



PHILLIPS PETROLEUM COMPANY, Stavanger, Norway

1. Lease Name, Well No. North Sea, 7/11-3X
2. Name of Production Formation PALEOCENE
3. Source of Gas Sample Separator
4. Field, Concession, Country North Sea, Norway
5. Separator Pressure 35 psia
6. Source of Liquid Samples Separator
7. Separator Temperature 45°F
8. Type and Working Pressure of Gas Bottle 25 psi std P.P.Co. sample container
9. Type of Liquid Sample
10. Date Sampled Dec. 29, 1968
11. Name of Person or Persons Taking Sample Fetters/Ziara
12. Name of Person or Persons Taking Sample
13. Shipping Information as Follows:
 - a) Name of Carrier _____
 - b) Air or Ocean Bill of Lading _____
 - c) Date Shipped _____
 - d) Routing _____
 - e) Shipment Number _____
14. Producing Rate At Time of Sampling:
 - a) Separator Gas, SCF 120,000 SCFPD
 - b) Hydrocarbon Liquid, STB 90 BPD
15. Ratio of Separator Gas to Stock Tank Oil, Cubic Feet/Barrel 1333 Cubic Feet/Barrel
16. Request the Gas and/or Oil Analysis to Include the Following:
 - a) An Analysis of Hydrocarbons Through and Including C₇+ Yes
 - b) H₂S _____ for presence
 - c) CO₂ Yes
 - d) N₂ Yes
 - e) H_e Yes
 - f) Recombined Formation Fluid Analysis Yes
17. Bottom Hole Pressure _____ at _____ 'RKB
18. Bottom Hole Temperature 254°F at 10110 'RKB

Note: Well making 340 bwpd at time of test

Identification Number _____

Attention: J. Gordon Erdman
Manager, Geochemistry Branch
Phillips Research Center
Bartlesville, Oklahoma

GAS AND/OR LIQUID PETROLEUM SAMPLES

DATA SHEET

Well Designation ⁽¹⁾	<u>7/11-3X</u>	
Field ⁽¹⁾	<u>Cod Structure</u>	
County (Parish, etc.)	<u>North Sea</u>	
State (or like sub-division)	<u>Block 7/11</u>	
Country	<u>Norway</u>	
	<u>Gas</u>	<u>Liquid</u>
Date Sampled ⁽¹⁾	<u>Dec. 29, 1968</u>	<u>Dec. 29, 1968</u>
Time Sampled ⁽¹⁾	<u>1330 hrs</u>	<u>1330 hrs</u>
By Whom Sampled ⁽¹⁾	<u>Fetters /Ziara</u>	<u>Fetters /Ziara</u>
Source of Sample (Sample Point)	<u>Separator</u>	<u>Separator</u>
Separator Pressure, psig	<u>20</u>	<u>20</u>
Separator Temperature, °F	<u>45</u>	<u>45</u>
Flow Rates (give units)	<u>120 MCFD</u>	<u>90 bopd</u>
Gas/Liquid Ratio, Mcf/bbl	<u>1.333</u>	
Formation Tested	<u>Main Sand</u>	
Depth Interval Tested	<u>10125-10145</u>	
Depth Reference Point (RKB, etc.)	<u>87'</u>	
Comments	<u>DST No. 7 In addition to above the formation was</u> <u>also producing 340 bwpd</u>	

(1) Same as on tag attached to cylinder.

W. L. Culbertson (2)
 J. W. Marx
 J. G. Erdman
 JFD/mfg

EXPLORATION AND PRODUCTION DEPARTMENT
 PRODUCTION DIVISION
 RESERVOIR ENGINEERING LABORATORY
 BARTLESVILLE, OKLAHOMA
 April 2, 1969

Norway Sector, North Sea, License 7,
 Block 11, Well No. 3X
COMPANION SEPARATOR SAMPLES

REL-24-GA-8-69

Mr. O. D. Thomas
 Bartlesville Office

In re: Data Sheet
 with samples to J. F. Downie

from Stavanger, Norway
 regarding subject sample.

