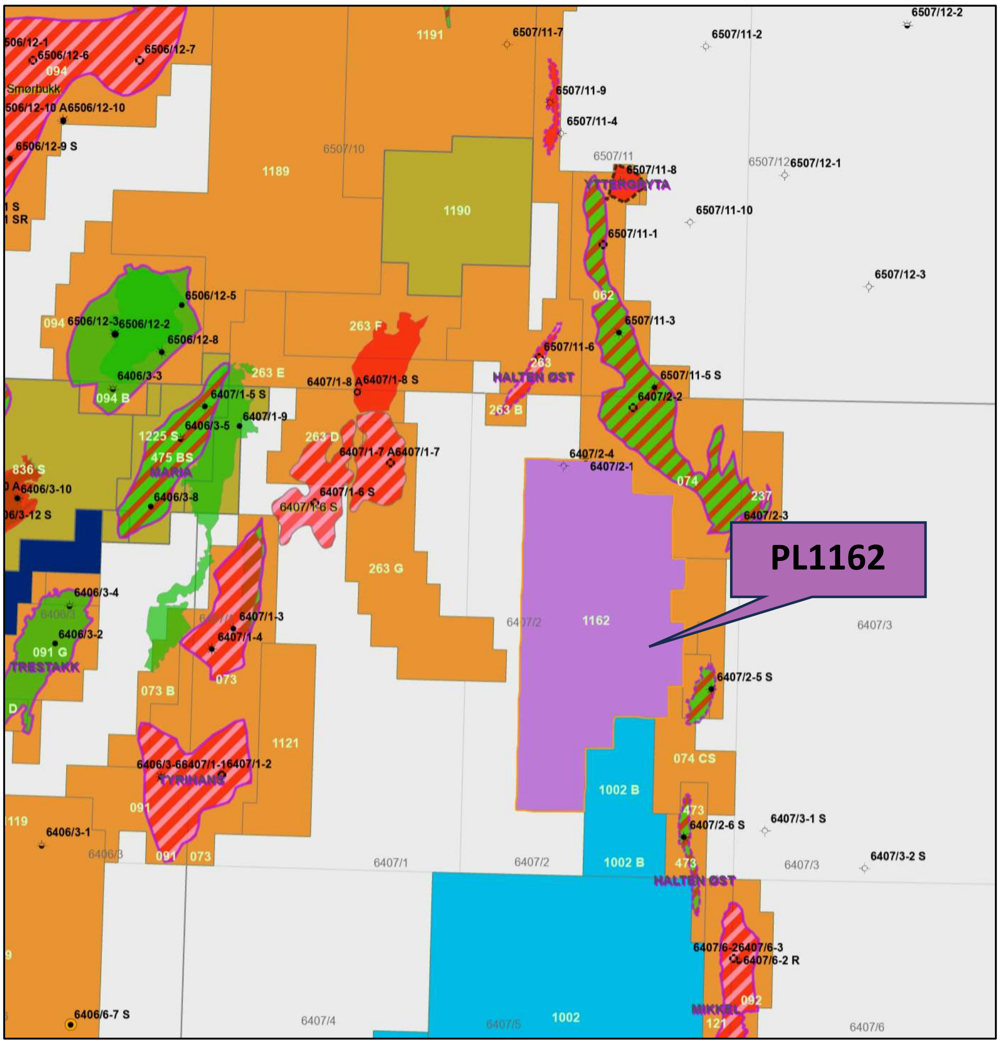
PL 1162

RELINQUISHMENT REPORT

March 2025



Partners:

1 License history

PL1162 was awarded on 11th March 2022 (following APA2021). The licence was applied for in APA by Lundin Energy Norway AS as operator and Chrysaor Norge AS for an initial period of 7 years. The licence was extended one year and relinquished at the drill/drop deadline of 11th March 2025. The licence is situated in the Gimsan Basin in the Norwegian Sea.

General info:

- Date of award: 11.03.2022 (following APA 2021).
- Area: Part of block 6407/2. Total 154 km_2.
- Licensees at award: Lundin Energy Norway AS (50%, Operator), Chrysaor Norge AS (30%) and Petoro AS (20%).
- Licensees at relinquishment: Aker BP ASA (50%, Operator), Harbour Energy Norge AS (30%) and Petoro AS (20%).
- Work program: Acquire modern 3D seismic and reprocess, conduct G&G studies

Extensions and area relinquishments:

- One year extension of the drill/drop decision was applied for and granted on 22.04.2024 due to the maturation of a new prospect (Nibbler) identified within the licence.
- Unanimous decision to relinquish the licence at the drill/drop deadline 11.03.2025.

Formal Management and Exploration Committee Meetings:

- Management / Exploration Committee Meeting No 1 (30.03.2022)
- Management / Exploration Committee Meeting No 2 (22.11.2022)
- Management / Exploration Committee Meeting No 3 (27.11.2023)
- Management / Exploration Committee Meeting No 4 (20.06.2024)
- Management / Exploration Committee Meeting No 5 (18.11.2024)

Reasoning for the relinquishment of the licence:

Based on the results of the reprocessing of PGS14002 and G&G studies performed no identified prospect has been found drillable. The Dixie prospect, the sole prospect identified in the APA application, is considered to have too high geological risks on reservoir presence and charge. The Nibbler prospect, identified post APA 2021 application, was also found to be too risky with trap and reservoir heterogeneity being the largest risks. Two leads were also identified and matured within the licence, the Bunny Bell and the Pongo Wearing, but none of these were de-risked to prospect status.

No other prospect/leads are identified in PL1162. All work commitments are fulfilled.

Hence, the PL1162 partnership has unanimously decided that there is no basis for a positive drill decision in the licence.

An overview of current prospects and leads in the licence is shown in Fig. 1.1.

