Company Mull Drilling Company, Inc. Lease & Well No. Walters #8

Elevation 1590Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 10691

Date 5/6/81 Sec. 34 Twp. 29S Range 7W County Kingman State Kansas

Test Approved by Vernon C. Schrag Western Representative Vernon Wondra

Formation Test No. 1 Interval Tested from 4140 ft. to 4162 ft. Total Depth 4162 ft.

Packer Depth 4135 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4140 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4152 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 4155 ft. Recorder Number 2603 Cap. 4400

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Blue Goose Drlg. Co. Rig #1 Drill Collar Length 308 I. D. 2¼ in.

Mud Type premix-monpac Viscosity 48 Weight Pipe Length - I. D. - in.

Weight 9.2 Water Loss 19 cc. Drill Pipe Length 3911 I. D. 3.8 in.

Chlorides 29,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make - Serial Number - Anchor Length 22 ft. Size 5½OD in.

Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4½FH in.

Blow: Very weak blow died in five minutes on initial flow period. No blow on final flow period. Flushed tool; picked up fluid on flush; very weak blow; died in five minutes.

Recovered 180 ft. of mud with few specks of oil

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 8:40 ~~A.M.~~ ~~P.M.~~ Time Started Off Bottom 10:40 ~~A.M.~~ ~~P.M.~~ Maximum Temperature 132°

| | | | | | | |
|---|---|---|---|---|---|---|
| Initial Hydrostatic Pressure | | | (A) 2017 | P.S.I. | | |
| Initial Flow Period | Minutes 30 | (B) 133 * | P.S.I. to | (C) 326 * | P.S.I. | |
| Initial Closed In Period | Minutes 30 | (D) 334 | P.S.I. | | | |
| Final Flow Period | Minutes 30 | (E) 115 | P.S.I. to | (F) 114 | P.S.I. | |
| Final Closed In Period | Minutes 30 | (G) 307 | P.S.I. | | | |
| Final Hydrostatic Pressure | | | (H) 1992 | P.S.I. | | |

## WESTERN TESTING CO., INC.

### Pressure Data

Date 5/6/81 — Test Ticket No. 10691

Recorder No. 6074 — Capacity 5100 — Location 4152 — Ft.

Clock No. - — Elevation 1590 Kelly Bushing — Well Temperature 132 °F

| Point | Pressure | | Time Given | Time Computed |
|---|---|---|---|---|
| A Initial Hydrostatic Mud | 2017 P.S.I. | Open Tool | 8:40A M | |
| B First Initial Flow Pressure | 133 * P.S.I. | First Flow Pressure | 30 Mins. | 30 Mins. |
| C First Final Flow Pressure | 326 * P.S.I. | Initial Closed-in Pressure | 30 Mins. | 30 Mins. |
| D Initial Closed-in Pressure | 334 P.S.I. | Second Flow Pressure | 30 Mins. | 30 Mins. |
| E Second Initial Flow Pressure | 115 P.S.I. | Final Closed-in Pressure | 30 Mins. | 30 Mins. |
| F Second Final Flow Pressure | 114 P.S.I. | | | |
| G Final Closed-in Pressure | 307 P.S.I. | | | |
| H Final Hydrostatic Mud | 1992 P.S.I. | | | |

* PRESSURES QUESTIONABLE DUE TO PLUGGING ACTION

### PRESSURE BREAKDOWN

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

| Point Mins. | Press. |
|---|---|
| P 1 0 | 133* |
| P 2 5 | 325* |
| P 3 10 | 286* |
| P 4 15 | 315* |
| P 5 20 | 322* |
| P 6 25 | 325* |
| P 7 30 | 326* |
| 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 | 326 * |
| 3 | 330 |
| 6 | 331 |
| 9 | 332 |
| 12 | 333 |
| 15 | 334 |
| 18 | 334 |
| 21 | 334 |
| 24 | 334 |
| 27 | 334 |
| 30 | 334 |

