WESTERN TESTERS

P. O. BOX 793 PHONE 793-7903

GREAT BEND, KANSAS

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET 22520

Formation White Cloud Elevation 1274 KB Eff. Pay _____ Ft.

District Augusta Date 12-28-77 Customer Order No. _____

COMPANY NAME White & Ellis Drilling, Inc.

ADDRESS East Side Financial Center - 7701 East Kellogg Suite 290 Wichita Ks. 67207

LEASE AND WELL NO. Beaver #1 COUNTY Sumner STATE Ks. Sec. 18 Twp. 31S Rge. 1W

Mail Inv. To Same (Co. Name) (Address) No. Copies Requested 1

Mail Charts To Same (Address) No. Copies Requested 5

Formation Test No. 1 O.K. X Misrun — Interval Tested From 1808 to 1857 Total Depth 1857

Size Main Hole 7 7/8 Rat Hole — Conv. — B.T. X Damaged — Yes X No Conv. X B.T. — Damaged — Yes X No

Top Packer Depth 1803 Ft. Size 6 3/4 Bottom Packer Depth 1808 Ft. Size 6 3/4

Straddle — Conv. — B.T. — Damaged — Yes — No Packer Depth — Ft. Size —

Tool Size 5 1/2 Tool Joint Size 4 1/2 FH Anchor Length 49 Ft. Size 5 1/2 Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 1851 Ft. Clock No. 9103 Depth 1854 Ft. Clock No. 9727

Top Make Kuster Cap. 3150 No. 1562 (Inside) ~~Outside~~ Bottom Make Kuster Cap. 3200 No. 1561 ~~Inside~~ (Outside)

Below Straddle: Depth — Rec. No. — Clock No. — ~~Inside~~ Outside Depth — Ft. Rec. No. — Clock No. — ~~Inside~~ ~~Outside~~

Time Set Packer 4:47 A M

Tool Open I.F.P. From 4:50 A M. to 5:20 A M. Hr. 30 Min. From (B) 47 60 P.S.I. To (C) 47 37 P.S.I.

Tool Closed I.C.I.P. From 5:20 A M. to 5:50 A M. Hr. 30 Min. (D) 47 41 P.S.I.

Tool Open F.F.P. From 5:50 A M. to 6:20 A M. Hr. 30 Min. From (E) 47 41 P.S.I. To (F) 47 41 P.S.I.

Tool Closed F.C.I.P. From 6:20 A M. to 6:50 A M. Hr. 30 Min. (G) 47 43 P.S.I.

Initial Hydrostatic Pressure (A) 932 933 P.S.I. Final Hydrostatic Pressure (H) 917 910 P.S.I. Maximum Temp. 90

INFORMATION

BLOW Very weak 30 min. Dead on FFP.

Did Well Flow — Yes X No Recovery Total Ft. 10' drlg mud

Reversed Out — Yes X No Mud Type Chem Viscosity 43 Weight 9.1 Water Loss 72.0 cc. Chlorides 7900

EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint — Jars: Size — In. Make — Ser. No. —

Dual Packers Yes Did Packers Hold? Yes Did Tool Plug? No Where? —

DRILLING CONTRACTOR CO Tools #2 Length Drill Pipe 1512 ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 FH In.

Length Weight Pipe — ft. I.D. Weight Pipe — In. Tool Joint Size — In. Length Drill Collars 272 ft. I.D. Drill Collars 2 1/4 In.

Tool Joint Size 4 XH In. Length D.S.T. Tool 68 ft.

Remarks

INVOICE SECTION

Open Hole Test	$ 415.00
Straddle Test	$
Jars	$
Selective Zone	$
Safety Joint	$
Misrun	$
Evaluation	$
Packer	$
Circ. Sub.	$
	$
Total	$ 415.00

COMPANY TERMS

Western Testing Co., Inc., shall not be liable for damage of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 10% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Charley V. Shanks (Signature of Customer or his Authorized Representative) Western Representative Tim Wilson

Operator's Time _____ Hrs.

WESTERN TESTING CO., INC.
Pressure Data

Date 12-28-77 Test Ticket No. 22520

Recorder No. 1562 Capacity 3150 Location 11851 Ft.

