

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
--	---

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	BURR 1-6
Doc ID	1500441

All Electric Logs Run

DIL
DUCP
MEL
BHCS



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Burr #1-6

6-3s-37w Cheyenne,KS

Start Date: 2020.01.11 @ 16:39:00

End Date: 2020.01.12 @ 01:29:00

Job Ticket #: 66417 DST #: 1

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

Printed: 2020.01.16 @ 16:04:02



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne, KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66417

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2020.01.11 @ 16:39:00

GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:40:15

Time Test Ended: 01:29:00

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 83

Interval: 4256.00 ft (KB) To 4320.00 ft (KB) (TVD)

Reference Elevations: 3443.00 ft (KB)

Total Depth: 4320.00 ft (KB) (TVD)

3438.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8652 Outside

Press@RunDepth: 58.48 psig @ 4257.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.01.11 End Date: 2020.01.12

Last Calib.: 2020.01.12

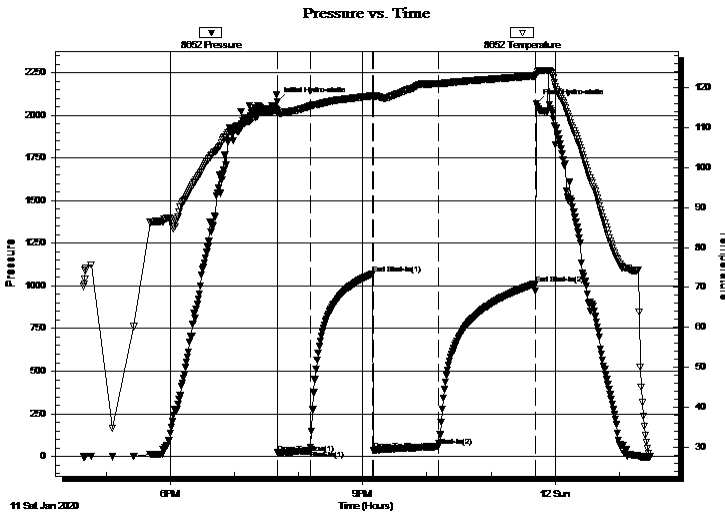
Start Time: 16:39:05 End Time: 01:29:00

Time On Btm: 2020.01.11 @ 19:40:00

Time Off Btm: 2020.01.11 @ 23:42:15

TEST COMMENT: 30 - IF: Blow built to just over 2" (Diesel in bucket)
60 - IS: No blow back
60 - FF: Blow built to 1 1/2"
90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2078.34	114.35	Initial Hydro-static
1	21.20	113.37	Open To Flow (1)
31	33.60	115.47	Shut-In(1)
90	1071.10	118.00	End Shut-In(1)
90	36.93	117.54	Open To Flow (2)
151	58.48	121.04	Shut-In(2)
241	1011.57	122.96	End Shut-In(2)
243	2069.65	123.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	Mud 100%	0.37

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66417

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2020.01.11 @ 16:39:00

Tool Information

Drill Pipe:	Length: 4104.00 ft	Diameter: 3.80 inches	Volume: 57.57 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 149.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 58.30 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	4256.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	64.00 ft				
Tool Length:	93.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4228.00	
Shut In Tool	5.00			4233.00	
Hydraulic tool	5.00			4238.00	
Jars	5.00			4243.00	
Safety Joint	3.00			4246.00	
Packer	5.00			4251.00	29.00 Bottom Of Top Packer
Packer	5.00			4256.00	
Stubb	1.00			4257.00	
Recorder	0.00	6625	Inside	4257.00	
Recorder	0.00	8652	Outside	4257.00	
Perforations	25.00			4282.00	
Blank Spacing	33.00			4315.00	
Perforations	2.00			4317.00	
Bullnose	3.00			4320.00	64.00 Bottom Packers & Anchor

Total Tool Length: 93.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66417

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2020.01.11 @ 16:39:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	Mud 100%	0.369

Total Length: 75.00 ft Total Volume: 0.369 bbl

Num Fluid Samples: 0

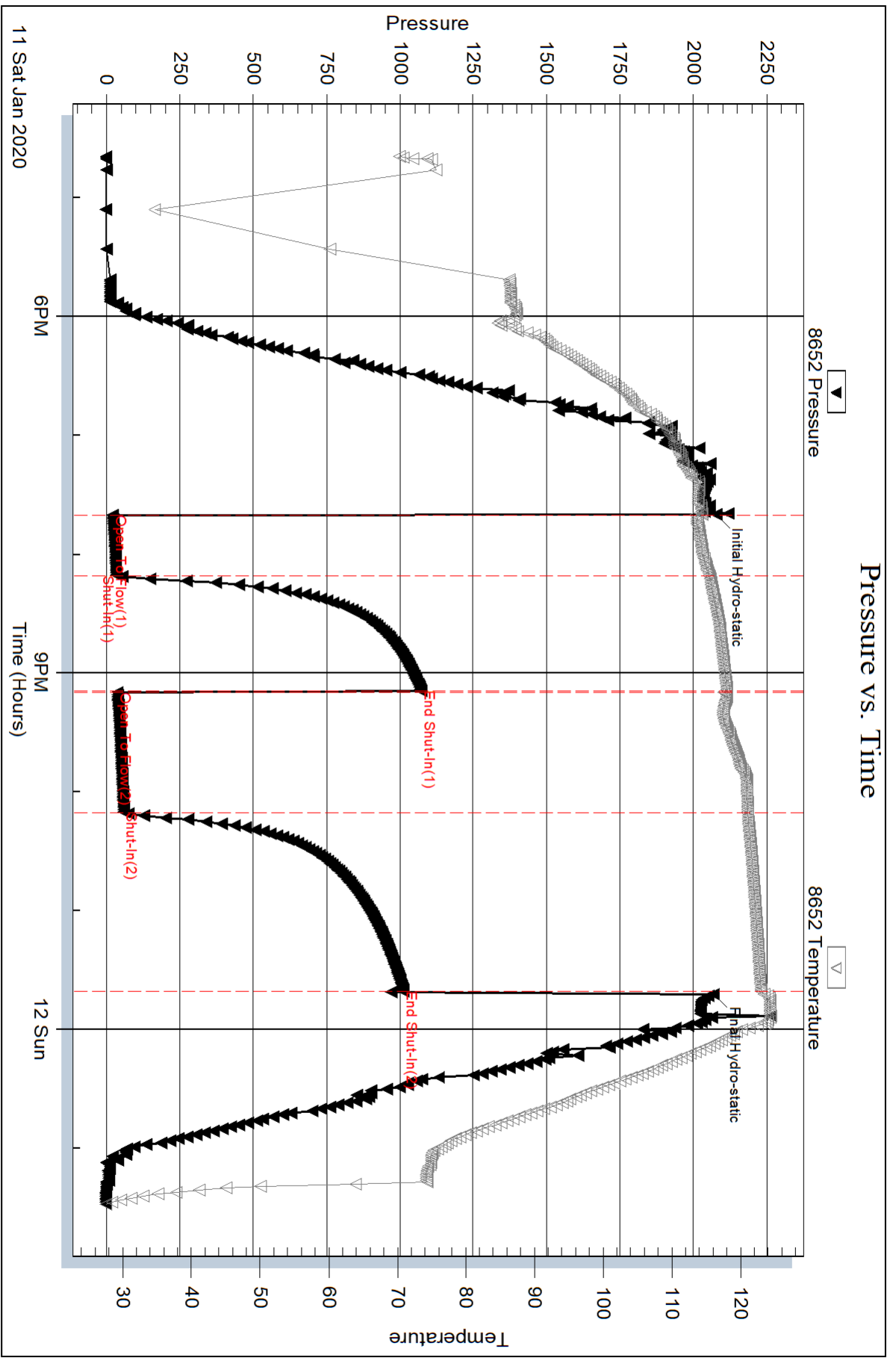
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



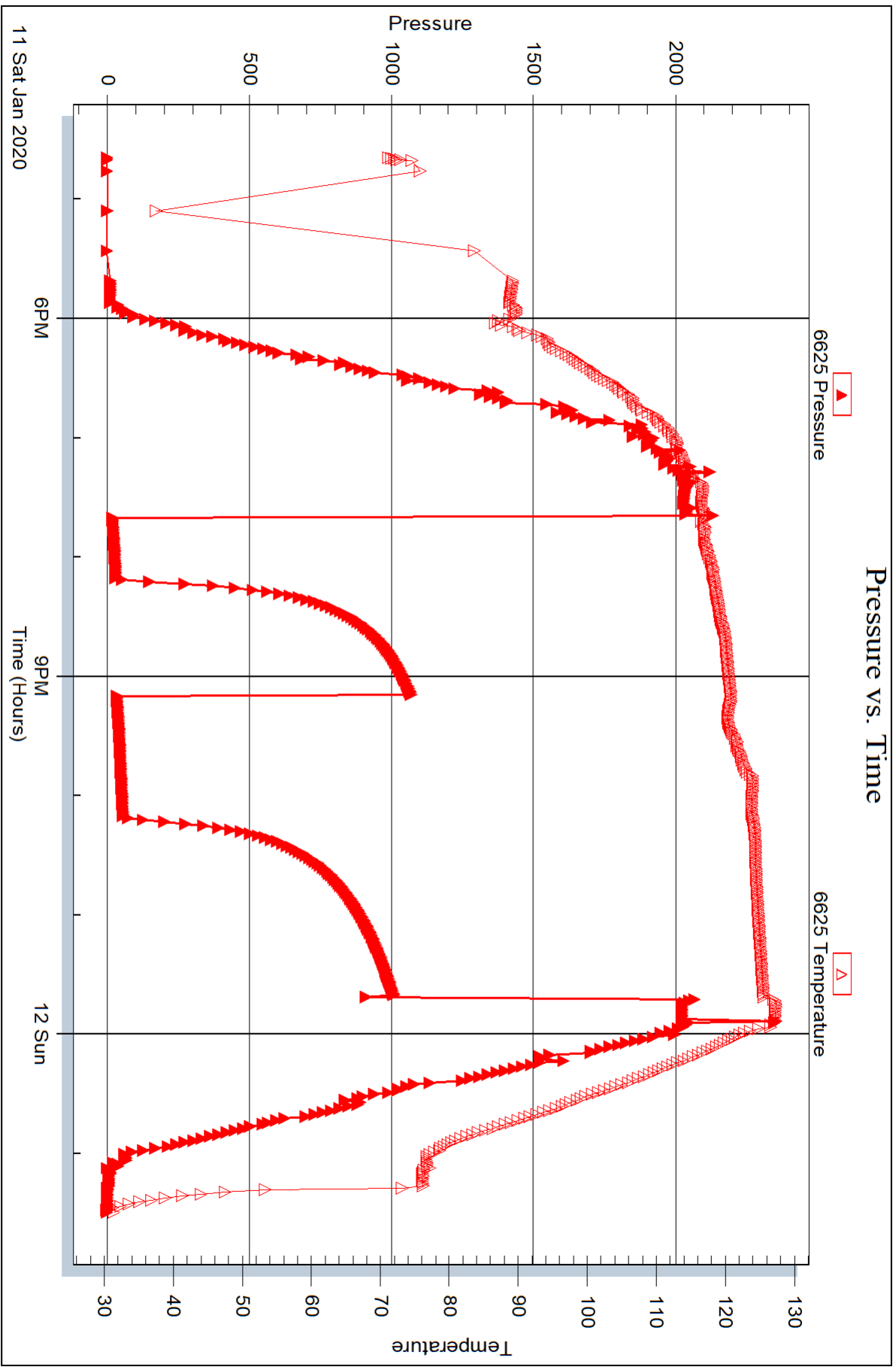
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Burr #1-6

