

**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Flatirons Res LLC**

303 E 17th Ste 940  
Denver Colo 80202

ATTN:

**14-16-28-Lane-Ks**

**Church Lawrence 11-14**

Start Date: 2010.05.18 @ 22:37:37

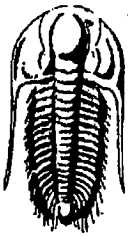
End Date: 2010.05.19 @ 05:57:07

Job Ticket #: 38687                      DST #: 1

**KCC  
JUL 27 2010  
CONFIDENTIAL**

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

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JUL 29 2010  
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**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Flatirons Res LLC  
 303 E 17th Ste 940  
 Denver Colo 80202  
 ATTN:

**Church Lawrence 11-14**  
**14-16-28-Lane-Ks**  
 Job Ticket: 38687      DST#: 1  
 Test Start: 2010.05.18 @ 22:37:37

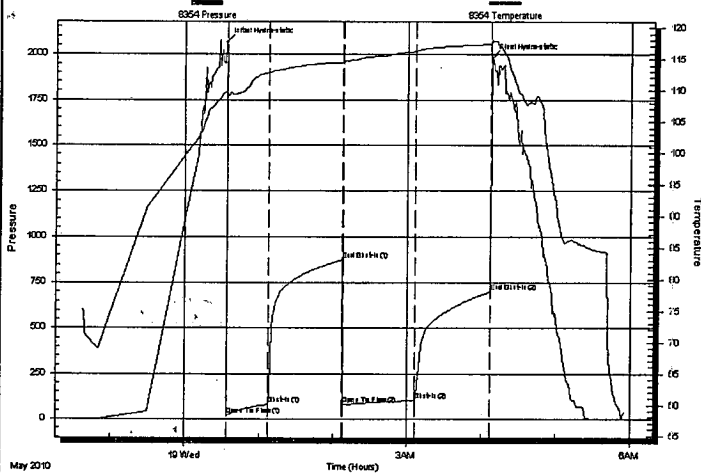
## GENERAL INFORMATION:

Formation: H-I LKC  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:34:07  
 Time Test Ended: 05:57:07  
 Test Type: Conventional Bottom Hole  
 Tester: Dan Bangle  
 Unit No: 38  
 Interval: 4008.00 ft (KB) To 4076.00 ft (KB) (TVD)  
 Reference Elevations: 2633.00 ft (KB)  
 Total Depth: 4076.00 ft (KB) (TVD) 2628.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 8354**      **Inside**  
 Press@RunDepth: 105.49 psig @ 4012.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2010.05.18      End Date: 2010.05.19      Last Calib.: 2010.05.19  
 Start Time: 22:37:38      End Time: 05:57:07      Time On Btm: 2010.05.19 @ 00:33:07  
 Time Off Btm: 2010.05.19 @ 04:08:07

TEST COMMENT: IF-Weak building to 1"  
 FF-Weak building to 1/2"

Pressure vs. Time



## PRESSURE SUMMARY

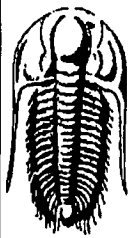
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2065.69	109.71	Initial Hydro-static
1	20.46	108.96	Open To Flow (1)
34	79.81	112.80	Shut-In(1)
94	872.65	114.47	End Shut-In(1)
95	81.78	114.31	Open To Flow (2)
153	105.49	116.30	Shut-In(2)
215	701.63	117.33	End Shut-In(2)
215	1982.04	117.67	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mdy Wtr	0.59
60.00	Mud w/ show of oil on top	0.82

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Flatirons Res LLC

**Church Lawrence 11-14**

303 E 17th Ste 940  
Denver Colo 80202

**14-16-28-Lane-Ks**

Job Ticket: 38687

**DST#: 1**

ATTN:

Test Start: 2010.05.18 @ 22:37:37

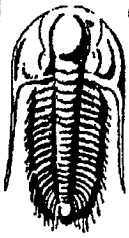
## Tool Information

Drill Pipe:	Length: 3887.00 ft	Diameter: 3.80 inches	Volume: 54.52 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: 2000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
			<b>Total Volume: 55.12 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4008.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	96.00 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			3981.00	
Shut In Tool	5.00			3986.00	
Hydraulic tool	5.00			3991.00	
Jars	5.00			3996.00	
Safety Joint	3.00			3999.00	
Packer	5.00			4004.00	28.00 Bottom Of Top Packer
Packer	4.00			4008.00	
Stubb	1.00			4009.00	
Perforations	2.00			4011.00	
Change Over Sub	1.00			4012.00	
Recorder	0.00	8354	Inside	4012.00	
Recorder	0.00	8520	Outside	4012.00	
Drill Pipe	31.00			4043.00	
Change Over Sub	1.00			4044.00	
Perforations	29.00			4073.00	
Bullnose	3.00			4076.00	68.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>96.00</b>				



**TRILOBITE  
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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Flatirons Res LLC  
303 E 17th Ste 940  
Denver Colo 80202

