

Well no : 1/ 9-06S Operator : STATOIL

Coordinates : 56 29 03.85 N UTM coord. : 6260135 N  
02 56 0.14 E 495896 E

Licence no : 044 Permit no : 318

Rig : SEDCO 707

Contractor : SEDCO INC.

Bottom hole temperature : 121 deg.C Elev. KB : 25 M

Spud. date : 82.03.21 Water depth : 75 M

Compl. date : 82.12.01 Total depth : 3880 M

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

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

Seisloca : 404 - 410 SP 217

#### LICENSEES

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9,130 NORSK AGIP A/S  
15,000 NORSK FINA A/S  
25,870 PHILLIPS PETROLEUM CO NORWAY  
50,000 DEN NORSK STAT 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	168,0	36	168,0	
SURF.COND.	20	463,0	26	479,0	1,34
INTERM.	13 3/8	1453,0	17 1/2	1472,0	1,87
INTERM.	9 5/8	3140,0	12 1/4	3155,0	2,06
LINER	7	3866,0	8 1/2	3880,0	

#### CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	3415.7 - 3427.0	10.0	88.5	PALEOCENE
2	3427.0 - 3445.0	17.4	96.7	PALEOCENE
3	3445.0 - 3463.5	12.4	67.0	PALEOCENE
4	3463.5 - 3481.7	17.5	96.2	PALEOCENE
5	3481.7 - 3500.0	17.8	97.3	PALEOCENE
6	3500.0 - 3518.3	17.8	97.3	PALEOCENE
7	3518.3 - 3530.0	11.7	100.0	L.CRETACEOUS
8	3530.0 - 3537.8	3.8	48.7	L.CRETACEOUS
9	3537.8 - 3556.5	18.1	96.8	L.CRETACEOUS
10	3556.5 - 3575.0	17.0	91.9	L.CRETACEOUS
11	3575.0 - 3584.8	9.4	95.9	L.CRETACEOUS
12	3584.8 - 3598.0	12.7	96.2	L.CRETACEOUS
13	3598.0 - 3616.0	17.8	98.9	L.CRETACEOUS
14	3616.0 - 3619.0	0.6	20.0	L.CRETACEOUS

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	FSIP	WHP
1	3771 - 3777		ONLY	WATER					
2	3636 - 3655	12.7	475*	530	0.799*	0.705	1115		3350
3	3523 - 3587	17.4	700	850	0.828	0.687	1215		3673
4	3417 - 3459	22.2	605	850	0.878	0.695	1406		2218

