CONFIDENTIAL

WELL COMPLETION REPORT

PHILLIPS 7/11-2X

PRODUCTION LICENSE 018

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WELL COMPLETION REPORT
PHILLIPS 7/11-2X
PRODUCTION LICENSE 018

C O N T E N T S

A T T A C H M E N T S

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SUMMARY

Well:	Phillips 7/11-2X
Classification:	New Field Wildcat
Area:	Field 7, Block 11, Production License 018
Contractor and Rig:	ODECO Norway Inc. "Ocean Traveler"
Location:	Line NJV 5704, S.P. 1248
	57° 04' 15.2" N
	02° 24' 26.5" E
Water Depth:	82 meters (268 feet) below mean sea level
Rotary Kelly Bushing:	27 meters (87 feet) above mean sea level
Objective:	To test the Tertiary.
Results:	Tested gas and condensate from Paleocene sandstone.
Status:	Suspended well.
Total Depth:	3427 meters (11,245 feet) RKB.

DRILLING HISTORY

Dates of Operations

Spud:	21. July 1968
At Total Depth:	12. September 1968
Completed:	14. October 1968

Details of Operations

- Casing Program -

30-inch set at 132 meters (435 feet) RKB in 36" hole and cemented with 600 sacks cement.

20-inch set at 484 meters (1587 feet) RKB in 26" hole and cemented with 2700 sacks cement.

13-3/8-inch set at 1945 meters (6381 feet) RKB in 17-½" hole and cemented with 2300 sacks cement.

9-5/8-inch set at 3203 meters (10,510 feet) RKB in 12-1/4" hole and cemented with 1500 sacks cement.

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- Mud Program -

Depth:	Weight:	Viscosity:	PV:	YP:	Water Loss:
0- 4000 feet (0- 1219 meters)	9 ppg	30	8	12	22
4000- 6500 feet (1219- 1981 meters)	10 ppg	65	16	30	29
6500- 8998 feet (1981- 2744 meters)	12 ppg	55-190	35	25	13
8998- 9709 feet (2744- 2959 meters)	13.6 ppg	55	40	8	8.4
9709-11245 feet (2959- 3427 meters)	13 ppg	60	40	14	4

Seawater was used for drilling to 4000 feet where the system was changed to a salt-saturated Drispac-Desco-Flosal type.

- Logging Program -

Schlumberger Tools	Run	Interval
Induction Electric	1	6384 - 10,813 feet
	2	10,600 - 11,244 "
Gamma Ray-Sonic-Caliper	1	340 - 6467 feet
	2	6384 - 10,814 "
	3	10,600 - 11,244 "
Laterolog	1	1587 - 6467 feet
	2	6384 - 10,812 "
Microlog/Microlaterolog-Caliper	1	9500 - 10,811 feet
	2	10,600 - 11,244 "
Formation Density	1	9500 - 10,813 feet
	2	10,600 - 11,244 "
Neutron (SNP)	1	9500 - 10,812 feet
	2	10,600 - 11,244 "
Continuous Dipmeter (HDT)	1	6384 - 10,805 feet
Cement Bond Log	1	8750 - 10,490 feet

- Drilling Problems -

A 17-½ inch hole was drilled to 6500 feet. Tight hole problems were experienced upon pulling out of hole to log. Hole had to be washed back to total depth after which heaving shale problems and hole

caving problems occurred. After mud weight was increased to 14 pounds per gallon the hole was washed to bottom and was successfully logged and cased.

- Hole Deviation -

Maximum vertical deviation is 2° at 9060 feet, and 1° at 9709 feet.

- Stuck Pipe -

No stuck pipe problems were encountered in the drilling of the well.

- Lost Circulation -

No lost circulation problems occurred.

- Coring -

One core was taken in the Paleocene sandstone in the interval 9943 feet to 9990 feet. 60 sidewall cores were attempted in the interval 9567 feet to 10,809 feet. 30 cores were recovered. (See Appendices 1 and 2.)

