

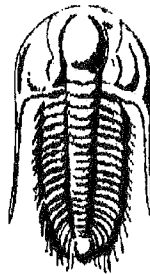
15-145-21580

31-22s-15w

CONFIDENTIAL

JUN 19 2009

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg.Co.Inc.**

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

31-22s-15w Pawnee Ks

Bowman A#1-31

Start Date: 2009.02.22 @ 04:48:05

End Date: 2009.02.22 @ 11:13:20

Job Ticket #: 33999 DST #: 1

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JUN 19 2009

KCC WICHITA

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drlg.Co.Inc.

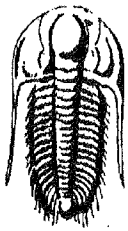
Bowman A#1-31

31-22s-15w Pawnee Ks

DST # 1

Tarkio SS

2009.02.22



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co. Inc.

250 N. Water, Ste. 300
Wichita, KS 67202

ATTN: Bob Stolze

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 33999

DST#: 1

Test Start: 2009.02.22 @ 04:48:05

GENERAL INFORMATION:

Formation: **Tarkio SS**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:34:35

Time Test Ended: 11:13:20

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 39

Interval: **2847.00 ft (KB) To 2880.00 ft (KB) (TVD)**

Total Depth: 2880.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2015.00 ft (KB)

2010.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8167 Inside

Press@RunDepth: 88.66 psig @ 2848.00 ft (KB)

Start Date: 2009.02.22 End Date: 2009.02.22

Start Time: 04:48:10 End Time: 11:13:19

Capacity: 7000.00 psig

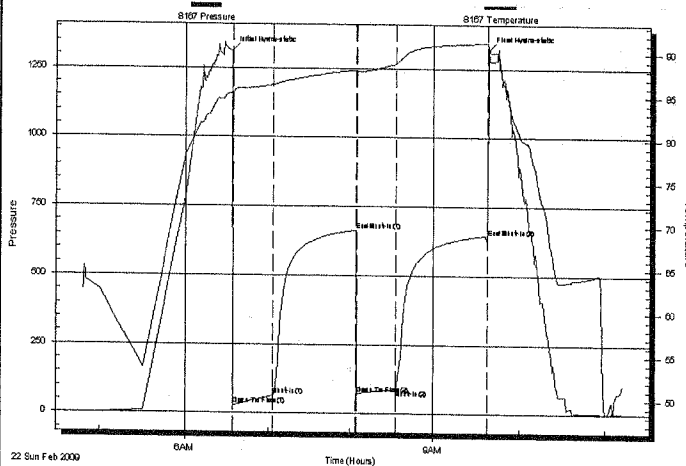
Last Calib.: 2009.02.22

Time On Btm: 2009.02.22 @ 06:33:50

Time Off Btm: 2009.02.22 @ 09:38:19

TEST COMMENT: IF: Fair to strong blow BOB in 14 mins
IS: No blow
FF: Fair blow Slow increase to 13 1/2"
FSI: Weak blow 1/4" or less

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1310.84	85.30	Initial Hydro-static
1	28.79	85.23	Open To Flow (1)
30	64.29	86.37	Shut-In (1)
91	664.37	88.09	End Shut-In (1)
91	72.58	87.93	Open To Flow (2)
120	88.66	88.84	Shut-In (2)
184	641.65	91.27	End Shut-In (2)
185	1319.19	90.79	Final Hydro-static

Recovery

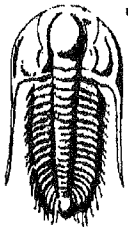
Length (ft)	Description	Volume (bbl)
60.00	WM 49%w 51% m/ Rw .2 ohms @ 51 deg	0.30
95.00	Drlg. mud	0.79
0.00	275 ft. of GIP	0.00

Gas Rates

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

JUN 19 2009

TOOL DIAGRAM


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfine Drig.Co.Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolze

Bowman A#131

31-22s-15w Pawnee Ks

Job Ticket: 33999

DST#: 1

Test Start: 2009.02.22 @ 04:48:05

Tool Information

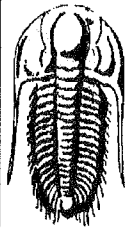
Drill Pipe:	Length: 2718.00 ft	Diameter: 3.80 inches	Volume: 38.13 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 57000.00 lb
		Total Volume: 38.72 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	2847.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 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			2825.00	
Shut In Tool	5.00			2830.00	
Hydraulic tool	5.00			2835.00	
Safety Joint	3.00			2838.00	
Packer	4.00			2842.00	23.00 Bottom Of Top Packer
Packer	5.00			2847.00	
Stubb	1.00			2848.00	
Recorder	0.00	8167	Inside	2848.00	
Recorder	0.00	8370	Inside	2848.00	
Perforations	27.00			2875.00	
Bullnose	5.00			2880.00	33.00 Bottom Packers & Anchor

Total Tool Length: 56.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg.Co.Inc.

Bowman A#1-31

250 N.Water,Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 33999

DST#: 1

ATTN: Bob Stolze

Test Start: 2009.02.22 @ 04:48:05

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 11.94 in³

Resistivity: 0.00 ohm.m

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

deg API

Water Salinity: 53000 ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	WM 49%w 51%m/ Rw .2 ohms@ 51deg	0.295
95.00	Drlg.mud	0.786
0.00	275 ft.of GIP	0.000

