

**General information**

Wellbore name	6507/4-2 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Field	DVALIN
Discovery	6507/4-2 S (Dvalin Nord)
Well name	6507/4-2
Seismic location	
Production licence	211
Drilling operator	Wintershall Dea Norge AS
Drill permit	1847-L
Drilling facility	DEEPSEA ABERDEEN
Drilling days	89
Entered date	20.02.2021
Completed date	19.05.2021
Plugged and abandon date	19.05.2021
Release date	19.05.2023
Publication date	12.09.2023
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS/CONDENSATE
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	GARN FM
2nd level with HC, age	LATE CRETACEOUS
2nd level with HC, formation	LANGE FM
3rd level with HC, age	LATE CRETACEOUS
3rd level with HC, formation	LYSING FM
Kelly bushing elevation [m]	32.0
Water depth [m]	450.0
Total depth (MD) [m RKB]	4485.0
Final vertical depth (TVD) [m RKB]	4430.0
Maximum inclination [°]	16.7
Bottom hole temperature [°C]	162
Oldest penetrated age	EARLY JURASSIC



Oldest penetrated formation	ROR FM
Geodetic datum	ED50
NS degrees	65° 32' 23.77" N
EW degrees	7° 11' 22.41" E
NS UTM [m]	7270017.61
EW UTM [m]	416357.57
UTM zone	32
NPDID wellbore	9251

Wellbore history

General

Well 6507/4-2 S was drilled to test the Dvalin prospect on the Revfallet Fault Complex between the Victoria and rugl discoveries in the Norwegian Sea. The primary objective for the well was to prove hydrocarbons in the Middle Jurassic Garn Formation in the Fangst Group. The secondary objectives were to prove hydrocarbons in the Cretaceous Lysing and Lange Formations.

Operations and results

Wildcat well 6507/4-2 S was spudded with the semi-submersible installation Deepsea Aberdeen on 20 February 2021 and drilled to TD at 4485 m (4430 m TVD) m in the early Jurassic Ror Formation. Non-production time was 19.7 days (22%) mainly due to ruptured BOP control Multiplex cable during a WOW period. This occurred during logging operations in the 8 1/2" section. The well was drilled with seawater and hi-vis pills down to 1500 m and with Innovert NS oil-based mud from 1500 m to TD.

The well proved gas in the Garn Fm, with no proven gas-water contact, it proved gas/condensate in the Lysing Fm with gas-water contact at 2923.5 m (2915 m TVD), and it proved gas and oil in four differently pressured sand layers in the Lange Fm. No hydrocarbon contacts were identified in the Lange Formation. Shows were observed in the hydrocarbon bearing sands in the Lange and Garn formations. The deepest show in the Garn Formation was at 4363 m. In the Lysing Formation no shows were observed.

Three cores were cut in succession from 4262.4 to 4326.7 m in the Garn Formation. Total recovery was 100%. MDT fluid samples were taken in the Lysing Formation at 2897.5 m (gas condensate), 2909.2 (gas condensate) and 2961.5 m (water), in the Lange Formation at 3597.6 m (wet gas), 3701.6 m (oil) and 3822.3 m (oil), and in the Garn Formation at 4264 m (wet gas), 4268.6 m (wet gas) and 4326.6 m (wet gas).

The well was permanently abandoned on 19 May 2021 as an oil and gas discovery.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1510.00	4485.00



Cuttings available for sampling?	YES
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Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	4262.4	4273.6	[m]
2	4274.0	4282.0	[m]
3	4282.0	4326.7	[m]

Total core sample length [m]	63.9
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
482	NORDLAND GP
487	NAUST FM
1449	KAI FM
1896	HORDALAND GP
1896	BRYGGE FM
1988	ROGALAND GP
1988	TARE FM
2032	TANG FM
2100	SHETLAND GP
2100	SPRINGAR FM
2342	NISE FM
2771	KVITNOS FM
2890	CROMER KNOLL GP
2890	LYSING FM
2963	LANGE FM
3550	NO FORMAL NAME
3823	VIKING GP
3823	MELKE FM
4262	FANGST GP
4262	GARN FM
4350	NOT FM
4361	ILE FM



4423	BÅT GP
4423	ROR FM
4446	TOFTE FM
4453	ROR FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT PEX HNGS MSIP NGI PPC	2832	4020
CMR XPT NEXT	2850	3900
CMR XPT NEXT	4236	4455
ECS	4327	4327
LWD - ABG DGR EWR PWD PCDC	1500	2841
LWD - AFR ABG PCDC DGR ADR ALD -	2841	4029
LWD - COREA1	4262	4274
LWD - COREA2	4274	4282
LWD - COREA3	4282	4326
LWD - CTN XBAT XCAL PWD	2841	4029
LWD - DGR EWR PWD PCDC	544	1500
LWD - EWR DGR DM PWD	4029	4262
LWD - EWR DGR DM PWD ALD CTN	4326	4485
LWD - HO	482	544
LWD - PCDC PWD	4029	4029
MDT	2897	3900
MDT	3822	4020
MDT	4327	4327
MDT TLC	4264	4290
QAIT PPC ADT APS HLDS HNGS	3843	4487
QGEO SS PPC	4000	4472
SWC	4263	4365
SWC	4330	4365
SWC SGT MSCT	2832	4020
SWC SGT MSCT	2832	4020
USIHD CBL	2162	4025
VSP	911	4355

Casing and leak-off tests



Casing type	Casing diam. [inch]	Casing depth [m]	Hole diam. [inch]	Hole depth [m]	LOT/FIT mud eqv. [g/cm3]	Formation test type
CONDUCTOR	30	541.0	36	544.0	0.00	
INTERM.	13 3/8	1454.5	17 1/2	1500.0	1.64	FIT
INTERM.	9 7/8	2832.0	12 1/4	2841.0	1.77	LOT
LINER	7 5/8	4028.0	9 1/4	4029.0	2.16	FIT
OPEN HOLE		4485.0	6 1/2	4485.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
360	1.03	1.0	3.8	Sea Water	
544	1.49	19.0	8.6	Water Base	
1382	1.67	36.0	4.7	INNOVERT	
1452	1.49	26.0	9.5	INNOVERT	
1503	1.29	18.0	10.0	Water Base	
1650	1.51	33.0	9.0	Innovert	
2020	1.55	40.0	11.9	INNOVERT	
2505	1.67	41.0	3.3	INNOVERT	
2562	1.55	33.0	11.4	INNOVERT	
2820	1.55	34.0	10.0	INNOVERT	
2841	1.55	33.0	10.0	INNOVERT	
2845	1.59	30.0	7.1	INNOVERT	
2870	1.58	29.0	7.1	INNOVERT	
2925	1.57	29.0	5.7	Innovert	
3041	1.61	29.0	6.2	Innovert	
3095	1.64	28.0	7.6	Innovert	
3098	1.64	28.0	5.7	Innovert	
3690	1.65	31.0	4.7	INNOVERT	
4029	1.67	28.0	8.6	INNOVERT	
4485	1.67	40.0	7.6	INNOVERT	