

D. S. T. REPORT

Well Name	Phillips	Test No.	2
Well Number	7-11-1X	Zone Tested	II
Company	Phillips Petroleum Company	Interval	10,175 - 10,197.5
Comp. Rep.	J. Feters	Tester	H. Price
		Date	June 1, 1968





DRILL-STEM TEST DATA

Well Name Phillips		Test No 2
Well Number 7-11-1X		Zone Tested II
Company Phillips Petroleum Company		Interval 10,175 - 10,197.5
Comp. Rep. J. Feters	Tester H. Price	Date June 1, 1968

Type of Test **Casing Hook Wall** RFS Tool No. _____

Preflow **27** mins. ISI **350** mins. Flow **515** mins. FSI **440** mins.

Specify Inside or Outside	REC. No. 2758	REC. No. 2759	REC. No.
	RANGE 72 HR CLOCK	RANGE 48 HR CLOCK	RANGE _____ HR CLOCK
DEPTH	10,178	10,183	
Initial Hydro Mud Press	6,477	6,479	psi (9)
Initial Shut-In Press	6,082	6,085	psi (9)
Initial Flow Press	1,814 7,604	1,817 7,607	psi (9)
Final Flow Press	2,326	2,328	
Final Shut-In Press	3,013	3,016	
Final Hydro Mud Press	6,477	6,479	psi (9)

Mud Drop **Nil** Fluid Loss **13.0** Mud Weight **12.6# per gal.**
 Viscosity **43** Temperature °F **256** Net Pay Tested **20'**
 Top Packer Depth **-** Bottom Packer Depth **10,113** Total Depth **10,224**
 Drill Pipe Size **3 1/2" E.U.E.** Wt. **9.3** Drill Collar I.D. **2 1/4"** Sub Ft Run **283.21**
 Surface Choke Size **1/4" Adj.** Bottom Choke Size **2" ID Bumper** Main Hole Size **9-5/8" X 47# Casing**
 Anchor Size **3 1/2" E.U.E.** Rat Hole Size _____ Feet of Rat Hole _____
 Cushion Amount **575'** Type **Sea water** Rubber Size _____
2080' **15% Acid**
 Fluid Recovery Total Feet **7489'** **Diesel Oil @ - 7.2# per gallon**

~~XXXXXXXX~~ ~~XXXXX~~ Fluid Recovery Total Feet = **1690**
 Recovered **5 bbls** Feet of **Diesel oil with definite trace of crude oil**
 Recovered **10 bbls** Feet of **Diesel oil, water and acid mixture**
 Recovered **15 bbls** Feet of **Water & acid mixture**
 Recovered _____ Feet of _____

Gas Recovery How Measured **Adjustable choke gas flow** Riser size: _____
 equation

580 mins.	Temp. F	Press Rdg. 80 psi	Orifice Size _____	=	103	MCF Day
715 mins.	Temp. F	Press Rdg. 68 psi	Orifice Size _____	=	88	MCF Day
835 mins.	Temp. F	Press Rdg. 60 psi	Orifice Size _____	=	78	MCF Day
1045 mins.	Temp. F	Press Rdg. 50 psi	Orifice Size _____	=	64	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 _____

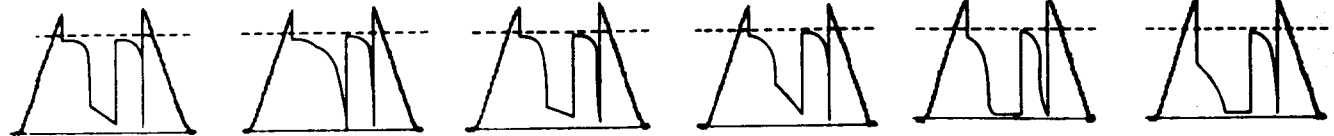
REMARKS: **Open tool on initial flow, surface press. 0. Final flow rate 1.5 bbl/hr. Total flow back 2.5 bbl., shut tool in for 350 mis. then opened & squeezed acid into formation at 1 BPM. Shut in 15 mins, opened for final flow period, flowed diesel oil at 4.2 bbls./hr. until well unloaded with strong flow of gas, diesel oil about 55 bbl volume decreased to low volume dry gas flow and remained same throughout remainder of test. Pulled loose and bunched out.**



