WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Tice Petroleum Company Lease & Well No. Richardson #1

Elevation 1619' K.B. Ticket Number 3059

Date 12-7-63 Sec. 8 Twp. 31S Range 7W County Harper State Kansas

Test Approved by Toby Elster Western Representative George Tew

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Formation Test No. 1 O.K. X Misrun ____ Interval Tested From 4412' to 4430' Total Depth 4430'

Size Main Hole 7 7/8" Rat Hole None Conv. X B.T. ____ Damaged ____ Yes X No Conv. ____ B.T. X Damaged ____ Yes X No

Packer Depth 4412 Ft. Size 6 3/4" Packer Depth 4407 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 18 Ft. Size 5½" OD

RECORDERS Depth 4421 Ft Clock No. 6806 Depth 4424 Ft. Clock No. 60

Top Make Amerada Cap. 4200# No. 1558 Inside Outside Bottom Make Western Cap. 4000# No. 60 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

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Time Set Packer 11:22P M

Tool Open I.F.P. From 11:23P M to 11:28P M - Hr. 5 Min. From (B) 54 P.S.I. To (C) 59 P.S.I.

Tool Closed I.C.I.P. From 11:28P M. to 11:58P M. - Hr. 30 Min. (D) 1332 P.S.I.

Tool Open F.F.P. From 11:58P M. to 1:58P M. 2 Hr. - Min. From (E) 84 P.S.I. To (F) 177 P.S.I.

Tool Closed F.C.I.P. From 1:58P M. to 2:43P M. - Hr. 45 Min. (G) 1269 P.S.I.

Inital Hydrostatic Pressure (A) 2351 P.S.I. Final Hydrostatic Pressure (H) 2338 P.S.I.

SURFACE INFORMATION Size Choke 1/2 In. Max. Press. P.S.I. Time Description of Flow

____ ____ ____M. ____

____ ____ ____M. ____

____ ____ ____M. ____

BLOW Weak blow throughout test Bottom Choke Size 3/4 in.

Did Well Flow ____ Yes X No Recovery Total Ft. 330'

60' S.O. & G.C.Mud - 270' Muddy salt water Mud

Reversed Out ____ Yes X No Mud Type Starch Viscosity 50 Weight 9.8 Maximum Temp. 132 °F

EXTRA EQUIPMENT: Dual Packers Yes Safety Joint Yes Jars: Size No Make ____ Ser. No. ____

Type Circ. Sub. Plug Did Tool Plug? No Where? ____ Did Packer Hold? Yes

Length Drill Pipe 4090' ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 300 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 40 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 12-7-63 Test Ticket No. 3059

Recorder No. 1538 Capacity 4200# Location 4421 Ft.

Clock No. 6806 Elevation 1619' K.B. Well Temperature 132 °F

Point		Pressure		Time Given		Time Computed	
A	Initial Hydrostatic Mud	2351 P.S.I.	Opened Tool	11:22 P	M	11:22 PM	
B	First Initial Flow Pressure	54 P.S.I.	First Flow Pressure	5	Mins.	5	Mins.
C	First Final Flow Pressure	59 P.S.I.	Initial Closed-in Pressure	30	Mins.	31	Mins.
D	Initial Closed-in Pressure	1332 P.S.I.	Second Flow Pressure	120	Mins.	120	Mins.
E	Second Initial Flow Pressure	84 P.S.I.	Final Closed-in Pressure	45	Mins.	45	Mins.
F	Second Final Flow Pressure	177 P.S.I.					
G	Final Closed-in Pressure	1269 P.S.I.					
H	Final Hydrostatic Mud	2338 P.S.I.					

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	54
P 2 5	59
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 1 Min.

Point Minutes	Press.
0	59
3	90
6	151
9	240
12	390
15	397
18	853
21	1037
24	1156
27	1254
30	1321
31	1332

