



KANSAS CORPORATION COMMISSION 1124907  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

June 2009

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
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or      Date Reached TD      Completion Date or  
Recompletion Date           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

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total 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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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 Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

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
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<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> _____ _____
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Form	ACO1 - Well Completion
Operator	Culbreath Oil & Gas Company, Inc.
Well Name	Coburn 4-8
Doc ID	1124907

Tops

Name	Top	Datum
Anhydrite	2239	+379
Base Anhydrite	2272	+347
Heebner	3822	-1204
Toronto	3846	-1228
Lansing	3864	-1246
Munice Creek	3978	-1360
Stark	4050	-1432
BKC	4092	-1474
LTD	4120	



**CONSOLIDATED**  
Oil Well Services, LLC

**REMIT TO**  
Consolidated Oil Well Services, LLC  
Dept. 970  
P.O. Box 4346  
Houston, TX 77210-4346

**MAIN OFFICE**  
P.O. Box 884  
Chanute, KS 66720  
620/431-9210 • 1-800/467-8676  
Fax 620/431-0012

INVOICE

Invoice # 256825

Invoice Date: 02/20/2013 Terms: 10/10/30,n/30 Page 1

CULBREATH OIL & GAS CO.INC  
1532 S. PEORIA AVE  
TULSA OK 74120  
(918)749-3508

COBURN 4-8  
39337  
8-10-24  
02-16-2013  
KS

Part Number	Description	Qty	Unit Price	Total
1104S	CLASS "A" CEMENT (SALE)	185.00	17.6500	3265.25
1118B	PREMIUM GEL / BENTONITE	348.00	.2500	87.00
1102	CALCIUM CHLORIDE (50#)	522.00	.8900	464.58

Sublet Performed	Description	Total
9996-130	CEMENT MATERIAL DISCOUNT	-381.68
9995-130	CEMENT EQUIPMENT DISCOUNT	-176.86

Description	Hours	Unit Price	Total
463 CEMENT PUMP (SURFACE)	1.00	1085.00	1085.00
463 EQUIPMENT MILEAGE (ONE WAY)	35.00	5.00	175.00
693 TON MILEAGE DELIVERY	1.00	508.55	508.55

Amount Due 5883.10 if paid after 03/22/2013

Parts:	3816.83	Freight:	.00	Tax:	267.95	AR	5294.79
Labor:	.00	Misc:	.00	Total:	5294.79		
Sublt:	-558.54	Supplies:	.00	Change:	.00		

Signed \_\_\_\_\_ Date \_\_\_\_\_



**CONSOLIDATED**  
Oil Well Services, LLC

256825

TICKET NUMBER 39337

LOCATION Oakley KS

FOREMAN Fuzz4

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

125

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY	
2-16-13	2777	Coburn 4-8	8	10	24	Shenandoah	
CUSTOMER Culbreath Oil & Gas		antrak 10 W Rd 100 1 W -		TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS				463	Cory D		
CITY		STATE		693	Ed		
ZIP CODE					Phil K		

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 275' CASING SIZE & WEIGHT 8 5/8  
 CASING DEPTH 273' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 14.7 SLURRY VOL 1.36 WATER gal/sk 6.5 CEMENT LEFT in CASING 20'  
 DISPLACEMENT 16.1 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting on MAVERICK #108 Ris up and circulate  
mix 185 gals class A' 392 cc 29 gal. Displace 16 BBL and  
shot in.

Cement did circulate approx 4 BBLs to pit

Thanks Fuzz4Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	1085.00	1085.00
5406	385	MILEAGE	5.00	175.00
5407A	8.7 Tow	Tow Mileage Delivery	167	508.33
11045	185 sks	Class A' cement	17.63	3265.25
1118B	348 #	Bentonite	.25	87.00
1102	522 #	Calcium Chloride	.89	464.58
		subtotal		5585.38
		less 1070		5585.34
		subtotal		5026.84

completed

Ravin 3737

SALES TAX 267.95  
ESTIMATED TOTAL 5294.79

AUTHORIZATION [Signature] TITLE Toolpusher DATE \_\_\_\_\_

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



## DRILL STEM TEST REPORT

Prepared For: **Culbreath Oil & Gas**

1532 S. Peopia Ave  
Tulsa OK 74120

ATTN: Pat Deenihan

### **Coburn #4-8**

#### **8-10s-26w Sheridan,KS**

Start Date: 2013.02.21 @ 01:00:00

End Date: 2013.02.21 @ 09:48:00

Job Ticket #: 48050                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.05 @ 09:15:01



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Culbreath Oil & Gas

**8-10s-26w Sheridan,KS**

1532 S. Peopia Ave  
Tulsa OK 74120

**Coburn #4-8**

ATTN: Pat Deenihan

Job Ticket: 48050

**DST#: 1**

Test Start: 2013.02.21 @ 01:00:00

## GENERAL INFORMATION:

Formation: **LKC B-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:05:00

Time Test Ended: 09:48:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Kreutzer Jr.

