



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling CO**

250 N. Water
STE 300
Wichita KS 6702

ATTN: Jeff Christian

24 5s 30w Decatur KS

Bastin 1-24

Start Date: 2008.08.01 @ 09:50:00

End Date: 2008.08.01 @ 17:45:00

Job Ticket #: 32078 DST #: 1

KCC
NOV 25 2008
CONFIDENTIAL

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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NOV 26 2008

CONSERVATION DIVISION
WICHITA, KS



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling CO

250 N. Water
STE 300
Wichita KS 6702
ATTN: Jeff Christian

Bastin 1-24

24 5s 30w Decatur KS

Job Ticket: 32078

DST#: 1

Test Start: 2008.08.01 @ 09:50:00

GENERAL INFORMATION:

Formation: **Toronto LKC A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:58:00

Time Test Ended: 17:45:00

Test Type: Conventional Bottom Hole

Tester: Jake Fahrenbruch

Unit No: 43

Interval: **3849.00 ft (KB) To 3927.00 ft (KB) (TVD)**

Total Depth: 3927.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2818.00 ft (KB)

2813.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8352 Inside

Press@RunDepth: 129.62 psig @ 3850.00 ft (KB)

Start Date: 2008.08.01

End Date: 2008.08.01

Capacity: 7000.00 psig

Last Calib.: 2008.08.01

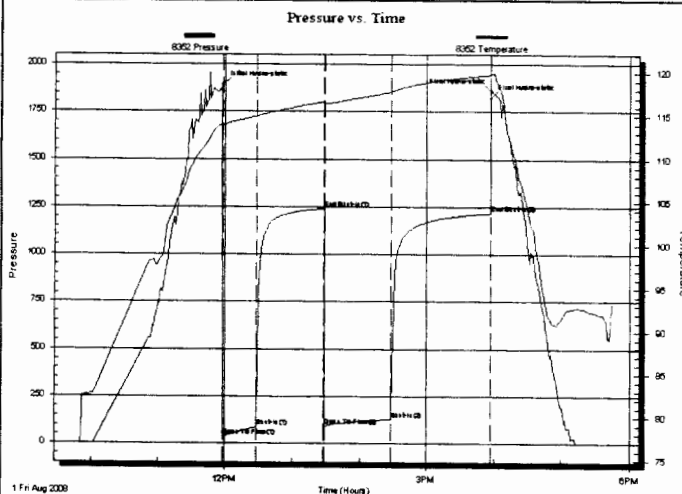
Start Time: 09:50:02

End Time: 17:45:00

Time On Btm: 2008.08.01 @ 11:57:40

Time Off Btm: 2008.08.01 @ 15:57:00

TEST COMMENT: IF Light blow built to 4.5"
ISI Bled off no blow back
FF Light blow built to 6"
FSI Bled off no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1888.63	114.16	Initial Hydro-static
1	34.93	113.28	Open To Flow (1)
31	88.91	114.94	Shut-In (1)
91	1238.94	116.61	End Shut-In (1)
91	93.23	116.26	Open To Flow (2)
151	129.62	117.80	Shut-In (2)
239	1216.70	119.77	End Shut-In (2)
240	1820.46	120.00	Final Hydro-static
241	1854.07	119.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	SOSWCM Trace oil 25%w 75% m	0.59
120.00	SOSM Trace oil 100% m	1.15
0.00	Chlorides=25,500ppm	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO

Bastin 1-24

250 N. Water
STE 300
Wichita KS 6702
ATTN: Jeff Christian

24 5s 30w Decatur KS

Job Ticket: 32078

DST#: 1

Test Start: 2008.08.01 @ 09:50:00

Tool Information

Drill Pipe:	Length: 3674.00 ft	Diameter: 3.80 inches	Volume: 51.54 bbl	Tool Weight:	3000.00 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: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose:	70000.00 lb
		Total Volume:	52.42 bbl	Tool Chased	6.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3849.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	78.00 ft				
Tool Length:	98.00 ft				
Number of Packers:	1	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3834.00	
Hydraulic tool	5.00			3839.00	
Packer	5.00			3844.00	20.00 Bottom Of Top Packer
Packer	5.00			3849.00	
Stubb	1.00			3850.00	
Recorder	0.00	8352	Inside	3850.00	
Recorder	0.00	6799	Inside	3850.00	
Perforations	8.00			3858.00	
Blank Spacing	66.00			3924.00	
Bullnose	3.00			3927.00	78.00 Bottom Packers & Anchor
Total Tool Length:	98.00				

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WICHITA, KS



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO

Bastin 1-24

250 N. Water
STE 300
Wichita KS 6702
ATTN: Jeff Christian

24 5s 30w Decatur KS

Job Ticket: 32078 **DST#: 1**

Test Start: 2008.08.01 @ 09:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 7.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 6.79 in³

Resistivity: ohm.m

Salinity: 800.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	SOSWCM Trace oil 25%w 75%m	0.590
120.00	SOSM Trace oil 100%m	1.146
0.00	Chlorides=25,500ppm	0.000

