



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Robert Hendrix

Burk Trust D #5-23

23-1s-36w Rawlins,KS

Start Date: 2014.10.25 @ 09:53:00

End Date: 2014.10.25 @ 18:13:00

Job Ticket #: 60195 DST #: 1

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

Printed: 2014.10.30 @ 16:50:20



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-1s-36w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60195

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.10.25 @ 09:53:00

GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:12:30

Time Test Ended: 18:13:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4111.00 ft (KB) To 4157.00 ft (KB) (TVD)

Reference Elevations: 3318.00 ft (KB)

Total Depth: 4157.00 ft (KB) (TVD)

3307.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8874

Inside

Press@RunDepth: 31.91 psig @ 4112.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.25

End Date:

2014.10.25

Last Calib.:

2014.10.25

Start Time: 09:54:00

End Time:

18:13:00

Time On Btm:

2014.10.25 @ 12:11:30

Time Off Btm:

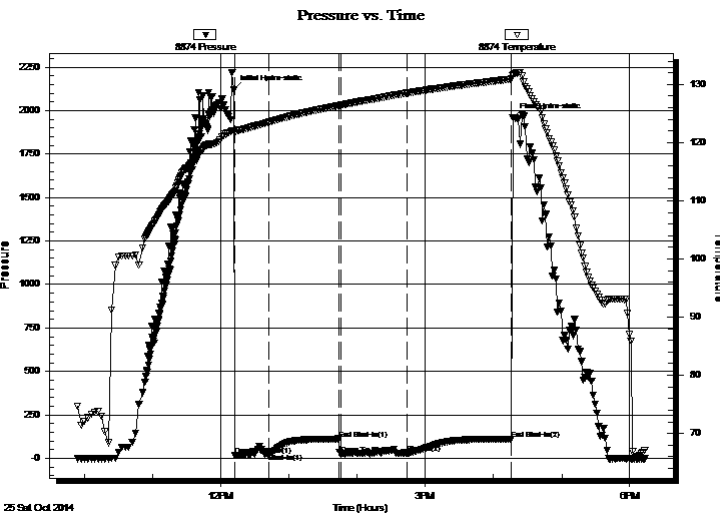
2014.10.25 @ 16:17:00

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

60 - IS- No Return

60 - FF- No Blow

90 - FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2118.81	122.05	Initial Hydro-static
1	17.05	121.74	Open To Flow (1)
31	30.32	123.50	Shut-In(1)
92	111.88	126.32	End Shut-In(1)
94	23.09	126.37	Open To Flow (2)
152	31.91	128.49	Shut-In(2)
244	111.75	130.89	End Shut-In(2)
246	1960.45	131.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	OSM 100M (oil spots)	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60195

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.10.25 @ 09:53:00

Tool Information

Drill Pipe:	Length: 3907.00 ft	Diameter: 3.80 inches	Volume: 54.80 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: 206.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 55.81 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4111.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	74.00 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			4084.00	
Shut In Tool	5.00			4089.00	
Hydraulic tool	5.00			4094.00	
Jars	5.00			4099.00	
Safety Joint	3.00			4102.00	
Packer	5.00			4107.00	28.00 Bottom Of Top Packer
Packer	4.00			4111.00	
Stubb	1.00			4112.00	
Recorder	0.00	8653	Outside	4112.00	
Recorder	0.00	8874	Inside	4112.00	
Perforations	6.00			4118.00	
Change Over Sub	1.00			4119.00	
Drill Pipe	32.00			4151.00	
Change Over Sub	1.00			4152.00	
Bullnose	5.00			4157.00	46.00 Bottom Packers & Anchor

Total Tool Length: 74.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60195

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.10.25 @ 09:53:00

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: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

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
20.00	OSM 100M (oil spots)	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

