



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1223624  
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: \_\_\_\_\_

1223624

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Burk Trust 'C' 4-22
Doc ID	1223624

All Electric Logs Run

DIL
DUCP
MEL
BHCS





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

### **Burk Trust C #4-22**

### **22 1s 36w Rawlins KS**

Start Date: 2014.05.30 @ 03:00:00

End Date: 2014.05.30 @ 09:55:00

Job Ticket #: 58788                      DST #: 1

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

Printed: 2014.06.02 @ 15:23:51



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58788

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2014.05.30 @ 03:00:00

## GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:15:00

Time Test Ended: 09:55:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Robert Zodrow

Unit No: 46

**Interval: 4038.00 ft (KB) To 4078.00 ft (KB) (TVD)**

Reference Elevations: 3249.00 ft (KB)

Total Depth: 4078.00 ft (KB) (TVD)

3238.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6769 Outside**

Press@RunDepth: 27.42 psig @ 4039.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.30

End Date:

2014.05.30

Last Calib.:

2014.05.30

Start Time:

03:00:05

End Time:

09:54:59

Time On Btm:

2014.05.30 @ 05:14:30

Time Off Btm:

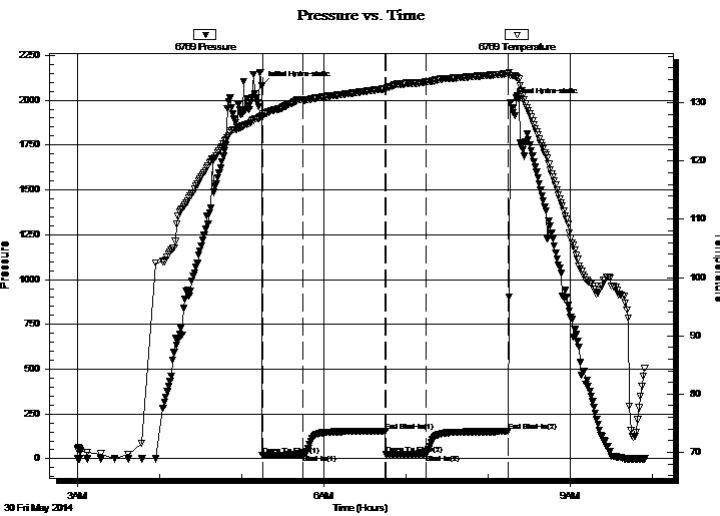
2014.05.30 @ 08:16:30

TEST COMMENT: 30-IF- Blow built to 1/8"

60-ISI- No return

30-FF- No blow

60-FSI- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2079.92	127.70	Initial Hydro-static
1	18.78	127.57	Open To Flow (1)
31	21.99	130.51	Shut-In(1)
91	152.86	132.43	End Shut-In(1)
91	23.34	132.48	Open To Flow (2)
121	27.42	133.59	Shut-In(2)
180	151.46	135.04	End Shut-In(2)
182	1988.73	134.66	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100%m	0.05

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58788

**DST#: 1**

ATTN: Robert Hendrix

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Test Type: Conventional Bottom Hole (Initial)

Tester: Robert Zodrow

Unit No: 46

**Interval: 4038.00 ft (KB) To 4078.00 ft (KB) (TVD)**

Reference Elevations: 3249.00 ft (KB)

Total Depth: 4078.00 ft (KB) (TVD)

3238.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8288** Inside

Press@RunDepth: psig @ 4039.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.30

End Date:

2014.05.30

Last Calib.:

2014.05.30

Start Time: 03:00:05

End Time:

09:54:59

Time On Btm:

Time Off Btm:

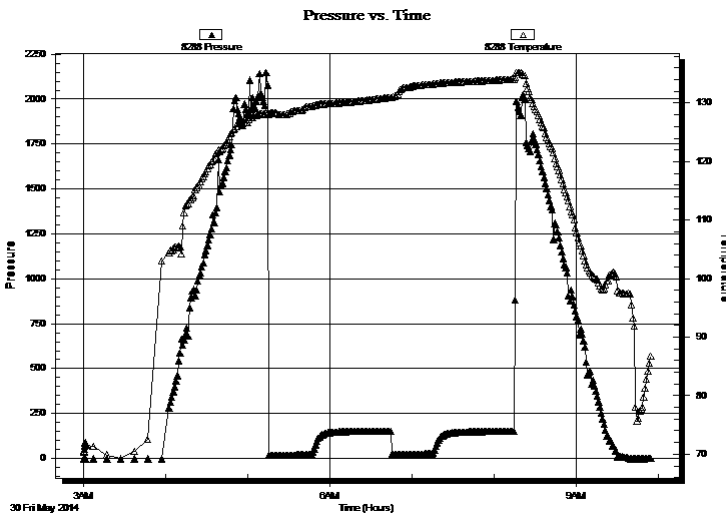
TEST COMMENT: 30-IF- Blow built to 1/8"

60-ISI- No return

30-FF- No blow

60-FSI- No return

## PRESSURE SUMMARY



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

Length (ft)	Description	Volume (bbl)
10.00	mud 100%m	0.05

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58788

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2014.05.30 @ 03:00:00

## Tool Information

Drill Pipe:	Length: 3819.00 ft	Diameter: 3.88 inches	Volume: 55.85 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: 203.00 ft	Diameter: 2.25 inches	Volume: 1.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 56.85 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4038.00 ft			Final 72000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4016.00	
Hydraulic tool	5.00			4021.00	
Jars	5.00			4026.00	
Safety Joint	3.00			4029.00	
Packer	5.00			4034.00	27.00 Bottom Of Top Packer
Packer	4.00			4038.00	
Stubb	1.00			4039.00	
Recorder	0.00	8288	Inside	4039.00	
Recorder	0.00	6769	Outside	4039.00	
Perforations	3.00			4042.00	
Change Over Sub	1.00			4043.00	
Drill Pipe	31.00			4074.00	
Change Over Sub	1.00			4075.00	
Bullnose	3.00			4078.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 67.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58788

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2014.05.30 @ 03:00:00

### 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: 5.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud 100%m	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

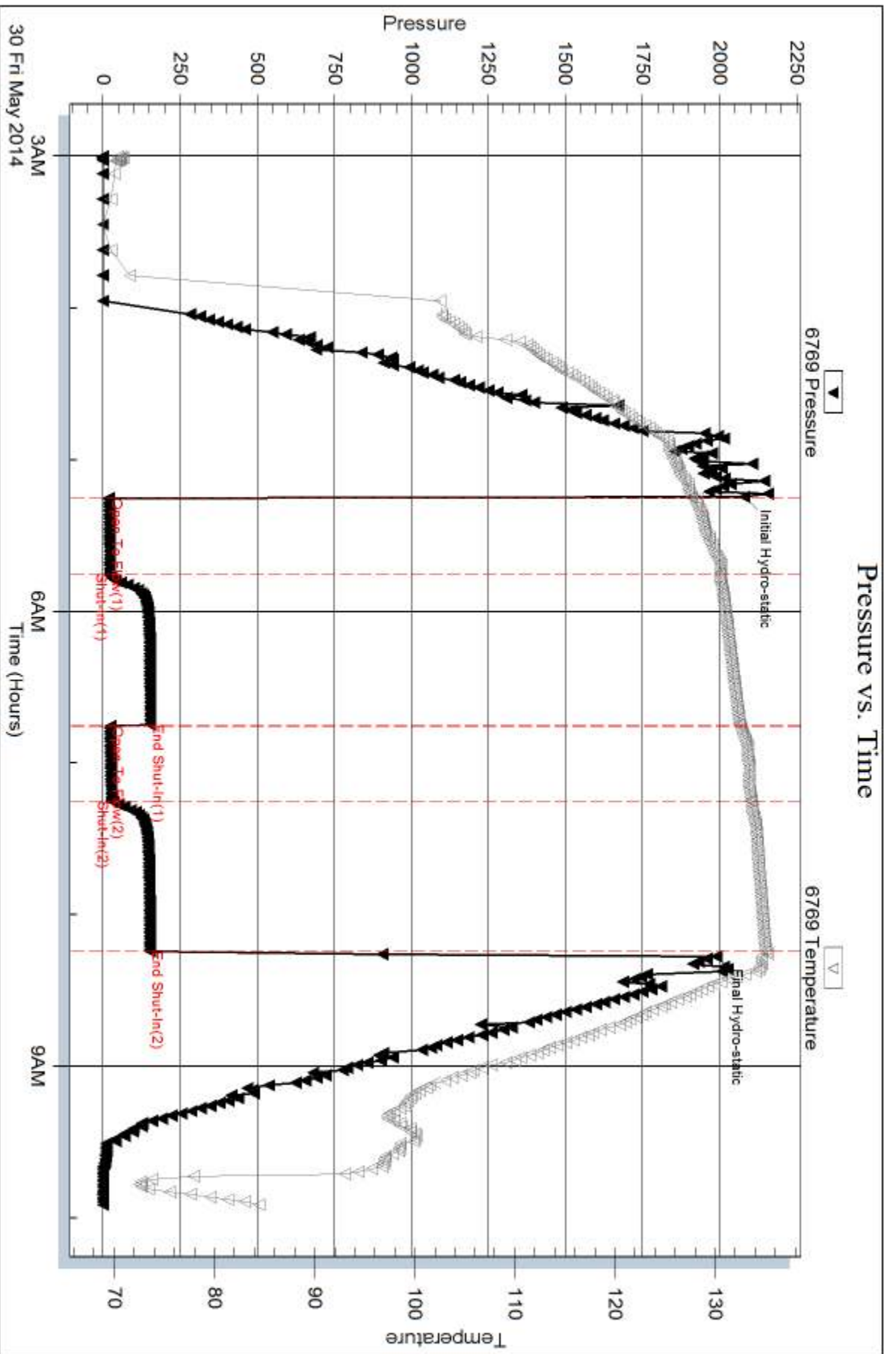
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



