

WDSS Report

Date: 26/03/98

PB/SKR

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Well no:	Operator:
34/08-09 S	HYDRO

Well

Coordinates :	61° 18' 50.53" N 02° 23' 17.89" E	UTM coord. :	6798082.19 N 467241.65 E
License no :	120	Permit no :	746
Rig :	WEST DELTA	Rig type :	SEMI-SUB.
Contractor :	A/S SMEDVIG DRILLING CO.		
Bottom hole temp:	115 °C	Elev. KB :	29 M
Spud. date :	92.10.25	Water depth :	300 M
Compl. date :	92.12.26	Total depth :	3530 M
Spud. class :	APPRAISAL	Form. at TD :	TRIASSIC
Compl. class :	P&A. SHOWS	Prod.form. :	
Seisloca :	NH 9001, RAD 461, KOLONNE 683		

Licenseses

- 13.000000 ELF PETROLEUM NORGE AS
- 18.000000 NORSK HYDRO PRODUKSJON AS
- 6.000000 SAGA PETROLEUM ASA
- 50.000000 DEN NORSKE STATS OLJESELSKAP A.S
- 13.000000 NORSKE CONOCO A/S

Casing and Leak-off Tests

Type	Casing diam	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm3
CONDUCTOR	30	414.0	36	415.0	
INTERM.	13 3/8	1344.0	17 1/2	1359.0	1.55
INTERM.	9 5/8	2451.0	12 1/4	2467.0	1.80
OPEN HOLE		3530.0	8 1/2	3530.0	

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Conventional Cores

Core no.	Intervals cored meters	Recovery m	%
1	1109.0 - 1113.3	4.3	100.0
2	2936.0 - 2947.5	11.5	100.0
3	2948.5 - 2954.0	5.5	100.0
5	3170.5 - 3176.3	5.8	100.0
6	3178.0 - 3192.9	14.9	100.0

Mud

Depth	Mud weight	Visc.	Mud type
1109.0	1.20		WATER BASED
1360.0	1.05	24.0	WATER BASED
1698.0	1.30	17.0	WATER BASED
1703.0	1.30	18.0	WATER BASED
1940.0	1.37	19.0	WATER BASED
2102.0	1.42	23.0	WATER BASED
2210.0	1.42	19.0	WATER BASED
2467.0	1.51	14.0	WATER BASED
2470.0	1.51	15.0	WATER BASED
2531.0	1.51	22.0	WATER BASED
2559.0	1.51	21.0	WATER BASED
2665.0	1.51	22.0	WATER BASED
2707.0	1.51	23.0	WATER BASED
2749.0	1.51	24.0	WATER BASED
2869.0	1.60	28.0	WATER BASED
2899.0	1.63	27.0	WATER BASED
2924.0	1.65	29.0	WATER BASED
2949.0	1.65	31.0	WATER BASED
2969.0	1.67	30.0	WATER BASED
3015.0	1.65	34.0	WATER BASED
3135.0	1.65	30.0	WATER BASED
3162.0	1.65	32.0	WATER BASED
3171.0	1.66	32.0	WATER BASED
3190.0	1.65	31.0	WATER BASED
3243.0	1.65	26.0	WATER BASED
3285.0	1.65	30.0	WATER BASED
3332.0	1.65	40.0	WATER BASED
3417.0	1.65	37.0	WATER BASED
3435.0	1.65	34.0	WATER BASED
3530.0	1.68	32.0	WATER BASED

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Drill Stem Test (intervals and pressures)

Test no.	Test interval meter	Choke size	Pressure (psi) WHP	BTHP	FFP
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Drill Stem Test (recovery)

Test no.	Oil Sm ³ /d	Gas Sm ³ /d	Oil grav. g/cm ³	Gas grav. rel. air	GOR m ³ /m ³
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Drill Bit Cuttings and Wet Samples

Sample type	Interval below KB	Number of samples
WET SAMPLES	1370 -3530	444
CUTTINGS	1359 -3530	360

