



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1203325  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1203325

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing     Pumping     Gas Lift     Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	FIML Natural Resources, LLC
Well Name	Mulville 15B-18-2029
Doc ID	1203325

All Electric Logs Run

Array compensated true resistivity
Spectral density
Sonic
Microlog



# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 142301  
Invoice Date: Apr 2, 2014  
Page: 1

Voice: (817) 546-7282  
Fax: (817) 246-3361

Bill To:
FIML Natural Resources LLC 410 17th St., Suite 900 Denver, CO 80202

Customer ID	Field Ticket #	Payment Terms	
FIML	62000	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-03	Oakley	Apr 2, 2014	5/2/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Mullville 15B #18-20-29		
240.00	CEMENT MATERIALS	Class A Common	17.90	4,296.00
160.00	CEMENT MATERIALS	Pozmix	9.35	1,496.00
14.00	CEMENT MATERIALS	Gel	23.40	327.60
417.20	CEMENT SERVICE	Cubic Feet Charge	2.48	1,034.66
516.00	CEMENT SERVICE	Ton Mileage Charge	2.60	1,341.60
1.00	CEMENT SERVICE	Plug to Abandon	1,250.00	1,250.00
40.00	CEMENT SERVICE	Pump Truck Mileage	7.70	308.00
40.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	176.00
1.00	CEMENT SUPERVISOR	Kelly Gabel		
1.00	EQUIPMENT OPERATOR	Wayne McGhghy		
1.00	JOB DISCOUNT	Job Discount if paid within terms	2,352.86	-2,352.86

Subtotal	7,877.00
Sales Tax	731.42
Total Invoice Amount	8,608.42
Payment/Credit Applied	
<b>TOTAL</b>	<b>8,608.42</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

\$ [REDACTED]

ONLY IF PAID ON OR BEFORE  
[REDACTED] Apr 27, 2014





## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th st Ste 900  
Denver, CO 80202-4420

ATTN: Gary Doke/ Jim Musgr

### **Mulville #15-B**

### **18-20s-29w Lane,KS**

Start Date: 2014.03.29 @ 14:45:29

End Date: 2014.03.29 @ 21:40:44

Job Ticket #: 56327                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.03 @ 14:47:50



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

**18-20s-29w Lane, KS**

410 17th st Ste 900  
Denver, CO 80202-4420

**Mulville #15-B**

Job Ticket: 56327

**DST#: 1**

ATTN: Gary Doke/ Jim Musgr

Test Start: 2014.03.29 @ 14:45:29

## GENERAL INFORMATION:

Formation: **LKC L - Marmaton B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:31:14

Time Test Ended: 21:40:44

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane McBride

Unit No: 55

**Interval: 4428.00 ft (KB) To 4526.00 ft (KB) (TVD)**

Reference Elevations: 2900.00 ft (KB)

Total Depth: 4526.00 ft (KB) (TVD)

2889.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6771**

**Inside**

Press@RunDepth: 25.52 psig @ 4429.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.29

End Date:

2014.03.29

Last Calib.:

2014.03.29

Start Time:

14:45:29

End Time:

21:29:44

Time On Btm:

2014.03.29 @ 17:30:14

Time Off Btm:

2014.03.29 @ 19:46:59

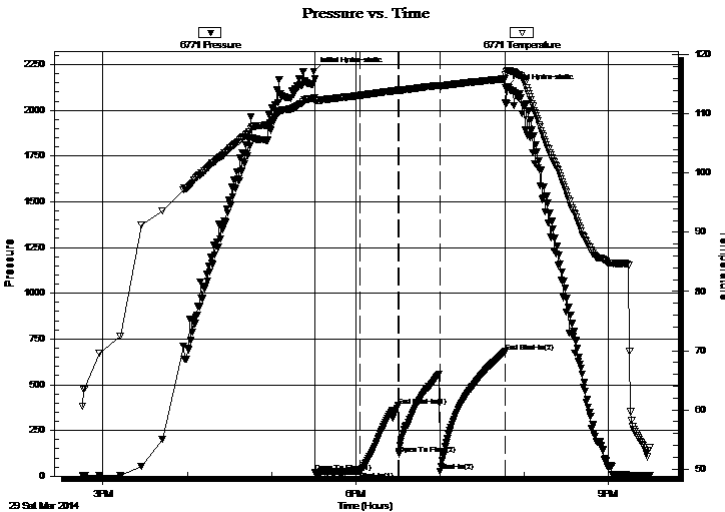
TEST COMMENT: 1/4" blow died in 20 min.

No return

No blow

No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2211.90	112.74	Initial Hydro-static
1	20.40	112.23	Open To Flow (1)
33	25.97	113.13	Shut-In(1)
60	384.58	114.00	End Shut-In(1)
61	121.88	113.93	Open To Flow (2)
90	25.52	114.66	Shut-In(2)
137	680.27	115.94	End Shut-In(2)
137	2122.03	116.72	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%m	0.02

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**18-20s-29w Lane,KS**

410 17th st Ste 900  
Denver, CO 80202-4420

**Mulville #15-B**

Job Ticket: 56327

**DST#: 1**

ATTN: Gary Doke/ Jim Musgr

Test Start: 2014.03.29 @ 14:45:29

## Tool Information

Drill Pipe:	Length: 4057.00 ft	Diameter: 3.80 inches	Volume: 56.91 bbl	Tool Weight: 2500.00 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: 371.00 ft	Diameter: 2.25 inches	Volume: 1.82 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 58.73 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 73000.00 lb
Depth to Top Packer:	4428.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	118.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4409.00	
Shut In Tool	5.00			4414.00	
Hydraulic tool	5.00			4419.00	
Packer	5.00			4424.00	20.00 Bottom Of Top Packer
Packer	4.00			4428.00	
Stubb	1.00			4429.00	
Recorder	0.00	6771	Inside	4429.00	
Recorder	0.00	8844	Outside	4429.00	
Anchor	26.00			4455.00	
Change Over Sub	1.00			4456.00	
Drill Pipe	64.00			4520.00	
Change Over Sub	1.00			4521.00	
Bullnose	5.00			4526.00	98.00 Bottom Packers & Anchor