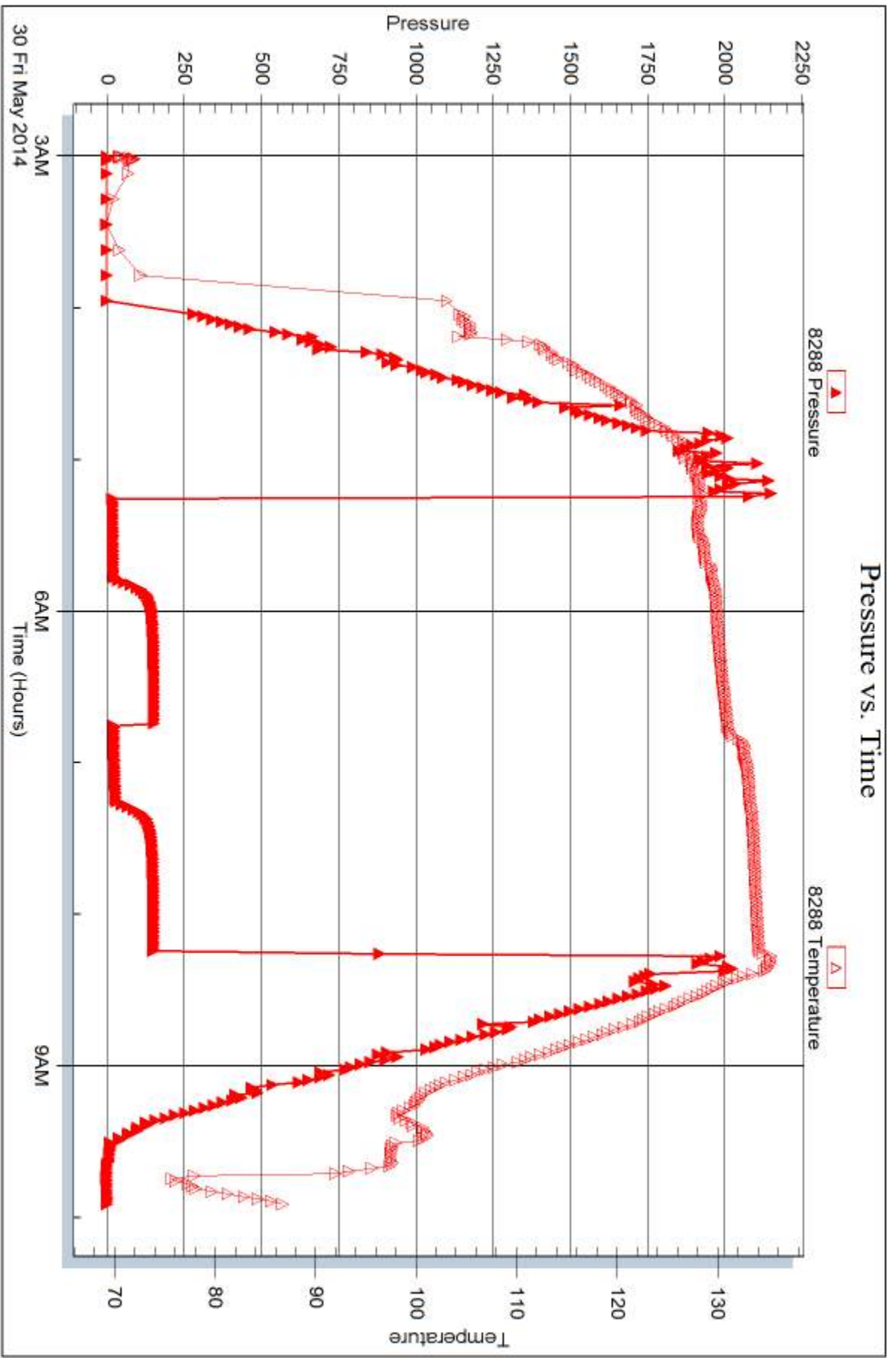
Serial #: 8298

Inside

Murfin Drilling Co Inc

Burk Trust C #4-22

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 58788

Printed: 2014.06.02 @ 15:23:52



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

### **Burk Trust C #4-22**

### **22 1s 36w Rawlins KS**

Start Date: 2014.05.31 @ 05:15:05

End Date: 2014.05.31 @ 13:11:59

Job Ticket #: 58789                      DST #: 2

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

Printed: 2014.06.02 @ 15:23:22

Murfin Drilling Co Inc  
22 1s 36w Rawlins KS  
Burk Trust C #4-22  
DST # 2  
LKC "A-D"  
2014.05.31



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58789

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2014.05.31 @ 05:15:05

## GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:13:00

Time Test Ended: 13:11:59

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 46

**Interval: 4193.00 ft (KB) To 4246.00 ft (KB) (TVD)**

Reference Elevations: 3249.00 ft (KB)

Total Depth: 4246.00 ft (KB) (TVD)

3238.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8288**

**Inside**

Press@RunDepth: 101.78 psig @ 4194.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.31

End Date:

2014.05.31

Last Calib.:

2014.05.31

Start Time:

05:15:05

End Time:

13:11:59

Time On Btm:

2014.05.31 @ 07:10:30

Time Off Btm:

2014.05.31 @ 11:19:29

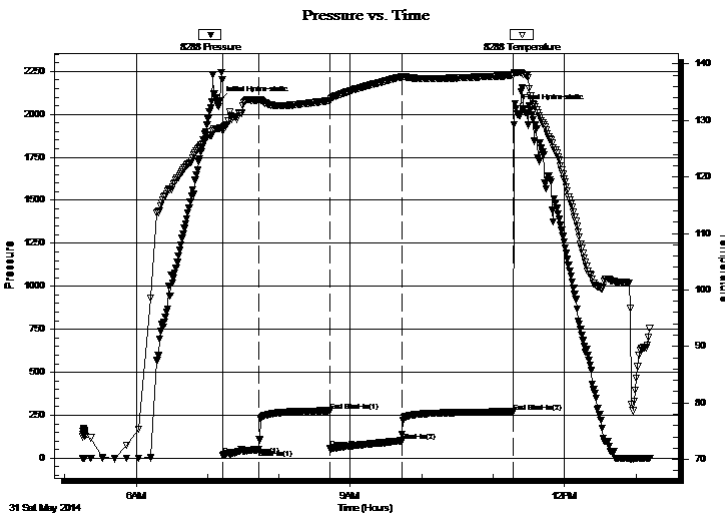
TEST COMMENT: 30-IF- Blow built to 2 3/4"

60-ISI- No return

60-FF- Blow started in 20 mins built to 2"

90-FSI- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2079.52	128.61	Initial Hydro-static
3	18.81	128.19	Open To Flow (1)
33	51.28	133.63	Shut-In(1)
92	276.67	133.50	End Shut-In(1)
93	55.86	133.33	Open To Flow (2)
153	101.78	137.71	Shut-In(2)
246	270.42	137.95	End Shut-In(2)
249	2032.21	138.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
200.00	ow cm 10%o 25%w 65%m	0.98

\* Recovery from multiple tests

## 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: Robert Hendrix

**22 1s 36w Rawlins KS**

**Burk Trust C #4-22**

Job Ticket: 58789

**DST#: 2**

Test Start: 2014.05.31 @ 05:15:05

## GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:13:00

Time Test Ended: 13:11:59

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 46

**Interval: 4193.00 ft (KB) To 4246.00 ft (KB) (TVD)**

Total Depth: 4246.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3249.00 ft (KB)

3238.00 ft (CF)

KB to GR/CF: 11.00 ft

**Serial #: 6769 Outside**

Press@RunDepth: psig @ 4194.00 ft (KB)

Start Date: 2014.05.31

End Date:

2014.05.31

Start Time: 05:15:05

End Time:

13:11:59

Capacity: 8000.00 psig

Last Calib.:

2014.05.31

Time On Btm:

Time Off Btm:

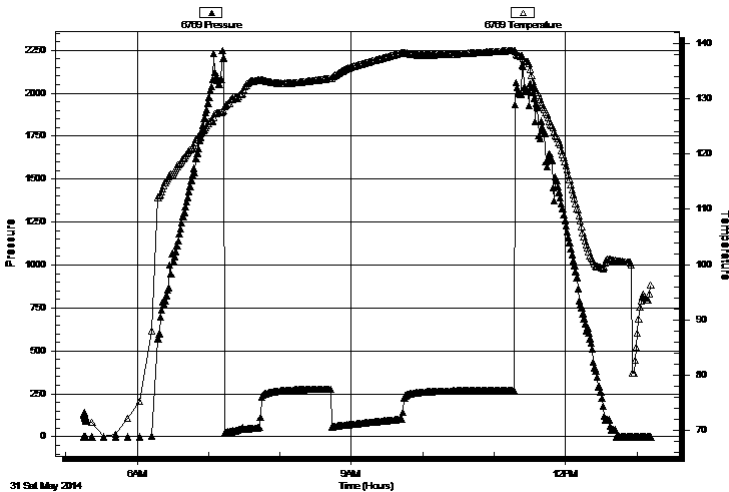
**TEST COMMENT:** 30-IF- Blow built to 2 3/4"

60-IS- No return

60-FF- Blow started in 20 mins built to 2"

90-FS- No return

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
200.00	ow cm 10%o 25%w 65%m	0.98

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58789

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2014.05.31 @ 05:15:05

## Tool Information

Drill Pipe:	Length: 3976.00 ft	Diameter: 3.88 inches	Volume: 58.15 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: 203.00 ft	Diameter: 2.25 inches	Volume: 1.00 bbl	Weight to Pull Loose: 86000.00 lb
			<u>Total Volume: 59.15 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4193.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.00 ft			
Tool Length:	80.00 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			4171.00	
Hydraulic tool	5.00			4176.00	
Jars	5.00			4181.00	
Safety Joint	3.00			4184.00	
Packer	5.00			4189.00	27.00 Bottom Of Top Packer
Packer	4.00			4193.00	
Stubb	1.00			4194.00	
Recorder	0.00	8288	Inside	4194.00	
Recorder	0.00	6769	Outside	4194.00	
Perforations	16.00			4210.00	
Change Over Sub	1.00			4211.00	
Drill Pipe	31.00			4242.00	
Change Over Sub	1.00			4243.00	
Bullnose	3.00			4246.00	53.00 Bottom Packers & Anchor

