



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Darrah Oil CO  
 225 N Market Suite 300  
 Wichita KS 67202  
 ATTN: Will Darrah/ Seth Ev

**21-17-8**  
**Kratzler#11**  
 Job Ticket: 49522 **DST#: 1**  
 Test Start: 2013.01.20 @ 22:27:59

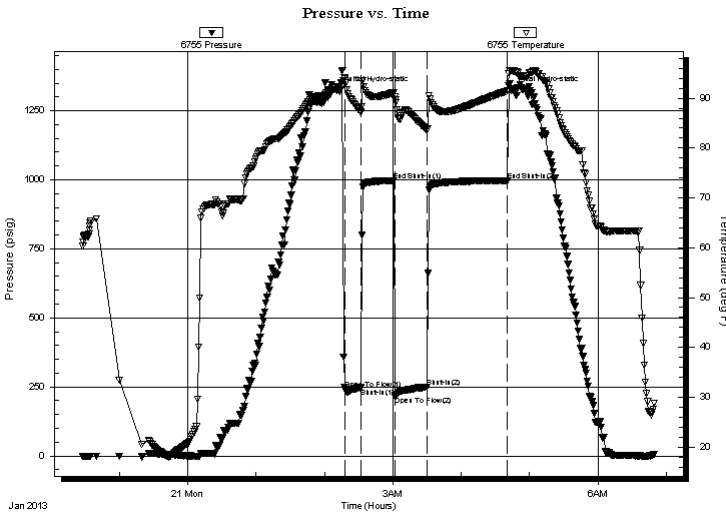
## GENERAL INFORMATION:

Formation: **Lansing B**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:17:59  
 Time Test Ended: 06:49:44  
 Interval: **2814.00 ft (KB) To 2850.00 ft (KB) (TVD)**  
 Total Depth: 2850.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Chris Staats  
 Unit No: 47  
 Reference Elevations: 1769.00 ft (KB)  
 1764.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6755 Outside**  
 Press @ Run Depth: 248.39 psig @ 2815.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.01.20 End Date: 2013.01.21 Last Calib.: 2013.01.21  
 Start Time: 22:28:04 End Time: 06:49:43 Time On Btm: 2013.01.21 @ 02:13:44  
 Time Off Btm: 2013.01.21 @ 04:43:44

**TEST COMMENT:** IF: Strong blow BOB 10 sec GTS 2 min {see gas flow chart}  
 IS: No blow back  
 FF: Strong blow BOB 10 sec {see gas flow chart}  
 FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1321.80	92.33	Initial Hydro-static
5	239.95	93.91	Open To Flow (1)
19	246.44	87.16	Shut-In(1)
47	997.29	91.09	End Shut-In(1)
49	217.08	89.69	Open To Flow (2)
77	248.39	83.57	Shut-In(2)
147	997.33	91.43	End Shut-In(2)
150	1323.95	95.51	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	2815' GIP	0.00
120.00	MUD	0.59

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	29.00	1247.70
Last Gas Rate	1.00	39.00	1535.19
Max. Gas Rate	1.00	40.00	1563.93



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## FLUID SUMMARY

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**21-17-8**

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Job Ticket: 49522

**DST#: 1**

ATTN: Will Darrah/ Seth Ev

Test Start: 2013.01.20 @ 22:27:59

### 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: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 0.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	2815' GIP	0.000
120.00	MUD	0.590

Total Length: 120.00 ft      Total Volume: 0.590 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



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## DRILL STEM TEST REPORT

**GAS RATES**

Darrah Oil CO

**21-17-8**

225 N Market Suite 300  
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**Kratzler#11**

Job Ticket: 49522

**DST#: 1**

ATTN: Will Darrah/ Seth Ev

Test Start: 2013.01.20 @ 22:27:59

### 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	5	1.00	29.00	1247.70
1	15	1.00	35.00	1420.19
2	5	1.00	34.00	1391.44
2	10	1.00	39.00	1535.19
2	20	1.00	40.00	1563.93
2	30	1.00	39.00	1535.19