Unit No: 61

**Interval: 3870.00 ft (KB) To 3904.00 ft (KB) (TVD)**

Reference Elevations: 2628.00 ft (KB)

Total Depth: 3904.00 ft (KB) (TVD)

2618.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8791**

**Inside**

Press @ Run Depth: 109.99 psig @ 3871.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.02.21

End Date:

2013.02.21

Last Calib.:

2013.02.21

Start Time: 01:00:01

End Time:

09:48:00

Time On Btm:

2013.02.21 @ 03:48:30

Time Off Btm:

2013.02.21 @ 07:25:30

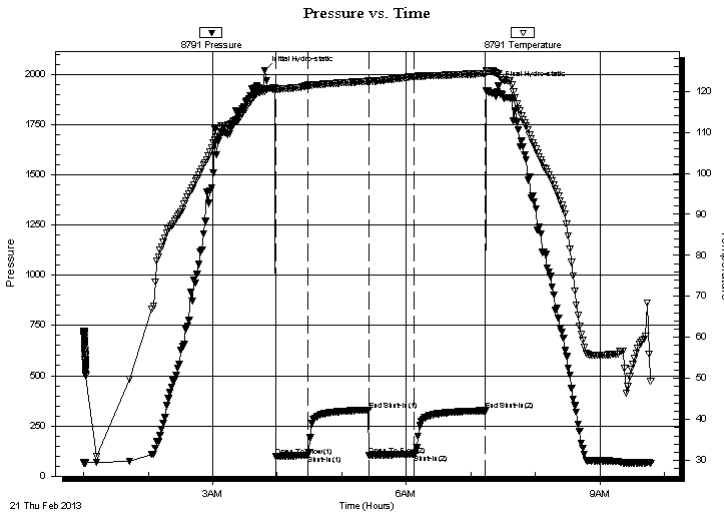
**TEST COMMENT:** IF: Weak blow , Died in 20 mins.

ISI: No blow back

FF: Weak blow , Died in 5 mins.

FSI: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2018.14	120.07	Initial Hydro-static
11	99.12	120.45	Open To Flow (1)
40	105.11	121.46	Shut-In(1)
97	329.39	122.48	End Shut-In(1)
97	104.64	122.41	Open To Flow (2)
139	109.99	123.65	Shut-In(2)
205	326.33	124.38	End Shut-In(2)
217	1944.48	124.32	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
35.00	mud w ith oil specks	0.49

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Culbreath Oil & Gas

**8-10s-26w Sheridan,KS**

1532 S. Peopia Ave  
Tulsa OK 74120

**Coburn #4-8**

Job Ticket: 48050

**DST#: 1**

ATTN: Pat Deenihan

Test Start: 2013.02.21 @ 01:00:00

## Tool Information

Drill Pipe:	Length: 3872.00 ft	Diameter: 3.80 inches	Volume: 54.31 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 54.31 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3870.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	34.00 ft				
Tool Length:	62.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3847.00	
Hydraulic tool	5.00			3852.00	
Jars	5.00			3857.00	
Safety Joint	3.00			3860.00	
Packer	5.00			3865.00	28.00 Bottom Of Top Packer
Packer	5.00			3870.00	
Stubb	1.00			3871.00	
Recorder	0.00	8791	Inside	3871.00	
Recorder	0.00	8651	Outside	3871.00	
Perforations	30.00			3901.00	
Bullnose	3.00			3904.00	34.00 Bottom Packers & Anchor

**Total Tool Length: 62.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Culbreath Oil & Gas

**8-10s-26w Sheridan,KS**

1532 S. Peopia Ave  
Tulsa OK 74120

**Coburn #4-8**

Job Ticket: 48050

**DST#: 1**

ATTN: Pat Deenihan

Test Start: 2013.02.21 @ 01:00:00

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	mud w ith oil specks	0.491

Total Length: 35.00 ft      Total Volume: 0.491 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8791

