



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

Urban #1-3

3-2s-29w Decatur,KS

Start Date: 2013.06.04 @ 04:23:00

End Date: 2013.06.04 @ 12:08:30

Job Ticket #: 52638 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.06.07 @ 09:20:31



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

3-2s-29w Decatur, KS

250 N Water STE #300
Wichita, KS 67202

Urban #1-3

Job Ticket: 52638

DST#: 1

ATTN: Bob Stolzle

Test Start: 2013.06.04 @ 04:23:00

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:37:00

Time Test Ended: 12:08:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 3752.00 ft (KB) To 3860.00 ft (KB) (TVD)

Reference Elevations: 2806.00 ft (KB)

Total Depth: 3860.00 ft (KB) (TVD)

2801.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8520 Outside

Press @ RunDepth: 47.73 psig @ 3753.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.04

End Date:

2013.06.04

Last Calib.:

2013.06.04

Start Time: 04:33:00

End Time:

12:08:30

Time On Btm:

2013.06.04 @ 06:35:30

Time Off Btm:

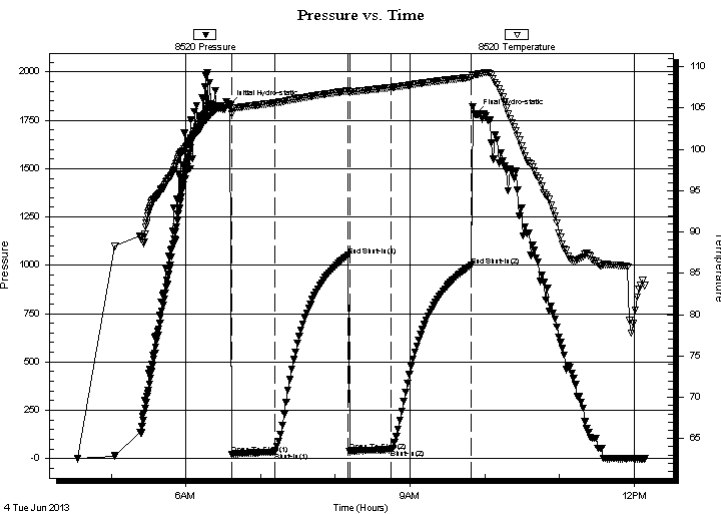
2013.06.04 @ 09:53:00

TEST COMMENT: 30 - IF- 1/4" Blow built to 3/4"

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1829.74	105.30	Initial Hydro-static
2	20.84	104.26	Open To Flow (1)
36	34.44	105.63	Shut-In(1)
95	1050.52	107.08	End Shut-In(1)
96	37.07	106.94	Open To Flow (2)
130	47.73	107.50	Shut-In(2)
194	999.49	108.71	End Shut-In(2)
198	1782.59	109.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	OSM 100M (oil spots)	0.15

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

3-2s-29w Decatur, KS

250 N Water STE #300
Wichita, KS 67202

Urban #1-3

Job Ticket: 52638

DST#: 1

ATTN: Bob Stolzle

Test Start: 2013.06.04 @ 04:23:00

Tool Information

Drill Pipe:	Length: 3575.00 ft	Diameter: 3.80 inches	Volume: 50.15 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 51.06 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3752.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	108.00 ft			
Tool Length:	128.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3733.00	
Shut In Tool	5.00			3738.00	
Hydraulic tool	5.00			3743.00	
Packer	5.00			3748.00	20.00 Bottom Of Top Packer
Packer	4.00			3752.00	
Stubb	1.00			3753.00	
Recorder	0.00	8354	Inside	3753.00	
Recorder	0.00	8520	Outside	3753.00	
Perforations	5.00			3758.00	
Change Over Sub	1.00			3759.00	
Drill Pipe	95.00			3854.00	
Change Over Sub	1.00			3855.00	
Bullnose	5.00			3860.00	108.00 Bottom Packers & Anchor

Total Tool Length: 128.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

3-2s-29w Decatur, KS

250 N Water STE #300
Wichita, KS 67202

Urban #1-3

Job Ticket: 52638

DST#: 1

ATTN: Bob Stolzle

Test Start: 2013.06.04 @ 04:23:00

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: 5.18 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	OSM 100M (oil spots)	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

