



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE #300  
Wichita, KS 67202

ATTN: Robert Hendrix

**Walter #2-1**

**1-1s-36w Rawlins,KS**

Start Date: 2013.09.06 @ 10:50:00

End Date: 2013.09.06 @ 19:07:00

Job Ticket #: 53373                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.11 @ 14:02:29



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.  
 250 N Water STE #300  
 Wichita, KS 67202  
 ATTN: Robert Hendrix

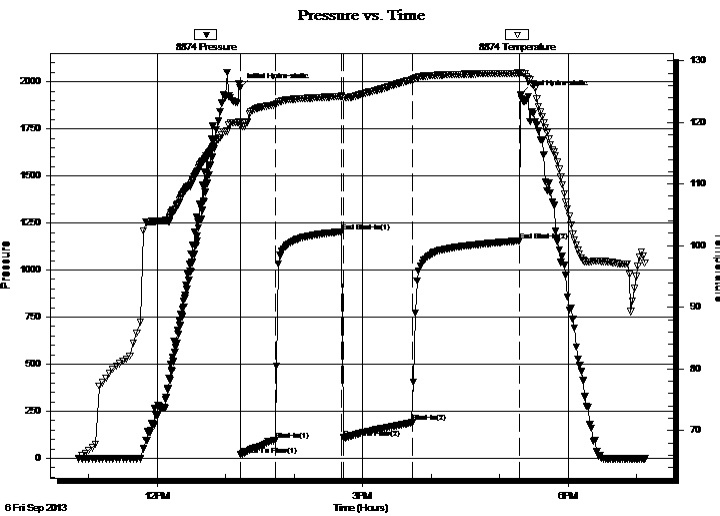
**1-1s-36w Rawlins,KS**  
**Walter #2-1**  
 Job Ticket: 53373      **DST#: 1**  
 Test Start: 2013.09.06 @ 10:50:00

## GENERAL INFORMATION:

Formation: **Oread**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:13:00  
 Time Test Ended: 19:07:00  
 Interval: **3928.00 ft (KB) To 3980.00 ft (KB) (TVD)**  
 Total Depth: 3980.00 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: 3115.00 ft (KB)  
 3105.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8874      Inside**  
 Press @ Run Depth: 189.45 psig @ 3929.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.09.06      End Date: 2013.09.06      Last Calib.: 2013.09.06  
 Start Time: 10:51:00      End Time: 19:07:00      Time On Btm: 2013.09.06 @ 13:12:30  
 Time Off Btm: 2013.09.06 @ 17:18:30

**TEST COMMENT:** 30 - IF- 1/4" Blow built to 7"  
 60 - IS- No Return  
 60 - FF- Surface Blow started at 3 min. Built to 10"  
 90 - FS- No Return



## PRESSURE SUMMARY

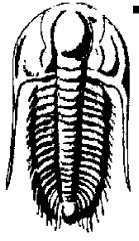
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1967.91	120.13	Initial Hydro-static
1	18.51	119.51	Open To Flow (1)
31	97.23	122.86	Shut-In(1)
89	1203.62	124.25	End Shut-In(1)
91	109.06	123.96	Open To Flow (2)
151	189.45	126.91	Shut-In(2)
245	1155.14	128.00	End Shut-In(2)
246	1931.61	128.12	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
360.00	OCWM 50M 40W 10o	1.77
10.00	Free Oil 100o	0.05

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Co.

250 N Water STE #300  
Wichita, KS 67202

ATTN: Robert Hendrix

**1-1s-36w Rawlins,KS**

**Walter #2-1**

Job Ticket: 53373

**DST#: 1**

Test Start: 2013.09.06 @ 10:50:00

**GENERAL INFORMATION:**

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:13:00

Time Test Ended: 19:07:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

**Interval: 3928.00 ft (KB) To 3980.00 ft (KB) (TVD)**

Total Depth: 3980.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3115.00 ft (KB)

3105.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8653 Outside**

Press @RunDepth: psig @ 3929.00 ft (KB)

Start Date: 2013.09.06

End Date:

2013.09.06

Start Time: 10:51:00

End Time:

19:05:30

Capacity: 8000.00 psig

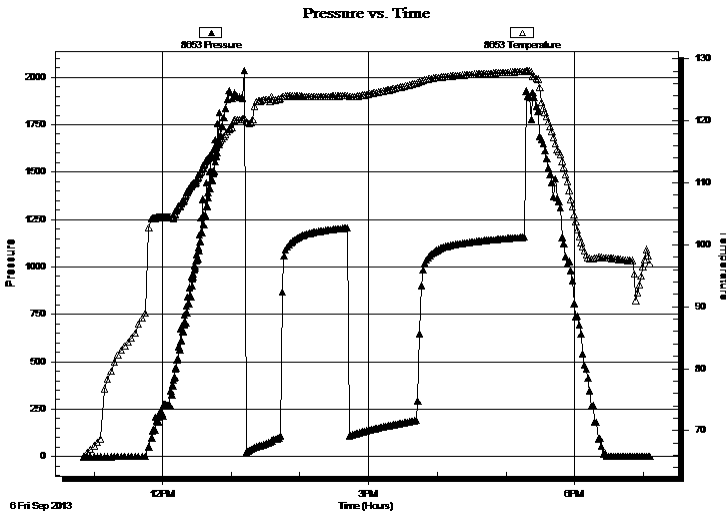
Last Calib.: 2013.09.06

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30 - IF- 1/4" Blow built to 7"  
60 - IS- No Return  
60 - FF- Surface Blow started at 3 min. Built to 10"  
90 - FS- No Return

**PRESSURE SUMMARY**



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

**Recovery**

Length (ft)	Description	Volume (bbl)
360.00	OCWM 50M 40W 10o	1.77
10.00	Free Oil 100o	0.05

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53373

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2013.09.06 @ 10:50:00

## Tool Information

Drill Pipe:	Length: 3394.00 ft	Diameter: 3.80 inches	Volume: 47.61 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 50.24 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3928.00 ft			Final 78000.00 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
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Shut In Tool	5.00			3906.00	
Hydraulic tool	5.00			3911.00	
Jars	5.00			3916.00	
Safety Joint	3.00			3919.00	
Packer	5.00			3924.00	27.00 Bottom Of Top Packer
Packer	4.00			3928.00	
Stubb	1.00			3929.00	
Recorder	0.00	8653	Outside	3929.00	
Recorder	0.00	8874	Inside	3929.00	
Perforations	13.00			3942.00	
Change Over Sub	1.00			3943.00	
Drill Pipe	31.00			3974.00	
Change Over Sub	1.00			3975.00	
Bullnose	5.00			3980.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 79.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53373

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2013.09.06 @ 10:50:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
360.00	OCWM 50M 40W 10o	1.770
10.00	Free Oil 100o	0.049

Total Length: 370.00 ft      Total Volume: 1.819 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API = 36 @ 110 deg = 31 cor  
RW .17 @ 87 = 32000ppm32000

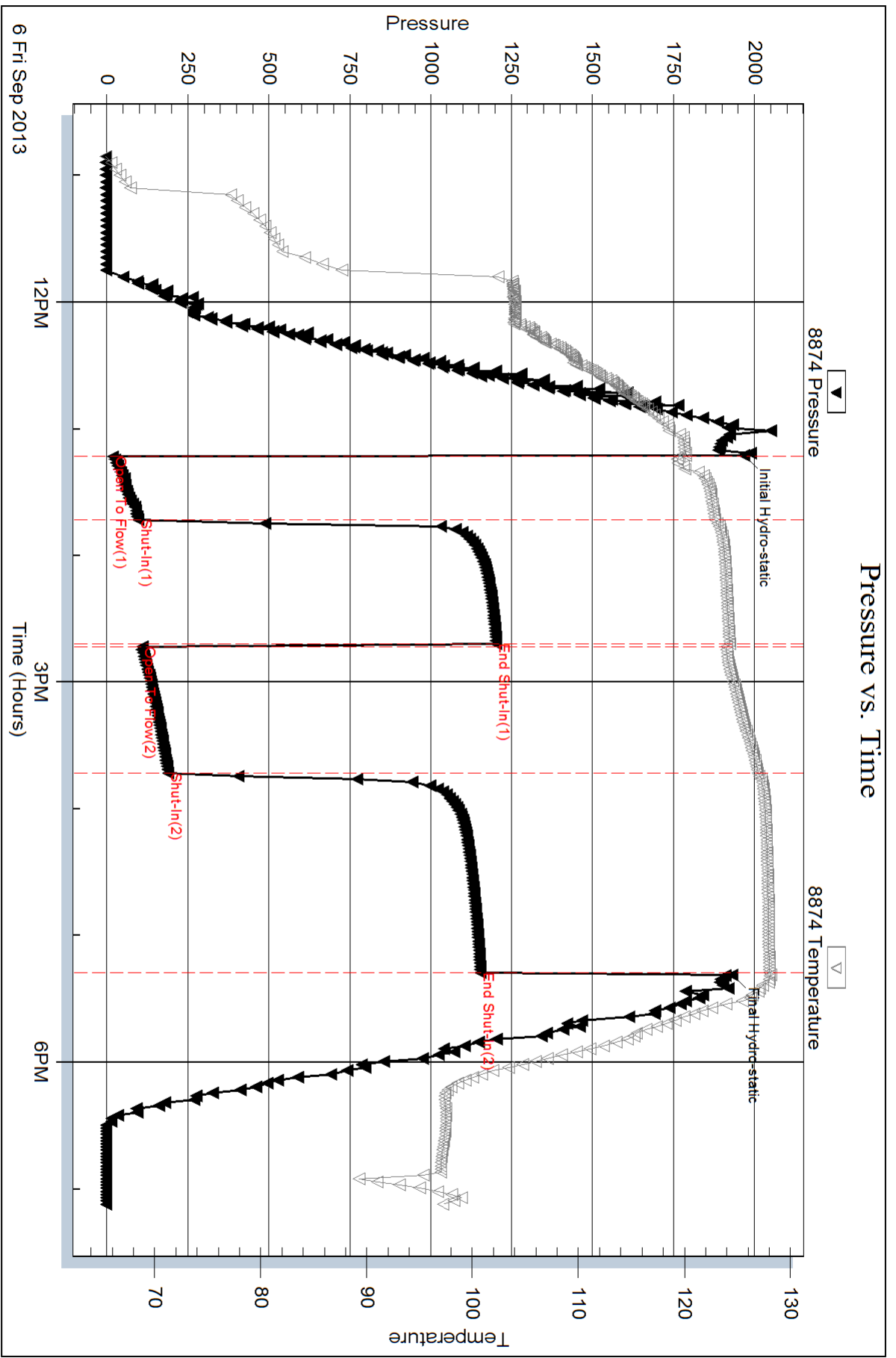
Serial #: 8874

Inside

Murfin Drilling Co.