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

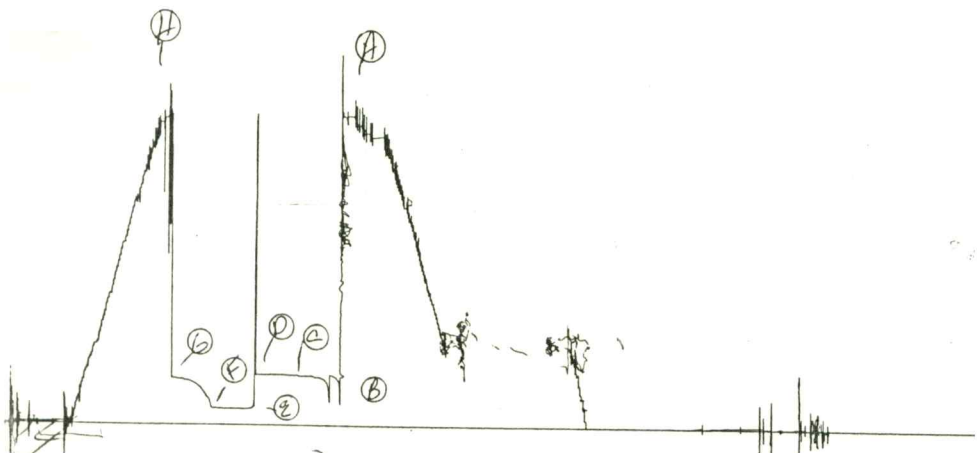
| Point Minutes | Press. |
|---|---|
| 0 | 115 |
| 5 | 109 |
| 10 | 109 |
| 15 | 109 |
| 20 | 109 |
| 25 | 112 |
| 30 | 114 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 114 |
| 3 | 179 |
| 6 | 215 |
| 9 | 251 |
| 12 | 269 |
| 15 | 281 |
| 18 | 292 |
| 21 | 299 |
| 24 | 302 |
| 27 | 306 |
| 30 | 307 |

JK #10691

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Company Mull Drilling Company, Inc. Lease & Well No. Walters #8

Elevation 1590 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 10692

Date 5/7/81 Sec. 34 Twp. 29S Range 7W County Kingman State Kansas

Test Approved by Vernon C. Schrag Western Representative VErnon Wondra

Formation Test No. 2 Interval Tested from 4160 ft. to 4182 ft. Total Depth 4182 ft.

Packer Depth 4155 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4160 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4172 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 4175 ft. Recorder Number 2603 Cap. 4100

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Blue Goose Drlg. Co. Rig #1 Drill Collar Length 308 I. D. 2¼ in.

Mud Type premix-monpac Viscosity 48 Weight Pipe Length - I. D. - in.

Weight 9.2 Water Loss 19 cc. Drill Pipe Length 3831 I. D. 3.8 in.

Chlorides 29,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make - Serial Number - Anchor Length 22 ft. Size 5½ODn.

Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4½FH in.

Blow: Very weak blow; died in five minutes on initial flow period. No blow on final flow period Flushed tool; few bubbles died.

Recovered 150 ft. of water (chlorides 39,000 ppm

Recovered 180 ft. of mud 42,000 ppm

Recovered ft. of

Recovered ft. of (Chlorides were tested from ~~suction pit at 37,500 ppm~~)

Recovered ft. of

Remarks: Slid tool twenty feet to bottom. ~~Picked up fluid while sliding and on flush.~~

Time Set Packer(s) 4:00 A.M. ~~P.M.~~ Time Started Off Bottom 6:00 A.M. ~~P.M.~~ Maximum Temperature ~~131°~~

| | | | | | | |
|---|---|---|---|---|---|---|
| Initial Hydrostatic Pressure | | | (A) | 2030 | P.S.I. | |
| Initial Flow Period | Minutes | 30 | (B) | 164 * P.S.I. | to (C) | 243 * P.S.I. |
| Initial Closed In Period | Minutes | 30 | (D) | 368 P.S.I. | | |
| Final Flow Period | Minutes | 30 | (E) | 230 P.S.I. | to (F) | 215 P.S.I. |
| Final Closed In Period | Minutes | 30 | (G) | 338 P.S.I. | | |
| Final Hydrostatic Pressure | | | (H) | 1992 P.S.I. | | |

# WESTERN TESTING CO., INC.

## Pressure Data

Date 5/7/81 Test Ticket No. 10692

Recorder No. 6074 Capacity 5100 Location 4172

Clock No. --- Elevation 1590 Kelly Bushing Ft. Well Temperature 131 °F

| Point | | Pressure | |
|---|---|---|---|
| A | Initial Hydrostatic Mud | 2030 | P.S.I. |
| B | First Initial Flow Pressure | 164 * | P.S.I. |
| C | First Final Flow Pressure | 243 * | P.S.I. |
| D | Initial Closed-in Pressure | 368 | P.S.I. |
| E | Second Initial Flow Pressure | 230 | P.S.I. |
| F | Second Final Flow Pressure | 215 | P.S.I. |
| G | Final Closed-in Pressure | 338 | P.S.I. |
| H | Final Hydrostatic Mud | 1992 | P.S.I. |

| | Time Given | Time Computed |
|---|---|---|
| Open Tool | 4:00A M | |
| First Flow Pressure | 30 Mins. | 30 Mins. |
| Initial Closed-in Pressure | 30 Mins. | 30 Mins. |
| Second Flow Pressure | 30 Mins. | 30 Mins. |
| Final Closed-in Pressure | 30 Mins. | 30 Mins. |

* PRESSURES QUESTIONABLE DUE TO PLUGGING ACTION.