Total Length: 240.00 ft

Total Volume: 1.736 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 1

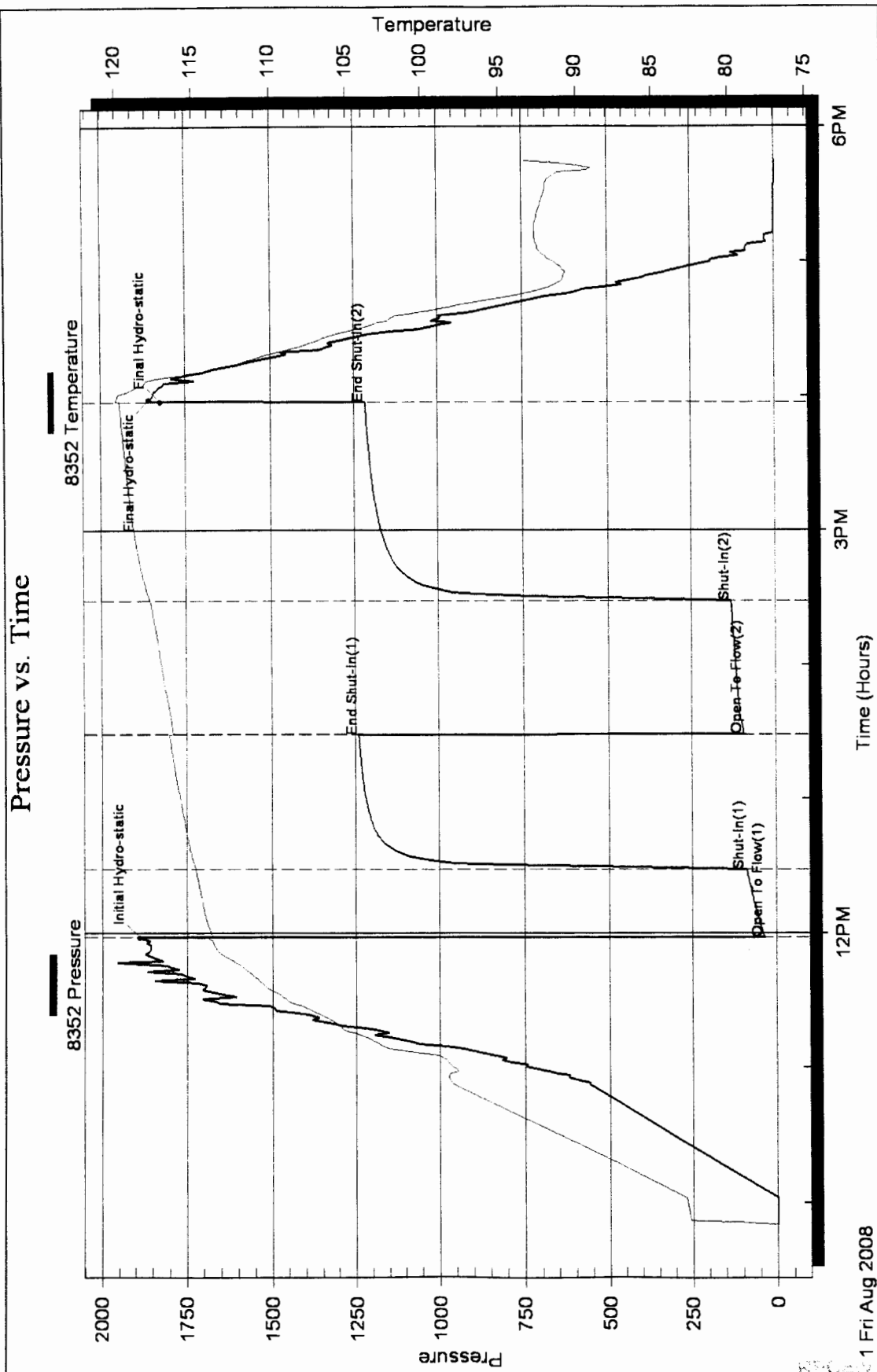
24 5s 30w Decatur KS

Murfin Drilling CO

Inside

Serial #: 8352

Pressure vs. Time



KANSAS CORPORATION COMMISSION

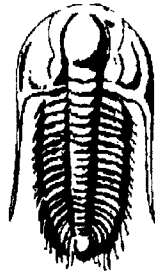
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WICHITA, KS

Ref. No: 32078

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling CO**

250 N. Water
STE 300
Wichita KS 6702

ATTN: Jeff Christian

24 5s 30w Decatur KS

Bastin 1-24

Start Date: 2008.08.02 @ 02:30:00

End Date: 2008.08.02 @ 09:38:30

Job Ticket #: 320079 DST #: 2

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PO Box 1733 Hays, KS 67601
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WICHITA, KS



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling CO

250 N. Water
STE 300
Wichita KS 6702
ATTN: Jeff Christian

Bastin 1-24

24 5s 30w Decatur KS

Job Ticket: 320079

DST#: 2

Test Start: 2008.08.02 @ 02:30:00

GENERAL INFORMATION:

Formation: **LKC "E-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:19:00

Time Test Ended: 09:38:30

Test Type: Conventional Bottom Hole

Tester: Jake Fahrenbruch

Unit No: 43

Interval: **3944.00 ft (KB) To 3972.00 ft (KB) (TVD)**

Total Depth: 3972.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2818.00 ft (KB)

2813.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8352

Inside

Press@RunDepth: 20.45 psig @ 3945.00 ft (KB)

Start Date: 2008.08.02

End Date:

2008.08.02

Start Time: 02:30:02

End Time:

09:38:30

Capacity: 7000.00 psig

Last Calib.: 2008.08.02

Time On Btm: 2008.08.02 @ 04:18:50

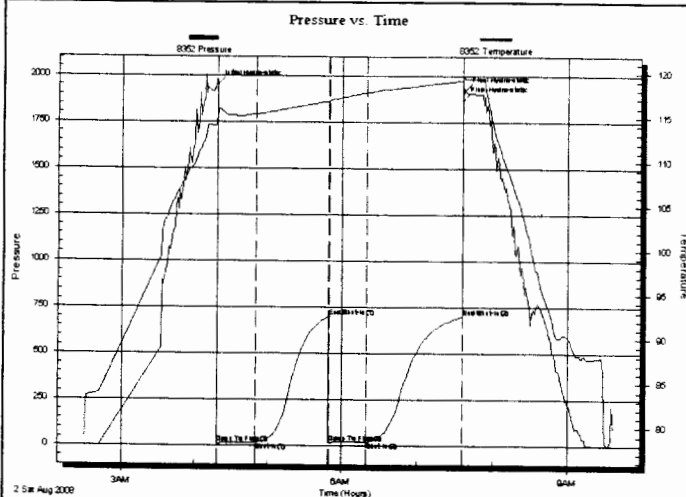
Time Off Btm: 2008.08.02 @ 07:36:19

TEST COMMENT: IF Very weak blow built to .5" in 12 minutes dead after 27 minutes

ISI No blow back

FF No blow

FSI No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1951.95	115.65	Initial Hydro-static
1	14.13	114.73	Open To Flow (1)
32	16.53	115.31	Shut-In(1)
91	699.95	116.80	End Shut-In(1)
91	18.71	116.75	Open To Flow (2)
122	20.45	117.76	Shut-In(2)
198	699.34	119.16	End Shut-In(2)
198	1867.64	119.78	Final Hydro-static
199	1921.06	119.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	SOCM 5%o 95% m	0.05

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO

Bastin 1-24

250 N. Water
STE 300
Wichita KS 6702
ATTN: Jeff Christian

24 5s 30w Decatur KS
Job Ticket: 320079 **DST#: 2**
Test Start: 2008.08.02 @ 02:30:00

Tool Information

Drill Pipe:	Length: 3770.00 ft	Diameter: 3.80 inches	Volume: 52.88 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: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose:	55000.00 lb
		Total Volume:	53.76 bbl	Tool Chased	5.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3944.00 ft			Final	45000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	28.00 ft				
Tool Length:	48.00 ft				
Number of Packers:	1	Diameter:	6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3929.00	
Hydraulic tool	5.00			3934.00	
Packer	5.00			3939.00	20.00 Bottom Of Top Packer
Packer	5.00			3944.00	
Stubb	1.00			3945.00	
Recorder	0.00	8352	Inside	3945.00	
Recorder	0.00	6799	Inside	3945.00	
Perforations	24.00			3969.00	
Bullnose	3.00			3972.00	28.00 Bottom Packers & Anchor
Total Tool Length:	48.00				

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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO

Bastin 1-24

250 N. Water

24 5s 30w Decatur KS

STE 300

Job Ticket: 320079

DST#: 2

Wichita KS 6702

ATTN: Jeff Christian

Test Start: 2008.08.02 @ 02:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 7.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	SOOM 5%o 95%m	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:

DST Test Number: 2

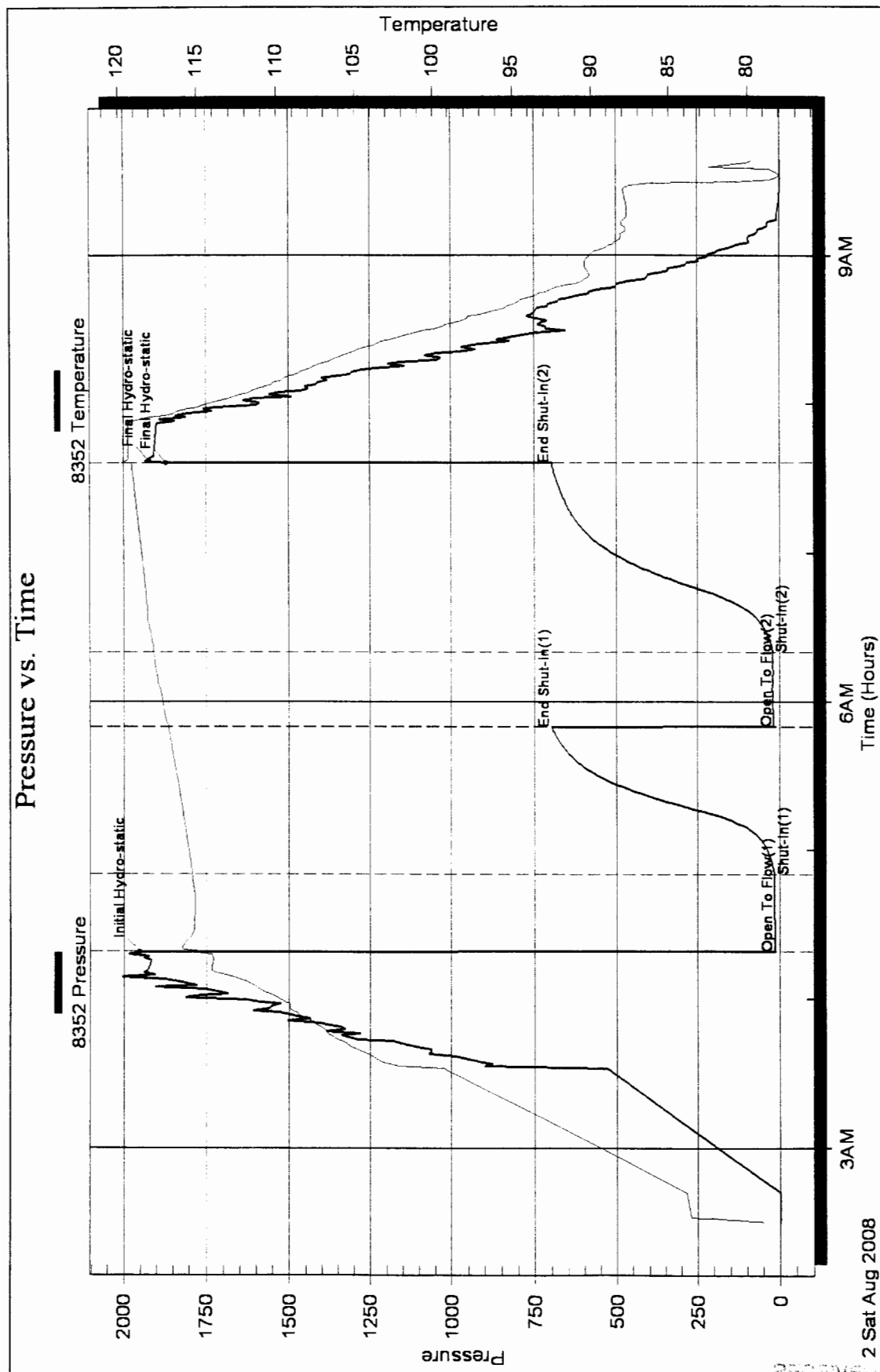
24 5s 30w Decatur KS

Murfin Drilling CO

Inside

Serial #: 8352

Pressure vs. Time



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WICHITA, KS

Ref. No: 320079

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DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling CO**

250 N. Water
STE 300
Wichita KS 6702

ATTN: Jeff Christian

24 5s 30w Decatur KS

Bastin 1-24

Start Date: 2008.08.03 @ 01:13:00

End Date: 2008.08.03 @ 10:17:49

Job Ticket #: 32080 DST #: 3

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DRILL STEM TEST REPORT

Murfin Drilling CO

250 N. Water
STE 300
Wichita KS 6702
ATTN: Jeff Christian

Bastin 1-24

24 5s 30w Decatur KS

Job Ticket: 32080

DST#: 3

Test Start: 2008.08.03 @ 01:13:00

GENERAL INFORMATION:

Formation: **LKC "H-K"**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 03:32:50

Time Test Ended: 10:17:49

Test Type: **Conventional Bottom Hole**

Tester: **Jake Fahrenbruch**

Unit No: **43**

Interval: **3991.00 ft (KB) To 4084.00 ft (KB) (TVD)**

Total Depth: **4084.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2818.00 ft (KB)**

