



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Brad Rine

CWA 'D' #1-32

32-2s-36w Rawlins,KS

Start Date: 2013.08.26 @ 22:30:00

End Date: 2013.08.27 @ 07:40:30

Job Ticket #: 53365 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.04 @ 13:18:27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53365

DST#: 1

ATTN: Brad Rine

Test Start: 2013.08.26 @ 22:30:00

GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:58:00

Time Test Ended: 07:40:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4307.00 ft (KB) To 4375.00 ft (KB) (TVD)

Reference Elevations: 3364.00 ft (KB)

Total Depth: 4375.00 ft (KB) (TVD)

3359.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8874

Inside

Press @ Run Depth: 1269.48 psig @ 4308.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.26

End Date:

2013.08.27

Last Calib.:

2013.08.27

Start Time: 22:31:00

End Time:

07:40:30

Time On Btm:

2013.08.27 @ 00:57:30

Time Off Btm:

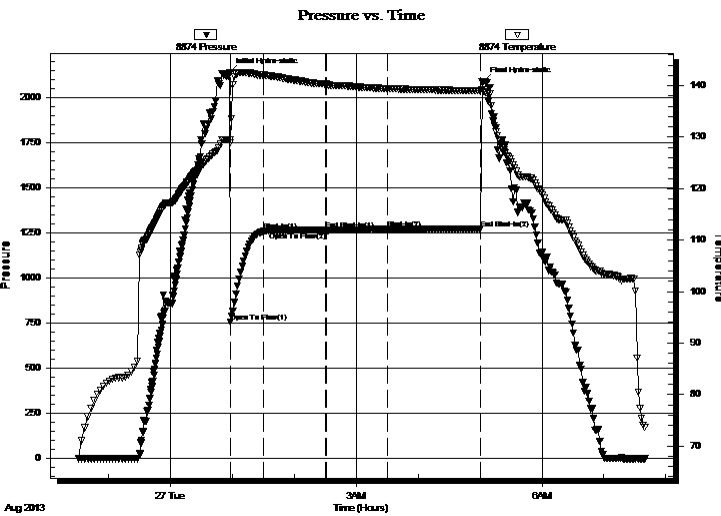
2013.08.27 @ 05:03:30

TEST COMMENT: 30 - IF- BoB in 30 sec

60 - IS- No Return

60 - FF- Weak Surface Blow built to 4"

90 - FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2139.44	129.50	Initial Hydro-static
1	755.78	128.93	Open To Flow (1)
33	1258.92	142.06	Shut-In(1)
93	1267.13	140.32	End Shut-In(1)
94	1257.54	140.29	Open To Flow (2)
153	1269.48	139.43	Shut-In(2)
243	1270.96	139.04	End Shut-In(2)
246	2088.09	138.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud (Heavy) 100M	0.02
2046.00	MW 5M 95W	24.15
252.00	MW 20M 80W	3.53
310.00	WM 80M 20W	4.35
216.00	MUD 100M	3.03

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N Water STE #300
Wichita, KS 67202
ATTN: Brad Rine

32-2s-36w Rawlins, KS
CWA 'D' #1-32
Job Ticket: 53365 **DST#: 1**
Test Start: 2013.08.26 @ 22:30:00

GENERAL INFORMATION:

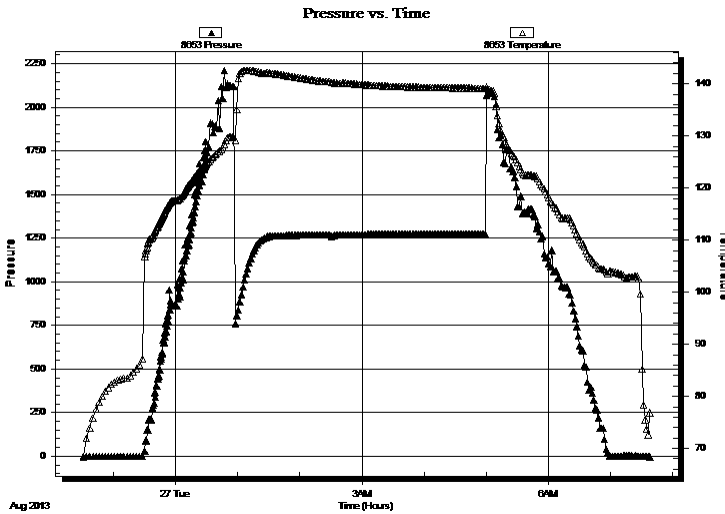
Formation: **LKC "A-D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:58:00
Time Test Ended: 07:40:30
Interval: **4307.00 ft (KB) To 4375.00 ft (KB) (TVD)**
Total Depth: 4375.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 66
Reference Elevations: 3364.00 ft (KB)
3359.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8653 Outside

Press @ Run Depth: psig @ 4308.00 ft (KB)
Start Date: 2013.08.26 End Date: 2013.08.27
Start Time: 22:31:00 End Time: 07:39:00
Capacity: 8000.00 psig
Last Calib.: 2013.08.27
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF- BoB in 30 sec
60 - IS- No Return
60 - FF- Weak Surface Blow built to 4"
90 - FS- No Return

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud (Heavy) 100M	0.02
2046.00	MW 5M 95W	24.15
252.00	MW 20M 80W	3.53
310.00	WM 80M 20W	4.35
216.00	MUD 100M	3.03

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53365

DST#: 1

ATTN: Brad Rine

Test Start: 2013.08.26 @ 22:30:00

Tool Information

Drill Pipe:	Length: 3800.00 ft	Diameter: 3.80 inches	Volume: 53.30 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 94000.00 lb
			<u>Total Volume: 55.78 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4307.00 ft			Final 90000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	95.00 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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Shut In Tool	5.00			4285.00	
Hydraulic tool	5.00			4290.00	
Jars	5.00			4295.00	
Safety Joint	3.00			4298.00	
Packer	5.00			4303.00	27.00 Bottom Of Top Packer
Packer	4.00			4307.00	
Stubb	1.00			4308.00	
Recorder	0.00	8653	Outside	4308.00	
Recorder	0.00	8874	Inside	4308.00	
Perforations	28.00			4336.00	
Change Over Sub	1.00			4337.00	
Drill Pipe	32.00			4369.00	
Change Over Sub	1.00			4370.00	
Bullnose	5.00			4375.00	68.00 Bottom Packers & Anchor

Total Tool Length: 95.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53365

DST#: 1

ATTN: Brad Rine

Test Start: 2013.08.26 @ 22:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	Mud (Heavy) 100M	0.025
2046.00	MW 5M 95W	24.145
252.00	MW 20M 80W	3.535
310.00	WM 80M 20W	4.348
216.00	MJD 100M	3.030

Total Length: 2829.00 ft Total Volume: 35.083 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

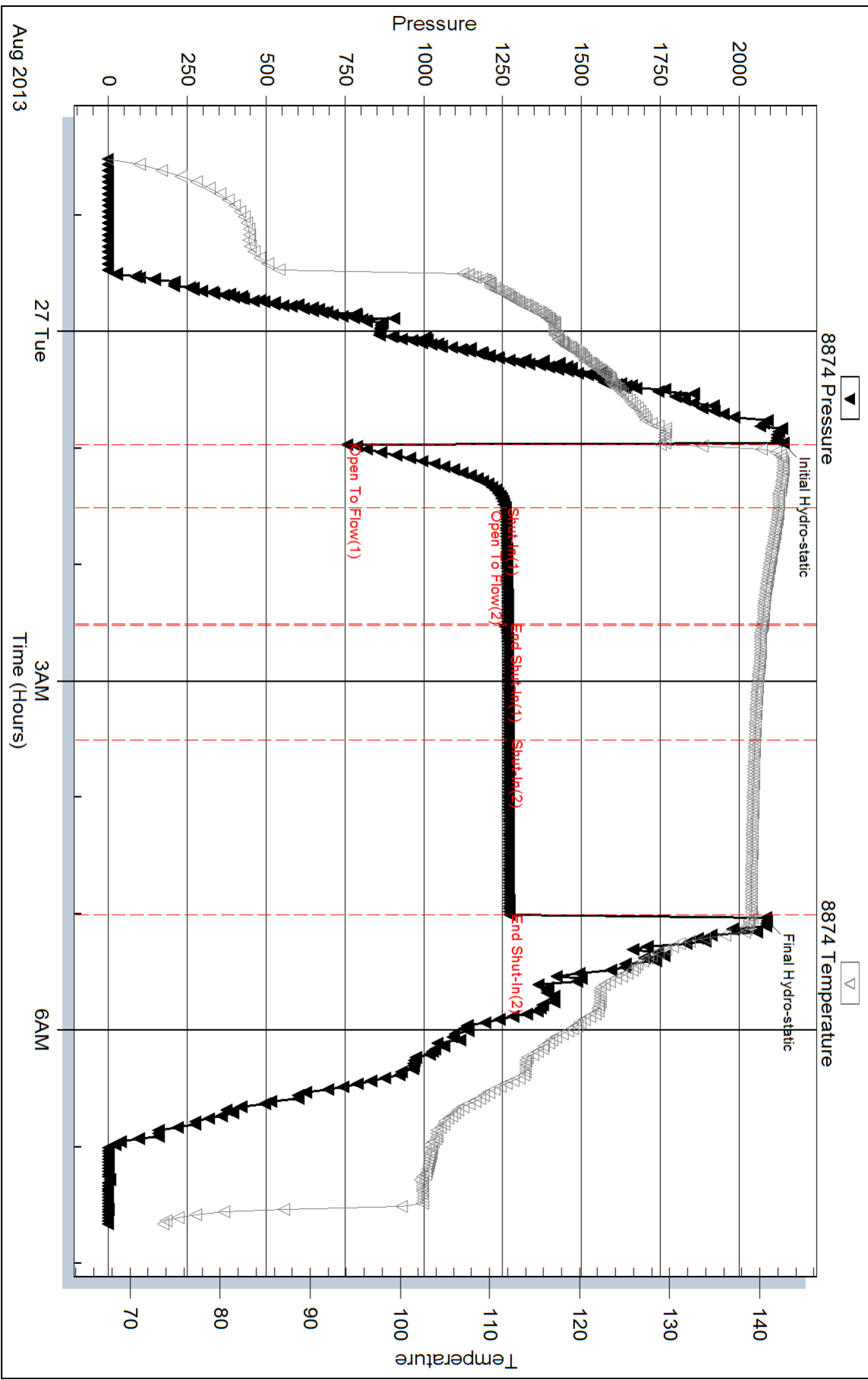
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .275 @ 77 DEG.=23,000PPM

