

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1250455
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
-----------------------------------	-----------------	---

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: _____

1250455

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

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

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

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

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

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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
--	--	---

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Culwell 'C' 3-10
Doc ID	1250455

All Electric Logs Run

DIL
DUCP
MEL
BHCS
CBL



DRILL STEM TEST REPORT

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

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Chuck Schmultz

Culwell 'C' #3-10

10-1s-37w Cheyenne,KS

Start Date: 2015.02.11 @ 04:04:00

End Date: 2015.02.11 @ 12:45:45

Job Ticket #: 61092 DST #: 1

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

Printed: 2015.02.16 @ 10:34:06



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne, KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61092

DST#: 1

ATTN: Chuck Schmultz

Test Start: 2015.02.11 @ 04:04:00

GENERAL INFORMATION:

Formation: **LKC 'A - D'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:03:15

Time Test Ended: 12:45:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 54

Interval: 4106.00 ft (KB) To 4225.00 ft (KB) (TVD)

Reference Elevations: 3200.00 ft (KB)

Total Depth: 4225.00 ft (KB) (TVD)

3189.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 6753

Outside

Press@RunDepth: 148.37 psig @ 4107.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.02.11

End Date: 2015.02.11

Last Calib.: 2015.02.11

Start Time: 04:04:05

End Time: 12:45:45

Time On Btm: 2015.02.11 @ 06:02:45

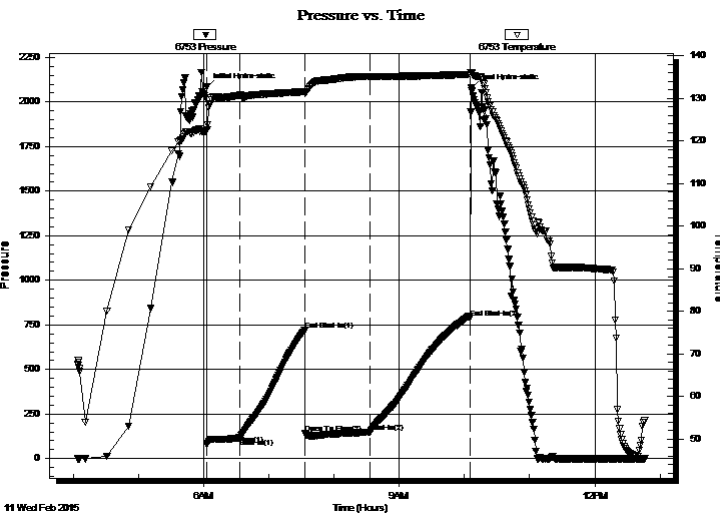
Time Off Btm: 2015.02.11 @ 10:06:30

TEST COMMENT: 30 - IF - Surface blow built to bottom of the bucket in 7 mins.

60 - ISI - No Return

60 - FF - Surface blow built up to 10"

90 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2083.62	122.53	Initial Hydro-static
1	80.86	122.66	Open To Flow (1)
31	116.39	130.71	Shut-In(1)
91	720.58	131.55	End Shut-In(1)
91	139.80	131.24	Open To Flow (2)
151	148.37	135.04	Shut-In(2)
243	789.63	135.57	End Shut-In(2)
244	2077.58	136.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
121.00	OCM - 60M - 40o	0.60
126.00	OCM - 50M - 50o	1.19
93.00	Free Oil - 100o	1.30

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61092

DST#: 1

ATTN: Chuck Schmultz

Test Start: 2015.02.11 @ 04:04:00

GENERAL INFORMATION:

Formation: **LKC 'A - D'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:03:15

Time Test Ended: 12:45:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 54

Interval: 4106.00 ft (KB) To 4225.00 ft (KB) (TVD)

Total Depth: 4225.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3200.00 ft (KB)

3189.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8368

Inside

Press@RunDepth: psig @ 4107.00 ft (KB)

Start Date: 2015.02.11

End Date:

2015.02.11

Start Time: 04:04:05

End Time:

12:45:45

Capacity: 8000.00 psig

Last Calib.:

2015.02.11

Time On Btm:

Time Off Btm:

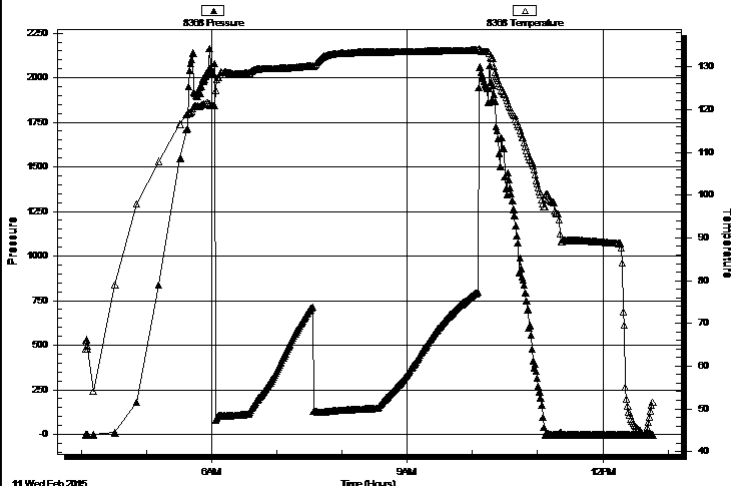
TEST COMMENT: 30 - IF - Surface blow built to bottom of the bucket in 7 mins.

60 - ISI - No Return

60 - FF - Surface blow built up to 10"

90 - FSI - No Return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
121.00	OCM - 60M - 40o	0.60
126.00	OCM - 50M - 50o	1.19
93.00	Free Oil - 100o	1.30

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61092

DST#: 1

ATTN: Chuck Schmultz

Test Start: 2015.02.11 @ 04:04:00

Tool Information

Drill Pipe:	Length: 3924.64 ft	Diameter: 3.80 inches	Volume: 55.05 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: 184.39 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 55.96 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.03 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4106.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	119.00 ft			
Tool Length:	146.00 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			4084.00	
Hydraulic tool	5.00			4089.00	
Jars	5.00			4094.00	
Safety Joint	3.00			4097.00	
Packer	4.00			4101.00	27.00 Bottom Of Top Packer
Packer	5.00			4106.00	
Stubb	1.00			4107.00	
Recorder	0.00	8368	Inside	4107.00	
Recorder	0.00	6753	Outside	4107.00	
Perforations	18.00			4125.00	
Change Over Sub	1.00			4126.00	
Drill Pipe	94.00			4220.00	
Change Over Sub	1.00			4221.00	
Bullnose	4.00			4225.00	119.00 Bottom Packers & Anchor

Total Tool Length: 146.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61092

DST#: 1

ATTN: Chuck Schmultz

Test Start: 2015.02.11 @ 04:04:00

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:

ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 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
121.00	OCM - 60M - 40o	0.595
126.00	OCM - 50M - 50o	1.190
93.00	Free Oil - 100o	1.305

Total Length: 340.00 ft

Total Volume: 3.090 bbl

Num Fluid Samples: 0

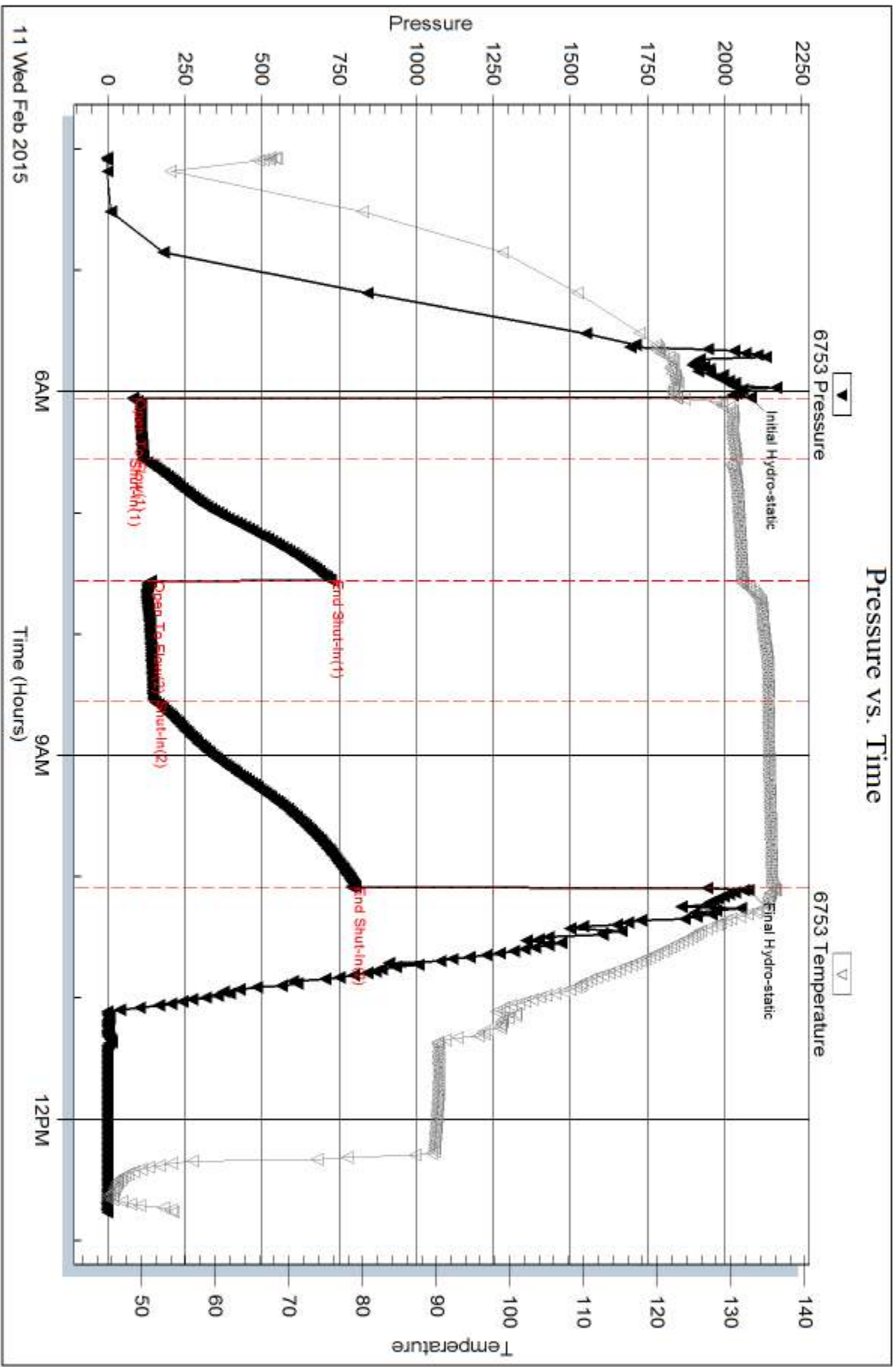
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



