



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1193073
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: _____

1193073

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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Raile 'A' #12-32
 1665 FSL 970 FEL
 Sec. 32-T2S-R41W
 3682' KB

James OWWO #6-32
 750 FSL 1766 FEL
 Sec. 32-T2S-R41W
 3664' KB

Formation	Sample Top	Datum	Ref	Log top	Datum	Ref	Log Top	Datum
Anhydrite	3546	+136	+4	3557	+125	-7	3532	+132
B/Anhydrite	3594	+88	-7	3595	+87	-8	3569	+95
Topeka	4341	-659	-3	4345	-663	-7	4320	-656
Oread	4460	-778	-5	4462	-780	-7	4437	-773
Lansing	4531	-849	-3	4537	-855	-9	4510	-846
Stark Sh	4758	-1076	+3	4762	-1080	-1	4743	-1079
BKC	4830	-1148	+2	4837	-1155	-5	4814	-1150
Marmaton	4862	-1180	+3	4872	-1190	-7	4847	-1183
Pawnee	4951	-1269	----	4956	-1274	-5	4933	-1269
Cherokee	5034	-1352	-6	5034	-1352	-6	5010	-1346
Mississippi	5331	-1649		5311	-1629		DNR	
RTD	5450						5070	
LTD				5451			5076	

Saman Sharifaie

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: **Martin Drilling Co., Inc.**
LEASE: **Rate - # 2-32**

FIELD: **Rate**
LOCATION: **1665' FSL & 970' FEL**
SEC: **32 TWP 2S RGE 41W**
COUNTY: **Cheyenne STATE Kansas**
CONTRACTOR: **Martin Drilling #14**
SPUD: **11/1/13 COMP 11/22/13**
MUD UP: **5450' LTD 5451'**
TYPE MUD: **Chemical**

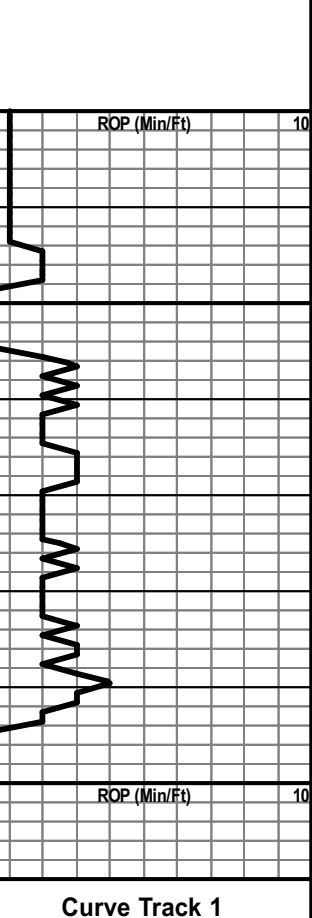
SAMPLES SAVED FROM: **4240' TO RTD**
DRILLING TIME KEPT FROM: **4240' TO RTD**
SAMPLES EXAMINED FROM: **4240' TO RTD**
GEOLOGICAL SUPERVISION FROM: **3940'**
REFERENCE WELL: **James OWWO #6-32**

ELEVATIONS
KB 3682'

DF
GL 3672'
Measurements Are All From Kelly Bushing
CASING
CONDUCTOR
SURFACE 8-5/8" at 349'
PRODUCTION 5-1/2" at 544'

ELECTRICAL SURVEYS
CND; DIL; MEL; SWIC
Pioneer Wireline

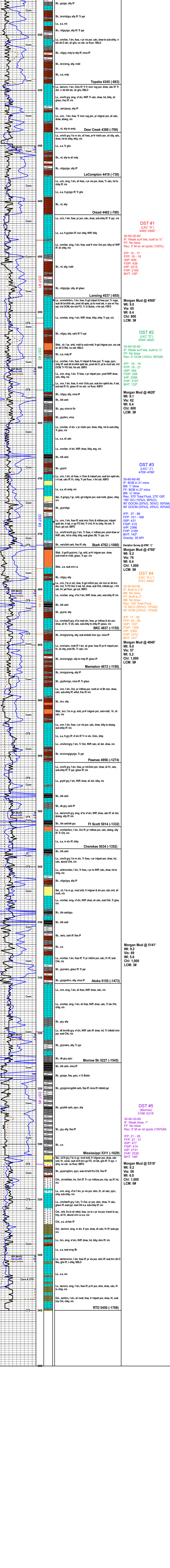
Formation	Sample Tops	E-log Tops	Strat Pos.
Anhydrite	3546 (+136)	3557 (+125)	-8
Basal Anhydrite	3594 (+88)	3595 (+87)	-7
Timaska	4341 (+659)	4345 (+663)	-7
Orestid	4460 (+776)	4462 (+780)	-7
Urbid	4531 (+847)	4537 (+853)	-7
Stark	4758 (+1076)	4762 (+1080)	-1
Pawnee	4951 (+1269)	4956 (+1274)	-3
Cherokee	5054 (+1352)	5054 (+1352)	-6
Morrow Sh	5224 (+1582)	5227 (+1585)	-5



REMARKS Due to fair to good shows of oil in multiple pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.

Respectfully Submitted,
Saman Sharifaie
Petroleum Geologist

API #15-023-21372
*Tops have been adjusted to electric logs





DRILL STEM TEST REPORT

Prepared For: **Murfin Driling Company**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Raile " A " #12-32

32-2s-41w Cheyenne KS

Start Date: 2013.11.16 @ 11:46:00

End Date: 2013.11.16 @ 19:00:00

Job Ticket #: 55149 DST #: 1

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

Printed: 2013.11.22 @ 14:36:13

Murfin Driling Company

32-2s-41w Cheyenne KS

Raile " A " #12-32

DST # 1

LKC " A "

2013.11.16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55149

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2013.11.16 @ 11:46:00

GENERAL INFORMATION:

Formation: **LKC " A "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:10:10

Time Test Ended: 19:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols

Unit No: 41

Interval: 4485.00 ft (KB) To 4560.00 ft (KB) (TVD)

Reference Elevations: 3682.00 ft (KB)

Total Depth: 4560.00 ft (KB) (TVD)

3669.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 13.00 ft

Serial #: 6752 Inside

Press@RunDepth: 18.74 psig @ 4486.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.16

End Date:

2013.11.16

Last Calib.: 2013.11.16

Start Time: 11:46:01

End Time:

19:00:00

Time On Btm: 2013.11.16 @ 14:10:00

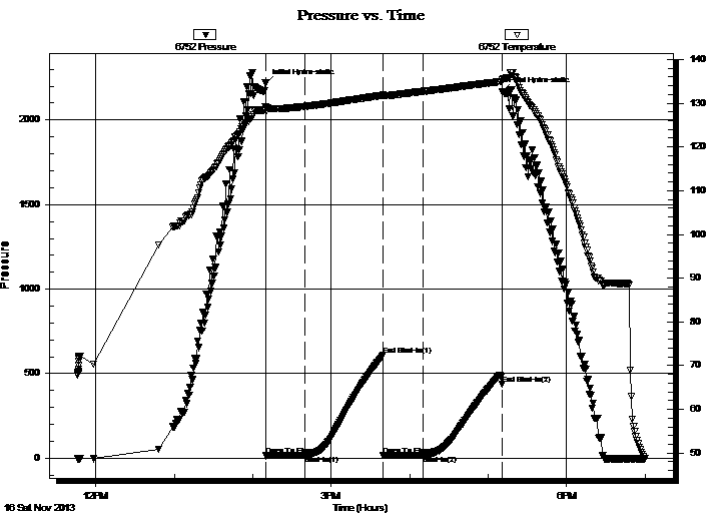
Time Off Btm: 2013.11.16 @ 17:10:50

TEST COMMENT: 30 IF - Surface blow built to 1/4"

60 ISI - No return

30 FF - No blow

60 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2215.01	129.27	Initial Hydro-static
1	14.89	128.18	Open To Flow (1)
30	17.09	129.26	Shut-In(1)
90	609.11	131.83	End Shut-In(1)
90	17.72	131.68	Open To Flow (2)
120	18.74	132.69	Shut-In(2)
181	438.63	134.93	End Shut-In(2)
181	2165.48	135.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w / oil spots 100%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55149

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2013.11.16 @ 11:46:00

Tool Information

Drill Pipe:	Length: 3932.00 ft	Diameter: 3.80 inches	Volume: 55.16 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: 559.00 ft	Diameter: 2.25 inches	Volume: 2.75 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 57.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4485.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	102.00 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			4459.00	
Shut In Tool	5.00			4464.00	
Hydraulic tool	5.00			4469.00	
Jars	5.00			4474.00	
Safety Joint	2.00			4476.00	
Packer	5.00			4481.00	27.00 Bottom Of Top Packer
Packer	4.00			4485.00	
Packer - Shale	0.00			4485.00	
Stubb	1.00			4486.00	
Recorder	0.00	6752	Inside	4486.00	
Recorder	0.00	8322	Outside	4486.00	
Perforations	6.00			4492.00	
Blank Spacing	65.00			4557.00	
Bullnose	3.00			4560.00	75.00 Bottom Packers & Anchor

Total Tool Length: 102.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55149

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2013.11.16 @ 11:46:00

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: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w / oil spots 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

