13-21s-24w

WESTERN

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Murfin Drilling Company Lease & Well No. Hollenbeck #1

Elevation 2501' D.F. Ticket Number 4795

Date 6-24-63 Sec. 13 Twp. 21S Range 24W County Hodgeman State Kansas

Test Approved by Ralph J. Rowe Western Representative Jack Tomlee

Formation Test No. 1 O.K. X Misrun ____ Interval Tested From 4325' to 4370' Total Depth 4370'

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

Packer Depth 4320 Ft. Size 6 3/4" Packer Depth 4325 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 45 Ft. Size 5½" OD Perf.

RECORDERS Depth 4328 Ft Clock No. 6774 Depth 4331 Ft. Clock No. 57

Top Make Amerada Cap. 3150# No. 1562 Inside Outside Bottom Make Western Cap. 4000# No. 57 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 3:46 P M

Tool Open I.F.P. From 3:48P M to 3:53P M - Hr. 5 Min. From (B) 116 P.S.I. To (C) 125 P.S.I.

Tool Closed I.C.I.P. From 3:53P M. to 4:23P M. - Hr. 30 Min. (D) 1377 P.S.I.

Tool Open F.F.P. From 4:23P M. to 5:23P M. 1 Hr. - Min. From (E) 185 P.S.I. To (F) 394 P.S.I.

Tool Closed F.C.I.P. From 5:23P M. to 5:53P M. - Hr. 30 Min. (G) 1310 P.S.I.

Inital Hydrostatic Pressure (A) 2357 P.S.I. Final Hydrostatic Pressure (H) 2328 P.S.I.

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

BLOW Strong Bottom Choke Size 3/4 in.

Did Well Flow Gas Yes ____ No Recovery Total Ft. G.T.S. 30 Mins. - 1210' Fluid

800' Gassy oil - 410' Gassy, muddy oil

Reversed Out X Yes ____ No Mud Type Starch Viscosity 45 Weight 10.1 Maximum Temp. 123 °F Mud

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 3406 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 900 ft. I.D. Weight Pipe 2.75 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 64 ft.

Remarks

WHELAN PRINTERS

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

Date 6-21-63 Test Ticket No. 4795

Recorder No. 1562 Capacity 3150# Location 4328 Ft.

Clock No. 6774 Elevation 2369' D.F. Well Temperature 123 °F

| Point | | Pressure | |
|---|---|---|---|
| A | Initial Hydrostatic Mud | 2357 | P.S.I. |
| B | First Initial Flow Pressure | 116 | P.S.I. |
| C | First Final Flow Pressure | 125 | P.S.I. |
| D | Initial Closed-in Pressure | 1377 | P.S.I. |
| E | Second Initial Flow Pressure | 185 | P.S.I. |
| F | Second Final Flow Pressure | 394 | P.S.I. |
| G | Final Closed-in Pressure | 1310 | P.S.I. |
| H | Final Hydrostatic Mud | 2328 | P.S.I. |

| | Time Given | | Time Computed | |
|---|---|---|---|---|
| Opened Tool | 3:48 P | M | 3:48 PM | |
| First Flow Pressure | 5 | Mins. | 5 | Mins. |
| Initial Closed-in Pressure | 30 | Mins. | 27 | Mins. |
| Second Flow Pressure | 60 | Mins. | 55 | Mins. |
| Final Closed-in Pressure | 30 | Mins. | 27 | Mins. |

## PRESSURE BREAKDOWN

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

| Point Mins. | Press. |
|---|---|
| P 1 0 | 116 |
| P 2 5 | 125 |
| 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: 9 Inc.
of 3 mins. and a
final inc. of - Min.

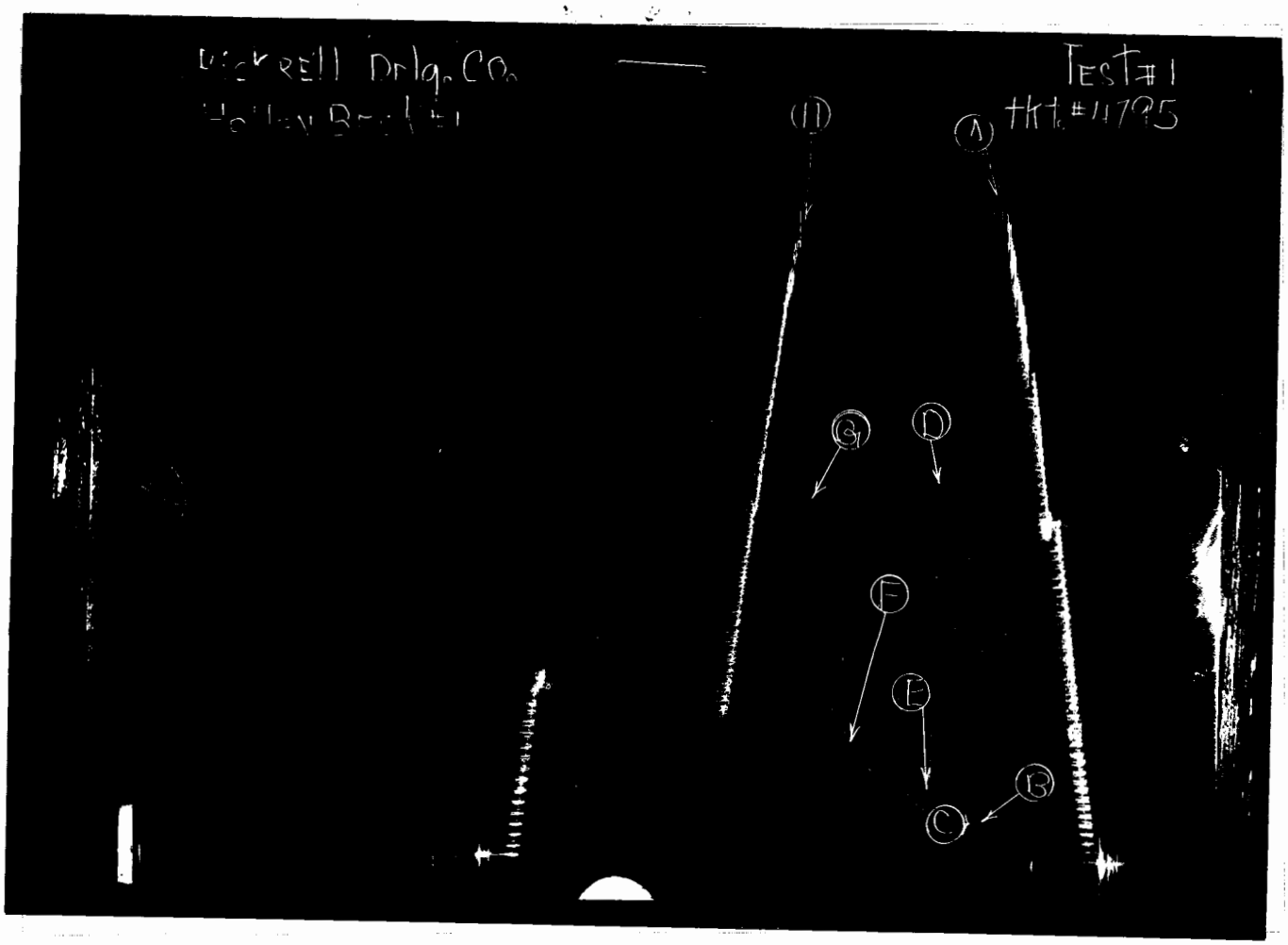
| Point Minutes | Press. |
|---|---|
| 0 | 125 |
| 3 | 610 |
| 6 | 1299 |
| 9 | 1359 |
| 12 | 1364 |
| 15 | 1368 |
| 18 | 1372 |
| 21 | 1373 |
| 24 | 1376 |
| 27 | 1377 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 185 |
| 5 | 198 |
| 10 | 228 |
| 15 | 251 |
| 20 | 272 |
| 25 | 283 |
| 30 | 304 |
| 35 | 321 |
| 40 | 343 |
| 45 | 362 |
| 50 | 378 |
| 55 | 394 |

