WESTERN TESTERS

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

Company Pickrell Drlg. Co. Lease & Well No. Froetschner C#1

Elevation 2113 Kelly Bushhing Formation Sand Effective Pay Ft. Ticket No. 10450

Date 2-20-68 Sec. 18 Twp. 21s Range 17w County Pawnee State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Dean Blagrave

Formation Test No. 1 O.K. x Misrun Interval Tested From 3910' to 3940' Total Depth 3940'

Size Main Hole 7 7/88 Rat Hole Conv. x B.T. Damaged Yes x No Conv. B.T. x Damaged Yes x No

Packer Depth 3905 Ft. Size 6 3/4 Packer Depth 3910 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 30 Ft. Size 5½"OD

RECORDERS Depth 3931 Ft. Clock No. 8475 Depth 3934 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 1:49 A. M

Tool Open I.F.P. From 1:51 M. to 2:01 A M. Hr. 10 Min. From (B) 38 P.S.I. To (C) 38 P.S.I.

Tool Closed I.C.I.P. From 2:01 M. to 2:31 A M. Hr. 30 Min. (D) 59 P.S.I.

Tool Open F.F.P. From 2:31 M. to 3:31 A M. 1 Hr. -- Min. From (E) 47 P.S.I. To (F) 53 P.S.I.

Tool Closed F.C.I.P. From 3:31 M. to 4:01 A M. Hr. 30 Min. (G) 61 P.S.I.

Initial Hydrostatic Pressure (A) 2127 P.S.I. Final Hydrostatic Pressure (H) 2109 P.S.I.

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

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

Did Well Flow Yes x No Recovery Total Ft. 10 feet mud.

Reversed Out Yes x No Mud Type starch Viscosity 49 Weight 10.1 Water Loss 8.8 cc. Maximum Temp. 112 °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 1055 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars in. Length D.S.T. Tool 48 ft.

Remarks Flushed at 20 and 40 minutes.

WESTERN TESTING CO., INC.
Pressure Data

Date 2-20-68

Recorder No. 2606 Capacity 4150 Test Ticket No. 10450

Clock No. 8475 Elevation 2113 Kelly Bushhing Location 3931 Ft.

Well Temperature 112 °F

Point		Pressure	
A	Initial Hydrostatic Mud	2127	P.S.I.
B	First Initial Flow Pressure	38	P.S.I.
C	First Final Flow Pressure	38	P.S.I.
D	Initial Closed-in Pressure	59	P.S.I.
E	Second Initial Flow Pressure	47	P.S.I.
F	Second Final Flow Pressure	53	P.S.I.
G	Final Closed-in Pressure	61	P.S.I.
H	Final Hydrostatic Mud	2109	P.S.I.

	Time Given	Time Computed
Opened Tool	1:51 A. M	1:51 AM
First Flow Pressure	10 Mins.	10 Mins.
Initial Closed-in Pressure	30 Mins.	30 Mins.
Second Flow Pressure	60 Mins.	60 Mins.
Final Closed-in Pressure	30 Mins.	30 Mins.

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 2 Inc. of 5 mins. and a final inc. of 0 Min.

Point	Mins.	Press.
P 1	0	38
P 2	5	38
P 3	10	38
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	38
3	38
6	38
9	40
12	43
15	45
18	47
21	50
24	53
27	57
30	59

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

Point Minutes	Press.
0	47
5	47
10	47
15	47
20	47
25	50
30	50
35	50
40	50
45	53
50	53
55	53
60	53

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

Point Minutes	Press.
0	53
3	53
6	53
9	53
12	53
15	55
18	55
21	57
24	58
27	59
30	61

WESTERN TESTERS

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

Company Pickrell Drlg. Co. Lease & Well No. Froetschner C#1

Elevation 2113 Kelly Bushing Formation Sand Effective Pay Ft. Ticket No. 10451

Date 2-20-68 Sec. 18 Twp. 21s Range 17w County Pawnee State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Dean Blagrave

Formation Test No. 2 O.K. x Misrun Interval Tested From 3910' to 3950' Total Depth 3950'

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 3905 Ft. Size 6 3/4 Packer Depth 3910 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 40 Ft. Size 5½"OD

RECORDERS Depth 3941 Ft. Clock No. 8475 Depth 3944 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 1:26 P. M

Tool Open I.F.P. From 1:29 M. to 1:39 P M. Hr. 10 Min. From (B) 59 P.S.I. To (C) 59 P.S.I.

Tool Closed I.C.I.P. From 1:39 M. to 2:09 P M. Hr. 30 Min. (D) 91 P.S.I.

Tool Open F.F.P. From 2:09 M. to 2:49 P M. Hr. 40 Min. From (E) 61 P.S.I. To (F) 68 P.S.I.

