

## WDSS Report

Date: 26/03/98

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<b>Well no:</b>	<b>Operator:</b>
<b>34/08-07</b>	<b>HYDRO</b>

### Well

Coordinates :	61° 19' 09.07" N 02° 33' 32.15" E	UTM coord. :	6798582.22 N 476383.07 E
License no :	120	Permit no :	725
Rig :	POLAR PIONEER	Rig type :	SEMI-SUB.
Contractor :	POLAR DRILLING A/S		
Bottom hole temp:	168 °C	Elev. KB :	23 M
Spud. date :	92.03.21	Water depth :	334 M
Compl. date :	92.07.16	Total depth :	5460 M
Spud. class :	WILDCAT	Form. at TD :	TRIASSIC
Compl. class :	SUSP.	Prod.form. :	
Seisloca :	NH 9001-REKKE 809, KOLONNE 1200		

### 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	444.5	36	446.0	
INTERM.	18 5/8	1436.0	26	1438.0	1.65
INTERM.	13 3/8	3264.0	17 1/2	3270.0	1.89
INTERM.	9 5/8	3945.0	12 1/4	3947.0	2.00
LINER	7	5458.0	8 1/2	5471.0	

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### Conventional Cores

Core no.	Intervals cored meters	Recovery m	%
1	4471.0 - 4491.4	20.4	100.0
2	4654.0 - 4656.8	2.8	100.0
3	5118.0 - 5118.3	0.3	100.0
4	5127.0 - 5132.2	5.2	100.0
5	5422.0 - 5429.9	7.9	100.0

### Mud

Depth	Mud weight	Visc.	Mud type
445.0	1.20	11.0	WATER BASED
506.0	1.08	27.0	WATER BASED
1065.0	1.08	25.0	WATER BASED
1441.0	1.20	16.0	WATER BASED
1750.0	1.40	23.0	WATER BASED
2151.0	1.40	27.0	WATER BASED
2349.0	1.40	26.0	WATER BASED
2483.0	1.40	25.0	WATER BASED
2553.0	1.40	26.0	WATER BASED
2556.0	1.40	25.0	WATER BASED
2664.0	1.40	26.0	WATER BASED
2766.0	1.40	27.0	WATER BASED
2792.0	1.40	27.0	WATER BASED
2800.0	1.40	27.0	WATER BASED
2888.0	1.40	27.0	WATER BASED
2955.0	1.40	27.0	WATER BASED
3009.0	1.41	26.0	WATER BASED
3060.0	1.40	27.0	WATER BASED
3133.0	1.40	27.0	WATER BASED
3153.0	1.40	27.0	WATER BASED
3261.0	1.40	25.0	WATER BASED
3288.0	1.40	28.0	WATER BASED
3332.0	1.40	25.0	WATER BASED
3376.0	1.40	25.0	WATER BASED
3453.0	1.40	17.0	WATER BASED
3533.0	1.40	19.0	WATER BASED
3562.0	1.40	22.0	WATER BASED
3636.0	1.40	19.0	WATER BASED
3712.0	1.40	18.0	WATER BASED
3724.0	1.40	18.0	WATER BASED
3763.0	1.40	18.0	WATER BASED

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3839.0	1.40	21.0	WATER BASED
3923.0	1.40	20.0	WATER BASED
3961.0	1.40	21.0	WATER BASED
4006.0	1.40	18.0	WATER BASED
4180.0	1.40	21.0	WATER BASED
4337.0	1.50	25.0	WATER BASED
4446.0	1.50	22.0	WATER BASED
4471.0	1.63	25.0	WATER BASED
4474.0	1.63	26.0	WATER BASED
4492.0	1.63	26.0	WATER BASED
4518.0	1.66	24.0	WATER BASED
4568.0	1.70	22.0	WATER BASED
4580.0	1.76	28.0	WATER BASED
4589.0	1.76	26.0	WATER BASED
4605.0	1.82	22.0	WATER BASED
4648.0	1.82	22.0	WATER BASED
4657.0	1.82	23.0	WATER BASED
4725.0	1.82	18.0	WATER BASED
4766.0	1.82	25.0	WATER BASED
4769.0	1.82	24.0	WATER BASED
4823.0	1.82	18.0	WATER BASED
4895.0	1.82	16.0	WATER BASED
4900.0	1.82	18.0	WATER BASED
4947.0	1.82	16.0	WATER BASED
4961.0	1.82	17.0	WATER BASED
5005.0	1.82	19.0	WATER BASED
5041.0	1.82	24.0	WATER BASED
5092.0	1.82	26.0	WATER BASED
5112.0	1.82	20.0	WATER BASED
5127.0	1.82	22.0	WATER BASED
5133.0	1.82	28.0	WATER BASED
5169.0	1.82	27.0	WATER BASED
5227.0	1.82	25.0	WATER BASED
5231.0	1.82	28.0	WATER BASED
5250.0	1.82	28.0	WATER BASED
5302.0	1.82	30.0	WATER BASED
5319.0	1.82	28.0	WATER BASED
5370.0	1.82	26.0	WATER BASED
5403.0	1.82	27.0	WATER BASED
5422.0	1.82	26.0	WATER BASED
5431.0	1.82	22.0	WATER BASED
5441.0	1.85	18.0	WATER BASED
5456.0	1.82	23.0	WATER BASED
5460.0	1.82	24.0	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 <sup>3</sup> /d	Gas Sm <sup>3</sup> /d	Oil grav. g/cm <sup>3</sup>	Gas grav. rel. air	GOR m <sup>3</sup> /m <sup>3</sup>
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### Drill Bit Cuttings and Wet Samples