Pressure vs. Time

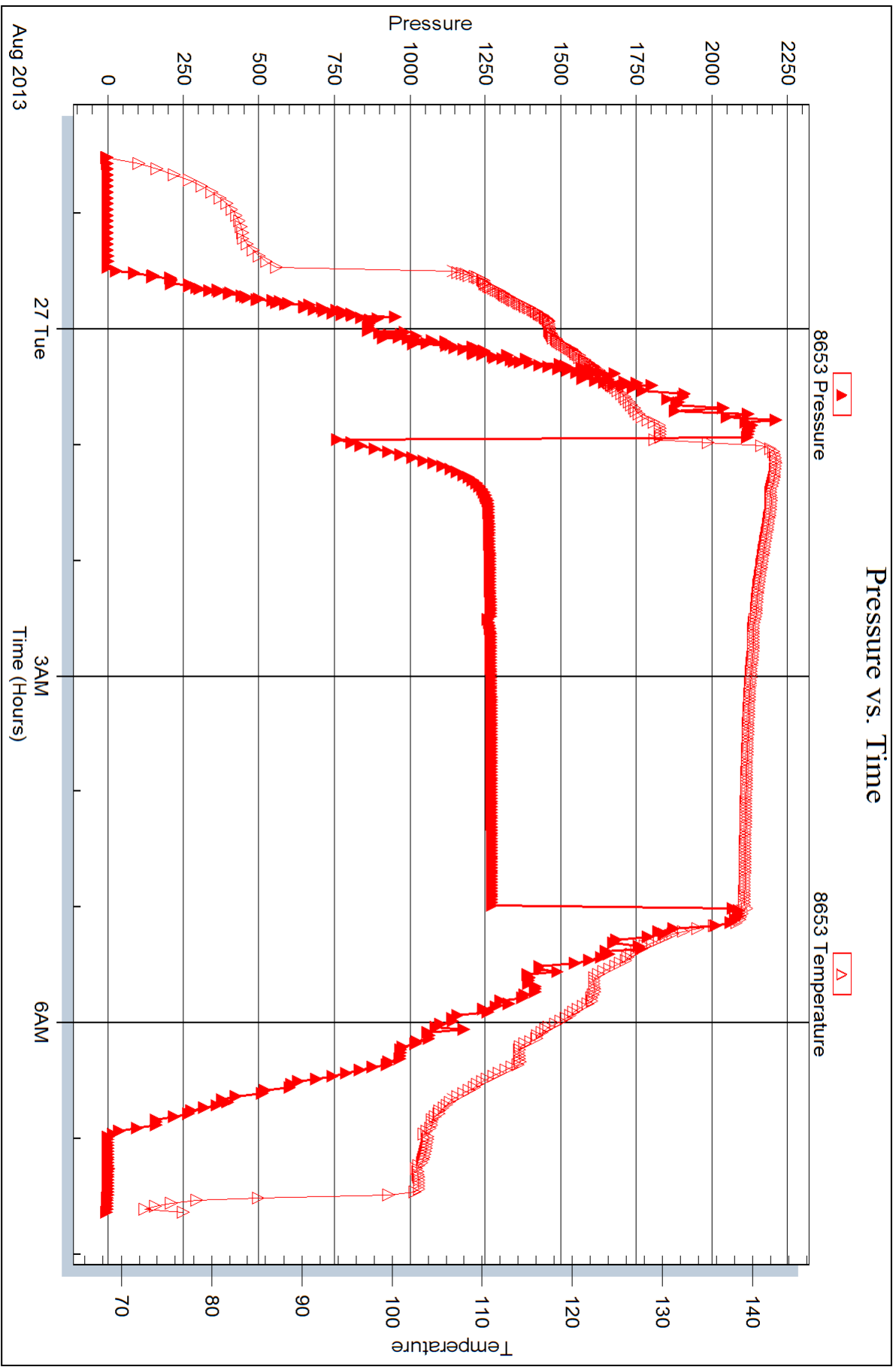


Serial #: 8653

Outside Murfin Drilling Co., Inc.

CWA ID#1-32

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 53365

Printed: 2013.09.04 @ 13:18:28



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Brad Rine

CWA 'D' #1-32

32-2s-36w Rawlins,KS

Start Date: 2013.08.27 @ 16:05:00

End Date: 2013.08.27 @ 21:55:30

Job Ticket #: 53366 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.04 @ 13:17:47



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N Water STE #300
 Wichita, KS 67202
 ATTN: Brad Rine

32-2s-36w Rawlins, KS

CWA 'D' #1-32

Job Ticket: 53366

DST#: 2

Test Start: 2013.08.27 @ 16:05:00

GENERAL INFORMATION:

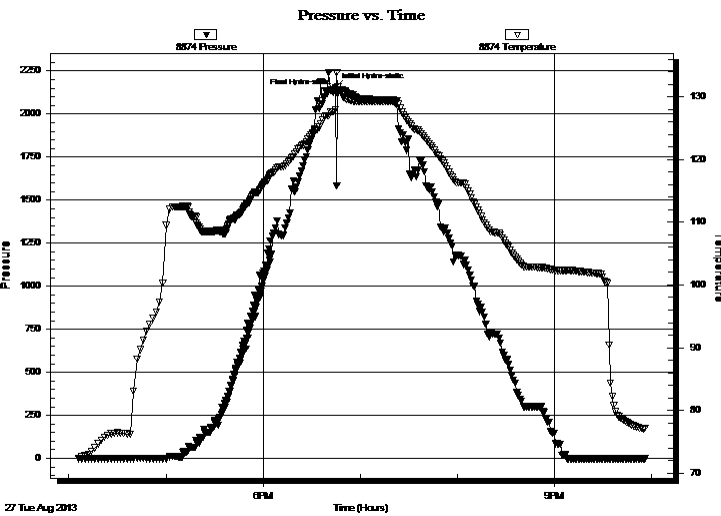
Formation: **LKC "G"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened:
 Tester: Kevin Mack
 Time Test Ended: 21:55:30
 Unit No: 66
 Interval: **4413.00 ft (KB) To 4430.00 ft (KB) (TVD)**
 Reference Elevations: 3364.00 ft (KB)
 Total Depth: 4430.00 ft (KB) (TVD)
 3359.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 5.00 ft

Serial #: 8874

Inside

Press @ Run Depth: psig @ 4414.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.27 End Date: 2013.08.27 Last Calib.: 2013.08.27
 Start Time: 16:06:00 End Time: 21:55:30 Time On Btm: 2013.08.27 @ 18:44:30
 Time Off Btm: 2013.08.27 @ 18:46:00

TEST COMMENT: Packer Failure... Pulled tools to reset anchor.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2154.03	127.98	Initial Hydro-static
2	2118.60	131.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
565.00	Mud 100M	3.33

Gas Rates

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



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TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53366

DST#: 2

ATTN: Brad Rine

Test Start: 2013.08.27 @ 16:05:00

GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 21:55:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4413.00 ft (KB) To 4430.00 ft (KB) (TVD)

Total Depth: 4430.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3364.00 ft (KB)

3359.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8653 Outside

Press @ Run Depth: psig @ 4414.00 ft (KB)

Start Date: 2013.08.27

End Date:

2013.08.27

Capacity: 8000.00 psig

Last Calib.:

2013.08.27

Start Time: 16:06:00

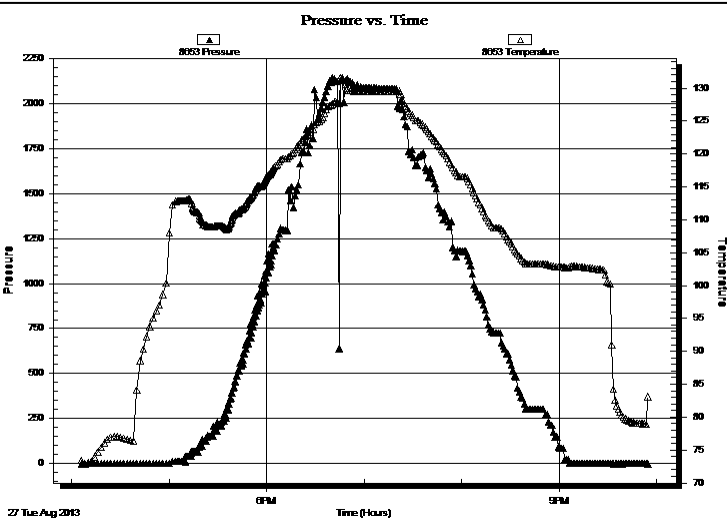
End Time:

21:54:30

Time On Btm:

Time Off Btm:

TEST COMMENT: Packer Failure... Pulled tools to reset anchor.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
565.00	Mud 100M	3.33

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53366

DST#: 2

ATTN: Brad Rine

Test Start: 2013.08.27 @ 16:05:00

Tool Information

Drill Pipe:	Length: 3891.00 ft	Diameter: 3.80 inches	Volume: 54.58 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 88000.00 lb
			<u>Total Volume: 57.06 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 85000.00 lb
Depth to Top Packer:	4413.00 ft			Final 87000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	17.00 ft			
Tool Length:	44.00 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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Shut In Tool	5.00			4391.00	
Hydraulic tool	5.00			4396.00	
Jars	5.00			4401.00	
Safety Joint	3.00			4404.00	
Packer	5.00			4409.00	27.00 Bottom Of Top Packer
Packer	4.00			4413.00	
Stubb	1.00			4414.00	
Recorder	0.00	8653	Outside	4414.00	
Recorder	0.00	8874	Inside	4414.00	
Perforations	11.00			4425.00	
Bullnose	5.00			4430.00	17.00 Bottom Packers & Anchor

Total Tool Length: 44.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53366

DST#: 2

ATTN: Brad Rine

Test Start: 2013.08.27 @ 16:05:00

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: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 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
565.00	Mud 100M	3.325

Total Length: 565.00 ft Total Volume: 3.325 bbl

Num Fluid Samples: 0

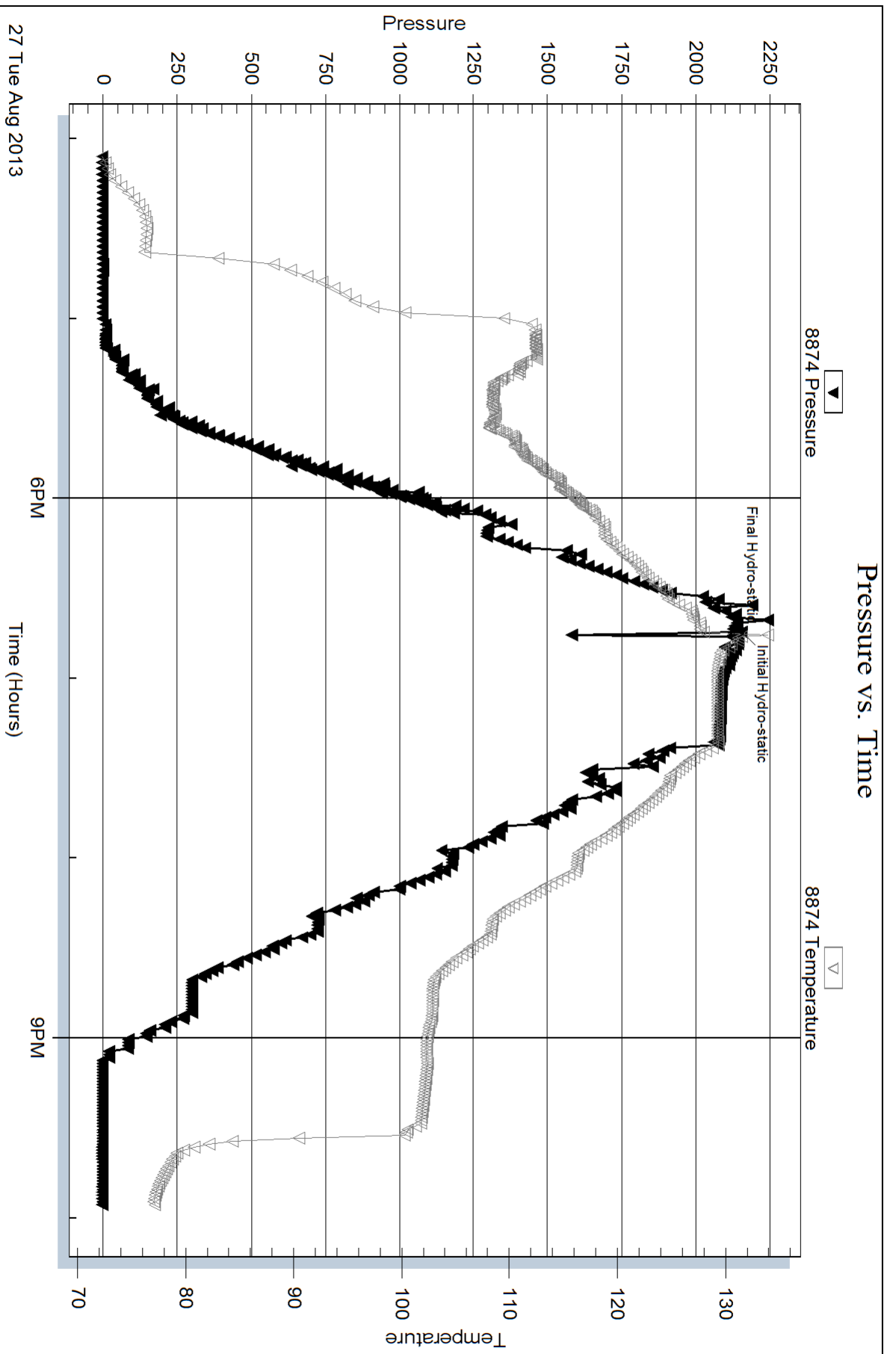
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

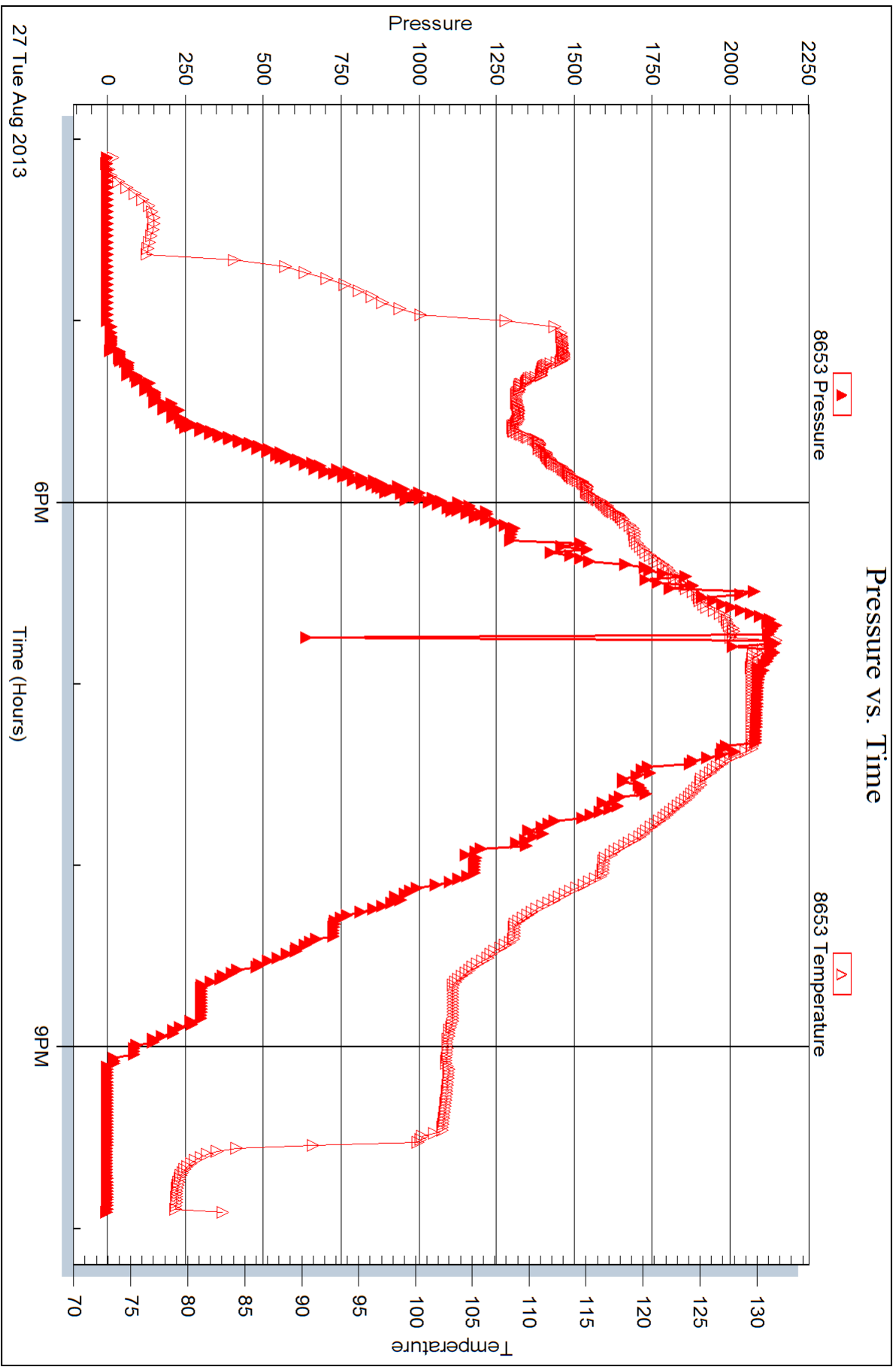


Serial #: 8653

Outside Murfin Drilling Co., Inc.