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 66417

Printed: 2020.01.16 @ 16:04:03



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Burr #1-6

6-3s-37w Cheyenne,KS

Start Date: 2020.01.12 @ 11:53:00

End Date: 2020.01.12 @ 18:37:45

Job Ticket #: 66418 DST #: 2

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

Printed: 2020.01.16 @ 15:58:12

Murfin Drilling Co., Inc. 6-3s-37w Cheyenne,KS Burr #1-6 DST # 2 LKC "A" 2020.01.12



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne, KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66418

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2020.01.12 @ 11:53:00

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:49:00

Time Test Ended: 18:37:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4314.00 ft (KB) To 4390.00 ft (KB) (TVD)

Reference Elevations: 3443.00 ft (KB)

Total Depth: 4390.00 ft (KB) (TVD)

3438.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8652 Outside

Press@RunDepth: 23.30 psig @ 4315.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.01.12 End Date: 2020.01.12

Last Calib.: 2020.01.12

Start Time: 11:53:05 End Time: 18:37:44

Time On Btm: 2020.01.12 @ 13:48:45

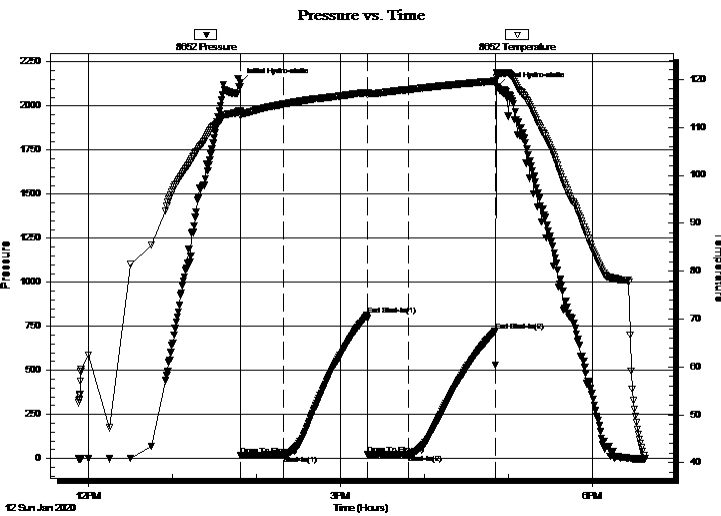
Time Off Btm: 2020.01.12 @ 16:52:00

TEST COMMENT: 30 - IF: Blow built to just over 1" (Diesel in bucket)

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2133.96	113.40	Initial Hydro-static
1	18.52	112.47	Open To Flow (1)
31	20.01	114.82	Shut-In(1)
91	814.08	117.25	End Shut-In(1)
91	21.55	116.88	Open To Flow (2)
120	23.30	117.87	Shut-In(2)
182	724.04	119.67	End Shut-In(2)
184	2109.07	120.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w /trace oil 100%m	0.05

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66418

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2020.01.12 @ 11:53:00

Tool Information

Drill Pipe:	Length: 4168.00 ft	Diameter: 3.80 inches	Volume: 58.47 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 149.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 59.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4314.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.00 ft			
Tool Length:	105.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4286.00	
Shut In Tool	5.00			4291.00	
Hydraulic tool	5.00			4296.00	
Jars	5.00			4301.00	
Safety Joint	3.00			4304.00	
Packer	5.00			4309.00	29.00 Bottom Of Top Packer
Packer	5.00			4314.00	
Stubb	1.00			4315.00	
Recorder	0.00	6625	Inside	4315.00	
Recorder	0.00	8652	Outside	4315.00	
Perforations	8.00			4323.00	
Blank Spacing	64.00			4387.00	
Bullnose	3.00			4390.00	76.00 Bottom Packers & Anchor

Total Tool Length: 105.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66418

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2020.01.12 @ 11:53:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud w /trace oil 100%m	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

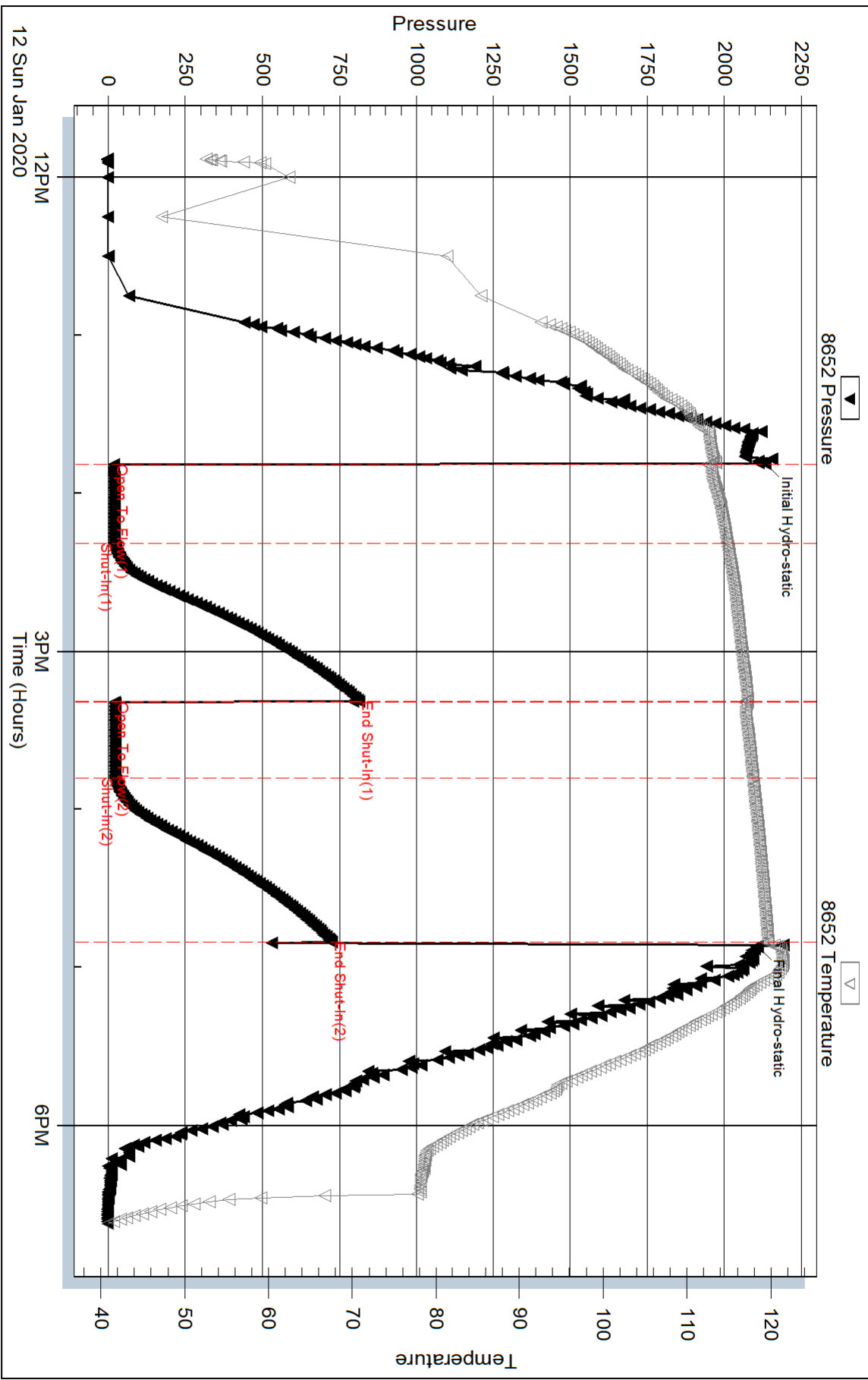
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



