

Well no : 29/ 6-01 Operator : BP

Coordinates : 60 32 17.94 N UTM coord. : 6711947 N  
01 59 24.05 E 444581 E

Licence no : 043 Permit no : 0307

Rig : SEDCO 707

Contractor : SEDCO INC.

Bottom hole temperature : 143 deg.C Elev. KB : 25 M

Spud. date : 81.10.12 Water depth : 124 M

Compl. date : 82.05.09 Total depth : 4832 M

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

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

Seisloca : BP 80 - 021 SP 302

#### LICENSEES

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50,000 BP PETROLEUM DEVELOPMENT OF NORWAY A/S  
50,000 DEN NORSKE STATS OLJESELSKAP 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	287,0	36	294,0	
SURF.COND.	18 5/8	1183,0	24	1205,0	1.76
INTERM.	13 3/8	2541,0	17 1/2	2557,0	1.85
INTERM.	9 5/8	3772,0	12 1/4	3783,0	2.15
LINER	7	4375,0	8 3/8	4832,0	

#### CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery M %	Series
1	4219.6 - 4238.0	18.4 100.0	M.JURASSIC
2	4238.0 - 4256.0	18.0 100.0	M.JURASSIC
3	4256.0 - 4274.0	18.0 100.0	M.JURASSIC
4	4274.0 - 4292.0	18.0 100.0	M.JURASSIC
5	4292.0 - 4310.0	18.0 100.0	M.JURASSIC
6	4310.0 - 4328.2	18.2 100.0	M.JURASSIC
7	4328.2 - 4339.6	11.4 100.0	M.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	WHFP	WHP
			1	4287 - 4301		SEE TEXT			
2	4256 - 4260		SEE TEXT					3699	
3	4208 4218	3.2	220 *	300	0.808*	0.705	1363		

