



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1107109  
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: \_\_\_\_\_



1107109

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	Flatirons Resources LLC
Well Name	Munsell 11-23
Doc ID	1107109

Tops

Name	Top	Datum
Anhydrite-top	2071	584
Anhydrite-base	2108	547
Topeka	3610	-955
Heebner	3862	-1207
Toronto	3882	-1227
Lansing	3900	-1245
Base/Kansas City	4223	-1568
Marmaton	4244	-1589
Pawnee	4372	-1717
Ft Scott	4402	-1747
Cherokee Shale	4427	-1772
Johnson zone	4468	-1813
Cherokee Sand	4477	-1822
Mississippian	4524	-1869

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

January 09, 2013

John Marvin  
Flatirons Resources LLC  
303 E 17TH AVE STE 940  
DENVER, CO 80203

Re: ACO1  
API 15-101-22414-00-00  
Munsell 11-23  
NW/4 Sec.23-16S-28W  
Lane County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
John Marvin



## DRILL STEM TEST REPORT

Prepared For: **Flatirons Resources LLC**

303 E 17th Ave Ste 940  
Denver CO 80203

ATTN: Ken Wallace

**Munsell #11-23**

**23-16s-28w Lane,KS**

Start Date: 2012.12.18 @ 01:01:04

End Date: 2012.12.18 @ 08:32:49

Job Ticket #: 49896                      DST #: 1

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

Printed: 2012.12.24 @ 11:07:47



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Flatirons Resources LLC

23-16s-28w Lane, KS

303 E 17th Ave Ste 940  
Denver CO 80203

Munsell #11-23

Job Ticket: 49896

DST#: 1

ATTN: Ken Wallace

Test Start: 2012.12.18 @ 01:01:04

## GENERAL INFORMATION:

Formation: **K**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 03:38:49  
 Time Test Ended: 08:32:49  
 Interval: **4150.00 ft (KB) To 4180.00 ft (KB) (TVD)**  
 Total Depth: 4180.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2655.00 ft (KB)  
 2645.00 ft (CF)  
 KB to GR/CF: 10.00 ft

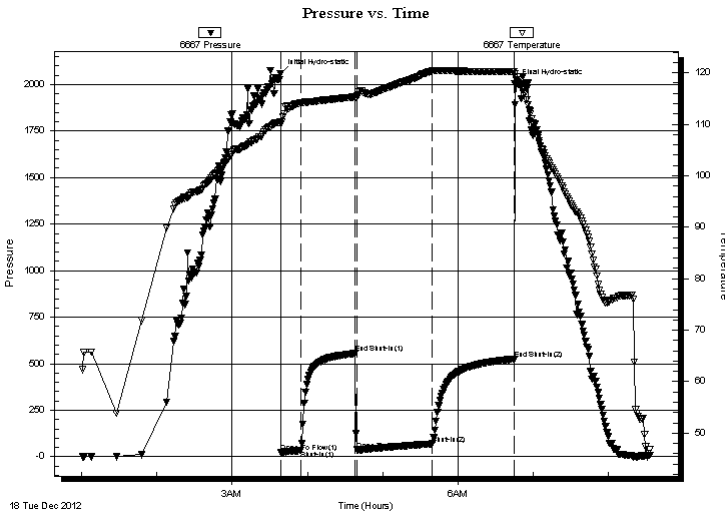
## Serial #: 6667

Inside

Press @ Run Depth: 68.41 psig @ 4151.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.12.18 End Date: 2012.12.18 Last Calib.: 2012.12.18  
 Start Time: 01:01:04 End Time: 08:32:49 Time On Btm: 2012.12.18 @ 03:38:34  
 Time Off Btm: 2012.12.18 @ 06:45:04

TEST COMMENT: 3" blow  
 No return  
 6" blow  
 No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2057.71	110.50	Initial Hydro-static
1	22.22	110.09	Open To Flow (1)
16	33.70	114.09	Shut-In(1)
60	554.53	115.32	End Shut-In(1)
61	36.91	115.46	Open To Flow (2)
121	68.41	120.32	Shut-In(2)
186	524.88	120.22	End Shut-In(2)
187	2003.92	119.85	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	free oil 100%o	0.03
88.00	m c w 30%m 70%w	1.23
0.00	150' very weak gas in pipe	0.00

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Flatirons Resources LLC  
 303 E 17th Ave Ste 940  
 Denver CO 80203  
 ATTN: Ken Wallace

**23-16s-28w Lane, KS**  
**Munsell #11-23**  
 Job Ticket: 49896      **DST#: 1**  
 Test Start: 2012.12.18 @ 01:01:04

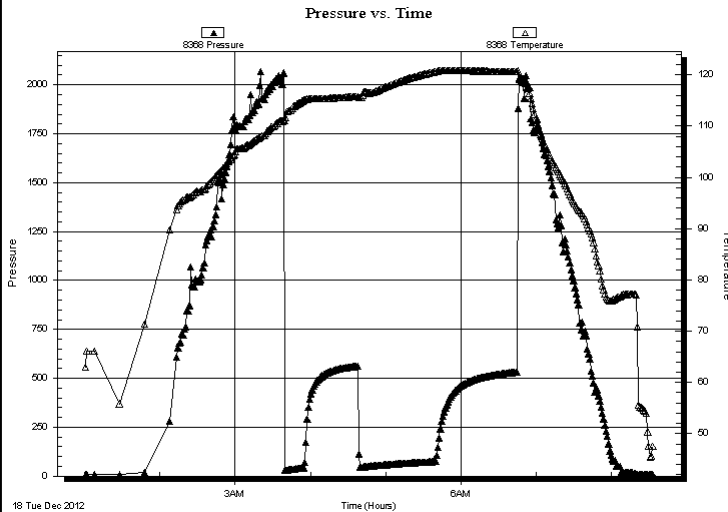
## GENERAL INFORMATION:

Formation: **K**  
 Deviated: **No** Whipstock: **0.00 ft (KB)** Test Type: **Conventional Bottom Hole (Initial)**  
 Time Tool Opened: **03:38:49** Tester: **Shane McBride**  
 Time Test Ended: **08:32:49** Unit No: **55**  
**Interval: 4150.00 ft (KB) To 4180.00 ft (KB) (TVD)** Reference Elevations: **2655.00 ft (KB)**  
 Total Depth: **4180.00 ft (KB) (TVD)** **2645.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **10.00 ft**

## Serial #: 8368      Outside

Press @ Run Depth:                      psig @	4151.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2012.12.18	End Date:	2012.12.18
Start Time:	01:01:04	End Time:	08:32:49
		Time On Btm:	
		Time Off Btm:	

TEST COMMENT: 3" blow  
 No return  
 6" blow  
 No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	free oil 100%o	0.03
88.00	m c w 30%m 70%w	1.23
0.00	150' very weak gas in pipe	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Flatirons Resources LLC

**23-16s-28w Lane, KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49896

**DST#: 1**

ATTN: Ken Wallace

Test Start: 2012.12.18 @ 01:01:04

## Tool Information

Drill Pipe:	Length: 4136.00 ft	Diameter: 3.80 inches	Volume: 58.02 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	4150.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	57.00 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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Change Over Sub	1.00			4124.00	
Shut In Tool	5.00			4129.00	
Hydraulic tool	5.00			4134.00	
Jars	5.00			4139.00	
Safety Joint	2.00			4141.00	
Packer	5.00			4146.00	27.00 Bottom Of Top Packer
Packer	4.00			4150.00	
Stubb	1.00			4151.00	
Recorder	0.00	6667	Inside	4151.00	
Recorder	0.00	8368	Outside	4151.00	
Perforations	24.00			4175.00	
Bullnose	5.00			4180.00	30.00 Bottom Packers & Anchor

**Total Tool Length: 57.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Flatirons Resources LLC

**23-16s-28w Lane, KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49896

**DST#: 1**

ATTN: Ken Wallace

Test Start: 2012.12.18 @ 01:01:04

## 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:

28000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.93 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	free oil 100%o	0.028
88.00	m c w 30%m 70%w	1.234
0.00	150' very weak gas in pipe	0.000

