

Well no : 30/ 6-13 Operator : HYDRO

Coordinates : 60 33 14.59 N UTM coord. : 6713288 N
 02 49 21.76 E 490276 E

Licence no : 053 Permit no : 366

Rig : TREASURE SEEKER Rig type : SEMI-SUB.

Contractor : WILHELMSSEN OFFSHORE SERVICES

Bottom hole temperature : 68 deg.C Elev. KB : 25 M

Spud.-date : 83.03.11 Water depth : 105 M

Compl. date : 83.05.14 Total depth : 2775 M

Spud. class : APPRAISAL Form. at TD : L.JURASSIC

Compl. class : SUSP. OIL/GAS DISC. Prod. form :

Seisloca : 36 M SW OF SP 490 ON LINE 703 127

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/cm3
CONDUCTOR	30	217,0	36	222,0	
SURF.COND.	20	600,0	26	613,0	1,46
INTERM.	13 3/8	1705,0	17 1/2	1725,0	1,72
INTERM.	9 5/8	2762,0	12 1/4	2775,0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery M	%	Series
1	2584.0 - 2599.9	15.5	97.5	MIDDLE JURASSIC
2	2599.9 - 2616.5	16.5	99.4	MIDDLE JURASSIC
3	2616.5 - 2621.0	3.1	68.9	MIDDLE JURASSIC
4	2623.0 - 2639.0	6.1	38.1	MIDDLE JURASSIC
5	2639.0 - 2642.0	0.0	0.0	MIDDLE JURASSIC
6	2642.0 - 2646.0	3.6	90.0	MIDDLE JURASSIC
7	2646.0 - 2654.9	8.9	100.0	MIDDLE JURASSIC
8	2654.9 - 2669.0	5.7	40.4	MIDDLE JURASSIC
9	2669.0 - 2673.0	3.3	82.5	MIDDLE JURASSIC

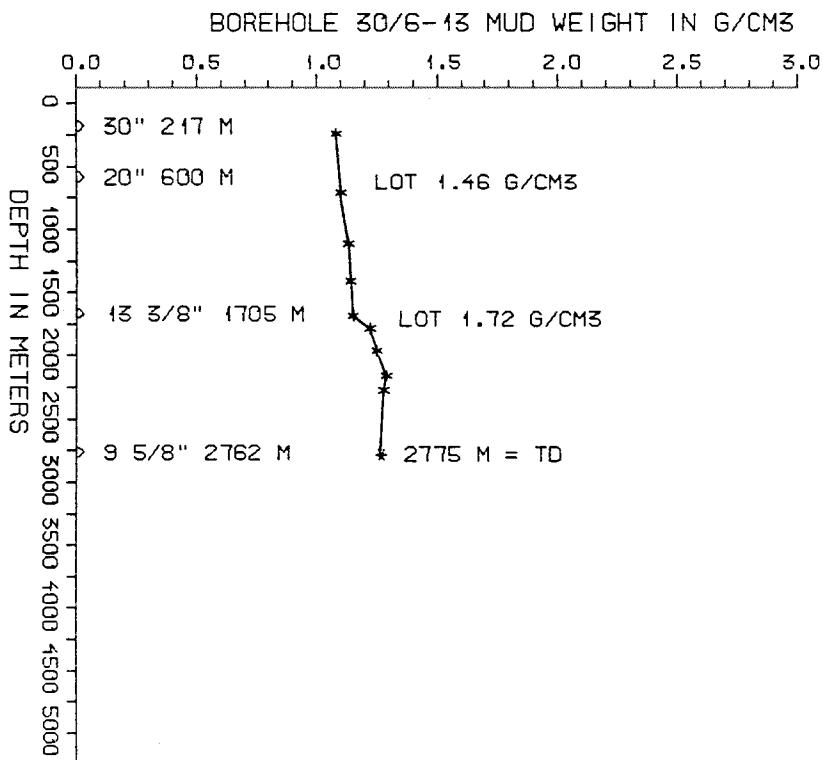
DRILL STEM TEST									
TEST NO	DEPTH BELOW KB	CHOKE SIZE mm	RECOVERY					PRESS. (psi)	
			OIL Sm ³ /d	GAS M Sm ³ /d	OIL GRAV. g/cm ³	GAS GRAV. rel. air	GOR m ³ /m ³	FSIP	WHP
1	2640 - 2650	11.11	450	57.766	0.852	0.680	128		1639
2	2596 - 2601	11.11	423	43.608	0.852	0.680	102		1581
3	2573 - 2580	11.11	428	42.192	0.847	0.680	98.5		1552