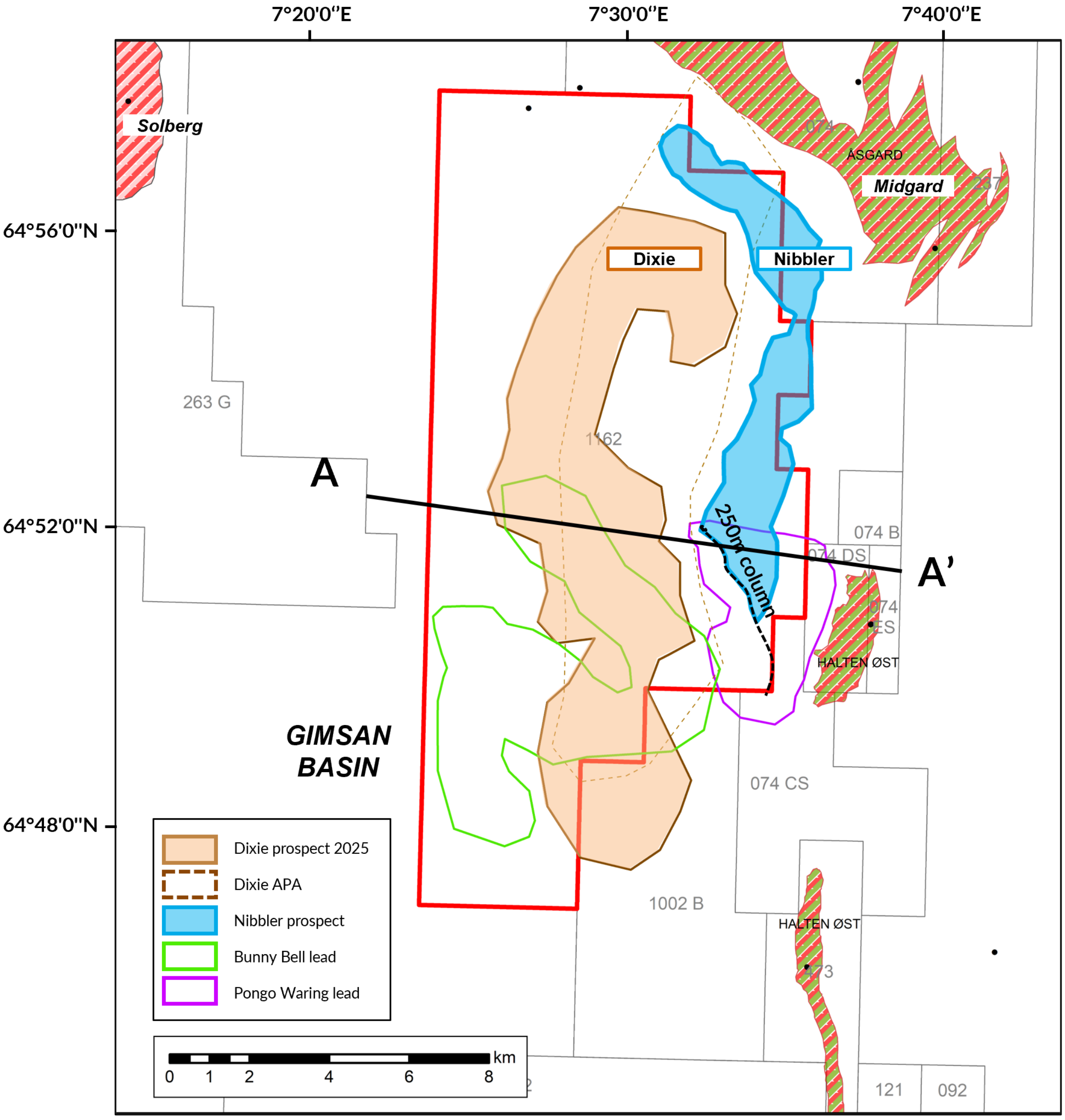


Fig. 1.1 PL1162 Regional overview with current prospects and leads.

2 Database

2.1 Seismic data

The PGS 14002 multi-client 3D dataset was used as input for the seismic reprocessing. A common reprocessing project for the two licences PL1162 and PL1164 was carried out, whereby the common seismic database for PL1162 comprised 415 km^2 of PGS14002ABPR23.

The reprocessing was done to de-risk the soft amplitude response seen at the Tang Fm. level and to verify a viable reservoir within the licence. A map of the seismic reprocessed data used in this project is shown in Fig. 2.1. A listing of the seismic database used in this study is shown in Table 2.1.

Table 2.1 Seismic database

Survey	TYPE	Domain	Owner/ Operator	**Year**	Dataset	NPDID	Entitlement	Area (km2)
Part of PGS14002ABPR23	3D	Time and depth	PGS	2023	Full + Angle Offset	-	Purchase	415

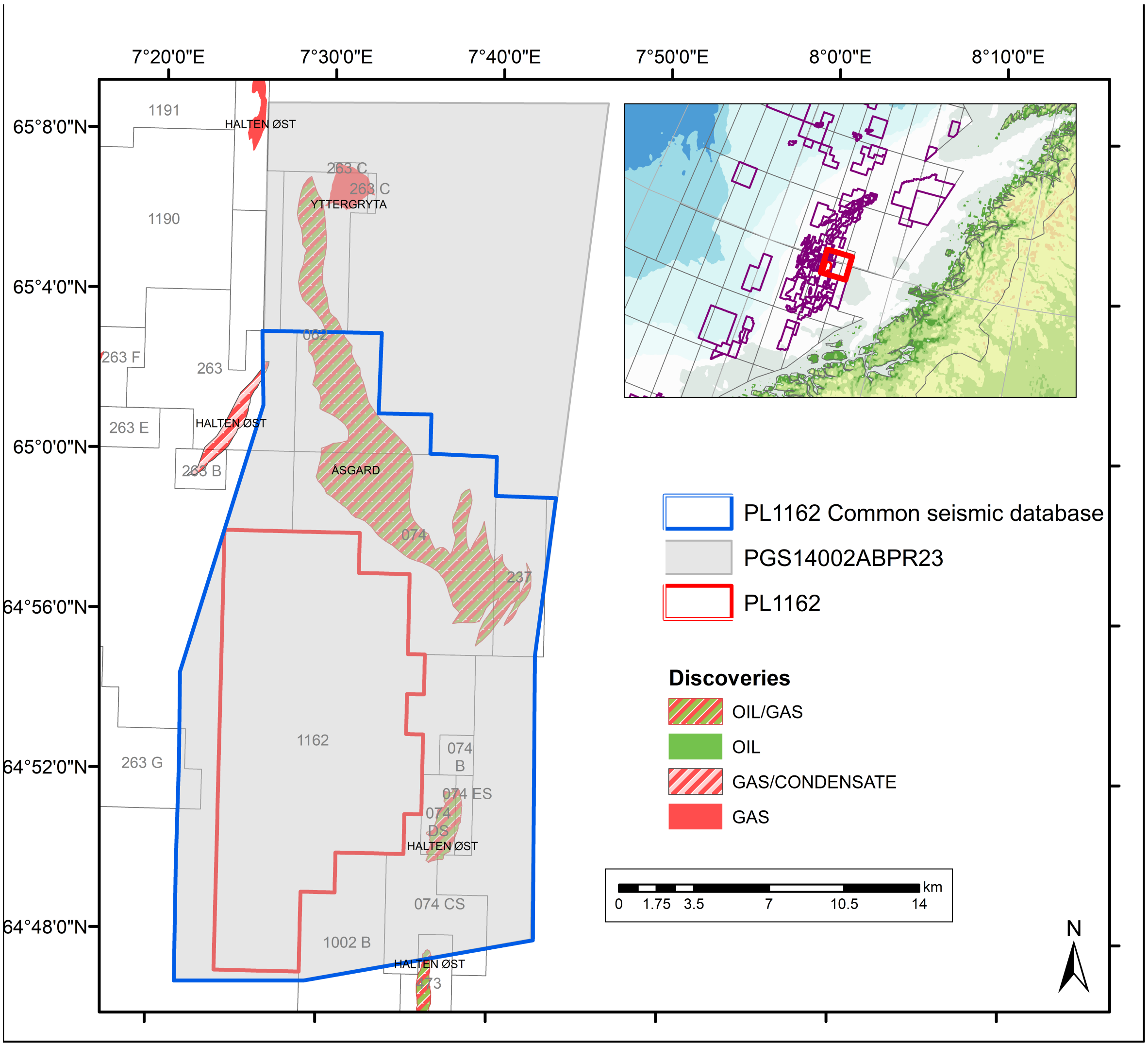


Fig. 2.1 Seismic database map

2.2 Well data

The PL1162 common well database is shown in Fig. 2.2 and Table 2.2 with key wells highlighted and comments indicating the value of the data to the prospect maturation.