- Testing -

Three drill stem tests were carried out with following results:

DST No. 1 (10,388' - 10,474'), IF 10 min, ISI 3 hrs. 38 min. FF 12 hrs. 15 min, FSI 7 hrs. 45 min. Recovered 23 bbls salt water-cut mud and mud filtrate. IFP 3770, ISIP 5963, FFP 4150, FSIP 5800.

DST No. 2 (9932' - 10,190'), IF 5 min., ISI 6 hrs. 8 min., FF 6 hrs. 2 min., FSI 5 hrs. 13 min. Gas to surface in 18 min. Maximum flow rate 43.18 MMCFGPD on 2 - 1-½" chokes. IFP 4009, ISIP 5661, FFP 3666, FSIP 5665. On isochronal tests of DST No. 2 zone, flows of gas and condensate through the separator averaged as follow:

1/4 "	choke,	3.54 MMCFGPD,	504 BPD	51.6° API	condensate	7023
27/64"	" ,	9.36 " ,	1043 "	52.1° "	"	8974
3/4 "	" ,	16.55 " ,	1390 "	52.0° "	"	11906
1 "	" ,	22.130 " ,	1267 "	61.0° "	"	17470

GOR 17480 SCF/BB

DST No. 3 (9776' - 9836'), IF 15 min., ISI 4 hrs. 35 min., FF 30 min., SI 59 min., pumped in 2 bbls diesel, IFP 3572, FFP 3602. FSP (initial) 3967. Pumped in 10 bbls diesel and acidized with 1000 gals HCl, SI 31 min., FP 8 hrs. 37 min., flowed back 16.75 bbls diesel, IFP 3711, FFP 3809.

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- Plugging and Abandonment -

The 9-5/8-inch casing was plugged as follows:

9505 - 9705 feet RKB:	Cement plug set above final perforations with 70 sacks Class "B" cement above retainer.
3850 - 4000 feet RKB:	Cement plug laid above cement retainer at 4004 feet with 52 sacks Class "B" cement.
680 - 980 feet RKB:	Laid cement plug with 104 sacks Class "B" cement.

Installed corrosion cap and abandoned well.

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GEOLOGY

Geologic Objectives

The objective of the 7/11-2X well was to test the hydrocarbon potential of the Paleocene on the west flank of the Cod structure, and to confirm the gas and condensate discovery made by the 7/11-1X well which is capable of producing 2700 BOPD and 40 MMCFGPD.

Results

- Stratigraphy -

Stratigraphic Unit	Depth RKB Meters	Depth RKB Feet	Depth MSL Meters	Depth MSL Feet	Drilled Thickness Meters	Drilled Thickness Feet	
QUATERNARY							
Recent	108	354	- 82	- 268			
Pleistocene					413	1354	
TERTIARY							
Upper Pliocene	521	1708	- 494	- 1621	107	352	552
Lower Pliocene	628	2060	- 601	- 1973	61	200	
Upper Miocene	689	2260	- 662	- 2173	57	186	
Middle Miocene	746	2446	- 719	- 2359	814	2672	1325
Lower Miocene							
- Burdigalian	1560	5118	-1533	- 5031	194	638	
- Aquitanian	1754	5756	-1728	- 5669	271	889	
Oligocene	2025	6645	-1999	- 6558	735	2412	
?Upper-?Middle Eocene	2761	9057	-2734	- 8970	152	499	729
?Lower Eocene-?Paleocene	2913	9556	-2886	- 9469	70	230	
Upper Paleocene	2983	9786	-2956	- 9699	237	778	1192(+)
Lower Paleocene							
- Danian	3220	10564	-3193	-10477	126	414	
UPPER CRETACEOUS							
Maestrichtian	3346	10978	-3320	-10891	81+	267+	
(Total Depth)	3427	11245	-3401	-11158			

- Lithology -

Quaternary

Recent-Pleistocene undifferentiated: Thickness 413 meters (1354 feet).
No lithology was observed in this interval as the well was drilled to 1700 feet without returns.

Tertiary

Upper Pliocene Clay Unit: Thickness 107 meters (352 feet). This unit is composed of light grey to greyish brown, soft gummy, slightly silty clay. Traces of shell fragments were observed toward the base of the interval.

