

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</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	GAMBLIN 3-22
Doc ID	1488210

All Electric Logs Run

DIL
DUCP
MEL
BHCS

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	GAMBLIN 3-22
Doc ID	1488210

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	4402	4408			150 gals 20% MCA, 150 gals 20% MCA, 300 gals 20% MCA, 600 gals 10% Acetic/10% Hydrochloric acid
4	4416	4423			150 gals 20% MCA, 150 gals 20% MCA, 300 gals 20% MCA, 600 gals 10% Acetic/10% Hydrochloric acid
4	4453	4457			600 gals 20% MCA, 300 gals 20% MCA
4	4538	4544			600 gals 20% MCA, 300 gals 20% MCA, 900 gals 20% MCA
4	4738	4742			750 gals 20% MCA , 150 gals 20% MCA

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	GAMBLIN 3-22
Doc ID	1488210

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	4750	4753			750 gals 20% MCA, 150 gals 20% MCA
4	4824	4830			1200 gals 20% MCA, 300 gals 20% MCA



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Gambling #3-22

22-2s-37w Cheyenne,KS

Start Date: 2019.10.15 @ 00:41:00

End Date: 2019.10.15 @ 08:45:50

Job Ticket #: 65618 DST #: 1

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

Printed: 2019.10.22 @ 09:42:46



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65618

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2019.10.15 @ 00:41:00

GENERAL INFORMATION:

Formation: **LKC " A "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:33:40

Time Test Ended: 08:45:50

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols

Unit No: 71

Interval: 4285.00 ft (KB) To 4360.00 ft (KB) (TVD)

Reference Elevations: 3404.00 ft (KB)

Total Depth: 4360.00 ft (KB) (TVD)

3399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366

Outside

Press@RunDepth: 158.65 psig @ 4286.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.10.15

End Date:

2019.10.15

Last Calib.: 2019.10.16

Start Time: 00:41:01

End Time:

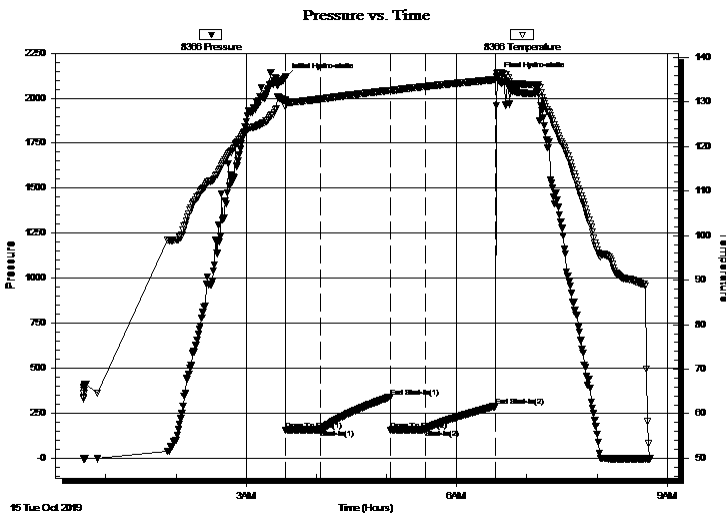
08:45:50

Time On Btm: 2019.10.15 @ 03:33:30

Time Off Btm: 2019.10.15 @ 06:34:20

TEST COMMENT: 30 IF - Surface blow
60 ISI - No return
30 FF - No blow
60 FSI - No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2116.92	130.19	Initial Hydro-static
1	154.88	128.93	Open To Flow (1)
30	158.61	130.66	Shut-In(1)
90	340.72	132.63	End Shut-In(1)
91	154.43	132.53	Open To Flow (2)
120	158.65	133.47	Shut-In(2)
180	287.70	135.03	End Shut-In(2)
181	2119.08	136.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
270.00	Mud 100%M	2.18

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.
 250 N. Water STE 300
 Wichita KS 67202
 ATTN: Saman Sharifaie

22-2s-37w Cheyenne,KS

Gambling #3-22

Job Ticket: 65618 **DST#: 1**
 Test Start: 2019.10.15 @ 00:41:00

GENERAL INFORMATION:

Formation: **LKC " A "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:33:40
 Time Test Ended: 08:45:50
 Interval: **4285.00 ft (KB) To 4360.00 ft (KB) (TVD)**
 Total Depth: 4360.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

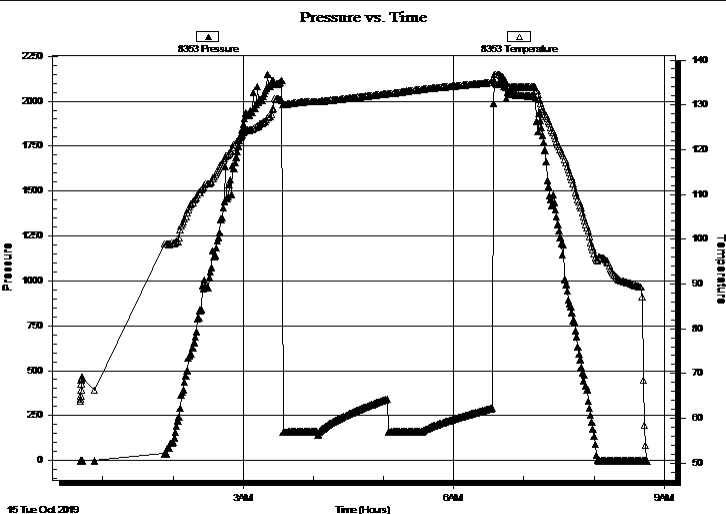
Test Type: Conventional Bottom Hole (Initial)
 Tester: Ryan Nichols
 Unit No: 71
 Reference Elevations: 3404.00 ft (KB)
 3399.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8353

Inside

Press@RunDepth: psig @ 4286.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.10.15 End Date: 2019.10.15 Last Calib.: 2019.10.16
 Start Time: 00:41:01 End Time: 08:45:40 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 IF - Surface blow
 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)
270.00	Mud 100%M	2.18

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65618

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2019.10.15 @ 00:41:00

Tool Information

Drill Pipe:	Length: 4105.00 ft	Diameter: 3.80 inches	Volume: 57.58 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: 176.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 58.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4285.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	103.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4262.00	
Hydraulic tool	5.00			4267.00	
Jars	5.00			4272.00	
Safety Joint	3.00			4275.00	
Packer	5.00			4280.00	28.00 Bottom Of Top Packer
Packer	5.00			4285.00	
Stubb	1.00			4286.00	
Recorder	0.00	8353	Inside	4286.00	
Recorder	0.00	8366	Outside	4286.00	
Perforations	6.00			4292.00	
Blank Spacing	65.00			4357.00	
Bullnose	3.00			4360.00	75.00 Bottom Packers & Anchor

Total Tool Length: 103.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65618

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2019.10.15 @ 00:41:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
270.00	Mud 100%M	2.184

Total Length: 270.00 ft Total Volume: 2.184 bbl

Num Fluid Samples: 0

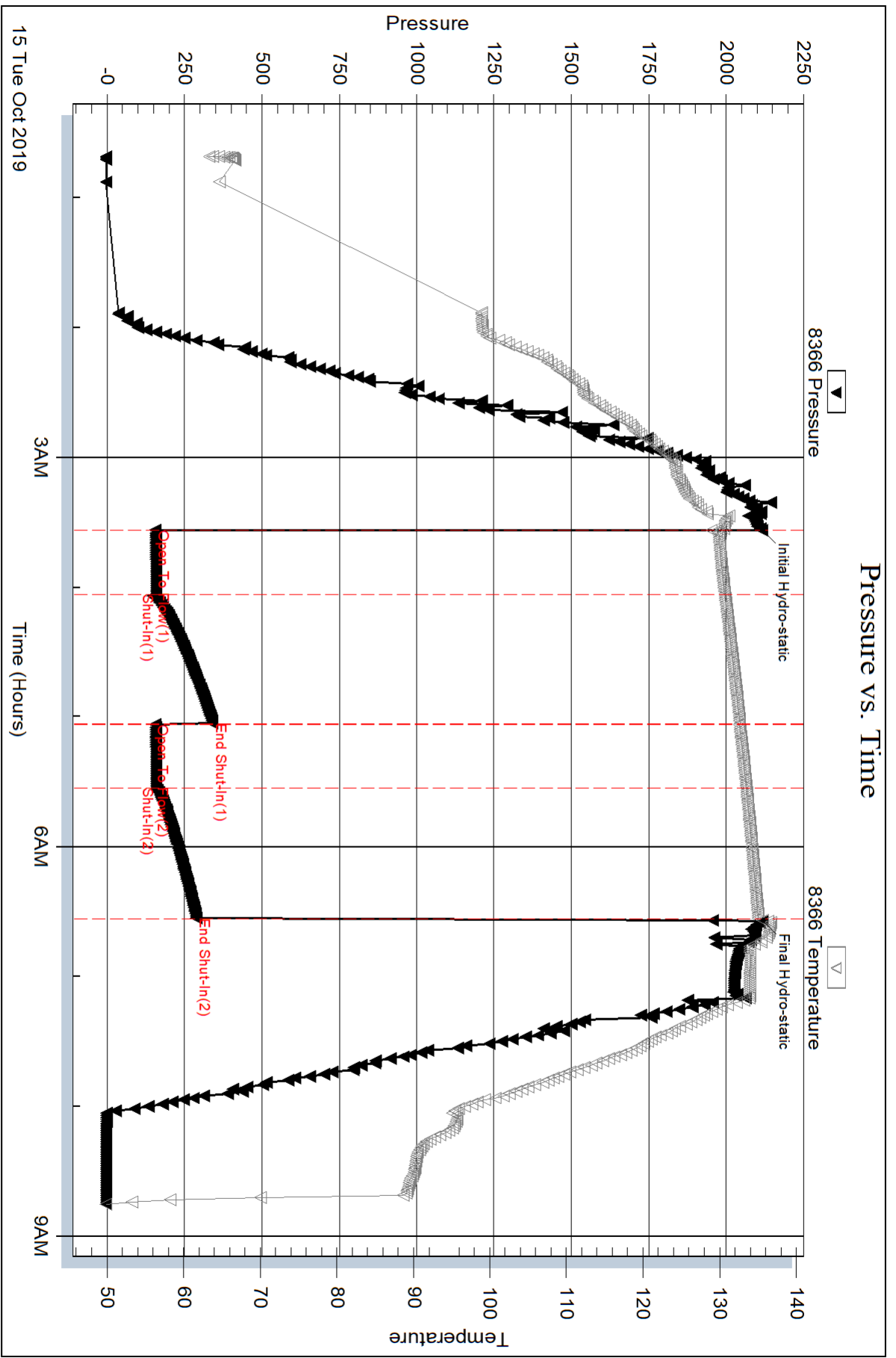
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