**Final Shut-In**
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of - Min.

| Point Minutes | Press. |
|---|---|
| 0 | 394 |
| 3 | 967 |
| 6 | 1231 |
| 9 | 1285 |
| 12 | 1294 |
| 15 | 1300 |
| 18 | 1305 |
| 21 | 1307 |
| 24 | 1310 |
| 27 | 1310 |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE | |
|---|---|---|---|
| (A) | Initial Hydrostatic Mud | 2357 | PSI |
| (B) | First Initial Flow Pressure | 116 | PSI |
| (C) | First Final Flow Pressure | 125 | PSI |
| (D) | Initial Closed-in Pressure | 1377 | PSI |
| (E) | Second Initial Flow Pressure | 185 | PSI |
| (F) | Second Final Flow Pressure | 394 | PSI |
| (G) | Final Closed-in Pressure | 1310 | PSI |
| (H) | Final Hydrostatic Mud | 2328 | PSI |

WESTERN

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Morrell Drilling Company Lease & Well No. Hollenbeck #1

Elevation 2369' D.F. Ticket Number 4796

Date 6-25-63 Sec. 13 Twp. 21 Range 24 County Hodgeman State Kansas

Test Approved by Ralph A. Hume Western Representative Jack Tomlkes

Formation Test No. 2 O.K. X Misrun ____ Interval Tested From 4434' to 4462' Total Depth 4462'

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 4429 Ft. Size 6 3/4" Packer Depth 4434 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 28 Ft. Size 5½" OD

RECORDERS Depth 4437 Ft Clock No. 6774 Depth 4440 Ft. Clock No. 57

Top Make Amerada Cap. 3150# No. 1562 Inside Outside Bottom Make Western Cap. 4000# No. 57 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 7:28P M

Tool Open I.F.P. From 9:30P M to 9:35P M - Hr. 5 Min. From (B) 50 P.S.I. To (C) 50 P.S.I.

Tool Closed I.C.I.P. From 9:35P M. to 10:05P M. - Hr. 30 Min. (D) 1337 P.S.I.

Tool Open F.F.P. From 10:05P M. to 11:05P M. 1 Hr. - Min. From (E) 130 P.S.I. To (F) 436 P.S.I.

Tool Closed F.C.I.P. From 11:05P M. to 11:35P M. - Hr. 30 Min. (G) 1199 P.S.I.

Inital Hydrostatic Pressure (A) 2412 P.S.I. Final Hydrostatic Pressure (H) 2384 P.S.I.

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

____ ____ ____M. ____

____ ____ ____M. ____

____ ____ ____M. ____

BLOW Strong Bottom Choke Size 3/4 in.

Did Well Flow ____ Yes X No Recovery Total Ft. 1270' - 670' Clean Oil - Gr 39 @ 60° - 600' Muddy Oil

No Water Mud

Reversed Out ____ Yes X No Mud Type Starch Viscosity 44 Weight 10. Maximum Temp. 132 °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 3515 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 900 ft. I.D. Weight Pipe 2.75 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 47 ft.

Remarks

WHELAN PRINTERS

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

Date 6-25-63 Test Ticket No. 4796

Recorder No. 1561 Capacity 3150# Location 4437 Ft.

Clock No. 6774 Elevation 2369' D.F. Well Temperature 132 °F

| Point | | Pressure | |
|---|---|---|---|
| A | Initial Hydrostatic Mud | 2412 | P.S.I. |
| B | First Initial Flow Pressure | 50 | P.S.I. |
| C | First Final Flow Pressure | 50 | P.S.I. |
| D | Initial Closed-in Pressure | 1337 | P.S.I. |
| E | Second Initial Flow Pressure | 130 | P.S.I. |
| F | Second Final Flow Pressure | 436 | P.S.I. |
| G | Final Closed-in Pressure | 1199 | P.S.I. |
| H | Final Hydrostatic Mud | 2384 | P.S.I. |

| | Time Given | Time Computed |
|---|---|---|
| Opened Tool | 9:30 P M | 9:30 PM |
| First Flow Pressure | 5 Mins. | 5 Mins. |
| Initial Closed-in Pressure | 30 Mins. | 27 Mins. |
| Second Flow Pressure | 60 Mins. | 60 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 - Min.

| Point Mins. | Press. |
|---|---|
| P 1 0 | 50 |
| P 2 5 | 50 |
| 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: 9 Inc.
of 3 mins. and a
final inc. of - Min.

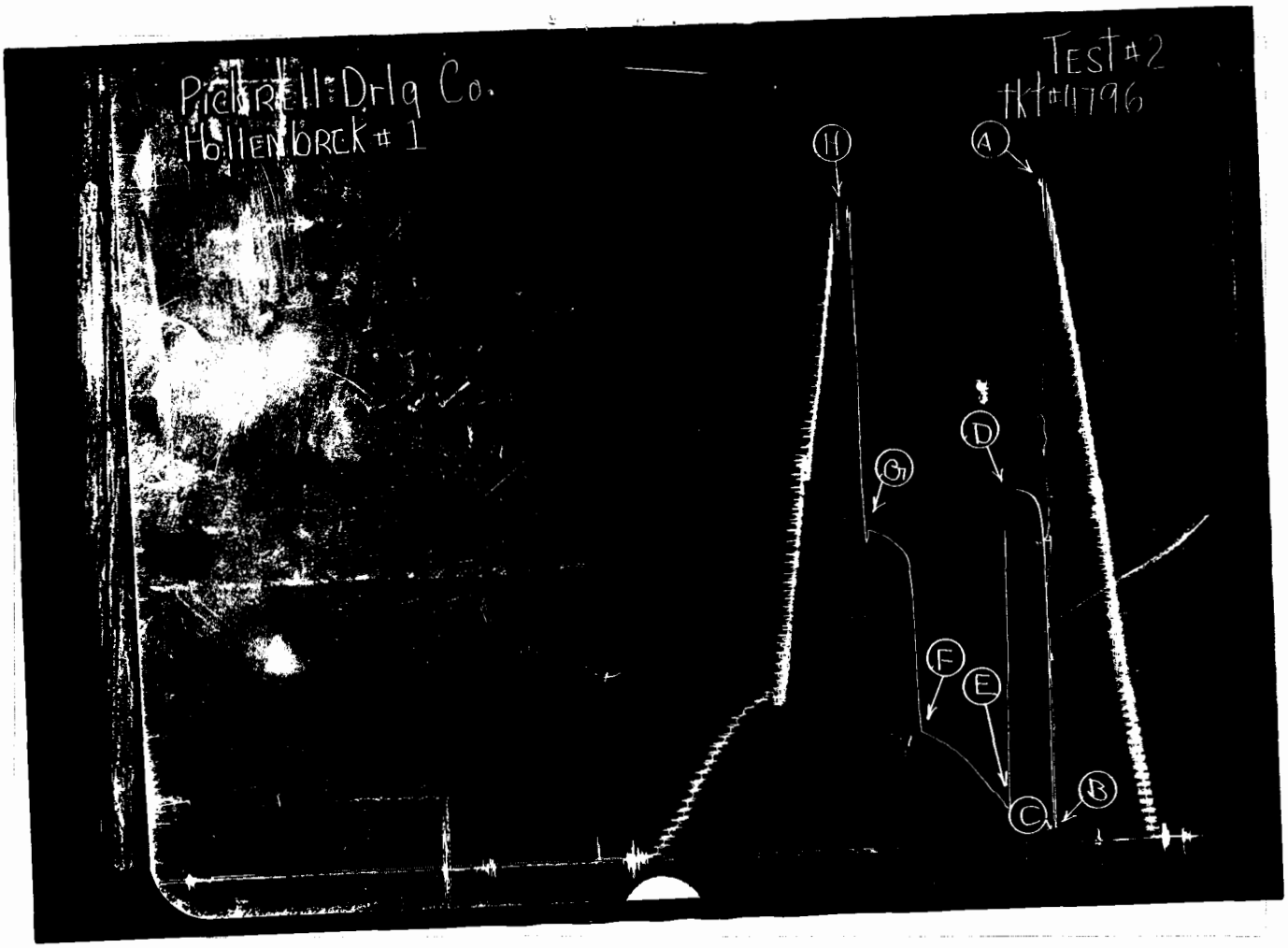
| Point Minutes | Press. |
|---|---|
| 0 | 50 |
| 3 | 1274 |
| 6 | 1291 |
| 9 | 1313 |
| 12 | 1323 |
| 15 | 1329 |
| 18 | 1330 |
| 21 | 1334 |
| 24 | 1335 |
| 27 | 1337 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 130 |
| 5 | 160 |
| 10 | 193 |
| 15 | 231 |
| 20 | 259 |
| 25 | 302 |
| 30 | 330 |
| 35 | 357 |
| 40 | 381 |
| 45 | 395 |
| 50 | 409 |
| 55 | 425 |
| 60 | 436 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 436 |
| 3 | 1054 |
| 6 | 1111 |
| 9 | 1136 |
| 12 | 1146 |
| 15 | 1160 |
| 18 | 1171 |
| 21 | 1180 |
| 24 | 1185 |
| 27 | 1191 |
| 30 | 1199 |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE | |
|---|---|---|---|
| (A) | Initial Hydrostatic Mud | 2412 | PSI |
| (B) | First Initial Flow Pressure | 50 | PSI |
| (C) | First Final Flow Pressure | 50 | PSI |
| (D) | Initial Closed-in Pressure | 1337 | PSI |
| (E) | Second Initial Flow Pressure | 130 | PSI |
| (F) | Second Final Flow Pressure | 436 | PSI |
| (G) | Final Closed-in Pressure | 1199 | PSI |
| (H) | Final Hydrostatic Mud | 2384 | PSI |