**Church Lawrence 11-14**  
**14-16-28-Lane-Ks**  
Job Ticket: 38687      **DST#: 1**  
Test Start: 2010.05.18 @ 22:37:37

ATTN:

**Mud and Cushion Information**

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 54.00 sec/qt  
Water Loss: 7.57 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 2000.00 ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: 35000 ppm

**Recovery Information**

Recovery Table

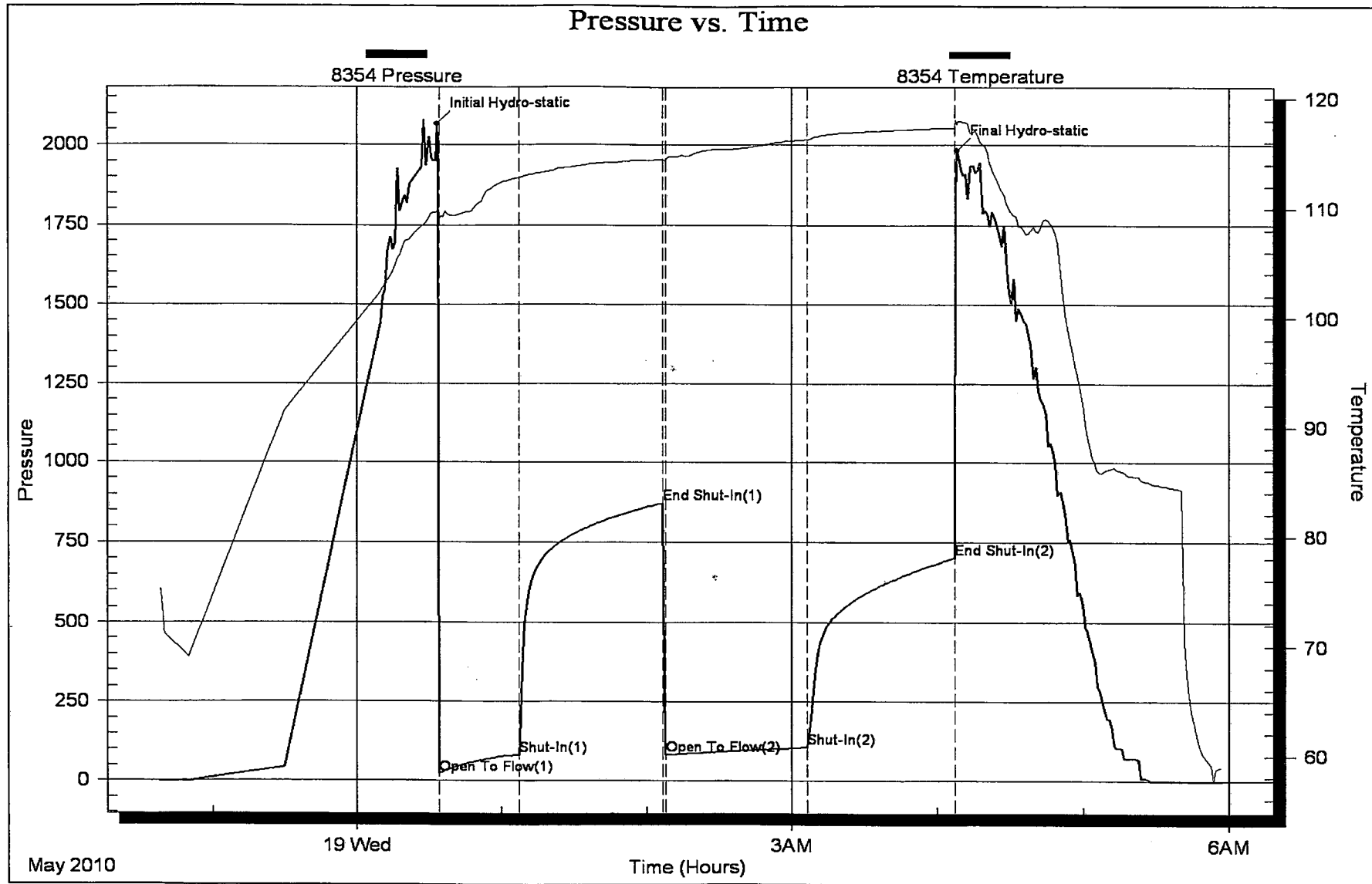
Length ft	Description	Volume bbl
120.00	Mdy Wtr	0.590
60.00	Mud w / show of oil on top	0.823

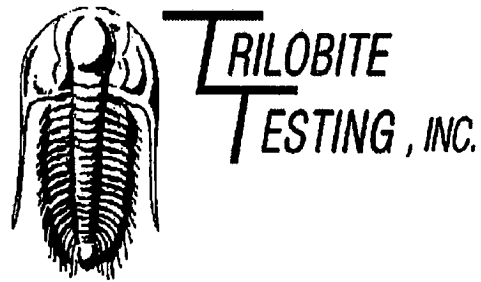
Total Length: 180.00 ft      Total Volume: 1.413 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: Rw .20 @ 70 =35000ppm





