

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	MUNN-BAILEY UNIT 1-12
Doc ID	1419925

All Electric Logs Run

DIL
DUCP
MEL
BHCS





**TREATMENT REPORT**



**HURRICANE SERVICES INC**

Customer:	Murfin Drilling INC	Date:	8/26/2018	Ticket #:	ICT1325
Field Rep:	Jay				
Address:	PO Box 661				
City, State:	Colby, KS				
County, Zip:	67701				

Field Order No.:		Open Hole:	7 7/8
Well Name:	Munn Bailey 1-12	Casing Depth:	
Location:	Bird City, KS	Casing Size:	
Formation:		Tubing Depth:	3189
Type of Service:	cement	Tubing Size:	4 1/2
Well Type:	oil	Liner Depth:	
Age of Well:	new	Liner Size:	
Packer Type:		Liner Top:	
Packer Depth:		Liner Bottom:	
Treatment Via:		Total Depth:	

Perf Depths (ft)	Perfs
<b>Total Perfs</b>	<b>0</b>

TIME	INJECTION RATE		PRESSURE		REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
	FLUID	N2/O2	STP	ANNULUS				
11:00 AM					arrive location			
11:05 AM					safety meeting			
11:10 AM					rig up			
11:25 AM					pump h2o			15.00
11:30 AM					mix 50 sacks cement @13.8 lbs/gal 1.43 yield @3189'			12.70
11:40 AM					displace h2o			6.00
11:45 AM					displace mud			37.00
12:30 PM					pump h2o			15.00
12:35 PM					mix 100 sacks cement @13.8 lbs/gal 1.43 yield @ 2366'			25.50
12:50 PM					displace h2o			5.00
12:55 PM					displace mud			25.00
2:30 PM					pump h2o			6.00
2:35 PM					mix 50 sacks cement @13.8 lbs/gal 1.43 yield @ 268			12.70
2:45 PM					displace with h2o			2.50
3:15 PM					filled rat hole w/ 30 sacks cement @13.8lbs/gal, 1.43 yield@ 30'			7.50
3:30 PM					filled mouse hole w/ 15 sacks cement @13.8 lbs/gal 1.43 yld @ 30'			4.00
3:45 PM					topped out well w/ 10 sks. Cement @13.8 lbs/gal 1.43 yld. @40'			2.50
					washed up equipment			
<b>TOTAL:</b>								<b>174.90</b>

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
-	#DIV/0!	-	#DIV/0!

**PRODUCTS USED**

pumped 255 sacks 60/40 poz w/ 4% gel, 1/4#/sk flo

Treater: \_\_\_\_\_

Customer: \_\_\_\_\_

MDCI  
Munn-Bailey Unit #1-12  
2640' FSL 2310' FWL  
Sec. 12-T2S-R38W  
3271' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3172	+99	+7	3173	+98	+6
B/Anhydrite	3207	+64	+7	3207	+64	+7
Neva	3642	-371	+2	3642	-371	+2
Red Eagle	3707	-436	+2	3709	-438	Flat
Foraker	3759	-488	+2	3760	-489	+1
Topeka	3984	-713	+2	3985	-714	+1
Oread	4129	-858	Flat	4129	-858	Flat
Lansing	4198	-927	Flat	4199	-928	-1
Stark	4431	-1160	-2	4433	-1162	-4
Mound City	4485	-1214	-4	4485	-1214	-4
Ft Scott	4616	-1345	-7	4619	-1348	-10
Oakley	4694	-1423	-9	4694	-1423	-9
RTD	5035	-1764				
LTD				5038	-1767	



# Robert L. Milford

PETROLEUM GEOLOGIST  
Wichita, Kansas

**GEOLOGISTS' REPORT**  
DRILLING TIME AND SAMPLE LOGS

**ELEVATIONS**  
BL 3,271'  
GL 3,266'

OPERATOR: **Murfin Drilling Company, Inc.**  
LEASE: **Murfin-Baldley Unit #1-12**

LOC SPOT: **E2 E2 W2**

LOC FOOTAGE: **2,440' FSL 2,310' FWL**

SEC: **12** TRSP: **25** RNS: **3W**

COUNTY: **Cheyenne** STATE: **Kansas**

API: **15-023-21492-00-00**

CONTRACTOR: **Murfin Drilling Co., Inc.** REG. NO. **3**

DEWELING STARTED: **9/25/2018** COMPLETED: **8/25/2018**

MODIFIED: **3/20** MODIFIED BY: **CR**

DRILLING TIME KEPT FROM: **3:50** TO: **RTD**

SAMPLES SAVED FROM: **3:50** TO: **RTD**

GEOLOGICAL SUPERVISOR/LOG: **3:50** TO: **RTD**

FORMATION NAME: **TOP** DATE: **3/17/14** SAMPLE: **+**

Stone Corral 3174' -489'  
Foraker 3174' -489'  
Topeka 3174' -489'  
Oread 3174' -489'  
Lansing 3174' -489'  
Fort Scott 3174' -489'  
Oakley 3174' -489'  
Missouri Depth 3174' -489'

MEASUREMENTS: **CASING RECORD**  
Candidate: **3174' @ 218'**  
Production name: **218' to 3174' cement**

FORMATION NAME	TOP	DATE	TOP	SAMPLE	DEPTH
Stone Corral	3174'	-489'	3174'	+97'	
Foraker	3174'	-489'	3174'	+97'	
Topeka	3174'	-489'	3174'	+97'	
Oread	3174'	-489'	3174'	+97'	
Lansing	3174'	-489'	3174'	+97'	
Fort Scott	3174'	-489'	3174'	+97'	
Oakley	3174'	-489'	3174'	+97'	
Missouri Depth	3174'	-489'	3174'	+97'	

DATE	7:00 AM DEPTH	REMARKS
8-15-18	0'	Spud @ 3:30 pm. Plug down @ 7:45 pm. Drilled out plug @ 4:00 am on 8-16-18 w/ PDC bit
8-16-18	370'	Cut 370' in last 24 hrs. Dev.: 0.75" @ 987', 1495' & 1996'
8-17-18	2,025'	Cut 1,655' in last 24 hrs; 21 hrs drlg. Dev.: 0.75" @ 2495' & Dev.: 0.5" @ 2901'
8-18-19	3,180'	Cut 1,155' in last 24 hrs; 21.5 hrs drlg. Bit trip @ 3450' (ran button bit)
8-19-18	3,620'	Cut 440' in last 24 hrs; 16.75 hrs drlg.
8-20-18	4,050'	Cut 430' in last 24 hrs; 21.25 hrs drlg. DST #1 @ 4220'
8-21-18	4,220'	Cut 170' in last 24 hrs; 7.5 hrs drlg. DST #2 @ 4297'
8-22-18	4,345'	Cut 125' in last 24 hrs; 6.75 hrs drlg. DST #3 @ 4345'. DST #4 @ 4430'
8-23-18	4,430'	Cut 85' in last 24 hrs; 5 hrs drlg.
8-24-18	4,615'	Cut 185' in last 24 hrs; 13.75 hrs drlg. DST #5 @ 4725'
8-25-18	4,725'	Cut 110' in last 24 hrs; 5.75 hrs drlg. RTD 5035' @ 6:40 pm
8-26-18	5,035'	Cut 310' in last 24 hrs; 9.75 hrs drlg. Plug and abandon

**Remarks**

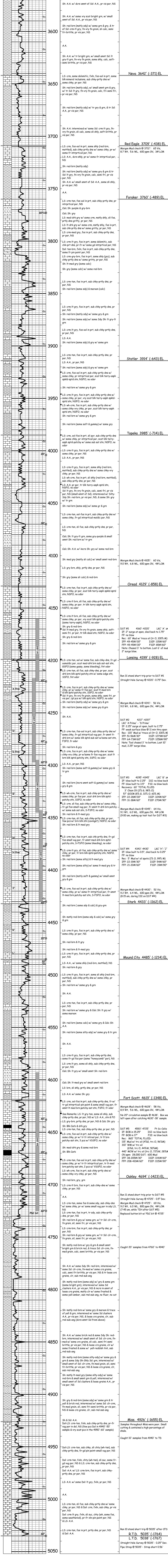
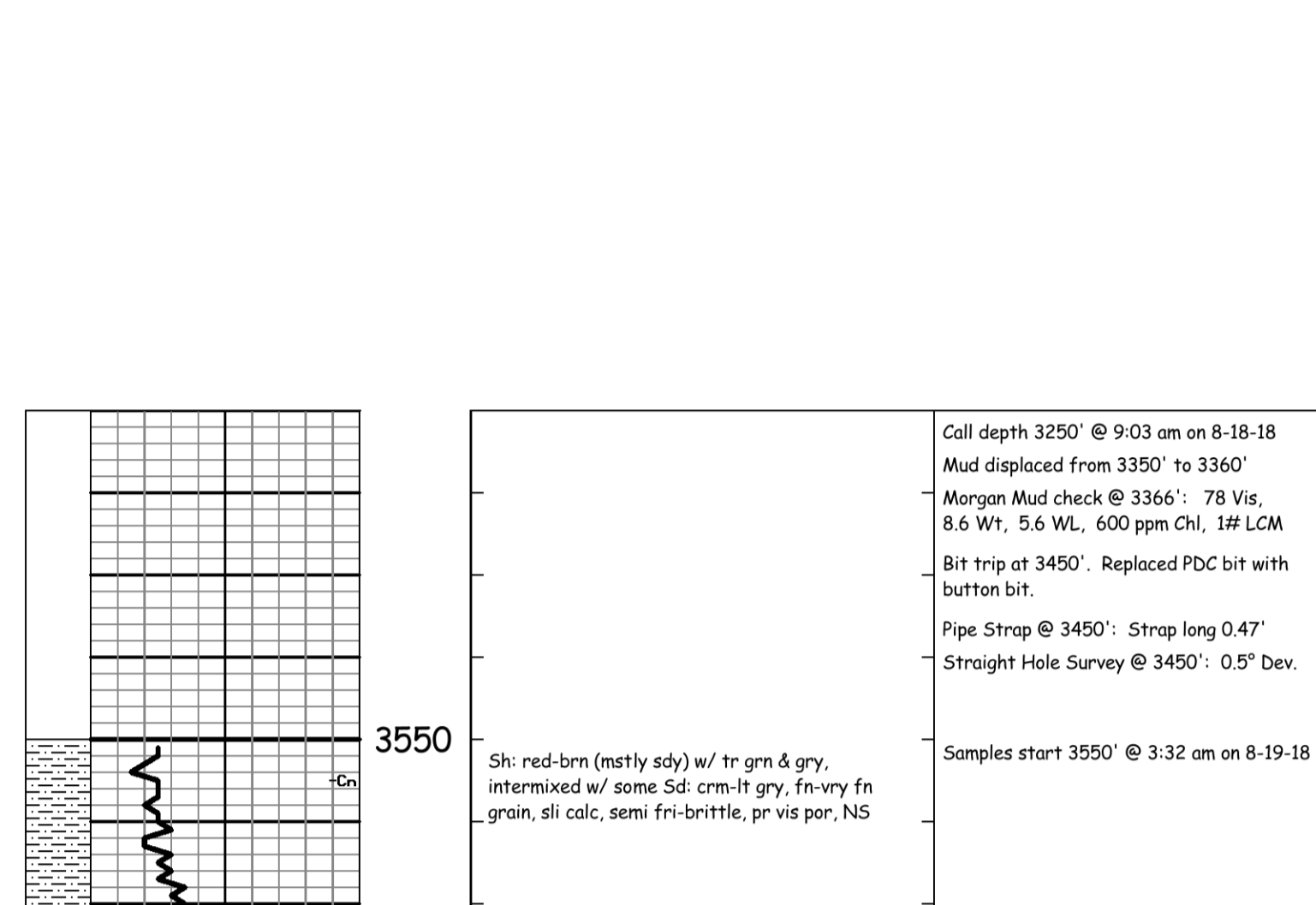
The electric log measurements correlate from even to 1' lower to the drilling measurements.

