

DST No. 4

Perforations: 10560-10580

No.	I.D.	O.D.	Description	Length	Depth
			Baker Test Head		
			Hydril Valve		
			Tubing Above RKB (Less)	6	-6
9	2.441	2 7/8	6.50 lb N-80 8R Tubing	278.92	272.92
			Otis SST Tree Slick Jt. & Hanger	27.00	299.92
323	"	"	6.50 lb N-80 Tubing	10064.30	10369.22
1	2 17/32	4 3/8	3 1/2 IF Pin x 2 7/8 Eue 8R Box	1.00	10365.22
1	2 17/32	"	3 1/2 IF x Pin Knock out sub	1.00	10366.22
1	2.5	"	2 7/8" Eue 8R Pin by 3 1/2 IF Box Sub	1.00	10367.22
3	2.441	2 7/8	6.50 lb N-80 Eue 8R Tubing	93.63	10460.85
			6.50 lb N-80 Eue 8R Tubing Sub		
1	2 1/8	3 3/4	2 7/8 x 3 1/2 Eue 8R Swage w/collar	0.70	10461.55
1	2 5/8	4 3/4	3 1/2 Eue 8R box x 3 1/2 IF Pin Sub	1.00	10462.55
1	5/8	"	B.J. HMV Tool (Safety Valve)	7.15	10469.70
1	2 11/16	"	3 1/2 IF Box by 3 1/2 Eue with 3 1/2 8R Collar	1.00	10470.70
1	2.441	"	3 1/2 Eue x 2 7/8 Eue 8R Swage	0.75	10471.45
1	"	5.884	B.J. FFC Packer	4.24	10475.69
1	"	2 7/8	6.50 lb N-80 EUE 8R Tubing	31.35	10507.04
1	"	2 7/8	6.50 N-80 Eue 8R Tubing per Jt.	31.52	10538.56
1	2.5	3.5	Recorder Hanger No. 2758	1.00	10539.56
1	"	"	Recorder Case	4.00	10543.56
1	"	"	Recorder Hanger No. 2759	1.00	10544.56
1	"	"	Recorder Case	4.00	10548.56
1	"	"	Recorder Hanger No. 2760	1.00	10549.56
1	"	"	Recorder Case	4.00	10553.56
			Overall Length of String	10559.56	





DATE: July 19, 1970

WELL: 2/4-3X

METER RUN SIZE: 7.625 I.D.



# PHILLIPS PETROLEUM CO.

WELL PRODUCTION TEST

Sheet 1 of 2

TEST NO.: 4

PERF. ZONE: 10560 - 10580

GAS OIL ~~GOR 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		Ftf	Fb	Fb x 24	Fg	Fpv			
Well flowed thru separator at 1700 hrs. July 19, 1970. Opening chokes wide open (3/4" & 3/4"). Stabilizing flow at 2000 hrs.															
2000	547	65	8x1.000	85	435	98		0.9653	200.46	4811	1.2263			1008	
2015	"	"	"	"	"	"		"	"	"	"			1018	
2030	550	"	"	"	"	"		"	"	"	"			"	
2045	"	"	"	"	"	"		"	"	"	"			1008	
2100	552	"	"	"	"	"		"	"	"	"			1037	
2115	554	"	"	"	"	99		0.9645	"	"	"			1018	
2130	556	"	"	"	"	97		0.9662	"	"	"			1027	
2145	"	"	"	"	"	"		"	"	"	"			"	
2200	"	"	"	"	"	96		0.9671	"	"	"			1037	
2215	"	"	"	"	"	"		"	"	"	"			1027	
2230	559	"	"	"	445	"		"	"	"	"			1037	
2245	"	"	"	"	"	98		0.9653	"	"	"			"	
2300	562	"	"	"	"	"		"	"	"	"			"	
2315	564	"	"	"	"	"		"	"	"	"			"	
2330	"	"	"	"	"	"		"	"	"	"			"	
2345	565	66	"	"	"	"		"	"	"	"			1056	
2400	568	"	"	86	"	"		"	"	"	"			1047	
0015	570	67	"	"	"	"		"	"	"	"			"	
0030	568	66	"	"	"	"		"	"	"	"			1056	
0045	567	"	"	87	455	"	196.5	"	"	"	"	1.0276	5844	1.148	1087
0100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
0115	568	"	"	"	"	"	"	"	"	"	"	"	"	"	"
0130	572	67	"	"	"	"	"	"	"	"	"	"	"	"	"