**Total Tool Length: 80.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58789

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2014.05.31 @ 05:15:05

### 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:

25000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
200.00	ow cm 10%o 25%w 65%m	0.984

Total Length: 200.00 ft      Total Volume: 0.984 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

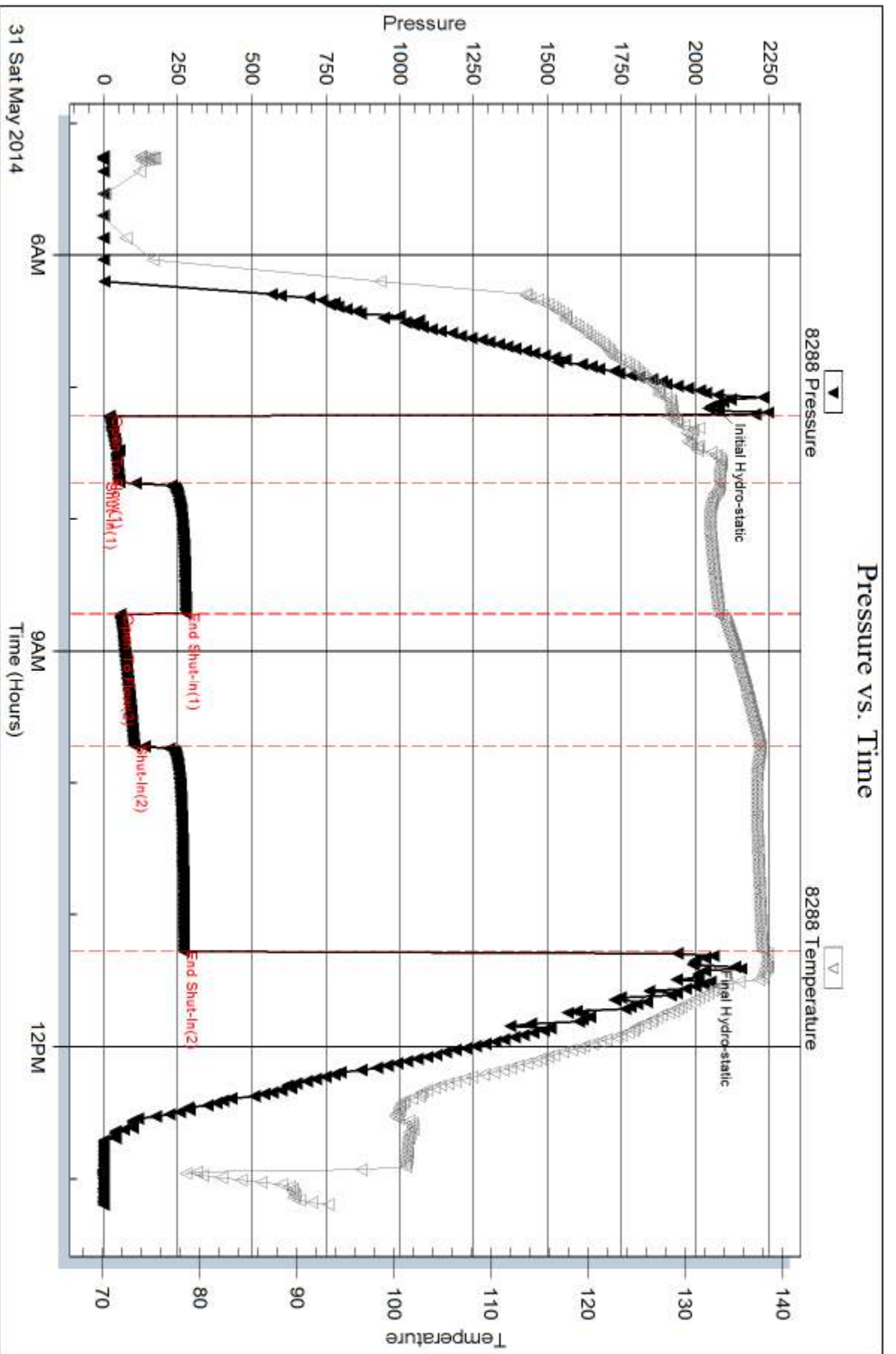
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .217@91deg f=25000



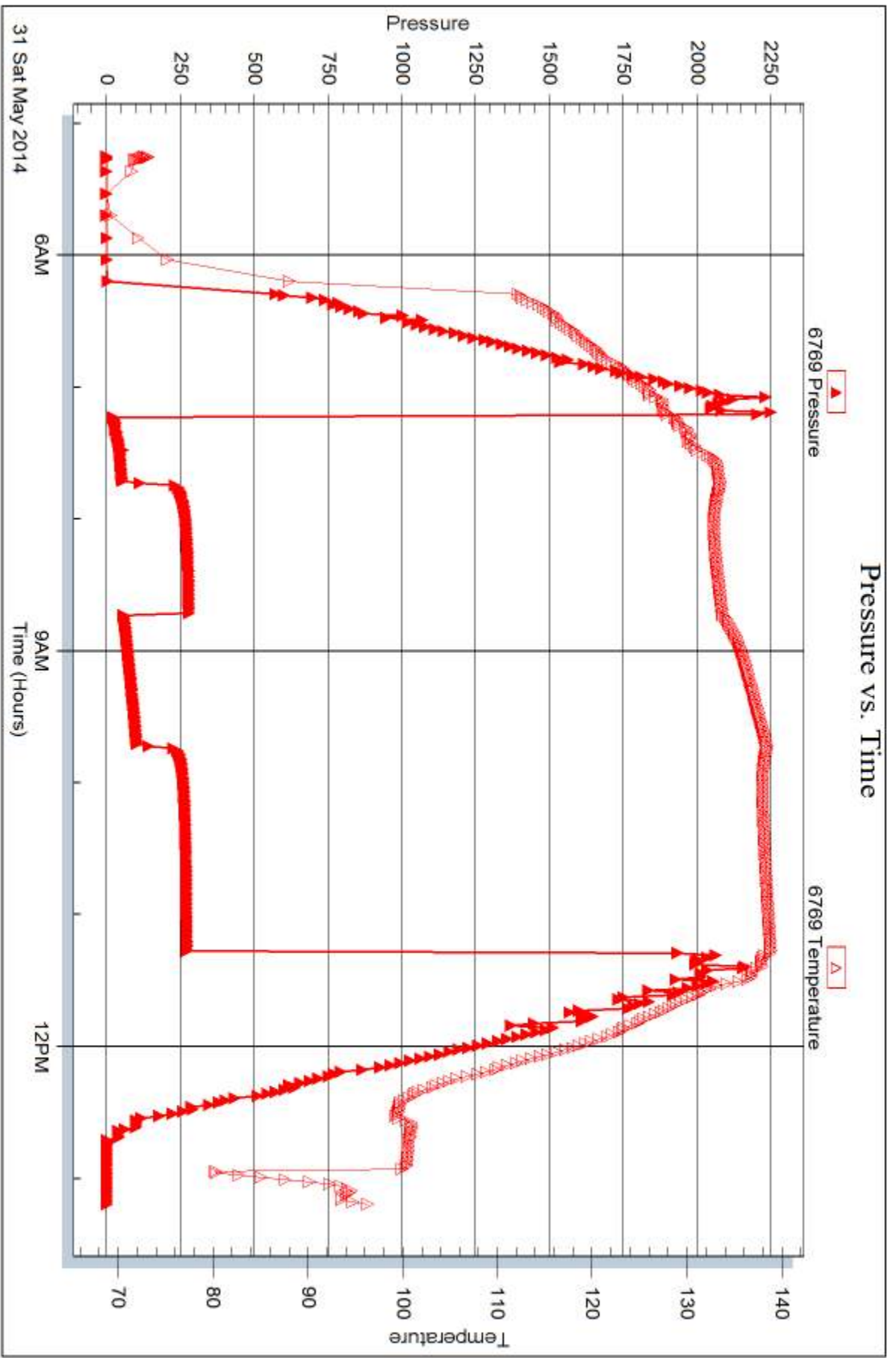


Serial #: 6769

Outside Murfin Drilling Co Inc

Burk Trust C #4-22

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 58789

Printed: 2014.06.02 @ 15:23:23



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

### **Burk Trust C #4-22**

### **22 1s 36w Rawlins KS**

Start Date: 2014.06.01 @ 00:15:00

End Date: 2014.06.01 @ 08:02:30

Job Ticket #: 58790                      DST #: 3

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

Printed: 2014.06.02 @ 15:22:53



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58790

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2014.06.01 @ 00:15:00

## GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:05:30

Time Test Ended: 08:02:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 46

**Interval: 4258.00 ft (KB) To 4310.00 ft (KB) (TVD)**

Reference Elevations: 3249.00 ft (KB)

Total Depth: 4310.00 ft (KB) (TVD)

3238.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6769 Outside**

Press@RunDepth: 29.30 psig @ 4259.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.06.01

End Date:

2014.06.01

Last Calib.: 2014.06.01

Start Time: 00:15:05

End Time:

08:02:29

Time On Btm: 2014.06.01 @ 02:05:00

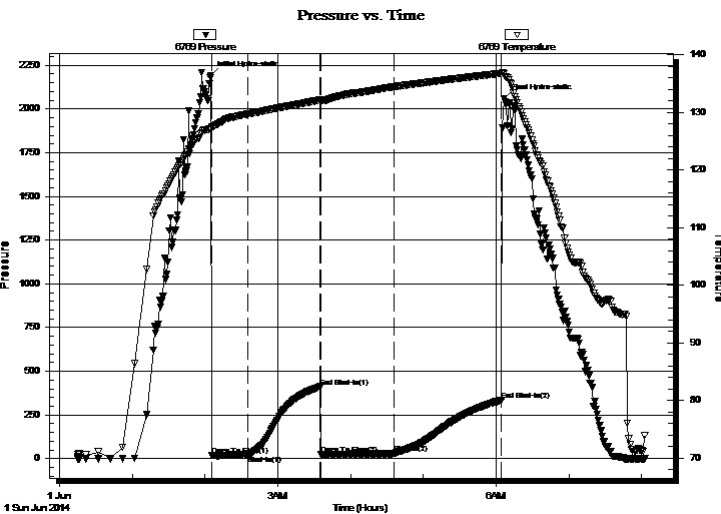
Time Off Btm: 2014.06.01 @ 06:06:30

TEST COMMENT: 30-IS- Blow built to 1/2"

60-IS- No return

60-FF- No blow

90-FS- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2191.03	127.01	Initial Hydro-static
1	20.58	127.54	Open To Flow (1)
30	21.86	129.68	Shut-In(1)
90	411.27	132.13	End Shut-In(1)
91	26.92	132.13	Open To Flow (2)
151	29.30	134.43	Shut-In(2)
240	335.28	136.77	End Shut-In(2)
242	2060.21	136.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	ocm 20%o 80%m	0.02

\* Recovery from multiple tests

## Gas Rates

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



# DRILL STEM TEST REPORT

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58790

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2014.06.01 @ 00:15:00

## GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:05:30

Time Test Ended: 08:02:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 46

**Interval: 4258.00 ft (KB) To 4310.00 ft (KB) (TVD)**

Total Depth: 4310.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3249.00 ft (KB)

3238.00 ft (CF)

KB to GR/CF: 11.00 ft

**Serial #: 8521**

**Inside**

Press@RunDepth: psig @ 4259.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.06.01

End Date: 2014.06.01

Last Calib.: 2014.06.01

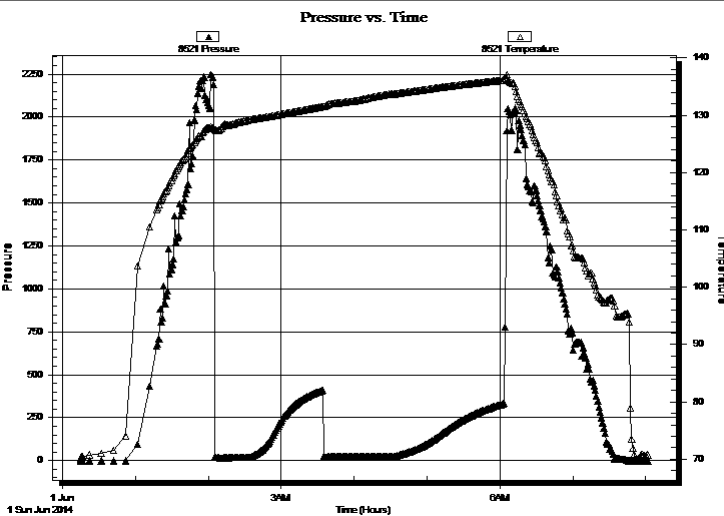
Start Time: 00:15:05

End Time: 08:01:59

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30-IF- Blow built to 1/2"  
60-ISI- No return  
60-FF- No blow  
90-FSI- No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	ocm 20%o 80%m	0.02

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58790

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2014.06.01 @ 00:15:00

## Tool Information

Drill Pipe:	Length: 4037.00 ft	Diameter: 3.88 inches	Volume: 59.04 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: 203.00 ft	Diameter: 2.25 inches	Volume: 1.00 bbl	Weight to Pull Loose:	84000.00 lb
			<u>Total Volume: 60.04 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	76000.00 lb
Depth to Top Packer:	4258.00 ft			Final	76000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			4236.00	
Hydraulic tool	5.00			4241.00	
Jars	5.00			4246.00	
Safety Joint	3.00			4249.00	
Packer	5.00			4254.00	27.00 Bottom Of Top Packer
Packer	4.00			4258.00	
Stubb	1.00			4259.00	
Recorder	0.00	8521	Inside	4259.00	
Recorder	0.00	6769	Outside	4259.00	
Perforations	15.00			4274.00	
Change Over Sub	1.00			4275.00	
Drill Pipe	31.00			4306.00	
Change Over Sub	1.00			4307.00	
Bullnose	3.00			4310.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 79.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58790

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2014.06.01 @ 00:15:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	ocm 20%o 80%m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbf

Num Fluid Samples: 0

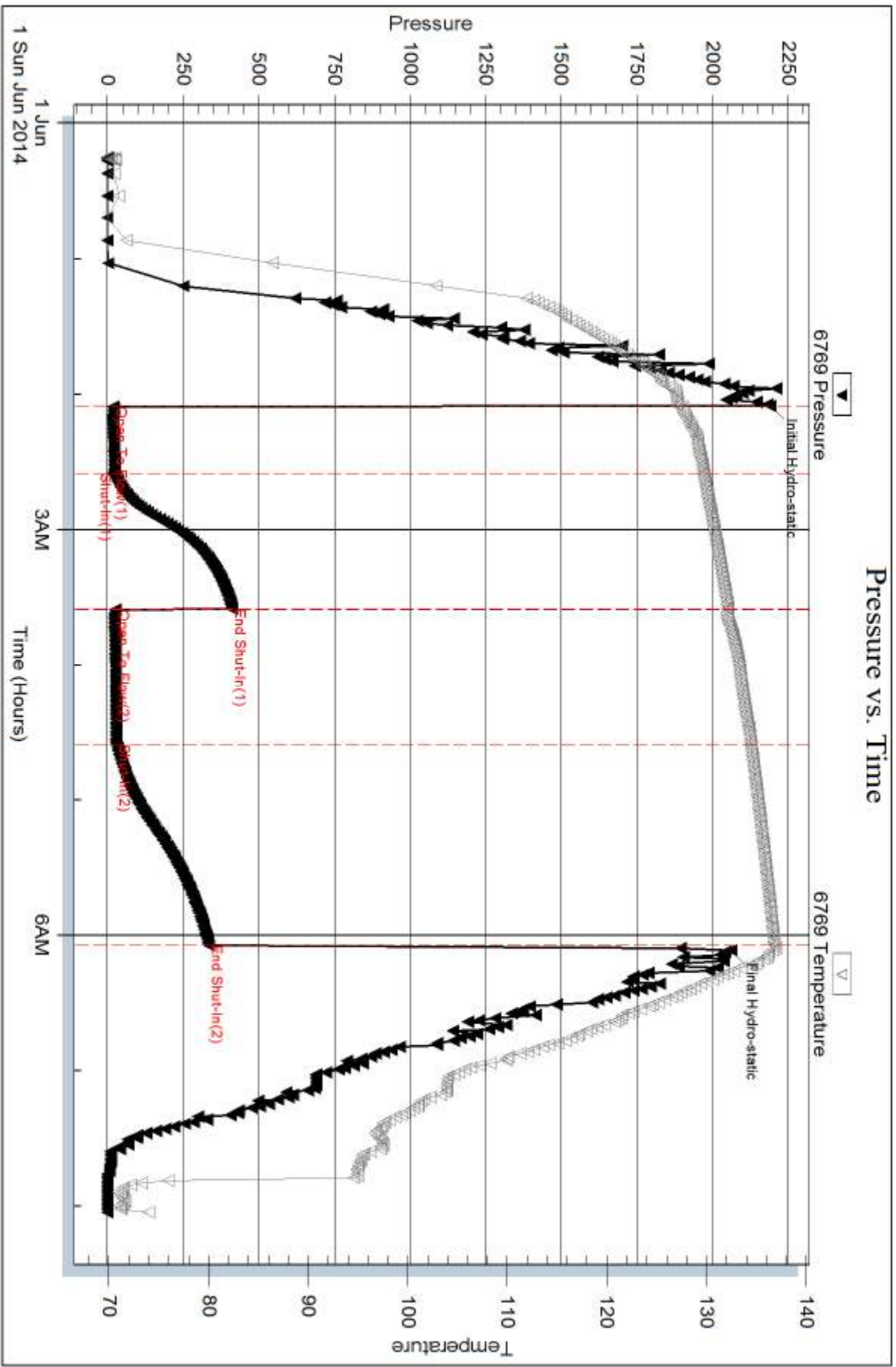
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





