

Well no : 6407/07-01S

Operator : HYDRO

Coordinates : 64 16 31.49 N
07 12 21.12 E

UTM coord. : 7129107 N
413114 E

Licence no : 107

Permit no : 486

Rig : POLAR PIONEER

Rig type : SEMI-SUB.

Contractor : POLAR FRONTIER DRILLING A/S

Bottom hole temperature : deg.C

Elev. KB : 23 M

Spud. date : 85.10.19

Water depth : 330 M

Compl. date : 86.04.07

Total depth : 3950 M

Spud. class : WILDCAT

Form. at TD : TRIASSIC ?

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

Prod. form : JURASSIC

Seisloca : HBGS 83 - 424 SP. 1568

LICENSEES

10.000000 NORSK AGIP A/S
20.000000 NORSK HYDRO PRODUKSJON A.S
20.000000 A/S NORSKE SHELL
50.000000 DEN NORSKE STATS OLJESELSKAP A.S

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	2713.0 - 2726.1	13.1	100.0	UPPER JURASSIC
2	2760.0 - 2770.7	10.7	90.0	MIDDLE JURASSIC
3	2772.0 - 2781.3	9.3	84.5	MIDDLE JURASSIC
4	2783.0 - 2804.0	18.8	89.5	LOWER JURASSIC
5	2804.0 - 2832.0	27.8	99.3	LOWER JURASSIC
6	2844.0 - 2854.8	10.8	100.0	LOWER JURASSIC
7	2871.0 - 2895.0	21.5	89.6	LOWER JURASSIC
8	2895.0 - 2923.0	27.8	99.3	LOWER JURASSIC
9	2923.0 - 2951.0	28.0	100.0	LOWER JURASSIC
10	2951.0 - 2970.0	19.0	100.0	LOWER JURASSIC
11	2970.0 - 2988.7	18.7	100.0	LOWER JURASSIC
12	2988.7 - 3013.5	24.6	99.2	LOWER JURASSIC
13	3013.3 - 3041.0	27.4	98.9	LOWER JURASSIC
14	3052.0 - 3060.2	8.2	100.0	LOWER JURASSIC
15	3063.0 - 3083.7	20.7	100.0	LOWER JURASSIC
16	3090.5 - 3118.0	27.5	100.0	LOWER JURASSIC

MUD PROPERTIES

Depth below KB meter	Mud weigh g/cm3	Viscosity	Mud type
375.000	1.04	0.0	WATER BASED
594.000	1.10	0.0	WATER BASED
945.000	1.06	0.0	WATER BASED
1172.000	1.07	0.0	WATER BASED
1172.000	1.10	0.0	WATER BASED
1172.000	1.16	0.0	WATER BASED

1172.000	1.20	20.0	WATER BASED
1368.000	1.21	22.0	WATER BASED
1411.000	1.30	22.0	WATER BASED
1652.000	1.60	32.0	WATER BASED
1687.000	1.65	30.0	WATER BASED
1917.000	1.68	31.0	WATER BASED
2284.000	1.71	30.0	WATER BASED
2388.000	1.63	34.0	WATER BASED
2506.000	1.65	28.0	WATER BASED
2713.000	1.44	19.0	WATER BASED
2727.000	1.38	17.0	WATER BASED
2728.000	1.47	28.0	WATER BASED
2728.000	1.46	12.0	WATER BASED
2832.000	1.38	17.0	WATER BASED
2833.000	1.54	5.0	BRINE
2833.000	1.49	5.0	BRINE
2836.000	1.38	16.0	WATER BASED
2923.000	1.55	18.0	WATER BASED
2935.000	1.54	5.0	BRINE
3016.000	1.55	5.0	BRINE
3016.000	1.56	5.0	BRINE
3016.000	1.54	5.0	BRINE
3090.000	1.55	19.0	WATER BASED
3094.000	1.49	5.0	BRINE
3094.000	1.58	5.0	BRINE
3094.000	1.57	5.0	BRINE
3094.000	1.58	5.0	BRINE
3094.000	1.56	5.0	BRINE
3094.000	1.55	5.0	BRINE
3118.000	1.51	24.0	WATER BASED
3755.000	1.49	16.0	WATER BASED
3755.000	1.50	16.0	WATER BASED
3755.000	1.49	16.0	WATER BASED
3755.000	1.50	15.0	WATER BASED
3758.000	1.49	13.0	WATER BASED

