



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1225069
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1225069

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

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. <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	JTT 1-24
Doc ID	1225069

All Electric Logs Run

DIL
DUCP
MEL
BHCS



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

JTT #1-24

24-23s-12w Stafford,KS

Start Date: 2014.06.28 @ 21:31:48

End Date: 2014.06.29 @ 05:31:18

Job Ticket #: 51995 DST #: 1

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

Printed: 2014.07.08 @ 10:07:22



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
 250 N. Water Ste. 300
 Wichita, KS 67202-1216
 ATTN: Chuck Schmaltz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 51995 **DST#: 1**

Test Start: 2014.06.28 @ 21:31:48

GENERAL INFORMATION:

Formation: **LKC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:41:03
 Time Test Ended: 05:31:18
 Interval: **3372.00 ft (KB) To 3442.00 ft (KB) (TVD)**
 Total Depth: 3442.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1857.00 ft (KB)
 1846.00 ft (CF)
 KB to GR/CF: 11.00 ft

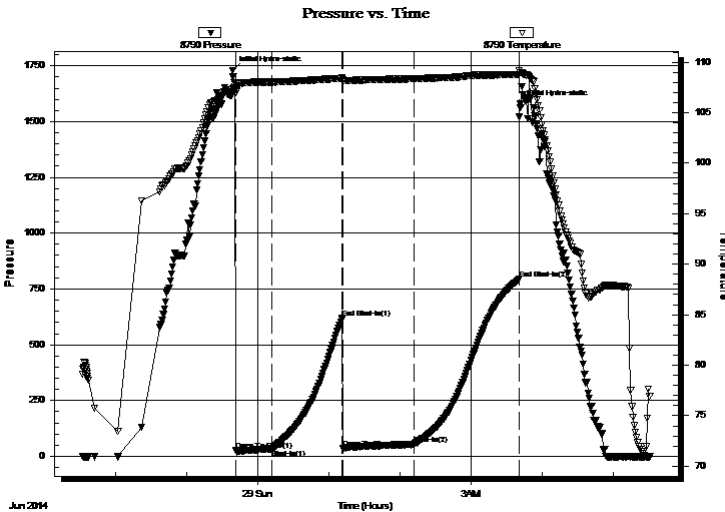
Serial #: 8790

Inside

Press@RunDepth: 52.51 psig @ 3376.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.06.28 End Date: 2014.06.29 Last Calib.: 2014.06.29
 Start Time: 21:31:53 End Time: 05:31:17 Time On Btm: 2014.06.28 @ 23:38:48
 Time Off Btm: 2014.06.29 @ 03:41:33

TEST COMMENT: IF: Strong blow . BOB @ 12 min.
 IS: No blow
 FF: Weak blow . 2" - surf.
 FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1729.21	107.34	Initial Hydro-static
3	27.13	107.05	Open To Flow (1)
33	32.06	108.02	Shut-In(1)
93	619.10	108.41	End Shut-In(1)
93	37.00	108.18	Open To Flow (2)
153	52.51	108.36	Shut-In(2)
242	794.67	108.76	End Shut-In(2)
243	1577.79	108.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	OGCM 2%o, 13%g, 85%m	0.39
0.00	310' GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
250 N. Water Ste. 300
Wichita, KS 67202-1216
ATTN: Chuck Schmaltz

24-23s-12w Stafford,KS
JTT #1-24
Job Ticket: 51995 **DST#: 1**
Test Start: 2014.06.28 @ 21:31:48

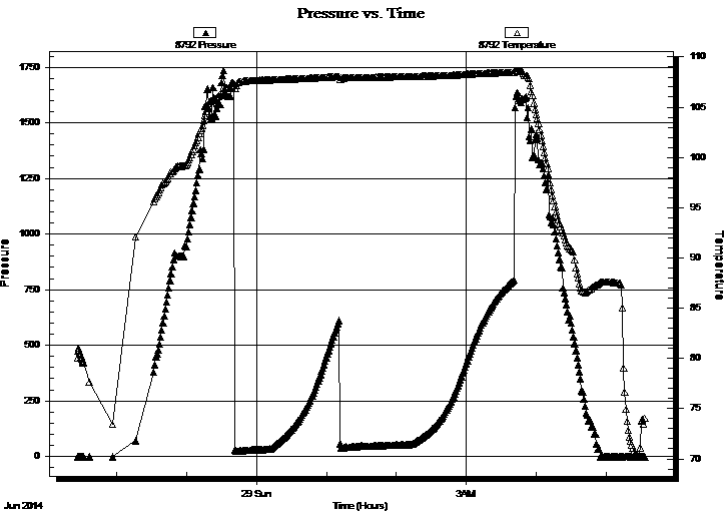
GENERAL INFORMATION:

Formation: **LKC**
Deviated: No Whipstock: ft (KB)
Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 23:41:03
Tester: Ryan Reynolds
Time Test Ended: 05:31:18
Unit No: 68
Interval: 3372.00 ft (KB) To 3442.00 ft (KB) (TVD)
Reference Elevations: 1857.00 ft (KB)
Total Depth: 3442.00 ft (KB) (TVD) 1846.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 8792 Outside

Press@RunDepth: psig @ 3376.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.06.28 End Date: 2014.06.29 Last Calib.: 2014.06.29
Start Time: 21:26:36 End Time: 05:33:30 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Strong blow . BOB @ 12 min.
IS: No blow
FF: Weak blow . 2" - surf.
FS: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
80.00	OGCM 2%o, 13%g, 85% m	0.39
0.00	310' GIP	0.00

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m³/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51995

DST#: 1

ATTN: Chuck Schmaltz

Test Start: 2014.06.28 @ 21:31:48

Tool Information

Drill Pipe:	Length: 3081.00 ft	Diameter: 3.80 inches	Volume: 43.22 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 277.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 44.58 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 67000.00 lb
Depth to Top Packer:	3372.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	97.00 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			3346.00	
Shut In Tool	5.00			3351.00	
Hydraulic tool	5.00			3356.00	
Jars	5.00			3361.00	
Safety Joint	2.00			3363.00	
Packer	5.00			3368.00	27.00 Bottom Of Top Packer
Packer	4.00			3372.00	
Stubb	1.00			3373.00	
Perforations	2.00			3375.00	
Change Over Sub	1.00			3376.00	
Recorder	0.00	8790	Inside	3376.00	
Recorder	0.00	8792	Outside	3376.00	
Drill Pipe	32.00			3408.00	
Change Over Sub	1.00			3409.00	
Perforations	30.00			3439.00	
Bullnose	3.00			3442.00	70.00 Bottom Packers & Anchor
Total Tool Length:	97.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51995

DST#: 1

ATTN: Chuck Schmaltz

Test Start: 2014.06.28 @ 21:31:48

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:

4800 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	OGCM 2%o, 13%g, 85%m	0.393
0.00	310' GIP	0.000

Total Length: 80.00 ft Total Volume: 0.393 bbl

Num Fluid Samples: 0

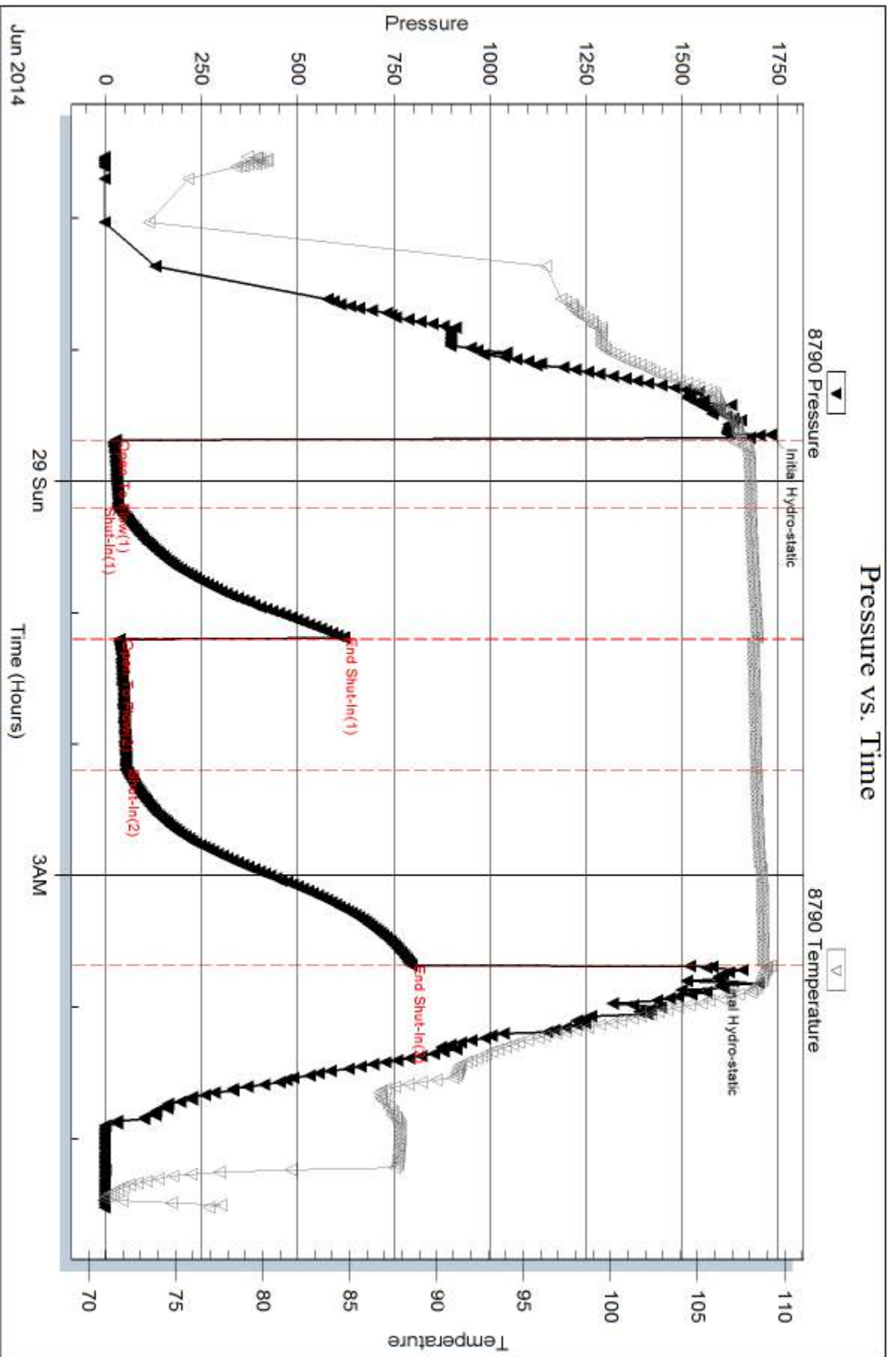
Num Gas Bombs: 0

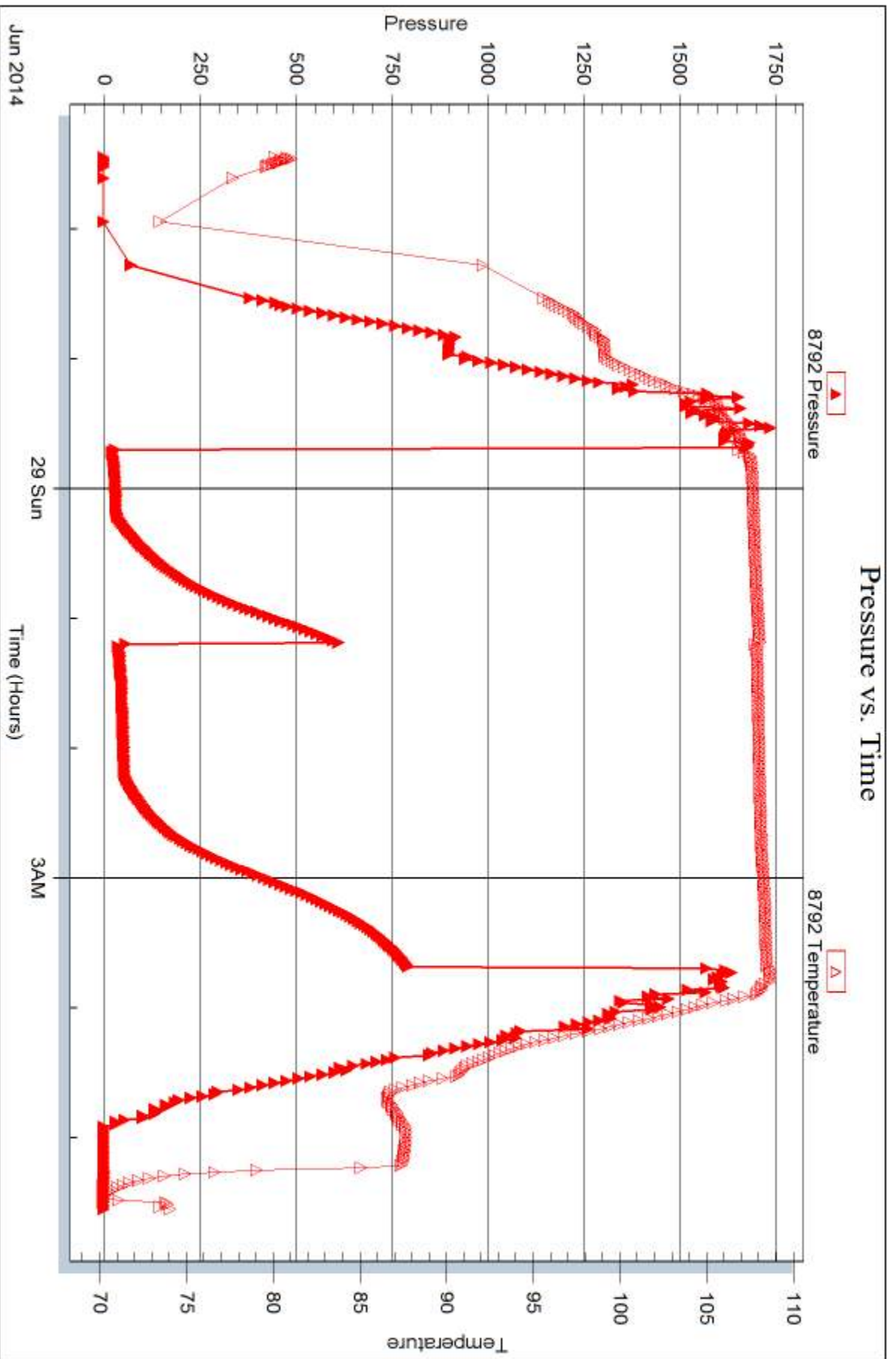
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

JTT #1-24

24-23s-12w Stafford,KS

Start Date: 2014.06.29 @ 15:30:36

End Date: 2014.06.29 @ 23:02:51

Job Ticket #: 51996 DST #: 2

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

Printed: 2014.07.08 @ 10:06:55



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
250 N. Water Ste. 300
Wichita, KS 67202-1216
ATTN: Chuck Schmalz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 51996

DST#: 2

Test Start: 2014.06.29 @ 15:30:36

GENERAL INFORMATION:

Formation: **LKC H- I**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 17:04:21
 Tester: Ryan Reynolds
 Time Test Ended: 23:02:51
 Unit No: 68
 Interval: **3482.00 ft (KB) To 3524.00 ft (KB) (TVD)**
 Reference Elevations: 1857.00 ft (KB)
 Total Depth: 3524.00 ft (KB) (TVD)
 1846.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 11.00 ft

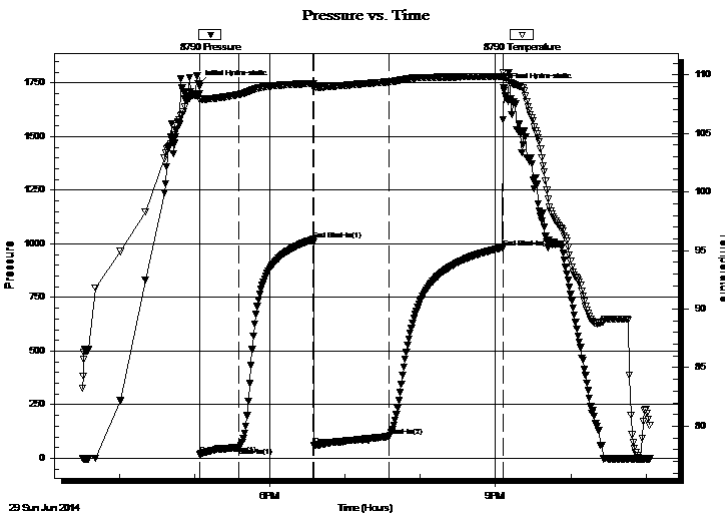
Serial #: 8790

Inside

Press@RunDepth: 101.60 psig @ 3486.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.06.29 End Date: 2014.06.29 Last Calib.: 2014.06.29
 Start Time: 15:30:41 End Time: 23:02:50 Time On Btm: 2014.06.29 @ 17:02:51
 Time Off Btm: 2014.06.29 @ 21:06:36

