



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources LLC**

410 17th st Ste 900  
Denver, CO 80202

ATTN: Gary Doke/Jim Musgrove

**33-18s-31w Scott,KS**

**Rueter #11-33-1831**

Start Date: 2011.05.04 @ 13:15:40

End Date: 2011.05.04 @ 20:17:33

Job Ticket #: 43306                      DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

FIML Natural Resources LLC

Rueter #11-33-1831

33-18s-31w Scott,KS

DST # 1

Spergen

2011.05.04



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FiVL Natural Resources LLC

Fracture #11-33-1831

410 17th st Ste 900  
Denver, CO 80202

33-18a-31w Scott, KS

Job Ticket: 43306

DST#: 1

ATTN: Gary Doke/Jim Musgrove Denver, CO 80202

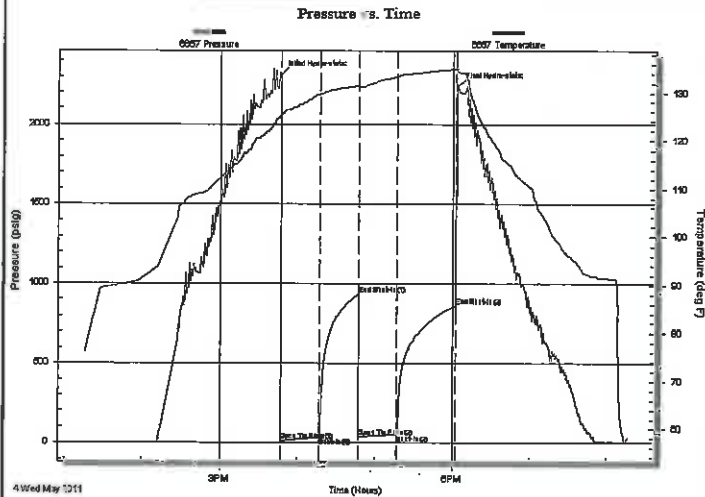
Test Start: 2011.05.04 @ 13:15:40

## GENERAL INFORMATION:

Formation: **Spongen**  
 Deviated: **No Whipstock** ft (KB)  
 Test Type: **Conventional Bottom Hole**  
 Time Tool Opened: **15:46:55**  
 Tester: **Shane McBride**  
 Time Test Ended: **20:17:33**  
 Unit No: **55**  
 Interval: **4601.00 ft (KB) To 4620.00 ft (KB) (TVD)**  
 Reference Elevations: **2948.00 ft (KB)**  
**Total Depth: 4620.00 ft (KB) (TVD)**  
**2938.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
 KB to GR/CF: **10.00 ft**

Serial #: **8887** Outside  
 Press@RunDepth: **49.76 psig @ 4602.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2011.05.04** End Date: **2011.05.04** Last Calib.: **2011.05.04**  
 Start Time: **13:15:40** End Time: **20:17:33** Time On Btm: **2011.05.04 @ 15:46:25**  
 Time Off Btm: **2011.05.04 @ 18:03:10**

TEST COMMENT: **3/4" in blow died back to 1/4" in.**  
**No return**  
**Very weak surface blow in 13 min.**  
**No return**



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2310.04	125.61	Initial Hydro-static
1	13.31	125.47	Open To Flow (1)
31	33.19	129.75	Shut-In(1)
61	934.94	131.50	End Shut-In(1)
62	35.26	131.19	Open To Flow (2)
91	49.76	133.42	Shut-In(2)
136	861.78	134.97	End Shut-In(2)
137	2238.77	134.48	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	mud 100% m	0.30

## Gas Rates

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



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TOOL DIAGRAM

FIML Natural Resources LLC

Fracture #11-33-1831

410 17th st Ste 900  
Denver, CO 80202

33-18a-31w Scott, KS

Job Ticket: 43306

CSW: 1

ATTN: Gary Doke/Jim Musgrove Denver, CO 80202

Test Start: 2011.05.04 @ 13:15:40

### Tool Information

Drill Pipe:	Length: 4356.00 ft	Diameter: 3.80 inches	Volume: 61.10 bbl	Tool Weight: 1500.00 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: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 62.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4601.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4582.00	
Shut In Tool	5.00			4587.00	
Hydraulic tool	5.00			4592.00	
Packer	5.00			4597.00	20.00 Bottom Of Top Packer
Packer	4.00			4601.00	
Stubb	1.00			4602.00	
Recorder	0.00	6771	Inside	4602.00	
Recorder	0.00	6667	Outside	4602.00	
Perforations	13.00			4615.00	
Bullnose	5.00			4620.00	19.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>39.00</b>				



