

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs 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 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 Geologist Report / Mud Logs <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
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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
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	RANK 2-2
Doc ID	1321651

All Electric Logs Run

DIL
DUCP
MEL
BHCS



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Chuck Schmaltz

Rank #2-2

2-23S-12W Stafford,KS

Start Date: 2016.10.02 @ 10:58:31

End Date: 2016.10.02 @ 18:22:31

Job Ticket #: 55418 DST #: 1

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

Printed: 2016.10.03 @ 11:18:15



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

2-23S-12W Stafford,KS

250 N Water Ste 300
Wichita, KS 67202

Rank #2-2

Job Ticket: 55418

DST#: 1

ATTN: Chuck Schmaltz

Test Start: 2016.10.02 @ 10:58:31

GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:46:01

Time Test Ended: 18:22:31

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 74

Interval: 3554.00 ft (KB) To 3750.00 ft (KB) (TVD)

Reference Elevations: 1840.00 ft (KB)

Total Depth: 3750.00 ft (KB) (TVD)

1829.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8525 Inside

Press@RunDepth: 80.44 psig @ 3555.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.02 End Date: 2016.10.02

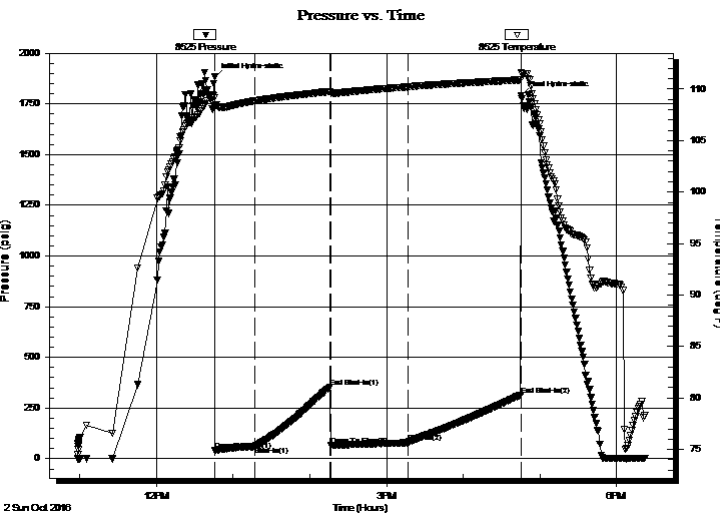
Last Calib.: 2016.10.02

Start Time: 10:58:32 End Time: 18:22:31

Time On Btm: 2016.10.02 @ 12:45:46

Time Off Btm: 2016.10.02 @ 16:45:16

TEST COMMENT: IF: Weak 1 inch Blow , Dead @ 11 minutes
IS: No Blow Back
FF: Weak 1/4 inch Blow , Dead @ 15 minutes
FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1882.12	109.19	Initial Hydro-static
1	41.54	108.38	Open To Flow (1)
31	60.19	108.84	Shut-In(1)
90	352.34	109.76	End Shut-In(1)
91	68.30	109.66	Open To Flow (2)
151	80.44	110.22	Shut-In(2)
240	315.24	110.90	End Shut-In(2)
240	1790.55	111.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	Mud	0.32

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co
 250 N Water Ste 300
 Wichita, KS 67202
 ATTN: Chuck Schmaltz

2-23S-12W Stafford,KS

Rank #2-2

Job Ticket: 55418 **DST#: 1**

Test Start: 2016.10.02 @ 10:58:31

GENERAL INFORMATION:

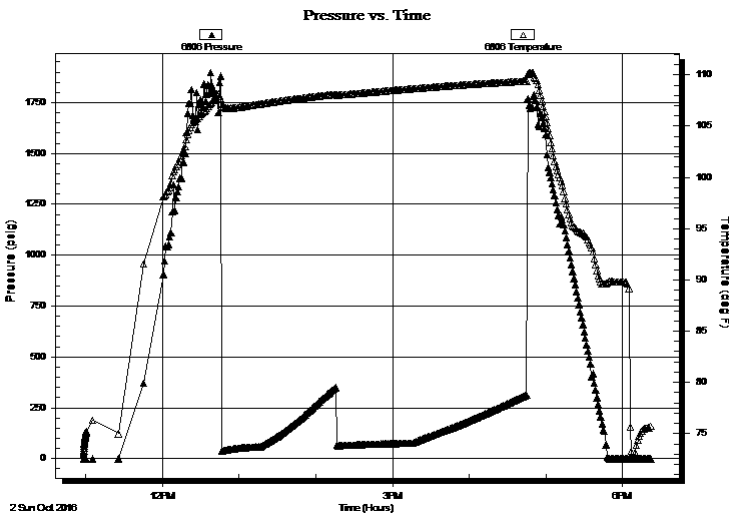
Formation: Viola			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)	
Time Tool Opened: 12:46:01		Tester: Leal Cason	
Time Test Ended: 18:22:31		Unit No: 74	
Interval: 3554.00 ft (KB) To 3750.00 ft (KB) (TVD)		Reference Elevations:	1840.00 ft (KB)
Total Depth: 3750.00 ft (KB) (TVD)			1829.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Good	KB to GR/CF:	11.00 ft

Serial #: 6806 Outside

Press@RunDepth:	psig @ 3555.00 ft (KB)	Capacity:	8000.00 psig
Start Date: 2016.10.02	End Date: 2016.10.02	Last Calib.:	2016.10.02
Start Time: 10:58:32	End Time: 18:22:16	Time On Btm:	
		Time Off Btm:	

