



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1092736  
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: \_\_\_\_\_

1092736

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> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Caerus Kansas LLC
Well Name	Hoffman 18-31
Doc ID	1092736

All Electric Logs Run

Dual Induction
Microlog
Compensated Density Neutron
Sonic Log

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

Sam Brownback, Governor

September 05, 2012

Amy Lay  
Caerus Kansas LLC  
600 17TH ST, STE 1600 N  
DENVER, CO 80202

Re: ACO1  
API 15-009-25723-00-00  
Hoffman 18-31  
NE/4 Sec.18-17S-13W  
Barton 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,  
Amy Lay



## DRILL STEM TEST REPORT

Prepared For: **Caerus Kansas LLC**

PO Box 1378  
Hays, KS 67601

ATTN: JUSTIN CARTER

**Hoffman 18-31**

**18-17S-13W Barton**

Start Date: 2012.07.16 @ 03:02:17

End Date: 2012.07.16 @ 13:11:02

Job Ticket #: 46615                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.16 @ 13:24:40



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Caerus Kansas LLC

**18-17S-13W Barton**

PO Box 1378  
Hays, KS 67601

**Hoffman 18-31**

ATTN: JUSTIN CARTER

Job Ticket: 46615

**DST#: 1**

Test Start: 2012.07.16 @ 03:02:17

## GENERAL INFORMATION:

Formation: **Lansing A-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:26:32

Time Test Ended: 13:11:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 45

**Interval: 3201.00 ft (KB) To 3266.00 ft (KB) (TVD)**

Reference Elevations: 1963.00 ft (KB)

Total Depth: 3266.00 ft (KB) (TVD)

1953.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6798**

**Inside**

Press @ Run Depth: 534.35 psig @ 3202.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.16

End Date: 2012.07.16

Last Calib.: 2012.07.16

Start Time: 03:02:18

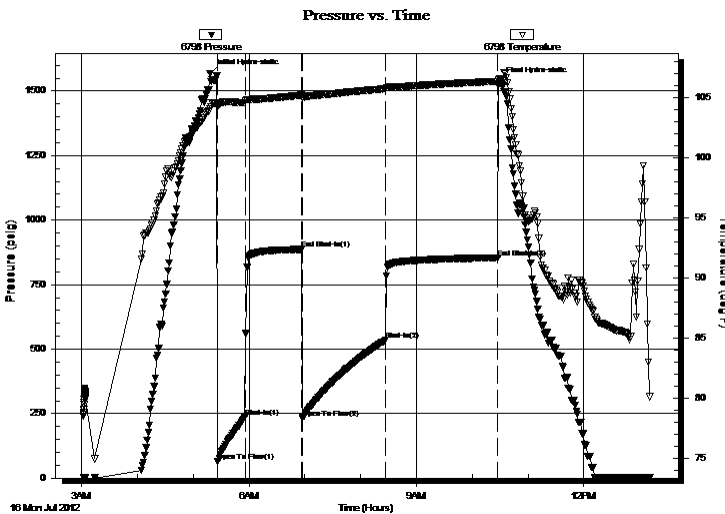
End Time: 13:11:02

Time On Btm: 2012.07.16 @ 05:18:02

Time Off Btm: 2012.07.16 @ 10:29:32

**TEST COMMENT:** IF: Strong Blow , BOB in 4 minutes  
IS: Weak Surface Blow Back  
FF: Strong Blow , BOB in 4 minutes, GTS in 87 minutes, TSTM  
FS: Surface Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1568.52	104.06	Initial Hydro-static
9	63.83	104.30	Open To Flow (1)
38	236.01	104.60	Shut-In(1)
99	886.57	105.18	End Shut-In(1)
100	232.73	104.99	Open To Flow (2)
189	534.35	105.72	Shut-In(2)
310	854.29	106.34	End Shut-In(2)
312	1536.60	106.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	1963 GIP	0.00
372.00	Water	5.22
438.00	GWMCO 20%G 10%W 20%M 50%O	6.14
120.00	MCO 20%M 80%O	1.68
310.00	GOCM 20%G 30%O 50%M	4.35

## Gas Rates

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



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Caerus Kansas LLC

18-17S-13W Barton

PO Box 1378  
Hays, KS 67601

Hoffman 18-31

ATTN: JUSTIN CARTER

Job Ticket: 46615

DST#: 1

Test Start: 2012.07.16 @ 03:02:17

### GENERAL INFORMATION:

Formation: **Lansing A-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:26:32

Time Test Ended: 13:11:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 45

Interval: **3201.00 ft (KB) To 3266.00 ft (KB) (TVD)**

Reference Elevations: 1963.00 ft (KB)

Total Depth: 3266.00 ft (KB) (TVD)

1953.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8367 Outside

Press @ Run Depth: psig @ 3202.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.16 End Date: 2012.07.16

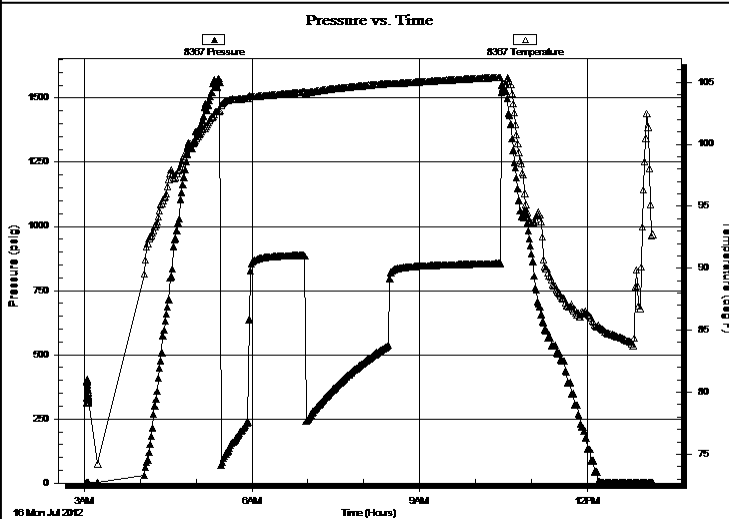
Last Calib.: 2012.07.16

Start Time: 03:02:18 End Time: 13:10:32

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 4 minutes  
IS: Weak Surface Blow Back  
FF: Strong Blow , BOB in 4 minutes, GTS in 87 minutes, TSTM  
FS: Surface Blow Back



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
0.00	1963 GIP	0.00
372.00	Water	5.22
438.00	GWMCO 20%G 10%W 20%M 50%O	6.14
120.00	MCO 20%M 80%O	1.68
310.00	GOCM 20%G 30%O 50%M	4.35

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Caerus Kansas LLC

**18-17S-13W Barton**

PO Box 1378  
Hays, KS 67601

**Hoffman 18-31**

Job Ticket: 46615

**DST#: 1**

ATTN: jUSTINcARTER

Test Start: 2012.07.16 @ 03:02:17

## 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:

95000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	1963 GIP	0.000
372.00	Water	5.218
438.00	GWMCO 20%G 10%W 20%M 50%O	6.144
120.00	MCO 20%M 80%O	1.683
310.00	GOCM 20%G 30%O 50%M	4.348

Total Length: 1240.00 ft      Total Volume: 17.393 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

