

WDSS Report

Date: 03/03/98

PB/SKR

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Well no:	Operator:
15/12-09 S	STATOIL

Well

Coordinates :	58° 04' 40.17" N 01° 53' 25.54" E	UTM coord. :	6438059.07 N 434554.98 E
License no :	38	Permit no :	732
Rig :	DEEPSEA BERGEN	Rig type :	SEMI-SUB.
Contractor :	ODFJELL DRILLING AND CONSULTING COMPANY A/S		
Bottom hole temp:	124 °C	Elev. KB :	23 M
Spud. date :	92.07.17	Water depth :	84 M
Compl. date :	92.10.08	Total depth :	3848 M
Spud. class :	APPRAISAL	Form. at TD :	TRIASSIC
Compl. class :	SUSPENDED. OIL/GAS	Prod.form. :	L.JURASSIC
Seisloca :	ST 8802, KOLONNE 919, RAD 461		

Licenseses

50.000000 DEN NORSKE STATS OLJESELSKAP A.S
50.000000 ESSO EXPL. & PROD. NORWAY A/S

Casing and Leak-off Tests

Type	Casing diam	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm ³
CONDUCTOR	30	167.0	36	167.0	
INTERM.	20	599.0	26	600.0	1.76
INTERM.	13 3/8	2207.0	17 1/2	2210.0	1.91
INTERM.	9 5/8	3313.0	12 1/4	3315.0	1.87
LINER	5 1/2	3846.0	8 1/2	3848.0	

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Conventional Cores

Core no.	Intervals cored meters	Recovery m	%
1	3389.0 - 3416.0	27.0	100.0
2	3416.0 - 3443.0	27.6	100.0
3	3443.6 - 3471.3	27.6	100.0
4	3471.0 - 3499.1	27.8	100.0
5	3499.1 - 3527.3	28.3	100.0
6	3527.3 - 3555.0	27.7	100.0
7	3652.0 - 3670.5	18.5	100.0

Mud

Depth	Mud weight	Visc.	Mud type
620.0	1.03	.0	DUMMY
623.0	1.40	34.0	DUMMY
960.0	1.40	40.0	DUMMY
1255.0	1.40	40.0	DUMMY
1298.0	1.40	45.0	DUMMY
1366.0	1.40	40.0	DUMMY
1387.0	1.40	46.0	DUMMY
1574.0	1.40	41.0	DUMMY
1697.0	1.40	46.0	DUMMY
1807.0	1.40	38.0	DUMMY
1879.0	1.40	37.0	DUMMY
2228.0	1.40	31.0	WATER BASED
2333.0	1.33	36.0	WATER BASED
2447.0	1.40	31.0	WATER BASED
2613.0	1.50	32.0	WATER BASED
2729.0	1.50	35.0	WATER BASED
2895.0	1.53	34.0	WATER BASED
3035.0	1.53	37.0	WATER BASED
3169.0	1.53	39.0	WATER BASED
3292.0	1.53	38.0	WATER BASED
3326.0	1.53	40.0	WATER BASED
3330.0	1.33	16.0	WATER BASED
3385.0	1.38	30.0	WATER BASED
3443.0	1.33	28.0	WATER BASED
3471.0	1.33	25.0	WATER BASED
3527.0	1.33	28.0	WATER BASED
3555.0	1.33	21.0	WATER BASED
3610.0	1.33	25.0	WATER BASED
3655.0	1.33	32.0	WATER BASED

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3690.0	1.33	36.0	WATER BASED
3814.0	1.33	38.0	WATER BASED
3848.1	1.33	32.0	WATER BASED

Drill Stem Test (intervals and pressures)

Test no.	Test interval meter	Choke size	Pressure (psi) WHP	BTHP	FFP
1.0	3540.0 - 3555.0	20.6	1562.0	4423.0	
2.0	3385.0 - 3445.0	20.6	1562.0	4423.0	

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
1.0	1530		0.852	0.751	87
2.0	1520		0.852	0.751	87

Drill Bit Cuttings and Wet Samples

Sample type	Interval below KB	Number of samples
WET SAMPLES	630 - 3815	1024

Shallow Gas

Interval below KB	Remarks

Available Logs

Log type	Intervals logged	1/200	1/500	
AC CBL GR	1330.0 - 3312.0			
AC CBL VDL GR	3200.0 - 3778.0			
CZDL CNL GR	3306.0 - 3844.3			