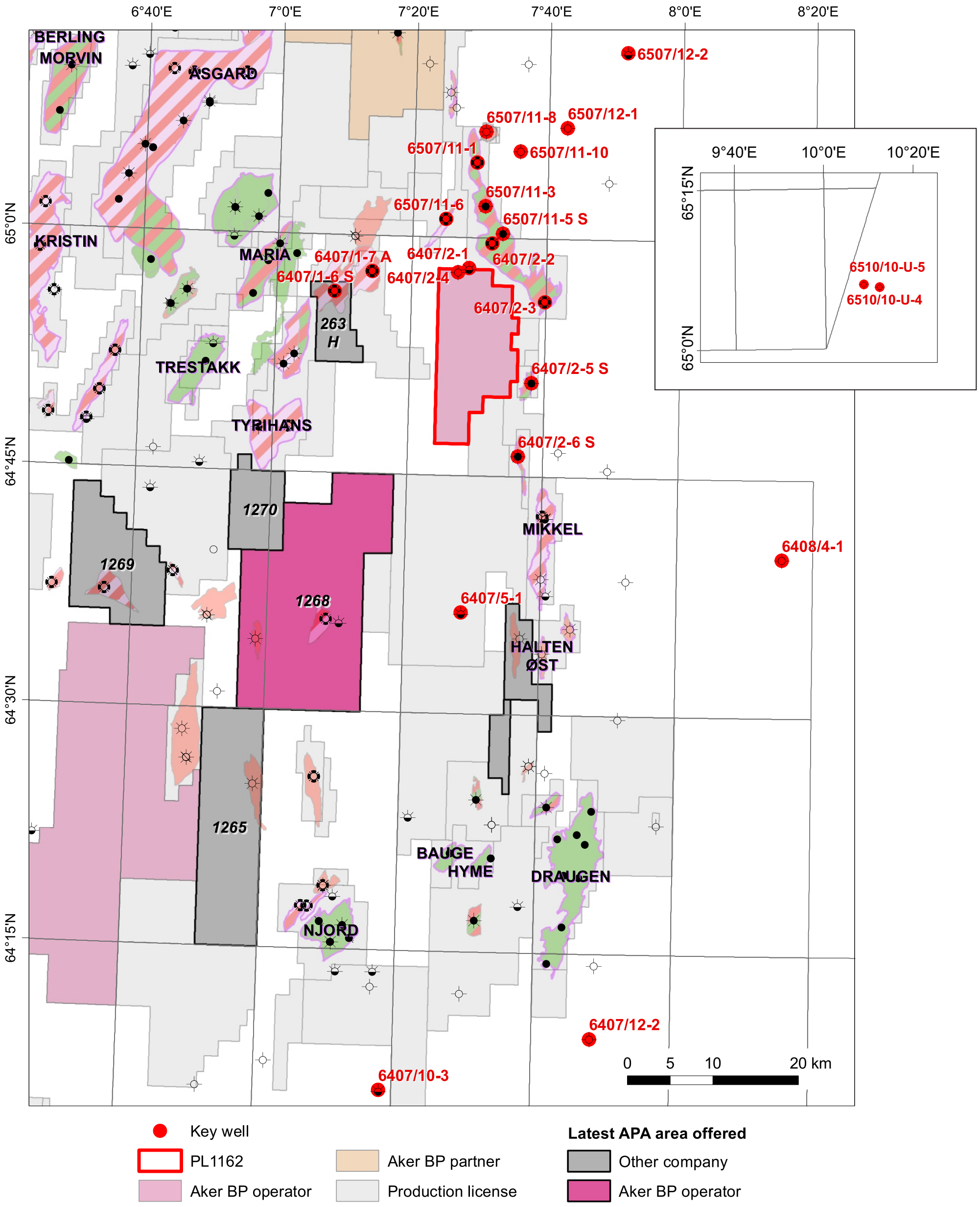


Fig. 2.2 Map view of wells used in the licence *The well database is unchanged from the 2021 APA application.*

Table 2.2 Well database

Well	Name	Licence	Operator	Year	NPD Id	Content	TD TVD	TD In	Comments, Key relevance	Entitlement
6407/1-7 A	Solberg	475	Wintershall	2014	7436	Gas/Cond	3342	Early Cretaceous	Gas/condensate Lange Fm. Sandstones, evidence stratigraphical trap	Released 2 y
6407/2-1		074	Saga	1982	76	Shows	3869	Late Triassic	Tang level contains indications of distal fan deposits, HC saturations and stratigraphy in Springar Fm.	Released 20 Y
6407/2-2	Midgard	074	Saga	1983	16	Gas/Cond	3351	Late Triassic	Key Stratigraphic Calibration, (Springar Fm. Sst.). HC saturations in Tare Fm.	Released 20 Y
6407/2-4		380	DNO	2009	6106	Dry	3000	Middle Jurassic	Key Stratigraphic Calibration Tang Fm. sandstones and Springar Fm. Sst. HC saturations in Tare Fm.	Released 2 y
6407/10-3		132	Hydro	1992	1927	Shows	2972	Pre-Devonian	Key Stratigraphic Calibration, penetrates Tang Fm. sandstones	Released 20 Y
6407/12-2		469	GDF	2009	6191	Dry	1481.5	Early Cretaceous	Key Stratigraphic Calibration, penetrates Tare Fm. sandstones	Trade
6507/11-1	Midgard	062	Saga	1981	68	Gas/Cond	3138	Late Triassic	Key Stratigraphic Calibration, HC saturations at Springar/Tang level	Released 20 Y
6507/11-3	Midgard	062	Saga	1985	470	Oil/Gas	3250	Late Triassic	Key Stratigraphic Calibration, HC saturations at Springar/Tang level, well tie	Released 20 Y
6407/1-6 S	Rodriguez	475	Wintershall	2013	7086	Gas/Cond	4075	Early Jurassic	Gas/condensate Lange Fm. Sandstones, evidence for stratigraphical trap	Trade
6407/2-3	Midgard	074	Saga	1987	935	Gas/Cond	3050	Early Jurassic	Key Stratigraphic Calibration, Tang Fm. Sandstones	Released 20 Y
6407/2-5 S	Nona	074	StatoilHydro	2009	6151	Oil/Gas	3311	Early Jurassic	Key Stratigraphic Calibration, contains Tang Fm. sandstones	Trade
6407/2-6 S	Flyndretind	473	Statoil	2010	6351	Oil/Gas	3188	Early Jurassic	Key Stratigraphic calibration, contains Tang Fm. sandstones	Released 2 y
6407/5-1		121	Mobil	1988	1174	Shows	4303	Middle Jurassic	Lange sandstones, stratigraphic control	Released 20 Y
6408/4-1		133	Conoco	1988	1246	Dry	2725	Late Triassic	Key Stratigraphic Calibration understanding of regional tilt, erosion, provenance evolution	Released 20 Y
6507/11-5 S	Midgard	062	Statoil	1997	3193	Oil/Gas	2599.5	Early Jurassic	Key Stratigraphic Calibration, HC saturations at Springar/Tang level	Released 20 Y
6507/11-6	Sigrid	263	Hydro	2001	4321	Gas/Cond	3439	Early Jurassic	Key Stratigraphic Calibration	Released 20 Y
6507/11-8	Yttergryta	062	Statoil	2007	5562	Gas	2772	Early Jurassic	Key Stratigraphic Calibration down dip from prospect	Released 2 y
6507/11-10	Frusalen	476	Det Norske	2010	6122	Dry	2319	Early Jurassic	Key Stratigraphic Calibration	Partner
6507/12-1		059	Saga	1980	202	Dry	3712	Triassic	Key Stratigraphic Calibration, estimates of Tang Fm. pinch out, thinning	Released 20 Y
6507/12-2		059	Saga	1981	437	Shows	5008	Middle Triassic	Key Stratigraphic Calibration, penetrates salt and Triassic section	Released 20 Y
6510/10-U4	Helgeland		IKU	1982	2541	N/A	282	Late Cretaceous	Key Stratigraphic Calibration, contains Tertiary stratigraphy near palaeo-coastline	Purchase
6510/10-U5	Helgeland		IKU	1982	2544	N/A	273	Paleocene	Key Stratigraphic Calibration, contains Tertiary stratigraphy near palaeo-coastline	Purchase

3 Geological and geophysical studies

Work performed in the licence was focused on prospect evaluation and maturation of the Dixie and Nibbler prospects and the Bunny Bell and Pongo Wearing leads. A complete re-mapping of the licence area on basis of the new reprocessed PGS14002ABPR23 seismic survey was carried out. The results were integrated with results from geological and geophysical analysis and studies described below. The PL1162 geophysical and geological studies work can be split in the following phases:

Geological studies

1. Sieve analysis. Du to the lack of concrete data in the Paleocene Tang interval (all wells in the area had deeper targets) a sieve analysis study was commenced to investigate the presence of overlooked sands. Cuttings from the entire Tang interval, occasionally also parts of Tare, in 14 wells were analysed (Fig. 3.1). Unfortunately, no sands were identified.
2. Geochemical sampling. 64 samples (19 core chips and 43 cuttings samples) were collected in the neighbouring wells to look for evidence of migrating oil which could fill the Dixie prospect. 62 samples were subjected to crushing, extraction and GC EOM and 2 samples subjected to TOC and RocEval. 22 samples were later selected as follow-up and subjected to MPLC, GC SAT, GC MS and Isotopes. Results: Good oil shows detected in Jurassic formations in wells 6407/2-3 and 6507/11-3. Oil show extracts in Jurassic samples do not correlate with extracts of younger samples. No convincing evidence of migrated oil in Cretaceous and Tertiary well samples. Interpretation of geochemical data hampered by poor samples/low concentrations. This project could not de-risk charge to the Dixie prospect.