Lower Pliocene Clay Unit: Thickness 61 meters (200 feet). The interval consists of grey to dark grey, gummy clays with traces of clear, fine grained sand. Traces of shell fragments and foraminifers increase in the lower portion.

Upper Miocene Clay Unit: Thickness 57 meters (186 feet). The unit is entirely composed of dark grey, gummy, silty clays.

Middle Miocene Clay Unit: Thickness 814 meters (2672 feet). This unit is composed of grey to greyish brown, gummy, slightly silty clays and shales with thin streaks of fine grained, fair sorted sand and stringers of tan to brown limestones and dolomites. Traces of shell fragments and foraminifers are found throughout.

Lower Miocene Burdigalian Shale Unit: Thickness 194 meters (638 feet).
This unit is composed of grey to light green to dark brown, soft, slightly calcerous shale with traces of tan, very fine crystalline dolomite and traces of pyrite in the upper portion.

Lower Miocene Aquitanian Shale Unit: Thickness 271 meters (889 feet).
The interval consists of grey to dark brown, very soft, silty clay and shale with thin stringers of white to tan, fine crystalline dolomite and limestone.

Oligocene Shale Unit: Thickness 735 meters (2412 feet). The unit is composed of light to dark grey to brown, slightly silty shale with increasing traces of green, waxy shale in the lower portion. Tan to grey, soft to hard, crystalline dolomite and limestone stringers occur throughout.

?Upper-?Middle Eocene Shale Unit: Thickness 152 meters (499 feet).
This unit consists of grey to brown to green, soft to firm shale. Thin stringers of microcrystalline, light brown limestone and dolomite occur throughout the interval.

?Lower Eocene-?Paleocene Shale Unit: Thickness 70 meters (230 feet).
The interval is made up of light grey to greenish brown, soft to hard, slightly silty shales with reddish shales appearing in the lower portion. Traces of grey to brown, hard, dense, microcrystalline limestone occur throughout.

Upper Paleocene Sandstone Unit: Thickness 237 meters (778 feet).
The upper portion of the interval is composed of interbedded light grey to brown, very fine grained, micaceous, silty, slightly calcareous sandstones and siltstones with light grey to greenish grey shales. The base of the unit contains white to light brown, chalky to crystalline limestones.

Lower Paleocene Danian Limestone Unit: Thickness 126 meters (414 feet).
The upper portion of the interval consists of light tan to white to light grey, chalky, medium to hard limestone with thin stringers of white to grey very fine grained, calcarous sandstone and grey to greenish shale. The middle section consists of white to light grey, chalky to microcrystalline, brittle, dense limestone. The lower section consists of stringers of grey, very fine grained sandstone, grey to brown shale and white, chalky, dense limestone.

Upper Cretaceous

Maestrichtian Limestone: Thickness 81+ meters (267+ feet).
This unit consists of white, chalky, dense, slightly siliceous limestone with traces of brown, translucent chert.

APPENDIX 1 (1)

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

CORE ANALYSIS RESULTS

Company Phillips Norway | Formation | File UKCA 135
Well 7/11-2X | Core Type | Date Report 1st Sept. '6
Field | Drilling Fluid / | Analysts RFB
County North Sea | State Norway | Elev. | Location

