WESTERN TESTERS

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

Company Pickrell Drilling Company Lease & Well No. Elmore #F-1

Elevation 2374 Kelly Bushings Formation Cherokee Effective Pay --------- Ft. Ticket No. 8447

Date July 31,1967 Sec. --------- Twp. Range County Ness State Kansas

Test Approved by George N. Mueller Western Representative Dean Blagrave

Formation Test No. 1 O.K. x Misrun Interval Tested From 4200' to 4245' Total Depth 4245'

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

Packer Depth 4195 Ft. Size 6 3/4 Packer Depth 4200 Ft. Size 6 3/4

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

Packer Depth Ft. Size

Tool Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 45 Ft. Size 5½ OD

RECORDERS Depth 4236 Ft. Clock No. 6892 Depth 4239 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 10:52 A M

Tool Open I.F.P. From 10:55 M. to 11:00 M. Hr. 5 Min. From (B) 166 P.S.I. To (C) 263 P.S.I.

Tool Closed I.C.I.P. From 11:00 M. to 11:30 M. Hr. 30 Min. (D) 1119 P.S.I.

Tool Open F.F.P. From 11:30A M. to 12:30P M. Hr. 1 Min. From (E) 316 P.S.I. To (F) 603 P.S.I.

Tool Closed F.C.I.P. From 12:30P M. to 1:00 M. Hr. 30 Min. (G) 863 P.S.I.

Initial Hydrostatic Pressure (A) 2313 P.S.I. Final Hydrostatic Pressure (H) 2303 P.S.I.

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

BLOW Strong throughout. Bottom Choke Size 3/4 In.

Did Well Flow Yes x No Recovery Total Ft. 130' clean oil; 1490' muddy oil

Reversed Out Yes x No Mud Type starch Viscosity 45 Weight 10.0 Water Loss ----- cc. Maximum Temp. 121 °F

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Jars: Size no Make Ser. No.

Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes

Length Drill Pipe ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 875 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars in. Length D.S.T. Tool 63 ft.

Remarks Gravity 37° corrected.

# WESTERN TESTING CO., INC.
## Pressure Data

Date July 31,1967 | Test Ticket No. 8447

Recorder No. 2606 | Capacity 4150 | Location 4236 Ft.

Clock No. 6892 | Elevation 2374 Kelly Bushings | Well Temperature 121 °F

| Point | | Pressure | | Time Given | Time Computed |
|---|---|---|---|---|---|
| A | Initial Hydrostatic Mud | 2313 P.S.I. | Opened Tool | 10:55A M | |
| B | First Initial Flow Pressure | 166 P.S.I. | First Flow Pressure | 5 Mins. | 5 Mins. |
| C | First Final Flow Pressure | 263 P.S.I. | Initial Closed-in Pressure | 30 Mins. | 30 Mins. |
| D | Initial Closed-in Pressure | 1119 P.S.I. | Second Flow Pressure | 60 Mins. | 60 Mins. |
| E | Second Initial Flow Pressure | 316 P.S.I. | Final Closed-in Pressure | 30 Mins. | 32 Mins. |
| F | Second Final Flow Pressure | 603 P.S.I. | | | |
| G | Final Closed-in Pressure | 863 P.S.I. | | | |
| H | Final Hydrostatic Mud | 2303 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 | 166 |
| P 2 5 | 263 |
| 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.