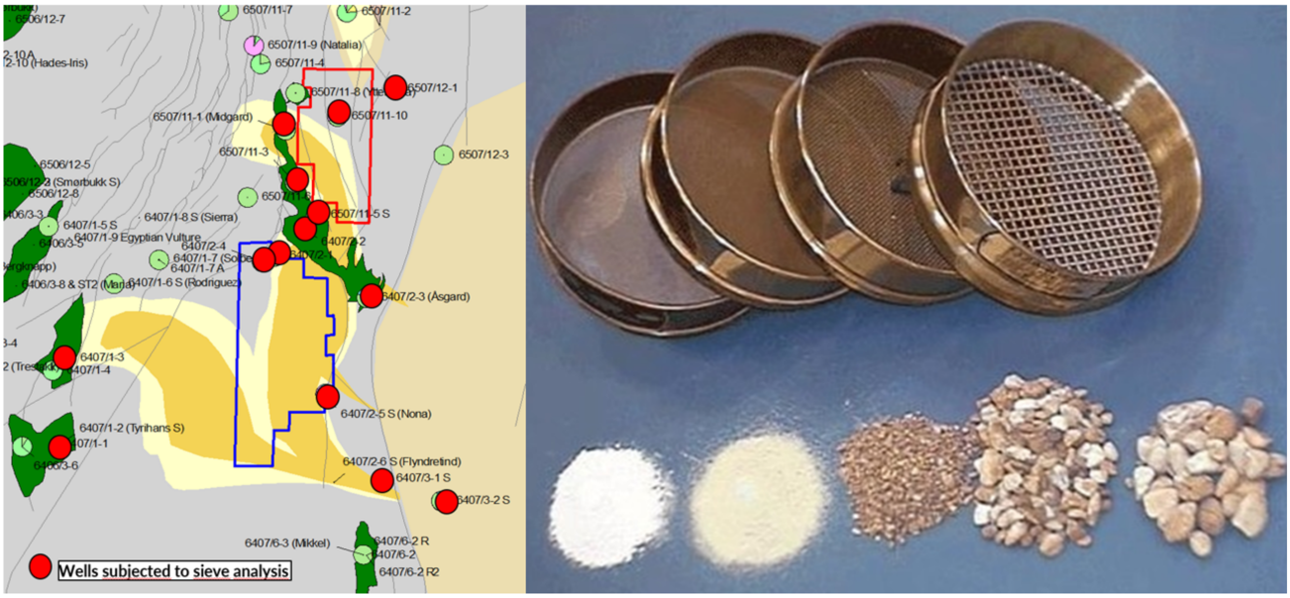


Fig. 3.1 Sieve analysis. *Left: Map of wells subjected to sieving. Right: Example of sieving mesh sizes and corresponding grains sizes (image not taken from the actual sieving).*

Geophysical studies

1. Seismic re-mapping of Cretaceous and Jurassic / Triassic surfaces on the new reprocessed PGS14002ABPR23 with detailed interpretation to mature further the Dixie prospect.
2. New depth conversion of surfaces using PGS14002ABPR23 velocity model.
3. Well tie using Aker BP BEST MIDNORWAY well markers, and generation of synthetic seismograms.
4. Generation of time and corresponding depth thickness maps to study sand lobe distribution.
5. Surface attribute mapping, incl. use of Geoteric, to investigate sedimentary patterns and general hydrocarbon prospectivity (Offset Stacks).
6. CSEM feasibility study of EMGS ST14250 and Allton PM17250.

Data enhancements and derivatives

1. Reprocessing relevant part of seismic data PGS14002 by CGG. Good uplift in reprocessed results; much less smoothed and more details are displayed, especially in the pre-Tertiary section as compared to the original data.
2. Rock physics and Seismic Data Analysis (SDA). Rock physics of wells 6507/11-2 and 6507/11-10. Generation of AVO attribute cubes including Intercept, Gradient, Fluid Factor, EEI and Shear Reflectivity.
3. Surface attribute mapping using INHOUSE_PGS14002ABPR23 CONDITIONED Offset Stacks.
4. Additional data conditioning for SDA analysis at Jurassic levels for the Nibbler prospect.

The main implications from the G&G studies are:

Dixie prospect

- No sand identified from sieving in the Tang Fm. interval in any of the neighbouring wells.
- No convincing evidence from geochemical analysis for migrating oil within the necessary carrier beds for filling the Dixie prospect
- Reprocessing of the 3D seismic data does show data uplift, but no strengthening for the presence of a viable reservoir in Dixie.
- AVO does not show a settled, areal confined anomaly and does not point a homogenous unit. Anomalous areas are very small and scattered with no clear depositional trend.

Nibbler prospect

- Abundant erosion of reservoir quality sand from the footwall in the east (the Midgard High) during the Callovian/Oxfordian (Melke Fm.).
- Fault seal modelling suggests potential for holding up to 250 m oil column.
- Seismic thickness and amplitude maps suggest depocenters on the hanging-wall of the western flank of the main Midgard bounding fault, but the thickness varies. A pinch out is difficult to map due to seismic resolution, and amplitudes are spotty/varying along the elongated shape of the prospect.
- Geochemical analysis for migrating oil is proven, and the prospect is situated within oil prone upper Jurassic shales.

4 Prospect update

The licence area covers some 150 km² and is located in block 6407/2 in the northern edge of the Gimsan Basin at the boundary of the Halten Terrace and Trøndelag Platform immediately south of the Midgard Field and northwest of the Mikkel Field. The identified prospect in the APA 2021, called Dixie, is a Paleocene (Tang Fm.) deep-water sandstone reservoir sourced with oil from the Upper Jurassic source rocks immediately beneath the prospect. Deeper prospectivity at Lange Fm. level has been identified in the Bunny Bell Lead, a Cretaceous deep-water fan system, and Pongo Waring, a combined Upper Jurassic-Triassic lead. The Nibbler prospect was identified on reprocessed seismic data and is a re-definition/re-evaluation of the Pongo Waring lead only including the Upper Jurassic part of Pongo Waring lead. An overview of prospects and leads in the licence are shown in Fig. 1.1 and on the geosection in Fig. 4.1.

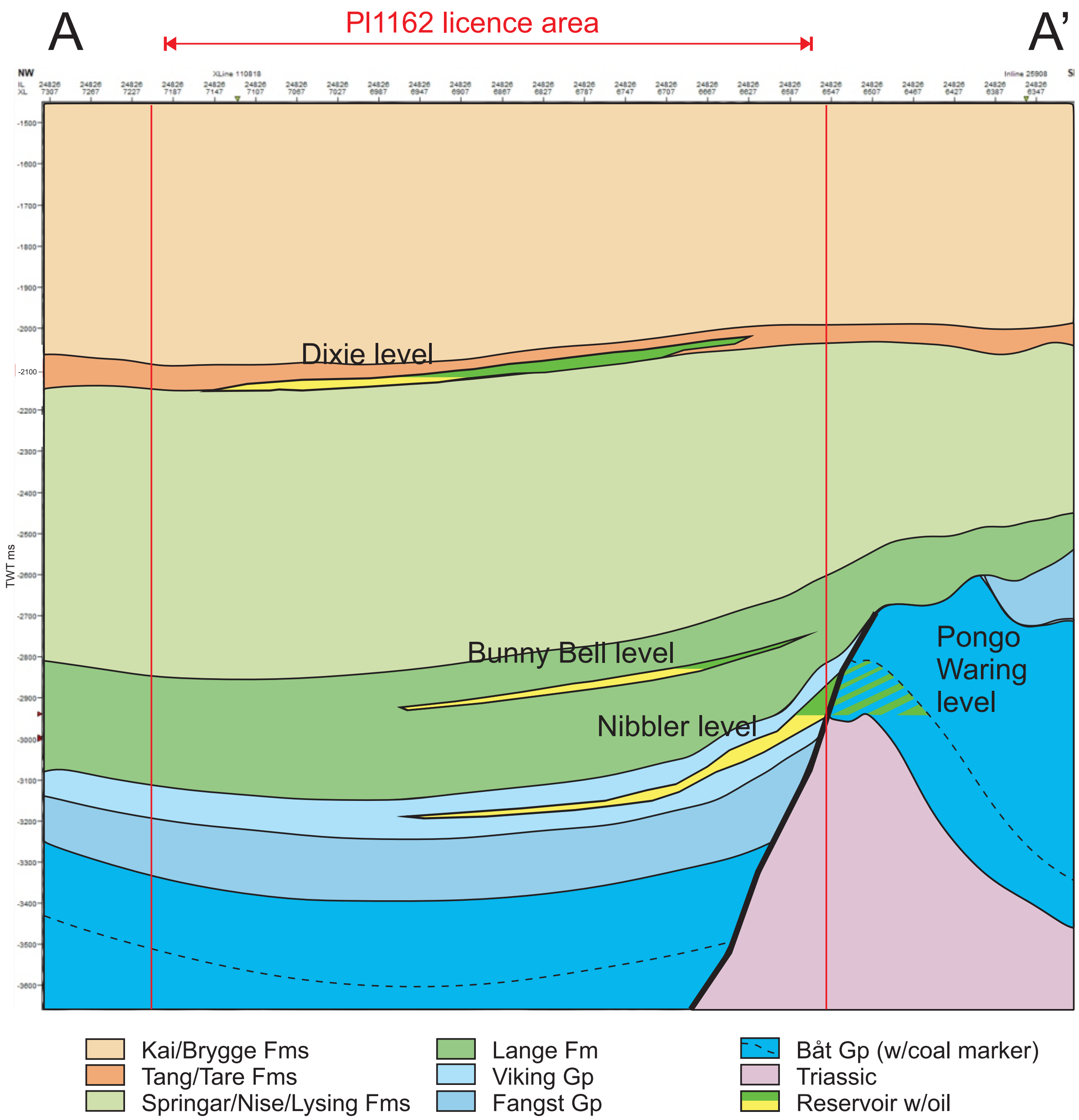


Fig. 4.1 Geosection of prospective intervals. *West to east geosection crossing the licence and showing all prospect levels. See Fig. 1.1 for location.*

4.1 Dixie prospect

The Dixie prospect (Fig. 1.1 and Fig. 4.1) was seen as a new opportunity in the APA2021 licensing round, based on a seismic soft amplitude anomaly within the Paleocene (Tang Fm.).