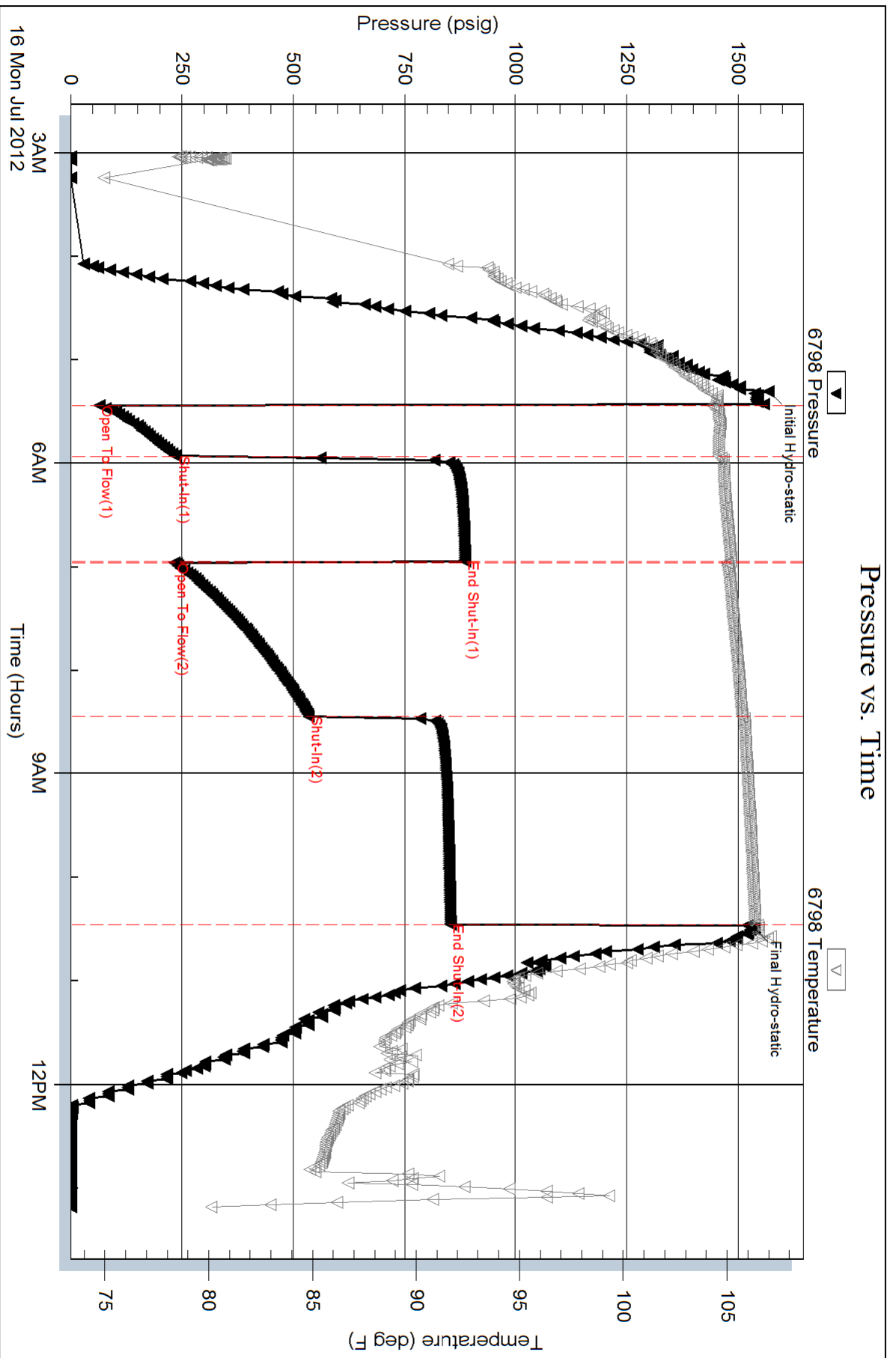
Serial #:

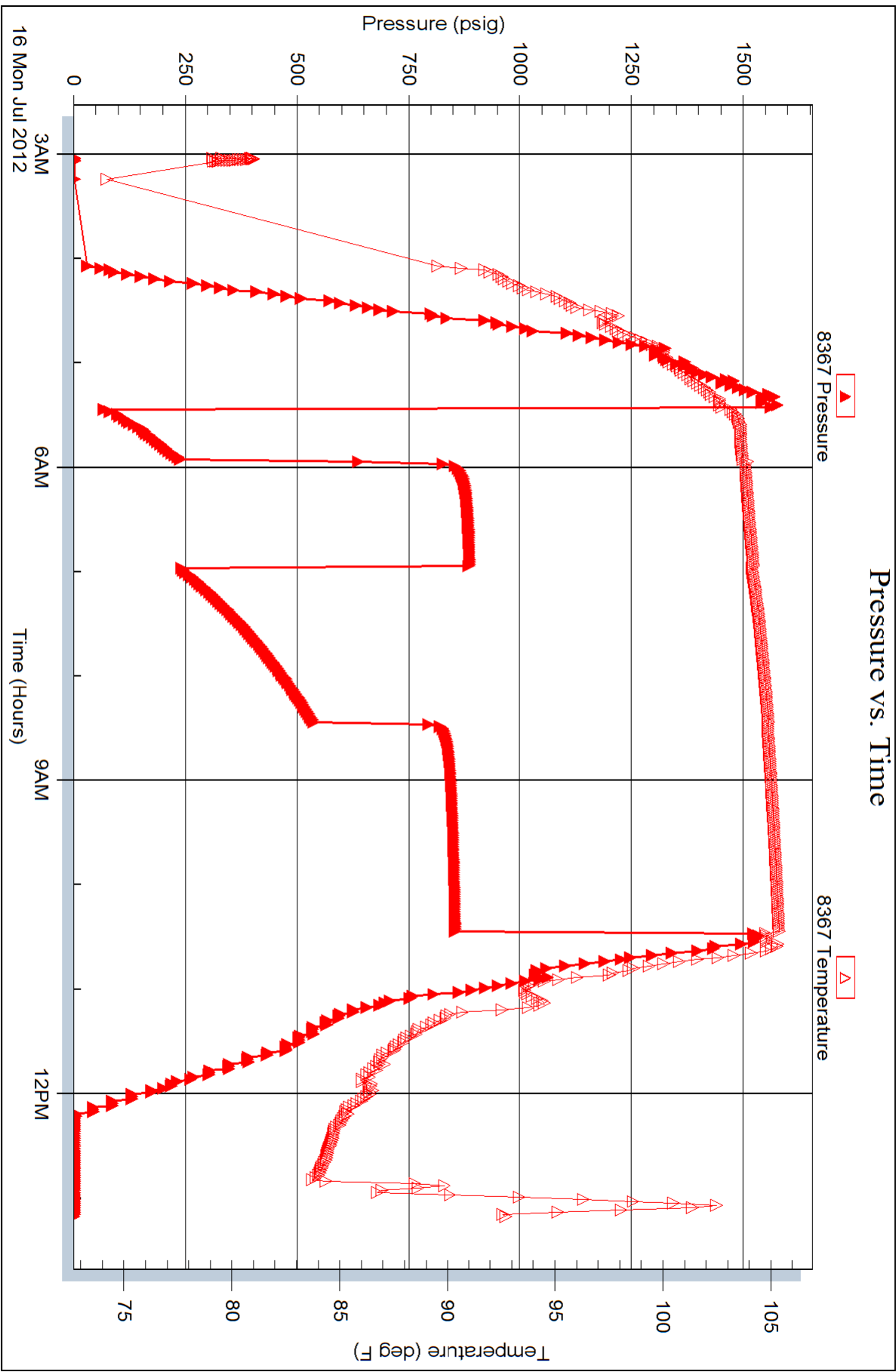
Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .07 @ 83 degrees