**Total Tool Length: 118.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**18-20s-29w Lane, KS**

410 17th st Ste 900  
Denver, CO 80202-4420

**Mulville #15-B**

Job Ticket: 56327

**DST#: 1**

ATTN: Gary Doke/ Jim Musgr

Test Start: 2014.03.29 @ 14:45:29

## 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:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

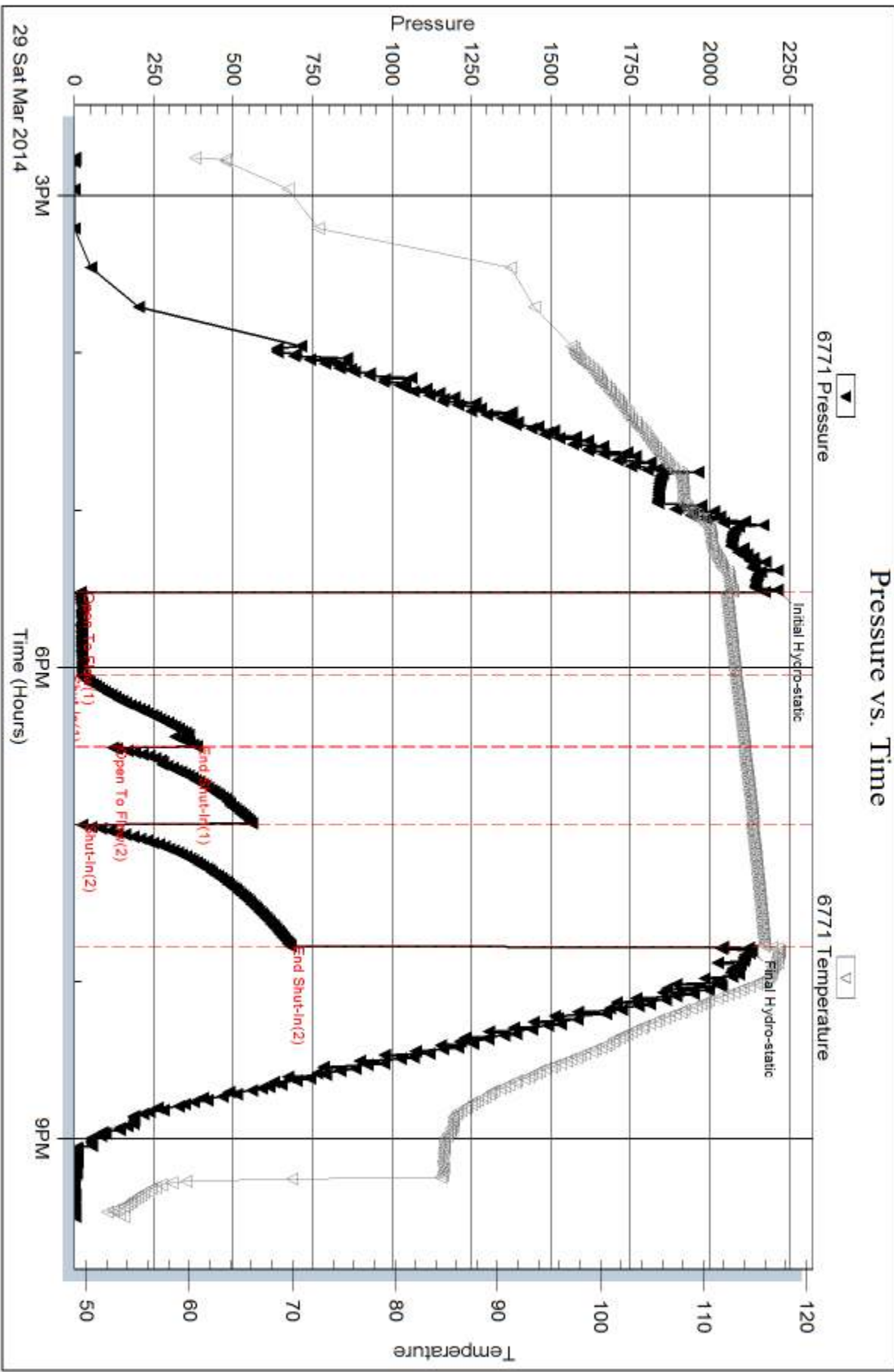
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