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## DRILL STEM TEST REPORT

FLUID SUMMARY

FIRM: Natural Resources LLC

Fracture #11-33-1631

410 17th st Ste 900  
Denver, CO 80202

33-163-31w Scott, KS

Job Ticket: 43306

DST#: 1

ATTN: Gary Dake/Jim Musgrove Denver, CO 80202

Test Start: 2011.05.04 @ 13:15:40

### Mud and Cushion Information:

Mud Type: Cel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.97 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1200.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information:

Recovery Table

Length ft	Description	Volume bbl
60.00	mud 100% m	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6667

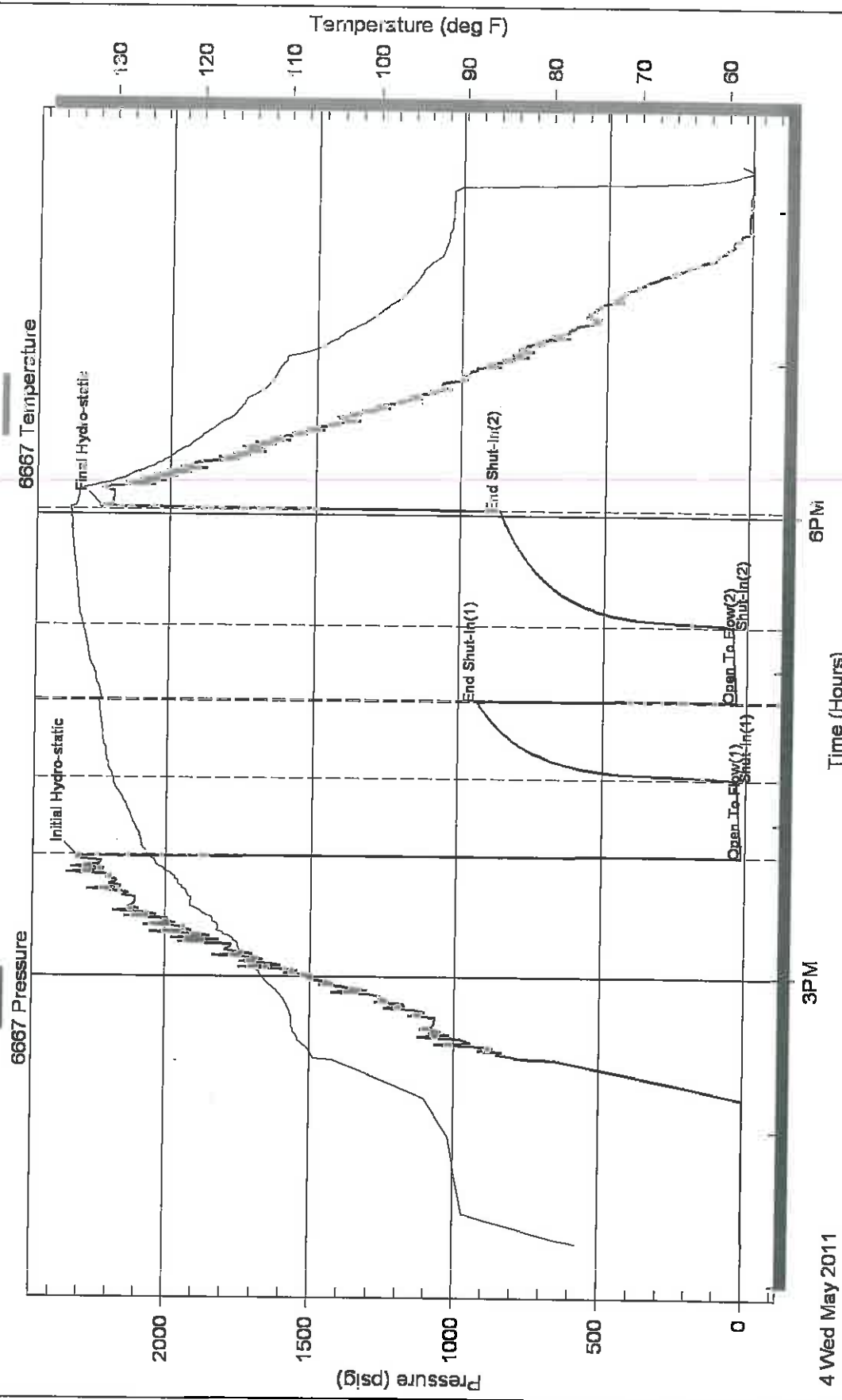
Outside

FIML Natural Resources LLC

33-18s-31w Scott, KS

DST Test Number: 1

### Pressure vs. Time



4 Wed May 2011

Triobite Testing, Inc

Ref. No: 43306

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