DRILL STEM TEST

----- INTERVALS AND PRESSURES

Test no.	interval meter	Choke size	Pressure (PSI)		
			WHP	BTHP	FFP
1.0	3099.500 - 3113.500 Test temperature: 114 °C	25.4	14.5	5944.9	4496.0
2.0	3022.900 - 3034.400 Test temperature: 116.9 °C	25.4	68.2	5840.8	832.5
3.0	2946.500 - 2973.000 Test temperature: 115 °C	12.7	2648.3	5754.8	5470.3
4.0	2840.000 - 2886.000 Test temperature: 109 °C	12.7	2669.9	5675.6	5370.6
5.0	2758.000 - 2781.000 Test temperature: 112 °C	25.4	790.4	5334.7	2944.2

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	0	0	0.000	0.000	0
2.0	85	19350	0.832	0.800	229

3.0	708	147100	0.824	0.707	208
4.0	714	147800	0.825	0.693	202
5.0	773	169900	0.823	0.732	220

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	420-3950	500
Wet Samples	420-3950	460

SHALLOW GAS

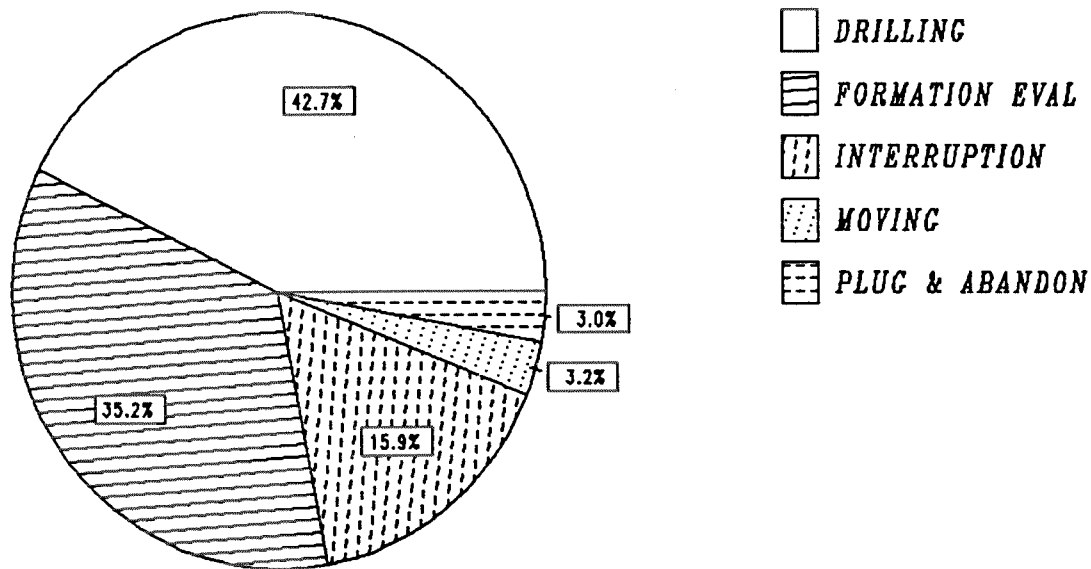
Interval below KB	REMARKS
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AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
DIS LSS GR	350.000 - 3951.000	X	X	
LDL CNL GR	420.000 - 3936.000	X	X	
DLL MSFL GR	1851.000 - 2707.000	X	X	
DLL MSFL LSS	2703.000 - 3011.000	X	X	
DLL MSFL LSS	2955.000 - 3748.000	X	X	
CDM AP/MSD SHDT	1884.000 - 3940.000	X	X	
SHDT BORE HOLE	2703.000 - 3752.000	X		
SHDT FAST CHANELS	2703.000 - 3752.000	X		
SHDT GR	3724.000 - 3940.000	X		
HP GAUGE	2002.000 - 2989.000			
STRAIN GAUGE	2002.000 - 3234.000			
NGT RATIOS	2675.000 - 3011.000	X		
NGT RATIOS	2960.000 - 3752.000	X		
CBL VDL GR	500.000 - 1891.000	X		
CBL VDL GR	1600.000 - 2704.000	X		
CBL VDL GR	2400.000 - 3733.000	X		
CBL VDL GR	2720.000 - 3007.500	X		
PRESSURE PARAMETER	350.000 - 3950.000			1:5000
TEMP. DATA LOG	445.000 - 3950.000			1:5000
DRILL DATA PRESS. LOG	360.000 - 3950.000			1:5000
WIRELINE DATA	440.000 - 3950.000			1:5000
MUD	353.000 - 3950.000			X
VELOCITY LOG	442.000 - 3942.000			X
(Geogram, synthetic seismogram. Plot 3-8				6 stk.)
(Two-way travel time, 3.75 + 10cm/s				2 stk.)
(VSP. Walkway				46 stk.)

