



## DRILL STEM TEST REPORT

Prepared For: **Red Oak Energy, Inc.**

7701 E Kellogg DR STE 710  
Wichita, KS 67207

ATTN: Ryan Davis

### **Great Bend Trust 1-7**

### **7-15s-41w Wallace, KS**

Start Date: 2019.04.30 @ 16:32:00

End Date: 2019.05.01 @ 00:06:45

Job Ticket #: 64069                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

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**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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7701 E Kellogg DR STE 710  
Wichita, KS 67207  
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**Great Bend Trust 1-7**

Job Ticket: 64069 **DST#: 1**

Test Start: 2019.04.30 @ 16:32:00

## GENERAL INFORMATION:

Formation: **Morrow Upper Snd.**

Deviated: No Whipstock: 3787.00 ft (KB)

Time Tool Opened: 19:00:50

Time Test Ended: 00:06:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 75

Interval: **4960.00 ft (KB) To 5010.00 ft (KB) (TVD)**

Reference Elevations: 3787.00 ft (KB)

Total Depth: 5010.00 ft (KB) (TVD)

3776.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 8289**

**Inside**

Press@RunDepth: 73.99 psig @ 4963.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.30

End Date:

2019.05.01

Last Calib.: 2019.04.30

Start Time: 16:32:02

End Time:

00:06:45

Time On Btm: 2019.04.30 @ 19:00:40

Time Off Btm: 2019.04.30 @ 21:35:20

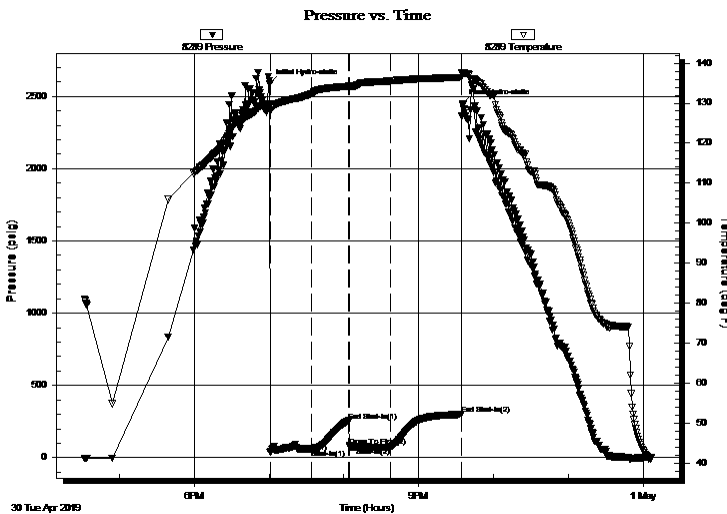
TEST COMMENT: IF: BOB 27 min., strong building blow, 16"

IS: No blow back

FF: BOB 1 1/2 min., 42"

FS: No blow back

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2587.22         | 129.52       | Initial Hydro-static |
| 1           | 37.83           | 127.96       | Open To Flow (1)     |
| 34          | 61.61           | 132.32       | Shut-In(1)           |
| 64          | 256.28          | 134.25       | End Shut-In(1)       |
| 64          | 83.08           | 134.18       | Open To Flow (2)     |
| 97          | 73.99           | 135.58       | Shut-In(2)           |
| 154         | 298.74          | 136.46       | End Shut-In(2)       |
| 155         | 2449.61         | 137.69       | Final Hydro-static   |

## Recovery

| Length (ft) | Description          | Volume (bbl) |
|-------------|----------------------|--------------|
| 60.00       | GOCM 30%G,10%O,60%M  | 0.30         |
| 60.00       | VGMCO 60%G,30%O,10%M | 0.30         |
|             |                      |              |
|             |                      |              |
|             |                      |              |

## Gas Rates

|  | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
|  |                |                 |                  |





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**TOOL DIAGRAM**

Red Oak Energy, Inc.