4S LANDING SUB		
XXXXXX X-Over Sub		
XXXXXX 4 Jt. D Pipe		
XXXXXX Pup Jt. (7')	185.80	
XXXXXX P.B. Bumper Sub	22.36	(Closed)
XXXXXX X-Over Sub	.80	
XXXXXX 2 Jts. Drill Pipe	88.79	
XXXXXX X-Over Sub	.74	
XXX Otis Test Tree	22.48	
RECORDER No.		DEPTH
RECORDER No. X-Over Sub	.80	DEPTH
XXXXXX 307 Jts. Tubing	9477.14	(3/2" X 9.6#)
XXXXXX X-Over Sub	1.76	
XXXXXX P.B. Bumper Sub	21.73	
(Closed)		
X-Over Sub	.85	
XXXXXX 9 Drill Collars	279.52	TOTAL TOOL ABOVE INTERVAL
ANCHOR—SPECIFY		
BLANK OFF OR BY PASS SUR		
RECORDER No.		DEPTH
X-Over Sub	1.62	
PACKER	8.35	TOTAL INTERVAL
3. PACKER DEPTH	10,113	
4. PACKER DEPTH		
ANCHOR—SPECIFY 1Jt. Tubing	31.75	
1Jt. Perf. Tubing	31.57	
X-Over Sub	1.60	
RECORDER No. 2758 (Ins.)	5.00	DEPTH 10,178
Recorder No. 2759 (Outs)	5.00	Depth 10,183
BULLNOSE	2.45	TOTAL TAIL PIPE
		TOTAL TEST TOOL

TOTAL DEPTH 10,189

DST CHARTS FOR COMPARATIVE VISUAL ANALYSIS



B 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



5 min. DST PRESSURE INCREMENTS OF PREFLOW FROM

POINT A TO B (27 Mins.)

Test # 2

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP			FINAL CIP				
	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG
1	0	Point A		6717				
2	5			6179				
3	10			5568				
4	15			4304				
5	20			4299				
6	25			4296				
7	27	Point B		4294 ✓				
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5 Min. DST PRESSURE INCREMENTS OF INITIAL SHUTIN

Test # 2

POINT B TO C

(350 Mins)

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG
1	0	Point B		4294	150			5935
2	5			4370	155			5941
3	10			4609		no increment reading for 60		
4	15			4884		mins. due to stair stepping		
5	20			5056	215			6018
6	25			5175	220			6021
7	30			5277	225			6024
8	35			5374	230			6026
9	40			5439	235			6029
10	45			5498	240			6032
11	50			5541	245			6035
12		no increments reading for 50			250			6037
13		mins. due to recorder stair			255			6040
14		stepping.			260			6042
15	100			5822	265			6045
16	105			5837	270			6047
17	110			5849	275			6050
18	115			5864	280			6053
19	120			5874	285			6056
20	125			5885	290			6058
21	130			5897	295			6061
22	135			5907	300			6063
23	140			5919	305			6066
24	145			5928	310			6068



5 Min. DST PRESSURE INCREMENTS OF INITIAL SHUT-IN

Test # 2

POINT B TO C

(350 Mins.)

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG
1	315			6071				
2	320			6074				
3	325			6074				
4	330			6076				
5	335			6079				
6	340			6079				
7	345			6082				
8	350	Point C		6082				
9				6085				
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DST PRESSURE INCREMENTS ACID SQUEEZE

Test # 2

POINT C TO D (77 Mins)

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG
1		Point C		6082				
2		Point D		7604				
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DST PRESSURE INCREMENTS

Test # 2

POINT D TO E (18 Mins)

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP			FINAL CIP				
	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG
1		Point D		7604				
2		Point E		7424				
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DST PRESSURE INCREMENTS

Test # 2

POINT E TO F (25 Mins.)

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP			FINAL CIP				
	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG
1		Point E		7424				
2		Point F		4097				
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60 Min. DST PRESSURE INCREMENTS FROM POINT F TO G

Test # 2

(466 Mins.)

