



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1211176
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: _____

1211176

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	Michael 1-4
Doc ID	1211176

All Electric Logs Run

Dual Induction
Dual Compensated
Microresistivity
Borehole Compensated



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Robert Hendrix

Michael #1-4

4-1s-35w Rawlins,KS

Start Date: 2014.04.15 @ 17:13:00

End Date: 2014.04.16 @ 00:10:00

Job Ticket #: 55210 DST #: 1

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

Printed: 2014.04.24 @ 08:47:34



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co
250 N. Water, Ste 300
Wichita KS 67202
ATTN: Robert Hendrix

4-1s-35w Rawlins,KS
Michael #1-4
Job Ticket: 55210 **DST#: 1**
Test Start: 2014.04.15 @ 17:13:00

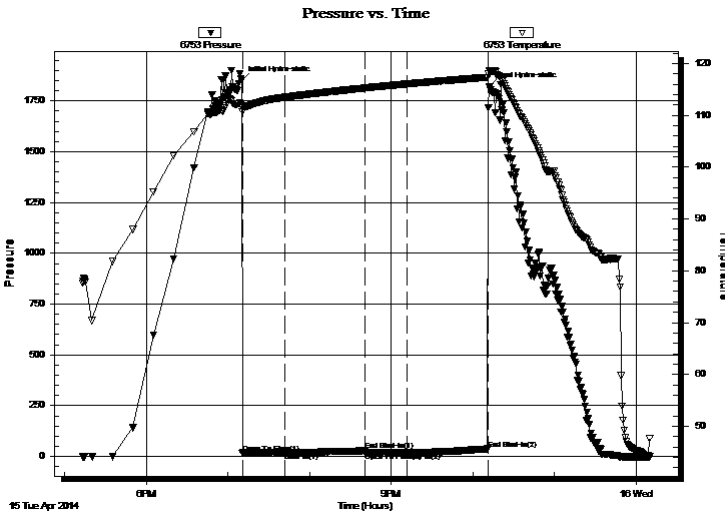
GENERAL INFORMATION:

Formation: **Stotler**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:10:30
Time Test Ended: 00:10:00
Interval: **3754.00 ft (KB) To 3804.00 ft (KB) (TVD)**
Total Depth: 3804.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: #54
Reference Elevations: 3119.00 ft (KB)
3108.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6753 **Inside**
Press@RunDepth: 19.50 psig @ 3755.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.04.15 End Date: 2014.04.16 Last Calib.: 2014.04.15
Start Time: 17:13:05 End Time: 00:09:59 Time On Btm: 2014.04.15 @ 19:10:15
Time Off Btm: 2014.04.15 @ 22:12:00

TEST COMMENT: 30 - IF - Surface blow stayed at a weak blow
60 - ISI - No Return
30 - FF - No Surface blow
60 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1849.02	111.92	Initial Hydro-static
1	16.08	110.71	Open To Flow (1)
32	20.55	113.48	Shut-In(1)
91	29.98	115.25	End Shut-In(1)
91	19.20	115.27	Open To Flow (2)
122	19.50	116.07	Shut-In(2)
181	35.80	117.35	End Shut-In(2)
182	1818.74	118.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud - 100M	0.01

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co
 250 N. Water, Ste 300
 Wichita KS 67202
 ATTN: Robert Hendrix

4-1s-35w Rawlins,KS
Michael #1-4
 Job Ticket: 55210 **DST#: 1**
 Test Start: 2014.04.15 @ 17:13:00

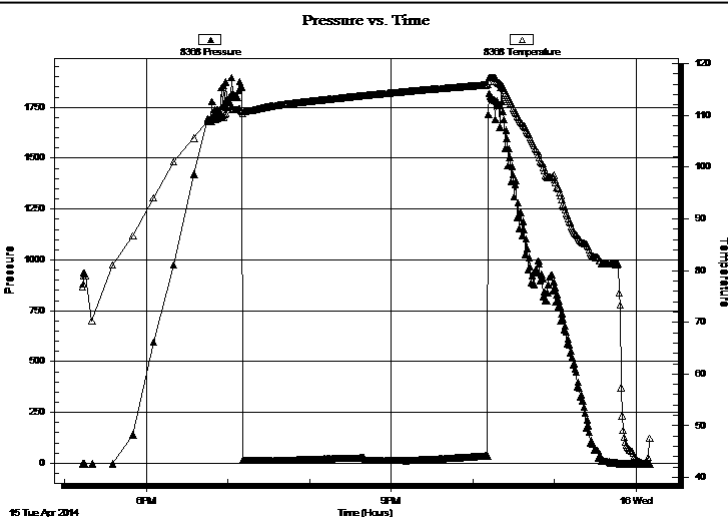
GENERAL INFORMATION:

Formation: **Stotler**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 19:10:30 Tester: Royal Fisher
 Time Test Ended: 00:10:00 Unit No: #54
 Interval: **3754.00 ft (KB) To 3804.00 ft (KB) (TVD)** Reference Elevations: 3119.00 ft (KB)
 Total Depth: 3804.00 ft (KB) (TVD) 3108.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 11.00 ft

Serial #: 8368 Inside

Press@RunDepth: psig @ 3755.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.15 End Date: 2014.04.16 Last Calib.: 2014.04.15
 Start Time: 17:13:05 End Time: 00:09:59 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow stayed at a weak blow
 60 - ISI - No Return
 30 - FF - No Surface blow
 60 - FSI - No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud - 100M	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

4-1s-35w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Michael #1-4

Job Ticket: 55210

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.04.15 @ 17:13:00

Tool Information

Drill Pipe:	Length: 3533.54 ft	Diameter: 3.80 inches	Volume: 49.57 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: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose:	102000.0 lb
			<u>Total Volume: 50.59 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.88 ft			String Weight: Initial	90000.00 lb
Depth to Top Packer:	3754.00 ft			Final	90000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	50.00 ft				
Tool Length:	77.00 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			3732.00	
Hydraulic tool	5.00			3737.00	
Jars	5.00			3742.00	
Safety Joint	3.00			3745.00	
Packer	4.00			3749.00	27.00 Bottom Of Top Packer
Packer	5.00			3754.00	
Stubb	1.00			3755.00	
Recorder	0.00	8368	Inside	3755.00	
Recorder	0.00	6753	Inside	3755.00	
Perforations	12.00			3767.00	
Change Over Sub	1.00			3768.00	
Drill Pipe	31.00			3799.00	
Change Over Sub	1.00			3800.00	
Bullnose	4.00			3804.00	50.00 Bottom Packers & Anchor

Total Tool Length: 77.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

4-1s-35w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Michael #1-4

Job Ticket: 55210

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.04.15 @ 17:13:00

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud - 100M	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

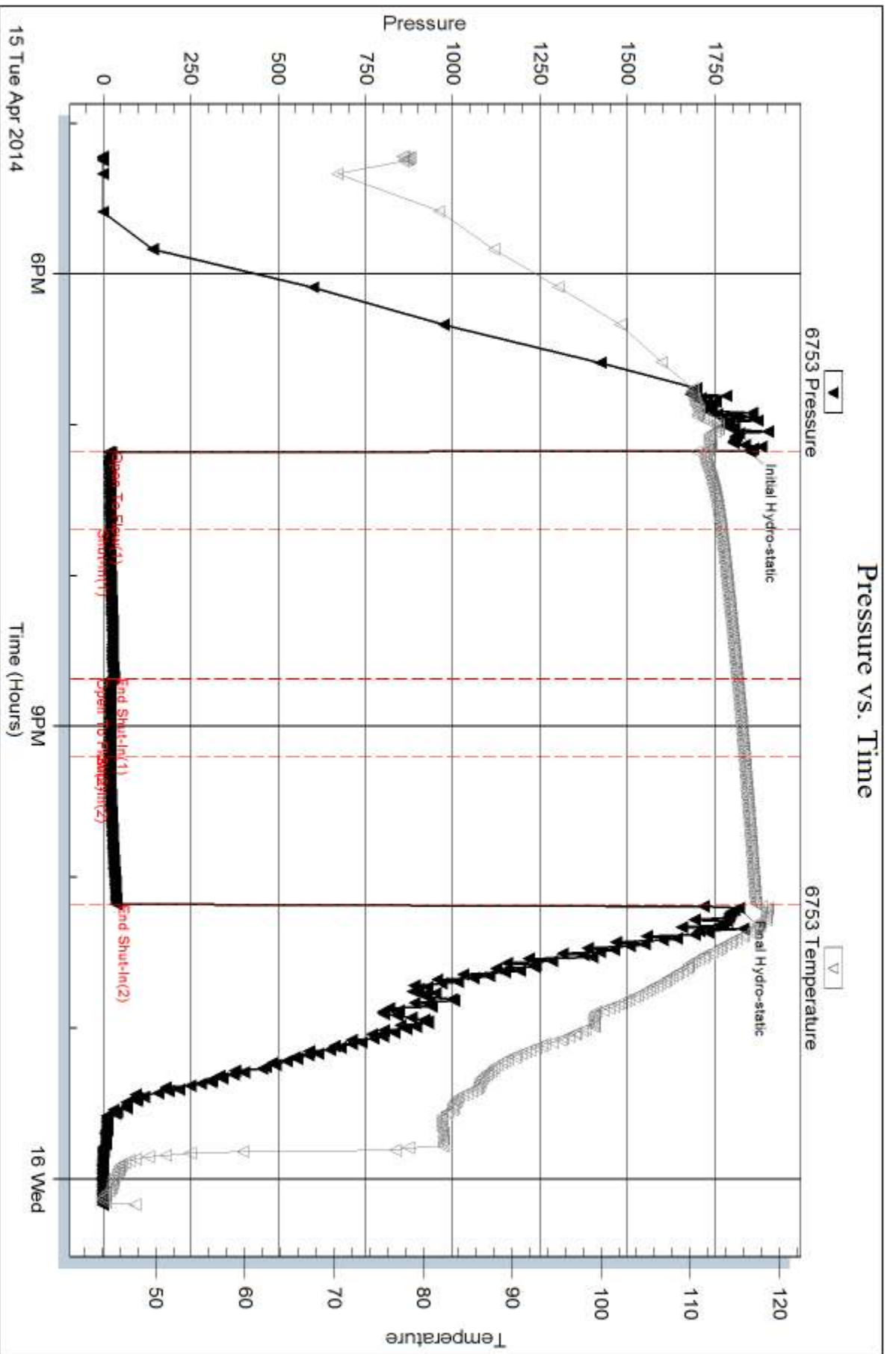
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



