

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

Rogue #10-25

25-9s-56w Lincoln,CO

Start Date: 2018.01.29 @ 03:16:25

End Date: 2018.01.29 @ 14:24:55

Job Ticket #: 64292 DST #: 1

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

Printed: 2018.02.05 @ 16:20:40



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

25-9s-56w Lincoln, CO

Rogue #10-25

Job Ticket: 64292

DST#: 1

Test Start: 2018.01.29 @ 03:16:25

GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:06:55

Time Test Ended: 14:24:55

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 72

Interval: 7060.00 ft (KB) To 7090.00 ft (KB) (TVD)

Total Depth: 7090.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 5309.00 ft (KB)

5299.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8166 Outside

Press@RunDepth: 791.60 psig @ 7061.00 ft (KB)

Start Date: 2018.01.29

End Date:

2018.01.29

Start Time: 03:16:30

End Time:

14:24:55

Capacity: 8000.00 psig

Last Calib.: 2018.01.29

Time On Btm: 2018.01.29 @ 07:04:25

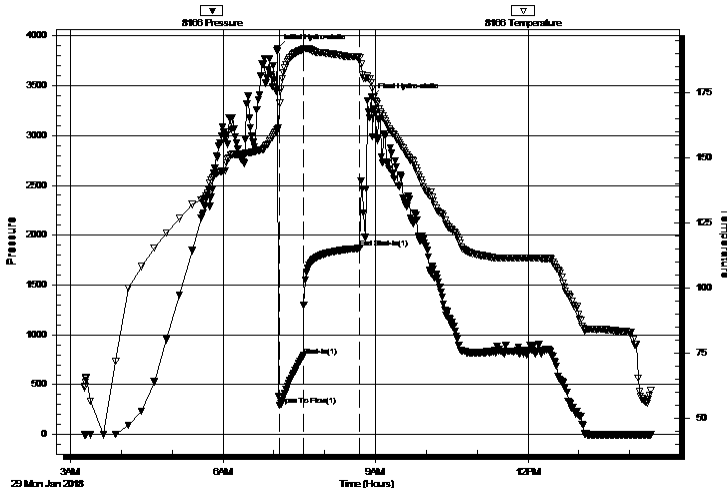
Time Off Btm: 2018.01.29 @ 08:54:55

TEST COMMENT: IF: BOB in 30 sec.

IS: BOB in 5 min. Gas to surface.

FF: Tool would not turn. Stuck on bottom pulled 160000 to get off bottom. String weight 90000.

Pressure vs. Time



PRESSURE SUMMARY

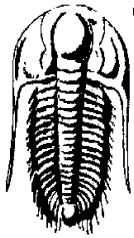
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3874.18	160.92	Initial Hydro-static
3	294.22	170.90	Open To Flow (1)
31	791.60	191.48	Shut-In(1)
97	1869.25	188.47	End Shut-In(1)
111	3384.64	178.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
558.00	mcw 95%w 5%m	2.74
558.00	ocmw 5%o 65%w 30%m	7.44
372.00	mcgo 20%g 50%o 30%m	5.22
186.00	go 10%g 90%o	2.61
0.00	GTS	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

25-9s-56w Lincoln, CO

Rogue #10-25

Job Ticket: 64292

DST#: 1

Test Start: 2018.01.29 @ 03:16:25

GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:06:55

Time Test Ended: 14:24:55

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 72

Interval: 7060.00 ft (KB) To 7090.00 ft (KB) (TVD)

Total Depth: 7090.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 5309.00 ft (KB)

5299.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6651 Inside

Press@RunDepth: psig @ 7061.00 ft (KB)

Start Date: 2018.01.29

End Date:

2018.01.29

Start Time: 03:16:19

End Time:

14:24:44

Capacity: 8000.00 psig

Last Calib.: 2018.01.29

Time On Btm:

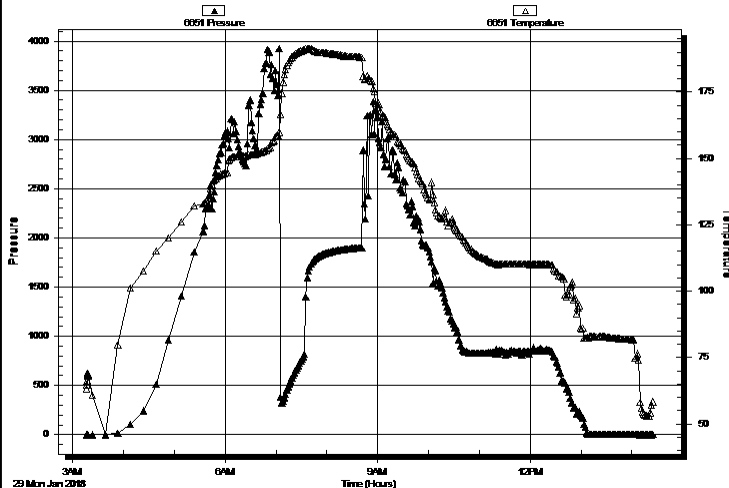
Time Off Btm:

TEST COMMENT: IF: BOB in 30 sec.

IS: BOB in 5 min. Gas to surface.

FF: Tool would not turn. Stuck on bottom pulled 160000 to get off bottom. String weight 90000.

Pressure vs. Time



PRESSURE SUMMARY

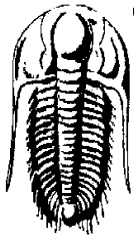
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
558.00	mcw 95%w 5%m	2.74
558.00	ocmw 5%o 65%w 30%m	7.44
372.00	mcgo 20%g 50%o 30%m	5.22
186.00	go 10%g 90%o	2.61
0.00	GTS	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

25-9s-56w Lincoln, CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64292

DST#: 1

ATTN: Greg Smith

Test Start: 2018.01.29 @ 03:16:25

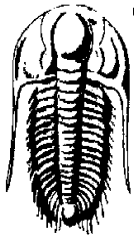
Tool Information

Drill Pipe:	Length:	6451.00 ft	Diameter:	3.80 inches	Volume:	90.49 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:	25000.00 lb
Drill Collar:	Length:	600.00 ft	Diameter:	2.25 inches	Volume:	2.95 bbl	Weight to Pull Loose:	160000.0 lb
					Total Volume:	93.44 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		18.00 ft					String Weight: Initial	90000.00 lb
Depth to Top Packer:		7060.00 ft					Final	110000.0 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		30.00 ft						
Tool Length:		57.00 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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Stubb	1.00			7034.00	
Shut In Tool	5.00			7039.00	
Hydraulic tool	5.00			7044.00	
Jars	5.00			7049.00	
Safety Joint	2.00			7051.00	
Packer	5.00			7056.00	27.00 Bottom Of Top Packer
Packer	4.00			7060.00	
Stubb	1.00			7061.00	
Recorder	0.00	6651	Inside	7061.00	
Recorder	0.00	8166	Outside	7061.00	
Perforations	24.00			7085.00	
Bullnose	5.00			7090.00	30.00 Bottom Packers & Anchor

Total Tool Length: 57.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

25-9s-56w Lincoln, CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64292

DST#: 1

ATTN: Greg Smith

Test Start: 2018.01.29 @ 03:16:25

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

48000 ppm

Viscosity: 75.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.00 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
558.00	mcw 95%w 5%m	2.744
558.00	ocmw 5%o 65%w 30%m	7.445
372.00	mcgo 20%g 50%o 30%m	5.218
186.00	go 10%g 90%o	2.609
0.00	GTS	0.000

Total Length: 1674.00 ft

Total Volume:

18.016 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 40@60=40

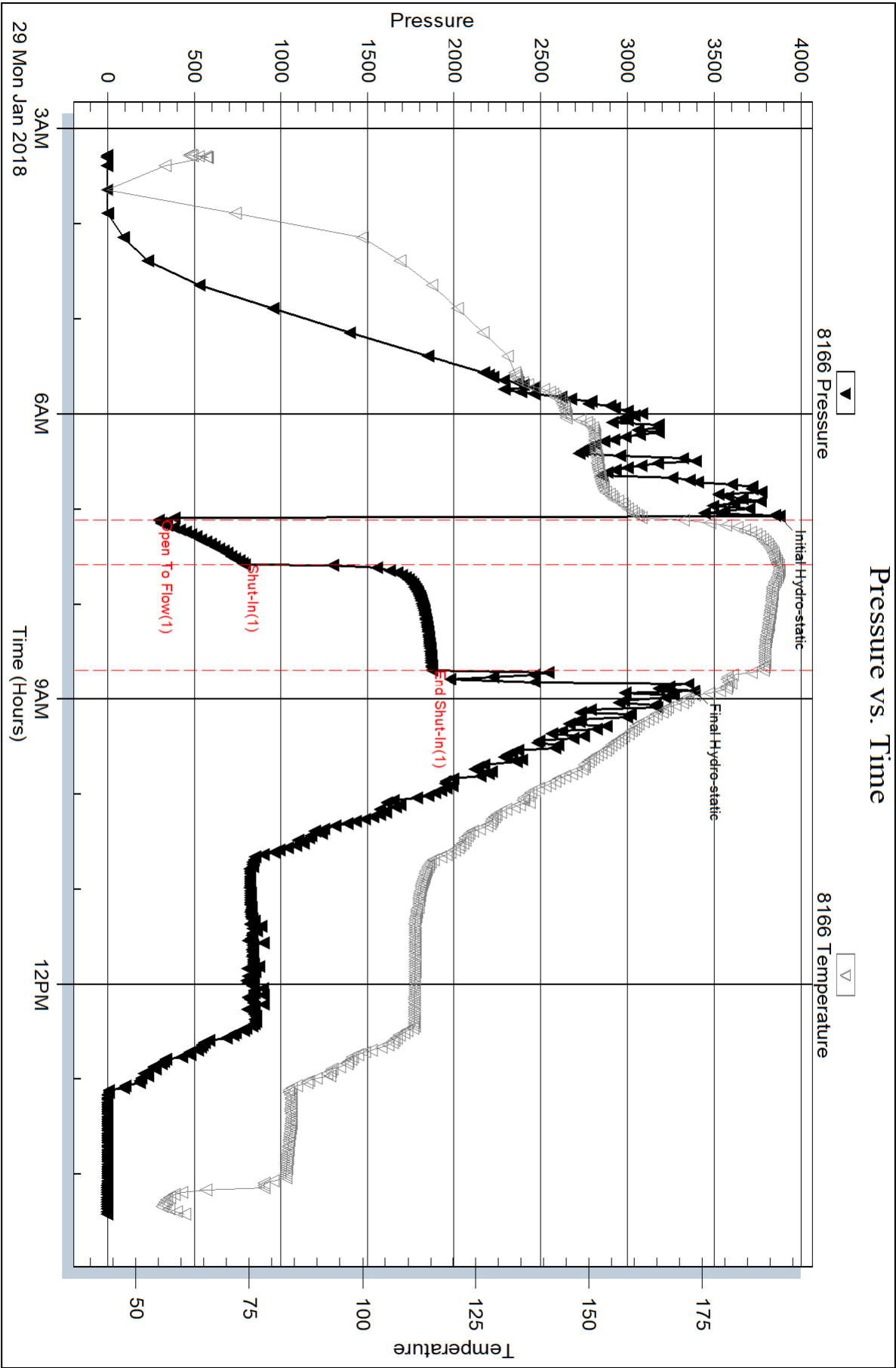
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Serial #: 8166