Sample type	Interval below KB	Number of samples
WET SAMPLES	1450 - 5460	510
CUTTINGS	1450 - 5460	570

### Shallow Gas

Interval below KB	Remarks

### Available Logs

Log type	Intervals logged	1/200	1/500
CBL VDL GR CCL	3803.0 - 5388.0		
CST GR	3986.0 - 4867.0		
DIL LSS GR	4813.0 - 5236.0		
DIL LSS NGS AMS	3210.0 - 3855.0		
DIL LSS SGR	3791.0 - 4900.0		
DIL LSS SGR	5167.0 - 5469.0		
DIL LSS SP GR	1436.0 - 3285.0		
DIL LSS SP GR AMS	1437.0 - 3285.0		
DIPLOG	4460.0 - 5460.0		

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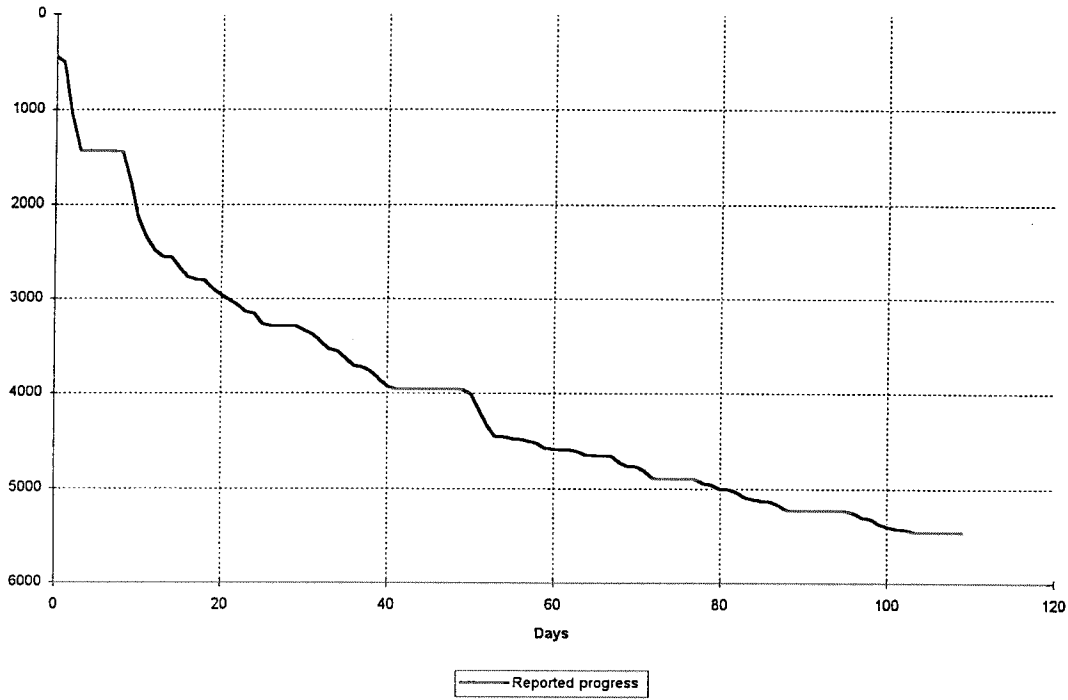
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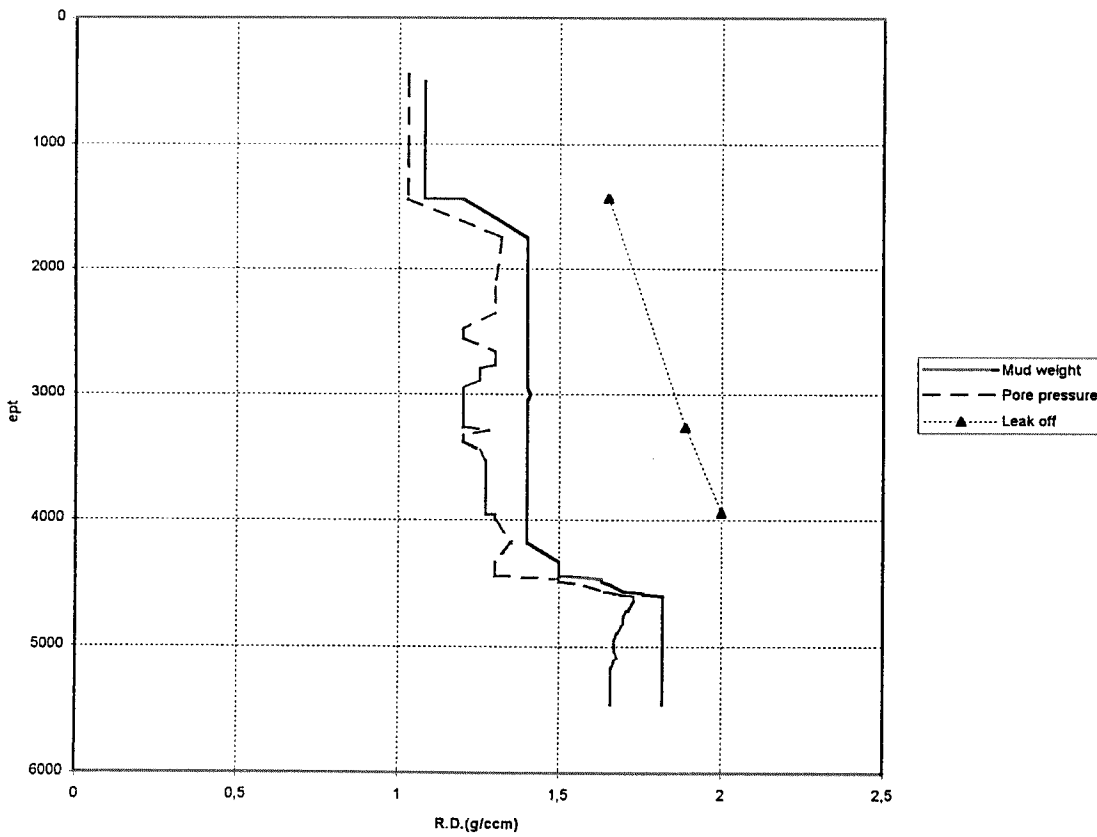
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DLL MSFL GR	4300.0 - 5467.0			
DOWNHOLE SEIS.SERVIS	4075.0 - 5460.0			
DRILLING DATA	358.0 - 5460.0			
FMS	3949.0 - 4895.0			
FMS 4 GR	4783.0 - 5232.0			
FMS 4 GR	5250.0 - 5463.0			
FORMATION EVALUATION	358.0 - 5460.0			
LDL CALIPER LOG	4375.0 - 4823.0			
LDL CNL GR	3210.0 - 3837.0			