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



DATE	7:00 AM DEPTH	REMARKS
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8-20-18	4,050'	Cut 430' in last 24 hrs; 21.25 hrs drlg. DST #1 @ 4220'
8-21-18	4,220'	Cut 170' in last 24 hrs; 7.5 hrs drlg. DST #2 @ 4297'
8-22-18	4,345'	Cut 125' in last 24 hrs; 6.75 hrs drlg. DST #3 @ 4345'. DST #4 @ 4430'
8-23-18	4,430'	Cut 85' in last 24 hrs; 5 hrs drlg.
8-24-18	4,615'	Cut 185' in last 24 hrs; 13.75 hrs drlg. DST #5 @ 4725'
8-25-18	4,725'	Cut 110' in last 24 hrs; 5.75 hrs drlg. RTD 5035' @ 6:40 pm
8-26-18	5,035'	Cut 310' in last 24 hrs; 9.75 hrs drlg. Plug and abandon





## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Rocky Milford

### **Munn - Bailey #1-12**

#### **12-2s-38w Cheyenne,KS**

Start Date: 2018.08.20 @ 21:45:00

End Date: 2018.08.21 @ 05:00:15

Job Ticket #: 64220                      DST #: 1

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

Printed: 2018.08.28 @ 17:04:40



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**12-2s-38w Cheyenne, KS**

**Munn - Bailey #1-12**

Job Ticket: 64220      **DST#: 1**  
 Test Start: 2018.08.20 @ 21:45:00

## GENERAL INFORMATION:

Formation: **LKC "A"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:56:00  
 Time Test Ended: 05:00:15  
 Interval: **4160.00 ft (KB) To 4220.00 ft (KB) (TVD)**  
 Total Depth: 4220.00 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: 3271.00 ft (KB)  
 3266.00 ft (CF)  
 KB to GR/CF: 5.00 ft

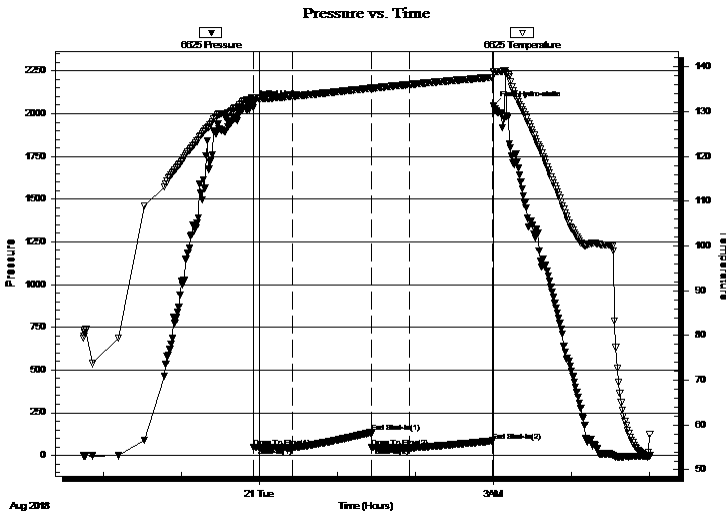
## Serial #: 6625

Inside

Press@RunDepth: 45.29 psig @ 4161.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2018.08.20      End Date: 2018.08.21      Last Calib.: 2018.08.21  
 Start Time: 21:45:05      End Time: 05:00:14      Time On Btm: 2018.08.20 @ 23:55:45  
 Time Off Btm: 2018.08.21 @ 03:00:15

TEST COMMENT: 30 - IF: 2" Surge Blow at open, died back to 1 3/4"  
 60 - IS: No blow back  
 30 - FF: No blow  
 60 - FS: No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2052.29	132.71	Initial Hydro-static
1	49.10	132.21	Open To Flow (1)
31	45.47	133.42	Shut-In(1)
91	134.70	135.23	End Shut-In(1)
91	49.37	135.20	Open To Flow (2)
120	45.29	136.05	Shut-In(2)
184	84.71	137.66	End Shut-In(2)
185	2044.77	138.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Mud w /trace of Oil 100%m	0.30

## 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

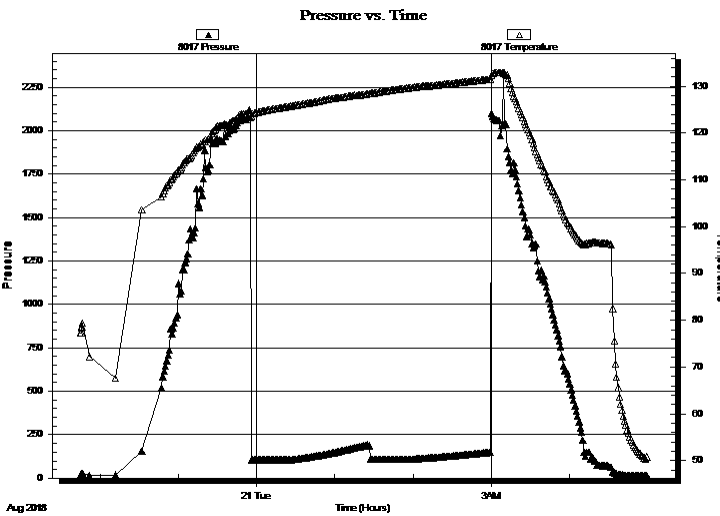
**12-2s-38w Cheyenne, KS**  
**Munn - Bailey #1-12**  
 Job Ticket: 64220 **DST#: 1**  
 Test Start: 2018.08.20 @ 21:45:00

**GENERAL INFORMATION:**

Formation: **LKC "A"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:56:00  
 Time Test Ended: 05:00:15  
 Interval: **4160.00 ft (KB) To 4220.00 ft (KB) (TVD)**  
 Total Depth: 4220.00 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: 3271.00 ft (KB)  
 3266.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8017 Outside**  
 Press@RunDepth: psig @ 4161.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.08.20 End Date: 2018.08.21 Last Calib.: 2018.08.21  
 Start Time: 21:45:05 End Time: 04:59:44 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30 - IF: 2" Surge Blow at open, died back to 1 3/4"  
 60 - IS: No blow back  
 30 - FF: No blow  
 60 - FS: No blow



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
60.00	Mud w /trace of Oil 100%m	0.30

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64220

**DST#: 1**

ATTN: Rocky Milford

Test Start: 2018.08.20 @ 21:45:00

## Tool Information

Drill Pipe:	Length: 3946.00 ft	Diameter: 3.80 inches	Volume: 55.35 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 207.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 56.37 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4160.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	89.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool Chased 3' to bottom - lost 6' of mud - 2" surge blow at open

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4132.00	
Shut In Tool	5.00			4137.00	
Hydraulic tool	5.00			4142.00	
Jars	5.00			4147.00	
Safety Joint	3.00			4150.00	
Packer	5.00			4155.00	29.00 Bottom Of Top Packer
Packer	5.00			4160.00	
Stubb	1.00			4161.00	
Recorder	0.00	6625	Inside	4161.00	
Recorder	0.00	8017	Outside	4161.00	
Perforations	20.00			4181.00	
Blank Spacing	33.00			4214.00	
Perforations	3.00			4217.00	
Bullnose	3.00			4220.00	60.00 Bottom Packers & Anchor

**Total Tool Length: 89.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64220

**DST#: 1**

ATTN: Rocky Milford

Test Start: 2018.08.20 @ 21:45:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.76 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	Mud w /trace of Oil 100%m	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

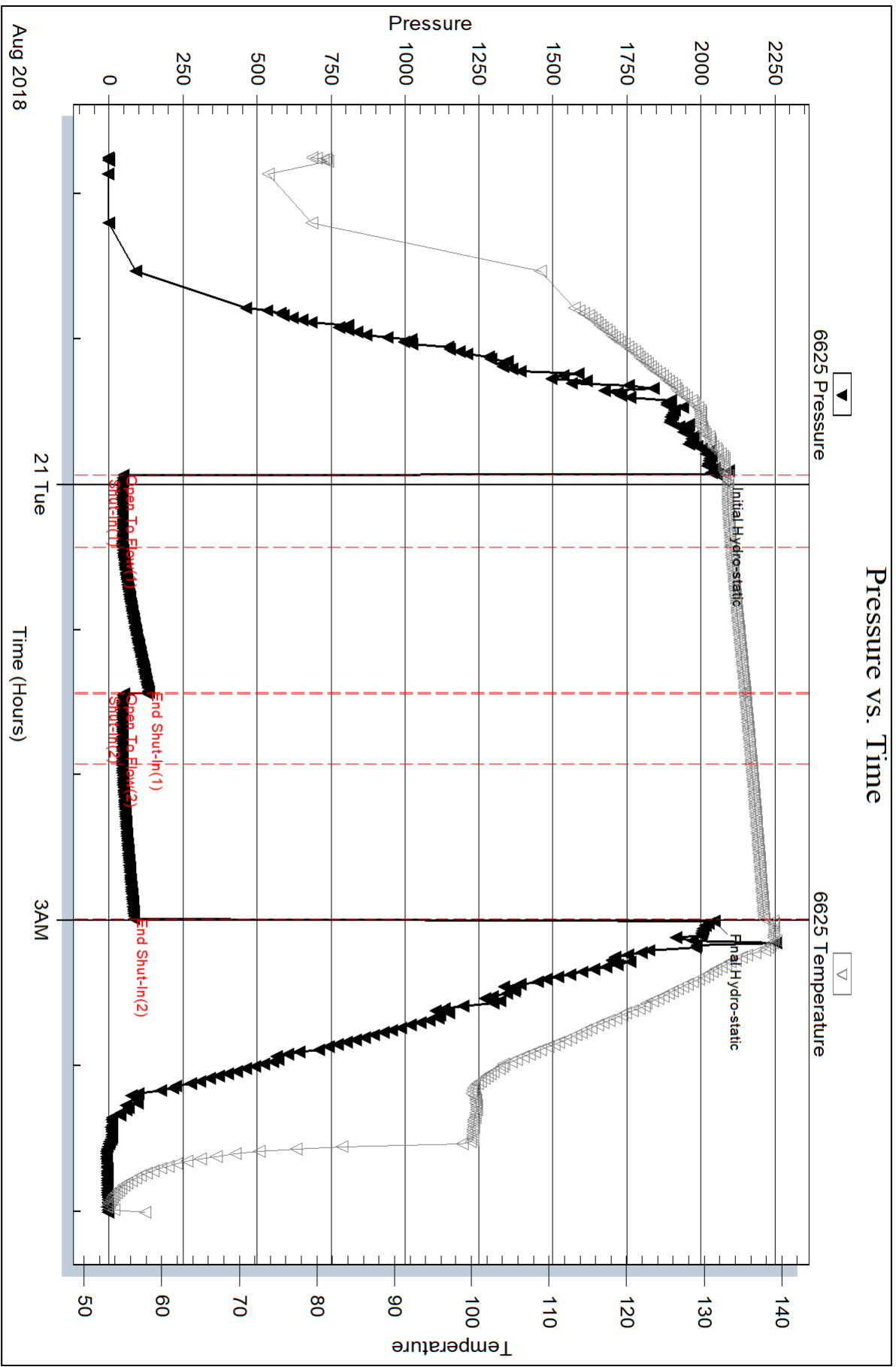
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