Total Length: 90.00 ft      Total Volume: 1.262 bbl

Num Fluid Samples: 0

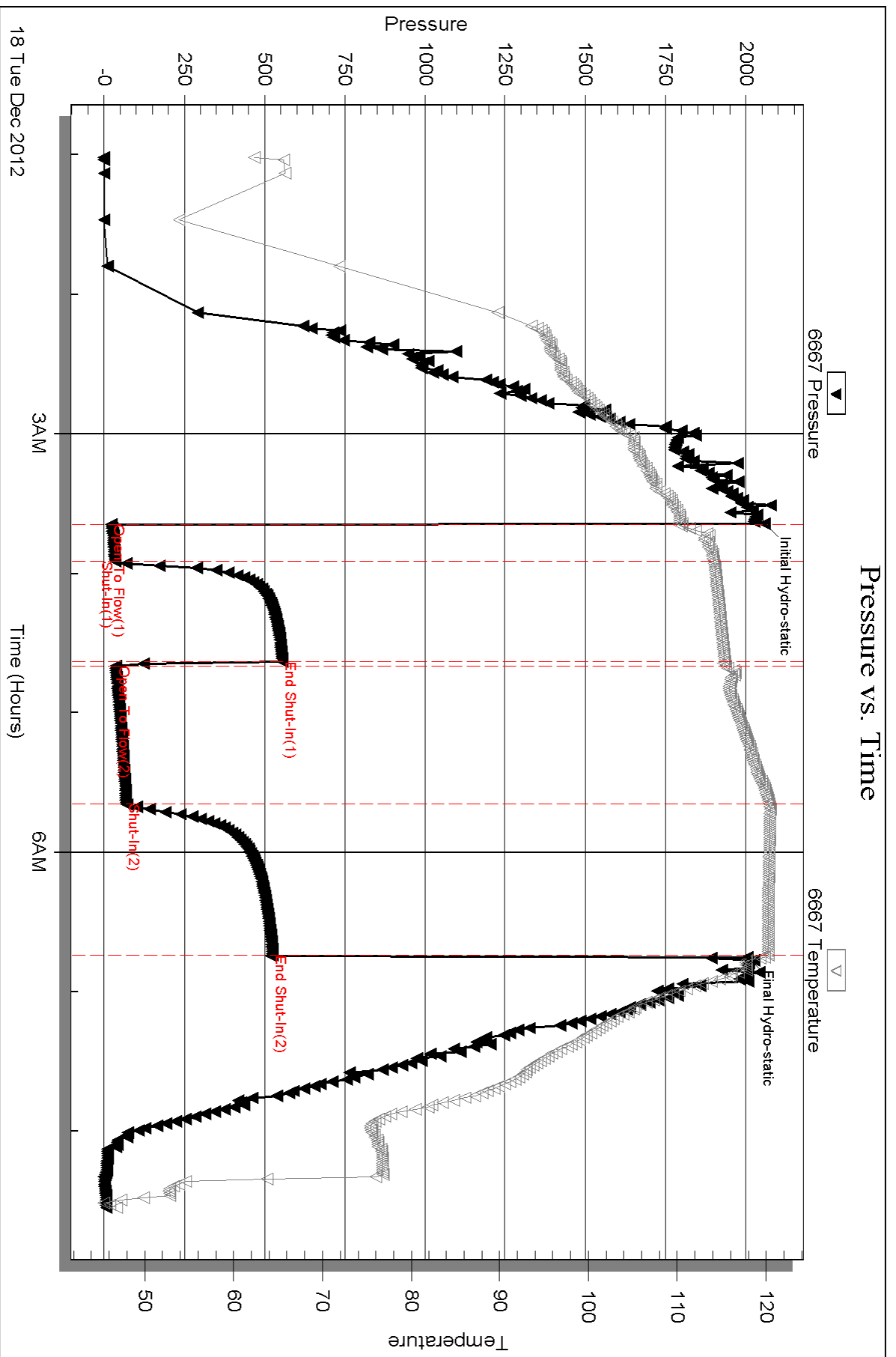
Num Gas Bombs: 0

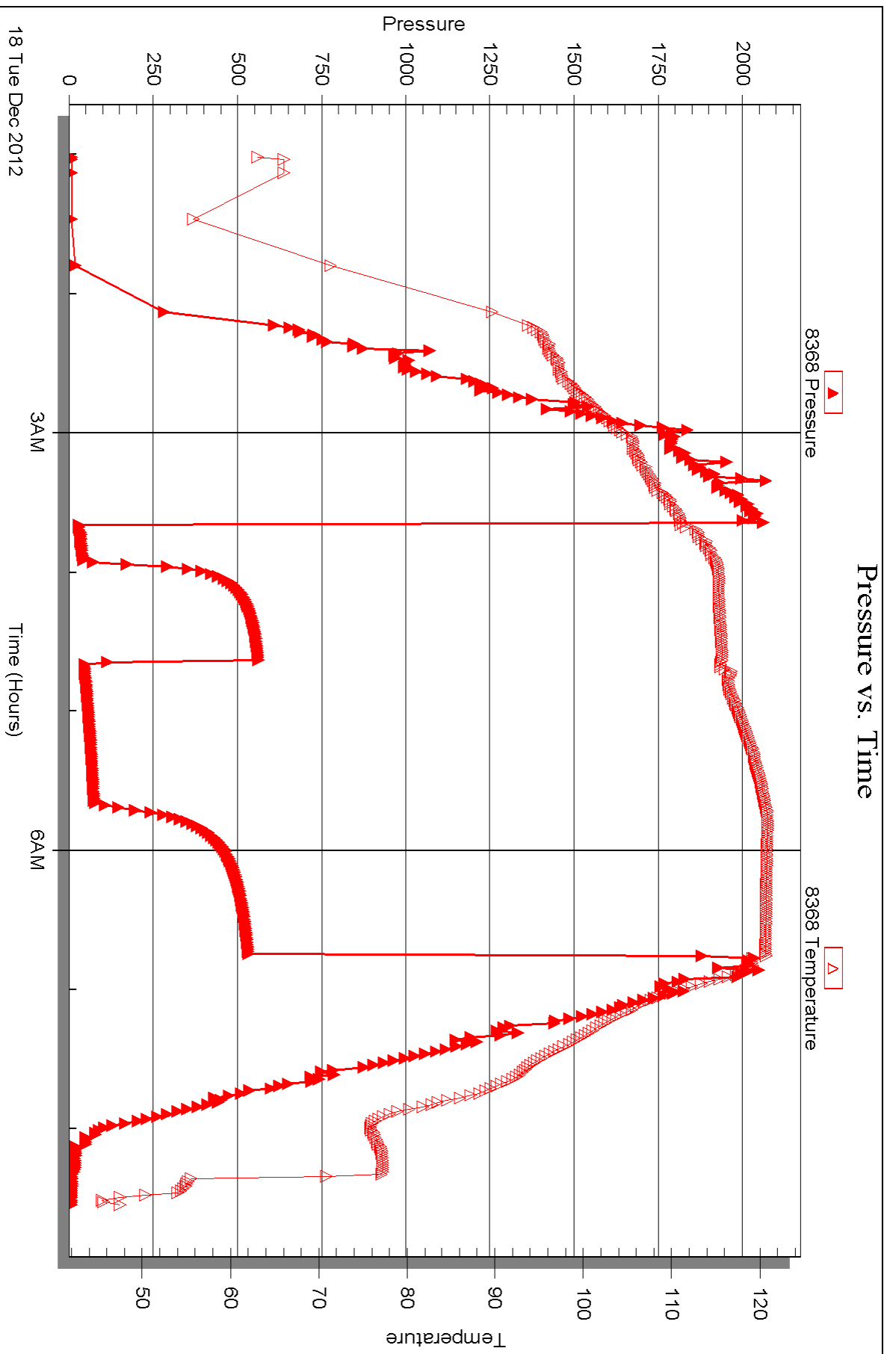
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw .347 @ 50\*f = 28,000







## DRILL STEM TEST REPORT

Prepared For: **Flatirons Resources LLC**

303 E 17th Ave Ste 940  
Denver CO 80203

ATTN: Ken Wallace

**Munsell #11-23**

**23-16s-28w Lane,KS**

Start Date: 2012.12.19 @ 01:41:12

End Date: 2012.12.19 @ 08:50:42

Job Ticket #: 49897                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.12.24 @ 11:07:01



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Flatirons Resources LLC

**23-16s-28w Lane, KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

ATTN: Ken Wallace

Job Ticket: 49897

**DST#: 2**

Test Start: 2012.12.19 @ 01:41:12

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 03:46:12

Time Test Ended: 08:50:42

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

**Interval: 4222.00 ft (KB) To 4309.00 ft (KB) (TVD)**

Reference Elevations: 2655.00 ft (KB)

Total Depth: 4309.00 ft (KB) (TVD)

2645.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 6667** Inside

Press @ Run Depth: 58.74 psig @ 4223.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.12.19

End Date: 2012.12.19

Last Calib.: 2012.12.19

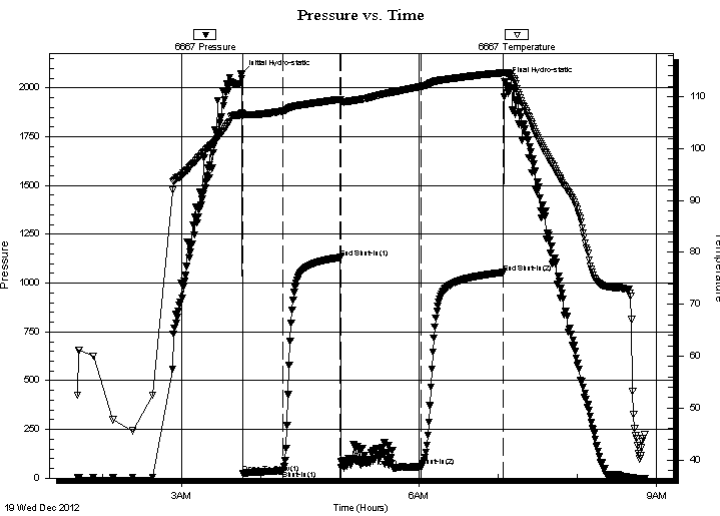
Start Time: 01:41:12

End Time: 08:50:42

Time On Btm: 2012.12.19 @ 03:45:12

Time Off Btm: 2012.12.19 @ 07:04:42

**TEST COMMENT:** 1" blow  
No return  
2 3/4" blow  
No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2071.66	106.81	Initial Hydro-static
1	24.90	106.63	Open To Flow (1)
32	38.29	107.24	Shut-In(1)
75	1131.62	109.51	End Shut-In(1)
76	56.79	109.11	Open To Flow (2)
137	58.74	111.98	Shut-In(2)
199	1054.66	114.62	End Shut-In(2)
200	2033.63	114.69	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
75.00	mud (heavy) 100%m	1.05

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE**  
**TESTING, INC.**

**DRILL STEM TEST REPORT**

Flatirons Resources LLC

303 E 17th Ave Ste 940  
Denver CO 80203

ATTN: Ken Wallace

**23-16s-28w Lane, KS**

**Munsell #11-23**

Job Ticket: 49897

**DST#: 2**

Test Start: 2012.12.19 @ 01:41:12

**GENERAL INFORMATION:**

Formation: **Marmaton**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 03:46:12

Time Test Ended: 08:50:42

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

**Interval: 4222.00 ft (KB) To 4309.00 ft (KB) (TVD)**

Total Depth: 4309.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2655.00 ft (KB)

2645.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8368 Outside**

Press @RunDepth: psig @ 4223.00 ft (KB)

Start Date: 2012.12.19

End Date: 2012.12.19

Start Time: 01:41:27

End Time: 08:50:42

Capacity: 8000.00 psig

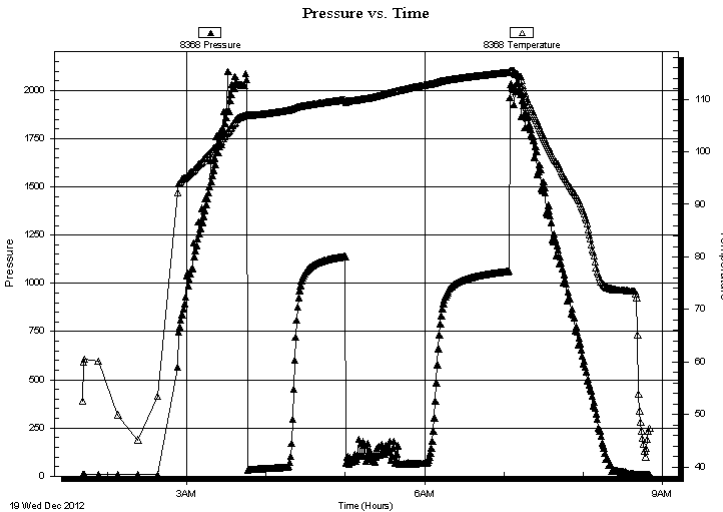
Last Calib.: 2012.12.19

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 1" blow  
No return  
2 3/4" blow  
No return

**PRESSURE SUMMARY**



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

**Recovery**

Length (ft)	Description	Volume (bbl)
75.00	mud (heavy) 100%m	1.05

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Flatirons Resources LLC

**23-16s-28w Lane,KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49897

**DST#: 2**

ATTN: Ken Wallace

Test Start: 2012.12.19 @ 01:41:12

## Tool Information

Drill Pipe:	Length: 4200.00 ft	Diameter: 3.80 inches	Volume: 58.91 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	82000.00 lb
			<u>Total Volume: 58.91 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	4222.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	87.00 ft				
Tool Length:	114.00 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			4196.00	
Shut In Tool	5.00			4201.00	
Hydraulic tool	5.00			4206.00	
Jars	5.00			4211.00	
Safety Joint	2.00			4213.00	
Packer	5.00			4218.00	27.00 Bottom Of Top Packer
Packer	4.00			4222.00	
Stubb	1.00			4223.00	
Recorder	0.00	6667	Inside	4223.00	
Recorder	0.00	8368	Outside	4223.00	
Perforations	16.00			4239.00	
Change Over Sub	1.00			4240.00	
Drill Pipe	63.00			4303.00	
Change Over Sub	1.00			4304.00	
Bullnose	5.00			4309.00	87.00 Bottom Packers & Anchor

**Total Tool Length: 114.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Flatirons Resources LLC

**23-16s-28w Lane, KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49897

**DST#: 2**

ATTN: Ken Wallace

Test Start: 2012.12.19 @ 01:41:12

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
75.00	mud (heavy) 100%m	1.052

Total Length: 75.00 ft      Total Volume: 1.052 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

