

Company Pickrell Drilling Company Lease & Well No. Cook #1-E  
Elevation 1529 Kelly Bushing Formation Mississippi Effective Pay -- Ft. Ticket No. 3958  
Date 9/19/79 Sec. 18 Twp. 34S Range 12W County Barber State Kansas  
Test Approved by Larry J. Richardson Western Representative Rod Tritt

Formation Test No. 1 Interval Tested from 4708 ft. to 4734 ft. Total Depth 4734 ft.

Packer Depth 4703 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4708 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --

Top Recorder Depth (Inside) 4712 ft. Recorder Number 2604 Cap. 4150

Bottom Recorder Depth (Outside) 4715 ft. Recorder Number 2606 Cap. 4150

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

Drilling Contractor Pickrell Drilling Drill Collar Length -- I. D. -- in.

Mud Type drispac Viscosity 52 Weight Pipe Length 253 I. D. 2 1/2 in.

Weight 9.2 Water Loss 15.2 cc. Drill Pipe Length 4515 I. D. 3.8 in.

Chlorides 14,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.

Jars: Make No Serial Number -- Anchor Length 26 ft. Size 5 1/2 OD 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 4 1/2 FH in.

Blow: Strong blow throughout test. Gas to surface four minutes into final flow period. See attached sheet for gas measurements.

Recovered 75 ft. of drilling mud

Recovered        ft. of       

Recovered        ft. of       

Recovered        ft. of       

Recovered        ft. of       

Remarks:       

Time Set Packer(s) 7:10 ~~P.M.~~ <sup>A.M.</sup> Time Started Off Bottom 11:40 ~~P.M.~~ <sup>A.M.</sup> Maximum Temperature 125

Initial Hydrostatic Pressure        (A) 2367 P.S.I.

Initial Flow Period        Minutes 30 (B) 44 P.S.I. to (C) 32 P.S.I.

Initial Closed In Period        Minutes 60 (D) 901 P.S.I.

Final Flow Period        Minutes 80 (E) 45 P.S.I. to (F) 30 P.S.I.

Final Closed In Period        Minutes 90 (G) 906 P.S.I.

Final Hydrostatic Pressure        (H) 2304 P.S.I.

Phone 316 262-5861  
316 838-0601



P. O. Box 1599  
WICHITA, KANSAS 67201

## GAS FLOW REPORT

Date 9/19/79 Ticket 3958 Company Pickrell Drilling Company  
Well Name and No. Cook #1-E Dst No. 1 Interval Tested 4708' - 4734'  
County Barber State Kansas Sec. 18 Twp. 34S Rg. 12S

| 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              |
|---------------------|--------------------|-------------------------------------|------------------------|------------------------------|-------------------------|----------------------------------|
| 7:10AM              |                    | TOOL OPEN                           |                        | PRE FLOW                     |                         |                                  |
|                     |                    |                                     |                        |                              |                         |                                  |
|                     |                    |                                     |                        |                              |                         |                                  |
|                     |                    |                                     |                        |                              |                         |                                  |
| 7:40                |                    |                                     |                        |                              |                         | Closed tool - No gas to surface. |
|                     |                    |                                     |                        |                              |                         |                                  |
|                     |                    |                                     |                        |                              |                         |                                  |

| 8:40AM (GAS TO SURFACE FOUR MINUTES) |               | SECOND FLOW  |  |  | TOOL OPEN |      |
|--------------------------------------|---------------|--------------|--|--|-----------|------|
| 10 min.                              | 4" of water   | 3/4" orifice |  |  | 28,300    | CFPD |
| 20 min.                              | 4" of water   | 3/4" orifice |  |  | 28,300    | CFPD |
| 30 min.                              | 4" of water   | 3/4" orifice |  |  | 28,300    | CFPD |
| 40 min.                              | 4.5" of water | 3/4" orifice |  |  | 30,100    | CFPD |
| 50 min.                              | 5" of water   | 3/4" orifice |  |  | 31,600    | CFPD |
| 60 min.                              | 5" of water   | 3/4" orifice |  |  | 31,600    | CFPD |
| 70 min.                              | 5" of water   | 3/4" orifice |  |  | 31,600    | CFPD |
| 80 min.                              | 5.5" of water | 3/4" orifice |  |  | 33,200    | CFPD |
| 90 min.                              | 5.5" of water | 3/4" orifice |  |  | 33,200    | CFPD |
|                                      |               |              |  |  |           |      |
|                                      |               |              |  |  |           |      |
|                                      |               |              |  |  |           |      |