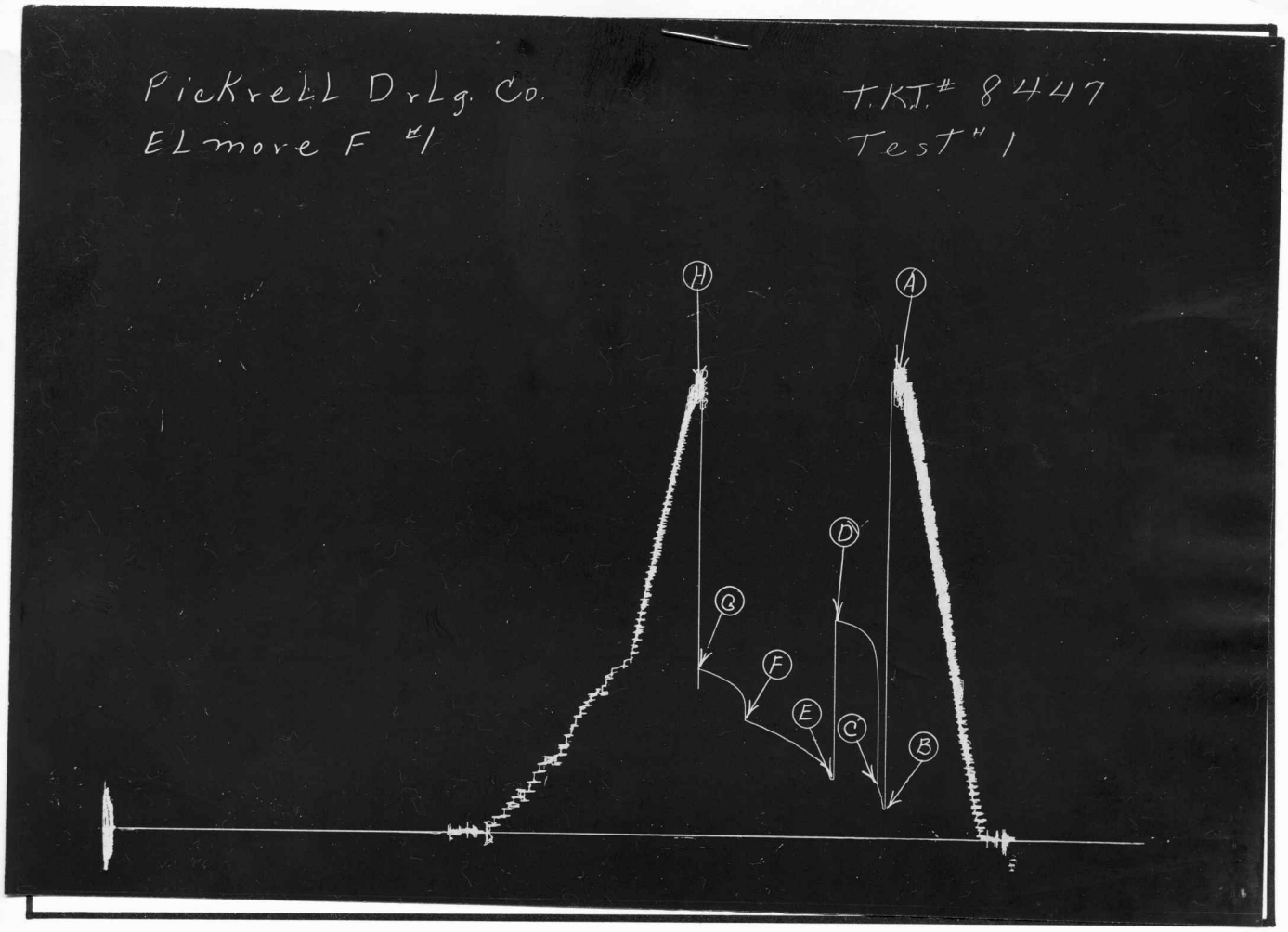
| Point Minutes | Press. |
|---|---|
| 0 | 263 |
| 3 | 923 |
| 6 | 997 |
| 9 | 1039 |
| 12 | 1066 |
| 15 | 1081 |
| 18 | 1093 |
| 21 | 1101 |
| 24 | 1109 |
| 27 | 1114 |
| 30 | 1119 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 316 |
| 5 | 359 |
| 10 | 408 |
| 15 | 433 |
| 20 | 460 |
| 25 | 485 |
| 30 | 506 |
| 35 | 526 |
| 40 | 545 |
| 45 | 560 |
| 50 | 576 |
| 55 | 589 |
| 60 | 603 |

**Final Shut-In**
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 2 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 603 |
| 3 | 744 |
| 6 | 765 |
| 9 | 786 |
| 12 | 801 |
| 15 | 813 |
| 18 | 825 |
| 21 | 834 |
| 24 | 844 |
| 27 | 851 |
| 30 | 858 |
| 32 | 863 |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE | |
|---|---|---|---|
| (A) | Initial Hydrostatic Mud | 2313 | PSI |
| (B) | First Initial Flow Pressure | 166 | PSI |
| (C) | First Final Flow Pressure | 263 | PSI |
| (D) | Initial Closed-in Pressure | 1119 | PSI |
| (E) | Second Initial Flow Pressure | 316 | PSI |
| (F) | Second Final Flow Pressure | 603 | PSI |
| (G) | Final Closed-in Pressure | 863 | PSI |
| (H) | Final Hydrostatic Mud | 2303 | PSI |

COMPANY PICKRELL DRILLING CO. LEASE AND WELL NO. ELMORE #~~E-1~~ J-1 SEC. ---- TWP. ------- RGE. -- TEST NO. 1 DATE 7-31-67