Walter #2-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 53373

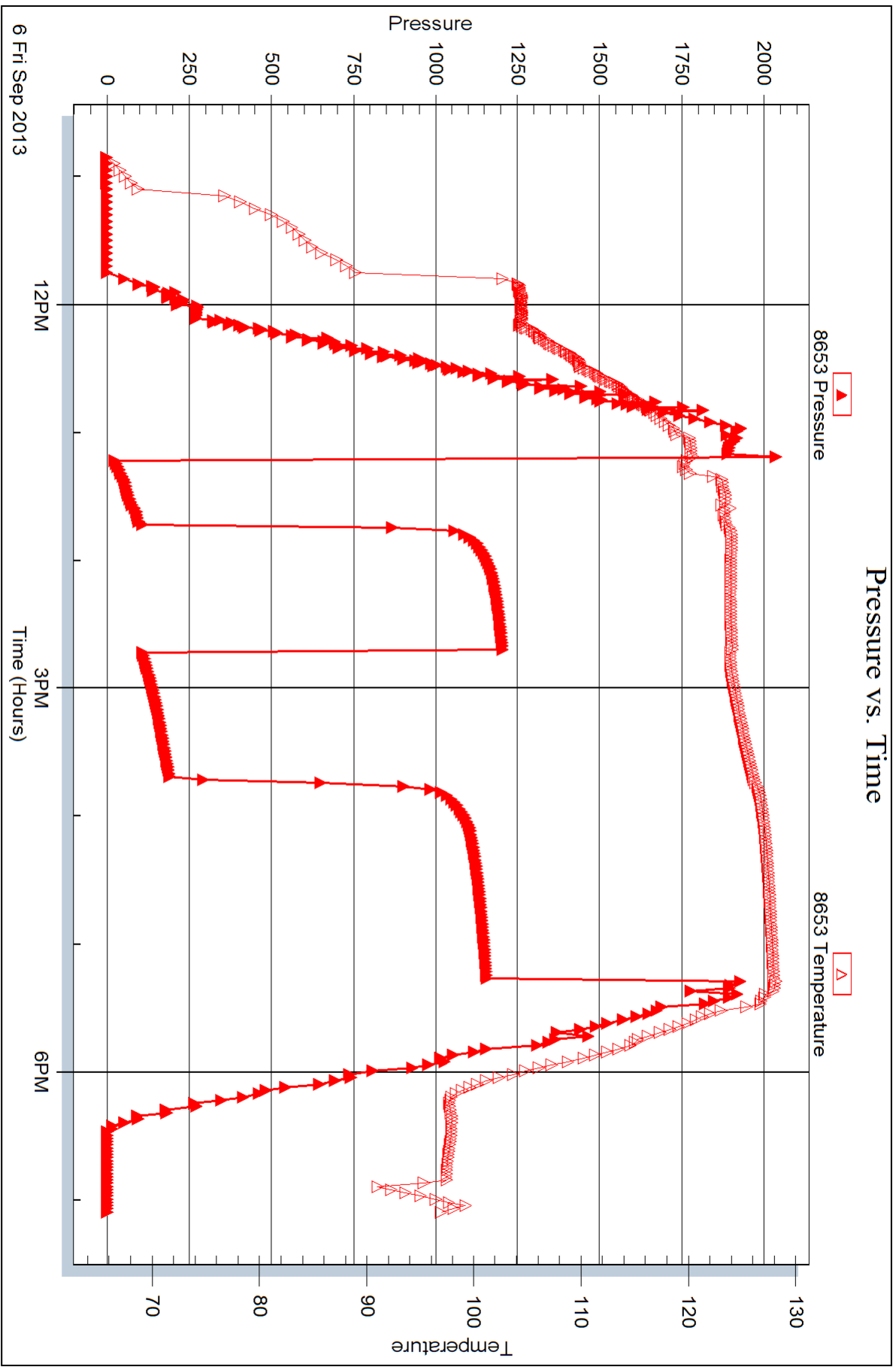
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Serial #: 8653

Outside Murfin Drilling Co.

Walter #2-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 53373

Printed: 2013.09.11 @ 14:02:31



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE #300  
Wichita, KS 67202

ATTN: Robert Hendrix

**Walter #2-1**

**1-1s-36w Rawlins,KS**

Start Date: 2013.09.07 @ 08:43:00

End Date: 2013.09.07 @ 16:29:00

Job Ticket #: 53374                      DST #: 2

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

Printed: 2013.09.11 @ 14:02:01





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.  
250 N Water STE #300  
Wichita, KS 67202  
ATTN: Robert Hendrix

**1-1s-36w Rawlins,KS**  
**Walter #2-1**  
Job Ticket: 53374      **DST#: 2**  
Test Start: 2013.09.07 @ 08:43:00

## GENERAL INFORMATION:

Formation: **LKC "A"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 10:49:00  
Time Test Ended: 16:29:00  
Interval: **3996.00 ft (KB) To 4094.00 ft (KB) (TVD)**  
Total Depth: 4094.00 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: 3115.00 ft (KB)  
3105.00 ft (CF)  
KB to GR/CF: 10.00 ft

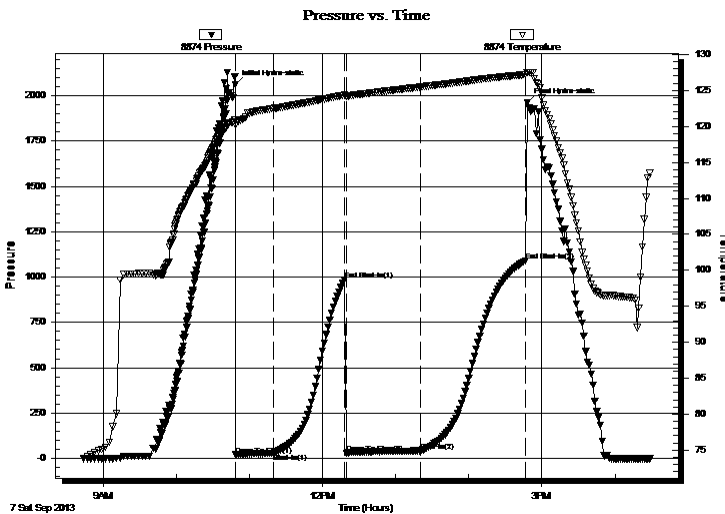
## Serial #: 8874

Inside

Press @ Run Depth: 41.50 psig @ 3997.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.09.07 End Date: 2013.09.07 Last Calib.: 2013.09.07  
Start Time: 08:44:00 End Time: 16:29:00 Time On Btm: 2013.09.07 @ 10:48:30  
Time Off Btm: 2013.09.07 @ 14:48:00

TEST COMMENT: 30 - IF- 1/4" Blow built to 3"  
60 - IS- No Return  
60 - FF- Surface Blow built to 6"  
90 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2063.86	120.88	Initial Hydro-static
1	20.03	120.28	Open To Flow (1)
32	28.95	122.49	Shut-In(1)
90	985.09	124.33	End Shut-In(1)
91	28.27	124.09	Open To Flow (2)
152	41.50	125.46	Shut-In(2)
238	1090.18	127.19	End Shut-In(2)
240	1964.15	127.50	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	OCM 60M 40o	0.44
0.00	180' 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.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53374

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.09.07 @ 08:43:00

## Tool Information

Drill Pipe:	Length: 3457.00 ft	Diameter: 3.80 inches	Volume: 48.49 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 51.12 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3996.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	125.00 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			3974.00	
Hydraulic tool	5.00			3979.00	
Jars	5.00			3984.00	
Safety Joint	3.00			3987.00	
Packer	5.00			3992.00	27.00 Bottom Of Top Packer
Packer	4.00			3996.00	
Stubb	1.00			3997.00	
Recorder	0.00	8653	Outside	3997.00	
Recorder	0.00	8874	Inside	3997.00	
Perforations	28.00			4025.00	
Change Over Sub	1.00			4026.00	
Drill Pipe	62.00			4088.00	
Change Over Sub	1.00			4089.00	
Bullnose	5.00			4094.00	98.00 Bottom Packers & Anchor

**Total Tool Length: 125.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53374

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.09.07 @ 08:43:00

## 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: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	OCM 60M 40o	0.443
0.00	180' GIP	0.000