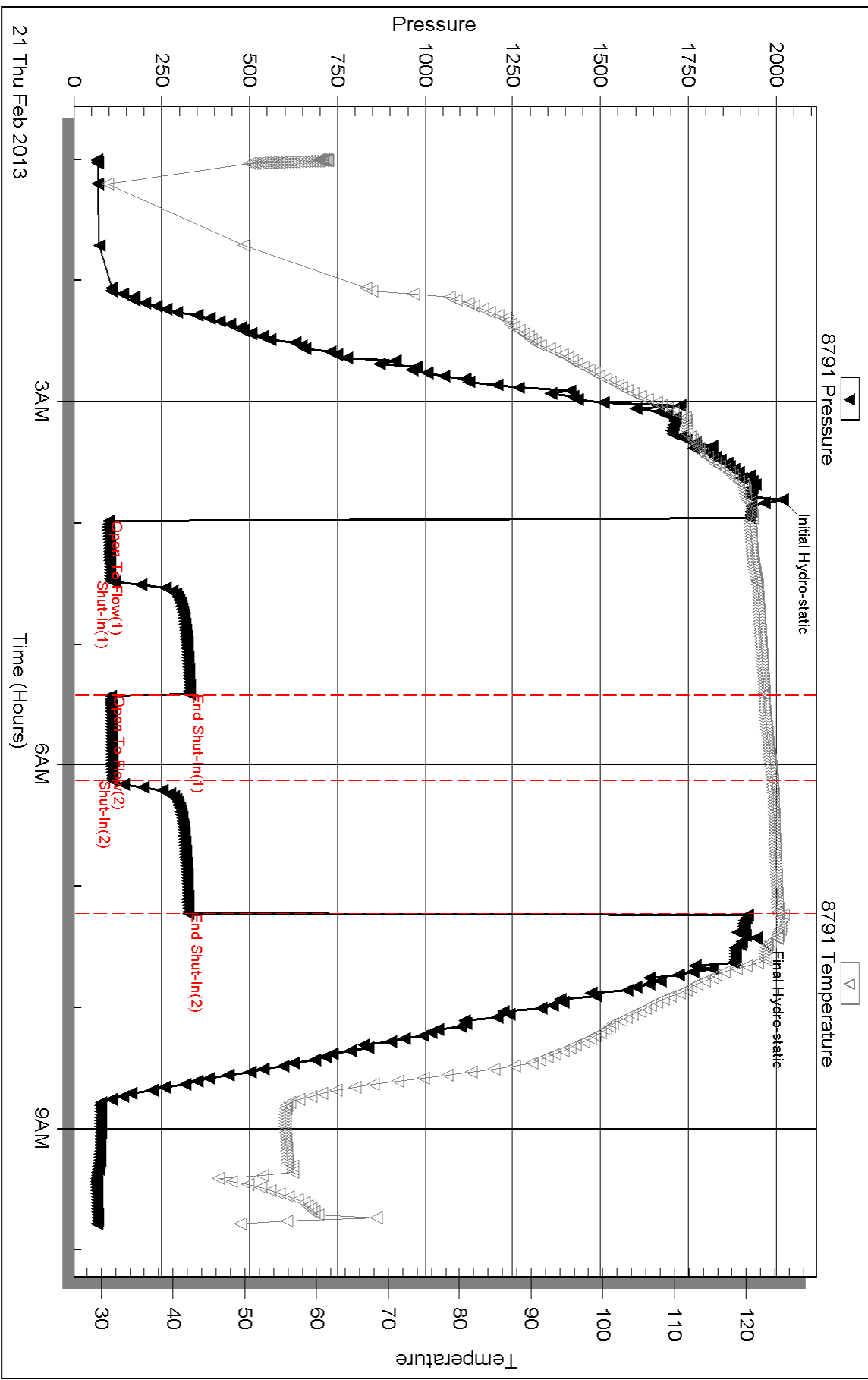
Inside

Culbreath Oil & Gas

Coburn #4-8

DST Test Number: 1

# Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48050

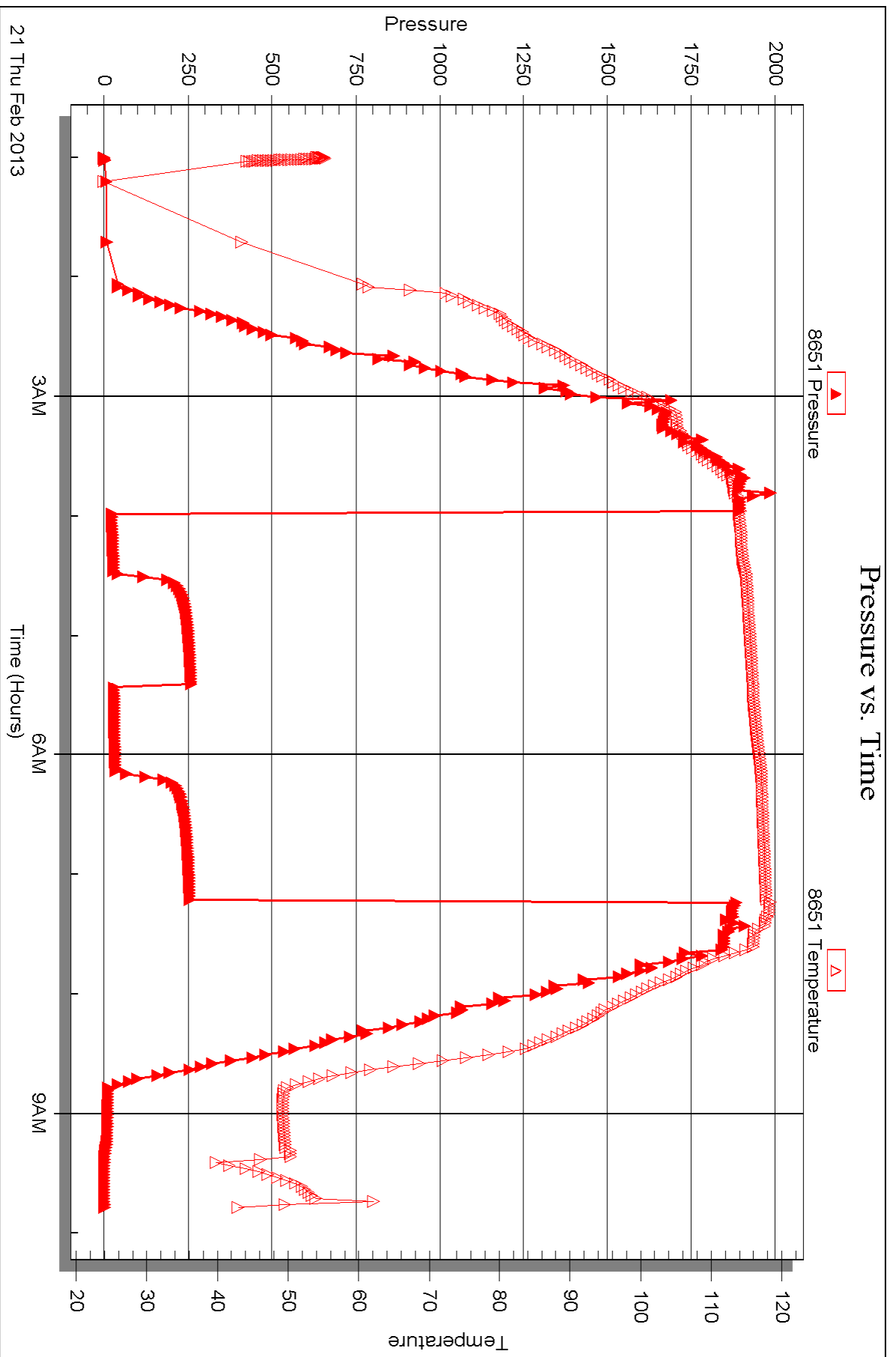
Printed: 2013.03.05 @ 09:15:04

Serial #: 8651

Outside Culbreath Oil & Gas

Coburn #4-8

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Culbreath Oil & Gas**

1532 S. Peopia Ave  
Tulsa OK 74120

ATTN: Pat Deenihan

### **Coburn #4-8**

#### **8-10s-26w Sheridan,KS**

Start Date: 2013.02.23 @ 04:05:00

End Date: 2013.02.23 @ 10:34:00

Job Ticket #: 50576                      DST #: 2

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

Printed: 2013.03.05 @ 09:14:26



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Culbreath Oil & Gas

**8-10s-26w Sheridan,KS**

1532 S. Peopia Ave  
Tulsa OK 74120

**Coburn #4-8**

ATTN: Pat Deenihan

Job Ticket: 50576

**DST#: 2**

Test Start: 2013.02.23 @ 04:05:00

## GENERAL INFORMATION:

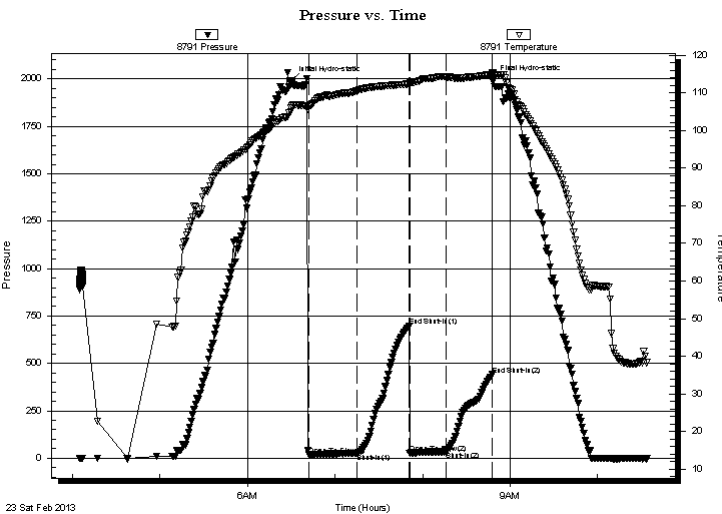
Formation: **LKC**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:42:00  
 Time Test Ended: 10:34:00  
 Interval: **3972.00 ft (KB) To 4006.00 ft (KB) (TVD)**  
 Total Depth: 4006.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreutzer Jr.  
 Unit No: 61  
 Reference Elevations: 2628.00 ft (KB)  
 2618.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 8791

Inside

Press @ Run Depth: 35.62 psig @ 3973.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.02.23 End Date: 2013.02.23 Last Calib.: 2013.02.23  
 Start Time: 04:05:01 End Time: 10:34:00 Time On Btm: 2013.02.23 @ 06:30:00  
 Time Off Btm: 2013.02.23 @ 08:48:00

TEST COMMENT: IF: Weak blow, Built to 1 1/4" over 15 mins. Died to surface over 30 mins.  
 IS: No blow back  