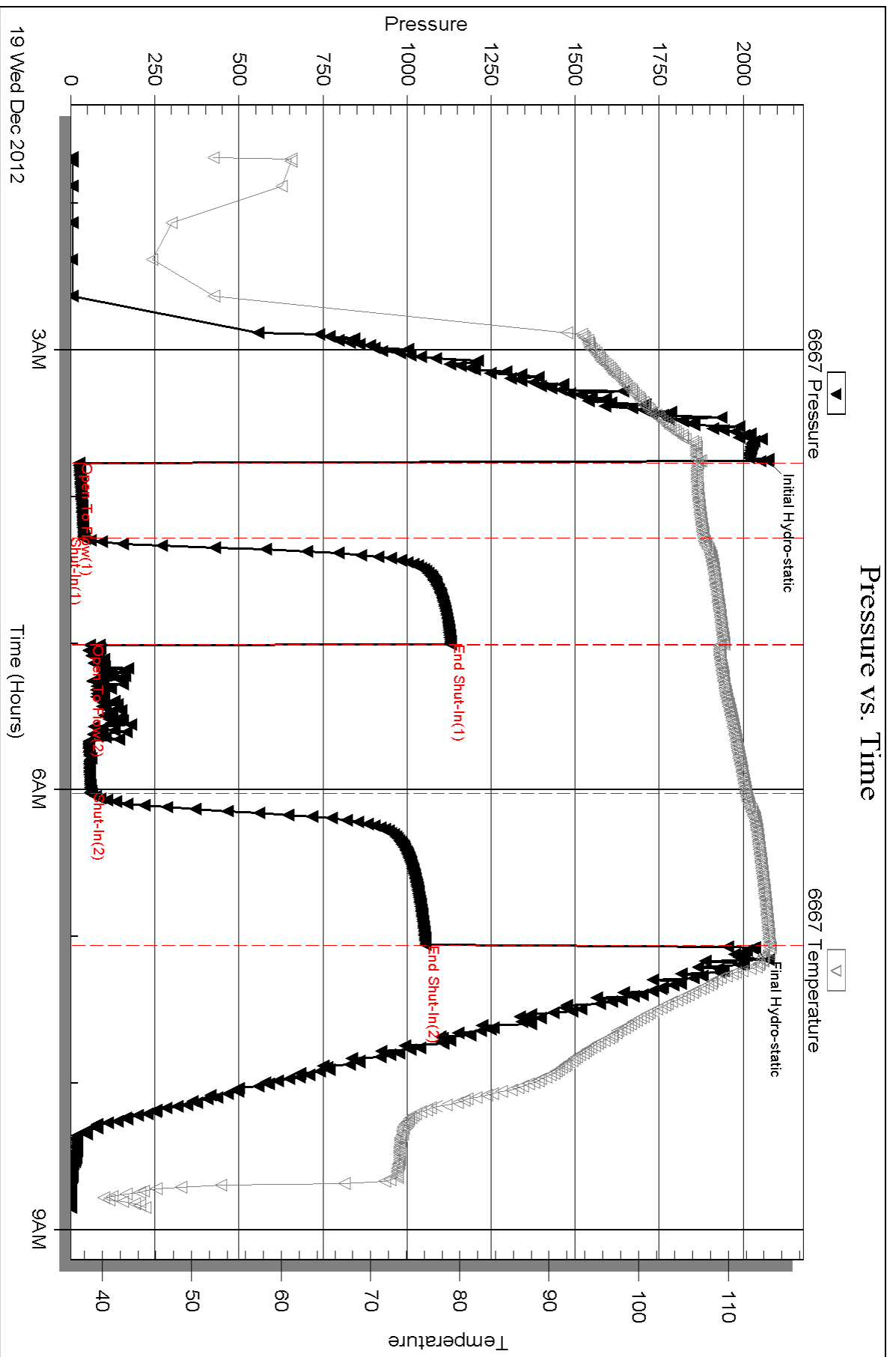
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



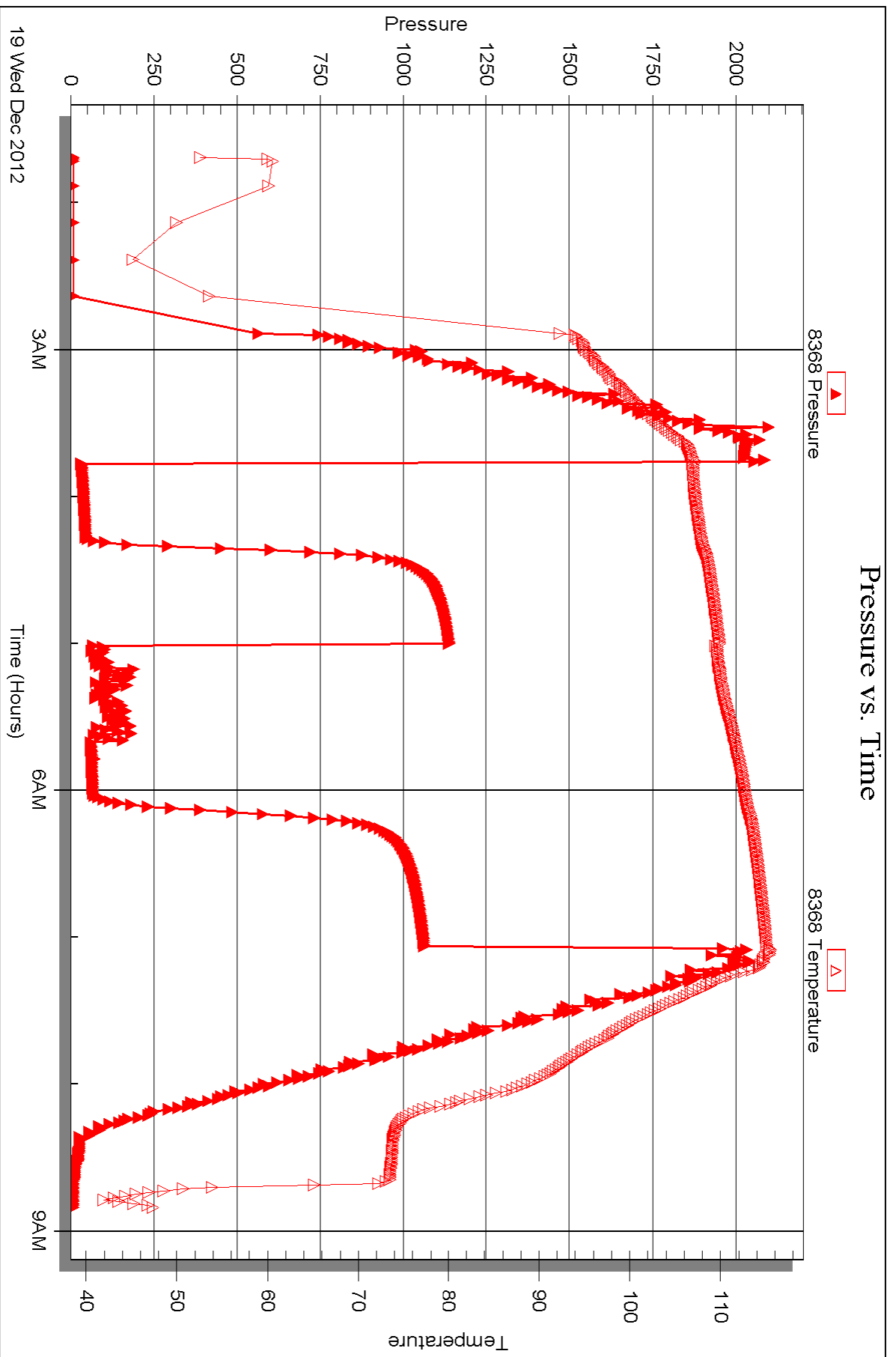


Serial #: 8368

Outside Flatirons Resources LLC

Munsell #11-23

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 49897

Printed: 2012.12.24 @ 11:07:06



## DRILL STEM TEST REPORT

Prepared For: **Flatirons Resources LLC**

303 E 17th Ave Ste 940  
Denver CO 80203

ATTN: Ken Wallace

**Munsell #11-23**

**23-16s-28w Lane,KS**

Start Date: 2012.12.19 @ 22:50:26

End Date: 2012.12.20 @ 07:25:56

Job Ticket #: 49898                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.12.24 @ 11:06:00



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Flatirons Resources LLC  
 303 E 17th Ave Ste 940  
 Denver CO 80203  
 ATTN: Ken Wallace

**23-16s-28w Lane, KS**  
**Munsell #11-23**  
 Job Ticket: 49898 **DST#: 3**  
 Test Start: 2012.12.19 @ 22:50:26

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 02:20:41  
 Time Test Ended: 07:25:56  
 Interval: **4316.00 ft (KB) To 4375.00 ft (KB) (TVD)**  
 Total Depth: 4375.00 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: 2655.00 ft (KB)  
 2645.00 ft (CF)  
 KB to GR/CF: 10.00 ft

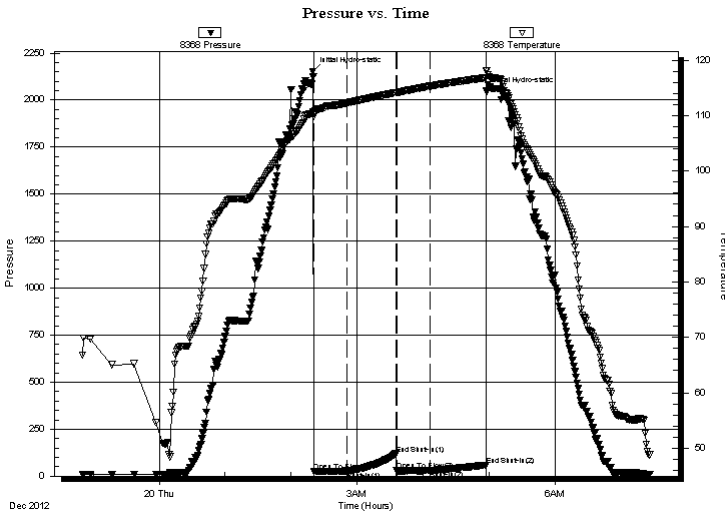
## Serial #: 8368

**Outside**

Press @ RunDepth: 29.16 psig @ 4317.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.12.19 End Date: 2012.12.20 Last Calib.: 2012.12.20  
 Start Time: 22:50:26 End Time: 07:25:56 Time On Btm: 2012.12.20 @ 02:19:41  
 Time Off Btm: 2012.12.20 @ 04:57:11

TEST COMMENT: 1" blow  
 No return  
 Very weak surface blow died in 17 min  
 No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2153.51	110.61	Initial Hydro-static
1	25.14	109.83	Open To Flow (1)
31	27.06	112.28	Shut-In(1)
76	119.01	114.16	End Shut-In(1)
77	28.42	114.16	Open To Flow (2)
107	29.16	115.31	Shut-In(2)
158	59.03	116.84	End Shut-In(2)
158	2047.63	118.11	Final Hydro-static

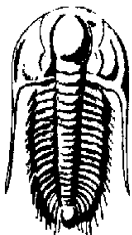
## Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud w/oil spots 100%m	0.14

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Flatirons Resources LLC

23-16s-28w Lane, KS

303 E 17th Ave Ste 940  
Denver CO 80203

Munsell #11-23

Job Ticket: 49898

DST#: 3

ATTN: Ken Wallace

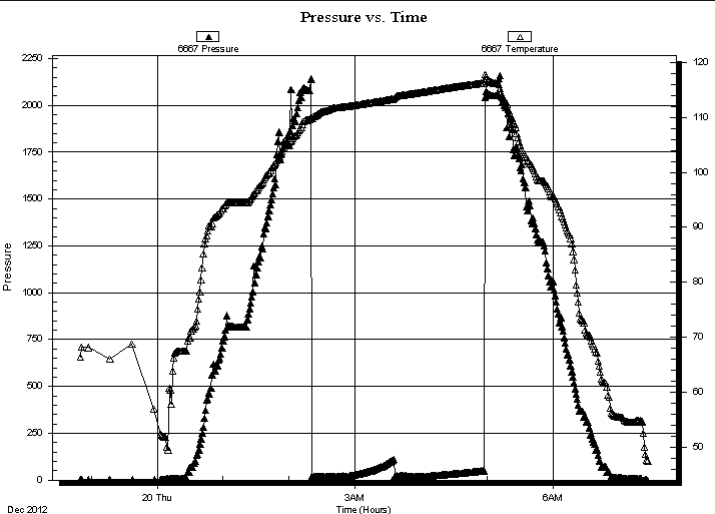
Test Start: 2012.12.19 @ 22:50:26

### GENERAL INFORMATION:

Formation: <b>Pawnee</b>	
Deviated: No Whipstock: 0.00 ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 02:20:41	Tester: Shane McBride
Time Test Ended: 07:25:56	Unit No: 55
<b>Interval: 4316.00 ft (KB) To 4375.00 ft (KB) (TVD)</b>	Reference Elevations: 2655.00 ft (KB)
Total Depth: 4375.00 ft (KB) (TVD)	2645.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair	KB to GR/CF: 10.00 ft

<b>Serial #: 6667</b>	<b>Inside</b>		
Press @ Run Depth: psig @ 4317.00 ft (KB)	Capacity: 8000.00 psig		
Start Date: 2012.12.19	End Date: 2012.12.20	Last Calib.: 2012.12.20	
Start Time: 22:50:26	End Time: 07:26:11	Time On Btm:	
		Time Off Btm:	

