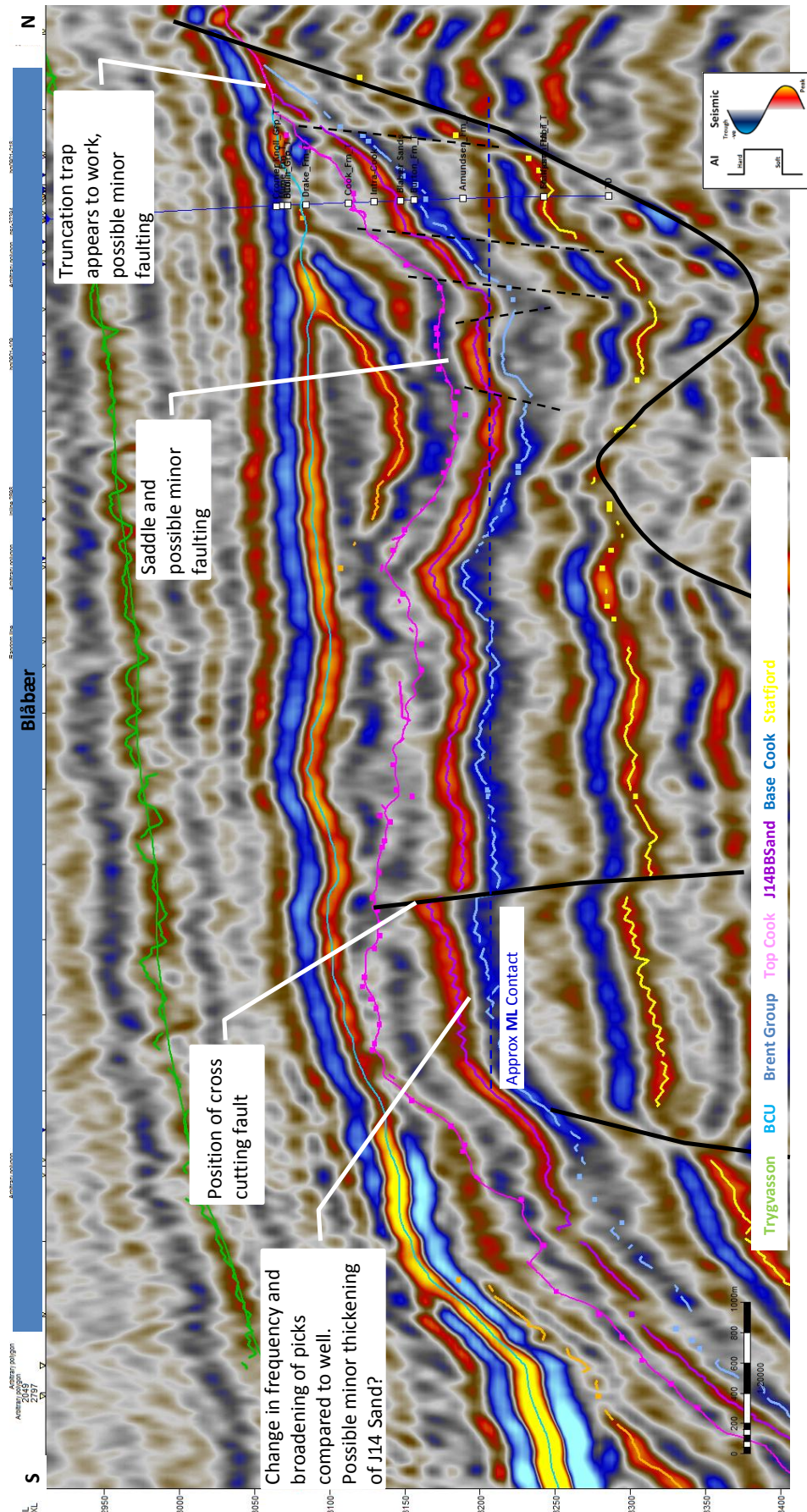


Fig. 4.3 Full stack seismic line along Blåbær structure.

