



DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita, KS 67202-1216

ATTN: Tom Funk

Racette #1-12

12-13s-33w Logan,KS

Start Date: 2013.04.14 @ 08:10:00

End Date: 2013.04.14 @ 16:16:00

Job Ticket #: 49974 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 09:48:46

Murfin Drilling Company, Inc.
12-13s-33w Logan,KS
Racette #1-12
DST # 1
Kansas City "E&F"
2013.04.14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 49974

DST#: 1

ATTN: Tom Funk

Test Start: 2013.04.14 @ 08:10:00

GENERAL INFORMATION:

Formation: **Kansas City "E&F"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 09:59:15 Tester: Jace McKinney
 Time Test Ended: 16:16:00 Unit No: 46
 Interval: **4094.00 ft (KB) To 4130.00 ft (KB) (TVD)** Reference Elevations: 3052.00 ft (KB)
 Total Depth: 4130.00 ft (KB) (TVD) 3041.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

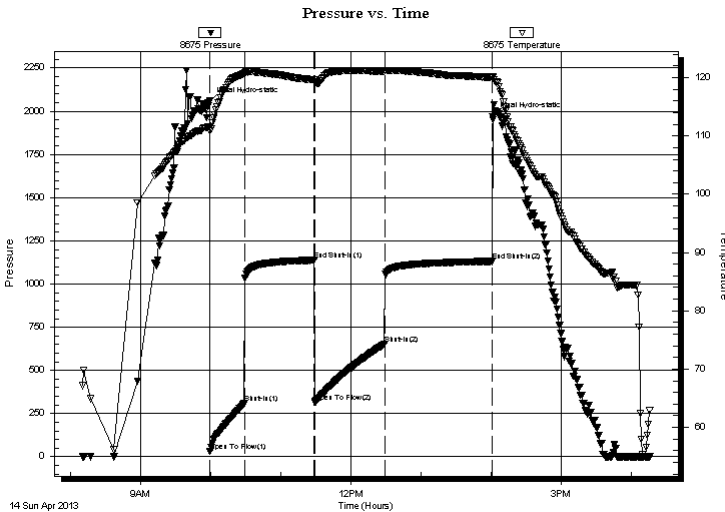
Serial #: 8675

Inside

Press @ Run Depth: 651.42 psig @ 4095.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.04.14 End Date: 2013.04.14 Last Calib.: 2013.04.14
 Start Time: 08:10:15 End Time: 16:16:00 Time On Btm: 2013.04.14 @ 09:59:00
 Time Off Btm: 2013.04.14 @ 14:01:00

TEST COMMENT: B.O.B. in 6 1/2 min.
 Bled off for 5 min. No return blow
 B.O.B. in 7 1/2 min.
 Bled off for 5 min, No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2057.82	111.61	Initial Hydro-static
1	33.47	110.89	Open To Flow (1)
30	309.11	120.68	Shut-In(1)
90	1137.64	119.61	End Shut-In(1)
90	315.54	119.28	Open To Flow (2)
150	651.42	121.09	Shut-In(2)
242	1131.13	120.03	End Shut-In(2)
242	1968.43	120.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
874.00	100% Water	10.91
252.00	mcw 30%M 70%W	3.53
204.00	mcw 50%M 50%W	2.86

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 49974

DST#: 1

ATTN: Tom Funk

Test Start: 2013.04.14 @ 08:10:00

Tool Information

Drill Pipe:	Length: 3948.62 ft	Diameter: 3.80 inches	Volume: 55.39 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 148.04 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 56.12 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.66 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4094.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	56.00 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			4075.00	
Shut In Tool	5.00			4080.00	
Hydraulic tool	5.00			4085.00	
Packer	5.00			4090.00	20.00 Bottom Of Top Packer
Packer	4.00			4094.00	
Stubb	1.00			4095.00	
Recorder	0.00	8675	Inside	4095.00	
Recorder	0.00	8650	Outside	4095.00	
Perforations	32.00			4127.00	
Change Over Sub	0.00			4127.00	
Drill Pipe	0.00			4127.00	
Change Over Sub	0.00			4127.00	
Bullnose	3.00			4130.00	36.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 49974

DST#: 1

ATTN: Tom Funk

Test Start: 2013.04.14 @ 08:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
874.00	100% Water	10.911
252.00	mcw 30%M 70%W	3.535
204.00	mcw 50%M 50%W	2.862

Total Length: 1330.00 ft Total Volume: 17.308 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .10 @ 70 F = 75,000

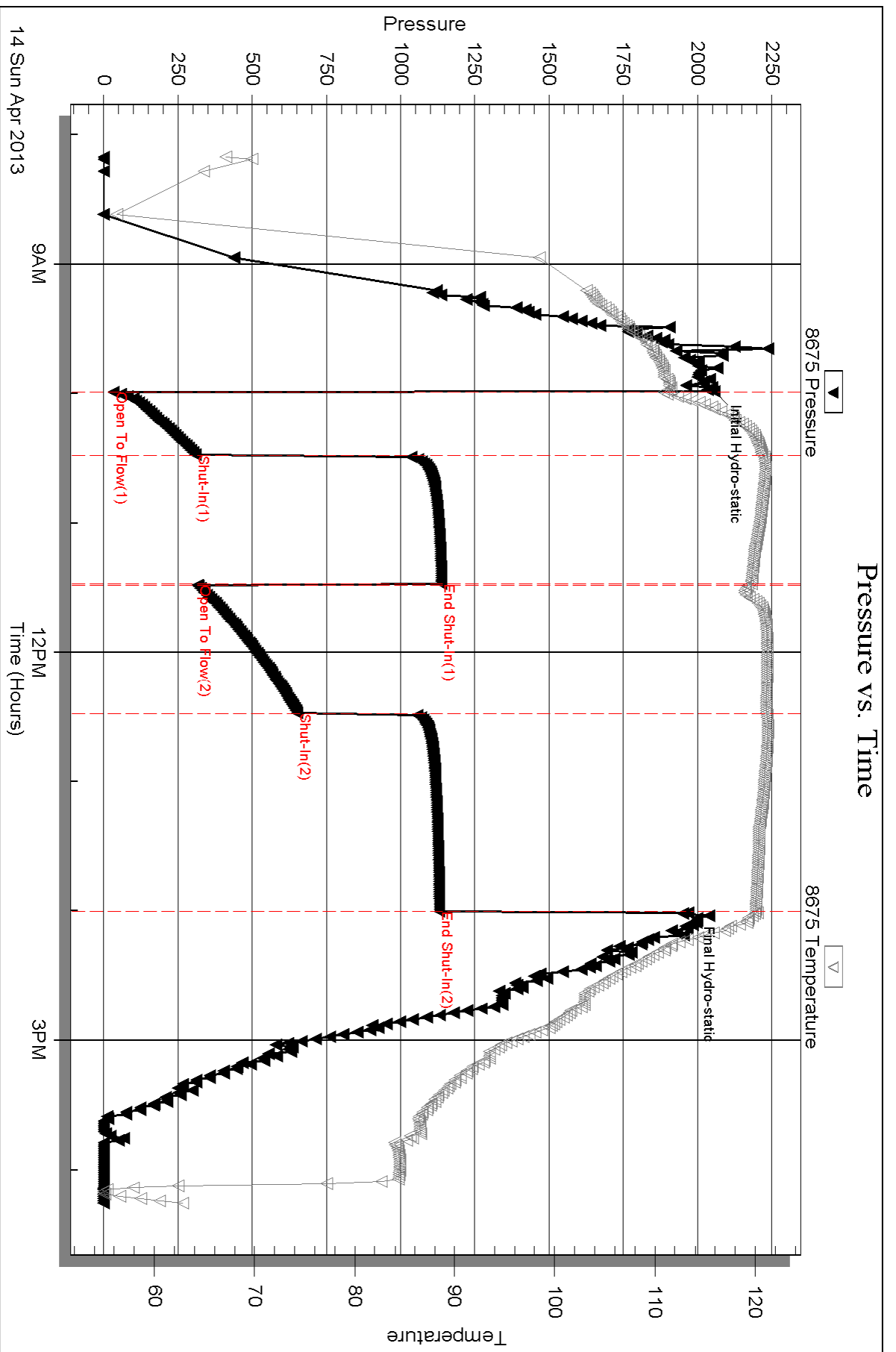
Serial #: 8675

Inside

Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 49974

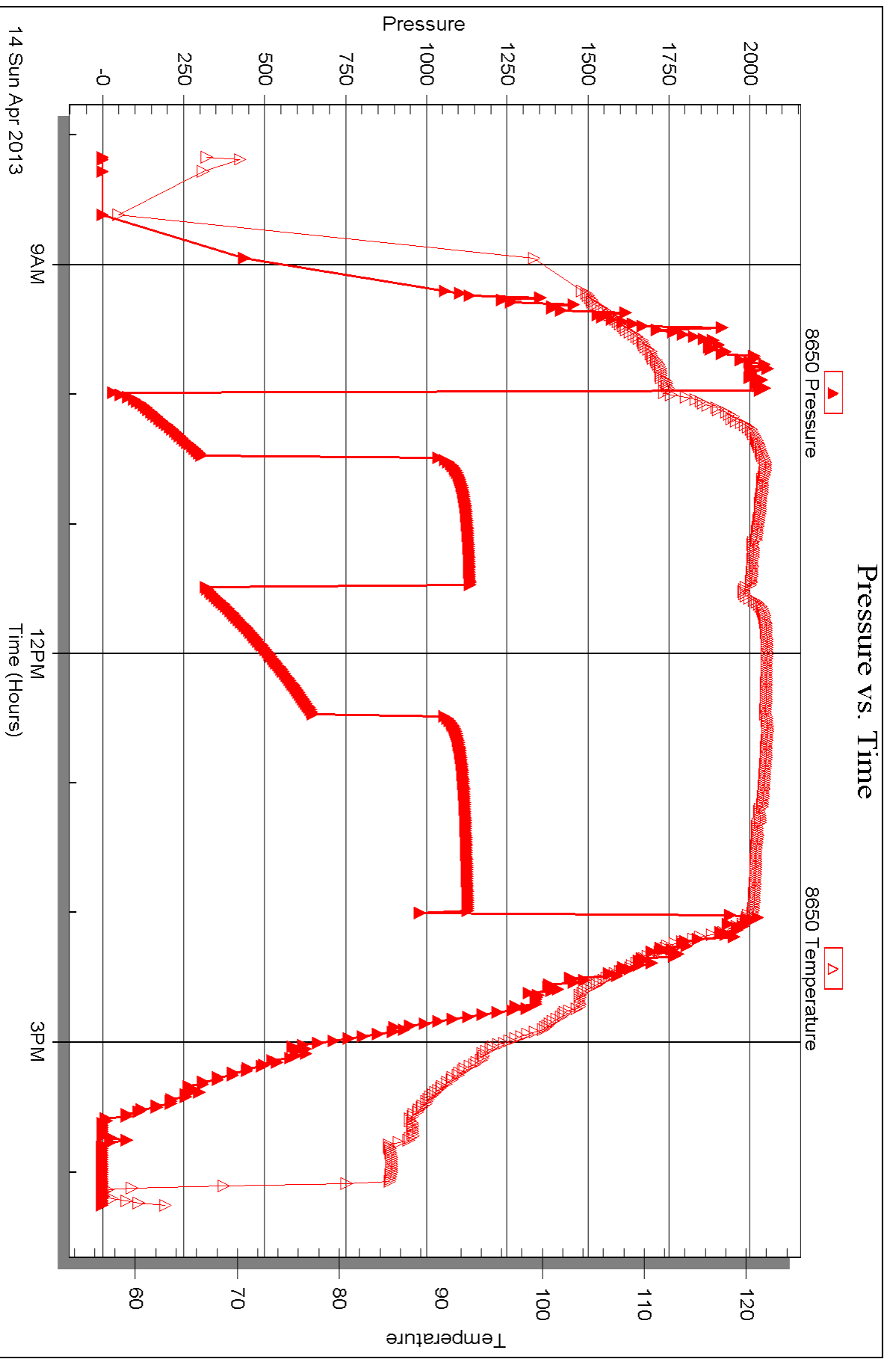
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Serial #: 8650

Outside Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 49974

Printed: 2013.04.24 @ 09:48:49



DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita, KS 67202-1216

ATTN: Tom Funk

Racette #1-12

12-13s-33w Logan,KS

Start Date: 2013.04.15 @ 05:50:00

End Date: 2013.04.15 @ 14:15:30

Job Ticket #: 49975 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 09:47:44



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 49975

DST#: 2

ATTN: Tom Funk

Test Start: 2013.04.15 @ 05:50:00

GENERAL INFORMATION:

Formation: **Kansas City "H & I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:06:00

Time Test Ended: 14:15:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4197.00 ft (KB) To 4230.00 ft (KB) (TVD)

Reference Elevations: 3052.00 ft (KB)

Total Depth: 4230.00 ft (KB) (TVD)

3041.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 408.71 psig @ 4198.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.15

End Date:

2013.04.15

Last Calib.:

2013.04.15

Start Time: 05:50:15

End Time:

14:15:30

Time On Btm:

2013.04.15 @ 08:05:45

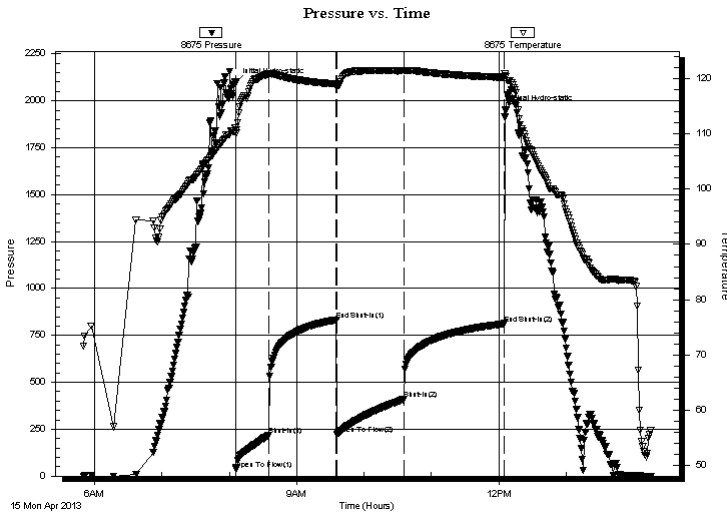
Time Off Btm:

2013.04.15 @ 12:05:45

TEST COMMENT:

B.O.B. in 8 min.
Bled off for 5 min. No return blow
B.O.B. in 12 min.
Bled off for 5 min. No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2094.86	111.18	Initial Hydro-static
1	38.14	110.15	Open To Flow (1)
30	218.92	120.85	Shut-In(1)
90	833.01	119.05	End Shut-In(1)
90	222.59	118.79	Open To Flow (2)
150	408.71	121.47	Shut-In(2)
239	812.02	120.27	End Shut-In(2)
240	1953.59	120.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
432.00	100% Water	4.71
189.00	mcw 20%M 80%W	2.65
239.00	w cm 40%W 60%M	3.35

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 49975

DST#: 2

ATTN: Tom Funk

Test Start: 2013.04.15 @ 05:50:00

Tool Information

Drill Pipe:	Length: 4041.16 ft	Diameter: 3.80 inches	Volume: 56.69 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 148.04 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 57.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.20 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	4197.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	53.00 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			4178.00	
Shut In Tool	5.00			4183.00	
Hydraulic tool	5.00			4188.00	
Packer	5.00			4193.00	20.00 Bottom Of Top Packer
Packer	4.00			4197.00	
Stubb	1.00			4198.00	
Recorder	0.00	8675	Inside	4198.00	
Recorder	0.00	8650	Outside	4198.00	
Perforations	29.00			4227.00	
Change Over Sub	0.00			4227.00	
Drill Pipe	0.00			4227.00	
Change Over Sub	0.00			4227.00	
Bullnose	3.00			4230.00	33.00 Bottom Packers & Anchor

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 49975

DST#: 2

ATTN: Tom Funk

Test Start: 2013.04.15 @ 05:50:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
432.00	100% Water	4.711
189.00	mcw 20%M 80%W	2.651
239.00	w cm 40%W 60%M	3.353

Total Length: 860.00 ft Total Volume: 10.715 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .09 @ 65 F = 90,000

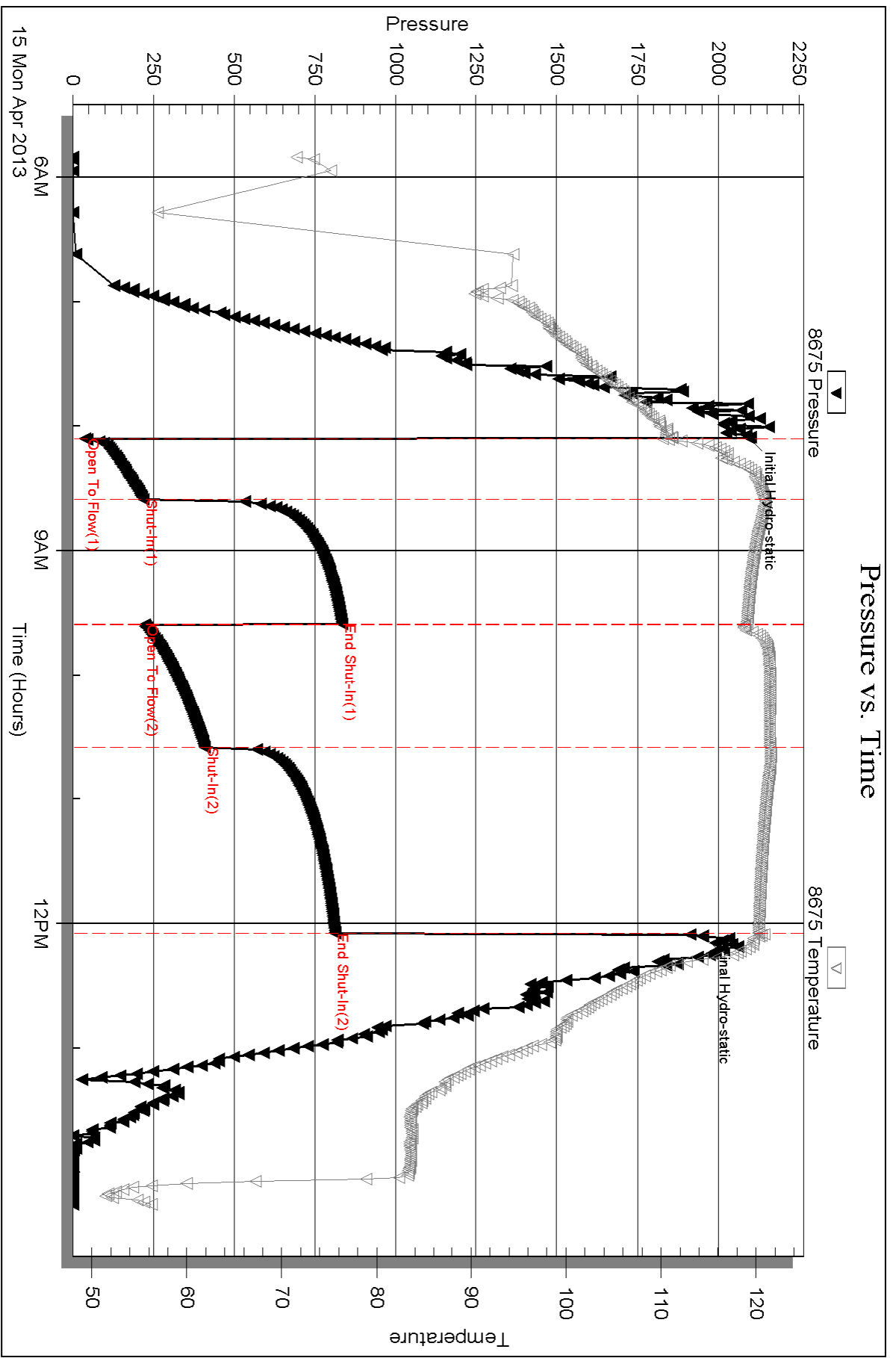
Serial #: 8675

Inside

Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 49975

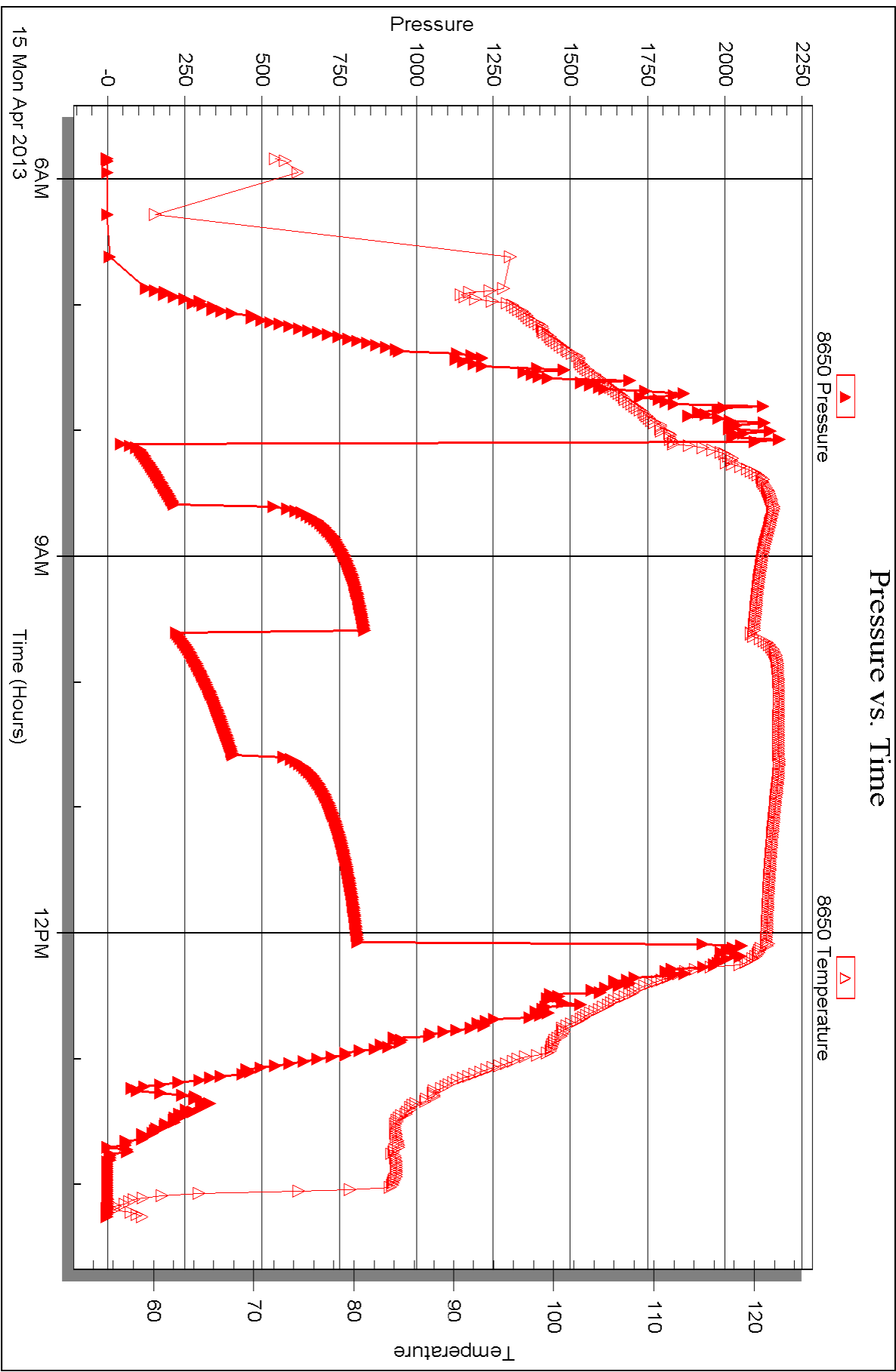
Printed: 2013.04.24 @ 09:47:47

Serial #: 8650

Outside Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 2





DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita, KS 67202-1216

ATTN: Tom Funk

Racette #1-12

12-13s-33w Logan,KS

Start Date: 2013.04.16 @ 00:05:00

End Date: 2013.04.16 @ 09:21:15

Job Ticket #: 53051 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 09:47:02



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53051

DST#: 3

ATTN: Tom Funk

Test Start: 2013.04.16 @ 00:05:00

GENERAL INFORMATION:

Formation: **Kansas City "J&K "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:53:30

Time Test Ended: 09:21:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4230.00 ft (KB) To 4285.00 ft (KB) (TVD)

Reference Elevations: 3052.00 ft (KB)

Total Depth: 4285.00 ft (KB) (TVD)

3041.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 392.86 psig @ 4231.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.16

End Date:

2013.04.16

Last Calib.:

2013.04.16

Start Time: 00:05:15

End Time:

09:21:15

Time On Btm:

2013.04.16 @ 02:53:15

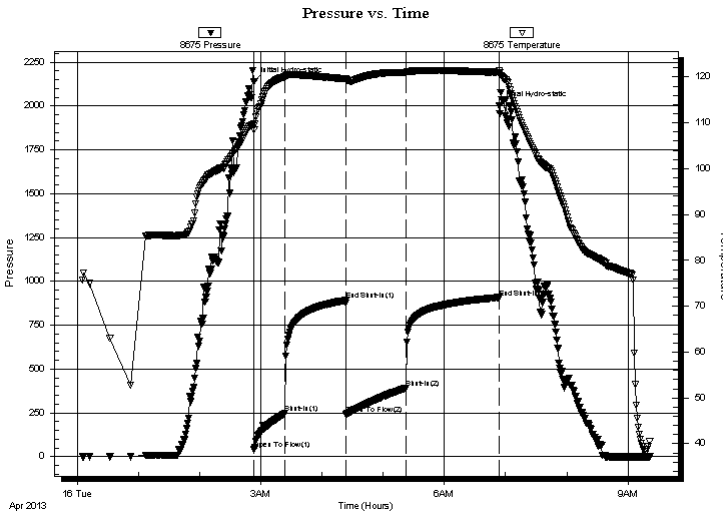
Time Off Btm:

2013.04.16 @ 06:54:00

TEST COMMENT:

B.O.B. in 7 min.
Bled off for 5 min. No re-run blow
B.O.B. in 23 min.
Bled off for 5 min. No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2138.77	109.76	Initial Hydro-static
1	41.30	108.49	Open To Flow (1)
31	249.30	120.08	Shut-In(1)
90	891.80	119.61	End Shut-In(1)
91	243.24	119.34	Open To Flow (2)
150	392.86	121.01	Shut-In(2)
240	907.90	121.02	End Shut-In(2)
241	2001.62	121.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
367.00	100% Water	3.80
189.00	mcw 40%M 60%W	2.65
189.00	w cm 40%W 60%M w ith oil scum	2.65
15.00	w cm 10%W 90%M w ith oil scum	0.21

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53051

DST#: 3

ATTN: Tom Funk

Test Start: 2013.04.16 @ 00:05:00

Tool Information

Drill Pipe:	Length: 4073.23 ft	Diameter: 3.80 inches	Volume: 57.14 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 148.04 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 57.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.27 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4230.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	75.00 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			4211.00	
Shut In Tool	5.00			4216.00	
Hydraulic tool	5.00			4221.00	
Packer	5.00			4226.00	20.00 Bottom Of Top Packer
Packer	4.00			4230.00	
Stubb	1.00			4231.00	
Recorder	0.00	8675	Inside	4231.00	
Recorder	0.00	8650	Outside	4231.00	
Perforations	18.00			4249.00	
Change Over Sub	1.00			4250.00	
Drill Pipe	31.00			4281.00	
Change Over Sub	1.00			4282.00	
Bullnose	3.00			4285.00	55.00 Bottom Packers & Anchor

Total Tool Length: 75.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53051

DST#: 3

ATTN: Tom Funk

Test Start: 2013.04.16 @ 00:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
367.00	100% Water	3.799
189.00	mcw 40%M 60%W	2.651
189.00	w cm 40%W 60%M w ith oil scum	2.651
15.00	w cm 10%W 90%M w ith oil scum	0.210

Total Length: 760.00 ft Total Volume: 9.311 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

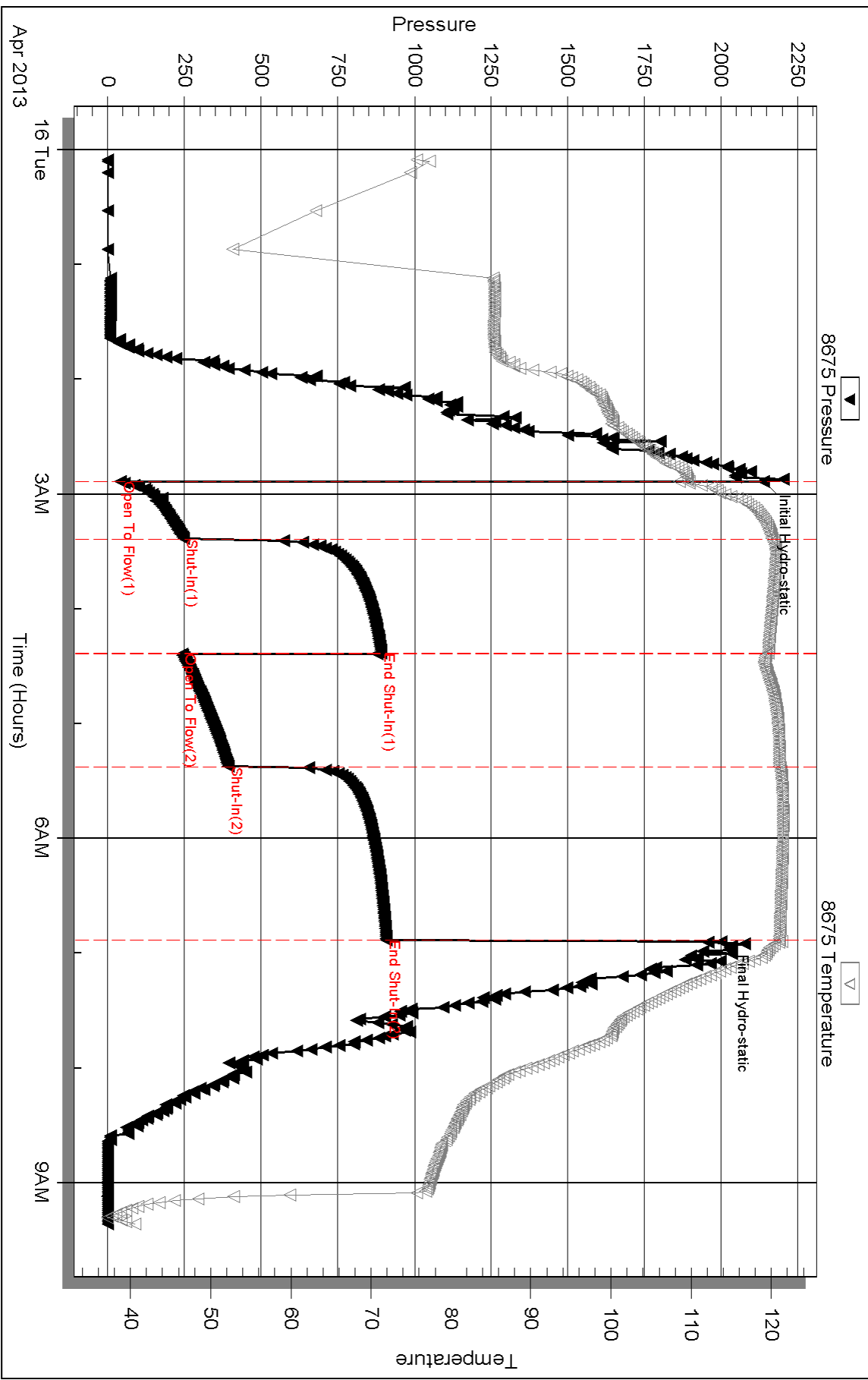
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw : .15 @ 35 F = 90,000

Pressure vs. Time

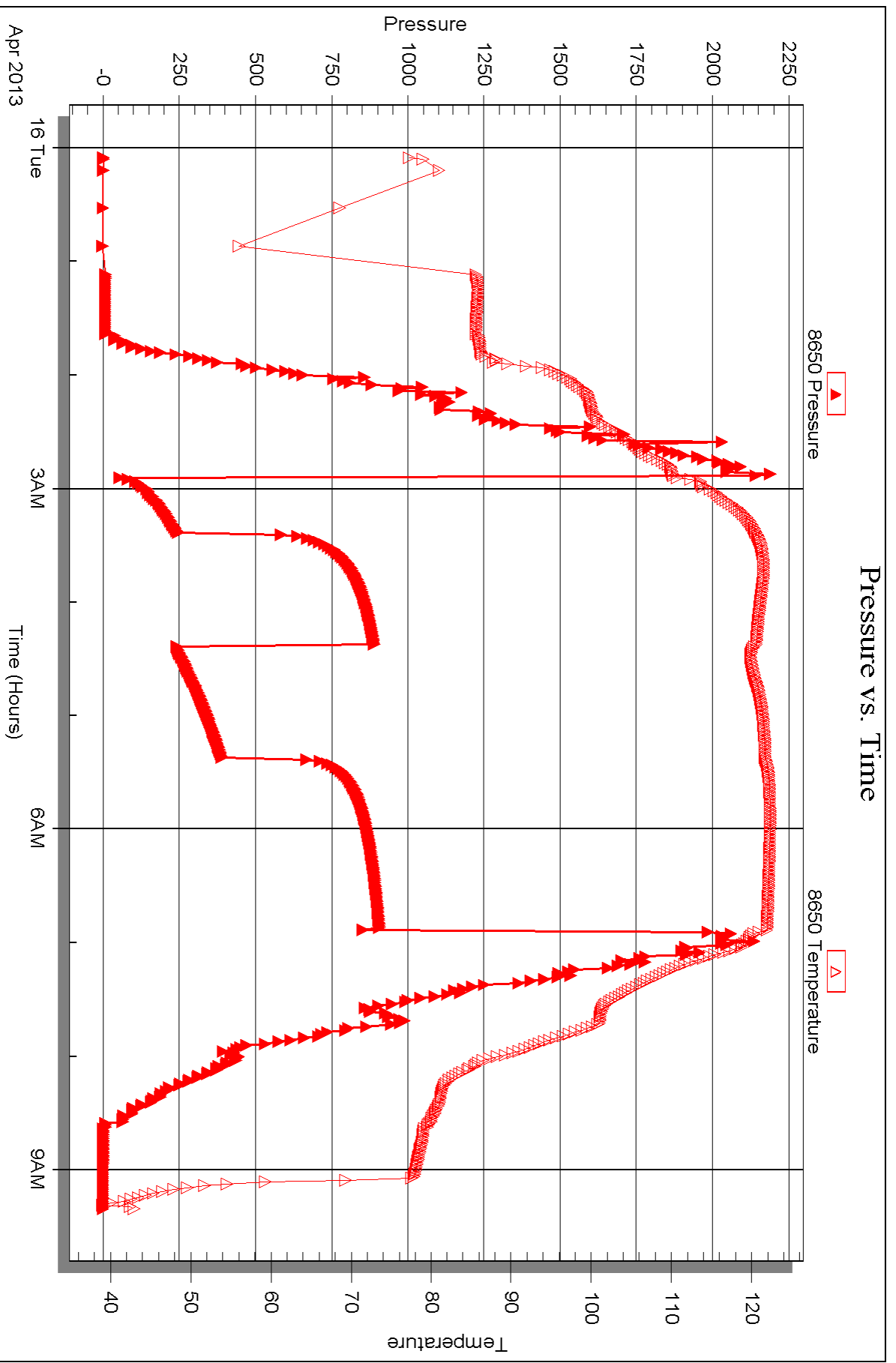


Serial #: 8650

Outside Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 3





DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita, KS 67202-1216

ATTN: Tom Funk

Racette #1-12

12-13s-33w Logan,KS

Start Date: 2013.04.17 @ 04:20:00

End Date: 2013.04.17 @ 12:55:45

Job Ticket #: 53052 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 09:45:49



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

12-13s-33w Logan, KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53052

DST#: 4

ATTN: Tom Funk

Test Start: 2013.04.17 @ 04:20:00

GENERAL INFORMATION:

Formation: **Altamont - Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:23:30

Time Test Ended: 12:55:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4377.00 ft (KB) To 4480.00 ft (KB) (TVD)

Reference Elevations: 3052.00 ft (KB)

Total Depth: 4480.00 ft (KB) (TVD)

3041.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 75.34 psig @ 4378.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.17

End Date:

2013.04.17

Last Calib.:

2013.04.17

Start Time: 04:20:15

End Time:

12:55:45

Time On Btm:

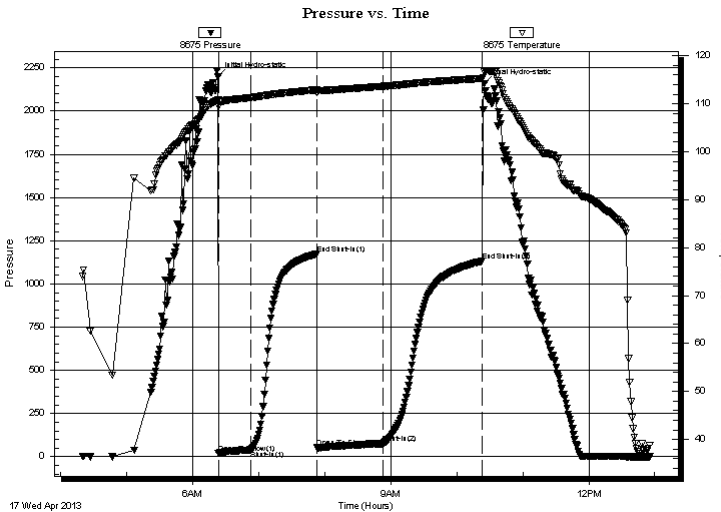
2013.04.17 @ 06:23:15

Time Off Btm:

2013.04.17 @ 10:25:15

TEST COMMENT: Built to 5 1/2" blow
No return blow
Built to 5" blow
No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2198.75	110.75	Initial Hydro-static
1	20.37	109.53	Open To Flow (1)
30	40.03	111.27	Shut-In(1)
90	1173.64	112.90	End Shut-In(1)
90	53.77	112.39	Open To Flow (2)
150	75.34	113.62	Shut-In(2)
240	1131.71	115.28	End Shut-In(2)
242	2158.01	116.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	gcmo 10%G 40%M 50%O	0.44
60.00	gco 10%G 90%O	0.31

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53052

DST#: 4

ATTN: Tom Funk

Test Start: 2013.04.17 @ 04:20:00

Tool Information

Drill Pipe:	Length: 4229.49 ft	Diameter: 3.80 inches	Volume: 59.33 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 148.04 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 71000.00 lb
			<u>Total Volume: 60.06 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.53 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4377.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	103.00 ft			
Tool Length:	123.00 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			4358.00	
Shut In Tool	5.00			4363.00	
Hydraulic tool	5.00			4368.00	
Packer	5.00			4373.00	20.00 Bottom Of Top Packer
Packer	4.00			4377.00	
Stubb	1.00			4378.00	
Recorder	0.00	8675	Inside	4378.00	
Recorder	0.00	8650	Outside	4378.00	
Perforations	3.00			4381.00	
Change Over Sub	1.00			4382.00	
Drill Pipe	94.00			4476.00	
Change Over Sub	1.00			4477.00	
Bullnose	3.00			4480.00	103.00 Bottom Packers & Anchor

Total Tool Length: 123.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53052

DST#: 4

ATTN: Tom Funk

Test Start: 2013.04.17 @ 04:20:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	gcmo 10%G 40%M 50%O	0.443
60.00	gco 10%G 90%O	0.313

Total Length: 150.00 ft Total Volume: 0.756 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API: 29 @ 40 F = 31

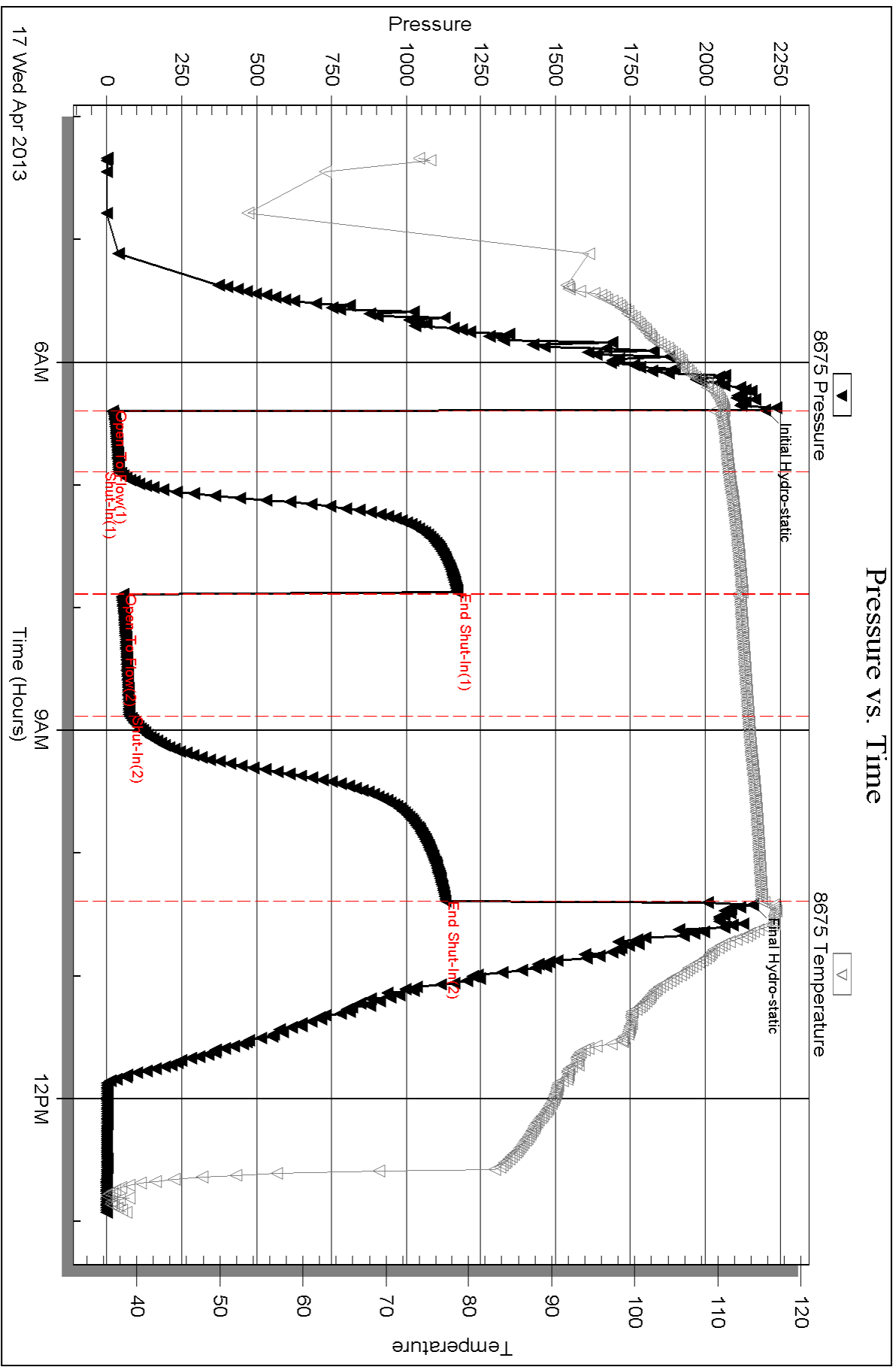
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Inside

Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 53052

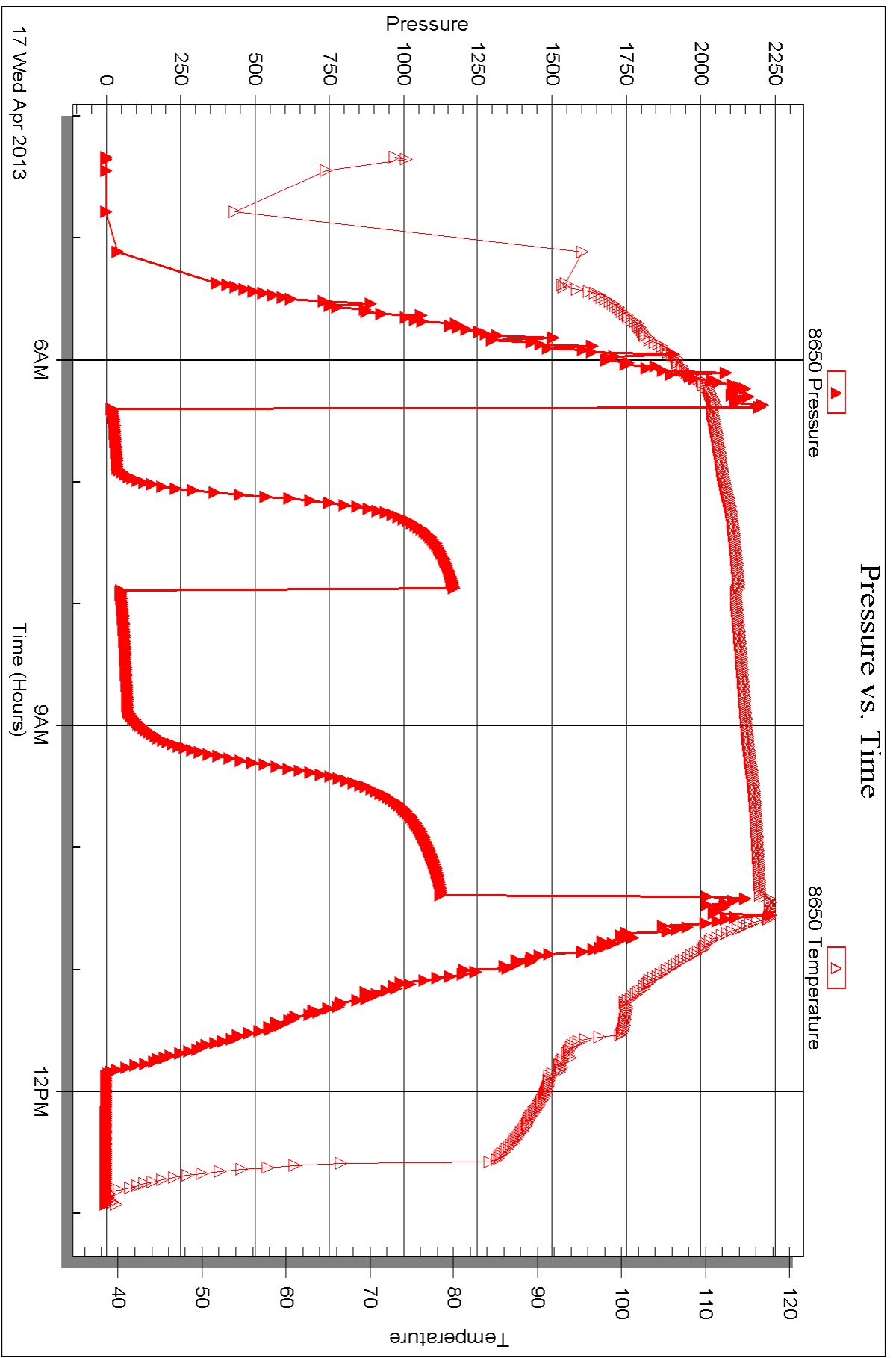
Printed: 2013.04.24 @ 09:45:51

Serial #: 8650

Outside Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 53052

Printed: 2013.04.24 @ 09:45:51



DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita, KS 67202-1216

ATTN: Tom Funk

Racette #1-12

12-13s-33w Logan,KS

Start Date: 2013.04.17 @ 23:40:00

End Date: 2013.04.18 @ 09:09:30

Job Ticket #: 53053 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 09:44:56



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53053

DST#: 5

ATTN: Tom Funk

Test Start: 2013.04.17 @ 23:40:00

GENERAL INFORMATION:

Formation: **Myric Station - Fort**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:06:00

Time Test Ended: 09:09:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4480.00 ft (KB) To 4540.00 ft (KB) (TVD)

Reference Elevations: 3052.00 ft (KB)

Total Depth: 4540.00 ft (KB) (TVD)

3041.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 146.83 psig @ 4481.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.17

End Date:

2013.04.18

Last Calib.:

2013.04.18

Start Time: 22:40:15

End Time:

08:09:30

Time On Btm:

2013.04.18 @ 01:05:45

Time Off Btm:

2013.04.18 @ 05:07:15

TEST COMMENT:

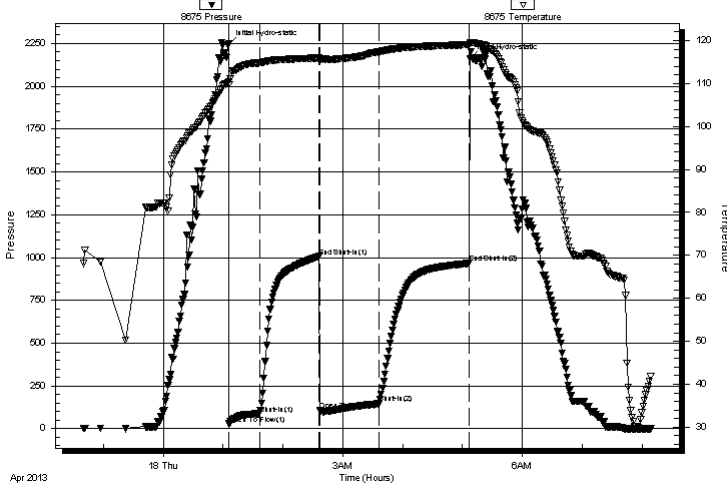
B.O.B. in 9 1/2 min.

Bled off for 5 min. Built to 1 1/2" return blow

B.O.B. in 8 min.

Bled off for 5 min. Built to 1 1/2" return blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2246.21	110.45	Initial Hydro-static
1	28.28	109.76	Open To Flow (1)
31	87.17	114.75	Shut-In(1)
91	1006.05	115.95	End Shut-In(1)
91	107.48	115.68	Open To Flow (2)
151	146.83	117.33	Shut-In(2)
241	967.91	119.01	End Shut-In(2)
242	2161.72	119.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	w cmog 5%W 30%M 30%O 35%G	0.30
118.00	mcgo 30%M 30%G 40%O	0.87
220.00	100% Clean Oil	3.09
0.00	820 Feet Gas In Pipe	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53053

DST#: 5

ATTN: Tom Funk

Test Start: 2013.04.17 @ 23:40:00

Tool Information

Drill Pipe:	Length: 4324.16 ft	Diameter: 3.80 inches	Volume: 60.66 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 148.04 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 61.39 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.20 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4480.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	80.00 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			4461.00	
Shut In Tool	5.00			4466.00	
Hydraulic tool	5.00			4471.00	
Packer	5.00			4476.00	20.00 Bottom Of Top Packer
Packer	4.00			4480.00	
Stubb	1.00			4481.00	
Recorder	0.00	8675	Inside	4481.00	
Recorder	0.00	8650	Outside	4481.00	
Perforations	23.00			4504.00	
Change Over Sub	1.00			4505.00	
Drill Pipe	31.00			4536.00	
Change Over Sub	1.00			4537.00	
Bullnose	3.00			4540.00	60.00 Bottom Packers & Anchor

Total Tool Length: 80.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53053

DST#: 5

ATTN: Tom Funk

Test Start: 2013.04.17 @ 23:40:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 60.00 sec/qt
Water Loss: 7.58 in³
Resistivity: ohm.m
Salinity: 5000.00 ppm
Filter Cake: 2.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 35 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

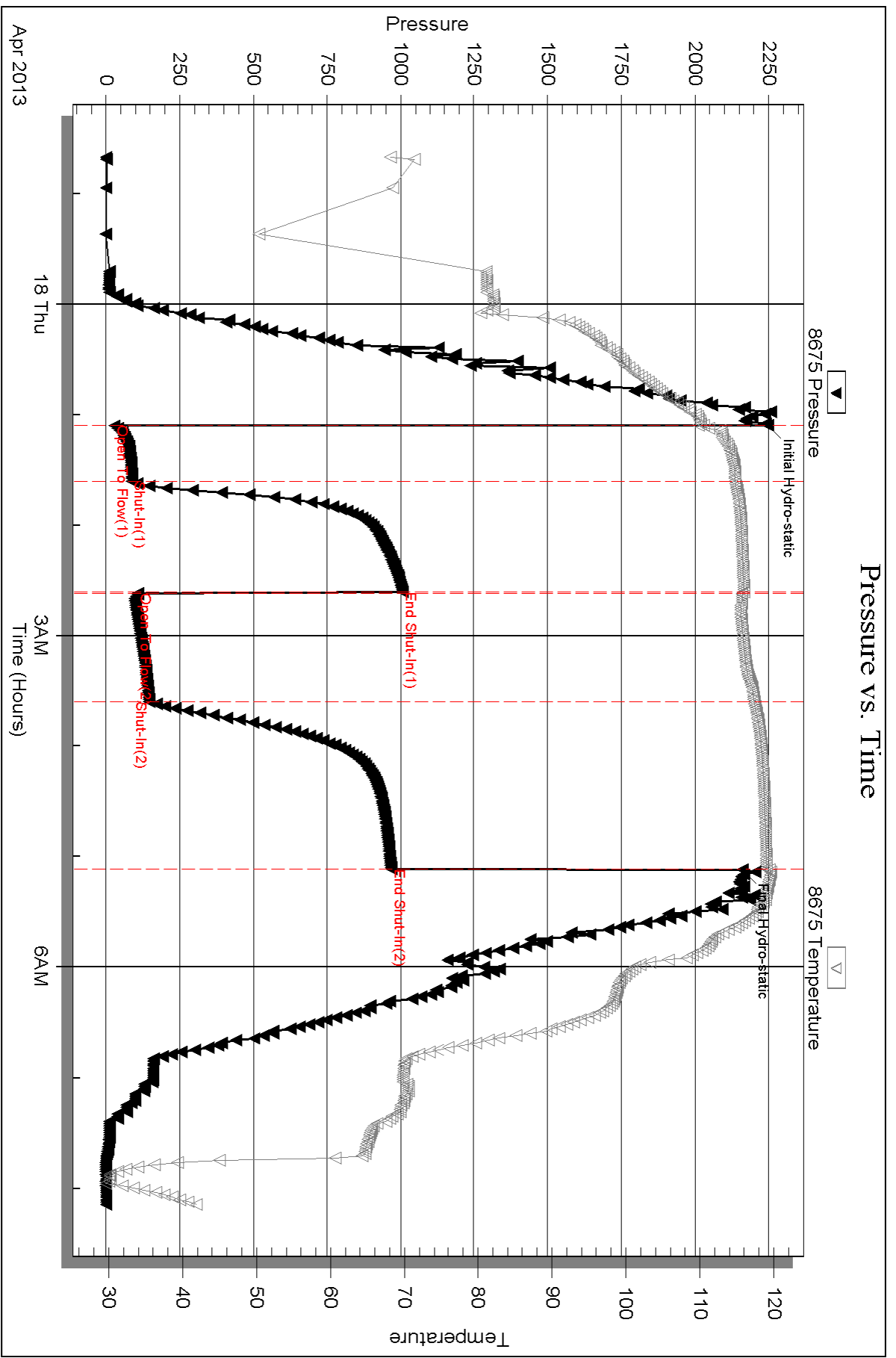
Length ft	Description	Volume bbl
62.00	w cmog 5%W 30%M 30%O 35%G	0.305
118.00	mcgo 30%M 30%G 40%O	0.871
220.00	100% Clean Oil	3.086
0.00	820 Feet Gas In Pipe	0.000

Total Length: 400.00 ft Total Volume: 4.262 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: API: 33 @ 40 F = 35

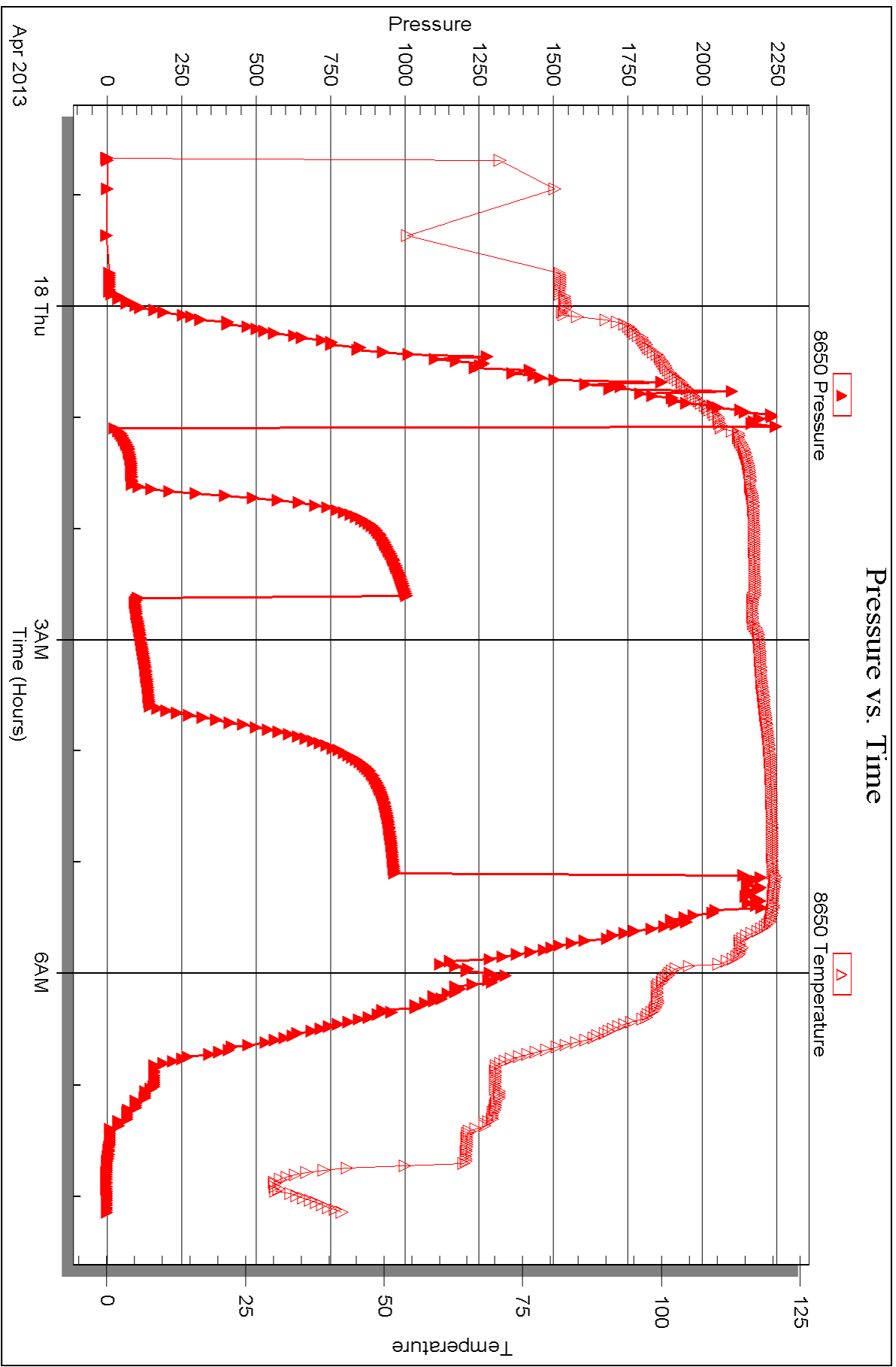


Serial #: 8650

Outside Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 5





DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita, KS 67202-1216

ATTN: Tom Funk

Racette #1-12

12-13s-33w Logan,KS

Start Date: 2013.04.18 @ 18:20:00

End Date: 2013.04.19 @ 03:20:30

Job Ticket #: 53054 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 09:44:16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53054

DST#: 6

ATTN: Tom Funk

Test Start: 2013.04.18 @ 18:20:00

GENERAL INFORMATION:

Formation: **Johnson Zone**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:18:15

Time Test Ended: 03:20:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4548.00 ft (KB) To 4610.00 ft (KB) (TVD)

Reference Elevations: 3052.00 ft (KB)

Total Depth: 4610.00 ft (KB) (TVD)

3041.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 195.58 psig @ 4549.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.18

End Date:

2013.04.19

Last Calib.:

2013.04.19

Start Time: 18:20:15

End Time:

03:20:30

Time On Btm:

2013.04.18 @ 20:17:45

Time Off Btm:

2013.04.19 @ 00:17:45

TEST COMMENT:

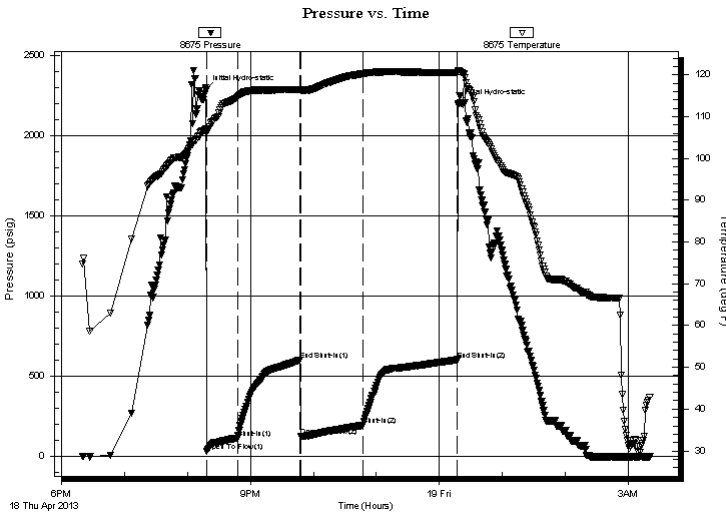
B.O.B. in 11 min.

Bled off for 5 min. Built to 3" return blow

B.O.B. in 6 min.

Bled off for 5 min. B.O.B. in 44 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2285.62	107.07	Initial Hydro-static
1	32.48	106.44	Open To Flow (1)
30	116.89	114.62	Shut-In(1)
90	603.33	116.51	End Shut-In(1)
91	126.18	116.33	Open To Flow (2)
150	195.58	120.32	Shut-In(2)
240	603.97	120.52	End Shut-In(2)
240	2195.54	121.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	w cgom 2%W 20%G 28%O 50%M	0.30
124.00	mcgo 30%M 30%G 40%O	0.96
282.00	100% Clean Oil	3.96
0.00	1100 Feet Gas In Pipe	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53054

DST#: 6

ATTN: Tom Funk

Test Start: 2013.04.18 @ 18:20:00

Tool Information

Drill Pipe:	Length: 4387.07 ft	Diameter: 3.80 inches	Volume: 61.54 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 148.04 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 62.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.11 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4548.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	82.00 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			4529.00	
Shut In Tool	5.00			4534.00	
Hydraulic tool	5.00			4539.00	
Packer	5.00			4544.00	20.00 Bottom Of Top Packer
Packer	4.00			4548.00	
Stubb	1.00			4549.00	
Recorder	0.00	8675	Inside	4549.00	
Recorder	0.00	8650	Outside	4549.00	
Perforations	25.00			4574.00	
Change Over Sub	1.00			4575.00	
Drill Pipe	31.00			4606.00	
Change Over Sub	1.00			4607.00	
Bullnose	3.00			4610.00	62.00 Bottom Packers & Anchor

Total Tool Length: 82.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

12-13s-33w Logan,KS

250 N Water STE 300
Wichita, KS 67202-1216

Racette #1-12

Job Ticket: 53054

DST#: 6

ATTN: Tom Funk

Test Start: 2013.04.18 @ 18:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	w cgom 2%W 20%G 28%O 50%M	0.305
124.00	mcgo 30%M 30%G 40%O	0.956
282.00	100% Clean Oil	3.956
0.00	1100 Feet Gas In Pipe	0.000

Total Length: 468.00 ft Total Volume: 5.217 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API: 29 @ 30 F = 32

Serial #: 8675

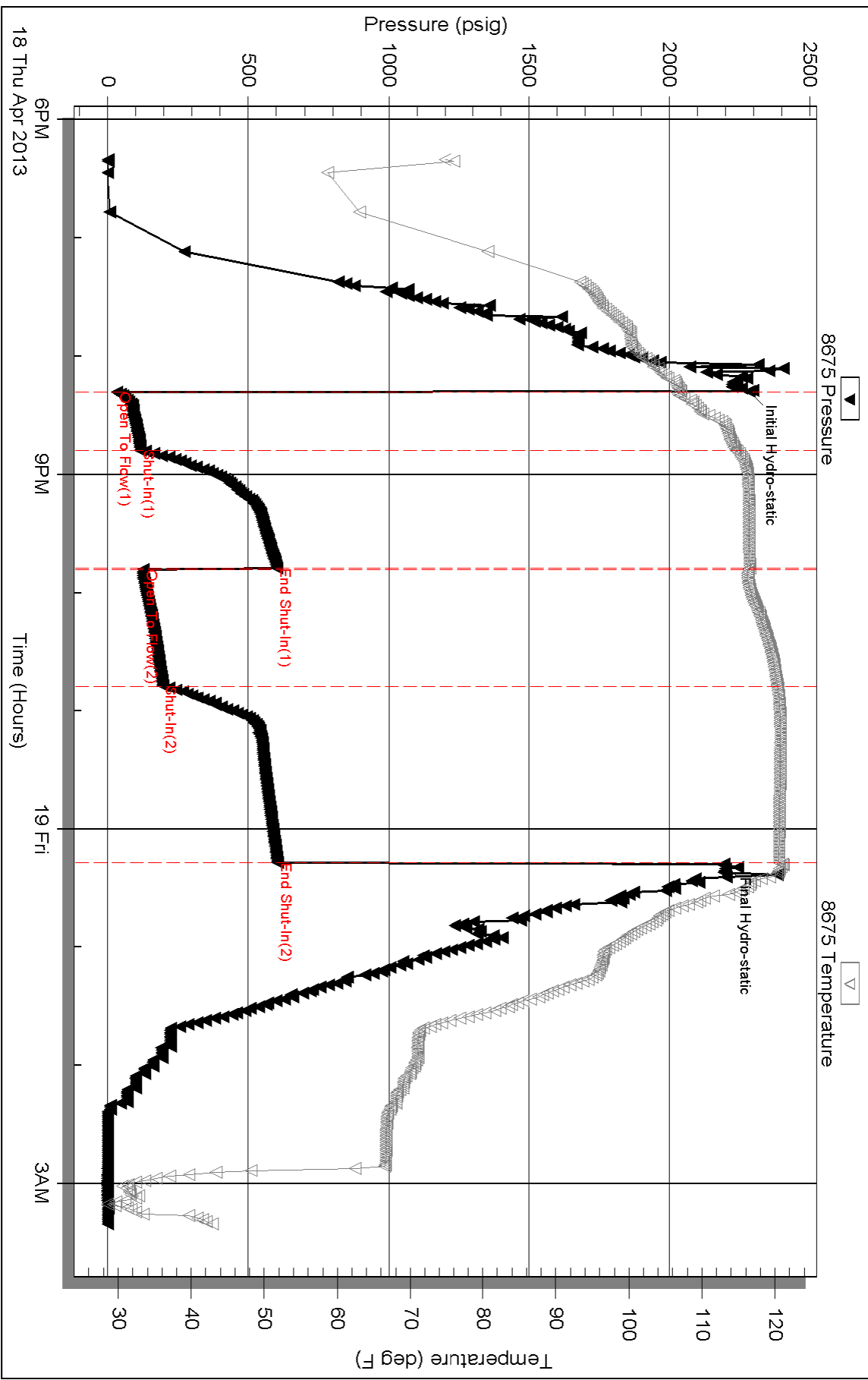
Inside

Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 6

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 53054

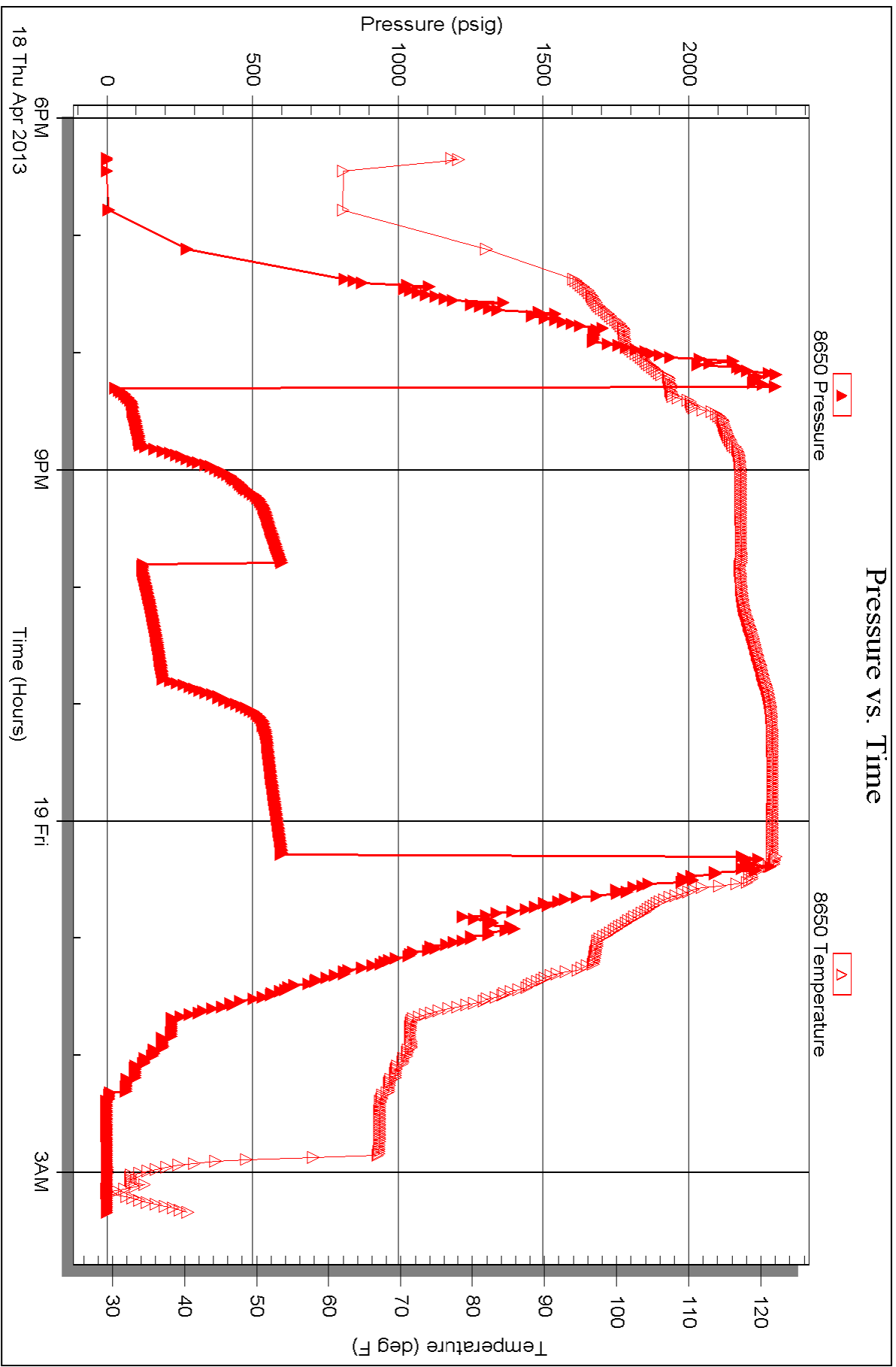
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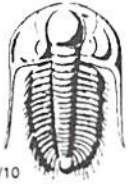
Serial #: 8650

Outside Murfin Drilling Company, Inc.

Racette #1-12

DST Test Number: 6





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 49974

Well Name & No. Racette # 1-12 Test No. 1 Date 4/14/13
 Company Martin Drilling Company, Inc. Elevation 3052 KB 3041 GL
 Address 250 N Water STE 300 Wichita KS, 67202-1216
 Co. Rep / Geo. Tom Funk Rig Martin Rig 22
 Location: Sec. 12 Twp. 13s Rge. 33w Co. Logan Co. State KS

Interval Tested 4094 - 4130 Zone Tested Kansas Ldy "E+F"
 Anchor Length* 36 Drill Pipe Run 3948.62 Mud Wt. 9.1
 Top Packer Depth 4090 Drill Collars Run 148.04 Vis 52
 Bottom Packer Depth 4094 Wt. Pipe Run _____ WL 6.4
 Total Depth 4130 Chlorides 4,400 ppm System LCM 4#

Blow Description B.O.B. in 6 1/2 min.
Bled off for 5 min. No return below
B.O.B. in 7 1/2 min.
Bled off for 5 min. No return below

Rec	Feet of	%gas	%oil	%water	%mud
<u>204</u>	<u>Feet of MCW</u>		<u>50</u>	<u>50</u>	
<u>252</u>	<u>Feet of MCW</u>		<u>70</u>	<u>30</u>	
<u>874</u>	<u>Feet of water</u>		<u>100</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

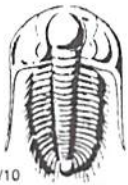
Rec Total 1330 BHT mont 122 Gravity _____ API RW .10 @ 70 ° F Chlorides 75,000 ppm

(A) Initial Hydrostatic 2,058 Test 1250 T-On Location 6:05
 (B) First Initial Flow 33 Jars _____ T-Started 8:10
 (C) First Final Flow 309 Safety Joint _____ T-Open 10:00
 (D) Initial Shut-In 1,138 Circ Sub M/C T-Pulled 14:00
 (E) Second Initial Flow 316 Hourly Standby 1/4 hr over 25 T-Out 16:16
 (F) Second Final Flow 651 Mileage 90 RT 80rt 124
 (G) Final Shut-In 1,131 Sampler _____
 (H) Final Hydrostatic 1,968 Straddle _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 600 Ruined Packer _____
 Final Flow 600 Extra Packer _____
 Final Shut-In 90 Extra Recorder _____
 Sub Total 0
 Total 1399
 MP/DST Disc't _____

Approved By [Signature] 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. 49975

Well Name & No. Racette #1-12 Test No. 2 Date 4/15/13
 Company Murkin Drilling Company, Inc Elevation 3052 KB 3041 GL
 Address 250 N Water STE 300 Wichita KS, 67202-1216
 Co. Rep / Geo. Tom Funk Rig Murkin Rig 22
 Location: Sec. 12 Twp. 13S Rge. 33W Co. Logan Co. State KS

Interval Tested 4197 - 4230 Zone Tested Kansas City "H+I"
 Anchor Length 33 Drill Pipe Run 4041.16 Mud Wt. 9.4
 Top Packer Depth 4193 Drill Collars Run 148.04 Vis 53
 Bottom Packer Depth 4197 Wt. Pipe Run _____ WL 8.4
 Total Depth 4230 Chlorides 4,400 ppm System LCM 3.5#

Blow Description B.O.B. in 8 min.
Bled off for 5 min. No return below
B.O.B. in 12 min.
Bled off for 5 min. No return below

Rec	Feet of	%gas	%oil	%water	%mud
<u>239</u>	<u>wcm</u>		<u>40</u>	<u>60</u>	
<u>189</u>	<u>mcw</u>		<u>80</u>	<u>20</u>	
<u>432</u>	<u>water</u>		<u>100</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 860 BHT 122 Gravity _____ API RW .09 @ 65 °F Chlorides 90,000 ppm

(A) Initial Hydrostatic 2,095 Test 1250 T-On Location 5:30
 (B) First Initial Flow 38 Jars _____ T-Started 5:50
 (C) First Final Flow 219 Safety Joint _____ T-Open 8:06
 (D) Initial Shut-In 833 Circ Sub N/C T-Pulled 12:06
 (E) Second Initial Flow 223 Hourly Standby _____ T-Out 14:15
 (F) Second Final Flow 409 Mileage 90 MI 124
 (G) Final Shut-In 812 Sampler _____
 (H) Final Hydrostatic 1,954 Straddle _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1374
 Sub Total _____
 Total 1374
 MP/DST Disc't _____

Approved By [Signature] 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. 53051

Well Name & No. Racette # 1-12 Test No. 3 Date 4/15/13 4/16/13
 Company Murfin Drilling Company, Inc Elevation 3052 KB 3041 GL
 Address 250 N Water STE 300 Wichita KS, 67202-1216
 Co. Rep / Geo. Tom Funk Rig Murfin Rig 22
 Location: Sec. 12 Twp. 13s Rge. 33w Co. Logan Co. State KS

Interval Tested 4230-4285 Zone Tested Kansas City "J+K"
 Anchor Length 55 Drill Pipe Run 4073.23 Mud Wt. 9.2
 Top Packer Depth 4226 Drill Collars Run 148.04 Vis 70
 Bottom Packer Depth 4230 Wt. Pipe Run _____ WL 6.4
 Total Depth 4285 Chlorides 5,000 ppm System LCM 7#

Blow Description B.O.B. in 7 min.
Bled off for 5 min. No return below
B.O.B. in 23 min.
Bled off for 5 min. No return below

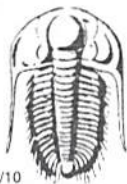
Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Feet of wcm with oilseum</u>		<u>10</u>	<u>90</u>	
<u>189</u>	<u>Feet of wcm oilseum</u>		<u>40</u>	<u>20</u>	
<u>189</u>	<u>Feet of mcw</u>		<u>60</u>	<u>40</u>	
<u>367</u>	<u>Feet of water</u>		<u>100</u>		
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 760 BHT 121 Gravity _____ API RW .15 @ 35 ° F Chlorides 90,000 ppm
 (A) Initial Hydrostatic 2,139 Test 1250 T-On Location 23:30
 (B) First Initial Flow 41 Jars _____ T-Started 00:05
 (C) First Final Flow 249 Safety Joint _____ T-Open 2:53
 (D) Initial Shut-In 892 Circ Sub N/C T-Pulled 6:53
 (E) Second Initial Flow 243 Hourly Standby _____ T-Out 9:21
 (F) Second Final Flow 393 Mileage 90 RT 124 Comments _____
 (G) Final Shut-In 908 Sampler _____
 (H) Final Hydrostatic 2,002 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Sub Total 1374
 Sub Total 1374

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53052

Well Name & No. Bacette # 1-12 Test No. 4 Date 4/17/13
 Company Martin Drilling Company, Inc. Elevation 3052 KB 3041 GL
 Address 250 N Water STE 300 Wichita KS 67202-1216
 Co. Rep / Geo. Tom Funk Rig Martin Rig 22
 Location: Sec. 12 Twp. 13s Rge. 33w Co. Logan Co. State K5

Interval Tested 4377-4480 Zone Tested Altament - Pawnee
 Anchor Length 103 Drill Pipe Run 4229.49 Mud Wt. 9.1
 Top Packer Depth 4373 Drill Collars Run 148.04 Vis 60
 Bottom Packer Depth 4377 Wt. Pipe Run _____ WL 7.6
 Total Depth 4480 Chlorides 6,800 ppm System LCM 5#

Blow Description Drill to 5' 1/2" below
No return below
Drill to 5" below
No return below

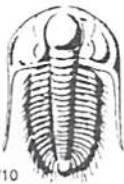
Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>600</u>	<u>10</u>	<u>90</u>		
<u>90</u>	<u>6000</u>	<u>10</u>	<u>60</u>		<u>40</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 150 BHT 114 Gravity 31 API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2,199 Test 1250 T-On Location 3:20
 (B) First Initial Flow 20 Jars T-Started 4:20
 (C) First Final Flow 40 Safety Joint T-Open 6:23
 (D) Initial Shut-In 1,174 Circ Sub N/C T-Pulled 10:23
 (E) Second Initial Flow 54 Hourly Standby T-Out 12:56
 (F) Second Final Flow 75 Mileage 90 RT 124 Comments _____
 (G) Final Shut-In 1,132 Sampler _____
 (H) Final Hydrostatic 2,158 Straddle _____

Initial Open 30 Shale Packer Ruined Shale Packer
 Initial Shut-In 60 Shale Packer Ruined Packer
 Final Flow 60 Extra Packer Extra Copies
 Final Shut-In 90 Extra Recorder Sub Total 0
 Day Standby Total 1374
 Accessibility MP/DST Disc't _____
 Sub Total 1374

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1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53053

Well Name & No. Racette # 1-12 Test No. 5 Date 4/17/13 4/18/13
 Company Murfin Drilling Company, Inc. Elevation 3052 KB 3041 GL
 Address 250 N Water STE 300 Wichita KS 67202-1216
 Co. Rep / Geo. Tom Funk Rig Murfin Rig 22
 Location: Sec. 12 Twp. 13s Rge. 33w Co. Logan Co State KS

Interval Tested 4480 - 4540 Zone Tested Myric Station - Fort Scott
 Anchor Length 60 Drill Pipe Run 4324.16 Mud Wt. 9.2
 Top Packer Depth 4476 Drill Collars Run 148.04 Vis 60
 Bottom Packer Depth 4480 Wt. Pipe Run _____ WL 7.6
 Total Depth 4540 Chlorides 5,000 ppm System LCM 5#

Blow Description B.O.B. in 9 1/2 min.
Bled off for 5 min Built to 1 1/2" return below
B.O.B. in 8 min.
Bled off for 5 min Built to 1 1/2" return below

Rec	Feet of	%gas	%oil	%water	%mud
	<u>820 Feet GAS in Pipe</u>				
Rec <u>220</u>	Feet of <u>clean oil</u>		<u>100</u>		
Rec <u>118</u>	Feet of <u>MCCO</u>	<u>30</u>	<u>40</u>		<u>30</u>
Rec <u>62</u>	Feet of <u>wcmbo</u>	<u>35</u>	<u>30</u>	<u>5</u>	<u>30</u>
Rec _____	Feet of _____	%gas	%oil	%water	%mud

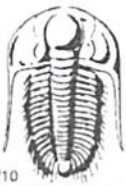
Rec Total 400 BHT 119 Gravity 35 API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2,246 Test 1250 T-On Location 21:30
 (B) First Initial Flow 28 Jars _____ T-Started 22:40
 (C) First Final Flow 87 Safety Joint _____ T-Open 1:05
 (D) Initial Shut-In 1,006 Circ Sub N/C 1.75h 175 T-Pulled 5:05
 (E) Second Initial Flow 107 Hourly Standby 1hr over 10 hrs T-Out 9:10
 (F) Second Final Flow 147 Mileage 90 RT 124
 (G) Final Shut-In 968 Sampler _____
 (H) Final Hydrostatic 2,162 Straddle _____

Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1549
 MP/DST Disc't _____

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

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53054

Well Name & No. Acette # 1-12 Test No. 6 Date 4/18/13 4/19/13
 Company Martin Drilling Company, Inc. Elevation 3052 KB 3041 GL
 Address 250 N Water STE 300 Wichita KS 67202-1216
 Co. Rep / Geo. Tom Funk Rig Martin Rig 22
 Location: Sec. 12 Twp. 13s Rge. 33w Co. Logan Co. State KS

Interval Tested 4548-4610 Zone Tested Johnson Zone
 Anchor Length 62 Drill Pipe Run 4387.07 Mud Wt. 9.2
 Top Packer Depth 4544 Drill Collars Run 148.04 Vis 54
 Bottom Packer Depth 4548 Wt. Pipe Run _____ WL 8.0
 Total Depth 4610 Chlorides 6,400 ppm System LCM 4#

Blow Description B.O.B. in 11 min.
Bled off for 5 min. Built to 3" return below
B.O.B. in 6 min.

Bled off for 5 min. B.O.B. in 44 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>1100 Feet GAS IN PIPE</u>				
<u>222</u>	<u>Oil</u>		<u>100</u>		
<u>124</u>	<u>MC 60</u>	<u>30</u>	<u>40</u>		<u>30</u>
<u>62</u>	<u>WCCOM</u>	<u>20</u>	<u>28</u>	<u>2</u>	<u>50</u>
____	Feet of _____	%gas	%oil	%water	%mud

Rec Total 468 BHT 121 Gravity 32 API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2,286 Test 1250 T-On Location 17:30
 (B) First Initial Flow 32 Jars _____ T-Started 18:20
 (C) First Final Flow 117 Safety Joint _____ T-Open 20:18
 (D) Initial Shut-In 603 Circ Sub N/C T-Pulled 00:18
 (E) Second Initial Flow 126 Hourly Standby _____ T-Out 3:20
 (F) Second Final Flow 196 Mileage 90 MI X 2 248 Comments Loaded @ 12:00
 (G) Final Shut-In 604 Sampler _____ pipe on 8/19/13
 (H) Final Hydrostatic 2,196 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 30 Day Standby _____ Total 1498
 Final Shut-In 60 Accessibility _____ MP/DST Disc't _____
 Sub Total 1498

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