10 1968

INDIVIDUAL WELL RECORD

PPCO

WA-7/11-02-11(2)

FROM:

PHILLIPS PETROLEUM COMPANY
P O BOX 72
STAVANGER, NORWAY

TO

International Department

Individual Well Record

Well 7/11-2X

North Sea - Norway

7/

Well File

GEOLOGY FILE

Form 7956 2-69

INTERNATIONAL DEPARTMENT

INDEX - INDIVIDUAL WELL RECORD

Country Norway Lease 7/11 Well No. 2X

Field North Sea (Cod) Date completed October 16th 1968

X	1. Index, Form 7956	X	2. Proposal and Authorization to drill
___	3. Location Plat	X	4. Reports to Governmental Agencies
X	5. Well Graph on Correlation Log	X	6. Individual Well Completion Record, Form 2266
X	7. Perforating & Squeeze Record, Form 822	X	8. Exploration Record, Form 883
X	9. Hydrocarbon Mud Log		
X	10. Well Logs -		
___	Logs -		
___	Logs -		
___	Logs -		
___	Logs -		
___	Logs -		
X	11. Drill Stem Tests	X	12. Columnar Core Record, Form 2069
X	13. Core Analysis	___	14. Individual Well Production Test
___	15. Bottom Hole Pressure and Productivity Index Tests, Form 884		
___	16. Water Analysis	X	17. Research Reports
X	18. Drilling Time and Bit Record	___	19. Hole Deviation Record
___	20. Mud Program and Record	___	21. Geological Summary
X	22. Daily Report Detailed, Form 911		
_	23. Proposal to Change Individual Well Status or to Repair or Replace Equipment, Form 902		
X	24. Final Report Individual Well Status, Form 903		
___			
___			

C O N F I D E N T I A L

NORWAY - NORTH SEA - CONFIRMATION WELL

DRILLING PROSPECTUS

Well: 7/11-2

Location: 57° 04' 00" N, 02° 24" 20" E.

Water Depth: Approximately 260'.

General:

Current plans are to drill to a depth of approximately 11,135' (100' into the limestone) in block 7/11 using ODECO's semi-submersible drilling rig "Ocean Traveler".

AFE NW-5505 ($1,719,628 gross; $635,575 net) has been assigned to the project.

Anticipated Pressures and Troublesome Formations:

Geologically, well 7/11-2 is anticipated to be similiar to well 7/11-1X except the formations should be 300' deeper.

The problem of heaving and sloughing shale will probably occur to a depth of 6500'. This problem will be solved by converting to a saturated salt system at ± 4000' and increasing the mud density to 12.0 ppg.

The gas zone to be encountered at 9800' can be balanced with a 11.0 to 11.2 ppg mud density. To provide positive hydrostatic overbalance a 12.0 ppg mud density will be used to drill and/or core this section. The limestone immediately below the sandstone could contain formation pressures requiring 11.8 ppg mud density for balance, however, the limestone in well 7/11-1X was very tight. Unless permeability develops in the well 7/11-2 limestone, this section should not present any unusual drilling problems.

Hole and Casing Program:

Hole Size	Casing Size	Description	Torque Ft-Lbs	Approx Depth RKB
36"	30"	1" wall 309 lb/ft	(Vetco Squnch Jts)	415-455'
26"	20"	a. 133 lb J ST&C	-	
		b. 133 lb J LT&C		±Total
		c. 133 lb J Vetco		±1650'
		d. 133 lb J ST&C		
17½"	13 3/8"	a. 68 lb J ST&C	5200	Total
		b. 68 lb J LT&C		± 6500'
12 1/4"	9 5/8"	47 lb N-80 Buttress	(to diamond mark)	±11,000'

N o t e s:

1. The 36" hole is to be drilled to a depth that will allow two or three joints of 30" casing to be set on bottom and still have 10' to 15' of casing above the sea floor. This will provide for better U.T. V. reception and allow for some settling of the 30" casing without the wellhead sinking below the sea floor.

2. In order to minimize hole washout below the 20", set the casing not more than 15 to 20 feet off bottom. A 20" casing design showing all cross overs has been furnished to assist in allowing the hole to be drilled to the proper depth. ALL of the LT&C and Vetco casing must be run on this job. This is the complete Norway stock of these two threads and will eliminate the need for cross overs on future wells.

3. Please note that approximately 60% of the 13 3/8" string will be LT&C casing. This is a non-API casing. Special caution is to be taken to see that the casing is "made-up" properly. The complete section of LT&C casing is to be run in this well so that it may also be eliminated from the Norway stock.

4. Two short 9 5/8" casing joints ($\pm$ 20') will be provided. One joint is to be placed in the string at $\pm$ 9900' and the second at $\pm$ 9800'. These joints will be used as checks during perforating operations.

Cement Requirements:

A. 30" casing.

Cement with 600 sxs (56,400 lbs), (700 sxs if 3 joints 30" are run) Dalen Portland cement plus 3% calcium chloride (1692 lbs). The cement slurry should be mixed to 15.6 ppg and will have more than one hour thickening time. FRESH WATER should be used as mixing water. Wait on cement 12 hours before drilling out. At this time the cement will have a compressive strength of approximately 1000 psi.

600 sxs of cement will provide for cement back to the surface plus 400% washout in open hole and fill the bottom 25' of 30" casing if two joints are set. If three joints are set with 700 sx the ratio is about the same. Run one joint of drill pipe below the 30" handling tool. A 30" Baker Float Shoe will be run on the bottom of the 30" casing.

B. 20" casing.

Cement with 1800 sxs Dalen Portland cement (169,200 lbs) plus 8% bentonite (12,960 lbs) plus 3% calcium chloride (5076 lbs) mixed to 13.1 ppg slurry density. FRESH WATER for mixing water is to be used. Thickening time for the "gel" cement will be 3:00 hrs. plus. Thickening time for the Portland plus 3% Calcium Chloride will be 1 hr. 30 mins.

The above cement design provides for cement back to the surface

plus 90% washout in open hole and 45' of fill in the 20" casing. A 20" Baker cement float shoe will be run on bottom and a 20" Baker cement baffle collar run 45' above the shoe. The plug should be displaced to the baffle collar.

Three 20" centralizers will be furnished and should be placed with one 7½' above the shoe, one on top of the second joint, and one on top of the fourth joint.

Halliburton top and bottom Type "S" cementing plugs are to be used and the casing string landed using drill pipe.

The mill connections of the bottom two joints of casing should be tack welded while the casing is laying on the rack and prior to the time casing is to be run. Baker-lok should be applied to the float shoe and collar connections.

Drilling may be resumed immediately after running the B.O.P.'s and Marine Riser.

C. 13 3/8" casing.

Cement with 2400 sxs Dalen Portland cement (225,000 lbs) plus 8% Gel (18,000 lbs). Slurry weight to be 13.1 ppg. Thickening time for this slurry is 1 hr. 50 mins. Follow with 900 sxs Dalen Portland cement mixed to 15.6 ppg. Thickening time for this slurry is 2 hrs. 25 mins. Both slurries are to be mixed with SEA WATER. This provides for cement from 6500' RKB back to the sea floor plus 25" washout in open hole.

The dry volume of the 2400 sxs common cement plus 8% Gel is 2700 cu.ft. which should fill three cement bulk tanks. The dry volume of the 900 sxs common cement is 900 cu.ft. which should fill one tank.

Run three centralizers with one 7½' above the shoe, on top of the second joint, and one on top of the fourth joint.

A Baker Model "G" differential fill shoe is to be run on bottom and a Baker Model "G" differential fill collar run one joint above the shoe.

Halliburton top and bottom Type "S" cementing plugs are to be used and the casing string landed using drill pipe.

The mill connections of the bottom two joints of casing should be tack welded while the casing is laying on the rack and prior to the time the casing is to be run. Baker-lok should be applied to the float shoe and collar connections.

Drilling may be resumed as soon as the 13 5/8" B.O.P. stack and 16" Marine Riser are in place.

D. 9 5/8" casing.

Cement with 1500 sxs class "B" cement (141,000 lbs) plus 0.3% DIACEL "LWL" (423 lbs) plus 0.1% DIACEL "A" (141 lbs) mixed with FRESH WATER to a slurry density of 15.6 ppg. Thickening

time for this cement will be 2 hrs. 22 mins. at 12,000 feet and 3 hrs. 37 mins. at 10,000 feet. The compressive strength of the cement will be 3000 psi plus in 24 hours.

The 1500 sxs of cement will provide a 4500' column of cement plus 25% allowed for washouts.

A Baker Model "G" differential float shoe will be run on the bottom and a Baker Model "G" differential float collar one joint above the shoe. Three centralizers will be run with one 7½' above the shoe, one two joints above the shoe, and one centralizer four joints above the shoe.

As this is N-80 casing, NO WELDING should be done. Baker-lok should be used instead.

Wait on cement 24 hours before drilling out.

Wellhead and B.O.P. Procedure:

A Cameron Underwater Wellhead System, Payne Control System, Hydril and Shaffer blowout preventors will be used for drilling this well. The procedure for handling and running this equipment is covered in the Cameron Underwater Wellhead Manual. A B.O.P. test is to be conducted to ½ the B.O.P. rated working pressure the first trip out of the hole after 12:01 A.M. each Tuesday.

Mud Logging:

The Geoservice mud logging unit is to be in service when the well is spudded. A geologist will be on board to furnish information to the mud logger as to frequency, number, and kind of samples to be collected.

Drill Stem Testing:

There will be no open hole drill stem testing.

Hole Deviation Surveys:

An instrument to measure hole deviation is available on the rig. Surveys should be made every trip out of the hole. Intermediate surveys are to be made only if deviation is a problem.

M U D P R O G R A M

36" and 26" Holes (36" at 65'; 26" at 1650')

These holes will be drilled with seawater and with no returns to the surface. A high viscosity mud should be prepared in the pits for use in pumping through the hole in small slugs in case hole cleaning should become a problem and for spotting in the hole prior to running casing. The amount spotted prior to running casing should equal twice the calculated hole volume, however, in the case of the 26" hole the amount spotted will be determined by the maximum pit volume. This high viscosity slurry should be prepared from approximately 20 ppb. Zeogel and 3 to 4 ppb. Flosal and should

have the following properties:

Weight - 8.6 lb/gal
Viscosity - above 150 sec/qt.
Water Loss - no control

17½" Hole (6500').

The drilling on the 17½" hole should commence with seawater and proceed with seawater to approximately 4000'. At 4000' commence adding salt to the system while drilling is in progress. Continue adding salt until the mud system is saturated. Dispac and starch should be added as required in a 1/4 ratio to control the water loss at 15 to 20 cc. At this time barite should be added to increase the density of the saturated salt system to 12.0 ppg. Also diesel oil should be added to this mud to maintain 5 to 7% oil. Prior to adding diesel to the system, Soltex should be mixed in the diesel in amounts of approximately 5 ppb. Soltex to one barrel diesel. This mud, having the following properties,

Weight - 12.0 lb/gal
Viscosity - 40 to 50 sec/qt.
Filtrate - 15 to 20 cc
pH - 7.0
Oil - 6%

should be maintained to casing depth with the exception that the filtration loss should be lowered to 10 - 15 cc prior to running logs and casing.

12 1/4" Hole (11,000')

The 12 1/4" hole should be drilled with a saturated salt mud as above having the following properties:

Weight 12.0 lb/gal
Viscosity - 40 to 50 sec/qt.
Filtrate - 10 - 12 cc
pH - 7.0
Oil - 6%

At about 10,000', the Drispac/Starch combination used to control the filtrate should be changed to Drispac/CMC, also in a 1/4 ratio, because of bottom hole temperature.

CONFIDENTIAL

NOR/D&P-Well 7/11-2x

July 10, 1968

PHILLIPS 7/11-2x, COD PROSPECT
GEOLOGIC PROGNOSIS

LOCATION: Field 7, Block 11, Production License 018; 57° 04' 00" N., 02° 24' 20" E; S.P. 1248, Line NJV 5704

PROPOSED T.D.: 11,135' (3394m) WATER DEPTH (MSL): - 257 (78m)

RKB (MSL): +90' (27m) SEA FLOOR (RKB): 347 (105m)

EXPECTED GEOLOGIC SECTION

xx. SEISMIC REFLECTORS
(x. objective zone) & (estim obj sand thicknesses)

FORMATION	ESTIM TOP RKB, FT(M)	EXPECTED LITHOLOGY
Recent-Pleist		sands, gravel
Pliocene		clays, shales
Miocene		" " , Thin ls
x Oligocene (x. 150')	6600 (2012)	(x) sandstone; clays
Eocene	8800 (2682)	clays, thin sands
x Paleocene (xx GREEN) (x. 800' gross)	9775 (2979)	(x) sandstone; & shale,w/ intbdd limestones lower 300'
U. Cret. (xx YELLOW)	11135 (3394)	limestone
Total depth	11135 (3394) or,	drill 100' into limestone

CASING PROGRAM

SIZE	APPROS. DEPTH RKB FT. (M)	ESTIM FM SET IN
30"	425 (130)	Recent
20"	1500 (457)	Pleist. - Pliocene
13 3/8"	6500 (1981)	Oligocene
9 5/8"	11,135 (3394)	Upper Cretaceous

.../...

LOGGING PROGRAM

RUN	HOLE SIZE	APPROX INTERVAL	TOOLS
-	36"	347-425'RKB (106-130m)	-
-	26"	425'-1500' RKB (130-457m)	(Gamma Ray, Run 1 to subsea)
1	17½"	1500'-6500' RKB (457-1981m)	LL/MLL-Cal BHC S/GR-Cal CDM or HDT BHC FDC SNP
2	12 1/4"	6500-11135 (TD) RKB (1981-3394m)	Same as Run 1. IES SP curve Sidewall Core Equip Geophone Survey at total depth.

CORING

At least 2 cores are planned, one at the top of the pay sand, and other in oil zone if recognizeable. At least full barrel recoveries should be attempted. Additional cores may be taken if warranted. Sidewall cores may be taken if warranted.

TESTING

As warranted.

Distribution:

Oslo office (3)
Stavanger office (4)
Brussels office (3)
Petrofina (1)
Agip (1)
Elf (3)

PHILLIPS PETROLEUM COMPANY

International E&P Department

A. F. E. No.....

COST ESTIMATE

Location 57° 04' 00" N, 02° 24' 30" E, Cod Structure

Date June 20 19 68

Description of Job: Tow Contractor's rig from Stavanger to location then drill Well 7/11-2X to a depth of 11,145' and fully test.

Work to be done by Contractor - ODECO Norway Inc.'s "Ocean Traveler".

UNIT	CLASS	ITEM	DESCRIPTION	QUAN.	UNIT PRICE	TANGIBLE	INTANGIBLE	TOTAL
			TANGIBLES:		US$	US$	US$	US $
			Casing:					
		1	30" O.D.	80'	33.75	2700		
		2	20" O.D.	1500'	18.75	28125		
		3	13 3/8" O.D.	6500'	8.25	53625		
		4	9 5/8" O.Dæ	11145'	6.50	72443		
		5	Wellhead & Misc. Subsea Equip.			50000		
			TOTAL TANGIBLES					206,893
			INTANGIBLES:					
		6	Tow to Location	8	4360	34880		
		7	Survey			8000		
		8	Contract Rig	65	11000	715000		
		9	Supply Boats	65	1600	104000		
		10	Helikopter Service	65	1850	120250		
		11	Shorebase	65	25	1625		
		12	Diving Service	65	700	45500		
		13	Mud Logging Service	65	150	9750		
		14	Cementing Service			60000		
		15	Logging and Perforating			100000		
		16	Mud Engineering Service	65	68	4420		
		17	Bits & Core Heads			15000		
		18	Mud & Chemicals			100000		
		19	Weather Service	65	10	650		
		20	Test Equipment Rental (Surface)	65	25	1625		
		21	Test Equipment Rental (Subsurface)	65	12	780		
		22	Misc. Tool Rental & Services	65	450	29250		
		23	Casing Accessories			8000		
		24	Diesel fuel	65	630	40950		
		25	Cut & Patch Tools	65	33	2145		
		26	Lubricants			500		
			TOTAL					

REQUESTED BY_____

ESTIMATE PREPARED BY_____

CHECKED BY_____

APPROVED BY

_____

_____

Form 452 11 62 Reproduction of Standard No 9.31-1 A 56449

PHILLIPS PETROLEUM COMPANY

International E & P Department

Page No. 2 of 2

A. F. E. No.....

COST ESTIMATE

Location 7/11-2X

Date 19

Description of Job:

Work to be done by

UNIT	CLASS	ITEM	DESCRIPTION	QUAN	UNIT PRICE	TANGIBLE	INTANGIBLE	TOTAL
					US$	US$	US$	US$
		27	Radio Operator Norsco	65	4		260	
		28	Contract Labor	65	200		13000	
		29	Transportation				10000	
		30	Harbor and Custom Fees	65	16		1040	
		31	Pilot Fees	65	52		3380	
		32	Radio Antenna - Smedvig	65	2		130	
		33	Phillips Supervision	65	140		9100	
		34	District Expense	65	900		58500	
		35	Test Equipment and Services				15000	
			TOTAL INTANGIBLES					1,512,735
			TOTAL					1,719,628

REQUESTED BY A.T. Crump

ESTIMATE PREPARED BY J.K. Fetters

CHECKED BY

APPROVED BY

Form 452 11 62 Reproduction of Standard No 9 31-1 A 56449

JKF/CJL
SO-268-68

Stavanger, September 12, 1968

Mr. T.J. Jobin,
OSLO OFFICE

NOR/D&P/Well 7/11-2.

Attached is a supplement request for well 7/11-2 and an estimated time breakdown. You will note that five tests are scheduled. Each test that can be eliminated will reduce the total expenditure approximately $30,000.

Original Signed by
A.T. CRUMP

A.T. CRUMP

Attach.

ESTIMATED TIME REQUIRED TO COMPLETE WELL 7/11-2.

	Days:
Drilling	3
Logging	2
Reaming	6
Running Casing	1
Cementing and W.O.C.	1
Collar log and Perforating	1
Test No. 1	3
Squeeze No. 1	1
Test No. 2	3
Squeeze No. 2	1
Test No. 3	3
Squeeze No. 3	1
Test No. 4	3
Squeeze No. 4	1
Test No. 5	3
Temporarily abandon well	3
Total	36

PETROLEUM COMPANY COMPANY

Page No. 1 of 2

International E&P Department

A. F. E. No. NW 550

COST ESTIMATE

Location Cod Structure, Block 7/11, Well 2X.

Date September 12, 19 6

Description of Job: Norwegian Sector of North Sea - Europe

------- Supplement No. 1-------

Work to be done by

UNIT	CLASS	ITEM	DESCRIPTION	QUAN.	UNIT PRICE	TANGIBLE	INTANGIBLE	TOTAL
			INTANGIBLES:					
			Contract Rig	36	11300		406,800	
			Supply Boats	36	1600		57,600	
			Helicopter Service	36	1850		66,600	
			Shorebase	36	25		900	
			Diving Service	36	700		25,200	
			Mud Logging Service	36	150		5,400	
			Cementing Service				30,000	
			Logging and Perforating				50,000	
			Mud Engineering Service	36	68		2,448	
			Bits				5,000	
			Mud and Chemicals				20,000	
			Weather Service	36	20		720	
			Test Equipment Rental Surface	36	25		900	
			" " " Sub-Surface	36	12		432	
			Misc. Tool Rental & Services	36	450		16,200	
			Diesel Fuel	36	630		22,680	
			Cut and Patch Tools	36	33		1,188	
			Lubricants				500	
			Radio Operator Norsco	36	4		144	
			Contract Labor	36	200		7,200	
			Transportation				30,000	
			Harbor and Custom Fees.	36	16		576	
			Pilot Fees	36	52		1,872	
			Radio Antenna	36	2		72	
			Phillips Supervision	36	140		5,040	
			District Expense	36	900		32,400	
			Test Equipment and Services				15,000	
			ORIGINAL ESTIMATE 1,719,628					
			SUPPLEMENT NO. 1 804,872					
			TOTAL REVISED ESTIMATE: 2,524,500					
			SUPPLEMENT NO. 1 TOTAL				804,872	

REQUESTED BY A.T. Crump

ESTIMATE PREPARED BY J.K. Fetters

CHECKED BY

APPROVED BY

Form 452 11-62 Reproduction of Standard No. 9.31-1 A 56449

AUTHORITY FOR EXPENDITURE

AFE NO NW 5505

To:
- ☐ COMPTROLLER DEPT.
- ☐ TREASURY DEPT.
- ☐ PURCHASING DEPT.
- ☐ ENGINEERING DEPT.
- ☒ Executive Dept.
- ☐ International Dept. (2)

PHILLIPS PETROLEUM COMPANY

International DEPARTMENT

- ☐ ORIGINAL
- ☒ SUPPLEMENT
- ☐ EXTENSION
- ☐ REDUCTION
- ☐ CANCELLATION

DATE Sept. 12, 19 68

TO THE EXECUTIVE COMMITTEE: BOARD OF DIRECTORS:

Phillips Petroleum Company - 36.96%
Petrofina S.A. - 30.00%
Agip Sp.A. - 13.04%
Elf Norge - 20.00%

AUTHORITY IS HEREBY REQUESTED TO:

Supplement the original estimate to drill a 3353 meter (11,000') offshore confirmation well and fully test well 7/11-2, field 7, block 11, Norwegian Production License 018, Norway, North Sea, Europe.

	CLEAR TO	GROSS COST	LESS PARTNER INT.	OUR NET INTEREST
EXPENSE		$	$	$
INVESTMENT		$ 804,872	$ 507,392	$ 297,480
	TOTAL	$ 804,872	$ 507,392	$ 297,480
	REVISED TOTAL ESTIMATE	$ 2,524,500	$1,591,446	$ 933,054
	PREVIOUS APPROVAL	$ 1,719,628	$1,084,054	$ 635,574
1968	APPROVAL REQUIRED	$ 804,872	$ 507,392	$ 297,480

BUDGET ITEM NUMBER 2 - Norway

CONTINGENCY - REGULAR ☐
CONTINGENCY - PAYOUT ☐

AVERAGE ANNUAL RATE OF RETURN _____ PER CENT
PAYOUT ON REQUIRED EXPENDITURE _____ YEARS
NO. TIMES EXPENDITURE RETURNED IN ECONOMIC LIFE _____
(ABOVE TO BE FIGURED AFTER FEDERAL INCOME TAXES)

ESTIMATED CONSTRUCTION PERIOD _____ MONTHS
ESTIMATED ECONOMIC LIFE OF PROJECT _____ YEARS
ESTIMATED INCREASE IN WORKING CAPITAL $ _____
RISK CLASSIFICATION _____

JUSTIFICATION:

Authority is requested to supplement AFE NW 5505 as a result of the following factors:

1) A sloughing shale was encountered above 6500' requiring a 14.8 ppg mud density for control. This increased mud density resulted in the total mud cost being $250,000 instead of $100,000 as estimated. In addition several days rig time were lost bringing the shale under control.

2) An 8½" hole was drilled below 9907' instead of 12-1/4" as planned. This required additional rig time to change out drilling assemblies and to ream the 8½" hole to 12-1/4" in order to set 9-5/8" casing.

3) Hard drilling encountered below 9800' increased the estimated drilling time by approximately ten days. Also, the hard drilling has required the use of diamond drilling bits which have increased estimated bit costs approximately $30,000.

4) It was necessary to make an intermediate log run at 10,810' for correlation purposes. This in turn required three days rig time and additional logging charges.

5) The drilling of this well on a "crash program" necessitated $50,000 air freight charges that were not orginally estimated.

6) Analysis of the electric logs indicates two additional DST tests will be required that were not included in the original estimate.

OPERATING COMMITTEE

DEPARTMENTAL APPROVALS

EXECUTIVE COMMITTEE OR BOARD OF DIRECTORS

DATE _____ 19 _____

Form 362 3-61

Stavanger

ESTIMATED TIME REQUIRED TO COMPLETE WELL 7/11-2

	Days:
Drilling	2
Logging	2
Reaming	6
Running Casing	1
Cementing and W.O.C.	1
Collar log and Perforating	1
Two additional Tests	8
Total	21 days

D

AUTHORITY FOR EXPENDITURE

AFE NO NW 5505

To:
- ☐ COMPTROLLER DEPT.
- ☐ TREASURY DEPT.
- ☐ PURCHASING DEPT.
- ☐ ENGINEERING DEPT.
- ☒ Executive Dept.
- ☐ International Dept. (2)

PHILLIPS PETROLEUM COMPANY

International DEPARTMENT

- ☐ ORIGINAL
- ☒ SUPPLEMENT
- ☐ EXTENSION
- ☐ REDUCTION
- ☐ CANCELLATION

DATE Sept. 12, 19 68

TO THE EXECUTIVE COMMITTEE: BOARD OF DIRECTORS:

Phillips Petroleum Company - 36.96%
Petrofina S.A. - 30.00%
Agip S.p.A. - 13.04%
Elf Norge - 20.00%

AUTHORITY IS HEREBY REQUESTED TO:

Supplement the original estimate to drill a 3353 meter (11,000') offshore confirmation well and fully test well 7/11-2, field 7, block 11, Norwegian Production License 018, Norway, North Sea, Europe.

CLEAR TO	GROSS COST	LESS PARTNER INT.	OUR NET INTEREST
EXPENSE	$	$	$
INVESTMENT	$ 532,217	$ 335,510	$ 196,707
TOTAL	$ 532,217	$ 335,510	$ 196,707
REVISED TOTAL ESTIMATE	$ 2,251,845	$ 1,419,563	$ 832,282
PREVIOUS APPROVAL	$ 1,719,628	$ 1,084,054	$ 635,574
APPROVAL REQUIRED	$ 532,217	$ 335,510	$ 196,707

BUDGET ITEM NUMBER 2- Norway

AVERAGE ANNUAL RATE OF RETURN _____ PER CENT
PAYOUT ON REQUIRED EXPENDITURE _____ YEARS
NO. TIMES EXPENDITURE RETURNED IN ECONOMIC LIFE _____
(ABOVE TO BE FIGURED AFTER FEDERAL INCOME TAXES)

CONTINGENCY - REGULAR ☐
CONTINGENCY - PAYOUT ☐

ESTIMATED CONSTRUCTION PERIOD _____ MONTHS
ESTIMATED ECONOMIC LIFE OF PROJECT _____ YEARS
ESTIMATED INCREASE IN WORKING CAPITAL $ _____
RISK CLASSIFICATION _____

JUSTIFICATION:

Authority is requested to supplement AFE NW 5505 as a result of the following factors:

1) A sloughing shale was encountered above 6500' requiring a 14.8 ppg mud density for control. This increased mud density resulted in the total mud cost being $250,000 instead of $100,000 as estimated. In addition several days rig time were lost bringing the shale under control.

2) An 8½" hole was drilled below 9907' instead of 12-1/4" as planned. This required additional rig time to change out drilling assemblies and to ream the 8½" hole to 12-1/4" in order to set 9-5/8" casing.

3) Hard drilling encountered below 9800' increased the estimated drilling time by approximately ten days. Also, the hard drilling has required the use of diamond drilling bits which have increased estimated bit costs approximately $30,000.

4) It was necessary to make an intermediate log run at 10,810' for correlation purposes. This in turn required three days rig time and additional logging charges.

5) The drilling of this well on a "crash program" necessitated $50,000 air freight charges that were not originally estimated.

6) Analysis of the electric logs indicates two additional DST tests will be required that were not included in the original estimate.