Tool Closed F.C.I.P. From 2:49 M. to 3:19 P M. Hr. 30 Min. (G) 76 P.S.I.

Initial Hydrostatic Pressure (A) 2107 P.S.I. Final Hydrostatic Pressure (H) 2073 P.S.I.

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

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

Did Well Flow Yes x No Recovery Total Ft. 10 feet mud.

Reversed Out Yes x No Mud Type starch Viscosity 44 Weight 10. Water Loss 9.2 cc. Maximum Temp. 113 °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 1055 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars in. Length D.S.T. Tool 58 ft.

Remarks Flushed at 20 minutes.

WESTERN TESTING CO., INC.
Pressure Data

Date 2-20-68 Test Ticket No. 10451

Recorder No. 2606 Capacity 4150 Location 3941 Ft.

Clock No. 8475 Elevation 2113 Kelly Bushing Well Temperature 113 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2107 P.S.I.	Opened Tool	1:29 P. M	1:29 PM
B First Initial Flow Pressure	59 P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C First Final Flow Pressure	59 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	91 P.S.I.	Second Flow Pressure	40 Mins.	40 Mins.
E Second Initial Flow Pressure	61 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	68 P.S.I.			
G Final Closed-in Pressure	76 P.S.I.			
H Final Hydrostatic Mud	2073 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 2 Inc.
of 5 mins. and a
final inc. of -- Min.

Point Mins.	Press.
P 1 0	59
P 2 5	59
P 3 10	59
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 -- Min.

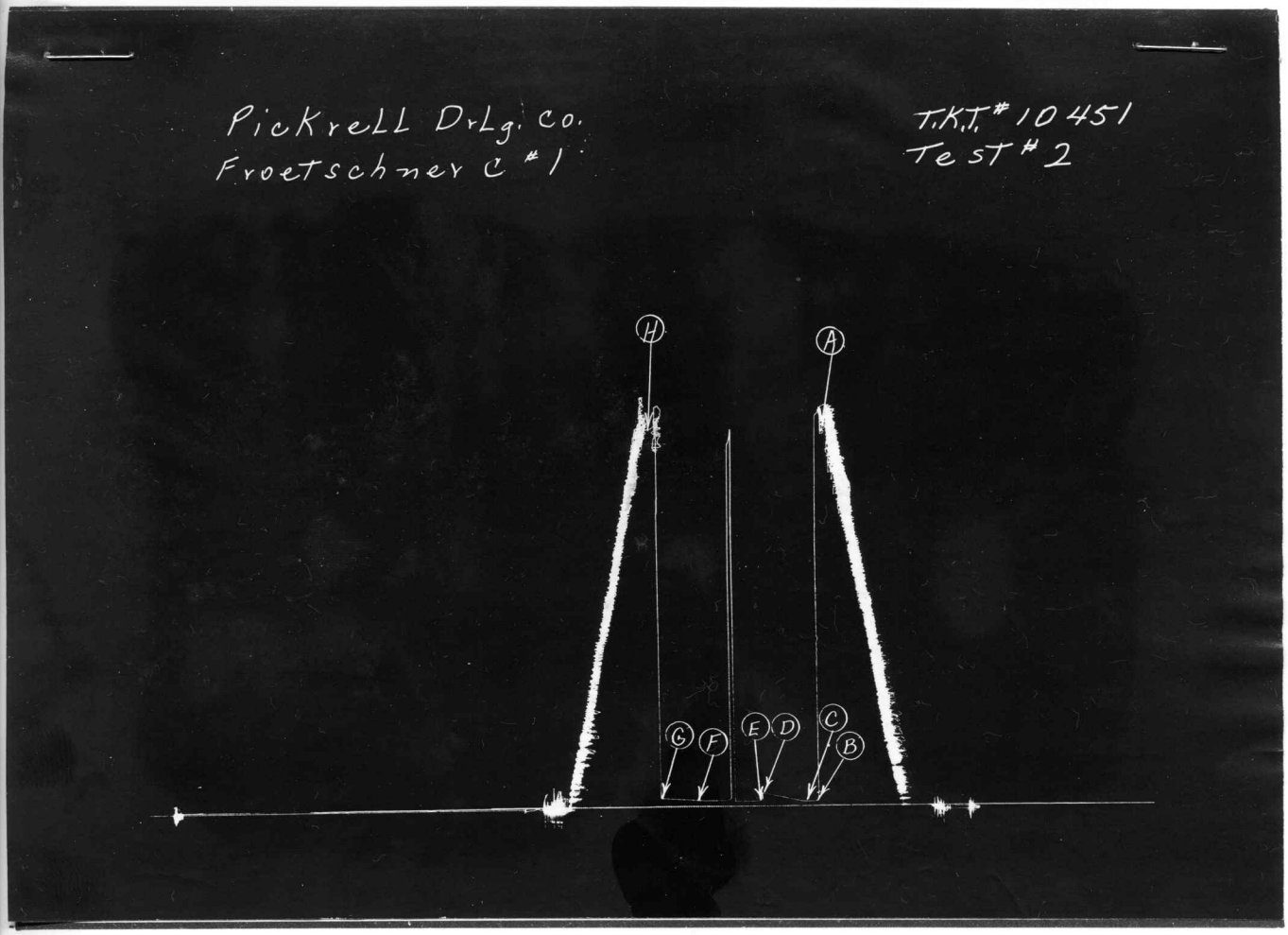
Point Minutes	Press.
0	59
3	59
6	59
9	61
12	64
15	69
18	73
21	77
24	82
27	87
30	91