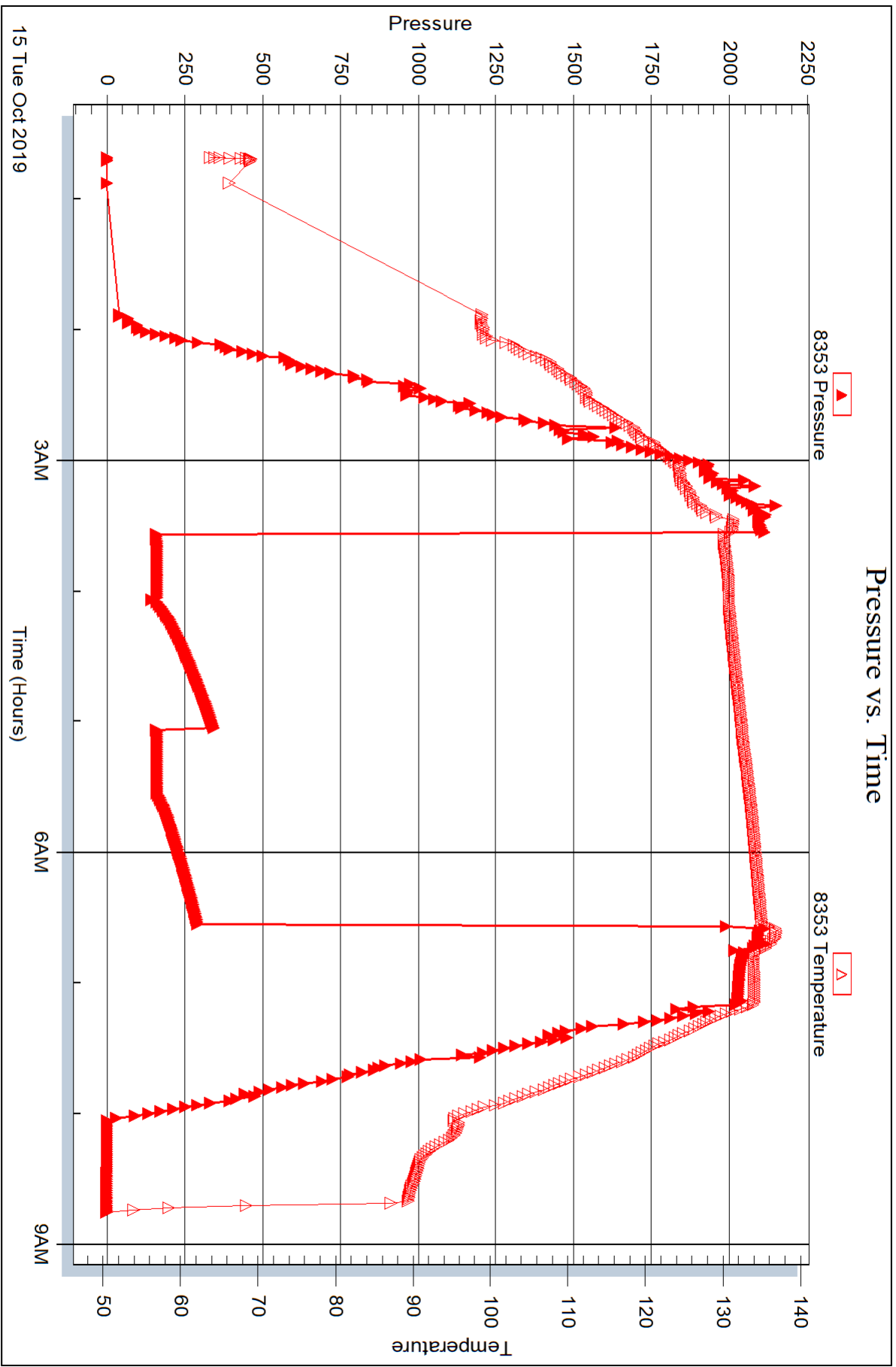
Serial #: 8353

Inside

Murfin Drilling Co.

Gambing #3-22

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 65618

Printed: 2019.10.22 @ 09:42:47



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Gambling #3-22

22-2s-37w Cheyenne,KS

Start Date: 2019.10.16 @ 18:08:00

End Date: 2019.10.17 @ 03:59:19

Job Ticket #: 65169 DST #: 2

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

Printed: 2019.10.22 @ 09:35:10



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65169

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2019.10.16 @ 18:08:00

GENERAL INFORMATION:

Formation: **LKC " B - D "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:53:00

Time Test Ended: 03:59:19

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4360.00 ft (KB) To 4426.00 ft (KB) (TVD)

Reference Elevations: 3404.00 ft (KB)

Total Depth: 4426.00 ft (KB) (TVD)

3399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366

Outside

Press@RunDepth: 67.51 psig @ 4361.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.10.16

End Date:

2019.10.17

Last Calib.: 2019.10.17

Start Time: 18:08:01

End Time:

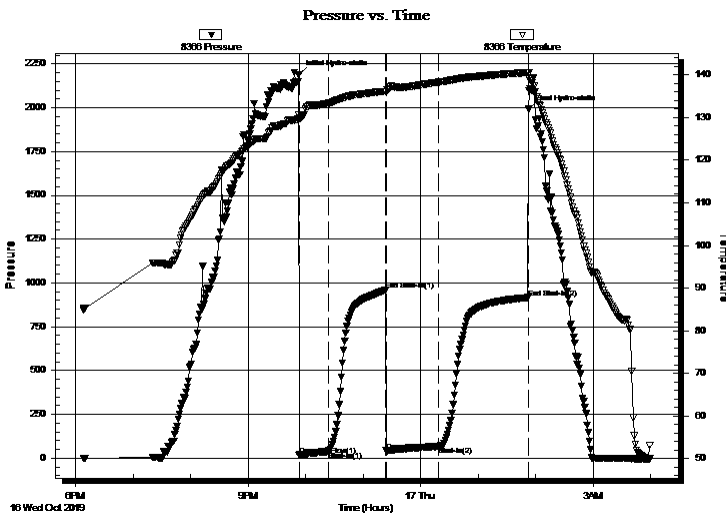
03:59:19

Time On Btm: 2019.10.16 @ 21:52:50

Time Off Btm: 2019.10.17 @ 01:52:50

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

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2188.92	130.66	Initial Hydro-static
1	16.72	129.75	Open To Flow (1)
31	36.58	133.31	Shut-In(1)
91	958.26	136.17	End Shut-In(1)
91	41.18	135.94	Open To Flow (2)
146	67.51	138.28	Shut-In(2)
240	916.30	140.57	End Shut-In(2)
240	1991.36	140.41	Final Hydro-static

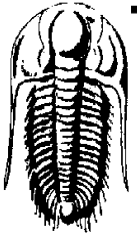
Recovery

Length (ft)	Description	Volume (bbl)
180.00	OCM - 40%o - 60%M	0.92

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65169

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2019.10.16 @ 18:08:00

GENERAL INFORMATION:

Formation: **LKC " B - D "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:53:00

Time Test Ended: 03:59:19

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4360.00 ft (KB) To 4426.00 ft (KB) (TVD)

Reference Elevations: 3404.00 ft (KB)

Total Depth: 4426.00 ft (KB) (TVD)

3399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8353 Inside

Press@RunDepth: psig @ 4361.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.10.16 End Date: 2019.10.17

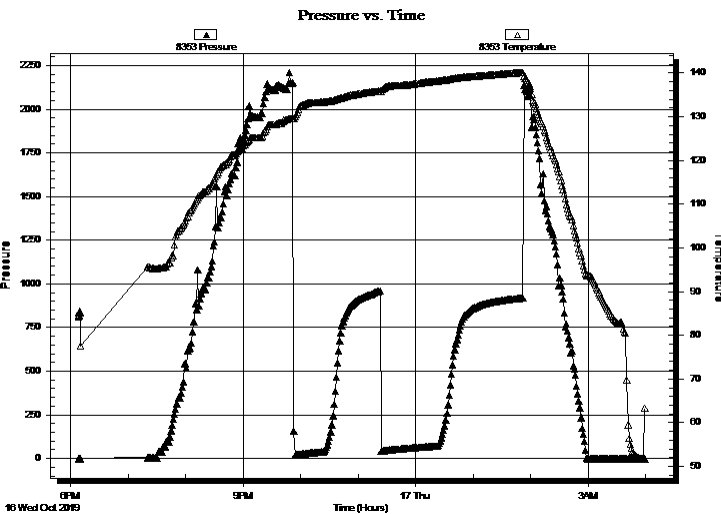
Last Calib.: 2019.10.17

Start Time: 18:08:01 End Time: 03:59:10

Time On Btm:

Time Off Btm:

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



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
180.00	OCM - 40%o - 60%M	0.92

* 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.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65169

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2019.10.16 @ 18:08:00

Tool Information

Drill Pipe:	Length: 4168.00 ft	Diameter: 3.80 inches	Volume: 58.47 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: 176.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 59.34 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4360.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	94.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4337.00	
Hydraulic tool	5.00			4342.00	
Jars	5.00			4347.00	
Safety Joint	3.00			4350.00	
Packer	5.00			4355.00	28.00 Bottom Of Top Packer
Packer	5.00			4360.00	
Stubb	1.00			4361.00	
Recorder	0.00	8353	Inside	4361.00	
Recorder	0.00	8366	Outside	4361.00	
Perforations	29.00			4390.00	
Blank Spacing	33.00			4423.00	
Bullnose	3.00			4426.00	66.00 Bottom Packers & Anchor

Total Tool Length: 94.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65169

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2019.10.16 @ 18:08:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	OCM - 40%o - 60%M	0.922

Total Length: 180.00 ft Total Volume: 0.922 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

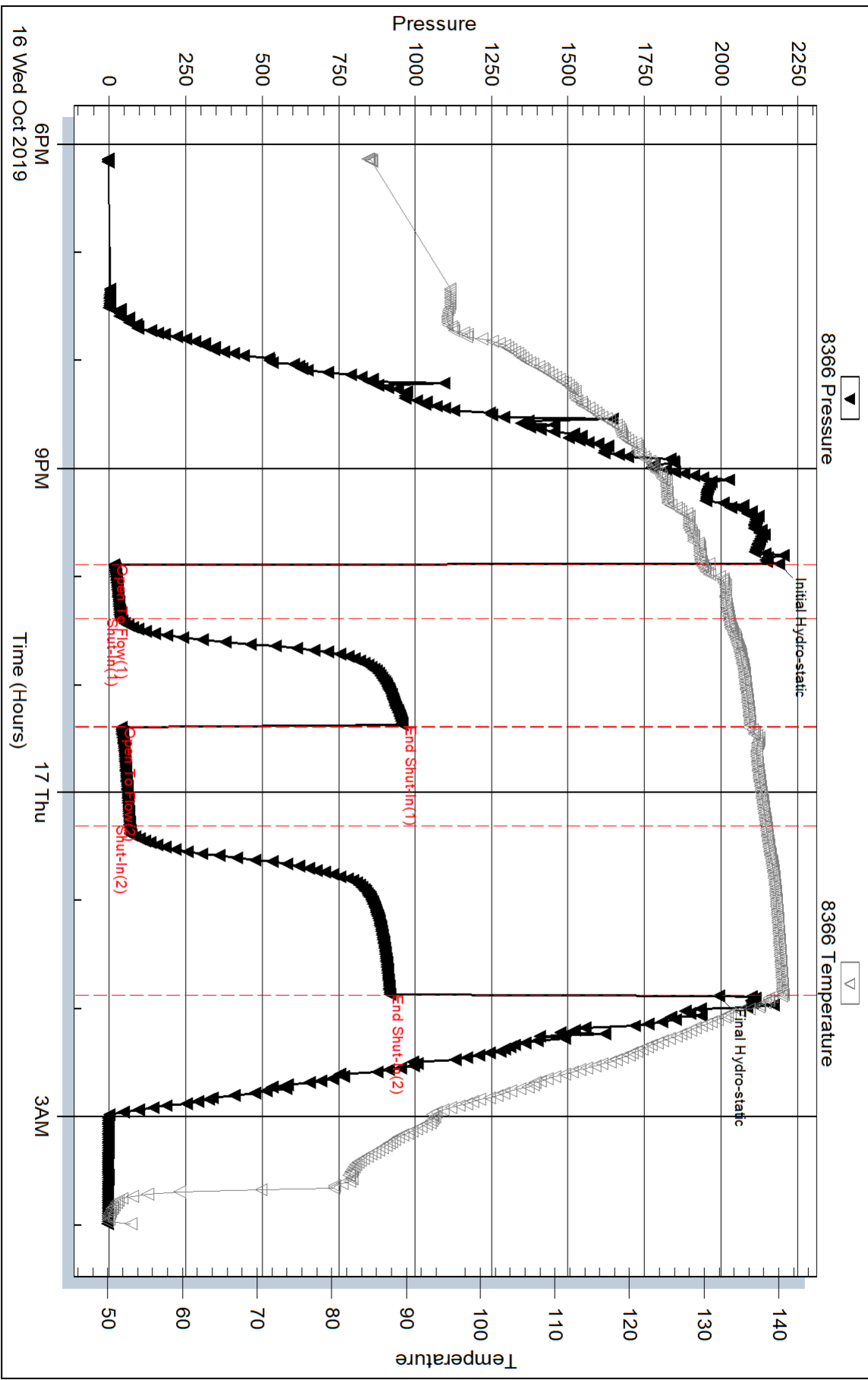
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



