



## DRILL STEM TEST REPORT

Prepared For: **Shelby Resources LLC**

2717 Canal BLVD.  
Suite C  
Hays Kansas, 67601

ATTN: Keith

**Eakin #7-7**

**7/22s/16w/Pawnee**

Start Date: 2013.06.09 @ 21:20:00

End Date: 2013.06.10 @ 06:37:30

Job Ticket #: 17593                      DST #: 2

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.06.09 @ 06:52:50



# DRILL STEM TEST REPORT

Shelby Resources LLC

7/22s/16w/Pawnee

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ATTN: Keith

**Eakin #7-7**

Job Ticket: 17593

**DST#: 2**

Test Start: 2013.06.09 @ 21:20:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:18:30

Time Test Ended: 06:37:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330/50/Great Bend

**Interval: 3870.00 ft (KB) To 3882.00 ft (KB) (TVD)**

Reference Elevations: 2019.00 ft (KB)

Total Depth: 3882.00 ft (KB) (TVD)

2006.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 13.00 ft

**Serial #: 8405 Inside**

Press @ RunDepth: 591.29 psia @ 3878.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.06.09

End Date: 2013.06.10

Last Calib.: 2013.06.09

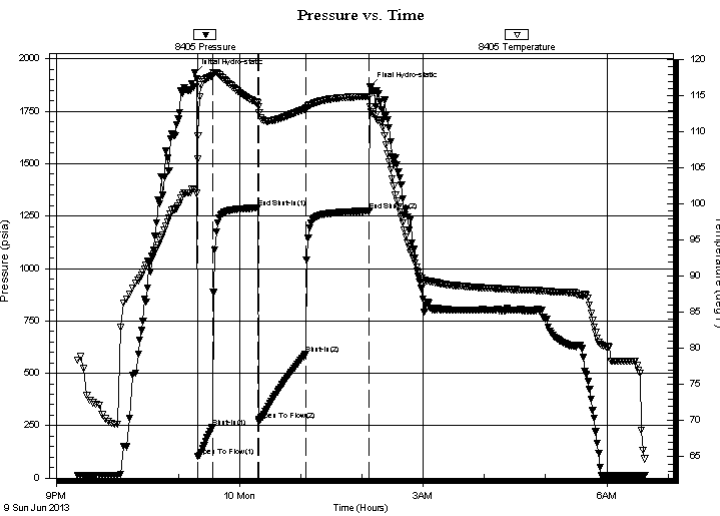
Start Time: 21:20:00

End Time: 06:37:30

Time On Btm: 2013.06.09 @ 23:16:00

Time Off Btm: 2013.06.10 @ 02:08:00

**TEST COMMENT:** 1st Open. 15 Minutes. Strong blow built to bottom of five gallon bucket in one minutes.  
1st Shut In. 45 Minutes Fair blow back built to bottom of five gallon bucket in ten minutes. Then backed off to 8 inches at end of shut in.  
2nd Open. 45 Minutes. Good blow built to bottom of 5 gallon bucket in 2 minutes. Gas to surface in 40 Minutes.



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1931.01         | 102.02       | Initial Hydro-static |
| 3           | 103.43          | 106.22       | Open To Flow (1)     |
| 17          | 242.92          | 117.78       | Shut-In(1)           |
| 62          | 1288.64         | 113.97       | End Shut-In(1)       |
| 63          | 278.20          | 113.47       | Open To Flow (2)     |
| 109         | 591.29          | 113.18       | Shut-In(2)           |
| 171         | 1273.71         | 114.91       | End Shut-In(2)       |
| 172         | 1864.99         | 113.48       | Final Hydro-static   |

## Recovery

| Length (ft) | Description           | Volume (bbl) |
|-------------|-----------------------|--------------|
| 1632.00     | Clean Oil             | 19.89        |
| 0.00        | Gravity corrected 46. | 0.00         |
|             |                       |              |
|             |                       |              |
|             |                       |              |

## Gas Rates

|                | Choke (inches) | Pressure (psia) | Gas Rate (Mcf/d) |
|----------------|----------------|-----------------|------------------|
| First Gas Rate | 0.13           | 4.50            | 1.68             |
| Last Gas Rate  | 0.13           | 4.50            | 1.68             |



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Job Ticket: 17593

**DST#: 2**

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Formation: **Arbuckle**

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Time Tool Opened: 23:18:30

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Tester: Shane Konzem

Unit No: 3330/50/Great Bend

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Reference Elevations: 2019.00 ft (KB)

Total Depth: 3882.00 ft (KB) (TVD)

2006.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 13.00 ft

**Serial #: 8400 Outside**

Press @ RunDepth: 1274.43 psia @ 3879.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.06.09

End Date:

2013.06.10

Last Calib.:

2013.06.09

Start Time: 21:30:00

End Time:

06:47:00

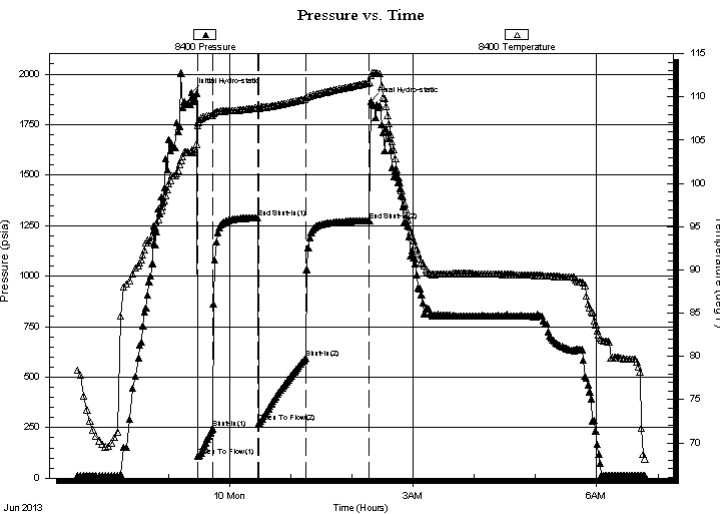
Time On Btm:

2013.06.09 @ 23:22:30

Time Off Btm:

2013.06.10 @ 02:18:30

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2nd Open. 45 Minutes. Good blow built to bottom of 5 gallon bucket in 2 minutes. Gas to surface in 40 Minutes.



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1909.16         | 103.70       | Initial Hydro-static |
| 6           | 106.33          | 106.66       | Open To Flow (1)     |
| 21          | 244.44          | 107.87       | Shut-In(1)           |
| 66          | 1289.60         | 108.77       | End Shut-In(1)       |
| 67          | 274.71          | 108.72       | Open To Flow (2)     |
| 112         | 592.75          | 109.77       | Shut-In(2)           |
| 175         | 1274.43         | 111.64       | End Shut-In(2)       |
| 176         | 1866.13         | 112.51       | Final Hydro-static   |

## Recovery

| Length (ft) | Description           | Volume (bbl) |
|-------------|-----------------------|--------------|
| 1632.00     | Clean Oil             | 19.89        |
| 0.00        | Gravity corrected 46. | 0.00         |
|             |                       |              |
|             |                       |              |
|             |                       |              |

## Gas Rates

|                | Choke (inches) | Pressure (psia) | Gas Rate (Mcf/d) |
|----------------|----------------|-----------------|------------------|
| First Gas Rate | 0.13           | 4.50            | 1.68             |
| Last Gas Rate  | 0.13           | 4.50            | 1.68             |



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Shelby Resources LLC

**7/22s/16w/Pawnee**

2717 Canal BLVD.  
Suite C  
Hays Kansas, 67601  
ATTN: Keith

**Eakin #7-7**

Job Ticket: 17593

**DST#: 2**

Test Start: 2013.06.09 @ 21:20:00

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3537.00 ft | Diameter: 3.80 inches | Volume: 49.61 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: 330.00 ft  | Diameter: 2.25 inches | Volume: 1.62 bbl               | Weight to Pull Loose: 86000.00 lb  |
|                           |                    |                       | <u>Total Volume: 51.23 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 20.00 ft           |                       |                                | String Weight: Initial 74000.00 lb |
| Depth to Top Packer:      | 3870.00 ft         |                       |                                | Final 80000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 12.00 ft           |                       |                                |                                    |
| Tool Length:              | 35.00 ft           |                       |                                |                                    |
| Number of Packers:        | 1                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

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

|                           |              |      |         |         |                            |
|---------------------------|--------------|------|---------|---------|----------------------------|
| SHut-InTool               | 5.00         |      | Inside  | 3852.00 |                            |
| Hydraulic Tool            | 5.00         |      |         | 3857.00 |                            |
| Jars                      | 6.00         |      |         | 3863.00 |                            |
| Safety Joint              | 2.00         |      |         | 3865.00 |                            |
| Packer                    | 5.00         |      |         | 3870.00 | 23.00 Bottom Of Top Packer |
| Anchor                    | 7.00         |      |         | 3877.00 |                            |
| Recorder                  | 1.00         | 8405 | Inside  | 3878.00 |                            |
| Recorder                  | 1.00         | 8400 | Outside | 3879.00 |                            |
| Bullnose                  | 3.00         |      |         | 3882.00 | 12.00 Anchor Tool          |
| <b>Total Tool Length:</b> | <b>35.00</b> |      |         |         |                            |



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Shelby Resources LLC

**7/22s/16w/Pawnee**

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Job Ticket: 17593

**DST#: 2**

Test Start: 2013.06.09 @ 21:20:00

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 47.00 sec/qt  
Water Loss: 10.00 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 4900.00 ppm  
Filter Cake: 1.00 inches

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

Oil API: deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description           | Volume<br>bbl |
|--------------|-----------------------|---------------|
| 1632.00      | Clean Oil             | 19.887        |
| 0.00         | Gravity corrected 46. | 0.000         |

Total Length: 1632.00 ft      Total Volume: 19.887 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Reversed all fluid out to a transport truck.



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**GAS RATES**

Shelby Resources LLC

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Hays Kansas, 67601  
ATTN: Keith

**Eakin #7-7**

Job Ticket: 17593

**DST#: 2**

Test Start: 2013.06.09 @ 21:20:00

## Gas Rates Information

Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

| Flow Period | Elapsed Time | Choke (inches) | Pressure (psia) | Gas Rate (Mcf/d) |
|-------------|--------------|----------------|-----------------|------------------|
| 2           | 40           | 0.13           | 4.50            | 1.68             |
| 2           | 40           | 0.13           | 4.50            | 1.68             |