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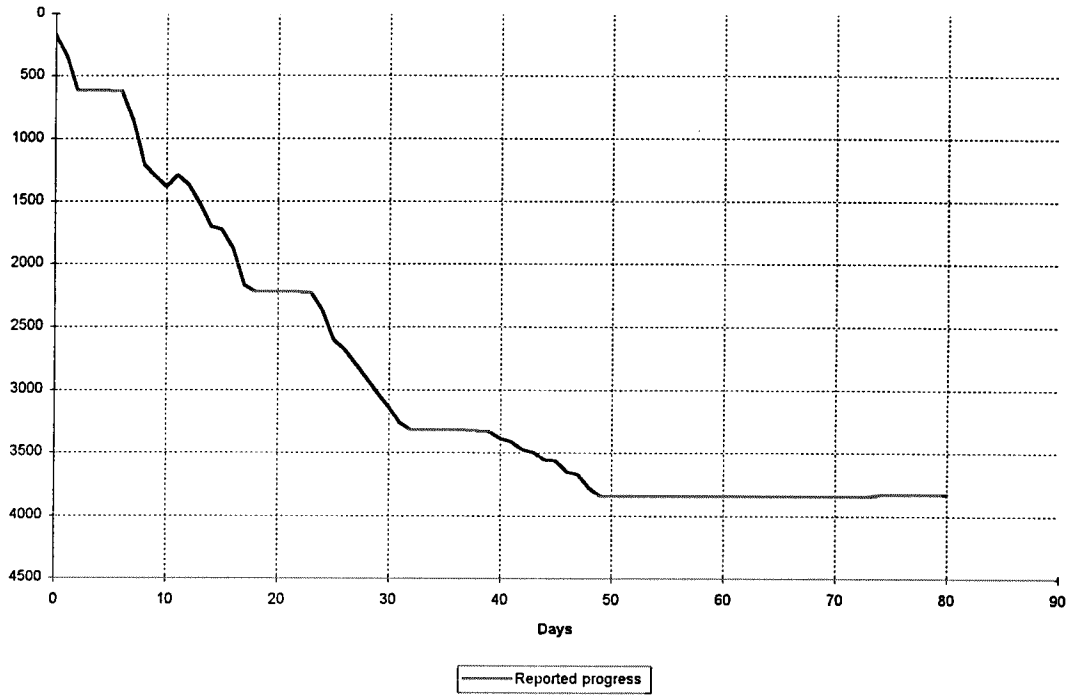
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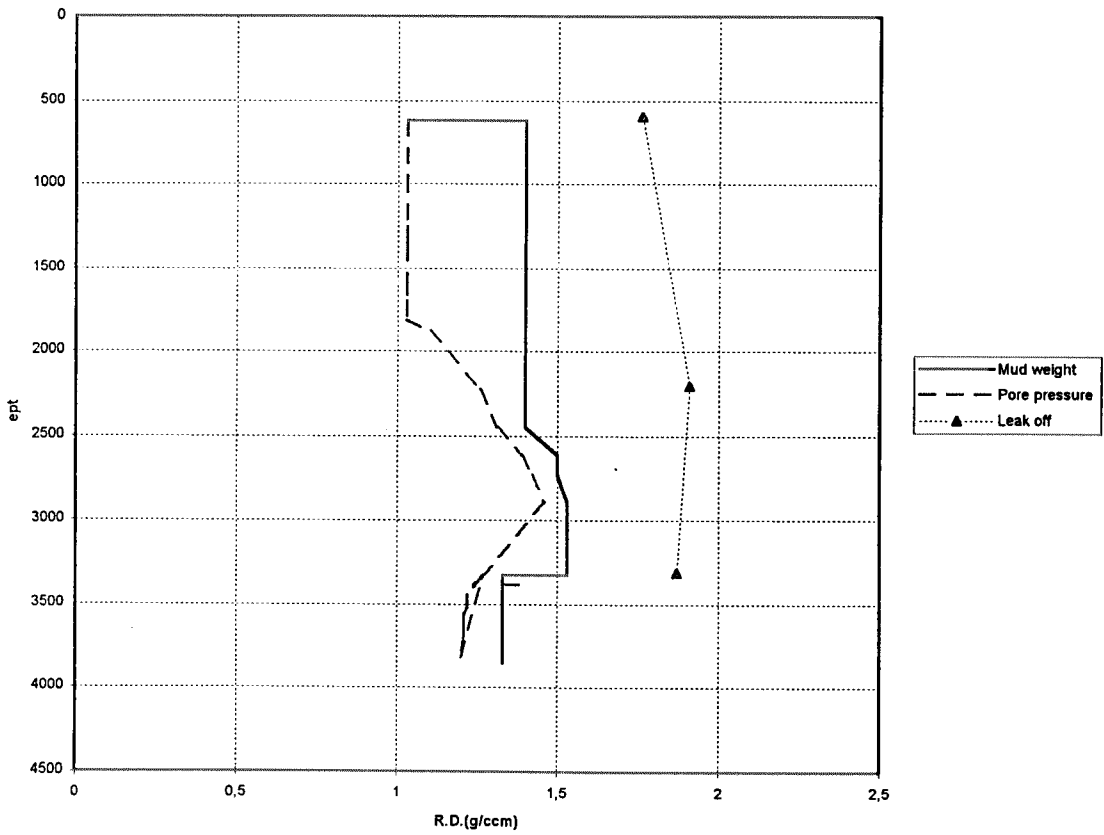
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DIFL BHC AC GR	3306.0 - 3844.0			
DLL MLL GR	3306.0 - 3676.0			
EWR DGR	168.0 - 3850.0			
FMT	3400.0 - 3673.0			
FORMATION EVALUATION	107.0 - 3848.0			
GR CCL	2930.0 - 3355.0			
SYNTH.SEISM.				
VERTICAL DEPTH	107.0 - 3848.0			