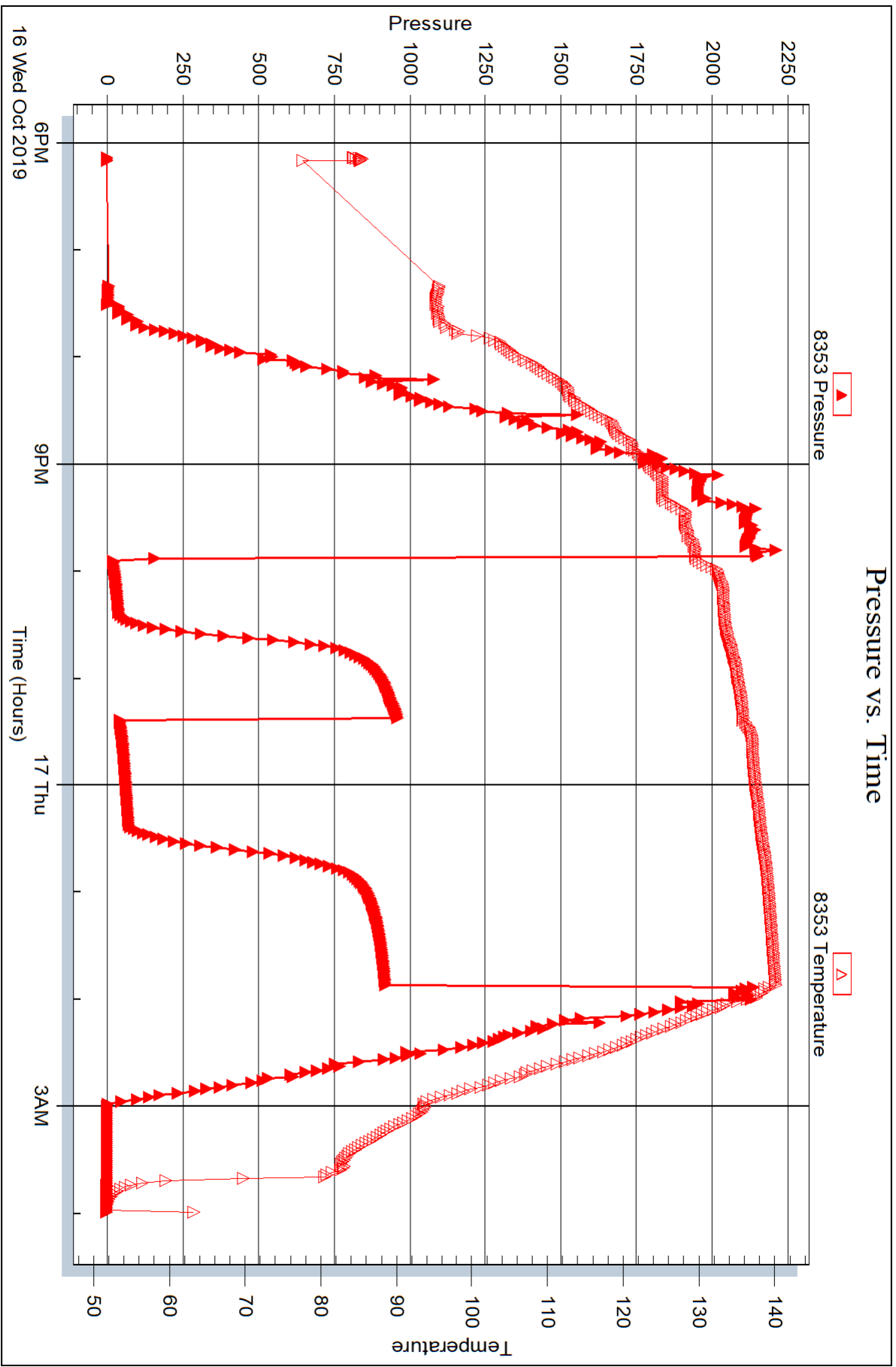
Serial #: 8353

Inside

Murfin Drilling Co.

Gambing #3-22

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Gambling #3-22

22-2s-37w Cheyenne,KS

Start Date: 2019.10.17 @ 12:27:00

End Date: 2019.10.17 @ 20:27:20

Job Ticket #: 65620 DST #: 3

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

Printed: 2019.10.22 @ 09:29:25



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-2s-37w Cheyenne, KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65620

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2019.10.17 @ 12:27:00

GENERAL INFORMATION:

Formation: **LKC " G "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:13:40

Time Test Ended: 20:27:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4427.00 ft (KB) To 4470.00 ft (KB) (TVD)

Reference Elevations: 3404.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

3399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: 45.48 psig @ 4428.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.10.17 End Date: 2019.10.17

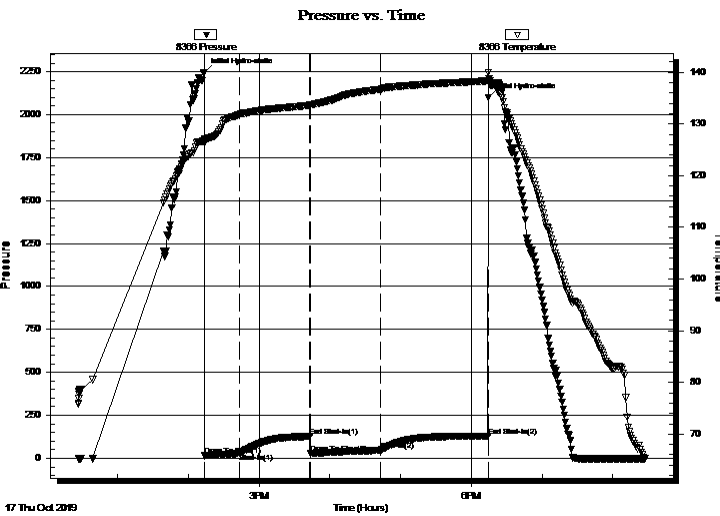
Last Calib.: 2019.10.17

Start Time: 12:27:01 End Time: 20:27:20

Time On Btm: 2019.10.17 @ 14:13:30

Time Off Btm: 2019.10.17 @ 18:14:30

TEST COMMENT: 30 IF - Blow built to 4"
60 ISI - No return
60 FF - Lost 10' mud w hen opened tool, 3" blow built to 10 1/2"
90 FSI - Surface return died @ 10 mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2245.49	127.01	Initial Hydro-static
1	14.47	126.24	Open To Flow (1)
30	27.76	131.84	Shut-In(1)
90	125.69	133.61	End Shut-In(1)
91	26.56	133.58	Open To Flow (2)
150	45.48	136.69	Shut-In(2)
241	127.44	138.33	End Shut-In(2)
241	2097.01	139.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	GOCM - 10%G - 35%o - 65%M	0.39
0.00	160' 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.

22-2s-37w Cheyenne, KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65620

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2019.10.17 @ 12:27:00

GENERAL INFORMATION:

Formation: **LKC " G "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:13:40

Time Test Ended: 20:27:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4427.00 ft (KB) To 4470.00 ft (KB) (TVD)

Reference Elevations: 3404.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

3399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8353 Inside

Press@RunDepth: psig @ 4428.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.10.17 End Date: 2019.10.17

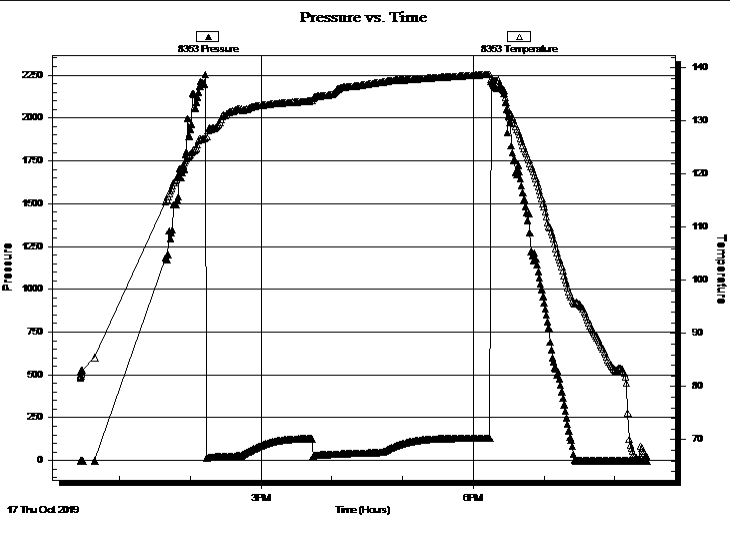
Last Calib.: 2019.10.17

Start Time: 12:27:01 End Time: 20:27:10

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF - Blow built to 4"
60 ISI - No return
60 FF - Lost 10' mud w hen opened tool, 3" blow built to 10 1/2"
90 FSI - Surface return died @ 10 mins



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
80.00	GOCM - 10%G - 35%o - 65%M	0.39
0.00	160' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65620

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2019.10.17 @ 12:27:00

Tool Information

Drill Pipe:	Length: 4233.00 ft	Diameter: 3.80 inches	Volume: 59.38 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: 176.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.25 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4427.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	71.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4404.00	
Hydraulic tool	5.00			4409.00	
Jars	5.00			4414.00	
Safety Joint	3.00			4417.00	
Packer	5.00			4422.00	28.00 Bottom Of Top Packer
Packer	5.00			4427.00	
Stubb	1.00			4428.00	
Recorder	0.00	8353	Inside	4428.00	
Recorder	0.00	8366	Outside	4428.00	
Perforations	6.00			4434.00	
Blank Spacing	33.00			4467.00	
Bullnose	3.00			4470.00	43.00 Bottom Packers & Anchor

Total Tool Length: 71.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65620

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2019.10.17 @ 12:27:00

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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	GOCM - 10%G - 35%o - 65%M	0.393
0.00	160' GIP	0.000