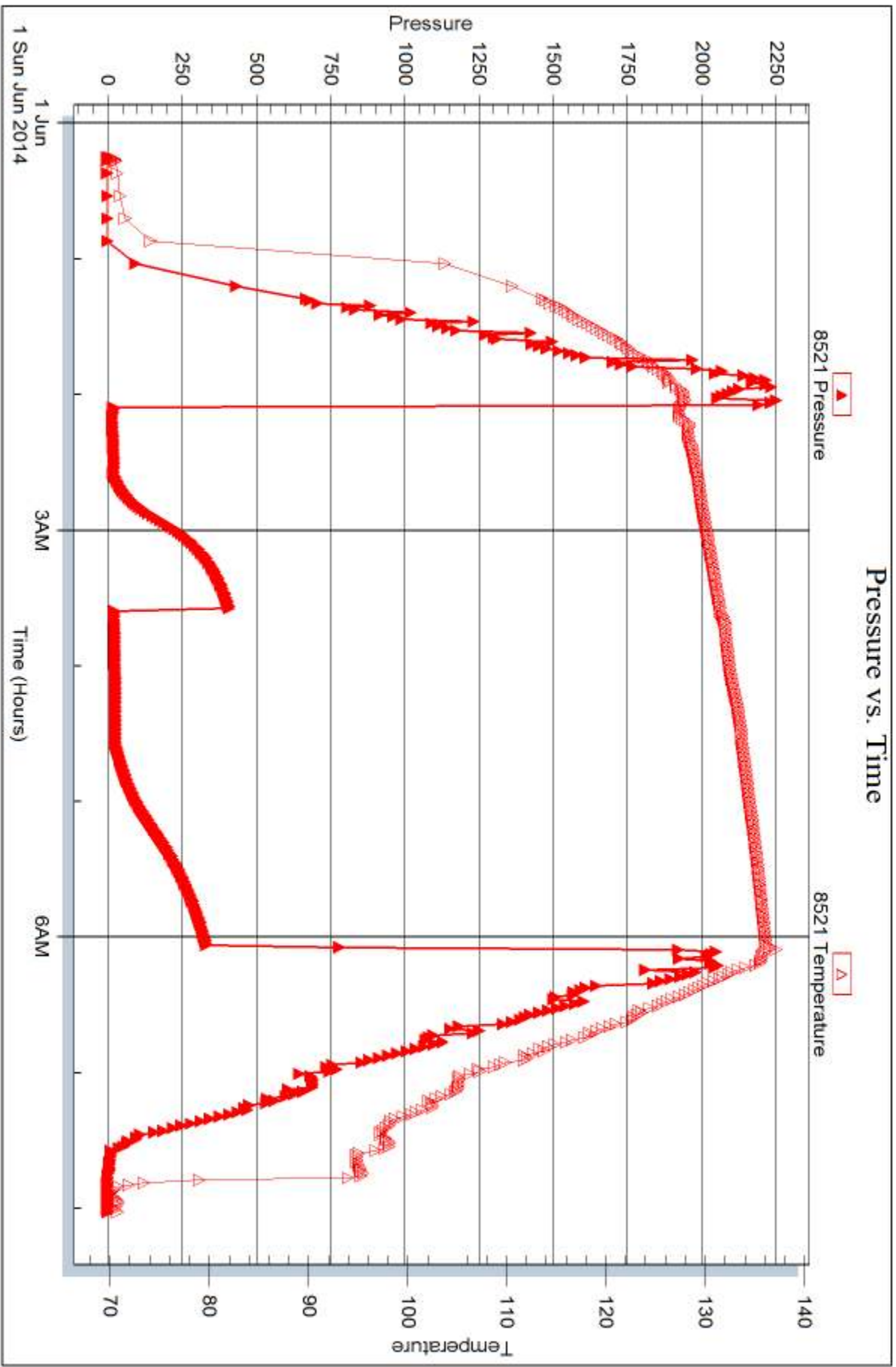
Serial #: 8521

Inside

Murfin Drilling Co Inc

Burk Trust C #4-22

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 58790

Printed: 2014.06.02 @ 15:22:55



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

### **Burk Trust C #4-22**

### **22 1s 36w Rawlins KS**

Start Date: 2014.06.01 @ 21:45:00

End Date: 2014.06.02 @ 04:54:00

Job Ticket #: 58791                      DST #: 4

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

Printed: 2014.06.02 @ 15:22:14



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58791

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2014.06.01 @ 21:45:00

## GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:59:00

Time Test Ended: 04:54:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 46

**Interval: 4339.00 ft (KB) To 4396.00 ft (KB) (TVD)**

Reference Elevations: 3249.00 ft (KB)

Total Depth: 4078.00 ft (KB) (TVD)

3238.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6769 Outside**

Press@RunDepth: 24.75 psig @ 4340.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.06.01

End Date:

2014.06.02

Last Calib.:

2014.06.02

Start Time: 21:45:05

End Time:

04:53:59

Time On Btm:

2014.06.01 @ 23:58:30

Time Off Btm:

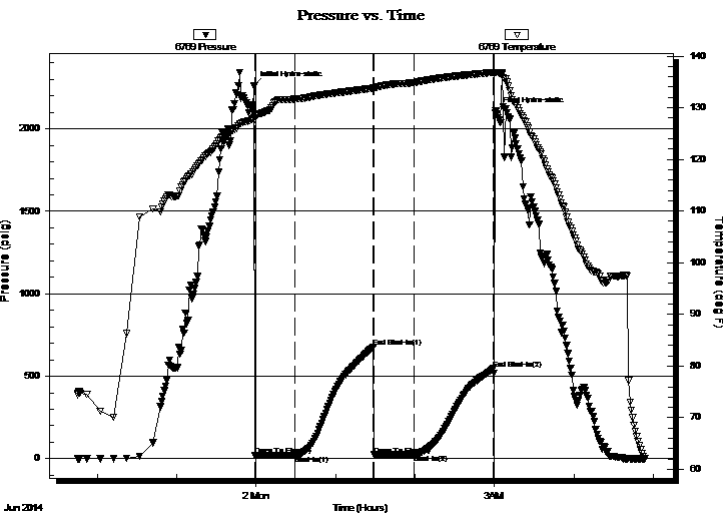
2014.06.02 @ 03:01:00

TEST COMMENT: 30-IF- Blow built to 1/8" died in 27 mins

60-ISI- No return

30-FF-No blow

60-FSI- Noreturn



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2264.49	128.10	Initial Hydro-static
1	19.18	127.75	Open To Flow (1)
31	22.07	131.68	Shut-In(1)
90	678.74	133.79	End Shut-In(1)
91	23.59	133.75	Open To Flow (2)
121	24.75	134.90	Shut-In(2)
181	545.80	136.83	End Shut-In(2)
183	2107.27	136.76	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%m	0.02

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Co Inc

250 N Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**22 1s 36w Rawlins KS**

**Burk Trust C #4-22**

Job Ticket: 58791

**DST#: 4**

Test Start: 2014.06.01 @ 21:45:00

**GENERAL INFORMATION:**

Formation: **LKC "J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:59:00  
 Time Test Ended: 04:54:00  
 Interval: **4339.00 ft (KB) To 4396.00 ft (KB) (TVD)**  
 Total Depth: 4078.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair

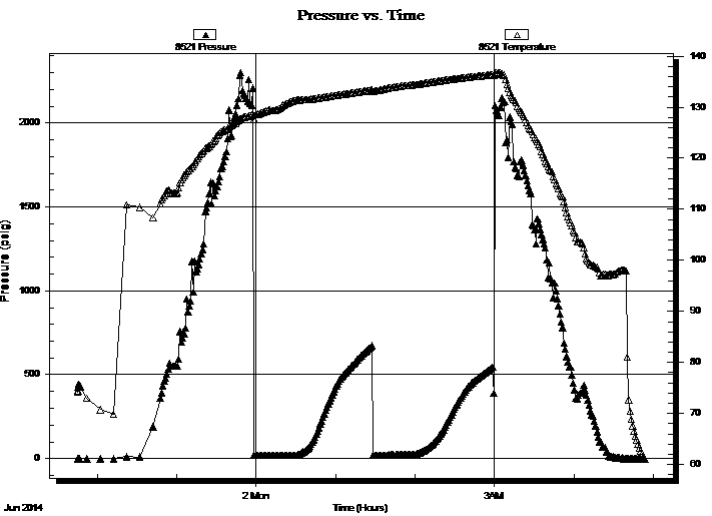
Test Type: Conventional Bottom Hole (Reset)  
 Tester: Robert Zodrow  
 Unit No: 46  
 Reference Elevations: 3249.00 ft (KB)  
 3238.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8521**

**Inside**

Press@RunDepth: psig @ 4340.00 ft (KB)  
 Start Date: 2014.06.01 End Date: 2014.06.02  
 Start Time: 21:45:05 End Time: 04:53:29  
 Capacity: 8000.00 psig  
 Last Calib.: 2014.06.02  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30-IF- Blow built to 1/8" died in 27 mins  
 60-ISI- No return  
 30-FF-No blow  
 60-FSI- Noreturn



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
5.00	mud 100%m	0.02

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58791

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2014.06.01 @ 21:45:00

## Tool Information

Drill Pipe:	Length: 4131.00 ft	Diameter: 3.88 inches	Volume: 60.41 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: 203.00 ft	Diameter: 2.25 inches	Volume: 1.00 bbl	Weight to Pull Loose: 88000.00 lb
			<u>Total Volume: 61.41 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4339.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	84.00 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			4317.00	
Hydraulic tool	5.00			4322.00	
Jars	5.00			4327.00	
Safety Joint	3.00			4330.00	
Packer	5.00			4335.00	27.00 Bottom Of Top Packer
Packer	4.00			4339.00	
Stubb	1.00			4340.00	
Recorder	0.00	8521	Inside	4340.00	
Recorder	0.00	6769	Outside	4340.00	
Perforations	20.00			4360.00	
Change Over Sub	1.00			4361.00	
Drill Pipe	31.00			4392.00	
Change Over Sub	1.00			4393.00	
Bullnose	3.00			4396.00	57.00 Bottom Packers & Anchor

