



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1138116  
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
-----------------------------------	-----------------	---

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: \_\_\_\_\_



1138116

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:  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> _____ <i>(Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Bowman A 1
Doc ID	1138116

Tops

Name	Top	Datum
Anhydrite	1665'	(411)
Topeka	3049'	(-973)
Heebner	3261'	(-1185)
Toronto	3288'	(-1212)
Lansing	3306'	(-1230)
Base/KC	3493'	(-1417)
Arbuckle	3592'	(-1516)
L.T.D.	3592'	(-1516)

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

May 06, 2013

Marge Schulte  
Farmer, John O., Inc.  
370 W WICHITA AVE  
PO BOX 352  
RUSSELL, KS 67665-2635

Re: ACO1  
API 15-147-20704-00-00  
Bowman A 1  
SW/4 Sec.31-04S-20W  
Phillips 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,  
Marge Schulte



## DRILL STEM TEST REPORT

Prepared For: **John O. Farmer, Inc.**

PO Box 352  
Russell, KS 67665

ATTN: Austin Klaus

### **Bowman A #1**

### **31-4s-20w Graham,KS**

Start Date: 2013.02.01 @ 13:25:00

End Date: 2013.02.01 @ 19:15:30

Job Ticket #: 51188                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.02.05 @ 11:00:49



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

John O. Farmer, Inc.

**31-4s-20w Graham,KS**

PO Box 352  
Russell, KS 67665

**Bowman A #1**

Job Ticket: 51188

**DST#: 1**

ATTN: Austin Klaus

Test Start: 2013.02.01 @ 13:25:00

## GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:27:15

Time Test Ended: 19:15:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

**Interval: 3321.00 ft (KB) To 3373.00 ft (KB) (TVD)**

Reference Elevations: 2076.00 ft (KB)

Total Depth: 3373.00 ft (KB) (TVD)

2068.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 6799**

**Inside**

Press @ Run Depth: 200.89 psig @ 3322.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.02.01

End Date:

2013.02.01

Last Calib.:

2013.02.01

Start Time: 13:25:05

End Time:

19:15:29

Time On Btm:

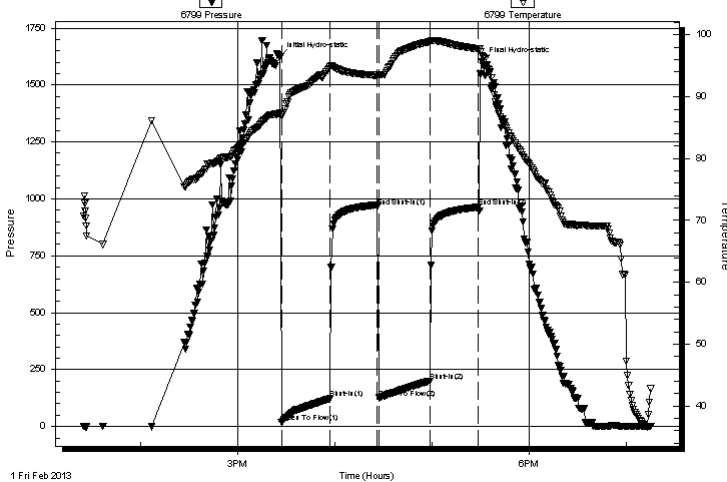
2013.02.01 @ 15:26:30

Time Off Btm:

2013.02.01 @ 17:31:00

**TEST COMMENT:** 30 - IF- BoB in 13 min.  
30 - IS- No Return  
30 - FF- BoB in 13 min.  
30 - FS- No Return

Pressure vs. Time



## PRESSURE SUMMARY

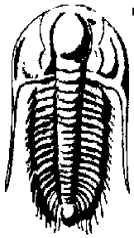
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1623.37	87.34	Initial Hydro-static
1	18.11	87.00	Open To Flow (1)
31	122.60	94.83	Shut-In(1)
60	966.35	93.49	End Shut-In(1)
61	126.05	93.51	Open To Flow (2)
93	200.89	98.89	Shut-In(2)
123	963.41	97.75	End Shut-In(2)
125	1604.25	96.61	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Heavy Mud 100M	0.02
115.00	MW 5M 95W	0.57
186.00	MW 20M 80W	2.58
94.00	MW 40M 60W	1.32

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

John O. Farmer, Inc.  
PO Box 352  
Russell, KS 67665  
ATTN: Austin Klaus

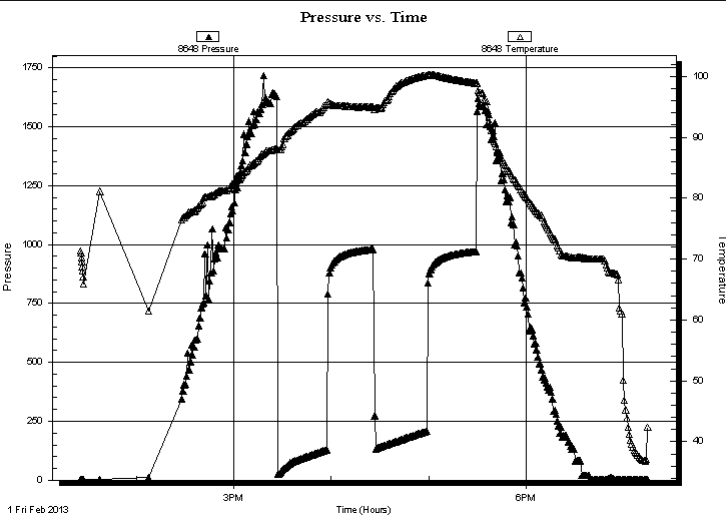
**31-4s-20w Graham,KS**  
**Bowman A #1**  
Job Ticket: 51188      **DST#: 1**  
Test Start: 2013.02.01 @ 13:25:00

**GENERAL INFORMATION:**

Formation:	<b>LKC "A-D"</b>				
Deviated:	No Whipstock:	ft (KB)	Test Type:	Conventional Bottom Hole (Initial)	
Time Tool Opened:	15:27:15		Tester:	Kevin Mack	
Time Test Ended:	19:15:30		Unit No:	43	
<b>Interval:</b>	<b>3321.00 ft (KB) To</b>	<b>3373.00 ft (KB) (TVD)</b>	Reference Elevations:	2076.00 ft (KB)	
Total Depth:	3373.00 ft (KB) (TVD)			2068.00 ft (CF)	
Hole Diameter:	7.88 inches	Hole Condition: Good	KB to GR/CF:	8.00 ft	

<b>Serial #: 8648</b>	<b>Inside</b>				
Press @RunDepth:	psig @	3322.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2013.02.01	End Date:	2013.02.01	Last Calib.:	2013.02.01
Start Time:	13:25:50	End Time:	19:14:44	Time On Btm:	
				Time Off Btm:	

**TEST COMMENT:** 30 - IF- BoB in 13 min.  
30 - IS- No Return  
30 - FF- BoB in 13 min.  
30 - FS- No Return



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
5.00	Heavy Mud 100M	0.02
115.00	MW 5M 95W	0.57
186.00	MW 20M 80W	2.58
94.00	MW 40M 60W	1.32

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer, Inc.

**31-4s-20w Graham,KS**

PO Box 352  
Russell, KS 67665

**Bowman A #1**

Job Ticket: 51188

**DST#: 1**

ATTN: Austin Klaus

Test Start: 2013.02.01 @ 13:25:00

## Tool Information

Drill Pipe:	Length: 3197.00 ft	Diameter: 3.80 inches	Volume: 44.85 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 48000.00 lb
			<u>Total Volume: 45.45 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3321.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	73.00 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			3301.00	
Shut In Tool	5.00			3306.00	
Hydraulic tool	5.00			3311.00	
Packer	5.00			3316.00	21.00 Bottom Of Top Packer
Packer	5.00			3321.00	
Stubb	1.00			3322.00	
Recorder	0.00	6799	Inside	3322.00	
Recorder	0.00	8648	Inside	3322.00	
Perforations	12.00			3334.00	
Change Over Sub	1.00			3335.00	
Drill Pipe	32.00			3367.00	
Change Over Sub	1.00			3368.00	
Bullnose	5.00			3373.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 73.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O. Farmer, Inc.