Dixie is expressed in the seismic as a soft event. It was interpreted as a deep water turbiditic sandstone reservoir sourced with oil from the underlying Jurassic level accumulation in the Midgard Field (Fig. 4.2). Alternatively/additionally the system might also have been influenced by contourites following the Bremstein Fault Complex northwards reworking the gravity flow sands (Fig. 4.3).

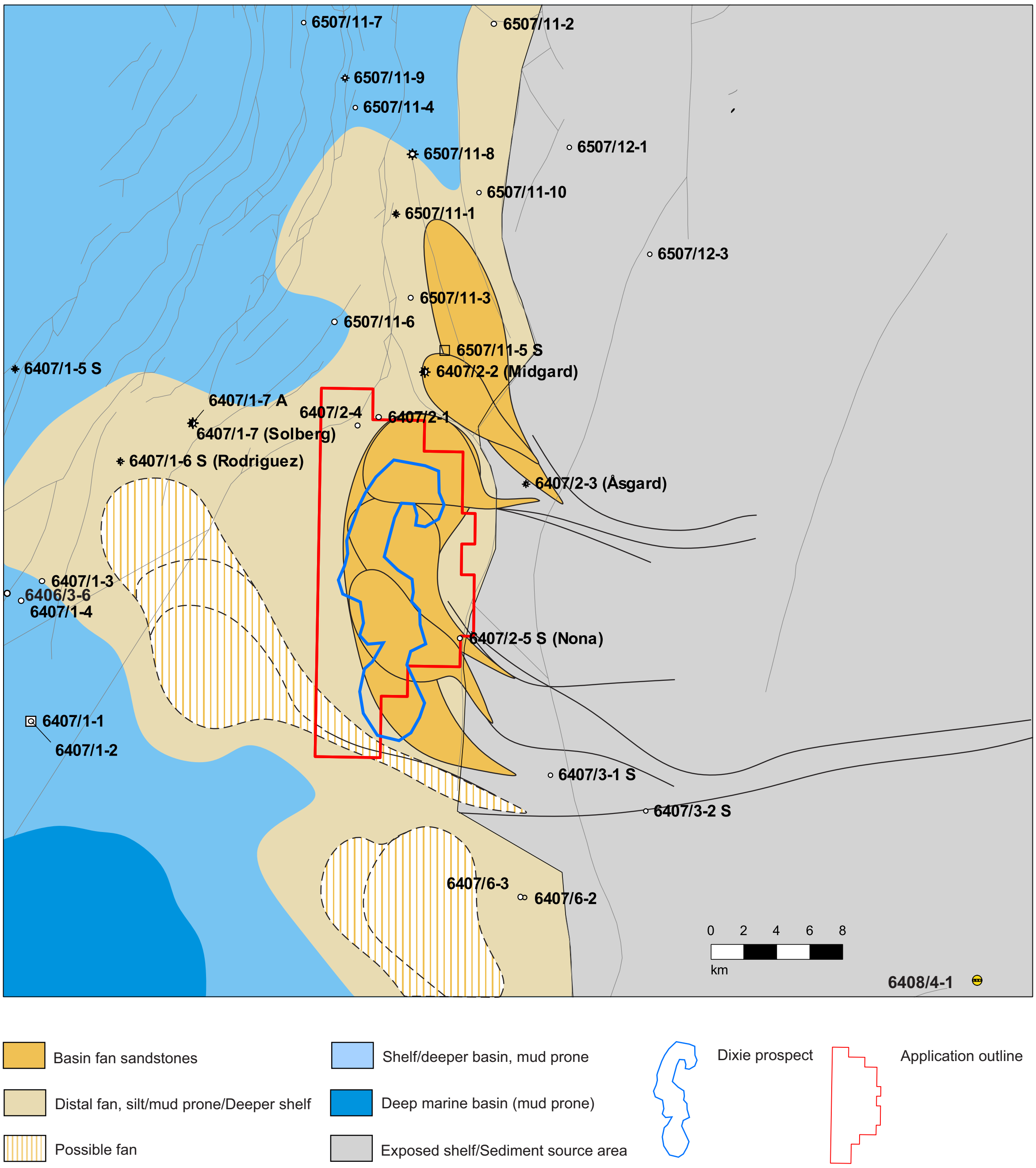


Fig. 4.2 Thanetian paleogeography. *GDE map of the Dixie depositional system as defined in the APA 2021 application, with marine gravity flow sands derived from the east and deposited off the shelf break.*

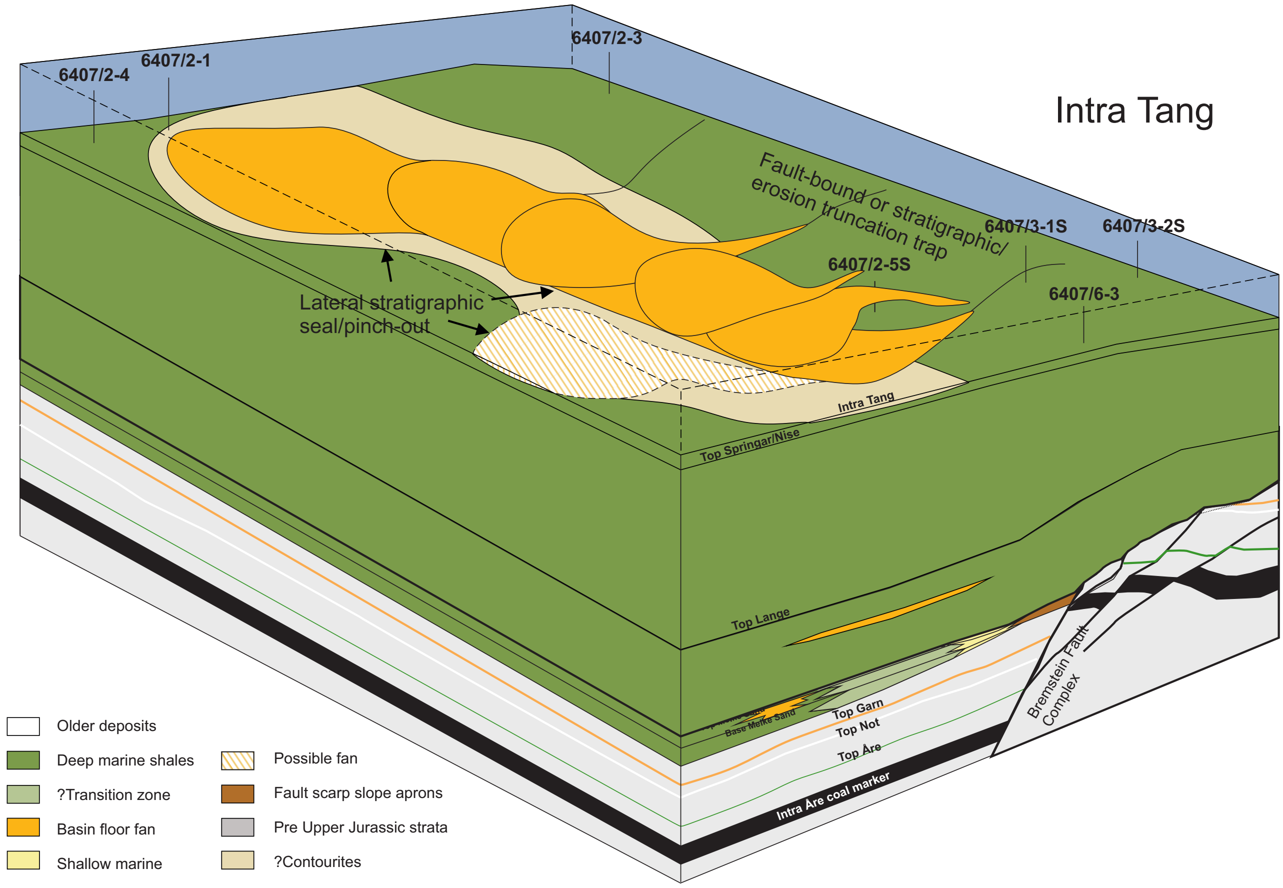


Fig. 4.3 3D depositional sketch of Thanetian/Tang Fm. *Conceptual sketch of the depositional system during deposition of the sands comprising the Dixie prospect. Sands are thought to have been derived in the east and deposited as marine gravity flow sand. Alternatively or additionally these may have been reworked by contourite drift following the shelf break at the time which is created by the Bremstein Fault Complex.*