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG
1		Point F		4097				
2	60			4068				
3	120			4041				
4	180			4005				
5	240			3962				
6	300			3905				
7	360			3815				
8	420			3608				
9	466	Point G		1814				
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5 Min. DST PRESSURE INCREMENTS OF FINAL FLOW

Test # 2

POINT G TO H (515 Mins.)

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+@	$\frac{T+@}{@}$	PSIG	Time Defl. "	T+@	$\frac{T+@}{@}$	PSIG
1	0	Point G		1814	120			2081
2	5			1817	125			2084
3	10			1825	130			2087
4	15			1847	135			2092
5	20			1861	140			2095
6	25			1878	145			2098
7	30			1889	150			2103
8	35			1897	155			2109
9	40			1903	160			2114
10	45			1889	165			2117
11	50			1914	170			2119
12	55			1956	175			2122
13	60			1972	180			2125
14	65			1994	185			2125
15	70			2016	190			2127
16	75			2027	195			2128
17	80			2038	200			2130
18	85			2049	205			2135
19	90			2054	210			2138
20	95			2057	215			2141
21	100			2062	220			2147
22	105			2068	225			2152
23	110			2071	230			2155
24	115			2076	235			2160



5 Min.

DST PRESSURE INCREMENTS OF FINAL FLOW

Test # 2

POINT G TO H (515 Mins.)

Recorder No. 2758

Depth 10, 178

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG
1	240			2163	360			2236
2	245			2168	365			2242
3	250			2168	370			2244
4	255			2171	375			2247
5	260			2176	380			2250
6	265			2179	385			2253
7	270			2182	390			2255
8	275			2185	395			2258
9	280			2188	400			2261
10	285			2190	405			2266
11	290			2193	410			2269
12	295			2198	415			2272
13	300			2201	420			2274
14	305			2206	425			2277
15	310			2209	430			2279
16	315			2212	435			2282
17	320			2215	440			2285
18	325			2217	445			2288
19	330			2221	450			2291
20	335			2223	455			2293
21	340			2226	460			2296
22	345			2228	465			2299
23	350			2231	470			2302
24	355			2233	475			2304



5 Min. DST PRESSURE INCREMENTS OF FINAL FLOW

Test # 2

POINT G TO H (515 Mins.)

Recorder No. 2758

Depth 10,178

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			2304				
2	485			2309				
3	490			2312				
4	495			2315				
5	500			2318				
6	505			2320				
7	510			2323				
8	515	Point H		2326				
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C



5 Min. DST PRESSURE INCREMENTS OF FINAL SHUT-IN

Test # 2

FROM POINT H TO I

(440 Mins)

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP				FINAL CIP			
	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG	Time Defl. "	T+θ	$\frac{T+\theta}{\theta}$	PSIG
1	0	Point H _{9.0}		2326	120	11.0	5.0	2567
2	5			2334	125			2575
3	10			2350	130			2584
4	15			2364	135			2592
5	20			2375	140			2600
6	25			2388	145			2608
7	30	9.5	19.0	2399	150			2617
8	35			2407	155			2624
9	40			2413	160			2633
10	45			2423	165			2644
11	50			2434	170			2652
12	55			2443	175			2662
13	60	10.0	10.0	2454	180	12.0	4.0	2671
14	65			2464	185			2679
15	70			2475	190			2682
16	75			2483	195			2695
17	80	10.5		2494	200			2703
18	85			2503	205			2711
19	90	10.5	7.0	2513	210			2720
20	95			2521	215			2728
21	100			2532	220			2733
22	105			2540	225			2741
23	110			2548	230			2752
24	115			2559	235			2758