Total Length: 155.00 ft

Total Volume: 1.081 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

JUN 19 2009

DST Test Number: 1

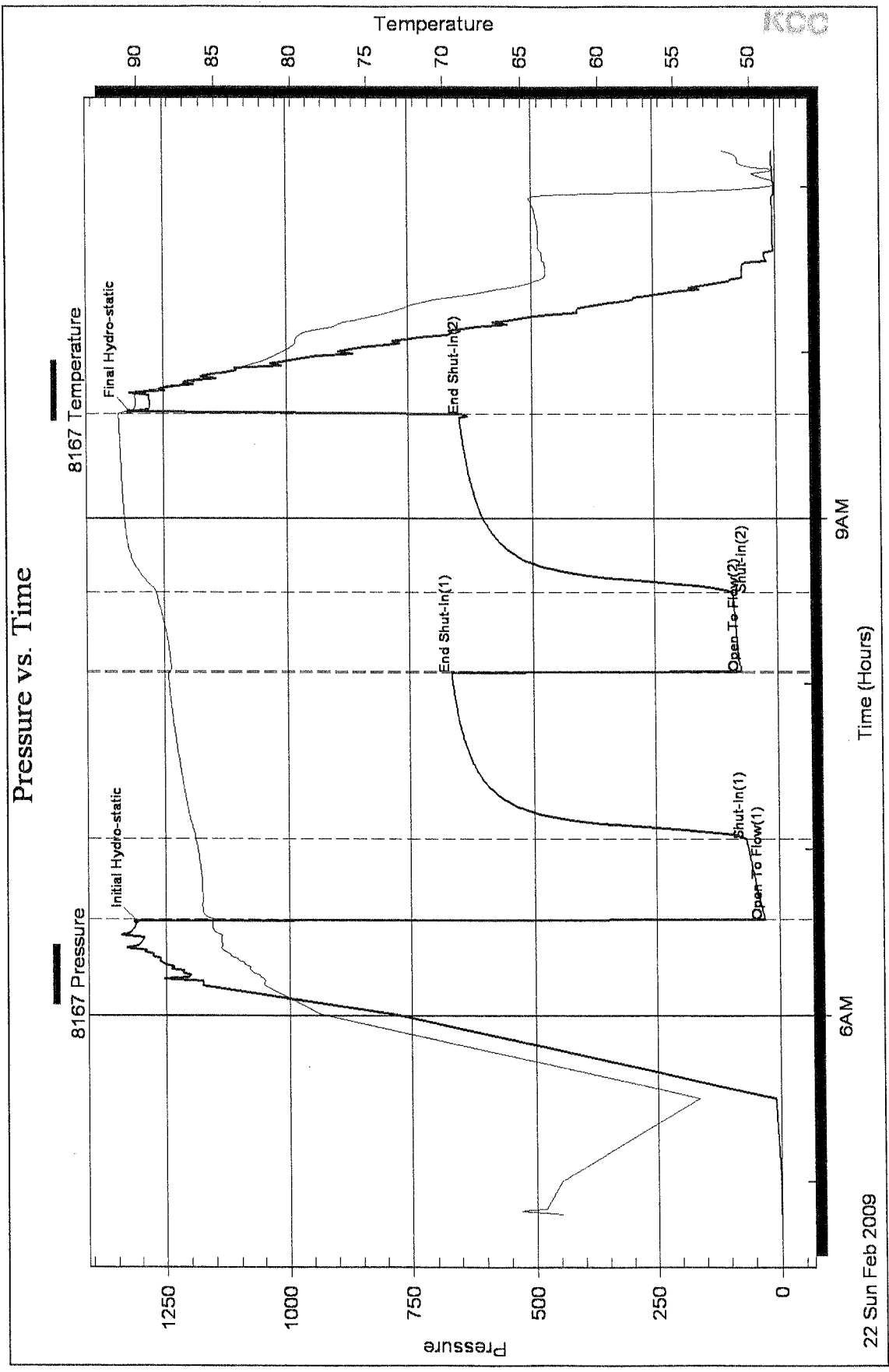
31-22s-15w Pawnee Ks

Murfin Drig. Co. Inc.

Inside

Serial #: 8167

Pressure vs. Time



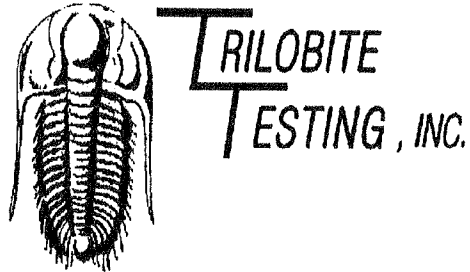
Ref. No: 33999

Trilobite Testing, Inc

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JUN 19 2009

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DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg.Co.Inc.**

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

31-22s-15w Pawnee Ks

Bowman A#1-31

Start Date: 2009.02.22 @ 22:21:22

End Date: 2009.02.23 @ 06:21:52

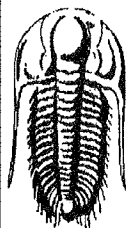
Job Ticket #: 34000 DST #: 2

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

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drlg. Co. Inc.

250 N. Water, Ste. 300
Wichita, KS 67202

ATTN: Bob Stolze

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 34000

DST#: 2

Test Start: 2009.02.22 @ 22:21:22

GENERAL INFORMATION:

Formation: **Howard LS**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:22:52

Time Test Ended: 06:21:52

Interval: **2980.00 ft (KB) To 3030.00 ft (KB) (TVD)**

Total Depth: 3030.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 39

Reference Elevations: 2015.00 ft (KB)

2010.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8167 Inside

Press@RunDepth: 106.39 psig @ 2981.00 ft (KB)