Lithological Abbreviations

SAND-SD, SHALE-SH, LIME-LM, DOLOMITE-DOL, CHERT-CH, GYPSUM-GYP, ANHYDRITE-ANHY, CONGLOMERATE-CONG, FOSSILIFEROUS-FOSS, SANDY-SDY, SHALY-SHY, LIMY-LMY, FINE-FN, MEDIUM-MED, COARSE-CSE, CRYSTALLINE-XLN, GRAIN-GRN, GRANULAR-GRNL, BROWN-BRN, GRAY-GY, VUGGY-VGY, FRACTURED-FRAC, LAMINATION-LAM, STYLOLITIC-STY, SLIGHTLY-, VERY-V/, WITH-W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS			
		[illegible]	[illegible]		OIL	TOTAL WATER	% of total volume			
		Ka	Kl				Bulk dens.	W_B	O_B	G_B
1	9944	0.78	0.52	17.5	2.9	68.6	2.31	12.0	0.5	5.0
2	45	3.6	2.6	15.1	7.9	74.8	2.40	11.3	1.2	2.6
3	46	0.35	0.22	18.9	2.6	84.6	2.43	16.0	0.5	2.4
4	48'9"	2.9	2.1	18.6	12.4	46.7	2.27	8.7	2.3	7.6
5	50	6.8	5.2	21.4	5.1	59.0	2.29	12.6	1.1	7.7
6	51	19	15	23.9	4.6	49.0	2.13	11.7	1.1	11.1
7	51'6"	38	32	27.2	11.8	45.2	2.12	12.3	3.2	11.7
8	53	27	22	16.3	7.4	58.9	2.39	9.6	1.2	5.5
9	54	36	30	22.2	10.0	44.1	2.24	9.8	2.2	10.2
10	55	61	53	23.2	10.3	39.7	2.18	9.2	2.4	11.6
11	56	1.1	0.8	18.6	6.5	52.1	2.30	9.7	1.2	7.7
12	58	0.27	0.17	19.0	2.1	42.2	2.22	8.0	0.4	10.6
13	59	47	40	22.0	5.0	35.4	2.16	7.8	1.1	13.1
14	60'6"	19	15	22.1	10.0	40.3	2.22	8.9	2.2	11.0
15	61'6"	38	32	15.3	7.8	43.8	2.38	6.7	1.2	7.4
16	63	13	10	23.7	8.9	36.3	2.14	8.6	2.1	13.[illegible]
17	65'6"	136	122	26.7	7.9	34.8	2.10	9.3	2.1	15.3
18	66'6"	137	123	27.3	8.4	34.4	2.34	9.4	2.3	15.6
19	67'6"	76	66	22.1	10.0	34.8	2.21	7.7	2.2	12.2
20	68'6"	52	44	21.4	5.1	36.0	2.20	7.7	1.1	12.6
21	69'8"	116	103	24.2	10.0	37.7	2.18	9.1	2.4	12.7
22	70'4"	1.9	1.3	18.6	6.5	48.3	2.32	9.0	1.2	8.4
23	71	2.9	2.1	21.0	5.2	47.2	2.25	9.9	1.1	10.0
24	73	30	25	28.6	7.3	43.0	2.16	12.3	2.1	14.2
25	74	7.8	6.0	23.3	4.7	42.9	2.18	10.0	1.1	12.2
26	9975'6"	0.41	0.26	17.8	14.6	53.4	2.37	9.5	2.6	5.7

APPENDIX 1 (2)

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

File UKCA 135 Page No. 2
Well 7/11-2X

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS % of total volume			
					OIL	TOTAL WATER				
		Ka	K1				Bulk dens.	W_B	O_B	G_B
27	9976'8"	6.6	5.0	17.4	6.8	50.0	2.35	8.7	1.2	7.5
28	77'6"	4.3	3.2	22.3	9.9	39.9	2.21	8.9	2.2	11.2
29	78'6"	55	47	25.1	8.4	36.7	2.15	9.2	2.1	13.8
	81'4"	2.7	1.9	24.2	9.1	48.4	2.21	11.7	2.2	10.3
31	82'4"	8.7	6.7	19.9	5.5	49.3	2.28	9.8	1.1	9.0
32	83'6"	4.1	3.0	23.6	9.8	51.7	2.26	12.2	2.3	9.1
33	84'4"	0.45	0.29	20.5	12.2	47.3	2.22	9.7	2.5	8.3
34	85'6"	6.2	4.7	24.0	12.1	47.1	2.24	11.3	2.9	9.8
35	86'6"	38	32	25.1	8.8	40.6	2.17	10.2	2.2	12.7
36	87'6"	51	43	22.5	4.9	36.4	2.17	8.2	1.1	13.2
37	88'6"	4.3	3.2	23.1	9.1	34.2	2.14	7.9	2.1	13.1
38	89'8"	8.2	6.3	20.7	10.6	41.1	2.24	8.5	2.2	10.0
39	90'4"	4.3	3.2	20.0	11.0	43.5	2.24	8.7	2.2	9.1
40	91'6"	5.3	4.0	23.0	9.6	50.0	2.25	11.5	2.2	9.3
41	9993	11.4	8.9	23.2	9.5	38.4	2.20	8.9	2.2	12.2

Phillips Petroleum Co.,
Norway.