WESTERN

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hollenbeck #1

Elevation 2369' D.F. Ticket Number 4797

Date 6-26-63 Sec. 13 Twp. 21 Range 24 County Hodgeman State Kansas

Test Approved by Ralph N. Ruwwe Western Representative Jack Teelkes

Formation Test No. 3 O.K. X Misrun ____ Interval Tested From 4463' to 4472' Total Depth 4472'

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 4458 Ft. Size 6 3/4" Packer Depth 4463 Ft. Size 6 3/4"

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

Packer Depth ____ Ft Size ____

Tool Size 5½" O.D. Tool Jt. Size 4½" F.H. Anchor Length 9 Ft. Size 5½" OD

RECORDERS Depth 4465 Ft Clock No. 6774 Depth 4468 Ft. Clock No. 57

Top Make Amerada Cap. 3150# No. 1562 Inside ~~Outside~~ Bottom Make Western Cap. 4000# No. 57 ~~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 12:24 P M

Tool Open I.F.P. From 12:26P M to 12:31P M - Hr. 5 Min. From (B) 20 P.S.I. To (C) 28 P.S.I.

Tool Closed I.C.I.P. From 12:31P M. to 1:01P M. - Hr. 30 Min. (D) 1294 P.S.I.

Tool Open F.F.P. From 1:01P M. to 2:01P M. 1 Hr. - Min. From (E) 58 P.S.I. To (F) 133 P.S.I.

Tool Closed F.C.I.P. From 2:01P M. to 2:31P M. - Hr. 30 Min. (G) 1029 P.S.I.

Inital Hydrostatic Pressure (A) 2449 P.S.I. Final Hydrostatic Pressure (H) 2417 P.S.I.

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

____ ____ ____ M. ____

____ ____ ____ M. ____

____ ____ ____ M. ____

BLOW Good throughout Bottom Choke Size 3/4 in.

Did Well Flow ____ Yes X No Recovery Total Ft. 340' Fluid - 250' Gas - 130' Clean Oil - 210' Muddy Oil No Water Mud

Reversed Out ____ Yes X No Mud Type Starch Viscosity 49 Weight 10.2 Maximum Temp. 132 °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 3544 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 900 ft. I.D. Weight Pipe 2.75 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 28 ft.

Remarks

WHELAN PRINTERS

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

Date 6-26-63 Test Ticket No. 4797

Recorder No. 1562 Capacity 3150# Location 4465 Ft.

Clock No. 6774 Elevation 2369' D.F. Well Temperature 132 °F

| Point | | Pressure | | | Time Given | Time Computed |
|---|---|---|---|---|---|---|
| A | Initial Hydrostatic Mud | 2449 P.S.I. | | Opened Tool | 12:26 P M | 12:26 PM |
| B | First Initial Flow Pressure | 20 P.S.I. | | First Flow Pressure | 5 Mins. | 5 Mins. |
| C | First Final Flow Pressure | 28 P.S.I. | | Initial Closed-in Pressure | 30 Mins. | 30 Mins. |
| D | Initial Closed-in Pressure | 1294 P.S.I. | | Second Flow Pressure | 60 Mins. | 60 Mins. |
| E | Second Initial Flow Pressure | 58 P.S.I. | | Final Closed-in Pressure | 30 Mins. | 27 Mins. |
| F | Second Final Flow Pressure | 133 P.S.I. | | | | |
| G | Final Closed-in Pressure | 1029 P.S.I. | | | | |
| H | Final Hydrostatic Mud | 2417 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 | 20 |
| P 2 5 | 28 |
| 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 - Min.

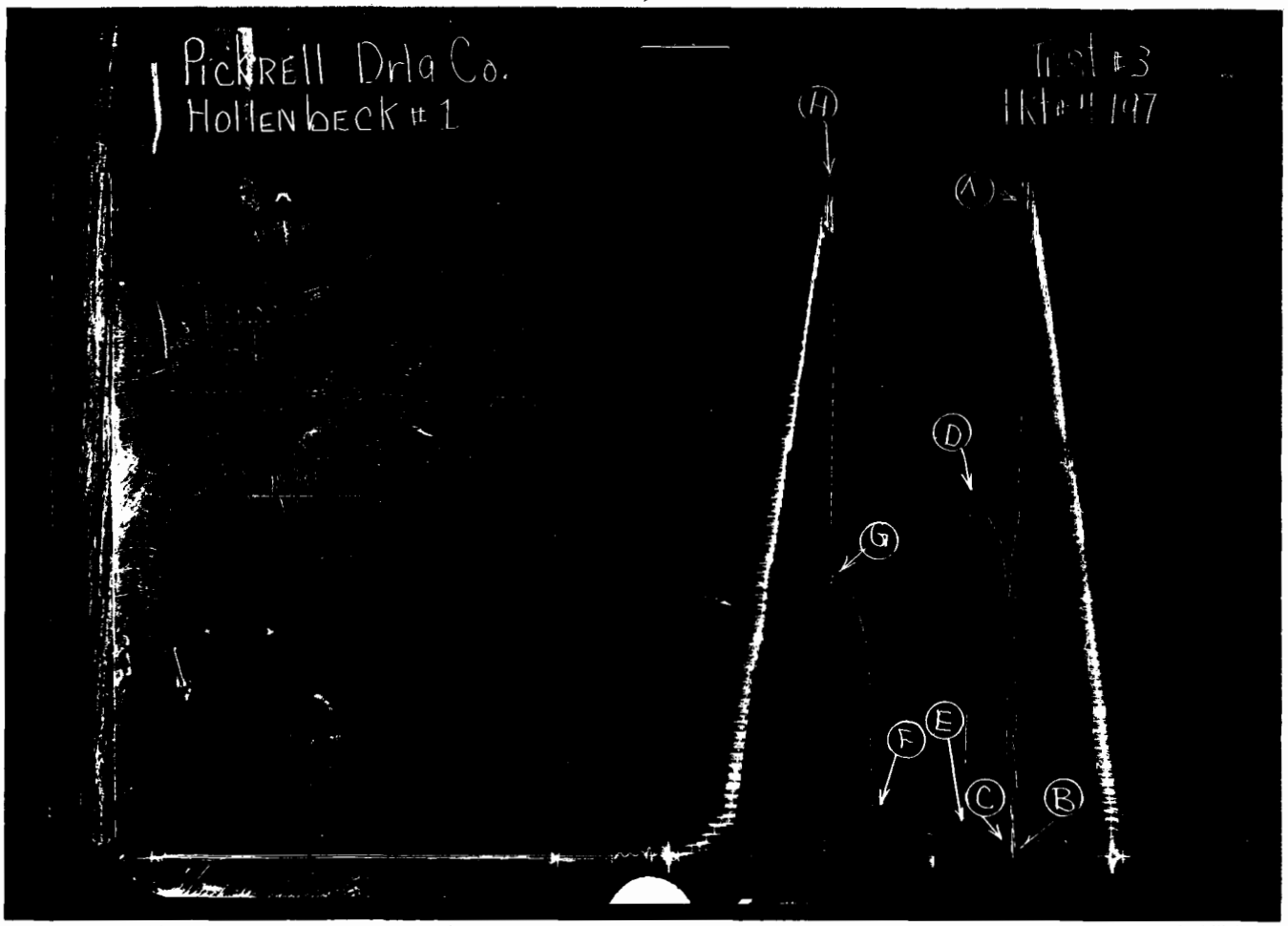
| Point Minutes | Press. |
|---|---|
| 0 | 28 |
| 3 | 398 |
| 6 | 1023 |
| 9 | 1161 |
| 12 | 1185 |
| 15 | 1229 |
| 18 | 1255 |
| 21 | 1264 |
| 24 | 1278 |
| 27 | 1288 |
| 30 | 1294 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 58 |
| 5 | 65 |
| 10 | 73 |
| 15 | 80 |
| 20 | 89 |
| 25 | 95 |
| 30 | 102 |
| 35 | 109 |
| 40 | 117 |
| 45 | 125 |
| 50 | 128 |
| 55 | 130 |
| 60 | 133 |