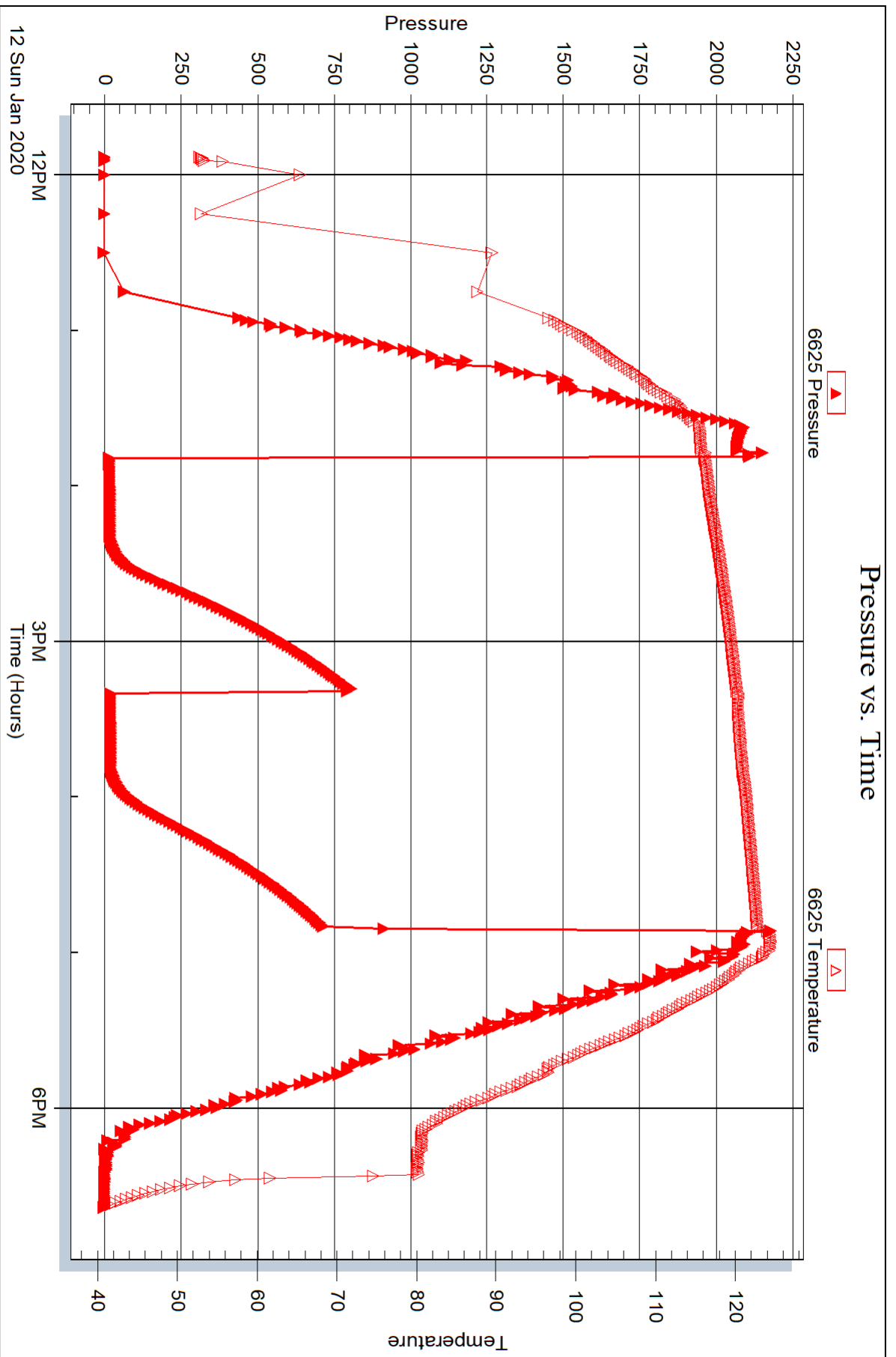
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Burr #1-6

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 66418

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DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Burr #1-6

6-3s-37w Cheyenne,KS

Start Date: 2020.01.13 @ 08:10:00

End Date: 2020.01.13 @ 16:31:00

Job Ticket #: 66419 DST #: 3

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

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne, KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66419

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2020.01.13 @ 08:10:00

GENERAL INFORMATION:

Formation: **LKC "D - G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:06:30

Time Test Ended: 16:31:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: **4390.00 ft (KB) To 4493.00 ft (KB) (TVD)**

Reference Elevations: 3443.00 ft (KB)

Total Depth: 4493.00 ft (KB) (TVD)

3438.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8652 Outside

Press@RunDepth: 1012.21 psig @ 4391.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.01.13

End Date: 2020.01.13

Last Calib.: 2020.01.13

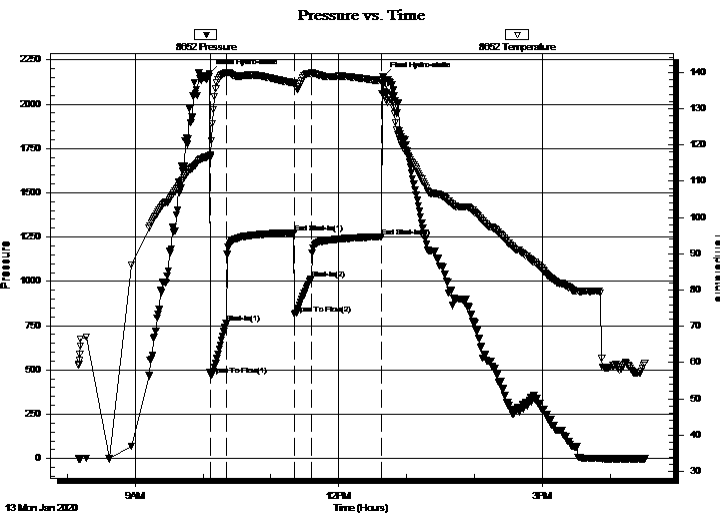
Start Time: 08:10:05

End Time: 16:30:59

Time On Btm: 2020.01.13 @ 10:05:45

Time Off Btm: 2020.01.13 @ 12:39:00

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 40 sec. in diesel, built to 202" (H2O)
60 - IS: Blow back built to 3/4" in diesel
15 - FF: Blow built to BOB at 45 sec. in diesel, built to 135" (H2O)
60 - FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2171.30	117.11	Initial Hydro-static
1	472.39	117.20	Open To Flow (1)
15	765.31	139.84	Shut-In(1)
75	1274.86	137.07	End Shut-In(1)
76	816.05	136.90	Open To Flow (2)
90	1012.21	139.76	Shut-In(2)
152	1251.32	137.61	End Shut-In(2)
154	2155.67	137.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	SMCW w/oil spots 96%w, 3%m, 1%o	1.17
250.00	SMGOCW 48%w, 26%g, 23%o, 3%m	3.51
1065.00	SMVCGO 74%o, 18%g, 5%w, 3%m	14.94
690.00	SW/ GMCO 37%g, 35%o, 23%m, 5%w	9.68
215.00	GHOCM 39%m, 38%o, 23%g	3.02
0.00	GIP = 30'	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., Inc.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66419

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2020.01.13 @ 08:10:00

Tool Information

Drill Pipe:	Length: 4230.00 ft	Diameter: 3.80 inches	Volume: 59.34 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 149.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 60.07 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4390.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	103.00 ft			
Tool Length:	132.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4362.00	
Shut In Tool	5.00			4367.00	
Hydraulic tool	5.00			4372.00	
Jars	5.00			4377.00	
Safety Joint	3.00			4380.00	
Packer	5.00			4385.00	29.00 Bottom Of Top Packer
Packer	5.00			4390.00	
Stubb	1.00			4391.00	
Recorder	0.00	6625	Inside	4391.00	
Recorder	0.00	8652	Outside	4391.00	
Perforations	33.00			4424.00	
Blank Spacing	64.00			4488.00	
Perforations	2.00			4490.00	
Bullnose	3.00			4493.00	103.00 Bottom Packers & Anchor

Total Tool Length: 132.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66419

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2020.01.13 @ 08:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27.2 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	SMCW w/oil spots 96%w , 3%m, 1%o	1.168
250.00	SM/GOCW 48%w , 26%g, 23%o, 3%m	3.507
1065.00	SMWCGO 74%o, 18%g, 5%w , 3%m	14.939
690.00	SW/ GMCO 37%g, 35%o, 23%m, 5%w	9.679
215.00	GHOCM 39%m, 38%o, 23%g	3.016
0.00	GIP = 30'	0.000

Total Length: 2400.00 ft Total Volume: 32.309 bbl

Num Fluid Samples: 0

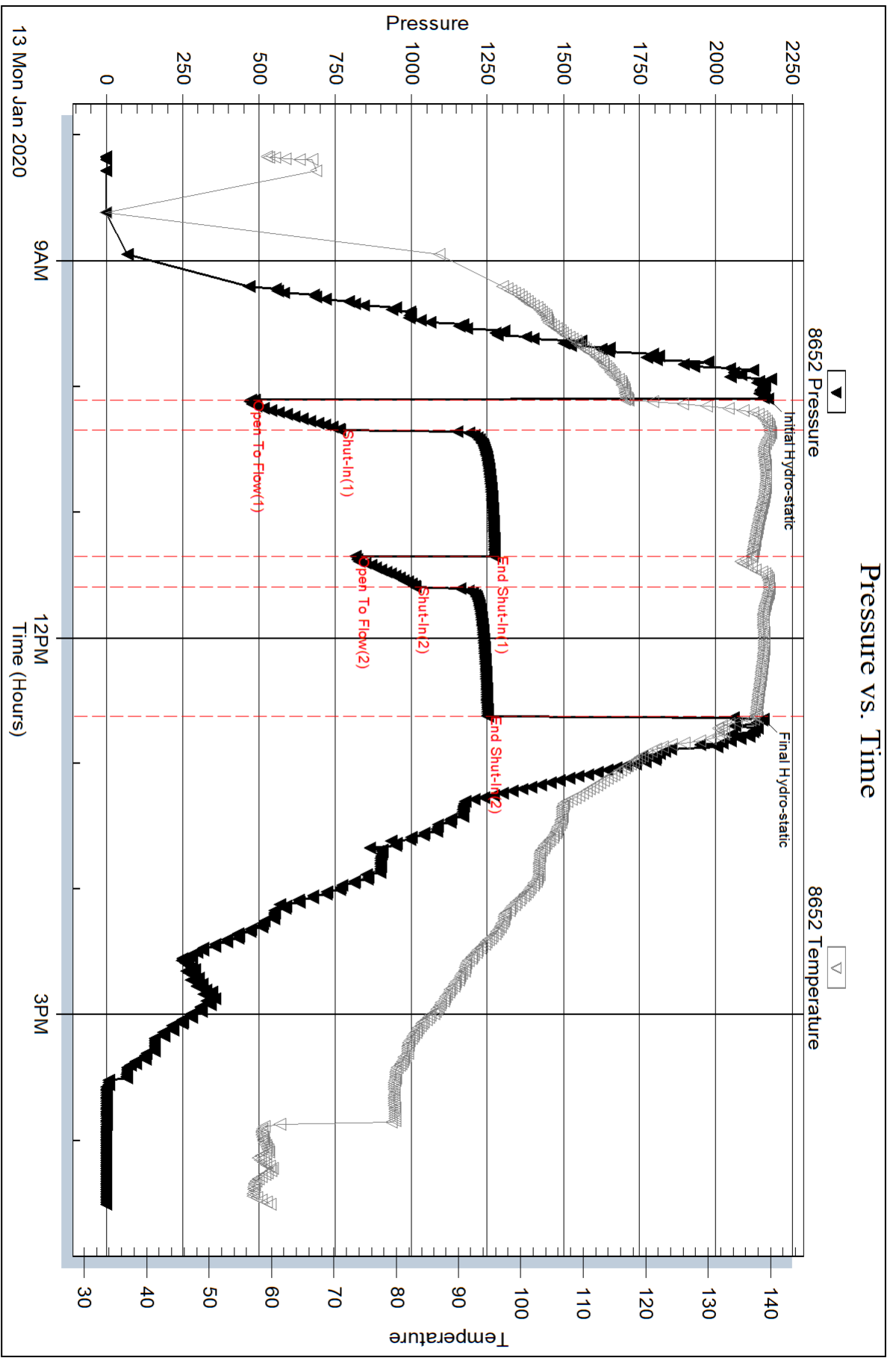
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 27 api @ 58 deg F Corrected Gravity = 27.2 api
RW = .287 ohms @ 59.5 deg F Chlorides = 29,000 ppm



