

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	HESTER 2-7
Doc ID	1725788

All Electric Logs Run

DIL
DUCP
MEL
BHCS

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	HESTER 2-7
Doc ID	1725788

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.250	8.625	23	259	H-325	260	



DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

Hester #2-7

7-1s-39w Dundy,KS

Start Date: 2023.06.12 @ 17:52:00

End Date: 2023.06.13 @ 03:23:45

Job Ticket #: 70236 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2023.06.19 @ 16:04:24



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co, Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

7-1s-39w Dundy,KS

Hester #2-7

Job Ticket: 70236

DST#: 1

Test Start: 2023.06.12 @ 17:52:00

GENERAL INFORMATION:

Formation: **Lansing B-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:43:45

Time Test Ended: 03:23:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

Interval: 4273.00 ft (KB) To 4354.00 ft (KB) (TVD)

Total Depth: 4354.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3291.00 ft (KB)

3286.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8845 Outside

Press@RunDepth: 725.52 psig @ 4274.00 ft (KB)

Start Date: 2023.06.12

End Date:

2023.06.13

Start Time: 17:52:05

End Time:

03:23:45

Capacity: 8000.00 psig

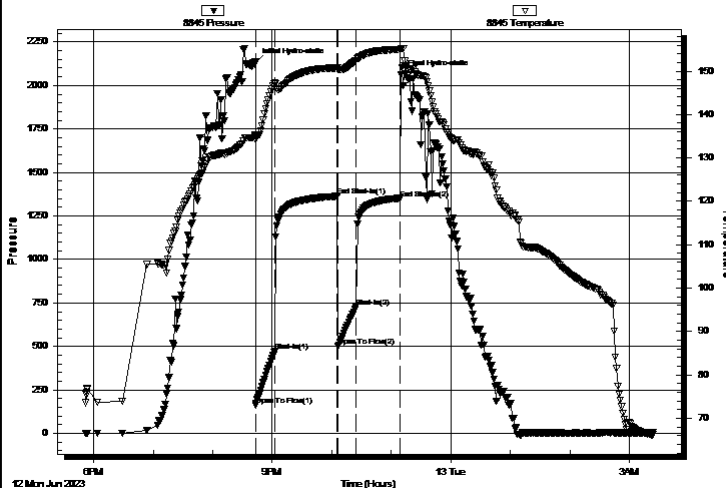
Last Calib.: 2023.06.13

Time On Btm: 2023.06.12 @ 20:43:15

Time Off Btm: 2023.06.12 @ 23:09:45

TEST COMMENT: IF: BOB @ 45 sec.
IS: No return.
FF: BOB @ 1 1/2 min.
FS: No return. 20-60-20-45

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2133.98	135.41	Initial Hydro-static
1	163.25	134.81	Open To Flow (1)
20	473.63	147.41	Shut-In (1)
83	1363.93	150.73	End Shut-In (1)
84	502.54	150.30	Open To Flow (2)
102	725.52	152.49	Shut-In (2)
146	1350.98	154.89	End Shut-In (2)
147	2060.78	155.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1070.00	smcw 2m 98w (oil spots)	13.37
380.00	somcw 5m 1o 94w	5.33
150.00	somcw 2o 40w 58m	2.10

Gas Rates

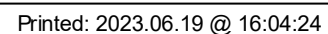
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Test Start: 2023.06.12 @ 17:52:00

KB to GR/CF: 5.00 ft

FSI: No return. 20-60-20-45





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co, Inc

7-1s-39w Dundy,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #2-7

Job Ticket: 70236

DST#: 1

ATTN: Robert Hendrix

Test Start: 2023.06.12 @ 17:52:00

Tool Information

Drill Pipe:	Length:	4075.00 ft	Diameter:	3.80 inches	Volume:	57.16 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 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:	90000.00 lb
					Total Volume:	58.05 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		12.00 ft					String Weight: Initial	65000.00 lb
Depth to Top Packer:		4273.00 ft					Final	71000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		81.00 ft						
Tool Length:		111.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description

Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00		4244.00	
Shut In Tool	5.00		4249.00	
Hydraulic tool	5.00		4254.00	
Jars	5.00		4259.00	
EM Tool	3.00		4262.00	
Safety Joint	2.00		4264.00	
Packer	5.00		4269.00	30.00 Bottom Of Top Packer
Packer	4.00		4273.00	
Stubb	1.00		4274.00	
Recorder	0.00	8319 Inside	4274.00	
Recorder	0.00	8845 Outside	4274.00	
Perforations	12.00		4286.00	
Change Over Sub	1.00		4287.00	
Drill Pipe	63.00		4350.00	
Change Over Sub	1.00		4351.00	
Bullnose	3.00		4354.00	81.00 Bottom Packers & Anchor
Total Tool Length:	111.00			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co, Inc

7-1s-39w Dundy,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #2-7

Job Ticket: 70236

DST#: 1

ATTN: Robert Hendrix

Test Start: 2023.06.12 @ 17:52:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 59.00 sec/qt

Water Loss: 6.39 in³

Resistivity: ohm.m

Salinity: 600.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

0 deg API

Water Salinity:

35000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1070.00	smcw 2m 98w (oil spots)	13.370
380.00	somcw 5m 1o 94w	5.330
150.00	somcw 2o 40w 58m	2.104

Total Length: 1600.00 ft Total Volume: 20.804 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