TEST COMMENT: IF: Weak blow . surf. - 3"
 IS: No blow
 FF: Weak blow . surf. - 2"
 FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1744.29	108.34	Initial Hydro-static
2	18.22	107.89	Open To Flow (1)
33	52.22	108.33	Shut-In(1)
92	1020.66	109.27	End Shut-In(1)
93	60.39	108.83	Open To Flow (2)
153	101.60	109.40	Shut-In(2)
243	982.88	109.87	End Shut-In(2)
244	1726.78	109.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW 5% <i>m</i> , 95% <i>w</i>	0.59
60.00	SLI OWCM 1% <i>o</i> , 19% <i>w</i> , 80% <i>m</i>	0.30
0.00	60' GIP	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
250 N. Water Ste. 300
Wichita, KS 67202-1216
ATTN: Chuck Schmalz

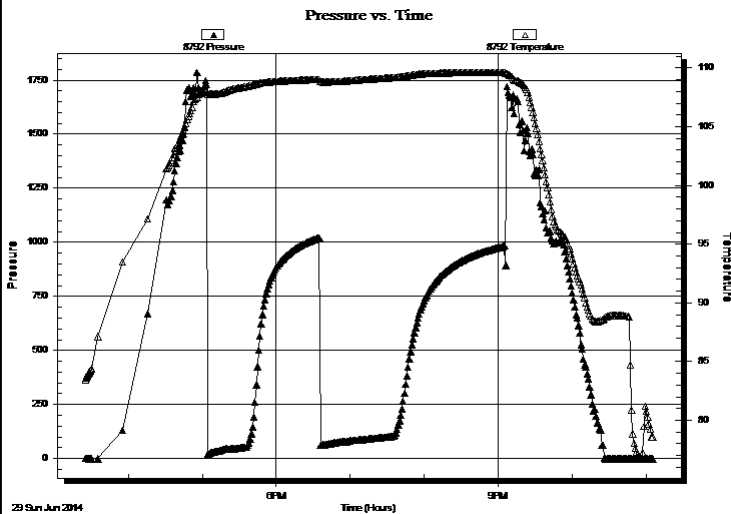
24-23s-12w Stafford,KS
JTT #1-24
Job Ticket: 51996 **DST#: 2**
Test Start: 2014.06.29 @ 15:30:36

GENERAL INFORMATION:

Formation: **LKC H- I**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:04:21
Time Test Ended: 23:02:51
Interval: **3482.00 ft (KB) To 3524.00 ft (KB) (TVD)**
Total Depth: 3524.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Ryan Reynolds
Unit No: 68
Reference Elevations: 1857.00 ft (KB)
1846.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8792 Outside
Press@RunDepth: psig @ 3486.00 ft (KB)
Start Date: 2014.06.29 End Date: 2014.06.29 Capacity: 8000.00 psig
Start Time: 15:25:36 End Time: 23:05:15 Last Calib.: 2014.06.29
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak blow . surf. - 3"
IS: No blow
FF: Weak blow . surf. - 2"
FS: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW 5% <i>m</i> , 95% <i>w</i>	0.59
60.00	SLI OWCM 1% <i>o</i> , 19% <i>w</i> , 80% <i>m</i>	0.30
0.00	60' GIP	0.00

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m³/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51996

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2014.06.29 @ 15:30:36

Tool Information

Drill Pipe:	Length: 3205.00 ft	Diameter: 3.80 inches	Volume: 44.96 bbl	Tool Weight:	2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 277.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose:	73000.00 lb
			<u>Total Volume: 46.32 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	3482.00 ft			Final	68000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	42.00 ft				
Tool Length:	69.00 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			3456.00	
Shut In Tool	5.00			3461.00	
Hydraulic tool	5.00			3466.00	
Jars	5.00			3471.00	
Safety Joint	2.00			3473.00	
Packer	5.00			3478.00	27.00 Bottom Of Top Packer
Packer	4.00			3482.00	
Stubb	1.00			3483.00	
Perforations	2.00			3485.00	
Change Over Sub	1.00			3486.00	
Recorder	0.00	8790	Inside	3486.00	
Recorder	0.00	8792	Outside	3486.00	
Drill Pipe	32.00			3518.00	
Change Over Sub	1.00			3519.00	
Perforations	2.00			3521.00	
Bullnose	3.00			3524.00	42.00 Bottom Packers & Anchor
Total Tool Length:	69.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51996

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2014.06.29 @ 15:30:36

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:

78000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5800.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	MCW 5% <i>m</i> , 95% <i>w</i>	0.590
60.00	SLI OWCM 1% <i>o</i> , 19% <i>w</i> , 80% <i>m</i>	0.295
0.00	60' GIP	0.000

Total Length: 180.00 ft

Total Volume: 0.885 bbl

Num Fluid Samples: 0

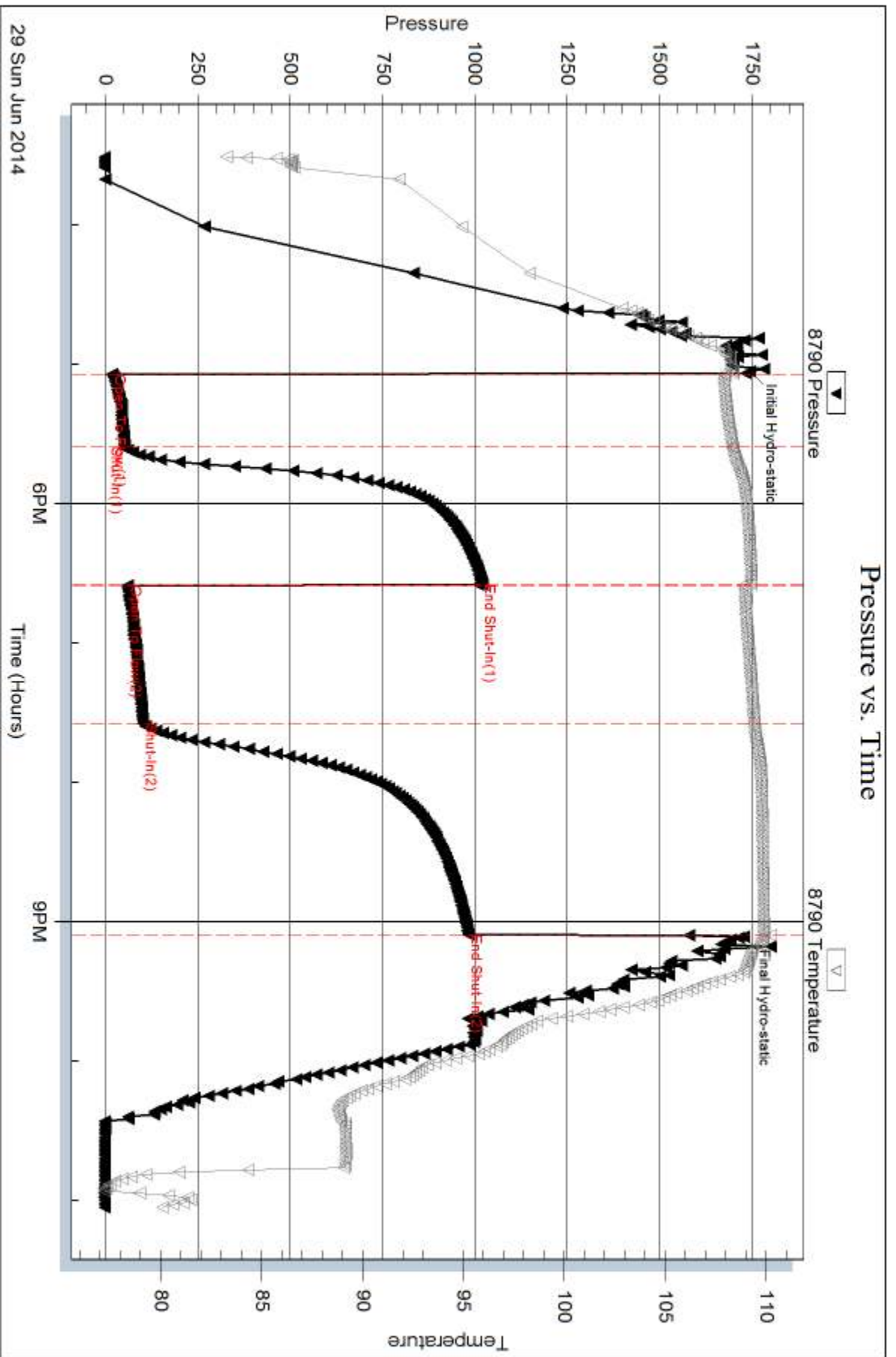
Num Gas Bombs: 0

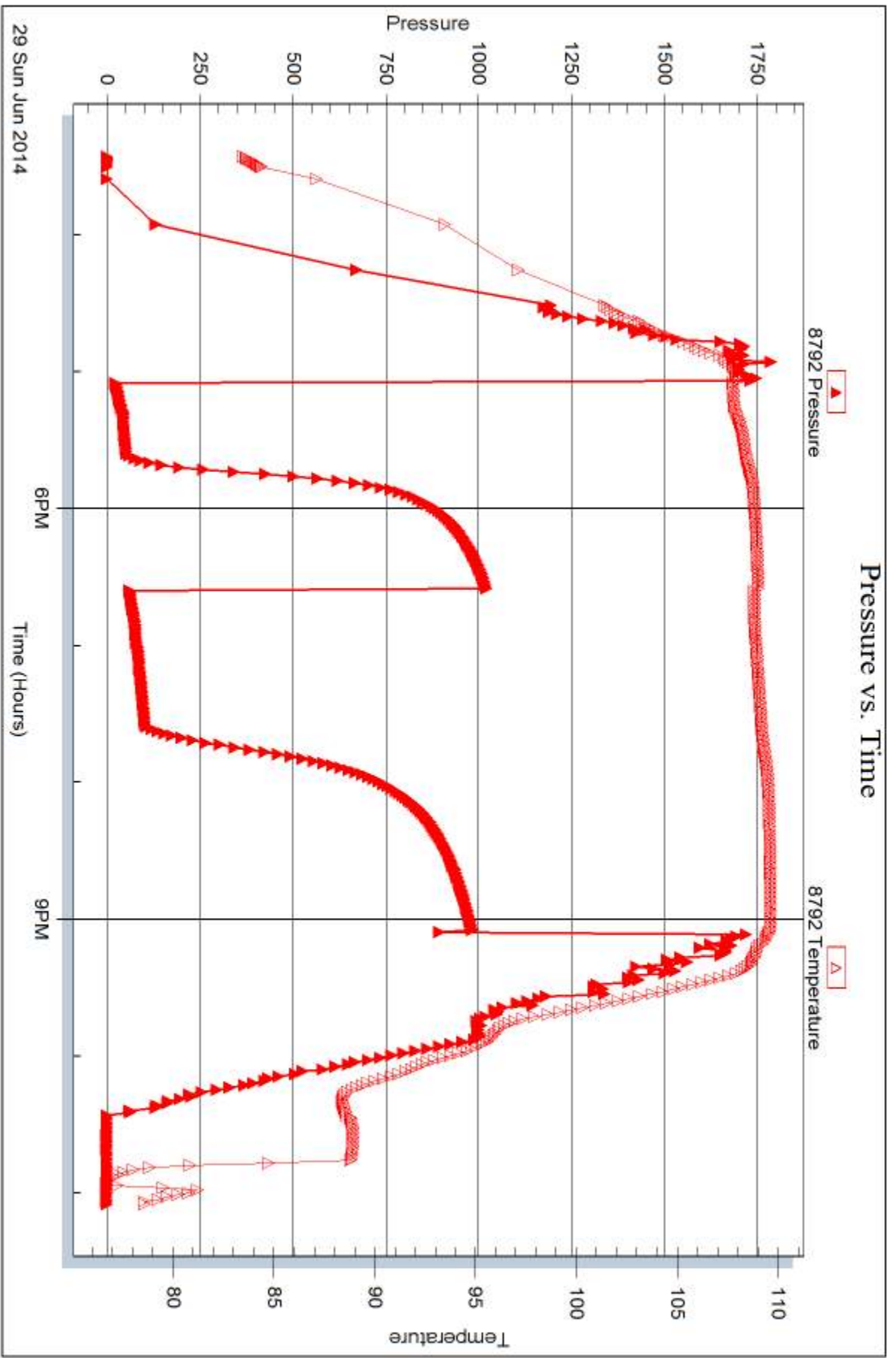
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

JTT #1-24

24-23s-12w Stafford,KS

Start Date: 2014.06.30 @ 10:12:01

End Date: 2014.06.30 @ 18:26:46

Job Ticket #: 51997 DST #: 3

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

Printed: 2014.07.08 @ 10:06:35



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
 250 N. Water Ste. 300
 Wichita, KS 67202-1216
 ATTN: Chuck Schmalz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 51997

DST#: 3

Test Start: 2014.06.30 @ 10:12:01

GENERAL INFORMATION:

Formation: **LKC. J-L**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:20:31
 Time Test Ended: 18:26:46
 Interval: **3525.00 ft (KB) To 3610.00 ft (KB) (TVD)**
 Total Depth: 3610.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1857.00 ft (KB)
 1846.00 ft (CF)
 KB to GR/CF: 11.00 ft

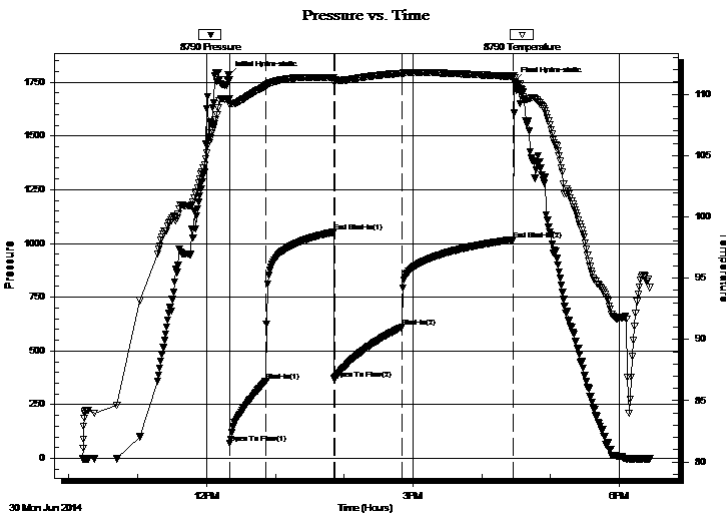
Serial #: 8790

Inside

Press@RunDepth: 610.98 psig @ 3532.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.06.30 End Date: 2014.06.30 Last Calib.: 2014.06.30
 Start Time: 10:12:06 End Time: 18:26:45 Time On Btm: 2014.06.30 @ 12:19:01
 Time Off Btm: 2014.06.30 @ 16:28:31

TEST COMMENT: IF: Strong blow . BOB @ 3 1/2 min.
 IS: No blow
 FF: Good blow . 1 - 9".
 FS: No blow .

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1782.25	109.59	Initial Hydro-static
2	70.78	109.15	Open To Flow (1)
33	360.86	110.66	Shut-In(1)
92	1052.68	111.35	End Shut-In(1)
93	371.25	111.17	Open To Flow (2)
152	610.98	111.68	Shut-In(2)
249	1018.23	111.46	End Shut-In(2)
250	1751.45	111.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1245.00	GMCW 2%g, 3%m, 95%w	14.94
0.00	45' GIP	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
250 N. Water Ste. 300
Wichita, KS 67202-1216
ATTN: Chuck Schmalz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 51997

DST#: 3

Test Start: 2014.06.30 @ 10:12:01

GENERAL INFORMATION:

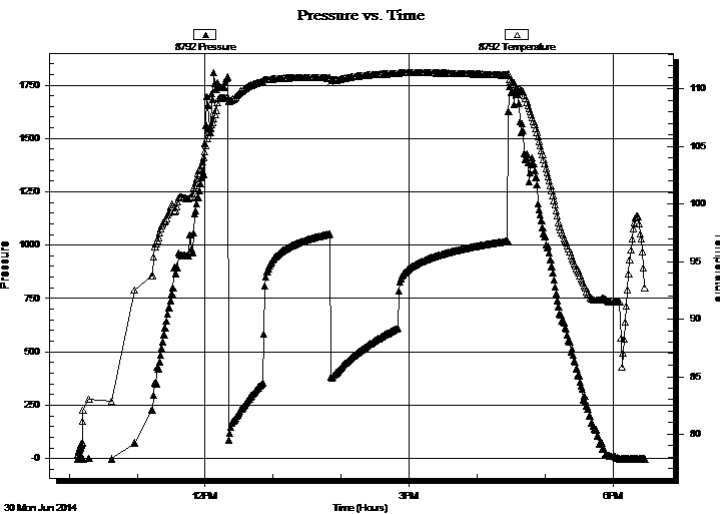
Formation: **LKC. J-L**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:20:31
 Time Test Ended: 18:26:46
 Interval: **3525.00 ft (KB) To 3610.00 ft (KB) (TVD)**
 Total Depth: 3610.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1857.00 ft (KB)
 1846.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8792

Outside

Press@RunDepth: psig @ 3532.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.06.30 End Date: 2014.06.30 Last Calib.: 2014.06.30
 Start Time: 10:07:33 End Time: 18:27:57 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong blow . BOB @ 3 1/2 min.
 IS: No blow
 FF: Good blow . 1 - 9".
 FS: No blow .



