

Well no : 30/ 6-07 Operator : HYDRO

Coordinates : 60 38 39.49 N UTM coord. : 6723353 N
 02 45 21.74 E 486657 E

Licence no : 053 Permit no : 329

Rig : NORTRYM

Contractor : GOLAR-NOR OFFSHORE A/S

Bottom hole temperature : 107 deg.C Elev. KB : 25 M

Spud. date : 82.05.28 Water depth : 114 M

Compl. date : 82.08.24 Total depth : 3236 M

Spud. class : APPRAISAL Form. at TD : JURASSIC

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

Seisloca : 8006 - 137 SP 589

LICENSEES

13,330 ELF AQUITAINE NORGE A/S
 12,500 NORSK HYDRO PRODUKSJON A.S
 10,000 MOBIL DEVELOPMENT NORWAY A/S
 7,500 SAGA PETROLEUM A.S
 50,000 DEN NORSKE STATS OLJESELSKAP A.S
 6,670 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	227,0	36	227,5	
SURF.COND.	20	952,0	26	965,0	1,62
INTERM.	13 3/8	2285,0	17 1/2	1787,0	1,78
INTERM.	9 5/8	2900,0	12 1/4	2916,0	1,75
OPEN HOLE			8 3/8	3236,0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery M %	Series
1	2648.0 - 2666.1	18.1 100.0	M. JURASSIC
2	2666.1 - 2679.5	8.9 66.4	M. JURASSIC
3	2679.5 - 2692.1	12.6 100.0	M. JURASSIC
4	2692.1 - 2694.0	1.5 78.9	M. JURASSIC
5	2694.0 - 2707.0	11.0 84.6	M. JURASSIC
6	2707.0 - 2720.0	12.4 95.4	M. JURASSIC
7	2720.0 - 2730.0	10.0 100.0	M. JURASSIC
8	2733.0 - 2751.0	17.0 94.4	M. JURASSIC
9	2751.0 - 2762.0	10.3 93.6	M. JURASSIC
10	2762.0 - 2780.0	18.0 100.0	M. JURASSIC
11	2780.0 - 2793.5	13.5 100.0	M. JURASSIC
12	2793.5 - 2812.0	18.5 100.0	E. 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	FFP
1	2729 - 2736	31.75	770	WATER					3930
2	2711 - 2716	22.23	1028	116	0.850	0.72	113		3271
3	2681 - 2684	12.70	534	65	0.835	0.70	122		4085
4	2637 - 2639	19.05	1339	146	0.853	0.70	109		3673

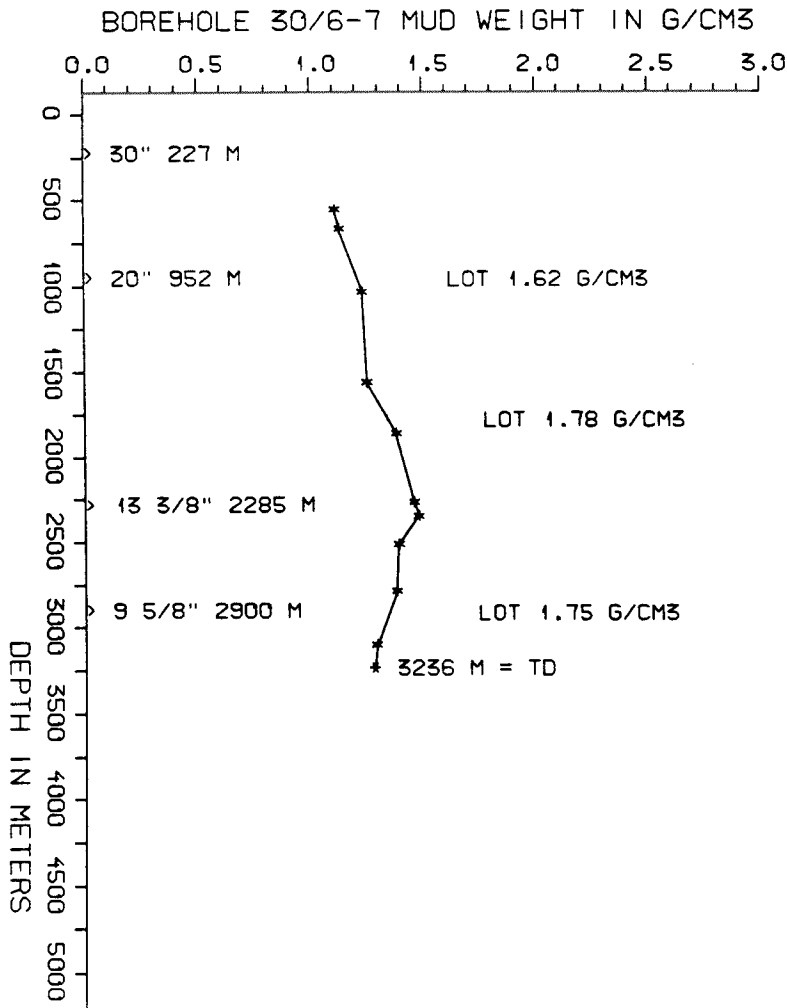
AVAILABLE LOGS			
LOG TYPE	INTERVALS	1/200	1/500
DIFL BHC AC GR	137 - 961	x	
DIFL BHC AC	940 - 2445	x	
DIFL BHC AC	2400 - 2908	x	
DIFL BHC AC	2575 - 3235	x	
DIFL BHC AC	137 - 3235		x
CDL CNL	940 - 2443	x	
CDL CNL	2400 - 2907	x	
CDL CNL	2860 - 3232	x	
CDL CNL	940 - 3232		x
DLL MLL	2600 - 2908	x	x
CDM	2000 - 2438	x	
CDM	2400 - 2908	x	
CDM	2890 - 3232	x	
CDM AP	2000 - 2438	x	x
CDM AP	2400 - 2908	x	x
FMT (TEST 1-21)	2633 - 2696		x
FMT (TEST 22-43)	2675 - 2695		x
FMT			x
FMT			x
FMT			x
COLLAR	2500 - 2908		x
CBL	130 - 2928	x	x
VELOCITY (S.C.L.)	137 - 3233		x