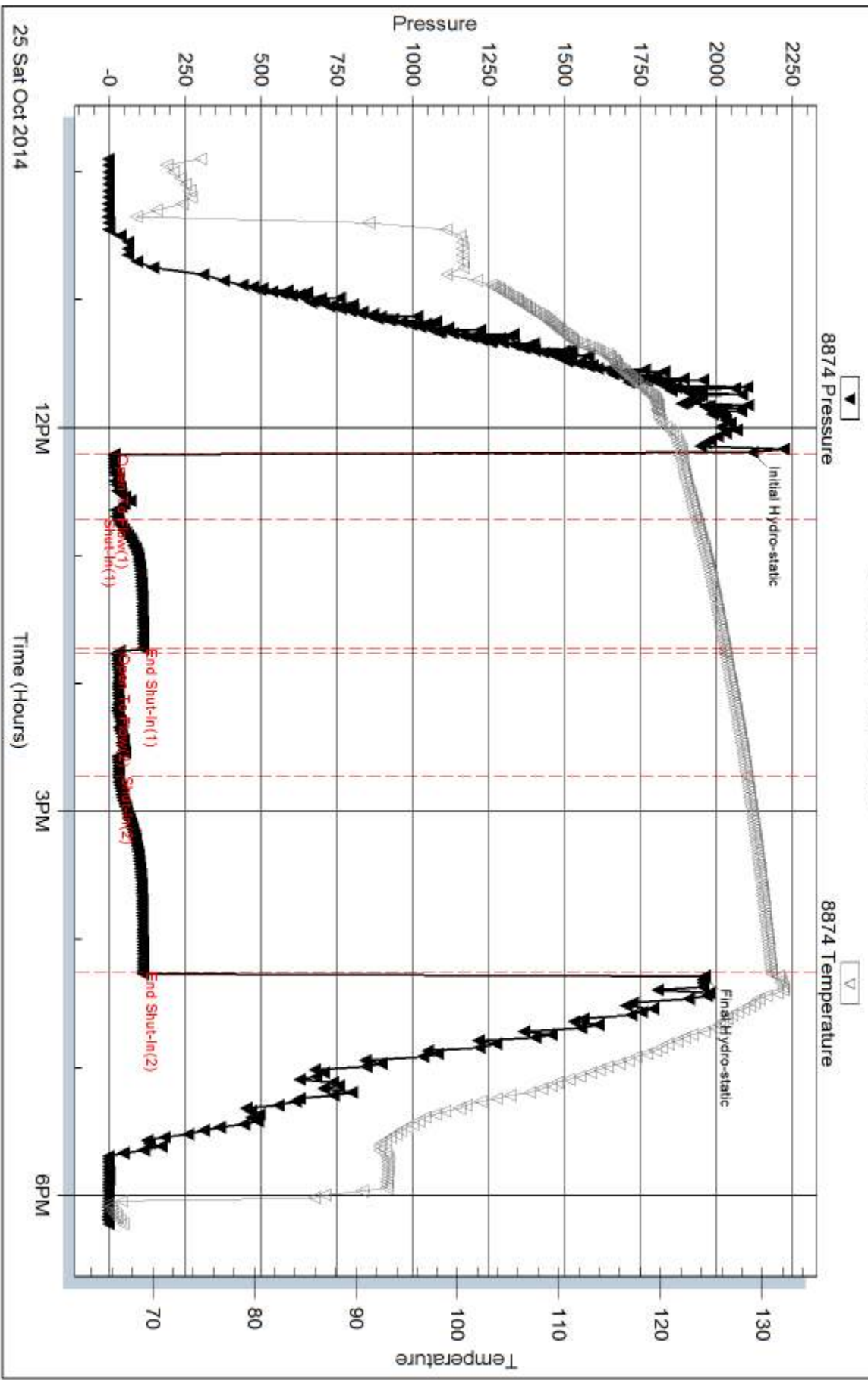
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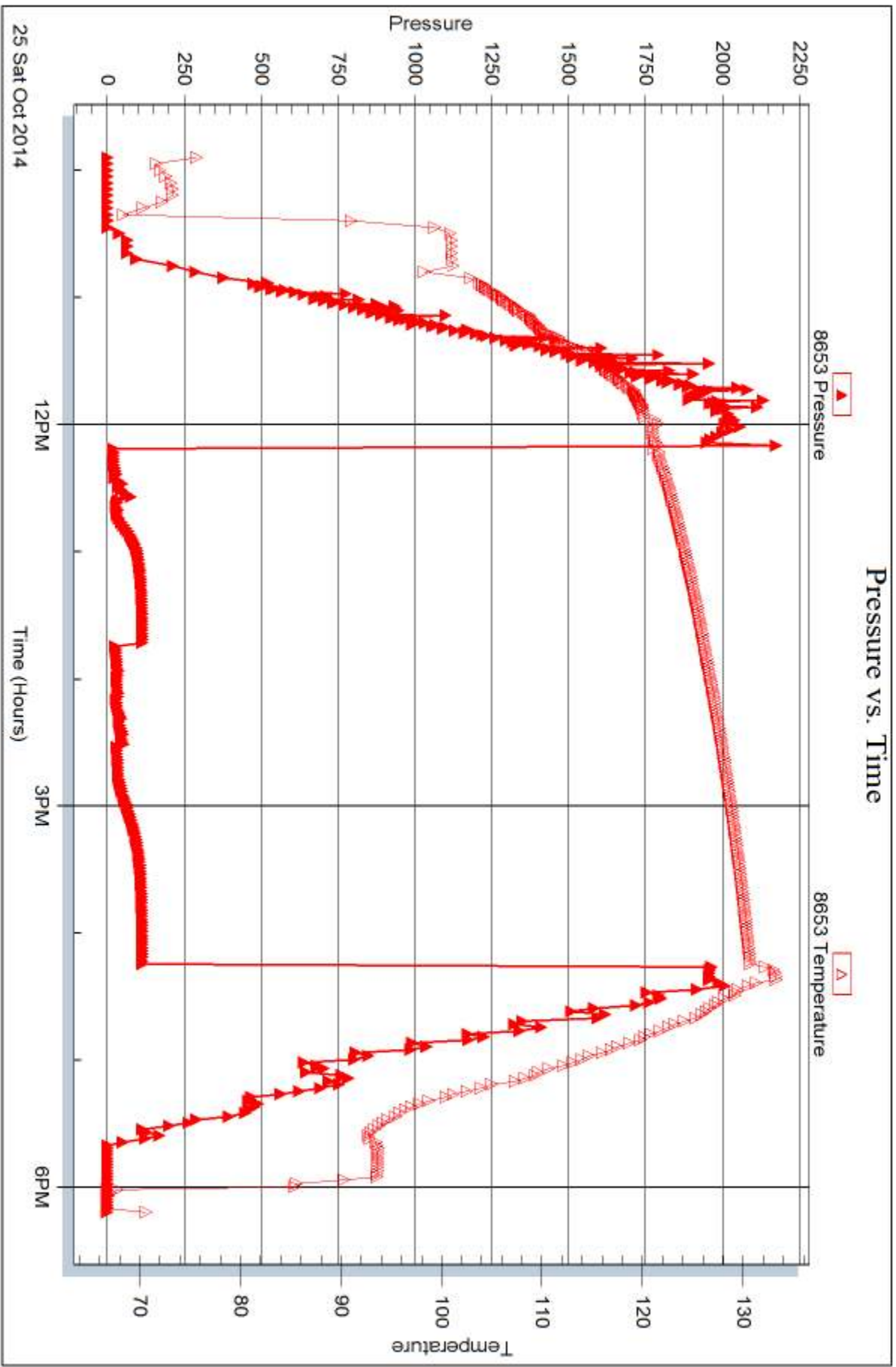
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Robert Hendrix

Burk Trust D #5-23

23-1s-36w Rawlins,KS

Start Date: 2014.10.26 @ 14:12:00

End Date: 2014.10.26 @ 22:59:30

Job Ticket #: 60196 DST #: 2

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

Printed: 2014.10.30 @ 16:49:55



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60196

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.10.26 @ 14:12:00

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:29:00

Time Test Ended: 22:59:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4266.00 ft (KB) To 4324.00 ft (KB) (TVD)

Reference Elevations: 3318.00 ft (KB)

Total Depth: 4324.00 ft (KB) (TVD)

3307.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8874

Inside

Press@RunDepth: 271.17 psig @ 4267.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.26

End Date: 2014.10.26

Last Calib.: 2014.10.26

Start Time: 14:13:00

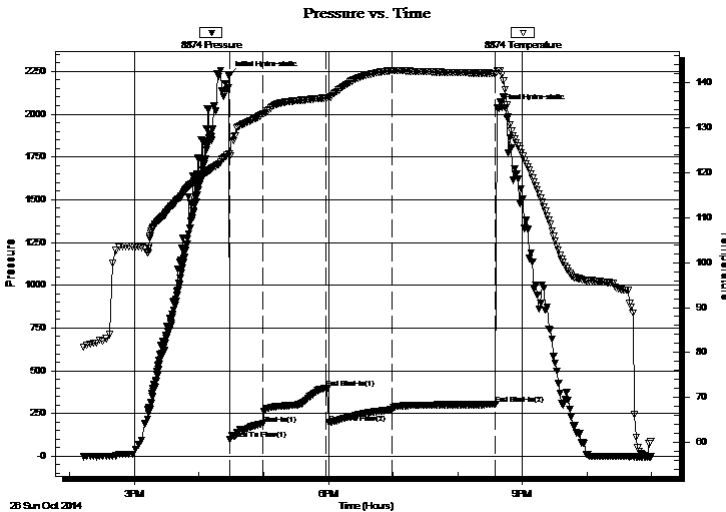
End Time: 22:59:30

Time On Btm: 2014.10.26 @ 16:28:00

Time Off Btm: 2014.10.26 @ 20:36:30

TEST COMMENT: 30 - IF- BoB in 10 min.
60 - IS- Surface Return started at 3 min. Built to 3 3/4"
60 - FF- BoB in 19 min.
90 - FS- Surface Return started at 1 min. Built to 8 3/4"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2224.51	124.12	Initial Hydro-static
1	100.23	123.80	Open To Flow (1)
31	189.36	133.07	Shut-In(1)
90	400.01	136.64	End Shut-In(1)
93	195.77	136.64	Open To Flow (2)
151	271.17	142.71	Shut-In(2)
247	302.83	142.12	End Shut-In(2)
249	2034.74	142.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	OCMW 5o 75W 20M	0.89
126.00	OCMW 10o 60W 30M	1.53
126.00	GWCMO 20G 30o 20W 30M	1.77
176.00	CGO 30G 70o	2.47
0.00	504' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60196

