

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1243389
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: _____

1243389

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. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</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	Fikan 1-5
Doc ID	1243389

All Electric Logs Run

DIL
DUCP
MEL
BHCS



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Bob Stolzle

Fikan #1-5

5-4s-35w Rawlins KS

Start Date: 2014.12.06 @ 18:05:00

End Date: 2014.12.07 @ 02:09:45

Job Ticket #: 60828 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 15:10:19



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60828

DST#: 1

ATTN: Bob Stolzle

Test Start: 2014.12.06 @ 18:05:00

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:50:00

Time Test Ended: 02:09:45

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 83

Interval: 4137.00 ft (KB) To 4205.00 ft (KB) (TVD)

Reference Elevations: 3272.00 ft (KB)

Total Depth: 4205.00 ft (KB) (TVD)

3267.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8791

Inside

Press@RunDepth: 19.32 psig @ 4138.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.06

End Date:

2014.12.07

Last Calib.:

2014.12.07

Start Time:

18:05:05

End Time:

02:09:44

Time On Btm:

2014.12.06 @ 20:49:45

Time Off Btm:

2014.12.06 @ 23:52:00

TEST COMMENT:

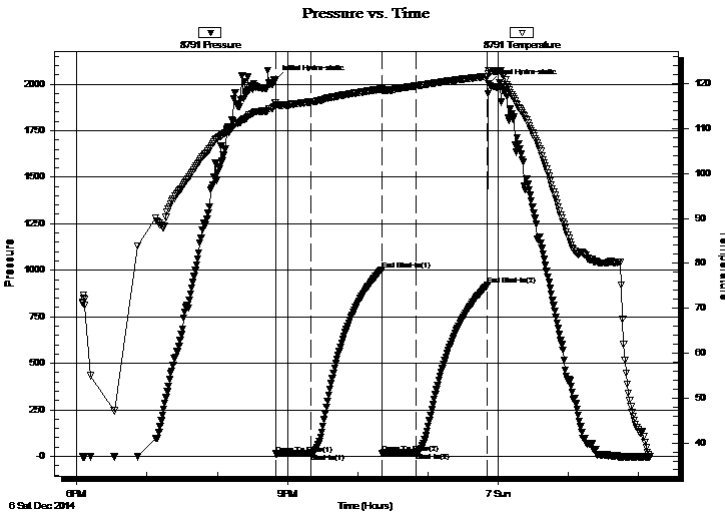
30 - IF: Blow built to 1/2"

60 - IS: No blow back

30 - FF: Surface blow at open, dead at 10 min., weak surface blow last few min. of open

60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2023.31	115.84	Initial Hydro-static
1	13.53	114.88	Open To Flow (1)
31	15.82	116.04	Shut-In(1)
91	1002.40	118.86	End Shut-In(1)
92	17.78	118.45	Open To Flow (2)
121	19.32	119.56	Shut-In(2)
181	919.82	121.68	End Shut-In(2)
183	2002.06	123.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100%	0.07
0.00	Oil spots in tool	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60828

DST#: 1

ATTN: Bob Stolzle

Test Start: 2014.12.06 @ 18:05:00

Tool Information

Drill Pipe:	Length: 3949.00 ft	Diameter: 3.80 inches	Volume: 55.39 bbl	Tool Weight: 2500.00 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 56.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4137.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4114.00	
Hydraulic tool	5.00			4119.00	
Jars	5.00			4124.00	
Safety Joint	3.00			4127.00	
Packer	5.00			4132.00	28.00 Bottom Of Top Packer
Packer	5.00			4137.00	
Stubb	1.00			4138.00	
Recorder	0.00	8791	Inside	4138.00	
Recorder	0.00	8366	Outside	4138.00	
Perforations	30.00			4168.00	
Blank Spacing	34.00			4202.00	
Bullnose	3.00			4205.00	68.00 Bottom Packers & Anchor

Total Tool Length: 96.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60828

DST#: 1

ATTN: Bob Stolzle

Test Start: 2014.12.06 @ 18:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.95 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud 100%	0.074
0.00	Oil spots in tool	0.000

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

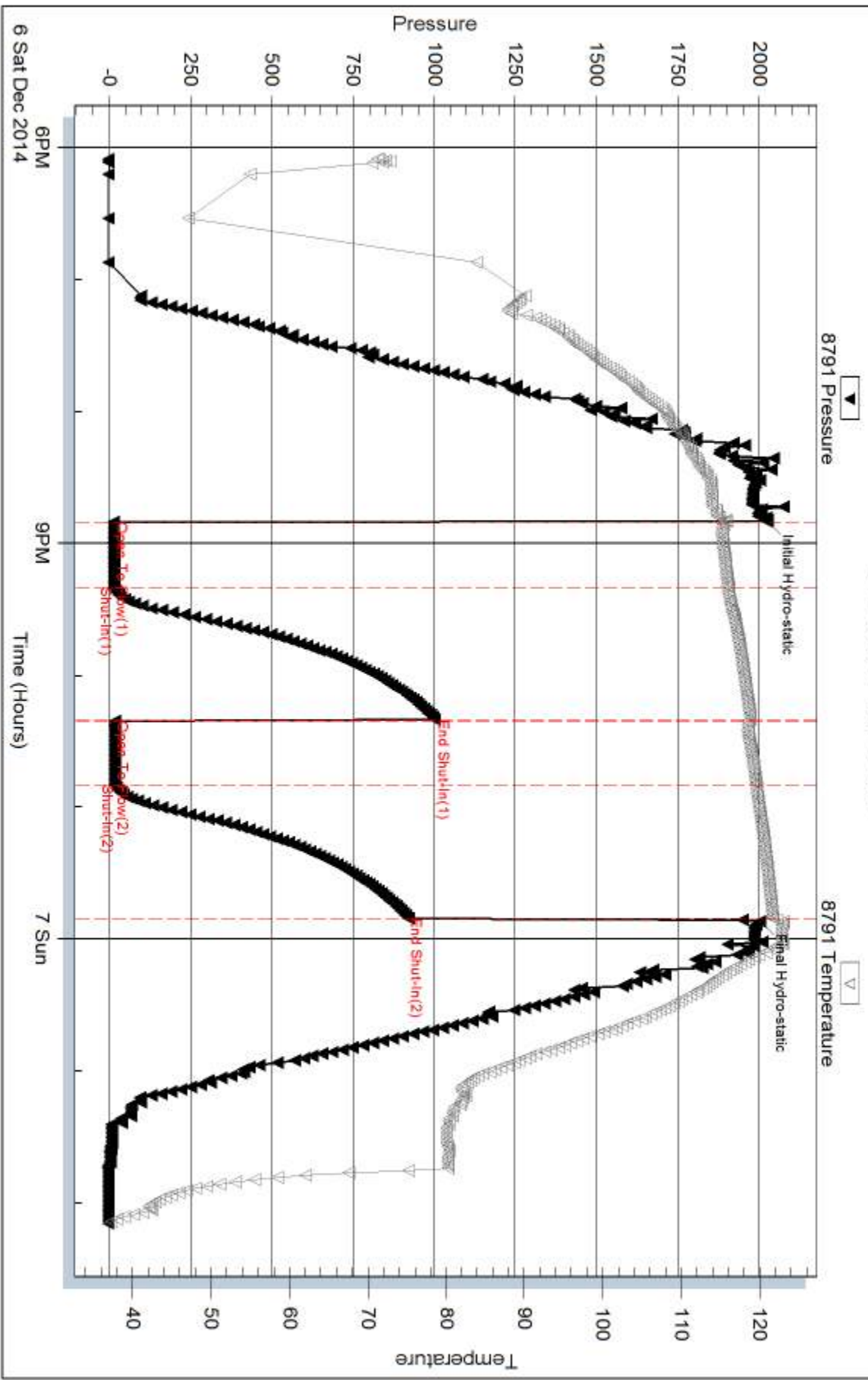
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

