



## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Rocky Milford

**MB 'A' #2-35**

**35-4s-31w Rawlins, KS**

Start Date: 2015.05.21 @ 13:00:00

End Date: 2015.05.21 @ 21:10:00

Job Ticket #: 62244                      DST #: 1

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

Printed: 2015.05.27 @ 09:29:18

Murfin Drilling Co., Inc.

35-4s-31w Rawlins, KS

MB 'A' #2-35

DST # 1

Leavenworth - LKC "B"

2015.05.21



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62244

**DST#: 1**

ATTN: Rocky Milford

Test Start: 2015.05.21 @ 13:00:00

## GENERAL INFORMATION:

Formation: **Leavenworth - LKC "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:26:00

Time Test Ended: 21:10:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 3846.00 ft (KB) To 3930.00 ft (KB) (TVD)**

Reference Elevations: 2870.00 ft (KB)

Total Depth: 3930.00 ft (KB) (TVD)

2865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8874**

**Inside**

Press@RunDepth: 132.45 psig @ 3847.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.05.21

End Date:

2015.05.21

Last Calib.:

2015.05.21

Start Time: 13:01:00

End Time:

21:10:00

Time On Btm:

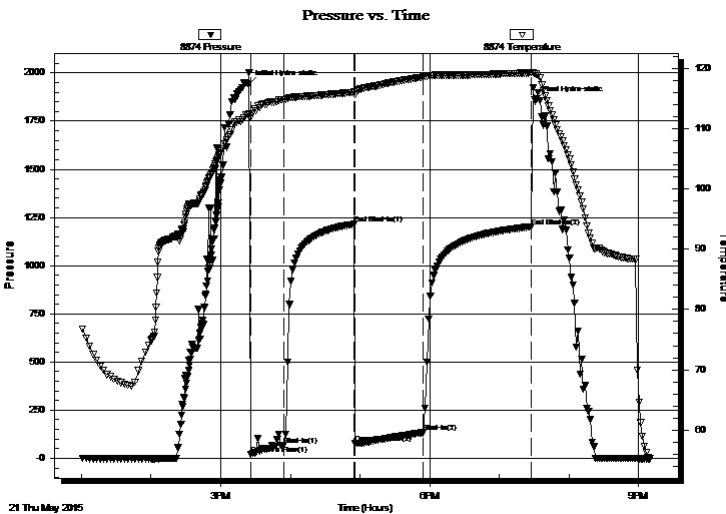
2015.05.21 @ 15:24:00

Time Off Btm:

2015.05.21 @ 19:31:00

**TEST COMMENT:** 30 - IF- Surface Blow built to 4"  
60 - IS- No Return  
60 - FF- Surface Blow started at min. Built to 4 1/4"  
90 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1940.88	112.37	Initial Hydro-static
2	19.84	111.80	Open To Flow (1)
31	68.66	114.80	Shut-In(1)
91	1214.94	116.04	End Shut-In(1)
92	76.95	115.63	Open To Flow (2)
151	132.45	118.55	Shut-In(2)
244	1201.59	119.26	End Shut-In(2)
247	1854.38	119.08	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	OSMW 20M 80W (oil spots)	0.30
62.00	OSMW 40M 60W (Oil Spots)	0.30
62.00	OSWM 50M 50W (oil spots)	0.30
62.00	OSM 100M (oil spots)	0.30

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

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

**35-4s-31w Rawlins, KS**

**MB 'A' #2-35**

Job Ticket: 62244

**DST#: 1**

Test Start: 2015.05.21 @ 13:00:00

## GENERAL INFORMATION:

Formation: **Leavenworth - LKC "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:26:00

Time Test Ended: 21:10:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

Interval: **3846.00 ft (KB) To 3930.00 ft (KB) (TVD)**

Reference Elevations: 2870.00 ft (KB)

Total Depth: 3930.00 ft (KB) (TVD)

2865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8653 Outside**

Press@RunDepth: psig @ 3847.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.05.21

End Date:

2015.05.21

Last Calib.:

2015.05.21

Start Time: 13:01:00

End Time:

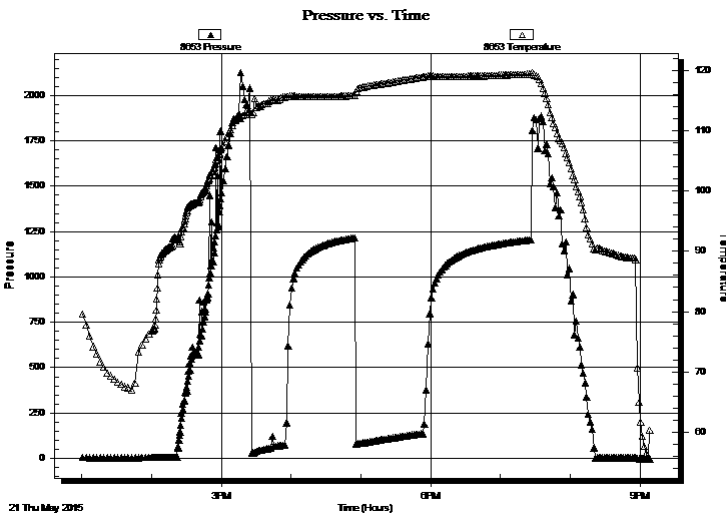
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Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- Surface Blow built to 4"  
 60 - IS- No Return  
 60 - FF- Surface Blow started at min. Built to 4 1/4"  
 90 - FS- No Return

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	OSMW 20M 80W (oil spots)	0.30
62.00	OSMW 40M 60W (Oil Spots)	0.30
62.00	OSWM 50M 50W (oil spots)	0.30
62.00	OSM 100M (oil spots)	0.30

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62244

**DST#: 1**

ATTN: Rocky Milford

Test Start: 2015.05.21 @ 13:00:00

## Tool Information

Drill Pipe:	Length: 3581.00 ft	Diameter: 3.80 inches	Volume: 50.23 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: 249.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 51.45 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3846.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	112.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3819.00	
Shut In Tool	5.00			3824.00	
Hydraulic tool	5.00			3829.00	
Jars	5.00			3834.00	
Safety Joint	3.00			3837.00	
Packer	5.00			3842.00	28.00 Bottom Of Top Packer
Packer	4.00			3846.00	
Stubb	1.00			3847.00	
Recorder	0.00	8653	Outside	3847.00	
Recorder	0.00	8874	Inside	3847.00	
Perforations	13.00			3860.00	
Change Over Sub	1.00			3861.00	
Drill Pipe	63.00			3924.00	
Change Over Sub	1.00			3925.00	
Bullnose	5.00			3930.00	84.00 Bottom Packers & Anchor

**Total Tool Length: 112.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62244

**DST#: 1**

ATTN: Rocky Milford

Test Start: 2015.05.21 @ 13:00:00

## 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:

50000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	OSMW 20M 80W (oil spots)	0.305
62.00	OSMW 40M 60W (Oil Spots)	0.305
62.00	OSWM 50M 50W (oil spots)	0.305
62.00	OSM 100M (oil spots)	0.305

Total Length: 248.00 ft

Total Volume: 1.220 bbl

Num Fluid Samples: 0

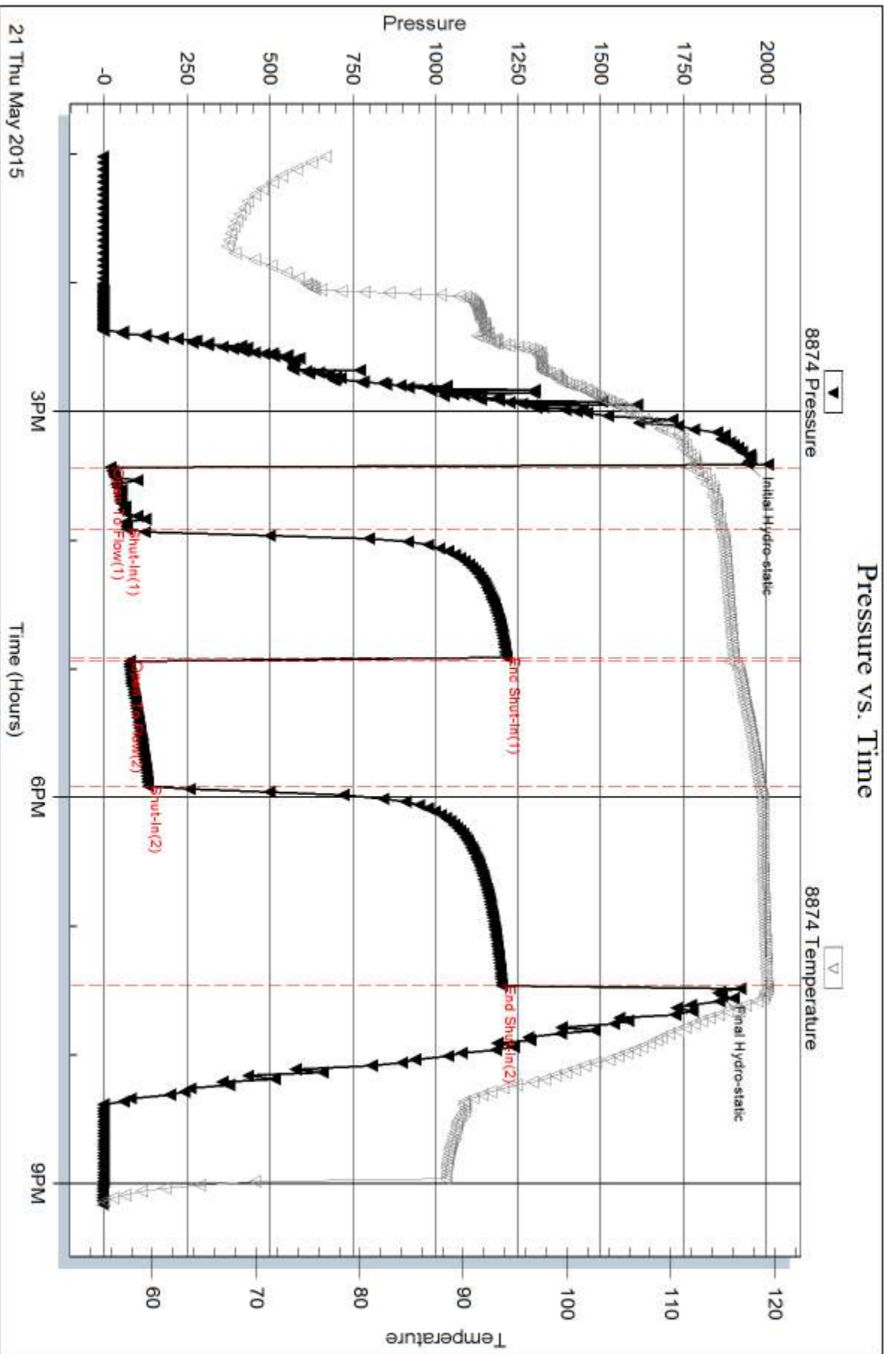
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .17 @ 68 = 50000ppm