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.10.26 @ 14:12:00

Tool Information

Drill Pipe:	Length: 4062.00 ft	Diameter: 3.80 inches	Volume: 56.98 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: 206.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 57.99 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4266.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4239.00	
Shut In Tool	5.00			4244.00	
Hydraulic tool	5.00			4249.00	
Jars	5.00			4254.00	
Safety Joint	3.00			4257.00	
Packer	5.00			4262.00	28.00 Bottom Of Top Packer
Packer	4.00			4266.00	
Stubb	1.00			4267.00	
Recorder	0.00	8653	Outside	4267.00	
Recorder	0.00	8874	Inside	4267.00	
Perforations	18.00			4285.00	
Change Over Sub	1.00			4286.00	
Drill Pipe	32.00			4318.00	
Change Over Sub	1.00			4319.00	
Bullnose	5.00			4324.00	58.00 Bottom Packers & Anchor

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60196

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.10.26 @ 14:12:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

22 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

57000 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
180.00	OCMW 5o 75W 20M	0.885
126.00	OCMW 10o 60W 30M	1.531
126.00	GWCMO 20G 30o 20W 30M	1.767
176.00	CGO 30G 70o	2.469
0.00	504' GIP	0.000

Total Length: 608.00 ft Total Volume: 6.652 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

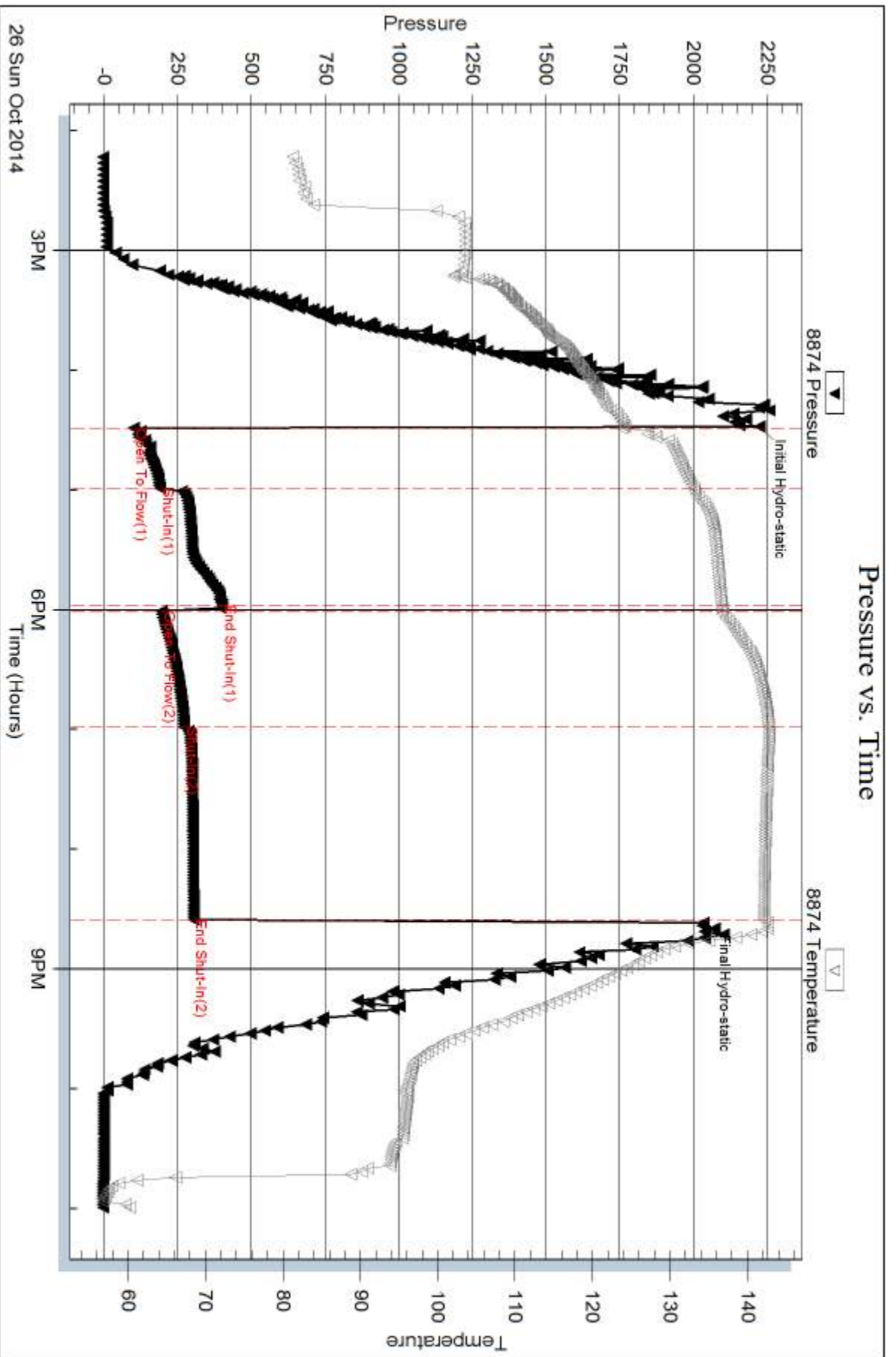
Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 24 @ 80 deg = 22 cor.