**31-4s-20w Graham,KS**

PO Box 352  
Russell, KS 67665

**Bowman A #1**

Job Ticket: 51188

**DST#: 1**

ATTN: Austin Klaus

Test Start: 2013.02.01 @ 13:25:00

## 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: 59.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
5.00	Heavy Mud 100M	0.025
115.00	MW 5M 95W	0.566
186.00	MW 20M 80W	2.582
94.00	MW 40M 60W	1.319

Total Length: 400.00 ft

Total Volume: 4.492 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

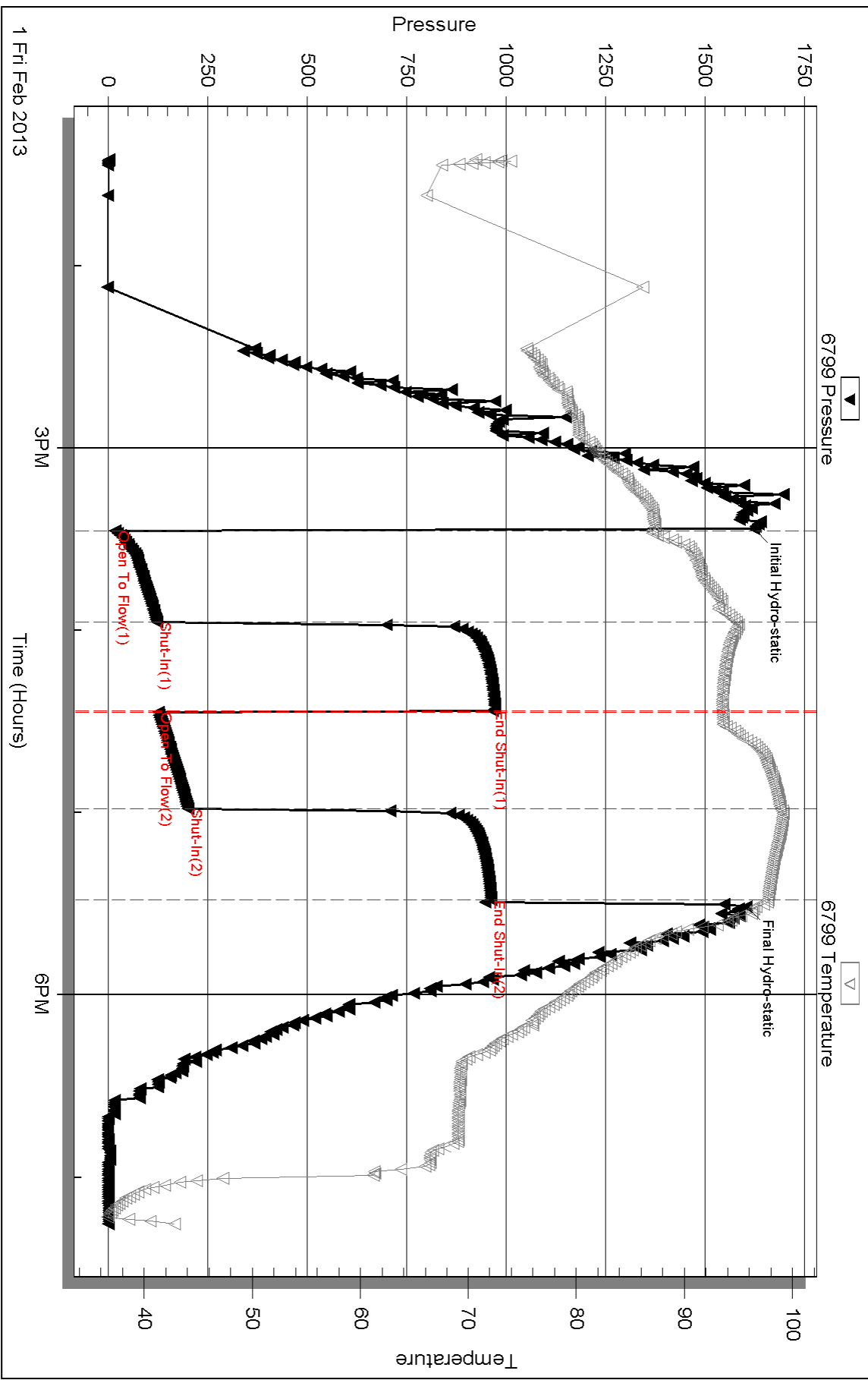
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time



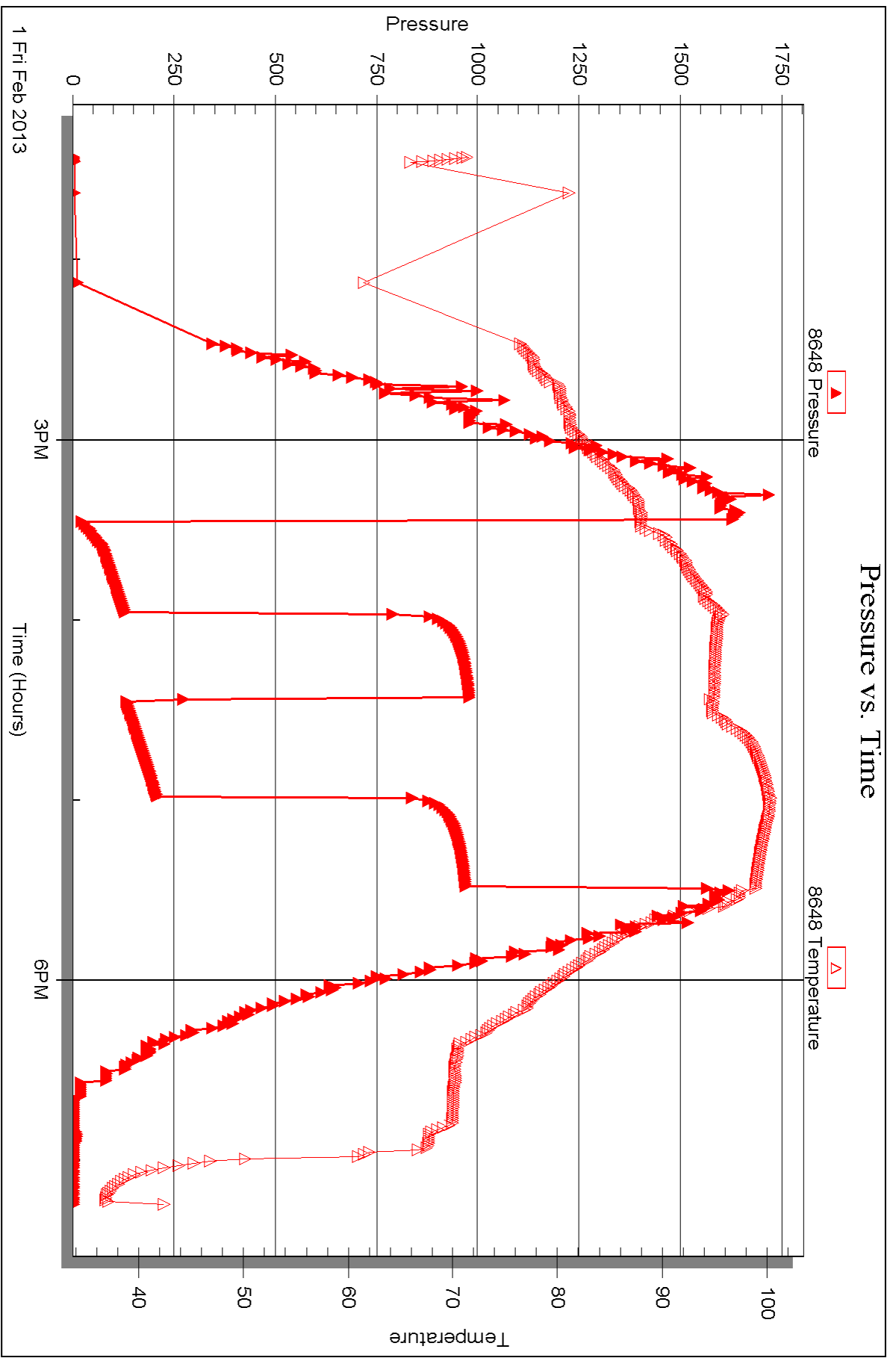
Serial #: 8648

Inside

John O. Farmer, Inc.

Bowman A #1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 51188

Printed: 2013.02.05 @ 11:00:52



## DRILL STEM TEST REPORT

Prepared For: **John O. Farmer, Inc.**

PO Box 352  
Russell, KS 67665

ATTN: Austin Klaus

### **Bowman A #1**

### **31-4s-20w Graham,KS**

Start Date: 2013.02.02 @ 09:17:00

End Date: 2013.02.02 @ 13:19:30

Job Ticket #: 51189                      DST #: 2

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

Printed: 2013.02.05 @ 11:00:08



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

John O. Farmer, Inc.