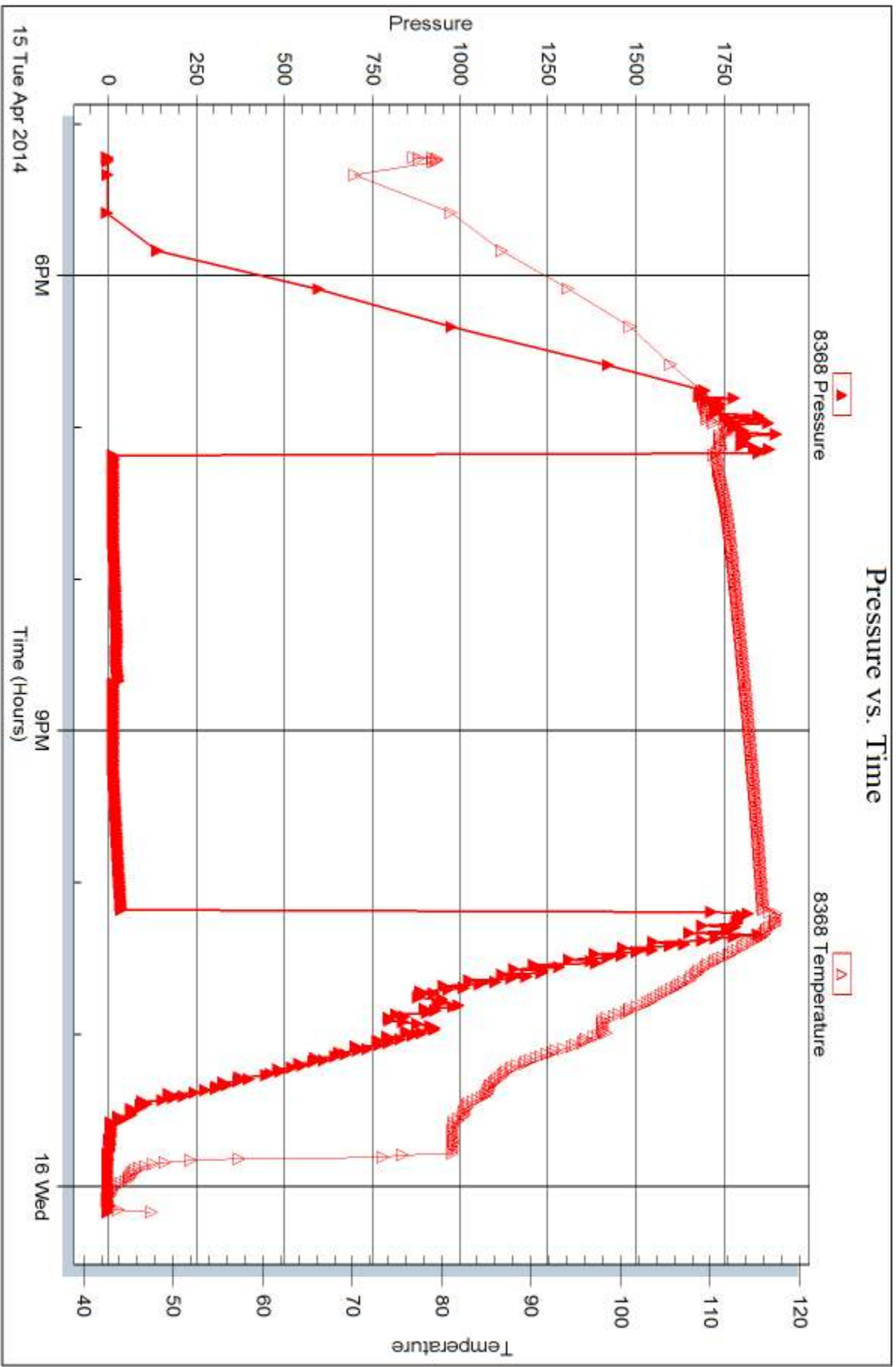
Serial #: 8368

Inside

Murfin Drilling Co

Michael #1-4

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Robert Hendrix

Michael #1-4

4-1s-35w Rawlins,KS

Start Date: 2014.04.17 @ 03:11:00

End Date: 2014.04.17 @ 11:48:45

Job Ticket #: 55211 DST #: 2

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

Printed: 2014.04.24 @ 08:46:25



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co
 250 N. Water, Ste 300
 Wichita KS 67202
 ATTN: Robert Hendrix

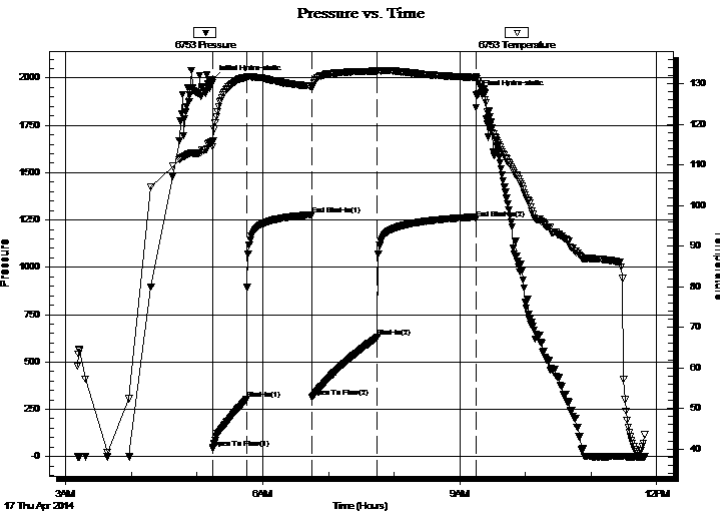
4-1s-35w Rawlins,KS
Michael #1-4
 Job Ticket: 55211 **DST#: 2**
 Test Start: 2014.04.17 @ 03:11:00

GENERAL INFORMATION:

Formation: **LKC A**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:14:15
 Time Test Ended: 11:48:45
 Interval: **4017.00 ft (KB) To 4069.00 ft (KB) (TVD)**
 Total Depth: 4069.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Royal Fisher
 Unit No: #54
 Reference Elevations: 3119.00 ft (KB)
 3108.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6753 Inside
 Press@RunDepth: 629.42 psig @ 4018.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.17 End Date: 2014.04.17 Last Calib.: 2014.04.17
 Start Time: 03:11:05 End Time: 11:48:45 Time On Btm: 2014.04.17 @ 05:14:00
 Time Off Btm: 2014.04.17 @ 09:15:15

TEST COMMENT: 30 - IF - Surface blow built to bottom of bucket in 6 mins.
 60 - ISI - Weak Return started 20 mins. into and built to 1/4"
 60 - FF - Surface blow built to bottom of bucket in 8 mins.
 90 - FSI - Weak Return started 15 mins. into and built to 1"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1992.98	115.65	Initial Hydro-static
1	45.00	114.49	Open To Flow (1)
32	302.34	131.53	Shut-In(1)
91	1277.51	129.40	End Shut-In(1)
91	311.21	128.93	Open To Flow (2)
151	629.42	133.04	Shut-In(2)
241	1255.11	131.52	End Shut-In(2)
242	1910.26	131.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
636.00	OCMW - 93W - 5M - 2o	7.03
635.00	OCMW - 90W - 5M - 5o	8.91
20.00	Free oil	0.28

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co
 250 N. Water, Ste 300
 Wichita KS 67202
 ATTN: Robert Hendrix

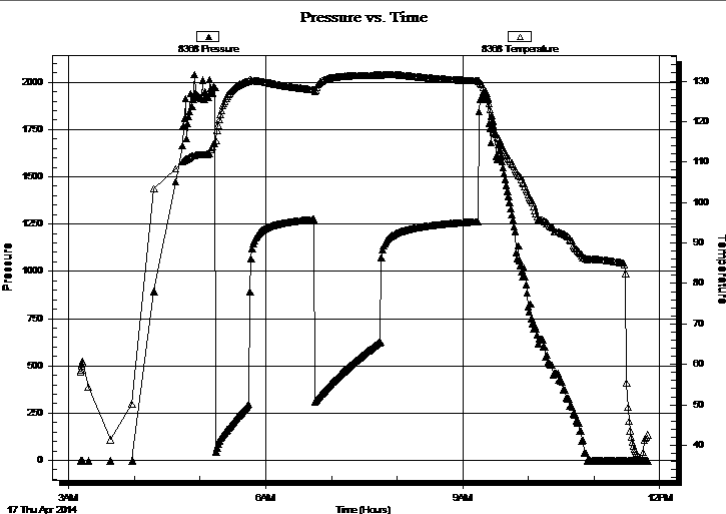
4-1s-35w Rawlins,KS
Michael #1-4
 Job Ticket: 55211 **DST#: 2**
 Test Start: 2014.04.17 @ 03:11:00

GENERAL INFORMATION:

Formation: **LKC A**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:14:15
 Time Test Ended: 11:48:45
 Interval: **4017.00 ft (KB) To 4069.00 ft (KB) (TVD)**
 Total Depth: 4069.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Royal Fisher
 Unit No: #54
 Reference Elevations: 3119.00 ft (KB)
 3108.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8368 Inside
 Press@RunDepth: psig @ 4018.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.17 End Date: 2014.04.17 Last Calib.: 2014.04.17
 Start Time: 03:11:05 End Time: 11:48:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow built to bottom of bucket in 6 mins.
 60 - ISI - Weak Return started 20 mins. into and built to 1/4"
 60 - FF - Surface blow built to bottom of bucket in 8 mins.
 90 - FSI - Weak Return started 15 mins. into and built to 1"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
636.00	OCMW - 93W - 5M - 2o	7.03
635.00	OCMW - 90W - 5M - 5o	8.91
20.00	Free oil	0.28