TIME	WELLHEAD		REMARKS
	TEMP °F	PRESS PSIG	
0300			Shut Well in for FSI
0305	67	770	
0310	64	959	
0315	62	1150	
0320	61	1370	
0325	61	1680	
0330	61	1920	
0345	68	3450	
0400	62	3800	
0415	56	3855	
0430	54	3895	
0445	52	3915	
0500	51	3930	
0515	51	3943	
0530	50	3955	
0545	50	3957	
0600	50	3967	
0615	50	3974	
0630	50	3975	
0645	51	3980	
0700	51	3980	
0715	50	3980	
0730	50	3980	
0745	49	3989	
0800	49	3991	
0815	49	3993	
0830	50	3995	
0845	50	3997	





# DRILL-STEM TEST DATA

Well Name <u>Phillips Ekofisk</u>		Test No <u>Four</u>
Well Number <u>2-4-3X</u>		Zone Tested
Company <u>Phillips Petroleum Company Norway</u>		Interval <u>10560 to 10580 4 Shots</u> ft.
Comp Rep <u>J. Winget</u>	Tester <u>D. Williams</u>	Date <u>July 19 &amp; 20, 1970</u>

Type of Test Casing RFS Tool No. \_\_\_\_\_

Preflow \_\_\_\_\_ mins. ISI \_\_\_\_\_ mins. Flow \_\_\_\_\_ mins. FSI \_\_\_\_\_ mins.

Specify Inside or Outside	INS REC. No. <u>2758</u>	INS REC. No. <u>2759</u>	INS REC. No. <u>2760</u>
	<u>10600</u> RANGE <u>72</u> HR. CLOCK	<u>10650</u> RANGE <u>72</u> HR. CLOCK	<u>10650</u> RANGE <u>72</u> HR. CLOCK
DEPTH	<u>10539.56</u>	<u>10544.56</u>	<u>10549.56</u>
Initial Hydro Mud Press	<u>7939</u>	<u>7963</u>	<u>7968</u>
Initial Shut-In Press			
Initial Flow Press	<u>1424</u>	<u>1359</u>	<u>1329</u>
Final Flow Press	<u>2261</u>	<u>2223</u>	<u>2185</u>
Final Shut-In Press	<u>7088</u>	<u>7059</u>	<u>7027</u>
Final Hydro Mud Press	<u>8116</u>	<u>8087</u>	<u>8100</u>

Mud Drop Nil Fluid Loss 3.2 Mud Weight 14.4  
 Viscosity 45 Temperature °F 267 F Net Pay Tested \_\_\_\_\_  
 Top Packer Depth 10475.69 Bottom Packer Depth \_\_\_\_\_ Total Depth 10581  
 Drill Pipe Size 2 7/8" - T Wt. 6.5 Drill Collar I.D. \_\_\_\_\_ Ft. Run \_\_\_\_\_  
 Surface Choke Size \_\_\_\_\_ Bottom Choke Size 5/8" Main Hole Size 9 5/8" 47# CSG  
 Anchor Size 2 7/8" - 3.5 OD Rat Hole Size 7" 29# CSG Feet of Rat Hole \_\_\_\_\_  
 Cushion Amount 5000 Type Fresh Water Rubber Size 5.812

Fluid Recovery Total Feet Pumped Fluid in formation then reversed circulation  
 Recovered \_\_\_\_\_ Feet of \_\_\_\_\_  
 Recovered \_\_\_\_\_ Feet of \_\_\_\_\_  
 Recovered \_\_\_\_\_ Feet of \_\_\_\_\_  
 Recovered \_\_\_\_\_ Feet of \_\_\_\_\_  
 Recovered \_\_\_\_\_ Feet of \_\_\_\_\_

Gas Recovery How Measured \_\_\_\_\_ Riser size: \_\_\_\_\_

_____ mins.	Temp. °F	Press Rdg. _____ psi	Orifice Size _____	= _____	MCF/Day
_____ mins.	Temp. °F	Press Rdg. _____ psi	Orifice Size _____	= _____	MCF/Day
_____ mins.	Temp. °F	Press Rdg. _____ psi	Orifice Size _____	= _____	MCF/Day
_____ mins.	Temp. °F	Press Rdg. _____ psi	Orifice Size _____	= _____	MCF/Day
_____ mins.	Temp. °F	Press Rdg. _____ psi	Orifice Size _____	= _____	MCF/Day
_____ mins.	Temp. °F	Press Rdg. _____ psi	Orifice Size _____	= _____	MCF/Day

Bleed Off Time for Drill Pipe \_\_\_\_\_

REMARKS Fair air blow. Water cushion to surface after 33 min. mud to surface after 49 mins. oil to surface after 54 mins. Let well clean up for 62 mins. then flowed through separator for remainder of test. Killed well by pumping in before pulling loose.