## PRESSURE BREAKDOWN

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

| Point Mins. | Press. |
|---|---|
| P 1 0 | 164* |
| P 2 5 | 246* |
| P 3 10 | 371* |
| P 4 15 | 394* |
| P 5 20 | 399* |
| P 6 25 | 348* |
| P 7 30 | 243* |
| 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 | 243 * |
| 3 | 350 |
| 6 | 366 |
| 9 | 371 |
| 12 | 371 |
| 15 | 371 |
| 18 | 371 |
| 21 | 371 |
| 24 | 368 |
| 27 | 368 |
| 30 | 368 |

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

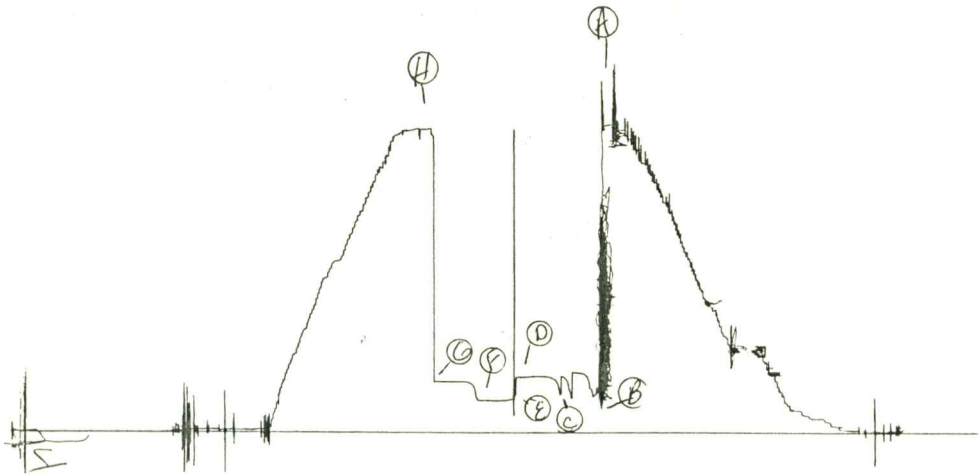
| Point Minutes | Press. |
|---|---|
| 0 | 230 |
| 5 | Flushed tool 217 |
| 10 | 215 |
| 15 | 215 |
| 20 | 215 |
| 25 | 215 |
| 30 | 215 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 215 |
| 3 | 304 |
| 6 | 330 |
| 9 | 338 |
| 12 | 338 |
| 15 | 338 |
| 18 | 338 |
| 21 | 338 |
| 24 | 338 |
| 27 | 338 |
| 30 | 338 |

JK# 10692

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Company Mull Drilling Company, Inc. Lease & Well No. Walters #8

Elevation 1590 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 10693

Date 5/8/81 Sec. 34 Twp. 29S Range 7W County Kingman State Kansas

Test Approved by Vernon C. Schrag Western Representative Vernon Wondra

Formation Test No. 3 Interval Tested from 4180 ft. to 4202 ft. Total Depth 4202 ft.

Packer Depth 4175 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4180 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4192 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 4195 ft. Recorder Number 2603 Cap. 4400

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Blue Goose Drlg. Co. Rig #1 Drill Collar Length 308 I. D. 2¼ in.

Mud Type premix-Monpac Viscosity 35 Weight Pipe Length - I. D. - in.

Weight 9.0 Water Loss 19 cc. Drill Pipe Length 3851 I. D. 3.8 in.

Chlorides 29,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½ OD in.

Jars: Make - Serial Number - Anchor Length 22 ft. Size 5½ OD in.

Did Well Flow? Yes Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4½ FH in.

Blow: Gas to surface in thirty-five minutes. See attached sheet for gas measurements.

Recovered 80 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 6:50 A.M. ~~P.M.~~ Time Started Off Bottom 10:05 A.M. ~~P.M.~~ Maximum Temperature 132°

| | | | | | | |
|---|---|---|---|---|---|---|
| Initial Hydrostatic Pressure | | | (A) | 2000 | P.S.I. | |
| Initial Flow Period | Minutes 30 | (B) | 90 | P.S.I. to (C) | 68 | P.S.I. |
| Initial Closed In Period | Minutes 45 | (D) | 494 | P.S.I. | | |
| Final Flow Period | Minutes 60 | (E) | 54 | P.S.I. to (F) | 59 | P.S.I. |
| Final Closed In Period | Minutes 63 | (G) | 485 | P.S.I. | | |
| Final Hydrostatic Pressure | | | (H) | 2000 | P.S.I. | |

# GAS FLOW REPORT

Date 5/8/81 Ticket 10693 Company Mull Drilling Company, Inc.