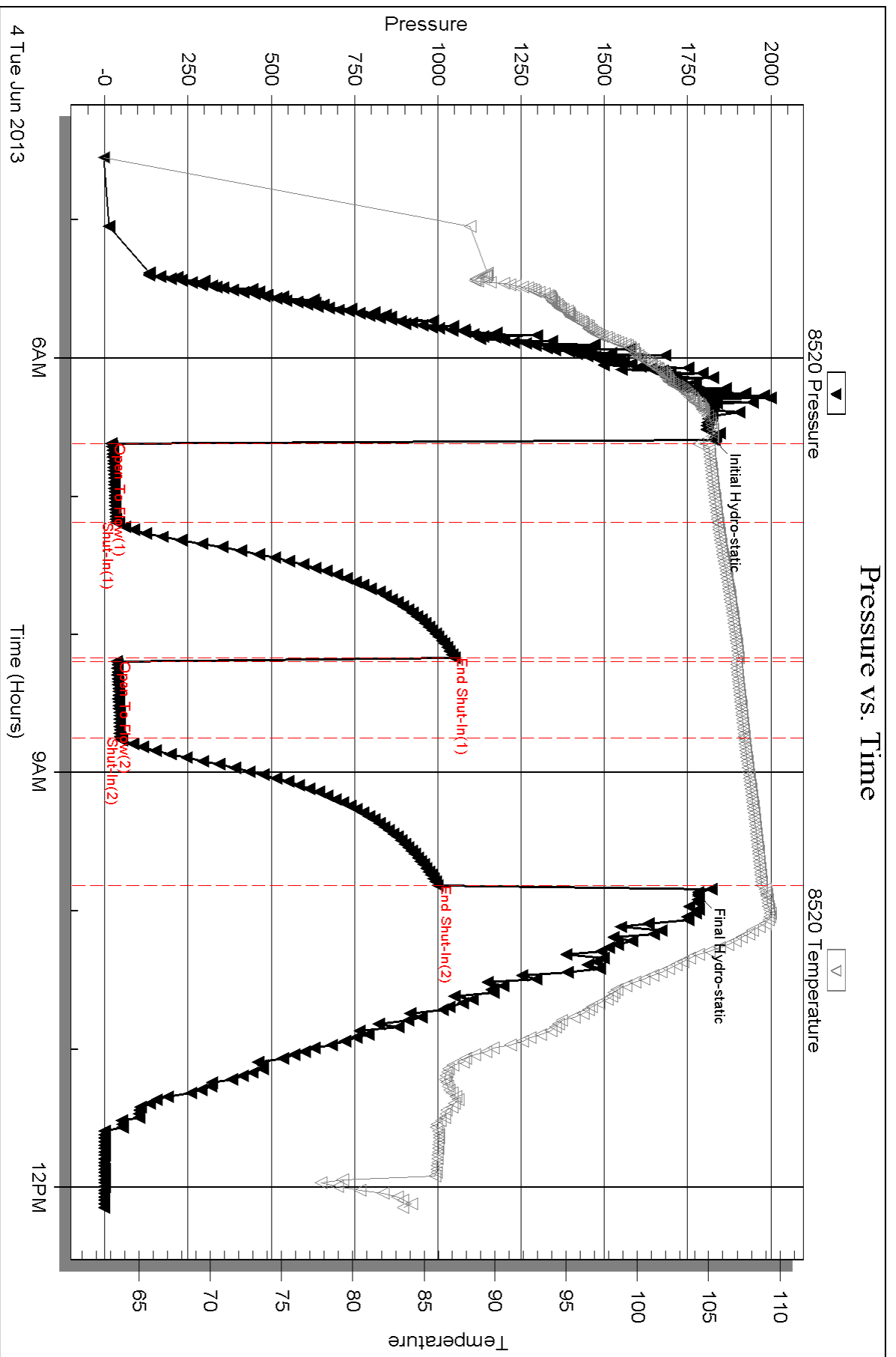
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



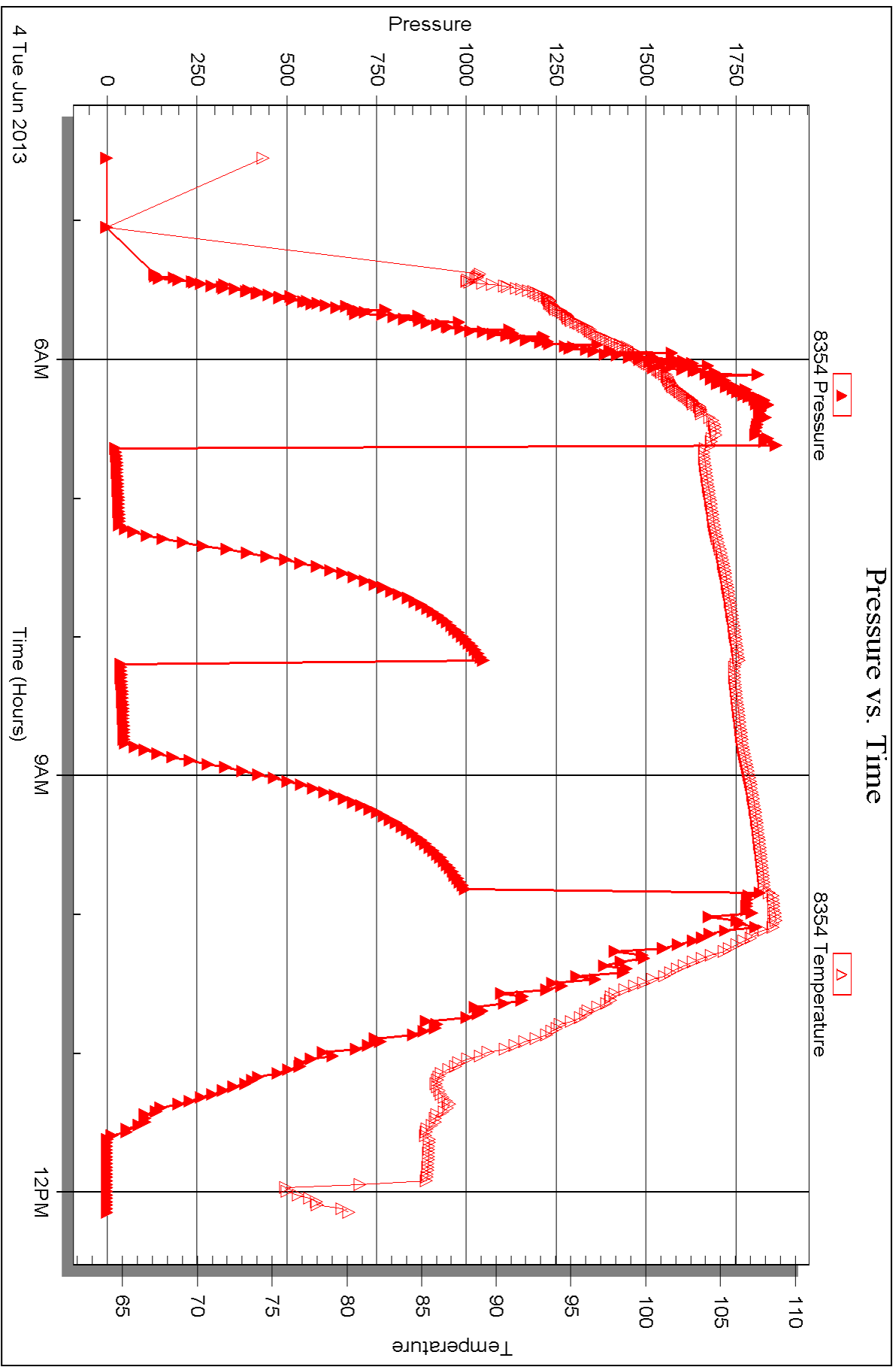
Serial #: 8354

Inside

Murfin Drilling Co., Inc.

Urban #1-3

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 52638

Printed: 2013.06.07 @ 09:20:34



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolze

Urban #1-3

3-2s-29w Decatur,KS

Start Date: 2013.06.05 @ 01:22:00

End Date: 2013.06.05 @ 09:59:30

Job Ticket #: 52639 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.06.07 @ 09:19:11



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

3-2s-29w Decatur, KS

250 N Water STE #300
Wichita, KS 67202

Urban #1-3

Job Ticket: 52639

DST#: 2

ATTN: Bob Stolzle

Test Start: 2013.06.05 @ 01:22:00

GENERAL INFORMATION:

Formation: **LKC "H,J,K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:18:10

Time Test Ended: 09:59:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 3896.00 ft (KB) To 4000.00 ft (KB) (TVD)

Reference Elevations: 2806.00 ft (KB)

Total Depth: 4000.00 ft (KB) (TVD)

2801.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8520 Outside

Press @ Run Depth: 219.73 psig @ 3897.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.05

End Date:

2013.06.05

Last Calib.:

2013.06.05

Start Time: 01:32:00

End Time:

09:59:30

Time On Btm:

2013.06.05 @ 03:17:40

Time Off Btm:

2013.06.05 @ 07:26:30

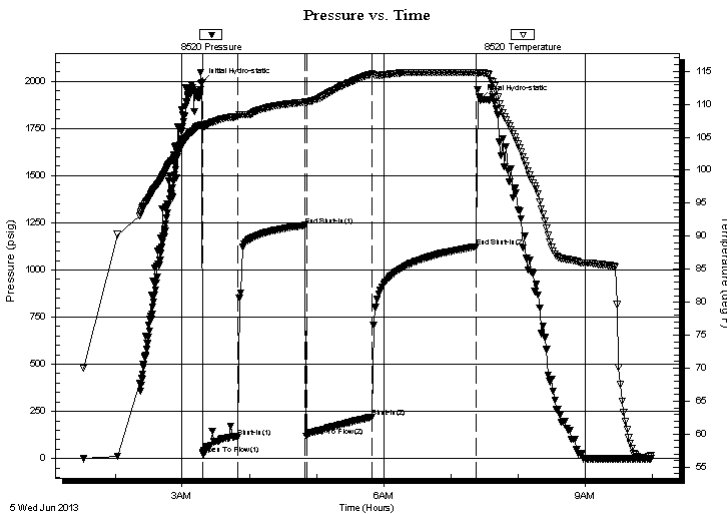
TEST COMMENT: 30 - IF- 1" Blow built to 7 1/4"

60 - IS- No Return

60 - FF- BoB in 45 min

90 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1992.08	106.93	Initial Hydro-static
1	24.79	106.56	Open To Flow (1)
32	113.73	108.15	Shut-In(1)
92	1236.06	110.29	End Shut-In(1)
94	119.00	110.22	Open To Flow (2)
152	219.73	114.59	Shut-In(2)
245	1123.02	114.74	End Shut-In(2)
249	1900.14	114.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
243.00	MW 80W 20M	1.71
126.00	MW 70W 30M	1.77
40.00	OSWM 50W 50M (oil spots)	0.56

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

3-2s-29w Decatur, KS

250 N Water STE #300
Wichita, KS 67202

Urban #1-3

Job Ticket: 52639

DST#: 2

ATTN: Bob Stolzle

Test Start: 2013.06.05 @ 01:22:00

Tool Information

Drill Pipe:	Length: 3700.00 ft	Diameter: 3.80 inches	Volume: 51.90 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 52.81 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3896.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	104.00 ft			
Tool Length:	124.00 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			3877.00	
Shut In Tool	5.00			3882.00	
Hydraulic tool	5.00			3887.00	
Packer	5.00			3892.00	20.00 Bottom Of Top Packer
Packer	4.00			3896.00	
Stubb	1.00			3897.00	
Recorder	0.00	8354	Inside	3897.00	
Recorder	0.00	8520	Outside	3897.00	
Perforations	1.00			3898.00	
Change Over Sub	1.00			3899.00	
Drill Pipe	95.00			3994.00	
Change Over Sub	1.00			3995.00	
Bullnose	5.00			4000.00	104.00 Bottom Packers & Anchor

Total Tool Length: 124.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

3-2s-29w Decatur, KS

250 N Water STE #300
Wichita, KS 67202

Urban #1-3

Job Ticket: 52639

DST#: 2

ATTN: Bob Stolzle

Test Start: 2013.06.05 @ 01:22:00

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:

42000 ppm

Viscosity: 72.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
243.00	MW 80W 20M	1.714
126.00	MW 70W 30M	1.767
40.00	OSWM 50W 50M (oil spots)	0.561

Total Length: 409.00 ft Total Volume: 4.042 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

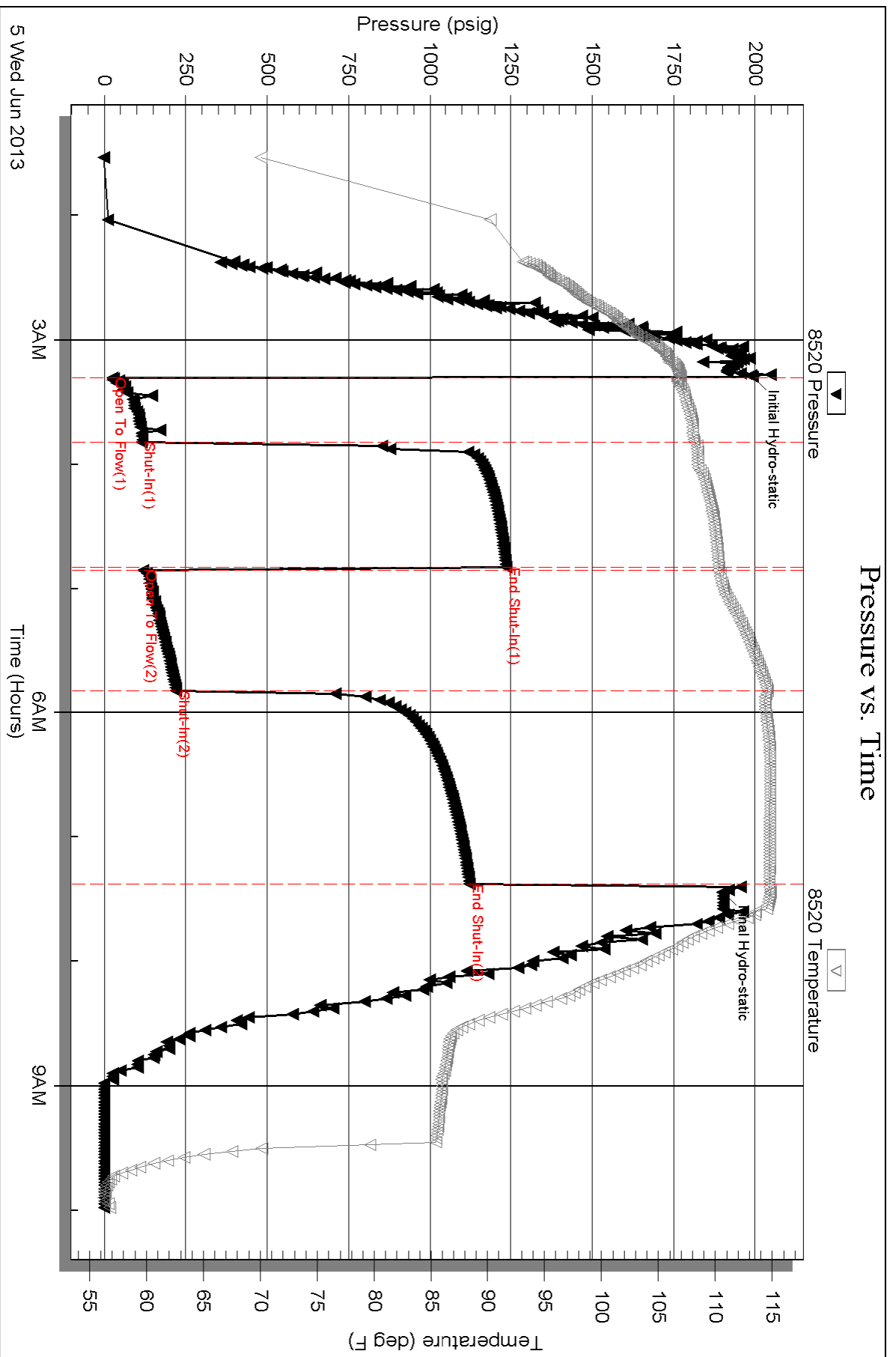
Recovery Comments: RW .214 @ 58 deg = 42000ppm

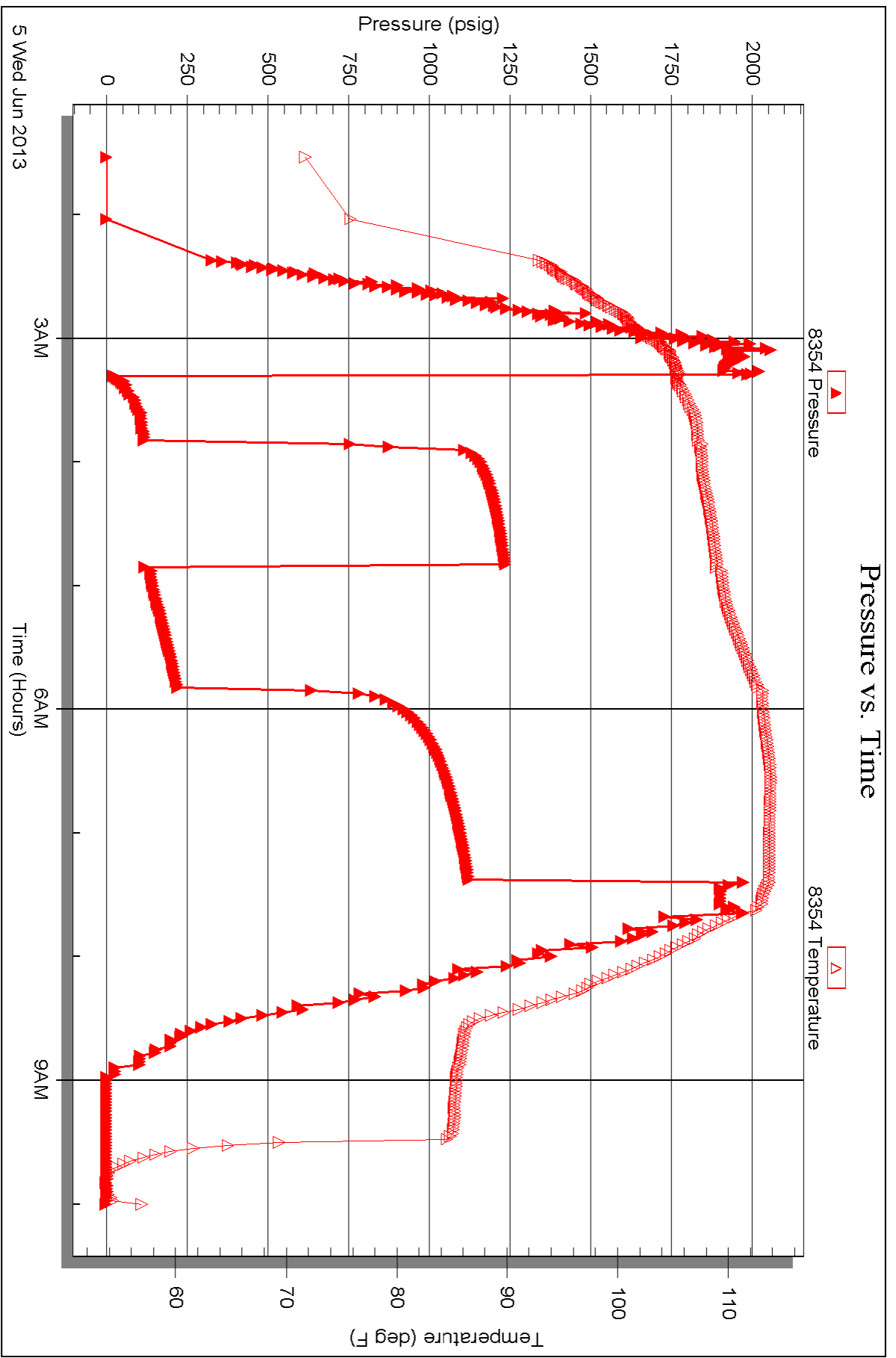
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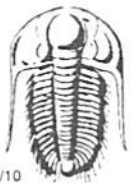
Outside Murfin Drilling Co., Inc.

Urban #1-3

DST Test Number: 2







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52638

Well Name & No. Urban #1-3 Test No. 1 Date 6-4-13
 Company Murfin Drilling Co., Inc Elevation 2806 KB 2801 GL
 Address 250 N Water STE # 3000 Wichita, KS 67202
 Co. Rep / Geo. Bob Stolzie Rig Murfin #8
 Location: Sec. 3 Twp. 2S Rge. 29W Co. Decatur State KS

Interval Tested 3752-3860 Zone Tested LKC "A-D"
 Anchor Length 108 Drill Pipe Run 3575 Mud Wt. 8.7
 Top Packer Depth 3748 Drill Collars Run 186 Vis 69
 Bottom Packer Depth 3752 Wt. Pipe Run 0 WL 5.2
 Total Depth 3860 Chlorides 1,100 ppm System LCM 6#

Blow Description IF - 1/4" Blow built to 3/4"
ISL - NO Return
FF - NO Blow
FSI - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>OSM</u>	<u>SPOTS</u>		<u>1000</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 30 BHT 109 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 1830 Test 1150 T-On Location 3:45 AM
 (B) First Initial Flow 21 Jars 250 T-Started 4:23 AM
 (C) First Final Flow 34 Safety Joint 75 T-Open 6:40 AM
 (D) Initial Shut-In 1051 Circ Sub N/C T-Pulled 9:40 AM
 (E) Second Initial Flow 37 Hourly Standby _____ T-Out 12:20 PM
 (F) Second Final Flow 48 Mileage 16RT 24.80 Comments _____
 (G) Final Shut-In 999 Sampler _____
 (H) Final Hydrostatic 1783 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1499.80

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. 52639

Well Name & No. Urban # 1-3 Test No. 2 Date 6-5-13
 Company Murfin Drilling Co, Inc. Elevation 2806 KB 2801 GL
 Address 250 N Water STE #3000 Wichita, KS 67202
 Co. Rep / Geo. Bob Stulzie Rig Murfin #3
 Location: Sec. 3 Twp. 2S Rge. 29W Co. Decatur State KS

Interval Tested 3896 - 4000 Zone Tested LKC "H, J, K"
 Anchor Length 104 Drill Pipe Run 3700 Mud Wt. 9.2
 Top Packer Depth 3892 Drill Collars Run 186 Vis 72
 Bottom Packer Depth 3896 Wt. Pipe Run 0 WL 5.2
 Total Depth 4000 Chlorides 1,500 ppm System LCM 6#

Blow Description IF - 1" Blow built to 7 1/4"
ISI - No Return
FF - Bob in 45 min.
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>Oswm</u>		<u>50</u>	<u>50</u>	
<u>126</u>	<u>MW</u>		<u>70</u>	<u>30</u>	
<u>243</u>	<u>MW</u>		<u>80</u>	<u>20</u>	

Rec Total 409 BHT 115 Gravity - API RW 214 @ 58 °F Chlorides 42,000 ppm

(A) Initial Hydrostatic 1861 1992 Test 1150 T-On Location 1:20 AM
 (B) First Initial Flow 21 25 Jars 250 T-Started 1:22 AM
 (C) First Final Flow 34 114 Safety Joint 75 T-Open 3:20 AM
 (D) Initial Shut-In 1057 1236 Circ Sub NIC T-Pulled 7:20 AM
 (E) Second Initial Flow 37 119 Hourly Standby _____ T-Out 10:15 AM
 (F) Second Final Flow 48 220 Mileage 16RT 24.80 Comments _____
 (G) Final Shut-In 999 1123 Sampler _____
 (H) Final Hydrostatic 1782 1900 Straddle _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 60 Shale Packer _____
 Final Flow 60 Extra Packer _____
 Final Shut-In 90 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1499.80
 Total 1499.80
 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.