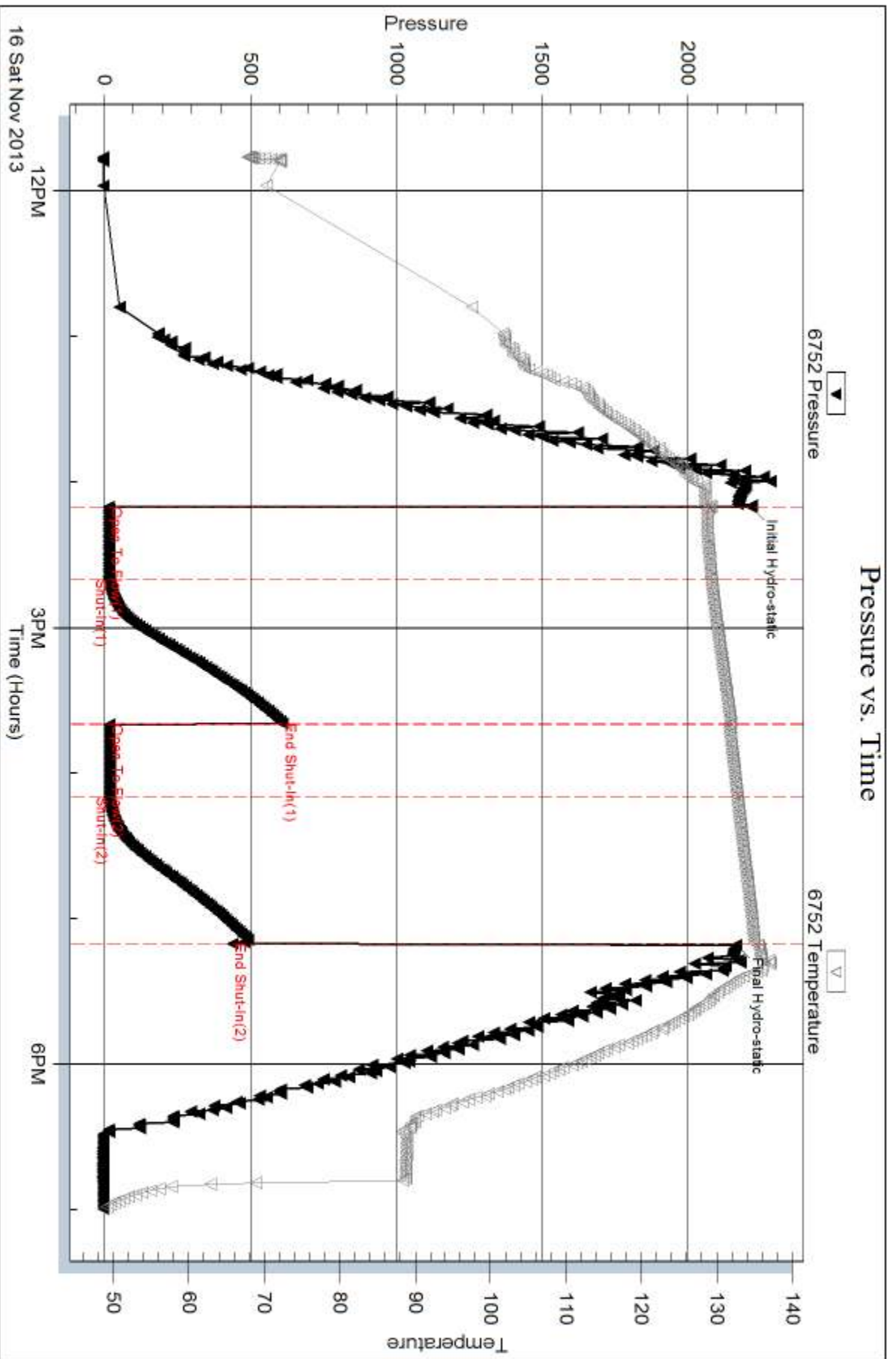
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

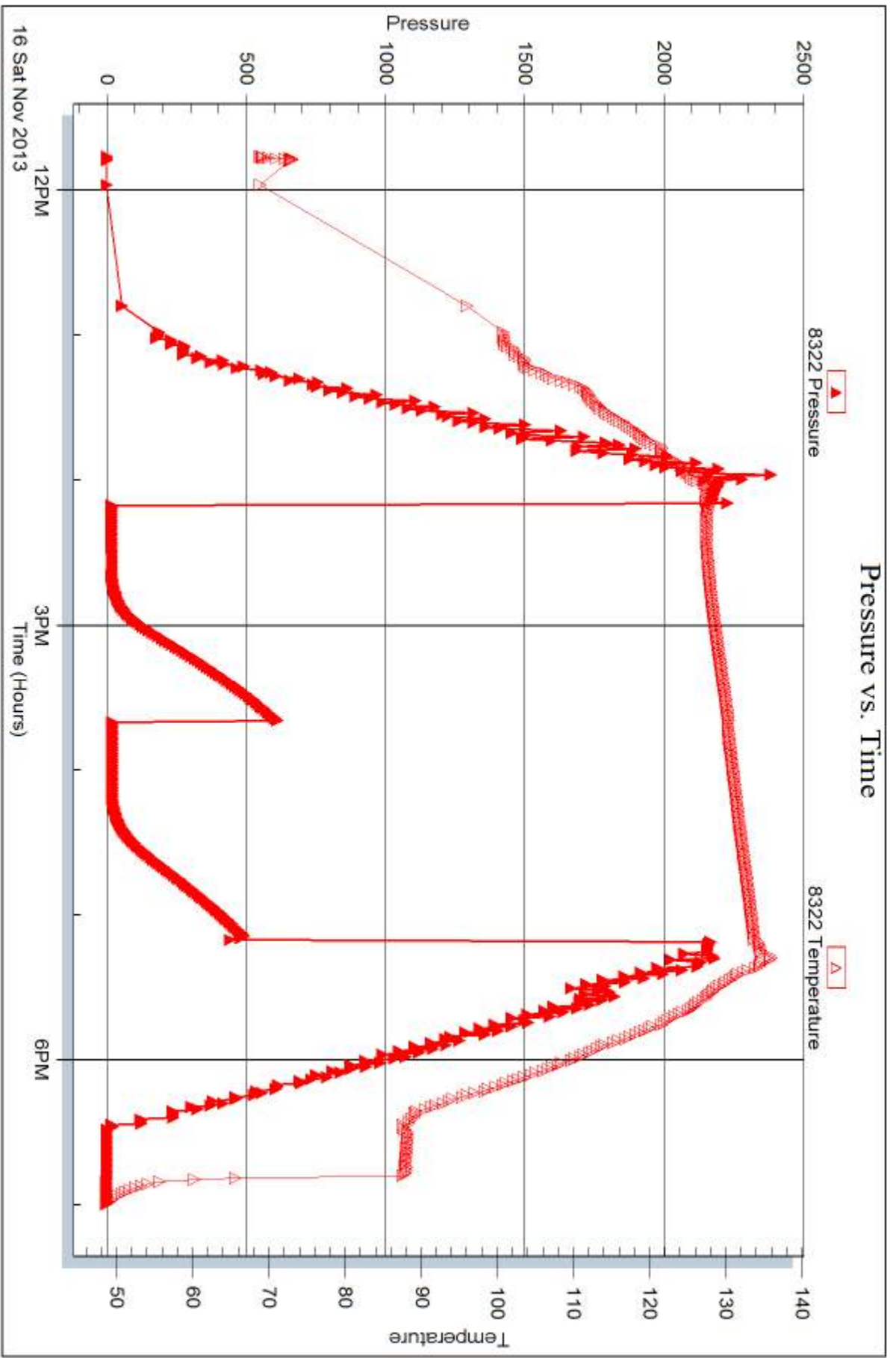


Serial #: 8322

Outside Murfin Drilling Company

Rate "A" #12-32

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55149

Printed: 2013.11.22 @ 14:36:16



DRILL STEM TEST REPORT

Prepared For: **Murfin Driling Company**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Raile " A " #12-32

32-2s-41w Cheyenne KS

Start Date: 2013.11.17 @ 04:04:00

End Date: 2013.11.17 @ 15:08:42

Job Ticket #: 55150 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.11.22 @ 14:35:29

Murfin Driling Company

32-2s-41w Cheyenne KS

Raile " A " #12-32

DST # 2

LKC " D "

2013.11.17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55150

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2013.11.17 @ 04:04:00

GENERAL INFORMATION:

Formation: **LKC " D "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:33:02

Time Test Ended: 15:08:42

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 41

Interval: 4545.00 ft (KB) To 4620.00 ft (KB) (TVD)

Reference Elevations: 3682.00 ft (KB)

Total Depth: 4620.00 ft (KB) (TVD)

3669.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 13.00 ft

Serial #: 8322 Outside

Press@RunDepth: 21.00 psig @ 4546.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.17

End Date:

2013.11.17

Last Calib.: 2013.11.17

Start Time: 04:04:01

End Time:

15:08:42

Time On Btm: 2013.11.17 @ 06:32:52

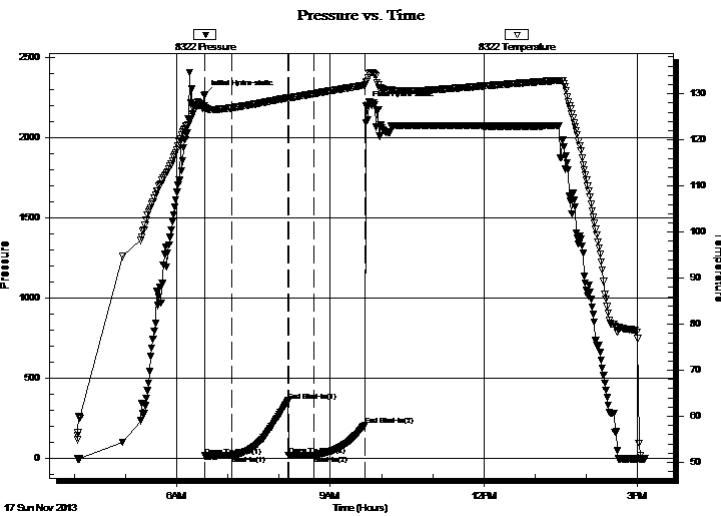
Time Off Btm: 2013.11.17 @ 09:42:12

TEST COMMENT: 30 IF - Surface blow built to 1/2"

60 ISI - No return

30 FF - No blow

60 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2265.90	127.32	Initial Hydro-static
1	16.14	126.69	Open To Flow (1)
32	17.99	126.95	Shut-In(1)
98	359.22	129.17	End Shut-In(1)
99	19.18	129.11	Open To Flow (2)
129	21.00	130.04	Shut-In(2)
188	208.45	131.89	End Shut-In(2)
190	2196.92	132.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OCM - 10%o - 90%M	0.02

* 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 Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55150