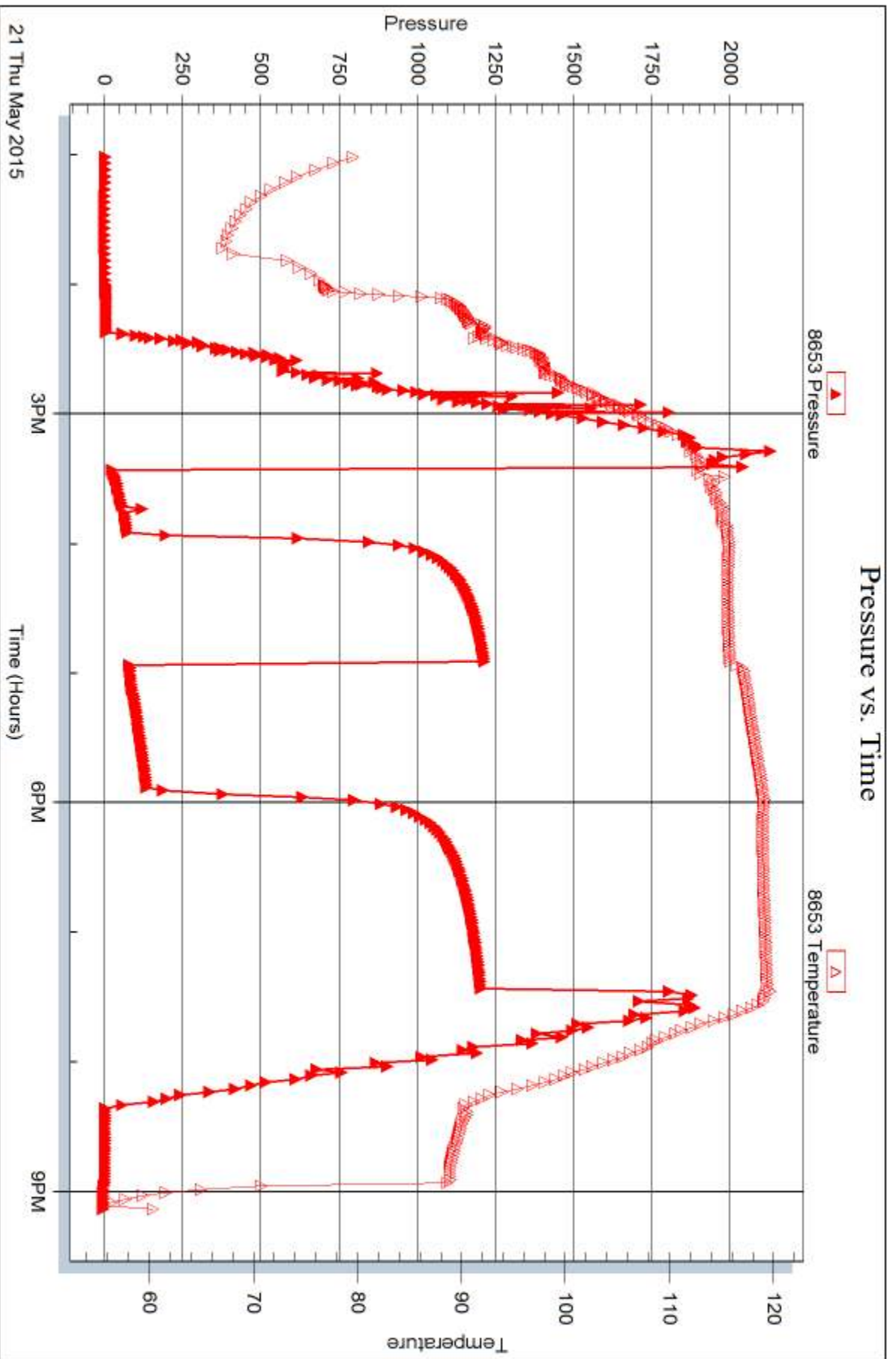


Serial #: 8653

Outside Murfin Drilling Co., Inc.

MB 'A' #2-35

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 62244

Printed: 2015.05.27 @ 09:29:19



## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Rocky Milford

**MB 'A' #2-35**

**35-4s-31w Rawlins, KS**

Start Date: 2015.05.22 @ 07:00:00

End Date: 2015.05.22 @ 15:56:00

Job Ticket #: 62245                      DST #: 2

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

Printed: 2015.05.27 @ 09:28:43





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

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

**35-4s-31w Rawlins, KS**

**MB 'A' #2-35**

Job Ticket: 62245

**DST#: 2**

Test Start: 2015.05.22 @ 07:00:00

## GENERAL INFORMATION:

Formation: **LKC "E-G"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:24:30  
 Time Test Ended: 15:56:00  
 Interval: **3947.00 ft (KB) To 3984.00 ft (KB) (TVD)**  
 Total Depth: 3984.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Kevin Mack  
 Unit No: 82  
 Reference Elevations: 2870.00 ft (KB)  
 2865.00 ft (CF)  
 KB to GR/CF: 5.00 ft

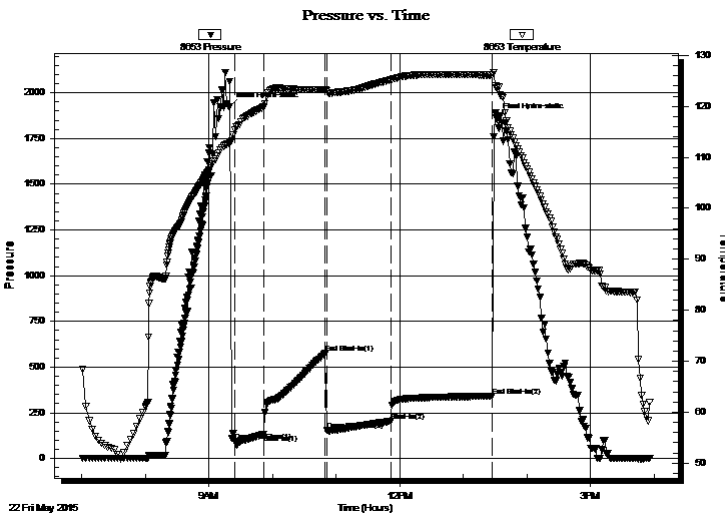
**Serial #: 8653**

**Outside**

Press@RunDepth: 203.48 psig @ 3948.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.05.22 End Date: 2015.05.22 Last Calib.: 2015.05.22  
 Start Time: 07:01:00 End Time: 15:56:00 Time On Btm: 2015.05.22 @ 09:19:30  
 Time Off Btm: 2015.05.22 @ 13:31:30

**TEST COMMENT:** 30 - IF- BoB in 6 min.  
 60 - IS- BoB in 43 min  
 30 - FF- BoB in 18 min  
 60 - FS- Surface Return built to 2" then died back to 1 3/4"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1923.57	112.65	Initial Hydro-static
5	94.36	115.37	Open To Flow (1)
32	132.56	119.82	Shut-In(1)
91	576.35	123.32	End Shut-In(1)
92	153.83	123.10	Open To Flow (2)
152	203.48	125.19	Shut-In(2)
248	340.90	126.11	End Shut-In(2)
252	1862.15	123.74	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	GOCM 10G 30o 60M	0.59
392.00	CGO 35G 65o	4.32
0.00	850 GIP 100G	0.00

## 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: Rocky Milford

**35-4s-31w Rawlins, KS**

**MB 'A' #2-35**

Job Ticket: 62245

**DST#: 2**

Test Start: 2015.05.22 @ 07:00:00

### GENERAL INFORMATION:

Formation: **LKC "E-G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:24:30

Time Test Ended: 15:56:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

Interval: **3947.00 ft (KB) To 3984.00 ft (KB) (TVD)**

Total Depth: 3984.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2870.00 ft (KB)

2865.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8520 Inside**

Press@RunDepth: psig @ 3948.00 ft (KB)

Start Date: 2015.05.22

End Date:

2015.05.22

Start Time: 07:01:00

End Time:

15:57:30

Capacity: 8000.00 psig

Last Calib.:

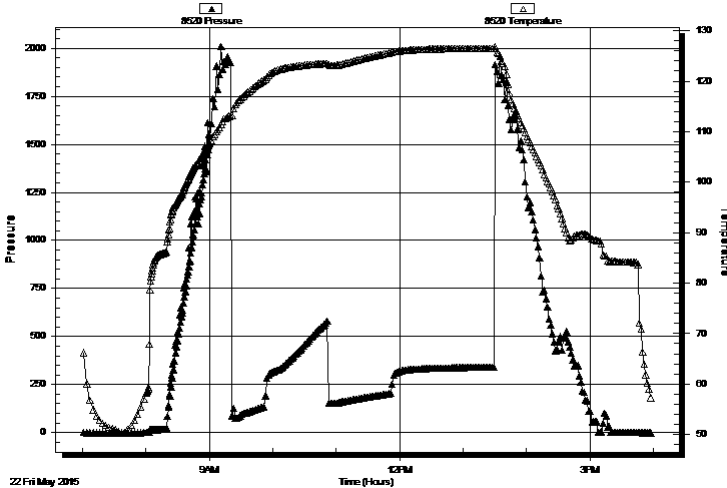
2015.05.22

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- BoB in 6 min.  
60 - IS- BoB in 43 min  
30 - FF- BoB in 18 min  
60 - FS- Surface Return built to 2" then died back to 1 3/4"

