WESTERN TESTERS

Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company Pickrell Drlg. Co. Lease & Well No. Bott A#1

Elevation 2169 Kelly Bushing Formation Cherokee Effective Pay 0 Ft. Ticket No. 10433

Date 1-30-68 Sec. 2 Twp. 19 Range 20 County Rush State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Dean Blagrave

Formation Test No. 1 O.K. X Misrun Interval Tested From 4142' to 4174' Total Depth 4174'

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

Packer Depth 4137 Ft. Size 6 3/4" Packer Depth 4142 Ft. Size 6 3/4"

Straddle Yes No X Conv. B.T. Damaged Yes No

Packer Depth Ft. Size

Tool Size 5½"OD Tool Jt. Size 4½"FH Anchor Length 32 Ft. Size 5½"OD

RECORDERS Depth 4165 Ft. Clock No. 8475 Depth 4168 Ft. Clock No. 6774

Top Make Amerada Cap. 4150 No. 2606 Inside ~~Outside~~ Bottom Make Amerada Cap. 4300 No. 1567 ~~Inside~~ Outside

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

Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 8:49 A. M

Tool Open I.F.P. From 8:51 M. to 9:01 A M. Hr. 10 Min. From (B) 54 P.S.I. To (C) 54 P.S.I.

Tool Closed I.C.I.P. From 9:01 M. to 9:31 A M. Hr. 30 Min. (D) 129 P.S.I.

Tool Open F.F.P. From 9:31 M. to 10:11 A M. Hr. 40 Min. From (E) 54 P.S.I. To (F) 59 P.S.I.

Tool Closed F.C.I.P. From 10:11 M. to 10:41 A M. Hr. 30 Min. (G) 73 P.S.I.

Initial Hydrostatic Pressure (A) 2177 P.S.I. Final Hydrostatic Pressure (H) 2161 P.S.I.

SURFACE INFORMATION	Size Choke 1/4 In.	Max. Press. P.S.I.	Time	Description of Flow
			M.	
			M.	
			M.	

BLOW Weak for 10 minutes. Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. Five feet mud.

Reversed Out Yes X No Mud Type starch Viscosity 42 Weight 10 Water Loss 9.2 cc. Maximum Temp. 114 °F

Type Circ. Sub. plug Did Tool Plug? no Jars: Size no Make Ser. No.

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Did Packer Hold? yes Where?

Length Drill Pipe ft. I.D. Drill Pipe in. Length Weight Pipe 995 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars in. Length D.S.T. Tool 50 ft.

Remarks Flushed at 20 minutes.

WESTERN TESTING CO., INC.
Pressure Data

Date 1-30-68 Test Ticket No. 10433

Recorder No. 2606 Capacity 4150 Location 4165 Ft.

Clock No. 8475 Elevation 2169 Kelly Bushing Well Temperature 114 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2177 P.S.I.	Opened Tool	8:51 A. M	8:51 AM
B First Initial Flow Pressure	54 P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C First Final Flow Pressure	54 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	129 P.S.I.	Second Flow Pressure	40 Mins.	40 Mins.
E Second Initial Flow Pressure	54 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	59 P.S.I.			
G Final Closed-in Pressure	73 P.S.I.			
H Final Hydrostatic Mud	2161 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 2 Inc.
of 6 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	54
P 2 5	54
P 3 10	54
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
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.