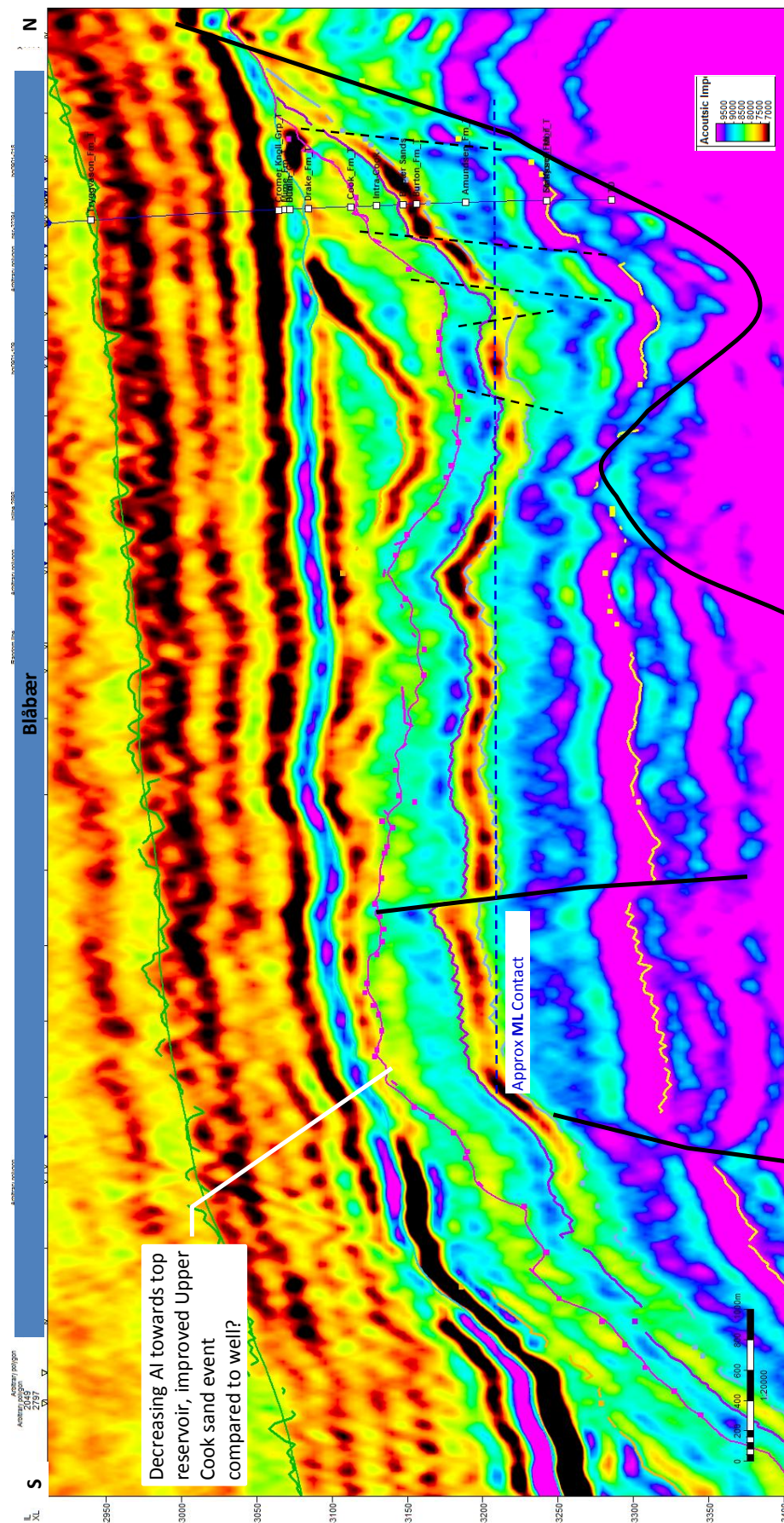


Fig. 4.4 Acoustic impedance (AI) along Blåbær structure.