 FF: No blow  
 FS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1992.23	105.96	Initial Hydro-static
12	17.40	106.40	Open To Flow (1)
45	26.68	110.60	Shut-In(1)
81	695.07	112.35	End Shut-In(1)
81	25.20	112.30	Open To Flow (2)
106	35.62	114.21	Shut-In(2)
138	440.61	114.73	End Shut-In(2)
138	1999.08	115.41	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
35.00	VSOCM-10%o90%m	0.49

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Culbreath Oil & Gas

**8-10s-26w Sheridan,KS**

1532 S. Peopia Ave  
Tulsa OK 74120

**Coburn #4-8**

Job Ticket: 50576

**DST#: 2**

ATTN: Pat Deenihan

Test Start: 2013.02.23 @ 04:05:00

## Tool Information

Drill Pipe:	Length: 3968.00 ft	Diameter: 3.80 inches	Volume: 55.66 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 55.66 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3972.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	34.00 ft				
Tool Length:	62.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3949.00	
Hydraulic tool	5.00			3954.00	
Jars	5.00			3959.00	
Safety Joint	3.00			3962.00	
Packer	5.00			3967.00	28.00 Bottom Of Top Packer
Packer	5.00			3972.00	
Stubb	1.00			3973.00	
Recorder	0.00	8791	Inside	3973.00	
Recorder	0.00	8651	Outside	3973.00	
Perforations	30.00			4003.00	
Bullnose	3.00			4006.00	34.00 Bottom Packers & Anchor

**Total Tool Length: 62.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Culbreath Oil & Gas

**8-10s-26w Sheridan,KS**

1532 S. Peopia Ave  
Tulsa OK 74120

**Coburn #4-8**

Job Ticket: 50576

**DST#: 2**

ATTN: Pat Deenihan

Test Start: 2013.02.23 @ 04:05:00

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	VSOCM-10%o90%m	0.491

Total Length: 35.00 ft      Total Volume: 0.491 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

