



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: 46551

DST#: 4

Test Start: 2012.04.22 @ 05:15:05

GENERAL INFORMATION:

Formation: **Krebs- Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:35:30

Time Test Ended: 13:10:59

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 48

Interval: 4448.00 ft (KB) To 4513.00 ft (KB) (TVD)

Total Depth: 4513.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2893.00 ft (KB)

2889.00 ft (CF)

KB to GR/CF: 4.00 ft

Serial #: 8736

Inside

Press @ Run Depth: 700.27 psig @ 4451.00 ft (KB)

Start Date: 2012.04.22

End Date: 2012.04.22

Start Time: 05:15:05

End Time: 13:10:59

Capacity: 8000.00 psig

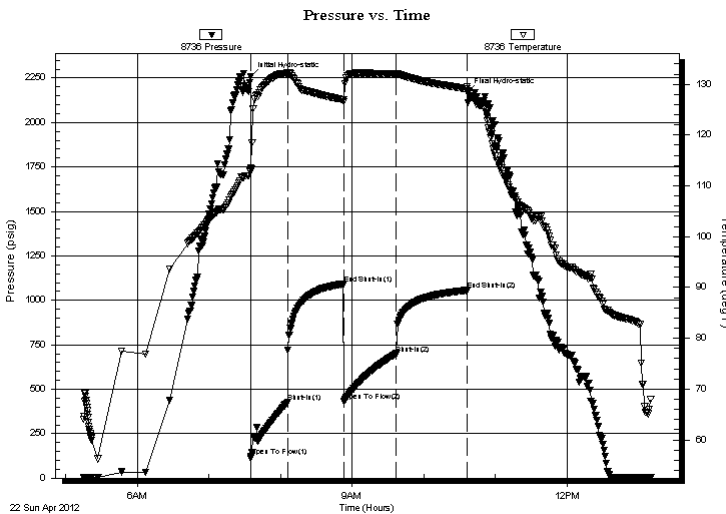
Last Calib.: 2012.04.22

Time On Btm: 2012.04.22 @ 07:35:00

Time Off Btm: 2012.04.22 @ 10:36:14

TEST COMMENT: IF:BOB in 3 min.
 IS:Built to weak surface blow and died in 10 min.
 FF:BOB in 3 min.
 FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2260.26	113.46	Initial Hydro-static
1	120.92	113.35	Open To Flow (1)
31	427.10	132.19	Shut-In(1)
78	1092.12	126.96	End Shut-In(1)
78	432.01	126.60	Open To Flow (2)
122	700.27	132.04	Shut-In(2)
181	1056.09	129.07	End Shut-In(2)
182	2170.29	129.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
121.00	sw 100% sw	0.60
1299.00	w cm 50%w 50%m	18.22
0.00	GIP= 124	0.00

* Recovery from multiple tests

Gas Rates

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



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Total Depth: 4513.00 ft (KB) (TVD)

2889.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 4.00 ft

Serial #: 6668 Outside

Press @ Run Depth: psig @ 4451.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.04.22

End Date: 2012.04.22

Last Calib.: 2012.04.22

Start Time: 05:15:15

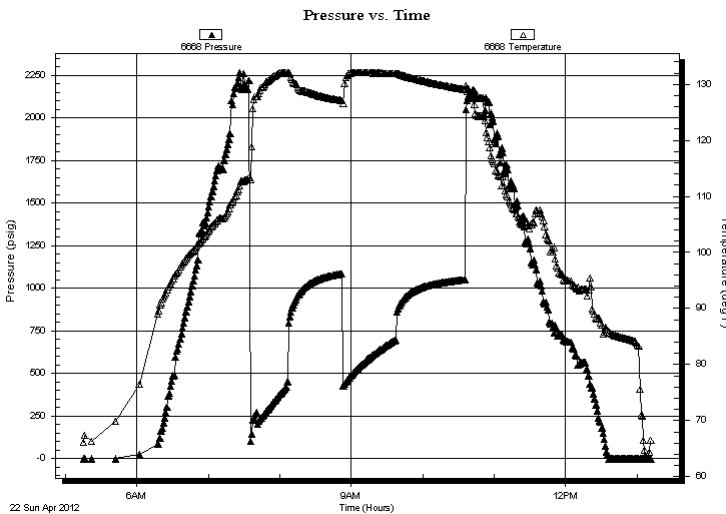
End Time: 13:11:15

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:BOB in 3 min.
IS:Built to weak surface blow and died in 10 min.
FF:BOB in 3 min.
FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
121.00	sw 100% sw	0.60
1299.00	w cm 50%w 50%m	18.22
0.00	GIP= 124	0.00