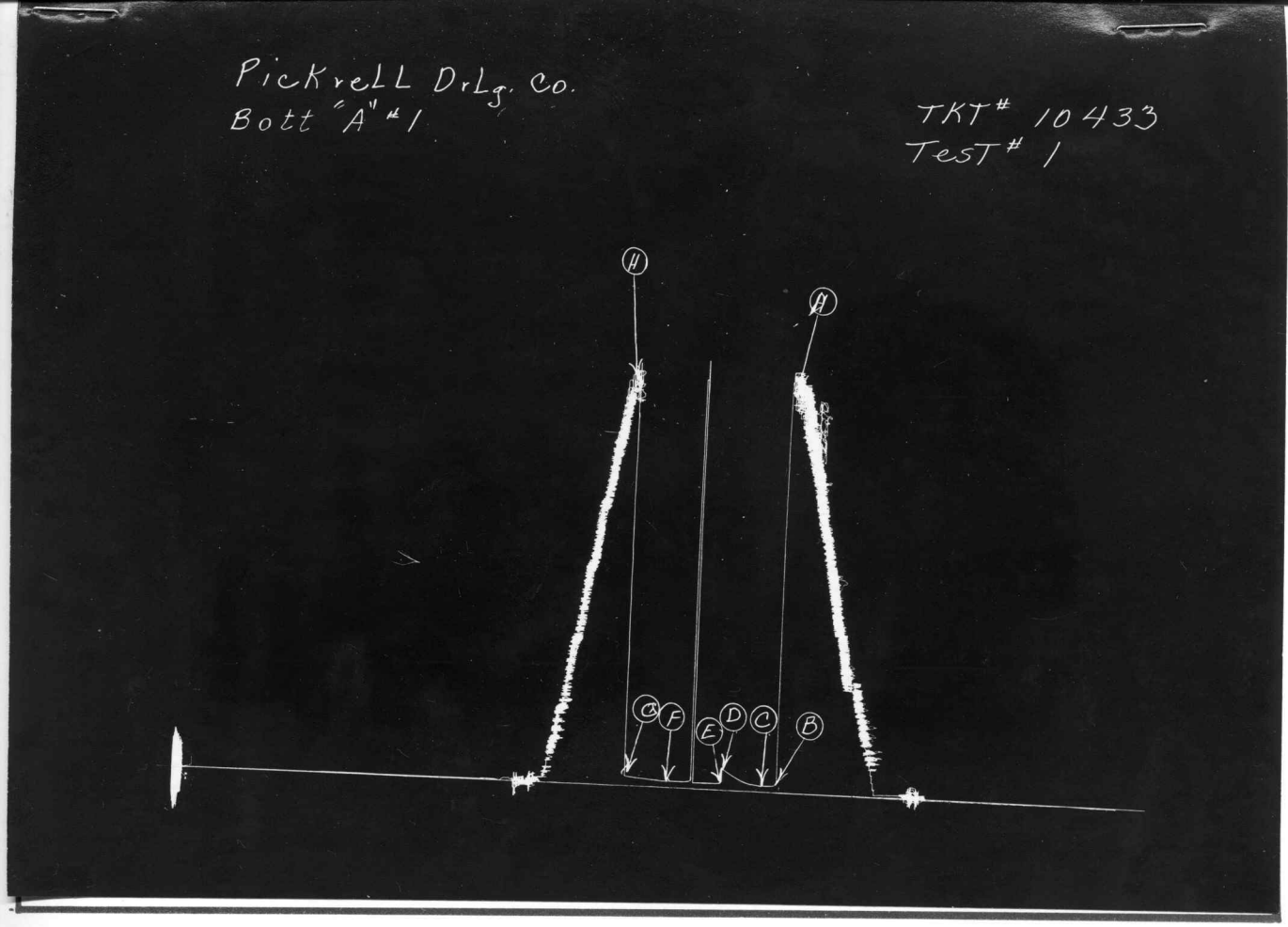
Point Minutes	Press.
0	54
3	54
6	54
9	54
12	57
15	64
18	73
21	87
24	101
27	114
30	129

Second Flow Pressure
Breakdown: 8 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	54
5	54
10	54
15	54
20	54
25	59
30	59
35	59
40	59

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

Point Minutes	Press.
0	59
3	59
6	59
9	61
12	61
15	63
18	65
21	67
24	69
27	71
30	73



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2229	2177	PSI
(B)	First Initial Flow Pressure	62	54	PSI
(C)	First Final Flow Pressure	62	54	PSI
(D)	Initial Closed-in Pressure	124	129	PSI
(E)	Second Initial Flow Pressure	62	54	PSI
(F)	Second Final Flow Pressure	62	59	PSI
(G)	Final Closed-in Pressure	72	73	PSI
(H)	Final Hydrostatic Mud	2209	2161	PSI

COMPANY Pickrell Drlg. Co. LEASE AND WELL NO. Bott A#1 SEC. 2 TWP. 19 RGE. 20 TEST NO. 1 DATE 1-30-68

