



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1159377  
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: \_\_\_\_\_



1159377

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  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: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
--	---

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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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> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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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

September 23, 2013

Charles Ramsay  
H & C Oil Operating Inc.  
PO BOX 86  
PLAINVILLE, KS 67663-0086

Re: ACO1  
API 15-065-23971-00-00  
Faulkner 14-2  
SW/4 Sec.14-08S-22W  
Graham 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,  
Charles Ramsay



COMPANY HFC Oil Operating, Inc.  
WELL Faulkner #14-2  
FIELD U-ideal

LOCATION 948' ECL + 1408' FWL  
ELEVATION DF 2124  
KB 2117  
GL 2117

SEC. 14 TWP. 8S RGE. 22W  
COUNTY Graham  
STATE Kansas

OPERATOR HFC Oil Operating, Inc.  
CONTRACTOR American Eagle, Rig #3  
COMM. 9-8-13  
CMT. 9-15-13

CASING RECORD  
SURF: 4 3/4" @ 222' None  
TOTAL DEPTH DRILLERS: 3423  
TOTAL DEPTH LOG: 3421

PRODUCTION DATA  
Drilling Measured From: KB to: TD  
Samples Saved From: 3100 to: TD  
Drilling Time from: 3100 to: TD  
Sample Examined from: 3000 to: TD  
Geological Supervision From: WellSite Geologist: Marc Downing  
Recorded by: Frances  
CML/CDL  
DIL  
MEL

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SURF SEA DRAIN POSITION	STRUCTURAL POSITION
Top Anhydrite	1494	1494	+425	+1
Base Anhydrite	1732	1732	+392	+3
Tapeka	3112	3108	-944	-6
Hebner	3327	3323	-1194	-8
Toronto	3347	3345	-1221	-9
LKC	3358	3358	-1232	-9
BKC	3571	3571	-1243	-8

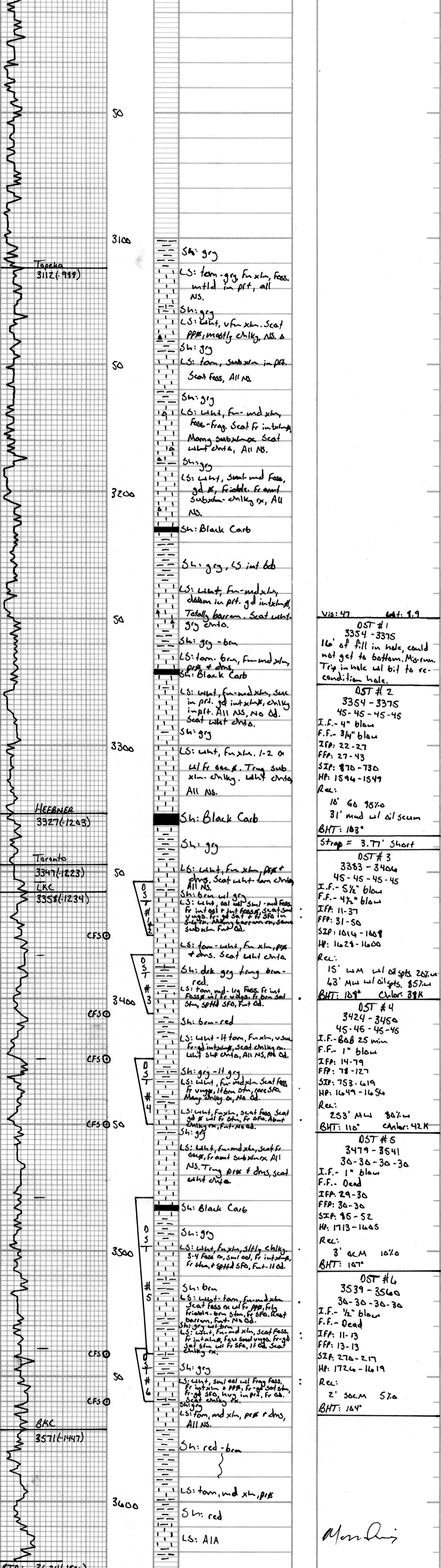
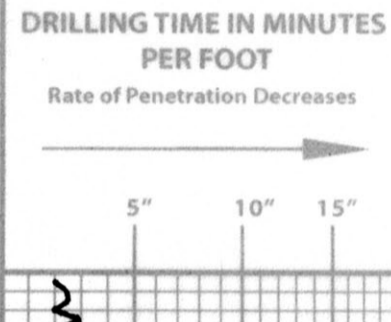
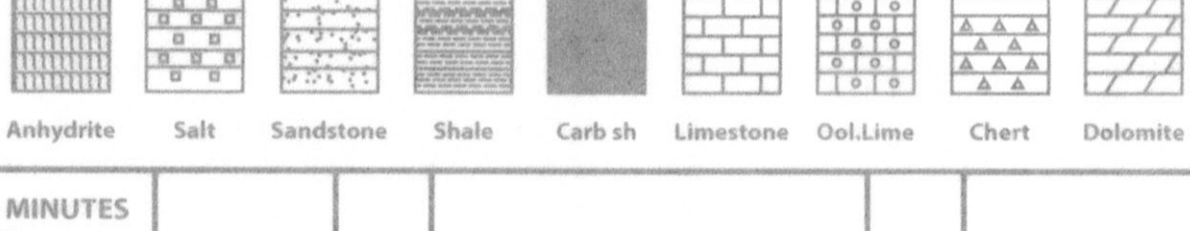
REFERENCE WELL FOR STRUCTURE HFC Oil Operating, Inc.  
Faulkner #141 708' ECL + 1108' FWL Sec. 14-8S-22W

DRILL STEM TESTS

No.	Interval	IFP/Time	SIP/Time	FFP/Time	ESP/Time	HP-HP	RECOVERY

REMARKS AND RECOMMENDATIONS  
Due to structural position, DST recovery + log evaluation, it was decided to plug + abandon this well.

LEGEND



Marc Downing





## DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc**

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **Faulkner #14-2**

### **14-8s-22w Graham,KS**

Start Date: 2013.09.11 @ 18:42:23

End Date: 2013.09.11 @ 23:36:23

Job Ticket #: 041763                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.18 @ 09:16:55









**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041763

**DST#: 1**

ATTN: Marc Downing

Test Start: 2013.09.11 @ 18:42:23

## Tool Information

Drill Pipe:	Length: 3342.00 ft	Diameter: 3.80 inches	Volume: 46.88 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	40000.00 lb
			<u>Total Volume: 46.88 bbl</u>	Tool Chased	16.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	30000.00 lb
Depth to Top Packer:	3354.00 ft			Final	34000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	21.00 ft				
Tool Length:	41.00 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			3335.00	
Shut In Tool	5.00			3340.00	
Hydraulic tool	5.00			3345.00	
Packer	4.00			3349.00	20.00 Bottom Of Top Packer
Packer	5.00			3354.00	
Stubb	1.00			3355.00	
Perforations	2.00			3357.00	
Recorder	0.00	6625	Outside	3357.00	
Recorder	0.00	8679	Inside	3357.00	
Perforations	15.00			3372.00	
Bullnose	3.00			3375.00	21.00 Bottom Packers & Anchor

**Total Tool Length: 41.00**





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041763

**DST#: 1**

ATTN: Marc Downing

Test Start: 2013.09.11 @ 18:42:23

**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: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl

Total Length:                      ft      Total Volume:                      bbl

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

Laboratory Name:                      Laboratory Location:

Recovery Comments:

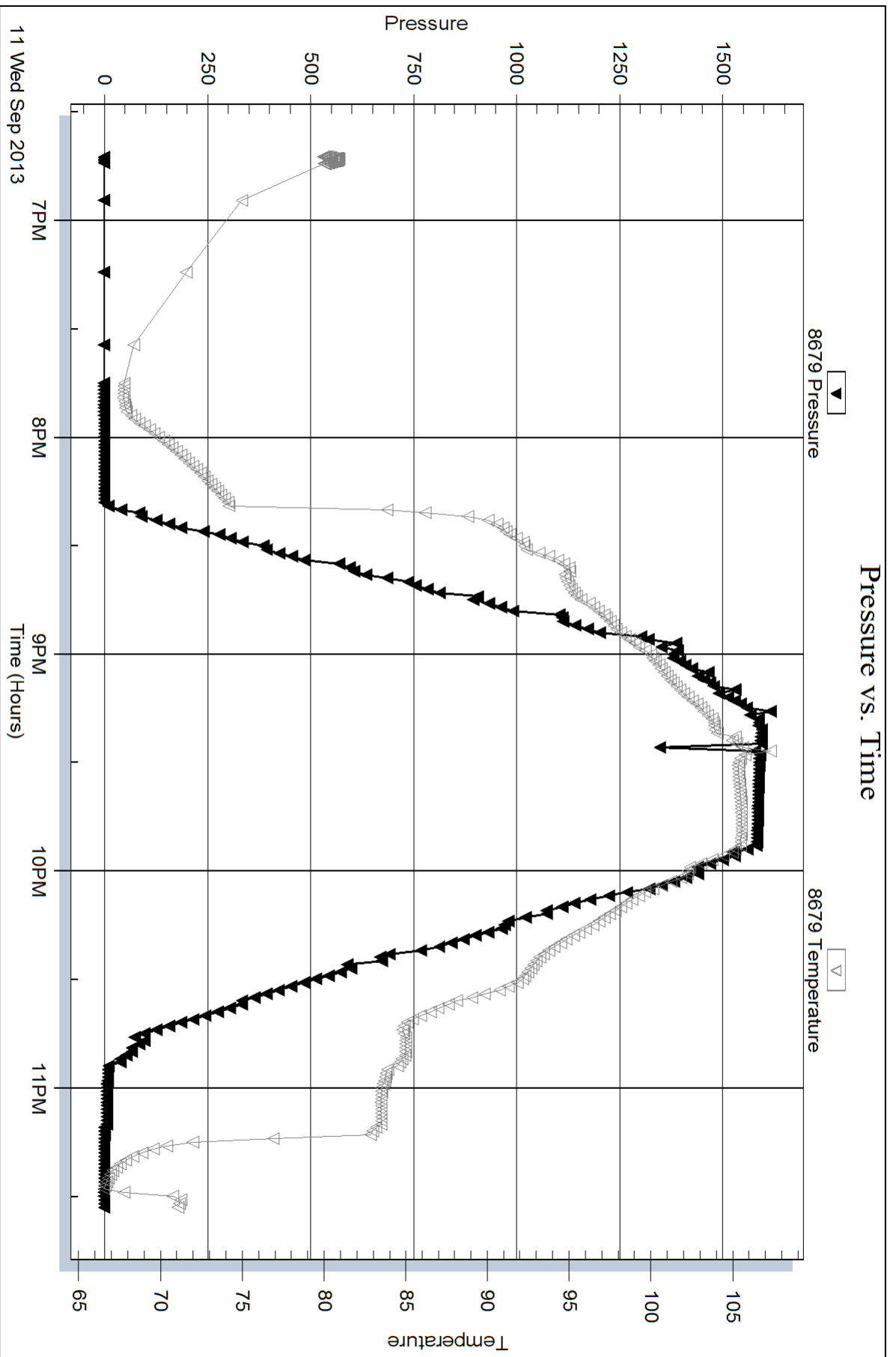
Serial #: 8679

Inside

H&C Oil Operating Inc

Faulkner #14-2

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 041763

Printed: 2013.09.18 @ 09:16:56

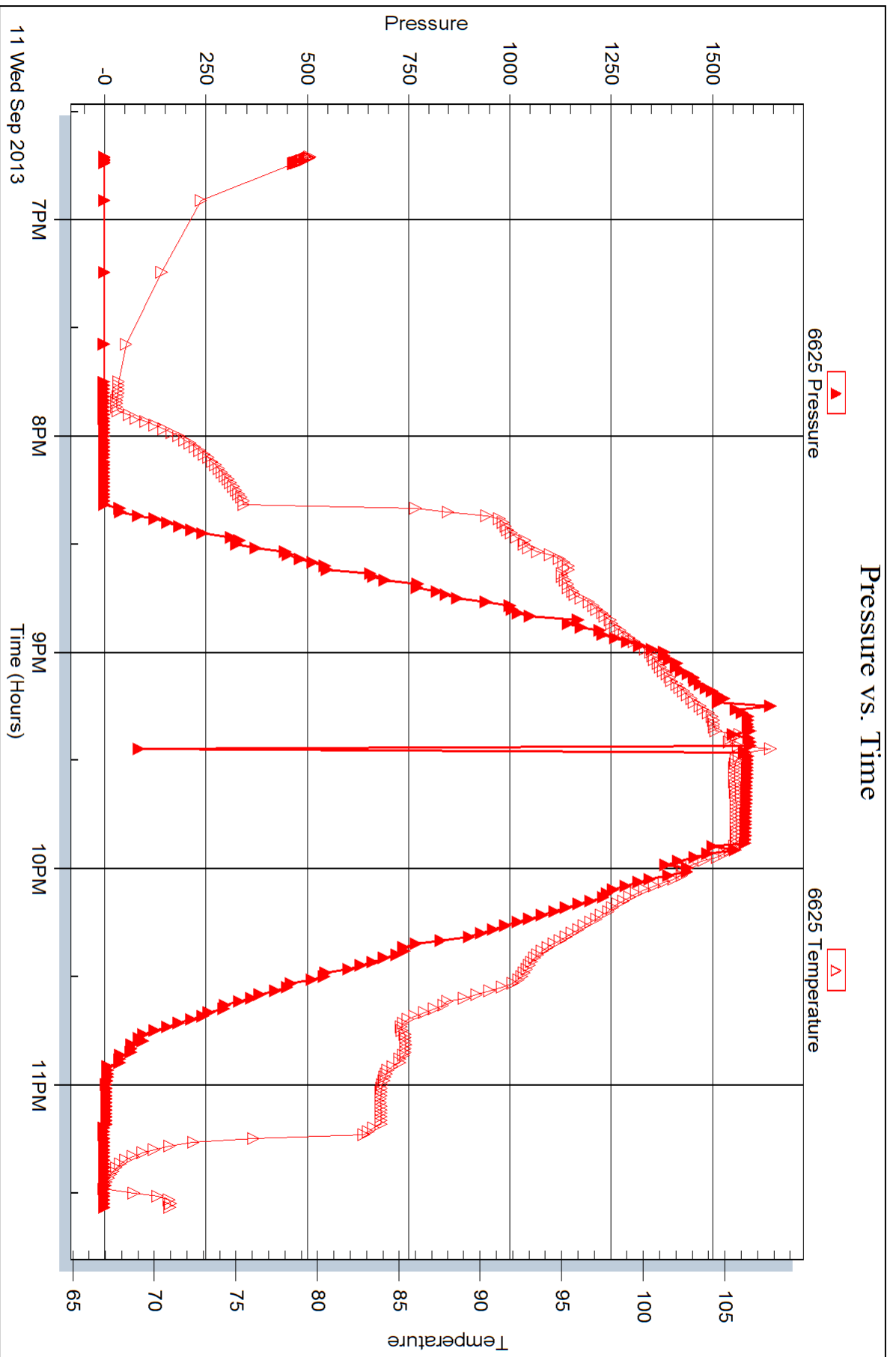


Serial #: 6625

Outside H&C Oil Operating Inc

Faulkner #14-2

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 041763

Printed: 2013.09.18 @ 09:16:57



## DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc**

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **Faulkner #14-2**

### **14-8s-22w Graham,KS**

Start Date: 2013.09.12 @ 04:52:09

End Date: 2013.09.12 @ 11:20:39

Job Ticket #: 041764                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.18 @ 09:16:26



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041764

**DST#: 2**

ATTN: Marc Downing

Test Start: 2013.09.12 @ 04:52:09

## GENERAL INFORMATION:

Formation: **LKC-A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:18:09

Time Test Ended: 11:20:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 67

**Interval: 3354.00 ft (KB) To 3375.00 ft (KB) (TVD)**

Reference Elevations: 2124.00 ft (KB)

Total Depth: 3375.00 ft (KB) (TVD)

2117.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 6625 Outside**

Press @ Run Depth: 42.74 psig @ 3357.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.12

End Date:

2013.09.12

Last Calib.:

2013.09.12

Start Time: 04:52:10

End Time:

11:19:39

Time On Btm:

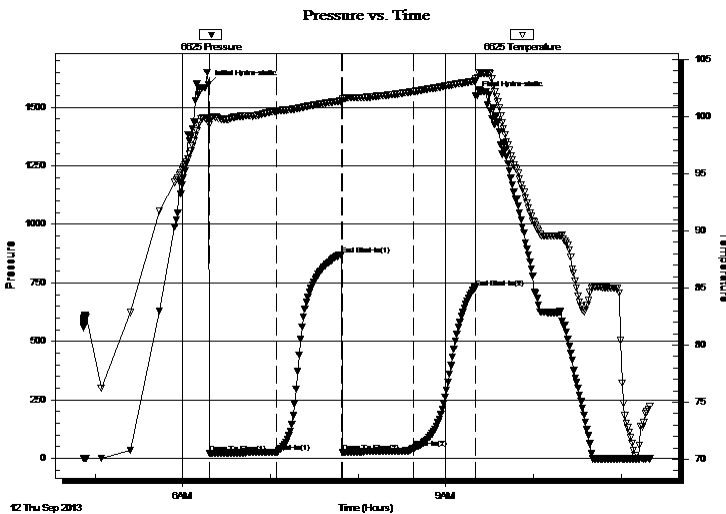
2013.09.12 @ 06:17:39

Time Off Btm:

2013.09.12 @ 09:20:39

**TEST COMMENT:** IFP=Fair blow built to 4 in  
ISI=Dead no blow back  
FFP=Weak blow built to 3/4 in  
FSI=Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1596.27	99.83	Initial Hydro-static
1	22.37	99.32	Open To Flow (1)
47	27.14	100.50	Shut-In(1)
91	870.09	101.38	End Shut-In(1)
92	26.80	101.38	Open To Flow (2)
141	42.74	102.21	Shut-In(2)
183	730.19	103.12	End Shut-In(2)
183	1549.45	103.35	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
31.00	Mud w ith a scum of oil	0.43
10.00	Gassy Oil 5%G 95%O	0.14

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041764

**DST#: 2**

ATTN: Marc Downing

Test Start: 2013.09.12 @ 04:52:09

## Tool Information

Drill Pipe:	Length: 3342.00 ft	Diameter: 3.80 inches	Volume: 46.88 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 46.88 bbl</u>	Tool Chased 4.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	3354.00 ft			Final 31000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	41.00 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			3335.00	
Shut In Tool	5.00			3340.00	
Hydraulic tool	5.00			3345.00	
Packer	4.00			3349.00	20.00 Bottom Of Top Packer
Packer	5.00			3354.00	
Stubb	1.00			3355.00	
Perforations	2.00			3357.00	
Recorder	0.00	6625	Outside	3357.00	
Recorder	0.00	8679	Inside	3357.00	
Perforations	15.00			3372.00	
Bullnose	3.00			3375.00	21.00 Bottom Packers & Anchor

**Total Tool Length: 41.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041764

**DST#: 2**

ATTN: Marc Downing

Test Start: 2013.09.12 @ 04:52:09

## 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: 47.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
31.00	Mud with a scum of oil	0.435
10.00	Gassy Oil 5%G 95%O	0.140

Total Length: 41.00 ft      Total Volume: 0.575 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

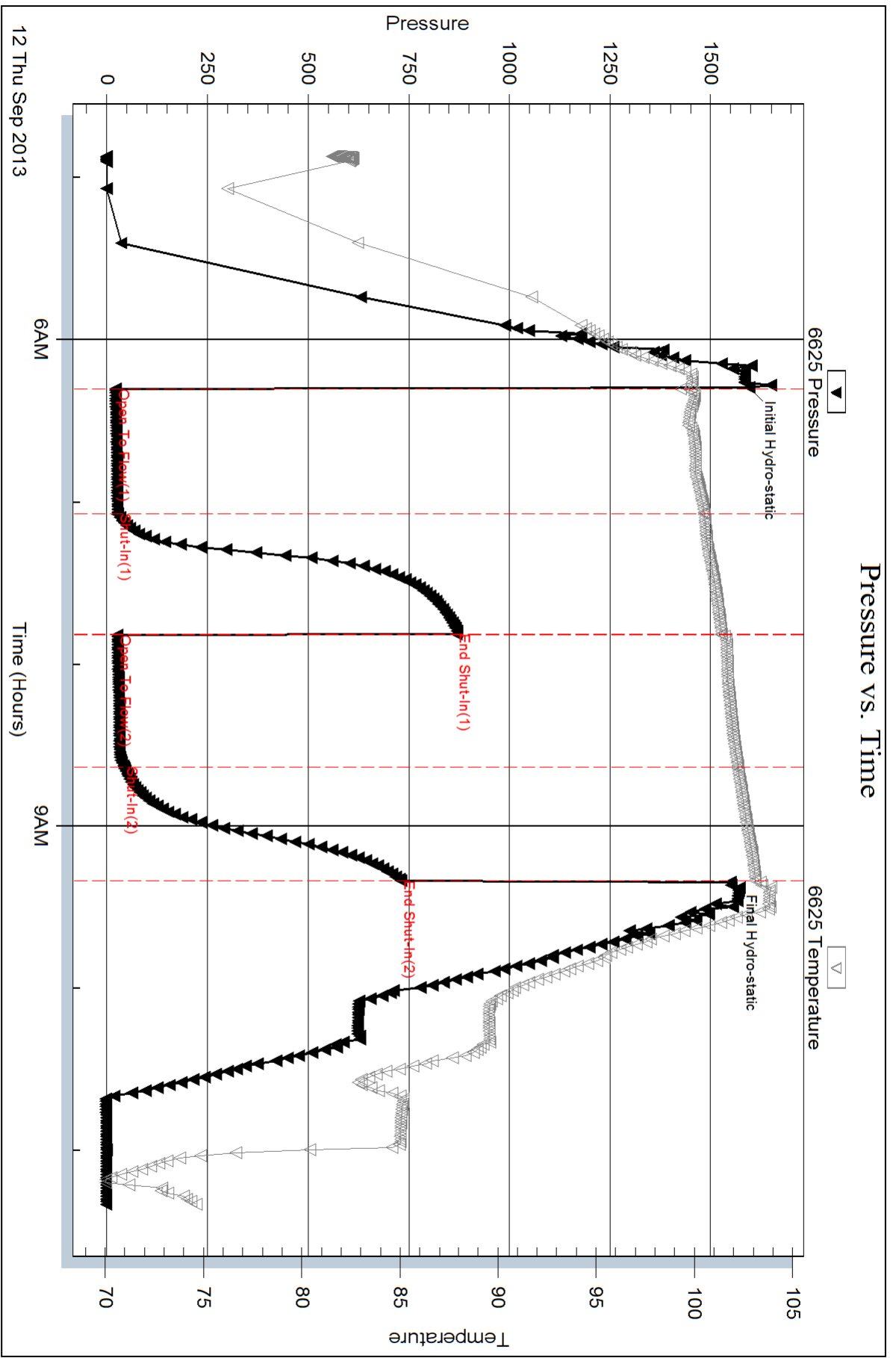
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