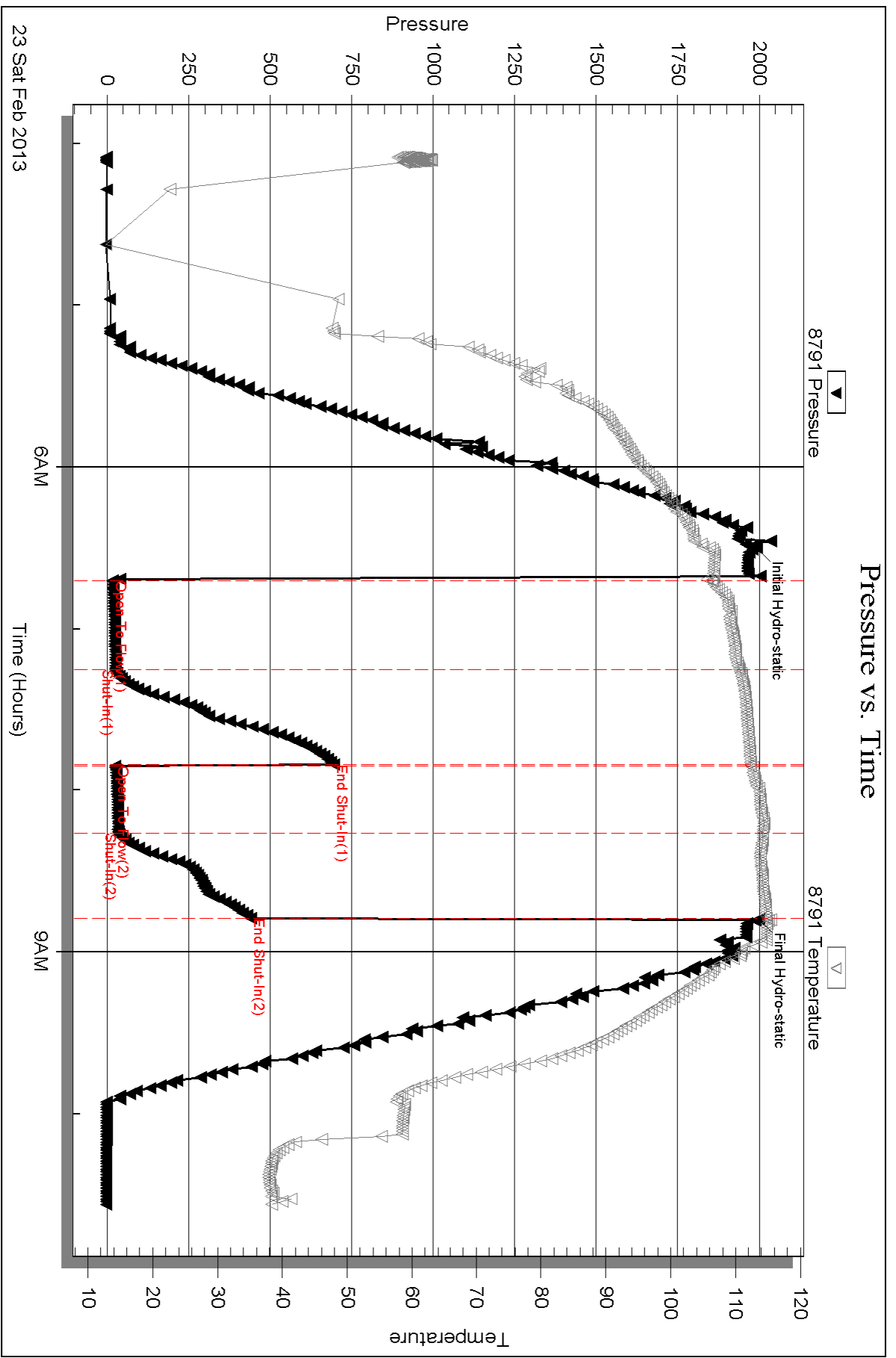
Serial #: 8791

Inside

Culbreath Oil & Gas

Coburn #4-8

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 50576

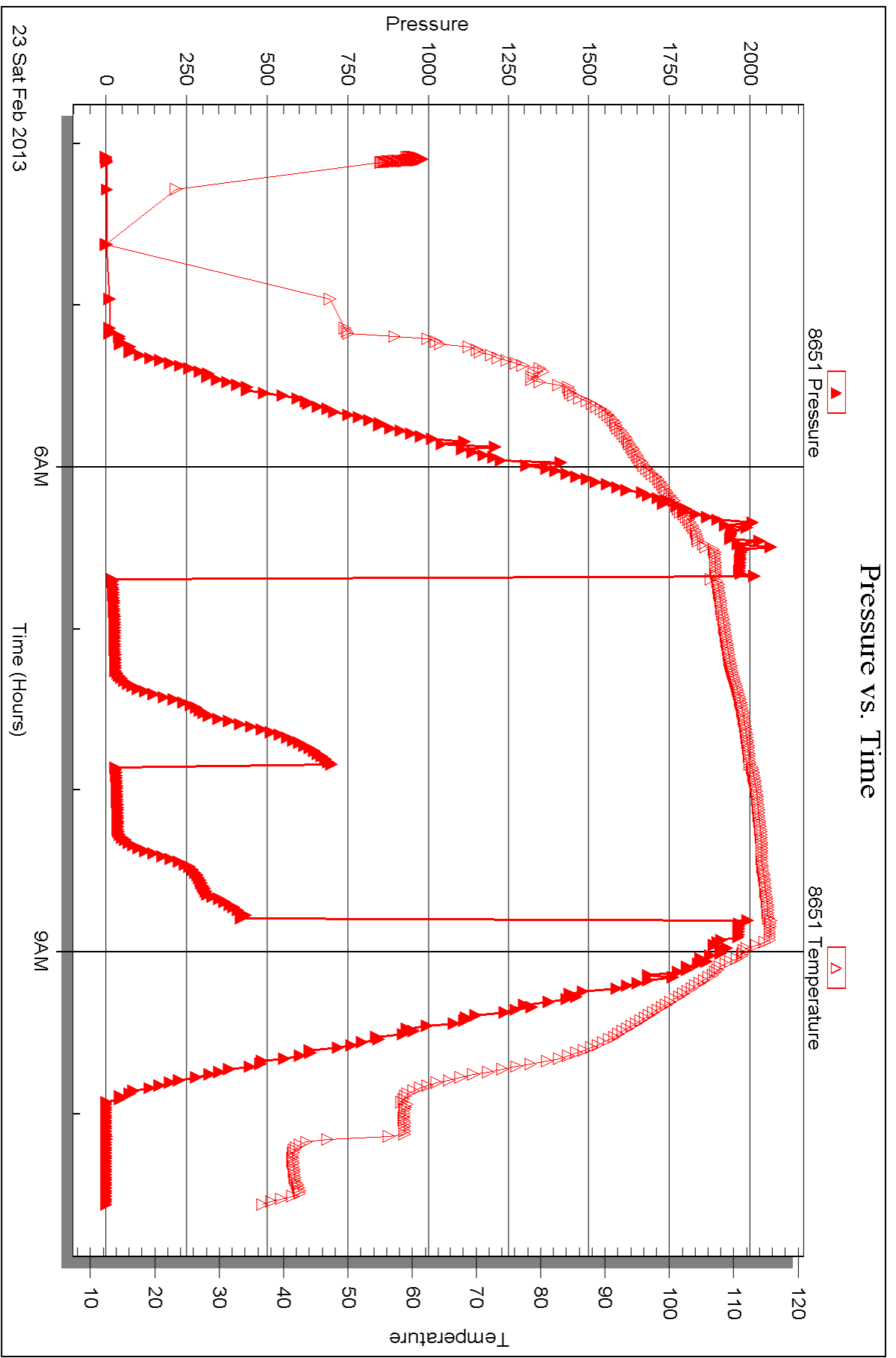
Printed: 2013.03.05 @ 09:14:29

Serial #: 8651

Outside Culbreath Oil & Gas

Coburn #4-8

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Culbreath Oil & Gas**

1532 S. Peopia Ave  
Tulsa OK 74120

ATTN: Pat Deenihan

### **Coburn #4-8**

#### **8-10s-26w Sheridan,KS**

Start Date: 2013.02.24 @ 00:55:00

End Date: 2013.02.24 @ 07:46:30

Job Ticket #: 50577                      DST #: 3

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

Printed: 2013.03.05 @ 09:13:07



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Culbreath Oil & Gas

**8-10s-26w Sheridan,KS**

1532 S. Peopia Ave  
Tulsa OK 74120

**Coburn #4-8**

ATTN: Pat Deenihan

Job Ticket: 50577

**DST#: 3**

Test Start: 2013.02.24 @ 00:55:00

## GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:24:00

Time Test Ended: 07:46:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 4004.00 ft (KB) To 4072.00 ft (KB) (TVD)**

Reference Elevations: 2628.00 ft (KB)

Total Depth: 4072.00 ft (KB) (TVD)

2618.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8651 Outside**

Press @ Run Depth: 21.66 psig @ 4008.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.02.24

End Date:

2013.02.24

Last Calib.:

2013.02.24

Start Time: 00:55:01

End Time:

07:46:30

Time On Btm:

2013.02.24 @ 03:22:30

Time Off Btm:

2013.02.24 @ 05:50:00

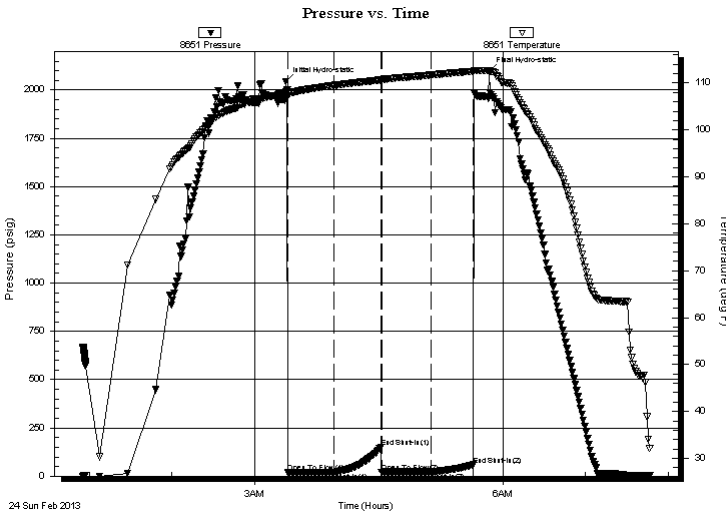
**TEST COMMENT:** IF: Weak surface blow over 30 mins.

IS: No blow back over 30 mins.

FF: No blow over 30 mins.

FS: No blow back over 30 mins.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2043.52	108.05	Initial Hydro-static
2	19.26	107.05	Open To Flow (1)
35	20.99	109.49	Shut-In(1)
69	148.30	110.67	End Shut-In(1)
70	20.91	110.61	Open To Flow (2)
106	21.66	111.74	Shut-In(2)
136	58.44	112.52	End Shut-In(2)
148	2097.23	112.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud-100%	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**

Culbreath Oil & Gas

**8-10s-26w Sheridan,KS**

1532 S. Peopia Ave  
Tulsa OK 74120

**Coburn #4-8**

Job Ticket: 50577

**DST#: 3**

ATTN: Pat Deenihan

Test Start: 2013.02.24 @ 00:55:00

## Tool Information

Drill Pipe:	Length: 4000.00 ft	Diameter: 3.80 inches	Volume: 56.11 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 56.11 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4004.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3981.00	
Hydraulic tool	5.00			3986.00	
Jars	5.00			3991.00	
Safety Joint	3.00			3994.00	
Packer	5.00			3999.00	28.00 Bottom Of Top Packer
Packer	5.00			4004.00	
Stubb	1.00			4005.00	
Perforations	1.00			4006.00	
Change Over Sub	2.00			4008.00	
Recorder	0.00	8791	Inside	4008.00	
Recorder	0.00	8651	Outside	4008.00	
Blank Spacing	31.00			4039.00	
Change Over Sub	1.00			4040.00	
Perforations	29.00			4069.00	
Bullnose	3.00			4072.00	68.00 Bottom Packers & Anchor