**Total Tool Length: 84.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc

**22 1s 36w Rawlins KS**

250 N Water STE 300  
Wichita KS 67202

**Burk Trust C #4-22**

Job Ticket: 58791

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2014.06.01 @ 21:45:00

## 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: 72.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

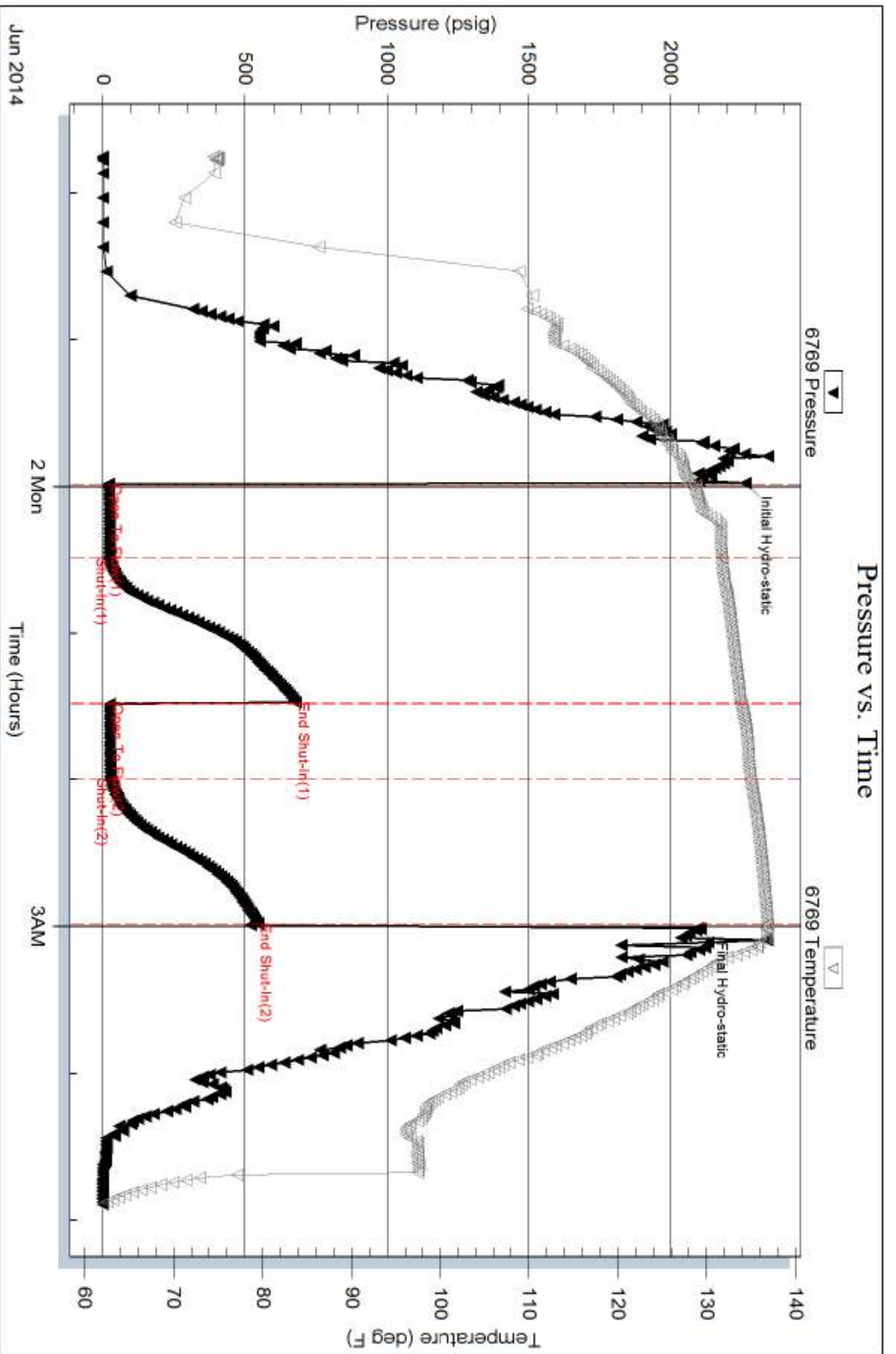
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



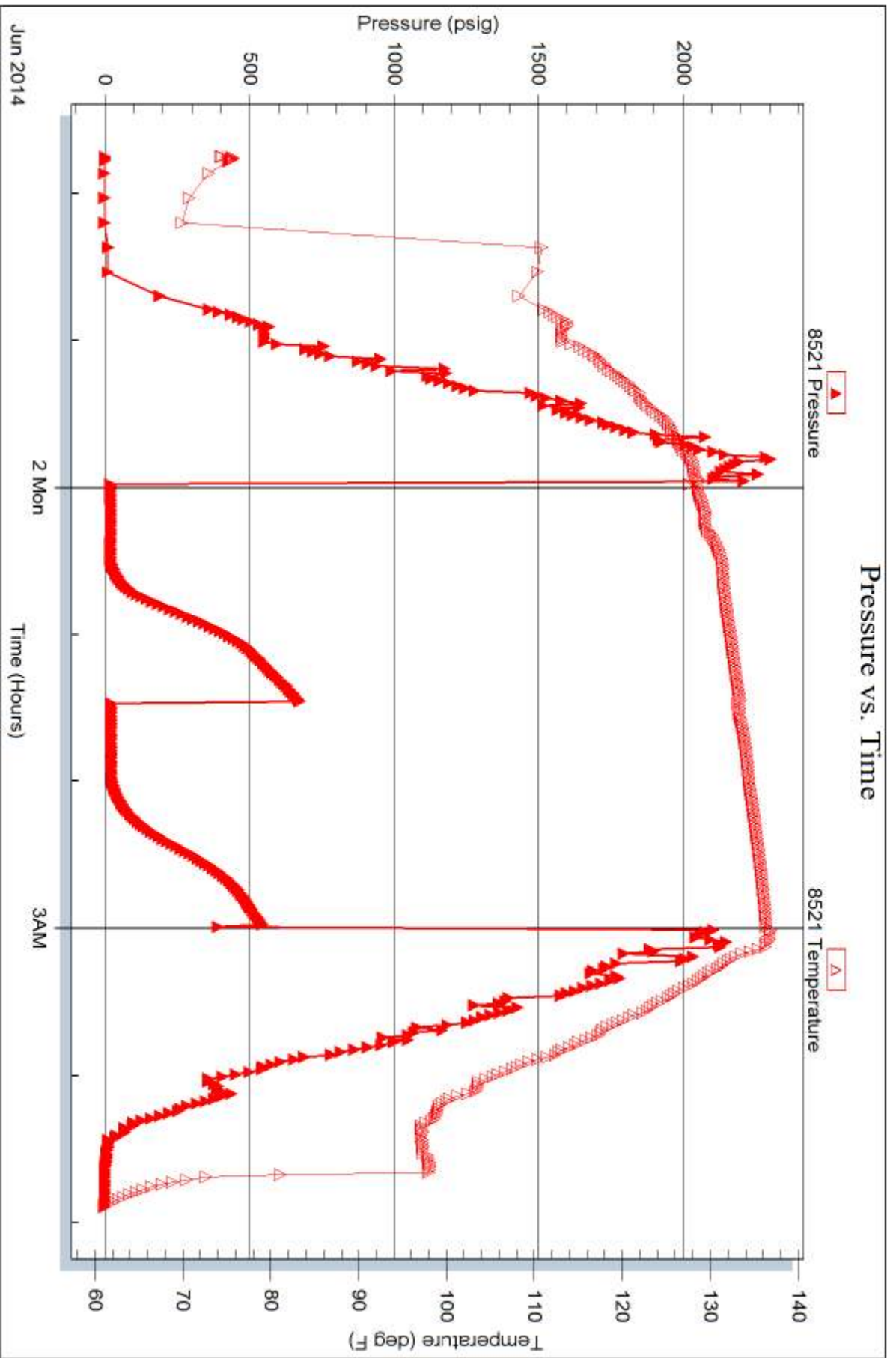
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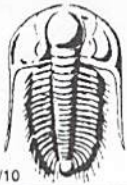
Murfin Drilling Co Inc

Burk Trust C #4-22

DST Test Number: 4







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58788

4/10

Well Name & No. Berk Trust C 4-22 Test No. 1 Date 5-30-2014  
 Company Murfin Drilling Co. Inc Elevation 3249 KB 3238 GL  
 Address 250 N Water STE 300 Wichita KS, 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin 2  
 Location: Sec. 22 Twp. 1 Rge. 36 Co. Rawlins State KS.

Interval Tested 4038 - 4078 Zone Tested Oread  
 Anchor Length 50 Drill Pipe Run 3819 Mud Wt. 8.9  
 Top Packer Depth 4034 Drill Collars Run ~~4000~~ 203 Vis 60  
 Bottom Packer Depth 4038 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4078 Chlorides 800 ppm System LCM 11

Blow Description IP - Blow built to 1/8"  
LSI - No return  
FP - No blow  
PSL - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</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 10 BHT 135 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2080  Test 1250 T-On Location 02:00 5-30  
 (B) First Initial Flow 19  Jars 250 T-Started 03:00 5-30  
 (C) First Final Flow 22  Safety Joint 75 T-Open 05:15 5-30  
 (D) Initial Shut-In 153  Circ Sub \_\_\_\_\_ T-Pulled 08:15 5-30  
 (E) Second Initial Flow 23  Hourly Standby \_\_\_\_\_ T-Out 09:55 5-30  
 (F) Second Final Flow 27  Mileage 110 RT 170.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 151  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1989  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_

Initial Open 30 Sub Total 0  
 Initial Shut-In 60 Total 1745.50  
 Final Flow 30 MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1745.50

Approved By R.D. Ship Our Representative Robert Zolnow

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. 58789

Well Name & No. Bark Trust C 4-22 Test No. 2 Date 5-31-2014  
 Company Murfin Drilling CO Inc Elevation 3249 KB 3238 GL  
 Address 250 N Water STE 300 Wichita KS, 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin 2  
 Location: Sec. 22 Twp. 1 Rge. 36 Co. Rawlins State KS

Interval Tested 4193 - 4246 Zone Tested LKC "A-0"  
 Anchor Length 53 Drill Pipe Run 3976 Mud Wt. 9.2  
 Top Packer Depth 4189 Drill Collars Run 203 Vis 55  
 Bottom Packer Depth 4193 Wt. Pipe Run 0 WL 6.4  
 Total Depth 4246 Chlorides 1,100 ppm System LCM 11  
 Blow Description IF - Blow built to 2<sup>3</sup>"  
ISI - NO return  
PF - Blow started in 20mins built to 2"  
FSI - NO return