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

4-1s-35w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Michael #1-4

Job Ticket: 55211

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.04.17 @ 03:11:00

Tool Information

Drill Pipe:	Length: 3813.85 ft	Diameter: 3.80 inches	Volume: 53.50 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: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 110000.0 lb
			<u>Total Volume: 54.52 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.19 ft			String Weight: Initial 96000.00 lb
Depth to Top Packer:	4017.00 ft			Final 106000.0 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	79.00 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			3995.00	
Hydraulic tool	5.00			4000.00	
Jars	5.00			4005.00	
Safety Joint	3.00			4008.00	
Packer	4.00			4012.00	27.00 Bottom Of Top Packer
Packer	5.00			4017.00	
Stubb	1.00			4018.00	
Recorder	0.00	8368	Inside	4018.00	
Recorder	0.00	6753	Inside	4018.00	
Perforations	14.00			4032.00	
Change Over Sub	1.00			4033.00	
Drill Pipe	31.00			4064.00	
Change Over Sub	1.00			4065.00	
Bullnose	4.00			4069.00	52.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

4-1s-35w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Michael #1-4

Job Ticket: 55211

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.04.17 @ 03:11:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

30 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

100000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
636.00	OCMW - 93W - 5M - 2o	7.033
635.00	OCMW - 90W - 5M - 5o	8.907
20.00	Free oil	0.281

Total Length: 1291.00 ft Total Volume: 16.221 bbl

Num Fluid Samples: 0

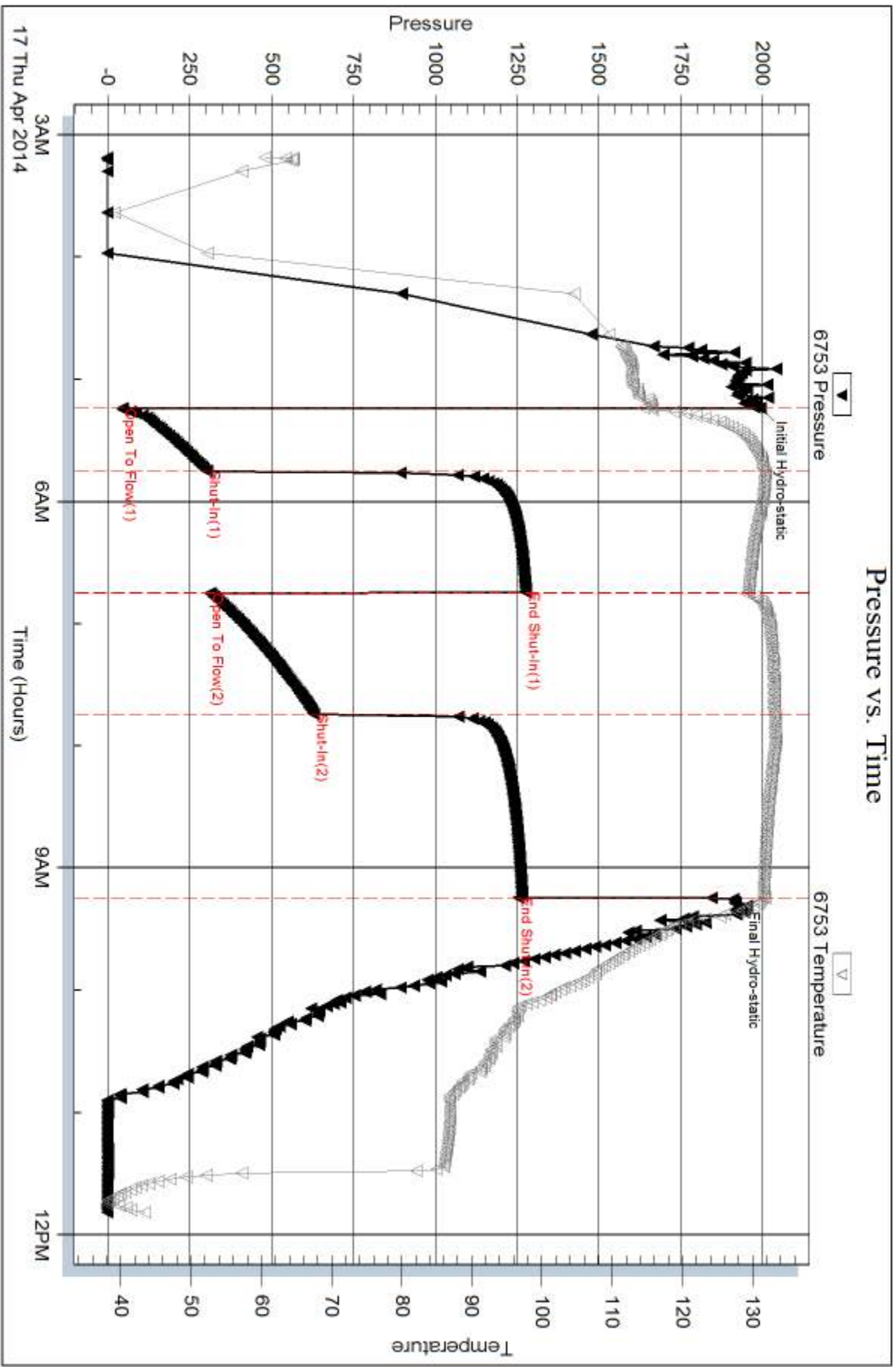
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



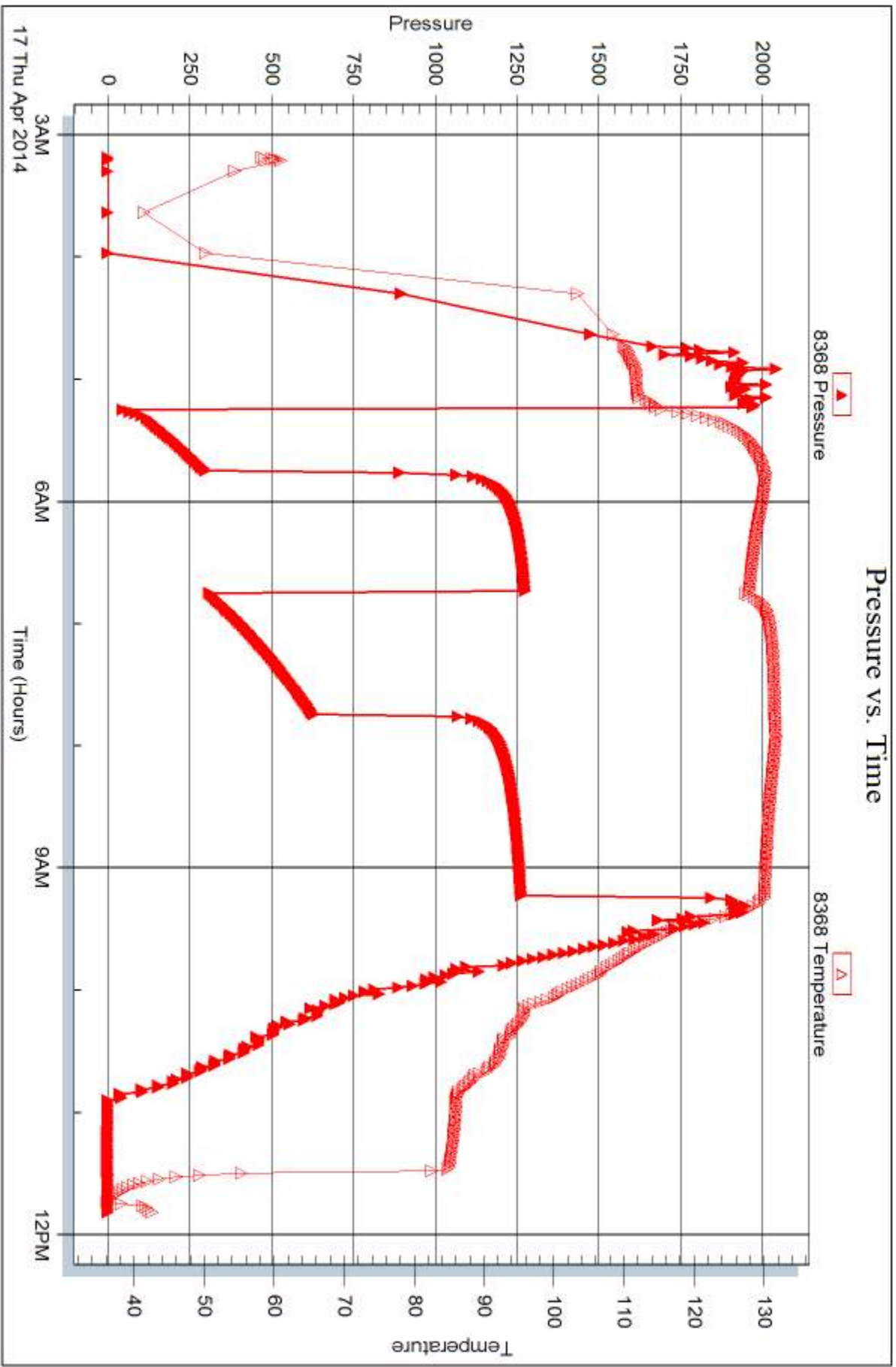
Serial #: 8368

Inside

Murfin Drilling Co

Michael #1-4

DST Test Number: 2



Tribble Testing, Inc

Ref. No: 55211

Printed: 2014.04.24 @ 08:46:26



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Robert Hendrix

Michael #1-4

4-1s-35w Rawlins,KS

Start Date: 2014.04.18 @ 02:37:00

End Date: 2014.04.18 @ 09:57:30

Job Ticket #: 55212 DST #: 3

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

Printed: 2014.04.24 @ 08:45:32



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co
250 N. Water, Ste 300
Wichita KS 67202
ATTN: Robert Hendrix

4-1s-35w Rawlins,KS
Michael #1-4
Job Ticket: 55212 **DST#: 3**
Test Start: 2014.04.18 @ 02:37:00

GENERAL INFORMATION:

Formation: **LKC 'D-G'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:10:15
Time Test Ended: 09:57:30
Interval: **4073.00 ft (KB) To 4172.00 ft (KB) (TVD)**
Total Depth: 4172.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: #54
Reference Elevations: 3119.00 ft (KB)
3108.00 ft (CF)
KB to GR/CF: 11.00 ft