## DRILL STEM TEST REPORT

Prepared For: **Flatirons Res LLC**

303 E 17th Ste 940  
Denver Colo 80202

ATTN:

**14-16-28-Lane-Ks**

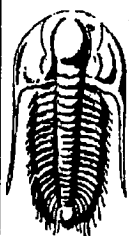
**Church Lawrence 11-14**

Start Date: 2010.05.19 @ 17:13:11

End Date: 2010.05.19 @ 23:58:11

Job Ticket #: 38688                      DST #: 2

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Flatirons Res LLC

303 E 17th Ste 940  
Denver Colo 80202

ATTN:

Church Lawrence 11-14

14-16-28-Lane-Ks

Job Ticket: 38688

DST#: 2

Test Start: 2010.05.19 @ 17:13:11

## GENERAL INFORMATION:

Formation: L LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:49:26

Time Test Ended: 23:58:11

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Interval: 4136.00 ft (KB) To 4170.00 ft (KB) (TVD)

Total Depth: 4170.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2633.00 ft (KB)

2628.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8354 Inside

Press@RunDepth: 65.80 psig @ 4137.00 ft (KB)

Start Date: 2010.05.19

End Date:

2010.05.19

Start Time: 17:13:12

End Time:

23:58:11

Capacity: 8000.00 psig

Last Calib.: 2010.05.20

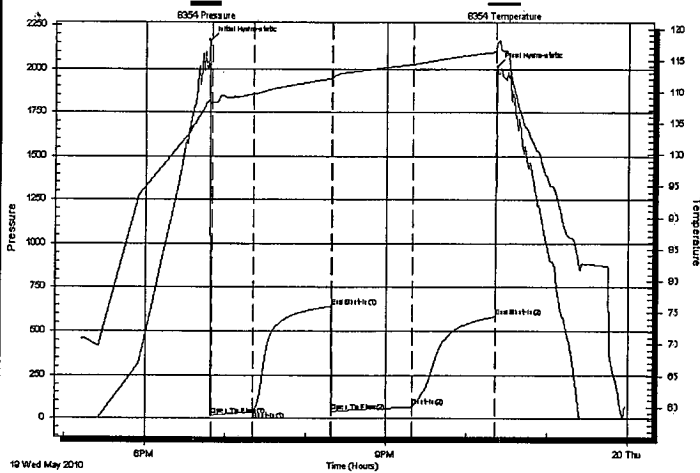
Time On Btm: 2010.05.19 @ 18:47:56

Time Off Btm: 2010.05.19 @ 22:22:11

TEST COMMENT: IF-Weak building to 1/2"

FF-Weak steady surface blow

Pressure vs. Time



## PRESSURE SUMMARY

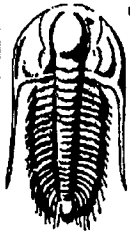
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2160.74	108.62	Initial Hydro-static
2	17.92	108.23	Open To Flow (1)
33	38.21	109.61	Shut-In(1)
91	642.31	112.07	End Shut-In(1)
91	41.79	111.81	Open To Flow (2)
151	65.80	114.36	Shut-In(2)
214	583.58	116.35	End Shut-In(2)
215	2013.10	117.71	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Sltly OCM 3%o 97%r	0.30

## Gas Rates

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



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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Flatirons Res LLC

Church Lawrence 11-14

303 E 17th Ste 940  
Denver Colo 80202

14-16-28-Lane-Ks

Job Ticket: 38688

DST#: 2

ATTN:

Test Start: 2010.05.19 @ 17:13:11

## Tool Information

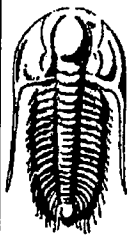
Drill Pipe:	Length: 4012.00 ft	Diameter: 3.80 inches	Volume: 56.28 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 56.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4136.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	62.00 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			4109.00	
Shut In Tool	5.00			4114.00	
Hydraulic tool	5.00			4119.00	
Jars	5.00			4124.00	
Safety Joint	3.00			4127.00	
Packer	5.00			4132.00	28.00 Bottom Of Top Packer
Packer	4.00			4136.00	
Stubb	1.00			4137.00	
Recorder	0.00	8354	Inside	4137.00	
Recorder	0.00	8520	Outside	4137.00	
Perforations	30.00			4167.00	
Bullnose	3.00			4170.00	34.00 Bottom Packers & Anchor

**Total Tool Length: 62.00**



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Church Lawrence 11-14

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Denver Colo 80202

14-16-28-Lane-Ks

Job Ticket: 38688

DST#: 2

ATTN:

Test Start: 2010.05.19 @ 17:13:11

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	Sltly OCM 3%o 97% <sub>m</sub>	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