DAILY DRILLING REPORT SYSTEM

Main operations for well : 6407/07 -01 S



Total : 4032.00 hours

Main operation	Minutes	Hours	% of total
DRILLING	103305	1721.75	42.70
FORMATION EVAL	85140	1419.00	35.19
INTERRUPTION	38535	642.25	15.93
MOVING	7695	128.25	3.18
PLUG & ABANDON	7245	120.75	2.99

MAIN OPERATIONS FOR WELL : 6407 / 07 - 01 S

MAIN OPERATION : DRILLING

Sub operations	Minutes	Hrs	% of total
BOP ACTIVITIES	10590	176.50	10.25
BOP/WELLHEAD EQ	2805	46.75	2.72
CASING	16395	273.25	15.87
CIRC/COND	2640	44.00	2.56
DRILL	31635	527.25	30.62
OTHER	780	13.00	0.76
PRESS DETECTION	615	10.25	0.60
REAM	1455	24.25	1.41
SURVEY	720	12.00	0.70
TRIP	31950	532.50	30.93
UNDERREAM	3720	62.00	3.60
Total	103305	1721.75	100.00

MAIN OPERATION : FORMATION EVAL

Sub operations	Minutes	Hrs	% of total
CIRC SAMPLES	210	3.50	0.25
CIRC/COND	1980	33.00	2.33
CORE	5490	91.50	6.45
DST	48060	801.00	56.45
LOG	13155	219.25	15.45
OTHER	405	6.75	0.48
RFT/FIT	1245	20.75	1.46
TRIP	13590	226.50	15.96
WAIT	1005	16.75	1.18
Total	85140	1419.00	100.00

MAIN OPERATION : INTERRUPTION

Sub operations	Minutes	Hrs	% of total
FISH	7305	121.75	18.96
MAINTAIN/REP	22065	367.75	57.26
OTHER	2595	43.25	6.73
WAIT	5355	89.25	13.90
WELL CONTROL	1215	20.25	3.15
Total	38535	642.25	100.00