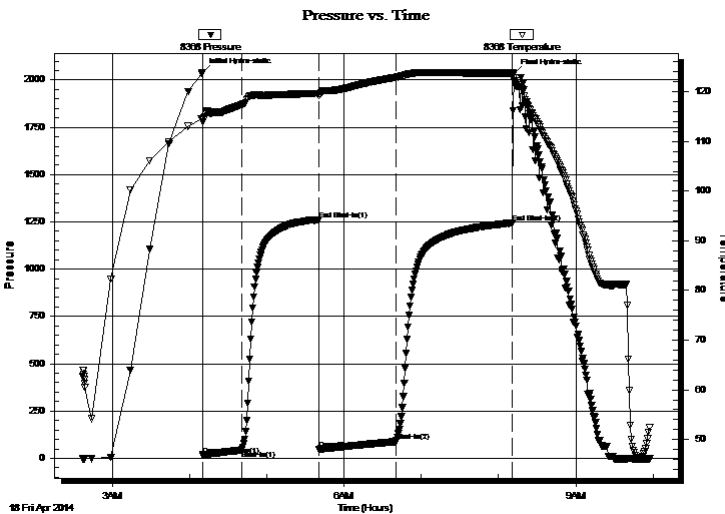
Serial #: 8368

Inside

Press@RunDepth: 91.02 psig @ 4074.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.04.18 End Date: 2014.04.18 Last Calib.: 2014.04.18
Start Time: 02:37:05 End Time: 09:57:29 Time On Btm: 2014.04.18 @ 04:10:00
Time Off Btm: 2014.04.18 @ 08:11:45

TEST COMMENT: 30 - IF - Surface blow built to 3 1/4"
60 - ISI - No Return
60 - FF - Surface blow built to 3/4"
90 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2040.27	114.64	Initial Hydro-static
1	17.71	114.03	Open To Flow (1)
31	42.86	117.39	Shut-In(1)
91	1260.35	119.69	End Shut-In(1)
91	49.34	119.20	Open To Flow (2)
151	91.02	122.92	Shut-In(2)
241	1244.63	123.76	End Shut-In(2)
242	2035.53	122.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
133.00	OCWM - 65M - 25W - 10o	0.65
3.00	Free Oil - 100o	0.01

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co
250 N. Water, Ste 300
Wichita KS 67202
ATTN: Robert Hendrix

4-1s-35w Rawlins,KS
Michael #1-4
Job Ticket: 55212 **DST#: 3**
Test Start: 2014.04.18 @ 02:37:00

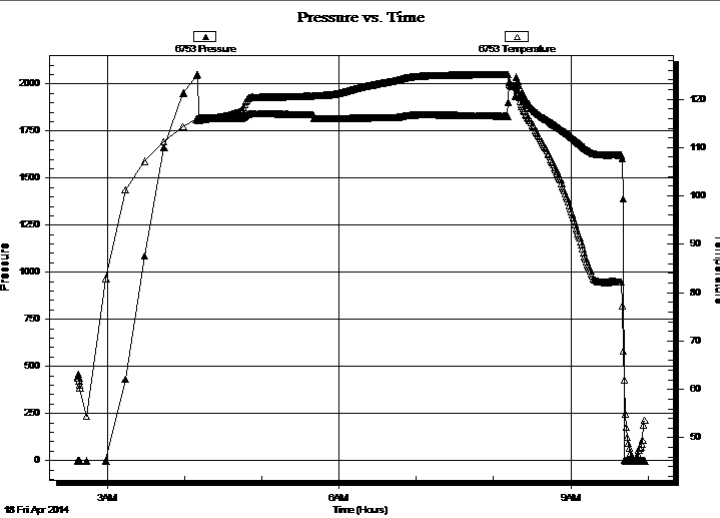
GENERAL INFORMATION:

Formation: **LKC 'D-G'**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 04:10:15 Tester: Royal Fisher
Time Test Ended: 09:57:30 Unit No: #54
Interval: 4073.00 ft (KB) To 4172.00 ft (KB) (TVD) Reference Elevations: 3119.00 ft (KB)
Total Depth: 4172.00 ft (KB) (TVD) 3108.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 11.00 ft

Serial #: 6753

Press@RunDepth: psig @ ft (KB) Capacity: 8000.00 psig
Start Date: 2014.04.18 End Date: 2014.04.18 Last Calib.: 2014.04.18
Start Time: 02:37:05 End Time: 09:57:29 Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow built to 3 1/4"
60 - ISI - No Return
60 - FF - Surface blow built to 3/4"
90 - FSI - No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
133.00	OCWM - 65M - 25W - 10o	0.65
3.00	Free Oil - 100o	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

4-1s-35w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Michael #1-4

Job Ticket: 55212

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.04.18 @ 02:37:00

Tool Information

Drill Pipe:	Length: 3846.24 ft	Diameter: 3.80 inches	Volume: 53.95 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: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 105000.0 lb
			<u>Total Volume: 54.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.58 ft			String Weight: Initial 100000.0 lb
Depth to Top Packer:	4073.00 ft			Final 100000.0 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	99.00 ft			
Tool Length:	126.00 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			4051.00	
Hydraulic tool	5.00			4056.00	
Jars	5.00			4061.00	
Safety Joint	3.00			4064.00	
Packer	4.00			4068.00	27.00 Bottom Of Top Packer
Packer	5.00			4073.00	
Stubb	1.00			4074.00	
Recorder	0.00	8368	Inside	4074.00	
Recorder	0.00	6753	Inside	4074.00	
Perforations	29.00			4103.00	
Change Over Sub	1.00			4104.00	
Drill Pipe	63.00			4167.00	
Change Over Sub	1.00			4168.00	
Bullnose	4.00			4172.00	99.00 Bottom Packers & Anchor

Total Tool Length: 126.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

4-1s-35w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Michael #1-4

Job Ticket: 55212

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.04.18 @ 02:37:00

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: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
133.00	OCWM - 65M - 25W - 10o	0.654
3.00	Free Oil - 100o	0.015