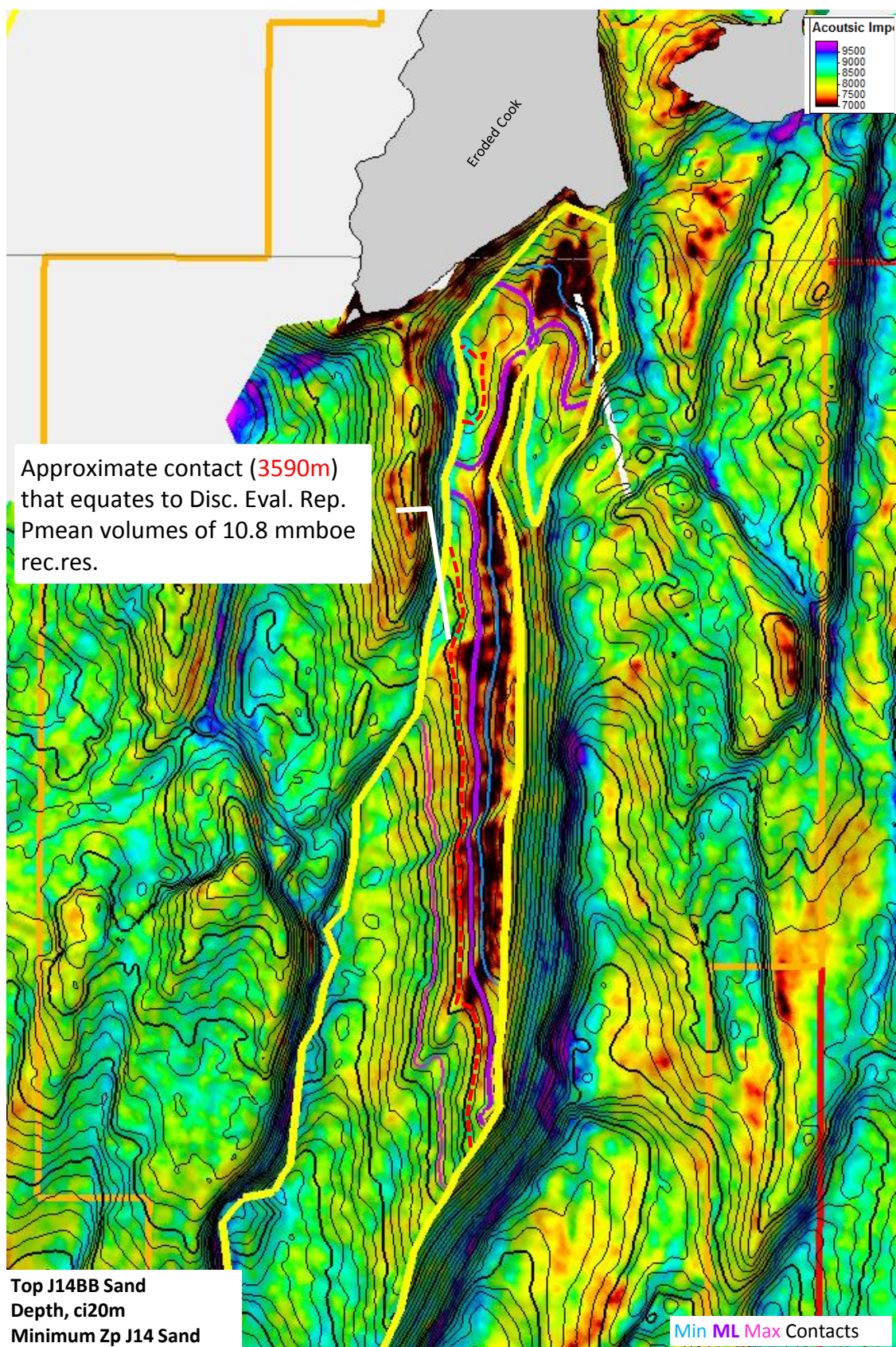


Fig. 4.5 Map view of acoustic impedance of Cook J14 sandstone. An amplitude anomaly which conforms to structure is used to define the most likely contact in Blåbær