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1245.00	GMCW 2%g, 3%m, 95%w	14.94
0.00	45' GIP	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51997

DST#: 3

ATTN: Chuck Schmaltz

Test Start: 2014.06.30 @ 10:12:01

Tool Information

Drill Pipe:	Length: 3236.00 ft	Diameter: 3.80 inches	Volume: 45.39 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 277.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 46.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3525.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	112.00 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			3499.00	
Shut In Tool	5.00			3504.00	
Hydraulic tool	5.00			3509.00	
Jars	5.00			3514.00	
Safety Joint	2.00			3516.00	
Packer	5.00			3521.00	27.00 Bottom Of Top Packer
Packer	4.00			3525.00	
Stubb	1.00			3526.00	
Perforations	5.00			3531.00	
Change Over Sub	1.00			3532.00	
Recorder	0.00	8790	Inside	3532.00	
Recorder	0.00	8792	Outside	3532.00	
Drill Pipe	63.00			3595.00	
Change Over Sub	1.00			3596.00	
Perforations	11.00			3607.00	
Bullnose	3.00			3610.00	85.00 Bottom Packers & Anchor
Total Tool Length:	112.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51997

DST#: 3

ATTN: Chuck Schmaltz

Test Start: 2014.06.30 @ 10:12:01

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 56.00 sec/qt
Water Loss: 8.78 in³
Resistivity: ohm.m
Salinity: 5200.00 ppm
Filter Cake: 0.02 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 76000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1245.00	GMCW 2%g, 3%m, 95%w	14.941
0.00	45' GIP	0.000

Total Length: 1245.00 ft Total Volume: 14.941 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

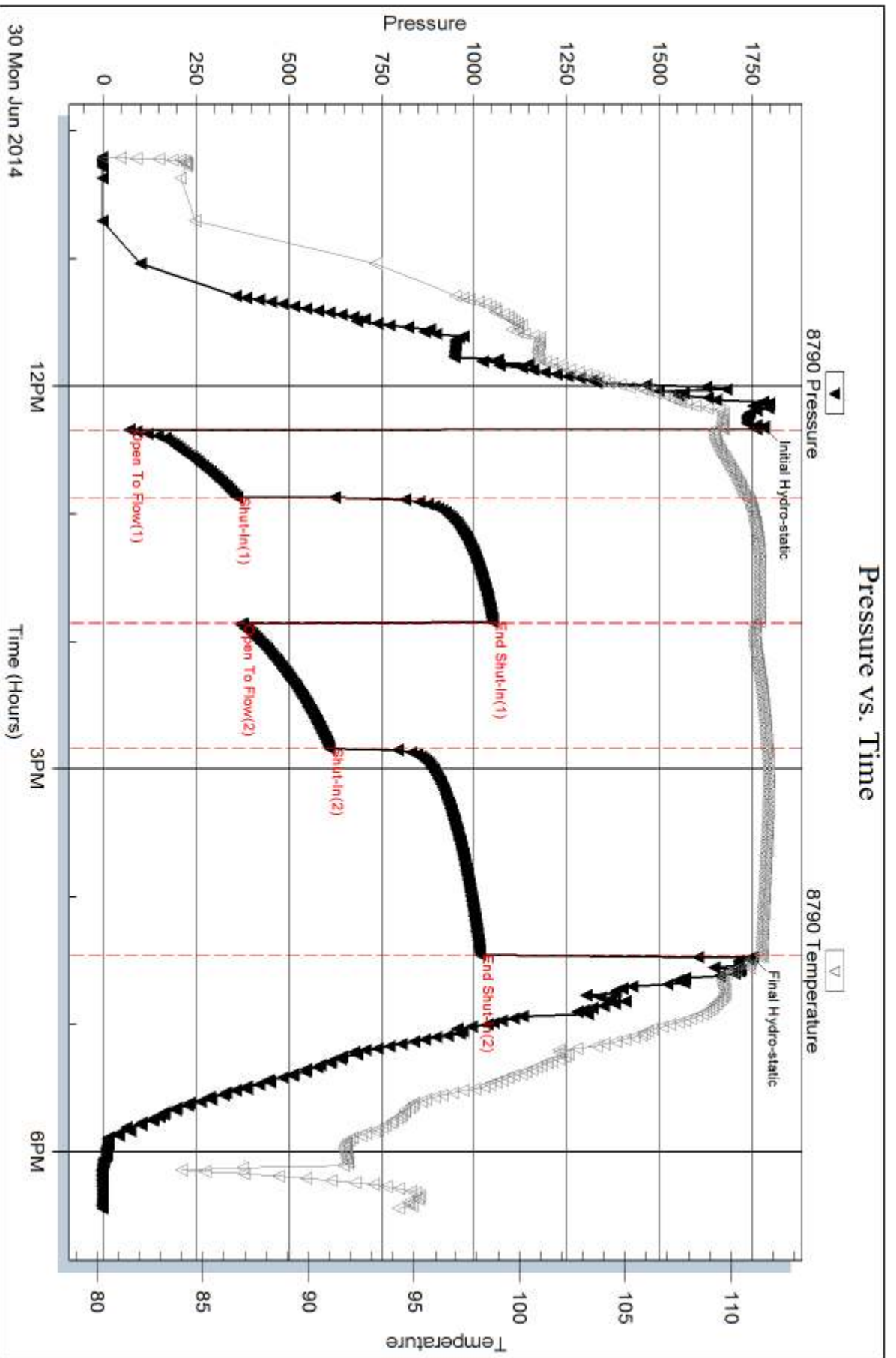
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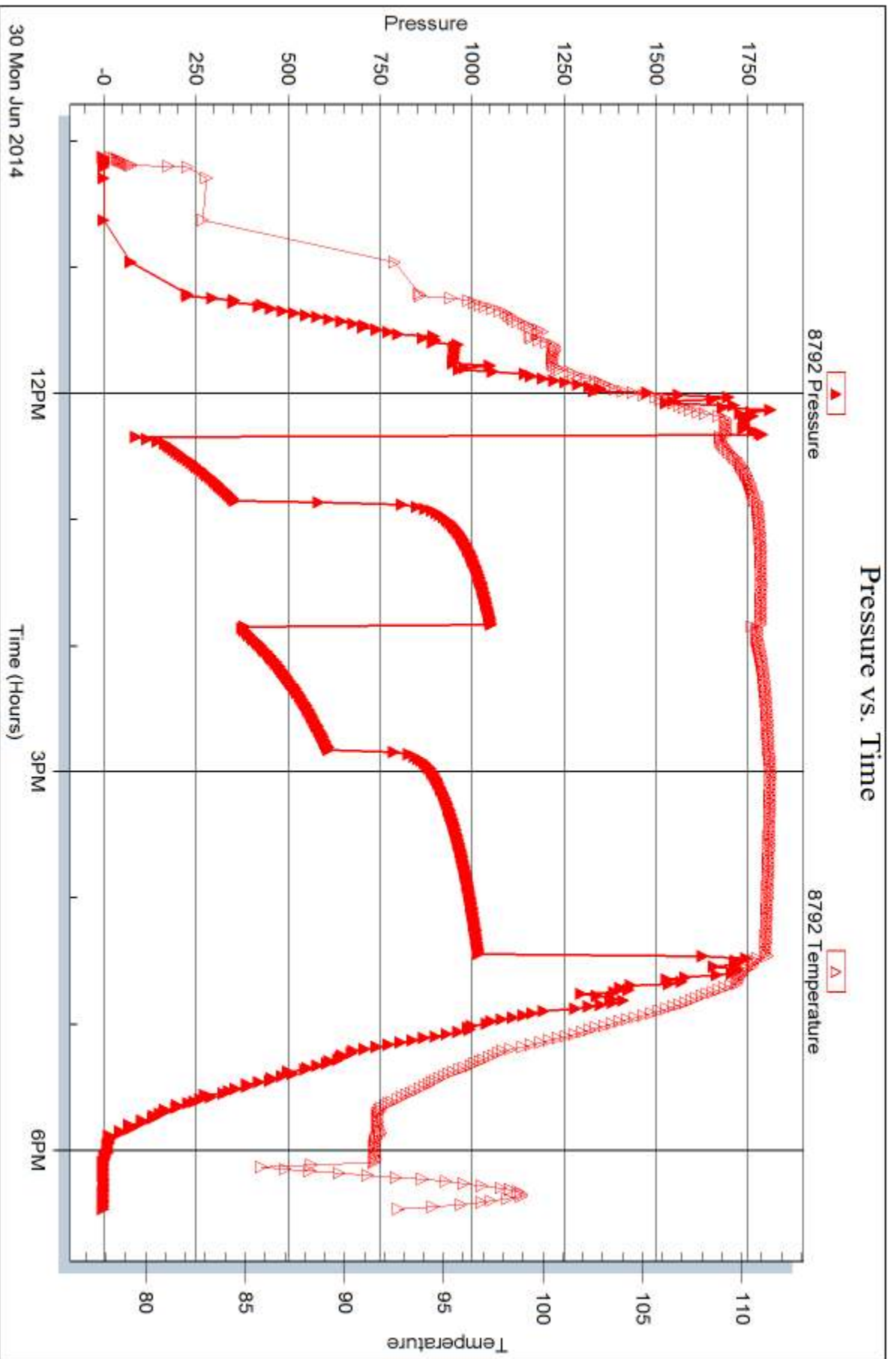
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

JTT #1-24

24-23s-12w Stafford,KS

Start Date: 2014.07.01 @ 01:58:00

End Date: 2014.07.01 @ 10:02:00

Job Ticket #: 51998 DST #: 4

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

Printed: 2014.07.08 @ 10:06:13

Murfin Drlg. Co., Inc. 24-23s-12w Stafford,KS JTT #1-24 DST # 4 Viola 2014.07.01



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
 250 N. Water Ste. 300
 Wichita, KS 67202-1216
 ATTN: Chuck Schmalz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 51998

DST#: 4

Test Start: 2014.07.01 @ 01:58:00

GENERAL INFORMATION:

Formation: **Viola**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:51:30
 Time Test Ended: 10:02:00
 Interval: **3605.00 ft (KB) To 3690.00 ft (KB) (TVD)**
 Total Depth: 3690.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1857.00 ft (KB)
 1846.00 ft (CF)
 KB to GR/CF: 11.00 ft

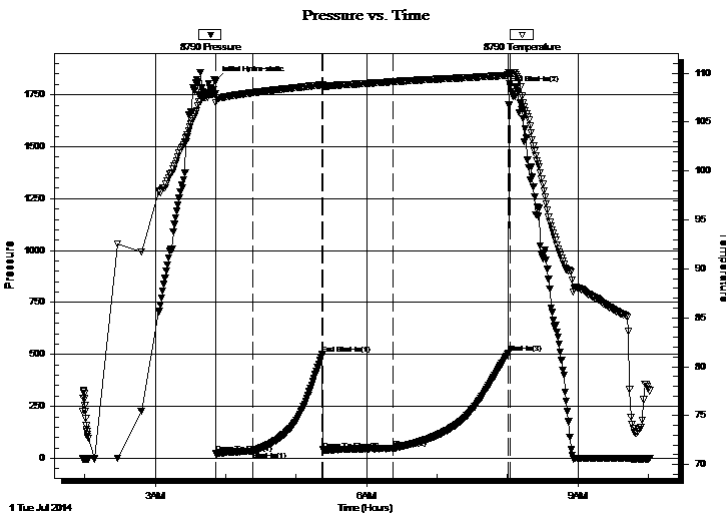
Serial #: 8790

Inside

Press@RunDepth: 47.91 psig @ 3612.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.01 End Date: 2014.07.01 Last Calib.: 2014.07.01
 Start Time: 01:58:05 End Time: 10:01:59 Time On Btm: 2014.07.01 @ 03:51:15
 Time Off Btm:

TEST COMMENT: IF: Weak blow . surf. - 1"
 IS: No blow
 FF: Weak blow . surf. - 2"
 FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1816.48	107.90	Initial Hydro-static
1	21.72	106.96	Open To Flow (1)
32	34.98	108.00	Shut-In(1)
91	501.36	108.81	End Shut-In(1)
92	40.72	108.65	Open To Flow (2)
152	47.91	109.13	Shut-In(2)
250	505.45	109.80	Shut-In(3)
251	1802.14	110.05	End Shut-In(2)

Recovery

Length (ft)	Description	Volume (bbl)
65.00	OCM 5%, 95% m	0.32

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
250 N. Water Ste. 300
Wichita, KS 67202-1216
ATTN: Chuck Schmalz

24-23s-12w Stafford,KS
JTT #1-24
Job Ticket: 51998 **DST#: 4**
Test Start: 2014.07.01 @ 01:58:00

GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 03:51:30 Tester: Ryan Reynolds
Time Test Ended: 10:02:00 Unit No: 68

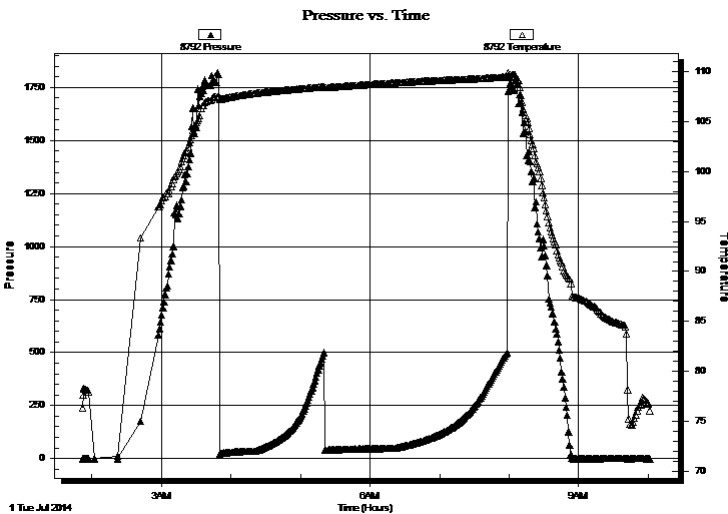
Interval: 3605.00 ft (KB) To 3690.00 ft (KB) (TVD) Reference Elevations: 1857.00 ft (KB)
Total Depth: 3690.00 ft (KB) (TVD) 1846.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 8792 Outside

Press@RunDepth: psig @ 3612.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.07.01 End Date: 2014.07.01 Last Calib.: 2014.07.01
Start Time: 01:52:06 End Time: 10:01:45 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak blow . surf. - 1"
IS: No blow
FF: Weak blow . surf. - 2"
FS: No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
65.00	OCM 5%, 95% m	0.32

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51998

DST#: 4

ATTN: Chuck Schmaltz

Test Start: 2014.07.01 @ 01:58:00

Tool Information

Drill Pipe:	Length: 3330.00 ft	Diameter: 3.80 inches	Volume: 46.71 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 277.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 48.07 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	3605.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	112.00 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			3579.00	
Shut In Tool	5.00			3584.00	
Hydraulic tool	5.00			3589.00	
Jars	5.00			3594.00	
Safety Joint	2.00			3596.00	
Packer	5.00			3601.00	27.00 Bottom Of Top Packer
Packer	4.00			3605.00	
Stubb	1.00			3606.00	
Perforations	5.00			3611.00	
Change Over Sub	1.00			3612.00	
Recorder	0.00	8790	Inside	3612.00	
Recorder	0.00	8792	Outside	3612.00	
Drill Pipe	64.00			3676.00	
Change Over Sub	1.00			3677.00	
Perforations	10.00			3687.00	
Bullnose	3.00			3690.00	85.00 Bottom Packers & Anchor
Total Tool Length:	112.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51998

DST#: 4

ATTN: Chuck Schmaltz

Test Start: 2014.07.01 @ 01:58:00

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:

6700 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	OCM 5%o, 95%m	0.320

Total Length: 65.00 ft Total Volume: 0.320 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