Pressure vs. Time



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
120.00	GOCM 10G 30o 60M	0.59
392.00	CGO 35G 65o	4.32
0.00	850 GIP 100G	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.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62245

**DST#: 2**

ATTN: Rocky Milford

Test Start: 2015.05.22 @ 07:00:00

## Tool Information

Drill Pipe:	Length: 3677.00 ft	Diameter: 3.80 inches	Volume: 51.58 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: 249.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 52.80 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3947.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	65.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3920.00	
Shut In Tool	5.00			3925.00	
Hydraulic tool	5.00			3930.00	
Jars	5.00			3935.00	
Safety Joint	3.00			3938.00	
Packer	5.00			3943.00	28.00 Bottom Of Top Packer
Packer	4.00			3947.00	
Stubb	1.00			3948.00	
Recorder	0.00	8653	Outside	3948.00	
Recorder	0.00	8520	Inside	3948.00	
Perforations	31.00			3979.00	
Bullnose	5.00			3984.00	37.00 Bottom Packers & Anchor

**Total Tool Length: 65.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62245

**DST#: 2**

ATTN: Rocky Milford

Test Start: 2015.05.22 @ 07:00:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GOCM 10G 30o 60M	0.590
392.00	CGO 35G 65o	4.324
0.00	850 GIP 100G	0.000

Total Length: 512.00 ft      Total Volume: 4.914 bbl

Num Fluid Samples: 0

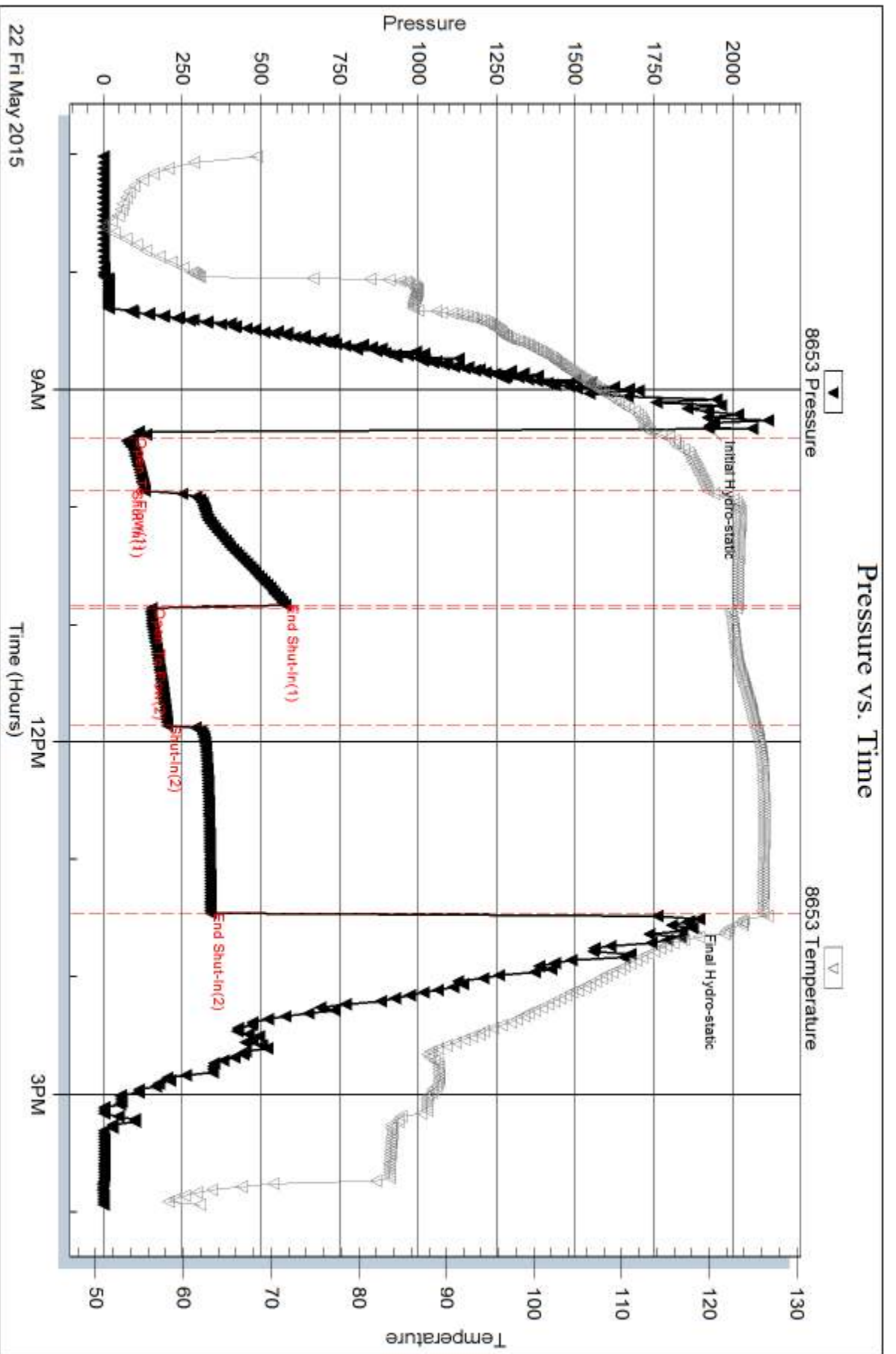
Num Gas Bombs: 0

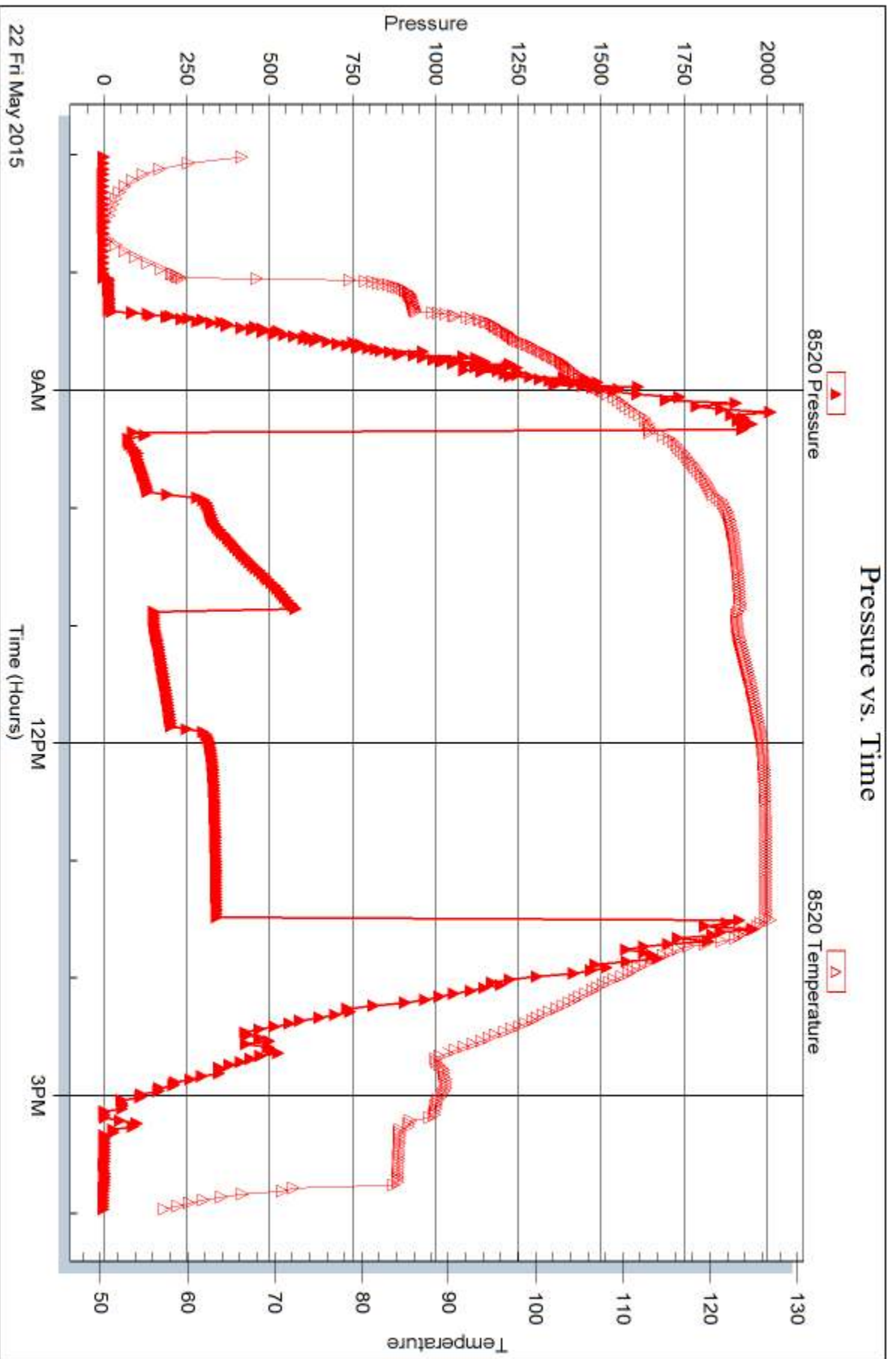
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 38 @ 70 = 37 corrected







## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Rocky Milford

**MB 'A' #2-35**

**35-4s-31w Rawlins, KS**

Start Date: 2015.05.23 @ 03:27:00

End Date: 2015.05.23 @ 12:05:00

Job Ticket #: 62246                      DST #: 3

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

Printed: 2015.05.27 @ 09:28:20



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62246

**DST#: 3**

ATTN: Rocky Milford

Test Start: 2015.05.23 @ 03:27:00

## GENERAL INFORMATION:

Formation: **LKC "H-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:36:30

Time Test Ended: 12:05:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 3994.00 ft (KB) To 4065.00 ft (KB) (TVD)**

Reference Elevations: 2870.00 ft (KB)

Total Depth: 4065.00 ft (KB) (TVD)

2865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8653 Outside**

Press@RunDepth: 125.93 psig @ 3995.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.05.23