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 (316) 793-7903

Company Pickrell Drlg. Co. Lease & Well No. Bott A#1

Elevation 2169 Kelly Bushing Formation Cherokee Effective Pay 11 Ft. Ticket No. 10434

Date 1-30-68 Sec. 2 Twp. 19 Range 20 County Rush State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Dean Blagrave

Formation Test No. 2 O.K. x Misrun Interval Tested From 4144' to 4187' Total Depth 4187'

Size Main Hole 7 7/8" Rat Hole Conv. x B.T. Damaged Yes x No Conv. B.T. x Damaged Yes x No

Packer Depth 4139 Ft. Size 6 3/4" Packer Depth 4144 Ft. Size 6 3/4"

Straddle Yes No x Conv. B.T. Damaged Yes No

Packer Depth Ft. Size

Tool Size 5½"OD Tool Jt. Size 4½"FH Anchor Length 43 Ft. Size 5½"OD

RECORDERS Depth 4178 Ft. Clock No. 8475 Depth 4181 Ft. Clock No. 6774

Top Make Amerada Cap. 4150 No. 2606 Inside Outside Bottom Make Amerada Cap. 4300 No. 1567 Inside Outside

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

Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 7:25 PM

Tool Open I.F.P. From 7:27 M. to 7:32 PM. Hr. 5 Min. From (B) 553 P.S.I. To (C) 644 P.S.I.

Tool Closed I.C.I.P. From 7:32 M. to 8:02 PM. Hr. 30 Min. (D) 994 P.S.I.

Tool Open F.F.P. From 8:02 M. to 9:02 PM. 1 Hr. -- Min. From (E) 742 P.S.I. To (F) 997 P.S.I.

Tool Closed F.C.I.P. From 9:02 M. to 9:32 PM. Hr. 30 Min. (G) 1002 P.S.I.

Initial Hydrostatic Pressure (A) 2198 P.S.I. Final Hydrostatic Pressure (H) 2177 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	1/4 In.		M.	
			M.	
			M.	

BLOW Strong for 35 minutes, decreased to weak for remainder of test. Bottom Choke Size 3/4 In.

Did Well Flow Yes x No Recovery Total Ft. 2075' slightly oil cut salt water.

Reversed Out Yes x No Mud Type starch Viscosity 45 Weight 10 Water Loss 9.2 cc. Maximum Temp. 119 °F

Type Circ. Sub. plug Did Tool Plug? no Jars: Size no Make Ser. No.

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Did Packer Hold? yes Where?

Length Drill Pipe ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 995 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars in. Length D.S.T. Tool 61 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 1-30-68 Test Ticket No. 10434

Recorder No. 2606 Capacity 4150 Location 4178 Ft.

Clock No. 8475 Elevation 2169 Kelly Bushing Well Temperature 119 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2198 P.S.I.	Opened Tool	7:27 P. M	7:27 PM
B First Initial Flow Pressure	553 P.S.I.	First Flow Pressure	5 Mins.	5 Mins.
C First Final Flow Pressure	644 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	994 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	742 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	997 P.S.I.			
G Final Closed-in Pressure	1002 P.S.I.			
H Final Hydrostatic Mud	2177 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	553
P 2 5	644
P 3	
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
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.