**Final Shut-In**
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of - Min.

| Point Minutes | Press. |
|---|---|
| 0 | 133 |
| 3 | 465 |
| 6 | 842 |
| 9 | 883 |
| 12 | 946 |
| 15 | 973 |
| 18 | 990 |
| 21 | 1007 |
| 24 | 1023 |
| 27 | 1029 |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE | |
|---|---|---|---|
| (A) | Initial Hydrostatic Mud | 2419 | PSI |
| (B) | First Initial Flow Pressure | 20 | PSI |
| (C) | First Final Flow Pressure | 28 | PSI |
| (D) | Initial Closed-in Pressure | 1294 | PSI |
| (E) | Second Initial Flow Pressure | 58 | PSI |
| (F) | Second Final Flow Pressure | 133 | PSI |
| (G) | Final Closed-in Pressure | 1029 | PSI |
| (H) | Final Hydrostatic Mud | 2417 | PSI |

WESTERN

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hollenbeck #1

Elevation 2369' D.F. Ticket Number 4798

Date 6-27-63 Sec. 13 Twp. 21 Range 24 County Hodgeman State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Jack Toelkes

Formation Test No. 4 O.K. X Misrun ____ Interval Tested From 4473' to 4482' Total Depth 4482'

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 4468 Ft. Size 6 3/4" Packer Depth 4473 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 9 Ft. Size 5½" OD

RECORDERS Depth 4475 Ft Clock No. 6774 Depth 4478 Ft. Clock No. 57

Top Make Amerada Cap. 3150# No. 1562 Inside ~~Outside~~ Bottom Make Western Cap. 4000# No. 57 ~~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 1:24 A M

Tool Open I.F.P. From 1:25A M to 1:30A M - Hr. 5 Min. From (B) 20 P.S.I. To (C) 20 P.S.I.

Tool Closed I.C.I.P. From 1:30A M. to 2:00A M. - Hr. 30 Min. (D) 1176 P.S.I.

Tool Open F.F.P. From 2:00A M. to 3:00A M. 1 Hr. - Min. From (E) 21 P.S.I. To (F) 21 P.S.I.

Tool Closed F.C.I.P. From 3:00A M. to 3:30A M. - Hr. 30 Min. (G) 87 P.S.I.

Inital Hydrostatic Pressure (A) 2404 P.S.I. Final Hydrostatic Pressure (H) 2360 P.S.I.

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

BLOW Very weak 5 mins. Bottom Choke Size 3/4 in.

Did Well Flow ____ Yes X No Recovery Total Ft. 10' Mud with scum of oil

Mud

Reversed Out ____ Yes X No Mud Type Starch Viscosity 49 Weight 9.8 Maximum Temp. 132 °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 3544 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 900 ft. I.D. Weight Pipe 2.75 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 28 ft.

Remarks

Flushed tool after 20 mins. - very weak 1/4 minute blow

WHELAN PRINTERS

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

Date 6-27-63 Test Ticket No. 4798

Recorder No. 1562 Capacity 3150# Location 4475 Ft.

Clock No. 6774 Elevation 2369' D.F. Well Temperature 132 °F

| Point | | Pressure | | | Time Given | Time Computed |
|---|---|---|---|---|---|---|
| A | Initial Hydrostatic Mud | 2404 P.S.I. | | Opened Tool | 1:25 A M | 1:25 AM |
| B | First Initial Flow Pressure | 20 P.S.I. | | First Flow Pressure | 5 Mins. | 5 Mins. |
| C | First Final Flow Pressure | 20 P.S.I. | | Initial Closed-in Pressure | 30 Mins. | 27 Mins. |
| D | Initial Closed-in Pressure | 1176 P.S.I. | | Second Flow Pressure | 60 Mins. | 60 Mins. |
| E | Second Initial Flow Pressure | 21 P.S.I. | | Final Closed-in Pressure | 30 Mins. | 27 Mins. |
| F | Second Final Flow Pressure | 21 P.S.I. | | | | |
| G | Final Closed-in Pressure | 87 P.S.I. | | | | |
| H | Final Hydrostatic Mud | 2360 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 | 20 |
| P 2 5 | 20 |
| 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: 9 Inc.
of 3 mins. and a
final inc. of - Min.