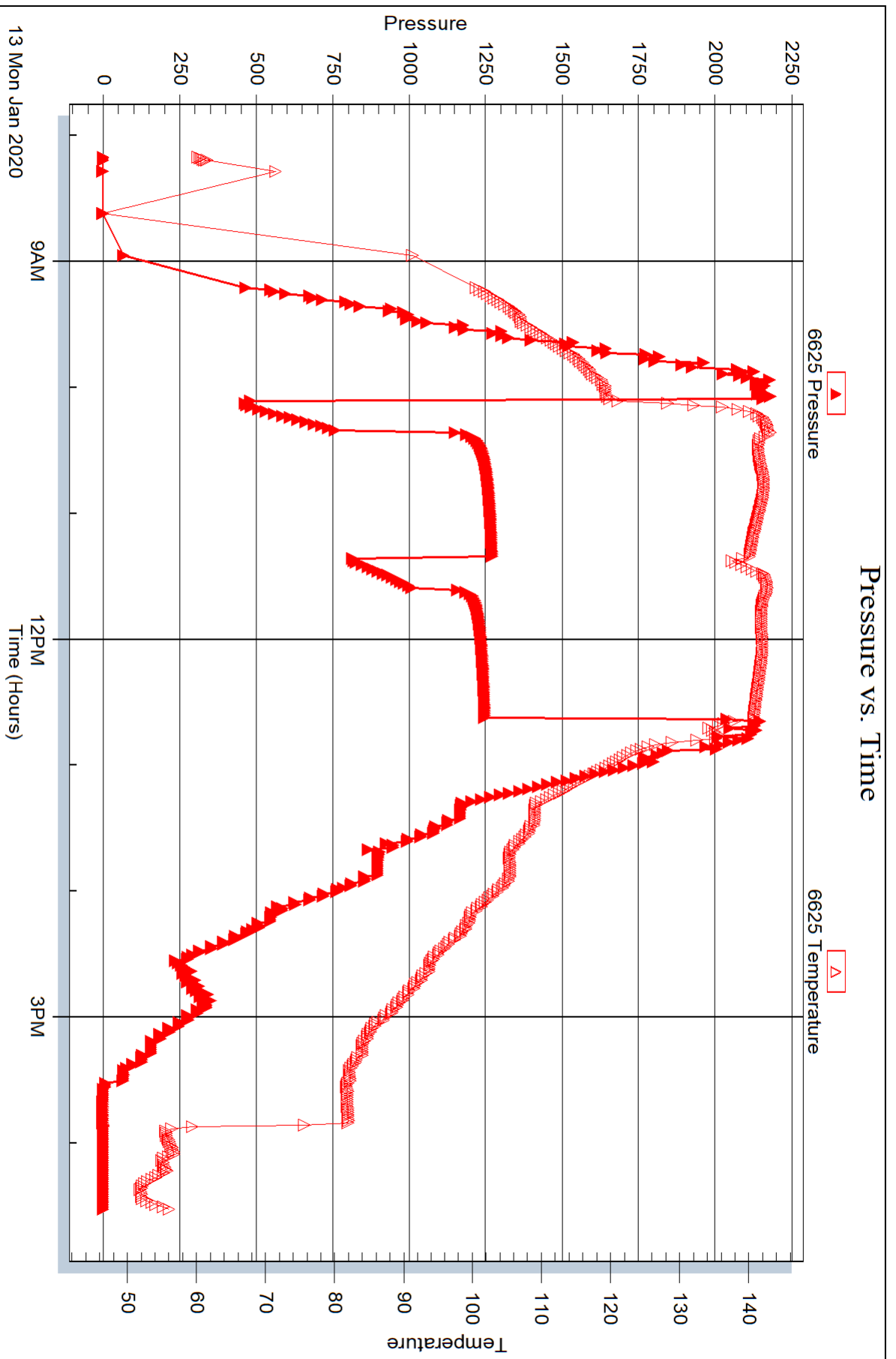
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Burr #1-6

DST Test Number: 3





DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Burr #1-6

6-3s-37w Cheyenne,KS

Start Date: 2020.01.14 @ 06:35:00

End Date: 2020.01.14 @ 14:17:00

Job Ticket #: 66420 DST #: 4

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

Printed: 2020.01.16 @ 15:50:59

Murfin Drilling Co., Inc. 6-3s-37w Cheyenne,KS Burr #1-6 DST # 4 LKC "H - J" 2020.01.14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne, KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66420

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2020.01.14 @ 06:35:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:29:15
 Time Test Ended: 14:17:00
 Interval: **4507.00 ft (KB) To 4590.00 ft (KB) (TVD)**
 Total Depth: 4590.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3443.00 ft (KB)
 3438.00 ft (CF)
 KB to GR/CF: 5.00 ft

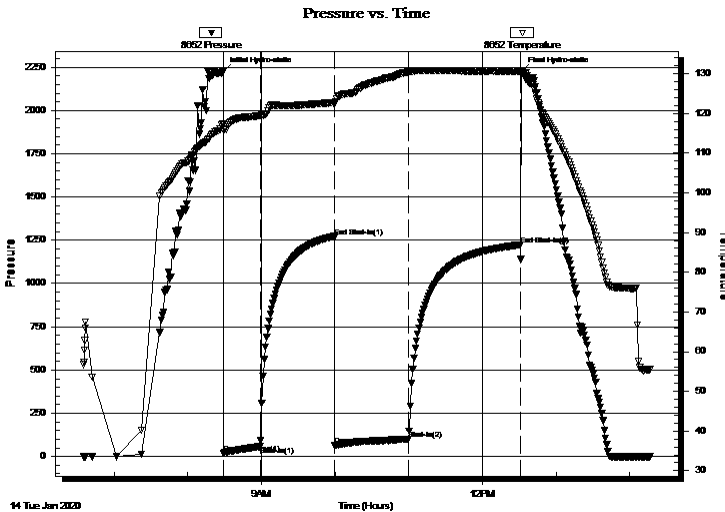
Serial #: 8652

Outside

Press@RunDepth: 101.08 psig @ 4508.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2020.01.14 End Date: 2020.01.14 Last Calib.: 2020.01.14
 Start Time: 06:35:05 End Time: 14:16:59 Time On Btm: 2020.01.14 @ 08:29:00
 Time Off Btm: 2020.01.14 @ 12:32:00

TEST COMMENT: 30 - IF: Blow built to 4 1/2" (Diesel in bucket)
 60 - IS: No blow back
 60 - FF: Blow built to 4 1/4"
 90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2227.22	117.35	Initial Hydro-static
1	20.48	115.87	Open To Flow (1)
30	58.15	119.43	Shut-In(1)
90	1272.10	122.72	End Shut-In(1)
91	62.48	122.18	Open To Flow (2)
151	101.08	130.42	Shut-In(2)
242	1223.18	130.62	End Shut-In(2)
243	2226.23	130.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	WCM w/trace of Oil 78%m, 22%w	1.17

* 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.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66420

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2020.01.14 @ 06:35:00

Tool Information

Drill Pipe:	Length: 4355.00 ft	Diameter: 3.80 inches	Volume: 61.09 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 149.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 61.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4507.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	83.00 ft			
Tool Length:	112.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4479.00	
Shut In Tool	5.00			4484.00	
Hydraulic tool	5.00			4489.00	
Jars	5.00			4494.00	
Safety Joint	3.00			4497.00	
Packer	5.00			4502.00	29.00 Bottom Of Top Packer
Packer	5.00			4507.00	
Stubb	1.00			4508.00	
Recorder	0.00	6625	Inside	4508.00	
Recorder	0.00	8652	Outside	4508.00	
Perforations	15.00			4523.00	
Blank Spacing	64.00			4587.00	
Bullnose	3.00			4590.00	83.00 Bottom Packers & Anchor

Total Tool Length: 112.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66420

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2020.01.14 @ 06:35:00

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:

16000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	WCM w/trace of Oil 78%m, 22%w	1.168