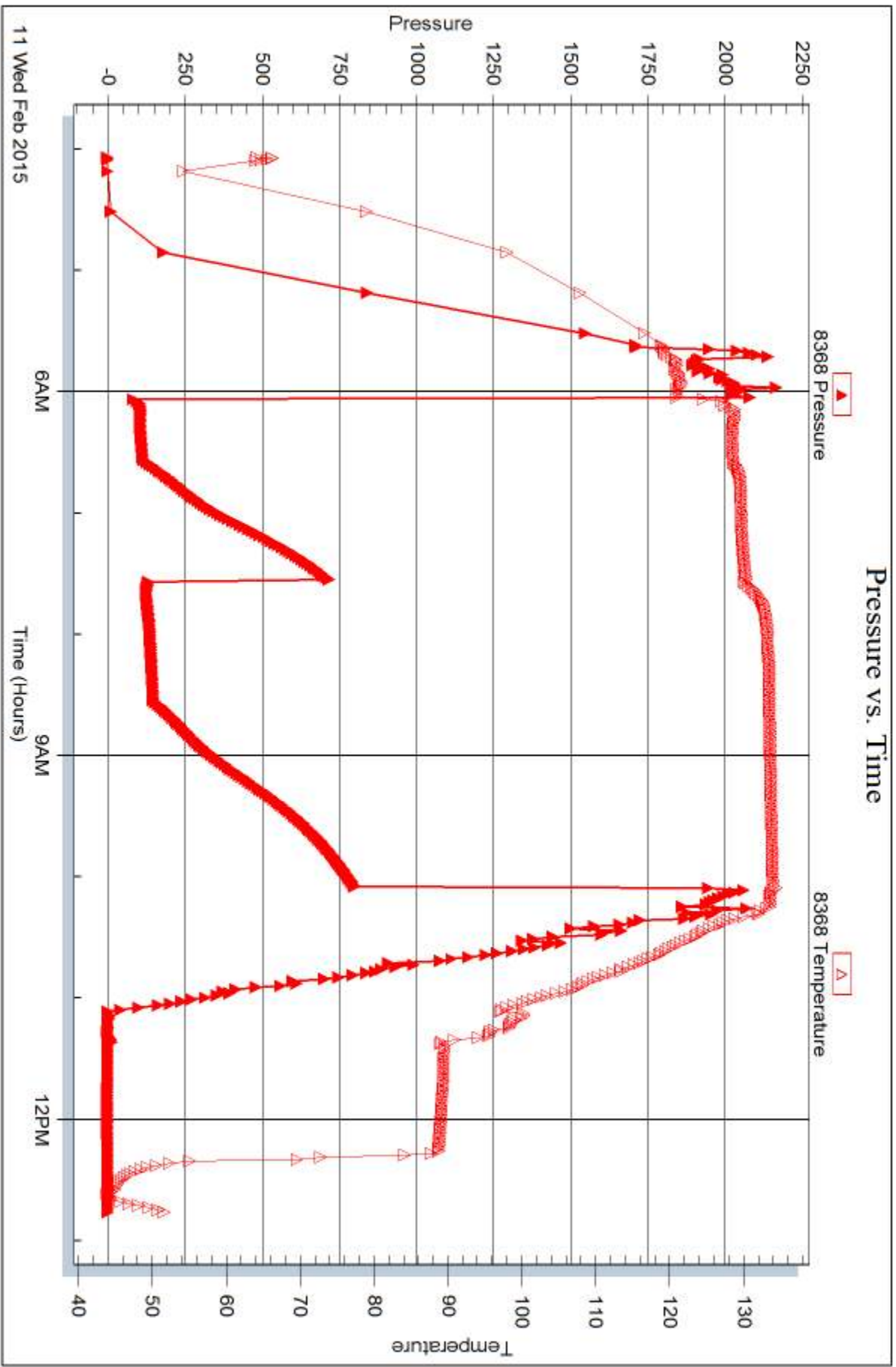
Serial #: 8368

Inside

Murfin Drilling Co., Inc.

Oilwell 'C' #3-10

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 61092

Printed: 2015.02.16 @ 10:34:07



DRILL STEM TEST REPORT

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

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Chuck Schmultz

Culwell 'C' #3-10

10-1s-37w Cheyenne,KS

Start Date: 2015.02.12 @ 00:26:00

End Date: 2015.02.12 @ 08:48:45

Job Ticket #: 61093 DST #: 2

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

Printed: 2015.02.16 @ 10:33:42



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61093

DST#: 2

ATTN: Chuck Schmultz

Test Start: 2015.02.12 @ 00:26:00

GENERAL INFORMATION:

Formation: **LKC 'G'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:28:30
 Time Test Ended: 08:48:45
 Interval: **4230.00 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: 3200.00 ft (KB)
 3189.00 ft (CF)
 KB to GR/CF: 11.00 ft

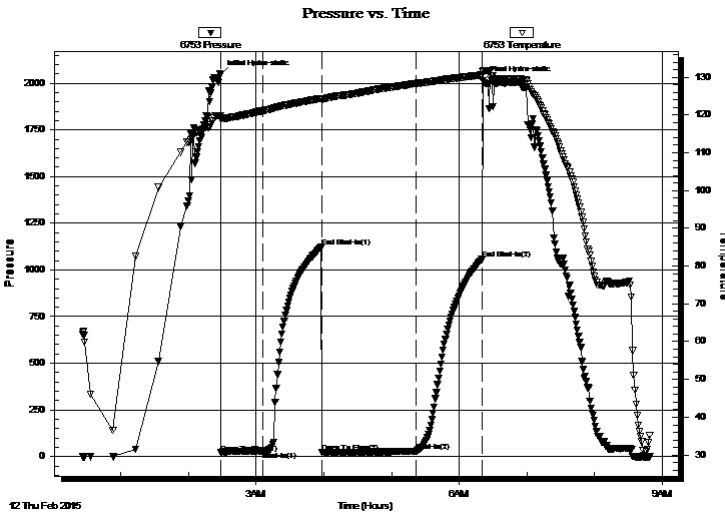
Serial #: 6753

Inside

Press@RunDepth: 27.62 psig @ 4231.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.02.12 End Date: 2015.02.12 Last Calib.: 2015.02.12
 Start Time: 00:26:05 End Time: 08:48:44 Time On Btm: 2015.02.12 @ 02:28:15
 Time Off Btm: 2015.02.12 @ 06:20:45

TEST COMMENT: 30 - IF - Surface blow slowly built to 3/4"
 60 - No Return
 80 - No Surface blow
 60 - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2048.12	119.78	Initial Hydro-static
1	19.69	119.08	Open To Flow (1)
38	30.70	121.12	Shut-In(1)
90	1123.44	124.43	End Shut-In(1)
91	22.36	124.00	Open To Flow (2)
173	27.62	128.32	Shut-In(2)
232	1056.33	130.57	End Shut-In(2)
233	2015.54	131.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM - 100M - Oil Spots	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61093

DST#: 2

ATTN: Chuck Schmultz

Test Start: 2015.02.12 @ 00:26:00

Tool Information

Drill Pipe:	Length: 4051.17 ft	Diameter: 3.80 inches	Volume: 56.83 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: 184.39 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 57.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.56 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4230.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	67.00 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			4208.00	
Hydraulic tool	5.00			4213.00	
Jars	5.00			4218.00	
Safety Joint	3.00			4221.00	
Packer	4.00			4225.00	27.00 Bottom Of Top Packer
Packer	5.00			4230.00	
Stubb	1.00			4231.00	
Recorder	0.00	6753	Inside	4231.00	
Recorder	0.00	8368	Outside	4231.00	
Perforations	35.00			4266.00	
Bullnose	4.00			4270.00	40.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61093

DST#: 2

ATTN: Chuck Schmultz

Test Start: 2015.02.12 @ 00:26:00

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:

bbl

Water Loss: 6.79 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
10.00	OSM - 100M - Oil Spots	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

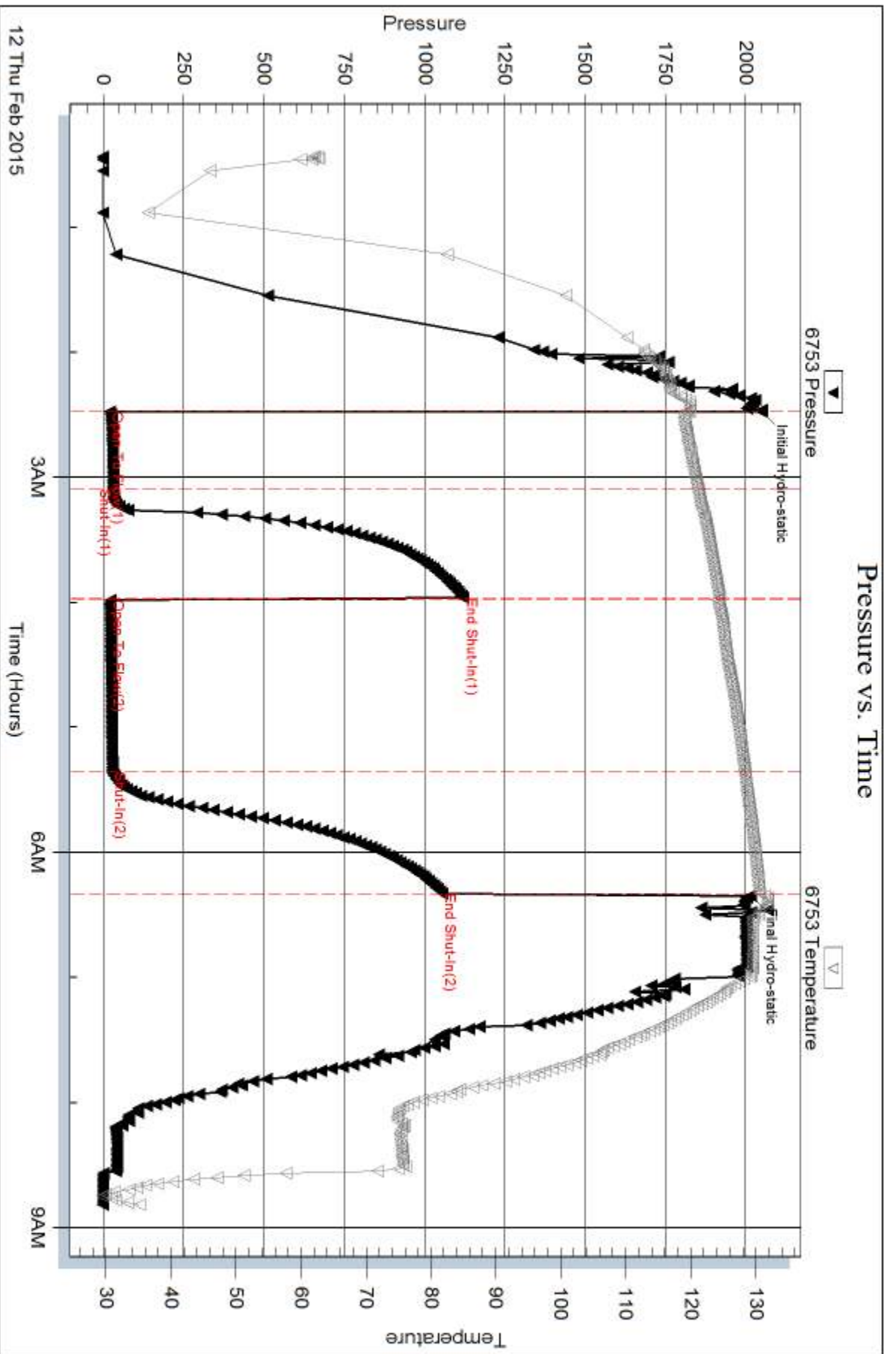
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