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

Company Pickrell Drilling Company Lease & Well No. Elmore #F-1

Elevation 2374 Kelly Bushings Formation Cherokee Effective Pay -------- Ft. Ticket No. 8448

Date August 1,1967 Sec. ---------- Twp. Range County Ness State Kansas

Test Approved by George N. Mueller Western Representative Dean Blagrave

Formation Test No. 2 O.K. x Misrun Interval Tested From 4247' to 4265' Total Depth 4275'

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 4242 Ft. Size 6 3/4 Packer Depth 4247 Ft. Size 6 3/4

Straddle Yes x No 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 4267 Ft. Clock No. 6892 Depth 4270 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 12:52 A M

Tool Open I.F.P. From 12:55 M. to 1:00 M. Hr. 5 Min. From (B) 971 P.S.I. To (C) 1002 P.S.I.

Tool Closed I.C.I.P. From 1:00A M. to 1:30 M. Hr. 30 Min. (D) 1226 P.S.I.

Tool Open F.F.P. From 1:30 M. to 2:00 M. Hr. 30 Min. From (E) 1101 P.S.I. To (F) 1221 P.S.I.

Tool Closed F.C.I.P. From 2:00 M. to 2:30 M. Hr. 30 Min. (G) 1227 P.S.I.

Initial Hydrostatic Pressure (A) 2321 P.S.I. Final Hydrostatic Pressure (H) 2277 P.S.I.

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

M.

M.

M.

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

Did Well Flow x Yes x No Recovery Total Ft. 2650' salt water.

Reversed Out Yes No Mud Type starch Viscosity 45 Weight 10 Water Loss ------- cc. Maximum Temp. 126 °F

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Jars: Size no Make Ser. No.

Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes

Length Drill Pipe ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 875 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars in. Length D.S.T. Tool 36 ft.

Remarks

## WESTERN TESTING CO., INC.
### Pressure Data

Date AUGUST 1, 1967 Test Ticket No. 8448

Recorder No. 2606 Capacity 4150 Location 4267 Ft.

Clock No. 6892 Elevation 2374 Kelly Bushings Well Temperature 126 °F

| Point | | Pressure | |
|---|---|---|---|
| A | Initial Hydrostatic Mud | 2321 | P.S.I. |
| B | First Initial Flow Pressure | 971 | P.S.I. |
| C | First Final Flow Pressure | 1002 | P.S.I. |
| D | Initial Closed-in Pressure | 1226 | P.S.I. |
| E | Second Initial Flow Pressure | 1101 | P.S.I. |
| F | Second Final Flow Pressure | 1221 | P.S.I. |
| G | Final Closed-in Pressure | 1227 | P.S.I. |
| H | Final Hydrostatic Mud | 2277 | P.S.I. |

| | Time Given | | Time Computed | |
|---|---|---|---|---|
| Opened Tool | 12:55 A | M | | |
| First Flow Pressure | 5 | Mins. | 5 | Mins. |
| Initial Closed-in Pressure | 30 | Mins. | 30 | Mins. |
| Second Flow Pressure | 30 | Mins. | 30 | Mins. |
| Final Closed-in Pressure | 30 | Mins. | 30 | Mins. |

## PRESSURE BREAKDOWN

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

| Point Mins. | Press. |
|---|---|
| P 1 0 | 971 |
| P 2 5 | 1002 |
| 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.