O.D. Thomas
C.O. Downey
Brussels E&P file
Brussels Budget Control
Field Office (2)

T. J. Jobin

DEPARTMENTAL APPROVALS

OPERATING COMMITTEE

EXECUTIVE COMMITTEE OR BOARD OF DIRECTORS
DATE _____ 19 _____

Form 362 3-61

PHILLIPS PETROLEUM COMPANY

International E&P Department

J. A. No.

COST ESTIMATE

A. F. E. No. NW 5505

Location: Cod Structure, Block 7/11, Well 2x. Date September 12, 1968

Description of Job: Norwegian Sector of North Sea - Europe

---------- Supplement No. 1 ----------

UNIT	CLASS	ITEM	DESCRIPTION (SHOW CONDITION OF USED MATERIAL AND EQUIPMENT)	QTY.	UNIT PRICE	TOTAL
			INTANGIBLES:			
			Contract Rig	21	11300	237,300
			Supply Boats	21	1600	33,600
			Helicopter Service	21	1850	38,850
			Shorebase	21	25	525
			Diving Service	21	700	14,700
			Mud Logging Service	21	150	3,150
			Cementing Service			30,000
			Logging and Perforating			50,000
			Mud Engineering Service	21	68	1,428
			Bits			5,000
			Mud and Chemicals			20,000
			Weather Service	21	20	420
			Test Equipment Rental Surface	21	25	525
			" " " Sub-Surface	21	12	252
			Misc. Tool Rental & Services	21	450	9,450
			Diesel Fuel	21	630	13,230
			Cut and Patch Tools	21	33	693
			Lubricants			500
			Radio Operator Norsco	21	4	84
			Contract Labor	21	200	4,200
			Harbor and Custom Fees	21	16	336
			Transportation			30,000
			Pilot Fees	21	52	1,092
			Radio Antenna	21	2	42
			Phillips Supervision	21	140	2,940
			District Expense	21	900	18,900
			Test Equipment and Services			15,000
			ORIGINAL ESTIMATE 1,719,628			
			SUPPLEMENT NO. 1 532,217			
			TOTAL REVISED ESTIMATE: 2,251,845			
			SUPPLEMENT NO. 1 TOTAL			532,217

REQUESTED BY A.T. Crump C

ESTIMATE GRADE BY J.K. Fetters F

CHECKED BY

APPROVED BY T.J. Johnson

AT Comp. File
Stavanger

CONFIDENTIAL

NOR/D&P - Well 7/8-1x

August 21, 1968

PHILLIPS 7/8-1x, CHUB PROSPECT

GEOLOGIC PROGNOSIS

LOCATION: Field 7, Block 8, Production License 016; 57° 19' 20.6" N., 02° 28' 28.8" E; S.P. 4181, Line NJV 5719 is 250° 60 meters.

PROPOSED T.D.: 11,000' (3353m) WATER DEPTH (MSL): - 272 (83m)

RKB (MSL): +90' (27m) SEA FLOOR (RKB): 362 (105m)

EXPECTED GEOLOGIC SECTION

xx. SEISMIC REFLECTORS
(x. Objective zone) & (estim obj sand thicknesses)

	FORMATION	ESTIM TOP RKB, FT(M)	EXPECTED LITHOLOGY
	Recent-Pleist		sands, gravel
	Pliocene		clays, shales
	Miocene		" " , Thin ls
x	Oligocene (x. 150')	5650 (1722)	(x) sandstone; clays
	Eocene	7050 (2149)	clays, thin sands
x	Paleocene (xx GREEN) (x. 800' gross)	8050 (2454)	(x) sandstone; & shale,w/ intbdd limestones lower 250'
	U. Cret. (xx YELLOW)	8830 (2691)	limestone
	Permian (xx Vermilion)	10700 (3261)	anhydrite, salt
	Total depth	11000 (3353)	drill 300' into Zechstein salt.

CASING PROGRAM

SIZE	APPROX. DEPTH RKB FT. (m)	ESTIM FM SET IN
30"	430 (131)	Recent
20"	1650 (503)	Pleist. - Pliocene
13 3/8"	6500 (1981)	Oligocene
9 5/8"	9000 -11,000 (2743-3353)	Upper Cretaceous

.../...

LOGGING PROGRAM

RUN	HOLE SIZE	APPROX. INTERVAL	TOOLS
-	36"	362'- 430' RKB (110-131m)	-
-	26"	430'-1650' RKB (131-503m)	(Gamma Ray, Run 1 to subsea)
1	17½"	1650'-6500' RKB (503-1981m)	LL/. -Cal BHC S/GR-Cal CDM or HDT BHC FDC } if needed SNP ML/MLL
2	12 1/4"	6500-11000' (TD) RKB (1981-3353m) (Two runs may be required in this interval).	Same as Run 1. Sidewall Core Equip. Geophone Survey at total depth.

CORING

At least 1 core is planned at the top of the Paleocene pay sand, and others as warranted. Full barrel recoveries should be attempted. Sidewall cores may be taken if warranted.

TESTING

As warranted.

Distribution:
Oslo office (3)
Stavanger office (4)
Brussels office (3)
Petrofina (1)
AGIP (1)
Elf Norge A/S (3)

Magne & Jerry

July 12, 1968.

R.W.L. Oldroyd,
Robertson Research Co. Ltd.,
Llanddulas, Abergele,
Denbigshire, Wales, U.K.

Re: 7/11-2x

Dear Bob:

This is to advise you that we will be spudding a second 7/11 well toward the end of next week with the "Ocean Traveler". You can expect that regular shipment of samples will begin about August 1st. Please process and report on these in the same manner as you did for the 7/11-1x. All reporting should be by post or telephone. Do not telex any determinations or depths. I want to emphasize that any queries made to your people regarding the paleontology or lithology of this well should be referred to Phillips' Oslo office. This applies to personnel of all other Phillips' offices, as well as to competitors' personnel as a matter of course.

As for 7/11-1, please cut remaining 7/11-2x wet sample material into 6 sets (or number reasonable for amount of available material); box, label and ship these to Phillips' Petroleum, Duseviken Shorebase, P.O. Box 72, Stavanger, Norway, on the completion of the well.

I note in your final report on 7/11-1 that you considered most of the faunas recovered in the section between 9400-10388 feet to be sufficiently diagnostic for reliable age determination. As you are probably aware the corresponding interval in the 7/11-2 will be of main interest to us. Accordingly, please advise me of any thoughts you may have regarding sample collection frequency, side wall cores etc. to improve the paleontologic control.

H.H. Heikkila

H.H. Heikkila

cc: A.T. Crump, Stavanger Office.

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

ATC/CJL-103/68

Stavanger, July 29, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From July 22 To July 29 Well No. 7/11-2X

	M	T	W	Th	F	S	S
Total Depth Beginning:		435	435	1235	1699	1699	1699
Total Depth End:	435	435	1235	1699	1699	1699	1699
Hole Size:							
Geological Formations Drilled:	1.						
	2.						
	3.						
	4.						

Drilling Fluid Characteristics:
Mud Density (lbs/gal) 8.8 Viscosity (API) 145 sec
Water Loss ____ Chloride Sea Water ppm pH ____
Plastic Viscosity ____ Yield Point ____ Oil ____

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)
30"	1" Wall		92.75	A	435
20"	133	J-55	1247	A	1587

Cementing Details: 30" cemented w/600 sx Dalen Common Cement (Neat)
20" cemented w/1000 sx Dalen Common Cement with 8% gel and 3% Calcium Chloride plus 900 sxs Dalen Common Cement with 3% Calcium Chloride.

Shows: (Oil, Gas, Water, etc.):

Logging Details: None

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc: 1^{o} at 1699

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment: None.

Details of Steps taken to protect Underwater Telecables, if requested:

Details of Accidents, Damages, Injuries and other as Ministry deems necessary

Details of Fire Drills held:

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

File

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

JKF/CJL-107/68

Stavanger, August 5, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From July 29 To Aug. 5 Well No. 7/11-2X.

	M	T	W	Th	F	S	S
Total Depth Beginning:	1699	5105	6010	6500	6500	6500	6500
Total Depth End:	5105	6010	6500	6500	6500	6500	6500
Hole Size:							

Geological Formations Drilled: 1. Tertiary
2.
3.
4.

Drilling Fluid Characteristics:
Mud Density (lbs/gal) 13.2 Viscosity (API) 90 sec
Water Loss 23 Chloride 155,000 ppm pH 9.1
Plastic Viscosity 45 Yield Point 43 Oil 4

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

Cementing Details: _____

Shows: (Oil, Gas, Water, etc.): _____

Logging Details: _____

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc: 2° at 5110'.

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment: _____

Details of Steps taken to protect Underwater Telecables, if requested: _____

Details of Accidents, Damages, Injuries and other as Ministry deems necessary: None

Details of Fire Drills held: July 31 - All stations and personnel worked properly and efficiently.

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

/CJL-110/68

Stavanger, August 12, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Aug 5 To Aug 12 Well No. 7/11-2

	5	6	7	8	9	10	11
Total Depth Beginning:	6500						
Total Depth End:							6500
Hole Size:							

Geological Formations Drilled:
1. Tertiary
2.
3.
4.

Drilling Fluid Characteristics:
Mud Density (lbs/gal) 14.3 Viscosity (API) 90 sec
Water Loss 6.2 Chloride 155,000 ppm pH 96
Plastic Viscosity 88 Yield Point 20 Oil 2%

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)
13 3/8	68	J-55	6023	A	6381

Cementing Details: 2400 sxs Common Cement plus 8% gel mixed with fresh water to a slurry density of 13.1 lbs/gal. followed with 900 sxs Common Cement mixed with fresh water to 15.6 lbs/gal.

Shows: (Oil, Gas, Water, etc.): Ran Sonic-GR log from 6467' - 340'.
" LL-7 " " 6467' - 1587'.

Logging Details:

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc:

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment:

Details of Steps taken to protect Underwater Telecables, if requested:

Details of Accidents, Damages, Injuries and other as Ministry deems necessary: None

Details of Fire Drills held: None

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

Stavanger, August 19, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From August 12 To August 18 Well No. 7/11-2X

Total Depth Beginning:	6500	6500	6500	6590	7270	7847	8998
Total Depth End:	6500	6500	6590	7270	7847	8305	8998
Hole Size:	12.1/4"	12.1/4"	12.1/4"	12.1/4"	12.1/4"	12.1/4"	12.1/4"

Geological Formations Drilled:
1. Tertiary
2.
3.
4.

Drilling Fluid Characteristics:
Mud Density (lbs/gal) 13.5 Viscosity (API) 150 sec
Water Loss 6.4 Chloride 132,000 ppm pH 9.5
Plastic Viscosity 56 Yield Point 22 oil 6

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

PHILLIPS PETROLEUM COMPANY
STAVANGER

Cementing Details:

Shows: (Oil, Gas, Water, etc.):

Logging Details:

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc: 2° at 8998'

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment:

Details of Steps taken to protect Underwater Telecables, if requested:

Details of Accidents, Damages, Injuries and other as Ministry deems necessary: Aug. 8th - S. Lunde - twisted ankle.
Aug.12th - S. Åreskjeld - foreign material in left eye.

Details of Fire Drills held: Aug. 12th - Fire drill conducted with all stations manned efficiently and all equipment functioning properly.

A.T. Crump
A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

CJL/115/68

Stavanger, August 26, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Aug. 19 To Aug. 25 Well No. 7/11-2

	M	T	W	Th	F	S	S
Total Depth Beginning:	8998	8998	8998	9050	9230	9709	9851
Total Depth End:	8998	8998	9050	9230	9709	9851	9943
Hole Size:	12-1/4	12-1/4	12-1/4	12-1/4	12-1/2	12-1/4	8½

Geological Formations Drilled:
1. Tertiary
2.
3.
4.

Drilling Fluid Characteristics:
Mud Density (lbs/gal) 13.1 Viscosity (API) 71 sec
Water Loss 7.1 Chloride 177.000 ppm pH 10.2
Plastic Viscosity 42 Yield Point 9 Oil 2

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

Cementing Details: _____

Shows: (Oil, Gas, Water, etc.): _____

Logging Details: _____

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc: _____

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment: _____

Details of Steps taken to protect Underwater Telecables, if requested: _____

Details of Accidents, Damages, Injuries and other as Ministry deems necessary

Aug. 20 - O. Haugen - Seriously hurt one leg.
Aug. 22 - S. Lunde - Injured right foot.
Aug. 13 - M. Lund - Injured left foot.
Aug. 18 - J. Hanevik -Injured left foot.

Details of Fire Drills held:

Aug. 20 - Fire drill conducted with all stations manned efficiently and all equipment functioned properly.

A.T. Crump

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

CJL/122/68

Stavanger, Sept. 3, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Aug. 26 To Sept. 2 Well No. 7/11-2

	26	27	28	29	30	31	1
Total Depth Beginning:	9943	9990	10134	10240	10328	10500	10629
Total Depth End:	9990	10134	10240	10328	10500	10629	10720
Hole Size:	8-7/16	8½	8½	8½	8-7/16	8-7/16	8-7/16

Geological Formations Drilled: 1. Tertiary
2.
3.
4.

Drilling Fluid Characteristics:
Mud Density (lbs/gal) 12.9 Viscosity (API) 54 sec
Water Loss 3.0 Chloride 130,000 ppm pH 9.0
Plastic Viscosity 43 Yield Point 11 Oil 5

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

PHILLIPS PETROLEUM COMPANY
STAVANGER

Cementing Details: _____

Shows: (Oil, Gas, Water, etc.): _____

Logging Details: _____

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc: _____

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment: _____

Details of Steps taken to protect Underwater Telecables, if requested: _____

Details of Accidents, Damages, Injuries and other as Ministry deems necessary: Aug. 27 - R. Andrews hurt foot, however not very serious.

Details of Fire Drills held: Aug. 37 - Sept. 1 - All stations manned and functioned properly.

Christin Landmark secretary
for A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
NORWEGIAN AKTIESELSKAP
P.O. BOX 72 - STAVANGER, NORWAY - PHONE 41 310, 41 391 - CABLE: PHILLSTAV - TELEX: 3031

CJL/128/68

Stavanger, September 9, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Sept. 2 To Sept. 9 Well No. 7/11-2

	M	T	W	Th	F	S	S
Total Depth Beginning:	10720	10752	10810	10810	10810	10810	10810
Total Depth End:	10752	10810	10810	10810	10810	10810	10842
Hole Size:	8-7/16	8½	8½	8½	8½	8½	8½

Geological Formations Drilled: 1. Tertiary
2.
3.
4.

Drilling Fluid Characteristics: Mud Density (lbs/gal)_____ Viscosity (API)___sec
Water Loss_____ Chloride_____ ppm pH_____
Plastic Viscosity____ Yield Point_____ Oil_____

Casing Details:

Diameter (Inches)	Weight (lbs/Ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

PHILLIPS PETROLEUM COMPANY
STAVANGER

Cementing Details:

Shows: (Oil, Gas, Water, etc.):

Logging Details: Sept. 2 - Ran Sonic-Gr Caliper.
Sept. 4 - Ran Sonic-Gr Caliper, IES, MLL, FDC, SNP.
Sept. 5 - Ran LL-7 and HDT.

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc:

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment:

Details of Steps taken to protect Underwater Telecables, if requested:

Details of Accidents, Damages, Injuries and other as Ministry deems necessary: None

Details of Fire Drills held: Sept. 3 - Safety and Fire drill.
Sept. 9 - " " " " "
Response both times - OK.

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

CJL/132/68

Stavanger, September 16, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Sept. 9 To Sept. 16 Well No. 7/11-2

	M	T	W	Th	F	S	S
Total Depth Beginning:	10842	10939	11000	11075	11158	11245	11245
Total Depth End:	10939	11000	11075	11158	11245	11245	11245
Hole Size:	8½	8-7/16	8½	8½	8½	8½	8½

Geological Formations Drilled: 1. Tertiary
2.
3.
4.

Drilling Fluid Characteristics: Mud Density (lbs/gal) 13.1 Viscosity (API) 54 sec
Water Loss 3.4 Chloride 115,000 ppm pH 9.8
Plastic Viscosity 40 Yield Point 12 Oil 6%

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

PHILLIPS PETROLEUM COMPANY
STAVANGER

Cementing Details: _____

Shows: (Oil, Gas, Water, etc.): _____

Logging Details: _____

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc: _____

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment: _____

Details of Steps taken to protect Underwater Telecables, if requested: _____

Details of Accidents, Damages, Injuries and other as Ministry deems necessary: Sept. 13 - Odd Tostensen hurt eye, however, not seriously.

Details of Fire Drills held: Sept. 14 - Two Pit Drills - Reaction Time - good.
Sept. 15 - One " " - " " "

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

CJL/140/68

Stavanger, September 24, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Sept. 16 To Sept. 23 Well No. 7/11-2

	M	T	W	Th	F	S	S
Total Depth Beginning:	11245						
Total Depth End:							11245
Hole Size:	12-1/4	12-1/4	12-1/4	12-1/4	12-1/4	12-1/4	12-1/4

Geological Formations Drilled:
1. Tertiary
2.
3.
4.

Drilling Fluid Characteristics:
Mud Density (lbs/gal)_____ Viscosity (API)___sec
Water Loss_____ Chloride_____ppm pH_____
Plastic Viscosity___ Yield Point_____ Oil_____

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)
9-5/8"	47 lb	N-80	10,168	A	10510'

PHILLIPS PETROLEUM COMPANY
STAVANGER

Cementing Details: 1500 sxs Class "B" plus .3% LWL plus 1/10% Diaseal "A" mixed to a slurry weight of 15.6 ppg.

Shows: (Oil, Gas, Water, etc.):

Logging Details:

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc:

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment:

Details of Steps taken to protect Underwater Telecables, if requested:

Details of Accidents, Damages, Injuries and other as Ministry deems necessary None

Details of Fire Drills held: Sept. 17 - 1 safety drill and 2 pit drills. Reaction time good.

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

Weekly

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

CJL/GMR-148/68

Stavanger, October 1, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Sept. 23 To Sept. 30 Well No. 7/11-2X

	M	T	W	Th	F	S	S
P.B.T.D. Total Depth Beginning:	10510						
P.B.T.D. Total Depth End:							10510
Hole Size:							

Geological Formations Drilled:
1. _____
2. _____
3. _____
4. _____

Drilling Fluid Characteristics:
Mud Density (lbs/gal)_____ Viscosity (API)___sec
Water Loss_____ Chloride_____ppm pH_____
Plastic Viscosity___ Yield Point_____ Oil_____

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

7/11-2A

PHILLIPS PETROLEUM COMPANY
STAVANGER

Cementing Details: _____

Shows: (Oil, Gas, Water, etc.): _____

Logging Details: Sept. 24 - Ran Schlumberger Bond Log CCL/Gamma Ray from 10,500 to 8,750'

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc: DST No. 1 started at 1557 hrs Sept. 26

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment: Perforated 4 holes/ft with 4" carrier to shape charges from 10,452-10,474, 10,388-10,413, 10,421-10,436 to cover a misfire

Details of Steps taken to protect Underwater Telecables, if requested: _____

Details of Accidents, Damages, Injuries and other as Ministry deems necessary: Sept. 25 - Mr. Gismyrvik cut thumb, however, not injured seriously
Sept. 28 - Mr. Torstensen cut thumb, however, not injured seriously

Details of Fire Drills held: None

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

JB/GMR-255-68

Stavanger, October 11, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Sept. 30 To Oct. 6 Well No. 7/11-2X

	M	T	W	Th	F	S	S
Total Depth Beginning:	10487	10487	10352				10352
Total Depth End:	10487	10352					9913
Hole Size:							

Geological Formations Drilled:
1.
2.
3.
4.

Drilling Fluid Characteristics:
Mud Density (lbs/gal) 13.0 Viscosity (API) 48 sec
Water Loss 4.0 Chloride 100,000 ppm pH 9
Plastic Viscosity 35 Yield Point 8 Oil 3%

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

PHILLIPS PETROLEUM COMPANY
STAVANGER

Cementing Details:

Shows: (Oil, Gas, Water, etc.):

Logging Details:

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc: Oct 3 commenced DST No. 2

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment: Oct 1 fished DST tools, 9-6½" drill collars, 6" sub. Oct.1 set Baker "K" cement retainer at 10,352 KB and lost setting tool in hole. Oct 2, perforated 10,190 to 10,137, 10115 to 10110, 10090 to 10048, 10042 to 10025, 10010 to 9932, with 4 holes per foot. Oct 6, set Baker "K" cement retainer at 9913' RKB and perforated 9776 to 9836 with 4 holes per foot.

Details of Steps taken to protect Underwater Telecables, if requested:

Details of Accidents, Damages, Injuries and other as Ministry deems necessary No accidents

Details of Fire Drills held: Sept 30 held one drill - result good
Oct 1 held two drills - results good

A.T. Crump
A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

JB/GMR-157/68

Stavanger, October 15, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Oct. 7 To Oct. 13 Well No. 7/11-2X

	M	T	W	Th	F	S	S
Total Depth Beginning:	9913	9913	9705	4004			
Total Depth End:	9913	9705	4004	680			680
Hole Size:							

Geological Formations Drilled:
1. _____
2. _____
3. _____
4. _____

Drilling Fluid Characteristics:
Mud Density (lbs/gal)_____ Viscosity (API)___sec
Water Loss_____ Chloride_____ppm pH_____
Plastic Viscosity___ Yield Point_____ Oil_____

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

PHILLIPS PETROLEUM COMPANY
STAVANGER

Cementing Details: Layed cement plugs from, 9705 to 9505, from 4000 to 3850, from 980 to 680

Shows: (Oil, Gas, Water, etc.):

Logging Details:

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc: Made DST No. 3 of perforated interval 9776 to 9836 RKB

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment: Set Baker Model K cement retainers at 9705, 4004 RKB and layed cement plugs as recorded above. Installed corrosion cap with sonar beacons

Details of Steps taken to protect Underwater Telecables, if requested:

Details of Accidents, Damages, Injuries and other as Ministry deems necessary No accidents

Details of Fire Drills held: No drills

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

ATC/GMR-168/68

Stavanger, October 22, 1968

CONFIDENTIAL

The Ministry of Industry,
Akersgaten 42,
OSLO 1

ATTENTION: Petroleum Section.

PHILLIPS PETROLEUM COMPANY - WEEKLY DRILLING REPORT

From Oct. 14 To Oct. 20 Well No. 7/11-2X

	M	T	W	Th	F	S	S
Total Depth Beginning:	680'RKB with corrosion cap installed at sea bed						
Total Depth End:							
Hole Size:							

Geological Formations Drilled:
1.
2.
3.
4.

Drilling Fluid Characteristics:
Mud Density (lbs/gal)_____ Viscosity (API)___sec
Water Loss_____ Chloride_____ppm pH_____
Plastic Viscosity____ Yield Point_____ Oil_____

Casing Details:

Diameter (Inches)	Weight (lbs/ft.)	Grade (API)	Length (Feet)	Condition	Depth (Feet)

PHILLIPS PETROLEUM COMPANY
STAVANGER

Cementing Details:

Shows: (Oil, Gas, Water, etc.):

Logging Details:

Deviation Surveys, Formation Tests, Pressure Tests, Temperature Measurements, etc:

Details of Fishing Jobs, Shooting, Perforating, Fracturing, Acidizing, Completion or Abandonment:

All anchors bolstered for rig move at 0930 hrs October 15, 1968

Details of Steps taken to protect Underwater Telecables, if requested:

Details of Accidents, Damages, Injuries and other as Ministry deems necessary

Oct. 15 - Two accidents
Mr. Eriksen cut his leg
Mr. Håvik cut his hand

Details of Fire Drills held:

No drills

A.T. Crump
for PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
STAVANGER

Well 7/11-2X

DST No. 1

Recovery from test was 23 bbl water, suspected to be mud filtrate contaminated with formation water.

DST No. 2

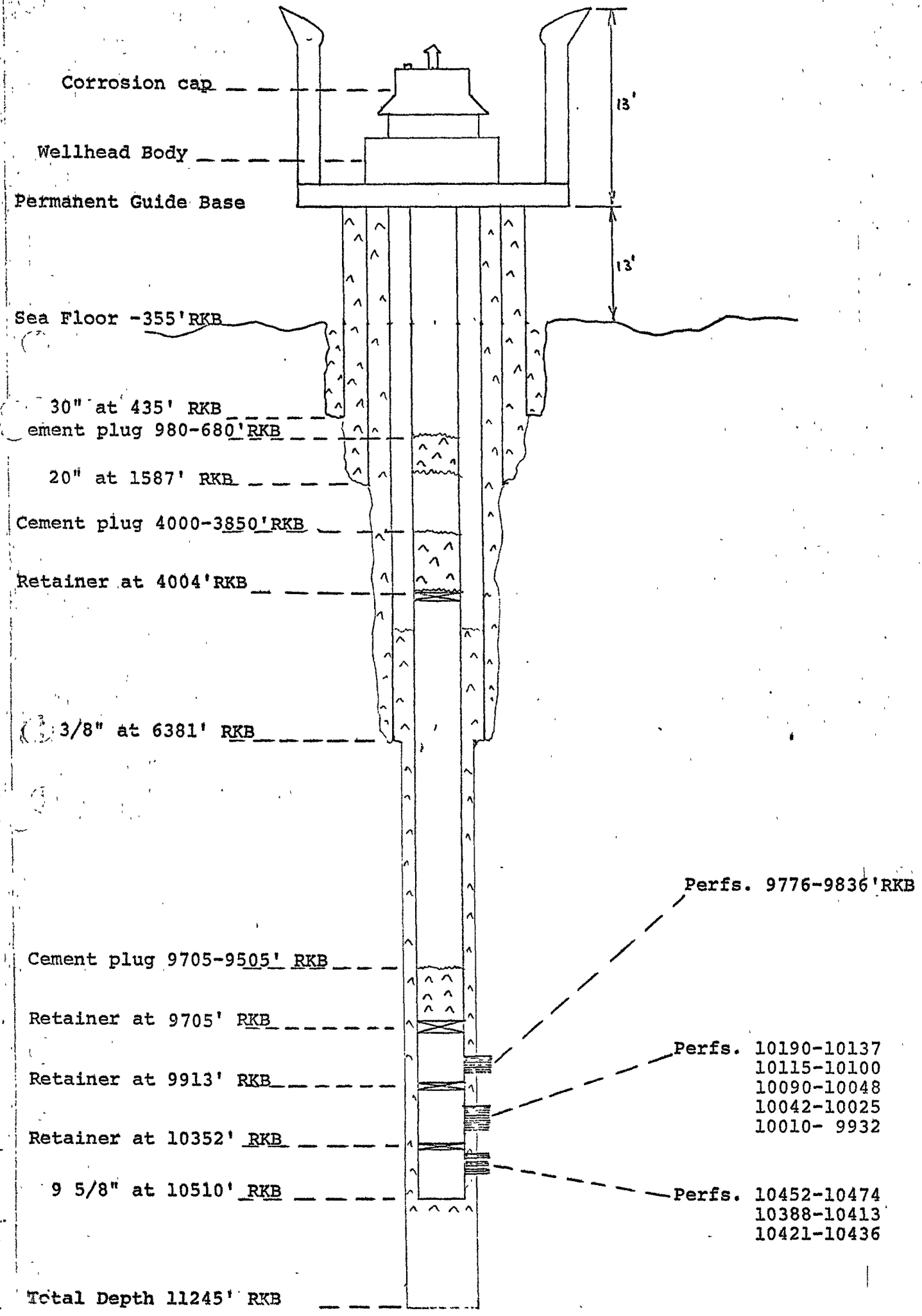
During this test the well flowed gas and hydrocarbon liquid. The maximum measured gas flowrate was 43 MMCFD. The maximum measured liquid flowrate was 1390 BPD with a corresponding gas flowrate of 16.5 MMCFD.

DST No. 3

No fluid was recovered during this test.