Start Date: 2009.02.22

End Date: 2009.02.23

Start Time: 22:21:27

End Time: 06:21:51

Capacity: 7000.00 psig

Last Calib.: 2009.02.23

Time On Btm: 2009.02.23 @ 00:21:52

Time Off Btm: 2009.02.23 @ 04:30:21

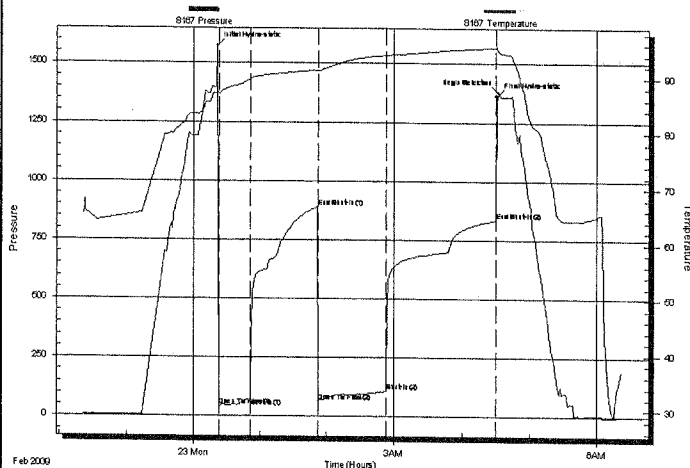
TEST COMMENT: IF: Strong blow BOB in 10 secs GTS in 17 mins. (see gas flow report)

IS: Strong blow BOB

FF: Strong blow (see gas flow report)

FS: Strong blow BOB

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1571.50	87.39	Initial Hydro-static
1	41.36	87.15	Open To Flow (1)
30	73.72	89.78	Shut-In (1)
91	890.10	91.44	End Shut-In (1)
91	62.18	91.29	Open To Flow (2)
151	106.39	94.09	Shut-In (2)
248	835.07	95.56	End Shut-In (2)
249	1362.68	95.73	Final Hydro-static
251	1375.89	94.92	Begin Selection

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GCMW 7%g 23%w 70%w /Rw .18ohms @0.59leg	
110.00	GCWM 30%g 22%w 48%w/trace of oil	1.54

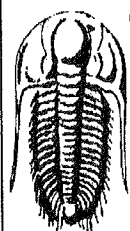
Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	11.00	40.30
Last Gas Rate	0.38	15.00	107.70
Max. Gas Rate	0.25	19.00	52.99

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TOOL DIAGRAM


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drig.Co.Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 34000

DST#: 2

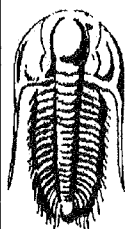
Test Start: 2009.02.22 @ 22:21:22

Tool Information

Drill Pipe:	Length: 2843.00 ft	Diameter: 3.80 inches	Volume: 39.88 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 75000.00 lb
		Total Volume:	40.47 bbl	Tool Chased 6.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	2980.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	73.00 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			2958.00	
Shut In Tool	5.00			2963.00	
Hydraulic tool	5.00			2968.00	
Safety Joint	3.00			2971.00	
Packer	4.00			2975.00	23.00 Bottom Of Top Packer
Packer	5.00			2980.00	
Stubb	1.00			2981.00	
Recorder	0.00	8167	Inside	2981.00	
Recorder	0.00	8370	Inside	2981.00	
Perforations	9.00			2990.00	
Change Over Sub	1.00			2991.00	
Blank Spacing	31.00			3022.00	
Change Over Sub	1.00			3023.00	
Perforations	2.00			3025.00	
Bullnose	5.00			3030.00	50.00 Bottom Packers & Anchor

Total Tool Length: 73.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilg.Co.Inc.

Bowman A#1-31

250 N.Water,Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 34000

DST#: 2

ATTN: Bob Stolzie

Test Start: 2009.02.22 @ 22:21:22

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:

61000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.96 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GCMV 7%g 23%m 70%w /Rw .18ohms @39 t	0.590
110.00	GCWM 30%g 22%w 48%m/trace of oil	1.543

Total Length: 230.00 ft

Total Volume: 2.133 bbl

Num Fluid Samples: 0

Num Gas Bombs: 1

Serial #: gp-2

Laboratory Name: Caraway

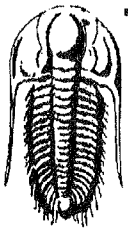
Laboratory Location: Liberal, KS

Recovery Comments:

JUN 30 2009

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GAS RATES

**TRILOBITE
TESTING, INC.****DRILL STEM TEST REPORT**

Murfin Drig.Co.Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

Bowman A#1-31**31-22s-15w Pawnee Ks**

Job Ticket: 34000

DST#: 2

Test Start: 2009.02.22 @ 22:21:22

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
1	25	0.25	11.00	40.30
1	25	0.25	11.00	40.30
1	30	0.25	15.00	46.64
2	10	0.25	19.00	52.99
2	20	0.38	17.00	115.03
2	30	0.38	15.00	107.70
2	40	0.38	13.00	100.37
2	60	0.38	15.00	107.70

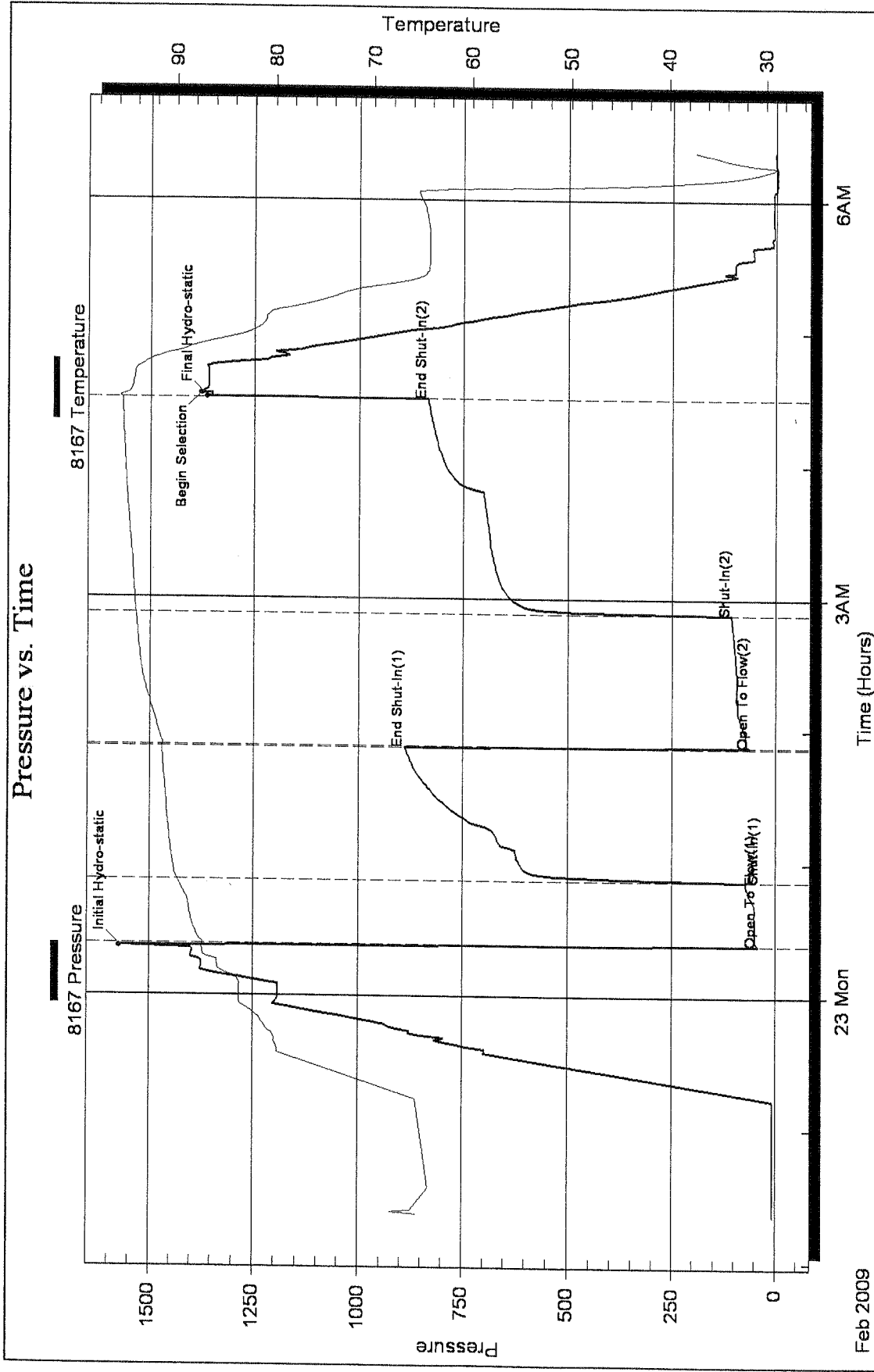
Serial #: 8167

Inside

Murfin Dtg Co Inc.

31-22s-15w Pawnee Ks

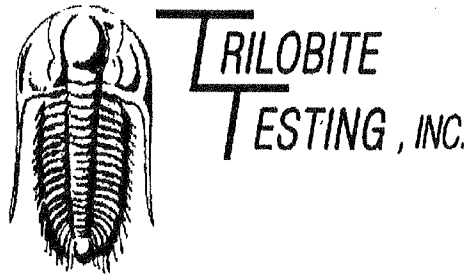
DST Test Number: 2



CONFIDENTIAL

JUN 19 2009

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DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg.Co.Inc.**

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

31-22s-15w Pawnee Ks

Bowman A#1-31

Start Date: 2009.02.24 @ 12:52:06

End Date: 2009.02.24 @ 20:39:51

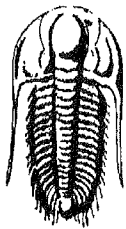
Job Ticket #: 35051 DST #: 3

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