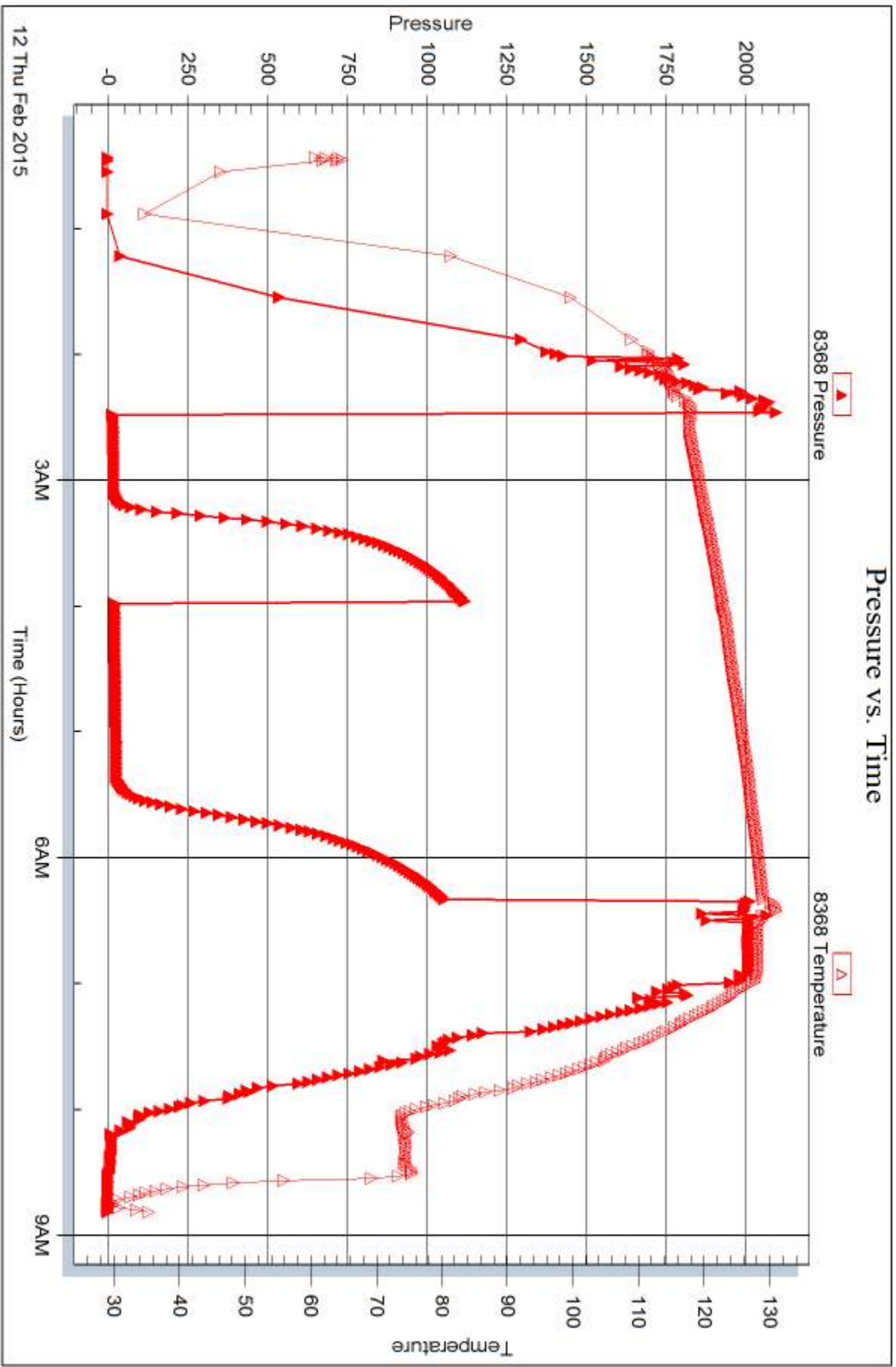


Serial #: 8368

Outside Murfin Drilling Co., Inc.

Oilwell 'C' #3-10

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 61093

Printed: 2015.02.16 @ 10:33:43



DRILL STEM TEST REPORT

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

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Chuck Schmultz

Culwell 'C' #3-10

10-1s-37w Cheyenne,KS

Start Date: 2015.02.12 @ 22:39:00

End Date: 2015.02.13 @ 05:23:30

Job Ticket #: 61094 DST #: 3

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

Printed: 2015.02.16 @ 10:33:03



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne, KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61094

DST#: 3

ATTN: Chuck Schmultz

Test Start: 2015.02.12 @ 22:39:00

GENERAL INFORMATION:

Formation: **LKC 'H - J'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:27:15
 Time Test Ended: 05:23:30
 Interval: **4272.00 ft (KB) To 4365.00 ft (KB) (TVD)**
 Total Depth: 4365.00 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: 3200.00 ft (KB)
 3189.00 ft (CF)
 KB to GR/CF: 11.00 ft

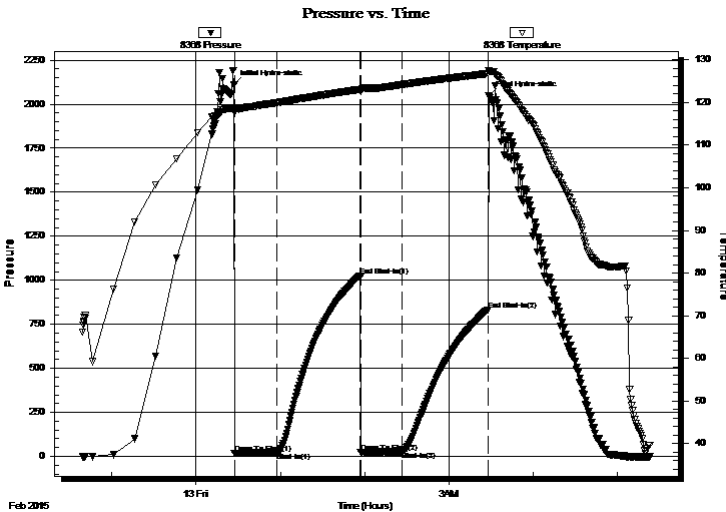
Serial #: 8368

Inside

Press@RunDepth: 26.75 psig @ 4273.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.02.12 End Date: 2015.02.13 Last Calib.: 2015.02.13
 Start Time: 22:39:05 End Time: 05:23:29 Time On Btm: 2015.02.13 @ 00:27:00
 Time Off Btm: 2015.02.13 @ 03:28:45

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

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2111.08	118.75	Initial Hydro-static
1	15.39	117.65	Open To Flow (1)
31	21.37	119.95	Shut-In(1)
90	1026.02	123.06	End Shut-In(1)
91	23.68	122.67	Open To Flow (2)
120	26.75	124.19	Shut-In(2)
181	832.22	126.75	End Shut-In(2)
182	2046.66	127.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM - 100M - Oil Spots	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Chuck Schmultz

10-1s-37w Cheyenne,KS

Culwell 'C' #3-10

Job Ticket: 61094

DST#: 3

Test Start: 2015.02.12 @ 22:39:00

GENERAL INFORMATION:

Formation: **LKC 'H - J'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:27:15

Time Test Ended: 05:23:30

Interval: 4272.00 ft (KB) To 4365.00 ft (KB) (TVD)

Total Depth: 4365.00 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: 3200.00 ft (KB)

3189.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6753

Outside

Press@RunDepth: psig @ 4273.00 ft (KB)

Start Date: 2015.02.12 End Date: 2015.02.13

Start Time: 22:39:05 End Time: 05:23:29

Capacity: 8000.00 psig

Last Calib.: 2015.02.13

Time On Btm:

Time Off Btm:

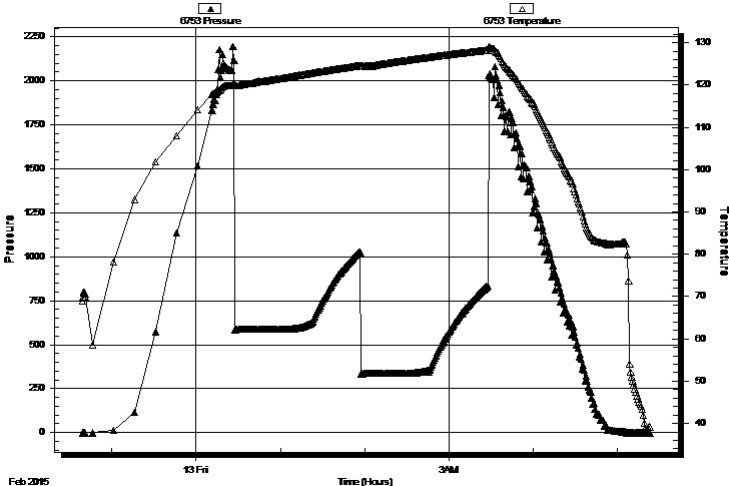
TEST COMMENT: 30 - IF - Surface blow built up to 3/4"

60 - ISI - No Return

30 - FF - No Surface blow

60 - FSI - No Return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM - 100M - Oil Spots	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61094

DST#: 3

ATTN: Chuck Schmultz

Test Start: 2015.02.12 @ 22:39:00

Tool Information

Drill Pipe:	Length: 4082.05 ft	Diameter: 3.80 inches	Volume: 57.26 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: 184.39 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 58.17 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.44 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4272.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	93.00 ft			
Tool Length:	120.00 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			4250.00	
Hydraulic tool	5.00			4255.00	
Jars	5.00			4260.00	
Safety Joint	3.00			4263.00	
Packer	4.00			4267.00	27.00 Bottom Of Top Packer
Packer	5.00			4272.00	
Stubb	1.00			4273.00	
Recorder	0.00	8368	Inside	4273.00	
Recorder	0.00	6753	Outside	4273.00	
Perforations	23.00			4296.00	
Change Over Sub	1.00			4297.00	
Drill Pipe	63.00			4360.00	
Change Over Sub	1.00			4361.00	
Bullnose	4.00			4365.00	93.00 Bottom Packers & Anchor

Total Tool Length: 120.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61094

DST#: 3

ATTN: Chuck Schmultz

Test Start: 2015.02.12 @ 22:39:00

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: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.99 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 bbf
10.00	OSM - 100M - Oil Spots	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