Well 7/11-2x

TEMPORARY SUSPENSION PROCEDURE



July 1, 1968.

The Ministry of Industry,
Akersgaten 42,
Oslo 1.

Phillips No. 7/11-2
Exploratory Test, Production License 018

Pursuant to Section 39, Royal Decree of 9 April, 1965, Phillips Petroleum Company as operator for itself, Norske Fina A/S, Norsk AGIP A/S, and Elf Norge A/S, herewith submits for the Ministry's approval the following particulars of the drilling program for the subject test well.

a.	Drilling Vessel	:	"Ocean Traveler".
	Construction and equipment:		Previously submitted by ODECO Norway and Esso Exploration Norway. Details of installation of diagonal pontoons from inside pontoons to outside pontoons can be obtained from ODECO Norway.
	Drilling contractor	:	ODECO Norway.
b.	Geographic coordinates	:	57° 04' N. Latitude. 02° 24' 30" E. Longitude.
	Surveyed coordinates to be provided later.		
c.	Estimated total depth	:	3353 meters (11,000 feet) RKB.
d.	Expected geological strata:		Quaternary Tertiary Mesozoic.

...../.....

e. Water depth : 78 meters (257 feet) Mean Sea Level.

f. Casing program.

Diam.	Type	Weight/ ft.	Condition	Set at RKB	Amount cement
30"	1" Wall	330 lbs.	A	130m (425 ft)	750 sacks Dalen Portland, and 3% Calcium Chloride
20"	J ST&C	133 lbs.	A	458m (1500 ft)	1700 sacks Dalen Portland, and 8% bentonite, and 3% Calcium Chloride
13 3/8"	J ST&C	68 lbs.	A	1829m (6000 ft)	2400 sacks Dalen Portland, with 0.3% LWL and 16.1 lbs salt per sack of cement if necessary to use salt saturated cement
9 5/8"	N Buttress	47 lbs.	A	3353m (11000 ft)	1500 sacks Class "B", and 0,3% LWL; plus 16.1 lbs. salt per sack of cement if necessary to use salt saturated cement.

g. Blowout preventers:

Upper hole: 20", 2000 p.s.i. Working Pressure Hydril.

Remainder : 2 - 13 5/8" 5000 p.s.i. Working Pressure type LWS Shaffer double hydraulic ram-type.

1 - 13 5/8" 5000 p.s.i. Working Pressure Hydril GK.

Necessary accessory equipment.

(Detailed drawings and descriptions of test procedures previously submitted).

h. Drilling fluid program:

Same as submitted for the 7/11-1 well, except that salt-saturated mud will be carried from approximately 3000 feet TKB to total depth. Please refer to letter of January 9, 1968, A.T. Crump, Phillips Petroleum Company, Stavanger.

1. Logging program:

Contractor: S.P.E. Schlumberger.

Run	Hole size	Interval	Tools (Schlumberger)
-	36"	106-130m RKB (347-425 ft)	-
-	26"	130-458m RKB (425-1500 ft)	-
1	17½"	458-1829m RKB (1500-6000 ft)	Induction Electric Laterolog/Microlaterolog-Caliper, BHC Sonic/Gamma-Caliper (Gamma Ray run to subsea). In addition, if needed to evaluate oil or gas shows: Continuous Dipmeter or HDT BHC Formation Density Epithermal Neutron Sidewall Core Equipment.
2	12 1/4"	1829-3353m RKB (6000-11000ft)	Same as Run 1 Geophone Survey at total depth.

Mudlogging program:

Contractor: Geoservices.

A mud logging unit with continuous gas detector on the mud stream and continuous chromatographic analysis for relative percentage of hydrocarbons will be in operation from the 20-inch casing point to total depth.

Ditch Sample program:

Ditch samples of cuttings will be caught starting at the 20-inch casing shoe at about 25 to 30-foot intervals, and reduced to 10-foot and 5-foot intervals as soon as drilling rate slows down.

...../.....

j. Coring program:

Coring points will be dependent upon shows of oil or gas, and the need for porosity information in the Lower Tertiary Section only. Supplementary coring may be done with Sidewall Core gun.

Formation	Estimated depth
Lower Tertiary	2932 meters (9620 feet) RKB

k. Testing program:

Test intervals will be dependent upon oil and gas shows encountered and upon log analysis and evaluation of prospective zones. Conventional drillstem tests will not be run; however, completion type tests may be made using production packers and Otis Engineering Corporation's Subsurface Test Tree equipment.

l. Safety instructions applicable to the platform and work carried out:

Previously submitted.

Yours truly,
PHILLIPS PETROLEUM COMPANY

ORIGINAL SIGNED
T. J. JOBIN

T.J. Jobin
Manager

bcc: A.T. Crump, Stavanger.

TJJ/HHH/ib

JKF/CJL-095/68

Stavanger, July 19, 1968

The Ministry of Industry,
Akersgaten 42,
OSLO 1

Dear Sirs,

This is to inform you that Phillips Petroleum Company commenced operations on their well 7/11-2X on July 19, 1968. The drilling vessel "Ocean Traveler" is being used for this work.

Well 7/11-2X is located as follows:

57° 04' 00" North

02° 24' 00" East.

Yours very truly,

Original Signed by
A. T. CRUMP

A.T. Crump
Area Superintendent
Drilling & Production

cc: Luftfartsdirektoratet,
Sjøfartsdirektoratet,
Kommunal-og Arbeids-departementet,
Fyrdirektoratet,
Direktoratet for Arbeids-tilsynet,
Politimesteren i Stavanger,
Fiskeridirektoratet,
Fiskeridepartementet,
Skattedirektøren,
Forsvarsdepartementet,
Telegrafverket,
Helsedirektoratet,
Elektrisitetstilsynet,
Statens Utlendingskontor,
Statens Oljeråd,
"Etterretninger for Sjøfarende",
"Fiskerimeldinger".

Addresses to above in file:
Nore/D+P/ Addresses

July 2, 1968.

The Ministry of Industry,
Akersgaten 42,
Oslo 1.

In accordance with Chapter III Section 14 of the Royal Decree of August 25, 1967 (Safety Regulations) consent to use the Odeco "Ocean Traveler" for drilling the 7/11-2 well is requested.

Any costs involved in granting this consent will be covered by the licensee.

Yours truly,

PHILLIPS PETROLEUM COMPANY

ORIGINAL SIGNED
W. J. JOBIN

T.J. Jobin

bcc: W.W. Dunn (r) L.H. Hoelscher, Brussels Office.
A.T. Crump, Stavanger Office. √

TJJ/ib

July 10, 1968.

Ministry of Industry,
Akersgaten 42,
Oslo 1.

Re: Phillips Petroleum Company 7/11-2x.

In accordance with Chapter 1 Section 5 of the Royal Decree of August 25, 1967 (Safety Regulations) the following is the list of contractors that will be used in drilling Phillips Petroleum Company 7/11-2x well.

ODECO, Gjensidiges Hus,
Kongsgårdbakken 6, Stavanger - American

B.J. Service, N.V., Mauritskade 5,
The Hague, Netherland - American

S.P.E. Schlumberger, Sunde, Hafrsfjord. - French

Smit Lloyd, Westplein 9., P.O. Box 896,
Rotterdam, Holland. - Dutch

M/V Ry, c/o. North Sea Exploration Service,
Stavanger. - Norwegian

Helikopter Service A/S., Drammensvn. 40. - Norwegian

Geoservices S.A., 20 Rue d'Aumale,
Paris 9, France - French

Del-Strick Well Testing, Inc., Suite 407,
231 Carondelet St.
New Orleans 701-30. U.S.A. - American

North Sea Exploration Service,
Pilestredet 7, Oslo 1. - Norwegian

Yours very truly,

T.J. Jobin

cc: A.T. Crump
Stavanger.

TJJ/ng

July 11, 1968.

Re: Phillips Petroleum Company - 7/11-2x.

Ministry of Industry,
Akersgaten 42,
Oslo 1.

In accordance with Chapter III Section 25, Royal Decree of August 25, 1967 (Safety Regulations), the following sets for the organizational plans of personnel directly associated with the operation of the Ocean Traveler.

Phillips Petroleum Company

A.T. Crump
Area Superientendent - 18 years experience.

J.K. Fetters	* E.O. Seabourn	* G.E. Winget
Pet. Eng. - 8 years experience	Drilling Supervisor, 18 years experience	Drilling Supervisor, 23 years experience.

ODECO

D.F. Kahle
Manager - 15 years experience

Clyde Miller
* Operations Manager - 15 years experience

T.M. Montgomery
* Rig Superientendent - 20 years experience.

* At least two of these men will be on the platform at all times.

All the personnel listed above have many years experience in offshore drilling and are experts in all the various phases of this type of operation.

Yours very truly,

cc: A.T. Crump
Stavanger

T.J. Jobin

TJJ/ng

July 10, 1968.

Directorate of Fisheries,
P.O. Box 185,
Bergen.

Announcement of Location
Phillips 7/11-2, Exploratory Test.
Drilling Vessel "Ocean Traveler".

In accordance with Section 6 of the Norwegian Safety Regulations established by Royal Decree of August 25, 1967, we wish to advise you that Phillips Petroleum Company expects the "Ocean Traveler" to leave Stavanger on 15th July for the drilling location at 57° 04' 00" N, 02° 24' 20" E.

Surveyed coordinates and date of positioning will be provided as soon as possible.

Yours very truly,

T.J. Jobin

cc: Ministry of Industry.
bc: A.T. Crump

TJJ/ng

July 10, 1968.

Luftfartsdirektoratet,
"Notices from the Directorate of Aviation",
Storgaten 10 b.,
Oslo 1.

Announcement of Location
Phillips 7/11-2, Exploratory Test.
Drilling Vessel "Ocean Traveler".

In accordance with Section 6 of the Norwegian Safety Regulations established by Royal Decree of August 25, 1967, we wish to advise you that Phillips Petroleum Company expects the "Ocean Traveler" to leave Stavanger on 15th July for the drilling location at 57° 04' 00" N, 02° 24' 20" E.

Surveyed coordinates and date of positioning will be provided as soon as possible.

Yours very truly,

T.J. Jobin

cc: Ministry of Industry.
bc: A.T. Crump

TJJ/ng

July 10, 1968.

Norsk Rikskringkasting,
"Fiskerimeldinger",
Bjørnstjerne Bjørnsons Pl. 1,
Oslo 3.

Announcement of Location
Phillips 7/11-2, Exploratory Test.
Drilling Vessel "Ocean Traveler".

In accordance with Section 6 of the Norwegian Safety Regulations established by Royal Decree of August 25, 1967, we wish to advise you that Phillips Petroleum Company expects the "Ocean Traveler" to leave Stavanger on 15th July for the drilling location at 57° 04' 00" N, 02° 24' 20" E.

Surveyed coordinates and date of positioning will be provided as soon as possible.

Yours very truly,

T.J. Jobin

cc: Ministry of Industry.
bc: A.T. Crump

TJJ/ng

Ed - Would you please send a Telex to the Ministry of Industry the day before you plan moving the Ocean Traveler out of Stavanger. The Telex No is 1140 in case you don't have it. E

July 11, 1968.

Re: Phillips Petroleum Company - 7/11-2x.

Ministry of Industry,
Akersgaten 42,
Oslo 1.

In accordance with chapter XII Section 108, Royal Decree of August 25, 1967 (Safety Regulations), the communication system that will be used to cover the operation of the Ocean Traveler on 7/11-2x will be as follows:

Two Sikorsky S-61 Helicopters will be used for the transportation of all the personnel. Daily flights will be made five days per week. The Smit Lloyd No 6 will be used for handling the anchors and for transporting supplies between the shore base and the Ocean Traveler. The M/V Ry will be used as a stand-by boat at the platform. It has a cargo capacity of 185 Tons and may be used on occasion to carry supplies.

Yours very truly,

T.J. Jobin

cc: A.T. Crump,
Stavanger.

TJJ/ng

July 23, 1968

Exp/corr/notice to Geol

Norsk Rikskringkasting
"Fiskerimeldinger"
Bjørnstjerne Bjørnsons Pl. 1
Oslo 3

Norges Sjøkartverk
"Etterretninger for Sjøfarende"
Stavanger.

Directorate of Fisheries
P.O. Box 185
Bergen

Luftfartsdirektoratet
"Notices from the Directorate of Aviation"
Storgaten 10 b
Oslo 1

FILE
CEQ
—
D.S.
ENGR
MATL
CIRC
SUPT

Announcement of Location
Phillips 7/11-2, Exploratory Test.
Drilling Vessel "Ocean Traveler".

In accordance with Section 6 of the Norwegian Safety Regulations established by Royal Decree of August 25, 1967, we wish to advise you that Phillips Petroleum Company was on location July 20, 1967 with the Ocean Traveler at 57° 04' 15.1'' N, 02° 24' 26.8'' E in 265 Feet of water.

257

Yours very truly,

T.J. Jobin

SSW/TJJ/ak

Stavanger office copy for your information only

SUPT	☐
	☐
MATL	☐
ENGR	☑
D. S.	☐
———	☐
CEC	☐
FILE	☑

DET KONGELIGE DEPARTEMENT FOR INDUSTRI OG HÅNDVERK

KONTOR: AKERSGT. 42 - TELEFON 41 78 00
POSTADRESSE: OSLO-DEP. OSLO 1

OLJEKONTORET

OFFICE	☐
MANAGER	☐
GEOLOGICAL	☐
———	☐
FILE	☐

Phillips Petroleum Company
Akersgt. 45

OSLO 1

Deres ref. | Vår ref. (bes oppgitt ved svar) Jnr. ID/Olje 868/68 OKC/JE | Dato 26.10.68

KONTINENTALSOKKELEN. VEDRØRENDE BRØNNHODEUTSTYR ETTERLATT PÅ HAVBUNNEN.

Man viser til ukerapport vedrørende borehull 7/11-2, datert 22 d.m.

Phillips Petroleum Company anmodes om å gi melding gjennom Norsk Rikskringkastings "Fiskerimeldinger" og til Fiskeridirektoratet i Bergen om at brønnhodeutstyr er etterlatt på havbunnen p.g.a. midlertidig avbrudd i arbeidet med borehull 7/11-2. Meldingen skal angi utstyrets nøyaktige posisjon og høyde over havbunnen. Dersom posisjonen er avmerket med en bøye, skal melding også rykkes inn i "Etterretninger for sjøfarende."

Thorgrim Haga
Thorgrim Haga

Olav K. Christiansen
Olav K. Christiansen

PHILLIPS PETROLEUM CO.
RECEIVED
1 NOV 1968
STAVANGER

PETROLEUM COMPANY
RECEIVED
30 OKT 1968

Unofficial Translation

THE ROYAL DEPARTMENT OF INDUSTRY AND HANDICRAFT

To: Phillips Petroleum Company
Akersgaten 45,
Oslo 1

THE CONTINENTAL SHELF. REGARDING WELL-HEAD EQUIPMENT LEFT ON THE SEA-BOTTON.

We refer to weekly report for well 7/11-2, dated October 22, 1968.

Phillips Petroleum Company is requested to give notification through Norwegian Broadcasting Co. over "Fishing Reports" and to the Fishing Directorat in Bergen that well head equipment has been left on the sea bottom because of temporary disruption of work on well 7/11-2. The report shall give exact position and height over sea bottom. If the position is marked with a buoy, the notice should also be given to "Notice for Mariners".

Thorgrim Haga

Olav K. Christiansen

PHILLIPS PETROLEUM COMPANY
STAVANGER

S E E L O G F I L E

Form 2266 1-56

INDIVIDUAL WELL COMPLETION RECORD

Lease Cod Well No. 7/11-2X AFE P- NW 5505

LINE MEASUREMENTS OF WELL:
RKB to 30" wellhead - 342'
RKB to 20" wellhead - 340'
RKB to 13-5/8" wellhead - 338'

Measurement Taken From RKB to mean sea level 87'

ELEVATIONS:
Ground ____ Ft.
Derrick Floor ____ Ft.
R K B ____ Ft.
Top Csg. Flg. ____ Ft.
Or Bench Mark ____ Ft.

COST DATA:
Est. Total Mud ____
TOTAL PAID DRILLING CONTRACTOR:
Footage $ ____
Day Work $ ____

CASING						CEMENT					
Date	Size	Weight	Condition & Grade	Amount Run	Where Set	No. Sacks	Kind	Depth Of Plug	Top In Annulus	Amount Pulled	Date Pulled
uly 22,68	30"	390 lb	J-55-1	93'	435'	600	Common	435		None	
uly 26,68	20"	133 lb	J-55-1	1245'	1587'	1800	Dalen w/8% Gel 3% $CaCl_2$	1547'	Surface	None	(RKB to 20" head is 340')
						followed 900	Dalen w/3% $CaCl_2$				
ug.10,68	13-3/8"	68 lb	J-55-1	6041'	6381'	2400	Dalen common plus 8% Gel	6340'	Surface	None	(RKB to 13-3/8" well-head 338')
						followed 900	Common Class B				
ept.19,68	9-5/8"	47 lb	N-80-1	10172'	10510'	1500	Class B w/3% LWL 1/10 % Diacel A	10564	8750	None	Installed corrosion cap Oct. 12,68 for T.P.&A.

m 882 12-57 A 59362
Printed in U.S.A.

PERFORATING AND SQUEEZE RECORD

Lease Cod

Well 7/11-2X
AFE NW-5505

Date	Size of Casting	Perforating To	Perforating From	No. of Feet Perforated	No. of Holes	Size of Holes	Gun Diameter	Gun Type	Perforating Company
Sept.26,68	9-5/8	10452	10474	22	88	.47"	4"	Shape Charge Carrier Gun	Schlumberger
		10388	10413	75	176	.47"	4"	"	"
		Production Test ran on above perforations Sept. 27,68. Set Baker Model "K" Ratainer at 10,352'.							
Oct.2,68	9-5/8"	10190	10137	53	212	.47"	4"	Shape Charge Carrier Gun	Schlumberger
		10115	10100	15	60	.47"		"	"
		10090	10048	42	168	.47"		"	"
		10042	10025	17	68	.47"		"	"
		10010	9932	22	88	.47"		"	"
		Production Test Oct. 4, 68. Set Baker Model "K" cement Retainer at 9913'.							
Oct.6,68	9-5/8"	9776	9836	40	160	.47"	4"	Shape Charge Carrier Gun	Schlumberger

Oct. 7-8-68 Production test above perforations

Oct. 8-68 Set Baker Model "K" cement Retainer at 9705'

Oct. 9-68 Laid 70 sacks Class "B" cement plug 9705'-9505'

Oct. 9-68 Set Baker Model "K" cement Retainer.

EXPLORATION RECORD

Lease Field 7, Block 11 - Norway Offshore Well 7/11-2X

Formation Name	Top	Base	Remarks
Recent			
Pleistocene			
Upper Pliocene	1708 (-1621)	1859	
Plio. correl. horiz.	1859 (-1772)	2060	
Lower Pliocene	2060 (-1973)	2260	
Upper Miocene	2260 (-2173)	2446	
Middle Miocene	2446 (-2359)	5118	
Lower Miocene			
Burdigalian	5118 (-5031)	5756	
Aquitanian	5756 (-5669)	6645	
Oligocene	6645 (-6558)	9057	
?U. (?) - M. Eocene	9057 (-8970)	9556	
?L. Eoc. - ? Paleoc.	9556 (-9469)	9786	
Paleocene	9786 (-9699)	9830	
Up. Sand Member			
Shale Member	9830 (-9743)	9933	
Middle Sand Member	9933 (-9846)	10203	
Lower Sand Member B	10203 (-10116)	10444	
Lower Sand Member A	10444 (-10357)	10564	
Danian	10564 (-10477)	10980	
Upper Cretaceous	10980 (-10893)	11245	
Total Depth	11245 (-11158)		

Form 883 3-53

PHILLIPS PETROLEUM COMPANY
STAVANGER

SEE LOG FILE

PHILLIPS PETROLEUM COMPANY
STAVANGER

S E E L O G F I L E

JKF/CJL-129/68 Stavanger, September 12, 1968

S.P.E. Schlumberger,
Sunde, Hafrsfjord,
STAVANGER

ATTENTION: Mr. L. Stiles.

Dear Sir,

It is requested that any Phillips Petroleum Company log or computer processed interpretation distribution concerning the Norway area be made only as directed by a representative of the Phillips Oslo or Stavanger office.

Your company's cooperation in this matter will be appreciated.

Yours very truly,

Original Signed by
A. T. CRUMP
A.T. Crump
Area Superintendent
Drilling & Production

cc: T.J. Jobin, Phillips, Oslo.

SOCIETE DE PROSPECTION ELECTRIQUE
SCHLUMBERGER

SOCIETE ANONYME AU CAPITAL DE 14 250 000 F

42, RUE SAINT DOMINIQUE PARIS VII^{e} TEL SOL 97-58 ADR.TELEGR PROSELEC-PARIS TELEX LOGELEC 26644 R.C.SEINE 54 B 6611

Phillips Petroleum Norsk A.S.
Dusevik Shorebase
P.O. Box 72
Stavanger, Norway.

September 18, 1968

Attention : Mr. J. Fetters.

Dear Sirs,

Please find enclosed one transparency, one print and a listing pertaining to an additional computation on your well 7/11-2 X.

The additional interval covers 9751 to 9837 feet and includes the sand interval from 9810 to 9830 feet. The additional section of plot-out was spliced onto the section that we previously sent in order to have a complete presentation. The listing covers only the additional interval.

There are two important points that we would like to make here :

1. Since the intervals above and below 9837 feet were processed separately, the integrations of porosity and hydrocarbon are discontinuous at that depth.

2. Bad hole shape above 9788 feet has caused anomalous log readings, particularly on the density log. These bad readings are reflected on the porosity and hydrocarbon curves. This is particularly noticeable at 9780 feet.

We remain,

yours very truly,

for W.J. BOWEN

NN:mmb
encl.

RECEIVED 23 Sept

S C H L U M B E R G E R

COMPUTER PROCESSED INTERPRETATION

SHALY SAND PROGRAM

(08-CA-03)

COMPANY	PHILLIPS PET. CO.
WELL	7/11-2X
COUNTRY	NORWAY OFFSHORE
REF.	UK009
DATE	17. 9. 68

PASS 3-3

PASSAGE PAR LA[illegible]

INTERVAL N. 1 PROCESSED LOGS = IL MLL GR SNP FD CAL

POROSITY LIMIT FOR INTEGRATION = .0

ZONE N. 1 FROM 9751.0 TO 9837.0 RW = .020 RMF = .018 RSH = .90

SSP = .0 PPM/1000 =160.0 INV.DIAM.= .0 GRAIN DENS. = 2.65

HYDROCARBON DENS. = .30

DEPTH(FT)	RT	P	PHI-N	PHI-FD	PHI	H.CAPB	M.OIL	RO-H	AV.D	SW
9751.0	.6	47.7	52.3	28.6	22.0	7.7	2.8			64.6
9752.0	.6	50.0	54.6	29.0	23.0	7.8	2.8			64.6
9753.0	.5	54.7	53.6	29.2	21.6	6.1	1.3			71.6
9[illegible].0	.5	47.7	48.6	28.0	21.3	5.6	1.3			73.3
9[illegible]5.0	.5	57.0	48.8	30.4	22.4	7.0	1.3			68.9
9756.0	.5	64.0	51.0	31.5	22.5	7.4	1.3			67.3
9757.0	.5	61.6	50.8	30.7	22.1	6.9	1.3			68.9
9758.0	.5	60.5	49.4	25.8	17.4	2.6	1.5			85.0
9759.0	.5	53.5	45.7	23.1	15.6	.6	.6			95.9
9760.0	.5	57.0	45.6	20.8	12.8	.0	.0			117.0
9761.0	.5	54.7	47.0	20.3	12.6	.0	.0			120.5
9762.0	.5	50.0	49.8	21.4	14.4	.0	.0			105.9
9763.0	.5	44.2	50.3	21.6	15.4	.0	.0			101.0
9764.0	.5	47.7	50.6	24.4	17.8	2.3	.0			86.8
9765.0	.5	51.2	51.1	27.1	19.9	4.5	.0			77.6
9766.0	.5	51.2	48.6	23.8	16.5	1.4	.0			91.3
9767.0	.6	55.8	45.3	19.6	11.8	.0	.0			110.4
9768.0	.6	55.8	44.2	20.0	12.2	.0	.0			106.4
9769.0	.6	54.7	44.6	21.4	13.8	.7	.7			94.6
9770.0	.5	54.7	46.1	22.5	14.6	.0	.0			100.5
9771.0	.5	55.8	45.2	21.0	13.2	.0	.0			113.2
9772.0	.5	50.0	42.4	17.6	10.6	.0	.0			166.0
9[illegible].0	.5	41.9	38.1	13.7	7.9	.0	.0			171.1
9[illegible]4.0	.6	40.7	34.8	13.9	8.2	.0	.0			187.8
9775.0	.7	44.2	37.[illegible]	16.8	10.6	.0	.0			117.2
9776.0	.8	41.9	40.1	19.3	13.5	2.1	2.1			84.3
9777.0	.8	34.9	39.1	26.0	21.1	8.5	2.9			59.5
9778.0	.6	24.0	44.2	38.4	35.1	19.3	2.6			45.0
9779.0	.6	3.7	50.7	49.8	49.3	33.0	2.6			33.0
9780.0	.6	40.4	52.9	43.2	37.5	22.0	2.6			41.4
9781.0	.6	51.2	48.2	31.8	24.7	10.3	5.7			58.4
9782.0	.5	55.8	47.6	31.3	25.5	7.9	4.3			66.4
9783.0	.6	66.1	46.9	28.1	19.0	5.8	3.0			69.2
9784.0	.6	52.3	45.4	24.6	17.3	3.9	3.1			78.0
9785.0	.5	47.7	48.5	27.0	20.3	4.7	1.3			76.9
9786.0	.5	62.8	46.1	24.3	15.5	1.1	.0			93.2
9787.0	.6	62.8	41.4	17.9	9.1	.0	.0			159.3

PT;!(FT)	RT	P	PHI-N	PHI-FO	PHI	H.CARB	H.OIL	RO-H	AV.D	SW
788.0	.7	51.6	35.1	13.7	5.0	.0	.0			113.1
789.0	.8	55.8	31.7	11.2	3.4	.0	.0			106.3
790.0	.9	54.7	30.7	11.8	4.1	.0	.0			109.5
791.0	.9	61.6	31.7	13.2	4.6	.0	.0			110.6
792.0	.9	59.3	32.6	13.4	5.1	.0	.0			114.0
793.0	.9	59.3	30.9	12.4	4.1	.0	.0			108.4
794.0	.8	65.1	29.0	10.8	1.7	.0	.0			101.2
795.0	.8	73.1	28.0	9.7	.0	.0	.0			100.0
796.0	.9	51.5	28.3	10.7	2.0	.0	.0			101.0
797.0	.9	55.8	29.1	11.8	4.0	.0	.0			108.5
798.0	1.0	45.3	29.1	12.0	5.6	.0	.0			124.3
799.0	1.1	36.0	29.3	12.4	7.4	.0	.0			131.7
800.0	1.1	40.7	27.9	11.9	6.2	.0	.0			136.1
801.0	1.1	48.8	28.7	12.0	5.2	.0	.0			118.4
802.0	1.1	62.8	29.9	11.9	3.1	.0	.0			104.5
803.0	1.0	72.1	30.7	10.8	.8	.0	.0			100.2
804.0	1.0	59.3	30.0	11.6	3.3	.0	.0			105.6
805.0	.9	48.8	30.8	13.3	6.5	.0	.0			132.1
806.0	.9	44.2	31.2	13.9	7.7	.0	.0			159.9
807.0	1.0	36.0	32.6	13.1	8.1	.0	.0			126.7
808.0	1.1	32.6	32.7	13.5	8.9	.0	.0			105.3
809.0	1.1	43.0	31.6	14.3	8.3	.0	.0			100.2
810.0	1.1	45.3	31.9	14.2	7.8	.0	.0			102.9
811.0	1.1	36.0	33.5	14.2	9.1	.1	.1			98.7
812.0	1.0	34.9	32.8	14.3	9.7	.0	.0			102.2
813.0	1.0	30.2	32.8	15.3	12.0	1.6	.0			86.4
814.0	.9	22.1	32.7	15.5	12.4	.5	.0			85.3
815.0	1.0	20.9	31.6	13.1	10.1	.0	.0			109.6
816.0	1.1	19.8	30.7	11.8	9.1	.0	.0			116.9
817.0	1.2	20.9	32.2	14.1	11.1	1.3	.7			88.6
818.0	1.2	23.3	33.5	15.1	12.9	3.1	.1			76.3
819.0	1.2	23.3	32.8	15.5	13.2	3.4	.6			74.5
820.0	1.2	19.8	32.9	13.9	11.0	3.9	1.3			72.5
821.0	1.2	20.9	34.5	17.2	14.3	4.1	1.3			71.0
822.0	1.2	25.5	34.3	18.2	14.6	4.7	1.3			67.6
823.0	1.3	26.7	33.3	13.6	14.9	5.5	1.0			63.2
824.0	1.3	31.4	32.2	17.3	12.9	4.1	.5			68.5
825.0	1.4	31.4	30.8	15.6	11.2	3.0	1.0			73.1
826.0	1.5	40.7	28.7	14.5	8.8	2.2	1.6			74.8
827.0	1.6	43.0	27.6	14.1	8.0	2.2	2.0			73.2
828.0	1.5	54.7	29.2	14.4	7.0	2.0	2.0			71.6
829.0	1.4	51.2	29.9	15.6	8.5	2.3	1.1			72.2
830.0	1.3	48.8	28.8	15.7	8.8	2.0	1.8			77.0
831.0	1.1	64.1	27.1	11.2	3.8	.0	.0			107.0
832.0	1.1	81.8	25.5	12.7	.9	.0	.0			95.6
833.0	1.1	81.8	24.8	12.4	.6	.0	.0			96.5
834.0	1.0	52.6	24.4	11.8	4.4	.0	.0			111.0
835.0	1.0	58.9	24.6	10.5	2.2	.0	.0			102.4

DEPTH(FT)	RT	P	PHI-N	PHI-FD	PHI	H.CARB	M.OIL	RO-H	AV.D	SW
9836.0	.9	57.6	25.2	11.4	3.3	.0	.0			105.6
9837.0	.8	60.3	26.3	11.8	3.4	.0	.0			105.7

PHILLIPS PETROLEUM COMPANY
BARTLESVILLE, OKLAHOMA 74003

September 27, 1968

Re: E-NORWAY/PROD/RESERVOIR
Log Analysis 7/11-2X

Mr. A. T. Crump
Stavanger Office

Analysis of the 7/11-2X well logs has been completed. Copies of two separate studies are enclosed for your records and use.