Clock No. 9103 Elevation 1274 Kelly Bushing Well Temperature 90 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	933	P.S.I.	Open Tool	4:47 AM	
B	First Initial Flow Pressure	60	P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	37	P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	41	P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E	Second Initial Flow Pressure	41	P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	41	P.S.I.			
G	Final Closed-in Pressure	43	P.S.I.			
H	Final Hydrostatic Mud	910	P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point	Mins.	Press.
P 1	0	60
P 2	5	46
P 3	10	40
P 4	15	38
P 5	20	38
P 6	25	37
P 7	30	37
P 8	35	
P 9	40	
P10	45	
P11	50	
P12	55	
P13	60	
P14		
P15		
P16		
P17		
P18		
P19		
P20		

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	37
3	37
6	37
9	37
12	38
15	39
18	40
21	40
24	41
27	41
30	41
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

Second Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	42
5	41
10	40
15	
20	
25	
30	41
35	
40	
45	
50	
55	
60	
65	
70	
75	
80	
85	
90	

Final Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	41
3	41
6	
9	42
12	42
15	42
18	43
21	
24	
27	
30	43
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

1562

TK# 22520

I.

Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company White & Ellis Drilling, Inc. Lease & Well No. Beaver #1

Elevation 1274 Kelly Bush. Formation White Cloud Effective Pay - Ft. Ticket No. 22520

Date 12-28-77 Sec. 18 Twp. 31S Range 1W County Sumner State Kansas

Test Approved by Charley V. Shank Western Representative Tim Wilson

Formation Test No. 1 O.K. X Misrun - Interval Tested From 1808' to 1857' Total Depth 1857'

Size Main Hole 7 7/8 Rat Hole - Conv. - B.T. X Damaged - Yes X No Conv. X B.T. - Damaged - Yes X No

Top Packer Depth 1803 Ft. Size 6 3/4 Bottom Packer Depth 1808 Ft. Size 6 3/4

Straddle - Conv. - B.T. - Damaged - Yes - No Packer Depth - Ft. Size -

Tool Size 5½OD Tool Joint Size 4½FH Anchor Length 49 Ft. Size 5½OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 1851 Ft. Clock No. 9103 Depth 1854 Ft. Clock No. 9727

Top Make Kuster Cap. 3150 No. 1562 Inside ~~Outside~~ Bottom Make Kuster Cap. 3200 No. 1561 = ~~Inside~~ Outside

Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside

Time Set Packer 4:47A. M

Tool Open I.F.P. From 4:50A M. to 5:20A M. - Hr. 30 Min. From (B) 60 P.S.I. To (C) 37 P.S.I.

Tool Closed I.C.I.P. From 5:20A M. to 5:50A M. - Hr. 30 Min (D) 41 P.S.I.

Tool Open F.F.P. From 5:50A M. to 6:20A M. - Hr. 30 Min. From (E) 41 P.S.I. To (F) 41 P.S.I.

Tool Closed F.C.I.P. From 6:20A M. to 6:50A M. - Hr. 30 Min. (G) 43 P.S.I.

Initial Hydrostatic Pressure (A) 933 P.S.I. Final Hydrostatic Pressure (H) 910 P.S.I. Maximum Temp. 90

INFORMATION

BLOW Very weak blow for 30 minutes during the initial flow period. No blow on the final flow period.

Did Well Flow - Yes X No Recovery Total Ft. 10' of drilling mud.

Reversed Out - Yes X No Mud Type Chem Viscosity 43 Weight 9.1 Water Loss 72.0 cc. Chlorides 7,900 PPM

EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint - Jars: Size - In. Make - Ser. No. -

Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? -

DRILLING CONTRACTOR White & Ellis Drlg.(#2) Length Drill Pipe? 1512 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4½FH In.

Length Weight Pipe - Ft. I.D. Weight Pipe - In. Tool Joint Size - In. Length Drill Collars 277 Ft. I.D. Drill Collars 2 1/4 In.

Tool Joint Size 4H-90 In. Length D.S.T. Tool 68 Ft.

Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 12-28-77 Test Ticket No. 22520

Recorder No. 1562 Capacity 3150 Location 1851 Ft.