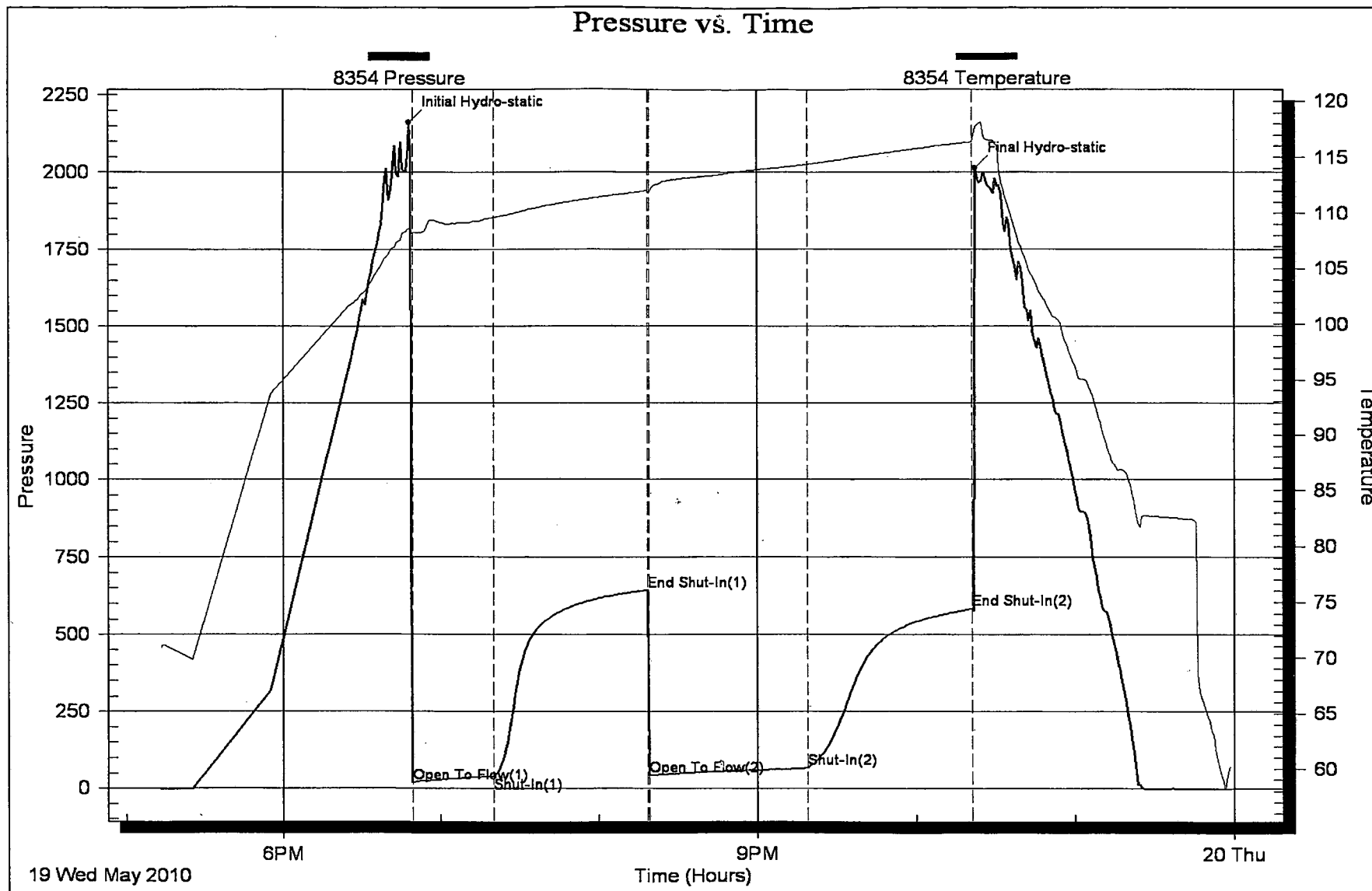
Num Gas Bombs: 0

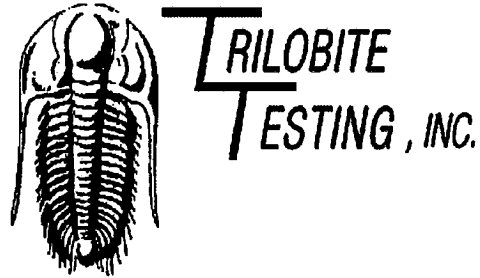
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **Flatirons Res LLC**

303 E 17th Ste 940  
Denver Colo 80202

ATTN:

**14-16-28-Lane-Ks**

**Church Lawrence 11-14**

Start Date: 2010.05.20 @ 22:47:33

End Date: 2010.05.21 @ 05:02:03

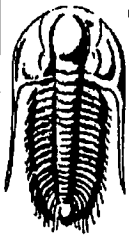
Job Ticket #: 38689                      DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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





**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Flatirons Res LLC

**Church Lawrence 11-14**

303 E 17th Ste 940  
Denver Colo 80202

**14-16-28-Lane-Ks**

Job Ticket: 38689

**DST#: 3**

ATTN:

Test Start: 2010.05.20 @ 22:47:33

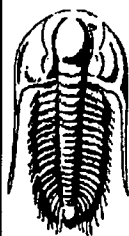
**Tool Information**

Drill Pipe:	Length: 4200.00 ft	Diameter: 3.80 inches	Volume: 58.91 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: 20000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 59.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4344.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	66.00 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			4317.00	
Shut In Tool	5.00			4322.00	
Hydraulic tool	5.00			4327.00	
Jars	5.00			4332.00	
Safety Joint	3.00			4335.00	
Packer	5.00			4340.00	28.00 Bottom Of Top Packer
Packer	4.00			4344.00	
Stubb	1.00			4345.00	
Recorder	0.00	8354	Inside	4345.00	
Recorder	0.00	8520	Outside	4345.00	
Perforations	34.00			4379.00	
Bullnose	3.00			4382.00	38.00 Bottom Packers & Anchor

**Total Tool Length: 66.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Flatirons Res LLC

Church Lawrence 11-14

303 E 17th Ste 940  
Denver Colo 80202

14-16-28-Lane-Ks

Job Ticket: 38689

DST#:3

ATTN:

Test Start: 2010.05.20 @ 22:47:33

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 91.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	MCGsyO 30%g 50%o 20%m	0.295
152.00	CGsyO 30%g 70%o	1.567
0.00	940 GIP	0.000

Total Length: 212.00 ft

Total Volume: 1.862 bbl

Num Fluid Samples: 0

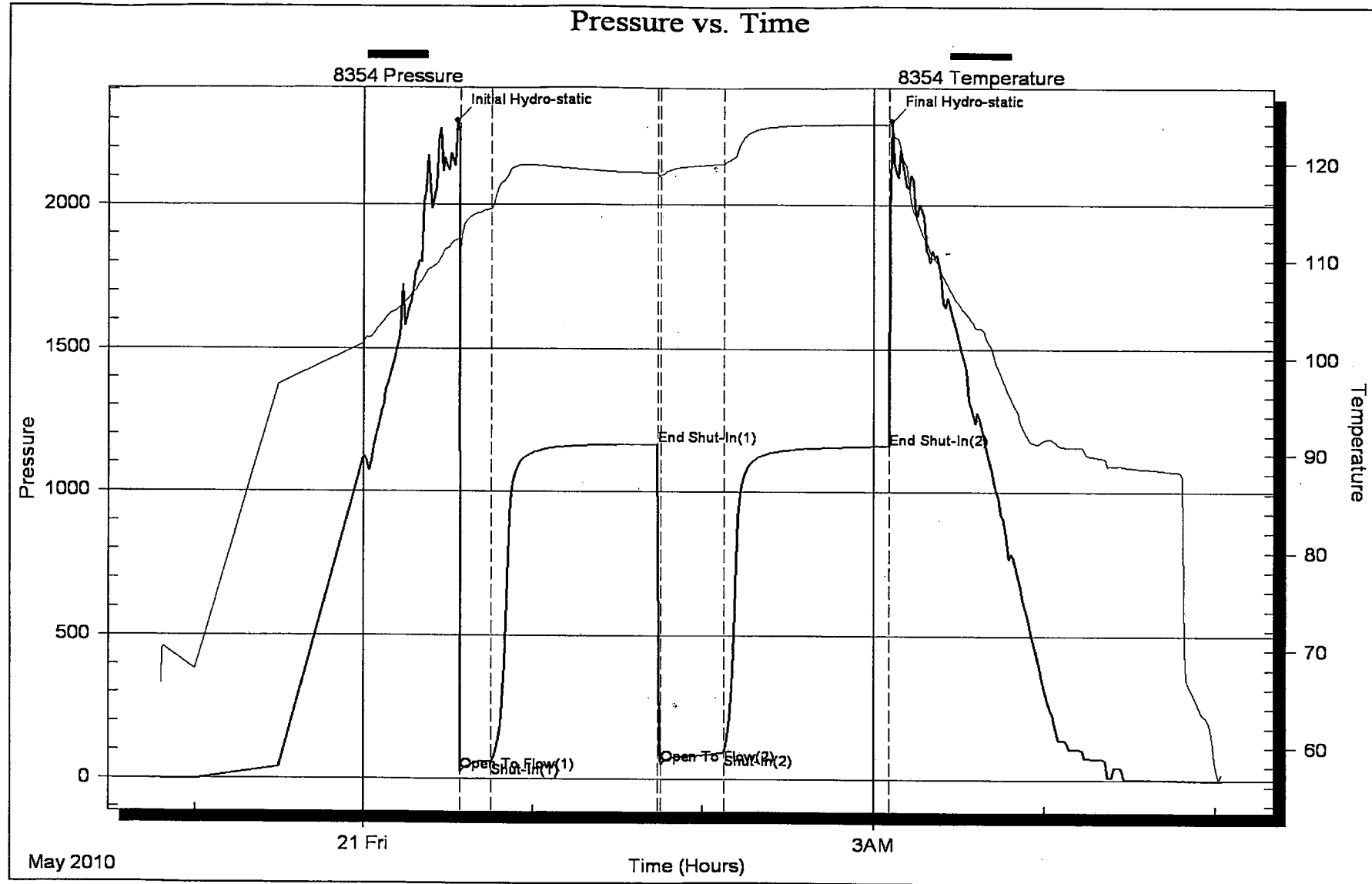
Num Gas Bombs: 0

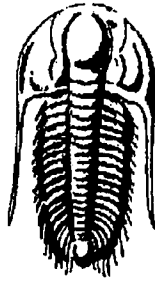
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Flatirons Res LLC**

