General information

Wellbore name	9/2-8 S
Type	EXPLORATION
Purpose	WILDCAT
Status	RE-CLASS TO DEV
Factmaps in new window	link to map
Main area	NORTH SEA
Field	YME
Discovery	9/2-1 Yme
Well name	9/2-8
Seismic location	ST9413- INLINE 866 & CROSSLINE 1296
Production licence	114
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	895-L
Drilling facility	YME
Drilling days	203
Entered date	24.06.1997
Completed date	02.02.1998
Release date	02.02.2000
Publication date	24.09.2002
Purpose - planned	WILDCAT
Reclassified to wellbore	9/2-A-3
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	42.0
Water depth [m]	93.0
Total depth (MD) [m RKB]	7584.0
Final vertical depth (TVD) [m RKB]	3345.0
Maximum inclination [°]	99
Oldest penetrated age	LATE PERMIAN
Oldest penetrated formation	ZECHSTEIN GP
Geodetic datum	ED50
NS degrees	57° 49' 7.58'' N
EW degrees	4° 31' 11'' E
NS UTM [m]	6409692.56
EW UTM [m]	590282.87
UTM zone	31
NPDID wellbore	3126

Wellbore history

General

Well 9/2-8 S was drilled from slot 3 of the Yme template. The well was planned as an exploration well, to identify the hydrocarbon potential of the Yme Epsilon East and West structures. The well design was based on flexibility to enable later completion as a production well if commercial reserves of oil were encountered. The Epsilon East and West structures are developed on the east and west sides of a salt diapir. The well was planned to drill down through the sequence on the east flank with the Sandnes Formation being the primary target. As a secondary target the well was planned to extend a further 1600 m into Epsilon West structure. This involved drilling through the base of the salt diapir and then up through the sequence within the western flank. The Epsilon East structure was recognized as a fairly well defined prospect, comprising of an eastward dipping tilted fault block. Complicated tectonism affecting the Epsilon West structure however, meant this could only have the status of a lead. The main uncertainties with respect to probability of discovery were considered as leakage/trap and source/migration.

Operations and results

Wildcat well 9/2-8 S was spudded from the seabed with the jack-up installation "Mærsk Giant" on 24 June 1997. At 5936 m the BHA became stuck while drilling the Sandnes Formation. The well was subsequently sidetracked to 9/2-8S T2 from 5680 m on the 4 October 1997. The T2 sidetrack was only drilled to 6011 m due to the BHA becoming stuck at 6002 m while pulling out of hole. A further sidetrack, 9/2-8S T3, was drilled from 5628.5 m, on 19 October 1997 and reached a TD of 7203 m on 16 December 1997. This sidetrack failed to penetrate the Vestland Group, passing from Zechstein salts of the faulted zone straight into the shales of the Tau Formation. As a result a final sidetrack, 9/2-8S T4, was started from 6144 m on 21 December 1997. This wellbore reached final TD at 7584 m in the Late Jurassic Egersund formation on 18 January 1998 after penetrating the uppermost Sandnes Formation. The Sandnes Formation proved to be dry and tight. Cores were taken in the original 9/2-8S well from 5842 m to 5926 m within the Sandnes reservoir on the Epsilon East structure. Oil shows were noted, but MWD logging indicated that the formation was water wet. A FMT fluid sample was taken in 9/2-8S T4 at 7397 m (Epsilon West structure). The plan was to complete the well with a 5" liner through the reservoir section, but as both structures were water wet, cement-plugs were set in the Epsilon West. The well was completed in the Epsilon East structure on 2 February 1998 as a dry well. It was subsequently re-classified to development well 9/2-A-3 and used as an injection well for gas produced from the Yme field.

Testing

No drill stem test was performed.

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	5842.0	5869.3	[m]
2	5870.0	5876.5	[m]
3	5876.5	5898.6	[m]

4	5898.6	5927.0	[m]

Total core sample length [m]	84.3
Cores available for sampling?	YES

Core photos


5842-5847m


5847-5852m


5852-5857m


5857-5862m


5862-5867m


5867-5869m


5870-5875m


5875-5876m


5876-5881m


5881-5886m


5886-5891m


5891-5896m


5896-5899m


5899-5903m


5903-5908m


5908-5913m


5913-5918m


5918-5923m


5923-5927m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
5690.0	[m]	DC	GEOSTR
5710.0	[m]	DC	GEOSTR

5729.0	[m]	DC	GEOSTR
5752.0	[m]	DC	GEOSTR
5769.0	[m]	DC	GEOSTR
5790.0	[m]	DC	GEOSTR
5808.0	[m]	DC	GEOSTR
5829.0	[m]	DC	GEOSTR
5841.0	[m]	DC	GEOSTR
5842.6	[m]	C	WESTL
5846.6	[m]	C	WESTL
5850.0	[m]	DC	GEOSTR
5851.5	[m]	C	WESTL
5859.0	[m]	DC	GEOSTR
5859.4	[m]	C	WESTL
5863.0	[m]	DC	GEOSTR
5866.8	[m]	C	WESTL
5868.9	[m]	C	WESTL
5877.0	[m]	DC	GEOSTR
5899.5	[m]	C	WESTL
5900.8	[m]	C	WESTL
5904.5	[m]	C	WESTL
5911.8	[m]	C	WESTL
5919.0	[m]	C	WESTL
5923.6	[m]	C	WESTL
5926.8	[m]	C	WESTL
5931.0	[m]	DC	GEOSTR
5995.6	[m]	C	WESTL