## DRILL STEM TEST REPORT

Prepared For: **Caerus Kansas LLC**

PO Box 1378  
Hays, KS 67601

ATTN: JUSTIN cARTER

**Hoffman 18-31**

**18-17S-13W Barton**

Start Date: 2012.07.16 @ 19:51:54

End Date: 2012.07.17 @ 04:13:39

Job Ticket #: 47616                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.17 @ 04:28:40



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Caerus Kansas LLC

**18-17S-13W Barton**

PO Box 1378  
Hays, KS 67601

**Hoffman 18-31**

ATTN: JUSTIN CARTER

Job Ticket: 47616

**DST#: 2**

Test Start: 2012.07.16 @ 19:51:54

## GENERAL INFORMATION:

Formation: **Lansing F & G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:22:24

Time Test Ended: 04:13:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

**Interval: 3266.00 ft (KB) To 3301.00 ft (KB) (TVD)**

Reference Elevations: 1963.00 ft (KB)

Total Depth: 3301.00 ft (KB) (TVD)

1953.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6798 Inside**

Press @ Run Depth: 94.65 psig @ 3267.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.16 End Date: 2012.07.17

Last Calib.: 2012.07.17

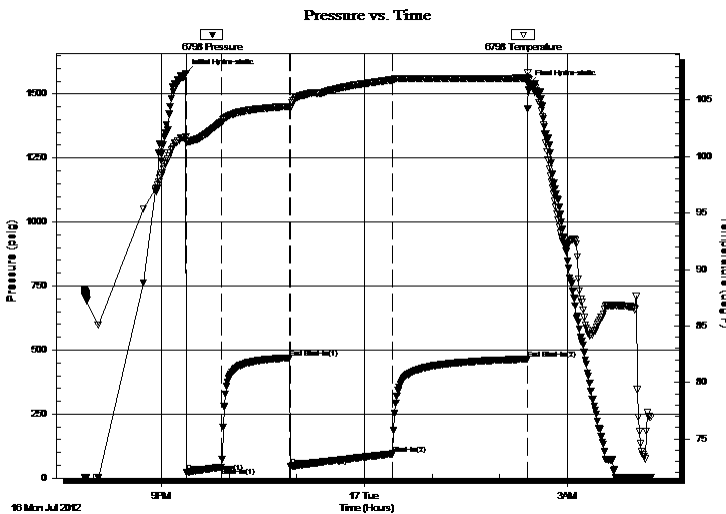
Start Time: 19:51:55 End Time: 04:13:39

Time On Btm: 2012.07.16 @ 21:21:39

Time Off Btm: 2012.07.17 @ 02:25:09

**TEST COMMENT:** IF: Weak Blow, 1 1/2 inches  
IS: No Blow Back  
FF: Weak Blow, 3 inches  
FS: No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1580.40	101.75	Initial Hydro-static
1	22.13	101.26	Open To Flow (1)
32	43.32	103.05	Shut-In(1)
93	469.49	104.45	End Shut-In(1)
93	44.65	104.29	Open To Flow (2)
183	94.65	106.79	Shut-In(2)
303	464.22	106.94	End Shut-In(2)
304	1535.82	106.93	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
130.00	Muddy Water 10%M 90%W	1.82

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Caerus Kansas LLC

**18-17S-13W Barton**

PO Box 1378  
Hays, KS 67601

**Hoffman 18-31**

Job Ticket: 47616

**DST#: 2**

ATTN: jUSTINcARTER

Test Start: 2012.07.16 @ 19:51:54

## 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:

95000 ppm

Viscosity: 43.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
130.00	Muddy Water 10%M 90%W	1.824

Total Length: 130.00 ft      Total Volume: 1.824 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

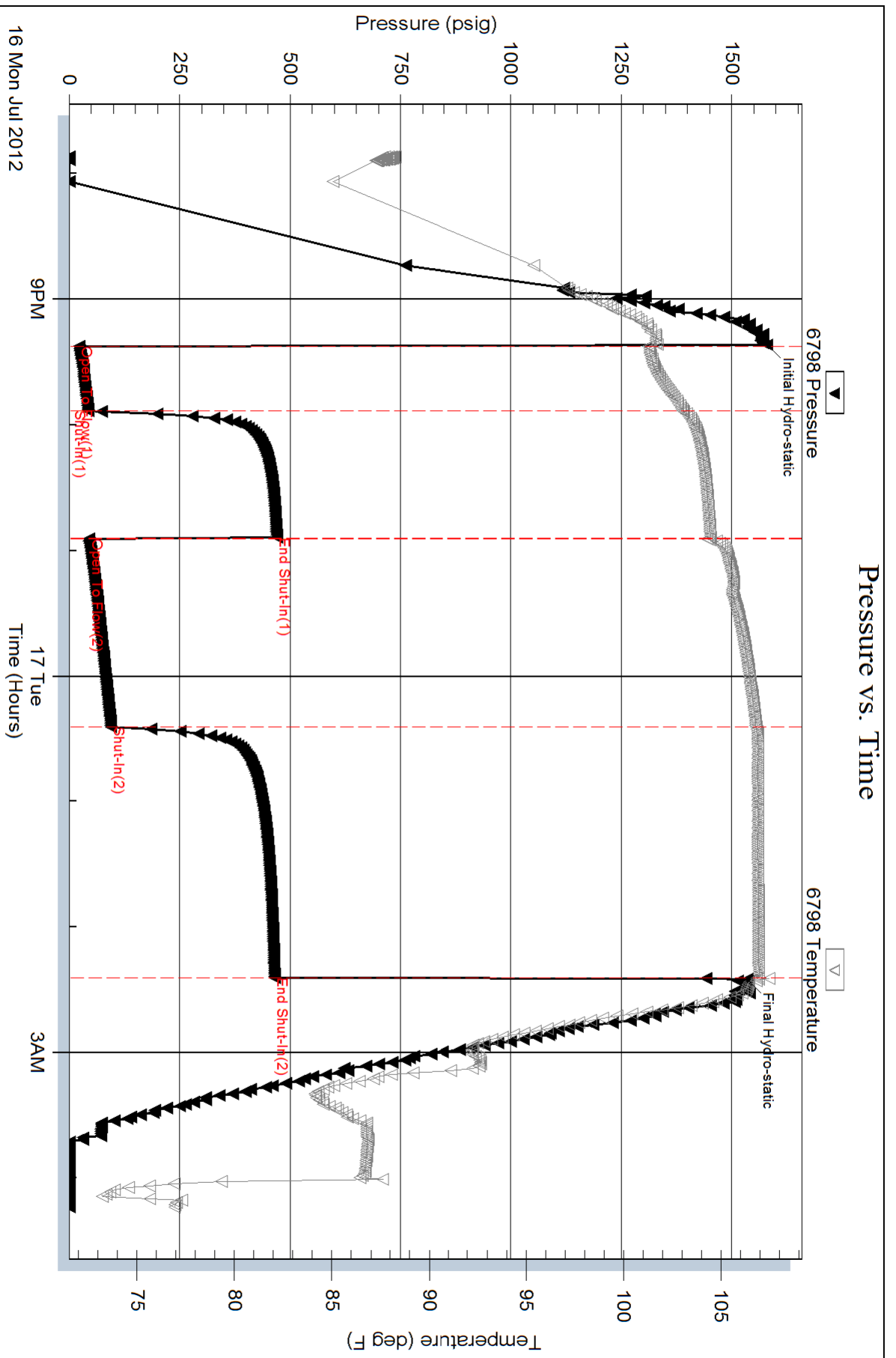
Serial #:

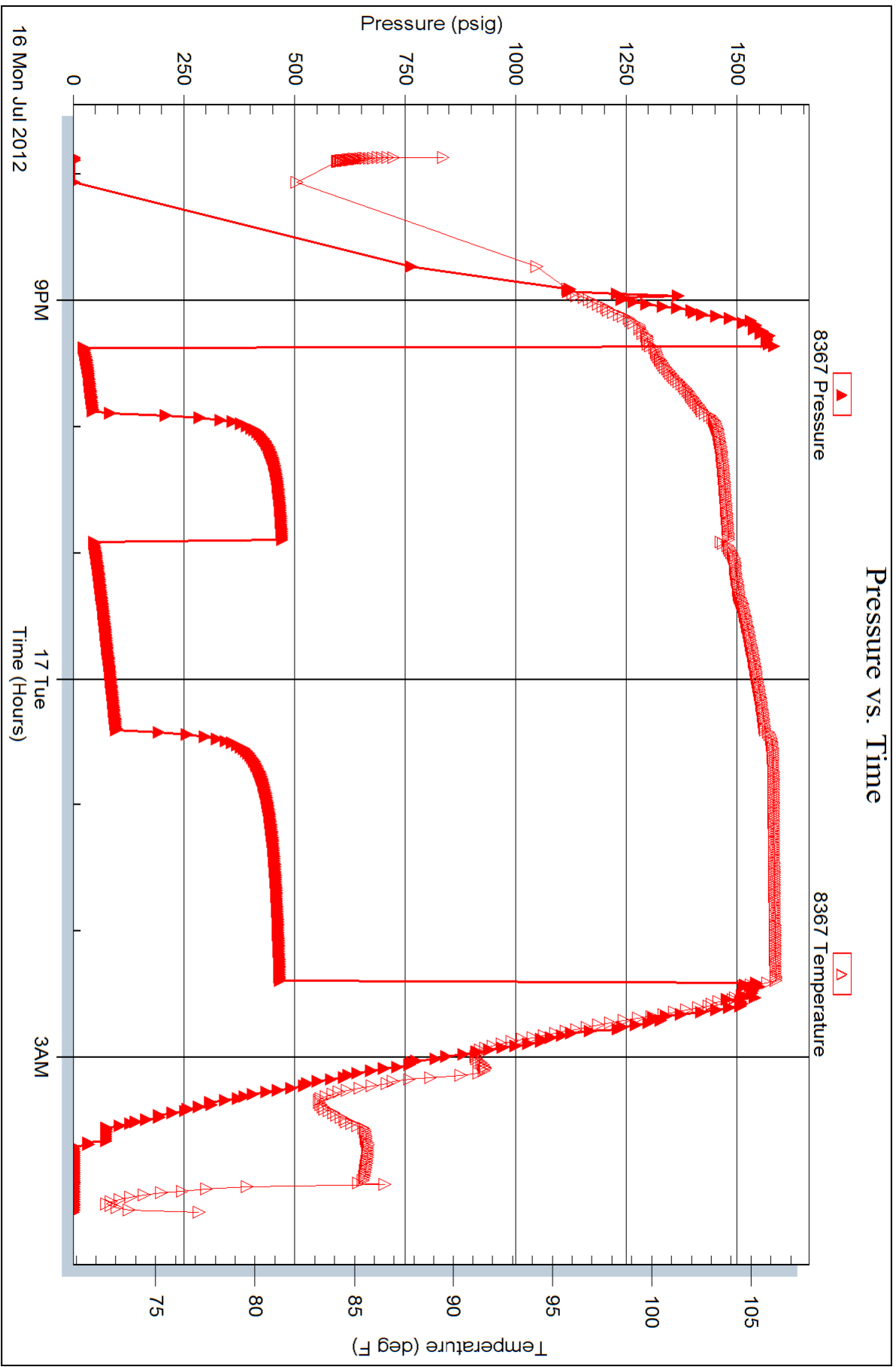
Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .075 @ 78 degrees

### Pressure vs. Time









**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Caerus Kansas LLC

**18-17S-13W Barton**

PO Box 1378  
Hays, KS 67601

**Hoffman 18-31**

Job Ticket: 47617

**DST#: 3**

ATTN: JUSTIN CARTER

Test Start: 2012.07.17 @ 13:37:06

## GENERAL INFORMATION:

Formation: **Lansing H & I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:33:36

Time Test Ended: 22:17:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

**Interval: 3334.00 ft (KB) To 3372.00 ft (KB) (TVD)**

Reference Elevations: 1963.00 ft (KB)

Total Depth: 3372.00 ft (KB) (TVD)

1953.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6798 Inside**

Press @ Run Depth: 29.43 psig @ 3335.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.17

End Date:

2012.07.17

Last Calib.:

2012.07.17

Start Time: 13:37:07

End Time:

22:17:36

Time On Btm:

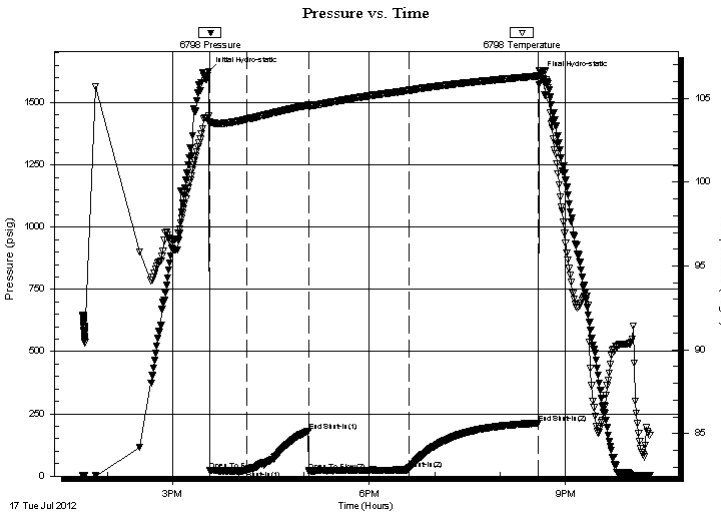
2012.07.17 @ 15:32:51

Time Off Btm:

2012.07.17 @ 20:36:21

**TEST COMMENT:** IF: Weak 1/2 inch Blow  
IS: No Blow Back  
FF: Fair Blow, BOB in 45 minutes  
FS: No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1625.95	103.95	Initial Hydro-static
1	22.43	103.50	Open To Flow (1)
35	25.20	103.75	Shut-In(1)
92	180.52	104.59	End Shut-In(1)
92	18.85	104.53	Open To Flow (2)
183	29.43	105.47	Shut-In(2)
303	212.74	106.34	End Shut-In(2)
304	1608.13	106.63	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	285 GIP	0.00
15.00	Muddy Water 30%M 70%W	0.21