TEST COMMENT: IF: Weak 1 inch Blow , Dead @ 11 minutes
 IS: No Blow Back
 FF: Weak 1/4 inch Blow , Dead @ 15 minutes
 FS: No Blow Back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
65.00	Mud	0.32

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

2-23S-12W Stafford,KS

250 N Water Ste 300
Wichita, KS 67202

Rank #2-2

Job Ticket: 55418

DST#: 1

ATTN: Chuck Schmaltz

Test Start: 2016.10.02 @ 10:58:31

Tool Information

Drill Pipe:	Length: 3266.00 ft	Diameter: 3.80 inches	Volume: 45.81 bbl	Tool Weight:	2100.00 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: 272.00 ft	Diameter: 2.25 inches	Volume: 1.34 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 47.15 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	65000.00 lb
Depth to Top Packer:	3554.00 ft			Final	65000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	196.00 ft				
Tool Length:	222.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3533.00	
Hydraulic tool	5.00			3538.00	
Jars	5.00			3543.00	
Safety Joint	2.00			3545.00	
Packer	5.00			3550.00	26.00 Bottom Of Top Packer
Packer	4.00			3554.00	
Stubb	1.00			3555.00	
Recorder	0.00	8525	Inside	3555.00	
Recorder	0.00	6806	Outside	3555.00	
Perforations	7.00			3562.00	
Change Over Sub	1.00			3563.00	
Drill Pipe	159.00			3722.00	
Change Over Sub	1.00			3723.00	
Perforations	24.00			3747.00	
Bullnose	3.00			3750.00	196.00 Bottom Packers & Anchor

Total Tool Length: 222.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

2-23S-12W Stafford,KS

250 N Water Ste 300
Wichita, KS 67202

Rank #2-2

Job Ticket: 55418

DST#: 1

ATTN: Chuck Schmaltz

Test Start: 2016.10.02 @ 10:58:31

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: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 10500.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	Mud	0.320

Total Length: 65.00 ft Total Volume: 0.320 bbl

Num Fluid Samples: 0

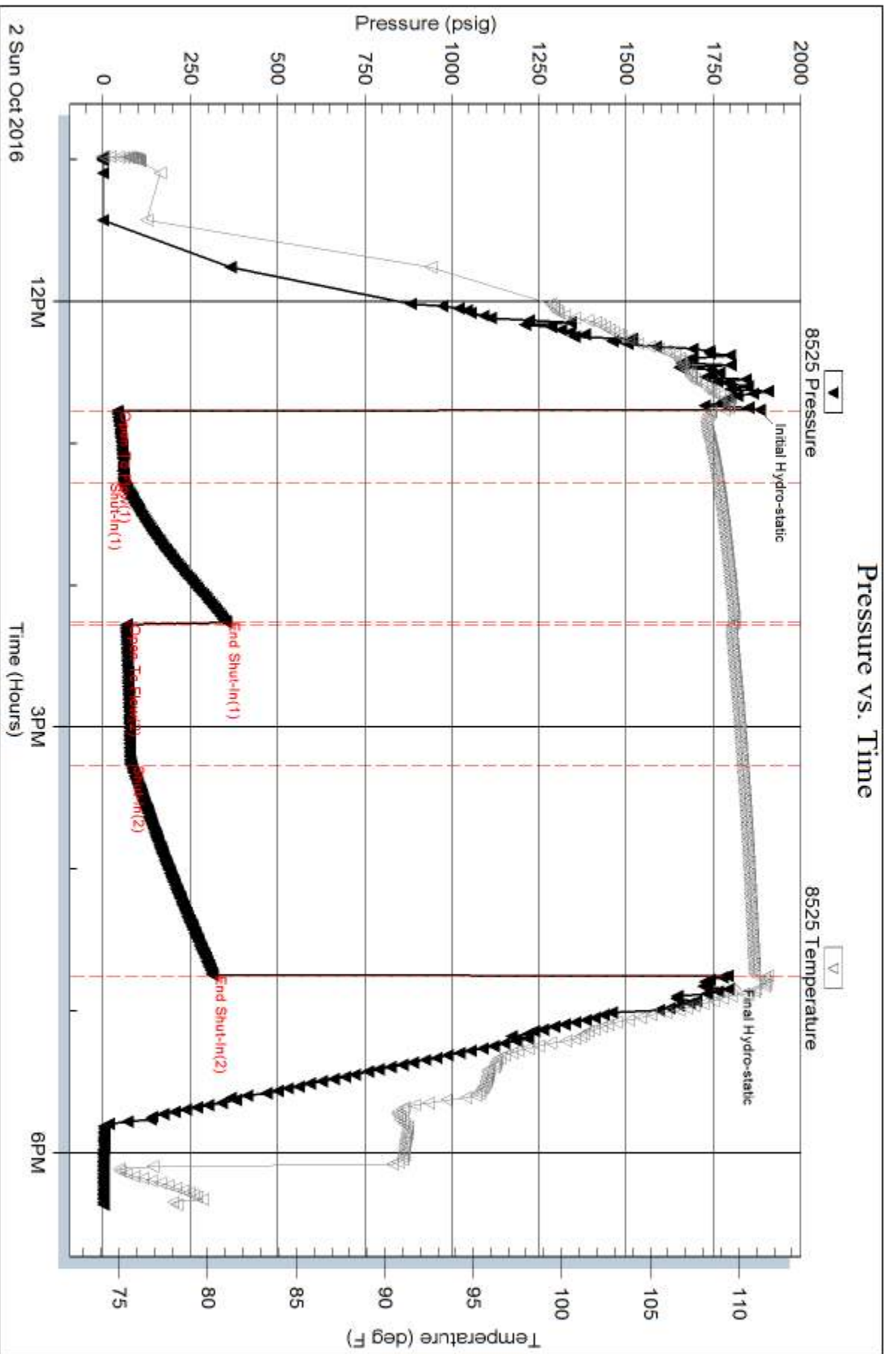
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