**TEST COMMENT:** 1" blow  
No return  
Very weak surface blow died in 17 min  
No return



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud w/oil spots 100%m	0.14

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Flatirons Resources LLC

**23-16s-28w Lane,KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49898

**DST#: 3**

ATTN: Ken Wallace

Test Start: 2012.12.19 @ 22:50:26

## Tool Information

Drill Pipe:	Length: 4294.00 ft	Diameter: 3.80 inches	Volume: 60.23 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 60.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4316.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4290.00	
Shut In Tool	5.00			4295.00	
Hydraulic tool	5.00			4300.00	
Jars	5.00			4305.00	
Safety Joint	2.00			4307.00	
Packer	5.00			4312.00	27.00 Bottom Of Top Packer
Packer	4.00			4316.00	
Stubb	1.00			4317.00	
Recorder	0.00	6667	Inside	4317.00	
Recorder	0.00	8368	Outside	4317.00	
Perforations	19.00			4336.00	
Change Over Sub	1.00			4337.00	
Drill Pipe	32.00			4369.00	
Change Over Sub	1.00			4370.00	
Bullnose	5.00			4375.00	59.00 Bottom Packers & Anchor

**Total Tool Length: 86.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Flatirons Resources LLC

**23-16s-28w Lane,KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49898

**DST#: 3**

ATTN: Ken Wallace

Test Start: 2012.12.19 @ 22:50:26

## 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: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud w /oil spots 100%m	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

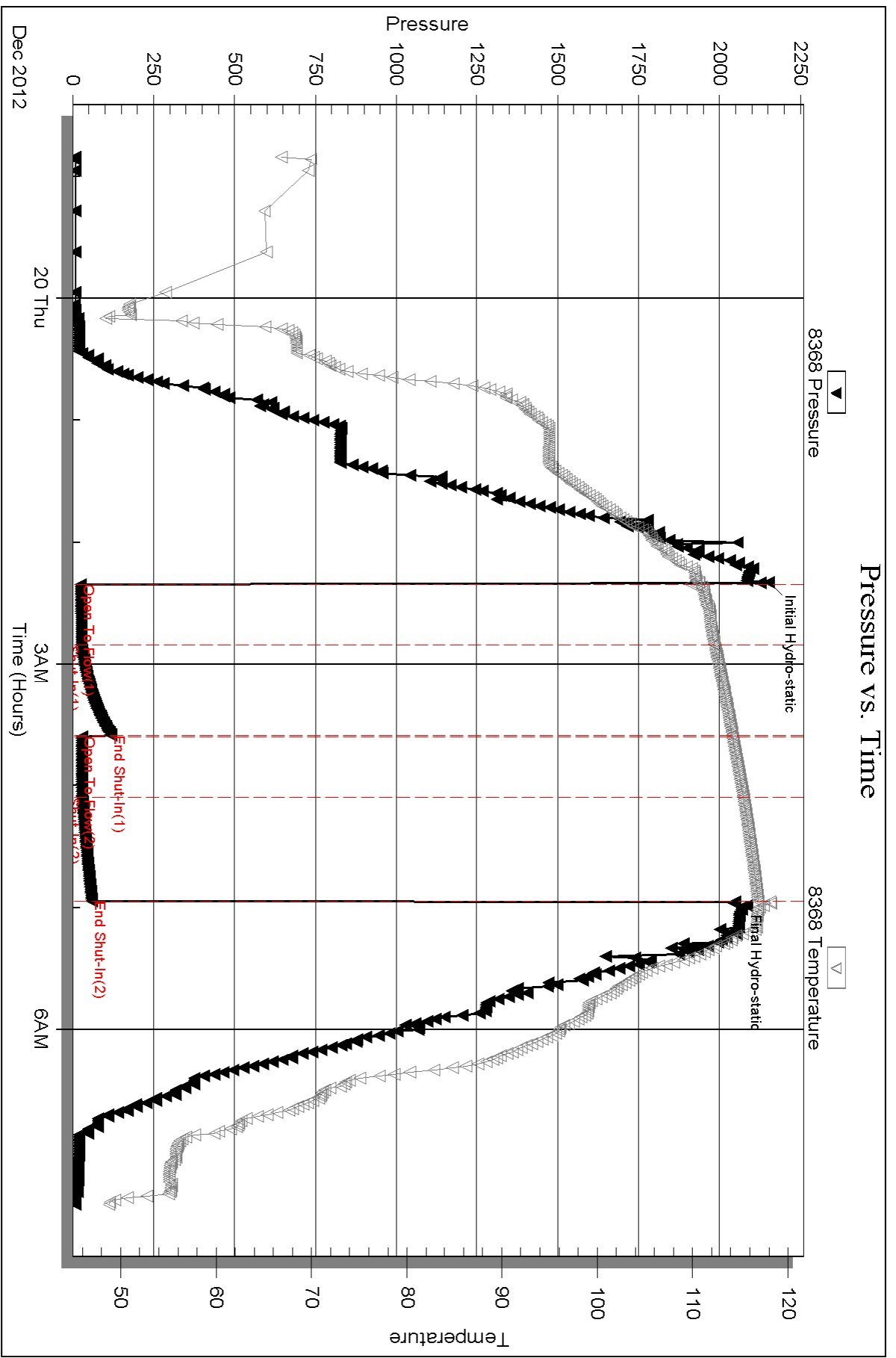
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Had 600' drilling mud in pipe, rig hands dropped a tong die down drill pipe when coming out of hole, broke circ pin off.





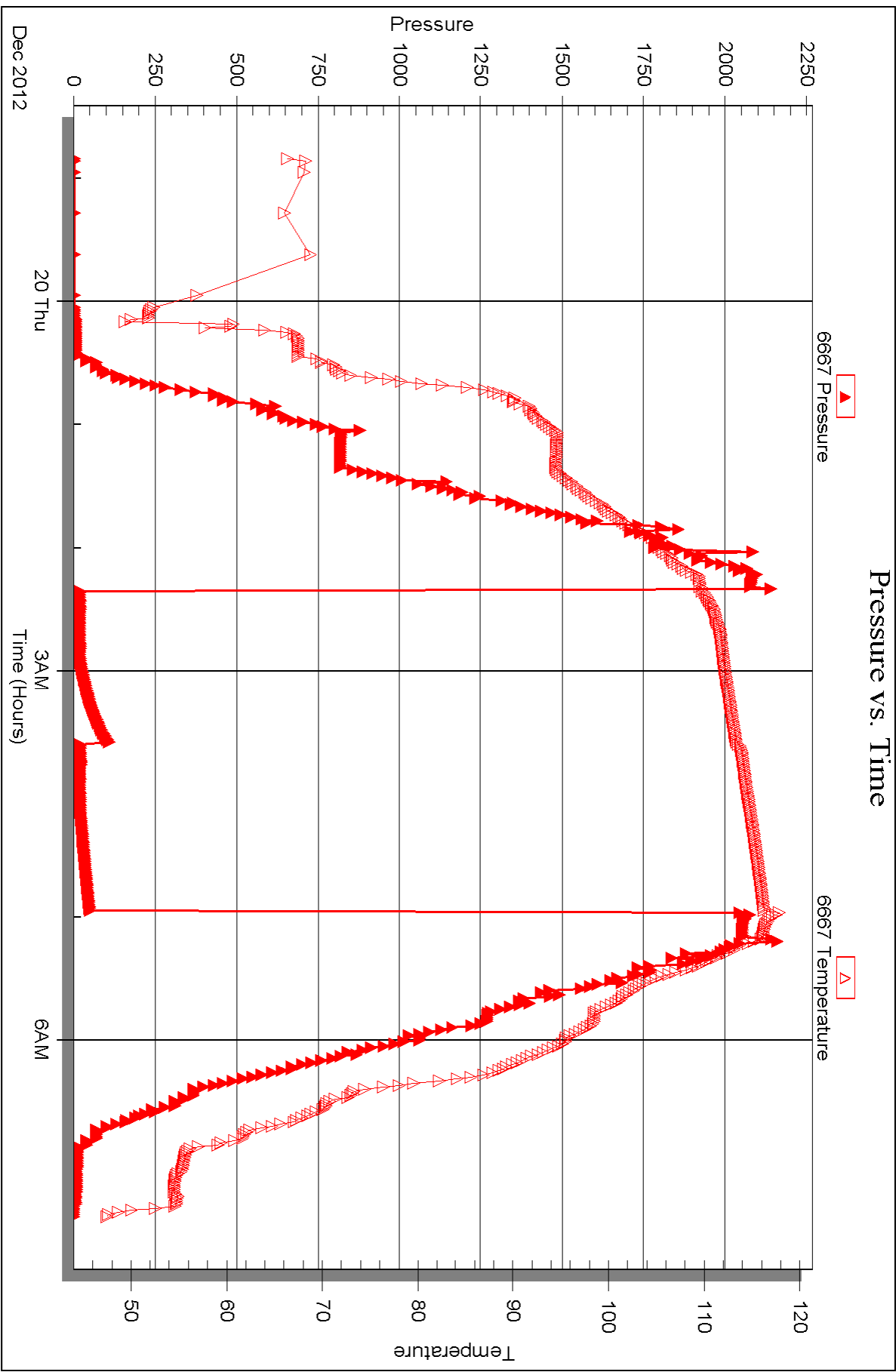
Serial #: 6667

Inside

Flatirons Resources LLC

Munsell #11-23

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Flatirons Resources LLC**

303 E 17th Ave Ste 940  
Denver CO 80203

ATTN: Ken Wallace

**Munsell #11-23**

**23-16s-28w Lane,KS**

Start Date: 2012.12.21 @ 01:00:41

End Date: 2012.12.21 @ 08:13:56

Job Ticket #: 49899                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.12.24 @ 11:05:20



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Flatirons Resources LLC  
 303 E 17th Ave Ste 940  
 Denver CO 80203  
 ATTN: Ken Wallace

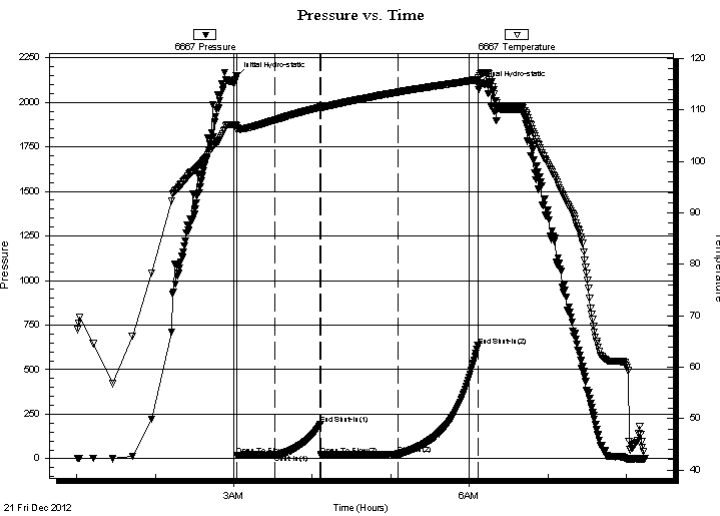
**23-16s-28w Lane, KS**  
**Munsell #11-23**  
 Job Ticket: 49899 **DST#: 4**  
 Test Start: 2012.12.21 @ 01:00:41

## GENERAL INFORMATION:

Formation: **Ft Scott**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 03:02:26  
 Time Test Ended: 08:13:56  
 Interval: **4388.00 ft (KB) To 4435.00 ft (KB) (TVD)**  
 Total Depth: 4435.00 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: 2655.00 ft (KB)  
 2645.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 6667 Inside**  
 Press @ Run Depth: 27.50 psig @ 4389.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.12.21 End Date: 2012.12.21 Last Calib.: 2012.12.21  
 Start Time: 01:00:41 End Time: 08:13:56 Time On Btm: 2012.12.21 @ 03:02:11  
 Time Off Btm: 2012.12.21 @ 06:06:56

**TEST COMMENT:** 1/4" blow died in 26 min.  
 No return  
 5 1/2" blow  
 No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2143.38	106.95	Initial Hydro-static
1	19.89	106.14	Open To Flow (1)
30	22.87	108.05	Shut-In(1)
64	193.74	110.56	End Shut-In(1)
65	18.06	110.47	Open To Flow (2)
124	27.50	113.46	Shut-In(2)
185	634.21	115.93	End Shut-In(2)
185	2096.43	116.23	Final Hydro-static

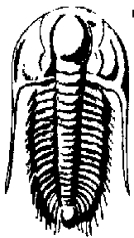
## Recovery

Length (ft)	Description	Volume (bbl)
30.00	o c m 7%o 93%m	0.42
0.00	90' gas in pipe (very faint odor)	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Flatirons Resources LLC

