

## WDSS Report

Date: 17/09/96

PB/SKR

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Well no:	Operator:
<b>7/12-10</b>	<b>BP</b>

### Well

Coordinates :	57° 10' 57.37" N	UTM coord. :	6337871.9 N
	02° 48' 18.47" E		488219.56 E
License no :	19	Permit no :	686
Rig :	ROSS ISLE	Rig type :	SEMI-SUB.
Contractor :	TRANSNOR RIG AS		
Bottom hole temp:	114 °C	Elev. KB :	23 M
Spud. date :	91.07.08	Water depth :	71 M
Compl. date :	91.08.29	Total depth :	3667 M
Spud. class :	APPRAISAL	Form. at TD :	TRIASSIC
Compl. class :	P&A. DRY HOLE	Prod.form. :	
Seisloca :	BPN 88 - 513 SP 272		

### Licensees

10.000000 CONOCO NORWAY INC.  
 5.000000 AS PELICAN  
 12.500000 DEN NORSKE STATS OLJESELSKAP A.S  
 15.000000 SVENSKA PETROLEUM EXPLORATION AS  
 57.500000 BP PETROLEUM DEV. OF NORWAY AS

### Casing and Leak-off Tests

Type	Casing diam	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm <sup>3</sup>
CONDUCTOR	30	167.0	36	168.0	
INTERM.	20	939.0	26	948.0	1.75
INTERM.	13 3/8	2724.0	17 1/2	2730.0	1.75
OPEN HOLE		3667.0	12 1/4	3667.0	

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### Conventional Cores

Core no.	Intervals cored meters	Recovery m	%
1	3616.0 - 3627.8	11.8	100.0
2	3628.0 - 3655.0	27.0	100.0

### Mud

Depth	Mud weight	Visc.	Mud type
550.0	1.03		WATER BASED
951.0	1.40	30.0	WATER BASED
1064.0	1.75	34.0	WATER BASED
1232.0	1.48	38.0	WATER BASED
1366.0	1.55	37.0	WATER BASED
1501.0	1.55	42.0	WATER BASED
2722.0	1.60	42.0	WATER BASED
2724.0	1.57	43.0	WATER BASED
2730.0	1.64	42.0	WATER BASED
2730.0	1.65	45.0	WATER BASED
2730.0	1.65	37.0	WATER BASED
3655.0	1.55	39.0	WATER BASED
3667.0	1.57	36.0	WATER BASED
3667.0	1.55	35.0	WATER BASED
3667.0	1.57	27.0	WATER BASED
3667.0	1.55	37.0	WATER BASED

### 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 Sm3/d	Gas Sm3/d	Oil grav. g/cm3	Gas grav. rel. air	GOR m3/m3
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### Drill Bit Cuttings and Wet Samples

Sample type	Interval below KB	Number of samples
WET SAMPLES	960 - 3667	270
CUTTINGS	960 - 3556	270

### Shallow Gas

Interval below KB	Remarks

### Available Logs

Log type	Intervals logged	1/200	1/500	
CST GR	2918.0 - 3673.0			
DLL MSFL AS GR	3096.0 - 3669.0			
DLL MSFL ASL SP GR	2726.0 - 3153.0			
DLL MSFL LSS GR CAL	70.0 - 2730.0			
LDL CNL GR	2829.0 - 3156.0			
LDL CNL NGS	3600.0 - 3672.0			
NGT RATIOS	3600.0 - 3672.0			
PRESSURE EVALUATION	93.0 - 3667.0			
RFT GR	3013.0 - 3055.0			
RWD	3253.0 - 3667.0			
SYNTHETIC SEISMOGRAM				
WIRE LINE PRESSURE	93.0 - 3667.0			
WSC	1100.0 - 3673.0			
VSP - SEISMIC EDIT				