Total Length: 180.00 ft Total Volume: 1.168 bbl

Num Fluid Samples: 0

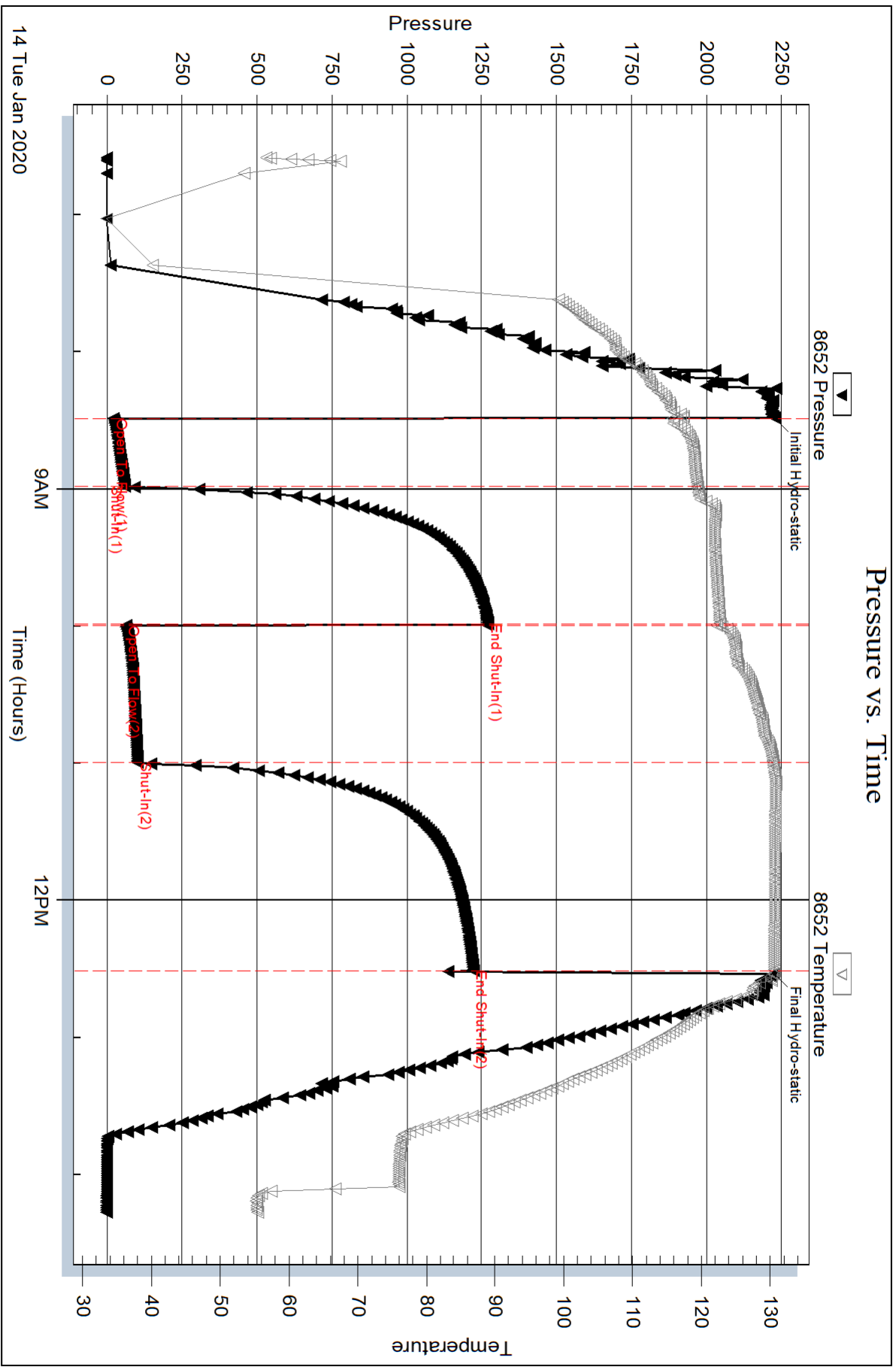
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .588 ohms @ 50 deg F Chlorides = 16,000 ppm



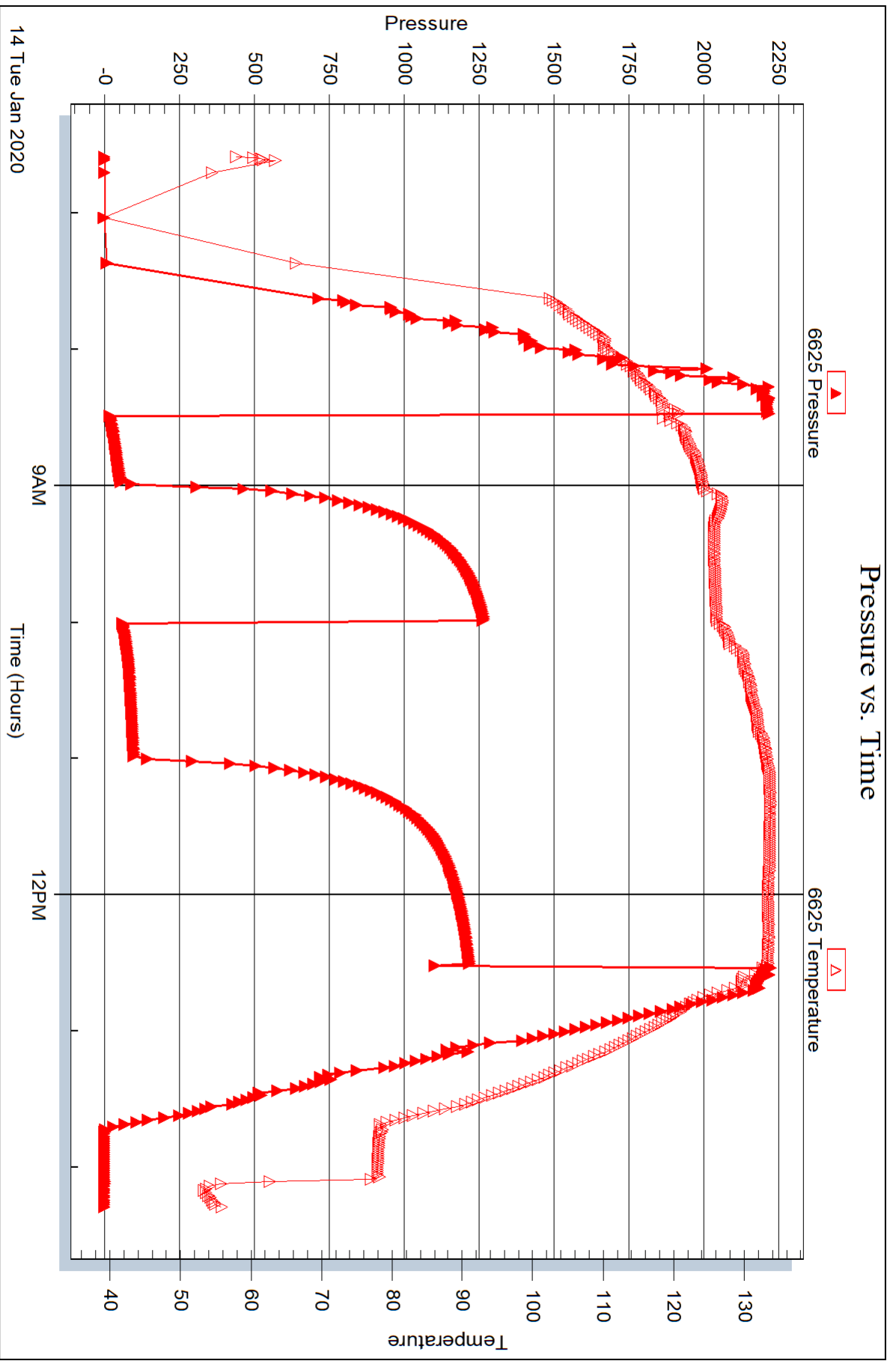
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Burr #1-6

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 66420

Printed: 2020.01.16 @ 15:51:00



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Burr #1-6

6-3s-37w Cheyenne,KS

Start Date: 2020.01.15 @ 19:25:00

End Date: 2020.01.16 @ 08:12:45

Job Ticket #: 66421 DST #: 5

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

Printed: 2020.01.16 @ 11:28:16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne, KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66421

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2020.01.15 @ 19:25:00

GENERAL INFORMATION:

Formation: **Ft Scott - Celia**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:51:45

Time Test Ended: 08:12:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4746.00 ft (KB) To 4880.00 ft (KB) (TVD)

Reference Elevations: 3443.00 ft (KB)

Total Depth: 4880.00 ft (KB) (TVD)

3438.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8652 Outside

Press@RunDepth: 740.11 psig @ 4747.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.01.15 End Date: 2020.01.16

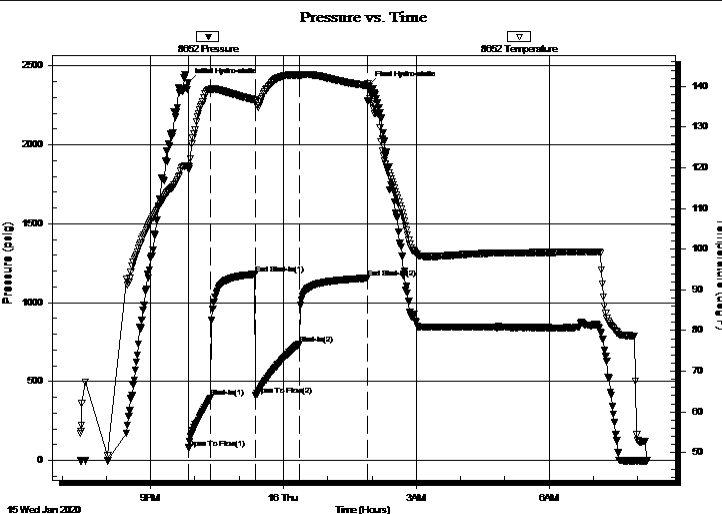
Last Calib.: 2020.01.16

Start Time: 19:25:05 End Time: 08:12:45

Time On Btm: 2020.01.15 @ 21:51:15

Time Off Btm: 2020.01.16 @ 01:55:15

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 2 3/4 min. (Diesel), built to 81" (H2O)
60 - IS: Blow back built to BOB at 40 min. (Diesel), built to 13 1/2" (H2O)
60 - FF: Blow built to BOB at 3 min. (Diesel), built to 125" (H2O)
90 - FS: Blow back built to BOB at 46 min. (Diesel), built to 10 1/2" (H2O)



