

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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 Geologist Report / Mud Logs <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
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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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
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) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Walter 'A' 2-1
Doc ID	1272014

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 672020

ATTN: Rocky Milford

Walter 'A' #2-1

1-1s-36w Rawlins,KS

Start Date: 2015.11.08 @ 21:25:00

End Date: 2015.11.09 @ 04:36:00

Job Ticket #: 62856 DST #: 1

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

Printed: 2015.11.13 @ 16:14:21



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water STE 300
Wichita, KS 672020
ATTN: Rocky Milford

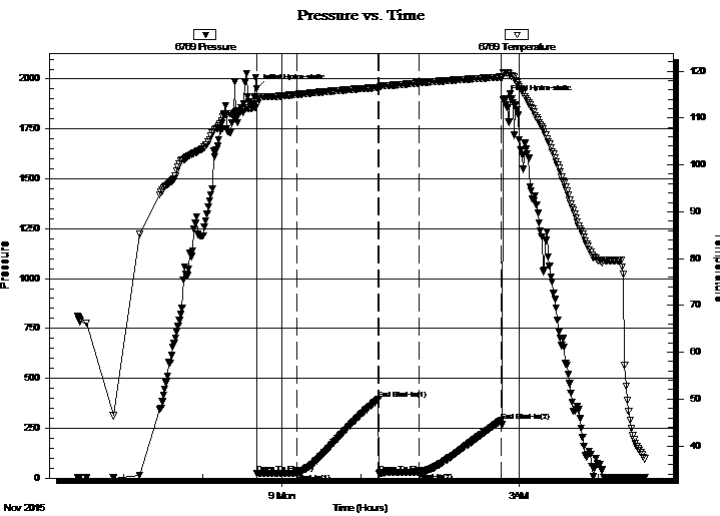
1-1s-36w Rawlins,KS
Walter 'A' #2-1
Job Ticket: 62856 **DST#: 1**
Test Start: 2015.11.08 @ 21:25:00

GENERAL INFORMATION:

Formation: **Stotler**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:41:15
Time Test Ended: 04:36:00
Interval: **3842.00 ft (KB) To 3982.00 ft (KB) (TVD)**
Total Depth: 3982.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: James Winder
Unit No: 83
Reference Elevations: 3273.00 ft (KB)
3262.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6769 Inside
Press@RunDepth: 28.03 psig @ 3843.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.11.08 End Date: 2015.11.09 Last Calib.: 2015.11.09
Start Time: 21:25:05 End Time: 04:35:59 Time On Btm: 2015.11.08 @ 23:41:00
Time Off Btm: 2015.11.09 @ 02:48:30

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 3/4", died back to weak surface blow
60 - IS: No blow back
30 - FF: No blow
60 - FS: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1952.23	112.83	Initial Hydro-static
1	22.60	113.05	Open To Flow (1)
31	25.62	115.04	Shut-In(1)
93	395.57	116.53	End Shut-In(1)
93	25.49	116.44	Open To Flow (2)
124	28.03	117.49	Shut-In(2)
186	287.55	118.74	End Shut-In(2)
188	1899.46	119.73	Final Hydro-static

Recovery

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

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62856

DST#: 1

ATTN: Rocky Milford

Test Start: 2015.11.08 @ 21:25:00

Tool Information

Drill Pipe:	Length: 3657.00 ft	Diameter: 3.80 inches	Volume: 51.30 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: 182.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 52.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3842.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	140.00 ft			
Tool Length:	168.00 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			3819.00	
Hydraulic tool	5.00			3824.00	
Jars	5.00			3829.00	
Safety Joint	3.00			3832.00	
Packer	5.00			3837.00	28.00 Bottom Of Top Packer
Packer	5.00			3842.00	
Stubb	1.00			3843.00	
Recorder	0.00	6769	Inside	3843.00	
Recorder	0.00	8366	Outside	3843.00	
Perforations	8.00			3851.00	
Blank Spacing	128.00			3979.00	
Bullnose	3.00			3982.00	140.00 Bottom Packers & Anchor

Total Tool Length: 168.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62856

DST#: 1

ATTN: Rocky Milford

Test Start: 2015.11.08 @ 21:25:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

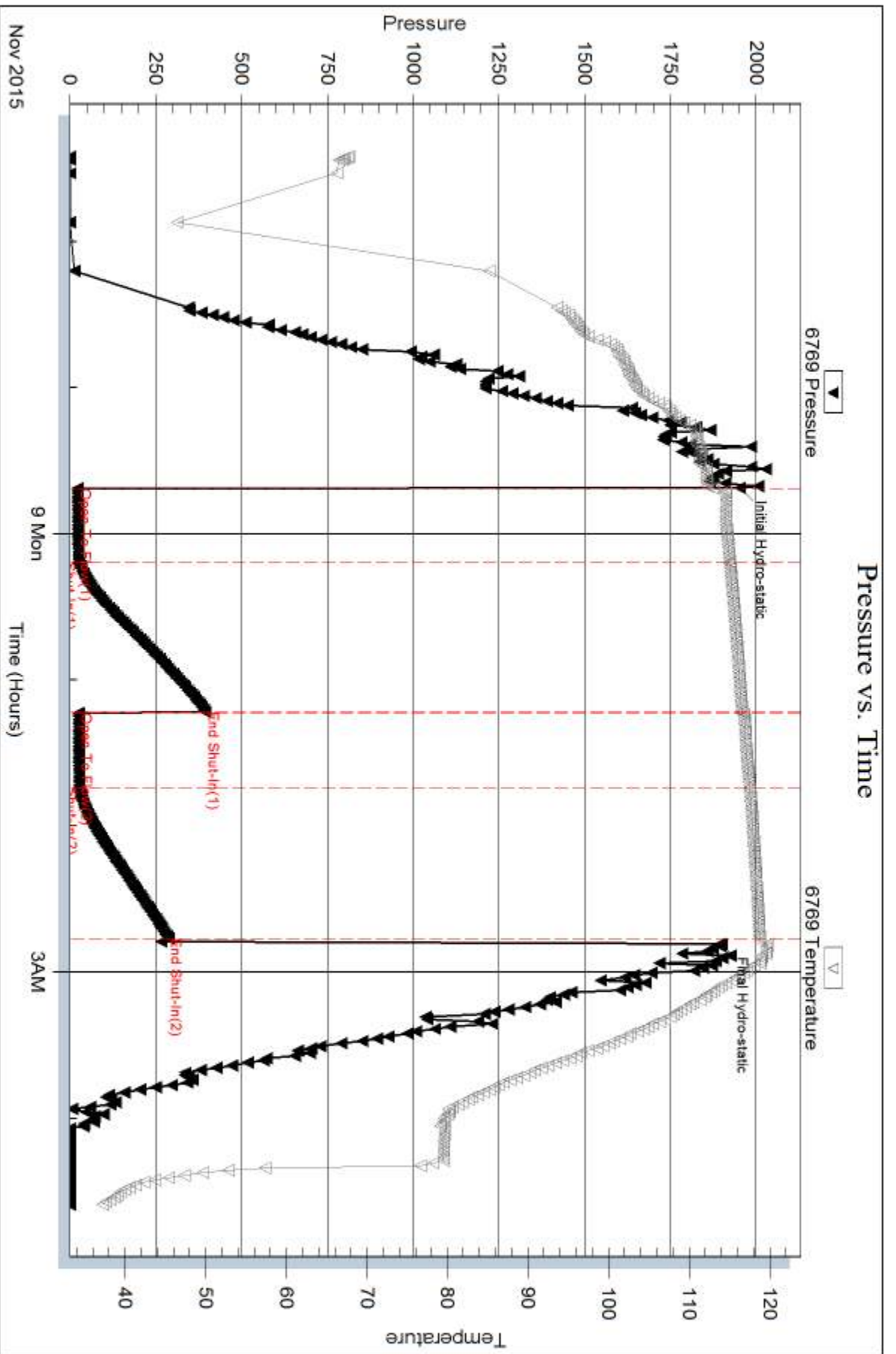
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

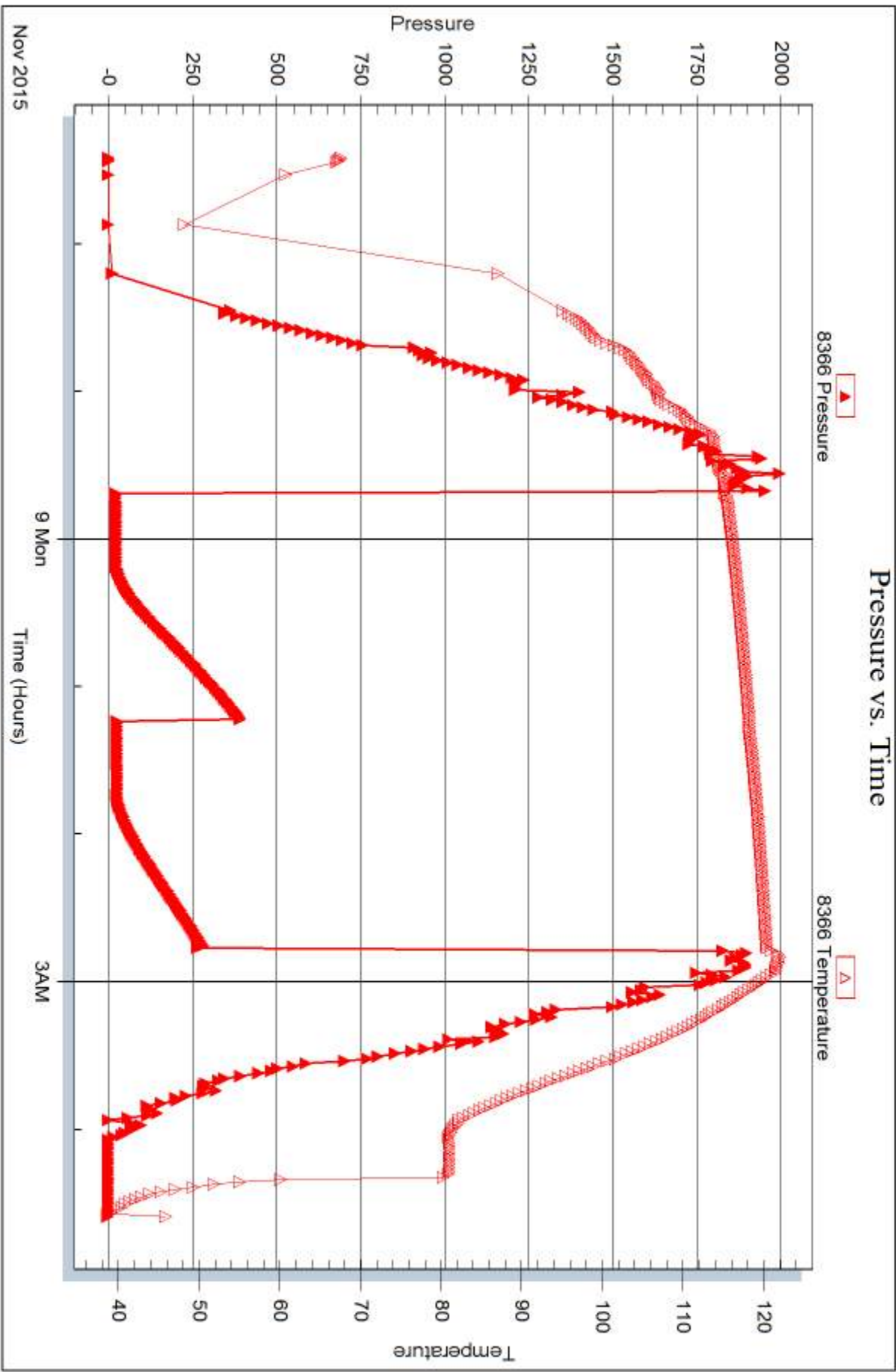


Serial #: 8366

Outside Murfin Drilling Co., Inc.