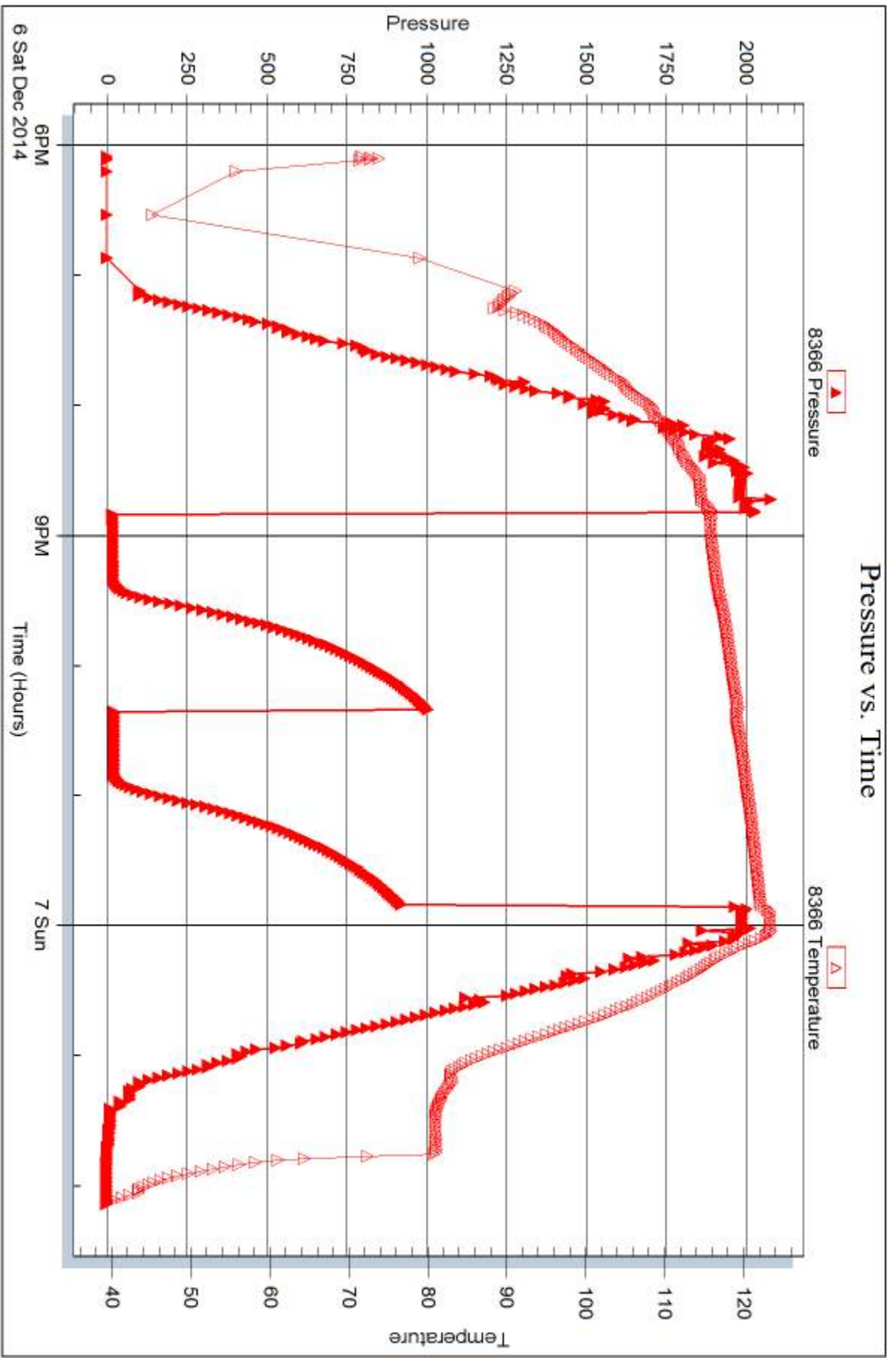


Serial #: 8366

Outside Murfin Drilling Co., Inc.

Fikan #1-5

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60828

Printed: 2014, 12, 12 @ 15:10:20



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Bob Stolze

Fikan #1-5

5-4s-35w Rawlins KS

Start Date: 2014.12.07 @ 14:15:00

End Date: 2014.12.07 @ 21:45:45

Job Ticket #: 60829 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 15:09:52



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60829

DST#: 2

ATTN: Bob Stolzle

Test Start: 2014.12.07 @ 14:15:00

GENERAL INFORMATION:

Formation: **LKC "D - F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:33:15
 Time Test Ended: 21:45:45
 Interval: **4202.00 ft (KB) To 4285.00 ft (KB) (TVD)**
 Total Depth: 4285.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3272.00 ft (KB)
 3267.00 ft (CF)
 KB to GR/CF: 5.00 ft

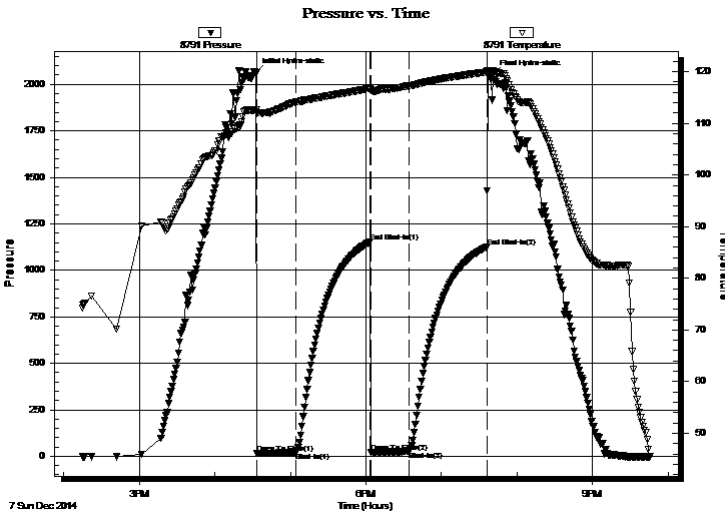
Serial #: 8791

Inside

Press@RunDepth: 25.67 psig @ 4203.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.12.07 End Date: 2014.12.07 Last Calib.: 2014.12.07
 Start Time: 14:15:05 End Time: 21:45:44 Time On Btm: 2014.12.07 @ 16:32:45
 Time Off Btm: 2014.12.07 @ 19:40:45

TEST COMMENT: 30 - IF: 1/8" Blow at open, blow stayed at 1/8" throughout open
 60 - IS: No blow back
 30 - FF: No blow
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2061.47	112.59	Initial Hydro-static
1	14.86	112.06	Open To Flow (1)
32	19.68	114.10	Shut-In(1)
91	1153.25	116.75	End Shut-In(1)
92	21.50	116.41	Open To Flow (2)
122	25.67	117.28	Shut-In(2)
184	1125.90	119.95	End Shut-In(2)
188	2053.06	120.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100%	0.05
0.00	Oil spots in tool	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60829

DST#: 2

ATTN: Bob Stolzle

Test Start: 2014.12.07 @ 14:15:00

Tool Information

Drill Pipe:	Length: 4012.00 ft	Diameter: 3.80 inches	Volume: 56.28 bbl	Tool Weight: 2500.00 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 57.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4202.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	83.00 ft			
Tool Length:	111.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4179.00	
Hydraulic tool	5.00			4184.00	
Jars	5.00			4189.00	
Safety Joint	3.00			4192.00	
Packer	5.00			4197.00	28.00 Bottom Of Top Packer
Packer	5.00			4202.00	
Stubb	1.00			4203.00	
Recorder	0.00	8791	Inside	4203.00	
Recorder	0.00	8366	Outside	4203.00	
Perforations	14.00			4217.00	
Blank Spacing	65.00			4282.00	
Bullnose	3.00			4285.00	83.00 Bottom Packers & Anchor

Total Tool Length: 111.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60829

DST#: 2

ATTN: Bob Stolzle

Test Start: 2014.12.07 @ 14:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100%	0.049
0.00	Oil spots in tool	0.000

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

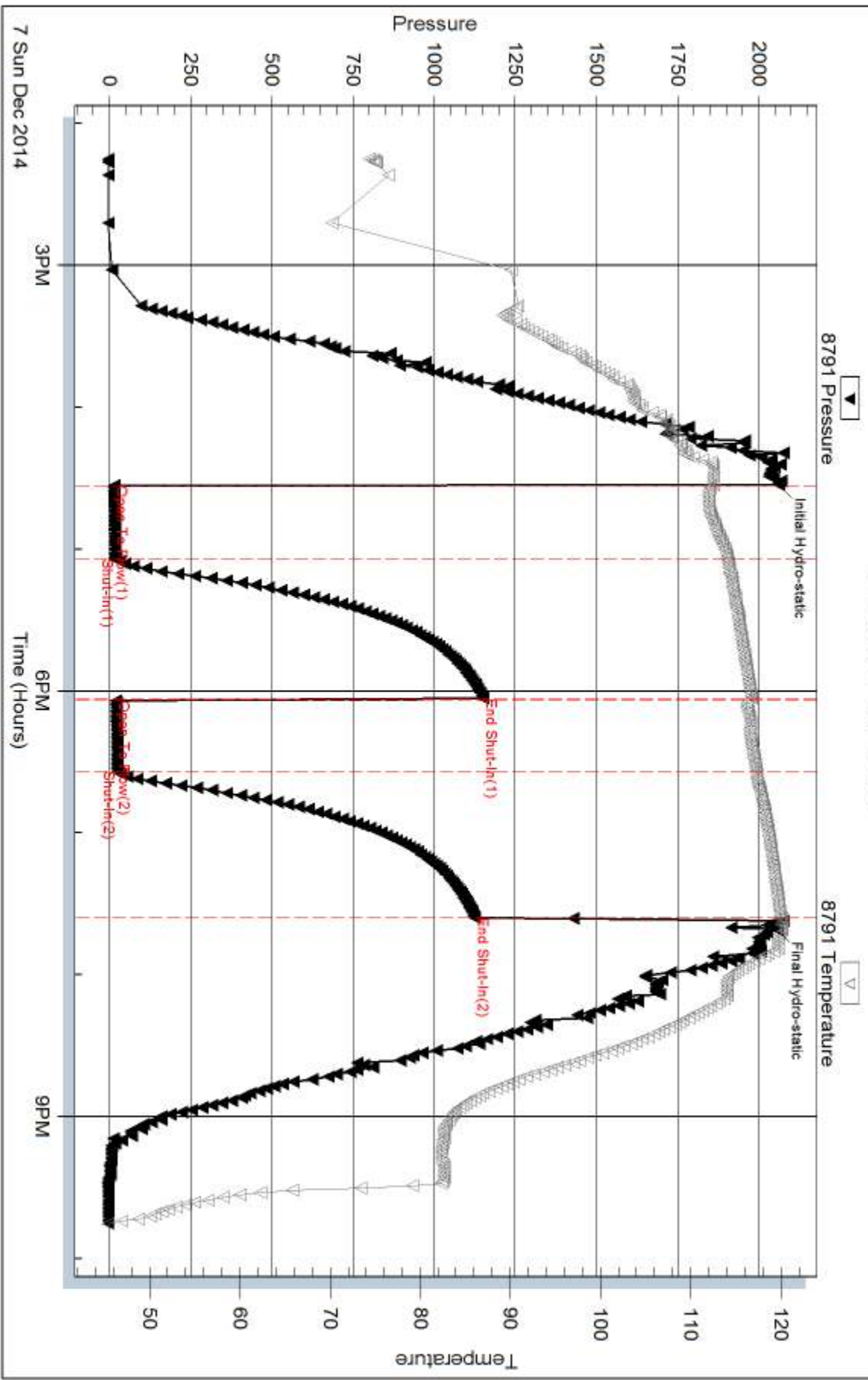
Serial #:

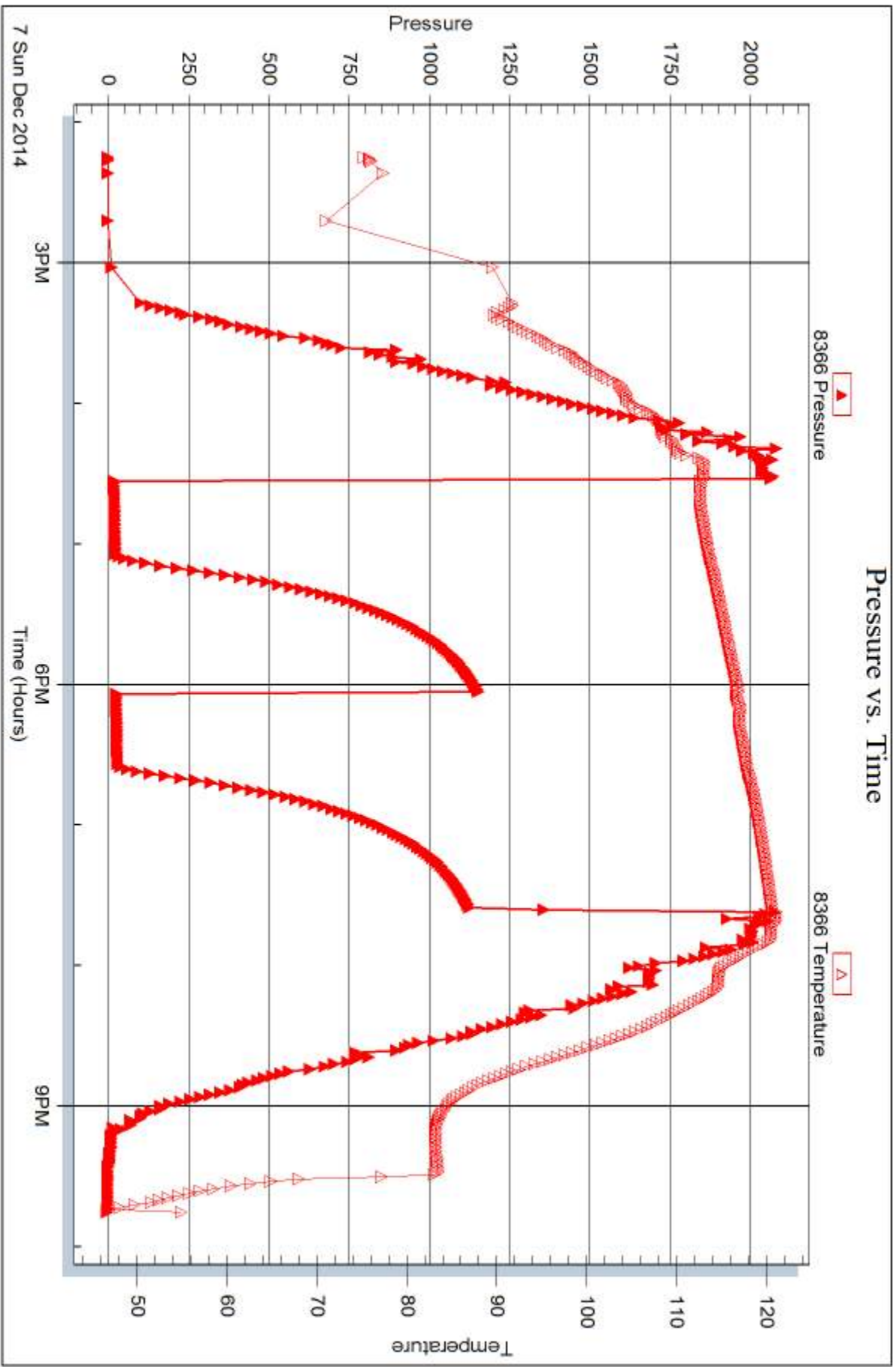
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Bob Stolze

Fikan #1-5

5-4s-35w Rawlins KS

Start Date: 2014.12.08 @ 18:02:00

End Date: 2014.12.09 @ 02:52:45

Job Ticket #: 60830 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 15:09:30



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60830

DST#: 3

ATTN: Bob Stolzle

Test Start: 2014.12.08 @ 18:02:00

GENERAL INFORMATION:

Formation: **LKC "G - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:49:45

Time Test Ended: 02:52:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4256.00 ft (KB) To 4445.00 ft (KB) (TVD)

Reference Elevations: 3272.00 ft (KB)

Total Depth: 4445.00 ft (KB) (TVD)

3267.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8791

Inside

Press@RunDepth: 450.11 psig @ 4257.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.08

End Date:

2014.12.09

Last Calib.:

2014.12.09

Start Time:

18:02:05

End Time:

02:52:45

Time On Btm:

2014.12.08 @ 20:49:30

Time Off Btm:

2014.12.08 @ 23:51:00

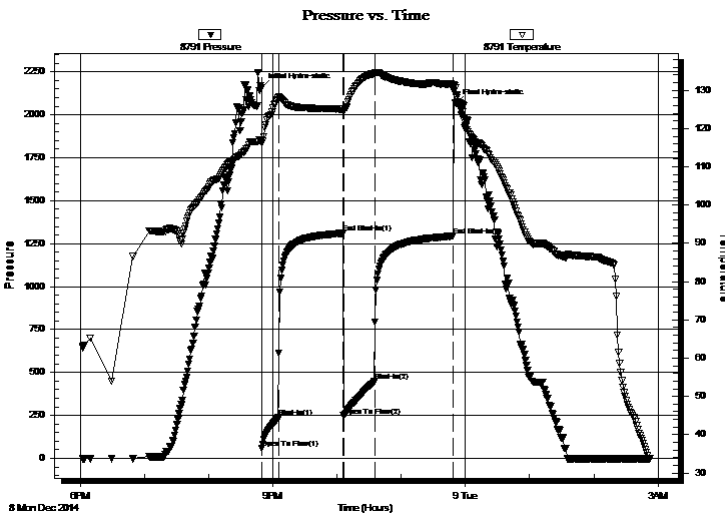
TEST COMMENT: 15 - IF: Blow built to BOB (11") in 4 min.

60 - IS: No blow back

30 - FF: Blow built to BOB in 5 min.

60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2156.69	117.16	Initial Hydro-static
1	59.67	116.29	Open To Flow (1)
16	237.45	128.02	Shut-In(1)
76	1309.96	125.09	End Shut-In(1)
77	247.78	124.68	Open To Flow (2)
106	450.11	134.36	Shut-In(2)
179	1294.35	131.52	End Shut-In(2)
182	2064.85	130.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
444.00	MCW 86%w, 14%m	4.53
440.00	Watery Mud 60%m, 40%w	6.17
62.00	WCM 85%m, 15%w	0.87

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60830

DST#: 3

ATTN: Bob Stolzle

Test Start: 2014.12.08 @ 18:02:00

Tool Information

Drill Pipe:	Length: 4076.00 ft	Diameter: 3.80 inches	Volume: 57.18 bbl	Tool Weight: 2500.00 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 58.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4256.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	189.00 ft			
Tool Length:	217.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4233.00	
Hydraulic tool	5.00			4238.00	
Jars	5.00			4243.00	
Safety Joint	3.00			4246.00	
Packer	5.00			4251.00	28.00 Bottom Of Top Packer
Packer	5.00			4256.00	
Stubb	1.00			4257.00	
Recorder	0.00	8791	Inside	4257.00	
Recorder	0.00	8366	Outside	4257.00	
Perforations	20.00			4277.00	
Blank Spacing	160.00			4437.00	
Perforations	5.00			4442.00	
Bullnose	3.00			4445.00	189.00 Bottom Packers & Anchor

Total Tool Length: 217.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60830

DST#: 3

ATTN: Bob Stolzle

Test Start: 2014.12.08 @ 18:02:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