## Main operations for well: 7/12-10

### Main operation: DRILLING

Sub operation:	Minutes:	Hours:	% of total:
BOP ACTIVITIES	285	4,8	0,48
BOP/WELLHEAD EQ	2640	44,0	4,41
CASING	3181	53,0	5,31
CIRC/COND	4090	68,2	6,83
DRILL	30885	514,8	51,60
HOLE OPEN	2340	39,0	3,91
OTHER	990	16,5	1,65
PRESS DETECTION	15	0,3	0,03
REAM	2070	34,5	3,46
SURVEY	210	3,5	0,35
TRIP	12664	211,1	21,16
WAIT	480	8,0	0,80
<b>Total</b>	<b>59850</b>	<b>997,5</b>	<b>100,00</b>

### Main operation: FORMATION EVAL

Sub operation:	Minutes:	Hours:	% of total:
CIRC/COND	90	1,5	1,40
CORE	720	12,0	11,21
LOG	4035	67,3	62,85
RFT/FIT	300	5,0	4,67
TRIP	1275	21,3	19,86
<b>Total</b>	<b>6420</b>	<b>107,0</b>	<b>100,00</b>

### Main operation: INTERRUPTION

Sub operation:	Minutes:	Hours:	% of total:
MAINTAIN/REP	1680	28,0	70,89
OTHER	465	7,8	19,62
WELL CONTROL	225	3,8	9,49
<b>Total</b>	<b>2370</b>	<b>39,5</b>	<b>100,00</b>

### Main operation: MOVING

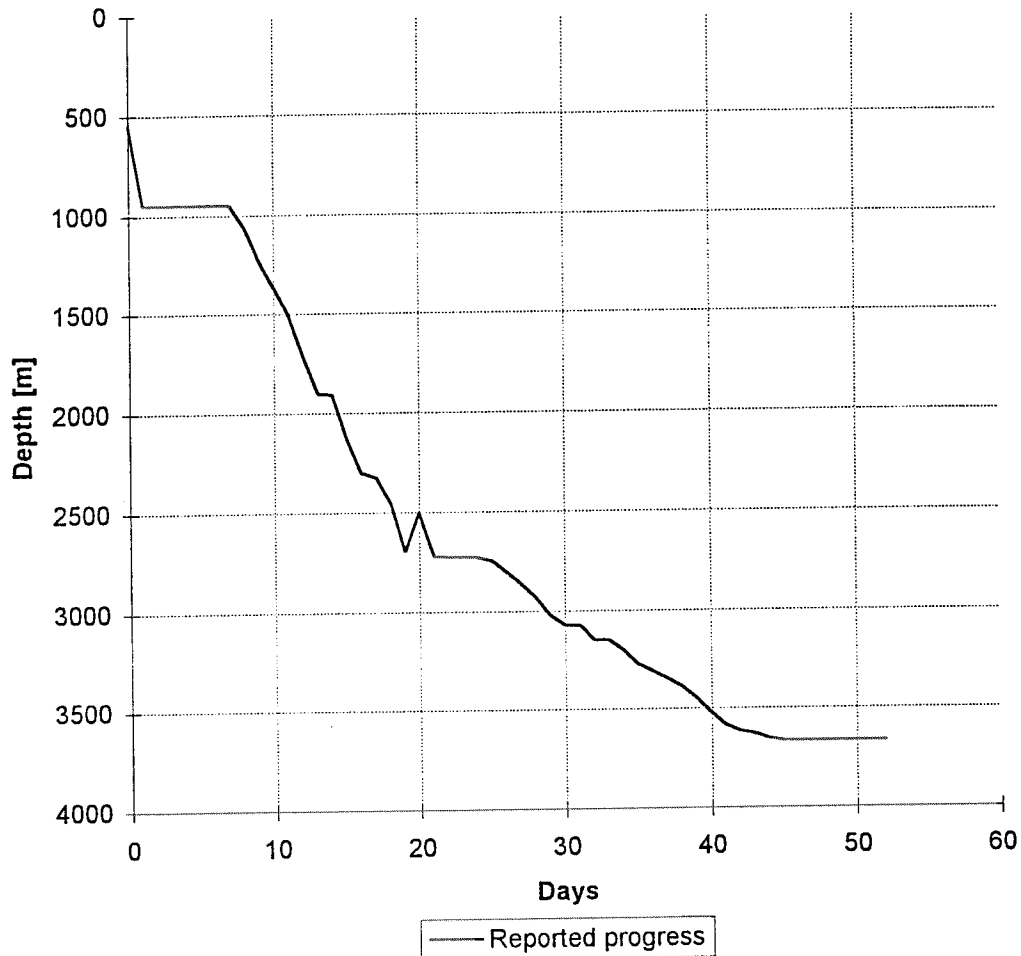
Sub operation:	Minutes:	Hours:	% of total:
ANCHOR	1365	22,8	32,97
POSITION	540	9,0	13,04
SKID	1230	20,5	29,71
TRANSIT	1005	16,8	24,28
<b>Total</b>	<b>4140</b>	<b>69,0</b>	<b>100,00</b>