23-16s-28w Lane, KS

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

ATTN: Ken Wallace

Job Ticket: 49899

**DST#: 4**

Test Start: 2012.12.21 @ 01:00:41

## GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 03:02:26

Time Test Ended: 08:13:56

**Interval: 4388.00 ft (KB) To 4435.00 ft (KB) (TVD)**

Total Depth: 4435.00 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: 2655.00 ft (KB)

2645.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8368 Outside**

Press @RunDepth: psig @ 4389.00 ft (KB)

Start Date: 2012.12.21

End Date: 2012.12.21

Start Time: 01:00:26

End Time: 08:14:41

Capacity: 8000.00 psig

Last Calib.: 2012.12.21

Time On Btm:

Time Off Btm:

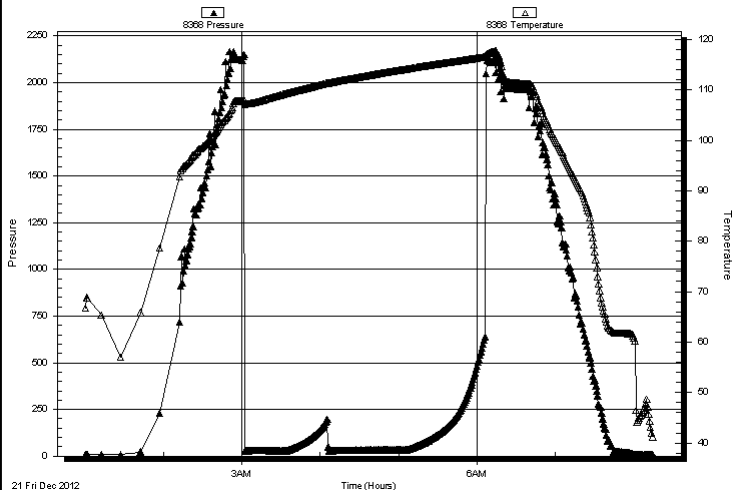
**TEST COMMENT:** 1/4" blow died in 26 min.

No return

5 1/2" blow

No return

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	o c m 7%o 93%m	0.42
0.00	90' gas in pipe (very faint odor)	0.00

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Flatirons Resources LLC

**23-16s-28w Lane,KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49899

**DST#: 4**

ATTN: Ken Wallace

Test Start: 2012.12.21 @ 01:00:41

## Tool Information

Drill Pipe:	Length: 4388.00 ft	Diameter: 3.80 inches	Volume: 61.55 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 61.55 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4388.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	74.00 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			4362.00	
Shut In Tool	5.00			4367.00	
Hydraulic tool	5.00			4372.00	
Jars	5.00			4377.00	
Safety Joint	2.00			4379.00	
Packer	5.00			4384.00	27.00 Bottom Of Top Packer
Packer	4.00			4388.00	
Stubb	1.00			4389.00	
Recorder	0.00	6667	Inside	4389.00	
Recorder	0.00	8368	Outside	4389.00	
Perforations	7.00			4396.00	
Change Over Sub	1.00			4397.00	
Drill Pipe	32.00			4429.00	
Change Over Sub	1.00			4430.00	
Bullnose	5.00			4435.00	47.00 Bottom Packers & Anchor

**Total Tool Length: 74.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Flatirons Resources LLC

**23-16s-28w Lane, KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49899

**DST#: 4**

ATTN: Ken Wallace

Test Start: 2012.12.21 @ 01:00:41

## 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: 43.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	o c m 7%o 93%m	0.421
0.00	90' gas in pipe (very faint odor)	0.000

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

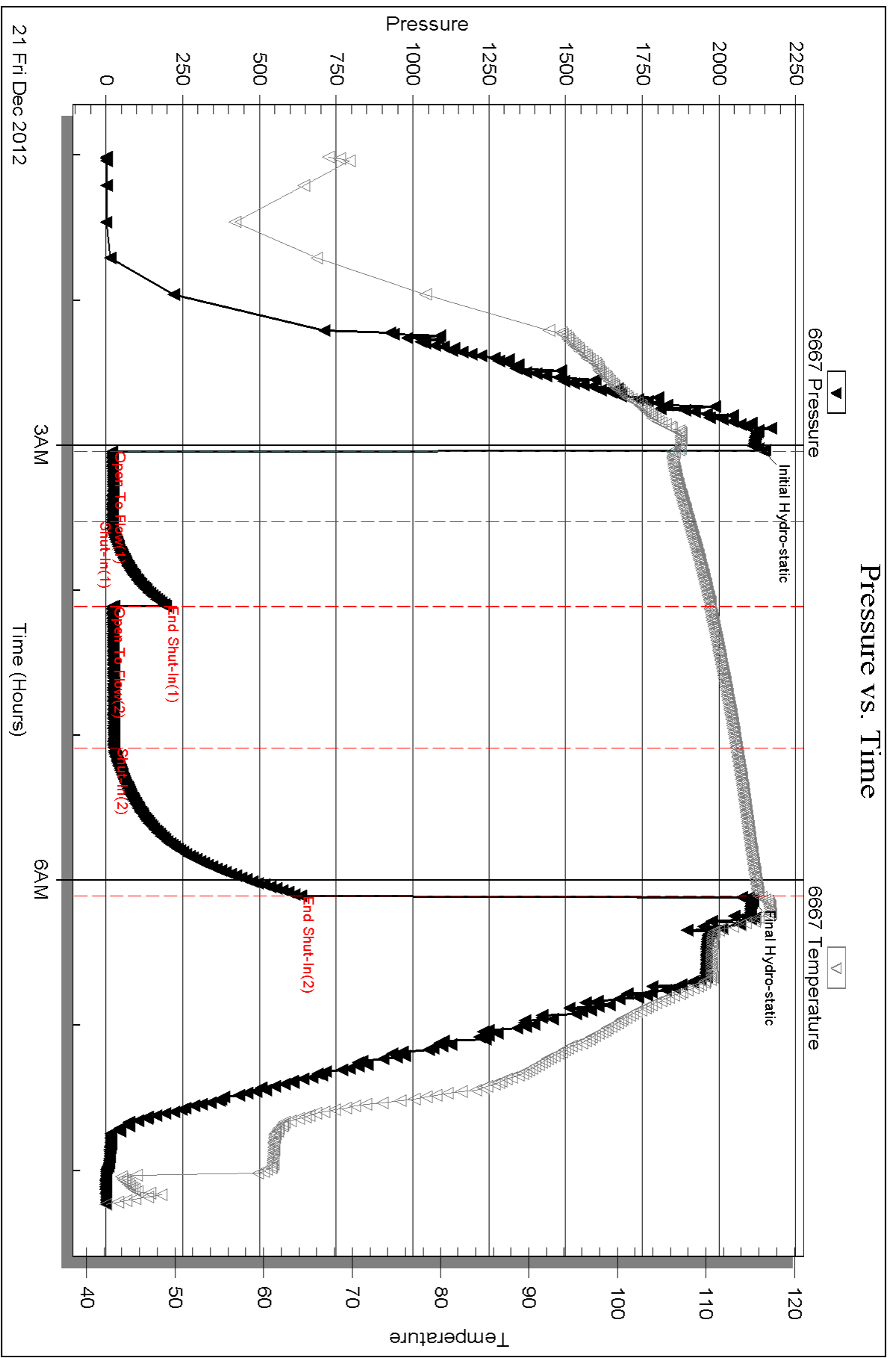
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

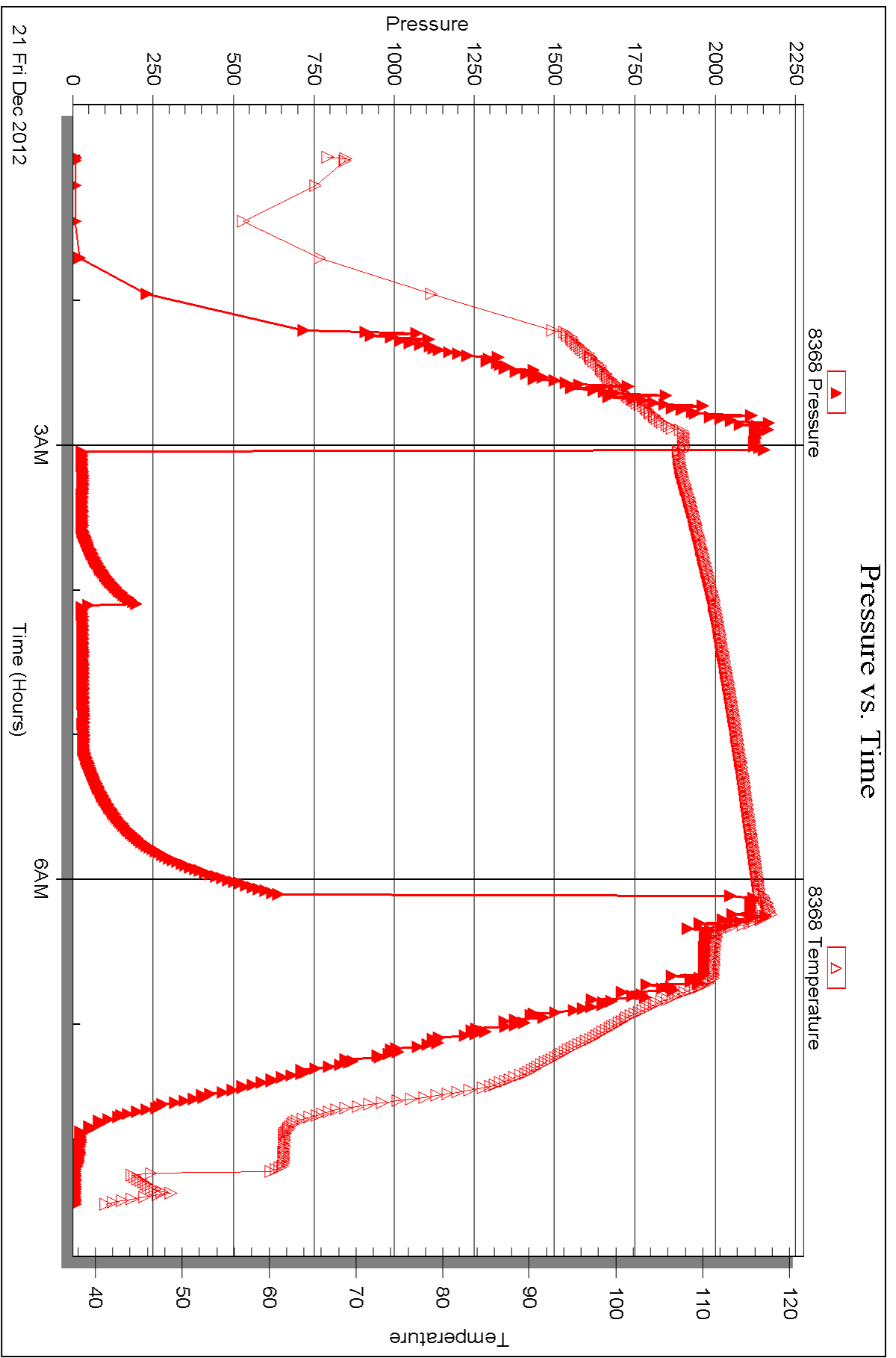


Serial #: 8368

Outside Flatirons Resources LLC

Munsell #11-23

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 49899

Printed: 2012.12.24 @ 11:05:25





## DRILL STEM TEST REPORT

Prepared For: **Flatirons Resources LLC**

303 E 17th Ave Ste 940  
Denver CO 80203

ATTN: Ken Wallace

**Munsell #11-23**

**23-16s-28w Lane,KS**

Start Date: 2012.12.22 @ 09:40:46

End Date: 2012.12.22 @ 16:30:01

Job Ticket #: 49900                      DST #: 5

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

Printed: 2012.12.24 @ 11:04:36



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Flatirons Resources LLC

303 E 17th Ave Ste 940  
Denver CO 80203

ATTN: Ken Wallace

23-16s-28w Lane, KS

Munsell #11-23

Job Ticket: 49900

DST#: 5

Test Start: 2012.12.22 @ 09:40:46

## GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 11:38:31

Time Test Ended: 16:30:01

Test Type: Conventional Straddle (Reset)

