

Well no : 30/06-19

Operator : HYDRO

Coordinates : 60 42 58.03 N  
02 54 54.18 E UTM coord. : 6731330 N  
495364 E

Licence no : 53 Permit no : 511

Rig : POLAR PIONEER Rig type : SEMI-SUB.

Contractor : POLAR FRONTIER DRILLING A/S

Bottom hole temperature : deg.C Elev. KB : 23 M

Spud. date : 86.04.09 Water depth : 136 M

Compl. date : 86.06.21 Total depth : 3304 M

Spud. class : WILDCAT Form. at TD : E.JURASSIC

Compl. class : SUSPENDED. OIL/GAS Prod. form : M.JURASSIC

Seisloca : ST 8006 - 145 SP. 215

## LICENSEES

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10.667000 ELF AQUITAINE NORGE A/S  
 12.250000 NORSK HYDRO PRODUKSJON A.S  
 8.000000 MOBIL EXPLORATION NORWAY INC.  
 7.350000 SAGA PETROLEUM A.S.  
 56.400000 DEN NORSKE STATS OLJESELSKAP A.S  
 5.333000 TOTAL NORGE A.S

## CASING AND LEAK-OFF TESTS

Type	Casing diam.	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm <sup>3</sup>
SURF.COND.	20	602.0	26	729.0	1.39
INTERM.	13 3/8	1495.0	17 1/2	1589.0	1.76
INTERM.	9 5/8	2790.0	12 1/4	2804.0	1.68
LINER	7	3273.0	8 1/2	3301.0	.

## CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	2858.0 - 2886.0	28.0	100.0	
2	2886.0 - 2914.0	28.0	100.0	LOWER JURASSIC
3	2914.0 - 2942.0	28.0	100.0	LOWER JURASSIC
4	2942.0 - 2954.0	28.0	100.0	LOWER JURASSIC

## MUD PROPERTIES

Depth below KB meter	Mud weigh g/cm <sup>3</sup>	Viscosity	Mud type
563.000	1.05	10.0	WATER BASED
614.000	1.15	9.0	WATER BASED
614.000	1.05	16.0	WATER BASED
729.000	1.09	12.0	WATER BASED
1153.000	1.15	20.0	WATER BASED
1589.000	1.11	20.0	WATER BASED

1202.000	1.13	20.0	WATER BASED
1359.000	1.15	22.0	WATER BASED
1539.000	1.25	27.0	WATER BASED
2681.000	1.40	17.0	WATER BASED
2800.000	1.22	15.0	WATER BASED
2804.000	1.40	18.0	WATER BASED
2840.000	1.21	10.0	WATER BASED
2846.000	1.25	21.0	WATER BASED
2914.000	1.21	16.0	WATER BASED
2963.000	1.22	13.0	WATER BASED
3000.000	1.25	20.0	WATER BASED
3038.000	1.21	14.0	WATER BASED
3088.000	1.22	14.0	WATER BASED
3110.000	1.25	19.0	WATER BASED
3117.000	1.21	20.0	WATER BASED
3117.000	1.22	14.0	WATER BASED
3301.000	1.25	20.0	WATER BASED
2900.000	1.19	14.0	WATER BASED
2939.000	1.18	12.0	WATER BASED
2939.000	1.19	12.0	WATER BASED

### DRILL STEM TEST

#### INTERVALS AND PRESSURES

Test no.	interval meter	Choke size	Pressure (PSI)		
			WHP	BTHP	FFP
1.0	2945.000 - 2954.000 Test temperature: 124 °C	15.9	518.0	4692.0	3420.0
2.0	2907.000 - 2932.300 Test temperature: 122 °C	14.3	1251.0	4706.2	4264.0
3.0	2876.000 - 2884.000 Test temperature: 123 °C	20.6	631.0	4615.0	3408.0