### Main operation: PLUG & ABANDON

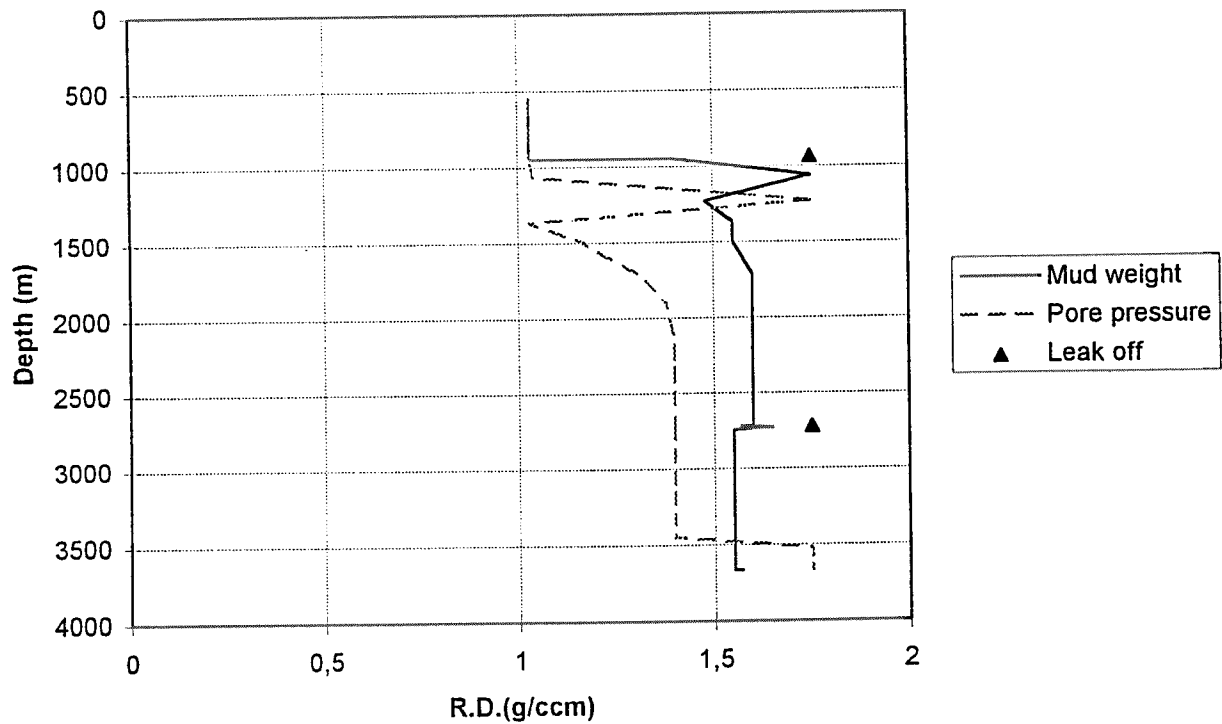
Sub operation:	Minutes:	Hours:	% of total:
CEMENT PLUG	465	7,8	9,34
CIRC/COND	300	5,0	6,02
CUT	135	2,3	2,71
EQUIP RECOVERY	795	13,3	15,96
OTHER	255	4,3	5,12
PERFORATE	60	1,0	1,20
TRIP	2970	49,5	59,64
<b>Total</b>	<b>4980</b>	<b>83,0</b>	<b>100,00</b>

