

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	HULDA 1-23
Doc ID	1509596

All Electric Logs Run

DIL
DUCP
MEL
BHCS

MDCI
Hulda #1-23
330FSL 1320FEL
Sec. 23-T2S-R38W
3402' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3282	+120	+1	3282	+120	+1
B/Anhydrite	3319	+83	+1	3315	+87	+5
Topeka	4099	-697	Flat	4093	-691	+6
Oread	4252	-850	-5	4248	-846	-1
Lansing	4318	-916	-2	4314	-912	+2
Stark	4548	-1146	+3	4545	-1143	+6
Mound City	4598	-1196	+3	4598	-1196	+3
Ft Scott	4723	-1321	+4	4730	-1328	-3
Oakley	4798	-1396	+7	4807	-1405	-2
Mississippian				5054	-1652	-25
RTD	5100					
LTD				5100		



CEMENT TREATMENT REPORT

Customer: Murfin Drilling Co	Well: Hulda #1-23	Ticket: ICT3407
City, State: Wichita, KS	County: Cheyenne, KS	Date: 3/12/2020
Field Rep: Arturo - T/P	S-T-R: Sec 23 - T2S - R38W	Service: Cement - PTA

Downhole Information	
Hole Size:	7.875 in
Hole Depth:	5100 ft
Casing Size:	8.625 in
Casing Depth:	306 ft
Drill Pipe:	4.5 in
Depth:	3325 ft
Tool / Packers:	
Depth:	ft
Displacements:	47.3 bbls

Calculated Slurry	
Weight:	13.8 # / sk
Water / Sk:	6.89 gal / sk
Yield:	1.42 ft ³ / sk
Bbls / Ft:	
Depth:	ft
Annular Volume:	bbls
Excess:	
Total Slurry:	64.5 bbls
Total Sacks:	255 sk

Product	% / #	#
Class A	60.00	14382
Poz	40.00	7548
Gol	4.00	877
CaCl		
Gypsum		
Netso		
PhenoSeal		
Flo Seal		
Salt (bww)		
Total		22,807

TIME	RATE	PSI	BBLs	REMARKS
14:00				Call out
18:30				Depart yard
20:15				Arrive on locn. Rig RIH w/ DP
20:20				JSA, discuss moving on, spotting & rig-up of equipment
20:25				Move on, spot & rig-up equipment
20:45				Rig-up complete
				Plug #1 3325' - 3116'
21:05	3.2	180.0	5.0	Pump water ahead
21:10	4.5	340.0	12.6	Mix & pump 60sx cement @ 13.8ppg. Y - 1.42cuft/sk; MR - 6.89g/sk
21:13	3.5	100.0	2.0	Pump water behind
21:17	7.0	200.0	44.0	Rig displace w/ 9.3ppg WBM
21:23				Rig TOH w/ DP
				Plug #2 2525' - 2105'
21:50	4.5	220.0	5.0	Pump water ahead
21:52	4.8	270.0	25.3	Mix & pump 50sx cement @ 13.8ppg. Y - 1.42cuft/sk; MR - 6.89g/sk
21:59	3.7	100.0	2.0	Pump water behind
22:00	7.0	200.0	29.3	Rig displace w/ 9.3ppg WBM
22:05				Rig TOH w/ DP
				Plug #3 315' - 140'
23:05	4.5	180.0	12.6	Mix & pump 50sx cement @ 13.8ppg. Y - 1.42cuft/sk; MR - 6.89g/sk
23:09	2.8	50.0	1.5	Displace w/ water
23:12				Rig TOH w/ DP
23:30	2.0	50.0	7.8	Plug ratihole w/ 30sx cement @ 13.8ppg
23:57	2.0	50.0	3.8	Plug mousehole w/ 15sx cement @ 13.8ppg
0:00				Plug #4 40' - surface
0:00	2.0	50.0	2.5	Mix & pump 10sx cement @ 13.8ppg. Y - 1.42cuft/sk; MR - 6.89g/sk
0:05				Wash-up pumps & lines
0:10				JSA, discuss rigging down & racking up equipment
0:15				Rig down & rack up
0:25				JSA, discuss journey management
0:30				Depart locn
Thanks for calling Hurricane Services Inc.				

CREW		UNIT	SUMMARY		
Comerter:	Scott Green	74	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jesse Jones	230	4.0 bpm	153 psi	163 bbls
Bulk #1:	Kale Ochs	194 / 254			
Bulk #2:	Travis Thrasher				



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Hulda #1-23

23-2s-38w Cheyenne,KS

Start Date: 2020.03.06 @ 17:10:00

End Date: 2020.03.07 @ 00:04:00

Job Ticket #: 66485 DST #: 1

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

Printed: 2020.03.12 @ 15:00:30



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66485

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2020.03.06 @ 17:10:00

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:05:45

Time Test Ended: 00:04:00

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 83

Interval: 4275.00 ft (KB) To 4350.00 ft (KB) (TVD)

Reference Elevations: 3402.00 ft (KB)

Total Depth: 4350.00 ft (KB) (TVD)

3397.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8652 Outside

Press@RunDepth: 21.16 psig @ 4276.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.03.06

End Date:

2020.03.07

Last Calib.:

2020.03.07

Start Time:

17:10:05

End Time:

00:03:59

Time On Btm:

2020.03.06 @ 19:05:30

Time Off Btm:

2020.03.06 @ 22:08:30

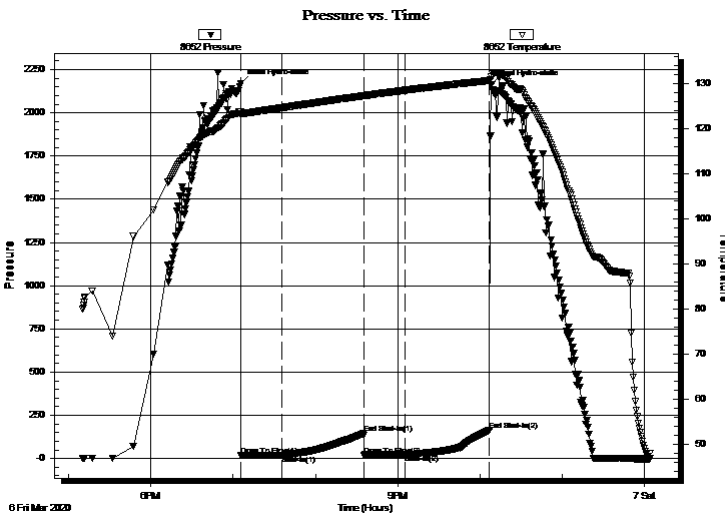
TEST COMMENT: 30 - IF: 1/8" Blow at open, built slightly, died back to surface blow

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2168.43	123.63	Initial Hydro-static
1	18.67	123.01	Open To Flow (1)
30	19.79	124.61	Shut-In(1)
90	145.44	127.29	End Shut-In(1)
91	20.38	127.27	Open To Flow (2)
120	21.16	128.50	Shut-In(2)
182	162.60	130.66	End Shut-In(2)
183	2161.98	131.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w /trace oil 100%m	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66485

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2020.03.06 @ 17:10:00

Tool Information

Drill Pipe:	Length: 4088.00 ft	Diameter: 3.80 inches	Volume: 57.34 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: 20000.00 lb
Drill Collar:	Length: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 58.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4275.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	104.00 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			4247.00	
Shut In Tool	5.00			4252.00	
Hydraulic tool	5.00			4257.00	
Jars	5.00			4262.00	
Safety Joint	3.00			4265.00	
Packer	5.00			4270.00	29.00 Bottom Of Top Packer
Packer	5.00			4275.00	
Stubb	1.00			4276.00	
Recorder	0.00	6625	Inside	4276.00	
Recorder	0.00	8652	Outside	4276.00	
Perforations	5.00			4281.00	
Blank Spacing	65.00			4346.00	
Perforations	1.00			4347.00	
Bullnose	3.00			4350.00	75.00 Bottom Packers & Anchor

Total Tool Length: 104.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66485

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2020.03.06 @ 17:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w /trace oil 100%m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