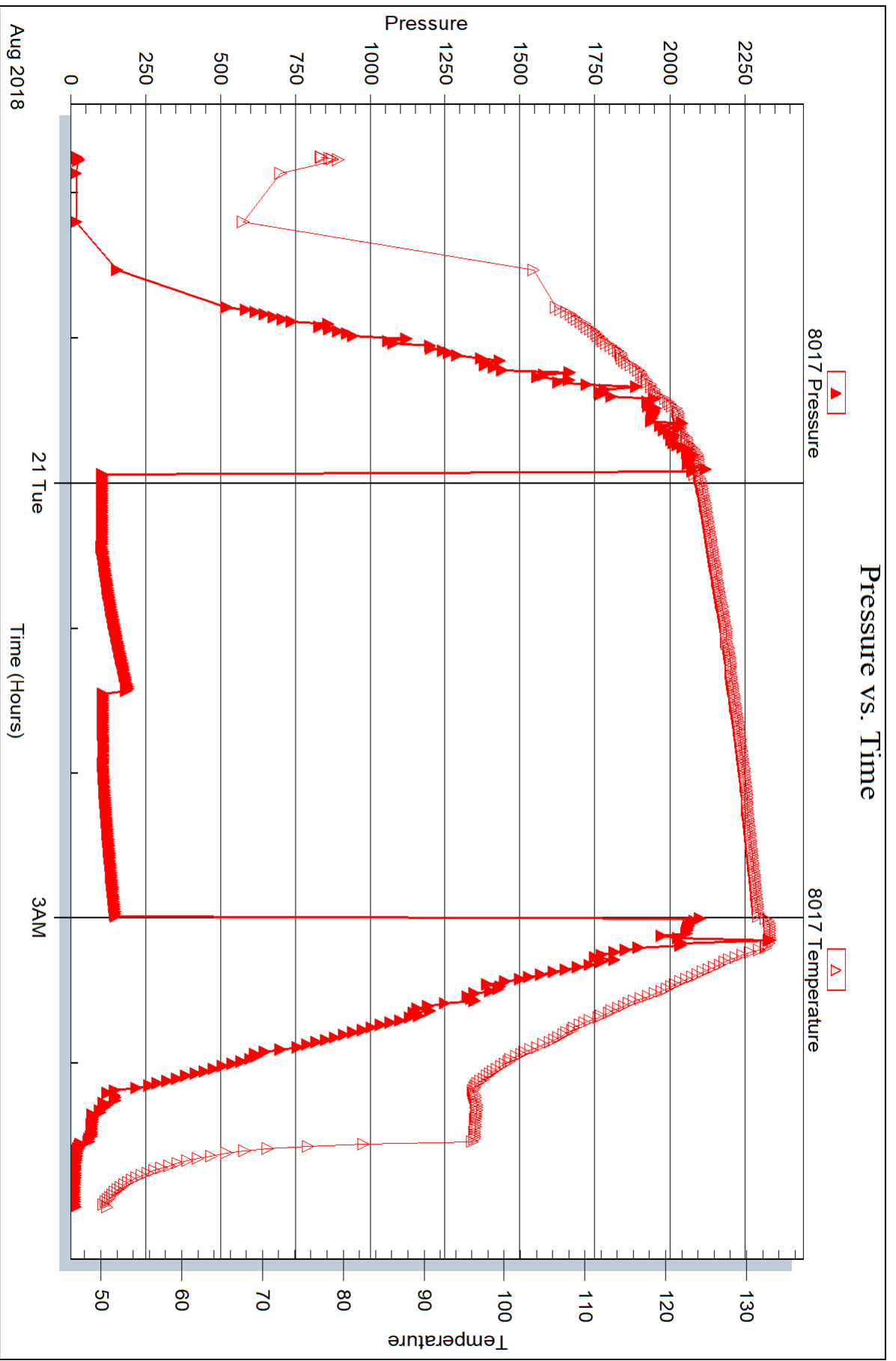


Serial #: 8017

Outside Murfin Drilling Co., Inc.

Munn - Bailey #1-12

DST Test Number: 1







## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Rocky Milford

### **Munn - Bailey #1-12**

#### **12-2s-38w Cheyenne,KS**

Start Date: 2018.08.21 @ 15:10:00

End Date: 2018.08.21 @ 23:14:30

Job Ticket #: 64221                      DST #: 2

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

Printed: 2018.08.28 @ 17:02:26



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**12-2s-38w Cheyenne, KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64221

**DST#: 2**

ATTN: Rocky Milford

Test Start: 2018.08.21 @ 15:10:00

## GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:13:15

Time Test Ended: 23:14:30

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 83

**Interval: 4217.00 ft (KB) To 4297.00 ft (KB) (TVD)**

Reference Elevations: 3271.00 ft (KB)

Total Depth: 4297.00 ft (KB) (TVD)

3266.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 6625**

**Inside**

Press@RunDepth: 73.43 psig @ 4218.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.08.21

End Date:

2018.08.21

Last Calib.:

2018.08.21

Start Time: 15:10:05

End Time:

23:14:29

Time On Btm:

2018.08.21 @ 17:13:00

Time Off Btm:

2018.08.21 @ 21:17:00

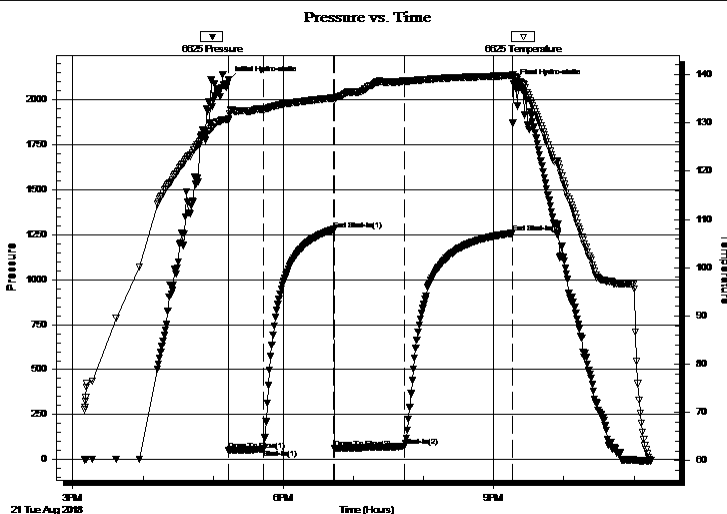
**TEST COMMENT:** 30 - IF: 2 1/4" Surge Blow at open, built to 2 3/4"

60 - IS: No blow back

60 - FF: Weak surface blow at 11 min., surface blow through open

90 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2107.59	130.92	Initial Hydro-static
1	51.21	130.54	Open To Flow (1)
30	56.49	132.74	Shut-In(1)
91	1278.54	135.17	End Shut-In(1)
91	63.79	134.70	Open To Flow (2)
151	73.43	138.61	Shut-In(2)
243	1258.17	139.81	End Shut-In(2)
244	2087.04	139.63	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mud w /trace oil 100%m	0.59

## 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

**12-2s-38w Cheyenne,KS**

**Munn - Bailey #1-12**

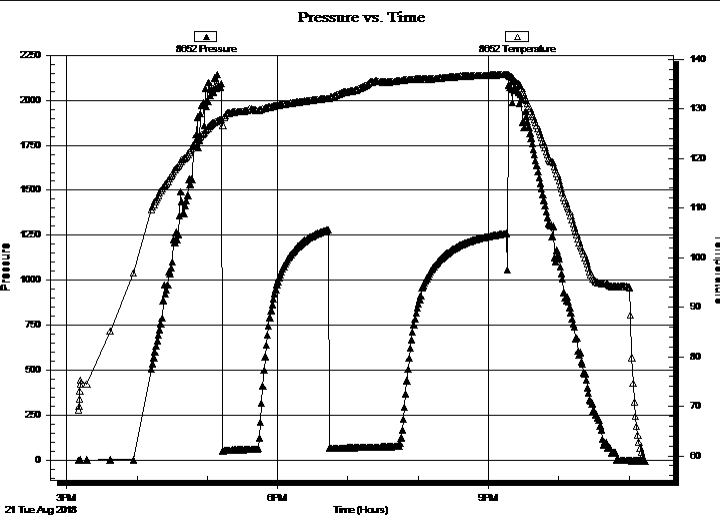
Job Ticket: 64221 **DST#: 2**  
 Test Start: 2018.08.21 @ 15:10:00

## GENERAL INFORMATION:

Formation: **LKC "A" prime - "D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 17:13:15  
 Time Test Ended: 23:14:30  
 Interval: **4217.00 ft (KB) To 4297.00 ft (KB) (TVD)**  
 Total Depth: 4297.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3271.00 ft (KB)  
 3266.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8652 Outside**  
 Press@RunDepth: psig @ 4218.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.08.21 End Date: 2018.08.21 Last Calib.: 2018.08.21  
 Start Time: 15:10:05 End Time: 23:13:59 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30 - IF: 2 1/4" Surge Blow at open, built to 2 3/4"  
 60 - IS: No blow back  
 60 - FF: Weak surface blow at 11 min., surface blow through open  
 90 - FS: No blow back



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

Recovery		
Length (ft)	Description	Volume (bbl)
120.00	Mud w /trace oil 100%m	0.59

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64221

**DST#: 2**

ATTN: Rocky Milford

Test Start: 2018.08.21 @ 15:10:00

## Tool Information

Drill Pipe:	Length: 4008.00 ft	Diameter: 3.80 inches	Volume: 56.22 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 207.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 57.24 bbl</u>	Tool Chased	3.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	65000.00 lb
Depth to Top Packer:	4217.00 ft			Final	65000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	80.00 ft				
Tool Length:	109.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: Tool Chased 3' to bottom at open, lost 10' of mud - 2 1/4" Surge blow at open

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

Change Over Sub	1.00			4189.00	
Shut In Tool	5.00			4194.00	
Hydraulic tool	5.00			4199.00	
Jars	5.00			4204.00	
Safety Joint	3.00			4207.00	
Packer	5.00			4212.00	29.00 Bottom Of Top Packer
Packer	5.00			4217.00	
Stubb	1.00			4218.00	
Recorder	0.00	6625	Inside	4218.00	
Recorder	0.00	8652	Outside	4218.00	
Perforations	10.00			4228.00	
Blank Spacing	65.00			4293.00	
Perforations	1.00			4294.00	
Bullnose	3.00			4297.00	80.00 Bottom Packers & Anchor

**Total Tool Length: 109.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64221

**DST#: 2**

ATTN: Rocky Milford

Test Start: 2018.08.21 @ 15:10:00

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Mud w /trace oil 100%m	0.590