RW .16 @ 63 = 57000ppm

Pressure vs. Time

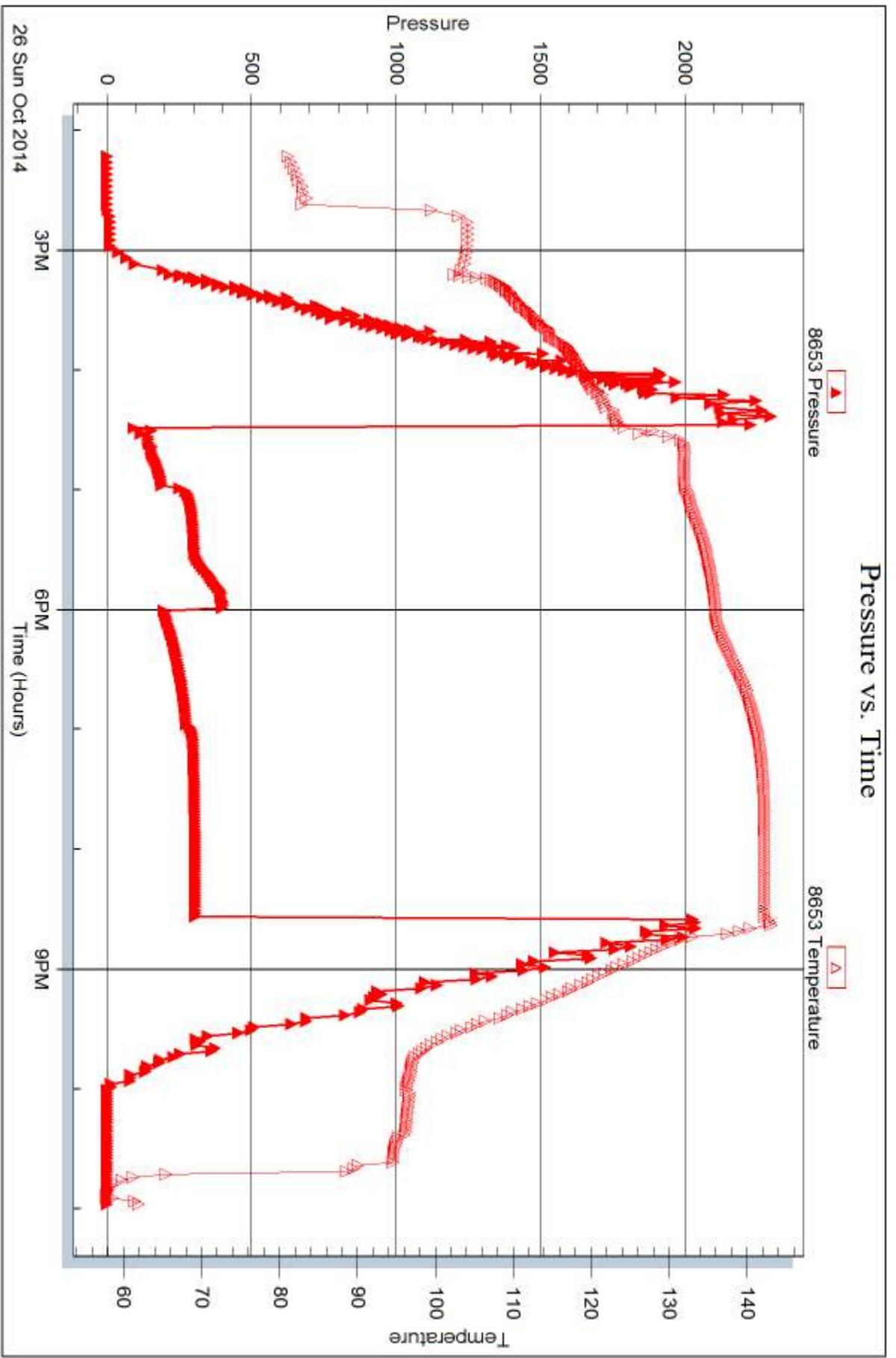


Serial #: 8653

Outside Murfin Drilling Co., Inc.

Burk Trust D#5-23

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 60196

Printed: 2014, 10:30 @ 16:49:56



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Robert Hendrix

Burk Trust D #5-23

23-1s-36w Rawlins,KS

Start Date: 2014.10.27 @ 09:45:00

End Date: 2014.10.27 @ 17:50:30

Job Ticket #: 60197 DST #: 3

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

Printed: 2014.10.30 @ 16:49:35



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60197

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.10.27 @ 09:45:00

GENERAL INFORMATION:

Formation: **LKC "G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:56:30
 Time Test Ended: 17:50:30
 Interval: **4336.00 ft (KB) To 4390.00 ft (KB) (TVD)**
 Total Depth: 4390.00 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: 3318.00 ft (KB)
 3307.00 ft (CF)
 KB to GR/CF: 11.00 ft

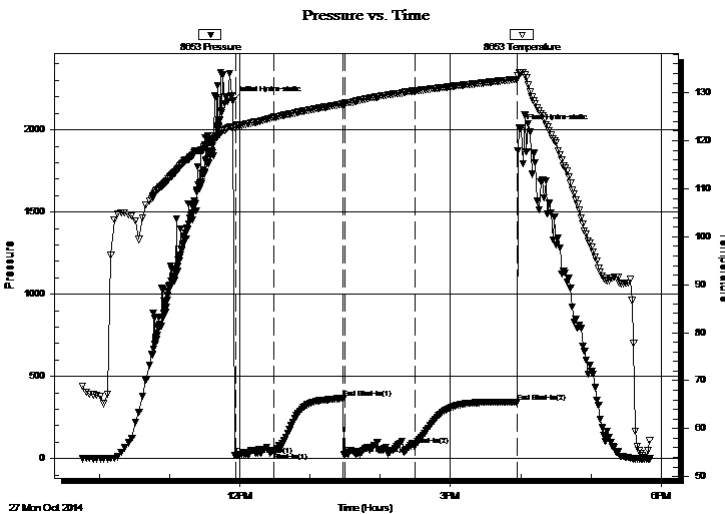
Serial #: 8653

Outside

Press@RunDepth: 83.21 psig @ 4337.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.27 End Date: 2014.10.27 Last Calib.: 2014.10.27
 Start Time: 09:46:00 End Time: 17:50:30 Time On Btm: 2014.10.27 @ 11:54:30
 Time Off Btm: 2014.10.27 @ 15:59:30

TEST COMMENT: 30 - IF- 1/4" Blow built to 1/2", hen died back to Surface Blow
 60 - ISI- No Return
 60 - FF- No Blow
 90 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2179.22	122.88	Initial Hydro-static
2	21.28	123.04	Open To Flow (1)
35	41.10	124.89	Shut-In(1)
94	367.91	127.67	End Shut-In(1)
95	26.90	127.79	Open To Flow (2)
155	83.21	130.38	Shut-In(2)
243	344.39	132.82	End Shut-In(2)
245	2005.04	134.17	Final Hydro-static

Recovery

Gas Rates

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

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-1s-36w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60197

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.10.27 @ 09:45:00

GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:56:30

Time Test Ended: 17:50:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4336.00 ft (KB) To 4390.00 ft (KB) (TVD)

Total Depth: 4390.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3318.00 ft (KB)

3307.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8874

Inside

Press@RunDepth: 341.57 psig @ 4337.00 ft (KB)

Start Date: 2014.10.27

End Date: 2014.10.27

Start Time: 09:46:00

End Time: 17:52:00

Capacity: 8000.00 psig

Last Calib.: 2014.10.27

Time On Btm:

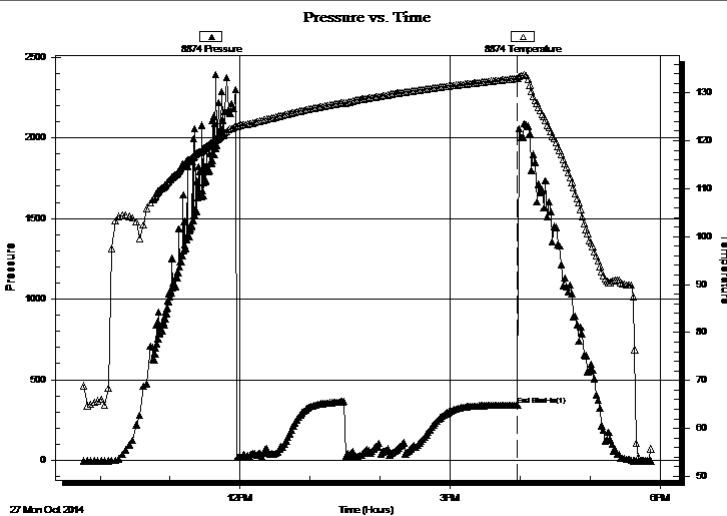
Time Off Btm:

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

60 - IS- No Return

60 - FF- No Blow

90 - FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	341.57	132.99	End Shut-In(1)