DRILL STEM TEST NUMBER FOUR

PRESSURE COMPARISON

Point	Recorder # 2758	Recorder # 2759	Recorder # 2760
A	7989	7963	7968
B	2761	2728	2745
C	3924	3946	3924
D	1424	1359	1353
E	1739	1701	1652
F	2261	2223	2185
G	7088	7059	7027
H	8116	8087	8100

Point	Surface	TIME DEFLECTION COMPARISON (MIN)		
		# 2758	# 2759	# 2760
A to D	116	125	130	130
D to F	600	567	612	614
F to G	600	533	553	552

PLEASE NOTE THE CLOCK IN RECORDER # 2758 SEEMS TO HAVE BEEN RUNNING SLIGHTLY SLOWER THAN THE OTHER RECORDER DURING THIS TEST. FOR THIS REASON WE HAVE EXTRAPOLATED THE SHUT IN PRESSURE RECORDED ON 2759.

DRILL STEM TEST NUMBER FOUR

Operation	Length of Test		Choke Size	Wellhead	
	Hrs.	Mins.		Press PSIA	Temp F
Clean Up Flow	1	56	2 - 48/64"	NR	
F.F.	10		2 - 48/64"	593	66
FSI	10		None	4022	

DRILL STEM TEST NUMBER FOUR

TOOL DRAWING D.S.T. # 4

No.	I.D.	O.D.	Description	Length	Depth
			Baker Test Head		
			Hydril Valve		
			Tubing Above Rkb Less	6	-6
9	2.441	2 7/8	6.50 lb. N80 8R Tubing	278.92	272.92
			Otis SST Tree Slick Jt. & Hanger	27.00	299.92
323	2.441	2 7/8	6.50lb N 80 Tubing	10064.30	10364.22
1	2 17/32	4 3/8	3 1/2 IF Pin X 2 7/8 Eue 8R Box	1.00	10365.22
1	2 17/32	4 3/8	3 1/2 IF X Pin Knock out sub	1.00	10366.22
1	2.5	4 3/8	2 7/8" Eue 8R Pin X 3 1/2 IF Box sub	1.00	10367.22
3	2.441	2 7/8	6.50lb N80 Eue 8R Tubing	93.63	10460.85
			6.50lb N80 Eue 8R Tubing Sub		
1	2 1/8	3 1/2	2 7/8 X 3 1/2 Eue 8R Swage w/collar	0.70	10461.55
1	2 5/8	4 1/2	3 1/2 Eue 8R box X 3 1/2 IF Pin sub	1.00	10462.55
1	5/8	4 1/2	BJ HMV Tool (Safety Valve)	7.15	10469.70
1	2 11/16	4 1/2	3 1/2 IF Box X 3 1/2 Eue w/3 1/2 8R collar	1.00	10470.70
1	2.441	4 1/2	3 1/2 Eue X 2 7/8 Eue 8R Swedge	0.75	10471.45
1	2.441	5.881	BJ FFC Packer	4.24	10475.69
1	2.441	2 7/8	6.50lb N 80 Eue 8R Tubing	31.35	10507.04
1	2.441	2 7/8	6.50lb N80 Eue 8R Tubing Perf Jt.	31.52	10538.56

DRILL STEM TEST NUMBER FOUR

TOOL DRAWING D.S.T. # 4

No.	I.D.	O.D.	Description	Length	Depth
1	2.5	3.5	Recorder Hanger No. 2758	1.00	10539.56
1	2.5	3.5	Recorder Case	4.00	10543.56
1	2.5	3.5	Recorder Hanger No. 2759	1.00	10544.56
1	2.5	3.5	Recorder Case	4.00	10548.56
1	2.5	3.5	Recorder Hanger No. 2760	1.00	10549.56
1	2.5	3.5	Recorder Case	4.00	10553.56
Overall Length of String				10559.56	