#### RECOVERY

Test no.	Oil Sm <sup>3</sup> /d	Gas Sm <sup>3</sup> /d	Oil grav. g/cm <sup>3</sup>	Gas grav. rel. air	GOR m <sup>3</sup> /m <sup>3</sup>
1.0	564	26000	0.861	0.850	46
2.0	797	34000	0.833	0.780	52
3.0	668	25000	0.831	0.860	50

### DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	620-3300	550
Wet Samples	620-3300	600

### SHALLOW GAS

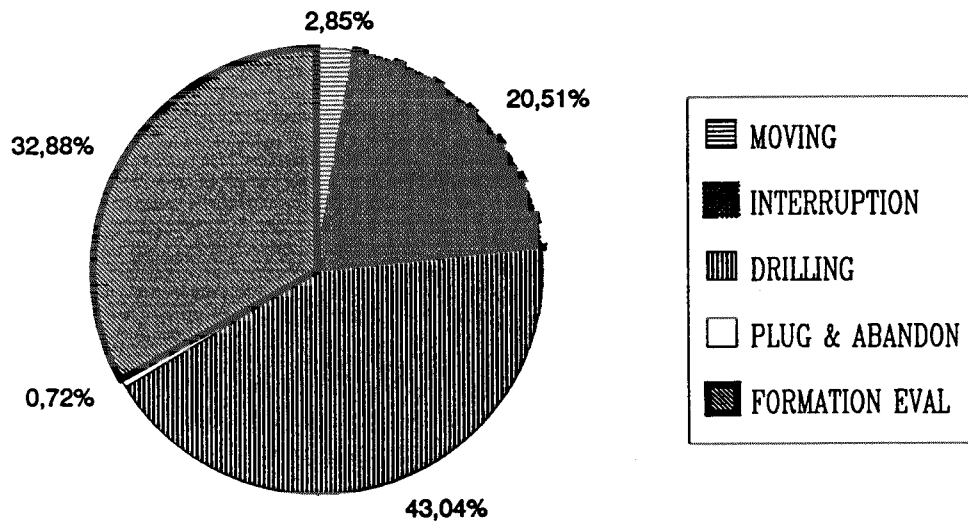
Interval below KB	REMARKS
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## AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
DIL LSS GR	602.000 - 1524.000	X	X	
DIL LSS GR	1493.000 - 2802.500	X	X	
DIL LSS	2790.000 - 3302.000	X	X	
DLL MSFL LSS GR	2790.000 - 2920.000	X	X	
DLL MSFL GR	2790.000 - 3065.000	X	X	
LDL	602.000 - 1523.000	X	X	
LDL CNL	1493.000 - 2803.000	X	X	
LDL CNL NGL	2790.000 - 2920.000	X	X	
LDL CNL NGT	2790.000 - 3302.000	X	X	
SHDT SLOW CHANNELS	1493.000 - 2804.000	X		
SHDT FAST CHANNELS	1493.000 - 2804.000	X		
SHDT SLOW CHANNELS	2790.000 - 3302.500	X		
SHDT FAST CHANNELS	2790.000 - 3302.000	X		
CDM AP/MSD SHDT	1900.000 - 2904.000	X		X
CDM AP/MSD SHDT	2790.000 - 3302.000	X		X
NGT	2782.000 - 2988.000	X		
NGT	2839.000 - 2916.000	X		
NGT RATIOS	2790.000 - 2920.000	X		
NGT RATIOS	2790.000 - 3065.000	X		X
HP GAUGE	2858.000 - 3282.000		1:100	
HP GAUGE	2858.000 - 3282.000		1:100	
HP GAUGE	2951.000 - 2954.000		1:100	
STRAIN GAUGE	2858.000 - 3282.000		1:100	
STRAIN GAUGE	2858.000 - 3282.000		1:100	
STRAIN GAUGE	2951.000 - 2954.000		1:100	
CBL VDL	335.000 - 1493.000	X		
CBL VDL	1327.000 - 2631.000	X		
CBL VDL	2632.000 - 2997.000	X		
VELOCITY LOG	602.000 - 3302.000		1:1000	X
(Geogram, synthetic seismogram, 10-20 cm/s			11 stk.)	