Dixie is situated in a topographic low, bounded by a potential fault or stratigraphic/erosion truncation to the east. Down-dip, (towards the north, south and west) the fan appears to shale out based on changes in seismic amplitude. The reflectors at this level are mappable with good confidence, including the Top Tare Fm., Top Tang Fm., Top Springar Fm. and two reflectors that represent fan lobes. The initial identification of the fan was on the ultra-far cube, where there is a marked increase of amplitude for the soft event.

Re-mapping of surfaces and seismic data analysis of the Dixie prospect showed that the prospect is difficult to de-limit spatially. Seismic data analysis showed a not areally consistent, spotty AVO behaviour. Several wells have been drilled in or nearby the seismic amplitude anomaly without any indications of sands seen in cuttings (Fig. 3.1). A significant drop in recoverable volumes compared to the APA application is related to a lower recovery factor (as explained in 5 Technical evaluation) and a mapped thinner reservoir thickness (a drop from 50 m in the 2021 APA application to 24m +/-5m).

The main risks for the Dixie prospect are migration and the presence of reservoir quality sands, which could not be proved in the G&G studies. Hence, the original COS from 17% (APA 2021) is reduced to 5%. Updated risks and volumes are shown in Table 4.1.

Table 4.1 NPD table 4 Dixie prospect

Block		Prospect name	Dixie	Discovery/Prosp/Lead	Prospect	Prosp ID (or New!)	NPD will insert value	NPD approved (Y/N)	
Play name	NPD will insert value	New Play (Y/N)		Outside play (Y/N)					
Oil, Gas or O&G case:	Oil	Reported by company		Reference document				Assessment year	
This is case no.:		Structural element	Halten Terrace	Type of trap	Structural	Water depth [m MSL] (>0)	275	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)	12.13	38.32	37.10	62.10				
	Gas [10^9 Sm^3] (>0.00)					2.01	6.24	6.22	10.48
Recoverable resources	Oil [10^6 Sm^3] (>0.00)	1.81	4.51	6.00	10.60				
	Gas [10^9 Sm^3] (>0.00)					1.39	4.10	4.37	7.41
Reservoir Chrono (from)	Thanetian	Reservoir litho (from)	Tang Fm	Source Rock, chrono primary	Kimmeridgian	Source Rock, litho primary	Spekk fm	Seal, Chrono	Ypresian
Reservoir Chrono (to)	Thanetian	Reservoir litho (to)	Tang Fm	Source Rock, chrono secondary	Callovian	Source Rock, litho secondary	Melke fm	Seal, Litho	Tare Fm
Probability [fraction]									
Technical (oil + gas + oil & gas case) (0.00-1.00)	0.05	Oil case (0.00-1.00)	0.05	Gas case (0.00-1.00)	0.00	Oil & Gas case (0.00-1.00)	0.00		
Reservoir (P1) (0.00-1.00)	0.24	Trap (P2) (0.00-1.00)	0.48	Charge (P3) (0.00-1.00)	0.40	Retention (P4) (0.00-1.00)	1.00		
Parametres:	Low (P90)	Base	High (P10)	*Comments:*					
Depth to top of prospect [m MSL] (> 0)	2045	2045	2045						
Area of closure [km^2] (> 0.0)	12.5	31.0	46.2	*Mean values have here been used as the base case for the input parameters.*					
Reservoir thickness [m] (> 0)	17.9	20.0	22.1						
HC column in prospect [m] (> 0)	100	138	175	*In the petrophysical evaluation of the reservoir parameters for the reference wells, the Thomas Stieber (1975) method was utilised for most of the wells. This method utilises cut-offs for net res fraction and porosity. (Net res fraction is the fraction of the desired facies that is of reservoir quality; net reservoir rock/ net sand).*					
Gross rock vol. [10^9 m^3] (> 0.000)	0.179	0.534	0.873						
Net / Gross [fraction] (0.00-1.00)	0.75	0.82	0.90						
Porosity [fraction] (0.00-1.00)	0.16	0.18	0.20	*Gross rock volume is the HC-bearing gross volum, that is the GRV calculated down to the HCW contact*					
Permeability [mD] (> 0.0)									
Water Saturation [fraction] (0.00-1.00)	0.25	0.30	0.35						
Bg [Rm3/Sm3] (< 1.0000)									
1/Bo [Sm3/Rm3] (< 1.00)	0.66	0.67	0.68						
GOR, free gas [Sm^3/Sm^3] (> 0)									
GOR, oil [Sm^3/Sm^3] (> 0)	154	168	182						
Recov. factor, oil main phase [fraction] (0.00-1.00)	0.12	0.16	0.20						
Recov. factor, gas ass. phase [fraction] (0.00-1.00)	0.65	0.70	0.75						
Recov. factor, gas main phase [fraction] (0.00-1.00)				*Retention (P4) after accumulation, is part of the trap risk.*					
Recov. factor, liquid ass. phase [fraction] (0.00-1.00)				For NPD use:					
Temperature, top res [°C] (>0)				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)	220			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.	2.	3.					Kart nr	NPD will insert value

4.2 Nibbler prospect

The Nibbler prospect (Fig. 1.1 and Fig. 4.1) was not part of the original APA application, but was identified in the course of the licence work at Jurassic / Triassic level. Maturing this Nibbler prospect to a Drill or Drop decision was the main reason for extending the licence with one year.

The play is proven in the area in wells 6407/5-2 S and 6407/6-7.

Nibbler is a thickness and amplitude anomaly west of the main Midgard fault block residing at a depth of around 3000m TVDSS. The anomaly resides within the Melke Fm. unit and is expressed as a soft kick on seismic. It is seismically defined and partly conceptually derived. This hanging-wall trap prospect is constrained in the east by fault seal of the western main bounding fault of the Midgard Field. Towards the north and west the prospect pinches out and has a stratigraphic component. A pinch out is difficult to map with confidence due to seismic resolution. Trap and seal mechanisms are seen as the critical aspects.

The reservoir sands with assumed good properties are interpreted to have been deposited as fault scarp slope aprons where fluvial and alluvial fan, and/or submarine channels, debris flows and slumps/slides are common features (Fig. 4.4). However, heterogeneities are thus likely due to short sediment transport distance and uncertain system pinch-out imposes a large risk on stratigraphic trapping mechanisms towards the west and north. These observations are also supported by seismic analysis showing spotty AVO class II to III.

The hydrocarbon system is proven in the area where the prospect is situated within oil mature source rocks of the Spekk Fm. and Melke Fm., suggesting a very likely migration route into the prospect.

The main risks for the Nibbler prospect are the trapping mechanisms and reservoir. Both stratigraphic pinch-out and fault seal has a strong influence on both trap presence and hydrocarbon volumes where reservoir heterogeneity imposes a risk for reservoir compartmentalisation. Hence, the COS is set to 12%. Risks and volumes are shown in Table 4.2.