5 min DST PRESSURE INCREMENTS On clean up flow Point A to D

Recorder No. 2758

Depth 10540

Page 1 of 1

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + 0	$\frac{T + 0}{0}$	PSIG	Time Defl. "	T + 0	$\frac{T + 0}{0}$	PSIG
1	0	Point A		7989	120			1419
2	5			6567	125	Point D		1424
3	10			6059				
4	15			5332				
5	20			4665				
6	25			3989				
7	30			3082				
8	35	Point B		2761				
9	40			3098				
10	45			3422				
11	50			3660				
12	55	Point C		3924				
13	60			3838				
14	65			3562				
15	70			3292				
16	75			3060				
17	80			2886				
18	85			2684				
19	90			2337				
20	95			2049				
21	100			1809				
22	105			1625				
23	110			1533				
24	115			1533				



5 min DST PRESSURE INCREMENTS On flow period Point D to F

Recorder No. 2758

Depth 10540

Page 1 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + G	$\frac{T+G}{G}$	PSIG	Time Defl. "	T + G	$\frac{T+G}{G}$	PSIG
1	0	Point D		1424	120			2196
2	5			1636	125			2199
3	10			1679	130			2202
4	15			1707	135			2202
5	20			1728	140			2202
6	25	Point E		1739	145			2202
7	30			1842	150			2199
8	35			1929	155			2196
9	40			2011	160			2194
10	45			2060	165			2191
11	50			2103	170			2191
12	55			2131	175			2191
13	60			2147	180			2191
14	65			2164	185			2191
15	70			2169	190			2191
16	75			2172	195			2191
17	80			2175	200			2191
18	85			2180	205			2191
19	90			2180	210			2194
20	95			2183	215			2194
21	100			2185	220			2196
22	105			2188	225			2196
23	110			2191	230			2199
24	115			2194	235			2199



5 min DST PRESSURE INCREMENTS On flow period Point D to F

Recorder No. 2758

Depth 10540

Page 2 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + 0	$\frac{T + 0}{0}$	PSIG	Time Defl. "	T + 0	$\frac{T + 0}{0}$	PSIG
1	240			2202	360			2229
2	245			2204	365			2229
3	250			2204	370			2229
4	255			2207	375			2231
5	260			2207	380			2231
6	265			2210	385			2234
7	270			2210	390			2234
8	275			2212	395			2234
9	280			2212	400			2237
10	285			2212	405			2237
11	290			2215	410			2237
12	295			2215	415			2237
13	300			2215	420			2237
14	305			2215	425			2237
15	310			2215	430			2237
16	315			2218	435			2239
17	320			2218	440			2239
18	325			2218	445			2239
19	330			2221	450			2239
20	335			2223	455			2242
21	340			2223	460			2242
22	345			2223	465			2242
23	350			2226	470			2242
24	355			2226	475			2245



5 min DST PRESSURE INCREMENTS On flow period Point D to F

Recorder No. 2758

Depth 10540

Page 3 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+0	$\frac{T+0}{0}$	PSIG	Time Defl. "	T+0	$\frac{T+0}{0}$	PSIG
1	480			2245				
2	485			2245				
3	490			2245				
4	495			2245				
5	500			2245				
6	505			2248				
7	510			2248				
8	515			2248				
9	520			2248				
10	525			2250				
11	530			2250				
12	535			2250				
13	540			2253				
14	545			2255				
15	550			2255				
16	555			2258				
17	560			2261				
18	567	Point	F	2261				
19								
20								
21								
22								
23								
24								



5 min DST PRESSURE INCREMENTS On F.S.I.P. Point F to G

Recorder No. 2758

Depth 10540

Page 1 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + G	$\frac{T+G}{G}$	PSIG	Time Defl. "	T + G	$\frac{T+G}{G}$	PSIG
1	0	Point F		2261	120			7011
2	5			2897	125			7016
3	10			3903	130			7016
4	15			6332	135			7022
5	20			6701	140			7024
6	25			6781	145			7027
7	30			6824	150			7029
8	35			6856	155			7032
9	40			6877	160			7035
10	45			6893	165			7035
11	50			6909	170			7037
12	55			6920	175			7040
13	60			6936	180			7040
14	65			6947	185			7043
15	70			6955	190			7048
16	75			6963	195			7048
17	80			6971	200			7048
18	85			6979	205			7051
19	90			6984	210			7051
20	95			6989	215			7051
21	100			6995	220			7051
22	105			7000	225			7056
23	110			7003	230			7059
24	115			7005	235			7059