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2013.11.17 @ 04:04:00

Tool Information

Drill Pipe:	Length: 3965.00 ft	Diameter: 3.80 inches	Volume: 55.62 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: 559.00 ft	Diameter: 2.25 inches	Volume: 2.75 bbl	Weight to Pull Loose:	100000.0 lb
			<u>Total Volume: 58.37 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	80000.00 lb
Depth to Top Packer:	4545.00 ft			Final	80000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	75.00 ft				
Tool Length:	102.00 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			4519.00	
Shut In Tool	5.00			4524.00	
Hydraulic tool	5.00			4529.00	
Jars	5.00			4534.00	
Safety Joint	2.00			4536.00	
Packer	5.00			4541.00	27.00 Bottom Of Top Packer
Packer	4.00			4545.00	
Packer - Shale	0.00			4545.00	
Stubb	1.00			4546.00	
Recorder	0.00	6752	Inside	4546.00	
Recorder	0.00	8322	Outside	4546.00	
Perforations	6.00			4552.00	
Blank Spacing	65.00			4617.00	
Bullnose	3.00			4620.00	75.00 Bottom Packers & Anchor

Total Tool Length: 102.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55150

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2013.11.17 @ 04:04:00

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: 65.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.36 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	OCM - 10%o - 90%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

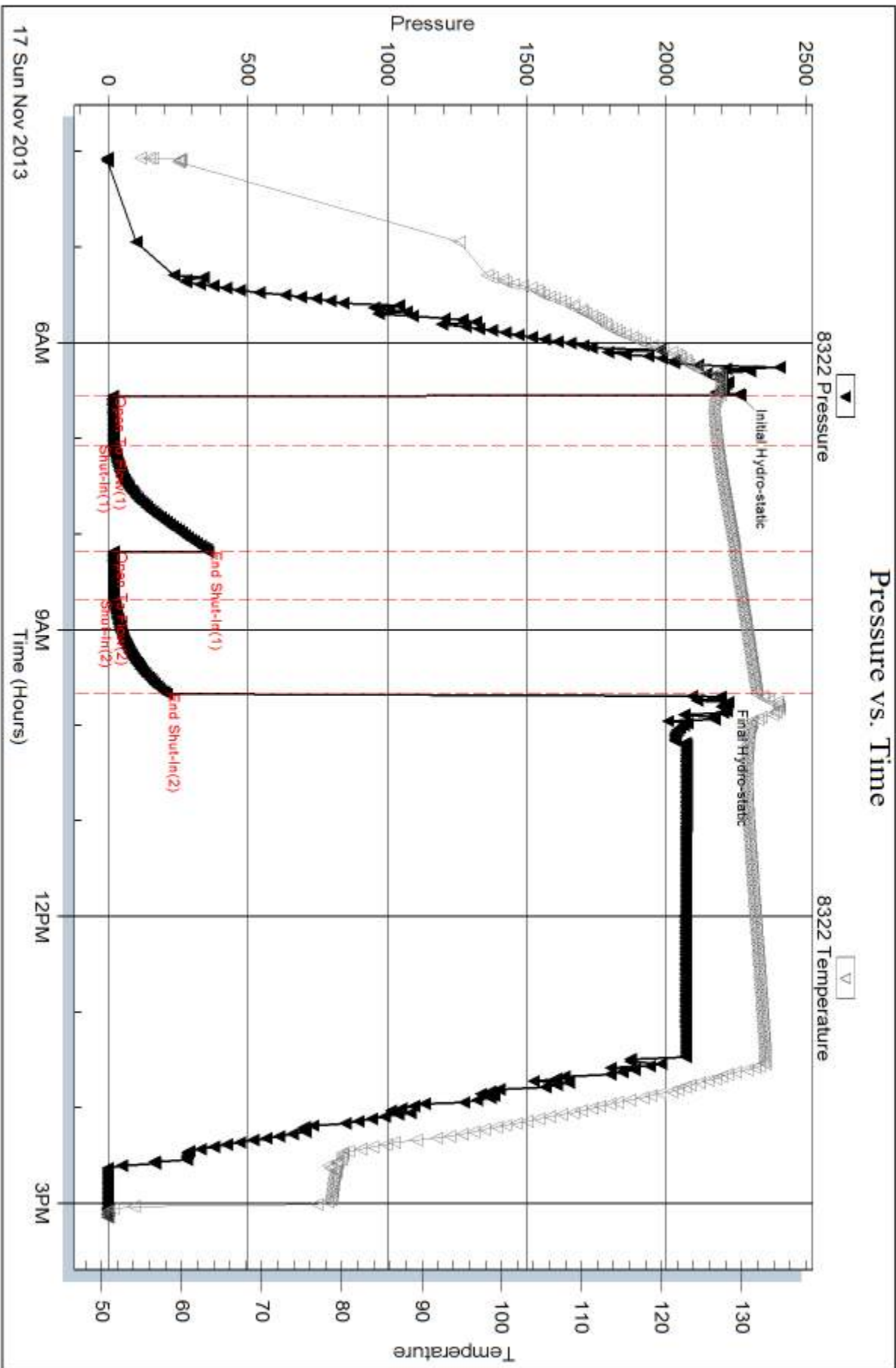
Num Gas Bombs: 0

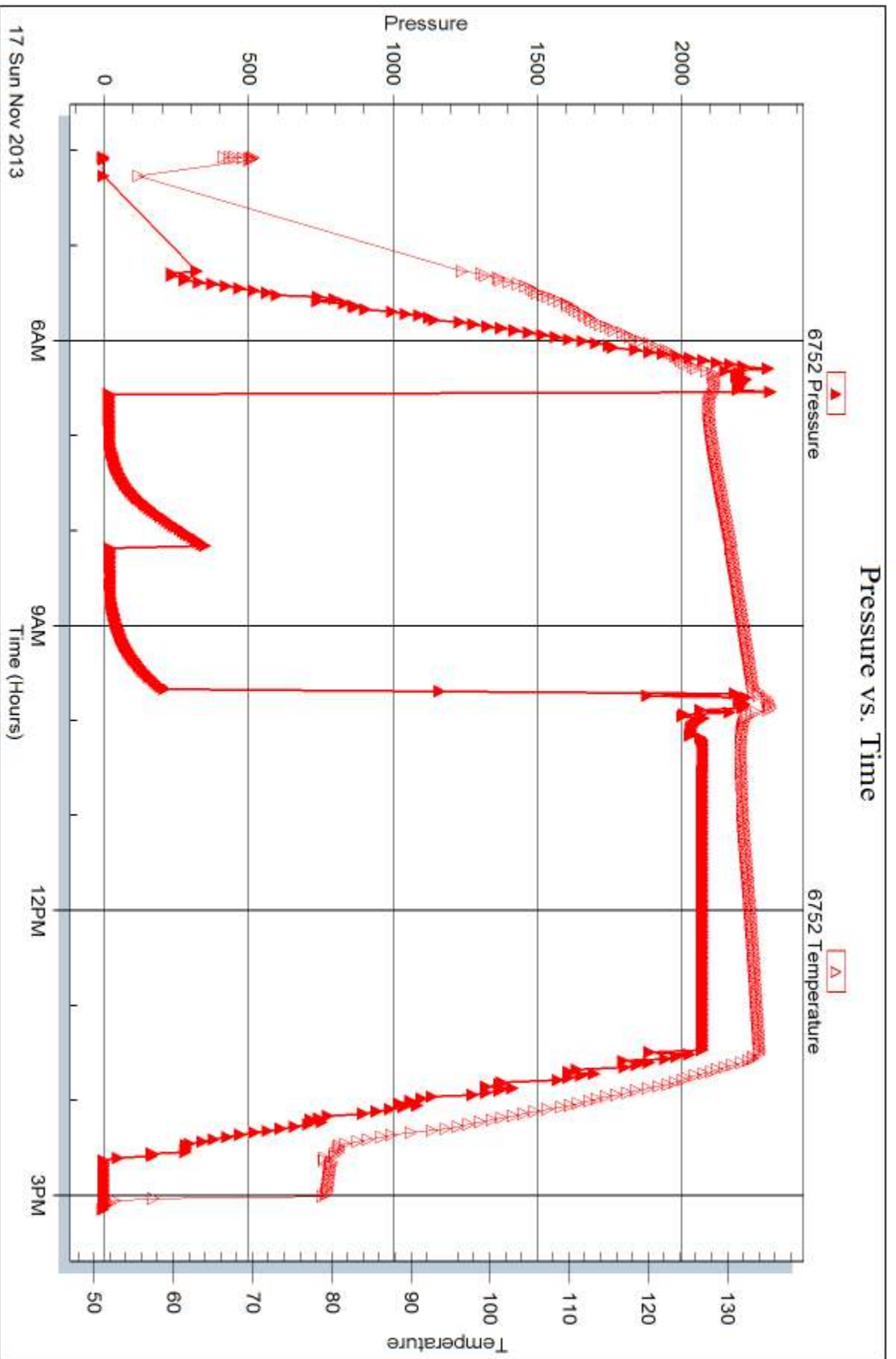
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Driling Company**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Raile " A " #12-32

32-2s-41w Cheyenne KS

Start Date: 2013.11.18 @ 05:14:00

End Date: 2013.11.18 @ 14:08:49

Job Ticket #: 55102 DST #: 3

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

Printed: 2013.11.22 @ 14:34:58



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55102

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2013.11.18 @ 05:14:00

GENERAL INFORMATION:

Formation: **LKC " J "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:57:10

Time Test Ended: 14:08:49

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 41

Interval: 4709.00 ft (KB) To 4760.00 ft (KB) (TVD)

Reference Elevations: 3682.00 ft (KB)

Total Depth: 4760.00 ft (KB) (TVD)

3669.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 13.00 ft

Serial #: 6752

Inside

Press@RunDepth: 167.60 psig @ 4710.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.18

End Date:

2013.11.18

Last Calib.:

2013.11.18

Start Time: 05:14:01

End Time:

14:08:49

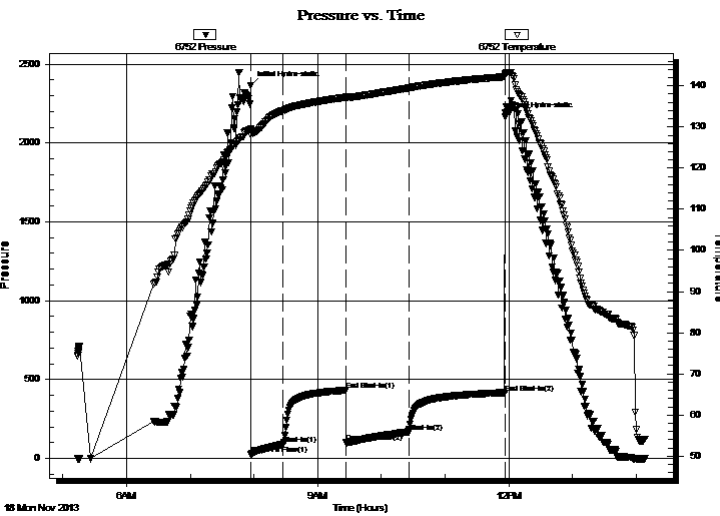
Time On Btm:

2013.11.18 @ 07:57:00

Time Off Btm:

2013.11.18 @ 11:56:39

TEST COMMENT: 30 IF - 1/4" blow built to BoB @ 21 mins
60 ISI - Surface blow started @ 1 min built to 1"
60 FF - Surface blow built to BoB @ 27 mins
90 FSI - Surface blow built to 1/4" @ 60 mins died back to surface blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2365.61	129.49	Initial Hydro-static
1	26.72	128.19	Open To Flow (1)
31	88.62	133.98	Shut-In(1)
90	431.17	137.23	End Shut-In(1)
90	101.11	137.12	Open To Flow (2)
149	167.60	139.45	Shut-In(2)
240	414.61	142.22	End Shut-In(2)
240	2164.80	142.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	GOCM - 25%G - 25%o - 50%M	0.44
90.00	GOCM - 20 %G - 30%o - 50%M	0.44
190.00	GO - 10%G - 90%o	0.93
0.00	270' GIP	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 Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55102

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2013.11.18 @ 05:14:00

Tool Information

Drill Pipe:	Length: 4154.00 ft	Diameter: 3.80 inches	Volume: 58.27 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: 559.00 ft	Diameter: 2.25 inches	Volume: 2.75 bbl	Weight to Pull Loose: 86000.00 lb
			<u>Total Volume: 61.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4709.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	78.00 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			4683.00	
Shut In Tool	5.00			4688.00	
Hydraulic tool	5.00			4693.00	
Jars	5.00			4698.00	
Safety Joint	2.00			4700.00	
Packer	5.00			4705.00	27.00 Bottom Of Top Packer
Packer	4.00			4709.00	
Packer - Shale	0.00			4709.00	
Stubb	1.00			4710.00	
Recorder	0.00	6752	Inside	4710.00	
Recorder	0.00	8322	Outside	4710.00	
Perforations	14.00			4724.00	
Blank Spacing	33.00			4757.00	
Bullnose	3.00			4760.00	51.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55102

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2013.11.18 @ 05:14:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 76.00 sec/qt
Water Loss: 5.99 in³
Resistivity: ohm.m
Salinity: 1000.00 ppm
Filter Cake: 2.00 inches

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

Oil API: 35 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	GOCM - 25%G - 25%o - 50%M	0.443
90.00	GOCM - 20 %G - 30%o - 50%M	0.443
190.00	GO - 10%G - 90%o	0.934
0.00	270' GIP	0.000

Total Length: 370.00 ft Total Volume: 1.820 bbl

Num Fluid Samples: 0

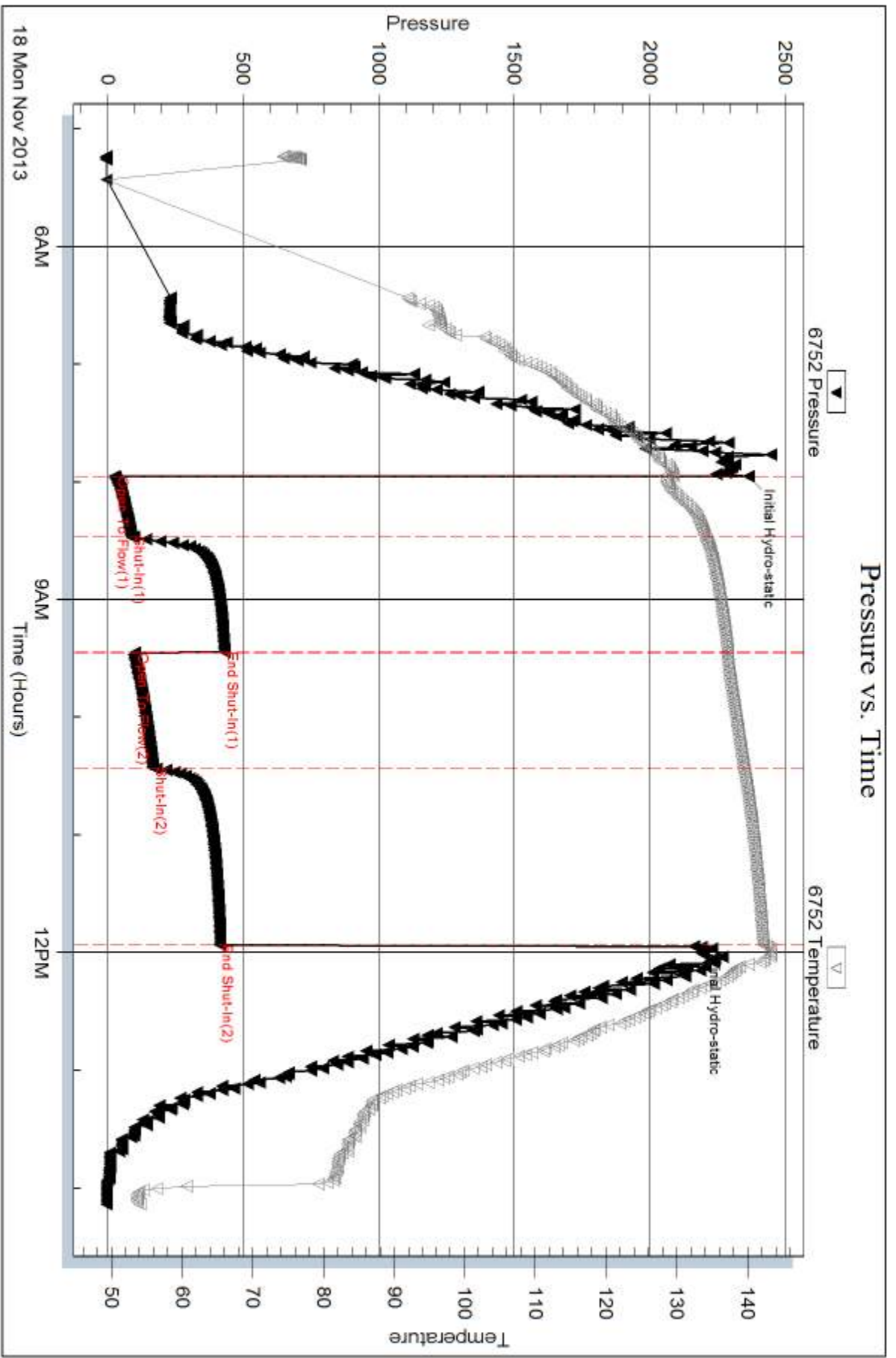
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: OIL API = 36 @ 70 DEG F = 35 COR 60 DEG F

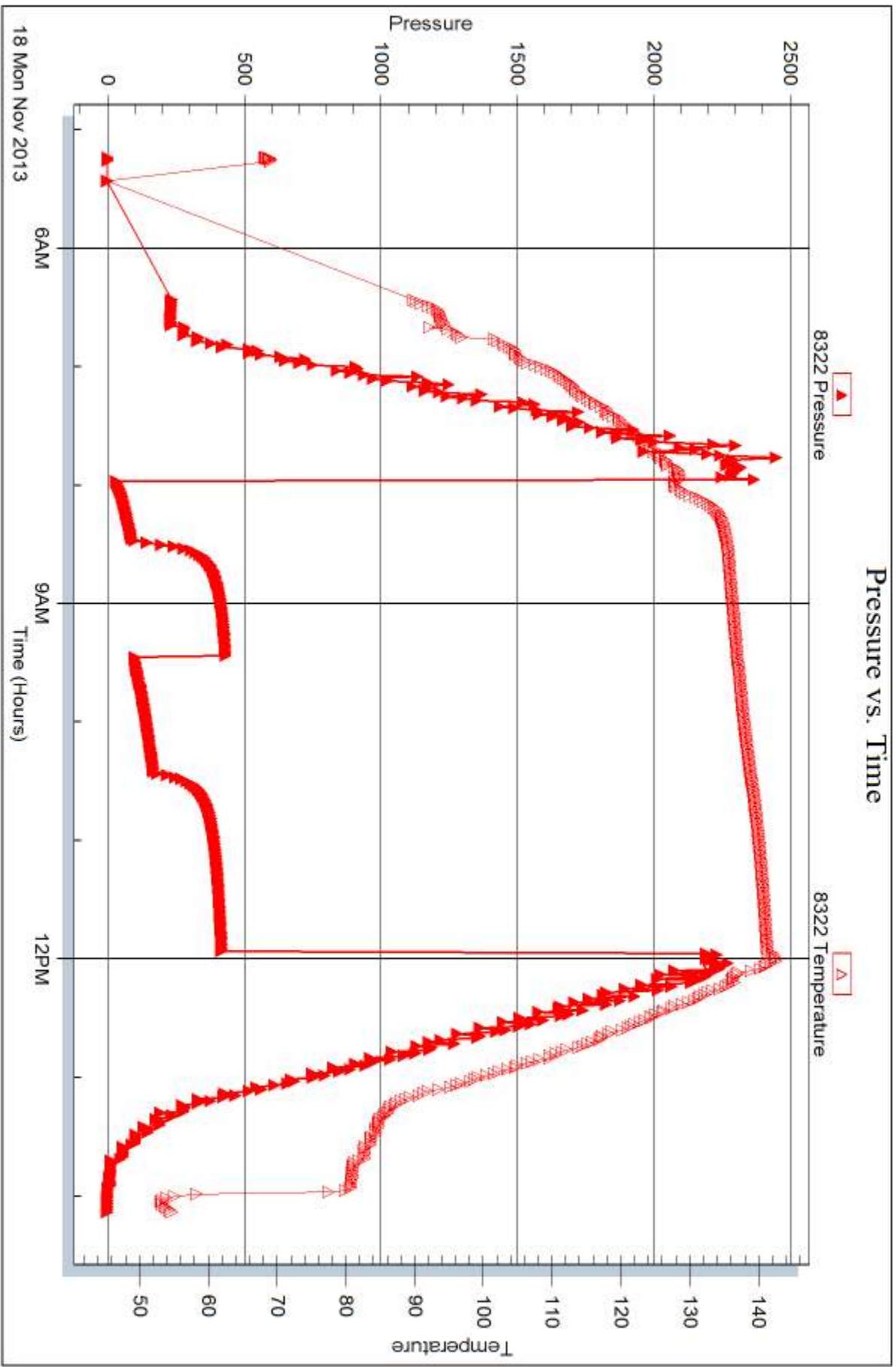


Serial #: 8322

Outside Murfin Drilling Company

Rate "A" #12-32

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Driling Company**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Raile " A " #12-32