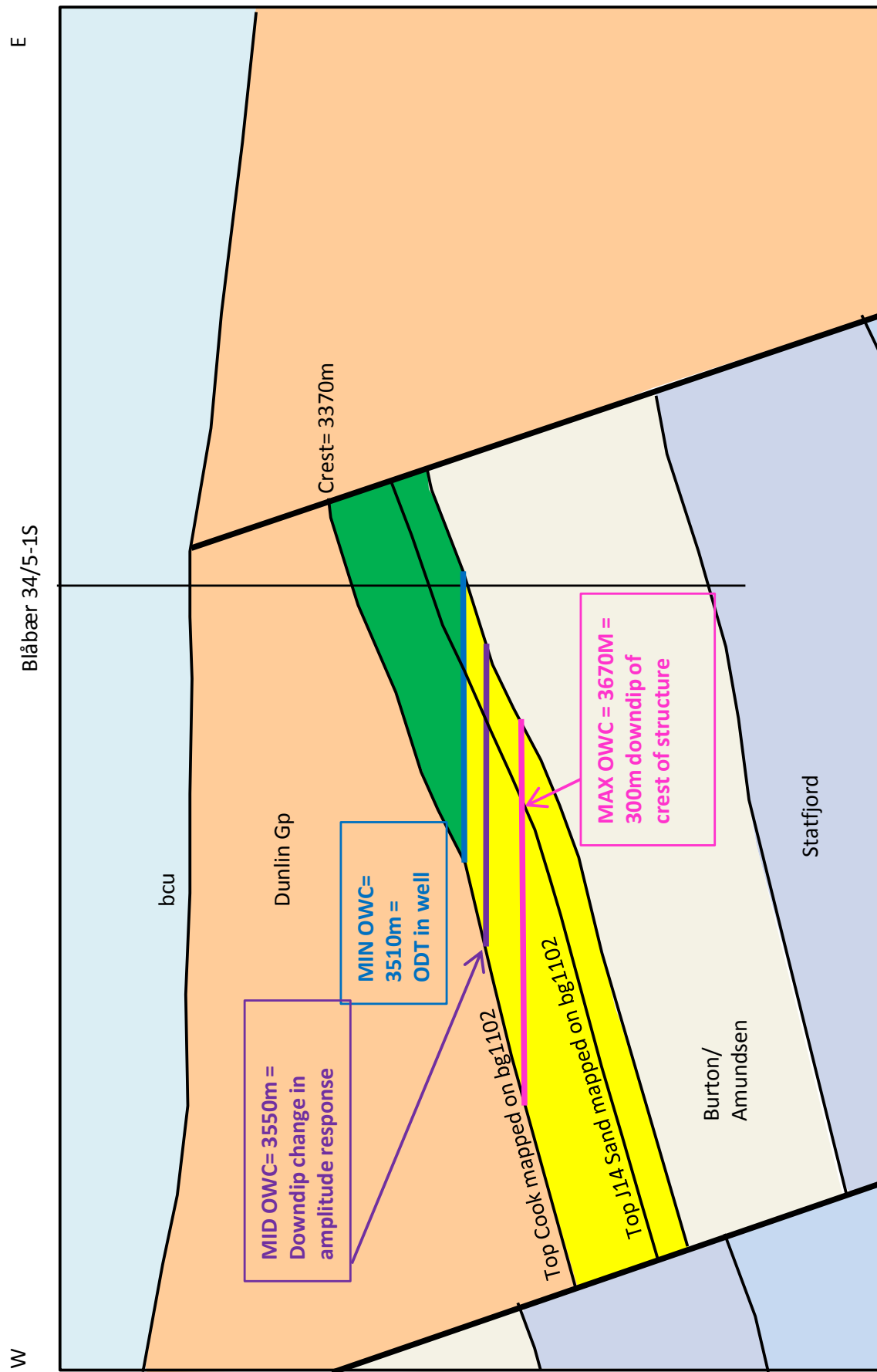


Fig. 4.6 Blåbær volume model.