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

Point Minutes	Press.
0	61
5	61
10	61
15	61
20	61
25	68
30	68
35	68
40	68

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

Point Minutes	Press.
0	68
3	68
6	68
9	68
12	70
15	70
18	72
21	72
24	74
27	75
30	76



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2104	2107	PSI
(B)	First Initial Flow Pressure	62	59	PSI
(C)	First Final Flow Pressure	62	59	PSI
(D)	Initial Closed-in Pressure	93	91	PSI
(E)	Second Initial Flow Pressure	62	61	PSI
(F)	Second Final Flow Pressure	72	68	PSI
(G)	Final Closed-in Pressure	72	76	PSI
(H)	Final Hydrostatic Mud	2083	2073	PSI

COMPANY Pickrell Drlg. Co. LEASE AND WELL NO. Froetschner C#1 SEC. 18 TWP. 21s RGE. 17w TEST NO. 2 DATE 2-20-68

WESTERN TESTERS

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

Company Pickrell Drlg. Co. Lease & Well No. Froetschner C#1

Elevation 2113 Kelly Bushing Formation Reagan Effective Pay 13 Ft. Ticket No. 10452

Date 2-21-68 Sec. 18 Twp. 21s Range 17w County Pawnee State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Dean Blagrave

Formation Test No. 3 O.K. x Misrun Interval Tested From 3952' to 3965' Total Depth 3965'

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 3947 Ft. Size 6 3/4 Packer Depth 3952 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 13 Ft. Size 5½"OD

RECORDERS Depth 3956 Ft. Clock No. 8475 Depth 3959 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 4:14 A. M

Tool Open I.F.P. From 4:16 M. to 4:21 A M. Hr. 5 Min. From (B) 346 P.S.I. To (C) 609 P.S.I.

Tool Closed I.C.I.P. From 4:21 M. to 4:51 A M. Hr. 30 Min. (D) 1227 P.S.I.

Tool Open F.F.P. From 4:51 M. to 5:51 A M. 1 Hr. -- Min. From (E) 719 P.S.I. To (F) 1223 P.S.I.

Tool Closed F.C.I.P. From 5:51 M. to 6:21 A M. Hr. 30 Min. (G) 1227 P.S.I.

Initial Hydrostatic Pressure (A) 2139 P.S.I. Final Hydrostatic Pressure (H) 2112 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 to weak at end. Bottom Choke Size 3/4 In.

Did Well Flow Yes x No Recovery Total Ft. 2575 feet black sulphur water.

Reversed Out x Yes No Mud Type starch Viscosity 50 Weight 10 Water Loss 9.2 cc. Maximum Temp 121 °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 1055 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars in. Length D.S.T. Tool 31 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 2-21-68 Test Ticket No. 10452

Recorder No. 2606 Capacity 4150 Location 3956 Ft.

Clock No. 8475 Elevation 2113 Kelly Bushing Well Temperature 121 °F

Point		Pressure			Time Given		Time Computed	
A	Initial Hydrostatic Mud	2139	P.S.I.	Opened Tool	4:16 A.	M	4:16 AM	
B	First Initial Flow Pressure	346	P.S.I.	First Flow Pressure	5	Mins.	5	Mins.
C	First Final Flow Pressure	609	P.S.I.	Initial Closed-in Pressure	30	Mins.	30	Mins.
D	Initial Closed-in Pressure	1227	P.S.I.	Second Flow Pressure	60	Mins.	60	Mins.
E	Second Initial Flow Pressure	719	P.S.I.	Final Closed-in Pressure	30	Mins.	30	Mins.
F	Second Final Flow Pressure	1223	P.S.I.					
G	Final Closed-in Pressure	1227	P.S.I.					
H	Final Hydrostatic Mud	2112	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	346
P 2 5	609
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.