CWA ID#1-32

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 53366

Printed: 2013.09.04 @ 13:17:48



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Brad Rine

CWA 'D' #1-32

32-2s-36w Rawlins,KS

Start Date: 2013.08.27 @ 22:10:00

End Date: 2013.08.28 @ 06:08:00

Job Ticket #: 53367 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.04 @ 13:00:58

Murfin Drilling Co., Inc. 32-2s-36w Rawlins,KS CWA 'D' #1-32 DST # 3 LKC "G" 2013.08.27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N Water STE #300
 Wichita, KS 67202
 ATTN: Brad Rine

32-2s-36w Rawlins, KS

CWA 'D' #1-32

Job Ticket: 53367

DST#: 3

Test Start: 2013.08.27 @ 22:10:00

GENERAL INFORMATION:

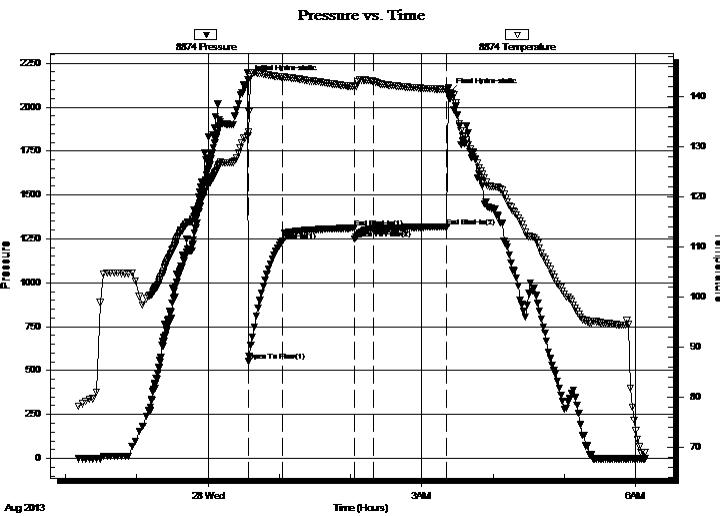
Formation: **LKC "G"**
 Deviated: No Whipstock: ft (KB)
 Test Type: (Initial)
 Time Tool Opened: 00:34:00
 Tester: Kevin Mack
 Time Test Ended: 06:08:00
 Unit No: 66
 Interval: **4382.00 ft (KB) To 4430.00 ft (KB) (TVD)**
 Reference Elevations: 3364.00 ft (KB)
 Total Depth: 4430.00 ft (KB) (TVD)
 3359.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 5.00 ft

Serial #: 8874

Inside

Press @ Run Depth: 1310.24 psig @ 4383.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.27 End Date: 2013.08.28 Last Calib.: 2013.08.28
 Start Time: 22:11:00 End Time: 06:08:00 Time On Btm: 2013.08.28 @ 00:33:30
 Time Off Btm: 2013.08.28 @ 03:23:00

TEST COMMENT: 30 - IF- BoB in 30 sec.
 60 - IS- No Return
 15 - FF- Weak Surface Blow built to 2 1/2"
 60 - FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2158.24	132.17	Initial Hydro-static
1	551.53	132.86	Open To Flow (1)
30	1239.14	143.87	Shut-In(1)
90	1311.35	141.96	End Shut-In(1)
90	1250.90	141.96	Open To Flow (2)
106	1310.24	142.98	Shut-In(2)
168	1317.26	141.36	End Shut-In(2)
170	2084.29	139.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02
2046.00	MW 95W 5M	24.15
310.00	MW 80W 20M	4.35
186.00	MW 60W 40M	2.61
373.00	Mud 100M	5.23

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.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53367

DST#: 3

ATTN: Brad Rine

Test Start: 2013.08.27 @ 22:10:00

Tool Information

Drill Pipe:	Length: 3865.00 ft	Diameter: 3.80 inches	Volume: 54.22 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 56.70 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	4382.00 ft			Final 94000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	75.00 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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Shut In Tool	5.00			4360.00	
Hydraulic tool	5.00			4365.00	
Jars	5.00			4370.00	
Safety Joint	3.00			4373.00	
Packer	5.00			4378.00	27.00 Bottom Of Top Packer
Packer	4.00			4382.00	
Packer - Shale	0.00			4382.00	
Stubb	1.00			4383.00	
Recorder	0.00	8653	Outside	4383.00	
Recorder	0.00	8874	Inside	4383.00	
Perforations	9.00			4392.00	
Change Over Sub	1.00			4393.00	
Drill Pipe	31.00			4424.00	
Change Over Sub	1.00			4425.00	
Bullnose	5.00			4430.00	48.00 Bottom Packers & Anchor

Total Tool Length: 75.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53367

DST#: 3

ATTN: Brad Rine

Test Start: 2013.08.27 @ 22:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

28000 ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 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 bbbl
5.00	Mud 100M	0.025
2046.00	MW 95W 5M	24.145
310.00	MW 80W 20M	4.348
186.00	MW 60W 40M	2.609
373.00	Mud 100M	5.232

Total Length: 2920.00 ft Total Volume: 36.359 bbl

Num Fluid Samples: 0

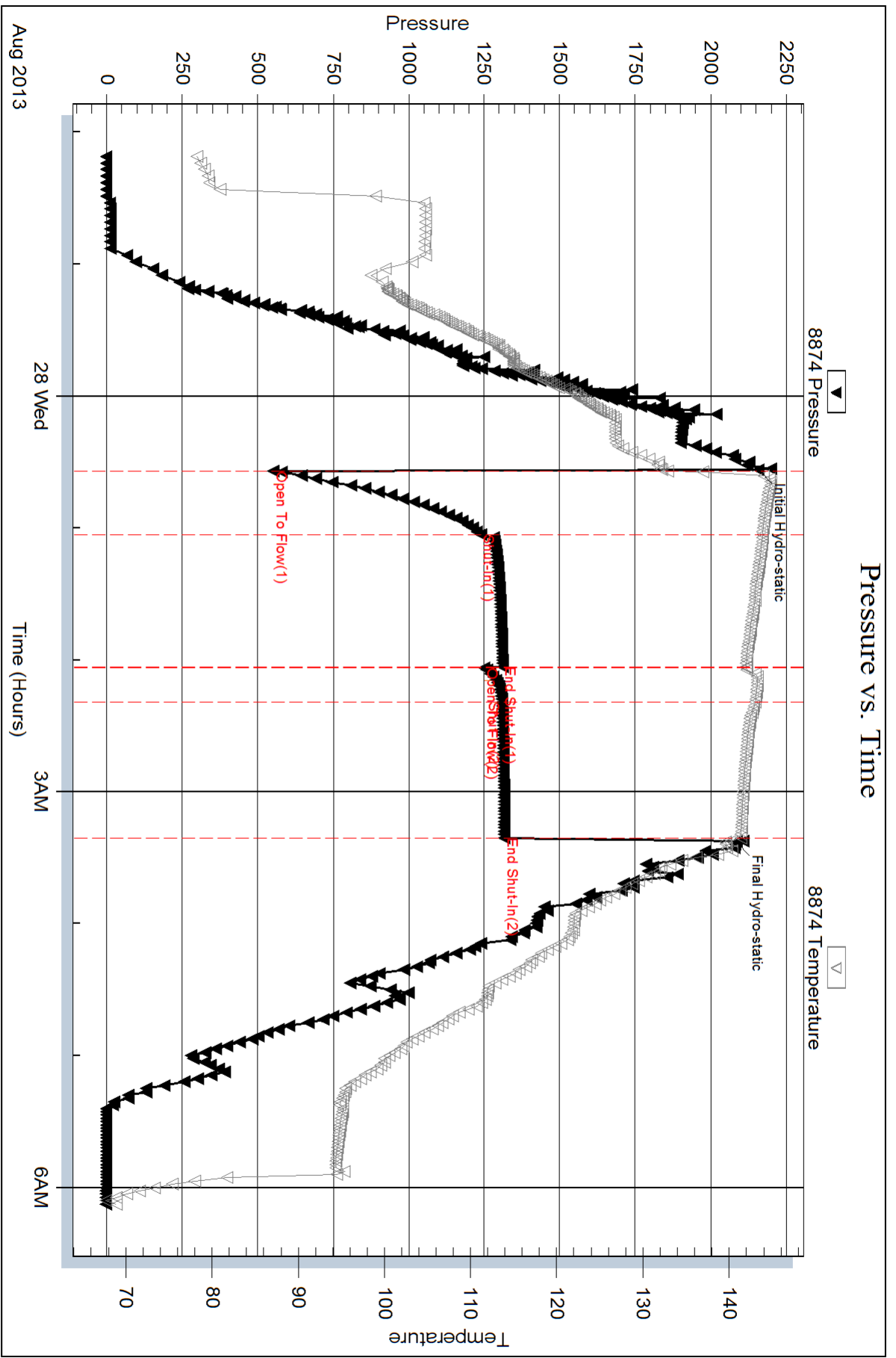
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .228 @ 75 deg.= 28000ppm