**31-4s-20w Graham,KS**

PO Box 352  
Russell, KS 67665

**Bowman A #1**

Job Ticket: 51189

**DST#: 2**

ATTN: Austin Klaus

Test Start: 2013.02.02 @ 09:17:00

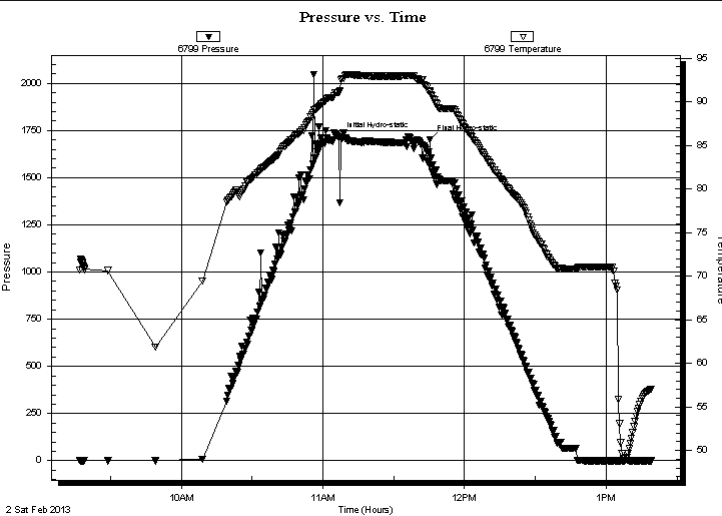
## GENERAL INFORMATION:

Formation: **LKC**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened:  
 Tester: Kevin Mack  
 Time Test Ended: 13:19:30  
 Unit No: 43  
 Interval: **3448.00 ft (KB) To 3510.00 ft (KB) (TVD)**  
 Reference Elevations: 2076.00 ft (KB)  
 Total Depth: 3510.00 ft (KB) (TVD)  
 2068.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 8.00 ft

**Serial #: 6799** Inside

Press @ Run Depth: psig @ 3449.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.02.02 End Date: 2013.02.02 Last Calib.: 2013.02.02  
 Start Time: 09:17:05 End Time: 13:19:30 Time On Btm: 2013.02.02 @ 11:07:00  
 Time Off Btm: 2013.02.02 @ 11:45:30

**TEST COMMENT:** Packer Failure - Attempted to set packers tw ice, Failed both times.  
 Tripped out of hole to change anchor.



## PRESSURE SUMMARY

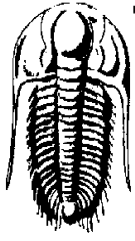
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1715.53	91.09	Initial Hydro-static
39	1699.67	91.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
150.00	Mud 100M	0.98

## Gas Rates

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



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

# DRILL STEM TEST REPORT

John O. Farmer, Inc.  
PO Box 352  
Russell, KS 67665  
ATTN: Austin Klaus

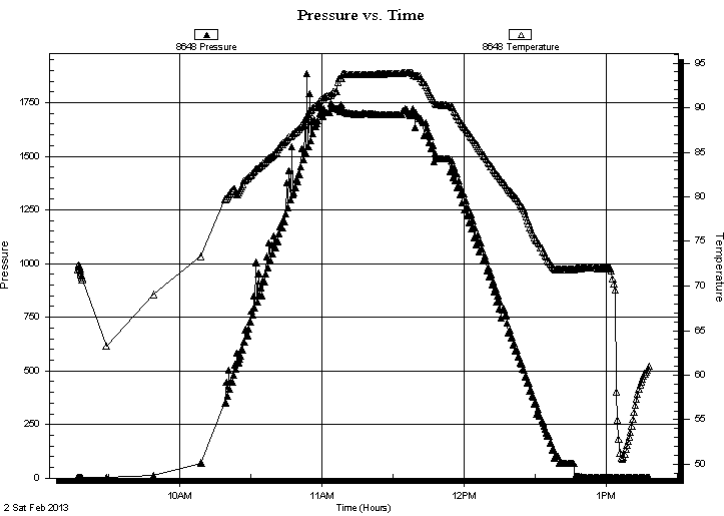
**31-4s-20w Graham, KS**  
**Bowman A #1**  
Job Ticket: 51189      **DST#: 2**  
Test Start: 2013.02.02 @ 09:17:00

**GENERAL INFORMATION:**

Formation: **LKC**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened:  
Time Test Ended: 13:19:30  
**Interval: 3448.00 ft (KB) To 3510.00 ft (KB) (TVD)**  
Total Depth: 3510.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches      Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Kevin Mack  
Unit No: 43  
Reference Elevations: 2076.00 ft (KB)  
2068.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8648      Inside**  
Press @ Run Depth:      psig @ 3449.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.02.02      End Date: 2013.02.02      Last Calib.: 2013.02.02  
Start Time: 09:17:05      End Time: 13:18:30      Time On Btm:  
Time Off Btm:

**TEST COMMENT:** Packer Failure - Attempted to set packers tw ice, Failed both times.  
Tripped out of hole to change anchor.



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
150.00	Mud 100M	0.98

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer, Inc.

**31-4s-20w Graham,KS**

PO Box 352  
Russell, KS 67665

**Bowman A #1**

Job Ticket: 51189

**DST#: 2**

ATTN: Austin Klaus

Test Start: 2013.02.02 @ 09:17:00

## Tool Information

Drill Pipe:	Length: 3319.00 ft	Diameter: 3.80 inches	Volume: 46.56 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 47.16 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3448.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	83.00 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			3428.00	
Shut In Tool	5.00			3433.00	
Hydraulic tool	5.00			3438.00	
Packer	5.00			3443.00	21.00 Bottom Of Top Packer
Packer	5.00			3448.00	
Stubb	1.00			3449.00	
Recorder	0.00	6799	Inside	3449.00	
Recorder	0.00	8648	Inside	3449.00	
Perforations	22.00			3471.00	
Change Over Sub	1.00			3472.00	
Drill Pipe	32.00			3504.00	
Change Over Sub	1.00			3505.00	
Bullnose	5.00			3510.00	62.00 Bottom Packers & Anchor

**Total Tool Length: 83.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O. Farmer, Inc.

**31-4s-20w Graham,KS**

PO Box 352  
Russell, KS 67665

**Bowman A #1**

Job Ticket: 51189

**DST#: 2**

ATTN: Austin Klaus

Test Start: 2013.02.02 @ 09:17:00

## 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: 59.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	Mud 100M	0.984

Total Length: 150.00 ft      Total Volume: 0.984 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

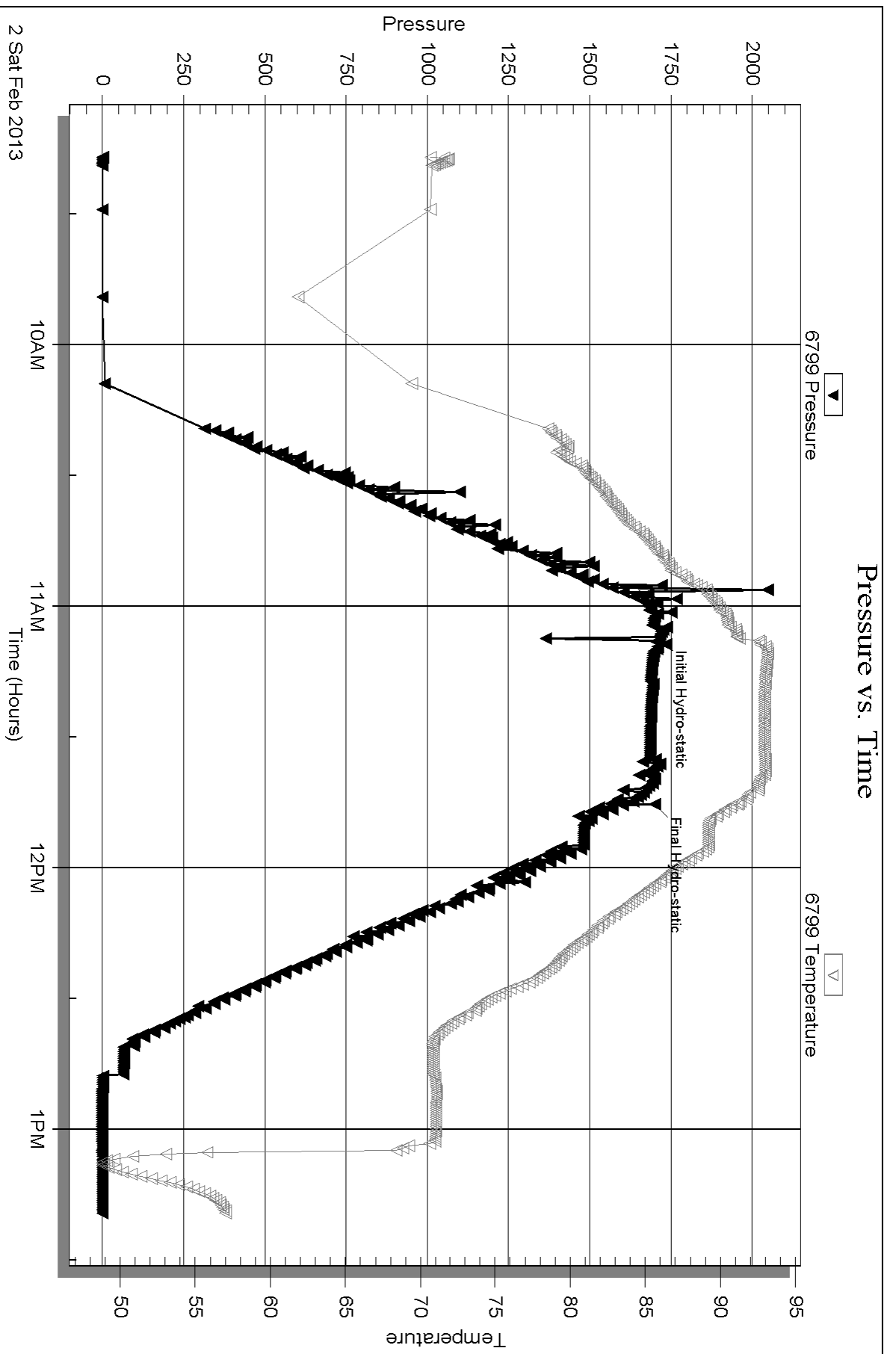
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