The two computer studies made were: (1) Study Type 501, where porosity is obtained from the density log and water saturation calculated directly from porosity and R_t using the Archie saturation equation; (2) Study Type 604, where both effective and total porosity are calculated using the sonic and density logs. The difference between the two porosities is attributed to shaliness. Water saturation is calculated by use of an empirical equation which takes into account the reduction of R_t by the shale. Thus, the water saturations are, in general, lower than those on Study 501.

Net pay was picked by comparing the Microlog separation and mud cake to the quantitative analyses described above and is shown on the log analysis plots.

I believe it is significant that there is no apparent water contact in the main pay sands down to at lease 10,200'. There may be high water saturations in some of the sand stringers at the base of the section but a definite pick on a gas/water contact is not possible.

One final point: There are only slight indications that these sands contain gas rather than liquid hydrocarbons. For this reason, I do not think the Schlumberger computer log analysis is correct. They have used a fluid density of 0.3 g/cc which causes the porosities to be much lower than I have calculated (SWSC - 12% vs. PPCo. - 18%).

I hope these data prove useful. If there are any questions or comments, please advise.

Joe Owen

Joe D. Owen

JDO:erm
Attachment - 2 Log Analyses
cc: Messrs. W. W. Dunn
(r) Silvio Eha - w/attach.
Owen D. Thomas

CJL/GHR
SO-203/68

Stavanger, October 1, 1968

Mr. T.J. Jobin
OSLO OFFICE

NOR/D&P/Well 7/11-2X

ATTENTION: Mr. H.H. Heikkila

Enclosed herewith please find copy of correspondence from Mr. J.D. Owen dated September 27, 1968, and two copies each of log analyses as referred to in his letter.

Original Signed by
A. T. CRUMP

A.T. CRUMP

Encl.

JKF/CJL
SO-269-68

Stavanger, September 12, 1968

Mr. T.J. Jobin,
OSLO OFFICE

NOR/D&P/Well 7/11-2.

This is to advise that Schlumberger inadvertently forwarded copies of Well 7/11-2 computer processed interpretation to C. Wyndham in London and J. Owens in Bartlesville. Schlumberger was instructed to mail copies direct to Brussels, Oslo, and Stavanger, but no mention was made of London and Bartlesville.

The local Schlumberger office will advise their office in Paris of our distribution requirements and no future problems are anticipated.

Original Signed by
A. T. CRUMP

A.T. CRUMP

For detailed Information on Drill Stem Tests

See "DST" Reports filed separately

JB/GMR-182/68 Stavanger, November 1, 1968

Petrofina S.A.
39 Rue de la Loi
Brussels 4
BELGIUM

ATTENTION: Mr. M. Castelain

Dear Sirs,

As requested in your letter ref. exploration & production 1.003/68 please find enclosed a copy of DST No. 1 Well 7/11-2X.

Yours very truly,

T.J. Jobin

Encl.

BZ/GMR-192/68 Stavanger, November 18, 1968

Petrofina S.A.
33 Rue de la Loi
Brussels 4
BELGIUM

ATTENTION: Mr. C. Donnami

Dear Sirs,

Ref.: Production Test Data Well 7/11-2X, DST No. 1
Your letter 1.003/68 - MC/md. - October 29, 1968.

In reference to your subject letter, we enclose another copy of DST No. 1 of well 7/11-2X.

In order that we may be sure that you have received these data, please initial and return the attached copy of the transmittal letter to this office.

Yours very truly,

Original signed by
A. T. CRUMP

A.T. Crump
Area Superintendent
Drilling & Production

Date _____

Received by _____

Encl.

BAZ/GMR-212/68 Stavanger, December 3, 1968

Oslo office +(one copy for Min. of Ind.)
Brussels office
Elf Norge A/S
Fina
Agip

Dear Sirs,

Transmitted herewith please find copies of B.J. Services Drill Stem Test Nos. 1, 2 and 3 for Well 7/11-2X. Enclosed also is Baker Oil Tools copy of DST No. 3.

Yours very truly,

Original Signed by
A. T. CRUMP

A.T. Crump
Area Superintendent
Drilling & Production

Encl.

ATC/BAZ/GHR
SO-T008-69

Stavanger, January 8, 1969

Mr. T.J. Jobin
OSLO OFFICE

NOR/D&P/Well 7/11-2X
DST Reports

Transmitted herewith, please find three Drill Stem Test Reports for the above three tests on Well 7/11-2X.

The Final DST Pressure Charts were forwarded to you on December 3, 1968.

Please advise if you require additional information concerning the subject Drill Stem Tests. For your information, data sheets for DST Computer Form 1800 and DST reports covering these three tests have been submitted to Bartlesville.

A.T. CRUMP

Encl.
cc: Brussels office

JKF/GMR
SO-310-68

Stavanger, October 11, 1968

Mr. T.J. Jobin
OSLO OFFICE

NOR/D&P/Well 7/11-2

The following hydrocarbon samples from DST No. 2 are being shipped to Bartlesville for analysis:

Quantity	Description	Attention
4	25 psi gas samples	J.F. Downie
3	Companion separator kits	J.F. Downie
2	Geochemical kits	J.Gordon Erdman
1	20 liter liquid container	Bradley Skinner

In addition to the above, 3 water samples from well 7/11-1X are being included in the shipment. It is requested that Mr. Ralph Young arrange for these samples to be analyzed by Dartougher Engineering in Tulsa.

Data sheets for the hydrocarbon samples are attached.

Original Signed by
A. T. CRUMP

A.T. CRUMP

cc: L.M. Hoelscher
R.L. Young
J.F. Downie
R.E. Lindsay
J. Gordon Erdman
Bradley Skinner (2)

PHILLIPS PETROLEUM COMPANY EUROPE-AFRICA
BRUSSELS OFFICE

CIRC	☐
MATL	☐
ENGR	☐
D. S.	☐
———	☐
CEC	☐
FILE	☐

October 22, 1968

Mr. A.T. Crump
Stavanger Office

Reference your transmittal of the field calculated Well Production Test Summary for Well 7/11-2X.

Please refer to DST No. 2 in this transmittal. The well name is shown as 7/11-1X. We have changed our copies and suggest you change yours to avoid confusion.

L.H. Hoelscher

LHH:aht/292/68

to A.T. Crump

Read

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

SUPT	☑
CIRC	☐
ENOR	☐
D. S.	☐
	☐
CEC	☐
FILE	☑

BAZ/GMR-212/68

Stavanger, December 3, 1968

Receipt copy returned to Crump 12/7

Mr. T.J. Jobin
OSLO OFFICE

Dear Sirs,

Transmitted herewith please find copies of B.J. Services Drill Stem Test Nos. 1, 2 and 3 for Well 7/11-2X. Enclosed also is Baker Oil Tools copy of DST No. 3.

Yours very truly,

A.T. Crump
Area Superintendent
Drilling & Production

Please forward one copy to the Ministry of Industry.

Encl.

PHILLIPS PETROLEUM CO.
RECEIVED
10. DES. 1968
STAVANGER

PETROLEUM COMPANY RECEIVED 4 DES 1968

ATC/GMR-163/68 Stavanger, October 21, 1968

Agip S.P.A.
C.P. 4174
Milano
ITALY

ATTENTION: Mr. S. Orioli

Dear Sirs,

Transmitted herewith please find field calculated well production test summary for well 7/11-2, DST No. 1, 2 and 3.

Yours very truly

Original Signed by
A. T. CRUMP

A.T. Crump
Area Superintendent
Drilling & Production

Encl.

ATC/GHR
SBR-012-68

Stavanger, October 21, 1968

Mr. W.W. Dunn
BRUSSELS OFFICE

ATTENTION: Mr. L.H. Hoelscher

Transmitted herewith please find 2 copies of field calculated Well Production Test summary for well 7/11-2 DST No. 1, 2 and 3. (One copy for Bartlesville office).

Original Signed by
A. T. CRUMP

A.T. CRUMP

Encl.

ATC/GmR-162/68 Stavanger, October 21, 1968

Petrofina S.A.
33 Rue de la Loi,
Brussels 4.
BELGIUM

ATTENTION: Mr. C. Bonnard

Dear Sirs,

Transmitted herewith please find field edit well production test summary for well 7/11-2, DST 1, 2 and 3.

Yours very truly

Original Signed by
A. T. CRUMP

A.T. Crump
Area Superintendent
Drilling & Production

Encl.

ATC/GHR
SO-319-68

Stavanger, October 21, 1968

Mr. T.J. Jobin
OSLO OFFICE

Transmitted herewith please find 3 copies of field calculated Well Production Test summary for well 7/11-2 DST No. 1, 2 and 3.

Original Signed by
A. T. CRUMP

A.T. CRUMP

Encl.

PHILLIPS

B.J. BORG WARNER

TESTING REPORT

DRILL-STEM TEST DATA

Well Name PHILLIPS 7-11-2X	Test No. 1
Well Number 7-11-2X	Zone Tested I
Company PHILLIPS PETROLEUM CO.	Interval 10,388 - 10424.5
Comp. Rep. MR. J. FETTERS Tester D. WILLIAMS	Date 26-9-68

Preflow 10 mins. ISI 218 mins. Flow 735 mins. FSI 465 mins.

Type of Test CASING HOOK WALL	REC. No. 2258 72 HR. CLOCK	REC. No. 2259 72 HR. CLOCK	REC. No. REUTERT 180 HR. CLOCK
DEPTH	10454	10,460	10,429
Initial Hydro Mud Press	7144	7145	
Initial Shut-In Press	5824	5840	DATA GIVEN
Initial Flow Press	3940	3945	BY
Final Flow Press	4223	4237	BAKER OIL TOOLS
Final Shut-In Press	CLOCK STOPPED	5202	
Final Hydro Mud Press	7010	7034	

Mud Drop NIL Fluid Loss 4.0 Mud Weight 12.9

Viscosity 62 Temperature 262° F. Net Pay Tested 59'

Top Packer Depth 10,359 Bottom Packer Depth — Total Depth 10,487

~~Drill Pipe~~ Tubing Size 3½" E.U.E. Wt. 9.3# Drill Collar I.D. 2½" Ft. Run 279

Surface Choke Size 1" Bottom Choke Size 2" I.D. Bumper Sub. Main Hole Size 9⅝" x 47# CASING

Anchor Size 3½" E.U.E. TUBING Rat Hole Size — Feet of Rat Hole —

Cushion Amount 10,359' DIESEL OIL Type 6.7# PER GAL. Rubber Size 7 13/16"

Fluid Recovery Total Feet 10,359'

Recovered 7714 Feet of DIESEL OIL 6.7# PER GAL.

Recovered 2645 Feet of MUDDY WATER

Gas Recovery How Measured NIL.

____ mins.	Press Rdg. ____	=	____ MCF/Day
____ mins.	Press Rdg. ____	=	____ MCF/Day
____ mins.	Press Rdg. ____	=	____ MCF/Day
____ mins.	Press Rdg. ____	=	____ MCF/Day

REMARKS:

Recovery During Initial Flow — 36bbls, total @ ½ bpm rate and 0psi flowing surface pressure.

Recovery during Final Flow — 20bbls, total with initial flow rate of 2bph ~~and~~ and final rate of 0.25bph. 0psi flowing surface pressure

A

BORG WARNER

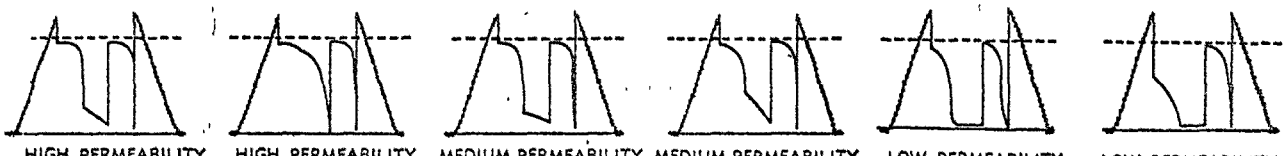
TEST # 1

TESTING REPORT

BAKER TEST HEAD.

HYDRIL VALVE.	CO SUB	2.00
10 STDS + 6' & 8' PUP. TUBING	SHUT IN TOOL	321.75'
X-OVER SUB	[illegible]	.20
OTIS TEST TREE & HANGER	[illegible]	24.25'
104 - STDS, 1 - DOUBLE & 10' NIPPLE	[illegible]	9700.24
X-OVER SUB	RECORDER(S)	1.05'
P.B. BUMPER SUB (CLOSED)	[illegible]	22.36
X-OVER SUB	[illegible]	.85
9 - DRILL COLLARS	PACKER	278.97
1. PACKER DEPTH		
X-OVER SUBS	[illegible]	2.18
2. PACKER DEPTH		
X-OVER SUB + TUBING TESTER	[illegible]	3.10
BAKER PACKER	[illegible]	6.80
1 JOINT 3½" TUBING	RECORDER	31.25'
1 JOINT PERF TUBING PACKER DEPTH	[illegible]	31.24
BAKER HANGER SUB (LEUTERT REC.) 4. PACKER DEPTH	PACKER	.88
JOINT 3½" TUBING	ANCHOR [illegible]	30.87
CROSS OVER SUBS		1.64
RECORDER HANGER SUB (#2758)		1.00
RECORDER CASE		4.00
RECORDER HANGER SUB (#2759)		1.00
PERF. SUB.		1.00
RECORDER CASE		4.00
BULL NOSE TOTAL DEPTH 10466	BULLNOSE	2.50

DST CHARTS FOR COMPARATIVE VISUAL ANALYSIS



HIGH PERMEABILITY STRONG DAMAGE EFFECT | HIGH PERMEABILITY NO DAMAGE EFFECT | MEDIUM PERMEABILITY STRONG DAMAGE EFFECT | MEDIUM PERMEABILITY NO DAMAGE EFFECT | LOW PERMEABILITY STRONG DAMAGE EFFECT | LOW PERMEABILITY NO DAMAGE EFFECT

PHILLIPS PETROLEUM COMPANY, Stavanger, Norway

1. Lease Name, Well No. 7/11-R
2. Field, Concession, Country Cod Structure, North Sea, Norway
2. Name of Production Formation Un-named
4. Perforated interval (Depth from RKB) 9932'-10190'
5. Source of Gas Sample Low Pressure Gas Scrubber
6. Source of Liquid Samples
7. Separator Pressure 800 psig
8. Separator Temperature 80°F
9. Type and Working Pressure of Gas Bottle 25 PSI PPG Gas Bottle
10. Type of Liquid Sample Container
11. Date Sampled 2330 HRS Oct 3, 1968
12. Name of Person or Persons Taking Sample Fuse-Olsen & Fetters
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 9.36 MMCFD
    b) Hydrocarbon Liquid, STB 1043
15. Ratio of Separator Gas to Stock Tank Oil, Cubic Feet/Barrel 8950
16. Request the Gas and/or Oil Analysis to Include the Following:
    a) An Analysis of Hydrocarbons Through and Including C_7+ Yes
    b) H_2S See remarks
    c) CO_2 Yes
    d) N_2 Yes
    e) H_e Yes
    f) Recombined Formation Fluid Analysis Yes
17. Bottom Hole Pressure 5665 PSIA at 10135 'RKB
18. Bottom Hole Temperature 254°F at 10135 'RKB

PHILLIPS PETROLEUM COMPANY, Stavanger, Norway

1. Lease Name, Well No. 7/11 - 2
2. Field, Concession, Country Ekofisk Structure, North Sea Norway
3. Name of Production Formation Un-named
4. Perforated interval (Depth from RKB) 9932' - 10190'
5. Source of Gas Sample Low Pressure Gas Scrubber
6. Source of Liquid Samples
7. Separator Pressure 800 psig
8. Separator Temperature 80°F
9. Type and Working Pressure of Gas Bottle 25PSI PPG GAS BOTTLE
10. Type of Liquid Sample Container
11. Date Sampled 1350 HRS Oct 3, 1968
12. Name of Person or Persons Taking Sample ENGE-OLSEN & FETTERS
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 9.36 MMCFD
    b) Hydrocarbon Liquid, STB 1043
15. Ratio of Separator Gas to Stock Tank Oil, Cubic Feet/Barrel 8950
16. Request the Gas and/or Oil Analysis to Include the Following:
    a) An Analysis of Hydrocarbons Through and Including C_7+ yes
    b) H_2S for presence
    c) CO_2 yes
    d) N_2 yes
    e) H_e yes
    f) Recombined Formation Fluid Analysis yes
17. Bottom Hole Pressure 5665 PSIA at 10,135 'RKB
18. Bottom Hole Temperature 254°F at 10,135 'RKB

PHILLIPS PETROLEUM COMPANY, Stavanger, Norway

1. Lease Name, Well No. 7/11-7 2. Field, Concession, Country Gullfaks, Norwegian Sea, Norway
2. Name of Production Formation Unnamed 4. Perforated interval (Depth from RKB) 9932'-10100'
5. Source of Gas Sample Low Press Gas Scrubber 6. Source of Liquid Samples
7. Separator Pressure 915 PSIG 8. Separator Temperature 139°F
9. Type and Working Pressure of Gas Bottle 25 PSI PPCo GAS BOTTLE 10. Type of Liquid Sample Container 11. Date Sampled 07:30 HRS Oct 4, 1986 12. Name of Person or Persons Taking Sample FINE-OLSEN & FETTERS
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 22.13 MMCFD
    b) Hydrocarbon Liquid, STB 12677 bpd
15. Ratio of Separator Gas to Stock Tank Oil, Cubic Feet/Barrel 1741.6
16. Request the Gas and/or Oil Analysis to Include the Following:
    a) An Analysis of Hydrocarbons Through and Including C_7+ YES
    b) H_2S No process
    c) CO_2 YES
    d) N_2 YES
    e) H_e YES
    f) Recombined Formation Fluid Analysis YES
17. Bottom Hole Pressure 5065 PSIA at 10135 'RKB
18. Bottom Hole Temperature 254°F at 10135 'RKB

PHILLIPS PETROLEUM COMPANY, Stavanger, Norway

1. Lease Name, Well No. 7/11-2 2. Field, Concession, Country [illegible], North Sea Norway
2. Name of Production Formation un-named 4. Perforated interval (Depth from RKB) 9932' - 10190'
5. Source of Gas Sample [illegible] 6. Source of Liquid Samples ________
7. Separator Pressure 1000 psig 8. Separator Temperature 121°F
9. Type and Working Pressure of Gas Bottle 250 psi PPCo Gas Bottle 10. Type of Liquid Sample Container ________ 11. Date Sampled [illegible] Oct 4, 196[illegible] 12. Name of Person or Persons Taking Sample Evje-Olsen & Fetters
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 16.55 MMCFD
   b) Hydrocarbon Liquid, STB 1340
15. Ratio of Separator Gas to Stock Tank Oil, Cubic Feet/Barrel 11,900
16. Request the Gas and/or Oil Analysis to Include the Following:
   a) An Analysis of Hydrocarbons Through and Including C_7+ yes
   b) H_2S for presence
   c) CO_2 yes
   d) N_2 yes
   e) H_e yes
   f) Recombined Formation Fluid Analysis yes
17. Bottom Hole Pressure 5665 psia at 10,135 'RKB
18. Bottom Hole Temperature 254°F at 10,135 'RKB

Cylinder Number(s) _____

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

Data Sheet for GAS AND/OR LIQUID PETROLEUM SAMPLES in Cylinders

Well Designation[1] (Lease, Well No. etc.)	7/11-2X	
Field Name (or "Wildcat")	WILDCAT, COD STRUCTURE	
County (Parish, etc.)		
State (or like sub-division)		
Country	NORTH SEA, NORWAY	
Sample Type	Gas	Liquid
Date Sampled[1]	OCT 30th '68	OCT 30th '68
Time Sampled[1]	2350 hrs	2350 hrs.
By Whom Sampled[1]	GUNDERSON AND PETTERS	
Sample Point Location (Separator, Well Head, etc.)	SEPARATOR	
Pressure of Sample Point	815 PSIA	815 PSIA
Temperature of Sample Point, °F	80°F	80°F
Pressure put in Sample Cylinder	815psia	815 psia.
Flow Rates (give units) or Well Status	9.36 MMSCFD	9.36 MMSCFD
Gas/Liquid Ratio, Mcf/bbl	8.950	
Name of Formation Tested	UNKNOWN	
Depth Interval Tested, Upper & Lower	9932 — 10190	
Depth Reference Point (RKB, etc.)	87' MSL	

Comments (Well Status, Sampling Problems, etc.) _____

(1) Same as on tag attached to cylinder.

Cylinder Number(s)

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

Data Sheet for GAS AND/OR LIQUID PETROLEUM SAMPLES in Cylinders

Well Designation[1] (Lease, Well No. etc.)	7/11-2	
Field Name (or "Wildcat")	COD STRUCTURE	
County (Parish, etc.)	NORTH SEA	
State (or like sub-division)		
Country	NORWAY	
Sample Type	Gas	Liquid
Date Sampled[1]	OCT 4, 1968	OCT 4, 1968
Time Sampled[1]	0750HRS	0750HRS
By Whom Sampled[1]	EVJE-OLSEN & FETTERS	
Sample Point Location (Separator, Well Head, etc.)	SEPARATOR	SEPARATOR
Pressure of Sample Point	930PSIA	930 PSIA
Temperature of Sample Point, °F	139°F	139°F
Pressure put in Sample Cylinder	930PSIA	930 PSIA
Flow Rates (give units) or Well Status	22.13MMCFD	1267 b/d
Gas/Liquid Ratio, Mcf/bbl	17.466	
Name of Formation Tested	UN-named	
Depth Interval Tested, Upper & Lower	9932' - 10190' RKB	
Depth Reference Point (RKB, etc.)	87' to MSL	

Comments (Well Status, Sampling Problems, etc.)

(1) Same as on tag attached to cylinder.

Form 2069

DEPTH

DESCRIPTION AND REMARKS

(X: Interval of estimated last core)

See Section 21;
Geologic Summary,
Appendixes 1 and 2.

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. '68
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-KLN GRAIN-GRN GRANULAR-GRNL	BROWN-BRN GRAY-GY VUGGY-VGY	FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY	SLIGHTLY-SL/ VERY-V/ WITH-W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS HORIZONTAL Ka	PERMEABILITY MILLIDARCYS VERTICAL Kl	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE OIL	RESIDUAL SATURATION PER CENT PORE TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
1	9944	0.78	0.52	17.5	2.9	68.6	
2	45	3.6	2.6	15.1	7.9	74.8	
3	46	0.35	0.22	18.9	2.6	84.6	
4	48'9"	2.9	2.1	18.6	12.4	46.7	
5	50	6.8	5.2	21.4	5.1	59.0	
6	51	19	15	23.9	4.6	49.0	
7	51'6"	38	32	27.2	11.8	45.2	
8	53	27	22	16.3	7.4	58.9	
9	54	36	30	22.2	10.0	44.1	
10	55	61	53	23.2	10.3	39.7	
11	56	1.1	0.8	18.6	6.5	52.1	
12	58	0.27	0.17	19.0	2.1	42.2	
13	59	47	40	22.0	5.0	35.4	
14	60'6"	19	15	22.1	10.0	40.3	
15	61'6"	38	32	15.3	7.8	43.8	
16	63	13	10	23.7	8.9	36.3	
17	65'6"	136	122	26.7	7.9	34.8	
18	66'6"	137	123	27.3	8.4	34.4	
19	67'6"	76	66	22.1	10.0	34.8	
20	68'6"	52	44	21.4	5.1	36.0	
21	69'8"	116	103	24.2	10.0	37.7	
22	70'4"	1.9	1.3	18.6	6.5	48.3	
23	71	2.9	2.1	21.0	5.2	47.2	
24	73	30	25	28.6	7.3	43.0	
25	74	7.8	6.0	23.3	4.7	42.9	
26	9975'6"	0.41	0.26	17.8	14.6	53.4	

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
					OIL	TOTAL WATER	
		Ka	K1				
27	9976'8"	6.6	5.0	17.4	6.8	50.0	
28	77'6"	4.3	3.2	22.3	9.9	39.9	
29	78'6"	55	47	25.1	8.4	36.7	
30	81'4"	2.7	1.9	24.2	9.1	48.4	
31	82'4"	8.7	6.7	19.9	5.5	49.3	
32	83'6"	4.1	3.0	23.6	9.8	51.7	
	84'4"	0.45	0.29	20.5	12.2	47.3	
34	85'6"	6.2	4.7	24.0	12.1	47.1	
35	86'6"	38	32	25.1	8.8	40.6	
36	87'6"	51	43	22.5	4.9	36.4	
37	88'6"	4.3	3.2	23.1	9.1	34.2	
38	89'8"	8.2	6.3	20.7	10.6	41.1	
39	90'4"	4.3	3.2	20.0	11.0	43.5	
40	91'6"	5.3	4.0	23.0	9.6	50.0	
41	9993	11.4	8.9	23.2	9.5	38.4	

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.