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Caerus Kansas LLC

**18-17S-13W Barton**

PO Box 1378  
Hays, KS 67601

**Hoffman 18-31**

Job Ticket: 47617

**DST#: 3**

ATTN: JUSTIN CARTER

Test Start: 2012.07.17 @ 13:37:06

### GENERAL INFORMATION:

Formation: **Lansing H & I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:33:36

Time Test Ended: 22:17:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

**Interval: 3334.00 ft (KB) To 3372.00 ft (KB) (TVD)**

Reference Elevations: 1963.00 ft (KB)

Total Depth: 3372.00 ft (KB) (TVD)

1953.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8367 Outside**

Press @ Run Depth: psig @ 3335.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.17

End Date:

2012.07.17

Last Calib.:

2012.07.17

Start Time: 13:37:07

End Time:

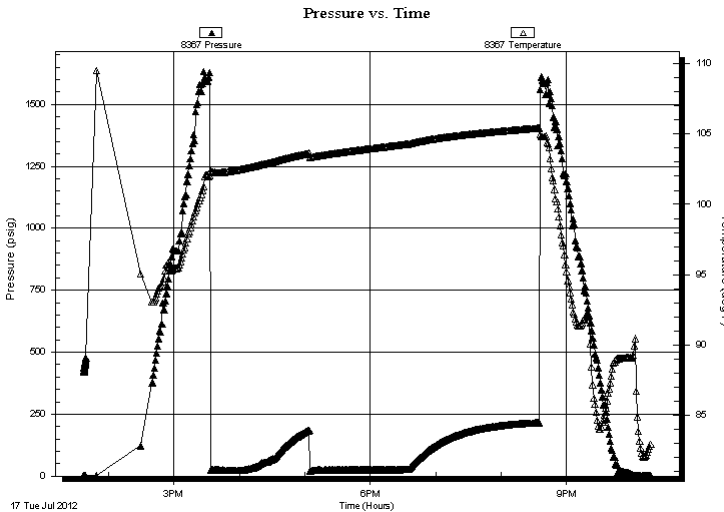
22:17:36

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: Weak 1/2 inch Blow  
IS: No Blow Back  
FF: Fair Blow, BOB in 45 minutes  
FS: No Blow Back

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
0.00	285 GIP	0.00
15.00	Muddy Water 30%M 70%W	0.21

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Caerus Kansas LLC

**18-17S-13W Barton**

PO Box 1378  
Hays, KS 67601

**Hoffman 18-31**

Job Ticket: 47617

**DST#: 3**

ATTN: jUSTINcARTER

Test Start: 2012.07.17 @ 13:37:06

### 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:

90000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	285 GIP	0.000
15.00	Muddy Water 30%M 70%W	0.210

Total Length: 15.00 ft      Total Volume: 0.210 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

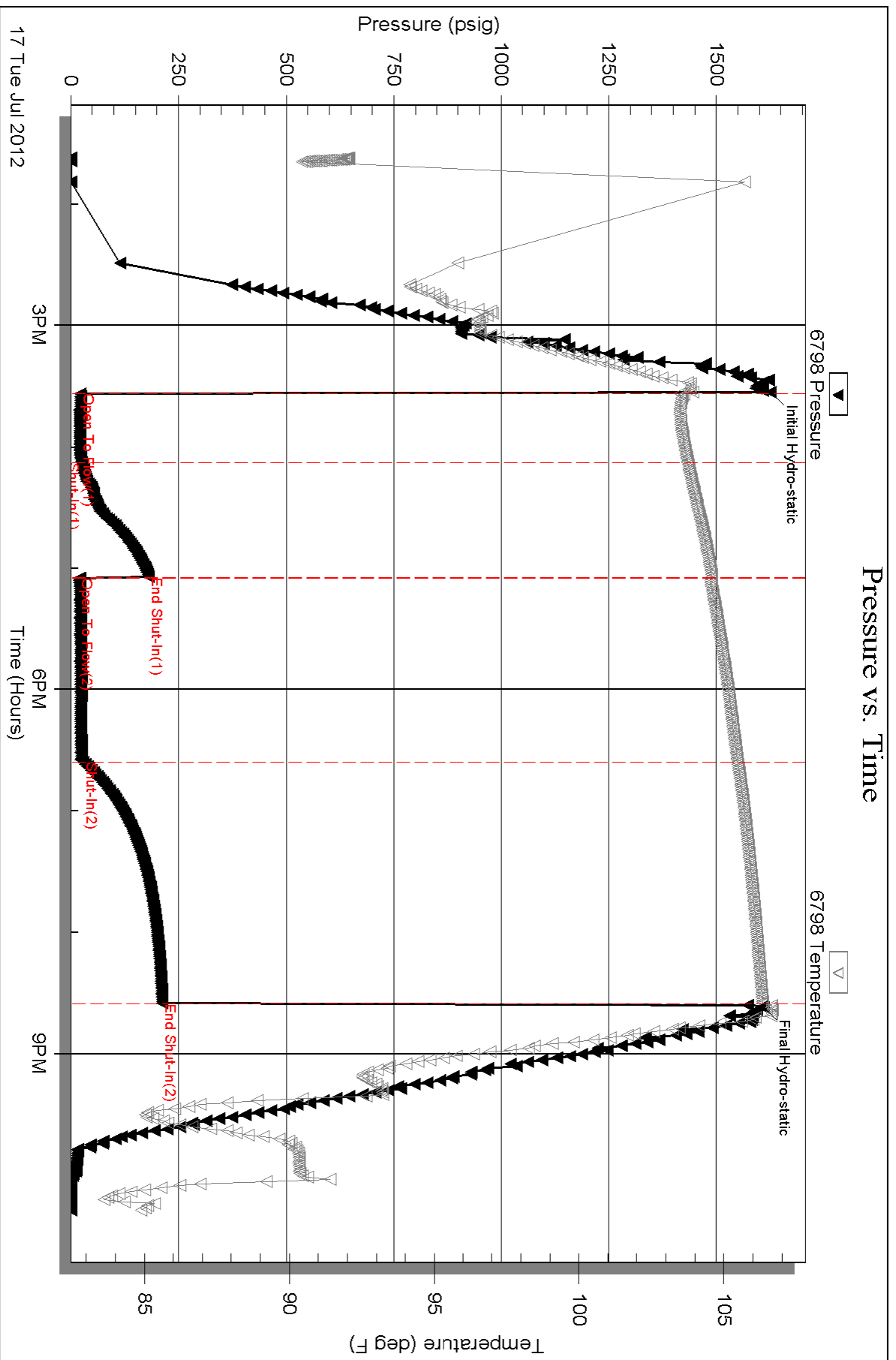
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .07 @ 88 degrees