60000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
444.00	MCW 86%w , 14%m	4.534
440.00	Watery Mud 60%m, 40%w	6.172
62.00	WCM 85%m, 15%w	0.870

Total Length: 946.00 ft Total Volume: 11.576 bbl

Num Fluid Samples: 0

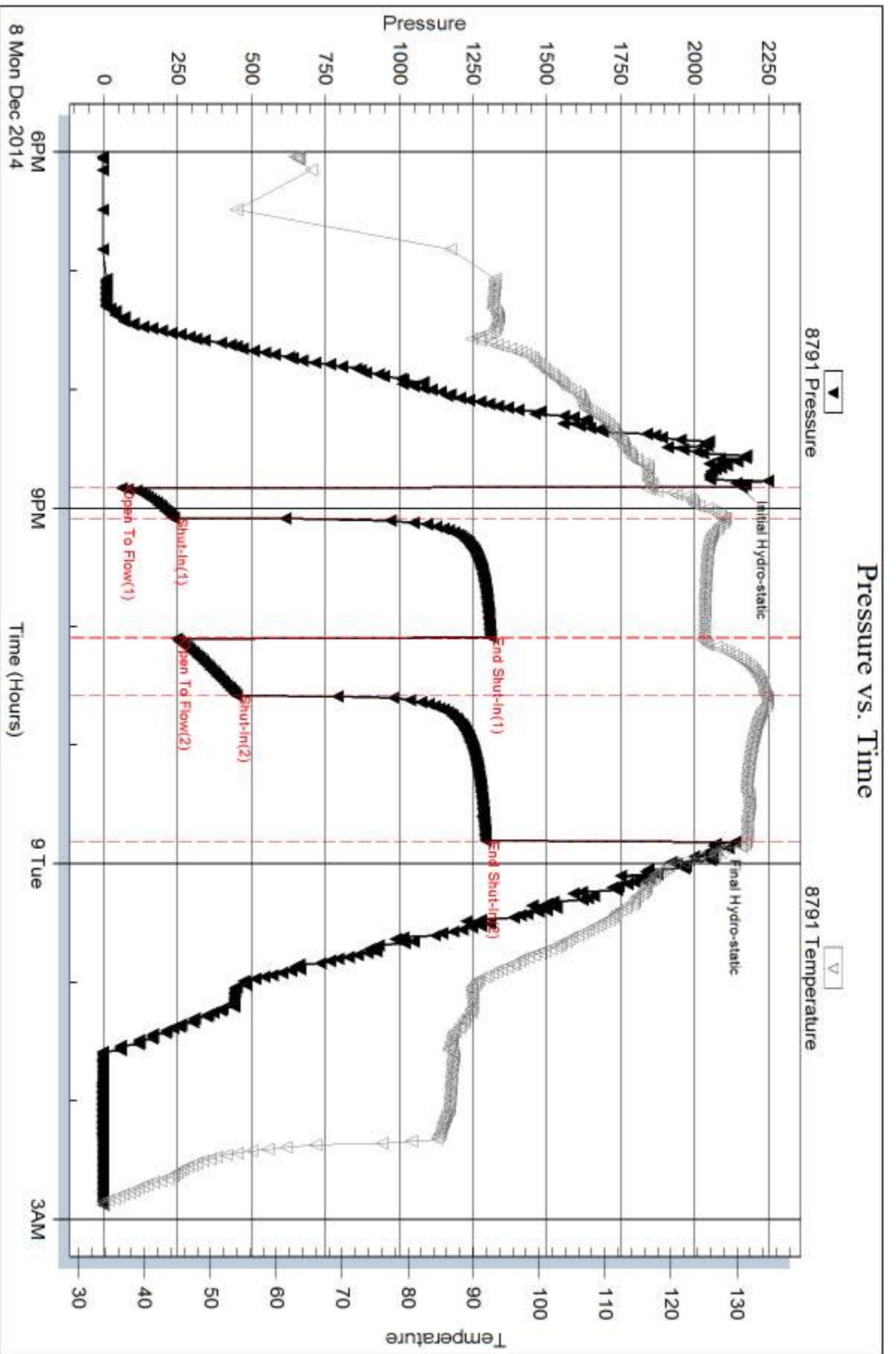
Num Gas Bombs: 0

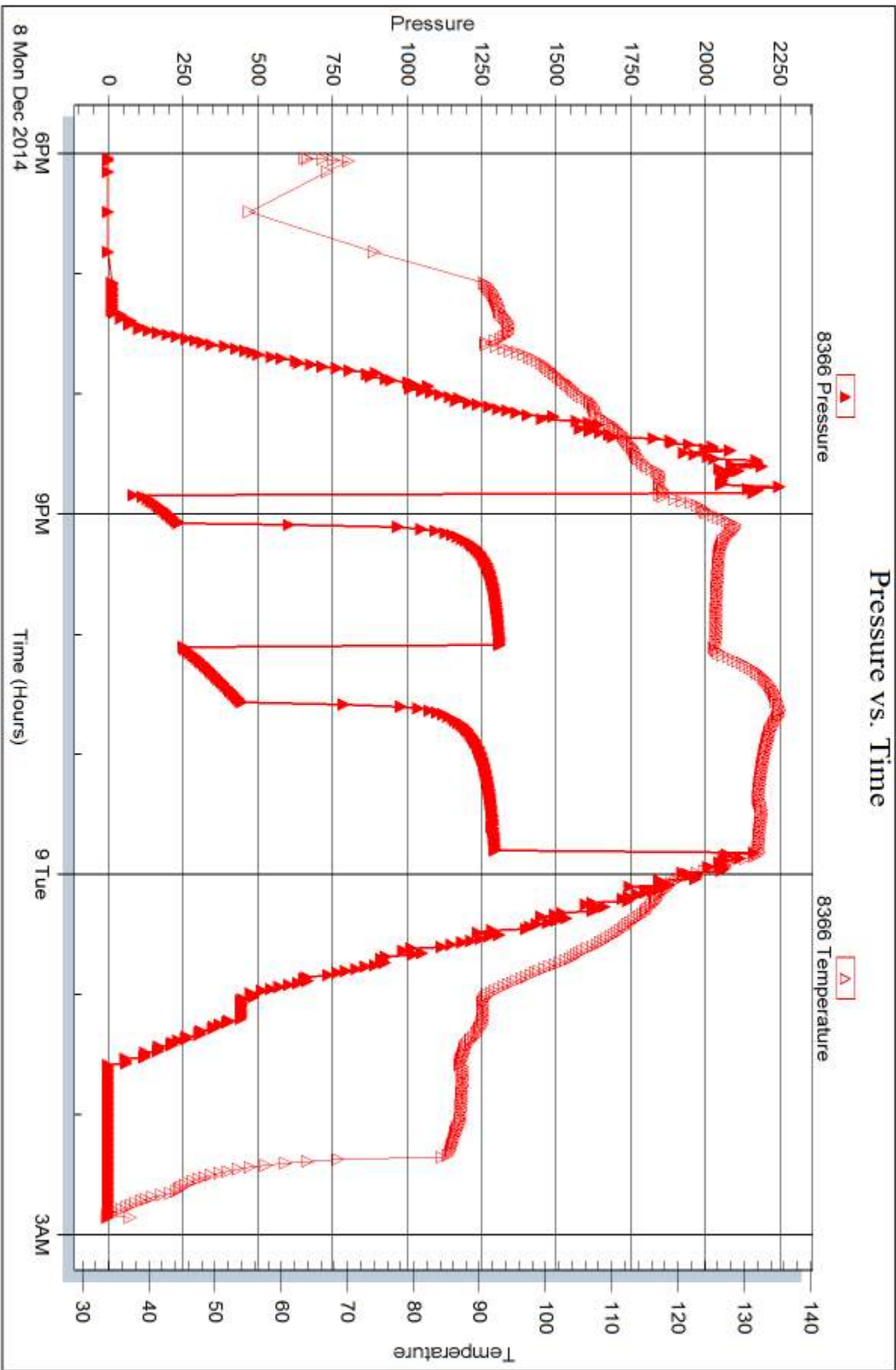
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .240 ohms @ 37.3 deg F Chlorides = 60,000 ppm







DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Bob Stolzle

Fikan #1-5

5-4s-35w Rawlins KS

Start Date: 2014.12.10 @ 03:44:00

End Date: 2014.12.10 @ 12:08:30

Job Ticket #: 60831 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 15:09:06

Murfin Drilling Co., Inc.
5-4s-35w Rawlins KS
Fikan #1-5
DST # 4
Pawnee
2014.12.10



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60831

DST#: 4

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 03:44:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:30:30

Time Test Ended: 12:08:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4538.00 ft (KB) To 4620.00 ft (KB) (TVD)

Reference Elevations: 3272.00 ft (KB)

Total Depth: 4620.00 ft (KB) (TVD)

3267.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8791 Inside

Press@RunDepth: 54.78 psig @ 4539.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.10 End Date: 2014.12.10