SUPT	☐	A.
CIRC	☐	
MATL	☐	
ENGR	☐	JKF
D. S.	☐	
	☐	
CEC	☐	
FILE	☐	

A. T. Crump
Stavanger Office

January 2, 1969

Re: NORWAY/PROD/7/11-2X/CORRESPONDENCE

Mr. L. H. Hoelscher
Phillips Petroleum Company Europe-Africa
Brussels, Belgium

Attached is a copy of the completed analysis report of the companion separator samples from Well 7/11-2X. These analyses were made by J. F. Downie, E & P Department Lab. The report is self-explanatory.

Original Signed By
Ralph L. Young

Ralph L. Young

RLY:HPH:erm
Attachment
cc: Mr. T. J. Jobin w/Attach. 2
Mr. A. T. Crump w/Attach. 2

PHILLIPS PETROLEUM CO.
RECEIVED
-7 JAN 1969
STAVANGER

PHILLIPS 66

7/11-2x

December 16, 1968

INTER-OFFICE CORRESPONDENCE / SUBJECT:
BARTLESVILLE, OKLAHOMA

Norway Sector, North Sea, License 7,
Block 11, Well No. 2X
COMPANION SEPARATOR SAMPLES

REL-138-GA-52-68

Mr. O. D. Thomas
12 C4 PB
International Department
Bartlesville Office

Reference is made to a letter from Mr. A. T. Crump, Stavanger, Norway, to Mr. T. J. Jobin, Oslo, Norway, in re: NOR/D&P/WELL 7/11-2 dated October 11, 1968, and ten attachments. The documents transmitted three companion separator samples (gas and liquid) to J. F. Downie, two geochemical kits to J. G. Erdman, and one 20-liter liquid container to Bradley Skinner. The attached data and analyses pertain to the companion separator samples sent to J. F. Downie.

J. F. Downie

J. F. Downie
262 CL PRC
Ext. 48-431

JFD:pjh

cc: Messrs. P. L. Young (6)
E. E. Clark (r) M. D. Voss
R. V. Smith
W. L. Culbertson (2)
J. W. Marx
J. G. Erdman
JFD/mfg (3)

ALL SAMPLES FROM DRILL STEM TEST NO. 2 WITH PERFORATIONS FROM 9,932' - 10,190' RKB FORMATION UNNAMED

Gas/Liquid Ratio - scf/bbl	8,950			11,900			17,466		
	SEPARATOR GAS	SEPARATOR LIQUID	COMPOSITE WELL STREAM	SEPARATOR GAS	SEPARATOR LIQUID	COMPOSITE WELL STREAM	SEPARATOR GAS	SEPARATOR LIQUID	COMPOSITE WELL STREAM
Source of sample	Separator*	Separator*		Separator*	Separator*		Separator*	Separator*	
Separator pressure, psig	800	800		1,000	1,000		915	915	
Separator temperature, °F	80	80		121	120		139	135	
Sample container	2-valve, 2-gal, s. s.	75-ml Hoke bottle		2-valve, 2-gal, s. s.	75-ml Hoke bottle		2-valve, 2-gal, s. s.	75-ml Hoke bottle	
Sample pressure, psig	25	----------		25	----------		25	----------	
Date sampled	Oct. 3, 1968	Oct. 3, 1968		Oct. 4, 1968	Oct. 4, 1968		Oct. 4, 1968	Oct. 4, 1968	
Time sampled, hours	2350	----------		0330	----------		0730	----------	
Producing rate - gas, Mscf/d	9,360	9,360		16,550	16,550		22,130	22,130	
liquid, stb/d	1,043	1,043		1,390	1,390		1,267	1,267	
Gas/liquid ratio, Mscf/bbl	8.950	8.950		11.900	11.900		17.466	17.466	
Bottom hole pressure at 10,135', psia	5,665	5,665		5,665	5,665		5,665	5,665	
Bottom hole temperature at 10,135, °F	254	254		254	254		254	254	
Stock tank temperature, °F		35-40			35-40			35-40	
HH-1668-68 Serial No.	179	180		181	182		183	184	

Component	MOL PER CENT	MOL PER CENT	MOL PER CENT	MOL PER CENT	MOL PER CENT	MOL PER CENT	MOL PER CENT	MOL PER CENT	MOL PER CENT
Helium	<0.02	0.00	<0.02	<0.02	0.00	<0.02	<0.02	0.00	<0.02
Carbon dioxide	2.50	1.28	2.33	2.47	1.32	2.33	2.50	1.16	2.40
Nitrogen	0.90	0.06	0.78	0.88	0.07	0.79	0.85	0.07	0.79
Methane	84.01	20.75	75.11	82.97	21.05	75.82	81.25	20.22	76.51
Ethane	7.57	7.84	7.61	7.73	7.80	7.74	8.16	6.65	8.04
Propane	2.94	7.94	3.64	3.17	7.47	3.67	3.69	6.75	3.93
i-Butane	0.48	2.68	0.79	0.57	2.42	0.78	0.73	2.04	0.83
n-Butane	0.80	6.58	1.61	1.00	5.67	1.54	1.31	5.82	1.66
i-Pentane	0.22	3.89	0.74	0.31	3.37	0.66	0.43	2.56	0.60
n-Pentane	0.20	4.45	0.85	0.30	3.94	0.76	0.42	2.94	0.64
Cyclopentane		0.35			0.32			0.31	
Hexane	0.15	6.29	1.48	0.27	5.81	1.29	0.35	5.83	0.99
Cyclohexane		2.41			2.46			2.02	
Benzene		0.89			0.85			0.71	
Heptane and heavier	0.23	34.59	5.06	0.33	37.45	4.62	0.31	42.92	3.61
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Specific gravity of gas (Air = 1.000)	0.6851			0.7021			0.7221		
Heating value of gas, Btu/cf - dry	1142.			1170.			1200.		
(14.696 psia & 60°F)-water saturated	1122.			1149.			1179.		
Molecular weight of heptane plus		171.			168.			167.	
Specific gravity of heptane plus		0.796			0.794			0.795	

*As per information from Bartlesville office

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS 75207

January 2, 1969

RESERVOIR FLUID ANALYSIS

Phillips Petroleum Company
P. O. Box 72
Stavanger, Norway

Attention: Mr. Jerry Fetters

Subject: Reservoir Fluid Study
7/11-2X Well
Block 7/11 Field
North Sea, Norway
Our File Number: RFL 5114

Gentlemen:

Samples of primary separator liquid and vapor were collected from the subject well and submitted to our Dallas laboratory for use in a reservoir fluid study. Presented on the following pages are the results of this study as requested by Phillips Petroleum Company.

After correction for the factors shown on page one, the producing gas-liquid ratio was 16,912 cubic feet of primary separator gas at 14.696 psia and 60°F. per barrel of stock tank liquid at 60°F. In our laboratory it was found that this ratio is equivalent to 13,519 standard cubic feet of primary separator gas per barrel of primary separator liquid at 915 psig and 60°F. This ratio was then used in conjunction with the measured compositions of the separator products to calculate the composition of the well stream material, and these data are reported on page two.

The separator liquid and vapor products were then physically recombined to their producing gas-liquid ratio and the resultant fluid was examined in a visual cell at the reservoir temperature of 253°F. During a constant composition expansion at this temperature a retrograde dew point was observed at a pressure of 5503 psig. The last reservoir pressure was reported to be 5550 psig at a depth of 10,135 feet. Comparison of the dew point pressure

to the last reservoir pressure gives an indication that the fluid probably exists in the reservoir as a saturated gas phase. The results of the pressure-volume measurements, along with the measured deviation factor at the dew point pressure and above, are presented on page three.

In order to simulate pressure depletion of the reservoir, a constant volume depletion study was performed on a sample of the reservoir fluid. This depletion consisted of a series of expansions and constant pressure displacements, with each displacement terminating at the original cell volume. The gas displaced at each pressure level was charged to low temperature, fractional distillation equipment for analysis and volume measurements. Two deviation factors were calculated from the results of this depletion study. The first is a deviation factor of the produced equilibrium gas phase. The second is the two-phase deviation factor, and it is defined as the volume of gas plus liquid in the reservoir divided by the volume that would be occupied at reservoir conditions by an equal number of mols of an ideal gas. A graph of cumulative volume of gas produced versus the absolute pressure divided by the two-phase deviation factor is a straight line which may be extrapolated to yield total gas recovery. Presented on page four are the results obtained during this constant volume depletion study.

Smoothed compositions and equilibrium ratios from the literature were used to calculate the surface recoveries that may be expected as reservoir pressure declines. These recoveries are based upon one MMSCF of fluid in place at the dew point pressure, and they are presented on page five. Also tabulated on page five are the total plant products available in the primary separator gas and the second-stage gas, as well as the total plant products produced in the well stream. A plant efficiency of 100 per cent has been assumed for these recoveries.

The data concerning the amounts of retrograde liquid condensation in the reservoir, as reservoir pressure declines, are shown on page six of this report. At the first depletion level of 4500 psig the amount of retrograde liquid was only 0.46 per cent of the hydrocarbon pore space. The maximum retrograde liquid condensation will occur at a reservoir pressure of about 1000 psig, and the retrograde liquid will be about 4.3 per cent of the hydrocarbon pore space.

It has been our pleasure to perform this study for Phillips Petroleum Company. If you have any questions or if we may assist you further in any manner, please do not hesitate to contact us.

Very truly yours,

Core Laboratories, Inc.
Reservoir Fluid Analysis

P L Moses (PE)

P. L. Moses
Manager

PLM:HS:dr
15 cc - Addressee

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

File RFL 5114

Company Phillips Petroleum Company — Date Sampled October 4, 1968

Well 7/11-2X — Province

Field Block 7/11 — Country North Sea, Norway

FORMATION CHARACTERISTICS

Formation Name	
Date First Well Completed	, 19
Original Reservoir Pressure	5328 PSIG @ -9439 Ft.
Original Produced Gas-Liquid Ratio	11050 SCF/Bbl
Production Rate	400 Bbls/Day
Separator Pressure and Temperature	450 PSIG 53 ° F.
Liquid Gravity at 60° F.	55 ° API
Datum	9439 Ft. Subsea

WELL CHARACTERISTICS

Elevation	87 Ft.
Total Depth	11245 Ft.
Producing Interval	9932-10190 Ft.
Tubing Size and Depth	3-1/2 In. to 10147 Ft.
Open Flow Potential	60 MMSCF/Day
Last Reservoir Pressure	5550 PSIG @ 10135 Ft.
Date	October 4, 19 68
Reservoir Temperature	253 ° F. @ 10061 Ft.
Status of Well	
Pressure Gauge	

SAMPLING CONDITIONS

Flowing Tubing Pressure		2254 PSIG
Flowing Bottom Hole Pressure		4259 PSIG
Primary Separator Pressure		915 PSIG
Primary Separator Temperature		138 ° F.
Secondary Separator Pressure		PSIG
Secondary Separator Temperature		° F.
Field Stock Tank Liquid Gravity		51 ° API @ 60° F.
Primary Separator Gas Production Rate		MSCF/Day
Pressure Base	14.696 PSIA	
Temperature Base	60 ° F.	
Compressibility Factor (F_{pv})	1.062	
Gas Gravity (Laboratory)	0.692	
Gas Gravity Factor (F_g)	1.2021	
Liquid Production Rate @ 60° F.		Bbls/Day
Primary Separator Gas/ Stock Tank Liquid Ratio		16912 SCF/Bbl
or		59.13 Bbls/MMSCF

Core Laboratories, Inc., Engineer

REMARKS:

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

File RFL 5114

Well 7/11-2X

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

Component	Separator Liquid Mol Per Cent	Separator Gas Mol Per Cent	Separator Gas GPM	Well Stream Mol Per Cent	Well Stream GPM
Hydrogen		0.02		0.02	
Helium		0.01		0.01	
Hydrogen Sulfide	Nil	Nil		Nil	
Carbon Dioxide	0.78	2.21		2.11	
Nitrogen	0.07	0.92		0.86	
Methane	18.14	83.30		78.79	
Ethane	6.48	7.67		7.59	
Propane	6.75	3.37	0.925	3.60	0.990
iso-Butane	1.74	0.58	0.189	0.66	0.216
n-Butane	5.79	1.02	0.321	1.35	0.425
iso-Pentane	3.15	0.28	0.102	0.48	0.175
n-Pentane	3.68	0.27	0.098	0.51	0.184
Hexanes	8.16	0.18	0.073	0.73	0.299
Heptanes plus	45.26	0.17	0.077	3.29	1.998
	100.00	100.00	1.785	100.00	4.287

Properties of Heptanes plus

API gravity @ 60° F.	46.9			
Specific gravity @ 60/60° F.	0.7932			0.791
Molecular weight	154	103		152

Calculated separator gas gravity (air = 1.000) = 0.692

Calculated gross heating value for separator gas = 1154 BTU per cubic foot of dry gas @ 14.696 psia and 60° F.

Primary separator gas collected @ 900 psig and 136 °F.

Primary separator liquid collected @ 900 psig and 132 °F.

Primary separator gas/separator liquid ratio	13519 SCF/Bbl @ 60° F.
Primary separator liquid/stock tank liquid ratio	1.251 Bbls @ 60° F./Bbl
Primary separator gas/well stream ratio	930.91 MSCF/MMSCF
Stock tank liquid/well stream ratio	55.04 Bbls/MMSCF

Pressure-Volume Relations of Reservoir Fluid at 253° F.
(Constant Composition Expansion)

Pressure PSIG		Relative Volume	Deviation Factor Z
7000		0.8900	1.191
6500		0.9202	1.144
6000		0.9566	1.098
5700		0.9815	1.070
5637		0.9875	1.065
5587		0.9923	1.061
5567		0.9941	1.059
5550	Reservoir Pressure	0.9954	1.057*
5529		0.9973	1.055
5503	Dew Point Pressure	1.0000	1.053**
5493		1.0006	
5477		1.0023	
5451		1.0049	
5372		1.0130	
5260		1.0252	
4980		1.0591	
4591		1.1148	
4208		1.1838	
3812		1.2738	
3417		1.3927	
3019		1.5533	
2619		1.7730	
2222		2.0848	
1869		2.4883	
1571		2.9755	
1357		3.4642	
1191		3.9629	

* Gas formation volume factor = 1.467 MSCF/Bbl.
** Gas formation volume factor = 1.460 MSCF/Bbl.

Depletion Study at 253 °F.

Hydrocarbon Analyses of Produced Well Stream- Mol Per Cent

	Reservoir Pressure - PSIG							
Component	5503	4500	3400	2300	1400	760	380*	0
Carbon dioxide	2.19	2.18	2.30	2.24	2.27	2.28	2.31	
Nitrogen	0.81	0.83	0.87	0.90	0.87	0.85	0.81	
Methane	78.73	79.14	79.71	80.33	80.75	80.01	78.65	
Ethane	7.70	7.70	7.95	7.54	7.86	7.93	7.74	
Propane	3.34	3.50	3.31	3.66	3.35	3.64	3.63	
iso-Butane	0.76	0.66	0.72	0.67	0.72	0.70	0.80	
n-Butane	1.41	1.43	1.22	1.35	1.30	1.40	1.66	
iso-Pentane	0.43	0.41	0.32	0.39	0.45	0.45	0.67	
n-Pentane	0.61	0.52	0.66	0.49	0.46	0.63	0.66	
Hexanes	0.68	0.76	0.74	0.64	0.61	0.66	0.92	
Heptanes plus	3.34	2.87	2.20	1.79	1.36	1.45	2.15	
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
Molecular weight of heptanes plus	152	141	130	120	114	112	113	
Specific gravity of heptanes plus	0.791	0.782	0.770	0.760	0.754	0.752	0.753	
Deviation Factor - Z								
Equilibrium gas	1.053	0.979	0.922	0.906	0.921	0.948		
Two-phase	1.053	0.974	0.914	0.887	0.890	0.870		
Well stream produced-								
Cumulative per cent of initial	0.000	11.596	28.790	50.323	69.765	83.058		98.634
GPM from Smooth Compositions								
Propane plus	4.208	3.842	3.379	3.024	2.857	2.941	3.655	
Butanes plus	3.288	2.928	2.470	2.115	1.937	1.986	2.659	
Pentanes plus	2.623	2.266	1.817	1.472	1.284	1.318	1.876	

Calculated Cumulative Recovery During Depletion

Cumulative Recovery per MMSCF of Original Fluid	Initial in Place	Reservoir Pressure—PSIG 5503	4500	3400	2300	1400	760	0
Well Stream—MSCF	1000	0	115.96	287.90	503.23	697.65	830.58	986.34
Normal Temperature Separation *								
Stock tank liquid—barrels	52.04	0	5.02	10.49	15.41	18.89		
Primary separator gas—MSCF	938.88	0	109.75	274.54	483.07	672.49		
Second stage gas—MSCF	15.07	0	1.53	3.30	4.98	6.22		
Stock tank gas—MSCF	5.11	0	0.52	1.13	1.71	2.15		
Total "Plant Products" in Primary Separator Gas - Gallons**								
Propane	814	0	96	240	424	594		
Butanes (total)	527	0	62	157	279	393		
Pentanes plus	521	0	62	157	280	395		
Total "Plant Products" in Second Stage Gas - Gallons**								
Propane	30	0	3.0	6.5	9.9	12.4		
Butanes (total)	16	0	1.7	3.7	5.6	7.0		
Pentanes plus	10	0	1.0	2.2	3.4	4.3		
Total "Plant Products" in Well Stream—Gallons **								
Propane	920	0	106	262	458	637	764	919
Butanes (total)	665	0	77	189	328	455	543	665
Pentanes plus	2623	0	263	575	892	1142	1317	1609

* Primary separator at 900 psig and 135°F., second stage separator at 100 psig and 80°F., stock tank at atmospheric pressure and 60°F.

** Recovery assumes 100 per cent plant efficiency.

Retrograde Condensation During Gas Depletion at 253° F.

Pressure PSIG		Retrograde Liquid Volume Per Cent of Hydrocarbon Pore Space
5503	Dew Point Pressure	0.00
5493		Trace
5477		Trace
5451		0.01
5372		0.01
5260		0.05
4980		0.15
4500	First Depletion Level	0.46
3400		2.11
2300		3.53
1400		4.17
760		4.28
0		3.88

Properties of Zero PSIG Residual Liquid

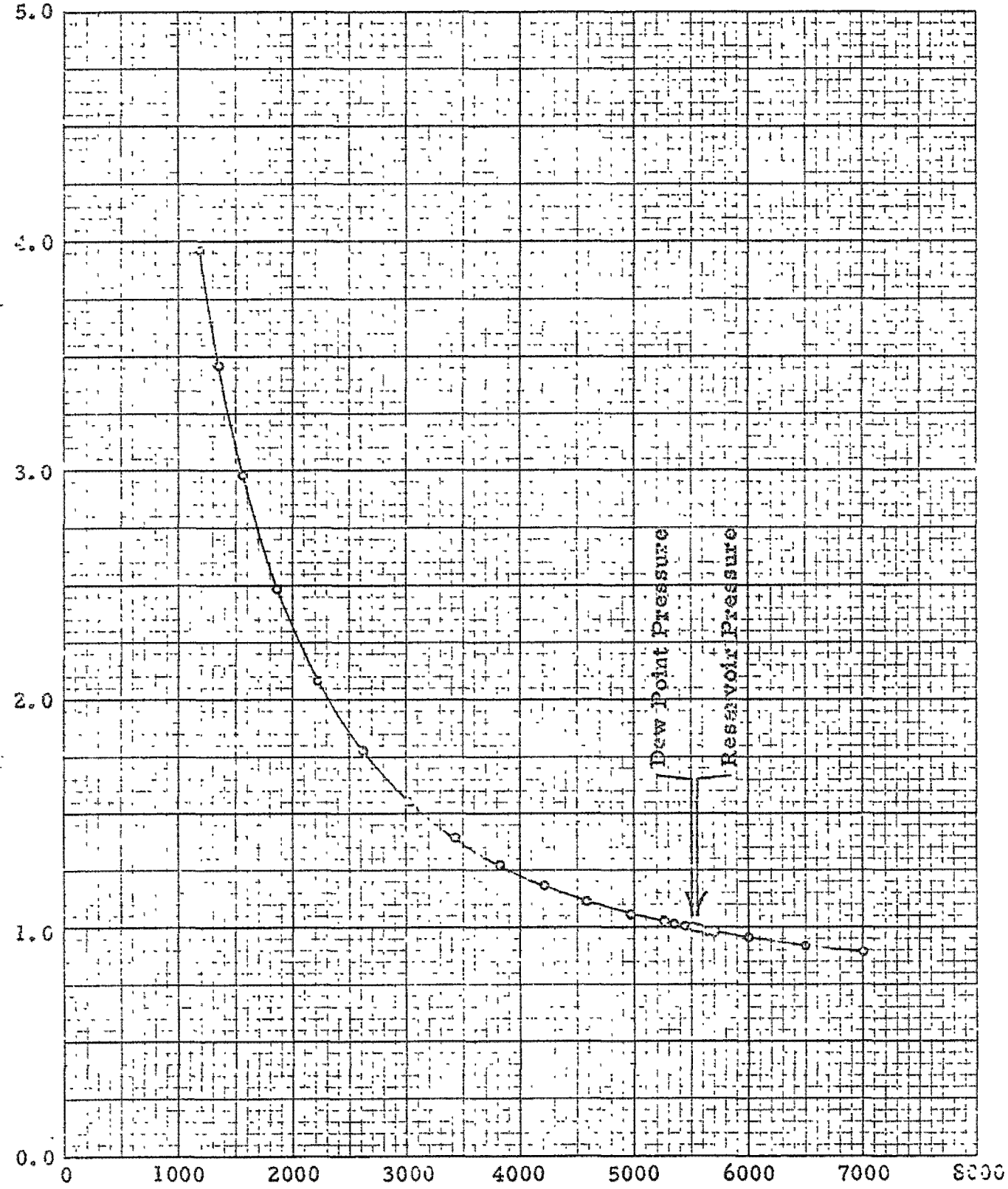
Gravity : 43.0 °API @ 60° F.
Density : 0.8111 gms/cc @ 60° F.
Molecular weight: 190

Core Laboratories, Inc.
Reservoir Fluid Analysis

P. L. Moses
Manager

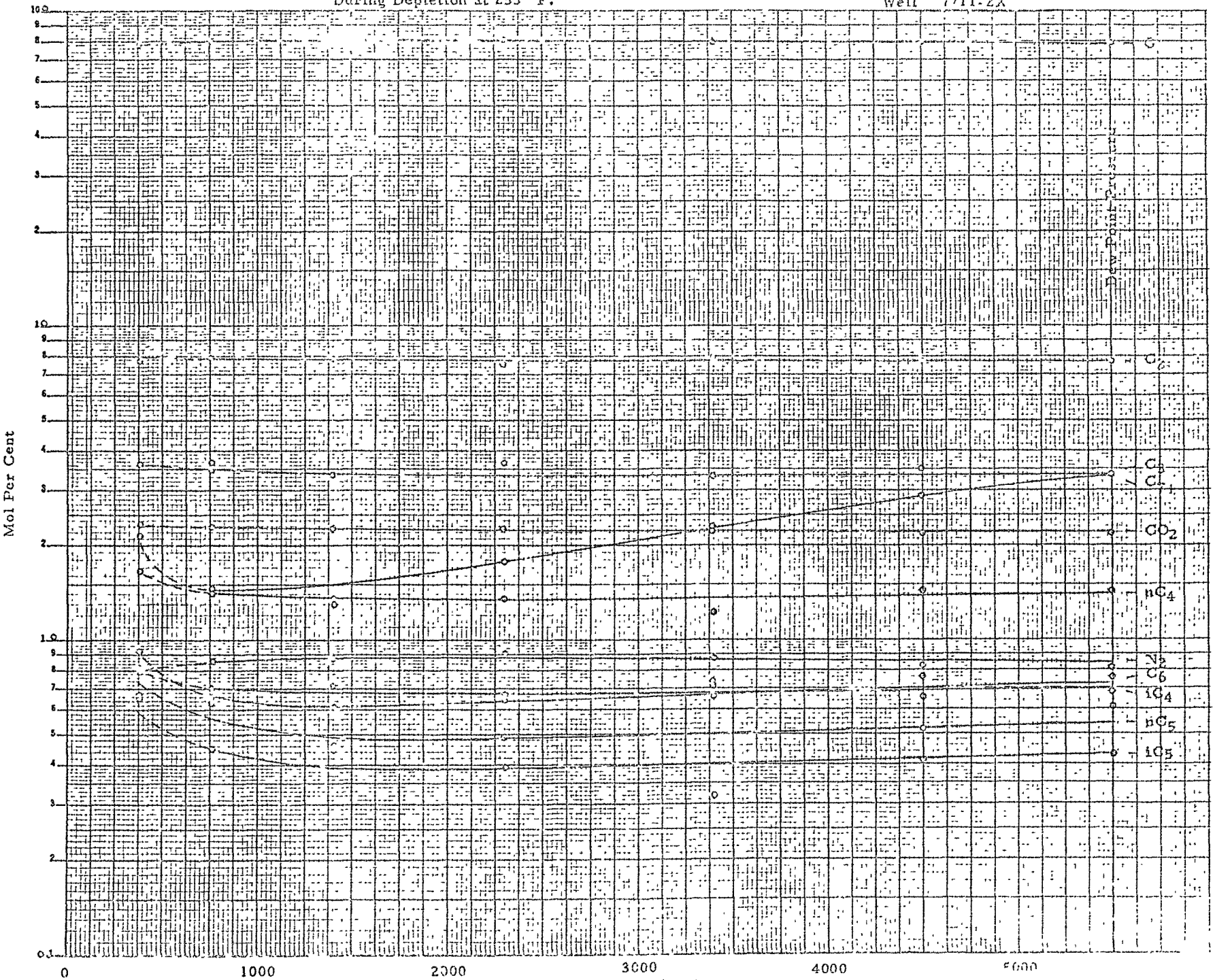
Pressure-Volume Relations of Reservoir Fluid at 253°F.

