

# CONFIDENTIAL

## PHILLIPS PETROLEUM COMPANY WELL PRODUCTION TEST

OFFICE	<input type="checkbox"/>
MANAGER	<input type="checkbox"/>
GEOLOGICAL	<input type="checkbox"/>
FILE	<input type="checkbox"/>

Well 7/11-3X  
DST No. 1  
Interval: 10629-10651  
Date of Test: December 8 through 9, 1968  
Hole Size: 7" casing set at 10960' RKB.

ID/OLJE
00127 *-4.2.69
SAKSB:
ARKIV:

### Test String Make-up

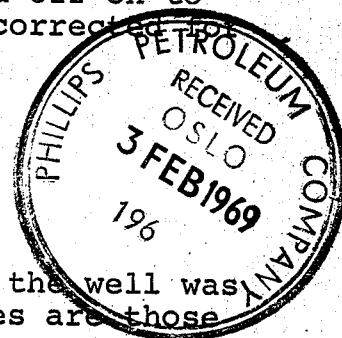
Bottom to Top:

<u>Item</u>	<u>I.D.</u>	<u>Length</u>	<u>RKB Setting Depth</u>
a) Bomb Catcher		0.05	10669.20
b) One Joint Tubing	2.992	31.45	10669.15
1) Leutert No. 560			10658.70
2) Leutert No. 560			10647.10
c) Baker Model "R" Hanger	2.75	0.86	10637.70
d) One Joint Tubing	2.992	31.26	10636.84
1) Amerada Temp. Recorder			10610.20
2) Amerada Pressure Recorder			10604.20
e) Baker Model "F" Hanger	2.75	0.92	10606.58
f) Perforated Joint	2.992	31.36	10604.66
g) B-J Cross-over Sub	3.740	0.75	10573.30
h) B-J Cross-over Sub		0.83	10572.55
i) 7" B-J Packer	2.50	6.38	10576.72
j) B-J Cross-over Sub		0.95	10570.34
k) B-J Cross-over Sub		1.06	10569.39
l) One Joint Tubing	2.992	31.08	10568.33
m) 3½" Tubing, 110 Stands	2.992	10202.25	10537.25
n) OTIS TEST TREE		84.25	335.00
o) Cross-over Sub		0.20	310.75
p) 10 Joints Tubing	2.992	310	-7.65
q) Hydrill Valve		2	-9.65
r) Baker Test Head		4.5	

Note: Packer seated with OTIS hanger 5 ft. off seat. When hanger seated, 40,000 lbs. weight had been slacked-off on to packer. The Recorder setting depths were correct for this 5' movement.

The following are attached to this report:

1. Test Procedure
2. Wellhead pressure measurements
3. Fluid Sample Analysis. After the final flow, the well was killed by reversing circulation. These samples are those reversed out of the well.





# PHILLIPS PETROLEUM COMPANY

Baker Packer at 10571' RKB

EST STARTED: 0236 hrs Dec. 8, 1968

EST COMPLETED: 1612 hrs Dec. 8, 1968

## DST NO. 1 SUMMARY

DEPTH OF PRESSURE RECORDER: Amerada Pressure Recorder - 10609'; Amerada Temp. Recorder - 10615'; No. 560 Leutert 10658; No. 566 Leutert 10647

Operation	Time		Length of Test		Choke Size	Wellhead		Gas MMCFD	Oil BPD	GOR Cu.Ft./STB	Water BPD	BHP PSIA
	From	To	Hrs.	Mins.		Press PSIA	Temp °F					
IF	0236	0255	-	19	1"	0	NR	None	50	None	None	3885
ISI	0255	0810	5	15	None	1405	NR	None	None	None	None	5247
FF	0810	1210	4	00	1"	0	NR	None	12	None	None	3952
FSI	1210	1612	4	02	None	1168	NR	None	None	None	None	5033
No. 566 Leutert Recorder (Field readings):												
					<u>Operation</u>	<u>PSIA</u>						
					IHP	7723						
					IF <sub>1</sub>	3885						
					IF <sub>2</sub>	3885						
					ISI	5247						
					FF <sub>1</sub>	3910						
					FF <sub>2</sub>	3952						
					FSI	5033						
					FHP	7723						

DATE: Dec. 8, 1968**PHILLIPS PETROLEUM CO.**LEASE: Blk. 7/11

SURFACE PRESSURE

INTERVAL: 10629-10651 RKWELL NO.: 7/11-3XTEST NO.: DST No. 1

TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
		Dead weight	
0236		0	Opened for Initial Flow Period - well flowed
		0	back 2.25 bbls in first 2.5 minutes and then
		0	flowed less than 1 bbl. for remaining 16.5
		0	minutes.
0255		< 50	Shut in for pressure build-up.
0305		50	
0310		88	
0315		147	
0330		300	
3045		420	
0400		525	
0415		628	
0430		712	
0445		792	
0500		863	
0515		928	
0530		988	
0545		1042	
0600		1094	
0615		1138	
0630		1180	
0645		1220	
0700		1257	
0715		1289	
0730		1320	



TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
0745		30	
0800		25	Completed Initial shut-in.
0810			Open well. Well flowed at 21 gals. per hour during the four hours testing period. Well flowed from 0810 to 1210 with zero surface pressure
1210		< 50	Shut in for pressure build-up.
1215		< 50	
1230		< 50	
1245		145	
1300		280	
1315		400	
1330		500	
1345		590	
1400		675	
1415		750	
1430		820	
1445		884	
1500		940	
1515		996	
1530		1045	
1545		1090	
1600		1132	
1615		1153	Pulled Packer and killed well