Recovery

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

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60197

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.10.27 @ 09:45:00

Tool Information

Drill Pipe:	Length: 4130.00 ft	Diameter: 3.80 inches	Volume: 57.93 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: 206.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 58.94 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4336.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4309.00	
Shut In Tool	5.00			4314.00	
Hydraulic tool	5.00			4319.00	
Jars	5.00			4324.00	
Safety Joint	3.00			4327.00	
Packer	5.00			4332.00	28.00 Bottom Of Top Packer
Packer	4.00			4336.00	
Stubb	1.00			4337.00	
Recorder	0.00	8653	Outside	4337.00	
Recorder	0.00	8874	Inside	4337.00	
Perforations	15.00			4352.00	
Change Over Sub	1.00			4353.00	
Drill Pipe	31.00			4384.00	
Change Over Sub	1.00			4385.00	
Bullnose	5.00			4390.00	54.00 Bottom Packers & Anchor

Total Tool Length: 82.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60197

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.10.27 @ 09:45:00

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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

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

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

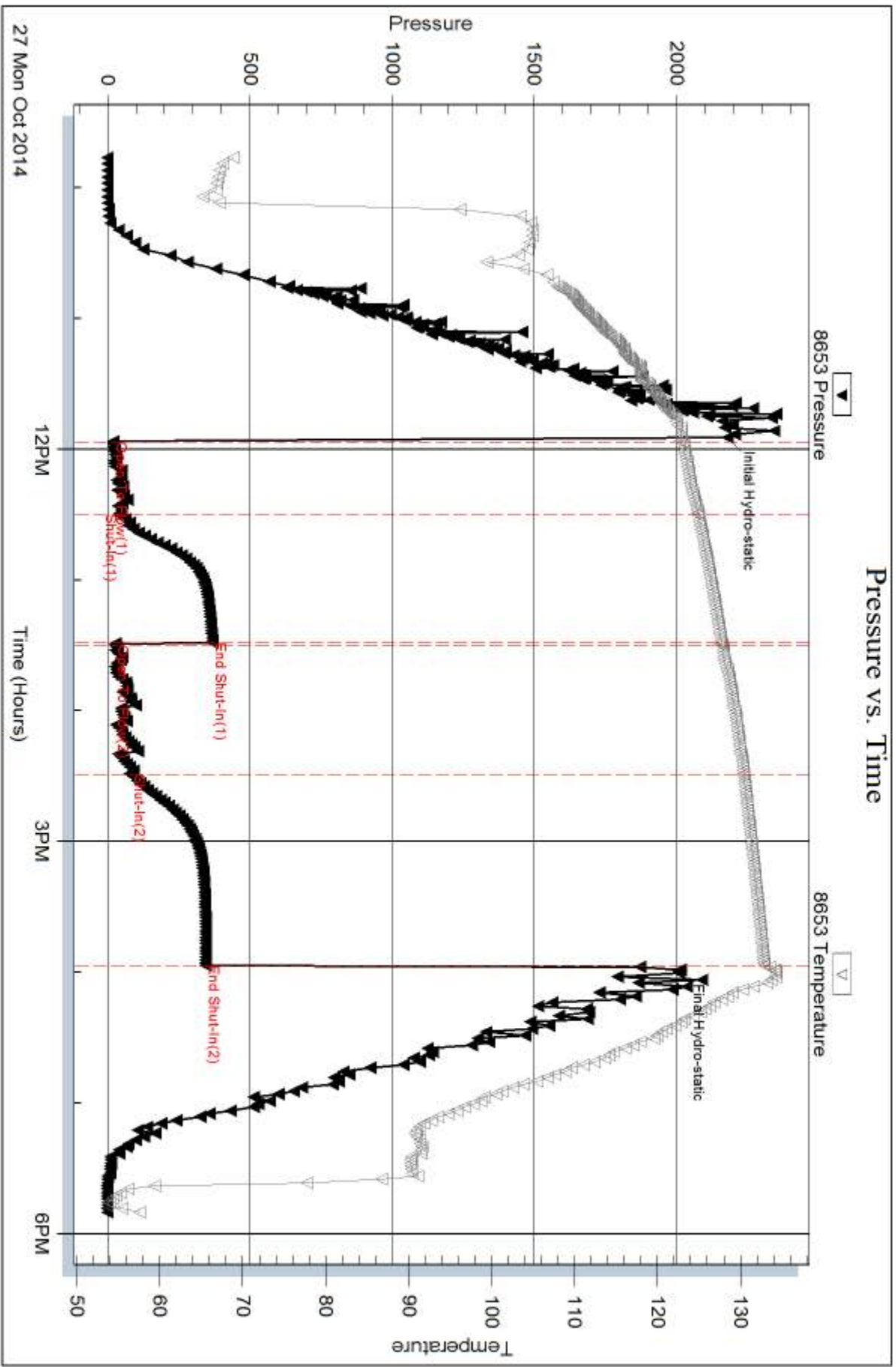
Recovery Comments:

Serial #: 8653

Outside Murfin Drilling Co., Inc.