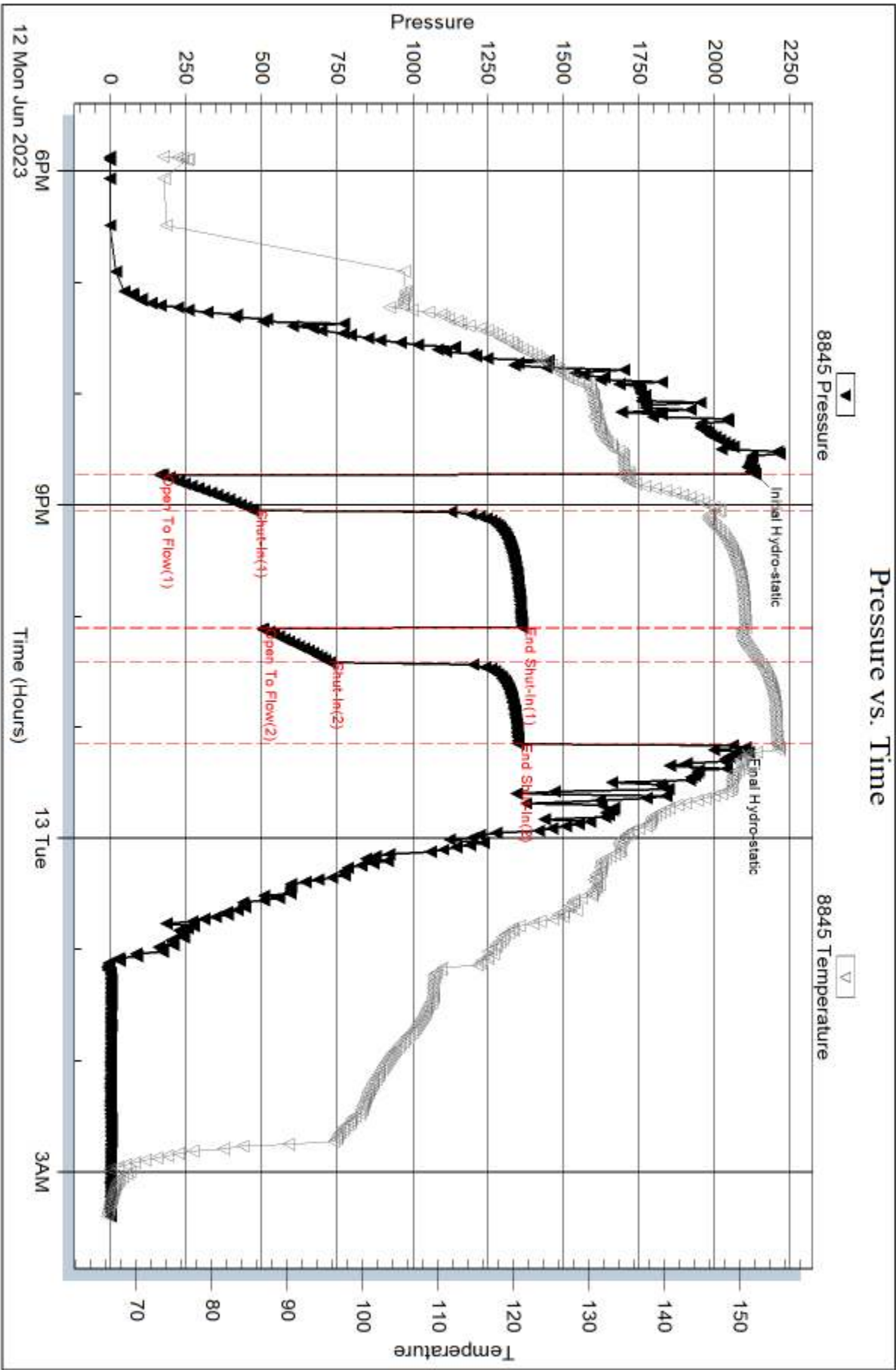
Recovery Comments: rw is .222 @ 61F = 35000ppm

Serial #: 8845

Outside Murfin Drilling Co, Inc

Hester #2-7

DST Test Number: 1



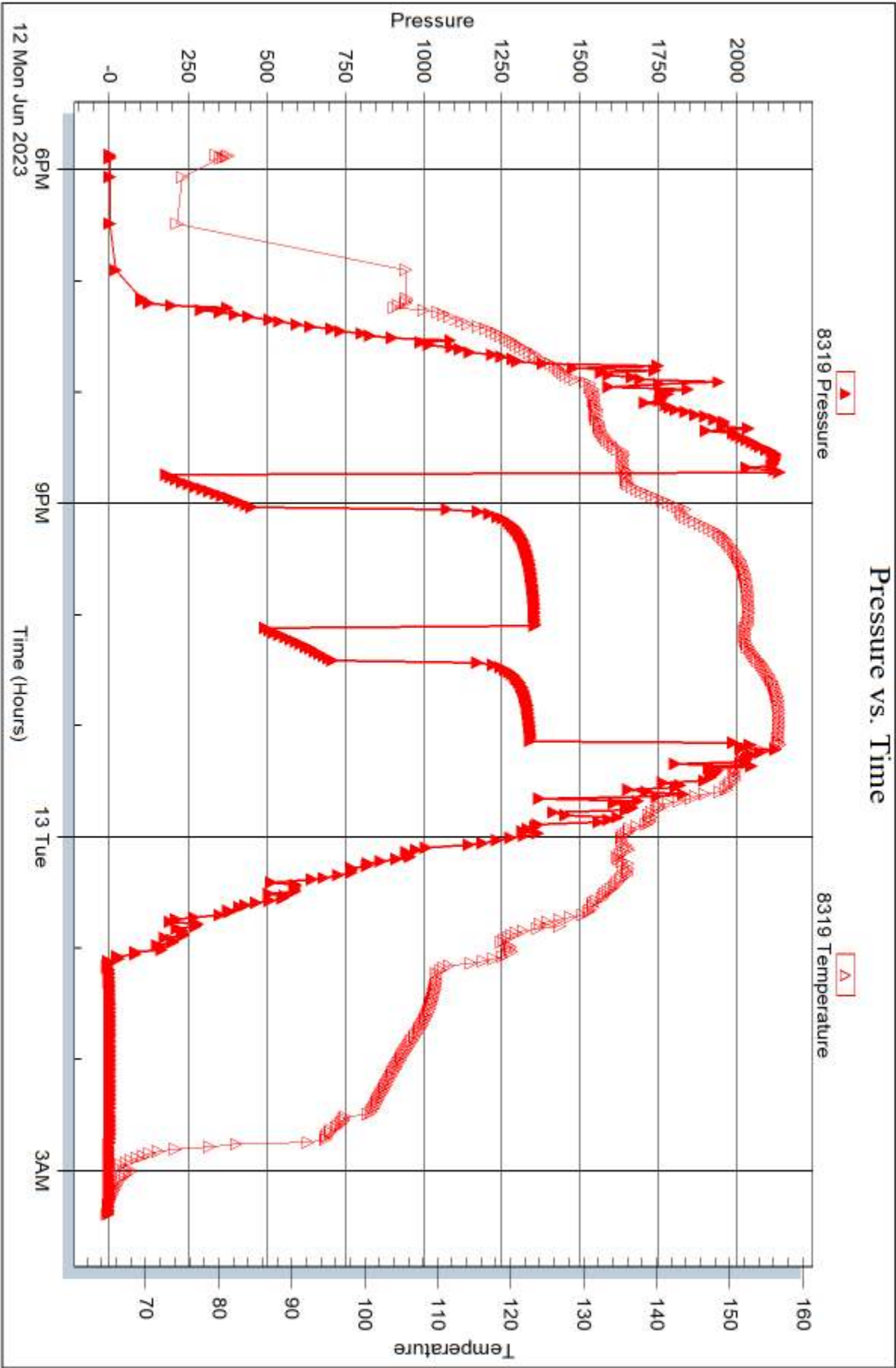
Serial #: 8319

Inside

Murfin Drilling Co, Inc

Hester #2-7

DST Test Number: 1





DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

Hester #2-7

7-1s-39w Dundy,KS

Start Date: 2023.06.13 @ 14:36:00

End Date: 2023.06.13 @ 17:04:45

Job Ticket #: 70237 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2023.06.19 @ 15:53:25



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co, Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

7-1s-39w Dundy,KS

Hester #2-7

Job Ticket: 70237

DST#: 2

Test Start: 2023.06.13 @ 14:36:00

GENERAL INFORMATION:

Formation: **Lansing G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:01:00

Time Test Ended: 17:04:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4356.00 ft (KB) To 4403.00 ft (KB) (TVD)