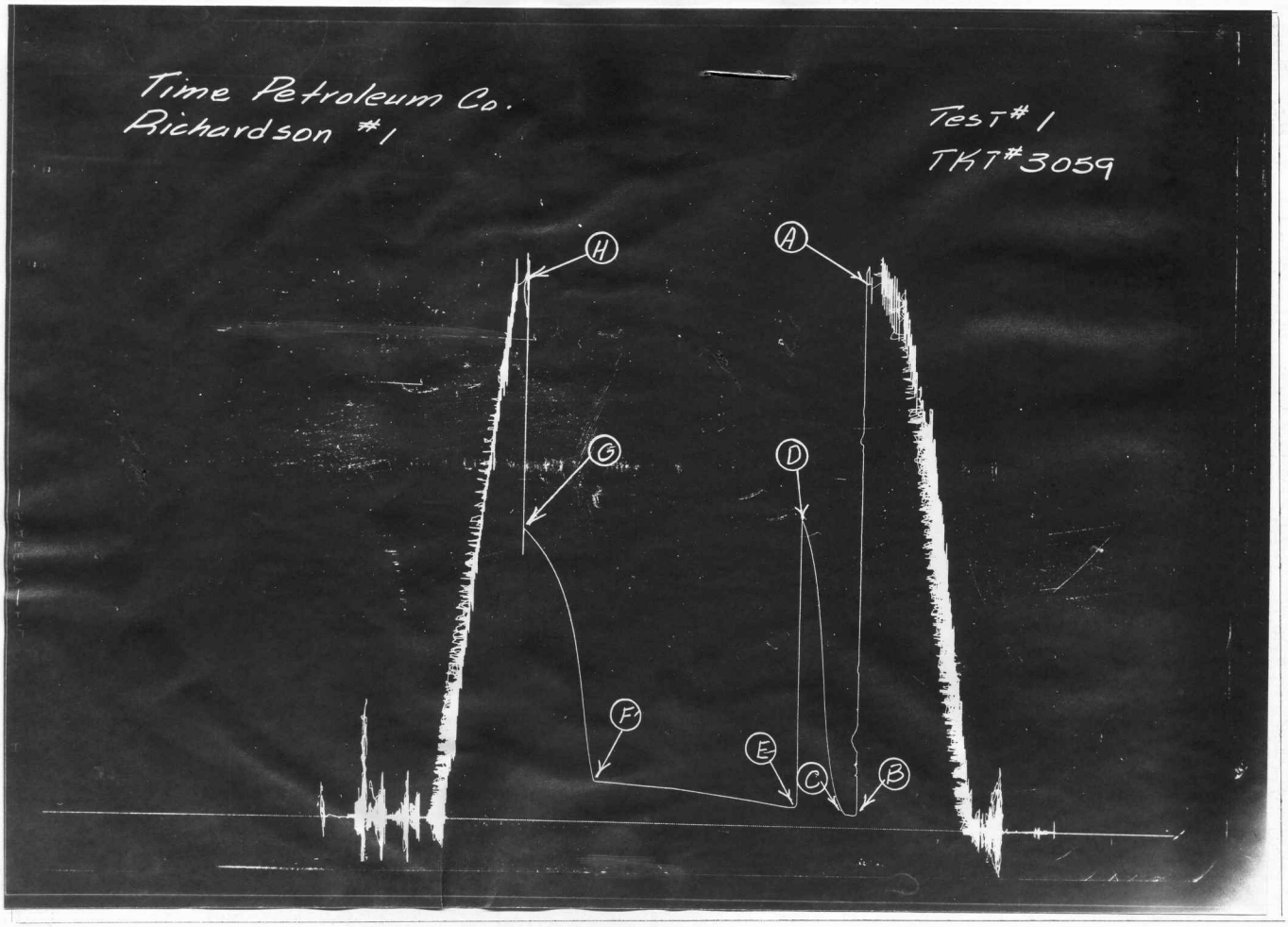
Second Flow Pressure
Breakdown: 24 Inc.
of 5 mins. and a
final inc. of - Min.

Point Minutes	Press.
0	84
5	86
10	88
15	94
20	101
25	109
30	113
35	118
40	124
45	128
50	132
55	137
60	143
65	147
70	154
75	156
80	159
85	160
90	162
95	164
100	166
105	170
110	172
115	175
120	177

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

Point Minutes	Press.
0	177
3	286
6	434
9	604
12	735
15	845
18	924
21	989
24	1043
27	1091
30	1129
33	1165
36	1194
39	1219
42	1242
45	1269

WHELAN PRINTERS



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	2351	PSI
(B)	First Initial Flow Pressure	54	PSI
(C)	First Final Flow Pressure	59	PSI
(D)	Initial Closed-in Pressure	1332	PSI
(E)	Second Initial Flow Pressure	64	PSI
(F)	Second Final Flow Pressure	177	PSI
(G)	Final Closed-in Pressure	1269	PSI
(H)	Final Hydrostatic Mud	2338	PSI

Company Time Petroleum Co. Lease and Well No. Richardson #1 Sec. 8 Twp. 31S Rge. 7W Test No. 1 Date 12-7-63

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company The Petroleum Company Lease & Well No. Richardson #1