Total Length: 90.00 ft      Total Volume: 0.443 bbl

Num Fluid Samples: 0

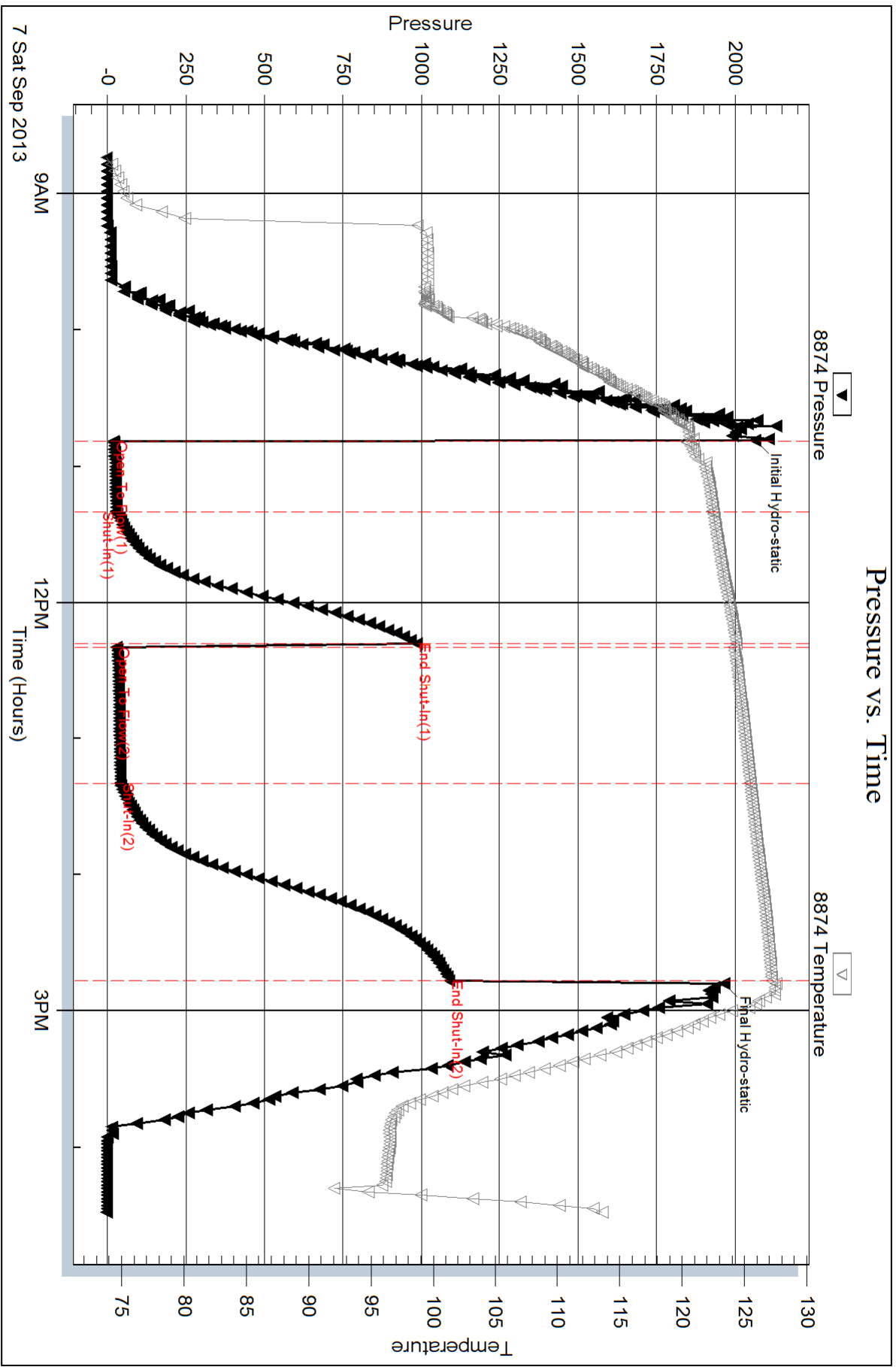
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

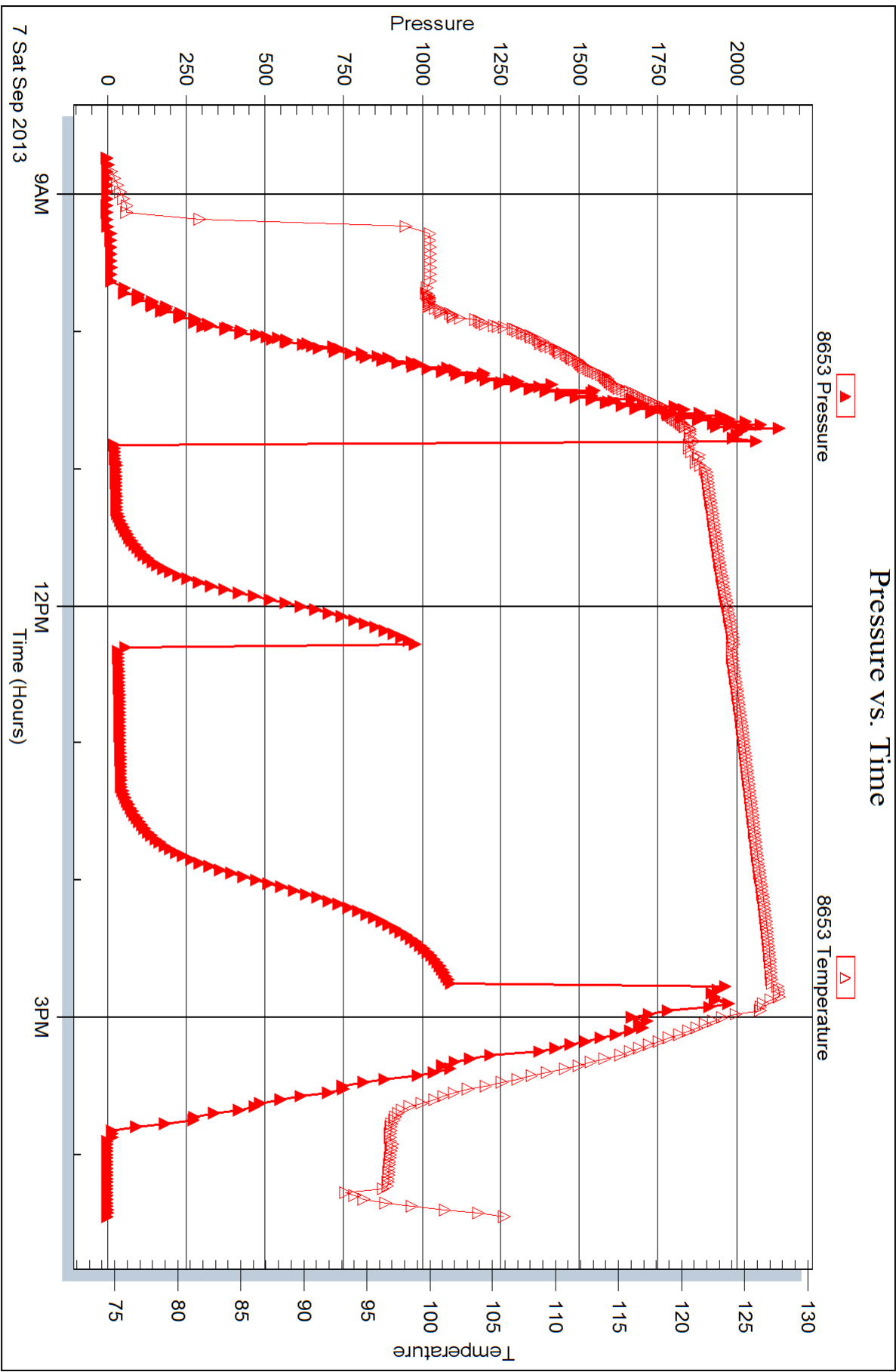


Serial #: 8653

Outside Murfin Drilling Co.

Walter #2-1

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE #300  
Wichita, KS 67202

ATTN: Robert Hendrix

**Walter #2-1**

**1-1s-36w Rawlins,KS**

Start Date: 2013.09.07 @ 23:07:00

End Date: 2013.09.08 @ 05:48:00

Job Ticket #: 53375                      DST #: 3

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

Printed: 2013.09.11 @ 14:01:38



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.  
 250 N Water STE #300  
 Wichita, KS 67202  
 ATTN: Robert Hendrix

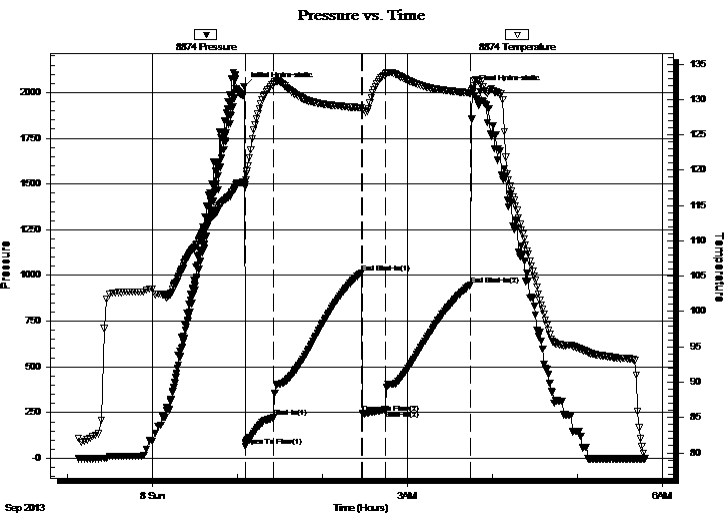
**1-1s-36w Rawlins,KS**  
**Walter #2-1**  
 Job Ticket: 53375      **DST#: 3**  
 Test Start: 2013.09.07 @ 23:07:00

## GENERAL INFORMATION:

Formation: **LKC "D"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 01:05:30  
 Tester: Kevin Mack  
 Time Test Ended: 05:48:00  
 Unit No: 66  
 Interval: **4082.00 ft (KB) To 4122.00 ft (KB) (TVD)**  
 Reference Elevations: 3115.00 ft (KB)  
 Total Depth: 4082.00 ft (KB) (TVD)      3105.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good      KB to GR/CF: 10.00 ft

**Serial #: 8874      Inside**  
 Press @ RunDepth: 266.32 psig @ 4083.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.09.07      End Date: 2013.09.08      Last Calib.: 2013.09.08  
 Start Time: 23:08:00      End Time: 05:48:00      Time On Btm: 2013.09.08 @ 01:05:10  
 Time Off Btm: 2013.09.08 @ 03:46:00