5 Min. DST PRESSURE INCREMENTS OF FINAL SHUT-IN

Test # 2

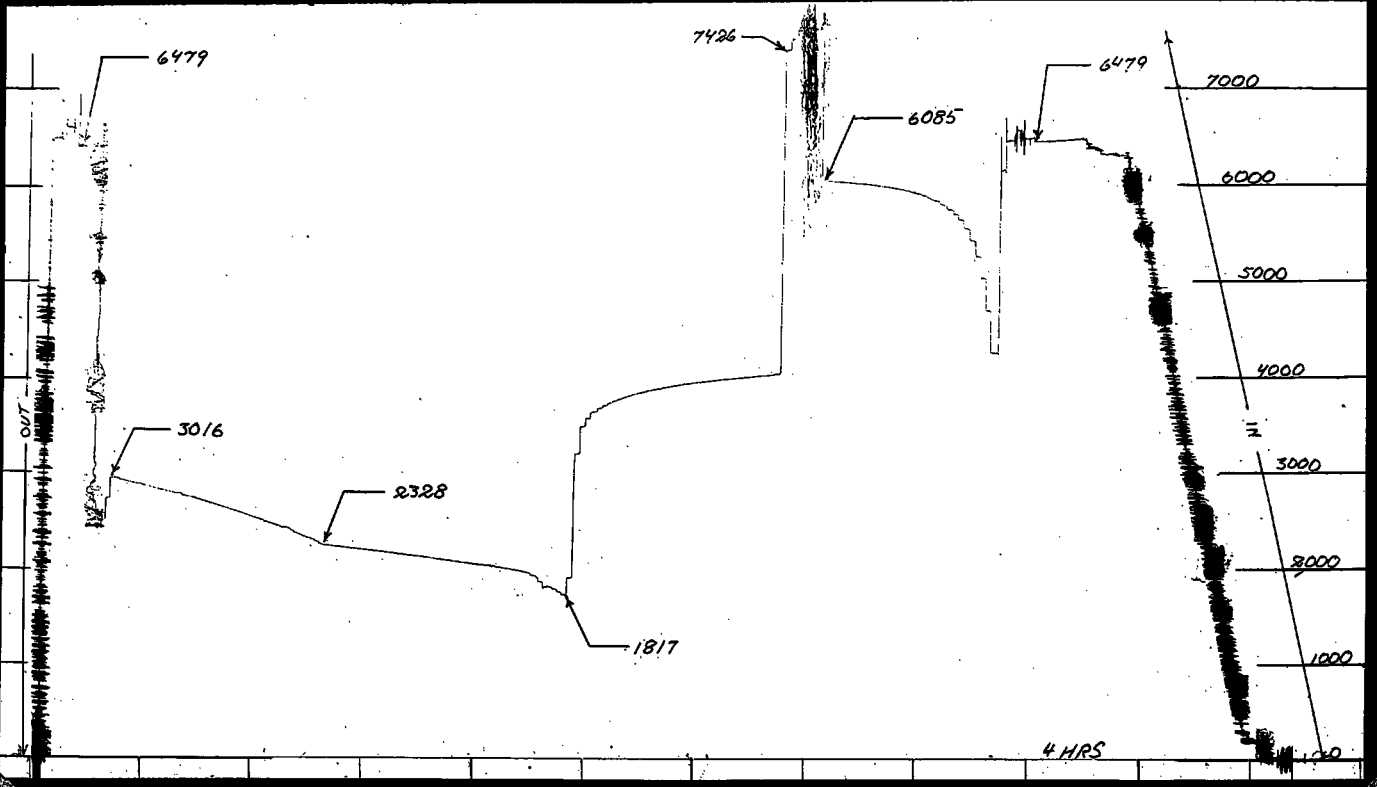
FROM POINT H TO I (440 Mins.)

Recorder No. 2758

Depth 10,178

Points	INITIAL CIP			FINAL CIP				
	Time Diff. "	T+0	$\frac{T+0}{0}$	PSIG	Time Diff. "	T+0	$\frac{T+0}{0}$	PSIG
1	240	13.0	3.25	2763	360	15.0	2.5	2918
2	245			2771	365			2925
3	250			2779	370			2931
4	255			2787	375			2937
5	260			2796	380			2945
6	265			2801	385			2950
7	270			2807	390	15.5	2.38	2956
8	275			2814	395			2961
9	280			2823	400			2966
10	285			2828	405			2972
11	290			2834	410			2980
12	295			2839	415			2986
13	300	14.0	2.80	2847	420	16.0	2.29	2991
14	305			2852	425			2997
15	310			2858	430			3002
16	315			2866	435			3007
17	320			2872	440	16.33 Point I	2.23	3013 ✓
18	325			2877				
19	330			2883				
20	335			2888				
21	340			2896				
22	345			2901				
23	350			2907				
24	355			2912				

Phillips 7-11-1X
Recorder # 2759 Test # 2



Phillips 7-11-1X
Recorder # 2758 Test # 2