Company Phillips Petroleum Company Formation
Well 7/11-2X Province
Field Block 7/11 Country North Sea, Norway



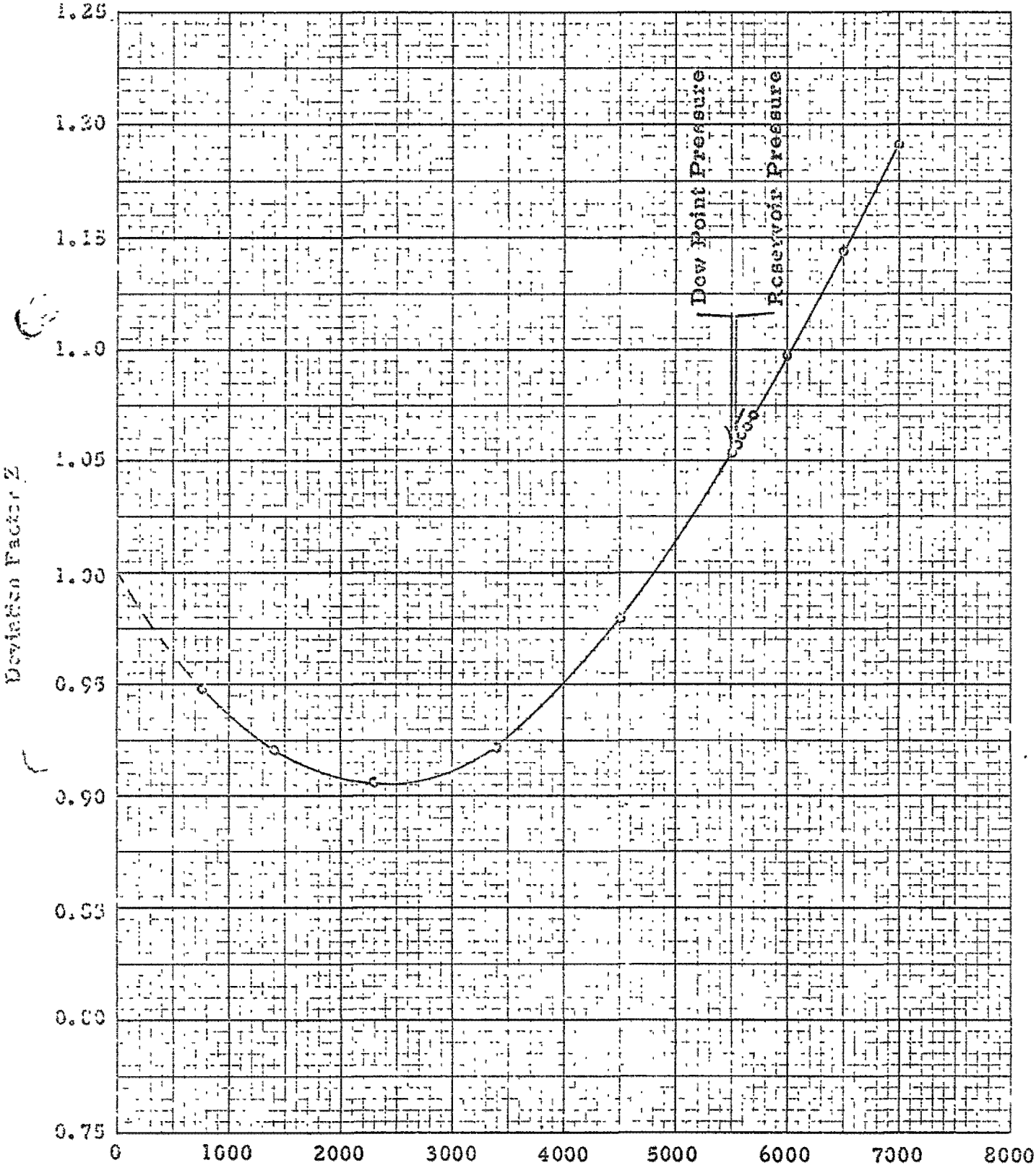
Hydrocarbon Analyses of Produced Well Stream
During Depletion at 253° F.

File RFL 5114
Well 7/11-2X



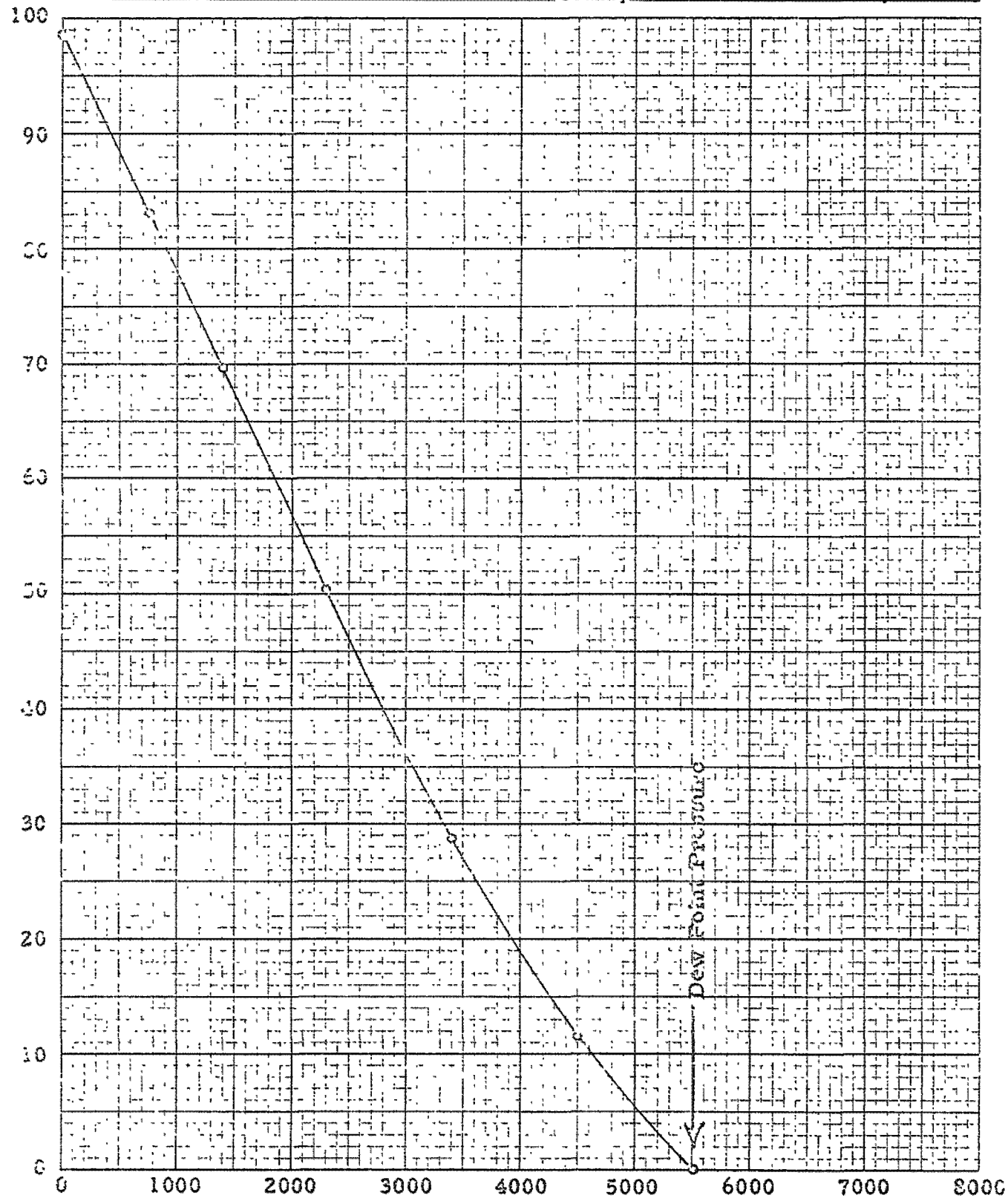
Deviation Factor Z of Well Stream During Depletion at 253°F.

Company Phillips Petroleum Company Formation
Well 7/11-2X Province
Field Block 7/11 Country North Sea, Norway



Volume of Well Stream Produced During Depletion

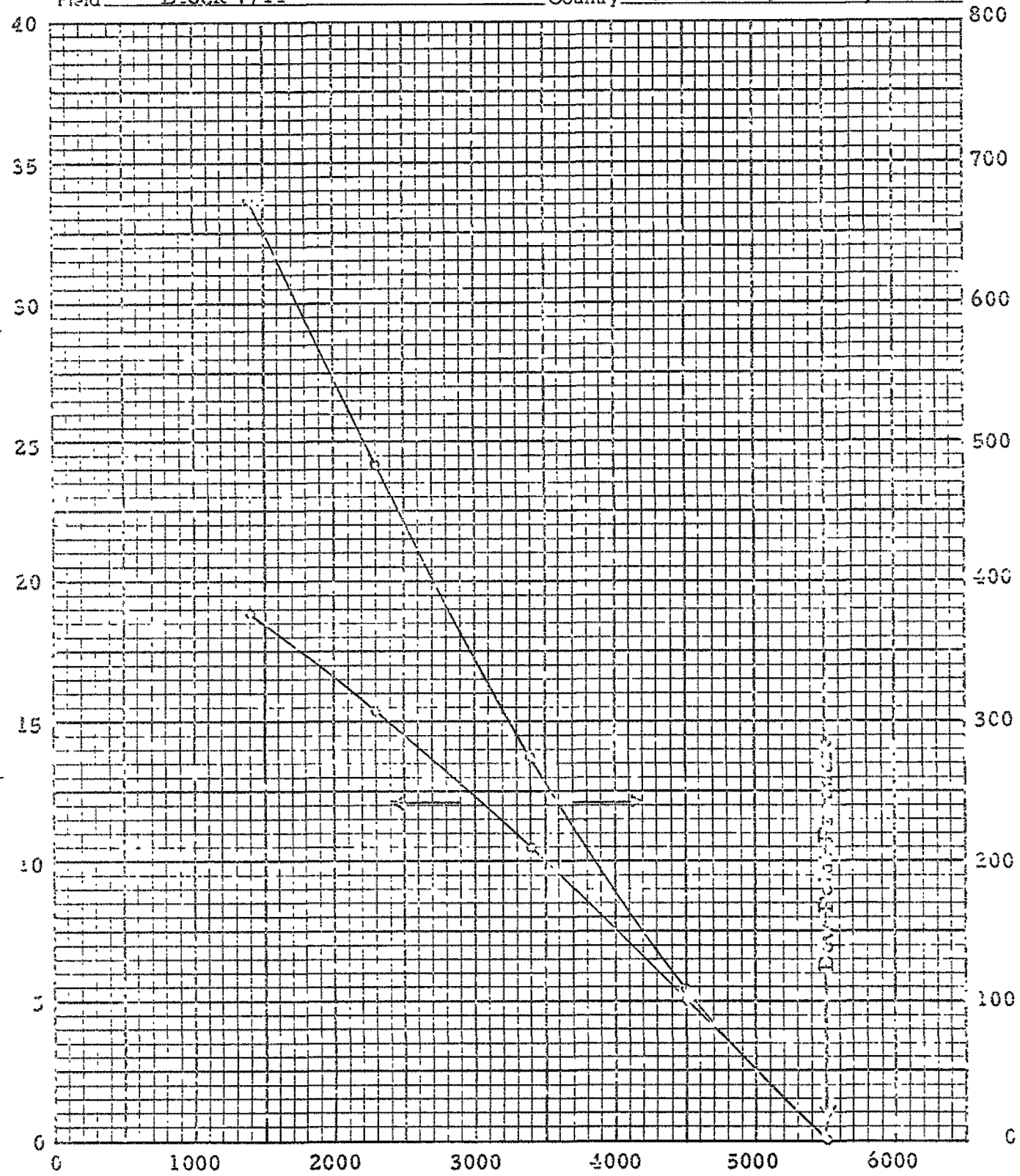
Company Phillips Petroleum Company Formation
Well 7/11-2X Province
Field Block 7/11 Country North Sea, Norway



CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

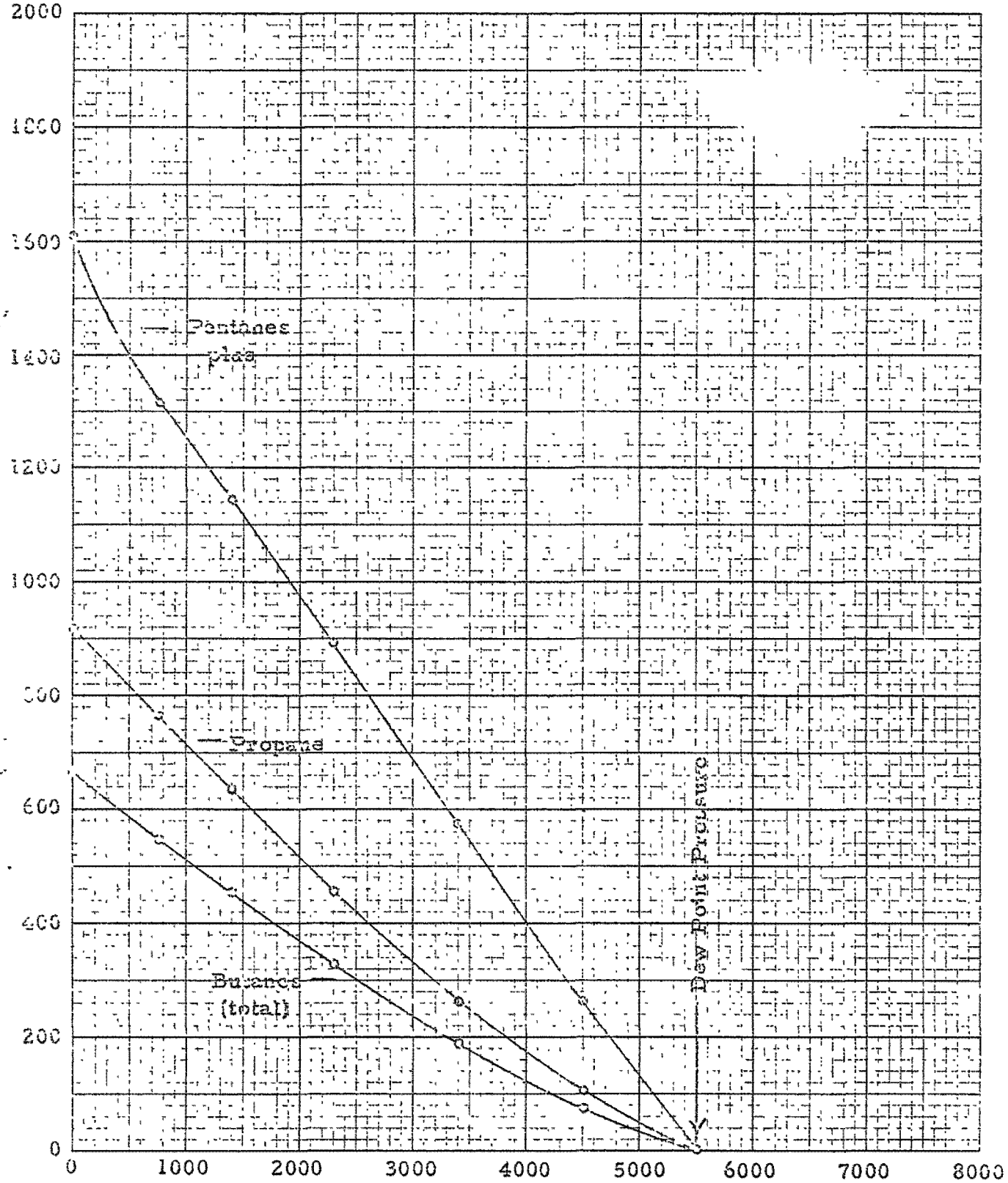
Cumulative Recovery During Depletion

Company Phillips Petroleum Company Formation
Well 7/11-2X Province
Field Block 7/11 Country North Sea, Norway



Cumulative Recovery - "Plant Products" in Well Stream

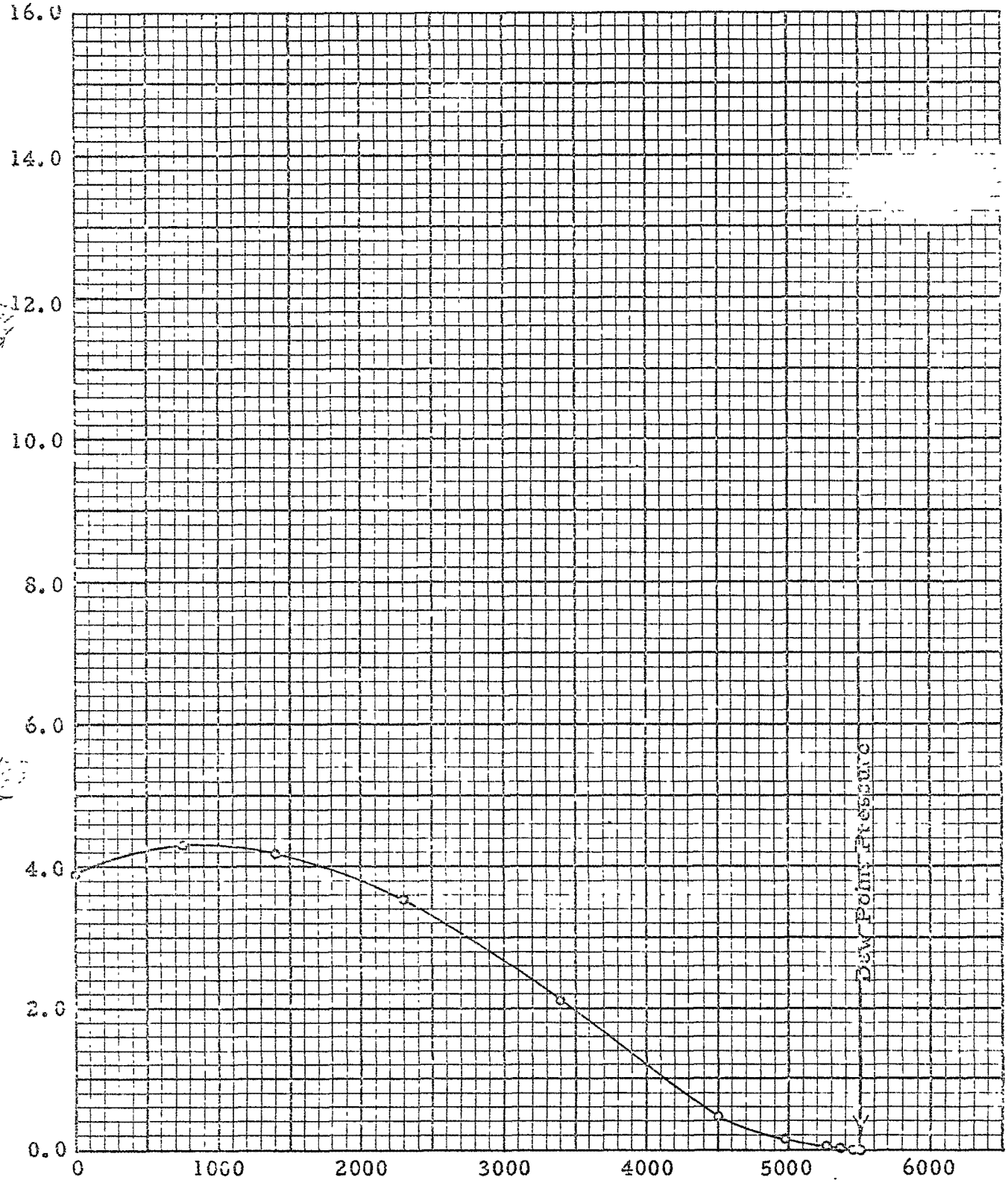
Company Phillips Petroleum Company Formation
Well 7/11-2X Province
Field Block 7/11 Country North Sea, Norway



CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Retrograde Condensation During Depletion

Company Phillips Petroleum Company Formation
Well 7/11-2X Province
Field Block 7/11 Country North Sea, Norway



CORE LABORATORIES, Inc.
Petroleum Reservoir Engineering
DALLAS, TEXAS 75207

RESERVOIR FLUID ANALYSIS
P. L. MOSES, MANAGER

REPLY TO
BOX 10185
CABLE
CORELAB

November 8, 1968

Mr. Jerry Fetters
Phillips Petroleum Norsk
P. O. Box 72
Stavanger, Norway

Dear Mr. Fetters:

We have received the samples from your 7/11-2X well and have begun the laboratory study. Before we can make the physical recombination, however, some additional information is needed. The data sheets on the well indicate the liquid production rate to be 1267 barrels per day. The data sheets do not indicate whether this is stock tank liquid or separator liquid. We would appreciate your advising us as to the condition of the liquid measurement.

In a memorandum concerning these samples, Jerry Carey mentioned the question of hydrogen sulfide after the samples had been shipped in steel cylinders. Hydrogen sulfide reacts with steel and measurements made from steel bottles will suffer. The only truly satisfactory way to measure hydrogen sulfide is at the wellhead. Certain steps can be taken to reduce the chemical reaction, such as using stainless steel cylinders and taking the separator liquid sample by gas displacement, as water accelerates the chemical reaction. While small quantities of hydrogen sulfide will still be lost, the amount of the loss does not appear to significantly affect PVT properties. Tests also indicate that the reaction does not continue after a realtively short period of time. It appears that a coating forms in the inside of the cylinders and further reaction is small.

We will look forward to hearing from you in the very near future in regard to the measurement of the liquid production. If at any time you should have questions, please do not hesitate to contact us.

Very truly yours,

CORE LABORATORIES, INC.
Reservoir Fluid Analysis

P. L. Moses
Manager

PLM:pb

JNE/CHR-191/68 Stavanger, November 15, 1968

Core Laboratories, Inc.
P.O. Box 10135
Dallas
Texas 75207
USA

ATTENTION: Mr. P.L. Howes

This is to advise that the hydrocarbon samples obtained from Nell 7/11-2X were measured as stock tank liquids.

Your comments concerning hydrogen sulfide measurements were appreciated. It is requested that the samples be analyzed for hydrogen sulfide presence only and no attempt made to obtain a quantatative measurement.

Please advise if you require additional information concerning the hydrocarbon samples.

Yours very truly,

Original Signed by
A. T. CRUMP

A.T. Crump
Area Superintendent
Drilling & Production

INTER-OFFICE CORRESPONDENCE
STAVANGER OFFICE

JKF/GMR
SO-T012-69

Stavanger, January 13, 1969

Mr. T.J. Jobin
OSLO OFFICE

NOR/D&P/Well 7/11-2X

Attached are two copies of the Core Lab. reservoir fluid study for well 7/11-2X. One copy is for your file and one for transmittal to the Ministry of Industry.

By copy of this letter, two reports of the fluid study are transmitted to the Brussels office. One copy is for their file and one for transmittal to Bartlesville.

This date copies of the study have been forwarded to Agip, Petrofina and Elf.

Please indicate the copies have been received in your office by signing and returning one copy of this letter.

A.T. CRUMP

cc: L.H. Hoelscher w/attachm. (2)

Received by _____

Date _____

PHILLIPS PETROLEUM CO. RECEIVED OSLO 15 JAN 1969

PHILLIPS PETROLEUM COMPANY NORWAY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

7/11-2

JKF/GMR-014/69

Stavanger, January 13, 1969

Petrofina S.A.
33 Rue de la Loi
Brussels 4
BELGIUM

ATTENTION: Mr. C. Bonnami

Dear Sirs,

Attached are reservoir fluid studies by Core Laboratories Inc. and Phillips Petroleum Company. Please sign and return one copy of this letter to indicate the attached data were received by your company.

Yours very truly,

A.T. Crump
Area Superintendent
Drilling & Production

PHILLIPS PETROLEUM CO.
RECEIVED
STAVANGER

cc: Mr. T.J. Jobin

Received by: _____

Date: 20/1/69

PHILLIPS PETROLEUM COMPANY NORWAY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

JKF/GMR-013/69

Stavanger, January 13, 1969

7/11 - 2x

Agip S.P.A.
C.P. 4174
Milano
ITALY

ATTENTION: Mr. S. Orioli

Dear Sirs,

Attached are reservoir fluid studies by Core Laboratories Inc. and Phillips Petroleum Company. Please sign and return one copy of this letter to indicate the attached data were received by your company.

Yours very truly,

PHILLIPS PETROLEUM CO.
RECEIVED
20. JAN. 1969
STAVANGER

A.T. Crump
Area Superintendent
Drilling & Production

cc: Mr. T.J. Jobin

Received by: _____

Date: 17/1/69

JKF/GMR-015/69 Stavanger, January 13, 1969

Olf norge A/S
Dronning Maudsgt. 11
OSLO

7/11-2

Dear Sirs,

Attached are reservoir fluid studies by Core Laboratories and Phillips Petroleum Company. Please sign and return one copy of this letter to indicate the attached data were received by your company.

Yours very truly,

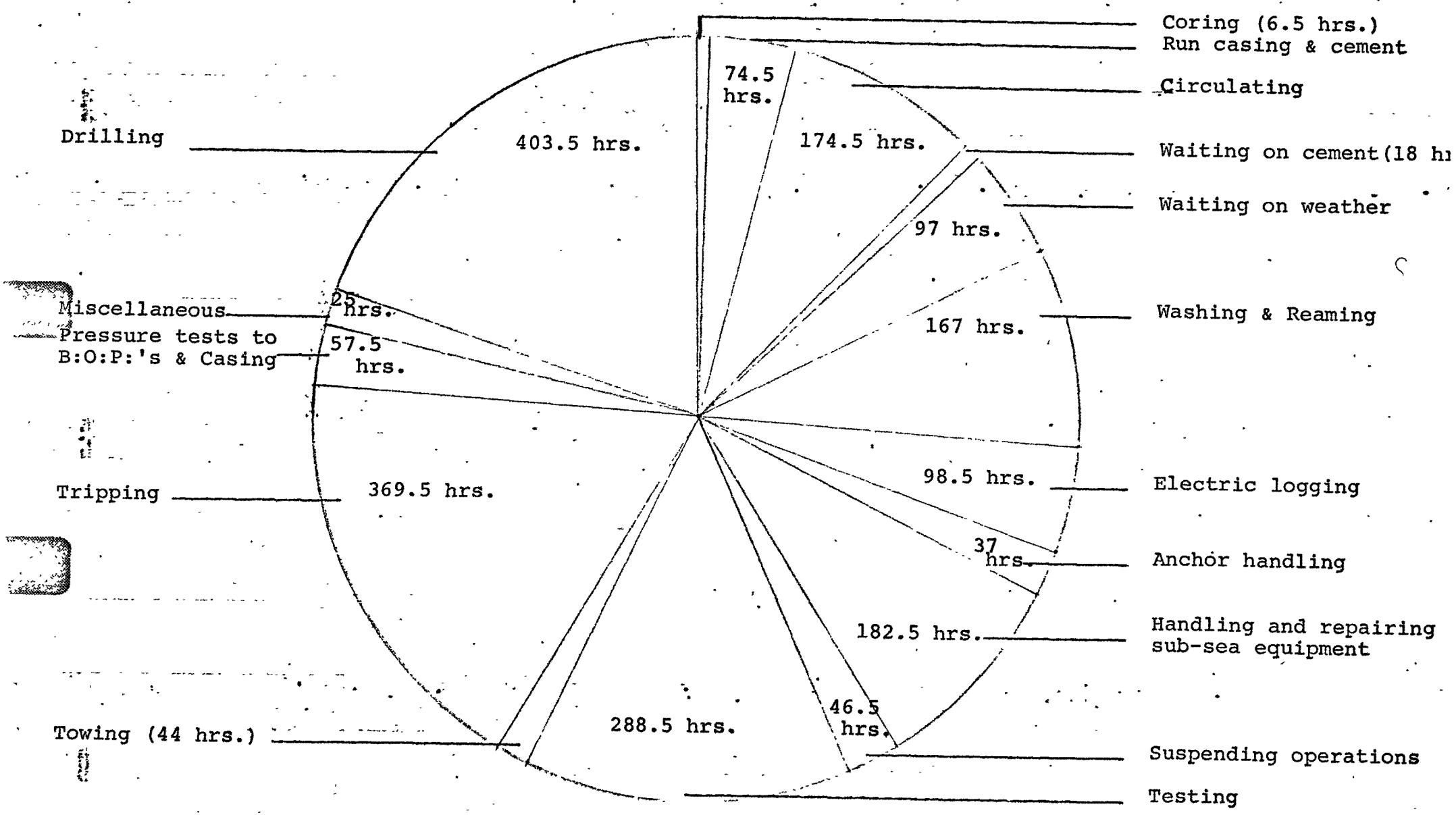
A.T. Crump
Area Superintendent
Drilling & Production

cc: Mr. T.J. Jobim

Received by: _____

Date: _____

PHILLIPS PETROLEUM COMPANY - NORWAY



TIME BREAKDOWN IN HOURS FOR WELL 7/11-2X (COD No. 2) --- NORWAY, 1968

ILE NO. ______ BIT RECORD SALESMAN:

CONTRACTOR ODECO RIG NO. 10
COMPANY Phillips Petroleum FIELD COD
LEASE 7/11 WELL NO. 2X
STATE Norway COUNTY N.S.
SEC./ T'SHIP/RANGE

