



**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
Kinyon 2-33
Job Ticket: 54158 **DST#: 3**
Test Start: 2014.07.20 @ 21:57:27

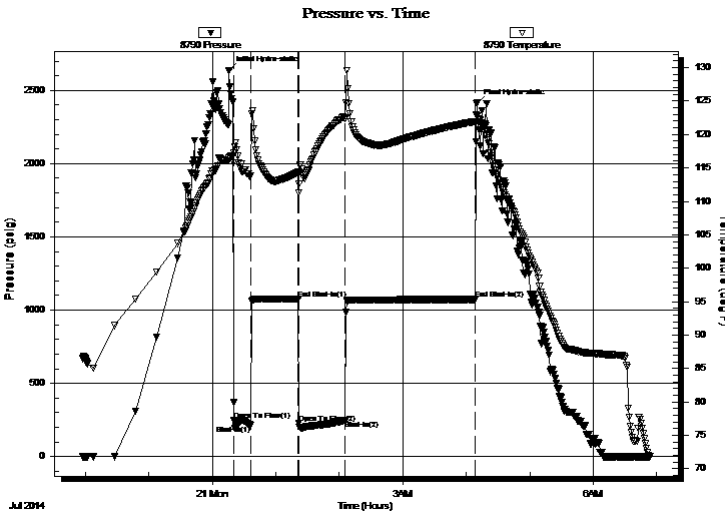
GENERAL INFORMATION:

Formation: **Miss. Chert**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 00:20:27
Time Test Ended: 06:53:12
Interval: **4790.00 ft (KB) To 4807.00 ft (KB) (TVD)**
Total Depth: 4807.00 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: 2205.00 ft (KB)
2192.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8790 **Inside**
Press@RunDepth: 248.60 psig @ 4791.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.07.20 End Date: 2014.07.21 Last Calib.: 2014.07.21
Start Time: 21:57:32 End Time: 06:53:12 Time On Btm: 2014.07.21 @ 00:15:57
Time Off Btm: 2014.07.21 @ 04:09:57

TEST COMMENT: IF: Strong blow . BOB immed. GTS @ 7min.
IS: No blow
FF: Strong blow . BOB immed. Guaged gas.
FS: Strong BOB BB @ 35min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2636.89	116.44	Initial Hydro-static
5	244.83	117.30	Open To Flow (1)
21	212.46	113.89	Shut-In(1)
66	1077.42	114.40	End Shut-In(1)
66	225.95	111.26	Open To Flow (2)
110	248.60	122.43	Shut-In(2)
233	1073.19	121.96	End Shut-In(2)
234	2410.13	122.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	WMCGO 3%w , 8%m, 9%g, 80%o	0.59
450.00	Clean Gassy Oil 25%g, 75%o	4.43

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	45.00	930.94
Last Gas Rate	0.50	52.00	449.26
Max. Gas Rate	0.50	75.00	604.41



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

33-27s-18w Kiowa Co., KS
Kinyon 2-33
Job Ticket: 54158 **DST#: 3**
Test Start: 2014.07.20 @ 21:57:27

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:	58000 ppm
Viscosity: 64.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.39 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5200.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	WMCGO 3%w, 8%m, 9%g, 80%o	0.590
450.00	Clean Gassy Oil 25%g, 75%o	4.427

Total Length: 570.00 ft Total Volume: 5.017 bbl
 Num Fluid Samples: 1 Num Gas Bombs: 1 Serial #: RR-1
 Laboratory Name: Caraway Laboratory Location: Liberal, KS
 Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Herman L. Loeb, LLC.

33-27s-18w Kiowa Co., KS

P.O. Box 838
Lawrenceville, IL 62439

Kinyon 2-33

Job Ticket: 54158

DST#: 3

ATTN: Jon Christensen

Test Start: 2014.07.20 @ 21:57:27

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	15	0.75	45.00	930.94
2	10	0.50	75.00	604.41
2	20	0.50	70.00	570.69
2	30	0.50	62.00	516.72
2	40	0.50	55.00	469.50
2	45	0.50	52.00	449.26