Total Depth: 4403.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3291.00 ft (KB)

3286.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8319

Press@RunDepth: psig @ ft (KB)

Start Date: 2023.06.13

End Date:

2023.06.13

Start Time: 14:36:05

End Time:

17:04:55

Capacity: 8000.00 psig

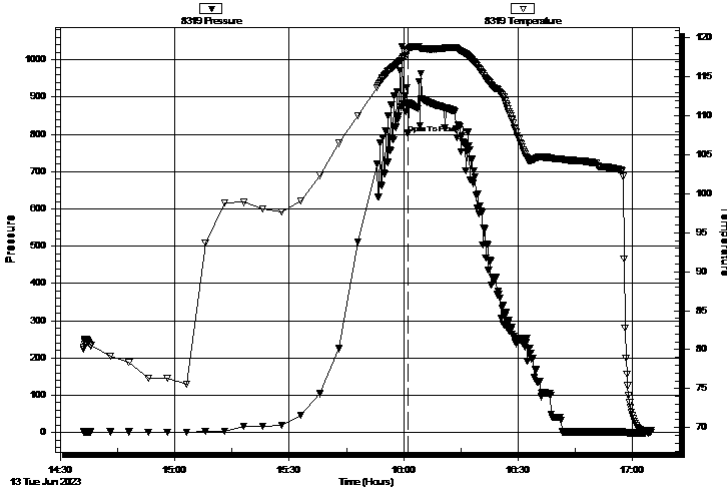
Last Calib.: 2023.06.13

Time On Btm:

Time Off Btm:

TEST COMMENT: Hit bridge half way to bottom, Misrun

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	802.87	118.34	Open To Flow (1)

Recovery

Length (ft)	Description	Volume (bbl)
0.00	Misrun	0.00

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co, Inc

7-1s-39w Dundy,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #2-7

Job Ticket: 70237

DST#: 2

ATTN: Robert Hendrix

Test Start: 2023.06.13 @ 14:36:00

Tool Information

Drill Pipe:	Length:	4169.00 ft	Diameter:	3.80 inches	Volume:	58.48 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	40000.00 lb
Drill Collar:	Length:	180.00 ft	Diameter:	2.25 inches	Volume:	0.89 bbl	Weight to Pull Loose:	40000.00 lb
					Total Volume:	59.37 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		23.00 ft					String Weight: Initial	40000.00 lb
Depth to Top Packer:		4356.00 ft					Final	40000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		47.00 ft						
Tool Length:		77.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description

Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00		4327.00	
Shut In Tool	5.00		4332.00	
Hydraulic tool	5.00		4337.00	
Jars	5.00		4342.00	
EM Tool	3.00		4345.00	
Safety Joint	2.00		4347.00	
Packer	5.00		4352.00	30.00 Bottom Of Top Packer
Packer	4.00		4356.00	
Stubb	1.00		4357.00	
Recorder	0.00	8319 Inside	4357.00	
Recorder	0.00	8845 Outside	4357.00	
Perforations	10.00		4367.00	
Change Over Sub	1.00		4368.00	
Drill Pipe	31.00		4399.00	
Change Over Sub	1.00		4400.00	
Bullnose	3.00		4403.00	47.00 Bottom Packers & Anchor
Total Tool Length:	77.00			



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co, Inc

7-1s-39w Dundy,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #2-7

Job Ticket: 70237

DST#: 2

ATTN: Robert Hendrix

Test Start: 2023.06.13 @ 14:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 59.00 sec/qt

Water Loss: 6.38 in³

Resistivity: ohm.m

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

0 deg API

0 ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	Misrun	0.000

Total Length:

ft

Total Volume:

bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

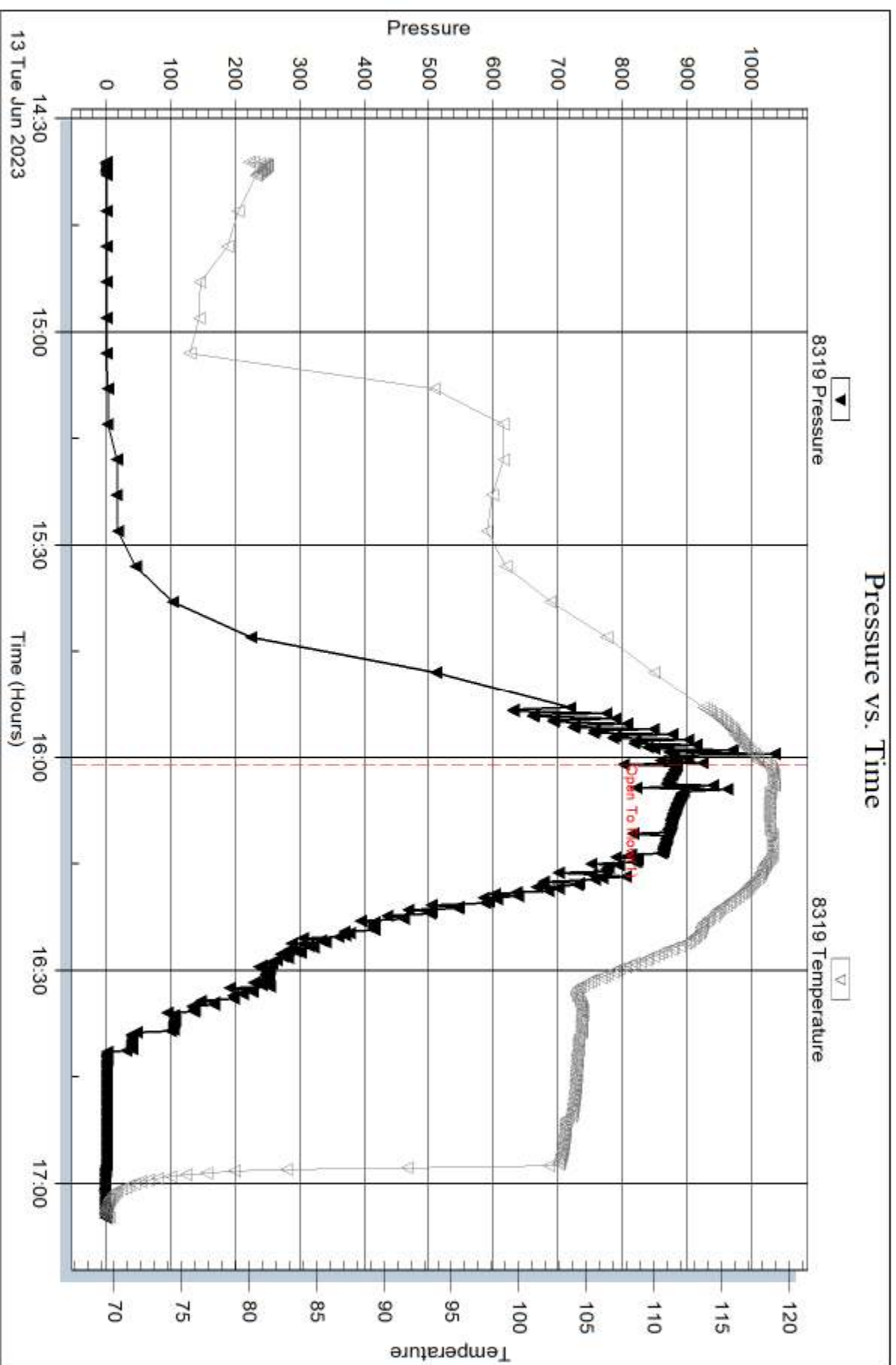
Recovery Comments:

Serial #: 8319

Murfin Drilling Co, Inc

Hester #2-7

DST Test Number: 2





DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

Hester #2-7

7-1s-39w Dundy,KS

Start Date: 2023.06.13 @ 22:26:00

End Date: 2023.06.14 @ 07:25:45

Job Ticket #: 70238 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2023.06.19 @ 15:51:34



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co, Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

7-1s-39w Dundy, KS

Hester #2-7

Job Ticket: 70238

DST#: 3

Test Start: 2023.06.13 @ 22:26:00

GENERAL INFORMATION:

Formation: **LKC G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:31:30

Time Test Ended: 07:25:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4350.00 ft (KB) To 4403.00 ft (KB) (TVD)

Total Depth: 4403.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3291.00 ft (KB)

3286.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8845 Outside

Press@RunDepth: 51.52 psig @ 4351.00 ft (KB)

Start Date: 2023.06.13

End Date:

2023.06.14

Start Time: 22:26:05

End Time:

07:25:45

Capacity: 8000.00 psig

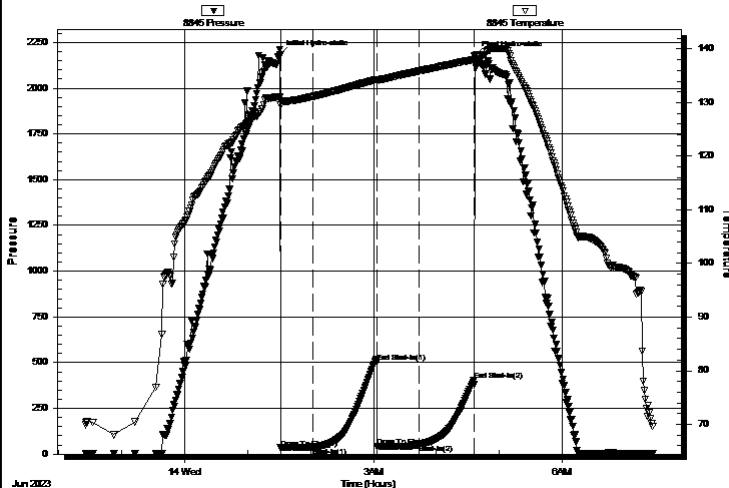
Last Calib.: 2023.06.14

Time On Btm: 2023.06.14 @ 01:31:15

Time Off Btm: 2023.06.14 @ 04:36:30

TEST COMMENT: IF: 1/4" blow .
IS: No return.
FF: No blow .
FS: No retrun. 30-60-30-60

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2183.78	131.06	Initial Hydro-static
1	34.26	129.52	Open To Flow (1)
31	38.79	131.13	Shut-In(1)
92	502.68	134.30	End Shut-In(1)
93	41.34	134.07	Open To Flow (2)
132	51.52	135.87	Shut-In(2)
185	404.40	138.04	End Shut-In(2)
186	2176.92	138.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud 100m (oil spots)	0.07

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co, Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

7-1s-39w Dundy,KS

Hester #2-7

Job Ticket: 70238

DST#: 3

Test Start: 2023.06.13 @ 22:26:00

GENERAL INFORMATION:

Formation: **LKC G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:31:30

Time Test Ended: 07:25:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4350.00 ft (KB) To 4403.00 ft (KB) (TVD)

Total Depth: 4403.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3291.00 ft (KB)

3286.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8319 Inside

Press@RunDepth: psig @ 4351.00 ft (KB)

Start Date: 2023.06.13

End Date:

2023.06.14

Start Time: 22:26:05

End Time:

07:25:45

Capacity: 8000.00 psig

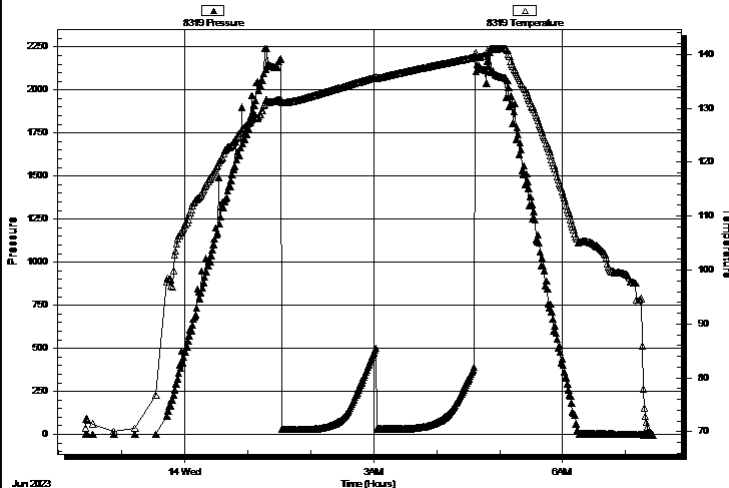
Last Calib.: 2023.06.14

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/4" blow .
IS: No return.
FF: No blow .
FS: No retrun. 30-60-30-60

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
15.00	mud 100m (oil spots)	0.07

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co, Inc

7-1s-39w Dundy,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #2-7

Job Ticket: 70238

DST#: 3

ATTN: Robert Hendrix

Test Start: 2023.06.13 @ 22:26:00

Tool Information

Drill Pipe:	Length:	4169.00 ft	Diameter:	3.80 inches	Volume:	58.48 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 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:	90000.00 lb
					Total Volume:	59.37 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		29.00 ft					String Weight: Initial	68000.00 lb
Depth to Top Packer:		4350.00 ft					Final	68000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		53.00 ft						
Tool Length:		83.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description

Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00		4321.00	
Shut In Tool	5.00		4326.00	
Hydraulic tool	5.00		4331.00	
Jars	5.00		4336.00	
EM Tool	3.00		4339.00	
Safety Joint	2.00		4341.00	
Packer	5.00		4346.00	30.00 Bottom Of Top Packer
Packer	4.00		4350.00	
Stubb	1.00		4351.00	
Recorder	0.00	8319 Inside	4351.00	
Recorder	0.00	8845 Outside	4351.00	
Perforations	16.00		4367.00	
Change Over Sub	1.00		4368.00	
Drill Pipe	31.00		4399.00	
Change Over Sub	1.00		4400.00	
Bullnose	3.00		4403.00	53.00 Bottom Packers & Anchor
Total Tool Length:	83.00			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co, Inc

7-1s-39w Dundy,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #2-7

Job Ticket: 70238

DST#: 3

ATTN: Robert Hendrix

Test Start: 2023.06.13 @ 22:26:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 59.00 sec/qt