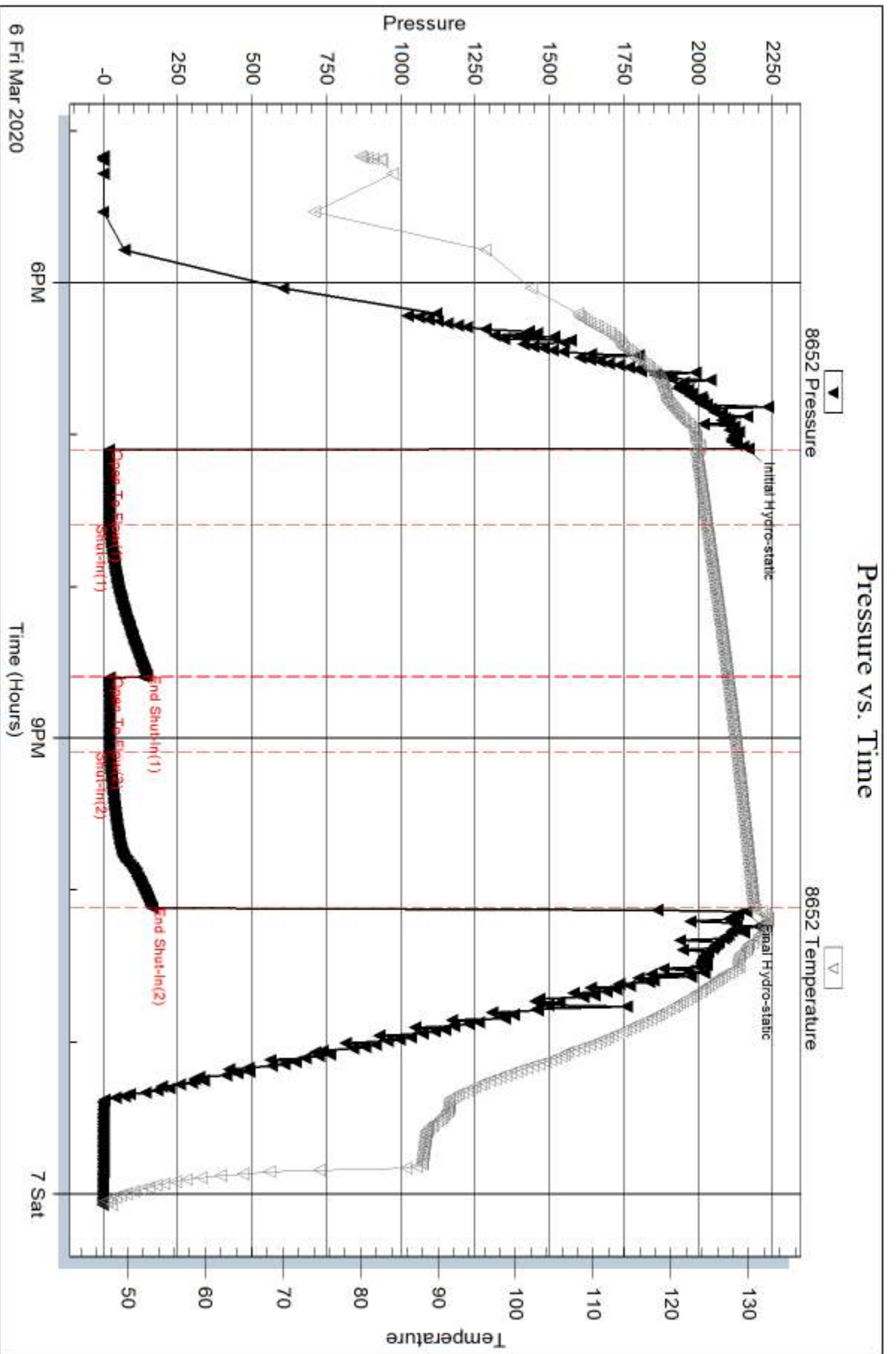
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



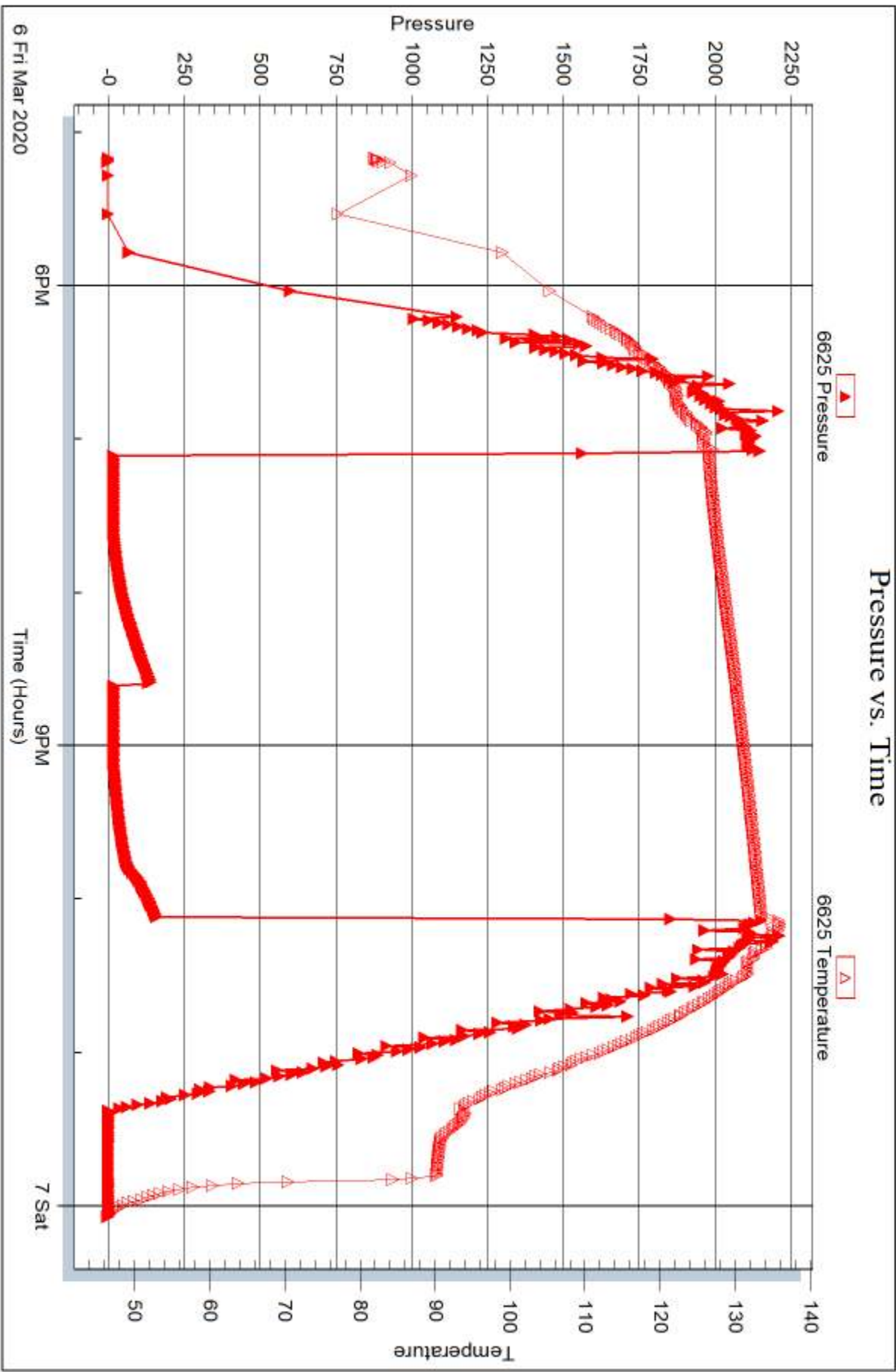
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Hulda #1-23

DST Test Number: 1





DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Hulda #1-23

23-2s-38w Cheyenne,KS

Start Date: 2020.03.07 @ 09:10:00

End Date: 2020.03.07 @ 17:34:15

Job Ticket #: 66486 DST #: 2

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

Printed: 2020.03.12 @ 14:56:56



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne, KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66486

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2020.03.07 @ 09:10:00

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:38:00

Time Test Ended: 17:34:15

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4346.00 ft (KB) To 4400.00 ft (KB) (TVD)

Reference Elevations: 3402.00 ft (KB)

Total Depth: 4400.00 ft (KB) (TVD)

3397.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8652 Outside

Press@RunDepth: 20.68 psig @ 4347.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.03.07 End Date: 2020.03.07

Last Calib.: 2020.03.07

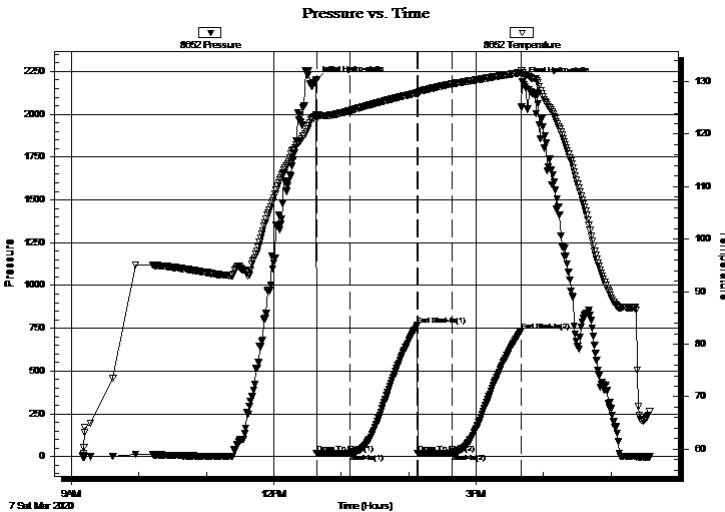
Start Time: 09:10:05 End Time: 17:34:14

Time On Btm: 2020.03.07 @ 12:37:45

Time Off Btm: 2020.03.07 @ 15:41:15

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

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2197.63	123.74	Initial Hydro-static
1	17.68	122.79	Open To Flow (1)
30	18.88	124.47	Shut-In(1)
90	766.25	127.86	End Shut-In(1)
91	19.16	127.49	Open To Flow (2)
121	20.68	129.54	Shut-In(2)
182	733.06	131.72	End Shut-In(2)
184	2189.85	131.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

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.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66486

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2020.03.07 @ 09:10:00

Tool Information

Drill Pipe:	Length: 4151.00 ft	Diameter: 3.80 inches	Volume: 58.23 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 59.12 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4346.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	83.00 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			4318.00	
Shut In Tool	5.00			4323.00	
Hydraulic tool	5.00			4328.00	
Jars	5.00			4333.00	
Safety Joint	3.00			4336.00	
Packer	5.00			4341.00	29.00 Bottom Of Top Packer
Packer	5.00			4346.00	
Stubb	1.00			4347.00	
Recorder	0.00	6625	Inside	4347.00	
Recorder	0.00	8652	Outside	4347.00	
Perforations	15.00			4362.00	
Blank Spacing	34.00			4396.00	
Perforations	1.00			4397.00	
Bullnose	3.00			4400.00	54.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66486

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2020.03.07 @ 09:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 91.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud 100%	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

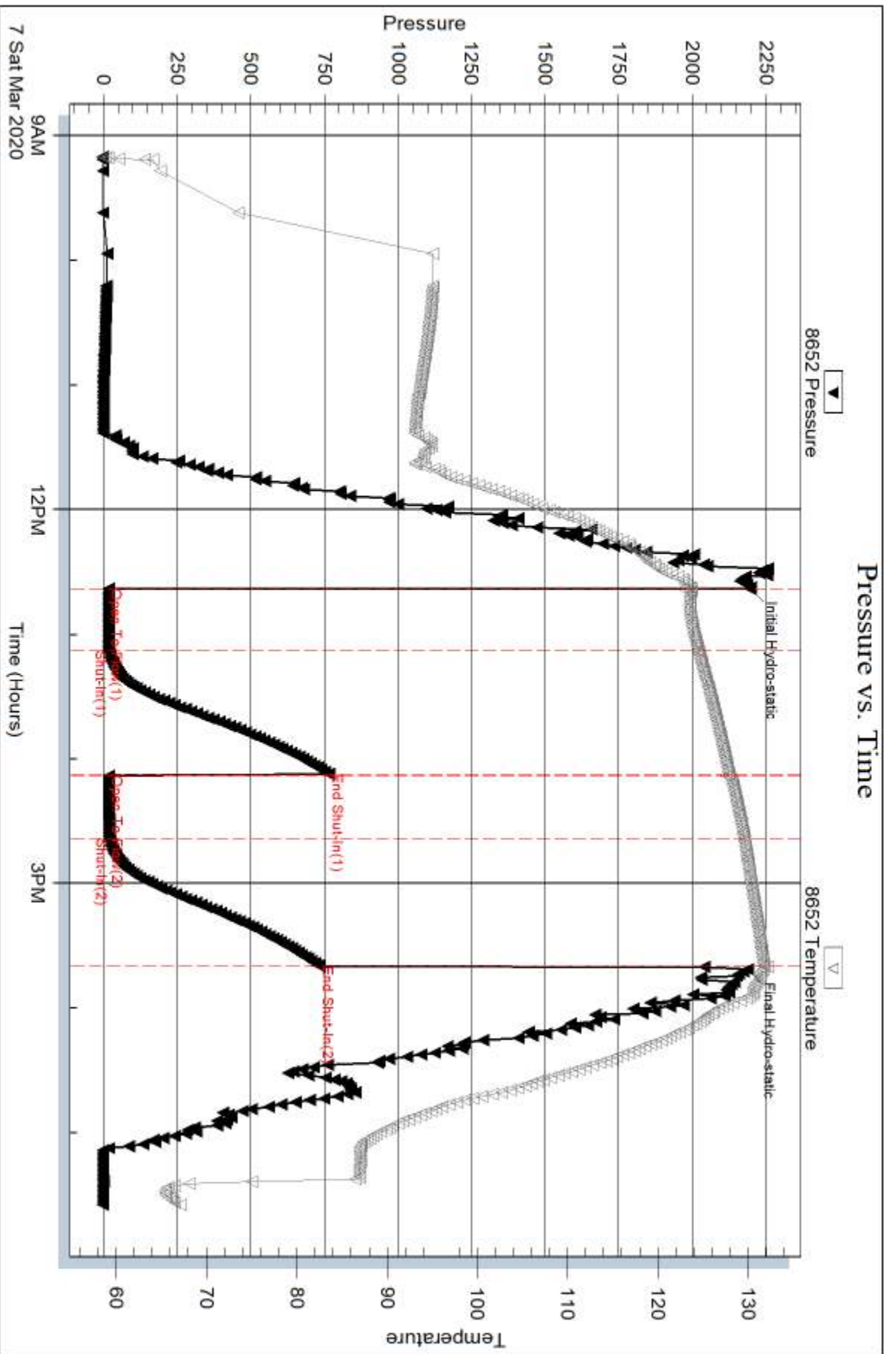
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



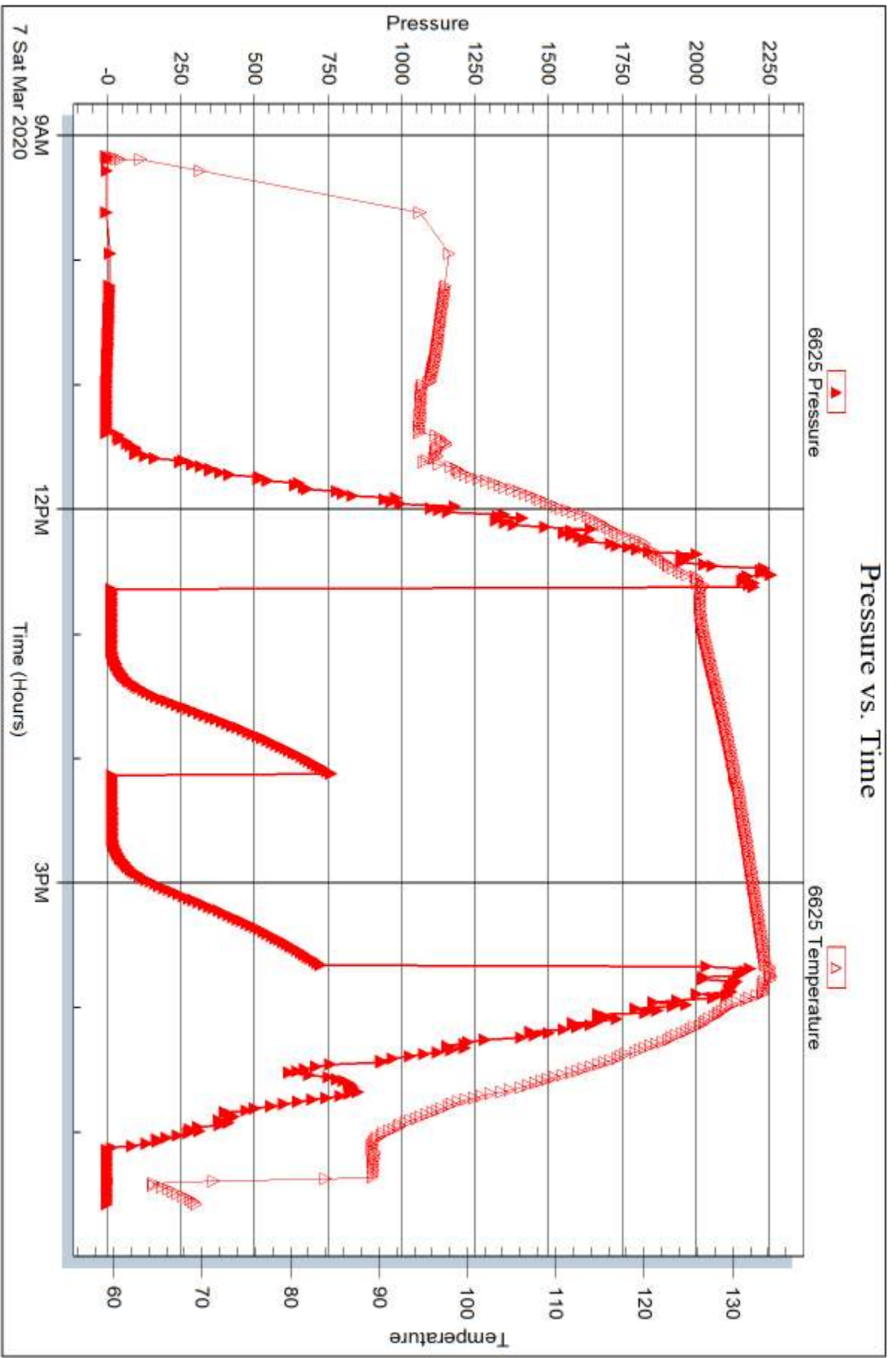
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Hulda #1-23

DST Test Number: 2





DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Hulda #1-23

23-2s-38w Cheyenne,KS

Start Date: 2020.03.08 @ 04:14:00

End Date: 2020.03.08 @ 11:04:15

Job Ticket #: 66487 DST #: 3

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

Printed: 2020.03.12 @ 14:48:01



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne, KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66487

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2020.03.08 @ 04:14:00

GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:07:00

Time Test Ended: 11:04:15

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4394.00 ft (KB) To 4460.00 ft (KB) (TVD)

Reference Elevations: 3402.00 ft (KB)

Total Depth: 4460.00 ft (KB) (TVD)

3397.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8652 Outside

Press@RunDepth: 22.10 psig @ 4395.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.03.08

End Date:

2020.03.08

Last Calib.:

2020.03.08

Start Time:

04:14:05

End Time:

11:04:14

Time On Btm:

2020.03.08 @ 06:06:45

Time Off Btm:

2020.03.08 @ 09:09:45

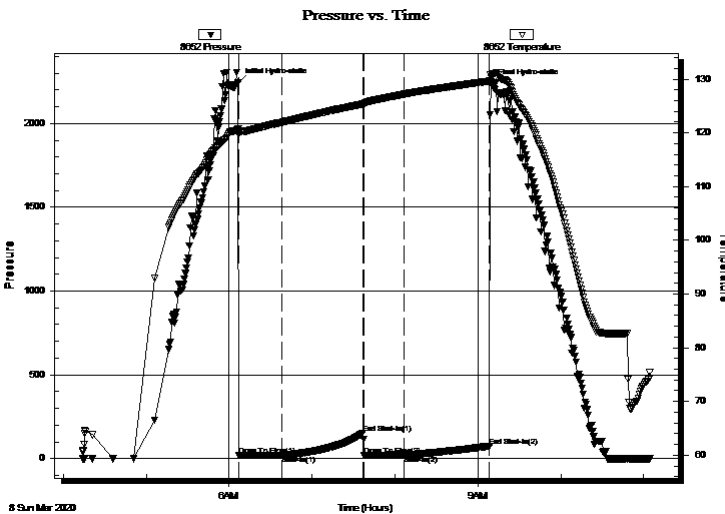
TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1"

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2242.28	120.67	Initial Hydro-static
1	17.61	119.60	Open To Flow (1)
32	19.90	121.96	Shut-In(1)
90	151.24	125.36	End Shut-In(1)
91	20.87	125.39	Open To Flow (2)
120	22.10	127.19	Shut-In(2)
182	75.02	129.66	End Shut-In(2)
183	2237.98	130.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%	0.02
0.00	Oil spots in tool	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.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66487

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2020.03.08 @ 04:14:00

Tool Information

Drill Pipe:	Length: 4215.00 ft	Diameter: 3.80 inches	Volume: 59.13 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4394.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	95.00 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			4366.00	
Shut In Tool	5.00			4371.00	
Hydraulic tool	5.00			4376.00	
Jars	5.00			4381.00	
Safety Joint	3.00			4384.00	
Packer	5.00			4389.00	29.00 Bottom Of Top Packer
Packer	5.00			4394.00	
Stubb	1.00			4395.00	
Recorder	0.00	6625	Inside	4395.00	
Recorder	0.00	8652	Outside	4395.00	
Perforations	25.00			4420.00	
Blank Spacing	34.00			4454.00	
Perforations	3.00			4457.00	
Bullnose	3.00			4460.00	66.00 Bottom Packers & Anchor

Total Tool Length: 95.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66487

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2020.03.08 @ 04:14:00

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: 75.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	Mud 100%	0.025
0.00	Oil spots in tool	0.000

Total Length: 5.00 ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

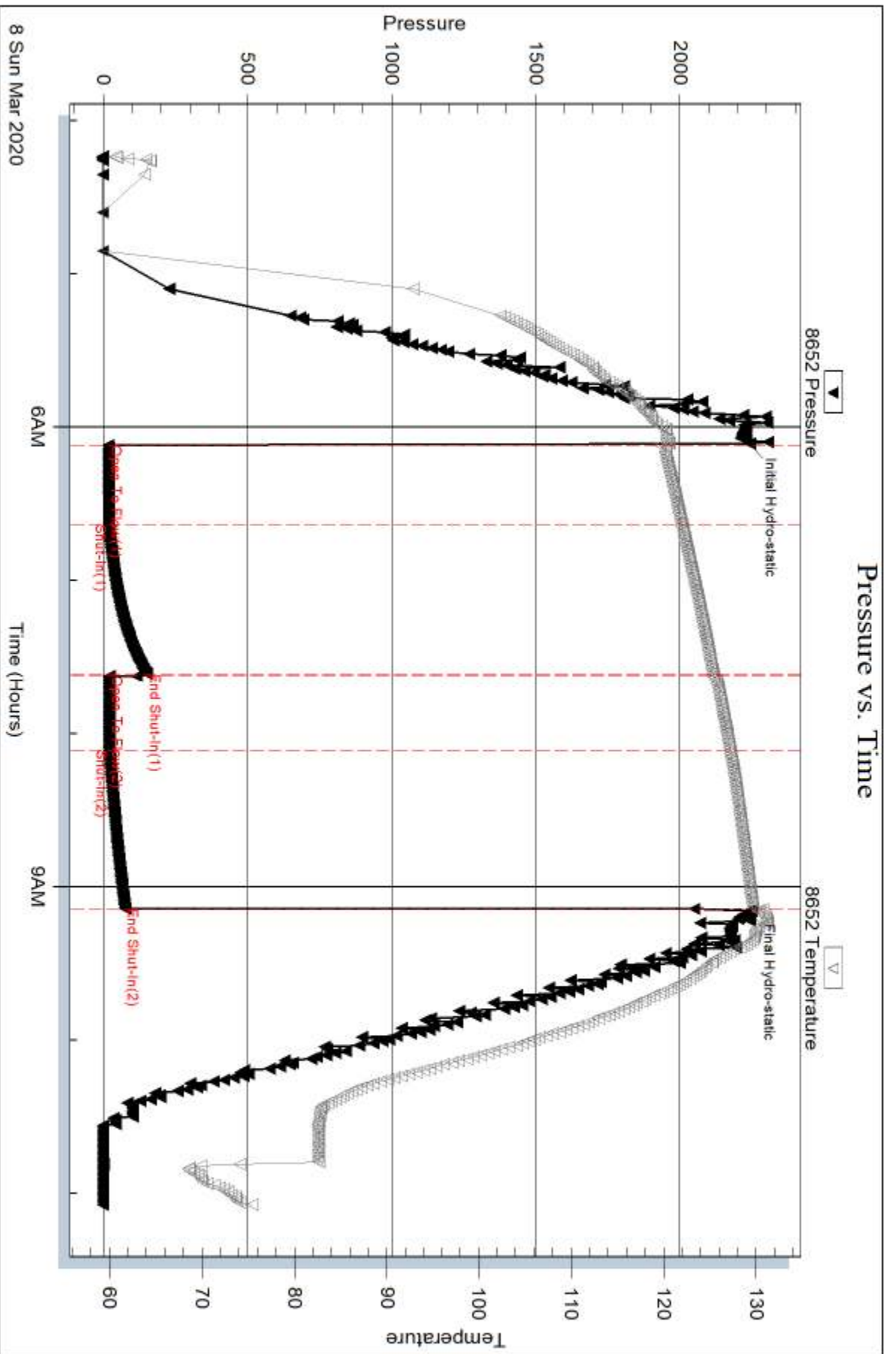
Num Gas Bombs: 0

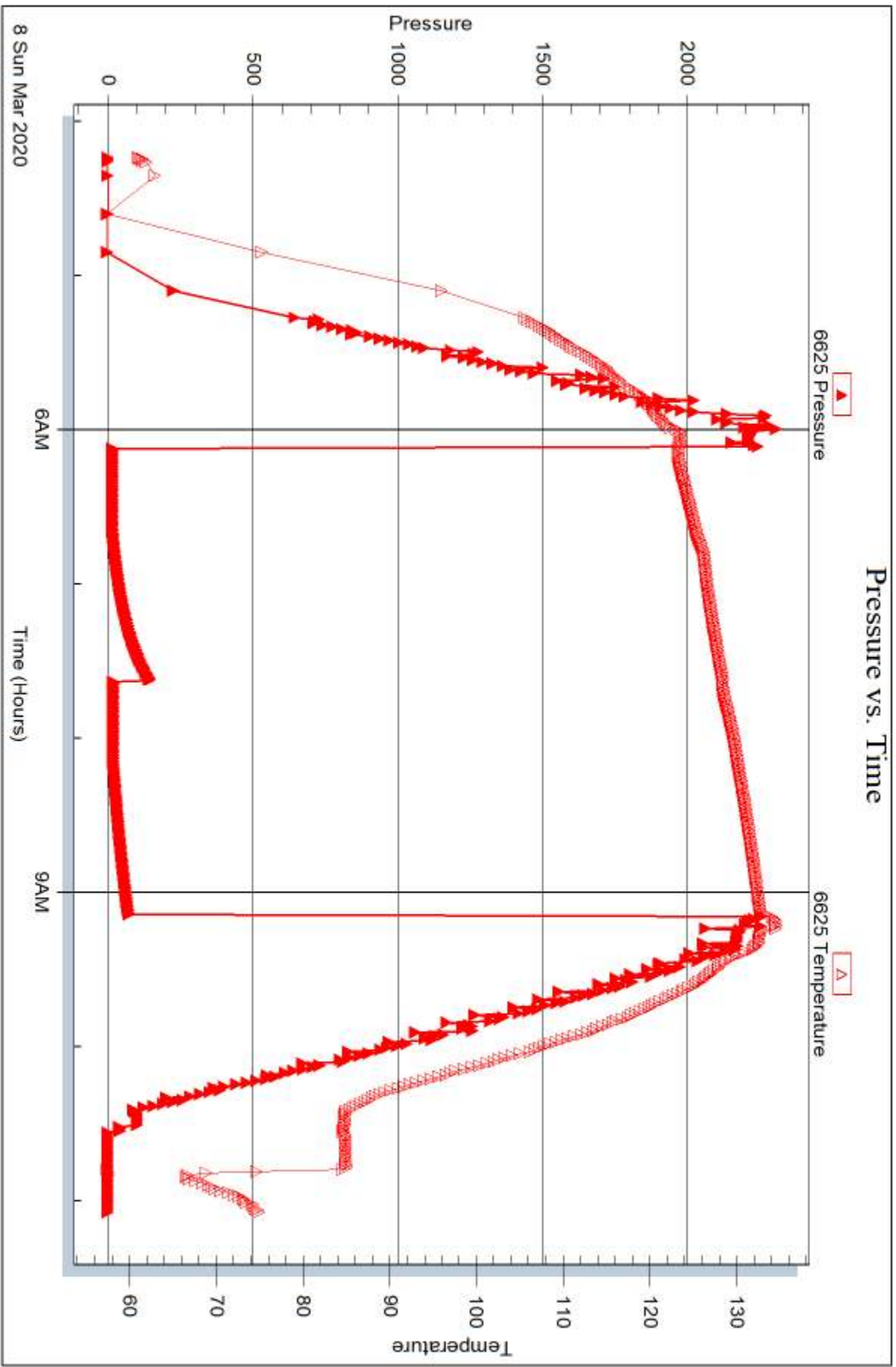
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Hulda #1-23

23-2s-38w Cheyenne,KS

Start Date: 2020.03.09 @ 00:35:00

End Date: 2020.03.09 @ 08:00:15

Job Ticket #: 66488 DST #: 4

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

Printed: 2020.03.12 @ 14:46:53



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne, KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66488

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2020.03.09 @ 00:35:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:44:30
 Time Test Ended: 08:00:15
 Interval: **4446.00 ft (KB) To 4546.00 ft (KB) (TVD)**
 Total Depth: 4546.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3402.00 ft (KB)
 3397.00 ft (CF)
 KB to GR/CF: 5.00 ft

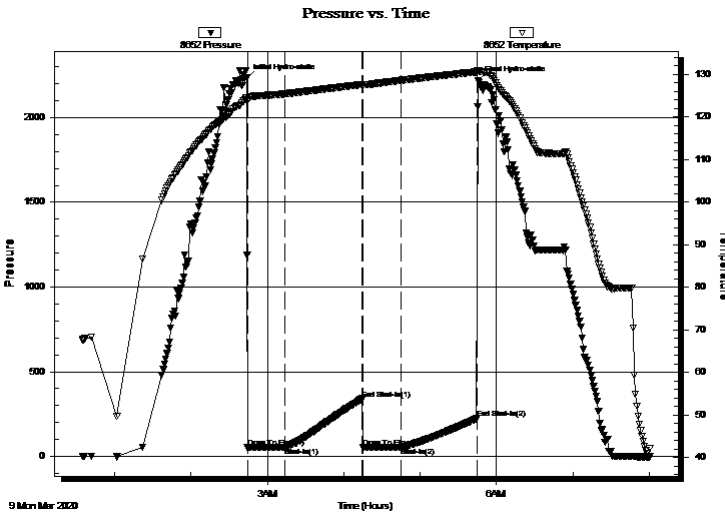
Serial #: 8652

Outside

Press@RunDepth: 54.41 psig @ 4447.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2020.03.09 End Date: 2020.03.09 Last Calib.: 2020.03.09
 Start Time: 00:35:05 End Time: 08:00:14 Time On Btm: 2020.03.09 @ 02:44:00
 Time Off Btm: 2020.03.09 @ 05:45:30

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

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2232.67	124.42	Initial Hydro-static
1	51.48	123.91	Open To Flow (1)
30	53.32	125.36	Shut-In(1)
91	340.61	127.58	End Shut-In(1)
92	52.61	127.47	Open To Flow (2)
121	54.41	128.51	Shut-In(2)
181	222.78	130.52	End Shut-In(2)
182	2215.77	130.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Mud 100%	0.34
0.00	Oil spots in tool	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.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66488

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2020.03.09 @ 00:35:00

Tool Information

Drill Pipe:	Length: 4247.00 ft	Diameter: 3.80 inches	Volume: 59.57 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 60.46 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4446.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	100.00 ft			
Tool Length:	129.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool chased 6' to bottom at open, lost 15' of mud - 2 1/4" surge blow at open

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4418.00	
Shut In Tool	5.00			4423.00	
Hydraulic tool	5.00			4428.00	
Jars	5.00			4433.00	
Safety Joint	3.00			4436.00	
Packer	5.00			4441.00	29.00 Bottom Of Top Packer
Packer	5.00			4446.00	
Stubb	1.00			4447.00	
Recorder	0.00	6625	Inside	4447.00	
Recorder	0.00	8652	Outside	4447.00	
Perforations	29.00			4476.00	
Blank Spacing	65.00			4541.00	
Perforations	2.00			4543.00	
Bullnose	3.00			4546.00	100.00 Bottom Packers & Anchor
Total Tool Length:	129.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66488

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2020.03.09 @ 00:35:00

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:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Mud 100%	0.344
0.00	Oil spots in tool	0.000

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

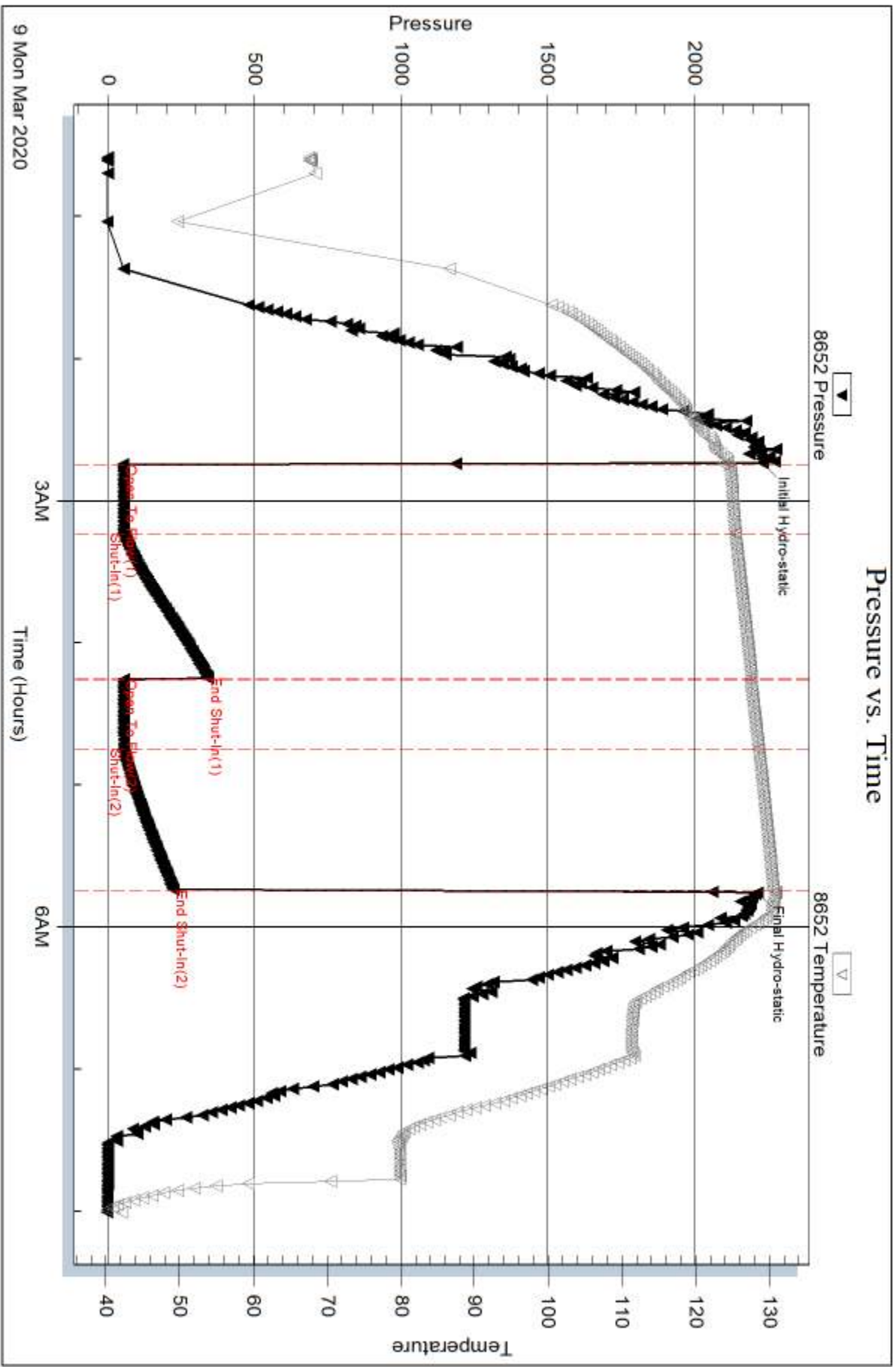
Num Gas Bombs: 0

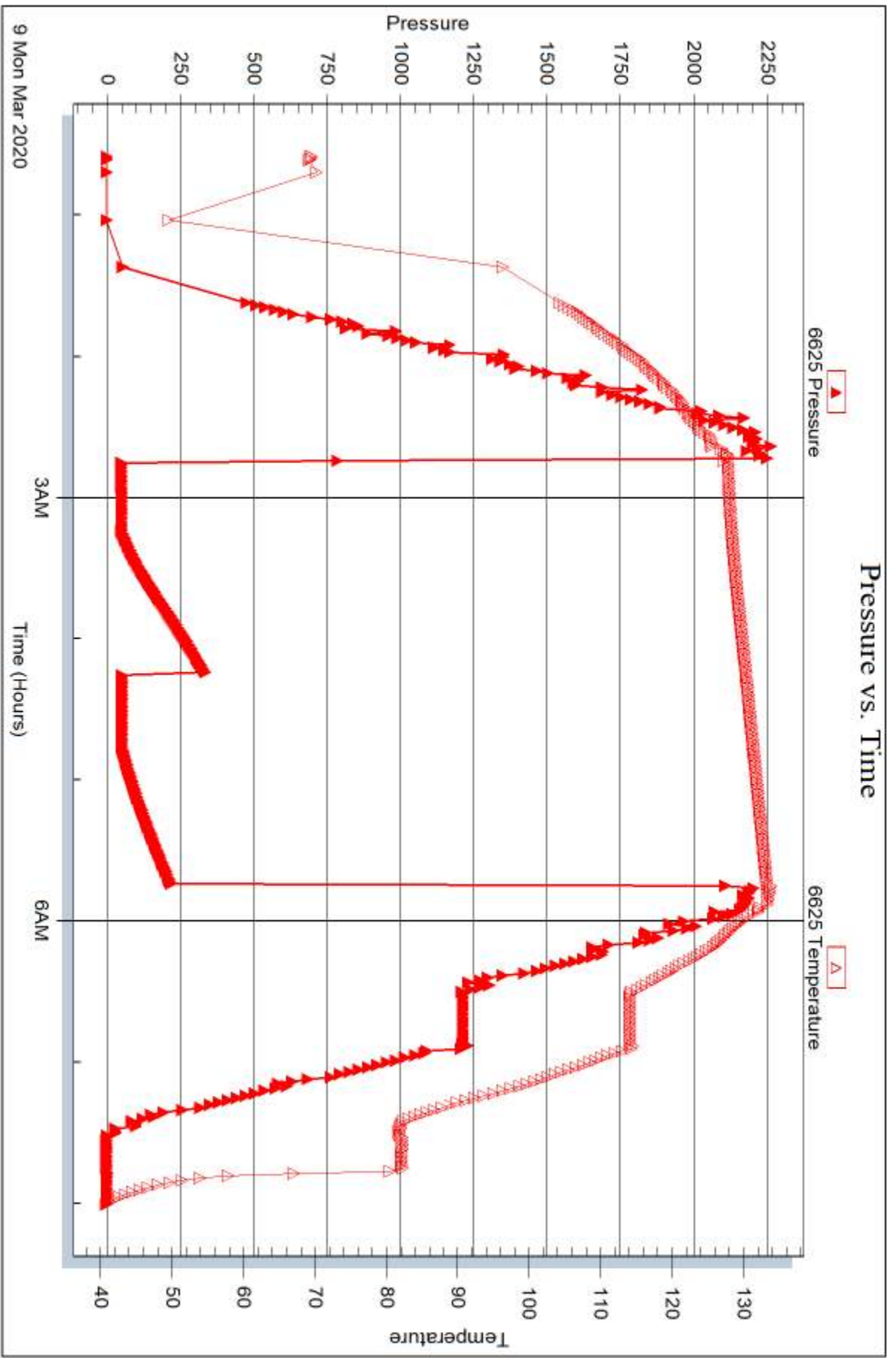
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Saman Sharifaie

Hulda #1-23

23-2s-38w Cheyenne,KS

Start Date: 2020.03.10 @ 15:16:00

End Date: 2020.03.10 @ 22:26:00

Job Ticket #: 66489 DST #: 5

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

Printed: 2020.03.12 @ 14:46:04



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne, KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66489

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2020.03.10 @ 15:16:00

GENERAL INFORMATION:

Formation: **Ft. Scott - Celia**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:19:00

Time Test Ended: 22:26:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4696.00 ft (KB) To 4840.00 ft (KB) (TVD)

Reference Elevations: 3402.00 ft (KB)

Total Depth: 4840.00 ft (KB) (TVD)

3397.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8652 Outside

Press@RunDepth: 33.79 psig @ 4697.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.03.10

End Date:

2020.03.10

Last Calib.:

2020.03.10

Start Time: 15:16:05

End Time:

22:25:59

Time On Btm:

2020.03.10 @ 17:18:45

Time Off Btm:

2020.03.10 @ 20:21:15

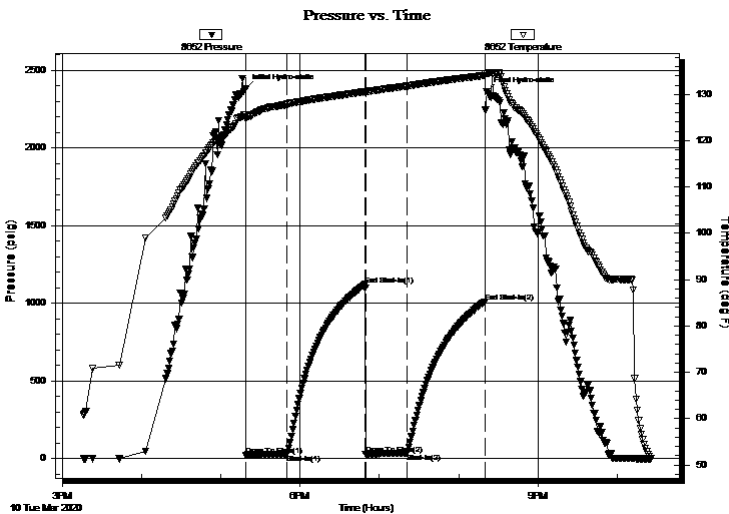
TEST COMMENT: 30 - IF: 1/2" Blow at open, built to 1"

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2382.70	125.50	Initial Hydro-static
1	22.34	124.69	Open To Flow (1)
31	26.52	127.83	Shut-In(1)
91	1120.08	130.58	End Shut-In(1)
91	29.42	130.11	Open To Flow (2)
122	33.79	131.80	Shut-In(2)
181	1009.87	134.09	End Shut-In(2)
183	2365.59	134.42	Final Hydro-static

Recovery

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

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66489

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2020.03.10 @ 15:16:00

Tool Information

Drill Pipe:	Length: 4499.00 ft	Diameter: 3.80 inches	Volume: 63.11 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 64.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4696.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	144.00 ft			
Tool Length:	173.00 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			4668.00	
Shut In Tool	5.00			4673.00	
Hydraulic tool	5.00			4678.00	
Jars	5.00			4683.00	
Safety Joint	3.00			4686.00	
Packer	5.00			4691.00	29.00 Bottom Of Top Packer
Packer	5.00			4696.00	
Stubb	1.00			4697.00	
Recorder	0.00	6625	Inside	4697.00	
Recorder	0.00	8652	Outside	4697.00	
Perforations	10.00			4707.00	
Blank Spacing	129.00			4836.00	
Perforations	1.00			4837.00	
Bullnose	3.00			4840.00	144.00 Bottom Packers & Anchor

Total Tool Length: 173.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-2s-38w Cheyenne,KS

250 N. Water STE 300
Wichita, KS 67202

Hulda #1-23

Job Ticket: 66489

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2020.03.10 @ 15:16:00

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: 72.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud 100%	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

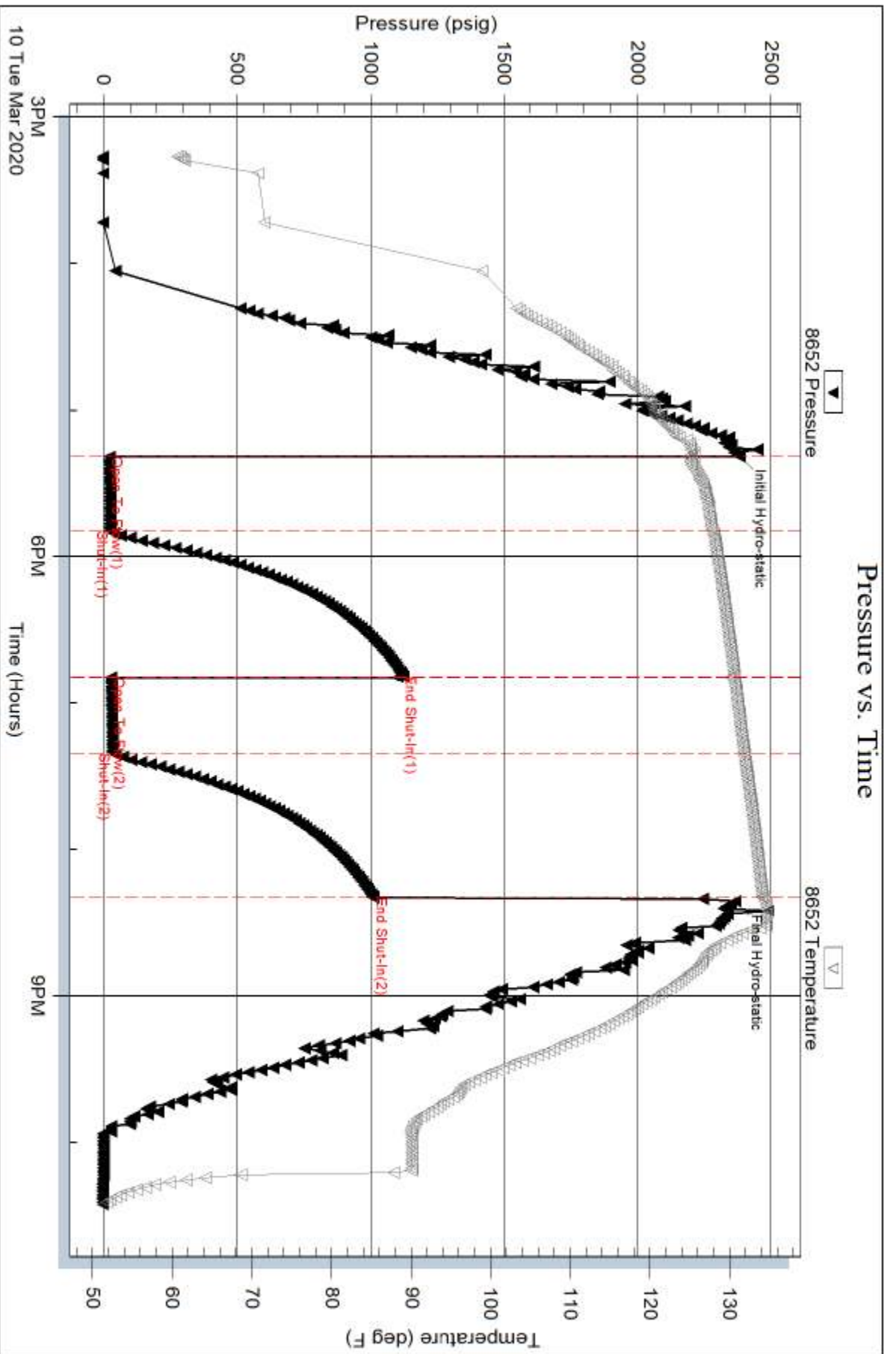
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



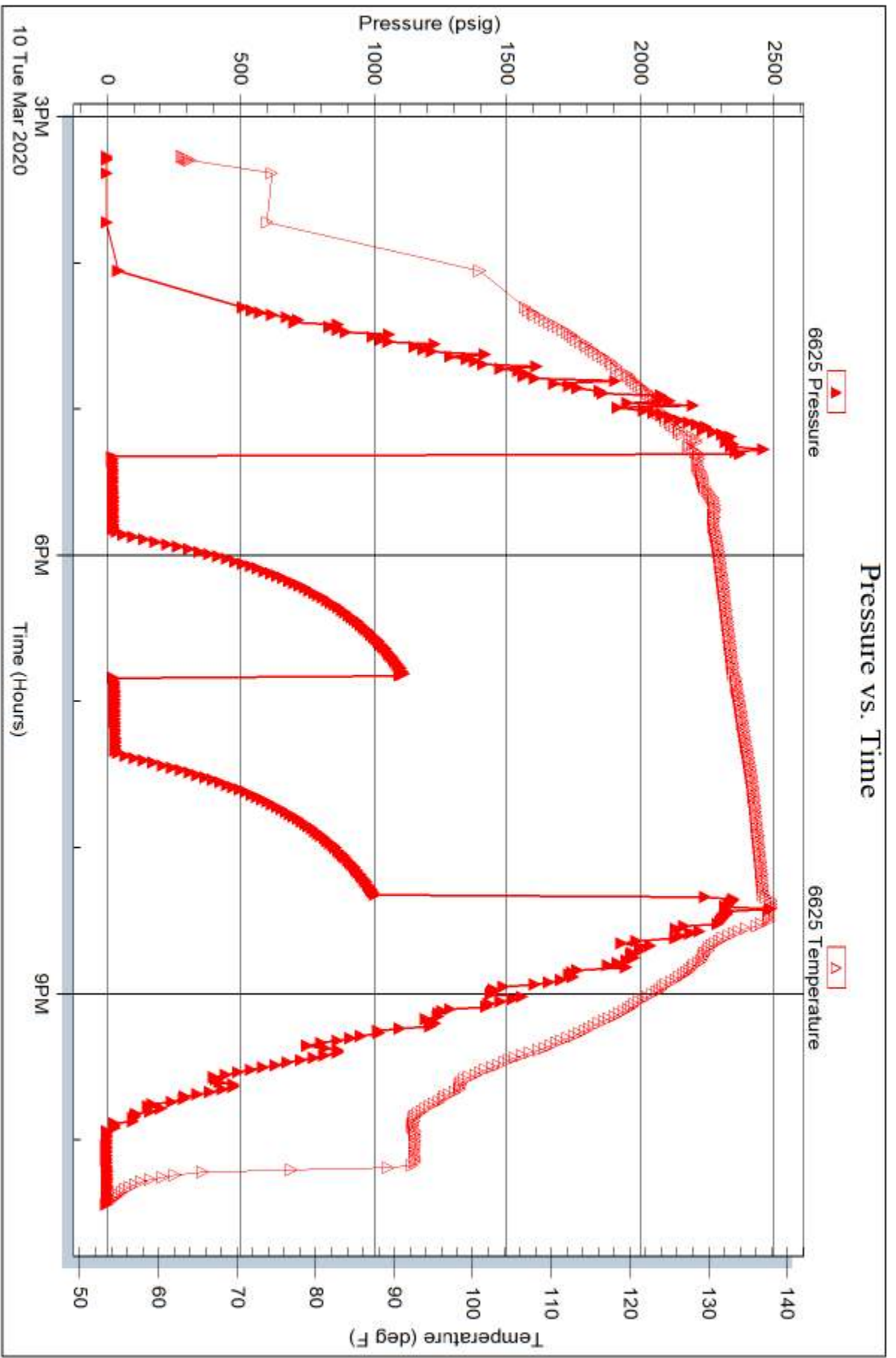
Serial #: 6625

Inside

Murfin Drilling Co., Inc.

Hulda #1-23

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 66489

Printed: 2020.03.12 @ 14:46:05



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66485

NO.

Well Name & No. Hulda #1-23 Test No. 1 Date 3-6-20
 Company Murfin Drilling Co. Inc. Elevation 3402 KB 3397 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #7
 Location: Sec. 23 Twp 2s Rge. 38w Co. Cheyenne State KS

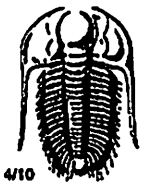
Interval Tested 4275 - 4350 Zone Tested LKC "A"
 Anchor Length 75 Drill Pipe Run 4088 Mud Wt. 9.1
 Top Packer Depth 4270 Drill Collars Run 180 Vis 70
 Bottom Packer Depth 4275 Wt. Pipe Run - WL 6.0
 Total Depth 4350 Chlorides 900 ppm System LCM 5
 Blow Description IF: 1/8" Blow at open, built slightly, died back to surface blow
ISI: No blowback
FF: No blow
FSI: No blow

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

Rec Total 5 BHT 131 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2168 Test 1300 T-On Location 13:30 3/8
 (B) First Initial Flow 19 Jars 250 T-Started 17:10
 (C) First Final Flow 20 Safety Joint 75 T-Open 19:05
 (D) Initial Shut-In 145 Circ Sub _____ T-Pulled 22:07
 (E) Second Initial Flow 20 Hourly Standby _____ T-Out 00:00 3/7
 (F) Second Final Flow 21 Mileage 124 RT 124 Comments old OB @ 15:00
 (G) Final Shut-In 163 Sampler _____ rig finished short trip @ 14:00
 (H) Final Hydrostatic 2162 Straddle _____ EM Tool _____
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer 320
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total 320
 Accessibility _____ Total 2069
 Sub Total 1749 MP/DST Disc't _____

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



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66486

NO.

Well Name & No. Hulda #1-23 Test No. 2 Date 3-7-20
 Company Murfin Drilling Co. Inc Elevation 3402 KB 3397 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #7
 Location: Sec. 23 Twp 2s Rge. 38w Co. Cheyenne State KS

Interval Tested 4346 - 4400 Zone Tested LKC "D"
 Anchor Length 54 Drill Pipe Run 4151 Mud Wt. 9.2
 Top Packer Depth 4341 Drill Collars Run 180 Vis 91
 Bottom Packer Depth 4346 Wt. Pipe Run - WL 6.0
 Total Depth 4400 Chlorides 800 ppm System LCM 5

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

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</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 2 BHT 132 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2198 Test 1300
 (B) First Initial Flow 18 Jars 250
 (C) First Final Flow 19 Safety Joint 75
 (D) Initial Shut-In 766 Circ Sub _____
 (E) Second Initial Flow 19 Hourly Standby _____
 (F) Second Final Flow 21 Mileage 124 RT 124
 (G) Final Shut-In 733 Sampler _____
 (H) Final Hydrostatic 2190 Straddle _____

T-On Location 8:25
 T-Started 9:10
 T-Open 12:38
 T-Pulled 15:39
 T-Out 17:40

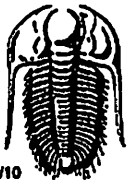
Comments Rig had to work on ANTI-FREEZE leak

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

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

Approved By _____ Our Representative James Winkler

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66487

NO.

Well Name & No. Hulda #1-23 Test No. 3 Date 3-8-20
 Company Murfin Drilling Co. Inc Elevation 3402 KB 3397 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #7
 Location: Sec. 23 Twp 2s Rge. 38w Co. Cheyenne State KS

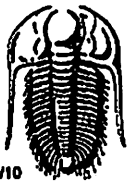
Interval Tested 4394-4460 Zone Tested LKC "6"
 Anchor Length 66 Drill Pipe Run 4215 Mud Wt. 9.1
 Top Packer Depth 4389 Drill Collars Run 180 Vis 75
 Bottom Packer Depth 4394 Wt. Pipe Run - WL 6.0
 Total Depth 4460 Chlorides 800 ppm System LCM 4
 Blow Description IF: 1/4' Blow at open, built to 1"
ISI: No blowback
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
	<u>Oil spots in tool</u>				

Rec Total 5 BHT 130 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2242 Test 1300 T-On Location 3:20
 (B) First Initial Flow 18 Jars 250 T-Started 4:14
 (C) First Final Flow 20 Safety Joint 75 T-Open 6:07
 (D) Initial Shut-In 151 Circ Sub _____ T-Pulled 9:08
 (E) Second Initial Flow 21 Hourly Standby _____ T-Out 11:00
 (F) Second Final Flow 22 Mileage 124RT 124 Comments _____
 (G) Final Shut-In 75 Sampler _____
 (H) Final Hydrostatic 2238 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1749 EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1749 MP/DST Disc't _____

Approved By _____ Our Representative James Winkler
 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 66488

NO.

Well Name & No. Hulda #1-23 Test No. 4 Date 3-9-20
 Company Murfin Drilling Co. Inc Elevation 3402 KB 3397 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #7
 Location: Sec. 23 Twp 2S Rge. 38W Co. Cheyenne State KS

Interval Tested 4446 - 4546 Zone Tested LKC "H-J"
 Anchor Length 100 Drill Pipe Run 4247 Mud Wt. 9.2
 Top Packer Depth 4441 Drill Collars Run 180 Vis 60
 Bottom Packer Depth 4446 Wt. Pipe Run - WL 6.4
 Total Depth 4546 Chlorides 800 ppm System LCM 5
 Blow Description IF: 2 1/4" Surge blow at open, built to 2 1/2"
ISI: No blowback
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>mud</u>				<u>100%</u>
	<u>Oil spots in tool</u>				

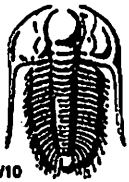
Rec Total 70 BHT 131 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2233 Test 1300 T-On Location 23:35 3/8
 (B) First Initial Flow 51 Jars 250 T-Started 00:35
 (C) First Final Flow 53 Safety Joint 75 T-Open 2:44
 (D) Initial Shut-In 341 Circ Sub _____ T-Pulled 5:44
 (E) Second Initial Flow 53 Hourly Standby _____ T-Out 7:55
 (F) Second Final Flow 54 Mileage 124 RT 124 Comments Tool chased 6' to
 (G) Final Shut-In 223 Sampler _____ bottom at open, lost 15' mud
 (H) Final Hydrostatic 2216 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1749

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

Sub Total 0
 Total 1749
 MP/DST Disc't _____

Approved By _____ Our Representative James Winkler
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66489

NO.

Well Name & No. Hulda #1-23 Test No. 5 Date 3-10-20
 Company Murfin Drilling Co Inc Elevation 3402 KB 3397 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #7
 Location: Sec. 23 Twp 2s Rge. 38w Co. Cheyenne State KS

Interval Tested 4696-4840 Zone Tested Ft. Scott - Celia
 Anchor Length 144 Drill Pipe Run 4499 Mud Wt. 9.1
 Top Packer Depth 4691 Drill Collars Run 180 Vis 72
 Bottom Packer Depth 4696 Wt. Pipe Run - WL 6.0
 Total Depth 4840 Chlorides 800 ppm System LCM 5
 Blow Description IF: 1/2" Blow at open, built to 1"
ISI: No blowback
FF: No blow
FSI: No blow

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

Rec Total 30 BHT 134 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2383 Test 1300 T-On Location 14:15
 (B) First Initial Flow 22 Jars 250 T-Started 15:16
 (C) First Final Flow 27 Safety Joint 75 T-Open 17:19
 (D) Initial Shut-In 1120 Circ Sub _____ T-Pulled 20:19
 (E) Second Initial Flow 29 Hourly Standby _____ T-Out 22:20
 (F) Second Final Flow 34 Mileage 124 RT 124 Comments _____
 (G) Final Shut-In 1010 Sampler _____
 (H) Final Hydrostatic 2366 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1749 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 30
 Final Shut-In 60

Approved By _____ Our Representative James Winks
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