Depth v.s. time plot for well: 15/12-9 S



Composite plot for well: 15/12-9 S



Main operations for well: 15/12-9 S

Main operation: DRILLING

Sub operation:	Minutes:	Hours:	% of total:
BOP ACTIVITIES	1350	22,5	2,20
BOP/WELLHEAD EQ	2790	46,5	4,55
CASING	16320	272,0	26,64
CIRC/COND	1140	19,0	1,86
DRILL	20400	340,0	33,30
HOLE OPEN	1260	21,0	2,06
REAM	3720	62,0	6,07
SURVEY	930	15,5	1,52
TRIP	13350	222,5	21,79
Total	61260	1021,0	100,00

Main operation: FORMATION EVAL

Sub operation:	Minutes:	Hours:	% of total:
CIRC SAMPLES	360	6,0	1,02
CIRC/COND	1650	27,5	4,68
CORE	2280	38,0	6,47
DST	17790	296,5	50,47
LOG	5940	99,0	16,85
OTHER	690	11,5	1,96
RFT/FIT	330	5,5	0,94
TRIP	6210	103,5	17,62
Total	35250	587,5	100,00

Main operation: INTERRUPTION

Sub operation:	Minutes:	Hours:	% of total:
FISH	2100	35,0	22,36
MAINTAIN/REP	5580	93,0	59,42
OTHER	540	9,0	5,75
WAIT	1080	18,0	11,50
WELL CONTROL	90	1,5	0,96
Total	9390	156,5	100,00

Main operation: MOVING

Sub operation:	Minutes:	Hours:	% of total:
ANCHOR	930	15,5	25,62
TRANSIT	2700	45,0	74,38
Total	3630	60,5	100,00

Main operation: PLUG & ABANDON

Sub operation:	Minutes:	Hours:	% of total:
CEMENT PLUG	120	2,0	1,49
CIRC/COND	540	9,0	6,69
EQUIP RECOVERY	240	4,0	2,97
OTHER	3570	59,5	44,24
SQUEEZE	690	11,5	8,55
TRIP	2910	48,5	36,06
Total	8070	134,5	100,00

Total time used: Hours

WELL HISTORY 15/12 –9 S

GENERAL:

The main objective for the appraisal Well 15/12 –9 S was to reduce the uncertainty in the reserve estimate for the structure and prove sufficient reserves in the southern part of the discovery for further development.

Secondary objectives were to:

- Determine top of the Salt
- Calibrate the seismic
- Improve the reservoir knowledge by complete reservoir coring
- Test reservoir continuity.
- Perform a water test to obtain water samples
- Collect PVT-fluid data from the southern part of the field

OPERATION:

Appraisal Well 15/12 –9 S was spudded 17 July 1992 by the rig "Deepsea Bergen" and completed 5 September 1992 at a depth of 3848m RKB in rocks of Triassic age. The well proved hydrocarbon in Jurassic sandstone.

The well was temporarily plugged and abandoned as a future oil producing oil producer.

TESTING:

Two DST tests were performed in well 15/12 –9 S.

Geological Tops.

Well: 15/12-9 S

Depth m (RKB).

Nordland Group	107.0
Utsira Fm	1358.0
Hordaland Group	1400.0
Rogaland Group	2930.0
Balder Fm	2930.0
Sele Fm	2945.0
Lista Fm	3005.0
Våle Fm	3082.0
Shetland Group	3091.0
Tor Fm	3091.0
Hod Fm	3187.0
Blodøks Fm	3260.0
Cromer Knoll Group	3295.0
Viking Group	3304.0
Draupne Fm	3304.0
Heather Fm	3320.0
Vestland Group	3385.0
Oxfordian Sst	3385.0
Sleipner Fm	3620.0
Triassic	3688.0
Skagerrak Fm	3688.0
T.D.	3848.0