Lease name and well number
 Field, county, and state
 Name of producing formation
 Perforated interval
 Source of sample
 Separator pressure, psig
 Separator temperature, °F
 Gas - liquid ratio, Mcf/bbl.
 Sample container
 Pressure in container, psig
 Date sampled
 Sampled by
 Producing rate

License 7, Block 11, Well No. 3X
 Norway Sector, North Sea
 Paleocene
 10,125' - 10,145'
 Separator
 20 (35 psia)
 45
 13.33
 2-gallon, 2-valve, stainless steel bottle
 25
 December 29, 1968
 Fetter/Ziara
 120,000 SCFPD and 90 BPD

The composition of the sample was as follows:

Component	Separator Gas, Mol Per Cent	Separator Liquid, Mol Per Cent	Composite Well Stream Mol Per Cent
Helium	<0.02	---	---
Carbon dioxide	3.89	0.12	2.60
Nitrogen	0.80	0.03	0.54
Methane	42.83	0.59	28.42
Ethane	23.20	2.12	16.01
Propane	17.83	6.74	14.05
i-Butane	3.26	2.98	3.16
n-Butane	5.31	7.25	5.97
i-Pentane	1.17	4.34	2.25
n-Pentane	0.90	5.09	2.33
Hexane	0.53	12.78	4.71
Heptane and heavier	0.28	57.96	19.96
	100.00	100.00	100.00

Specific gravity (air = 1.00) 1.0667
 Heating value, Btu/cf - dry 1704.
 (14.696 psia and 60°F) - wet 1674.

Molecular weight heptanes plus = 219
 Specific Gravity heptanes plus @ 60°F = 0.828

J. F. Downie

J. F. Downie
 E & P Dept. 262 CL PRC
 Ext. 48-431



BAROID DIVISION NATIONAL LEAD COMPANY

DRILLING MUD RECORD

COMPANY Phillips Petroleum Co. STATE Nebraska CASING PROGRAM: 13 3/4 inch at 1527 ft.
 WELL 7-11-3X COUNTY North Platte 9 7/8 inch at 6471 ft.
 DATE 12-31-68 CONTRACTOR ODECO LOCATION 7-11 7 inch at 10,960 ft.
 STOCKPOINT Stausger BAROID ENGINEER Bill Witt - Chuck Hower SEC _____ TWP _____ RNG _____ TOTAL DEPTH 10,992 ft.