Walter 'A' #2-1

DST Test Number: 1





DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 672020

ATTN: Rocky Milford

Walter 'A' #2-1

1-1s-36w Rawlins,KS

Start Date: 2015.11.10 @ 00:15:00

End Date: 2015.11.10 @ 07:11:00

Job Ticket #: 62857 DST #: 2

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

Printed: 2015.11.13 @ 16:13:51



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water STE 300
 Wichita, KS 672020
 ATTN: Rocky Milford

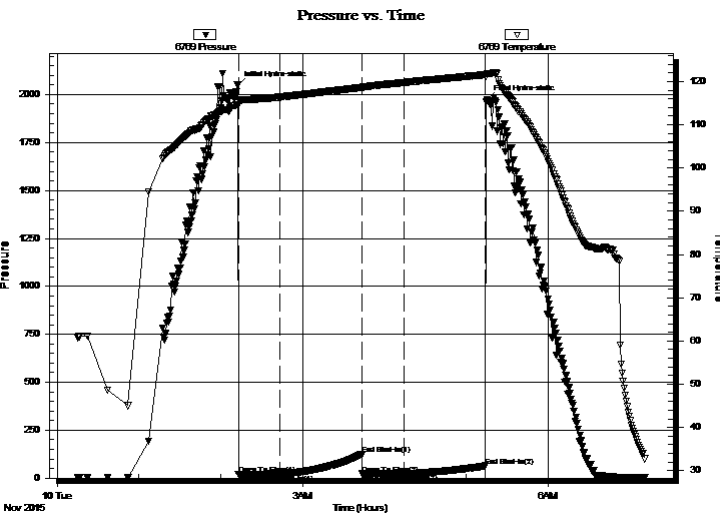
1-1s-36w Rawlins,KS
Walter 'A' #2-1
 Job Ticket: 62857 **DST#: 2**
 Test Start: 2015.11.10 @ 00:15:00

GENERAL INFORMATION:

Formation: **Oread**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:12:45
 Time Test Ended: 07:11:00
 Interval: **4083.00 ft (KB) To 4138.00 ft (KB) (TVD)**
 Total Depth: 4138.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3273.00 ft (KB)
 3262.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6769 Inside
 Press@RunDepth: 22.59 psig @ 4084.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.11.10 End Date: 2015.11.10 Last Calib.: 2015.11.10
 Start Time: 00:15:05 End Time: 07:10:59 Time On Btm: 2015.11.10 @ 02:12:30
 Time Off Btm: 2015.11.10 @ 05:15:00

TEST COMMENT: 30 - IF: Blow built to 1/4", died back to weak surface blow
 60 - IS: No blow back
 30 - FF: No blow
 60 - FS: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2048.13	114.27	Initial Hydro-static
1	20.05	114.72	Open To Flow (1)
31	21.60	116.39	Shut-In(1)
91	125.90	118.63	End Shut-In(1)
92	21.80	118.63	Open To Flow (2)
122	22.59	119.76	Shut-In(2)
182	63.65	121.57	End Shut-In(2)
183	1972.34	121.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

* 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.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62857

DST#: 2

ATTN: Rocky Milford

Test Start: 2015.11.10 @ 00:15:00

Tool Information

Drill Pipe:	Length: 3901.00 ft	Diameter: 3.80 inches	Volume: 54.72 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 182.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 55.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4083.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 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			4060.00	
Hydraulic tool	5.00			4065.00	
Jars	5.00			4070.00	
Safety Joint	3.00			4073.00	
Packer	5.00			4078.00	28.00 Bottom Of Top Packer
Packer	5.00			4083.00	
Packer - Shale	0.00			4083.00	
Stubb	1.00			4084.00	
Recorder	0.00	6769	Inside	4084.00	
Recorder	0.00	8366	Outside	4084.00	
Perforations	18.00			4102.00	
Blank Spacing	33.00			4135.00	
Bullnose	3.00			4138.00	55.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62857

DST#: 2

ATTN: Rocky Milford

Test Start: 2015.11.10 @ 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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud 100%	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

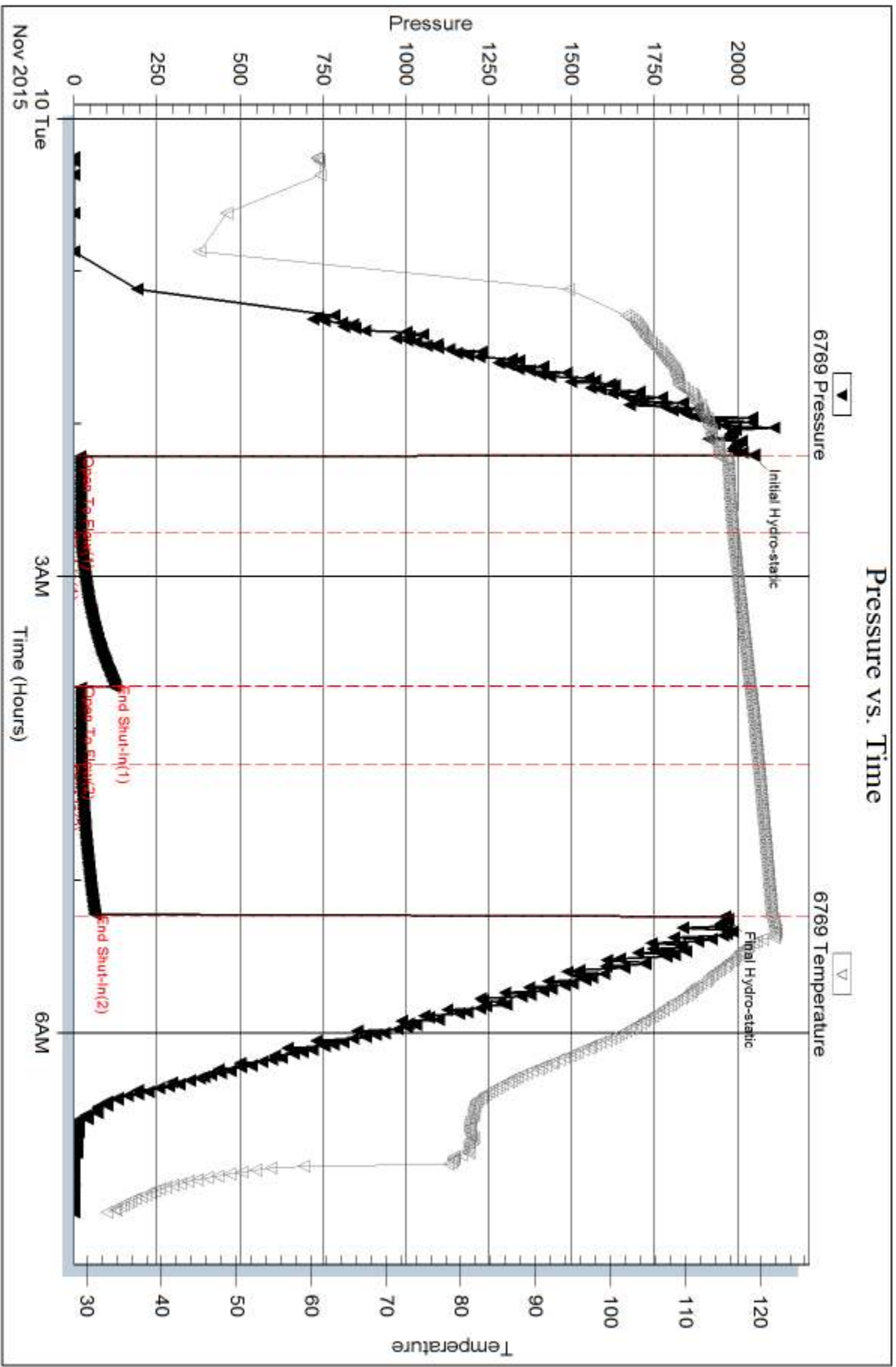
Num Gas Bombs: 0

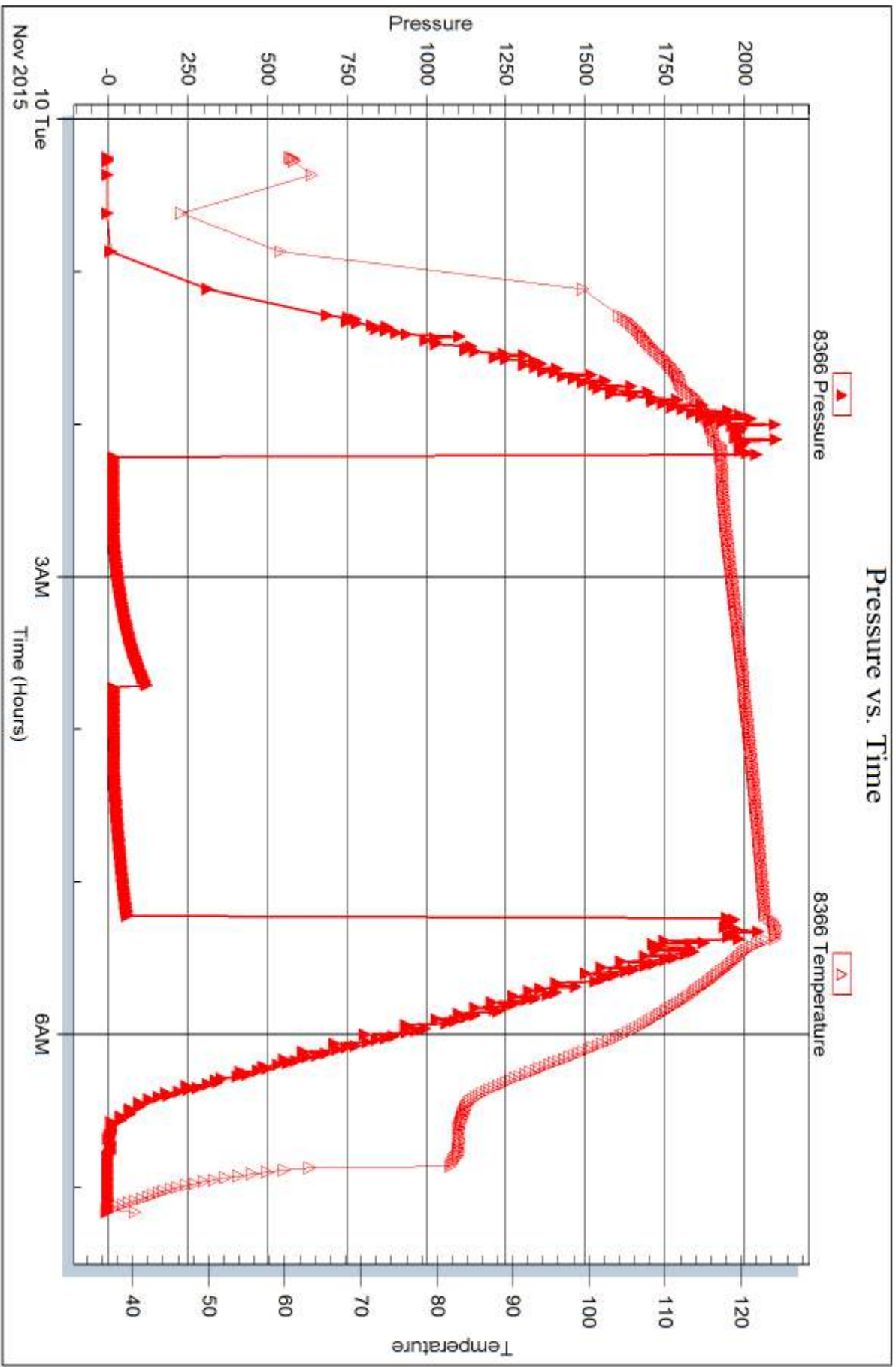
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 672020