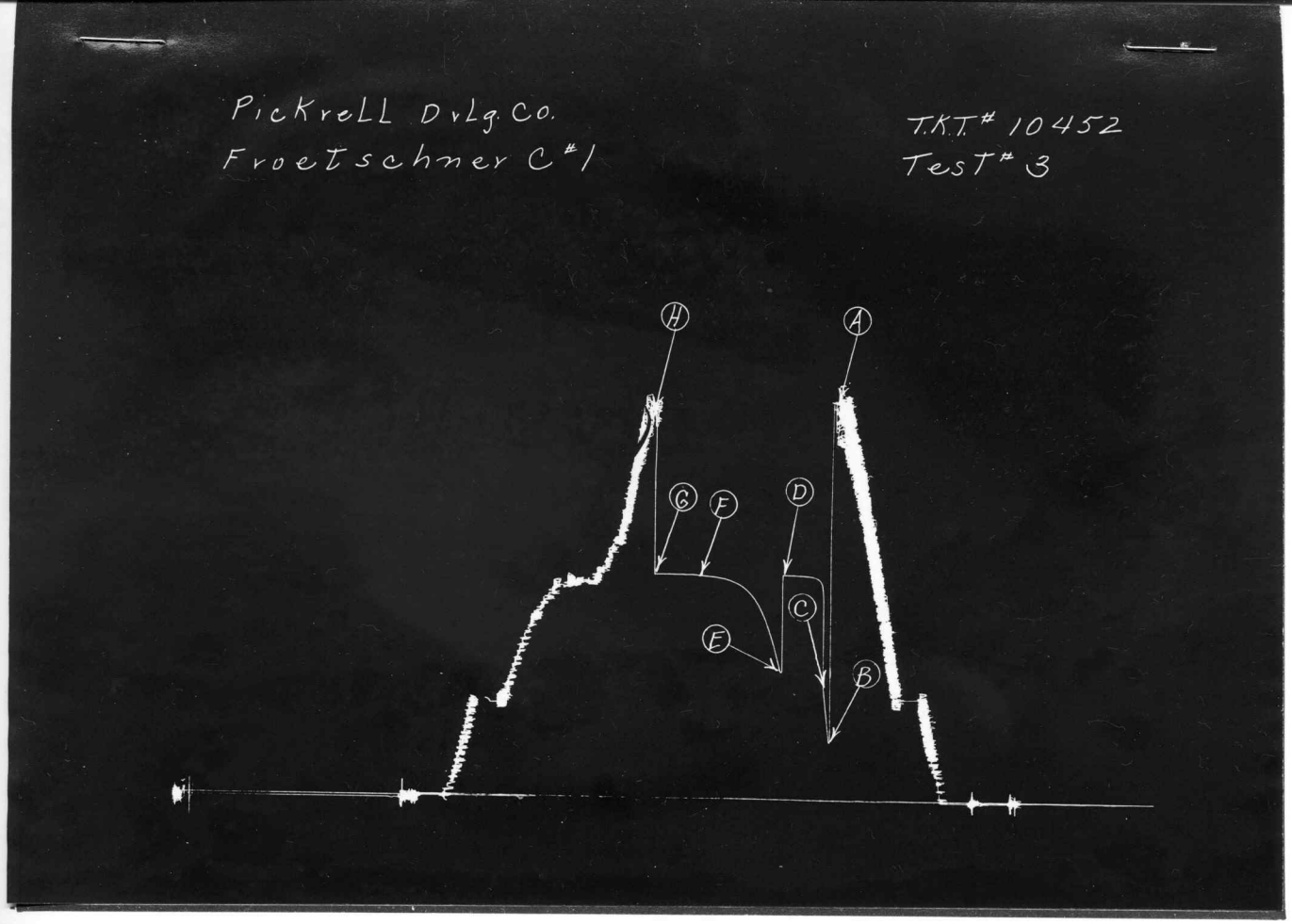
Point Minutes	Press.
0	609
3	1196
6	1215
9	1219
12	1221
15	1223
18	1225
21	1226
24	1227
27	1227
30	1227

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

Point Minutes	Press.
0	719
5	835
10	958
15	1056
20	1116
25	1153
30	1178
35	1196
40	1207
45	1215
50	1217
55	1221
60	1223

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

Point Minutes	Press.
0	1223
3	1226
6	1227
9	1227
12	1227
15	1227
18	1227
21	1227
24	1227
27	1227
30	1227



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2135	2139	PSI
(B)	First Initial Flow Pressure	343	346	PSI
(C)	First Final Flow Pressure	634	609	PSI
(D)	Initial Closed-in Pressure	1225	1227	PSI
(E)	Second Initial Flow Pressure	717	719	PSI
(F)	Second Final Flow Pressure	1215	1223	PSI
(G)	Final Closed-in Pressure	1225	1227	PSI
(H)	Final Hydrostatic Mud	2114	2112	PSI

COMPANY Pickrell Drlg. Co. LEASE AND WELL NO. Froetschner C#1 SEC. 18 TWP. 21s RGE. 17w TEST NO. 3 DATE 2-21-68