Water Loss: 6.38 in³

Resistivity: ohm.m

Salinity: 600.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

0 deg API

0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	mud 100m (oil spots)	0.074

Total Length: 15.00 ft

Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

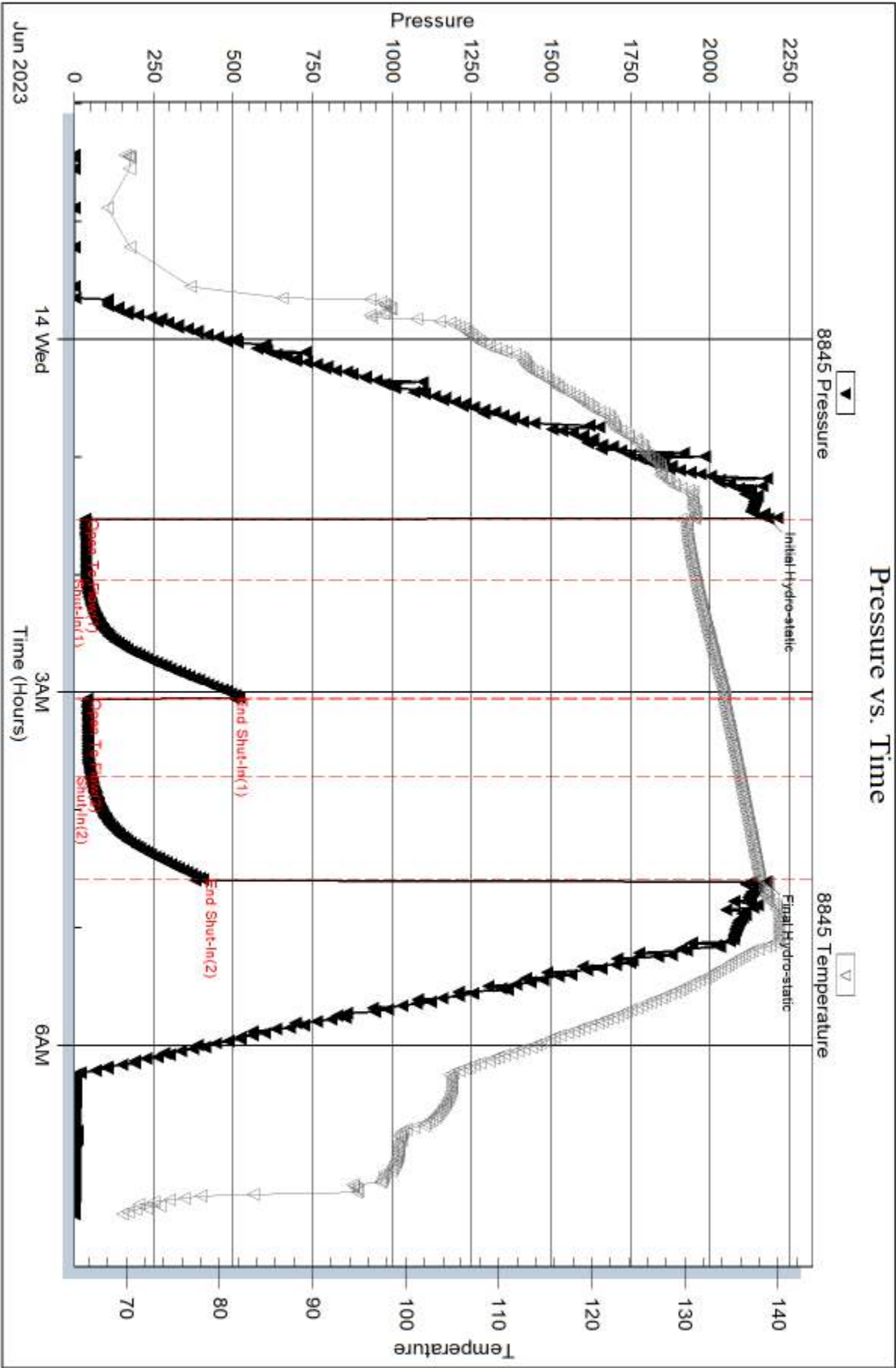
Recovery Comments:

Serial #: 8845

Outside Murfin Drilling Co, Inc

Hester #2-7

DST Test Number: 3



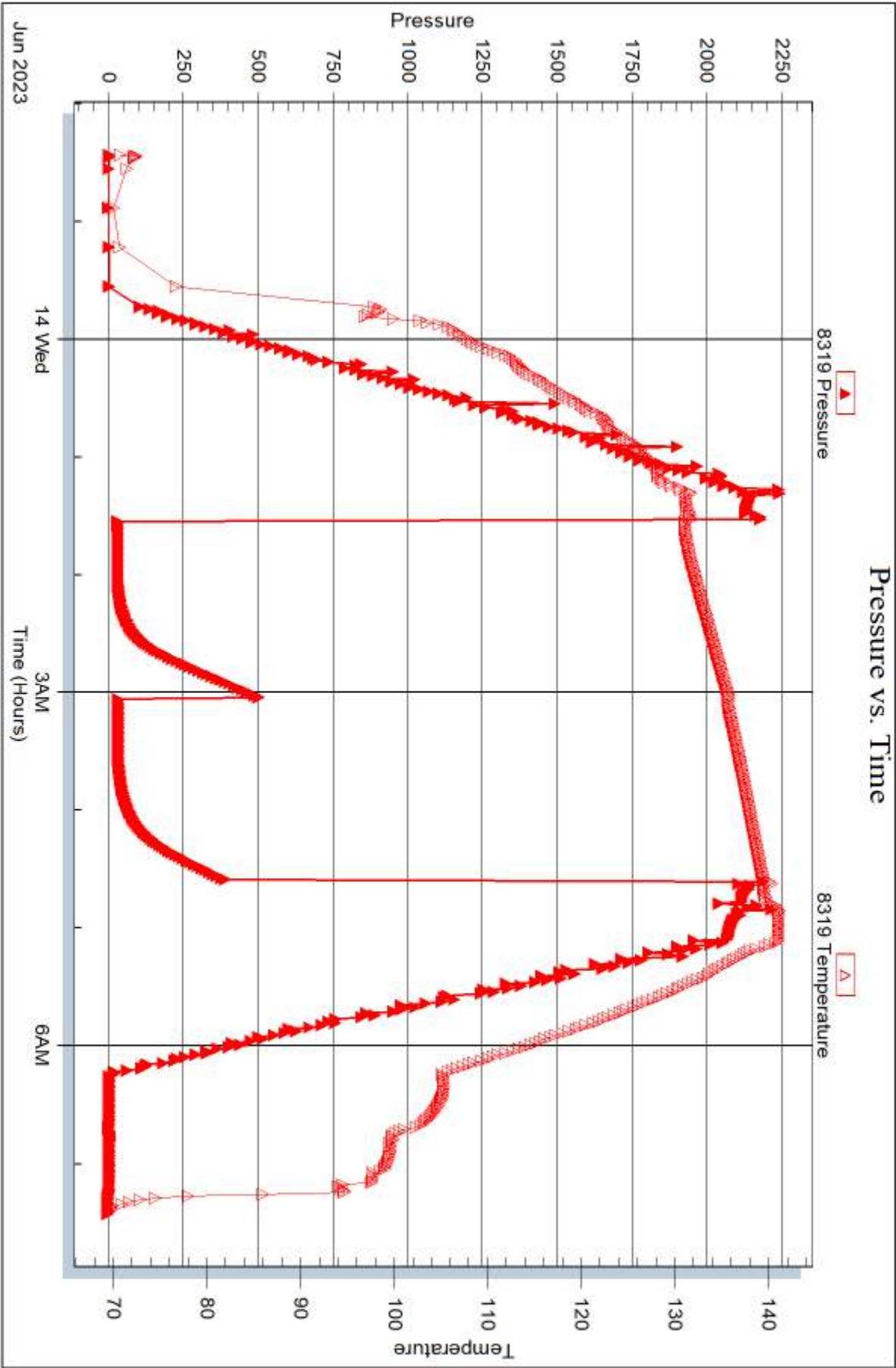
Serial #: 8319

Inside

Murfin Drilling Co, Inc

Hester #2-7

DST Test Number: 3





DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

Hester #2-7

7-1s-39w Dundy,KS

Start Date: 2023.06.15 @ 01:00:00

End Date: 2023.06.15 @ 08:39:00

Job Ticket #: 70238 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2023.06.19 @ 15:35:13



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co, Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

7-1s-39w Dundy,KS

Hester #2-7

Job Ticket: 70238

DST#: 4

Test Start: 2023.06.15 @ 01:00:00

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:48:15

Time Test Ended: 08:39:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4386.00 ft (KB) To 4476.00 ft (KB) (TVD)

Reference Elevations: 3291.00 ft (KB)

Total Depth: 4476.00 ft (KB) (TVD)

3286.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8845 Outside

Press@RunDepth: 27.48 psig @ 4387.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.15

End Date:

2023.06.15

Last Calib.: 2023.06.15

Start Time: 01:00:05

End Time:

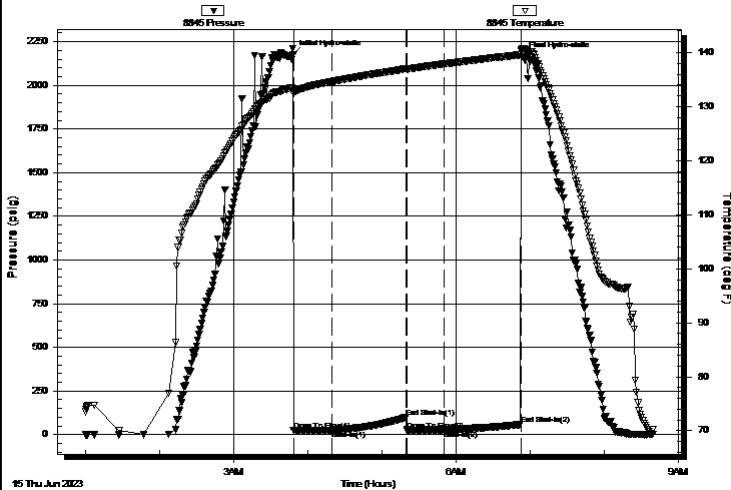
08:38:59

Time On Btm: 2023.06.15 @ 03:48:00

Time Off Btm: 2023.06.15 @ 06:53:15

TEST COMMENT: IF: 1/4" blow .
IS: No return.
No blow .
FS: No return 30-60-30-60

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2173.84	133.32	Initial Hydro-static
1	25.45	132.45	Open To Flow (1)
32	27.21	134.65	Shut-In(1)
92	98.73	137.02	End Shut-In(1)
92	25.97	136.98	Open To Flow (2)
123	27.48	137.91	Shut-In(2)
184	58.31	139.60	End Shut-In(2)
186	2166.10	140.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100m (oil spots)	0.02

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co, Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

7-1s-39w Dundy, KS

Hester #2-7

Job Ticket: 70238

DST#: 4

Test Start: 2023.06.15 @ 01:00:00

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:48:15

Time Test Ended: 08:39:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4386.00 ft (KB) To 4476.00 ft (KB) (TVD)

Total Depth: 4476.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3291.00 ft (KB)

3286.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8319 Inside

Press@RunDepth: psig @ 4387.00 ft (KB)

Start Date: 2023.06.15

End Date:

2023.06.15

Start Time: 01:00:05

End Time:

08:39:14

Capacity: 8000.00 psig

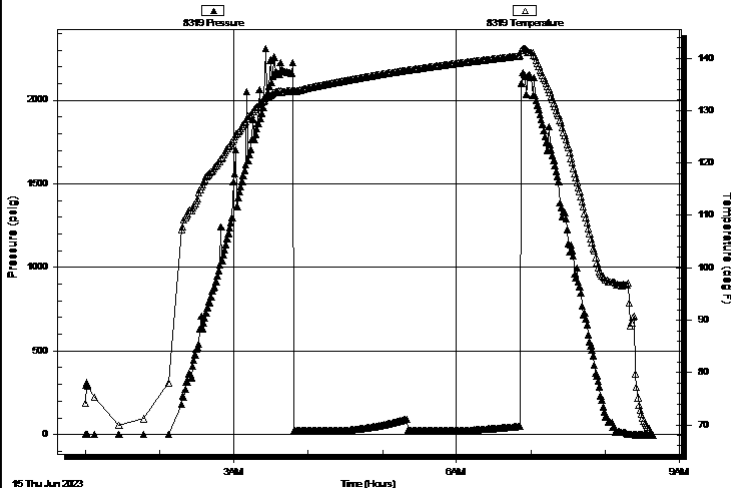
Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/4" blow .
IS: No return.
No blow .
FS: No return 30-60-30-60

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
5.00	mud 100m (oil spots)	0.02

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co, Inc

7-1s-39w Dundy,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #2-7

Job Ticket: 70238

DST#: 4

ATTN: Robert Hendrix

Test Start: 2023.06.15 @ 01:00:00

Tool Information

Drill Pipe:	Length:	4201.00 ft	Diameter:	3.80 inches	Volume:	58.93 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 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:	90000.00 lb
					Total Volume:	59.82 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		25.00 ft					String Weight: Initial	68000.00 lb
Depth to Top Packer:		4386.00 ft					Final	68000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		90.00 ft						
Tool Length:		120.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4357.00	
Shut In Tool	5.00			4362.00	
Hydraulic tool	5.00			4367.00	
Jars	5.00			4372.00	
EM Tool	3.00			4375.00	
Safety Joint	2.00			4377.00	
Packer	5.00			4382.00	30.00 Bottom Of Top Packer
Packer	4.00			4386.00	
Stubb	1.00			4387.00	
Recorder	0.00	8319	Inside	4387.00	
Recorder	0.00	8845	Outside	4387.00	
Perforations	21.00			4408.00	
Change Over Sub	1.00			4409.00	
Drill Pipe	63.00			4472.00	
Change Over Sub	1.00			4473.00	
Bullnose	3.00			4476.00	90.00 Bottom Packers & Anchor
Total Tool Length:	120.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co, Inc