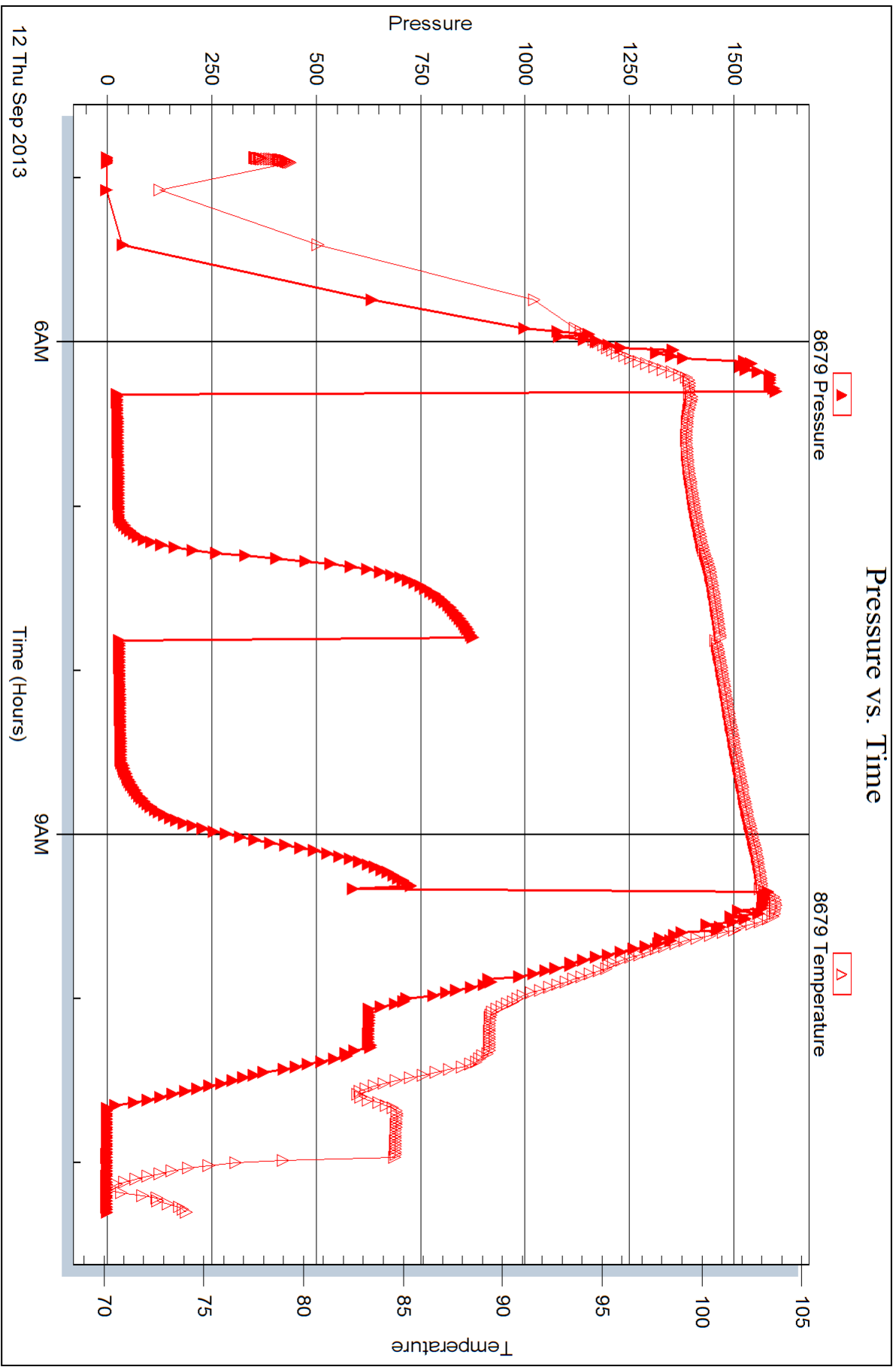
Serial #: 8679

Inside

H&C Oil Operating Inc

Faulkner #14-2

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc**

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **Faulkner #14-2**

### **14-8s-22w Graham,KS**

Start Date: 2013.09.12 @ 18:17:49

End Date: 2013.09.13 @ 01:20:19

Job Ticket #: 041765                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.18 @ 09:15:56



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041765

**DST#: 3**

ATTN: Marc Downing

Test Start: 2013.09.12 @ 18:17:49

## GENERAL INFORMATION:

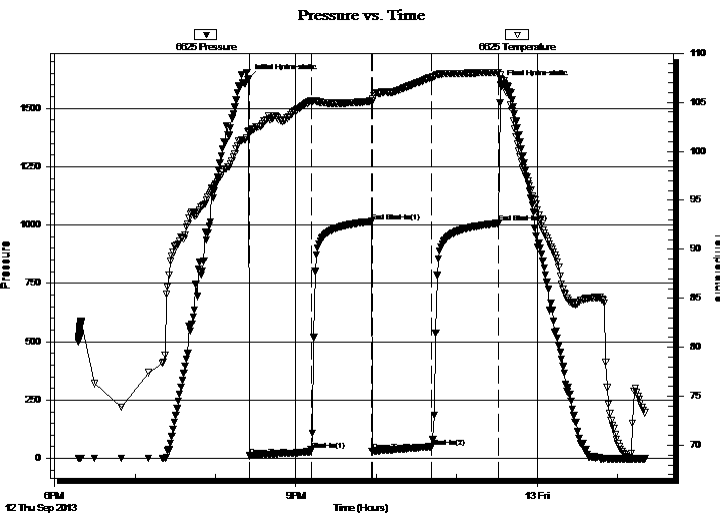
Formation: **LKC-C**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:25:19  
 Time Test Ended: 01:20:19  
 Interval: **3383.00 ft (KB) To 3406.00 ft (KB) (TVD)**  
 Total Depth: 3406.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jeff Brown  
 Unit No: 67  
 Reference Elevations: 2124.00 ft (KB)  
 2117.00 ft (CF)  
 KB to GR/CF: 7.00 ft

## Serial #: 6625

Outside

Press @ Run Depth: 49.72 psig @ 3384.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.12 End Date: 2013.09.13 Last Calib.: 2013.09.13  
 Start Time: 18:17:50 End Time: 01:20:19 Time On Btm: 2013.09.12 @ 20:24:49  
 Time Off Btm: 2013.09.12 @ 23:32:49

TEST COMMENT: IFP=Fair blow built to 5-1/2 in  
 ISI=Dead no blow back  
 FFP=Fair blow built to 4-1/2 in  
 FSI=Dead no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1627.99	102.05	Initial Hydro-static
1	11.07	101.90	Open To Flow (1)
47	36.69	105.16	Shut-In(1)
92	1015.60	105.12	End Shut-In(1)
92	31.43	105.12	Open To Flow (2)
137	49.72	107.56	Shut-In(2)
187	1008.07	108.05	End Shut-In(2)
188	1600.16	107.40	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	MW with oil spots 15%M 85%W	0.88
15.00	WM with oil spots 20%W 80%M	0.21

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041765

**DST#: 3**

ATTN: Marc Downing

Test Start: 2013.09.12 @ 18:17:49

### GENERAL INFORMATION:

Formation: **LKC-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:25:19

Time Test Ended: 01:20:19

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 67

**Interval: 3383.00 ft (KB) To 3406.00 ft (KB) (TVD)**

Reference Elevations: 2124.00 ft (KB)

Total Depth: 3406.00 ft (KB) (TVD)

2117.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8679 Inside**

Press @ Run Depth: psig @ 3384.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.12

End Date: 2013.09.13

Last Calib.: 2013.09.13

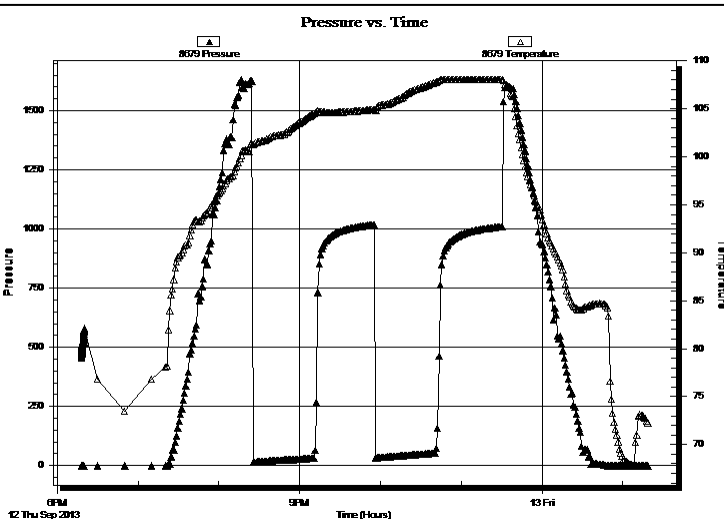
Start Time: 18:18:00

End Time: 01:18:59

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IFP=Fair blow built to 5-1/2 in  
ISI=Dead no blow back  
FFP=Fair blow built to 4-1/2 in  
FSI=Dead no blow back



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
63.00	MW with oil spots 15%M 85%W	0.88
15.00	WM with oil spots 20%W 80%M	0.21

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041765

**DST#: 3**

ATTN: Marc Downing

Test Start: 2013.09.12 @ 18:17:49

## Tool Information

Drill Pipe:	Length: 3374.00 ft	Diameter: 3.80 inches	Volume: 47.33 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 34000.00 lb
			<u>Total Volume: 47.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 28000.00 lb
Depth to Top Packer:	3383.00 ft			Final 29000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	43.00 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			3364.00	
Shut In Tool	5.00			3369.00	
Hydraulic tool	5.00			3374.00	
Packer	4.00			3378.00	20.00 Bottom Of Top Packer
Packer	5.00			3383.00	
Stubb	1.00			3384.00	
Recorder	0.00	6625	Outside	3384.00	
Recorder	0.00	8679	Inside	3384.00	
Perforations	19.00			3403.00	
Bullnose	3.00			3406.00	23.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>43.00</b>				





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041765

**DST#: 3**

ATTN: Marc Downing

Test Start: 2013.09.12 @ 18:17:49

## 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: 45.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	MW w ith oil spots 15%M 85%W	0.884
15.00	WM w ith oil spots 20%W 80%M	0.210