# DAILY DRILLING REPORT SYSTEM

Main operations for well: 0030/06-19



Total: 1800.00 hours

<i>Main operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
MOVING	3075	51,25	2,85
INTERRUPTION	22155	369,25	20,51
DRILLING	46485	774,75	43,04
PLUG & ABANDON	780	13,00	0,72
FORMATION EVAL	35505	591,75	32,88

MAIN OPERATIONS FOR WELL: 0030 / 06 - 19

MAIN OPERATION: MOVING

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
TRANSIT	2205	36,75	71,71
ANCHOR	870	14,50	28,29
Total	3075	51,25	100,00

MAIN OPERATION: DRILLING

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
TRIP	9795	163,25	21,07
DRILL	17700	295,00	38,08
CIRC/COND	1215	20,25	2,61
CASING	8775	146,25	18,88
HOLE OPEN	885	14,75	1,90
BOP/WELLHEAD EQ	1695	28,25	3,65
BOP ACTIVITIES	3645	60,75	7,84
OTHER	180	3,00	0,39
SURVEY	1545	25,75	3,32
PRESS DETECTION	120	2,00	0,26
REAM	930	15,50	2,00
Total	46485	774,75	100,00

MAIN OPERATION: INTERRUPTION

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
OTHER	210	3,50	0,95
MAINTAIN/REP	4425	73,75	19,97
FISH	7215	120,25	32,57
SIDETRACK	10245	170,75	46,24
WAIT	60	1,00	0,27
Total	22155	369,25	100,00