Outside Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 1



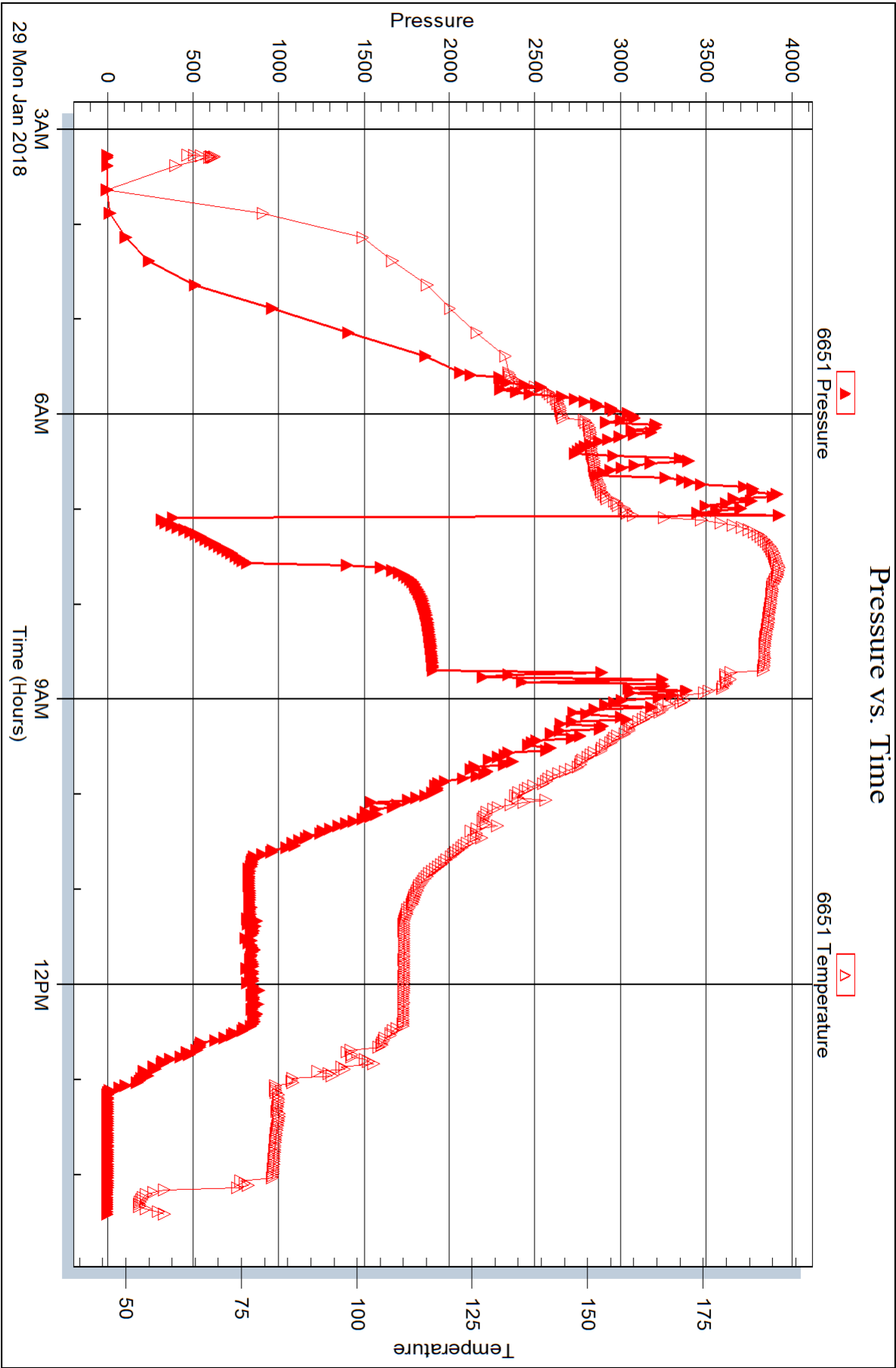
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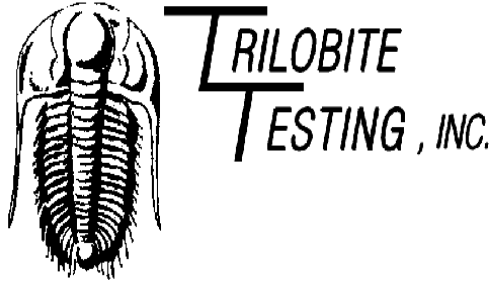
Inside

Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

Rogue #10-25

25-9s-56w Lincoln,CO

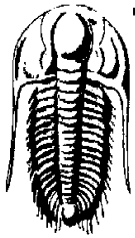
Start Date: 2018.01.30 @ 08:53:11

End Date: 2018.01.30 @ 19:37:41

Job Ticket #: 64293 DST #: 2

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

Printed: 2018.02.05 @ 16:20:11



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

25-9s-56w Lincoln, CO

Rogue #10-25

Job Ticket: 64293

DST#: 2

Test Start: 2018.01.30 @ 08:53:11

GENERAL INFORMATION:

Formation: **Lower LKC L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:19:11

Time Test Ended: 19:37:41

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 72

Interval: 7100.00 ft (KB) To 7130.00 ft (KB) (TVD)

Total Depth: 7130.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 5309.00 ft (KB)

5299.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8166 Outside

Press@RunDepth: 225.96 psig @ 7101.00 ft (KB)

Start Date: 2018.01.30

End Date:

2018.01.30

Start Time: 08:53:16

End Time:

19:37:41

Capacity: 8000.00 psig

Last Calib.: 2018.01.30

Time On Btm: 2018.01.30 @ 12:15:41

Time Off Btm: 2018.01.30 @ 15:49:41

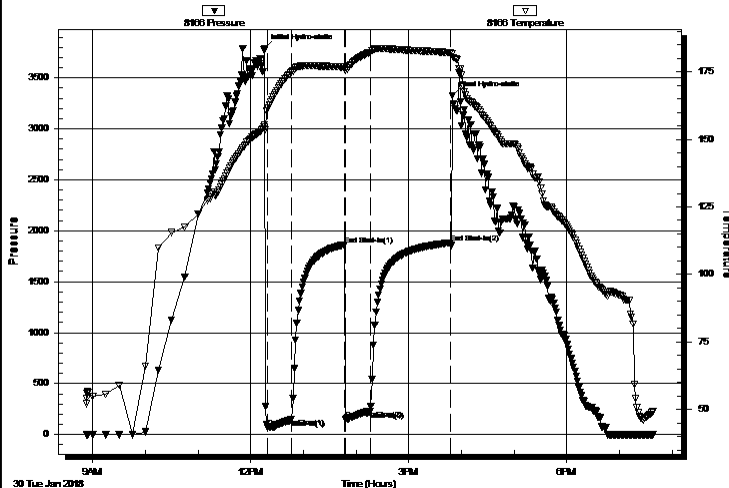
TEST COMMENT: IF: BOB in 1 min. Gas to surface in 16 min. Gas TSTM

IS: Surface blow built to 2"

FF: BOB in 1 min. Gas TSTM

FS: BOB in 32 min.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3789.25	155.32	Initial Hydro-static
4	73.86	161.55	Open To Flow (1)
31	148.13	174.90	Shut-In(1)
91	1863.41	176.73	End Shut-In(1)
93	149.59	175.49	Open To Flow (2)
121	225.96	182.24	Shut-In(2)
212	1879.95	182.08	End Shut-In(2)
214	3328.09	181.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
185.00	mcw 95%w 5%m	0.91
93.00	gocw m 40%g 10%o 20%w 30%m	0.46
124.00	mcgo 40%g 40%o 20%m	1.72
166.00	go 10%g 90%o	2.33
0.00	GTS	0.00

Gas Rates

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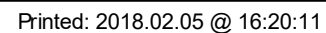
* Recovery from multiple tests

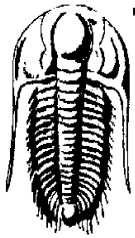


Test Start: 2018.01.30 @ 08:53:11

KB to GR/CF: 10.00 ft

FS: BOB in 32 min.