## GAS BOTTLE

Serial No. ----- Date Bottle Filled ----- Date to be Invoiced 9/19/79

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 1% per month, equal to 12% 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 Pickrell Drilling Company

Authorized by Larry J. Richardson

# WESTERN TESTING CO., INC.

## Pressure Data

Date 9/19/79 Recorder No. 2604 Capacity 4150 Test Ticket No. 3958  
 Clock No. -- Elevation 1529 Kelly Bushing Location 4712 Ft. --  
 Well Temperature 125 °F

| Point                          | Pressure |        | Time Given | Time Computed |
|--------------------------------|----------|--------|------------|---------------|
| A Initial Hydrostatic Mud      | 2367     | P.S.I. | 7:10A      | M             |
| B First Initial Flow Pressure  | 44       | P.S.I. | 30         | Mins. 30      |
| C First Final Flow Pressure    | 32       | P.S.I. | 60         | Mins. 60      |
| D Initial Closed-in Pressure   | 901      | P.S.I. | 90         | Mins. 80      |
| E Second Initial Flow Pressure | 45       | P.S.I. | 90         | Mins. 90      |
| F Second Final Flow Pressure   | 30       | P.S.I. |            |               |
| G Final Closed-in Pressure     | 906      | P.S.I. |            |               |
| H Final Hydrostatic Mud        | 2304     | P.S.I. |            |               |

### PRESSURE BREAKDOWN

| First Flow Pressure         |           | Initial Shut-In             |            | Second Flow Pressure        |           | Final Shut-In               |            |
|-----------------------------|-----------|-----------------------------|------------|-----------------------------|-----------|-----------------------------|------------|
| Breakdown: <u>6</u> Inc.    |           | Breakdown: <u>20</u> Inc.   |            | Breakdown: <u>16</u> Inc.   |           | Breakdown: <u>30</u> Inc.   |            |
| of <u>5</u> mins. and a     |           | of <u>3</u> mins. and a     |            | of <u>5</u> mins. and a     |           | of <u>3</u> mins. and a     |            |
| final inc. of <u>0</u> Min. |           | final inc. of <u>0</u> Min. |            | final inc. of <u>0</u> Min. |           | final inc. of <u>0</u> Min. |            |
| Point Mins.                 | Press.    | Point Minutes               | Press.     | Point Minutes               | Press.    | Point Minutes               | Press.     |
| P 1 <u>0</u>                | <u>44</u> | <u>0</u>                    | <u>32</u>  | <u>0</u>                    | <u>45</u> | <u>0</u>                    | <u>50</u>  |
| P 2 <u>5</u>                | <u>43</u> | <u>3</u>                    | <u>51</u>  | <u>5</u>                    | <u>38</u> | <u>3</u>                    | <u>155</u> |
| P 3 <u>10</u>               | <u>34</u> | <u>6</u>                    | <u>83</u>  | <u>10</u>                   | <u>32</u> | <u>6</u>                    | <u>402</u> |
| P 4 <u>15</u>               | <u>32</u> | <u>9</u>                    | <u>179</u> | <u>15</u>                   | <u>30</u> | <u>9</u>                    | <u>611</u> |
| P 5 <u>20</u>               | <u>32</u> | <u>12</u>                   | <u>425</u> | <u>20</u>                   | <u>30</u> | <u>12</u>                   | <u>738</u> |
| P 6 <u>25</u>               | <u>32</u> | <u>15</u>                   | <u>494</u> | <u>25</u>                   | <u>30</u> | <u>15</u>                   | <u>807</u> |
| P 7 <u>30</u>               | <u>32</u> | <u>18</u>                   | <u>621</u> | <u>30</u>                   | <u>30</u> | <u>18</u>                   | <u>843</u> |
| P 8                         |           | <u>21</u>                   | <u>713</u> | <u>35</u>                   | <u>30</u> | <u>21</u>                   | <u>864</u> |
| P 9                         |           | <u>24</u>                   | <u>774</u> | <u>40</u>                   | <u>30</u> | <u>24</u>                   | <u>874</u> |
| P10                         |           | <u>27</u>                   | <u>809</u> | <u>45</u>                   | <u>30</u> | <u>27</u>                   | <u>885</u> |
| P11                         |           | <u>30</u>                   | <u>836</u> | <u>50</u>                   | <u>30</u> | <u>30</u>                   | <u>891</u> |
| P12                         |           | <u>33</u>                   | <u>851</u> | <u>55</u>                   | <u>30</u> | <u>33</u>                   | <u>895</u> |
| P13                         |           | <u>36</u>                   | <u>866</u> | <u>60</u>                   | <u>30</u> | <u>36</u>                   | <u>899</u> |
| P14                         |           | <u>39</u>                   | <u>878</u> | <u>65</u>                   | <u>30</u> | <u>39</u>                   | <u>900</u> |
| P15                         |           | <u>42</u>                   | <u>885</u> | <u>70</u>                   | <u>30</u> | <u>42</u>                   | <u>901</u> |
| P16                         |           | <u>45</u>                   | <u>889</u> | <u>75</u>                   | <u>30</u> | <u>45</u>                   | <u>903</u> |
| P17                         |           | <u>48</u>                   | <u>893</u> | <u>80</u>                   | <u>30</u> | <u>48</u>                   | <u>904</u> |
| P18                         |           | <u>51</u>                   | <u>897</u> |                             |           | <u>51</u>                   | <u>904</u> |
| P19                         |           | <u>54</u>                   | <u>899</u> |                             |           | <u>54</u>                   | <u>905</u> |
| P20                         |           | <u>57</u>                   | <u>900</u> |                             |           | <u>57</u>                   | <u>905</u> |
|                             |           | <u>60</u>                   | <u>901</u> |                             |           | <u>60</u>                   | <u>906</u> |