## 5 min DST PRESSURE INCREMENTS On F.S.I.P. Point F to G

Recorder No 2758

Depth 10540

Page 2 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG
1	240			7059	360			7075
2	245			7059	365			7075
3	250			7061	370			7075
4	255			7061	375			7075
5	260			7064	380			7075
6	265			7064	385			7080
7	270			7064	390			7080
8	275			7064	395			7082
9	280			7066	400			7082
10	285			7069	405			7082
11	290			7069	410			7082
12	295			7069	415			7082
13	300			7069	420			7082
14	305			7069	425			7082
15	310			7069	430			7082
16	315			7072	435			7085
17	320			7072	440			7085
18	325			7072	445			7085
19	330			7072	450			7085
20	335			7072	455			7085
21	340			7072	460			7085
22	345			7072	465			7085
23	350			7075	470			7085
24	355			7075	475			7085



5 min DST PRESSURE INCREMENTS On F.S.I.P. Point F to G

Recorder No. 2758

Depth 10540

Page 3 of 3

Points	Time Defl. "	INITIAL CIP			Time Defl. "	FINAL CIP		
		T + 0	$\frac{T + 0}{0}$	PSIG		T + 0	$\frac{T + 0}{0}$	PSIG
1	480			7085				
2	485			7085				
3	490			7085				
4	495			7085				
5	500			7085				
6	505			7085				
7	510			7085				
8	515			7088				
9	520			7088				
10	525			7088				
11	530			7088				
12	533	Point	G	7088				
13		Point	H	8116				
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								



5 min DST PRESSURE INCREMENTS On clean up flow Point A to D

Recorder No. 2759

Depth 10544

Page 1 of 1

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG
1	0	Point A		7963	120			1457
2	5			7187	125			1402
3	10			6524	130	Point D		1359
4	15			5850				
5	20			5304				
6	25			4565				
7	30			3924				
8	35			3081				
9	40	Point B		2728				
10	45			3076				
11	50			3346				
12	55			3600				
13	60			3870				
14	65	Point C		3946				
15	70			3595				
16	75			3341				
17	80			3146				
18	85			2995				
19	90			2761				
20	95			2478				
21	100			2169				
22	105			1886				
23	110			1718				
24	115			1549				



5 min DST PRESSURE INCREMENTS On flow period Point D to F

Recorder No. 2759

Depth 10544

Page 1 of 3

Points	Time Defl. "	INITIAL CIP			Time Defl. "	FINAL CIP		
		T+0	$\frac{T+0}{0}$	PSIG		T+0	$\frac{T+0}{0}$	PSIG
1	0	Point D		1359	120			2158
2	5			1463	125			2161
3	10			1603	130			2163
4	15			1652	135			2163
5	20			1674	140			2169
6	25	Point E		1701	145			2169
7	30			1782	150			2171
8	35			1891	155			2171
9	40			1978	160			2169
10	45			2033	165			2169
11	50			2071	170			2166
12	55			2092	175			2163
13	60			2114	180			2163
14	65			2125	185			2161
15	70			2131	190			2161
16	75			2136	195			2161
17	80			2142	200			2161
18	85			2144	205			2161
19	90			2147	210			2161
20	95			2147	215			2161
21	100			2150	220			2161
22	105			2152	225			2161
23	110			2152	230			2161
24	115			2155	235			2161



5 min DST PRESSURE INCREMENTS On flow period Point D to F

Recorder No. 2759

Depth 10544

Page 2 of 3

Points	Time Defl. "	INITIAL CIP			Time Defl. "	FINAL CIP		
		T+Θ	$\frac{T+\Theta}{\Theta}$	PSIG		T+Θ	$\frac{T+\Theta}{\Theta}$	PSIG
1	240			2161	360			2185
2	245			2163	365			2185
3	250			2163	370			2185
4	255			2166	375			2188
5	260			2166	380			2188
6	265			2169	385			2190
7	270			2169	390			2190
8	275			2171	395			2190
9	280			2171	400			2193
10	285			2174	405			2193
11	290			2174	410			2193
12	295			2174	415			2196
13	300			2177	420			2196
14	305			2177	425			2196
15	310			2177	430			2196
16	315			2177	435			2198
17	320			2179	440			2198
18	325			2179	445			2198
19	330			2179	450			2198
20	335			2179	455			2198
21	340			2179	460			2201
22	345			2182	465			2201
23	350			2182	470			2204
24	355			2182	475			2204