Shallow Gas

Interval below KB	Remarks

Available Logs

Log type	Intervals logged	1/200	1/500	
BHC AC GR	2449.0 - 3526.0			
COMPOSITE DIFL AC GR	0 - 3526.0			
COMPOSITE ZDL CN GR	.0 - 2449.0			
COMPUTED HEXDIP	2449.0 - 3506.0			
CZDL CN GR	2449.0 - 3531.0			
DDP LOG	330.0 - 3530.0			
DIFL BHC AC GR	1176.0 - 2466.0			

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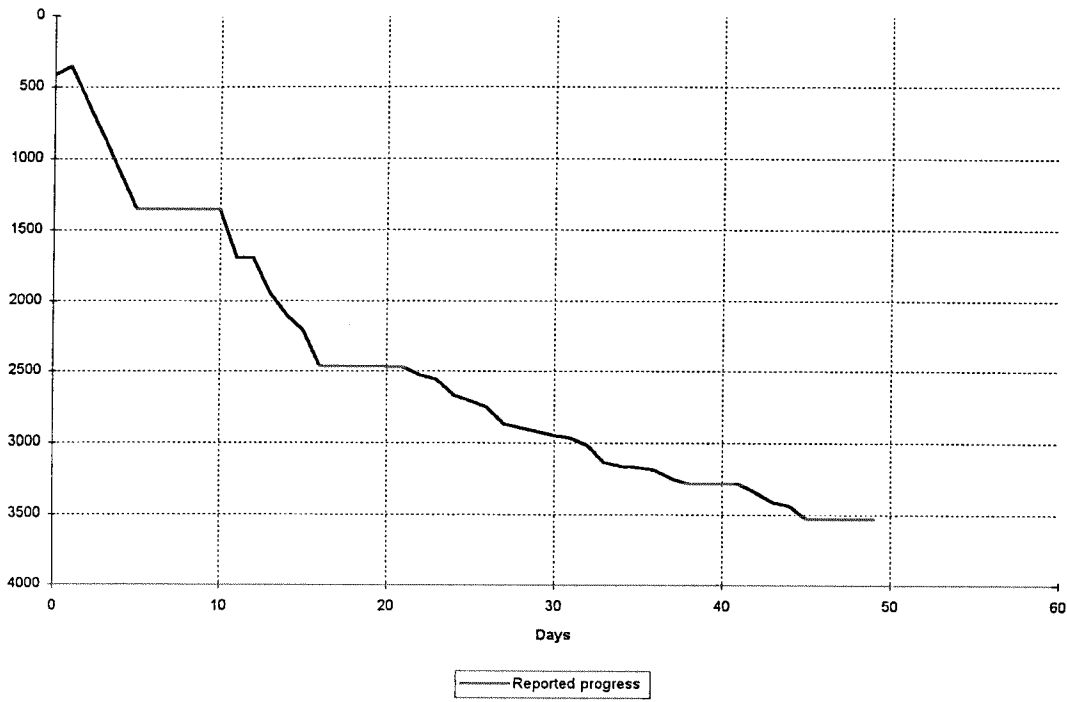
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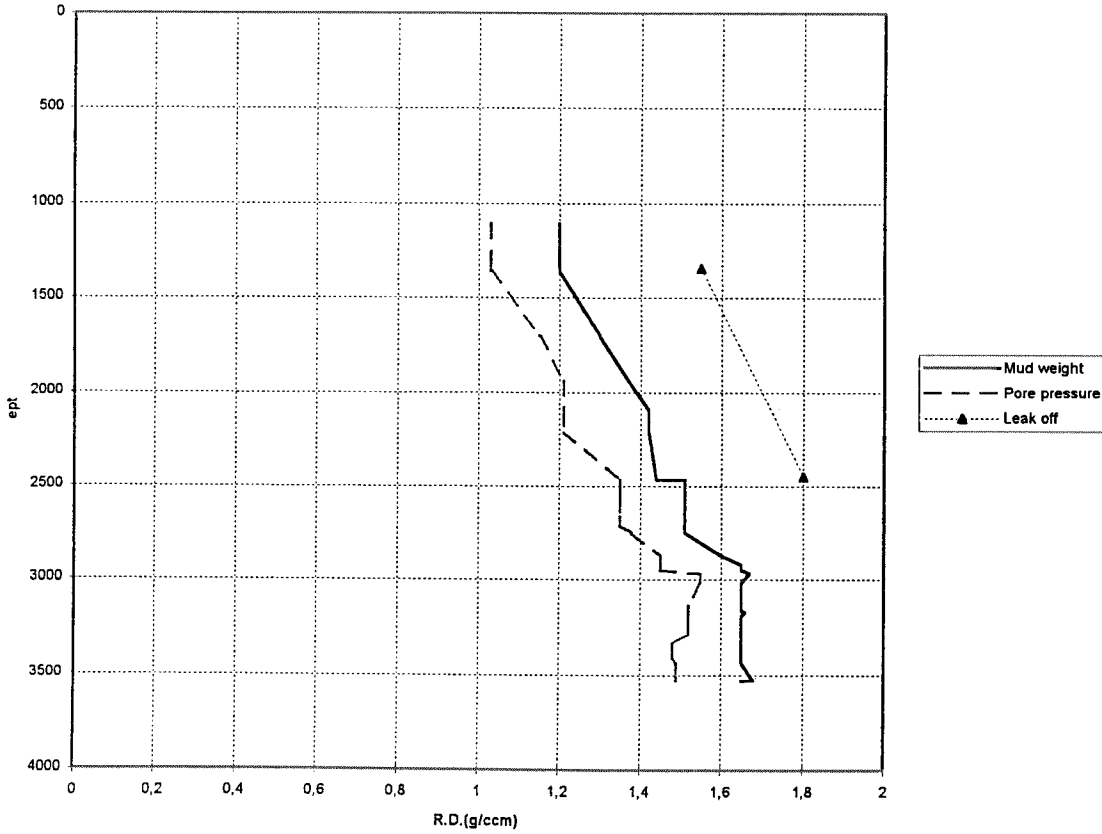
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DIPLOG	2450.0 - 3500.0			
DLL ML GR	2487.0 - 3274.0			
DLL MLL GR	1862.0 - 3509.0			
DRILLING PROGRESS	330.0 - 3500.0			
FMT	2931.0 - 3486.0			
FORMATION EVAL.LOG	330.0 - 3530.0			
GASCHROMATOLOG	1350.0 - 3530.0			
POST SITE SURVEY	330.0 - 1200.0			
SHORT NORMAL	330.0 - 3530.0			
SYNTHETIC SEISMOGRAM				
TEMP.DATA PLOT	1300.0 - 3600.0			
TIME DIP DISPLAY				
TWO WAY TRAVEL TIME				
WIRELINE	330.0 - 3530.0			
VSP				
Z-DENSILOG NEUTRON	0 - 1271.0			