Burk Trust D#5-23

DST Test Number: 3



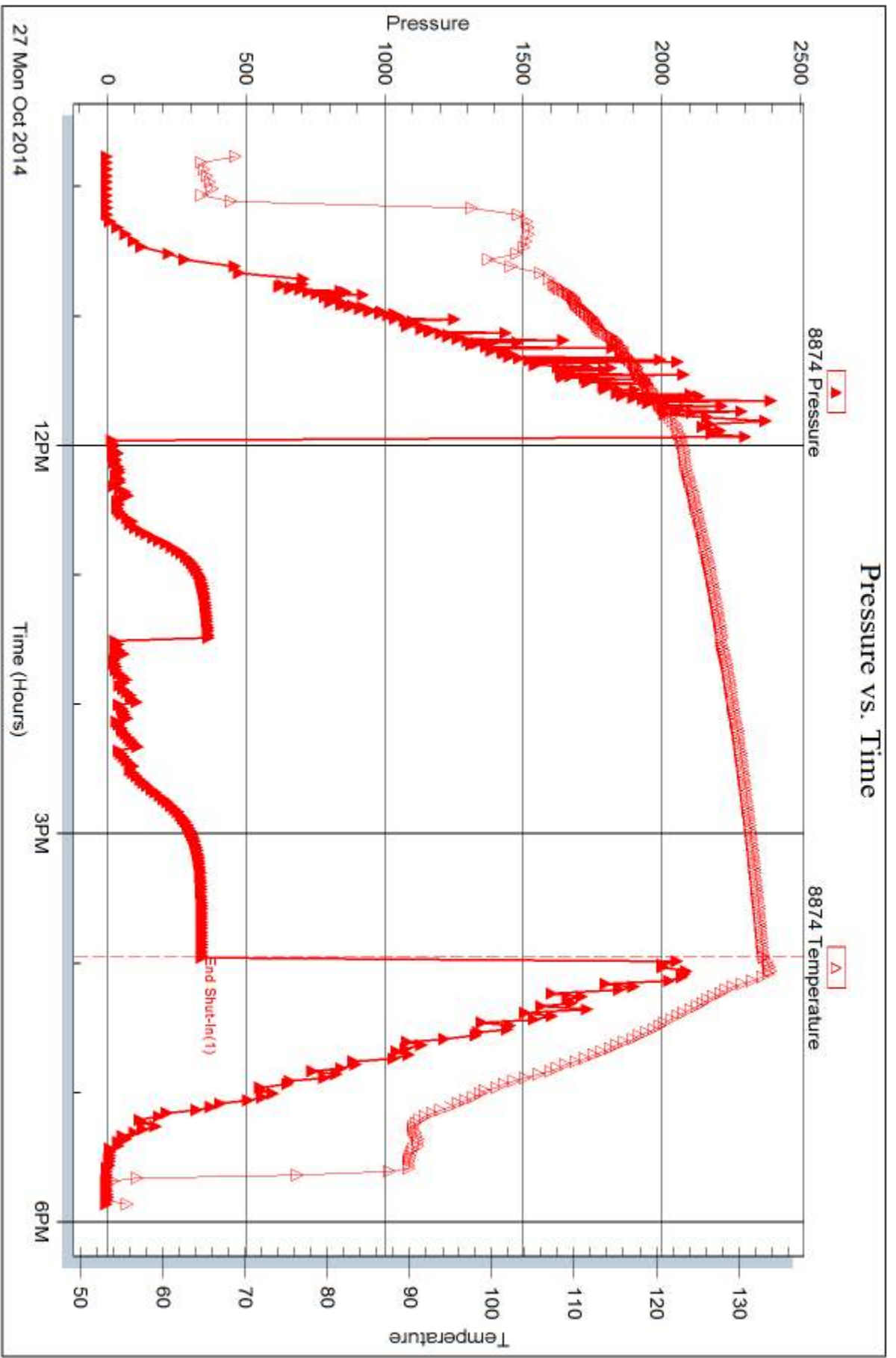
Serial #: 8874

Inside

Murfin Drilling Co., Inc.

Burk Trust D#5-23

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 60197

Printed: 2014, 10:30 @ 16:49:36



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Robert Hendrix

Burk Trust D #5-23

23-1s-36w Rawlins,KS

Start Date: 2014.10.28 @ 08:40:00

End Date: 2014.10.28 @ 17:25:00

Job Ticket #: 60198 DST #: 4

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

Printed: 2014.10.30 @ 16:48:06

Murfin Drilling Co., Inc.
23-1s-36w Rawlins,KS
Burk Trust D #5-23
DST # 4
LKC "H.J."
2014.10.28



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60198

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.10.28 @ 08:40:00

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:40:30

Time Test Ended: 17:25:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4382.00 ft (KB) To 4475.00 ft (KB) (TVD)

Reference Elevations: 3318.00 ft (KB)

Total Depth: 4475.00 ft (KB) (TVD)

3307.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8874

Inside

Press@RunDepth: 212.35 psig @ 4383.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.28

End Date:

2014.10.28

Last Calib.:

2014.10.28

Start Time:

08:41:00

End Time:

17:25:00

Time On Btm:

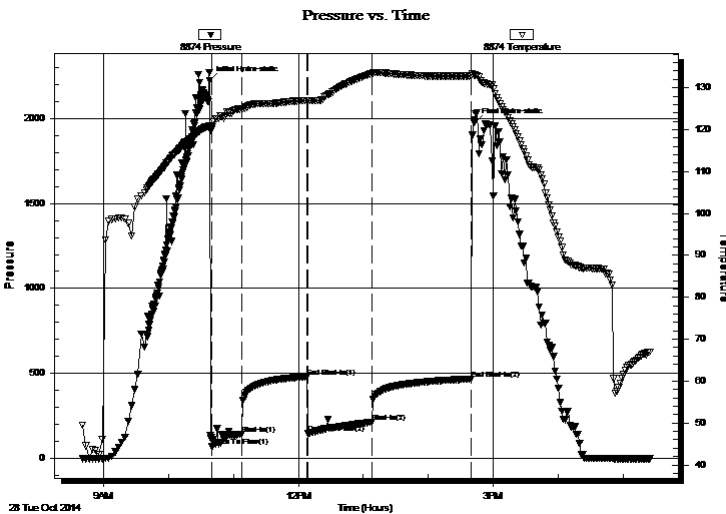
2014.10.28 @ 10:38:20

Time Off Btm:

2014.10.28 @ 14:42:30

TEST COMMENT: 30 - IF- 1/2" Blow built to BoB in 28 min.
60 - IS- No Return
60 - FF- Surface Blow started at 2 min. Built to BoB in 45 min.
90 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2224.20	120.76	Initial Hydro-static
3	68.18	120.68	Open To Flow (1)
30	141.28	124.96	Shut-In(1)
90	480.48	126.97	End Shut-In(1)
91	144.66	126.90	Open To Flow (2)
150	212.35	133.37	Shut-In(2)
241	466.78	132.82	End Shut-In(2)
245	1977.97	133.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OSMW 20M 80W (oil spots)	0.59
126.00	OCWM 10o 40W 50M	0.98
189.00	OCM 90M 10o	2.65

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

23-1s-36w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60198

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.10.28 @ 08:40:00

Tool Information

Drill Pipe:	Length: 4164.00 ft	Diameter: 3.80 inches	Volume: 58.41 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: 206.00 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 59.42 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4382.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	93.00 ft			
Tool Length:	121.00 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			4355.00	
Shut In Tool	5.00			4360.00	
Hydraulic tool	5.00			4365.00	
Jars	5.00			4370.00	
Safety Joint	3.00			4373.00	
Packer	5.00			4378.00	28.00 Bottom Of Top Packer
Packer	4.00			4382.00	
Stubb	1.00			4383.00	
Recorder	0.00	8653	Outside	4383.00	
Recorder	0.00	8874	Inside	4383.00	
Perforations	22.00			4405.00	
Change Over Sub	1.00			4406.00	
Drill Pipe	63.00			4469.00	
Change Over Sub	1.00			4470.00	
Bullnose	5.00			4475.00	93.00 Bottom Packers & Anchor

Total Tool Length: 121.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-1s-36w Rawlins,KS

250 N Water STE #300
Wichita, KS 67202

Burk Trust D #5-23

Job Ticket: 60198

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.10.28 @ 08:40:00

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:

38000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	OSMW 20M 80W (oil spots)	0.590
126.00	OCWM 10o 40W 50M	0.984
189.00	OCM 90M 10o	2.651

Total Length: 435.00 ft Total Volume: 4.225 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .24 @ 59 deg= 38,000ppm