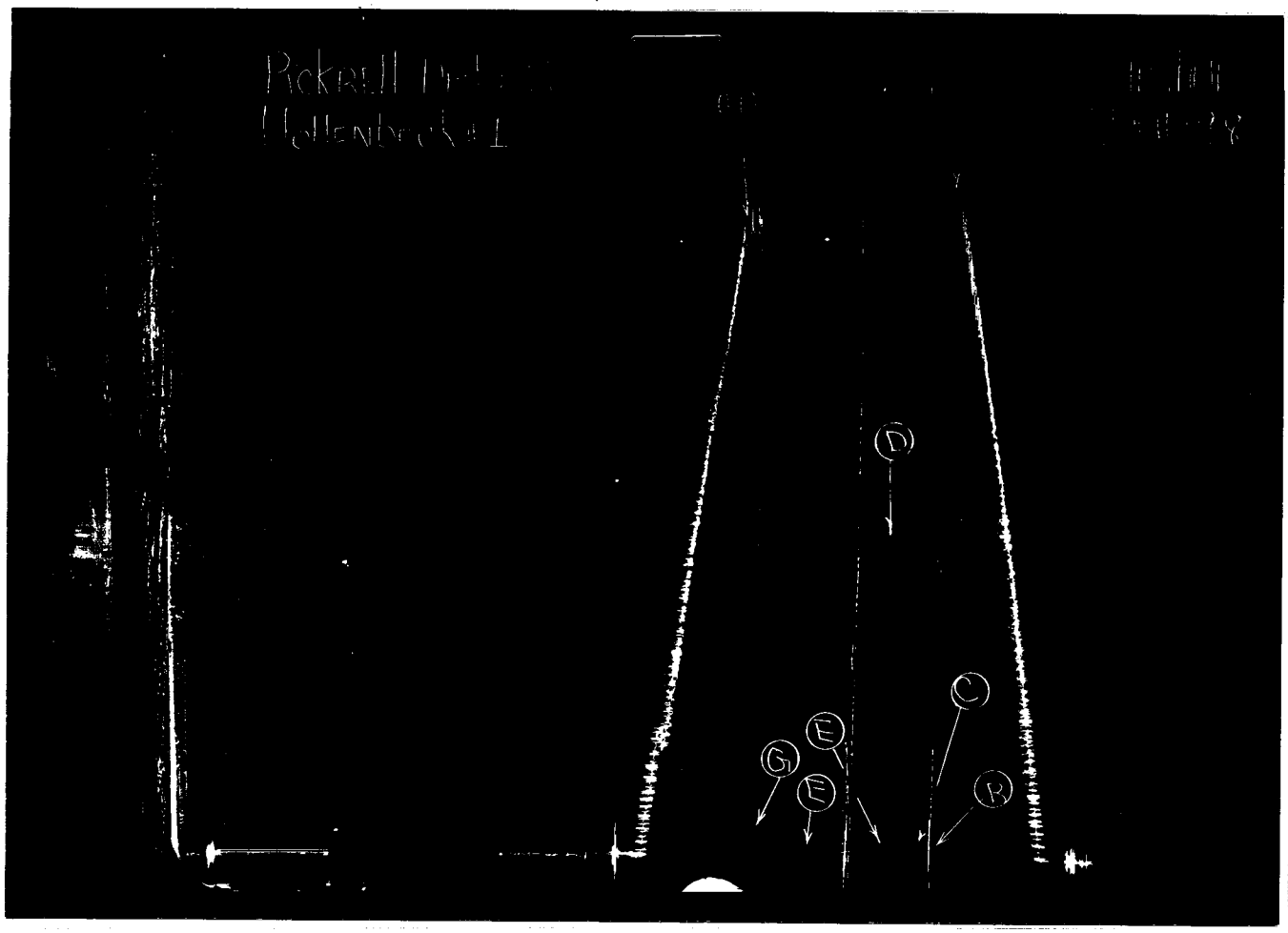
| Point Minutes | Press. |
|---|---|
| 0 | 20 |
| 3 | 304 |
| 6 | 531 |
| 9 | 635 |
| 12 | 773 |
| 15 | 859 |
| 18 | 1029 |
| 21 | 1097 |
| 24 | 1147 |
| 27 | 1176 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 21 |
| 5 | 21 |
| 10 | 21 |
| 15 | 21 |
| 20 | 21 |
| 25 | 21 |
| 30 | 21 |
| 35 | 21 |
| 40 | 21 |
| 45 | 21 |
| 50 | 21 |
| 55 | 21 |
| 60 | 21 |

**Final Shut-In**
Breakdown: 9 Inc.
of 3 mins. and a
final Inc. of - Min.

| Point Minutes | Press. |
|---|---|
| 0 | 21 |
| 3 | 26 |
| 6 | 31 |
| 9 | 39 |
| 12 | 45 |
| 15 | 50 |
| 18 | 64 |
| 21 | 78 |
| 24 | 82 |
| 27 | 87 |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE | |
|---|---|---|---|
| (A) | Initial Hydrostatic Mud | 2404 | PSI |
| (B) | First Initial Flow Pressure | 20 | PSI |
| (C) | First Final Flow Pressure | 20 | PSI |
| (D) | Initial Closed-in Pressure | 1176 | PSI |
| (E) | Second Initial Flow Pressure | 21 | PSI |
| (F) | Second Final Flow Pressure | 21 | PSI |
| (G) | Final Closed-in Pressure | 87 | PSI |
| (H) | Final Hydrostatic Mud | 2360 | PSI |

WESTERN

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hollenbeck #1

Elevation 2369' D.F. Ticket Number 4799

Date 6-27-63 Sec. 13 Twp. 21 Range 24 County Hodgeman State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Jack Toelkes

---

Formation Test No. 5 O.K. X Misrun ____ Interval Tested From 4483' to 4497' Total Depth 4497'

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 4478 Ft. Size 6 3/4" Packer Depth 4483 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 14 Ft. Size 5½" OD

---

RECORDERS Depth 4490 Ft Clock No. 6774 Depth 4493 Ft. Clock No. 57

Top Make Amerada Cap. 3150# No. 1562 Inside Outside Bottom Make Western Cap. 4000# No. 57 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 2:58P M

Tool Open I.F.P. From 3:00P M to 3:05P M - Hr. 5 Min. From (B) 0 P.S.I. To (C) 0 P.S.I.

Tool Closed I.C.I.P. From 3:05P M. to 3:35P M. - Hr. 30 Min. (D) 1362 P.S.I.

Tool Open F.F.P. From 3:35P M. to 4:35P M. 1 Hr. - Min. From (E) 73 P.S.I. To (F) 289 P.S.I.

Tool Closed F.C.I.P. From 4:35P M. to 5:05P M. - Hr. 30 Min. (G) 1383 P.S.I.

Inital Hydrostatic Pressure (A) 2504 P.S.I. Final Hydrostatic Pressure (H) 2295 P.S.I.

---

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

____ ____ ____ M. ____

____ ____ ____ M. ____

____ ____ ____ M. ____

BLOW Good throughout Bottom Choke Size 3/4 in.

Did Well Flow ____ Yes X No Recovery Total Ft. 740' Fluid - 430' Clean oil slightly gassy - 310' Muddy oil-33 Gr. corr. No Water Mud

Reversed Out ____ Yes X No Mud Type Starch Viscosity 47 Weight 10.1 Maximum Temp. 136 °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 3564 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 900 ft. I.D. Weight Pipe 2.75 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 33 ft.

Remarks

WHELAN PRINTERS

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

Date 6-27-63 | Test Ticket No. 4799

Recorder No. 1562 | Capacity 3150# | Location 4490 Ft.

Clock No. 6774 | Elevation 2369' D.F. | Well Temperature 136 °F

| Point | | Pressure |
|---|---|---|
| A | Initial Hydrostatic Mud | 2504 P.S.I. |
| B | First Initial Flow Pressure | 0 P.S.I. |
| C | First Final Flow Pressure | 0 P.S.I. |
| D | Initial Closed-in Pressure | 1362 P.S.I. |
| E | Second Initial Flow Pressure | 73 P.S.I. |
| F | Second Final Flow Pressure | 289 P.S.I. |
| G | Final Closed-in Pressure | 1383 P.S.I. |
| H | Final Hydrostatic Mud | 2295 P.S.I. |

| | Time Given | Time Computed |
|---|---|---|
| Opened Tool | 3:00 P M | 3:00 PM |
| First Flow Pressure | 5 Mins. | 5 Mins. |
| Initial Closed-in Pressure | 30 Mins. | 27 Mins. |
| Second Flow Pressure | 60 Mins. | 55 Mins. |
| Final Closed-in Pressure | 30 Mins. | 27 Mins. |