5 min DST PRESSURE INCREMENTS On flow period Point D to F

Recorder No. 2759

Depth 10544

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Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+0	$\frac{T+0}{0}$	PSIG	Time Defl. "	T+0	$\frac{T+0}{0}$	PSIG
1	480			2204	600			2218
2	485			2204	605			2221
3	490			2204	610			2223
4	495			2207	612	Point F		2223
5	500			2207				
6	505			2207				
7	510			2207				
8	515			2207				
9	520			2207				
10	525			2209				
11	530			2209				
12	535			2209				
13	540			2209				
14	545			2209				
15	550			2212				
16	555			2212				
17	560			2212				
18	565			2215				
19	570			2215				
20	575			2215				
21	580			2218				
22	585			2218				
23	590			2218				
24	595			2218				



5 min DST PRESSURE INCREMENTS On F.S.I.P. Point F to G

Recorder No 2759

Depth 10544

Page 1 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG
1	0	Point F		2223	120			6979
2	5	747	150	2782	125			6984
3	10			3789	130			6989
4	15			6113	135			6989
5	20			6669	140			6992
6	25			6749	145			6995
7	30			6794	150	892	5.95	6997
8	35			6824	155			7000
9	40			6845	160			7003
10	45	787	17.5	6867	165			7005
11	50			6877	170			7005
12	55			6893	175			7008
13	60			6904	180			7011
14	65			6914	185	927	5.00	7011
15	70			6925	190			7016
16	75			6931	195			7016
17	80	822	10.3	6939	200			7016
18	85			6947	205			7019
19	90			6952	210			7022
20	95			6958	215			7022
21	100			6963	220	962	4.37	7022
22	105			6968	225			7024
23	110			6971	230			7024
24	115	857	7.45	6974	235			7024



## 5 min DST PRESSURE INCREMENTS On F.S.I.P. Point F to G

Recorder No. 2759

Depth 10544

Page 2 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG
1	240			7027	360	1102	3.06	7046
2	245			7027	365			7046
3	250			7030	370			7046
4	255	997	3.92	7030	375			7046
5	260			7032	380			7049
6	265			7032	385			7049
7	270			7032	390			7049
8	275			7032	395	1137	2.88	7049
9	280			7035	400			7049
10	285			7035	405			7049
11	290	1032	3.57	7035	410			7049
12	295			7038	415			7049
13	300			7038	420			7052
14	305			7038	425			7052
15	310			7038	430	1172	2.73	7052
16	315			7041	435			7052
17	320			7041	440			7054
18	325	1067	3.28	7041	445			7054
19	330			7043	450			7054
20	335			7043	455			7054
21	340			7043	460			7054
22	345			7043	465	1207	2.60	7054
23	350			7043	470			7054
24	355			7043	475			7054



5 min DST PRESSURE INCREMENTS On F.S.I.P. Point F to G

Recorder No.

Depth 10544

Page 3 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG
1	480			7054				
2	485			7054				
3	490			7054				
4	495			7054				
5	500	1242	2.49	7054				
6	505			7057				
7	510			7057				
8	515	1257	2.44	7057				
9	520	1262	2.42	7059				
10	525			7059				
11	530			7059				
12	535			7059				
13	540			7059				
14	545			7059				
15	550			7059				
16	553	1295	2.34	7059				
17		Point G						
18		Point H		8100				
19								
20								
21								
22								
23								
24								



5 min DST PRESSURE INCREMENTS On clean up flow Point A to D

Recorder No. 2760

Depth 10550

Page 1 of 1

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+@	$\frac{T+@}{@}$	PSIG	Time Defl. "	T+@	$\frac{T+@}{@}$	PSIG
1	0	Point	A	7968	120			1495
2	5			7151	125			1397
3	10			6487	130	Point	D	1353
4	15			5776				
5	20			4859				
6	25			4169				
7	30			3364				
8	35	Point	B	2745				
9	40			2864				
10	45			3185				
11	50			3424				
12	55			3679				
13	60	Point	C	3924				
14	65			3712				
15	70			3440				
16	75			3193				
17	80			3000				
18	85			2810				
19	90			2614				
20	95			2310				
21	100			2006				
22	105			1766				
23	110			1620				
24	115			1565				



5 mi DST PRESSURE INCREMENTS On flow period Point D to F

Recorder No. 2760

Depth 10550

Page 1 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG
1	0	Point D		1329	120			2120
2	5			1446	125			2122
3	10			1565	130			2125
4	15			1609	135			2128
5	20			1636	140			2131
6	25			1652	145			2133
7	30			1696	150			2136
8	35			1815	155			2133
9	40			1908	160			2133
10	45			1973	165			2131
11	50			2011	170			2131
12	55			2044	175			2131
13	60			2071	180			2128
14	65			2082	185			2125
15	70			2090	190			2125
16	75			2099	195			2125
17	80			2101	200			2125
18	85			2103	205			2125
19	90			2106	210			2125
20	95			2109	215			2125
21	100			2111	220			2125
22	105			2114	225			2125
23	110			2117	230			2125
24	115			2120	235			2125