FLUID SAMPLES  
DST No. 1

Sample No.	80	83	85	86	87	88	Pit Mud
Weight	7.1	8.9	8.9	11.5	11.1	13.7	13.8 <sup>†</sup>
Chloride		98,000	85,000	100,000	100,000	120,000	125,000
Resistivity	10 <sup>+</sup>	0.33 at 54 <sup>o</sup>	0.30 at 54 <sup>o</sup>	0.12 at 53 <sup>o</sup>	0.11 at 53 <sup>o</sup>	0.12 at 53 <sup>o</sup>	0.11 at 53 <sup>o</sup>
Calcium		75 ppm	65 ppm	80 ppm	80 ppm	70 ppm	80 ppm
Total hardness		120 ppm	130 ppm	220 ppm	160 ppm	160 ppm	200 ppm
% Oil (Retort)	96%	52%	53%	6%	6%	3%	2%
% Water (Retort)	-	35%	37%	80%	82%	71%	-
Color of filtrate	Oil	Med-Red w/oil	Med-Red w/oil	Med-dark red, no oil	Med-dark red, no oil	Med-dark red, no oil	Dark Red no oil
Smell of filtrate	Oily	Oily	Oily	Oily	Oily	Oily	-
pH	Diesel oil	8.0	8.2	8.1	8.0	8.1	8.4
Remarks	-	-	Hi W.L.	Few Black Spects-Hi W.L.	Diesel Bubbles on top- Hi W.L.	Low W.L.	4.9 W.L.

Note: The volume of the tubing is 92 bbls. The above sample numbers represent barrels fluid reversed out prior to taking the sample. Four barrels of fluid contaminated with diesel oil and mud were recovered.

It is our opinion that any formation fluid existing in the samples is contaminated with diesel oil, drilling mud and/or mud filtrate to such a degree that it does not represent true formation fluid.

It is interesting to note that Sample No. 85 indicates contamination by a fluid containing less chlorides than was carried in the drilling fluid.

# CONFIDENTIAL

PHILLIPS PETROLEUM COMPANY  
WELL PRODUCTION TEST

ID/OLJE

00137 \*-4.2.69

SAKSB:  
ARKIV:

Well 7/11-3X  
DST No. 2  
Interval: 10532-10603  
Date of Test: December 9, 1968 through 11, 1968  
Hole Size: 7" casing set at 10960' RKB

## Test String Make-up

Bottom to top:

<u>Item</u>	<u>I.D.</u>	<u>Length</u>	<u>RKB Setting Depth</u>
a) Bomb Catcher		0.05	10579.15
b) One Joint Tubing	2.992	31.45	10579.10
1) Leutert No. 560			10570.75
2) Leutert No. 566			10559.15
c) Baker Model "R" Hanger	2.75	0.86	10547.65
d) One Joint Tubing	2.992	31.26	10546.79
1) Amerada Temp. Recorder			10543.35
2) Amerada Press. Recorder			10537.35
e) Baker Model "F" Hanger	2.75	0.92	10515.53
f) Perforated Joint	2.992	31.36	10514.61
g) B-J Cross-Over Sub	3.740	0.75	10483.25
h) B-J Cross-Over Sub		0.83	10482.50
i) B-J Packer (7")	2.50	6.38	10483.67
j) B-J Cross-Over Sub		0.95	10478.29
k) B-J Cross-Over Sub		1.06	10477.34
l) 3½" Tubing, 109 Stands	2.992	10,110.28	10476.28
m) One Joint Tubing	2.992	31.00	366.00
n) OTIS TEST TREE		24.25	335.00
o) Cross-Over Sub		0.20	310.75
p) Pups 2'		2'	310.55
q) 10 Joints Tubing		310'	308.55
r) Hydrill Valve		2'	-1.45
s) Baker Test Head		4.5	-3.45

The following are attached to this report:

1. Test procedure
2. Wellhead pressure measurements
3. Field fluid sample analysis. After the final flow, the well was killed by reversing circulation. These samples were reversed out of the well.



# PHILLIPS PETROLEUM COMPANY

EST STARTED: 1645 hrs Dec. 10, 1968

EST COMPLETED: 1300 hrs Dec. 11, 1969

DST NO. 2 SUMMARY

B-J Packer at 10482 RKB

No. 560 Leutert at 10570'

DEPTH OF PRESSURE RECORDER: Amerada Press. at 10537, Amerada Temp at 10543, No. 566 Leutert at 10559'

Operation	Time		Length of Test		Choke Size	Wellhead		Gas MMCFD	Oil BPD	GOR Cu.Ft./STB	Water BPD	BHP PSIA
	From	To	Hrs.	Mins.		Press PSIA	Temp °F					
IF	1645	1700	-	15	1"	0	N.R.	None	96	None	None	3885
ISI	1700	2000	3	-	None	1786	N.R.	None	None	None	None	5482
FF	2000	0830	12	30	1"	0	N.R.	None	48	None	None	4188
FSI	0830	1300	4	30	None	1292	N.R.	None	None	None	None	5420
<u>No. 566 Leutert (Field reading)</u>												
					IHP	7683						
					IF <sub>1</sub>	3925						
					IF <sub>2</sub>	3885						
					ISI	5482						
					FF <sub>1</sub>	3942						
					FF <sub>2</sub>	4188						
					FSI	5420						
					FHP	7687						

DATE: Dec. 9, 1968**PHILLIPS PETROLEUM CO.**LEASE: Blk. 7/11

SURFACE PRESSURE

INTERVAL: 10532-10603WELL NO.: 7/11-3XTEST NO.: DST No. 2

TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
		Dead weight	
16:45		0	Opened for Initial Flow Period - well flowed 0.90 bbls during last 14 minutes of test.
17:00		<50	Shut in for pressure build-up.
17:05		145	
17:10		375	
17:15		615	
17:20		810	
17:25		940	
17:30		1040	
17:45		1317	
18:00		1457	
18:15		1566	
18:30		1623	
18:45		1672	
19:00		1702	
19:15		1730	
19:30		1745	
19:45		1758	
20:00		1771	Completed Initial Shut-in. Opened well. Well flowed 23 bbls. Flow started at 2.5 BPH and slowly decreased to 1.5 BPH at end of 12.50 hr flow period.
08:30		< 50	Shut in for pressure build-up.
08:30		180	





