



FOSTER TESTERS, INC.

COBESA, TEXAS

TEST TICKET NO.

8175

ORDER NO.

DATE NOVEMBER 24, 1967

COMPANY HELMERICH & PAYNE, INC. LEASE MARY LOVE WELL NO. 1 TEST NO. 3
FIELD WILDCAT COUNTY LEA STATE NEW MEXICO DISTRICT HOBBS
MAIL CHARTS TO AS DIRECTED
MAIL INVOICE TO HELMERICH & PAYNE, P. O. BOX 548, BRAUN, TEXAS 79744

FORMATION TESTED DEVONIAN TOTAL DEPTH 12,880' PACKER DEPTH 12,820' MAIN HOLES 7 7/8"
INTERVAL TESTED 12,820' TO 12,880' ANCHOR LENGTH 60' GAT HOLES
DRILL PIPE 4 1/4" H-3, 80" ID DRILL COLLARS 2 1/2" H-2, 50" ID PACKER TYPE BT SIZE 6 5/8" NUMBER 2
TIME PACKER SET 12:13 A.M. P.M. X P.M. X TOOK OPEN 2 HOURS 12 MINUTES
TIME TOOL OPEN 12:15 A.M. P.M. X P.M. X TOOK OPEN 2 HOURS 12 MINUTES
INITIAL SHUT IN 1 HOURS AK-1 MINUTES FINAL SHUT IN 2 HOURS 1645 MINUTES
RECORDED TYPE AK-1 CAPACITY 9,000#-8,000# NUMBER: TOP 1261 BOTTOM 1645 MINUTES
TOP RECORDER DEPTH 12,875' BOTTOM RECORDER DEPTH 12,880'
TOP CLOCK NUMBER 8977 BOTTOM CLOCK NUMBER 8979
FOUR STAGE SHUT IN TOOL YES X NO MAXIMUM TEMPERATURE 246 PACKER HOLD YES X NO REVERSED OUT YES X NO
MUD TYPE ADJUSTABLE 1" MUD WEIGHT 9.3 VISCOSITY 74 FILTER CAKE 2/32 WATER LOSS REC
CHOKE SIZE, TOP ADJUSTABLE 1" BOTTOM 5/8" R/P TOOL FLUIT NO FLUID CUSHION 3250' MINE WATER
CONVENTIONAL TEST YES STRADDLE TEST NO CARING TEST NO
SECOND ASSEMBLY YES ROTARY JAR YES SAFETY JOINT YES MINE RUN
OPERATOR'S TIME TOOK RENTAL TIME BLANDED TIME MILEAGE
SURFACE ACTION OPENED WITH A VERY WEAK BLOW. INCREASED TO A WEAK BLOW.

RECOVERY SEVERSED OUT 9750' FLUID. 3250' WATER BLANKET. 1500' MUD CUT SALT WATER.
5000' SALT WATER. CHLORIDES 40,000 P.P.M.

REMARKS 10 MINUTE PRE FLOW. 28' PERFORATION. 270' TOTAL DRILL COLLAR LENGTH.

TESTER B. E. DAVIS TEST APPROVED BY FRANK THURMAN

	RECORDED NO.	RECORDED NO.	RECORDED NO.
A INITIAL HYDROSTATIC PRESSURE	1645		
B INITIAL SHUT IN PRESSURE	6403	P.S.I.	P.S.I.
C INITIAL FLOW PRESSURE	4735	P.S.I.	P.S.I.
D FINAL FLOW PRESSURE	4735	P.S.I.	P.S.I.
E FINAL SHUT IN PRESSURE	4033	P.S.I.	P.S.I.
F FINAL HYDROSTATIC PRESSURE	4129	P.S.I.	P.S.I.
	5351	P.S.I.	P.S.I.

Odessa, Texas

DRILL STEM TEST PRESSURE BREAKDOWN RESULTS

TEST DATE 11-24-67
TYPE RECORDER AK.