Well Name and No. Walters #8 Dst No. 3 Interval Tested 4180'-4202'

County Kingman State Kansas Sec. 34 Twp. 29S Rg. 7W

| Time Gauge Pre-Flow | Time Gauge in Min. | P.S.I. on Merla Orifice Well Tester | P.S.I. on Pitot Tester | P.S.I. on Side Static Tester | P.S.I. on U-Tube Tester | Description of Flow |
|---|---|---|---|---|---|---|
| | | | | | | **PRE FLOW** |
| Gas in thirty-five minutes. | | | | | | |
| | | | | | | **SECOND FLOW** |
| | 10 min. | 26" of water | | 1/4" orifice | | 8,560 CFPD |
| | 20 min. | 28" of water | | 1/4" orifice | | 8,890 CFPD |
| | 30 min. | 30" of water | | 1/4" orifice | | 9,200 CFPD |
| | 40 min. | 32" of water | | 1/4" orifice | | 9,500 CFPD |
| | 50 min. | 32" of water | | 1/4" orifice | | 9,500 CFPD |
| | 55 min. | 32" of water | | 1/4" orifice | | 9,500 CFPD |

## GAS BOTTLE

Serial No. ----- Date Bottle Filled ------- Date to be Invoiced 5/8/81

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property 'or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of $75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Mull Drilling Company, Inc.

Authorized by Vernon C. Schrag

FORM WTC 6

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

Date 5/8/81 Test Ticket No. 10693

Recorder No. 6074 Capacity 5100 Location 4192 Ft.

Clock No. -- Elevation 1590 Kelly Bushing Well Temperature 132 °F

| Point | | Pressure | |
|---|---|---|---|
| A | Initial Hydrostatic Mud | 2000 | P.S.I. |
| B | First Initial Flow Pressure | 90 | P.S.I. |
| C | First Final Flow Pressure | 68 | P.S.I. |
| D | Initial Closed-in Pressure | 484 | P.S.I. |
| E | Second Initial Flow Pressure | 54 | P.S.I. |
| F | Second Final Flow Pressure | 59 | P.S.I. |
| G | Final Closed-in Pressure | 485 | P.S.I. |
| H | Final Hydrostatic Mud | 2000 | P.S.I. |

| | Time Given | Time Computed |
|---|---|---|
| Open Tool | 6:50A M | |
| First Flow Pressure | 30 Mins. | 30 Mins. |
| Initial Closed-in Pressure | 45 Mins. | 45 Mins. |
| Second Flow Pressure | 60 Mins. | 60 Mins. |
| Final Closed-in Pressure | 60 Mins. | 63 Mins. |

## PRESSURE BREAKDOWN

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

| Point Mins. | Press. |
|---|---|
| P 1 0 | 90 |
| P 2 5 | 74 |
| P 3 10 | 71 |
| P 4 15 | 68 |
| P 5 20 | 68 |
| P 6 25 | 68 |
| P 7 30 | 68 |
| P 8 | |
| P 9 | |
| P10 | |
| P11 | |
| P12 | |
| P13 | |
| P14 | |
| P15 | |
| P16 | |
| P17 | |
| P18 | |
| P19 | |
| P20 | |

**Initial Shut-In**
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 68 |
| 3 | 399 |
| 6 | 460 |
| 9 | 481 |
| 12 | 486 |
| 15 | 486 |
| 18 | 487 |
| 21 | 488 |
| 24 | 489 |
| 27 | 489 |
| 30 | 490 |
| 33 | 491 |
| 36 | 492 |
| 39 | 493 |
| 42 | 493 |
| 45 | 494 |

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

| Point Minutes | Press. |
|---|---|
| 0 | 54 |
| 5 | 56 |
| 10 | 56 |
| 15 | 59 |
| 20 | 60 |
| 25 | 60 |
| 30 | 61 |
| 35 | 60 |
| 40 | 60 |
| 45 | 59 |
| 50 | 59 |
| 55 | 59 |
| 60 | 59 |

**Final Shut-In**
Breakdown: 21 Inc. of 3 mins. and a final inc. of 0 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 59 |
| 3 | 379 |
| 6 | 450 |
| 9 | 464 |
| 12 | 470 |
| 15 | 476 |
| 18 | 478 |
| 21 | 479 |
| 24 | 480 |
| 27 | 481 |
| 30 | 482 |
| 33 | 482 |
| 36 | 482 |
| 39 | 482 |
| 42 | 482 |
| 45 | 482 |
| 48 | 482 |
| 51 | 482 |
| 54 | 482 |
| 57 | 482 |
| 60 | 483 |
| 63 | 485 |

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