

Well no : 29/ 9-01

Operator : HYDRO

Coordinates : 60 28 33.19 N UTM coord. : 6704986 N
 01 59 58.95 E UTM zone 31 445007 E

Licence no : 040 Permit no : 390

Rig : TREASURE SEEKER Rig type : SEMI-SUB.

Contractor : WILHELMSSEN OFFSHORE SERVICES

Bottom hole temperature : 153 deg.C Elev. KB : 25 M

Spud date : 83.09.23 Water depth : 104 M

Compl. date : 84.02.24 Total depth : 4703 M

Spud class. : WILDCAT Age at TD : JURASSIC

Compl. class. : P&A. GAS DISCOVERY

Seis. loc. : CDP 239276 (NH 8101)

LICENSEES

28.800 ELF AQUITAINE NORGE A/S
 6.800 NORSK HYDRO PRODUKSJON A.S
 50.000 DEN NORSKE STATS OLJESELSKAP A.S
 14.400 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 ³
CONDUCTOR	30	213.5	36	215.0	
SURF. COND.	20	1040.5	26	1057.0	1.54
INTERM.	13 3/8	2724.0	17 1/2	2751.0	1.91
INTERM.	9 5/8	3927.0	12 1/4	3950.0	2.19
LINER	7	4546.0	8 3/8	4703.0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	4386.0 - 4404.0	17.7	98.3	MIDDLE JURASSIC
2	4404.0 - 4418.0	13.4	95.7	MIDDLE JURASSIC
3	4418.0 - 4436.0	18.0	100.0	MIDDLE JURASSIC

MUD PROPERTIES

Depth below KB meter	Mud weight g/cm ³	Funnel viscosity s/qt	Mud type
250.0	1.06	48.0	WATER BASED
450.0	1.10	48.0	WATER BASED
565.0	1.04	30.0	WATER BASED
905.0	1.06	32.0	WATER BASED
1050.0	1.11	47.0	WATER BASED
1250.0	1.12	53.0	WATER BASED
1550.0	1.13	50.0	WATER BASED
1750.0	1.14	47.0	WATER BASED
1920.0	1.20	49.0	WATER BASED
2000.0	1.25	49.0	WATER BASED
2120.0	1.26	46.0	WATER BASED
2220.0	1.32	45.0	WATER BASED
2250.0	1.38	52.0	WATER BASED
2300.0	1.39	52.0	WATER BASED
2400.0	1.38	52.0	WATER BASED
2750.0	1.42	56.0	WATER BASED
3700.0	1.50	45.0	WATER BASED
3810.0	1.53	46.0	WATER BASED
3860.0	1.80	52.0	WATER BASED
3950.0	1.97	47.0	WATER BASED
4050.0	1.98	30.0	WATER BASED
4150.0	2.02	26.0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no.	Interval meter	Choke size	Pressure (PSI)		
			FSIP	BHP	WHP
1.0	4405.0 - 4394.0	12.7		1280.0	120.0

RECOVERY

Test no.	Oil Sm ³ /d	Gas M Sm ³ /d	Oil grav. g/cm ³	Gas grav. rel. air	GOR m ³ /m ³
1.0		10		0.774	

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS	220 - 4703	1400
WET SAMPLES	220 - 4703	960