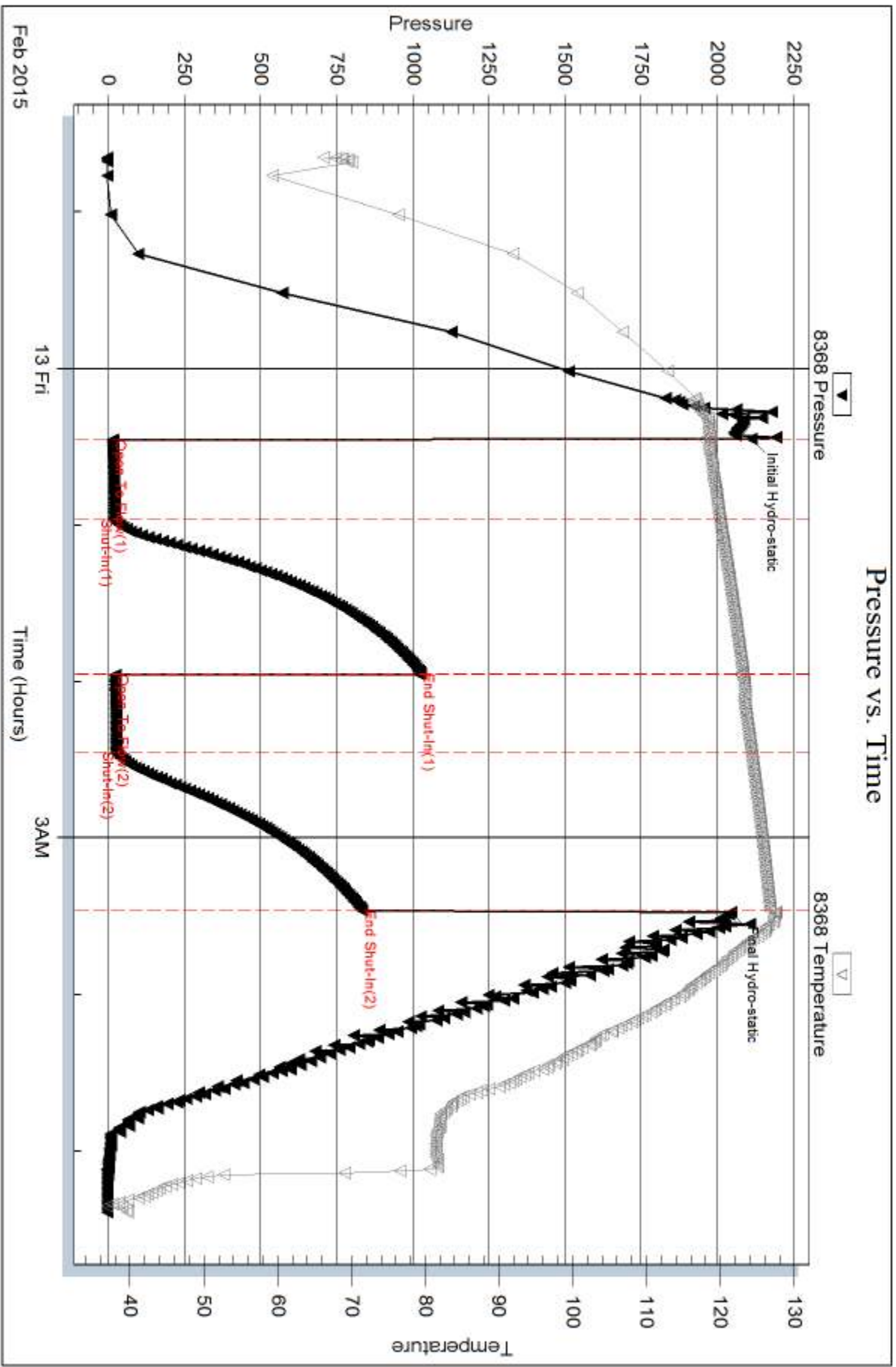
Serial #: 8368

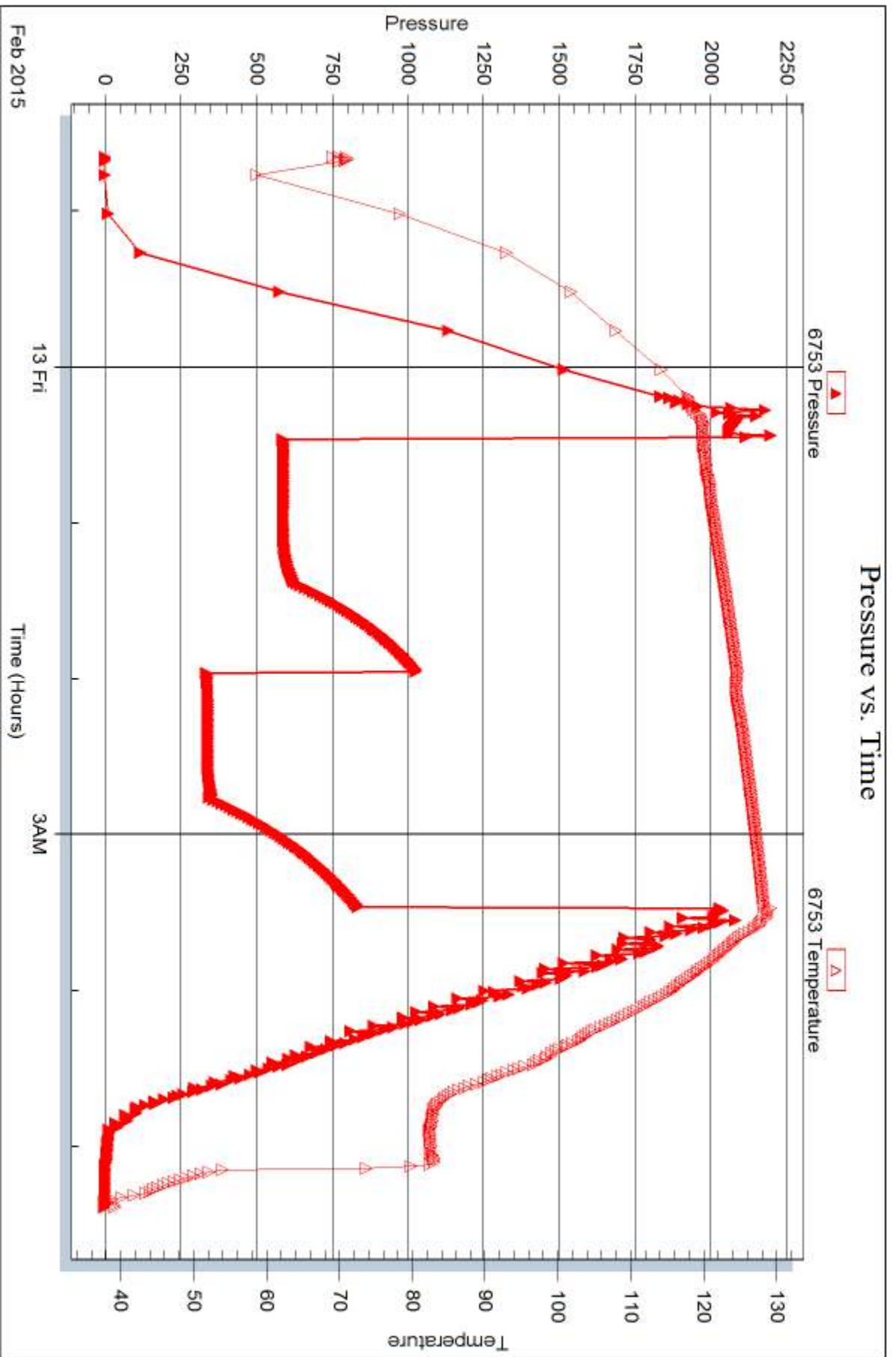
Inside

Murfin Drilling Co., Inc.

Oilwell 'C' #3-10

DST Test Number: 3







DRILL STEM TEST REPORT

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

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Chuck Schmultz

Culwell 'C' #3-10

10-1s-37w Cheyenne,KS

Start Date: 2015.02.14 @ 02:27:00

End Date: 2015.02.14 @ 10:40:45

Job Ticket #: 61095 DST #: 4

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

Printed: 2015.02.16 @ 10:32:10



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61095

DST#: 4

ATTN: Chuck Schmultz

Test Start: 2015.02.14 @ 02:27:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:42:45

Time Test Ended: 10:40:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 54

Interval: 4520.00 ft (KB) To 4565.00 ft (KB) (TVD)

Reference Elevations: 3200.00 ft (KB)

Total Depth: 4565.00 ft (KB) (TVD)

3189.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 6753 Outside

Press@RunDepth: 41.58 psig @ 4521.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.02.14

End Date:

2015.02.14

Last Calib.:

2015.02.14

Start Time:

02:27:05

End Time:

10:40:44

Time On Btm:

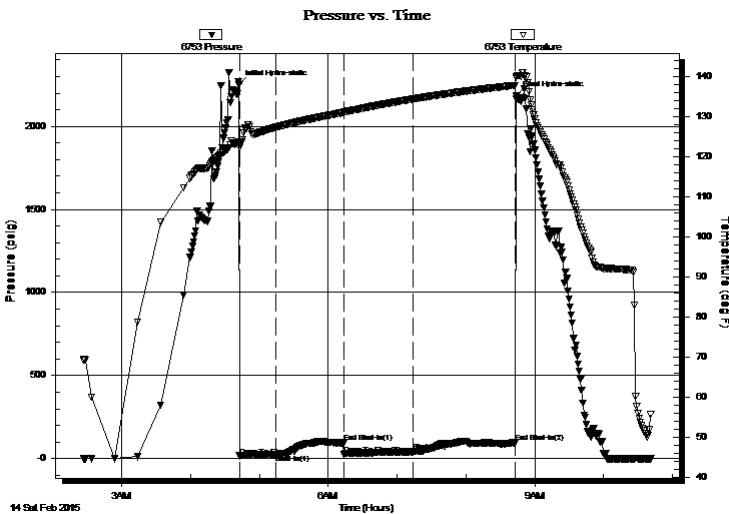
2015.02.14 @ 04:42:30

Time Off Btm:

2015.02.14 @ 08:44:00

TEST COMMENT: 30 - IF - Surface blow built up to 2"
60 - ISI - Faint return at end of shut-in
60 - FF - Surface blow built to 7 1/2"
90 - FSI - Faint Return started 4 mins. in and built to 2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2250.46	123.64	Initial Hydro-static
1	16.80	122.29	Open To Flow (1)
32	26.01	127.34	Shut-In(1)
91	95.93	131.09	End Shut-In(1)
92	26.88	131.15	Open To Flow (2)
152	41.58	134.43	Shut-In(2)
241	96.28	137.87	End Shut-In(2)
242	2185.38	140.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM - 50M - 50o	0.30
35.00	Free Oil - 100o	0.17

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne, KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61095

DST#: 4

ATTN: Chuck Schmultz

Test Start: 2015.02.14 @ 02:27:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:42:45

Time Test Ended: 10:40:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 54

Interval: 4520.00 ft (KB) To 4565.00 ft (KB) (TVD)

Reference Elevations: 3200.00 ft (KB)

Total Depth: 4565.00 ft (KB) (TVD)

3189.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8368 Inside

Press@RunDepth: psig @ 4521.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.02.14

End Date: 2015.02.14

Last Calib.: 2015.02.14

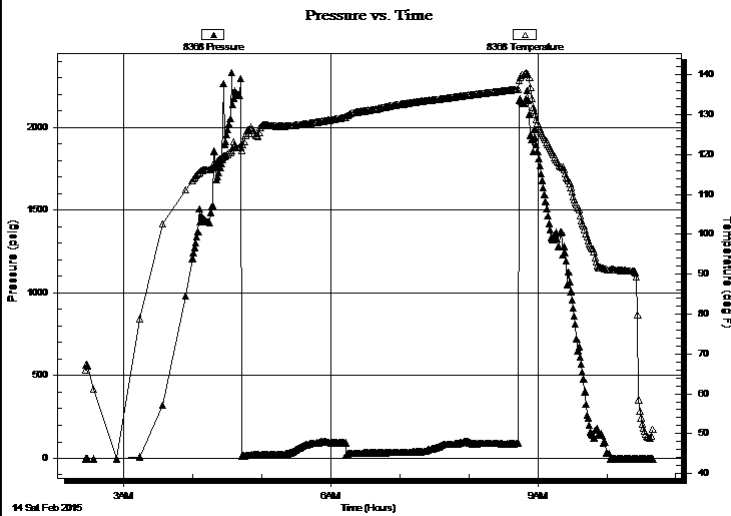
Start Time: 02:27:05

End Time: 10:40:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow built up to 2"
60 - ISI - Faint return at end of shut-in
60 - FF - Surface blow built to 7 1/2"
90 - FSI - Faint Return started 4 mins. in and built to 2"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM - 50M - 50o	0.30
35.00	Free Oil - 100o	0.17