WTC - 4

continued next page

# WESTERN TESTING CO., INC.

## Pressure Data

Date 9/19/79 Test Ticket No. 3958  
 Recorder No. 2604 Capacity 4150 Location 4712 Ft.  
 Clock No. -- Elevation 1529 Kelly Bushing Well Temperature 125 °F

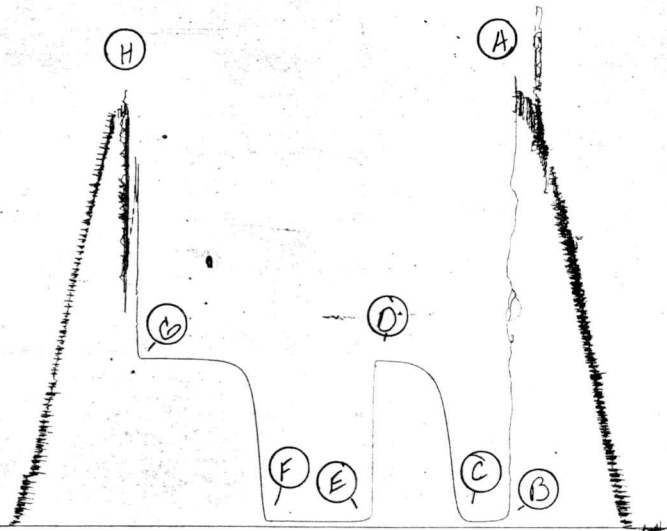
| Point                          | Pressure |        | Time Given | Time Computed |
|--------------------------------|----------|--------|------------|---------------|
| A Initial Hydrostatic Mud      | 2367     | P.S.I. | 7:10A      | M             |
| B First Initial Flow Pressure  | 44       | P.S.I. | 30         | Mins. 30      |
| C First Final Flow Pressure    | 32       | P.S.I. | 60         | Mins. 60      |
| D Initial Closed-in Pressure   | 901      | P.S.I. | 90         | Mins. 80      |
| E Second Initial Flow Pressure | 45       | P.S.I. | 90         | Mins. 90      |
| F Second Final Flow Pressure   | 30       | P.S.I. |            |               |
| G Final Closed-in Pressure     | 906      | P.S.I. |            |               |
| H Final Hydrostatic Mud        | 2304     | P.S.I. |            |               |