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2394.34	120.44	Initial Hydro-static
1	80.25	119.63	Open To Flow (1)
31	398.43	139.27	Shut-In(1)
91	1180.52	136.66	End Shut-In(1)
92	415.31	136.54	Open To Flow (2)
151	740.11	142.78	Shut-In(2)
243	1155.50	140.19	End Shut-In(2)
244	2373.75	140.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 43%o, 38%g, 19%m	0.59
1565.00	Rev. Out sample every 5 min.	21.69
0.00	5 - 15 min. VSM/GO 77%o, 22%g, 1%m	0.00
0.00	20 - 75 min. GMCO 66%o, 26%m, 8%g	0.00
125.00	CGO 80%o, 20%g	1.75
0.00	GIP = 625'	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.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66421

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2020.01.15 @ 19:25:00

Tool Information

Drill Pipe:	Length: 4576.00 ft	Diameter: 3.80 inches	Volume: 64.19 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 149.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 64.92 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4746.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	134.00 ft			
Tool Length:	163.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Waited on vac truck to reverse out

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4718.00	
Shut In Tool	5.00			4723.00	
Hydraulic tool	5.00			4728.00	
Jars	5.00			4733.00	
Safety Joint	3.00			4736.00	
Packer	5.00			4741.00	29.00 Bottom Of Top Packer
Packer	5.00			4746.00	
Stubb	1.00			4747.00	
Recorder	0.00	6625	Inside	4747.00	
Recorder	0.00	8652	Outside	4747.00	
Perforations	29.00			4776.00	
Blank Spacing	95.00			4871.00	
Perforations	6.00			4877.00	
Bullnose	3.00			4880.00	134.00 Bottom Packers & Anchor

Total Tool Length: 163.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

6-3s-37w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Burr #1-6

Job Ticket: 66421

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2020.01.15 @ 19:25:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

26.4 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GMCO 43%o, 38%g, 19%m	0.590
1565.00	Rev. Out sample every 5 min.	21.689
0.00	5 - 15 min. VSM/GO 77%o, 22%g, 1%m	0.000
0.00	20 - 75 min. GMCO 66%o, 26%m, 8%g	0.000
125.00	CGO 80%o, 20%g	1.753
0.00	GIP = 625'	0.000

Total Length: 1810.00 ft Total Volume: 24.032 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

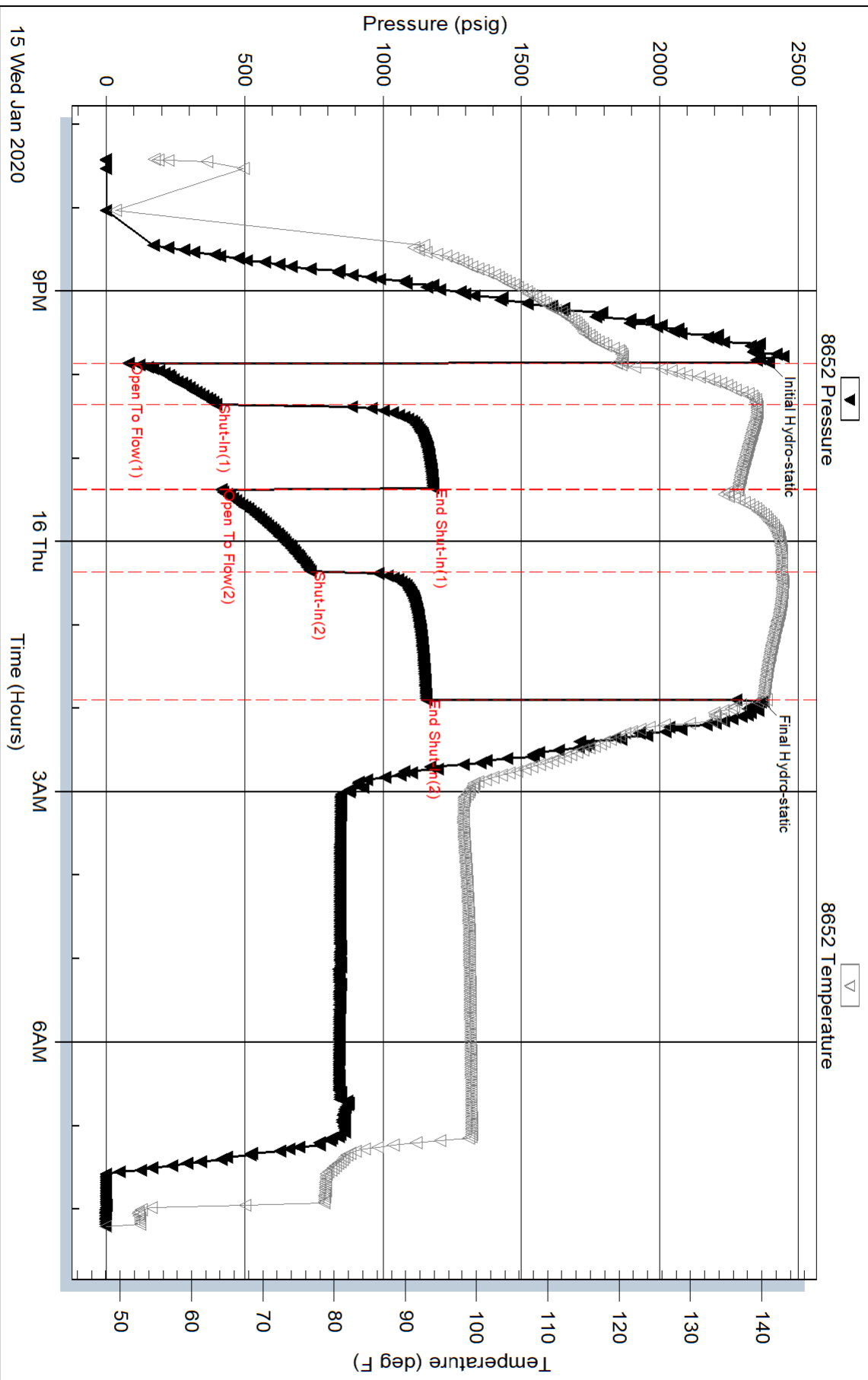
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 22 api @ 16 deg F Corrected Gravity = 26.4 api

Pressure vs. Time



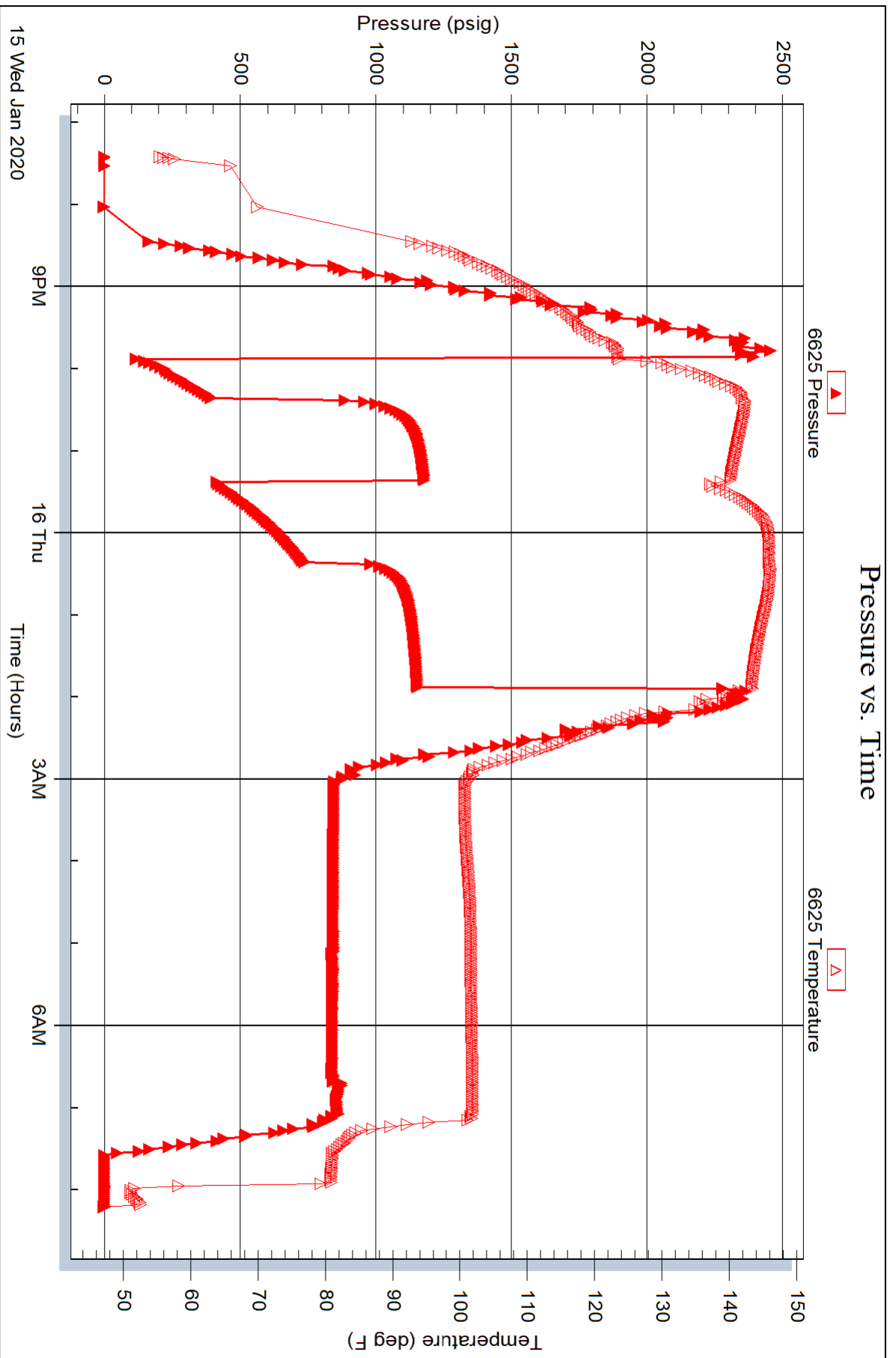
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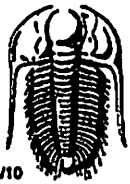
Inside

Murfin Drilling Co., Inc.

