



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Roberts Res. Inc.  
2020 N. Tyler Rd. Ste. 106  
Wichita, KS 67212  
ATTN: Kent Roberts

**16-32s-12w Barber Co. KS**

**Etheridge Trust 1-16**

Job Ticket: 57882      **DST#: 2**  
Test Start: 2015.07.08 @ 19:26:10

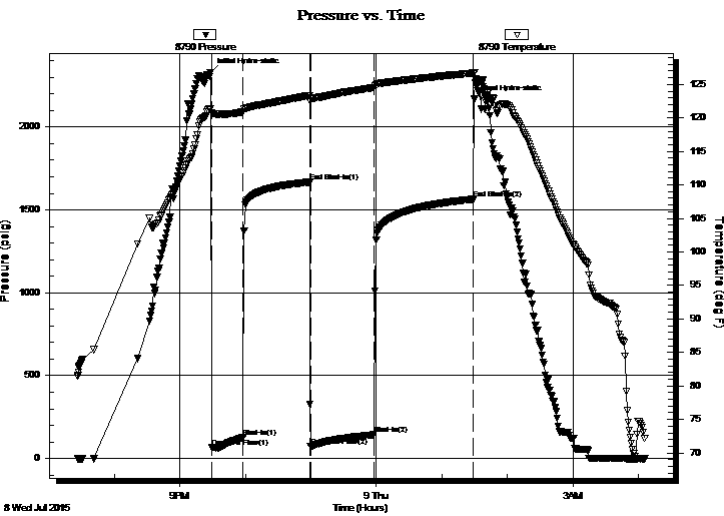
## GENERAL INFORMATION:

Formation: **Viola**  
Deviated: No Whipstock: 0.00 ft (KB)  
Time Tool Opened: 21:28:55  
Time Test Ended: 04:06:40  
Interval: **4698.00 ft (KB) To 4710.00 ft (KB) (TVD)**  
Total Depth: 4710.00 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: 1639.00 ft (KB)  
1627.00 ft (CF)  
KB to GR/CF: 12.00 ft

## Serial #: 8790

Press@RunDepth: 144.03 psig @ 4699.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2015.07.08      End Date: 2015.07.09      Last Calib.: 2015.07.09  
Start Time: 19:26:15      End Time: 04:06:40      Time On Btm: 2015.07.08 @ 21:27:55  
Time Off Btm: 2015.07.09 @ 01:29:55

TEST COMMENT: IF: Strong blow . BOB immed. GTS @ 6min.  
IS: Weak blow . surf. - 1"  
FF: Strong blow . BOB @ 15sec. Guaged gas.  
FS: Fair blow . surf. - 5".



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2329.60	121.36	Initial Hydro-static
1	67.36	120.72	Open To Flow (1)
30	126.73	120.90	Shut-In(1)
91	1667.21	123.34	End Shut-In(1)
92	73.33	122.94	Open To Flow (2)
150	144.03	124.53	Shut-In(2)
242	1564.57	126.69	End Shut-In(2)
242	2168.05	126.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	OCW 10%o, 90%w	0.44
95.00	OCW 25%o, 75%w	0.47
62.00	GMWCO 41%g, 6%m, 10%w, 43%o	0.35
63.00	GMWCO 10%g, 5%m, 6%w, 79%o	0.35

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	27.00	65.68
Last Gas Rate	0.38	22.00	133.34
Max. Gas Rate	0.25	58.00	114.86



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## FLUID SUMMARY

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### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 48.00 sec/qt  
Water Loss: 9.98 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 5500.00 ppm  
Filter Cake: 0.08 inches

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

Oil API: deg API  
Water Salinity: 76000 ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	OCW 10%o, 90%w	0.443
95.00	OCW 25%o, 75%w	0.467
62.00	GMWCO 41%g, 6%m, 10%w, 43%o	0.347
63.00	GMWCO 10%g, 5%m, 6%w, 79%o	0.353

Total Length: 310.00 ft      Total Volume: 1.610 bbl

Num Fluid Samples: 1

Num Gas Bombs: 1

Serial #: RR-1

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:



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**GAS RATES**

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Job Ticket: 57882

**DST#: 2**

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Test Start: 2015.07.08 @ 19:26:10

### 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)
1	10	0.25	27.00	65.68
1	20	0.25	46.00	95.82
1	30	0.25	58.00	114.86
2	10	0.38	26.00	147.99
2	20	0.38	32.00	169.97
2	30	0.38	31.00	166.31
2	40	0.38	28.00	155.32
2	50	0.38	25.00	144.33
2	60	0.38	22.00	133.34