Last Calib.: 2014.12.10

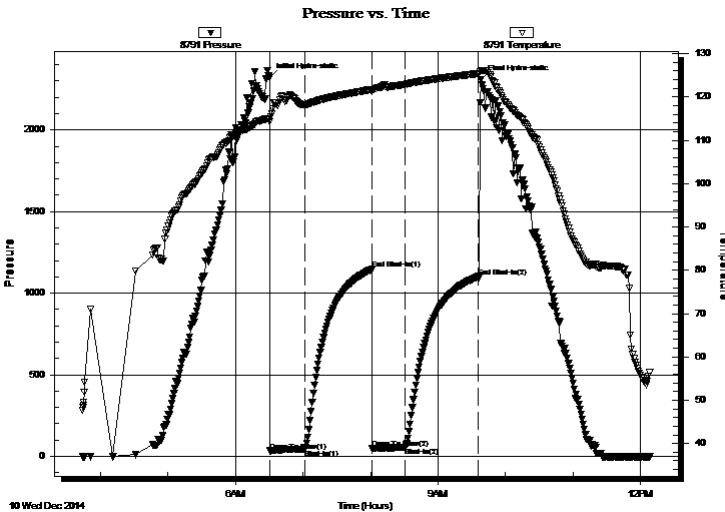
Start Time: 03:44:05 End Time: 12:08:29

Time On Btm: 2014.12.10 @ 06:30:15

Time Off Btm: 2014.12.10 @ 09:38:15

TEST COMMENT: 30 - IF: Blow built 1 1/2"
60 - ISI: No Blow back
30 - ISI: Blow built to 1/8", died back, dead at close
60 - FSI: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2319.59	115.08	Initial Hydro-static
1	33.49	114.24	Open To Flow (1)
32	44.35	118.20	Shut-In(1)
91	1145.89	121.73	End Shut-In(1)
92	47.27	121.18	Open To Flow (2)
121	54.78	122.91	Shut-In(2)
186	1101.76	125.42	End Shut-In(2)
188	2308.97	126.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Mud 100%	0.34

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60831

DST#: 4

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 03:44:00

Tool Information

Drill Pipe:	Length: 4329.00 ft	Diameter: 3.80 inches	Volume: 60.72 bbl	Tool Weight: 2500.00 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 61.63 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4538.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	82.00 ft			
Tool Length:	110.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			4515.00	
Hydraulic tool	5.00			4520.00	
Jars	5.00			4525.00	
Safety Joint	3.00			4528.00	
Packer	5.00			4533.00	28.00 Bottom Of Top Packer
Packer	5.00			4538.00	
Stubb	1.00			4539.00	
Recorder	0.00	8791	Inside	4539.00	
Recorder	0.00	8366	Outside	4539.00	
Perforations	13.00			4552.00	
Blank Spacing	65.00			4617.00	
Bullnose	3.00			4620.00	82.00 Bottom Packers & Anchor

Total Tool Length: 110.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60831

DST#: 4

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 03:44:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Mud 100%	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

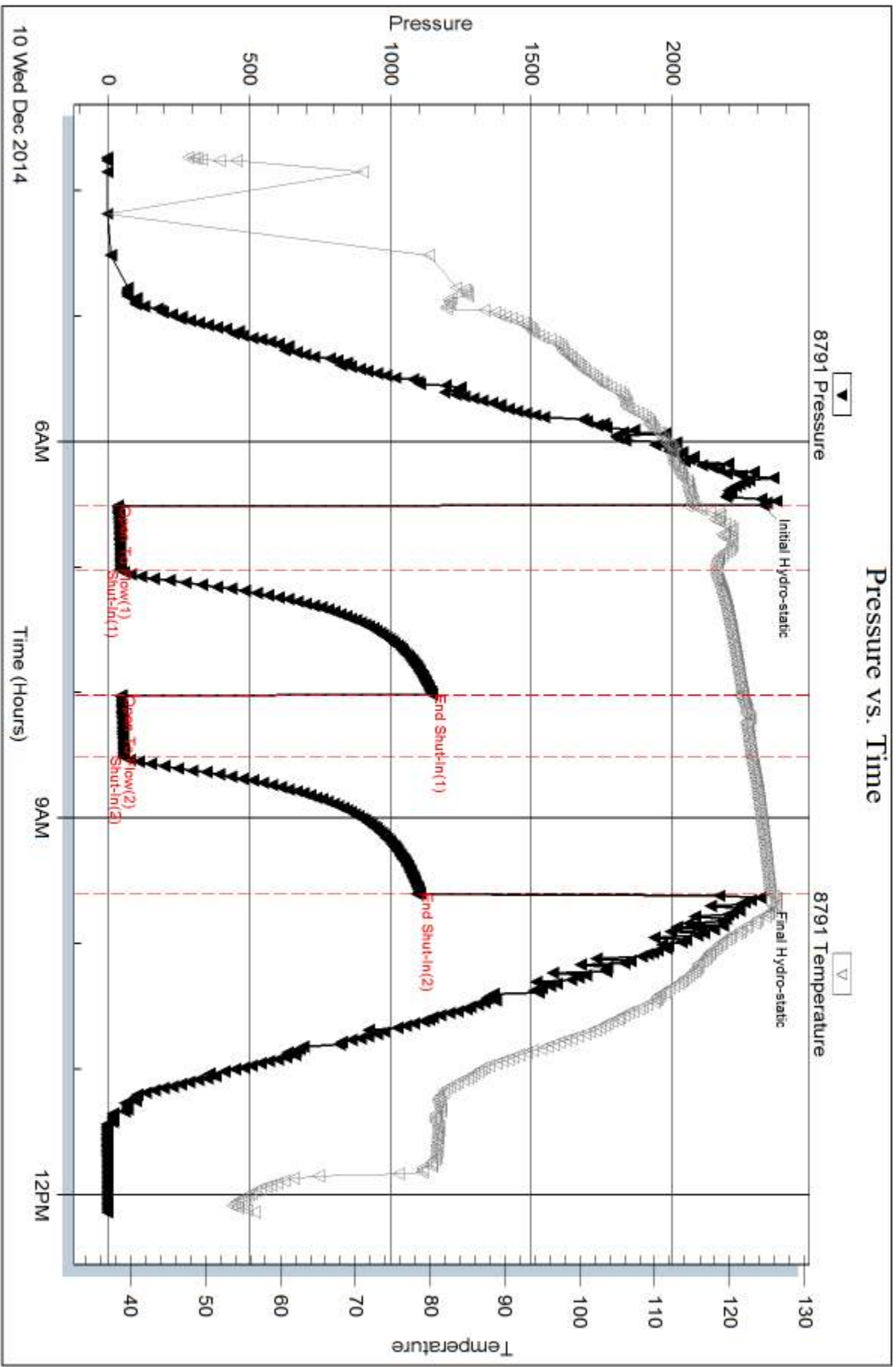
Num Gas Bombs: 0

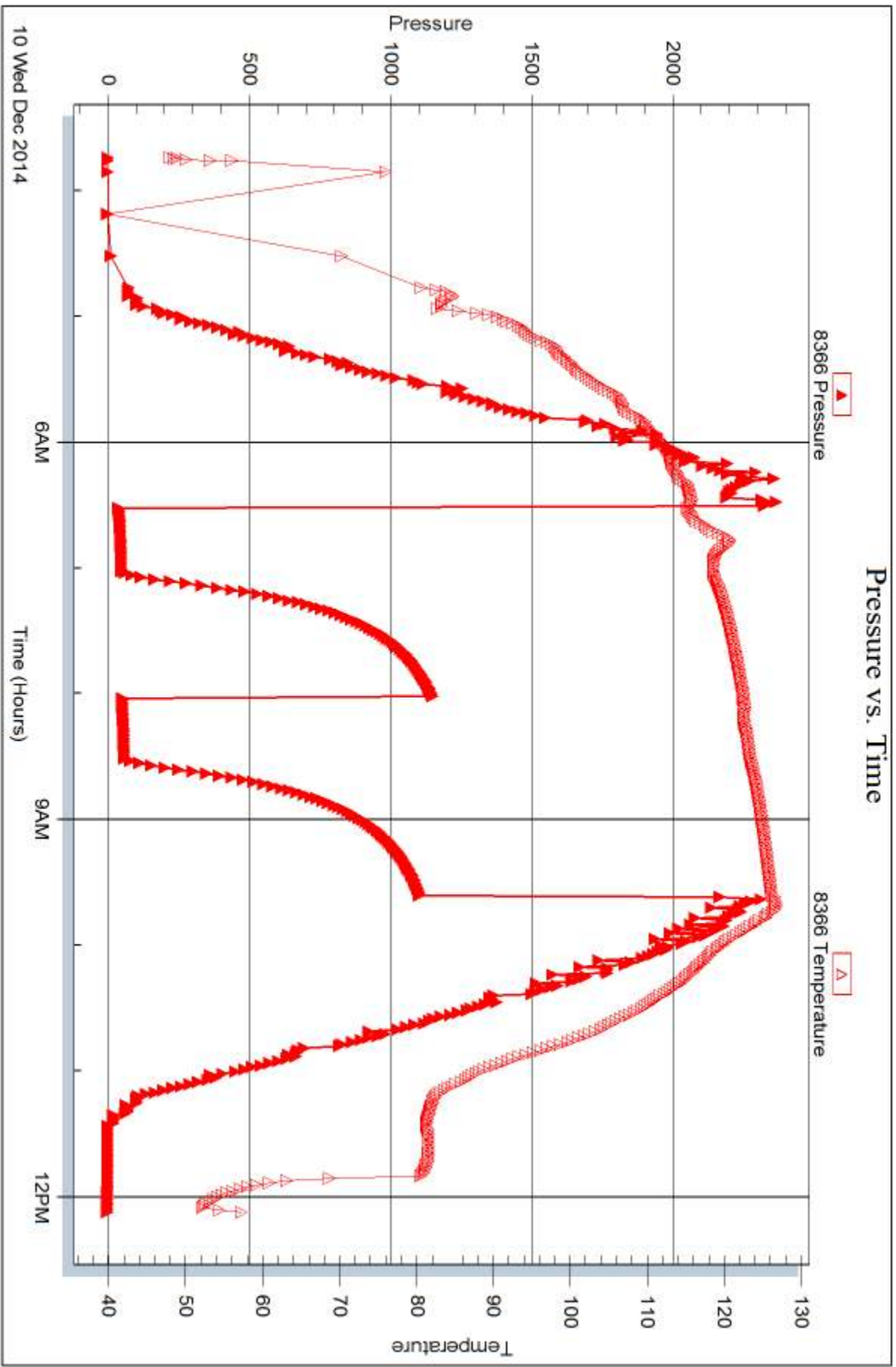
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Bob Stolzle