Total Length: 136.00 ft Total Volume: 0.669 bbl

Num Fluid Samples: 0

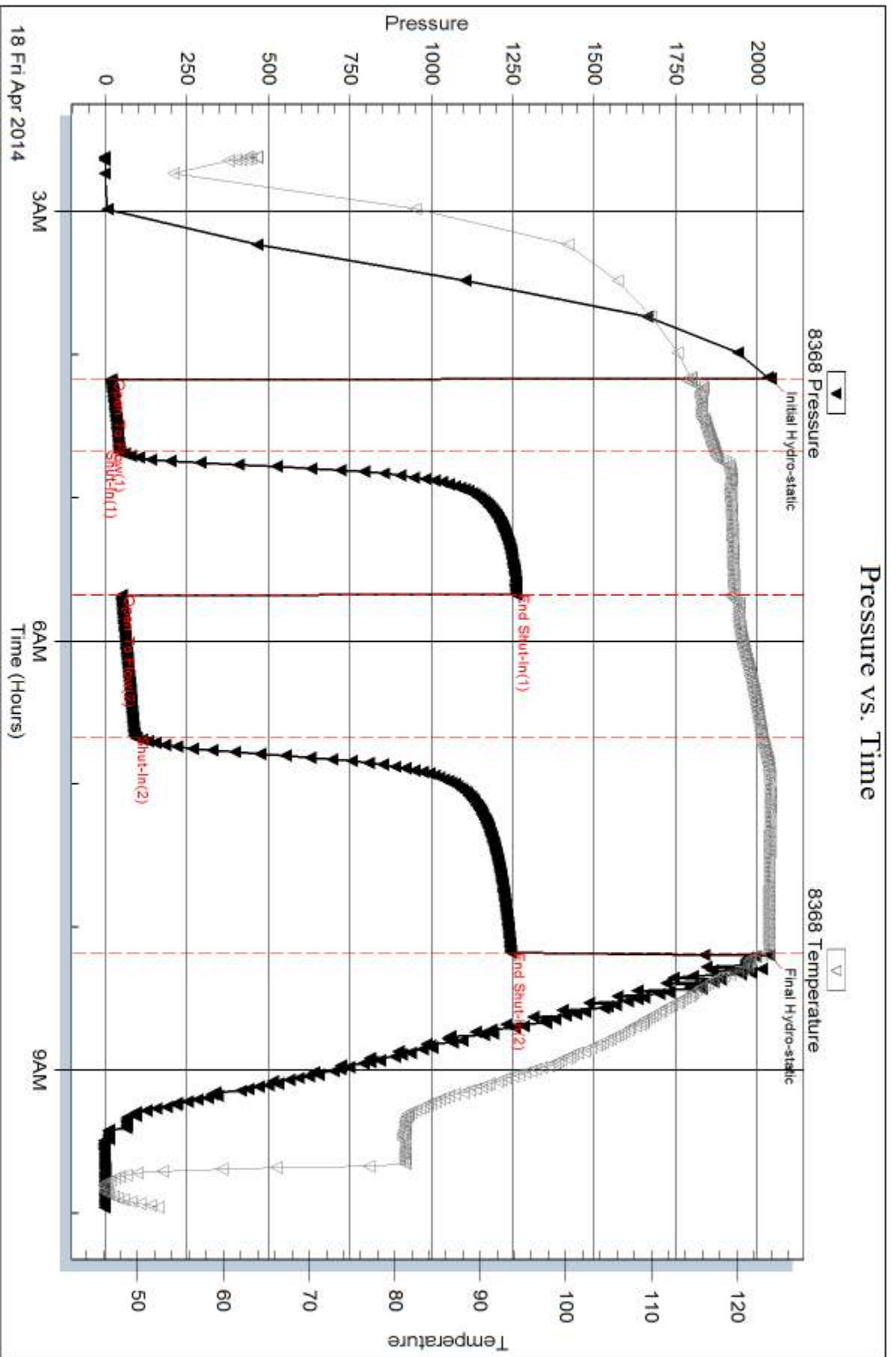
Num Gas Bombs: 0

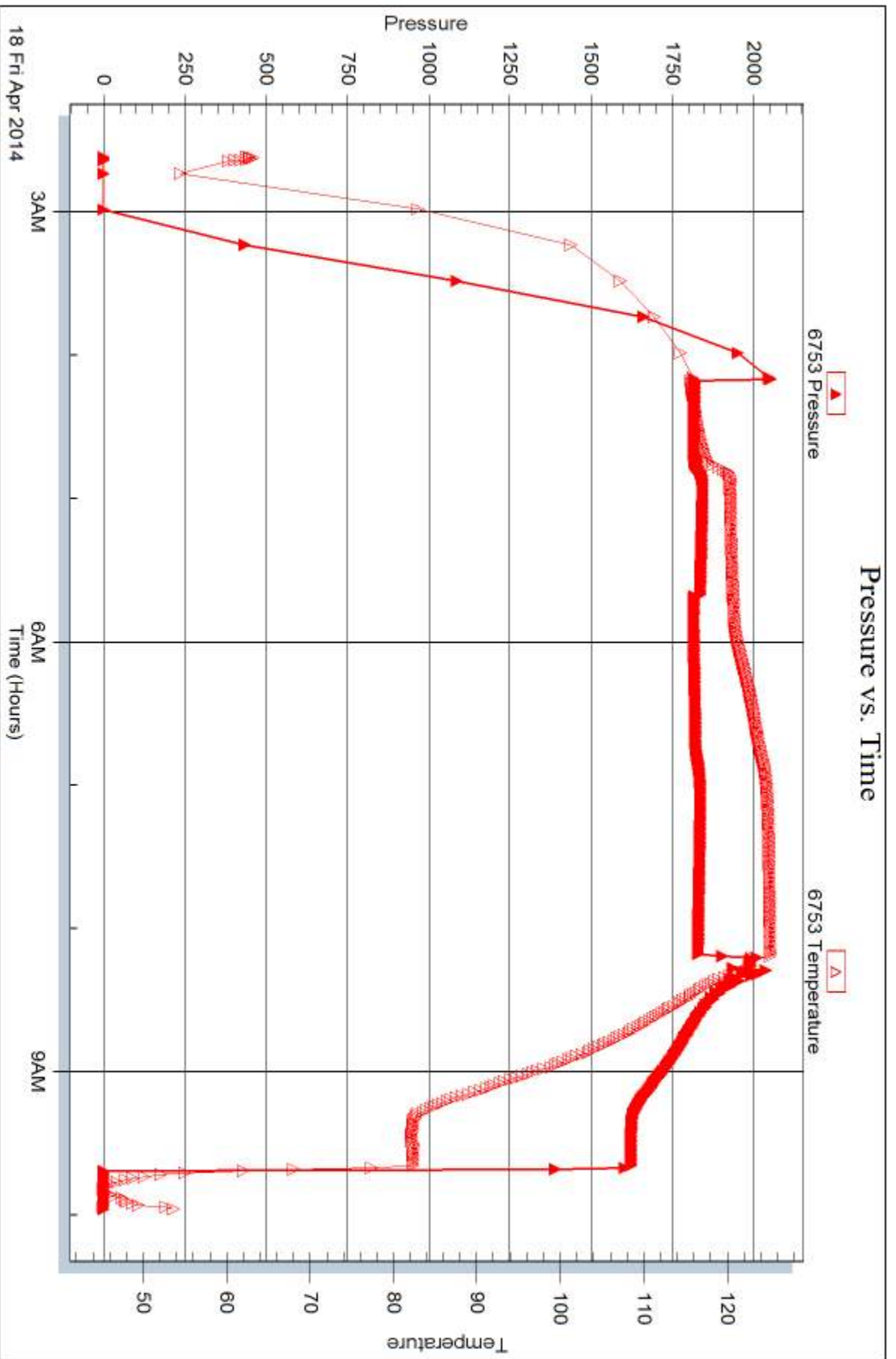
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Robert Hendrix

Michael #1-4

4-1s-35w Rawlins,KS

Start Date: 2014.04.18 @ 23:59:00

End Date: 2014.04.19 @ 07:19:45

Job Ticket #: 55213 DST #: 4

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

Printed: 2014.04.24 @ 08:44:54



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co
250 N. Water, Ste 300
Wichita KS 67202
ATTN: Robert Hendrix

4-1s-35w Rawlins,KS
Michael #1-4
Job Ticket: 55213 **DST#: 4**
Test Start: 2014.04.18 @ 23:59:00

GENERAL INFORMATION:

Formation: **LKC H-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:18:00
Time Test Ended: 07:19:45
Interval: **4176.00 ft (KB) To 4270.00 ft (KB) (TVD)**
Total Depth: 4270.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: #54
Reference Elevations: 3119.00 ft (KB)
3108.00 ft (CF)
KB to GR/CF: 11.00 ft

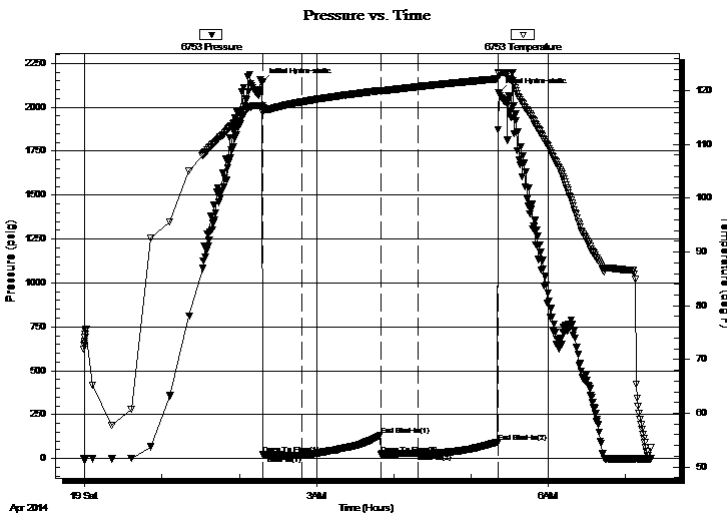
Serial #: 6753

Inside

Press@RunDepth: 29.05 psig @ 4177.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.04.18 End Date: 2014.04.19 Last Calib.: 2014.04.19
Start Time: 23:59:05 End Time: 07:19:44 Time On Btm: 2014.04.19 @ 02:17:45
Time Off Btm: 2014.04.19 @ 05:21:15

TEST COMMENT: 30 - IF - Surface blow stayed at a weak blow
60 - ISI - No Return
30 - FF - No Surface blow
60 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2140.28	117.27	Initial Hydro-static
1	21.71	115.90	Open To Flow (1)
31	20.19	117.94	Shut-In(1)
92	132.13	120.03	End Shut-In(1)
92	25.05	119.98	Open To Flow (2)
121	29.05	120.74	Shut-In(2)
183	94.20	122.21	End Shut-In(2)
184	2083.91	123.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	OCM - 90M - 10o	0.01

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co
 250 N. Water, Ste 300
 Wichita KS 67202
 ATTN: Robert Hendrix

4-1s-35w Rawlins,KS
Michael #1-4
 Job Ticket: 55213 **DST#: 4**
 Test Start: 2014.04.18 @ 23:59:00

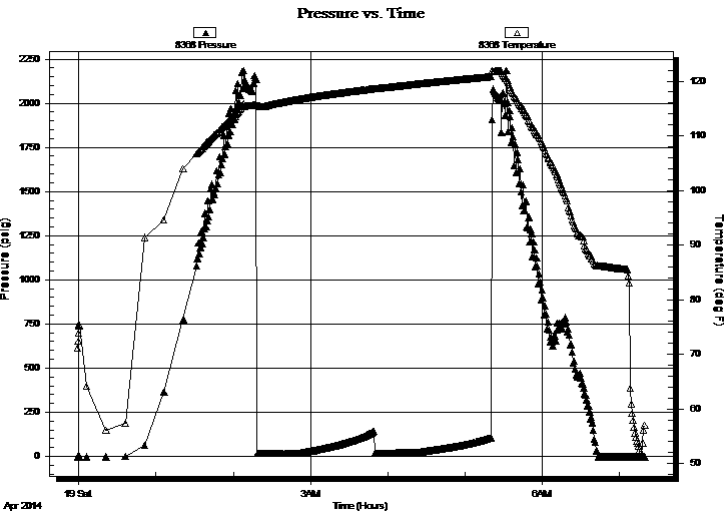
GENERAL INFORMATION:

Formation: **LKC H-J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:18:00
 Time Test Ended: 07:19:45
Interval: 4176.00 ft (KB) To 4270.00 ft (KB) (TVD)
 Total Depth: 4270.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Royal Fisher
 Unit No: #54
 Reference Elevations: 3119.00 ft (KB)
 3108.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8368 Inside

Press@RunDepth: psig @ 4177.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.18 End Date: 2014.04.19 Last Calib.: 2014.04.19
 Start Time: 23:59:05 End Time: 07:19:44 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow stayed at a weak blow
 60 - ISI - No Return
 30 - FF - No Surface blow
 60 - FSI - No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	OCM - 90M - 10o	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

4-1s-35w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Michael #1-4

Job Ticket: 55213

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.04.18 @ 23:59:00

Tool Information

Drill Pipe:	Length: 3972.66 ft	Diameter: 3.80 inches	Volume: 55.73 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: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 104000.0 lb
			<u>Total Volume: 56.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 98000.00 lb
Depth to Top Packer:	4176.00 ft			Final 98000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	94.00 ft			
Tool Length:	121.00 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			4154.00	
Hydraulic tool	5.00			4159.00	
Jars	5.00			4164.00	
Safety Joint	3.00			4167.00	
Packer	4.00			4171.00	27.00 Bottom Of Top Packer
Packer	5.00			4176.00	
Stubb	1.00			4177.00	
Recorder	0.00	8368	Inside	4177.00	
Recorder	0.00	6753	Inside	4177.00	
Perforations	24.00			4201.00	
Change Over Sub	1.00			4202.00	
Drill Pipe	63.00			4265.00	
Change Over Sub	1.00			4266.00	
Bullnose	4.00			4270.00	94.00 Bottom Packers & Anchor

Total Tool Length: 121.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

4-1s-35w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Michael #1-4

Job Ticket: 55213

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.04.18 @ 23:59:00

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: 5.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	OCM - 90M - 10o	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

