



DRILL STEM TEST REPORT

Prepared For: **M & M Exploration**

4257 Main St # 230
Westminster, CO 80031

ATTN: Beth Brock

Z-Bar #4-7

4-34s-15w Barber,KS

Start Date: 2012.08.22 @ 08:08:59

End Date: 2012.08.22 @ 14:36:44

Job Ticket #: 49562 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

M & M Exploration
4257 Main St # 230
Westminster, CO 80031
ATTN: Beth Brock

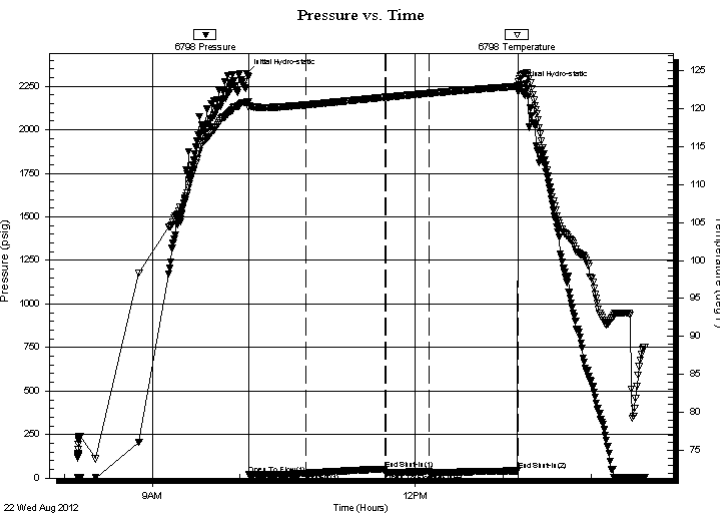
4-34s-15w Barber,KS
Z-Bar #4-7
Job Ticket: 49562 **DST#: 1**
Test Start: 2012.08.22 @ 08:08:59

GENERAL INFORMATION:

Formation: **Hertha**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 10:06:14 Tester: Leal Cason
Time Test Ended: 14:36:44 Unit No: 45
Interval: 4485.00 ft (KB) To 4524.00 ft (KB) (TVD) Reference Elevations: 1647.00 ft (KB)
Total Depth: 4524.00 ft (KB) (TVD) 1635.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 12.00 ft

Serial #: 6798 Inside
Press @ Run Depth: 37.31 psig @ 4486.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.08.22 End Date: 2012.08.22 Last Calib.: 2012.08.22
Start Time: 08:09:00 End Time: 14:36:44 Time On Btm: 2012.08.22 @ 10:04:29
Time Off Btm: 2012.08.22 @ 13:11:44

TEST COMMENT: IF: Weak Surface Blow
IS: No Blow Back
FF: No Blow
FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2324.10	120.83	Initial Hydro-static
2	20.99	120.16	Open To Flow (1)
41	27.98	120.48	Shut-In(1)
95	51.66	121.50	End Shut-In(1)
95	29.84	121.49	Open To Flow (2)
125	37.31	122.01	Shut-In(2)
186	42.26	122.94	End Shut-In(2)
188	2255.48	124.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud	0.03

Gas Rates

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



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TOOL DIAGRAM

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Tool Information

Drill Pipe:	Length: 4488.00 ft	Diameter: 3.80 inches	Volume: 62.95 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	90000.00 lb
			<u>Total Volume: 62.95 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	4485.00 ft			Final	53000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	39.00 ft				
Tool Length:	66.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4463.00	
Hydraulic tool	5.00			4468.00	
Jars	5.00			4473.00	
Safety Joint	2.00			4475.00	
Packer	5.00			4480.00	27.00 Bottom Of Top Packer
Packer	5.00			4485.00	
Stubb	1.00			4486.00	
Recorder	0.00	6798	Inside	4486.00	
Recorder	0.00	8367	Outside	4486.00	
Perforations	2.00			4488.00	
Change Over Sub	1.00			4489.00	
Drill Pipe	31.00			4520.00	
Change Over Sub	1.00			4521.00	
Bullnose	3.00			4524.00	39.00 Bottom Packers & Anchor

Total Tool Length: 66.00



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FLUID SUMMARY

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4-34s-15w Barber,KS
Z-Bar #4-7
Job Ticket: 49562 **DST#: 1**
Test Start: 2012.08.22 @ 08:08:59