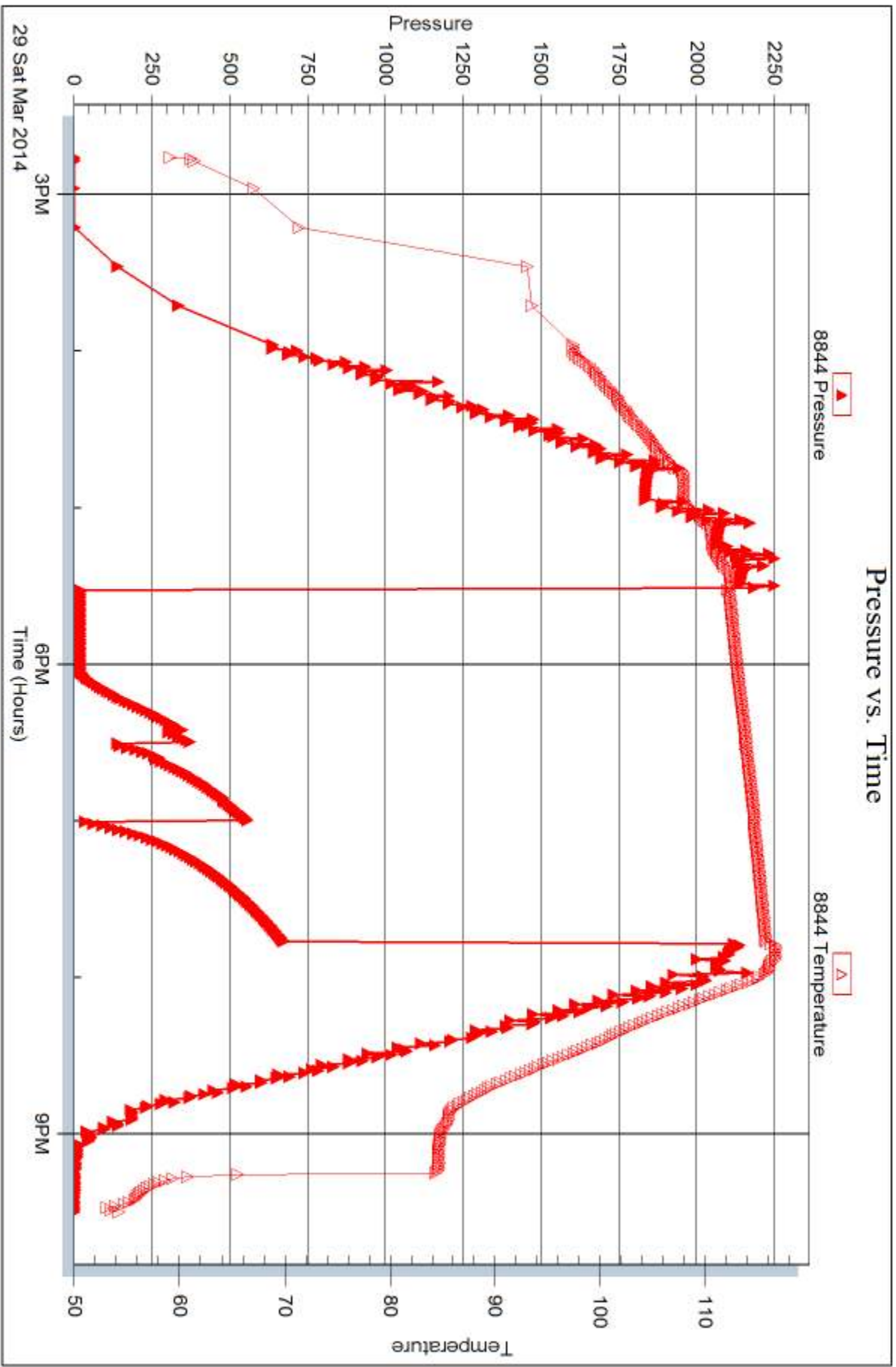


Serial #: 8844

Outside FIML Natural Resources

Mulville #15-B

DST Test Number: 1



Tribble Testing, Inc

Ref. No: 56327

Printed: 2014.04.03 @ 14:47:53



## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th st Ste 900  
Denver, CO 80202-4420

ATTN: Gary Doke/ Jim Musgr

### **Mulville #15-B**

### **18-20s-29w Lane,KS**

Start Date: 2014.03.30 @ 10:00:44

End Date: 2014.03.30 @ 16:26:29

Job Ticket #: 56328                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.03 @ 14:47:24



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FIML Natural Resources

**18-20s-29w Lane, KS**

410 17th st Ste 900  
Denver, CO 80202-4420

**Mulville #15-B**

Job Ticket: 56328

**DST#: 2**

ATTN: Gary Doke/ Jim Musgr

Test Start: 2014.03.30 @ 10:00:44

## GENERAL INFORMATION:

Formation: **Pawnee - Ft Scott**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:01:29  
 Time Test Ended: 16:26:29  
 Interval: **4530.00 ft (KB) To 4620.00 ft (KB) (TVD)**  
 Total Depth: 4620.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2900.00 ft (KB)  
 2889.00 ft (CF)  
 KB to GR/CF: 11.00 ft

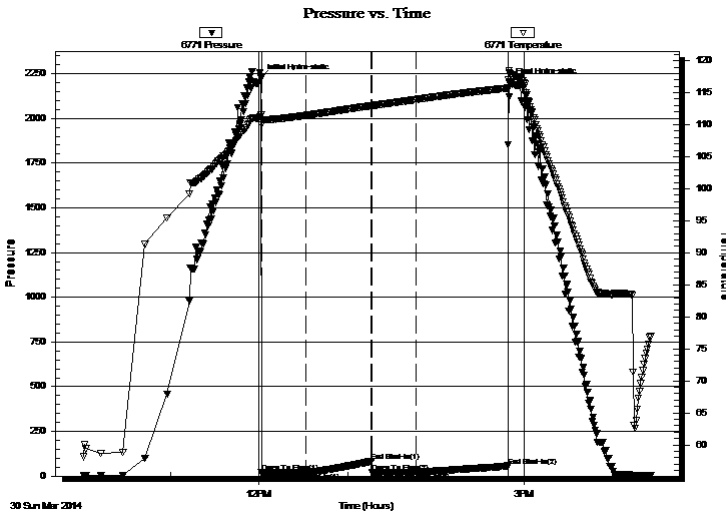
## Serial #: 6771

Inside

Press@RunDepth: 20.70 psig @ 4531.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.03.30 End Date: 2014.03.30 Last Calib.: 2014.03.30  
 Start Time: 10:00:44 End Time: 16:26:29 Time On Btm: 2014.03.30 @ 12:01:14  
 Time Off Btm: 2014.03.30 @ 14:49:44