Depth v.s. time plot for well: 34/8-9 S



Composite plot for well: 34/8-9 S



Main operations for well: 34/8-9 S

Main operation: DRILLING

Sub operation:	Minutes:	Hours:	% of total:
BOP ACTIVITIES	1260	21,0	2,99
BOP/WELLHEAD EQ	600	10,0	1,42
CASING	4770	79,5	11,31
CIRC/COND	1020	17,0	2,42
DRILL	20940	349,0	49,64
OTHER	60	1,0	0,14
REAM	510	8,5	1,21
TRIP	13020	217,0	30,87
Total	42180	703,0	100,00

Main operation: FORMATION EVAL

Sub operation:	Minutes:	Hours:	% of total:
CIRC SAMPLES	570	9,5	4,51
CIRC/COND	330	5,5	2,61
CORE	1050	17,5	8,31
LOG	4620	77,0	36,58
RFT/FIT	2310	38,5	18,29
TRIP	3750	62,5	29,69
Total	12630	210,5	100,00

Main operation: INTERRUPTION

Sub operation:	Minutes:	Hours:	% of total:
FISH	8340	139,0	39,89
MAINTAIN/REP	11100	185,0	53,08
OTHER	210	3,5	1,00
WAIT	1260	21,0	6,03
Total	20910	348,5	100,00

Main operation: MOVING

Sub operation:	Minutes:	Hours:	% of total:
ANCHOR	4560	76,0	76,77
TRANSIT	1380	23,0	23,23
Total	5940	99,0	100,00

Main operation: PLUG & ABANDON

Sub operation:	Minutes:	Hours:	% of total:
CEMENT PLUG	840	14,0	9,72
CIRC/COND	720	12,0	8,33
CUT	330	5,5	3,82
EQUIP RECOVERY	2460	41,0	28,47
MECHANICAL PLUG	960	16,0	11,11
OTHER	180	3,0	2,08
TRIP	3090	51,5	35,76
WAIT	60	1,0	0,69
Total	8640	144,0	100,00

Total time used: Hours

WELL HISTORY 34/8-9 S

GENERAL:

The primary objective of well 34/8-9 S was the appraisal of the Statfjord/Amundsen reservoir, in the A-South prospect of the Visund field. The following essential parameters were to be investigated by well 34/8-9S:

- Establish the inferred OWC at 3100m TVD and confirm the pressure regime in the Statfjord and Amundsen Formations.
- Ascertain reservoir segmentation, fault transmissibility, and fluid type distribution.

The secondary objective of the well was to determine the hydrocarbon potential of the Cook Formation in the structure. A deviated hole was planned in order that both objectives could be fully evaluated.

Furthermore the spud location of the well was chosen so that an optimal, updip, sidetrack could be drilled in order to appraise the Lunde A-south gas condensate discovery.

OPERATION:

The well was spudded on the 26th October 1992 by the semi submersible rig "West Delta" and was completed the 9th December 1992 in rocks of Triassic age.

Six conventional cores were cut in the well. One core was cut in the Nordland Group (Utsira Formation), two cores were taken in the Brent Group, and one core was taken over the Amundsen/Statfjord Formation boundary. Further two cores were taken in the Statfjord Formation.

The Brent Group was encountered from 2922.5m RKB to 2983.5m. From a gross Brent Group thickness of 61m, a net sand thickness of 47m was identified, with average porosity of 20.8%.

Wireline logs confirmed an OWC at 2931m MD, while RFT pressure tests suggested a free water level around 2933m. The Formation pressure in the Brent Group revealed two separate water regimes, approximately 2.1 and 2.8 bar lower than the established common Brent water gradient interpreted in the well 34/8-1 and 34/8-5. The Lunde Formation, 3246m RKB to T.D of the well at 3530m RKB was also found water wet. From a gross thickness of 87m, 37m are interpreted as net sand. However, the logs in the Lunde Formation were of bad quality due to sticking.

The well 34/8-9S was permanently plugged and abandoned as an oil discovery.

TESTING:

No DST tests were performed in this well.

Geological Tops.

Well: 34/8-9 S.

	Depth m (RKB).
Nordland Group	330.0
Utsira Fm	1092.0
Hordaland Group	1131.0
Rogaland Group	1842.0
Balder Fm	1842.0
Sele Fm	1908.5
Shetland Group	2036.5
Cromer Knoll Group	2903.5
Viking Group	2908.0
Draupne Fm	2908.0
Heather Fm	2914.0
Brent Group	2922.5
Tarbert Fm	2922.5
Ness Fm	2942.5
Etive Fm	2956.0
Rannoch Fm	2962.5
Dunlin Group	2983.5
Drake Fm	2983.5
Cook Fm	3012.0
Amundsen Fm	3116.0
Statfjord Fm	3151.5
Hegre Group	3246.0
Lunde Fm.	3246.0
T.D.	3530.0