Rec	Feet of	%gas	%oil	%water	%mud
<u>200</u>	<u>owcm</u>	<u>10</u>	<u>25</u>	<u>65</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 200 BHT 139 Gravity - API RW 217 @ 91 °F Chlorides 25,000 ppm  
 (A) Initial Hydrostatic 2203  Test 1250 T-On Location 04:45 5-31  
 (B) First Initial Flow 21  Jars 250 T-Started 05:35 5-31  
 (C) First Final Flow 54  Safety Joint 75 T-Open 07:13 5-31  
 (D) Initial Shut-In 279  Circ Sub \_\_\_\_\_ T-Pulled 11:16 5-31  
 (E) Second Initial Flow ~~100~~ 57  Hourly Standby \_\_\_\_\_ T-Out 13:12 5-31  
 (F) Second Final Flow 103  Mileage 110 RT 170.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 271  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2079  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1745.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 1745.50

Approved By Rob D. White Our Representative Robert Zechow

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. 58790

Well Name & No. Burk Trust C 4-22 Test No. 3 Date 5-31-2014  
 Company Murfin Drilling CO Inc. Elevation 3249 KB 3238 GL  
 Address 250 N water STE 300 Wichita KS, 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin 2  
 Location: Sec. 22 Twp. 1 Rge. 36 Co. Rawlins State KS

Interval Tested 4258 - 4310 Zone Tested LKC "A"  
 Anchor Length 52 Drill Pipe Run 4037 Mud Wt. 9.3  
 Top Packer Depth 4254 Drill Collars Run 203 Vis 48  
 Bottom Packer Depth 4258 Wt. Pipe Run 0 WL 7.6  
 Total Depth 4310 Chlorides 1,100 ppm System LCM 8.0  
 Blow Description RF - Blow hole to 1/2"  
ISI - No return  
FF - No blow  
FSL - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>0cm</u>	<u>20</u>		<u>80</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 137 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2191  Test 1250 T-On Location 23:45 5-31  
 (B) First Initial Flow 21  Jars 250 T-Started 00:15 6-1  
 (C) First Final Flow 22  Safety Joint 75 T-Open 02:05 6-1  
 (D) Initial Shut-In 411  Circ Sub \_\_\_\_\_ T-Pulled 06:05 6-1  
 (E) Second Initial Flow 27  Hourly Standby \_\_\_\_\_ T-Out 08:02 6-1  
 (F) Second Final Flow 29  Mileage 110 RT 170.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 335  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2060  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1745.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1745.50

Approved By Robert Zedrow Our Representative Robert Zedrow  
 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. 58791

Well Name & No. Burk Trust C 4-22 Test No. 4 Date 6-1-2014  
 Company Morfin Drilling CO Inc Elevation 3249 KB 3238 GL  
 Address 250 N water STE 300 Wichita KS, 67202  
 Co. Rep / Geo. Robert Hendrix Rig morfin 2  
 Location: Sec. 22 Twp. 1 Rge. 36 Co. Rawlins State KS

Interval Tested 4339 - 4396 Zone Tested LKC "J"  
 Anchor Length 57 Drill Pipe Run 4131 Mud Wt. 9.3  
 Top Packer Depth 4335 Drill Collars Run 203 Vis 72  
 Bottom Packer Depth 4339 Wt. Pipe Run 0 WL 6.8  
 Total Depth 4396 Chlorides 1,100 ppm System LCM 10  
 Blow Description IF - Blow built to 1/8" died in 27 mins  
ISI - NO return  
FF - NO blow  
FSI - NO return

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

Rec Total 5 BHT 137 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2264  Test 1250 T-On Location 21:15 6-1  
 (B) First Initial Flow 19  Jars 250 T-Started 21:45 6-1  
 (C) First Final Flow 22  Safety Joint 75 T-Open 23:59 6-1  
 (D) Initial Shut-In 679  Circ Sub \_\_\_\_\_ T-Pulled 02:59 6-2  
 (E) Second Initial Flow 24  Hourly Standby \_\_\_\_\_ T-Out 04:54 6-2  
 (F) Second Final Flow 25  Mileage 110 RT 170.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 546  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2107  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1745.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1745.50

Approved By Robert D. Why Our Representative Robert Zechow  
 Trilobite Testing Inc. shall not be liable for damaged or 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 Company Inc.**

LEASE: **Burk Trust C #4-22**

FIELD: **East Fork**

LOCATION: **11007sl & 4707el**

SEC: **22** TWP: **1s** RGE: **36w**

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

CONTRACTOR: **Murfin Drilling Co. Inc. Klg #2**

RTD: **5/26/2014** COMP: **6/5/2014**

SPUD: **4:53:37** LTYE: **4:34:00**

MUD UP: **3:41:00** TYPE MUD: **Chemical**

SAMPLES SAVED FROM: **3540'** TO: **TD**

DRILLING TIME KEPT FROM: **3540'** TO: **TD**

SAMPLES EXAMINED FROM: **3540'** TO: **TD**

GEOLOGICAL SUPERVISION FROM: **3510'**

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

Promoted, Induction, Micro Seismic  
Former Energy Services

FORMATION TOPS

ELECTRIC LOG

SAMPLE

Anhydrite

Neva

Foraker

Topeka

Oread

Lansing

Stark Shale

BKC

ELEVATIONS

KB: **3249'**

DF: \_\_\_\_\_

GL: **3238'**

Measurements Are All From **Kelly Bushing**

CASING

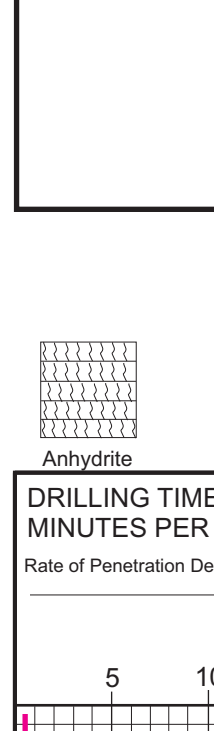
CONDUCTOR: \_\_\_\_\_

SURFACE: **8-1/8" @ 221'**

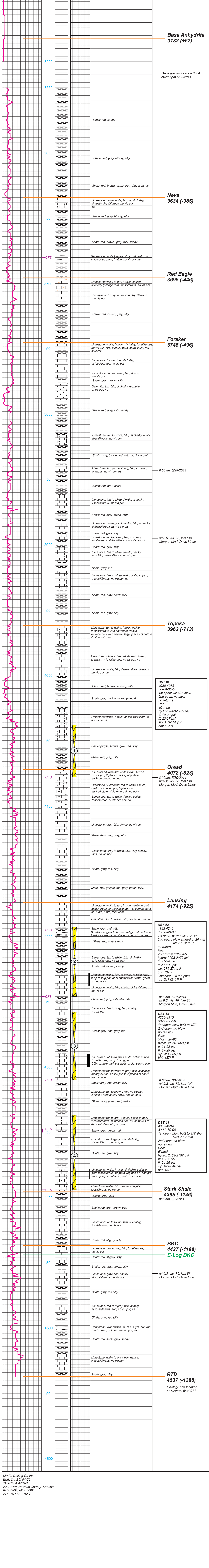
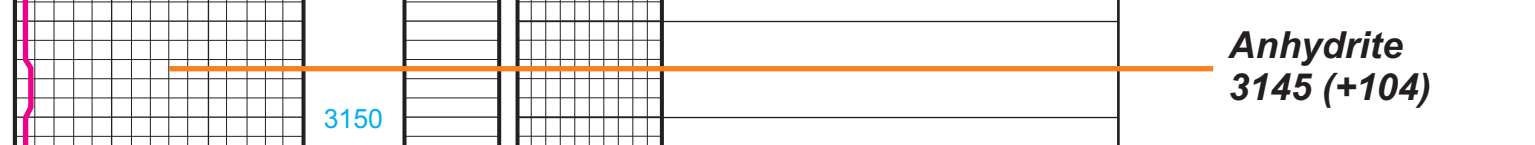
PRODUCTION: **5 1/2" @ 4331'**

ELECTRICAL SURVEYS

APL# **15-153-21017**



### LEGEND





acct.  
Prod-MG

# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 1435 14

Invoice Date: May 26, 2014

Voice: (817) 546-7282

Page: 1

Fax: (817) 246-3361

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	63421	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	May 26, 2014	6/25/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Burk Trust C #4-22		
220.00	CEMENT MATERIALS	Class A Common	17.90	3,938.00
8.00	CEMENT MATERIALS	Chloride	64.00	512.00
231.00	CEMENT SERVICE	Cubic Feet Charge	2.48	572.88
958.50	CEMENT SERVICE	Ton Mileage Charge	2.60	2,492.10
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
80.00	CEMENT SERVICE	Pump Truck Mileage	7.70	616.00
1.00	CEMENT SERVICE	Manifold Rental	275.00	275.00
80.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	352.00
1.00	CEMENT SUPERVISOR	Alan Ryan		
1.00	EQUIPMENT OPERATOR	Kevin Ryan		

Subtotal	10,270.23
Sales Tax	351.55
Total Invoice Amount	10,621.78
Payment/Credit Applied	
<b>TOTAL</b>	<b>10,621.78</b>

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

\$ 3,594.58

ONLY IF PAID ON OR BEFORE  
Jun 25, 2014

*algr*

# ALLIED OIL & GAS SERVICES, LLC

2062  
063421  
021

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:

*Oakley, KS*

DATE <u>5/26/14</u>	SEC. <u>22</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION	JOB START <u>7:00pm</u>	JOB FINISH <u>7:30pm</u>
LEASE <u>Trust C</u>	WELL# <u>4-22</u>	LOCATION <u>Barboly W to AA</u>	COUNTY <u>Barber</u>	STATE <u>KS</u>			
OLD OR NEW (Circle one) <u>NEW</u>			W TO <u>5-5</u> <u>1/2 W</u>				

CONTRACTOR Murfin 2 OWNER Some

TYPE OF JOB Surf Case

HOLE SIZE 12 1/4 T.D. 222' CEMENT AMOUNT ORDERED 220 can 390cc

CASING SIZE 8 7/8 DEPTH 222'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15 FT

PERFS.