Total time used:  Hours

Depth vs time for well: 7/12-10



Composite plot for well: 7/12-10



# Well History 7/12-10.

## General:

Well 7/12-10 was designed to drill segment C of the 7/12-JU2 prospect that lies in the Late Jurassic fairway along the eastern flank of the Central Graben. The segment is located on a terrace which acts as a transition zone between the Sorvestlandet High to the northeast and the half graben with the 7/12-5 discovery to the southwest. Segment C is some 200-300 m shallower than the Ula Formation penetrated in 7/12-5, and reservoir quality and thus potential productivity were expected to be significantly better than what estimated for well 7/12-5.

The main reservoir target was sandstones of the Ula Formation which was expected to prove up a commercial volume of oil in the Ula Formation for tie back to the Ula Field. The sands were thought to thin to the southeast, where they subcrop along the flanks of Triassic highs. The resulting trap configuration is very similar to the trap model for the Gyda Field. Secondary reservoir potential exists in both the Middle Jurassic and the uppermost part of the Triassic and this would also be evaluated.

The critical risk for the prospect was the presence of reservoir. Possible transfer zones to the northwest of the drilling location might represent alternative locations for pinchout edge. Block 7/12-10 was believed to be an area of low to negligible risk of shallow gas, since no problems have ever been experienced from shallow gas in previous drillings.

## Operations:

Appraisal well 7/12-10 was spudded by the semi-submersible rig Ross Isle 8 July 1991, and was completed 29 August 1991 at a depth of 3667 m RKB, 38 m shallower than prognosed, in rocks of Triassic age, the Skagerak Formation. No shallow gas was observed, as expected in this area. Two conventional cores were cut, core one in the Farsund Formation and core two in the transition between the Ula Formation and the Triassic Skagerak Formation. A total of sixty sidewall cores were attempted and 12 were recovered. The Ula Formation came in 56 m deeper than prognosed, and was approximately 30 m thinner than anticipated. Top Triassic came in at 3641.5 m RKB, 7.5 m shallower than prognosed. Good oil shows were observed in the Tor Formation, but no shows were observed in the Ula Formation or the Triassic Skagerak Formation. Drilling went without any significant problems. The well was plugged and abandoned as a dry hole with hydrocarbon shows.

## Testing:

No DST tests were performed in this well.

# Geological Tops.

## Well:.7/12-10.

	Depth m (RKB).
Nordland Group	94.5
Hordaland Group	1930.0
Rogaland Group	2658.0
Balder Fm	2658.0
Scle Fm	2700.0
Lista Fm	2763.0
Vidar Fm	2861.0
Våle Fm	2917.0
Shetland Group	2935.0
Ekofisk Fm	2935.0
Tor Fm	3000.0
Hod Fm	3180.0
Blodoks Fm	3282.0
Hidra Fm	3283.5
Cromer Knoll Group	3286.0
Rodby Fm	3286.0
Sola Fm	3332.0
Tuxen Fm	3362.0
Åsgard Fm	3385.0
Tyne Group	3538.0
Mandal Fm	3538.0
Farsund Fm	3563.5
Vestland Group	3627.0
Ula Fm	3627.0
Triassic Group	3641.5
Skagerak.Fm	3641.5
T.D.	3673.0