TEST COMMENT: 1/4" blow died back to a surface blow  
 No return  
 Bubble to open tool ,No blow  
 No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2224.70	111.50	Initial Hydro-static
1	19.25	109.97	Open To Flow (1)
31	18.75	111.45	Shut-In(1)
75	83.56	112.97	End Shut-In(1)
76	20.24	112.95	Open To Flow (2)
106	20.70	113.93	Shut-In(2)
168	56.83	115.71	End Shut-In(2)
169	2198.03	118.10	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%m	0.02

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**18-20s-29w Lane,KS**

410 17th st Ste 900  
Denver, CO 80202-4420

**Mulville #15-B**

Job Ticket: 56328

**DST#: 2**

ATTN: Gary Doke/ Jim Musgr

Test Start: 2014.03.30 @ 10:00:44

## Tool Information

Drill Pipe:	Length: 4151.00 ft	Diameter: 3.80 inches	Volume: 58.23 bbl	Tool Weight: 2500.00 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: 371.00 ft	Diameter: 2.25 inches	Volume: 1.82 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 60.05 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 73000.00 lb
Depth to Top Packer:	4530.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	110.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4511.00	
Shut In Tool	5.00			4516.00	
Hydraulic tool	5.00			4521.00	
Packer	5.00			4526.00	20.00 Bottom Of Top Packer
Packer	4.00			4530.00	
Stubb	1.00			4531.00	
Recorder	0.00	6771	Inside	4531.00	
Recorder	0.00	8844	Outside	4531.00	
Anchor	18.00			4549.00	
Change Over Sub	1.00			4550.00	
Drill Pipe	64.00			4614.00	
Change Over Sub	1.00			4615.00	
Bullnose	5.00			4620.00	90.00 Bottom Packers & Anchor

**Total Tool Length: 110.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

FIML Natural Resources

**18-20s-29w Lane, KS**

410 17th st Ste 900  
Denver, CO 80202-4420

**Mulville #15-B**

Job Ticket: 56328

**DST#: 2**

ATTN: Gary Doke/ Jim Musgr

Test Start: 2014.03.30 @ 10:00:44

### 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:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

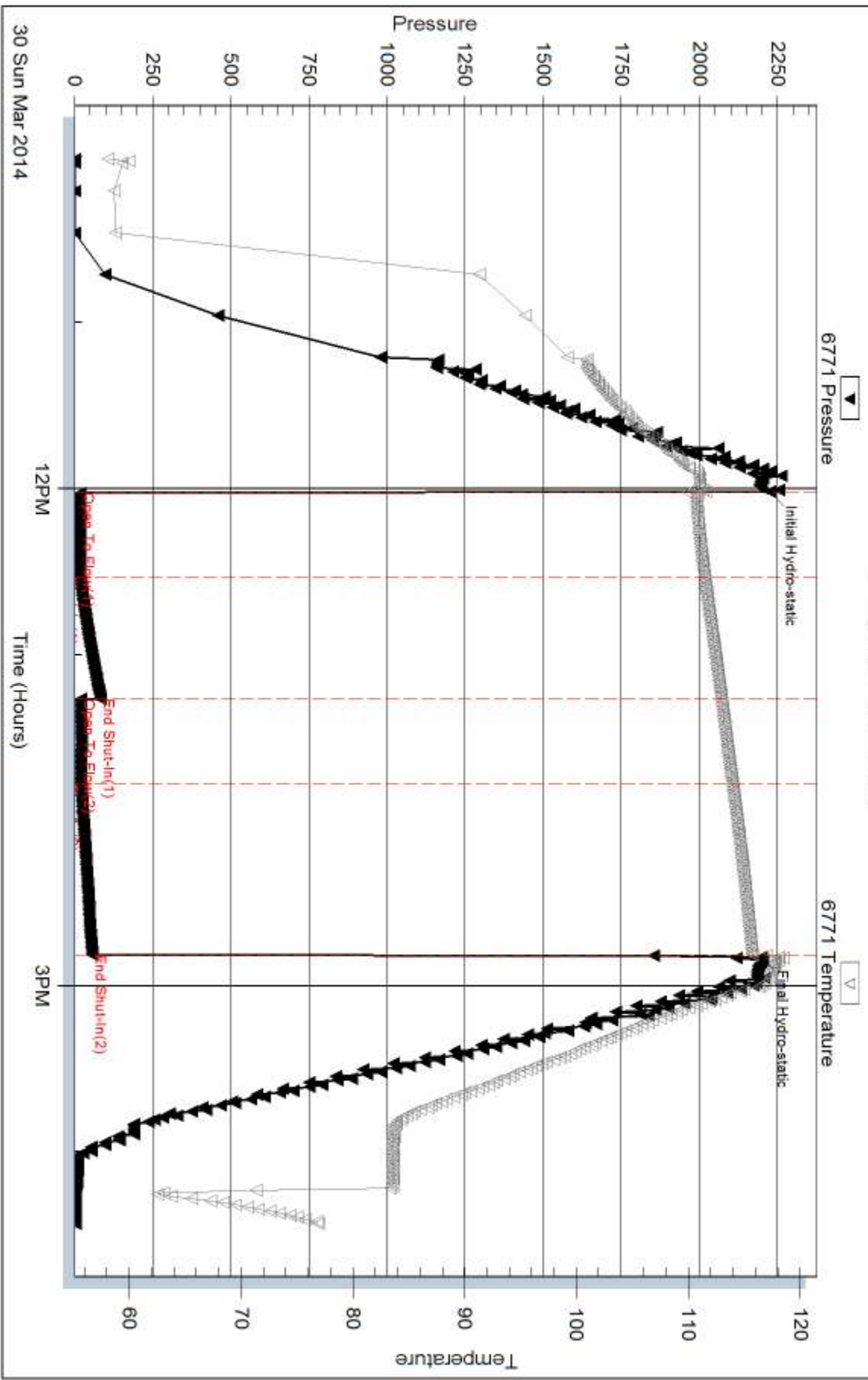
Serial #:

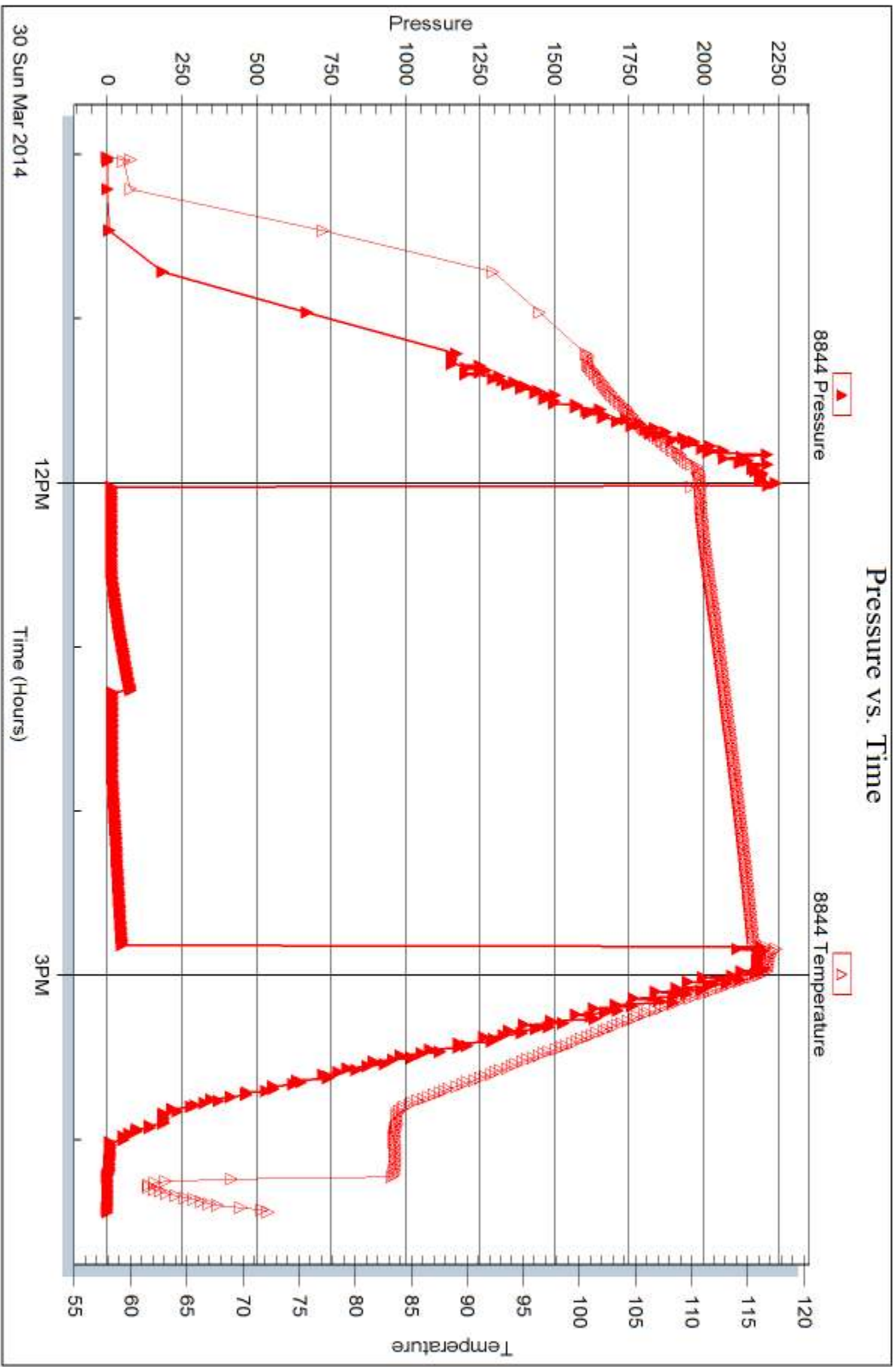
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th st Ste 900  
Denver, CO 80202-4420

ATTN: Gary Doke/ Jim Musgr

### **Mulville #15-B**

### **18-20s-29w Lane,KS**

Start Date: 2014.03.31 @ 05:16:03

End Date: 2014.03.31 @ 11:55:33

Job Ticket #: 56329                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.03 @ 14:41:14



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FIML Natural Resources

**18-20s-29w Lane, KS**

410 17th st Ste 900  
Denver, CO 80202-4420

**Mulville #15-B**

Job Ticket: 56329

**DST#: 3**

ATTN: Gary Doke/ Jim Musgr

Test Start: 2014.03.31 @ 05:16:03

## GENERAL INFORMATION:

Formation: **Johnson -Miss-Sperge**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:25:18

Time Test Ended: 11:55:33

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

**Interval: 4620.00 ft (KB) To 4690.00 ft (KB) (TVD)**

Reference Elevations: 2900.00 ft (KB)