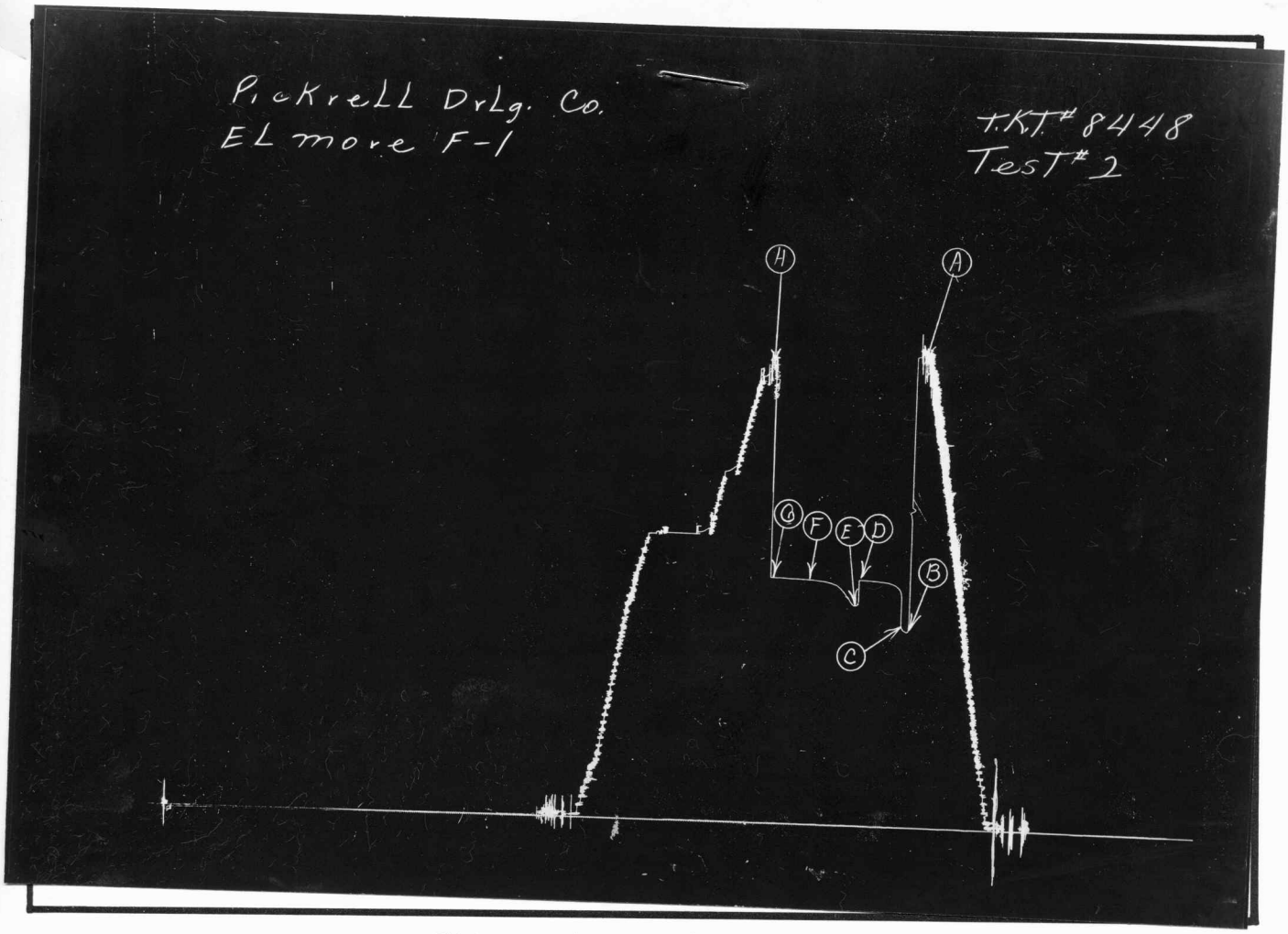
| Point Minutes | Press. |
|---|---|
| 0 | 1002 |
| 3 | 1194 |
| 6 | 1209 |
| 9 | 1215 |
| 12 | 1219 |
| 15 | 1221 |
| 18 | 1224 |
| 21 | 1226 |
| 24 | 1226 |
| 27 | 1226 |
| 30 | 1226 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 1101 |
| 5 | 1117 |
| 10 | 1173 |
| 15 | 1198 |
| 20 | 1211 |
| 25 | 1217 |
| 30 | 1221 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 1221 |
| 3 | 1223 |
| 6 | 1225 |
| 9 | 1226 |
| 12 | 1227 |
| 15 | 1227 |
| 18 | 1227 |
| 21 | 1227 |
| 24 | 1227 |
| 27 | 1227 |
| 30 | 1227 |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE |
|---|---|---|
| (A) | Initial Hydrostatic Mud | 2321 PSI |
| (B) | First Initial Flow Pressure | 971 PSI |
| (C) | First Final Flow Pressure | 1002 PSI |
| (D) | Initial Closed-in Pressure | 1226 PSI |
| (E) | Second Initial Flow Pressure | 1101 PSI |
| (F) | Second Final Flow Pressure | 1221 PSI |
| (G) | Final Closed-in Pressure | 1227 PSI |
| (H) | Final Hydrostatic Mud | 2277 PSI |

COMPANY PICKRELL DRILLING CO. LEASE AND WELL NO. ELMORE #1 J-1 SEC. TWP. RGE. TEST NO. 2 DATE 8-1-67