32-2s-41w Cheyenne KS

Start Date: 2013.11.19 @ 00:15:00

End Date: 2013.11.19 @ 09:12:19

Job Ticket #: 55103 DST #: 4

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

Printed: 2013.11.22 @ 14:34:27



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55103

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2013.11.19 @ 00:15:00

GENERAL INFORMATION:

Formation: **LKC " K & L "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:52:50

Time Test Ended: 09:12:19

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 41

Interval: 4781.00 ft (KB) To 4840.00 ft (KB) (TVD)

Reference Elevations: 3682.00 ft (KB)

Total Depth: 4840.00 ft (KB) (TVD)

3669.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 13.00 ft

Serial #: 8322 Outside

Press@RunDepth: 68.58 psig @ 4782.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.19

End Date: 2013.11.19

Last Calib.: 2013.11.19

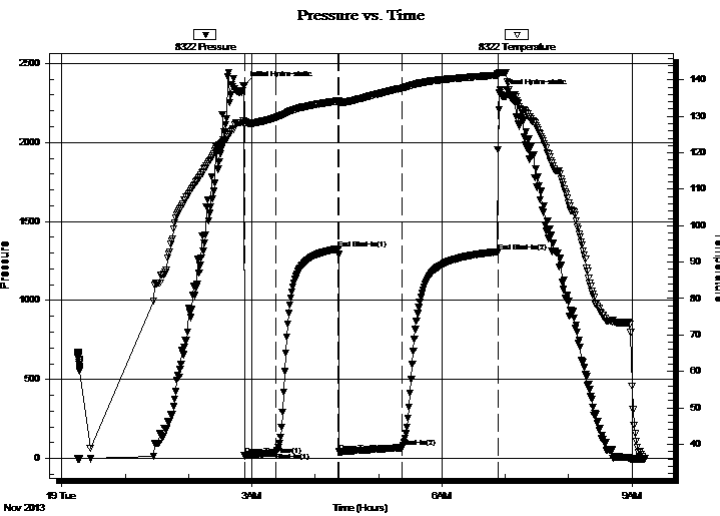
Start Time: 00:15:01

End Time: 09:12:19

Time On Btm: 2013.11.19 @ 02:52:40

Time Off Btm: 2013.11.19 @ 06:54:20

TEST COMMENT: 30 IF - 1/4" blow built to 2 1/2"
60 ISI - No return
60 FF - Surface blow started @ 3 mins built to 2"
90 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2360.25	128.79	Initial Hydro-static
1	17.44	128.12	Open To Flow (1)
30	36.34	129.67	Shut-In(1)
90	1327.12	134.24	End Shut-In(1)
90	42.01	133.95	Open To Flow (2)
149	68.58	137.73	Shut-In(2)
241	1308.46	141.30	End Shut-In(2)
242	2312.06	142.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	OCM - 25%o - 75%M	0.44
15.00	MCO - 15%M - 85%o	0.07

* 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 Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55103

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2013.11.19 @ 00:15:00

Tool Information

Drill Pipe:	Length: 4219.00 ft	Diameter: 3.80 inches	Volume: 59.18 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: 559.00 ft	Diameter: 2.25 inches	Volume: 2.75 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 61.93 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4781.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	86.00 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			4755.00	
Shut In Tool	5.00			4760.00	
Hydraulic tool	5.00			4765.00	
Jars	5.00			4770.00	
Safety Joint	2.00			4772.00	
Packer	5.00			4777.00	27.00 Bottom Of Top Packer
Packer	4.00			4781.00	
Packer - Shale	0.00			4781.00	
Stubb	1.00			4782.00	
Recorder	0.00	6752	Inside	4782.00	
Recorder	0.00	8322	Outside	4782.00	
Perforations	21.00			4803.00	
Blank Spacing	34.00			4837.00	
Bullnose	3.00			4840.00	59.00 Bottom Packers & Anchor

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55103

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2013.11.19 @ 00:15:00

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: 76.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
90.00	OCM - 25%o - 75%M	0.443
15.00	MCO - 15%M - 85%o	0.074

Total Length: 105.00 ft

Total Volume: 0.517 bbf

Num Fluid Samples: 0

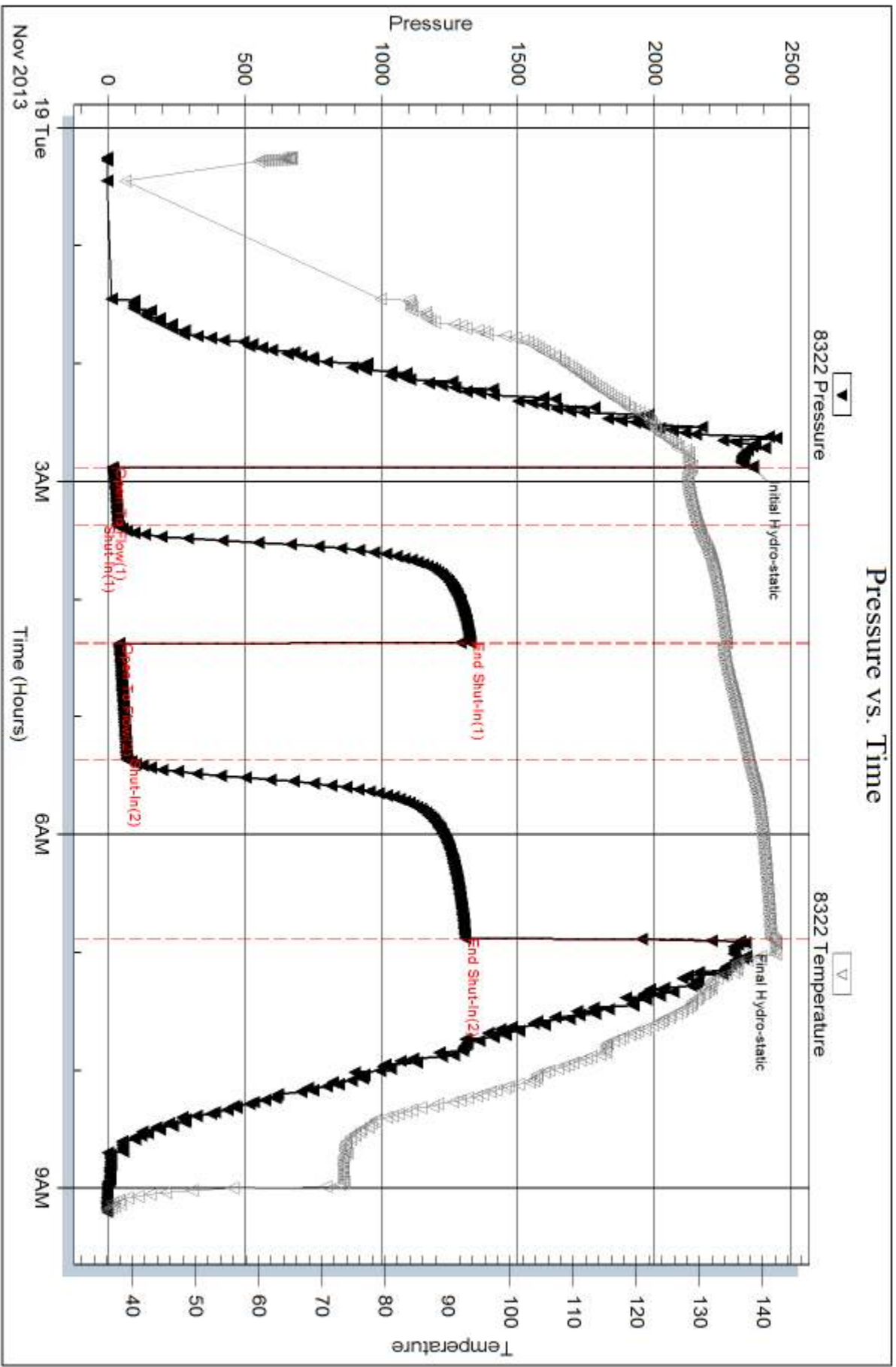
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Murfin Driling Company**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Raile " A " #12-32

32-2s-41w Cheyenne KS

Start Date: 2013.11.21 @ 00:20:00

End Date: 2013.11.21 @ 08:17:30

Job Ticket #: 55104 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.11.22 @ 14:33:43



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55104

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2013.11.21 @ 00:20:00

GENERAL INFORMATION:

Formation: **Morrow Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:44:40

Time Test Ended: 08:17:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 41

Interval: 5198.00 ft (KB) To 5318.00 ft (KB) (TVD)

Reference Elevations: 3682.00 ft (KB)

Total Depth: 5318.00 ft (KB) (TVD)

3669.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 13.00 ft

Serial #: 6752

Inside

Press@RunDepth: 30.50 psig @ 5199.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.21

End Date:

2013.11.21

Last Calib.: 2013.11.21

Start Time: 00:20:01

End Time:

08:17:30

Time On Btm: 2013.11.21 @ 02:44:30

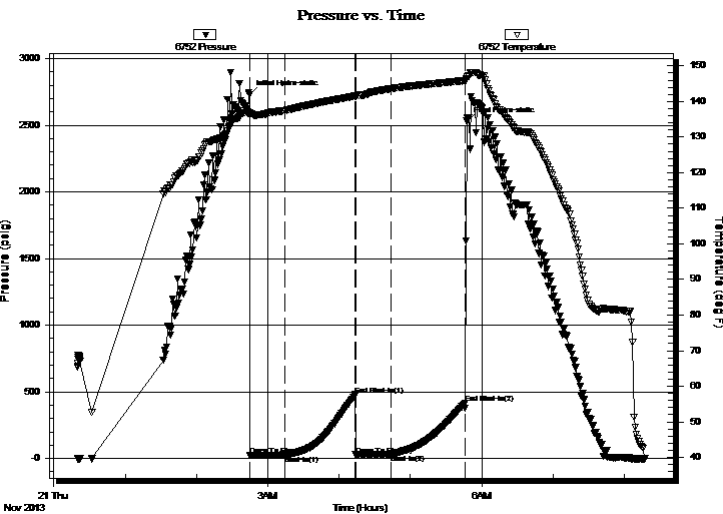
Time Off Btm: 2013.11.21 @ 05:47:20

TEST COMMENT: 30 IF - 1/2" blow built to 1"

60 ISI - No return

30 FF - No blow

60 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2731.23	136.95	Initial Hydro-static
1	20.85	136.28	Open To Flow (1)
31	26.05	137.45	Shut-In(1)
90	477.48	141.51	End Shut-In(1)
90	26.95	141.33	Open To Flow (2)
120	30.50	143.60	Shut-In(2)
182	414.23	145.88	End Shut-In(2)
183	2529.70	146.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w / oil spots	0.02

* 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 Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55104

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2013.11.21 @ 00:20:00

Tool Information

Drill Pipe:	Length: 4632.00 ft	Diameter: 3.80 inches	Volume: 64.97 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: 559.00 ft	Diameter: 2.25 inches	Volume: 2.75 bbl	Weight to Pull Loose: 25000.00 lb
			<u>Total Volume: 67.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	5198.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	120.00 ft			
Tool Length:	147.00 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			5172.00	
Shut In Tool	5.00			5177.00	
Hydraulic tool	5.00			5182.00	
Jars	5.00			5187.00	
Safety Joint	2.00			5189.00	
Packer	5.00			5194.00	27.00 Bottom Of Top Packer
Packer	4.00			5198.00	
Packer - Shale	0.00			5198.00	
Stubb	1.00			5199.00	
Recorder	0.00	6752	Inside	5199.00	
Recorder	0.00	8322	Outside	5199.00	
Perforations	19.00			5218.00	
Blank Spacing	97.00			5315.00	
Bullnose	3.00			5318.00	120.00 Bottom Packers & Anchor

Total Tool Length: 147.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

32-2s-41w Cheyenne KS

250 N. Water STE 300
Wichita KS 67202

Raile " A " #12-32

Job Ticket: 55104

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2013.11.21 @ 00:20:00

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: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w / oil spots	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

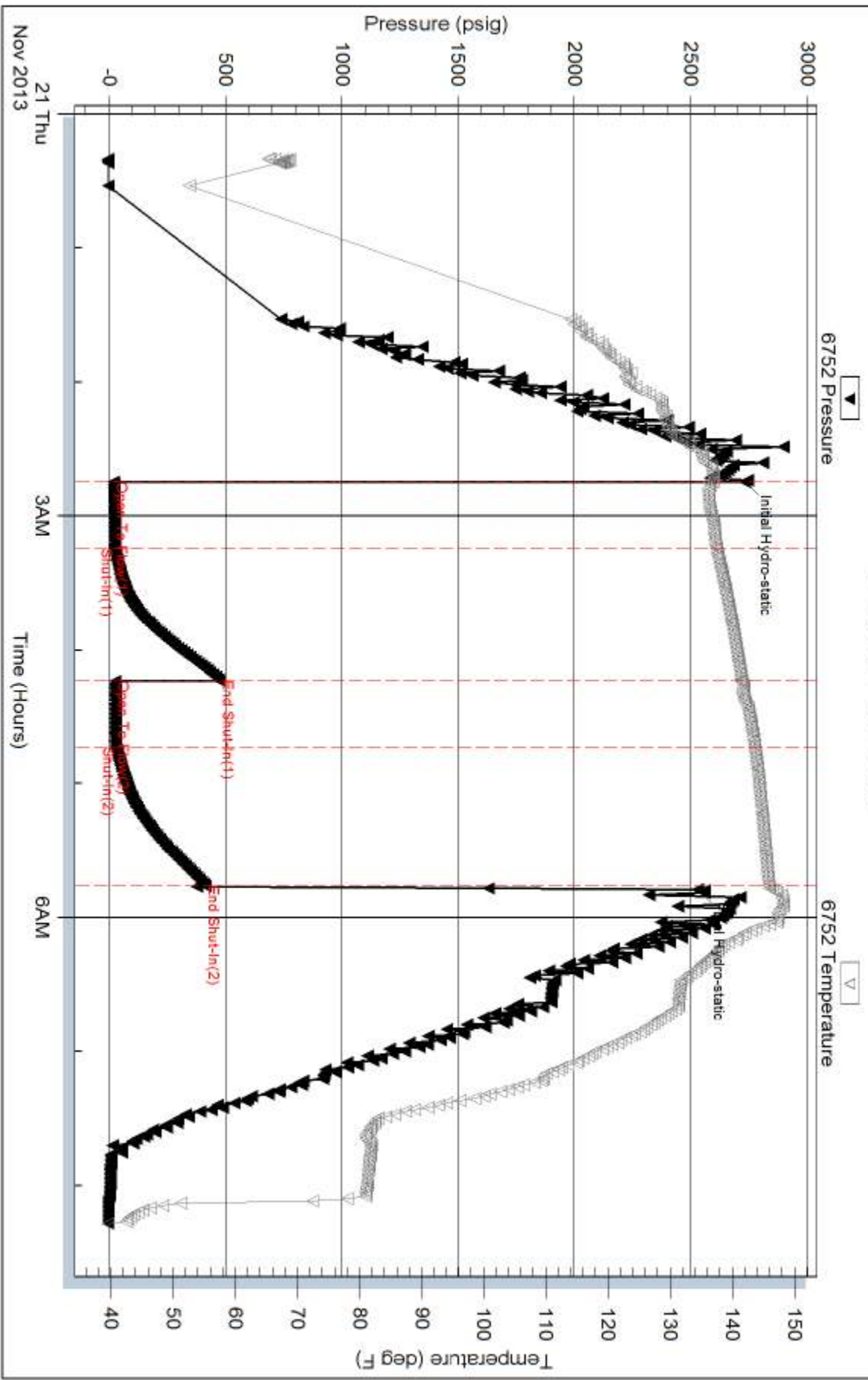
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

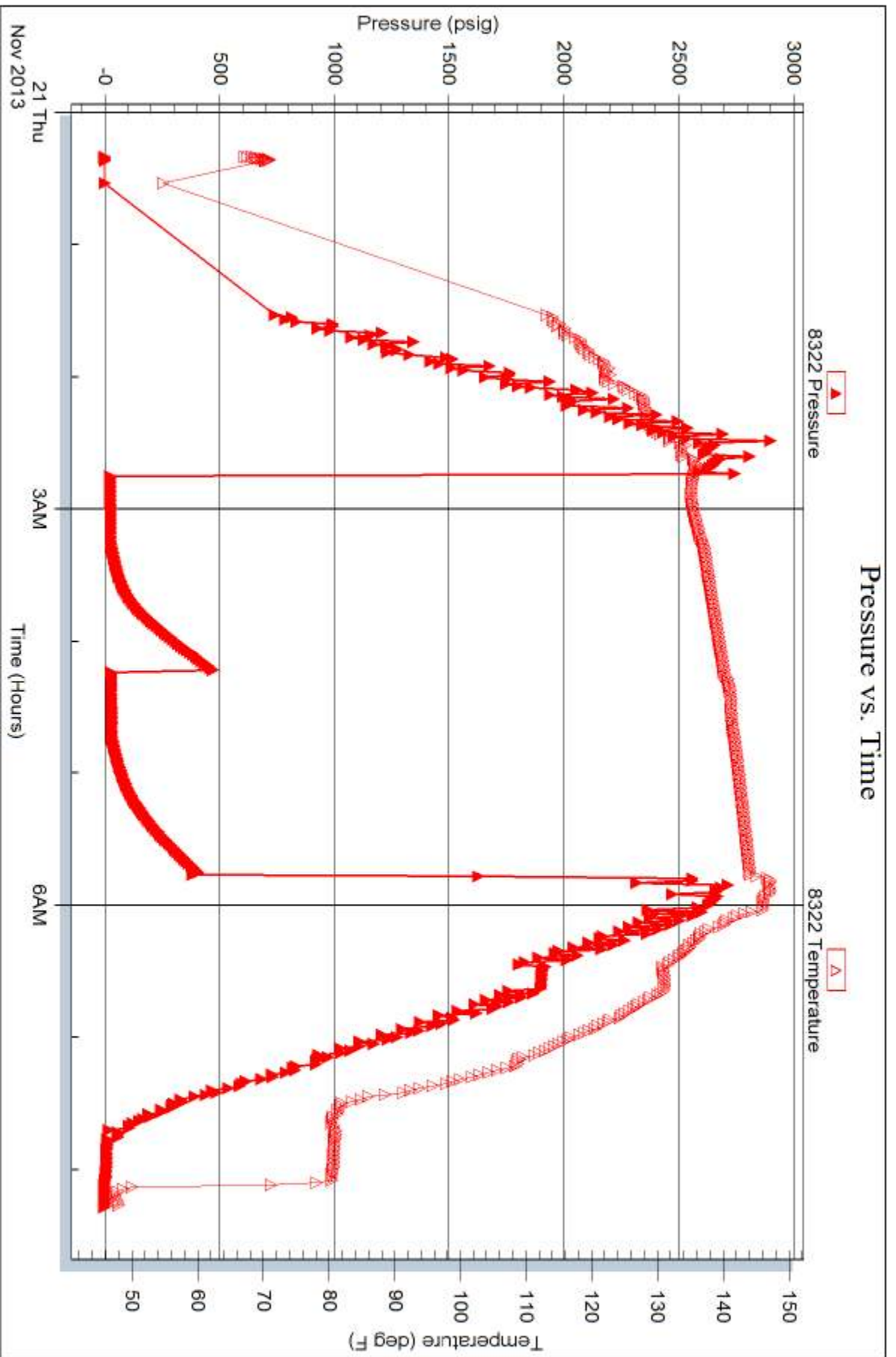


Serial #: 8322

Outside Murfin Drilling Company

Rate "A" #12-32

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55149

Well Name & No. Raile "A" #12-32 Test No. 1 Date 11/16/13
 Company Murfin Drilling Company Elevation 3682 KB 3669 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #14
 Location: Sec. 32 Twp. 25 Rge. 41W Co. Cheyene State KS