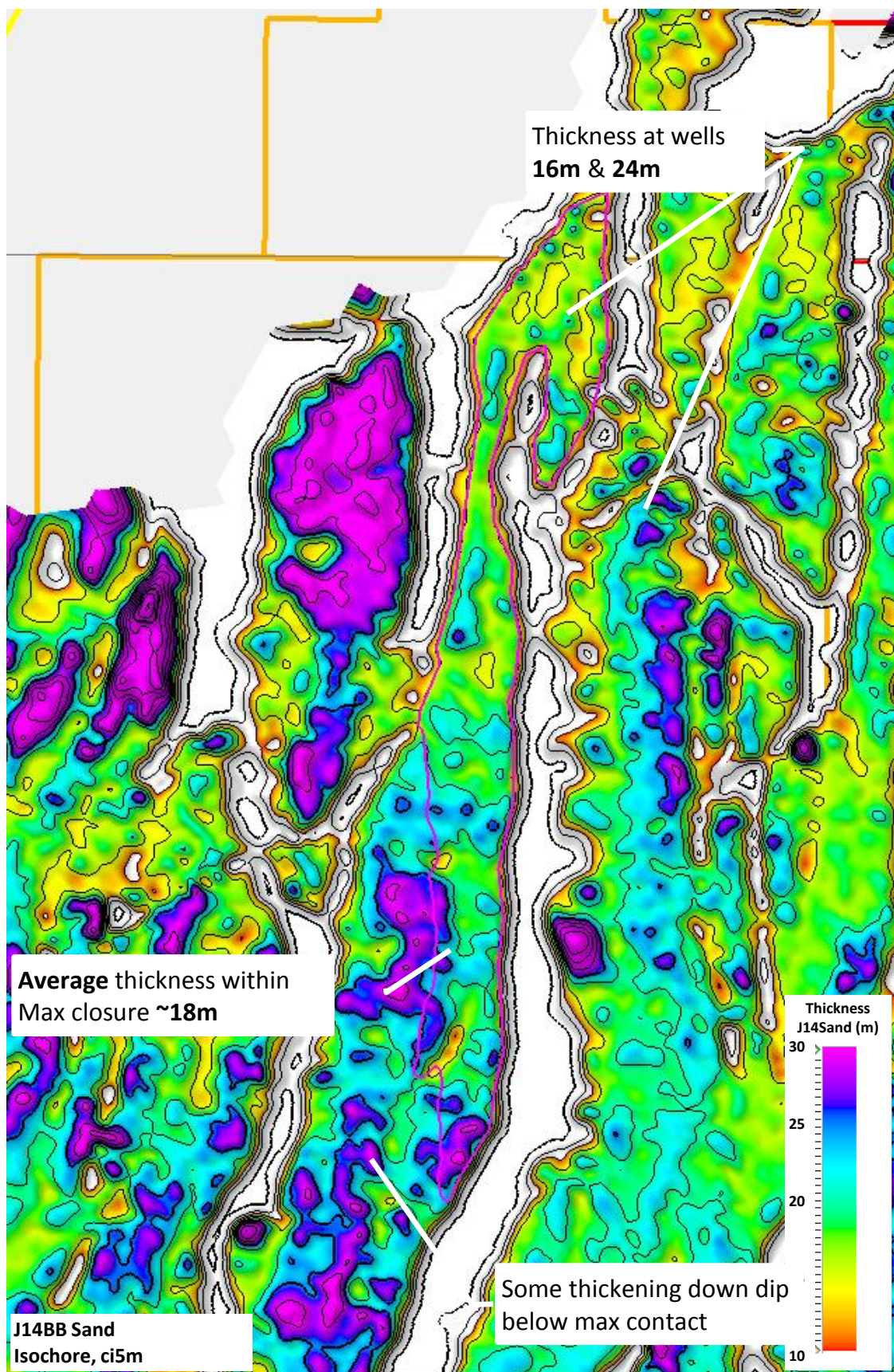


Fig. 4.7 Whole Cook thickness (time).

There is a further additional prospect remaining within the licence, the Skogsbær prospect (Fig. 1.1) which is interpreted as a stratigraphically trapped Upper Jurassic deep marine intra-Draupne sandstone, with sands sourced from the eroded Amoco High (well 34/2-3) to the north of the licence, and redeposited down-dip in the Pancake Basin to the south. However, while the Amoco High has been eroded down to the Triassic below the bcu, the presence of high quality sands down-dip is considered to be high risk due to the lack of sands to be eroded. At the northern limits of the Tampen Spur, the Brent Group is shale prone, the Cook Fm is shale prone in the Blåbær licence and the Statfjord Fm is most likely the variable net-to-gross Eriksson Mbr.

A rock physics study using well 34/7-31 from the Borg field to the south suggests that the Skogsbær seismic amplitude anomaly is a low to medium porosity (10-15%) intra-Draupne sand of approximately 25m thickness and these results were incorporated into prospect volumetrics (Fig. 4.8, Fig. 4.9).

The updated prospect summary sheets are shown in Fig. 4.10 and Fig. 4.11.