Tester: Shane McBride

Unit No: 55

Interval: **4446.00 ft (KB) To 4499.00 ft (KB) (TVD)**

Total Depth: 4560.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2655.00 ft (KB)

2645.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: **8368** Outside

Press @ Run Depth: 42.40 psig @ 4447.00 ft (KB)

Start Date: 2012.12.22

End Date:

2012.12.22

Start Time: 09:40:46

End Time:

16:21:01

Capacity: 8000.00 psig

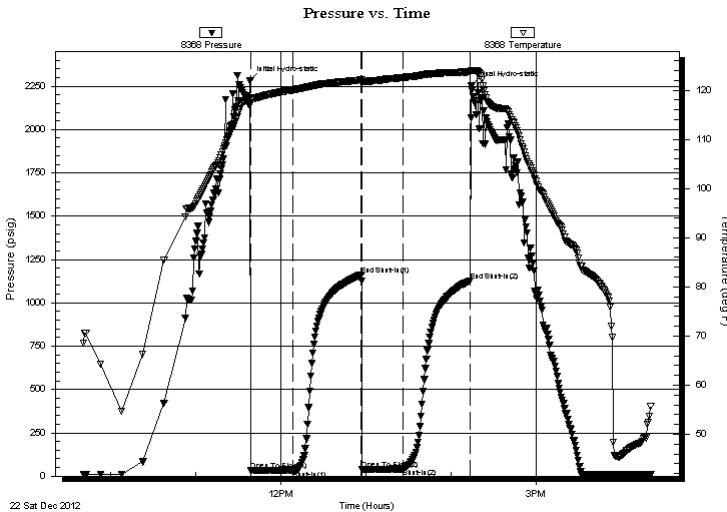
Last Calib.: 2012.12.22

Time On Btm: 2012.12.22 @ 11:38:16

Time Off Btm: 2012.12.22 @ 14:14:31

TEST COMMENT: 1" blow  
No return  
1/8" blow died in 28 min.  
No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2281.82	118.55	Initial Hydro-static
1	32.14	117.29	Open To Flow (1)
31	35.84	120.08	Shut-In(1)
79	1161.16	122.07	End Shut-In(1)
79	37.89	121.62	Open To Flow (2)
108	42.40	122.59	Shut-In(2)
156	1128.86	123.76	End Shut-In(2)
157	2252.34	123.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	free oil 100%o	0.04
17.00	s o c m 5%o 95%m	0.24

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Flatirons Resources LLC  
 303 E 17th Ave Ste 940  
 Denver CO 80203  
 ATTN: Ken Wallace

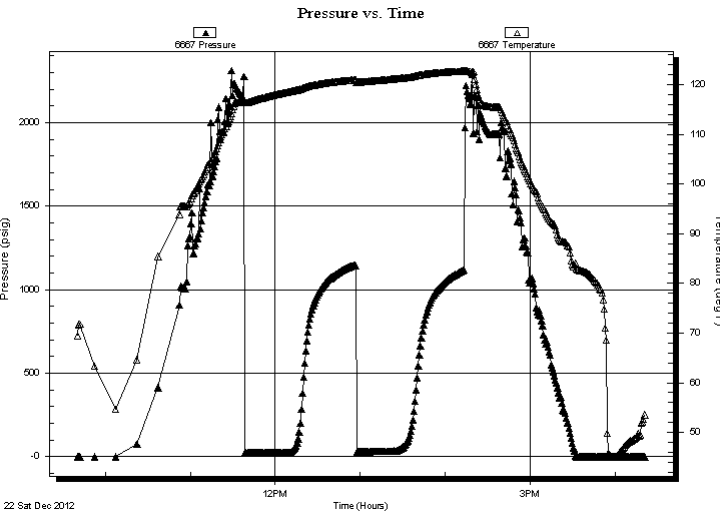
**23-16s-28w Lane, KS**  
**Munsell #11-23**  
 Job Ticket: 49900 **DST#: 5**  
 Test Start: 2012.12.22 @ 09:40:46

**GENERAL INFORMATION:**

Formation: **Cherokee**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 11:38:31  
 Time Test Ended: 16:30:01  
**Interval: 4446.00 ft (KB) To 4499.00 ft (KB) (TVD)**  
 Total Depth: 4560.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Reset)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2655.00 ft (KB)  
 2645.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 6667** Inside  
 Press @ Run Depth: psig @ 4447.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.12.22 End Date: 2012.12.22 Last Calib.: 2012.12.22  
 Start Time: 09:40:31 End Time: 16:21:01 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 1" blow  
 No return  
 1/8" blow died in 28 min.  
 No return



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
3.00	free oil 100%o	0.04
17.00	s o c m 5%o 95%m	0.24

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Flatirons Resources LLC  
 303 E 17th Ave Ste 940  
 Denver CO 80203  
 ATTN: Ken Wallace

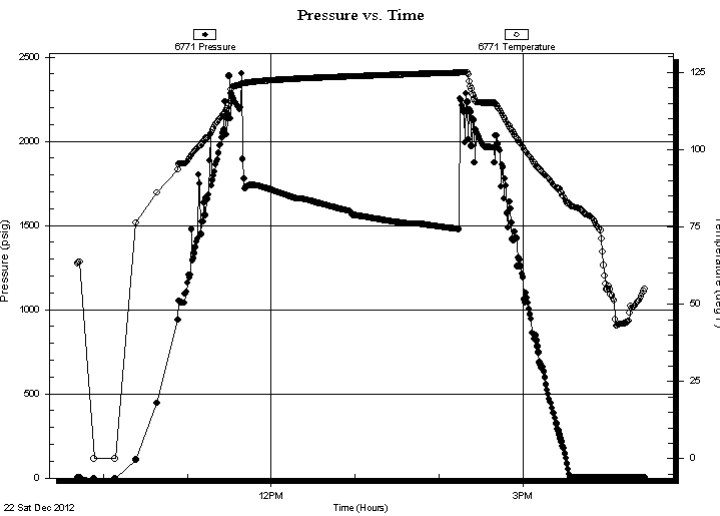
**23-16s-28w Lane, KS**  
**Munsell #11-23**  
 Job Ticket: 49900      **DST#: 5**  
 Test Start: 2012.12.22 @ 09:40:46

## GENERAL INFORMATION:

Formation: **Cherokee**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 11:38:31  
 Time Test Ended: 16:30:01  
**Interval: 4446.00 ft (KB) To 4499.00 ft (KB) (TVD)**  
 Total Depth: 4560.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Reset)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2655.00 ft (KB)  
 2645.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 6771 Below (Straddle)**  
 Press @RunDepth:      psig @ 4521.00 ft (KB)  
 Start Date: 2012.12.22      End Date: 2012.12.22  
 Start Time: 09:41:30      End Time: 16:27:15  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.12.22  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 1" blow  
 No return  
 1/8" blow died in 28 min.  
 No return



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

Recovery		
Length (ft)	Description	Volume (bbl)
3.00	free oil 100%o	0.04
17.00	s o c m 5%o 95%m	0.24

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Flatirons Resources LLC

**23-16s-28w Lane,KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49900

**DST#: 5**

ATTN: Ken Wallace

Test Start: 2012.12.22 @ 09:40:46

## Tool Information

Drill Pipe:	Length: 4450.00 ft	Diameter: 3.80 inches	Volume: 62.42 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: 30000.00 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: 62.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4446.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	4560.00 ft			
Interval between Packers:	114.00 ft			
Tool Length:	141.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Change Over Sub	1.00			4420.00	
Shut In Tool	5.00			4425.00	
Hydraulic tool	5.00			4430.00	
Jars	5.00			4435.00	
Safety Joint	2.00			4437.00	
Packer	5.00			4442.00	27.00 Bottom Of Top Packer
Packer	4.00			4446.00	
Stubb	1.00			4447.00	
Recorder	0.00	6667	Inside	4447.00	
Recorder	0.00	8368	Outside	4447.00	
Perforations	10.00			4457.00	
Change Over Sub	1.00			4458.00	
Drill Pipe	31.00			4489.00	
Change Over Sub	1.00			4490.00	
Perforations	5.00			4495.00	
Blank Off Sub	1.00			4496.00	
top of s packer	3.00			4499.00	
Packer - Shale	0.00			4499.00	
Stubb	1.00			4500.00	
Anchor	21.00			4521.00	
Recorder	0.00	6771	Below	4521.00	
Change Over Sub	1.00			4522.00	
Drill Pipe	32.00			4554.00	
Change Over Sub	1.00			4555.00	
Bullnose	5.00			4560.00	114.00 Bottom Packers & Anchor

**Total Tool Length: 141.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Flatirons Resources LLC

**23-16s-28w Lane, KS**

303 E 17th Ave Ste 940  
Denver CO 80203

**Munsell #11-23**

Job Ticket: 49900

**DST#: 5**

ATTN: Ken Wallace

Test Start: 2012.12.22 @ 09:40:46

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	free oil 100%o	0.042
17.00	s o c m 5%o 95%m	0.238

Total Length: 20.00 ft      Total Volume: 0.280 bbl

Num Fluid Samples: 0

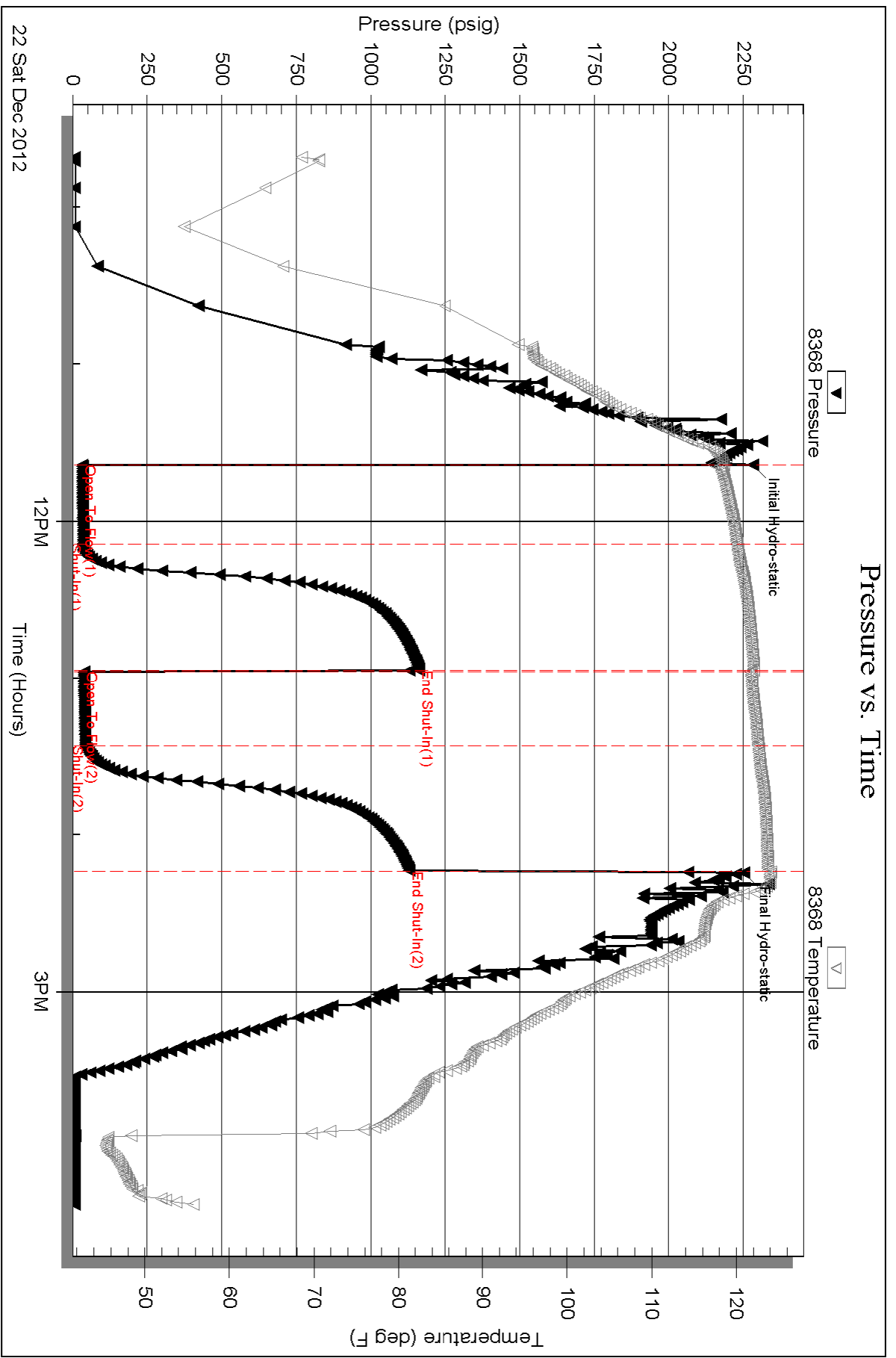
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