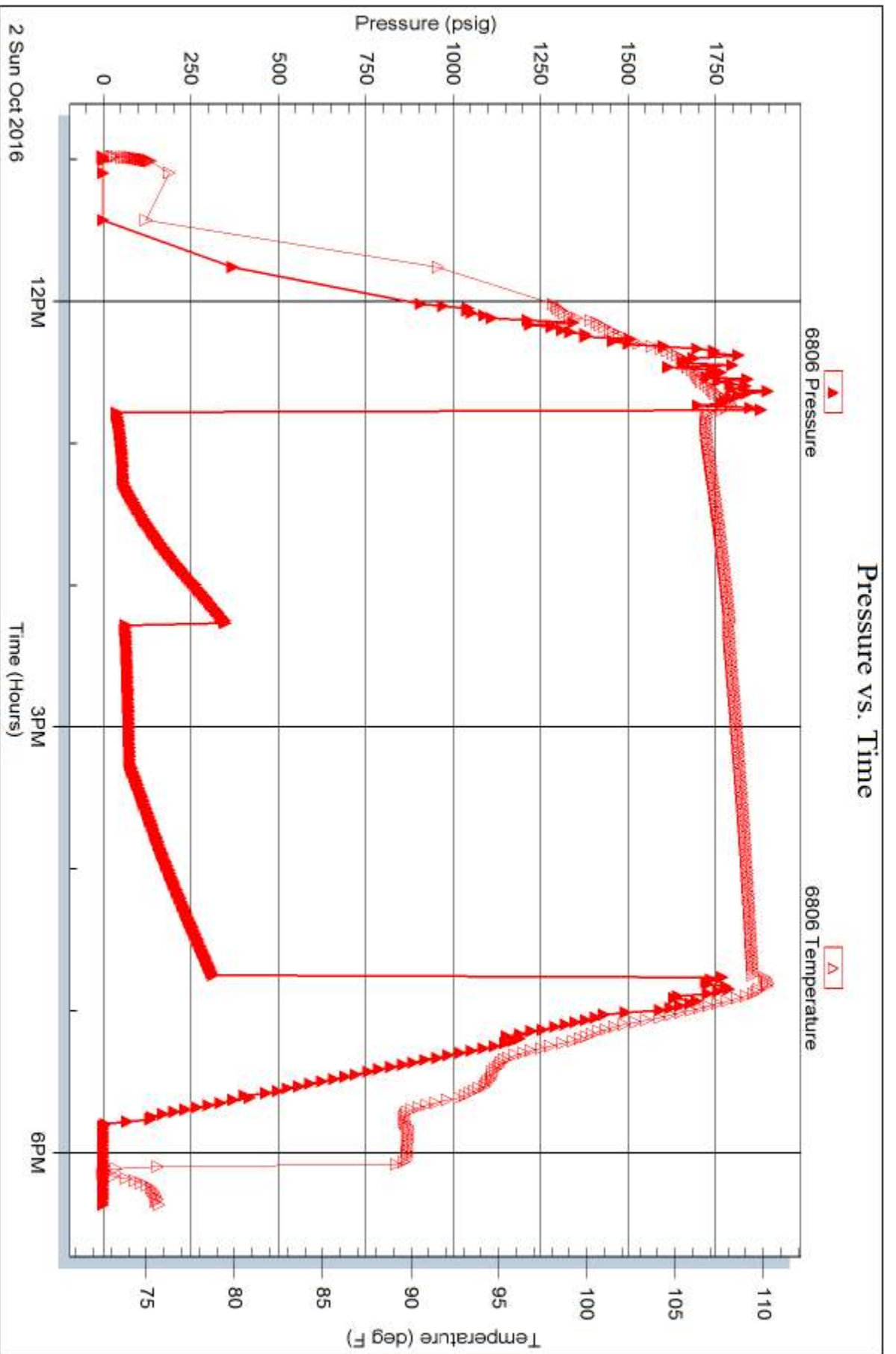


Serial #: 6806

Outside Murfin Drilling Co

Rank #2-2

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55418

Printed: 2016.10.03 @ 11:18:17



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Chuck Schmaltz

Rank #2-2

2-23S-12W Stafford,KS

Start Date: 2016.10.03 @ 22:42:00

End Date: 2016.10.04 @ 07:33:45

Job Ticket #: 63084 DST #: 2

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

Printed: 2016.10.04 @ 09:38:57



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

2-23S-12W Stafford,KS

250 N Water Ste 300
Wichita, KS 67202

Rank #2-2

Job Ticket: 63084

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2016.10.03 @ 22:42:00

GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:35:15

Time Test Ended: 07:33:45

Test Type: Conventional Straddle (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 3595.00 ft (KB) To 3644.00 ft (KB) (TVD)

Reference Elevations: 1840.00 ft (KB)

Total Depth: 3916.00 ft (KB) (TVD)

1829.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 6798

Inside

Press@RunDepth: 72.33 psig @ 3596.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.03

End Date:

2016.10.04

Last Calib.:

2016.10.03

Start Time:

22:42:05

End Time:

07:33:45

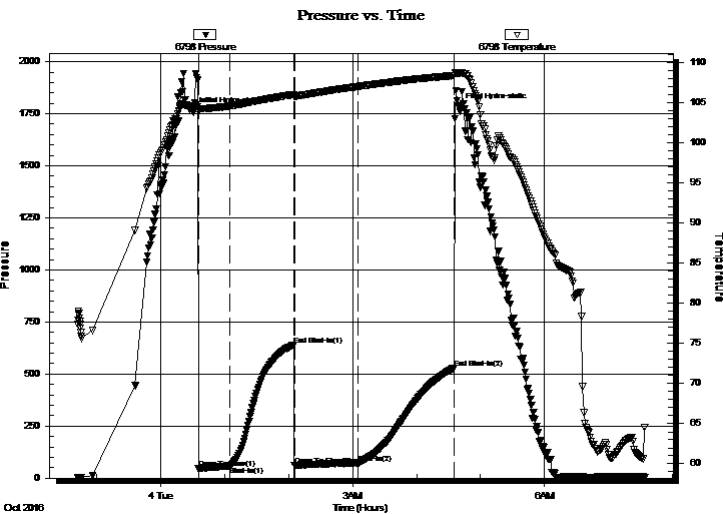
Time On Btm:

2016.10.04 @ 00:30:15

Time Off Btm:

2016.10.04 @ 04:39:45

TEST COMMENT: IF - Weak blow building to 3/4 inch initial flow period.
FF - No blow throughout final flow period.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1760.01	104.59	Initial Hydro-static
5	44.69	103.95	Open To Flow (1)
35	58.61	104.62	Shut-In(1)
95	640.21	106.05	End Shut-In(1)
95	61.54	105.85	Open To Flow (2)
155	72.33	107.05	Shut-In(2)
245	528.78	108.41	End Shut-In(2)
250	1779.12	108.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Oil spotted mud 1% O & 99% M	0.34

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co
 250 N Water Ste 300
 Wichita, KS 67202
 ATTN: Chuck Schmaltz

2-23S-12W Stafford, KS

Rank #2-2

Job Ticket: 63084 **DST#: 2**

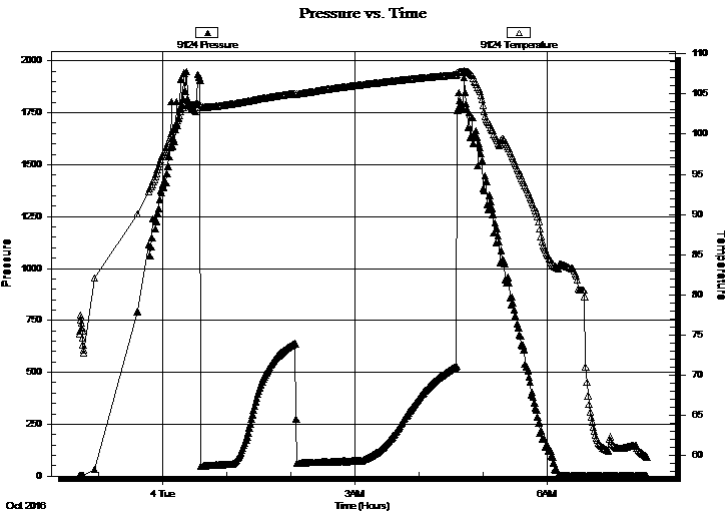
Test Start: 2016.10.03 @ 22:42:00

GENERAL INFORMATION:

Formation: **Viola**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Straddle (Initial)
 Time Tool Opened: 00:35:15 Tester: Jimmy Ricketts
 Time Test Ended: 07:33:45 Unit No: 80
Interval: 3595.00 ft (KB) To 3644.00 ft (KB) (TVD) Reference Elevations: 1840.00 ft (KB)
 Total Depth: 3916.00 ft (KB) (TVD) 1829.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 9124 Outside
 Press@RunDepth: psig @ 3596.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.10.03 End Date: 2016.10.04 Last Calib.: 1899.12.30
 Start Time: 22:42:05 End Time: 07:33:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF - Weak blow building to 3/4 inch initial flow period.
 FF - No blow throughout final flow period.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Oil spotted mud 1% O & 99% M	0.34

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

2-23S-12W Stafford, KS

250 N Water Ste 300
Wichita, KS 67202

Rank #2-2

Job Ticket: 63084

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2016.10.03 @ 22:42:00

GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:35:15

Time Test Ended: 07:33:45

Test Type: Conventional Straddle (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 3595.00 ft (KB) To 3644.00 ft (KB) (TVD)

Reference Elevations: 1840.00 ft (KB)

Total Depth: 3916.00 ft (KB) (TVD)

1829.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8367 Below (Straddle)

Press@RunDepth: psig @ 3645.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.03

End Date:

2016.10.04

Last Calib.:

1899.12.30

Start Time: 22:26:01

End Time:

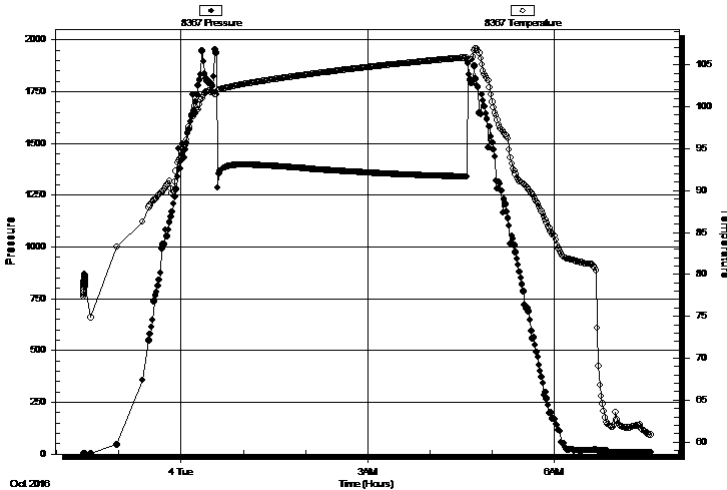
07:33:00

Time On Btm:

Time Off Btm:

TEST COMMENT: IF - Weak blow building to 3/4 inch initial flow period.
FF - No blow throughout final flow period.

