

Well no : 15/ 3-04 Operator : ELF

Coordinates : 58 49 05.28 N UTM coord. : 6520488 N
01 52 59.82 E 435502 E

Licence no : 025 Permit no : 304

Rig : BORGSTEN DOLPHIN

Contractor : DOLPHIN SERVICES A/S

Bottom hole temperature : 124 deg.C Elev. KB : 25 M

Spud. date : 81.10.03 Water depth : 107 M

Compl. date : 82.03.30 Total depth : 4259 M

Spud. class : WILDCAT Form. at TD : TRIASSIC

Compl. class : P&A. OIL/GAS DISC. Prod. form :

Seisloca : 783 402 SP 490

LICENSEES

 43,600 ELF AQUITAINE NORGE A/S
 19,600 NORSK HYDRO PRODUKSJON A.S
 15,000 NORSKE HUBBAY A/S
 21,800 TOTAL MARINE NORSK A.S

CASING AND LEAK-OFF TESTS

Type	Casing diam.	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm
CONDUCTOR	30	192,0	36	192,0	
SURF.COND.	20	921,0	26	937,0	1,45
INTERM.	13 3/8	2818,0	17 1/2	2833,0	1,78
INTERM.	9 5/8	3681,0	12 1/4	3700,0	2,05
LINER	7	3946,0	8 1/2	3948,0	2,07
OPEN HOLE			5 7/8	4259,0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	1678.0 - 1696.0	5.0	27.8	JURASSIC
2	3792.0 - 3795.6	3.6	100.0	JURASSIC
3	3796.0 - 3813.0	11.0	64.7	JURASSIC
4	3813.0 - 3821.1	8.1	100.0	JURASSIC
5	3821.0 - 3839.3	18.3	100.0	JURASSIC

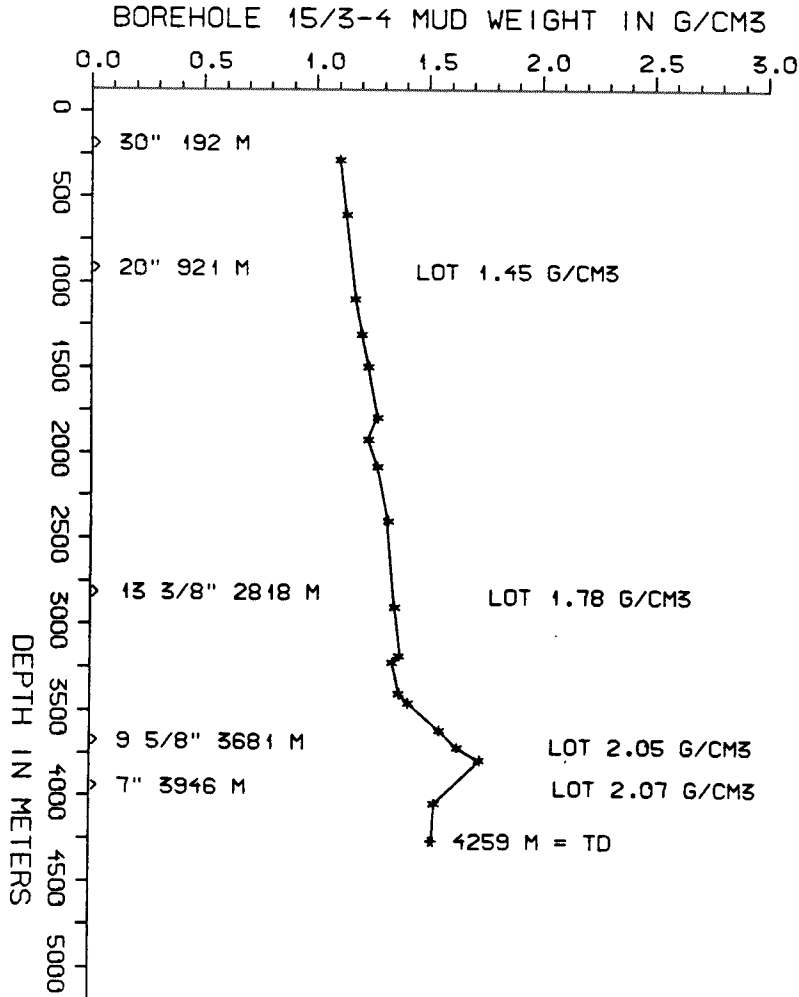
DRILL STEM TEST									
TEST NO	DEPTH BELOW KB	CHOKE SIZE mm	RECOVERY					PRESS. (psi)	
			OIL Sm3 /d	GAS M Sm3 /d	OIL GRAV. g/cm3	GAS GRAV. rel. air	GOR m3/m3	FSIP	WHP
			1	3789 - 3807	15.8	615	245.2		