## PRESSURE BREAKDOWN

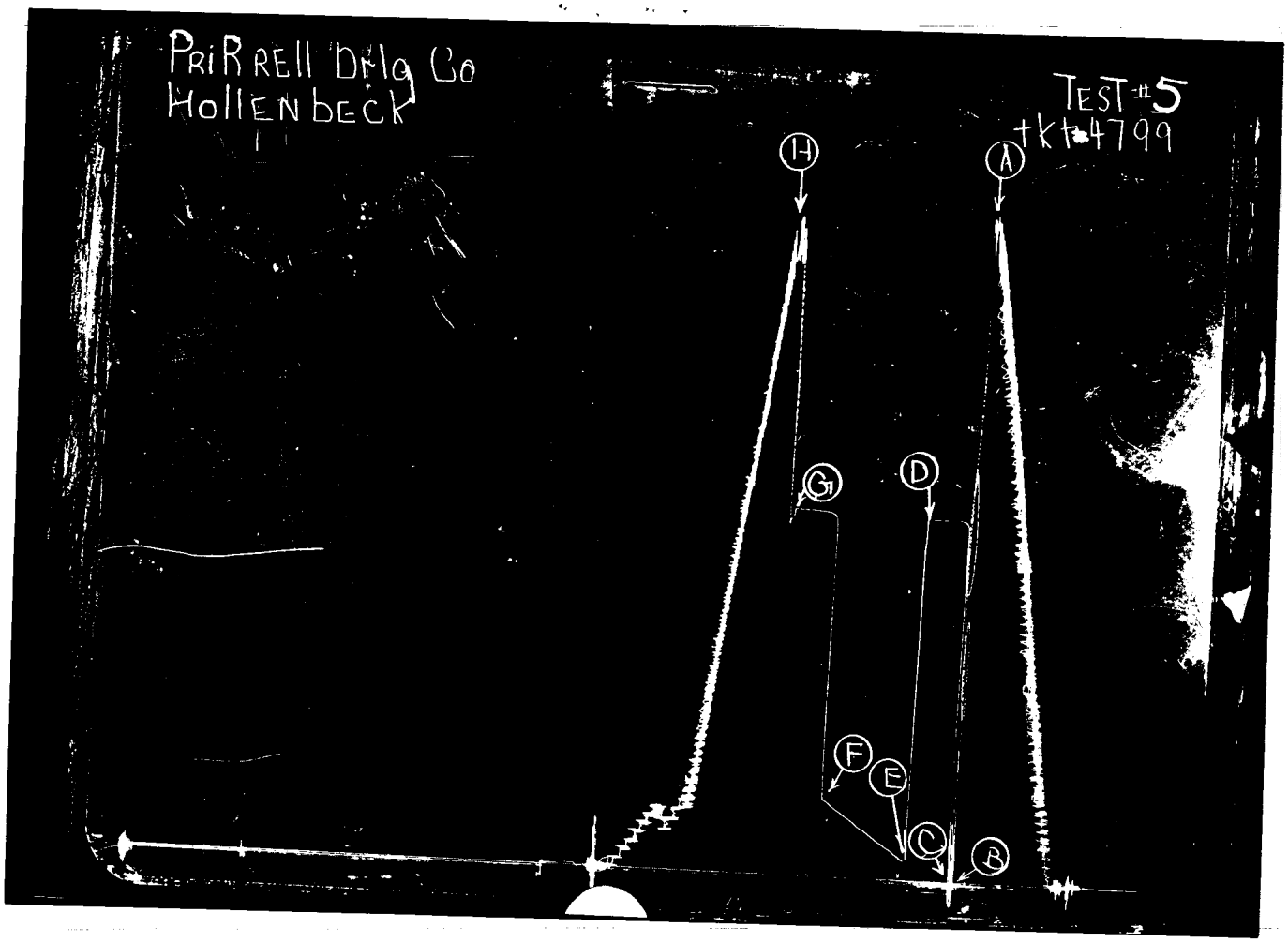
**First Flow Press.**
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of - Min.

**Initial Shut-In**
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of - Min.

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

**Final Shut-In**
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of - Min.

| Point Mins. | Press. | Point Minutes | Press. | Point Minutes | Press. | Point Minutes | Press. |
|---|---|---|---|---|---|---|---|
| P 1 0 | 0 | 0 | 0 | 0 | 73 | 0 | 289 |
| P 2 5 | 0 | 3 | 1345 | 5 | 91 | 3 | 1373 |
| P 3 | | 6 | 1362 | 10 | 116 | 6 | 1379 |
| P 4 | | 9 | 1362 | 15 | 131 | 9 | 1383 |
| P 5 | | 12 | 1362 | 20 | 147 | 12 | 1383 |
| P 6 | | 15 | 1362 | 25 | 168 | 15 | 1383 |
| P 7 | | 18 | 1362 | 30 | 187 | 18 | 1383 |
| P 8 | | 21 | 1362 | 35 | 209 | 21 | 1383 |
| P 9 | | 24 | 1362 | 40 | 228 | 24 | 1383 |
| P10 | | 27 | 1362 | 45 | 245 | 27 | 1383 |
| P11 | | | | 50 | 267 | | |
| P12 | | | | 55 | 289 | | |
| P13 | | | | | | | |
| P14 | | | | | | | |
| P15 | | | | | | | |
| P16 | | | | | | | |
| P17 | | | | | | | |
| P18 | | | | | | | |
| P19 | | | | | | | |
| P20 | | | | | | | |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE | |
|---|---|---|---|
| (A) | Initial Hydrostatic Mud | 2504 | PSI |
| (B) | First Initial Flow Pressure | 0 | PSI |
| (C) | First Final Flow Pressure | 0 | PSI |
| (D) | Initial Closed-in Pressure | 1362 | PSI |
| (E) | Second Initial Flow Pressure | 73 | PSI |
| (F) | Second Final Flow Pressure | 289 | PSI |
| (G) | Final Closed-in Pressure | 1383 | PSI |
| (H) | Final Hydrostatic Mud | 2295 | PSI |

WESTERN

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hollenbeck #1

Elevation 2369' D.F. Ticket Number 4800

Date 6-28-63 Sec. 13 Twp. 21 Range 24 County Hodgeman State Kansas

Test Approved by Ralph W. Unwe Western Representative Jack Toelkes

---

Formation Test No. 6 O.K. X Misrun ____ Interval Tested From 4498' to 4512' Total Depth 4512'

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 4493 Ft. Size 6 3/4" Packer Depth 4498 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 14 Ft. Size 5½" OD

---

RECORDERS Depth 4505 Ft Clock No. 6774 Depth 4508 Ft. Clock No. 57

Top Make Amerada Cap. 3150# No. 1562 Inside ~~Outside~~ Bottom Make Western Cap. 4000# No. 57 ~~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 5:05A M

Tool Open I.F.P. From 5:07A M to 5:12A M - Hr. 5 Min. From (B) 165 P.S.I. To (C) 165 P.S.I.

Tool Closed I.C.I.P. From 5:12A M. to 5:42A M. - Hr. 30 Min. (D) 1373 P.S.I.

Tool Open F.F.P. From 5:42A M. to 6:42A M. 1 Hr. - Min. From (E) 433 P.S.I. To (F) 1210 P.S.I.

Tool Closed F.C.I.P. From 6:42A M. to 7:12A M. - Hr. 30 Min. (G) 1329 P.S.I.

Inital Hydrostatic Pressure (A) 2490 P.S.I. Final Hydrostatic Pressure (H) 2482 P.S.I.

---

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

_____ _____ _____ M. _____

_____ _____ _____ M. _____

_____ _____ _____ M. _____

BLOW Strong - decreased to fair Bottom Choke Size ____ in.

Did Well Flow ____ Yes X No Recovery Total Ft. 3300' Fluid - 3240' Clean Gassy oil - 60' Muddy Oil - M. Water

Gr. 36 Corr. Mud

Reversed Out ____ Yes X No Mud Type Starch Viscosity 43 Weight 10. Maximum Temp. 136 °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 3579 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 900 ft. I.D. Weight Pipe 2.75 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 33 ft.

Remarks

WHELAN PRINTERS

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

Date 6-28-63 Test Ticket No. 4800

Recorder No. 1562 Capacity 3150# Location 4505 Ft.