MAIN OPERATION : MOVING

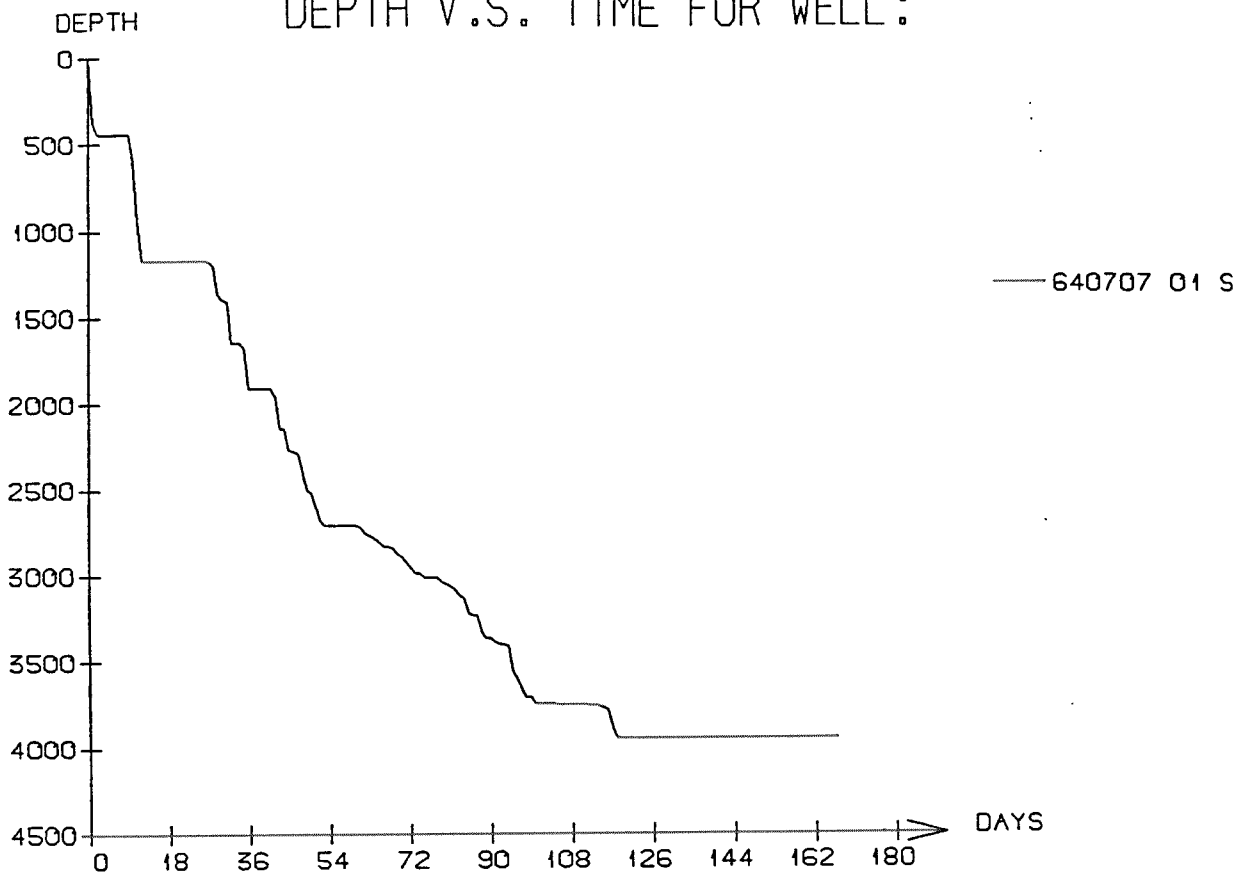
Sub operations	Minutes	Hrs	% of total
ANCHOR	4305	71.75	55.95
TRANSIT	3390	56.50	44.05
Total	7695	128.25	100.00

MAIN OPERATION : PLUG & ABANDON

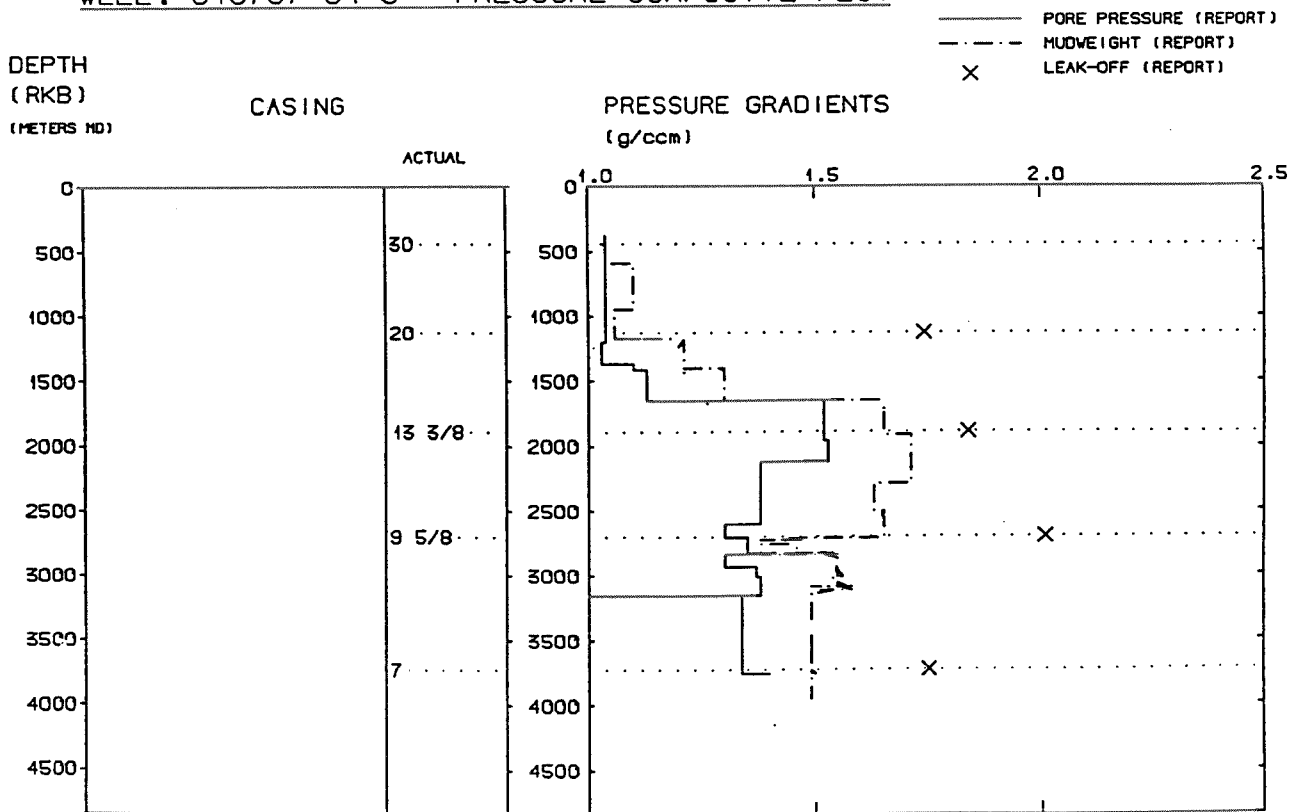
Sub operations	Minutes	Hrs	% of total
CEMENT PLUG	390	6.50	5.38
CIRC/COND	30	0.50	0.41
CUT	270	4.50	3.73
EQUIP RECOVERY	2520	42.00	34.78
OTHER	15	0.25	0.21
PERFORATE	750	12.50	10.35
SQUEEZE	90	1.50	1.24
TRIP	2220	37.00	30.64
WAIT	960	16.00	13.25
Total	7245	120.75	100.00