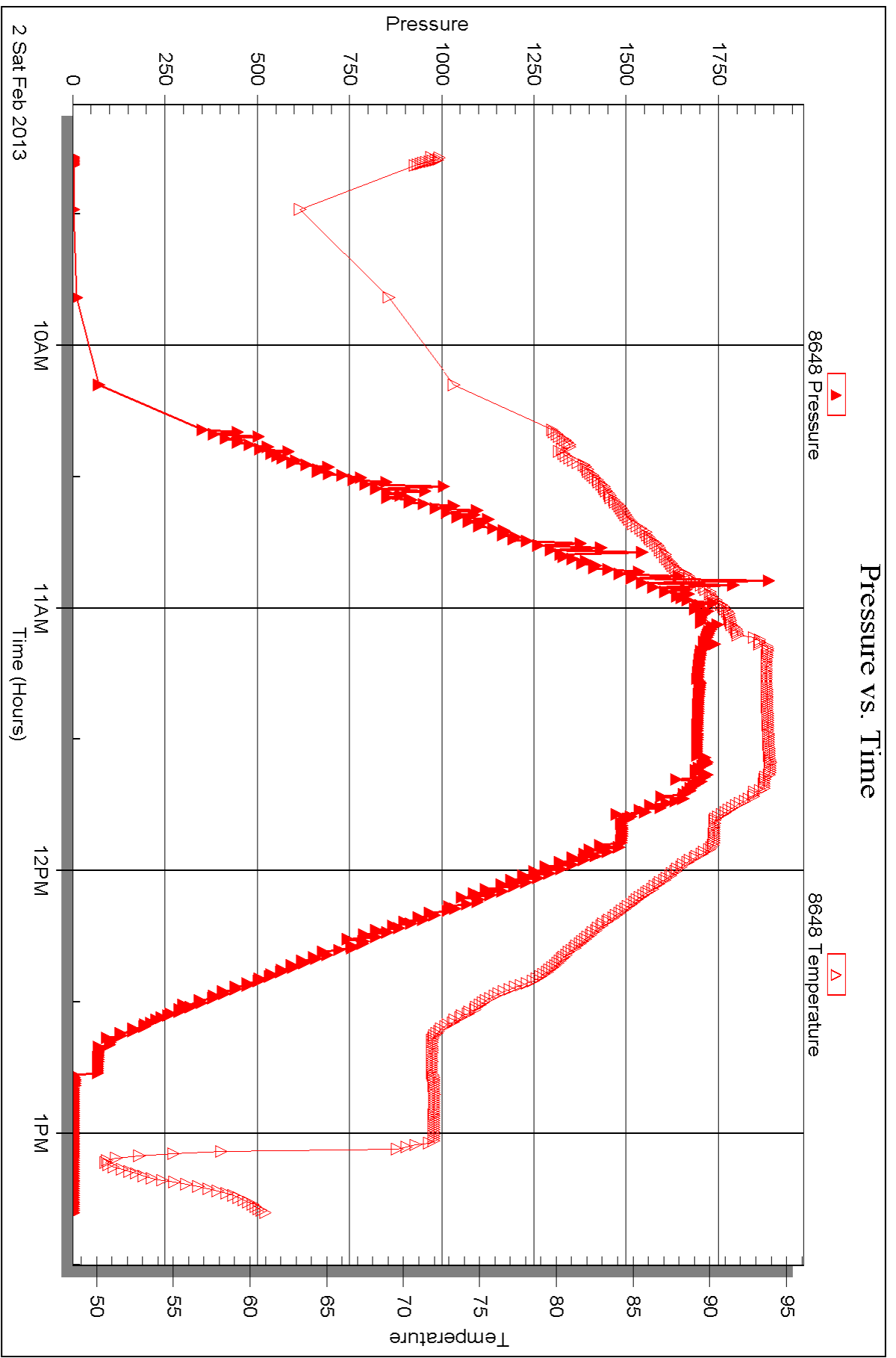
Serial #: 8648

Inside

John O. Farmer, Inc.

Bowman A #1

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **John O. Farmer, Inc.**

PO Box 352  
Russell, KS 67665

ATTN: Austin Klaus

### **Bowman A #1**

### **31-4s-20w Graham,KS**

Start Date: 2013.02.02 @ 13:35:00

End Date: 2013.02.02 @ 18:53:30

Job Ticket #: 51190                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.02.05 @ 10:59:30

John O. Farmer, Inc.  
31-4s-20w Graham,KS  
Bowman A #1  
DST # 3  
LKC "I,J,K"  
2013.02.02



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

John O. Farmer, Inc.

**31-4s-20w Graham,KS**

PO Box 352  
Russell, KS 67665

**Bowman A #1**

Job Ticket: 51190

**DST#: 3**

ATTN: Austin Klaus

Test Start: 2013.02.02 @ 13:35:00

## GENERAL INFORMATION:

Formation: **LKC "I,J,K"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:52:15  
 Time Test Ended: 18:53:30  
 Interval: **3438.00 ft (KB) To 3510.00 ft (KB) (TVD)**  
 Total Depth: 3510.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Kevin Mack  
 Unit No: 43  
 Reference Elevations: 2076.00 ft (KB)  
 2068.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 6799

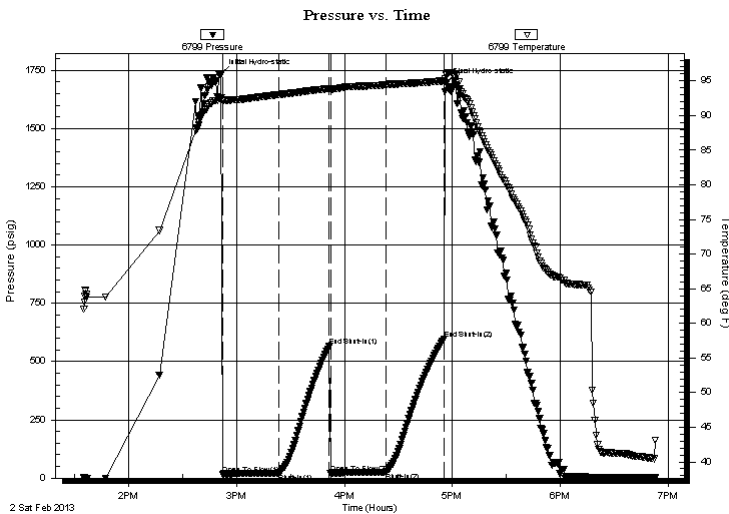
Inside

Press @ Run Depth: 24.48 psig @ 3439.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.02.02 End Date: 2013.02.02 Last Calib.: 2013.02.02  
 Start Time: 13:35:05 End Time: 18:53:29 Time On Btm: 2013.02.02 @ 14:51:30  
 Time Off Btm: 2013.02.02 @ 16:56:30

TEST COMMENT: 30 - IF- Blow built to 1", then died back to 1/2"  
 30 - IS- No Return  
 30 - FF- No Blow  
 30 - FS- No Return

## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1734.55	92.57	Initial Hydro-static
1	17.46	92.08	Open To Flow (1)
32	21.46	93.02	Shut-In(1)
60	566.32	93.89	End Shut-In(1)
61	21.85	93.74	Open To Flow (2)
92	24.48	94.46	Shut-In(2)
124	596.08	95.00	End Shut-In(2)
125	1694.82	95.91	Final Hydro-static



## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100M (oil spots)	0.05

## Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

John O. Farmer, Inc.