Clock No. 6774 Elevation 2369' D.F. Well Temperature 136 °F

| Point | | Pressure | | Time Given | Time Computed |
|---|---|---|---|---|---|
| A | Initial Hydrostatic Mud | 2490 | P.S.I. | Opened Tool 5:07 A M | 5:07 AM |
| B | First Initial Flow Pressure | 165 | P.S.I. | First Flow Pressure 5 Mins. | 5 Mins. |
| C | First Final Flow Pressure | 165 | P.S.I. | Initial Closed-in Pressure 30 Mins. | 30 Mins. |
| D | Initial Closed-in Pressure | 1373 | P.S.I. | Second Flow Pressure 60 Mins. | 55 Mins. |
| E | Second Initial Flow Pressure | 433 | P.S.I. | Final Closed-in Pressure 30 Mins. | 27 Mins. |
| F | Second Final Flow Pressure | 1210 | P.S.I. | | |
| G | Final Closed-in Pressure | 1329 | P.S.I. | | |
| H | Final Hydrostatic Mud | 2482 | P.S.I. | | |

## PRESSURE BREAKDOWN

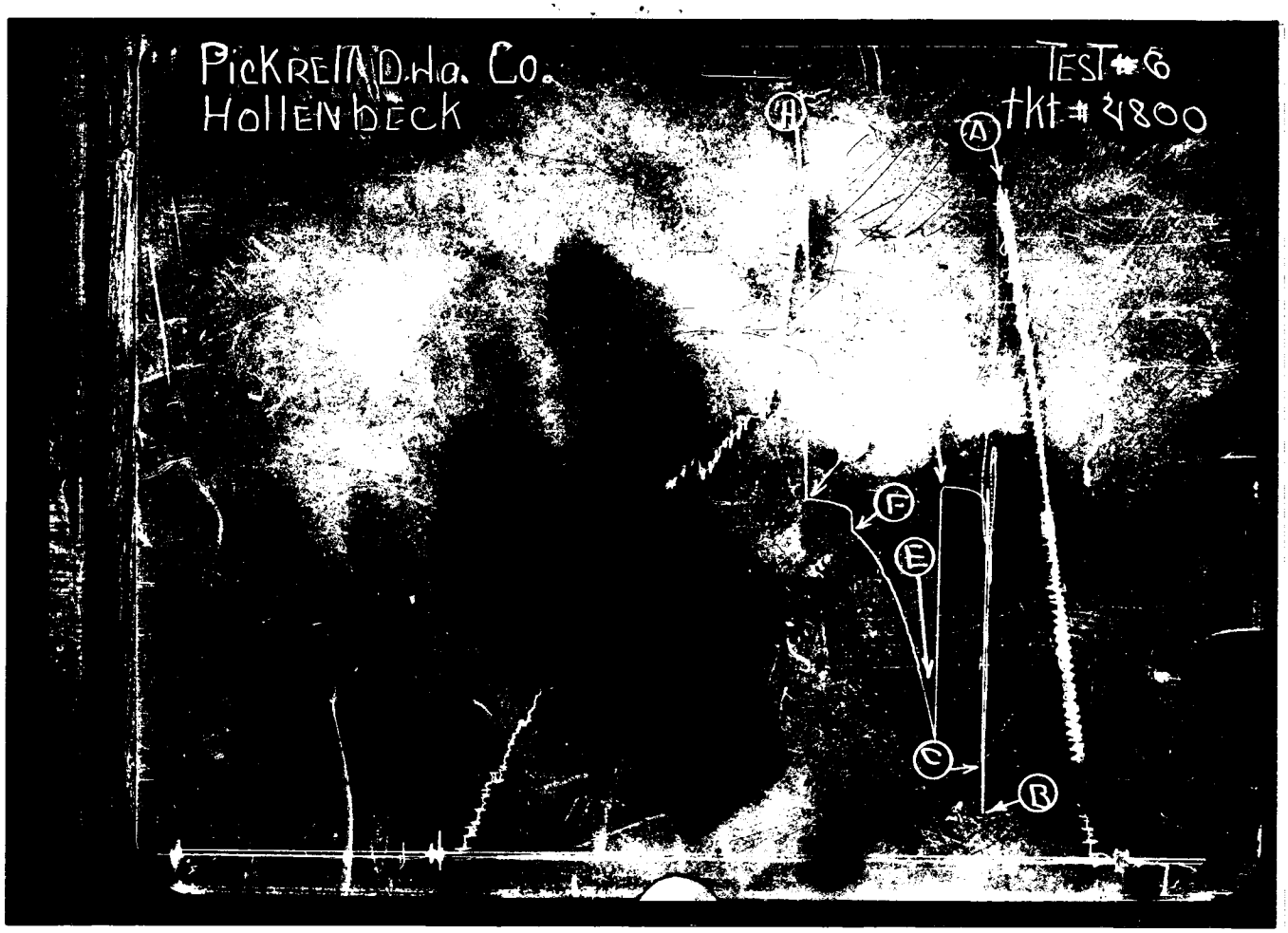
**First Flow Press.**
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of - Min.

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

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

**Final Shut-In**
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of - Min.

| Point Mins. | Press. | Point Minutes | Press. | Point Minutes | Press. | Point Minutes | Press. |
|---|---|---|---|---|---|---|---|
| P 1 0 | 165 | 0 | 165 | 0 | 433 | 0 | 1210 |
| P 2 5 | 165 | 3 | 1329 | 5 | 476 | 3 | 1297 |
| P 3 | | 6 | 1353 | 10 | 667 | 6 | 1305 |
| P 4 | | 9 | 1360 | 15 | 769 | 9 | 1310 |
| P 5 | | 12 | 1365 | 20 | 859 | 12 | 1315 |
| P 6 | | 15 | 1368 | 25 | 937 | 15 | 1318 |
| P 7 | | 18 | 1373 | 30 | 1003 | 18 | 1321 |
| P 8 | | 21 | 1373 | 35 | 1054 | 21 | 1324 |
| P 9 | | 24 | 1373 | 40 | 1109 | 24 | 1329 |
| P10 | | 27 | 1373 | 45 | 1150 | 27 | 1329 |
| P11 | | 30 | 1373 | 50 | 1176 | | |
| P12 | | | | 55 | 1210 | | |
| P13 | | | | | | | |
| P14 | | | | | | | |
| P15 | | | | | | | |
| P16 | | | | | | | |
| P17 | | | | | | | |
| P18 | | | | | | | |
| P19 | | | | | | | |
| P20 | | | | | | | |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE | |
|---|---|---|---|
| (A) | Initial Hydrostatic Mud | 2490 | PSI |
| (B) | First Initial Flow Pressure | 165 | PSI |
| (C) | First Final Flow Pressure | 165 | PSI |
| (D) | Initial Closed-in Pressure | 1373 | PSI |
| (E) | Second Initial Flow Pressure | 433 | PSI |
| (F) | Second Final Flow Pressure | 1210 | PSI |
| (G) | Final Closed-in Pressure | 1329 | PSI |
| (H) | Final Hydrostatic Mud | 2482 | PSI |

WESTERN

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hollenbeck #1

Elevation 2369' D.F. Ticket Number 3526

Date 6-28-63 Sec. 13 Twp. 21 Range 24 County Hodgeman State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Jack Toelkes

---

Formation Test No. 7 O.K. X Misrun ____ Interval Tested From 4513' to 4522' Total Depth 4522'

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 4508 Ft. Size 6 3/4" Packer Depth 4513 Ft. Size 6 3/4"

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

Packer Depth ____ Ft Size ____

Tool Size ____ Tool Jt. Size ____ Anchor Length ____ Ft. Size ____

---

RECORDERS Depth 4515 Ft Clock No. 6774 Depth 4518 Ft. Clock No. 57

Top Make Amerada Cap. 3150# No. 1562 Inside ~~Outside~~ Bottom Make Western Cap. 4000# No. 57 ~~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 6:35 P M

Tool Open I.F.P. From 6:36P M to 6:41P M - Hr. 5 Min. From (B) 20 P.S.I. To (C) 29 P.S.I.

Tool Closed I.C.I.P. From 6:41P M. to 7:11P M. - Hr. 30 Min. (D) 1394 P.S.I.

Tool Open F.F.P. From 7:11P M. to 8:11P M. 1 Hr. - Min. From (E) 47 P.S.I. To (F) 177 P.S.I.

Tool Closed F.C.I.P. From 8:11P M. to 8:41P M. - Hr. 30 Min. (G) 1395 P.S.I.