FLUID SAMPLES  
DST No. 2

	66	69	72	75	78	81	84	87
Weight, ppg	10.9	10.0	9.3	9.2	9.0	9.1	9.0	8.9
Chloride, ppm	110,000	95,000	64,000	52,000	44,000	37,000	35,000	32,000
Resistivity - Baroid	.1 at 51°	.1 at 49°	.12 at 51°	.14 at 51°	0.145	.175 at 50°	.18 at 50°	.2 at 50°
Resistivity - Schlumberger	.078 at 49°	.08 at 48°	.116 at 50°	.132 at 50°	.144 at 49°	.168 at 49°	.178 at 50°	.186 at 49°
Calcium, ppm	65	60	50	50	70	60	110	170
Total hardness	200	180	170	160	250	200	280	340
Retort - % Oil	7%	-	-	-	3%	-	-	-
Retort - % Water	86%	-	-	-	96%	-	-	-
Color of filtrate	M. Red	M. Red	L-M Red	Pink	Pink	Pink	Pink	Pink
pH	8.1	8.1	8.0	8.0	8.0	8.0	8.0	8.0

Remarks

Total recovery when tubing was reverse circulated:

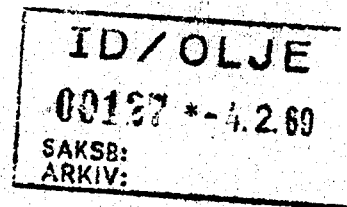
60 bbls diesel  
5 bbls drilling mud  
23 bbls water  
3 bbls contaminated mud

91 bbls total tubing volume

Note: The volume of the tubing is 91 bbls. The fluid sample numbers are the barrels fluid reversed out prior to taking the individual sample. The high resistivity readings of the water samples (0.145 to 0.20 at 50° F) which gives  $R_w = 0.04$  at 250° F bottom hole temperature agrees favorably with log analysis. It should be noted that the latter samples (ie 81, 84 and 87) probably are more representative of formation water than samples numbers 66 thru 78 since these samples have been more affected by mud filtrate.

# CONFIDENTIAL

## PHILLIPS PETROLEUM COMPANY WELL PRODUCTION TEST



Well 7/11-3X  
DST No. 3  
Interval: 10423-10506  
Date of Test: December 11, 1968 through 12, 1968  
Hole Size: 7" Casing set at 10960 RKB

### Test String Make-up

Bottom to Top:

<u>Item</u>	<u>I.D.</u>	<u>Length</u>	<u>RKB Setting Depth</u>
a) Bomb Catcher		0.05	10476.67
b) One Joint Tubing	2.992	31.45	10476.62
1) Leutert No. 560			10466.60
2) Leutert No. 566			10455.50
c) Baker Model "R" Hanger	2.75	0.86	10445.17
d) One Joint Tubing	2.992	31.26	10444.31
1) Amerada Temp.			10425.40
2) Amerada Press.			10419.80
e) Baker Model "F" Hanger	2.75	0.92	10413.05
f) Perforated Joint	2.992	31.36	10412.13
g) B-J Cross-Over Sub	3.740	0.75	10380.77
h) B-J Cross-Over Sub		0.83	10380.02
i) B-J Packer (7")	2.50	6.38	10371.19
j) B-J Cross-Over Sub		0.95	10375.81
k) B-J Cross-Over Sub		1.06	10374.86
l) One Joint Tubing	2.992	31.00	10373.80
m) 3½" Tubing, 108 Stands	2.992	10017.80	10342.80
n) OTIS TEST TREE		24.25	335.00
o) Cross-Over Sub		0.20	310.75
p) Pups 2'		2'	310.55
q) 10 Joints Tubing		310'	308.55
r) Hydrill Valve		2'	-1.45
s) Baker Test Head		4.5	-7.95

The following are attached to this report:

1. Test Procedure
2. Wellhead pressure measurements
3. Field fluid sample analysis. After the final flow, the well was killed by reverse circulating. These samples were reversed out of the well during circulation.



# PHILLIPS PETROLEUM COMPANY

B-J Packer set at 10379' RKB

EST STARTED: 1820 hrs Dec. 11, 1968

EST COMPLETED: 0745 hrs Dec. 12, 1968

## DST NO. 3 SUMMARY

Leutert No. 560 at 10467'

DEPTH OF PRESSURE RECORDER: Amerada Press. at 10537; Amerada Temp. at 10425, Leutert No. 566 at 10456'

Operation	Time		Length of Test		Choke Size	Wellhead		Gas MMCFD	Oil BPD	GOR Cu.Ft./STB	Water BPD	BHP PSIA
	From	To	Hrs.	Mins.		Press PSIA	Temp °F					
IF	1820	1835	-	15	1"	0	N.R.	None	58	None	None	3885
ISI	1835	2130	2	55	None	1794	N.R.	None	None	None	None	5525
FF	2130	0400	6	30	1"	0	N.R.	None	36	None	None	4019
FSI	0400	0745	3	45	None	1516	N.R.	None	None	None	None	5510
No. 566 Leutert Recorder (field readings)												
						Operation	Pressure					
						IHP	7679					
						IF <sub>1</sub>	3950					
						IF <sub>2</sub>	3885					
						ISI	5525					
						FF <sub>1</sub>	3926					
						FF <sub>2</sub>	4019					
						FSI	5510					
						FHP	7775					



SHEET 1 OF 2DATE: Dec. 11, 1968**PHILLIPS PETROLEUM CO.**LEASE: Blk. 7/11

SURFACE PRESSURE

INTERVAL: 10423-10506 RKEWELL NO.: 7/11-3XTEST NO.: DST No. 3

TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
		Dead weight	
1820			Opened Initial flow period - well flowed 0.6 bbls during last 14 minutes of test.
1835		< 50	Shut in for pressure build-up
1840		130	
1845		445	
1850		625	
1855		770	
1900		905	
1915		1220	
1930		1402	
1945		1544	
2000		1607	
2015		1667	
2030		1703	
2045		1731	
2100		1752	
2115		1767	
2130		1779	Completed Initial shut-in. Opened well. Well flowed 11.6 bbls. Started flowing 1.8 BPH and ended 1.33 BPH. Assume and average rate of 1.53 BPH.
0400		< 50	Shut in for pressure build-up.
0415		390	
0430		762	
0445		989	
0500		1135	