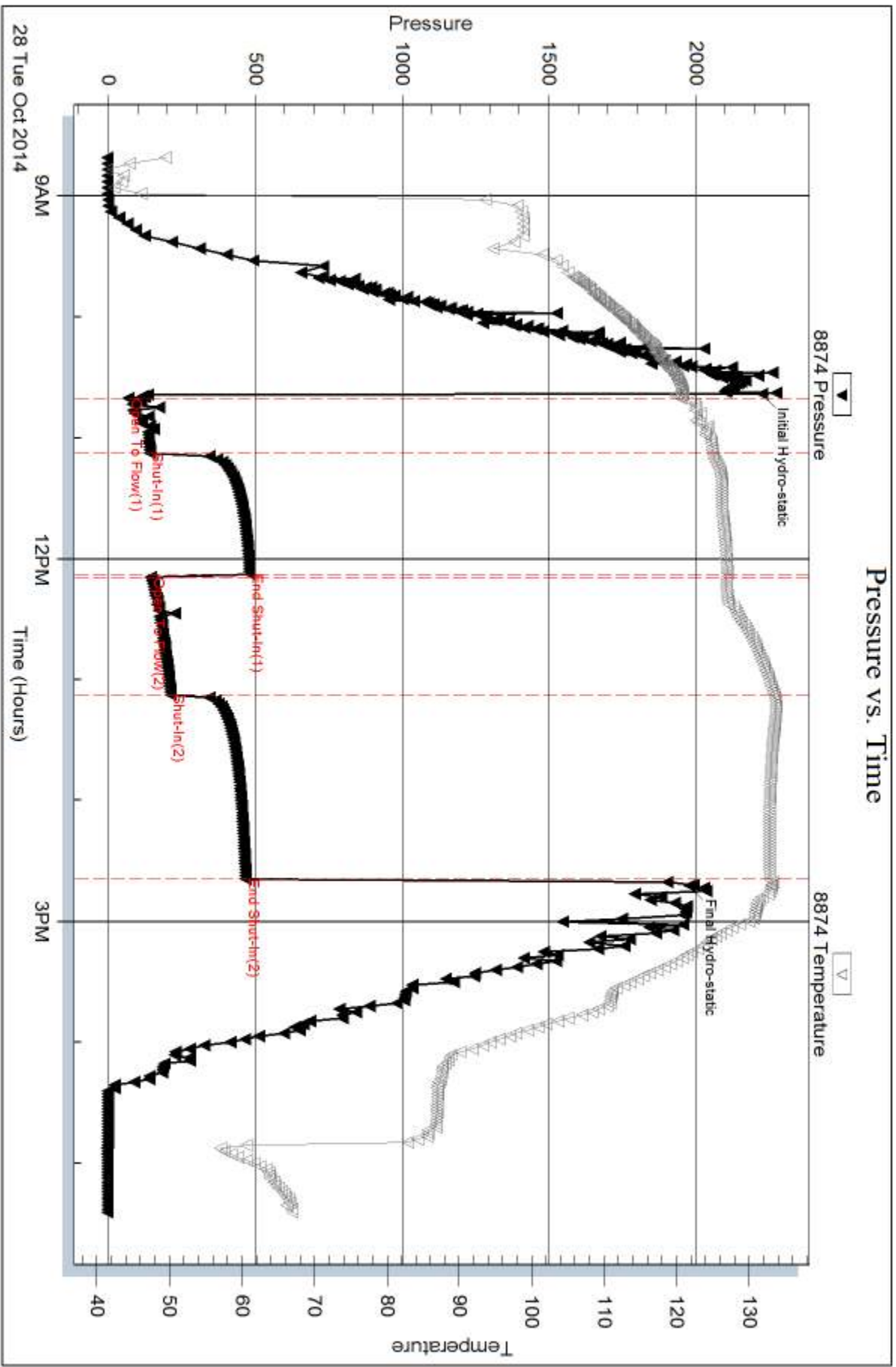
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Inside

Murfin Drilling Co., Inc.

Burk Trust D#5-23

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 60198

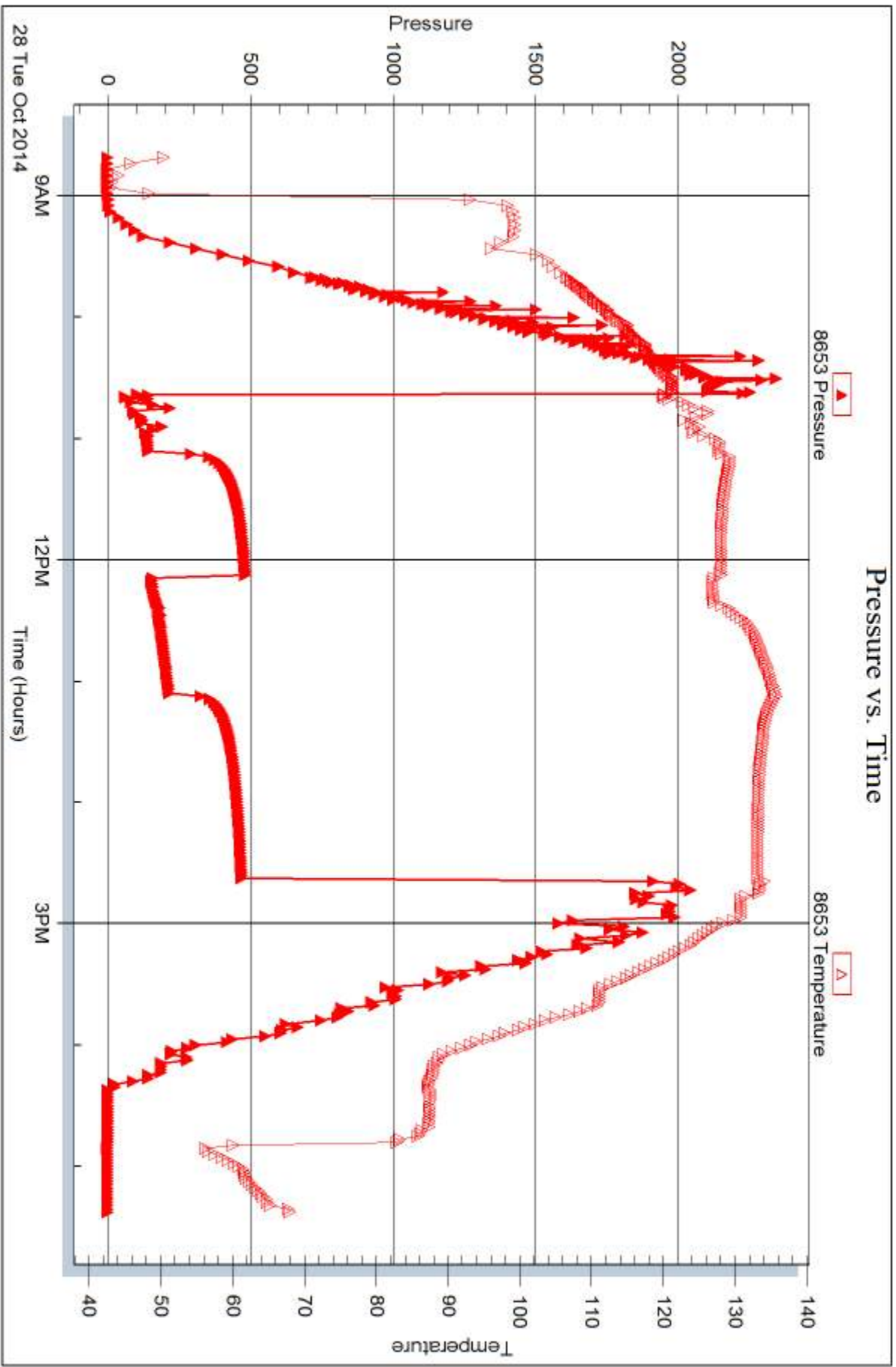
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Serial #: 8653

Outside Murfin Drilling Co., Inc.