303 E 17th Ste 940  
Denver Colo 80202

ATTN:

**14-16-28-Lane-Ks**

**Church Lawrence 11-14**

Start Date: 2010.05.21 @ 14:00:54

End Date: 2010.05.21 @ 18:26:24

Job Ticket #: 38690                      DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Flatirons Res LLC

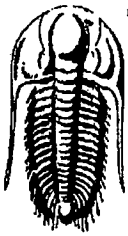
Church Lawrence 11-14

14-16-28-Lane-Ks

DST # 4

Cherokee

2010.05.21



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Flatirons Res LLC  
303 E 17th Ste 940  
Denver Colo 80202  
ATTN:

**Church Lawrence 11-14**  
**14-16-28-Lane-Ks**  
Job Ticket: 38690      **DST#: 4**  
Test Start: 2010.05.21 @ 14:00:54

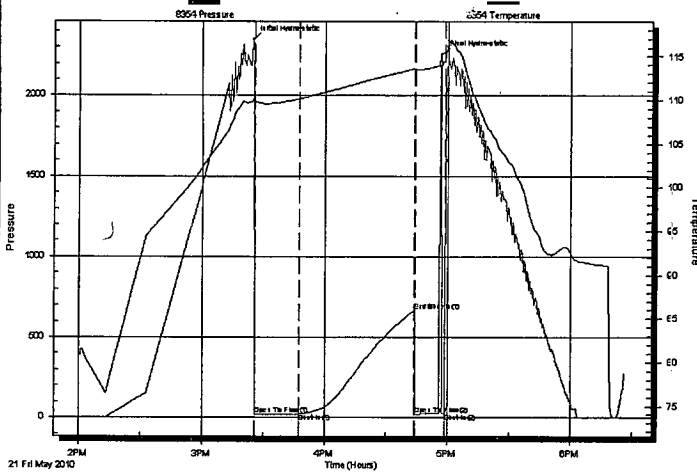
## GENERAL INFORMATION:

Formation: **Cheroke**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 15:25:54  
Time Test Ended: 18:26:24  
Interval: **4406.00 ft (KB) To 4448.00 ft (KB) (TVD)**  
Total Depth: 4448.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole  
Tester: Dan Bangle  
Unit No: 38  
Reference Elevations: 2633.00 ft (KB)  
2628.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8354**      **Inside**  
Press@RunDepth: 22.76 psig @ 4410.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2010.05.21      End Date: 2010.05.21      Last Calib.: 2010.05.21  
Start Time: 14:00:55      End Time: 18:26:24      Time On Btm: 2010.05.21 @ 15:24:54  
Time Off Btm: 2010.05.21 @ 16:56:54

TEST COMMENT: IF-Weak died in 15 min  
FF-No blow - flushed tool

Pressure vs. Time



## PRESSURE SUMMARY

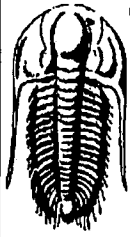
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2344.50	109.97	Initial Hydro-static
1	19.55	109.53	Open To Flow (1)
23	22.76	110.19	Shut-In(1)
79	666.88	113.59	End Shut-In(1)
80	21.07	113.40	Open To Flow (2)
92	2252.70	114.87	Final Hydro-static
94	24.94	114.46	Shut-In(2)

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Flatirons Res LLC  
303 E 17th Ste 940  
Denver Colo 80202  
  
ATTN:

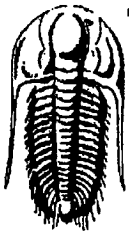
**Church Lawrence 11-14**  
**14-16-28-Lane-Ks**  
Job Ticket: 38690      **DST#: 4**  
Test Start: 2010.05.21 @ 14:00:54

**Tool Information**

Drill Pipe:	Length: 4262.00 ft	Diameter: 3.80 inches	Volume: 59.78 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: 20000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 60.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	4406.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	70.00 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			4379.00	
Shut In Tool	5.00			4384.00	
Hydraulic tool	5.00			4389.00	
Jars	5.00			4394.00	
Safety Joint	3.00			4397.00	
Packer	5.00			4402.00	28.00      Bottom Of Top Packer
Packer	4.00			4406.00	
Stubb	1.00			4407.00	
Perforations	2.00			4409.00	
Change Over Sub	1.00			4410.00	
Recorder	0.00	8354	Inside	4410.00	
Recorder	0.00	8520	Outside	4410.00	
Drill Pipe	31.00			4441.00	
Change Over Sub	1.00			4442.00	
Perforations	3.00			4445.00	
Bullnose	3.00			4448.00	42.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>70.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Flatirons Res LLC  
303 E 17th Ste 940  
Denver Colo 80202