RIG MAKE National
RIG SIZE 162.5
PUMP NO. 1 N-1300
PUMP NO. 2 N-1300
MUD TYPE SALT

COLLARS: OD X ID X LENGTH
250 x 8" x 3"
x x
DRILL PIPE 5" 19.5# G-E
TOOL JOINT 6 3/8" X-H 5"

MO. / DAY / YR.
SPUD 0630 July 21/68 /
UNDER SURFACE / /
UNDER INTER. / /
TOTAL DEPTH / /

Arndt-McVey
Lesperance-Birch
T.P.-DRILLERS
Ruble-Little
Buckley-McGinty
Supt. T.M. Montgon
WATER SOURCE North Sea
FUEL SOURCE Fina

RUN NO.	SIZE	MAKE	TYPE	SERIAL NO.	JETS - 32nds Reg. R or RO 1	2	3	DEPTH OUT	FEET	HOURS	FEET PER HOUR	CUM. HOURS	WT. 1000 LBS.	R.P.M.	PUMP PRESS.	PUMP NO 1 Liner	SPM	PUMP NO. 2 Liner	SPM	MUD PROPERTIES Wt.	W.L.	F.V.	P.V.	Y.P.	Ver. Dev.	Dull. Cond. 1/4 1/8 T	B	G	
1 RR	36"	Sec	HO	X-103.5	18	18	18	435	80	4	20		10	65	1500	7 1/4	65	7 1/4	65	Sea water					1/4	1	1	I	
1 RR	17 1/2	HTCO	OSC3A	UK49081	16	16	16	435	80	4	"	4	"	"	"	"	"	"	"		"			"	1/4	"	"	"	
2 RR	26"	HTCO	OSC3A	UK340	16	16	16	1699	1264	31	41.9	35	15	90	1250	7 1/4	65	7 1/4	65	Sea water					[illegible]	1	2	I	
1 RR	17 1/2	HTCO	OSC3AJ	UK49081	16	16	16	Ran to drill				Plug [illegible]																	
3	17 1/2	HTCO	OSC3AJ	[illegible]49086	18	18	18	5110	3411	19.5	175	54 1/2	30	190	2900	7 1/4	65	7 1/4	65	Sea water					2				Start mud up 2350
4	17 1/2	HTCO	OSC3-J	N.R.	18	18	18	6500	1390	16	87	70 1/2	40	190	2800	7 1/4	55	6 3/4	55	9.8		46							
1 RR	17 1/2	HTCO	OSC3-J	N.R.	18	18	18	6500	Built up mud weight to 12.0 ppg - Circl. & Cond. mud																				
2 RR	17 1/2	HTCO	OSC3-J	N.R.	18	18	18	6500	Reaming, and cleaning out hole. Set 13 3/8" Csg. at 65																				
5	12 1/4	HTCO	OSC3AJ	UK.38381	Full Open			6353	556	6	59.3	76 1/2	12	80	900	6 3/4	65	6 3/4	65	11.9	5	47				Run			Drilled cement.
6	12 1/4	HTCO	X3AJ	UK43433	14	14	14	7846	1373	34	39.5	110 1/2	5-20	120	2600	6 3/4	45	6 3/4	45	12.1		71							
7	12 1/4	HTCO	X3AJ	UK43432	12	12	12	8998	1152	25 1/2	45	136	25	120	3000	6 3/4	35	6 3/4	35	11.7	10	82				2	2	I	
8	12 1/4	HTCO	X1GJ	UK43432	14	14	14	9085	87	5	17.4	141	10-25	80	3000	6 3/4	50	6 3/4	50	15.9	9	62							
9	12 1/4	Security	S3J	945563	18	18	18	9709	624	30	20.8	171	34	100	3000	6 3/4	40	6 3/4	36	13.9	8.9	57			1°				Retrieve Pore Pr
10	8 1/2	HTCO	X3A	UK43984	14	14	14	9851	142	8.5	16.7	179.5	30	100	3010	6 3/4	40	6 3/4	40	13.2	8.9	62				2	1	I	
11	8 1/2	Security	M4NJ	946631	14	14	13	9942	92	9.5	9.68	189.0	42	80	3000	6 3/4	30	6 3/4	30	13.1		54							
CH#1	8 7/16	Christ.	C-22	N.R.				9990	48	6.5	7.83	195.5	20	130	900	6 3/4	32	6 3/4	32										Coring.
12	8 1/2	HTCO	XVJ	UK58347	14	14	14	10135	144	10	14.4	205.5	35	90	3000	6 3/4	35	6 3/4	35	12.9	6.6	58				6	1	I	Nippling Slip. Jt.
13	8 1/2	HTCO	XVJ	UK53008	14	14	14	10264	129	11	11.7	216.5	30	70	2800	6 3/4	32	6 3/4	32	13	6	59							
14	8 7/16	Christ.	MD33	NR10359086				10760	510	93.5	6.05	310	40	160	1800	6 3/4	50	/	/	13		54							
15	8 1/2	Security	M4NJ	945636	14	14	14	10810	58	7	8.25	317	28	80	3000	6 3/4	35	6 3/4	30	12.9	3.2	57				1	2	I	
8 1/2		Security	M4NJ	RR945636	14	14	14	10810	Logging & Clean up Trip. Circl. & Cond. Mud																				
		Security	M4NJ	904507T	14	14	14	10810	Logging & Reaming																				
		Sec.	M4LJ	945639	11	12	13	10822	12	6	2	323	35	70	3000	6 3/4	54												Ream & Wash Ho

GET Security IN YOUR DRILLING

Form No. SES 51 (Rev

BIT RECORD

SALESMAN:

CONTRACTOR ODECO RIG NO. 10
COMPANY PHILLIPS PET. FIELD COD
WELL 7/11 WELL NO. 2X
STATE NORWAY COUNTY N.S.
TWP/RANGE

RIG MAKE National
RIG SIZE 1625
PUMP NO. 1 N-1300
PUMP NO. 2 N-1300
MUD TYPE Salt

COLLARS: OD X ID X LENGTH
750' x 8" x 3"
___ x ___
DRILL PIPE 5" 19.5# G-E
TOOL JOINT 6-5/8" X-H 5"

MO. / DAY / YR.
SPUD 0630 July / 31 / 68
UNDER SURFACE ___ / ___ / ___
UNDER INTER. ___ / ___ / ___
TOTAL DEPTH ___ / ___ / ___

T.P.-DRILLERS Arndt - McVey
Lawrence - Buck
Rubio - Little
Buckley - Mcginty
Supt. T.M. Montgomery
WATER SOURCE North Sea
FUEL SOURCE FINA

SIZE	MAKE	TYPE	SERIAL NO.	JETS - 32nds Reg. R or RO 1	2	3	DEPTH OUT	FEET	HOURS	FEET PER HOUR	CUM. HOURS	WT. 1000 LBS.	R.P.M.	PUMP PRESS.	PUMP NO 1 Liner	SPM	PUMP NO. 2 Liner	SPM	MUD PROPERTIES Wt.	W.L.	F.V.	P.V.	Y.P.	Ver. Dev.	Dull. Cond. 1/4 1/8 T	B	G		Date
8½	Sec.	MAJ	945848	11	11	11	10889	67	9	7.45	332	30	60	3000	6¾	48			133	23	62								Sept 8
8½	Sec.	MANJ	945638	11	11	11	10939	50	10	5	342	35	50	3000	6¾	47			132	32	58				7	4	I		Sept 9
8⅞	CHRIST	MD 33	NR103594				11002	63	19.5	3.22	361.5	35	60	2100	6¾	48			13.1	32	57				HOIST				Sept 10
8½	HTCO	XC	UK 64116	11	11	11	11076	74	12	6.15	373.5	35	70	2900	6¾	46			13.1	33	59								Sept 11
8½	HTCO	XC	UK583/3	11	11	11	11158	82	10	8.2	383.5	40	85	2800	6¾	42			13.1		59				3	2	I		Sept 12
8½	HTCO	OWV	UK64/00	11	11	11	11245	87	9	9.65	392.5	40	85	2800	6¾	42			131	31	57				1	3	I		Sept 13
8½	HTCO	XC	UK58373	14	14	14	Reaming from 9888 to										10102												Sept 14
12¼	Sec.	C-12	X4953				Reaming "8½" to 12¼"										10570'												Sept 17
8½	HTCO	XC	UK58373				Fish Tubing (Test Tools) — 100% Recovered												13	5%	48						0	Circ. & Cond. Mud	Sept 20

BAROID DIVISION
NATIONAL LEAD COMPANY

DRILLING MUD RECORD

COMPANY: Phillips Petro Co — STATE: Norway — CASING PROGRAM: 20 inch at 170 ft.; 13 3/8 inch at 6385 ft.; 9 5/8 inch at 10518 ft.

WELL: 7-11-2X — COUNTY: N-SEA

DATE: 28-3-69 — CONTRACTOR: ODECO — LOCATION: 7-11

STOCKPOINT: Stavanger — BAROID ENGINEER: Allen, Gerke, Matinelly, Stelzer — SEC ___ TWP ___ RNG ___ — TOTAL DEPTH: 11245 ft.

DATE	DEPTH	WEIGHT	VISCOSITY	FILTRATION		SAND	SALT		pH	VISCOSITY			GELS		FILTRATE ANALYSIS				RETORT ANALYSIS			REMARKS AND TREATMENT
	feet	lb/gal	Sec	cc	Cake 32nd	%	NaCl ppm	Cl ppm		cp	Pv	Yp	in	10 min	Cl ppm	Ca ppm	SO_4 ppm	Alk Pf	Oil %	Water %	Solids %	
2-21	150	8.8	100																			Conductor Pipe
22	600	8.8	100																			Drilling Seawater
24	1700	8.8	120																			Spotting Slugs
25	4400	9.3	34	24	4	1		18000	8.1	15	8	11	4	8		490		.05				Mudding up
27	5100	10.3	55	25	4	.25		14000	7.2	26	13	26	9	12		550		.10	4	81	15	Mudding up
30	5500	10.2	65	20	5	2		137000	7.4	28	15	26	9	16		620		.60	3	79	18	Desander + Desilter Down.
31	6500	10.7	50	60	6	2.25		158000	7.6	30	18	25	8	25		640		.40	2	78	20	Desilt+Desand Down Trip Bit Seawater
4-1	6500	11.2	48	70	7	.50		184000	7.3	30	16	20	12	20		240		.45	1	80	19	Desilt+Desand Down Weighting
2	6500	12	50	35	5	1.50		141000	9	23	17	11	4	15		270		.21	2	81	17	Raise pH + Lower Filtrate
3	6500	12.4	66	19	4	2.00		110000	8.5	38	32	12	2	21		320		.12	1	80	19	Raise cement with cement
4	6500	13.1	90	23	5	2		155000	9.1	53	45	43	16	30		360		.04	4	78	18	Testing Cont. Weight
5	6500	13.6	64	16	5	2.50		112000	8.7	45	34	17	6	21		360		.18	5	77	18	Barite @ 5600. Nolube
6	6500	13.7	69	13.7	4	2.50		138000	9.6	49	43	1.5	5	16		320		.40	3	75	22	Barite @ 5600. Rubber cut
7	6500	14.3	131	9.8	4	2.50		135000	9.3	101	80	20	5	27		540		.30	3	73	24	" " " "
8	6500	14.3	70	6.2	3	2.5		155000	9.6	74	88	20	5	18		420		.60	2	74	24	" " " "
9	6500	14.6	71	6.2	3	2		142000	9.4	86	93	12	3	28		340		.45	2	74	24	Logging.
4-11-12		Run	13 3/8	casing																		
13	6500	11.7	43	7.8	2	1		116000	8.6	22	19	4	0	0		840		.20	7	77	16	Drlg cement
14	9000	12.1	54	10.8	2	1.5		157000	11	39	36	28	3	14		520		.14	6	77	17	Drilling
15	7750	12.1	54	8.9	2	2		163000	11	46	35	19	0	5		500		.50	5	79	16	Drilling Gumbo shale
16	8000	12	68	14.1	2	1.50		157000	9.1	37	30	15	3	7		490		.12	4	80	16	Drilling " "
17	8900	12	190	13.8	4	1.75		111000	9.2	75	55	50	8	50		420		.15	6	74	20	Drilling " "
18	7800	11.7	140	9.4	3	1.50		127000	9.3	45	52	22	6	35		460		.14	5	76	19	Barite @ 6400 Rubber cut
19	9400	13.5	150	6.4	2	2		134000	9.5	66	56	23	5	43		420		.30	4	76	20	" @ 7000 " "
20	9400	13.4	49	13.4	3	1		169000	10.5	29	24	15	1	8		300		.47	7	79	14	" @ 5800 " "
21	9400	13.9	57	8.4	2	1.20		186000	10.6	40	35	9	1	3		290		.37	2	73	25	" " " " "
22	9510	13.6	55	8.4	2	1		175000	10.4	45	41	7	1	4		220		.25	2	77	21	Drilling
23	9700	13.4	57	8	2	1		170000	10.3	44	40	7	1	6		250		.30	2	78	20	Drilling
24	9851	13.1	62	9.5	2	.75		150000	11	42	33	6	1	10		290		.27	2	77	22	Drilling
25	9939	13.1	61	7.1	2	.25		171000	10.7	45	40	9	1	9		220		.37	2	77	19	Coring
26	9950	13.1	53	6.4	2	.75		170000	10.1	39	36	6	1	11		230		.21	2	80	18	Drilling
27	10120	12.9	51	6.8	3	2		170000	[illegible]	40	35	10	[illegible]	11		[illegible]		.31	2	77	21	Drill[illegible]

BARAROID DIVISION
NATIONAL LEAD COMPANY

DRILLING MUD RECORD

COMPANY Phillips Petro Co STATE Norway CASING PROGRAM: 20 inch at [illegible] ft.

WELL 7-11-2X COUNTY N. SEA 13 3/8 inch at 6325 ft.

DATE 28-3-69 CONTRACTOR ODECO LOCATION 7-11 9 5/8 inch at 11 510 ft

STOCKPOINT Stavanger BAROID ENGINEER Allen' George Matthew SEC TWP RNG TOTAL DEPTH 11245 ft.

DATE	DEPTH	WEIGHT	VISCOSITY	FILTRATION		SAND	SALT		pH	VISCOSITY			GELS		FILTRATE ANALYSIS				RETORT ANALYSIS			REMARKS AND TREATMENT
	feet	lb/gal	Sec	cc	Cake 32nd	%	NaCl ppm	Cl ppm		cp	Pv	Yp	in	10 min	Cl ppm	Ca ppm	SO4 ppm	Alk Pf	Oil %	Water %	Solids %	
3-29	10240	12.8	48	6	3	1		165000	10	37	32	13	3	11		230		.31	2	77	21	Drilling
29	10325	12.7	54	4.6	3	1		[illegible]	9.5	45	31	14	2	11		240		.28	4	75	21	Drilling
30	10490	13	55	3.2	1	2		[illegible]	9.2	55	46	10	2	10		240		.15	3	71	21	Drilling
31	10629	13	54	3	1	1.75		[illegible]	8.5	50	45	11	1	5		360		.16	4	72	16	Drilling corrected solids
Apr 1	10710	12.9	54	3	1	2		131000	9	54	43	11	1	5		600		.15	5	65	30	Drilling
2	10766	13	55	3	1	2		131000	9	50	44	12	1	4		600		.13	5	65	30	[illegible] @ 7762
3	10810	13'	54	3.2	1	2	•	126000	9	55	41	14	3	8		640		.10	5	69	30	Drilling
4	10810	13	55	3.2	1	2		121000	9	55	43	15	3	6		640		.10	5	69	30	[illegible]
5	10810	13	53	3	1	2		130000	9	54	41	11	4	9		560		.10	6	69	30	"
6	10810	13	53	3	1	2		123000	9	52	45	13	3	8		560		.10	6	62	30	[illegible] 12¼ to 9 3/8
7	10823	13.2	56	3.4	2	2		120000	8.5	56	43	17	3	9		460		.1	6	68	20	Drilling
8	10852	13.3	63	3.2	2	2		122000	9.2	57	48	17	3	11		380		.1	6	68	26	Drilling
9	10938	13.2	57	3	2	2		120000	8.8	46	40	15	3	11		520		.10	6	68	20	Drilling
10	11043	13.1	55	3.2	2	2		121000	9.4	56	44	15	2	11		560		.15	6	68	21	Drilling
11	11150	13.1	57	3.3	2	2		124000	9.4	54	45	13	3	12		380		.10	6	68	26	Drilling
12	11158	13.1	58	3.1	2	2		121000	9.4	56	47	12	3	12		380		.15	5	69	20	Drilling
13	11235	13	58	3.4	2	1.25		115000	9.4	57	48	14	3	16		380		.15	6	68	20	Drilling
14	11245	13.1	54	3.4	2	2		110000	9.5	51	41	18	3	10		340		.17	6	72	19	Logging
15	10369	13	56	3.9	2	1.75		116000	9.5	56	41	18	3	10		340		.18	6	67	19	Reaming hole to 12¼
16	10459	13.1	60	3.6	2	1.50		107000	9.5	49	41	16	3	15		240		.2	5	75	20	" " "
17	10570	13	57	4.1	2	1.25		[illegible]	9.2	45	36	18	3	14		280		.15	6	70	19	" " "
-19																						
21-22	Kronbasen																					
23	10510	13	70	3	2	1		112000	9	65	55	20	4	21		440		.15	4	75	21	Tripping cement cont
24	10510	13	52	3.6	2	2		[illegible]	9.2	45	34	16	2	14		320		.15	4	70	21	Drilled to bit [illegible]
25	10485	12.9	62	3.5	2	1.25		103000	9	47	4	5	3	4		320		[illegible]	4	70	21	Set cement plug @ 10486
7	Waiting on cement																					
28	10400	13	48	5.6	2	.50		112000	9.2	30	28	2	2	3		480		.13	3	73	18	Testing
29	10400	13.2	43	5.4	2	.50		[illegible]	8.9	34	28	11	2	6		520		.10	2	74	18	Testing
1	10400	13	52	4.8	2	.75		103000	9.2	44	28	13	3	5		600		.12	3	73	18	Testing
1																						
3		Testing																				

BAROID DIVISION
NATIONAL LEAD COMPANY

COMPANY Phillips Petro Co STATE Norway CASING PROGRAM: 20 inch at 175
WELL 7-11-2X COUNTY N-SEA 13 3/8 inch at 138
CONTRACTOR ODECO LOCATION 7-11 SEC TWP RNG 9 5/8 inch at 1051
STOCKPOINT Stavanger DATE BAROID ENGINEER George Allen Mattingly Stelzer TOTAL DEPTH

DATE	DEPTH	WEIGHT	VISCOSITY	FILTRATION		SAND	SALT		pH	VISCOSITY			GELS		FILTRATE ANALYSIS				RETORT ANALYSIS			REMARKS AND TREATMENT
	feet	lb/gal	Sec	cc	Cake 32nd	%	NaCl ppm	Cl ppm		cp	Pv	Yp	in	10 min	Cl ppm	Ca ppm	SO_4 ppm	Alk Pf	Oil %	Water %	Solids %	
Oct 4	10480	13	49	4.5	2	.25		103000	9	40	32	5	3	11		800		.12	3	79	18	Testing
5	10480	13	48	4	2	.50		100000	9	38	35	8	2	12		560		.11	3	79	18	Testing.

MATERIAL	AMOUNT	COST $	MATERIAL	AMOUNT	COST $	MATERIAL	AMOUNT	COST $
Zeogel 50 lb.	1393	4053.63	Mica F 25 lb.	40	224.80			
Flosal 50 lb.	544	6071.04	CMC hvt 25 lb.	447	5790.78			
Lime 50 lb.	23	48.76	Bentonite 50 lb.	469	1679.02			
Soltex 50 lb.	442	9273.16	Q-Broxin 50 lb.	419	3930.22			
Act-Flow 55 gal.	61	12505.00						
Starch 25 lb.	323	2289.44						
Drispac 50 lb.	262	14551.48						
Salt 50 lb.	10721	23478.99						
Barite M.Ton	1260	83347.00						
Al. Stearate 20 lb.	42	401.52						
S. Sulfate 50 lb.	400	3528.00						
Caustic 50 lb.	203	2040.15						
Barite 50 lb.	4766	13773.74						
Desco 50 lb.	1132	35658.00						
						Drayage		
						Sales Tax		
							TOTAL COST	$222646.82

BAROID

MUD MATERIALS USED (Total)

DRILLING MUD RECORD

BR-1907-5

PRINTED IN U.S.A.

DAILY REPORT DETAILED

LEASE Block 7/11 WELL NO. 2 SHEET NO. 1

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
July		
20		Drilling vessel "Ocean Traveler" towed to location 7/11-2X; coordinates 57° 04' 14.723 North, 02° 24' 26.086" East. Ran anchors Nos. 6 and 7.
21		Ran anchors Nos. 8, 1, 2, 3, 4, and 5 and reran 6 and 7. Submerged barge to 80'. Went in hole with bottom hole assembly.
22	435'	Prepared to spud. Well 7/11-2X was spudded at 0630 hrs. July 21. Spotted 150 bbls mud. Made short trip. Spotted 300 bbls of viscous mud and surveyed. Ran and landed 2 joints 30" casing set at 435' RKB. Cemented with 600 sxs common cement mixed with sea water. Mw: 8.7.
23	435'	Drilled hard cement from 396' to 419'. RKB to Mean Sea Level - 87'. RKB to 30" Wellhead Body - 342'.
24	1235'	Drilled cement from 396' to 424'. Made trip; checked bit for plugging and laid down 26" stabilizer. Stabilizer laid down because 1" bore restricted criculation rate. Mw: 8.8, Vis: 145.
25	1699'	Drilled to T.D. Spotted mud in hole (790 bbls). Came out of hole slowly. Tight hole 40' below shoe. Waited at shoe. Ran in hole. Found 38' fill. Did not drill out. Made short trip and deviation survey which failed. Spotted 400 bbls mud and came out of hole. Ran 30 joints of 20" 133 lb J-55 ST&C, LT&C and Vetco couplings. Cemented with 1800 sxs Dalen Cement plus 8% gel plus 3% $CaCl_2$ followed with 900 sxs Dalen plus 3% $CaCl_2$. Used Halliburton type "S" plug and pipe wiper tripping plug. Plug bumped with 1200 psi. 460 bbls displacement using sea water. Released press and rotated running tool out of 20" head.

DAILY REPORT DETAILED

LEASE _____ WELL NO. _____ SHEET NO. 2

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
July		Pressure to shear top plug 800 psi. RKB to 20" wellhead - 340'. Mw: 8.5, Vis: 150.
26	1699	Ran casing to wellhead housing. Set at 1587' and landed with 5" drill pipe. Cemented and pumped plug down. Ran 20" stack.
27	1699	Trying to land stack. Made observation dive and then one dive to inspect guide posts. Found guide base where 10" reduces to 6" setting on top of guide corner post. Pulled 20" BOP stack to cellar deck. Spaced out guide frame on 20" BOP stack. Latched Collet connector and checked AX gasket with 300 psi. Unlatched running Collet and came out of hole. Ran Mud Riser.
28	1699	Landed and latched mud riser, nippled up slip joint, choke and kill lines. Tested choke and kill lines to 2000 psi, Hydril, casing and Collet connector to 1000 psi. Pulled out of hole and laid down test plug. Made up 17½" bit. Ran in hole and tagged plug at 1550'. Drilled shoe at 1590'. Found 30' of open hole below shoe. Dropped survey and came out of hole. Made up bit and picked up drilling assemblies. Drilled cement.
29	5105	Went in hole. Reamed and washed from 1630 to 1699'. Continued drilling. Circulated and conditioned hole. Continued drilling. Mw: 10.3, Vis: 55, Pv: 13, Yp: 26.
30	6010	Circulated and conditioned hole for trip. Dropped survey and came out of hole. Had tight hole on bottom, pumped 18 joints out of hole. Went in hole with bit. (20' of fill on bottom.) Circulated and conditioned mud to drill. Drilled for ten hours. Mw: 10.1, Vis: 65, Pv: 15, Yp: 26.

DAILY REPORT DETAILED

LEASE_____ WELL NO._____ SHEET NO. 3

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
July 31	6500	Continued drilling. Pulled and worked out of tight hole to 5641'. Had full circulation and rotation. Circulated and conditioned mud at 5641'. Mw: 10.2, Vis: 50, Pv: 17, Yp: 25.
August 1	6500	Came out of hole. Went in hole to shoe. Circulated and conditioned mud. Mw: 11.2, Vis: 48, Pv: 16, Yp: 26.
2	6500	Went in hole to 3000'. Circulated and conditioned mud. Went in hole to 4008'. Circulated and conditioned mud. First tight hole 4056'. Washed and reamed to 4650'. Mw: 12.0, Vis: 50, Pv: 17, Yp: 14.
3	6500	Laid down 17 joints. Ran 9 stands in hole. Reamed slowly from 4940' to 4980'. Circulated and conditioned mud. Reamed from 5590' to 5676'. Pipe started torquing and sticking. Worked pipe free with a maximum pull of 350,000 lbs. Worked bit out of tight hole between 5670 - 5570'. Mw: 12.4, Vis: 66, Pv: 32, Yp: 12.
4	6500	Circulated and conditioned mud to 12.4 ppg at 5570'. Came out of hole. Laid down 20 joints drill pipe, roller reamer, and B.S. Picked up new B.S. Went in hole with bit and bottom hole assembly. Bit at 1590'. Circulated while mixing chemicals and weight. Builded mud weight and cleaned cement contaminated barite from bulk mud tanks. Mw: 13.2, Vis: 90, Pv: 45, Yp: 43.
5	6500	Circulated and conditioned mud to 13.8 ppg. Went in hole. Came out of hole. Went in hole to 5340' and bit started taking weight. Circulated and conditioned mud weight to 13.6 ppg. While circulating recovered large amounts of shale and soft clay. Mw: 13.6, Vis: 64, Pv: 34, Yp: 17.