**7-15s-41w Wallace, KS**

7701 E Kellogg DR STE 710  
Wichita, KS 67207

**Great Bend Trust 1-7**

Job Ticket: 64069

**DST#: 1**

ATTN: Ryan Davis

Test Start: 2019.04.30 @ 16:32:00

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 4681.00 ft | Diameter: 3.80 inches | Volume: 65.66 bbl              | Tool Weight: 2000.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer: 20000.00 lb  |
| Drill Collar:             | Length: 272.00 ft  | Diameter: 2.25 inches | Volume: 1.34 bbl               | Weight to Pull Loose: 90000.00 lb  |
|                           |                    |                       | <u>Total Volume: 67.00 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 20.00 ft           |                       |                                | String Weight: Initial 83000.00 lb |
| Depth to Top Packer:      | 4960.00 ft         |                       |                                | Final 83000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 50.00 ft           |                       |                                |                                    |
| Tool Length:              | 77.00 ft           |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

|                 |       |      |         |         |                               |
|-----------------|-------|------|---------|---------|-------------------------------|
| Shut In Tool    | 5.00  |      |         | 4938.00 |                               |
| Hydraulic tool  | 5.00  |      |         | 4943.00 |                               |
| Jars            | 5.00  |      |         | 4948.00 |                               |
| Safety Joint    | 3.00  |      |         | 4951.00 |                               |
| Packer          | 5.00  |      |         | 4956.00 | 27.00 Bottom Of Top Packer    |
| Packer          | 4.00  |      |         | 4960.00 |                               |
| Stubb           | 1.00  |      |         | 4961.00 |                               |
| Perforations    | 2.00  |      |         | 4963.00 |                               |
| Recorder        | 0.00  | 8289 | Inside  | 4963.00 |                               |
| Recorder        | 0.00  | 6672 | Outside | 4963.00 |                               |
| Perforations    | 10.00 |      |         | 4973.00 |                               |
| Change Over Sub | 1.00  |      |         | 4974.00 |                               |
| Drill Pipe      | 32.00 |      |         | 5006.00 |                               |
| Change Over Sub | 1.00  |      |         | 5007.00 |                               |
| Bullnose        | 3.00  |      |         | 5010.00 | 50.00 Bottom Packers & Anchor |

**Total Tool Length: 77.00**



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**FLUID SUMMARY**

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**7-15s-41w Wallace, KS**

7701 E Kellogg DR STE 710  
Wichita, KS 67207

**Great Bend Trust 1-7**

Job Ticket: 64069

**DST#: 1**

ATTN: Ryan Davis

Test Start: 2019.04.30 @ 16:32:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

| Length<br>ft | Description          | Volume<br>bbl |
|--------------|----------------------|---------------|
| 60.00        | GOCM 30%G,10%O,60%M  | 0.295         |
| 60.00        | VGMCO 60%G,30%O,10%M | 0.295         |

