

REPEAT FORMATION TESTER (RFT) RESULTS


TESTING

A number of RFT measurements were attempted in the gross interval 15,086' - 15,689' (4598.3 m - 4782.1 m) as outlined below.

<u>DEPTH RKB</u>	<u>FORMATION PRESSURE</u>
15,086' (4598.3 m)	no seal
15,254' (4649.5 m)	dry test
15,275' (4655.9 m)	no seal
15,483' (4719.3 m)	dry test
(a) 15,502' (4725.1 m)	13,025 PSI
(b) 15,502' (4725.1 m)	dry test
(c) 15,502' (4725.1 m)	dry test
15,512' (4728.1 m)	dry test
15,620' (4761.0 m)	dry test
15,627' (4763.2 m)	dry test.
15,656' (4772.0 m)	no seal
(a) 15,657' (4772.3 m)	13,164 PSI
(b) 15,657' (4772.3 m)	no seal
(c) 15,657' (4772.3 m) **	13,372 PSI
15,658' (4772.6 m)	no seal
(a) 15,661' (4773.5 m)	13,169 PSI
(b) 15,661' (4773.5 m)	no seal
(a) 15,665' (4774.8 m)	13,063 PSI
(b) 15,665' (4774.8 m)	13,464 PSI
(c) 15,665' (4774.8 m)	13,460 PSI
15,675' (4777.8 m)	no seal
15,679' (4779.0 m)	13,196 PSI
15,680' (4779.3 m)	no seal
15,681' (4779.6 m)	13,116 PSI
15,682' (4779.9 m)	no seal
15,683' (4780.2 m)	no seal
15,685' (4780.8 m)	no seal
15,688' (4781.8 m)	no seal
15,689' (4782.1 m)	no seal

** A fluid sample was obtained at this depth, and its analysis is shown by the report on the following two pages.

No drill stem tests were performed in the Lower Cretaceous or older sand due to the high formation pressures indicated by RFT measurement. No significant hydrocarbon shows which warranted testing were encountered above the sands.

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A subsidiary of Det norske Veritas and A/S Kongsberg Våpenfabrikk

Phillips Petroleum Company Norway
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att: Alf Svindland

Date 12.01.81.
JK/LL/ml 12 lab.

SAMPLING AND GAS ANALYSIS WELL 2/7-19.

Enclosed, please find the results of the analysis.

Some comments might be of aid to you:

The gas sample was taken at semi-atmospheric conditions (5psig) using a plastic hose from the RFT chamber to Schlumberger's plastic separator and a rubber hose from the separator to a Welker sample cylinder. Minute amounts of air are suspected to be present in the sample (much less than 0,1). This should not affect the results to any appreciable degree.

Two samples of mud were taken directly from RFT chamber. Immediately upon arrival at the laboratory, a rough density measurement was made, yielding approximately 0,7 g/cc. A sentrifuge test indicated a gas-cut of approximately 50 %. There was no apparent oil-staining of the surface. Extraction with tetrachloromethane followed by IR spectrophotometry resulted in a spectrogram showing so low oil content that contributions from organic additives and pollutants have to be eliminated before a determination of oil traces probably can be performed. Due to the nature of mud additives this will be extremely difficult. The mud filtrate was dark brown and had a resistivity of 4.1 ohm-meters at 15°C.

Very truly yours

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Phillips Petroleum Company Norway

JK/ml

NATURAL GAS COMPONENT ANALYSIS

Sample: Gas from RFT, well 2/7-19X.

Sample pressure: Approx. 270 psig in RFT chamber.

5 psig in sample bottle.