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KCC WICHITA



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drlg.Co.,Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzie

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 35051

DST#: 3

Test Start: 2009.02.24 @ 12:52:06

GENERAL INFORMATION:

Formation: **Lans. A - B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:22:21

Time Test Ended: 20:39:51

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 39

Interval: 3545.00 ft (KB) To 3580.00 ft (KB) (TVD)

Total Depth: 3580.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2015.00 ft (KB)

2010.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8167

Inside

Press@RunDepth: 135.29 psig @ 3546.00 ft (KB)

Start Date: 2009.02.24

End Date: 2009.02.24

Start Time: 12:52:11

End Time: 20:39:50

Capacity: 7000.00 psig

Last Calib.: 2009.02.24

Time On Btm: 2009.02.24 @ 14:20:51

Time Off Btm: 2009.02.24 @ 18:29:05

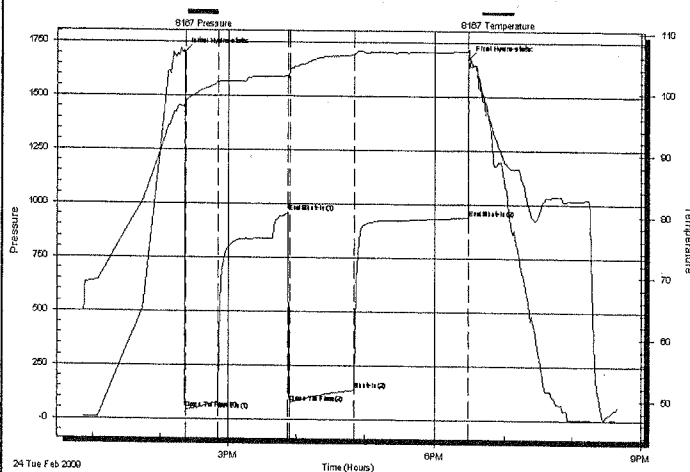
TEST COMMENT: IF:Strong blow . GTS in 11 mins. (see gas flow report)

IS:Strong blow . BOB

FF:Strong blow . (see gas flow report)