**Church Lawrence 11-14**  
**14-16-28-Lane-Ks**  
Job Ticket: 38690      DST#: 4  
Test Start: 2010.05.21 @ 14:00:54

ATTN:

**Mud and Cushion Information**

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 60.00 sec/qt  
Water Loss: 8.79 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 3500.00 ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: ppm

**Recovery Information**

Recovery Table

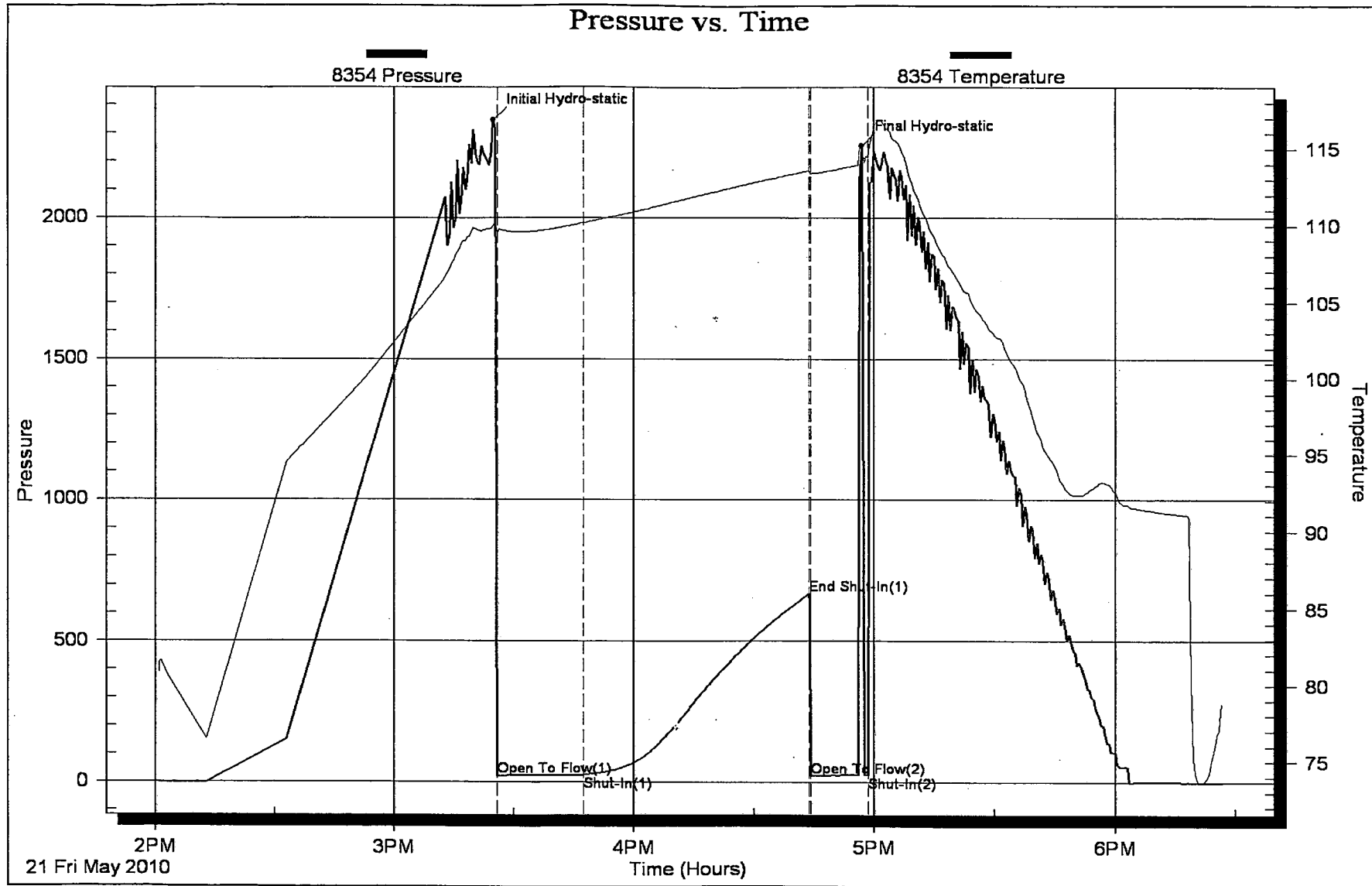
Length ft	Description	Volume bbl
10.00	Mud	0.049

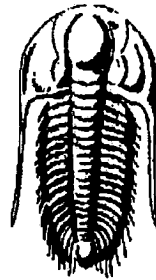
Total Length: 10.00 ft      Total Volume: 0.049 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Flatirons Res LLC**

303 E 17th Ste 940  
Denver Colo 80202

ATTN:

**14-16-28-Lane-Ks**

**Church Lawrence 11-14**

Start Date: 2010.05.22 @ 17:58:19

End Date: 2010.05.23 @ 00:51:19

Job Ticket #: 38592                      DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Flatirons Res LLC