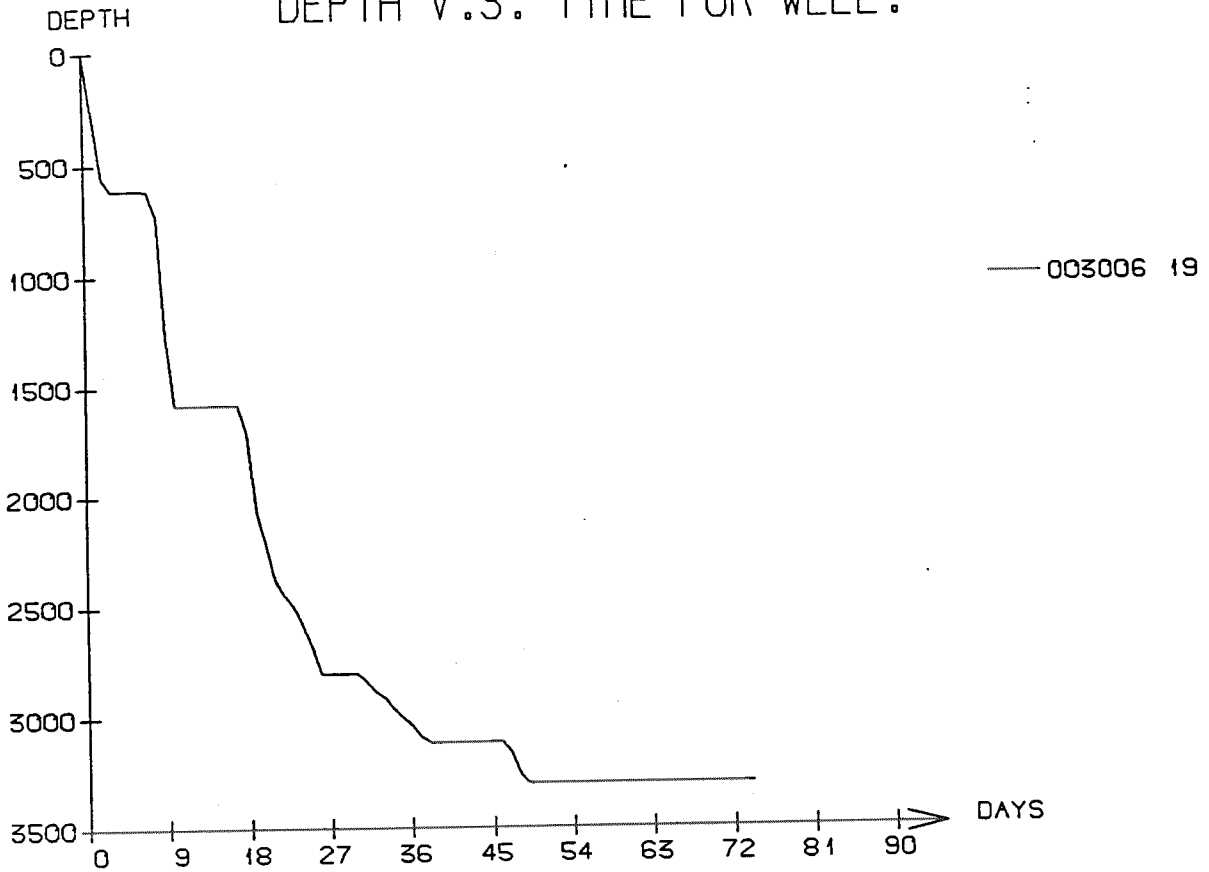
MAIN OPERATION: FORMATION EVAL

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
LOG	4755	79,25	13,39
WAIT	615	10,25	1,73
CIRC SAMPLES	345	5,75	0,97
CORE	2460	41,00	6,93
TRIP	1455	24,25	4,10
CIRC/COND	255	4,25	0,72
OTHER	15	0,25	0,04
RFT/FIT	1170	19,50	3,30
DST	24435	407,25	68,82
Total	35505	591,75	100,00