Total time used 4032.00 hrs

DEPTH V.S. TIME FOR WELL :



WELL: 640707 01 S PRESSURE COMPOSITE PLOT



Well History 6407/7-1 S

GENERAL:

Well 6407/7-1 S was the first well drilled on the A structure, located in the southern part of the block. It was designed to test the structural closure of the A structure. The main objectives were to test the hydrocarbon potential of the A structure, to establish confident estimates for hydrocarbon reserves in the structure and to penetrate the deep reflector which was interpreted to be the "Top Middle Triassic Evaporite reflector". In addition, the well was drilled to obtain reservoir data from the Middle and Early Jurassic reservoir sandstones and to establish a better stratigraphical/sedimentological and structural knowledge of the area. The prognosed depth was 4025 m.

OPERATIONS:

Wildcat well 6407/7-1 S was spudded 19 October 1985 by Polar Frontier Drilling A/S semi-submersible rig Polar Pioneer and completed 7 April 1986 at a depth of 3950 m RKB in Triassic claystones. Drilling proceeded without significant problems.

16 cores were cut in the interval 2713 - 3118 m. The top of the reservoir came in at 2758 m, 71,5 m higher up than prognosed. The oil/water contact is defined from the logs to be between 3003 and 3082,5 m.

RFT-data indicates an oil/water contact between 3016 and 3020 m.

The well is plugged and abandoned as an oil and gas discovery.

TESTING:

5 DST tests were performed in this well. They were performed in the interval 2758 - 3113 m.

GEOLOGICAL TOPS

WELL: 6407/7-1 S

Depth m (RKB)

<i>Nordland Group</i>	353.0
<i>Naust Fm.</i>	353.0
<i>Hordaland Group</i>	1081.0
<i>Brygge Fm.</i>	1081.0
<i>Rogaland Group</i>	1739.0
<i>Tang Fm.</i>	1739.0
<i>Shetland Group</i>	1971.0
<i>Cromer Knoll Group</i>	2682.0
<i>Viking Group</i>	2698.0
<i>Spekk Fm.</i>	2698.0
<i>Rogn Fm.</i>	2706.0
<i>Melke Fm.</i>	2713.0
<i>Fangst Group</i>	2759.0
<i>Garn Fm.</i>	2759.0
<i>Båt Group</i>	2773.0
<i>Ror Fm.</i>	2773.0
<i>Tilje Fm.</i>	2839.0
<i>Åre Fm.</i>	3017.0
<i>Triassic Group</i>	3177.0
<i>Grey Beds</i>	3177.0
<i>Red Beds</i>	3277.0
<i>T.D.</i>	3953.0