



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Grand Mesa Operating Comp.  
1700 North Waterfront PKWY  
BLDG 600  
Wichita KS 67206  
ATTN: John Goldsmith

**21-13s-31w Gove KS**

**CSC #1-21**

Job Ticket: 46498

**DST#: 1**

Test Start: 2012.04.19 @ 08:57:05

## GENERAL INFORMATION:

Formation: "H"  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 11:07:15  
Time Test Ended: 17:00:14  
Interval: **4084.00 ft (KB) To 4116.00 ft (KB) (TVD)**  
Total Depth: 4116.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches  
Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Mike Roberts  
Unit No: 48  
Reference Elevations: 2893.00 ft (KB)  
2889.00 ft (CF)  
KB to GR/CF: 4.00 ft

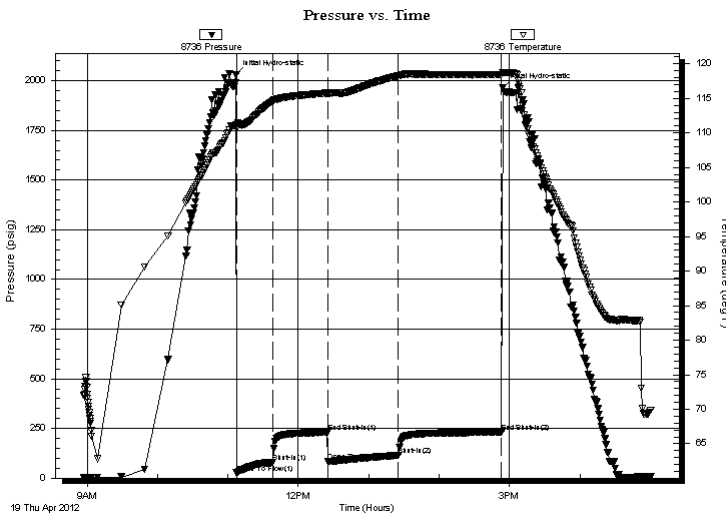
## Serial #: 8736

Inside

Press @ Run Depth: 114.89 psig @ 4085.00 ft (KB)  
Start Date: 2012.04.19 End Date: 2012.04.19  
Start Time: 08:57:05 End Time: 17:00:14  
Capacity: 8000.00 psig  
Last Calib.: 2012.04.19  
Time On Btm: 2012.04.19 @ 11:07:00  
Time Off Btm: 2012.04.19 @ 14:54:14

TEST COMMENT: IF: Built to 6" blow  
IS: No return blow  
FF: Built to 9" blow  
FS: No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2031.43	111.13	Initial Hydro-static
1	25.78	110.70	Open To Flow (1)
32	80.13	114.66	Shut-In(1)
78	230.48	115.77	End Shut-In(1)
78	83.40	115.72	Open To Flow (2)
139	114.89	118.28	Shut-In(2)
227	230.80	118.42	End Shut-In(2)
228	1966.92	118.74	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
121.00	mcw 20% m 80% w	0.60
62.00	w cm 30% w 70% m	0.87
10.00	free oil	0.14
20.00	mud 100% m	0.28
0.00	30 FT GIP	0.00

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



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## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 13000 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2500.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
121.00	mcw 20%m 80%w	0.595
62.00	w cm 30%w 70%m	0.870
10.00	free oil	0.140
20.00	mud 100%m	0.281
0.00	30 FT GIP	0.000

Total Length: 213.00 ft      Total Volume: 1.886 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW= .501 @ 70.9\*= 13,000 ppm