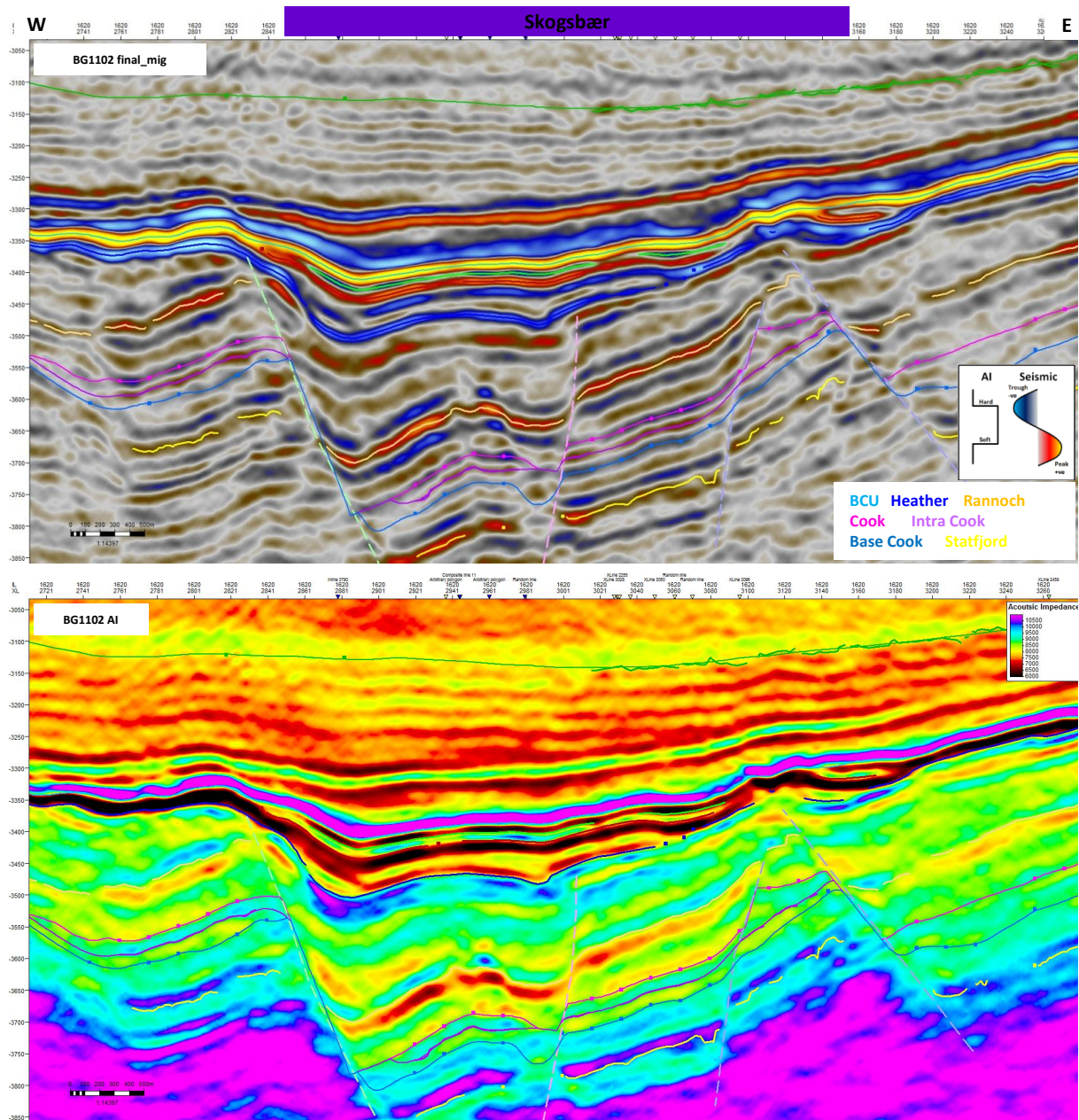


Fig. 4.9 Seismic line across Skogsbær prospect.

Table 5: Prospect data (Enclose map)

Oil, Gas or O&G case: Oil	Block: 34/5	Prospect name	Blåbær	Discovery/Prospect lead	Discovery	Prospect ID (or New)	NPD will insert value	NPD approved (Y/N)	
	Play name	New Play (Y/N)	No	Outside play (Y/N)	No				
		Reported by company	BC Norge	Reference document				Assessment year	2014
		Structural element	Tampen Spur	Type of trap	Dip/ fault closed	Water depth (m MSL) (>0)	387	Seismic database (2D/3D)	3D
		Resources in Place and RECOVERABLE							
		Volumes, this case							
		Main phase							
		Associated phase							
		Low (P80)	Base, Mode	Base, Mean	High (P10)	Low (P90)	Base, Mode	Base, Mean	High (P10)
		Oil [10 ⁶ Sm ³] (>0.00)	1.70	2.91	14.68	0.15	0.22	0.34	0.55
	Gas [10 ⁶ Sm ³] (>0.00)								
	Oil [10 ⁶ Sm ³] (>0.00)	0.59	1.17	1.90	0.05	0.07	0.11	0.18	
	Gas [10 ⁶ Sm ³] (>0.00)								
	Recoverable resources								
	Reservoir Chrono (from)	Reservoir litho (from)	Cook Fm	Source Rock, chrono primary	Toarcian	Source Rock, litho primary	Drake Fm	Toarcian	
	Reservoir Chrono (to)	Reservoir litho (to)		Source Rock, chrono secondary		Source Rock, litho secondary	Seal, Litho	Drake Fm	
Probability [fraction]									
	Technical (oil + gas + oil & gas case) (0.00-1.00)	0.64	Oil case (0.00-1.00)	0.64	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)	0.85	Retention (P4) (0.00-1.00)	1.00	
Parameters:									
	Low (P90)	Base	High (P10)						
	3420	3420	3420						
	Depth to top of prospect [m MSL] (> 0)								
	1.6	2.7	4.2						
	Area of closure [km ²] (> 0)								
	1.1	1.6	2.5						
	Reservoir thickness [m] (> 0)								
	90	130	250						
	HC column in prospect [m] (> 0)								
	153.400	192.700	241.300						
	Gross rock vol. [10 ⁶ m ³] (> 0.000)								
	0.70	0.91	0.90						
	Net / Gross [fraction] (0.00-1.00)								
	0.14	0.19	0.24						
	Porosity [fraction] (0.00-1.00)								
	Permeability [mD] (> 0.0)								
	0.30	0.38	0.50						
	Water Saturation [fraction] (0.00-1.00)								
	Bg [Rm3Sm3] (< 1.0000)								
	0.81	0.73	0.66						
	1/Bg [Sm3/Rm3] (< 1.00)								
	GOR, free gas [Sm ³ /Sm ³] (> 0)								
	89	116	143						
	GOR, oil [Sm ³ /Sm ³] (> 0)								
	0.30	0.40	0.50						
	Recov. factor, oil main phase [fraction] (0.00-1.00)								
	0.30	0.40	0.50						
	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)								
	0.30	0.40	0.50						
	Recov. factor, liquid ass. phase [fraction] (0.00-1.00)								
	0.30	0.40	0.50						
For NPD use:									
	117								
	Temperature, top res [°C] (>0)								
	605								
	Pressure, top res [bar] (>0)								
Cut off criteria for NIG calculation									
	1. VSH 50%								
	2. Porosity 10%								
	3.								
Register - init:									
	NPD will insert value								
Register Date:									
	NPD will insert value								
Kart oppdatert									
	NPD will insert value								
Kart dato									
	NPD will insert value								
Kart nr									
	NPD will insert value								