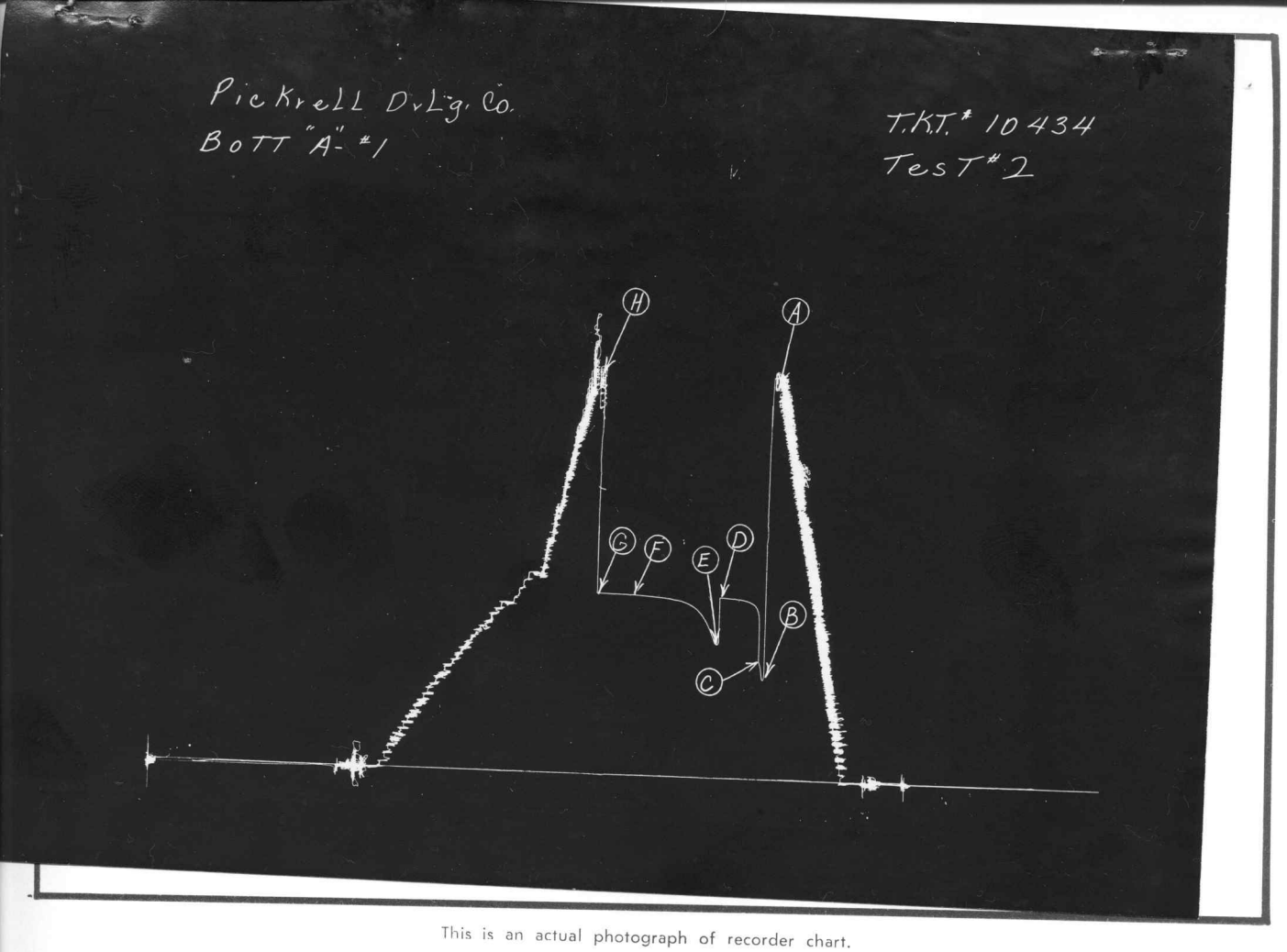
Point Minutes	Press.
0	644
3	935
6	962
9	973
12	981
15	985
18	988
21	991
24	993
27	994
30	994

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	742
5	777
10	868
15	916
20	948
25	962
30	977
35	983
40	987
45	991
50	993
55	995
60	997

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

Point Minutes	Press.
0	997
3	999
6	1000
9	1001
12	1002
15	1002
18	1002
21	1002
24	1002
27	1002
30	1002



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2198	2198	PSI
(B)	First Initial Flow Pressure	551	553	PSI
(C)	First Final Flow Pressure	644	644	PSI
(D)	Initial Closed-in Pressure	997	994	PSI
(E)	Second Initial Flow Pressure	738	742	PSI
(F)	Second Final Flow Pressure	997	997	PSI
(G)	Final Closed-in Pressure	997	1002	PSI
(H)	Final Hydrostatic Mud	2167	2177	PSI

COMPANY Pickrell Drlg. Co. LEASE AND WELL NO. Bott A#1 SEC. 2 TWP. 19 RGE. 20 TEST NO. 2 DATE 1-30-68