Burr #1-6

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66417

NO.

Well Name & No. Burr #1-6 Test No. 1 Date 1-11-20
 Company Murfin Drilling Co. Inc. Elevation 3443 KB 3438 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3
 Location: Sec. 6 Twp 3s Rge. 37w Co. Cheyenne State KS

Interval Tested 4256 - 4320 Zone Tested Oread
 Anchor Length 64 Drill Pipe Run 4104 Mud Wt. 8.9
 Top Packer Depth 4251 Drill Collars Run 149 Vis 52
 Bottom Packer Depth 4256 Wt. Pipe Run - WL 6.0
 Total Depth 4320 Chlorides 700 ppm System LCM 2

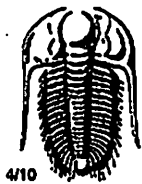
Blow Description IF: Blow built to just over 2" (diesel in bucket)
ISI: No blowback
FF: Blow built to 1 1/2"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>75</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 75 BHT 123 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 (A) Initial Hydrostatic 2078 Test 1300 T-On Location 15:00 Y11
 (B) First Initial Flow 21 Jars 250 T-Started 16:39
 (C) First Final Flow 34 Safety Joint 75 T-Open 19:40
 (D) Initial Shut-In 1071 Circ Sub _____ T-Pulled 23:41
 (E) Second Initial Flow 37 Hourly Standby _____ T-Out 1:30 Y12
 (F) Second Final Flow 58 Mileage 124 RT 124 Comments _____
 (G) Final Shut-In 1012 Sampler _____
 (H) Final Hydrostatic 2070 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Sub Total 1749 MP/DST Disc't _____

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66418

NO.

Well Name & No. Burr #1-6 Test No. 2 Date 1-12-20
 Company Murfin Drilling Co. Inc Elevation 3443 KB 3438 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3
 Location: Sec. 6 Twp 3s Rge. 37w Co. Cheyenne State KS

Interval Tested 4314 - 4390 Zone Tested LKC "A"
 Anchor Length 76 Drill Pipe Run 4168 Mud Wt. 9.0
 Top Packer Depth 4309 Drill Collars Run 149 Vls 60
 Bottom Packer Depth 4314 Wt. Pipe Run - WL 5.6
 Total Depth 4390 Chlorides 700 ppm System LCM 4

Blow Description IF: Blow built to just over 1" (diesel in bucket)
ISI: No blowback
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud w/trace oil</u>	<u>trace</u>	<u>0</u>	<u>100</u>	<u>0</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

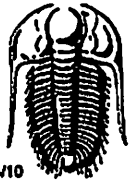
Rec Total 10 BHT 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2134 Test 1300 T-On Location 10:45
 (B) First Initial Flow 19 Jars 250 T-Started 11:53
 (C) First Final Flow 20 Safety Joint 75 T-Open 13:49
 (D) Initial Shut-In 814 Circ Sub _____ T-Pulled 16:50
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 18:30
 (F) Second Final Flow 23 Mileage 124RT 124 Comments _____
 (G) Final Shut-In 724 Sampler _____
 (H) Final Hydrostatic 2109 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30 EM Tool _____
 Initial Shut-In 60 Ruined Shale Packer _____
 Final Flow 30 Ruined Packer _____
 Final Shut-In 60 Extra Copies _____
 Sub Total 0
 Total 1749
 Sub Total 1749 MP/DST Disc't _____

Approved By _____ Our Representative James Winder

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66419

NO.

Well Name & No. Burr #1-6 Test No. 3 Date 1-13-20
 Company Murfin Drilling Co. Inc Elevation 3443 KB 3438 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3
 Location: Sec. 6 Twp 3s Rge. 37w Co. Cheyenne State Ks

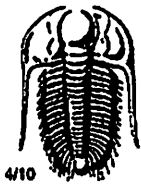
Interval Tested 4390 - 4493 Zone Tested LKC "D-5"
 Anchor Length 103 Drill Pipe Run 4230 Mud Wt. 9.1
 Top Packer Depth 4385 Drill Collars Run 149 Vis 59
 Bottom Packer Depth 4390 Wt. Pipe Run - WL 6.0
 Total Depth 4493 Chlorides 700 ppm System LCM 4

Blow Description IF: Blow built to BOB (11") at 40 sec in diesel, built to 202" (H₂O)
ISI: Blowback built to 3/4" in diesel
FF: Blow built to BOB at 45 sec in diesel, built to 135" (H₂O)
FSD: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
215	6HOCM	23	38	39	
690	SMW/GMCO	37	35	5	23
1065	SMWC60	18	74	5	3
250	SM/GOCW	26	23	48	3
180	SMCW w/oil spots	-	1	96	3
Rec Total <u>2400</u>	BHT <u>138</u>	Gravity <u>27.2</u>	API RW <u>287</u>	@ <u>59.5</u> F	Chlorides <u>29000</u> ppm

(A) Initial Hydrostatic 2171 Test 1300 T-On Location 7:00
 (B) First Initial Flow 472 Jars 250 T-Started 8:10
 (C) First Final Flow 765 Safety Joint 75 T-Open 10:06
 (D) Initial Shut-In 1275 Circ Sub _____ T-Pulled 12:37
 (E) Second Initial Flow 816 Hourly Standby _____ T-Out 16:05
 (F) Second Final Flow 1012 Mileage 124RT 124 Comments _____
 (G) Final Shut-In 1251 Sampler _____
 (H) Final Hydrostatic 2156 Straddle _____
 Initial Open 15 Shale Packer _____
 Initial Shut-In 60 Extra Packer _____
 Final Flow 15 Extra Recorder _____
 Final Shut-In 60 Day Standby _____
 Accessibility _____ Sub Total 1749 MP/DST Disc't _____

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



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66420

NO.

Well Name & No. Burr #1-6 Test No. 4 Date 1-14-20
 Company Murfin Drilling Co. Inc Elevation 3443 KB 3438 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3
 Location: Sec. 6 Twp 3s Rge. 37w Co. Cheyenne State KS

Interval Tested 4507-4590 Zone Tested LKC "H-J"
 Anchor Length 83 Drill Pipe Run 4355 Mud Wt. 9.0
 Top Packer Depth 4502 Drill Collars Run 149 Vls 60
 Bottom Packer Depth 4507 Wt. Pipe Run - WL 5.6
 Total Depth 4590 Chlorides 700 ppm System LCM 4

Blow Description IF: Blow built to 4 1/2" (diesel in bucket)
ISI: No blowback
FF: Blow built to 4 1/4"
FBI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>WCM w/trace of Oil</u>	<u>trace</u>	<u>22</u>	<u>78</u>	
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 131 Gravity _____ API RW .588 @ 50 °F Chlorides 16,000 ppm

- (A) Initial Hydrostatic 2227
- (B) First Initial Flow 20
- (C) First Final Flow 58
- (D) Initial Shut-In 1272
- (E) Second Initial Flow 62
- (F) Second Final Flow 101
- (G) Final Shut-In 1223
- (H) Final Hydrostatic 2226

- Test 1300
 - Jars 250
 - Safety Joint 75
 - Circ Sub
 - Hourly Standby
 - Mileage 124 RT 124
 - Sampler
 - Straddle
 - Shale Packer
 - Extra Packer
 - Extra Recorder
 - Day Standby
 - Accessibility
- Sub Total 1749

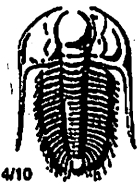
- T-On Location 5:35
- T-Started 6:35
- T-Open 8:29
- T-Pulled 12:31
- T-Out 14:15

- Comments _____
- EM Tool
 - Ruined Shale Packer
 - Ruined Packer
 - Extra Copies
- Sub Total 0
 Total 1749
 MP/DST Disc't _____

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

Approved By _____ Our Representative James Warden

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66421

NO.

Well Name & No. Burr #1-6 Test No. 5 Date 1-15-20
 Company Murfin Drilling Co. Inc Elevation 3443 KB 3438 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Shari faie Rig Murfin #3
 Location: Sec. 6 Twp 3s Rge. 37w Co. Cheyenne State KS

Interval Tested 4746 - 4880 Zone Tested Ft Scott - Celia
 Anchor Length 134 Drill Pipe Run 4576 Mud Wt. 9.2
 Top Packer Depth 4741 Drill Collars Run 149 Vis 53
 Bottom Packer Depth 4746 Wt. Pipe Run - WL 6.4
 Total Depth 4880 Chlorides 1300 ppm System LCM 2

Blow Description IF: Blow built to BOB (11") at 2 3/4 min (diesel in bucket), built to 81" (H2O)
ISI: Blowback built to BOB at 40 min (diesel), built to 13 1/2" (H2O)
FF: Blow built to BOB at 3 min (diesel), built to 125"
FSI: Blowback built to BOB at 46 min (diesel), built to 10 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>125</u>	<u>C60</u>	<u>20</u>	<u>80</u>		
<u>REV</u> <u>Out 1565</u> <u>samples every</u> <u>5 min</u>	<u>5 min - 15 min VSM/60</u>	<u>22</u>	<u>77</u>		<u>1</u>
<u>Below</u> <u>5 min</u>	<u>20 min - 75 min G/MCO</u>	<u>8</u>	<u>66</u>		<u>26</u>
<u>5 min</u>	<u>G/MCO</u>	<u>38</u>	<u>43</u>		<u>19</u>
<u>5 min</u>	<u>GEP = 625'</u>				