Mud and Cushion Information

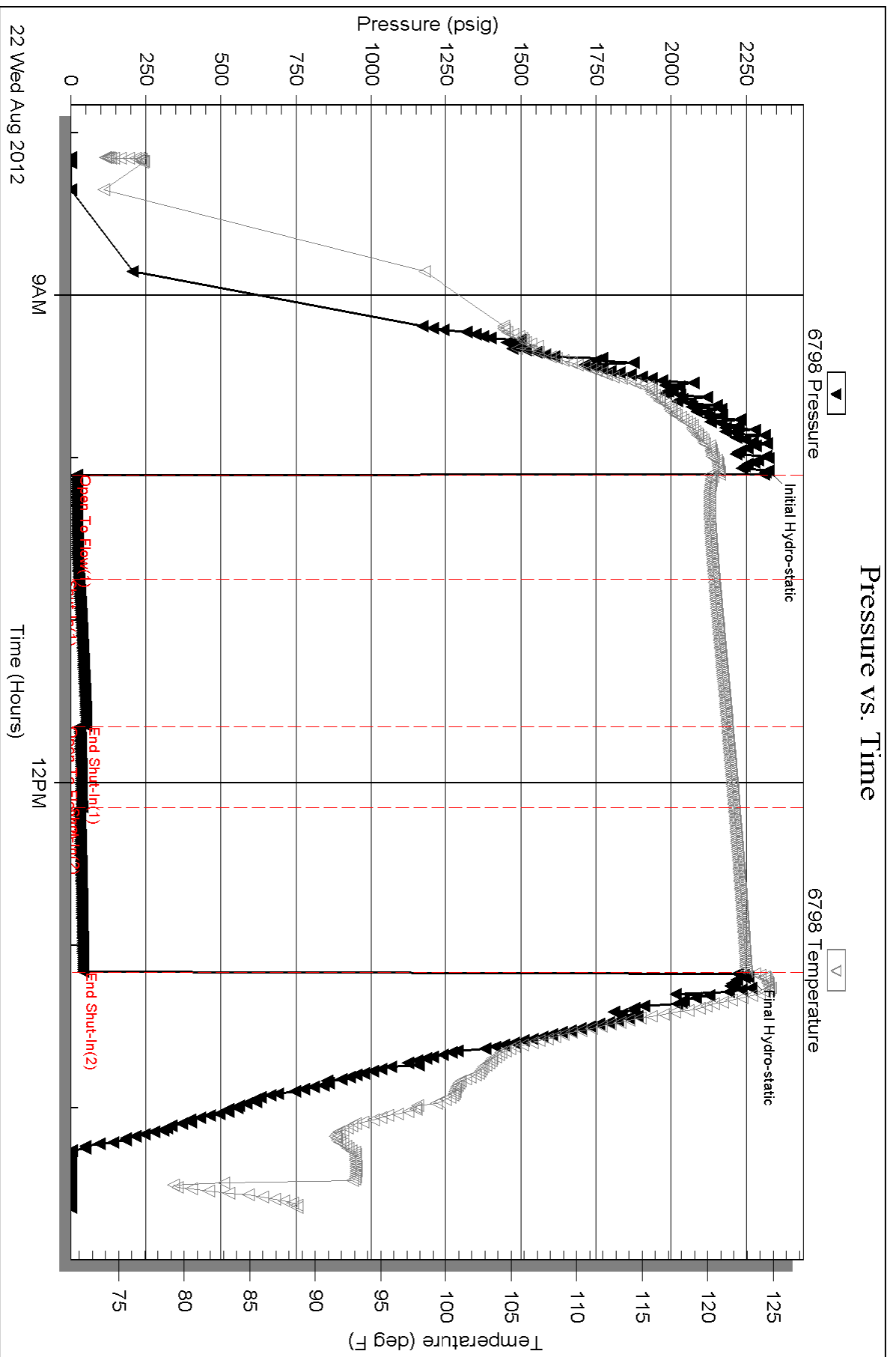
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 44.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud	0.028

Total Length: 2.00 ft Total Volume: 0.028 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