FLUID SAMPLE ANALYSIS  
DST No. 3

Sample No.	1	2	3	4	5	6	7	8
Weight, ppg	10.3	10.1	9.9	9.7	9.6	9.5	9.3	10.1
Chloride, ppm	99,000	95,000	87,000	82,000	79,000	75,000	67,000	72,000
Resistivity, Baroid	.1	.08	.1	.1	.1	.1	.12	.12
Resistivity, Schlumberger	.083 at 50°	.079 at 50°	.083 at 50°	.084 at 52°	.085 at 52°	.089 at 52°	.104 at 47°	.106 at 52°
Calcium, ppm	30	40	40	80	100	160	140	80
Total hardness, ppm	240	260	280	280	360	480	520	320
Retort - % Oil							1.5	4.0
Retort - % Water							96	91
Color of filtrate	Red- Brown	Red- Brown	L.Red Brown	Red- Pink	Pink	Light Pink	Light Pink	Pink- Red
pH	7.8	7.6	7.4	7.3	7.2	7.1	7.1	7.4
Remarks								

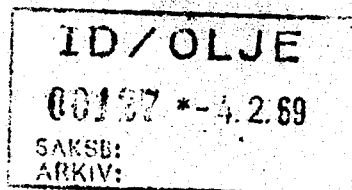
Total recovery when tubing reverse circulated:

78 bbls diesel oil  
 3 bbls mud  
 8 bbls water  
2 bbls water cut mud  
91 bbls total tubing volume

Note: A sample of each of the eight barrels of water reverse circulated from the well was obtained. Sample number one is the first barrel water flowed into the wellbore and sample number eight was the last barrel flowed into the wellbore.

# CONFIDENTIAL

## PHILLIPS PETROLEUM COMPANY WELL PRODUCTION TEST



Well 7/11-3X  
DST No. 4  
Interval: 10369-10408  
Date of Test: December 12, 1968 through 13, 1968  
Hole Size: 7" Casing set at 10960 RKB

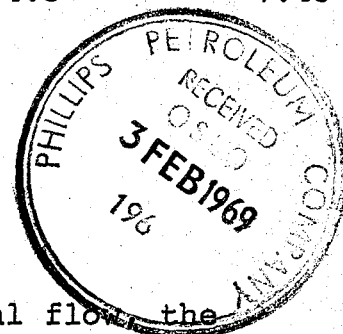
### Test String Make-up

Bottom to Top:

<u>Item</u>	<u>I.D.</u>	<u>Length</u>	<u>RKB Setting Depth</u>
a) Bomb Catcher		0.05	10393.71
b) One Joint Tubing	2.992	31.45	10393.66
1) Leutert No. 560			10383.64
2) Leutert No. 566			10372.54
c) Baker Model "R" Hanger	2.75	0.86	10362.21
d) Baker Model "F" Hanger	2.75	0.92	10364.35
e) Perforated Joint	2.992	31.36	10364.43
f) One Joint Tubing	2.992	31.26	10333.07
g) B-J Cross-Over Sub	3.740	0.75	10301.81
h) B-J Cross-Over Sub		0.83	10301.06
i) B-J Packer (7")	2.50	6.38	10300.23
j) B-J Cross-Over Sub		0.95	10293.85
k) B-J Cross-Over Sub		1.06	10292.90
l) One Joint Tubing	2.992	31.00	10291.84
m) 3½" Tubing, 107 Stands	2.992	9925.84	10260.84
n) OTIS TEST TREE		24.25	335.00
o) Cross-Over Sub		0.20	310.75
p) Pups 2'		2'	310.55
q) 10 Joints Tubing		310'	308.55
r) Pups 4'		4'	-1.45
s) Hydrill Valve		2'	-5.45
t) Baker Test Head		4.5'	-7.45

The following are attached to this report:

1. Test procedure
2. Wellhead pressure measurements
3. Field fluid sample analysis. After the final flow, the well was killed by reversing circulation. These samples were reversed out of the well during circulation.







# PHILLIPS PETROLEUM COMPANY

Perforations: 10369-10384  
10393-10408  
B-J Packer set at 10300' RKB

EST STARTED: 2245 hrs Dec. 12, 1968

EST COMPLETED: 1440 hrs Dec. 13, 1968

## DST NO. 4      SUMMARY

DEPTH OF PRESSURE RECORDER: Leutert No. 560 at 10384', Leutert No. 566 at 10373'

Operation	Time		Length of Test		Choke Size	Wellhead		Gas MMCFD	Oil BPD	GOR Cu.Ft./STB	Water BPD	BHP PSIA
	From	To	Hrs.	Mins.		Press PSIA	Temp °F					
IF	2245	2300	-	15	1"	0	N.R.	None	103	None	None	3825
ISI	2300	0130	2	30	None	1778	N.R.	None	None	None	None	5489
FF	0130	1115	9	45	1"	0	N.R.	None	41	None	None	4067
FSI	1115	1440	3	25	None	1425	N.R.	None	None	None	None	5473
No. 566 Leutert Recorder (field readings)												
						<u>Operation</u>	<u>Pressure</u>					
						IHP	7521					
						IF <sub>1</sub>	3825					
						IF <sub>2</sub>	3810					
						ISI	5489					
						FF <sub>1</sub>	3800					
						FF <sub>2</sub>	4067					
						FSI	5473					
						FHP	7521					

DATE: Dec. 12, 1969**PHILLIPS PETROLEUM CO.**LEASE: Blk. 7/11

SURFACE PRESSURE

INTERVAL: 10369-10408WELL NO.: 7/11-3XTEST NO.: DST No. 4

TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
		Dead weight	
2245			Opened for Initial flow period - Well flowed 2 bbls during first minute, then flowed 1.0 bbl during remaining 14 minutes for an average rate of 4.3 BPH.
2300		< 50	Shut in for pressure build-up.
2305		190	
2310		490	
2315		720	
2330		1089	
2345		1345	
0000		1502	
0015		1600	
0030		1655	
0045		1700	
0100		1729	
0115		1750	
0130		1763	Completed Initial shut-in. Opened well. Well flowed 18 bbls. at a rate of 1.71 BPH
1115		< 50	Shut-in for pressure build-up.
1120		200	
1125		380	
1130		540	
1145		750	
1200		975	
1215		1110	