DATE	DEPTH feet	WEIGHT lb/gal	VISCOSITY Sec	FILTRATION		SAND %	SALT		pH	VISCOSITY			GELS		FILTRATE ANALYSIS				RETORT ANALYSIS			REMARKS AND TREATMENT			
				cc	Cake 32nd		NaCl ppm	Cl ppm		cp	Pv	Yp	in	10min	Cl ppm	Ca ppm	SO ₄ ppm	Alk Pf	Oil %	Water %	Solids %				
Dec 16	-	8.8	150																					W.O.W. - Daily surface hole in water - Pump mud on track.	
17	563	8.8	150																					Set 20" casing to 563'	
18	563	8.8	100																					Daily of seawater	
19	1238	8.8	100																					Drilled 1 1/2" hole to 1675'	
20	1675	8.8	100																					Set 18 3/4" casing to 1675'	
21	1675	10.0	90																					W.O.W. - Working on machine	
22-24	1675	11.0	38	5	1	0	185,000	7.0	20	17	7	0	1		220		0							Will drill with seawater to 2000'	
25	3800	16.0	38	5	1	0	185,000	7.0	20	17	7	0	1		220		0								
26	5150	16.8	38	5.5	2	1	182,000	7.5	16	15	3	0	1		250		0	3	87	11				Set - Having mud rings	
27	5972	11.6	43	4.3	2	1	189,000	7.8	24	21	6	0	1		230		.01	2	89	11				Having tight hole - All 150' to	
28	5972	12.2	54	4.8	2	1	184,000	8.0	40	35	10	1	6		550		.04	2	85	13				Cement treatment 1 hour's	
29	5972	12.5	62	4.5	2	1/2	182,000	7.8	45	39	12	2	7		310		.06	1	84	13				Reaming - Raising wt. to 12.5'	
30	6480	12.5	66	4.4	2	1/2	186,000	7.5	59	50	18	2	8		520		.02	1	82	17				Drilling ahead	
31	6540	12.9	71	5.1	2	3	181,000	7.5	57	45	28	3	17		520		0	1	75	24				Conditioning hole to log	
Nov. 1	6540	12.9	75	6.5	3	3	189,000	7.5	65	50	30	3	20		520		0	1	75	24				Run 9 7/8" casing to 6471'	
2-3-4																									Waiting on weather
5	6800	12.1	48	3.2	2	1/2	188,000	8.5	47	40	14	2	6		200		.02	1	80	19				Drilled out shoe of 8 1/2" bit	
6	7200	12.0	48	4.4	2	1/2	180,000	8.0	40	32	16	2	7		300		.02	1	85	14				Drilling ahead	
7	7540	13.0	52	5.1	2	1/2	148,000	8.5	44	36	16	3	10		360		.05	1	82	17				Washing - Raising wt. to 13.0'	
8	7540	13.0	52	4.9	2	1/2	140,000	8.8	46	38	16	3	12		1000		.1	1	82	17				Excess calcium due to cement in barite	
9	7540	12.9	49	5.2	2	1/2	138,000	8.5	38	32	12	2	8		960		.08	1	82	17				W.O.W. - Working on Sodium sulfate + Barite	
10	7540	13.0	50	4.2	2	1/2	135,000	8.5	40	33	14	3	10		880		.08	2	81	17				Lost 400 gal mud when string seized - Reaming	
11	7540	13.8	55	5.2	2	1/2	135,000	8.4	40	33	14	3	12		500		.05	3	80	17				Raising wt. to 14.0'	
12	7540	14.5	60	4.2	2	1/2	150,000	8.3	52	49	14	3	12		460		.04	2	77	21				Raising wt. to 14.5' - Reaming	
13	7540	14.5	64	4.8	2	1/2	130,000	7.8	56	48	14	2	16		300		.05	2	75	22				Reaming to bottom	
14	8135	14.5	65	5.4	2	1/2	115,000	8.2	51	44	14	0	16		180		.13	2	72	26				Drilling ahead	
15	8200	14.4	65	4.2	2	1/2	115,000	8.2	60	55	10	0	16		180		.3	2	72	26				Drilling	
16	8300	14.3	56	4.5	2	1/2	116,000	7.8	50	47	6	1	14		200		.4	3	71	26				Drilling	
17	9630	14.1	60	5.5	2	1/2	126,000	8.6	41	36	10	1	16		160		.5	5	72	23				Drilling	



BAROID DIVISION NATIONAL LEAD COMPANY

DRILLING MUD RECORD

COMPANY Phillips Petroleum Co STATE Norway CASING PROGRAM: 13 3/8 inch at 1527 ft.
 WELL 7-11-3X COUNTY North Sea 9 7/8 inch at 6471 ft.
 DATE 12-31-68 CONTRACTOR ODECO LOCATION 7-11 7" inch at 19900 ft.
 STOCKPOINT Skinner BAROID ENGINEER Bill Witt - Chuck Hoover SEC TWP RNG TOTAL DEPTH 10,922 ft.