Fikan #1-5

5-4s-35w Rawlins KS

Start Date: 2014.12.10 @ 23:06:00

End Date: 2014.12.11 @ 07:30:45

Job Ticket #: 60832 DST #: 5

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 15:08:27



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60832

DST#: 5

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 23:06:00

GENERAL INFORMATION:

Formation: **Verdigris**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:45:30

Time Test Ended: 07:30:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4610.00 ft (KB) To 4670.00 ft (KB) (TVD)

Reference Elevations: 3272.00 ft (KB)

Total Depth: 4670.00 ft (KB) (TVD)

3267.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8791

Inside

Press@RunDepth: 19.40 psig @ 4611.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.10

End Date:

2014.12.11

Last Calib.:

2014.12.11

Start Time: 23:06:05

End Time:

07:30:44

Time On Btm:

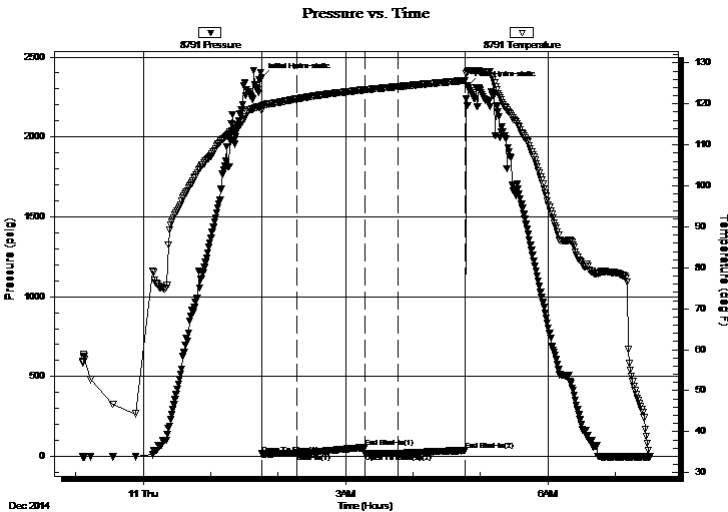
2014.12.11 @ 01:45:15

Time Off Btm:

2014.12.11 @ 04:48:30

TEST COMMENT: 30 - IF: Blow built to 1"
60 - ISI: No blow back
30 - FF: Surface blow at open, dead at 6 min.
60 - FSI: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2373.32	119.46	Initial Hydro-static
1	15.38	118.39	Open To Flow (1)
31	17.54	121.19	Shut-In(1)
92	56.20	123.45	End Shut-In(1)
92	17.79	123.43	Open To Flow (2)
121	19.40	124.20	Shut-In(2)
181	37.00	125.72	End Shut-In(2)
184	2319.22	127.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60832

DST#: 5

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 23:06:00

Tool Information

Drill Pipe:	Length: 4422.00 ft	Diameter: 3.80 inches	Volume: 62.03 bbl	Tool Weight: 2500.00 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 62.94 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4610.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	88.00 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			4587.00	
Hydraulic tool	5.00			4592.00	
Jars	5.00			4597.00	
Safety Joint	3.00			4600.00	
Packer	5.00			4605.00	28.00 Bottom Of Top Packer
Packer	5.00			4610.00	
Stubb	1.00			4611.00	
Recorder	0.00	8791	Inside	4611.00	
Recorder	0.00	8366	Outside	4611.00	
Perforations	22.00			4633.00	
Blank Spacing	34.00			4667.00	
Bullnose	3.00			4670.00	60.00 Bottom Packers & Anchor

Total Tool Length: 88.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

5-4s-35w Rawlins KS

250 N. Water STE 300
Wichita, KS 67202

Fikan #1-5

Job Ticket: 60832

DST#: 5

ATTN: Bob Stolzle

Test Start: 2014.12.10 @ 23:06:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