Components	Individual runs			Average (Mole %)
	Run no.1.	Run no.2.	Run no.3.	
Methane	72.391	72.588	72.472	72.48
Ethane	13.390	13.417	13.412	13.41
Propane	6.672	6.693	6.683	6.68
n-Butane	1.861	1.860	1.861	1.86
iso-Butane	1.005	1.006	1.006	1.01
n-Pentane	0.391	0.388	0.390	0.390
iso-Pentane	0.370	0.367	0.370	0.369
Hexane+ heavier constituents	0.647	0.605	0.632	0.628
Carbon dioxide	1.960	1.957	1.956	1.96
Oxygen	0.002	0.002	0.002	0.002
Nitrogen	<u>1.311</u>	<u>1.389</u>	<u>1.333</u>	<u>1.34</u>
	100.000	100.273	100.117	100.13

Very truly yours

GEOPHYSICAL COMPANY NORWAY A/S

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OILFIELD CONSULTANTS INTERNATIONAL

DRILLING MUD RECAP

(BY INTERVAL)

OPERATOR: Phillips Petroleum Co. Norway WELL: 2/7 - 19X
 INTERVAL: From: Spud To: 507 ft. (RKB)
 TOTAL INTERVAL Ft: 187 ft., TOTAL DRILLED Ft: 187 ft., TOTAL BIT RUNS: 2
 TOTAL ROTATING HOURS (DRLG + REAMING): 18 hr., TOTAL BIT RUNS: 2
 CSG. SIZE: 30" & DEPTH 505 ft. (RKB), HOLE SIZE: 38" & DEPTH: 507 ft. (RKB)

MUD PRODUCTS USED

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNIT COST</u>	<u>TOTAL UNITS</u>	<u>TOTAL COST (\$)</u>	<u>% OF TOTAL COST</u>
Wyo. Bentonite	50 Kg.	\$ 14.00	150	\$ 2,100.00	96.5 %
Caustic Soda	25 Kg.	12.45	6	74.70	3.5 %

INTERVAL MUD COST: (\$) 2174.70 INTERVAL BARRELS: 1000

INTERVAL MUD, COST/Ft: (\$) 4.29 INTERVAL MUD, COST/DAY: (\$) 724.90

REMARKS: Had to spud twice due to 4° hole deviation

OILFIELD CONSULTANTS INTERNATIONAL

DRILLING MUD RECAP

(BY INTERVAL)

OPERATOR: Phillips Petroleum Co. Norway WELL: 2/7 - 19X
INTERVAL: From: 507 ft. To: 1947 ft. (RKB)
TOTAL INTERVAL Ft: 1440 ft., TOTAL DRILLED Ft: 1440 ft., TOTAL BIT RUNS: 2
TOTAL ROTATING HOURS (DRLG + REAMING): 32, TOTAL BIT RUNS: 2
CSG. SIZE: 20" & DEPTH 1924 ft. (RKB), HOLE SIZE: 26" & DEPTH: 1947 ft. (RKB)

MUD PRODUCTS USED

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNIT COST</u>	<u>TOTAL UNITS</u>	<u>TOTAL COST (\$)</u>	<u>% OF TOTAL COST</u>
Wyo. Bentonite	50 Kg.	\$ 14.00	220	\$ 3,080.00	97.6%
Caustic Soda	25 Kg.	12.45	6	74.70	2.4%

INTERVAL MUD COST: (\$) 3,154.00 INTERVAL BARRELS: 1200

INTERVAL MUD, COST/Ft: (\$) 2.19 INTERVAL MUD, COST/DAY: (\$) 630.94

REMARKS: _____

OILFIELD CONSULTANTS INTERNATIONAL

DRILLING MUD RECAP

(BY INTERVAL)

OPERATOR: Phillips Petroleum Co. Norway WELL: 2/7 - 19X
 INTERVAL: From: 1947 ft. To: 5250 ft. (RKB)
 TOTAL INTERVAL Ft: 3303 ft., TOTAL DRILLED Ft: 3303 ft., TOTAL BIT RUNS: 1
 TOTAL ROTATING HOURS (DRLG + REAMING): 52 hr., TOTAL BIT RUNS: 1
 CSG. SIZE: 13 3/8" & DEPTH 5203 ft. (RKB), HOLE SIZE: 17 1/2" & DEPTH: 5250 ft. (RKB)