Burk Trust D#5-23

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 60198

Printed: 2014, 10:30 @ 16:48:07



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60195

4/10

Well Name & No. Burk Trust D#5-23 Test No. 1 Date 10-25-14
 Company Murfin Drilling Co., Inc Elevation 3318 KB 3307 GL
 Address 2508 N Water STE #300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrik Rig Murfin #2
 Location: Sec. 23 Twp. 1S Rge. 36W Co. Rawlins State KS

Interval Tested 4111-4157 Zone Tested Orend
 Anchor Length 46' Drill Pipe Run 3907 Mud Wt. 9.1
 Top Packer Depth 4107 Drill Collars Run 206 Vis 65
 Bottom Packer Depth 4111 Wt. Pipe Run 0 WL 6.4
 Total Depth 4157 Chlorides 700 ppm System LCM 11#
 Blow Description IF - 1/4" Blow built to 3/4"
ISI - No Return
FF - No Blow
FSI - No Return

Rec	Feet of	%gas	SPOTS	%oil	%water	%mud
<u>20</u>	<u>OSM</u>				<u>100</u>	
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud

Rec Total 20' BHT 131 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2118</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>8:55 AM</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>9:53 AM</u>
(C) First Final Flow <u>30</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>12:13 PM</u>
(D) Initial Shut-In <u>111</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>4:13 PM</u>
(E) Second Initial Flow <u>23</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>6:13 PM</u>
(F) Second Final Flow <u>31</u>	<input checked="" type="checkbox"/> Mileage <u>108 RT</u> 167.40	Comments
(G) Final Shut-In <u>111</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1960</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>1742.40</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1742.40</u>	

Approved By _____ Our Representative

TriLOBite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60196

Well Name & No. Buck Trust D #5-23 Test No. 2 Date 10-26-14
 Company Murfin Drilling Co., Inc. Elevation 3318 KB 3307 GL
 Address 250 N Water STE # 3000 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 23 Twp. 1S Rge. 36W Co. Rawlins State KS

Interval Tested 4226-4234 4324 Zone Tested LKC "D"
 Anchor Length 58' Drill Pipe Run _____ Mud Wt. 9.1
 Top Packer Depth 4262 Drill Collars Run 2006 Vis 64
 Bottom Packer Depth 4266 Wt. Pipe Run 0 WL 7.2
 Total Depth 4234 Chlorides 700 ppm System LCM 10#

Blow Description IF - BoB in 10 min.
ISI - Surface Return started at 3 min. Built to 3 3/4"
FF - BoB in 19 min
FSI - Surface Return started at 1 min. Built to 8 3/4"

Rec	Feet of	%gas	%oil	%water	%mud
<u>176</u>	<u>CGO</u>	<u>30</u>	<u>70</u>		
<u>126</u>	<u>GWCMO</u>	<u>20</u>	<u>30</u>	<u>20</u>	<u>30</u>
<u>126</u>	<u>OCMW</u>		<u>10</u>	<u>60</u>	<u>30</u>
<u>180</u>	<u>OCMW</u>		<u>5</u>	<u>75</u>	<u>20</u>

Rec Total 608' BHT 142 Gravity 22 API RW 0.16 @ 63 °F Chlorides 57,000 ppm

(A) Initial Hydrostatic 2224 Test 1250 T-On Location 2:10 PM
 (B) First Initial Flow 1000 Jars 250 T-Started 2:12 PM
 (C) First Final Flow 184 Safety Joint 75 T-Open 4:30 PM
 (D) Initial Shut-In 400 Circ Sub _____ T-Pulled 8:30 PM
 (E) Second Initial Flow 195 Hourly Standby _____ T-Out 11:00 PM
 (F) Second Final Flow 271 Mileage 108 RT 167.40 Comments 504' GIP
 (G) Final Shut-In 302 Sampler _____
 (H) Final Hydrostatic 2034 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____

Initial Open 30 Sub Total 0
 Initial Shut-In 60 Total 1742.40
 Final Flow 60 MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1742.400

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60197

Well Name & No. Burk Trust D #5-23 Test No. 3 Date 10-27-14
 Company Murphy Drilling Co., Inc. Elevation 3318 KB 3307 GL
 Address 2508 N Water STE #300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murphy #2
 Location: Sec. 23 Twp. 1S Rge. 26W Co. Rawlins State KS

Interval Tested 4336 - 4390 Zone Tested LKC "6"
 Anchor Length 54' Drill Pipe Run 4130' Mud Wt. 9.3
 Top Packer Depth 4332 Drill Collars Run 206 Vis 62
 Bottom Packer Depth 4336 Wt. Pipe Run 0 WL 7.2
 Total Depth 4390 Chlorides 800 ppm System LCM 9#
 Blow Description IF - 1/4" Blow built to 1/2", then died back to surface Blow
ISI - No Return
FF - No Blow
FST - No Return

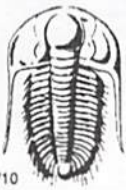
Rec	Feet of	%gas	SPOTS	%oil	%water	%mud
<u>108</u>	<u>OSM</u>				<u>1000</u>	
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud
Rec	Feet of	%gas		%oil	%water	%mud

Rec Total 108' BHT 133 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2179</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>9:30 AM</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>9:45 AM</u>
(C) First Final Flow <u>41</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>12:00 PM</u>
(D) Initial Shut-In <u>367</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>4:00 PM</u>
(E) Second Initial Flow <u>26</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>5:52 PM</u>
(F) Second Final Flow <u>83</u>	<input checked="" type="checkbox"/> Mileage <u>108 RT</u> 167.40	Comments
(G) Final Shut-In <u>344 344</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2005</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>300</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>600</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>1742.40</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1742.40</u>	

Approved By _____ Our Representative

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60198

Well Name & No. Buck Trust D#5-23 Test No. 4 Date 10-28-14
 Company Murfin Drilling Co., Inc. Elevation 3318 KB 3307 GL
 Address 2500 N Water STE # 3000 Wichita, KS 67202
 Co. Rep / Geo. Robert Henrix Rig Murfin #2
 Location: Sec. 23 Twp. 15 Rge. 36W Co. Rawlins State KS

Interval Tested 4382-4475 Zone Tested LKC "H-J"
 Anchor Length 93' Drill Pipe Run 4164' Mud Wt. 9.2
 Top Packer Depth 4378 Drill Collars Run 206' Vis 56
 Bottom Packer Depth 4382 Wt. Pipe Run 0' WL 6.4
 Total Depth 4475 Chlorides 700 ppm System LCM 12#
 Blow Description IF - 1/2" Blow built to BoB in 28 min.
ISI - No Return
PF - Surface Blow started at 2 min. Built to BoB in 45 min.
FST - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>189</u>	<u>CCM</u>	<u>10</u>		<u>90</u>	
<u>126</u>	<u>CCM</u>	<u>10</u>	<u>40</u>	<u>50</u>	
<u>120</u>	<u>OS MW</u>	<u>SPOTS</u>	<u>80</u>	<u>20</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 435 BHT 133 Gravity - API RW 24 @ 59 °F Chlorides 38,000 ppm

(A) Initial Hydrostatic <u>2224</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>8:35 AM</u>
(B) First Initial Flow <u>68</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>8:40 AM</u>
(C) First Final Flow <u>141</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:40 AM</u>
(D) Initial Shut-In <u>480</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>2:40 PM</u>
(E) Second Initial Flow <u>144</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>4:26 PM</u>
(F) Second Final Flow <u>212</u>	<input checked="" type="checkbox"/> Mileage <u>108 RT</u> 167.40	Comments
(G) Final Shut-In <u>466</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1977</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>300</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>600</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>600</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>900</u>	<input type="checkbox"/> Day Standby	Total <u>1742.40</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1742.40</u>	

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