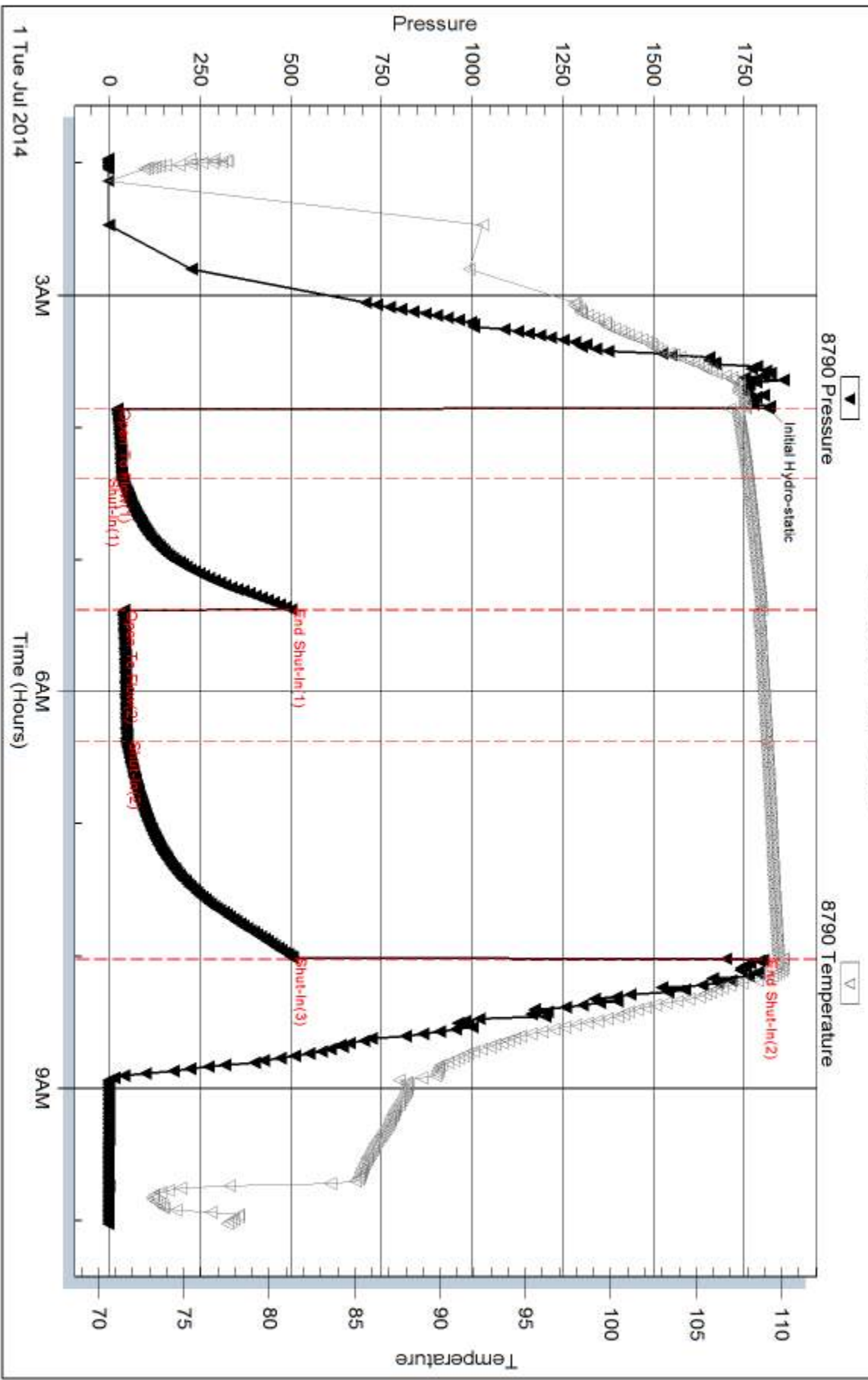
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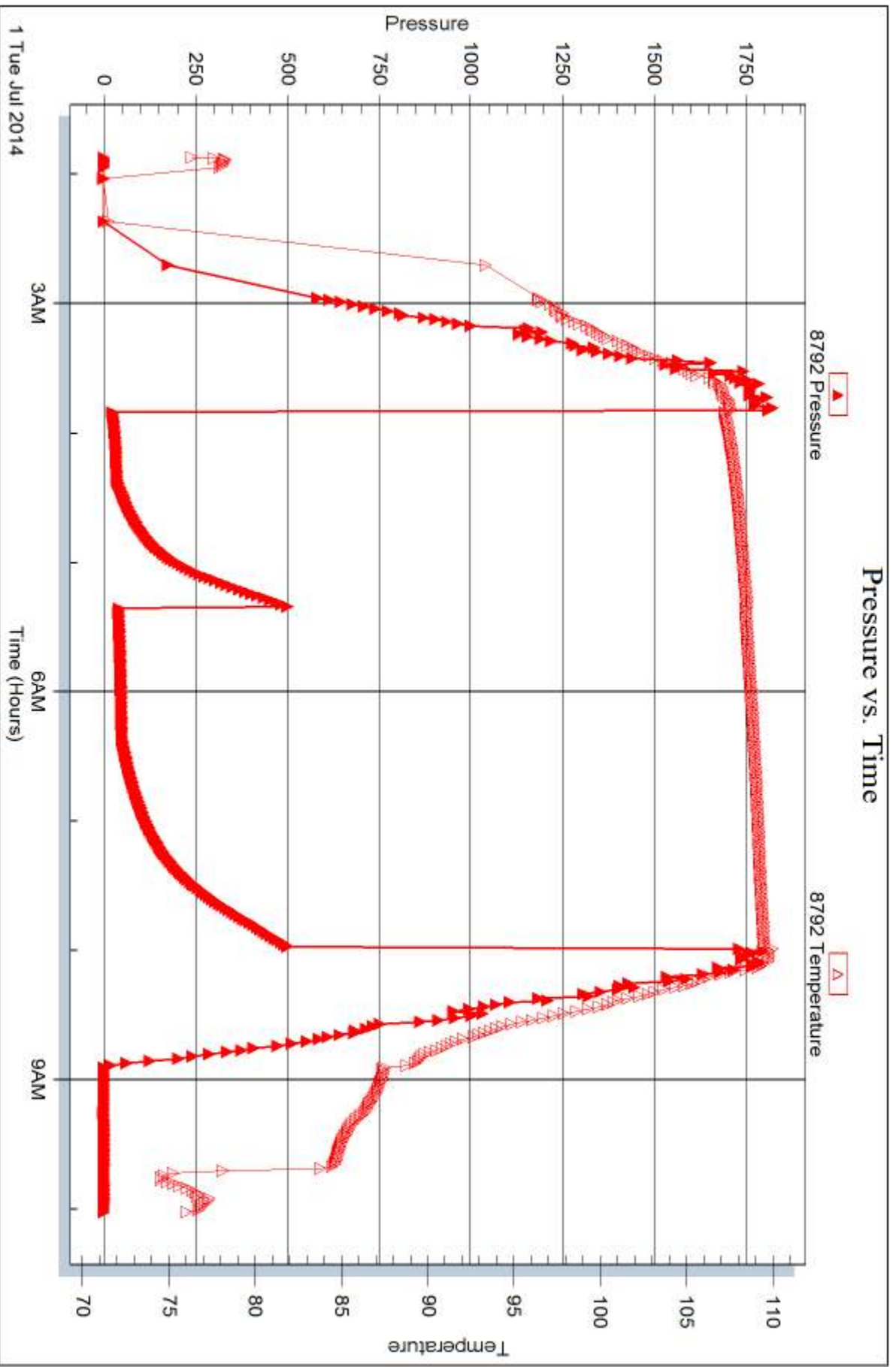
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

JTT #1-24

24-23s-12w Stafford,KS

Start Date: 2014.07.01 @ 17:07:47

End Date: 2014.07.02 @ 02:50:47

Job Ticket #: 51999 DST #: 5

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

Printed: 2014.07.08 @ 10:05:51

Murfin Drlg. Co., Inc. 24-23s-12w Stafford,KS JTT #1-24 DST # 5 Arbuckle 2014.07.01



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
250 N. Water Ste. 300
Wichita, KS 67202-1216
ATTN: Chuck Schmalz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 51999

DST#: 5

Test Start: 2014.07.01 @ 17:07:47

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 19:01:47
 Tester: Ryan Reynolds
 Time Test Ended: 02:50:47
 Unit No: 68
 Interval: **3680.00 ft (KB) To 3750.00 ft (KB) (TVD)**
 Reference Elevations: 1857.00 ft (KB)
 Total Depth: 3750.00 ft (KB) (TVD)
 1846.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 11.00 ft

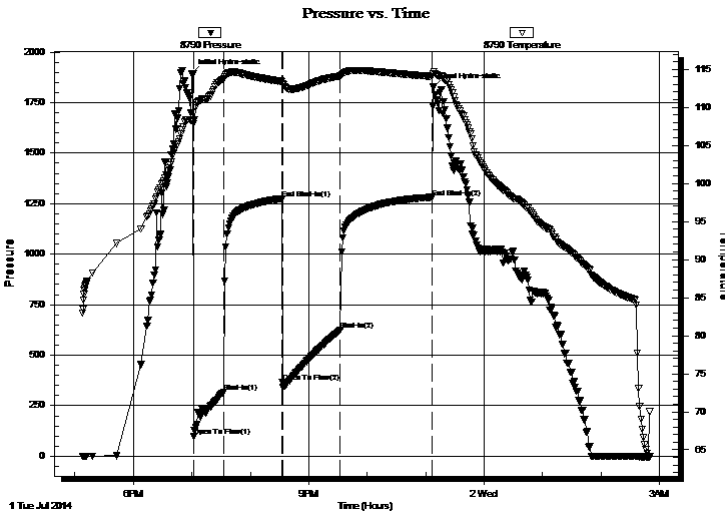
Serial #: 8790

Inside

Press@RunDepth: 624.98 psig @ 3687.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.01 End Date: 2014.07.02 Last Calib.: 2014.07.02
 Start Time: 17:07:52 End Time: 02:50:47 Time On Btm: 2014.07.01 @ 19:00:02
 Time Off Btm: 2014.07.01 @ 23:07:47

TEST COMMENT: IF: Strong blow . BOB @ 4min.
 IS: Weak surf. blow
 FF: Strong blow . BOB @ 4min.
 FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1895.05	108.28	Initial Hydro-static
2	96.83	107.82	Open To Flow (1)
33	317.64	113.75	Shut-In(1)
93	1274.90	113.42	End Shut-In(1)
93	365.62	113.08	Open To Flow (2)
153	624.98	114.11	Shut-In(2)
247	1281.70	114.04	End Shut-In(2)
248	1826.23	114.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1660.00	Clean gassy Oil 10%g, 90%o	20.76
0.00	(occas. spots of mud in rec.)	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
250 N. Water Ste. 300
Wichita, KS 67202-1216
ATTN: Chuck Schmaltz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 51999

DST#: 5

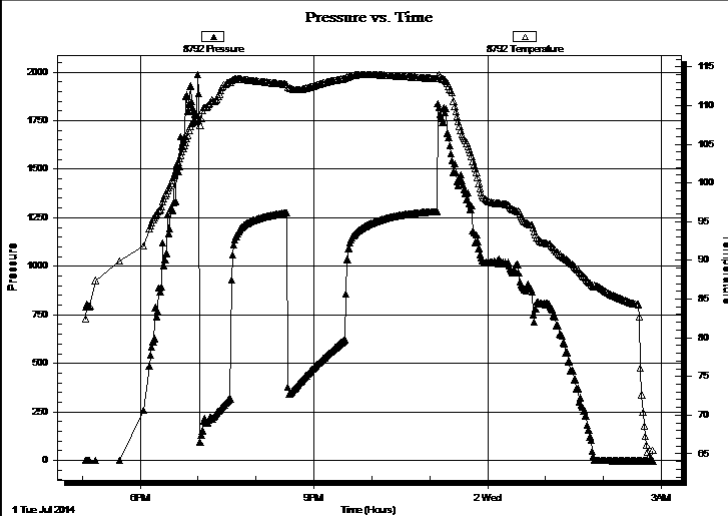
Test Start: 2014.07.01 @ 17:07:47

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:01:47
 Time Test Ended: 02:50:47
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Interval: **3680.00 ft (KB) To 3750.00 ft (KB) (TVD)**
 Total Depth: 3750.00 ft (KB) (TVD)
 Reference Elevations: 1857.00 ft (KB)
 1846.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 11.00 ft

Serial #: 8792 Outside
 Press@RunDepth: psig @ 3687.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.01 End Date: 2014.07.02 Last Calib.: 2014.07.02
 Start Time: 17:03:34 End Time: 02:51:44 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong blow . BOB @ 4min.
 IS: Weak surf. blow
 FF: Strong blow . BOB @ 4min.
 FS: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1660.00	Clean gassy Oil 10%g, 90%o	20.76
0.00	(occas. spots of mud in rec.)	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51999

DST#: 5

ATTN: Chuck Schmaltz

Test Start: 2014.07.01 @ 17:07:47

Tool Information

Drill Pipe:	Length: 3393.00 ft	Diameter: 3.80 inches	Volume: 47.59 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 277.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 48.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3680.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	97.00 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			3654.00	
Shut In Tool	5.00			3659.00	
Hydraulic tool	5.00			3664.00	
Jars	5.00			3669.00	
Safety Joint	2.00			3671.00	
Packer	5.00			3676.00	27.00 Bottom Of Top Packer
Packer	4.00			3680.00	
Stubb	1.00			3681.00	
Perforations	5.00			3686.00	
Change Over Sub	1.00			3687.00	
Recorder	0.00	8790	Inside	3687.00	
Recorder	0.00	8792	Outside	3687.00	
Drill Pipe	32.00			3719.00	
Change Over Sub	1.00			3720.00	
Perforations	27.00			3747.00	
Bullnose	3.00			3750.00	70.00 Bottom Packers & Anchor
Total Tool Length:	97.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 51999

DST#: 5

ATTN: Chuck Schmaltz

Test Start: 2014.07.01 @ 17:07:47

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6400.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1660.00	Clean gassy Oil 10%g, 90%o	20.762
0.00	(occas. spots of mud in rec.)	0.000