Table 5: Prospect data (Enclose map)

Table 5: Prospect data (enclose map)									
Block	34/5	Prospect name	Skogabær	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)	No	Outside play (Y/N)	No				
Oil, Gas or O&G case:		Reported by company		Reference document				Assessment year	2014
This is case no.:		Structural element	Tampen Spur	Type of trap	Stratigraphic	Water depth [m MSL] (>0)	400	Seismic database (2D/3D)	3D
Resources IN PLACE and RECOVERABLE									
Volumes, this case									
In place resources	Oil [10 ⁹ Sm ³] (>0.00)	5.86	Base, Mode	Base, Mean	High (P10)	Low (P90)	Base, Mode	Base, Mean	High (P10)
	Gas [10 ⁹ Sm ³] (>0.00)		9.17	14.70	26.20	0.61	0.95	1.61	2.91
Recoverable resources	Oil [10 ⁹ Sm ³] (>0.00)	2.31	3.38	5.90	10.50	0.44	0.76	1.17	2.13
	Gas [10 ⁹ Sm ³] (>0.00)								
Reservoir Chrono (from)	Oxfordian	Reservoir litho (from)	Draupne Fm	Source Rock, chrono primary	Oxfordian	Source Rock, litho primary	Draupne Fm	Seal, Chrono	Oxfordian
Reservoir Chrono (to)	Ryazanian	Reservoir litho (to)		Source Rock, chrono secondary		Source Rock, litho secondary	Seal, Litho	Draupne Fm	
Probability [fraction]									
Technical (oil + gas + oil & gas case) (0.00-1.00)	0.11	Oil case (0.00-1.00)	0.11	Gas case (0.00-1.00)		Oil & Gas case (0.00-1.00)			
Reservoir (P1) (0.00-1.00)	0.30	Trap (P2) (0.00-1.00)	0.45	Charge (P3) (0.00-1.00)	0.85	Retention (P4) (0.00-1.00)	1.00		
Parameters:									
Depth to top of prospect [m MSL] (> 0)	3550	Base	High (P10)	Comments					
	9.1	16.8	3600	3650					
Area of closure [km ²] (> 0.0)	5	25	25	27.0					
HC column in prospect [m] (> 0)	100	200	340	50					
Gross rock vol. [10 ⁹ m ³] (> 0.000)	456.600	795.200	1172.500						
Net / Gross [fraction] (0.00-1.00)	0.20	0.50	0.70						
Porosity [fraction] (0.00-1.00)	0.10	0.15	0.20						
Permeability [mD] (> 0.0)									
Water Saturation [fraction] (0.00-1.00)	0.20	0.30		0.40					
Bq [Rm3Sm3] (< 1.0000)	0.71	0.71		0.71					
1/Bq [Sm3/Rm3] (< 1.00)									
GOR, free gas [Sm ³ /Sm ³] (> 0)	53	116	143						
GOR, oil [Sm ³ /Sm ³] (> 0)	0.30	0.40	0.50						
Recov. factor, oil main phase [fraction] (0.00-1.00)	0.30	0.40	0.50						
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			Innrap. av. geol.-init: <td>NPD will insert value</td> <td>Register - init:<td>NPD will insert value</td><td>Kart oppdatert<td>NPD will insert value</td></td></td>	NPD will insert value	Register - init: <td>NPD will insert value</td> <td>Kart oppdatert<td>NPD will insert value</td></td>	NPD will insert value	Kart oppdatert <td>NPD will insert value</td>	NPD will insert value
Pressure, top res [bar] (>0)	650			Date: <td>NPD will insert value</td> <td>Register Date:<td>NPD will insert value</td><td>Kart dato</td><td>NPD will insert value</td></td>	NPD will insert value	Register Date: <td>NPD will insert value</td> <td>Kart dato</td> <td>NPD will insert value</td>	NPD will insert value	Kart dato	NPD will insert value
Cut off criteria for N/G calculation									
1. Vsh 50%		2. Porosity 10%	3.					Kart	NPD will insert value

Fig. 4.11 Skonsbær prospect data.

5 Technical Evaluations

The Blåbær structure is split into three segments by a saddle and a fault (Fig. 5.1). A producer is placed in each segment in order to achieve recovery factors of approximately 40%.

The assumed development concept for the Blåbær discovery comprises a subsea tieback to the Knarr FPSO in the adjacent PL 373 S licence. Three oil producers and two water injectors are drilled from two template locations utilising a semi-submersible drilling rig in water depths of 400m.