Well: 7/11-2X.

CORE DESCRIPTION

9943' to 9943'10"

Sandstone - light gray, fine-grained, sub-rounded, argillaceous, calcareous, micaceous, with occasional green shale inclusions; dull gold overall pinpoint fluorescence which yields a very poor, slow, bluish-white carbon tetrachloride cut under ultra-violet light.

9943'10" to 9944'

Shale - black, firm, fissile.

9944' to 9946'3"

Sandstone - As above but with good carbon tetrachloride cut.

9946'3" to 9947'

Shale - black, hard, fissile, with sandy lamellae; apparent dip 2°.

9947' to 9948'9"

Shale - dark gray, micaceous, very sandy.

9948'9" to 9949'3"

Sandstone - light gray, fine-grained, sub-rounded, slightly calcareous, micaceous, with occasional gray shale inclusions, carbon tetrachloride cut as above.

9949'3" to 9950'

Shale - dark gray, firm, very sandy.

9950' to 9950'8"

Sandstone - gray brown, fine-grained, slightly calcareous, as above.

9950'8" to 9950'10"

Shale - As above.

9950'10" to 9951'

Sandstone - As above.

9951' to 9951'6"

Shale - As above.

Phillips Petroleum Co.,
Norway.

Well: 7/11-2X

CORE DESCRIPTION

9951'6" to 9952'4"

Sandstone - As above.

9952'4" to 9952'6"

Shale - As above.

9952'6" to 9956'5"

Sandstone - As above.

9956'5" to 9957'6"

Shale - Medium gray, firm, micaceous, very sandy.

9957'6" to 9960'2"

Sandstone - Light gray, fine-grained to medium-grained, hard, sub-angular to sub-rounded, argillaceous, calcareous, micaceous, occasional small gray shale inclusions.

9960'2" to 9960'4"

Shale - As above.

9960'4" to 9962'3"

Sandstone - Gray brown, fine-grained, hard, argillaceous, calcareous, micaceous, small gray shale inclusions.

9962'3" to 9962'9"

Shale - Dark gray, firm, micaceous; apparent dip 2°.

9962'9" to 9963'6"

Sandstone - Gray brown, fine-grained, hard, argillaceous, calcareous, micaceous, with small gray shale inclusions.

9963'6" to 9965'5"

Shale - Dark gray, firm, fissile, micaceous, slightly sandy.

9965'5" to 9969'9"

Sandstone - Gray brown, fine-grained to medium-grained, sub-angular to sub-rounded, argillaceous, slightly calcareous, micaceous, small gray shale inclusions, carbon tetrachloride cut as above.

Phillips Petroleum Co.,
Norway.

Well: 7/11-2X

CORE DESCRIPTION

9969'9" to 9969'10"

Shale - Dark gray as above.

9969'10" to 9971'7"

Sandstone - As above.

9971'7" to 9973'

Shale - As above with thin sand lamellae.

9973' to 9975'

Sandstone - As above.

9975' to 9975'3"

Shale - As above.

9975'3" to 9976'

Sandstone - Light gray, fine-grained, argillaceous, calcareous, micaceous; with many dark gray shale inclusions; cut as above.

9976' to 9979'5"

Sandstone - Gray brown, fine-grained, argillaceous, micaceous, calcareous, with occasional gray shale inclusions; cut as above.