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

25-9s-56w Lincoln, CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64293

DST#: 2

ATTN: Greg Smith

Test Start: 2018.01.30 @ 08:53:11

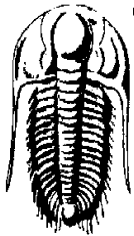
Tool Information

Drill Pipe:	Length: 6805.00 ft	Diameter: 3.80 inches	Volume: 95.46 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: 25000.00 lb
Drill Collar:	Length: 280.00 ft	Diameter: 2.25 inches	Volume: 1.38 bbl	Weight to Pull Loose: 120000.0 lb
		Total Volume:	96.84 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 90000.00 lb
Depth to Top Packer:	7100.00 ft			Final 94000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	57.00 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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Stubb	1.00			7074.00	
Shut In Tool	5.00			7079.00	
Hydraulic tool	5.00			7084.00	
Jars	5.00			7089.00	
Safety Joint	2.00			7091.00	
Packer	5.00			7096.00	27.00 Bottom Of Top Packer
Packer	4.00			7100.00	
Stubb	1.00			7101.00	
Recorder	0.00	6651	Inside	7101.00	
Recorder	0.00	8166	Outside	7101.00	
Perforations	24.00			7125.00	
Bullnose	5.00			7130.00	30.00 Bottom Packers & Anchor

Total Tool Length: 57.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

25-9s-56w Lincoln, CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64293

DST#: 2

ATTN: Greg Smith

Test Start: 2018.01.30 @ 08:53:11

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

45000 ppm

Viscosity: 75.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.40 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
185.00	mcw 95%w 5%m	0.910
93.00	gocw m 40%g 10%o 20%w 30%m	0.457
124.00	mcgo 40%g 40%o 20%m	1.721
166.00	go 10%g 90%o	2.329
0.00	GTS	0.000

Total Length: 568.00 ft

Total Volume: 5.417 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 33@60=33

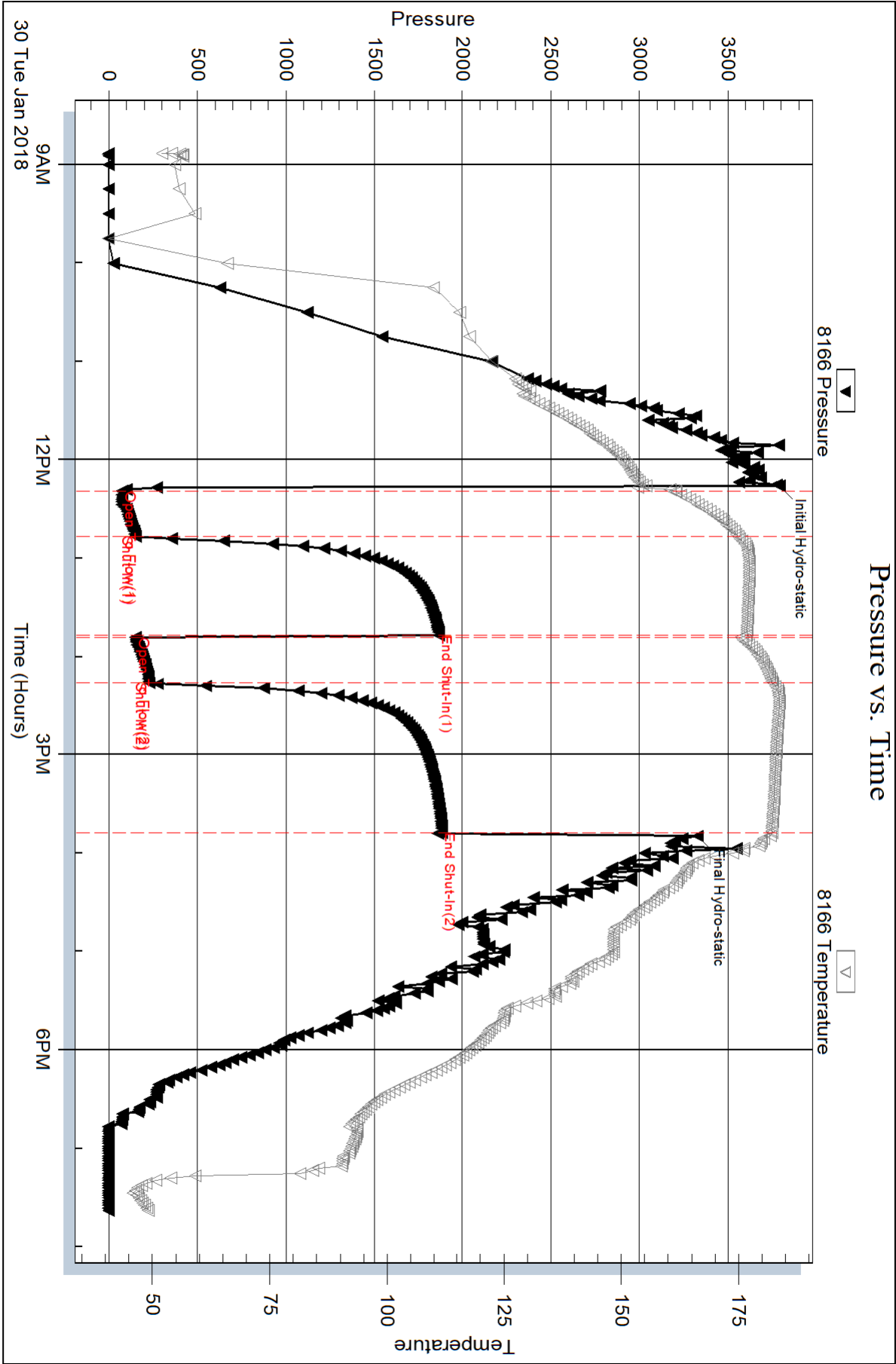
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Serial #: 8166

Outside Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 2



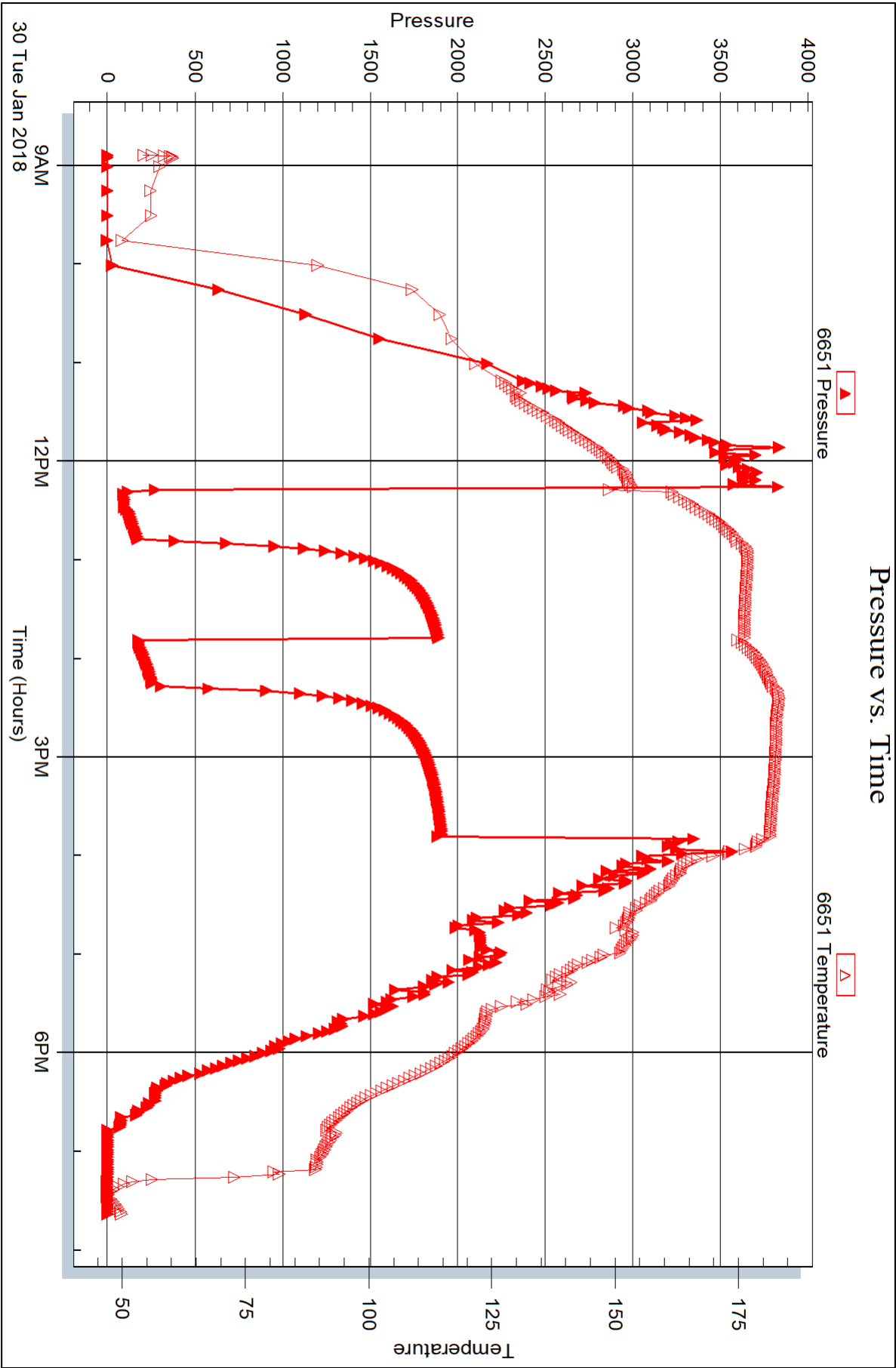
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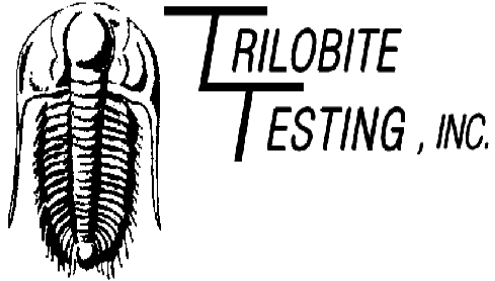
Inside

Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

Rogue #10-25

25-9s-56w Lincoln,CO

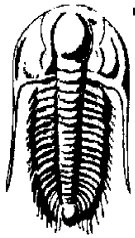
Start Date: 2018.02.01 @ 01:33:15

End Date: 2018.02.01 @ 08:57:45

Job Ticket #: 64294 DST #: 3

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

Printed: 2018.02.05 @ 16:17:38



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

25-9s-56w Lincoln, CO

Rogue #10-25

Job Ticket: 64294

DST#: 3

Test Start: 2018.02.01 @ 01:33:15

GENERAL INFORMATION:

Formation: **Marmaton C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:01:15

Time Test Ended: 08:57:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 72

Interval: 7204.00 ft (KB) To 7250.00 ft (KB) (TVD)

Total Depth: 7250.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 5309.00 ft (KB)

5299.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8166 Outside

Press@RunDepth: psig @ 7205.00 ft (KB)

Start Date: 2018.02.01

End Date:

2018.02.01

Start Time: 01:33:20

End Time:

08:57:44

Capacity: 8000.00 psig

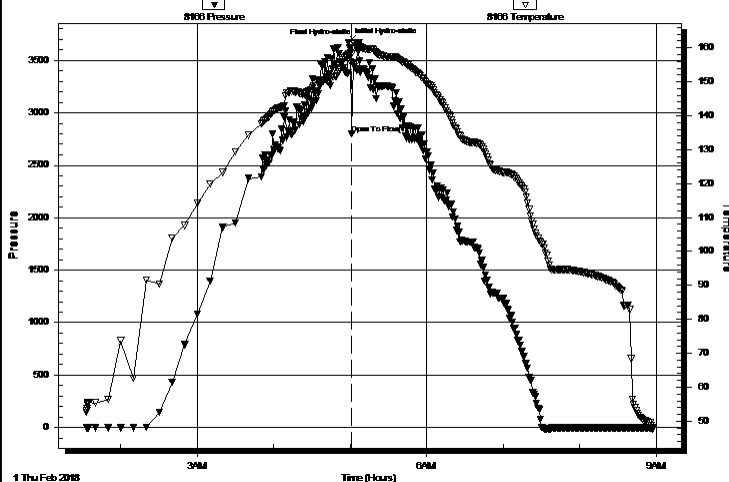
Last Calib.: 2018.02.01

Time On Btm: 2018.02.01 @ 04:58:45

Time Off Btm: 2018.02.01 @ 05:05:45

TEST COMMENT: Packers Failed on open.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3671.62	158.33	Initial Hydro-static
3	2798.07	158.21	Open To Flow (1)
7	3663.85	160.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
465.00	mud 100% m	3.97

Gas Rates

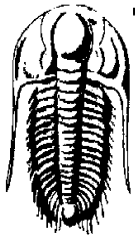
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



Test Start: 2018.02.01 @ 01:33:15

KB to GR/CF: 10.00 ft



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

25-9s-56w Lincoln, CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64294

DST#: 3

ATTN: Greg Smith

Test Start: 2018.02.01 @ 01:33:15

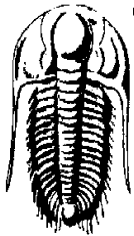
Tool Information

Drill Pipe:	Length:	6903.00 ft	Diameter:	3.80 inches	Volume:	96.83 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:	25000.00 lb
Drill Collar:	Length:	280.00 ft	Diameter:	2.25 inches	Volume:	1.38 bbl	Weight to Pull Loose:	100000.0 lb
					Total Volume:	98.21 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		6.00 ft					String Weight: Initial	80000.00 lb
Depth to Top Packer:		7204.00 ft					Final	90000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		46.00 ft						
Tool Length:		73.00 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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Stubb	1.00			7178.00	
Shut In Tool	5.00			7183.00	
Hydraulic tool	5.00			7188.00	
Jars	5.00			7193.00	
Safety Joint	2.00			7195.00	
Packer	5.00			7200.00	27.00 Bottom Of Top Packer
Packer	4.00			7204.00	
Stubb	1.00			7205.00	
Recorder	0.00	6651	Inside	7205.00	
Recorder	0.00	8166	Outside	7205.00	
Perforations	6.00			7211.00	
Change Over Sub	1.00			7212.00	
Drill Pipe	32.00			7244.00	
Change Over Sub	1.00			7245.00	
Bullnose	5.00			7250.00	46.00 Bottom Packers & Anchor

Total Tool Length: 73.00



TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

25-9s-56w Lincoln, CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64294

DST#: 3

ATTN: Greg Smith

Test Start: 2018.02.01 @ 01:33:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 71.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.00 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
465.00	mud 100%m	3.972

Total Length: 465.00 ft

Total Volume: 3.972 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

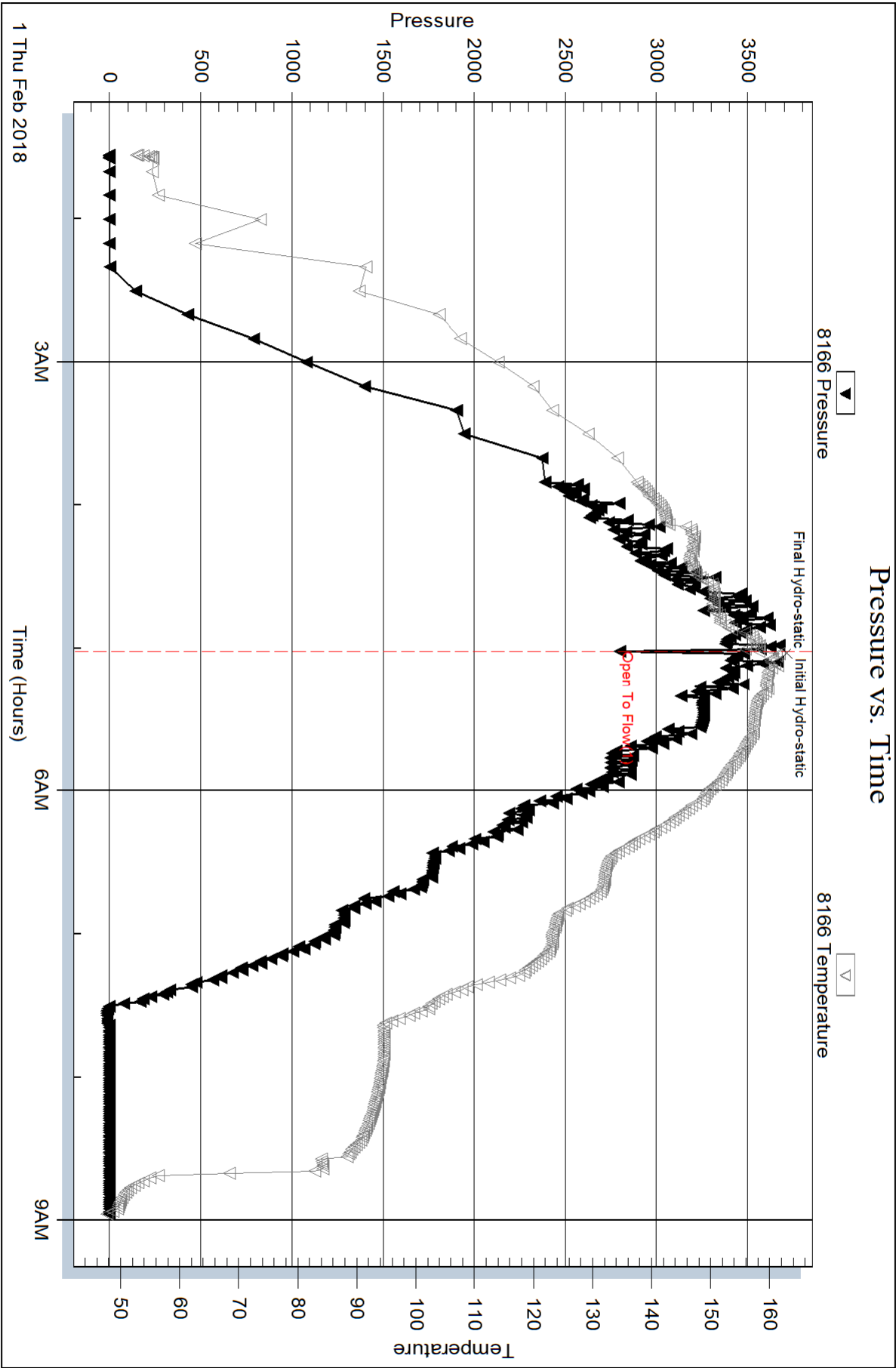
Recovery Comments:

Serial #: 8166

Outside Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 3



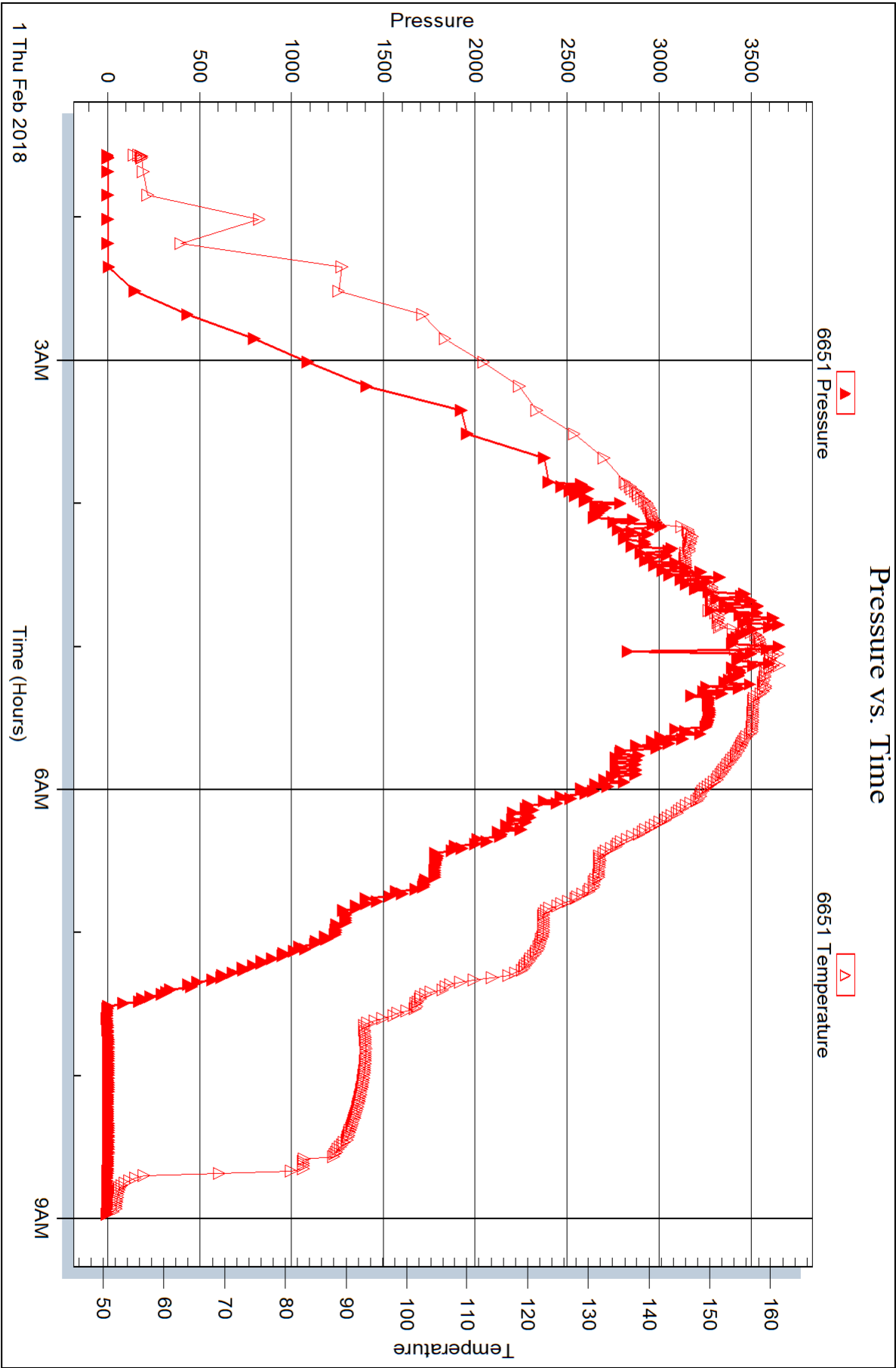
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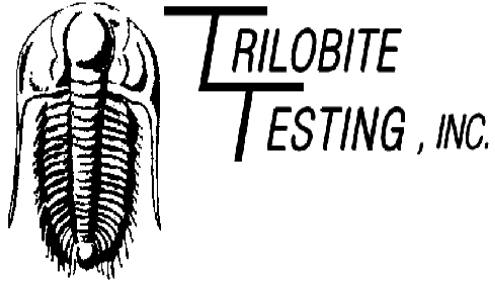
Inside

Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

Rogue #10-25

25-9s-56w Lincoln,CO

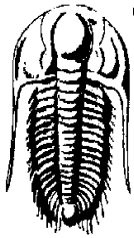
Start Date: 2018.02.01 @ 22:54:44

End Date: 2018.02.02 @ 05:39:44

Job Ticket #: 64295 DST #: 4

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

Printed: 2018.02.05 @ 16:11:29



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

25-9s-56w Lincoln, CO

Rogue #10-25

Job Ticket: 64295

DST#: 4

Test Start: 2018.02.01 @ 22:54:44

GENERAL INFORMATION:

Formation: **Marmaton C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:14:44

Time Test Ended: 05:39:44

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 72

Interval: 7194.00 ft (KB) To 7250.00 ft (KB) (TVD)

Total Depth: 7250.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 5309.00 ft (KB)

5299.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8166 Outside

Press@RunDepth: psig @ 7195.00 ft (KB)

Start Date: 2018.02.01

End Date:

2018.02.02

Start Time: 22:54:49

End Time:

05:39:43

Capacity: 8000.00 psig

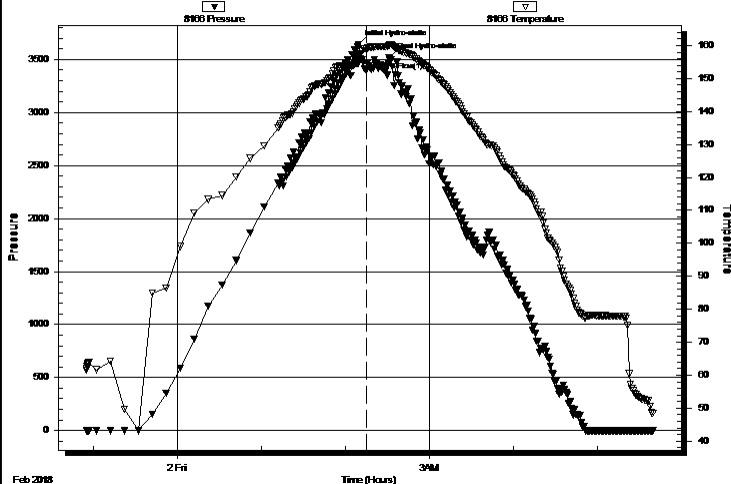
Last Calib.: 2018.02.02

Time On Btm: 2018.02.02 @ 02:09:14

Time Off Btm: 2018.02.02 @ 02:31:14

TEST COMMENT: Hit a bridge at 7225. Never made it to bottom. Bunch on clay looking mud stuck on the tool when we got out of the hole.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3641.87	154.69	Initial Hydro-static
6	3393.46	158.90	Open To Flow (1)
22	3514.23	160.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00		0.00

Gas Rates

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



Test Start: 2018.02.01 @ 22:54:44

KB to GR/CF: 10.00 ft

Time Off Btm:

Printed: 2018.02.05 @ 16:11:29



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

25-9s-56w Lincoln, CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64295

DST#: 4

ATTN: Greg Smith

Test Start: 2018.02.01 @ 22:54:44

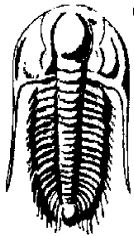
Tool Information

Drill Pipe:	Length:	6903.00 ft	Diameter:	3.80 inches	Volume:	96.83 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:	280.00 ft	Diameter:	2.25 inches	Volume:	1.38 bbl	Weight to Pull Loose:	110000.0 lb
					Total Volume:	98.21 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		16.00 ft					String Weight: Initial	80000.00 lb
Depth to Top Packer:		7194.00 ft					Final	80000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		56.00 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
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			7168.00	
Shut In Tool	5.00			7173.00	
Hydraulic tool	5.00			7178.00	
Jars	5.00			7183.00	
Safety Joint	2.00			7185.00	
Packer	5.00			7190.00	27.00 Bottom Of Top Packer
Packer	4.00			7194.00	
Stubb	1.00			7195.00	
Recorder	0.00	6651	Inside	7195.00	
Recorder	0.00	8166	Outside	7195.00	
Perforations	16.00			7211.00	
Change Over Sub	1.00			7212.00	
Drill Pipe	32.00			7244.00	
Change Over Sub	1.00			7245.00	
Bullnose	5.00			7250.00	56.00 Bottom Packers & Anchor

Total Tool Length: 83.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

25-9s-56w Lincoln, CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64295

DST#: 4

ATTN: Greg Smith

Test Start: 2018.02.01 @ 22:54:44

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 75.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00		0.000

Total Length: ft

Total Volume: bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

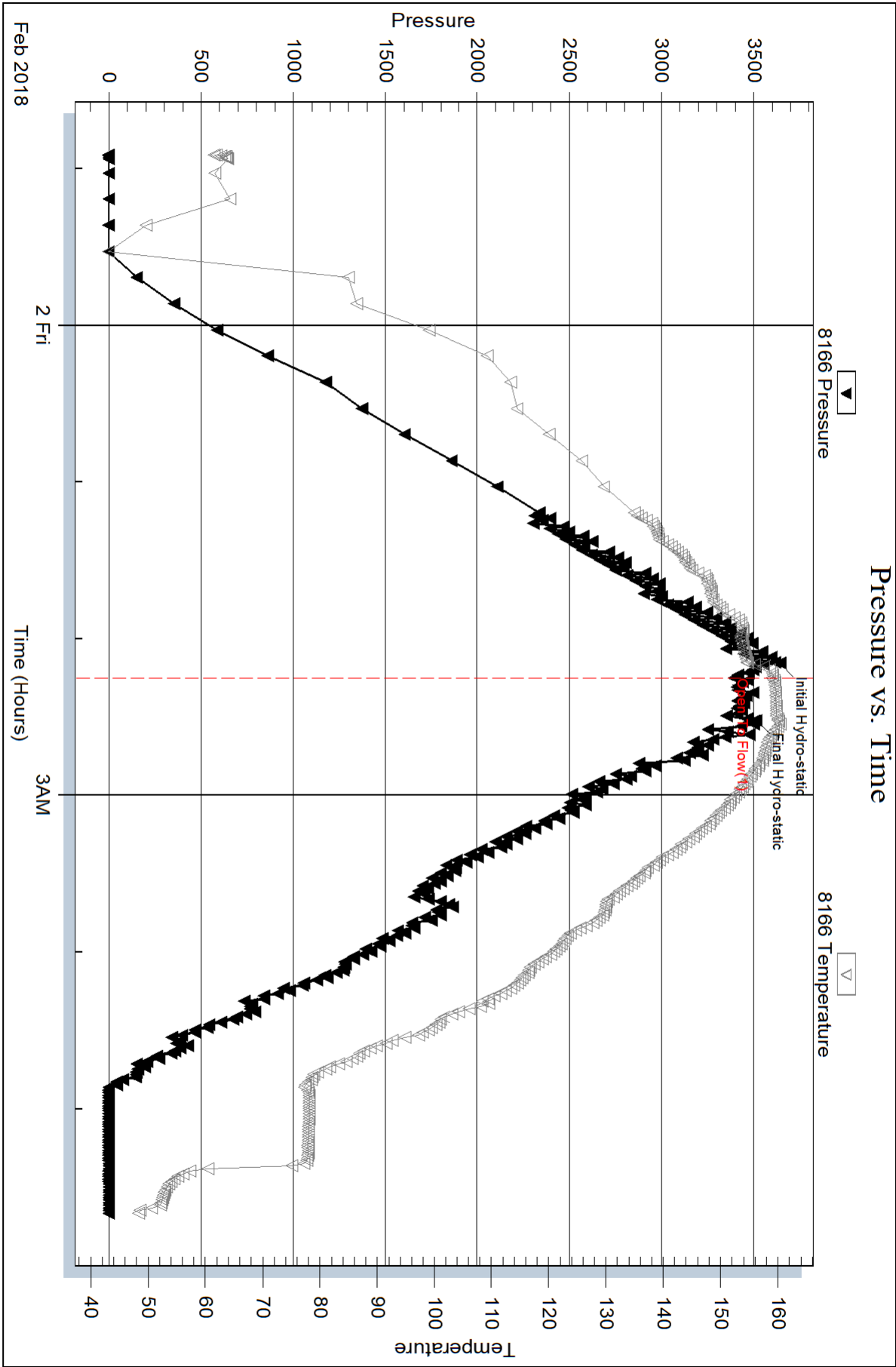
Recovery Comments:

Serial #: 8166

Outside Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 4



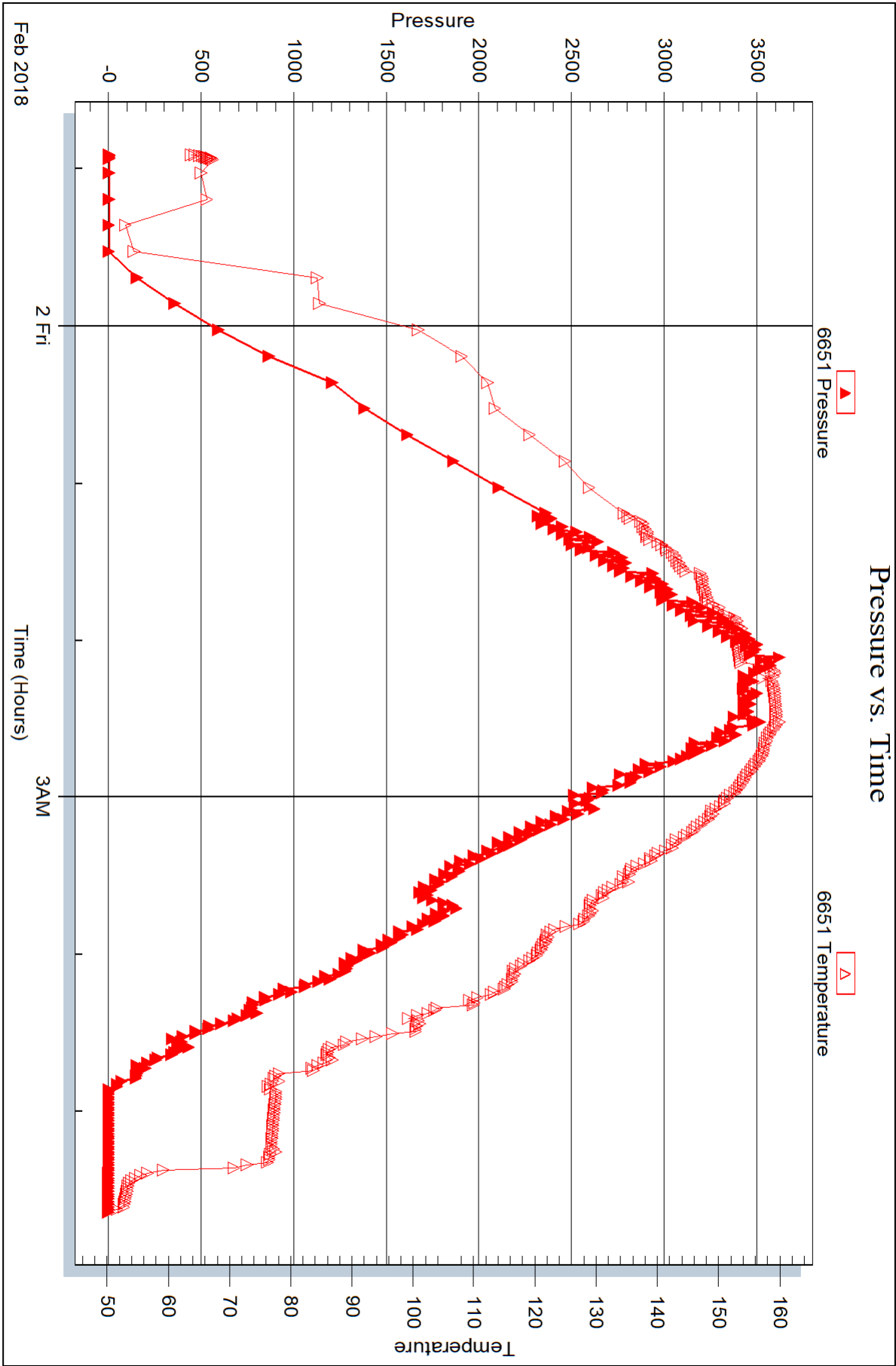
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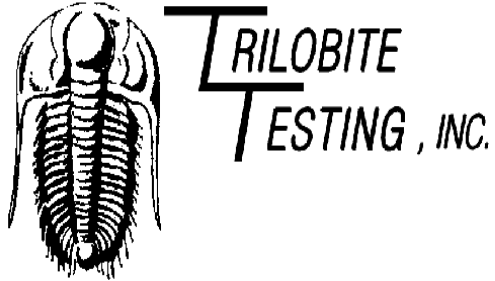
Inside

Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

Rogue #10-25

25-9s-56w Lincoln,CO

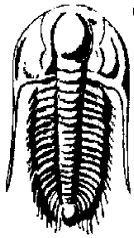
Start Date: 2018.02.03 @ 02:02:34

End Date: 2018.02.03 @ 09:15:04

Job Ticket #: 64296 DST #: 5

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

Printed: 2018.02.05 @ 16:10:58



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita, KS 67202

ATTN: Greg Smith

25-9s-56w Lincoln, CO

Rogue #10-25

Job Ticket: 64296

DST#: 5

Test Start: 2018.02.03 @ 02:02:34

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:34:04

Time Test Ended: 09:15:04

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 72

Interval: 7277.00 ft (KB) To 7329.00 ft (KB) (TVD)

Total Depth: 7329.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 5309.00 ft (KB)

5299.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8166 Outside

Press@RunDepth: psig @ 7278.00 ft (KB)

Start Date: 2018.02.03

End Date:

2018.02.03

Start Time: 02:02:39

End Time:

09:15:03

Capacity: 8000.00 psig

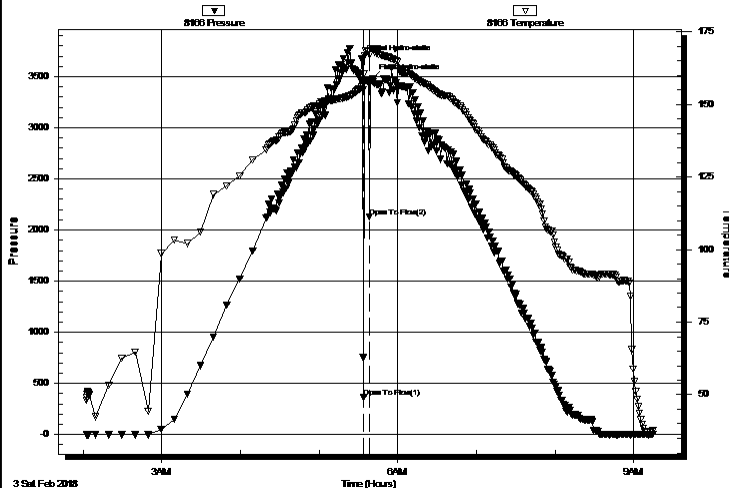
Last Calib.: 2018.02.03

Time On Btm: 2018.02.03 @ 05:33:04

Time Off Btm: 2018.02.03 @ 05:41:04

TEST COMMENT: Packers failed on open.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3663.36	156.23	Initial Hydro-static
1	362.31	160.32	Open To Flow (1)
6	2128.41	166.93	Open To Flow (2)
8	3476.58	168.85	Final Hydro-static

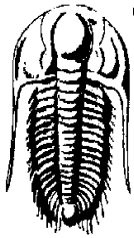
Recovery

Length (ft)	Description	Volume (bbl)
93.00	gcm 10%g 90%m	0.46
186.00	mog 60%g 40%m	0.91
124.00	gcm 10%g 90%m	0.61

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: Greg Smith

25-9s-56w Lincoln, CO

Rogue #10-25

Job Ticket: 64296

DST#: 5

Test Start: 2018.02.03 @ 02:02:34

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:34:04

Time Test Ended: 09:15:04

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 72

Interval: 7277.00 ft (KB) To 7329.00 ft (KB) (TVD)

Total Depth: 7329.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 5309.00 ft (KB)

5299.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6651 Inside

Press@RunDepth: psig @ 7278.00 ft (KB)

Start Date: 2018.02.03

End Date:

2018.02.03

Start Time: 02:02:24

End Time:

09:14:48

Capacity: 8000.00 psig

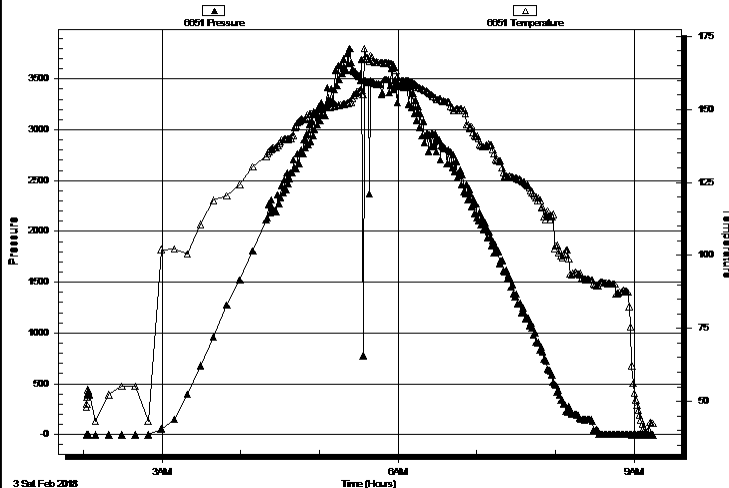
Last Calib.: 2018.02.03

Time On Btm:

Time Off Btm:

TEST COMMENT: Packers failed on open.

Pressure vs. Time



PRESSURE SUMMARY

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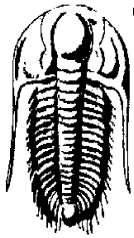
Recovery

Length (ft)	Description	Volume (bbl)
93.00	gcm 10%g 90%m	0.46
186.00	mog 60%g 40%m	0.91
124.00	gcm 10%g 90%m	0.61

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

25-9s-56w Lincoln, CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64296

DST#: 5

ATTN: Greg Smith

Test Start: 2018.02.03 @ 02:02:34

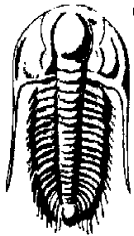
Tool Information

Drill Pipe:	Length: 6675.00 ft	Diameter: 3.80 inches	Volume: 93.63 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: 30000.00 lb
Drill Collar:	Length: 600.00 ft	Diameter: 2.25 inches	Volume: 2.95 bbl	Weight to Pull Loose: 95000.00 lb
		Total Volume:	96.58 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 90000.00 lb
Depth to Top Packer:	7277.00 ft			Final 92000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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

Stubb	1.00			7251.00	
Shut In Tool	5.00			7256.00	
Hydraulic tool	5.00			7261.00	
Jars	5.00			7266.00	
Safety Joint	2.00			7268.00	
Packer	5.00			7273.00	27.00 Bottom Of Top Packer
Packer	4.00			7277.00	
Stubb	1.00			7278.00	
Recorder	0.00	6651	Inside	7278.00	
Recorder	0.00	8166	Outside	7278.00	
Perforations	13.00			7291.00	
Change Over Sub	1.00			7292.00	
Drill Pipe	31.00			7323.00	
Change Over Sub	1.00			7324.00	
Bullnose	5.00			7329.00	52.00 Bottom Packers & Anchor