5 min DST PRESSURE INCREMENTS On flow period Point D to F

Recorder No 2760

Depth 10550

Page 2 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG
1	240			2128	360			2147
2	245			2128	365			2147
3	250			2128	370			2150
4	255			2128	375			2150
5	260			2131	380			2152
6	265			2131	385			2152
7	270			2134	390			2152
8	275			2136	395			2152
9	280			2136	400			2152
10	285			2139	405			2158
11	290			2136	410			2158
12	295			2139	415			2158
13	300			2142	420			2158
14	305			2142	425			2161
15	310			2142	430			2161
16	315			2142	435			2161
17	320			2142	440			2161
18	325			2142	445			2163
19	330			2142	450			2163
20	335			2142	455			2163
21	340			2142	460			2163
22	345			2144	465			2166
23	350			2144	470			2166
24	355			2147	475			2166



5 mirDST PRESSURE INCREMENTS On flow period Point D to F

Recorder No. 2760

Depth 10550

Page 3 of 3

Points	Time Defl. "	INITIAL CIP			Time Defl. "	FINAL CIP		
		T+θ	$\frac{T+\theta}{\theta}$	PSIG		T+θ	$\frac{T+\theta}{\theta}$	PSIG
1	480			2166	600			2182
2	485			2166	605			2185
3	490			2166	610			2185
4	495			2169	614	Point F		2185
5	500			2169				
6	505			2169				
7	510			2169				
8	515			2169				
9	520			2169				
10	525			2171				
11	530			2171				
12	535			2171				
13	540			2171				
14	545			2171				
15	550			2174				
16	555			2174				
17	560			2174				
18	565			2177				
19	570			2177				
20	575			2179				
21	580			2179				
22	585			2179				
23	590			2179				
24	595			2182				



5 min DST PRESSURE INCREMENTS On F.S.I.P. Point F to G

Recorder No. 2760

Depth 10550

Page 1 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG
1	0	Point F		2185	120			6952
2	5			2956	125			6955
3	10			3924	130			6958
4	15			6332	135			6963
5	20			6648	140			6963
6	25			6722	145			6966
7	30			6764	150			6968
8	35			6791	155			6974
9	40			6813	160			6974
10	45			6834	165			6976
11	50			6845	170			6979
12	55			6861	175			6979
13	60			6872	180			6981
14	65			6883	185			6981
15	70			6893	190			6984
16	75			6898	195			6987
17	80			6904	200			6856
18	85			6914	205			6989
19	90			6920	210			6992
20	95			6925	215			6992
21	100			6931	220			6995
22	105			6936	225			6995
23	110			6941	230			6995
24	115			6947	235			6995



5 min DST PRESSURE INCREMENTS On F.S.I.P. Point F to G

Recorder No. 2760

Depth 10550

Page 2 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + $\theta$	$\frac{T + \theta}{\theta}$	PSIG
1	240			6997	360			7016
2	245			6997	365			7016
3	250			7000	370			7016
4	255			7000	375			7016
5	260			7000	380			7019
6	265			7003	385			7019
7	270			7003	390			7019
8	275			7005	395			7019
9	280			7005	400			7019
10	285			7005	405			7019
11	290			7005	410			7019
12	295			7008	415			7022
13	300			7011	420			7022
14	305			7011	425			7022
15	310			7011	430			7022
16	315			7011	435			7022
17	320			7011	440			7022
18	325			7011	445			7022
19	330			7012	450			7022
20	335			7012	455			7022
21	340			7012	460			7022
22	345			7012	465			7024
23	350			7012	470			7024
24	355			7016	475			7024