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61095

DST#: 4

ATTN: Chuck Schmultz

Test Start: 2015.02.14 @ 02:27:00

Tool Information

Drill Pipe:	Length: 4333.78 ft	Diameter: 3.80 inches	Volume: 60.79 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: 184.39 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 61.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.17 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4520.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	72.00 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			4498.00	
Hydraulic tool	5.00			4503.00	
Jars	5.00			4508.00	
Safety Joint	3.00			4511.00	
Packer	4.00			4515.00	27.00 Bottom Of Top Packer
Packer	5.00			4520.00	
Stubb	1.00			4521.00	
Recorder	0.00	8368	Inside	4521.00	
Recorder	0.00	6753	Outside	4521.00	
Perforations	7.00			4528.00	
Change Over Sub	1.00			4529.00	
Drill Pipe	31.00			4560.00	
Change Over Sub	1.00			4561.00	
Bullnose	4.00			4565.00	45.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

10-1s-37w Cheyenne,KS

250 N. Water, Ste 300
Wichita KS 67202

Culwell 'C' #3-10

Job Ticket: 61095

DST#: 4

ATTN: Chuck Schmultz

Test Start: 2015.02.14 @ 02:27:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 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
60.00	OCM - 50M - 50o	0.295
35.00	Free Oil - 100o	0.172

Total Length: 95.00 ft Total Volume: 0.467 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

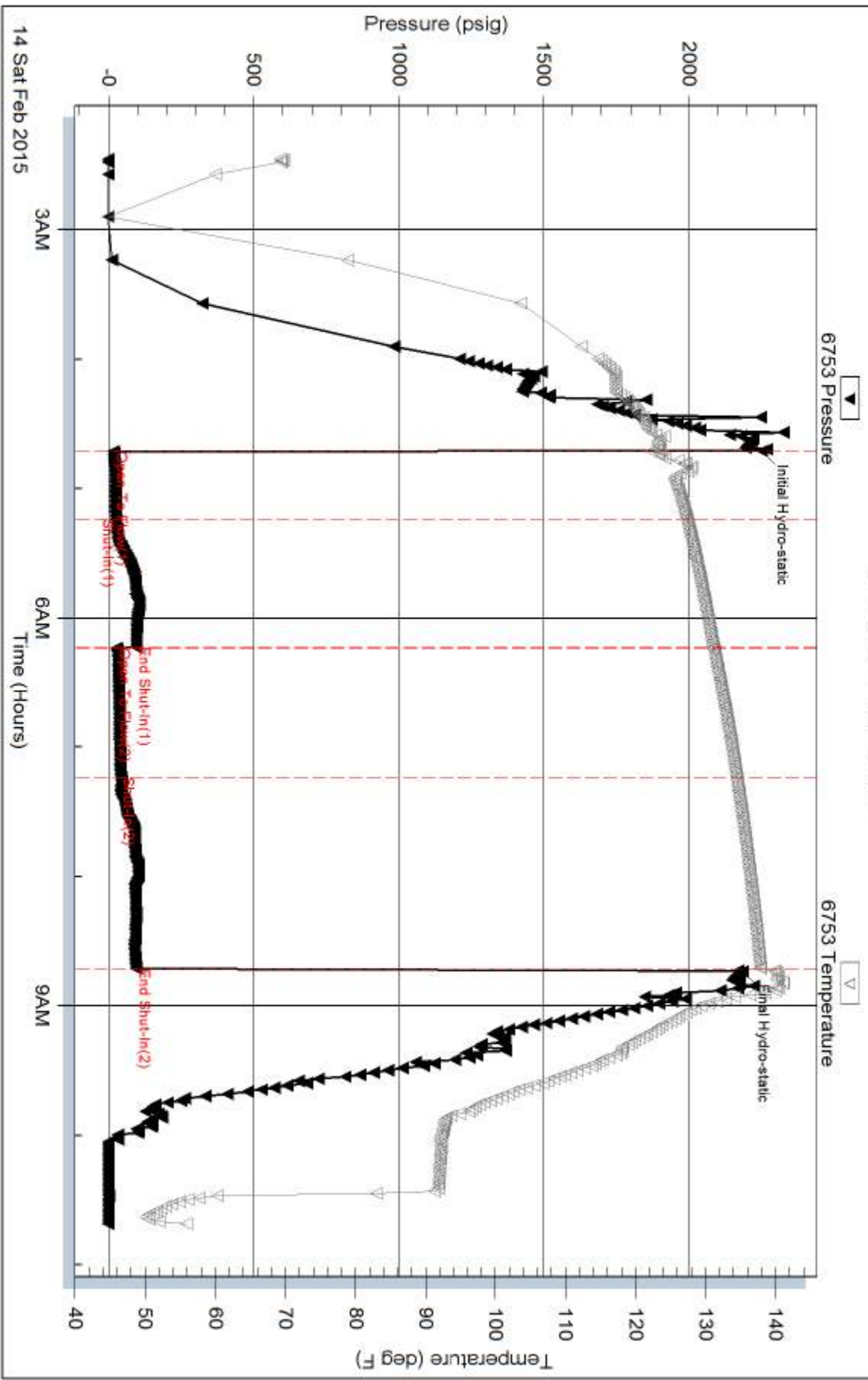
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



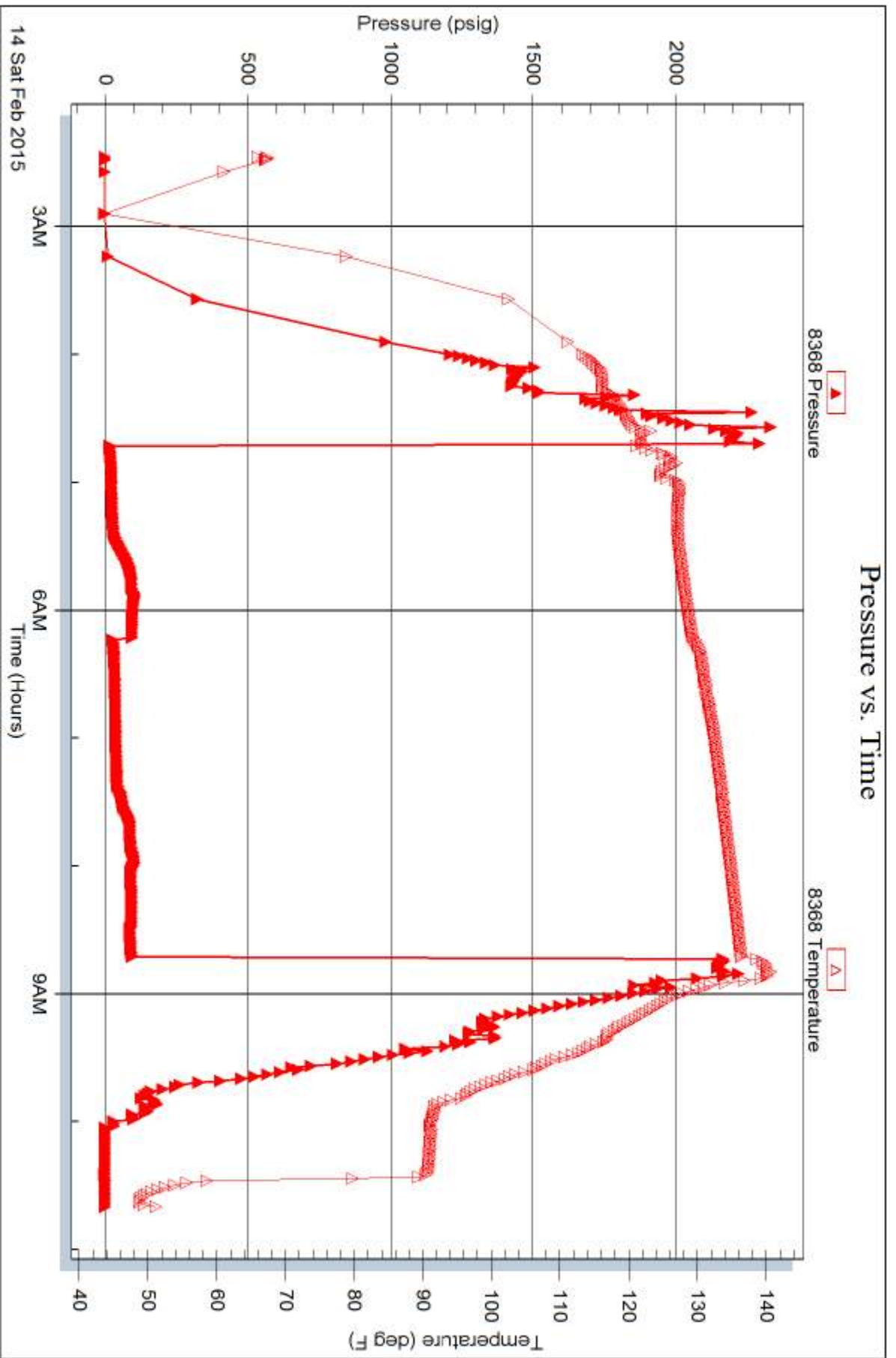
Serial #: 8368

Inside

Murfin Drilling Co., Inc.

Oilwell 'C' #3-10

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 61095

Printed: 2015.02.16 @ 10:32:11



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61092

Well Name & No. Culwell 'C' # 3-10 Test No. 1 Date 2-11-15
 Company Murfin Drilling Co. Inc. Elevation 3200 KB 3189 GL
 Address 250 N. Water, Ste 300 Wichita Ks 67202
 Co. Rep / Geo. Chuck Schmultz Rig Murfin #20
 Location: Sec. 10 Twp. 1S Rge. 37W Co. Cheyenne State Ks

Interval Tested 4106' - 4225' Zone Tested Lans. - 'A40'
 Anchor Length 119' Drill Pipe Run 3924.54' Mud Wt. 9.4
 Top Packer Depth 4101' Drill Collars Run 184.39' Vis 45
 Bottom Packer Depth 4106' Wt. Pipe Run 0 WL 8.8
 Total Depth 4225' Chlorides 600 ppm System LCM 10#

Blow Description IF - Surface blow built to bottom of the bucket in 7 mins.
ISI - No Return
FF - Surface blow built up to 10"
FST - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>93'</u>	<u>Free Oil</u>	<u>100</u>			
<u>126'</u>	<u>OCM</u>	<u>50</u>			<u>50</u>
<u>121'</u>	<u>OCM</u>	<u>40</u>			<u>60</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 340' BHT 135°F Gravity 30 @ 60°F API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2083 Test 1150 T-On Location 3:05am
 (B) First Initial Flow 80 Jars 250 T-Started 4:04am
 (C) First Final Flow 116 Safety Joint 75 T-Open 6:03am
 (D) Initial Shut-In 720 Circ Sub N/C T-Pulled 10:03am
 (E) Second Initial Flow 139 Hourly Standby T-Out 12:46pm
 (F) Second Final Flow 148 Mileage 130 R/T 130 Comments _____
 (G) Final Shut-In 789 Sampler _____
 (H) Final Hydrostatic 2077 Straddle _____
 Shale Packer _____
 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 0
 Total 1605
 MP/DST Disc't _____
 Sub Total 1605

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. 61093

4/10

Well Name & No. Culwell 'C' #3-10 Test No. 2 Date 2-11-15
 Company Murkin Drilling Co., Inc. Elevation 3200 KB 3189 GL
 Address 250 N. Water, Ste 300 Wichita Ks 67202
 Co. Rep / Geo. Chuck Schmultz Rig Murkin #20
 Location: Sec. 10 Twp. 1S Rge. 37W Co. Cheyenne State Ks

Interval Tested 4230-4270 Zone Tested Lans. - G
 Anchor Length 40' Drill Pipe Run 4051.17' Mud Wt. 9.4
 Top Packer Depth 4225 Drill Collars Run 184.39' Vis 60
 Bottom Packer Depth 4230 Wt. Pipe Run 0 WL 6.8
 Total Depth 4270 Chlorides 600 ppm System LCM 10#

Blow Description IF - Surface blow slowly built to 3/4"
ISI - No Return
FF - No Surface blow
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10'</u>	<u>OSM</u>	<u>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

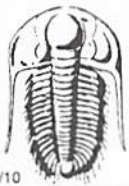
Rec Total 10' BHT 130°F Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2048 Test 1150 T-On Location 11:59pm
 (B) First Initial Flow 19 Jars 250 T-Started 12:26am
 (C) First Final Flow 30 Safety Joint 75 T-Open 2:28am
 (D) Initial Shut-In 1123 Circ Sub N/C T-Pulled 6:20am
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 8:49am
 (F) Second Final Flow 27 Mileage 130 R/T 130 Comments I messed up on
 (G) Final Shut-In 1056 Sampler _____ second open, was sicker
 (H) Final Hydrostatic 2015 Straddle _____ then a dog all night.