## DST No. 4

Sample No.	10	11	12	13	14	15	16	17
Weight, ppg	8.9	8.9	8.8	8.6	8.5	8.7	8.7	8.7
Chloride, ppm	51,000	51,000	47,000	44,000	42,000	41,000	39,000	38,000
Resistivity, Baroid	.13	.14	.14	.15	.16	.16	.16	.17
Resistivity, Schlumberger	.114	.119	.124	.130	.136	.142	.145	.149
Calcium, ppm	180	200	220	220	240	240	250	260
Total hardness, ppm	400	420	430	440	480	490	490	500
Sulfate								
Retort % Oil				1		1	.5	.5
Retort % Water				98		98	98.5	98.5
Color of filtrate	D.Pink	D.Pink	Lt. Purple	Lt. Purple	Lt. Purple	Lt. Purple	Lt. Purple	Lt. Purple
pH	7.0	6.8	6.8	6.6	6.6	6.6	6.6	6.5
Remarks								

Total recovery when tubing was reverse circulated:

65 bbls diesel oil  
 5 bbls diesel cut mud  
 17 bbls water  
2 bbls water cut mud

89 bbls total tubing volume

Note: A sample of each barrel of water reversed from the well was taken. The above sample numbers refer to each barrel of water in the order it was reversed from the well. (Sample No. 1 was the first barrel to enter the wellbore and No. 17 the last barrel).

# CONFIDENTIAL

PHILLIPS PETROLEUM COMPANY  
WELL PRODUCTION TEST

ID/OLJE

00127 --4.2.59

SAKSB:  
ARKIV:

Well 7/11-3X

DST No. 5

Interval: 10255-10315

Date of Test: December 14, 1968 through 15, 1958

Hole Size: 7" Casing set at 10960 RKB.

## Test String Make-up

Bottom to Top:

<u>Item</u>	<u>I.D.</u>	<u>Length</u>	<u>RKB Setting Depth</u>
a) Bomb Catcher		0.05	10306.32
b) One Joint Tubing	2.992	31.45	10305.82
1) Leutert No. 560			10295.80
2) Leutert No. 566			10284.70
c) Baker Model "R" Hanger	2.75	0.86	10274.37
d) Perforated Joint	2.992	31.36	10273.51
e) B-J Cross-Over Sub	3.740	0.75	10242.15
f) B-J Cross-Over Sub		0.83	10241.40
g) B-J Packer (7")	2.50	6.38	10240.57
h) B-J Cross-Over Sub		0.95	10234.19
i) B-J Cross-Over Sub		1.06	10233.24
j) Two Joints Tubing	2.992	62.50	10232.18
k) Tubing 3½", 106 stands	2.992	9834.68	10169.68
l) OTIS TEST TREE		24.25	335.00
m) Cross-Over Sub		0.20	310.75
n) Pup 2'		2'	310.55
o) 10 Jts. Tubing		310'	308.55
p) Pup 4'		4'	-1.45
q) Hydrill Valve		2'	-5.45
r) Baker Test Head		4.5	-7.45

Note: Packer setting depth has been moved up the hole 4 ft. due to 20,000 lbs. weight set on top of Packer.

The following are attached to this report:

1. Test procedure
2. Wellhead pressure measurements
3. Field fluid sample analysis. After the final flow, the well was killed by reversing circulation. These samples were reversed out of the well during circulation.

### Discussion

The test packer stuck and could not be retrieved from the hole. As a result of the stuck packer, the pressure recorder could not be retrieved and no bottom hole pressures will be available for this test.





DATE: Dec. 14, 1968**PHILLIPS PETROLEUM CO.**LEASE: Blk. 7/11

SURFACE PRESSURE

INTERVAL: 10255-10315WELL NO.: 7/11-3XTEST NO.: DST No. 5

TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
		Dead weight	
1505			Opened for Initial flow period. Well flowed 2 bbls during first minute, then flowed 0.3 bbl during remaining 14 minutes for an average rate of 1.43 BPH.
1521		<50	Shut in for pressure build-up.
1529		50	
1530		71	
1535		185	
1540		287	
1545		380	
1600		626	
1615		806	
1630		959	
1645		1079	
1700		1184	
1715		1268	
1730		1343	
1745		1402	
1800		1452	
1815		1499	
1830		1539	
1900		1597	
1915		1622	
1930		1644	
1945		1663	





FLUID SAMPLE ANALYSIS  
DST No. 5

Sample No.	9	10	11	12	13	14	15
Weight, ppg	8.8	8.8	8.7	8.7	8.6	8.6	8.6
Chloride, ppm	49,000	43,000	40,000	35,000	33,000	32,000	30,000
Resistivity, Baroid	.11	.12	.13	.14	.15	.15	.16
Resistivity, Schlumberger at 65°	.107	.118	.127	.138	.145	.151	.160
Calcium, ppm	240	240	240	260	280	280	280
Total hardness, ppm	380	380	440	480	480	480	480
pH	7.0	6.9	6.9	6.8	6.8	6.6	6.7
Color of filtrate	Pink- ish	Pink Grey	Pink Grey	Grey	Grey	Grey	Grey
Sulfate							
Retort % Oil		2		1		.5	
Retort % Water		97		98		98.5	
Remarks							

Total recovery when tubing was reverse circulated:

66 bbls diesel oil  
 5 bbls diesel cut mud  
 15 bbls water  
4 bbls water cut mud  
 90 bbls total tubing volume

Note: A sample of each barrel of water reversed from the well was taken. The above sample numbers refer to the order of the water as it was reversed from the tubing.

# CONFIDENTIAL

ID/OLJE

00127 \*-4.2.69

SAKSB:  
ARKIV:

## PHILLIPS PETROLEUM COMPANY WELL PRODUCTION TEST

Well 7/11-3X

DST No. 6

Interval: 10158-10203

Date of Test: December 26, 1968 through 27, 1968

Hole Size: 7" Casing set at 10960 RKB with Baker Model  
"K" Retainer set at 10208'.