AVAILABLE LOGS			
LOG TYPE	INTERVALS	1/200	1/500
ISF LSS GR	600 - 1698	X	
ISF LSS	1700 - 2778	X	
ISF LSS GR	600 - 2779		X
LDL	600 - 1699	X	
LDL CNL	1703 - 2779	X	
LDL CNL	600 - 2779		X
DLL MSFL	2260 - 2700	X	X
SHDT/STRATIGRAPHIC DIPM.	1980 - 2773	X	
CDM AP/STRATIGRAPHICAL			
DIPMETER COMPUTATION	1975 - 2249	X	
NGT SPECTRO	2250 - 2770	X	
EPT PCD	2550 - 2766	X	X
HRT/TEMP.	40 - 906	X	X
RFT STRAIN GAUGE PRETESTS		X	
RFT STRAIN GAUGE SAMPLE ATTEMPTS 1 - 4		X	
RFT HEWLETT PACKARD GAUGE	2290 - 2668	X	
RFT HP GAUGE SAMPLE ATT.	2290 - 2668	X	
DRILLING DATA PRESSURE	222 - 2775	1:5000	
TEMPERATURE DATA	222 - 2775	1:5000	
DXC NXB	222 - 2775	1:5000	
MUD	222 - 2775		X
VELOCITY (S.C.L.)	600 - 2778		X
(Geogram Synthetic Seismogram, rev./nor. pol, minimum phase,		3 stk)	
(SEISMIC log, 707-2780m,		1 stk)	

MUD PROPERTIES			
DEPTH BELOW KB m	WEIGHT g/cm ³	FUNNEL VISC. sec	FILTRATE LOSS cm ³
185	1.05	100	
610	1.07	40	
1085	1.10	39	
1330	1.11	35	
1640	1.12	33	
1720	1.19	39	
1860	1.22	35	
2100	1.26	36	
2210	1.25	36	
2300	1.25	36	
2420	1.25	40	
2510	1.25	40	
2600	1.25	38	
2775	1.25	38	

DRILL BIT CUTTINGS AND WET SAMPLES		
SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS	222 - 2775	320
WET SAMPLES	230 - 2775	528

SHALLOW GAS	
DEPTH INTERVAL m KB	REMARKS
	NONE



WELL HISTORY - 30/6-13

GENERAL:

The appraisal well 30/6-13 was drilled in a downflank position on the Alpha structure east of well 30/6-1 (see WDSS vol.10). The main objectives of the well was to confirm the reserves of hydrocarbons, to define and refine the geological model for the Alpha structure, to ascertain details of reservoir properties and fluid properties from the lower part of the oil zone, to confirm the current mapping and structural interpretation, to obtain cores from the Brent Group and to do a water injection test in the oil zone. The well encountered hydrocarbons in the Middle Jurassic Brent Group sandstones. No other hydrocarbon bearing reservoirs were encountered. Oilshows reported from Upper Cretaceous limestone stringers were considered uninteresting.

OPERATIONS:

The well was spudded 11.03.83 by the semi-submersible rig Treasure Seeker. A total of nine cores were cut continuously from the Ness Formation to the Dunlin Group shales. No major problems occurred during drilling. The well was drilled using waterbased mud.

TESTING:

Three DST's were performed. A combined production and injection test was performed in the Etive Formation and two production tests were done in the Ness/Tarbert Formation. All three produced oil and gas.

GEOLOGICAL TOPS
WELL 30/6-13

	Depth m (RKB)
Nordland Group	130,0
Utsira Fm	705,0
Hordaland Group	904,0
Rogaland Group	2035,5
Balder Fm	2035,5
Sele Fm	2090,5
Lista Fm	2164,0
Montrose Group	2260,0
Maureen Fm	2260,0
Shetland Group	2288,0
Cromer Knoll Group	2387,0
Viking Group	2400,5
Draupne Fm	2400,5
Heather Fm	2424,0
Brent Group	2571,0
Ness Fm	2571,0
Etive Fm	2628,0
Dunlin Group	2671,0
Drake Fm	2671,0
TD =	2775,0