



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Grand Mesa Operating Company
 1700 N Waterfront Pkw g Bldg 600 Wichita, Ks 67206
 ATTN: Kent Matson

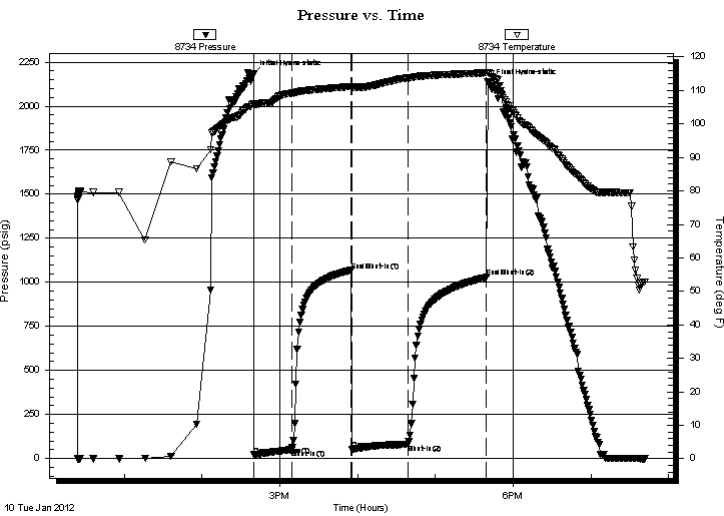
17-17-24 Ness, Ks
Phelps 3-17
 Job Ticket: 46405 **DST#: 1**
 Test Start: 2012.01.10 @ 12:23:49

GENERAL INFORMATION:

Formation: **Cherokee Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:39:55
 Time Test Ended: 19:41:25
 Interval: **4384.00 ft (KB) To 4417.00 ft (KB) (TVD)**
 Total Depth: 4417.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brian Fairbank
 Unit No: 41
 Reference Elevations: 2466.00 ft (KB)
 2461.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8734 Outside
 Press @ Run Depth: 80.27 psig @ 4389.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.01.10 End Date: 2012.01.10 Last Calib.: 2012.01.10
 Start Time: 12:23:56 End Time: 19:41:25 Time On Btm: 2012.01.10 @ 14:38:55
 Time Off Btm: 2012.01.10 @ 17:41:25

TEST COMMENT: IFP - weak to fair blow sur - 4 1/4"
 ISI - no blow back
 FFP - weak to fair blow sur - 5"
 FSI - no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2181.10	106.08	Initial Hydro-static
1	20.13	105.72	Open To Flow (1)
30	50.08	109.17	Shut-In(1)
76	1067.51	111.18	End Shut-In(1)
77	52.08	110.94	Open To Flow (2)
120	80.27	113.71	Shut-In(2)
181	1028.44	115.31	End Shut-In(2)
183	2129.41	115.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	HOCM 30%O, 70%M	0.30
55.00	MCO 60%O, 40%M	0.27
50.00	FREE OIL 95%O, 5%M	0.40

Gas Rates

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



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FLUID SUMMARY

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Job Ticket: 46405 **DST#: 1**
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Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 37 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.20 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 6000.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	HOCM 30%O, 70%M	0.295
55.00	MCO 60%O, 40%M	0.270
50.00	FREE OIL 95%O, 5%M	0.401

Total Length: 165.00 ft Total Volume: 0.966 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Pressure vs. Time