7-1s-39w Dundy,KS

250 N Water Ste 300
Wichita, KS 67202

Hester #2-7

Job Ticket: 70238

DST#: 4

ATTN: Robert Hendrix

Test Start: 2023.06.15 @ 01:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 59.00 sec/qt

Water Loss: 6.38 in³

Resistivity: ohm.m

Salinity: 600.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

0 deg API

0 ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100m (oil spots)	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:



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70236

Well Name & No. Hester #2-7 Test No. 1 Date 06/13/2023
 Company Morton Drilling Co, Inc Elevation 3291 KB 3284 GL
 Address 250 N Walnut Ste 300 Wichita, KS 67202
 Co. Rep / Geo Robert Hendrix Rig Morton 112
 Location: Sec. 7 Twp 15 Rge. 39W Co. Dundy State Ks

Interval Tested 4273-4354 Zone Tested Lansing B-D
 Anchor Length 81' Drill Pipe Run 4075 Mud Wt. 9.6
 Top Packer Depth 4262 Drill Collars Run 180 Vis 59
 Bottom Packer Depth 4273 Wt. Pipe Run — WL 6.4
 Total Depth 4354 Chlorides 600 ppm System LCM 1.5#

Blow Description B IF BOB @ 45 sec
ISF No return
FF BOB @ 1 1/2 min
FSI No return

Rec <u>150</u>	Feet of <u>SOMCOW</u>	%gas <u>2</u>	%oil <u>70</u>	%water <u>48</u>	%mud
Rec <u>380</u>	Feet of <u>SOMCOW</u>	%gas <u>1</u>	%oil <u>94</u>	%water <u>5</u>	%mud
Rec <u>1070</u>	Feet of <u>SOMCOW</u> (coil spots)	%gas	%oil <u>98</u>	%water <u>2</u>	%mud
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 1600 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 Initial Hydrostatic 2133 ☒ Test 1950 ☐ Ruined Shale Packer _____
 Initial Flow 163 to 473 ☒ Jars 300 ☐ Ruined Packer _____
 Initial Shut-In 1363 ☐ Circ Sub _____ ☒ Hotel Stayed @ Rig
 Final Flow 502 to 725 ☐ Hourly Standby _____ ☒ EM Tool Successful NO
 Final Shut-In 1350 ☒ Mileage 87mi 152.25 ☐ Accessibility _____
 Final Hydrostatic 2060 ☐ Sampler _____ ☐ Gas Sample _____
 T- On Location 1708 ☐ Straddle _____ ☐ Sub Total -350
 Initial Flow 20 T-Started 1757 ☐ Shale Packer _____ ☐ Total 2052.25
 Initial Shut-In 60 T-Open 2045 ☐ Extra Packer _____ ☐ Tool Loaded _____ @ _____
 Final Flow 20 T-Pulled 2225 ☐ Extra Recorder _____ ☐ MP/DST Disc't _____
 Final Shut-In 5260 T-Out 0323 06/13 ☐ Day Standby _____

Comments _____

Approved By _____ Our Representative [Signature]

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**TRILOBITE
TESTING INC.**

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70237

Well Name & No. Hester #2-7 Test No. 2 Date 06/13/2023
Company Murfin Drilling Co Elevation 3291 KB 3286 GL
Address Wichita KS
Co. Rep / Geo Robert Hendrix Rig Murfin 110
Location: Sec. 7 Twp 15 Rge. 39W Co. Dundy State Ks

Interval Tested 4356-4403 Zone Tested LKC G
Anchor Length 47' Drill Pipe Run 4069 Mud Wt. 9.0
Top Packer Depth 4351 Drill Collars Run 180 Vis 60
Bottom Packer Depth 4356 Wt. Pipe Run — WL 6.4
Total Depth 4403 Chlorides 2,000 ppm System LCM 2#

Blow Description Hit bridge 25 stands in
mission

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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total _____ BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
Initial Hydrostatic _____ ☒ Test 1500 ☐ Ruined Shale Packer _____
Initial Flow _____ to _____ ☒ Jars 300 ☐ Ruined Packer _____
Initial Shut-In _____ ☐ Circ Sub _____ ☒ Hotel Stayed at Rig
Final Flow _____ to _____ ☐ Hourly Standby _____ ☒ EM Tool Successful -350
Final Shut-In _____ ☒ Mileage No ☐ Accessibility _____
Final Hydrostatic _____ ☐ Sampler _____ ☐ Gas Sample _____
T- On Location 1400 ☐ Straddle _____ ☐ Sub Total -350
Initial Flow _____ T-Started 1436 ☐ Shale Packer _____ ☐ Total 1450
Initial Shut-In _____ T-Open mission ☐ Extra Packer _____ ☐ Tool Loaded _____ @ _____
Final Flow _____ T-Pulled 1600 ☐ Extra Recorder _____ ☐ MP/DST Disc't _____
Final Shut-In _____ T-Out 1704 ☐ Day Standby _____

Comments mission

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70238

Well Name & No. Hester #2-7 Test No. 3 Date 06/14/2023
Company Martin Drilling Co Elevation 3291 KB 3286 GL
Address Wichita, KS
Co. Rep / Geo Robert Hendrix Rig Martin 110
Location: Sec. 7 Twp 1s Rge. 39w Co. Dundy State KS

Interval Tested 4350-4403 Zone Tested Ltc G
Anchor Length 53 Drill Pipe Run 4069 Mud Wt. 9.0
Top Packer Depth 4345 Drill Collars Run 180 Vis 59
Bottom Packer Depth 4350 Wt. Pipe Run — WL 6.4
Total Depth 4403 Chlorides 2,000 ppm System LCM 2#

Blow Description IF 1/4" blow
ISI No return.
FF No blow
ISI No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud</u>			<u>100</u>	
	<u>oil spots</u>				

Rec Total 15 BHT 139 Gravity — API RW — @ — °F Chlorides — ppm

Initial Hydrostatic 2183 ☒ Test 1950 ☐ Ruined Shale Packer

Initial Flow 34 to 38 ☒ Jars 300 ☐ Ruined Packer

Initial Shut-In 502 ☐ Circ Sub ☐ Hotel Benkelman

Final Flow 41 to 51 ☐ Hourly Standby ☒ MEM Tool Successful yes

Final Shut-In 404 ☒ Mileage 16mi 31.50 ☐ Accessibility

Final Hydrostatic 2176 ☐ Sampler ☐ Gas Sample

T- On Location 2200 ☐ Straddle ☐ Sub Total 0

Initial Flow 36 T-Started 2226 ☐ Shale Packer ☐ Total 2281.50

Initial Shut-In 60 T-Open 0131 ☐ Extra Packer ☐ Tool Loaded @

Final Flow 30 T-Pulled 0431 ☐ Extra Recorder ☐ MP/DST Disc't

Final Shut-In 60 T-Out 0726 ☐ Day Standby

Comments

Approved By Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70239

Well Name & No. Hester #2-7 Test No. 4 Date 06/05/2023
 Company Moran Drilling Co Inc Elevation 3291 KB 3286 GL
 Address Wichita, ks
 Co. Rep / Geo Robert Hendrix Rig Moran 110
 Location: Sec. 7 Twp 1s Rge. 39w Co. Dundy State Ks

Interval Tested 4386-4476 Zone Tested LKC H-J
 Anchor Length 90' Drill Pipe Run 4201 Mud Wt. 9.0
 Top Packer Depth 4381 Drill Collars Run 180 Vis 60
 Bottom Packer Depth 4386 Wt. Pipe Run — WL 6.4
 Total Depth 4476 Chlorides 2000 ppm System LCM 2 #

Blow Description IF 1/4" blow
ISI No return.
EF No blow.
FSI No return.