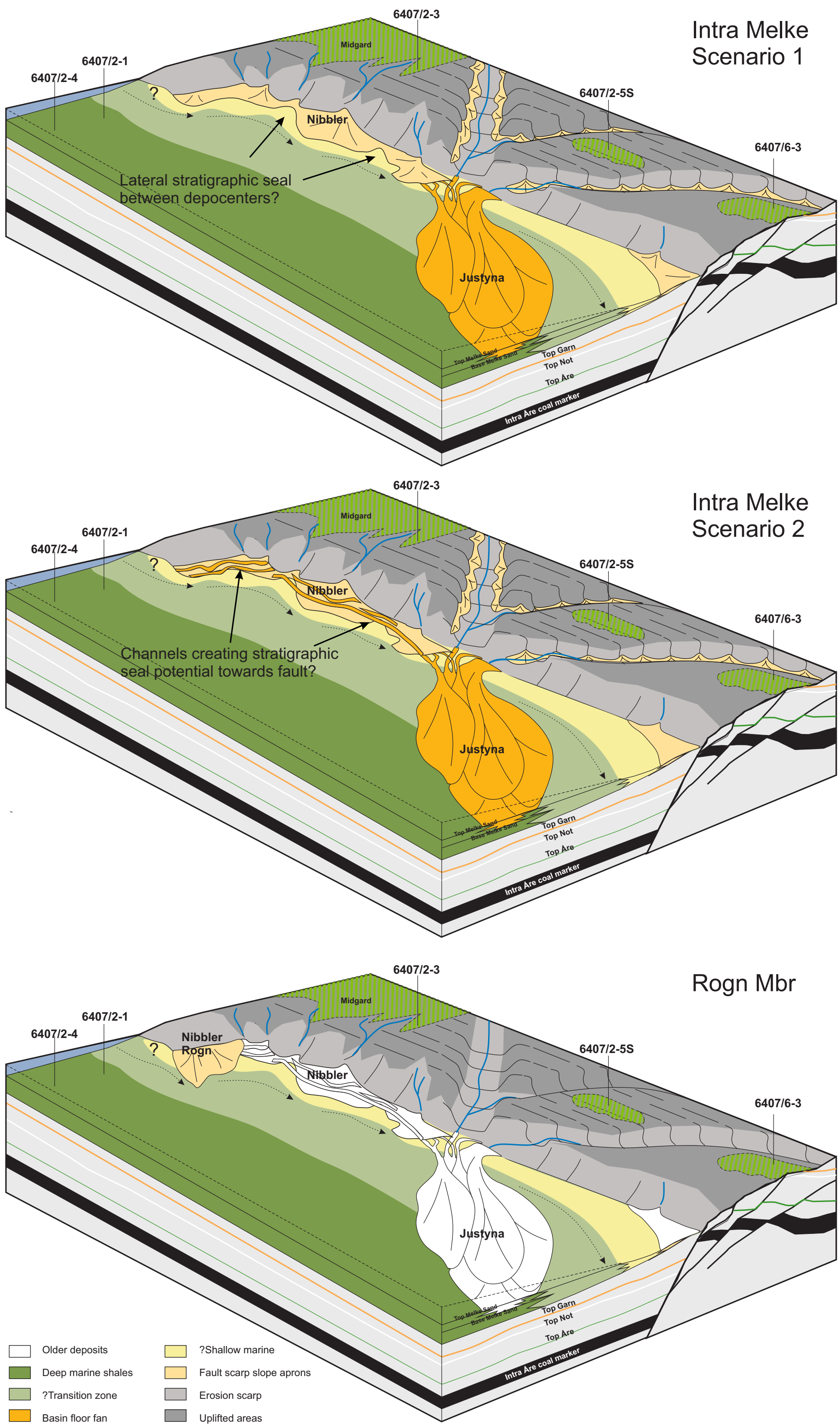


Fig. 4.4 3D depositional sketch of Melke and Rogn.
Upper: Intra Melke Scenario 1 where Nibbler is deposited as fault scarp aprons and the potential for inter-fan shales constituting lateral shale barriers may occur.
Middle. Intra-Melke Scenario 2 where along-fault channels or longshore currents rework the fan aprons and create lateral connectivity and possibly stratigraphic seal potential towards the fault in the east.
Lower: Rogn member where thickness anomaly is observed on the Rogn level suggesting a local depocenter in Kimmeridgian/Tithonian ties in the northern part of the licence.

Table 4.2 NPD table 4 Nibbler prospect

Block		Prospect name	Nibbler (Former: Nibl	Discovery/Prosp/Lead	Prospect	Prosp ID (or New!)	NPD will insert value	NPD approved (Y/N)	
Play name	NPD will insert value	New Play (Y/N)		Outside play (Y/N)					
Oil, Gas or O&G case:	Oil	Reported by company		Reference document				Assessment year	
This is case no.:		Structural element	Gimsan Basin	Type of trap	1.1 Fault-dependent	Water depth [m MSL] (>0)	260	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)	5.00	10.59	12.86	21.89				
	Gas [10^9 Sm^3] (>0.00)					1.02	2.33	2.74	4.69
Recoverable resources	Oil [10^6 Sm^3] (>0.00)	1.96	4.26	5.18	8.97				
	Gas [10^9 Sm^3] (>0.00)					0.40	0.84	1.10	1.92
Reservoir Chrono (from)	Kimmeridgian	Reservoir litho (from)	Melke fm	Source Rock, chrono primary	Kimmeridgian	Source Rock, litho primary	Spekk fm	Seal, Chrono	Kimmeridgian
Reservoir Chrono (to)	Kimmeridgian	Reservoir litho (to)	Melke fm	Source Rock, chrono secondary	Kimmeridgian	Source Rock, litho secondary	Melke fm	Seal, Litho	Melke fm
Probability [fraction]									
Technical (oil + gas + oil & gas case) (0.00-1.00)	0.12	Oil case (0.00-1.00)	0.12	Gas case (0.00-1.00)	0.00	Oil & Gas case (0.00-1.00)	0.00		
Reservoir (P1) (0.00-1.00)	0.49	Trap (P2) (0.00-1.00)	0.30	Charge (P3) (0.00-1.00)	0.80	Retention (P4) (0.00-1.00)	1.00		
Parametres:	Low (P90)	Base	High (P10)	*Comments:*					
Depth to top of prospect [m MSL] (> 0)									
Area of closure [km^2] (> 0.0)	7.2	11.7	15.1	*Mean values have here been used as the base case for the input parameters.*					
Reservoir thickness [m] (> 0)									
HC column in prospect [m] (> 0)				*In the petrophysical evaluation of the reservoir parameters for the reference wells, the Thomas Stieber (1975) method was utilised for most of the wells. This method utilises cut-offs for net res fraction and porosity. (Net res fraction is the fraction of the desired facies that is of reservoir quality; net reservoir rock/ net sand).*					
Gross rock vol. [10^9 m^3] (> 0.000)	0.214	0.471	0.693						
Net / Gross [fraction] (0.00-1.00)	0.27	0.39	0.52	*Gross rock volume is the HC-bearing gross volum, that is the GRV calculated down to the HCW contact*					
Porosity [fraction] (0.00-1.00)	0.14	0.16	0.18						
Permeability [mD] (> 0.0)									
Water Saturation [fraction] (0.00-1.00)	0.17	0.25	0.33						
Bg [Rm3/Sm3] (< 1.0000)									
1/Bo [Sm3/Rm3] (< 1.00)	0.50	0.58	0.66						
GOR, free gas [Sm^3/Sm^3] (> 0)									
GOR, oil [Sm^3/Sm^3] (> 0)	146	219	300						
Recov. factor, oil main phase [fraction] (0.00-1.00)	0.37	0.40	0.43						
Recov. factor, gas ass. phase [fraction] (0.00-1.00)	0.37	0.40	0.43	*Retention (P4) after accumulation, is part of the trap risk.*					
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)				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)				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.	2.	3.					Kart nr	NPD will insert value

4.3 Other leads

Other leads in the licence area are shown in Fig. 1.1.

Bunny Bell:
Lead briefly described in the APA 2021 application. Not matured to prospect status.

Pongo Waring:
Lead briefly described in the APA 2021 application. Re-defined after new seismic interpretation and re-named to Nibbler Prospect (4.2 Nibbler prospect) including only the Intra-Melke hangingwall trap. The Early Jurassic and Triassic part located in the footwall on the eastern side of the main bounding fault is found to be too risky and removed form the prospect definition.

5 Technical evaluation

A TecEc evaluation has been performed for both prospects.

<u>Dixie prospect TecEc</u>
For Dixie a light TecEc was used as the CoS was as low as 5%. The result from this screening was a severe downgrade of recovery factor du to the necessity of injecting water to maintain recovery.