## PRESSURE BREAKDOWN

| First Flow Pressure         |        | Initial Shut-In             |        | Second Flow Pressure        |        | Final Shut-In               |        |
|-----------------------------|--------|-----------------------------|--------|-----------------------------|--------|-----------------------------|--------|
| Breakdown: <u>6</u> Inc.    |        | Breakdown: <u>20</u> Inc.   |        | Breakdown: <u>16</u> Inc.   |        | Breakdown: <u>30</u> Inc.   |        |
| of <u>5</u> mins. and a     |        | of <u>3</u> mins. and a     |        | of <u>5</u> mins. and a     |        | of <u>3</u> mins. and a     |        |
| final inc. of <u>0</u> Min. |        | final inc. of <u>0</u> Min. |        | final inc. of <u>0</u> Min. |        | final inc. of <u>0</u> Min. |        |
| Point Mins.                 | Press. | Point Minutes               | Press. | Point Minutes               | Press. | Point Minutes               | Press. |
| P 1                         |        |                             |        |                             |        | 63                          | 906    |
| P 2                         |        |                             |        |                             |        | 66                          | 906    |
| P 3                         |        |                             |        |                             |        | 69                          | 906    |
| P 4                         |        |                             |        |                             |        | 72                          | 906    |
| P 5                         |        |                             |        |                             |        | 75                          | 906    |
| P 6                         |        |                             |        |                             |        | 78                          | 906    |
| P 7                         |        |                             |        |                             |        | 81                          | 906    |
| P 8                         |        |                             |        |                             |        | 84                          | 906    |
| P 9                         |        |                             |        |                             |        | 87                          | 906    |
| P10                         |        |                             |        |                             |        | 90                          | 906    |
| P11                         |        |                             |        |                             |        |                             |        |
| P12                         |        |                             |        |                             |        |                             |        |
| P13                         |        |                             |        |                             |        |                             |        |
| P14                         |        |                             |        |                             |        |                             |        |
| P15                         |        |                             |        |                             |        |                             |        |
| P16                         |        |                             |        |                             |        |                             |        |
| P17                         |        |                             |        |                             |        |                             |        |
| P18                         |        |                             |        |                             |        |                             |        |
| P19                         |        |                             |        |                             |        |                             |        |
| P20                         |        |                             |        |                             |        |                             |        |

2604 Dst #1

TK4 #3958  
I



Company Pickrell Drilling Company Lease & Well No. Cook #1-E  
Elevation 1529 Kelly Bushing Formation Mississippi Effective Pay -- Ft. Ticket No. 3959  
Date 9/20/79 Sec. 18 Twp. 34S Range 12W County Barber State Kansas  
Test Approved by Larry J. Richardson Western Representative Rod Tritt

Formation Test No. 2 Interval Tested from 4730 ft. to 4779 ft. Total Depth 4779 ft.

Packer Depth 4725 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4730 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --

Top Recorder Depth (Inside) 4734 ft. Recorder Number 2604 Cap. 4150

Bottom Recorder Depth (Outside) 4737 ft. Recorder Number 2606 Cap. 4150

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

Drilling Contractor Pickrell Drilling Drill Collar Length 120 I. D. 2 1/4 in.

Mud Type drispac Viscosity 40 Weight Pipe Length 253 I. D. 2 1/2 in.

Weight 9.3 Water Loss 25.6 cc. Drill Pipe Length 4329 I. D. 3.8 in.

Chlorides 19,000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 OD in.

Jars: Make WTC Serial Number 407 Anchor Length 49 ft. Size 5 1/2 OD 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 4 1/2 FH in.

Blow: Weak blow; died in ten minutes on initial flow period. No blow on final flow period.

Flushed tool on final opening.