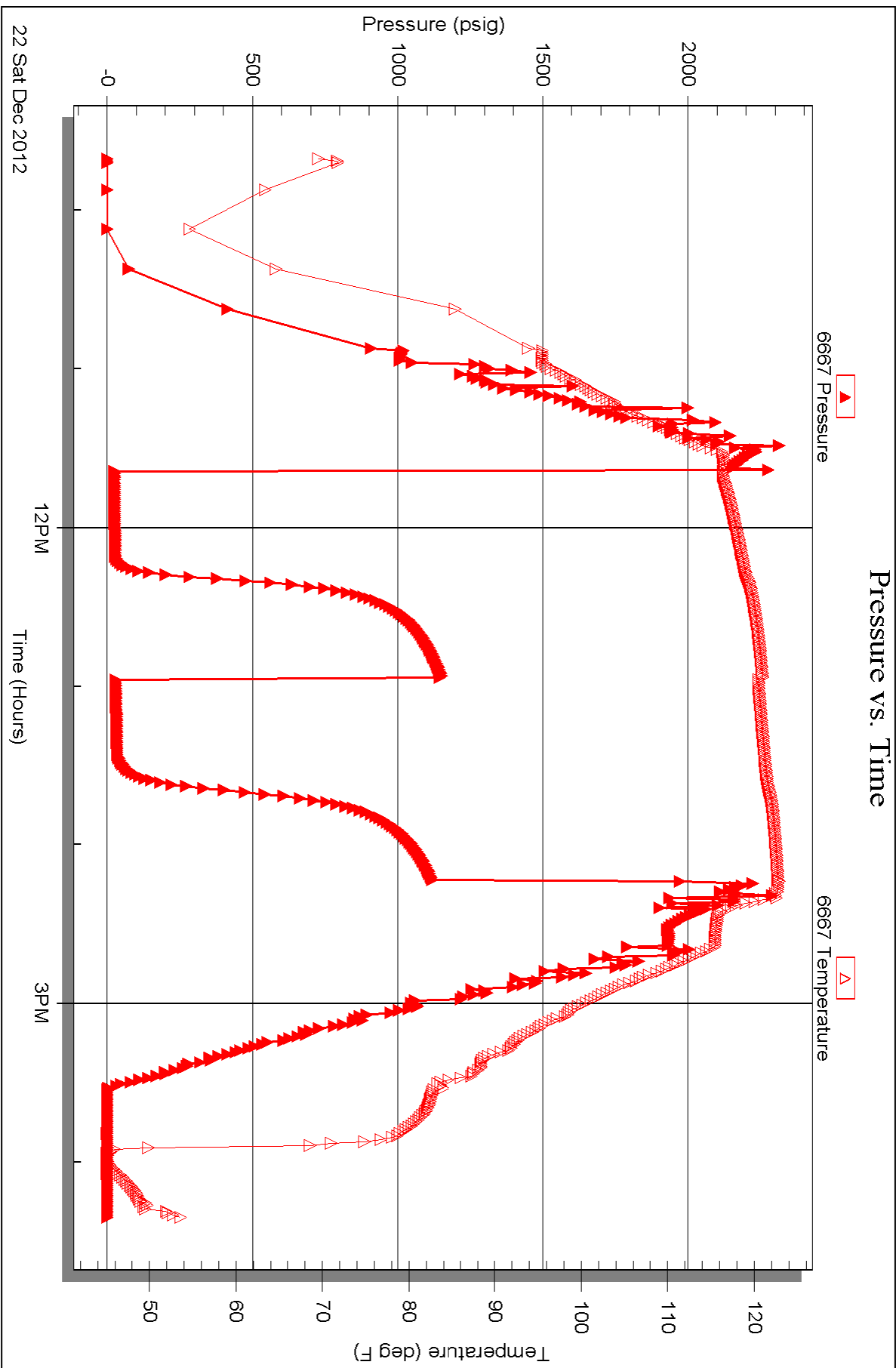
Serial #: 6667

Inside

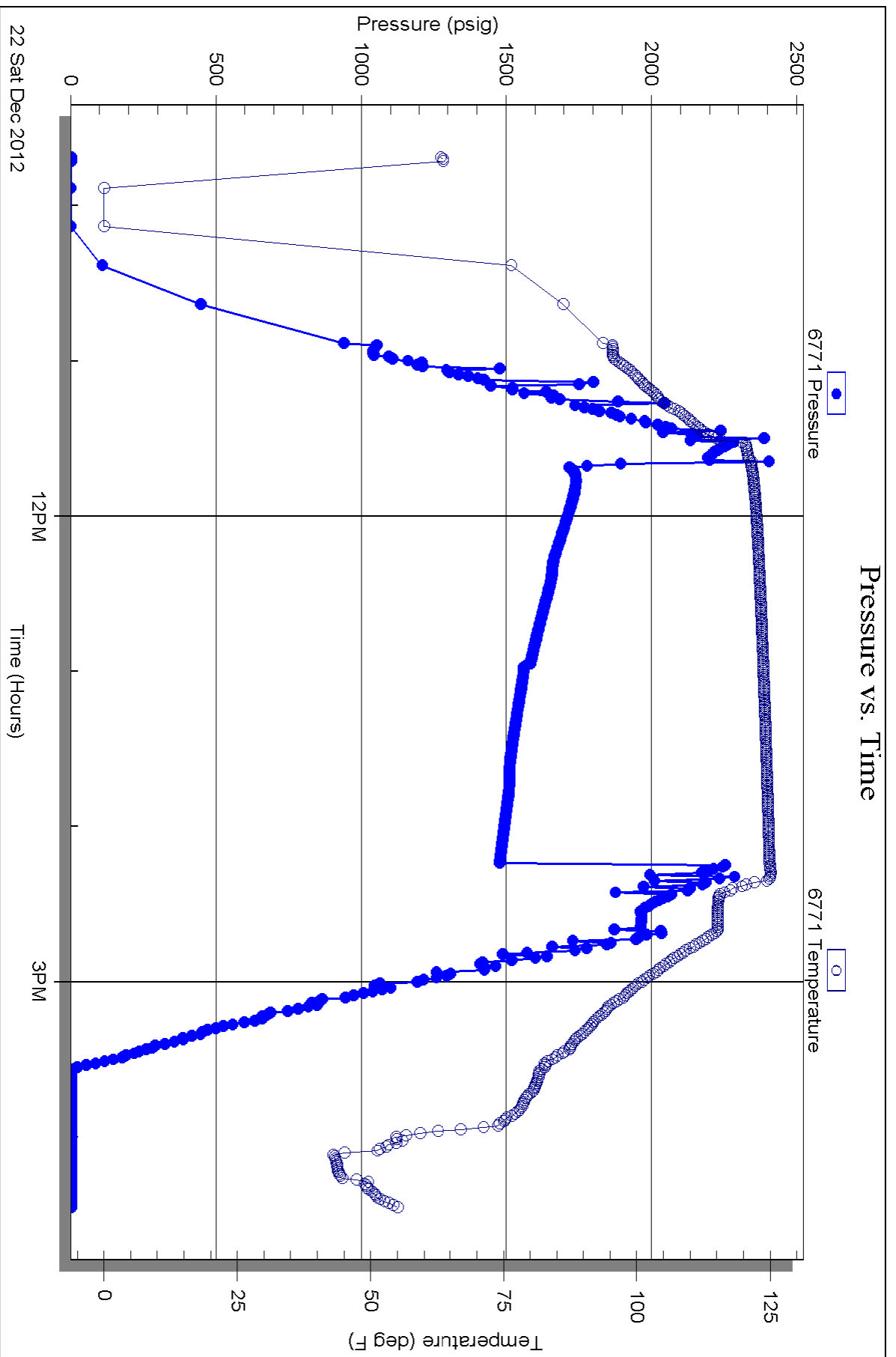
Flatirons Resources LLC

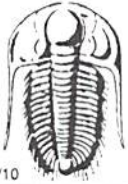
Munsell #11-23

DST Test Number: 5









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49896

4/10

Well Name & No. Munsted # 11-23 Test No. #1 Date 12/18/12  
 Company Flatirons Resources LLC Elevation 2655 KB 2645 GL  
 Address 303 E 17th Ave Ste 940 Denver, Colo 80203  
 Co. Rep / Geo. Ken Wallace Rig Val #7  
 Location: Sec. 23 Twp. 16S Rge. 28W Co. Lane State Ks

Interval Tested 4150 4180 Zone Tested R  
 Anchor Length 30 Drill Pipe Run 4136 Mud Wt. 9.3  
 Top Packer Depth 4145 Drill Collars Run — Vis 45  
 Bottom Packer Depth 4150 Wt. Pipe Run — WL 8.0  
 Total Depth 4180 Chlorides 3800 ppm System LCM #3

Blow Description 3" w blow  
No return  
6" w blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2'</u>	<u>feet of free oil</u>	<u>100</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>88'</u>	<u>feet of mcw</u>	<u>—</u>	<u>70</u>	<u>—</u>	<u>30</u>
<u>—</u>	<u>feet of</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>—</u>	<u>feet of (150' very weak gas w pipe)</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>—</u>	<u>feet of</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Rec Total 90 BHT 120° Gravity — API RW 347 @ 50 ° F Chlorides 28000 ppm

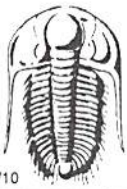
(A) Initial Hydrostatic <u>2057</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>23:50</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>01:00</u>
(C) First Final Flow <u>33</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>03:37</u>
(D) Initial Shut-In <u>554</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>06:37</u>
(E) Second Initial Flow <u>36</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>08:35</u>
(F) Second Final Flow <u>68</u>	<input checked="" type="checkbox"/> Mileage <u>83RT</u> 128.65	Comments
(G) Final Shut-In <u>524</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2003</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer

Initial Open 15  
 Initial Shut-In 45  
 Final Flow 60  
 Final Shut-In 60

Sub Total 1703.65

Approved By Ken Wallace Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49897

4/10

Well Name & No. Munsell #11-23 Test No. #2 Date 12/19/12  
 Company Flatirons Resources LLC Elevation 2655 KB 2645 GL  
 Address 303 E 17th Ave Ste 940 Denver, Colo 80203  
 Co. Rep / Geo. Ken Wallace Rig Yal #7  
 Location: Sec. 23 Twp. 16S Rge. 28W Co. Lane State Ks

Interval Tested 4222 4309 Zone Tested Marmaton  
 Anchor Length 87 Drill Pipe Run 4200 Mud Wt. 9.5  
 Top Packer Depth 4217 Drill Collars Run — Vis 65  
 Bottom Packer Depth 4222 Wt. Pipe Run — WL 7.2  
 Total Depth 4309 Chlorides 3500 ppm System LCM #3

Blow Description 1" blow  
No return  
2 3/4" blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>75'</u>	<u>Mud (Heavy)</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

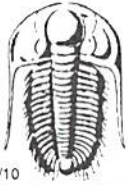
Rec Total 75' BHT 115° Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 2071  Test 1250 T-On Location 00:45  
 (B) First Initial Flow 24  Jars 250 T-Started 01:40  
 (C) First Final Flow 38  Safety Joint 75 T-Open 03:45  
 (D) Initial Shut-In 1131  Circ Sub N/C T-Pulled 07:00  
 (E) Second Initial Flow 54  Hourly Standby T-Out 08:50  
 (F) Second Final Flow 58  Mileage 83 RT 128.65 Comments —  
 (G) Final Shut-In 1054  Sampler —  
 (H) Final Hydrostatic 2033  Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —  
 Extra Packer —  Extra Copies —  
 Extra Recorder — Sub Total 0  
 Day Standby — Total 1703.65  
 Accessibility — MP/DST Disc't —

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 60  
 Final Shut-In 60  
 Sub Total 1703.65

Approved By Ken Wallace Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49898

4/10

Well Name & No. Mansell #11-23 Test No. #3 Date 12/20/12  
 Company Flatirons Resources LLC Elevation 2655 KB 2645 GL  
 Address 303 E 17th Ave Ste 940 Denver, Colo 80203  
 Co. Rep / Geo. Ken Wallace Rig Val #7  
 Location: Sec. 23 Twp. 16S Rge. 28W Co. lane State Ks

Interval Tested 4314 4375 Zone Tested Pawnee  
 Anchor Length 59 Drill Pipe Run 4294' Mud Wt. 9.3  
 Top Packer Depth 4311 Drill Collars Run — Vis 51  
 Bottom Packer Depth 4314 Wt. Pipe Run — WL 6.4  
 Total Depth 4375 Chlorides 2200 ppm System LCM #2

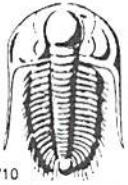
Blow Description 1" in blow  
No return  
Very Weak Surface blow died in 17 min  
No return

Rec	Feet of	%gas	Spots	%oil	%water	%mud
10'	Mad w/oil spots				100	
	(Had 600' Drilling mud in pipe)					
	Rig hands dropped a Tong Die					
	down pipe on way out of hole					
	(Broke Circ sub off.)					