NORWEGIAN OPERATIONS

S I D E W A L L C O R E F O R M

Well No.: 7/11-2X
Country: Norway
Date: Sept. 4-5, 1968
Geologist: J.L. Montgomery

Depth:	Rec.	Description	Fluor	Remarks
10,809'	misfire			
10,806'	Brok.bul.			
10,797'	½"	ls, lt gr, chky, hard		
10,750'	3/4"	ls, lt gr, chky, frac, hard	yel fluor v weak cut	
10,700'	empty			
10,680'	empty			
10,665'	lost			
10,650'	empty			
10,600'	3/4"	ls, lt gr, chky, marly		
10,553'	lost			
10,500'	lost			
10,452'	3/4"	ss, wh-lt gy, vf,fri, well sort,sltst cem,glauc	yel fluor, v weak cut	
10,440'	1"	ss,wh, vf, fri, well sort, sli calc, glauc	yel, fluor v weak cut	
10,395'	1½"	ss, gy, vf, fri, poor sort, sli calc, slty, sli glauc, gy sh	few small spots yel fluor	
10,335'	1-3/4"	ss, gy, vf, fri, slty, well sort, spots carb matr	stks yel fluor	
10,270'	misfire			
10,165'	1"	ss, wht-buf, vf, loose, v slty, tr glauc	pale yel fluor	
10,155'	lost			
10,126'	misfire			
10,105'	1½"	ss, lt gy vf, loose, v slty, well sort	spots, stks pale yel fluor	
10,072'	lost			
10,055'	misfire			
10,035'	1½"	ss, lt gy-lt brn vf, loose v slty, well sort	spots pale yel fluor	
10,029'	misfire			
10,016'	lost			
9,990'	½"	sh, lt-dk gy, slty, med hd		
9,830'	1½"	sltst, lt bl-gy, shly, calc		
9,810'	misfire			
9,569'	1-1/4"	sh, wht-lt gy		
9,567'	tr.	mostly wall cake w/small piece brn waxy hd sh		

NORWEGIAN OPERATIONS

S I D E W A L L C O R E F O R M

Well No.: 7/11-2X Date: Sept. 4-5, 1968

Country: Norway Geologist: J.L. Montgomery

Depth:	Rec.	Description	Fluor	Remarks
10,809'	3/4"	ls, lt gy, mic xln, dn		
10,806'	lost			
10,804'	3/4"	ls, lt gy, chky-mic xln, hd, moist appear	faint spots	
10,801'	3/4"	ls, wht, chky, hd	faint yel fluor on outer edges	
10,800'	3/4"	ls, wh-lt gy, chky, hd small stks organic matr, moist appear	faint spots yel fluor on outer edges	
10,790'	3/4"	ls, lt gy-lt grn, mic xln, hd, glauc, moist appear		
10,779'	3/4"	ls, wh, chky, hd, thin brn sh lam		
10,760'	3/4"	ls, wht, chky, hd, badly frac	small stks yel fluor	
10,745'	3/4"	ls, wh, chky, hd, badly frac	faint yel fluor	
10,700'	3/4"	ls, wh, chky, brit, hd, frac, moist appear	tr yel fluor in fracs	
10,680'	lost			
10,665'	3/4"	ls, gy, mic-xln, hd brit		
10,650'	3/4"	ls, gy, mic-xln, hd, brit, moist appear	tr fluor	
10,605'	3/4"	ls, gy, mic-xln, hd broken, blk stks		
10,573'	1"	ls, dk gy, mic-xln, hd, foss, moist appear		
10,565'	1-1/4"	ls, wh-lt gy, chky, hd		
10,553'	1"	ss, lt gy vf, poor sort, calc cem, loose, glauc	good yel fluor	
10,495'	1½"	sh, dk gy-blk, slty, med hd		
10,463'	empty			
10,270'	empty			
10,214'	empty			
10,155'	misfire			
10,145'	misfire			
10,126'	misfire			
10,093'	misfire			
10,072'	misfire			

NORWEGIAN OPERATIONS

S I D E W A L L C O R E / F O R M

Well No.: 7/11-2X
Country: Norway

Date: Sept. 4-5, 1968
Geologist: J.L. Montgomery

Depth:	Rec.	Description	Fluor	Remarks
10,055'	misfire			
10,029'	misfire			
10,016'	misfire			
9,810'	misfire			

7/11-2

APPENDIX 1 (3)

Phillips Petroleum Co.,
Norway.

Well: 7/11-2X.