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 60 Extra Packer _____ Ruined Packer _____
 Final Flow 80 Extra Recorder _____ Extra Copies _____
 Final Shut-In 60 Day Standby _____ Sub Total 0
 Total 1605
 Sub Total 1605 Accessibility _____ MP/DST Disc't _____

Approved By _____ Our Representative Ronald L. [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. 61094

Well Name & No. Culwell 'C' #3-10 Test No. 3 Date 2-12-15
 Company Murfin Drilling Co., Inc. Elevation 3200 KB 3189 GL
 Address 250 N. Water, Ste 300 Wichita Ks 67202
 Co. Rep / Geo. Chuck Schmultz Rig Murfin #20
 Location: Sec. 10 Twp. 1S Rge. 37W Co. Cheyenne State Ks

Interval Tested 4272-4365 Zone Tested Lans. 'H & J'
 Anchor Length 93' Drill Pipe Run 4082.05' Mud Wt. 9.3
 Top Packer Depth 4267 Drill Collars Run 184.39' Vis 54
 Bottom Packer Depth 4272 Wt. Pipe Run ⊖ WL 6.0
 Total Depth 4365 Chlorides 500 ppm System LCM 10#
 Blow Description IF - Surface blow built up to 3/4"
ISI - No Return
FF - No Surface blow
FST - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10'</u>	<u>asm</u>	<u>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 10' BHT 126°F Gravity 1150 API RW 130 R/T @ 130 °F Chlorides 500 ppm

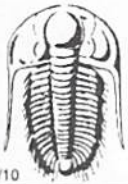
(A) Initial Hydrostatic 2111 Test
 (B) First Initial Flow 15 Jars 250
 (C) First Final Flow 21 Safety Joint 75
 (D) Initial Shut-In 1026 Circ Sub N/C
 (E) Second Initial Flow 23 Hourly Standby
 (F) Second Final Flow 26 Mileage 130 R/T 130
 (G) Final Shut-In 832 Sampler
 (H) Final Hydrostatic 2046 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

T-On Location 10:21pm
 T-Started 10:39pm
 T-Open 12:27am
 T-Pulled 3:27am
 T-Out 5:24am
 Comments _____
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1605
 MP/DST Disc't _____
 Sub Total 1605

Approved By _____

Our Representative Ronald E. [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. 61095

Well Name & No. Calwell 'C' #3-10 Test No. 4 Date 2-14-15
 Company Martin Drilling Co., Inc. Elevation 3200 KB 3189 GL
 Address 250 W. Water, Ste 300 Wichita ks 67202
 Co. Rep / Geo. Chuck Schmultz Rig Martin #20
 Location: Sec. 10 Twp. 1S Rge. 37 W Co. Cheyenne State ks

Interval Tested 4520-4565 Zone Tested Pawnee
 Anchor Length 45' Drill Pipe Run 4333.78' Mud Wt. 9.3
 Top Packer Depth 4515 Drill Collars Run 184.39' Vis 60
 Bottom Packer Depth 4520 Wt. Pipe Run 0 WL 7.2
 Total Depth 4565 Chlorides 500 ppm System LCM 10#

Blow Description IF-Surface blow built up to 2"
ISI-Faint return started at end of shut-in.
FF-Surface blow built to 7 1/2"
FSI-Faint return started 4mins into and built to 2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>35'</u>	<u>Free Oil</u>	<u>100</u>			
<u>60'</u>	<u>OCM</u>	<u>50</u>		<u>50</u>	
	<u>189'-G.I.P</u>	<u>100</u>			

Rec Total 95' BHT 137°F Gravity 34 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic 2250 Test 1150 T-On Location 2:01 am
 (B) First Initial Flow 16 Jars 250 T-Started 2:27 am
 (C) First Final Flow 26 Safety Joint 75 T-Open 4:44 am
 (D) Initial Shut-In 95 Circ Sub N/C T-Pulled 8:44 am
 (E) Second Initial Flow 26 Hourly Standby T-Out 10:41 am
 (F) Second Final Flow 41 Mileage 130 R/T 130 Comments loaded tool after test but not released
 (G) Final Shut-In 96 Sampler
 (H) Final Hydrostatic 2185 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder
 Day Standby
 Accessibility

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Sub Total 1605
 Total 1605
 MP/DST Disc't

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.

NO.	Interval	SP/Time	SP/Time	SP/Time	SP/Time	SP/Time	REMARKS
1	4165-4225	85' 10"	720'	194'	189'	2083'	93' FO (54 30%) 126' MCD 121' HOCM
2	4230-4270	40' 30"	60'	90'	90'	195' F	10' Oil Spotted Mud
3	4272-4365	15' 21"	107'	107'	63'	211'	10' Oil Spotted Mud 10' Oil Spotted Mud
4	4370-4565	15' 21"	95'	75' 41"	96'	2195'	35' CO (50 30%) 60' MCD

FORMATION TYPES & STRUCTURAL POSITION

FORMATION **SURFACE ELEVATION** **SURFACE POSITION** **STRUCTURAL POSITION**

ANHYDRITE - TOP 3169 3176 4-31 1

ANHYDRITE - BASE 3162 3176 4-31 2

NEVA 3102 3558 -30 -1

RED EAGLE 3165 3164 -46 -1

FORAKER 3110 3168 -58 -3

OREAD 3091 3282 -72 -4

STARK 4048 4041 -84 -2

LANCING 4156 4159 -91 -0

PAWNEE 4423 4414 -121 +1

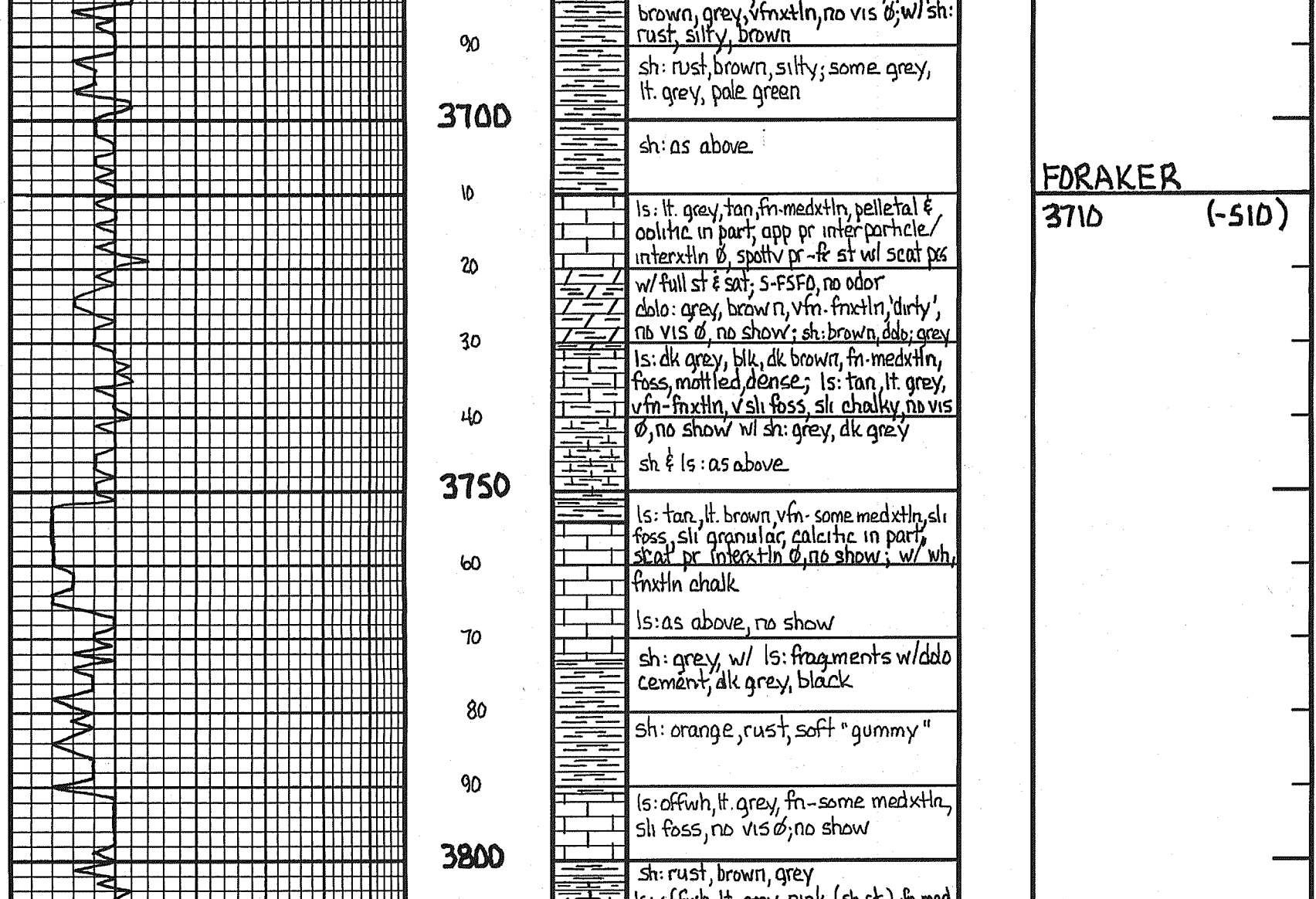
CHEROKEE 4627 4627 -135 -3

TOTAL DEPTH 4730 - -147 -2

NO.	Interval	SP/Time	SP/Time	SP/Time	SP/Time	SP/Time	REMARKS
1	4165-4225	85' 10"	720'	194'	189'	2083'	93' FO (54 30%) 126' MCD 121' HOCM
2	4230-4270	40' 30"	60'	90'	90'	195' F	10' Oil Spotted Mud
3	4272-4365	15' 21"	107'	107'	63'	211'	10' Oil Spotted Mud 10' Oil Spotted Mud
4	4370-4565	15' 21"	95'	75' 41"	96'	2195'	35' CO (50 30%) 60' MCD

LEGEND

NO.	Interval	SP/Time	SP/Time	SP/Time	SP/Time	SP/Time	REMARKS
1	4165-4225	85' 10"	720'	194'	189'	2083'	93' FO (54 30%) 126' MCD 121' HOCM
2	4230-4270	40' 30"	60'	90'	90'	195' F	10' Oil Spotted Mud
3	4272-4365	15' 21"	107'	107'	63'	211'	10' Oil Spotted Mud 10' Oil Spotted Mud
4	4370-4565	15' 21"	95'	75' 41"	96'	2195'	35' CO (50 30%) 60' MCD