PO Box 352  
Russell, KS 67665

ATTN: Austin Klaus

**31-4s-20w Graham,KS**

**Bowman A #1**

Job Ticket: 51190

**DST#: 3**

Test Start: 2013.02.02 @ 13:35:00

### GENERAL INFORMATION:

Formation: **LKC "I,J,K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:52:15

Time Test Ended: 18:53:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

**Interval: 3438.00 ft (KB) To 3510.00 ft (KB) (TVD)**

Total Depth: 3510.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2076.00 ft (KB)

2068.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8648 Inside**

Press @ Run Depth: psig @ 3439.00 ft (KB)

Start Date: 2013.02.02

End Date:

2013.02.02

Start Time: 13:35:35

End Time:

18:52:44

Capacity: 8000.00 psig

Last Calib.: 2013.02.02

Time On Btm:

Time Off Btm:

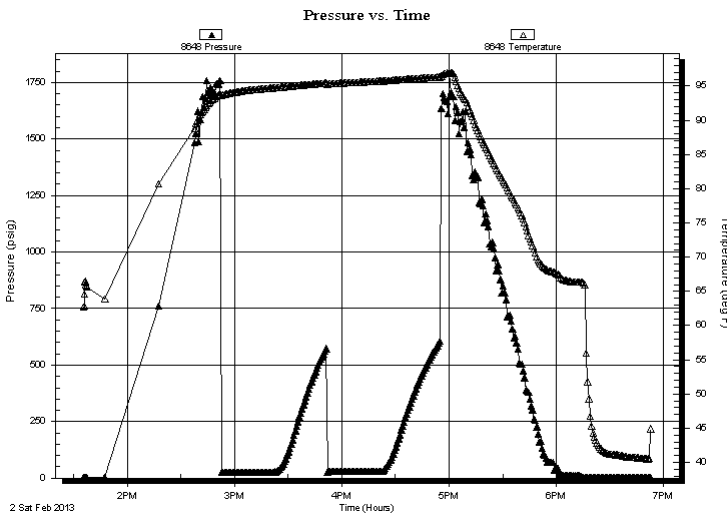
TEST COMMENT: 30 - IF- Blow built to 1", then died back to 1/2"

30 - IS- No Return

30 - FF- No Blow

30 - FS- No Return

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100M (oil spots)	0.05

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O. Farmer, Inc.

**31-4s-20w Graham,KS**

PO Box 352  
Russell, KS 67665

**Bowman A #1**

Job Ticket: 51190

**DST#: 3**

ATTN: Austin Klaus

Test Start: 2013.02.02 @ 13:35:00

## Tool Information

Drill Pipe:	Length: 3319.00 ft	Diameter: 3.80 inches	Volume: 46.56 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 47.16 bbl</u>	Tool Chased	5.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	40000.00 lb
Depth to Top Packer:	3438.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	72.00 ft				
Tool Length:	93.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments: tool slid approx 5' to bottom, then opened approx 5' early and had to be chased to bottom.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3418.00	
Shut In Tool	5.00			3423.00	
Hydraulic tool	5.00			3428.00	
Packer	5.00			3433.00	21.00 Bottom Of Top Packer
Packer	5.00			3438.00	
Stubb	1.00			3439.00	
Recorder	0.00	6799	Inside	3439.00	
Recorder	0.00	8648	Inside	3439.00	
Perforations	2.00			3441.00	
Change Over Sub	1.00			3442.00	
Drill Pipe	64.00			3506.00	
Change Over Sub	1.00			3507.00	
Bullnose	3.00			3510.00	72.00 Bottom Packers & Anchor

**Total Tool Length: 93.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

John O. Farmer, Inc.

**31-4s-20w Graham,KS**

PO Box 352  
Russell, KS 67665

**Bowman A #1**

Job Ticket: 51190

**DST#: 3**

ATTN: Austin Klaus

Test Start: 2013.02.02 @ 13:35:00

## 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: 59.00 sec/qt

Cushion Volume: bbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OSM 100M (oil spots)	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

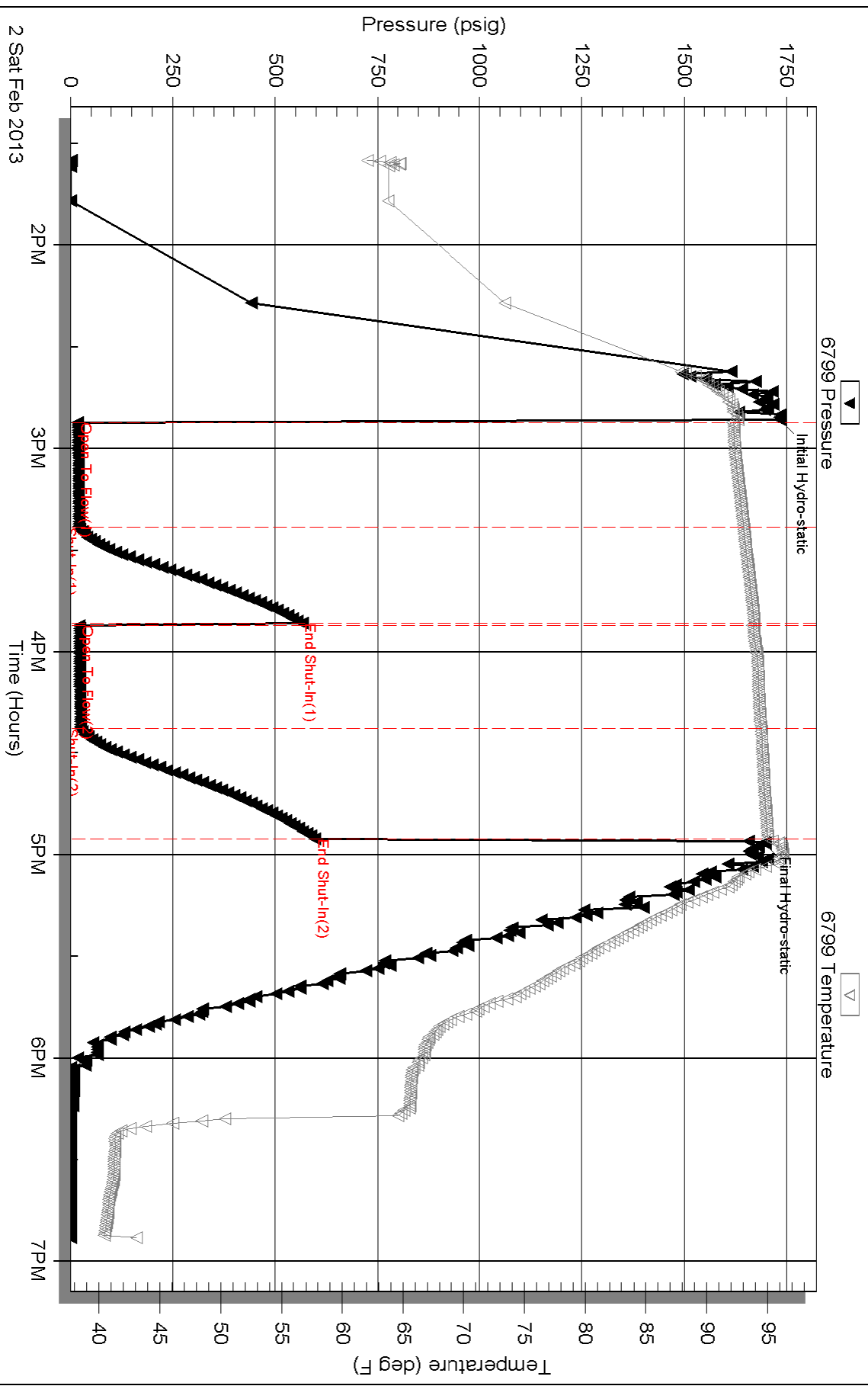
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