LDL CNL GR	5166.0 - 5438.0			
LDL CNL NGS	3949.0 - 4880.0			
LDL CNL NGS	4823.0 - 5225.0			
LDL CNL NGS AMS	3210.0 - 3837.0			
LITHOLOG	1400.0 - 5460.0			
LSS GR	5166.0 - 5445.0			
MSD	3950.0 - 5460.0			
MSFL CALIPER LOG	4400.0 - 5158.0			
MWD LOG	375.0 - 4769.0			
NGS RATIOS	4823.0 - 5225.0			
NGS RATIOS	5167.0 - 5439.0			
NGT RATIOS	3949.0 - 4880.0			
RFT GR	4398.0 - 5141.0			
SITE SURVEY				
SYNTHETIC SEISMOGRAM				
TWO WAY TRAVEL TIME				
WELLSITE LITHOLOGY	5000.0 - 5400.0			
WIRELINE DATA SUMMAR	1450.0 - 5460.0			
VSP				

Depth v.s. time plot for well: 34/8-7



Composite plot for well: 34/8-7



**Main operation: DRILLING**

Sub operation:	Minutes:	Hours:	% of total:
BOP ACTIVITIES	6390	106,5	5,45
BOP/WELLHEAD EQ	1470	24,5	1,25
CASING	16800	280,0	14,34
CIRC/COND	5100	85,0	4,35
DRILL	60900	1015,0	51,98
OTHER	1500	25,0	1,28
PRESS DETECTION	930	15,5	0,79
REAM	1620	27,0	1,38
SURVEY	120	2,0	0,10
TRIP	22320	372,0	19,05
<b>Total</b>	<b>117150</b>	<b>1952,5</b>	<b>100,00</b>