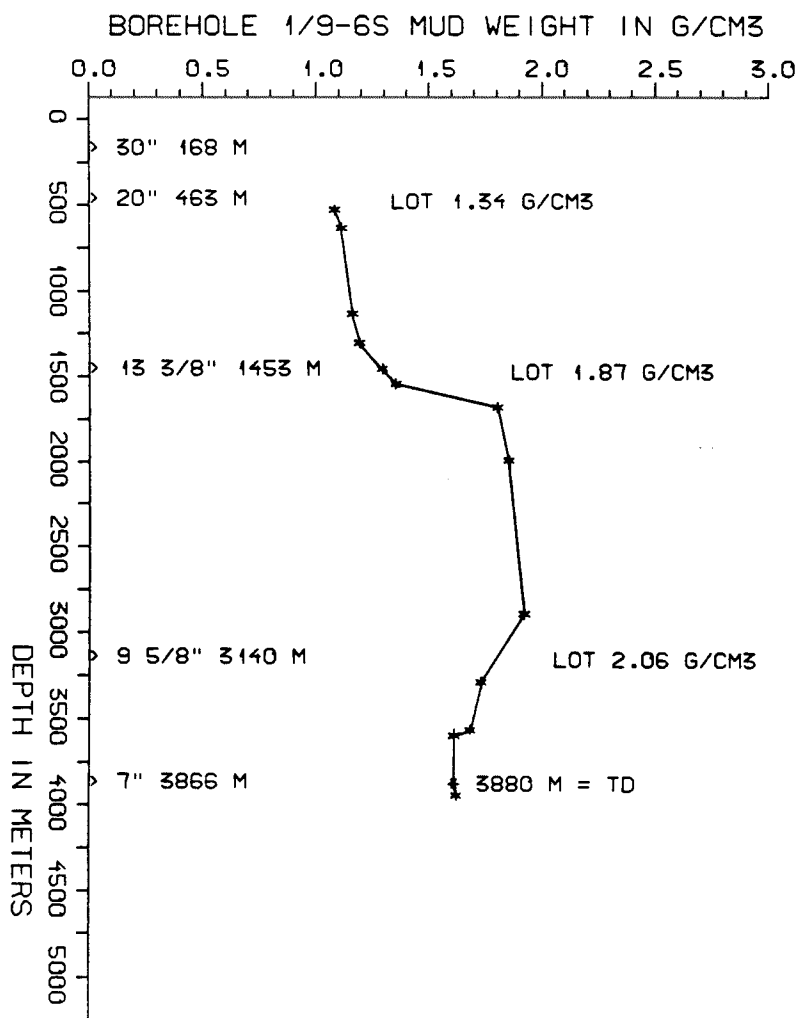
\* = CONDENSAT

AVAILABLE LOGS			
LOG TYPE	INTERVALS	1/200	1/500
ISF SONIC GR	100 - 479	x	x
ISF BHC	462 - 1222	x	x
ISF BHC TVD	462 - 1165	x	x
ISF BHC	1452 - 3154	x	x
ISF BHC NGT	2980 - 3877	x	x
LDL	462 - 1223	x	x
LDL TVD	462 - 1160	x	x
CNL	1100 - 1500	x	
FDC	1451 - 3153	x	x
LDL CNL	3139 - 3877	x	x
DLL MSFL	3139 - 3876	x	x
SHDT	3139 - 3880	x	
CDM AP	3140 - 3879	x	
GEODIP	3401 - 3498	1:40	
EPT PCD	3139 - 3877	x	x
NGT	2980 - 3868	x	x
RFT	3139 - 3880	x	
DIRECTIONAL SURVEY	3139 - 3878	1:50	CM/M
CBL	435 - 1452	x	
OPEN HOLE WAVEFORMS	3139 - 3869	x	
OPEN HOLE VDL	3139 - 3869	x	
MUD	167 - 3880		x
VELOCITY	328 - 3877		x
(Two Way Travel Time , 10 cm/s,			1stk)
(VSP Moving Source, 10 cm/s,- polarity 1-2, b/p-w/t,			2stk)
(Offset Source Profile, 10 cm/s,- polarity 1-2, b/p-w/t,			4stk)

MUD PROPERTIES			
DEPTH BELOW KB m	WEIGHT g/cm3	FUNNEL VISC. sec	FILTRATE LOSS cm3
460	1.05	35	
568	1.08	35	
1064	1.13	30	
1235	1.16	33	
1386	1.26	35	
1472	1.32	53	
1606	1.77	64	
1920	1.82	65	
2283	1.88	71	
2821	1.89	60	
3214	1.70	57	
3476	1.68	53	
3495	1.65	58	
3531	1.58	48	
3574	1.62	47	
3676	1.56	48	
3880	1.59	55	

DRILL BIT CUTTINGS AND WET SAMPLES		
SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS	170 - 3880	560
WET SAMPLES	170 - 3880	740

SHALLOW GAS	
DEPTH INTERVAL m KB	REMARKS
	NONE



## WELL HISTORY - 1/9-6 S

### GENERAL :

The main objective of well 1/9-6 was to appraise the Gamma Structure of the Tommeliten Field. The well was drilled by Phillips (Statoil is operator in the licence) and deviated due to the planned use of this well as a production well. The main targets were sandstones in the Middle Jurassic and Late Triassic. Secondary objectives were represented by the Late Cretaceous chalk and a sandstone of Oligocene age. The Jurassic sandstones proved water bearing. Gas was tested from an Oligocene sandstone.

### OPERATIONS :

Well 1/9-6 was spudded 21.03.82 by the drilling rig "Sedco 707". Drilling of the 36" and 26" holes were without incident. There was some difficulty in getting logging tools in the 17 1/2" hole. Gumbo problems occurred while drilling the 12 1/4" hole and both open hole and cased hole logging runs were plagued with tool failures. 14 cores were cut in the 8 1/2" section. Problems with jamming and differential sticking occurred while coring. Differential sticking also occurred while drilling the bottom part of the 8 1/2" hole. After retrieving the RFT, the well began flowing and sloughing large amounts of shale below the 9 5/8" shoe.

### TESTING :

Four DST's were performed in this well, but technical and operational problems plagued all tests. DST no.1 was a water test, but only 3 Sm<sup>3</sup> water were produced. DST no.2 flowed gas and condensate after the third attempt. H<sub>2</sub>S was measured to be 4 - 6 ppm during DST 2A the CO<sub>2</sub> content was measured to be 3 %. Two attempts were made on the next test. DST 3 flowed gas and condensate after stimulating the well. The retest was not stimulated. DST 4 was perforated over two intervals in the Ekofisk formation and produced gas and condensate after stimulation.

# GEOLOGICAL TOPS

WELL: 1/9-6 S

	<i>Depth m (RKB)</i>
<i>Nordland Group</i>	<i>102 m</i>
<i>Hordaland Group</i>	<i>1755 m</i>
<i>Rogaland Group</i>	<i>3242 m</i>
<i>Balder Fm</i>	<i>3242 m</i>
<i>Sele Fm</i>	<i>3275 m</i>
<i>Lista Fm</i>	<i>3322 m</i>
<i>Montrose Group</i>	<i>3373 m</i>
<i>Maureen Fm</i>	<i>3373 m</i>
<i>Chalk Group</i>	<i>3411 m</i>
<i>Ekofisk Fm</i>	<i>3411 m</i>
<i>Tor Fm</i>	<i>3516 m</i>
<i>Hod Fm</i>	<i>3781 m</i>
	<u><i>TD = 3880 m</i></u>