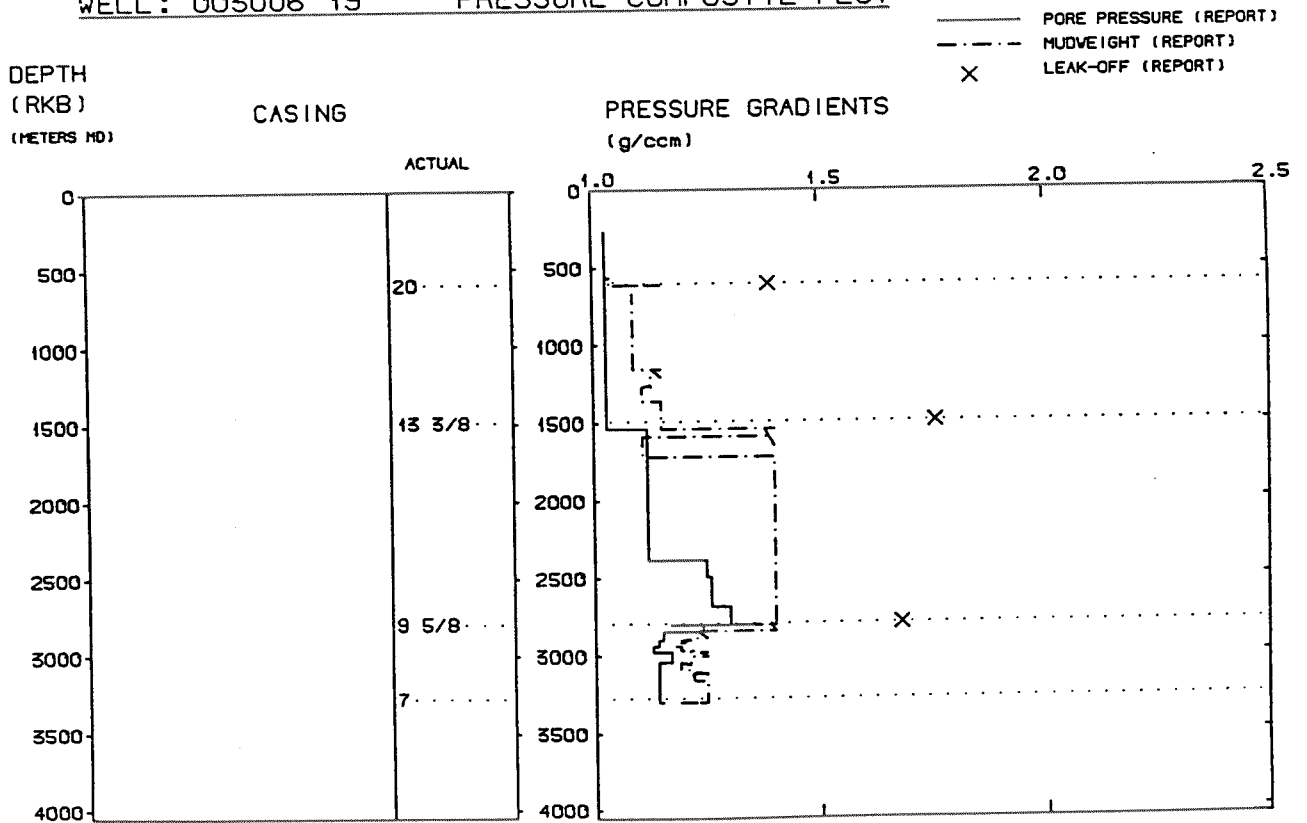
MAIN OPERATION: PLUG & ABANDON

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
WAIT	255	4,25	32,69
OTHER	525	8,75	67,31
Total	780	13,00	100,00

# DEPTH V.S. TIME FOR WELL:



## WELL: 003006 19      PRESSURE COMPOSITE PLOT



## Well History 30/6-19

### GENERAL:

Well 30/6-19 was drilled on the Beta Saddle prospect in the north-eastern part of block 30/6. The Beta Saddle is the down faulted structure between the Veslefrikk field and the Beta South discovery. The objectives of the well were to:

- Discover hydrocarbons in the Brent Group and Cook and Statfjord Formations
- Drill on a location which leaves a minimum of untested reserves up dip in any reservoir.
- Avoid drilling into the complex of faults which bound the Beta Saddle on the west.
- Fulfill one of the obligations imposed by NPD.

The well was planned to be drilled approx. 100 m into the Statfjord Formation.

### OPERATIONS:

Wildcat well 30/6-19 was spudded 9 April 1986 by Polar Frontier Drilling A/S semi-submersible rig Polar Pioneer and completed 21 June 1986 at a depth of 3304 m in Jurassic rocks. Drilling proceeded without significant problems down to 1589 m where the string got stuck and the well was sidetracked at 1179 m. At 3117 m the string got stuck and a cement plug was set at 2847 m. The well was sidetracked at 2822 m and drilled to TD.

4 cores were cut in the Brent reservoir from 2858 - 2954 m.

RFT-data indicates that the oil/water contact is at 2956.5 m

The well is temporary abandoned as an oil and gas discovery, and will be re-entered for further testing later.

### TESTING:

3 DST tests were performed in this well. One in the interval 2944 - 2953 m, a second in the interval 2906.9 - 2931.9 m, and the third in the interval 2876 - 2884 m RKB.

GEOLOGICAL TOPS  
WELL: 30/6-19

	Depth m (RKB)
Nordland Group	182.5
Utsira Fm.	722.0
Hordaland Group	891.0
Rogaland Group	1941.0
Balder Fm.	1941.0
Sele Fm.	2032.0
Lista Fm.	2065.0
Våle Fm.	2217.0
Shetland Group	2247.0
Hardråde Fm.	2247.0
Kyrre Fm.	2417.0
Cromer Knoll Group	2549.0
Rødby Fm.	2549.0
Viking Group	2572.0
Draupne Fm.	2572.0
Heather Fm.	2677.0
Brent Group	2857.0
Tarbert Fm.	2857.0
Ness Fm.	2866.0
Etive Fm.	2905.0
Rannoch Fm.	2915.0
Oseberg Fm.	2920.0
Dunlin Group	2989.0
Drake Fm.	2989.0
Cook Fm.	3103.0
Amundsen Fm.	3159.0
Statfjord Fm.	3255.0
T.D.	3304.0