SHALLOW GAS

INTERVAL
BELOW KB

REMARKS

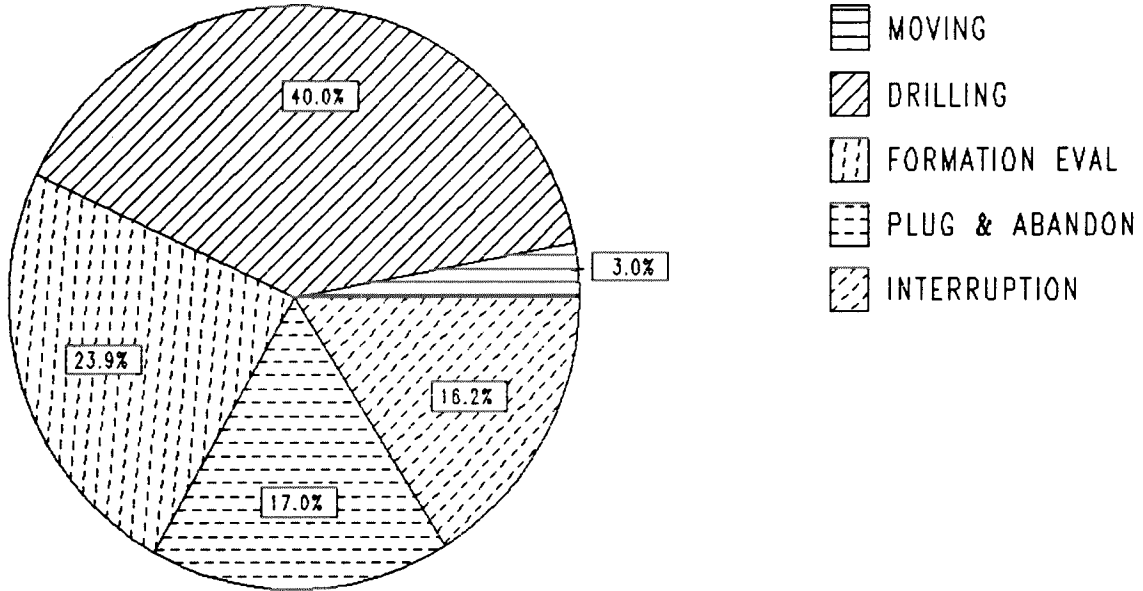
NONE

AVAILABLE LOGS

LOG TYPE	INTERVAL	1/200	1/500
ISF LSS GR (GR:115-213M)	213 - 1055	X	
ISF LSS MSFL	1039 - 2752	X	
ISF LSS	2721 - 3953	X	
ISF BHC	3929 - 4556	X	
ISF LSS	3929 - 4703	X	
ISF LSS GR PLAYBACK	213 - 4703		X
LDL CNL	1039 - 2752	X	
LDL CNL	2720 - 3955	X	
LDL CNL	3927 - 4557	X	
LDL CNL	4450 - 4703	X	
LDL CNL PLAYBACK	1039 - 4703		X
DLL MSFL	4200 - 4554	X	
DLL MSFL	4358 - 4704	X	X
CDM	1760 - 2749	X	
CDM	2720 - 3955	X	
SHDT	3927 - 4557	X	
SHDT	4525 - 4701	X	
CDM AP	1748 - 2744	X	X
CDM AP	2723 - 3955	X	X
SHDT AP	3850 - 4600	X	X
SHDT AP	4350 - 4700	X	X
MWD	1950 - 4220		X
CBL VDL	1857 - 2717	X	
CBL VDL	2715 - 3925	X	
TEMPERATURE DATA	134 - 4703	1:2000	
DRILLING DATA PRESSURE	134 - 4703	1:2000	
DXC NXB	134 - 4703	1:2000	
MUD (FORMATION EVALUATION)	215 - 4703		X
VELOCITY (L.T.S.)	213 - 4703	1:1000	X
(+ Airgun Well Velocity Survey & C.L.D.			1 stk)
(+ VSP, 10 cm/s, proc:Apr-84,			11 stk)
(+ T.W.T.T, 10 cm/s, 250-4700m,			1 stk)
(+ Listing of two way time in sec., velocities in m/sec, reflection coefficients, m.m.			1 stk)