DAILY REPORT DETAILED

LEASE_____WELL NO._____SHEET NO. 4

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
August		
6	6500	Circulated and conditioned hole. Mud weight 13.1 ppg. Washed from 5374 to 5561'. Conditioned hole. Increased mud density to 13.5 ppg. Cleaned out to 5794'. Hole sloughed in and could not rotate but could circulate. Pulled 300,000 lbs for 60' with pumps shut down. Drill string came free and pulled with no excessive drag. Came out of hole. Changed bottom hole assembly and went in hole. Found bridge at 5077'. Washed from 5077' to 5343'. Circulated and conditioned mud density to 14.1 ppg. Mw: 13.7, Vis: 68, Pv: 43, Yp: 15.
7	6500	Washed from 5343' to 6200'. While washing, the hole would occassionally slough-in. The drill string was picked up and the section redrilled until the hole was cleaned. The hole seemed to be standing up at that time. Several large chunks of shale were circulated to the surface. One chunk weighed 12.5 lbs and measured 11½" x 10½" x 3". Mw: 14.7, Vis: 515, Pv: 81, Yp: 28.
8	6500	Made trip to condition hole and removed jets from bit. No drag while making trip. No tight places while going in hole and no fill on bottom. Circulated bottoms up. Cleaned out hole from 6200' to 6500'. Mw: 14.4, Vis: 90, Pv: 88, Yp: 20.
9	6500	Circulated and conditioned hole for logging. Ran Sonic-GR log from 6467' to 340' and LL-7 from 6467' to 1587'. Schlumberger T.D. 6475'. Went in hole. Mw: 14.3, Vis: 90, Pv: 88, Yp: 20.
10	6500	Circulated and conditioned hole. Came out of hole. Ran 153 joints 13-3/8" 68 lb range 3 ST&C and LT&C casing and set at 6381' RKB.
11	6500	Circulated with only 10% returns. Cemented with 2400 sxs Common Cement

DAILY REPORT DETAILED

LEASE_____WELL NO._____SHEET NO. 5

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
August		
		plus 8% gel mixed with fresh water to a slurry density of 13.1 lbs/gal. Followed with 900 sxs common cement mixed with fresh water to 15.6 lbs/gal. Displaced plug with 894 bbls. Released and pulled landing string. Pulled 24" marine riser. Went in hole with collet connector and retrieved 20" BOP Stack. N o t e: During cementing and circulating operations an estimated 1200 bbls of mud was lost. 18 hours after plug bumped the 13-3/8" x 20" annulus was still flowing mud, however, after 20 hours the annulus was dead.
12	6500	Prepared to run stack. Went in hole with drill pipe stinger. Picked up rubber stabilizer, latched collet connector, closed 5" pipe rams and ran 13-5/8" BOP Stack. Tested BOP Stack to 4000 psi. Test OK. Pulled test plug.
13	6500	Ran 16" marine riser and choke and kill lines. Ran 12-1/4" wear bushing. Went in hole with 12-1/4" bit, junk basket, 6 drill collars and 8" bumper sub. Found top of cement 5997' RKB. Conditioned mud and displaced sea water in 13-3/8" casing with 12.0 ppg mud. Tested 13-3/8" casing to 2000 psi. Drilled firm cement.
14	6590	Tested casing to 2000 psi. Drilled shoe at 6384'. Washed and reamed to 6473'. Circulated bottoms up. Came out of hole. Picked up bottom hole assembly. Went in hole. Washed to 6500'. Drilled. Mw: 12.0, Vis: 64, Pv: 26, Yp: 28.
15	7290	Continued drilling. Made short trip. Came out to casing shoe to repair rotary table. Installed new rotary motor. Mw: 12,1, Vis: 54, Pv: 35, Yp: 19.

DAILY REPORT DETAILED

LEASE_____ WELL NO._____ SHEET NO. 6

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
August		
16	7847	Went in hole. Drilled. Circulated and conditioned mud. N o t e s: Drilled 266' in five hours. Mud viscosity increased from 54 secs. to 180 secs. Attempted to lower viscosity while drilling by adding water. Water cut weight from 12.4 to 11.9. Started adding salt and viscosity increased to 85 secs. Added Drispac to control water loss and caustic to lowe viscosity. Mw: 12.0, Vis: 68, Pv: 30, Yp: 18.
17	8305	Circulated and conditioned mud to 12.0 ppg and viscosity 50 secs. Dropped Totco. Made trip for new bit. Circulated and conditioned mud prior to drilling. Drilled 11½ hours. N o t e: At 7847' took deviation survey but no picture. Had to ream before each connection until drag reduced. Mw: 12.0, Vis: 190, Pv: 55, Yp: 30.
18	8998	Continued drilling. Circulated and conditioned mud. Dropped survey. Came out of hole measuring with steel line. Went in hole with new bit. Mw: 11.8, Vis: 120, Pv: 44, Yp: 25.
19	8998	Broke circulation. Went in hole and hit bridge at 6422'. Washed and reamed tight spot to 7000'. Hole sloughed and unable to circulate. Worked two joints out of hole. Pulled 100,000 lbs over weight of drill string. Pulled 13 stands to casing shoe. Circulated and increased mud density from 11.8 to 13.0 ppg. Went in hole 13 stands. Broke circulation and washed from 7000' to 7200'. Hole sloughed and unable to circulate or rotate. Pulled two joints and conditioned mud. Washed to 7200'. Hole continued to slough. Circulated and washed slowly while building mud weight. Mw: 13.5, Vis: 150, Pv: 56, Yp: 22.

DAILY REPORT DETAILED

LEASE_____ WELL NO._____ SHEET NO. 7

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
August		
20	8998	Cleaned out hole to 7444'. Circulated and conditioned mud at 6381'. Cleaned out hole from 744' to 7886'. Hole free while going in hole to 7444'. Mw: 13.0, Vis: 50, Pv: 25, Yp: 11.
21	9050	Cleaned hole from 7886' to 8998'. Continued drilling. Mw: 13.8, Vis: 57, Pv: 35, Yp: 9.
22	9230	Continued drilling. Came out of hole slowly. Tested BOP to 2500 psi. Test OK. Changed saver sub and Hydril valve and tested kelly. Went in hole. Washed out 32' of fill with rig pumps. No weight required. Continued drilling. Mw: 13.6, Vis: 55, Pv: 41, Yp: 7.
23	9709	24 hrs - drilling. From 9550' slight drag when making connections. While coming out of hole there was no drag. Mw: 13.3, Vis: 63, Pv: 43, Yp: 10.
24	9851	Circulated samples before trip and dropping Totco. Came out of hole. Laid down 8" bottom hole assembly and picked up 6½" assembly. Went in hole. No fill after trip. Hole condition very good. Drilled. Hole size reduced from 12-1/4" to 8½" at 9709' RKB. Circulated samples before trip. Mw: 13.1, Vis: 62, Pv: 39, Yp: 6.
25	9943	Made trip for new bit. Continued drilling. Had drilling break from 9936' to 9943'. Circulated bottoms up. Came out of hole. Mw: 13.1, Vis: 71, Pv: 42, Yp: 9.
26	9990	Went in hole with core barrel. Cut drilling line. Went in hole. Circulated bottoms up before coring. Cored. Came out of hole. Went in hole with new bit. Mw: 13.1, Vis: 53, Pv: 37, Yp: 6.

DAILY REPORT DETAILED

LEASE_____ WELL NO._____ SHEET NO. 8

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
August		
27	10134	Reamed 47' of 8-7/16" hole to 8½". Drilled. Circulated bottoms up. Came out of hole. Mw: 12.9, Vis: 56, Pv: 35, Yp: 10.
28	10240	Tested BOP's to 2400 psi. Test OK. Went in hole with new bit. Drilled. Mw: 12.8, Vis: 48, Pv: 32, Yp: 12.
29	10328	Continued drilling. Made trip for new bit and continued drilling. Mw: 12.7, Vis: 54, Pv: 37, Yp: 14.
30	10500	Drilled 12½ hrs. Made short trip from 10,420' to 9700'. No drag. Continued drilling. Mw: 13.0, Vis: 55, Pv: 46, Yp: 10.
31	10629	Drilled. Made short trip back to 9700' with no drag. Drilling continued. Mw: 13.0, Vis: 55, Pv: 46, Yp: 10.
Sept.		
1	10720	Continued drilling. Wiper trip 10683' to 9700'. Continued drilling. Mw: 12.9, Vis: 54, Pv: 43, Yp: 11.
2	10752	Drilled to 10,752'. Came out of hole. Ran Sonic GR Caliper. Hit bridge at 9752'. Could not get logging tools deeper. (12-1/4" hole reduced to 8½" at 9709' RKB.) Went in hole. Mw: 13.0, Vis: 55, Pv: 44, Yp: 12.
3	10810	Broke circulation at bottom casing. Washed and reamed tight spots to 10,751'. Drilled to 10,810'. Circulated and conditioned mud prior to logging. Made short trip to casing at 6395'. Went in hole to 10,810'. No fill or tight spots. Circulated bottoms up. Mud in good condition. Came out of hole with no drag. Mw: 13.1, Vis: 54, Pv: 41, Yp: 14.

DAILY REPORT DETAILED

LEASE_____ WELL NO._____ SHEET NO. 9

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
Sept.		
4	10810	Ran Sonic-GR Caliper from 10814' to 6384' IES from 10813' to 6384'. MLL from 10811' to 9500'. FDC from 10813' to 9500'. SNP from 10812' to 9500'. Logs indicate Cod No. 2 running 363' low to Cod No. 1 in Paleocene Sand. Sonic Resistivity and MLL - IES plots indicate gas production. Mw: 13.1, Vis: 54, Pv: 41, Yp: 14.
5	10810	Made trip to circulate bottoms up. No hole problem during trip. Ran LL-7 from 10812' to 6384'. Ran HDT from 10815' to 6384'. Mw: 13, Vis: 53, Pv: 41, Yp: 11.
6	10810	Took SWC. Rig down Schlumberger and laid down 6½" drill collars. Went in hole with 12-1/4" hole opener. Mw: 13.1, Vis: 53, Pv: 45, Yp: 13.
7	10810	Went in hole to casing shoe. Cut drill line 90'. Finished in hole. Reamed hole to 12-1/4" to a depth of 9888'. Came out of hole. Mw: 13.2, Vis: 53, Pv: 38, Yp: 11.
8	10842	Went in hole to rat hole. Reamed and washed to T.D. Drilled. Made trip for new bit. Continued drilling. Mw: 13.3, Vis: 63, Pv: 48, Yp: 17.
9	10939	Continued drilling. Made trip for new bi Drilled. Came out of hole. Mw: 13.2, Vis: 57, Pv: 40, Yp: 15.
10	11000	Tripping for new bit. Drilled with diamond bit. Mw: 13.2, Vis: 55, Pv: 39, Yp: 13.
11	11075	Continued drilling. Made trip. Drilled and came out of hole. Mw: 13.1, Vis: 57, Pv: 45, Yp: 13.

DAILY REPORT DETAILED

LEASE _____ WELL NO. _____ SHEET NO. 10

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
Sept.		
12	11158	Change bit and went in hole to casing shoe. Cut drill line. Finished trip. Drilled and came out of hole for new bi Mw: 13.1, Vis: 58, Pv: 47, Yp: 14.
13	11245	Went in hole. Drilled. Circulated samples. Made wiper trip. Circulate and conditioned mud. Came out of hole. SL with no correction. Mw: 13.1, Vis: 58, Pv: 42, Yp: 14.
14	11245	Finished coming out of hole. Ran IES, G/R Sonic, Mll, Formation Density Log and SNP from 10,600 to 11,244'. Laid down 6½" D.C.
15	11245	Changed out drilling line. Picked up drill collars and hole opener and went in hole. Opened 8½" hole to 12-1/4" from 9888' to 10,102 (412'). Came out of hole. Mw: 13.1, Vis: 54, Pv: 40, Yp: 12.
16	11245	Changed reamer cutters. Went in hole. Washed 26' to bottom. Opened 8½" hole to 12-1/4" to 10309 from 10102. Came out of hole and changed reamer cutters. Mw: 13.0, Vis: 50, Pv: 43, Yp: 19.
17	11245	Went in hole. Washed 300' to bottom. Opened 8½" hole to 12-1/4" from 10309 t 10463'. Came out of hole. Changed reamer cutters. Went in hole. Removed kelly spinner for repairs. Finished go ng in hole. Opened 8½" hole from 10463 to 10512'. Mw: 13.1, Vis: 60, Pv: 41, Yp: 20.
18	11245	Opened hole to 12-1/4" from 10463' to 10570'. Circulated. Made 15 stds. wipertrip. Circulated and conditioned mud. Started pulling out of hole 64 st in derrick. Laid down drill pipe and botom hole assembly. Rigged up to run casing. Mw: 13.1, Vis: 57, Pv: 36, Yp: 18.

DAILY REPORT DETAILED

LEASE _____ WELL NO. _____ SHEET NO. 11

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
Sept.		
19	11245	Ran 251 joints 9-5/8" 47 lb N-80 buttress casing. Set and cemented at 10510' RKB. Ran 8 centralizers from bottom up to 9500'. Cemented with 1500 sacks class "B" plus .3% LWL plus 1/10% Diacel "A" mixed to a slurry weight of 15.6 ppg.
20	11245	Tested 9-5/8" seal assembly - no test. Picked up 9-6" D.C.'s and stand in derrick.
21	10510	Tested new seal assembly - no test. Came out of hole. Closed blind rams. Made dive No. 1 and pressured up Wellhead Collet Connector leaking. Rigged up and pulled mud riser. Went in hole with stinger and ran Collet Connector. UTV in operable. Made dive No. 2 to stab stinger and Collet into stack. Released stack and pulled Payne Pods. Retrieved BOP Stack. Rigged up running tool and ran same to retrieve saver well head sub and Collet.
22	10510	Ran in hole with stinger. Stabbed wellhead and repaired hydraulic line. Unlatched and pulled 13-3/8" Collet. Found A4 ring gasket damaged. Diver inspected wellhead and found no damage. Ran and landed 13-3/8" Collet. Diver stabbed stinger to land BOP Stack; picked up BOP Stack. Tested BOP Collet and Payne Pods. Stabbed choke and killed line. Tested Baker Seal Units 5000 psi-ok.
23		Pulled blue pod. Replaced O-ring. Reran and stabbed. Tested BOP Stack and casing with 1500 psi. Test OK. COOH and laid down landing string and ran Collet Connector. Ran mud riser and nippled up cellar deck. Ran test plug and tested BOP, choke and kill line to 2500 psi. Test OK. Came out of hole with test plug. Ran short bore protector. Made up BHA and picked up 97 singles. Tagged plug at 10463'.

DAILY REPORT DETAILED

LEASE_____ WELL NO._____ SHEET NO. 12

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
Sept.		
23		(Calc. 10,464'). Drilled three feet and found casing empty. Slacked off to within 4' of shoe and did not find any cement.
24	10510	Drilled plug and float collar from 10,463' to 10,466'. Went in hole to 10,506. No cement between float collar and shoe. Came out of hole. Ran Schlumberger Bond Log, CLL/Gamma Ray from 10,500 to 8,750'. Picked up tubing and stood in derrick. Tested casing to 2100 psi. Could pump into formation 1/4 bbls/minute at that pressure. Held 1500 psi. Made up Baker Model "S" tubing tester with Model "K" snap latch stinger below, picked up tubing and went in hole.
25	10510	Circulated to clean scale from tubing testing valve. Tried to test tubing - tubing failed at 5000 psi. Came out of hole with tubing. Found 1 joint tubing with 2' split. Laid down bad joint, went back in hole and tested tubing to 5000 psi for 15 minutes. OK. Measured out of hole. Ran Baker Model "K" (Mercury) cement retainer on Schlumberger wireline and set at 10487'. Ran Snaplatch stinger on D.C. and D.P.
26	10510	Squeezed cementing. Mixed 50 sacks Dalen Portland cement with .3% LWL and squeezed 2.2 bbls slurry into formation at pressure increasing from 2100 psi to 3000 psi; holding 2800 psi. Circulated out remainder of cement. Laid down 30 jts. D.P. and came out of hole. Slipped and cut drilling line. Retrieved short bore protector. Schlumberger perforated 4 holes/ft. with 4" carrier to shape charges from 10,452 to 10,474; 10,388 to 10,413 and 10,421 to 10,436 to cover a misfire. Rigged floor for test. Tested separator and test lines to 4000 psi. OK. Made up tools for test No. 1.

DAILY REPORT DETAILED

LEASE _____ WELL NO. _____ SHEET NO. 13

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
Sept.		
27	10487	Went in hole with test string. Picked up Otis type SST test tree. Ran in hole and installed Baker test head. Displaced tubing with 93 bbls diesel and set packer at 10,355'. DST No. 1 - Test started at 1557 hours Sept. 26,68. Bottom BJ Press. recorder at 10460 RKB Top " " " " 10454 " Baker (Laurent) " " 10429 "
28	10487	Tested DST No. 1. Unseat Packer and reversed out. Received 23 bbls muddy saltwater judged to be mud filtrate contaminated with formation water. No oil or gas. Came out of hole, broke down test tools and redressed packer. Welded pad eye on drill nipple snub line. Made up test tool and went in hole.
29	10487	Continued DST No. 1. Landed tubing in wellhead on test plug and pulled landing string. String landed at 5441. Waited on weather. Went in hole and screwed into safety jt. and tested plug and pulled tubing. Pin on pressure balanced bumper sub failed, dropped BHA (less B.S.) to bottom. Top of fish calculated to be 10,086'. Schlumberger ran CCL and junk pusher and located top of fish at 10,084'. Picked up 9-6½" D.C. and dress overshot.
30	10487	Ran UTV, found mud riser parted at first connection above balljoint. Made dive No. 1 to assist restab of riser. Could not stab as balljoint was out of alignment. Hang off mud riser, picked up stabilizer on D.P. Dive No. 2 assisted stab of D.P. and stabilizer which aligned Balljoint and allowed restab of riser. Diver made fast locking studs. Measured in hole with overshot. Went over fish and chain out of hole.

DAILY REPORT DETAILED

LEASE_____ WELL NO._____ SHEET NO. 14

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
Oct.		
1	10352	Came out of hole with fish. 100% recovery, no damage to tools. 3 jts. tubing slightly bent. Went in hole with bit to condition mud. Circulated at 10,350. Spot 25 bbls seawater at 10,250. Came out of hole and laid down 20 jts. D.P. Schlumberger ran Baker (Mercury) Model "K" cement retainer and set at 10,352. When coming through rotary table, setting tools caught on bottom of rotary, pulled out of rope socked and dropped back to bottom. Will fish out after DST No. 2. Started perforating.
2	10352	Finished perforating 4 holes/foot with shape charges 10,190 to 10,137; 10,115 to 10,100; 10,090 to 10,048; 10,042 to 10,025 and 10,010 to 9,932' (all depths IES and RKB). Ran test plug. Tested BOP stack - OK. Laid down test plug and made up BHA for DST No. 2. Ran test tool string. Displaced tubing with diesel oil. Tried to set packer - unsuccessful. Reversed out diesel oil and reverse circulated.
3	10352	Came out of hole with 9-5/8" Baker retrievimatic EA Production Packer and test string. Found small pieces of junk iron in packer's "J" slot. Made up BHA using 9-5/8" BJ tupe SSC Production Packer. Ran BHA, Otis test tree and Baker test head (checked torque on all connections). Displaced tubing with diesel oil.
4	10352	Ran DST No. 2
5	10352	Adjusted flow for Core Lab. bottom hole sampler. Rates 20 MMCFD, 10 MMCFD and 5 MMCFD. Conditioned mud in pits and attempted to run BHS on Halliburton wireline, unsuccessful. Prep. to kill well. Pumped 87 bbls., 13 lb/gal. mud

DAILY REPORT DETAILED

LEASE _____ WELL NO. _____ SHEET NO. 15

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
Oct.		
5		into tubing. Tubing went on vacuum. Building volume in mud pits. Filled tubing with 7 bbls mud. Unseated packer and reverse circulated. Spotted 25 bbls seawater on bottom and came out of hole with packer and test assembly.
6	10352	Laid down test tools and packer. Rigged up Schlumberger, ran and set Baker Mercury Series Model "K" cement retainer at 9913' RKB, and perforated DST No. 3 zone from 9776 to 9836. (2 misruns with retainer). Came out of hole with perf. gun and rigged down Schlumberger. Made up test assembly and went in hole. Extrapilated BHP from BJ "Custer" recorder at 10,135' to a BHP of 5665 O.F.P. = 60,000,000 Cu.ft/day.
7	9913	Finished going in hole with test string for DST No. 3 and displaced tubing with 96 bbls diesel oil. Set Baker model EA packer at 9695. DST No. 3 unseat packer and reversed out diesel oil, spotted acid and reset packer. Continued DST No. 3
8	9705	Killed well and reversed circulating. Came out of hole 29 stds. tubing. Laid down tubing, D.C. and test tools. Rigged up Schlumberger and set Baker Model "K" cement retainer at 9705.
9	4004	Rigged down Schlumberger after having set Baker Model "K" cement retainer at 9705' RKB. Finished laying down 3½" O.D. tubing and 6½" O.D. Killed collars Ran 5" D.P. open ended to 9705'. Circ. and conditioned mud. Laid 70 sacks Class B cement plug from 9705 to 9505'. Came out of hole laying down 5700'-5' D.P. Schlumberger set Baker Model "K" retainer at 4004'. Ran 5" D.P. open ended to 4004 and circulated before laying cement plug.

DAILY REPORT DETAILED

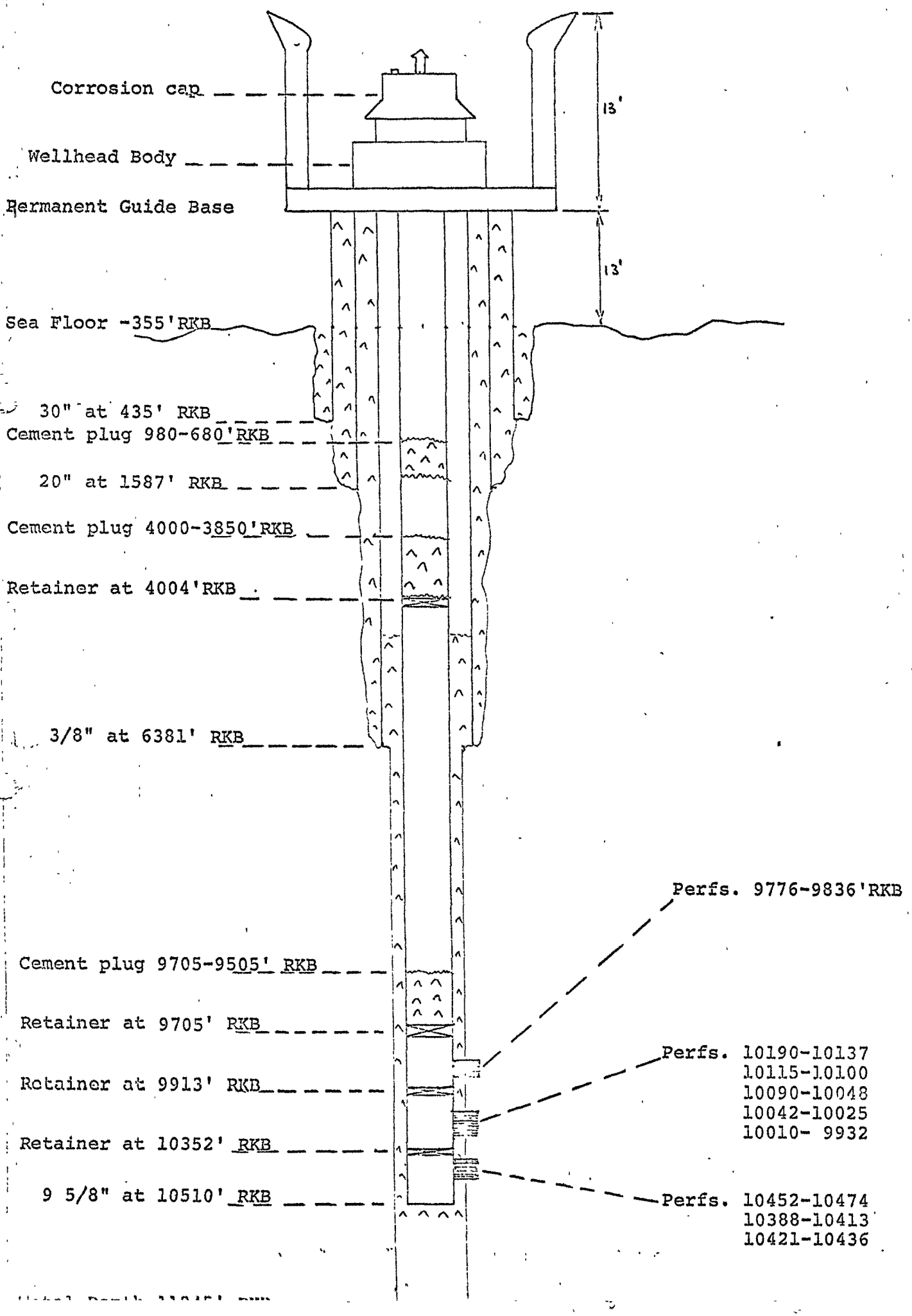
LEASE_____ WELL NO._____ SHEET NO. 16

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
Oct.		
10		Mixed 52 sacks class "B" cement plug 0.3% LWL and 1% Diacel "A" and set 150' cement plug from 4000' to 3850'. Came out of hole and stood back 1000' of 5" Drillpipe and laid down 3000' of drillpipe. Went in hole with 5" drillpipe to 980' and laid 104 sacks class "B" plus 0.3% LWL and 1% Diacel "A" cement plug from 980' to 680'. Washed wellhead and BOP stack with sea water and laid down remaining drill pipe.
11		Made dive No. 1. Diver tried to hock hose to bottom collet.
12		Divers connected hose to wellhead protector collet, unlatched and pulled same. Installed corrosion cap and sonar beacons. Laid down D.P. Divers disconnected guide lines from guide base and retrieved guide lines. Pumped up to 69' draft.
13		Waiting on weather
14		Waiting on weather
15		Pumped out to 20'. Pulled anchors 4, 5, 6, 2, 3 and 1
		0930 hours October 15, 1968 - Finished well 7/11-2X. At this time all anchors were bolstered.

PHILLIPS PETROLEUM COMPANY

Well 7/11-2X

TEMPORARY SUSPENSION PROCEDURE



PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

SUPT	☒
CIRC	☐
MATL	☐
ENGR	☐
D. S.	☐
	☐
CEC	☐
FILE	☐

CJL/GMR - 145/68

Stavanger, September 26, 1968

Petrofina S. A.
33, Rue de la Loi
Brussels 4
BELGIUM

ATTENTION: Mr. C. Bonnami

Dear Sir,

Transmitted herewith please find one print and a listing pertaining to an additional computation on Phillips Well 7/11-2x.

By receipt of this letter please sign one copy and return same to this office.

Yours very truly,

A. T. Crump

A. T. Crump
Area Superintendent
Drilling & Production

Encl.

Received by: Mme Duchamis

Date : 4/10/68

PHILLIPS PETROLEUM CO.
STAVANGER

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

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ENGR ☐
D. S. ☐
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CEC ☐
FILE Geol ✓

Pls send copy to Stavanger

CJL/GMR - 143/68

Stavanger, September 26, 1968

elf norge A/S
Dronning Maudsgt. 11
OSLO

ATTENTION: Mr. J. C. Vauchez

Dear Sir,

Under separate cover we are transmitting to you two prints, two listings and one transparency pertaining to an additional computation on Phillips Well 7/11-2x.

By receipt please sign one copy of this letter in the space provided below and return same to this office.

Yours very truly,

A. T. Crump
Area Superintendent
Drilling & Production

Received by: J. Vauchez

Date : 30/09/68.

Elf Norge A/S
27 SEP 1968
Oslo

PHILLIPS PETROLEUM COMPANY
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OSLO
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196

PHILLIPS PETROLEUM CO.
STAVANGER

CJL/GMR
SBR-011/68

Stavanger, September 26, 1968

Mr. W. W. Dunn
BRUSSELS OFFICE

NOR/D&P/Well 7/11-2x

ATTENTION: Mr. L. H. Hoelscher

Transmitted herewith please find two prints and two listings pertaining to an additional computation on Well 7/11-2x.

Please forward one print and a listing to the Bartlesville office if required.

By receipt of this letter please sign one copy in the space provided below and return same to this office.

Signed by
A. T. CRUMP

A. T. Crump

Encl.

Received by: _____

Date : _____

cc: T. J. Jobin

PHILLIPS PETROLEUM COMPANY
UTENLANDSK AKSJESELSKAP
P.O.BOX 72 - STAVANGER, NORWAY - PHONE 41 340, 41 391 - CABLE: PHILLSTAV - TELEX: 3081

CJL/GMR - 144/68

Stavanger, September 26, 1968

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CEC	☐
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Agip Sp.A.
C. P. 4174
Milano
ITALY

ATTENTION: Mr. S. Orioli

Dear Sir,

Transmitted herewith please find one print and a listing pertaining to an additional computation on Phillips Well 7/11-2x.

By receipt of this letter please sign one copy and return same to this office.

Yours very truly,

A. T. Crump
Area Superintendent
Drilling & Production

Encl.

Received by _____
Date 2/10/68

2-10-68

PHILLIPS PETROLEUM CO.
RECEIVED
STAVANGER