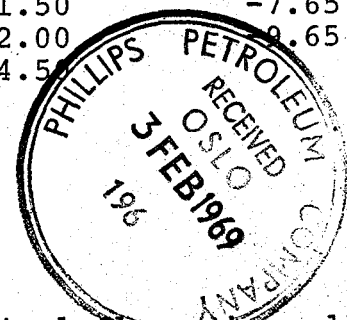
### Test String Make-up

Bottom to Top:

<u>ITEM</u>	<u>I.D.</u>	<u>Length</u>	<u>RKB Setting Depth</u>
a) Bottom of Bull Nose		0.05	10147.74
b) B-J Bull Nose	2.75	2.50	10145.24
c) B-J Recorder Nose	2.75	4.00	10141.24
d) B-J Perforated Joint	2.75	1.00	10140.24
e) B-J Recorder Hanger	2-5/16	1.00	10139.24
f) B-J Recorder Case	2.75	4.00	10135.24
g) B-J Recorder Hanger	2-5/16	1.00	10134.24
h) Cross-Over, 3½ FH Box x 3½ IF Pin	2.50	0.85	10133.39
i) Cross-Over, 3½ EUE Box x 3½ IH Pin	2-7/16	1.00	10132.39
j) One Joint Perforated Tubing	2.992	31.25	10101.14
k) Cross-Over, 3½ EUE Pin x 2-7/8 EUE	3-3/8	0.78	10100.36
l) Baker Packer	2-3/8	6.40	10093.96
m) Cross-Over, 2-7/8" EUE Pin x 3½ EUE Box	2-3/8	0.90	10093.06
n) 316 Joints, 3½" Tubing	2.992	9758.06	335.00
o) OTIS TEST TREE	2.50	24.25	310.75
p) Cross-Over, 2-7/8" EUE Pin x 3½ EUE Box	2-3/8	0.90	309.85
q) 6', 3½ EUE Pup	2.992	6.00	303.85
r) 9 Joints, 3½ EUE 8RD Tubing	2.992	279.00	24.85
s) One Joint, 3½ EUE 8RD Tubing	2.922	31.00	-6.15
t) Cross-Over, 4½ IF Box x 3½ EUE Pin	3.00	1.50	-7.65
u) Hydrill Valve		2.00	9.65
v) Baker Test Tree		4.5	

The following are attached to this report:

1. Test Procedure
2. Wellhead pressure measurements
3. Field Fluid sample analysis. After the final flow from the well was killed by reversing circulation. Sample numbers 88 thru 144 were reverse circulated from the well.





# PHILLIPS PETROLEUM COMPANY

Baker Packer set at 10104  
Perforations 10158-10203

TEST STARTED: 0810 hrs Dec. 27, 1968

TEST COMPLETED: 1800 hrs Dec. 27, 1968

## DST NO. 6 SUMMARY

DEPTH OF PRESSURE RECORDER: No. 2760 at 10145 RKB, No. 2761 at 10150' RKB.

Operation	Time		Length of Test		Choke Size	Wellhead		Gas MMCFD	Oil BPD	GOR Cu.Ft./STB	Water BPD	BHP PSIA
	From	To	Hrs.	Mins.		Press PSIA	Temp °F					
IF	0810	0825	-	15	1"	0	N.R.	None	1440	None	None	
ISI	0825	1118	2	53	None	1611	N.R.	None	None	None	None	
FF	1118	1511	3	53	1"	0	N.R.	None	1032	None	None	
FSI	1511	1800	2	49	None	852	N.R.	None	None	None	None	
<u>No. 2761 Recorder (field readings)</u>												
					Operation	Pressure						
					IHP	6462						
					IF <sub>1</sub>	3815						
					FIF <sub>1</sub>	3943						
					ISI	5513						
					IF <sub>2</sub>	4049						
					FF <sub>2</sub>	4491						
					FSI	5331						
					FHP	6457						

DATE: Dec. 27, 1968**PHILLIPS PETROLEUM CO.**LEASE: Blk. 7/11

SURFACE PRESSURE

INTERVAL: 10158-10203WELL NO.: 7/11-3XTEST NO.: DST No. 6

TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
		Dead Weight	
0810			Opened for initial flow period. Well flowed 1.5 bbls during first minute, then flowed 14.5 bbls during remaining 14 minutes for an average rate of 1 BPM.
0825			Shut in for pressure build-up.
0831		1080	
0833		1250	
0835		1315	
0840		1410	
0845		1450	
0900		1530	
0915		1550	
0917			Shut valve on wellhead to repair leak.
0940		1560	
0945		1590	Shut valve on wellhead to check for leak.
0950		1585	Opened wellhead valve
1000		1590	
1015		1593	
1030		1593	
1045		1594	
1100		1596	
1115		1596	Completed Initial shut-in. Opened well, well flowed 85 bbls diesel oil at a rate of 44 BPH, then flowed 3 bbls diesel cut mud and then 56 bbls water before being shut in for pressure build-up.





FLUID SAMPLE ANALYSIS  
DST No. 6

Sample No.	74	124	144
Weight, ppg	8.5 <sup>+</sup>	8.5 <sup>-</sup>	8.5 <sup>-</sup>
Chloride	22,000	18,500	18,500
Resistivity	0.26 at 50	0.291 at 51	0.296 at 50
Calcium	240	250	260
Total Hardness	440	440	480
Color of Filtrate	Cloudy	Clear	Clear

Notes: During final flow, well flowed 85 bbls diesel, 3 bbls diesel cut mud and 56 bbls of formation water. In addition, 88 bbls of formation water was reverse circulated from the well giving a total of 144 bbls total formation water recovery.

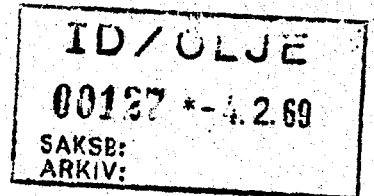
Total Recovery including reverse circulation:

56 bbls formation water  
88 bbls diesel and diesel cut mud

154 bbls

The above sample numbers refer to the number of barrels of water that had been flowed and reverse circulated from the formation before the analysis was made.