DEPTHS

DEPTH	TYPE	DEPTH	FEET	HOURS	PIRE STAGES
1	HTC	275	775	2	DEPTH INCL. @ 775' 1.0°
2	HTC	3400	3175	40	DEPTH INCL. @ 775' 1.0°
3	HTC	6722	4130	910	DEPTH INCL. @ 775' 1.0°

NO.	Interval	SP/Time	SP/Time	SP/Time	SP/Time	SP/Time	REMARKS
1	4165-4225	85' 10"	720'	194'	189'	2083'	93' FO (54 30%) 126' MCD 121' HOCM
2	4230-4270	40' 30"	60'	90'	90'	195' F	10' Oil Spotted Mud
3	4272-4365	15' 21"	107'	107'	63'	211'	10' Oil Spotted Mud 10' Oil Spotted Mud
4	4370-4565	15' 21"	95'	75' 41"	96'	2195'	35' CO (50 30%) 60' MCD

SAMPLE DESCRIPTIONS

DEPTH	SAMPLE DESCRIPTIONS
3100	sh: rust, vry silty/sandy; scat calc; few pcs tan, vfnxtn, dense ls;
3150	rust sh as above w/ ss: tan, lt, gy vfn grained, calc, firm, no vis @, no show
3200	sh: rust, silty/sandy, w/ anthy inclusions; scat tan ss as above
3250	sh: rust silty/sandy → staley ss; rust vfn grained, firm-frable, no vis @, NS
3300	sh: rust silty/sandy
3350	sh: rust, silty/sandy → ss: rust, vfn grained, shaley, firm, no vis @, NS
3400	as above w/ scat anthy inclusions; scat grey sh
3450	as above w/ orange sh
3500	sh: as above; sh int. in anthy
3550	sh: as above, w/ scat ss: lt grey, grey, greenish-grey, vfn grained, well sorted, firm, sh. calc, no vis @, no show
3600	ls: tan, lt grey, fm-some medxtn, vsl fess, granular in part, cpl pcs w/ pr interxtn @; sh: rust, silty/sandy; few clusters ss: grey, fragnated, well sorted, firm, no vis @, no show
3650	sh: rust, silty/sandy; some brown, grey
3700	sh: as above
3750	sh: rust, silty/sandy; some grey
3800	sh: as above
3850	ls: tan, medxtn, sh fess, sh granular, dkly in part, tr pr interxtn @, no show; dk grey, brown, vfn medxtn, dense, w/ sh; ls: offwh, tan, vfn medxtn, vry sh fess, vry sh ool (vry fm) app or interxtn @, no show; considerable Δ, orange, brown, some grey, fresh, opaque
3900	ls: as above, w/ doab: brown, purple-brown, grey, vfn medxtn, no vis @, w/ sh; rust, silty, brown
3950	sh: rust, brown, green, lt. grey, pale green
4000	sh: as above
4050	ls: lt. grey, tan, fm-medxtn, pelletal & oolitic in part, app or interparchic, interxtn @, spotty pr fr st w/ scat pcs w/ full st & sat; S-FSD, no odor
4100	sh: dk grey, blk, dk brown, fm-medxtn, fess, mottled dense; ls: tan, lt. grey, vfn medxtn, vsl fess, sh. chalky, no vis @, no show w/ sh: grey, dk grey
4150	ls: tan, lt. brown, vfn medxtn, sh fess, sh granular, calc in part, scat pr interxtn @, no show; w/ wh medxtn chalk
4200	ls: as above, no show
4250	sh: grey, w/ ls: fragments w/ doab cement, dk grey, black
4300	sh: orange, rust; soft "gummy"
4350	ls: offwh, lt. grey, fm-some medxtn, sh fess, no vis @, no show
4400	sh: rust, brown, grey
4450	ls: offwh, lt. grey, pink (sh st), fm-med xtn, sh fess, no vis @, no show
4500	sh: rust, brown, grey, calc in part; w/ ls: as above
4550	ls: lt. grey, pink, medxtn, dolomite in part; no vis @, no show; sh: rust, brown
4600	sh: rust, brown, grey, calc in part; sh: orange "gummy"
4650	ls: lt. grey, tan, medxtn, mottled v sl fess, tr pr interxtn @; scat dk oil residue, NS live oil
4700	sh: brown, grey, some rust; ls: lt. grey, fm-medxtn, pelletal, sh ool, well cemented, scat pr interparchic; considerable dd oil residue, no show live oil
4750	ls: as above; considerable dd oil residue, no show live oil; sh: grey, some brown
4800	ls: as above w/ grey, brown sh; sh: grey, brown, some rust; w/ ls: tan, lt. brown, medxtn, calc in part; no vis @, no show
4850	sh: rust, silty → sandy; sh: grey; sh: rust-brown w/ scat ls: frag inclusions, rust-brown, medxtn, sh. calc, ls
4900	sh: orange "gummy"; scat brown, grey
4950	ls: tan, lt. grey, vfn medxtn (few pcs medxtn, no vis @, no show)
5000	ls: offwh, lt. grey, fm-medxtn, tr fess, scat interbedded rust sh;
5050	sh: rust
5100	ls: tan, lt. arev fm-medxtn sh. chalky, no vis @, no show
5150	ls: as above w/ scat dk tan flesh ool
5200	ls: tan, lt. arev fm-medxtn v sl fess, pelletal in part, no vis @, no show
5250	sh: rust, silty → sandy; sh: grey, orange
5300	sh: rust, silty → sandy, scat ss/silt; lt. grey, tan, vfn grained, well sorted, friable, no vis @, no show
5350	sh & ls: tan clusters; ss: as above; NS
5400	ls: offwh, tan, lt. grey, macro-some medxtn, tr fess, cool, no vis @, NS
5450	ls: as above; few pcs sh stain (rust)
5500	ls: as above; w/ inc. in sh: rust, grey, greenish-grey
5550	sh: grey, lt. grey, some brown, rusty; scat ls: pale greenish-grey, (shaley) vfn grained, dense
5600	sh: lt. grey, grey, calc in part; sh: rust, brown
5650	ls: sh as above
5700	ls: offwh, lt. grey, some tan, fm-medxtn, pelletal in part, vsl fess, app or interxtn @, vuggy @ (vry fine), fr-gd golden-bk brown st & sat; S-FSD, fr fresh odor
5750	ls: as above, significant dec. in show; w/ ls: offwh, lt. grey, tan, fm-medxtn, sh. calc, in part, tr pr interxtn @; scat dk oil residue, no show live oil
5800	ls: tan, grey, dk grey, fm-medxtn, dense w/ fess; w/ v. grey, fr. granulated, firm, app or interxtn @, fr cement dk oil residue, no show live oil
5850	ls: tan, grey, micro-fmedxtn, dense w/ scat ss as above; show dk oil, NS
5900	ls: as above; scat pyrte
5950	ls: tan, lt. grey, micro-fmedxtn, dense; scat wh. chalk; sh: pale green-grey, "gummy" scat dk grey, brown, rust
6000	sh: dk grey, grey, brown, rusty; fr pvy, scat ss: grey, vfn grained, friable, no vis @, considerable dd oil residue, NS
6050	sh: rust, grey, pale green-grey, w/ wh. tan ss: fr granulated, calc, no vis @, no show
6100	ls: offwh, lt. grey, fm-medxtn, sh. pelletal, calc, well cemented, fr medxtn, fr few pcs pr-med. dk brown st, live oil st, NS
6150	3/4 pcs / tray ls; sh: fm-medxtn, granular in part, sh. chalky, fess (fuss), app or interxtn @, vuggy @, pr-fr med brown st w/ pr-fr sat, S-FSD ppts Pd @ on brk, no odor; most no vis @, no show
6200	sh: rust, brown, lt. grey, considerable
6250	ls: offwh, tan-grey, micro-fmedxtn, dense sh & ls: as above
6300	sh: rust, silty; brown, lt. grey, scat ss: w/ wh. tan ss: fr granulated, calc, firm, fr interxtn @, considerable dd oil residue
6350	ls: offwh, lt. grey, some tan, fm-med xtn, sh fess, granular in part, app or interxtn @, vuggy @ (small), spotty pr fr dk st w/ sat, S-FSD, no odor
6400	ls: tan, lt. grey, fm-some medxtn, chalky in part, no vis @, tr dd oil residue
6450	sh: rust; brown, some grey
6500	sh: rust, silty in part, some brown, grey
6550	sh: as above
6600	ls: offwh, tan, fm-medxtn, sh. ool, chalky in part, vpr-pr interxtn @, few pcs w/ few minute patts fo on brk, no odor, scat dd oil residue
6650	sh: brown, grey; w/ ls: tan, lt. grey, vfn medxtn, dense
6700	sh: rust, sh. silty; some brown, grey
6750	sh: as above, w/ scat ls: grey, vfn medxtn, sh. chalky, dense
6800	ls: offwh, tan, fm-medxtn, sh. ool, chalky in part, pr-fr interxtn @, vuggy @ (fine), pr-scat fr dk st w/ patchy sat, S-FSD, no odor, scat dd oil residue
6850	ls: offwh, tan, medxtn, chalky in part, no vis @, NS
6900	sh: rust, brown, grey, green
6950	siltstone, vfn grained ss; rust, brown, sh. shaley, friable, no vis @, no show
7000	siltstone, vfn grained ss; as above, w/ sh: brown, rust, some grey
7050	sh: rust, brown, silty, few pcs grey
7100	ls: tan, lt. grey, fm-med. ool in part, tr fess, sh. mottled, sh. chalky, no vis @, no show
7150	sh: brown, rust
7200	ls: offwh, tan, fm-medxtn, chalky, scat wh. chalky, no vis @, no show
7250	ls: as above
7300	sh: brown, rust, some grey, green
7350	ls: lt. grey, tan, vfn-medxtn, chalky in part, tr vpr interxtn @, no show; ls: brown, medxtn, ool, no vis @, NS
7400	sh: rust, brown, purple-brown, some grey, green
7450	ls: grey, dk grey, brown, micro-fmedxtn, dense, sh. chalky
7500	sh: rust, brown, calc, sandy
7550	sh: rust, brown, calc; scat ls: tan, fm-medxtn, scat rust sh. laminations & rust sh contact
7600	sh: brown, some rust, silty
7650	sh: as above w/ ls: offwh, tan, vfn-medxtn, sh. chalky, w/ rust sh
7700	ls: lt. dk. grey, some tan, vfn medxtn, dense
7750	ls: as above
7800	sh: grey, some green, brown, rust; w/ scat ls: tan, brown, medxtn, sh. ool, dense
7850	sh: offwh, tan, medxtn, brown, rust
7900	ls: offwh, tan, medxtn, brown, rust; pr-fr (cpl pcss) interbedded interxtn @, pr-fr, lt-med brown st, S-FSD, no odor
7950	ls: lt. grey, grey, tan, fm-medxtn, vsl ool, no vis @, no show
8000	ls: as above; sh. chalky, no vis @, NS
8050	sh: grey, dk grey, some brown
8100	ls: tan, lt. brown, grey-brown, fm-med xtn, tr fess, dense
8150	ls: as above, becoming sh. chalky
8200	ls: tan, brown, grey, some rust; few pcs green
8250	ls: tan, grey, vfn medxtn, dense ls: brown, fm-medxtn, sh. fess, scat pcs ool, no vis @, no show
8300	ls: as above, becoming chalky w/ few pcs wh. chalk
8350	sh: grey, dk grey, some brown, green-grey
8400	ls: tan, lt. brown, fm-medxtn, sh. ool, chalky in part; sh: grey, brown, tr vpy
8450	ls: offwh, tan, brown, fm-medxtn, sandy in part, chalky, no vis @, NS
8500	sh: grey, green-grey, brown, w/ ls: as above
8550	sh: as above, w/ ls: tan, lt. brown, fm-medxtn, tr ool, sh. sandy, chalky
8600	sh: brown, rust, silty, grey, green, yellow-green; ss: w/ fragnated, well sorted, fragnated, calc, no vis @, no show
8650	sh: rust, brown, grey, green, silty in part; ss: w/ tan, vfn grained, well sorted, firm, scat pr intergrnd @, NS
8700	sh: as above; shly sd; rust, brown, fm grained, well sorted, firm-frable, no vis @, no show; ss: clear tan, lt. grey, fragnated, well sorted, friable, scat pr intergrnd @; NS: few large, sub-sd sand grains, clear, blue-wh, sub-md
8750	sh: as above
8800	sh: brown, rust, silty, grey, green, yellow-green, no vis @, no show
8850	sh: rust, brown, grey, green, silty in part; ss: w/ tan, vfn grained, well sorted, firm, scat pr intergrnd @, NS
8900	sh: as above
8950	sh: brown, rust, silty, grey, green, yellow-green, no vis @, no show
9000	sh: rust, brown, grey, green, silty in part; ss: w/ tan, vfn grained, well sorted, firm, scat pr intergrnd @, NS
9050	sh: as above
9100	sh: brown, rust, silty, grey, green, yellow-green, no vis @, no show
9150	sh: rust, brown, grey, green, silty in part; ss: w/ tan, vfn grained, well sorted, firm, scat pr intergrnd @, NS
9200	sh: as above
9250	sh: brown, rust, silty, grey, green, yellow-green, no vis @, no show
9300	sh: rust, brown, grey, green, silty in part; ss: w/ tan, vfn grained, well sorted, firm, scat pr intergrnd @, NS
9350	sh: as above
9400	sh: brown, rust, silty, grey, green, yellow-green, no vis @, no show
9450	sh: rust, brown, grey, green, silty in part; ss: w/ tan, vfn grained, well sorted, firm, scat pr intergrnd @, NS
9500	sh: as above
9550	sh: brown, rust, silty, grey, green, yellow-green, no vis @, no show
9600	sh: rust, brown, grey, green, silty in part; ss: w/ tan, vfn grained, well sorted, firm, scat pr intergrnd @, NS
9650	sh: as above
9700	sh: brown, rust, silty, grey, green, yellow-green, no vis @, no show
9750	sh: rust, brown, grey, green, silty in part; ss: w/ tan, vfn grained, well sorted, firm, scat pr intergrnd @, NS
9800	sh: as above
9850	sh: brown, rust, silty, grey, green, yellow-green, no vis @, no show
9900	sh: rust, brown, grey, green, silty in part; ss: w/ tan, vfn grained, well sorted, firm, scat pr intergrnd @, NS
9950	sh: as above