Elevation 1619' K.B. Ticket Number 3232

Date 12-9-63 Sec. 8 Twp. 31S Range 7W County Harper State Kansas

Test Approved by Toby Elster Western Representative Guy N. Knipe

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Formation Test No. 2 O.K. X Misrun ____ Interval Tested From 4792' to 4808' Total Depth 4808'

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

Packer Depth 4789 Ft. Size 6 3/4" Packer Depth 4792 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 16 Ft. Size 5½" OD

RECORDERS Depth 4802 Ft Clock No. 6859 Depth 4805 Ft. Clock No. 59

Top Make Amerada Cap. 4200# No. 1559 Inside Outside Bottom Make Western Cap. 4000# No. 59 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

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Time Set Packer 1:39 A M

Tool Open I.F.P. From 1:41A M to 1:44A M - Hr. 3 Min. From (B) 267 P.S.I. To (C) 319 P.S.I.

Tool Closed I.C.I.P. From 1:44A M. to 2:14A M. - Hr. 30 Min. (D) 1751 P.S.I.

Tool Open F.F.P. From 2:14A M. to 4:14A M. 2 Hr. - Min. From (E) 449 P.S.I. To (F) 1748 P.S.I.

Tool Closed F.C.I.P. From 4:14A M. to 4:59A M. - Hr. 45 Min. (G) 1748 P.S.I.

Inital Hydrostatic Pressure (A) 2566 P.S.I. Final Hydrostatic Pressure (H) 2531 P.S.I.

SURFACE INFORMATION Size Choke 3/4 In. Max. Press. P.S.I. Time Description of Flow

Gas to surface 2 Hrs. 40 Mins. ____M. ____

____M. ____

____M. ____

BLOW Strong-blow throughout flow period Bottom Choke Size 3/4 in.

Did Well Flow X Yes ____ No Recovery Total Ft. 3554' Total Fluid 62' Heavy gas cut mud - 92' Heavy Gas Slightly Oil Cut Mud - 3400' Gassy Salt Water

Reversed Out X Yes ____ No Mud Type Starch Viscosity 50 Weight 9.7 Maximum Temp. 146 °F Mud

EXTRA EQUIPMENT: Dual Packers Yes Safety Joint Yes Jars: Size No Make ____ Ser. No. ____

Type Circ. Sub. Ring Did Tool Plug? No Where? ____ Did Packer Hold? Yes

Length Drill Pipe 4456 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 310 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 38 ft.

Remarks

Gas surfaced after tool was closed in for F.C.I.P.

WESTERN TESTING CO., INC.
Pressure Data

Date 12-9-63 Test Ticket No. 3732

Recorder No. 1559 Capacity 4200# Location 4802 Ft.

Clock No. 6859 Elevation 1619' K.B. Well Temperature 146 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	2566 P.S.I.	Opened Tool	1:39 A M	1:39 AM
B	First Initial Flow Pressure	267 P.S.I.	First Flow Pressure	3 Mins.	3 Mins.
C	First Final Flow Pressure	319 P.S.I.	Initial Closed-in Pressure	30 Mins.	33 Mins.
D	Initial Closed-in Pressure	1751 P.S.I.	Second Flow Pressure	120 Mins.	120 Mins.
E	Second Initial Flow Pressure	449 P.S.I.	Final Closed-in Pressure	45 Mins.	30 Mins.
F	Second Final Flow Pressure	1748 P.S.I.			
G	Final Closed-in Pressure	1748 P.S.I.			
H	Final Hydrostatic Mud	2531 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.

Breakdown: 1 Inc.

of 3 mins. and a

final inc. of - Min.

Point Mins.	Press.
P 1 0	267
P 2 3	319
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: 11 Inc.

of 3 mins. and a

final inc. of - Min.

Point Minutes	Press.
0	319
3	1144
6	1740
9	1744
12	1746
15	1751
18	1751
21	1751
24	1751
27	1751
30	1751
33	1751

Second Flow Pressure

Breakdown: 24 Inc.

of 5 mins. and a

final inc. of - Min.