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
70.00	Oil spotted mud 1% O & 99% M	0.34

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

2-23S-12W Stafford,KS

250 N Water Ste 300
Wichita, KS 67202

Rank #2-2

Job Ticket: 63084

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2016.10.03 @ 22:42:00

Tool Information

Drill Pipe:	Length: 3328.00 ft	Diameter: 3.80 inches	Volume: 46.68 bbl	Tool Weight: 4500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 273.00 ft	Diameter: 2.25 inches	Volume: 1.34 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 48.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3595.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	3644.00 ft			
Interval between Packers:	49.00 ft			
Tool Length:	349.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3568.00	
Shut In Tool	5.00			3573.00	
Hydraulic tool	5.00			3578.00	
Jars	5.00			3583.00	
Safety Joint	3.00			3586.00	
Packer	4.00			3590.00	28.00 Bottom Of Top Packer
Packer	5.00			3595.00	
Stubb	1.00			3596.00	
Recorder	0.00	9124	Outside	3596.00	
Recorder	0.00	6798	Inside	3596.00	
Perforations	7.00			3603.00	
Change Over Sub	0.50			3603.50	
Blank Spacing	31.00			3634.50	
Change Over Sub	0.50			3635.00	
Perforations	5.00			3640.00	
Blank Off Sub	1.00			3641.00	
T.C.	3.00			3644.00	49.00 Tool Interval
Packer	0.00			3644.00	
Stubb	1.00			3645.00	
Recorder	0.00	8367	Below	3645.00	
Perforations	13.00			3658.00	
Change Over Sub	0.50			3658.50	
Blank Spacing	252.00			3910.50	
Change Over Sub	0.50			3911.00	
Bullnose	5.00			3916.00	272.00 Bottom Packers & Anchor

Total Tool Length: 349.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

2-23S-12W Stafford,KS

250 N Water Ste 300
Wichita, KS 67202

Rank #2-2

Job Ticket: 63084

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2016.10.03 @ 22:42:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 10400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Oil spotted mud 1% O & 99% M	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