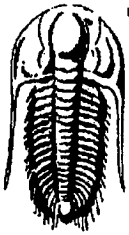
Church Lawrence 11-14

14-16-28-Lane-Ks

DST # 5

Cherokee

2010.05.22



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Flatirons Res LLC

303 E 17th Ste 940  
Denver Colo 80202

ATTN:

Church Lawrence 11-14

14-16-28-Lane-Ks

Job Ticket: 38592

DST#: 5

Test Start: 2010.05.22 @ 17:58:19

## GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:27:49

Time Test Ended: 00:51:19

Test Type: Conventional Straddle

Tester: Brett Dickinson

Unit No: 47

Interval: **4441.00 ft (KB) To 4475.00 ft (KB) (TVD)**

Reference Elevations: 2633.00 ft (KB)

Total Depth: 4574.00 ft (KB) (TVD)

2628.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 5.00 ft

Serial #: **8369**

Inside

Press@RunDepth: 110.60 psig @ 4442.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.05.22

End Date:

2010.05.23

Last Calib.: 2010.05.23

Start Time: 17:58:24

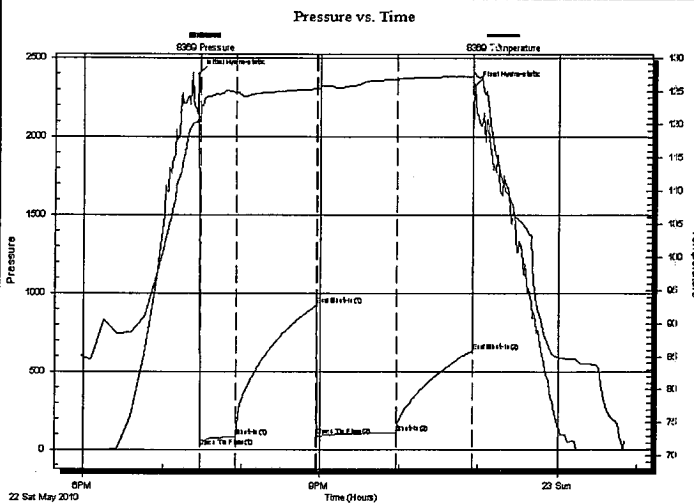
End Time:

00:51:18

Time On Btm: 2010.05.22 @ 19:26:49

Time Off Btm: 2010.05.22 @ 22:56:48

TEST COMMENT: IF-5.25in blow  
ISI-No blow  
FF-No blow  
FSI-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2399.25	120.89	Initial Hydro-static
1	22.44	120.32	Open To Flow (1)
29	84.99	124.75	Shut-In(1)
90	923.80	125.33	End Shut-In(1)
91	88.72	125.17	Open To Flow (2)
151	110.60	126.73	Shut-In(2)
209	635.97	127.17	End Shut-In(2)
210	2327.91	127.75	Final Hydro-static

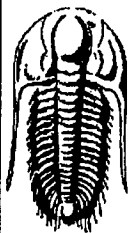
## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud	0.15
180.00	SWCM 10%W 90%M	1.67

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Flatirons Res LLC

**Church Lawrence 11-14**

303 E 17th Ste 940  
Denver Colo 80202

**14-16-28-Lane-Ks**

Job Ticket: 38592

**DST#: 5**

ATTN:

Test Start: 2010.05.22 @ 17:58:19

### Tool Information

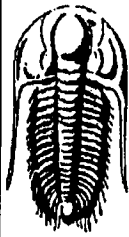
Drill Pipe:	Length: 4317.00 ft	Diameter: 3.80 inches	Volume: 60.56 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 61.17 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4441.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	4475.00 ft			
Interval between Packers:	34.00 ft			
Tool Length:	161.00 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			4415.00	
Shut In Tool	5.00			4420.00	
Hydraulic tool	5.00			4425.00	
Jars	4.00			4429.00	
Safety Joint	3.00			4432.00	
Packer	4.00			4436.00	27.00 Bottom Of Top Packer
Packer	5.00			4441.00	
Stubb	1.00			4442.00	
Recorder	0.00	8369	Inside	4442.00	
Recorder	0.00	6719	Inside	4442.00	
Perforations	29.00			4471.00	
Blank Off Sub	1.00			4472.00	
Blank Spacing	3.00			4475.00	34.00 Tool Interval
Packer	0.00			4475.00	
Stubb	1.00			4476.00	
Recorder	0.00	8319	Below	4476.00	
Perforations	1.00			4477.00	
Change Over Sub	1.00			4478.00	
Blank Spacing	93.00			4571.00	
Change Over Sub	1.00			4572.00	
Bullnose	3.00			4575.00	100.00 Bottom Packers & Anchor

**Total Tool Length: 161.00**



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

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Flatirons Res LLC  
303 E 17th Ste 940  
Denver Colo 80202  
  
ATTN:

**Church Lawrence 11-14**  
**14-16-28-Lane-Ks**  
Job Ticket: 38592      **DST#: 5**  
Test Start: 2010.05.22 @ 17:58:19

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	25000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3500.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud	0.148
180.00	SWCM 10%W 90%M	1.669

Total Length: 210.00 ft      Total Volume: 1.817 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