# CONFIDENTIAL



PHILLIPS PETROLEUM COMPANY  
WELL PRODUCTION TEST

Well 7/11-3X  
DST No. 7  
Interval: 10125-10145  
Date of Test: December 28, 1968 through 29, 1968  
Hole Size: 7" Casing set at 10960 RKB

Test String Make-up

Bottom to Top:

<u>Item</u>	<u>I.D.</u>	<u>Length</u>	<u>RKB Setting Depth</u>
a) Bottom of Bull Nose		0.05	10116.74
b) B-J Bull Nose	2.75	2.50	10114.24
c) B-J Recorder Nose	2.75	4.00	10110.24
d) B-J Perforated Joint	2.75	1.00	10109.24
e) B-J Recorder Hanger	2-5/16	1.00	10108.24
f) B-J Recorder Case	2.75	4.00	10104.24
g) B-J Recorder Hanger	2-5/16	1.00	10103.24
h) Cross-Over, 3½ FH Box x 3½ IF Pin	2.50	0.85	10102.39
i) Cross-Over EUE Box x 3½ IH Pin	2-7/16	1.00	10101.39
j) One Joint Perforated Tubing	2.992	31.25	10070.14
k) Cross-Over, 3½ EUE Pin x 3½ EUE Box	3-3/8	0.78	10069.36
l) Baker Packer	2-3/8	6.40	10062.96
m) Cross-Over, 2-7/8 EUE Pin x 3½ EUE Box	2-3/8	0.90	10062.06
n) 315 Joints, 3½" Tubing	2.992	9727.06	335.00
o) OTIS TEST TREE	2.50	24.25	310.75
p) Cross-Over, 2-7/8 EUE Pin x 3½ EUE Box	2-3/8	0.90	309.85
q) One 6', 3½ EUE Pup	2.992	6.00	303.85
r) 9 Joints, 3½ EUE 8RD Tubing	2.992	279.00	24.85
s) One Joint, 3½ EUE 8RD Tubing	2.992	31.00	-6.15
t) Cross-Over, 4½ IF Box x 3½ EUE Pin	3.00	1.50	-7.65
u) Hydrill Valve		2.00	-9.65
v) Baker Test Head		4.50	

The following are attached to this report:

1. Test procedure
2. Wellhead pressure measurements
3. Field fluid sample analysis.



# PHILLIPS PETROLEUM COMPANY

Baker Packer set at 10063  
Perforations - 10125-10145

TEST STARTED: 1857 hrs Dec. 28, 1968

TEST COMPLETED: 1855 hrs Dec. 29, 1968

## DST NO. 7 SUMMARY

DEPTH OF PRESSURE RECORDER: No. 2759 at 10104 RKB, No. 2760 at 10110 RKB

Operation	Time		Length of Test		Choke Size	Wellhead		Gas MMCFD	Oil BPD	GOR Cu.Ft./STB	Water BPD	BHP PSIA
	From	To	Hrs.	Mins.		Press PSIA	Temp °F					
IF	1857	1912	-	15	1"	0	N.R.	None	515	None	None	
ISI	1912	2100	1	48	None	1792	N.R.	None	None	None	None	
Load tubing	2100	0115	4	15	1"	0	N.R.	None	465	None	None	
Flow - Vent & Tank	0115	1115	10	00	1/4"	60	N.R.	Trace	79	N.R.	315	
Flow - Sep	1115	1510	3	55	1/2"	35	45	0.120	90	1333	340	
FSI	1510	1855	3	45	None	1310	N.R.	None	None	None	None	
No. 2760 Recorder (field readings)												
Operation						Pressure						
IHP						6616						
IF <sub>1</sub>						3734						
FIF <sub>1</sub>						3789						
ISI						5541						
IF <sub>2</sub>						3832						
FF <sub>2</sub>						3532						
FSI						5306						
FHP						6616						
Note: Gravity of crude oil - 47° API with a greenish black color.												

DATE: Dec. 28, 1968**PHILLIPS PETROLEUM CO.**LEASE: Blk. 7/11

SURFACE PRESSURE

INTERVAL: 10125-10145WELL NO.: 7/11-3XTEST NO.: DST No. 7

TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
		Dead weight	
1857			Opened for initial flow period. Well flowed 1.5 bbls during first minute, then flowed 5.00 bbls during remaining 14 minutes for an average rate of 0.32 BPM.
1912		< 50	Shut in for pressure build-up.
1913		650	
1915		1050	
1916		1200	
1917		1300	
1918		1380	
1919		1445	
1920		1500	
1925		1630	
1930		1690	
1945		1750	
2000		1765	
2015		1770	
2030		1775	
2045		1777	
2100		1777	Completed Initial shut-in. Opened well. Well flowed 82.25 bbls diesel oil at a rate of 19.4 BPH.
0115			Well flowed through port flow line and
0220		50	a 1/4" choke. Vent was lighted and burned.
0225		55	Well flowed water with a trace of oil and gas.



TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
0230		57	
0235		55	
0240		55	
2045		55	
0300		45	
0315		45	
0320			Flowed into B-J Services tank. Samples were taken
0340			for analysis.
0340			Flowed back through port flow line.
0345		45	
0400		45	
0415		45	
0430		45	
0445		45	
0645		45	
0700		47	
0715		47	Flowed back into B-J Services tank. Sample were
			taken for analysis.
1115		19	Flowed through separator.
1215		19	
1230		19	
1245		21	
1300		21	
1315		21	
1330		21	
1345		22	
1400		22	



FORMATION FLUID SAMPLE ANALYSIS  
DST No. 7

Time	Choke Inches	Rate bbls/ min.	Pressure Psig	Resistivity at temp. °F.	Cl ppm	Retort %
0330	1/4	0.216	40-55	0.268 at 48	23,000	Oil - 2; Water 98
0730	"	0.275	45	0.321 at 50	15,500	Oil -20; Water 80
0900	"	0.273	N.R.	0.325 at 50	16,000	Oil -22; Water 75
1030	"	0.272	N.R.	0.335 at 49	16,000	Oil -25; Water 75
1100	"	0.270	N.R.	0.349 at 49	15.400	Oil -26; Water 74
1500	1/2	0.300	20	0.320 at 49	16,000	

Note: The above samples were taken at various times after the diesel oil was unloaded from the tubing and formation fluid had reached the surface.