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 (316) 793-7903

Company Pickrell Drlg. Co. Lease & Well No. Bott A#1

Elevation 2169 Kelly Bushing Formation Cherokee Effective Pay Ft. Ticket No. 10435

Date 1-31-68 Sec. 2 Twp. 19 Range 20 County Rush State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Dean Blagrave

Formation Test No. 3 O.K. X Misrun Interval Tested From 4192' to 4225' Total Depth 4285'

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

Packer Depth 4187 Ft. Size 6 3/4" Packer Depth 4192 Ft. Size 6 3/4"

Straddle Yes No X Conv. B.T. Damaged Yes No

Packer Depth Ft. Size

Tool Size 5½"OD Tool Jt. Size 4½"FH Anchor Length 33 Ft. Size 5½"OD

RECORDERS Depth 4216 Ft. Clock No. 8475 Depth 4219 Ft. Clock No. 6774

Top Make Amerada Cap. 4150 No. 2606 Inside Outside Bottom Make Amerada Cap. 4300 No. 1567 Inside Outside

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

Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 3:06 P. M

Tool Open I.F.P. From 3:08 M. to 3:13P M. Hr. 5 Min. From (B) 218 P.S.I. To (C) 299 P.S.I.

Tool Closed I.C.I.P. From 3:13 M. to 3:43 PM. Hr. 30 Min. (D) 1029 P.S.I.

Tool Open F.F.P. From 3:43 M. to 4:43 PM. 1 Hr. -- Min. From (E) 421 P.S.I. To (F) 871 P.S.I.

Tool Closed F.C.I.P. From 4:43 M. to 5:13 PM. Hr. 30 Min. (G) 1019 P.S.I.

Initial Hydrostatic Pressure (A) 2229 P.S.I. Final Hydrostatic Pressure (H) 2218 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	1/4 In.		M.	
			M.	
			M.	

BLOW Strong decreasing toward end of test. Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 1800 feet muddy salt water.

Reversed Out X Yes No Mud Type starch Viscosity 50 Weight 10 Water Loss 8.8 cc. Maximum Temp. 119 °F

Type Circ. Sub. plug Did Tool Plug? no Jars: Size no Make Ser. No.

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Did Packer Hold? yes Where?

Length Drill Pipe ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 995 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars in. Length D.S.T. Tool 51 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 1-31-68 Test Ticket No. 10435

Recorder No. 2606 Capacity 4150 Location 4216 Ft.

Clock No. 8475 Elevation 2169 Kelly Bushing Well Temperature 119 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2229 P.S.I.	Opened Tool	3:08 P. M.	3:08 PM
B First Initial Flow Pressure	218 P.S.I.	First Flow Pressure	5 Mins.	4 Mins.
C First Final Flow Pressure	299 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1029 P.S.I.	Second Flow Pressure	60 Mins.	58 Mins.
E Second Initial Flow Pressure	421 P.S.I.	Final Closed-in Pressure	30 Mins.	33 Mins.
F Second Final Flow Pressure	871 P.S.I.			
G Final Closed-in Pressure	1019 P.S.I.			
H Final Hydrostatic Mud	2218 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 1 Inc.
of 4 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	218
P 2 4	299
P 3	
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
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.

