



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Advantage Res. Inc.  
 1775 Sherman St. Ste. 1700  
 Denver, CO. 80203-4317  
 ATTN: Pete Lauer

**20-28s-12e Elk Co., KS**  
**Frank Pettijohn 1**  
 Job Ticket: 59970 **DST#: 2**  
 Test Start: 2015.04.02 @ 15:20:03

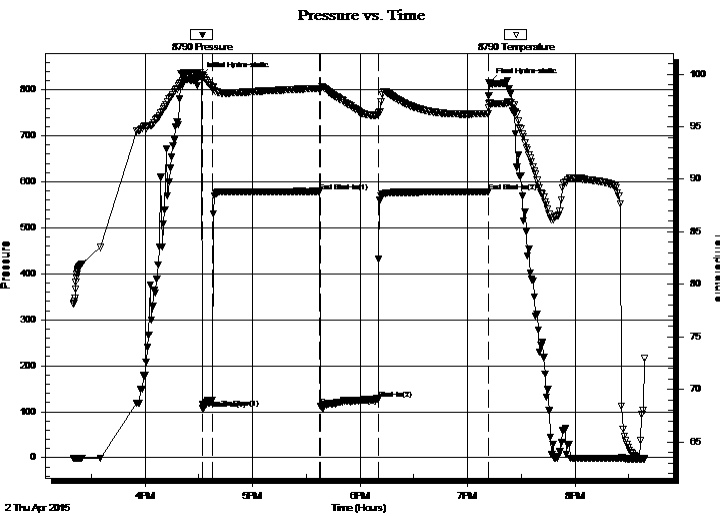
## GENERAL INFORMATION:

Formation: **Miss./Osage**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 16:32:18  
 Time Test Ended: 20:39:03  
 Interval: **1740.00 ft (KB) To 1776.00 ft (KB) (TVD)**  
 Total Depth: 1776.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Reynolds  
 Unit No: 68  
 Reference Elevations: 1083.00 ft (KB)  
 1074.00 ft (CF)  
 KB to GR/CF: 9.00 ft

## Serial #: 8790

Press @ Run Depth: 127.27 psig @ 1741.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.04.02 End Date: 2015.04.02 Last Calib.: 2015.04.02  
 Start Time: 15:20:08 End Time: 20:39:02 Time On Btm: 2015.04.02 @ 16:31:03  
 Time Off Btm: 2015.04.02 @ 19:12:03

TEST COMMENT: IF: Strong blow . BOB immed. GTS @ 4min.  
 IS: No blow .  
 FF: Strong blow . BOB immed. Guaged gas.  
 FS: No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	829.62	100.16	Initial Hydro-static
2	107.77	99.86	Open To Flow (1)
7	124.98	98.67	Shut-In(1)
67	579.06	98.66	End Shut-In(1)
67	112.33	98.65	Open To Flow (2)
99	127.27	96.14	Shut-In(2)
161	578.32	96.25	End Shut-In(2)
161	814.52	97.19	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
125.00	Drig mud 100%m	0.61

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.63	38.00	560.72
Last Gas Rate	0.63	38.00	560.72
Max. Gas Rate	0.63	38.00	560.72





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**FLUID SUMMARY**

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**Frank Pettijohn 1**

Job Ticket: 59970

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ATTN: Pete Lauer

Test Start: 2015.04.02 @ 15:20:03

## 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:

480 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 0.07 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	Drig mud 100%m	0.615

Total Length: 125.00 ft

Total Volume: 0.615 bbl

Num Fluid Samples: 1

Num Gas Bombs: 1

Serial #: RR-3

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:



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**GAS RATES**

Advantage Res. Inc.

**20-28s-12e Elk Co., KS**

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Denver, CO. 80203-4317

**Frank Pettijohn 1**

Job Ticket: 59970

**DST#: 2**

ATTN: Pete Lauer

Test Start: 2015.04.02 @ 15:20:03

### 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 (psig)	Gas Rate (Mcf/d)
2	10	0.63	38.00	560.72
2	20	0.63	38.00	560.72
2	30	0.63	38.00	560.72