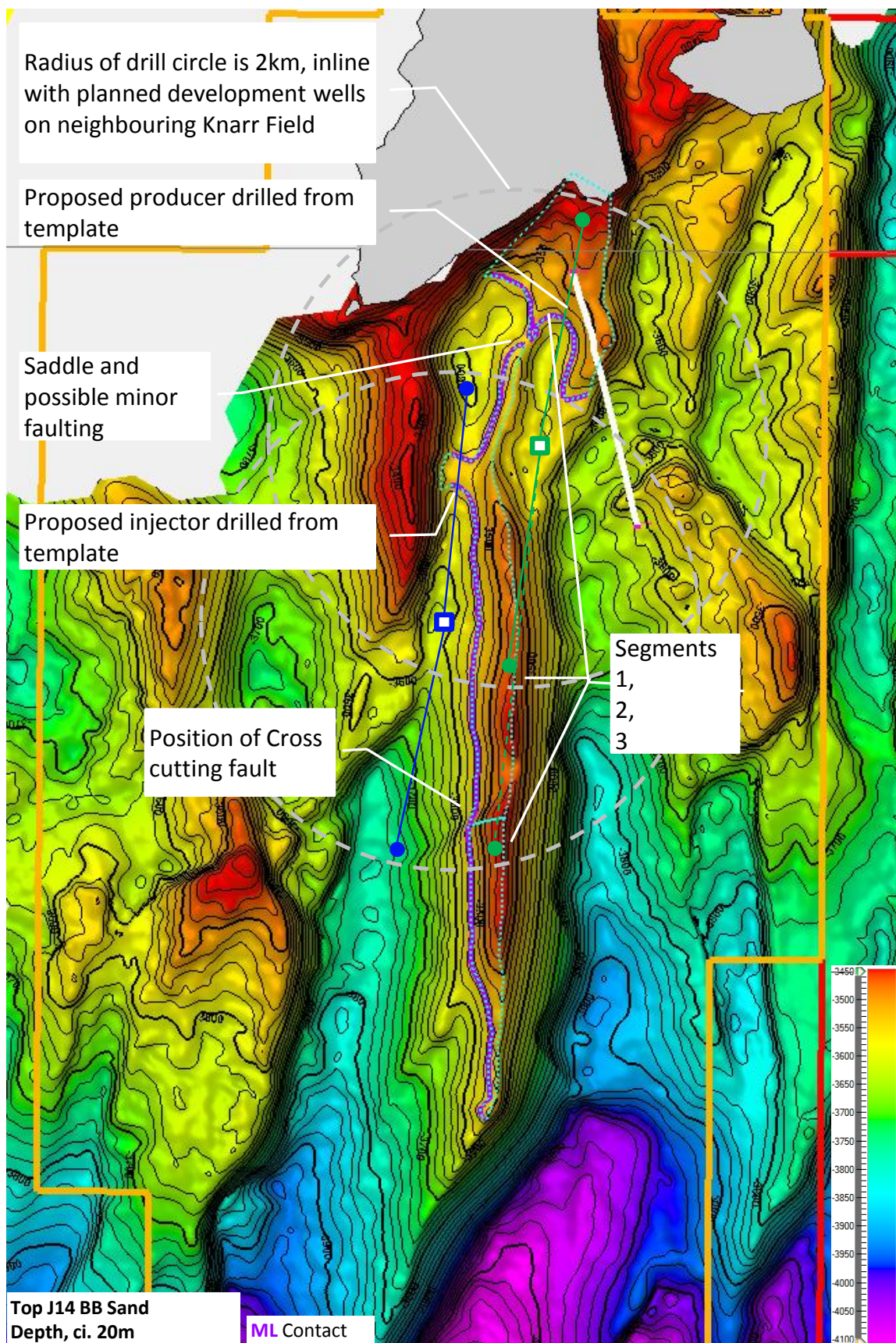


Fig. 5.1 Blåbær development concept.

6 Conclusions

The PL 374 S partnership have decided to relinquish the licence following an extensive licence work programme which included

- the merge of seismic volume BG06M01
- the drilling of exploration well 34/5-1 S & sidetrack 34/5-1 A & subsequent post-well analysis
- acquisition of 3D seismic volume BG1102

The partnership has concluded that the limited volumes discovered in the Blåbær structure cannot be economically produced. The key risks related to the Blåbær structure include the location of the OWC and reservoir quality. There is limited upside potential identified elsewhere in the licence within the Cook Fm. The sole remaining prospect within the licence is Skogsbær, which is defined by a seismic amplitude anomaly, and is a high risk stratigraphic trap with reservoir presence identified as a key risk.

All work commitments in the licence have been fulfilled and through extensive sub-surface studies the partnership has concluded that prospectivity is limited. Based on these assumptions the licence group unanimously agreed to relinquish the licence.