FS:Strong blow . BOB

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1704.26	97.76	Initial Hydro-static
2	41.83	98.64	Open To Flow (1)
30	79.43	101.71	Shut-In(1)
93	959.96	102.83	End Shut-In(1)
94	75.04	103.98	Open To Flow (2)
151	135.29	106.32	Shut-In(2)
248	937.14	106.97	End Shut-In(2)
249	1673.50	107.30	Final Hydro-static

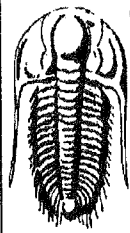
Recovery

Length (ft)	Description	Volume (bbl)
185.00	MW 29%m 71%w Rw .13 ohms@ 57 de 1.50	
70.00	GCWM 6%g 24%w 70%m	0.98

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	6.00	32.36
Last Gas Rate	0.25	29.00	68.85
Max. Gas Rate	0.25	29.00	68.85

JUN 19 2009


**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig.Co.Inc.

Bowman A#1-31

 250 N.Water,Ste.300
 Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 35051

DST#: 3

ATTN: Bob Stolzle

Test Start: 2009.02.24 @ 12:52:06

Tool Information

Drill Pipe:	Length: 3435.00 ft	Diameter: 3.80 inches	Volume: 48.18 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 71000.00 lb
		Total Volume: 48.77 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	3545.00 ft			Final 63500.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	58.00 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			3523.00	
Shut In Tool	5.00			3528.00	
Hydraulic tool	5.00			3533.00	
Safety Joint	3.00			3536.00	
Packer	4.00			3540.00	23.00 Bottom Of Top Packer
Packer	5.00			3545.00	
Stubb	1.00			3546.00	
Recorder	0.00	8167	Inside	3546.00	
Recorder	0.00	8370	Inside	3546.00	
Perforations	29.00			3575.00	
Bullnose	5.00			3580.00	35.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilg.Co.Inc.

Bowman A#1-31

250 N.Water,Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 35051

DST#: 3

ATTN: Bob Stolzle

Test Start: 2009.02.24 @ 12:52:06

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 63.00 sec/qt

Water Loss: 7.17 in³

Resistivity: 0.00 ohm.m

Salinity: 9100.00 ppm

Filter Cake: 0.20 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

deg API

Water Salinity: 83000 ppm

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
185.00	MW 29% _m 71% _w Rw .13 ohms@ 57deg	1.502
70.00	GCWM 6% _g 24% _w 70% _m	0.982

Total Length: 255.00 ft

Total Volume: 2.484 bbl

Num Fluid Samples: 0

Num Gas Bombs: 1

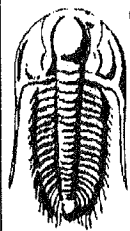
Serial #: gp-3

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:

JUN 10 2009

**TRILOBITE
TESTING, INC.****DRILL STEM TEST REPORT**

KCC

GAS RATES

Murfin Drlg.Co.Inc.