Clock No. 9103 Elevation 1274 Kelly Bushing Well Temperature 90 °F

Point	Pressure		Time Given	Time Computed
Initial Hydrostatic Mud	933 P.S.I.	Open Tool	4:47A. M	
First Initial Flow Pressure	60 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
First Final Flow Pressure	37 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
Initial Closed-in Pressure	41 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
Second Initial Flow Pressure	41 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
Second Final Flow Pressure	41 P.S.I.			
Final Closed-in Pressure	43 P.S.I.			
Final Hydrostatic Mud	910 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P1 0	60
P2 5	46
P3 10	40
P4 15	38
P5 20	38
P6 25	37
P7 30	37
P8	
P9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	37
3	37
6	37
9	37
12	38
15	39
18	40
21	40
24	41
27	41
30	41

Second Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	42
5	41
10	41
15	41
20	41
25	41
30	41

Final Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	41
3	41
6	41
9	42
12	42
15	42
18	43
21	43
24	43
27	43
30	43

WESTERN TESTERS

Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company White & Ellis Drilling, Inc. Lease & Well No. Beaver #1

Elevation 1269 Ground Level Formation Mississippi Effective Pay - Ft. Ticket No. 22891

Date 1-3-78 Sec. 18 Twp. 31S Range 1W County Sumner State Kansas

Test Approved by Charley V. Shank Western Representative Vernon Wondra

Formation Test No. 2 O.K. X Misrun - Interval Tested From 3730' to 3755' Total Depth 3755'

Size Main Hole 7-7/8 Rat Hole - Conv. - B.T. X Damaged - Yes X No Conv. X B.T. - Damaged - Yes X No

Top Packer Depth 3725 Ft. Size 6-3/4 Bottom Packer Depth 3730 Ft. Size 6-3/4

Straddle - Conv. - B.T. - Damaged - Yes - No Packer Depth - Ft. Size -

Tool Size 5½OD Tool Joint Size 4½FH Anchor Length 25 Ft. Size 5½OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 3745 Ft. Clock No. 6859 Depth 3748 Ft. Clock No. 10412

Top Make Kuster Cap. 4250 No. 1051 Inside ~~Outside~~ Bottom Make Kuster Cap. 4300 No. 1567 ~~Inside~~ Outside

Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside

Time Set Packer 2:53 P M

Tool Open I.F.P. From 2:55 M. to 3:25 M. - Hr. 30 Min. From (B) 110 P.S.I. To (C) 83 P.S.I.

Tool Closed I.C.I.P. From 3:25 M. to 4:10 M. - Hr. 45 Min (D) 1445 P.S.I.

Tool Open F.F.P. From 4:10 M. to 4:40 M. - Hr. 30 Min. From (E) 142 P.S.I. To (F) 105 P.S.I.

Tool Closed F.C.I.P. From 4:40 M. to 5:25 M. - Hr. 45 Min. (G) 396 P.S.I.

Initial Hydrostatic Pressure (A) 1991 P.S.I. Final Hydrostatic Pressure (H) 1970 P.S.I. Maximum Temp. 114

INFORMATION

BLOW Very Weak Blow throughout flow periods.

Did Well Flow - Yes X No Recovery Total Ft. 113' Mud

Reversed Out - Yes X No Mud Type Chem. Viscosity 36 Weight 9.8 Water Loss 14.4 cc. Chlorides 2,800 P.P.M.

EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint - Jars: Size - In. Make - Ser. No. -

Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? -

DRILLING CONTRACTOR White & Ellis Drlg.Co. Rig. #2 Length Drill Pipe? 3430 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4½FH In.

Length Weight Pipe - Ft. I.D. Weight Pipe - In. Tool Joint Size - In. Length Drill Collars 277 Ft. I.D. Drill Collars 2¼ In.

Tool Joint Size 4"H-90 In. Length D.S.T. Tool 48 Ft.

Remarks:

WESTERN TESTING CO., INC.
Pressure Data

Date 1-3-78 Test Ticket No. 22891

Recorder No. 1051 Capacity 4250 Location 3745 Ft.