ATTN: Rocky Milford

Walter 'A' #2-1

1-1s-36w Rawlins,KS

Start Date: 2015.11.11 @ 02:50:00

End Date: 2015.11.11 @ 10:44:00

Job Ticket #: 62858 DST #: 3

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

Printed: 2015.11.13 @ 16:13:27



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water STE 300
Wichita, KS 672020
ATTN: Rocky Milford

1-1s-36w Rawlins,KS
Walter 'A' #2-1
Job Ticket: 62858 **DST#: 3**
Test Start: 2015.11.11 @ 02:50:00

GENERAL INFORMATION:

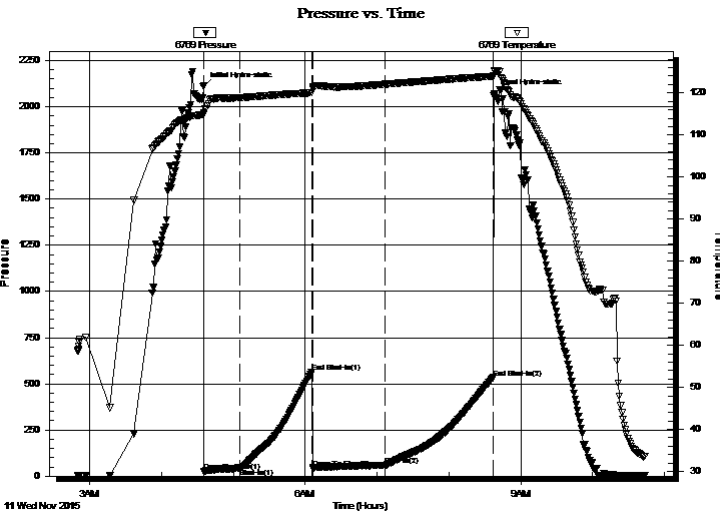
Formation: **LKC "A - D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:35:30
Time Test Ended: 10:44:00
Interval: **4158.00 ft (KB) To 4285.00 ft (KB) (TVD)**
Total Depth: 4285.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83
Reference Elevations: 3273.00 ft (KB)
3262.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6769

Inside

Press@RunDepth: 59.98 psig @ 4159.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.11.11 End Date: 2015.11.11 Last Calib.: 2015.11.11
Start Time: 02:50:05 End Time: 10:43:59 Time On Btm: 2015.11.11 @ 04:35:00
Time Off Btm: 2015.11.11 @ 08:37:45

TEST COMMENT: 30 - IF: Surface blow, dead at 4 min., Fixed leak @ 15 min., blow built to 1/2"
60 - IS: No blow back
60 - FF: Blow built to 3 1/2"
90 - FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2108.90	114.85	Initial Hydro-static
1	25.40	115.22	Open To Flow (1)
31	41.62	118.87	Shut-In(1)
91	564.02	120.03	End Shut-In(1)
92	44.11	121.35	Open To Flow (2)
152	59.98	122.05	Shut-In(2)
242	532.50	123.96	End Shut-In(2)
243	2070.32	125.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	OCM 66% m, 31% o, 3% g	0.37
10.00	SMCO 93% o, 5% m, 2% g	0.05
0.00	GIP = 100'	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62858

DST#: 3

ATTN: Rocky Milford

Test Start: 2015.11.11 @ 02:50:00

Tool Information

Drill Pipe:	Length: 3966.00 ft	Diameter: 3.80 inches	Volume: 55.63 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: 182.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 56.53 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4158.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	127.00 ft			
Tool Length:	155.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: had loose connection at hoses during IF
found and fixed at 15 min.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4135.00	
Hydraulic tool	5.00			4140.00	
Jars	5.00			4145.00	
Safety Joint	3.00			4148.00	
Packer	5.00			4153.00	28.00 Bottom Of Top Packer
Packer	5.00			4158.00	
Stubb	1.00			4159.00	
Recorder	0.00	6769	Inside	4159.00	
Recorder	0.00	8366	Outside	4159.00	
Perforations	26.00			4185.00	
Blank Spacing	97.00			4282.00	
Bullnose	3.00			4285.00	127.00 Bottom Packers & Anchor

Total Tool Length: 155.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62858

DST#: 3

ATTN: Rocky Milford

Test Start: 2015.11.11 @ 02:50:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 61.00 sec/qt
Water Loss: 5.57 in³
Resistivity: ohm.m
Salinity: 700.00 ppm
Filter Cake: 2.00 inches

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

Oil API: 31.2 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	OCM 66% <i>m</i> , 31% <i>o</i> , 3% <i>g</i>	0.369
10.00	SMCO 93% <i>o</i> , 5% <i>m</i> , 2% <i>g</i>	0.049
0.00	GIP = 100'	0.000

Total Length: 85.00 ft Total Volume: 0.418 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

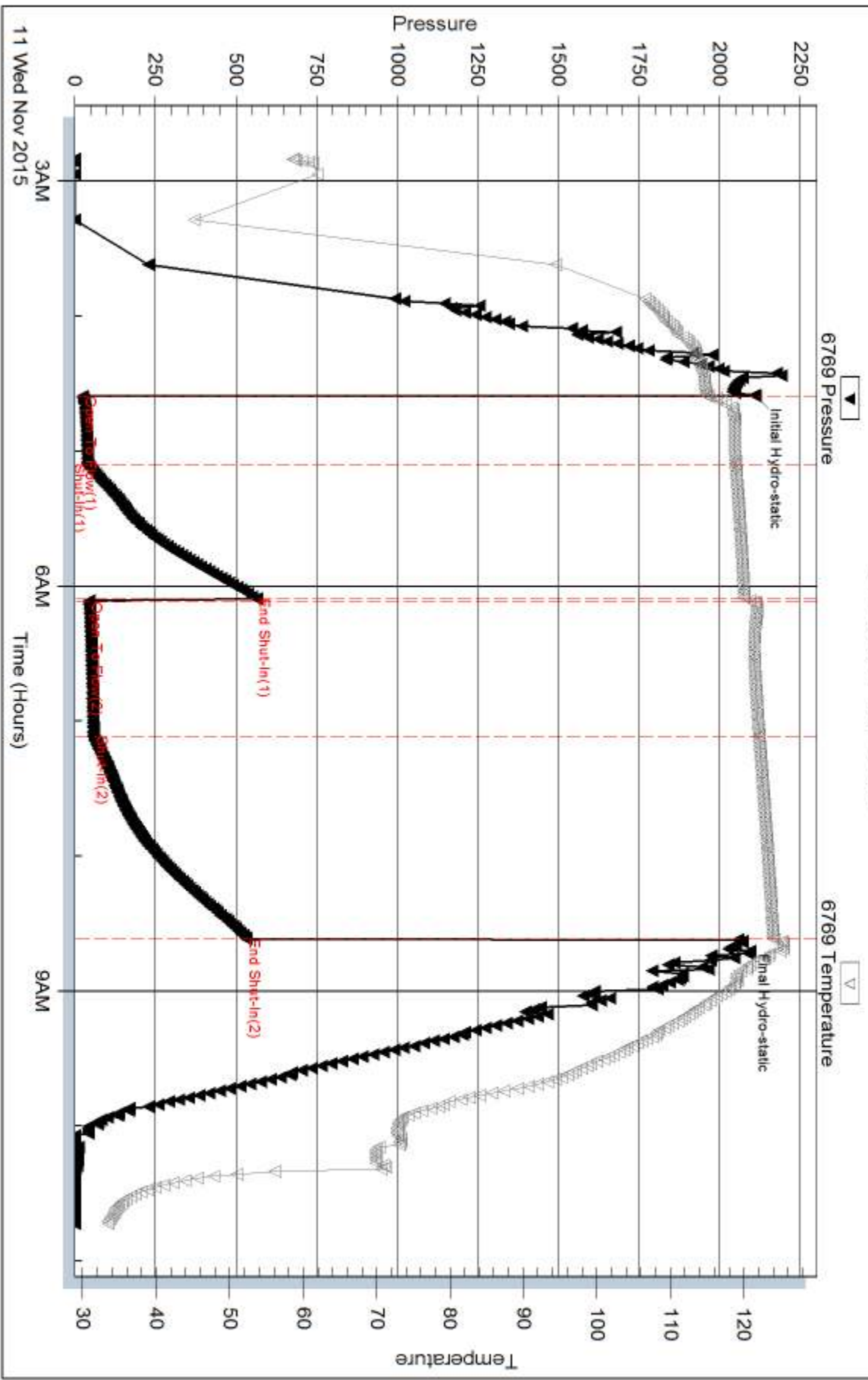
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 30 api @ 38 deg F
Corrected Gravity = 31.2 api

Pressure vs. Time

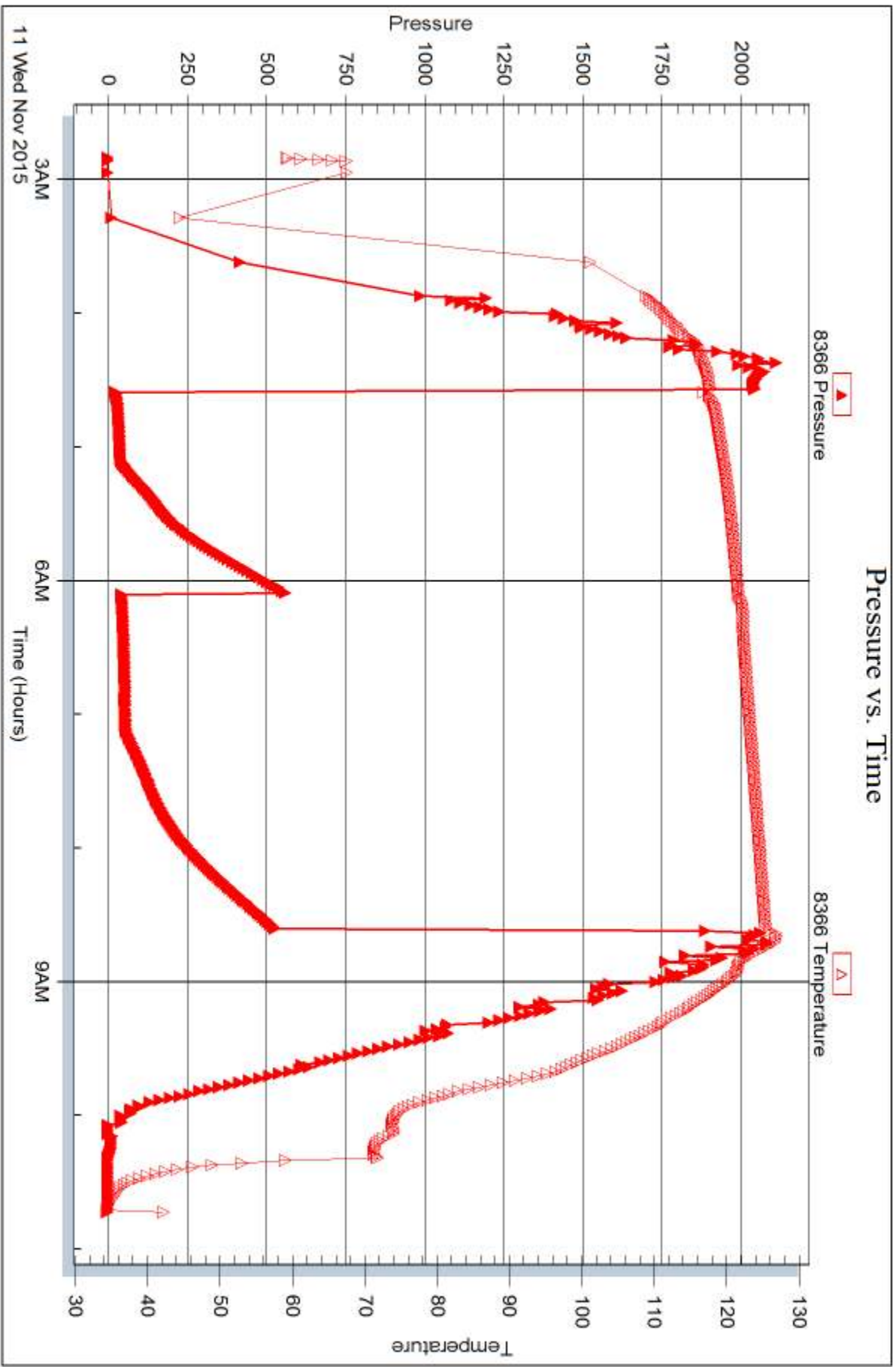


Serial #: 8366

Outside Murfin Drilling Co., Inc.