Total Length: 120.00 ft      Total Volume: 0.590 bbl

Num Fluid Samples: 0

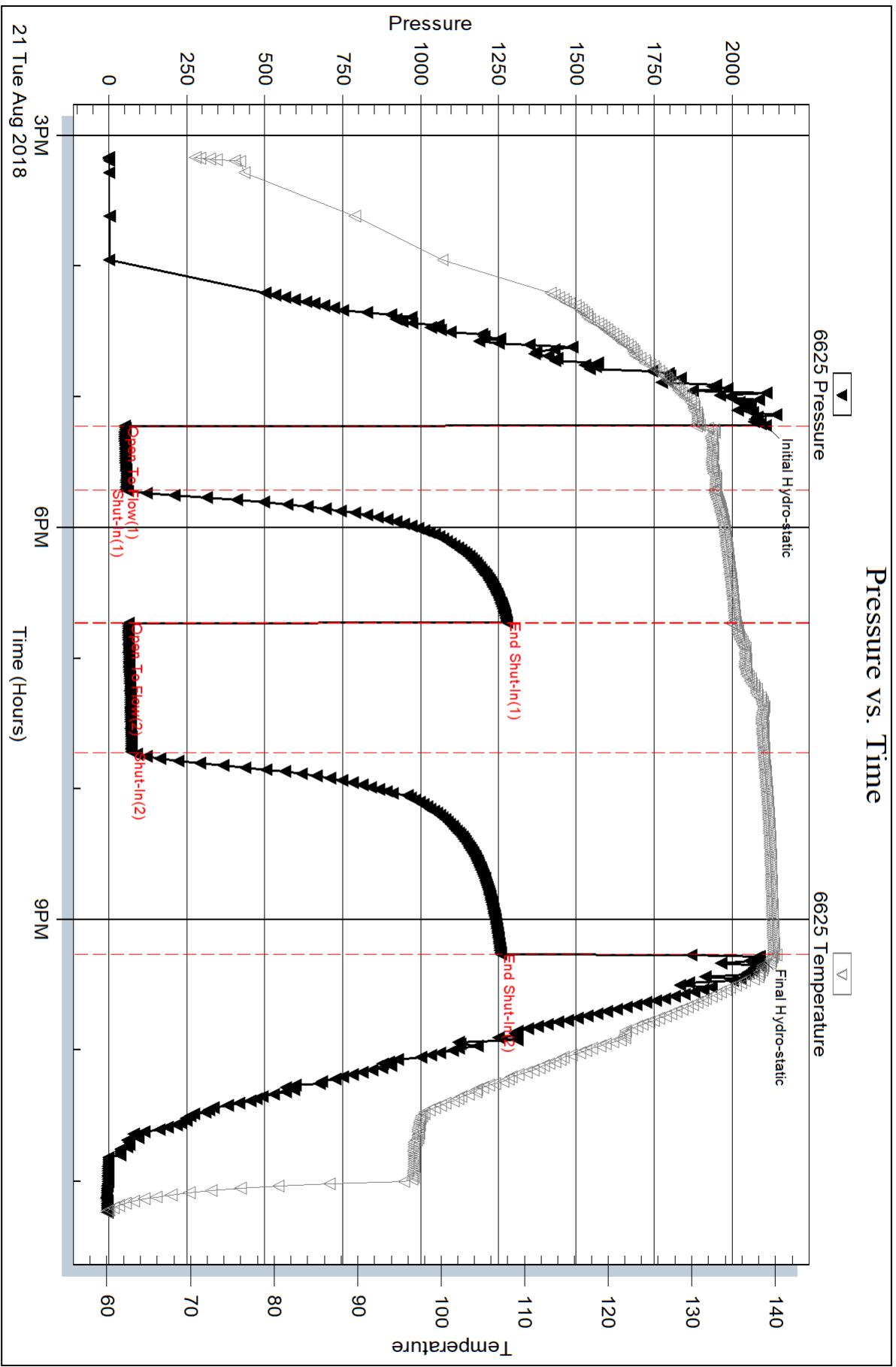
Num Gas Bombs: 0

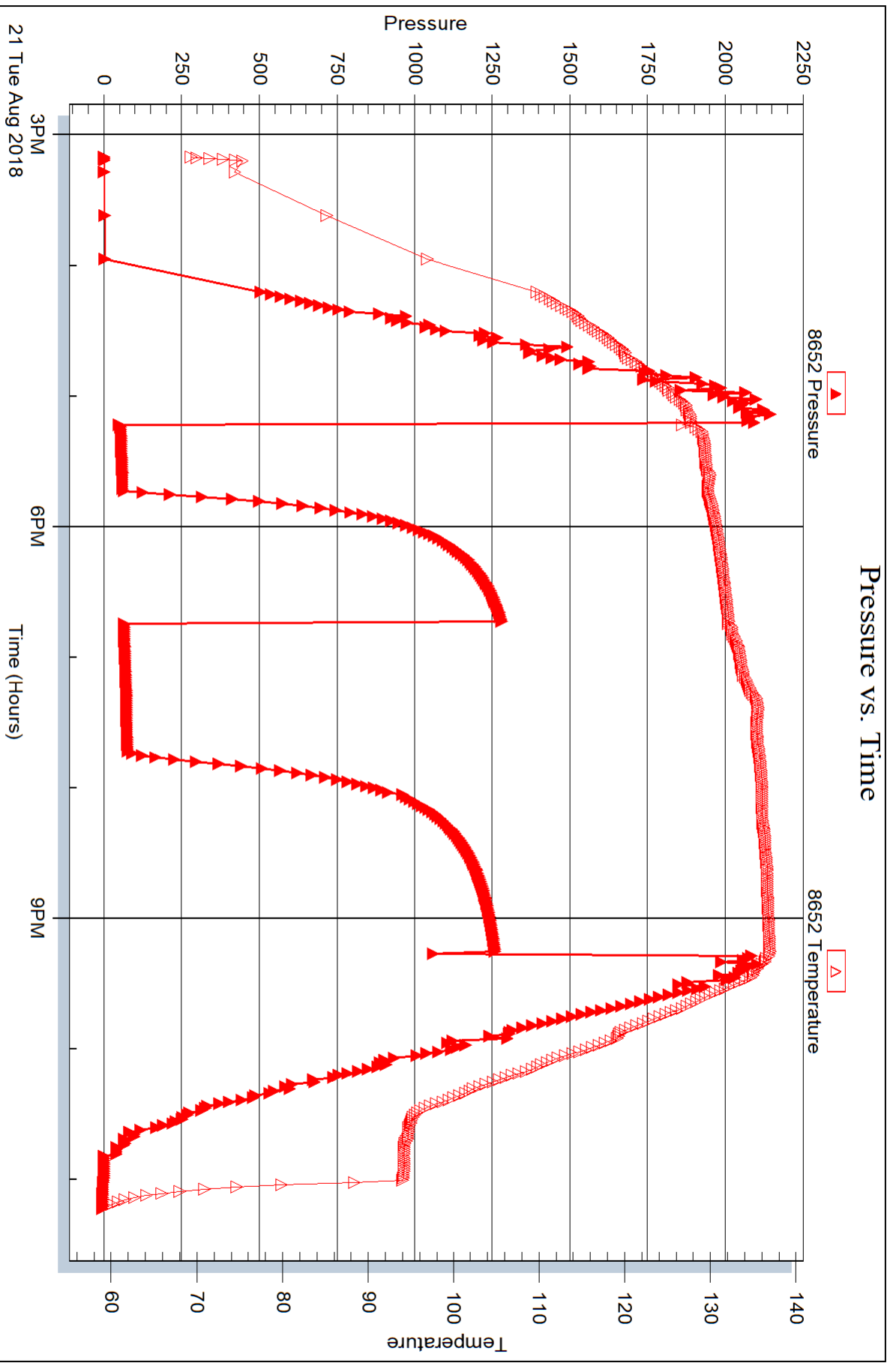
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Rocky Milford

### **Munn - Bailey #1-12**

#### **12-2s-38w Cheyenne,KS**

Start Date: 2018.08.22 @ 08:40:00

End Date: 2018.08.22 @ 16:43:45

Job Ticket #: 64222                      DST #: 3

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

Printed: 2018.08.28 @ 17:02:02



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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

**12-2s-38w Cheyenne, KS**

**Munn - Bailey #1-12**

Job Ticket: 64222      **DST#: 3**  
Test Start: 2018.08.22 @ 08:40:00

## GENERAL INFORMATION:

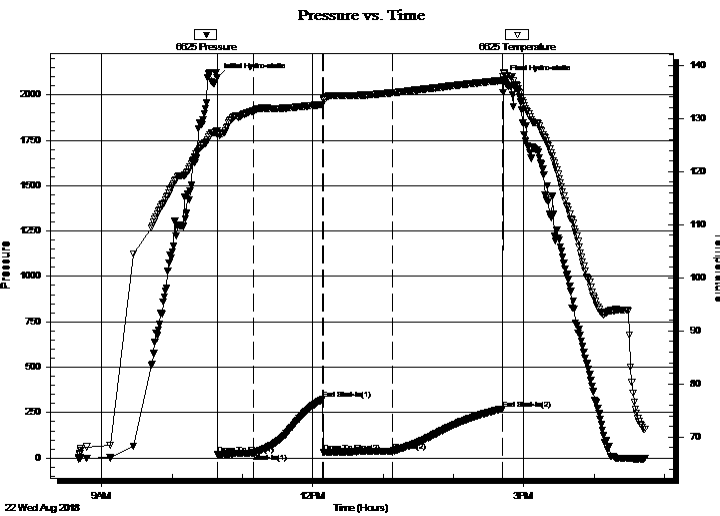
Formation: **LKC "G"**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 10:38:30  
Time Test Ended: 16:43:45  
Interval: **4295.00 ft (KB) To 4345.00 ft (KB) (TVD)**  
Total Depth: 4345.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: James Winder  
Unit No: 83  
Reference Elevations: 3271.00 ft (KB)  
3266.00 ft (CF)  
KB to GR/CF: 5.00 ft

## Serial #: 6625

Inside

Press@RunDepth: 38.46 psig @ 4296.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2018.08.22      End Date: 2018.08.22      Last Calib.: 2018.08.22  
Start Time: 08:40:05      End Time: 16:43:44      Time On Btm: 2018.08.22 @ 10:38:15  
Time Off Btm: 2018.08.22 @ 14:43:00

TEST COMMENT: 30 - IF: Blow built to 2 1/4"  
60 - IS: No blow back  
60 - FF: 1/4" Blow at open, built to 3 1/2"  
90 - FS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2094.71	127.64	Initial Hydro-static
1	22.04	126.91	Open To Flow (1)
31	27.70	131.38	Shut-In(1)
90	324.03	132.61	End Shut-In(1)
91	31.26	133.47	Open To Flow (2)
150	38.46	134.79	Shut-In(2)
244	270.12	137.15	End Shut-In(2)
245	2083.58	138.64	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
57.00	GOCM 60%o, 32%o, 8%g	0.28
3.00	CO 98%o, 2%g	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: Rocky Milford

12-2s-38w Cheyenne, KS

**Munn - Bailey #1-12**

Job Ticket: 64222 **DST#: 3**

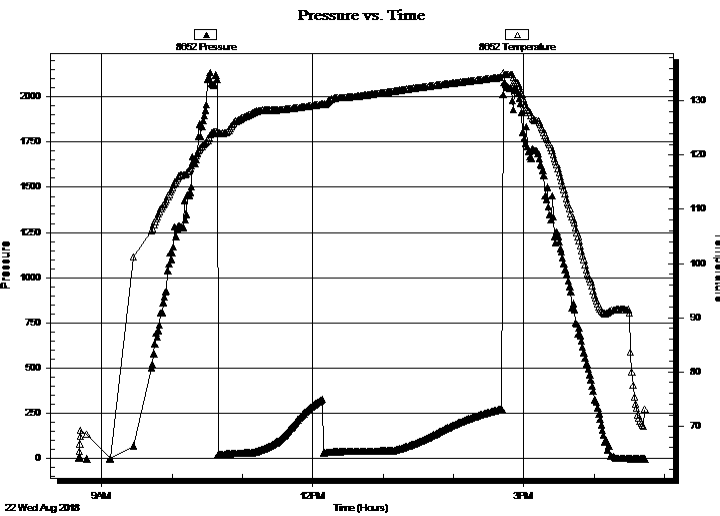
Test Start: 2018.08.22 @ 08:40:00

### GENERAL INFORMATION:

Formation: **LKC "G"**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 10:38:30 Tester: James Winder  
 Time Test Ended: 16:43:45 Unit No: 83  
**Interval: 4295.00 ft (KB) To 4345.00 ft (KB) (TVD)** Reference Elevations: 3271.00 ft (KB)  
 Total Depth: 4345.00 ft (KB) (TVD) 3266.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 8652** **Outside**  
 Press@RunDepth: psig @ 4296.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.08.22 End Date: 2018.08.22 Last Calib.: 2018.08.22  
 Start Time: 08:40:05 End Time: 16:43:14 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30 - IF: Blow built to 2 1/4"  
 60 - IS: No blow back  
 60 - FF: 1/4" Blow at open, built to 3 1/2"  
 90 - FS: No blow back



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
57.00	GOCM 60%o, 32%o, 8%g	0.28
3.00	CO 98%o, 2%g	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.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64222

**DST#: 3**

ATTN: Rocky Milford

Test Start: 2018.08.22 @ 08:40:00

## Tool Information

Drill Pipe:	Length: 4071.00 ft	Diameter: 3.80 inches	Volume: 57.11 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 207.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 58.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4295.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4267.00	
Shut In Tool	5.00			4272.00	
Hydraulic tool	5.00			4277.00	
Jars	5.00			4282.00	
Safety Joint	3.00			4285.00	
Packer	5.00			4290.00	29.00 Bottom Of Top Packer
Packer	5.00			4295.00	
Stubb	1.00			4296.00	
Recorder	0.00	6625	Inside	4296.00	
Recorder	0.00	8652	Outside	4296.00	
Perforations	10.00			4306.00	
Blank Spacing	33.00			4339.00	
Perforations	3.00			4342.00	
Bullnose	3.00			4345.00	50.00 Bottom Packers & Anchor

**Total Tool Length: 79.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64222

**DST#: 3**

ATTN: Rocky Milford

Test Start: 2018.08.22 @ 08:40:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29.8 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
57.00	GOCM 60% <i>m</i> , 32% <i>o</i> , 8% <i>g</i>	0.280
3.00	CO 98% <i>o</i> , 2% <i>g</i>	0.015

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

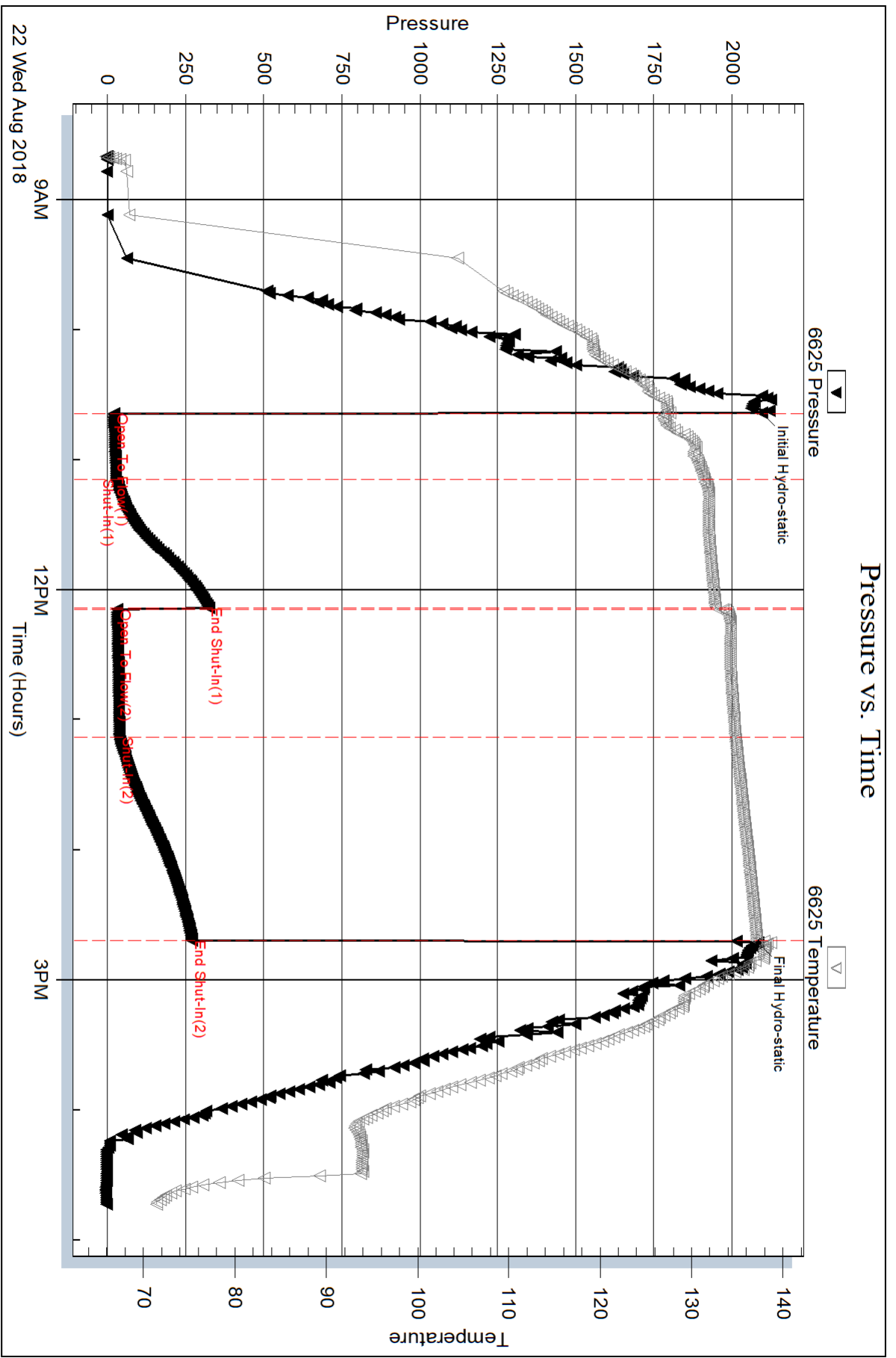
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 31 api @ 72 deg F Corrected Gravity = 29.8 api

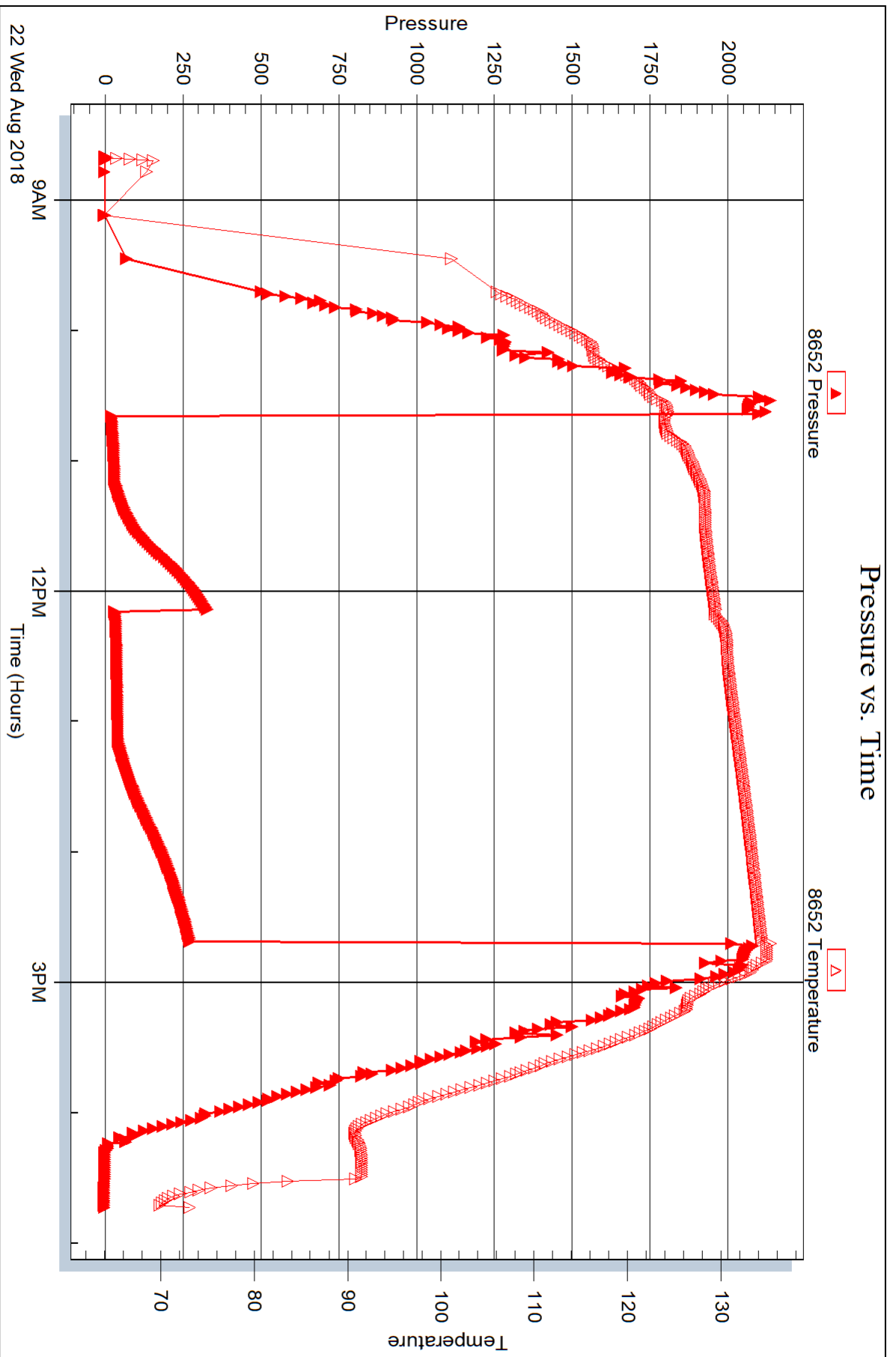


Serial #: 8652

Outside Murfin Drilling Co., Inc.

Munn - Bailey #1-12

DST Test Number: 3







## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Rocky Milford

### **Munn - Bailey #1-12**

#### **12-2s-38w Cheyenne,KS**

Start Date: 2018.08.23 @ 05:32:00

End Date: 2018.08.23 @ 13:24:00

Job Ticket #: 64223                      DST #: 4

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

Printed: 2018.08.28 @ 17:01:14



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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

**12-2s-38w Cheyenne, KS**

**Munn - Bailey #1-12**

Job Ticket: 64223      **DST#: 4**  
Test Start: 2018.08.23 @ 05:32:00

## GENERAL INFORMATION:

Formation: **LKC "H - J"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 07:40:15  
Time Test Ended: 13:24:00  
Interval: **4343.00 ft (KB) To 4430.00 ft (KB) (TVD)**  
Total Depth: 4430.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: James Winder  
Unit No: 83  
Reference Elevations: 3271.00 ft (KB)  
3266.00 ft (CF)  
KB to GR/CF: 5.00 ft

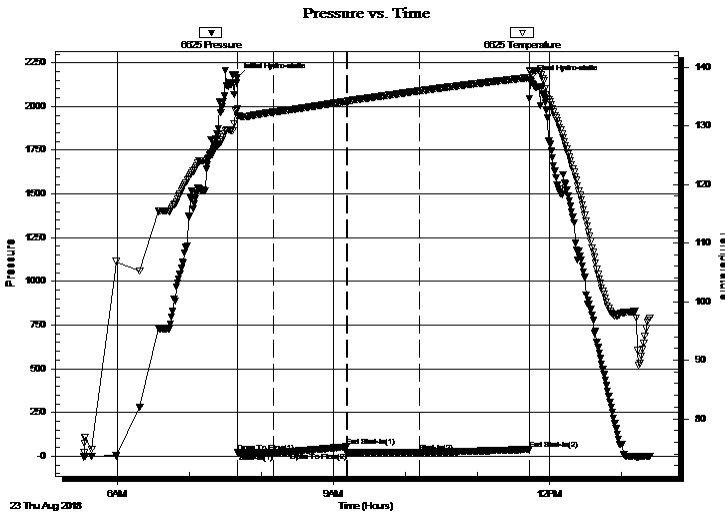
## Serial #: 6625

Inside

Press@RunDepth: 19.84 psig @ 4344.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2018.08.23 End Date: 2018.08.23 Last Calib.: 2018.08.23  
Start Time: 05:32:05 End Time: 13:23:59 Time On Btm: 2018.08.23 @ 07:40:00  
Time Off Btm: 2018.08.23 @ 11:44:00

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to almost 1/2", died back to 1/4" at close  
60 - IS: No blow back  
60 - FF: No blow  
90 - FS: No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2165.50	132.83	Initial Hydro-static
1	22.25	131.51	Open To Flow (1)
31	18.84	132.33	Shut-In(1)
91	53.76	134.17	End Shut-In(1)
92	20.59	134.19	Open To Flow (2)
152	19.84	135.94	Shut-In(2)
243	38.50	138.22	End Shut-In(2)
244	2151.37	139.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w /Oil spots 99%m, 1%o	0.02

\* 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

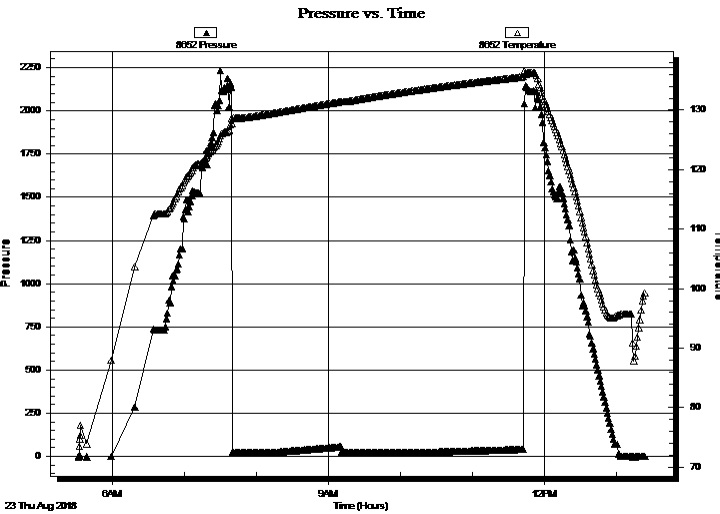
**12-2s-38w Cheyenne,KS**  
**Munn - Bailey #1-12**  
 Job Ticket: 64223 **DST#: 4**  
 Test Start: 2018.08.23 @ 05:32:00

**GENERAL INFORMATION:**

Formation: **LKC "H - J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:40:15  
 Time Test Ended: 13:24:00  
 Interval: **4343.00 ft (KB) To 4430.00 ft (KB) (TVD)**  
 Total Depth: 4430.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3271.00 ft (KB)  
 3266.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8652 Outside**  
 Press@RunDepth: psig @ 4344.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.08.23 End Date: 2018.08.23 Last Calib.: 2018.08.23  
 Start Time: 05:32:05 End Time: 13:23:44 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30 - IF: 1/4" Blow at open, built to almost 1/2", died back to 1/4" at close  
 60 - IS: No blow back  
 60 - FF: No blow  
 90 - FS: No blow



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
5.00	Mud w /Oil spots 99%m, 1%o	0.02

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64223

**DST#: 4**

ATTN: Rocky Milford

Test Start: 2018.08.23 @ 05:32:00

## Tool Information

Drill Pipe:	Length: 4132.00 ft	Diameter: 3.80 inches	Volume: 57.96 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 207.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 58.98 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4343.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 ft			
Tool Length:	116.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4315.00	
Shut In Tool	5.00			4320.00	
Hydraulic tool	5.00			4325.00	
Jars	5.00			4330.00	
Safety Joint	3.00			4333.00	
Packer	5.00			4338.00	29.00 Bottom Of Top Packer
Packer	5.00			4343.00	
Stubb	1.00			4344.00	
Recorder	0.00	6625	Inside	4344.00	
Recorder	0.00	8652	Outside	4344.00	
Perforations	18.00			4362.00	
Blank Spacing	65.00			4427.00	
Bullnose	3.00			4430.00	87.00 Bottom Packers & Anchor

**Total Tool Length: 116.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64223

**DST#: 4**

ATTN: Rocky Milford

Test Start: 2018.08.23 @ 05:32:00

## 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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w /Oil spots 99% <sub>m</sub> , 1% <sub>o</sub>	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 #: 6625

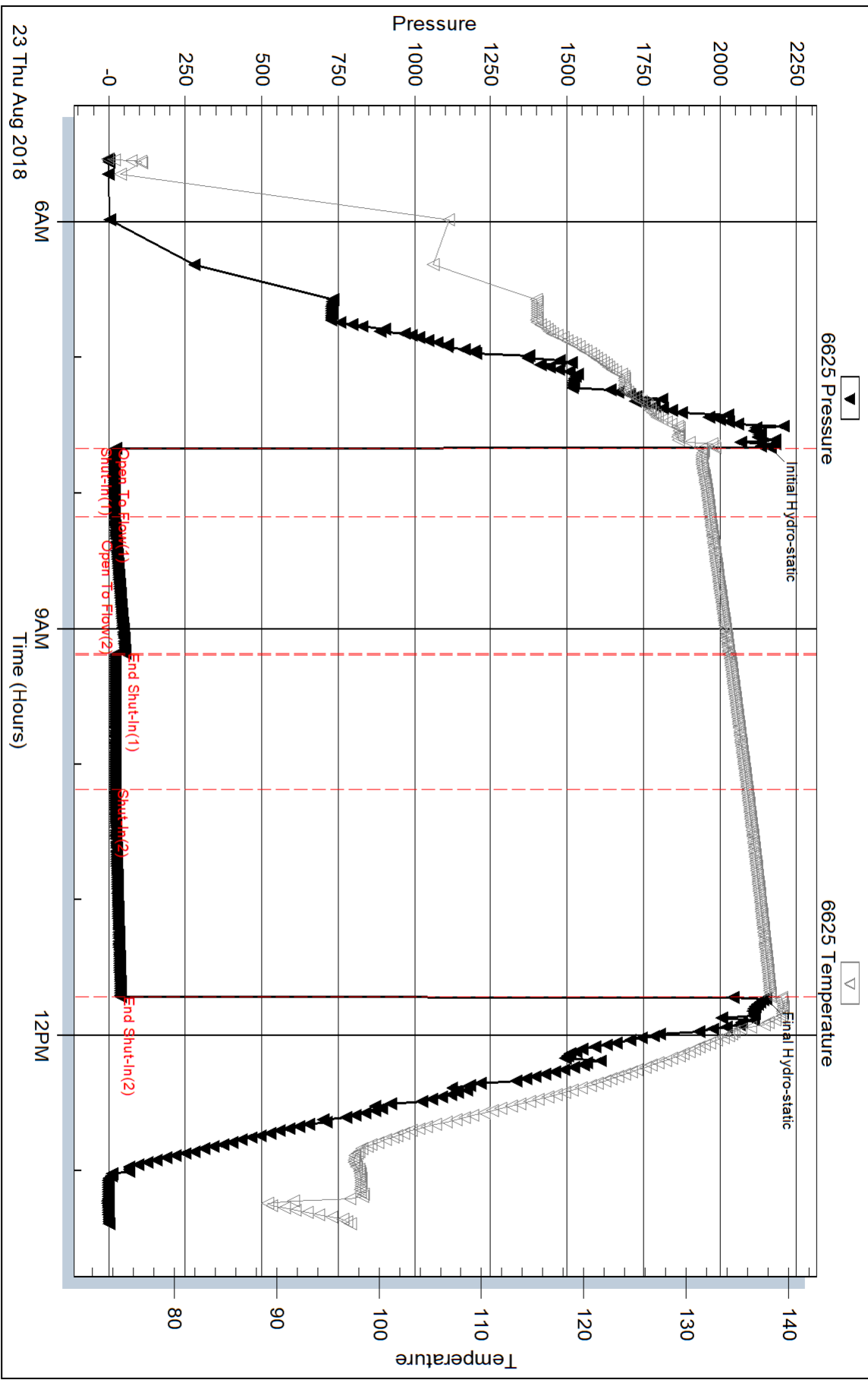
Inside

Murfin Drilling Co., Inc.

Munn - Bailey #1-12

DST Test Number: 4

# Pressure vs. Time

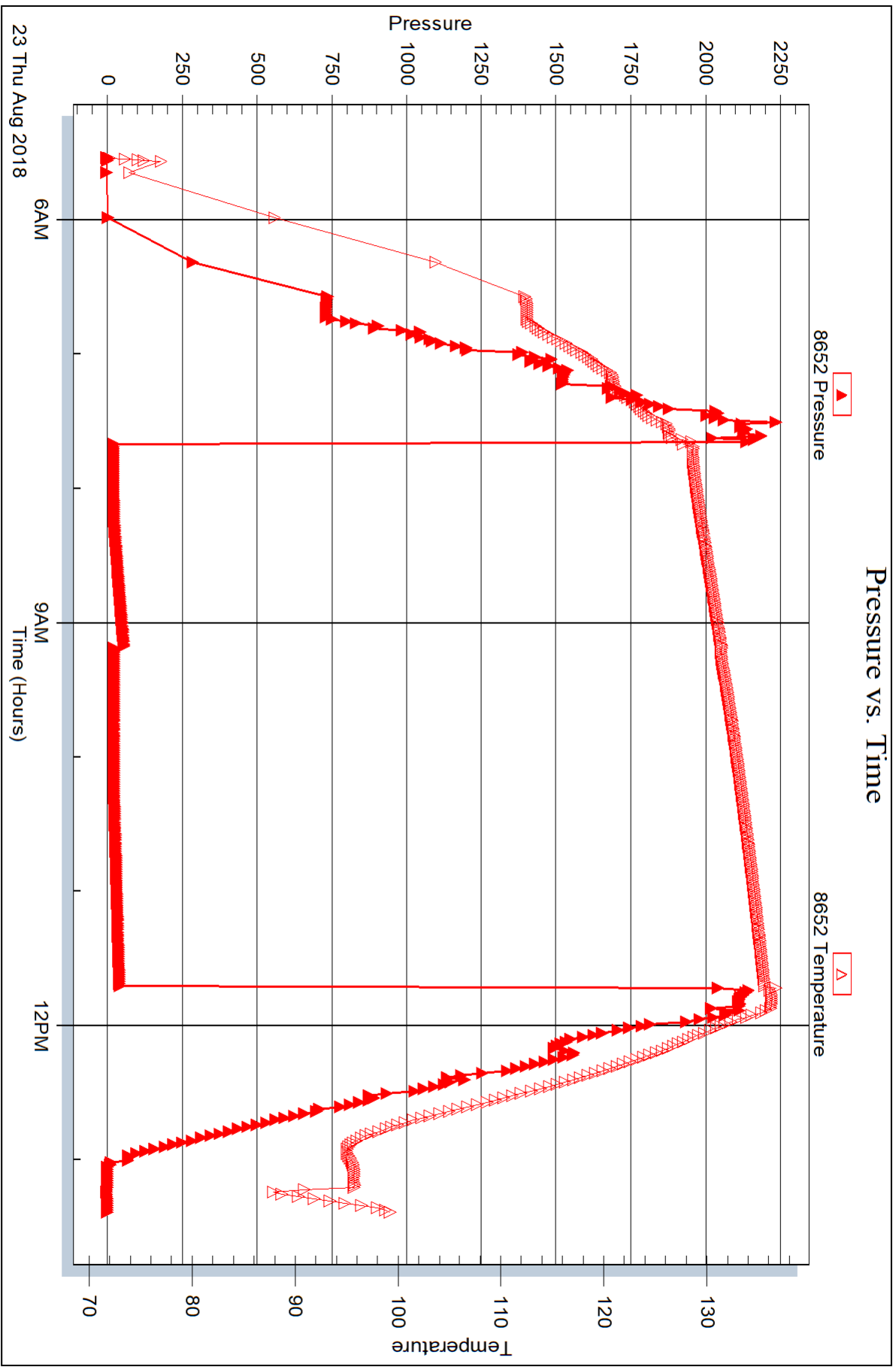


Serial #: 8652

Outside Murfin Drilling Co., Inc.

Munn - Bailey #1-12

DST Test Number: 4





## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Rocky Milford

### **Munn - Bailey #1-12**

#### **12-2s-38w Cheyenne,KS**

Start Date: 2018.08.24 @ 19:29:00

End Date: 2018.08.25 @ 04:27:30

Job Ticket #: 64224                      DST #: 5

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

Printed: 2018.08.28 @ 16:56:15





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**12-2s-38w Cheyenne, KS**

**Munn - Bailey #1-12**

Job Ticket: 64224      **DST#: 5**  
 Test Start: 2018.08.24 @ 19:29:00

## GENERAL INFORMATION:

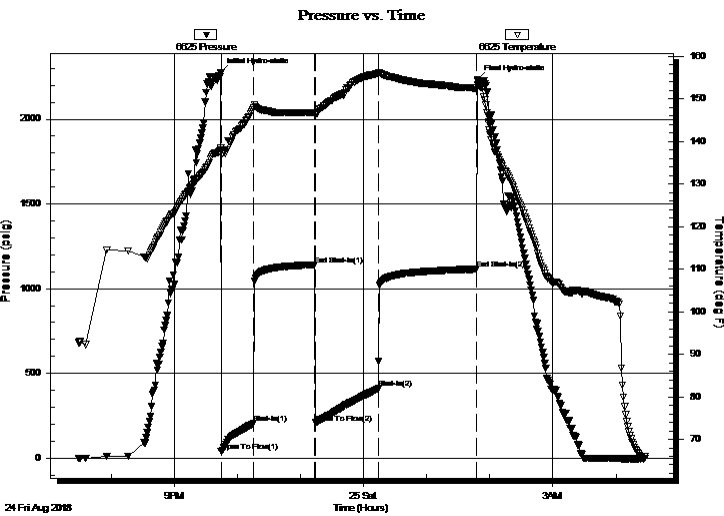
Formation: **Ft Scott - Celia**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:44:30  
 Time Test Ended: 04:27:30  
 Interval: **4593.00 ft (KB) To 4725.00 ft (KB) (TVD)**  
 Total Depth: 4725.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3271.00 ft (KB)  
 3266.00 ft (CF)  
 KB to GR/CF: 5.00 ft

## Serial #: 6625

Inside

Press@RunDepth: 409.85 psig @ 4594.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2018.08.24      End Date: 2018.08.25      Last Calib.: 2018.08.25  
 Start Time: 19:29:05      End Time: 04:27:30      Time On Btm: 2018.08.24 @ 21:44:15  
 Time Off Btm: 2018.08.25 @ 01:48:30

TEST COMMENT: 30 - IF: 1" Blow at open, built to BOB (11") at 15 1/4 min., built to 22 1/2"  
 60 - IS: No blow back  
 60 - FF: Blow built to BOB at 17 min., built to 36 1/4 min.  
 90 - FS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2275.75	138.52	Initial Hydro-static
1	38.10	138.10	Open To Flow (1)
31	204.76	147.82	Shut-In(1)
90	1140.85	146.82	End Shut-In(1)
90	207.79	146.27	Open To Flow (2)
150	409.85	156.03	Shut-In(2)
243	1114.71	152.50	End Shut-In(2)
245	2235.31	153.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
440.00	MCW w/trace oil 72%w, 28%m	4.29
310.00	WM w/trace oil 50%m, 44%w, 6%g	4.35
115.00	Mud w/trace oil 96%m, 4%g	1.61

\* 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.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64224

**DST#: 5**

ATTN: Rocky Milford

Test Start: 2018.08.24 @ 19:29:00

## Tool Information

Drill Pipe:	Length: 4381.00 ft	Diameter: 3.80 inches	Volume: 61.45 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 207.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 62.47 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4593.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	132.00 ft			
Tool Length:	161.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4565.00	
Shut In Tool	5.00			4570.00	
Hydraulic tool	5.00			4575.00	
Jars	5.00			4580.00	
Safety Joint	3.00			4583.00	
Packer	5.00			4588.00	29.00 Bottom Of Top Packer
Packer	5.00			4593.00	
Stubb	1.00			4594.00	
Recorder	0.00	6625	Inside	4594.00	
Recorder	0.00	8652	Outside	4594.00	
Perforations	30.00			4624.00	
Blank Spacing	97.00			4721.00	
Perforations	1.00			4722.00	
Bullnose	3.00			4725.00	132.00 Bottom Packers & Anchor

**Total Tool Length: 161.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**12-2s-38w Cheyenne,KS**

250 N. Water STE 300  
Wichita, KS 67202

**Munn - Bailey #1-12**

Job Ticket: 64224

**DST#: 5**

ATTN: Rocky Milford

Test Start: 2018.08.24 @ 19:29:00

## 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:

28000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
440.00	MCW w/trace oil 72%w , 28%m	4.286
310.00	WM w/trace oil 50%m, 44%w , 6%g	4.348
115.00	Mud w/trace oil 96%m, 4%g	1.613

Total Length: 865.00 ft      Total Volume: 10.247 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .260 ohms @ 65.2 deg F Chlorides = 28,000 ppm

Serial #: 6625

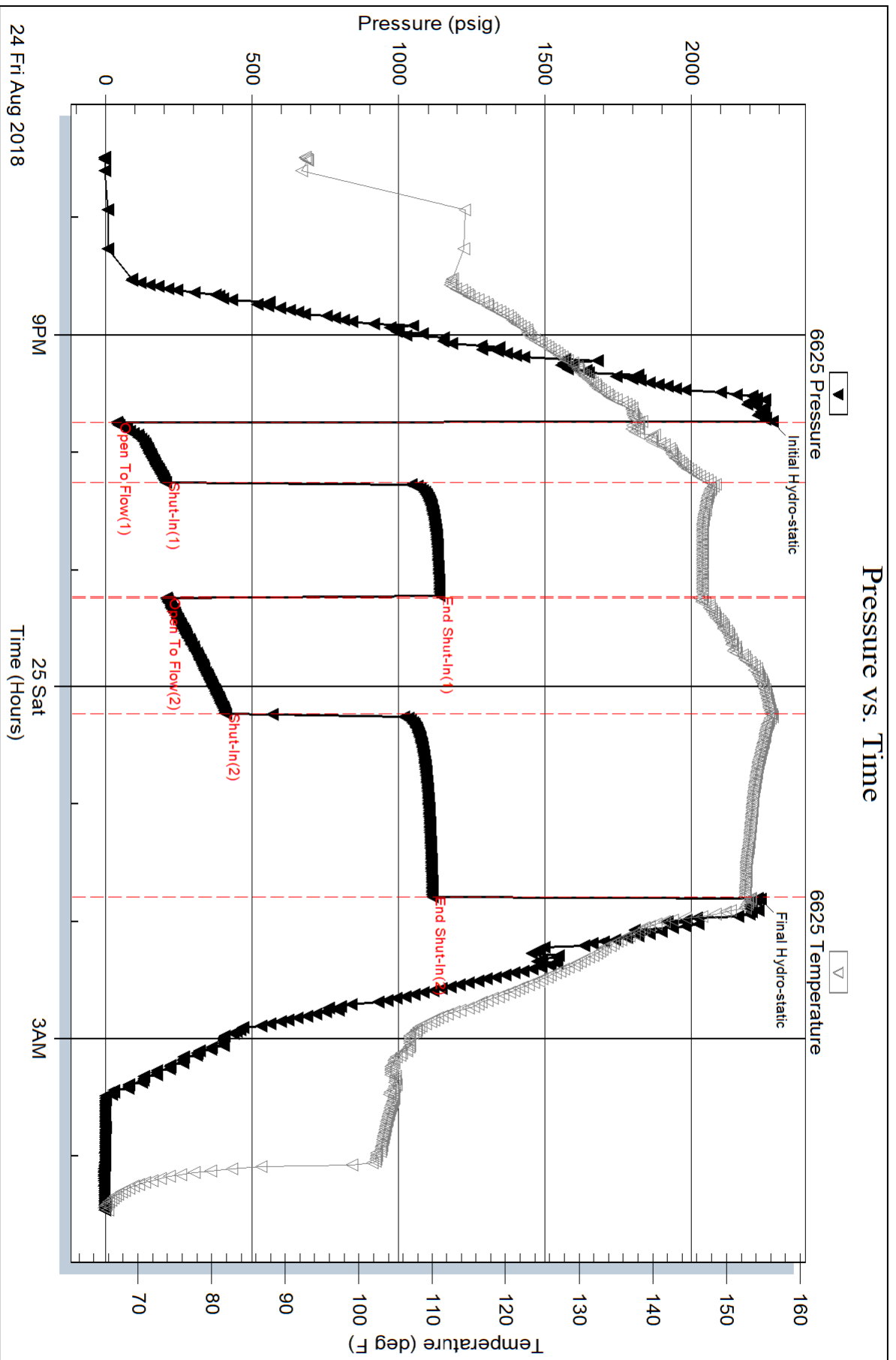
Inside

Murfin Drilling Co., Inc.

Munn - Bailey #1-12

DST Test Number: 5

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 64224

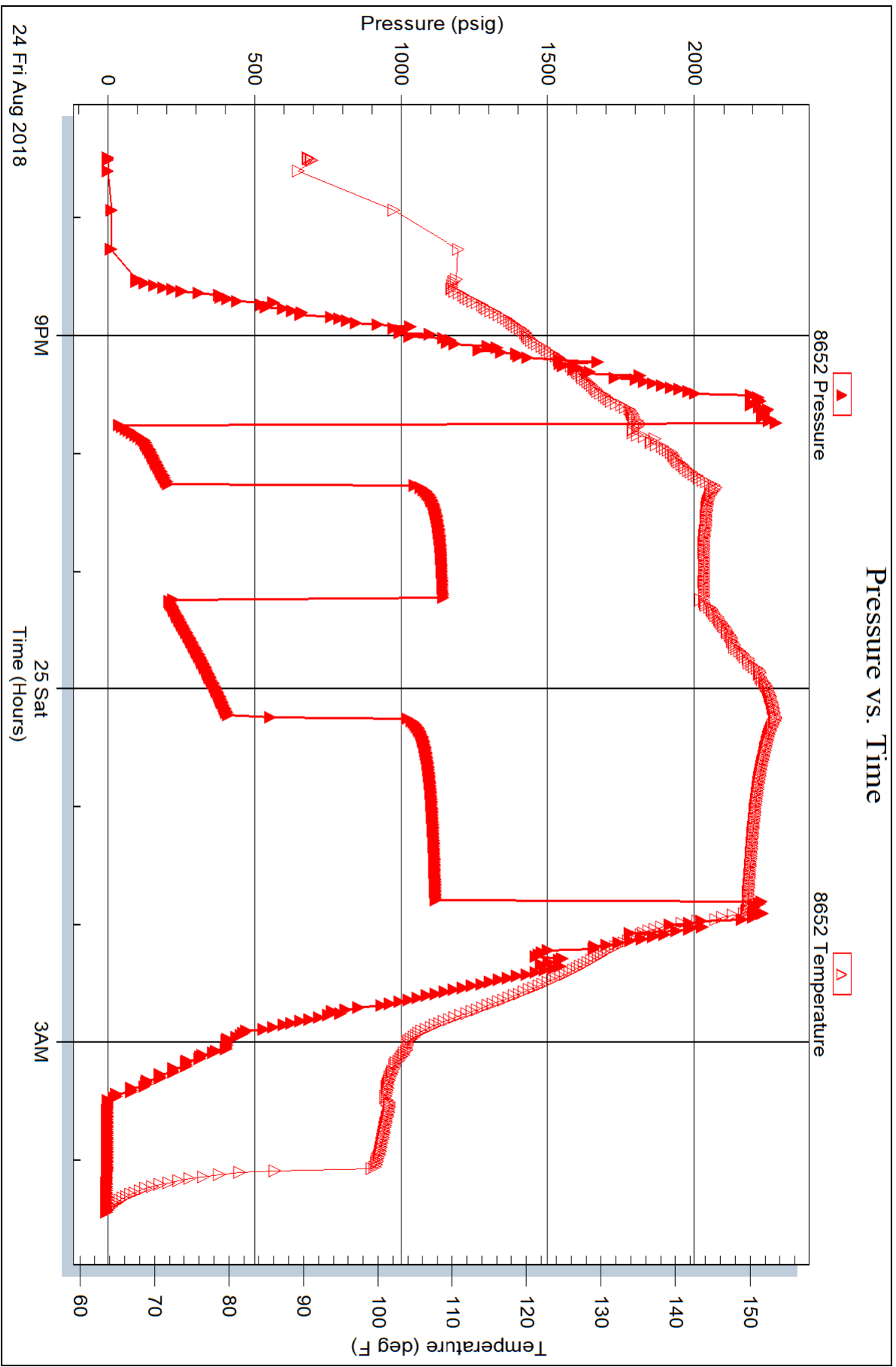
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Serial #: 8652

Outside Murfin Drilling Co., Inc.

Munn - Bailey #1-12

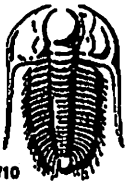
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Trilobite Testing, Inc

Ref. No: 64224

Printed: 2018.08.28 @ 16:56:16



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64220

Well Name & No. Munn-Bailey Unit #1-12 Test No. 1 Date 8-20-18  
 Company Murfin Drilling Co. Inc Elevation 3271 KB 3266 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #3  
 Location: Sec. 12 Twp 2S Rge. 38W Co. Cheyenne State KS

Interval Tested 4160-4220 Zone Tested LKC "A"  
 Anchor Length 60 Drill Pipe Run 3946 Mud Wt. 9.0  
 Top Packer Depth 4155 Drill Collars Run ~~000~~ 207 Vis 60  
 Bottom Packer Depth 4160 Wt. Pipe Run - WL 6.8  
 Total Depth 4220 Chlorides 600 ppm System LCM 4

Blow Description IF: 2" surge blow at open, died back to 1 3/4"  
ISI: No blowback  
FF: No blow  
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>Mud w/trace oil</u>	<u>trace</u>	<u></u>	<u></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 Total 60 BHT 138 Gravity 1150 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2052  
 (B) First Initial Flow 49  
 (C) First Final Flow 45  
 (D) Initial Shut-In 135  
 (E) Second Initial Flow 49  
 (F) Second Final Flow 45  
 (G) Final Shut-In 85  
 (H) Final Hydrostatic 2045

Test 1150  
 Jars 250  
 Safety Joint 75  
 Circ Sub  
 Hourly Standby  
 Mileage 132 RT 132  
 Sampler  
 Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1607

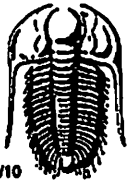
T-On Location 18:45 8/20  
 T-Started 21:45  
 T-Open 23:56  
 T-Pulled 2:59  
 T-Out 5:00 8/21

Comments #1 chased 3' to bottom  
lost 6' of mud - 2" surge blow

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

Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1607  
 MP/DST Disc't

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. 64221

Well Name & No. Munn - Bailey Unit #1-12 Test No. 2 Date 8-21-18  
 Company Murfin Drilling Co Inc Elevation 3271 KB 3266 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #3  
 Location: Sec. 12 Twp 25 Rge. 38w Co. Cheyenne State KS

Interval Tested 4217 - 4297 Zone Tested LKC "Aprime" - "D" prime  
 Anchor Length 80 Drill Pipe Run 4008 Mud Wt. 9.0  
 Top Packer Depth 4212 Drill Collars Run 207 Vis 56  
 Bottom Packer Depth 4217 Wt. Pipe Run - WL 6.8  
 Total Depth 4297 Chlorides 600 ppm System LCM 4

Blow Description IF: 2 1/4" surge blow at open, built to 2 3/4"  
ISI: No blowback  
FF: Weak surface blow at 11 min, surface blow through open.  
FSI: No blowback

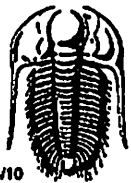
Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>Mud w/trace oil</u>	<u>trace</u>	<u>oil</u>	<u>100</u>	<u></u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 120 BHT 140 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2108  Test 1150 T-On Location 14:15  
 (B) First Initial Flow 51  Jars 250 T-Started 15:10  
 (C) First Final Flow 56  Safety Joint 75 T-Open 17:13  
 (D) Initial Shut-In 1279  Circ Sub \_\_\_\_\_ T-Pulled 21:16  
 (E) Second Initial Flow 64  Hourly Standby \_\_\_\_\_ T-Out 23:15  
 (F) Second Final Flow 73  Mileage 132 RT 132 Comments tool chased 3' to  
 (G) Final Shut-In 1258  Sampler \_\_\_\_\_ bottom at open, lost 10'  
 (H) Final Hydrostatic 2087  Straddle \_\_\_\_\_ Mud - 2 1/4" surge blow  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_  
 Final Flow 60  Day Standby \_\_\_\_\_  
 Final Shut-In 90  Accessibility \_\_\_\_\_  
 Sub Total 1607 MP/DST Disc't \_\_\_\_\_

Approved By Rocky Milford Our Representative James Winder  
 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. 64222

Well Name & No. Munn - Bailey Unit #1-12 Test No. 3 Date 8-22-18  
 Company Murfin Drilling Co. Inc Elevation 3271 KB 3266 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #3  
 Location: Sec. 12 Twp 2S Rge. 38W Co. Cheyenne State KS

Interval Tested 4295 - 4345 Zone Tested LKC "5"  
 Anchor Length 50 Drill Pipe Run 4071 Mud Wt. 9.1  
 Top Packer Depth 4290 Drill Collars Run 207 Vls 64  
 Bottom Packer Depth 4295 Wt. Pipe Run - WL 6.0  
 Total Depth 4345 Chlorides 600 ppm System LCM 4

Blow Description IF: Blow built to 2 1/4"  
ISI: No blowback  
FF: 1/4" Blow at open, built to 3 1/2"  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>CO</u>	<u>2</u>	<u>98</u>	<u>-</u>	<u>-</u>
<u>57</u>	<u>60CM</u>	<u>8</u>	<u>32</u>	<u>60</u>	<u>60</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 60 BHT 137 Gravity 29.8 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2095  
 (B) First Initial Flow 22  
 (C) First Final Flow 28  
 (D) Initial Shut-In 324  
 (E) Second Initial Flow 31  
 (F) Second Final Flow 38  
 (G) Final Shut-In 270  
 (H) Final Hydrostatic 2084

Test 1150  
 Jars 250  
 Safety Joint 75  
 Circ Sub  
 Hourly Standby  
 Mileage 132 RT 132  
 Sampler  
 Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1607

T-On Location 7:50  
 T-Started 8:40  
 T-Open 10:38  
 T-Pulled 14:41  
 T-Out 16:35

Comments \_\_\_\_\_  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1607  
 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 Winkler  
 Trilobite Testing Inc. shall not be liable for damage 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. 64223

Well Name & No. Munn - Bailey Unit #1-12 Test No. 4 Date 8-23-18  
 Company Murfin Drilling Co. Inc Elevation 3271 KB 3266 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #3  
 Location: Sec. 12 Twp 2s Rge. 38w Co. Cheyenne State KS

Interval Tested 4343 - 4430 Zone Tested LKC "H-J"  
 Anchor Length 87 Drill Pipe Run 4132 Mud Wt. 9.2  
 Top Packer Depth 4338 Drill Collars Run 207 Vls 52  
 Bottom Packer Depth 4343 Wt. Pipe Run - WL 6.4  
 Total Depth 4430 Chlorides 600 ppm System LCM 4  
 Blow Description IF: 1/4" Blow at open, built to almost 1/2", died back to 1/4" at close  
ISI: No blowback  
FF: No blow  
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud w/ail spots</u>	<u>1</u>		<u>99</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

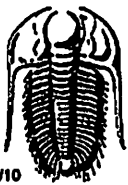
Rec Total 5 BHT 138 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2166  Test 1150 T-On Location 4:30  
 (B) First Initial Flow 22  Jars 250 T-Started 5:32  
 (C) First Final Flow 19  Safety Joint 75 T-Open 7:40  
 (D) Initial Shut-In 54  Circ Sub \_\_\_\_\_ T-Pulled 11:43  
 (E) Second Initial Flow 21  Hourly Standby \_\_\_\_\_ T-Out 13:20  
 (F) Second Final Flow 20  Mileage 132 RT 132 Comments \_\_\_\_\_  
 (G) Final Shut-In 39  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2151  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1607

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

MP/DST Disc't \_\_\_\_\_

Approved By Rocky Milford Our Representative James Winder  
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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64224

Well Name & No. Munn - Bailey #1-12 Test No. 5 Date 8-24-18  
 Company Murfin Drilling Co. Inc Elevation 3271 KB 3266 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #3  
 Location: Sec. 12 Twp 2S Rge. 38W Co. Cheyenne State KS

Interval Tested 4593 - 4725 Zone Tested Ft Scott - Celia  
 Anchor Length 132 Drill Pipe Run 4381 Mud Wt. 8.9  
 Top Packer Depth 4588 Drill Collars Run 207 Vls 58  
 Bottom Packer Depth 4593 (Shale) Wt. Pipe Run - WL 5.6  
 Total Depth 4725 Chlorides 600 ppm System LCM 4

Blow Description IF: 1" Blow at open, built to BOR(11") at 15 1/4 min., built to 22 1/2"  
ISI: No blowback  
FF: Blow built to BOB at 17 min., built to 36 1/4"  
FJI: No blowback

Rec	Feet of	%gas	trace %oil	%water	%mud
<u>115</u>	<u>mud w/trace oil</u>	<u>4</u>	<u>trace</u>	<u>-</u>	<u>96</u>
<u>310</u>	<u>WM w/trace oil</u>	<u>6</u>	<u>trace</u>	<u>44</u>	<u>50</u>
<u>440</u>	<u>MCW w/trace oil</u>	<u>-</u>	<u>trace</u>	<u>72</u>	<u>28</u>
		%gas	%oil	%water	%mud

Rec Total 865 BHT 153 Gravity \_\_\_\_\_ API RW 260 @ 65.2 °F Chlorides 28,000 ppm

(A) Initial Hydrostatic 2276  Test 1150 T-On Location 18:15 8/24  
 (B) First Initial Flow 38  Jars 250 T-Started 19:29  
 (C) First Final Flow 205  Safety Joint 75 T-Open 21:44  
 (D) Initial Shut-In 1141  Circ Sub \_\_\_\_\_ T-Pulled 1:47  
 (E) Second Initial Flow 208  Hourly Standby \_\_\_\_\_ T-Out 4:25 8/25  
 (F) Second Final Flow 410  Mileage 132 RT 132 Comments \_\_\_\_\_  
 (G) Final Shut-In 1115  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2235  Straddle \_\_\_\_\_  
 Shale Packer 250  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 1857  
 Sub Total 1857 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  
 Triobite Testing Inc. shall not be liable for damages 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.