Total Length: 80.00 ft Total Volume: 0.393 bbl

Num Fluid Samples: 0

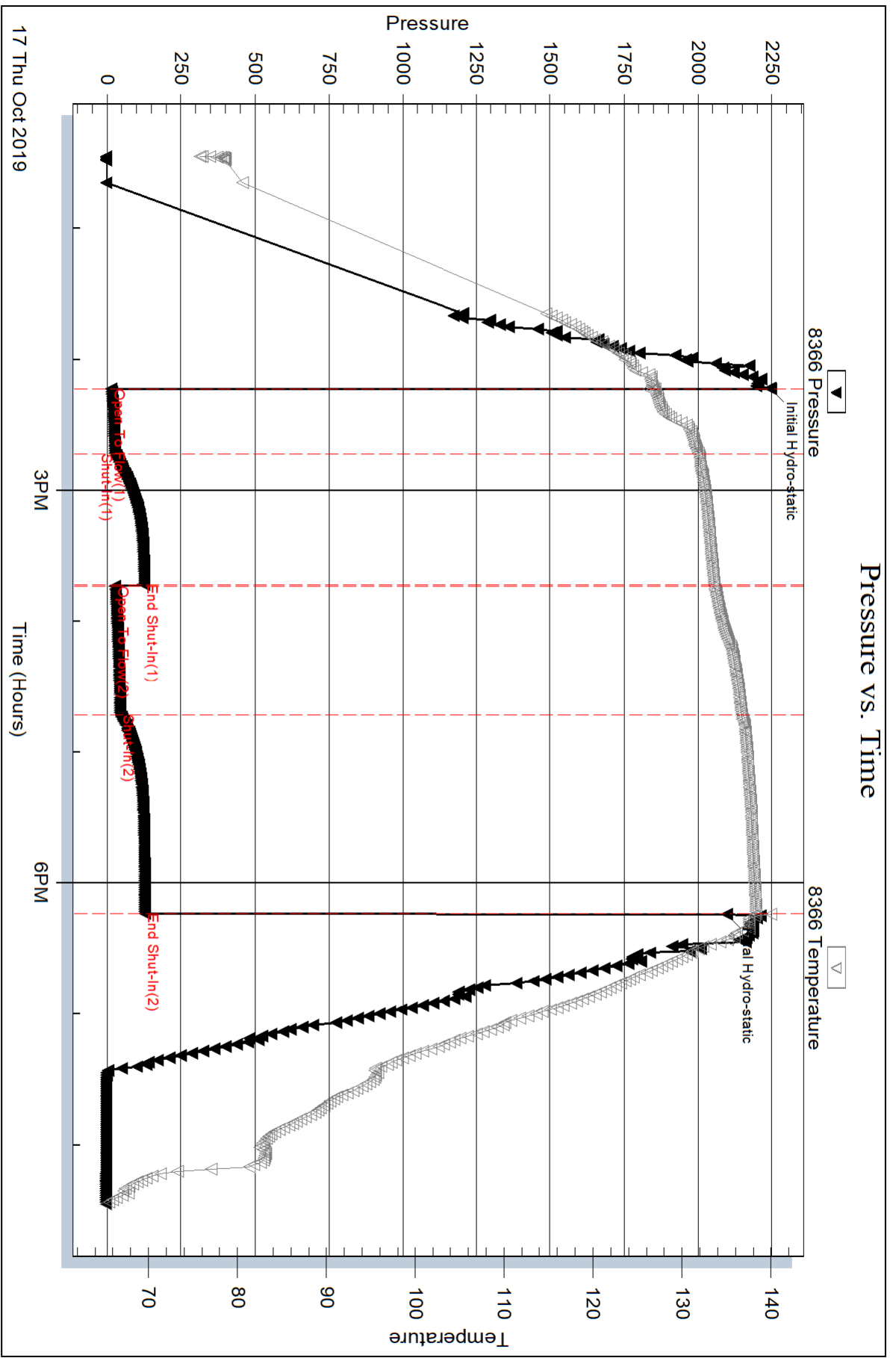
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



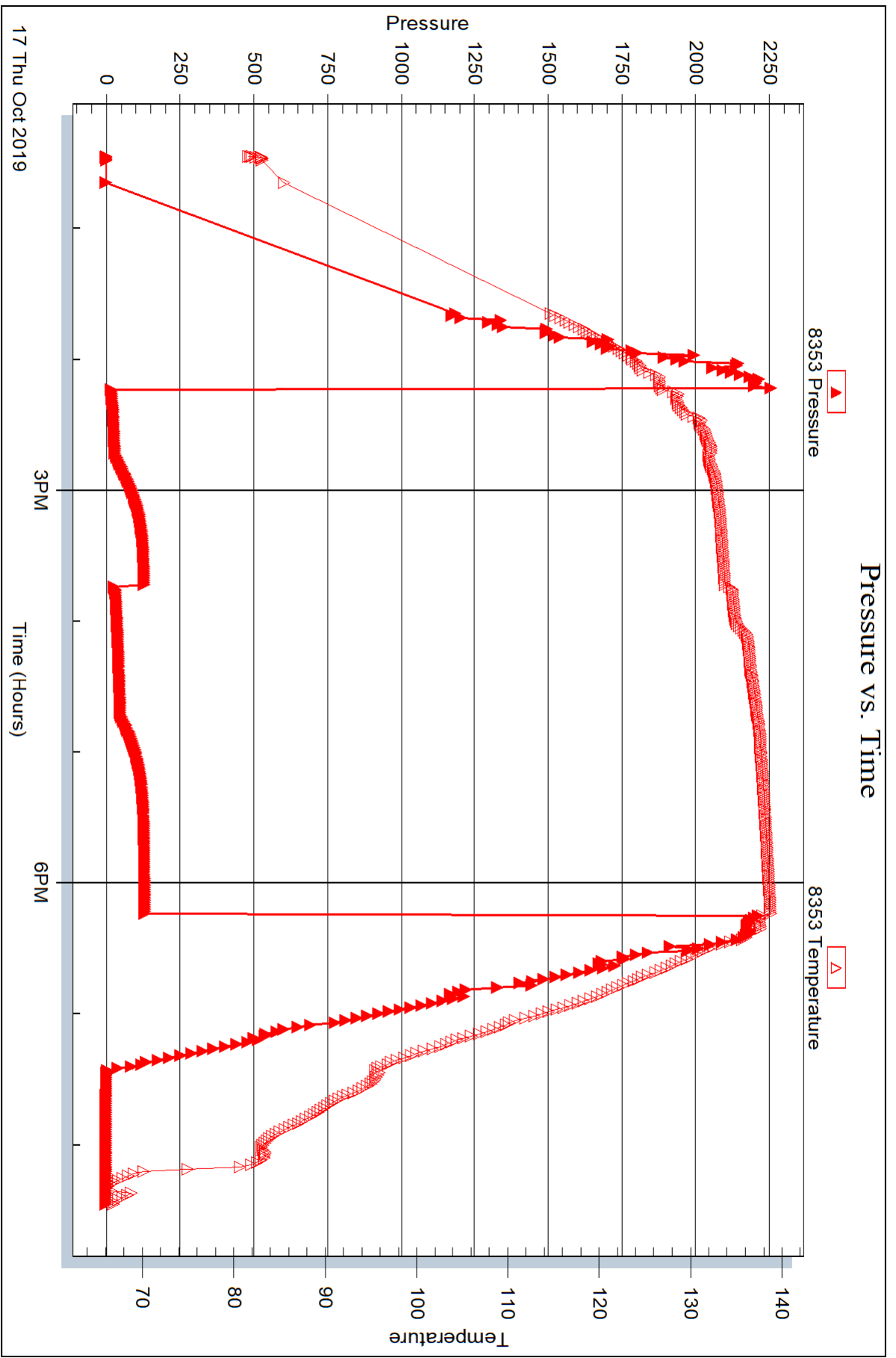
Serial #: 8353

Inside

Murfin Drilling Co.

Gambling #3-22

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 65620

Printed: 2019.10.22 @ 09:29:26



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Gambling #3-22

22-2s-37w Cheyenne,KS

Start Date: 2019.10.18 @ 08:55:00

End Date: 2019.10.18 @ 17:19:20

Job Ticket #: 65621 DST #: 4

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

Printed: 2019.10.22 @ 09:28:05



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65621

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2019.10.18 @ 08:55:00

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:59:40

Time Test Ended: 17:19:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4470.00 ft (KB) To 4560.00 ft (KB) (TVD)

Reference Elevations: 3404.00 ft (KB)

Total Depth: 4560.00 ft (KB) (TVD)

3399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: 94.06 psig @ 4471.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.10.18

End Date: 2019.10.18

Last Calib.: 2019.10.18

Start Time: 08:55:01

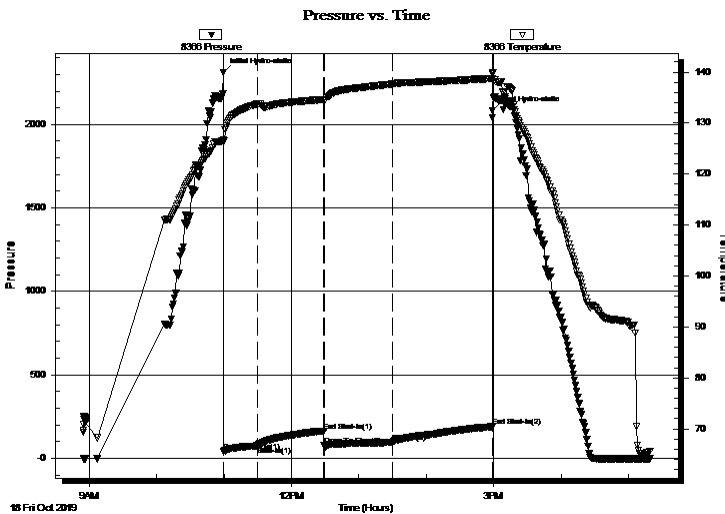
End Time: 17:19:20

Time On Btm: 2019.10.18 @ 10:59:20

Time Off Btm: 2019.10.18 @ 14:59:09

TEST COMMENT: 30 IF - BoB @ 12 1/2"
60 ISI - Surface blow return died @ 35 mins
60 FF - BoB @ 3 mins
90 FSI - No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2312.06	126.67	Initial Hydro-static
1	40.08	126.61	Open To Flow (1)
31	73.75	133.81	Shut-In(1)
90	162.97	134.64	End Shut-In(1)
90	75.14	134.59	Open To Flow (2)
151	94.06	137.66	Shut-In(2)
240	188.89	138.72	End Shut-In(2)
240	2084.64	139.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM - 30%G - 30%o - 40%M	0.30
60.00	GOCM - 10%G - 20%G - 70%M	0.30
60.00	GOCM - 10%G - 10%o - 80%M	0.33
30.00	VSOCM - 3%o - 97%M	0.42

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

22-2s-37w Cheyenne,KS

Gambling #3-22

Job Ticket: 65621

DST#: 4

Test Start: 2019.10.18 @ 08:55:00

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:59:40

Time Test Ended: 17:19:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4470.00 ft (KB) To 4560.00 ft (KB) (TVD)

Total Depth: 4560.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3404.00 ft (KB)

3399.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8353

Inside

Press@RunDepth: psig @ 4471.00 ft (KB)

Start Date: 2019.10.18

End Date:

2019.10.18

Start Time: 08:55:01

End Time:

17:19:20

Capacity: 8000.00 psig

Last Calib.:

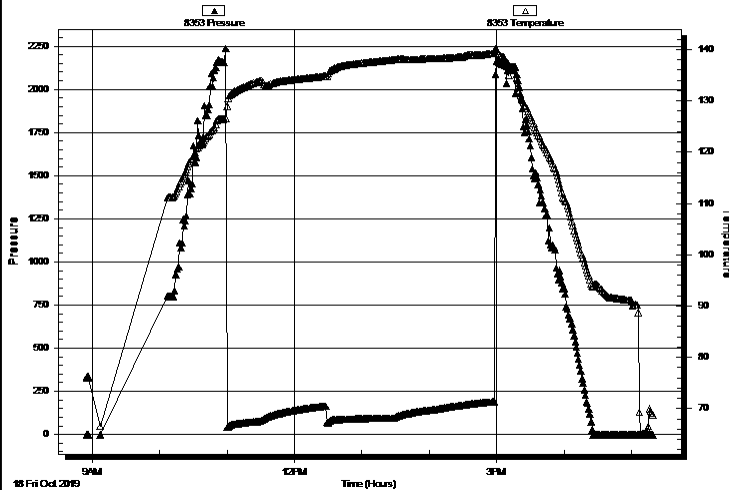
2019.10.18

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF - BoB @ 12 1/2"
60 ISI - Surface blow return died @ 35 mins
60 FF - BoB @ 3 mins
90 FSI - No return

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
60.00	GOCM - 30%G - 30%o - 40%M	0.30
60.00	GOCM - 10%G- 20%G - 70%M	0.30
60.00	GOCM - 10%G - 10%o - 80%M	0.33
30.00	VSOCM - 3%o - 97%M	0.42