Total Length: 1660.00 ft Total Volume: 20.762 bbl

Num Fluid Samples: 0

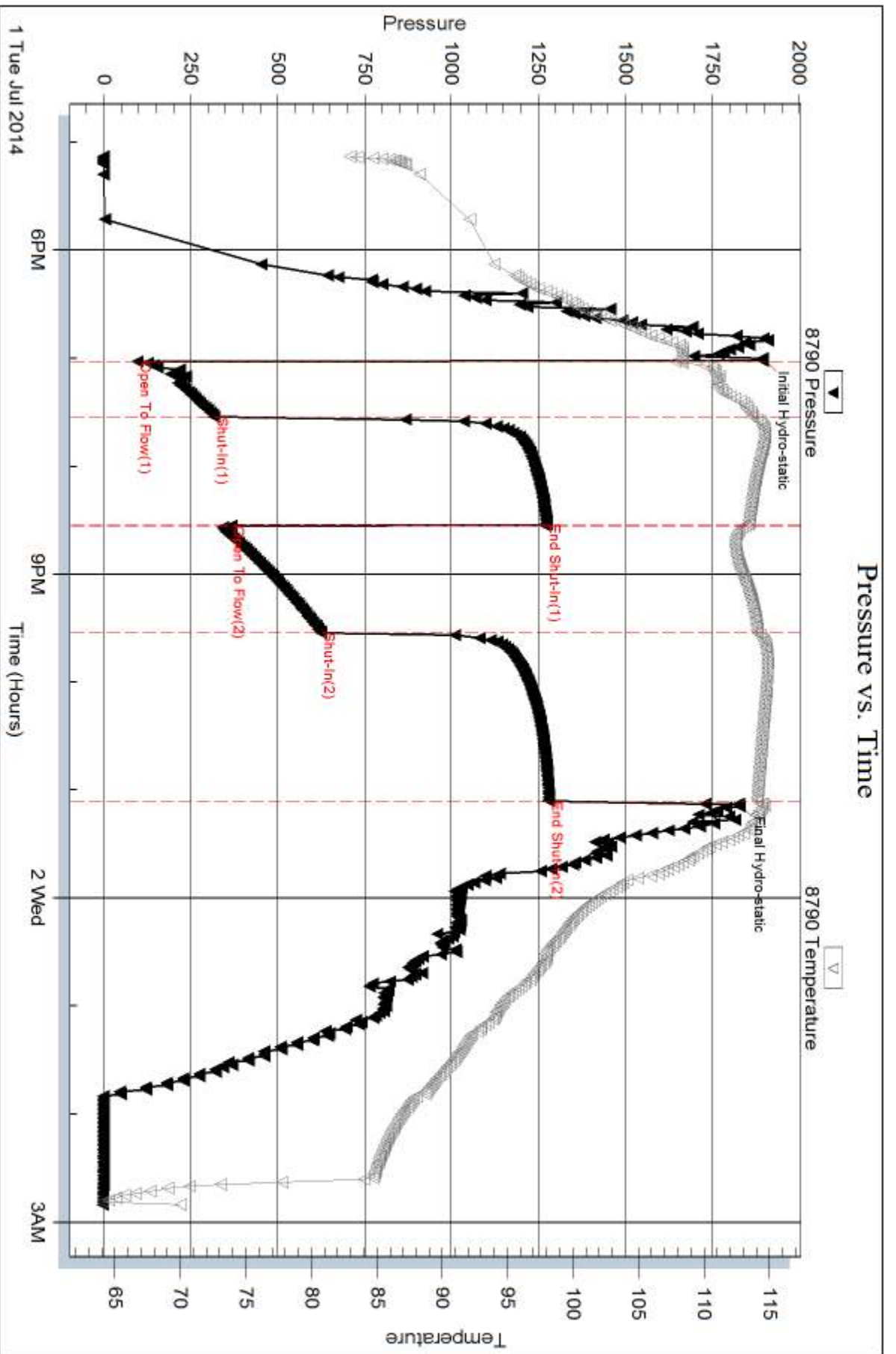
Num Gas Bombs: 0

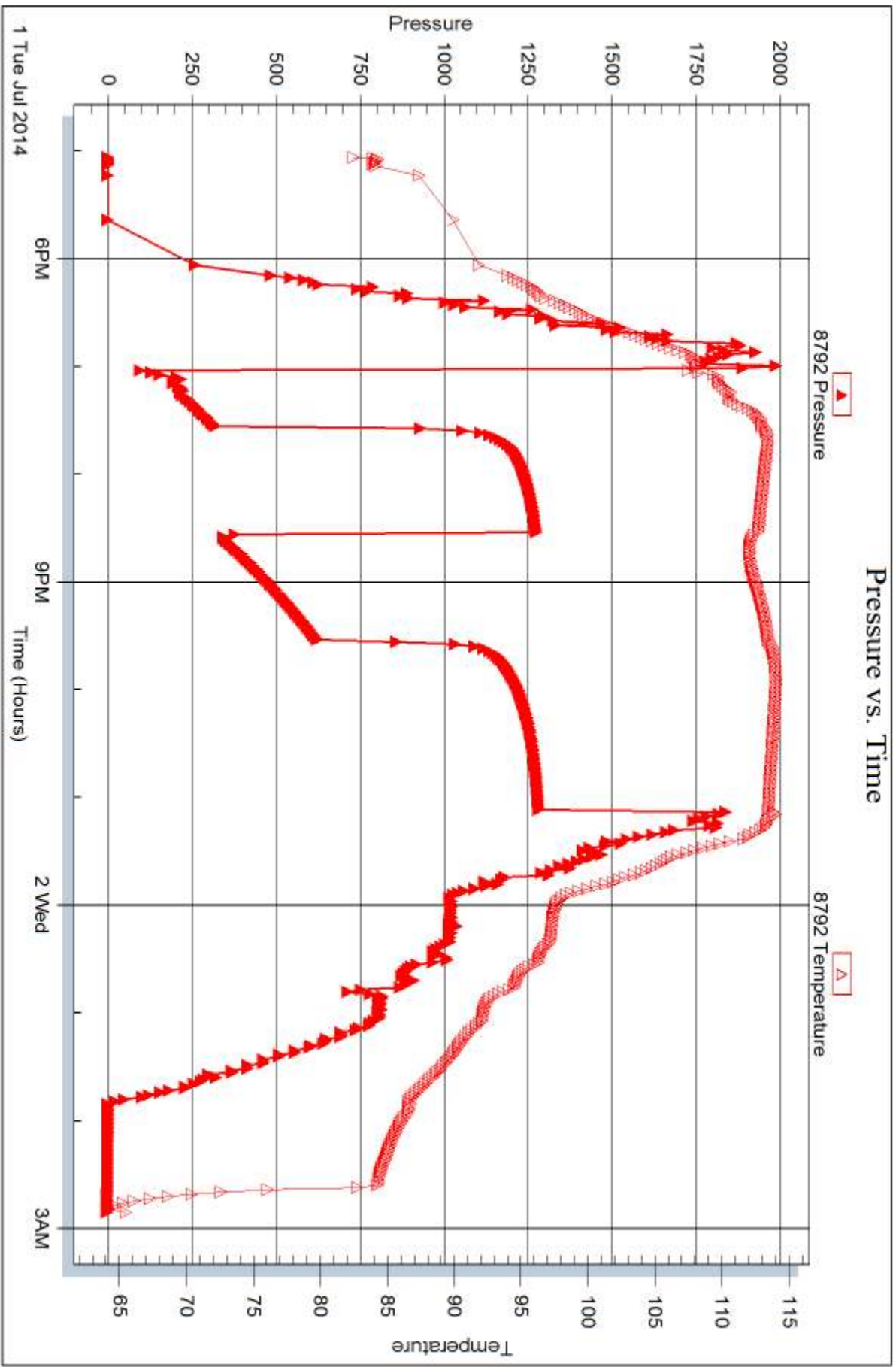
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

JTT #1-24

24-23s-12w Stafford,KS

Start Date: 2014.07.02 @ 09:37:41

End Date: 2014.07.02 @ 18:38:41

Job Ticket #: 52000 DST #: 6

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

Printed: 2014.07.08 @ 10:05:29

Murfin Drlg. Co., Inc. 24-23s-12w Stafford,KS JTT #1-24 DST # 6 Arbuckle 2014.07.02



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
 250 N. Water Ste. 300
 Wichita, KS 67202-1216
 ATTN: Chuck Schmaltz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 52000

DST#: 6

Test Start: 2014.07.02 @ 09:37:41

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:38:11
 Time Test Ended: 18:38:41
 Interval: **3750.00 ft (KB) To 3760.00 ft (KB) (TVD)**
 Total Depth: 3760.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1857.00 ft (KB)
 1846.00 ft (CF)
 KB to GR/CF: 11.00 ft

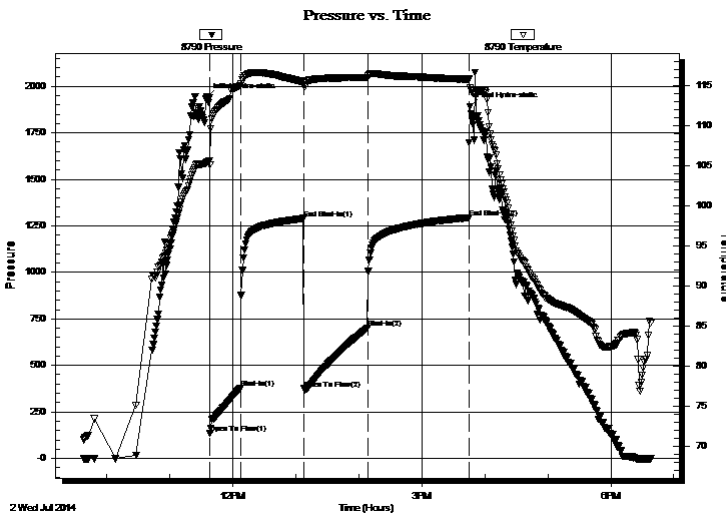
Serial #: 8790

Inside

Press@RunDepth: 700.67 psig @ 3751.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.02 End Date: 2014.07.02 Last Calib.: 2014.07.02
 Start Time: 09:37:46 End Time: 18:38:41 Time On Btm: 2014.07.02 @ 11:35:11
 Time Off Btm: 2014.07.02 @ 15:45:56

TEST COMMENT: IF: Strong blow . BOB @ 3 min.
 IS: Weak dying surf. blow .
 FF: Strong blow . BOB @ 5 min.
 FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1940.27	105.47	Initial Hydro-static
3	136.76	105.14	Open To Flow (1)
33	379.17	114.98	Shut-In(1)
93	1289.69	115.46	End Shut-In(1)
93	374.28	115.00	Open To Flow (2)
153	700.67	116.01	Shut-In(2)
250	1293.90	115.81	End Shut-In(2)
251	1892.32	114.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMWCO 10%g, 20%m, 25%w, 45%o	0.59
1925.00	Clean Gassy Oil 15%g, 85%o	25.57
0.00	60' GIP	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
 250 N. Water Ste. 300
 Wichita, KS 67202-1216
 ATTN: Chuck Schmaltz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 52000 **DST#: 6**

Test Start: 2014.07.02 @ 09:37:41

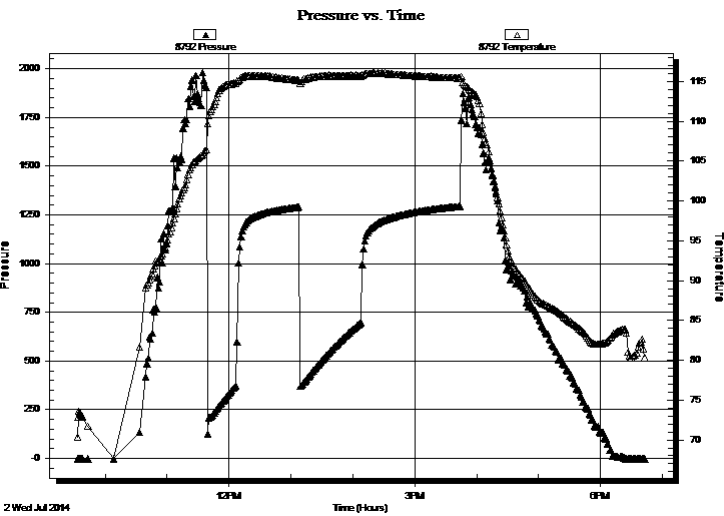
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:38:11
 Time Test Ended: 18:38:41
 Interval: **3750.00 ft (KB) To 3760.00 ft (KB) (TVD)**
 Total Depth: 3760.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1857.00 ft (KB)
 1846.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8792 Outside

Press@RunDepth: psig @ 3751.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.02 End Date: 2014.07.02 Last Calib.: 2014.07.02
 Start Time: 09:33:15 End Time: 18:43:10 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong blow . BOB @ 3 min.
 IS: Weak dying surf. blow .
 FF: Strong blow . BOB @ 5 min.
 FS: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMWCO 10%g, 20%m, 25%w, 45%o	0.59
1925.00	Clean Gassy Oil 15%g, 85%o	25.57
0.00	60' GIP	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 52000

DST#: 6

ATTN: Chuck Schmaltz

Test Start: 2014.07.02 @ 09:37:41

Tool Information

Drill Pipe:	Length: 3456.00 ft	Diameter: 3.80 inches	Volume: 48.48 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 277.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 94000.00 lb
			<u>Total Volume: 49.84 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	3750.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	37.00 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			3724.00	
Shut In Tool	5.00			3729.00	
Hydraulic tool	5.00			3734.00	
Jars	5.00			3739.00	
Safety Joint	2.00			3741.00	
Packer	5.00			3746.00	27.00 Bottom Of Top Packer
Packer	4.00			3750.00	
Stubb	1.00			3751.00	
Recorder	0.00	8790	Inside	3751.00	
Recorder	0.00	8792	Outside	3751.00	
Perforations	6.00			3757.00	
Bullnose	3.00			3760.00	10.00 Bottom Packers & Anchor

Total Tool Length: 37.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 52000

DST#: 6

ATTN: Chuck Schmaltz

Test Start: 2014.07.02 @ 09:37:41

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 65.00 sec/qt
Water Loss: 8.39 in³
Resistivity: ohm.m
Salinity: 6400.00 ppm
Filter Cake: 0.02 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 24000 ppm

Recovery Information

Recovery Table

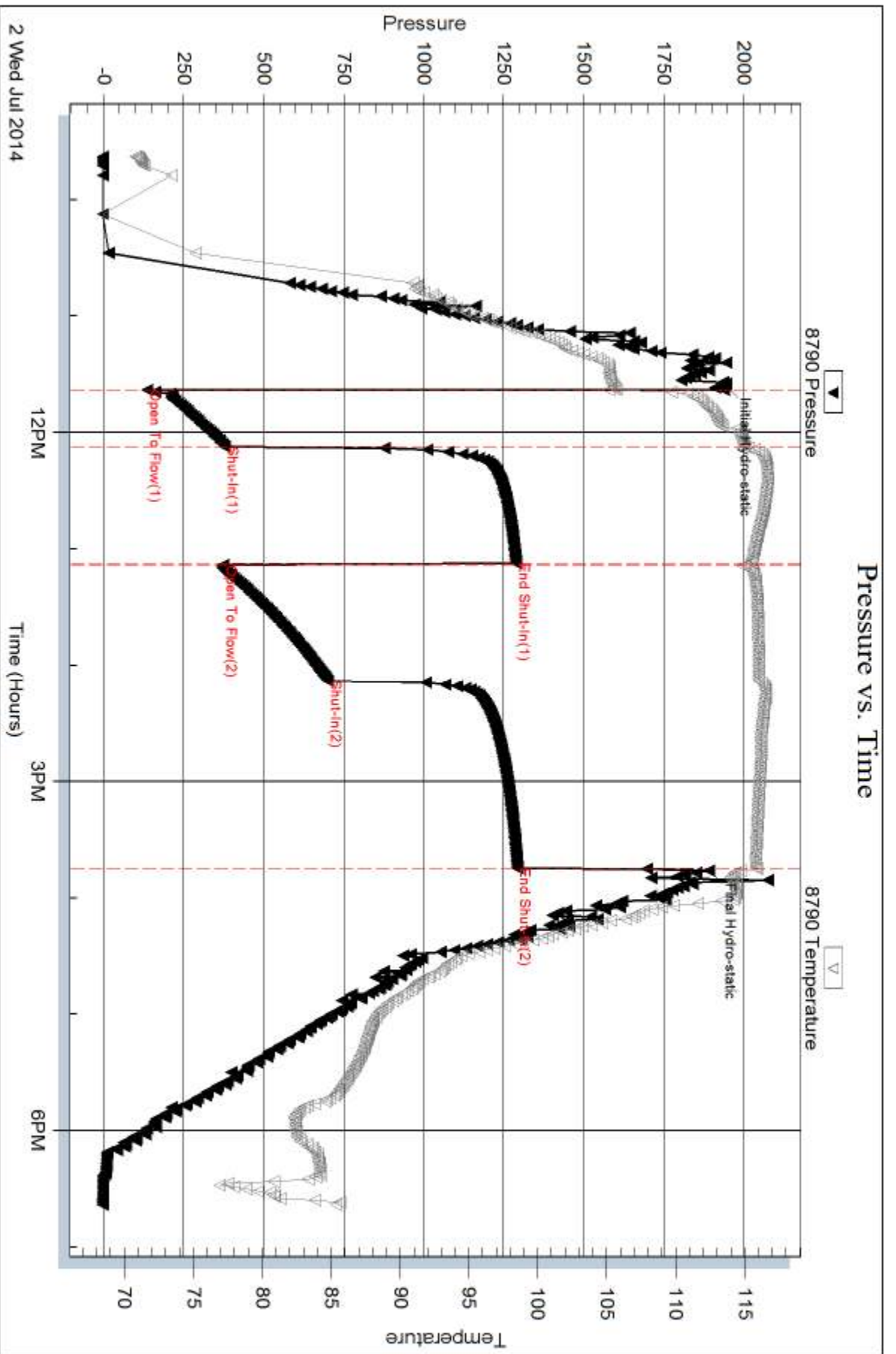
Length ft	Description	Volume bbl
120.00	GMWCO 10%g, 20%m, 25%w , 45%o	0.590
1925.00	Clean Gassy Oil 15%g, 85%o	25.572
0.00	60' GIP	0.000

Total Length: 2045.00 ft Total Volume: 26.162 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none

Laboratory Name: Laboratory Location:

Recovery Comments:

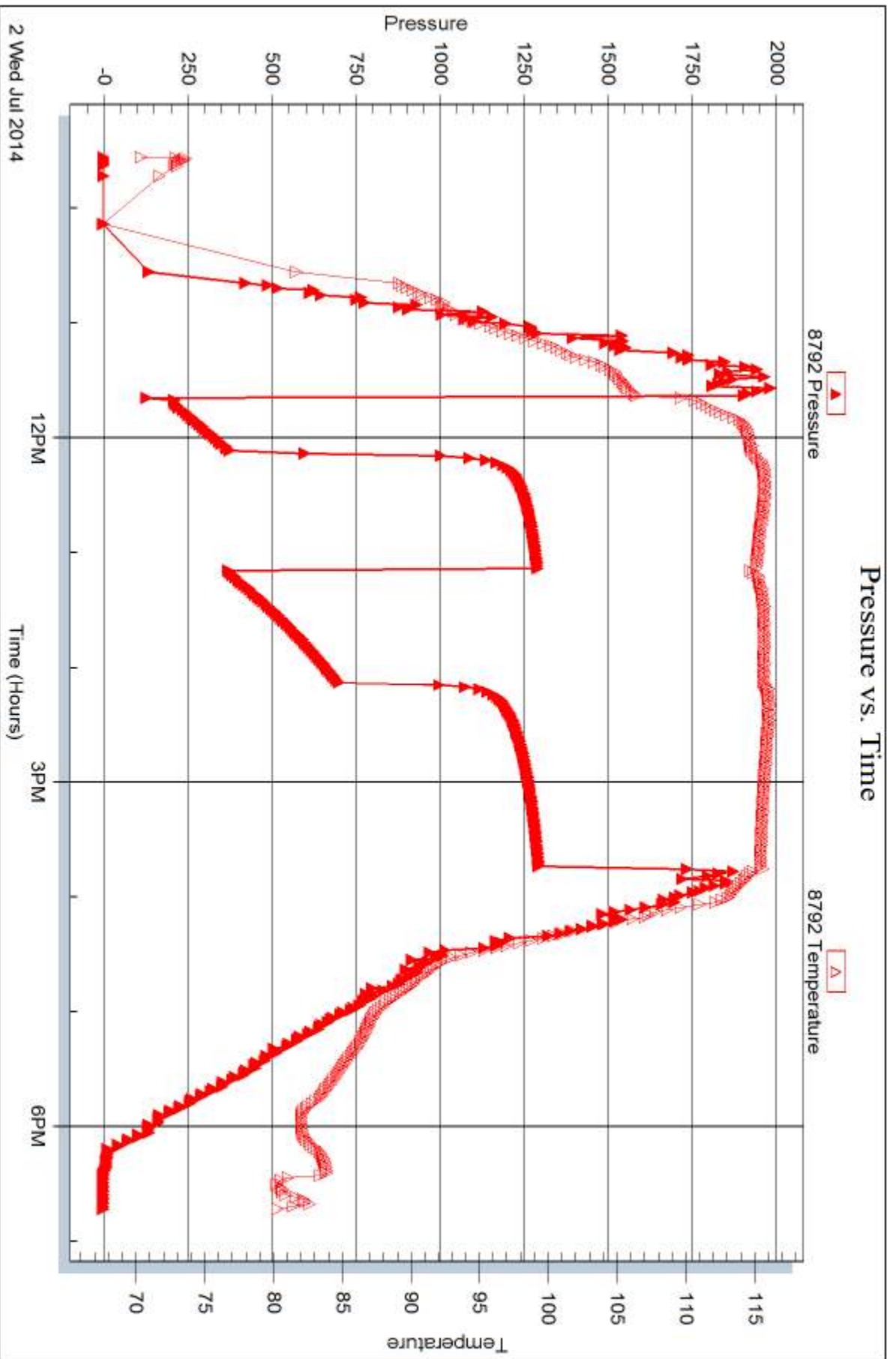


Serial #: 8792

Outside Murfin Dtg. Co., Inc.