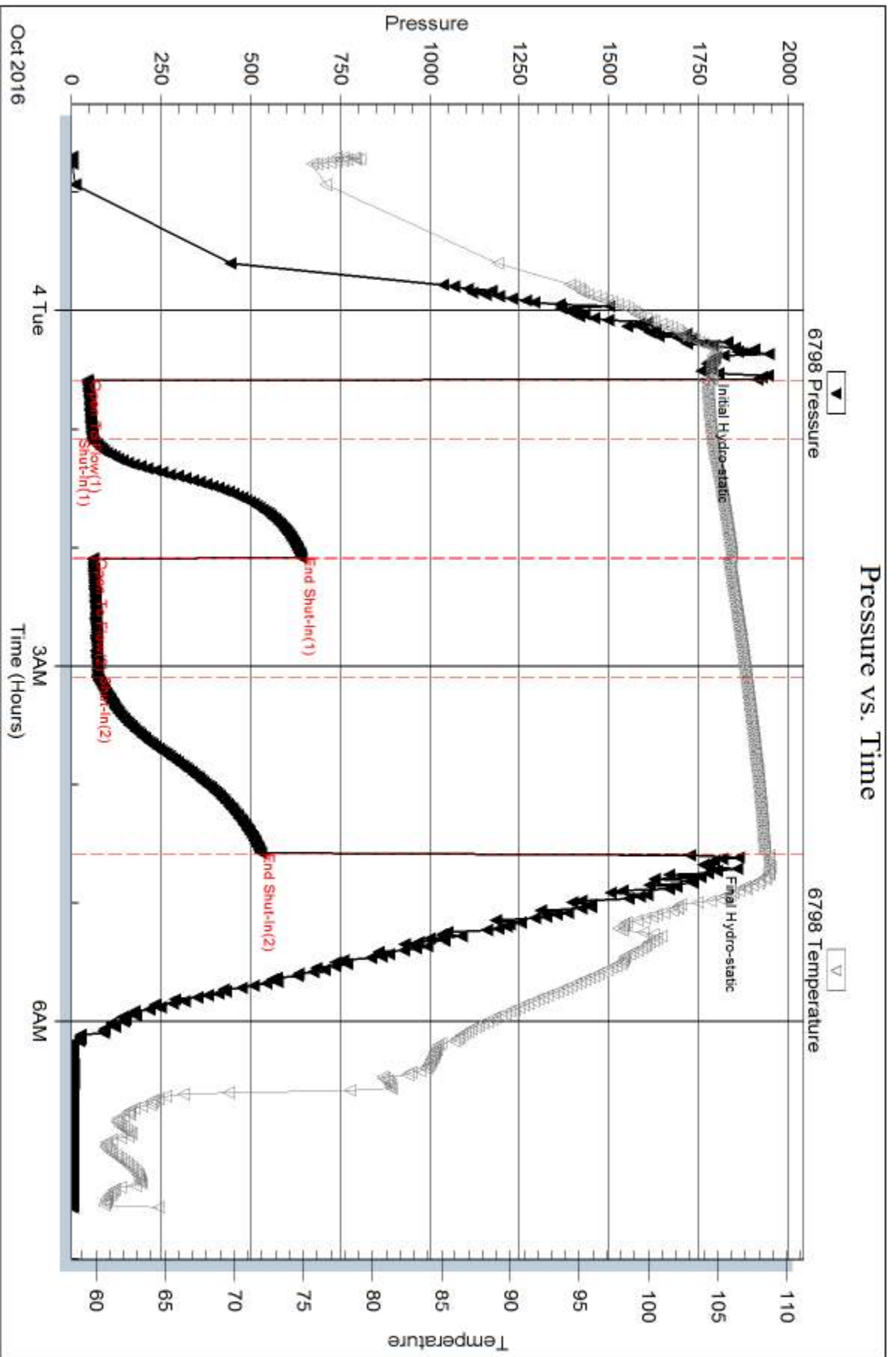
Num Gas Bombs: 0

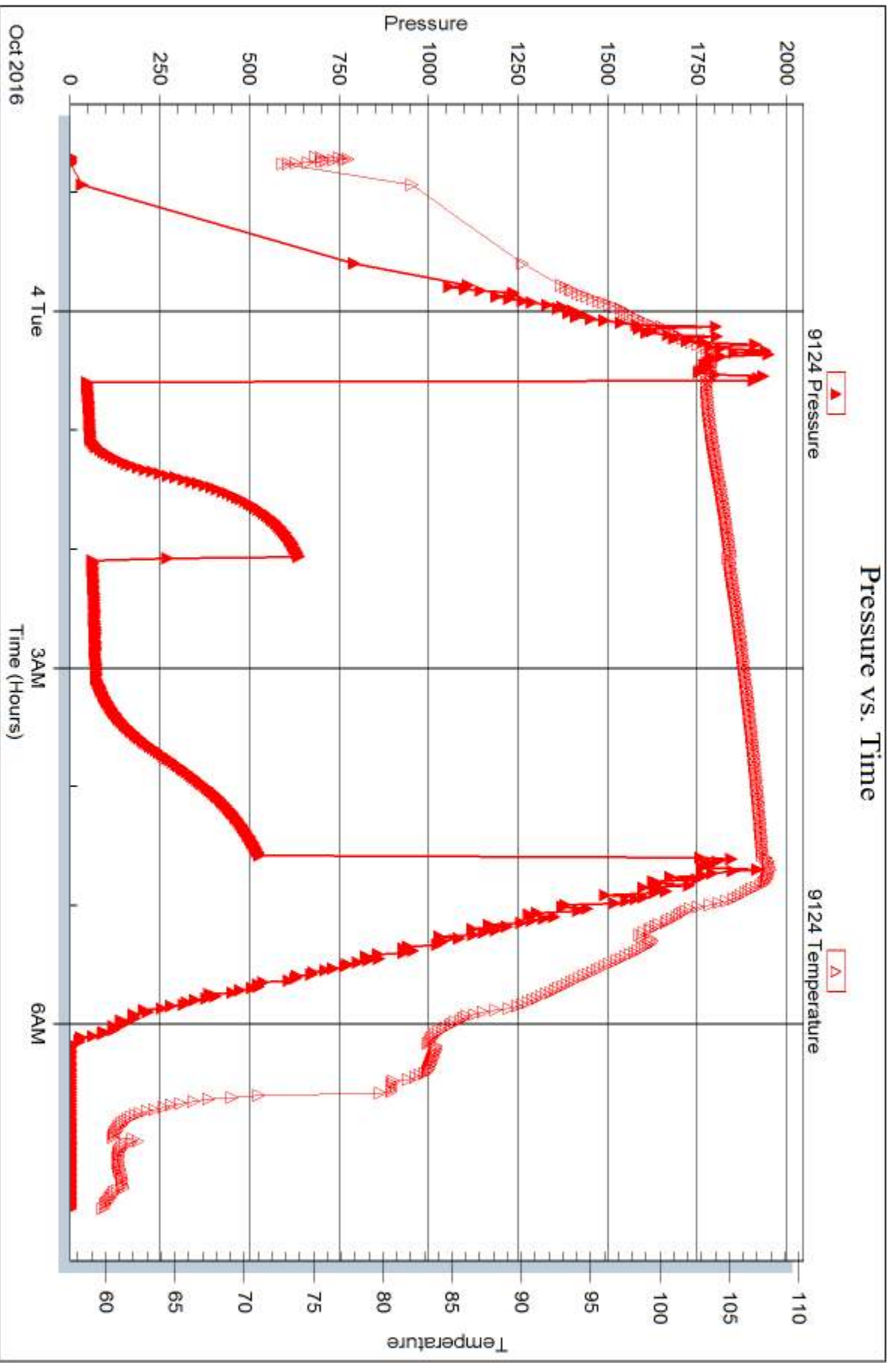
Serial #:

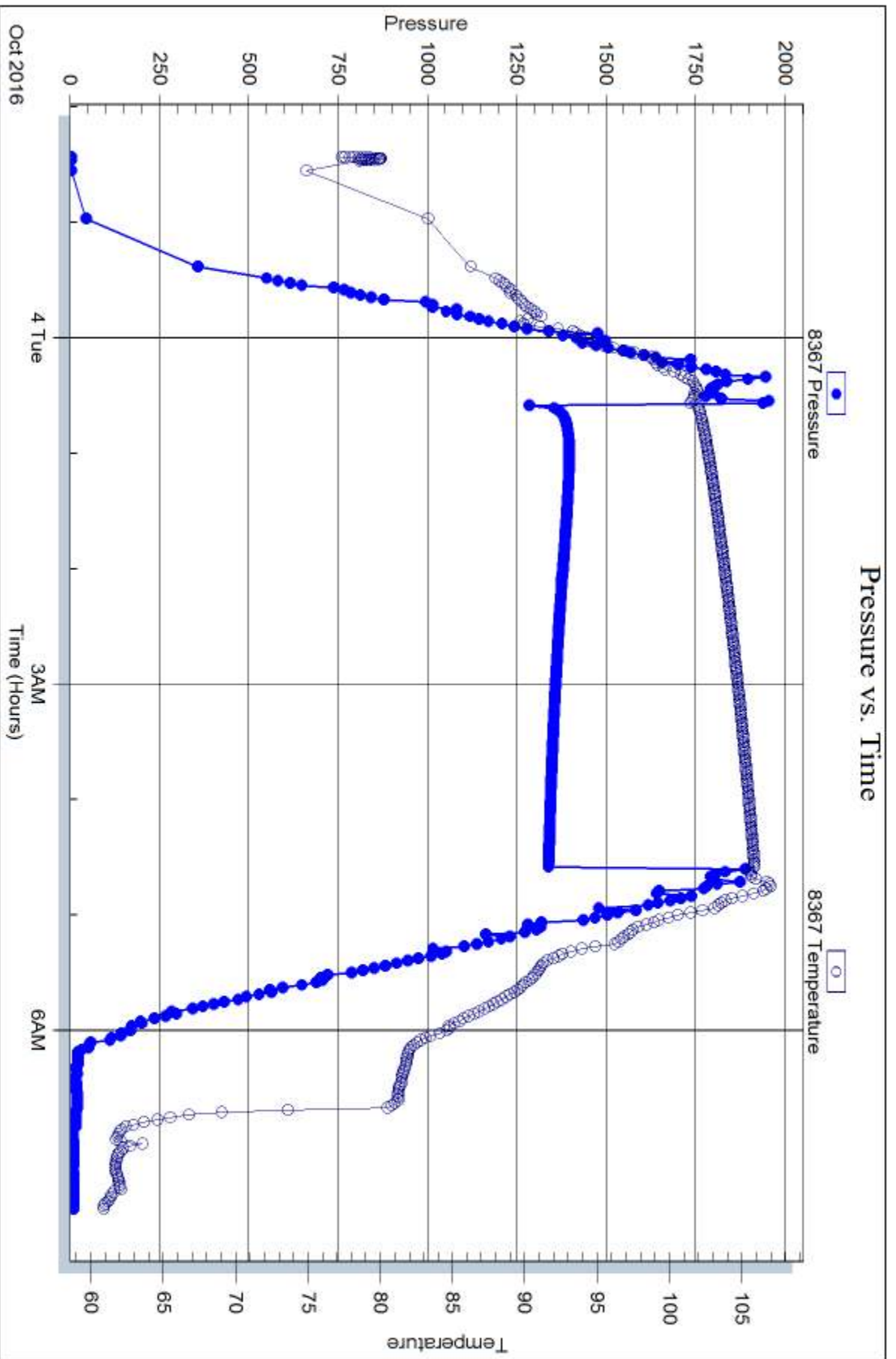
Laboratory Name:

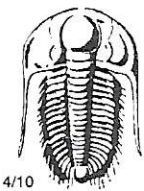
Laboratory Location:

Recovery Comments:









TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55418** 23233

Well Name & No. Rank 2-2 Test No. 1 Date 10/02/16
 Company Martin Drilling Co Elevation 1840 KB 1829 GL
 Address 250 N. Water st e 300 Wichita, KS 67202
 Co. Rep / Geo. Chuck Schmalz Rig Martin 21
 Location: Sec. 2 Twp. 23S Rge. 12W Co. Stafford State KS

Interval Tested 3554 - 3750 Zone Tested Viola
 Anchor Length 196 Drill Pipe Run 3266 Mud Wt. 9.4
 Top Packer Depth 3549 Drill Collars Run 272 Vis 68
 Bottom Packer Depth 3554 Wt. Pipe Run 0 WL 8.4
 Total Depth 3750 Chlorides 10500 ppm System LCM 2

Blow Description IF: weak 1/4 inch Blow, Dead @ 11 minutes

ISI: NO Blow BACK

FF: weak 1/4 inch Blow, Dead @ 15 minutes

FSI: NO Blow BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>Mud</u>				

Rec Total 65 BHT 111 Gravity N/C API RW N/C @ N/C °F Chlorides N/C ppm

(A) Initial Hydrostatic 1882 Test 1050 T-On Location 09:30
 (B) First Initial Flow 41 Jars 250 T-Started 16:58
 (C) First Final Flow 60 Safety Joint 75 T-Open 12:46
 (D) Initial Shut-In 352 Circ Sub _____ T-Pulled 16:45
 (E) Second Initial Flow 68 Hourly Standby _____ T-Out 18:22
 (F) Second Final Flow 80 Mileage (70) 52.50 Comments _____
 (G) Final Shut-In 315 Sampler _____
 (H) Final Hydrostatic 1790 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 60 Day Standby _____ Total 1427.50
 Final Shut-In 90 Accessibility _____ MP/DST Disc't _____

Sub Total 1427.50

Approved By [Signature] Our Representative [Signature]

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. 63084

Well Name & No. Rank #2-2 Test No. 2 Date 10-4
 Company Murfin Drilling Company Elevation 1840 KB 1829 GL
 Address 250 North Water Suite 300 Wichita, KS. 67202
 Co. Rep / Geo. Chuck Schmalz Rig Murfin #21
 Location: Sec. 2 Twp. 23 S Rge. 12 W Co. Stafford State KS