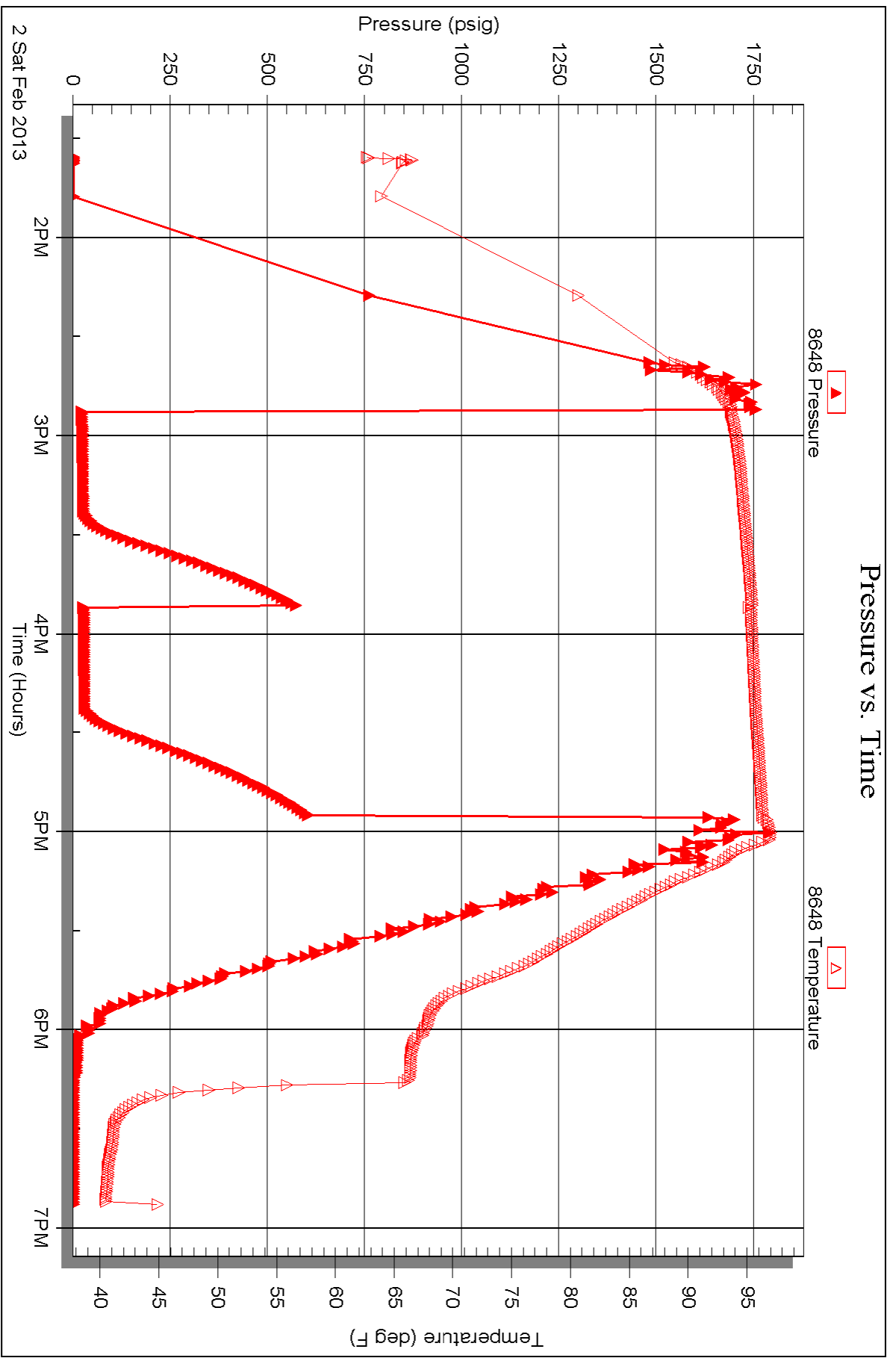
Serial #: 8648

Inside

John O. Farmer, Inc.

Bowman A #1

DST Test Number: 3





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51188

4/10

Well Name & No. Bowman A#1 Test No. 1 Date 2-1-13  
 Company John O. Farmer, Inc Elevation 2076 KB 2068 GL  
 Address 370 W Wichita Ave Russell KS 67665  
 Co. Rep / Geo. Austin Klaus Rig WW #12  
 Location: Sec. 31 Twp. 4S Rge. 20W Co. \_\_\_\_\_ State KS

Interval Tested 3321-3373 Zone Tested LKC "A-D"  
 Anchor Length 52' Drill Pipe Run 3197 Mud Wt. 8.9  
 Top Packer Depth 3317 Drill Collars Run 123' Vis 59  
 Bottom Packer Depth 3321 Wt. Pipe Run 0 WL 6.4  
 Total Depth 3373 Chlorides 400 ppm System LCM 2#

Blow Description IF - BOB in 13 min.  
ISI - NO Return  
FF - BOB in 13 min.  
FSI - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>94</u>	<u>MW</u>		<u>60</u>	<u>40</u>	
<u>186</u>	<u>MW</u>		<u>80</u>	<u>20</u>	
<u>120115</u>	<u>MW</u>		<u>95</u>	<u>5</u>	
<u>5</u>	<u>Heavy mud</u>			<u>100</u>	

Rec Total 400 BHT 98 Gravity — API RW — @ 53 ° F Chlorides — ppm

(A) Initial Hydrostatic <u>1623</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>11:45 AM</u>
(B) First Initial Flow <u>18</u>	<input type="checkbox"/> Jars	T-Started <u>1:25 PM</u>
(C) First Final Flow <u>122</u>	<input type="checkbox"/> Safety Joint	T-Open <u>3:26 PM</u>
(D) Initial Shut-In <u>966</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>5:26 PM</u>
(E) Second Initial Flow <u>126</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>7:15 PM</u>
(F) Second Final Flow <u>2100</u>	<input checked="" type="checkbox"/> Mileage <u>133 RT</u> 206.15	Comments _____
(G) Final Shut-In <u>963</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1604</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1356.15</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
Sub Total <u>1356.15</u>		

Approved By \_\_\_\_\_ Our Representative

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



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51189

Well Name & No. Bowman A#1 Test No. 2 Date 2-2-13  
 Company John O. Farmer, Inc Elevation 2076 KB 2068 GL  
 Address 370 W Wichita Ave Russell, KS 67665  
 Co. Rep / Geo. Austin Klaus Rig WW #12  
 Location: Sec. 31 Twp. 4S Rge. 20W Co. Phillips State KS

Interval Tested 3448-3510 Zone Tested L1K "I, J, K"  
 Anchor Length 62' Drill Pipe Run 3319 Mud Wt. 8.9  
 Top Packer Depth 3444 Drill Collars Run 123' Vis 59  
 Bottom Packer Depth 3448 Wt. Pipe Run 0 WL 6.4  
 Total Depth 3510 Chlorides 4000 ppm System LCM 2#

Blow Description IF- ISI- Packer Failure  
FF- attempted to set packers twice, Failed both times  
FSI- Tripped out to change anchor length.

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 150 BHT 91 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1715  Test 950 T-On Location 7:00 AM  
 (B) First Initial Flow \_\_\_\_\_  Jars \_\_\_\_\_ T-Started 9:17 AM  
 (C) First Final Flow \_\_\_\_\_  Safety Joint \_\_\_\_\_ T-Open 11:07 AM  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled 11:30 AM  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 1:20 PM  
 (F) Second Final Flow \_\_\_\_\_  Mileage 133RT 206.15 Comments Packer Failure  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1699  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open \_\_\_\_\_  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In \_\_\_\_\_  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow \_\_\_\_\_  Day Standby \_\_\_\_\_ Total 1156.15  
 Final Shut-In \_\_\_\_\_  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1156.15

Approved By \_\_\_\_\_ Our Representative

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



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51190

Well Name & No. Bowman A #1 Test No. 3 Date 2-2-13  
 Company John O. Farmer, Inc. Elevation 2076 KB 2068 GL  
 Address 370 W Wichita Ave. Russell, KS 67665  
 Co. Rep / Geo. Austin Klaus Rig WW #12  
 Location: Sec. 31 Twp. 4S Rge. 20W Co. Phillips State KS

Interval Tested 3438-3510 Zone Tested Lkc "I, J, K"  
 Anchor Length 72' Drill Pipe Run 33/4 Mud Wt. 8.9  
 Top Packer Depth ~~3438~~ 3434 Drill Collars Run 123 Vis 59  
 Bottom Packer Depth ~~3438~~ 3438 Wt. Pipe Run 0 WL 6.4  
 Total Depth 3510 Chlorides 400 ppm System LCM 2#

Blow Description IF - Blow built to 1" then died back to 1/2"  
ISI - NO Return  
FF - NO Blow  
FST - NO Return

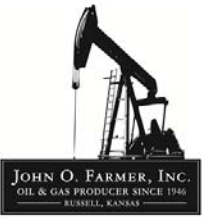
Rec	Feet of	%gas	spots	%oil	%water	%mud
<u>10</u>	<u>OSM</u>				<u>lead</u>	
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud

Rec Total 10 BHT 95 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1734  Test 1150 T-On Location 7:00 AM  
 (B) First Initial Flow 17  Jars T-Started 1:35 PM  
 (C) First Final Flow 21  Safety Joint T-Open 2:53 PM  
 (D) Initial Shut-In 566  Circ Sub N/C T-Pulled 4:53 PM  
 (E) Second Initial Flow 21  Hourly Standby T-Out 6:55 PM  
 (F) Second Final Flow 24  Mileage Comments Had to chase tool approx 5' to Bottom  
 (G) Final Shut-In 596  Sampler  Ruined Shale Packer  
 (H) Final Hydrostatic 1694  Straddle  Ruined Packer X2 640  
 Shale Packer  Extra Copies  
 Initial Open  Extra Packer Sub Total 640  
 Initial Shut-In  Extra Recorder Total 1790  
 Final Flow  Day Standby MP/DST Disc't  
 Final Shut-In  Accessibility Sub Total 1150

Approved By \_\_\_\_\_ Our Representative

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.