Inital Hydrostatic Pressure (A) 2454 P.S.I. Final Hydrostatic Pressure (H) 2444 P.S.I.

---

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

____ ____ ____ M. ____

____ ____ ____ M. ____

____ ____ ____ M. ____

BLOW Mk build up to fair Bottom Choke Size 3/4 in.

Did Well Flow ____ Yes X No Recovery Total Ft. 390' - 90' oil - 35 Gr. corr. - 60' thin mud - 240' Water (Sulf)

Mud

Reversed Out ____ Yes X No Mud Type Stardh Viscosity 43 Weight 10. Maximum Temp. 136 °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 3596 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 900 ft. I.D. Weight Pipe 2.75 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 26 ft.

Remarks

WHELAN PRINTERS

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

Date 6-28-63 Test Ticket No. 3526

Recorder No. 1562 Capacity 3150# Location 4515 Ft.

Clock No. 6774 Elevation 2369' D.F. Well Temperature 136 °F

| Point | | Pressure | |
|---|---|---|---|
| A | Initial Hydrostatic Mud | 2454 | P.S.I. |
| B | First Initial Flow Pressure | 20 | P.S.I. |
| C | First Final Flow Pressure | 29 | P.S.I. |
| D | Initial Closed-in Pressure | 1394 | P.S.I. |
| E | Second Initial Flow Pressure | 47 | P.S.I. |
| F | Second Final Flow Pressure | 177 | P.S.I. |
| G | Final Closed-in Pressure | 1395 | P.S.I. |
| H | Final Hydrostatic Mud | 2444 | P.S.I. |

| | Time Given | Time Computed |
|---|---|---|
| Opened Tool | 6:36P M | 6:36 PM |
| First Flow Pressure | 5 Mins. | 5 Mins. |
| Initial Closed-in Pressure | 30 Mins. | 30 Mins. |
| Second Flow Pressure | 60 Mins. | 55 Mins. |
| Final Closed-in Pressure | 30 Mins. | 27 Mins. |

## PRESSURE BREAKDOWN

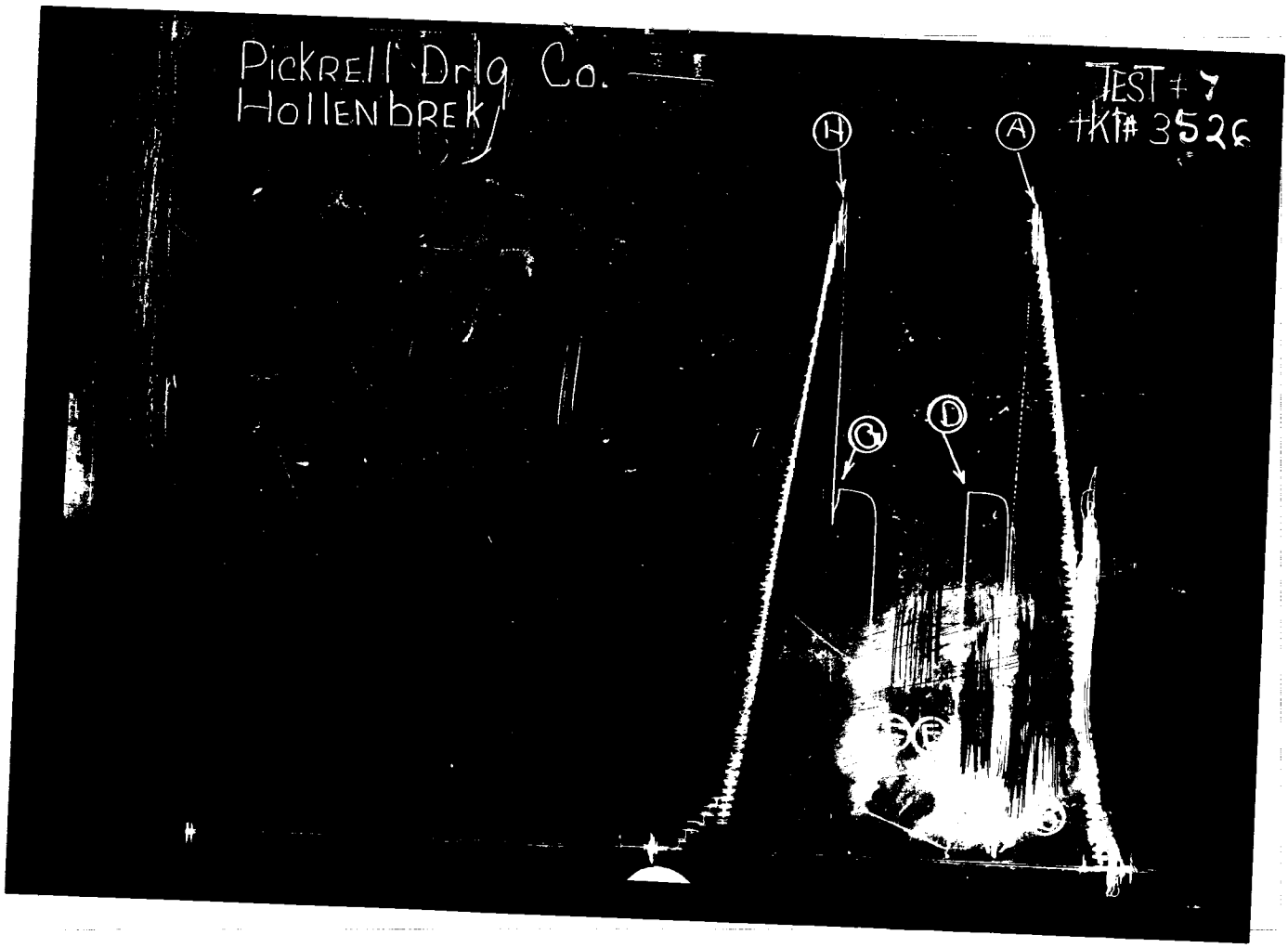
**First Flow Press.**
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of - Min.

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

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

**Final Shut-In**
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of - Min.

| Point Mins. | Press. | Point Minutes | Press. | Point Minutes | Press. | Point Minutes | Press. |
|---|---|---|---|---|---|---|---|
| P 1 0 | 20 | 0 | 29 | 0 | 47 | 0 | 177 |
| P 2 5 | 29 | 3 | 1316 | 5 | 56 | 3 | 1326 |
| P 3 | | 6 | 1376 | 10 | 70 | 6 | 1365 |
| P 4 | | 9 | 1386 | 15 | 81 | 9 | 1387 |
| P 5 | | 12 | 1389 | 20 | 94 | 12 | 1387 |
| P 6 | | 15 | 1394 | 25 | 109 | 15 | 1389 |
| P 7 | | 18 | 1394 | 30 | 120 | 18 | 1390 |
| P 8 | | 21 | 1394 | 35 | 131 | 21 | 1394 |
| P 9 | | 24 | 1394 | 40 | 141 | 24 | 1395 |
| P10 | | 27 | 1394 | 45 | 152 | 27 | 1395 |
| P11 | | 30 | 1394 | 50 | 165 | 30 | |
| P12 | | | | 55 | 177 | | |
| P13 | | | | | | | |
| P14 | | | | | | | |
| P15 | | | | | | | |
| P16 | | | | | | | |
| P17 | | | | | | | |
| P18 | | | | | | | |
| P19 | | | | | | | |
| P20 | | | | | | | |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE | |
|---|---|---|---|
| (A) | Initial Hydrostatic Mud | 2454 | PSI |
| (B) | First Initial Flow Pressure | 20 | PSI |
| (C) | First Final Flow Pressure | 29 | PSI |
| (D) | Initial Closed-in Pressure | 1394 | PSI |
| (E) | Second Initial Flow Pressure | 47 | PSI |
| (F) | Second Final Flow Pressure | 177 | PSI |
| (G) | Final Closed-in Pressure | 1395 | PSI |
| (H) | Final Hydrostatic Mud | 2444 | PSI |