Recovered 55 ft. of drilling mud

Recovered        ft. of       

Recovered        ft. of       

Recovered        ft. of       

Recovered        ft. of       

Remarks:       

Time Set Packer(s) 4:50 ~~A.M.~~ P.M. Time Started Off Bottom 6:05 ~~A.M.~~ P.M. Maximum Temperature 126

Initial Hydrostatic Pressure 2316 P.S.I. (A)

Initial Flow Period 30 Minutes (B) 79 P.S.I. to (C) 40 P.S.I.

Initial Closed In Period 27 Minutes (D) 55 P.S.I.

Final Flow Period 15 Minutes (E) 53 P.S.I. to (F) 60 P.S.I.

Final Closed In Period -- Minutes (G) -- P.S.I.

Final Hydrostatic Pressure 2315 P.S.I. (H)

# WESTERN TESTING CO., INC.

## Pressure Data

Date 9/20/79 Test Ticket No. 3959  
 Recorder No. 2604 Capacity 4150 Location 4734 Ft.  
 Clock No. -- Elevation 1529 Kelly Bushing Well Temperature 126 °F

| Point                          | Pressure |        | Time Given | Time Computed  |
|--------------------------------|----------|--------|------------|----------------|
| A Initial Hydrostatic Mud      | 2316     | P.S.I. | 6:05P      | M              |
| B First Initial Flow Pressure  | 79       | P.S.I. | 30         | Mins. 30 Mins. |
| C First Final Flow Pressure    | 40       | P.S.I. | 30         | Mins. 27 Mins. |
| D Initial Closed-in Pressure   | 55       | P.S.I. | 15         | Mins. 15 Mins. |
| E Second Initial Flow Pressure | 53       | P.S.I. | --         | Mins. -- Mins. |
| F Second Final Flow Pressure   | 60       | P.S.I. |            |                |
| G Final Closed-in Pressure     | --       | P.S.I. |            |                |
| H Final Hydrostatic Mud        | 2315     | P.S.I. |            |                |

## PRESSURE BREAKDOWN

| First Flow Pressure |        | Initial Shut-In |        | Second Flow Pressure |        | Final Shut-In |        |
|---------------------|--------|-----------------|--------|----------------------|--------|---------------|--------|
| Point Mins.         | Press. | Point Minutes   | Press. | Point Minutes        | Press. | Point Minutes | Press. |
| P 1                 | 79     | 0               | 40     | 0                    | 53     |               |        |
| P 2                 | 55     | 3               | 40     | 5                    | 54     |               |        |
| P 3                 | 47     | 6               | 43     | 15                   | 77     |               |        |
| P 4                 | 45     | 9               | 45     |                      | 60     |               |        |
| P 5                 | 43     | 12              | 45     |                      |        |               |        |
| P 6                 | 41     | 15              | 47     |                      |        |               |        |
| P 7                 | 40     | 18              | 48     |                      |        |               |        |
| P 8                 |        | 21              | 51     |                      |        |               |        |
| P 9                 |        | 24              | 53     |                      |        |               |        |
| P10                 |        | 27              | 55     |                      |        |               |        |
| P11                 |        |                 |        |                      |        |               |        |
| P12                 |        |                 |        |                      |        |               |        |
| P13                 |        |                 |        |                      |        |               |        |
| P14                 |        |                 |        |                      |        |               |        |
| P15                 |        |                 |        |                      |        |               |        |
| P16                 |        |                 |        |                      |        |               |        |
| P17                 |        |                 |        |                      |        |               |        |
| P18                 |        |                 |        |                      |        |               |        |
| P19                 |        |                 |        |                      |        |               |        |
| P20                 |        |                 |        |                      |        |               |        |

Breakdown: 6 Inc. of 5 mins. and a final inc. of 0 Min.  
 Breakdown: 9 Inc. of 3 mins. and a final inc. of 0 Min.  
 Breakdown: 3 Inc. of 5 mins. and a final inc. of 0 Min.  
 Breakdown: 0 Inc. of 3 mins. and a final inc. of 0 Min.

flushed tool

2604 - DST #2

TKT# 3959

I.