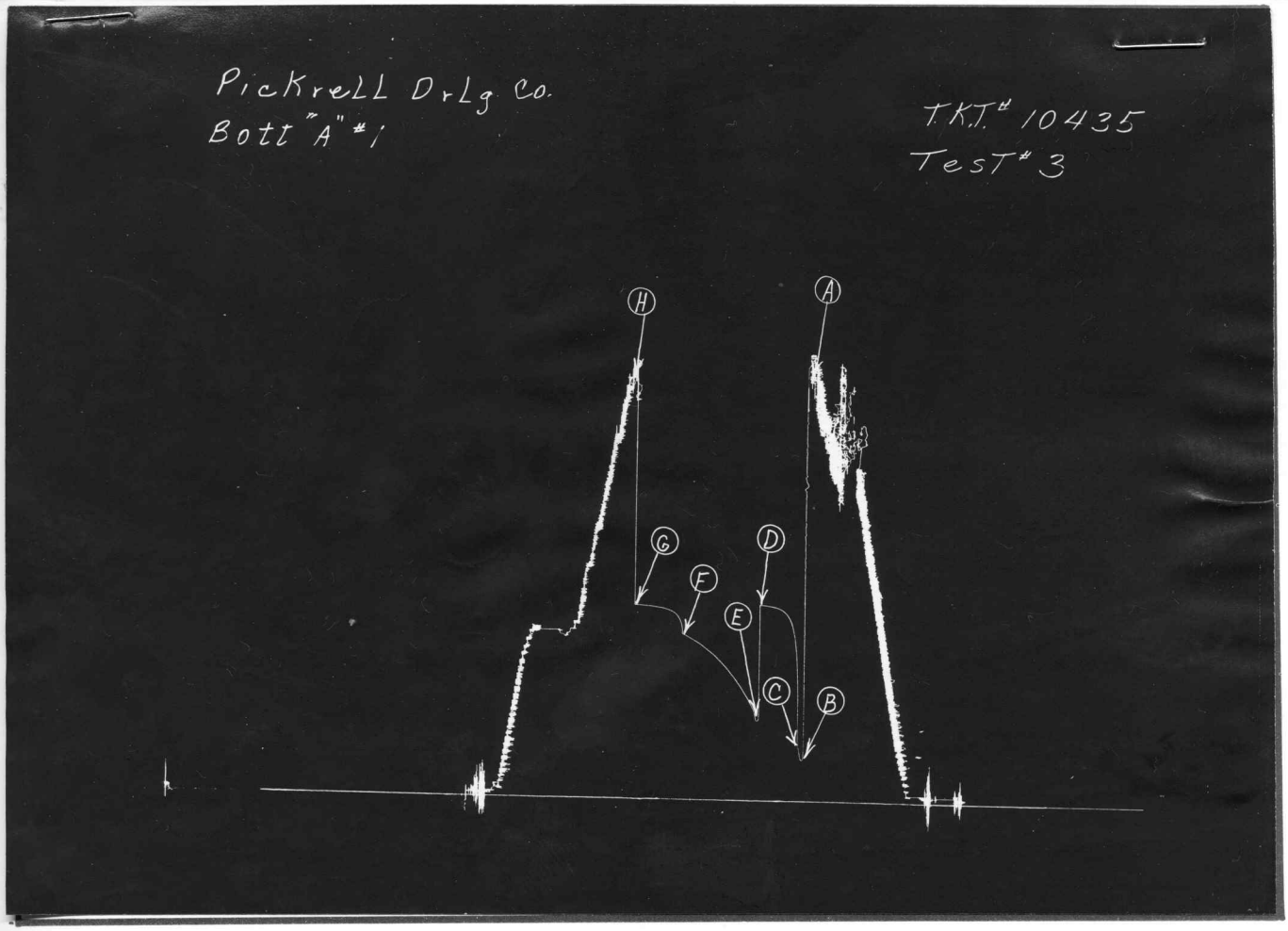
Point Minutes	Press.
0	299
3	831
6	931
9	975
12	996
15	1008
18	1016
21	1020
24	1023
27	1026
30	1029

Second Flow Pressure
Breakdown: 11 Inc.
of 5 mins. and a
final inc. of 3 Min.

Point Minutes	Press.
0	421
5	489
10	556
15	581
20	711
25	808
30	740
35	771
40	802
45	827
50	848
55	862
58	871

Final Shut-In
Breakdown: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	871
3	960
6	979
9	991
12	1000
15	1006
18	1010
21	1012
24	1014
27	1016
30	1018
33	1019



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2229	2229	PSI
(B)	First Initial Flow Pressure	218	218	PSI
(C)	First Final Flow Pressure	291	299	PSI
(D)	Initial Closed-in Pressure	1028	1029	PSI
(E)	Second Initial Flow Pressure	416	421	PSI
(F)	Second Final Flow Pressure	873	871	PSI
(G)	Final Closed-in Pressure	1018	1019	PSI
(H)	Final Hydrostatic Mud	2209	2218	PSI

COMPANY Pickrell Drlg. Co. LEASE AND WELL NO. Bott A#1 SEC. 2 TWP. 19 RGE. 20 TEST NO. 3 DATE 1-31-69