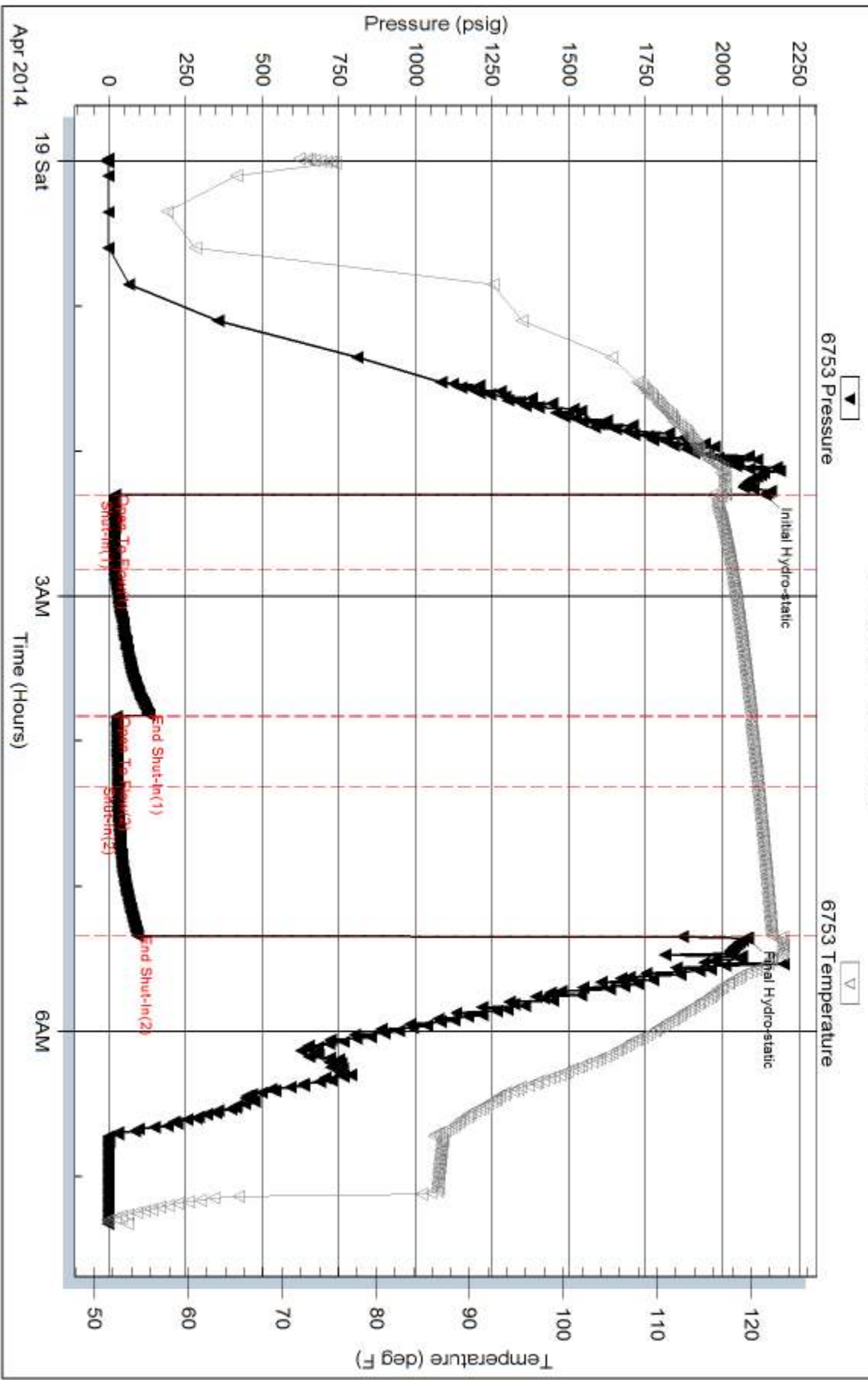
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



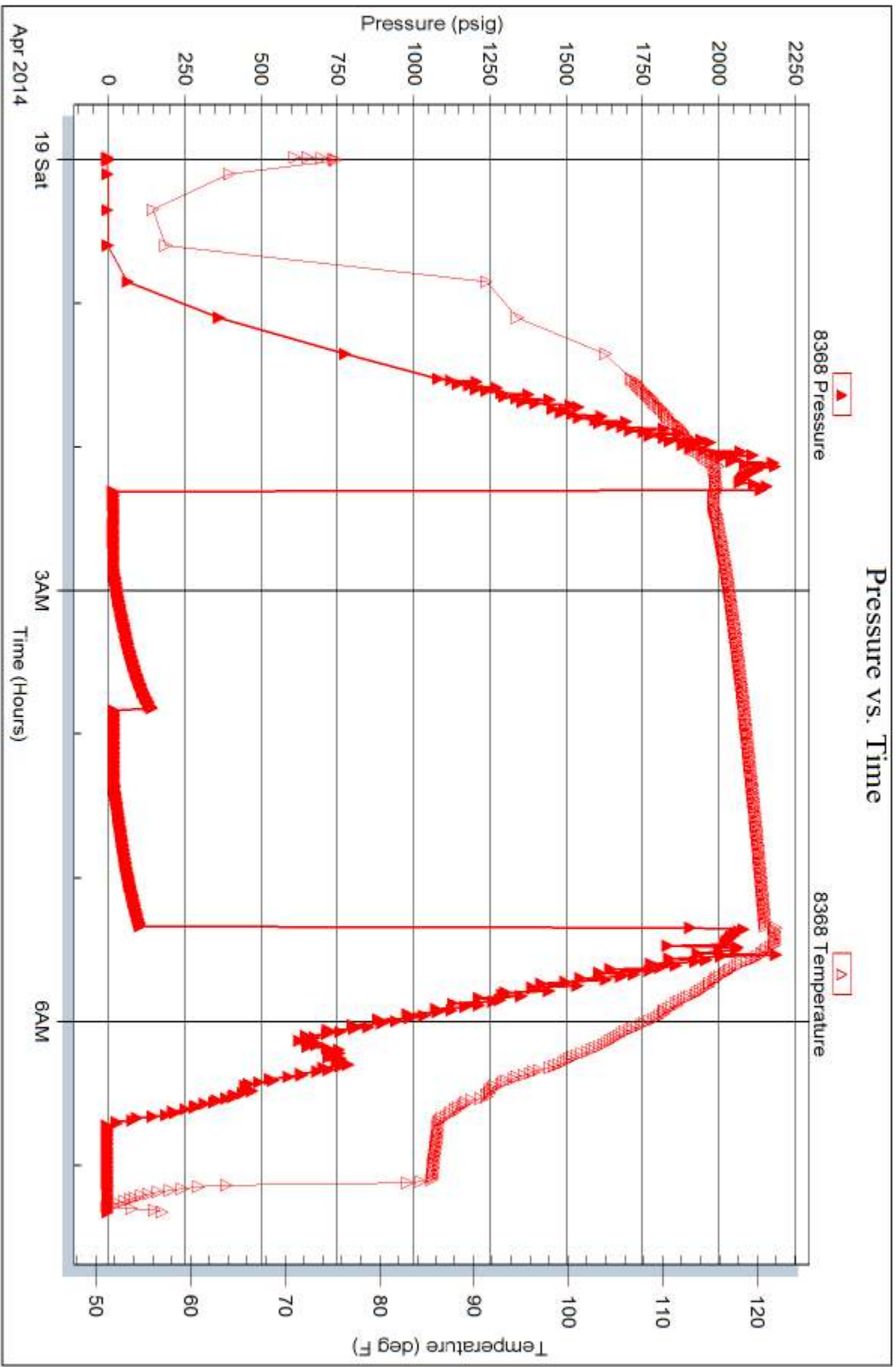
Serial #: 8368

Inside

Murfin Drilling Co

Michael #1-4

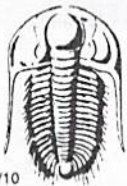
DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 55213

Printed: 2014.04.24 @ 08:44:55



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55210

Well Name & No. Micheal #1-4 Test No. 1 Date 4-15-14
 Company Murfin Drilling Co., Inc. Elevation 3119 KB 3108 GL
 Address 250 N. Water, Ste 300 Wichita KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 4 Twp. 15 Rge. 35 W Co. Rawlins State KS

Interval Tested 3754 - 3804 Zone Tested Stotler
 Anchor Length 50' Drill Pipe Run 3533.54' Mud Wt. 9.2
 Top Packer Depth 3749' Drill Collars Run 207.34' Vis 58
 Bottom Packer Depth 3754' Wt. Pipe Run 0 WL 6.0
 Total Depth 3804 Chlorides 500 ppm System LCM 4#

Blow Description IF - Surface blow stayed at a weak blow
ISI - No Return
FF - No Surface blow
FZI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2'</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 2' BHT 1179F Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1849 Test 1150 T-On Location 4:30pm
 (B) First Initial Flow 16 Jars 250 T-Started 5:13pm
 (C) First Final Flow 20 Safety Joint 75 T-Open 7:11pm
 (D) Initial Shut-In 29 Circ Sub N/C T-Pulled 10:11pm
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 12:10am
 (F) Second Final Flow 19 Mileage 106 RT 164.30 Comments _____
 (G) Final Shut-In 35 Sampler _____
 (H) Final Hydrostatic 1818 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1639.30
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1639.30

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. 55211

Well Name & No. Michael #1-4 Test No. 2 Date 4-17-14
 Company Murfin Drilling Co., Inc. Elevation 3119 KB 3108 GL
 Address 250 N. Water, Ste 300 Wichita KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 4 Twp. 1S Rge. 35W Co. Lawlins State KS

Interval Tested 4017-4069 Zone Tested Lansing-A
 Anchor Length 52' Drill Pipe Run 3813.85 Mud Wt. 9.1
 Top Packer Depth 4012 Drill Collars Run 207.34 Vis 62
 Bottom Packer Depth 4017 Wt. Pipe Run 0 WL 6.8
 Total Depth 4069 Chlorides 600 ppm System LCM 3#

Blow Description IF - ~~0~~ Surface blow built to bottom of bucket in 6 mins.
ISI - Weak return started 20 mins. into and built to 1/4"
FF - Surface blow built to bottom of bucket in 8 mins.
FZI - Weak ~~0~~ return started 15 mins. into and built to 1"