JTT #1-24

DST Test Number: 6



Triobite Testing, Inc

Ref. No: 52000

Printed: 2014.07.08 @ 10:05:30



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

JTT #1-24

24-23s-12w Stafford,KS

Start Date: 2014.07.03 @ 01:26:45

End Date: 2014.07.03 @ 09:25:30

Job Ticket #: 54151 DST #: 7

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

Printed: 2014.07.08 @ 10:04:58



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
 250 N. Water Ste. 300
 Wichita, KS 67202-1216
 ATTN: Chuck Schmalz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 54151

DST#: 7

Test Start: 2014.07.03 @ 01:26:45

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:11:30
 Time Test Ended: 09:25:30
 Interval: **3760.00 ft (KB) To 3770.00 ft (KB) (TVD)**
 Total Depth: 3770.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1857.00 ft (KB)
 1846.00 ft (CF)
 KB to GR/CF: 11.00 ft

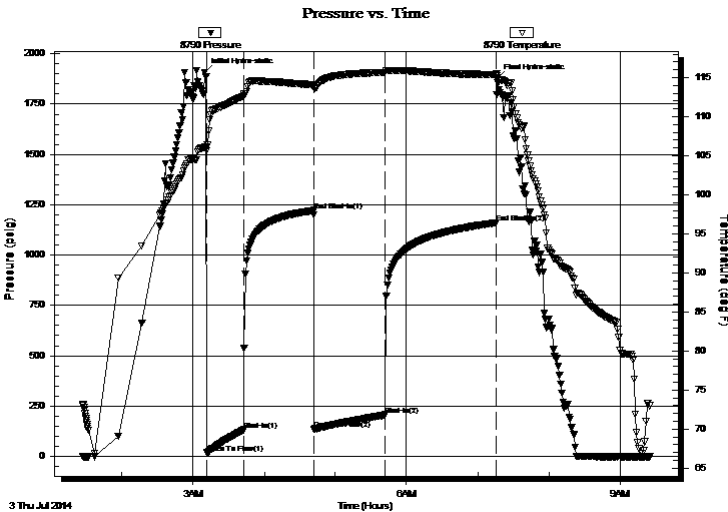
Serial #: 8790

Inside

Press@RunDepth: 206.10 psig @ 3761.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.03 End Date: 2014.07.03 Last Calib.: 2014.07.03
 Start Time: 01:26:50 End Time: 09:25:29 Time On Btm: 2014.07.03 @ 03:10:00
 Time Off Btm: 2014.07.03 @ 07:16:30

TEST COMMENT: IF: Good blow . surf. - 9"
 IS: No blow
 FF: Good blow . surf. - 8"
 FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1906.22	106.18	Initial Hydro-static
2	17.98	105.60	Open To Flow (1)
33	131.34	112.63	Shut-In(1)
92	1221.63	114.04	End Shut-In(1)
93	134.29	113.64	Open To Flow (2)
152	206.10	115.66	Shut-In(2)
246	1160.31	115.35	End Shut-In(2)
247	1877.73	115.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OMCW 5%o, 20%m, 75%w	0.30
320.00	OMCW 1%o, 4%m, 95%w	2.51

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

24-23s-12w Stafford,KS

JTT #1-24

Job Ticket: 54151

DST#: 7

Test Start: 2014.07.03 @ 01:26:45

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:11:30

Time Test Ended: 09:25:30

Interval: **3760.00 ft (KB) To 3770.00 ft (KB) (TVD)**

Total Depth: 3770.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Reynolds

Unit No: 68

Reference Elevations: 1857.00 ft (KB)

1846.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8792 Outside

Press@RunDepth: psig @ 3761.00 ft (KB)

Start Date: 2014.07.03

End Date: 2014.07.03

Start Time: 01:19:08

End Time: 09:28:02

Capacity: 8000.00 psig

Last Calib.: 2014.07.03

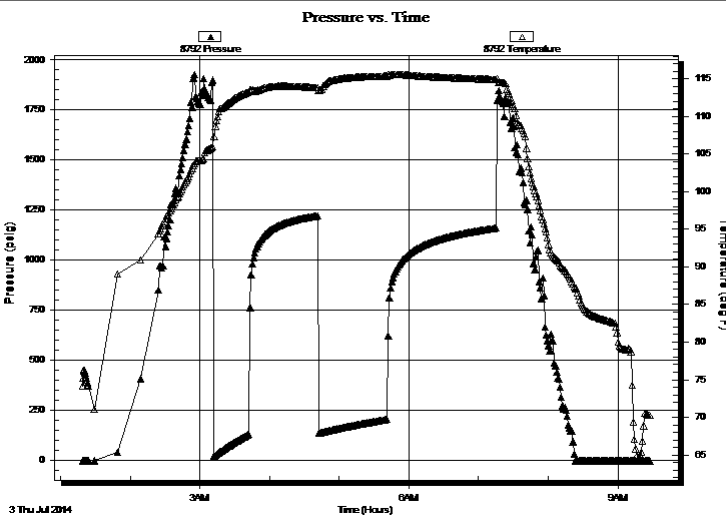
Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Good blow . surf. - 9"
IS: No blow
FF: Good blow . surf. - 8"
FS: No blow

PRESSURE SUMMARY

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



Recovery

Length (ft)	Description	Volume (bbl)
60.00	OMCW 5%o, 20%m, 75%w	0.30
320.00	OMCW 1%o, 4%m, 95%w	2.51

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m³/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 54151

DST#: 7

ATTN: Chuck Schmaltz

Test Start: 2014.07.03 @ 01:26:45

Tool Information

Drill Pipe:	Length: 3487.00 ft	Diameter: 3.80 inches	Volume: 48.91 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 277.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 50.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	3760.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	37.00 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			3734.00	
Shut In Tool	5.00			3739.00	
Hydraulic tool	5.00			3744.00	
Jars	5.00			3749.00	
Safety Joint	2.00			3751.00	
Packer	5.00			3756.00	27.00 Bottom Of Top Packer
Packer	4.00			3760.00	
Stubb	1.00			3761.00	
Recorder	0.00	8790	Inside	3761.00	
Recorder	0.00	8792	Outside	3761.00	
Perforations	6.00			3767.00	
Bullnose	3.00			3770.00	10.00 Bottom Packers & Anchor

Total Tool Length: 37.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

24-23s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

JTT #1-24

Job Ticket: 54151

DST#: 7

ATTN: Chuck Schmaltz

Test Start: 2014.07.03 @ 01:26:45

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:

27000 ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8200.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OMCW 5%o, 20%m, 75%w	0.295
320.00	OMCW 1%o, 4%m, 95%w	2.512

Total Length: 380.00 ft

Total Volume: 2.807 bbl

Num Fluid Samples: 0

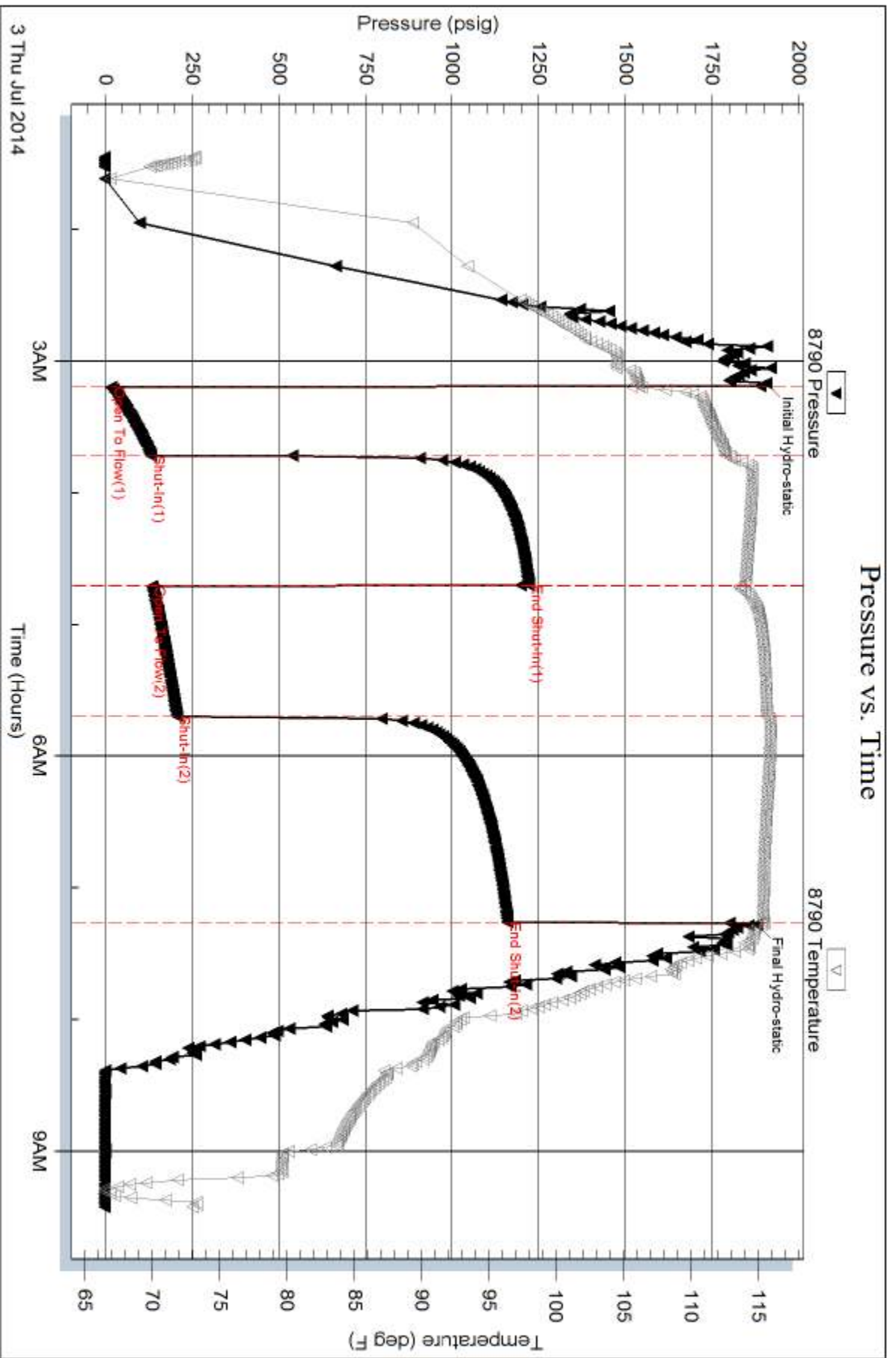
Num Gas Bombs: 0

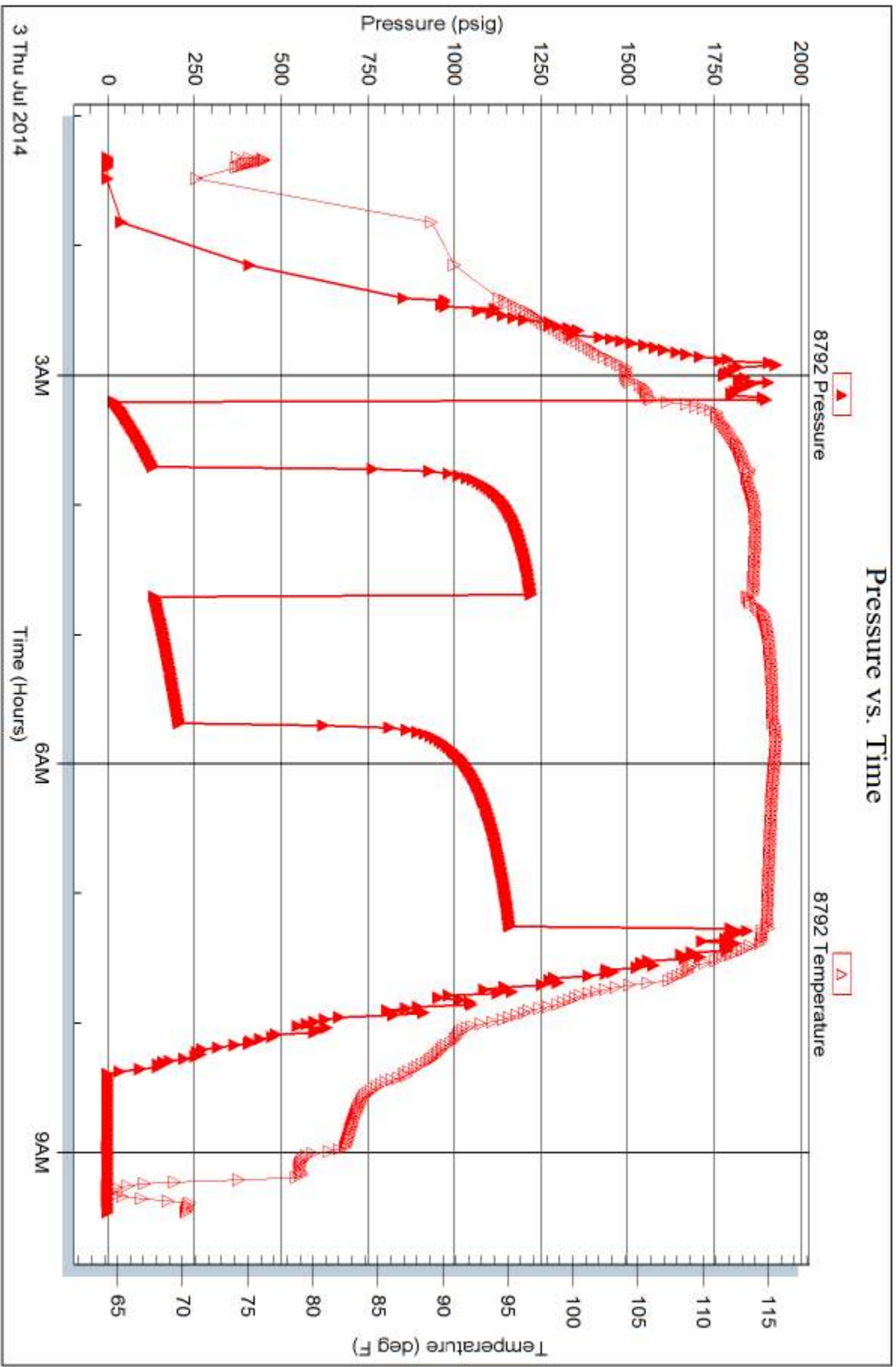
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51995

4/10

Well Name & No. JTT 1-24 Test No. 1 Date 6-28-14
 Company Murfin Drilling Co., Inc. Elevation 1857 KB 1846 GL
 Address 250 N. Water Ste., 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Chuck Schmaltz Rig Murfin 21
 Location: Sec. 24 Twp. 23s. Rge. 12w. Co. Stafford State KS

Interval Tested 3372-3442 Zone Tested Lans.
 Anchor Length 70' Drill Pipe Run 3081 Mud Wt. 9.3
 Top Packer Depth 3367 Drill Collars Run 277 Vis 52
 Bottom Packer Depth 3372 Wt. Pipe Run Ø WL 8.4
 Total Depth 3442 Chlorides 4800 ppm System LCM 1/2#
 Blow Description IF: Strong blow. BoB @ 12 min. ISI: No blow
FF: Weak blow. 2" - surf. FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>GIP</u>				
<u>80</u>	<u>60cm</u>	<u>13</u>	<u>2</u>	<u>85</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 390 BHT 109 Gravity n/c API RW n/c @ n/c °F Chlorides 4800 ppm
 (A) Initial Hydrostatic 1729 Test 1150 T-On Location 1915
 (B) First Initial Flow 27 Jars 250 T-Started 2132
 (C) First Final Flow 32 Safety Joint 75 T-Open 2341
 (D) Initial Shut-In 619 Circ Sub _____ T-Pulled 0341
 (E) Second Initial Flow 37 Hourly Standby 1 1/4 T-Out 0531
 (F) Second Final Flow 53 Mileage 66 102.30 Comments _____
 (G) Final Shut-In 795 Sampler _____
 (H) Final Hydrostatic 1578 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1577.30

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

Sub Total 0
 Total 1577.30
 MP/DST Disc't _____

Approved By _____ Our Representative Bryan Reynolds
 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. 51996

Well Name & No. JTT 1-24 Test No. 2 Date 6-29-14
 Company Murfin Drlg. Co., Inc. Elevation 1857 KB 1846 GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Chuck Schmaltz Rig Murfin 21
 Location: Sec. 24 Twp. 23s Rge. 12w Co. Stafford State KS

