



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Herman L. Loeb, LLC.  
P.O. Box 838  
Lawrenceville, IL.62439  
ATTN: Jon Christensen

**33-27s-18w Kiowa Co., Ks**  
**Unruh #4-33**  
Job Ticket: 57809 **DST#: 2**  
Test Start: 2015.03.05 @ 03:28:47

## GENERAL INFORMATION:

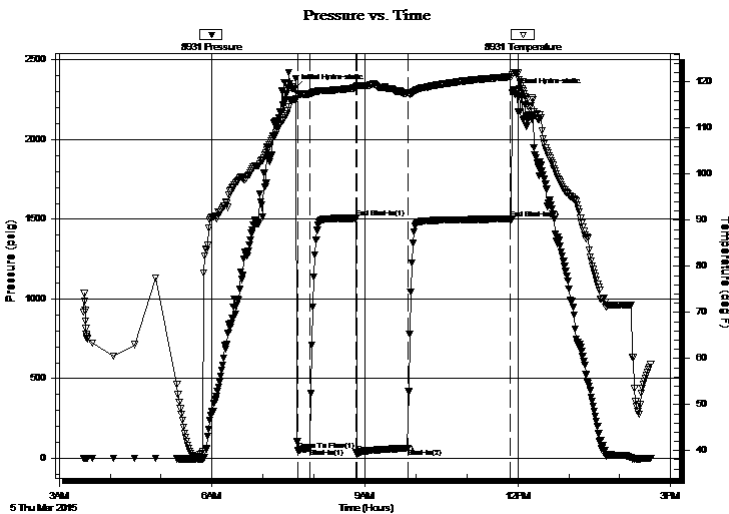
Formation: **Mississippi Chert**  
Deviated: No Whipstock: 0.00 ft (KB)  
Time Tool Opened: 07:41:02  
Time Test Ended: 14:37:17  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Matt Smith  
Unit No: 53  
Interval: **4743.00 ft (KB) To 4812.00 ft (KB) (TVD)**  
Reference Elevations: 2206.00 ft (KB)  
Total Depth: 4812.00 ft (KB) (TVD) 2197.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

## Serial #: 8931

Inside

Press@RunDepth: 63.79 psig @ 4744.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.03.05 End Date: 2015.03.05 Last Calib.: 2015.03.05  
Start Time: 03:28:52 End Time: 14:37:17 Time On Btm: 2015.03.05 @ 07:37:32  
Time Off Btm: 2015.03.05 @ 11:53:47

TEST COMMENT: IF: Strong blow . B.O.B. in 45 secs.  
IS: Weak blow . Surface. G.T.S. in 4 mins. Blow back after 15 mins. Dead in 34 mins.  
FF: Strong blow . B.O.B. immediate. G.T.S., Gauged gas see gas report.  
FSI: No blow . Bleed off in 10 mins.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2318.97	116.11	Initial Hydro-static
4	49.29	117.25	Open To Flow (1)
18	63.63	117.44	Shut-In(1)
72	1506.60	118.73	End Shut-In(1)
73	29.59	119.04	Open To Flow (2)
133	63.79	117.74	Shut-In(2)
254	1502.51	121.18	End Shut-In(2)
257	2297.62	121.58	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	GCM 10%g 90%m	0.15
0.00	G.I.P. G.T.S. 100% g	0.00

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	13.00	43.47
Last Gas Rate	0.25	23.00	59.33
Max. Gas Rate	0.25	23.00	59.33



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**FLUID SUMMARY**

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## 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:	2500 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: 0.20 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	GCM 10%g 90%m	0.148
0.00	G.I.P. G.T.S. 100% g	0.000

Total Length: 30.00 ft      Total Volume: 0.148 bbl

Num Fluid Samples: 1      Num Gas Bombs: 2      Serial #: MAS Pratt

Laboratory Name: Caraway      Laboratory Location: Liberal, KS

Recovery Comments:



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**GAS RATES**

Herman L. Loeb, LLC.

**33-27s-18w Kiowa Co., Ks**

P.O. Box 838  
Lawrenceville, IL 62439

**Unruh #4-33**

Job Ticket: 57809

**DST#: 2**

ATTN: Jon Christensen

Test Start: 2015.03.05 @ 03:28:47

### 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	0.25	13.00	43.47
2	10	0.25	13.00	43.47
2	20	0.25	17.00	49.81
2	30	0.25	20.00	54.57
2	40	0.25	22.00	57.74
2	45	0.25	22.50	58.54
2	50	0.25	23.00	59.33