MUD PRODUCTS USED

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNIT COST</u>	<u>TOTAL UNITS</u>	<u>TOTAL COST (\$)</u>	<u>% OF TOTAL COST</u>
Barite	100 lb.	\$ 5.60	110	\$ 616.00	11.5%
Wyo. Bentonite	50 Kg.	14.00	180	2,520.00	47.0%
Lignosulfonate	25 Kg.	15.00	92	1,380.00	25.7%
Caustic Soda	25 Kg.	12.45	28	348.60	6.5%
Mica Fine	25 Kg.	14.50	16	232.00	4.3%
Nut Plug Fine	25 Kg.	14.50	18	261.00	5.0%

INTERVAL MUD COST: (\$) 5357.60 INTERVAL BARRELS: 2000
 INTERVAL MUD, COST/Ft: (\$) 1.62 INTERVAL MUD, COST/DAY: (\$) 471.86

REMARKS: Mica used as a precaution measure against loss of circulation at shoe.
Nut Plug used to unball bit and stabilizers.

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DRILLING MUD RECAP

(BY INTERVAL)

OPERATOR: Phillips Petroleum Co. Norway WELL: 2/7 - 19X
 INTERVAL: From: 5250 ft. To: 12,470 ft. (RK)
 TOTAL INTERVAL Ft: 7153 ft., TOTAL DRILLED Ft: 7220 ft., TOTAL BIT RUNS: 7
 TOTAL ROTATING HOURS (DRLG + REAMING): 424.5, TOTAL BIT RUNS: 12
 CSG. SIZE: 9 5/8" & DEPTH 12,403 ft. (RKB), HOLE SIZE: 12 1/4" & DEPTH: 12,470 ft. (RK)

MUD PRODUCTS USED

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNIT COST</u>	<u>TOTAL UNITS</u>	<u>TOTAL COST (\$)</u>	<u>% OF TOTAL COST</u>
Barite	100 lb.	\$ 5.60	24,999	\$ 139,994.40	64.2%
Wyo. Bentonite	50 Kg.	14.00	174	2,436.00	1.0%
Lignosulfonate	25 Kg.	15.00	796	11,940.00	5.5%
Caustic Soda	25 Kg.	12.45	500	6,225.00	2.8%
Drispac Reg.	50 lb.	141.00	123	17,343.00	7.9%
Drispac Super-Lo	50 lb.	152.00	70	10,640.00	4.8%
Desco	50 lb.	29.29	395	11,534.00	5.3%
Soltex	50 lb.	68.00	219	14,892.00	6.8%
Mica	25 Kg.	14.50	157	2,276.50	1.0%
Plug	25 Kg.	14.50	20	290.00	0.2%
Defoamer	20 L.	69.00	7	483.00	0.5%

INTERVAL MUD COST: (\$) 218,053.90 INTERVAL BARRELS: 2775
 INTERVAL MUD, COST/Ft: (\$) 30.20 INTERVAL MUD, COST/DAY: (\$) 5191.76

REMARKS: _____

OILFIELD CONSULTANTS INTERNATIONAL

DRILLING MUD RECAP

(BY INTERVAL)

OPERATOR: Phillips Petroleum Company Norway WELL: 2/7 - 19X
 INTERVAL: From: 12,470 ft. To: 16,000 ft. (RKB)
 TOTAL INTERVAL Ft: 3,530 ft. , TOTAL DRILLED Ft: 3,530 ft. , TOTAL BIT RUNS: 7
 TOTAL ROTATING HOURS (DRLG + REAMING): 756.5 , TOTAL BIT RUNS: 7
 CSG. SIZE: 7" & DEPTH 15,995 ft. (RKB), HOLE SIZE: 8½" & DEPTH: 16,000 ft. (RKB)

