

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](mailto: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)</i> <i>(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	JONES 'A' 5-17
Doc ID	1474913

All Electric Logs Run

DIL
DUCP
MEL
BHCS



# Saman Sharifaie

## Petroleum Geologist

### GEOLOGIST'S REPORT

#### DRILLING TIME AND SAMPLE LOG

COMPANY: **Marlin Drilling Co., Inc.**  
LEASE: Jones "A" #5-17  
FIELD: Jones Canyon South

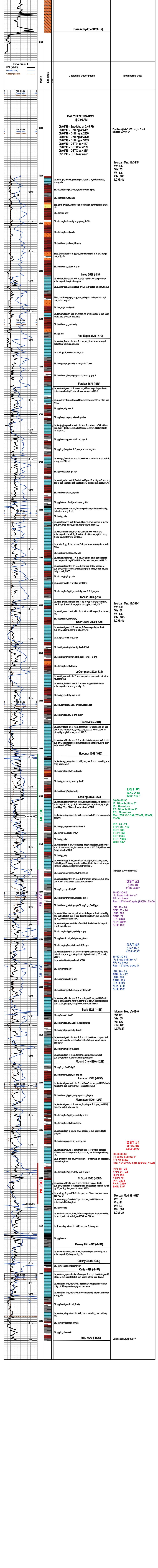
LOCATION: 1980' FNL & 2080' FWL  
COUNTY: Cheyenne STATE: Kansas  
CONTRACTOR: **Marlin Drilling #3**  
RFD: 09/02/19 COMP: 09/11/19  
MUD UP: 3.248" TYPE MUD: Chemical  
SAMPLES SAVED FROM: 3.50" TO RTD  
DRILLING TIME KEPT FROM: 3.50" TO RTD  
SAMPLES EXAMINED FROM: 3.50" TO RTD  
GEOLOGICAL SUPERVISION FROM: 3.50" TO RTD  
REFERENCE WELL: Berveco - Vada #1-17

FLUID: \_\_\_\_\_  
GL: 3.16"  
MEASUREMENTS ARE ALL FROM KELLY BUSHING  
CASING CONDUCTOR SURFACE: 8-5/8" at 304'  
ELECTRICAL SURVEYS CND, DIL, MEL, SWIR

Formation	Sample Tops	E-log Tops	Strat.
Anhydrite	3105 (+39)	3102 (+39)	-2
Base Anhydrite	3143 (-1)	3139 (-2)	-4
Neva	3544 (-413)	3556 (-415)	-3
Fisher	3670 (-529)	3671 (-530)	-1
Starbuck	4104 (-963)	4103 (-962)	FBT
Start	4326 (-1185)	4326 (-1185)	-1
Mound City	4381 (-1240)	4380 (-1239)	-2
FT Scott	4504 (-1365)	4503 (-1363)	-5
Celia	4598 (-1457)	4598 (-1457)	-8

REMARKS: Due to poor shows of oil in multiple potential pay zones and negative DST results, it is recommended and agreed upon by all parties that this well be plugged and abandoned.

Respectfully Submitted,  
API #15-023-21518  
Saman Sharifaie  
Petroleum Geologist  
\*Tops have been adjusted to electric logs





## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Jones 'A' #5-17**

#### **17-1s-37w Cheyenne, NE**

Start Date: 2019.09.07 @ 05:50:00

End Date: 2019.09.07 @ 14:08:15

Job Ticket #: 65577                      DST #: 1

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

Printed: 2019.09.11 @ 13:45:28

Murfin Drilling Co., Inc.

17-1s-37w Cheyenne, NE

Jones 'A' #5-17

DST # 1

LKC "A - D"

2019.09.07



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65577

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2019.09.07 @ 05:50:00

## GENERAL INFORMATION:

Formation: **LKC "A - D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:16:15  
 Time Test Ended: 14:08:15  
 Interval: **4056.00 ft (KB) To 4177.00 ft (KB) (TVD)**  
 Total Depth: 4177.00 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: 3141.00 ft (KB)  
 3136.00 ft (CF)  
 KB to GR/CF: 5.00 ft

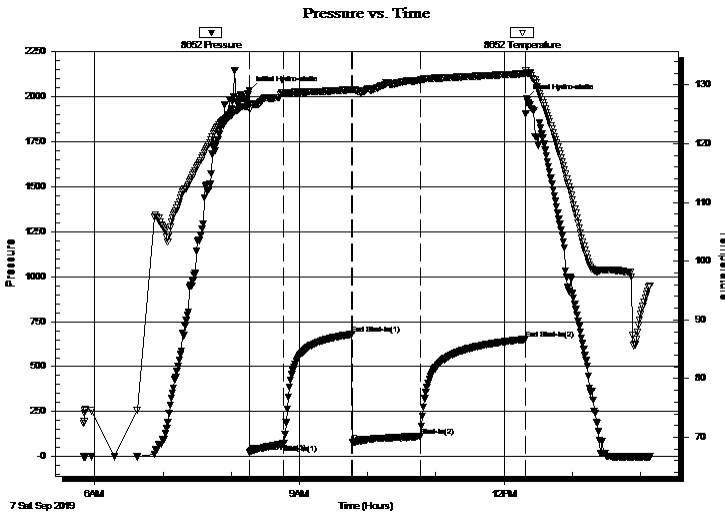
## Serial #: 8652

Outside

Press@RunDepth: 112.19 psig @ 4057.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.09.07 End Date: 2019.09.07 Last Calib.: 2019.09.07  
 Start Time: 05:50:05 End Time: 14:08:14 Time On Btm: 2019.09.07 @ 08:16:00  
 Time Off Btm: 2019.09.07 @ 12:19:45

TEST COMMENT: 30 - IF: Blow built to 6"  
 60 - IS: No blow back  
 60 - FF: Blow built to 4"  
 90 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2034.62	126.84	Initial Hydro-static
1	24.79	125.93	Open To Flow (1)
30	71.17	128.67	Shut-In(1)
90	679.71	129.24	End Shut-In(1)
91	79.27	129.20	Open To Flow (2)
151	112.19	130.87	Shut-In(2)
243	652.38	131.96	End Shut-In(2)
244	1989.36	132.13	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
208.00	GOCM 75% m, 16% o, 9% g	1.30

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65577

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2019.09.07 @ 05:50:00

## GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:16:15

Time Test Ended: 14:08:15

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 83

**Interval: 4056.00 ft (KB) To 4177.00 ft (KB) (TVD)**

Reference Elevations: 3141.00 ft (KB)

Total Depth: 4177.00 ft (KB) (TVD)

3136.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 6625 Inside**

Press@RunDepth: psig @ 4057.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.07

End Date:

2019.09.07

Last Calib.:

2019.09.07

Start Time: 05:50:05

End Time:

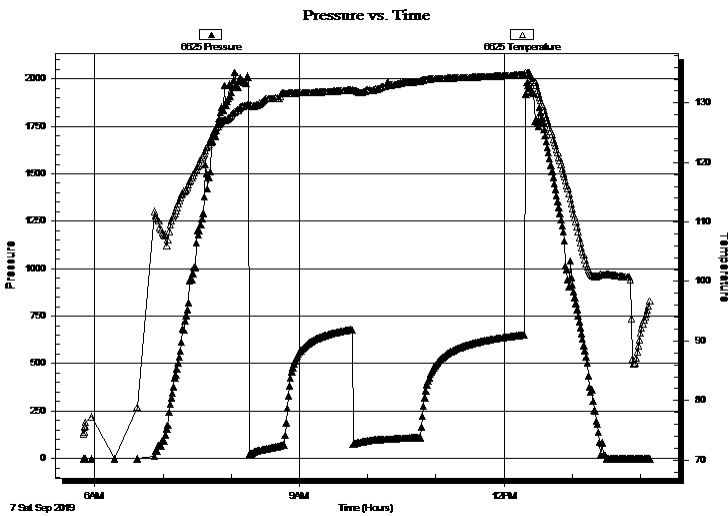
14:08:44

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30 - IF: Blow built to 6"  
60 - IS: No blow back  
60 - FF: Blow built to 4"  
90 - FS: No blow back

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
208.00	GOCM 75% m, 16% o, 9% g	1.30

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65577

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2019.09.07 @ 05:50:00

## Tool Information

Drill Pipe:	Length: 3856.00 ft	Diameter: 3.80 inches	Volume: 54.09 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: 178.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 54.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4056.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	121.00 ft			
Tool Length:	150.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4028.00	
Shut In Tool	5.00			4033.00	
Hydraulic tool	5.00			4038.00	
Jars	5.00			4043.00	
Safety Joint	3.00			4046.00	
Packer	5.00			4051.00	29.00 Bottom Of Top Packer
Packer	5.00			4056.00	
Stubb	1.00			4057.00	
Recorder	0.00	6625	Inside	4057.00	
Recorder	0.00	8652	Outside	4057.00	
Perforations	20.00			4077.00	
Blank Spacing	97.00			4174.00	
Bullnose	3.00			4177.00	121.00 Bottom Packers & Anchor

**Total Tool Length: 150.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65577

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2019.09.07 @ 05:50:00

## 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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
208.00	GOCM 75% <sub>m</sub> , 16% <sub>o</sub> , 9% <sub>g</sub>	1.296

Total Length: 208.00 ft      Total Volume: 1.296 bbl

Num Fluid Samples: 0

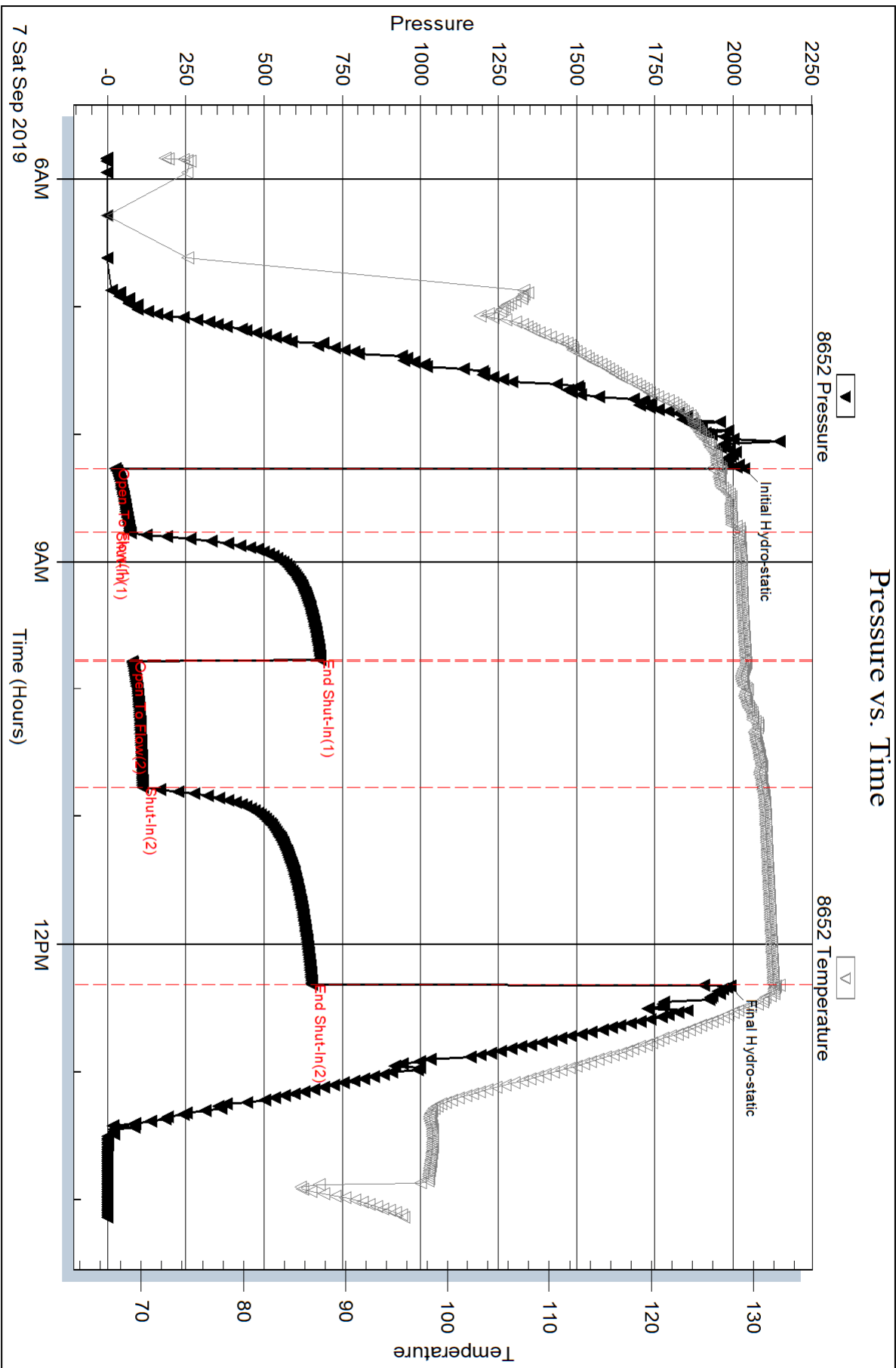
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



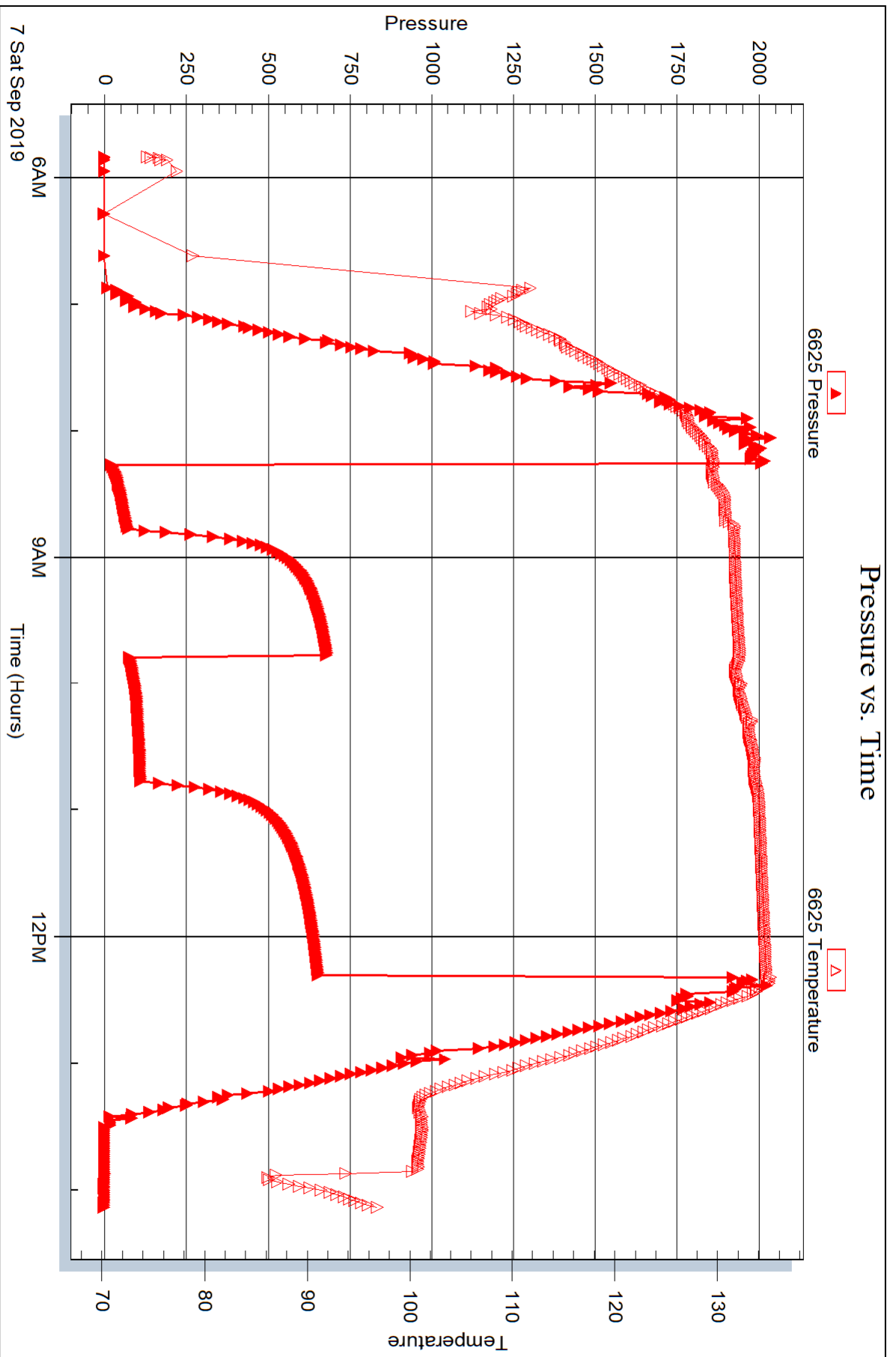
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Jones 'A' #5-17

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 65577

Printed: 2019.09.11 @ 13:45:29



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Jones 'A' #5-17**

#### **17-1s-37w Cheyenne, NE**

Start Date: 2019.09.08 @ 01:19:00

End Date: 2019.09.08 @ 08:31:45

Job Ticket #: 65578                      DST #: 2

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

Printed: 2019.09.11 @ 13:45:03



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65578

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2019.09.08 @ 01:19:00

## GENERAL INFORMATION:

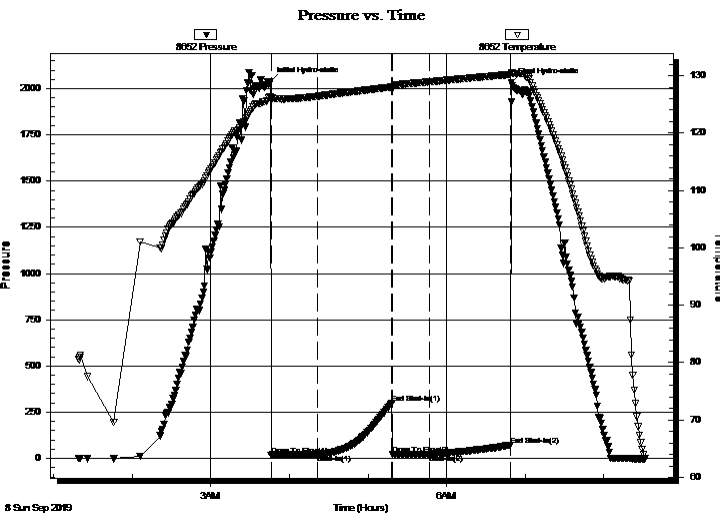
Formation: **LKC "G"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:46:00  
 Time Test Ended: 08:31:45  
 Interval: **4176.00 ft (KB) To 4235.00 ft (KB) (TVD)**  
 Total Depth: 4235.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3141.00 ft (KB)  
 3136.00 ft (CF)  
 KB to GR/CF: 5.00 ft

## Serial #: 8652

Outside

Press@RunDepth: 23.64 psig @ 4177.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.09.08 End Date: 2019.09.08 Last Calib.: 2019.09.08  
 Start Time: 01:19:05 End Time: 08:31:44 Time On Btm: 2019.09.08 @ 03:45:30  
 Time Off Btm: 2019.09.08 @ 06:49:30

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



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2040.31	126.35	Initial Hydro-static
1	18.64	126.02	Open To Flow (1)
36	20.19	126.41	Shut-In(1)
93	299.92	128.02	End Shut-In(1)
94	22.91	127.69	Open To Flow (2)
122	23.64	128.93	Shut-In(2)
184	72.38	130.21	End Shut-In(2)
184	2032.22	130.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w /Oil spots 98%m, 2%o	0.07

\* 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.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65578

**DST#: 2**

ATTN: Saman Sharifaie

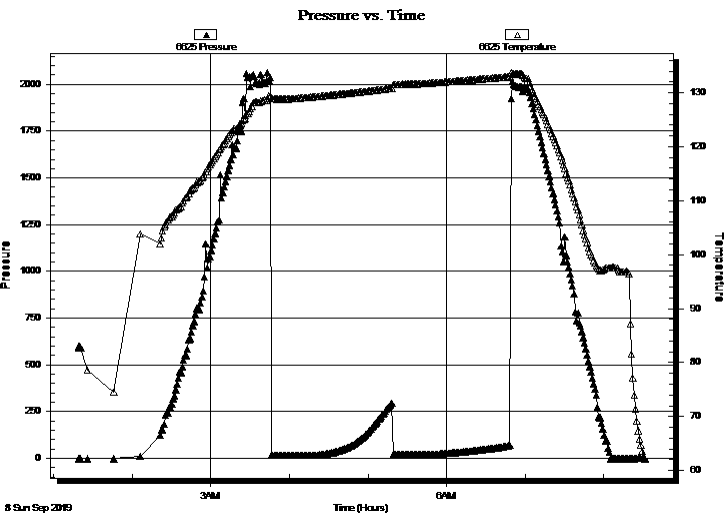
Test Start: 2019.09.08 @ 01:19:00

**GENERAL INFORMATION:**

Formation:	<b>LKC "G"</b>			Test Type:	Conventional Bottom Hole (Reset)
Deviated:	No Whipstock:	ft (KB)		Tester:	James Winder
Time Tool Opened:	03:46:00			Unit No:	83
Time Test Ended:	08:31:45			Reference Elevations:	3141.00 ft (KB)
<b>Interval:</b>	<b>4176.00 ft (KB) To 4235.00 ft (KB) (TVD)</b>				3136.00 ft (CF)
Total Depth:	4235.00 ft (KB) (TVD)			KB to GR/CF:	5.00 ft
Hole Diameter:	7.88 inches	Hole Condition:	Fair		

<b>Serial #: 6625</b>	<b>Inside</b>			Capacity:	8000.00 psig
Press@RunDepth:	psig @	4177.00 ft (KB)		Last Calib.:	2019.09.08
Start Date:	2019.09.08	End Date:	2019.09.08	Time On Btm:	
Start Time:	01:19:05	End Time:	08:31:59	Time Off Btm:	

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



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
15.00	Mud w /Oil spots 98% <sub>m</sub> , 2% <sub>o</sub>	0.07

**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.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65578

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2019.09.08 @ 01:19:00

## Tool Information

Drill Pipe:	Length: 3982.00 ft	Diameter: 3.80 inches	Volume: 55.86 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: 178.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 56.74 bbl</u>	Tool Chased 9.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4176.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	88.00 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			4148.00	
Shut In Tool	5.00			4153.00	
Hydraulic tool	5.00			4158.00	
Jars	5.00			4163.00	
Safety Joint	3.00			4166.00	
Packer	5.00			4171.00	29.00 Bottom Of Top Packer
Packer	5.00			4176.00	
Stubb	1.00			4177.00	
Recorder	0.00	6625	Inside	4177.00	
Recorder	0.00	8652	Outside	4177.00	
Perforations	20.00			4197.00	
Blank Spacing	33.00			4230.00	
Perforations	2.00			4232.00	
Bullnose	3.00			4235.00	59.00 Bottom Packers & Anchor

**Total Tool Length: 88.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65578

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2019.09.08 @ 01:19:00

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.97 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
15.00	Mud w /Oil spots 98%m, 2%o	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbl

Num Fluid Samples: 0

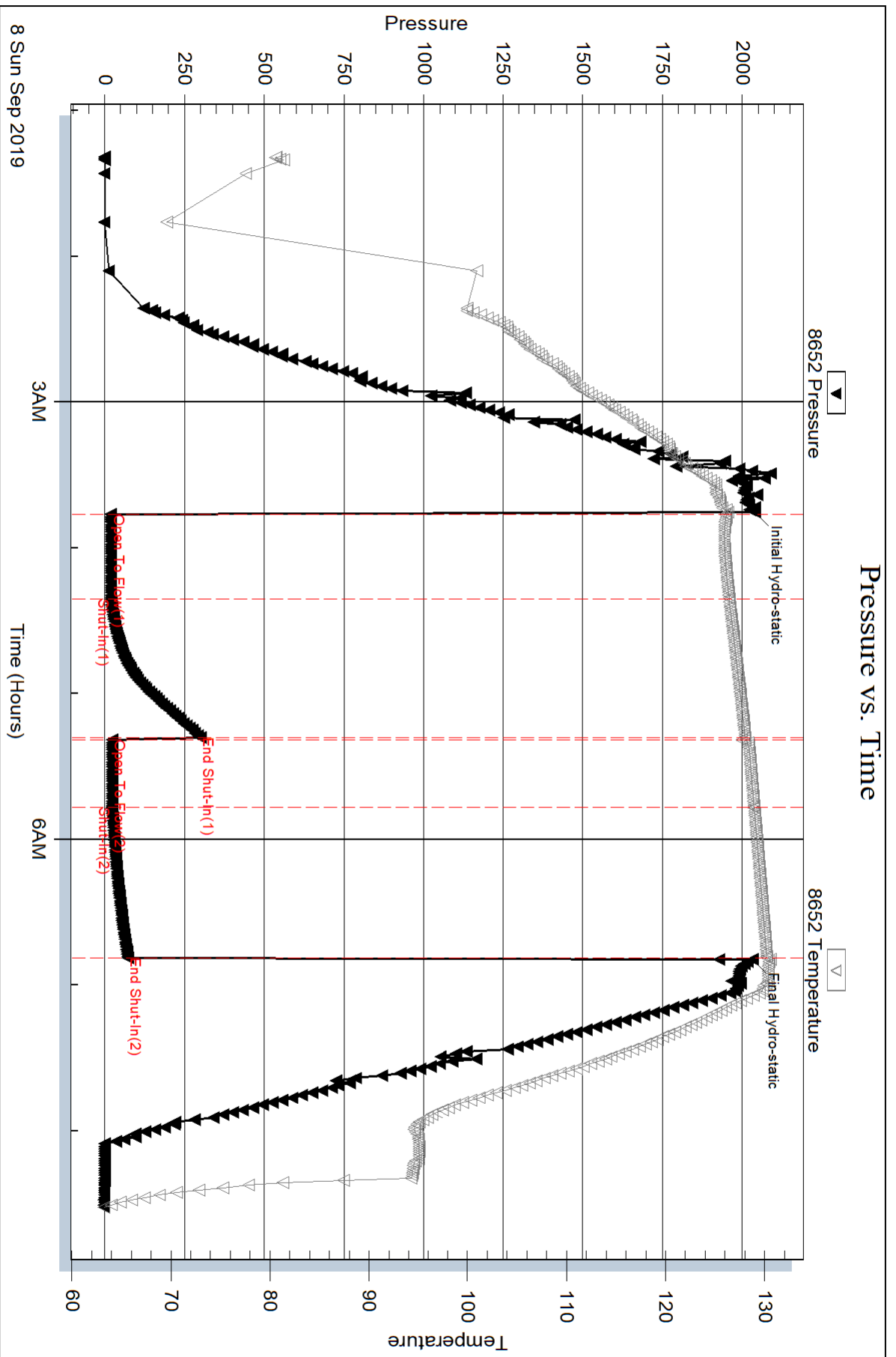
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



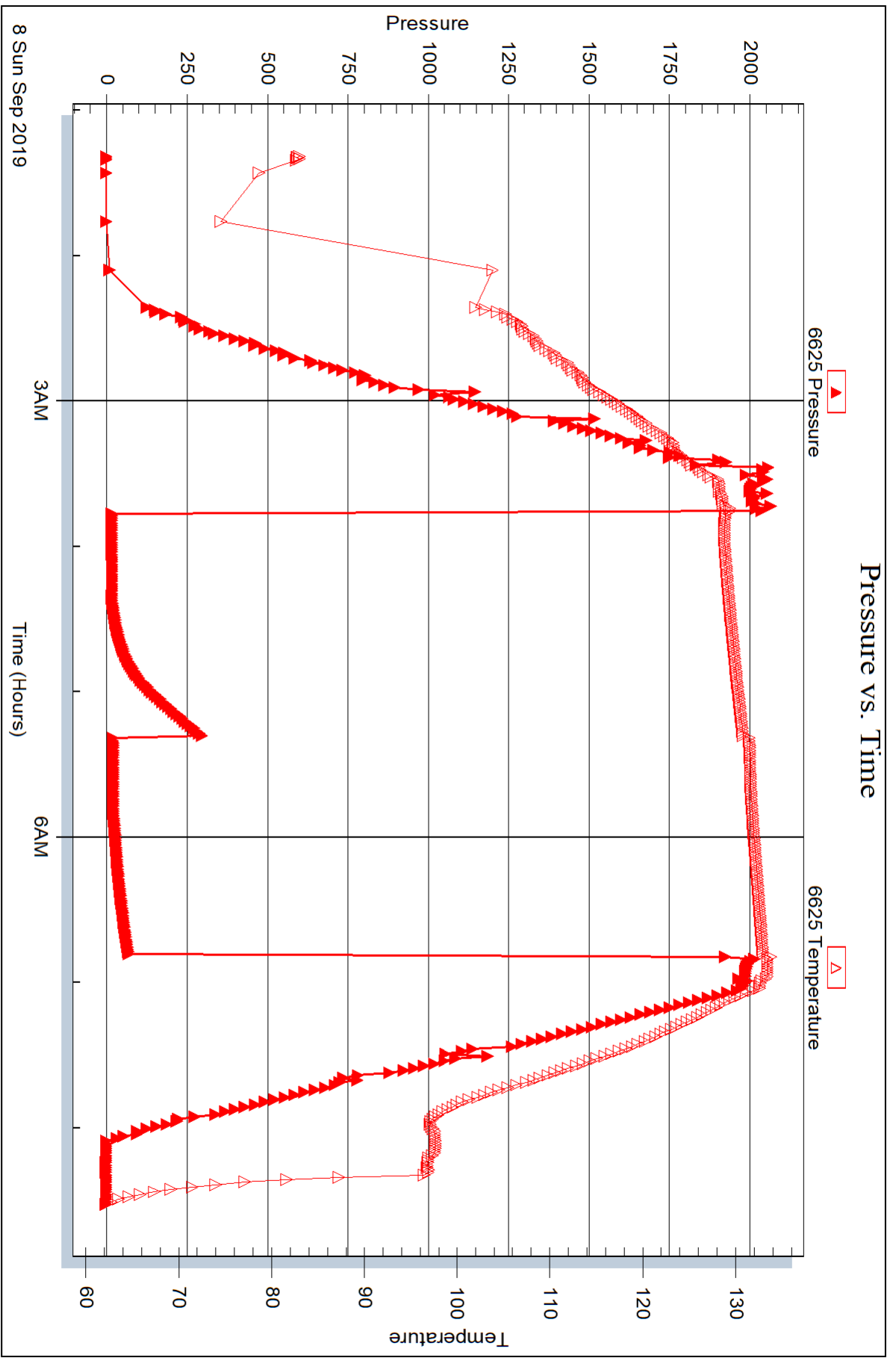
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Jones 'A' #5-17

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 65578

Printed: 2019.09.11 @ 13:45:05



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Jones 'A' #5-17**

#### **17-1s-37w Cheyenne, NE**

Start Date: 2019.09.08 @ 20:40:00

End Date: 2019.09.09 @ 04:14:45

Job Ticket #: 65579                      DST #: 3

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

Printed: 2019.09.11 @ 13:44:28

Murfin Drilling Co., Inc.

17-1s-37w Cheyenne, NE

Jones 'A' #5-17

DST # 3

LKC "H - J"

2019.09.08



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65579

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2019.09.08 @ 20:40:00

## GENERAL INFORMATION:

Formation: **LKC "H - J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:22:30  
 Time Test Ended: 04:14:45  
 Interval: **4235.00 ft (KB) To 4330.00 ft (KB) (TVD)**  
 Total Depth: 4330.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3141.00 ft (KB)  
 3136.00 ft (CF)  
 KB to GR/CF: 5.00 ft

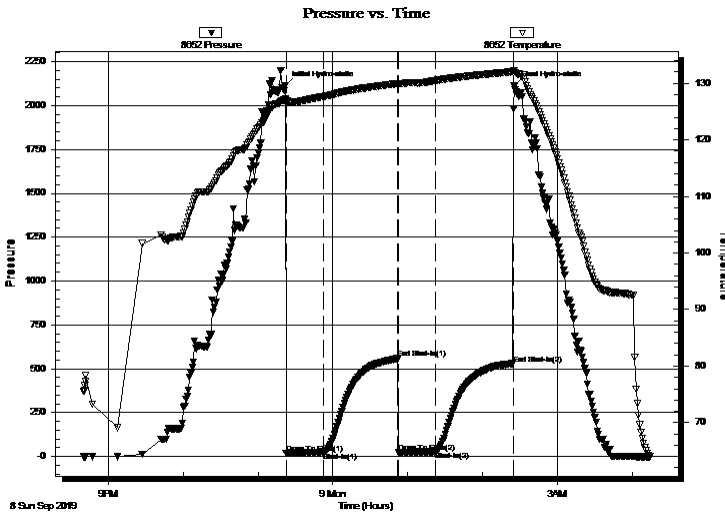
## Serial #: 8652

Outside

Press@RunDepth: 27.01 psig @ 4236.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.09.08 End Date: 2019.09.09 Last Calib.: 2019.09.09  
 Start Time: 20:40:05 End Time: 04:14:44 Time On Btm: 2019.09.08 @ 23:22:15  
 Time Off Btm: 2019.09.09 @ 02:25:30

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

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2115.22	127.20	Initial Hydro-static
1	19.51	126.43	Open To Flow (1)
31	22.91	127.67	Shut-In(1)
90	557.89	129.98	End Shut-In(1)
91	24.44	129.72	Open To Flow (2)
121	27.01	130.51	Shut-In(2)
183	528.96	132.06	End Shut-In(2)
184	2110.79	132.29	Final Hydro-static

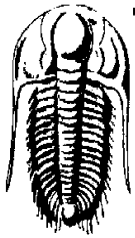
## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w /trace of Oil 100%m	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: Saman Sharifaie

**17-1s-37w Cheyenne, NE**

**Jones 'A' #5-17**

Job Ticket: 65579

**DST#: 3**

Test Start: 2019.09.08 @ 20:40:00

### GENERAL INFORMATION:

Formation: **LKC "H - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:22:30

Time Test Ended: 04:14:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4235.00 ft (KB) To 4330.00 ft (KB) (TVD)**

Reference Elevations: 3141.00 ft (KB)

Total Depth: 4330.00 ft (KB) (TVD)

3136.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 6625 Inside**

Press@RunDepth: psig @ 4236.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.08

End Date:

2019.09.09

Last Calib.:

2019.09.09

Start Time: 20:40:05

End Time:

04:15:14

Time On Btm:

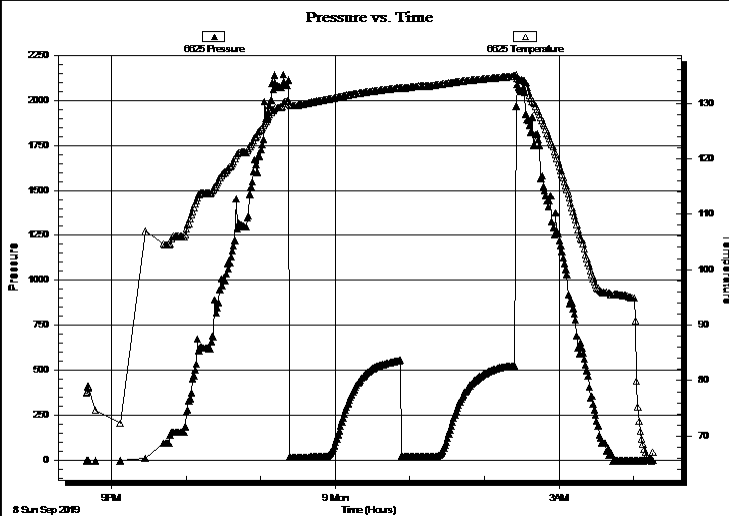
Time Off Btm:

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

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)
10.00	Mud w /trace of Oil 100% m	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.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65579

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2019.09.08 @ 20:40:00

## Tool Information

Drill Pipe:	Length: 4043.00 ft	Diameter: 3.80 inches	Volume: 56.71 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: 178.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 57.59 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4235.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	124.00 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			4207.00	
Shut In Tool	5.00			4212.00	
Hydraulic tool	5.00			4217.00	
Jars	5.00			4222.00	
Safety Joint	3.00			4225.00	
Packer	5.00			4230.00	29.00 Bottom Of Top Packer
Packer	5.00			4235.00	
Stubb	1.00			4236.00	
Recorder	0.00	6625	Inside	4236.00	
Recorder	0.00	8652	Outside	4236.00	
Perforations	24.00			4260.00	
Blank Spacing	65.00			4325.00	
Perforations	2.00			4327.00	
Bullnose	3.00			4330.00	95.00 Bottom Packers & Anchor

**Total Tool Length: 124.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65579

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2019.09.08 @ 20:40:00

## 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: 57.00 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
10.00	Mud w /trace of Oil 100% <sub>m</sub>	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

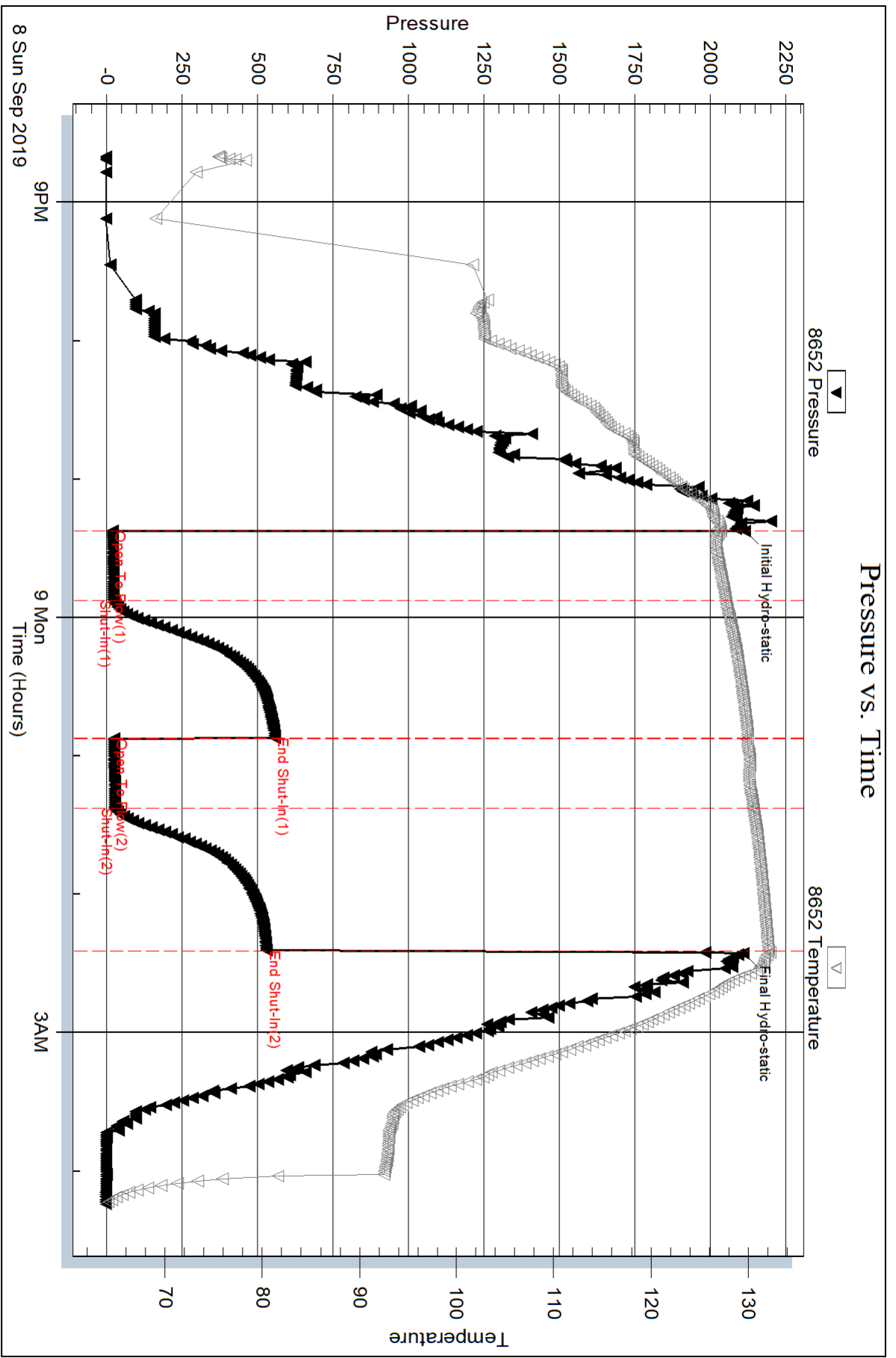


Serial #: 8652

Outside Murfin Drilling Co., Inc.

Jones 'A' #5-17

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 65579

Printed: 2019.09.11 @ 13:44:29

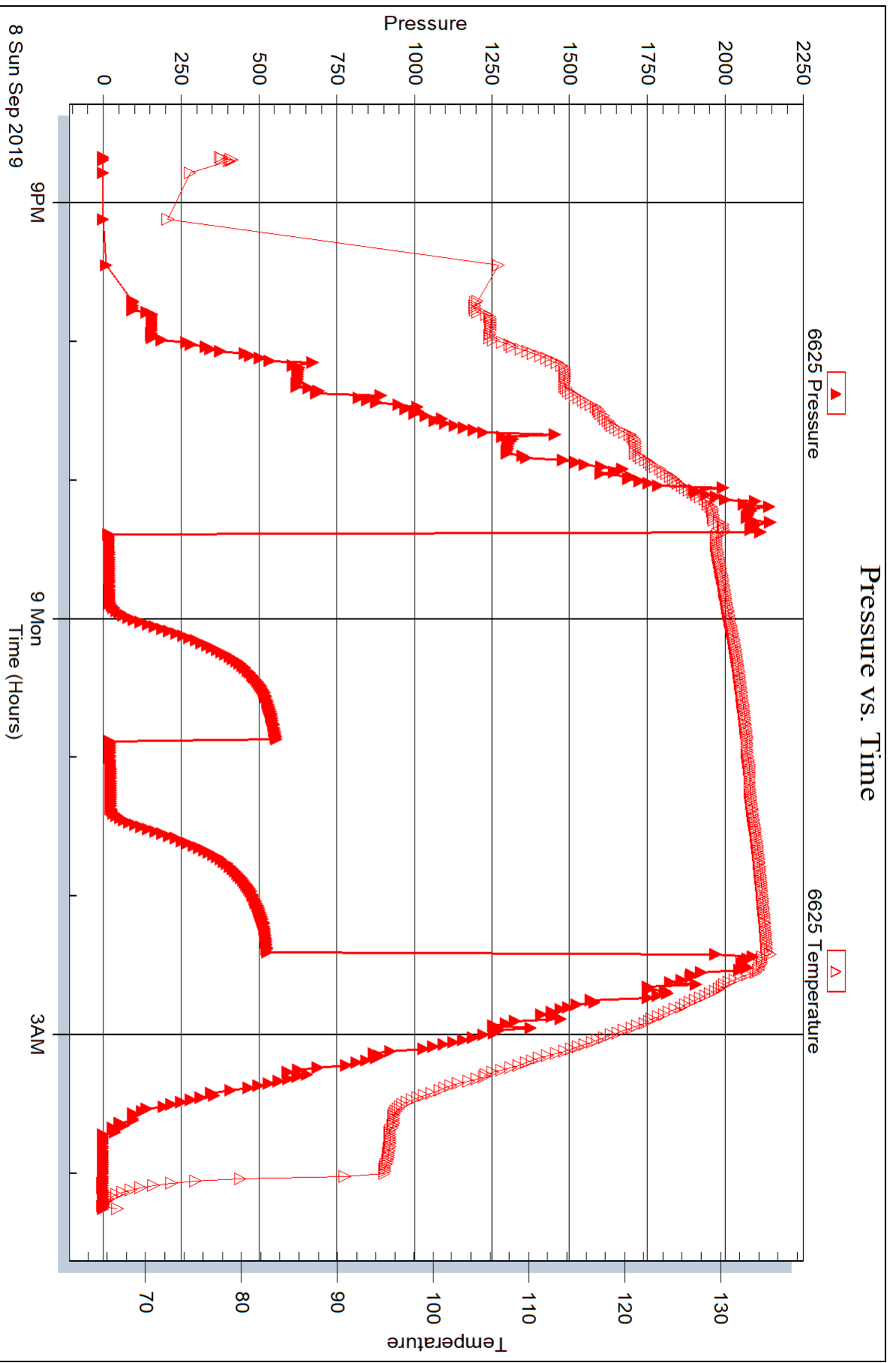
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Jones 'A' #5-17

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 65579

Printed: 2019.09.11 @ 13:44:29



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Jones 'A' #5-17**

#### **17-1s-37w Cheyenne, NE**

Start Date: 2019.09.09 @ 23:54:00

End Date: 2019.09.10 @ 06:55:45

Job Ticket #: 65580                      DST #: 4

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

Printed: 2019.09.11 @ 13:36:40

Murfin Drilling Co., Inc. 17-1s-37w Cheyenne, NE Jones 'A' #5-17 DST # 4 Ft. Scott 2019.09.09



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65580

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2019.09.09 @ 23:54:00

## GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:04:15

Time Test Ended: 06:55:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4484.00 ft (KB) To 4527.00 ft (KB) (TVD)**

Reference Elevations: 3141.00 ft (KB)

Total Depth: 4527.00 ft (KB) (TVD)

3136.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8652 Outside**

Press@RunDepth: 22.17 psig @ 4485.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.09

End Date:

2019.09.10

Last Calib.:

2019.09.10

Start Time: 23:54:05

End Time:

06:55:44

Time On Btm:

2019.09.10 @ 02:03:45

Time Off Btm:

2019.09.10 @ 05:06:15

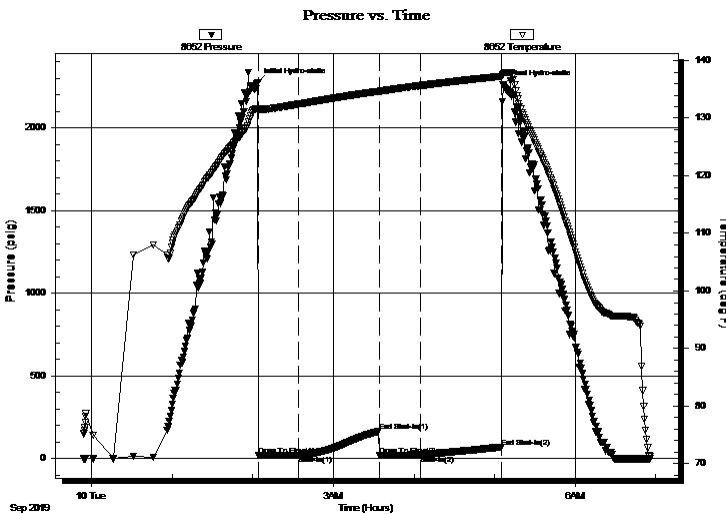
**TEST COMMENT:** 30 - IF: 1/4" Blow at open, built to 1"

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2274.77	131.62	Initial Hydro-static
1	18.23	131.18	Open To Flow (1)
31	19.79	132.45	Shut-In(1)
91	163.89	134.69	End Shut-In(1)
91	20.97	134.67	Open To Flow (2)
121	22.17	135.64	Shut-In(2)
182	69.53	137.28	End Shut-In(2)
183	2259.04	137.59	Final Hydro-static

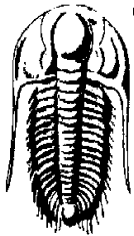
## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w /Oil spots 99%m, 1%o	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: Saman Sharifaie

**17-1s-37w Cheyenne, NE**

**Jones 'A' #5-17**

Job Ticket: 65580

**DST#: 4**

Test Start: 2019.09.09 @ 23:54:00

### GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:04:15

Time Test Ended: 06:55:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

**Interval: 4484.00 ft (KB) To 4527.00 ft (KB) (TVD)**

Total Depth: 4527.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3141.00 ft (KB)

3136.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6625 Inside**

Press@RunDepth: psig @ 4485.00 ft (KB)

Start Date: 2019.09.09 End Date: 2019.09.10

Start Time: 23:54:05 End Time: 06:56:14

Capacity: 8000.00 psig

Last Calib.: 2019.09.10

Time On Btm:

Time Off Btm:

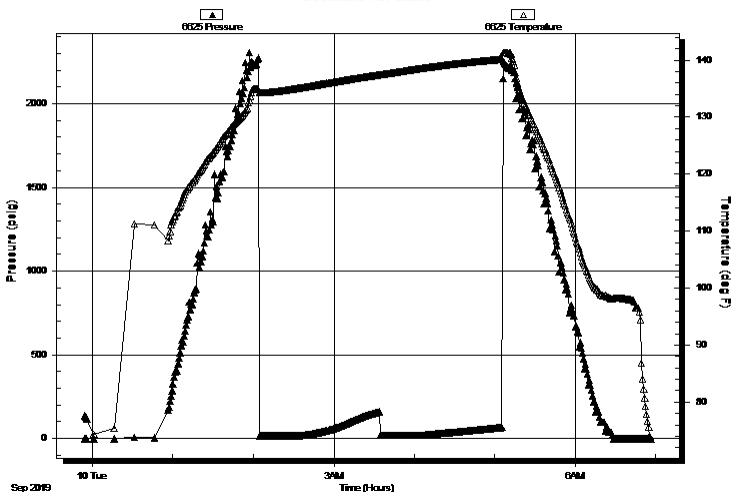
TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1"

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w /Oil spots 99%m, 1%o	0.05

\* 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.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65580

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2019.09.09 @ 23:54:00

## Tool Information

Drill Pipe:	Length: 4293.00 ft	Diameter: 3.80 inches	Volume: 60.22 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: 178.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 61.10 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4484.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4456.00	
Shut In Tool	5.00			4461.00	
Hydraulic tool	5.00			4466.00	
Jars	5.00			4471.00	
Safety Joint	3.00			4474.00	
Packer	5.00			4479.00	29.00 Bottom Of Top Packer
Packer	5.00			4484.00	
Stubb	1.00			4485.00	
Recorder	0.00	6625	Inside	4485.00	
Recorder	0.00	8652	Outside	4485.00	
Perforations	5.00			4490.00	
Blank Spacing	33.00			4523.00	
Perforations	1.00			4524.00	
Bullnose	3.00			4527.00	43.00 Bottom Packers & Anchor

**Total Tool Length: 72.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**17-1s-37w Cheyenne, NE**

250 N. Water STE 300  
Wichita, KS 67202

**Jones 'A' #5-17**

Job Ticket: 65580

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2019.09.09 @ 23:54:00

## 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: 55.00 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
10.00	Mud w /Oil spots 99% <sub>m</sub> , 1% <sub>o</sub>	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

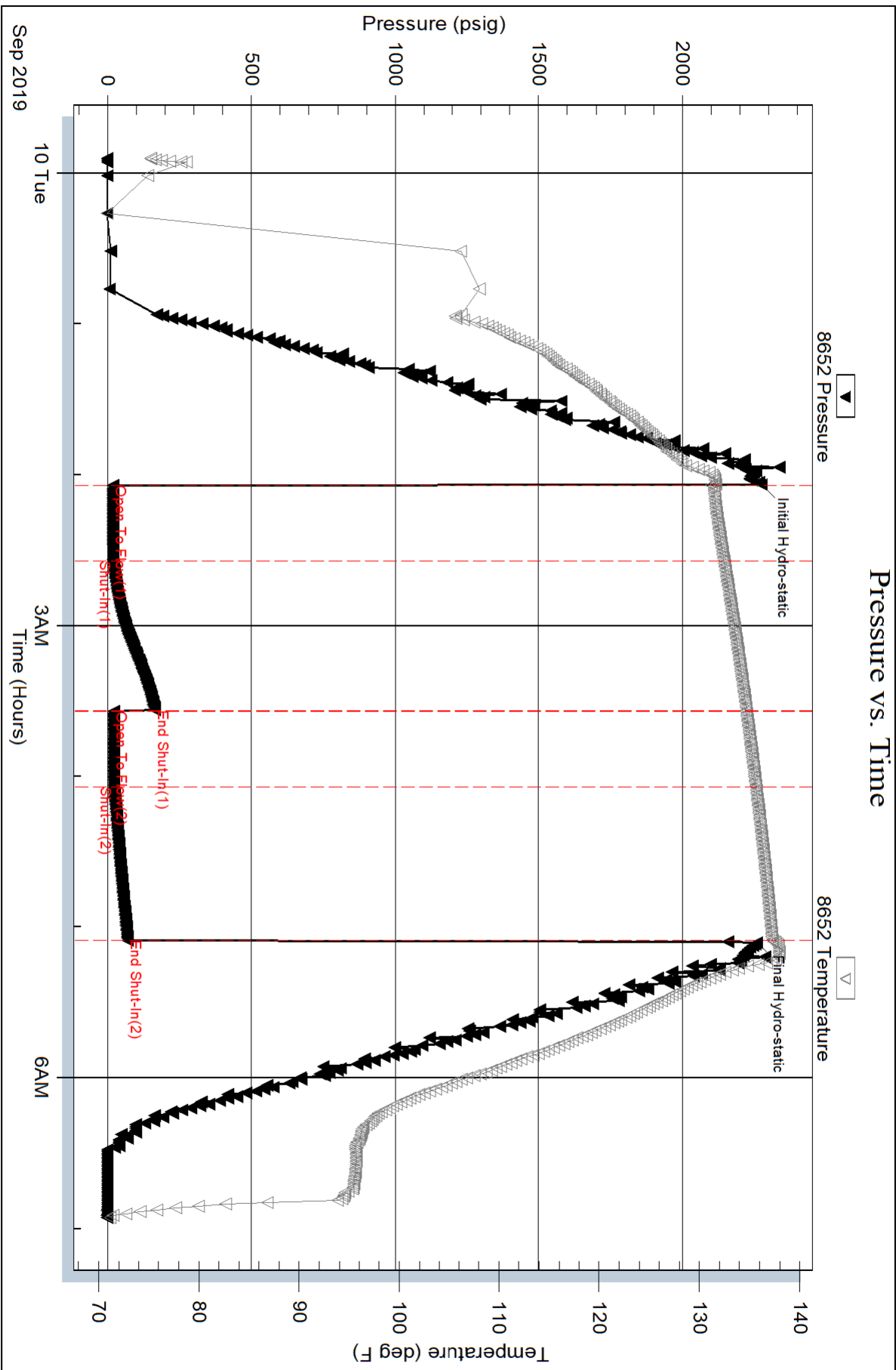
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





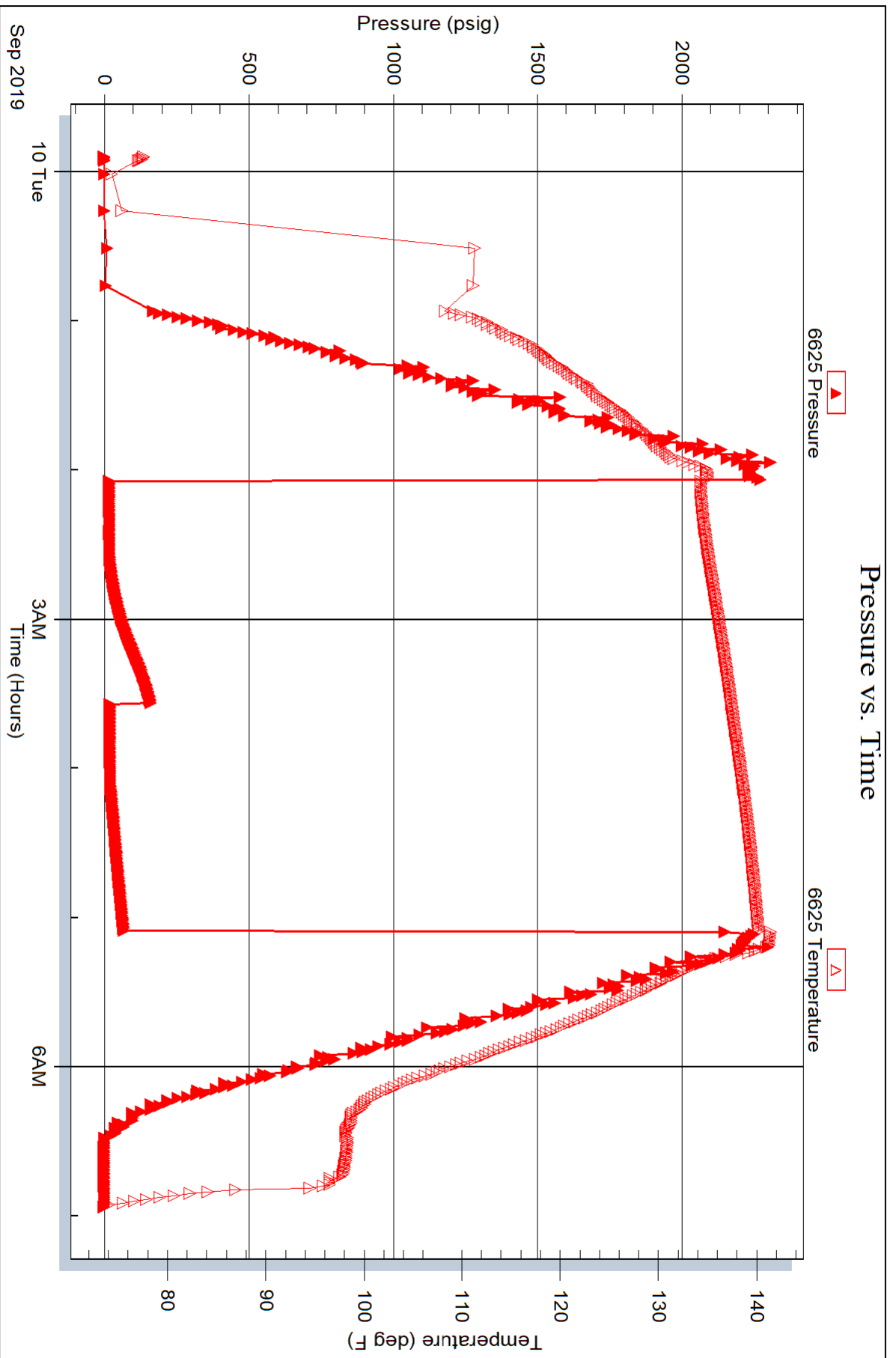
Serial #: 6625

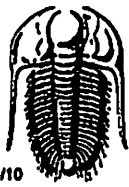
Inside

Murfin Drilling Co., Inc.

Jones 'A' #5-17

DST Test Number: 4





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 65577

Well Name & No. Jones "A" # 5-17 Test No. 1 Date 9-7-19  
 Company Murfin Drilling Co. Inc Elevation 3141 KB 3136 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3  
 Location: Sec. 17 Twp 1s Rge. 37w Co. Cheyenne State KS

Interval Tested 4056 - 4177 Zone Tested LKC "A-D"  
 Anchor Length 121 Drill Pipe Run 3856 Mud Wt. 9.2  
 Top Packer Depth 4051 Drill Collars Run 178 Vls 61  
 Bottom Packer Depth 4056 Wt. Pipe Run - WL 6.0  
 Total Depth 4177 Chlorides 600 ppm System LCM 4

Blow Description IF: Blow built to 6"  
ISI: No blowback  
FF: Blow built to 4"  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>208</u>	<u>60cm</u>	<u>9</u>	<u>16</u>	<u>75</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

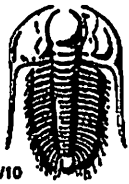
Rec Total 208 BHT 132 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2035  Test 1300 T-On Location 4:25  
 (B) First Initial Flow 25  Jars 250 T-Started 5:50  
 (C) First Final Flow 71  Safety Joint 75 T-Open 8:16  
 (D) Initial Shut-In 680  Circ Sub \_\_\_\_\_ T-Pulled 12:19  
 (E) Second Initial Flow 79  Hourly Standby \_\_\_\_\_ T-Out 14:10  
 (F) Second Final Flow 112  Mileage 146 RT 146 Comments \_\_\_\_\_  
 (G) Final Shut-In 652  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1989  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

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

Sub Total 1771 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative James Vink  
 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. 65578

Well Name & No. Jones 'A' #5-17 Test No. 2 Date 9-8-19  
 Company Murfin Drilling Co. Inc Elevation 3141 KB 3136 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3  
 Location: Sec. 17 Twp 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 4176 - 4235 Zone Tested LKC "6"  
 Anchor Length 59 Drill Pipe Run 3982 Mud Wt. 9.1  
 Top Packer Depth 4171 Drill Collars Run 178 Vls 57  
 Bottom Packer Depth 4176 Wt. Pipe Run - WL 6.0  
 Total Depth 4235 Chlorides 600 ppm System LCM 2  
 Blow Description IF: 1/4" Blow at open, died back to weak surface blow  
ISI: No blow  
FF: No blow  
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>mud w/oil spots</u>	<u>2</u>		<u>98</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 130 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

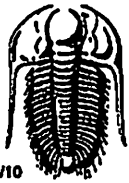
(A) Initial Hydrostatic 2040  Test 1300 T-On Location 23:55 9/7  
 (B) First Initial Flow 19  Jars 250 T-Started 1:19 9/8  
 (C) First Final Flow 20  Safety Joint 75 T-Open 3:46  
 (D) Initial Shut-In 300  Circ Sub \_\_\_\_\_ T-Pulled 6:48  
 (E) Second Initial Flow 23  Hourly Standby \_\_\_\_\_ T-Out 8:30  
 (F) Second Final Flow 24  Mileage 146 RT 146 Comments \_\_\_\_\_  
 (G) Final Shut-In 72  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2032  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

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

Sub Total 1771 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative James Winkler

Triobite 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. 65579

Well Name & No. Jones 'A' #5-17 Test No. 3 Date 9-8-19  
 Company Murfin Drilling Co. Inc Elevation 3141 KB 3136 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3  
 Location: Sec. 17 Twp 1s Rge. 37w Co. Cheyenne State KS

Interval Tested 4235 - 4330 Zone Tested LKC "H-5"  
 Anchor Length 95 Drill Pipe Run 4043 Mud Wt. 9.1  
 Top Packer Depth 4230 Drill Collars Run 178 Vls 57  
 Bottom Packer Depth 4235 Wt. Pipe Run - WL 5.6  
 Total Depth 4330 Chlorides 600 ppm System LCM 4  
 Blow Description IF: 1/4" Blow at open, built to 1/2"  
ISI: No blowback

FF: No blow

FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud w/trace oil</u>	<u>trace</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 132 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2115  Test 1300 T-On Location 19:35 9/8  
 (B) First Initial Flow 20  Jars 250 T-Started 20:40  
 (C) First Final Flow 23  Safety Joint 75 T-Open 23:22  
 (D) Initial Shut-In 558  Circ Sub \_\_\_\_\_ T-Pulled 2:24  
 (E) Second Initial Flow 24  Hourly Standby \_\_\_\_\_ T-Out 4:15 9/9  
 (F) Second Final Flow 27  Mileage 146RT 146 Comments \_\_\_\_\_  
 (G) Final Shut-In 529  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2111  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  EM Tool \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Shut-In 60  Day Standby \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Sub Total 1771  Accessibility \_\_\_\_\_ Sub Total 0  
 Total 1771 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative James Warden

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 65580

Well Name & No. Jones 'A' #5-17 Test No. 4 Date 9-9-19  
 Company Murfin Drilling Co. Inc Elevation 3141 KB 3136 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3  
 Location: Sec. 17 Twp 1s Rge. 37w Co. Cheyenne State KS

Interval Tested 4484-4527 Zone Tested Ft. Scott  
 Anchor Length 43 Drill Pipe Run 4293 Mud Wt. 9.2  
 Top Packer Depth 4479 Drill Collars Run 178 Vls 55  
 Bottom Packer Depth 4484 Wt. Pipe Run - WL 5.6  
 Total Depth 4527 Chlorides 600 ppm System LCM 2  
 Blow Description IF: 1/4" Blow at open, built to 1"  
ISI: No blowback  
FF: No blow  
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud w/oil 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 10 BHT 137 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2275  Test 1300 T-On Location 22:30 9/9  
 (B) First Initial Flow 18  Jars 250 T-Started 23:54  
 (C) First Final Flow 20  Safety Joint 75 T-Open 2:04  
 (D) Initial Shut-In 164  Circ Sub \_\_\_\_\_ T-Pulled 5:05  
 (E) Second Initial Flow 21  Hourly Standby \_\_\_\_\_ T-Out 6:55 9/10  
 (F) Second Final Flow 22  Mileage 146 RTX2 292 Comments \_\_\_\_\_  
 (G) Final Shut-In 70  Sampler \_\_\_\_\_ loaded tools 9/10 16:55  
 (H) Final Hydrostatic 2259  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1917

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

Sub Total 0  
 Total 1917  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ 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.



**CEMENT TREATMENT REPORT**

<b>Customer:</b> Murfin Drilling Co.	<b>Well:</b> Jones A #5-17	<b>Ticket:</b> ICT2325
<b>City, State:</b> Wichita, KS	<b>County:</b> Cheyenne, KS	<b>Date:</b> 9/2/2019
<b>Field Rep:</b> Jay	<b>S-T-R:</b> Sec17 - T1S - R37W	<b>Service:</b> Cement

Downhole Information	
<b>Hole Size:</b>	12.25 in
<b>Hole Depth:</b>	304 ft
<b>Casing Size:</b>	8.625 in
<b>Casing Depth:</b>	304 ft
<b>Tubing / Liner:</b>	in
<b>Depth:</b>	ft
<b>Tool / Packer:</b>	
<b>Depth:</b>	ft
<b>Displacement:</b>	18.2 bbls

Slurry	
<b>Weight:</b>	14.8 #/gal
<b>Water / Sx:</b>	6.88 gal / sx
<b>Yield:</b>	1.41 ft <sup>3</sup> / sx
<b>Bbls / Ft.:</b>	0.0735
<b>Depth:</b>	304 ft
<b>Volume:</b>	22.35 bbls
<b>Excess:</b>	200 %
<b>Total Slurry:</b>	69.1 bbls
<b>Total Sacks:</b>	275 sx

Cement Blend		
Product	%	#
Class A	100.0	25850
Gel	2.0	517
CaCl	3.0	776
Metso		
KolSeal		
PhenoSeal	0.25#/sk	69
Salt		
<b>Total</b>		<b>27211'</b>

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS
15:30				Called for job					
16:00				Depart Oakley yard					
17:45				Arrive on locn. Rig just TD'd 12.25" OH at 304'					
17:50				JSA, discuss moving, spotting & rig-up					
18:00				Move on, spot & rig-up					
18:30				Rig-up complete					
18:50				Start to RIH w/ casing					
19:32				Casing @ setting depth					
19:37		80.0		Circulate & condition hole					
19:43	4.5	110.0	5.0	Pump H2O ahead					
19:47	4.0	220.0	69.1	Mix & pump 295sx cement @ 14.8# Y - 1.41cuft/sk, MW - 6.7g/sk					
20:04	2.5	110.0		Cement to surface, 61bbl cement away					
20:07	4.0	140.0		Displace w/ H2O					
20:12			18.2	Shutdown. End Job					
20:15				Wash-up pumps & lines					
20:30				JSA, discuss rigging down & rack up					
20:35				Rig down & rack up equip					
20:50				Rig down complete					
20:55				JSA, discuss journey management					
21:00				Depart locn					
				Note: 26bbl / 103sx cement slurry circulated to surface					
				Thanks for calling Hurricane Svcs Inc					

CREW	UNIT
Cementer: Scott Green	74
Pump Operator: Michael Rebarchek	230
Bulk #1: Alex Hlxson	182 / 256
Bulk #2:	

SUMMARY		
Average Rate	Average Pressure	Total Fluid
3.75 bpm	132.00 psi	92.30 bbls



**CEMENT TREATMENT REPORT**

Customer: <b>Murfin Drilling Co.</b>	Well: <b>Jones 'A' #X-17 5-17</b>	Ticket: <b>ICT2384</b>
City, State: <b>Wichita, KS</b>	County: <b>Cheyenne, KS</b>	Date: <b>9/11/2019</b>
Field Rep: <b>Jay</b>	S-T-R: <b>Soc17 - T1S - R37W</b>	Service: <b>Cement</b>

Downhole Information	
Hole Size:	7.875 in
Hole Depth:	4670 ft
Casing Size:	6.625 in
Casing Depth:	304 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	bbbls

Slurry	
Weight:	13.8 #/gal
Water / Sw:	0.09 gal / sx
Yield:	1.42 ft <sup>3</sup> / sx
Bbls / Ft:	
Depth:	ft
Volume:	bbbls
Excess:	%
Total Slurry:	bbbls
Total Sacks:	255 sx

Cement Blend		
Product	%	#
Class A	80.0	14382
FlyAsh	40.0	7548
Gel	4.0	877
CoCl		
KolSeal		
PhonoSeal		
Salt		
Total		22,807

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS
10:30				Called for job	17:43	2.5	80	7.50	Plug rathole w/ 30sx slurry @ 13.8ppg
12:00				Depart Oakley yard	17:49	2.5	80	3.80	Plug mousehole w/ 15sx slurry @ 13.8ppg
13:45				Arrive on locn. Rig RH w/ DP to 3120'	17:51				Shutdown
13:50				JSA, discuss moving, spotting & rig-up	17:55				Wash-up pumps & lines
13:55				Move on, spot & rig-up	18:10				JSA, discuss rigging down & rackup equip.
14:00				DP @ 3120'. Rig circ & condition hole	18:15				Rig down & rack-up equipment
14:30				Rig-up complete	18:30				Rig down complete
				Plug #1 3120' - 2909'	18:35				JSA, discuss journey management
14:39	2.5	50.0	5.0	Pump H2O ahead	18:45				Depart locn
14:42	4.0	300.0	12.7	Mix & pump 60sx slurry @ 13.8ppg					
				Y - 1.42cuft/sk, MW - 6.89g/sk					
14:45	2.5	50.0	2.0	Pump H2O behind					
14:49	6.5	200.0	39.3	Rig displace w/ mud					
14:56				Rig POH to 2340'					Thanks for calling Hurricane Svcs Inc.
				Plug #2 2340' - 2298'					
15:28	2.5	50.0	5.0	Pump H2O ahead					
15:29	4.6	350.0	25.5	Mix & pump 100sx slurry @ 13.8ppg					Plug mousehole w/ 15sx slurry @ 13.8ppg
				Y - 1.42cuft/sk, MW - 6.89g/sk					
15:35	2.5	50.0	2.0	Pump H2O behind					
15:38	8.5	175.0	24.9	Rig displace w/ mud					
15:45				Rig POH to 355'					
				Plug #3 355' - 152'					
16:45	4.0	155.0	12.7	Mix & pump 50sx slurry @ 13.8ppg					
				Y - 1.42cuft/sk, MW - 6.89g/sk					
16:50	3.3	65.0	2.7	Displace w/ H2O					
16:52				Rig POH to surface. Rig down kelly,					
				rathole, mousehole & laydown same.					
17:38	2.5	80.0	2.5	Pump 10sx @ 13.8ppg & plug 40' - 0'					
				Y - 1.48cuft/sk, MW - 6.89g/sk					

CREW	UNIT
Cementer: <b>Scott Green</b>	74
Pump Operator: <b>Michael Rabarchek</b>	230
Bulk #1: <b>Jesse Jones</b>	242
Bulk #2:	

SUMMARY		
Average Rate	Average Pressure	Total Fluid
3.61638 bpm.	129.62 psi	145.60 bbls

MDCI  
 Jones A #5-17  
 1980' FSL 2080' FWL  
 Sec. 17-T1S-R37W  
 3141' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3105	+36	-5	3102	+39	-2
B/Anhydrite	3142	-1	-7	3139	+2	-4
Neva	3554	-413	-1	3556	-415	-3
Red Eagle	3620	-479	-1	3620	-479	-1
Foraker	3670	-529	+2	3671	-530	+1
Stotler	3813	-672	+3	3817	-676	-1
Topeka	3888	-747	+2	3894	-753	-4
Oread	4026	-885	+3	4025	-884	+4
Lansing	4104	-963	-1	4103	-962	Flat
Stark	4326	-1185	-1	4326	-1185	-1
Mound City	4381	-1240	+1	4380	-1239	+2
Ft Scott	4506	-1365	+3	4503	-1362	+5
Oakley	4587	-1446	+8	4590	-1449	+5
Celia	4598	-1457	+8	4598	-1457	+8
RTD	4670					
LTD				4668		