Interval Tested 3595 - 3644 Zone Tested Viola
 Anchor Length 49' Drill Pipe Run 3328 Mud Wt. 9.5
 Top Packer Depth 3590 + 3595 Drill Collars Run 273 Vis 54
 Bottom Packer Depth 3644 Wt. Pipe Run 0 WL 9.2
 Total Depth 3916 Chlorides 10,400 ppm System LCM
 Blow Description IF - weak blow building to 3/4 inch IFP.
FF - No blow throughout FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>oil spotted mud</u>				<u>99</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 70 BHT 109 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1760</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>2100</u>
(B) First Initial Flow <u>45</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2226</u>
(C) First Final Flow <u>59</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0035</u>
(D) Initial Shut-In <u>640</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0435</u>
(E) Second Initial Flow <u>62</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>0700</u>
(F) Second Final Flow <u>72</u>	<input checked="" type="checkbox"/> Mileage <u>RT 200</u> 52.50	Comments _____
(G) Final Shut-In <u>529</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1779</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<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>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Total <u>2027.50</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>2027.50</u>	

Approved By [Signature] Our Representative Jimmy Dickels
 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.



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

2-23-12

FIELD SERVICE TICKET
1718 13863 A

DATE _____ TICKET NO. _____

DATE OF JOB 9/28/2016		DISTRICT Pigt, KS		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 Muehlen Drilling Company, Inc				LEASE P901C				WELL NO. 2		
ADDRESS				COUNTY Stafford		STATE KS				
CITY				STATE		SERVICE CREW D. G. N., S. C. O., M. M. G. B. R. U.				
AUTHORIZED BY				JOB TYPE: C/W/ 8 5/8 SOI/SIC						
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
86779	1						9/27			8:30
73768	3/4						9/27			11:00
							9/28			4:15
							9/28			5:15
							9/28			5:45
						MILES FROM STATION TO WELL 42				

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: [Signature]
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP101	A-Con Bleed Common	SK	200		3,600 00
CP100C	Common Cement	SK	200		3,200 00
CC102	Cellofibre	Lb	100		370 00
CC109	Calcium Chloride	Lb	940		987 00
CF105	TOP Cement Rubber Plug, 8 5/8	EG	1		275 00
CF1773	Centrifuger 8 5/8 X 12 1/4	EG	2		435 00
CC131	S099r	Lb	100		500 00
F100	Unit mileage charge - pickups, sms, lvs, m, ccs	m	45		202 50
F101	Heavy Equipment mileage	m	90		675 00
F113	Proppant and Bulk Delivery, charges, p, m, c, m, c	Ton	846		2,115 00
CF201	Depth Charge, Sol - 1,000	Ypr	1		1,200 00
CF240	Blend and mixing Service Charge	SK	400		560 00
CF504	Plug Cons. per Unit 1,292.00 Charge	Job	1		250 00
S003	Service Supervisor, P, r, s, e 8 hrs on loc.	EG	1		175 00
SUB TOTAL					14,494 50

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$		
MATERIALS	%TAX ON \$		
DISCOUNT		TOTAL	7,537 14

SERVICE REPRESENTATIVE: [Signature] THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO. _____

Customer Mullen Drilling Company, Inc.	Lease No.	Date 9/28/2016
Lease 29nk	Well # 2-2	
Field Order # 13863	Station Pratt, KS	Casing 8 5/8
		Depth 647
Type Job CNW/ 8 5/8 Surface	Formation	County Stafford
		State KS
		Legal Description 2-23-12

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 8 5/8	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
Depth 647	Depth	From	To	Pre Pad	Max			5 Min.
Volume 41	Volume	From	To	Pad	Min			10 Min.
Max Press	Max Press	From	To	Frac	Avg			15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used			Annulus Pressure
Plug Depth 627	Packer Depth	From	To	Flush Freshwater	Gas Volume			Total Load

Customer Representative JUGN	Station Manager Kevin Gordley	Treater Darin Franklin
Service Units 92911 78982 86779 70959 73768		
Driver Names Darin Scott Scott McGrew McGrew		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
9/27 11:00pm					On location / Safety meeting
					8 5/8 casing set 9+ 647'
					200SK A-Con Blend Common + 3%CC
					1/4 # Cellfisque, 12.0ppg, 2.47 veil, 14.49 water
					200SK Common + 2%CC, 1/4 # Cellfisque
					15.6 ppg, 1.20 veil, 5.23 veil
9/28 4:15pm	200		3	6	Pump 3 bbls water
	200		88	6	mix 200 SK Less Cement
	200		25	6	mix 200 SK 79:1 cement
					Shut down
					Release Plug
	200		0	4	Start displacement
5:15pm	200		40	4	Shut in
					Cement did circulate
					Job complete / Darin & crew
					Thank you!!!

MDCI
 Rank #2-2
 1500' FNL 330' FWL
 Sec. 2-23S-12W
 1839' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref
Anhydrite	610	+1229	-6	604	+1235	Flat
B/Anhydrite	626	+1213	Flat	622	+1217	+4
Stotler				2551	-712	+8
Topeka	2795	-956	-1	2784	-945	+10
Heebner	3166	-1327	+2	3156	-1317	+12
Lansing	3303	-1464	+2	3294	-1455	+11
Stark	3521	-1682	+2	3513	-1674	+10
BKC	3573	-1734	+3	3567	-1728	+9
Viola	3606	-1767	-3	3593	-1754	+10
Simpson	3686	-1847	+56	3648	-1809	+94
Arbuckle	3823	-1984	-9	3799	-1960	+15
RTD	3925					
LTD				3916		