Rec	Feet of	%gas	%oil	%water	%mud
<u>20'</u>	<u>Free Oil</u>	<u>100</u>			
<u>635'</u>	<u>OCMW</u>	<u>5</u>	<u>90</u>	<u>5</u>	
<u>636'</u>	<u>OCMW</u>	<u>2</u>	<u>93</u>	<u>5</u>	
<u>94'</u>	<u>Gas in pipe</u>				

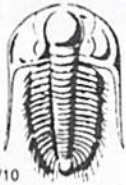
Rec Total 1291' BHT 131°F Gravity 30 API RW .152 @ 38 °F Chlorides 100,000 ppm

(A) Initial Hydrostatic 1992 Test 1250 T-On Location 3:00am
 (B) First Initial Flow 45 Jars 250 T-Started 3:11am
 (C) First Final Flow 302 Safety Joint 75 T-Open 5:14am
 (D) Initial Shut-In 1277 Circ Sub N/C T-Pulled 9:14am
 (E) Second Initial Flow 311 Hourly Standby _____ T-Out 11:49am
 (F) Second Final Flow 629 Mileage 106 R/T 164.30
 (G) Final Shut-In 1255 Sampler _____
 (H) Final Hydrostatic 1910 Straddle _____

Ruined Shale Packer _____
 Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Copies _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1739.30
 Total 1739.30
 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55212**

Well Name & No. Michael #1-4 Test No. 3 Date 4-18-14
 Company Murfin Drilling Co., Inc. Elevation 3119 KB 3108 GL
 Address 250 N. Water, Ste 300 Wichita KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 4 Twp. 1S Rge. 35W Co. Rawlins State KS

Interval Tested 4073 - 4172 Zone Tested Lans 'D'-'G'
 Anchor Length 99' Drill Pipe Run 3846.24 Mud Wt. 9.0
 Top Packer Depth 4068 Drill Collars Run 207.34 Vis 63
 Bottom Packer Depth 4073 Wt. Pipe Run 0 WL 5.6
 Total Depth 4172 Chlorides 700 ppm System LCM 8#
 Blow Description IF-Surface blow built to 3/4"
ISI-No return
FF-Surface blow built to 3/4"
FSI-No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>133'</u>	<u>acwm</u>	<u>10</u>	<u>0</u>	<u>25</u>	<u>65</u>
<u>3'</u>	<u>Free Oil</u>	<u>100</u>			

Rec Total 136' BHT 123°F Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2040 Test 1250 T-On Location 2:10am
 (B) First Initial Flow 17 Jars 250 T-Started 2:37am
 (C) First Final Flow 42 Safety Joint 75 T-Open 4:10am
 (D) Initial Shut-In 1260 Circ Sub n/c T-Pulled 8:10am
 (E) Second Initial Flow 49 Hourly Standby _____ T-Out 9:57am
 (F) Second Final Flow 91 Mileage 106 R/T 164.30
 (G) Final Shut-In 1244 Sampler _____
 (H) Final Hydrostatic 2035 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1739.30

MP/DST Disc't _____

Approved By _____ Our Representative Peter Foster

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. **55213**

4/10

Well Name & No. <u>Micheal #1-4</u>	Test No. <u>4</u>	Date <u>4-18-14</u>
Company <u>Murfin Drilling Co., Inc.</u>	Elevation <u>3119</u>	KB <u>3108</u> GL
Address <u>250 N. Water, Ste 300 Wichita KS 67202</u>		
Co. Rep / Geo. <u>Robert Hendrix</u>	Rig <u>Murfin #2</u>	
Location: Sec. <u>4</u> Twp. <u>1S</u> Rge. <u>35W</u> Co. <u>Rawlins</u> State <u>KS</u>		

Interval Tested <u>4176 - 4270</u>	Zone Tested <u>Lans - H & J</u>
Anchor Length <u>94'</u>	Drill Pipe Run <u>3972.66'</u> Mud Wt. <u>9.1</u>
Top Packer Depth <u>4171</u>	Drill Collars Run <u>207.34'</u> Vis <u>60</u>
Bottom Packer Depth <u>4176</u>	Wt. Pipe Run <u>0</u> WL <u>5.6</u>
Total Depth <u>4270</u>	Chlorides <u>700</u> ppm System LCM <u>6#</u>

Blow Description IF - Surface blow stayed at a weak blow
ISI - No Return
FF - No Surface blow
FST - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2'</u>	<u>0cm</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 <u>2'</u>	BHT <u>122°F</u>	Gravity	API RW	@	°F	Chlorides	ppm
(A) Initial Hydrostatic <u>2140</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>11:30pm</u>					
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:59pm</u>					
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2:18am</u>					
(D) Initial Shut-In <u>132</u>	<input checked="" type="checkbox"/> Circ Sub <u>n/c</u>	T-Pulled <u>5:18am</u>					
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>7:20am</u>					
(F) Second Final Flow <u>29</u>	<input checked="" type="checkbox"/> Mileage <u>106 RIT</u> <u>328.60</u>	Comments <u>Picked up tool on</u>					
(G) Final Shut-In <u>94</u>	<input type="checkbox"/> Sampler	<u>4-20-14</u>					
(H) Final Hydrostatic <u>2083</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer					
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer					
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies					
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>					
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1903.60</u>					
	<input type="checkbox"/> Accessibility	MP/DST Disc't					
	Sub Total <u>1903.60</u>						

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.

Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: **Murfin Drilling Co. Inc.**

LEASE: **Michael #1-4**

FIELD: **Wildecat**

LOCATION: **2640' n1 & 700' e1**

SEC: **4** TWP: **1S** RGE: **35W**

COUNTY: **Rawlins** STATE: **Kansas**

CONTRACTOR: **Murfin Drilling Co. Inc. Rig 2**

RTD: **4/12/2014** COMP: **4/21/2014**

SPUD: **4/7/62** LTD: **4/7/63**

MUD UP: **3/291** TYPE MUD: **Chemical**

SAMPLES SAVED FROM: **3530 TO TD**

DRILLING TIME KEPT FROM: **2629 TO TD**

SAMPLES EXAMINED FROM: **3530 TO TD**

GEOLOGICAL SUPERVISION FROM: **3628**

GEOLOGIST ON WELL: **Robert D. Hendrix**

FORMATION TOPS: **ELECTRIC LOG**

ANHYDRITE: **3014 (-511)** **3015 (-104)**

TOPEKA: **3830 (-511)** **3832 (-514)**

LANSEAR: **3840 (-721)** **3842 (-721)**

LANSEAR: **3840 (-721)** **3842 (-721)**

LANSEAR: **3840 (-721)** **3842 (-721)**

LANSEAR: **3840 (-721)** **3842 (-721)**

LANSEAR: **3840 (-721)** **3842 (-721)**

LANSEAR: **3840 (-721)** **3842 (-721)**

ELEVATIONS: **KB 3119**

DF: _____

GL: **3108**

Measurements Are All From **Kelly Bushings**

CASING CONDUCTOR: _____

SURFACE: **8.58' at 224**

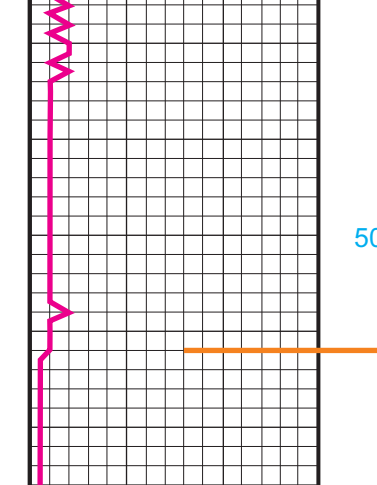
PRODUCTION: **100%**

ELECTRICAL SURVEYS

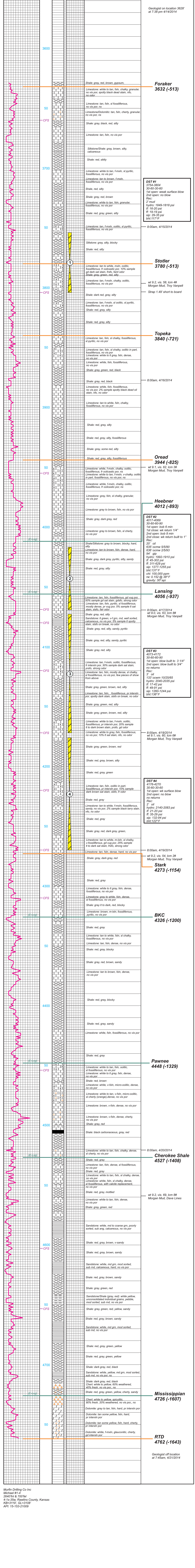
interdig/zone

Princeton Windmill Services

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anhydrite	3014 (-511)	3015 (-104)
Topeka	3830 (-511)	3832 (-514)
Lansier	3840 (-721)	3842 (-721)
Shank Shale	4056 (-892)	4052 (-888)
BKC	4278 (-1150)	4273 (-1154)
Excavator	4326 (-1202)	4319 (-1200)
Excavator	4448 (-1328)	4442 (-1328)
Mississippian	4723 (-1606)	4702 (-1583)



REMARKS:



Michael #1-4
 Daily Drilling Report
 Page Two

- 4/19/14 Depth 4270'. Cut 98'. DT: None. CT: 17¼ hrs. Dev.: ¾° @ 4270'. **LKC H:** Ist, fxln, ool in part, foss, pr interxln por, drk brn sat stn, SSFO, fr odor. **LKC J:** Ist, fxln, sl chalky, very foss, gd vug por, lt-drk sat stn, FSFO, strong odor. **DST #4 4176-4270 (LKC H-J):** 30-60-30-60. Rec.: 2'OCM (90%M, 10%O). HP: 2140-2084. FP: 22/20, 25/29. SIP: 132-94. BHT: 122°.
- 4/20/14 Depth 4505'. Cut 235'. DT: None. CT: 5¼ hrs. Dev.: None.
- 4/21/14 RTD: 4762'. Cut 257'. DT: None. CT: 10¾ hrs. Dev.: ¼° @ 4762'. HC @ 8:15PM 4/20. Pioneer logged 2:45AM – 7:00AM 4/21. LTD: 4763'. To plug
- 4/22/14 RTD: 4762'. CT: 16hrs. Allied plugged hole 12:15PM-2:00PM 4/21, as follows using 60/40Poz, 4%Gel, ¼#Flo seal, 25sxs @ 3020', 100sxs @ 2250', 40sxs @ 275', 10sxs @ 40', 30sxs RH, 15sxs MH. Orders by David Wann KCC 4/16. RR @ 6:00PM 4/21/14. FINAL REPORT