DATE	DEPTH feet	WEIGHT lb/gal	VISCOSITY Sec	FILTRATION		SAND %	SALT		pH	VISCOSITY			GELS		FILTRATE ANALYSIS				RETORT ANALYSIS			REMARKS AND TREATMENT	
				cc	Cake 32nd		NaCl ppm	Ca ppm		cp	Pv	Yp	in	10 min	Cl ppm	Ca ppm	SO ₄ ppm	Alk Pf	Oil %	Water %	Solids %		
18-19	10,253	14.0	56	6.4	2	TR		150,000	8.4	47	45	5	0	12		120		.15	4	72	24	Hole in good condition	
19	10,253	13.9	54	5.0	2	TR		150,000	8.4	36	32	8	0	10		40		.1	4	72	24	Drilling	
20	10,090	13.9	50	5.2	2	TR		150,000	8.2	34	24	8	0	12		40		.1	3	73	24	Drilling Case #1	
21	10,150	13.9	52	5.1	2	1/2		150,000	8.4	40	24	12	0	10		100		.12	3	72	24	Drilling Case #2	
22	10,200	13.9	51	4.9	2	3/4		150,000	8.4	40	33	14	0	8		120		.05	4	72	24	Drilling	
23	10,370	13.9	50	4.8	2	3/4		150,000	8.4	41	35	12	0	8		120		.05	4	72	24	Drilling Case #3	
24	10,430	13.9	51	4.8	2	1/2		150,000	8.4	41	35	12	0	8		120		.05	4	72	24	Drilling w/ Diamond bit	
25	10,540	13.8	52	4.7	2	1/2		150,000	8.5	42	36	12	0	8		120		.05	4	71	25	Hole is good condition	
26	10,720	13.8	53	4.8	2	1/2		150,000	8.5	43	36	14	0	8		140		.06	4	70	26	Small hole in mud zone	
27	10,868	13.9	55	5.0	2	1/2		150,000	8.4	42	35	14	0	10		140		.06	3	71	26	Allow mud to stop hole in 2 sec	
28	10,992	14.0	48	5.0	2	1		150,000	8.4	43	39	9	0	10		40		.15	3	73	24	Hole in good shape	
29	"	14.0	52	5.1	2	1/2		150,000	8.2	39	25	8	0	14		38		.13	2	74	24	Dry - condition mud to E. hole	
30	"	13.9	63	4.2	2	1/2		150,000	8.4	49	42	14	0	16		48		.13	2	74	24	4 1/2 hrs white logging	
Dec. 1	"	13.9	65	4.2	2	1/2		150,000	8.4	49	42	14	0	16		28		.13	2	74	24	Logging	
2-6	"	14.0	63	4.2	2	1/2		146,000	8.2	53	44	19	0	21		44		0	2	73	25	Running casing to 10,900. waiting on weather.	
7	"	13.8	52	4.8	2	TR		140,000	8.3	44	38	12	0	12		80		.02	2	73	25	C.C. through tubing	
8	"	13.8	50	4.9	2	TR		125,000	8.4	44	38	12	0	10		80		.02	2	73	25	Testing DST #1	
9-10	"	13.8	50	5.0	2	TR		125,000	8.4	44	38	12	0	10		100		.02	2	73	25	Testing DST #2	
11-16	"	13.0	40	NC																			Testing DST #3, 4, 5 Reduce wt to 13.0.
17-18	"	13.0	40	NC																			Test packer stuck in casing
19-20	"	12.8	42	10.8	2	TR		100,000	8.0	21	17	8	0	2		260		0	1	80	19	Allow tubewire in one at top of Packer, test packer in hole. Pulling BOP & Run to Repair	
21-25	"	12.9	45	10.8	2	TR		125,000	8.0	24	19	12	0	2		300		0	1	81	12	Repaired Packer & BOP waited on weather 4 days mixed 250 lb oil mud	
26-27	"	12.2	42	15	2	TR		110,000	8.0	23	18	10	0	3		300		0	1	82	17	Testing DST #6	
28-29	"	12.0	45	16	2	TR		100,000	8.0	23	18	10	0	2		280		0	1	81	12	Testing DST #7, 8.	
30	"																						Flushing