Total Length: 78.00 ft      Total Volume: 1.094 bbl

Num Fluid Samples: 0

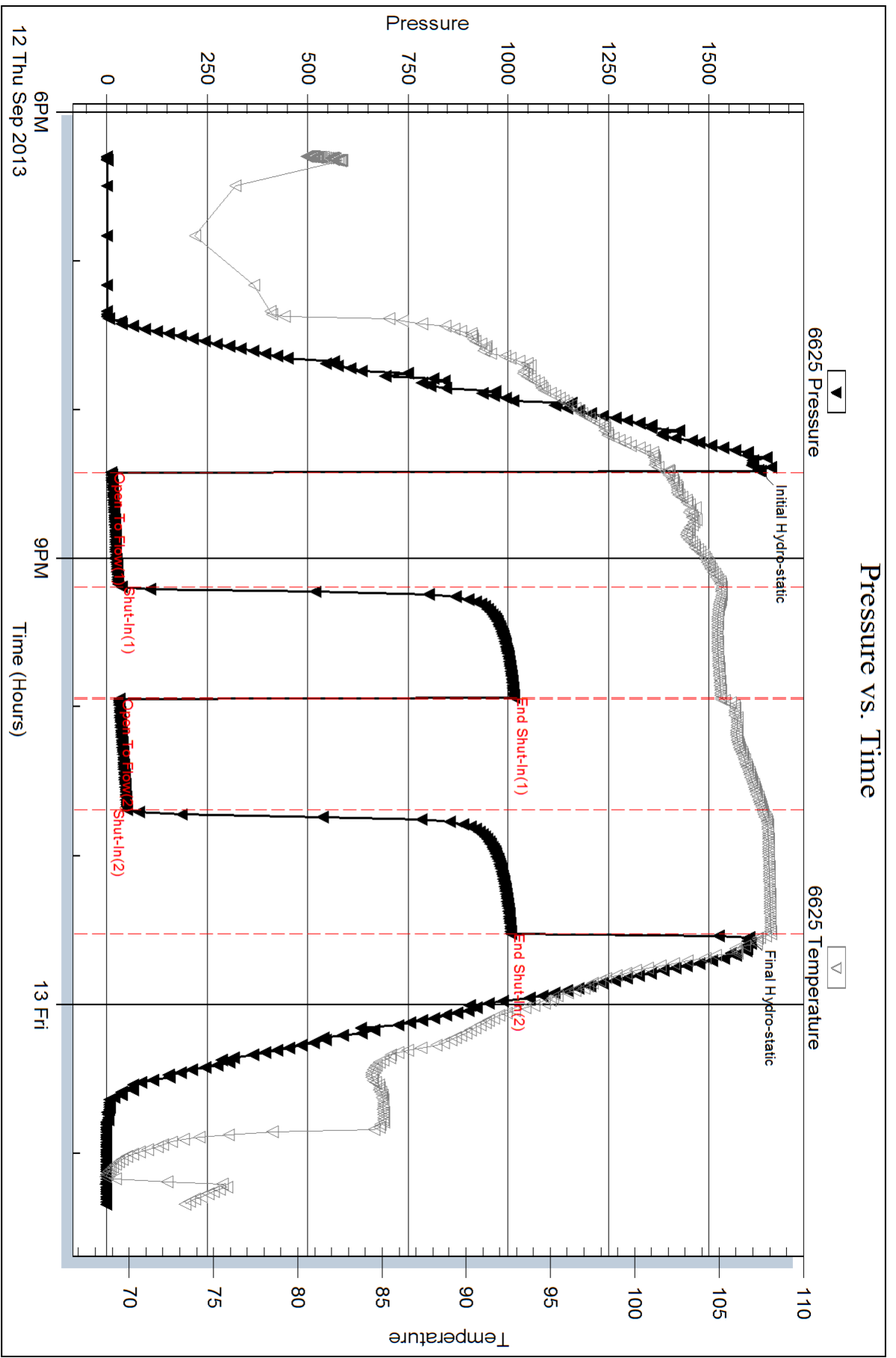
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



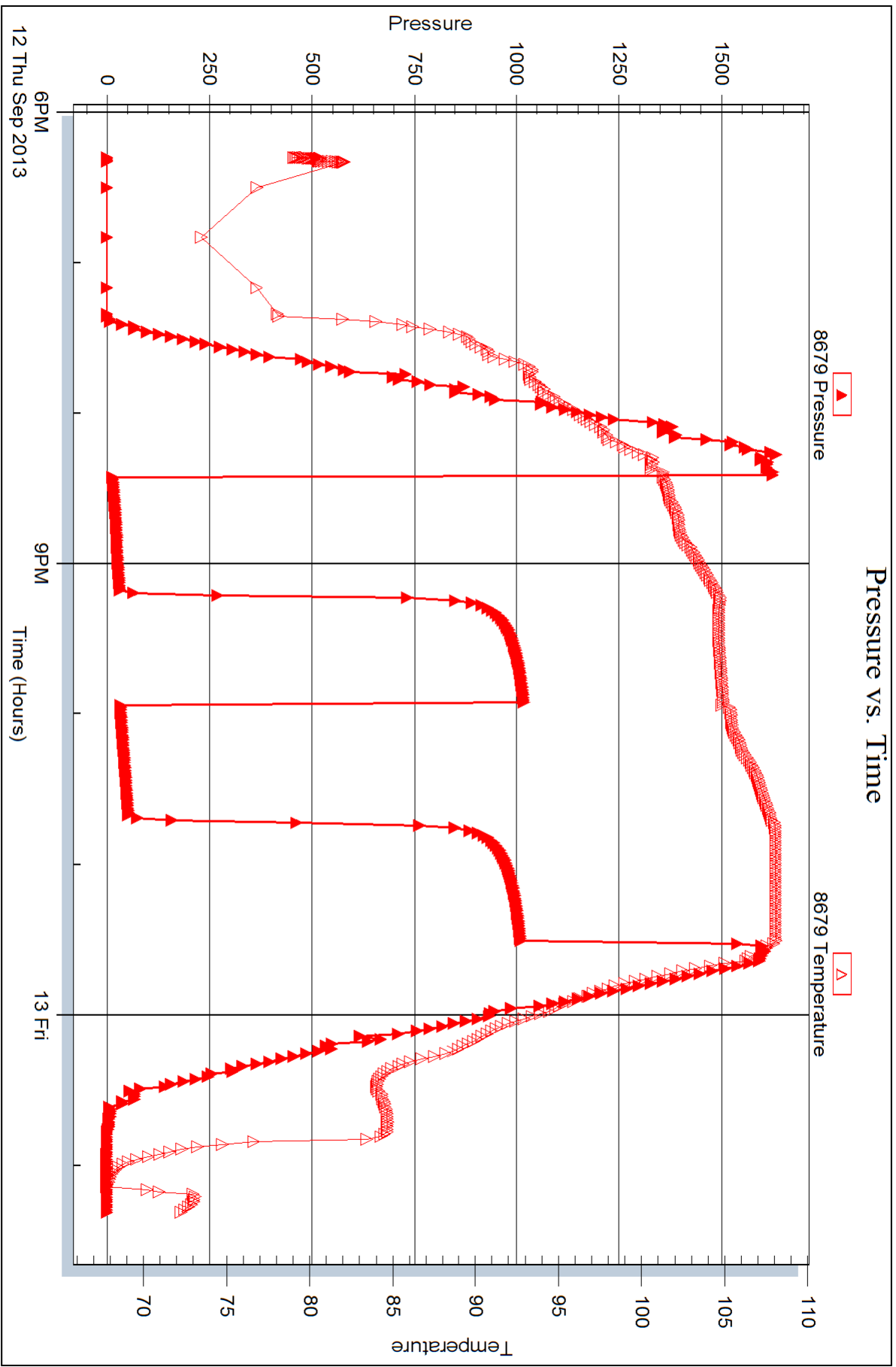
Serial #: 8679

Inside

H&C Oil Operating Inc

Faulkner #14-2

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 041765

Printed: 2013.09.18 @ 09:15:58



## DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc**

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **Faulkner #14-2**

### **14-8s-22w Graham,KS**

Start Date: 2013.09.13 @ 09:54:12

End Date: 2013.09.13 @ 16:33:42

Job Ticket #: 041766                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.18 @ 09:15:22



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041766

**DST#: 4**

ATTN: Marc Downing

Test Start: 2013.09.13 @ 09:54:12

## GENERAL INFORMATION:

Formation: **LKC-E & F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:37:12

Time Test Ended: 16:33:42

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 67

**Interval: 3424.00 ft (KB) To 3450.00 ft (KB) (TVD)**

Reference Elevations: 2124.00 ft (KB)

Total Depth: 3450.00 ft (KB) (TVD)

2117.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 6625 Outside**

Press @ Run Depth: 126.67 psig @ 3428.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.13

End Date: 2013.09.13

Last Calib.: 2013.09.13

Start Time: 09:54:13

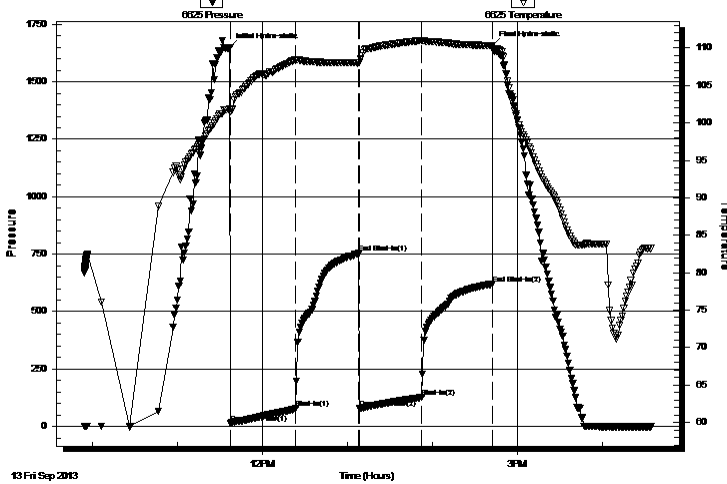
End Time: 16:33:42

Time On Btm: 2013.09.13 @ 11:36:42

Time Off Btm: 2013.09.13 @ 14:42:12

**TEST COMMENT:** IFP=Good blow BOB in 25 min  
ISI=Dead no blow back  
FFP=Weak blow built to 1 in died back to a 1/4 in  
FSI=Dead no blow back

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1649.13	101.80	Initial Hydro-static
1	14.04	101.47	Open To Flow (1)
47	78.99	108.43	Shut-In(1)
91	752.86	107.99	End Shut-In(1)
92	77.88	108.07	Open To Flow (2)
136	126.67	110.99	Shut-In(2)
185	618.87	110.29	End Shut-In(2)
186	1656.22	109.85	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
253.00	MW 20%M 80%W	3.55

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc  
 PO Box 86  
 Plainville KS 67663  
 ATTN: Marc Downing

**14-8s-22w Graham,KS**  
**Faulkner #14-2**  
 Job Ticket: 041766 **DST#: 4**  
 Test Start: 2013.09.13 @ 09:54:12

## GENERAL INFORMATION:

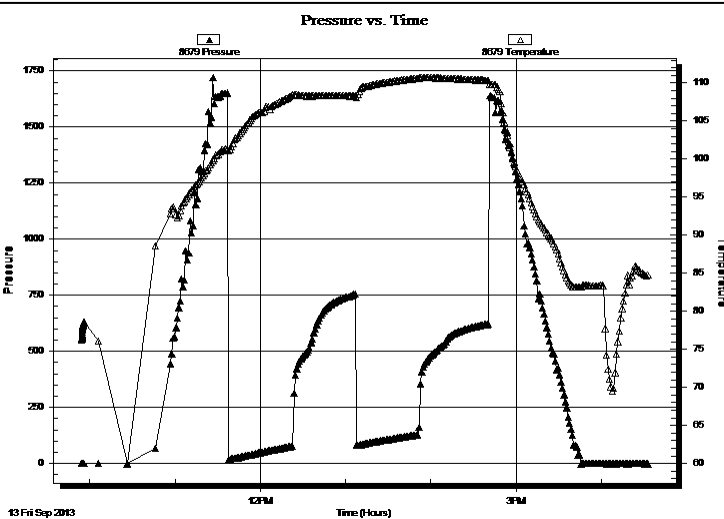
Formation: **LKC-E & F**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:37:12  
 Time Test Ended: 16:33:42  
 Interval: **3424.00 ft (KB) To 3450.00 ft (KB) (TVD)**  
 Total Depth: 3450.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jeff Brown  
 Unit No: 67  
 Reference Elevations: 2124.00 ft (KB)  
 2117.00 ft (CF)  
 KB to GR/CF: 7.00 ft