Clock No. 6859 Elevation 1269 Ground Level Well Temperature 114 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1991 P.S.I.		Open Tool	2:53 P M	
B	First Initial Flow Pressure	110 P.S.I.		First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	83 P.S.I.		Initial Closed-in Pressure	45 Mins.	45 Mins.
D	Initial Closed-in Pressure	1445 P.S.I.		Second Flow Pressure	30 Mins.	30 Mins.
E	Second Initial Flow Pressure	142 P.S.I.		Final Closed-in Pressure	45 Mins.	45 Mins.
F	Second Final Flow Pressure	105 P.S.I.				
G	Final Closed-in Pressure	396 P.S.I.				
H	Final Hydrostatic Mud	1970 P.S.I.				

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point	Mins.	Press.
P 1	0	110
P 2	5	88
P 3	10	84
P 4	15	83
P 5	20	83
P 6	25	83
P 7	30	83
P 8		
P 9		
P10		
P11		
P12		
P13		
P14		
P15		
P16		
P17		
P18		
P19		
P20		

Initial Shut-In
Breakdown: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

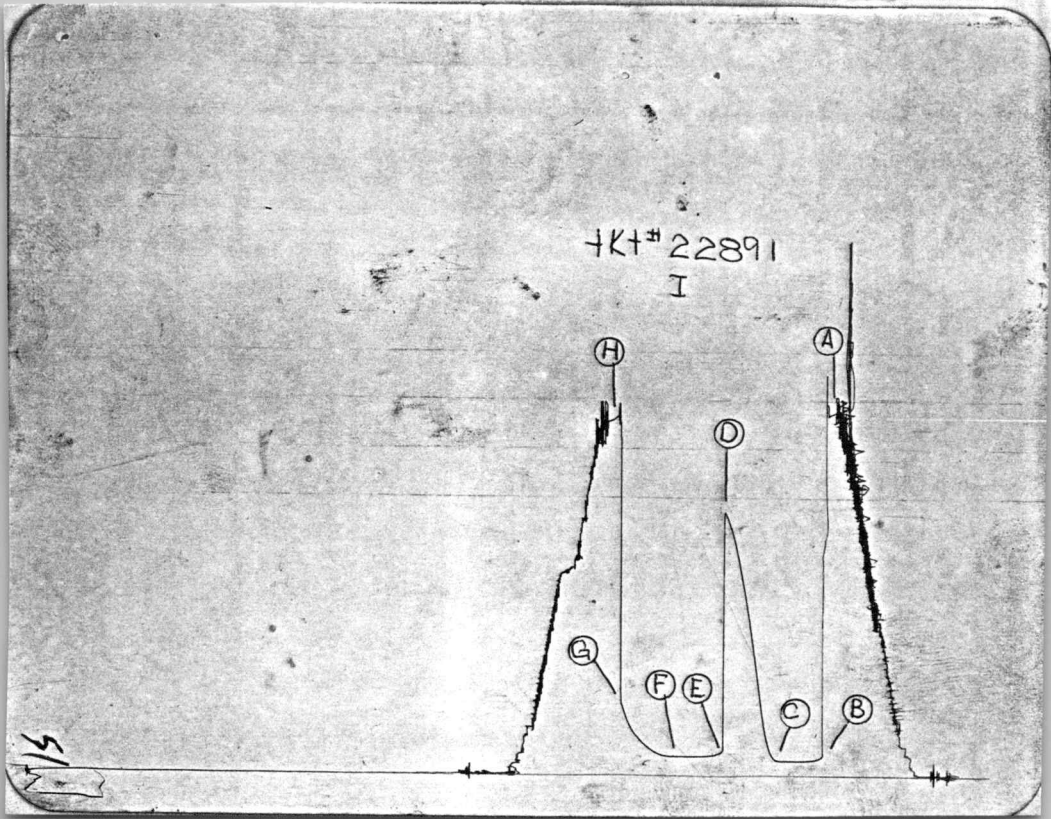
Point Minutes	Press.
0	83
3	86
6	99
9	140
12	230
15	349
18	476
21	610
24	747
27	872
30	894
33	896
36	1201
39	1294
42	1373
45	1445

Second Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	142
5	118
10	110
15	105
20	105
25	105
30	105

Final Shut-In
Breakdown: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	105
3	105
6	105
9	106
12	112
15	114
18	123
21	133
24	148
27	166
30	187
33	211
36	237
39	275
42	327
45	396


HKT# 22891
I
H
A
D
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Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company White & Ellis Drilling, Inc. Lease & Well No. Beaver #1