AVAILABLE LOGS				
LOG TYPE	INTERVALS	1/200	1/500	
ISF SONIC GR	118 - 934	x	x	
ISF SONIC	921 - 2831	x	x	
ISF SONIC	2819 - 3708	x	x	
ISF BHC	3682 - 3838	x	x	
ISF BHC	3682 - 3949	x	x	
ISF SONIC	3948 - 4098	x	x	
BHC SONIC	3948 - 4094	x	x	
LDL	192 - 931	x	x	
LDL CNL	921 - 2825	x	x	
LDL CNL	2819 - 3702	x	x	
LDL CNL	3682 - 3838	x	x	
LDL CNL	3682 - 3949	x	x	
LDL CNL	3940 - 4096	x	x	
DLL MSFL	3682 - 3949	x	x	
DLL MSFL	3682 - 3935	x	x	
CDM	2819 - 3706	x		
CDM	3682 - 3949	x		
CDM	3948 - 4095	x		
CDM AP	2821 - 3706	x	x	
CDM AP	3683 - 3950	x	x	
CDM AP	3949 - 4095	x	x	
RFT	3682 - 3930	x		
RFT	3682 - 3930	x		
NGS	3682 - 3946	x		
BGS	921 - 2823	x	x	
FIT	3823 - 3874	x		
SIDEWALL CORE SAMP.	2850 - 3700	x		
DIRECTIONAL SURVEY	2819 - 3706			HORIZ.SCALE 0.3 M/CM,
DIRECTIONAL SURVEY	3683 - 3950			HORIZ.SCALE 0.5 M/CM,
DIRECTIONAL SURVEY	3948 - 4095			HORIZ.SCALE 0.8 M/CM,
CBL VDL (run:1,4)	175 - 3430	x		(run:1. 175m - 2819m)
CBL VDL (run:2,3)	3382 - 3944	x		(run:2.2400m - 3430m)
MUD	194 - 4258		x	(run:3.3382m - 3682m)
VELOCITY	132 - 4094	1:1000	x	(run:4.3436m - 3944m)
(Air Gun Well Velocity Survey & C.L.D. 1stk)				
(Synthetic Seismogram Marine, 5-10 cm/s, 2stk)				
(Synthetic Seismogram, b/p-w/t, 5-10 cm/s, 4stk)				
(Two Way Travel Time, 5-10 cm/s, 2stk)				

MUD PROPERTIES			
DEPTH BELOW KB m	WEIGHT g/cm3	FUNNEL VISC. sec	FILTRATE LOSS cm3
220	1.07	66	
540	1.10	65	
1030	1.14	44	
1240	1.17	45	
1430	1.20	45	
1730	1.24	58	
1860	1.20	53	
2020	1.24	75	
2300	1.22	80	
2330	1.29	65	
2830	1.32	60	
3110	1.34	54	
3150	1.31	54	
3330	1.34	54	
3380	1.38	54	
3405	1.40	54	
3435	1.44	54	
3540	1.52	54	
3570	1.49	54	
3615	1.55	54	
3640	1.60	54	
3715	1.70	58	
3970	1.50	58	

DRILL BIT CUTTINGS AND WET SAMPLES		
SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS	210 - 4250	325
WET SAMPLES	210 - 3844	529

SHALLOW GAS	
DEPTH INTERVAL m KB	REMARKS
	NONE



WELL HISTORY - 15/3-4

GENERAL :

The well 15/3-4 was drilled to test the hydrocarbon potential of the Jurassic and Middle Jurassic formations. The secondary target was the Eocene sands. The latter were found waterbearing. Hydrocarbons were found in the sandstones of Middle Jurassic age.

OPERATIONS :

The well was spudded 03.10.81 by the drilling rig "Borgsten Dolphin". 1 core was taken in the 17 1/2" section. After the 13 3/8" casing had been cemented a 13 day interruption occurred due to repairs on the BOP stack and bad weather. 4 cores were taken in the 12 1/4" section. The 7" liner was set and a 5 7/8" hole was drilled to 4258.5 m. When running in hole the drillstring got stuck. This led to a premature plugging at 3840 m.

TESTING :

3 RFT and 1 DST were performed on this well. 7.4 % CO₂ was measured during this test.

GEOLOGICAL TOPS

WELL: 15/3-4

	Depth m (RKB)
<i>Nordland Group</i>	132 m
<i>Hordaland Group</i>	1635 m
<i>Rogaland Group</i>	2258 m
<i>Balder Fm</i>	2258 m
<i>Chalk Group</i>	2621 m
<i>Ekofisk Fm</i>	2621 m
<i>Tor Fm</i>	2720 m
<i>Hod Fm</i>	3017 m
<i>Plenus Marl Fm</i>	3263 - 3323 m
<i>Hidra Fm</i>	3390 m
<i>Cromer Knoll Group</i>	3526 m
<i>Valhall Fm</i>	3526 m
<i>Viking Group</i>	3675 m
<i>Kimmeridge Clay Fm</i>	3675 m
<i>Heather Fm</i>	3742 m
<i>Brent Group</i>	3786 m
<i>Triassic Group</i>	3953 m
<i>Skagerak Fm</i>	4044 m

TD = 4259 m