Walter 'A' #2-1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62858

Printed: 2015.11.13 @ 16:13:29



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 672020

ATTN: Rocky Milford

Walter 'A' #2-1

1-1s-36w Rawlins,KS

Start Date: 2015.11.11 @ 21:47:00

End Date: 2015.11.12 @ 05:04:00

Job Ticket #: 62859 DST #: 4

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

Printed: 2015.11.13 @ 16:13:03



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water STE 300
 Wichita, KS 672020
 ATTN: Rocky Milford

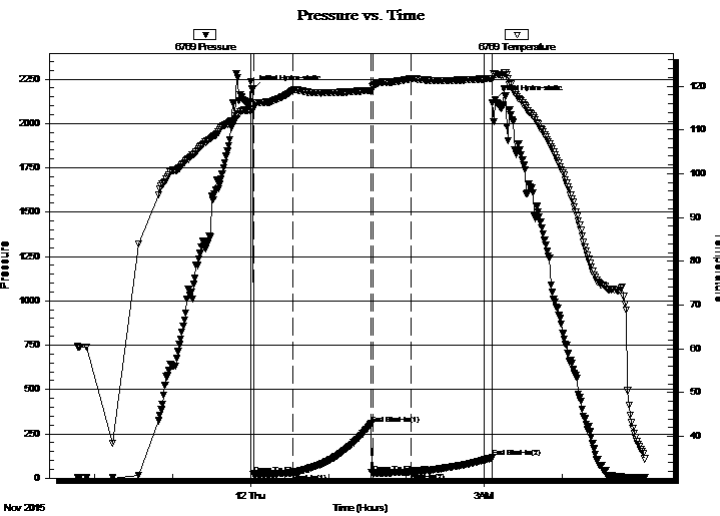
1-1s-36w Rawlins,KS
Walter 'A' #2-1
 Job Ticket: 62859 **DST#: 4**
 Test Start: 2015.11.11 @ 21:47:00

GENERAL INFORMATION:

Formation: **LKC "G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:02:15
 Time Test Ended: 05:04:00
 Interval: **4281.00 ft (KB) To 4345.00 ft (KB) (TVD)**
 Total Depth: 4345.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3273.00 ft (KB)
 3262.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6769 Inside
 Press@RunDepth: 31.79 psig @ 4282.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.11.11 End Date: 2015.11.12 Last Calib.: 2015.11.12
 Start Time: 21:47:05 End Time: 05:03:59 Time On Btm: 2015.11.12 @ 00:02:00
 Time Off Btm: 2015.11.12 @ 03:08:15

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1"
 60 - IS: No blow back
 30 - FF: No blow
 60 - FS: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2191.50	114.66	Initial Hydro-static
1	20.79	114.84	Open To Flow (1)
31	26.85	118.96	Shut-In(1)
91	306.82	119.03	End Shut-In(1)
92	26.53	119.87	Open To Flow (2)
122	31.79	121.66	Shut-In(2)
184	114.70	121.75	End Shut-In(2)
187	2132.58	122.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	SOCM 96% m, 3% o, 1% g	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62859

DST#: 4

ATTN: Rocky Milford

Test Start: 2015.11.11 @ 21:47:00

Tool Information

Drill Pipe:	Length: 4092.00 ft	Diameter: 3.80 inches	Volume: 57.40 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: 182.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 58.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4281.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	92.00 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			4258.00	
Hydraulic tool	5.00			4263.00	
Jars	5.00			4268.00	
Safety Joint	3.00			4271.00	
Packer	5.00			4276.00	28.00 Bottom Of Top Packer
Packer	5.00			4281.00	
Stubb	1.00			4282.00	
Recorder	0.00	6769	Inside	4282.00	
Recorder	0.00	8366	Outside	4282.00	
Perforations	26.00			4308.00	
Blank Spacing	34.00			4342.00	
Bullnose	3.00			4345.00	64.00 Bottom Packers & Anchor

Total Tool Length: 92.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62859

DST#: 4

ATTN: Rocky Milford

Test Start: 2015.11.11 @ 21:47:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.57 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	SOCM 96% m, 3% o, 1% g	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

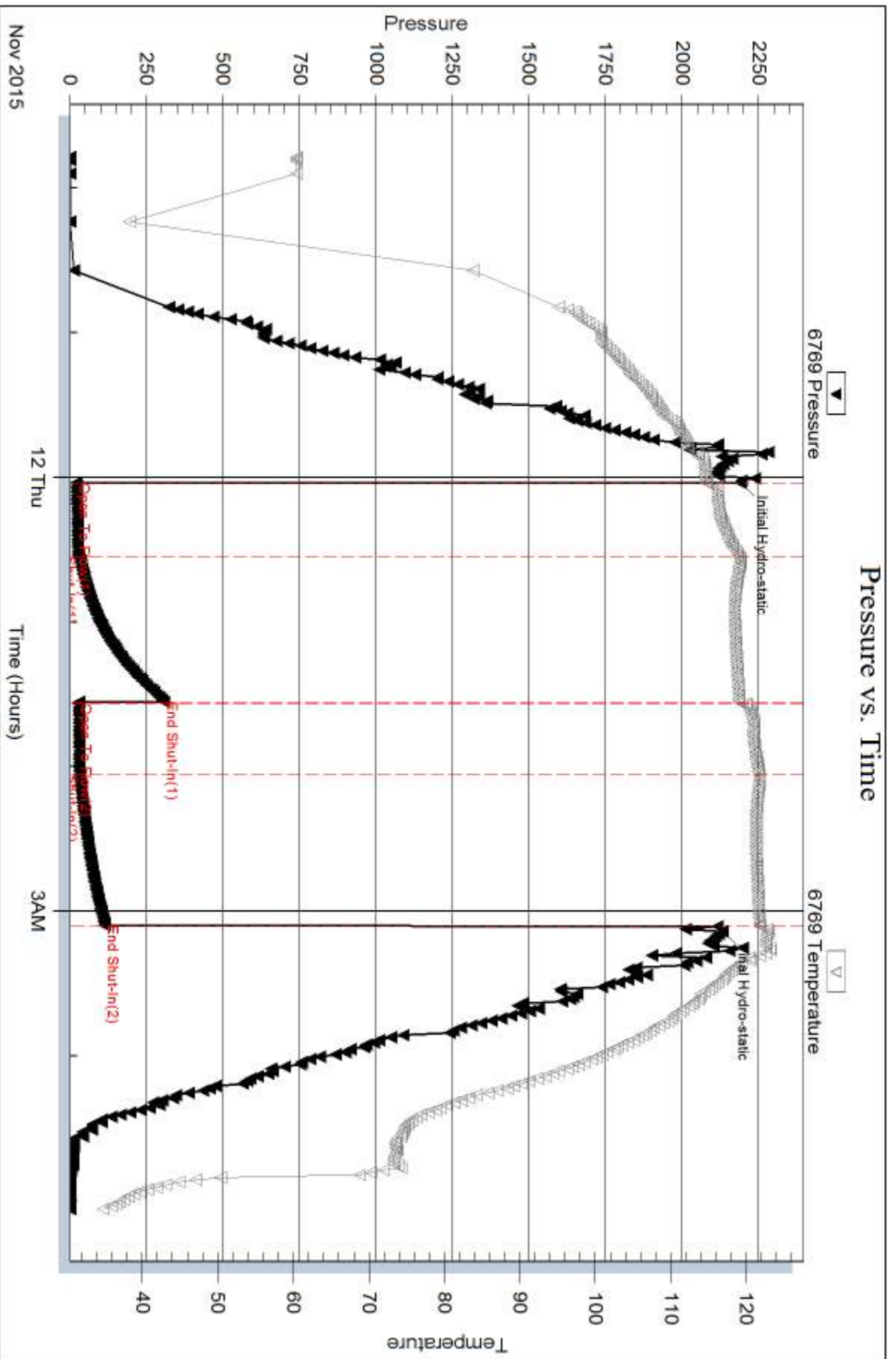
Num Gas Bombs: 0

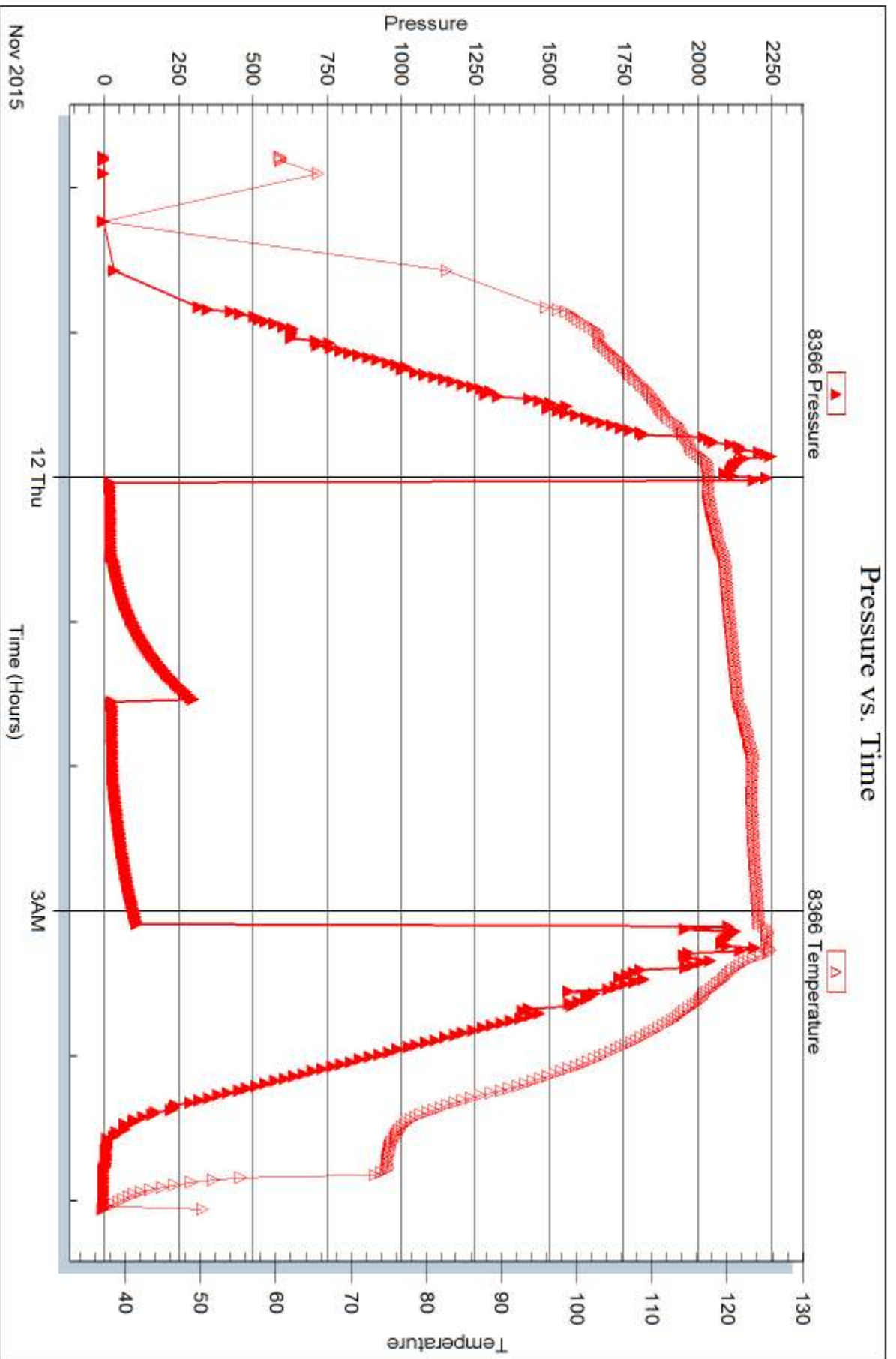
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 672020

ATTN: Rocky Milford

Walter 'A' #2-1

1-1s-36w Rawlins,KS

Start Date: 2015.11.12 @ 19:10:00

End Date: 2015.11.13 @ 03:34:15

Job Ticket #: 62860 DST #: 5

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

Printed: 2015.11.13 @ 16:12:28

Murfin Drilling Co., Inc.

1-1s-36w Rawlins,KS

Walter 'A' #2-1

DST # 5

LKC "G prime - J"

2015.11.12



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water STE 300
 Wichita, KS 67202
 ATTN: Rocky Milford

1-1s-36w Rawlins,KS
Walter 'A' #2-1
 Job Ticket: 62860 **DST#: 5**
 Test Start: 2015.11.12 @ 19:10:00

GENERAL INFORMATION:

Formation: **LKC "G prime - J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:03:30
 Time Test Ended: 03:34:15
 Interval: **4338.00 ft (KB) To 4433.00 ft (KB) (TVD)**
 Total Depth: 4433.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3273.00 ft (KB)
 3262.00 ft (CF)
 KB to GR/CF: 11.00 ft

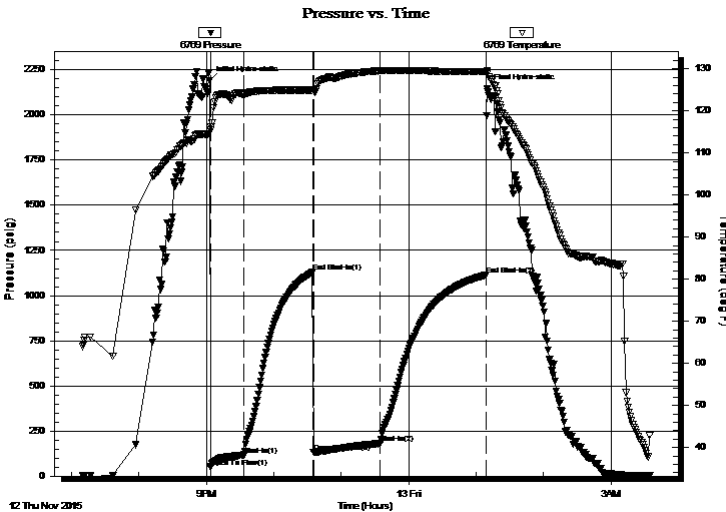
Serial #: 6769

Inside

Press@RunDepth: 181.69 psig @ 4339.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.11.12 End Date: 2015.11.13 Last Calib.: 2015.11.13
 Start Time: 19:10:05 End Time: 03:34:14 Time On Btm: 2015.11.12 @ 21:03:15
 Time Off Btm: 2015.11.13 @ 01:09:45

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 10 min. (Diesel in bucket)
 60 - IS: Blow back built to 5"
 60 - FF: Blow built to BOB at 9 1/4 min.
 90 - FS: Blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2189.26	114.98	Initial Hydro-static
1	47.66	115.42	Open To Flow (1)
31	117.97	123.78	Shut-In(1)
92	1129.17	124.85	End Shut-In(1)
93	131.06	124.77	Open To Flow (2)
152	181.69	129.51	Shut-In(2)
246	1113.26	129.28	End Shut-In(2)
247	2143.99	129.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
215.00	GOCM 67% m, 16% o, 17% g	1.36
95.00	SMCO 92% o, 4% m, 4% g	1.33
110.00	GO 79% o, 20% g, 1% m	1.54
0.00	GIP = 575'	0.00

* 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: Rocky Milford

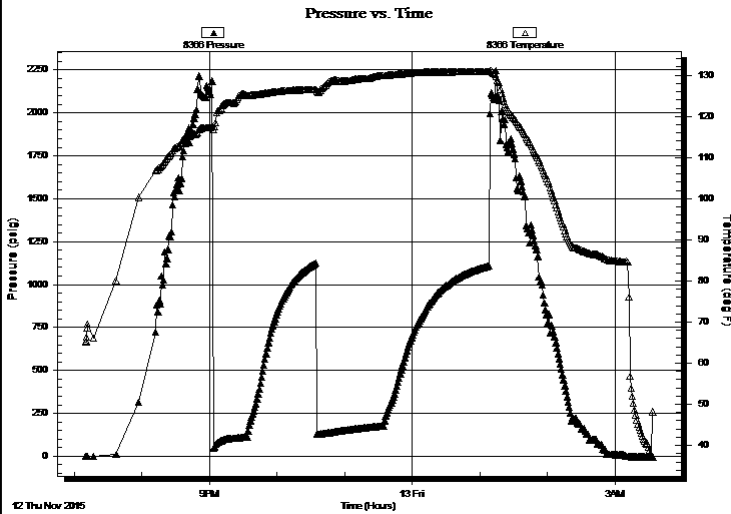
1-1s-36w Rawlins, KS
Walter 'A' #2-1
Job Ticket: 62860 **DST#: 5**
Test Start: 2015.11.12 @ 19:10:00

GENERAL INFORMATION:

Formation: **LKC "G prime - J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:03:30
 Time Test Ended: 03:34:15
 Interval: **4338.00 ft (KB) To 4433.00 ft (KB) (TVD)**
 Total Depth: 4433.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3273.00 ft (KB)
 3262.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8366 Outside
 Press@RunDepth: psig @ 4339.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.11.12 End Date: 2015.11.13 Last Calib.: 2015.11.13
 Start Time: 19:10:05 End Time: 03:33:29 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 10 min. (Diesel in bucket)
 60 - IS: Blow back built to 5"
 60 - FF: Blow built to BOB at 9 1/4 min.
 90 - FS: Blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
215.00	GOCM 67% m, 16% o, 17% g	1.36
95.00	SMCO 92% o, 4% m, 4% g	1.33
110.00	GO 79% o, 20% g, 1% m	1.54
0.00	GIP = 575'	0.00

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.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62860

DST#: 5

ATTN: Rocky Milford

Test Start: 2015.11.12 @ 19:10:00

Tool Information

Drill Pipe:	Length: 4155.00 ft	Diameter: 3.80 inches	Volume: 58.28 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 182.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 59.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4338.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	123.00 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			4315.00	
Hydraulic tool	5.00			4320.00	
Jars	5.00			4325.00	
Safety Joint	3.00			4328.00	
Packer	5.00			4333.00	28.00 Bottom Of Top Packer
Packer	5.00			4338.00	
Stubb	1.00			4339.00	
Recorder	0.00	6769	Inside	4339.00	
Recorder	0.00	8366	Outside	4339.00	
Perforations	26.00			4365.00	
Blank Spacing	65.00			4430.00	
Bullnose	3.00			4433.00	95.00 Bottom Packers & Anchor

Total Tool Length: 123.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

1-1s-36w Rawlins,KS

250 N. Water STE 300
Wichita, KS 672020

Walter 'A' #2-1

Job Ticket: 62860

DST#: 5

ATTN: Rocky Milford

Test Start: 2015.11.12 @ 19:10:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 56.00 sec/qt
Water Loss: 5.99 in³
Resistivity: ohm.m
Salinity: 700.00 ppm
Filter Cake: 2.00 inches

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

Oil API: 33.8 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

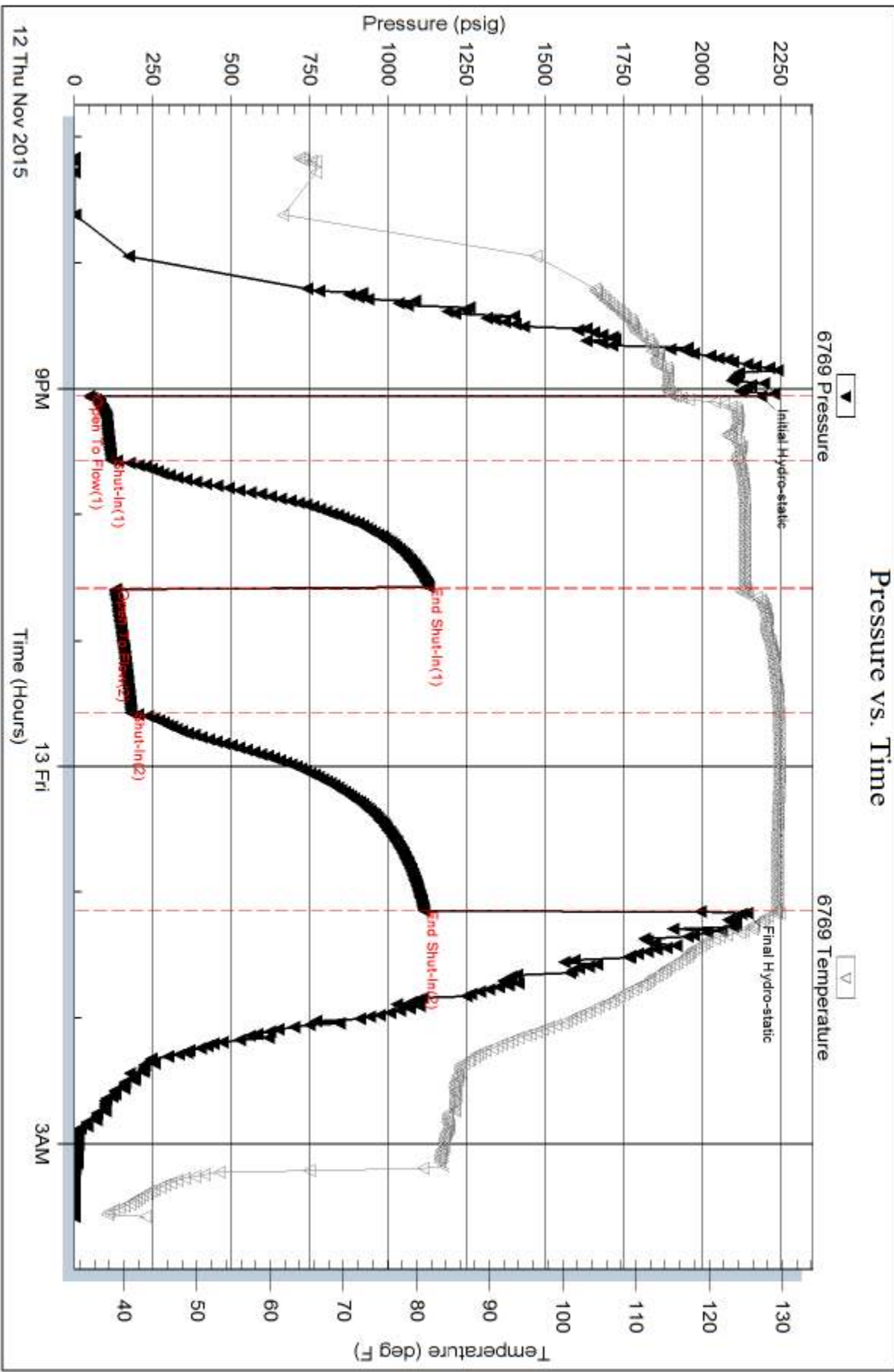
Length ft	Description	Volume bbl
215.00	GOCM 67% <i>m</i> , 16% <i>o</i> , 17% <i>g</i>	1.358
95.00	SMCO 92% <i>o</i> , 4% <i>m</i> , 4% <i>g</i>	1.333
110.00	GO 79% <i>o</i> , 20% <i>g</i> , 1% <i>m</i>	1.543
0.00	GIP = 575'	0.000

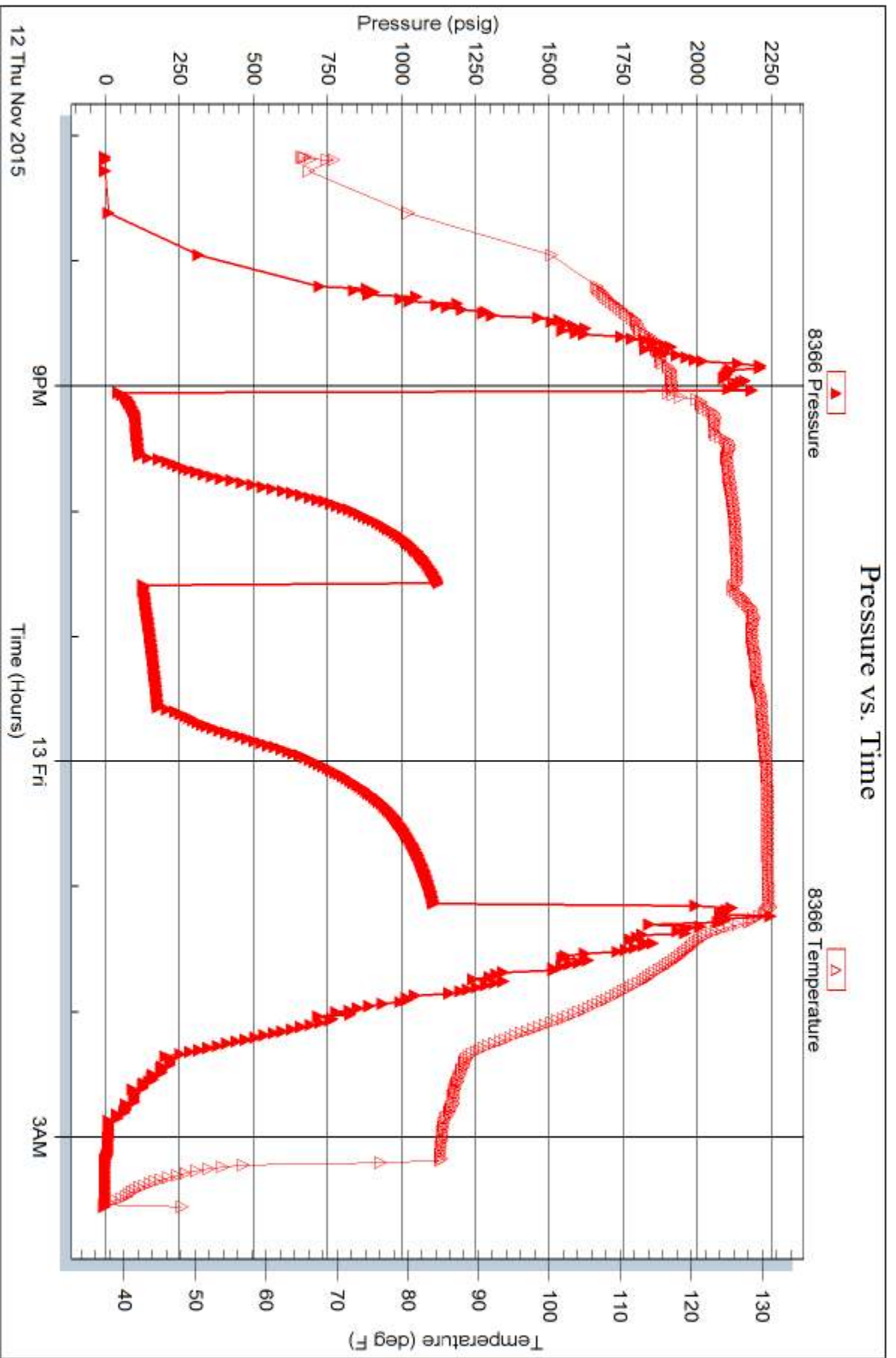
Total Length: 420.00 ft Total Volume: 4.234 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity = 31.8 api @ 40 deg F
Corrected Gravity = 33.8 api







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62856

Well Name & No. Walter 'A' # 2-1 Test No. 1 Date 11-8-15
 Company Murfin Drilling Co, Inc Elevation 3273 KB 3262 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #2
 Location: Sec. 1 Twp. 1S Rge. 36w Co. Rawlins State KS

Interval Tested 3842 - 3982 Zone Tested Stotler
 Anchor Length 140 Drill Pipe Run 3657 Mud Wt. 9.1
 Top Packer Depth 3837 Drill Collars Run 182 Vis 56
 Bottom Packer Depth ~~3837~~ 3842 Wt. Pipe Run - WL 5.6
 Total Depth 3982 Chlorides 700 ppm System LCM 6
 Blow Description IF: 1/4" Blow at open, built to 3/4", died back to weak surface blow
ISI: No blowback
FF: No blow
FSI: No blow

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

Rec Total 5 BHT 119 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1952 Test 1050 T-On Location 20:00 1/8
 (B) First Initial Flow 23 Jars 250 T-Started 21:25
 (C) First Final Flow 26 Safety Joint 75 T-Open 23:41
 (D) Initial Shut-In 396 Circ Sub _____ T-Pulled 2:46
 (E) Second Initial Flow 25 Hourly Standby _____ T-Out 4:30 1/9
 (F) Second Final Flow 28 Mileage 110 RT 110 Comments _____
 (G) Final Shut-In 288 Sampler _____
 (H) Final Hydrostatic 1899 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1485
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1485

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

Approved By Rocky Milford Our Representative James Windes

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. 62857

Well Name & No. Walter 'A' #2-1 Test No. 2 Date 11/9/15
 Company Murfin Drilling Co, Inc Elevation 3273 KB 3262 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #2
 Location: Sec. 1 Twp. 1S Rge. 36w Co. Rawlins State KS

Interval Tested 4083 - 4138 Zone Tested Oread
 Anchor Length 55 Drill Pipe Run 3901 Mud Wt. 9.2
 Top Packer Depth 4078 Drill Collars Run 182 Vis 51
 Bottom Packer Depth 4083 (shale) Wt. Pipe Run - WL 6.8
 Total Depth 4138 Chlorides 700 ppm System LCM 10
 Blow Description IF: Blow built to 1/4", died back to weak surface blow
ISI: No blowback
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2 BHT 122 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2048 Test 1150 T-On Location 23:15 1/9
 (B) First Initial Flow 20 Jars 250 T-Started 00:15
 (C) First Final Flow 22 Safety Joint 75 T-Open 2:12
 (D) Initial Shut-In 126 Circ Sub _____ T-Pulled 5:15
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 7:05 1/10
 (F) Second Final Flow 23 Mileage 110RT 110 Comments _____
 (G) Final Shut-In 64 Sampler _____
 (H) Final Hydrostatic 1972 Straddle _____ Ruined Shale Packer _____
 Shale Packer 250 Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1835
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1835

Approved By Robert Milford

Our Representative James Winder

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62858

Well Name & No. Walter 'A' #2-1 Test No. 3 Date 11-11-15
 Company Murfin Drilling Co. Inc. Elevation 3273 KB 3262 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #2
 Location: Sec. 1 Twp. 15 Rge. 36w Co. Rawlins State KS

Interval Tested 4158-4285 Zone Tested LKC "A-D"
 Anchor Length 127 Drill Pipe Run 3966 Mud Wt. 9.1
 Top Packer Depth 4153 Drill Collars Run 182 Vis 61
 Bottom Packer Depth 4158 Wt. Pipe Run - WL 5.6
 Total Depth 4285 Chlorides 700 ppm System LCM 10

Blow Description IF: Surface blow, dead at 4 min. Fixed leak, blow built to 1/2"
ISI: No blowback
FF: Blow built to 3 1/2"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>SMCO</u>	<u>2</u>	<u>93</u>	<u>-</u>	<u>5</u>
<u>75</u>	<u>OCM</u>	<u>3</u>	<u>31</u>	<u>-</u>	<u>66</u>
	<u>GIP = 100'</u>				
Rec Total	<u>85</u>				
BHT	<u>124</u>				
Gravity	<u>31.2</u>				
API RW	<u>2</u>				
@					
F Chlorides					
ppm					

(A) Initial Hydrostatic 2109
 (B) First Initial Flow 25
 (C) First Final Flow 42
 (D) Initial Shut-In 564
 (E) Second Initial Flow 44
 (F) Second Final Flow 60
 (G) Final Shut-In 533
 (H) Final Hydrostatic 2070

Test 1150
 Jars 250
 Safety Joint 75
 Circ Sub
 Hourly Standby
 Mileage 110RT 110
 Sampler
 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1585

T-On Location 1:45
 T-Started 2:50
 T-Open 4:35
 T-Pulled 8:36
 T-Out 10:45

Comments loose base connection on IF: Fixed at 15 min.
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1585
 MP/DST Disc't

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

Approved By Rocky Milford

Our Representative James Winder

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62859

Well Name & No. Walter 'A' #2-1 Test No. 4 Date 11-11-15
 Company Murfin Drilling Co. Inc. Elevation 3273 KB 3262 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #2
 Location: Sec. 1 Twp. 1S Rge. 36w Co. Rawlins State KS

Interval Tested 4281 - 4345 Zone Tested LKC "G"
 Anchor Length 64 Drill Pipe Run 4092 Mud Wt. 9.3
 Top Packer Depth 4276 Drill Collars Run 182 Vis 58
 Bottom Packer Depth 4281 Wt. Pipe Run - WL 5.6
 Total Depth 4345 Chlorides 700 ppm System LCM 8

Blow Description IF: 1/4" Blow at open, built to 1" (Diesel in bucket)
ISI: No blowback
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>50cm</u>	<u>1</u>	<u>3</u>	<u>96</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 15 BHT 122 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2192 Test 1150 T-On Location 21:00 1/11
 (B) First Initial Flow 21 Jars 250 T-Started 21:47
 (C) First Final Flow 27 Safety Joint 75 T-Open 00:02
 (D) Initial Shut-In 307 Circ Sub _____ T-Pulled 3:05
 (E) Second Initial Flow 27 Hourly Standby _____ T-Out 5:00 1/12
 (F) Second Final Flow 32 Mileage 110RT 110 Comments _____
 (G) Final Shut-In 115 Sampler _____
 (H) Final Hydrostatic 2133 Straddle _____
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer 320
 Extra Recorder _____ Extra Copies _____
 Initial Open 30 Day Standby _____ Sub Total 0
 Initial Shut-In 60 Accessibility _____ Total 1905
 Final Flow 30 Sub Total 1585 MP/DST Disc't _____
 Final Shut-In 60

Approved By Rocky Milford Our Representative James Windsor
 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 of 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. 62860

Well Name & No. Walter 'A' #2-1 Test No. 5 Date 11-12-15
 Company Murfin Drilling Co. Inc Elevation 3273 KB 3262 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #2
 Location: Sec. 1 Twp. 1S Rge. 36w Co. Rawlins State KS

Interval Tested 4338 - 4433 Zone Tested LKC "G prime - J"
 Anchor Length 95 Drill Pipe Run 4155 Mud Wt. 9.4
 Top Packer Depth 4333 Drill Collars Run 182 Vis 56
 Bottom Packer Depth 4338 Wt. Pipe Run - WL 6.0
 Total Depth 4433 Chlorides 700 ppm System LCM 8
 Blow Description IF: Blow built to BOB (11") at 10min. (Diesel in bucket)
ISI: Blowback built to 5"
FF: Blow built to BOB at 9 1/4 min
FSI: Blowback built to 6"

Rec	Feet of	%gas	%oil	%water	%mud
<u>110</u>	<u>GO</u>	<u>20</u>	<u>79</u>	<u>-</u>	<u>1</u>
<u>95</u>	<u>SMCO</u>	<u>4</u>	<u>92</u>	<u>-</u>	<u>4</u>
<u>215</u>	<u>60cm</u>	<u>17</u>	<u>16</u>	<u>-</u>	<u>67</u>
	<u>GIP = 575'</u>				

Rec Total 420 BHT 129 Gravity 33.8 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic 2189 Test 1150 T-On Location 18:30
 (B) First Initial Flow 48 Jars 250 T-Started 19:10
 (C) First Final Flow 118 Safety Joint 75 T-Open 21:03
 (D) Initial Shut-In 1129 Circ Sub T-Pulled 1:08
 (E) Second Initial Flow 131 Hourly Standby T-Out 3:25
 (F) Second Final Flow 182 Mileage 110RTx2 220 Comments
 (G) Final Shut-In 1113 Sampler
 (H) Final Hydrostatic 2144 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1695
 Accessibility MP/DST Disc't
 Sub Total 1695

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

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

Robert L. Milford
PETROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGISTS REPORT
DRILLING TIME AND SAMPLE LOG

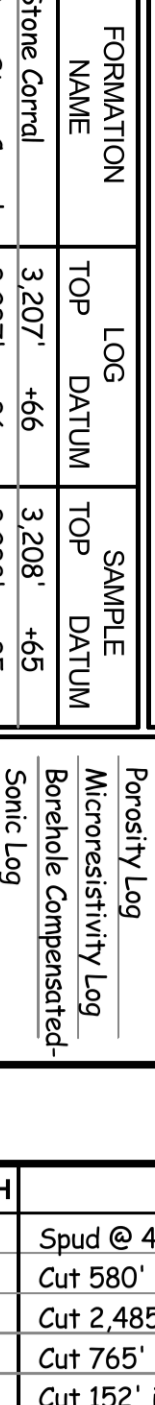
OPERATOR: **Murfin Drilling Company, Inc.**
LEASE: **Walter 'A' #2-1**
LOC. SPOT: **150' E of NW SW SE**
LOC. FOOTAGE: **990' FSL 2,160' FEL**

SEC: **1** TWP: **1S** RANG: **36W**
COUNTY: **Rawlins** STATE: **Kansas**
API: **15-153-21171-00-00**

CONTRACTOR: **Murfin Drilling Co., Inc.** RIG NO.: **2**
DRILLING STARTED: **11-5-2015** COMPLETED: **11-13-2015**
MUD DISPLACED: **3388'** MUD TYPE: **Chemical**
DRILLING TIME (HEFT FROM): **3,638'** TO: **RTD**
SAMPLES SAVED FROM: **3,670'** TO: **RTD**
SAMPLES EXAMINED FROM: **3,670'** TO: **RTD**
GEOLOGICAL SUPERVISION FROM: **3,670'** TO: **RTD**

MEASUREMENTS: **KB 3,273'**
GL 3,262'
CASSING RECORD
CONDUCTOR
Surface: **8.5/8" @ 306'**
Production: **5.1/2" @ 4582'**
w/ 500 sacks cement

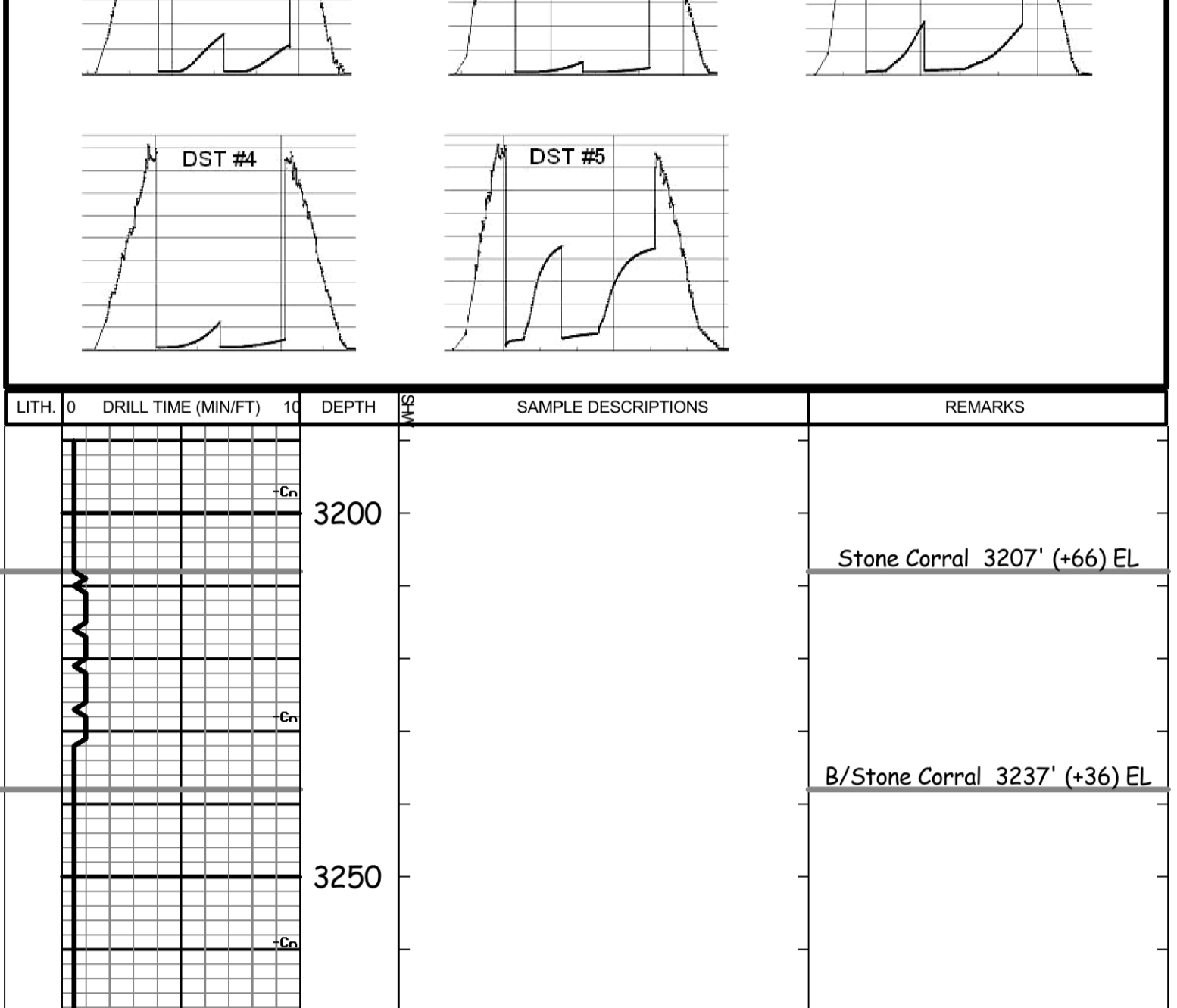
FORMATION NAME LOG SAMPLE TOP DATUM TOP DATUM
Stone Corral 3,207' +66 3,208' +65
Base Stone Corral 3,237' +36 3,238' +35
Neva 3,684' -411 3,684' -411
Foraker 3,794' -821 3,794' -821
Topeka 4,000' -727 4,000' -727
Oread 4,123' -850 4,123' -850
Lansing 4,218' -945 4,218' -945
Stark 4,432' -1159 4,432' -1159
B/KC 4,482' -1209 4,482' -1209
Total Depth 4,585' -1313 4,585' -1312



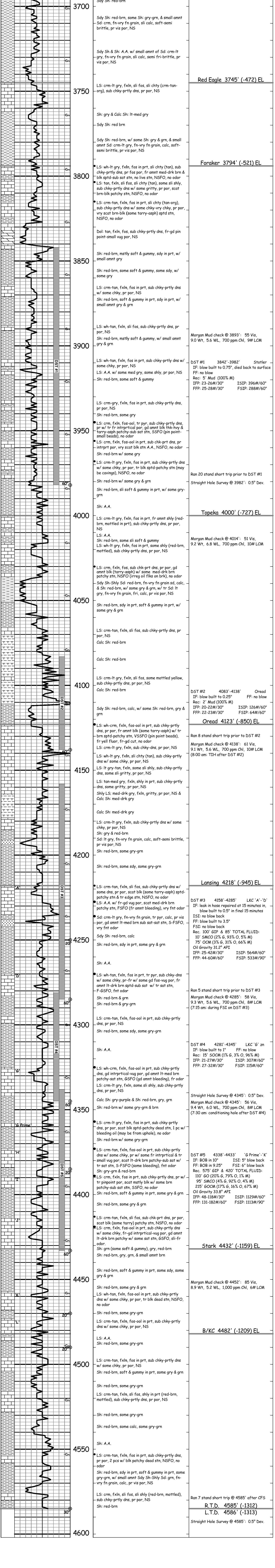
FORMATION NAME	LOG	SAMPLE TOP	DATUM	TOP	DATUM
Stone Corral	3,207'	+66	3,208'	+65	
Base Stone Corral	3,237'	+36	3,238'	+35	
Neva	3,684'	-411	3,684'	-411	
Foraker	3,794'	-821	3,794'	-821	
Topeka	4,000'	-727	4,000'	-727	
Oread	4,123'	-850	4,123'	-850	
Lansing	4,218'	-945	4,218'	-945	
Stark	4,432'	-1159	4,432'	-1159	
B/KC	4,482'	-1209	4,482'	-1209	
Total Depth	4,585'	-1313	4,585'	-1312	

DATE	7:00 AM DEPTH	REMARKS
11-5-15	0'	Spud @ 4:15 pm. Plug down @ 9:00 pm. Drilled out plug @ 5:00 am on 11-6-15 w/ PDC bit
11-6-15	580'	Cut 580' in last 24 hrs.
11-7-15	3,065'	Cut 2,485' in last 24 hrs; 22.5 hrs drlg. Bit trip @ 3637' (ran button bit)
11-8-15	3,830'	Cut 765' in last 24 hrs; 17 hrs drlg. DST #1 @ 3982'
11-9-15	3,982'	Cut 152' in last 24 hrs; 8.5 hrs drlg. DST #2 @ 4138'
11-10-15	4,138'	Cut 156' in last 24 hrs; 12.25 hrs drlg. DST #3 @ 4285'
11-11-15	4,285'	Cut 147' in last 24 hrs; 12.5 hrs drlg. DST #4 @ 4345'
11-12-15	4,345'	Cut 60' in last 24 hrs; 5.5 hrs drlg. DST #5 @ 4433'
11-13-15	4,442'	Cut 97' in last 24 hrs; 8.25 hrs drlg. RTD 4585' @ 7:45 pm
11-14-15	4,585'	Cut 143' in last 24 hrs; 11.75 hrs drlg. Ran production casing.

Remarks
The electric log measurements correlate from even to 1' higher to the drilling measurements.
Formation tops and lithology on this report have been corrected to the electric log.
The drilling samples were deposited at the Kansas Geological Survey office in Wichita.
Respectfully submitted,
Robert L. Milford



LITH	0	DRILL TIME (MIN/FT)	10	DEPTH	SAMPLE DESCRIPTIONS	REMARKS
				3200		Stone Corral 3207' (+66) EL
				3250		B/Stone Corral 3237' (+36) EL



*allt
Prod-MG*



INVOICE

P.O. Box 205803
Dallas, TX 75320-5803

Invoice Number: 151174
Invoice Date: Nov 5, 2015
Page: 1

Voice: (832) 482-3742
Fax: (832) 482-3738

Federal Tax I.D.#: 20-8651475

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	67858	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Nov 5, 2015	12/5/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Walter A #2-1		
250.00	CEMENT MATERIALS	Class A Common	17.90	4,475.00
470.00	CEMENT MATERIALS	Gel	0.50	235.00
705.00	CEMENT MATERIALS	Chloride	1.10	775.50
270.33	CEMENT SERVICE	Cubic Feet Charge	2.48	670.42
616.50	CEMENT SERVICE	Ton Mileage Charge	2.75	1,695.38
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
50.00	CEMENT SERVICE	Pump Truck Mileage	7.70	385.00
50.00	CEMENT SERVICE	Light Vehicle Mileage -- No Charge		
1.00	CEMENT SERVICE	Swedge Rental -- No Charge		
1.00	JOB DISCOUNT	Job Discount if paid within terms -- Material	2,742.75	-2,742.75
1.00	JOB DISCOUNT	Job Discount if paid within terms -- Cement Service	2,131.54	-2,131.54
1.00	CEMENT SUPERVISOR	Andrew Forslund		
1.00	EQUIPMENT OPERATOR	Darren Racette		
1.00	OPERATOR ASSISTANT	Cory Brown		

<p>ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. ONLY IF PAID ON OR BEFORE</p> <p>Dec 5, 2015</p> <p>1 1/2% CHARGED THEREAFTER.</p>	Subtotal	4,874.26
	Sales Tax	452.55
	Total Invoice Amount	5,326.81
	Payment/Credit Applied	
	TOTAL	5,326.81

Okge



P.O. Box 205803
Dallas, TX 75320-5803

Voice: (832) 482-3742
Fax: (832) 482-3738

*Accty -
cc: WF
cc: Mango*

INVOICE

Invoice Number: 151235
Invoice Date: Nov 14, 2015
Page: 1

Federal Tax I.D.#: 20-8651475

*EC 103 R
FH*

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	LIB1511141802	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Liberal	Nov 14, 2015	12/14/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Walter A #2-1		
1.00	CEMENT SERVICE	Long String	2,765.75	2,765.75
1.00	CEMENT SERVICE	CMLP	275.00	275.00
598.00	CEMENT SERVICE	PHDL	2.48	1,483.04
1,260.00	CEMENT SERVICE	DRYG	2.75	3,465.00
50.00	CEMENT SERVICE	MILV	4.40	220.00
50.00	CEMENT SERVICE	MIHV	7.70	385.00
2.00	CEMENT SERVICE	Waiting on l	440.00	880.00
1.00	EQUIPMENT SALES	5.5 AFFS	545.00	545.00
1.00	EQUIPMENT SALES	5.5 LBP	660.00	660.00
3.00	EQUIPMENT SALES	5.5 CB	395.00	1,185.00
15.00	EQUIPMENT SALES	5.5 TUB	95.00	1,425.00
20.00	EQUIPMENT SALES	5.5 ROS	125.00	2,500.00
12.00	CEMENT MATERIALS	CW-HVS	25.00	300.00
250.00	CEMENT MATERIALS	CB-ALWA	19.88	4,970.00
63.00	CEMENT MATERIALS	CLC-CPF	2.97	187.11
200.00	CEMENT MATERIALS	CB-ASA	23.50	4,700.00
1,000.00	CEMENT MATERIALS	CLC-KOL	0.98	980.00
113.00	CEMENT MATERIALS	CFL-330	23.10	2,610.30
28.00	CEMENT MATERIALS	CDF-100P	3.50	98.00
50.00	CEMENT MATERIALS	CB-ALWA	19.88	994.00

Allied will be sending credit for the 2 hours of WOL

James

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. ONLY IF PAID ON OR BEFORE

Dec 14, 2015

1 1/2% CHARGED THEREAFTER.

Subtotal	Continued
Sales Tax	Continued
Total Invoice Amount	Continued
Payment/Credit Applied	
TOTAL	Continued



P.O. Box 205803
Dallas, TX 75320-5803

Voice: (832) 482-3742
Fax: (832) 482-3738

INVOICE

Invoice Number: 151235
Invoice Date: Nov 14, 2015
Page: 2

Federal Tax I.D.#: 20-8651475

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	LIB1511141802	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Liberal	Nov 14, 2015	12/14/15

Quantity	Item	Description	Unit Price	Amount
13.00	CEMENT MATERIALS	CLC-CPF	2.97	38.61
5.00	CEMENT MATERIALS	KCL	26.90	134.50
1.00	JOB DISCOUNT	Job Discount if paid within terms -- Material & Equipment	11,730.14	-11,730.14
1.00	JOB DISCOUNT	Job Discount if paid within terms -- Cement Service	5,210.58	-5,210.58
1.00	CEMENT SUPERVISOR	Edgar Rodriguez		
1.00	EQUIPMENT OPERATOR	Alejandro Ayala		
1.00	CEMENT SUPERVISOR	Aldo Epinoza		

<p>ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. ONLY IF PAID ON OR BEFORE</p> <p>Dec 14, 2015</p> <p>1 1/2% CHARGED THEREAFTER.</p>	Subtotal	13,860.59
	Sales Tax	791.78
	Total Invoice Amount	14,652.37
	Payment/Credit Applied	
	TOTAL	14,652.37



Field Ticket Number: LIB1511141802 Field Ticket Date: Saturday, November 14, 2015

Bill To:
Murfin Drilling Company Inc.
Wichita, Kansas 67202
#N/A

Job Name: 02 Production/Long String
Well Location: Rawlins, Kansas
Well Name: Walter A
Well Number: # 2-1
Well Type: New Well
Rig Number:
Shipping Point: Liberal, KS
Sales Office: Mid Con

PERSONEL		EQUIPMENT	
EDGAR RODRIGUEZ		868-842	
ALEX AYALA		531-541	
ALDO ESPINOZA		984	

SERVICES - SERVICES - SERVICES

Description	Qty	UOM	Unit Amt	Gross Amt	Unit Net	Discount	Net Amount
PUMP, CASING CEMENT 4001-5000 FT	1.00	min. 4 hr	2,765.75	2765.75	1,244.59	55.0%	1,244.59
CMLP	1.00	per day	275.00	275.00	123.75	55.0%	123.75
PHDL	598.00	per cu. Ft.	2.48	1483.04	1.12	55.0%	667.37
DRYG	1260.00	ton-mile	2.75	3465.00	1.24	55.0%	1,559.25
MILV	50.00	per mile	4.40	220.00	1.98	55.0%	99.00
MIHV	50.00	per mile	7.70	385.00	3.47	55.0%	173.25

FLOAT EQUIPMENT -- FLOAT EQUIPMENT -- FLOAT EQUIPMENT

AFFS-5.5	1.00	each	545.00	545.00	245.25	55.0%	245.25
LBP-5.5	1.00	each	660.00	660.00	297.00	55.0%	297.00
CB-5.5	3.00	each	395.00	1,185.00	177.75	55.0%	533.25
TUB - 5.5	15.00	each	95.00	1,425.00	42.75	55.0%	641.25
ROS - 5.5	20.00	each	125.00	2,500.00	56.25	55.0%	1,125.00

MATERIALS - MATERIALS - MATERIALS

CW-HVS	12.00	bbl	25.00	300.00	11.25	55.0%	135.00
CB-ALWA	250.00	sack	19.88	4,970.00	8.95	55.0%	2,236.50
CLC-CPF	63.00	pound	2.97	187.11	1.34	55.0%	84.20
CB-ASA	200.00	sack	23.50	4,700.00	10.58	55.0%	2,115.00
CLC-KOL	1000.00	pound	0.98	980.00	0.44	55.0%	441.00
CFL-330	113.00	pound	23.10	2,610.30	10.40	55.0%	1,174.64
CDF-100P	28.00	pound	3.50	98.00	1.58	55.0%	44.10
CB-ALWA	50.00	sack	19.88	994.00	8.95	55.0%	447.30
CLC-CPF	13.00	pound	2.97	38.61	1.34	55.0%	17.37
KCL	5.00	gal	26.90	134.50	12.11	55.0%	60.53

ADDITIONAL ITEMS - ADDITIONAL ITEMS - ADDITIONAL ITEMS

Additional hours, in excess of set hours	2.00	per hour	440.00	880.00	198.00	55.0%	396.00
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	Gross	Discount	Final
Services Total	8,593.79	4,726.58	3,867.21
Equipment Total	6,315.00	3,473.25	2,841.75
Materials Total	15,012.52	8,256.89	6,755.63
Additional Items	880.00	484.00	396.00
Final Total	30,801.31	16,940.72	13,860.59

Allied Rep: _____
Customer Agent: _____

MDCI
Walter 'A' #2-1
990' FSL 2160' FEL
Sec. 1-T1S-R36W
3273' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3208	+65	+6	3207	+66	+7
B/Anhydrite	3231	+42	+15	3237	+36	+9
Neva	3685	-412	+8	3684	-411	+9
Red Eagle	3746	-473	+9	3745	-472	+10
Foraker	3794	-521	+9	3794	-521	+9
Topeka	4001	-728	+9	4000	-727	+10
Oread	4118	-845	+12	4123	-850	+7
Lansing	4218	-945	+11	4218	-945	+11
Stark	4431	-1158	+12	4432	-1159	+11
BKC	4483	-1210	+10	4482	-1209	+11
RTD	4585	-1312				
LTD				4586	-1313	