**Total Tool Length: 96.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Culbreath Oil & Gas

**8-10s-26w Sheridan,KS**

1532 S. Peopia Ave  
Tulsa OK 74120

**Coburn #4-8**

Job Ticket: 50577

**DST#: 3**

ATTN: Pat Deenihan

Test Start: 2013.02.24 @ 00:55:00

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	mud-100%	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:

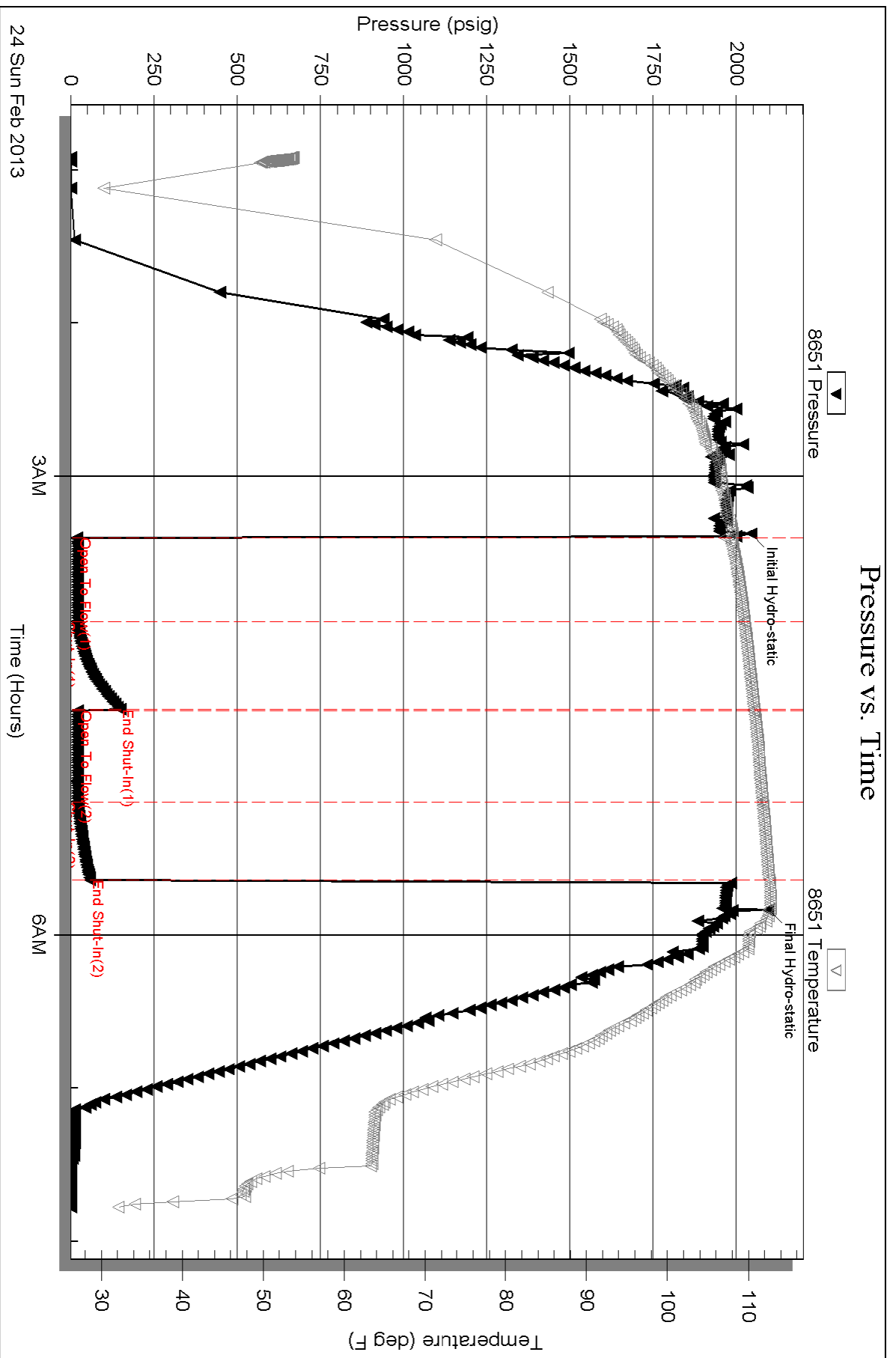
Recovery Comments:

Serial #: 8651

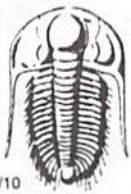
Outside Culbreath Oil & Gas

Coburn #4-8

DST Test Number: 3







# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48050

Well Name & No. Coburn #4-8 Test No. 1 Date 2-21-2013  
 Company Culbreth Oil & Gas Co. Inc. Elevation 2628 KB 2618 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. ~~PAT DEEN~~ PAT DEENIHAN Rig Maurice  
 Location: Sec. 8 Twp. 10S Rge. 26W Co. Sheridan State KS

