

**General information**

Wellbore name	34/10-48 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	GIMLE
Discovery	34/10-48 S Gimle
Well name	34/10-48
Seismic location	linje 2951 & CDP 3135
Production licence	050
Drilling operator	Statoil ASA (old)
Drill permit	1071-L
Drilling facility	GULLFAKS C
Drilling days	281
Entered date	17.03.2004
Completed date	22.12.2004
Release date	22.12.2006
Publication date	28.02.2008
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	LATE JURASSIC
1st level with HC, formation	VIKING GP
2nd level with HC, age	MIDDLE JURASSIC
2nd level with HC, formation	BRENT GP
Kelly bushing elevation [m]	84.1
Water depth [m]	216.9
Total depth (MD) [m RKB]	7393.0
Final vertical depth (TVD) [m RKB]	2933.0
Maximum inclination [°]	92.6
Bottom hole temperature [°C]	107
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	LUNDE FM
Geodetic datum	ED50
NS degrees	61° 12' 53.78" N



EW degrees	2° 16' 27.79" E
NS UTM [m]	6787106.31
EW UTM [m]	461018.63
UTM zone	31
NPDID wellbore	4902

Wellbore history

**General**

Well 34/10-48 S was drilled on the Gullfaks Field in the Northern North Sea, from the Gullfaks C platform. The main objective was to test the hydrocarbon potential of the Brent Group in the Topas prospect. The secondary objectives were to test the hydrocarbon potential in 3 leads; the Nesle lead east of the Topas prospect, the U2 lead in the slope of the Gullfaks Horst and Late Jurassic at the base of the main bounding fault limiting the Gullfaks Structure to the east. The well should be completed as a producer.

Operations and results

Well 34/10-48 S was spudded from a preset 32" conductor at slot 29 on the Gullfaks C platform on 17 March 2004.

The planned well was a very challenging one, with a complex and highly deviated well path. Deviation from vertical was 11 deg at 438 m and was increased to ca 66 deg from 1500 m. When entering the Lunde Formation inclination was 56 deg, and from ca 5500 m in the Brent Group and to TD the well path was kept approximately horizontal. It was planned drilled in 4 sections, 24", 17 1/2", 12 1/4" and 8 1/2". The planned TD of the well was 6848 m. Information gathered while drilling the 8 1/2" section led to a change in plans and the well path in the reservoir was changed and extended with 550 m. The well 48 S was drilled to 7393 m. The well was drilled with spud mud in the 24" section from 443 m to 1355 m, with Glydril mud in the 17 1/2" section from 1355 m to 2610 m, and with Versavert oil based mud in the remaining sections from 2610 m to TD.

The well was classified as exploration well from 3600 m. The Lunde Formation was penetrated at 3657 m. Hydrocarbon filled sandstones in this Formation (the U2 lead) were encountered at 4272 m /2470 m TVD, while the sandstone layer at the base of the main bounding fault, at 4891 m / 2800 m TVD, was water filled. The Topas prospect was penetrated some 7.5 m shallow to prognosis. The well drilled through hydrocarbon filled Tarbert Formation and into water filled Ness Formation. Since the well drilled water filled Ness, Etive and Rannoch Formations the well path was revised and the Nesle lead was drilled higher on the structure. The well drilled through some hydrocarbon filled Late Jurassic sands (Intra Heather Formation sandstone) before entering hydrocarbon filled sands of the Ness and Tarbert Formations of the Topas prospect in the PL120 licence. The well path was steered down and the oil water contact was found at 7133 m /2929 m TVD RKB in the Tarbert Formation. The preliminary results of the well 34/10-48 S indicated that the well path had penetrated low on the Topas structure and that the well path was not ideal for production. It was therefore decided to drill a sidetrack and aim as high on the re-interpreted structure as possible.

One core was cut in the Tarbert Formation from 5174 to 5207.15 m. MDT fluid samples were collected at 4372 m, 4455 m, 4492 m and 4533 m in the Lunde Formation. All samples contained oil with relatively high gas/oil ratio.

Well bore 34/10-48 S was plugged back to 5060 m and permanently abandoned on 22 December 2004 as an oil discovery. Well side track 34/10-48 A was initiated.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
3600.00	7392.00



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	5174.0	5207.2	[m]

Total core sample length [m]	33.2
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
301	NORDLAND GP
1102	UTSIRA FM
1122	HORDALAND GP
2357	ROGALAND GP
2357	BALDER FM
2528	LISTA FM
2851	SHETLAND GP
3612	CROMER KNOLL GP
3657	HEGRE GP
3657	LUNDE FM
4645	DUNLIN GP
4645	DRAKE FM
4891	COOK FM
5008	VIKING GP
5008	HEATHER FM
5161	BRENT GP
5161	TARBERT FM
5311	NESS FM
5456	ETIVE FM
5500	RANNOCH FM
5843	ETIVE FM
5856	NESS FM
5999	TARBERT FM
6143	VIKING GP



6143	HEATHER FM
6455	BRENT GP
6455	NESS FM
6640	TARBERT FM
7304	VIKING GP
7304	HEATHER FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
ARC6 ADN6	5608	5878
ARC6 ADN6	5850	6221
EMS GR MDT DN	3670	5005
EMS GR MDT UP	5005	2600
LWD - ARC ISONIC ADN8	2667	5106
LWD - ARC6 ADN6	5106	7393
LWD - ARC6 ADN6 TST6	5106	5850
LWD - CDR	224	725
LWD - CDR	1287	2667
MDT	5140	7145
MDT ECS CMR DN	5140	6413
MDT ECS CMR UP	5149	6413

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.	20	1283.0	24	1287.0	0.00	LOT
INTERM.	13 3/8	2661.0	17 1/2	2667.0	1.83	LOT
INTERM.	9 5/8	5108.0	12 1/4	5109.0	0.00	LOT
OPEN HOLE		7393.0	8 1/2	7393.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
670	1.12	18.0		SEAWATER/CMC	
1153	1.12	19.0		SEAWATER/CMC	



1288	1.20	27.0		SEAWATER/CMC	
1520	1.29	16.0		GLYDRIL 12	
2667	1.55	37.0		GLYDRIL 12	
3759	1.65	70.0		VERSAVERT 42	
3825	1.64	60.0		VERSAVERT 41	
5105	1.60	35.0		VERSAVERT 41	
5109	1.59	53.0		VERSAVERT 41	
6057	1.60	53.0		VERSAVERT 41	
6244	1.58	44.0		VERSAVERT 41	
7393	1.58	57.0		VERSAVERT 41	

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]
4902_Formalion_pressure_(Formasjonstrykk)	pdf	0.25