Interval Tested 4485 - 4560 Zone Tested LKC "A"
 Anchor Length 75' Drill Pipe Run 3932' Mud Wt. 9.0
 Top Packer Depth 4480 Drill Collars Run 559' Vis 65
 Bottom Packer Depth 4485 Wt. Pipe Run 0' WL 6.4
 Total Depth 4560 Chlorides 800 ppm System LCM 3

Blow Description IF - Surface blow built to 1/4"
ISI - No return
FF - No blow
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud w/oil spots</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 _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2215 Test 1250 T-On Location 09:30
 (B) First Initial Flow 15 Jars 250 T-Started 11:46
 (C) First Final Flow 17 Safety Joint 75 T-Open 14:10
 (D) Initial Shut-In 609 Circ Sub NC T-Pulled 17:10
 (E) Second Initial Flow 18 Hourly Standby _____ T-Out 19:00
 (F) Second Final Flow 19 Mileage 166 RT 257.30 Comments _____
 (G) Final Shut-In 439 Sampler _____
 (H) Final Hydrostatic 2165 Straddle _____
 Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 2082.30
 Accessibility _____ MP/DST Disc't _____
 Sub Total 2082.30

Approved By _____ Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55150**

Well Name & No. Raile "A" # 12-32 Test No. 2 Date 11/17/13
 Company Martin Drilling Company Elevation 3682 KB 3669 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifia Rig Martin # 14
 Location: Sec. 32 Twp. 25 Rge. 41W Co. Cheyene State KS

Interval Tested 4545 - 4620 Zone Tested LKC "D"
 Anchor Length 75' Drill Pipe Run 3965' Mud Wt. 9.1
 Top Packer Depth 4540 Drill Collars Run 559' Vis 62
 Bottom Packer Depth 4545 Wt. Pipe Run 0' WL 6.4
 Total Depth 4620 Chlorides 800 ppm System LCM 3

Blow Description IF - Surface blow built to 1/2"
ISI - No return
FF - No blow
FST - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>CCM</u>		<u>10%</u>	<u>90%</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5' BHT 1320 Gravity — API RW — @ —° F Chlorides — ppm

(A) Initial Hydrostatic 2266 Test 1250 T-On Location 03:15
 (B) First Initial Flow 16 Jars 250 T-Started 04:04
 (C) First Final Flow 18 Safety Joint 75 T-Open 06:34
 (D) Initial Shut-In 359 Circ Sub NC T-Pulled 09:34
 (E) Second Initial Flow 19 Hourly Standby X2 200 T-Out 15:08
 (F) Second Final Flow 21 Mileage 166 RT 257.30
 (G) Final Shut-In 208 Sampler
 (H) Final Hydrostatic 2197 Straddle Ruined Shale Packer
 Shale Packer 250 Ruined Packer
 Extra Packer Extra Copies
 Initial Open 30 Extra Recorder Sub Total 0
 Initial Shut-In 60 Day Standby Total 2282.30
 Final Flow 30 Accessibility MP/DST Disc't
 Final Shut-In 60 Sub Total 2282.30

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55102**

Well Name & No. Raile "A" #12-32 Test No. 3 Date 11/18/13
 Company Murfin Drilling Company Elevation 3682 KB 3669 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Suman Sharifai Rig Murfin #14
 Location: Sec. 32 Twp. 25 Rge. 41W Co. Cheyenne State KS

Interval Tested 4709-4760 Zone Tested LKC "J"
 Anchor Length 51' Drill Pipe Run 4154' Mud Wt. 9.2
 Top Packer Depth 4704 Drill Collars Run 559' Vis 76
 Bottom Packer Depth 4709 Wt. Pipe Run 0' WL 6.0
 Total Depth 4760 Chlorides 1000 ppm System LCM 5

Blow Description IF - 1/4" blow built to BoB @ 21 mins
ISI - Surface blow started @ 1 min built to 1"
FF - Surface blow built to BoB @ 27 mins
FST - Surface blow built to 1/4" died back to surface blow @ 60

Rec	Feet of	%gas	%oil	%water	%mud
<u>190'</u>	<u>60</u>	<u>10</u>	<u>90</u>		
<u>90'</u>	<u>60CM</u>	<u>20</u>	<u>30</u>	<u>50</u>	<u>50</u>
<u>90'</u>	<u>60CM</u>	<u>25</u>	<u>25</u>	<u>50</u>	<u>50</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 370' BHT 142° Gravity 35 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2366 Test 1250 T-On Location 04:30
 (B) First Initial Flow 27 Jars 250 T-Started 05:14
 (C) First Final Flow 89 Safety Joint 75 T-Open 07:56
 (D) Initial Shut-In 431 Circ Sub NC T-Pulled 11:56
 (E) Second Initial Flow 101 Hourly Standby _____ T-Out 14:08
 (F) Second Final Flow 168 Mileage 166 RT 257.30
 (G) Final Shut-In 415 Sampler _____
 (H) Final Hydrostatic 2165 Straddle _____

Initial Open 30 Shale Packer 250 Ruined Shale Packer _____
 Initial Shut-In 60 Extra Packer _____ Ruined Packer _____
 Final Flow 60 Extra Recorder _____ Sub Total 0
 Final Shut-In 90 Day Standby _____ Total 2082.30
 Accessibility _____ MP/DST Disc't _____
 Sub Total 2082.30

Approved By _____ Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55103**

Well Name & No. Kaile "A" #12-32 Test No. 4 Date 11/19/13
 Company Murfin Drilling Company Elevation 3682 KB 3669 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #14
 Location: Sec. 32 Twp. 25 Rge. 41W Co. Cheyenne State KS

Interval Tested 4781 - 4840 Zone Tested LKC "K & L"
 Anchor Length 59' Drill Pipe Run 4219' Mud Wt. 9.2
 Top Packer Depth 4776 Drill Collars Run 559' Vis 76
 Bottom Packer Depth 4781 Wt. Pipe Run 0' WL 6.0
 Total Depth 4840 Chlorides 1000 ppm System LCM 5

Blow Description IF - 1/4" blow built to 2 1/2"
ISI - No return
FF - Surface blow started @ 3 mins built to 2"
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>MCO</u>	<u>85</u>		<u>15</u>	
<u>90</u>	<u>OCM</u>	<u>25</u>		<u>75</u>	

Rec Total 105' BHT 141° Gravity ✓ API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2360</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>00:00</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>00:15</u>
(C) First Final Flow <u>36</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>02:53</u>
(D) Initial Shut-In <u>1327</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>06:53</u>
(E) Second Initial Flow <u>42</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>09:12</u>
(F) Second Final Flow <u>69</u>	<input checked="" type="checkbox"/> Mileage <u>166 RT</u> 257.30	Comments
(G) Final Shut-In <u>1308</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2312</u>	<input type="checkbox"/> Straddle	

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

Shale Packer 250
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Ruined Shale Packer
 Ruined Packer
 Extra Copies

Sub Total 0
 Total 2082.30
 MP/DST Disc't

Sub Total 2082.30

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55104

Well Name & No. Raile "A" #12-32 Test No. 5 Date 11/20/13
 Company Murfin Drilling Company Elevation 9682 KB 3669 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #14
 Location: Sec. 32 Twp. 2S Rge. 41W Co. Cheyenne State KS

Interval Tested 5198-5318 Zone Tested Marrow Sand
 Anchor Length 120' Drill Pipe Run 4632' Mud Wt. 9.2
 Top Packer Depth 5193 Drill Collars Run 559' Vis 69
 Bottom Packer Depth 5198 Wt. Pipe Run 0' WL 5.6
 Total Depth 5318 Chlorides 1000 ppm System LCM 3

Blow Description IF - 1/2" blow built to 1"
ISL - No return
FF - No blow
FSL - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud w/oil spots</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 1460 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2731</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>23:30</u>
(B) First Initial Flow <u>31</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>00:20</u>
(C) First Final Flow <u>26</u>	<input checked="" type="checkbox"/> Safety Joint <u>75 NC</u>	T-Open <u>02:44</u>
(D) Initial Shut-In <u>477</u>	<input checked="" type="checkbox"/> Circ Sub <u>—</u>	T-Pulled <u>05:44</u>
(E) Second Initial Flow <u>27</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>08:17</u>
(F) Second Final Flow <u>31</u>	<input checked="" type="checkbox"/> Mileage <u>166 RT</u> 514.60	Comments <u>Loaded tools @</u>
(G) Final Shut-In <u>414</u>	<input type="checkbox"/> Sampler <u>—</u>	<u>11:30 on 11/22/13</u>
(H) Final Hydrostatic <u>2530</u>	<input type="checkbox"/> Straddle <u>—</u>	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
	<input type="checkbox"/> Shale Packer <u>—</u>	<input type="checkbox"/> Ruined Packer <u>—</u>
	<input type="checkbox"/> Extra Packer <u>—</u>	<input type="checkbox"/> Extra Copies <u>—</u>

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

Sub Total 2089.60

Sub Total 1275
 Total 3364.60
 MP/DST Disc't —

Approved By _____ Our Representative [Signature]

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PO Box 93999
Southlake, TX 76092

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

INVOICE

Invoice Number: 139819
Invoice Date: Nov 11, 2013
Page: 1

*acct.
Prod. - LH*

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	61413	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Nov 11, 2013	12/11/13