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
135	NORDLAND GP
540	HORDALAND GP
752	ROGALAND GP
752	BALDER FM
773	SELE FM
810	LISTA FM
838	VÅLE FM
850	SHETLAND GP
850	EKOFISK FM

886	TOR FM
1251	HOD FM
2132	BLODØKS FM
2257	CROMER KNOLL GP
2257	RØDBY FM
2290	SOLA FM
2572	ÅSGARD FM
4762	BOKNFJORD GP
4762	FLEKKEFJORD FM
4995	SAUDA FM
5689	TAU FM
5769	EGERSUND FM
5823	VESTLAND GP
5823	SANDNES FM
5955	BRYNE FM
6023	ZECHSTEIN GP
7378	VESTLAND GP
7378	SANDNES FM
7420	EGERSUND FM

Composite logs

Document name	Document format	Document size [MB]
3126	pdf	0.52

Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
3126_9_2_8_S_COMPLETION_REPORT	pdf	22.64

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CNL ZDL HDIL MAC CHT GR	7378	7584
DGR EWR DIR	244	2286

DGR EWR PWD DIR	2286	6011
DGR EWR PWD DIR	6003	7378
DGR EWR SLD CN DIR	5700	6003
DPIL 6-CALI MAC CHT GR	2212	5636
FMT CHT GR	5836	5896
FMT CHT GR	7400	7394
SF-4 DIR	7279	7584

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
SURF.COND.	30	244.0	36	245.0	0.00	LOT
CONDUCTOR	20	847.0	26	850.0	0.00	LOT
INTERM.	13 3/8	2281.4	17 1/2	2283.0	0.00	LOT
INTERM.	9 5/8	5941.0	12 1/4	6011.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
59	1.64	41.0		PETROFREE	
189	1.03			SEAWATER/BENT.	
247	1.39			SEAWATER/BENT.	
300	1.03			SEAWATER/PAC	
400	1.03			SEAWATER/PAC	
820	1.03			SEAWATER/PAC	
853	1.03			DUMMY	
1330	1.30	30.0		SEAWATER/PAC	
1571	1.30	28.0		SEAWATER/PAC	
1740	1.30	31.0		SEAWATER/PAC	
1775	1.30	32.0		SEAWATER/PAC	
1856	1.30	35.0		SEAWATER/PAC	
2031	1.30	33.0		KCL/PAC/PHPA	
2190	1.03			DUMMY	
2249	1.30	32.0		KCL/PAC/PHPA	
2286	1.39	40.0		KCL/PAC/PHPA	
2286	1.39	40.0		KCL/PAC/PHPA	
2840	1.54	46.0		PETROFREE	

3292	1.54	49.0		PETROFREE	
3760	1.54	42.0		PETROFREE	
3962	1.54			DUMMY	
4021	1.54	48.0		PETROFREE	
4316	1.54	44.0		PETROFREE	
4671	1.54	41.0		PETROFREE	
4957	1.60	44.0		PETROFREE	
5274	1.60	44.0		PETROFREE	
5300	1.60	45.0		PETROFREE	
5332	1.60	41.0		PETROFREE	
5560	1.60	33.0		PETROFREE	
5667	1.64	42.0		PETROFREE	
5680	1.64	42.0		PETROFREE	
5714	1.67	42.0		PETROFREE	
5717	1.64	39.0		PETROFREE	
5730	1.64	45.0		PETROFREE	
5741	1.64	36.0		PETROFREE	
5788	1.64	39.0		PETROFREE	
5842	1.67	42.0		PETROFREE	
5854	1.64	40.0		PETROFREE	
5866	1.64			DUMMY	
5870	1.64	40.0		PETROFREE	
5877	1.64	40.0		PETROFREE	
5936	1.64	41.0		PETROFREE	
5942	1.60	35.0		PETROFREE	
5942	1.64	41.0		PETROFREE	
6002	1.64	41.0		PETROFREE	
6178	1.60	39.0		PETROFREE	
6210	1.60	36.0		PETROFREE	
6213	1.60	34.0		PETROFREE	
6264	1.60	36.0		PETROFREE	
6300	1.60	33.0		PETROFREE	
6314	1.60	33.0		PETROFREE	
6405	1.60	33.0		PETROFREE	
6681	1.60	32.0		PETROFREE	
6770	1.60	32.0		PETROFREE	
6850	1.60	33.0		PETROFREE	
6876	1.60	32.0		PETROFREE	
6991	1.60	33.0		PETROFREE	
7082	1.60	32.0		PETROFREE	

7154	1.60	35.0		PETROFREE	
7157	1.60	32.0		PETROFREE	
7203	1.60	32.0		PETROFREE	
7203	1.60	32.0		PETROFREE	
7285	1.60	33.0		PETROFREE	
7378	1.60	31.0		PETROFREE	
7394	1.32	30.0		PETROFREE	
7584	1.32	24.0		PETROFREE	
7584	1.32	30.0		PETROFREE	

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]
3126_Formation_pressure_(Formasjonstrykk)	PDF	0.21