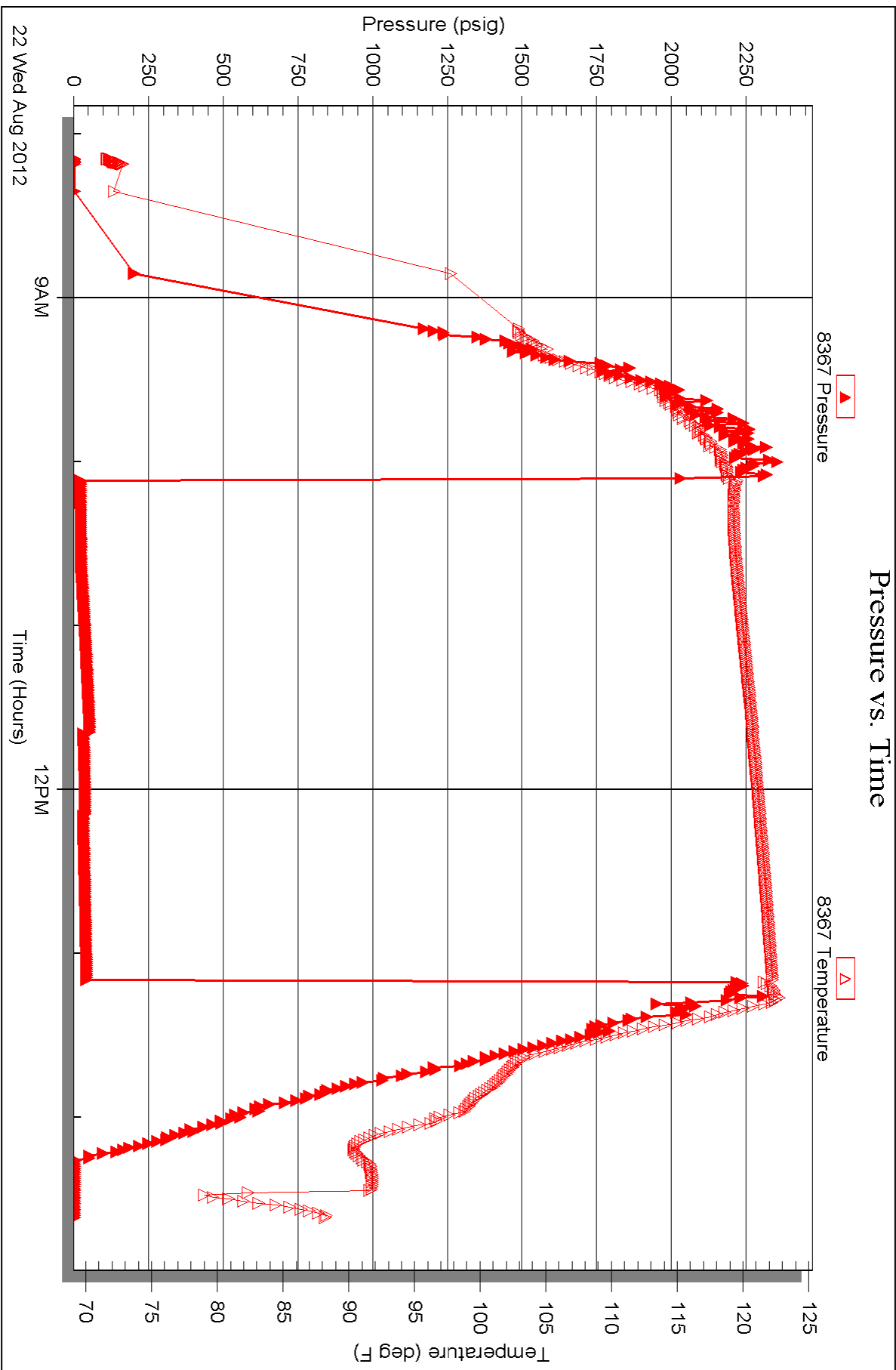
Serial #: 8367

Outside

M & M Exploration

Z-Bar #4-7

DST Test Number: 1





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49562

4/10

Well Name & No. Z-Bar 4-7 Test No. 1 Date 08/22/12
 Company M+M Exploration Elevation 1647 KB 1635 GL
 Address 4257 Main St # 230 Westminster, CO 80031
 Co. Rep / Geo. Beth Brock Rig Southwind 70
 Location: Sec. 4 Twp. 34S Rge. 15W Co. Barber State KS

Interval Tested 4485 - 4524 Zone Tested Hertha
 Anchor Length 39 Drill Pipe Run 4488 Mud Wt. 9.3
 Top Packer Depth 4480 Drill Collars Run 0 Vis 44
 Bottom Packer Depth 4485 Wt. Pipe Run 0 WL 10.0
 Total Depth 4524 Chlorides 5000 ppm System LCM 4

Blow Description IF: weak surface Blow
ISI: no Blow Back
FF: NO BLOW
FSI: NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec Total	<u>2</u>	BHT	<u>123</u>	Gravity	<u>NIC</u>
		API RW	<u>NIC</u>	@	<u>NIC</u>
		F	Chlorides	<u>NIC</u>	ppm

(A) Initial Hydrostatic 2324 Test 1250 T-On Location 03:30
 (B) First Initial Flow 21 Jars 250 T-Started 08:08
 (C) First Final Flow 28 Safety Joint 75 T-Open 10:06
 (D) Initial Shut-In 52 Circ Sub T-Pulled 13:09
 (E) Second Initial Flow 30 Hourly Standby 1 100 T-Out 14:36
 (F) Second Final Flow 37 Mileage (130M) 201.50 Comments _____
 (G) Final Shut-In 42 Sampler _____
 (H) Final Hydrostatic 2255 Straddle _____
 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1876.50
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1876.50

Approved By Beth Brock Our Representative [Signature]
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