### Pressure vs. Time

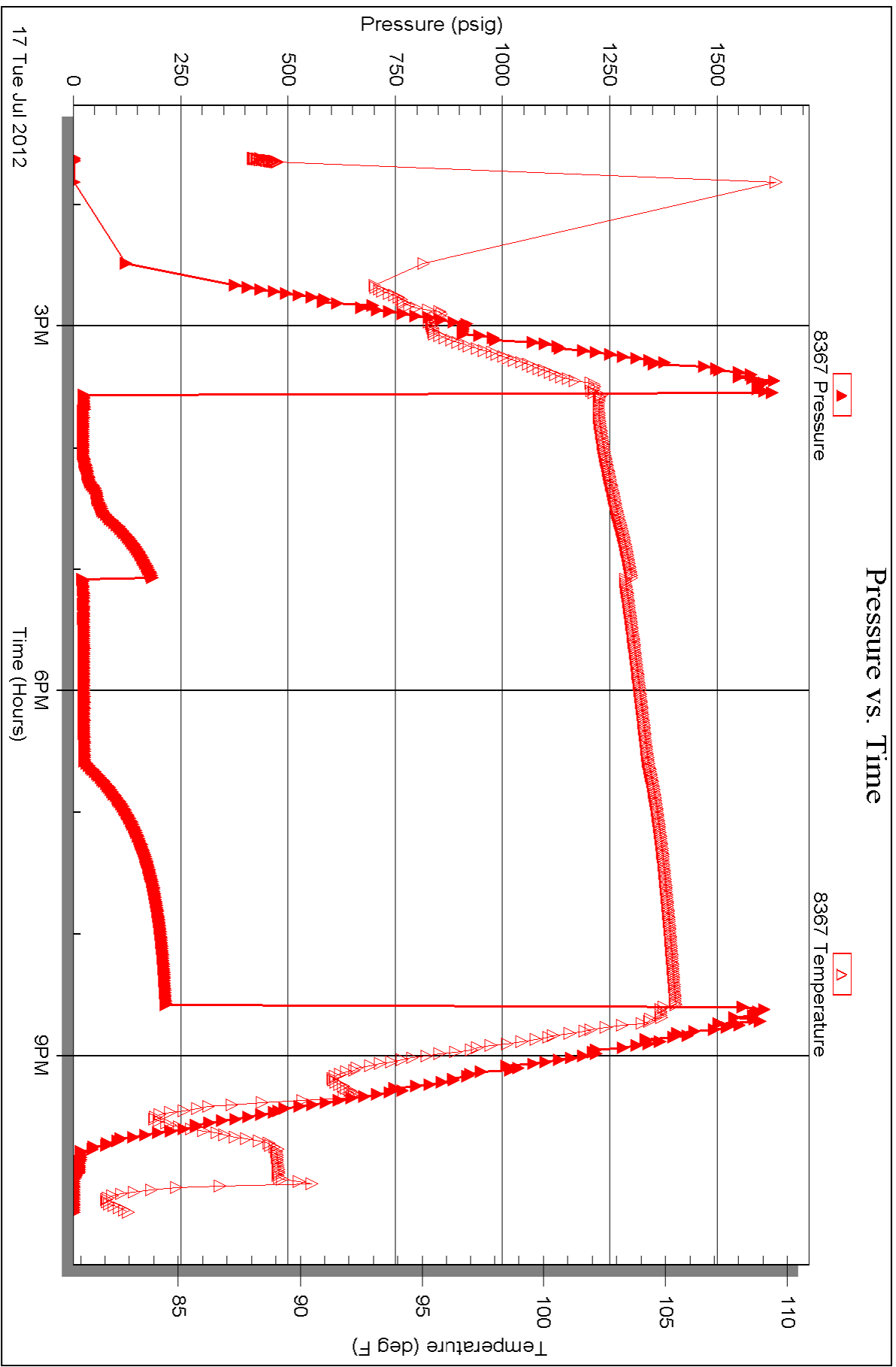


Serial #: 8367

Outside Caerus Kansas LLC

Hoffman 18-31

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Caerus Kansas LLC**

PO Box 1378  
Hays, KS 67601

ATTN: JUSTIN cARTER

**Hoffman 18-31**

**18-17S-13W Barton**

Start Date: 2012.07.18 @ 12:00:31

End Date: 2012.07.18 @ 18:32:01

Job Ticket #: 47618                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.18 @ 19:16:00



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Caerus Kansas LLC

**18-17S-13W Barton**

PO Box 1378  
Hays, KS 67601

**Hoffman 18-31**

Job Ticket: 47618

**DST#: 4**

ATTN: JUSTIN CARTER

Test Start: 2012.07.18 @ 12:00:31

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:33:16

Time Test Ended: 18:32:01

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

**Interval: 3406.00 ft (KB) To 3451.00 ft (KB) (TVD)**

Reference Elevations: 1963.00 ft (KB)

Total Depth: 3451.00 ft (KB) (TVD)

1953.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6798**

**Inside**

Press @ Run Depth: 27.27 psig @ 3407.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.18

End Date:

2012.07.18

Last Calib.:

2012.07.18

Start Time: 12:00:32

End Time:

18:32:01

Time On Btm:

2012.07.18 @ 13:32:46

Time Off Btm:

2012.07.18 @ 16:35:46

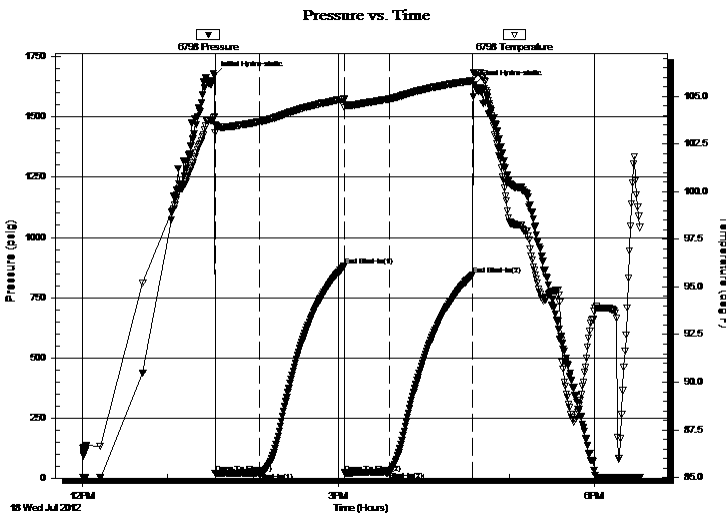
TEST COMMENT: IF: Weak Surface Blow, Dead @ 15 minutes

IS: No Blow Back

FF: No Blow

FS: No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1671.18	103.91	Initial Hydro-static
1	20.39	103.10	Open To Flow (1)
32	22.34	103.66	Shut-In(1)
92	880.21	104.85	End Shut-In(1)
92	21.95	104.40	Open To Flow (2)
123	27.27	104.85	Shut-In(2)
182	844.06	105.82	End Shut-In(2)
183	1634.49	106.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	VSOSM -1%O +99%M	0.07

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Caerus Kansas LLC

**18-17S-13W Barton**

PO Box 1378  
Hays, KS 67601

**Hoffman 18-31**

Job Ticket: 47618

**DST#: 4**

ATTN: jUSTINcARTER

Test Start: 2012.07.18 @ 12:00:31

## 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: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	VSOSM-1%O +99%M	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl

Num Fluid Samples: 0

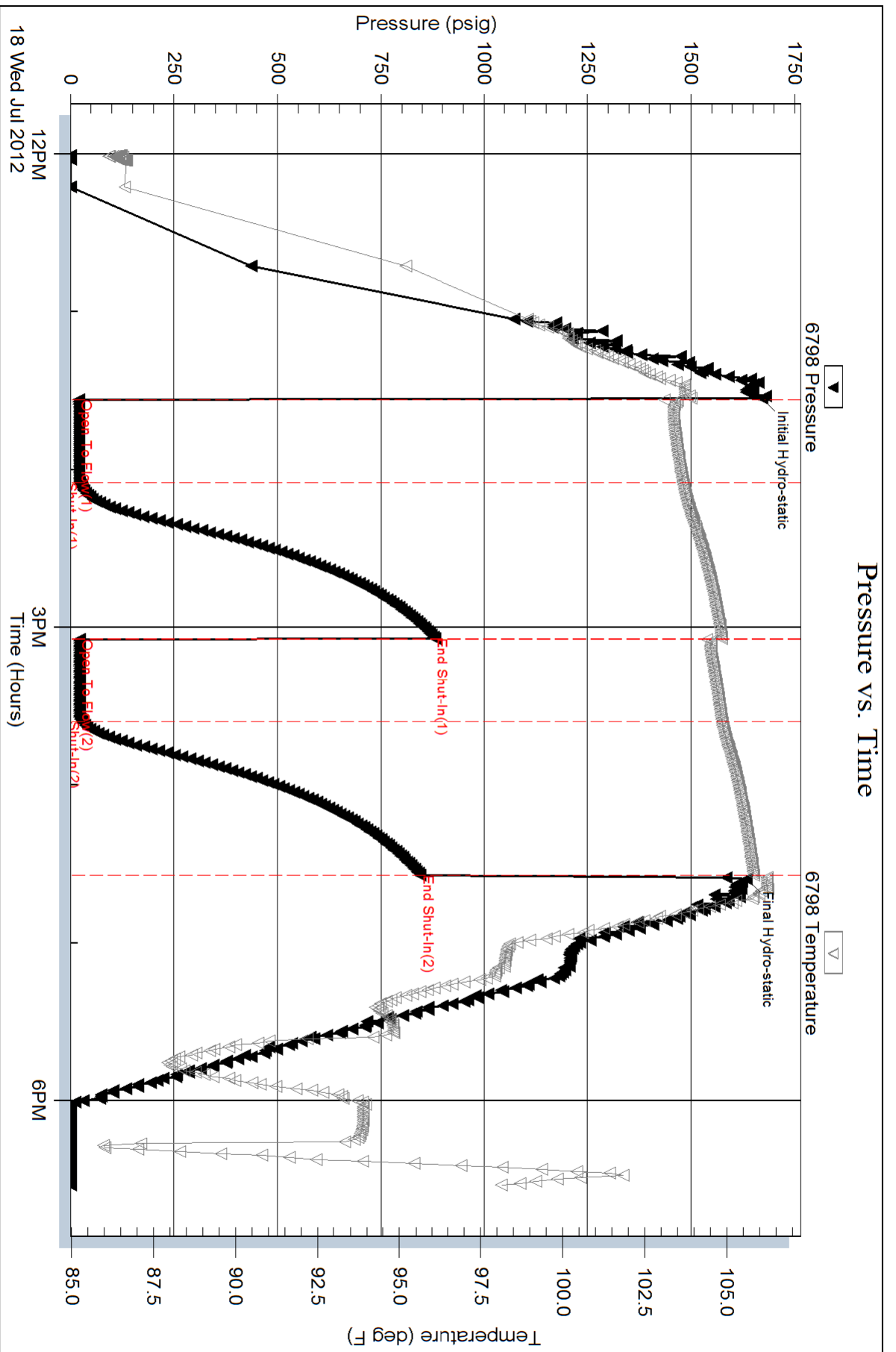
Num Gas Bombs: 0

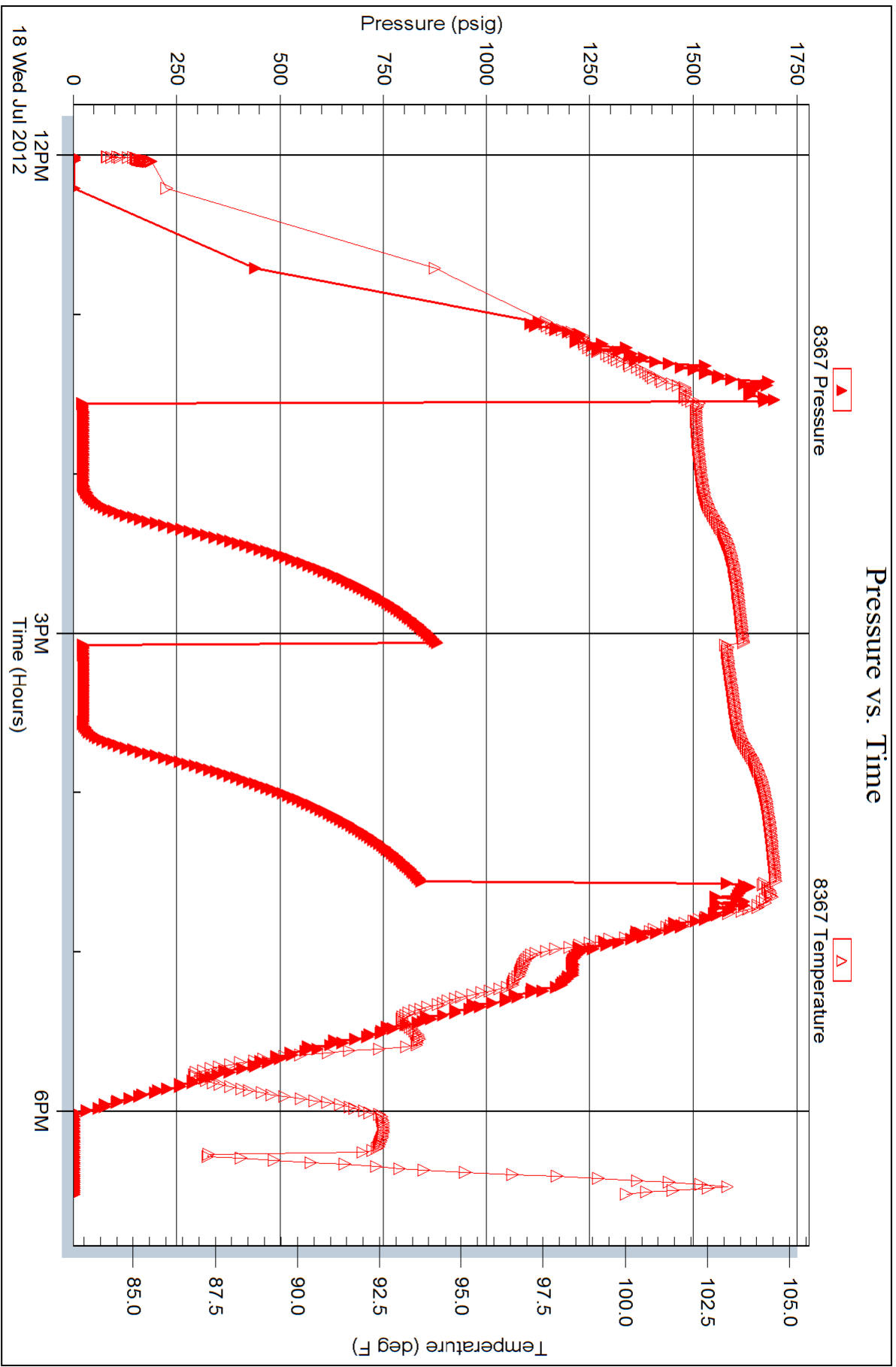
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