Total Length: 120.00 ft      Total Volume: 0.590 bbl

Num Fluid Samples: 0

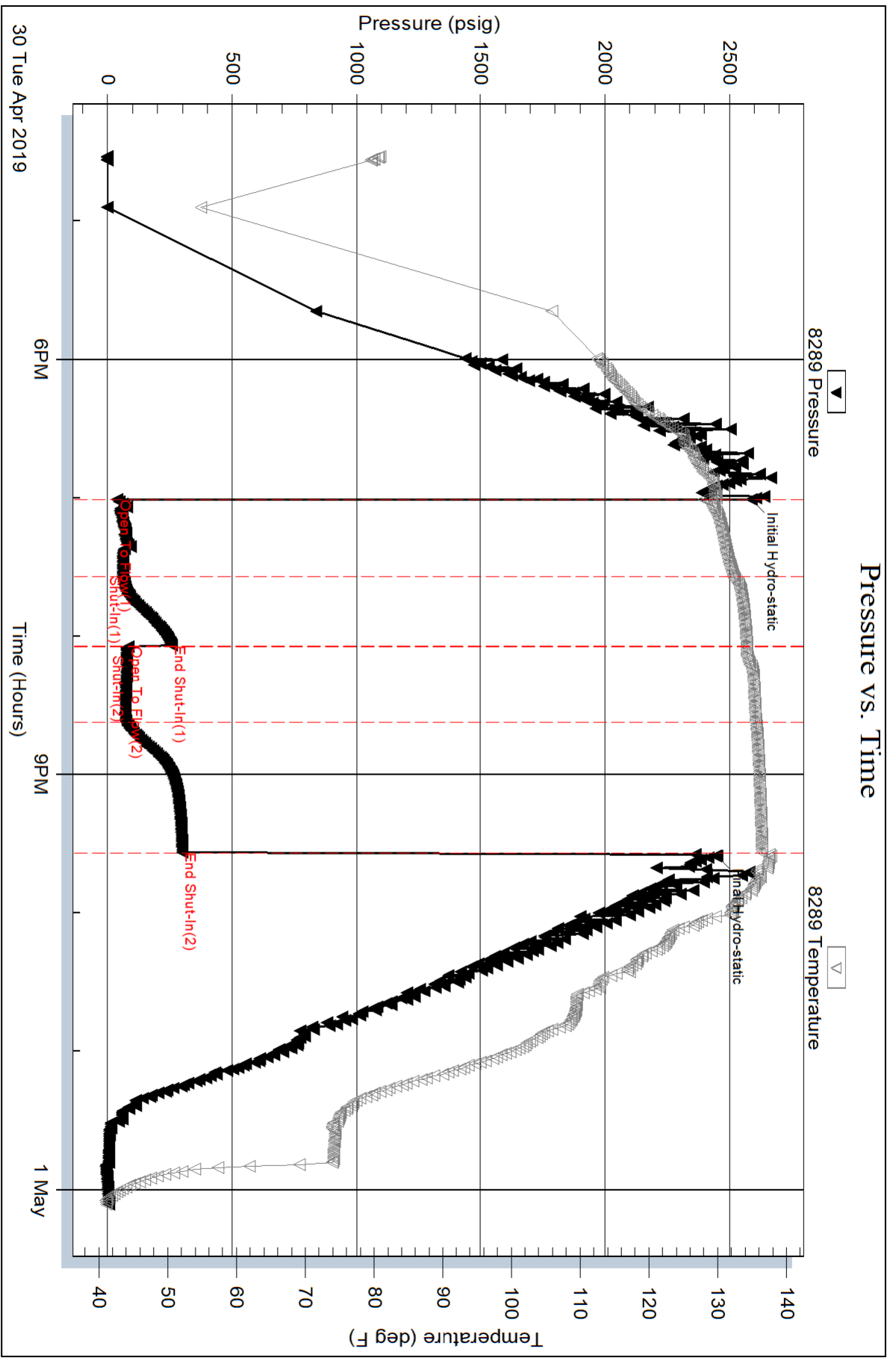
Num Gas Bombs: 0

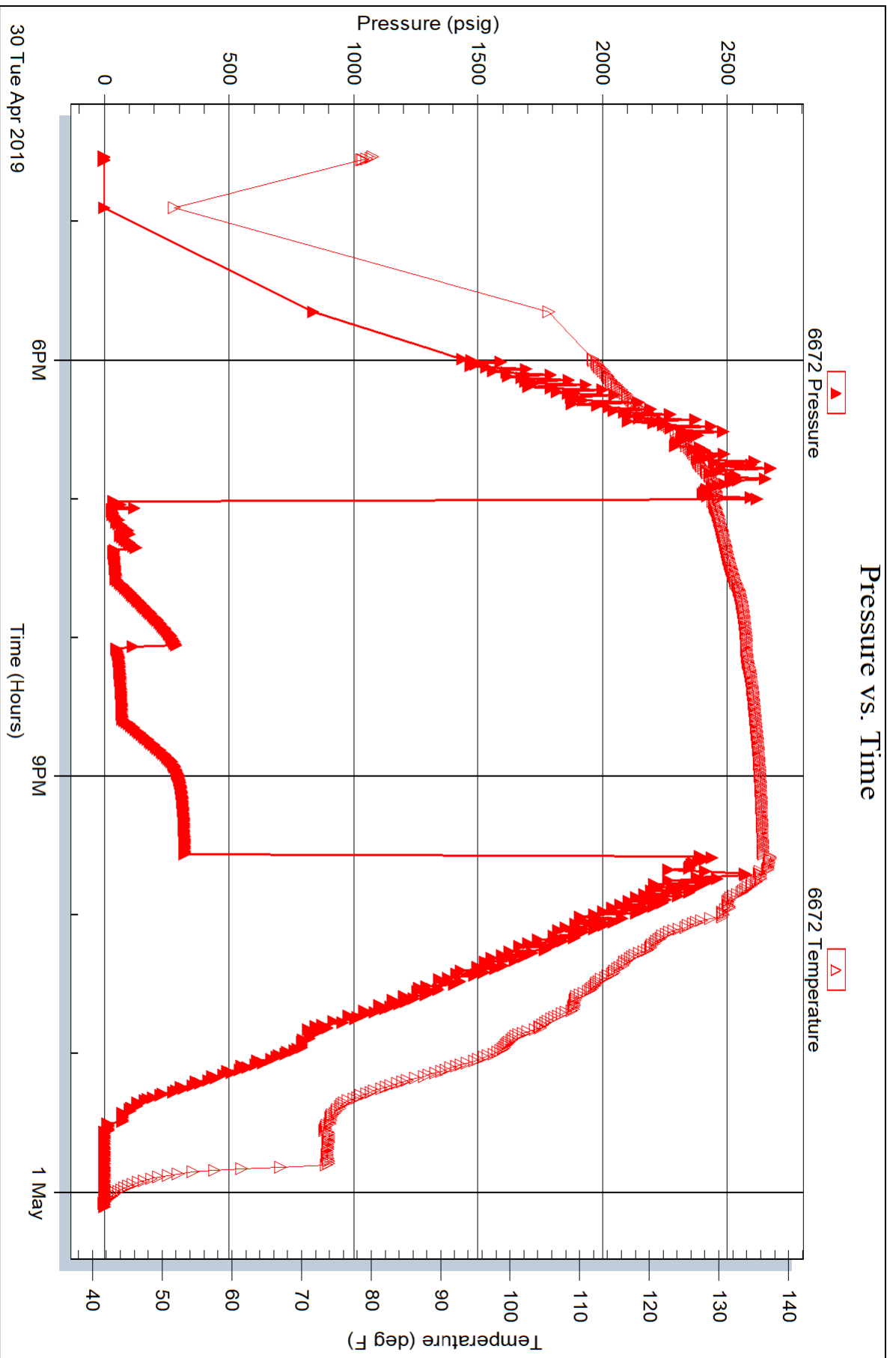
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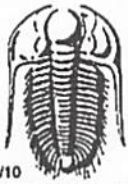
Laboratory Name:

Laboratory Location:

Recovery Comments: No detectable GIP







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **64069**

4/10

Well Name & No. Great Bend Trust 1-17 Test No. 1 Date 4-30-19  
 Company Red Oak Energy, Inc. Elevation 3787 KB 31776 GL  
 Address 7701 E Kellogg DR STE 710 Wichita, KS 67207  
 Co. Rep / Geo. Ryan Davis Rig Murfin 21  
 Location: Sec. 17 Twp 15 Rge. 41 Co. Wallace State KS

Interval Tested 4960-5010 Zone Tested Morrow Upper Sand.  
 Anchor Length 50' Drill Pipe Run 4681 Mud Wt. 9.3  
 Top Packer Depth 4955 Drill Collars Run 272 Vis 64  
 Bottom Packer Depth 4960 Wt. Pipe Run N.A. WL 8.0  
 Total Depth 5010 Chlorides 4000 ppm System LCM 17#

Blow Description JFI BOB 27 min, strong building blow, 16 inches  
ISB! No blow back  
FFI BOB 1.5 min, 42 inches  
FSB! No blow back

| Rec       | Feet of                | %gas      | %oil      | %water | %mud      |
|-----------|------------------------|-----------|-----------|--------|-----------|
| <u>60</u> | <u>gassy oily mud</u>  | <u>30</u> | <u>10</u> |        | <u>60</u> |
| <u>60</u> | <u>gassy muddy oil</u> | <u>60</u> | <u>30</u> |        | <u>10</u> |
| Rec       | Feet of                | %gas      | %oil      | %water | %mud      |
| Rec       | Feet of                | %gas      | %oil      | %water | %mud      |
| Rec       | Feet of                | %gas      | %oil      | %water | %mud      |

Rec Total 120 BHT 136 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 (A) Initial Hydrostatic 2587  Test conv. 1400 T-On Location 1400  
 (B) First Initial Flow 38  Jars 250 T-Started 1630 (120M 2hd)  
 (C) First Final Flow 62  Safety Joint 75 T-Open 1900  
 (D) Initial Shut-In 256  Circ Sub \_\_\_\_\_ T-Pulled 2130  
 (E) Second Initial Flow 83  Hourly Standby \_\_\_\_\_ T-Out 2400  
 (F) Second Final Flow 74  Mileage 150 300 Comments batson @ 1632  
 (G) Final Shut-In 299  Sampler \_\_\_\_\_ loaded tools 5/1 17:30  
 (H) Final Hydrostatic 2450  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 2025  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 2025

Approved By [Signature] Our Representative [Signature] Chris Hagan  
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785-656-3947