Total Depth: 4690.00 ft (KB) (TVD)

2889.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6771**

**Inside**

Press@RunDepth: 33.11 psig @ 4621.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.31

End Date:

2014.03.31

Last Calib.:

2014.03.31

Start Time:

05:16:03

End Time:

11:35:33

Time On Btm:

2014.03.31 @ 07:24:48

Time Off Btm:

2014.03.31 @ 09:46:03

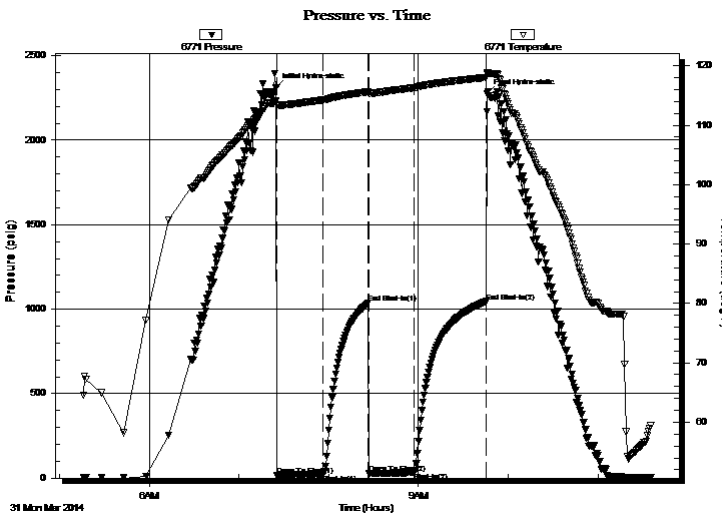
TEST COMMENT: 1/4" blow @ open died in 23 min.

No return

Bubble to open tool, No blow

No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2309.70	114.05	Initial Hydro-static
1	18.08	113.39	Open To Flow (1)
32	24.70	114.26	Shut-In(1)
62	1034.41	115.64	End Shut-In(1)
62	26.28	115.30	Open To Flow (2)
93	33.11	116.33	Shut-In(2)
141	1044.71	118.04	End Shut-In(2)
142	2277.63	118.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100% m	0.02

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**18-20s-29w Lane, KS**

410 17th st Ste 900  
Denver, CO 80202-4420

**Mulville #15-B**

Job Ticket: 56329

**DST#: 3**

ATTN: Gary Doke/ Jim Musgr

Test Start: 2014.03.31 @ 05:16:03

## Tool Information

Drill Pipe:	Length: 4247.00 ft	Diameter: 3.80 inches	Volume: 59.57 bbl	Tool Weight: 2500.00 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: 371.00 ft	Diameter: 2.25 inches	Volume: 1.82 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 61.39 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 73000.00 lb
Depth to Top Packer:	4620.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4601.00	
Shut In Tool	5.00			4606.00	
Hydraulic tool	5.00			4611.00	
Packer	5.00			4616.00	20.00 Bottom Of Top Packer
Packer	4.00			4620.00	
Stubb	1.00			4621.00	
Recorder	0.00	6771	Inside	4621.00	
Recorder	0.00	8844	Outside	4621.00	
Anchor	30.00			4651.00	
Change Over Sub	1.00			4652.00	
Drill Pipe	32.00			4684.00	
Change Over Sub	1.00			4685.00	
Bullnose	5.00			4690.00	70.00 Bottom Packers & Anchor

