



DRILL STEM TEST REPORT

Prepared For: **Younger Energy Company**

9415 E. Harry Suite 403
Wichita.Kansas 67207-5083

ATTN: Keith Reavis

Drack #3

9-22s-13wStafford

Start Date: 2017.06.15 @ 01:18:00

End Date: 2017.06.15 @ 00:00:00

Job Ticket #: 01174 DST #: 3

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2017.06.15 @ 09:59:12



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Job Ticket: 01174

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Test Start: 2017.06.15 @ 01:18:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:55:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 1

Interval: **3769.00 ft (KB) To 3783.00 ft (KB) (TVD)**

Reference Elevations: 1898.00 ft (KB)

Total Depth: 3783.00 ft (KB) (TVD)

1890.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: **91716** Outside

Press@RunDepth: 1167.79 psig @ 3778.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2017.06.15

End Date: 2017.06.15

Last Calib.: 2017.06.15

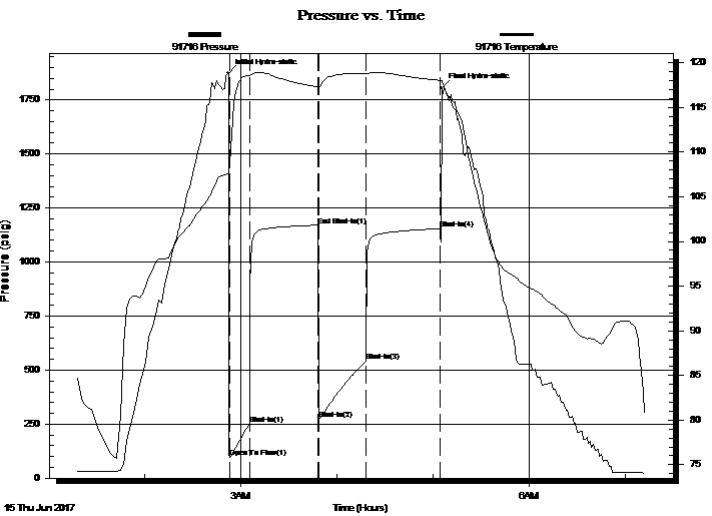
Start Time: 01:18:00

End Time: 07:12:29

Time On Btm: 2017.06.15 @ 02:52:30

Time Off Btm: 2017.06.15 @ 05:05:30

TEST COMMENT: 1st opening 10 Minutes Strong blow built to the bottom of the bucket in 1 minute
1st Shut-In 45 Minutes weak blow back
2nd Opening 30 minutes Good blow built to the bottom of the bucket in 2 minutes
2nd Shut-In 45 Minutes Weak blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1874.25 | 107.71 | Initial Hydro-static |
| 1 | 98.70 | 108.61 | Open To Flow (1) |
| 13 | 250.84 | 118.59 | Shut-In(1) |
| 56 | 1167.79 | 117.28 | End Shut-In(1) |
| 57 | 271.12 | 117.23 | Shut-In(2) |
| 86 | 542.93 | 118.77 | Shut-In(3) |
| 132 | 1153.98 | 118.02 | Shut-In(4) |
| 133 | 1805.73 | 118.03 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------------------|--------------|
| 300.00 | Gas in the pipe | 4.21 |
| 350.00 | frothy gassy oil | 4.91 |
| 120.00 | Oil and gas cut w ater | 1.68 |
| 0.00 | 27%Gas 15% Oil 8% Mudnb 40% Water | 0.00 |
| 120.00 | Oil and gas cut w ater | 1.68 |
| 0.00 | 17%Gas 15% Oil 8%Mud 60% Water | 0.00 |

Gas Rates

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



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TOOL DIAGRAM

Younger Energy Company

9-22s-13wStafford

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Wichita, Kansas 67207-5083

Drack #3

Job Ticket: 01174

DST#: 3

ATTN: Keith Reavis

Test Start: 2017.06.15 @ 01:18:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 3745.00 ft | Diameter: 3.80 inches | Volume: 52.53 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: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight to Pull Loose: | 74000.00 lb |
| | | | <u>Total Volume: 52.53 bbl</u> | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 3.00 ft | | | String Weight: Initial | 68000.00 lb |
| Depth to Top Packer: | 3769.00 ft | | | Final | 72000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 14.00 ft | | | | |
| Tool Length: | 41.00 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 | | | 3747.00 | |
| Hydraulic tool | 5.00 | | | 3752.00 | |
| Jars | 5.00 | | | 3757.00 | |
| Safety Joint | 2.00 | | | 3759.00 | |
| Top Packer | 5.00 | | | 3764.00 | |
| Packer | 5.00 | | | 3769.00 | 27.00 Bottom Of Top Packer |
| Anchor | 9.00 | | | 3778.00 | |
| Recorder | 0.00 | 9119 | Inside | 3778.00 | |
| Recorder | 0.00 | 91716 | Outside | 3778.00 | |
| Bullnose | 5.00 | | | 3783.00 | 14.00 Anchor Tool |
| Total Tool Length: | 41.00 | | | | |



DRILL STEM TEST REPORT

FLUID SUMMARY

Younger Energy Company

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Wichita, Kansas 67207-5083

Drack #3

Job Ticket: 01174

DST#: 3

ATTN: Keith Reavis

Test Start: 2017.06.15 @ 01:18:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 8.00 in³
Resistivity: ohm.m
Salinity: 4000.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------------------|---------------|
| 300.00 | Gas in the pipe | 4.208 |
| 350.00 | frothy gassy oil | 4.910 |
| 120.00 | Oil and gasd cut w ater | 1.683 |
| 0.00 | 27%Gas 15% Oil 8% Mudnb 40% Water | 0.000 |
| 120.00 | Oil and gas cut w ater | 1.683 |
| 0.00 | 17%Gas 15% Oil 8%Mud 60% Water | 0.000 |
| 120.00 | Oil Cut Water | 1.683 |
| 0.00 | 10%Oil 8% Mud 82%Water | 0.000 |
| 120.00 | Water with A trace of oil | 1.683 |
| 0.00 | 1%Oil 3%Mud 96%Water | 0.000 |
| 120.00 | Water with a traCE OF oil | 1.683 |
| 0.00 | 3%Mud 97%Water | 0.000 |
| 180.00 | w ater with a trace of oil | 2.525 |
| 0.00 | 1%Mud 99% Water | 0.000 |
| 0.00 | chlorides 19,000 | 0.000 |

Total Length: 1430.00 ft Total Volume: 20.058 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