**TEST COMMENT:** 15 - IF - BoB in 2 min.  
 60 - ISI - Return built to BoB in 10 min  
 15 - FF - BoB in 8 min.  
 60 - FSI - Return built to BoB in 10 min.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2035.05	118.33	Initial Hydro-static
1	66.19	117.62	Open To Flow (1)
21	222.94	132.22	Shut-In(1)
83	1014.23	128.85	End Shut-In(1)
84	245.96	128.38	Open To Flow (2)
100	266.32	133.57	Shut-In(2)
160	948.31	130.91	End Shut-In(2)
161	2018.48	131.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
340.00	Clean Gassy Oil 50o 50G	1.67
360.00	GMCO 40G 40o 20M	3.27
0.00	1,100' GIP	0.00

## Gas Rates

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





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.  
250 N Water STE #300  
Wichita, KS 67202  
ATTN: Robert Hendrix

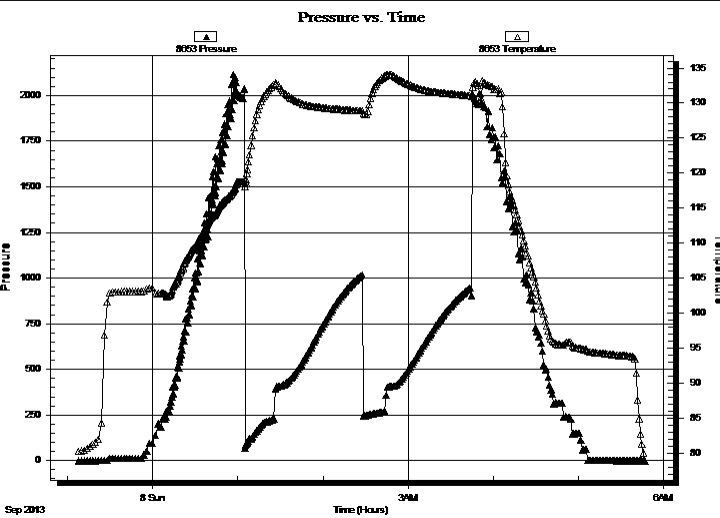
**1-1s-36w Rawlins, KS**  
**Walter #2-1**  
Job Ticket: 53375      **DST#: 3**  
Test Start: 2013.09.07 @ 23:07:00

**GENERAL INFORMATION:**

Formation: <b>LKC "D"</b>		
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 01:05:30		Tester: Kevin Mack
Time Test Ended: 05:48:00		Unit No: 66
<b>Interval: 4082.00 ft (KB) To 4122.00 ft (KB) (TVD)</b>		Reference Elevations: 3115.00 ft (KB)
Total Depth: 4082.00 ft (KB) (TVD)		3105.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Good	KB to GR/CF: 10.00 ft

<b>Serial #: 8653</b>	<b>Outside</b>		
Press @ Run Depth:                      psig @	4083.00 ft (KB)	Capacity:	8000.00 psig
Start Date: 2013.09.07	End Date: 2013.09.08	Last Calib.:	2013.09.08
Start Time: 23:08:00	End Time: 05:47:00	Time On Btm:	
		Time Off Btm:	

**TEST COMMENT:** 15 - IF - BoB in 2 min.  
60 - ISI - Return built to BoB in 10 min  
15 - FF - BoB in 8 min.  
60 - FSI - Return built to BoB in 10 min.



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

Recovery		
Length (ft)	Description	Volume (bbl)
340.00	Clean Gassy Oil 50o 50G	1.67
360.00	GMCO 40G 40o 20M	3.27
0.00	1,100' 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.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53375

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.09.07 @ 23:07:00

## Tool Information

Drill Pipe:	Length: 3552.00 ft	Diameter: 3.80 inches	Volume: 49.83 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 52.46 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4082.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	67.00 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			4060.00	
Hydraulic tool	5.00			4065.00	
Jars	5.00			4070.00	
Safety Joint	3.00			4073.00	
Packer	5.00			4078.00	27.00 Bottom Of Top Packer
Packer	4.00			4082.00	
Stubb	1.00			4083.00	
Recorder	0.00	8653	Outside	4083.00	
Recorder	0.00	8874	Inside	4083.00	
Perforations	1.00			4084.00	
Change Over Sub	1.00			4085.00	
Drill Pipe	31.00			4116.00	
Change Over Sub	1.00			4117.00	
Bullnose	5.00			4122.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 67.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53375

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.09.07 @ 23:07:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
340.00	Clean Gassy Oil 50o 50G	1.672
360.00	GMCO 40G 40o 20M	3.273
0.00	1,100' GIP	0.000

Total Length: 700.00 ft      Total Volume: 4.945 bbl

Num Fluid Samples: 0

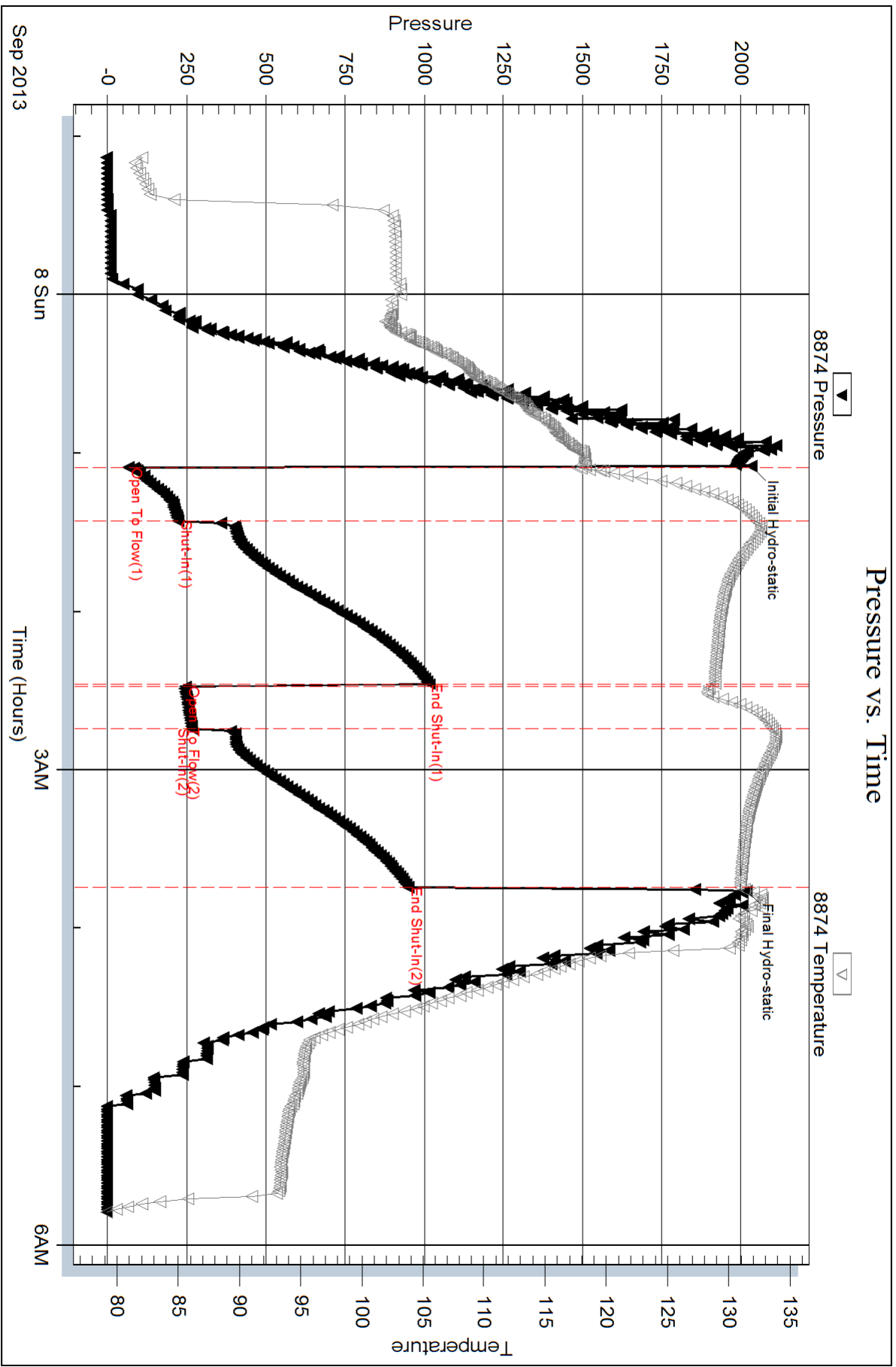
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 37 @90 deg=34cor

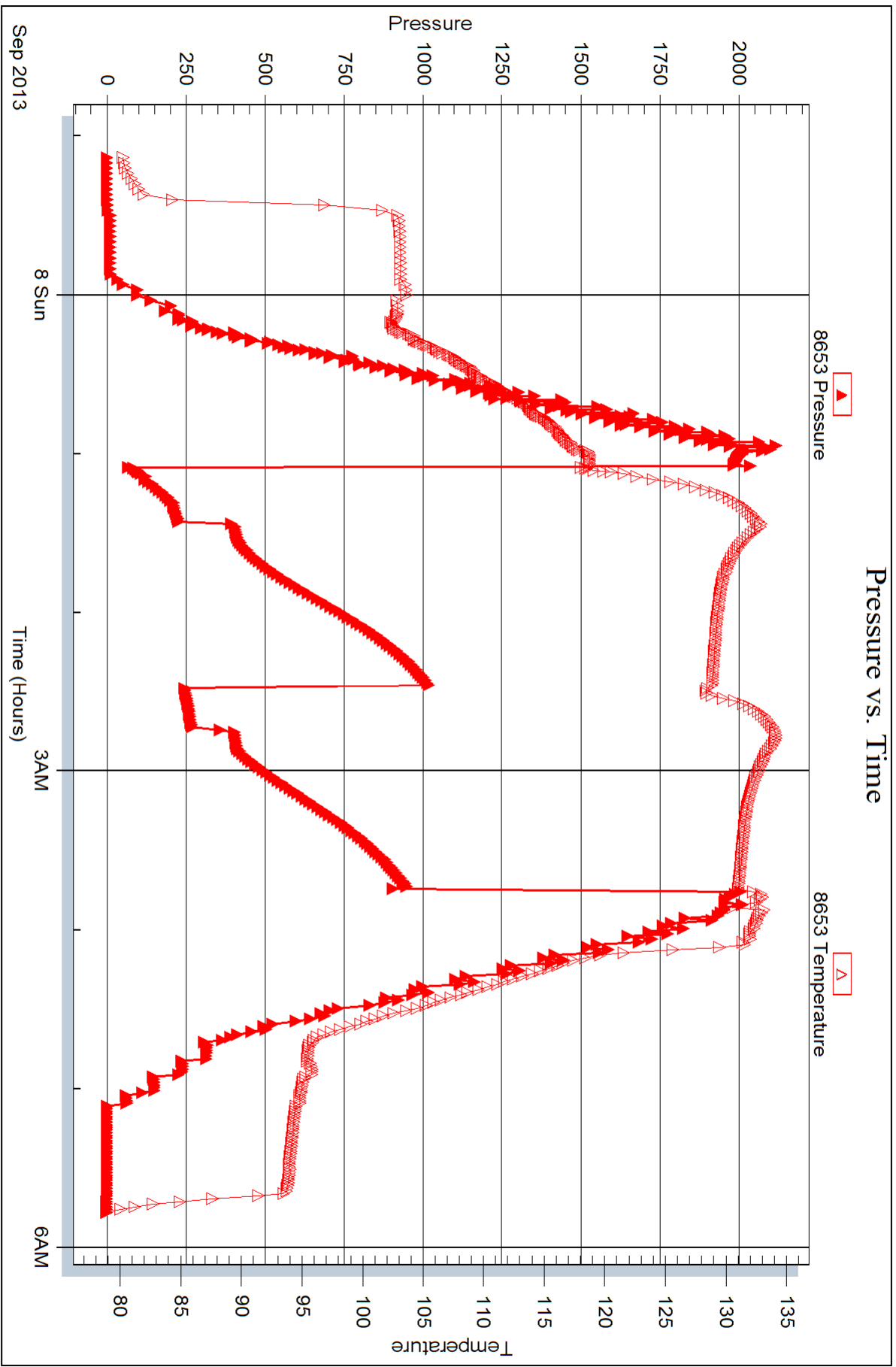


Serial #: 8653

Outside Murfin Drilling Co.

Walter #2-1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 53375

Printed: 2013.09.11 @ 14:01:39



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE #300  
Wichita, KS 67202

ATTN: Robert Hendrix

**Walter #2-1**

**1-1s-36w Rawlins,KS**

Start Date: 2013.09.09 @ 03:40:00

End Date: 2013.09.09 @ 11:14:30

Job Ticket #: 53526                      DST #: 4

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

Printed: 2013.09.11 @ 14:01:10



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.  
 250 N Water STE #300  
 Wichita, KS 67202  
 ATTN: Robert Hendrix

**1-1s-36w Rawlins,KS**  
**Walter #2-1**  
 Job Ticket: 53526 **DST#: 4**  
 Test Start: 2013.09.09 @ 03:40:00

## GENERAL INFORMATION:

Formation: **LKC "H-I"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 05:32:40  
 Time Test Ended: 11:14:30  
 Interval: **4174.00 ft (KB) To 4248.00 ft (KB) (TVD)**  
 Total Depth: 4248.00 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: 3115.00 ft (KB)  
 3105.00 ft (CF)  
 KB to GR/CF: 10.00 ft

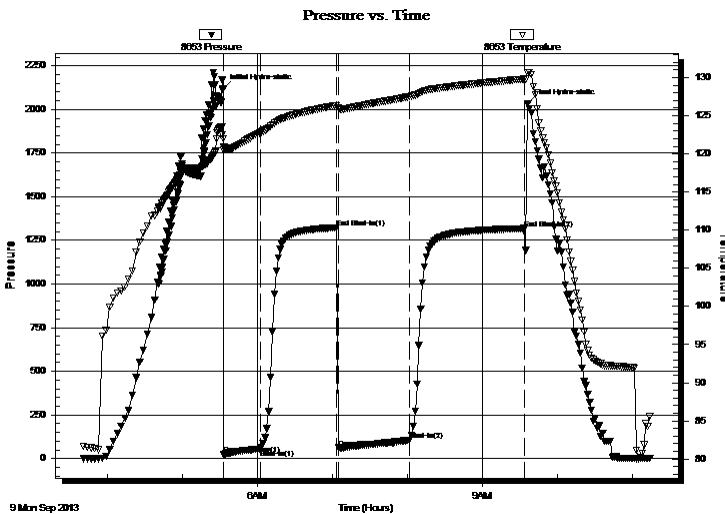
## Serial #: 8653

## Outside

Press @ Run Depth: 104.43 psig @ 4175.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.09 End Date: 2013.09.09 Last Calib.: 2013.09.09  
 Start Time: 03:41:00 End Time: 11:14:30 Time On Btm: 2013.09.09 @ 05:32:30  
 Time Off Btm: 2013.09.09 @ 09:36:00

TEST COMMENT: 30 - IF - BoB in 18 min  
 60 - ISI - No Return  
 60 - FF - BoB in 18 1/2 min.  
 90 - FSI - Weak Surface Return built to 5"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2119.11	121.95	Initial Hydro-static
1	22.78	120.55	Open To Flow (1)
30	55.15	122.78	Shut-In(1)
91	1323.09	126.37	End Shut-In(1)
92	61.52	125.99	Open To Flow (2)
149	104.43	127.50	Shut-In(2)
241	1318.32	129.81	End Shut-In(2)
244	2035.50	130.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	GOCM 30G 30o 40M	0.44
130.00	Clean Gassy Oil 40G 60o	0.64
0.00	800' 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.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53526

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.09.09 @ 03:40:00

## Tool Information

Drill Pipe:	Length: 3616.00 ft	Diameter: 3.80 inches	Volume: 50.72 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 53.35 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4174.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	102.00 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			4147.00	
Shut In Tool	5.00			4152.00	
Hydraulic tool	5.00			4157.00	
Jars	5.00			4162.00	
Safety Joint	3.00			4165.00	
Packer	5.00			4170.00	28.00 Bottom Of Top Packer
Packer	4.00			4174.00	
Stubb	1.00			4175.00	
Recorder	0.00	8653	Outside	4175.00	
Recorder	0.00	8874	Inside	4175.00	
Perforations	4.00			4179.00	
Change Over Sub	1.00			4180.00	
Drill Pipe	62.00			4242.00	
Change Over Sub	1.00			4243.00	
Bullnose	5.00			4248.00	74.00 Bottom Packers & Anchor

**Total Tool Length: 102.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53526

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.09.09 @ 03:40:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 550.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
90.00	GOCM 30G 30o 40M	0.443
130.00	Clean Gassy Oil 40G 60o	0.639
0.00	800' GIP	0.000

Total Length: 220.00 ft      Total Volume: 1.082 bbl

Num Fluid Samples: 0

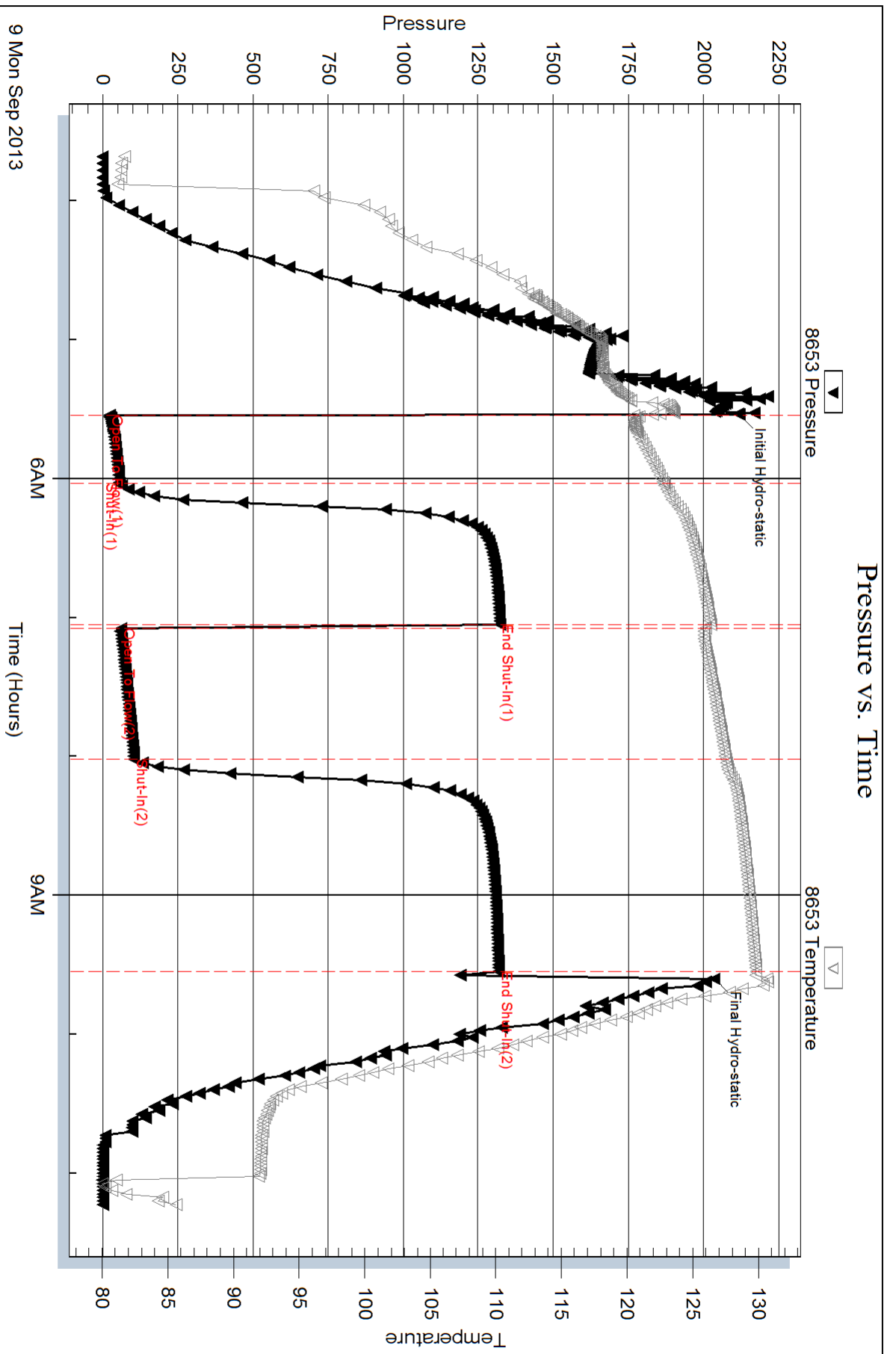
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 34 @ 90 deg = 31 cor.



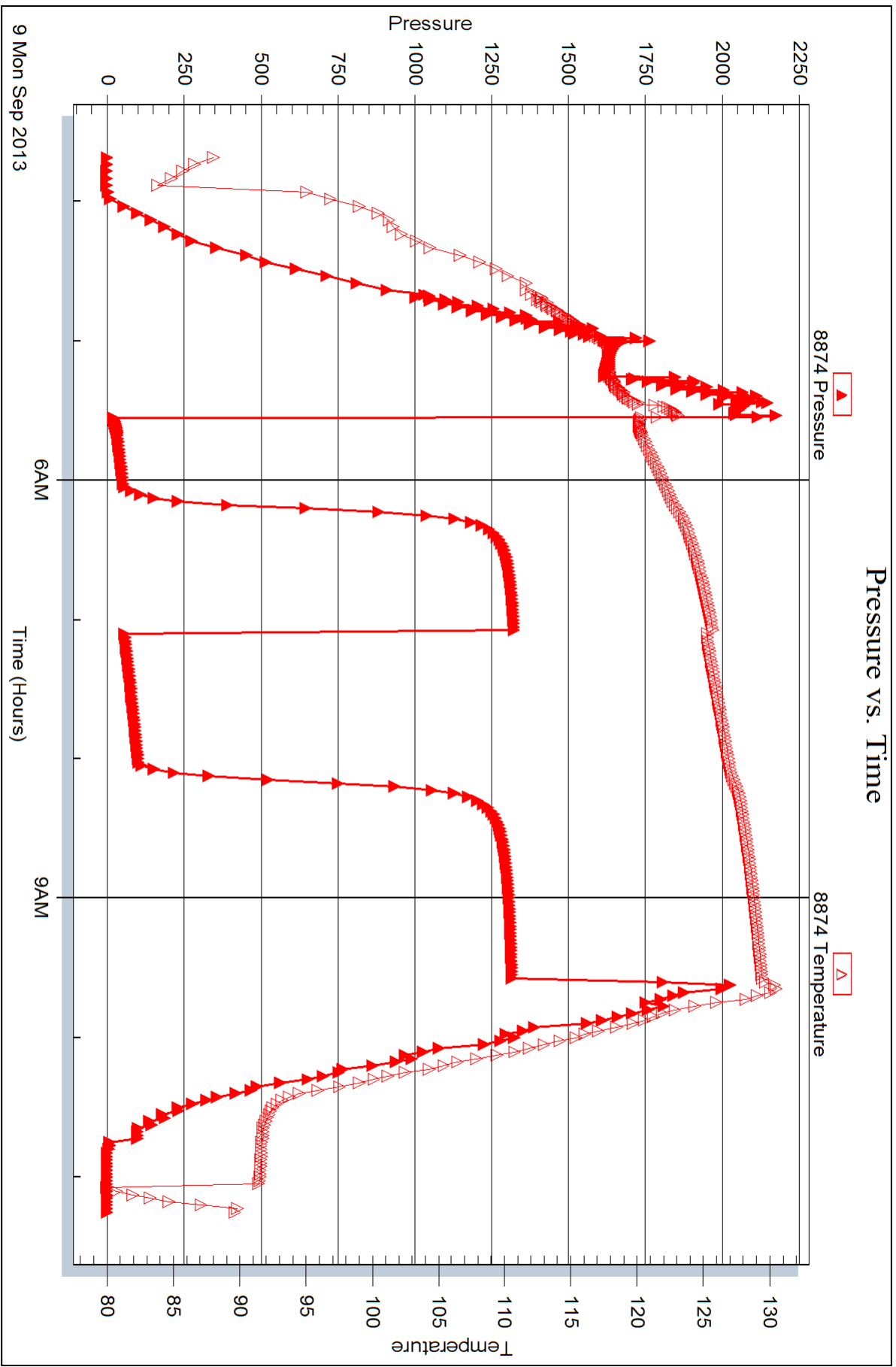
Serial #: 8874

Inside

Murfin Drilling Co.

Walter #2-1

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE #300  
Wichita, KS 67202

ATTN: Robert Hendrix

**Walter #2-1**

**1-1s-36w Rawlins,KS**

Start Date: 2013.09.09 @ 19:05:00

End Date: 2013.09.10 @ 04:37:00

Job Ticket #: 53527                      DST #: 5

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

Printed: 2013.09.11 @ 14:00:42



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co.  
250 N Water STE #300  
Wichita, KS 67202  
ATTN: Robert Hendrix

**1-1s-36w Rawlins,KS**  
**Walter #2-1**  
Job Ticket: 53527      **DST#: 5**  
Test Start: 2013.09.09 @ 19:05:00

## GENERAL INFORMATION:

Formation: **LKC "J"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 21:28:00  
Time Test Ended: 04:37:00  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Kevin Mack  
Unit No: 66  
Interval: **4242.00 ft (KB) To 4278.00 ft (KB) (TVD)**  
Reference Elevations: 3115.00 ft (KB)  
Total Depth: 4278.00 ft (KB) (TVD) 3105.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

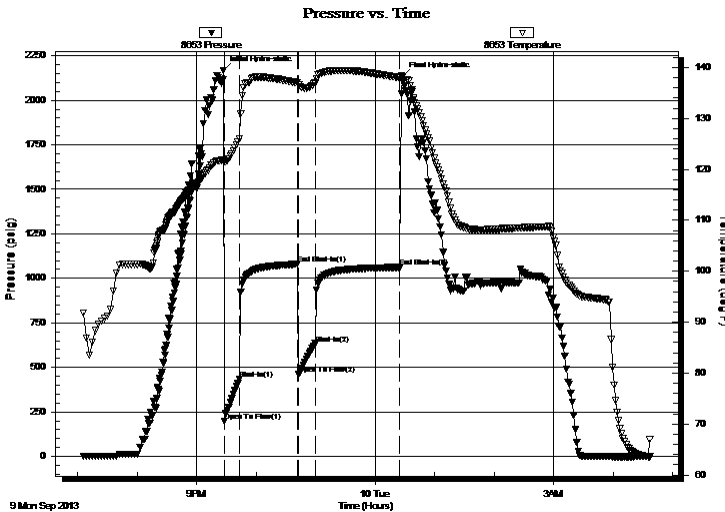
## Serial #: 8653

## Outside

Press @ Run Depth: 633.41 psig @ 4243.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.09.09 End Date: 2013.09.10 Last Calib.: 2013.09.10  
Start Time: 19:06:00 End Time: 04:37:00 Time On Btm: 2013.09.09 @ 21:27:00  
Time Off Btm: 2013.09.10 @ 00:27:30

TEST COMMENT: 15 - IF - BoB in 45 sec.  
60 - ISI - BoB in 4 min. GTS  
15 - FF - BoB in 1 1/2 min.  
90 FSI - BoB in 4 min.

## PRESSURE SUMMARY



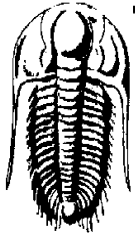
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2167.79	121.88	Initial Hydro-static
1	196.77	121.45	Open To Flow (1)
16	432.38	126.04	Shut-In(1)
75	1081.08	136.98	End Shut-In(1)
76	462.24	136.69	Open To Flow (2)
93	633.41	136.94	Shut-In(2)
178	1061.51	138.01	End Shut-In(2)
181	2133.20	138.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	GOCM 30G 30o 40M	0.44
1830.00	Clean Gassy Oil 40G 60o	21.62
0.00	GTS	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Murfin Drilling Co.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53527

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2013.09.09 @ 19:05:00

**GENERAL INFORMATION:**

Formation: **LKC "J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:28:00  
 Time Test Ended: 04:37:00  
**Interval: 4242.00 ft (KB) To 4278.00 ft (KB) (TVD)**  
 Total Depth: 4278.00 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: 3115.00 ft (KB)  
 3105.00 ft (CF)  
 KB to GR/CF: 10.00 ft

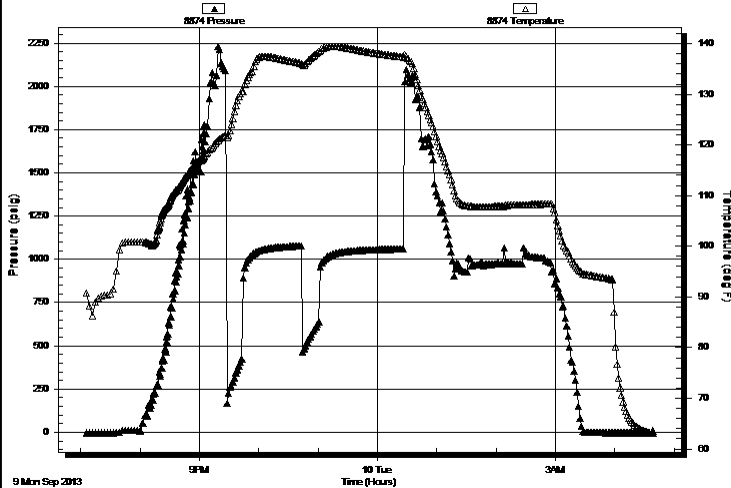
**Serial #: 8874**

**Inside**

Press @ Run Depth: psig @ 4243.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.09 End Date: 2013.09.10 Last Calib.: 2013.09.10  
 Start Time: 19:06:00 End Time: 04:39:00 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 15 - IF - BoB in 45 sec.  
 60 - ISI - BoB in 4 min. GTS  
 15 - FF - BoB in 1 1/2 min.  
 90 FSI - BoB in 4 min.

Pressure vs. Time



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
90.00	GOCM 30G 30o 40M	0.44
1830.00	Clean Gassy Oil 40G 60o	21.62
0.00	GTS	0.00

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53527

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2013.09.09 @ 19:05:00

## Tool Information

Drill Pipe:	Length: 3712.00 ft	Diameter: 3.80 inches	Volume: 52.07 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 54.70 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4242.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4215.00	
Shut In Tool	5.00			4220.00	
Hydraulic tool	5.00			4225.00	
Jars	5.00			4230.00	
Safety Joint	3.00			4233.00	
Packer	5.00			4238.00	28.00 Bottom Of Top Packer
Packer	4.00			4242.00	
Stubb	1.00			4243.00	
Recorder	0.00	8653	Outside	4243.00	
Recorder	0.00	8874	Inside	4243.00	
Perforations	30.00			4273.00	
Bullnose	5.00			4278.00	36.00 Bottom Packers & Anchor

**Total Tool Length: 64.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co.

**1-1s-36w Rawlins,KS**

250 N Water STE #300  
Wichita, KS 67202

**Walter #2-1**

Job Ticket: 53527

**DST#: 5**

ATTN: Robert Hendrix

Test Start: 2013.09.09 @ 19:05:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 650.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	GOCM 30G 30o 40M	0.443
1830.00	Clean Gassy Oil 40G 60o	21.616
0.00	GTS	0.000

Total Length: 1920.00 ft      Total Volume: 22.059 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

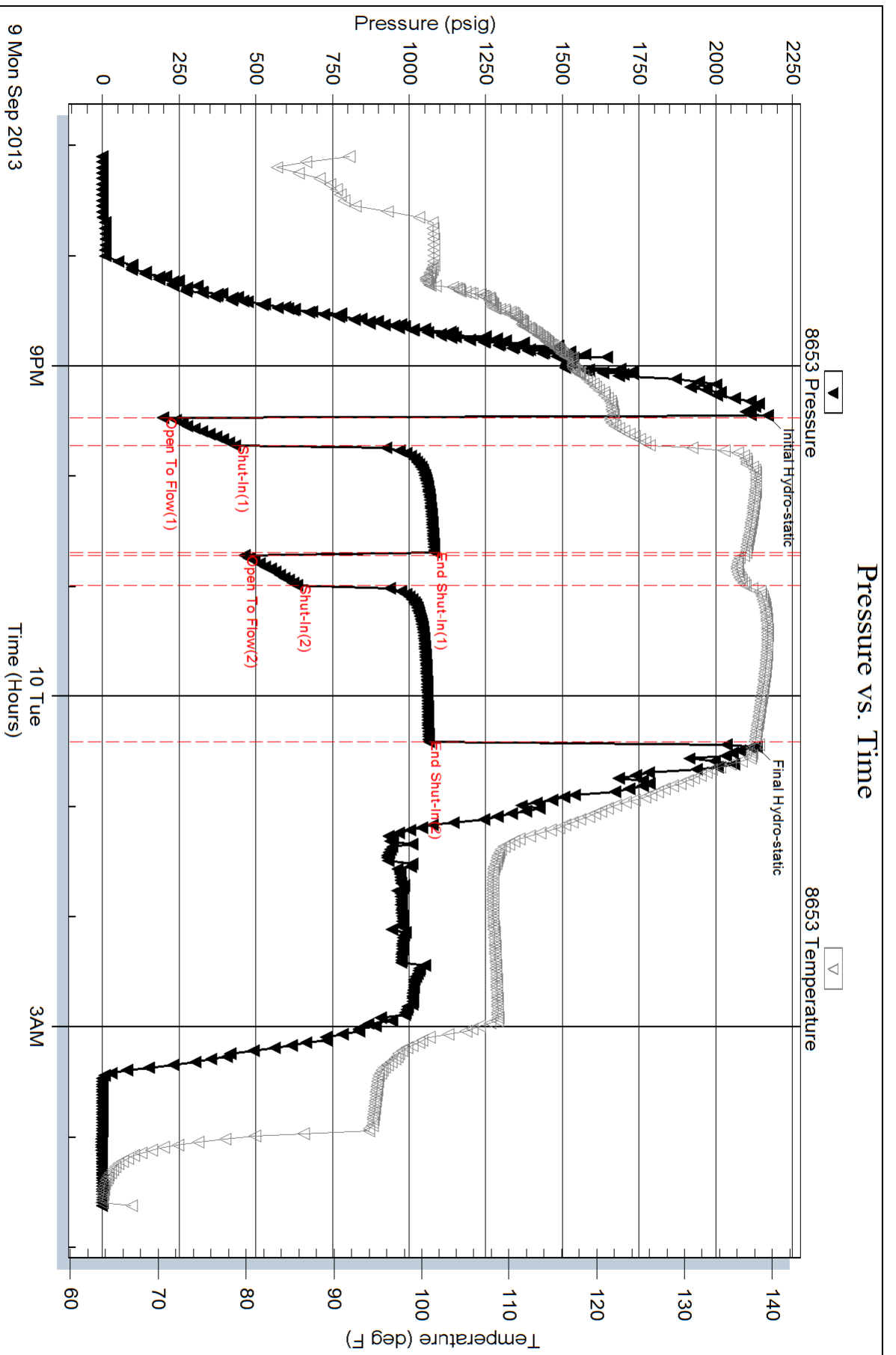
Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API = 37 @ 80 deg = 35cor.

Dropped Bar to Reverse Fluid

### Pressure vs. Time



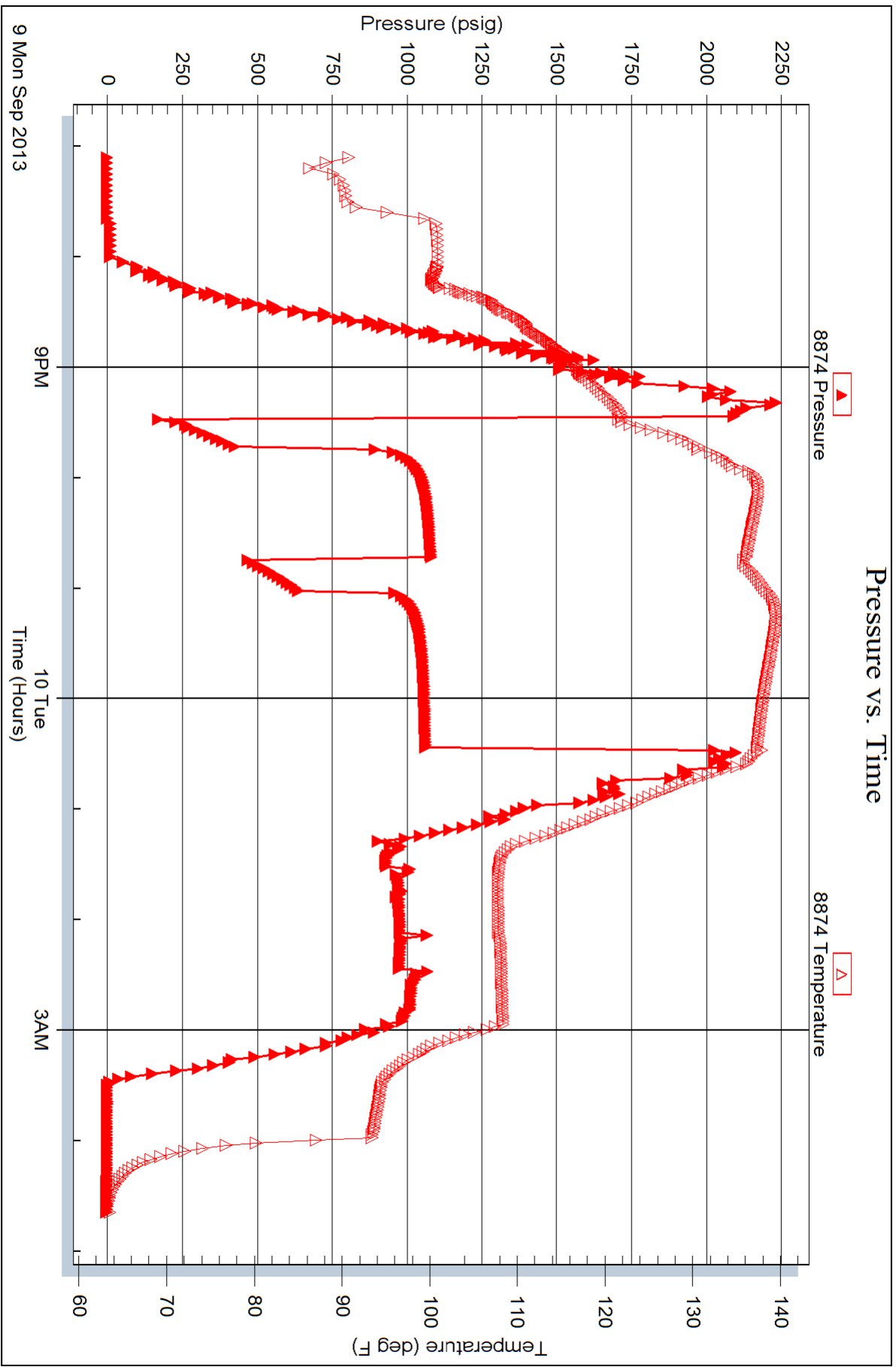
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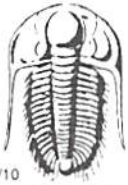
Inside

Murfin Drilling Co.

Walter #2-1

DST Test Number: 5





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53373

4/10

Well Name & No. Walter #2-1 Test No. 1 Date 9-6-13  
 Company Muffin Drilling Co. Elevation 3115 KB 3105 GL  
 Address 2505 N Walter STE #3000 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Muffin #14  
 Location: Sec. 1 Twp. 1S Rge. 36 W Co. Rawlins State KS

Interval Tested 3928-3980 Zone Tested Oreoc  
 Anchor Length 52' Drill Pipe Run 3394 Mud Wt. 9.1  
 Top Packer Depth 3924 Drill Collars Run 535' Vis 7x  
 Bottom Packer Depth 3928 Wt. Pipe Run 0 WL 4.8  
 Total Depth 3928 Chlorides 6000 ppm System LCM 4#

Blow Description IF-1/4" Blow built to 7"  
ISI- No Return  
FF-Surface Blow started at 3 min. Built to 10"  
FSI- NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Free Oil</u>	<u>1000</u>			
<u>300</u>	<u>OC WM</u>	<u>10</u>	<u>40</u>	<u>50</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 370 BHT 128 Gravity 31 API RW .17 @ 87 °F Chlorides 32,000 ppm  
 (A) Initial Hydrostatic 1967  Test 1150 T-On Location 9:45 AM  
 (B) First Initial Flow 18  Jars 250 T-Started 10:50 AM  
 (C) First Final Flow 97  Safety Joint 75 T-Open 1:15 PM  
 (D) Initial Shut-In 1203  Circ Sub NIC T-Pulled 5:15 PM  
 (E) Second Initial Flow 109  Hourly Standby \_\_\_\_\_ T-Out 7:20 PM  
 (F) Second Final Flow 189  Mileage 114 RT 176.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 1155  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1931  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 1651.70  
 Total 1651.70  
 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. 53374

Well Name & No. Walter #2-1 Test No. 2 Date 9-7-13  
 Company Murrin Drilling Co. Elevation 3115 KB 3105 GL  
 Address 250 N Water STE #3000 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murrin #14  
 Location: Sec. 1 Twp. 1S Rge. 36W Co. Rawlins State KS

Interval Tested 3996-4094 Zone Tested LKC "A"  
 Anchor Length 98' Drill Pipe Run 3457 Mud Wt. 9.2  
 Top Packer Depth 3992 Drill Collars Run 535' Vis 70  
 Bottom Packer Depth 3996 Wt. Pipe Run 0 WL 5.6  
 Total Depth 4094 Chlorides 7000 ppm System LCM 2#

Blow Description IF - 1/4" Built to 3"  
ISI - No Return  
FF - Surface Blow built to 6"  
FST - No Return

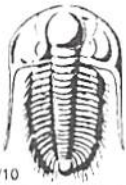
Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>OCM</u>	<u>40</u>	<u>0</u>	<u>60</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>180</u>	Feet of <u>GIP</u>	<u>1000</u>			
Rec Total <u>90</u>	BHT <u>127</u>	Gravity	API RW	@	F Chlorides ppm

(A) Initial Hydrostatic 2063  Test 1250 T-On Location 8:40 AM  
 (B) First Initial Flow 208  Jars 250 T-Started 8:43 AM  
 (C) First Final Flow 28  Safety Joint 75 T-Open 10:50 AM  
 (D) Initial Shut-In 985  Circ Sub N/C T-Pulled 2:50 PM  
 (E) Second Initial Flow 28  Hourly Standby T-Out 4:40 PM  
 (F) Second Final Flow 41  Mileage 114 RT 176.70 Comments  
 (G) Final Shut-In 1090  Sampler  
 (H) Final Hydrostatic 1964  Straddle  Ruined Shale Packer

Initial Open 30  Shale Packer  Ruined Packer  
 Initial Shut-In 60  Extra Packer  Extra Copies  
 Final Flow 60  Extra Recorder Sub Total 0  
 Final Shut-In 90  Day Standby Total 1751.70  
 Accessibility MP/DST Disc't  
 Sub Total 1751.70

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. 53375

Well Name & No. Walter #2-1 Test No. 3 Date 9-7-13  
 Company Murfin Drilling Co. Elevation 3115 KB 3105 GL  
 Address 2500 N Walter STE #3000 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #14  
 Location: Sec. 1 Twp. 1S Rge. 36W Co. Rawlins State KS

Interval Tested 4082-4122 Zone Tested LKC "D"  
 Anchor Length 408 Drill Pipe Run 3552 Mud Wt. 9.2  
 Top Packer Depth 4078 Drill Collars Run 535' Vis 70  
 Bottom Packer Depth 4082 Wt. Pipe Run 0 WL 5.6  
 Total Depth 4122 Chlorides 7000 ppm System LCM 2#

Blow Description IF-BoB in 2 min.  
ISI- Return Built to BoB in 10 min  
FF-BoB in 8 min

FSI- Return Built to BoB in 10 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>340</u>	<u>Clean Gassy Oil</u>	<u>50</u>	<u>50</u>		
<u>360</u>	<u>GMC0</u>	<u>40</u>	<u>40</u>		<u>20</u>
<u>1,100</u>	<u>GIP</u>	<u>1000</u>			

Rec Total 7000 BHT 131 Gravity 34 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2035</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>10:45 PM</u>
(B) First Initial Flow <u>66</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>11:07 PM</u>
(C) First Final Flow <u>222</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>2:13 AM</u>
(D) Initial Shut-In <u>1014</u>	<input checked="" type="checkbox"/> Circ Sub	T-Pulled <u>4:43 AM</u>
(E) Second Initial Flow <u>245</u>	<input type="checkbox"/> Hourly Standby	T-Out
(F) Second Final Flow <u>266</u>	<input checked="" type="checkbox"/> Mileage <u>114RT</u> 176.70	Comments
(G) Final Shut-In <u>948</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2018</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open 15  
 Initial Shut-In 60  
 Final Flow 15  
 Final Shut-In 60

Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

Sub Total 1751.70

Sub Total 1751.70

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. 53526

Well Name & No. Walter #2-1 Test No. 4 Date 9-9-13  
 Company Murphy Drilling Co. Elevation 3115 KB 3105 GL  
 Address 2500 N Walter STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murphy #14  
 Location: Sec. 1 Twp. 15 Rge. 36W Co. Rawlins State KS

Interval Tested 4174-4248 Zone Tested Like "H-I"  
 Anchor Length 74' Drill Pipe Run 3616' Mud Wt. 9.1  
 Top Packer Depth 4170 Drill Collars Run 535' Vis 51  
 Bottom Packer Depth 4174 Wt. Pipe Run Ø WL 5.2  
 Total Depth 4248 Chlorides 550 ppm System LCM 2#

Blow Description IF - Bob in 18 min.  
ISI - No Return  
FF - Bob in 18 1/2 min.  
FSI - Weak surface return Built to 5"

Rec	Feet of	%gas	%oil	%water	%mud
<u>130</u>	<u>Feet of Ckn Gassy Oil</u>	<u>40</u>	<u>60</u>		
<u>90</u>	<u>Feet of GOCM</u>	<u>30</u>	<u>Ø</u>	<u>40</u>	
			<u>30</u>		
<u>80</u>	<u>Feet of GIP</u>	<u>100</u>			

Rec Total 220 BHT 130 Gravity 31 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2119  Test 1250 T-On Location 3:35 AM  
 (B) First Initial Flow 22  Jars 250 T-Started 3:40 AM  
 (C) First Final Flow 55  Safety Joint 75 T-Open 5:35 AM  
 (D) Initial Shut-In 1323  Circ Sub NIL T-Pulled 9:35 AM  
 (E) Second Initial Flow 61  Hourly Standby \_\_\_\_\_ T-Out 11:25 AM

(F) Second Final Flow 104  Mileage 114RT 176.70  
 (G) Final Shut-In 1318  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2035  Straddle \_\_\_\_\_

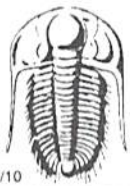
Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_

Initial Open 30  Day Standby \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Accessibility \_\_\_\_\_ Total 1751.70  
 Final Flow 60

Final Shut-In 90 Sub Total 1751.70 MP/DST Disc't \_\_\_\_\_

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53527

Well Name & No. Walter #2-1 Test No. 5 Date 9-9-13  
 Company Murfin Drilling Co Elevation 3115 KB 3105 GL  
 Address 250 N Walter STE #300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #14  
 Location: Sec. 1 Twp. 15 Rge. 36w Co. Rawlins State KS

Interval Tested 4242-4278 Zone Tested LKC "J"  
 Anchor Length 36' Drill Pipe Run 3712 Mud Wt. 9.3  
 Top Packer Depth 4238 Drill Collars Run 535 Vis 55  
 Bottom Packer Depth 4242 Wt. Pipe Run Ø WL 5.6  
 Total Depth 4278 Chlorides 650 ppm System LCM 4#

Blow Description IF - BOB in 45 sec.  
ISI - BOB in 4 min  
FF - BOB in 1 1/2 min.  
FSI - BOB in 4 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>1830</u>	<u>Clean Gassy oil</u>	<u>40</u>	<u>60</u>		
<u>90</u>	<u>GDGM</u>	<u>30</u>	<u>30</u>	<u>40</u>	

Rec Total 1920 BHT 138° Gravity 35 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2167</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>6:30 PM</u>
(B) First Initial Flow <u>196</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>7:05 PM</u>
(C) First Final Flow <u>432</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>9:28 PM</u>
(D) Initial Shut-In <u>1081</u>	<input checked="" type="checkbox"/> Circ Sub <u>XCharge 50</u>	T-Pulled <u>12:28 AM</u>
(E) Second Initial Flow <u>462</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>4:50 AM</u>
(F) Second Final Flow <u>633</u>	<input checked="" type="checkbox"/> Mileage <u>114RT 176.70</u>	Comments <u>Dropped Bar to reverse out oil Gas to surface @ ISI</u>
(G) Final Shut-In <u>1061</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>2133</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
Initial Open <u>15</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder	Total <u>2121.70</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1801.70</u>	

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