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RECORDER NO. 1645

CAPACITY 8 000 11

CLOCK NO. 8979

TICKET NO. 8175

Initial Flow time, t_0 : 10

10

min. ISIP time: 60

min

Flow Period Time, t_c : 120

Living

FSIP time: 120

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Packer Set: 312

ms

INITIAL SHUT IN				FLOW PERIOD				FINAL SHUT IN			
Press. Point Δt , min	$t_i + \Delta t$ Δt	Pressure PSIG	Press. Point min.	Pressure PSIG	Press. Point Δt , min.	$t_i + \Delta t$ Δt	Pressure PSIG	Press. Point Δt , min.	$t_i + \Delta t$ Δt	Pressure PSIG	
0			0	4735	0		4033	93			
10		4122	10	4629	-3	10	4009	96			
20		4451	20	4504	-4	20	4024	99			
30		4591	30	4398	-2	30	4039	102			
40		4682	40	4312	12	40	4054	105			
50		4716	50	4240	25	50	4062	108			
60		4735	60	4185	18	60	4076	111			
			70	4137	21	70	4086	114			
			80	4100	24	80	4093	117			
			90	4074	22	90	4105	120			
			100	4052	40	100	4112				
			110	4038	43	110	4120				
			120	4033	34	120	4129				
					39						
					42						
					45						
					48						
					51						
					54						
					57						
					60						
					63						
					66						
					69						
					72						
					75						
					78						
					81						
					84						
					87						
					90						



FOSTER TESTERS, INC.
ODESSA, TEXAS

TEST TICKET NO. 8161

ORDER NO.

DATE OCTOBER 23, 1967

COMPANY HELMERICH & FRY, INC. INCORPORATED LEASE MARY LOVE
FIELD MIDLOAT COUNTY LEA STATE NEW MEXICO WELL NO. 1 TEST NO. 1
MAIL CHARTS TO HELMERICH & FRY, INC. P. O. BOX 548, IRAN, TEXAS DISTRICT HOBBS
MAIL INVOICE TO

DEPTH	9,485'	PACKER DEPTH	9,460'	MAIN HOLE	7 7/8"
ANCHOR LENGTH	26'	PACKER TYPE	BL	SIZE	6 5/8" NUMBER 2
PACKER SET	5	HOURS	42	MINUTES	2
TOOL OPEN	2	HOURS	-	MINUTES	-
MINUTES	30	FINAL SHUT IN	2	HOURS	-
NUMBER: TOP	1482	BOTTOM	2755	MINUTES	-
NUMBER: BOTTOM	9,485'	BOTTOM RECORD DEPTH	9,485'	MINUTES	-
BOTTOM CLOCK NUMBER	8977	MAXIMUM TEMPERATURE	-	PACKER HOLD YES	X NO
MUD WEIGHT	8.6	VISCOSITY	39	REVERSED OUT	YES X NO
BOTTOM	5/8"	DID TOOL PLUG	NO	FILTER CAKE	1/32" WATER LOSS 12.4cc
STRANDLE TEST	-	CASING TEST	-	FLUID CUSHION	-
STANDBY JAR	YES	SAFETY JOINT	YES	MISS RUN	-
RENTAL TIME	-	STANDBY TIME	-	MILEAGE	-
BY LEAK BLOW, LEAK BLOW THROUGH COT TEST.	-	-	-	-	-
REMARKS	65' FILL 1.5' GAS IN DRILL PIPE. 219' OIL & GAS OUT 2ND. 581 GAS IN 1.5' OIL. 940' GAS OUT SLIGHTLY DEAD CH OUT 2ND. 521 SALT. 1.5' CHLORIDES 64,000 P.P.M. 10 MINUTE FLOW. 25' PERFORATION. 658' TOTAL DRILL COLLAR LENGTH.				
TESTER	3. E. DAVIS				
TEST APPROVED BY	FRANK THURMAN				

A	INITIAL HYDROSTATIC PRESSURE	RECORDED NO.	2755	RECORDED NO.	RECORDED NO.
B	INITIAL SHUT IN PRESSURE	P.S.I.	4212	P.S.I.	P.S.I.
C	INITIAL FLOW PRESSURE	P.S.I.	3576	P.S.I.	P.S.I.
D	FINAL FLOW PRESSURE	P.S.I.	1000	P.S.I.	P.S.I.
E	FINAL SHUT IN PRESSURE	P.S.I.	1110	P.S.I.	P.S.I.
F	FINAL HYDROSTATIC PRESSURE	P.S.I.	3452	P.S.I.	P.S.I.
		P.S.I.	4212	P.S.I.	P.S.I.