Point Minutes	Press.
0	449
5	588
10	766
15	943
20	1123
25	1277
30	1405
35	1506
40	1575
45	1641
50	1691
55	1725
60	1742
65	1746
70	1748
75	1748
80	1748
85	1748
90	1748
95	1748
100	1748
105	1748
110	1748
115	1748
120	1748

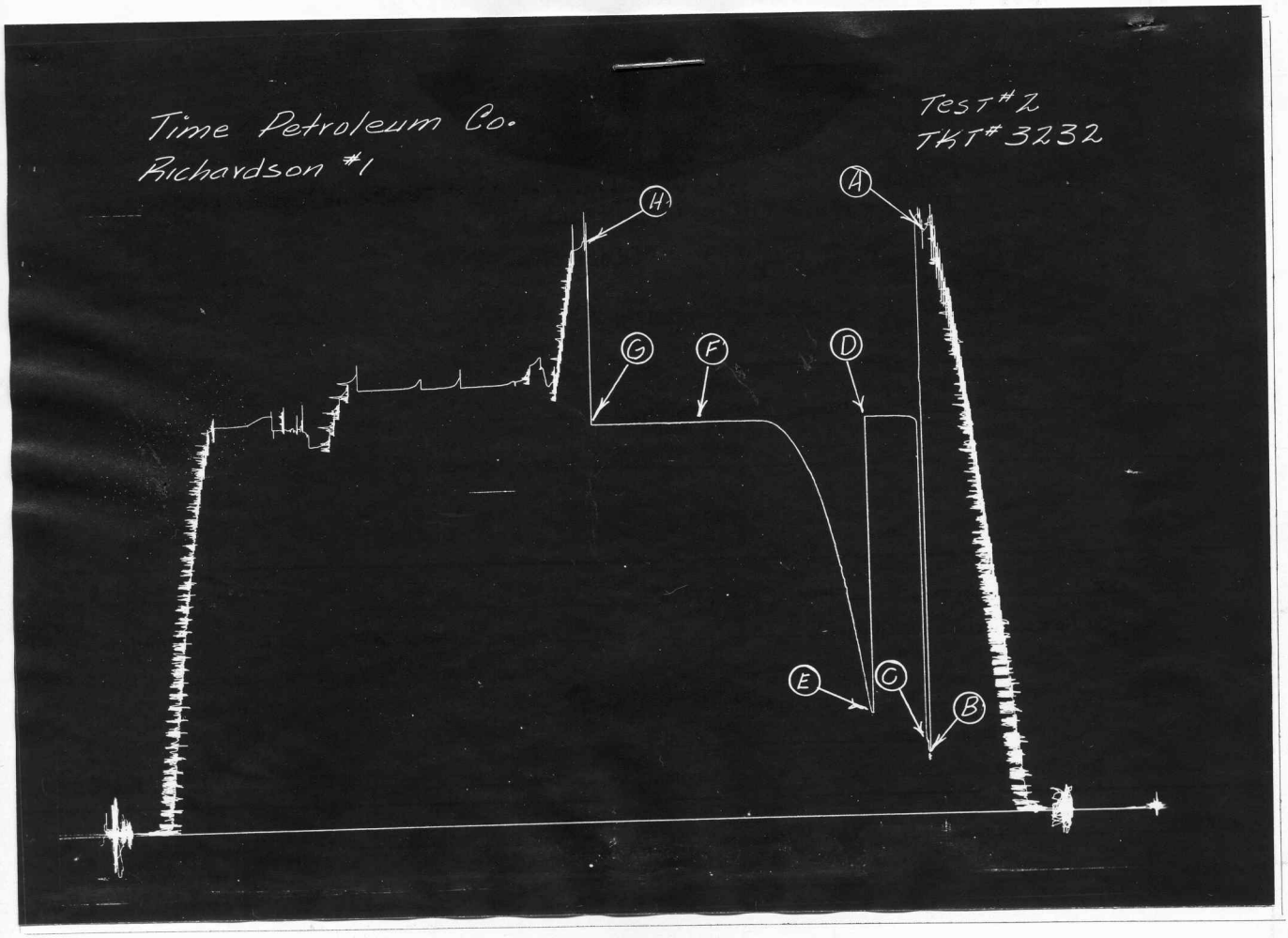
Final Shut-In

Breakdown: 10 Inc.

of 3 mins. and a

final inc. of - Min.

Point Minutes	Press.
0	1748
3	1748
6	1748
9	1748
12	1748
15	1748
18	1748
21	1748
24	1748
27	1748
30	1748



This is an actual photograph of recorder chart.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	2566 PSI
(B)	First Initial Flow Pressure	267 PSI
(C)	First Final Flow Pressure	319 PSI
(D)	Initial Closed-in Pressure	1751 PSI
(E)	Second Initial Flow Pressure	449 PSI
(F)	Second Final Flow Pressure	1748 PSI
(G)	Final Closed-in Pressure	1748 PSI
(H)	Final Hydrostatic Mud	2531 PSI

Company Time Petroleum Co. Lease and Well No. Richardson #1 Sec. 8 Twp. 31S Rge. 7W Test No. 2 Date 12-9-63