CORE DESCRIPTION

9943' to 9943'10"

Sandstone - light gray, fine-grained, sub-rounded, argillaceous, calcareous, micaceous, with occasional green shale inclusions; dull gold overall pinpoint fluorescence which yields a very poor, slow, bluish-white carbon tetrachloride cut under ultra-violet light.

9943'10" to 9944'

Shale - black, firm, fissile.

9944' to 9946'3"

Sandstone - As above but with good carbon tetrachloride cut.

9946'3" to 9947'

Shale - black, hard, fissile, with sandy lamellae; apparent dip 2°.

9947' to 9948'9"

Shale - dark gray, micaceous, very sandy.

9948'9" to 9949'3"

Sandstone - light gray, fine-grained, sub-rounded, slightly calcareous, micaceous, with occasional gray shale inclusions, carbon tetrachloride cut as above.

9949'3" to 9950'

Shale - dark gray, firm, very sandy.

9950' to 9950'8"

Sandstone - gray brown, fine-grained, slightly calcareous, as above.

9950'8" to 9950'10"

Shale - As above.

9950'10" to 9951'

Sandstone - As above.

9951' to 9951'6"

Shale - As above.

Phillips Petroleum Co.,
Norway.

Well: 7/11-2X

CORE DESCRIPTION

9951'6" to 9952'4"

Sandstone - As above.

9952'4" to 9952'6"

Shale - As above.

9952'6" to 9956'5"

Sandstone - As above.

9956'5" to 9957'6"

Shale - Medium gray, firm, micaceous, very sandy.

9957'6" to 9960'2"

Sandstone - Light gray, fine-grained to medium-grained, hard, sub-angular to sub-rounded, argillaceous, calcareous, micaceous, occasional small gray shale inclusions.

9960'2" to 9960'4"

Shale - As above.

9960'4" to 9962'3"

Sandstone - Gray brown, fine-grained, hard, argillaceous, calcareous, micaceous, small gray shale inclusions.

9962'3" to 9962'9"

Shale - Dark gray, firm, micaceous; apparent dip 2°.

9962'9" to 9963'6"

Sandstone - Gray brown, fine-grained, hard, argillaceous, calcareous, micaceous, with small gray shale inclusions.

9963'6" to 9965'5"

Shale - Dark gray, firm, fissile, micaceous, slightly sandy.

9965'5" to 9969'9"

Sandstone - Gray brown, fine-grained to medium-grained, sub-angular to sub-rounded, argillaceous, slightly calcareous, micaceous, small gray shale inclusions, carbon tetrachloride cut as above.

Phillips Petroleum Co.,
Norway.

Well: 7/11-2X

CORE DESCRIPTION

9969'9" to 9969'10"

Shale - Dark gray as above.

9969'10" to 9971'7"

Sandstone - As above.

9971'7" to 9973'

Shale - As above with thin sand lamellae.

9973' to 9975'

Sandstone - As above.

9975' to 9975'3"

Shale - As above.

9975'3" to 9976'

Sandstone - Light gray, fine-grained, argillaceous, calcareous, micaceous; with many dark gray shale inclusions; cut as above.

9976' to 9979'5"

Sandstone - Gray brown, fine-grained, argillaceous, micaceous, calcareous, with occasional gray shale inclusions; cut as above.

THE MINISTRY OF INDUSTRY – OIL SECTION
WELL LOGGING WORK SHEET

WELL No. 7/11-2
SHEET No. 1 of 1

Data furnished by licensee:

1		5		9		13		17	
2		6		10		14		18	
3		7		11		15		19	
4		8		12		16		20	

Geologist: OB Date: 26/2 RTKB (MSL): _____ ft Sea Bed (MSL): _____ ft

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from 9943 ft
to 9994 ft

BED BOUNDARIES DEPTH BELOW (MSL)	STRATIGRAFIC DIV. TIME UNIT	ROCK UNIT	PALAEO UNIT	SAMPLES USED	NAME OF ROCK	POROSITY AND PERMEABILITY	COLOUR	TEXTURE	HARDNESS AND CEMENTATION	ACCESSORY MINERALS	FOSSILS	STRATIFICATION AND SEDIMENTARY STRUCTURES	TECTONIC STRUCTURES	HYDRO-CARBON AND CARBON'S INDICATIONS	INTERPRETATION FACIES	RATING	REMARKS
9943 ft a				C TS	m s Siltst.	P Perm	lt Gy dull.	Grains: 85-90% Qtz >90% Occ. Calcite, Dol., Mica & Plag. s-(srt) Sub,rnd, low sph. Matrix: Calcite, var. degrees of calcif. is nicely demonstr.	hd, grainy. Frac. Brk, HCl +		None obs,	micro bed, observed,	Frac. along micro bed,	None		B	
8 b				C	amph. Quartzite	T T	dk. Gy mtl.	Qtz. - Flaggy "amph."	hd. conch. Frac. Brk. HCl ÷v ⊗	None obs.	None obs	Vague bed. ?	Frac.	None	z	(C R)	The amph. & bedded char. may have something to do with a fault. ? Press Surf
9				C TS	f.-m. f quarbzitic Sst.	(P) (Perm)	lt Gy dull.	Grains: >95% Qtz >95% Occ, Mica & Plag low sph. (srt), sub.rnd-sub.ang. low-mod sph. No matrix	hd. cmb. Frac. Brk. HCl ÷ ⊗		None obs,	slump-str,		None	Shelf mod. deep z,	B	
C 10 9994 –				C TS	calc. Siltst,	(P) (Perm)	lt Gy vgt. dull	Grains: >95% Qtz >95% Occ. mica & plag, (srt)-srt rnd.-subrnd., mod. Sph. No real matrix, but small degree of calcif. react.	hd Cmb. Frac. Brk, Infreq. but widespr. spots w/ react. on HCl.	Pyr. -Scat. spots	None obs.	vague bed.	Small frac, along m. Bed,	? Carb. matter in the frac.	z,	PRB	Some loose stones (up to 5 cm) below the core wate more pa Gy and app. > loote.
							Lo 2cm dk Gy						Lo 2cm more frac,				
															9644		

FOUNDATION RESEARCH COMPANY LIMITED

MICROPALAEONTOLOGICAL ANALYSIS CHART

DATE: 20.9.68. | ANALYST: GWH PR | LOCATION: Norwegian North Sea Well 7/11-2X

FOR: Phillips Petroleum Company, Norway. | CHART NO. 9 | 9000'-10000'

LITHOLOGY: LIMESTONE, DOLOMITE, OOLITIC LIMESTONE, CLAY, SHALE, SILTY/SANDY SHALE, SILTSTONE, SANDSTONE, CONGLOMERATE, GYPSUM, VOLCANICS, INTRUSIVES, SALT, COAL, CHERT, Pyrite, Glauconite

DEPTH IN FEET: 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000

SYSTEM: EOCENE (? UPPER - ? MIDDLE)

STAGE: ? LOWER EOCENE - ? PALAEOCENE

ZONE: PALAEOCENE

FORAMINIFERA

MICROFOSSILS

- Ammodiscus incertus
- Glomospira charoides
- Bathysiphon eocenicus
- Rhabdammina sp.
- Haplophragmoides carinatum
- Pelosina sp.
- Hyppocrepina sp.
- Pullenia sphaeroides
- Trochammina glabigeriniformis
- Haplophragmoides latidorsatus
- P Globigerina cf. linaperta linaperta
- P Globigerina cf. centralis
- Trochammina globigeriniformis var. altiformis
- Sigmoilina tenuis
- Sigmoilina schlumbergeri
- Cribrostomoides sp.2
- Coscinodiscus sp.
- P Globigerina barbosa
- Cyclammina sp.
- Catapsydrax unicavus
- Hormosina sp.
- P Globigerina triangularis
- Quinqueloculina sp.
- Trochammina pentagona
- Glomospirella woodi
- Haplophragmoides cf. obliquicameratus
- Involutina pyrotecnica
- Cyclammina incisa
- P Globigerina triloculinoides
- P Globigerina cf. velascoensis
- Glandulina laevigata
- Cibicides proprius
- P Globigerina cf. inaequispira
- Cyclammina challinori