# AUSTIN B. KLAUS



**Cell 785.650.3629**  
**Work 785.483.3145**  
**Ext 225**

**PO BOX 352**  
**Russell, KS 67665**  
**austin.klaus@johnofarmer.com**

**Scale 1:240 (5"=100') Imperial**  
**Measured Depth Log**

**Well Name:** Bowman A #1  
**Location:** Phillips County  
**License Number:** API # 15-147-20,704-0000  
**Spud Date:** 1/28/2013  
**Surface Coordinates:** Section 31 - Township 4 South - Range 20 West  
2,310' FSL & 380' FWL  
**Bottom Hole Coordinates:** Vertical well with minimal deviation, same as above  
**Ground Elevation (ft):** 2,068' **K.B. Elevation (ft):** 2,076'  
**Logged Interval (ft):** 3,000' **To:** RTD **Total Depth (ft):** 3,596'  
**Formation:** Topeka-Arbuckle  
**Type of Drilling Fluid:** Chemical (Andy's)

**Region:** Kansas  
**Drilling Completed:** 2/2/2013

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

## OPERATOR

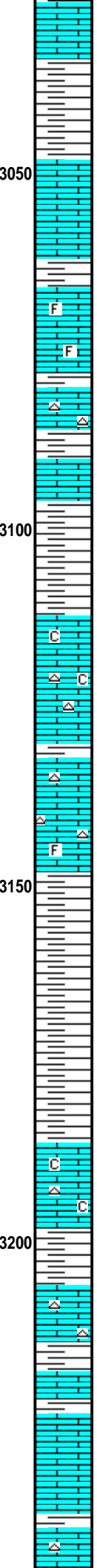
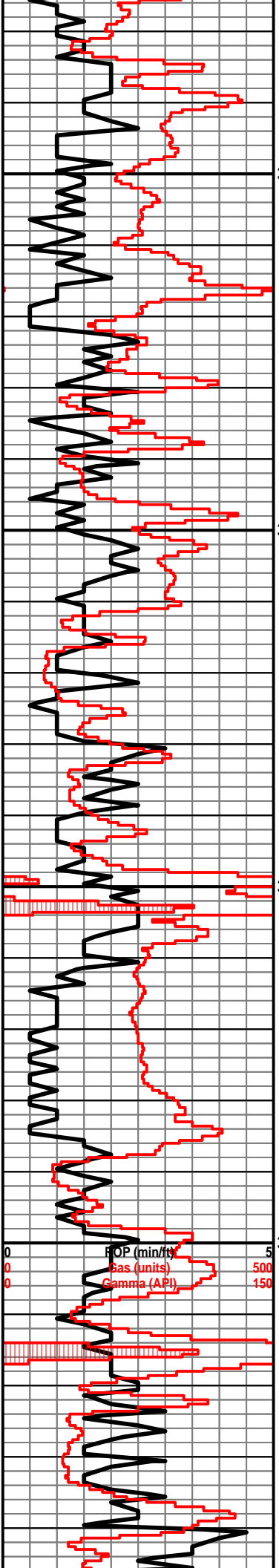
**Company:** John O. Farmer, Inc.  
**Address:** P.O. Box 352  
Russell, KS 67665-0352

## Comments

The Bowman A #1 well was drilled by WW Drilling Rig #12(Tool Pusher: Calvin Pfannenstiel ).

The location for the Bowman A #1 well was found via 3-D seismic survey. Based on the results of the drill stem tests that were conducted and samples and wireline logs that were evaluated, the decision was made to plug and abandon the Bowman A #1 well on 2/3/2013.





Ls: gry-tan, fn-sub xln, mostly DNS, barren

Sh: drk gry-grn, soft

Sh: drk brn-rd-gry, vry soft

3050

Ls: lt gry-tan, fn-sub xln, mostly DNS, barren

**Topeka 3062' (-986)**

F

Ls: tan-gry, fn-sub xln, scat pp vuggy porosity, mostly barren, NSFO, No odor, fossil

F

Ls: ala, chert-off wh

Sh: gry-grn

3100

Ls: tan-lt gry, fn-sub xln, mostly DNS

C

Ls: ala, vry chalky, hvy chert-off wh

Ls: ala

Ls: off wh-lt gry, fn-sub xln, mostly DNS, barren, vry hvy chert-off wh, sl fossil

F

3150

Sh: drk gry-brn-blk

Sh: drk gry-brn

Ls: off wh-tan, fn-sub xln, scat pp vuggy porosity, mostly barren, hvy chalk, hvy chert-off wh, NSFO, No odor

C

C

3200

Sh: drk gry-brn, soft

Ls: off wh-lt gry, fn-sub xln, mostly DNS, barren, chert-off wh

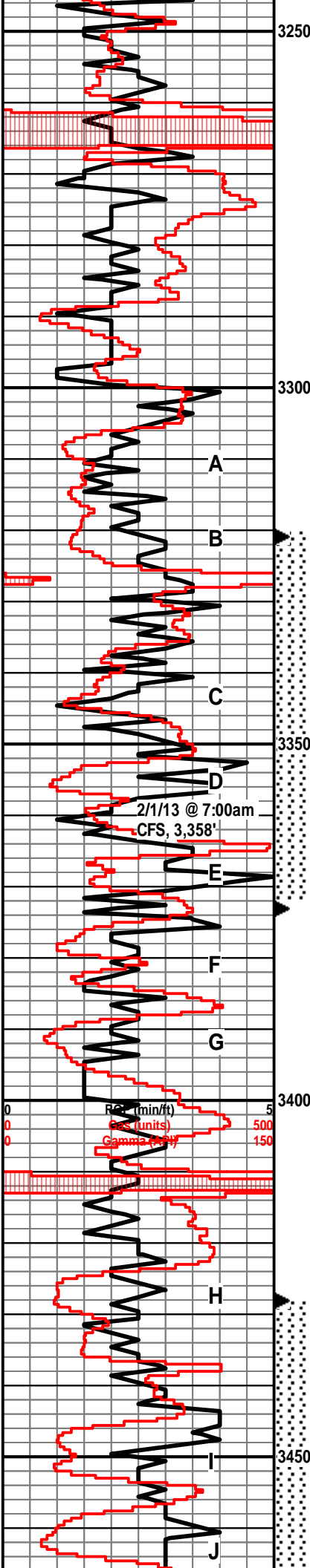
Sh: drk gry-brn-grn, soft

Ls: tan-gry, fn-sub xln, mostly DNS, mostly barren

Sh: drk gry-blk

Ls: tan-brn-lt gry, fn-sub xln, mostly DNS, chert-off

Vis: 54  
 Wt: 8.7  
 LCM: #1



Ls: tan brn-lt gry, fn sub xln, mostly DNS, chert off wh, sl chalky

Ls: ala

Sh: blk, carb, fissile

**Heebner 3268' (-1192)**

Sh: lt gry-grn, soft

Sh: gry-brn-grn, soft

Ls: off wh-lt gry, fn xln, scat in xln porosity, vry scat lt oil st in porosity, NSFO, vry lt odor

**Toronto 3300' (-1224)**

Ls: off wh-tan, fn-sub xln, mostly DNS, mostly barren, hvy chert-off wh, sl chalky

**Lansing 3316' (-1240)**

Ls: off wh-lt gry, fn-sub xln, mostly DNS, barren, chert-off wh

Sh: drk gry-brn, soft

Ls: off wh-tan, fn xln, poor pp vuggy & int xln porosity, fair oil st in porosity, VSSFO, sl odor, hvy chert-off wh, dull yel fluor

Ls: off wh-tan, fn-sub xln, mostly DNS, barren, NSFO, no odor, hvy chert-off wh

Sh: drk gry

Ls: off wh-lt gry, fn-sub xln, scat pp vuggy porosity, mostly barren, NSFO, No odor, fossil, sl chalky

Sh: drk gry-brn-grn

Ls: off wh-tan, fn xln, poor int xln porosity, vry lt oil st in porosity, VSSFO, vry sl odor

Ls: off wh-tan, fn xln, scat int xln porosity, mostly barren, NSFO, no odor, chalky, sl fossil

Ls: tan-gry, fn-sub xln, mostly DNS, hvy chert-off wh

Sh: drk gry-blk

Ls: tan-lt gry, fn xln, fw pcs w/ scat int xln porosity, mostly barren, NSFO, no odor, chert-off wh, sl chalky

Sh: gry-brn, soft

Ls: off wh-tan, fn xln, poor int xln porosity, fair oil st, SSFO, sl-fair odor

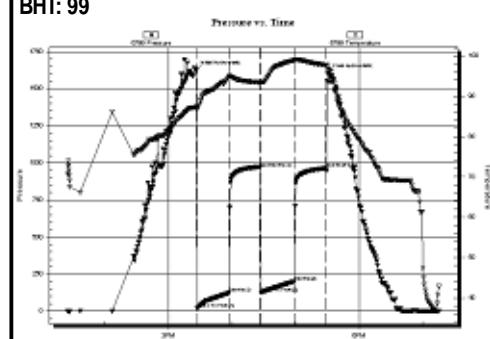
Sh: drk gry

Ls: off wh-lt gry, fn xln, poor int xln porosity, lt-fair oil st, SFO, sl-fair odor