2813.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 8352

Inside

Press@RunDepth: **116.70 psig @ 3992.00 ft (KB)**

Start Date: **2008.08.03**

End Date: **2008.08.03**

Start Time: **01:13:02**

End Time: **10:17:49**

Capacity: **7000.00 psig**

Last Calib.: **2008.08.03**

Time On Btm: **2008.08.03 @ 03:32:30**

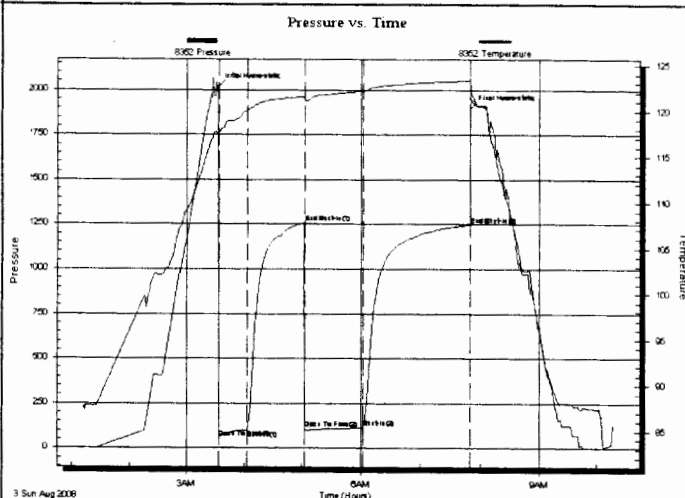
Time Off Btm: **2008.08.03 @ 07:50:19**

TEST COMMENT: IF Fair blow built to 10 1/4"

ISI Bled off blow back built to 1/4" died after 30min

FF Fair blow built to BOB in 35min

FSI Bled off blow built to 3/4" died after 18min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2016.72	117.63	Initial Hydro-static
1	57.70	117.42	Open To Flow (1)
31	97.28	120.09	Shut-In (1)
90	1256.85	121.56	End Shut-In (1)
90	107.89	121.20	Open To Flow (2)
150	116.70	122.23	Shut-In (2)
258	1247.47	123.35	End Shut-In (2)
258	1898.60	123.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
210.00	G&OCM 10%g 23%o 67%m	1.32
50.00	Gassy clean oil 10%g 90%m	0.70
0.00	160' GIP	0.00

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO

250 N. Water
STE 300
Wichita KS 6702
ATTN: Jeff Christian

Bastin 1-24

24 5s 30w Decatur KS

Job Ticket: 32080

DST#: 3

Test Start: 2008.08.03 @ 01:13:00

Tool Information

Drill Pipe:	Length: 3800.00 ft	Diameter: 3.80 inches	Volume: 53.30 bbl	Tool Weight:	3000.00 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: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose:	55000.00 lb
		Total Volume:	54.18 bbl	Tool Chased	6.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3991.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	93.00 ft				
Tool Length:	113.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3976.00	
Hydraulic tool	5.00			3981.00	
Packer	5.00			3986.00	20.00 Bottom Of Top Packer
Packer	5.00			3991.00	
Stubb	1.00			3992.00	
Recorder	0.00	8352	Inside	3992.00	
Recorder	0.00	6799	Inside	3992.00	
Perforations	23.00			4015.00	
Blank Spacing	66.00			4081.00	
Bullnose	3.00			4084.00	93.00 Bottom Packers & Anchor
Total Tool Length:	113.00				

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FLUID SUMMARY

Murfin Drilling CO

Bastin 1-24

250 N. Water

24 5s 30w Decatur KS

STE 300

Job Ticket: 32080

DST#: 3

Wichita KS 6702

ATTN: Jeff Christian

Test Start: 2008.08.03 @ 01:13:00

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:

bbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
210.00	G&OCM 10%g 23%o 67%m	1.315
50.00	Gassy clean oil 10%g 90%m	0.701
0.00	160' GIP	0.000