**Total Tool Length: 90.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

FIML Natural Resources

**18-20s-29w Lane, KS**

410 17th st Ste 900  
Denver, CO 80202-4420

**Mulville #15-B**

Job Ticket: 56329

**DST#: 3**

ATTN: Gary Doke/ Jim Musgr

Test Start: 2014.03.31 @ 05:16:03

### 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:

0 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

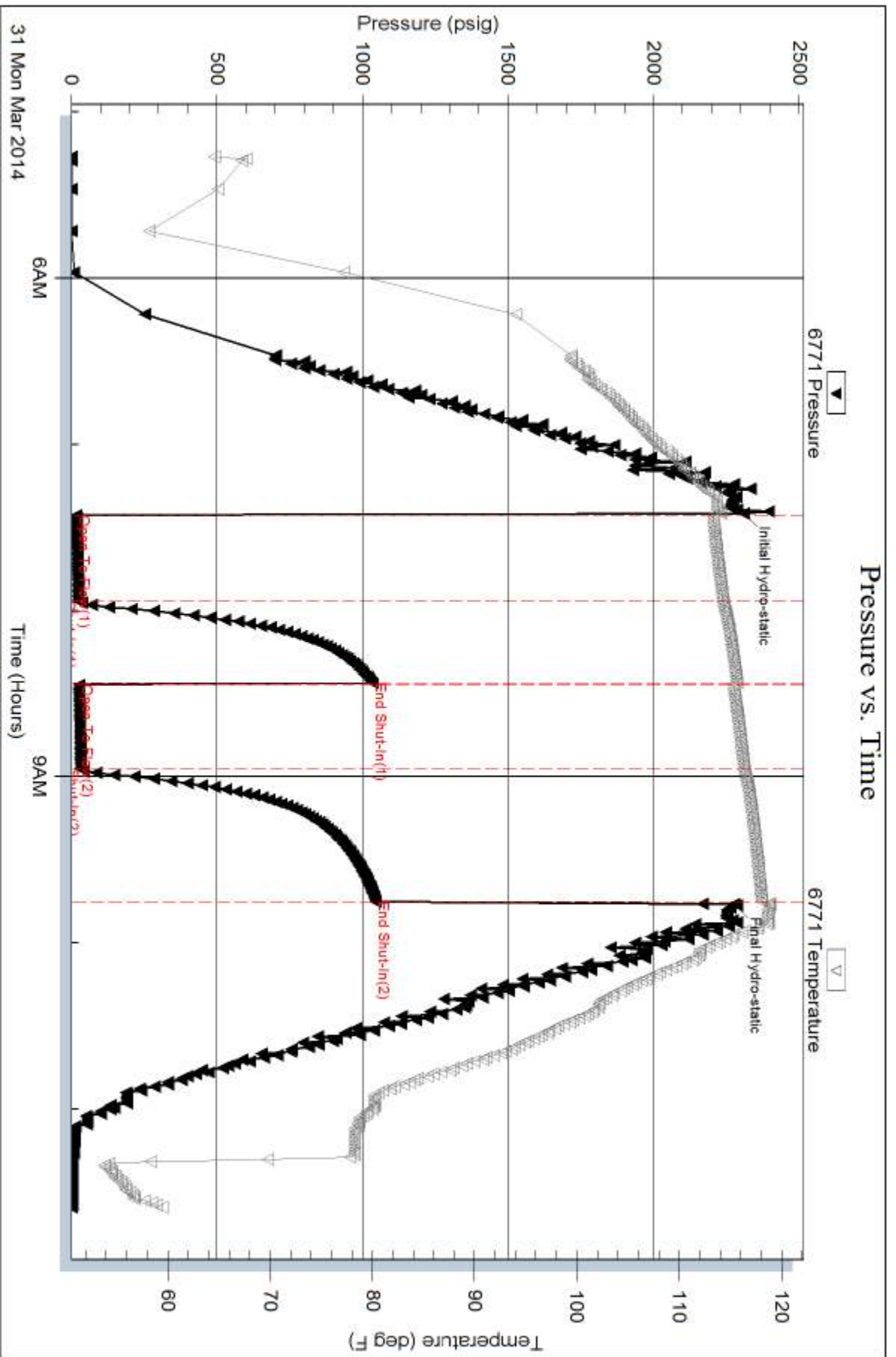
Num Gas Bombs: 0

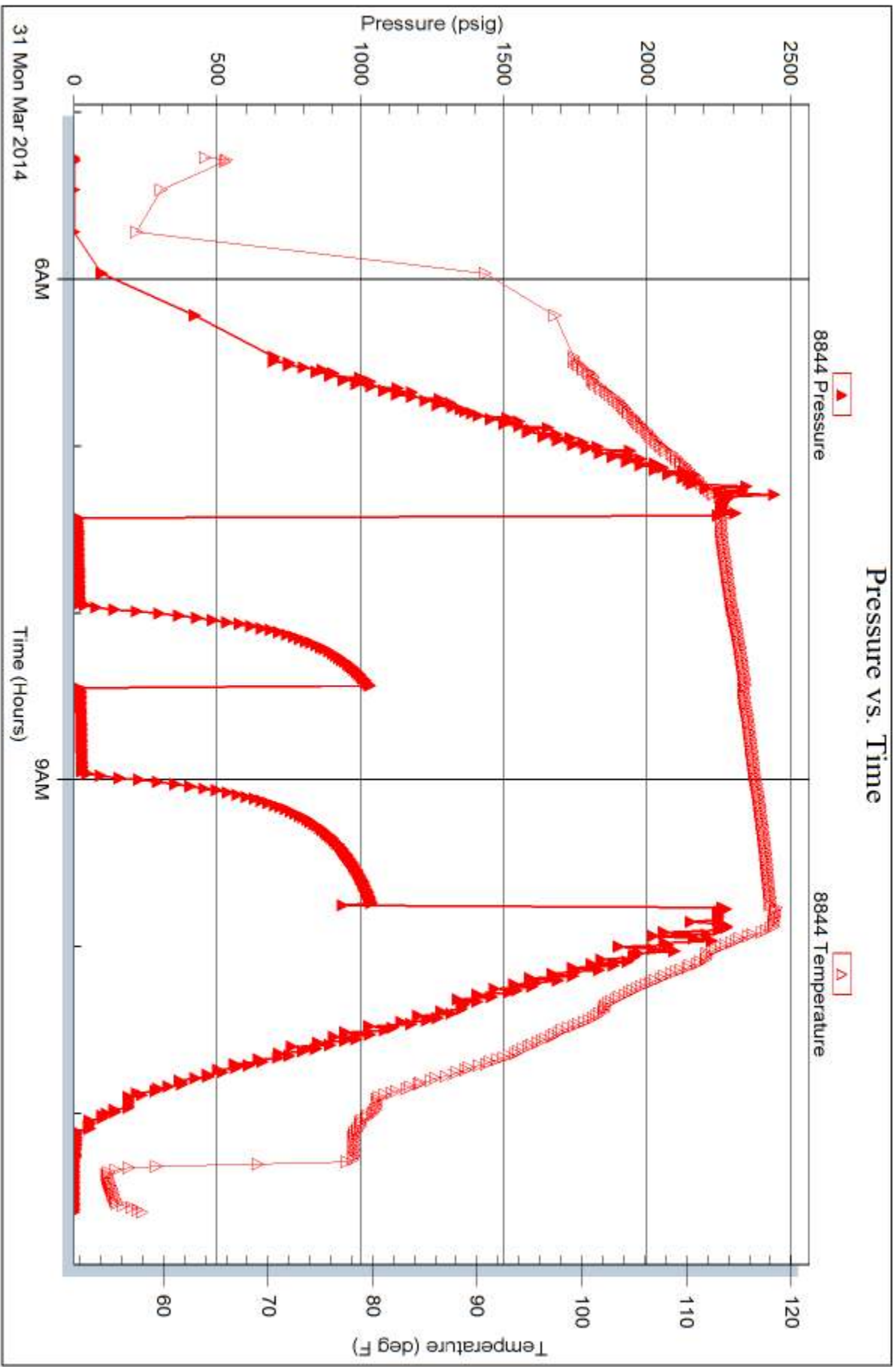
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 56327