End Date: 2015.05.23

Last Calib.: 2015.05.23

Start Time: 03:28:00

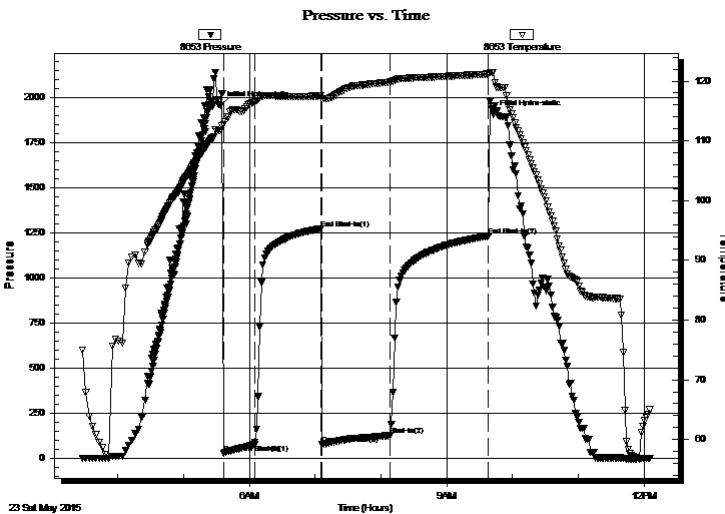
End Time: 12:05:00

Time On Btm: 2015.05.23 @ 05:33:30

Time Off Btm: 2015.05.23 @ 09:42:30

**TEST COMMENT:** 30 - IF- BoB in 24 min.  
60 - IS- Surface Return started at 1 min. Built to 1/2"  
60 - FF- BoB in 20 min.  
90 - FS- Surface Return started at 1 min. Built to 1/2"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1953.90	111.73	Initial Hydro-static
3	29.15	112.66	Open To Flow (1)
31	75.61	116.38	Shut-In(1)
92	1272.96	117.53	End Shut-In(1)
93	78.93	117.02	Open To Flow (2)
155	125.93	119.84	Shut-In(2)
245	1232.82	121.18	End Shut-In(2)
249	1907.19	121.44	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	GMCO 20G 40o 40M	0.30
80.00	GOCM 10G 30o 60M	0.39
130.00	CGO 25G 75o	0.83
0.00	30' GIP	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.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62246

**DST#: 3**

ATTN: Rocky Milford

Test Start: 2015.05.23 @ 03:27:00

## Tool Information

Drill Pipe:	Length: 3737.00 ft	Diameter: 3.80 inches	Volume: 52.42 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: 249.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 53.64 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3994.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	71.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3967.00	
Shut In Tool	5.00			3972.00	
Hydraulic tool	5.00			3977.00	
Jars	5.00			3982.00	
Safety Joint	3.00			3985.00	
Packer	5.00			3990.00	28.00 Bottom Of Top Packer
Packer	4.00			3994.00	
Stubb	1.00			3995.00	
Recorder	0.00	8653	Outside	3995.00	
Recorder	0.00	8520	Inside	3995.00	
Perforations	31.00			4026.00	
Change Over Sub	1.00			4027.00	
Drill Pipe	32.00			4059.00	
Change Over Sub	1.00			4060.00	
Bullnose	5.00			4065.00	71.00 Bottom Packers & Anchor

**Total Tool Length: 99.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62246

**DST#: 3**

ATTN: Rocky Milford

Test Start: 2015.05.23 @ 03:27:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GMCO 20G 40o 40M	0.295
80.00	GOCM 10G 30o 60M	0.393
130.00	CGO 25G 75o	0.831
0.00	30' GIP	0.000

Total Length: 270.00 ft      Total Volume: 1.519 bbl

Num Fluid Samples: 0

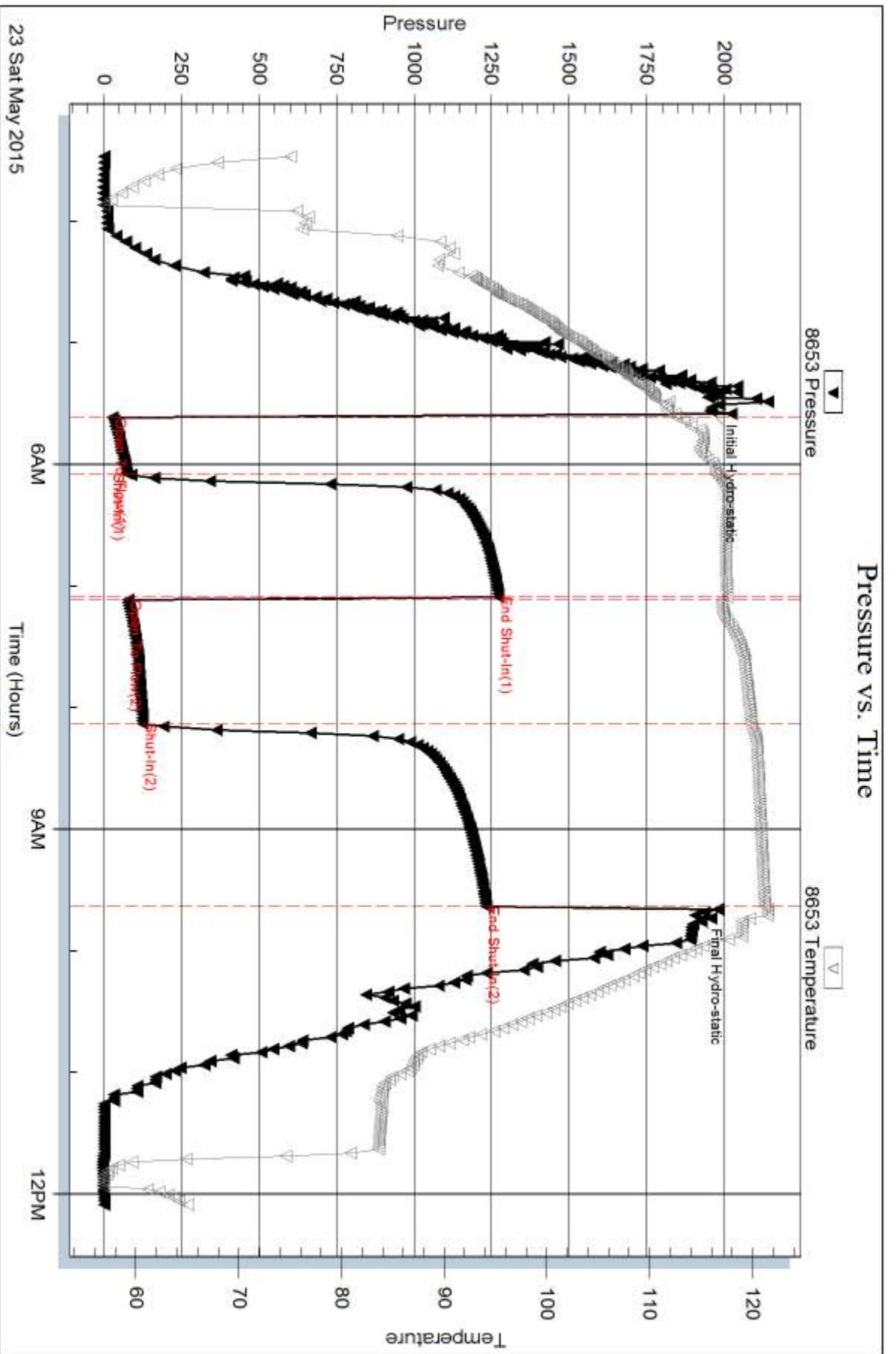
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API = 41 @ 80 deg = 39



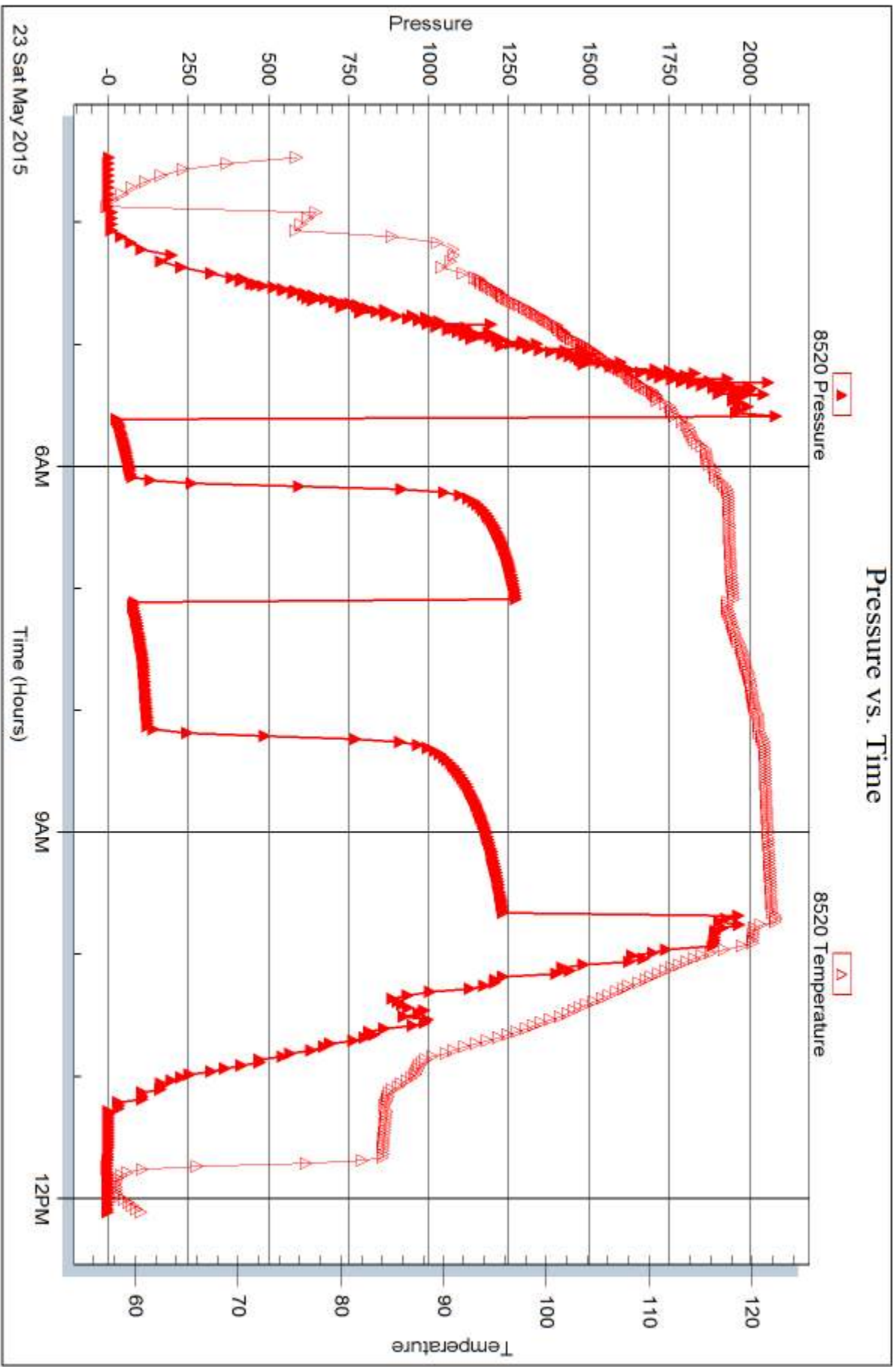
Serial #: 8520

Inside

Murfin Drilling Co., Inc.

MB 'A' #2-35

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62246

Printed: 2015.05.27 @ 09:28:21



## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Rocky Milford

**MB 'A' #2-35**

**35-4s-31w Rawlins, KS**

Start Date: 2015.05.23 @ 21:37:00

End Date: 2015.05.24 @ 05:56:30

Job Ticket #: 62247                      DST #: 4

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

Printed: 2015.05.27 @ 09:27:56



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62247

**DST#: 4**

ATTN: Rocky Milford

Test Start: 2015.05.23 @ 21:37:00

## GENERAL INFORMATION:

Formation: **LKC "K-L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:28:10

Time Test Ended: 05:56:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 4059.00 ft (KB) To 4120.00 ft (KB) (TVD)**

Reference Elevations: 2870.00 ft (KB)

Total Depth: 4120.00 ft (KB) (TVD)

2865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8874 Inside**

Press@RunDepth: 59.82 psig @ 4060.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.05.23

End Date:

2015.05.24

Last Calib.: 2015.05.24

Start Time: 21:38:00

End Time:

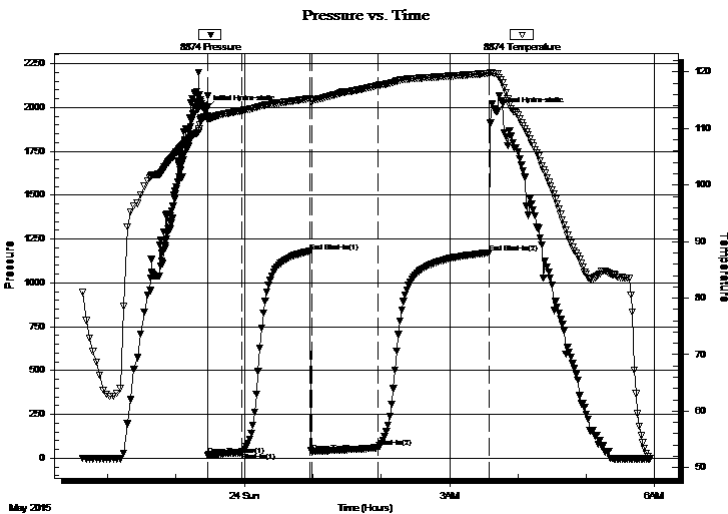
05:56:30

Time On Btm: 2015.05.23 @ 23:26:50

Time Off Btm: 2015.05.24 @ 03:40:30

**TEST COMMENT:** 30 - IF- 1/4" Blow built to 5"  
60 - IS- No Return  
60 - FF- Blow built to 9 1/2"  
90 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1990.29	112.18	Initial Hydro-static
2	17.98	111.54	Open To Flow (1)
31	32.77	113.13	Shut-In(1)
91	1179.41	115.29	End Shut-In(1)
93	37.01	115.04	Open To Flow (2)
151	59.82	117.64	Shut-In(2)
248	1171.45	119.76	End Shut-In(2)
254	1977.52	119.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
40.00	GOCM 10G 40o 50M	0.20
80.00	CGO 40G 60o	0.39
0.00	250' GIP	0.00

## Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62247

**DST#: 4**

ATTN: Rocky Milford

Test Start: 2015.05.23 @ 21:37:00

### GENERAL INFORMATION:

Formation: **LKC "K-L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:28:10

Time Test Ended: 05:56:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

Interval: **4059.00 ft (KB) To 4120.00 ft (KB) (TVD)**

Reference Elevations: 2870.00 ft (KB)

Total Depth: 4120.00 ft (KB) (TVD)

2865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8653 Outside**

Press@RunDepth: psig @ 4060.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.05.23

End Date: 2015.05.24

Last Calib.: 2015.05.24

Start Time: 21:38:00

End Time: 05:55:00

Time On Btm:

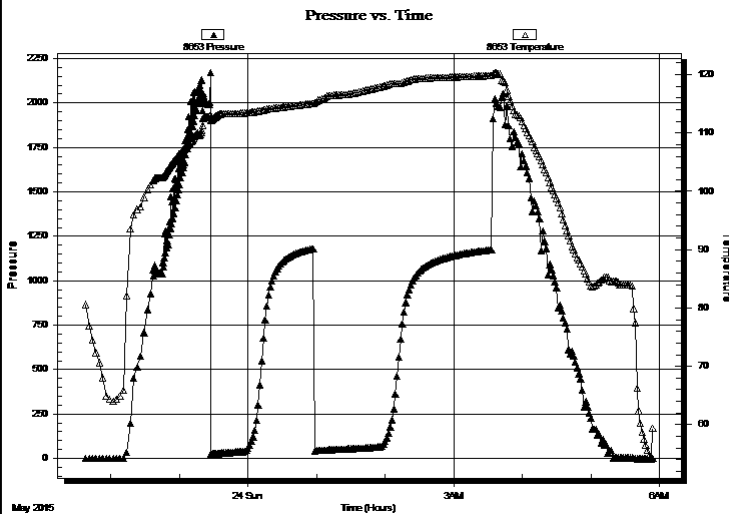
Time Off Btm:

TEST COMMENT: 30 - IF- 1/4" Blow built to 5"

60 - IS- No Return

60 - FF- Blow built to 9 1/2"

90 - FS- No Return



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
40.00	GOCM 10G 40o 50M	0.20
80.00	CGO 40G 60o	0.39
0.00	250' GIP	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.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62247

**DST#: 4**

ATTN: Rocky Milford

Test Start: 2015.05.23 @ 21:37:00

## Tool Information

Drill Pipe:	Length: 3802.00 ft	Diameter: 3.80 inches	Volume: 53.33 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: 249.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose:	78000.00 lb
			<u>Total Volume: 54.55 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	4059.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	61.00 ft				
Tool Length:	89.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4032.00	
Shut In Tool	5.00			4037.00	
Hydraulic tool	5.00			4042.00	
Jars	5.00			4047.00	
Safety Joint	3.00			4050.00	
Packer	5.00			4055.00	28.00 Bottom Of Top Packer
Packer	4.00			4059.00	
Stubb	1.00			4060.00	
Recorder	0.00	8653	Outside	4060.00	
Recorder	0.00	8874	Inside	4060.00	
Perforations	21.00			4081.00	
Change Over Sub	1.00			4082.00	
Drill Pipe	32.00			4114.00	
Change Over Sub	1.00			4115.00	
Bullnose	5.00			4120.00	61.00 Bottom Packers & Anchor

**Total Tool Length: 89.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62247

**DST#: 4**

ATTN: Rocky Milford

Test Start: 2015.05.23 @ 21:37:00

## 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:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	GOCM 10G 40o 50M	0.197
80.00	CGO 40G 60o	0.393
0.00	250' GIP	0.000

Total Length: 120.00 ft      Total Volume: 0.590 bbl

Num Fluid Samples: 0

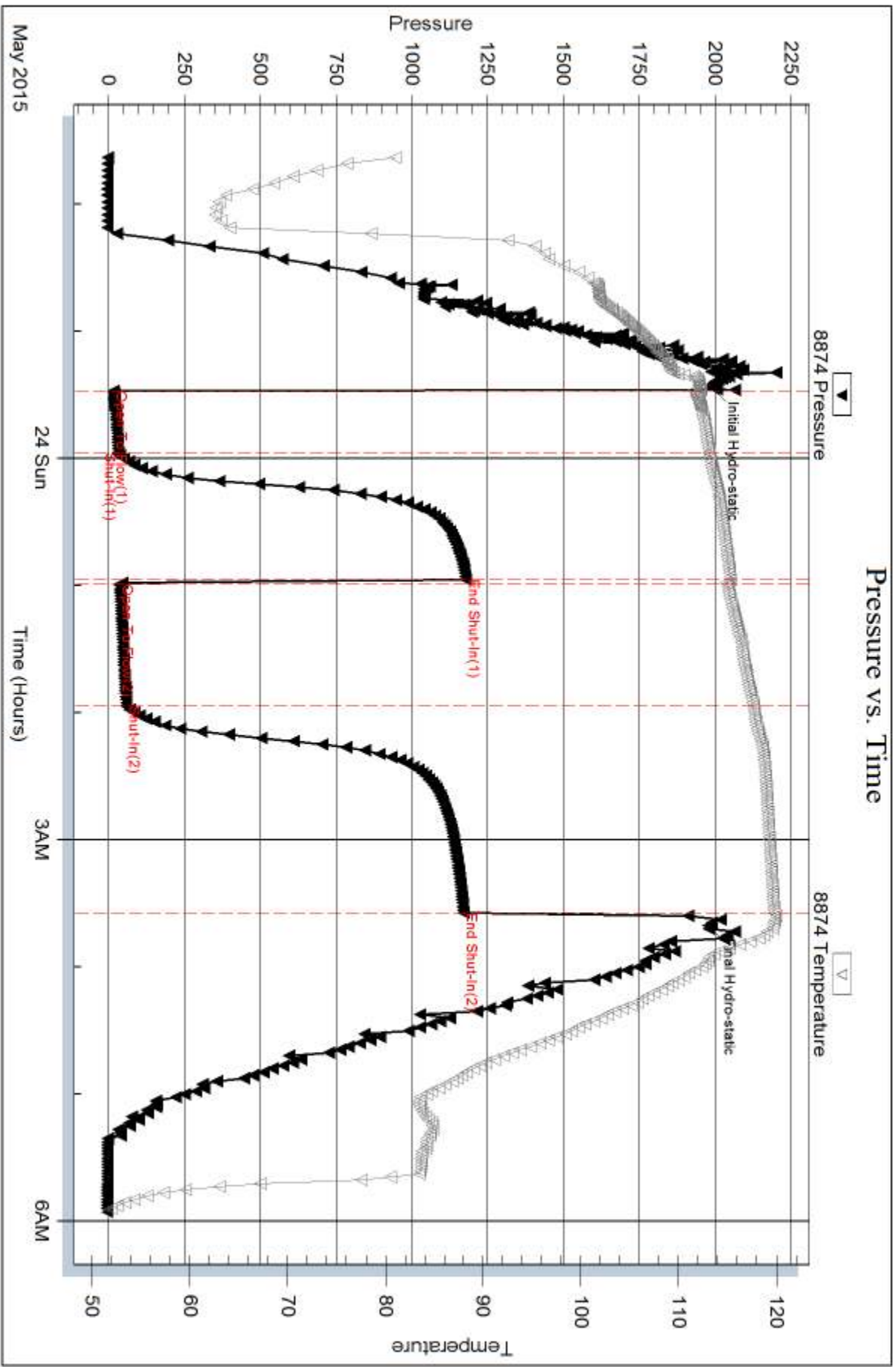
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API = 35 @ 80 = 33 corrected

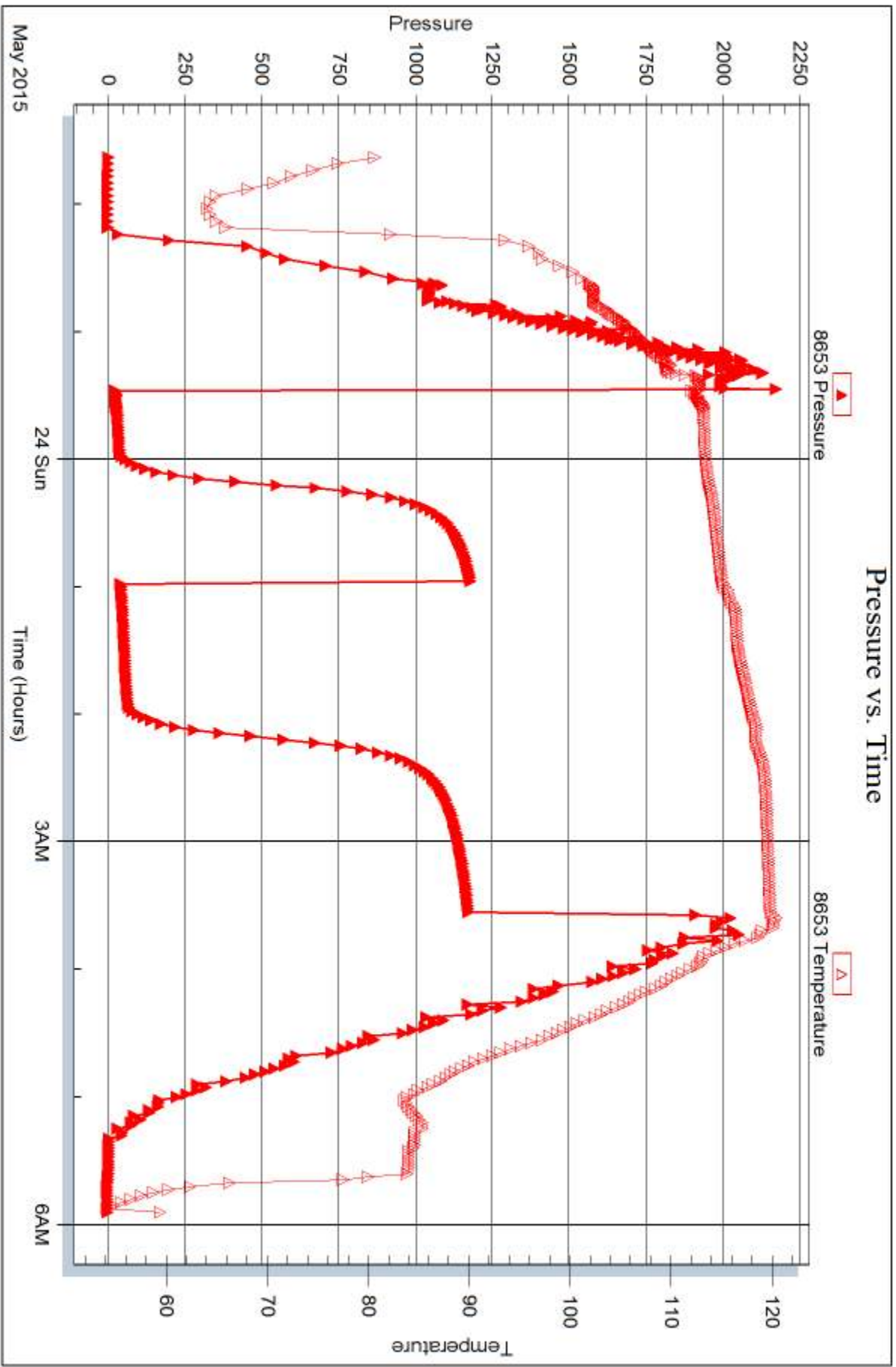


Serial #: 8653

Outside Murfin Drilling Co., Inc.

MB 'A' #2-35

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 62247

Printed: 2015.05.27 @ 09:27:57



## DRILL STEM TEST REPORT

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

250 N Water STE #300  
Wichita, KS 67202

ATTN: Rocky Milford

**MB 'A' #2-35**

**35-4s-31w Rawlins, KS**

Start Date: 2015.05.24 @ 22:34:00

End Date: 2015.05.25 @ 07:03:00

Job Ticket #: 62248                      DST #: 5

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

Printed: 2015.05.27 @ 09:26:56

Murfin Drilling Co., Inc.

35-4s-31w Rawlins, KS

MB 'A' #2-35

DST # 5

Ft. Scott - Verdigr

2015.05.24



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**35-4s-31w Rawlins, KS**

**MB 'A' #2-35**

Job Ticket: 62248

**DST#: 5**

Test Start: 2015.05.24 @ 22:34:00

## GENERAL INFORMATION:

Formation: **Ft. Scott - Verdigri**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:01:30

Time Test Ended: 07:03:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 4275.00 ft (KB) To 4342.00 ft (KB) (TVD)**

Reference Elevations: 2870.00 ft (KB)

Total Depth: 4342.00 ft (KB) (TVD)

2865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8874**

**Inside**

Press@RunDepth: 26.51 psig @ 4276.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.05.24

End Date:

2015.05.25

Last Calib.: 2015.05.25

Start Time: 22:35:00

End Time:

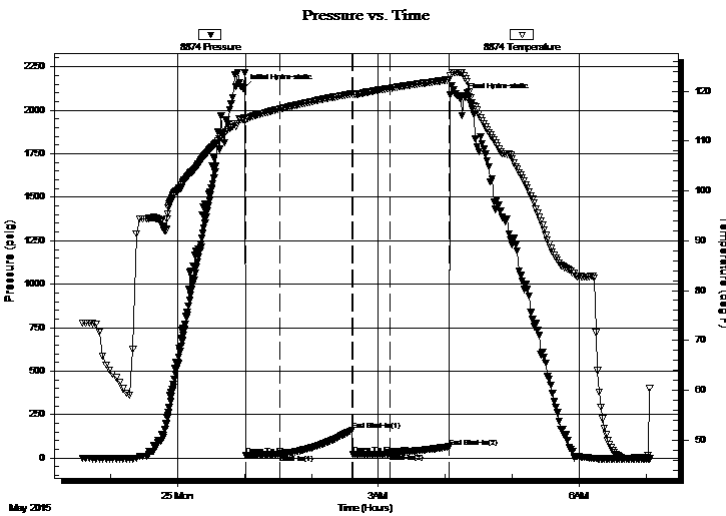
07:03:00

Time On Btm: 2015.05.25 @ 00:59:30

Time Off Btm: 2015.05.25 @ 04:14:00

**TEST COMMENT:** 30 - IF- 1/4" Blow built to 1/2" then died back to Surface Blow  
 60 - ISI- No Return  
 30 - FF- No Blow  
 60- FSI- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2126.77	114.31	Initial Hydro-static
2	18.17	114.44	Open To Flow (1)
32	20.56	116.44	Shut-In(1)
97	161.99	119.49	End Shut-In(1)
98	21.49	119.29	Open To Flow (2)
131	26.51	120.58	Shut-In(2)
184	65.32	122.30	End Shut-In(2)
195	2070.10	123.71	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100M (oil spots)	0.05

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62248

**DST#: 5**

ATTN: Rocky Milford

Test Start: 2015.05.24 @ 22:34:00

## GENERAL INFORMATION:

Formation: **Ft. Scott - Verdigri**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:01:30

Time Test Ended: 07:03:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 4275.00 ft (KB) To 4342.00 ft (KB) (TVD)**

Reference Elevations: 2870.00 ft (KB)

Total Depth: 4342.00 ft (KB) (TVD)

2865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8653**

**Outside**

Press@RunDepth: psig @ 4276.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.05.24

End Date:

2015.05.25

Last Calib.:

2015.05.25

Start Time: 22:35:00

End Time:

07:01:30

Time On Btm:

Time Off Btm:

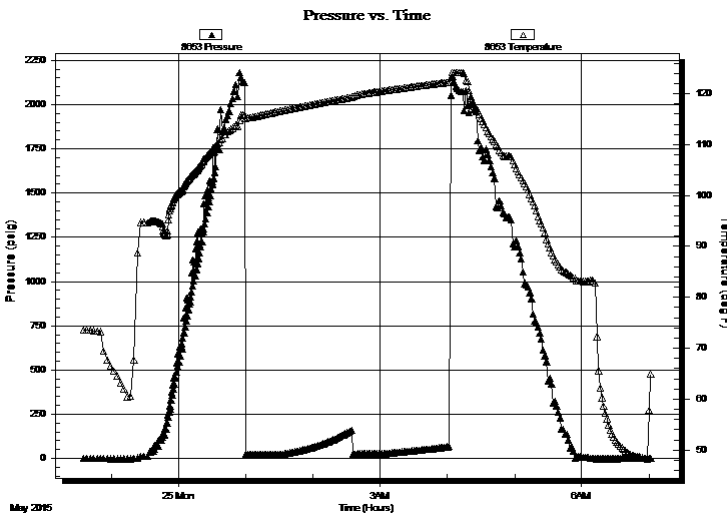
TEST COMMENT: 30 - IF- 1/4" Blow built to 1/2" then died back to Surface Blow

60 - ISI- No Return

30 - FF- No Blow

60- FSI- No Return

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100M (oil spots)	0.05

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62248

**DST#: 5**

ATTN: Rocky Milford

Test Start: 2015.05.24 @ 22:34:00

## Tool Information

Drill Pipe:	Length: 4020.00 ft	Diameter: 3.80 inches	Volume: 56.39 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: 249.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 57.61 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4275.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4248.00	
Shut In Tool	5.00			4253.00	
Hydraulic tool	5.00			4258.00	
Jars	5.00			4263.00	
Safety Joint	3.00			4266.00	
Packer	5.00			4271.00	28.00 Bottom Of Top Packer
Packer	4.00			4275.00	
Stubb	1.00			4276.00	
Recorder	0.00	8653	Outside	4276.00	
Recorder	0.00	8874	Inside	4276.00	
Perforations	27.00			4303.00	
Change Over Sub	1.00			4304.00	
Drill Pipe	32.00			4336.00	
Change Over Sub	1.00			4337.00	
Bullnose	5.00			4342.00	67.00 Bottom Packers & Anchor

**Total Tool Length: 95.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-4s-31w Rawlins, KS**

250 N Water STE #300  
Wichita, KS 67202

**MB 'A' #2-35**

Job Ticket: 62248

**DST#: 5**

ATTN: Rocky Milford

Test Start: 2015.05.24 @ 22:34:00

## 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: 64.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OSM 100M (oil spots)	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

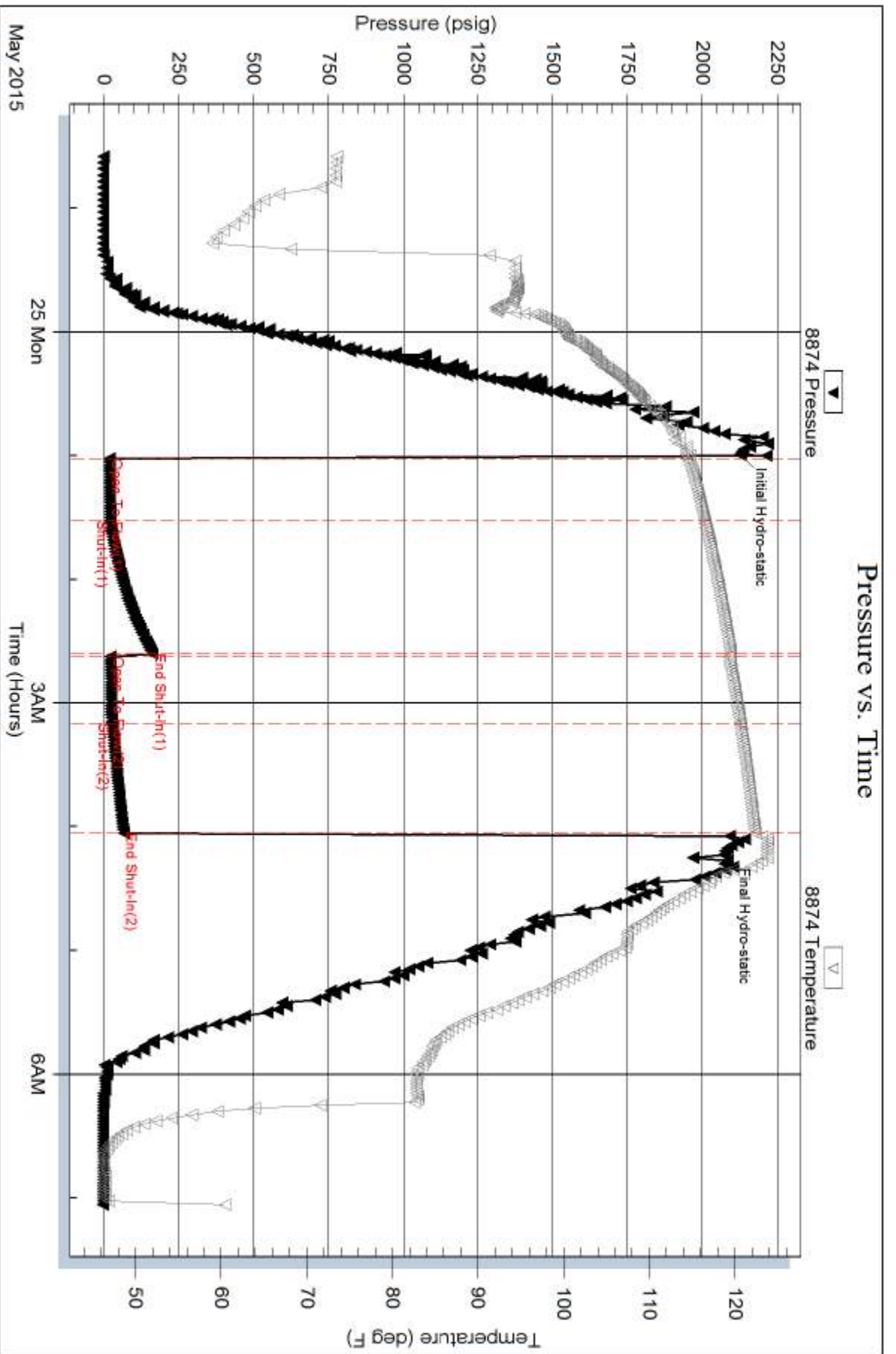
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

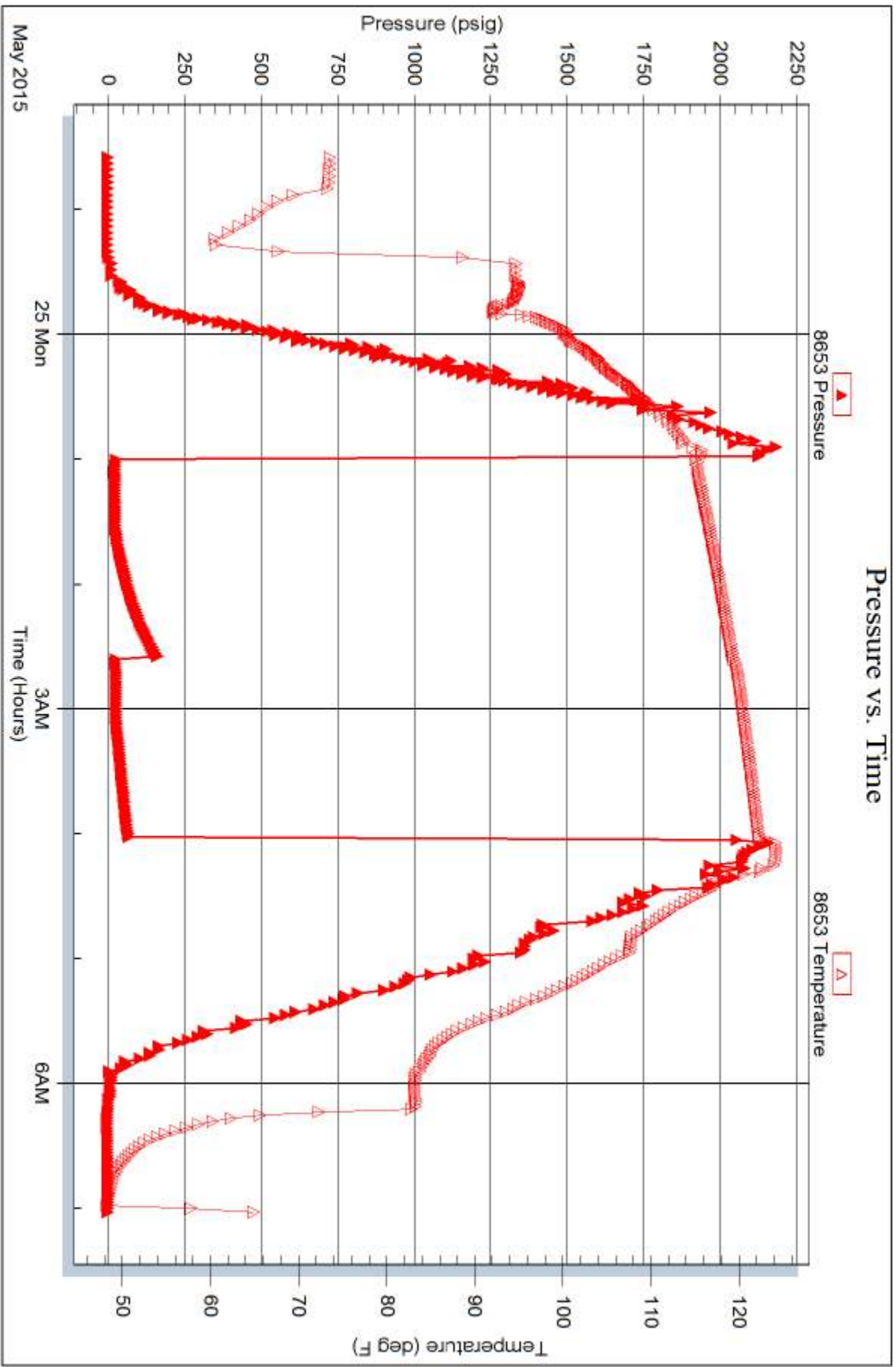


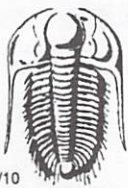
Serial #: 8653

Outside Murfin Drilling Co., Inc.

MB A' #2-35

DST Test Number: 5





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62244

Well Name & No. MB 'A' #2-35 Test No. 1 Date 5-21-15  
 Company Murfin Drilling Co., Inc. Elevation 2870 KB 2865 GL  
 Address 250 N Water STE #3000 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #7  
 Location: Sec. 35 Twp. 4S Rge. 31W Co. Rawlins State KS

Interval Tested 3846-3930 Zone Tested Leavenworth - LKC "B"  
 Anchor Length 84' Drill Pipe Run 3581 Mud Wt. 9.1  
 Top Packer Depth 3842 Drill Collars Run 249' Vis 55  
 Bottom Packer Depth 3846 Wt. Pipe Run 0 WL 6.4  
 Total Depth 3930 Chlorides 1,400 ppm System LCM 6#  
 Blow Description IF - Surface Blow built to 4"  
IST - No Return  
FF - Surface Blow started at 5 min. Built to 4 1/4"  
FST - No Return

Rec	Feet of	%gas	Spots	%oil	%water	%mud
62	OSM				100	
62	OSMw				50	50
62	OSWm				60	40
62	OSwm				80	20

Rec Total 248' BHT 119 Gravity — API RW .17 @ 67 °F Chlorides 50,000 ppm  
 (A) Initial Hydrostatic 1940  Test 1050 T-On Location 12:10 PM  
 (B) First Initial Flow 19  Jars 250 T-Started 1:00 PM  
 (C) First Final Flow 68  Safety Joint 75 T-Open 3:25 PM  
 (D) Initial Shut-In 1214  Circ Sub — T-Pulled 7:25 PM  
 (E) Second Initial Flow 76  Hourly Standby — T-Out 9:00 PM  
 (F) Second Final Flow 132  Mileage 50 RT 50  
 (G) Final Shut-In 1201  Sampler —  
 (H) Final Hydrostatic 1854  Straddle —  
 Ruined Shale Packer —  
 Ruined Packer —  
 Extra Copies —  
 Initial Open 30  Extra Packer —  
 Initial Shut-In 60  Extra Recorder —  
 Final Flow 60  Day Standby —  
 Final Shut-In 90  Accessibility —  
 Sub Total 1425  
 Sub Total 1425 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. 62245

Well Name & No. MB 'A' #2-35 Test No. 2 Date 5/22/15  
 Company Murfin Drilling Co., Inc Elevation 2870 KB 2865 GL  
 Address 250 N Water STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #7  
 Location: Sec. 35 Twp. 4S Rge. 31W Co. Rawlins State KS

Interval Tested 3947-3984 Zone Tested LKL "E-G"  
 Anchor Length 37' Drill Pipe Run 3677' Mud Wt. 9.1  
 Top Packer Depth 3943 Drill Collars Run 249 Vis 58  
 Bottom Packer Depth 3947 Wt. Pipe Run 0 WL 6.8  
 Total Depth 3984 Chlorides 20000 ppm System LCM 5#  
 Blow Description IF - BoB in 6 min.  
IST - BoB in 48 min.  
FF - BoB in 18  
FSI - Surface Return Built to 2" then died back to 1 3/4"

Rec	Feet of	%gas	%oil	%water	%mud
<u>392</u>	<u>CGO</u>	<u>35</u>	<u>65</u>		
<u>120</u>	<u>GOCM</u>	<u>10</u>	<u>30</u>		<u>60</u>
<u>850'</u>	<u><del>850'</del> GIP</u>	<u>100</u>			
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec Total <u>512'</u>	BHT <u>126</u>	Gravity <u>37</u>	API RW <u>-</u>	@ <u>-</u> ° F	Chlorides <u>-</u> ppm

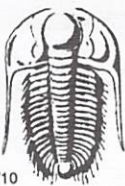
(A) Initial Hydrostatic 1923  Test 1050 T-On Location 6:15 AM  
 (B) First Initial Flow 94  Jars 250 T-Started 7:00 AM  
 (C) First Final Flow 132  Safety Joint 75 T-Open 9:22 AM  
 (D) Initial Shut-In 576  Circ Sub T-Pulled 1:22 PM  
 (E) Second Initial Flow 153  Hourly Standby T-Out 4:06 PM  
 (F) Second Final Flow 203  Mileage 50RT 50 Comments \_\_\_\_\_  
 (G) Final Shut-In 340  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1862  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1425

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

Sub Total 0  
 Total 1425  
 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. 62246

Well Name & No. MB 'A' #2-35 Test No. 3 Date 5-23-15  
 Company Murkin Drilling Co, Inc. Elevation 2870 KB 2865 GL  
 Address 2500 N Water STE #3000 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murkin #7  
 Location: Sec. 35 Twp. 4S Rge. 31W Co. Rawlins State KS

Interval Tested 3994-4065 Zone Tested LKC "H-S"  
 Anchor Length 71 Drill Pipe Run 3737 Mud Wt. 9.1  
 Top Packer Depth 3994 Drill Collars Run 249' Vis 58  
 Bottom Packer Depth 3994 Wt. Pipe Run 0 WL 6.8  
 Total Depth 4065 Chlorides 20000 ppm System LCM 5  
 Blow Description IF-BoB in 24 min.  
ISI-Surface Return started at 1 min. Built to 1/2"  
FF-BoB in 20 min.  
FBI-Surface Return started at 1 min. Built to 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>130</u>	<u>CGO</u>	<u>25</u>	<u>75</u>		
<u>80</u>	<u>GOCM</u>	<u>10</u>	<u>30</u>	<u>60</u>	
<u>60</u>	<u>GMCO</u>	<u>20</u>	<u>80</u>	<u>40</u>	

Rec Total 270' BHT 121 Gravity 39 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1953  Test 1150 T-On Location 3:20 AM  
 (B) First Initial Flow 29  Jars 250 T-Started 3:27 AM  
 (C) First Final Flow 75  Safety Joint 75 T-Open 5:35 AM  
 (D) Initial Shut-In 1272  Circ Sub  T-Pulled 9:35 AM  
 (E) Second Initial Flow 78  Hourly Standby  T-Out 12:07 PM  
 (F) Second Final Flow 125  Mileage 50 RT 50 Comments   
 (G) Final Shut-In 1232  Sampler   
 (H) Final Hydrostatic 1907  Straddle   Ruined Shale Packer   
 Shale Packer   Ruined Packer   
 Extra Packer   Extra Copies   
 Extra Recorder  Sub Total 0  
 Day Standby  Total 1525  
 Accessibility  MP/DST Disc't   
 Sub Total 1525

Approved By \_\_\_\_\_ Our Representative

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62247

Well Name & No. MB 'A' #2-35 Test No. 4 Date 5-23-15  
 Company Murfin Drilling Co., Inc Elevation 2870 KB 2865 GL  
 Address 250 N Water STE# 300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #7  
 Location: Sec. 35 Twp. 4S Rge. 3W Co. Rawlins State KS

Interval Tested 4059-4120 Zone Tested LKC "K-L"  
 Anchor Length 61' Drill Pipe Run 3802 Mud Wt. 9.1  
 Top Packer Depth 4055 Drill Collars Run 249' Vis 50  
 Bottom Packer Depth 4059 Wt. Pipe Run 0 WL 68  
 Total Depth 4120 Chlorides 2,000 ppm System LCM 4#  
 Blow Description IF - 1/4" Blow built to 5"  
ISI - NO Return  
FF - Blow built to 9 1/2"  
FSI - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>CGO</u>	<u>Yes</u>	<u>60</u>		
<u>40</u>	<u>GCM</u>	<u>100</u>	<u>40</u>	<u>50</u>	
<u>250</u>	<u>GIP</u>	<u>100</u>			

Rec Total 120 BHT 120 Gravity 33 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1990  Test 1150 T-On Location 9:30 PM  
 (B) First Initial Flow 17  Jars 250 T-Started 9:37 PM  
 (C) First Final Flow 32  Safety Joint 75 T-Open 11:28 PM  
 (D) Initial Shut-In 1179  Circ Sub - T-Pulled 3:28 AM 5/24/15  
 (E) Second Initial Flow 37  Hourly Standby - T-Out 5:58 AM  
 (F) Second Final Flow 59  Mileage 50 RT 50 Comments -  
 (G) Final Shut-In 1171  Sampler -  
 (H) Final Hydrostatic 1977  Straddle -  
 Shale Packer -  
 Ruined Shale Packer -  
 Ruined Packer -  
 Extra Copies -  
 Initial Open 30  Extra Recorder -  
 Initial Shut-In 60  Day Standby -  
 Final Flow 60  Accessibility -  
 Final Shut-In 90  Sub Total 0  
 Sub Total 1525 Total 1525 MP/DST Disc't -

Approved By \_\_\_\_\_ Our Representative \_\_\_\_\_

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62248

Well Name & No. MB 'A' #2-35 Test No. 5 Date 5-25-15  
 Company Murfin Drilling, Co., Inc. Elevation 2870 KB 2865 GL  
 Address 250 N Water STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Rocky Milford Rig Murfin #7  
 Location: Sec. 35 Twp. 4S Rge. 3W Co. Rawlins State KS

Interval Tested 4275-4342 Zone Tested Ft. Scott - Verdigris  
 Anchor Length 67 Drill Pipe Run 4020' Mud Wt. 8.9  
 Top Packer Depth 4271 Drill Collars Run 249' Vis 64  
 Bottom Packer Depth 4275 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4342 Chlorides 1,600 ppm System LCM 8#  
 Blow Description IF- 1/4" Blow built to 1/2", then died back to surface Blow  
ISI- NO Return  
FF- NO Blow  
FSD- NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10'</u>	<u>CSM</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 10 BHT 122 Gravity — API RW — @ — ° F Chlorides — ppm  
 (A) Initial Hydrostatic 2126  Test 1150 T-On Location 10:30 PM 5/24  
 (B) First Initial Flow 18  Jars 250 T-Started 10:34 PM  
 (C) First Final Flow 20  Safety Joint 75 T-Open 1:02 AM  
 (D) Initial Shut-In 161  Circ Sub \_\_\_\_\_ T-Pulled 4:02 AM  
 (E) Second Initial Flow 21  Hourly Standby \_\_\_\_\_ T-Out 7:03 AM  
 (F) Second Final Flow 26  Mileage 50 RT 50 Comments Loaded tools  
 (G) Final Shut-In 65  Sampler \_\_\_\_\_ at end of test  
 (H) Final Hydrostatic 2070  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1525 MP/DST Disc't \_\_\_\_\_  
 Sub Total 0  
 Total 1525

Approved By \_\_\_\_\_ Our Representative [Signature]  
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