(Geogram Synthetic Seismogram, 10 cm/s,
n/r pol., m/z phase, 2stk)

MUD PROPERTIES			
DEPTH BELOW KB m	WEIGHT g/cm ³	FUNNEL VISC. sec	FILTRATE LOSS cm ³
490	1.08	46	
600	1.10	28	
970	1.20	38	
1495	1.22	42	
1795	1.35	60	
2200	1.43	69	
2285	1.45	72	
2450	1.36	62	
2720	1.35	45	
3035	1.26	49	
3120	1.27	67	
3210	1.26	58	

DRILL BIT CUTTINGS AND WET SAMPLES		
SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS	220 - 2445	250
WET SAMPLES	230 - 3237	540

SHALLOW GAS	
DEPTH INTERVAL m KB	REMARKS
	NONE ON LOGS, HIGH GAS READING AROUND 350m



WELL HISTORY - 30/6-7

GENERAL :

The primary objective of this well was to test for hydrocarbon accumulations in the Late Jurassic sandstones of the Brent formation in the Alpha-north structure of block 30/6. Secondary objectives were to locate further hydrocarbon accumulations in the Late and Early Jurassic sandstones of the Dunlin and Statfjord formations.

OPERATIONS :

The well spudded 28.05.82 by the drilling rig "Nortrym". The 26" section was initiated by a 17 1/2" pilot hole. One small pocket of shallow gas was detected at 358 m (5.6% C₁). The 17 1/2" section was drilled to 2447 m after encountering several tight spots. While running the 13 3/8" casing a malfunction of the clutch caused the abandonment of this operation. After solving the problem, the casing was found to be stuck at 2285 m - thus the casing was set at this depth. 12 cores were taken in the 12 1/4" section.

TESTING :

Four DST's were performed on this well. DST no. 1 consisted of a 378 min. flow and a 612 min. build-up before injecting for 792 min. with a fall-off period of 1098 minutes. DST no. 2 consisted of 6 min. initial flow followed by an initial build-up of 66 minutes. The main flow period lasted 774 min. and the main build-up lasted 1452 min. 2 sets of separator recombination- and 4 bottom hole samples were obtained during this test. DST no. 3 consisted an initial flow and build-up of 6 and 240 min. followed by a main flow and build-up of 522 and 690 min. 2 sets of separator recombination samples were obtained. DST no. 4 consisted of an initial flow and build-up of 6 and 72 min. followed by a main flow and build-up of 720 and 1074 min. A formation stability test flow was performed (342 min.) followed by a final build-up of 204 min. Two separator samples and five bottom hole samples were obtained during this test. Maximum CO₂ on the tests was measured to 1%. H₂S was not encountered. Four samples were also recovered from FMT runs.

GEOLOGICAL TOPS

WELL: 30/6-7

	Depth m (RKB)
Nordland Group	139 m
Utsira Fm	704 m
Hordaland Group	893 m
Rogaland Group	2009,5 m
Balder Fm	2009,5 m
Sele Fm	2083 m
Lista Fm	2192 m
Montrose Group	2272 m
Maureen Fm Equiv.	2272 m
Shetland Group	2290 m
Viking Group	2560 m
Heather Fm	2560 m
Brent Group	2631,5 m
Tarbert Fm	2631,5 m
Ness Group	2647 m
Rannoch Fm / Etive Fm	2728 m
Dunlin Group	2786 m
Drake Fm	2786 m
Cook Fm	2975 m
Burton Fm	3023 m
Amundsen Fm	3092 m
Statfjord Fm	3152 m
	<u>TD = 3236 m</u>