Michael #1-4 2640 FNL 700 FEL Sec. 4-1S-35W 3119' KB							Wilkinson #1-9 2550 FSL 1800 FWL Sec. 9-1S-35W 3143' KB	
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	3015	+104	+2	3014	+105	+3	3041	+102
B/Anhydrite	3052	+67	-1	3052	+67	-1	3075	+68
Foraker	3632	-513	-1	3630	-511	+1	3655	-512
Topeka	3840	-721	+1	3840	-721	+1	3865	-722
Oread	3944	-825	+3	3950	-831	-3	3971	-828
Lansing	4052	-933	+3	4056	-937	-1	4079	-936
BKC	4319	-1200	+3	4326	-1207	-4	4346	-1203
Mississippi	4702	-1583	+14	4726	-1607	-10	4740	-1597
RTD	4762						4800	-1657
LTD				4763			4798	-1655



PO Box 93999
Southlake, TX 76092

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

INVOICE

Invoice Number: 142509
Invoice Date: Apr 12, 2014
Page: 1

*acct.
Prod-met*

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	62058	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Apr 12, 2014	5/12/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Michael #1-4		
220.00	CEMENT MATERIALS	Class A Common	17.90	3,938.00
8.00	CEMENT MATERIALS	Chloride	64.00	512.00
231.35	CEMENT SERVICE	Cubic Feet Charge	2.48	573.75
799.50	CEMENT SERVICE	Ton Mileage Charge	2.60	2,078.70
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
75.00	CEMENT SERVICE	Pump Truck Mileage	7.70	577.50
75.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	330.00
1.00	CEMENT SUPERVISOR	Talon Jones		
1.00	EQUIPMENT OPERATOR	Wayne McGhghy		

Subtotal	9,522.20
Sales Tax	351.55
Total Invoice Amount	9,873.75
Payment/Credit Applied	
TOTAL	9,873.75

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

\$ 3,332.77 ✓

ONLY IF PAID ON OR BEFORE
May 7, 2014

Sa

- 332.77
6540.98

ALLIED OIL & GAS SERVICES, LLC 062058

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:

Oakleyks

DATE <i>4-12-14</i>	SEC <i>24</i>	TWP. <i>15</i>	RANGE <i>34w</i>	CALLED OUT	ON LOCATION	JOB START <i>9:30 PM</i>	JOB FINISH <i>10:00 PM</i>
LEASE <i>Michael</i>	WELL# <i>1-4</i>	LOCATION <i>Beardsley to N w into</i>	COUNTY <i>Rawlins</i>	STATE <i>1-5</i>			
OLD OR <input checked="" type="radio"/> NEW (Circle one)							

CONTRACTOR *Martin #2*

TYPE OF JOB *12 3/4*

HOLE SIZE *8 5/8* T.D. *224*

CASING SIZE DEPTH *7.24*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. *15 #*

PERFS.

DISPLACEMENT *13.5 bbl*

EQUIPMENT

OWNER *Same*

CEMENT AMOUNT ORDERED *220 stb Cam*

3 1/2 cc

PUMP TRUCK CEMENTER *Talon Torres*

422 HELPER *Wayne McElroy*

BULK TRUCK

373 DRIVER *Juan #1 (TWS)*

BULK TRUCK

DRIVER

COMMON	<i>220</i>	@ <i>12.90</i>	<i>2838.00</i>
POZMIX		@	
GEL		@	
CHLORIDE	<i>8</i>	@ <i>64.00</i>	<i>512.00</i>
ASC		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<i>231.35 cut</i>	@ <i>2.48</i>	<i>573.25</i>
MILEAGE	<i>10.66 hrs</i>	@ <i>2.60</i>	<i>277.20</i>
			TOTAL <i>7102.45</i>

(2,485.84/35%)

REMARKS:
Mixed 220 stb cam 3 1/2 cc @ 22.4 # displaced 13 1/2 bbl water cement did circulate.

SERVICE

DEPTH OF JOB	<i>224 ft</i>	
PUMP TRUCK CHARGE	<i>1512.25</i>	
EXTRA FOOTAGE	@	
MILEAGE <i>Mt Hr 75</i>	@ <i>7.70</i>	<i>577.50</i>
MANIFOLD <i>Mi Light duty 75</i>	@ <i>4.90</i>	<i>330.00</i>
	@	
TOTAL <i>2419.25</i>		

(846.91/35%)

CHARGE TO: *Martin*

STREET _____

CITY _____ STATE _____ ZIP _____

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.

SALES TAX (If Any) _____

TOTAL CHARGES *9,522.20*

DISCOUNT *3,332.77 (35%)* IF PAID IN 30 DAYS

6,189.43 Net.

PRINTED NAME *Apro Calzosa*

SIGNATURE *Apro Calzosa*



PO Box 93999
Southlake, TX 76092

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

*acct
Prod-MG*

INVOICE

Invoice Number: 142792

Invoice Date: Apr 21, 2014

Page: 1

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	61350	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-03	Oakley	Apr 21, 2014	5/21/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Michael #1-4		
135.00	CEMENT MATERIALS	Class A Common	17.90	2,416.50
90.00	CEMENT MATERIALS	Pozmix	9.35	841.50
8.00	CEMENT MATERIALS	Gel	23.40	187.20
56.00	CEMENT MATERIALS	Flo Seal	2.97	166.32
241.65	CEMENT SERVICE	Cubic Feet Charge	2.48	599.29
756.75	CEMENT SERVICE	Ton Mileage Charge	2.60	1,967.55
1.00	CEMENT SERVICE	Plug to Abandon	2,600.47	2,600.47
75.00	CEMENT SERVICE	Pump Truck Mileage	7.70	577.50
75.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	330.00
1.00	EQUIPMENT SALES	8-5/8 Wooden Plug	110.00	110.00
1.00	EQUIPMENT OPERATOR	Paul Beaver		
1.00	EQUIPMENT OPERATOR	Tyler Flipse		

Subtotal	9,796.33
Sales Tax	773.91
Total Invoice Amount	10,570.24
Payment/Credit Applied	
TOTAL	10,570.24

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

\$ 3,390.21

ONLY IF PAID ON OR BEFORE
May 16, 2014

OK #572

ALLIED OIL & GAS SERVICES, LLC 061350

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:
Oakley Ks

DATE <u>4-21-14</u>	SEC <u>24</u>	TWP <u>1</u>	RANGE <u>34</u>	CALLED OUT	ON LOCATION <u>12:00 p.m.</u>	JOB START <u>1:00 pm</u>	JOB FINISH <u>2:00 pm</u>
LEASE <u>Michael</u>	WELL # <u>1-4</u>	LOCATION <u>Beardsley 15 N Winto</u>	COUNTY: <u>Reno</u>		STATE <u>KS</u>		
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR <u>Martin Z</u>	OWNER <u>Same</u>
TYPE OF JOB <u>PTA</u>	
HOLE SIZE <u>7 7/8</u>	T.D. <u>4762'</u>
CASING SIZE	DEPTH
TUBING SIZE	DEPTH
DRILL PIPE <u>4 1/2</u>	DEPTH <u>3020'</u>
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT <u>1st plug 500 gal 3130 gal 1st plug 500 gal 2.78 mod</u>	
EQUIPMENT	

PUMP TRUCK	CEMENTER <u>Paul Beaver</u>
# <u>120</u>	HELPER <u>Tyler Flipse</u>
BULK TRUCK	
# <u>821/308</u>	DRIVER <u>Romero (TWS)</u>
BULK TRUCK	
#	DRIVER

CEMENT	AMOUNT ORDERED <u>225 sks 60/40</u>
	<u>4% gel 1/4# Flo-seal</u>
COMMON	<u>135 sks @ 17.90 2416.50</u>
POZMIX	<u>80 sks @ 9.35 841.50</u>
GEL	<u>8 sks @ 23.40 187.20</u>
CHLORIDE	@
ASC	@
<u>Flo-seal 56#</u>	<u>@ 2.97 166.32</u>
	@
	@
	@
	@
<u>Material Total</u>	<u>@ 3,611.52</u>
<u>(1,764.03 / 35%)</u>	@
<u>SERVICE</u>	@
HANDLING <u>241.65 4th</u>	<u>@ 2.48 599.29</u>
MILEAGE <u>10.09 1 hr 75 mi @ 2.60</u>	<u>1967.55</u>

REMARKS:

1st plug mix 25 sks @ 3020'
Displace w/ water / mud
2nd plug mix 100 sks @ 2250'
Displace w/ water / mud
3rd plug mix 40 sks @ 275'
4th plug mix 10 sks @ 40' w/ wooden plug
Mix 30 sks in R.H. mix 15 sks in M.H.
Thank You!
Paul & Tyler

CHARGE TO: Martin Drlg.
 STREET _____
 CITY _____ STATE _____ ZIP _____

DEPTH OF JOB	<u>3020'</u>
PUMP TRUCK CHARGE	<u>2600.47</u>
EXTRA FOOTAGE	@
MILEAGE MTLV	<u>75 @ 7.70 577.50</u>
MANIFOLD	@
MPLV	<u>75 @ 4.40 330.00</u>
	@
<u>(2,126.18 / 35%)</u>	
TOTAL <u>6,079.52</u>	

PLUG & FLOAT EQUIPMENT

<u>8 5/8 wooden plug</u>	@	<u>4110.00</u>
	@	
	@	
	@	
	@	
<u>0%</u>		TOTAL <u>110.00</u>

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 Armando Cubero
 SIGNATURE Armando Cubero

SALES TAX (If Any) _____
 TOTAL CHARGES 9,796.33
 DISCOUNT 3,390.21 (35%) IF PAID IN 30 DAYS
6,406.11 Net