Vis: 53  
Wt: 8.7

Wt: 8.8  
Vis: 55  
LCM: #2

DST #1 3,321'-3,373' (LKC A-D)  
30"-30"-30"-30"  
IF: BOB in 13 minutes, no blow back  
FF: BOB in 13 minutes, no blow back  
Rec: 5' Drilling Mud, 395' MW (20% M, 80% W)  
FP: 18-123#, 126-201#  
SIP: 966-963#  
HP: 1,623-1,604#  
BHT: 99



Wt: 9.0  
Vis: 61

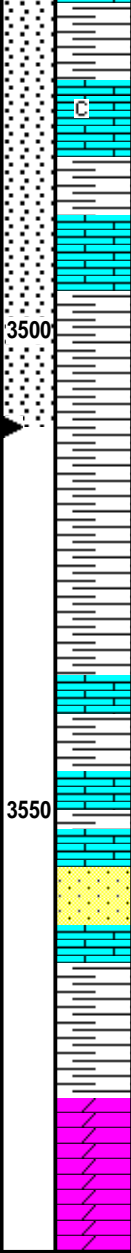
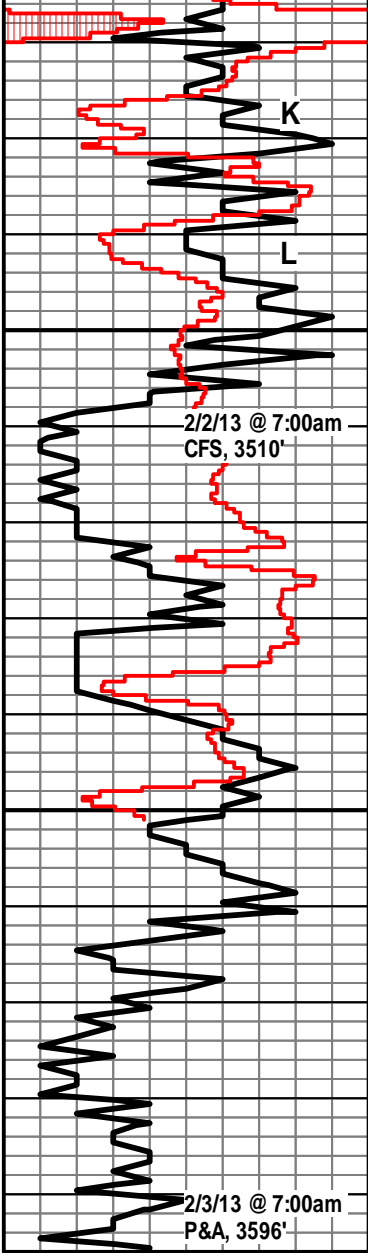
Wt: 9.0  
Vis: 64

DST #2 3,448'-3,510' (LKC I-L)  
Misrun-packer failure

DST #3 3,438'-3,510' (LKC I-L)  
30"-30"-30"-30"

IF: Built to 1", no blow back  
FF: Blow died, no blow back  
Rec: 10' oil spotted drilling mud  
FP: 17-21#, 22-24#  
SIP: 566-596#  
HP: 1,735-1,695#  
BHT: 96





Sh: drk gry-blk

Ls: off wh-tan, fn-sub xln, mostly DNS, NSFO, No odor, sl chalky

Sh: drk gry

Ls: off wh-tan, fn-sub xln, mostly DNS

**BKC 3500' (-1424)**

Sh: drk gry-brn-grn

Sh: drk gry-brn-grn, soft

Sh: gry-brn-red, vry soft

Sh, Cong: gry-brn-grn

Ls: tan-lt gry, fn-sub xln, mostly DNS, barren

Sh, Congl: ala

Sh: drk gry-brn

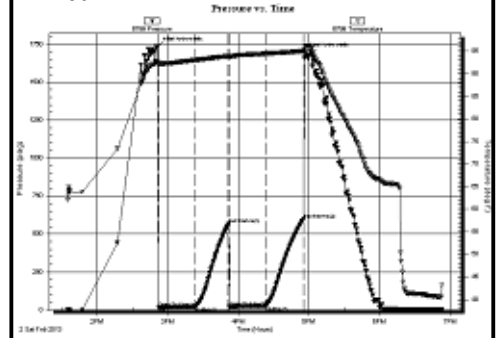
Qtz: clr, farly well rnd, fn grn, well sorted, barren, NSFO, No odor

Sh: gry-brn

**Arbuckle 3580' (-1504)**

Dolo: off wh-brn, fn xln, poor int xln porosity, mostly barren, NSFO, no odor

Dolo: off wh, fn xln, poor int xln porosity, mostly barren, NSFO, no odor, chalky



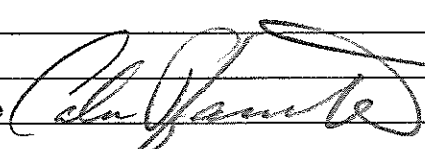
# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 6502

Date	1-29-13	Sec.	31	Twp.	4	Range	20	County	Phillips	State	KS	On Location		Finish	7:13pm
Lease								Well No.		Location					
Brazman A								1		Lagan W to 15000' / 5 1/2" W V INTO					
Contractor								Owner		To Quality Oilwell Cementing, Inc.					
WW #12										You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Type Job								Charge To		Surface					
Hole Size								T.D.		J.C. Farmer					
12 1/4								220							
Csg.								Depth		Street					
8 5/8								220							
Tbg. Size								Depth		City					
										State					
Tool								Depth		The above was done to satisfaction and supervision of owner agent or contractor.					
Cement Left in Csg.								Shoe Joint		Cement Amount Ordered					
15'										150 com 3 1/2" CC 2 1/2" DEE					
Meas Line								Displace							
								13.3L							
<b>EQUIPMENT</b>								Common		150					
Pumptrk								No.		Cementer					
9										Cody					
Bulktrk								No.		Driver					
										Cody					
Bulktrk								No.		Driver					
1										Billy					
<b>JOB SERVICES &amp; REMARKS</b>								Hulls							
Remarks:								Salt							
Rat Hole								Flowseal							
Mouse Hole								Kol-Seal							
Centralizers								Mud CLR 48							
Baskets								CFL-117 or CD110 CAF 38							
D/V or Port Collar								Sand							
8 5/8 on Bottom - Est Circulation.								Handling		158					
Mix 150 SKY Displace.								Mileage							
<b>Cement Circulated!</b>								<b>FLOAT EQUIPMENT</b>							
								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge		Surface					
								Mileage		62					
X Signature										Tax					
										Discount					
										Total Charge					

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 6073

Date	2-3-13	Sec.	31	Twp.	4	Range	20	County	Phillips	State	Ks	On Location		Finish	1:30 PM
------	--------	------	----	------	---	-------	----	--------	----------	-------	----	-------------	--	--------	---------

Location Logan, Ks - 2 W to 1500 Rd, 1 1/4 S, 1 1/2 W

Lease	Bowman A	Well No.	1	Owner	N/Into
-------	----------	----------	---	-------	--------

Contractor	W-W #12		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.
------------	---------	--	--

Type Job	Plug		Charge To	John O Farmer
----------	------	--	-----------	---------------

Hole Size	4 7/8"	T.D.	3596'	Street	
-----------	--------	------	-------	--------	--

Csg.		Depth		City	
------	--	-------	--	------	--

Tbg. Size	4 1/2 D.P.	Depth	3550'	State	
-----------	------------	-------	-------	-------	--

Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
------	--	-------	--	--	--

Cement Left in Csg.		Shoe Joint		Cement Amount Ordered	255 sx 60/40 4% Gel
---------------------	--	------------	--	-----------------------	---------------------

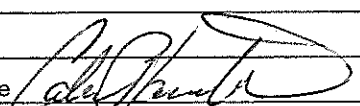
Meas Line		Displace	1/20/mud	1/4 # Flo-seal	
-----------	--	----------	----------	----------------	--

EQUIPMENT					
Pumptrk	16	No.	Cementer	Travis	Common
			Helper		153
Bulktrk	14	No.	Driver	Rick	Poz. Mix
			Driver		102
Bulktrk	P.W.	No.	Driver	Clayton	Gel.
			Driver		9
					Calcium

JOB SERVICES & REMARKS		
Remarks:	3550' - 50 SX	Hulls
Rat Hole	1680' - 25 SX	Salt
Mouse Hole	1000' - 100 SX	Flowseal
Centralizers	270' - 40 SX	63#
Baskets	40' - 10 SX w/ plug	Kol-Seal
D/V or Port Collar	Pathole w/ 30 SX	Mud CLR 48
		CFL-117 or CD110 CAF 38
		Sand
		Handling
		264
		Mileage

FLOAT EQUIPMENT	
	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down
	1- Dry hole plug

Pumptrk Charge	plug
Mileage	62

Signature		Tax
		Discount
		Total Charge