

**General information**

Wellbore name	6507/7-15 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	6507/7-15 S Dvalin
Well name	6507/7-15
Seismic location	Survey RD07M1 inline 10690 & crossline 7523
Production licence	435
Drilling operator	RWE Dea Norge AS
Drill permit	1380-L
Drilling facility	WEST ALPHA
Drilling days	115
Entered date	09.01.2012
Completed date	02.05.2012
Release date	02.05.2014
Publication date	02.05.2014
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	FANGST GP
2nd level with HC, age	EARLY JURASSIC
2nd level with HC, formation	TILJE FM
Kelly bushing elevation [m]	18.0
Water depth [m]	399.0
Total depth (MD) [m RKB]	4567.0
Final vertical depth (TVD) [m RKB]	4552.0
Maximum inclination [°]	11.9
Bottom hole temperature [°C]	165
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	TILJE FM
Geodetic datum	ED50



NS degrees	65° 25' 31.81" N
EW degrees	7° 5' 56.11" E
NS UTM [m]	7257390.90
EW UTM [m]	411785.99
UTM zone	32
NPDID wellbore	6730

Wellbore history

**General**

Well 6507/7-15 S was drilled on the Zidane West prospect between the Heidrun Field and the 6506/6-1 Bella Donna discovery in the Haltenbanken area of the Norwegian Sea. The primary target was the Middle Jurassic Fangst Group; Garn and Ile Formations. Secondary target levels were the Lower Cretaceous Lange Formation sandstone and the

Lower Jurassic Tilje Formation.

Operations and results

Wildcat well 6507/7-15 S was spudded with the semi-submersible installation West Alpha on 9 January 2012 and drilled to TD at 4567 m (4552 m TVD) in the Early Jurassic Tilje Formation. A 9 7/8" shallow gas pilot hole was drilled from 496 m to 649 m and shallow gas was observed at 640 - 644 m. The 26" hole was drilled to 596 m and the 20" casing was set at 594 m, above the shallow gas zone. Operations were stopped at 4124 m after setting of 9 5/8" casing due to leakage in the kill line and failure on a fail-safe valve. The well was plugged and the BOP was pulled, repaired and run again.

Otherwise, operations went forth without significant problems. The well was drilled with seawater, bentonite and hi-vis sweeps down to 596 m, with KCl/freshwater dilution mud from 596 m to 1336 m, with Glydril mud from 1336 m to 2210 m, and with Versatherm oil based mud from 2210 m to TD

The well encountered gas in the Lange, Garn, Ile and Tilje Formations. The Lange Formation had gas in a sandy interval from 3586.5 m (3585.5 m TVD) down to 3634 m (3632.5 m TVD) and water up to 3679.5 m (3677.5 m TVD) based on logs. Pressure testing was difficult due to poor reservoir conditions, so no conclusive gas gradient could be established. The Fangst Group contained gas from top Garn at 4266.5 m (4255 m TVD) down to 4404 m (4395 m TVD) in the Ile Formation. Formation pressure analysis proved the Garn and Ile Formations to be on the same gas gradient. A 10 m gas column was encountered in the Tilje Formation from the top at 4499 m (4485 m TVD) down to 4511 m (4497 m TVD), but within a different pressure system from the overlying formations. No fluid contacts from pressure measurements could be identified in this well, all hydrocarbon columns were penetrated in down-to settings.

Two cores were cut from 4265 m to 4329.6 m in the Garn Formation and one core was cut from 4362 m to 4415.3 m in the Ile Formation. MDT gas samples were taken at 3627.24 m in the Lange Formation sands and at 4275.06 m, 4300.53 m, and 4320.39 m in the Garn Formation. These sample stations were sampled with an extra-large diameter probe. Two more hydrocarbon samples were taken in the Ile Formation 4381.80 m while performing a mini DST. No water samples were taken in the well.

The well was permanently abandoned on 2 May 2012 as a 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]
600.00	4567.00

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	4265.0	4285.3	[m]
2	4292.0	4329.6	[m]
3	4362.0	4415.3	[m]

Total core sample length [m]	111.2
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
417	NORDLAND GP
417	NAUST FM
1481	KAI FM
1906	HORDALAND GP
1906	BRYGGE FM
2002	ROGALAND GP
2002	TARE FM
2059	TANG FM
2122	SHETLAND GP
2122	SPRINGAR FM
2620	NISE FM
2955	CROMER KNOLL GP
2955	LYSING FM
3030	LANGE FM
3854	VIKING GP
3854	SPEKK FM
3866	MELKE FM
4267	FANGST GP
4267	GARN FM
4350	NOT FM
4356	ILE FM
4410	BÅT GP
4410	ROR FM
4499	TILJE FM



Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT TLD APS HNGS EDTC LEHQT ECRD	2175	4133
CMR HXPT EDTC LEHQT ECRD	4250	4567
CMR XPT EDTC LEHQT ECRD	3540	3840
LWD - DI	417	596
LWD - DI GR ECD DEN CAL RES NEU	496	649
LWD - ECD RES GR DI	596	1336
LWD - ECD RES GR DI DT	1336	2210
LWD - ECD RES GR DI DT CAL DEN N	2210	4133
LWD - RES GR ECD DEN CAL NEU DI	4116	4567
LWD - RES GR ECD DEN CAL NEU DI	4133	4265
LWD - RES GR ECD DEN NEU DI TST	4265	4292
MDT	3627	3627
MRPS MRHY MRPO IFA HRMS	4269	4300
MRPS MRHY MRPO IFA HRMS MRMS	4271	4320
MSCT EDTC LEHQT ECRD	3618	3798
MSCT EDTC LEHQT ECRD	4289	4544
OMB12 GPIT PPC MSIP EDTC LEHQT E	2175	4133
OMB12 GPIT PPC MSIP EDTC LEHQT E	4123	4567
QAIT LDS APS ECS ILE HNGS EDTC L	3765	4568
SC PO PA PS HY PO IFA MS EDTC LE	4280	4405
VS14 EDTC LEHQT ECRD	2092	4557

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	497.0	36	497.0	0.00	
SURF.COND.	20	594.0	26	596.0	0.00	



PILOT HOLE		649.0	9 7/8	649.0	0.00	
INTERM.	16	1320.0	20	1336.0	0.00	
INTERM.	13 3/8	2175.0	17 1/2	2210.0	0.00	
INTERM.	9 5/8	4124.0	12 1/4	4133.0	0.00	
OPEN HOLE		4534.0	8 1/2	4534.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
460	1.50	25.0		Spud mud	
496	1.04			Spud mud	
596	1.03			seawater	
649	1.04			Spud mud	
1336	1.13	10.0		KCl mud	
2210	1.50	18.0		Glydril	
3665	1.64	46.0		Versatherm	
4133	1.64	49.0		Versatherm	
4133	1.66	47.0		Versatherm	
4265	1.80	65.0		Versatherm	
4265	1.68	59.0		Versatherm	
4416	1.82	67.0		Versatherm	
4567	1.83	74.0		Versatherm	
4567	1.60	18.0		Glydril	
4567	1.83	61.0		Versatherm	

Pressure plots

The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

Document name	Document format	Document size [MB]
6730 Formation pressure (Formasjonstrykk)	pdf	0.28