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65621

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2019.10.18 @ 08:55:00

Tool Information

Drill Pipe:	Length: 4295.00 ft	Diameter: 3.80 inches	Volume: 60.25 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: 176.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 61.12 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4470.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	118.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4447.00	
Hydraulic tool	5.00			4452.00	
Jars	5.00			4457.00	
Safety Joint	3.00			4460.00	
Packer	5.00			4465.00	28.00 Bottom Of Top Packer
Packer	5.00			4470.00	
Stubb	1.00			4471.00	
Recorder	0.00	8353	Inside	4471.00	
Recorder	0.00	8366	Outside	4471.00	
Perforations	21.00			4492.00	
Blank Spacing	65.00			4557.00	
Bullnose	3.00			4560.00	90.00 Bottom Packers & Anchor

Total Tool Length: 118.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65621

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2019.10.18 @ 08:55:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GOCM - 30%G - 30%o - 40%M	0.295
60.00	GOCM - 10%G- 20%G - 70%M	0.295
60.00	GOCM - 10%G - 10%o - 80%M	0.332
30.00	VSOCM - 3%o - 97%M	0.421

Total Length: 210.00 ft

Total Volume: 1.343 bbl

Num Fluid Samples: 0

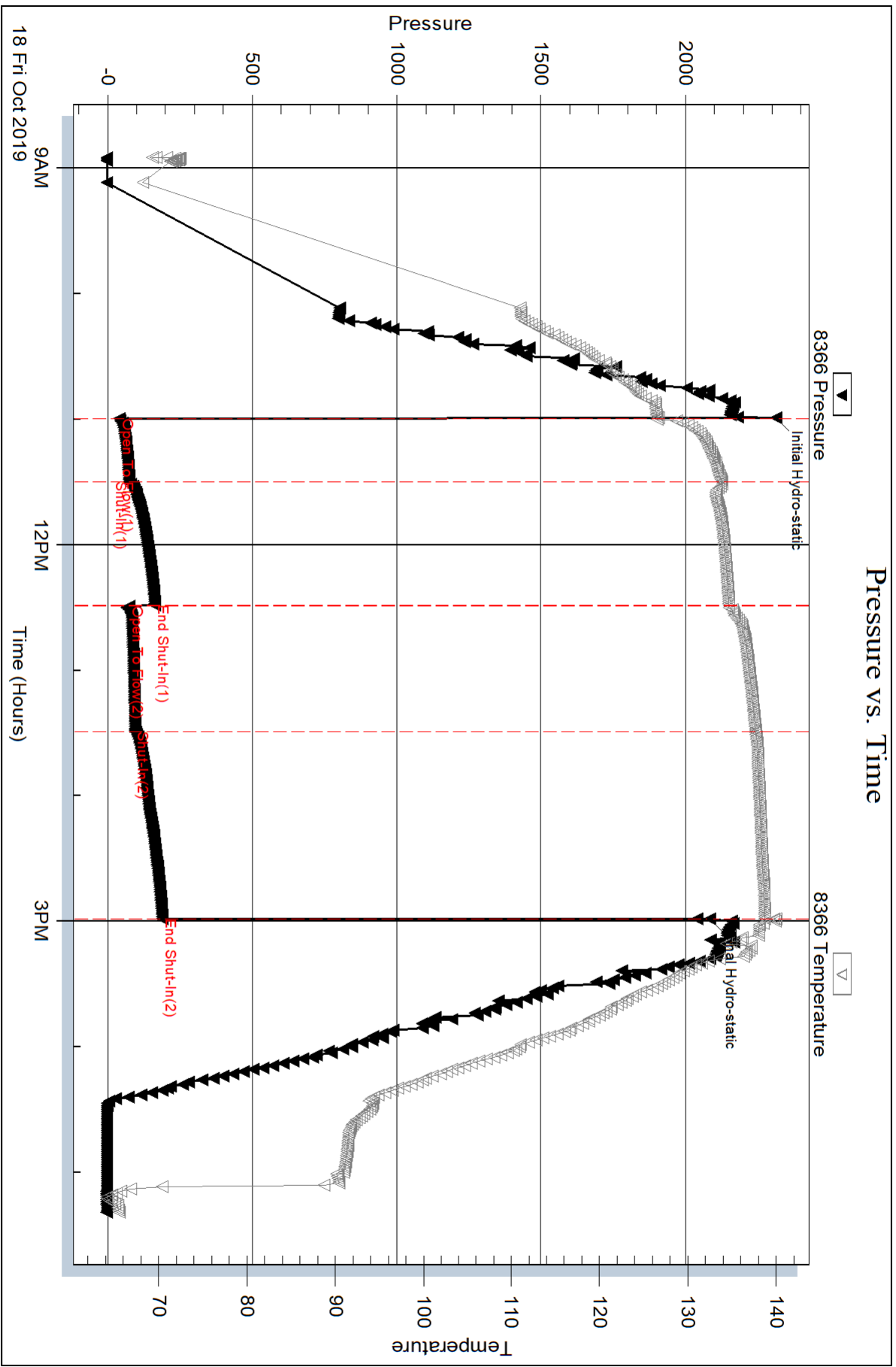
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



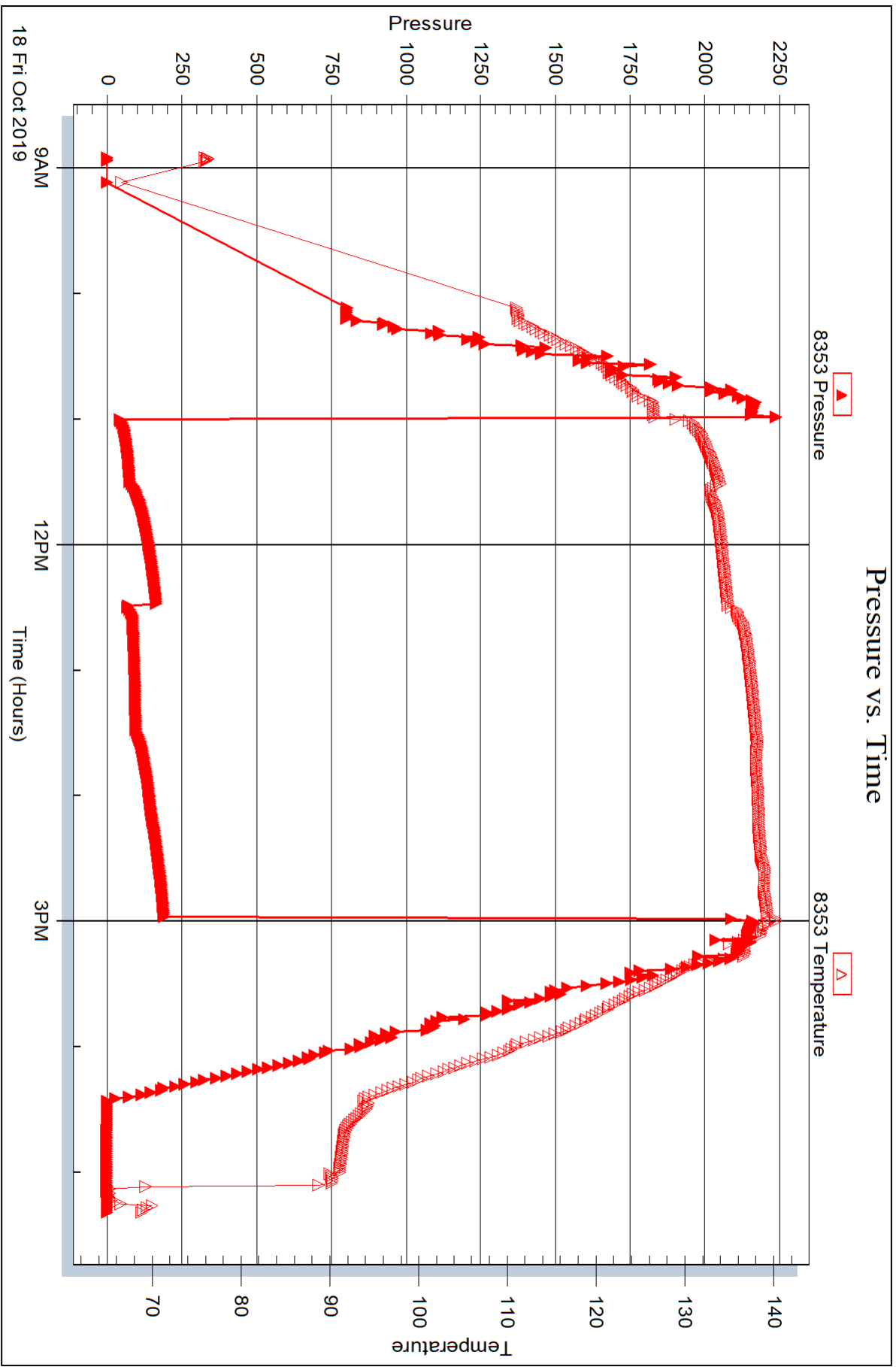
Serial #: 8353

Inside

Murfin Drilling Co.

Gambling #3-22

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Gambling #3-22

22-2s-37w Cheyenne,KS

Start Date: 2019.10.19 @ 20:40:00

End Date: 2019.10.20 @ 04:56:39

Job Ticket #: 65622 DST #: 5

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

Printed: 2019.10.22 @ 09:27:37

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

Gambling #3-22

DST # 5

Ft. Scott - Celia

2019.10.19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-2s-37w Cheyenne, KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65622

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2019.10.19 @ 20:40:00

GENERAL INFORMATION:

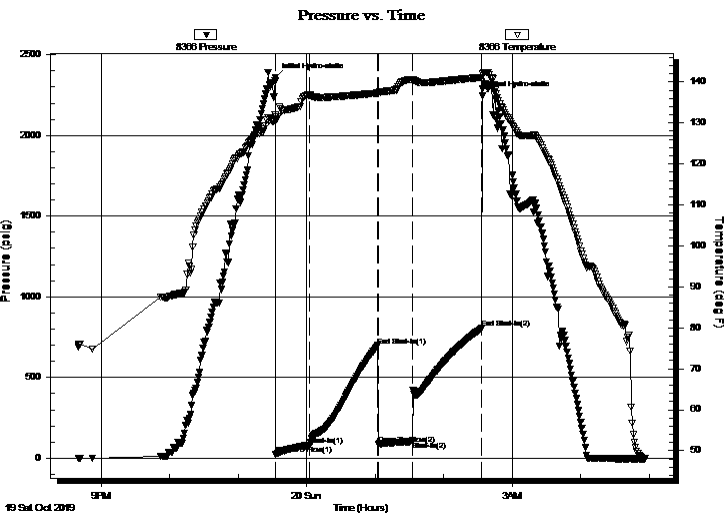
Formation: **Ft. Scott - Celia**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:32:40
 Time Test Ended: 04:56:39
 Interval: **4702.00 ft (KB) To 4850.00 ft (KB) (TVD)**
 Total Depth: 4850.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Nichols
 Unit No: 71
 Reference Elevations: 3404.00 ft (KB)
 3399.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8366

Outside

Press@RunDepth: 102.88 psig @ 4703.00 ft (KB)
 Start Date: 2019.10.19 End Date: 2019.10.20
 Start Time: 20:40:01 End Time: 04:56:40
 Capacity: 8000.00 psig
 Last Calib.: 2019.10.20
 Time On Btm: 2019.10.19 @ 23:32:30
 Time Off Btm: 2019.10.20 @ 02:33:40

TEST COMMENT: 30 IF - Blow built to 5"
 60 ISI - No return
 30 FF - Blow built to 3 1/4"
 60 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2356.79	131.54	Initial Hydro-static
1	23.57	130.67	Open To Flow (1)
30	81.88	136.79	Shut-In(1)
90	696.43	137.29	End Shut-In(1)
90	86.47	137.15	Open To Flow (2)
120	102.88	140.40	Shut-In(2)
181	804.68	141.10	End Shut-In(2)
182	2243.68	141.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	OCM - 35%o - 65%M	1.20