NO.	Interval	SP/Time	SP/Time	SP/Time	SP/Time	SP/Time	REMARKS
1	4165-4225	85' 10"	720'	194'	189'	2083'	93' FO (54 30%) 126' MCD 121' HOCM
2	4230-4270	40' 30"	60'	90'	90'	195' F	10' Oil Spotted Mud
3	4272-4365	15' 21"	107'	107'	63'	211'	10' Oil Spotted Mud 10' Oil Spotted Mud
4	4370-4565	15' 21"	95'	75' 41"	96'	2195'	35' CO (50 30%) 60' MCD

REMARKS

NO.	Interval	SP/Time	SP/Time	SP/Time	SP/Time	SP/Time	REMARKS
1	4165-4225	85' 10"	720'	194'	189'	2083'	93' FO (54 30%) 126' MCD 121' HOCM
2	4230-4270	40' 30"	60'	90'	90'	195' F	10' Oil Spotted Mud
3	4272-4365	15' 21"	107'	107'	63'	211'	10' Oil Spotted Mud 10' Oil Spotted Mud
4	4370-4565	15' 21"	95'	75' 41"	96'	2195'	35' CO (50 30%) 60' MCD

NO.	Interval	SP/Time	SP/Time	SP/Time	SP/Time	SP/Time	REMARKS
1	4165-4225	85' 10"	720'	194'	189'	2083'	93' FO (54 30%) 126' MCD 121' HOCM
2	4230-4270	40' 30"	60'	90'	90'	195' F	10' Oil Spotted Mud



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



Invoice

DATE	INVOICE #
2/15/2015	28285

BILL TO
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661
USED FOR <u>IC-103</u>
APPROVED <u>JS RK</u>

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3-10	Culwell C	Cheyenne	Company Tools R...	Oil	Development	5-1/2" LongString	Jason
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				160	Miles	5.00	800.00
579D	Pump Charge - Top To Bottom LongString				1	Job	1,700.00	1,700.00
403-5	5 1/2" Cement Basket				3	Each	250.00	750.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	225.00	225.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	300.00	300.00T
409-5	5 1/2" Turbolizer				14	Each	75.00	1,050.00T
413-5	5 1/2" Roto Wall Scratcher				20	Each	35.00	700.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
281	Mud Flush				500	Gallon(s)	1.25	625.00T
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
276	Flocele				125	Lb(s)	2.25	281.25T
283	Salt				1,000	Lb(s)	0.20	200.00T
284	Calseal				9	Sack(s)	30.00	270.00T
285	CFR-1				150	Lb(s)	4.50	675.00T
290	D-Air				5	Gallon(s)	42.00	210.00T
325	Standard Cement				200	Sacks	12.25	2,450.00T
330	Swift Multi-Density Standard (MIDCON II)				300	Sacks	15.75	4,725.00T
581D	Service Charge Cement				500	Sacks	1.50	750.00
583D	Drayage				4,062	Ton Miles	0.75	3,046.50
	Subtotal							19,057.75
	Sales Tax Cheyenne County						8.15%	1,040.04
We Appreciate Your Business!							Total	\$20,097.79



Services, Inc.

CHARGE TO: MURFIN DRILLING.
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET 29285

PAGE 1 OF 2

1. NESS CITY, KS. WELL/PROJECT NO. _____ LEASE CULWELL 2.3.10 CHEYENNE STATE KS. CITY McDONALD, KS. DATE 15 FEB 15 OWNER _____
 2. _____ CONTRACTOR Co Tools RIG #20 RIG NAME NO. _____ SHIPPED VIA _____ DELIVERED TO _____ ORDER NO. _____
 3. _____ TICKET TYPE SERVICE SALES WELL TYPE DIL WELL CATEGORY DEVELOPMENT JOB PURPOSE 5.5 HOLE STRIKE WELL PERMIT NO. _____ WELL LOCATION 4WJ 14.5N, E/W/E 150
 4. _____ REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE \$115	1100	mi			5.00	800.00
579					Pump CHARGE	1500				1700.00	1700.00
403					CEMENT BASKETS	3 EA				250.00	750.00
406					LATCH DOWN PLUG & BARREL	1 EA				225.00	225.00
407					INSERT FLOAT SHOE w/FILL	1 EA				300.00	300.00
409					TURBIDIZERS	14 EA				75.00	1050.00
413					ROTOWAL SCATCHERS	20 EA				35.00	700.00
419					ROTATING HEAD RENTAL	1500				2.00	300.00
281					MUD FLUSH	500	gal			1.25	625.00
221					LIQUID REL	4	gal			25.00	100.00

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 15 FEB 15 TIME SIGNED 2:34 PM
 SIGNED BY [Signature] A.M. P.M.

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

SURVEY		AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	AMOUNT
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					1	6450.00
WE UNDERSTOOD AND MET YOUR NEEDS?					2	12600.00
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"/> CUSTOMER DID NOT WISH TO RESPOND						
SUBTOTAL						19057.00
Cheyenne TAX @ 8.15%						1040.04
TOTAL						20097.04

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR [Signature] APPROVAL _____
 Thank You!



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

TICKET CONTINUATION

TICKET No. 28285

PRICE REFERENCE	SECONDARY REFERENCE PART NUMBER	ACCOUNTING		TIME	CUSTOMER'S DESCRIPTION	WELL				DATE	PAGE	OF	
		LOC	ACCT			DR	QTY	U/M	QTY				U/M
276					FLOCELE	185	lbs			2.15	281	35	
283					SALT	1000	lbs			.20	200	00	
284					ANISEAL	9	bx			30.00	270	00	
285-					CFR-1	150	lbs			4.50	675	00	
290					D-AIR	5	gal			42.00	210	00	
385					STANDARD EA-2	200	bx			12.25	2450	00	
330					SMD CEMENT	500	bx			15.25	4725	00	
581					SERVICE CHARGE					1.50	750	00	
583					MILEAGE CHARGE					.75	3046.50		
					TOTAL								
					LOADED								
					MILES								
					TOTAL	906.0							
					CUBIC FEET								
					TOTAL								
CONTINUATION TOTAL:												12607	75

MURFIN DRILLING

LUWELL C3-10

15 FEB 15 2 | 2

MURFIN DRILLING
LUWELL C3-10
15 FEB 15 2 | 2

JOB LOG

SWIFT Services, Inc.

DATE **15 FEB 15** PAGE NO.

CUSTOMER
MURFIN DRILLING

WELL NO.

LEASE

CUMWELL C 3-10

JOB TYPE

5 1/2 LONGSTRING

TICKET NO.

28285

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1430							ON LOCATION
	1810							START PIPE 5 1/2-15.5-A RTD @ 4730 SET @ 4723 SHOE JT. 21,00' CENTRALIZERS 1-13,37 BASKETS. 9,34,38 CIRCULATE @ ST. 57
	2005							DROP BALL CIRCULATE
	2059	6	12		✓		400	Pump 500 gal MUD FLUSH
		6	20		✓		400	Pump 20 Bbl KCL SPACER
	2105		7.5					PLUG RH-30SX-MH-20SX
		6	138		✓			MIX 250 SX SMD
		4	48		✓			MIX 200 SX EA-2
	2151							WASH OUT Pump & LINES
	2154	6	40		✓			START DISPLACING PLUG. BLOW RADIATOR HOSE.
	2259	8	112		✓		2500	PSI up -
	2302				✓			RELEASE PSI- DRY WELL DID NOT CIRCULATE CEMENT
	2305							WASH TRUCK
	2345							JOB COMPLETE
								THANKS \$115
								JASON DAVE COLE PRESTON ROB

MDCI
 Culwell 'C' #3-10
 660' FSL 1980' FWL
 Sec. 10-T1S-R37W
 3200' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3149	+51	-4	3146	+54	-1
B/Anhydrite	3181	+19	-5	3178	+22	-2
Neva	3602	-402	-5	3599	-399	-2
Red Eagle	3665	-465	-5	3663	-463	-3
Foraker	3710	-510	-5	3708	-508	-3
Topeka	3934	-734	-6	3932	-732	-4
Oread	4068	-868	-6	4064	-864	-2
Lansing	4149	-949	-5	4144	-944	Flat
Stark	4366	-1166	-6	4360	-1160	Flat
BKC	4423	-1223	-10	4414	-1214	-1
Pawnee	4543	-1343	-10	4536	-1336	-3
Cherokee				4623	-1423	-3
RTD	4730	-1530				
LTD				4726	-1526	