FOSTER TESTERS, INC.
Odessa Texas

DRILL STEM TEST PRESSURE BREAKDOWN RESULTS

DATE 1-27-57 RECORDER NO. 2755 600# CLOCK NO. 8977 TICKET NO. 8161
K- TOP OR BOTTOM OF TEST RECORDER DEPTH 9,485' OTHER 9,480'

Slip time 90 min. Flow Period 120 min. Slip time 120 min. Packer Set 342 min.

FLOW PERIOD

FINAL SHUT IN

Press. Point min.	Pressure PSIG	Pressure PSIG	Press. Point min.	Pressure PSIG	Press. Point min.
0	1000	1110	93	93	
10	1013	2273	96	96	
20	1021	3096	99	99	
30	1033	3211	102	102	
40	1043	3279	105	105	
50	1051	3321	108	108	
60	1060	3356	111	111	
70	1066	3384	114	114	
80	1078	3402	117	117	
90	1086	3419	120	120	
100	1096	3434			
110	1103	3444			
120	1110	3452			

REMARKS



FOSTER TESTERS, INC.
ODESSA, TEXAS

TEST TICKET NO. 8157
ORDER NO.
DATE OCTOBER 27, 1967

COMPANY HELMERICH & PAYNE INCORPORATED LEASE MARY LOVE WELL NO. 1 TEST NO. 2
FIELD HILDCAT COUNTY LEA STATE NEW MEXICO DISTRICT HOBBS
MAIL CHARTS TO S. DIRECTED
MAIL INVOICE TO HELMERICH & PAYNE INC., P. O. BOX 542, IRVING TEXAS 75714

FORMATION TESTED MOLE CAMP TOTAL DEPTH 10,165' PACKER DEPTH 10,136'-10,131' MAIN MOLE 7 7/8"
INTERVAL TESTED 10,136' TO 10,165' ANCHOR LENGTH 29' NAT HOLE -
DRILL PIPE 4 1/2" FH-16, 60" ID DRILL COLLARS 67190-2210 PACKER TYPE BT SIZE 6 5/8" NUMBER 2
TIME PACKER SET 3:03 A.M. X P.M. PACKER SET 3 HOURS - MINUTES
TIME TOOL OPEN 3:05 A.M. X P.M. TOOL OPEN - HOURS - MINUTES
INITIAL SHUT IN - HOURS - MINUTES FINAL SHUT IN 4 HOURS - MINUTES
RECORDER TYPE H.C.T. K-1 CAPACITY 7,500#-6,000# NUMBER: TOP 100 BOTTOM 1483
TOP RECORDER DEPTH 10,159' BOTTOM RECORDER DEPTH 10,164'
TOE CLOCK NUMBER 204 BOTTOM CLOCK NUMBER 6759
FOUR STAGE SHUT IN TOOL YES X NO MAXIMUM TEMPERATURE 154° PACKER HOLD YES X NO REVERSED OUT YES X NO
MUD TYPE GEL MUD WEIGHT 8.9 VISCOSITY 33 FILTER CAKE 1/3 WATER LOSS 10.00
CHOKE SIZE - TOP ADJUSTABLE BOTTOM 5/8 DID TOOL PLUG NO FLUID CUSHION - KIND -
CONVENTIONAL TEST YES STADDLE TEST - CASING TEST - MISS RUN -
SECOND ASSEMBLY YES ROTARY JAR YES SAFETY JOINT YES
OPERATOR'S TIME TOOL RENTAL TIME STANDBY TIME MILEAGE
SURFACE ACTION OPENED TOOL ON BLANK CHOKER WITH 2 1/2" WALK BLOCK. DIED IN 10 MINUTES.

RECOVERY 713' G.S. IN DRILL PIPE.
55' VERY SLIGHTLY GEL. G.S. OUT DILLING MUD.