DISPLACEMENT 13,1859

EQUIPMENT

PUMP TRUCK # 43-281 CEMENTER Alan Ryan

BULK TRUCK # 373 DRIVER Drew T (Tus)

BULK TRUCK # DRIVER

COMMON 220 @ 17.20 3928 @  
 POZMIX @  
 GEL @  
 CHLORIDE 8 @ 6.90 512 @  
 ASC @  
 Material Total @ 4450.00  
 (1,557.50/353)  
 HANDLING 231 @ 5.72 20  
 MILEAGE 22 @ 10.65 700 2492 @  
 TOTAL

REMARKS:

*Run Cement Circulate, Max Cement, Air Place Cement, Spurt in*

*Cement did circulate*

*Thank You Alan Kevin, Trust*

CHARGE TO: Murfin Drilling  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB 222' 25'  
 PUMP TRUCK CHARGE 1512  
 EXTRA FOOTAGE @  
 MILEAGE 80 miles @ 2.30 680 @  
 MANIFOLD @ 40 225 @  
 @ 4 380 @

(2,037.08/353) TOTAL 5,822.23

PLUG & FLOAT EQUIPMENT

\_\_\_\_\_  
 @  
 \_\_\_\_\_  
 @  
 \_\_\_\_\_  
 @  
 \_\_\_\_\_  
 @

(0.00) TOTAL \_\_\_\_\_

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

PRINTED NAME Auto Caber

SIGNATURE Auto Caber

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES 10,270.23  
 DISCOUNT 3,594.58(353) IF PAID IN 30 DAYS  
6,675.65 Net



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



# Invoice

DATE	INVOICE #
6/3/2014	26333

BILL TO
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661

- Acidizing
- Cement
- Tool Rental

USED FOR 1C 103  
APPROVED [Signature]  
FH

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#4-22	Burk Trust C	Rawlins	Company Tools	Oil	Development	Cement LongStri...	Blaine

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	150	Miles	6.00	900.00
579D	Pump Charge - Top To Bottom LongString	1	Job	2,000.00	2,000.00
403-5	5 1/2" Cement Basket	3	Each	300.00	900.00T
406-5	5 1/2" Latch Down Plug & Baffle	1	Each	275.00	275.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill	1	Each	375.00	375.00T
409-5	5 1/2" Turbolizer	15	Each	90.00	1,350.00T
413-5	5 1/2" Roto Wall Scratcher	20	Each	40.00	800.00T
419-5	5 1/2" Rotating Head Rental	1	Each	200.00	200.00T
330	Swift Multi-Density Standard (MIDCON II)	300	Sacks	18.50	5,550.00T
325	Standard Cement	200	Sacks	14.50	2,900.00T
284	Calseal	10	Sack(s)	35.00	350.00T
283	Salt	1,000	Lb(s)	0.20	200.00T
285	CFR-1	100	Lb(s)	4.50	450.00T
276	Flocele	125	Lb(s)	2.50	312.50T
281	Mud Flush	500	Gallon(s)	1.25	625.00T
221	Liquid KCL (Clayfix)	2	Gallon(s)	25.00	50.00T
581D	Service Charge Cement	500	Sacks	2.00	1,000.00
583D	Drayage	3,810.23	Ton Miles	1.00	3,810.23
	Subtotal				22,047.73
	Sales Tax Rawlins County			7.90%	1,132.66

**We Appreciate Your Business!** **Total** \$23,180.39





Services, Inc.

TICKET 26333

PAGE 1 OF 2

CHARGE TO: Murfin Drilling  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

SERVICE LOCATIONS  
 1. Ness City  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_

WELL/PROJECT NO. 4-22 LEASE Buck Trust 'c' COUNTY/PARISH Rawlins STATE KS CITY Bardsley DATE 30 Jun 14 OWNER \_\_\_\_\_  
 CONTRACTOR \_\_\_\_\_ RIG NAME/NO. \_\_\_\_\_ SHIPPED VIA CT DELIVERED TO location ORDER NO. \_\_\_\_\_  
 TICKET TYPE  SERVICE  SALES  
 WELL TYPE oil WELL CATEGORY to tools JOB PURPOSE Developments cement long string WELL PERMIT NO. \_\_\_\_\_  
 INVOICE INSTRUCTIONS \_\_\_\_\_ WELL LOCATION 22-1-36

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE TRK 114	150	mi			6.00	900.00
579		1			Pump Charge	1	ea			2000.00	2000.00
<del>330</del>					SWTS						
4D3		1			Cement Basket	5 1/2	in	3	ea	300.00	900.00
4D6		1			Lateral down plug & haffle	5 1/2	in	1	ea	275.00	275.00
4D7		1			Insert float shoe w/ auto fill	5 1/2	in	1	ea	375.00	375.00
4D9		1			Turbolizer	5 1/2	in	15	ea	90.00	1350.00
4I3		1			Rob Well scraper	5 1/2	in	20	ea	40.00	800.00
4I9		1			Rotating head rental	5 1/2	in	1	ea	200.00	200.00

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 6/23/14 TIME SIGNED 2:00  A.M.  P.M.  
 REMIT PAYMENT TO:  
 SWIFT SERVICES, INC.  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

SURVEY  
 OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?  
 WE UNDERSTOOD AND MET YOUR NEEDS?  
 OUR SERVICE WAS PERFORMED WITHOUT DELAY?  
 WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?  
 ARE YOU SATISFIED WITH OUR SERVICE?  
 CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 1 6807.00  
 Subtotal 2162.47  
 Rawlins TAX 7.9%  
 TOTAL 23,180.39

SWIFT OPERATOR PRM APPROVAL \_\_\_\_\_  
 CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.  
 Thank You!



Services, Inc

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

TICKET CONTINUATION

TICKET No. 26333

CUSTOMER MURKIN Drilling

WELL Burt Trust 'C' 4-22

DATE 8 June 14

PAGE 21 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL				DATE	UNIT PRICE	AMOUNT
		LOC	ACCT	DE			QTY	UNK	QTY	UNK			
330						5WD cement	300	SK				18.50	5550.00
325						STANDARD cement (for 61-2)	200	SK				14.50	2900.00
284						ca/seal	1000	lb	10	SK		35.00	3500.00
283						SALT	1000	lb				0.20	200.00
285						CFR-1	100	lb				4.50	450.00
276						Flocele	125	lb				2.50	312.50
281						Mud Flush	500	gal				1.25	625.00
221						KCL Flush	200	gal				2.50	500.00
581						SERVICE CHARGE						2.00	2.00
583						MILEAGE CHARGE						1.00	1.00
						TOTAL WEIGHT						56823	
						LOADED MILES						520	
						CUBIC FEET						150	
						TON MILES							
CONTINUATION TOTAL													15297.73

JOB LOG

SWIFT Services, Inc.

DATE: 3/20/14 PAGE NO.

CUSTOMER: MURKIN Drilling

WELL NO. 4-22

LEASE: Burk Trust "C"

JOB TYPE: cement long string

TICKET NO. 26333

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								300 sk 5MD cement w/ 4# floccle 200 sk EA-2 w/ 4# floccle 5 1/2" x 15.5# casing 108 ft 453.85' TD: 4537' shut 21.8' Post 17.34, 61 Catalizer 1-10, 12, 14, 16, 33, 60
	1030							on loc TRK 114
	1420							start 5 1/2" x 15.5# casing in well
	1530							circulate 1/2 way in - joint "60
	1700							Drop ball - circulate - ROTATE
	1800		12				200	Pump 500 mud flush
			20				200	Pump 20 bbl KCH flush
	1807		7					Plug BH - MH 30sk - 20sk
	1812	6	138				200	mix 5MD cement 250 sk @ 11.2 ppq
	1840	4 1/2	47				200	mix EA-2 cement 200sk @ 15.3 ppq
	1855							Drop latch down plug wash <del>out</del> out pump & line
	1900	6 1/2					200	Displace plug
		5 1/2	97				1000	
	1930	5 1/2	107				1500	Land plug → cement to surface - 20sk top it ←
								Release pressure to truck - dried up
	1935							wash truck Rack up
	2000							job complete
								Thanks Darin Flatt, casing & rods

Burk Trust 'C' #4-22  
 Daily Drilling Report  
 Page Two

6/3/14 RTD 4537'. Cut 143'. DT: None. CT: 12hrs. Dev.: 1° @ 4537'. HC @ 7:30PM 6/2.  
 Pioneer logged 1:30AM – 7:00AM 6/3. LTD: 4540'.

6/4/14 RTD: 4537'. CT: 16½ hrs. Ran 108jts of 5 ½" prod csg, set @ 4531'. Swift cmt w/450sxs  
 (250sxs SMD, 200sxs EA-2). PD @ 7:30PM 6/3. 30sxs RH, 20sxs MH. Circ 20sxs. RR  
 @ 11:30PM 6/3. FINAL REPORT

		MDCI Burk Trust 'C' #4-22 1100' FSL 400' FEL Sec. 22-T1S-R36W 3249' KB				MDCI Burk Trust 'C' #1-22 1980' FSL 660' FEL Sec. 22-T1S-R36W 3225' KB			
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref	Log Top	Datum	
Anhydrite	3145	+104	+1	3145	+104	+1	3122	+103	
B/Anhydrite	3182	+67	-6	3180	+69	-4	3152	+73	
Neva	3634	-385	-5	3634	-385	-5	3605	-380	
Red Eagle	3695	-446	-6	3695	-446	-6	3665	-440	
Foraker	3745	-496	-7	3743	-494	-5	3714	-489	
Topeka	3962	-713	-8	3961	-712	-7	3930	-705	
Oread	4072	-823	-8	4073	-824	-9	4040	-815	
Lansing	4174	-925	-2	4174	-925	-2	4148	-923	
Stark	4395	-1146	-5	4394	-1145	-4	4366	-1141	
BKC	4447	-1198	-8	4444	-1195	-6	4414	-1189	
RTD	4537						4720	-1495	
LTD				4540			4719	-1494	