Total Length: 260.00 ft

Total Volume: 2.016 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

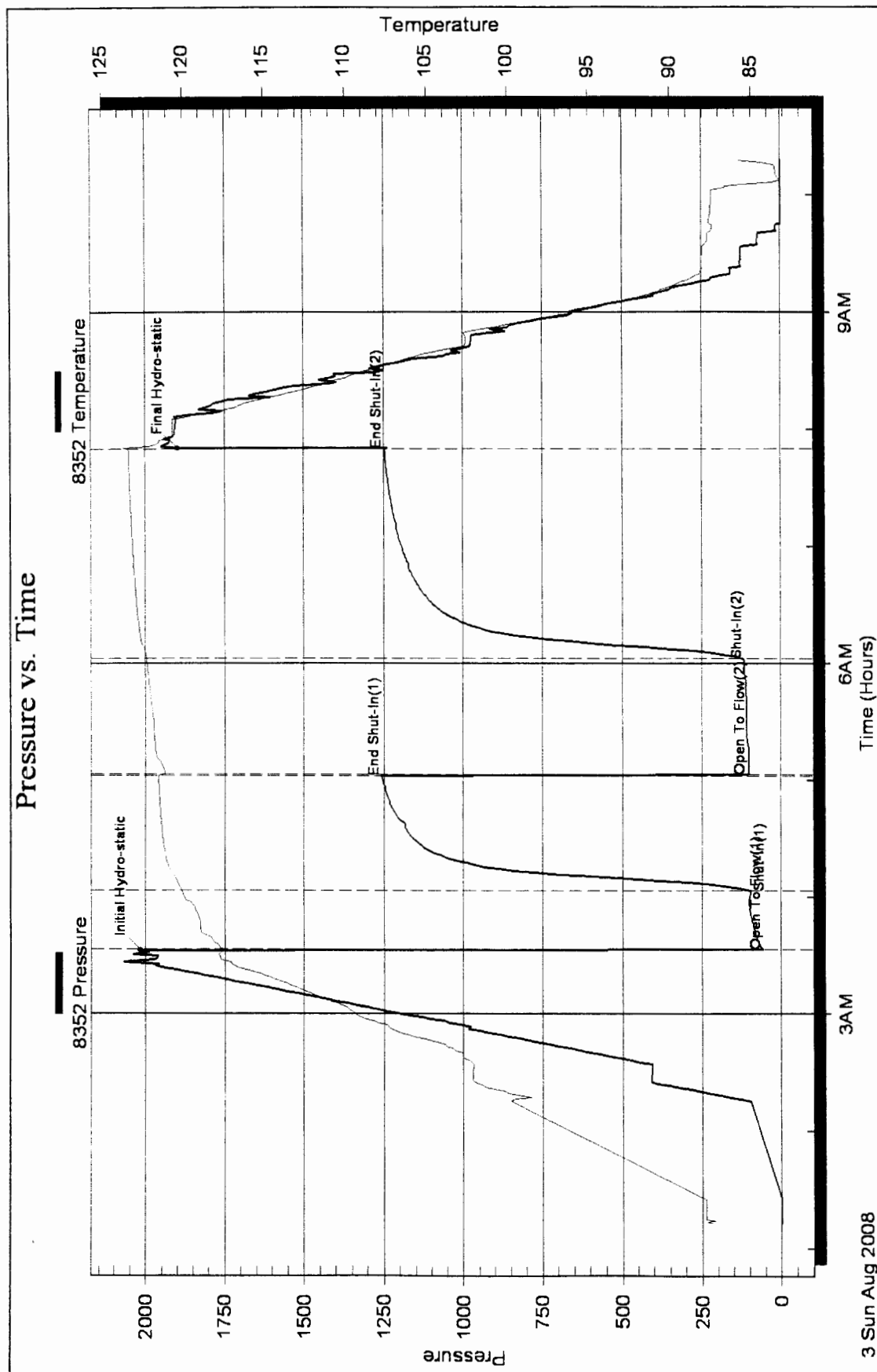
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 31.5 Corrected Gravity

Pressure vs. Time



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