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65622

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2019.10.19 @ 20:40:00

GENERAL INFORMATION:

Formation: **Ft. Scott - Celia**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:32:40

Time Test Ended: 04:56:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 71

Interval: 4702.00 ft (KB) To 4850.00 ft (KB) (TVD)

Total Depth: 4850.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3404.00 ft (KB)

3399.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8353 Inside

Press@RunDepth: psig @ 4703.00 ft (KB)

Start Date: 2019.10.19

End Date:

2019.10.20

Start Time: 20:40:01

End Time:

04:56:40

Capacity: 8000.00 psig

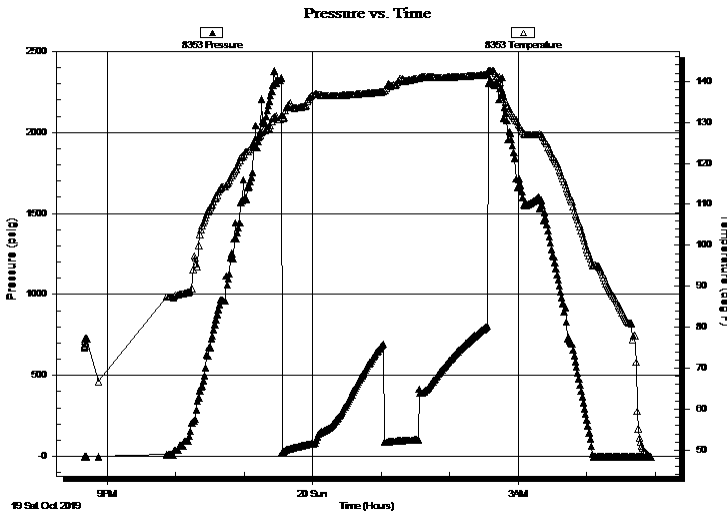
Last Calib.: 2019.10.20

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF - Blow built to 5"
60 ISI - No return
30 FF - Blow built to 3 1/4"
60 FSI - No return

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
200.00	OCM - 35%o - 65%M	1.20

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.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65622

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2019.10.19 @ 20:40:00

Tool Information

Drill Pipe:	Length: 4515.00 ft	Diameter: 3.80 inches	Volume: 63.33 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: 176.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 64.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4702.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	148.00 ft			
Tool Length:	176.00 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			4679.00	
Hydraulic tool	5.00			4684.00	
Jars	5.00			4689.00	
Safety Joint	3.00			4692.00	
Packer	5.00			4697.00	28.00 Bottom Of Top Packer
Packer	5.00			4702.00	
Stubb	1.00			4703.00	
Recorder	0.00	8353	Inside	4703.00	
Recorder	0.00	8366	Outside	4703.00	
Perforations	15.00			4718.00	
Blank Spacing	129.00			4847.00	
Bullnose	3.00			4850.00	148.00 Bottom Packers & Anchor

Total Tool Length: 176.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-2s-37w Cheyenne,KS

250 N. Water STE 300
Wichita KS 67202

Gambling #3-22

Job Ticket: 65622

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2019.10.19 @ 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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	OCM - 35%o - 65%M	1.202

Total Length: 200.00 ft Total Volume: 1.202 bbl

Num Fluid Samples: 0

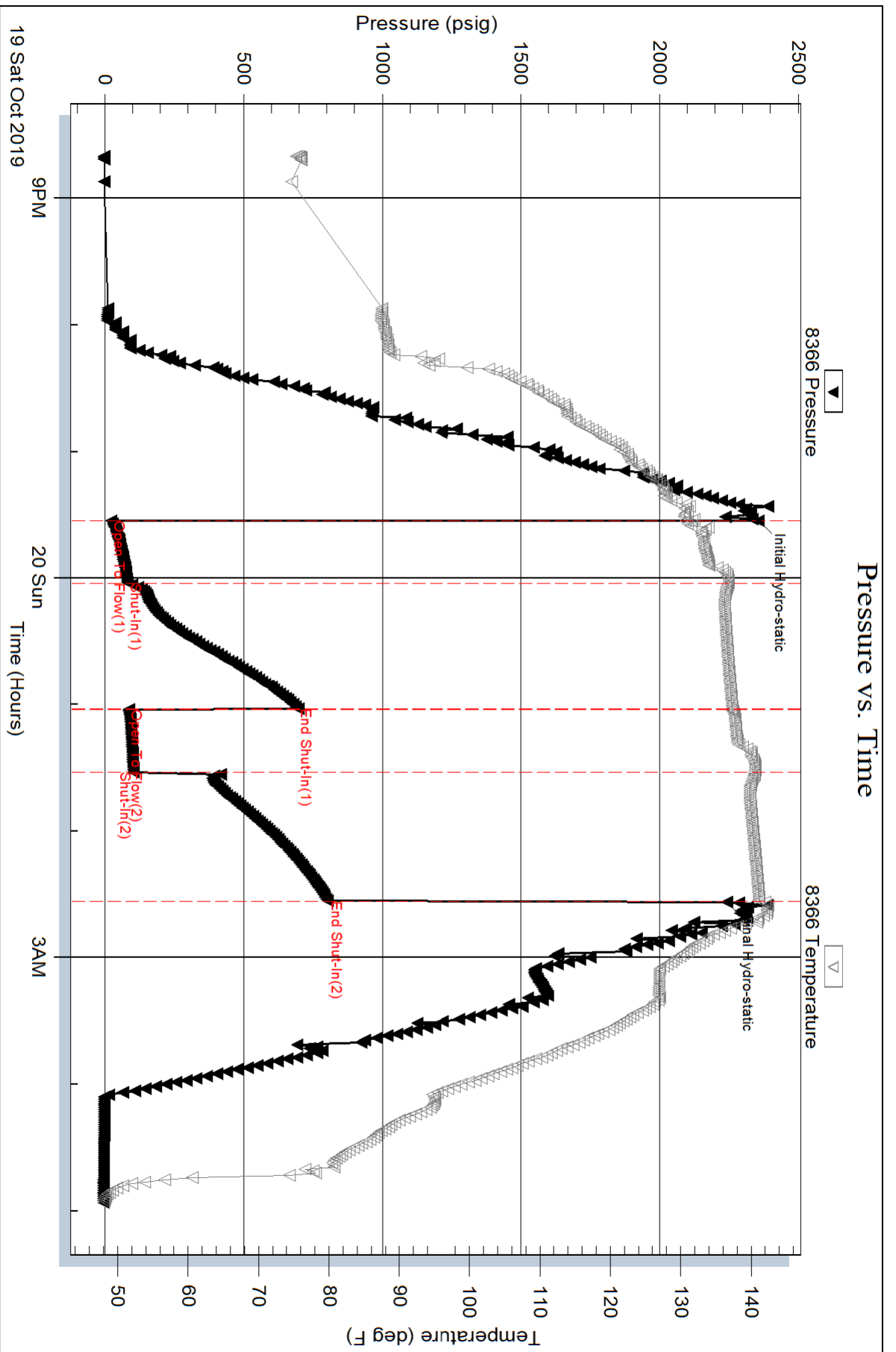
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



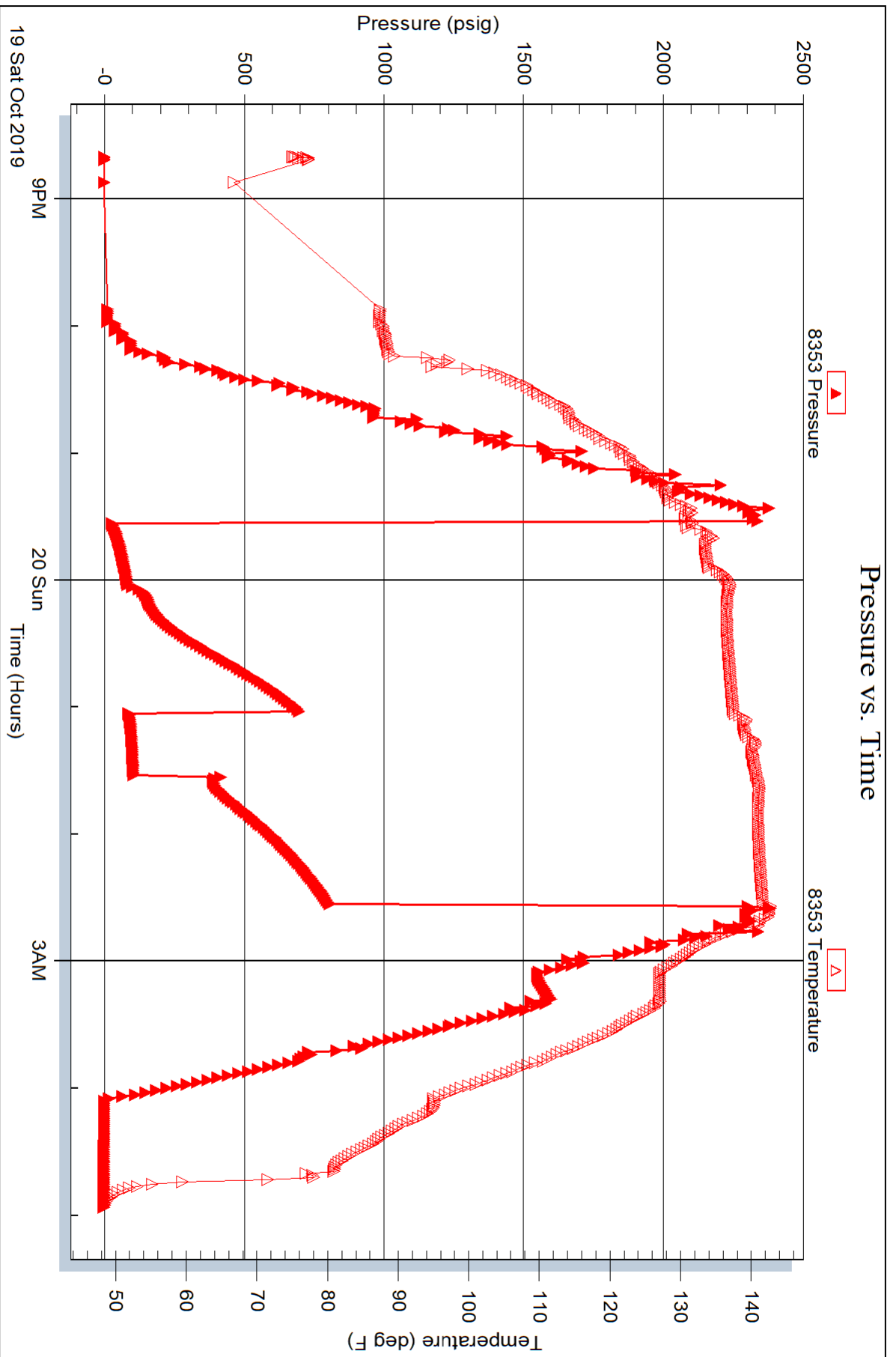
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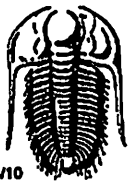
Inside

Murfin Drilling Co.