Interval Tested 3482-3524 Zone Tested Lans. A-I
 Anchor Length 42 Drill Pipe Run 3205 Mud Wt. 9.2
 Top Packer Depth 3477 Drill Collars Run 277 Vis 56
 Bottom Packer Depth 3482 Wt. Pipe Run Ø WL 8.8
 Total Depth 3524 Chlorides 5800 ppm System LCM 1#
 Blow Description IF: Weak blow surf. - 3" ISI: No blow
FF: Weak blow surf. - 2" FST: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>GIF</u>				
<u>60</u>	<u>SLI owcm</u>		<u>1</u>	<u>19</u>	<u>80</u>
<u>120</u>	<u>MCW</u>			<u>95</u>	<u>5</u>

Rec Total 180 BHT 110 Gravity N/C API RW 46 @ 85° F Chlorides 78000 ppm
 (A) Initial Hydrostatic 1744 Test 1150 .08 On Location 1515
 (B) First Initial Flow 18 Jars 250 T-Started 1531
 (C) First Final Flow 52 Safety Joint 75 T-Open 1704
 (D) Initial Shut-In 1021 Circ Sub _____ T-Pulled 2104
 (E) Second Initial Flow 60 Hourly Standby _____ T-Out 2303
 (F) Second Final Flow 102 Mileage 66 102.30 Comments _____
 (G) Final Shut-In 983 Sampler _____
 (H) Final Hydrostatic 1727 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1577.30

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Sub Total 1577.30
 Approved By _____ Our Representative Ryan Reynolds
 Total 1577.30
 MP/DST Disc't _____

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. 51997

Well Name & No. JTT 1-24 Test No. 3 Date 6-30-14
 Company Murfin Drilg Co., Inc Elevation 1857 KB 1846 GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Chuck Schmalz Rig Murfin 21
 Location: Sec. 24 Twp. 23s Rge. 12w Co. Stafford State KS

Interval Tested 3525 - 3610 Zone Tested Lans. "J-L"
 Anchor Length 85 Drill Pipe Run 3236 Mud Wt. 9.2
 Top Packer Depth 3520 Drill Collars Run 277 Vis 56
 Bottom Packer Depth 3525 Wt. Pipe Run ∅ WL 8.8
 Total Depth 3610 Chlorides 5200 ppm System LCM 1#
 Blow Description IF: Strong blow. BOB @ 3 1/2 min. ISI: No blow
FF: Good blow. 1-9" FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>GIP</u>				
<u>1245</u>	<u>GMCW</u>	<u>2</u>	<u>95</u>	<u>3</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1290 BHT 111 Gravity N/C API RW .075 @ 98 °F Chlorides 76⁰⁰⁰ ppm

(A) Initial Hydrostatic <u>1782</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1000</u>
(B) First Initial Flow <u>71</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1012</u>
(C) First Final Flow <u>361</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1221</u>
(D) Initial Shut-In <u>1053</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1621</u>
(E) Second Initial Flow <u>371</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1827</u>
(F) Second Final Flow <u>611</u>	<input checked="" type="checkbox"/> Mileage <u>66</u> <u>102.30</u>	Comments
(G) Final Shut-In <u>1018</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1751</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>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>1577.30</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1577.30</u>	

Approved By _____ Our Representative Ryan Reynolds
 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. 51998

Well Name & No. JTT 1-24 Test No. 4 Date 7-1-14
 Company Murfin Drkg. Co., Inc. Elevation 1857 KB 1846 GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Chuck Schmalz Rig Murfin 21
 Location: Sec. 24 Twp. 23s Rge. 12w Co. Stafford State KS

Interval Tested 3605-3690 Zone Tested Viola
 Anchor Length 85 Drill Pipe Run 3330 Mud Wt. 9.5
 Top Packer Depth 3600 Drill Collars Run 277 Vis 59
 Bottom Packer Depth 3605 Wt. Pipe Run Ø WL 9.2
 Total Depth 3690 Chlorides 6700 ppm System LCM 2#
 Blow Description IF: Weak blow surf. - 1" IST: No blow
FF: Weak blow surf. - 2" FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>OGM</u>	<u>3</u>		<u>95</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 65 BHT 110 Gravity n/c API RW n/c @ n/c °F Chlorides 6700 ppm

(A) Initial Hydrostatic <u>1816</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0145</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0158</u>
(C) First Final Flow <u>35</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0352</u>
(D) Initial Shut-In <u>501</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>0753</u>
(E) Second Initial Flow <u>41</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1002</u>
(F) Second Final Flow <u>48</u>	<input checked="" type="checkbox"/> Mileage <u>66</u> 102.30	Comments
(G) Final Shut-In <u>505</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1802</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>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>1577.30</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1577.30</u>	

Approved By _____

Our Representative

Ryan Reynolds

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51999

Well Name & No. JTT 1-24 Test No. 5 Date 7-1-14
 Company Murfin Drilling Co., Inc. Elevation 1857 KB 1846 GL
 Address 250 N. Water Ste. 300 Wichita KS 67202-1216
 Co. Rep / Geo. Chuck Schmaltz Rig Murfin 21
 Location: Sec. 24 Twp. 23s Rge. 12w Co. Stafford State KS

Interval Tested 3680 - 3750 Zone Tested Arbuckle
 Anchor Length 70 Drill Pipe Run 3393 Mud Wt. 9.4+
 Top Packer Depth 3675 Drill Collars Run 277 Vis 6.5
 Bottom Packer Depth 3680 Wt. Pipe Run Ø WL 8.4
 Total Depth 3750 Chlorides 6400 ppm System LCM 2#

Blow Description IF: Strong blow. BoB @ 4min. ISI: Weak
Surf. blow.
FF: Strong blow. BoB @ 4min. FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1660</u>	<u>Clean gassy Oil</u>	<u>10</u>	<u>90</u>		
	<u>(occ. spots of mud in keg)</u>				

Rec Total 1660 BHT 114 Gravity 40 API RW N/C @ N/C °F Chlorides 6400 ppm

(A) Initial Hydrostatic 1895 Test 1150 T-On Location 1630
 (B) First Initial Flow 97 Jars 250 T-Started 1708
 (C) First Final Flow 318 Safety Joint 75 T-Open 1902
 (D) Initial Shut-In 1275 Circ Sub _____ T-Pulled 2302
 (E) Second Initial Flow 366 Hourly Standby 1 1/4 0.5h 50 T-Out 0251
 (F) Second Final Flow 625 Mileage 660 102.30 Comments _____
 (G) Final Shut-In 1280 Sampler _____
 (H) Final Hydrostatic 1826 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

Sub Total 1627.30
 Total 1627.30
 MP/DST Disc't _____

Approved By _____ Our Representative Ryan Reynolds
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52000

Well Name & No. JTT 1-24 Test No. 6 Date 7-2-14
 Company Murfin Drilg Co., Inc. Elevation 1857 KB 1846 GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Chuck Schmalz Rig Murfin 21
 Location: Sec. 24 Twp. 23s Rge. 12w Co. Stafford State KS

Interval Tested 3750-3760 Zone Tested Arbuckle
 Anchor Length 10 Drill Pipe Run 3456 Mud Wt. 9.4+
 Top Packer Depth 3745 Drill Collars Run 277 Vis 65
 Bottom Packer Depth 3750 Wt. Pipe Run Ø WL 8.4
 Total Depth 3760 Chlorides 6400 ppm System LCM 2#

Blow Description IF: Strong blow. BOB @ 3 min.
ISI: Weak drying surf. blow.
FF: Strong blow. BOB @ 5 min. FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>GIP</u>				
<u>1925</u>	<u>Clean gassy Oil</u>	<u>15</u>	<u>85</u>		
<u>120</u>	<u>GMWCOL</u>	<u>10</u>	<u>45</u>	<u>25</u>	<u>20</u>

Rec Total 2105 BHT 116 Gravity 40 API RW 25 @ 80 °F Chlorides 24000 ppm

(A) Initial Hydrostatic <u>1940</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0930</u>
(B) First Initial Flow <u>137</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0938</u>
(C) First Final Flow <u>379</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1138</u>
(D) Initial Shut-In <u>1290</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1539</u>
(E) Second Initial Flow <u>374</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1839</u>
(F) Second Final Flow <u>701</u>	<input checked="" type="checkbox"/> Mileage <u>66</u> <u>102.30</u>	Comments
(G) Final Shut-In <u>1294</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1892</u>	<input type="checkbox"/> Straddle	

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1577.30</u>
	Sub Total <u>1577.30</u>	MP/DST Disc't

Approved By _____ Our Representative _____

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54151

Well Name & No. JTT 1-24 Test No. 7 Date 7-3-14
 Company Murfin Drilg Co., Inc. Elevation 1857 KB 1846 GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Chuck Schmaltz Rig Murfin 21
 Location: Sec. 24 Twp. 23s Rge. 12w Co. Stafford State KS

Interval Tested 3760 - 3770 Zone Tested Arbuckle
 Anchor Length 10 Drill Pipe Run 3487 Mud Wt. 9.5+
 Top Packer Depth 3765 Drill Collars Run 277 Vis 69
 Bottom Packer Depth 3760 Wt. Pipe Run 0 WL 9.6
 Total Depth 3770 Chlorides 8200 ppm System LCM 1#
 Blow Description IF: Good blow, surf. -9" IST: No blow.
FF: Good blow, surf. -8" FST: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>DMCW</u>	<u>5</u>	<u>75</u>	<u>20</u>	
<u>320</u>	<u>DMCW</u>	<u>1</u>	<u>95</u>	<u>4</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 380 BHT 115 Gravity N/C API RW 26 @ 70 °F Chlorides 27000 ppm
 Test 1150 T-On Location 0115
 Jars 250 T-Started 0127
 Safety Joint 75 T-Open 0311
 Circ Sub _____ T-Pulled 0711
 Hourly Standby _____ T-Out 0926
 Mileage 66 102.30 Comments _____
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1577.30

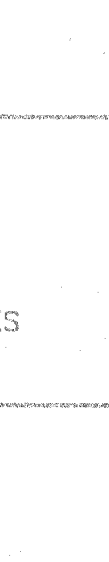
Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

Approved By _____ Our Representative Ryan Reynolds
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CHARLES SCHMALTZ CONSULTING GEOLOGIST WICHITA, KANSAS

REPORT
LOG

MURFIN DRILLING CO.
WILLARD
330' ENCL - 1700' FEL

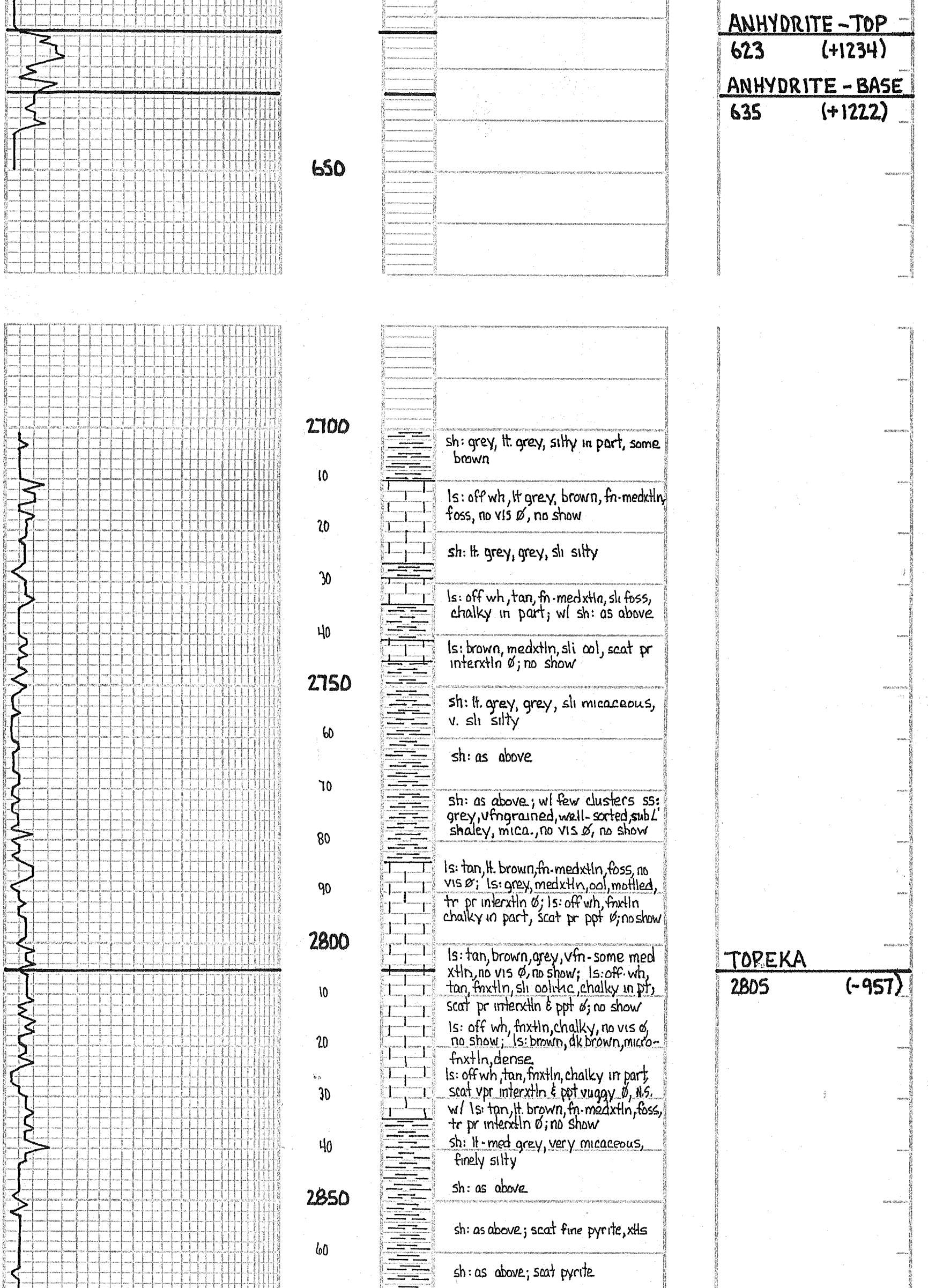


LOG NO. **24** REEL **235**
STAFF NO. **235**
COUNTY **KANSAS**
WELL # **JIT # 1-24**

FORMATION	SECTION	DEPTH	DIAMETER	STATUS
ANHYDRITE TOP	623	623	6 1/8"	1-2
ANHYDRITE - BASE	635	635	6 1/8"	-3
TORPEKA	2805	2805	6 1/8"	-4
HEEBNER	3186	3186	6 1/8"	-5
TORONTO	3203	3203	6 1/8"	-6
DOUGLAS	3219	3219	6 1/8"	-7
LANSING	3331	3331	6 1/8"	-8
VIDLA	3629	3629	6 1/8"	-9
ARBUCKLE	3736	3736	6 1/8"	-10
SIMPSON	3684	3684	6 1/8"	-11
TOTAL DEPTH	3900	3900		-145

GENERAL ATLANTIC RESURFACES, RUSSELL #1
600' EST - 1700' FEL SEC. 13 - T235 - R24W STAFFED GW KS

LOG NO.	WELL NO.	DEPTH	DIAMETER	STATUS
24	235	623	6 1/8"	1
		635	6 1/8"	2
		2805	6 1/8"	3
		3186	6 1/8"	4
		3203	6 1/8"	5
		3219	6 1/8"	6
		3331	6 1/8"	7
		3629	6 1/8"	8
		3736	6 1/8"	9
		3684	6 1/8"	10
		3900		11



DEPTH	FORMATION	DIAMETER	STATUS
623	ANHYDRITE TOP	6 1/8"	1-2
635	ANHYDRITE - BASE	6 1/8"	-3
2805	TORPEKA	6 1/8"	-4
3186	HEEBNER	6 1/8"	-5
3203	TORONTO	6 1/8"	-6
3219	DOUGLAS	6 1/8"	-7
3331	LANSING	6 1/8"	-8
3629	VIDLA	6 1/8"	-9
3736	ARBUCKLE	6 1/8"	-10
3684	SIMPSON	6 1/8"	-11
3900	TOTAL DEPTH		-145

LEGEND

[Symbol]	Anthrita
[Symbol]	Salt
[Symbol]	Sandstone
[Symbol]	Shale
[Symbol]	Carb sh
[Symbol]	Limestone
[Symbol]	ool. Lims
[Symbol]	Clert
[Symbol]	Dolomita

DEPTH	FORMATION	DIAMETER	STATUS
600	ANHYDRITE - TDP	6 1/8"	(+1234)
650	ANHYDRITE - BASE	6 1/8"	(+1222)
2700			
2800	TORPEKA	6 1/8"	(-957)
2850			
2900			
2950			
3000			
3050			
3100			
3150			
3200	HEEBNER	6 1/8"	(-1329)
3250			
3300			
3350			
3400			
3450			
3500			
3550			
3600			
3650			
3700			
3750			
3800			
3850			
3900			

DEPTH	FORMATION	DIAMETER	STATUS
3200	HEEBNER	6 1/8"	(-1329)
3250			
3300			
3350			
3400			
3450			
3500			
3550			
3600			
3650			
3700			
3750			
3800			
3850			
3900			

DEPTH	FORMATION	DIAMETER	STATUS
3200	HEEBNER	6 1/8"	(-1329)
3250			
3300			
3350			
3400			
3450			
3500			
3550			
3600			
3650			
3700			
3750			
3800			
3850			
3900			