DATE: December 29, 1968



# PHILLIPS PETROLEUM CO.

Sheet 1 of 1

WELL: 7/11-3X

## WELL PRODUCTION TEST

TEST NO.: DST No. 7

METER RUN SIZE: 4,026" I.D.

PERF.ZONE: 10125-10145  
 GAS OIL WATER

WELLHEAD.			METER ORIFICE	DIFF hw	METER PRESS	METER TEMP	$\sqrt{hw P}$	1	2	3	4	C	mmcf/d	bpd	bpd
TIME	PRESS	TEMP			psia	°F		F <sub>tf</sub>	F <sub>b</sub>	F <sub>b</sub> x 24	F <sub>g</sub>	F <sub>pv</sub>			
1115			0.500"										MCFD		
1130															
1200				204	35	45	84.7	1.0147	50.224	1205.37	1.2403	1.003	1517.04	128.493	
1230				186	35	45	80.9	1.0147	"	"	"	1.003	1517.04	122,725	94.56 334.56
1300				186	35	45	80.9	1.0147	"	"	"	1.003	1517.04	122.725	74.88 327.36
1330				180	35	45	79.4	1.0147	"	"	"	"	1517.04	120.450	89.76 340.32
1400				174	35	45	78.1	1.0147	"	"	"	"	1517.04	118.477	
1430				174	35	45	78.1	1.0147	"	"	"	"	1517.04	118.477	
1500				177	35	45	78.9	1.0147	"	"	"	"	1517.04	119.691	



# CONFIDENTIAL

## PHILLIPS PETROLEUM COMPANY WELL PRODUCTION TEST

Well 7/11-3X  
DST No. 8  
Interval: 9960-9990  
Date of Test: December 30, 1968 through 31, 1968  
Hole Size: 7" Casing set at 10960 RKB

### Test String Make-up

Bottom to Top:

<u>Item</u>	<u>I.D.</u>	<u>Length</u>	<u>RKB Setting Depth</u>
a) Bottom of Bull Nose		0.05	9961.44
b) B-J Bull Nose	2.75	2.50	9958.94
c) B-J Recorder Nose	2.75	4.00	9954.94
d) B-J Perforated Joint	2.75	1.00	9953.94
e) B-J Recorder Hanger	2-5/16	1.00	9952.94
f) B-J Recorder Case	2.75	4.00	9948.94
g) B-J Recorder Hanger	2-5/16	1.00	9947.94
h) Cross-Over, 3½ FH Box x 3½ IF Pin	2.50	0.85	9947.09
i) Cross-Over, 3½ EUE Box x 3½ IH Pin	2-7/16	1.00	9946.09
j) One Joint Perforated Tubing	2.992	31.25	9914.84
k) Cross-Over, 3½ EUE Pin x 3½ EUE Box	3-3/8	0.78	9914.06
l) Baker Packer	2-3/8	6.40	9907.66
m) Cross-Over, 2-7/8 EUE Pin x 3½ EUE Box	2-3/8	0.90	9906.76
n) 310 Joints 3½" Tubing	2.992	9571.76	335.00
o) OTIS TEST TREE	2.50	24.25	310.75
p) Cross-Over, 2-7/8 EUE Pin x 3½ EUE Box	2-3/8	0.90	309.85
q) One 6', 3½ EUE Pup	2.992	6.00	303.85
r) 9 Joints, 3½ EUE 8RD Tubing	2.992	279.00	24.85
s) One Joint, 3½ EUE 8RD	2.992	31.00	-6.15
t) Cross-Over, 4½ IF Box x 3½ EUE Pin	3.00	1.50	-7.65
u) Hydrill Valve		2.00	-9.65
v)		4.50	

The following are attached to this report:

1. Test procedure
2. Wellhead pressure measurements.



# PHILLIPS PETROLEUM COMPANY

Packer set at 9908  
Perforations 9960-9990'

EST STARTED: 1818 hrs Dec. 30, 68

EST COMPLETED: 2333 hrs Dec. 30, 68

## DST NO. 8 SUMMARY

DEPTH OF PRESSURE RECORDER: No. 2758 set at 9949; No. 2760 set at 9955'.

Operation	Time		Length of Test		Choke Size	Wellhead		Gas MMCFD	Oil BPD	GOR Cu.Ft./STB	Water BPD	BHP PSIA
	From	To	Hrs.	Mins.		Press PSIA	Temp °F					
IF	1818	1833	-	15	1"	0	N.R.	None	82	None	None	
ISI	1833	2130	2	57	None	374	N.R.	None	None	None	None	
FF	2130	2230	1	00	1"	0	N.R.	None	4.8	None	None	
FSI	2230	2333	1	03	None	275	N.R.	None	None	None	None	
No. 2760 Recorder (field readings)												
					Operation	Pressure						
					IHP	6381						
					IF <sub>1</sub>	3647						
					FIF <sub>1</sub>	3644						
					ISI	3955						
					IF <sub>2</sub>	3639						
					FF <sub>2</sub>	3644						
					FSI	3906						
					FHP	6344						

DATE: Dec. 30, 1968**PHILLIPS PETROLEUM CO.**LEASE: Blk 7/11

SURFACE PRESSURE

INTERVAL: 9960-9990WELL NO.: 7/11-3XTEST NO.: DST No. 8

TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
		Dead weight	
1818			Opened for initial flow period. Well flowed 1.5 bbls during first minute of flow and 0.8 bbls during last 14 minutes of flow.
1833		50	Shut in for pressure build-up.
1845		20	
1900		71	
1915		115	
1930		149	
1945		183	
2000		209	
2015		235	
2030		261	
2045		286	
2100		311	
2115		335	
2130		359	Completed initial shut-in. Opened well and flowed 0.2 bbls one hour.
2230		0	Shut in for pressure build-up.
2245		39	
2300		115	
2315		189	
2330		260	