Customer <b>CAERUS OPERATING</b>	Lease No.	Date <b>7-19-2012</b>
Lease <b>HOFFMAN</b>	Well # <b>18-31</b>	
Field Order #	Station <b>PRATT, KS.</b>	Casing <b>5 1/2"</b>
Type Job <b>CNW - 5 1/2" L.S.</b>	Depth	County <b>BARTON</b> State <b>Ks.</b>
	Formation <b>TD - 3498'</b>	Legal Description <b>18-17-13</b>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
5 1/2" x 15.5"			<b>CMT-</b>	<b>150SK (60/40 POZ)</b>				
Depth <b>3497'</b>	Depth	From	To	Pre Pad <b>@ 1.18 CU FT<sup>3</sup></b>	Max		5 Min.	
Volume <b>85.22 BBL</b>	Volume	From	To	Pad	Min <b>55 = 21.18'</b>		10 Min.	
Max Press <b>1500</b>	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection <b>P.C.</b>	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth <b>3475.82'</b>	Packer Depth	From	To	Flush <b>82.72 BBL</b>	Gas Volume		Total Load	

Customer Representative <b>BRIAN KARLIN</b>	Station Manager <b>D. SCOTT</b>	Treater <b>K. LESLEY</b>
---	---------------------------------	--------------------------

Service Units	<b>37586</b>	<b>19829</b>	<b>19813</b>	<b>19960</b>	<b>21010</b>				
Driver Names	<b>LESLEY</b>	<b>MARQUEE</b>		<b>YOUNG</b>					

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<b>2:30 PM</b>					<b>ON LOCATION - SAFETY MEETING</b>
<b>5:00 PM</b>					<b>RUN JTS. 5 1/2" x 15.5" CSG.</b>
					<b>TURBID. #2, 4, 8, 10, 12</b>
					<b>BASK. - #0</b>
<b>6:45 PM</b>					<b>CSG. ON BOTTOM</b>
<b>7:00 PM</b>					<b>HOOAHEAD</b>
<b>7:55 PM</b>	<b>400</b>		<b>5</b>	<b>6</b>	<b>MUDFLUSH</b>
<b>7:56 PM</b>	<b>400</b>		<b>12</b>	<b>6</b>	<b>H<sub>2</sub>O SPACER</b>
<b>7:58 PM</b>	<b>400</b>		<b>3</b>	<b>6</b>	<b>MIX 150 SKS. (60/40 POZ) @ 15.2 PPG</b>
<b>7:59 PM</b>	<b>300</b>		<b>32</b>	<b>6</b>	<b>CLEAR PUMP &amp; LINE - DROP PLUG (L.D)</b>
<b>8:04 PM</b>					<b>START DISPLACEMENT</b>
<b>8:11 PM</b>	<b>0</b>		<b>0</b>	<b>7</b>	<b>LIFT PRESSURE</b>
<b>8:19 PM</b>	<b>300</b>		<b>58</b>	<b>6</b>	<b>SLOW RATE</b>
<b>8:22 PM</b>	<b>500</b>		<b>70</b>	<b>5</b>	<b>PLUG DOWN - HELD</b>
<b>8:25 PM</b>	<b>1500</b>		<b>82.72</b>	<b>4</b>	<b>CIRC. THRU JOB</b>
			<b>6, 4</b>		<b>PLUG R.H. &amp; M.H.</b>
					<b>JOB COMPLETE,</b>
					<b>THANKS -</b>
					<b>KEVEN LESLEY</b>



**BASIC**<sup>SM</sup>  
ENERGY SERVICES  
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61  
P.O. Box 8613  
Pratt, Kansas 67124  
Phone 620-672-1201

FIELD SERVICE TICKET  
1718 03237 A

DATE \_\_\_\_\_ TICKET NO. \_\_\_\_\_

DATE OF JOB		DISTRICT		NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WDW <input type="checkbox"/>	CUSTOMER ORDER NO.
CUSTOMER				LEASE			WELL NO.		
ADDRESS				COUNTY			STATE		
CITY				STATE			SERVICE CREW		
AUTHORIZED BY				JOB TYPE:					
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	TIME
						ARRIVED AT JOB			
						START OPERATION			
						FINISH OPERATION			
						RELEASED			
						MILES FROM STATION TO WELL			

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: \_\_\_\_\_  
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 103	10" HOLE	SK	1		1,800.00
CP 103	6" HOLE	SK	1		600.00
CG 111	SOFT	LB	217		403.50
CG 110	CONCRETE	LB	17		587.00
CG 201	1/2" X 1/2"	LB	150		502.50
CF 107	CONCRETE	LB	1		400.00
CF 1251	TRIP	EA	1		360.00
CF 1651	TRIP	EA	6		660.00
CF 1101	TRIP	EA	1		210.00
CG 151	TRIP	EA	1		430.00
CG 165	TRIP	EA	1		276.75
CG 161	TRIP	EA	150		910.00
CG 113	TRIP	EA	551		894.40
CG 24	TRIP	EA	14		2,160.00
CG 240	TRIP	EA	200		280.00
CG 501	TRIP	EA	1		200.00
CG 504	TRIP	EA	1		250.00
CG 503	TRIP	EA	1		175.00

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$
TOTAL	

SERVICE REPRESENTATIVE	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY:
FIELD SERVICE ORDER NO.	(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 910

Cell 785-324-1041

Date	7-12-12	Sec.	18	Twp.	17	Range	13	County	Barton	State	Ks	On Location		Finish	11:30PM
Lease	Hoffman	Well No.	18-31		Location Russell, Ks - S to 150th Rd, 2 3/4 E										
Contractor	Maverick #106							Owner S/Into							
Type Job	Surface							To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size	12 1/4"		T.D.		916'		Charge To Caerus Kansas LLC								
Csg.	8 5/8"		Depth		916'		Street								
Tbg. Size			Depth		City										
Tool			Depth		State										
Cement Left in Csg.	30.20'		Shoe Joint		30.20'		The above was done to satisfaction and supervision of owner agent or contractor.								
Meas Line			Displace		56 BLS		Cement Amount Ordered 3505X Common 3%CC								
<b>EQUIPMENT</b>													2 1/2 Gal		
Pumptrk	5 No.	Cementer	Helper		Brett		Common 350								
Bulktrk	13 No.	Driver	Driver		Levy		Poz. Mix								
Bulktrk	14 No.	Driver	Driver		Rick		Gel. 7								
<b>JOB SERVICES &amp; REMARKS</b>													Calcium 13		
Remarks:	Hulls														
Rat Hole	Salt														
Mouse Hole	Flowseal														
Centralizers	Kol-Seal														
Baskets	Mud CLR 48														
D/V or Port Collar	CFL-117 or CD110 CAF 38														
Cement did Circulate.													Sand		
													Handling 370		
													Mileage		
<b>FLOAT EQUIPMENT</b>															
													Guide Shoe		
													Centralizer		
													Baskets		
													AFU Inserts		
													Float Shoe		
													Latch Down		
													1- Baffle plate		
													1- Rubber plug		
													Pumptrk Charge Long Surface		
													Mileage 21		
													Tax		
													Discount		
													Total Charge		
Signature Cecil R. Farmer															