Rec Total 10' BHT 118° Gravity — API RW — @ —° F Chlorides — ppm

(A) Initial Hydrostatic <u>2153</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>20:40</u>
(B) First Initial Flow <u>25</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>22:50</u>
(C) First Final Flow <u>27</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>02:20</u>
(D) Initial Shut-In <u>119</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>04:50</u>
(E) Second Initial Flow <u>28</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>07:30</u>
(F) Second Final Flow <u>29</u>	<input checked="" type="checkbox"/> Mileage <u>128.65</u>	Comments
(G) Final Shut-In <u>59</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2047</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>1703.65</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1703.65</u>	

Approved By [Signature] Our Representative [Signature]  
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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49899

Well Name & No. Munsel #11-23 Test No. #4 Date 12/21/12  
 Company Flatirons Resources LLC Elevation 2655 KB 2645 GL  
 Address 303 E 17<sup>th</sup> Ave Ste 940 Denver Colo  
 Co. Rep / Geo. Ken Wallace Rig Val #7  
 Location: Sec. 23 Twp. 16S Rge. 28W Co. Lane State Ks

Interval Tested 4388 4435 Zone Tested Fr. Scott  
 Anchor Length 47 Drill Pipe Run 4388 Mud Wt. 9.2  
 Top Packer Depth 4383 Drill Collars Run — Vis 43  
 Bottom Packer Depth 4388 Wt. Pipe Run — WL 6.4  
 Total Depth 4435 Chlorides 2400 ppm System LCM #2  
 Blow Description 1/4" in blow, dried in 26 min.  
No return  
5 1/2" in blow  
No return

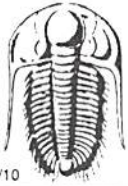
Rec	Feet of	%gas	%oil	%water	%mud
<u>30'</u>	<u>0 cm</u>		<u>7</u>		<u>93</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>90' Gas in pipe</u>	%gas	%oil	%water	%mud
Rec	Feet of <u>(very faint odor)</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30' BHT 116° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2143</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>23:40</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars	T-Started <u>01:00</u>
(C) First Final Flow <u>22</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>03:05</u>
(D) Initial Shut-In <u>193</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>06:05</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>08:20</u>
(F) Second Final Flow <u>27</u>	<input checked="" type="checkbox"/> Mileage <u>83 RT</u> <u>128.65</u>	Comments
(G) Final Shut-In <u>634</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2096</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Extra Recorder	Sub Total <u>320</u>
	<input type="checkbox"/> Day Standby	Total <u>1773.65</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1453.65</u>	

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49900

4/10

Well Name & No. Munsell # 11-23 Test No. #5 Date 12/22/12  
 Company Flatirons Resources LLC Elevation 2655 KB 2645 GL  
 Address 303 E 17th Ave Ste 940 Denver, Colo  
 Co. Rep / Geo. Ken Wallace Rig Val #7  
 Location: Sec. 23 Twp. 16S Rge. 28W Co. lane State ks

Interval Tested 4446 4499 Zone Tested Cherokee  
 Anchor Length 53 Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.2  
 Top Packer Depth 4441 Drill Collars Run \_\_\_\_\_ Vis 45  
 Bottom Packer Depth 4446 Wt. Pipe Run \_\_\_\_\_ WL 6.4  
 Total Depth (T.D. 4560) 4499 Chlorides 2400 ppm System LCM #2  
(61' tail pipe)  
 Blow Description 1" in blow  
1/8" blow dinged in 28 min  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>3'</u>	<u>Free Oil</u>		<u>100%</u>		
<u>17'</u>	<u>SOCM</u>		<u>5%</u>		<u>95%</u>
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 20' BHT 124° Gravity 31 API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2281  Test 1250 T-On Location 07:30  
 (B) First Initial Flow 32  Jars 250 T-Started 09:40  
 (C) First Final Flow 35  Safety Joint 75 T-Open 11:40  
 (D) Initial Shut-In 1161  Circ Sub N/C T-Pulled 14:10  
 (E) Second Initial Flow 37  Hourly Standby 1 hr waited T-Out 16:30  
 (F) Second Final Flow 42  Mileage 83 RT 128.65 Comments \_\_\_\_\_  
 (G) Final Shut-In 1128  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2252  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer 250  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 45  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 30  Day Standby \_\_\_\_\_ Total 2553.65  
 Final Shut-In 45  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 2553.65

Approved By Ken Wallace Our Representative [Signature]

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# ALLIED OIL & GAS SERVICES, LLC 059180

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT:  
*Great Bend KS*

DATE <i>12-11-12</i>	SEC. <i>23</i>	TWP. <i>16S</i>	RANGE <i>28W</i>	CALLED OUT <i>4:00 PM</i>	ON LOCATION <i>8:00 PM</i>	JOB START	JOB FINISH
LEASE <i>Moncell</i> WELL# <i>11-23</i>				LOCATION <i>G6W, 283N, 41W</i>		COUNTY <i>Lane</i>	STATE <i>KS</i>
OLD OR <input checked="" type="checkbox"/> NEW (Circle one)				Location <i>Pawnee Ave N 1.25 miles</i>		<i>1.01</i>	<i>loc 3</i>

CONTRACTOR *Val* OWNER *Flat Iron*

TYPE OF JOB *Surface*

HOLE SIZE *12 1/4* T.D. *223* CEMENT AMOUNT ORDERED *200 sk 3% C.C.*

CASING SIZE *8 5/8* DEPTH *223* *2% Gal*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX *500* MINIMUM

MEAS. LINE	SHOE JOINT <i>20' 1.22241</i>	COMMON <i>200 @ 17.90</i>	<i>3580.00</i>
CEMENT LEFT IN CSG. <i>20'</i>	POZMIX	GEL <i>4 @ 23.40</i>	<i>93.60</i>
PERFS.		CHLORIDE <i>7 @ 64.00</i>	<i>448.00</i>
DISPLACEMENT <i>13.6615</i>		ASC	

EQUIPMENT

PUMP TRUCK CEMENTER *Patrick Helgeson*

# *417* HELPER *woody a weal*

BULK TRUCK

# *5211-198* DRIVER *Joel Marchen*

BULK TRUCK DRIVER

HANDLING <i>216.66</i>	@ <i>2.48</i>	<i>537.32</i>
MILEAGE <i>9.88 x 50 x</i>	<i>2.60</i>	<i>661.91</i>
		<i>5945.32</i>
<i>1494 -</i>		TOTAL <i>6067.31</i>

REMARKS:  
*Cement to surface - 20 RBLS*

**SERVICE**

DEPTH OF JOB <i>223</i>	
PUMP TRUCK CHARGE <i>1512.25</i>	
EXTRA FOOTAGE @	
MILEAGE <i>Hum 50 @ 7.70</i>	<i>385.00</i>
MANIFOLD <i>Hum 50 @ 4.40</i>	<i>220.00</i>

TOTAL *2.117.25*

CHARGE TO: *Flat Iron*

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**PLUG & FLOAT EQUIPMENT**

_____ @ _____
_____ @ _____
_____ @ _____
_____ @ _____
_____ @ _____

TOTAL \_\_\_\_\_

To: Allied Oil & Gas Services, LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (if Any) *259.66*

TOTAL CHARGES ~~*8184.56*~~ *8060.57*

DISCOUNT ~~*30% 2455.56*~~ IF PAID IN 30 DAYS

*5729.20* *2418.17 disc*

*5642.40 net*

PRINTED NAME *JAMES Switzer*

SIGNATURE *[Signature]*

# ALLIED OIL & GAS SERVICES, LLC 060022

Federal Tax I.D. # 20-8651476

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT:

*Oakley*

DATE <i>12-23-12</i>	SEC <i>23</i>	TWP <i>16</i>	RANGE <i>28</i>	CALLED OUT	ON LOCATION	JOB START <i>2:30 AM</i>	JOB FINISH <i>3:30 PM</i>
LEASE <i>Munsell</i>	WELL # <i>11-23</i>	LOCATION <i>Shields 4E-1/2 N</i>		COUNTY <i>Lane</i>	STATE <i>Ks</i>		
OLD OR <input checked="" type="checkbox"/> NEW (Circle one)		<i>winto</i>					

CONTRACTOR *Val #7* OWNER *Same*

TYPE OF JOB *PTA*  
 HOLE SIZE *7 7/8* T.D. *4560'*  
 CASING SIZE DEPTH  
 TUBING SIZE DEPTH  
 DRILL PIPE *4 1/2* DEPTH *2090'*  
 TOOL DEPTH  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG.  
 PERFS.  
 DISPLACEMENT *2260*

CEMENT  
 AMOUNT ORDERED *300 SKS 60/40 40/60*  
*1/4 Flo Seal*

EQUIPMENT

PUMP TRUCK CEMENTER *Darren Racette*  
 # *422-281* HELPER *Tyler Ellipse*  
 BULK TRUCK  
 # *396-301* DRIVER *Thomas Torres (TUS)*  
 BULK TRUCK  
 # DRIVER

COMMON *180 SKS @ 17.92 \$ 3222.00*  
 POZMIX *120 SKS @ 19.35 \$ 2322.00*  
 GBL *10 SKS @ 23.40 \$ 234.00*  
 CHLORIDE  
 ASC  
 Flo Seal *75' @ 2.92 \$ 219.00*  
 HANDLING *32220 @ 2.48 \$ 799.06*  
 MILEAGE *13.45 @ 66 \$ 887.70*

REMARKS:

*mix 50 sks Cement 2090'*  
*mix 50 sks Cement 1290'*  
*mix 50 sks Cement 630'*  
*mix 50 sks Cement 260'*  
*mix 50 sks Cement 60'*  
*Plug mousehole 20 sks Cement*  
*Plug Rat hole 30 sks Cement*

TOTAL *7907.83*  
 SERVICE *7348.31*

DEPTH OF JOB *2090'*  
 PUMP TRUCK CHARGE *\$2483.52*  
 EXTRA FOOTAGE  
 MILEAGE *66 @ 7.70 \$ 508.20*  
 MANIFOLD  
*20 mileage 50 @ 4.92 \$ 984.00*

*Thank You*

CHARGE TO: *Flatiron Resources*  
 STREET  
 CITY STATE ZIP

TOTAL *3688.59*  
*3282.19*

PLUG & FLOAT EQUIPMENT

*Wooden Plug @ \$107.64*  
 TOTAL *\$107.64*

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PRINTED NAME *James S. Shultz*

SIGNATURE *[Signature]*

SALES TAX (if Any) *44.75 @ 66.4.30*  
 TOTAL CHARGES *11,227.66 10544.54*  
 DISCOUNT *4519.06* IF PAID IN 30 DAYS  
*to 778.60 4217.81 disc*  
*40% 6326.73*