Rec <u>10 5</u>	Feet of <u>Mud</u>	%gas	%oil	%water <u>100</u>	%mud
Rec	Feet of <u>oil spots</u>	%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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 140 Gravity — API RW — @ — °F Chlorides — ppm
 Initial Hydrostatic 2173 ☒ Test 1950 ☐ Ruined Shale Packer
 Initial Flow 25 to 27 ☒ Jars 300 ☐ Ruined Packer
 Initial Shut-In 98 ☐ Circ Sub ☐ Hotel Bentelman
 Final Flow 23 to 27 ☐ Hourly Standby ☒ EM Tool Successful
 Final Shut-In 58 ☒ Mileage 412+ 31.50 + 63 + 152.50 ☐ Accessibility
 Final Hydrostatic 2166 ☐ Sampler ☐ Gas Sample
 T- On Location 2200 ☐ Straddle ☐ Sub Total 800
 Initial Flow 30 T-Started 0100 ☐ Shale Packer ☐ Total 3297
 Initial Shut-In 60 T-Open 0350 ☐ Extra Packer ☐ Tool Loaded 06/16 @ 1600
 Final Flow 30 T-Pulled 0650 ☐ Extra Recorder ☐ MP/DST Disc't
 Final Shut-In 60 T-Out 0839 ☒ Day Standby 1d 7.25h
 Comments

Approved By _____ Our Representative [Signature]

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[illegible]



CEMENT TREATMENT REPORT

Customer:	Murfin Drilling	Well:	Hester #2-7	Ticket:	WP 4412
City, State:	Benkelman NE	County:	Cheyenne KS	Date:	6/17/2023
Field Rep:	Ricky Hilgers	S-T-R:	7-1S-39W	Service:	PTA

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	7 7/8 in	Blend:	H-Plug A	Blend:	
Hole Depth:	4850 ft	Weight:	13.8 ppg	Weight:	ppg
Casing Size:	in	Water / Sx:	6.9 gal / sx	Water / Sx:	gal / sx
Casing Depth:	ft	Yield:	1.42 ft ³ / sx	Yield:	ft ³ / sx
Tubing / Liners:	in	Annular Bbls / Ft.:	0.0406 bbls / ft.	Annular Bbls / Ft.:	bbls / ft.
Depth:	ft	Depth:	3350 ft	Depth:	ft
Tool / Packer:		Annular Volume:	136.0 bbls	Annular Volume:	0 bbls
Tool Depth:	ft	Excess:		Excess:	
Displacement:	bbls	Total Slurry:	60.6 bbls	Total Slurry:	0.0 bbls
		Total Sacks:	240 sx	Total Sacks:	0 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
2:45 PM			-	-	Arrived on location
2:55 PM				-	Safety meeting
3:05 PM				-	Rigged up
3:27 PM	3.2	120.0	5.0	5.0	Water ahead
3:32 AM	3.2	200.0	12.6	17.6	Mixed 50 sacks H-Plug A cement 13.8 ppg @ 3350'
3:35 PM	4.0	150.0	5.0	22.6	Begin water displacement
3:39 PM				22.6	Begin mud displacement with rig pump for 2:45 minutes
				22.6	
4:10 PM	4.0	120.0	5.0	27.6	Water ahead
4:13 PM	4.5	270.0	25.2	52.8	Mixed 100 sacks H-Plug A cement 13.8 ppg @ 2500'
4:20 PM	4.5	170.0	5.0	57.8	Begin water displacement
4:23 PM					Begin mud displacement with rig pump for 2:00 minutes
5:37 PM	4.5	100.0	5.0		Water ahead
5:41 PM	5.0	150.0	12.6		Mixed 50 sacks H-Plug A cement 13.8 ppg @ 310'
5:45 PM	3.5	70.0	0.5		Begin water displacement
6:10 PM	3.2	150.0	2.5		Mixed 10 sacks H-Plug A cement 13.8 ppg with wooden plug for top 40'
6:14 PM	3.0	170.0	7.5		Mixed 30 sacks H-Plug A cement 13.8 ppg for rathole plug
6:16 PM					Plug down
6:18 PM					Washed up and rigged down
6:55 PM					Left location

CREW		UNIT	SUMMARY		
Cementer:	John	947	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jose V	230	3.9 bpm	152 psi	86 bbls
Bulk #1:	Lupe	205			
Bulk #2:					

DRILLING REPORT - LOG TOPS - HESTER 2-7

MDCI Hester #2-7 800'FNL 1850'FEL Sec. 7-T1S-R39W KB: 3291						
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
SC	3329	-38	-34	3295	-4	0
B SC	3361	-70	-33	3326	-35	+2
TOPEKA	4060	-769	-5	4054	-763	+1
DEER CR	4086	-795	-3	4087	-796	-4
LECOMP	4140	-849	-8	4133	-842	-1
OREAD	4184	-893	-2	4184	-893	-2
LANS	4258	-967	-1	4258	-967	-1
LANS B	4316	-1025	-9	4309	-1018	-2
LANS D	4326	-1035	-2	4326	-1035	-2
LANS G	4372	-1081	+4	4378	-1087	-2
LANS H	4411	-1120	0	4412	-1121	-1
LANS J	4454	-1163	+1	4454	-1163	+1
STARK	4485	-1194	-6	4480	-1189	-1
LANS K	4511	-1220	-4	4507	-1216	0
LANS L	4535	-1244	-8	4530	-1239	-3
MOUND CITY	4543	-1252	-7	4536	-1245	0
LENAPAH	4552	-1261	-6	4544	-1253	+2
MARM	4578	-1287	-6	4572	-1281	0
MARM C	4636	-1345	-4	4629	-1338	+3
FT SC	4670	-1379	0	4661	-1370	+9
L FT SC	4710	-1419	-5	4702	-1411	+3
EXCELLO	4724	-1433	+3	4723	-1432	+4
BREEZY HILL	4735	-1444	+2	4736	-1445	+1
OAKLEY	4754	-1463	+1	4753	-1462	+2
CELIA	4759	-1468	0	4759	-1468	0
RTD	4850					
LTD				4852		