## Serial #: 8679

Inside

Press @ Run Depth: psig @ 3428.00 ft (KB)  
 Start Date: 2013.09.13 End Date: 2013.09.13  
 Start Time: 09:54:07 End Time: 16:32:36  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.09.13  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IFP=Good blow BOB in 25 min  
 ISI=Dead no blow back  
 FFP=Weak blow built to 1 in died back to a 1/4 in  
 FSI=Dead no blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
253.00	MW 20%M 80%W	3.55

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041766

**DST#: 4**

ATTN: Marc Downing

Test Start: 2013.09.13 @ 09:54:12

## Tool Information

Drill Pipe:	Length: 3437.00 ft	Diameter: 3.80 inches	Volume: 48.21 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	35000.00 lb
			<u>Total Volume: 48.21 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial	28000.00 lb
Depth to Top Packer:	3424.00 ft			Final	30000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	26.00 ft				
Tool Length:	46.00 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			3405.00	
Shut In Tool	5.00			3410.00	
Hydraulic tool	5.00			3415.00	
Packer	4.00			3419.00	20.00 Bottom Of Top Packer
Packer	5.00			3424.00	
Stubb	1.00			3425.00	
Perforations	3.00			3428.00	
Recorder	0.00	6625	Outside	3428.00	
Recorder	0.00	8679	Inside	3428.00	
Perforations	19.00			3447.00	
Bullnose	3.00			3450.00	26.00 Bottom Packers & Anchor

**Total Tool Length: 46.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041766

**DST#: 4**

ATTN: Marc Downing

Test Start: 2013.09.13 @ 09:54:12

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
253.00	MW 20%M 80%W	3.549

Total Length: 253.00 ft      Total Volume: 3.549 bbl

Num Fluid Samples: 0

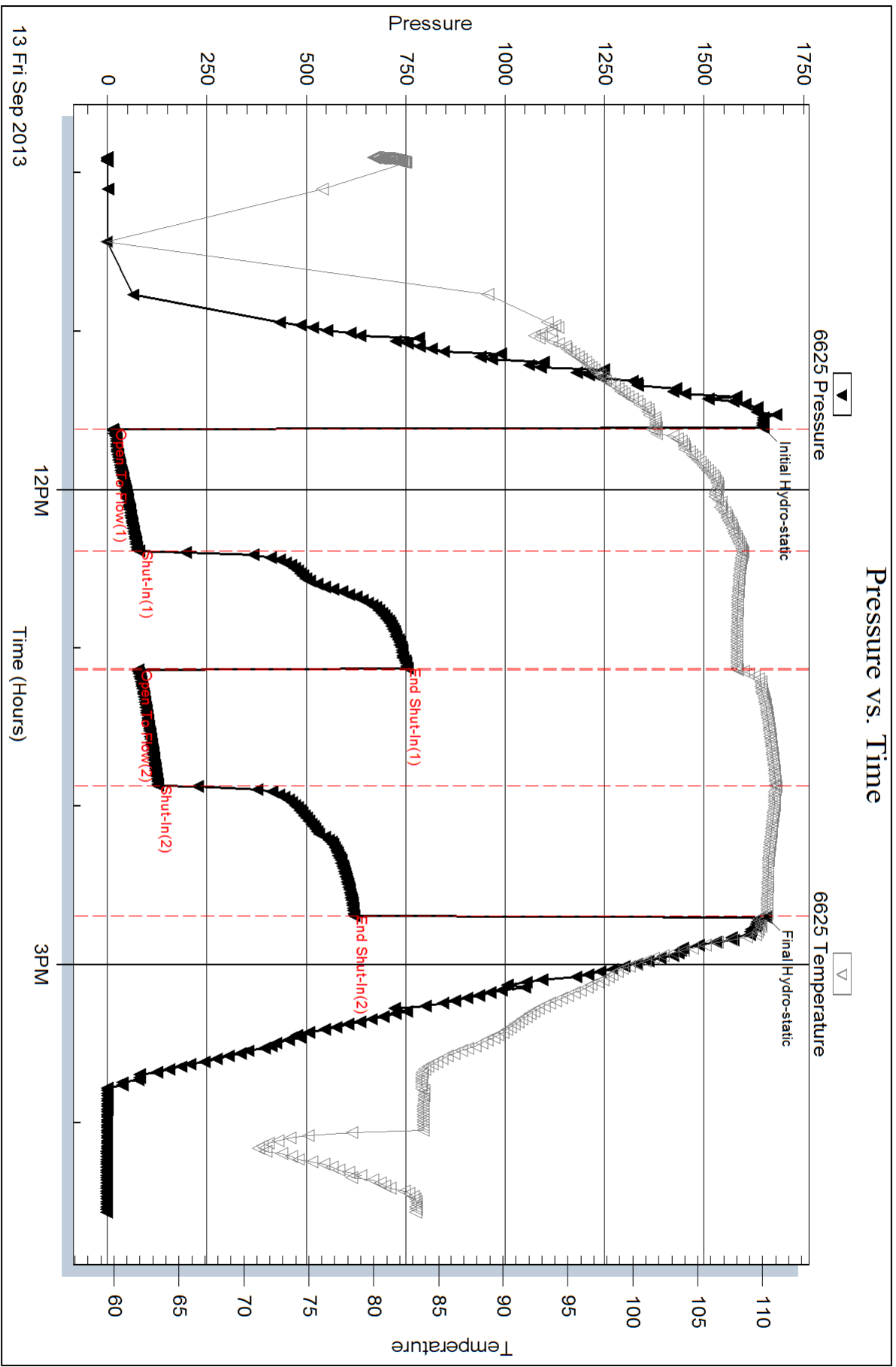
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



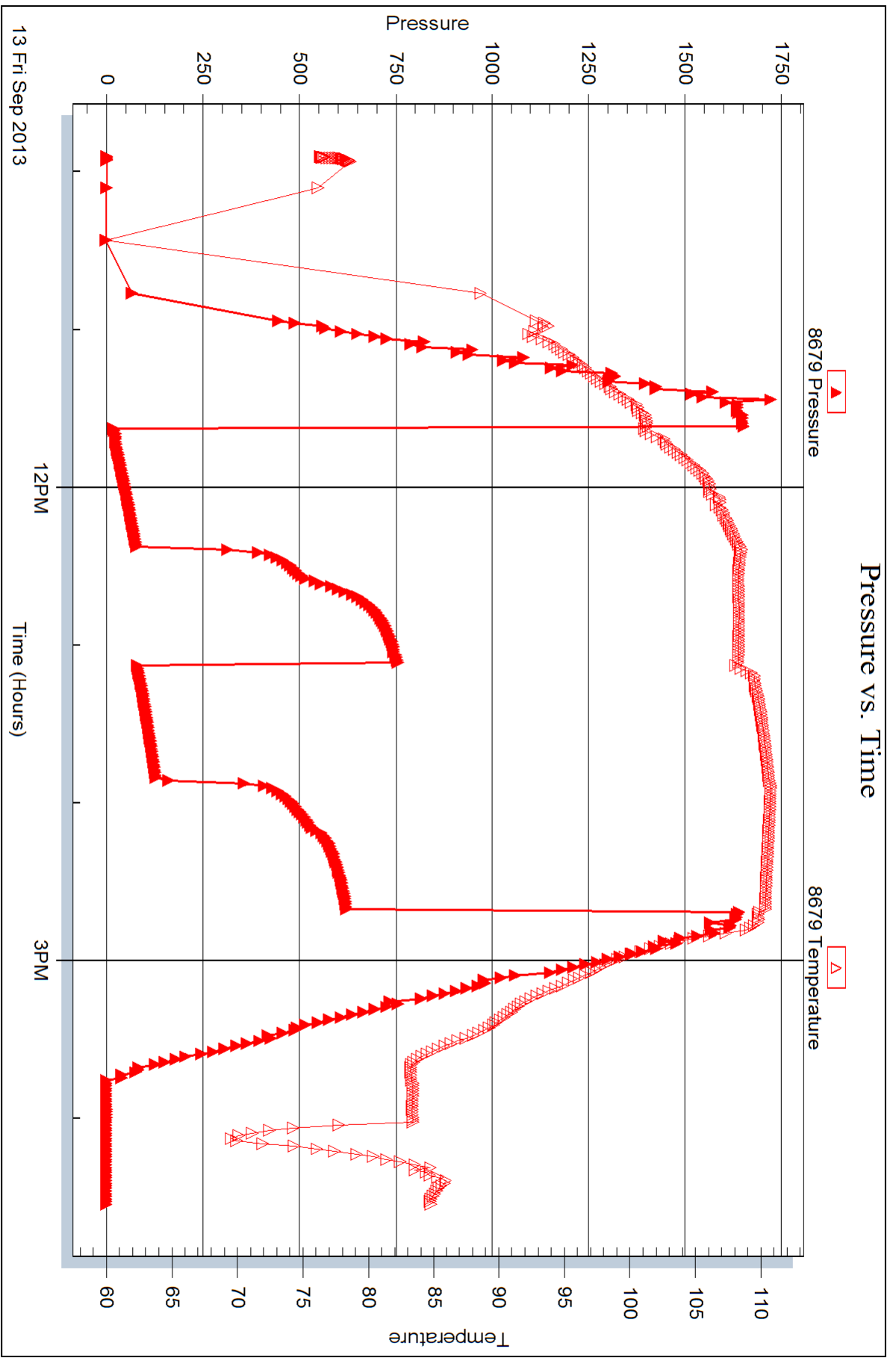
Serial #: 8679

Inside

H&C Oil Operating Inc

Faulkner #14-2

DST Test Number: 4



13 Fri Sep 2013

Trilobite Testing, Inc

Ref. No: 041766

Printed: 2013.09.18 @ 09:15:23



## DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc**

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **Faulkner #14-2**

### **14-8s-22w Graham,KS**

Start Date: 2013.09.14 @ 02:27:55

End Date: 2013.09.14 @ 07:48:55

Job Ticket #: 041767                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.18 @ 09:14:44



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041767

**DST#: 5**

ATTN: Marc Downing

Test Start: 2013.09.14 @ 02:27:55

## GENERAL INFORMATION:

Formation: **LKC-H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:55:55

Time Test Ended: 07:48:55

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 67

**Interval: 3479.00 ft (KB) To 3541.00 ft (KB) (TVD)**

Reference Elevations: 2124.00 ft (KB)

Total Depth: 3541.00 ft (KB) (TVD)

2117.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 6625 Outside**

Press @ Run Depth: 30.42 psig @ 3516.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.14

End Date:

2013.09.14

Last Calib.: 2013.09.14

Start Time: 02:27:56

End Time:

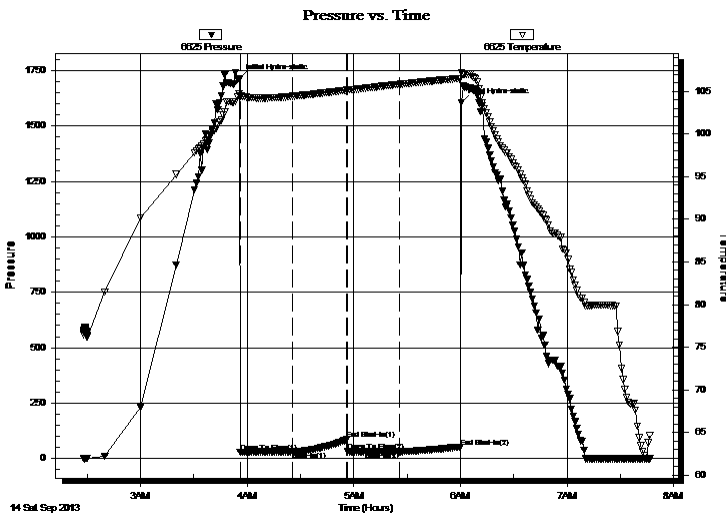
07:46:55

Time On Btm: 2013.09.14 @ 03:55:25

Time Off Btm: 2013.09.14 @ 06:00:25

**TEST COMMENT:** IFP=Weak blow built to 1 in  
ISI=Dead no blow back  
FFP=Deade no blow  
FSI=Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1712.61	104.71	Initial Hydro-static
1	28.68	104.48	Open To Flow (1)
30	30.17	104.41	Shut-In(1)
61	85.01	105.13	End Shut-In(1)
61	30.16	105.14	Open To Flow (2)
90	30.42	105.81	Shut-In(2)
125	51.70	106.51	End Shut-In(2)
125	1605.09	107.21	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	OCM 10%O 90%M	0.04

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041767

**DST#: 5**

ATTN: Marc Downing

Test Start: 2013.09.14 @ 02:27:55

## Tool Information

Drill Pipe:	Length: 3467.00 ft	Diameter: 3.80 inches	Volume: 48.63 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	34000.00 lb
			<u>Total Volume: 48.63 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	28000.00 lb
Depth to Top Packer:	3479.00 ft			Final	28000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	62.00 ft				
Tool Length:	82.00 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			3460.00	
Shut In Tool	5.00			3465.00	
Hydraulic tool	5.00			3470.00	
Packer	4.00			3474.00	20.00 Bottom Of Top Packer
Packer	5.00			3479.00	
Stubb	1.00			3480.00	
Perforations	3.00			3483.00	
Change Over Sub	1.00			3484.00	
Drill Pipe	31.00			3515.00	
Change Over Sub	1.00			3516.00	
Recorder	0.00	6625	Outside	3516.00	
Recorder	0.00	8679	Inside	3516.00	
Perforations	22.00			3538.00	
Bullnose	3.00			3541.00	62.00 Bottom Packers & Anchor

**Total Tool Length: 82.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041767

**DST#: 5**

ATTN: Marc Downing

Test Start: 2013.09.14 @ 02:27:55

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
3.00	OCM 10%O 90%M	0.042

Total Length: 3.00 ft      Total Volume: 0.042 bbl

Num Fluid Samples: 0

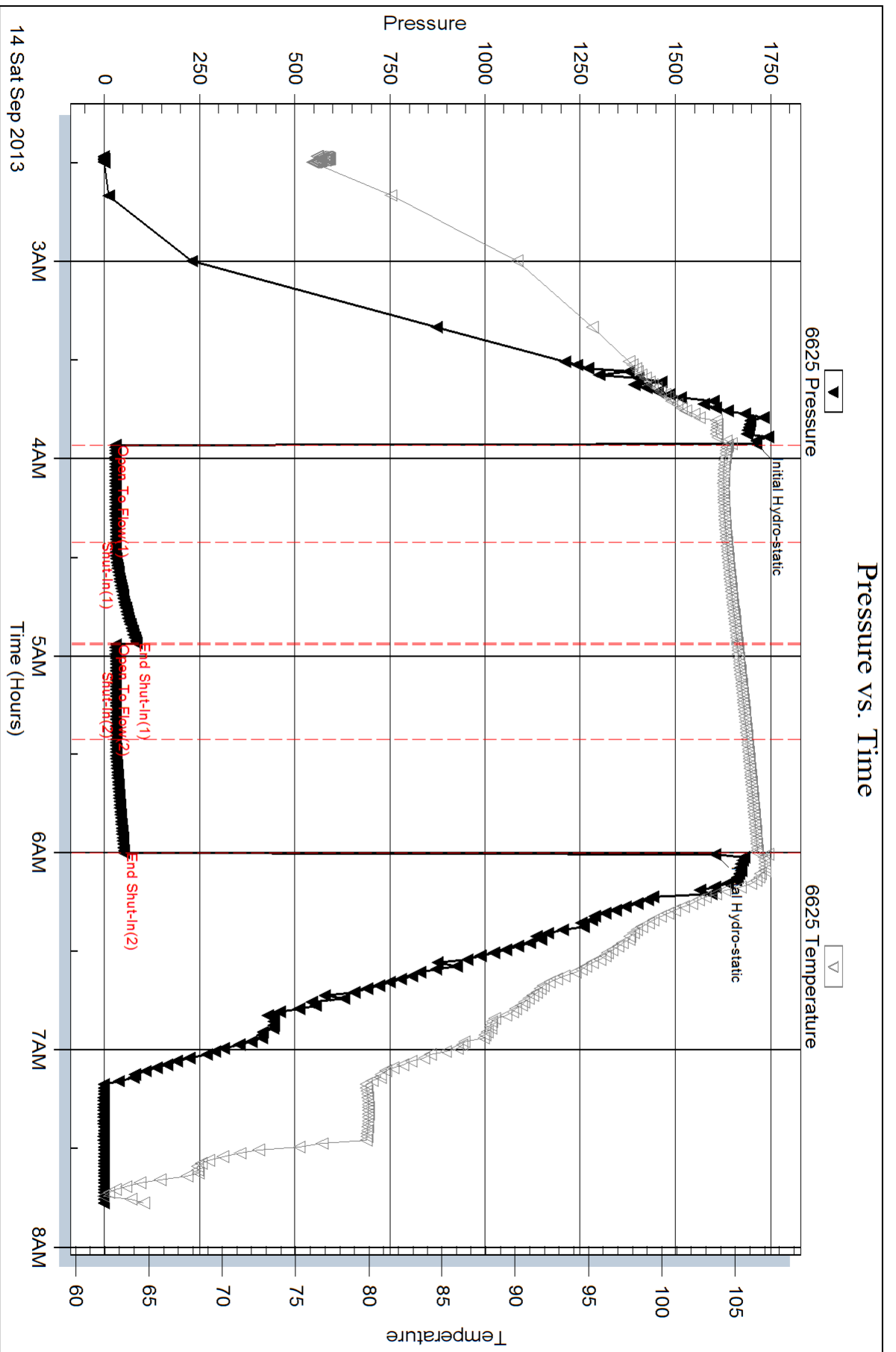
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



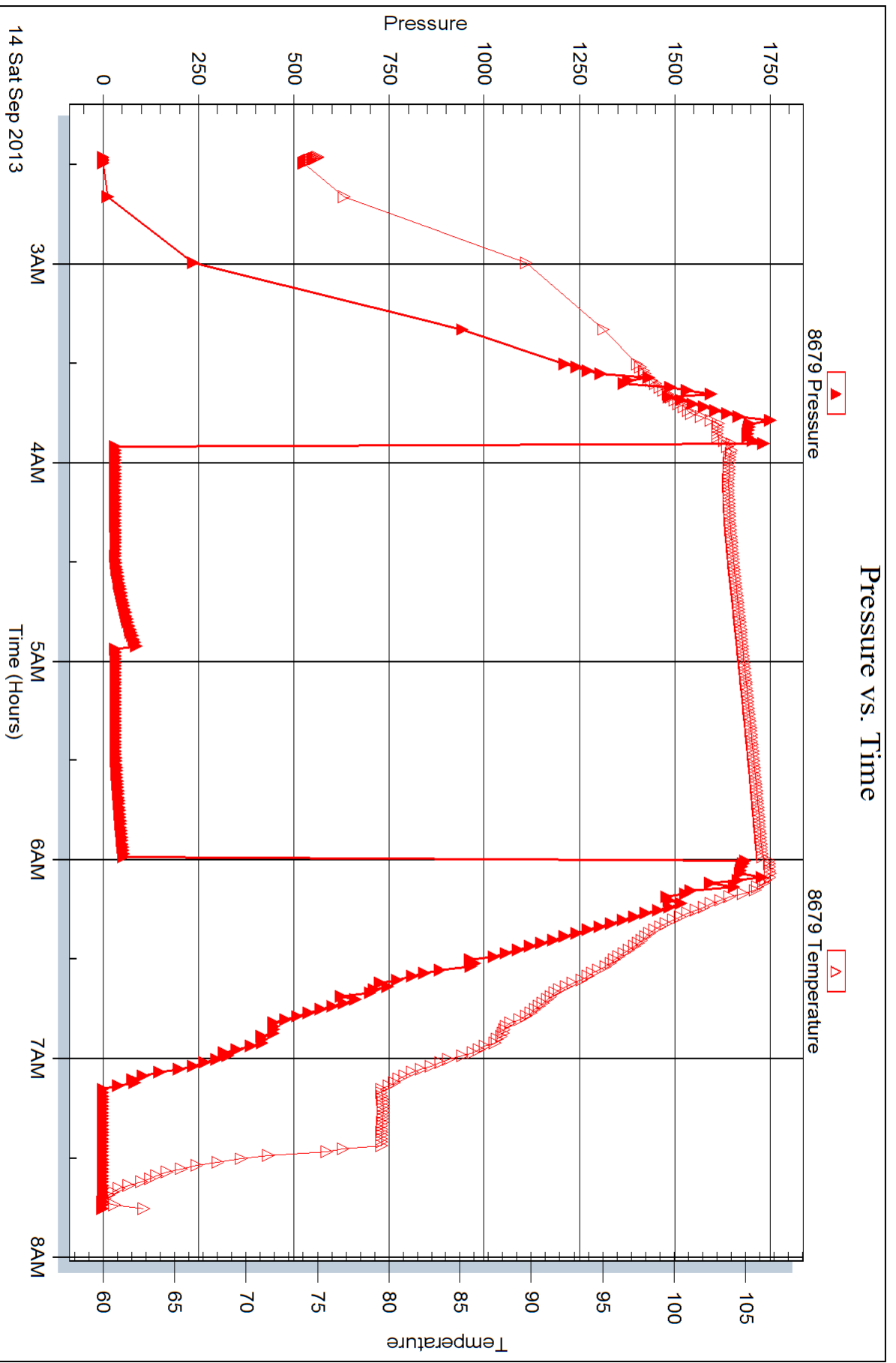
Serial #: 8679

Inside

H&C Oil Operating Inc

Faulkner #14-2

DST Test Number: 5





## DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc**

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **Faulkner #14-2**

### **14-8s-22w Graham,KS**

Start Date: 2013.09.14 @ 14:00:09

End Date: 2013.09.14 @ 19:22:09

Job Ticket #: 041768                      DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.18 @ 09:14:09



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041768

**DST#: 6**

ATTN: Marc Downing

Test Start: 2013.09.14 @ 14:00:09

## GENERAL INFORMATION:

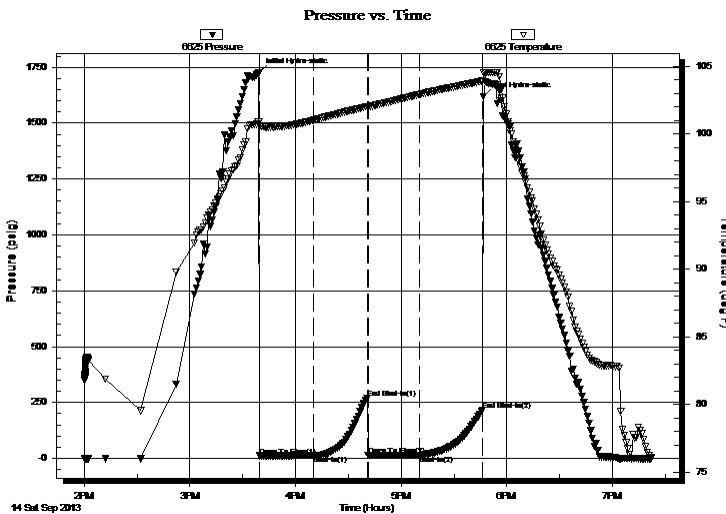
Formation: **LKC-K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:39:39  
 Time Test Ended: 19:22:09  
 Interval: **3539.00 ft (KB) To 3560.00 ft (KB) (TVD)**  
 Total Depth: 3560.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jeff Brown  
 Unit No: 67  
 Reference Elevations: 2124.00 ft (KB)  
 2117.00 ft (CF)  
 KB to GR/CF: 7.00 ft