Total Tool Length: 79.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

25-9s-56w Lincoln,CO

250 N Water Ste 300
Wichita, KS 67202

Rogue #10-25

Job Ticket: 64296

DST#: 5

ATTN: Greg Smith

Test Start: 2018.02.03 @ 02:02:34

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 75.00 sec/qt

Water Loss: 6.50 in³

Resistivity: 0.00 ohm.m

Salinity: 1000.00 ppm

Filter Cake: 2.00 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
93.00	gcm 10%g 90%m	0.457
186.00	mccg 60%g 40%m	0.915
124.00	gcm 10%g 90%m	0.610

Total Length: 403.00 ft

Total Volume: 1.982 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

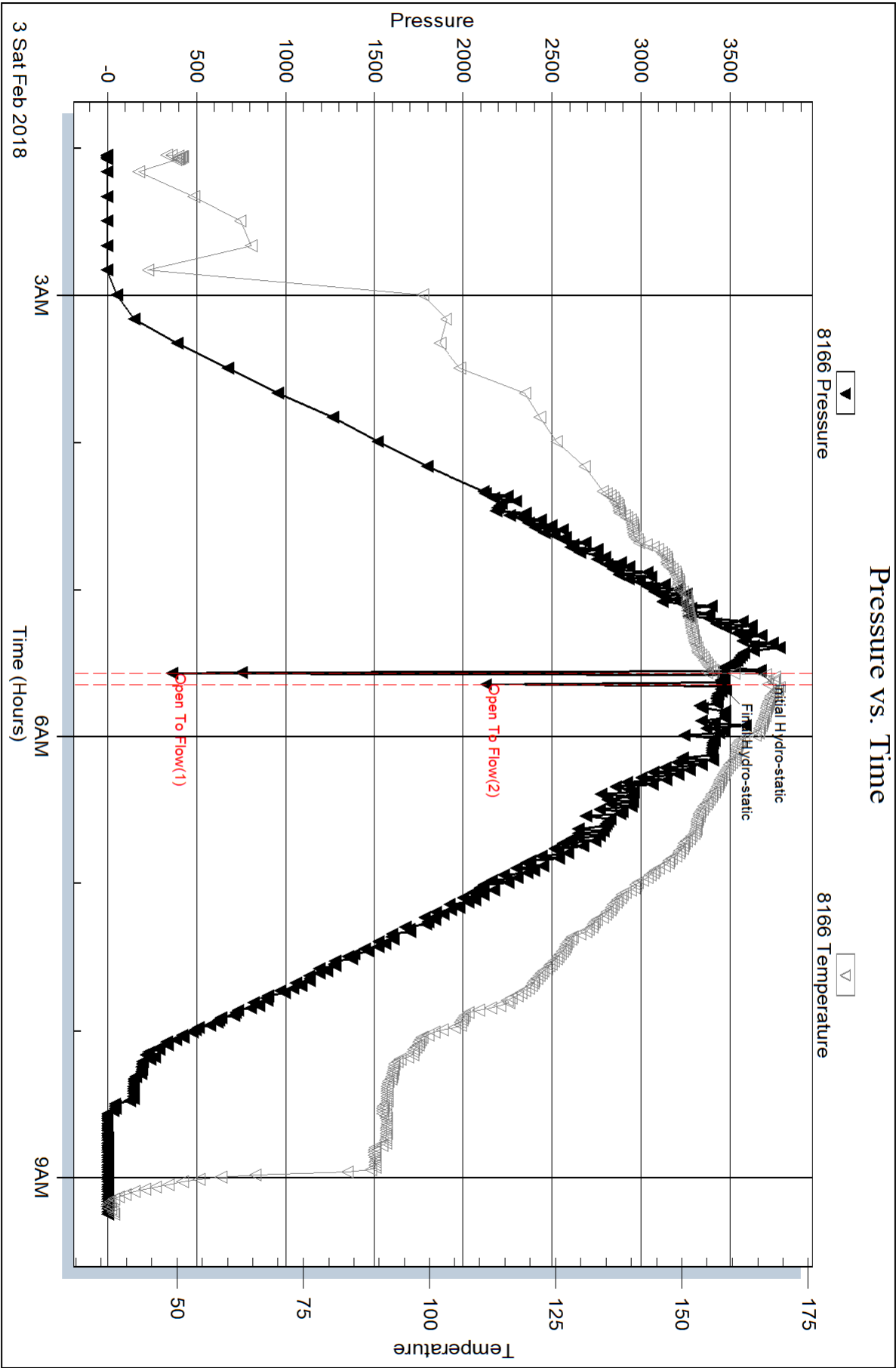
Recovery Comments:

Serial #: 8166

Outside Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 5



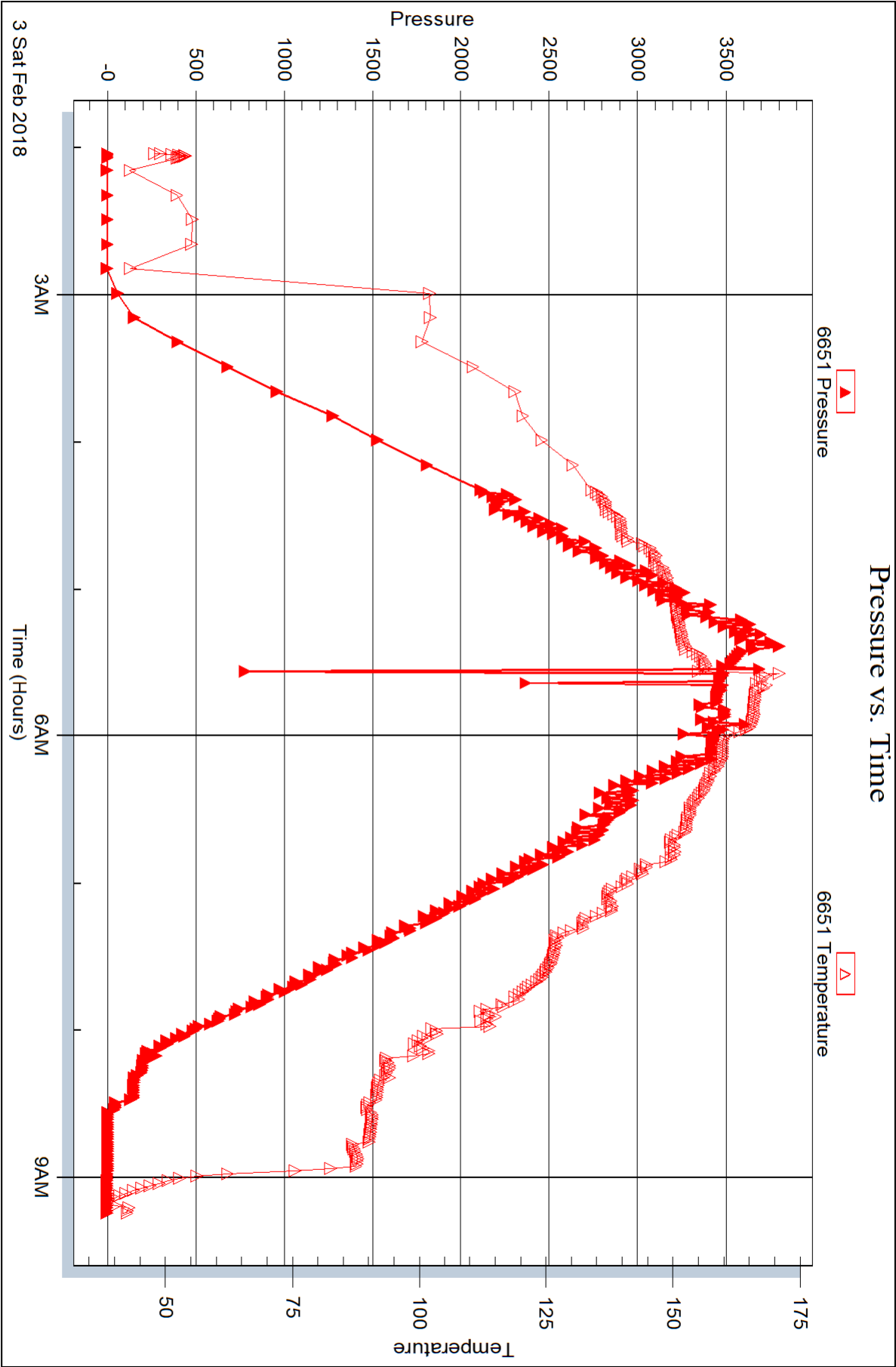
Serial #: 6651

Inside

Murfin Drilling Co Inc

Rogue #10-25

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64292

Well Name & No. Rogue 10-25 Test No. 1 Date 1-29-17
Company Murfin Drilling Co. Inc Elevation 5309 KB 5299 GL
Address 250 N Water Stc 300 Wichita, KS 67202
Co. Rep / Geo. Greg Smith Rig Murfin 25
Location: Sec. 25 Twp. 9S Rge. 56W Co. Lincoln State KS

Interval Tested 7060 7090 Zone Tested ~~5309~~ ~~5299~~ LSC-K
Anchor Length 30 Drill Pipe Run Mud Wt. 9.3
Top Packer Depth 7055 Drill Collars Run 600 Vis 75
Bottom Packer Depth 7060 Wt. Pipe Run WL 1.0
Total Depth 7090 Chlorides 1200 ppm System LCM 6
Blow Description IF: BoB in 30 sec.

IS: BoB in 5 min. Gas to surface.

FF: tool would not turn stuck on bottom pulled

160,000 - 90,000 string weight.

Rec	Feet of	%gas	%oil	%water	%mud
<u>186</u>	<u>90</u>	<u>10</u>	<u>90</u>		
<u>372</u>	<u>MC90</u>	<u>20</u>	<u>50</u>		
<u>558</u>	<u>OCMW</u>		<u>5</u>	<u>65</u>	<u>30</u>
<u>558</u>	<u>MCW</u>		<u>95</u>		<u>5</u>

Rec Total 1674 BHT 178 Gravity 40 API RW .20 @ 54 °F Chlorides 48,000 ppm

(A) Initial Hydrostatic	(B) First Initial Flow	(C) First Final Flow	(D) Initial Shut-In	(E) Second Initial Flow	(F) Second Final Flow	(G) Final Shut-In	(H) Final Hydrostatic
<u>3874</u>	<u>294</u>	<u>791</u>	<u>1869</u>	<u> </u>	<u> </u>	<u> </u>	<u>3384</u>

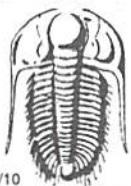
Test	Jars	Safety Joint	Circ Sub	Hourly Standby	Mileage	Sampler	Straddle	Shale Packer	Extra Packer	Extra Recorder	Day Standby	Accessibility
<u>1850</u>	<u>250</u>	<u>75</u>	<u>50.00</u>	<u> </u>	<u>460 - 345</u>	<u> </u>	<u> </u>	<u>29"36"x2 800</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

T-On Location 2:00
T-Started 3:16
T-Open 7:04
T-Pulled 8:34
T-Out 14:36
Comments

Initial Open 30
Initial Shut-In 60
Final Flow
Final Shut-In
Sub Total 3370

Approved By Greg Smith Our Representative

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

NO. **64293**

Well Name & No. Rogue 10-25 Test No. 2 Date 1-30-17
 Company Murfin Drilling Co Inc Elevation 5309 KB 5299 GL
 Address _____
 Co. Rep / Geo. Greg Smith Rig Murfin 25
 Location: Sec. 25 Twp. 95 Rge. 56W Co. Lincoln State CO

Interval Tested 7100 7130 Zone Tested Lower Lansing Porosity L
 Anchor Length 30 Drill Pipe Run 6805 Mud Wt. 9.2
 Top Packer Depth 7095 Drill Collars Run 280 Vis 7.5
 Bottom Packer Depth 7100 Wt. Pipe Run _____ WL 7.4
 Total Depth 7130 Chlorides 400 ppm System LCM 6

Blow Description IF: BoB in 1 min. Gas to surface in 16 min. To work to gauge
FS: Surface blow built to 2.
FF: BoB in 1 min. Gas to work to gauge.
FS: BoB in 32 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>166</u>	<u>90</u>	<u>10</u>	<u>90</u>		
<u>124</u>	<u>MC90</u>	<u>40</u>	<u>40</u>	<u>20</u>	<u>20</u>
<u>93</u>	<u>90CWM</u>	<u>40</u>	<u>10</u>	<u>20</u>	<u>30</u>
<u>185</u>	<u>MCW</u>		<u>95</u>	<u>5</u>	

Rec Total 568 BHT 182 Gravity 33 API RW .21 @ 55 °F Chlorides 45,000 ppm

(A) Initial Hydrostatic 3789 ☒ Test 1850
 (B) First Initial Flow 73 ☒ Jars 250
 (C) First Final Flow 148 ☒ Safety Joint 75
 (D) Initial Shut-In 1863 ☒ Circ Sub NIL
 (E) Second Initial Flow 149 ☐ Hourly Standby _____
 (F) Second Final Flow 225 ☒ Mileage 460 345
 (G) Final Shut-In 1879 ☐ Sampler _____
 (H) Final Hydrostatic 3328 ☐ Straddle _____
☒ Shale Packer x2 800

T-On Location 6:30
 T-Started 8:53
 T-Open 12:17
 T-Pulled 15:47
 T-Out 19:42

Comments _____

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

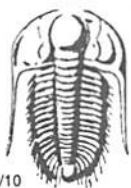
☐ Extra Packer _____
☐ Extra Recorder _____
☐ Day Standby _____
☐ Accessibility _____
 Sub Total 3120

☐ Ruined Shale Packer _____
☐ Ruined Packer _____
☐ Extra Copies _____
 Sub Total 0
 Total 3120
 MP/DST Disc't _____

Approved By Greg Smith

Our Representative _____

TriLOBITE Testing Inc. shall not be liable for damaged or 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. **64294**

Well Name & No. Rogue 10-25 Test No. 3 Date 2-1-18
Company Murfin Drilling Co Inc Elevation 5309 KB 5299 GL
Address _____
Co. Rep / Geo. Greg Smith Rig Murfin 25
Location: Sec. 25 Twp. 9S Rge. 56W Co. Lincoln State CO

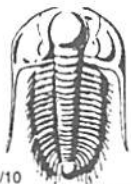
Interval Tested 7204 7250 Zone Tested Marmaton L
Anchor Length 46 Drill Pipe Run 6903 Mud Wt. 9.1
Top Packer Depth 7199 Drill Collars Run 280 Vis 71
Bottom Packer Depth 7204 Wt. Pipe Run — WL 5
Total Depth 7250 Chlorides 400 ppm System LCM 5.5
Blow Description Packer S Failed & open.

Rec	Feet of	%gas	%oil	%water	%mud
<u>465</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 465 BHT 160 Gravity — API RW — @ — °F Chlorides — ppm
(A) Initial Hydrostatic 3671 ☒ Test 1650 T-On Location 00:00
(B) First Initial Flow 2798 ☒ Jars 250 T-Started 1:33
(C) First Final Flow — ☒ Safety Joint 75 T-Open 5:00
(D) Initial Shut-In — ☒ Circ Sub NIL T-Pulled 5:15
(E) Second Initial Flow — ☐ Hourly Standby — T-Out 9:00
(F) Second Final Flow — ☒ Mileage 460 - 345 Comments 29" 36"
(G) Final Shut-In — ☐ Sampler —
(H) Final Hydrostatic 3663 ☐ Straddle —

Initial Open — ☒ Shale Packer x2 800 ☐ Ruined Shale Packer —
Initial Shut-In — ☐ Extra Packer — ☒ Ruined Packer 29" 425
Final Flow — ☐ Extra Recorder — Sub Total 425
Final Shut-In — ☐ Day Standby — Total 3545
☐ Accessibility — MP/DST Disc't —
Sub Total 3120

Approved By Greg Smith 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. 64295

Well Name & No. Rogue 10-25 Test No. 4 Date 2-1-18
 Company Murfin Drilling Co #1C Elevation 5309 KB 5299 GL
 Address _____
 Co. Rep / Geo. Greg Smith Rig Murfin 25
 Location: Sec. 25 Twp. 9S Rge. 56W Co. Lincoln State CO

Interval Tested 7194 7250 Zone Tested Marmaton C
 Anchor Length 56 Drill Pipe Run _____ Mud Wt. 9.1
 Top Packer Depth 7189 Drill Collars Run 280 Vis 7.5
 Bottom Packer Depth 7194 Wt. Pipe Run _____ WL 6.0
 Total Depth 7250 Chlorides 400 ppm System LCM 6

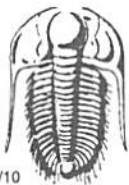
Blow Description Hit a bridge at 7225,
Never made it to bottom
Bunch of clay looking mud stuck of the tool
when we got out of the hole.

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 0 BHT 160 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 (A) Initial Hydrostatic 3641 ☒ Test 1650 T-On Location 21:30
 (B) First Initial Flow 3393 ☒ Jars 250 T-Started 22:54
 (C) First Final Flow _____ ☒ Safety Joint 75 T-Open _____
 (D) Initial Shut-In _____ ☒ Circ Sub M/C T-Pulled _____
 (E) Second Initial Flow _____ ☐ Hourly Standby _____ T-Out 5:45
 (F) Second Final Flow _____ ☒ Mileage 460- 345 Comments _____
 (G) Final Shut-In _____ ☐ Sampler _____
 (H) Final Hydrostatic 3514 ☐ Straddle _____

☒ Shale Packer X2 800 ☐ Ruined Shale Packer _____
☐ Extra Packer _____ ☐ Ruined Packer _____
☐ Extra Recorder _____ ☐ Extra Copies _____
☐ Day Standby _____ Sub Total 0
☐ Accessibility _____ Total 3120
 Sub Total 3120 MP/DST Disc't _____

Approved By Greg Smith Our Representative _____
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64296**

Well Name & No. Rogue 10-25 Test No. 5 Date 2-3-18
 Company Murfin Drilling Co Inc Elevation 5309 KB 5299 GL
 Address _____
 Co. Rep / Geo. Greg Smith Rig Murfin 25
 Location: Sec. 25 Twp. 9S Rge. 56W Co. Lincoln State CO

Interval Tested 7277 7329 Zone Tested Ft Scott
 Anchor Length 52 Drill Pipe Run 6675 Mud Wt. 9.3
 Top Packer Depth 7272 Drill Collars Run 280 Vis 76
 Bottom Packer Depth 7277 Wt. Pipe Run — WL 6.5
 Total Depth 7329 Chlorides 1000 ppm System LCM 6
 Blow Description Packers Failed on open.

Rec	Feet of	%gas	%oil	%water	%mud
<u>124</u>	<u>9cm</u>	<u>10</u>		<u>90</u>	
<u>186</u>	<u>MC9</u>	<u>60</u>		<u>40</u>	
<u>93</u>	<u>9cm</u>	<u>10</u>		<u>90</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 403 BHT 166 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>3663</u>	<input checked="" type="checkbox"/> Test <u>1650</u>	T-On Location <u>1:35</u>
(B) First Initial Flow <u>362</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2:02</u>
(C) First Final Flow <u>—</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>5:33</u>
(D) Initial Shut-In <u>—</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>5:40</u>
(E) Second Initial Flow <u>2128</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>9:15</u>
(F) Second Final Flow <u>—</u>	<input checked="" type="checkbox"/> Mileage <u>460x3</u> 690	Comments <u>6 nights in hotel</u>
(G) Final Shut-In <u>—</u>	<input type="checkbox"/> Sampler <u>—</u>	<u>10 added 2-3-18</u>
(H) Final Hydrostatic <u>3476</u>	<input type="checkbox"/> Straddle <u>—</u>	<u>9:30 pm</u>

<input checked="" type="checkbox"/> Shale Packer <u>x2</u> 800	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
<input type="checkbox"/> Extra Packer <u>—</u>	<input type="checkbox"/> Ruined Packer <u>—</u>
<input type="checkbox"/> Extra Recorder <u>—</u>	<input type="checkbox"/> Extra Copies <u>—</u>
<input type="checkbox"/> Day Standby <u>—</u>	Sub Total <u>0</u>
<input type="checkbox"/> Accessibility <u>—</u>	Total <u>3465</u>
Sub Total <u>3465</u>	MP/DST Disc't <u>—</u>

Approved By Greg Smith Our Representative [Signature]
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