Reservoir assessment

- The APA Dixie assessment recovery factor range (30-40-50%) assumed water injection for pressure support. Water injection is not readily available in the area (read: expensive = high MEFS)
- Few analogues and uncertainty in porosity-permeability level. We have assumed 10-100 mD average permeability. Thin sands at this permeability level will significantly limit max well rates (and consequently field plateau). This will increase MEFS.
- Development without water injection will significantly reduce oil recovery factor. There is very little aquifer connected and relatively “dead” oil (GOR of 30 Sm^3/Sm^3) that limits contribution from solution gas. Rough assessment of RF range would be 10-15-25%, less than half of what is used for a WI-case.

Field development assessment
The Dixie prospect is located in the Åsgard area, about 40 km from Åsgard A, B and C, 30 km from Smørbukk Sør, 30 km from Maria and 30 km from Heidrun (Fig. 5.1).

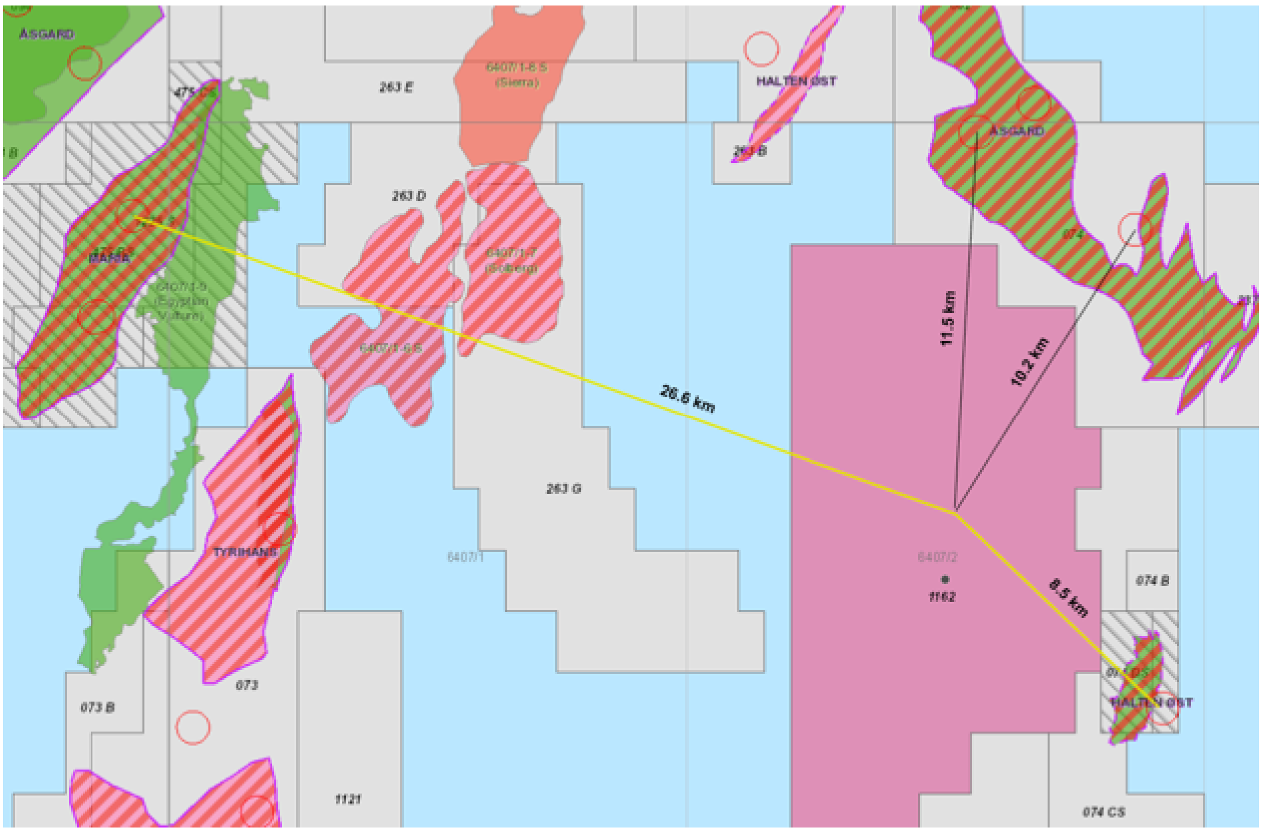


Fig. 5.1 Location and distance to hosts

1. Most likely development case would be to utilize existing infrastructure as much as possible. Limited water injection capacities in the area.
2. Potential solution
   a. 30 km subsea tie-back to Smørbukk Sør and further to Åsgard for processing and export
   b. One 4-slot template with two oil producers and one water injector
   c. Injection water from Heidrun/Maria (30 km) for the injection case
   d. Service and control from Smørbukk Sør/Maria
   e. Potential tie-in/topside modification cost at host(s)

Dixie prospect conclusion:
Due to relative long tie-back distances and most likely need for water injection, a Dixie development will be costly (high cost per boe).

Nibbler prospect TecEc
For Nibbler a full TecEc was performed, and two cases were investigated. As the Nibbler prospect also has a limited aquifer it is as Dixie dependent on maintaining reservoir pressure to uphold production and recovery factor. For Nibbler two case studies were performed, "Case 1" one using water injection (WI) and a second scenario "Case 2" using gas injection (GI). Both scenarios concluded that there is no positive economic value in the Nibbler prospect.

Reservoir assessment

- The Nibbler prospect was not identified in the 2021 APA.
- The prospect is elongated (long and narrow), and the reservoir zone varies in thickness (spotty amplitude anomalies). This will influence the drainage strategy and hence number of wells.
- Several analogues exist, e.g. Fenja Field. We have assumed 16% porosity and ~100 mD average permeability (Fenja analogue).
- Development without injection will have significantly lowered oil recovery factor as there is very little aquifer connected to the prospect.

Field development assessment
The Nibbler prospect is located in the same area as Dixie with the same limitations with regard to water injection. Gas is available locally due to the Halten Øst development and abundance of gas in Midgard in the neighbouring licence.

1. Most likely development case would be to utilize existing infrastructure as much as possible. Limited water injection capacities in the area.
2. Potential solution:
   a. 30 km subsea tie-back to Smørbukk Sør and further to Åsgard for processing and export.
   b. Two 4-slot templates located 5 km apart with three oil producers and two water injectors.
   c. Injection water from Heidrun/Maria (30 km) for the iWI injection case. Injection gas form Halten Øst in the GI case.
   d. Service and control from Smørbukk Sør/Maria.
   e. Potential tie-in/topside modification cost at host(s).

Nibbler prospect conclusion:
Two cases were studied (water injection and gas injection), however both resulted in non-economic opportunities.

6 Conclusion

Following a full G&G evaluation, the main prospect from the APA21 application (Dixie prospect) has been downgraded. The amplitude anomalies seen on the Tang level on seismic data available during APA21 and interpreted to represent oil filled sandstone, have not been confirmed on the new reprocessed 3D data set. There is little evidence of seismic soft anomalies to support oil-filled reservoirs in the objective Tang section in the Dixie Prospect.

G&G studies underpin a lack of reservoir sandstone present in the area, where some wells also penetrate the anomalies suggested being sand seen on seismic. Migration is seen as difficult as this implies a long and downward back-filling of the reservoir from leaking Midgard bounding faults. Geochemical analysis of neighboring wells in the area does not support the presence of HC migrating into the Dixie prospect. The Dixie prospect is downgraded with significantly reduced volumes from APA21 and with a very low COS (5%).

The Nibbler prospect is an intra-Melke hanging wall trap situated within oil prone source rocks. Reservoir with good properties is highly likely to be present as erosion of excellent reservoir sands occur locally. However, depositional heterogeneities are likely due to short sediment transport distance and uncertain system pinch-out imposes a large risk on stratigraphic trapping mechanisms towards the west and north. These observations are also supported by seismic analysis showing spotty AVO class II to III anomalous areas. The trap also relies on a sealing fault towards the east (Midgard bounding fault). An in-house fault seal modelling was undertaken and hydrocarbon column heights were limited to a maximum of 250m. In addition, the elongated shape of the prospect, long and narrow, results in a costly CAPEX compared to resource value. The overall result is that the outcome of both tec-ec cases are negative. A comprehensive in-house QAQC process for both prospects underpins these conclusions.

No other opportunities have been identified in the licence area.