5 min DST PRESSURE INCREMENTS On F.S.I.P. Points F to G

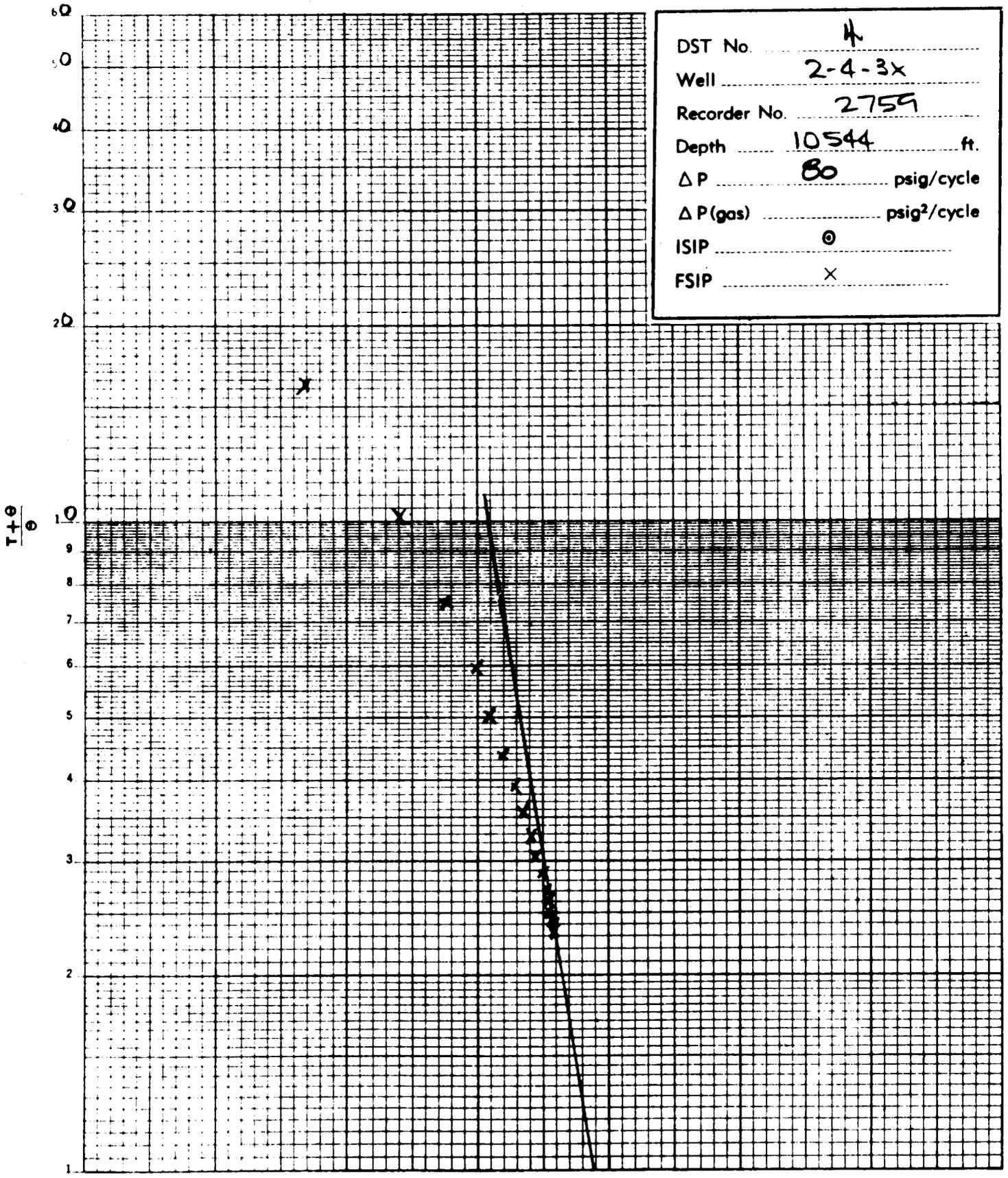
Recorder No. 2760

Depth 10550

Page 3 of 3

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T + θ	$\frac{T + \theta}{\theta}$	PSIG	Time Defl. "	T + θ	$\frac{T + \theta}{\theta}$	PSIG
1	480			7024				
2	485			7024				
3	490			7027				
4	495			7027				
5	500			7027				
6	505			7027				
7	510			7027				
8	515			7027				
9	520			7027				
10	525			7027				
11	530			7027				
12	535			7027				
13	540			7027				
14	545			7027				
15	550			7027				
16	552	Point	G	7027				
17		Point	H	8069				
18								
19								
20								
21								
22								
23								
24								

DST No.	4
Well	2-4-3x
Recorder No.	2759
Depth	10544 ft.
$\Delta P$	80 psig/cycle
$\Delta P$ (gas)	psig <sup>2</sup> /cycle
ISIP	⊙
FSIP	x



6700      6800      6900      7000      7100      7200      7300      7400

D