REMARKS 310 NOT WANT INITIAL SHUT IN PRESSURE.
60 MINUTE PRE FLOUT. 25' PERFORATION. 510' TOTAL DRILL COLLAR LENGTH.
TESTER J. E. MORRIS TEST APPROVED BY FRANK THURMAN

	RECORDED NO.	RECORDED NO.	RECORDED NO.
A INITIAL HYDROSTATIC PRESSURE	1483		
B INITIAL SHUT IN PRESSURE	4745	P.S.I.	P.S.I.
C INITIAL FLOW PRESSURE	-	P.S.I.	P.S.I.
D FINAL FLOW PRESSURE	63	P.S.I.	P.S.I.
E FINAL SHUT IN PRESSURE	3747	P.S.I.	P.S.I.
F FINAL HYDROSTATIC PRESSURE	4745	P.S.I.	P.S.I.

POSTER TESTERS, INC.
Odessa, Texas

DRILL STEM TEST PRESSURE BREAKDOWN RESULTS

TEST DATE 10-27-67 REORDER NO. 1483 CAPACITY 6,000# CLOCK NO. 6759 TICKET NO. 8157
TYPE RECORDER AK-1 TOP OR BOTTOM RECORDER BOTTOM REORDER DEPTH 10,164' OTHER

Initial Flow time: 60 min. ISIP time: -- min. Flow Period Time: -- min. ISIP time: 120 min. Pressure Sp: 182 min

INITIAL SHUT IN			FLOW PERIOD			FINAL SHUT IN		
Press. Point Δt , min	$t_0 + \Delta t$	Pressure PSIG	Press. Point min.	Pressure PSIG	Press. Point Δt , min.	$t_0 + \Delta t$	Pressure PSIG	Pressure PSIG
0					0		63	93
3					-3	10	304	96
6					-6	20	1520	99
9					-9	30	2610	102
12					-12	40	3131	105
15					-15	50	3351	108
18					-18	60	3475	111
21					-21	70	3561	114
24					-24	80	3619	117
27					-27	90	3669	120
30					-30	100	3700	
33					-33	110	3727	
36					-36	120	3747	
39					-39			
42					-42			
45					-45			
48					-48			
51					-51			
54					-54			
57					-57			
60					-60			
63					-63			
66					-66			
69					-69			
72					-72			
75					-75			
78					-78			
81					-81			
84					-84			
87					-87			
90					-90			

REMARKS:

FOSTER TESTERS, INC.
Odessa, Texas

DRILL STEM TEST PRESSURE BREAKDOWN RESULTS

TEST DATE 10-27-67
TYPE RECORDER AK-1

RECORD NO. 1483
TOP OR BOTTOM RECORDER BOTTOM

CAPACITY 6,000# CLOCK NO. 6759
RECORD DEPTH 10,164'

TICKET NO. 8157

INITIAL FLOW TIME, 60 min.

min.

ISIP TIME: -- min.

min.

Flow Period Time, -- min.

min.

PSIP TIME: 120 min.

min.

Packer Set 182 min.

INITIAL SHUT IN

PRE FLOW PERIOD

FINAL SHUT IN

Press Point Δt min.	$t_0 + \Delta t$	Pressure PSIG	Press Point min.	Pressure PSIG	Press Point Δt min.	$t_0 + \Delta t$	Pressure PSIG	Press Point Δt min.	$t_0 + \Delta t$	Pressure PSIG
0			0	63	0			0		63
3			5	48	3			3		36
6			10	47	6	7.0		6		96
9			15	47	9			9		107
12			20	51	12	7.0		12		105
15			25	53	15			15		106
18			30	56	18			18		106
21			35	58	21			21		104
24			40	59	24			24		107
27			45	60	27			27		105
30			50	60	30			30		105
33			55	62	33			33		105
36			60	63	36			36		105
39					39			39		105
42					42			42		105
45					45			45		105
48					48			48		105
51					51			51		105
54					54			54		105
57					57			57		105
60					60			60		105
63					63			63		105
66					66			66		105
69					69			69		105
72					72			72		105
75					75			75		105
78					78			78		105
81					81			81		105
84					84			84		105
87					87			87		105
90					90			90		105

REMARKS: