



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1236012
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: _____

1236012

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
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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				

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Makings 1-18
Doc ID	1236012

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: Keith Reavis

Makings #1-18

18-4s-33w Rawlings,KS

Start Date: 2014.10.26 @ 19:08:00

End Date: 2014.10.27 @ 03:32:09

Job Ticket #: 57748 DST #: 1

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

Printed: 2014.10.31 @ 10:04:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc
 250 N. Water Ste 300
 Wichita KS 67202
 ATTN: Keith Reavis

18-4s-33w Rawlings,KS

Makings #1-18

Job Ticket: 57748

DST#: 1

Test Start: 2014.10.26 @ 19:08:00

GENERAL INFORMATION:

Formation: **Toronto / LKC " A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:44:55

Time Test Ended: 03:32:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 71

Interval: 3986.00 ft (KB) To 4040.00 ft (KB) (TVD)

Total Depth: 4040.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3103.00 ft (KB)

3098.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8674

Inside

Press@RunDepth: 20.83 psig @ 3987.00 ft (KB)

Start Date: 2014.10.26

End Date:

2014.10.27

Start Time: 19:08:00

End Time:

03:32:09

Capacity: 8000.00 psig

Last Calib.: 2014.10.27

Time On Btm: 2014.10.26 @ 21:44:40

Time Off Btm: 2014.10.27 @ 00:49:39

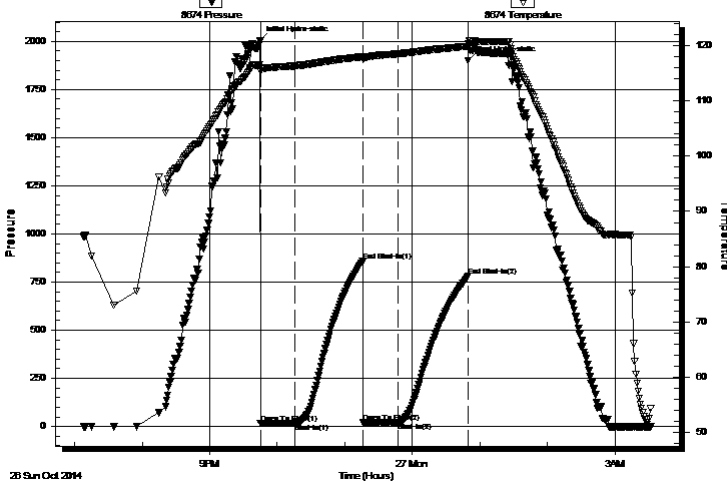
TEST COMMENT: IF- Weak Surface Blow 1/4"

IS- No Blow

FF- No Blow

FS- No Blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2004.80	116.59	Initial Hydro-static
1	16.66	115.42	Open To Flow (1)
31	18.51	116.35	Shut-In(1)
92	859.00	118.03	End Shut-In(1)
92	19.92	117.64	Open To Flow (2)
123	20.83	118.52	Shut-In(2)
185	779.61	119.89	End Shut-In(2)
185	1899.83	120.41	Final Hydro-static

Recovery

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

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

18-4s-33w Rawlings,KS

250 N. Water Ste 300
Wichita KS 67202

Makings #1-18

Job Ticket: 57748

DST#: 1

ATTN: Keith Reavis

Test Start: 2014.10.26 @ 19:08:00

GENERAL INFORMATION:

Formation: **Toronto / LKC " A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:44:55

Time Test Ended: 03:32:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 71

Interval: 3986.00 ft (KB) To 4040.00 ft (KB) (TVD)

Total Depth: 4040.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3103.00 ft (KB)

3098.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8355

Outside

Press@RunDepth: psig @ 3987.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.26

End Date:

2014.10.27

Last Calib.:

2014.10.27

Start Time: 18:58:05

End Time:

03:32:48

Time On Btm:

Time Off Btm:

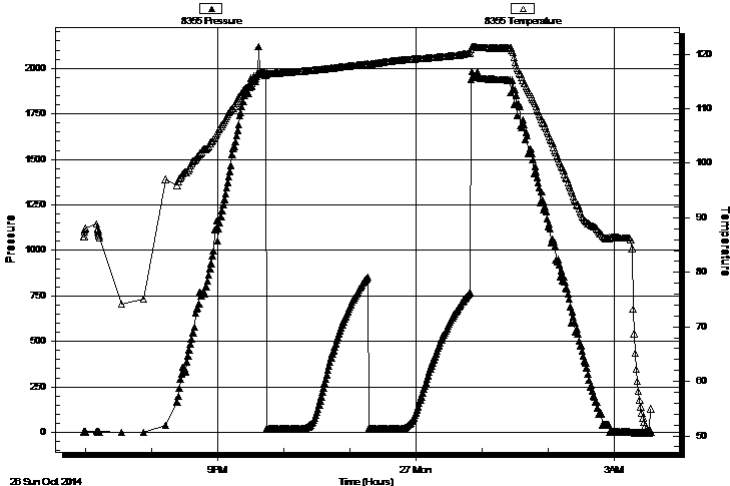
TEST COMMENT: IF- Weak Surface Blow 1/4"

IS- No Blow

FF- No Blow

FS- No Blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% mud	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
250 N. Water Ste 300
Wichita KS 67202
ATTN: Keith Reavis

18-4s-33w Rawlings,KS
Makings #1-18
Job Ticket: 57748 **DST#: 1**
Test Start: 2014.10.26 @ 19:08:00

Tool Information

Drill Pipe:	Length: 3806.00 ft	Diameter: 3.80 inches	Volume: 53.39 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose:	16000.00 lb
			<u>Total Volume: 54.26 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3986.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	54.00 ft				
Tool Length:	81.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			3960.00	
Shut In Tool	5.00			3965.00	
Hydraulic tool	5.00			3970.00	
Jars	5.00			3975.00	
Safety Joint	2.00			3977.00	
Packer	5.00			3982.00	27.00 Bottom Of Top Packer
Packer	4.00			3986.00	
Stubb	1.00			3987.00	
Recorder	0.00	8355	Outside	3987.00	
Recorder	0.00	8674	Inside	3987.00	
Perforations	14.00			4001.00	
Change Over Sub	1.00			4002.00	
Drill Pipe	32.00			4034.00	
Change Over Sub	1.00			4035.00	
Bullnose	5.00			4040.00	54.00 Bottom Packers & Anchor

Total Tool Length: 81.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc
250 N. Water Ste 300
Wichita KS 67202
ATTN: Keith Reavis

18-4s-33w Rawlings,KS
Makings #1-18
Job Ticket: 57748 **DST#: 1**
Test Start: 2014.10.26 @ 19:08:00

Mud and Cushion Information

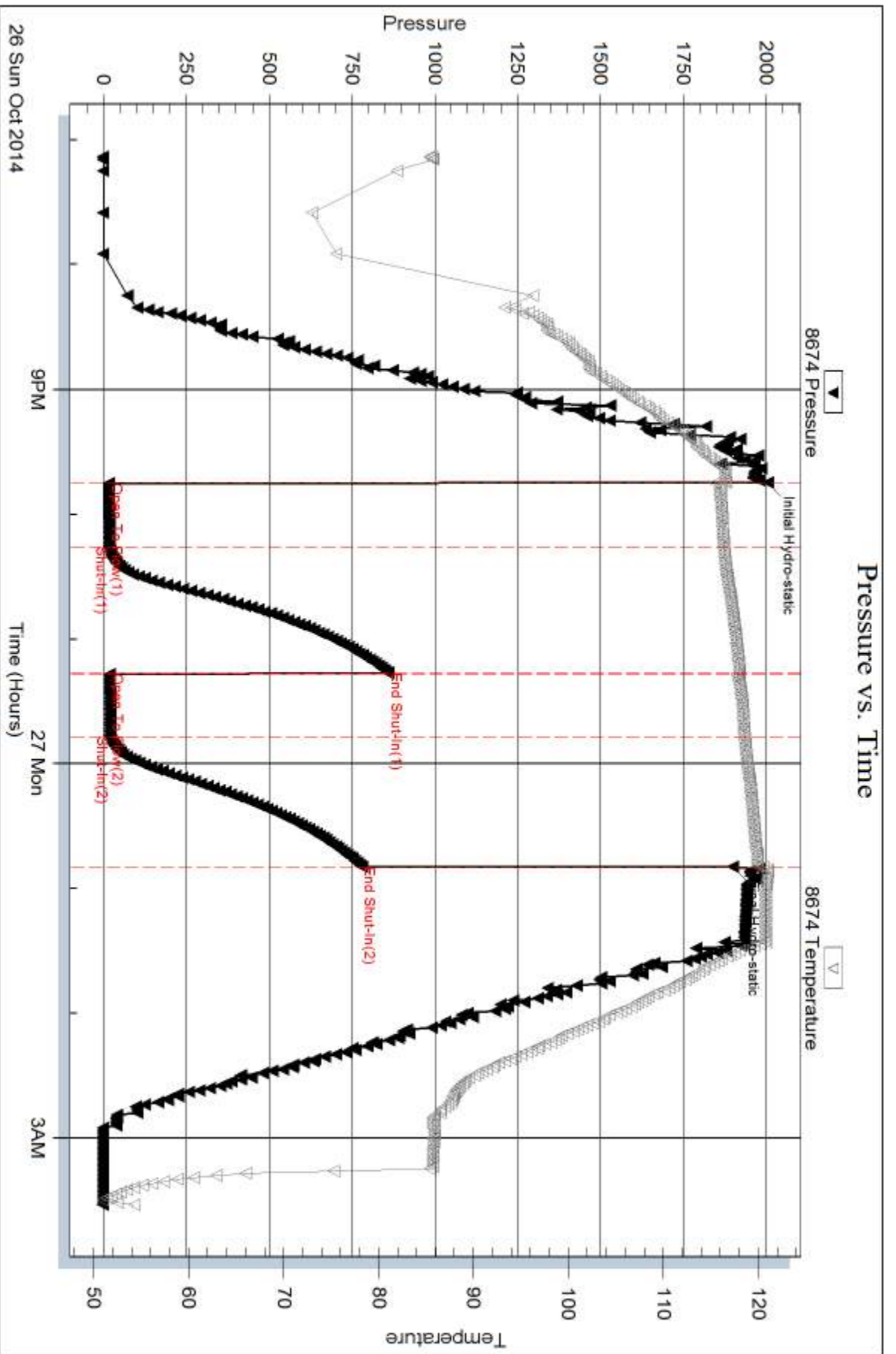
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.14 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100%mud	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:

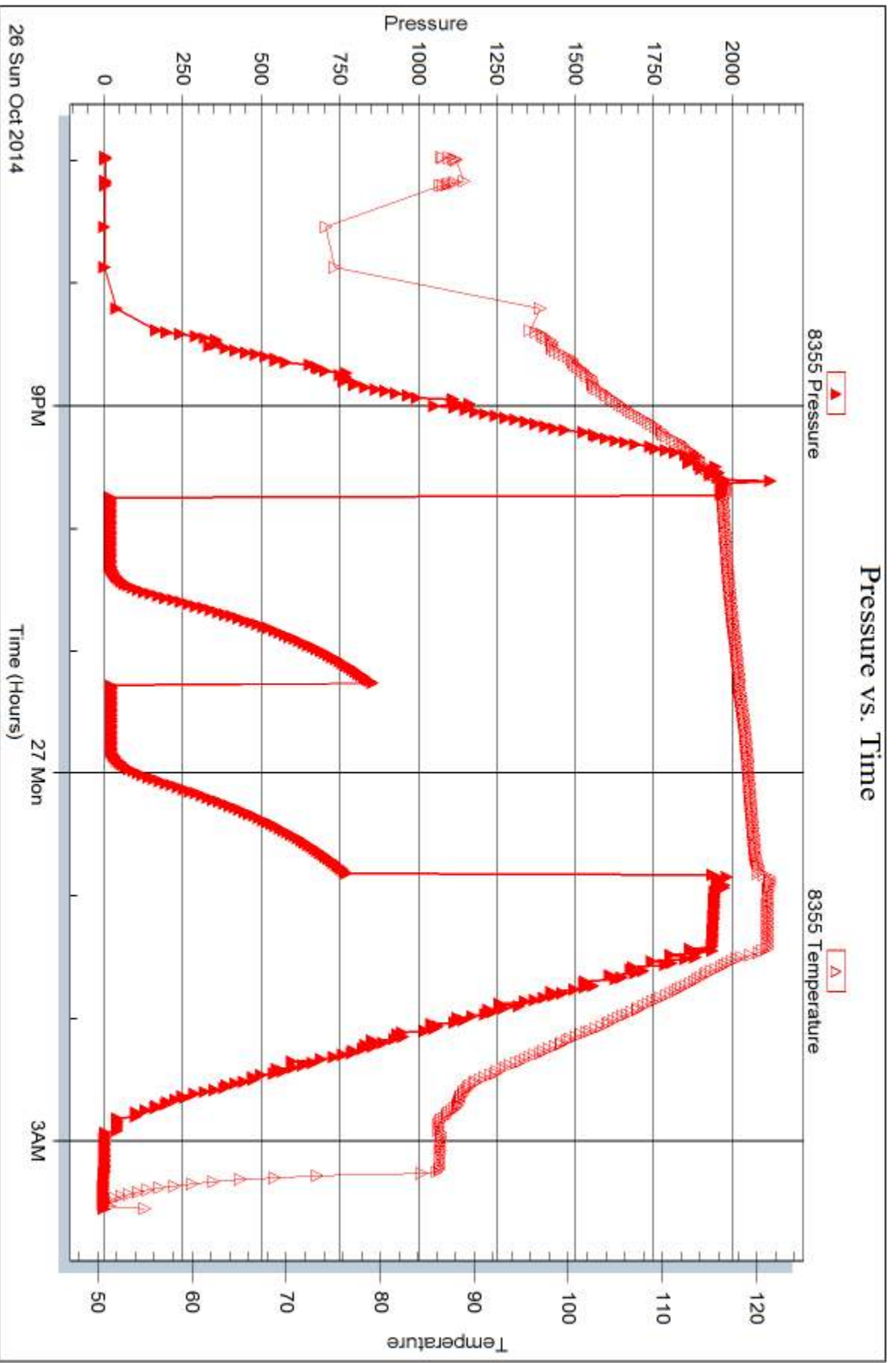


Serial #: 8355

Outside Murfin Drilling Co. Inc

Makings #1-18

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 57748

Printed: 2014, 10, 31 @ 10:04:56



DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS 67202

ATTN: Keith Reavis

Makings #1-18

18-4s-33w Rawlings,KS

Start Date: 2014.10.27 @ 13:06:00

End Date: 2014.10.27 @ 20:21:54

Job Ticket #: 57749 DST #: 2

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

Printed: 2014.10.31 @ 10:04:34

Murfin Drilling Co. Inc

18-4s-33w Rawlings,KS

Makings #1-18

DST # 2

LKC " B - D "

2014.10.27



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc
 250 N. Water Ste 300
 Wichita KS 67202
 ATTN: Keith Reavis

18-4s-33w Rawlings,KS

Makings #1-18

Job Ticket: 57749 **DST#: 2**
 Test Start: 2014.10.27 @ 13:06:00

GENERAL INFORMATION:

Formation: **LKC "B - D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:22:40
 Time Test Ended: 20:21:54
 Interval: **4042.00 ft (KB) To 4080.00 ft (KB) (TVD)**
 Total Depth: 4080.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Will MacLean
 Unit No: 71
 Reference Elevations: 3103.00 ft (KB)
 3098.00 ft (CF)
 KB to GR/CF: 5.00 ft

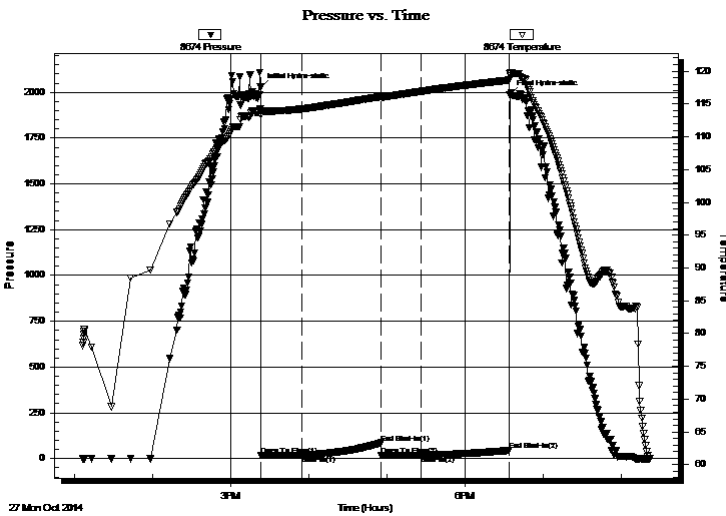
Serial #: 8674

Inside

Press@RunDepth: 19.64 psig @ 4046.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.27 End Date: 2014.10.27 Last Calib.: 2014.10.27
 Start Time: 13:06:00 End Time: 20:21:54 Time On Btm: 2014.10.27 @ 15:22:25
 Time Off Btm: 2014.10.27 @ 18:33:54

TEST COMMENT: IF- Weak Surface Blow
 IS- No Blow
 FF- No Blow
 FS- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2027.78	114.34	Initial Hydro-static
1	18.39	113.31	Open To Flow (1)
33	19.44	114.25	Shut-In(1)
93	86.39	116.09	End Shut-In(1)
93	18.55	116.05	Open To Flow (2)
124	19.64	116.91	Shut-In(2)
191	44.89	118.64	End Shut-In(2)
192	1985.30	119.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	100% mud	0.01

* 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: Keith Reavis

18-4s-33w Rawlings,KS

Makings #1-18

Job Ticket: 57749

DST#: 2

Test Start: 2014.10.27 @ 13:06:00

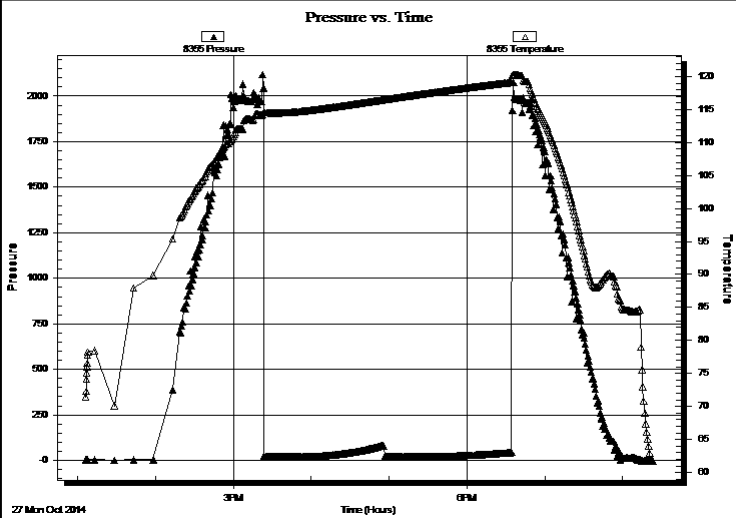
GENERAL INFORMATION:

Formation: **LKC " B - D "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:22:40
 Time Test Ended: 20:21:54
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Will MacLean
 Unit No: 71
 Interval: **4042.00 ft (KB) To 4080.00 ft (KB) (TVD)**
 Total Depth: 4080.00 ft (KB) (TVD)
 Reference Elevations: 3103.00 ft (KB)
 3098.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good
 KB to GR/CF: 5.00 ft

Serial #: 8355 Outside

Press@RunDepth: psig @ 4046.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.27 End Date: 2014.10.27 Last Calib.: 2014.10.27
 Start Time: 13:06:05 End Time: 20:23:14 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF- Weak Surface Blow
 IS- No Blow
 FF- No Blow
 FS- No Blow



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

Recovery		
Length (ft)	Description	Volume (bbl)
3.00	100% mud	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
250 N. Water Ste 300
Wichita KS 67202
ATTN: Keith Reavis

18-4s-33w Rawlings,KS
Makings #1-18
Job Ticket: 57749 **DST#: 2**
Test Start: 2014.10.27 @ 13:06:00

Tool Information

Drill Pipe:	Length: 3870.00 ft	Diameter: 3.80 inches	Volume: 54.29 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	32000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose:	18000.00 lb
			<u>Total Volume: 55.16 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4042.00 ft			Final	60000.0 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	38.00 ft				
Tool Length:	65.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4016.00	
Shut In Tool	5.00			4021.00	
Hydraulic tool	5.00			4026.00	
Jars	5.00			4031.00	
Safety Joint	2.00			4033.00	
Packer	5.00			4038.00	27.00 Bottom Of Top Packer
Packer	4.00			4042.00	
Stubb	1.00			4043.00	
Perforations	3.00			4046.00	
Recorder	0.00	8355	Outside	4046.00	
Recorder	0.00	8674	Inside	4046.00	
Perforations	29.00			4075.00	
Bullnose	5.00			4080.00	38.00 Bottom Packers & Anchor

Total Tool Length: 65.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc
250 N. Water Ste 300
Wichita KS 67202
ATTN: Keith Reavis

18-4s-33w Rawlings,KS
Makings #1-18
Job Ticket: 57749 **DST#: 2**
Test Start: 2014.10.27 @ 13:06:00

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: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.15 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1500.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

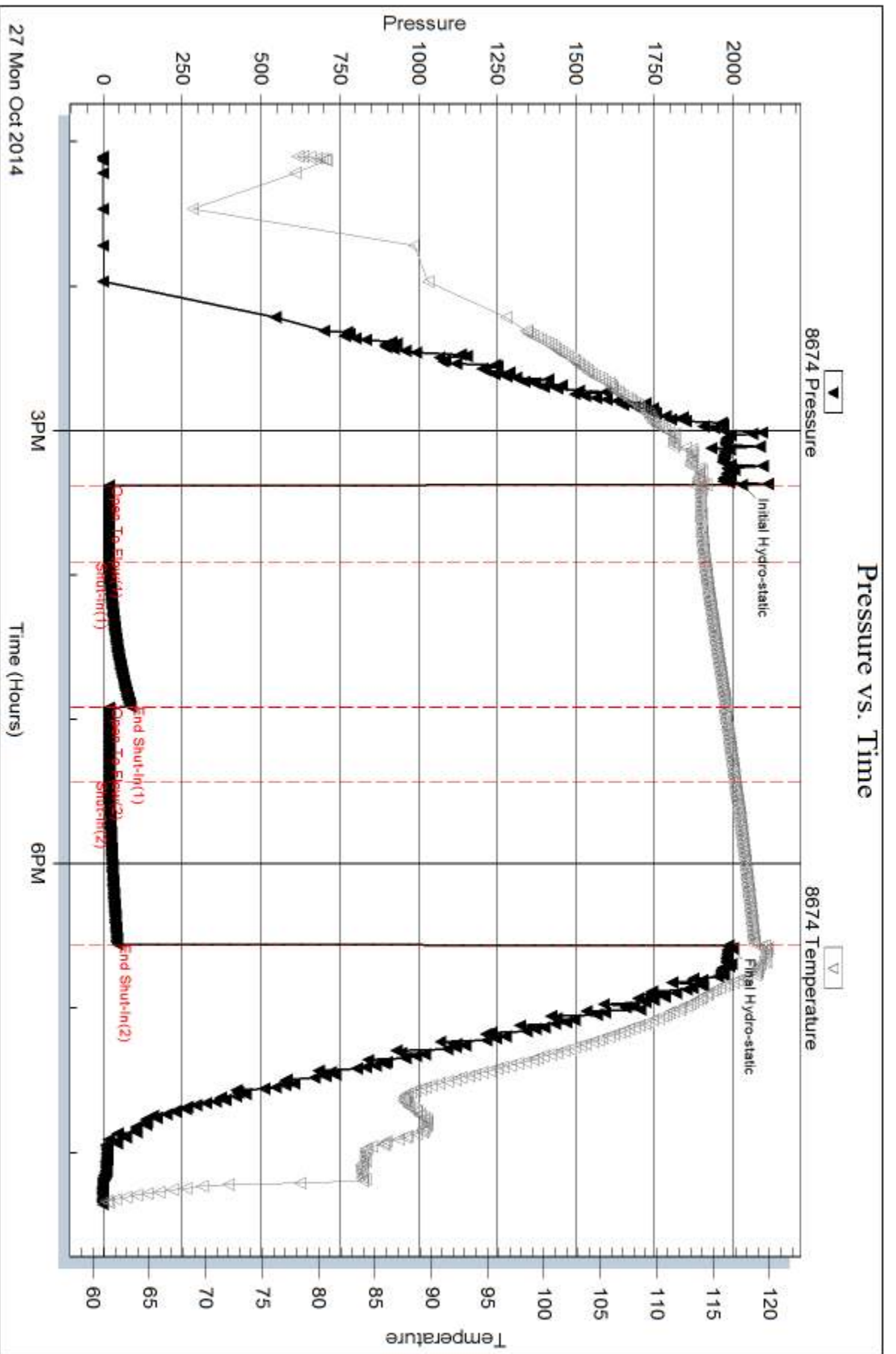
Length ft	Description	Volume bbl
3.00	100%mud	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

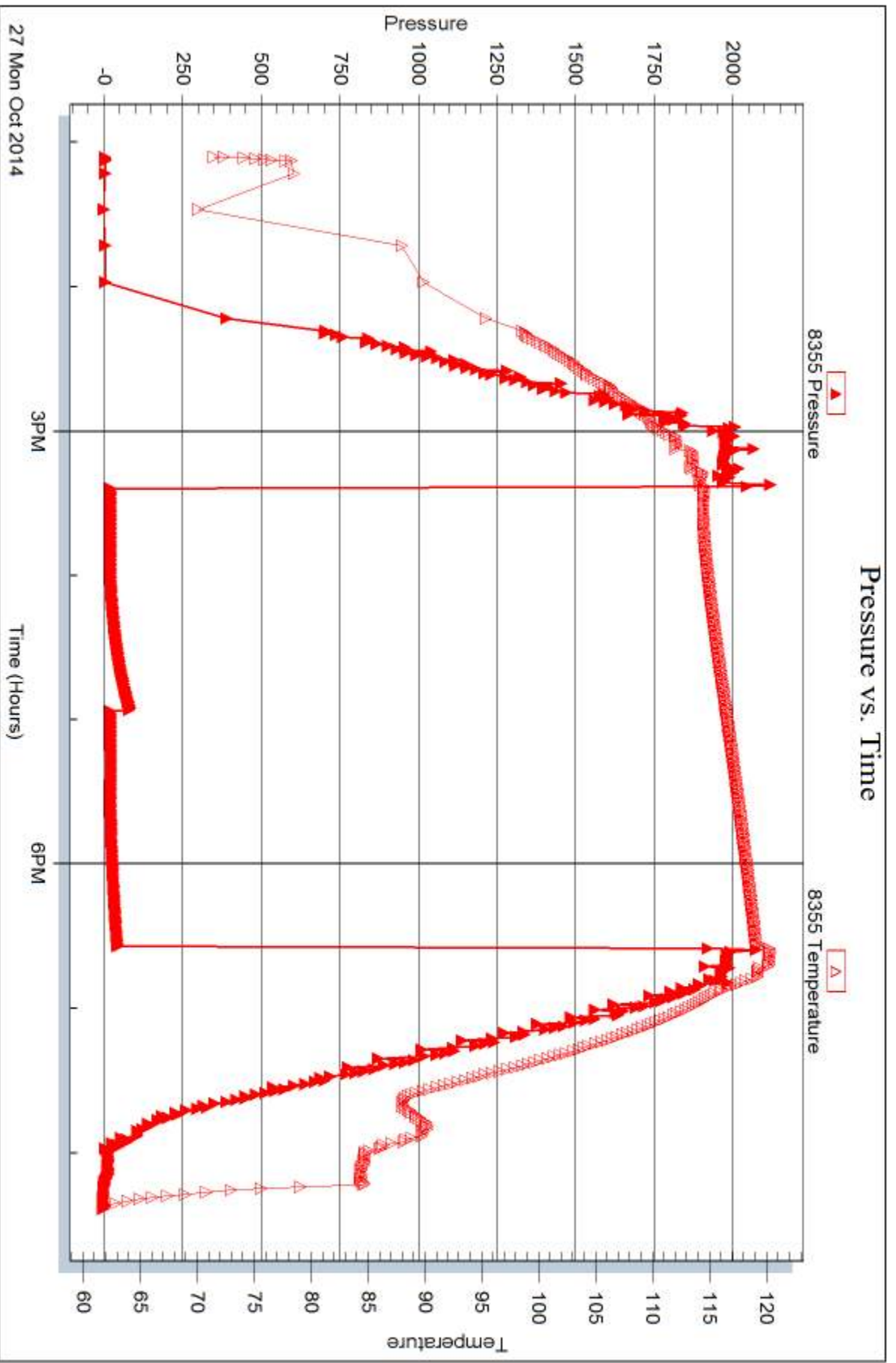


Serial #: 8355

Outside Murfin Drilling Co. Inc

Makings #1-18

DST Test Number: 2



27 Mon Oct 2014

Trilobite Testing, Inc

Ref. No: 57749

Printed: 2014, 10, 31 @ 10:04:35



DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS 67202

ATTN: Keith Reavis

Makings #1-18

18-4s-33w Rawlings,KS

Start Date: 2014.10.28 @ 07:08:00

End Date: 2014.10.28 @ 14:31:54

Job Ticket #: 57750 DST #: 3

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

Printed: 2014.10.31 @ 10:04:13

Murfin Drilling Co. Inc

18-4s-33w Rawlings,KS

Makings #1-18

DST # 3

LKC " F - G "

2014.10.28



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc
 250 N. Water Ste 300
 Wichita KS 67202
 ATTN: Keith Reavis

18-4s-33w Rawlings,KS

Makings #1-18

Job Ticket: 57750 **DST#: 3**
 Test Start: 2014.10.28 @ 07:08:00

GENERAL INFORMATION:

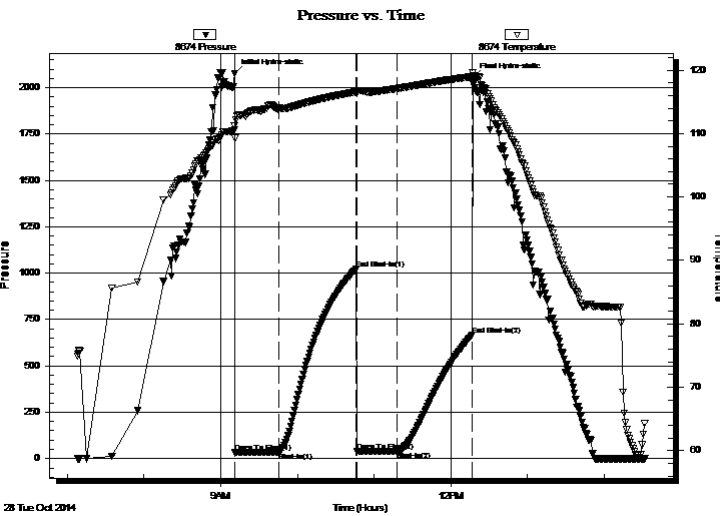
Formation: **LKC " F - G "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:11:10
 Time Test Ended: 14:31:54
 Interval: **4082.00 ft (KB) To 4126.00 ft (KB) (TVD)**
 Total Depth: 4126.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Will MacLean
 Unit No: 71
 Reference Elevations: 3103.00 ft (KB)
 3098.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8674

Inside

Press@RunDepth: 38.50 psig @ 4083.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.28 End Date: 2014.10.28 Last Calib.: 2014.10.28
 Start Time: 07:08:00 End Time: 14:31:54 Time On Btm: 2014.10.28 @ 09:10:55
 Time Off Btm: 2014.10.28 @ 12:17:09

TEST COMMENT: IF- 1/2" Blow Died in 17min Slid 5' to Bottom
 IS- No Blow
 FF- No Blow
 FS- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2077.77	110.61	Initial Hydro-static
1	32.07	109.25	Open To Flow (1)
35	36.00	113.96	Shut-In(1)
95	1021.72	116.55	End Shut-In(1)
96	37.22	116.25	Open To Flow (2)
127	38.50	117.09	Shut-In(2)
186	667.09	118.97	End Shut-In(2)
187	2053.61	119.64	Final Hydro-static

Recovery

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

* 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: Keith Reavis

18-4s-33w Rawlings,KS

Makings #1-18

Job Ticket: 57750

DST#: 3

Test Start: 2014.10.28 @ 07:08:00

GENERAL INFORMATION:

Formation: **LKC " F - G "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:11:10

Time Test Ended: 14:31:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 71

Interval: **4082.00 ft (KB) To 4126.00 ft (KB) (TVD)**

Total Depth: 4126.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3103.00 ft (KB)

3098.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8355

Outside

Press@RunDepth: psig @ 4083.00 ft (KB)

Start Date: 2014.10.28

Start Time: 07:08:05

End Date: 2014.10.28

End Time: 14:33:29

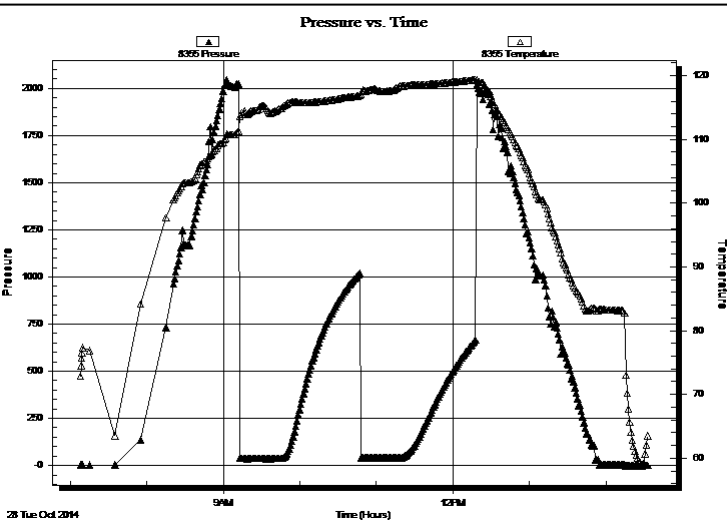
Capacity: 8000.00 psig

Last Calib.: 2014.10.28

Time On Btm:

Time Off Btm:

TEST COMMENT: IF- 1/2" Blow Died in 17min Slid 5' to Bottom
IS- No Blow
FF- No Blow
FS- No Blow



PRESSURE SUMMARY

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

Recovery

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

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
250 N. Water Ste 300
Wichita KS 67202
ATTN: Keith Reavis

18-4s-33w Rawlings,KS
Makings #1-18
Job Ticket: 57750 **DST#: 3**
Test Start: 2014.10.28 @ 07:08:00

Tool Information

Drill Pipe:	Length: 3902.00 ft	Diameter: 3.80 inches	Volume: 54.73 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 8000.00 lb
			<u>Total Volume: 55.60 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4082.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	71.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4056.00	
Shut In Tool	5.00			4061.00	
Hydraulic tool	5.00			4066.00	
Jars	5.00			4071.00	
Safety Joint	2.00			4073.00	
Packer	5.00			4078.00	27.00 Bottom Of Top Packer
Packer	4.00			4082.00	
Stubb	1.00			4083.00	
Recorder	0.00	8355	Outside	4083.00	
Recorder	0.00	8674	Inside	4083.00	
Perforations	5.00			4088.00	
Change Over Sub	1.00			4089.00	
Drill Pipe	31.00			4120.00	
Change Over Sub	1.00			4121.00	
Bullnose	5.00			4126.00	44.00 Bottom Packers & Anchor

Total Tool Length: 71.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

18-4s-33w Rawlings,KS

250 N. Water Ste 300
Wichita KS 67202

Makings #1-18

Job Ticket: 57750

DST#: 3

ATTN: Keith Reavis

Test Start: 2014.10.28 @ 07:08:00

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: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 9.14 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
10.00	100%mud	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

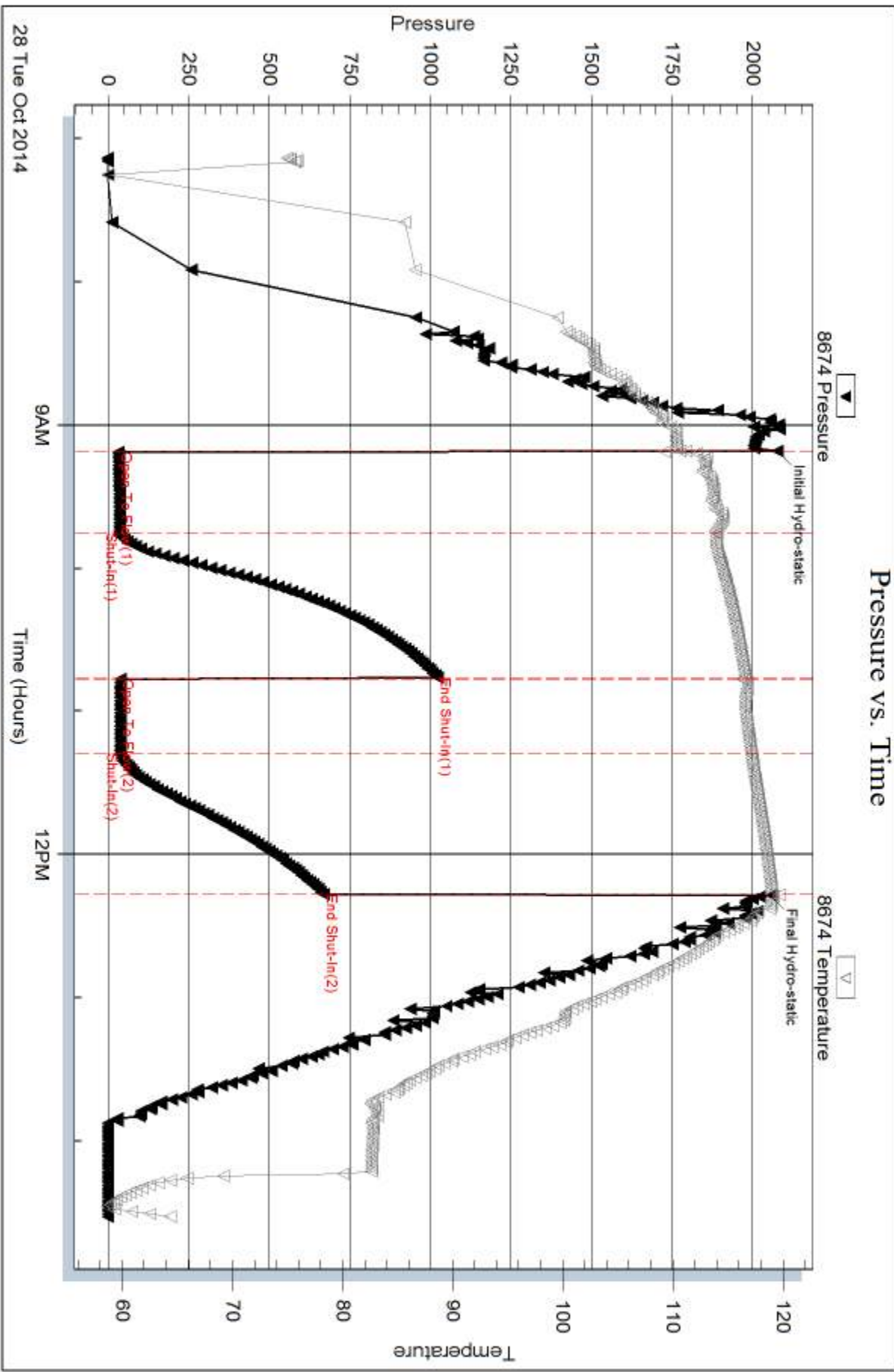
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Inside

Murfin Drilling Co. Inc

Makings #1-18

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 57750

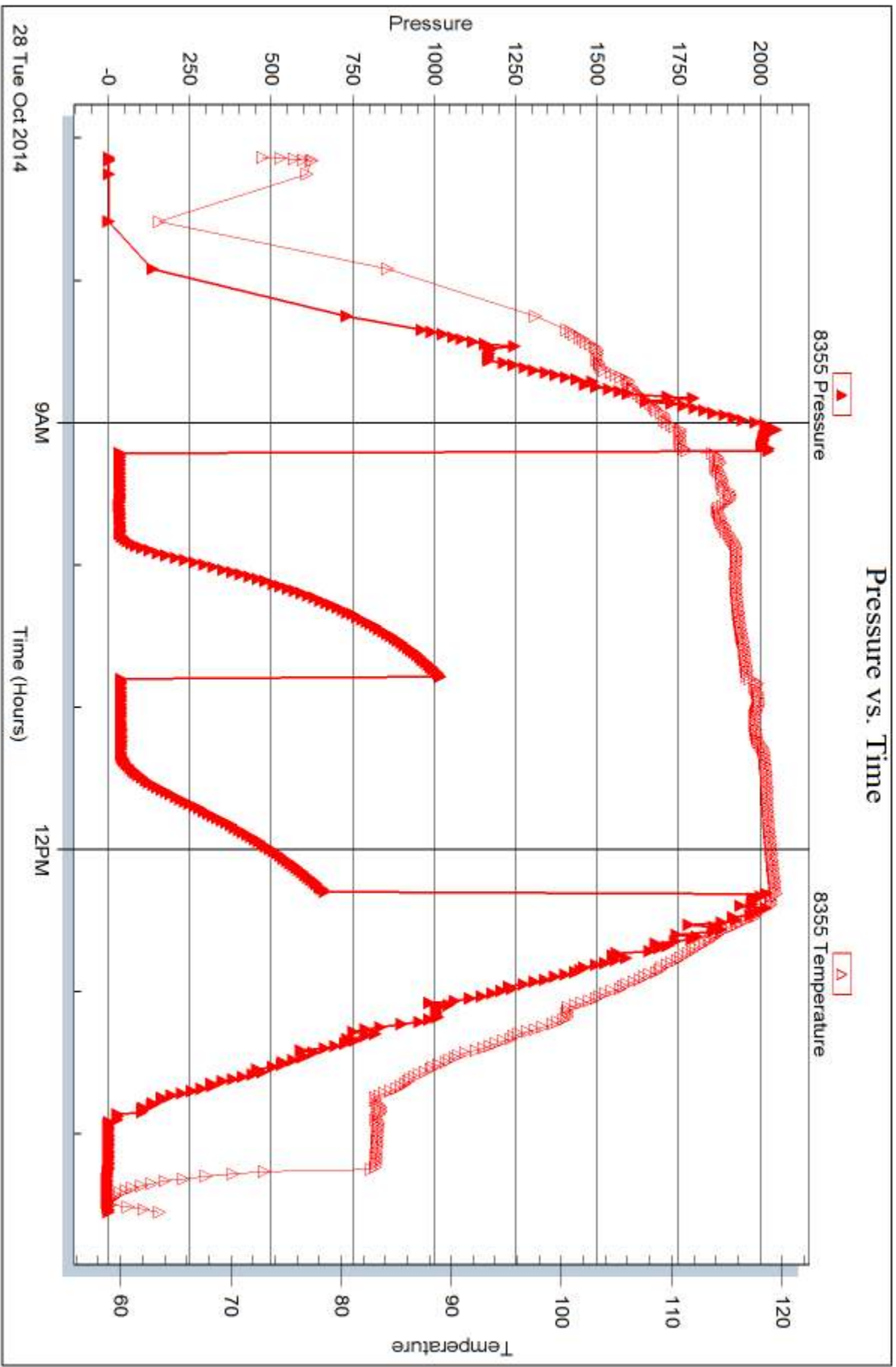
Printed: 2014, 10, 31 @ 10:04:14

Serial #: 8355

Outside Murfin Drilling Co. Inc

Makings #1-18

DST Test Number: 3



28 Tue Oct 2014

9AM

Time (Hours)

12PM

Pressure

Temperature

8355 Pressure

8355 Temperature



DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS 67202

ATTN: Keith Reavis

Makings #1-18

18-4s-33w Rawlings,KS

Start Date: 2014.10.29 @ 02:08:00

End Date: 2014.10.29 @ 12:10:55

Job Ticket #: 58702 DST #: 4

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

Printed: 2014.10.31 @ 10:03:47

Murfin Drilling Co. Inc

18-4s-33w Rawlings,KS

Makings #1-18

DST # 4

LKC "H-J"

2014.10.29



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc
 250 N. Water Ste 300
 Wichita KS 67202
 ATTN: Keith Reavis

18-4s-33w Rawlings,KS

Makings #1-18

Job Ticket: 58702 **DST#: 4**
 Test Start: 2014.10.29 @ 02:08:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 04:36:10
 Tester: Will MacLean
 Time Test Ended: 12:10:55
 Unit No: 71
 Interval: **4139.00 ft (KB) To 4220.00 ft (KB) (TVD)**
 Reference Elevations: 3103.00 ft (KB)
 Total Depth: 4220.00 ft (KB) (TVD) 3098.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

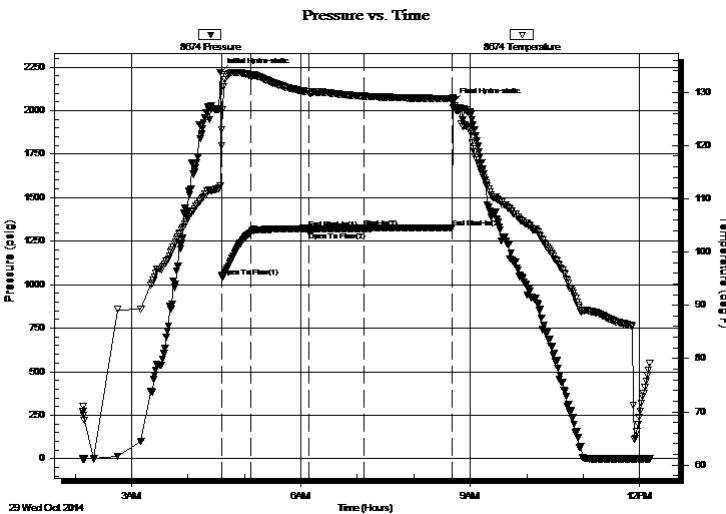
Serial #: 8674

Inside

Press@RunDepth: 1324.52 psig @ 4140.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.29 End Date: 2014.10.29 Last Calib.: 2014.10.29
 Start Time: 02:08:00 End Time: 12:10:55 Time On Btm: 2014.10.29 @ 04:34:25
 Time Off Btm: 2014.10.29 @ 08:41:39

TEST COMMENT: IF- Surface Blow 5" Built to BOB in 45sec Slid 8' to Bottom
 IS- No Blow
 FF- Weak Surface Blow Built to BOB in 5min Died Back to 3 1/4"
 FS- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2219.99	112.45	Initial Hydro-static
2	1046.51	123.01	Open To Flow (1)
33	1299.13	133.03	Shut-In(1)
94	1322.50	130.02	End Shut-In(1)
94	1304.45	129.97	Open To Flow (2)
153	1324.52	129.23	Shut-In(2)
247	1326.12	128.77	End Shut-In(2)
248	2044.62	129.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1500.00	GMCW 3%g 4%m 93%w	19.43
630.00	GMCW 3%g 20%m 77%w	8.84
441.00	GWCM 3%g 45%w 52%m	6.19
257.00	WCM 33%w 67%m	3.61

* 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: Keith Reavis

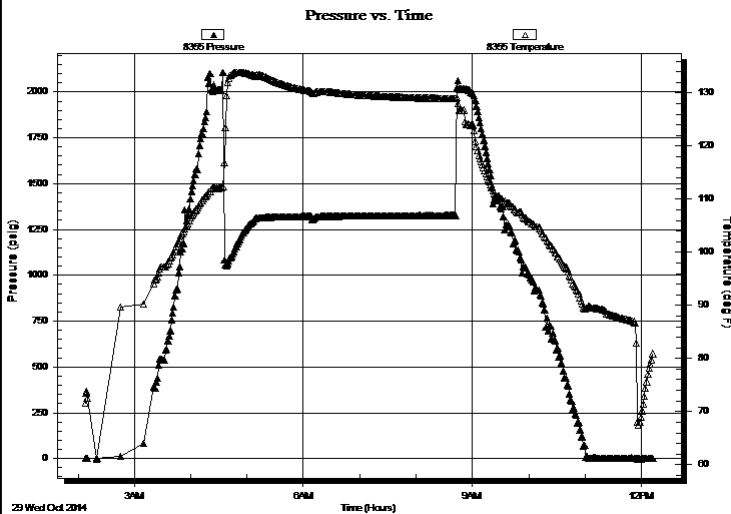
18-4s-33w Rawlings,KS
Makings #1-18
 Job Ticket: 58702 **DST#: 4**
 Test Start: 2014.10.29 @ 02:08:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 04:36:10 Tester: Will MacLean
 Time Test Ended: 12:10:55 Unit No: 71
Interval: 4139.00 ft (KB) To 4220.00 ft (KB) (TVD) Reference Elevations: 3103.00 ft (KB)
 Total Depth: 4220.00 ft (KB) (TVD) 3098.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8355 Outside
 Press@RunDepth: psig @ 4140.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.29 End Date: 2014.10.29 Last Calib.: 2014.10.29
 Start Time: 02:08:05 End Time: 12:12:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF- Surface Blow 5" Built to BOB in 45sec Slid 8' to Bottom
 IS- No Blow
 FF- Weak Surface Blow Built to BOB in 5min Died Back to 3 1/4"
 FS- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1500.00	GMCW 3%g 4%m 93%w	19.43
630.00	GMCW 3%g 20%m 77%w	8.84
441.00	GWCM 3%g 45%w 52%m	6.19
257.00	WCM 33%w 67%m	3.61

* 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
250 N. Water Ste 300
Wichita KS 67202
ATTN: Keith Reavis

18-4s-33w Rawlings,KS
Makings #1-18
Job Ticket: 58702 **DST#: 4**
Test Start: 2014.10.29 @ 02:08:00

Tool Information

Drill Pipe:	Length: 3967.00 ft	Diameter: 3.80 inches	Volume: 55.65 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	36000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose:	10000.00 lb
			<u>Total Volume: 56.52 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	62000.00 lb
Depth to Top Packer:	4139.00 ft			Final	70000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	81.00 ft				
Tool Length:	108.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			4113.00	
Shut In Tool	5.00			4118.00	
Hydraulic tool	5.00			4123.00	
Jars	5.00			4128.00	
Safety Joint	2.00			4130.00	
Packer	5.00			4135.00	27.00 Bottom Of Top Packer
Packer	4.00			4139.00	
Stubb	1.00			4140.00	
Recorder	0.00	8355	Outside	4140.00	
Recorder	0.00	8674	Inside	4140.00	
Perforations	10.00			4150.00	
Change Over Sub	1.00			4151.00	
Drill Pipe	63.00			4214.00	
Change Over Sub	1.00			4215.00	
Bullnose	5.00			4220.00	81.00 Bottom Packers & Anchor

Total Tool Length: 108.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc
250 N. Water Ste 300
Wichita KS 67202
ATTN: Keith Reavis

18-4s-33w Rawlings,KS
Makings #1-18
Job Ticket: 58702 **DST#: 4**
Test Start: 2014.10.29 @ 02:08:00

Mud and Cushion Information

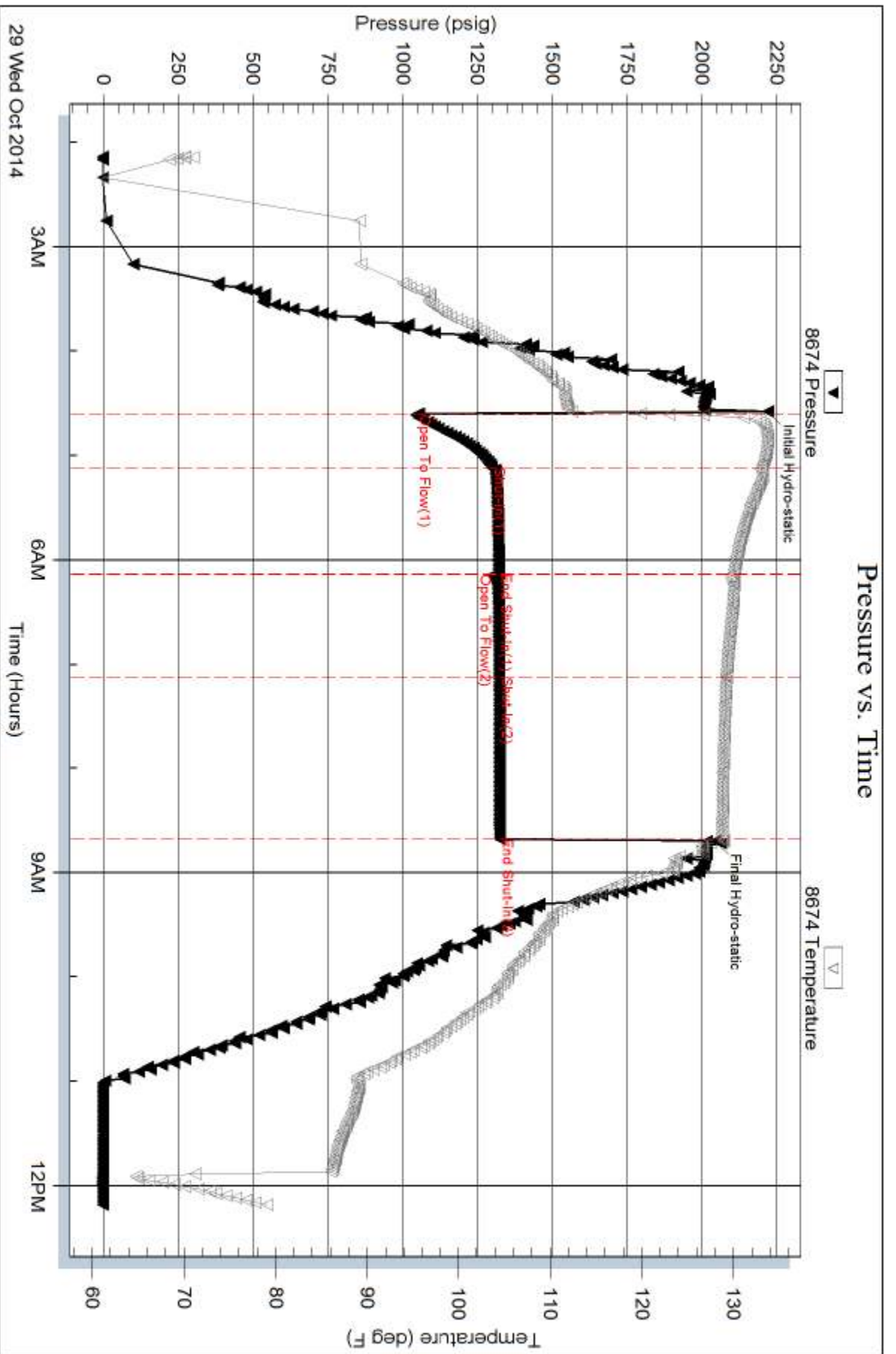
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	32000 ppm
Viscosity: 46.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.16 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2600.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1500.00	GMCW 3%g 4%m 93%w	19.429
630.00	GMCW 3%g 20%m 77%w	8.837
441.00	GWCM 3%g 45%w 52%m	6.186
257.00	WCM 33%w 67%m	3.605

Total Length: 2828.00 ft Total Volume: 38.057 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: API is .123 @ 66f = 32000

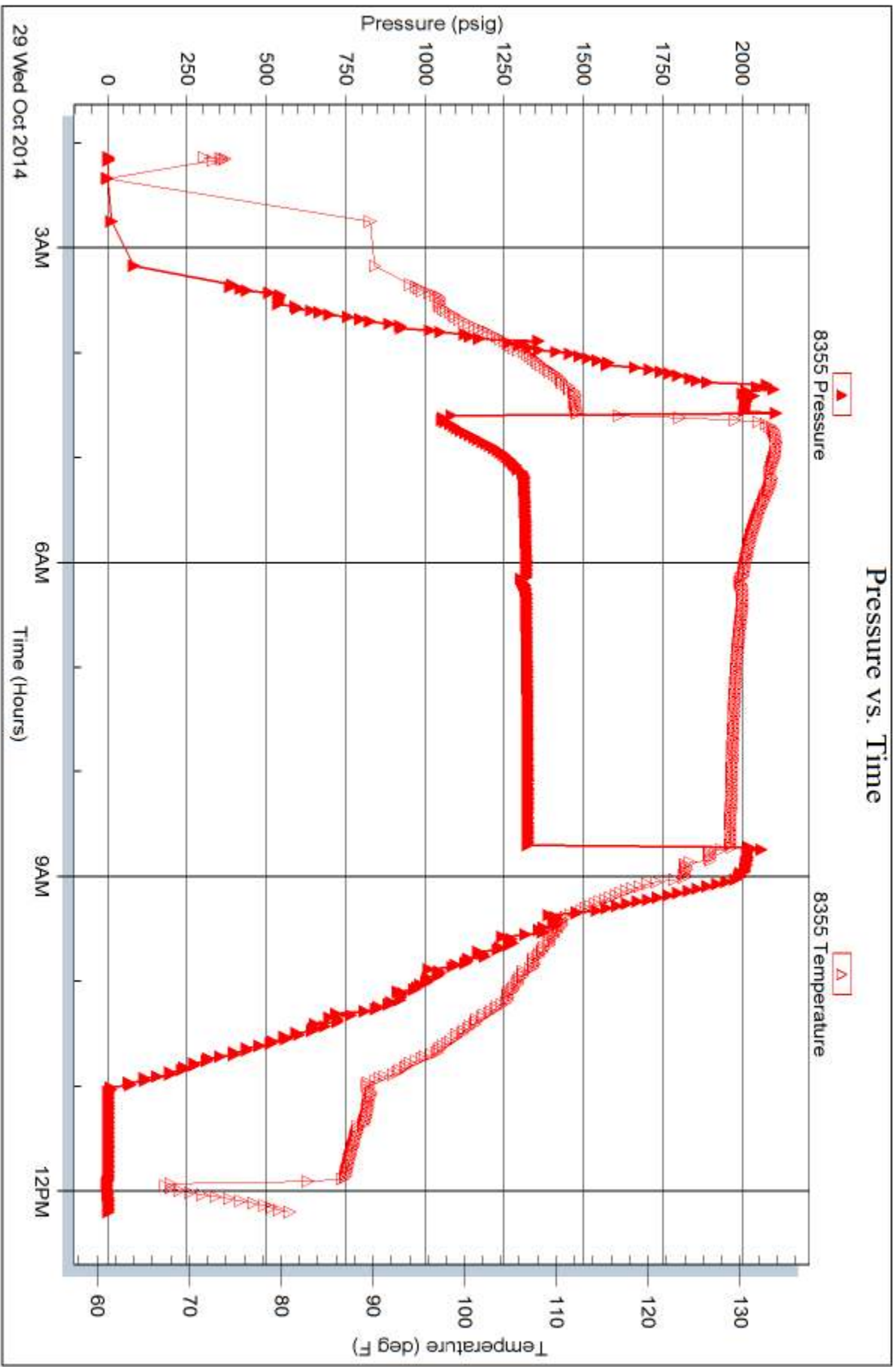


Serial #: 8355

Outside Murfin Drilling Co. Inc

Makings #1-18

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 58702

Printed: 2014, 10, 31 @ 10:03:49



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57748

Well Name & No. Makings #1-18 Test No. DST #1 Date 10-25-14
 Company Martin Drilling Co Inc Elevation 3103 KB 3098 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Keith Reavis Rig Martin #7
 Location: Sec. 18 Twp. 4S Rge. 33W Co. Rawlins State KS

Interval Tested 3986-4040 Zone Tested Toronto / LRC "A"
 Anchor Length 54 Drill Pipe Run 3806 Mud Wt. 9.1
 Top Packer Depth 3982 Drill Collars Run 177 Vis 56
 Bottom Packer Depth 3986 Wt. Pipe Run 0 WL 8.2
 Total Depth 4040 Chlorides 1000 ppm System LCM 416
 Blow Description TF - Weak Surface Blow 1/4"
ISI - No Blow
FF - No Blow
FST - No Blow

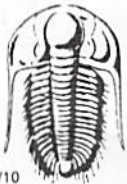
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2004 Test 1250 T-On Location 17:20
 (B) First Initial Flow 16 Jars 250 T-Started 19:08
 (C) First Final Flow 18 Safety Joint 75 T-Open 21:44
 (D) Initial Shut-In 859 Circ Sub N/C T-Pulled 00:49
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 3:32
 (F) Second Final Flow 20 Mileage 188 R/T 76rt 117.80 Comments _____
 (G) Final Shut-In 779 Sampler _____ Motel
 (H) Final Hydrostatic 1899 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1692.80
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1692.80

Approved By Keith Reavis Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57749

Well Name & No. McKings #1-18 Test No. DST #2 Date 10-27-14
 Company Murfin Drilling Co. Inc Elevation 3103 KB 3098 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Keith Reavis Rig Murfin 7
 Location: Sec. 18 Twp. 4s Rge. 33W Co. Rawlins State KS

Interval Tested 4042-4080 Zone Tested LRC "B-D"
 Anchor Length 38 Drill Pipe Run 3870 Mud Wt. 9.2
 Top Packer Depth 4038 Drill Collars Run 177 Vis 50
 Bottom Packer Depth 4042 Wt. Pipe Run 0 WL 9.2
 Total Depth 4080 Chlorides 1500 ppm System LCM 216

Blow Description IF- Weak Surface Blow
ISI- No Blow
FF- No Blow
FST- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</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

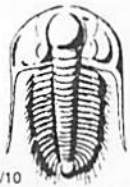
Rec Total 3 BHT 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2027 Test 1250 T-On Location 12:04
 (B) First Initial Flow 18 Jars 250 T-Started 13:06
 (C) First Final Flow 19 Safety Joint 75 T-Open 15:22
 (D) Initial Shut-In 86 Circ Sub NIC T-Pulled 18:23
 (E) Second Initial Flow 18 Hourly Standby T-Out 20:21.54
 (F) Second Final Flow 19 Mileage 188 RIT 117.80 Comments _____
 (G) Final Shut-In 44 Sampler _____ Motel
 (H) Final Hydrostatic 1985 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 1692.80
 Final Flow 30 Day Standby _____ Total _____
 Final Shut-In 60 Accessibility _____ MP/DST Disc't _____
 Sub Total 1692.80

Approved By _____ Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57750

Well Name & No. Markings #1-18 Test No. DST #3 Date 10-28-14
 Company Martin Drilling Co. Inc Elevation 3103 KB 3098 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Keith Reavis Rig Martin 7
 Location: Sec. 18 Twp. 4S Rge. 33W Co. Rawlins State KS

Interval Tested 4082-4126 Zone Tested LRC "F-G"
 Anchor Length 44 Drill Pipe Run 3902 Mud Wt. 9.2
 Top Packer Depth 4078 Drill Collars Run 177 Vis 50
 Bottom Packer Depth 4082 Wt. Pipe Run 0 WL 9.2
 Total Depth 4126 Chlorides 1500 ppm System LCM 216
 Blow Description IF - 1/2" Blow Prod in 17 min slid 5' to bottom
ISI - No Blow
FF - No Blow
FBI - No Blow

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 119 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2077 Test 1250 T-On Location 6:44
 (B) First Initial Flow 32 Jars 250 T-Started 7:05
 (C) First Final Flow 36 Safety Joint 75 T-Open 9:11
 (D) Initial Shut-In 1021 Circ Sub NIC T-Pulled 12:17
 (E) Second Initial Flow 37 Hourly Standby _____ T-Out 14:31
 (F) Second Final Flow 38 Mileage 180 R/T 117.80 Comments _____
 (G) Final Shut-In 667 Sampler _____ Motel
 (H) Final Hydrostatic 2053 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1692.80
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1692.80

Approved By _____ Our Representative W. M.
 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. 58702

Well Name & No. Makings #1-18 Test No. D57 #4 Date 10-29-14
 Company Martin Drilling Co. Inc Elevation 3103 KB 3098 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Keith Reavis Rig Martin 7
 Location: Sec. 18 Twp. 4s Rge. 33w Co. Rawlins State KS

Interval Tested 4139-4220 Zone Tested LRC "H-J"
 Anchor Length 81 Drill Pipe Run 3967 Mud Wt. 9.1
 Top Packer Depth 4135 Drill Collars Run 177 Vis 46
 Bottom Packer Depth 4139 Wt. Pipe Run 0 WL 9.2
 Total Depth 4220 Chlorides 2600 ppm System LCM 216

Blow Description IF - Surface Blow 5" Built to BOB in 45 sec slid 8' to Bottom
ISI - No Blow
EF - Well Surface Blow Built to BOB in 5 min Died Back to 3 1/4"
FST - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>257</u>	<u>WCM</u>		<u>33</u>	<u>67</u>	
<u>441</u>	<u>GWCM</u>	<u>3</u>	<u>45</u>	<u>52</u>	
<u>630</u>	<u>GMCW</u>	<u>3</u>	<u>77</u>	<u>20</u>	
<u>1500</u>	<u>GMCW</u>	<u>3</u>	<u>93</u>	<u>4</u>	
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2828 BHT 128 Gravity API RW 123 @ 66 °F Chlorides 32000 ppm

(A) Initial Hydrostatic 2219 Test 1250 T-On Location 1:40
 (B) First Initial Flow 1046 Jars 250 T-Started 2:08
 (C) First Final Flow 1299 Safety Joint 75 T-Open 4:36
 (D) Initial Shut-In 1322 Circ Sub MC T-Pulled 8:41
 (E) Second Initial Flow 1304 Hourly Standby _____ T-Out 12:10
 (F) Second Final Flow 1324 Mileage 188 RIT 117.80 Comments Notes
 (G) Final Shut-In 1326 Sampler _____ 117.80 Loaded tools 10/30
 (H) Final Hydrostatic 2044 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1810.60
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1810.60

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

Approved By _____ Our Representative [Signature]

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

OPERATOR

Company: Murfin Drilling Company
 Address: 250 N. Water
 Suite 300
 Wichita, KS 67202
 Contact Geologist: Shauna Gunzelman
 Contact Phone Nbr: 316-267-3241
 Well Name: Makings #1-18
 Location: Sec. 18 - T4S - R33W
 API: 15-153-21072-0000
 Pool: _____ Field: Wildcat
 State: Kansas Country: USA



Scale 1:240 Imperial

Well Name: Makings #1-18
 Surface Location: Sec. 18 - T4S - R33W
 Bottom Location:
 API: 15-153-21072-0000
 License Number: 30606
 Spud Date: 10/23/2014 Time: 3:45 PM
 Region: Rawlins County
 Drilling Completed: 10/30/2014 Time: 5:10 PM
 Surface Coordinates: 1100' FSL & 330' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 3098.00ft
 K.B. Elevation: 3103.00ft
 Logged Interval: 3740.00ft To: 4720.00ft
 Total Depth: 4720.00ft
 Formation: Mississippian
 Drilling Fluid Type: Chemical/Fresh Water Gel

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude:
 Latitude:
 N/S Co-ord: 1100' FSL
 E/W Co-ord: 330' FWL

LOGGED BY

Keith Reavis
Consulting Geologist

Company: Keith Reavis, Inc.
 Address: 3420 22nd Street
 Great Bend, KS 67530
 Phone Nbr: 620-617-4091
 Logged By: KLG #136 Name: Keith Reavis

CONTRACTOR

Contractor: Murfin Drilling Company
 Rig #: 7
 Rig Type: mud rotary
 Spud Date: 10/23/2014 Time: 3:45 PM
 TD Date: 10/30/2014 Time: 5:10 PM
 Rig Release: _____ Time: _____

ELEVATIONS

K.B. Elevation: 3103.00ft Ground Elevation: 3098.00ft
 K.B. to Ground: 5.00ft

NOTES

Due to negative results of DST's #1 - #4 and subsequent electrical log analysis, it was determined by the operator that the Makings #1-18 be plugged and abandoned as a dry test.

The samples were saved and will be available for review at the Kansas Geological Survey Well Sample Library located in Wichita, KS.

Respectfully submitted,
 Keith Reavis

Murfin Drilling Company
daily drilling report

DATE	7:00 AM DEPTH	REMARKS
10/25/2014		Geologist Keith Reavis on location @ 1900 hrs, 3730 ft, tripping bit, out with PDC and in with button, resume drilling
10/26/2014	3894	drilling ahead, Topeka, Deer Creek, Lecompton, Heebner, Toronto, Lansing shows in Toronto and Lansing A warrant test, short trip, TOH w/bit in w/tools
10/27/2014	4040	complete DST #1, successful test, TIH w/bit, resume drilling, B & D zones, show in B warrants test, TOH for DST #2, in w/tools, conduct and complete DST#2, successful test, TIH w/bit
10/28/2014	4126	resume drilling, run test across E, F and G, TOH w/bit, in w/tools, conduct DST #3, successful test, out w/tools, in w/bit, resume drilling, show in H and J warrant test, TOH w/bit
10/29/2014	4220	in hole w/tools, conducting DST #4, complete DST #4 successful test, back in hole w/bit, resume drilling, lower KC, Marmaton
10/30/2014	4482	drilling ahead, Pawnee, Ft. Scott, Cherokee, Mississippian, TD @ 4720 ft, 1710 hrs, short trip, ctch, TOH for logs, conducting logging operations
10/31/2014	4710	conduct and complete logging operations, geologist off location 0330 hrs

Murfin Drilling Company
well comparison sheet

DRILLING WELL					COMPARISON WELL				
MDC - Makings #1-18 1100' FSL & 330' FWL Sec 18-T4S-R33W					MDC - Morgan #1-17 660' FSL & 2310' FEL Sec 17-T4S-R33W				
3103 KB					3049 KB			Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	
Topeka	3819	-716	3825	-722	3782	-733	17	11	
Lecompton	3923	-820	3928	-825	3884	-835	15	10	
Oread	3965	-862	3972	-869	3926	-877	15	8	
Heebner	3988	-885	3992	-889	3950	-901	16	12	
Toronto	4018	-915	4026	-923	3980	-931	16	8	
Lansing	4029	-926	4036	-933	3991	-942	16	9	
Lansing G	4119	-1016	4128	-1025	4080	-1031	15	6	
Stark	4219	-1116	4224	-1121	4179	-1130	14	9	
Base KC	4267	-1164	4271	-1168	4229	-1180	16	12	
Pawnee	4400	-1297	4403	-1300	4362	-1313	16	13	
Cherokee	4468	-1365	4474	-1371	4432	-1383	18	12	
Mississippian	4643	-1540	4642	-1539	4618	-1569	29	30	
Total Depth	4720	-1617	4728	-1625	4690	-1641	24	16	

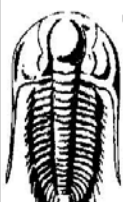
Drill Stem Test #1

	DRILL STEM TEST REPORT																																					
	Murfin Drilling Co. Inc 250 N. Water Ste 300 Wichita KS 67202 ATTN: Keith Reavis	18-4s-33w Rawlins Co. KS Makings # 1-18 Job Ticket: 57748 DST#: 1 Test Start: 2014.10.26 @ 19:08:00																																				
GENERAL INFORMATION: Formation: Toronto / LKC " A Deviated: No Whipstock ft (KB) Time Tool Opened: 21:44:55 Time Test Ended: 03:32:09 Interval: 3986.00 ft (KB) To 4040.00 ft (KB) (TVD) Total Depth: 4040.00 ft (KB) (TVD) Hole Diameter: 7.88 inches-Hole Condition: Good Test Type: Conventional Bottom Hole (Initial) Tester: Will MacLean Unit No: 71 Reference Elevations: 3103.00 ft (KB) 3098.00 ft (CF) KB to GR/CF: 5.00 ft																																						
Serial #: 8674 Inside Press@RunDepth: 20.83 psig @ 3987.00 ft (KB) Start Date: 2014.10.27 Start Time: 19:08:00 End Time: 03:32:09 Capacity: 8000.00 psig Last Calib.: 2014.10.27 Time On Btm: 2014.10.26 @ 21:44:40 Time Off Btm: 2014.10.27 @ 00:49:39																																						
TEST COMMENT: IF- Weak Surface Blow 1/4" IS- No Blow FF- No Blow FS- No Blow																																						
	PRESSURE SUMMARY <table border="1"> <thead> <tr> <th>Time (Min.)</th> <th>Pressure (psig)</th> <th>Temp (deg F)</th> <th>Annotation</th> </tr> </thead> <tbody> <tr><td>0</td><td>2004.80</td><td>116.59</td><td>Initial Hydro-static</td></tr> <tr><td>1</td><td>16.66</td><td>115.42</td><td>Open To Flow (1)</td></tr> <tr><td>31</td><td>18.51</td><td>116.35</td><td>Shut-In(1)</td></tr> <tr><td>92</td><td>859.00</td><td>118.03</td><td>End Shut-In(1)</td></tr> <tr><td>92</td><td>19.92</td><td>117.64</td><td>Open To Flow (2)</td></tr> <tr><td>123</td><td>20.83</td><td>118.52</td><td>Shut-In(2)</td></tr> <tr><td>185</td><td>779.61</td><td>119.89</td><td>End Shut-In(2)</td></tr> <tr><td>185</td><td>1899.83</td><td>120.41</td><td>Final Hydro-static</td></tr> </tbody> </table>		Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation	0	2004.80	116.59	Initial Hydro-static	1	16.66	115.42	Open To Flow (1)	31	18.51	116.35	Shut-In(1)	92	859.00	118.03	End Shut-In(1)	92	19.92	117.64	Open To Flow (2)	123	20.83	118.52	Shut-In(2)	185	779.61	119.89	End Shut-In(2)	185	1899.83	120.41	Final Hydro-static
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation																																			
0	2004.80	116.59	Initial Hydro-static																																			
1	16.66	115.42	Open To Flow (1)																																			
31	18.51	116.35	Shut-In(1)																																			
92	859.00	118.03	End Shut-In(1)																																			
92	19.92	117.64	Open To Flow (2)																																			
123	20.83	118.52	Shut-In(2)																																			
185	779.61	119.89	End Shut-In(2)																																			
185	1899.83	120.41	Final Hydro-static																																			

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

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

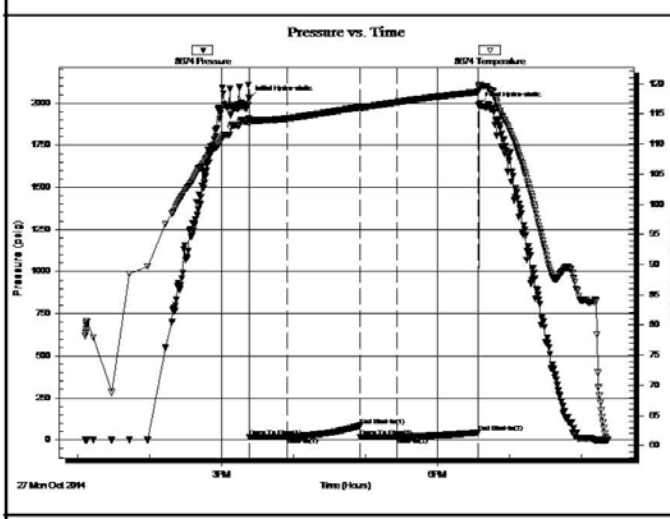
Drill Stem Test #2

	DRILL STEM TEST REPORT	
	Murfin Drilling Co. Inc 250 N. Water Ste 300 Wichita KS 67202 ATTN: Keith Reavis	18-4s-33w Rawlings Co. KS Makings # 1-18 Job Ticket: 57749 DST#: 2 Test Start: 2014.10.27 @ 13:06:00

GENERAL INFORMATION:
 Formation: **LKC "B-D"**
 Deviated: No Whipstock ft (KB)
 Time Tool Opened: 15:22:40
 Time Test Ended: 20:21:54
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Will MacLean
 Unit No: 71
 Interval: **4042.00 ft (KB) To 4080.00 ft (KB) (TVD)**
 Total Depth: 4080.00 ft (KB) (TVD)
 Reference Elevations: 3103.00 ft (KB)
 3098.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8674 Inside
 Press@RunDepth: 19.64 psig @ 4046.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.27 End Date: 2014.10.27 Last Calib.: 2014.10.27
 Start Time: 13:06:00 End Time: 20:21:54 Time On Btm: 2014.10.27 @ 15:22:25
 Time Off Btm: 2014.10.27 @ 18:33:54

TEST COMMENT: IF- Weak Surface Blow
 IS- No Blow
 FF- No Blow
 FSI- No Blow




PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2027.78	114.34	Initial Hydro-static
1	18.39	113.31	Open To Flow (1)
33	19.44	114.25	Shut-In(1)
93	86.39	116.09	End Shut-In(1)
93	18.55	116.05	Open To Flow (2)
124	19.64	116.91	Shut-In(2)
191	44.89	118.64	End Shut-In(2)
192	1985.30	119.61	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
3.00	100% mud	0.01

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

* Recovery from multiple tests

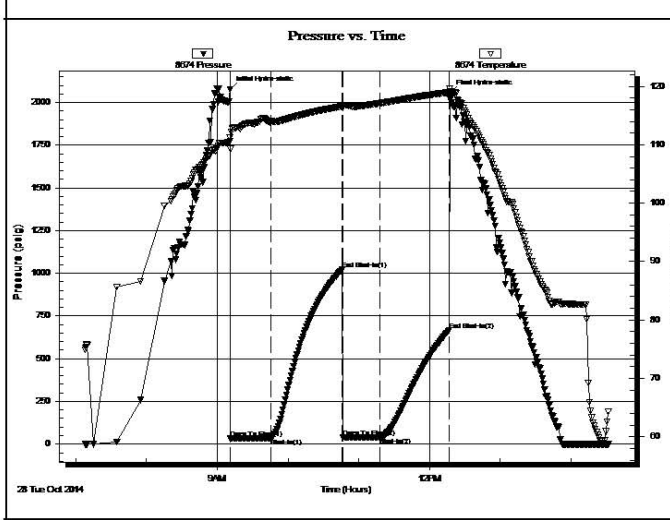
Drill Stem Test #3

	DRILL STEM TEST REPORT	
	Murfin Drilling Co. Inc 250 N. Water Ste 300 Wichita KS 67202 ATTN: Keith Reavis	18-4s-33w Rawlings Co. KS Makings # 1-18 Job Ticket: 57750 DST#: 3 Test Start: 2014.10.28 @ 07:08:00

GENERAL INFORMATION:
 Formation: **LKC "F-G"**
 Deviated: No Whipstock ft (KB)
 Time Tool Opened: 09:11:10
 Time Test Ended: 14:31:54
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Will MacLean
 Unit No: 71
 Interval: **4082.00 ft (KB) To 4126.00 ft (KB) (TVD)**
 Total Depth: 4126.00 ft (KB) (TVD)
 Reference Elevations: 3103.00 ft (KB)
 3098.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8674 Inside
 Press@RunDepth: 38.50 psig @ 4083.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.28 End Date: 2014.10.28 Last Calib.: 2014.10.28
 Start Time: 07:08:00 End Time: 14:31:54 Time On Btm: 2014.10.28 @ 09:10:55
 Time Off Btm: 2014.10.28 @ 12:17:09

TEST COMMENT: IF- 1/2" Blow Died in 17min Slid 5' to Bottom
 IS- No Blow
 FF- No Blow
 FSI- No Blow




PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2077.77	110.61	Initial Hydro-static
1	32.07	109.25	Open To Flow (1)
35	36.00	113.96	Shut-In(1)
95	1021.72	116.55	End Shut-In(1)
96	37.22	116.25	Open To Flow (2)
127	38.50	117.09	Shut-In(2)
186	667.09	118.97	End Shut-In(2)
187	2053.61	119.64	Final Hydro-static

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

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

* Recovery from multiple tests

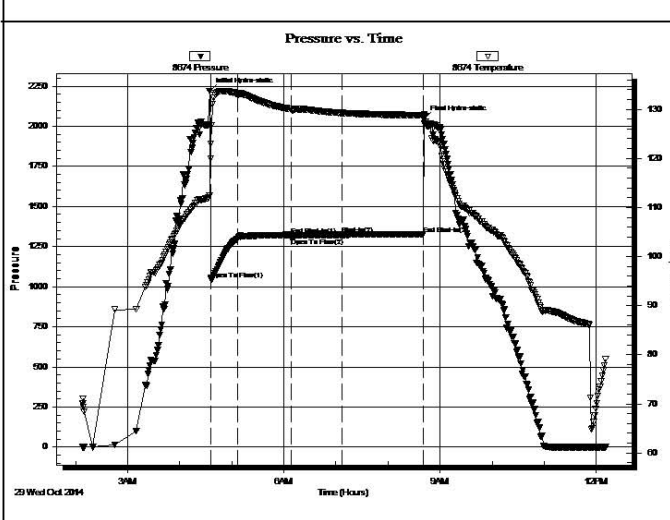
Drill Stem Test #4

	DRILL STEM TEST REPORT	
	Murfin Drilling Co. Inc 250 N. Water Ste 300 Wichita KS 67202 ATTN: Keith Reavis	18-4s-33w Rawlings Co. KS Makings # 1-18 Job Ticket: 58702 DST#: 4 Test Start: 2014.10.29 @ 02:08:00

GENERAL INFORMATION:
 Formation: **LKC "H-J"**
 Deviated: No Whipstock ft (KB)
 Time Tool Opened: 04:36:10
 Time Test Ended: 12:10:55
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Will MacLean
 Unit No: 71
 Interval: **4139.00 ft (KB) To 4220.00 ft (KB) (TVD)**
 Total Depth: 4220.00 ft (KB) (TVD)
 Reference Elevations: 3103.00 ft (KB)
 3098.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8674 Inside
 Press@RunDepth: 1324.52 psig @ 4140.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.29 End Date: 2014.10.29 Last Calib.: 2014.10.29
 Start Time: 02:08:00 End Time: 12:10:55 Time On Btm: 2014.10.29 @ 04:34:25
 Time Off Btm: 2014.10.29 @ 08:41:39

TEST COMMENT: IF- Surface Blow 5" Built to BOB in 45sec Slid 8' to Bottom
 IS- No Blow
 FF- Weak Surface Blow Built to BOB in 5min Died Back to 3 1/4"
 FSI- No Blow



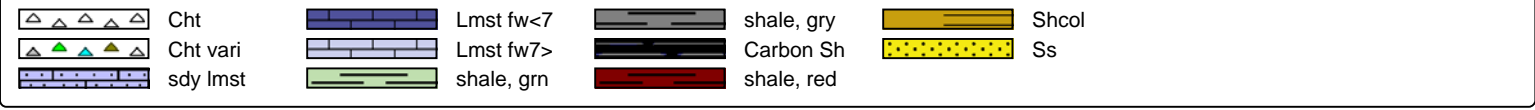
PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2219.99	112.45	Initial Hydro-static
2	1046.51	123.01	Open To Flow (1)
33	1299.13	133.03	Shut-In(1)
94	1322.50	130.02	End Shut-In(1)
94	1304.45	129.97	Open To Flow (2)
153	1324.52	129.23	Shut-In(2)
247	1326.17	128.77	End Shut-In(2)
248	2044.62	129.01	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
1500.00	GMCW 3%g 4%w 93%w	19.43
630.00	GMCW 3%g 20%w 77%w	8.84
441.00	GWCW 3%g 45%w 52%w	6.19
257.00	WCM 33%w 67%w	3.61

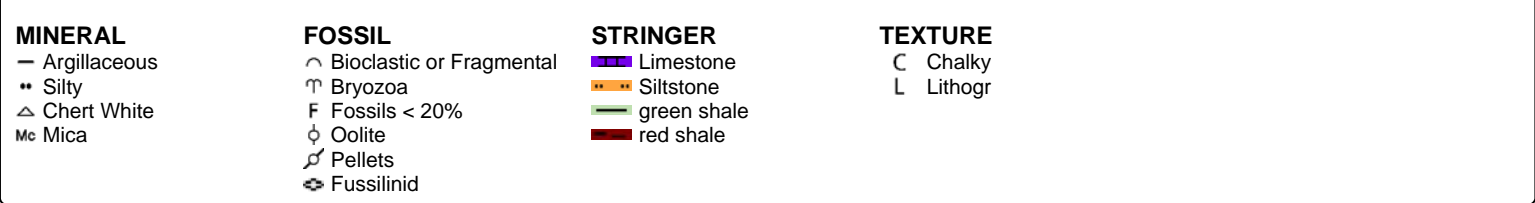
Gas Rates		
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests

ROCK TYPES



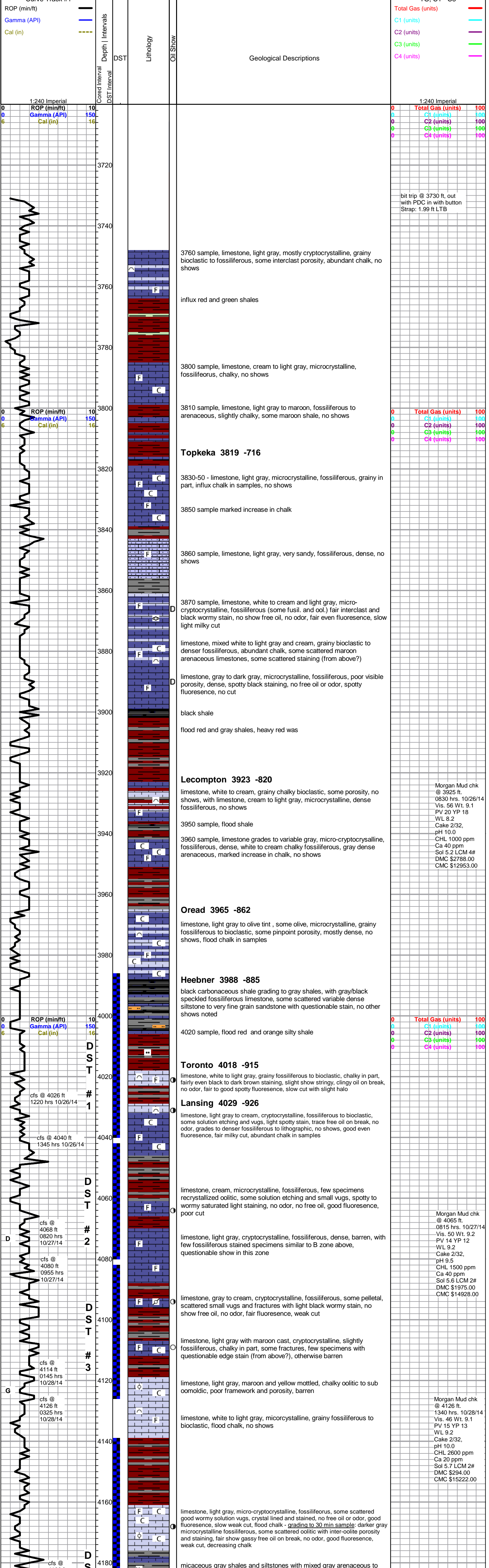
ACCESSORIES



OTHER SYMBOLS



Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)



10/28/14

4

ROP (min/ft)
Gamma (API)
Cal (in)

0
0
6

cfs @
4220 ft
2230 hrs
10/28/14

0
0
6

cfs @
4454 ft
0455 hrs
10/30/14

0
0
6

cfs @
4510 ft
0800 hrs
10/30/14

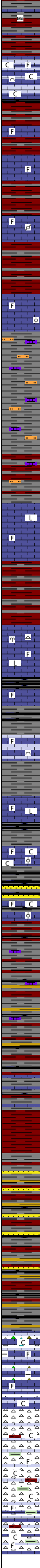
0
0
6

ROP (min/ft)
Gamma (API)
Cal (in)

0
0
6

cfs @
4720 ft
1710 hrs
10/31/14

0
0
6



increase red shales, heavy red wash, with shales and limestones as above

limestone, light gray to cream, microcrystalline, fossiliferous to grainy chalky bioclastic, some fair porosity, mostly barren, samples flooded with chalk, found 2 small dark gray specimens with small small stained vugs, no free oil or odor, fair cut, even yellow fluorescence

Stark Shale

limestone, white to light gray, microcrystalline, fossiliferous, chalky in part, poor porosity, no shows

limestone, as above

limestone, as above, with some tan, chalky pelletal to fossiliferous, no shows

Base KC 4267 -1164

limestone, light gray, microcrystalline, fossiliferous, trace oolitic, chalky, poor visible porosity, no shows

shale, silty shale and siltstone, gray to lavender, some argillaceous limestone

as above

as above with flood red shales, heavy red wash in sample

limestone, variable gray, some maroon veins and tinting, mostly cryptocrystalline, fossiliferous to sub-lithographic, some calcite veins, mostly dense, no shows

influx some lavender limestone

red, gray, lavender and maroon shales, some silty

Pawnee 4400 -1297

limestone, light gray to cream, mostly cryptocrystalline, fossiliferous to lithographic, trace sub-oolitic, abundant bryozoa fans, frosted fossiliferous chert, no shows

4440 sample, flood black carbonaceous shale and dark brown mottled fossiliferous limestone, dense, no shows

limestone, light gray, micro-cryptocrystalline, fossiliferous, some slightly grainy bioclastic, dense to sub-chalky, poor visible porosity, barren

limestone, variable gray, mostly cryptocrystalline, fossiliferous to lithographic, dense, no shows

Cherokee 4468 -1365

limestone, gray/green, light gray, some olive, dense fossiliferous to oolitic, with limestone, gray to cream, flattened oolitic, chalky in part, poor visible porosity, flood chalk

4500 sample - limestone, quartz fine grain, poor sorted, rounded to angular, well cemented, some pyritic, no shows, abundant shales

4510 sample - sand drops out, limestone as above with influx limestone, white to cream, flattened oolitic, chalky in part, no visible porosity, no shows - decrease in chalk

30 min sample, flood red sticky shale

mixed shales, some scattered dark gray arenaceous to fossiliferous limestone

shales as above, some light gray to white fossiliferous and argillaceous limestones, chalky in part, no shows

starting 4580 sample, flood red and brick shales, heavy red wash

4600-4630 samples, as above, almost all shale with some limestones as above, shales grading to more reds and maroons, less red wash, with scattered sandstone, white, fine grain, round to sub angular, fair sorting, poor porosity, slightly glauconitic, no shows

a.a.

Mississippian 4643 -1540

4650 sample, limestone, gray mottled and yellow to yellow mottled, fossiliferous, cherty to argillaceous, with chert, gray mottled to yellow mottled, fossiliferous, weathered to tripolitic, no show

4660-4670 samples, a.a. with influx gray mottled argillaceous shaley limestone to limey shale

starting 4680 sample: chert, white to frosted gray, fossiliferous, sharp and fresh to slightly weathered, with limestone, white to cream to light gray, chalky fossiliferous, some grainy, poor visible porosity, no shows, mottled maroon/green and olive shales

as above, abundant mottled maroon/green and olive shales, with some olive argillaceous fossiliferous limestones, no shows

Rotary TD 4720 ft. @ 1710 hrs 10/30/14
Pioneer Wireline TD 4728 ft
Complete logging operations 0315 hrs 10/31/14

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

Morgan Mud chk @ 4220 ft. 0930 hrs. 10/29/14 Vis. 53 Wt. 9.2 PV 17 YP 17 WL 6.4 Cake 2/32, pH 11.5 CHL 2800 ppm Ca 10 ppm Sol 6.4 LCM 3# DMC \$1949.00 CMC \$17171.00

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

Morgan Mud chk @ 4560 ft. 1025 hrs. 10/30/14 Vis. 50 Wt. 9.1 PV 16 YP 15 WL 6.4 Cake 2/32, pH 11.5 CHL 3200 ppm Ca 10 ppm Sol 5.7 LCM 3# DMC \$1821.00 CMC \$18992.00

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100



*acet
Prod-me*

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 1466 18
Invoice Date: Oct 23, 2014
Page: 1

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

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	63782	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Oct 23, 2014	11/22/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Makings #1-8		
280.00	CEMENT MATERIALS	Class A Common	17.90	5,012.00
790.00	CEMENT MATERIALS	Chloride	1.10	869.00
294.00	CEMENT SERVICE	Cubic Feet Charge	2.48	729.12
677.75	CEMENT SERVICE	Ton Mileage Charge	2.75	1,863.81
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
50.00	CEMENT SERVICE	Pump Truck Mileage	7.70	385.00
1.00	CEMENT SERVICE	Manifold Rental	275.00	275.00
50.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	220.00
1.00	CEMENT SUPERVISOR	Alan Ryan		
1.00	EQUIPMENT OPERATOR	Kevin Ryan		

Subtotal	10,866.18
Sales Tax	464.60
Total Invoice Amount	11,330.78
Payment/Credit Applied	
TOTAL	11,330.78

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

\$ 3,803.16

*OK
35/10*

ONLY IF PAID ON OR BEFORE

Nov 22, 2014

*- 3803.16
OK 7527.62*

ALLIED OIL & GAS SERVICES, LLC 2010 063782

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:

Dubley K

DATE <u>10/23/14</u>	SEC. <u>18</u>	TWP. <u>4</u>	RANGE <u>33</u>	CALLED OUT	ON LOCATION	JOB START <u>8:00</u>	JOB FINISH <u>8:30</u>
LEASE <u>Max 1943</u>	WELL# <u>1-8</u>	LOCATION <u>Calhoun TO Rankin Co Rd K</u>			COUNTY <u>Franklin</u>	STATE <u>TX</u>	
OLD OR NEW (Circle one)		<u>102 14 05 Erato</u>					

CONTRACTOR Murphy 7 OWNER Same

TYPE OF JOB Seal

HOLE SIZE 12 1/4 T.D. 261

CASING SIZE 8 5/8 DEPTH 261

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS.

DISPLACEMENT 15.5b

CEMENT AMOUNT ORDERED 280 Com 3070 CC

EQUIPMENT

PUMP TRUCK CEMENTER App Ryan

428-281 HELPER Kevin Ryan

BULK TRUCK

890 DRIVER Tom S (TSS)

BULK TRUCK

DRIVER

COMMON 280 @ 17.92 5012.00

POZMIX @

GEL @

CHLORIDE 290 @ 1.12 869.00

ASC @

Material Tested @ Tralles

(2015 8.35/35) @

HANDLING 294.00 @ 2.42 728.18

MILEAGE 225 @ 11.55 2588.75

REMARKS:

See Copy Circularity, Mix Count & Displacement Sheet

Cement did completely

Tom S

Franklin, Tom S

CHARGE TO Murphy Drilling Co

STREET

CITY STATE ZIP

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE 150.25

EXTRA FOOTAGE @

MILEAGE 50 @ 7.70 385.00

MANIFOLD @ 4.42 221.00

(1744.81/35%) TOTAL 4,985.10

PLUG & FLOAT EQUIPMENT

@

@

@

@

@

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 Fred Williams

SIGNATURE [Signature]

TOTAL

SALES TAX (If Any)

TOTAL CHARGES 10,866.18

DISCOUNT 3,803.16 (35%) IF PAID IN 30 DAYS

7,063.01 Net



PO Box 93999
Southlake, TX 76092

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

*Acct
Prod-me*

INVOICE

Invoice Number: 146745
Invoice Date: Oct 31, 2014
Page: 1

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	64219	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-03	Oakley	Oct 31, 2014	11/30/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Makings #1-18		
255.00	CEMENT MATERIALS	60/40/4% Gel Blend	18.92	4,824.60
64.00	CEMENT MATERIALS	Flo Seal	2.97	190.08
273.87	CEMENT SERVICE	Cubic Feet Charge	2.48	679.20
571.49	CEMENT SERVICE	Ton Mileage Charge	2.75	1,571.60
1.00	CEMENT SERVICE	Plug to Abandon	2,483.59	2,483.59
50.00	CEMENT SERVICE	Pump Truck Mileage	7.70	385.00
50.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	220.00
1.00	EQUIPMENT SALES	8-5/8 Dry Hole Plug	110.00	110.00
1.00	CEMENT SUPERVISOR	Andrew Forslund		
1.00	EQUIPMENT OPERATOR	Kevin Ryan		

Subtotal	10,464.07
Sales Tax	826.66
Total Invoice Amount	11,290.73
Payment/Credit Applied	
TOTAL	11,290.73

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

\$ 3,623.92 ✓✓

ONLY IF PAID ON OR BEFORE
Nov 30, 2014

OK JR
- 3623.92
7666.81

ALLIED OIL & GAS SERVICES, LLC 064219

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:

Colby

DATE <u>10-31-14</u>	SEC <u>18</u>	TWP. <u>4</u>	RANGE <u>33</u>	CALLED OUT	ON LOCATION <u>9:00 AM</u>	JOB START <u>11:30 AM</u>	JOB FINISH <u>12:30 PM</u>
LEASE <u>makings</u>	WELL # <u>1-18</u>	LOCATION <u>Colby 22 N 16 E 34 S</u>			COUNTY <u>Haskell</u>	STATE <u>KS</u>	
OLD OR <u>(NEW)</u> (Circle one)							

CONTRACTOR <u>murfin 7</u>	OWNER <u>same</u>
TYPE OF JOB <u>PTA</u>	
HOLE SIZE <u>7 1/8</u>	T.D.
CASING SIZE	DEPTH
TUBING SIZE	DEPTH
DRILL PIPE <u>4 1/2</u>	DEPTH <u>2830'</u>
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT	

CEMENT	
AMOUNT ORDERED <u>255 sks 64 4 bagel</u>	
<u>1/4 flo-seal</u>	
COMMON	@
POZMIX	@
GEL	@
CHLORIDE	@
ASC	@

EQUIPMENT

PUMP TRUCK # <u>431</u>	CEMENTER <u>Andrew Forstlund</u>
BULK TRUCK # <u>818</u>	HELPER <u>Kevin Ryan</u>
BULK TRUCK #	DRIVER <u>Oscar (TWS)</u>
BULK TRUCK #	DRIVER

<u>64 4 bagel 255 sks</u>	@ <u>18.92</u>	<u>4824.60</u>
<u>Flo-seal 1/4"</u>	@ <u>2.97</u>	<u>190.08</u>
<u>Material Total</u>	@	<u>5011.68</u>
<u>(1755.13) 35%</u>	@	
HANDLING <u>273.82</u>	@ <u>2.148</u>	<u>679.19</u>
MILEAGE <u>2.97 20/100</u>	@ <u>11.43 20/100</u>	<u>1571.62</u>

REMARKS:

50 sks @ 2800'
100 sks @ 2050'
50 sks @ 310'
10 sks @ 40'
15 sks mouse hole
30 sks Rat hole

Thank you

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

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 FRED WILLIAMS
SIGNATURE [Signature]

SERVICE

DEPTH OF JOB <u>2830'</u>	
PUMP TRUCK CHARGE	<u>2483.59</u>
EXTRA FOOTAGE	@
MILEAGE <u>50 miles</u>	@ <u>2.70</u> <u>385.00</u>
MANIFOLD	@
<u>light vehicle</u>	@ <u>4.40</u> <u>220.00</u>

(1868.77) 35% TOTAL 3,339.40

PLUG & FLOAT EQUIPMENT

<u>8 1/2"</u>	
<u>1 Dry Hole plug</u>	@ <u>110.00</u>
	@
	@
	@
	@

TOTAL 110.00

SALES TAX (If Any) _____
TOTAL CHARGES 6464.08
DISCOUNT 3603.92 (35%) IF PAID IN 30 DAYS
6,890.15 Net

Makings #1-18
 Daily Drilling Report
 Page Two

- 10/30/14 Depth 4480'. Cut 260'. DT: None. CT: 9¼ hrs. Dev.: None.
- 10/31/14 RTD: 4720'. Cut 240'. DT: None. CT: 13¾ hrs. Dev.: 1° @ 4720'. HC @ 6:15PM 10/30. Pioneer logged 10:45PM 10/30 – 4:00AM 10/31. LTD: 4728'.
- 11/1/14 RTD: 4720'. CT: 9½ hrs. Allied PLUGGED hole (9:30AM – 12:30PM 10/31) as follows using 60/40Poz, 4%Gel, ¼#Flo seal, 50sxs @ 2830', 100sxs @ 2050', 50sxs @ 310', 10sxs @ 40', 30sxs RH, 15sxs MH. Orders: Pat Bedore KCC Hays. RR @ 4:30PM 10/31. FINAL REPORT

		Makings #1-18 1100' FSL 330'FWL Sec. 18-4S-33W 3103' KB					Morgan #1-17 660' FSL 2310'FEL Sec. 17-4S-33W 3049' KB		
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum	
Anhydrite	2819	+284	Flat	2814	+289	+5	2765	+284	
B/Anhydrite	2848	+255	+6	2850	+253	+4	2800	+249	
Topeka	3819	-716	+16	3825	-722	+10	3781	-732	
Heebner	3988	-885	+17	3992	-889	+13	3951	-902	
Lansing	4029	-926	+15	4036	-933	+8	3990	-941	
Stark	4219	-1116	+14	4224	-1121	+9	4179	-1130	
BKC	4267	-1164	+17	4271	-1168	+13	4230	-1181	
Pawnee	4400	-1297	+15	4402	-1299	+13	4361	-1312	
Cherokee	4468	-1365	+19	4474	-1371	+13	4433	-1384	
Mississippi	4643	-1540	+29	4642	-1539	+30	4618	-1569	
RTD	4720						4686		
LTD				4728			4690		