Gambing #3-22

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65618

Well Name & No. Gamblin # 3-22 Test No. 1 Date 10/15/19
 Company Martin Drilling Co. Elevation 3404 KB 3399 GL
 Address ~~250 N. Water~~ 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sherrif Rig Martin # 3
 Location: Sec. 22 Twp 2S Rge. 37W Co. Cheyenne State KS

Interval Tested 4285 - 4360 Zone Tested 2KC "A"
 Anchor Length 75' Drill Pipe Run 4105' Mud Wt. 8.9
 Top Packer Depth 4280 Drill Collars Run 176' Vls 58
 Bottom Packer Depth 4285 Wt. Pipe Run 0' WL 6.4
 Total Depth 4360 Chlorides 700 ppm System LCM 4

Blow Description 30 IF - Surface blow
60 ISI - No return
30 FF - No blow
60 FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>270'</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 270' BHT 135° Gravity ✓ API RW ✓ @ —° F Chlorides — ppm

(A) Initial Hydrostatic 2117
 (B) First Initial Flow 159
 (C) First Final Flow 159
 (D) Initial Shut-In 341
 (E) Second Initial Flow 154
 (F) Second Final Flow 159
 (G) Final Shut-In 288
 (H) Final Hydrostatic 2119

Test 1300
 Jars 250
 Safety Joint 75
 Circ Sub
 Hourly Standby
 Mileage 118 RT
 Sampler
 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1743

T-On Location 23:30
 T-Started 00:41
 T-Open 03:33
 T-Pulled 06:33
 T-Out 08:30

Comments _____
 EM Tool
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1743
 MP/DST Disc't _____

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

Approved By _____ Our Representative R. J. Nichols

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65619

Well Name & No. Gamblin # 3-22 Test No. 2 Date 10/16/19
 Company Murfin Drilling Co. Elevation 3404 KB 3399 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin # 3
 Location: Sec. 22 Twp 2S Rge. 37 W Co. Cheyenne State KS

Interval Tested 4360-4426 Zone Tested 2KC "B-D"
 Anchor Length 66' Drill Pipe Run 4168' Mud Wt. 9.2
 Top Packer Depth 4355 Drill Collars Run 176' Vis 59
 Bottom Packer Depth 4360 Wt. Pipe Run 0' WL 6.0
 Total Depth 4426 Chlorides 1400 ppm System LCM 4
 Blow Description 30 IF - Blow built to 2"
60 ISF - No return
60 KF - Blow built to 2 1/2"
90 FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>180'</u>	<u>OCM</u>	<u>40</u>		<u>60</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

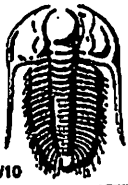
Rec Total 180' BHT 1410 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>2189</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>17:45</u>
(B) First Initial Flow <u>16</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>18:09</u>
(C) First Final Flow <u>37</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>21:53</u>
(D) Initial Shut-In <u>958</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>01:53</u>
(E) Second Initial Flow <u>41</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>03:45</u>
(F) Second Final Flow <u>68</u>	<input checked="" type="checkbox"/> Mileage <u>118 RT</u>	Comments
(G) Final Shut-In <u>916</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1991</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	<input type="checkbox"/> Extra Copies
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1743</u>
	Sub Total <u>1743</u>	MP/DST Disc't

Approved By _____

Our Representative Thy 2 Nichols

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. 65620

Well Name & No. Gamblin # 3-22 Test No. 3 Date 10/17/19
 Company Murfin Drilling Co. Elevation 3404 KB 3399 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Samea Sharifai Rig Murfin # 3
 Location: Sec. 22 Twp 2S Rge. 37W Co. Cheyenne State KS

Interval Tested 4427 - 4470 Zone Tested LKL "6"
 Anchor Length 43' Drill Pipe Run 4233' Mud Wt. 9.0
 Top Packer Depth 4422 Drill Collars Run 176' Vis 62
 Bottom Packer Depth 4427 Wt. Pipe Run 0' WL 6.0
 Total Depth 4470 Chlorides 1000 ppm System LCM 2

Blow Description 30 IF - Blow built to 4"
60 ISI - No return
60 FF - lost 10' mud when open, 3" blow built to 10 1/2"
90 FSI - Surface return died @ 10 mins

Rec	Feet of	%gas	%oil	%water	%mud
<u>80'</u>	<u>60CM</u>	<u>10</u>	<u>35</u>	<u>65</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 80' BHT 1380 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2245
 (B) First Initial Flow 14
 (C) First Final Flow 28
 (D) Initial Shut-In 126
 (E) Second Initial Flow 27
 (F) Second Final Flow 45
 (G) Final Shut-In 127
 (H) Final Hydrostatic 2097

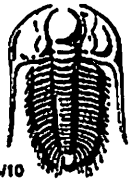
Test 1300
 Jars 250
 Safety Joint 75
 Circ Sub
 Hourly Standby
 Mileage 119 RT
 Sampler
 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1743

T-On Location 12:00
 T-Started 12:27
 T-Open 14:13
 T-Pulled 18:13
 T-Out 20:15
 Comments 180' GEP
 EM Tool
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1743
 MP/DST Disc't

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

Approved By _____ Our Representative R. J. M. B.

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65621

Well Name & No. Gamblin # 3-22 Test No. 4 Date 10/18/19
 Company Murkin Drilling Co Elevation 3404 KB 3399 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Saman Shacifaie Rig Murkin #3
 Location: Sec. 22 Twp 2S Rge. 37W Co. Cheyenne State KS

Interval Tested 4470 - 4560 Zone Tested LKC "H-J"
 Anchor Length 90 Drill Pipe Run 4295' Mud Wt. 9.1
 Top Packer Depth 4465 Drill Collars Run 176' Vis 58
 Bottom Packer Depth 4470 Wt. Pipe Run 0' WL 6.0
 Total Depth 4560 Chlorides 1000 ppm System LCM 3

Blow Description 30 IF - BoB @ 12 1/2 mins
60 ISL - Surface blow return died @ 35 mins
60 FF - BoB @ 3 mins
90 FSI - No return

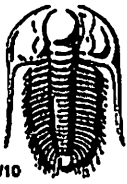
Rec	Feet of	%gas	%oil	%water	%mud
<u>30'</u>	<u>V50CM</u>	<u>3</u>		<u>97</u>	
<u>60'</u>	<u>GDCM</u>	<u>10</u>	<u>10</u>	<u>80</u>	
<u>60'</u>	<u>GOCM</u>	<u>10</u>	<u>20</u>	<u>70</u>	
<u>60'</u>	<u>GOCM</u>	<u>30</u>	<u>30</u>	<u>40</u>	
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 210' BHT 139' Gravity — API RW — @ — ° F Chlorides — ppm
 (A) Initial Hydrostatic 2312 Test 1300 T-On Location 08:30
 (B) First Initial Flow 40 Jars 250 T-Started 08:55
 (C) First Final Flow 74 Safety Joint 75 T-Open 10:59
 (D) Initial Shut-In 163 Circ Sub NC T-Pulled 14:59
 (E) Second Initial Flow 75 Hourly Standby _____ T-Out 17:15
 (F) Second Final Flow 94 Mileage 118 RT Comments _____
 (G) Final Shut-In 189 Sampler _____
 (H) Final Hydrostatic 2085 Straddle _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 60 Shale Packer _____
 Final Flow 60 Extra Packer _____
 Final Shut-In 90 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1743 EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1743 MP/DST Disc't _____

Approved By _____ Our Representative Thy 2 Pined

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65622

Well Name & No. Gamblin # 3-22 Test No. 5 Date 10/19/19
 Company Martin Drilling Co. Elevation 3404 KB 3399 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Samir Sharifine Rig Martin # 3
 Location: Sec. 22 Twp 25 Rge. 37W Co. Cheyenne State KS

Interval Tested 4702-4850 Zone Tested Ft. Scott - Celia
 Anchor Length 148' Drill Pipe Run 4515' Mud Wt. 9.2
 Top Packer Depth 4697 Drill Collars Run 176' Vis 61
 Bottom Packer Depth 4702 Wt. Pipe Run 0' WL 6.8
 Total Depth 4850 Chlorides 1800 ppm System LCM 3
 Blow Description 30 IF - Blow built to 5"
60 ISI - No return
30 FF - Blow built to 3 1/4"
60 FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>200'</u>	<u>OCM</u>	<u>35</u>		<u>65</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 200' BHT 1410 Gravity — API RW — @ —° F Chlorides — ppm

(A) Initial Hydrostatic <u>2357</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>20:00</u>
(B) First Initial Flow <u>24</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>20:40</u>
(C) First Final Flow <u>82</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>23:32</u>
(D) Initial Shut-In <u>696</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>02:32</u>
(E) Second Initial Flow <u>86</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>05:30</u>
(F) Second Final Flow <u>103</u>	<input checked="" type="checkbox"/> Mileage <u>118 RT</u>	Comments
(G) Final Shut-In <u>805</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2244</u>	<input type="checkbox"/> Straddle	
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> EM Tool
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Shale Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Ruined Packer
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Accessibility	Sub Total <u>0</u>
	Sub Total <u>1743</u>	Total <u>1743</u>

Approved By _____ Our Representative Raymond Nichols
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Saman Sharifaie

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: **Martin Drilling Co., Inc.**
LEASE: **Gambhir #3-22**

FIELD: **Wildcat**
LOCATION: **15001 F.N.I. & 1501 F.W.L.**
SEC: **22** TWP: **2S** RGE: **37W**
COUNTY: **Cheyenne** STATE: **Kansas**
CONTRACTOR: **Martin Drilling #3**
RUD: **10/1/19** COMP: **10/2/19**
SPUD: **4/9/20** TYPE MUD: **4951**
MUD UP: **3400** TYPE MUD: **Chemical**

SAMPLES SAVED FROM: **4010'** TO **RTD**
DRILLING TIME KEPT FROM: **4000'** TO **RTD**
SAMPLES EXAMINED FROM: **4010'** TO **RTD**

GEOLOGICAL SUPERVISION FROM: **3710'**
REFERENCE WELL: **MDCI - Gambhir #1-22**

ELEVATIONS
KB: **3404'**
DF: _____
GL: **3399'**
Measurements Are All From Kelly Bushing

CASING
CONDUCTOR: **8-5/8" at 388'**
SURFACE: **5-1/2" at 494'**
PRODUCTION: **5-1/2" at 494'**

ELECTRICAL SURVEYS
CND, DLI, MEL, SMI, SMC
Fluoriter, Hretline

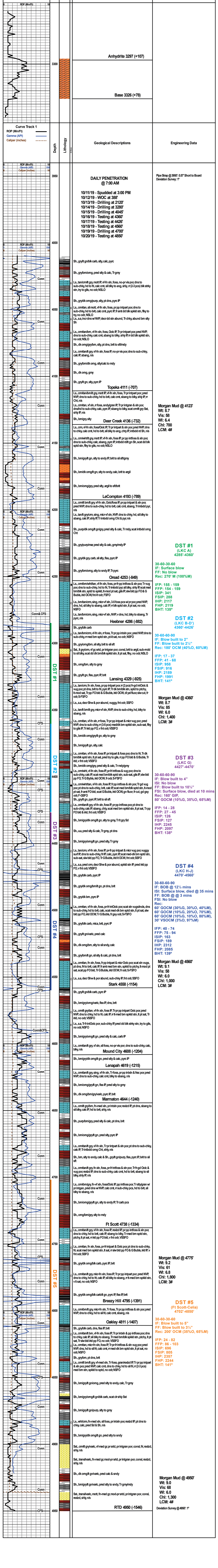
Formation	Sample Tops	E-log Tops	Strat Pos.
Anhydrite	3297 (+109)	3297 (+107)	-13
Base Anhydrite	3326 (+78)	3326 (+78)	-11
Topeka	4109 (-705)	4111 (-707)	-4
Overbed	4256 (-852)	4253 (-849)	-6
Stirling	4350 (-926)	4330 (-925)	-6
Starke	4353 (-1151)	4328 (-1154)	-9
Noland City	4605 (-1201)	4608 (-1204)	-8
FT Scott	4736 (-1332)	4738 (-1334)	-9
Orskov	4810 (-1406)	4811 (-1407)	-6



REMARKS
Due to fair to good shows of oil in multiple potential pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.