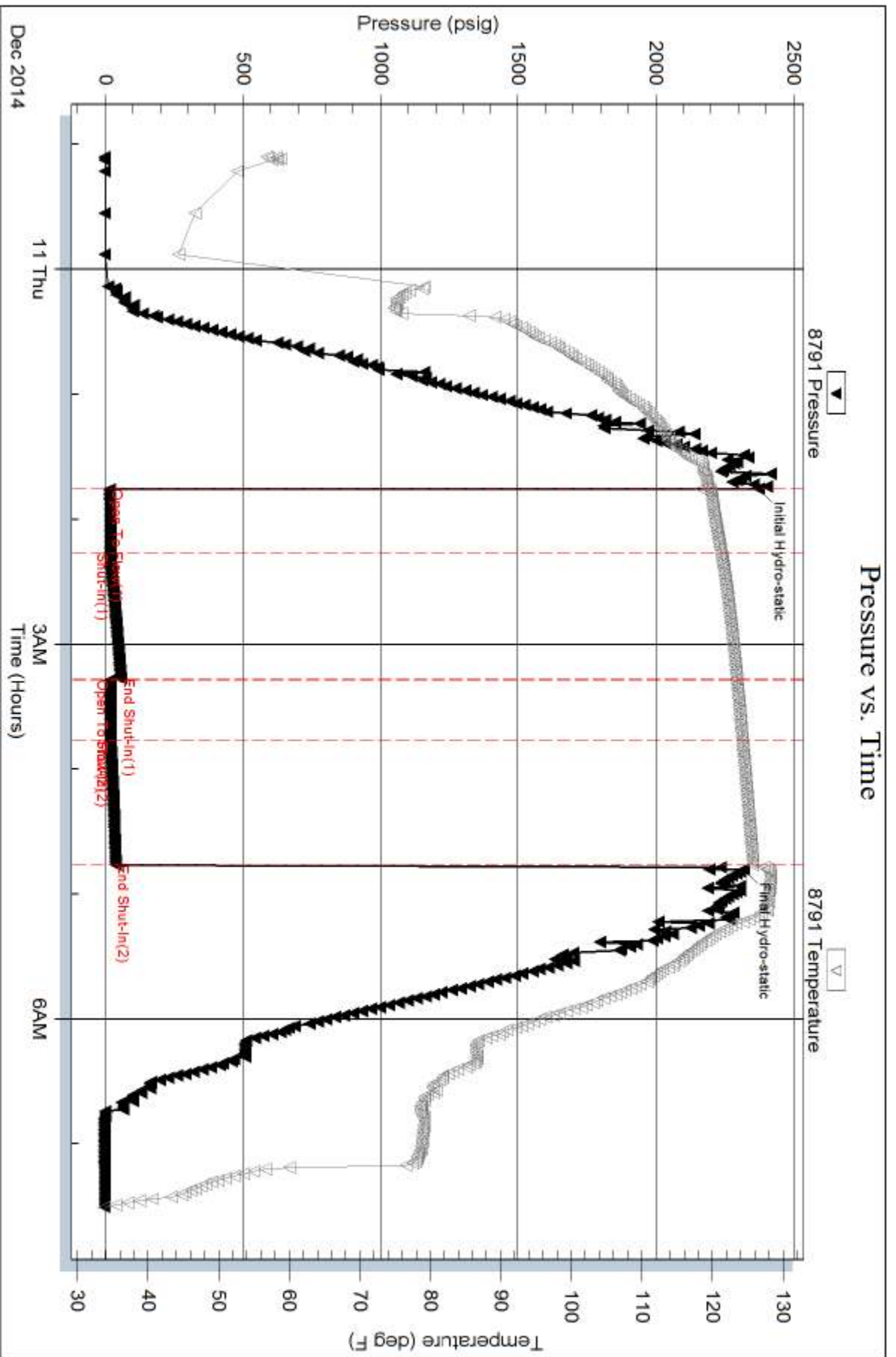
Num Gas Bombs: 0

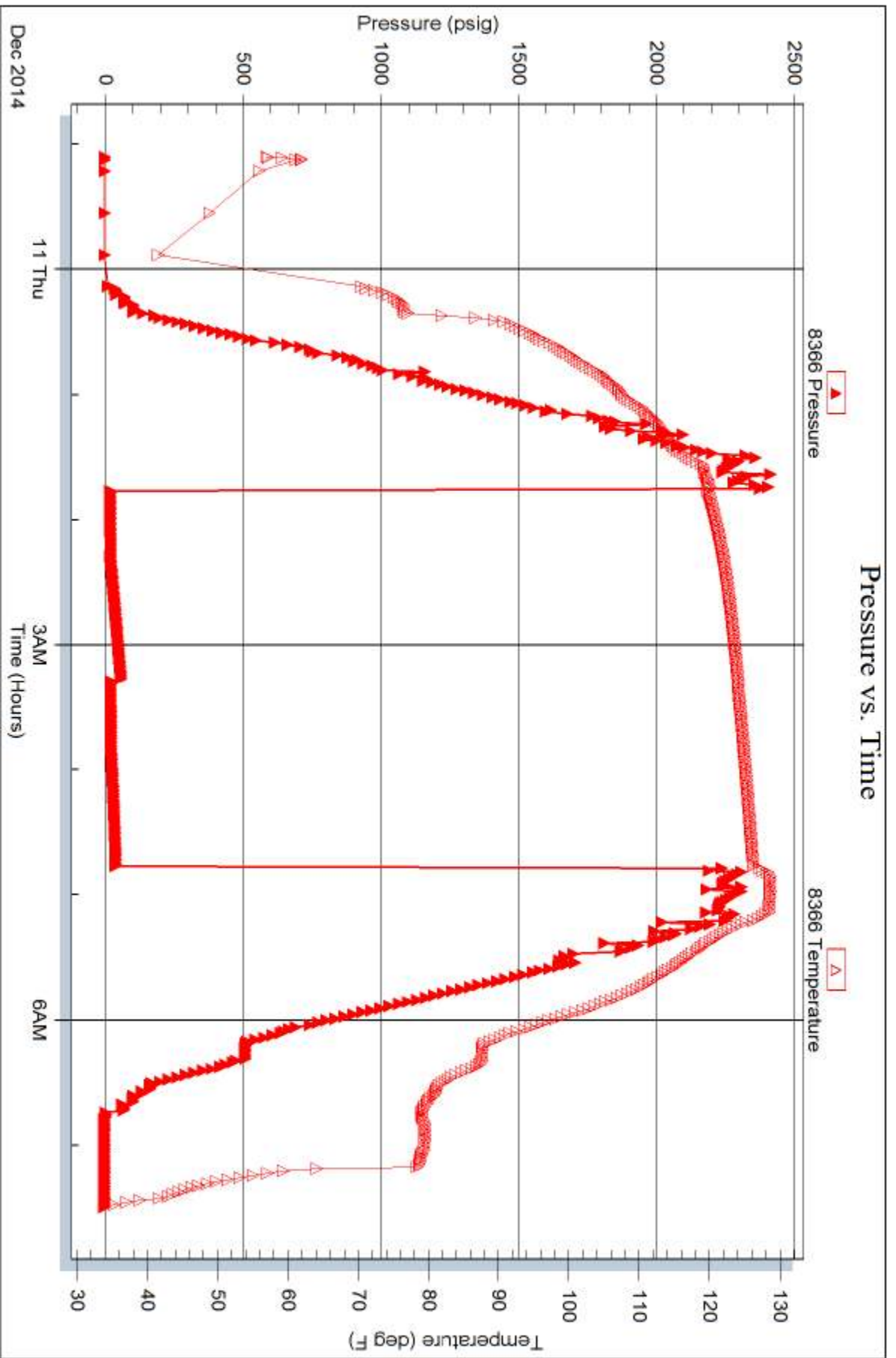
Serial #:

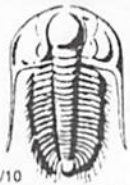
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **60828**

Well Name & No. Fikan #1-5 Test No. 1 Date 12-6-14
 Company Murfin Drilling Co. Inc Elevation 3272 KB 3267 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Bob Stolzle Rig Murfin #8
 Location: Sec. 5 Twp. 4s Rge. 35w Co. Rawlins State KS

Interval Tested 4137-4205 Zone Tested LKC "A"
 Anchor Length 68 Drill Pipe Run 3949 Mud Wt. 8.9
 Top Packer Depth 4132 Drill Collars Run 186 Vis 55
 Bottom Packer Depth 4137 Wt. Pipe Run - WL 6.0
 Total Depth 4205 Chlorides 2400 ppm System LCM 3

Blow Description IF: Blow built to 1/2"
ISI: No blowback
FF: Surface blow at open, dead at 10min., ~~and~~ weak surface blow last few minutes of open
FSI: No blowback

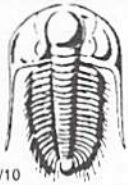
Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>mud</u>				<u>100%</u>
	<u>Oil spots in tool</u>				

Rec Total 15 BHT 122 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2023 Test 1250 T-On Location 17:15 12/6
 (B) First Initial Flow 14 Jars 250 T-Started 18:05
 (C) First Final Flow 16 Safety Joint 75 T-Open 20:50
 (D) Initial Shut-In 1002 Circ Sub _____ T-Pulled 23:50
 (E) Second Initial Flow 18 Hourly Standby _____ T-Out 2:05 12/7
 (F) Second Final Flow 19 Mileage 90RT 139.50 Comments _____
 (G) Final Shut-In 920 Sampler _____
 (H) Final Hydrostatic 2002 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1714.50
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1714.50

Approved By _____ Our Representative James Winder

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. **60829**

4/10

Well Name & No. Fi Kan #1-5 Test No. 2 Date 12-7-14
 Company Murfin Drilling Co. Inc. Elevation 3272 KB 3267 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Bob Stolze Rig Murfin #8
 Location: Sec. 5 Twp. 4s Rge. 35w Co. Rawlins State KS

Interval Tested 4202 - 4285 Zone Tested LKC "D-F"
 Anchor Length 83 Drill Pipe Run 4012 Mud Wt. ~~8.9~~ 9.1
 Top Packer Depth 4197 Drill Collars Run 186 Vis ~~55~~ 56
 Bottom Packer Depth 4202 Wt. Pipe Run - WL 6.4
 Total Depth 4285 Chlorides 2600 ppm System LCM 2
 Blow Description IF: 1/8" + Blow at open, blow stayed at 1/8" throughout open
ISI: No blowback
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>mud</u>				<u>100</u>
	<u>oil spots in tool</u>				

Rec Total 10 BHT 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2061</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>13:30</u>
(B) First Initial Flow <u>15</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>14:15</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>16:33</u>
(D) Initial Shut-In <u>1153</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>19:36</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>21:40</u>
(F) Second Final Flow <u>26</u>	<input checked="" type="checkbox"/> Mileage <u>90RT</u> 139.50	Comments _____
(G) Final Shut-In <u>1126</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2053</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1714.50</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1714.50</u>	

Approved By _____ Our Representative James Winder
 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. **60830**

4/10

Well Name & No. Fikan #1-5 Test No. 3 Date 12-8-14
 Company Murfin Drilling Co. Inc Elevation 3272 KB 3267 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Bob Stolzle Rig Murfin #8
 Location: Sec. 5 Twp. 4s Rge. 35W Co. Rawlins State KS

Interval Tested 4256-4445 Zone Tested LKC "G-L"
 Anchor Length 189 Drill Pipe Run 4076 Mud Wt. 9.2
 Top Packer Depth 4251 Drill Collars Run 186 Vis 58
 Bottom Packer Depth 4256 Wt. Pipe Run - WL 6.8
 Total Depth 4445 Chlorides 2900 ppm System LCM 2

Blow Description IF: Blow built to BOB (11") in 4min.
ISI: No blowback
FF: Blow built to BOB in 5min.
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>WCM</u>		<u>15</u>	<u>85</u>	
<u>440</u>	<u>Watery Mud</u>		<u>40</u>	<u>60</u>	
<u>444</u>	<u>MCW</u>		<u>86</u>	<u>14</u>	

Rec Total 946 BHT 132 Gravity _____ API RW .240 @ 37.3 °F Chlorides 60,000 ppm

(A) Initial Hydrostatic 2157 Test 1250 T-On Location 17:30
 (B) First Initial Flow 60 Jars 250 T-Started 18:02
 (C) First Final Flow 237 Safety Joint 75 T-Open 20:49
 (D) Initial Shut-In 1310 Circ Sub _____ T-Pulled 23:48
 (E) Second Initial Flow 248 Hourly Standby _____ T-Out 2:45
 (F) Second Final Flow 450 Mileage 90RT 139.50 Comments _____
 (G) Final Shut-In 1294 Sampler _____
 (H) Final Hydrostatic 2065 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____

Initial Open 15
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 60
 Sub Total 0
 Total 1714.50
 MP/DST Disc't _____
 Sub Total 1714.50

Approved By _____ Our Representative James Winder

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60831

4/10

Well Name & No. Fikan # 1-5 Test No. 4 Date 12-10-14
 Company Murfin Drilling Co. Inc Elevation 3272 KB 3267 GL
 Address 250 N. Water STE 300 Wichita, KS 67749
 Co. Rep / Geo. Bob Stolzle Rig Murfin #8
 Location: Sec. 5 Twp. 4s Rge. 35W Co. Rawlins State KS

