

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

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

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or _____ Date Reached TD _____ Completion Date or
Recompletion Date _____ Recompletion Date _____

API No.: _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

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

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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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	HESTER 1-7
Doc ID	1711595

All Electric Logs Run

DIL
DUCP
MEL
BHCS

DRILLING REPORT - LOG TOPS - HESTER 1-7

MDCI Hester #1-7 800' FNL 2400' FWL Sec. 7-T1S-R39W 3320' KB						
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3327	-7	+41	3324	-4	+44
B/Anhydrite	3358	-38	+37	3357	-37	+38
Oread	4220	-900	+23	4212	-892	+31
Lansing	4296	-976	+19	4286	-966	+29
Mound City	4573	-1253	+26	4566	-1246	+33
Ft Scott	4702	-1382	+25	4700	-1380	+27
Breezy Hill	4766	-1446	+32	4766	-1446	+32
Mississippian	5033	-1713	+32	5030	-1710	+35
RTD	5100					
LTD				5100		



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Clayton Erickson

Hester #1-7

7-1s-39w Cheyenne,KS

Start Date: 2023.01.21 @ 15:53:00

End Date: 2023.01.22 @ 01:05:00

Job Ticket #: 69741 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2023.01.26 @ 11:55:04



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Company Inc
 250 N Water Ste 300
 Wichita, KS 67202
 ATTN: Clayton Erickson

7-1s-39w Cheyenne,KS

Hester #1-7

Job Ticket: 69741

DST#: 1

Test Start: 2023.01.21 @ 15:53:00

GENERAL INFORMATION:

Formation: **LKC A-D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:51:15
 Time Test Ended: 01:05:00
 Interval: **4312.00 ft (KB) To 4376.00 ft (KB) (TVD)**
 Total Depth: 4376.00 ft (KB) (TVD)
 Hole Diameter: 7.87 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Nathan Aneas
 Unit No: 71
 Reference Elevations: 3320.00 ft (KB)
 3315.00 ft (CF)
 KB to GR/CF: 5.00 ft

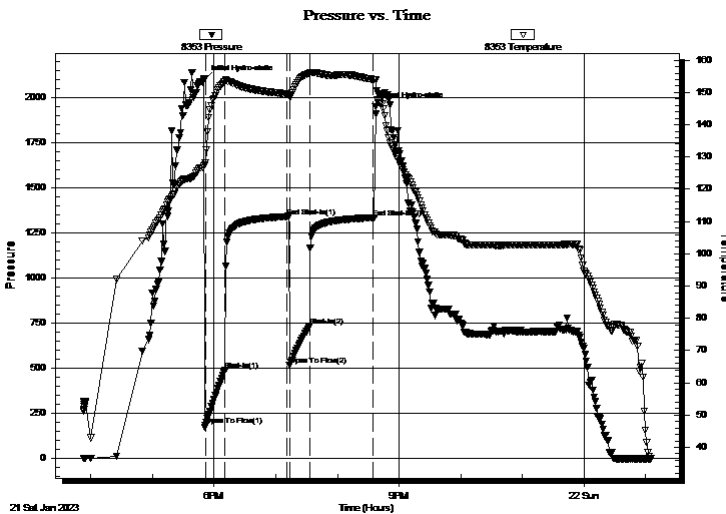
Serial #: 8353

Outside

Press@RunDepth: 733.68 psig @ 4313.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2023.01.21 End Date: 2023.01.22 Last Calib.: 2023.01.22
 Start Time: 15:53:01 End Time: 01:05:00 Time On Btm: 2023.01.21 @ 17:50:15
 Time Off Btm: 2023.01.21 @ 20:37:00

TEST COMMENT: 20:IF- Strong surface blow , BOB in 1 min, had to reset sensor
 60:IS- Weak surface blow , built to 3/4" in 10 min, final 5"
 20:FF- Strong surface blow , BOB in 10 min, final is 58 3/4"
 60:FS- Weak surface blow , died in 3 min

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2100.96	127.36	Initial Hydro-static
1	181.86	128.14	Open To Flow (1)
21	488.88	153.50	Shut-In(1)
81	1341.97	149.53	End Shut-In(1)
83	515.78	148.88	Open To Flow (2)
103	733.68	155.96	Shut-In(2)
165	1336.17	154.00	End Shut-In(2)
167	1954.08	154.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	GOMCW 40%W 30%G 20%M 10%O	0.58
315.00	GMCO 60%O 20%G 20%M	3.88
1319.00	GO 70%O 30%G Reversed out for 30 min	18.50

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc

7-1s-39w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #1-7

Job Ticket: 69741

DST#: 1

ATTN: Clayton Erickson

Test Start: 2023.01.21 @ 15:53:00

Tool Information

Drill Pipe:	Length: 4112.00 ft	Diameter: 3.80 inches	Volume: 57.68 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 58.55 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4312.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4285.00	
Hydraulic tool	5.00			4290.00	
Jars	5.00			4295.00	
EM Tool	4.00			4299.00	
Safety Joint	3.00			4302.00	
Packer	5.00			4307.00	32.00 Bottom Of Top Packer
Packer	5.00			4312.00	
Stubb	1.00			4313.00	
Recorder	0.00	8353	Outside	4313.00	
Recorder	0.00	8676	Inside	4313.00	
Perforations	27.00			4340.00	
Change Over Sub	1.00			4341.00	
Blank Spacing	31.00			4372.00	
Change Over Sub	1.00			4373.00	
Bullnose	3.00			4376.00	64.00 Bottom Packers & Anchor

Total Tool Length: 96.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc

7-1s-39w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #1-7

Job Ticket: 69741

DST#: 1

ATTN: Clayton Erickson

Test Start: 2023.01.21 @ 15:53:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

24.6 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
118.00	GOMCW 40%W 30%G 20%M 10%O	0.580
315.00	GMCO 60%O 20%G 20%M	3.881
1319.00	GO 70%O 30%G Reversed out for 30 min	18.502

Total Length: 1752.00 ft Total Volume: 22.963 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

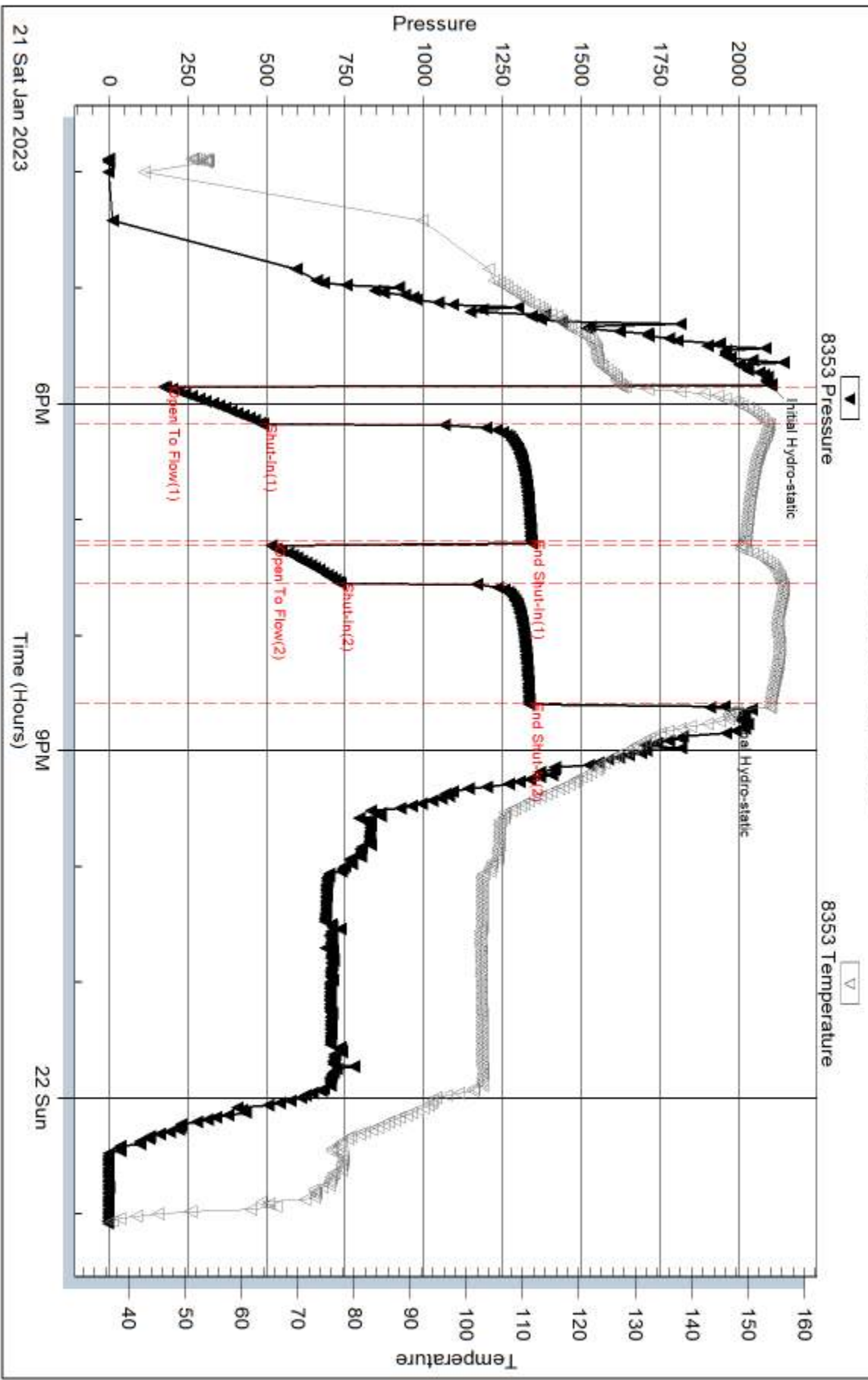
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 24 Oil API @ 60 deg API

Pressure vs. Time



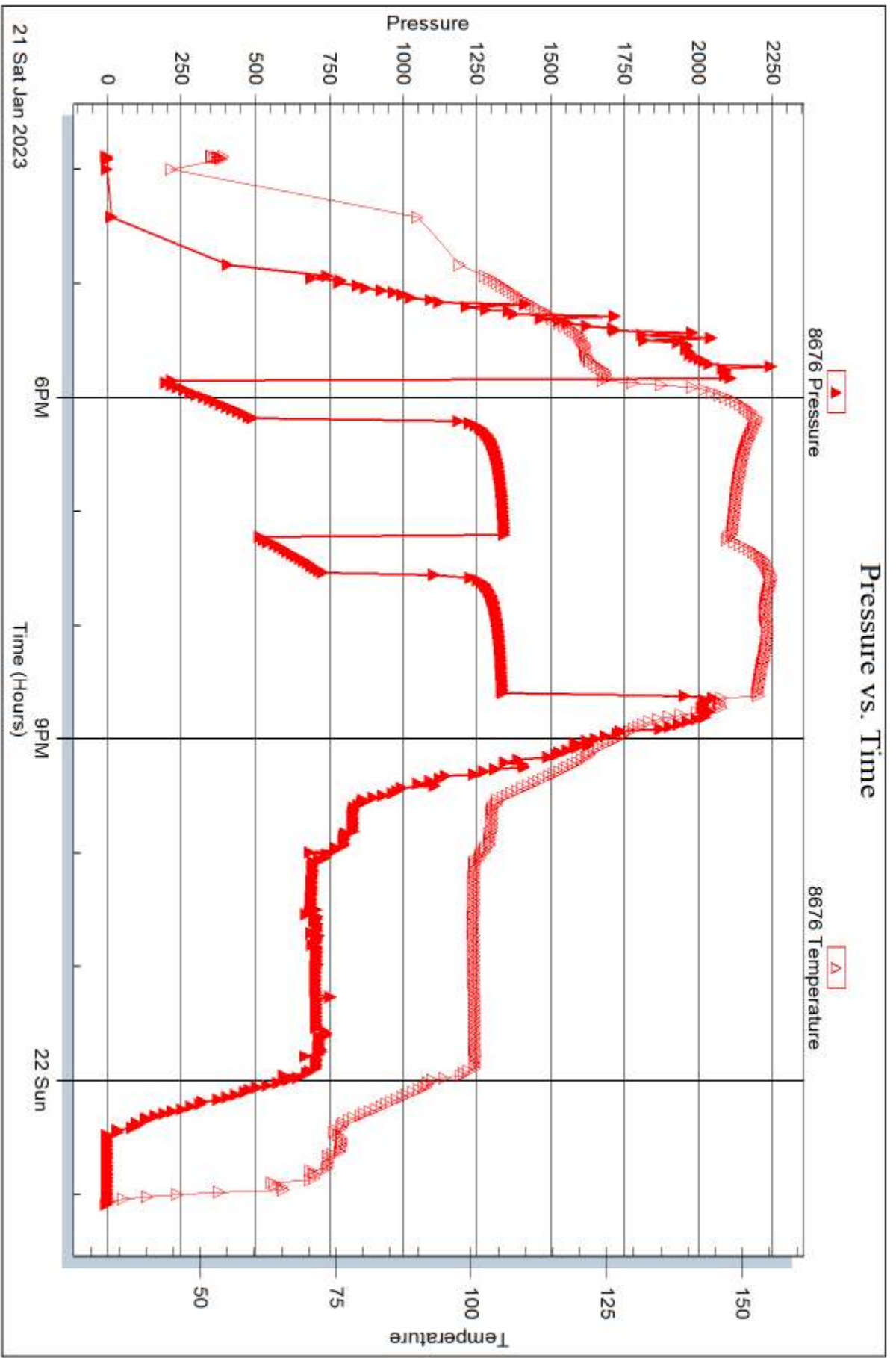
Serial #: 8676

Inside

Murfin Drilling Company Inc

Hester #1-7

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Clayton Erickson

Hester #1-7

7-1s-39w Cheyenne,KS

Start Date: 2023.01.22 @ 19:50:00

End Date: 2023.01.23 @ 04:37:45

Job Ticket #: 69742 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2023.01.26 @ 11:53:34

Murfin Drilling Company Inc
7-1s-39w Cheyenne,KS
Hester #1-7
DST # 2
LKC D2-G
2023.01.22



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Company Inc

7-1s-39w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #1-7

ATTN: Clayton Erickson

Job Ticket: 69742

DST#: 2

Test Start: 2023.01.22 @ 19:50:00

GENERAL INFORMATION:

Formation: **LKC D2-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:03:30

Time Test Ended: 04:37:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Nathan Aneas

Unit No: 71

Interval: 4372.00 ft (KB) To 4425.00 ft (KB) (TVD)

Reference Elevations: 3320.00 ft (KB)

Total Depth: 4425.00 ft (KB) (TVD)

3315.00 ft (CF)

Hole Diameter: 7.87 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8353 Outside

Press@RunDepth: 1138.33 psig @ 4373.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.01.22 End Date: 2023.01.23

Last Calib.: 2023.01.23

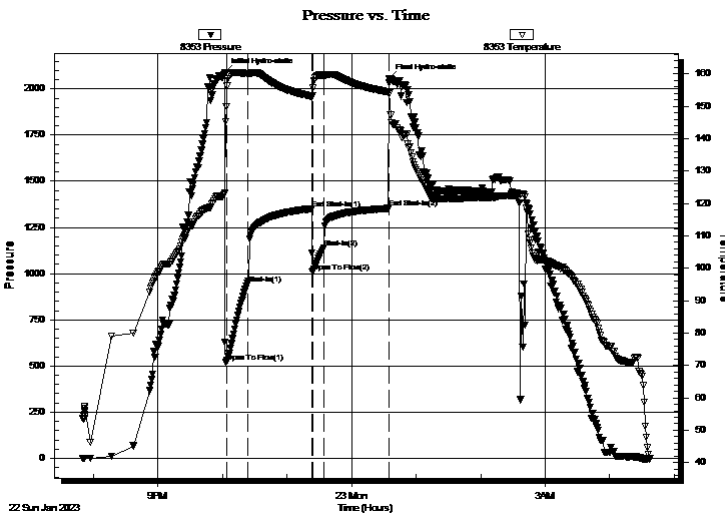
Start Time: 19:50:01 End Time: 04:37:45

Time On Btm: 2023.01.22 @ 22:02:00

Time Off Btm: 2023.01.23 @ 00:35:00

TEST COMMENT: 20:IF- Strong surface blow , BOB in 20 seconds, final is 372 1/4"
60:IS- Weak surface blow built to BOB in 7 min, final is 24 1/4"
10:FF- Strong surface blow , BOB in 20 seconds, final is 129 1/2"
60:FS- Weak surface blow , built to 7" in 10 min, final died to 5"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2089.08	123.31	Initial Hydro-static
2	520.37	149.91	Open To Flow (1)
22	946.00	160.04	Shut-In(1)
81	1351.16	153.06	End Shut-In(1)
82	1010.62	153.32	Open To Flow (2)
93	1138.33	159.67	Shut-In(2)
153	1353.42	154.44	End Shut-In(2)
153	2054.17	154.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	SGMCO 70%O 15%G 15%M	0.58
2894.00	Reversed out 25 min SGO 85%O 15%G	40.06
10.00	CO 100%O	0.14
0.00	GIP 504'	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 Company Inc

7-1s-39w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #1-7

Job Ticket: 69742

DST#: 2

ATTN: Clayton Erickson

Test Start: 2023.01.22 @ 19:50:00

Tool Information

Drill Pipe:	Length: 4173.00 ft	Diameter: 3.80 inches	Volume: 58.54 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 59.41 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4372.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4345.00	
Hydraulic tool	5.00			4350.00	
Jars	5.00			4355.00	
EM Tool	4.00			4359.00	
Safety Joint	3.00			4362.00	
Packer	5.00			4367.00	32.00 Bottom Of Top Packer
Packer	5.00			4372.00	
Stubb	1.00			4373.00	
Recorder	0.00	8353	Outside	4373.00	
Recorder	0.00	8676	Inside	4373.00	
Perforations	16.00			4389.00	
Change Over Sub	1.00			4390.00	
Blank Spacing	31.00			4421.00	
Change Over Sub	1.00			4422.00	
Bullnose	3.00			4425.00	53.00 Bottom Packers & Anchor

Total Tool Length: 85.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc

7-1s-39w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #1-7

Job Ticket: 69742

DST#: 2

ATTN: Clayton Erickson

Test Start: 2023.01.22 @ 19:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32.6 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 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
118.00	SGMCO 70%O 15%G 15%M	0.580
2894.00	Reversed out 25 min SGO 85%O 15%G	40.058
10.00	CO 100%O	0.140
0.00	GIP 504'	0.000

Total Length: 3022.00 ft Total Volume: 40.778 bbl

Num Fluid Samples: 0

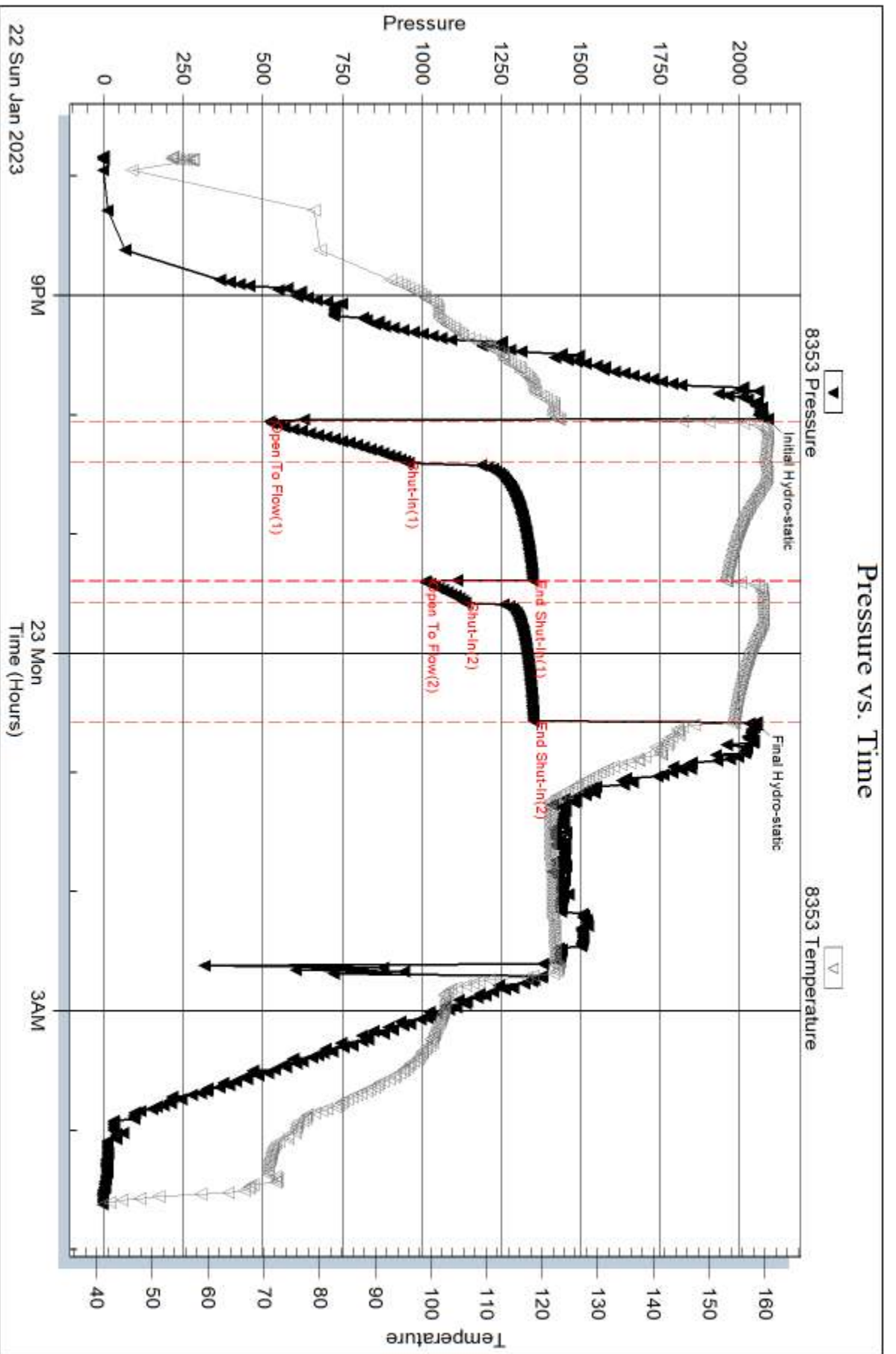
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 29 Oil API @ 30 deg API Corrected to 32 Oil API @ 60 deg API



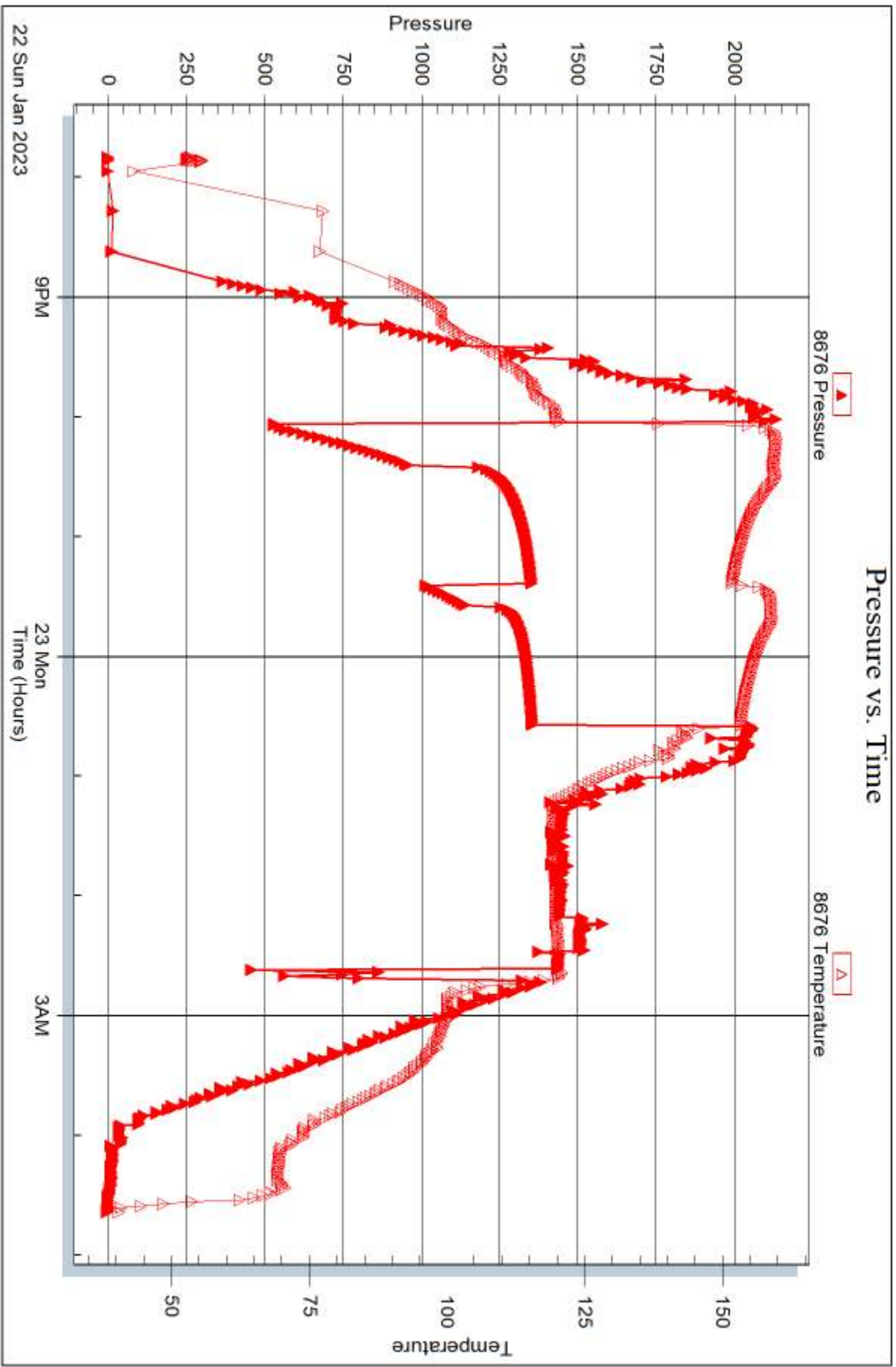
Serial #: 8676

Inside

Murfin Drilling Company Inc

Hester #1-7

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 69742

Printed: 2023.01.26 @ 11:53:35



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Clayton Erickson

Hester #1-7

7-1s-39w Cheyenne,KS

Start Date: 2023.01.23 @ 18:40:00

End Date: 2023.01.24 @ 01:30:45

Job Ticket #: 69743 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2023.01.26 @ 11:53:00

Murfin Drilling Company Inc
7-1s-39w Cheyenne,KS
Hester #1-7
DST # 3
LKC H-J
2023.01.23



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company Inc

7-1s-39w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #1-7

Job Ticket: 69743

DST#: 3

ATTN: Clayton Erickson

Test Start: 2023.01.23 @ 18:40:00

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:28:15

Time Test Ended: 01:30:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Nathan Aneas

Unit No: 71

Interval: 4423.00 ft (KB) To 4515.00 ft (KB) (TVD)

Reference Elevations: 3320.00 ft (KB)

Total Depth: 4515.00 ft (KB) (TVD)

3315.00 ft (CF)

Hole Diameter: 7.87 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8353 Outside

Press@RunDepth: 38.30 psig @ 4424.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.01.23

End Date:

2023.01.24

Last Calib.:

2023.01.24

Start Time: 18:40:01

End Time:

01:30:45

Time On Btm:

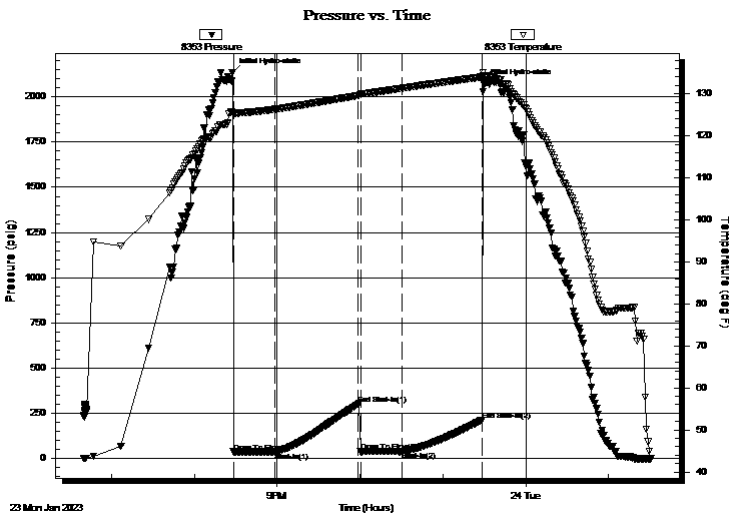
2023.01.23 @ 20:27:30

Time Off Btm:

2023.01.23 @ 23:29:30

TEST COMMENT: 30:IF- Weak surface blow , built to 1 3/4" in 10 min, final is 2"
60:IS- No blow back
30:FF- Weak surface blow , built to 1/4" in 10 min, final is weak surface
60:FS- No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.14	125.82	Initial Hydro-static
1	36.40	125.55	Open To Flow (1)
31	36.74	126.33	Shut-In(1)
91	300.01	129.60	End Shut-In(1)
93	37.65	129.85	Open To Flow (2)
123	38.30	131.33	Shut-In(2)
181	212.64	134.03	End Shut-In(2)
182	2071.23	134.29	Final Hydro-static

Recovery

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

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Company Inc

7-1s-39w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #1-7

Job Ticket: 69743

DST#: 3

ATTN: Clayton Erickson

Test Start: 2023.01.23 @ 18:40:00

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:28:15

Time Test Ended: 01:30:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Nathan Aneas

Unit No: 71

Interval: 4423.00 ft (KB) To 4515.00 ft (KB) (TVD)

Reference Elevations: 3320.00 ft (KB)

Total Depth: 4515.00 ft (KB) (TVD)

3315.00 ft (CF)

Hole Diameter: 7.87 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8676 Inside

Press@RunDepth: psig @ 4424.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.01.23

End Date:

2023.01.24

Last Calib.:

2023.01.24

Start Time: 18:40:01

End Time:

01:30:45

Time On Btm:

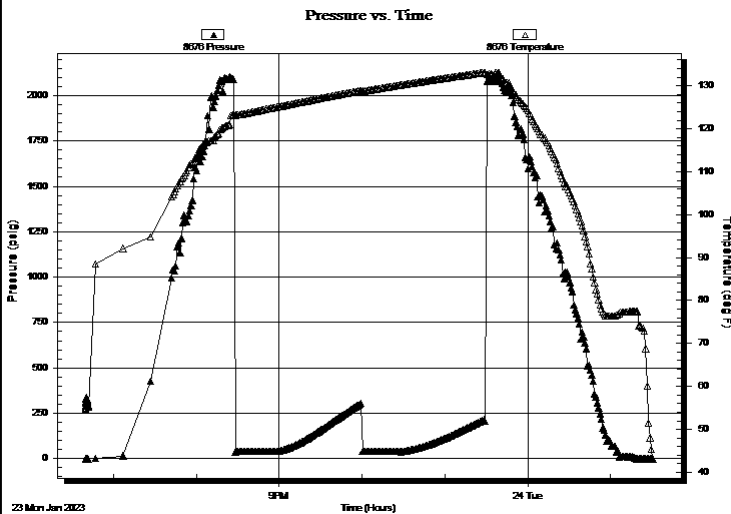
Time Off Btm:

TEST COMMENT: 30:IF- Weak surface blow , built to 1 3/4" in 10 min, final is 2"

60:IS- No blow back

30:FF- Weak surface blow , built to 1/4" in 10 min, final is weak surface

60:FS- No blow back



PRESSURE SUMMARY

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

Recovery

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

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc

7-1s-39w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #1-7

Job Ticket: 69743

DST#: 3

ATTN: Clayton Erickson

Test Start: 2023.01.23 @ 18:40:00

Tool Information

Drill Pipe:	Length: 4234.00 ft	Diameter: 3.80 inches	Volume: 59.39 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 177.00 ft	Diameter: 2.25 inches	Volume: 0.87 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 60.26 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4423.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	92.00 ft			
Tool Length:	124.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4396.00	
Hydraulic tool	5.00			4401.00	
Jars	5.00			4406.00	
EM Tool	4.00			4410.00	
Safety Joint	3.00			4413.00	
Packer	5.00			4418.00	32.00 Bottom Of Top Packer
Packer	5.00			4423.00	
Stubb	1.00			4424.00	
Recorder	0.00	8353	Outside	4424.00	
Recorder	0.00	8676	Inside	4424.00	
Perforations	23.00			4447.00	
Change Over Sub	1.00			4448.00	
Blank Spacing	63.00			4511.00	
Change Over Sub	1.00			4512.00	
Bullnose	3.00			4515.00	92.00 Bottom Packers & Anchor

Total Tool Length: 124.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc

7-1s-39w Cheyenne,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #1-7

Job Ticket: 69743

DST#: 3

ATTN: Clayton Erickson

Test Start: 2023.01.23 @ 18:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 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
5.00	Mud 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

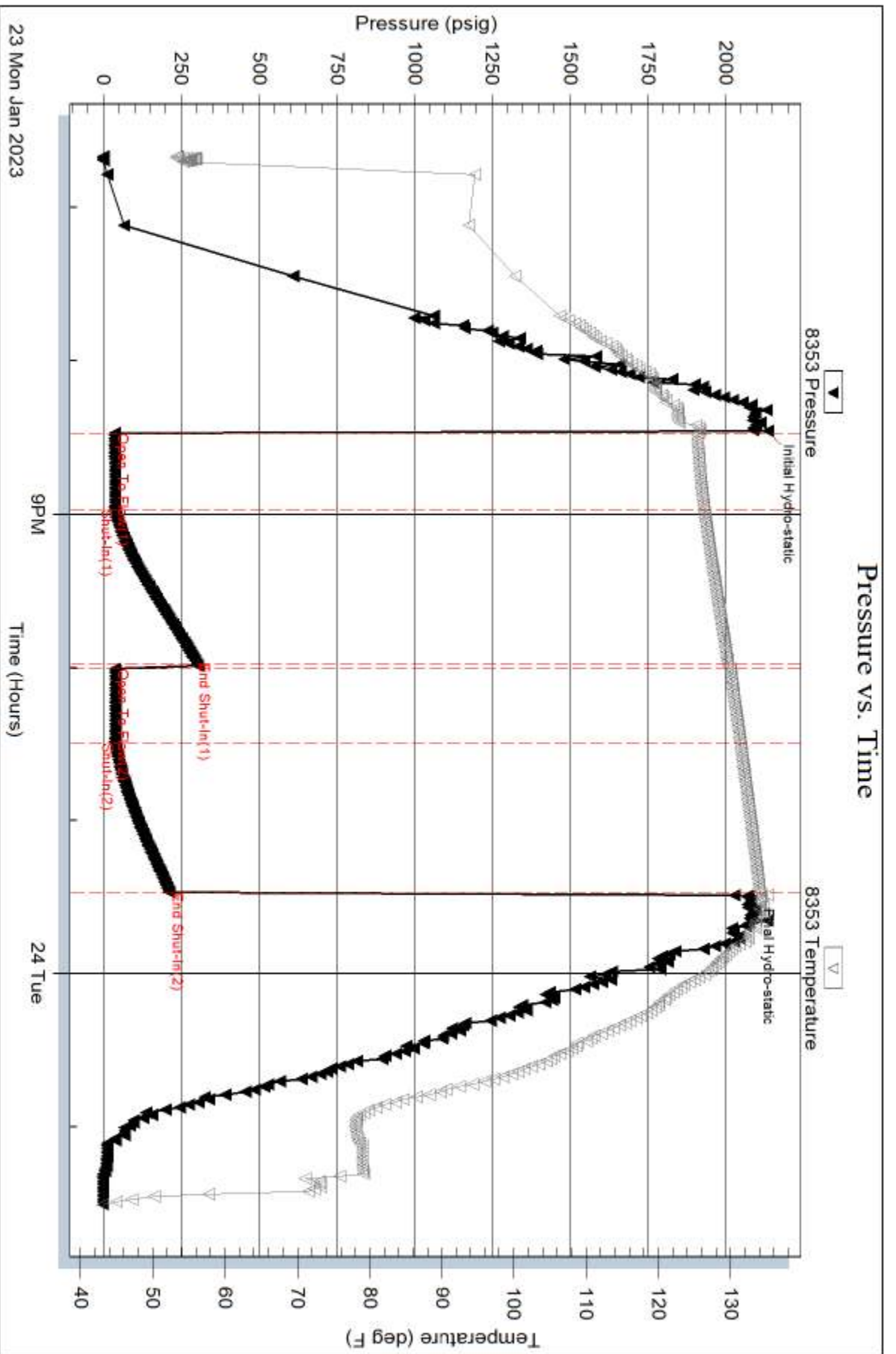
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



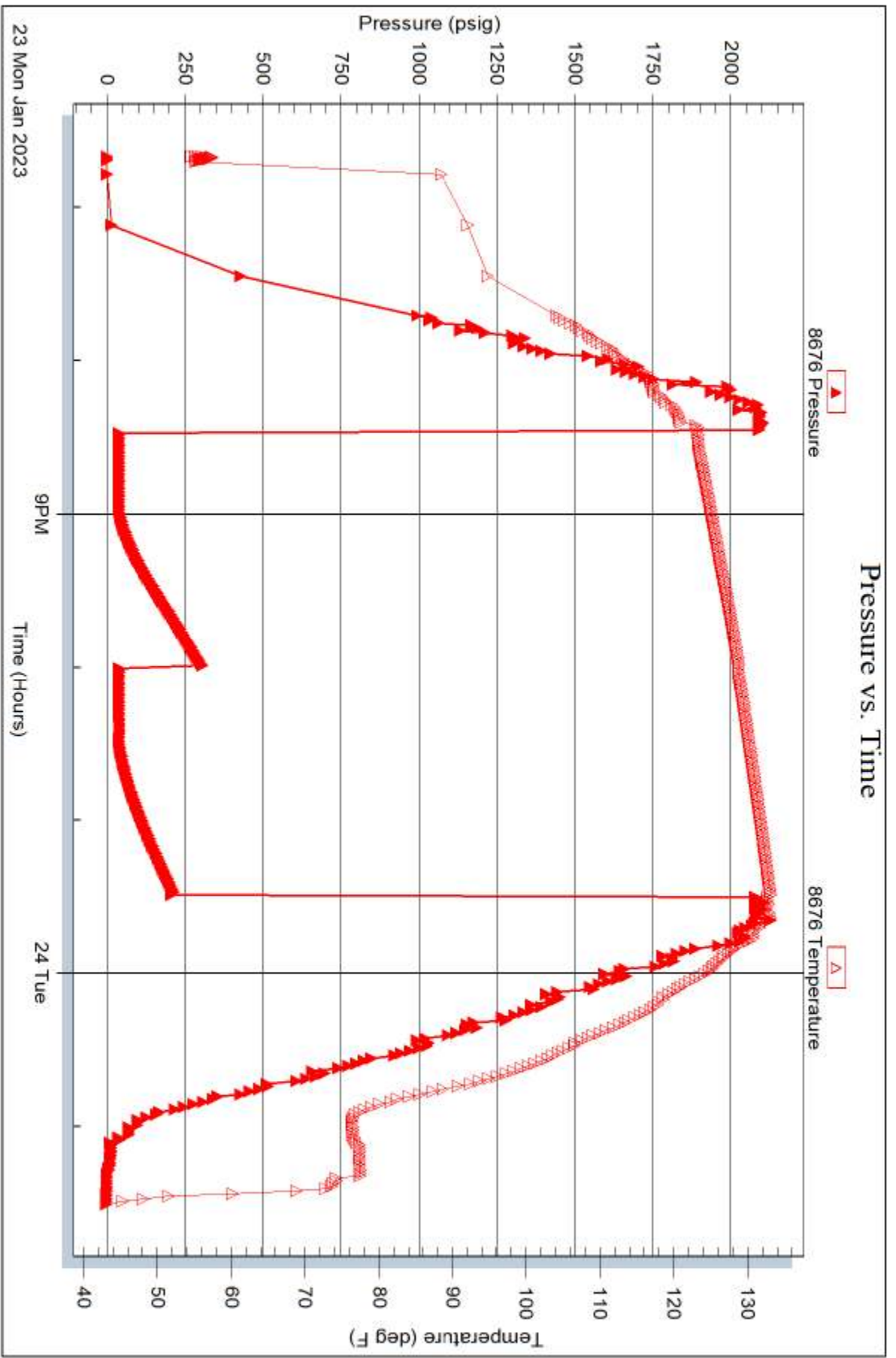
Serial #: 8676

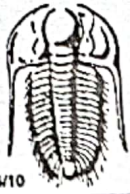
Inside

Murfin Drilling Company Inc

Hester #1-7

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69741

Well Name & No. Hester #1-7 Test No. 1 Date 01/21/23
 Company Murfin Drilling Company Inc Elevation 3320 KB 3315 GL
 Address 250 N Water Ste 300 Wichita, KS 67202
 Co. Rep / Geo. Clayton Erickson Rig Murfin #3
 Location: Sec. 7 Twp 13 Rge. 39W Co. Cheyenne State KS

Interval Tested 4312-4376 Zone Tested LKC A-D
 Anchor Length 64' Drill Pipe Run 4112 Mud Wt. 8.8
 Top Packer Depth 4301 Drill Collars Run 177 Vis 57
 Bottom Packer Depth 4312 Wt. Pipe Run _____ WL 6.4
 Total Depth 4376 Chlorides 600 ppm System LCM 2#

Blow Description IF - Strong surface blow, BOB in 1 min, Had to reset sensor
ISF - Weak surface blow, built to 3/4" in 10 min, Final 5"
FF - Strong surface blow, BOB in 10 min, Final is 58 3/4"
BSI - Weak surface blow, died in 3 min

Rec	Feet of	%gas	%oil	%water	%mu
<u>315</u>	<u>GIMCO</u>	<u>20</u>	<u>60</u>		<u>20</u>
<u>1319</u>	<u>Reversed out G10 (for 30 min)</u>	<u>30</u>	<u>70</u>		
<u>118</u>	<u>GOMCW</u>	<u>30</u>	<u>10</u>	<u>40</u>	<u>20</u>
____	Feet of _____	%gas	%oil	%water	%mu
____	Feet of _____	%gas	%oil	%water	%mu

Rec Total 1752' BHT 154° Gravity 24@160 API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2101</u>	<input checked="" type="checkbox"/> Test <u>1950</u>	T-On Location <u>13:50</u>
(B) First Initial Flow <u>182</u>	<input checked="" type="checkbox"/> Jars <u>300</u>	T-Started <u>15:53</u>
(C) First Final Flow <u>489</u>	<input checked="" type="checkbox"/> Safety Joint _____	T-Open <u>17:51</u>
(D) Initial Shut-In <u>1342</u>	<input checked="" type="checkbox"/> Circ Sub <u>Dropped Bar 50</u>	T-Pulled <u>20:35</u>
(E) Second Initial Flow <u>516</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>01:05</u>
(F) Second Final Flow <u>734</u>	<input checked="" type="checkbox"/> Mileage <u>190 RT 332.50</u>	Comments _____
(G) Final Shut-In <u>1336</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1954</u>	<input type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> EM Tool _____

Initial Open 20
 Initial Shut-In 60
 Final Flow 20
 Final Shut-In 60

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 2882.50 MP/DST Disc't _____

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69742

Well Name & No. Hester #1-7 Test No. 2 Date 01/22/23
 Company Murfin Drilling Company Inc Elevation 3320 KB 3315 GL
 Address 250 N. Water Ste 300 Wichita, KS 67202
 Co. Rep / Geo. Clayton Erickson Rig Murfin #3
 Location: Sec. 7 Twp 1S Rge. 39W Co. Cheyenne State KS

Interval Tested 4372-4425 Zone Tested LKC D²-G
 Anchor Length 53' Drill Pipe Run 4173 Mud Wt. 8.9
 Top Packer Depth 4367 Drill Collars Run 177 Vis 63
 Bottom Packer Depth 4372 Wt. Pipe Run _____ WL 6.0
 Total Depth 4425 Chlorides 800 ppm System LCM 6#

Blow Description IF-Strong surface blow, BOB in 20 seconds, Final 372 1/4"
ISI-Weak surface blow, built to BOB in 7min, Final is 24 1/4"
EF-Strong surface blow, BOB in 20 seconds, Final is 129 1/2"
FSI-Weak surface blow, built to 7" in 10min, Final died to 5"

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>CO</u>	<u>100</u>			
<u>2894</u>	<u>Reversed out for 25min SGO</u>	<u>15%</u>	<u>85%</u>		
<u>118</u>	<u>SGMCO</u>	<u>15%</u>	<u>70%</u>	<u>15%</u>	
	<u>GIP 504'</u>				

Rec Total 3022' BHT 154 Gravity 32@60 API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 2089
- (B) First Initial Flow 520
- (C) First Final Flow 946
- (D) Initial Shut-In 1351
- (E) Second Initial Flow 1011
- (F) Second Final Flow 1138
- (G) Final Shut-In 1353
- (H) Final Hydrostatic 2054

- Test 1950
- Jars 300
- Safety Joint
- Circ Sub Dropped Bar 50
- Hourly Standby
- Mileage 190 RT 332.50
- Sampler
- Straddle
- Shale Packer 250
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility

T-On Location 18:45
 T-Started 19:50
 T-Open 22:03
 T-Pulled 00:40
 T-Out 04:40

Comments _____
 EM Tool -175
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total -175
 Total 2707.50
 MP/DST Disc't _____

Initial Open 20
 Initial Shut-In 60
 Final Flow 10
 Final Shut-In 60

Sub Total 2882.50
 Our Representative [Signature]

Approved By _____
 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 equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69743

Well Name & No. Hester #1-7 Test No. 3 Date 01/23/23
 Company Murfin Drilling Company Inc Elevation 3320 KB 3315 GL
 Address 250 N. Water Ste 300 Wichita, KS 67202
 Co. Rep / Geo. Clayton Erickson Rig Murfin #3
 Location: Sec. 7 Twp 13 Rge. 39w Co. Cheyenne State KS

Interval Tested 4423-4515 Zone Tested LKC H-J
 Anchor Length 92' Drill Pipe Run 4234 Mud Wt. 8.7
 Top Packer Depth 4418 Drill Collars Run 177 Vis 57
 Bottom Packer Depth 4423 Wt. Pipe Run _____ WL 6.0
 Total Depth 4515 Chlorides 800 ppm System LCM G#

Blow Description FF-Weak surface blow, built to 1 3/4" in 10min, Final is 2"

FSI- No blow back

FF-Weak surface blow, built to 1/4" in 10min, Final is weak surface

FSI- No blow back

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

Rec Total 5 BHT 134' Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic ~~320~~ 2135 Test 1950 T-On Location 16:45
 (B) First Initial Flow 36 Jars 300 T-Started 18:40
 (C) First Final Flow 37 Safety Joint _____ T-Open 20:28
 (D) Initial Shut-In 300 Circ Sub _____ T-Pulled 23:30
 (E) Second Initial Flow 38 Hourly Standby _____ T-Out 01:30
 (F) Second Final Flow 38 Mileage 190 RT 332.50
 (G) Final Shut-In 213 Sampler _____ 332.50
 (H) Final Hydrostatic 2071 Straddle _____

Initial Open 30 Shale Packer 250 EM Tool -350
 Initial Shut-In 60 Extra Packer _____ Ruined Shale Packer 550
 Final Flow 30 Extra Recorder _____ Ruined Packer _____
 Final Shut-In 60 Day Standby 1d 12.5h Extra Copies _____
 Sub Total 3165 Accessibility _____ Sub Total 550 -350 + 800
 MP/DST Disc'l _____ Total 4165

Approved By _____ Our Representative [Signature]

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Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Hester #1-7
 API: 15-023-21597-00-00
 Location: NE SE NE NW Sec 7 T1S R39W
 License Number: 1/14/2023
 Spud Date: 800'FNL & 2400' FWL
 Region: Cheyenne County, KS
 Drilling Completed: 1/25/2023

Bottom Hole Coordinates: Surface casing: 8 5/8" @ 260'
 Production casing: 120 Jts 15.5# of 5 1/2" @ 5080'
 Ground Elevation (ft): 3315 K.B. Elevation (ft): 3320
 Logged Interval (ft): 4140 To: TD Total Depth (ft): 5100
 Formation:
 Type of Drilling Fluid: Chemical Mud

Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Murfin Drilling Co., Inc.
 Address: 250 N Water, Suite 300
 Wichita, KS 67202

GEOLOGIST

Name: Clayton Erickson
 Company: Erickson Wellsite Geology
 Address: 402 Palmer Street
 P.O. Box 294
 Loomis, NE 68958

DSTS

DST #1 4312-4376 20-60-20-60; Hydro: 2101-1954 IFF: 182-489 ISIP: 1342 FFP: 516-734 FSIP: 1336; Rec: 315' 20%g 60%o 20%w 1319' 30%g 70%o 118' 30%g 10%o 40%w 20%w; BHT: 154F Grav: 24 @60F; IF: BOB 1min ISI: 5" FF: BOB 10min FSI: surface dead in 3min

DST #2 4372-4425 20-60-10-60; Hydro: 2089-2054 IFF: 520-946 ISIP: 1351 FFP: 1011-1138 FSIP: 1353; Rec: 504' GIP 10' 100%o 2894' 15%g 85%o (reversed out) 118' 15%g 60%o 15%w; BHT: 154F Grav: 32 @60F; IF: BOB 20sec ISI: BOB 7min BOB: 20sec FSI: 7"

DST #3 4423-4515 30-60-30-60; Hydro: 2135-2071 IFF: 36-37 ISIP: 300 FFP: 38-38 FSIP: 213; Rec: 5' mud; BHT: 134F; IF: 2" ISI: dead FF: weak surface FSI: dead

COMMENTS

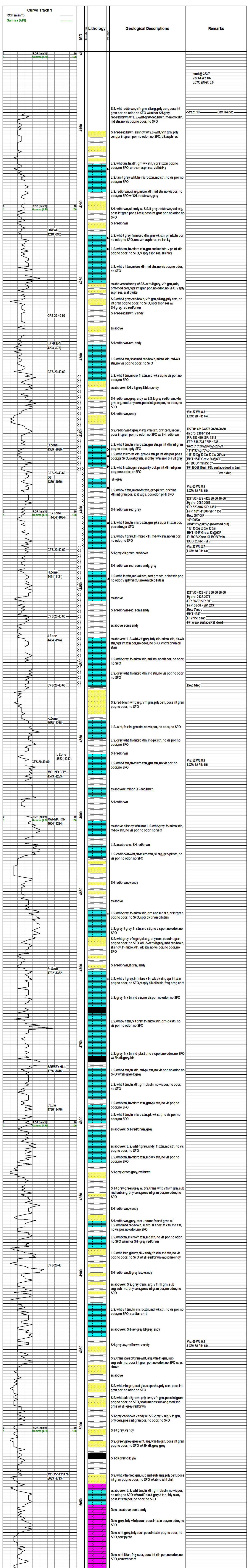
Based upon careful examination of rock samples, DST results and E-logs it was decided to run production casing.

FORMATION TOPS

Log Tops	Sample tops
Anhydrite 3324(-4)	4220(-898)
Base Anhy 3357(-37)	4293(-973)
OREAD 4212(-892)	4573(-1253)
LANSING 4286(-966)	4702(-1382)
Mound City 4566(-1246)	4766(-1446)
FT. SCOTT 4700(-1380)	5033(-1713)
BREEZY HILL 4766(-1446)	5100(-1780)
MISSISSIPPIAN 5030(-1710)	
TD 5100(-1780)	

ROCK TYPES			
Anhy	Bent	Brec	Cht
Clst	Carb. shale	Arkose	Dol
Gyp	Igne	Meta	
Mrlst	Salt	Shale	Shcol
Shlgt	Silst	Ss	Till

OTHER SYMBOLS			
Oil Show Even	Spotted Ques	Dead	Interval Dst



FRANKS Oilfield Service

◆ 815 Main Street Victoria, KS 67671 ◆ 24 Hour Phone (785) 639-7269
 ◆ Office Phone (785) 639-3949 ◆ Email: franksoilfield@yahoo.com

TICKET NUMBER 0840
 LOCATION North
 FOREMAN Tam Williams

FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY			
1/14/23		T-Hester 1-7	7	15	32N	Cherokee			
CUSTOMER <u>Martin Drilling Co.</u>		TRUCK #		DRIVER		TRUCK #		DRIVER	
MAILING ADDRESS		102		Tam W					
CITY		201		TackT					
STATE									
ZIP CODE									

JOB TYPE Surface HOLE SIZE _____ HOLE DEPTH 260' CASING SIZE & WEIGHT _____
 CASING DEPTH 260' DRILL PIPE _____ TUBING _____ OTHER 5 7/8" 27#
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING _____
 DISPLACEMENT _____ DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Go to location 10:00 am Set up on Rig #3. They had to get caller job. 4:30 am mix 260 lb surface blend & displace 165 lbs shot to at 5 am

COMPAS did cement

Thanks Tam & Tack

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
8002	1	PUMP CHARGE <u>Surface</u>	\$1150.00	\$1150.00
1001	12.8	MILEAGE	\$69.50	\$889.60
1003	12.25	Ten M. Recog Delivery	\$2315.25	\$2815.25
5004	25094	class A 3/4" 16" 280 gal	\$25.50	\$637.95
8005	100.165	solu	\$5.00	\$500.83
8005	6 hrs	stand by charge	\$100.00	\$600.00
			sub total	\$11,309.25
			less 5% disc	\$565.46
			sub total	\$10,743.79
			SALES TAX	\$567.27
			ESTIMATED TOTAL	\$11,311.06

AUTHORIZATION Jay [Signature] TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



CEMENT TREATMENT REPORT

Customer: Murfin Drilling	Well: Hester #1-7	Ticket: WP3880
City, State:	County: Cheyenne,KS	Date: 1/26/2023
Field Rep: Spencer Savage	S-T-R: 7-1S-39W	Service: Longsting

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	7 7/8 in	Blend:	H-Con	Blend:	H-LD
Hole Depth:	5100 ft	Weight:	12.0 ppg	Weight:	14.8 ppg
Casing Size:	5 1/2 in	Water / Sx:	15.5 gal / sx	Water / Sx:	6.5 gal / sx
Casing Depth:	5080.5 ft	Yield:	2.56 ft ³ / sx	Yield:	1.51 ft ³ / sx
Tubing / Liner:	in	Annular Bbls / Ft.:	bbs / ft.	Annular Bbls / Ft.:	bbs / ft.
Depth:	ft	Depth:	ft	Depth:	ft
Tool / Packer:		Annular Volume:	bbls	Annular Volume:	bbls
Tool Depth:	ft	Excess:		Excess:	
Displacement:	120.4 bbls	Total Slurry:	205.0 bbls	Total Slurry:	53.8 bbls
		Total Sacks:	450 sx	Total Sacks:	200 sx

TIME	RATE	PSI	BBLs	STAGE	TOTAL BBLs	REMARKS
8am						Arrive on location
1030am						Start Running Casing Turbos On Joints 1-13 , 33, 46 Baskets on joints 14,34,47
1115am						Drop Ball and Circulate for 10 min then continue Running Casing
150pm						Casing on Bottom Begin Circulating for 1hr
230pm						rig up Cement Crew
328pm	4.5	300.0	10.0			H2O Ahead
330pm	4.7	300.0	12.0			Super Mud Flush
334pm	4.7	300.0	10.0			Water Spacer
340pm	2.5	200.0	13.7			Rat Hole H-Con 12ppg 30sacks
343pm	2.5	150.0	9.1			Mouse Hole H-Con 12ppg 20sacks
347pm	6.3	450.0	182.4			Lead Slurry H-Con 12ppg 400sacks
443pm	6.0	150.0	53.8			Tail Slurry H-LD 14.8ppg 200sacks
505pm						Drop Plug and Clear Pump and Lines
511pm	6.5	650.0	120.0			Displacement 2% KCL in first 40 bbls
541pm	3.0	2,000.0				Land Plug Bump to 2700
						Bleed off plug help 1.5bbls in returns Circulated 5bbls Cement to the Pit
545pm						Wash Up
555pm						Rig Down
615pm						Leave Location

CREW		UNIT	SUMMARY		
Cementer:	Spencer	943	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jose	528/520	4.5 bpm	500 psi	411 bbls
Bulk #1:	Micheal	205			
Bulk #2:	Adrian	180/250			