Interval Tested 3870 3904 Zone Tested LRC-B&D  
 Anchor Length \_\_\_\_\_ Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.2  
 Top Packer Depth \_\_\_\_\_ Drill Collars Run -0- Vis 60  
 Bottom Packer Depth 3870 Wt. Pipe Run -0- WL 8.8  
 Total Depth 3904 Chlorides 1500 ppm System LCM 2H  
 Blow Description IF: Weak blow, Die in 20 mins  
ISS: No blow back  
FF: Weak blow surface. Die in 5 mins  
FST: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>35</u>	<u>Mud with oil specs</u>				
_____	_____				
_____	_____				
_____	_____				
_____	_____				

Rec Total 35 BHT 84 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2018</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>0030</u>
(B) First Initial Flow <u>99</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>100</u>
(C) First Final Flow <u>105</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>04:05</u>
(D) Initial Shut-In <u>324</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>7:05</u>
(E) Second Initial Flow <u>105</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>9:48</u>
(F) Second Final Flow <u>100</u>	<input checked="" type="checkbox"/> Mileage <u>6512-130</u> <u>1.55 = 201.50</u>	Comments <u>got stuck at 6:30 PM - 7:00</u>
(G) Final Shut-In <u>326</u>	<input type="checkbox"/> Sampler _____	<u>Didn't get pulled out till 12:00 AM</u>
(H) Final Hydrostatic <u>1444</u>	<input type="checkbox"/> Straddle _____	<u>Had tool and recorders going in hole</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<u>BY 1:00 AM</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Ruined Packer _____
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Accessibility _____	Sub Total <u>0</u>
	Sub Total <u>1676.50</u>	Total <u>1676.50</u>

Approved By \_\_\_\_\_ Our Representative Chris Meyer

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. **50576**

4/10

Well Name & No. Coburn #4-8 Test No. 2 Date 2-23-2013  
 Company Culbreth Oil & Gas Inc. Elevation 2628' KB 2618 GL  
 Address 1532 S. Peoria Ave Tulsa O.K. 74120  
 Co. Rep / Geo. Pat Deenihan Rig Murrik 10B  
 Location: Sec. 8 Twp. 10S Rge. 26W Co. Sheridan State Ks

Interval Tested 3972 4006 Zone Tested LKC-  
 Anchor Length 34 Drill Pipe Run 3968 Mud Wt. 9.2  
 Top Packer Depth 3967 Drill Collars Run -0- Vis 60  
 Bottom Packer Depth 3972 Wt. Pipe Run -0- WL 8.8  
 Total Depth 4006 Chlorides 1500 ppm System LCM 2#

Blow Description IF: Weak blow, Built to 14 in over 15 mins. Died to surface over 30 mins

IS: No blow back

FF: No blow

FS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>35</u>	<u><del>2000</del> 1500M</u>		<u>20</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 35 BHT 114 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

- (A) Initial Hydrostatic 1992
- (B) First Initial Flow 17
- (C) First Final Flow 27
- (D) Initial Shut-In 695
- (E) Second Initial Flow 25
- (F) Second Final Flow 36
- (G) Final Shut-In 441
- (H) Final Hydrostatic 1999

- Test 1250
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage 65x2=130x1.55 201.50
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby Day 19hrs 18.25
- Accessibility

- T-On Location 4:00
- T-Started 4:05
- T-Open 6:42
- T-Pulled 8:45
- T-Out 10:34

Comments Ran test #2 at 4:00 AM on 2-23. Finished test #1 at 9:50 AM on 2-21

- Ruined Shale Packer
- Ruined Packer
- Extra Copies
- Sub Total 608.33
- Total 2384.83

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

Sub Total 1776.50

Approved By \_\_\_\_\_

Our Representative Chuck Ryan



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50577

Well Name & No. Coburn #4-8 Test No. 3 Date 2-24-2013  
 Company Culbreath oil & Gas Inc. Elevation 2628 KB 2618 GL  
 Address 1532 S. Peopia Ave Tulsa O.K. 74120  
 Co. Rep / Geo. Pat Deenihan Rig Mavrik  
 Location: Sec. 8 Twp. 10S Rge. 26W Co. Sheridan State KS

Interval Tested 4004 4072 Zone Tested LKC-I, J, K  
 Anchor Length 68 Drill Pipe Run 4000 Mud Wt. 9.2  
 Top Packer Depth 3999 Drill Collars Run 0 Vis 60  
 Bottom Packer Depth 4004 Wt. Pipe Run 0 WL 8.8  
 Total Depth 4072 Chlorides 1500 ppm System LCM 2#

Blow Description IF: Weak blow surface over 30mins  
ISS: No blow back  
FF: No blow  
ESS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</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 3 BHT 117 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic	<u>2044</u>	<input checked="" type="checkbox"/> Test	1250	T-On Location	<u>00:45</u>
(B) First Initial Flow	<u>19</u>	<input checked="" type="checkbox"/> Jars	250	T-Started	<u>00:55</u>
(C) First Final Flow	<u>21</u>	<input checked="" type="checkbox"/> Safety Joint	75	T-Open	<u>3:24</u>
(D) Initial Shut-In	<u>148</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>5:40</u>
(E) Second Initial Flow	<u>21</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>7:46</u>
(F) Second Final Flow	<u>21</u>	<input checked="" type="checkbox"/> Mileage	<u>65 x 2 = 130 x 1.55 = 201.50</u>	Comments <u>Released on Sun 2-24</u>	
(G) Final Shut-In	<u>58</u>	<input type="checkbox"/> Sampler	<u>201.50 x 2 = 403 Load tools</u>	<u>at 10:30 pm</u>	
(H) Final Hydrostatic	<u>2097</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>1978</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1978</u>		

Approved By \_\_\_\_\_ Our Representative [Signature]

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