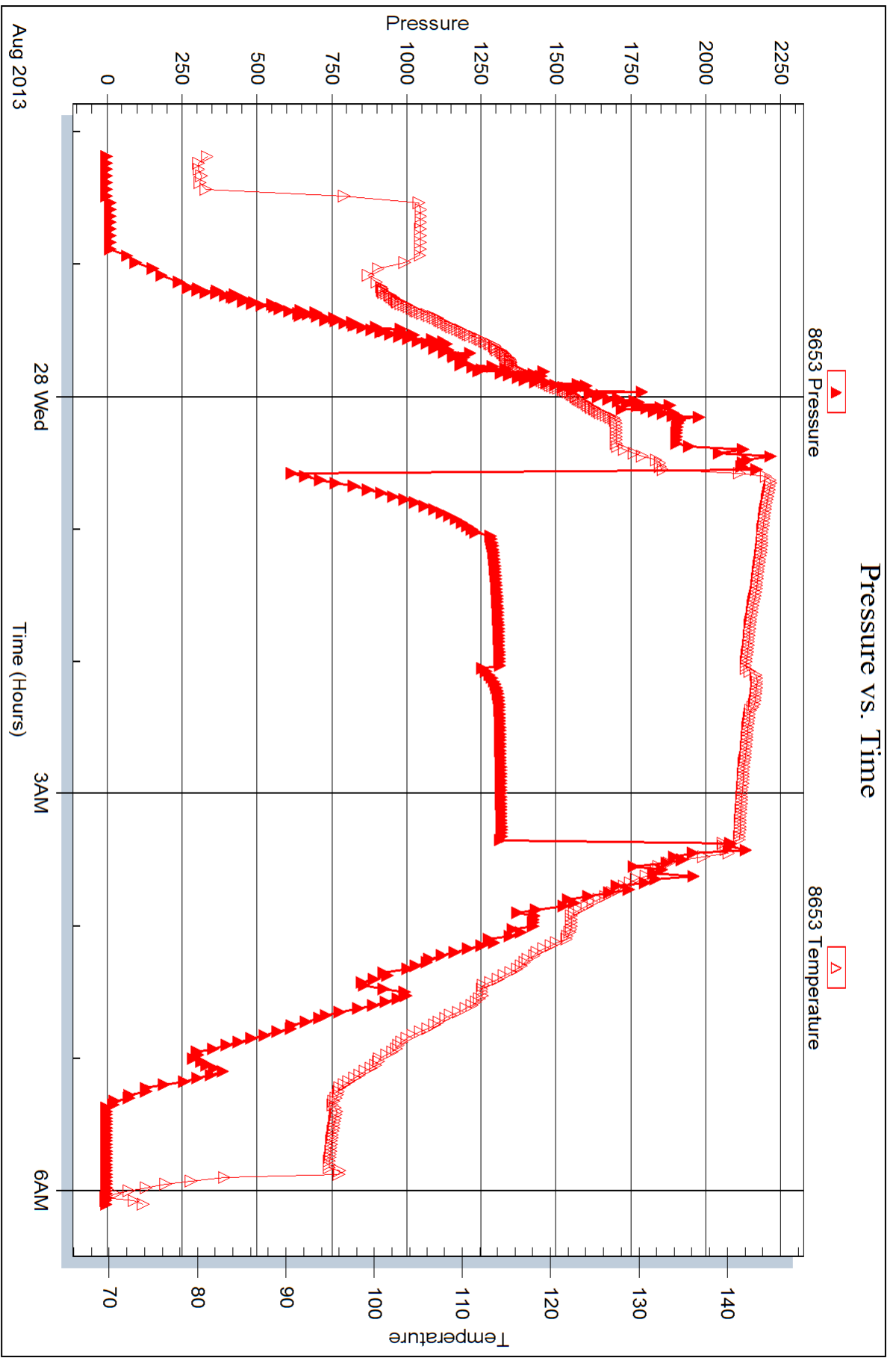


Serial #: 8653

Outside Murfin Drilling Co., Inc.

CWA ID#1-32

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 53367

Printed: 2013.09.04 @ 13:01:00



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Brad Rine

CWA 'D' #1-32

32-2s-36w Rawlins,KS

Start Date: 2013.08.28 @ 21:04:00

End Date: 2013.08.29 @ 04:02:00

Job Ticket #: 53368 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.04 @ 13:00:27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53368

DST#: 4

ATTN: Brad Rine

Test Start: 2013.08.28 @ 21:04:00

GENERAL INFORMATION:

Formation: **LKC "I-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:54:20

Time Test Ended: 04:02:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4474.00 ft (KB) To 4525.00 ft (KB) (TVD)

Reference Elevations: 3364.00 ft (KB)

Total Depth: 4525.00 ft (KB) (TVD)

3359.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8874

Inside

Press @ Run Depth: 22.73 psig @ 4475.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.28

End Date:

2013.08.29

Last Calib.:

2013.08.29

Start Time: 21:05:00

End Time:

04:02:00

Time On Btm:

2013.08.28 @ 22:54:10

Time Off Btm:

2013.08.29 @ 01:55:30

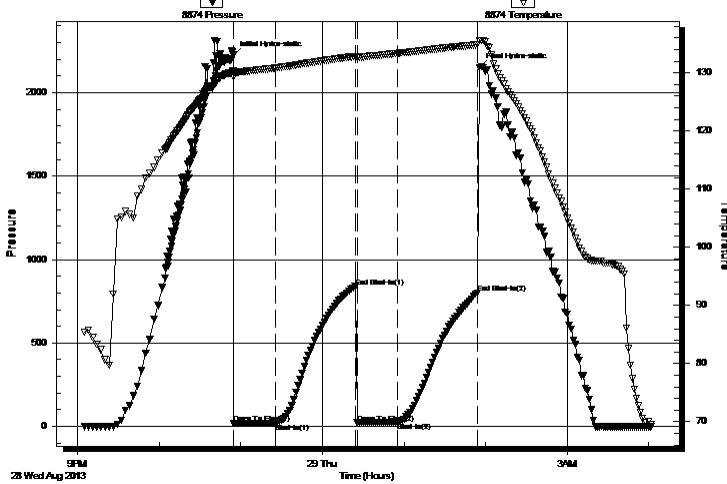
TEST COMMENT: 30 - IF- Weak Surface Blow built to 1/8", then died at 20 min.

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2225.28	130.40	Initial Hydro-static
1	17.08	129.25	Open To Flow (1)
31	20.21	130.79	Shut-In(1)
90	837.80	132.80	End Shut-In(1)
92	21.79	132.62	Open To Flow (2)
121	22.73	133.33	Shut-In(2)
180	800.89	134.82	End Shut-In(2)
182	2150.30	135.56	Final Hydro-static

Recovery

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

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53368

DST#: 4

ATTN: Brad Rine

Test Start: 2013.08.28 @ 21:04:00

Tool Information

Drill Pipe:	Length: 3957.00 ft	Diameter: 3.80 inches	Volume: 55.51 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 57.99 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4474.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4452.00	
Hydraulic tool	5.00			4457.00	
Jars	5.00			4462.00	
Safety Joint	3.00			4465.00	
Packer	5.00			4470.00	27.00 Bottom Of Top Packer
Packer	4.00			4474.00	
Packer - Shale	0.00			4474.00	
Stubb	1.00			4475.00	
Recorder	0.00	8653	Outside	4475.00	
Recorder	0.00	8874	Inside	4475.00	
Perforations	11.00			4486.00	
Change Over Sub	1.00			4487.00	
Drill Pipe	32.00			4519.00	
Change Over Sub	1.00			4520.00	
Bullnose	5.00			4525.00	51.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53368

DST#: 4

ATTN: Brad Rine

Test Start: 2013.08.28 @ 21:04:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 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
5.00	Mud 100M	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 #: 8874

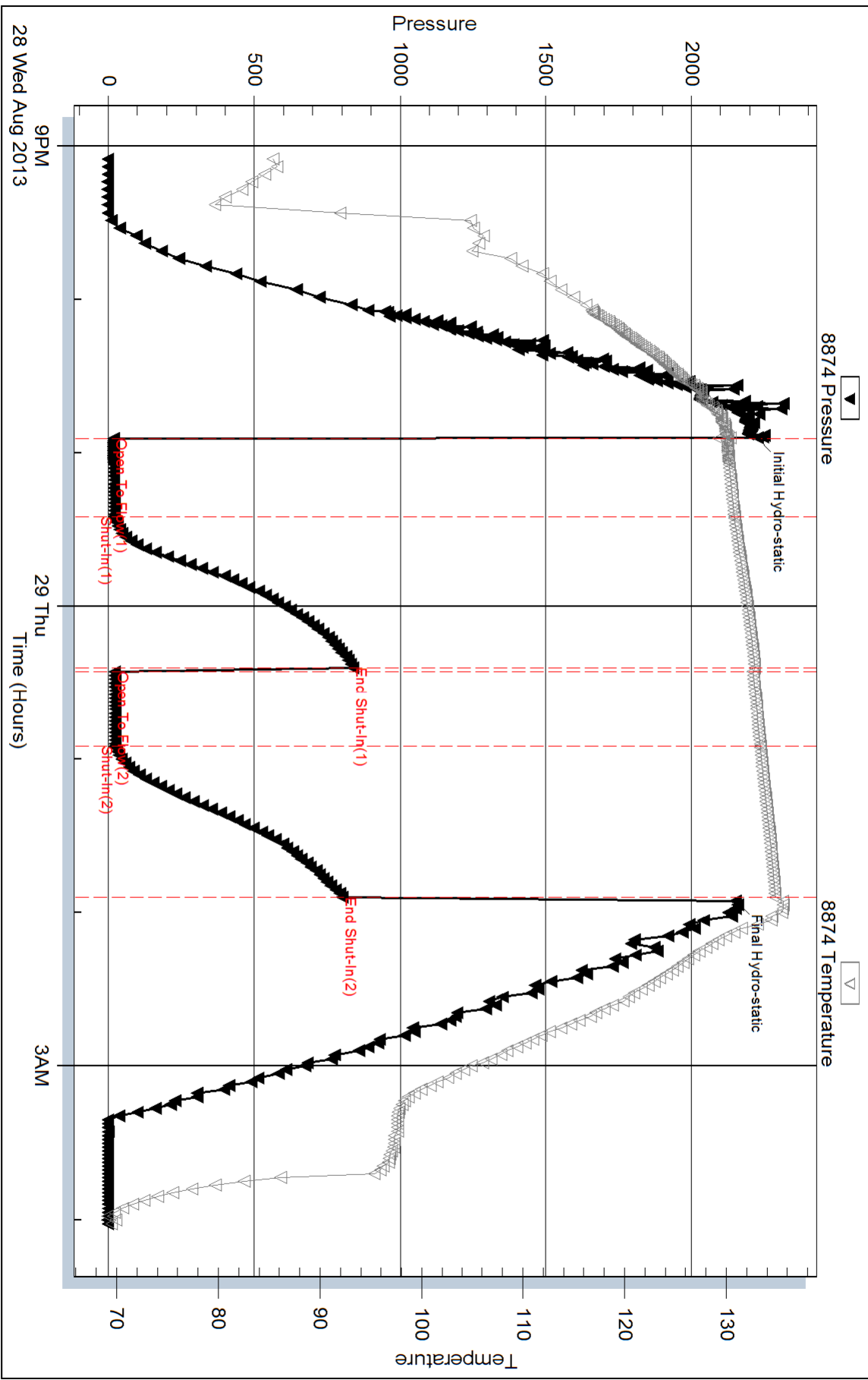
Inside

Murfin Drilling Co., Inc.

CWA ID#1-32

DST Test Number: 4

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 53368

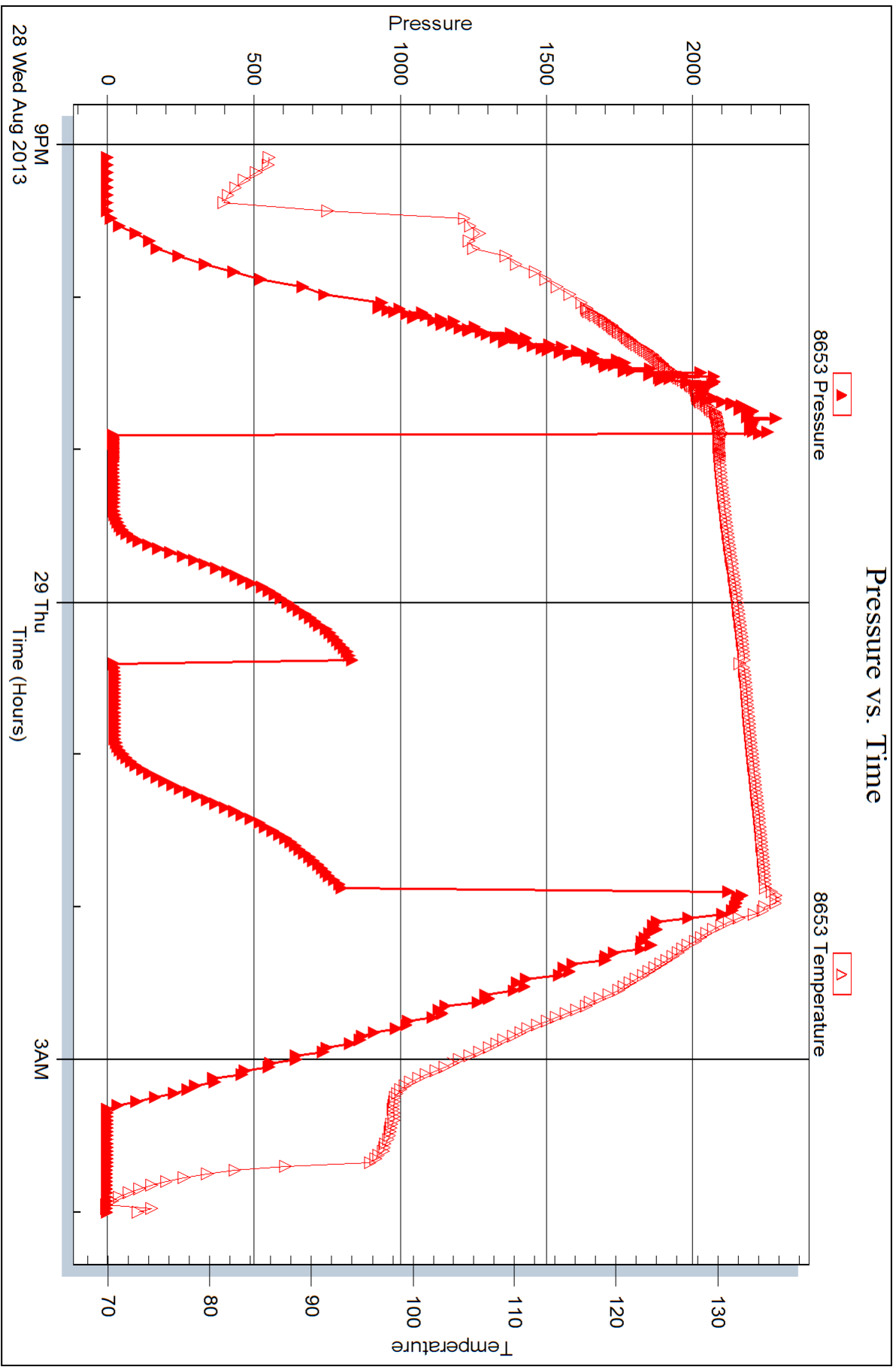
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Serial #: 8653

Outside Murfin Drilling Co., Inc.

CWA ID#1-32

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 53368

Printed: 2013.09.04 @ 13:00:28



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Brad Rine

CWA 'D' #1-32

32-2s-36w Rawlins,KS

Start Date: 2013.08.30 @ 06:35:00

End Date: 2013.08.30 @ 14:06:00

Job Ticket #: 53369 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.04 @ 12:58:24

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

CWA 'D' #1-32

DST # 5

Pawnee - Lower Pawne

2013.08.30



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N Water STE #300
Wichita, KS 67202
ATTN: Brad Rine

32-2s-36w Rawlins, KS

CWA 'D' #1-32

Job Ticket: 53369

DST#: 5

Test Start: 2013.08.30 @ 06:35:00

GENERAL INFORMATION:

Formation: **Pawnee - Lower Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:41:30

Time Test Ended: 14:06:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4670.00 ft (KB) To 4745.00 ft (KB) (TVD)

Reference Elevations: 3364.00 ft (KB)

Total Depth: 4745.00 ft (KB) (TVD)

3359.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8874 Inside

Press @ Run Depth: 35.87 psig @ 4671.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.30

End Date:

2013.08.30

Last Calib.:

2013.08.30

Start Time: 06:36:00

End Time:

14:06:00

Time On Btm:

2013.08.30 @ 08:41:00

Time Off Btm:

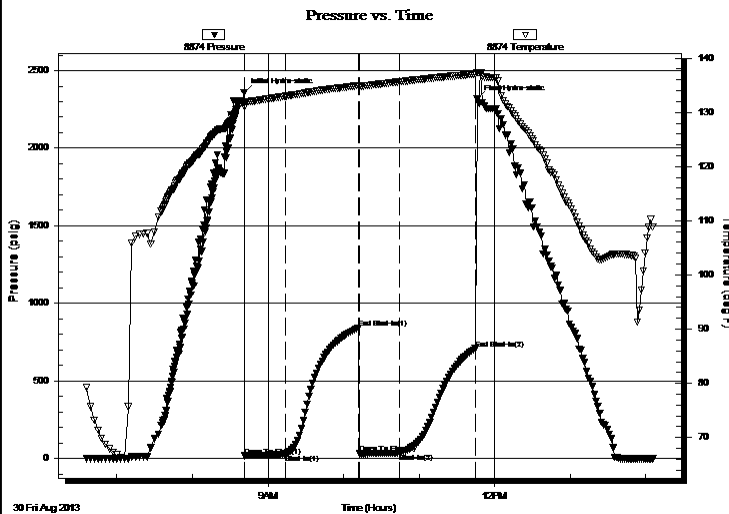
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TEST COMMENT: 30 - IF- 1/4" Blow built to 1"

60 - IS- No Return

30 - FF- No Blow

60 - IS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2359.65	131.63	Initial Hydro-static
1	16.64	130.97	Open To Flow (1)
33	26.87	132.99	Shut-In(1)
91	839.23	134.91	End Shut-In(1)
92	30.02	134.80	Open To Flow (2)
124	35.87	135.66	Shut-In(2)
184	708.16	137.04	End Shut-In(2)
185	2316.16	137.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	OCM 5o 95M	0.12
1.00	Free Oil 100o	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53369

DST#: 5

ATTN: Brad Rine

Test Start: 2013.08.30 @ 06:35:00

Tool Information

Drill Pipe:	Length: 4143.00 ft	Diameter: 3.80 inches	Volume: 58.12 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 60.60 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	4670.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	102.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4648.00	
Hydraulic tool	5.00			4653.00	
Jars	5.00			4658.00	
Safety Joint	3.00			4661.00	
Packer	5.00			4666.00	27.00 Bottom Of Top Packer
Packer	4.00			4670.00	
Stubb	1.00			4671.00	
Recorder	0.00	8653	Outside	4671.00	
Recorder	0.00	8874	Inside	4671.00	
Perforations	5.00			4676.00	
Change Over Sub	1.00			4677.00	
Drill Pipe	62.00			4739.00	
Change Over Sub	1.00			4740.00	
Bullnose	5.00			4745.00	75.00 Bottom Packers & Anchor

Total Tool Length: 102.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

CWA 'D' #1-32

Job Ticket: 53369

DST#: 5

ATTN: Brad Rine

Test Start: 2013.08.30 @ 06:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 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 bbbl
25.00	OCM 5o 95M	0.123
1.00	Free Oil 100o	0.005

Total Length: 26.00 ft Total Volume: 0.128 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

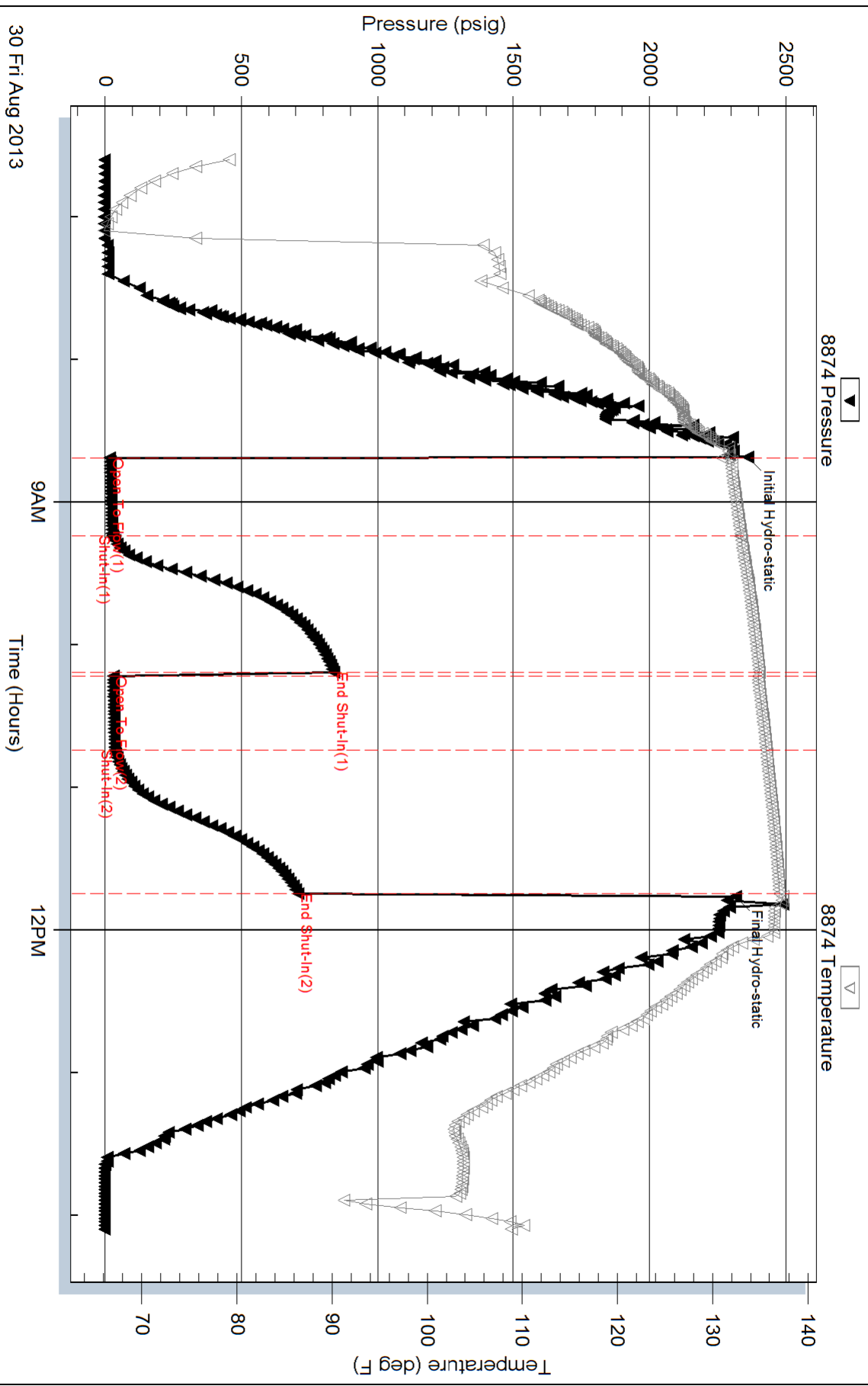
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

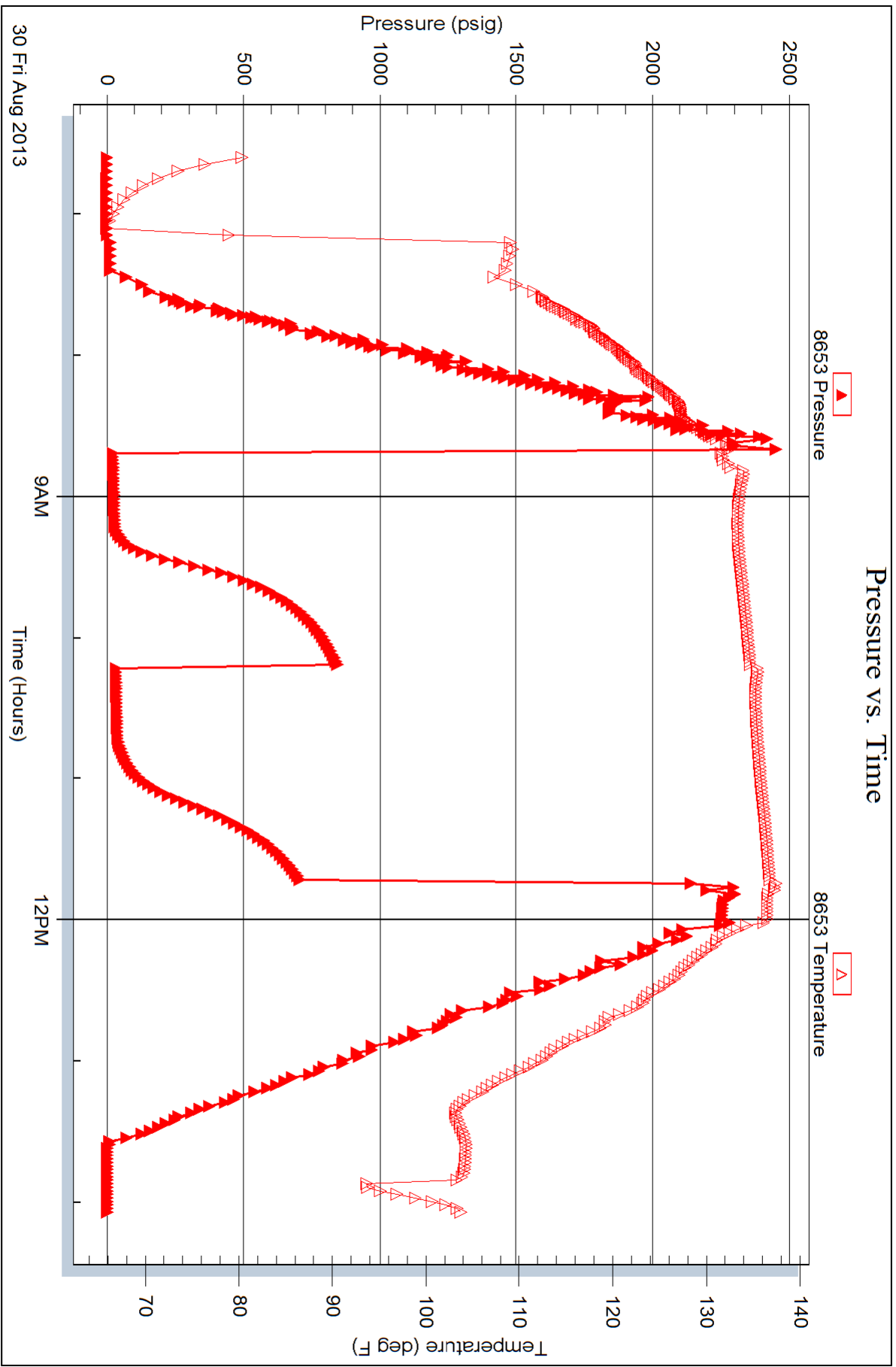


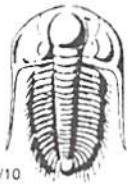
Serial #: 8653

Outside Murfin Drilling Co., Inc.

CWA ID#1-32

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53365

Well Name & No. CWA 'D' #1-32 Test No. 1 Date 8-26-13
 Company Murfin Drilling Co., Inc. Elevation 3364 KB 3359 GL
 Address 250 N Water STE #300 Wichita, KS 67202
 Co. Rep / Geo. Broad Rine Rig Murfin #3
 Location: Sec. 32 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4307-4375 Zone Tested LKC "A, B, D"
 Anchor Length 68' Drill Pipe Run 3800' Mud Wt. 9.1
 Top Packer Depth 4303 Drill Collars Run 505' Vis 52
 Bottom Packer Depth 4307 Wt. Pipe Run Ø WL 6.0
 Total Depth 4375 Chlorides 6000 ppm System LCM 1#

Blow Description IF - BoB in 30 Sec.
ISI - NO Return
FF - Weak Surface Blow built to 4"
FSI - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>216</u>	<u>Mud</u>			<u>1000</u>	
<u>310</u>	<u>GM</u>		<u>20</u>	<u>80</u>	
<u>252</u>	<u>MW</u>		<u>80</u>	<u>20</u>	
<u>2046</u>	<u>MW</u>		<u>95</u>	<u>5</u>	
<u>5</u>	<u>Mud (heavy)</u>			<u>1000</u>	

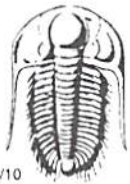
Rec Total 2829 BHT 139 Gravity - API RW 275 @ 77 °F Chlorides 23,000 ppm

(A) Initial Hydrostatic <u>2139</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>8:30 PM</u>
(B) First Initial Flow <u>755</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:30 PM</u>
(C) First Final Flow <u>1258</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1:00 AM</u>
(D) Initial Shut-In <u>1267</u>	<input checked="" type="checkbox"/> Circ Sub <u>50</u>	T-Pulled <u>5:00 AM</u>
(E) Second Initial Flow <u>1257</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>7:55 PM</u>
(F) Second Final Flow <u>1269</u>	<input checked="" type="checkbox"/> Mileage <u>110 RT</u> 170.50	Comments
(G) Final Shut-In <u>1270</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2088</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open 30 Shale Packer
 Initial Shut-In 60 Shale Packer
 Final Flow 60 Extra Packer
 Final Shut-In 90 Extra Recorder
 Extra Copies
 Sub Total 0
 Total 1795.50
 MP/DST Disc't

Approved By _____ Our Representative

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. 53366

Well Name & No. CWA '05' #1-32 Test No. 2 Date 8-27-13
 Company Murfin Drilling Co. Elevation 3364 KB 3359 GL
 Address 2508 N Water STE #3000 Wichita, KS 67202
 Co. Rep / Geo. Broad Rine Rig Murfin #3
 Location: Sec. 32 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4413-4430x Zone Tested LKC "G"
 Anchor Length 17 Drill Pipe Run 3891 Mud Wt. 9.2
 Top Packer Depth 4489 Drill Collars Run 5055 Vis 69
 Bottom Packer Depth 4413 Wt. Pipe Run Ø WL 6.0
 Total Depth 4430x Chlorides 1,200 ppm System LCM 1#

Blow Description IF- Packer Failure
ISI- Tripped out of hole to Reset anchor
FF- and run a re-test
FSI-

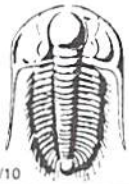
Rec	Feet of	%gas	%oil	%water	%mud
<u>565</u>	<u>Mud</u>			<u>100</u>	

Rec Total 565 BHT 1300 Gravity - API RW - @ - ° F Chlorides - ppm
 (A) Initial Hydrostatic 2154 Test 1050 T-On Location 3:40 PM
 (B) First Initial Flow | Jars 250 T-Started 4:05 PM
 (C) First Final Flow | Safety Joint 75 T-Open 6:45 PM
 (D) Initial Shut-In | Circ Sub | T-Pulled 6:50 PM
 (E) Second Initial Flow | Hourly Standby | T-Out 10:00 PM
 (F) Second Final Flow | Mileage 110 RT 170.50 Comments |
 (G) Final Shut-In | Sampler |
 (H) Final Hydrostatic 2118 Straddle |

Shale Packer | Ruined Shale Packer |
 Extra Packer | Ruined Packer X1 320
 Extra Recorder | Sub Total 0
 Day Standby | Total 1865.50
 Accessibility | MP/DST Disc't |
 Sub Total 1545.50

Approved By N/A 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. 53367

Well Name & No. CWA 'D' # 1-32 Test No. 3 Date 8-27-13
 Company Muffin Drilling Co., Inc. Elevation 3864 KB 3359 GL
 Address 250 N Water STE # 3005 Wichita, KS 67202
 Co. Rep / Geo. Brad Rine Rig Muffin #3
 Location: Sec. 32 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4382-4430 Zone Tested LKC "G"
 Anchor Length 48 Drill Pipe Run 3865' Mud Wt. 9.2
 Top Packer Depth 4378 Drill Collars Run 505 Vis 69
 Bottom Packer Depth 4382 Wt. Pipe Run 0 WL 6.0
 Total Depth 4430 Chlorides 1,200 ppm System LCM 1#
 Blow Description IF- BOB in 30' Sec.
ISI- No Return
FF- Weak Surface Blow built to 2 1/2"
FSL- NO Return

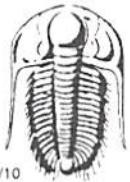
Rec	Feet of	%gas	%oil	%water	%mud
373	mud			100	
186	mud MW		60	40	
310	MW		80	20	
2046	MW		95	5	
5	Mud (heavy)			100	

Rec Total 2920' BHT 141° Gravity — API RW .228 @ 75° F Chlorides 28,000 ppm

(A) Initial Hydrostatic <u>2158</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>3:40 PM</u>
(B) First Initial Flow <u>551</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:10 PM</u>
(C) First Final Flow <u>1239</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>12:35 AM</u>
(D) Initial Shut-In <u>1311</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>3:20 AM</u>
(E) Second Initial Flow <u>1250</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>6:15 AM</u>
(F) Second Final Flow <u>1310</u>	<input checked="" type="checkbox"/> Mileage	Comments
(G) Final Shut-In <u>1317</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2084</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer <u>350</u>
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>2175</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1825</u>	

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. 53368

Well Name & No. CWA 'D' #1-32 Test No. 4 Date _____
 Company Murfin Drilling Co., Inc. Elevation 3364 KB 3359 GL _____
 Address 250 N Water STE # 300 Wichita, KS 67202
 Co. Rep / Geo. Brad Rine Rig Murfin #3
 Location: Sec. 32 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4474-4525 Zone Tested LKC "I-J"
 Anchor Length 51' Drill Pipe Run 3957 Mud Wt. 9.1
 Top Packer Depth 4470 Drill Collars Run 505' Vis 56
 Bottom Packer Depth 4474 Wt. Pipe Run Ø WL 5.2
 Total Depth 4525 Chlorides 1,200 ppm System LCM 1#

Blow Description IF - Weak Surface Blow built to 1/8", then died at 20 min.
ISI - No Return
FF -
FSL - No Return

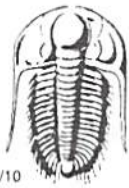
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Ø SM</u>	<u>SPOTS</u>		<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 135 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic	<u>2225</u>	<input checked="" type="checkbox"/> Test	<u>1250</u>	T-On Location	<u>9:00 PM</u>
(B) First Initial Flow	<u>17</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>9:04 PM</u>
(C) First Final Flow	<u>20</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>10:55 PM</u>
(D) Initial Shut-In	<u>837</u>	<input checked="" type="checkbox"/> Circ Sub		T-Pulled	<u>1:55 AM</u>
(E) Second Initial Flow	<u>21</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>4:10 AM</u>
(F) Second Final Flow	<u>22</u>	<input checked="" type="checkbox"/> Mileage	<u>110 RT 170.50</u>	Comments	<u>I wasn't called out for test until Rig was already out of the hole.</u>
(G) Final Shut-In	<u>800</u>	<input type="checkbox"/> Sampler		<input type="checkbox"/> Ruined Shale Packer	
(H) Final Hydrostatic	<u>2150</u>	<input checked="" type="checkbox"/> Shale Packer	<u>250</u>	<input type="checkbox"/> Ruined Packer	
Initial Open	<u>30</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Initial Shut-In	<u>60</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>0</u>
Final Flow	<u>30</u>	<input type="checkbox"/> Day Standby		Total	<u>1995.50</u>
Final Shut-In	<u>60</u>	<input type="checkbox"/> Accessibility		MP/DST Disc	
Sub Total		<u>1995.50</u>			

Approved By _____ Our Representative

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. 53369

Well Name & No. CWA 'D' #1-32 Test No. 5 Date 8-30-13
 Company Murfin Drilling Co., Inc. Elevation 3364 KB 3359 GL
 Address 250 N Water STE #300 Wichita, KS 67202
 Co. Rep / Geo. Broad Rine Rig Murfin #3
 Location: Sec. 32 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4670 - 4745 Zone Tested Pawnee - Lower Pawnee
 Anchor Length 75' Drill Pipe Run 4143 Mud Wt. 9.1
 Top Packer Depth 4666 Drill Collars Run 505 Vis 54
 Bottom Packer Depth 4670 Wt. Pipe Run 0 WL 5.6
 Total Depth 4745 Chlorides 1200 ppm System LCM 1#
 Blow Description IF - 1/4" Blow built to 1"
ISI - No Return
FF - No Blow
FSL - No Return

Rec	Feet of	%gas	%oil	%water	%mud
1	Free Oil	100			
25	OCM	5		95	

Rec Total 26' BHT 137' Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2359</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>5:45 AM</u>
(B) First Initial Flow <u>16</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>6:35 AM</u>
(C) First Final Flow <u>26</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>8:42 AM</u>
(D) Initial Shut-In <u>839</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>11:42 AM</u>
(E) Second Initial Flow <u>30</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2:10 PM</u>
(F) Second Final Flow <u>35</u>	<input checked="" type="checkbox"/> Mileage <u>341</u> <u>110 RT X2</u>	Comments <u>Lowest levels</u>
(G) Final Shut-In <u>708</u>	<input type="checkbox"/> Sampler	<u>3:30 AM 9-1-13</u>
(H) Final Hydrostatic <u>2316</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>800</u>
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Day Standby <u>1d 13.5h</u>	Total <u>2716</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1916</u>	

Approved By _____ Our Representative

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