Well Name & No. Medville #15-B Test No. #1 Date 3/29/14  
 Company FIMH Natural Resources Elevation 2900' KB 2889' GL  
 Address 410 17<sup>th</sup> St Ste 900 Denver, Colo 80202-4420  
 Co. Rep / Geo. Gary Duke / S. M. Magrann Rig H<sup>2</sup> #1  
 Location: Sec. 18 Twp. 20 Rge. 29 Co. Lane State Ks

Interval Tested 4428 4526 Zone Tested "L" - Marmaton "A-B"  
 Anchor Length 98 Drill Pipe Run 4057' Mud Wt. 9.1  
 Top Packer Depth 4423 Drill Collars Run 371' Vis 52  
 Bottom Packer Depth 4428 Wt. Pipe Run \_\_\_\_\_ WL 4.8  
 Total Depth 4526 Chlorides 4200 ppm System LCM #3  
 Blow Description 1/4" in blow died in 20 min  
No return  
No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5' BHT 117° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2211  Test 1250 T-On Location 14:15  
 (B) First Initial Flow 20  Jars \_\_\_\_\_ T-Started 14:45  
 (C) First Final Flow 25  Safety Joint \_\_\_\_\_ T-Open 17:30  
 (D) Initial Shut-In 384  Circ Sub N/C T-Pulled 19:45  
 (E) Second Initial Flow 121  Hourly Standby \_\_\_\_\_ T-Out \_\_\_\_\_  
 (F) Second Final Flow 25  Mileage 48 RT  $\times 1.55$  105.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 680  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2122  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 30  Day Standby \_\_\_\_\_ Total 1505.40  
 Final Shut-In 45  Accessibility \$ 150.00 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1505.40

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **56328**

4/10

Well Name & No. Malville #15-B Test No. #2 Date 3/30/14  
 Company FIML Natural Resources Elevation 2900 KB 2889 GL  
 Address 410 17<sup>th</sup> St. #900 Denver, Colo 80202-4420  
 Co. Rep / Geo Gary Duke / Ben Magrune Rig H2#1  
 Location: Sec. 18 Twp. 20 Rge. 29 Co. Lane State Ks

Interval Tested 4530 4620 Zone Tested Pawnee Max Station, H Scott  
 Anchor Length 90 Drill Pipe Run 4151' Mud Wt. 9.1  
 Top Packer Depth 4525 Drill Collars Run 371' Vis 52  
 Bottom Packer Depth 4530 Wt. Pipe Run --- WL 6.8  
 Total Depth 4620 Chlorides 4200 ppm System LCM #3  
 Blow Description 1/4" blow dried back to a surface blow  
No return  
Bubble to open tool, No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud</u>			<u>100</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 5' BHT 118° Gravity --- API RW --- @ --- °F Chlorides --- ppm

(A) Initial Hydrostatic <u>2224</u>	<input checked="" type="checkbox"/> Test <u>\$1250.00</u>	T-On Location <u>09:45</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars	T-Started <u>10:00</u>
(C) First Final Flow <u>18</u>	<input type="checkbox"/> Safety Joint	T-Open <u>11:58</u>
(D) Initial Shut-In <u>83</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/K</u>	T-Pulled <u>14:43</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out
(F) Second Final Flow <u>20</u>	<input checked="" type="checkbox"/> Mileage <u>68 RT \$105.40</u>	Comments
(G) Final Shut-In <u>56</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2198</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1505.40</u>
Final Shut-In <u>60</u>	<input checked="" type="checkbox"/> Accessibility <u>\$150.00</u>	MP/DST Disc't
	Sub Total <u>1505.40</u>	

Approved By [Signature]

Our Representative \_\_\_\_\_

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 56329

Well Name & No. Melville #15-B Test No. #3 Date 3/31/14  
 Company FIML Natural Resources Elevation 2900 KB 2889 GL  
 Address 410 17th Ste 900 Denver Colo 80202-4420  
 Co. Rep / Geo. Sary Duke / Jim Musgrave Rig H2#1  
 Location: Sec. 18 Twp. 20 Rge. 29 Co. Lane State Ks

Interval Tested 4620 4690 Zone Tested Johnson - Miss Spergen  
 Anchor Length 70 Drill Pipe Run 4247 Mud Wt. 9.3  
 Top Packer Depth 4615 Drill Collars Run 371' Vis 48  
 Bottom Packer Depth 4620 Wt. Pipe Run \_\_\_\_\_ WL 7.2  
 Total Depth 4690 Chlorides 3200 ppm System LCM #2

Blow Description 1/4" @ open died on 23 min  
No return  
Bubble to open tool No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5' BHT 119° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2309  Test \$ 1250.00 T-On Location 05:00  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 05:15  
 (C) First Final Flow 24  Safety Joint \_\_\_\_\_ T-Open 07:24  
 (D) Initial Shut-In 1034  Circ Sub N/C T-Pulled 09:39  
 (E) Second Initial Flow 26  Hourly Standby \_\_\_\_\_ T-Out 11:55  
 (F) Second Final Flow 33  Mileage 68.00 \$ 105.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 1044  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2277  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1505.40  
 Accessibility \$ 150.00 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1505.40

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 45

Approved By [Signature] Our Representative [Signature]

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