Rec Total 1810 BHT 140 Gravity 26.4 API RW @ °F Chlorides ppm

- (A) Initial Hydrostatic 2394
- (B) First Initial Flow 80
- (C) First Final Flow 398
- (D) Initial Shut-In 1181
- (E) Second Initial Flow 415
- (F) Second Final Flow 740
- (G) Final Shut-In 1156
- (H) Final Hydrostatic 2374

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

- Test 1300
- Jars 250
- Safety Joint 75
- Circ Sub REV out 50
- Hourly Standby
- Mileage 124 124
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1799

T-On Location 17:45 Y15
 T-Started 19:25
 T-Open 21:51
 T-Pulled 1:53
 T-Out 8:10 Y16

Comments walt on vac truck
to rev out
 EM Tool
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1799
 MP/DST Disc't

Approved By _____ Our Representative J. [Signature]

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Saman Sharifaie

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: **Martin Drilling Co., Inc.**
LEASE: **Burr #1-6**
FIELD: **Wildcat**
LOCATION: **990' ESL & 330' FEL**
SEC: **6 TWSP 3S RGE 31W**
COUNTY: **Cheyenne STATE Kansas**
CONTRACTOR: **Martin Drilling #3**
RTPD: **01/07/20 COMP 01/18/20**
SPUD: **5100' LTD 5103'**
MUD UP: **3650' TYPE MUD Chemical**

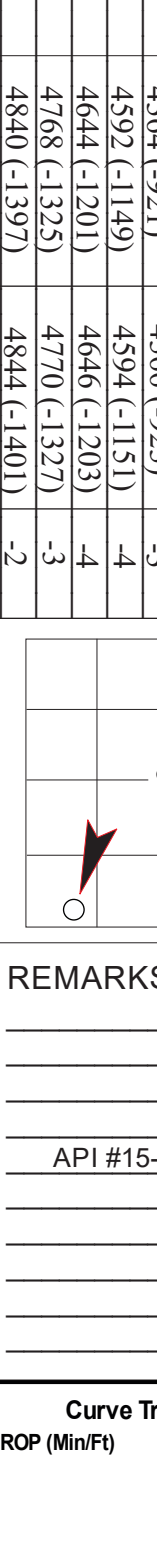
SAMPLES SAVED FROM: **4050' TO RTD**
DRILLING TIME KEPT FROM: **4050' TO RTD**
SAMPLES EXAMINED FROM: **4050' TO RTD**
GEOLOGICAL SUPERVISION FROM: **3750'**
REFERENCE WELL: **McCoy - CWA #1-8**

ELEVATIONS: **KB 3443'**
DF: _____
GL: **3438'**
Measurements Are All From Kelly Bushing

CASING: _____
CONDUCTOR: _____
SURFACE: **8-5/8" at 388'**
PRODUCTION: **5-1/2" at 397'**

ELECTRICAL SURVEYS: _____
CND, DIL, MEL, SWIR: _____
Fluor/Therline: _____

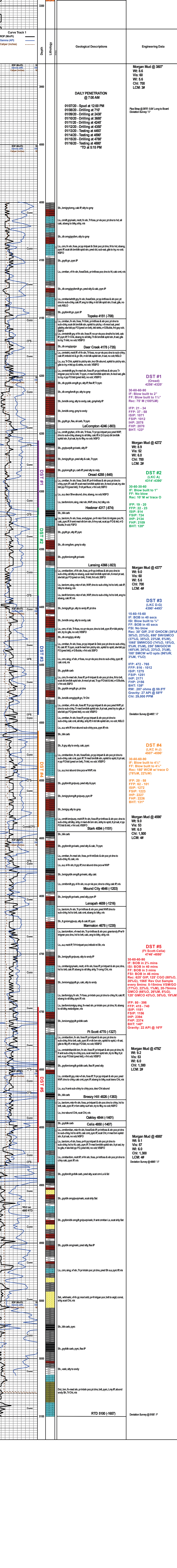
Formation	Sample Tops	E-log Tops	Strat Pos.
Anhydrite	3308 (+135)	3308 (+135)	-2
Base Anhydrite	3344 (+99)	3345 (+98)	-2
TOB&K	4148 (-705)	4151 (-708)	-2
TOB&K	4288 (-845)	4288 (-845)	-2
TOB&K	4364 (-921)	4366 (-923)	-2
Stark	4392 (-1499)	4394 (-1511)	-4
Mount City	4644 (-1201)	4646 (-1203)	-4
FT Scott	4708 (-1327)	4710 (-1327)	-3
ORKEY	4840 (-1397)	4844 (-1401)	-2



REMARKS: Due to poor to fair 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 #15-023-21530
Saman Sharifaie
Petroleum Geologist

*Tops have been adjusted to electric logs



MDCI
 Burr #1-6
 990' FSL 330' FEL
 Sec. 6-3S-37W
 3443' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref
Anhydrite	3308	+135	+2	Log tops	Datum	Ref
B/Anhydrite	3344	+99	-1	3308	+135	+2
Topeka	4148	-705	+7	3345	+98	-2
Oread	4288	-845	-2	4151	-708	-4
Lansing	4364	-921	-1	4288	-845	-2
Stark	4592	-1149	-2	4366	-923	-3
Mound City	4644	-1201	-2	4594	-1151	-4
Ft Scott	4768	-1325	-1	4646	-1203	-4
Oakley	4840	-1397	+2	4770	-1327	-3
Mississippian				4844	-1401	-2
RTD	5100					
LTD				5100		



CEMENT TREATMENT REPORT

Customer: Murfin Drilling Co	Well: Burr #1-6	Ticket: ICT3072
City, State: Wichita	County: Cheyenne, KS	Date: 1/7/2020
Field Rep: Jay	S-T-R: Sec6 - T3S - R37W	Service: Surface

Downhole Information	
Hole Size:	12 1/4 In
Hole Depth:	388 ft
Casing Size:	8 5/8 in
Casing Depth:	388 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Depth:	387.94 ft
Displacement:	22.9 bbls

Calculated Slurry	
Weight:	14.8 # / sx
Water / Sx:	6.88 gal / sx
Yield:	1.41 ft ³ / sx
Bbls / Ft.:	0.0735
Depth:	388 ft
Annular Volume:	28.52 bbls
Excess:	165%
Total Slurry:	75.3 bbls
Total Sacks:	300 sx

Product	% / #	#
Class A	100.00	28200
Poz		
Gel	2.00	564
CaCl	3.00	846
Gypsum		
Metso		
Kol Seal		
Flo Seal	0.25	75
Salt (brw)		
Total		29,685

TIME	RATE	PSI	BBLs	REMARKS
12:00				Called for job
14:15				Depart Oakley yard
15:45				Arrive on locn
15:50				JSA, discuss moving on, spotting & rigging up equipment
15:55				Move on, spot & rig up equipment
16:15				Rig-up complete. Rig TD 12 1/4" OH @ 388', circulate & condition hole.
16:45				Rig TOH w/ DP
17:10				Rig RIH w/ csg
18:05				Casing @ setting depth
18:13	6.5	350.0		Circulate & condition hole
18:22	4.0	90.0	5.0	Pump water
18:25	5.5	360.0	75.3	Mix & pump 300sx @ 14.8ppg. Y - 1.41cuft/sk, MW - 6.88g/sk
18:40	6.2	240.0		Displace w/ water
18:41	6.2		12.0	Cement returns to surface Note: 10bbls / 40sx of cement circulated to surface.
18:45			22.5	Shutdown & shut-in
18:50				Wash-up pumps & lines
19:00				JSA, discuss rigging down & racking up equipment
19:05				Rig down & rack up equipment
19:25				JSA, discuss journey management
19:30				Depart locn
				Thanks for calling Hurricane Services Inc

CREW		UNIT	SUMMARY		
Cementer:	Scott Green	74	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Dane Retzloff	230	5.7 bpm	260 psi	115 bbls
Bulk #1:	Jeff	181 / 256			
Bulk #2:					

SWIFT Services, Inc.

DATE 01/17/2020 PAGE NO. 1

WELL NO. <u>1-6</u>		LEASE <u>Burr</u>		JOB TYPE <u>Long String</u>		TICKET NO. <u>032716</u>		
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	<u>1015</u>							<u>On location w/ Float Equipment Rig LDDP.</u>
								<u>RTD - 5100</u>
								<u>LTD - 5103</u>
								<u>12 JTs of 5 1/2" x 15.5# set @ 5097.9'</u>
								<u>shoe Jt - 21, 23, Baffle Plate - 5076, 48</u>
								<u>Centralizers - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 34, 44</u>
								<u>Baskets - 11, 35, 45</u>
	<u>1215</u>							<u>Start Casing w/ Float Equipment</u>
	<u>1445</u>							<u>Break Circulation, @ 2577, Jt # 60</u>
								<u>Break Circulation on Bottom</u>
	<u>1630</u>							<u>Lost Circulation,</u>
								<u>Hook up to Swift</u>
		<u>2</u>	<u>8</u>					<u>Plug Rathole w/ 30 SKS SMD</u>
		<u>2</u>	<u>4</u>					<u>Plug Mousehole w/ 20 SKS SMD</u>
		<u>5</u>	<u>12</u>					<u>Pump Mud Flush</u>
		<u>5</u>	<u>20</u>					<u>Pump KCl Flush</u>
		<u>4</u>	<u>48</u>					<u>Start EA2 Cement - 200 SKS</u>
		<u>4</u>	<u>48</u>					<u>Finish Cement</u>
	<u>1720</u>							<u>Drop Plug, washout Pump Lines.</u>
	<u>1730</u>	<u>7</u>						<u>Start Displacement</u>
		<u>7</u>	<u>96</u>				<u>500</u>	<u>Catch Cmt</u>
		<u>6</u>	<u>118</u>				<u>1000</u>	<u>Lift Pressure</u>
	<u>1745</u>	<u>6</u>	<u>121</u>				<u>1500</u>	<u>Land Plug</u>
								<u>Release Truck, Dry</u>
								<u>Wash up</u>
								<u>Rack up</u>
	<u>1815</u>							<u>Job Complete</u>

Thank You,
Jon, Austin, Preston, Isaac