## Serial #: 6625 Outside

Press @ Run Depth: 13.34 psig @ 3542.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.14 End Date: 2013.09.14 Last Calib.: 2013.09.14  
 Start Time: 14:00:10 End Time: 19:22:09 Time On Btm: 2013.09.14 @ 15:39:09  
 Time Off Btm: 2013.09.14 @ 17:46:39

TEST COMMENT: IFP=Weak blow built to 1/2 in  
 ISI=Dead no blow back  
 FFP=Dead no blow  
 FSI=Dead bo blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1727.06	100.86	Initial Hydro-static
1	10.99	100.57	Open To Flow (1)
31	12.64	101.00	Shut-In(1)
62	269.91	102.01	End Shut-In(1)
62	12.54	102.00	Open To Flow (2)
91	13.34	102.90	Shut-In(2)
127	216.57	103.90	End Shut-In(2)
128	1619.30	104.48	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	SOCM 5%O 95%M	0.03

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041768

**DST#: 6**

ATTN: Marc Downing

Test Start: 2013.09.14 @ 14:00:09

## Tool Information

Drill Pipe:	Length: 3530.00 ft	Diameter: 3.80 inches	Volume: 49.52 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	35000.00 lb
			<u>Total Volume: 49.52 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	28000.00 lb
Depth to Top Packer:	3539.00 ft			Final	28000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	21.00 ft				
Tool Length:	41.00 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			3520.00	
Shut In Tool	5.00			3525.00	
Hydraulic tool	5.00			3530.00	
Packer	4.00			3534.00	20.00 Bottom Of Top Packer
Packer	5.00			3539.00	
Stubb	1.00			3540.00	
Perforations	2.00			3542.00	
Recorder	0.00	6625	Outside	3542.00	
Recorder	0.00	8679	Inside	3542.00	
Perforations	15.00			3557.00	
Bullnose	3.00			3560.00	21.00 Bottom Packers & Anchor

**Total Tool Length: 41.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc

**14-8s-22w Graham,KS**

PO Box 86  
Plainville KS 67663

**Faulkner #14-2**

Job Ticket: 041768

**DST#: 6**

ATTN: Marc Downing

Test Start: 2013.09.14 @ 14:00:09

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 57.94 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	SOCM 5%O 95%M	0.028

Total Length: 2.00 ft      Total Volume: 0.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

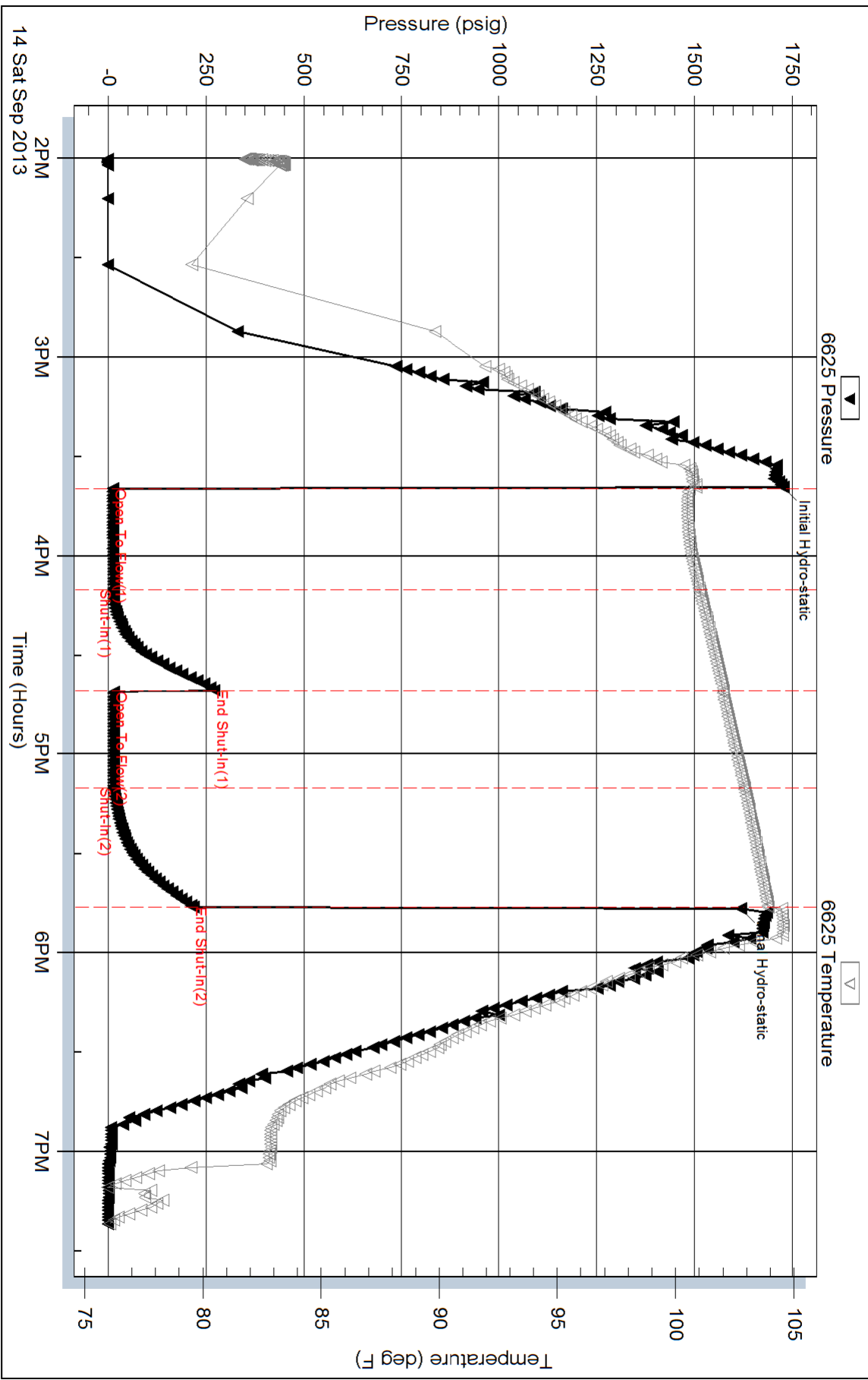
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time



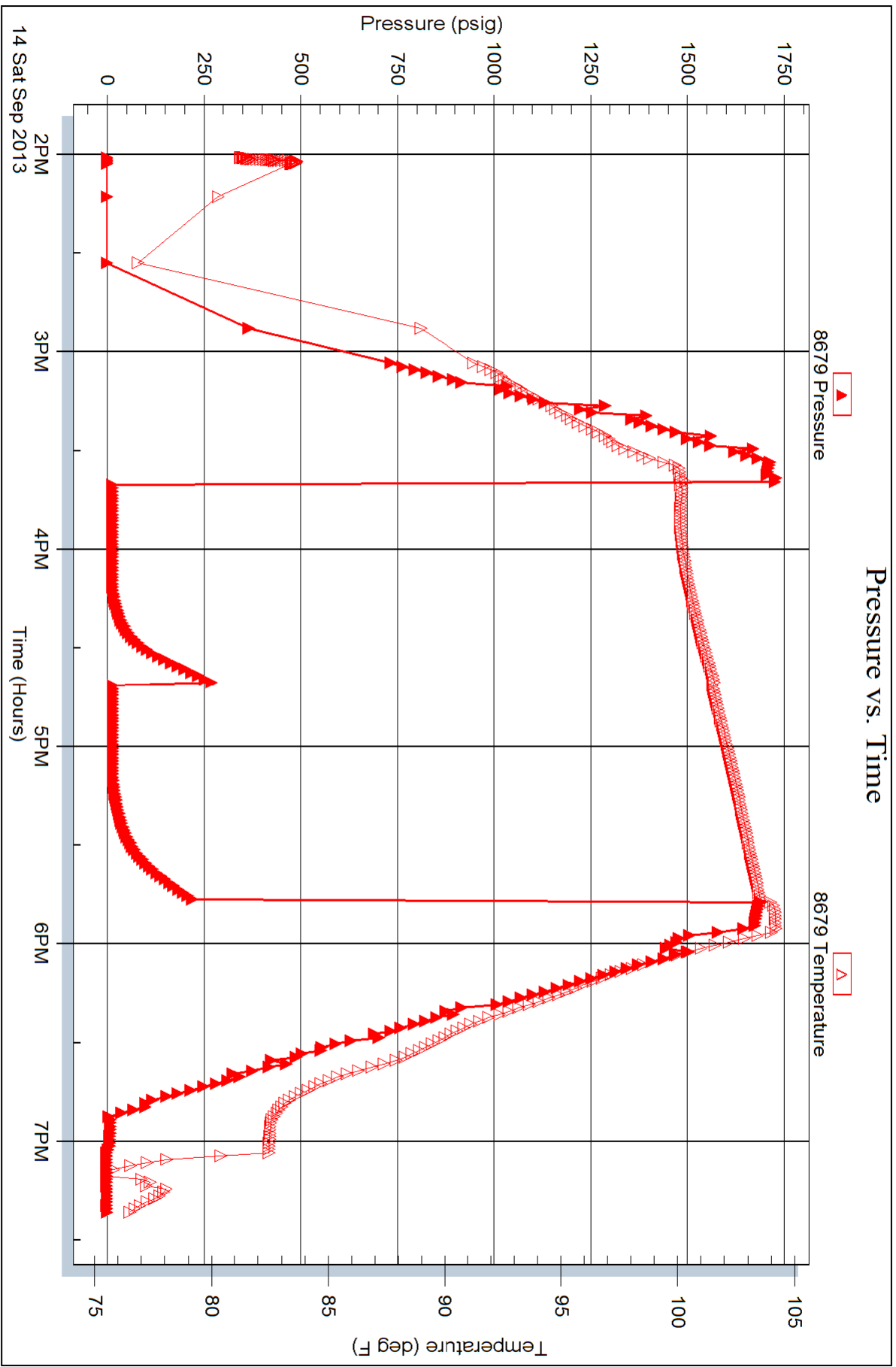
Serial #: 8679

Inside

H&C Oil Operating Inc

Faulkner #14-2

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 041768

Printed: 2013.09.18 @ 09:14:11



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 041763

Well Name & No. Faulkner 14-2 Test No. 1 Date 9-11-13  
 Company H+C Oil Operating INC Elevation 2124 KB 2117 GL  
 Address Po Box 86 Plainville KS 67463 + 0086  
 Co. Rep / Geo. Marc Downing Rig American Eagle # 3  
 Location: Sec. 14 Twp. 8 S Rge. 22 W Co. Graham State KS

Interval Tested 3354-3375 Zone Tested Lansing - A  
 Anchor Length 21 Drill Pipe Run 3372 Mud Wt. 8.9  
 Top Packer Depth 3349 Drill Collars Run 0 Vis 47  
 Bottom Packer Depth 3354 Wt. Pipe Run 0 WL 6.8  
 Total Depth 3375 Chlorides 1100 ppm System LCM 1