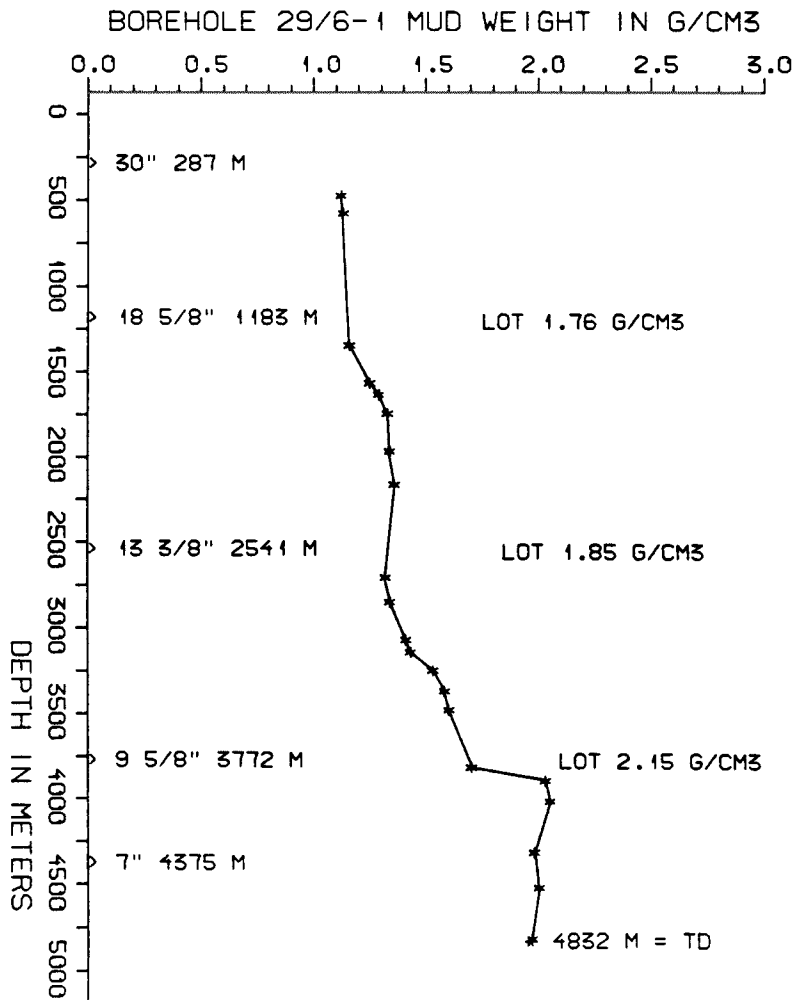
\* = CONDENSAT

AVAILABLE LOGS			
LOG TYPE	INTERVALS	1/200	1/500
GR	149 - 285	x	x
ISF SONIC GR	285 - 1190	x	x
ISF SONIC MSFL	1185 - 2550	x	x
ISF SONIC	2536 - 3779	x	x
ISF SONIC	3775 - 4253	x	x
ISF SONIC	4100 - 4416	x	x
ISF SONIC MSFL	4350 - 4832	x	x
FDC CNL	4140 - 4416	x	x
FDC CNL	4300 - 4830	x	x
FDC CNL	4300 - 4831	x	x
DLL MSFL	4100 - 4455	x	x
CDM	3775 - 4832	x	
CDM AP	3776 - 4834	x	x
CDM AP/CYBERDIP	3775 - 4832	x	x
RFT	3772 - 4256	x	
RFT	4150 - 4457	x	(Test:7b-1,7b-10)
RFT	3772 - 4832	x	(Test:5,7,12,19,23-27)
RFT	3772 - 4832	x	(Test:8d-10,13,17)
RFT	3772 - 4832	x	(Test:8e-8-20,22,23,27-37,40,43,48,50,71,82,86,88)
NGS RATIO PLAYBACK	3775 - 4830	x	x
CALIPER	3775 - 4832	x	
SIDEWALL CORES	2565 - 3780	x	
TEMPERATURE	10 - 981	x	x
TEMPERATURE	10 - 2585	x	x
CBL VDL	3570 - 4338	x	
CBL VDL	3500 - 4338	x	
CBL VDL	3570 - 4338	x	
CBL VDL	4150 - 4278	x	
TEMPERATURE DATA	148 - 4832	1:2500	
DRILLING DATA PRES.	148 - 4832	1:2500	
WIRELINE DATA PRES.	148 - 4832	1:2500	
PRESSURE EVALUATION	148 - 4832	1:2500	
MUD RESISTIVITY	1200 - 4832	1:2500	
MUD	148 - 4832		x
VELOCITY	274 - 4832	1:1000	x
(Air Gun Well Velocity Survey & C.L.D.		1stk)	
(Synthetic Seismogram Marine, 10 cm/s,		1stk)	
(Synthetic Seismogram b/p-w/t,10 cm/s,		2stk)	
(Two Way Travel Time, 10 cm/s,		1stk)	

MUD PROPERTIES			
DEPTH BELOW KB m	WEIGHT g/cm <sup>3</sup>	FUNNEL VISC. sec	FILTRATE LOSS cm <sup>3</sup>
400	1.09	85	
510	1.10	87	
1200	1.10	40	
1280	1.13	40	
1500	1.22	40	
1570	1.26	43	
1680	1.30	58	
1900	1.31	68	
2100	1.33	60	
2640	1.29	50	
2780	1.31	47	
3000	1.38	46	
3070	1.40	47	
3180	1.50	47	
3300	1.55	51	
3410	1.57	51	
3830	2.00	50	
3950	2.02	56	
4250	1.95	21	
4460	1.97	55	
4750	1.94	60	

DRILL BIT CUTTINGS AND WET SAMPLES		
SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS	294 - 4832	831
WET SAMPLES	290 - 4818	935

SHALLOW GAS	
DEPTH INTERVAL m KB	REMARKS
	NONE



## WELL HISTORY - 29/6-1

### GENERAL :

The primary objective of well 29/6-1 was the Brent fm. in a separate fault block to the west of the gas/condensate discoveries 30/4-2, 30/7-6 and 30/7-8 (see Well Data Summary Sheets Vols. 9, 11 and 12). The secondary objective was the Statfjord formation. Hydrocarbons were proven in the highly overpressured Brent fm. The Statfjord fm. was water bearing.

### OPERATIONS :

The well was spudded by "Sedco 707" on 12.10.81. When drilling the 17 1/2" pilot hole (with 1.1 s.g. mud) in the 24" section, mud losses occurred at 870 m. The hole was displaced to seawater and operations continued down to 1205 m where the 24" casing was set. Apart from technical problems with the BOP stack, operations went forth in both the 17 1/2" and 12 1/4" sections without incident. 7 cores were taken in the 8 3/8" section.

### TESTING :

Three drill stem tests were performed on this well. DST no. 1 consisted of a 5 minutes initial flow period and a 34 minutes initial shut-in. The well then flowed formation water with small quantities of gas in solution for 642 minutes before being shut-in for 796 minutes. Samples were taken both at the wellhead and at the separator throughout the test. DST no. 2 consisted of a flow period of 1065 minutes (no hydrocarbons observed) and a build-up period of 973 minutes. DST no. 3 consisted of a 5 minutes initial flow from the top of the reservoir followed by a 63 minutes build-up and a main flow of gas and condensate (439 minutes). H<sub>2</sub>S was not detected during the test. CO<sub>2</sub> concentrations were measured to 11 %, 0 % and 2% in<sup>2</sup> DST 1, 2 and 3 respectively.

# GEOLOGICAL TOPS

WELL: 29/6-1

	Depth m (RKB)
Nordland and Hordaland Group	149 m
Frigg Fm	1827 m
Rogaland Group	1881 m
Balder Fm	1881 m
Sele Fm	1900 m
Montrose Group	1921,5 m
Shetland Group	2348 m
Viking Group	3805 m
Draupne Fm	3805 m
Heather Fm	3915 m
Brent Group	4204,5 m
Tarbert Fm	4204,5 m
Ness Fm	4330 m
Etive Fm	4457 m
Rannoch Fm	4473 m
Broom Fm	4489 m
Dunlin Group	4499,5 m
Drake Fm	4499,5 m
Cook Fm	4544 m
Burton Fm	4607 m
Amundsen Fm	4645 m
Statfjord Fm	4729 m

TD = 4832 m