DAILY DRILLING REPORT SYSTEM

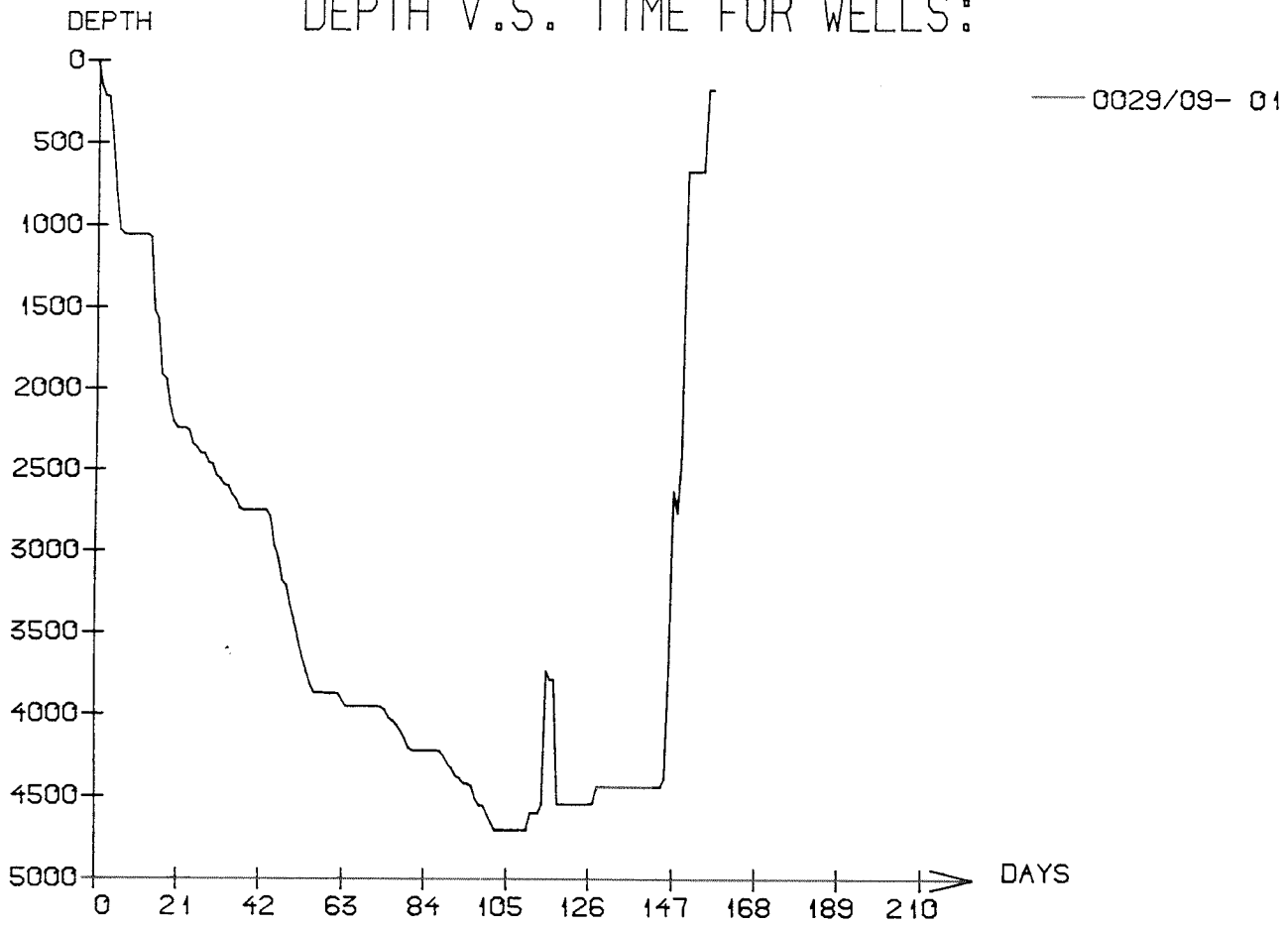
Main operation : 29/09-01



Total : 3825,75 HRS

Main operation	Hours	% of total
MOVING	115,00	3,01
DRILLING	1530,00	39,99
FORMATION EVAL	913,00	23,86
PLUG & ABANDON	649,50	16,98
INTERRUPTION	618,25	16,16

DEPTH V.S. TIME FOR WELLS:



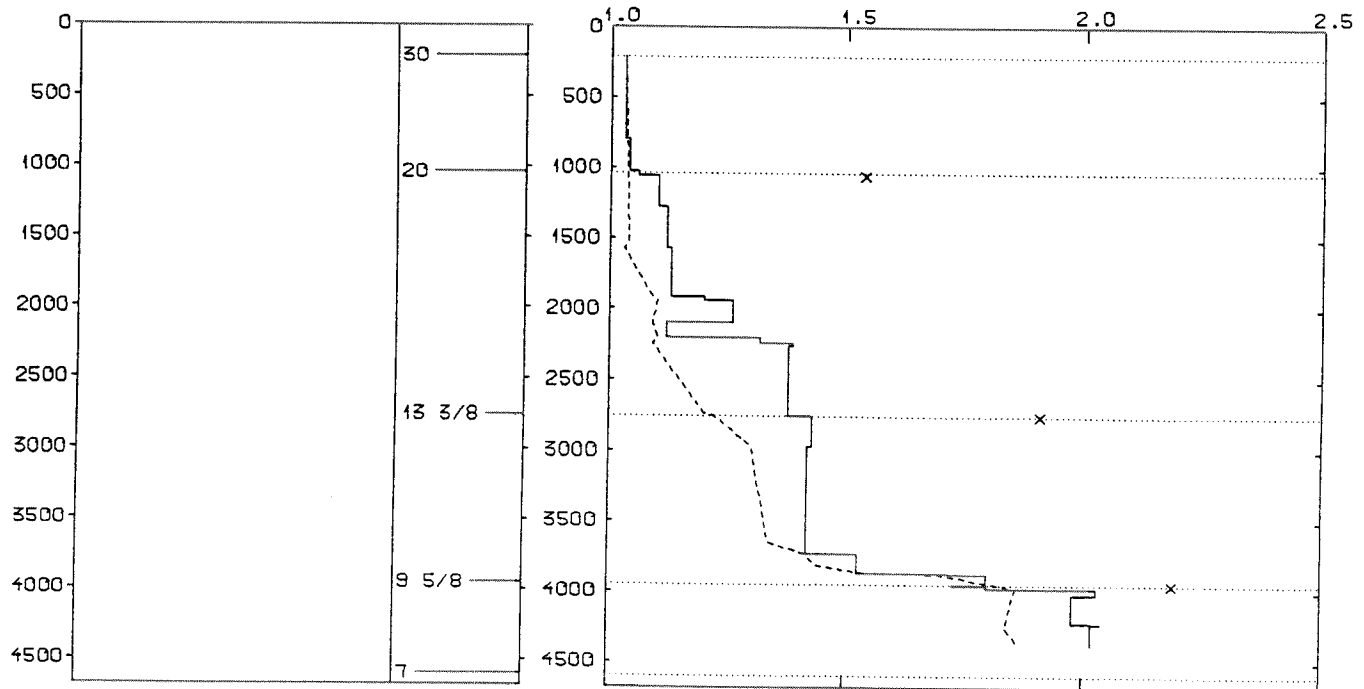
WELL: 002909 01 PRESSURE COMPOSITE PLOT

DEPTH
(RKB)
(METERS)

CASING

PRESSURE GRADIENTS
(g/ccm)

— MUDWEIGHT (REPORT)
- - - PORE PRESSURE (REPORT)
x LEAK-OFF (REPORT)



WELL HISTORY - 29/9-1

GENERAL:

The main objectives of the wildcat 29/9-1 were to obtain information about the presence of hydrocarbons and stratigraphy and reservoir parameters of the Middle and Lower Jurassic sequence. The well encountered hydrocarbons in the Middle Jurassic Brent Group and in the upper part of the Tertiary Frigg Formation.

OPERATIONS:

The well was spudded 23.09.83 by the semi-submersible rig Treasure Seeker. Three cores were cut in the Middle Jurassic sequence. During drilling of the 17 1/2" hole, tight hole problems were experienced. The 9 5/8" casing had to be run twice due to problems with the casing hanger seal. Due to high temperature and lack of circulation the mud in the 7" liner gelled up and had to be replaced several times. This caused difficulties operating the testing tool. The well was drilled using water based mud.

TESTING:

One DST was performed in the Brent Group. There were some problems operating the down hole testing tool due to gelling mud in the liner. Small amounts of gas were produced.

GEOLOGICAL TOPS

WELL: 29/ 9-01

	Depth m (RKB)
<i>Nordland Group</i>	128.000
<i>Hordaland Group</i>	935.000
<i>Frigg Fm</i>	1782.000
<i>Rogaland Group</i>	1981.000
<i>Balder/Sele Fm</i>	1981.000
<i>Lista Fm</i>	2015.000
<i>Heimdal Fm</i>	2074.000
<i>Våle Fm</i>	2310.000
<i>Shetland Group</i>	2355.000
<i>Ekofisk Fm</i>	2355.000
<i>Jorsalfare Fm</i>	2398.000
<i>Kyrre Fm</i>	2633.000
<i>Tryggvason Fm</i>	3604.000
<i>Blodøks Fm</i>	3770.000
<i>Svarte Fm</i>	3785.000
<i>Cromer Knoll Group</i>	3906.000
<i>Viking Group</i>	3980.000
<i>Draupne Fm</i>	3980.000
<i>Heather Fm</i>	4049.000
<i>Brent Group</i>	4386.500
<i>Ness Fm</i>	4386.500
<i>Etive Fm</i>	4393.500
<i>Rannoch Fm</i>	4405.500
<i>Broom Fm</i>	4415.000
<i>Dunlin Group</i>	4421.000
<i>Drake Fm</i>	4421.000
<i>Cook Fm</i>	4487.000
<i>Burton Fm</i>	4530.000
<i>Amundsen Fm</i>	4562.000
<i>Statfjord Fm</i>	4640.000
<i>Nansen Member</i>	4640.000
<i>Eiriksson Member</i>	4685.000
TD =	4703.000