Elevation 1269 Ground Lvl. Formation Mississippi Effective Pay - Ft. Ticket No. 22892

Date 1-4-78 Sec. 18 Twp. 31S Range 1 W County Sumner State Kansas

Test Approved by Charley V. Shank Western Representative Vernon Wondra

Formation Test No. 3 O.K. X Misrun - Interval Tested From 3729' to 3765' Total Depth 3765'

Size Main Hole 7-7/8 Rat Hole - Conv. - B.T. X Damaged - Yes X No Conv. X B.T. - Damaged - Yes X No

Top Packer Depth 3724 Ft. Size 6-3/4 Bottom Packer Depth 3729 Ft. Size 6-3/4

Straddle - Conv. - B.T. - Damaged - Yes - No Packer Depth - Ft. Size -

Tool Size 5½OD Tool Joint Size 4½FH Anchor Length 36 Ft. Size 5½OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 3755 Ft. Clock No. 6859 Depth 3758 Ft. Clock No. 10412

Top Make Kuster Cap. 4250 No. 1051 Inside Outside Bottom Make Kuster Cap. 4300 No. 1567 ~~Inside~~ Outside

Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside

Time Set Packer 6:13 A M

Tool Open I.F.P. From 6:15 M. to 6:45 M. - Hr. 30 Min. From (B) 103 P.S.I. To (C) 73 P.S.I.

Tool Closed I.C.I.P. From 6:45 M. to 7:30 M. - Hr. 45 Min (D) 1362 P.S.I.

Tool Open F.F.P. From 7:30 M. to 8:00 M. - Hr. 30 Min. From (E) 120 P.S.I. To (F) 86 P.S.I.

Tool Closed F.C.I.P. From 8:00 M. to 8:45 M. - Hr. 45 Min. (G) 787 P.S.I.

Initial Hydrostatic Pressure (A) 1963 P.S.I. Final Hydrostatic Pressure (H) 1878 P.S.I. Maximum Temp. 118°

INFORMATION

BLOW Very Weak blow throughout flow periods.

Did Well Flow - Yes X No Recovery Total Ft. 113'

Reversed Out - Yes X No Mud Type Chem. Viscosity 36 Weight 9.8 Water Loss 14.4 cc. Chlorides 2,800 P.P.M.

EXTRA EQUIPMENT: Type Circ. Sub Pin Safety Joint - Jars: Size - In. Make - Ser. No. -

Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? -

DRILLING CONTRACTOR White & Ellis Drlg. Rig#2 Length Drill Pipe? 3429 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4½FH In.

Length Weight Pipe - Ft. I.D. Weight Pipe - In. Tool Joint Size - In. Length Drill Collars 277 Ft. I.D. Drill Collars 2¼ In.

Tool Joint Size 4"H90 In. Length D.S.T. Tool 59 Ft.

Remarks:

WESTERN TESTING CO., INC.
Pressure Data

Date 1-4-78 Test Ticket No. 22892

Recorder No. 1051 Capacity 4250 Location 3755 Ft.

Clock No. 6859 Elevation 1269 Ground Level Well Temperature 118 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1963	P.S.I.	Open Tool	6:13 A M	
B	First Initial Flow Pressure	103	P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	73	P.S.I.	Initial Closed-in Pressure	45 Mins.	48 Mins.
D	Initial Closed-in Pressure	1362	P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E	Second Initial Flow Pressure	120	P.S.I.	Final Closed-in Pressure	45 Mins.	42 Mins.
F	Second Final Flow Pressure	86	P.S.I.			
G	Final Closed-in Pressure	787	P.S.I.			
H	Final Hydrostatic Mud	1878	P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	103
P 2 5	77
P 3 10	73
P 4 15	73
P 5 20	73
P 6 25	73
P 7 30	73
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 16 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	73
3	73
6	73
9	77
12	110
15	187
18	308
21	448
24	591
27	729
30	870
33	996
36	1109
39	1199
42	1271
45	1330
48	1362

Second Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	120
5	92
10	86
15	86
20	86
25	86
30	86

Final Shut-In
Breakdown: 14 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	86
3	86
6	86
9	97
12	108
15	127
18	151
21	183
24	230
27	297
30	381
33	478
36	581
39	578
42	787

HH # 22892
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