Interval Tested 4538 - 4620 Zone Tested Pawnee
 Anchor Length 82 Drill Pipe Run 4329 Mud Wt. 9.1
 Top Packer Depth 4533 Drill Collars Run 186 Vis 60
 Bottom Packer Depth 4538 Wt. Pipe Run - WL 6.8
 Total Depth 4620 Chlorides 4500 ppm System LCM 5

Blow Description IF: Blow built to 1 1/2"
ISI: No blowback
FF: Blow built to 1/8", died back, dead at close
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>Mud</u>				<u>100%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 70 BHT _____ Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2320</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>3:00</u>
(B) First Initial Flow <u>33</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>3:44</u>
(C) First Final Flow <u>44</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>6:30</u>
(D) Initial Shut-In <u>1146</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>9:36</u>
(E) Second Initial Flow <u>47</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>12:05</u>
(F) Second Final Flow <u>55</u>	<input checked="" type="checkbox"/> Mileage <u>90 RT</u> <u>139.50</u>	Comments _____
(G) Final Shut-In <u>1102</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2309</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>2034.50</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1714.50</u>	

Approved By _____ Our Representative James Winder

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. **60832**

4/10

Well Name & No. Fikan #1-5 Test No. 5 Date 12-10-14
 Company Murfin Drilling Co. Inc Elevation 3272 KB 3267 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Bob Stolzle Rig Murfin #8
 Location: Sec. 5 Twp. 4s Rge. 35w Co. Rawlins State KS

Interval Tested 4610 - 4670 Zone Tested Verdigris
 Anchor Length 60 Drill Pipe Run 4422 Mud Wt. 9.2
 Top Packer Depth 4605 Drill Collars Run 186 Vis 61
 Bottom Packer Depth 4610 Wt. Pipe Run - WL 6.4
 Total Depth 4670 Chlorides 3800 ppm System LCM 3

Blow Description IF: Blow built to 1"
ISI: No blowback
FF: Surface blow at open, dead at 6 min.
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud</u>			<u>100%</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 126 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2373 Test 1250 T-On Location ~~22:00~~ 22:00 12/10
 (B) First Initial Flow 15 Jars 250 T-Started 23:06
 (C) First Final Flow 18 Safety Joint 75 T-Open 1:45
 (D) Initial Shut-In 56 Circ Sub _____ T-Pulled 4:46
 (E) Second Initial Flow 18 Hourly Standby _____ T-Out 7:30 12/11
 (F) Second Final Flow 19 Mileage 90RT 139.50 Comments _____
 (G) Final Shut-In 37 Sampler _____
 (H) Final Hydrostatic 2319 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1714.50
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1714.50

Approved By _____ Our Representative James Winder

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.



PO Box 93999
Southlake, TX 76092

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

*acct
Prod-m*

INVOICE

Invoice Number: 147508
Invoice Date: Dec 2, 2014
Page: 1

Federal Tax I.D.#: 20-8651475

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	64831	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Dec 2, 2014	1/1/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Fikan #1-5		
300.00	CEMENT MATERIALS	Class A Common	17.90	5,370.00
846.00	CEMENT MATERIALS	Chloride	1.10	930.60
315.00	CEMENT SERVICE	Cubic Feet Charge	2.48	781.20
943.80	CEMENT SERVICE	Ton Mileage Charge	2.75	2,595.45
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
65.00	CEMENT SERVICE	Pump Truck Mileage	7.70	500.50
1.00	CEMENT SERVICE	Swedge Manifold Rental	275.00	275.00
65.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	286.00
1.00	CEMENT SUPERVISOR	Paul Beaver		
1.00	EQUIPMENT OPERATOR	Tyler Flipse		

Subtotal	12,251.00
Sales Tax	497.75
Total Invoice Amount	12,748.75
Payment/Credit Applied	
TOTAL	12,748.75

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

\$ 4,287.85

35%

ONLY IF PAID ON OR BEFORE
Jan 1, 2015

OK SR

*- 4287.85
8460.90*

ALLIED OIL & GAS SERVICES, LLC 064837

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Crakley K.S.

DATE <u>12-2-14</u>	SEC. <u>5</u>	TWP. <u>4</u>	RANGE <u>35</u>	CALLED OUT	ON LOCATION <u>7:30 p.m.</u>	JOB START <u>9:00 p.m.</u>	JOB FINISH <u>9:30 p.m.</u>
LEASE <u>Fikan</u>	WELL# <u>1-5</u>	LOCATION <u>Atwood W to Rd 16</u>			COUNTY <u>Raukas</u>	STATE <u>LS</u>	
OLD OR <u>(NEW)</u> (Circle one)			<u>4.5, 3W, N+E into</u>				

CONTRACTOR <u>Marlin B</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>343'</u>
CASING SIZE <u>8 5/8</u>	DEPTH <u>344'</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG. <u>1.5'</u>	
PERFS.	
DISPLACEMENT <u>20.5 bbl</u>	<u>420</u>
EQUIPMENT	

CEMENT AMOUNT ORDERED <u>300 sks Com 3/1 C.C.</u>
COMMON <u>300 sks @ 17.90</u> <u>5370.00</u>
POZMIX @
GEL @
CHLORIDE <u>84 lb @ 1.10</u> <u>930.60</u>
ASC @
<u>Material Total</u> <u>6300.60</u>
<u>(2005.21/35%)</u>
HANDLING <u>315.43</u> @ <u>2.48</u> <u>781.26</u>
MILEAGE <u>14.52 hrs x 6.5 mi @ 2.75</u> <u>2595.45</u>
TOTAL

PUMP TRUCK # <u>120</u>	CEMENTER <u>Paul Beaver</u>
BULK TRUCK # <u>891/310</u>	HELPER <u>Tyler Flipse/Tuan (two)</u>
BULK TRUCK #	DRIVER <u>Marco (two)</u>
#	DRIVER

REMARKS:
mix 300 sks
Displace w/ water
cement did circ

Thank You!
Paul + crew

CHARGE TO: Marlin Drlg
STREET _____
CITY _____ STATE _____ ZIP _____

SERVICE	
DEPTH OF JOB <u>344'</u>	
PUMP TRUCK CHARGE <u>1570.25</u>	
EXTRA FOOTAGE @	
MILEAGE <u>MLV 6.5 @ 7.70</u> <u>500.50</u>	
MANIFOLD <u>Swedge MLV 6.5 @ 4.40</u> <u>286.00</u>	
<u>(2082.64/35%)</u> TOTAL <u>5950.00</u>	

PLUG & FLOAT EQUIPMENT	
@	
@	
@	
@	
@	
TOTAL	

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.

PRINTED NAME Paulway Farr
SIGNATURE Paulway Farr

SALES TAX (If Any) _____
TOTAL CHARGES 12,251.00
DISCOUNT 4,287.85 (35%) IF PAID IN 30 DAYS
7,963.15 Net.



acct Prod-me

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 147618
Invoice Date: Dec 12, 2014
Page: 1

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

Federal Tax I.D.#: 20-8651475

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	64858	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-03	Oakley	Dec 12, 2014	1/11/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Fikan #1-5		
255.00	CEMENT MATERIALS	60/40/4% Gel blend	18.92	4,824.60
63.75	CEMENT MATERIALS	Flo Seal	2.97	189.34
273.87	CEMENT SERVICE	Cubic Feet Charge	2.48	679.20
742.94	CEMENT SERVICE	Ton Mileage Chargel	2.75	2,043.09
1.00	CEMENT SERVICE	Plug to Abandon	2,600.47	2,600.47
65.00	CEMENT SERVICE	Pump Truck Mileage	7.70	500.50
65.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	286.00
1.00	EQUIPMENT SALES	8-5/8 Dry Hole Plug	110.00	110.00
1.00	CEMENT SUPERVISOR	Andrew Forslund		
1.00	EQUIPMENT OPERATOR	Brandon Wilkinson		
1.00	OPERATOR ASSISTANT	Shawn Tatro		

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

\$ 3,931.62 *MSG*
OK

ONLY IF PAID ON OR BEFORE
Jan 11, 2015

Subtotal	11,233.20
Sales Tax	887.42
Total Invoice Amount	12,120.62
Payment/Credit Applied	
TOTAL	12,120.62

3931.62
8189.00
mTR

Fikan #1-5 440' FSL 540'FWL Sec. 5-4S-35W 3272' KB							Fikan #1 660' FSL 660'FEL Sec. 5-4S-35W 3265' KB	
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	3000	+272	-3	2998	+274	-1	2990	+275
B/Anhydrite	3040	+232	+7	3051	+221	-4	3040	+225
Topeka	3965	-693	+4	3964	-692	+5	3962	-697
Heebner	4142	-870	-2	4138	-866	+2	4133	-868
Lansing	4184	-912	+2	4183	-911	+3	4179	-914
Stark	4392	-1120	-3	4384	-1112	+5	4382	-1117
BKC	4439	-1167	-2	4431	-1159	+6	4430	-1165
Pawnee	4564	-1292	+4	4560	-1288	+8	4561	-1296
Cherokee	4634	-1362	+3	4630	-1358	+7	4630	-1365
Mississippi				4814	-1542	+19	4826	-1561
RTD	4930						4875	
LTD				4929				