Respectfully Submitted,
API #15-023-21524
Saman Sharifaie
Petroleum Geologist

*Tops have been adjusted to electric logs



**CEMENT TREATMENT REPORT**

Customer: **Murfin Drilling** Well: **Gamblin #3-22** Ticket: **ICT 2574**
 City, State: **Mcdonald Ks** County: **Cheyenne Ks** Date: **10/11/2019**
 Field Rep: **Jay Ruxicka** S-T-R: **22-2S-37W** Service: **Cement**

Downhole Information

Hole Size:	12.25
Hole Depth:	388
Casing Size:	8 5/8
Casing Depth:	388
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	23.44

Slurry

Weight:	14.8 # / sx
Water / Sx:	6 7/8 gal / sx
Yield:	1 2/5 ft ³ / sx
Bbls / Ft.:	
Depth:	ft
Volume:	bbls
Excess:	%
Total Slurry:	61 bbls
Total Sacks:	300 sx

Cement Blend

Product	%	#
Class A	100.0	28200
Gel	2.0	564
CaCl	3.0	846

Total **29,610**

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS
7:30 PM				Arrival					
7:32 PM				Safety Meeting					
7:45 PM				Rlg up					
10:05 PM				Circ casing on bottom					
10:12 PM				hook up to pump truck					
10:15 PM	5.0	250.0	61.0	mix 300 sks cement					
10:45 PM	5.0	250.0	23.5	Wash up and Displace					
10:50 AM				salt up truck					
11:00 PM				Rlg Down					
11:20 PM				Depart					

CREW		UNIT
Cementer:	Cory Davis	85.0
Pump Operator:	Kaleb Compton	209.0
Bulk #1:	Neil White	294.0
Helper:	John Polley	

SUMMARY

Average Rate	Average Pressure	Total Fluid
6 bpm	250.00 psi	84.50 bbls



CEMENT TREATMENT REPORT

Customer: Murfin Drilling Co	Well: GambIn #3-22	Ticket: ICT2623
City, State: Wichita, KS	County: Cheyenne, KS	Date: 10/21/2019
Field Rep: Nathan	S-T-R: Sec 22 - T2S - R37W	Service: Cement - Production Cag

Downhole Information

Hole Size:	7.875 in
Hole Depth:	4950 ft
Casing Size:	8.5 in
Casing Depth:	4945 ft
Drill Pipe:	in
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	117.2 bbls

Calculated Slurry - Lead

Weight:	12.00 # / ax
Water / Sw:	15.48 gal / ax
Yield:	2.56 ft ³ / ax
Bbls / Ft.:	0.0309
Depth:	ft
Annular Volume:	bbls
Excess:	
Total Slurry:	147.5 bbls
Total Sacks:	325 ax

Product	% / #	#
Class A	100.00	35250
Poz		
Gel		
CaCl	3.00	1058
Gypsum	2.00	705
Metso	2.00	705
PhenoSeal		
Flo Seal	0.25	94
Salt (brw)		
Total		37,811

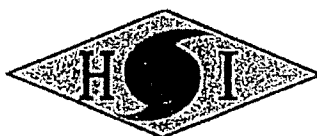
Calculated Slurry - Tail

Weight:	14.8 # / ax
Water / Sw:	6.61 gal / ax
Yield:	1.50 ft ³ / ax
Bbls / Ft.:	0.0309
Depth:	ft
Annular Volume:	bbls
Excess:	
Total Slurry:	58.5 bbls
Total Sacks:	200 ax

Product	% / #	#
Class A	100.00	18800
Poz		
Gel	1.00	188
CaCl		
Gypsum	5.00	940
CAF-38 Defoamer	0.25	47
CAL-160 Fluid Loss	0.60	113
KelSeal	5.00	1000
Salt (brw)	10.00	1100
Total		22,188

TIME	RATE	PSI	BBLs	REMARKS
17:00				Call out - 10/20/19
3:00				Depart yard
5:00				Arrive on locn.
5:05				JSA, discuss moving on, spotting & rig-up of equipment
5:10				Move on, spot & rig-up equipment
5:30				Rig-up complete
5:45				Start to RIH w/ 5 1/2" casing
7:30				Casing @ setting depth
7:50	6.5	400.0		Circulate & condition hole
8:05	3.5	200.0	5.0	Pump H2O ahead
8:06		3,300.0		Pressure test
8:10	3.0	250.0	10.0	Pump mudflush spacer
8:14	3.0	200.0	5.0	Pump H2O spacer
9:17			13.0	Plug ratihole w/ 30ax cement @ 12.0ppg
9:23			9.0	Plug mouseholehole w/ 20ax cement @ 12.0ppg
9:27	4.5	400.0	125.4	Mix & pump 275ax lead slurry @ 12.0ppg. Y - 2.58cuft/sk; MR - 15.48g/sk
10:00	4.0	350.0	58.5	Mix & pump 200ax tail slurry @ 14.8ppg. Y - 1.50cuft/sk; MR - 6.61g/sk
10:20				Shutdown. Wash-up pumps & lines. Release batchdown plug
10:25	5.0	250.0		Pump displacement
10:51	2.0	1,300.0	105.0	Slow rate
11:00		2,450.0	117.5	Bump plug. Final circulating pressure - 1900psi
11:02				Bleed off. Plug latched, 3/4bn back. Cement returns to collar
11:05				Wash-up pumps & lines to pH
11:20				JSA, discuss rigging down & racking up equipment
11:25				Rig down & rack up equipment
11:55				JSA, discuss journey management
12:00				Depart locn
				Thanks for calling Hurricane Eyes Inc

Crew	UNIT	SUMMARY		
		Average Rate	Average Pressure	Total Fluid
Cementor:	Scott Green	74		
Pump Operator:	Michael Rebarchek	286		
Bulk #1:	Kyle Ochs	181 / 258		
Bulk #2:	John Polley	294		
			1,937.5 bpm	910 psi
				448 bbls



CEMENT TREATMENT REPORT

Customer:	Murfin Drilling	Well:	Gamblin 3-22	Ticket:	ICT 2849
City, State:		County:	Cheyenne KS	Date:	11/27/2019
Field Rep:		S-T-R:	22-2 -37W	Service:	Squeeze

Downhole Information	
Hole Size:	in
Hole Depth:	ft
Casing Size:	5 1/2 in
Casing Depth:	ft
Tubing / Liner:	2 3/8 in
Depth:	ft
Tool / Packer:	Retainer
Depth:	4680 ft
Displacement:	19.5 bbls

Calculated Slurry	
Weight:	15.6 # / sx
Water / Sx:	5.22 gal / sx
Yield:	1.18 ft³ / sx
Bbls / Ft.:	
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	15.8 bbls
Total Sacks:	75 sx

Product	% / #	#
Class A	100.00	7050
Poz		
Gel		
CaCl		
Gypsum		
Metso		
Kol Seal		
Flo Seal		
Salt (bww)		

Total **7,050**

TIME	RATE	PSI	BBLs	REMARKS
1146A				ON LOCATION
1160A				SAFETY MEETING
1200P				RIG UP
1232P	3.0	2,000.0	14.8	TEST RETAINER RETAINER SET @ 4680 FT TOP PERF @ 4735 FT 2 3/8 TUBING 5 1/2 15.5# CASING
1250P	3.3	100.0	10.0	INJECTION RATE
1257P	3.3	100.0	15.8	CEMENT 75 sxs
110P				WASH PUMP & LINES
115P	-	-	17.8	DISPLACE H2O ON VACUUM
143P				VACUUM STOPPED
200P				WAIT 15 MINS
201P	0.2	500.0	0.2	PRESSURE UP
202P				WAIT 15 MINS
216P	0.2	500.0	0.1	PRESURE UP
216P				WAIT 15 MINS
231P	0.2	500.0	0.1	PRESSURE UP IT HELD
233P	2.0	160.0	30.0	PUMP H2O
244P				WASH UP
260P				RIG DOWN
300P				LEFT LOCATION

CREW		UNIT	SUMMARY		
Cementer:	Jimmie Cottrell	73	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jesse Jones	231	1.625 bpm	481 psi	88 bbls
Bulk #1:	John Polley	242			
Bulk #2:					



CEMENT TREATMENT REPORT

Customer: MDC	Well: Gamblin 3-22	Ticket: ICT 2859
City, State: Wichita, KS	County: Cheyenne, KS	Date: 12/2/2019
Field Rep: Buck	S-T-R: 22-2-37	Service: Squeeze

Downhole Information	
Hole Size:	7.875 in
Hole Depth:	ft
Casing Size:	5.5 in
Casing Depth:	ft
Tubing / Liner:	2.375 in
Depth:	4272 ft
Tool / Packer:	4272
Depth:	ft
Displacement:	16.5 bbls

Calculated Slurry	
Weight:	15.6 # / sx
Water / Sx:	5.21 gal / sx
Yield:	1.18 ft ³ / sx
Bbls / Ft.:	0.0183
Depth:	4272 ft
Annular Volume:	78.1776 bbls
Excess:	
Total Slurry:	21.0 bbls
Total Sacks:	100 sx

Product	% / #	#
Class A	100.00	9400
Poz		
Gel		
CaCl		
Gypsum		
Fluid Loss	0.25	24
Kol Seal		
Flo Seal		
Salt (bww)		
Total		9,424

TIME	RATE	PSI	BBLs	REMARKS
9:30 AM	2.0	500.0	15.5	On location safety meeting. Spot in and rig up. Hook up to tubing and test lower zones
10:51 AM	4.3	500.0	70.5	Pull tubing. Hook up to backside. Load backside with 70.5 BBL. Pressure up to 500
11:17 AM	3.3	120.0	15.0	Set up to get injection rate. 3.3 BBL @ 120 PSI. 15 BBL water. Wait on water
12:15 PM	3.0	230.0	21.0	Start mixing and pumping 100 sacks Class A with .25% fluid loss.
				Stop cement
12:27 PM				Wash up pump truck
				Open well
			4.5	Well on a vacuum. Well sucks 4.5 BBL displacement
				Vacuum stopped. Kick in pump
	0.6	2,000.0	5.0	At 5 BBL out pressure increases to 2000 PSI. Kick out pump and repressure to 2000
12:49 PM		960.0		Stop. Well fell to 960 PSI. Release pressure and well is dead. 6.5 BBL slurry pumped into formation.
12:54 PM	0.6	700.0		Pressure up backside to 700 PSI. Unset packer and reverse out @ 1700 PSI
		1,700.0		6 BBL into reversing out get cement to surface.
	4.0	800.0	40.0	Pump a total of 40 BBL during reversing out
	0.3	500.0		Repressure backside to 500 PSI
1:18 PM	0.3	2,000.0	0.8	Open tubing and pressure up on cement to 2000 PSI. Pressure fell 100 PSI in 1:50 min
1:30 PM				Stage on cement
2:00 PM		2,000.0		Pump on cement 2000 PSI
2:05 PM				SQUEEZED
		500.0		Pull 2 joints tubing and pressure up to 500 and shut in well
2:30 PM				Rig down and leave location. Thanks

CREW		UNIT	SUMMARY		
Cementer:	Jake H	77	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jesse	230	2.01111 bpm	962 psi	172 bbls
Bulk #1:	Kale	242			
Bulk #2:					

MDCI
 Gamblin #3-22
 1500' FNL 1050'FWL
 Sec. 22-2S-37W
 3404' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref
Anhydrite	3295	+109	-11	3297	+107	-13
B/Anhydrite	3326	+78	-11	3326	+78	-11
Topeka	4109	-705	-2	4111	-707	-4
Oread	4256	-852	-9	4253	-849	-6
Lansing	4330	-926	-9	4329	-925	-8
Stark	4555	-1151	-6	4558	-1154	-9
Mound City	4605	-1201	-5	4608	-1204	-8
Ft Scott	4736	-1332	-7	4738	-1334	-9
Oakley	4810	-1406	-5	4811	-1407	-6
Mississippian	NR			NR		
RTD	4950					
LTD				4951		