Blow Description IFF-  
ISI-  
FFP- Mis run 16 foot of fill in the hole  
FST-

Rec	Feet of	%gas	%oil	%water	%mud
<u>140</u>	<u>MUD</u>				

Rec Total 140 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic  Test 950 T-On Location 17:38  
 (B) First Initial Flow  Jars \_\_\_\_\_ T-Started 18:42  
 (C) First Final Flow  Safety Joint \_\_\_\_\_ T-Open 21:25  
 (D) Initial Shut-In  Circ Sub \_\_\_\_\_ T-Pulled 21:40  
 (E) Second Initial Flow  Hourly Standby \_\_\_\_\_ T-Out 23:36  
 (F) Second Final Flow  Mileage 120 RT 186 Comments \_\_\_\_\_  
 (G) Final Shut-In  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open \_\_\_\_\_  
 Initial Shut-In \_\_\_\_\_  
 Final Flow \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_

Sub Total 1136

Approved By \_\_\_\_\_ Our Representative Jeff Brown  
 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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 041764

Well Name & No. Faulkner 14-2 Test No. 2 Date 9-12-13  
 Company H+C Oil Operating INC Elevation 2124 KB 2117 GL  
 Address PO Box 86 Plainville KS 67663 + 0086  
 Co. Rep / Geo. Marc Downing Rig American Eagle #3  
 Location: Sec. 14 Twp. 8S Rge. 22W Co. Graham State KS

Interval Tested 3354-3375 Zone Tested LKC-A  
 Anchor Length 21 Drill Pipe Run 3342 Mud Wt. 8.9  
 Top Packer Depth 3349 Drill Collars Run 0 Vis 47  
 Bottom Packer Depth 3354 Wt. Pipe Run 0 WL 6.8  
 Total Depth 3375 Chlorides 1100 ppm System LCM 1

Blow Description FP-Fair Blow Built TO 4 IN  
ISI-Dead NO Blow Back  
FP-Weak Blow Built TO 3/4 IN  
ISI-Dead NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>31</u>	<u>mud with A Scum of oil</u>				
<u>10</u>	<u>Gassy oil</u>	<u>5</u>	<u>95</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 41 BHT 103 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1596  Test 1150 T-On Location 4:48  
 (B) First Initial Flow 22  Jars \_\_\_\_\_ T-Started 4:52  
 (C) First Final Flow 27  Safety Joint \_\_\_\_\_ T-Open 6:19  
 (D) Initial Shut-In 870  Circ Sub \_\_\_\_\_ T-Pulled 9:19  
 (E) Second Initial Flow 27  Hourly Standby \_\_\_\_\_ T-Out 11:20  
 (F) Second Final Flow 43  Mileage 186 Comments \_\_\_\_\_  
 (G) Final Shut-In 730  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1549  Straddle \_\_\_\_\_

Initial Open 45  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Ruined Packer \_\_\_\_\_  
 Final Flow 45  Extra Copies \_\_\_\_\_  
 Final Shut-In 45  Extra Recorder \_\_\_\_\_  
 Sub Total 0  
 Total 1336  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1336

Approved By \_\_\_\_\_ Our Representative Jeff Brown

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 041765

Well Name & No. Faulkner 14-2 Test No. 3 Date 9-12-13  
 Company H+C oil OPERATING INC Elevation 2124 KB 2117 GL  
 Address PO Box 86 Plainville KS 67663 + 0086  
 Co. Rep / Geo. Marc Downing Rig American Eagle #3  
 Location: Sec. 14 Twp. 8S Rge. 22 W Co. Graham State KS

Interval Tested 3383 - 3406 Zone Tested LKC-C  
 Anchor Length 23 Drill Pipe Run 3374 Mud Wt. 9.0  
 Top Packer Depth 3378 Drill Collars Run 0 Vis 45  
 Bottom Packer Depth 3383 Wt. Pipe Run 0 WL 7.8  
 Total Depth 3406 Chlorides 1200 ppm System LCM 1

Blow Description FP-Fair Blow Built TO 5 1/2 IN  
IS-Dead NO Blow Back  
FP-Fair Blow Built TO 4 1/2 IN  
IS-Dead NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>43</u>	<u>Feet of MW WITH OIL SPOTS</u>		<u>85</u>	<u>15</u>	
<u>15</u>	<u>Feet of WM WITH OIL</u>		<u>20</u>	<u>80</u>	

Rec Total 78 BHT 108 Gravity API RW. 198 @ 67.9° F Chlorides 38,000 ppm

(A) Initial Hydrostatic 1628  Test 1150 T-On Location 17:52  
 (B) First Initial Flow 11  Jars \_\_\_\_\_ T-Started 18:17  
 (C) First Final Flow 37  Safety Joint \_\_\_\_\_ T-Open 20:25  
 (D) Initial Shut-In 1016  Circ Sub \_\_\_\_\_ T-Pulled 23:25  
 (E) Second Initial Flow 31  Hourly Standby \_\_\_\_\_ T-Out 1:20  
 (F) Second Final Flow 50  Mileage 186 Comments \_\_\_\_\_  
 (G) Final Shut-In 1008  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1600  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45  
 Sub Total 1336  
 Total 1336  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Jeff Brown

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 041766

4/10

Well Name & No. Faulkner 14-2 Test No. 4 Date 9-13-13  
 Company H & C Oil Operating INC Elevation 2124 KB 2117 GL  
 Address Po Box 86 Plainville KS 67463 + 0086  
 Co. Rep / Geo. Marc Downing Rig American Eagle #3  
 Location: Sec. 14 Twp. 8s Rge. 22 W Co. Graham State KS

Interval Tested 3424-3450 Zone Tested LKC - E + F  
 Anchor Length 26 Drill Pipe Run 3437 Mud Wt. 9.1  
 Top Packer Depth 3419 Drill Collars Run 0 Vis 60  
 Bottom Packer Depth 3424 Wt. Pipe Run 0 WL 5.8  
 Total Depth 3450 Chlorides 1500 ppm System LCM 0

Blow Description FF- Good Blow Bob IN 25min  
FF- Dead No Blow Back  
FF- Weak Blow By: IT to 1 IN died back to a 1/4 IN  
FF- Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>253</u>	<u>Feet of MW</u>			<u>80</u>	<u>20</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 253 BHT 110 Gravity API RW, 178 @ 79.5 F Chlorides 42,000 ppm  
 (A) Initial Hydrostatic 1649  Test 1150 T-On Location \_\_\_\_\_  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 9:54  
 (C) First Final Flow 79  Safety Joint \_\_\_\_\_ T-Open 11:38  
 (D) Initial Shut-In 753  Circ Sub \_\_\_\_\_ T-Pulled 14:38  
 (E) Second Initial Flow 78  Hourly Standby \_\_\_\_\_ T-Out 16:38  
 (F) Second Final Flow 127  Mileage \_\_\_\_\_ Comments \_\_\_\_\_  
 (G) Final Shut-In 619  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1656  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45  
 Sub Total 0  
 Total 1150  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1150

Approved By \_\_\_\_\_ Our Representative Jill Brown  
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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 041767

Well Name & No. Faul Kner 14-2 Test No. 5 Date 9-14-13  
 Company H+C oil operating Elevation 2124 KB 2117 GL  
 Address Po Box 86 Plainville KS 67163 + 0086  
 Co. Rep / Geo. Marc Downing Rig American Eagle #3  
 Location: Sec. 14 Twp. 8S Rge. 22W Co. Graham State KS

Interval Tested 3479 - 3541 Zone Tested LKC - H-J  
 Anchor Length 62 Drill Pipe Run 3467 Mud Wt. 9.1  
 Top Packer Depth 3474 Drill Collars Run 0 Vis 600  
 Bottom Packer Depth 3479 Wt. Pipe Run 0 WL 5.8  
 Total Depth 3541 Chlorides 1500 ppm System LCM 0

Blow Description FF-Weak Blow Built To 1 IN  
ISI-Dead No Blow Back  
FF-Dead No Blow  
FSI-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>3'</u>	<u>CCM</u>		<u>10</u>		<u>90</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 3 BHT Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1713  Test 1150 T-On Location 2:15  
 (B) First Initial Flow 29  Jars T-Started 2:27  
 (C) First Final Flow 30  Safety Joint T-Open 3:55  
 (D) Initial Shut-In 85  Circ Sub T-Pulled 5:55  
 (E) Second Initial Flow 30  Hourly Standby T-Out 7:48  
 (F) Second Final Flow 30  Mileage 186 Comments  
 (G) Final Shut-In 52  Sampler  
 (H) Final Hydrostatic 1605  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies

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

Sub Total 1336  
 Total 1336  
 MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Jeff Brown

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 041768

4/10

Well Name & No. Faulkner 14-2 Test No. Lo Date 9-14-13  
 Company H+C oil operating Elevation 2124 KB 2117 GL  
 Address PO Box 86 Plainville KS 67463 + 0086  
 Co. Rep / Geo. Marc Downing Rig American Eagle #3  
 Location: Sec. 14 Twp. 8S Rge. 22W Co. Graham State KS

Interval Tested 3539 - 3540 Zone Tested LKC - K  
 Anchor Length 21 Drill Pipe Run 3530 Mud Wt. 9.2  
 Top Packer Depth 3534 Drill Collars Run 0 Vis 200  
 Bottom Packer Depth 3539 Wt. Pipe Run 0 WL 5.8  
 Total Depth 3560 Chlorides 1500 ppm System LCM 0

Blow Description 1st Weak Blow Built to 1/2 IN  
1st Dead NO Blow Back  
2nd Dead NO Blow  
3rd Dead NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2 BHT 104 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1726  Test 1150 T-On Location #1-0: 14:00  
 (B) First Initial Flow 11  Jars \_\_\_\_\_ T-Started 14:00  
 (C) First Final Flow 13  Safety Joint \_\_\_\_\_ T-Open 15:40  
 (D) Initial Shut-In 270  Circ Sub \_\_\_\_\_ T-Pulled 17:40  
 (E) Second Initial Flow 13  Hourly Standby \_\_\_\_\_ T-Out 19:22  
 (F) Second Final Flow 13  Mileage 186 Comments \_\_\_\_\_  
 (G) Final Shut-In 217  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1419  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 1336  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 30 Sub Total 1336

Approved By \_\_\_\_\_ Our Representative Jeff Brown  
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# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

No. 6895

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

Date	9-15-13	Sec.	14	Twp.	8	Range	22	County	Graham	State	On Location	Finish	3:30PM
Lease	Faulkner												
Contractor	American Eagle												
Type Job	Plug												
Hole Size	7 7/8												
Csg.	T.D.												
Tbg. Size	Depth												
Tool	Depth												
Cement Left in Csg.	Shoe Joint												
Meas Line	Displace												
EQUIPMENT													
Pumptrk	15	No.	Cementer										
			Helper	Nick									
Bulktrk	12	No.	Driver	Lonnie M.									
Bulktrk	P4	No.	Driver										
			Driver	Franks									
JOB SERVICES & REMARKS													
Remarks:													
Rat Hole	305X												
Mouse Hole													
Centralizers													
Baskets													
D/V or Port Collar													
	100 SX at 3550												
	25 SX at 1720												
	100 SX at 942												
	40 SX at 270												
	10 SX at 40 with wood plug												
	FLOAT EQUIPMENT												
	Guide Shoe												
	Centralizer												
	Baskets												
	AFU Inserts												
	Float Shoe												
	Latch Down												
	1 wood plug												
	Pumptrk Charge plug												
	Mileage 45												
	Tax												
	Discount												
	Total Charge												

X  
Signature 