MUD PRODUCTS USED

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNIT COST</u>	<u>TOTAL UNITS</u>	<u>TOTAL COST (\$)</u>	<u>% OF TOTAL COST</u>
Barite	100 lb.	\$ 5.60	73,995	\$ 414,372.00	81.7%
Wyo. Bentonite	50 Kg.	14.00	998	13,972.00	2.7%
Caustic Soda	25 Kg.	12.45	481	5,988.45	1.2%
Lignosulfonate	25 Kg.	15.00	1462	21,930.00	4.3%
Drispac Super-Lo	50 lb.	152.00	167	25,384.00	5.0%
Drispac	50 lb.	141.00	30	4,230.00	0.8%
Desco	50 lb.	29.29	74	2,167.46	0.4%
Diacel 'D'	40 lb.	23.30	30	699.00	0.1%
Nut Plug	25 Kg.	14.50	315	4,567.50	0.9%
Kwikseal	40 lb.	33.10	309	10,227.90	2.0%
Defoam	5 gal.	69.00	4	276.00	0.1%
Bicarbonate	50 Kg.	17.50	10	175.00	0.1%
Lignite	25 Kg.	18.50	82	1,517.00	0.2%
Mica	25 Kg.	14.50	115	1,667.50	0.3%

INTERVAL MUD COST: (\$) 507,173.81 INTERVAL BARRELS: 10,500
 INTERVAL MUD, COST/Ft: (\$) 143.67 INTERVAL MUD, COST/DAY: (\$) 5,228.59

REMARKS: _____

OILFIELD CONSULTANTS INTERNATIONAL

DRILLING MUD RECAP

(TOTAL WELL)

OPERATOR: Phillips Petroleum Co. Norway WELL: 2/7 - 19X T.D. 16,000 ft. (RKB)
 DATE OF SPUD: 19 August 1980, DATE OF T.D. 8 January 1981, DATE RIG REL: 28 January 1981
 DAYS (SPUD TO T.D.): 143, TOTAL DAYS (SPUD TO RREL): 163
 RKB TO SEABED: 320 ft., WATER DEPTH: _____, TOTAL DRILLED Ft: 15,680 ft.
 TOTAL ROTATING HOURS (DRLG + REAMING): 756.5 hr., TOTAL BIT RUNS: 19

CASING SIZE:	30"	20"	13 3/8"	9 5/8"	7"
CASING DEPTH (RKB):	505	1924	5203	12,403	15,995
HOLE SIZE:	36"	26"	17 1/2"	12 1/2"	8 1/2"
HOLE DEPTH (RKB):	507	1947	5250	12,470	16,000

MUD PRODUCTS USED

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNIT COST</u>	<u>TOTAL UNITS</u>	<u>TOTAL COST (\$)</u>	<u>% OF TOTAL COST</u>
Barite	100 lb.	\$ 5.60	99,104	\$ 554,982.40	75.4%
Wyo. Bentonite	50 Kg.	14.00	1,722	24,108.00	3.2
Caustic Soda	25 Kg.	12.45	1,021	12,711.45	1.7
Lignosulfonate	25 Kg.	15.00	2,350	35,250.00	4.8
Drispac	50 lb.	141.00	153	21,573.00	2.9
Drispac Super-Lo	50 lb.	152.00	237	36,024.00	4.9
Mica	25 Kg.	14.50	288	4,176.00	0.5
Nut Plug	25 Kg.	14.50	353	5,118.50	0.7
Desco	50 lb.	29.29	469	13,737.01	1.8
Soltex	50 lb.	68.00	219	14,892.00	2.0
Defoam	5 gal.	69.00	11	759.00	0.1
Diacel 'D'	40 lb.	23.30	30	699.00	0.1
Kwikseal	40 lb.	33.10	309	10,227.90	1.4
Lignite	25 Kg.	18.50	82	1,517.00	0.2
Bicarbonate	50 Kg.	17.50	10	175.00	0.1

TOTAL MUD COST: (\$) 735,950.26 TOTAL BARRELS: 17,475

TOTAL MUD, COST/Ft: (\$) 45.99 TOTAL MUD, COST/DAY: (\$) 4515.03

REMARKS: