

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 \_\_\_\_\_ 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
--	---

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
---	--	------------------------------------

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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	JEAN 'A' 1-7
Doc ID	1463720

All Electric Logs Run

DIL
DUCP
MEL
BHCS



# Robert D. Hendrix

## Petroleum Geologist

### GEOLOGIST'S REPORT

#### DRILLING TIME AND SAMPLE LOG

COMPANY: **Murfin Drilling Company, Inc.**

LEASE: **Jean A #1-7**

FIELD: **Wildcat**

LOCATION: **1320'fs & 330'fel**

SEC: **7** TWP: **1S** RGE: **37W**

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

CONTRACTOR: **Murfin Drilling Co. Inc. Rig #3**

SPUD: **4/26/2019** LTD: **5/6/2019**

RTD: **4700** COMD: **4700**

MUD: **3306** TYPE: **MUD** CHEMICAL: **Chemical**

SAMPLES SAVED FROM: **3470** TO: **TD**

DRILLING TIME KEPT FROM: **3470** TO: **TD**

SAMPLES EXAMINED FROM: **3470** TO: **TD**

GEOLOGICAL SUPERVISION FROM: **3400**

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

Microlog Score: **Former Weather**

FORMATION TOPS: **ELECTRIC LOG** SAMPLE

Anhydrite: **3120 (-481) 3118 (+50)**

Neva: **3562 (-394) 3565 (-397)**

Topeka: **3883 (-725) 3897 (-729)**

Lansing: **4108 (-940) 4106 (-938)**

Stark Shale: **4326 (-1158) 4330 (-1162)**

BRC: **4382 (-1214) 4385 (-1217)**

EL Scott: **4503 (-1336) 4502 (-1334)**

Oakley: **4588 (-1420) 4589 (-1421)**

API# 15-023-21509

ELEVATIONS: **KB 3168**

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

GL: **3163**

MEASUREMENTS ARE ALL FROM **KEELI BUSHING**

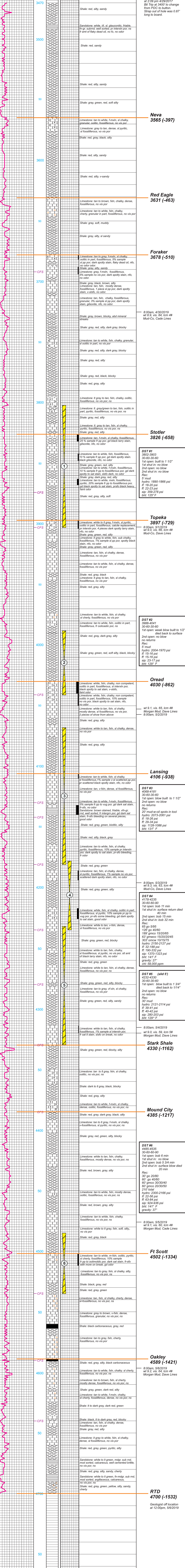
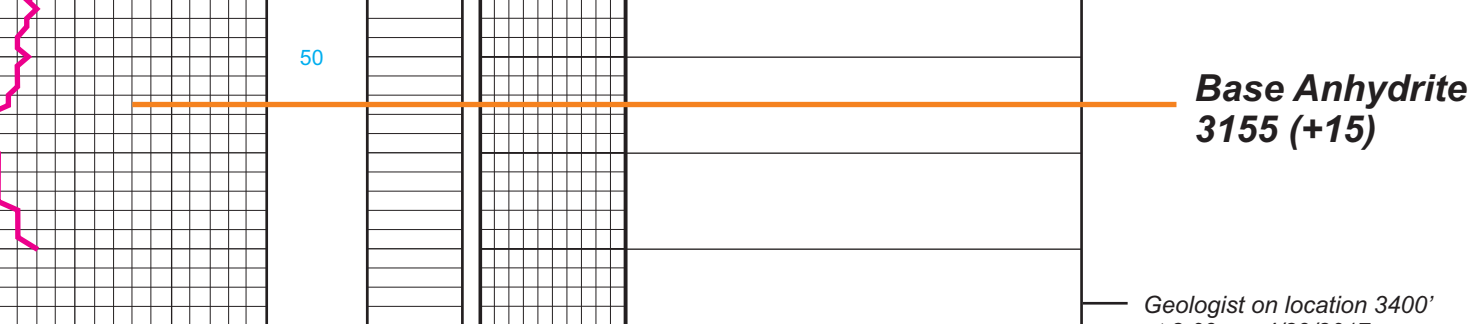
CASING: **8.5" ID x 3.30" O.D.**

CONDUCTOR: **5.1/2"**

PRODUCTION: **5.1/2"**

REMARKS:

### LEGEND



Murfin Drilling Co Inc  
Jean A #1-7  
1320'fs & 330'fel  
7-1s-37w, Cheyenne County, Kansas  
KB-3168, GL=3163  
API: 15-023-21509



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Jean 'A' #1-7**

**7-1s-37w Cheyenne,KS**

Start Date: 2019.04.30 @ 00:21:00

End Date: 2019.04.30 @ 07:54:20

Job Ticket #: 65537                      DST #: 1

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

Printed: 2019.05.07 @ 15:12:45



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
250 N. Water STE 300  
Wichita KS 67202  
ATTN: Robert Hendrix

**7-1s-37w Cheyenne,KS**

**Jean 'A' #1-7**

Job Ticket: 65537

**DST#: 1**

Test Start: 2019.04.30 @ 00:21:00

## GENERAL INFORMATION:

Formation: **Stotler - Topeka**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:55:40  
 Time Test Ended: 07:54:20  
 Interval: **3802.00 ft (KB) To 3903.00 ft (KB) (TVD)**  
 Total Depth: 3903.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Reference Elevations: 3168.00 ft (KB)  
 3163.00 ft (CF)  
 KB to GR/CF: 5.00 ft

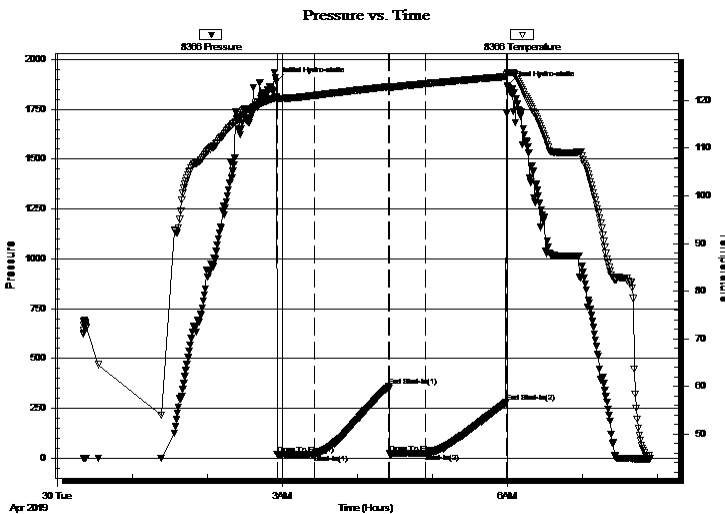
**Serial #: 8366**

**Outside**

Press@RunDepth: 23.00 psig @ 3803.00 ft (KB)  
 Start Date: 2019.04.30 End Date: 2019.04.30  
 Start Time: 00:21:01 End Time: 07:54:20  
 Capacity: 8000.00 psig  
 Last Calib.: 2019.05.01  
 Time On Btm: 2019.04.30 @ 02:55:20  
 Time Off Btm: 2019.04.30 @ 05:59:50

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

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1890.31	120.73	Initial Hydro-static
1	18.27	120.15	Open To Flow (1)
30	20.48	121.07	Shut-In(1)
90	359.07	122.91	End Shut-In(1)
91	21.65	122.75	Open To Flow (2)
120	23.00	123.54	Shut-In(2)
184	277.62	125.03	End Shut-In(2)
185	1866.47	125.79	Final Hydro-static

## Recovery

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

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N. Water STE 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

**7-1s-37w Cheyenne, KS**

**Jean 'A' #1-7**

Job Ticket: 65537      **DST#: 1**

Test Start: 2019.04.30 @ 00:21:00

## GENERAL INFORMATION:

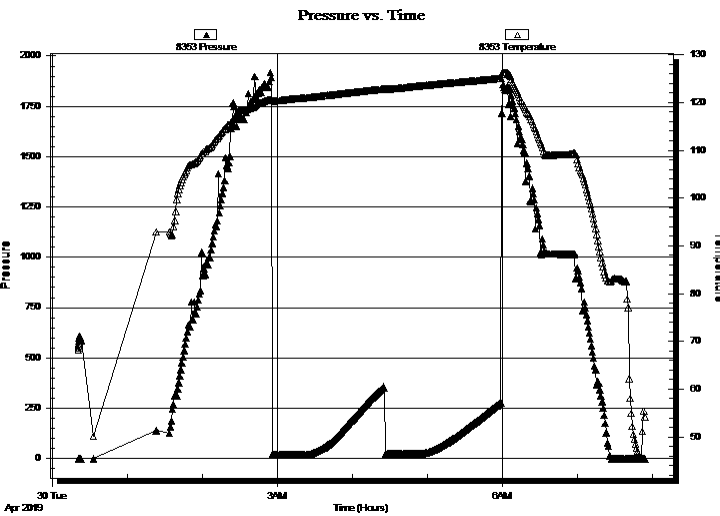
Formation: **Stotler - Topeka**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 02:55:40  
 Time Test Ended: 07:54:20  
 Interval: **3802.00 ft (KB) To 3903.00 ft (KB) (TVD)**  
 Total Depth: 3903.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Reference Elevations: 3168.00 ft (KB)  
 3163.00 ft (CF)  
 KB to GR/CF: 5.00 ft

## Serial #: 8353

Inside

Press@RunDepth:      psig @      3803.00 ft (KB)      Capacity:      8000.00 psig  
 Start Date: 2019.04.30      End Date: 2019.04.30      Last Calib.: 2019.05.01  
 Start Time: 00:21:01      End Time: 07:54:10      Time On Btm:  
 Time Off Btm:

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



## PRESSURE SUMMARY

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

## Recovery

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

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co. Inc.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65537

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2019.04.30 @ 00:21:00

## Tool Information

Drill Pipe:	Length: 3605.00 ft	Diameter: 3.80 inches	Volume: 50.57 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 51.44 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3802.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	101.00 ft			
Tool Length:	129.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3779.00	
Hydraulic tool	5.00			3784.00	
Jars	5.00			3789.00	
Safety Joint	3.00			3792.00	
Packer	5.00			3797.00	28.00 Bottom Of Top Packer
Packer	5.00			3802.00	
Stubb	1.00			3803.00	
Recorder	0.00	8353	Inside	3803.00	
Recorder	0.00	8366	Outside	3803.00	
Perforations	32.00			3835.00	
Blank Spacing	65.00			3900.00	
Bullnose	3.00			3903.00	101.00 Bottom Packers & Anchor

**Total Tool Length: 129.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65537

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2019.04.30 @ 00:21:00

## 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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%M	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

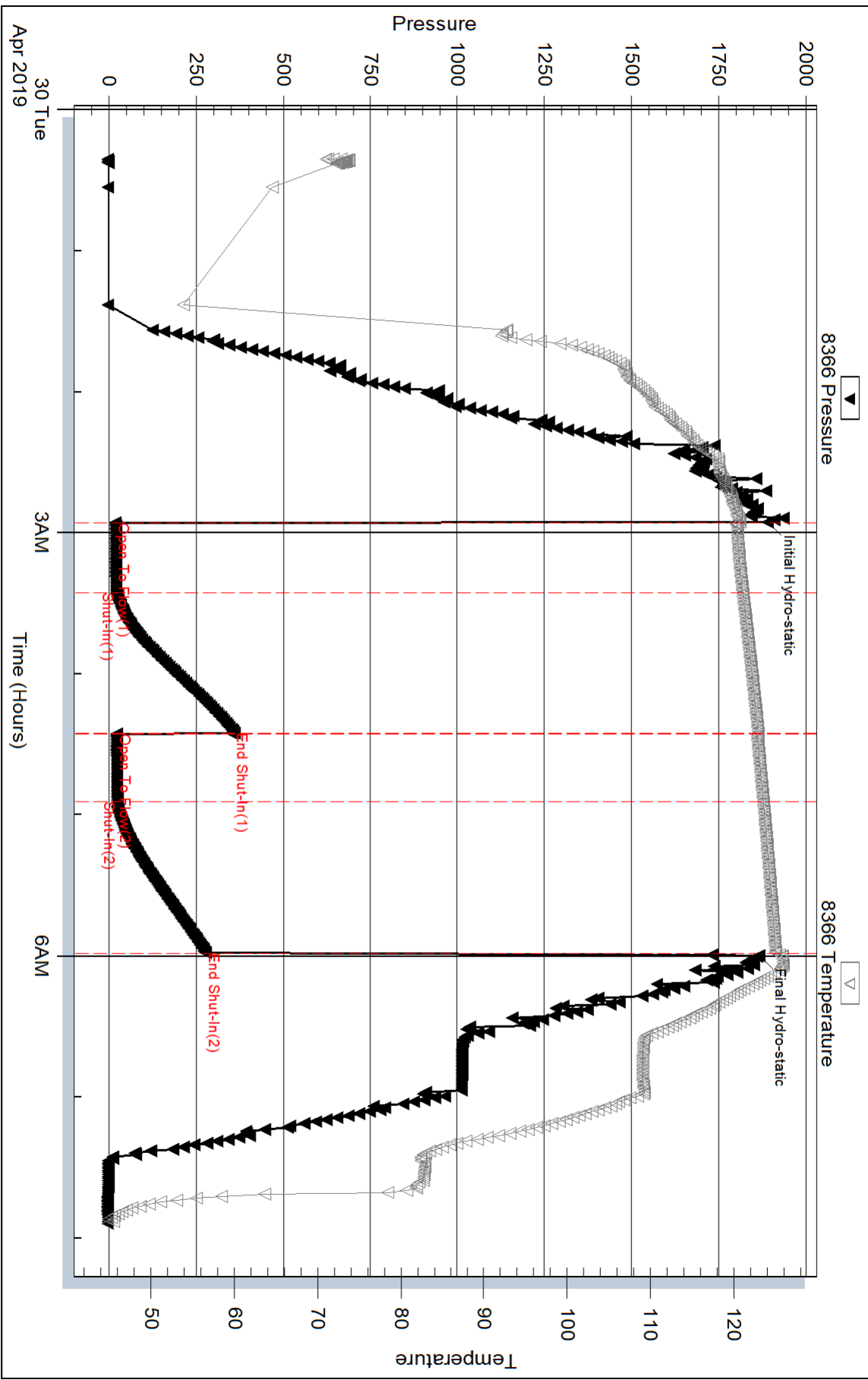
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time



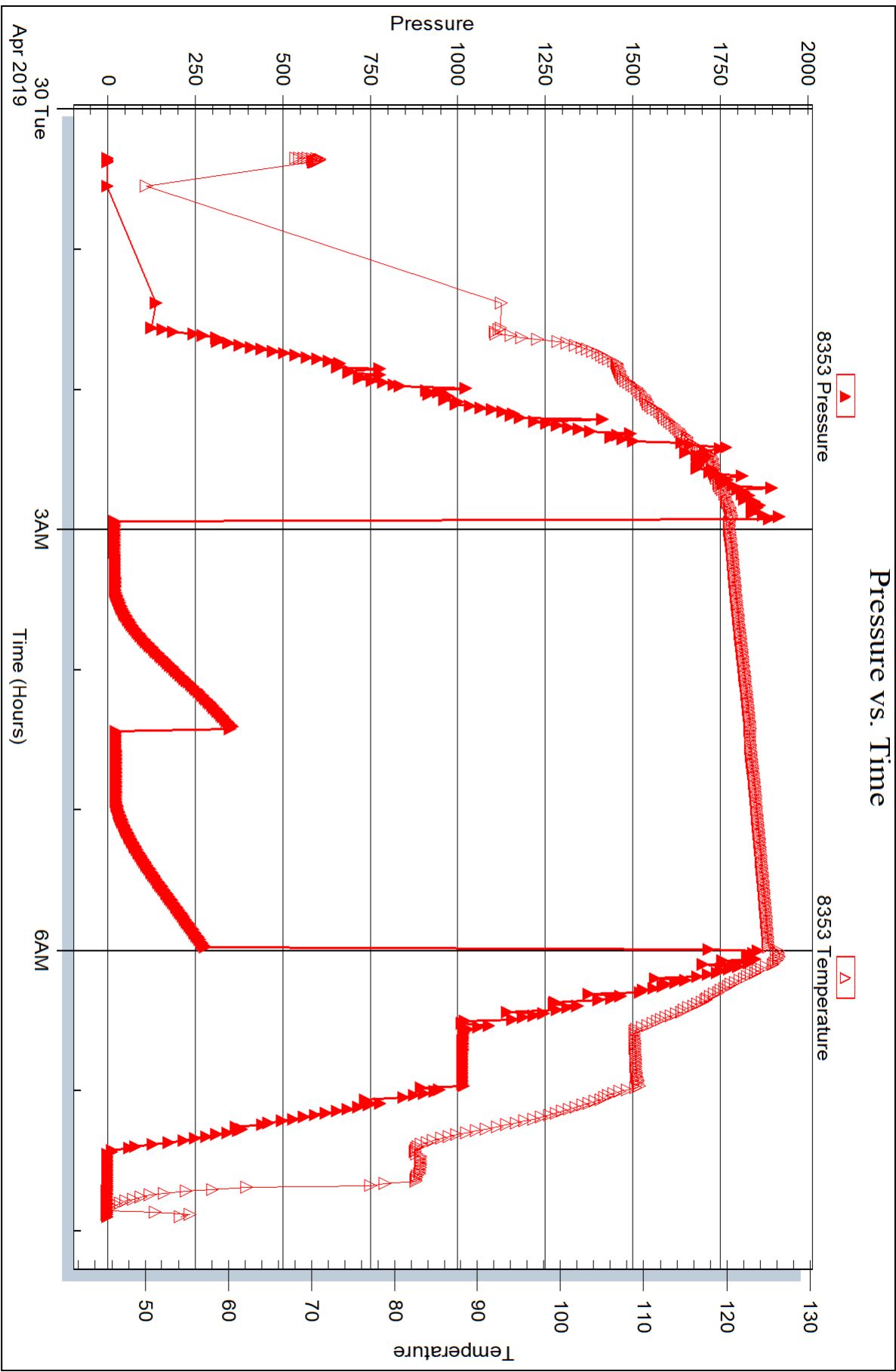
Serial #: 8353

Inside

Murfin Drilling Co. Inc.

Jean 'A' #1-7

DST Test Number: 1





## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Jean 'A' #1-7**

**7-1s-37w Cheyenne,KS**

Start Date: 2019.05.01 @ 21:27:00

End Date: 2019.05.02 @ 04:15:39

Job Ticket #: 65538                      DST #: 2

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

Printed: 2019.05.07 @ 15:11:48

Murfin Drilling Co. Inc. 7-1s-37w Cheyenne,KS Jean 'A' #1-7 DST # 2 Oread 2019.05.01



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N. Water STE 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

**7-1s-37w Cheyenne, KS**

**Jean 'A' #1-7**

Job Ticket: 65538

**DST#: 2**

Test Start: 2019.05.01 @ 21:27:00

## GENERAL INFORMATION:

Formation: **Oread**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:34:30  
 Time Test Ended: 04:15:39  
 Interval: **3988.00 ft (KB) To 4041.00 ft (KB) (TVD)**  
 Total Depth: 4041.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Reference Elevations: 3168.00 ft (KB)  
 3163.00 ft (CF)  
 KB to GR/CF: 5.00 ft

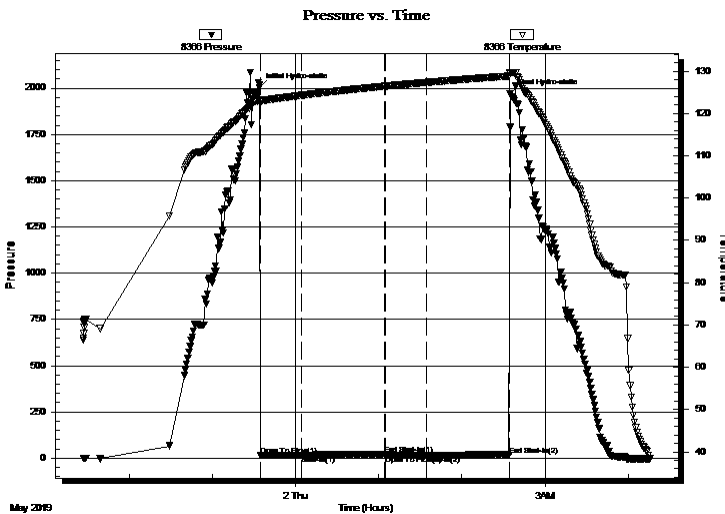
## Serial #: 8366

**Outside**

Press@RunDepth: 16.38 psig @ 3989.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.05.01 End Date: 2019.05.02 Last Calib.: 2019.05.02  
 Start Time: 21:27:01 End Time: 04:15:40 Time On Btm: 2019.05.01 @ 23:34:00  
 Time Off Btm: 2019.05.02 @ 02:34:50

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

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2003.61	123.32	Initial Hydro-static
1	15.35	122.25	Open To Flow (1)
30	16.06	124.28	Shut-In(1)
91	22.67	126.44	End Shut-In(1)
91	15.15	126.45	Open To Flow (2)
121	16.38	127.33	Shut-In(2)
181	16.61	128.85	End Shut-In(2)
181	1970.31	129.60	Final Hydro-static

## Recovery

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

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
250 N. Water STE 300  
Wichita KS 67202  
ATTN: Robert Hendrix

**7-1s-37w Cheyenne,KS**

**Jean 'A' #1-7**

Job Ticket: 65538

**DST#: 2**

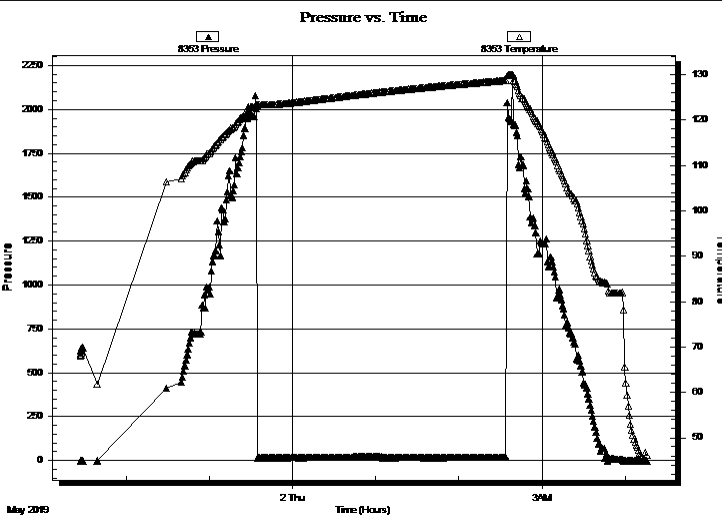
Test Start: 2019.05.01 @ 21:27:00

## GENERAL INFORMATION:

Formation: **Oread**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:34:30  
 Time Test Ended: 04:15:39  
 Interval: **3988.00 ft (KB) To 4041.00 ft (KB) (TVD)**  
 Total Depth: 4041.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Reference Elevations: 3168.00 ft (KB)  
 3163.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8353 Inside**  
 Press@RunDepth: psig @ 3989.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.05.01 End Date: 2019.05.02 Last Calib.: 2019.05.02  
 Start Time: 21:27:01 End Time: 04:15:40 Time On Btm:  
 Time Off Btm:

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



## PRESSURE SUMMARY

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

## Recovery

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

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co. Inc.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65538

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2019.05.01 @ 21:27:00

## Tool Information

Drill Pipe:	Length: 3793.00 ft	Diameter: 3.80 inches	Volume: 53.21 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 54.08 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3988.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	53.00 ft				
Tool Length:	81.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

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

Shut In Tool	5.00			3965.00	
Hydraulic tool	5.00			3970.00	
Jars	5.00			3975.00	
Safety Joint	3.00			3978.00	
Packer	5.00			3983.00	28.00 Bottom Of Top Packer
Packer	5.00			3988.00	
Stubb	1.00			3989.00	
Recorder	0.00	8353	Inside	3989.00	
Recorder	0.00	8366	Outside	3989.00	
Perforations	16.00			4005.00	
Blank Spacing	33.00			4038.00	
Bullnose	3.00			4041.00	53.00 Bottom Packers & Anchor

**Total Tool Length: 81.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65538

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2019.05.01 @ 21:27:00

## 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: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%M	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

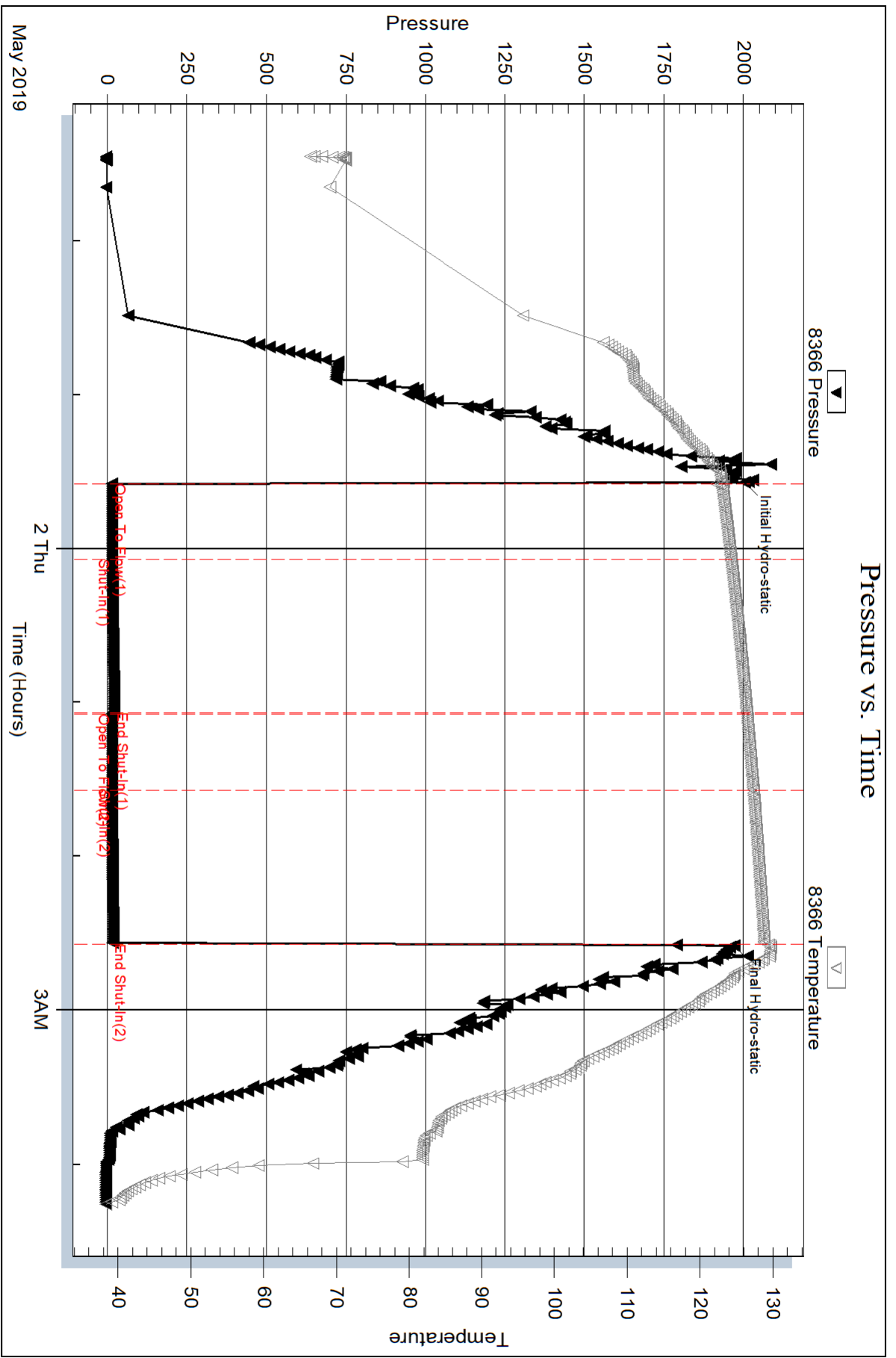
Num Gas Bombs: 0

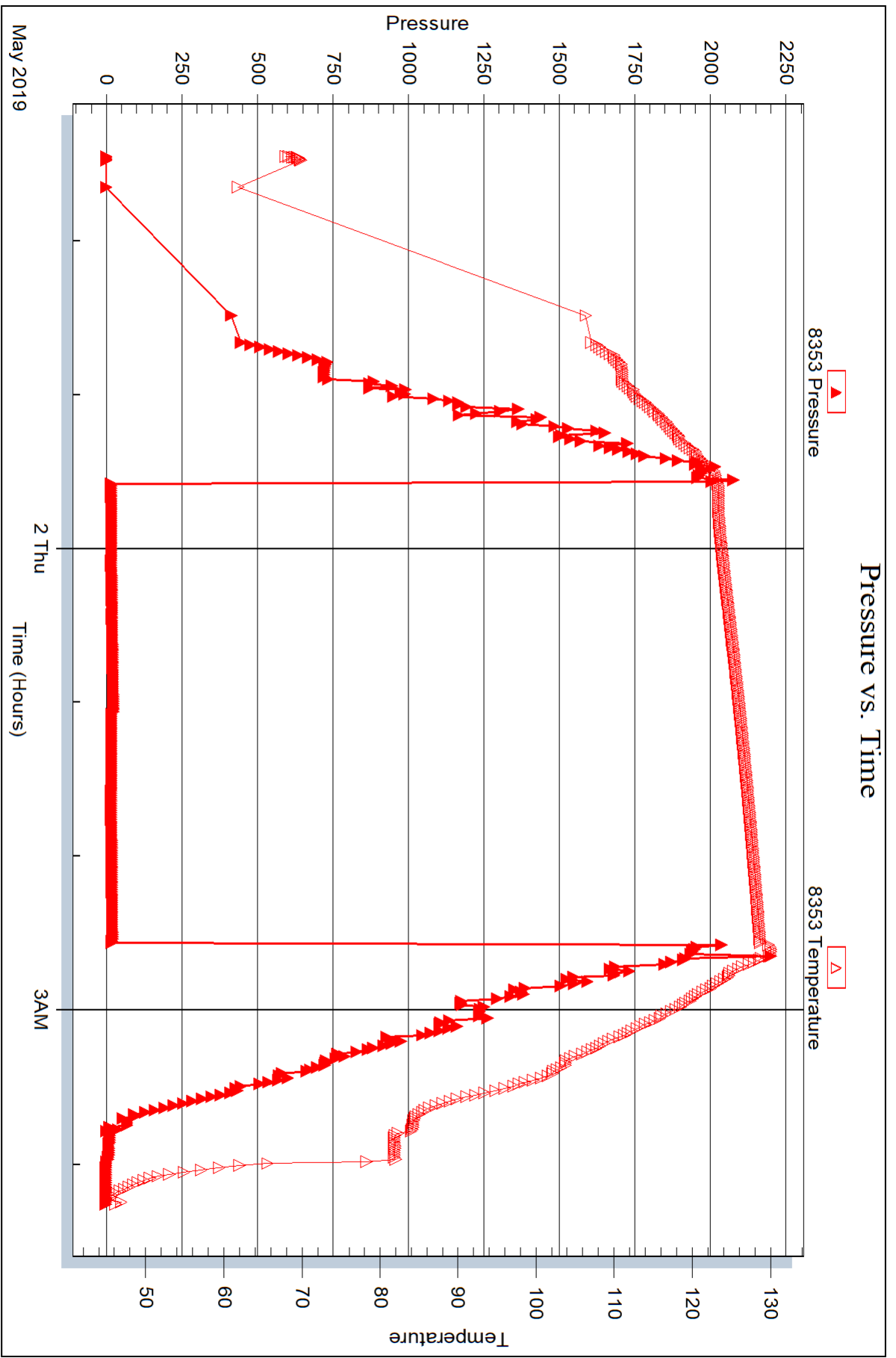
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Jean 'A' #1-7**

**7-1s-37w Cheyenne,KS**

Start Date: 2019.05.02 @ 20:56:00

End Date: 2019.05.03 @ 04:10:00

Job Ticket #: 65539                      DST #: 3

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

Printed: 2019.05.07 @ 15:11:06



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
250 N. Water STE 300  
Wichita KS 67202  
ATTN: Robert Hendrix

**7-1s-37w Cheyenne,KS**

**Jean 'A' #1-7**

Job Ticket: 65539

**DST#: 3**

Test Start: 2019.05.02 @ 20:56:00

## GENERAL INFORMATION:

Formation: **LKC " A - D "**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:17:50  
 Time Test Ended: 04:10:00  
 Interval: **4068.00 ft (KB) To 4181.00 ft (KB) (TVD)**  
 Total Depth: 4181.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Reference Elevations: 3168.00 ft (KB)  
 3163.00 ft (CF)  
 KB to GR/CF: 5.00 ft

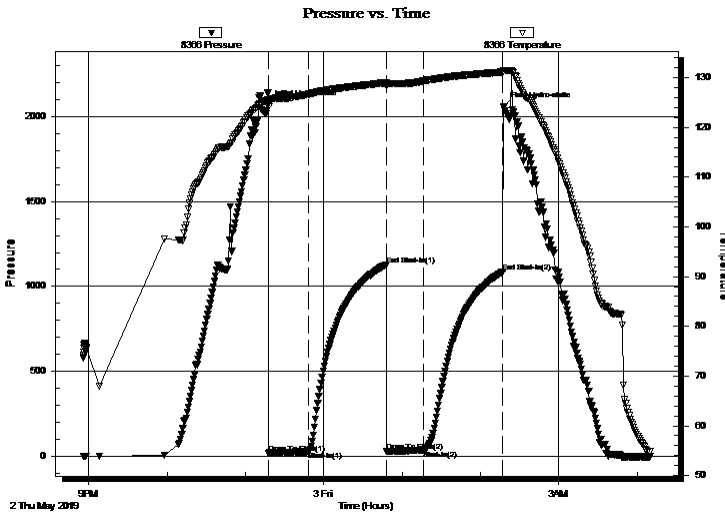
## Serial #: 8366

**Outside**

Press@RunDepth: 34.17 psig @ 4069.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.05.02 End Date: 2019.05.03 Last Calib.: 2019.05.03  
 Start Time: 20:56:01 End Time: 04:10:00 Time On Btm: 2019.05.02 @ 23:17:30  
 Time Off Btm: 2019.05.03 @ 02:17:50

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

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2072.97	125.40	Initial Hydro-static
1	17.95	124.13	Open To Flow (1)
31	26.23	126.61	Shut-In(1)
90	1127.64	128.96	End Shut-In(1)
91	29.05	128.28	Open To Flow (2)
119	34.17	129.28	Shut-In(2)
180	1086.33	131.11	End Shut-In(2)
181	2061.00	131.43	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud w / oil spots in tool 100%M	0.10

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Co. Inc.  
 250 N. Water STE 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

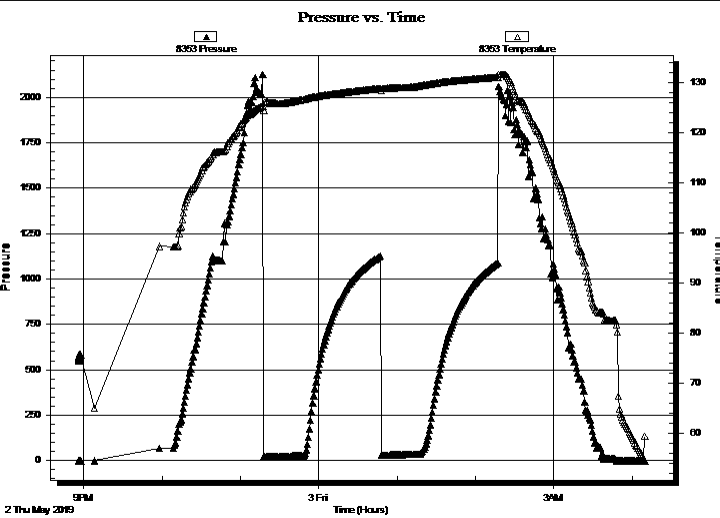
**7-1s-37w Cheyenne, KS**  
**Jean 'A' #1-7**  
 Job Ticket: 65539 **DST#: 3**  
 Test Start: 2019.05.02 @ 20:56:00

**GENERAL INFORMATION:**

Formation: **LKC " A - D "**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:17:50  
 Time Test Ended: 04:10:00  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Interval: **4068.00 ft (KB) To 4181.00 ft (KB) (TVD)**  
 Reference Elevations: 3168.00 ft (KB)  
 Total Depth: 4181.00 ft (KB) (TVD) 3163.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 8353** Inside  
 Press@RunDepth: psig @ 4069.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.05.02 End Date: 2019.05.03 Last Calib.: 2019.05.03  
 Start Time: 20:56:01 End Time: 04:09:50 Time On Btm:  
 Time Off Btm:

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



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

Recovery		
Length (ft)	Description	Volume (bbl)
20.00	Mud w / oil spots in tool 100%M	0.10

\* 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.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65539

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2019.05.02 @ 20:56:00

## Tool Information

Drill Pipe:	Length: 3885.00 ft	Diameter: 3.80 inches	Volume: 54.50 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 55.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4068.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	113.00 ft			
Tool Length:	141.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4045.00	
Hydraulic tool	5.00			4050.00	
Jars	5.00			4055.00	
Safety Joint	3.00			4058.00	
Packer	5.00			4063.00	28.00 Bottom Of Top Packer
Packer	5.00			4068.00	
Stubb	1.00			4069.00	
Recorder	0.00	8353	Inside	4069.00	
Recorder	0.00	8366	Outside	4069.00	
Perforations	13.00			4082.00	
Blank Spacing	96.00			4178.00	
Bullnose	3.00			4181.00	113.00 Bottom Packers & Anchor

**Total Tool Length: 141.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Co. Inc.  
250 N. Water STE 300  
Wichita KS 67202  
ATTN: Robert Hendrix

**7-1s-37w Cheyenne,KS**  
**Jean 'A' #1-7**  
Job Ticket: 65539      **DST#: 3**  
Test Start: 2019.05.02 @ 20:56:00

**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: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.59 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 900.00 ppm			
Filter Cake: 2.00 inches			

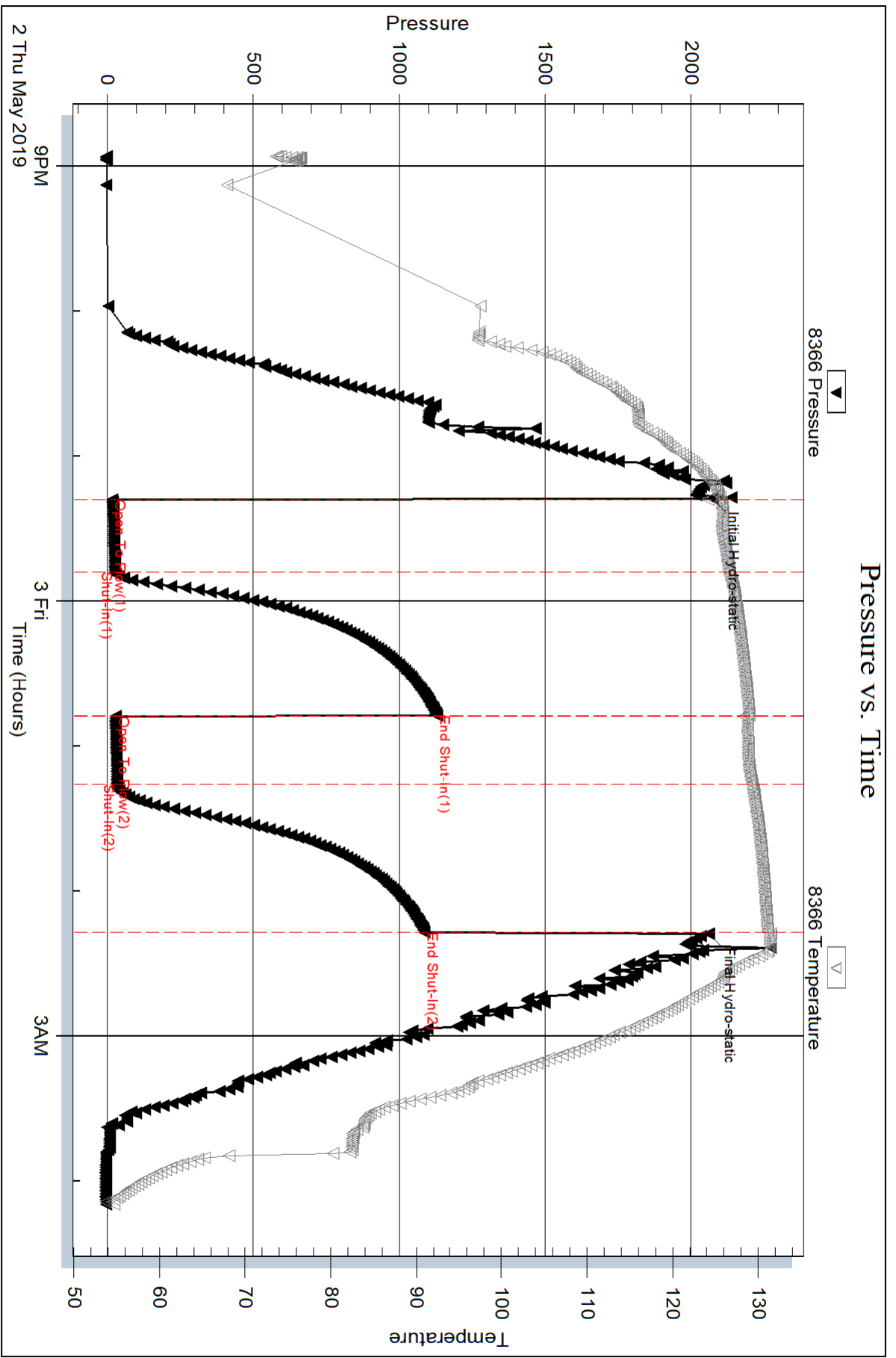
**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
20.00	Mud w / oil spots in tool 100%M	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:





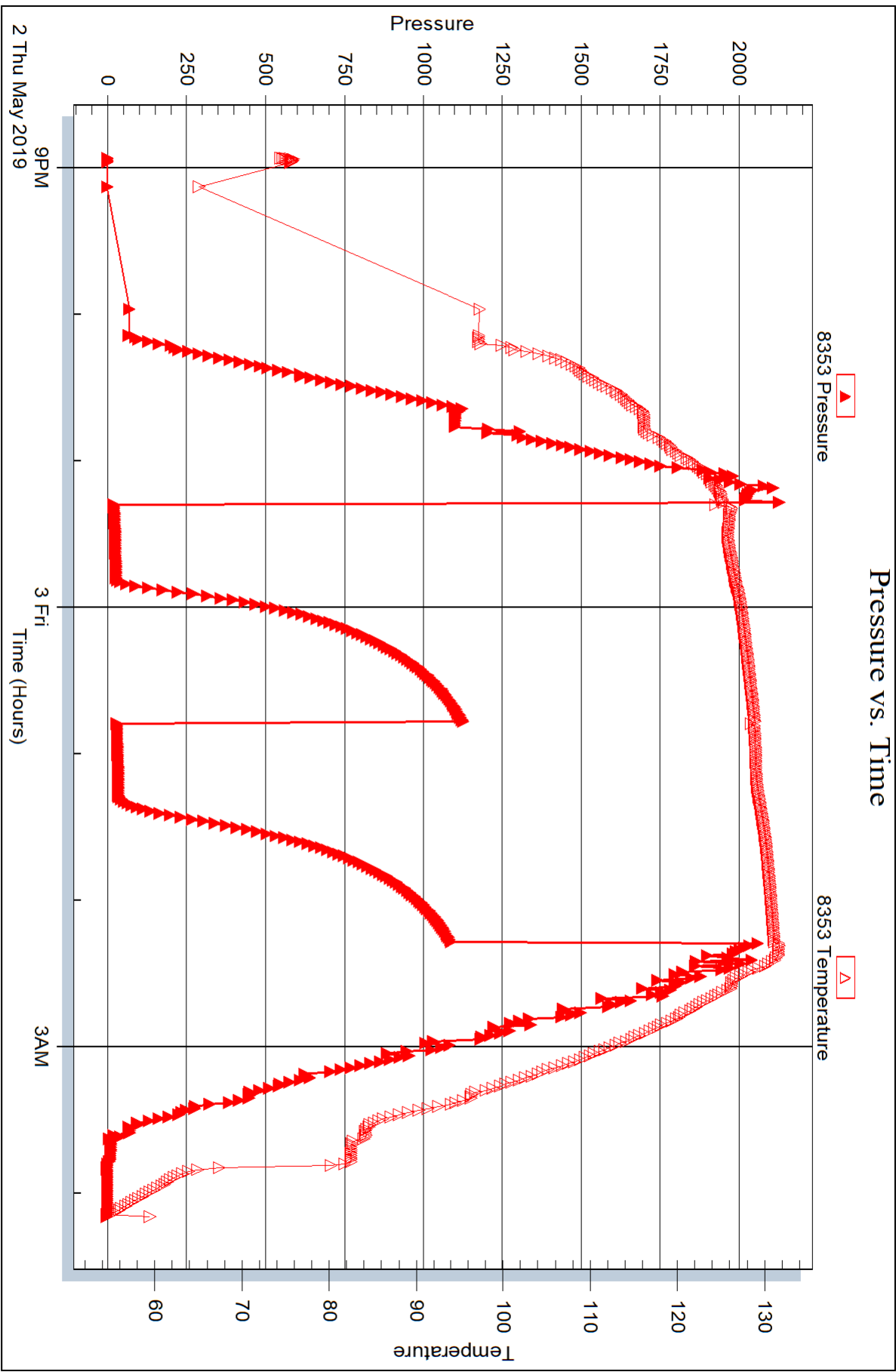
Serial #: 8353

Inside

Murfin Drilling Co. Inc.

Jean 'A' #1-7

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 65539

Printed: 2019.05.07 @ 15:11:07



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Jean 'A' #1-7**

**7-1s-37w Cheyenne,KS**

Start Date: 2019.05.03 @ 13:25:00

End Date: 2019.05.03 @ 21:41:50

Job Ticket #: 65540                      DST #: 4

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

Printed: 2019.05.07 @ 15:10:35



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N. Water STE 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

**7-1s-37w Cheyenne, KS**

**Jean 'A' #1-7**

Job Ticket: 65540

**DST#: 4**

Test Start: 2019.05.03 @ 13:25:00

## GENERAL INFORMATION:

Formation: **LKC " G "**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:03:00  
 Time Test Ended: 21:41:50  
 Interval: **4178.00 ft (KB) To 4235.00 ft (KB) (TVD)**  
 Total Depth: 4235.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Reference Elevations: 3168.00 ft (KB)  
 3163.00 ft (CF)  
 KB to GR/CF: 5.00 ft

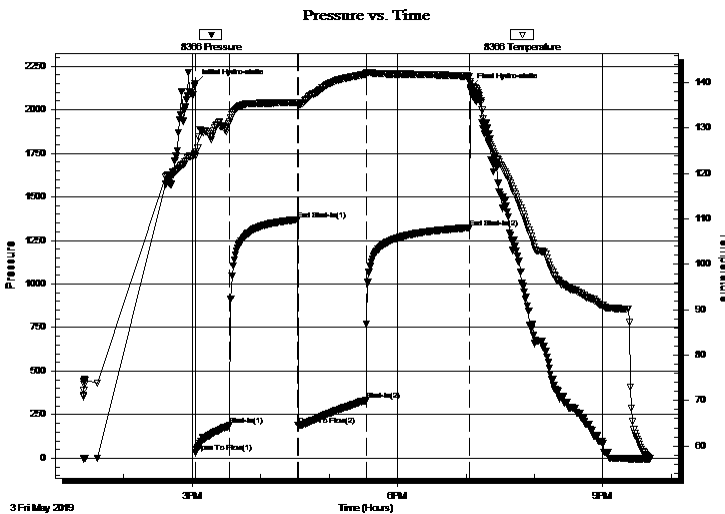
**Serial #: 8366**

**Outside**

Press@RunDepth: 331.75 psig @ 4179.00 ft (KB)  
 Start Date: 2019.05.03 End Date: 2019.05.03  
 Start Time: 13:25:01 End Time: 21:41:50  
 Capacity: 8000.00 psig  
 Last Calib.: 2019.05.03  
 Time On Btm: 2019.05.03 @ 15:02:40  
 Time Off Btm: 2019.05.03 @ 19:04:09

**TEST COMMENT:** 30 IF - BoB @ 11 mins  
 60 ISI - Surface blow died @ 40 mins  
 60 FF - BoB @ 15 mins  
 90 FSI - BoB @ 32 mins died back to 11"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2150.20	124.40	Initial Hydro-static
1	31.91	123.80	Open To Flow (1)
31	187.99	131.36	Shut-In(1)
90	1369.56	135.59	End Shut-In(1)
91	189.65	135.08	Open To Flow (2)
150	331.75	141.95	Shut-In(2)
241	1323.04	141.43	End Shut-In(2)
242	2127.31	139.87	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
303.00	OMCW - 10%o - 15%M - 75%W	2.64
63.00	GMWCO - 15%G - 20%M - 20%W - 45%o	0.88
189.00	GMCO - 15%G - 20%M - 65%o	2.65
126.00	GO - 40%G - 60%o	1.77
65.00	GO - 5%G - 95%o	0.91
0.00	504' GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
250 N. Water STE 300  
Wichita KS 67202  
ATTN: Robert Hendrix

**7-1s-37w Cheyenne, KS**

**Jean 'A' #1-7**

Job Ticket: 65540

**DST#: 4**

Test Start: 2019.05.03 @ 13:25:00

## GENERAL INFORMATION:

Formation: **LKC " G "**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:03:00  
 Time Test Ended: 21:41:50  
 Interval: **4178.00 ft (KB) To 4235.00 ft (KB) (TVD)**  
 Total Depth: 4235.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Reference Elevations: 3168.00 ft (KB)  
 3163.00 ft (CF)  
 KB to GR/CF: 5.00 ft

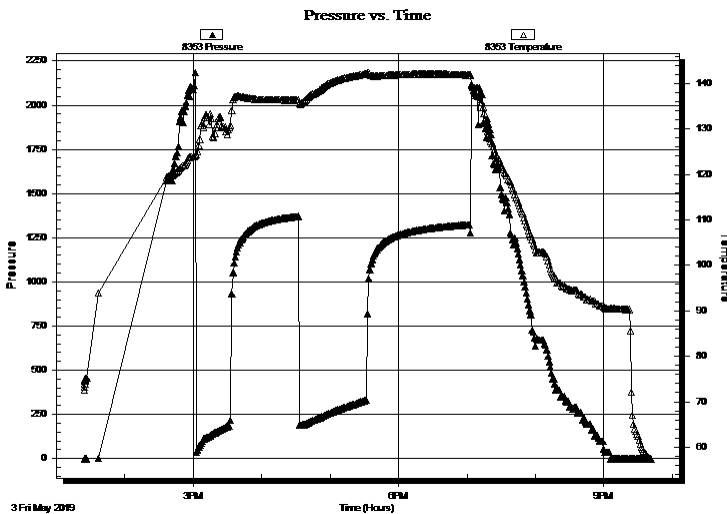
## Serial #: 8353

Inside

Press@RunDepth: psig @ 4179.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.05.03 End Date: 2019.05.03 Last Calib.: 2019.05.03  
 Start Time: 13:25:01 End Time: 21:41:40 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 30 IF - BoB @ 11 mins  
 60 ISI - Surface blow died @ 40 mins  
 60 FF - BoB @ 15 mins  
 90 FSI - BoB @ 32 mins died back to 11"

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
303.00	OMCW - 10%o - 15%M - 75%W	2.64
63.00	GMWCO - 15%G - 20%M - 20%W - 45%o	0.88
189.00	GMCO - 15%G - 20%M - 65%o	2.65
126.00	GO - 40%G - 60%o	1.77
65.00	GO - 5%G - 95%o	0.91
0.00	504' GIP	0.00

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co. Inc.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65540

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2019.05.03 @ 13:25:00

## Tool Information

Drill Pipe:	Length: 3980.00 ft	Diameter: 3.80 inches	Volume: 55.83 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 73000.00 lb
			<u>Total Volume: 56.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4178.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4155.00	
Hydraulic tool	5.00			4160.00	
Jars	5.00			4165.00	
Safety Joint	3.00			4168.00	
Packer	5.00			4173.00	28.00 Bottom Of Top Packer
Packer	5.00			4178.00	
Stubb	1.00			4179.00	
Recorder	0.00	8353	Inside	4179.00	
Recorder	0.00	8366	Outside	4179.00	
Perforations	20.00			4199.00	
Blank Spacing	33.00			4232.00	
Bullnose	3.00			4235.00	57.00 Bottom Packers & Anchor

**Total Tool Length: 85.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65540

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2019.05.03 @ 13:25:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
303.00	OMCW - 10%o - 15%M - 75%W	2.638
63.00	GMWCO - 15%G - 20%M - 20%W - 45%o	0.884
189.00	GMCO - 15%G - 20%M - 65%o	2.651
126.00	GO - 40%G - 60%o	1.767
65.00	GO - 5%G - 95%o	0.912
0.00	504' GIP	0.000

Total Length: 746.00 ft      Total Volume: 8.852 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

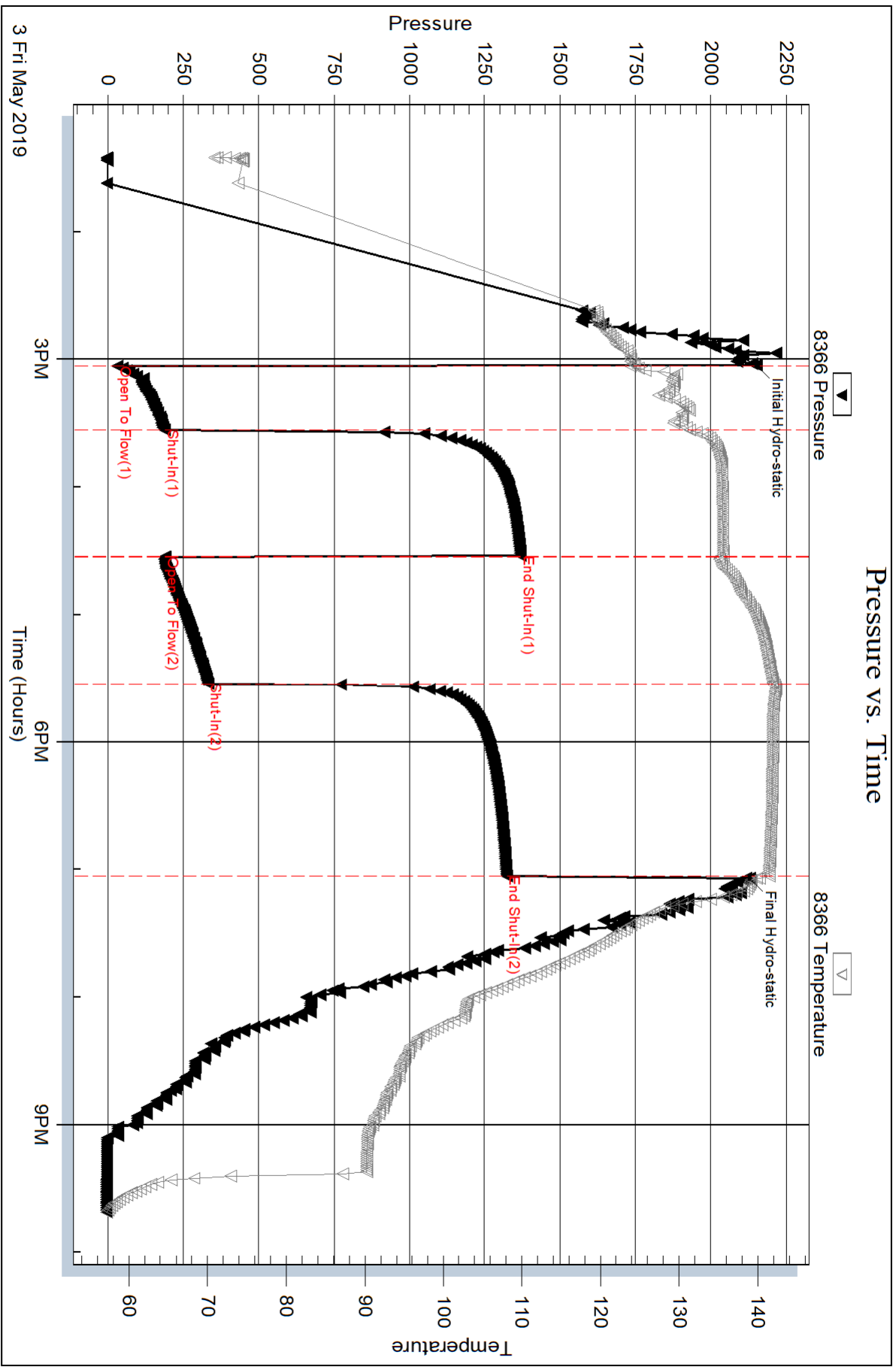
Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 27 @ 60 DEG F

RW = .145 @ 60 DEG F

Chlorides = 58,000 ppm





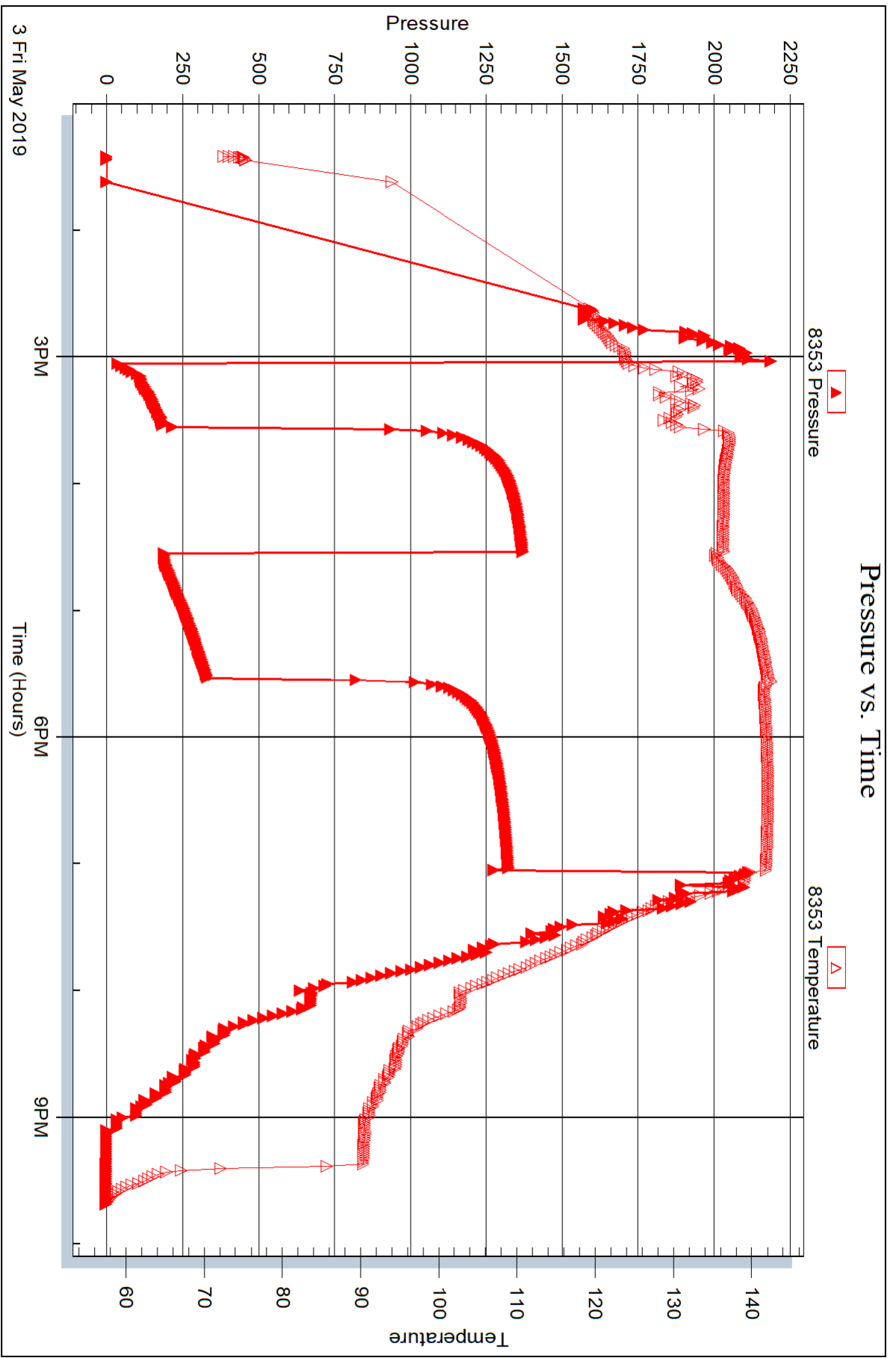
Serial #: 8353

Inside

Murfin Drilling Co. Inc.

Jean 'A' #1-7

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 65540

Printed: 2019.05.07 @ 15:10:36



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Jean 'A' #1-7**

**7-1s-37w Cheyenne,KS**

Start Date: 2019.05.04 @ 11:40:00

End Date: 2019.05.04 @ 18:32:50

Job Ticket #: 65541                      DST #: 5

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

Printed: 2019.05.07 @ 15:04:39

Murfin Drilling Co. Inc. 7-1s-37w Cheyenne,KS Jean 'A' #1-7 DST # 5 LKC " H - J " 2019.05.04



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N. Water STE 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

**7-1s-37w Cheyenne, KS**

**Jean 'A' #1-7**

Job Ticket: 65541

**DST#: 5**

Test Start: 2019.05.04 @ 11:40:00

## GENERAL INFORMATION:

Formation: **LKC "H - J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:29:40  
 Time Test Ended: 18:32:50  
 Interval: **4232.00 ft (KB) To 4330.00 ft (KB) (TVD)**  
 Total Depth: 4330.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Reference Elevations: 3168.00 ft (KB)  
 3163.00 ft (CF)  
 KB to GR/CF: 5.00 ft

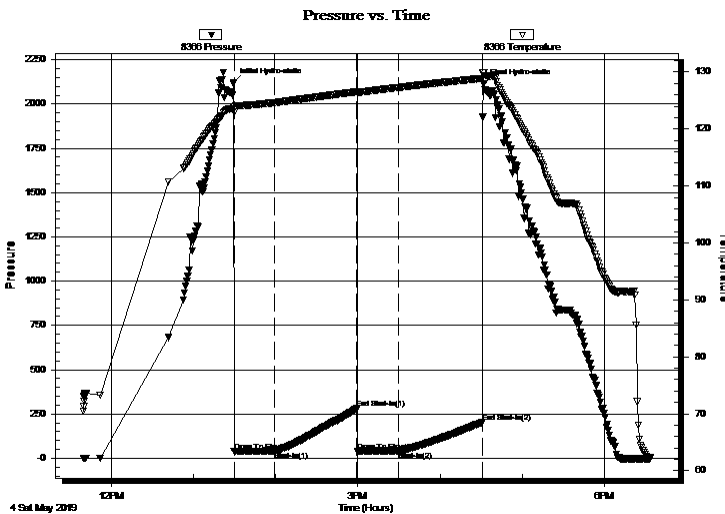
**Serial #: 8366**

**Outside**

Press@RunDepth: 41.93 psig @ 4233.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.05.04 End Date: 2019.05.04 Last Calib.: 2019.05.04  
 Start Time: 11:40:01 End Time: 18:32:50 Time On Btm: 2019.05.04 @ 13:29:10  
 Time Off Btm: 2019.05.04 @ 16:31:50

**TEST COMMENT:** 30 IF - Slid 5' - blow built to 1 3/4" died back to 1 1/4"  
 60 ISI - No return  
 30 FF - No blow  
 60 FSI - No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2120.63	123.87	Initial Hydro-static
1	38.88	122.96	Open To Flow (1)
31	40.86	124.64	Shut-In(1)
90	280.11	126.54	End Shut-In(1)
91	40.40	126.42	Open To Flow (2)
121	41.93	127.30	Shut-In(2)
182	202.87	128.90	End Shut-In(2)
183	2113.73	129.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%M	0.15

\* 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.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65541

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2019.05.04 @ 11:40:00

## Tool Information

Drill Pipe:	Length: 4040.00 ft	Diameter: 3.80 inches	Volume: 56.67 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 57.54 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4232.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	126.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4209.00	
Hydraulic tool	5.00			4214.00	
Jars	5.00			4219.00	
Safety Joint	3.00			4222.00	
Packer	5.00			4227.00	28.00 Bottom Of Top Packer
Packer	5.00			4232.00	
Stubb	1.00			4233.00	
Recorder	0.00	8353	Inside	4233.00	
Recorder	0.00	8366	Outside	4233.00	
Perforations	29.00			4262.00	
Blank Spacing	65.00			4327.00	
Bullnose	3.00			4330.00	98.00 Bottom Packers & Anchor

**Total Tool Length: 126.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65541

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2019.05.04 @ 11:40:00

## 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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud 100%M	0.148

Total Length: 30.00 ft      Total Volume: 0.148 bbl

Num Fluid Samples: 0

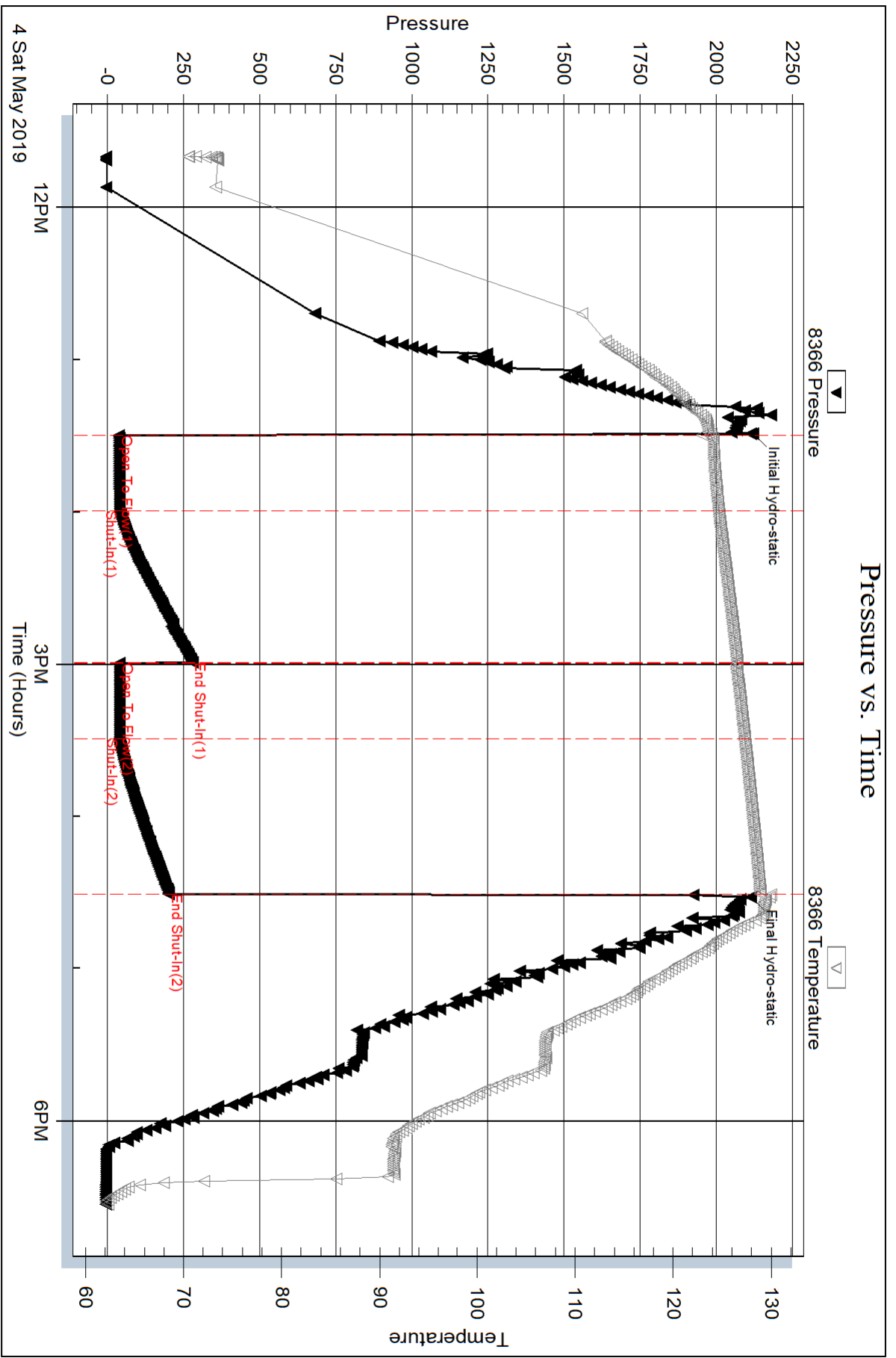
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



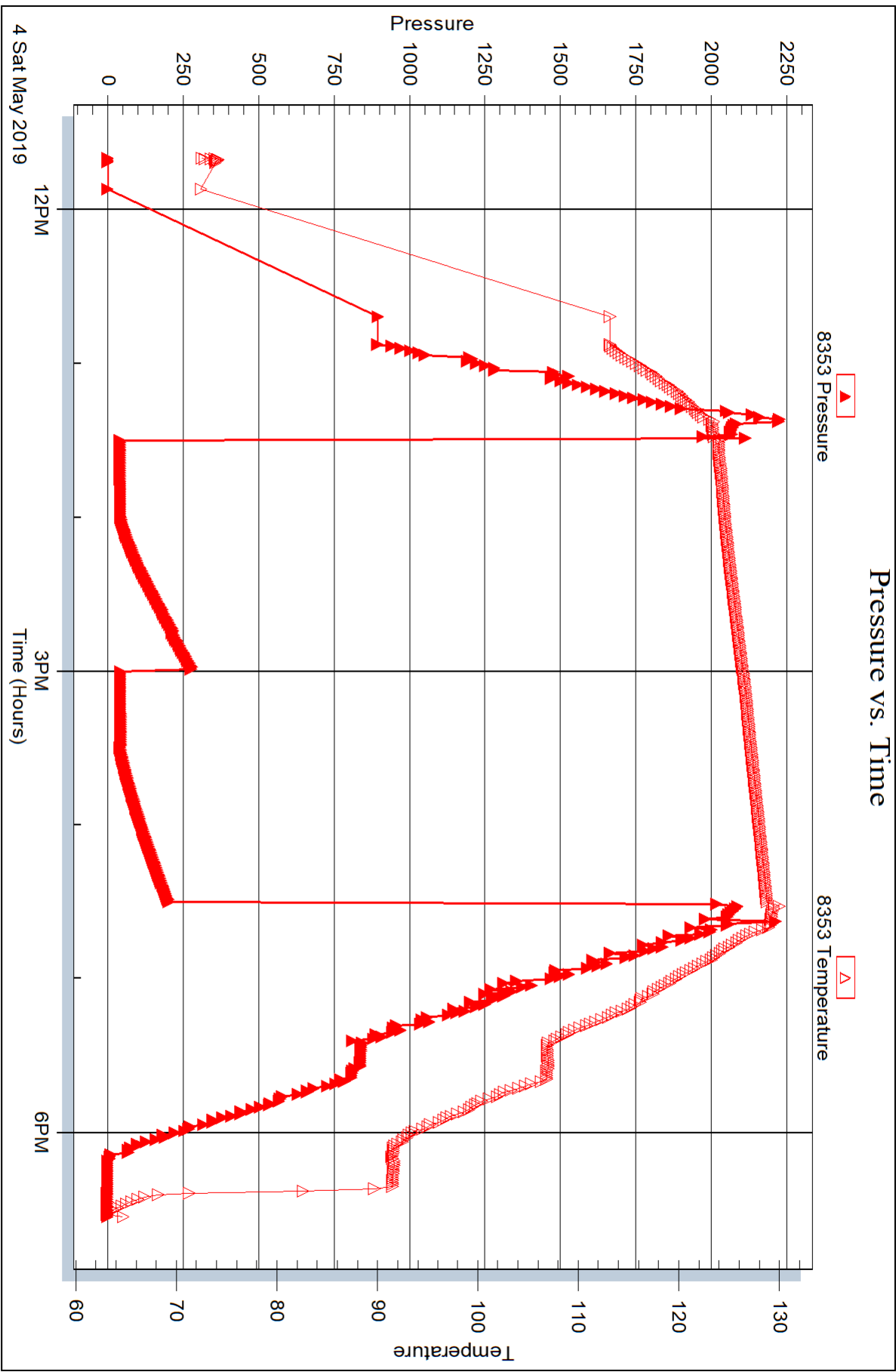
Serial #: 8353

Inside

Murfin Drilling Co. Inc.

Jean 'A' #1-7

DST Test Number: 5







## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita KS 67202

ATTN: Robert Hendrix

**Jean 'A' #1-7**

**7-1s-37w Cheyenne,KS**

Start Date: 2019.05.05 @ 16:14:00

End Date: 2019.05.06 @ 00:56:40

Job Ticket #: 65542                      DST #: 6

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

Printed: 2019.05.07 @ 14:53:56



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
 250 N. Water STE 300  
 Wichita KS 67202  
 ATTN: Robert Hendrix

**7-1s-37w Cheyenne, KS**

**Jean 'A' #1-7**

Job Ticket: 65542

**DST#: 6**

Test Start: 2019.05.05 @ 16:14:00

## GENERAL INFORMATION:

Formation: **Ft. Scott**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:29:00  
 Time Test Ended: 00:56:40  
 Interval: **4485.00 ft (KB) To 4535.00 ft (KB) (TVD)**  
 Total Depth: 4535.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols  
 Unit No: 71  
 Reference Elevations: 3168.00 ft (KB)  
 3163.00 ft (CF)  
 KB to GR/CF: 5.00 ft

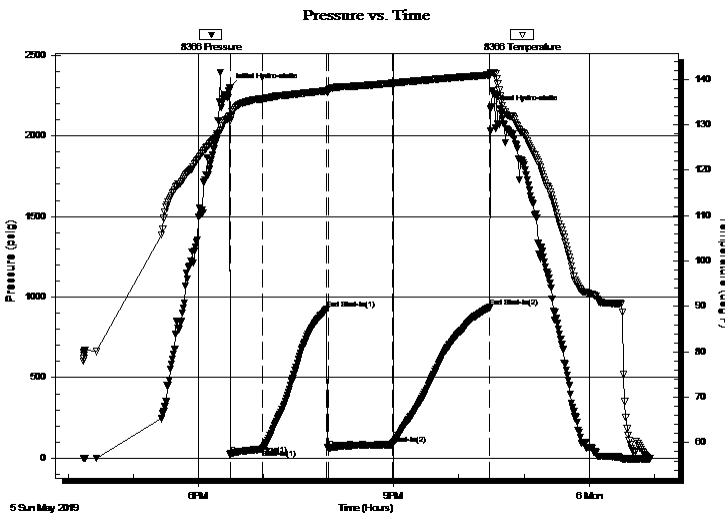
## Serial #: 8366

**Outside**

Press@RunDepth: 84.32 psig @ 4486.00 ft (KB)  
 Start Date: 2019.05.05 End Date: 2019.05.06  
 Start Time: 16:14:01 End Time: 00:56:40  
 Capacity: 8000.00 psig  
 Last Calib.: 2019.05.06  
 Time On Btm: 2019.05.05 @ 18:28:50  
 Time Off Btm: 2019.05.05 @ 22:29:10

TEST COMMENT: 30 IF - Blow built to 6"  
 60 ISI - No return  
 60 FF - Blow built to 5 3/4"  
 90 FSI - Surface blow died @ 20 mins

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2299.96	132.01	Initial Hydro-static
1	21.92	130.96	Open To Flow (1)
30	55.54	135.66	Shut-In(1)
90	924.43	137.49	End Shut-In(1)
91	63.02	137.38	Open To Flow (2)
150	84.32	139.13	Shut-In(2)
240	935.75	140.93	End Shut-In(2)
241	2166.16	141.40	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	GMCO - 20%G - 30%M 50%o	0.30
60.00	GMCO - 30%G - 30%M - 40%o	0.30
60.00	GO - 40%G - 60%o	0.32
30.00	GO - 20%G 80%o	0.42
0.00	120' GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.  
250 N. Water STE 300  
Wichita KS 67202  
ATTN: Robert Hendrix

**7-1s-37w Cheyenne, KS**

**Jean 'A' #1-7**

Job Ticket: 65542

**DST#: 6**

Test Start: 2019.05.05 @ 16:14:00

### GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:29:00

Time Test Ended: 00:56:40

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

**Interval: 4485.00 ft (KB) To 4535.00 ft (KB) (TVD)**

Reference Elevations: 3168.00 ft (KB)

Total Depth: 4535.00 ft (KB) (TVD)

3163.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8353 Inside**

Press@RunDepth: psig @ 4486.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.05.05

End Date:

2019.05.06

Last Calib.:

2019.05.06

Start Time: 16:14:01

End Time:

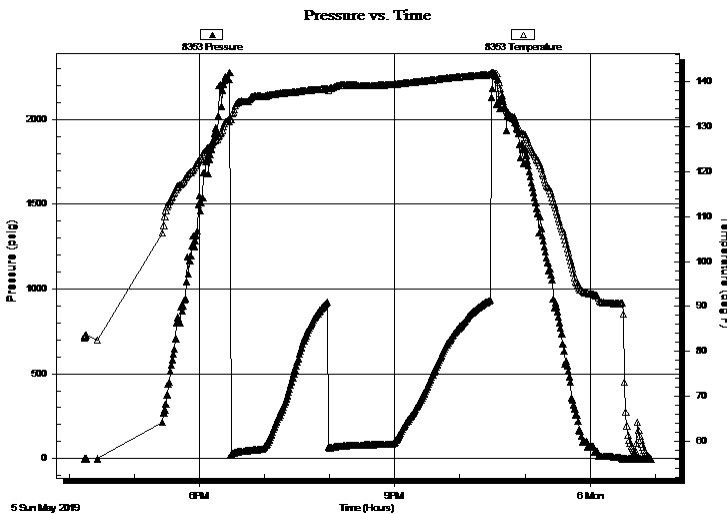
00:56:30

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF - Blow built to 6"  
60 ISI - No return  
60 FF - Blow built to 5 3/4"  
90 FSI - Surface blow died @ 20 mins

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
60.00	GMCO - 20%G - 30%M 50%o	0.30
60.00	GMCO - 30%G - 30%M - 40%o	0.30
60.00	GO - 40%G - 60%o	0.32
30.00	GO - 20%G 80%o	0.42
0.00	120' GIP	0.00

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co. Inc.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65542

**DST#: 6**

ATTN: Robert Hendrix

Test Start: 2019.05.05 @ 16:14:00

## Tool Information

Drill Pipe:	Length: 4291.00 ft	Diameter: 3.80 inches	Volume: 60.19 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 61.06 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4485.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4462.00	
Hydraulic tool	5.00			4467.00	
Jars	5.00			4472.00	
Safety Joint	3.00			4475.00	
Packer	5.00			4480.00	28.00 Bottom Of Top Packer
Packer	5.00			4485.00	
Stubb	1.00			4486.00	
Recorder	0.00	8353	Inside	4486.00	
Recorder	0.00	8366	Outside	4486.00	
Perforations	13.00			4499.00	
Blank Spacing	33.00			4532.00	
Bullnose	3.00			4535.00	50.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co. Inc.

**7-1s-37w Cheyenne,KS**

250 N. Water STE 300  
Wichita KS 67202

**Jean 'A' #1-7**

Job Ticket: 65542

**DST#: 6**

ATTN: Robert Hendrix

Test Start: 2019.05.05 @ 16:14:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GMCO - 20%G - 30%M 50%o	0.295
60.00	GMCO - 30%G - 30%M - 40%o	0.295
60.00	GO - 40%G - 60%o	0.322
30.00	GO - 20%G 80%o	0.421
0.00	120' GIP	0.000

Total Length: 210.00 ft      Total Volume: 1.333 bbl

Num Fluid Samples: 0

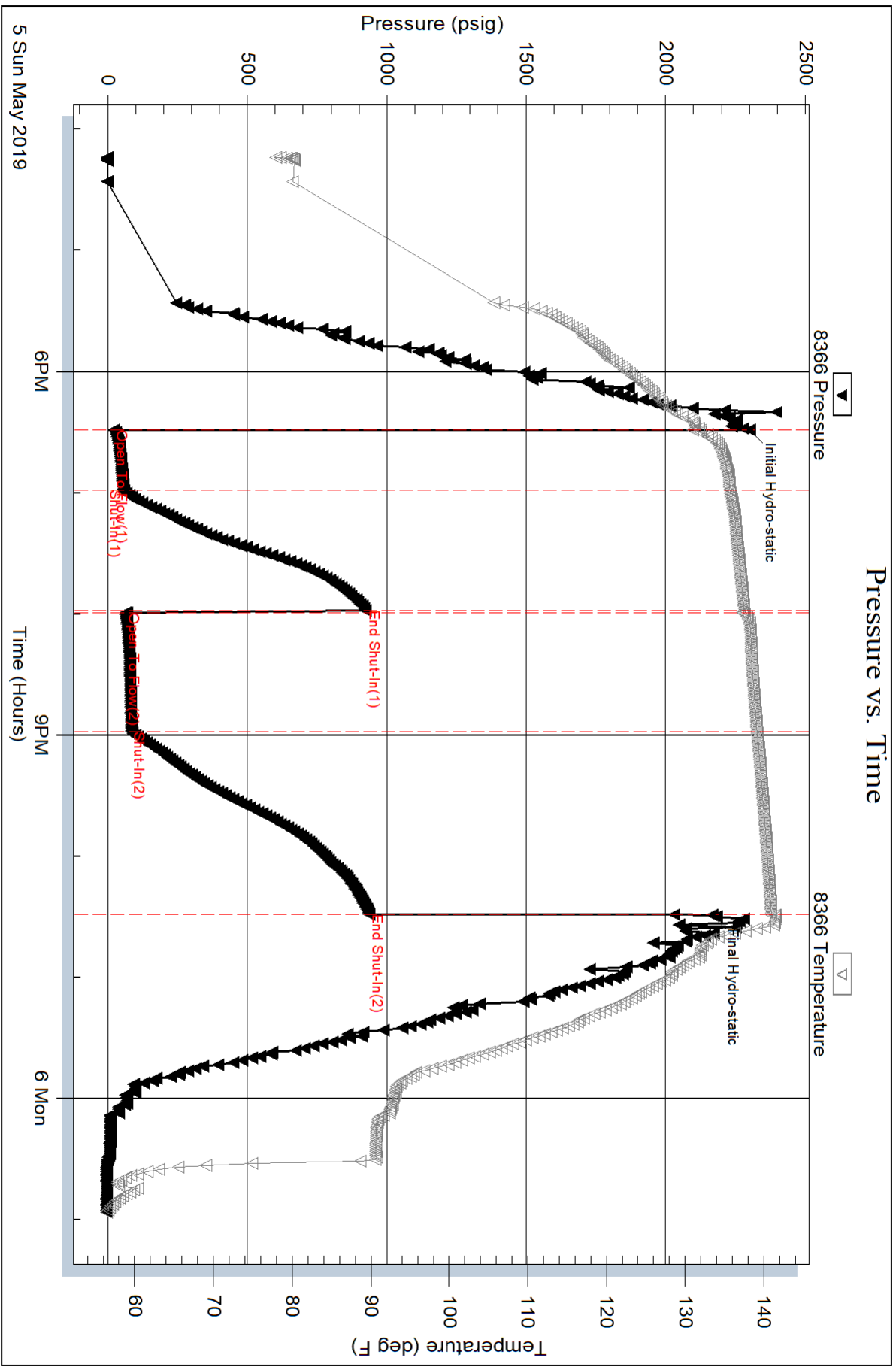
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 37 @ 60 DEG F



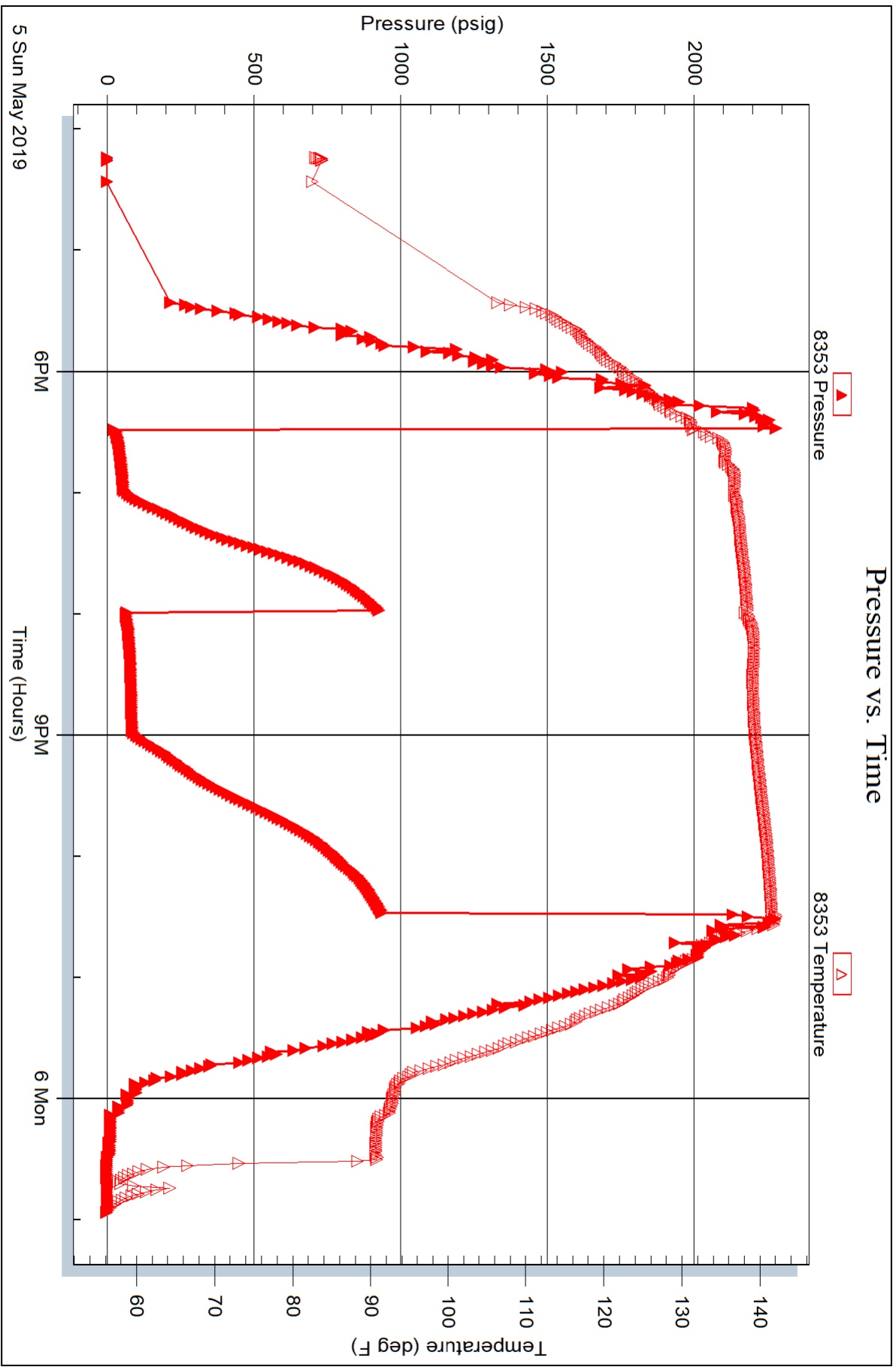
Serial #: 8353

Inside

Murfin Drilling Co. Inc.

Jean 'A' #1-7

DST Test Number: 6





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 65537

Well Name & No. Jean 'A' #1-7 Test No. 1 Date 4/30/19  
 Company Murfin Drilling Co. Inc. Elevation 3168 KB 3163 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #3  
 Location: Sec. 7 Twp 15 Rge. 37W Co. Cherokee State KS

Interval Tested 3802 - 3903 Zone Tested Stotler - Topeka  
 Anchor Length 101' Drill Pipe Run 3605' Mud Wt. 8.9  
 Top Packer Depth 3797 Drill Collars Run 177' Vis 64  
 Bottom Packer Depth 3802 Wt. Pipe Run 0' WL 5.6  
 Total Depth 3903 Chlorides 900 ppm System LCM 4  
 Blow Description 30 IF - Blow built to 1 1/2"  
60 ISI - No return  
30 FF - No blow  
60 FSI - No return

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

Rec Total 5' BHT 125° Gravity — API RW — @ — °F Chlorides — ppm

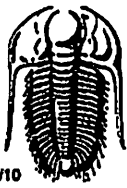
(A) Initial Hydrostatic <u>1890</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>23:30</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>00:21</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>02:55</u>
(D) Initial Shut-In <u>359</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>05:58</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>07:45</u>
(F) Second Final Flow <u>23</u>	<input checked="" type="checkbox"/> Mileage <u>149 RT</u> 149	Comments _____
(G) Final Shut-In <u>278</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>1866</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1674</u>
	Sub Total <u>1674</u>	MP/DST Disc't _____

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

Our Representative Ng 29118

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 test 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. 65538

Well Name & No. Jean 'A' #1-7 Test No. 2 Date 5/1/19  
 Company Murkin Drilling Co Inc. Elevation 3168 KB 3163 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murkin #3  
 Location: Sec. 7 Twp 15 Rge. 37 W Co. Cheyenne State KS

Interval Tested 3988 - 4041 Zone Tested Oread  
 Anchor Length 53' Drill Pipe Run 3793' Mud Wt. 9.0  
 Top Packer Depth 3983 Drill Collars Run 177' Vis 66  
 Bottom Packer Depth 3988 Wt. Pipe Run 0' WL 5.6  
 Total Depth 4041 Chlorides 900 ppm System LCM 4  
 Blow Description 30 IF - Blow built to 1/2" died back to surface  
60 ISI - No return  
30 FF - No blow  
60 FSI - No return

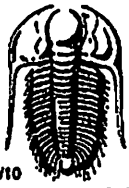
Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5' BHT 129° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2004</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>20:45</u>
(B) First Initial Flow <u>15</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>21:27</u>
(C) First Final Flow <u>16</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>23:34</u>
(D) Initial Shut-In <u>23</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>02:34</u>
(E) Second Initial Flow <u>15</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>04:15</u>
(F) Second Final Flow <u>16</u>	<input checked="" type="checkbox"/> Mileage <u>149 RT</u> 149	Comments
(G) Final Shut-In <u>17</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1970</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> EM Tool
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1774</u>
	Sub Total <u>1774</u>	MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative [Signature]

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



# TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 65539

Well Name & No. Jean 'A' # 1-7 Test No. 3 Date 5/2/19  
 Company Martin Drilling Co. Inc. Elevation 3168 KB 3163 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Martin # 3  
 Location: Sec. 7 Twp 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 4068 - 4181 Zone Tested LKC "A-D"  
 Anchor Length 113' Drill Pipe Run 3885' Mud Wt. 9.1  
 Top Packer Depth 4063 Drill Collars Run 177' Vis 65  
 Bottom Packer Depth 4068 Wt. Pipe Run 0' WL 5.6  
 Total Depth 4181 Chlorides 900 ppm System LCM 4  
 Blow Description 30 FF - Blow built to 1 1/2"  
60 IST - No return  
30 FF - No blow  
60 FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>20'</u>	<u>Mud w/oil spots in tool</u>	<u>Spots</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

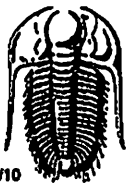
Rec Total 20' BHT 131° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2073</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>20:15</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>20:56</u>
(C) First Final Flow <u>26</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>023:18</u>
(D) Initial Shut-In <u>1128</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>02:17</u>
(E) Second Initial Flow <u>29</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>04:15</u>
(F) Second Final Flow <u>34</u>	<input checked="" type="checkbox"/> Mileage <u>149'</u>	Comments _____
(G) Final Shut-In <u>1086</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>2061</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1774</u>
Sub Total <u>1774</u>		MP/DST Disc't _____

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

Our Representative Ray J. Nichols

Tribolite 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. 65540

Well Name & No. Jean A # 1-7 Test No. 4 Date 5/13/19  
 Company Murfin Drilling Co. Inc. Elevation 3168 KB 3163 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin # 3  
 Location: Sec. 7 Twp 15 Rge. 37W Co. Cheyenne State KS

Interval Tested 4178 - 4235 Zone Tested LKC "G"  
 Anchor Length 57' Drill Pipe Run 3980' Mud Wt. 9.3  
 Top Packer Depth 4173 Drill Collars Run 177' Vis 63  
 Bottom Packer Depth 4178 Wt. Pipe Run 0' WL 6.0  
 Total Depth 4235 Chlorides 900 ppm System LCM 4  
 Blow Description 30 IF - BoB @ 11 mins  
60 ISI - Surface blow return died @ 40 mins  
60 FF - BoB @ 15 mins  
90 FSI - BoB @ 32 mins

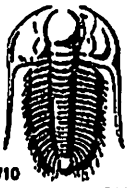
Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>60</u>	<u>5</u>	<u>95</u>		
<u>126</u>	<u>60</u>	<u>40</u>	<u>80</u>		
<u>189</u>	<u>GMCO</u>	<u>15</u>	<u>65</u>		<u>20</u>
<u>63</u>	<u>GMWCO</u>	<u>15</u>	<u>45</u>	<u>20</u>	<u>20</u>
<u>303</u>	<u>OMCW</u>		<u>10</u>	<u>75</u>	<u>15</u>

Rec Total 746' BHT 141° Gravity 27.60° API RW .145 @ 60° F Chlorides 58,000 ppm

(A) Initial Hydrostatic <u>2150</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>12:45</u>
(B) First Initial Flow <u>32</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>13:25</u>
(C) First Final Flow <u>188</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:03</u>
(D) Initial Shut-In <u>1370</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>19:03</u>
(E) Second Initial Flow <u>190</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>21:30</u>
(F) Second Final Flow <u>332</u>	<input checked="" type="checkbox"/> Mileage <u>149 RT</u>	Comments <u>504' GIP</u>
(G) Final Shut-In <u>1323</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2127</u>	<input type="checkbox"/> Straddle	
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> EM Tool
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Ruined Packer
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility	Total <u>1774</u>
	Sub Total <u>1774</u>	MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Th. J. Thib. B.

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 entered 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. 65541

Well Name & No. Jean 'A' #1-7 Test No. 5 Date 5/4/19  
 Company Murfin Drilling Co. Inc. Elevation 3168 KB 3163 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #3  
 Location: Sec. 7 Twp 15 Rge. 37W Co. Cheyenne State KS

Interval Tested 4232 - 4330 Zone Tested LKC "H-J"  
 Anchor Length 98' Drill Pipe Run 4040' Mud Wt. 9.0  
 Top Packer Depth 4227 Drill Collars Run 177' Vis 59  
 Bottom Packer Depth 4232 Wt. Pipe Run 0' WL 5.6  
 Total Depth 4330 Chlorides 900 ppm System LCM 5  
 Blow Description 30 IF - Blow built to 1 3/4" died back to 1 1/4"  
60 ISF - No return  
30 FF - No blow  
60 FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>30'</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30' BHT 129° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2121</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>11:00</u>
(B) First Initial Flow <u>39</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:40</u>
(C) First Final Flow <u>41</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:30</u>
(D) Initial Shut-In <u>280</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>16:30</u>
(E) Second Initial Flow <u>40</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>18:15</u>
(F) Second Final Flow <u>42</u>	<input checked="" type="checkbox"/> Mileage <u>149 RT</u>	Comments <u>Slide 5'</u>
(G) Final Shut-In <u>203</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2114</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1774</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1774</u>	

Approved By \_\_\_\_\_ Our Representative Tom 2

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. 65542

Well Name & No. Jean 'A' #1-7 Test No. 6 Date 5/5/19  
 Company Murfin Drilling Co. Inc. Elevation 3168 KB 3163 GL  
 Address 250 N. Water STE 300 Wichita 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin # 3  
 Location: Sec. 7 Twp 15 Rge. 37W Co. Cheyenne State KS

Interval Tested 4485 - 4535 Zone Tested Ft. Scott  
 Anchor Length 50' Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.1  
 Top Packer Depth 4480 Drill Collars Run 177' Vis 60  
 Bottom Packer Depth 4485 Wt. Pipe Run 0' WL 6.0  
 Total Depth 4535 Chlorides 900 ppm System LCM 4  
 Blow Description 30 IF - Blow built to 6"  
60 ISI - No return  
60 FF - Blow built to 5 3/4"  
90 FSI - Surface blow return died @ 20 mins

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>60</u>	<u>20</u>	<u>80</u>		
<u>60</u>	<u>60</u>	<u>40</u>	<u>60</u>		
<u>60</u>	<u>GMCO</u>	<u>30</u>	<u>40</u>	<u>30</u>	<u>30</u>
<u>60</u>	<u>GMCO</u>	<u>20</u>	<u>50</u>	<u>30</u>	<u>30</u>

Rec Total 210' BHT 141° Gravity 37 @ 60° API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2300</u>	<input type="checkbox"/> Test <u>1300</u>	T-On Location <u>15:30</u>
(B) First Initial Flow <u>22</u>	<input type="checkbox"/> Jars <u>250</u>	T-Started <u>16:14</u>
(C) First Final Flow <u>56</u>	<input type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>18:29</u>
(D) Initial Shut-In <u>924</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>22:28</u>
(E) Second Initial Flow <u>63</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>00:45</u>
(F) Second Final Flow <u>84</u>	<input type="checkbox"/> Mileage <u>149</u>	Comments <u>120' GIP</u>
(G) Final Shut-In <u>936</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2166</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Total <u>1774</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1774</u>	

Approved By \_\_\_\_\_ Our Representative Ry 2 M... B...

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.

MDCI  
 Jean 'A' #1-7  
 1320' FSL 330' FEL  
 Sec. 7-T1S-R37W  
 3168' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3118	+50	+7	3120	+48	+5
B/Anhydrite	3155	+13	+1	3152	+16	+4
Neva	3565	-397	+10	3562	-394	+13
Red Eagle	3631	-463	+8	3626	-458	+13
Foraker	3678	-510	+8	3676	-508	+10
Topeka	3897	-729	+9	3893	-725	+13
Oread	4030	-862	+12	4029	-861	+13
Lansing	4106	-938	+13	4108	-940	+11
Stark	4330	-1162	+10	4326	-1158	+14
Mound City				4382	-1214	+13
Ft Scott	4502	-1334	+11	4503	-1335	+10
Oakley	4589	-1421	+16	4588	-1420	+17
RTD	4700	-1532				
LTD				4700	-1532	





**CEMENT TREATMENT REPORT**

Customer: <b>Murfin Drilling INC</b>	Well: <b>Jean A 1-7</b>	Ticket: <b>ICT 1997</b>
City, State: <b>Bird city KS</b>	County: <b>Cheyenne</b>	Date: <b>5/7/2019</b>
Field Rep: <b>Nathan Witt</b>	S-T-R: <b>7/1/37W</b>	Service: <b>Cement</b>

Hole Size:	7 7/8
Hole Depth:	4700
Casing Size:	5.5
Casing Depth:	4693
Tubing / Liner:	
Depth:	
Tool / Packer:	
Depth:	
Displacement:	111

Weight:	12.0/14.8	# / sk
Water / Sk:	15.46/6.61	gal / sk
Yield:	2.56/1.50	ft <sup>3</sup> / sk
Bbls / Ft:	0.0238	
Depth:	ft	
Volume:		
Excess:	25%	
Total Slurry:	191	
Total Sacks:	500	

Product	%	#
Class A	100.0	
Gel		
CaCl		
Metso		
KolSeal		
PhenoSeal		
Salt		

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS
7:00 AM				ARRIVAL					
7:05 AM				SAFETY MEETING					
7:10 AM				RIG UP EQUIP					
7:30 AM				START RUNNING CASING					
8:36 AM				CIRCULATE CASING JNT 58 30 MINUTES					
9:00 AM				CIRCULATE CASING ON BOTTOM					
10:20 AM	6.0	350.0	32.0	MIX 500 GAL OF MUDFLUSH					
10:30 AM	3.0	200.0	8.0	PLUG MH AND RH WITH 50 SKS					
10:40 AM	5.5	400.0	114.0	MIX 250 SKS OF H CON					
11:00 AM	5.5	400.0	54.0	MIX 200 SKS OF H LONG					
11:15 AM	6.0	700.0	111.0	DISPLACE					
11:30 AM				FINAL LIFT 1300 PSI LANDED @ 2000					
11:40 AM				WASH UP					
11:50 AM				RIG DOWN					
12:00 PM				DEPART					

	UNIT
Cementer:	Dane Retziolf 78
Pump Operator:	Michael Rebarcek 231
Bulk #1:	Alan Ryan 242
Bulk #2:	John Polley 181

Average Rate	Average Pressure	Total Fluid
5 bpm	410.00 psi	319.00 bbls