Gas Rates

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

* Recovery from multiple tests



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TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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: 46551 **DST#: 4**
Test Start: 2012.04.22 @ 05:15:05

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: 25000 ppm
Viscosity: 74.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.78 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2800.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
121.00	sw 100% sw	0.595
1299.00	w cm 50%w 50%m	18.222
0.00	GIP= 124	0.000

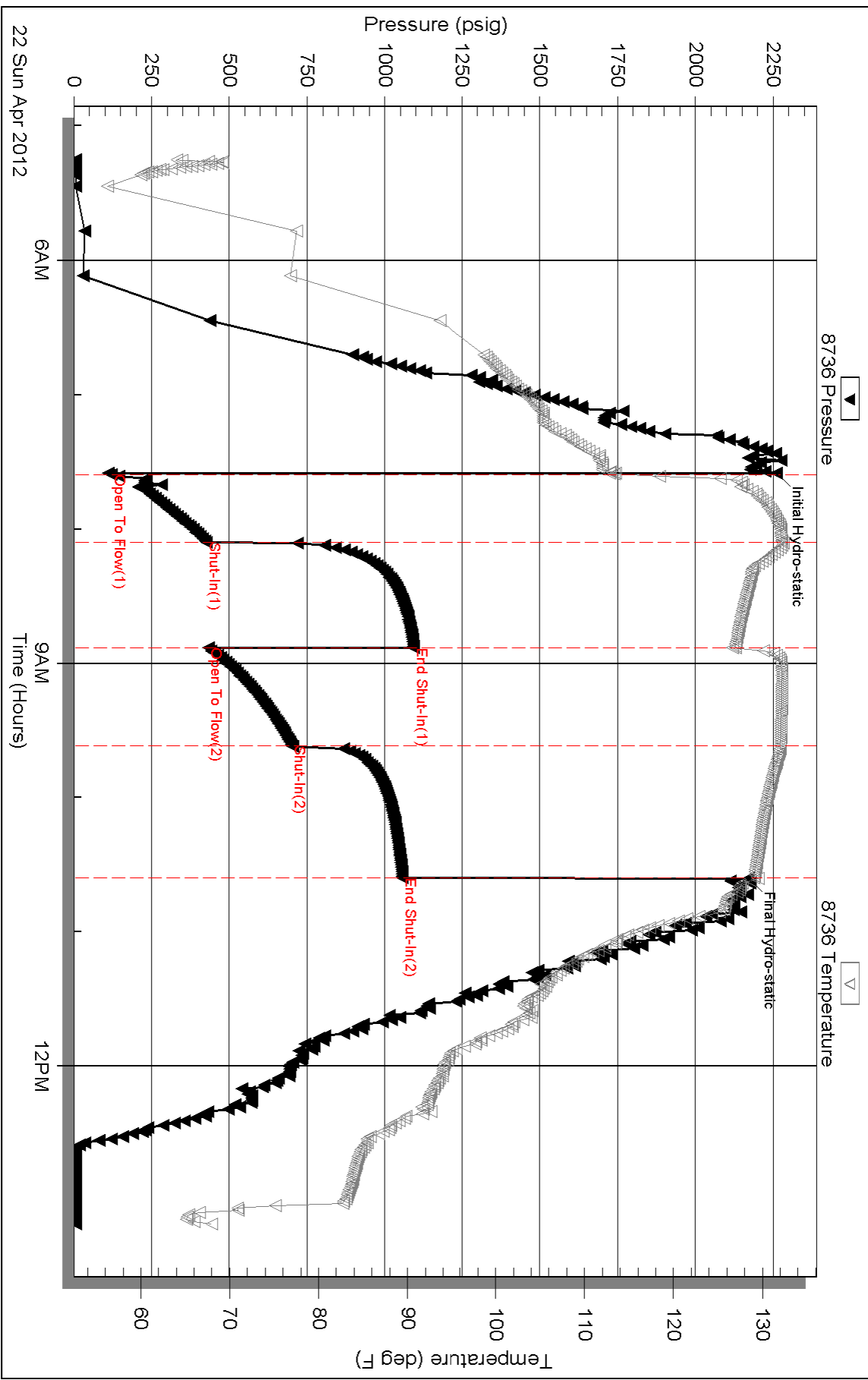
Total Length: 1420.00 ft Total Volume: 18.817 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW= .338@ 63*=25,000 ppm

Pressure vs. Time



Serial #: 6668

Outside Grand Mesa Operating Comp.

CSC #1-21

DST Test Number: 4