**Main operation: FORMATION EVAL**

Sub operation:	Minutes:	Hours:	% of total:
CIRC SAMPLES	1020	17,0	3,74
CIRC/COND	2190	36,5	8,03
CORE	3030	50,5	11,11
DST	1920	32,0	7,04
LOG	11190	186,5	41,03
OTHER	60	1,0	0,22
TRIP	7860	131,0	28,82
<b>Total</b>	<b>27270</b>	<b>454,5</b>	<b>100,00</b>

**Main operation: INTERRUPTION**

Sub operation:	Minutes:	Hours:	% of total:
FISH	4260	71,0	22,50
MAINTAIN/REP	14640	244,0	77,34
OTHER	30	0,5	0,16
<b>Total</b>	<b>18930</b>	<b>315,5</b>	<b>100,00</b>

**Main operation: MOVING**

Sub operation:	Minutes:	Hours:	% of total:
ANCHOR	1950	32,5	25,69
TRANSIT	5640	94,0	74,31
<b>Total</b>	<b>7590</b>	<b>126,5</b>	<b>100,00</b>

**Main operation: PLUG & ABANDON**

Sub operation:	Minutes:	Hours:	% of total:
CEMENT PLUG	120	2,0	4,08
CIRC/COND	120	2,0	4,08
EQUIP RECOVERY	1890	31,5	64,29
TRIP	810	13,5	27,55
<b>Total</b>	<b>2940</b>	<b>49,0</b>	<b>100,00</b>

Total time used:  Hours

# WELL HISTORY 34/8-7

## GENERAL:

Well 34/8-7 is located on the western flank of the Tampen Spur and is situated approximately 7.4 kilometres due east of well 34/8-4S, in the Visund prospect. This was the third exploration well to be drilled in the licence area. The primary objective of well 34/8-7 was to appraise the Jurassic Brent Group and Statfjord Formation in the hanging wall of the Visund Fault. The secondary objectives were to establish a good seismic to well correlation and to fulfil licence obligations.

## OPERATION:

The well 34/8-7 was spudded on the 21 March 1992 by the semi submersible rig "Polar Pioneer" and was completed the 3 July 1992 in rocks of Triassic age.

Conglomeratic density flow deposits were found in the Draupne Formation equivalent. From a gross thickness of 134.5m, 5.75m of net sand were identified of which 5.25m were regarded as net pay. An average porosity value 9.4% and average Sw of 50.1% were computed for the pay section. One core was cut in this unit and average 5.2% core porosity was measured.

The primary objective Brent Group was encountered at 4632.5m RKB. The entire Brent Group is interpreted as being gas bearing. From a gross thickness of 134.5m, 36.5m of net sand were recognised with 36.5m of net pay. An average porosity of 9.8% and average Sw of 30.4% were determined. Core analysis on core, which was cut in Brent Group, gave an average porosity of 9.9%. The sandy member of Cook Formation was found to be gas bearing, but poor reservoir properties reduced the net pay to only 2.0m with an average porosity of 8.3% and average Sw of 36.1%.

No net pay was identified in the Amundsen sand.

The Statfjord Formation is 88.5m thick of which 22.5m are net sand. 18.75m of net gas bearing pay was identified in this section. Two cores were cut in the Statfjord Formation, which gave an average core porosity of 7.1% porosity. Attempts to take RFT pre-test in the Draupne equivalent conglomerate proved to be unsuccessful due to the tight nature of the Formation. No RFT pressure measurements could be obtained in the Brent Group and Statfjord Formations.

The well was temporarily abandoned awaiting testing of Brent Group and Statfjord Formation.

## TESTING:

No DST tests were performed in this well.



# Geological Tops.

## Well: 34/8-7.

	Depth m (RKB).
Nordland Group	358.0
Utsira Fm	1071.0
Hordaland Group	1095.0
Rogaland Group	1875.0
Balder Fm	1875.0
Sele Fm	1915.0
Lista Fm	1928.0
Shetland Group	2081.0
Cromer Knoll Group	4028.0
Viking Group	4465.0
Draupne Fm	4465.0
Heather Fm	4610.0
Brent Group	4632.0
Tarbert Fm	4632.0
Ness Fm	4655.0
Etive Fm	4698.0
Rannoch Fm	4714.0
Broom Fm	4763.0
Dunlin Group	4767.0
Drake Fm	4767.0
Cook Fm	4809.0
Burton Fm	4952.0
Amundsen Fm	4983.0
Statfjord Fm	5118.0
Hegre Group	5207.0
Lunde Fm.	5207.0
T.D.	5460.0