DEPTH	FORMATION	DIAMETER	STATUS
3200	HEEBNER	6 1/8"	(-1329)
3250			
3300			
3350			
3400			
3450			
3500			
3550			
3600			
3650			
3700			
3750			
3800			
3850			
3900			



over
P17 oel-MG

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 144100

Invoice Date: Jun 25, 2014

Voice: (817) 546-7282
Fax: (817) 246-3361

Page: 1

Bill To:
Murfin Drlg. Co., Inc. 250 N. Water STE #300 Wichita, KS 67202

Customer ID	Field Ticket #	Payment Terms	
Murfin	63580	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Great Bend	Jun 25, 2014	7/25/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	JTT #1-24		
200.00	CEMENT MATERIALS	Class A Common	17.90	3,580.00
1,047.00	CEMENT MATERIALS	Chloride	1.10	1,151.70
175.00	CEMENT MATERIALS	65/35/6% Blend	19.88	3,479.00
44.00	CEMENT MATERIALS	Flo Seal	2.97	130.68
412.59	CEMENT SERVICE	Cubic Feet Charge	2.48	1,023.22
461.74	CEMENT SERVICE	Ton Mileage Charge	2.75	1,269.79
1.00	CEMENT SERVICE	Surface	2,058.50	2,058.50
25.00	CEMENT SERVICE	Pump Truck Mileage	7.70	192.50
1.00	CEMENT SERVICE	Manifold Rental	275.00	275.00
25.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	110.00
1.00	CEMENT SERVICE	Rig Time Credit	800.00	-800.00
2.00	EQUIPMENT SALES	8-5/8 Centralizer	75.00	150.00
1.00	EQUIPMENT SALES	8-5/8 Rubber Plug	131.00	131.00
1.00	EQUIPMENT SALES	8-5/8 Baffle Plate	320.00	320.00
1.00	CEMENT SUPERVISOR	Charles Kinyon		
1.00	EQUIPMENT OPERATOR	Ben Newell		
1.00	EQUIPMENT OPERATOR	Daniel Casper		
1.00	CEMENT SUPERVISOR	Tim Dickson		

Subtotal	13,071.39
Sales Tax	639.38
Total Invoice Amount	13,710.77
Payment/Credit Applied	
TOTAL	13,710.77

ALL PRICES ARE NET, PAYABLE
30 DAYS FOLLOWING DATE OF
INVOICE. 1 1/2% CHARGED
THEREAFTER. IF ACCOUNT IS
CURRENT, TAKE DISCOUNT OF

\$ 4,855.49

ONLY IF PAID ON OR BEFORE

Jul 25, 2014

OK
JK

ALLIED OIL & GAS SERVICES, LLC 063580

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:
great Bend

6-25-14 DATE	SEC 24	TWP 23	RANGE 12	CALLED OUT 2:00 pm	ON LOCATION 5:30pm	JOB START 11:00pm	JOB FINISH 11:50pm
JTT LEASE	WELL # 1-24	LOCATION	Stafford 6N 3/4 E	COUNTY	Stafford	STATE	KZ
OLD OR <input checked="" type="checkbox"/> NEW (Circle one)			S clnta				

CONTRACTOR *Murfin 21*
 TYPE OF JOB *Surface*
 HOLE SIZE *12 1/4* T.D. *654*
 CASING SIZE *8 5/8* 2 1/4 DEPTH *654*
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT *42.25*
 CEMENT LEFT IN CSG. *42.25*
 PERFS. _____
 DISPLACEMENT *H2O 38.96 BBI*

OWNER *name*
 CEMENT
 AMOUNT ORDERED *175 24 65/135 61 gal*
31' CC 4/4 200 24 class A
31' CC
 COMMON *200* @ *17.90* *3,580.00*
 POZMIX @ _____
 GEL @ _____
 CHLORIDE *1047* @ *1.10* *1,151.70*
 ASC @ _____
175 24 65/135 49% @ *17.88* *3,479.00*
49 @ *2.97* *1,388.48*
 Materials Total @ _____ *8,341.38*
 Disc @ *35%* *2,919.98*
 Service @ _____
 HANDLING *412.59* @ *2.48* *1,023.32*
 MILEAGE *18.47 x 25.4* *2.75* *1,269.81*

EQUIPMENT
 PUMP TRUCK CEMENTER *Charles Kingen*
 #398 HELPER *Ben Newell*
 BULK TRUCK
 #544-198 DRIVER *Dan Casper*
 BULK TRUCK
 #597 DRIVER *Tim Dickson*

REMARKS:

*Rig Ran 654' 8 5/8 csg Berke csg
 W/ Rig Mud hook to head 5 BBI H2O
 Mix 175 24 head @ 12.5 Mix 200 24
 Tail @ 15.6 shut down Release
 plug displac 38.96 BBI H2O
 plug did hand cement did circulate*

DEPTH OF JOB *654*
 PUMP TRUCK CHARGE @ *2058.50*
 EXTRA FOOTAGE @ _____
 MILEAGE *Hum 25* @ *7.70* *192.50*
 MANIFOLD @ *275.00* *275.00*
Hum 25 @ *4.40* *110.00*

CHARGE TO: *Murfin drilling*
 STREET _____
 CITY _____ STATE _____ ZIP _____

TOTAL *4,929.03*
 35% *1,725.16*

Thank you!
 To: Allied Oil & Gas Services, LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PLUG & FLOAT EQUIPMENT
2-centrifuges 7500 *150.00*
Rubber plug @ *131.00* *131.00*
Baffle plate @ *320.00* *320.00*
 @ _____
 @ _____
 @ _____

TOTAL *580.00*
 35% *203.00*

PRINTED NAME *X Juan Tinoco*
 SIGNATURE *X Juan Tinoco*

SALES TAX (If Any) _____
 TOTAL CHARGES *13,850.41*
 DISCOUNT *4,847.69* (35/35/35)
 IF PAID IN 30 DAYS
9,002.72
Rig Time 800.00
8,202.72



PAGE 1 of 1	CUST NO 1002852	YARD # 1718	INVOICE DATE 07/08/2014
INVOICE NUMBER 91535702			

Pratt (620) 672-1201

B MURFIN DRILLING
I PO Box: 288
L RUSSELL
L KS US 67665
T
O ATTN: ACCOUNTS PAYABLE

WELL FILE

J LEASE NAME JTT 1-24
O LOCATION
B COUNTY Stafford
S STATE KS
I JOB DESCRIPTION Cement-New Well Casing/Pi
T JOB CONTACT
E

JOB # 40741288	EQUIPMENT # 20920	PURCHASE ORDER NO.	TERMS Net - 30 days	DUE DATE 08/07/2014
-------------------	----------------------	--------------------	------------------------	------------------------

For Service Dates: 07/04/2014 to 07/04/2014

0040741288

171811010A Cement-New Well Casing/Pi 07/04/2014
Cement 5 1/2" Longstring

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
AA2 Cement	185.00	EA	12.75	2,358.76 T
60/40 POZ	50.00	EA	9.00	450.00 T
C-41P	44.00	EA	3.00	132.00 T
Salt	916.00	EA	0.38	343.50 T
Cement Friction Reducer	53.00	EA	4.50	238.50 T
C-44	174.00	EA	3.86	672.07 T
FLA-322	87.00	EA	5.62	489.37 T
Mud Flush	500.00	EA	1.13	562.50 T
Gilsonite	925.00	EA	0.50	464.81 T
Claymax KCL Substitute	5.00	EA	26.25	131.25 T
"Latch Down Plug & Baffle, 5 1/2"" (Blu	1.00	EA	300.00	300.00
"Auto Fill Float Shoe 5 1/2"" (Blue)"	1.00	EA	270.00	270.00
"Turbolizer, 5 1/2"" (Blue)"	10.00	EA	82.50	825.00
Cement Scratchers Rotating Type	12.00	EA	37.50	450.00
"Unit Mileage Chg (PU, cars one way)"	40.00	MI	3.19	127.50
Heavy Equipment Mileage	80.00	MI	5.25	420.00
"Proppant & Bulk Del. Chgs., per ton mil	434.00	EA	1.65	716.10
Depth Charge; 3001-4000'	1.00	EA	1,620.00	1,620.00
Blending & Mixing Service Charge	235.00	BAG	1.05	246.75
Casing Swivel Rental	1.00	EA	150.00	150.00
Plug Container Util. Chg.	1.00	EA	187.50	187.50
"Service Supervisor, first 8 hrs on loc.	1.00	EA	131.25	131.25

USED FOR IC 103
APPROVED JTT

OPERATOR PAY MDC
LEASE: JTT 1-24

IC103 Z 3998.0001.1 11,704.62 Cement Prod. Csg #1-24

PLEASE REMIT TO: BASIC ENERGY SERVICES, LP PO BOX 841903 DALLAS, TX 75284-1903	SEND OTHER CORRESPONDENCE TO: BASIC ENERGY SERVICES, LP 801 CHERRY ST, STE 2100 FORT WORTH, TX 76102	SUB TOTAL TAX INVOICE TOTAL	11,286.86 417.76 11,704.62
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BASICSM
ENERGY SERVICES
PRESSURE PLUMPING & WIRELINE

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

FIELD SERVICE TICKET
1718 11010 A

DATE _____ TICKET NO. _____

DATE OF JOB 7-4-2014 DISTRICT Pratt, 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 Murkin Drilling Co. Inc.		LEASE JTT WELL NO. 120							
ADDRESS		COUNTY Stephens STATE KS							
CITY STATE		SERVICE CREW Darin, Ps + E, Cole							
AUTHORIZED BY		JOB TYPE: C/W Longstring							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM/PM	TIME
27283	1						7-4	AM	2:00
33708	1					ARRIVED AT JOB	7-4	AM	5:00
20920	1					START OPERATION	7-4	AM	10:15
19960	1					FINISH OPERATION	7-4	AM	11:15
21010	1					RELEASED	7-4	AM	17:30
						MILES FROM STATION TO WELL	30		

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: Mark R. Kelly
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP105	AA2 Cement	SK	185		3,145.00
CP103	60/40 POZ	SK	50		600.00
CC105	C-41 P	Lb	44		176.00
CC111	SSI+	Lb	916		458.00
CC112	Cement Friction Reducer	Lb	53		318.00
CC115	C-44	Lb	174		896.10
CC129	FLD-322	Lb	87		652.50
CC201	Gilsonite	Lb	925		619.75
CF607	Logch Down Plus + Baffle 5 1/2 (Blue)	ES	1		400.00
CF1251	Auto Fill Floz shoe 5 1/2 (Blue)	ES	1		360.00
CF1651	Turbolizer 5 1/2 (Blue)	ES	10		1,100.00
CF2002	Cement Serschers Rotations Type	ES	12		600.00
CC151	Mud Flush	GSI	500		750.00
C704	Clymax KCL Substitute	GSI	5		175.00
E100	Unit Milesse Chsrse - Pickup	Mi	40		170.00
E101	Heavy Equipment Milesse	Mi	80		360.00
E113	Bulk Delivery	In/n	434		954.80
CE204	Depth Chsrse; 3001-4000	Hrs	1		2,160.00
CE240	Blending & Mixing Service Chsrse	SK	235		329.00

SUB TOTAL

CHEMICAL / ACID DATA:			

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

SERVICE REPRESENTATIVE <u>Darin Murkin</u>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <u>Mark R. Kelly</u> (WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)
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FIELD SERVICE ORDER NO. _____



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

FIELD SERVICE TICKET

~~1718 11011 A~~
CONTINUATION

DATE TICKET NO. 171811010 A

DATE OF JOB	7-4-2010	DISTRICT	Pratt, 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	Mullin Drilling Co. Inc			LEASE	JTT								WELL NO. 124		
ADDRESS				COUNTY	St Louis		STATE		KS						
CITY		STATE		SERVICE CREW		D Crin, Pst E., Cole									
AUTHORIZED BY				JOB TYPE:		CMU/Long string									

EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
						ARRIVED AT JOB				
						START OPERATION				
						FINISH OPERATION				
						RELEASED				
						MILES FROM STATION TO WELL				

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

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

SIGNED: *Mark Rollins*
(WELL/OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CE 501	CSS's Swivel Rents	ES	1		200.00
CE 504	Plus container utilization charge	Job	1		250.00
5003	Service Supervisory time 8 hrs on loc.	ES	1		175.00

CHEMICAL / ACID DATA:			

	SUB TOTAL	11,286.86
SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
	TOTAL	

SERVICE REPRESENTATIVE	<i>Darin Frank</i>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY:	<i>Mark Rollins</i>
FIELD SERVICE ORDER NO.		(WELL OWNER, OPERATOR CONTRACTOR OR AGENT)	

BASIC

energy services, L.P.

TREATMENT REPORT

Customer MURKIN Drilling Co. Inc	Lease No.	Date 7/4/2014
Lease JTT	Well # 1-24	
Field Order # 11010	Station P98+1, KS	Casing 5 1/2
Type Job CNU / Longstring	Depth 3889	County St Louis
	Formation TD-3900	State KS
		Legal Description 24-23-12

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 5 1/2	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
Depth 3889	Depth	From	To	Pre Pad	Max			5 Min.
Volume 90	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 3868	Packer Depth	From	To	Flush	Gas Volume			Total Load

Customer Representative	Station Manager Kevin Goreley	Treater Darin Franklin
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Service Units	27283	33708	20920	19960	21010				
Driver Names	Darin	Pgt E.	Pgt E.	COLE	COLE				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
5:00pm					On location / Safety meeting
					Run 88 Jts 5 1/2 Casing 17 ft - Series 3889
					Turbolizers - 1, 3, 5, 7, 9, 11, 13, 15, 17, 19
					D22 Cement - 10% SS+, .25% Defosmer
					.3% CFR, 1% Gss Block, .5% FLA 322
					5415K G. Isonite 15.0 PPG, 1.43 Voids, w/c, 5.94
					Pipe on bottom & break circulation
10:15pm	200		3		Pump 3 bbls water
	200		12		12 bbls mud flush
	200		3		3 bbls water
	200		47		mix 185x cement
					Shut down
					Wash pump & lines
					Release plug
	100		0	5	Start Displacement
	400		65	5	Lift Pressure
	300		80	3	Slow Rate
11:15pm	1500		88	3	Bump Plug
					Flow
	100		12	3	Plug Rate half & mouse hole
11:45pm					Job Complete / Darin & Crew

- 7/3/14 Depth 3770'. Cut 10'. DT: none. CT: 23¾ hrs. Dev.: none. **DST #6 3750-3760' (Arb):** 30-60-60-90. IFP: BOB in 3". ISIP: wk surf blow died, FFP: BOB in 5", FSIP: no blow, REC: 60' GIP, 1925' GCO (15%G, 85%O - 40 Gr), 120' SGM&WCO (10%G, 20%M, 25 %W, 45%O), CHL: 24000 ppm, Sys: 6400 ppm, HSP: 1940-1892, FP: 137/379, 374/701, SIP: 1290-1294, BHT: 116°. **CFS @ 3770' Arb - dolo:** tan, lt grey, mostly fn- some medxtln, few pcs rhombic or sucrosic in part, sli ool/ooc, pr ooc & vuggy por, pr - some fr interxtln por, pr-fr st w/ scat sat, S- FS ppts FO (under fluor), ft odor, few pcs chert wh, lt grey, fresh, opaque, few pcs wh chalk. **DST #7 3760-3770 (Arb):** 30-60-60-90, IFP: 1" blow bldg to 9", FFP: surf blow bldg to 8". Rec.: 60'OMCW (5%O, 20%M, 75%W), 320'OMCW (1%O, 4%M, 95%W). HP: 1906-1878. FP: 18/131, 134/206. SIP: 1222-1160. BHT: 115°.
- 7/4/14 RTD 3900'. Cut 130'. DT: None. CT: 20½ hrs. Dev.: ½° @ 3900'. HC @ 3:00PM 7/3. Pioneer logged 6:15PM – 11:00PM 7/3. LTD: 3900'. Run 5 ½".
- 7/5/14 RTD: 3900'. CT: 4 ¾ hrs. Ran 89jts of 17# 5½" prod csg, set @ 3889'. B-E cmt w/185sxs of AA-2. PD @ 11:45PM. 30sxs RH, 20sxs MH. RR @ 3:45PM 7/4.
 FINAL REPORT

MDCI JTT #1-24 330' FNL 1700' FEL Sec. 24-23S-12W 1857' KB							U M C Petro Corp Russell #1 500FSL 1700FEL Sec. 13-T23S-R12W 1848' KB	
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	620	+1237	-1	620	+1237	-1	610	+1238
B/Anhydrite	640	+1217	-10	640	+1217	-10	621	+1227
Stotler				2568	-711	-3	2556	-708
Topeka	2805	-949	-3	2808	-952	-6	2794	-946
Heebner	3186	-1330	-7	3185	-1329	-5	3172	-1324
Lansing	3331	-1474	-8	3330	-1473	-7	3314	-1466
Stark	3548	-1691	-7	3547	-1690	-6	3532	-1684
BKC	3608	-1751	-7	3607	-1750	-6	3592	-1744
Viola	3629	-1772	-6	3627	-1770	-4	3614	-1766
Simpson				3684	-1827	-2	3673	-1825
Arbuckle	3736	-1879	+3	3734	-1877	+5	3730	-1882
RTD	3900						3746	
LTD				3900				