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Raile A #12-32		
340.00	CEMENT MATERIALS	Class A Common	17.90	6,086.00
7.00	CEMENT MATERIALS	Gel	23.40	163.80
12.00	CEMENT MATERIALS	Chloride	64.00	768.00
367.65	CEMENT SERVICE	Cubic Feet	2.48	911.77
1,677.00	CEMENT SERVICE	Ton Mileage	2.60	4,360.20
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
100.00	CEMENT SERVICE	Pump Truck Mileage	7.70	770.00
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
100.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	440.00
1.00	CEMENT SUPERVISOR	Andrew Forslund		
1.00	OPERATOR ASSISTANT	Kevin Ryan		
1.00	OPERATOR ASSISTANT	Mike McKampson		

Subtotal	15,287.02
Sales Tax	571.95
Total Invoice Amount	15,858.97
Payment/Credit Applied	
TOTAL	15,858.97

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

\$ 5,350.45 *3516*

ONLY IF PAID ON OR BEFORE *OK*

Dec 6, 2013

LL

- 5350.45
10,508.52

ALLIED OIL & GAS SERVICES, LLC 061413

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:
Oakley

DATE <u>11-11-13</u>	SEC. <u>32</u>	TWP. <u>25</u>	RANGE <u>41W</u>	CALLED OUT	ON LOCATION	JOB START <u>10:30a</u>	JOB FINISH <u>11:00 pm</u>
LEASE <u>Reg. Le A</u>	WELL# <u>12-32</u>	LOCATION <u>St Francis 8 W 5 1/2 N</u>			COUNTY <u>Cheyenne</u>	STATE <u>KS</u>	
OLD OR <input checked="" type="radio"/> NEW (Circle one)			<u>W into</u>				

CONTRACTOR <u>Murfin 14</u>	OWNER <u>same</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>350'</u>
CASING SIZE <u>8 5/8</u>	DEPTH <u>350'</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG. <u>15'</u>	
PERFS.	
DISPLACEMENT <u>21.33 BBL.</u>	

CEMENT			
AMOUNT ORDERED	<u>340 sbs com 3 3/4 cc</u>		
	<u>2 1/2 gal</u>		
COMMON	<u>340 sbs</u>	@ <u>17.90</u>	<u>6086.00</u>
POZMIX		@	
GEL	<u>7 sbs</u>	@ <u>23.40</u>	<u>163.80</u>
CHLORIDE	<u>12 sbs</u>	@ <u>64.00</u>	<u>768.00</u>
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>362.65 cc/ft</u>	@ <u>2.58</u>	<u>911.77</u>
MILEAGE	<u>2.60 Ten/mile</u>	@ <u>16.77</u>	<u>436.20</u>
			TOTAL <u>2289.77</u>

EQUIPMENT

PUMP TRUCK	CEMENTER	<u>Andrew Forstner</u>
# <u>323-281</u>	HELPER	<u>Kevin Ryan</u>
BULK TRUCK		
# <u>396</u>	DRIVER	<u>mike McKamper</u>
BULK TRUCK		
#	DRIVER	

REMARKS:

Cement did circulate.
25 BBL TO PIT

Thank you

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

SERVICE

DEPTH OF JOB	<u>350'</u>		
PUMP TRUCK CHARGE			<u>1512.25</u>
EXTRA FOOTAGE	@		
MILEAGE	<u>10 miles</u>	@ <u>2.20</u>	<u>220.00</u>
MANIFOLD	<u>head</u>	@	<u>225.00</u>
	<u>light vehicle</u>	@ <u>44.00</u>	<u>440.00</u>
		@	

TOTAL 2992.25

PLUG & FLOAT EQUIPMENT

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____

TOTAL _____

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cement 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 Greg L. Wick
SIGNATURE Greg L. Wick

SALES TAX (If Any)	_____
TOTAL CHARGES	<u>15,287.02</u>
DISCOUNT	<u>5,350.45</u> IF PAID IN 30 DAYS
	<u>9,936.56 Net</u>



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



rec'd
cc: W
cc: L12
cc: L-1

Invoice

DATE	INVOICE #
11/22/2013	25242

BILL TO
Murfin Drilling Co Inc P. O. Box 130 Hill City, KS 67642-0130
USED FOR <u>IC 103</u>
APPROVED <u>JT</u>

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#12-32	Raile A	Cheyenne	Murfin Drilling	Oil	Development	5-1/2" LongString	Josh

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	180	Miles	6.00	1,080.00
578D-L	Pump Charge - Long String	1	Job	1,500.00	1,500.00
221	Liquid KCL (Clayfix)	4	Gallon(s)	25.00	100.00T
280	Flocheck 21	500	Gallon(s)	3.00	1,500.00T
402-5	5 1/2" Centralizer	15	Each	70.00	1,050.00T
403-5	5 1/2" Cement Basket	1	Each	300.00	300.00T
406-5	5 1/2" Latch Down Plug & Baffle	1	Each	275.00	275.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill	1	Each	375.00	375.00T
413-5	5 1/2" Roto Wall Scratcher	25	Each	40.00	1,000.00T
419-5	5 1/2" Rotating Head Rental	1	Each	200.00	200.00T
325	Standard Cement	350	Sacks	14.50	5,075.00T
276	Flocele	100	Lb(s)	2.50	250.00T
283	Salt	1,800	Lb(s)	0.20	360.00T
284	Calseal	16	Sack(s)	35.00	560.00T
285	CFR-1	250	Lb(s)	4.50	1,125.00T
581D	Service Charge Cement	350	Sacks	2.00	700.00
583D	Drayage	3,299	Ton Miles	1.00	3,299.00
	Subtotal				18,749.00
	Sales Tax Cheyenne County			8.15%	991.86

Thank You For Your Business & Best Wishes For A Wonderful Holiday Season!!	Total	\$19,740.86
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Services, Inc.

CHARGE TO: Murkin
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 25242

PAGE 1 OF 2

1. SERVICE LOCATIONS Hays ks WELLPROJECT NO. 12-32 LEASE Acile A COUNTY/PARISH Cherokee STATE KS DATE 11-22-13 OWNER

2. Ness City ks TICKET TYPE SERVICE CONTRACTOR Murkin RIG NAME NO. 14 SHIPPED VIA CT DELIVERED TO Cherokee ORDER NO.

3. WELL TYPE 0:1 WELL CATEGORY Development JOB PURPOSE 5 1/2 Lbns String WELL PERMIT NO. WELL LOCATION Sec 32 Twp 25 R41W

4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT		AMOUNT
		LOC	ACCT	DF		QTY.	UM	QTY.	UM	
575					MILEAGE # 112	180	mi	6	cc	1080
578					Pump Charge Long String	1	ea	1500	cc	1500
221					Liquid KCl	4	gal	25	cc	100
280					Flocheck 21	500	gal	3	cc	1500
402					Centralizers	15	ea	57	cc	1050
403					Conent Basket	1	ea	300	cc	300
406					Latch Down Plug + Baffle	1	ea	275	cc	275
407					Insect Food Shoe w/Auto Fill	1	ea	375	cc	375
413					Robt Wall Scraper	25	ea	40	cc	1000
419					Rotating Head Rental	1	ea	200	cc	200

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY**, and **LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED 11-22-13 TIME SIGNED 1:00 A.M. P.M.

SWIFT OPERATOR Jade King APPROVAL [Signature]

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UN-DECIDED	DIS-AGREE
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

Subtotal 18,749.00
 Cherokee Tax 8.15% 991.86
 TOTAL 19,740.86

Thank You!



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 25242

CUSTOMER
Murfim

WELL
Bavle A 1232

DATE
11-22-93

PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING LOG ACCTG DE	TIME	DESCRIPTION	WELL				UNIT PRICE	AMOUNT
					QTY	UM	QTY	UM		
325		2		Standard Cement	350	SKS			14.50	5075.00
276		2		Floccle	100	LBS			2.50	250.00
283		2		Salt	1800	LBS			20	360.00
284		2		Caiscal	16	SKS			35.00	560.00
285		2		CFR	250	LBS			4.50	1125.00
581		2		SERVICE CHARGE					2.00	700.00
583		2		MILEAGE CHARGE					1.00	3299.00
				TOTAL WEIGHT	36650					
				LOADED MILES	180					
				CUBIC FEET	350					
				TON MILES	3299					
CONTINUATION TOTAL										11369.00

JOB LOG

SWIFT Services, Inc.

DATE 11-22-12 PAGE NO.

CUSTOMER *Murkin* WELL NO. *12-32* LEASE *Agile A* JOB TYPE *5 1/2 Longstring* TICKET NO. *25242*

CHART NO.	TIME	RATE (BPM)	VOLUME (BB) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	<i>1600</i>							<i>On location</i> <i>5 1/2 15.5"</i> <i>TO 5450 SJ 21</i> <i>TP 5447 Insert 5426</i> <i>centralizers 1-13, 16, 20</i> <i>Basket 21</i>
	<i>1835</i>							<i>Start Pipe</i>
	<i>1930</i>							<i>Break circulation Joint 62</i>
	<i>2000</i>							<i>Finish Running Pipe</i>
	<i>2115</i>							<i>Drop Ball circulate Rotate</i>
	<i>2215</i>	<i>5</i>	<i>15</i>	<i>-</i>	<i>✓</i>		<i>300</i>	<i>Start KCL Flush</i>
		<i>5</i>	<i>12</i>		<i>✓</i>		<i>300</i>	<i>Start Plugcheck 21</i>
		<i>5</i>	<i>5</i>		<i>✓</i>		<i>300</i>	<i>start KCL Flush</i>
	<i>2220</i>	<i>5</i>	<i>73</i>		<i>✓</i>		<i>300</i>	<i>Start cement</i>
	<i>2353</i>							<i>Drop Plug</i> <i>wash out Pump + Lines</i>
	<i>2255</i>	<i>6.5</i>						<i>Start Displacement w/20 bbl KCL</i>
	<i>2315</i>	<i>6.5</i>	<i>129.1</i>					<i>Load Plug</i>
	<i>2320</i>							<i>Release Plug</i>
	<i>2325</i>							<i>plug BH 30 sks, MH 20 sks</i>
								<i>wash up Rack up</i>
	<i>0015</i>							<i>Job Complete</i> <i>Thank You</i> <i>Josh, Brian, John</i>