Bowman A#1-31250 N.Water,Ste.300
Wichita, KS 67202**31-22s-15w Pawnee Ks**

Job Ticket: 35051

DST#: 3

ATTN: Bob Stolzle

Test Start: 2009.02.24 @ 12:52:06

Gas Rates Information

Temperature: 59 deg C

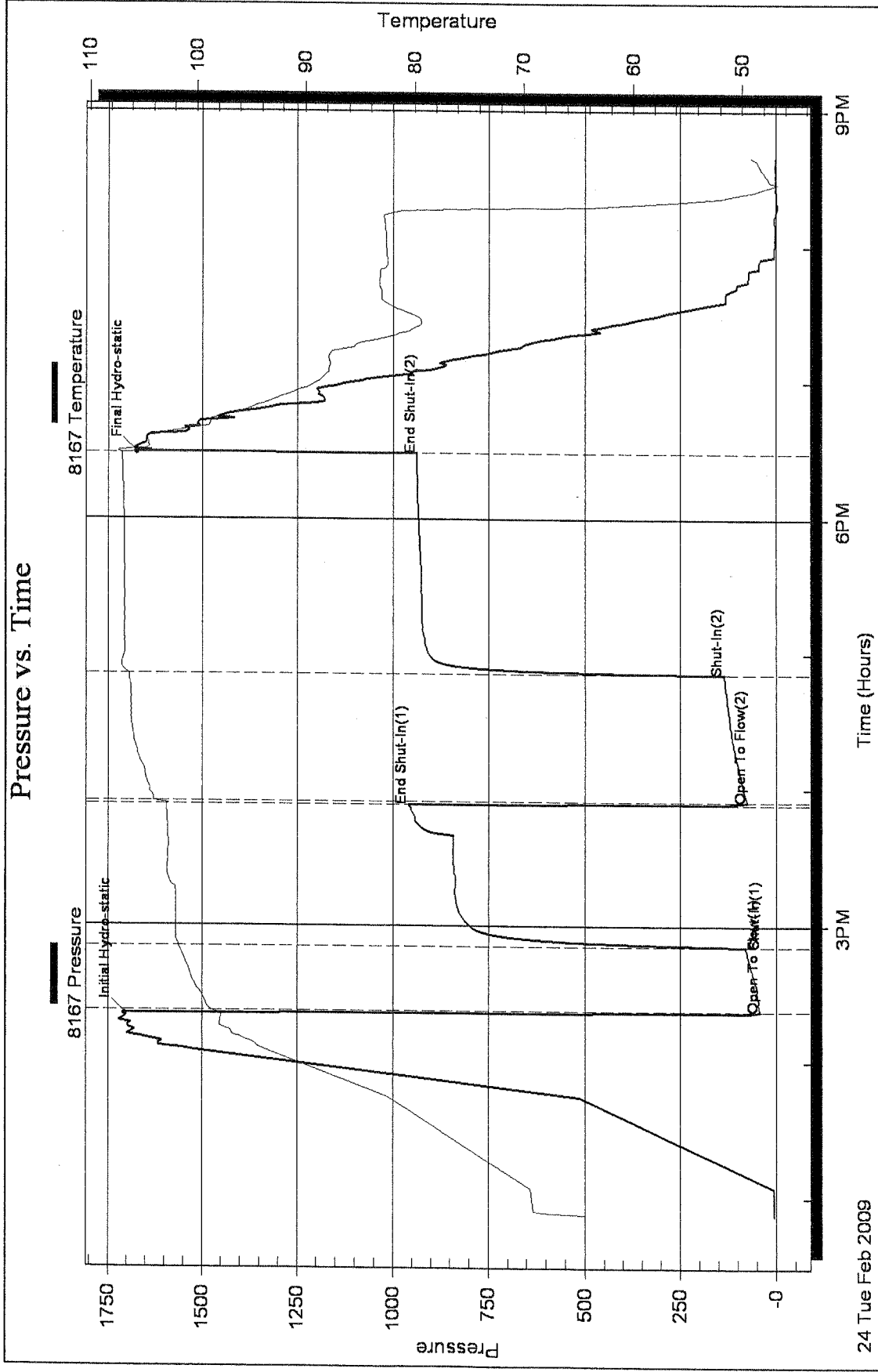
Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m³/d)
1	20	0.25	6.00	32.36
1	30	0.25	15.00	46.64
2	10	0.25	11.00	40.30
2	20	0.25	14.00	45.05
2	30	0.25	21.00	56.16
2	40	0.25	24.00	60.92
2	50	0.25	26.00	64.09
2	60	0.25	29.00	68.85

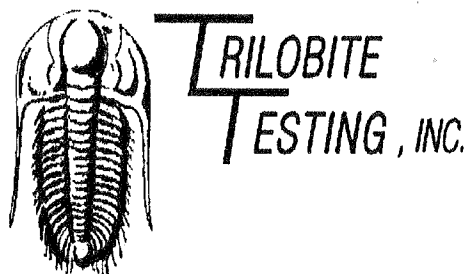
Pressure vs. Time



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JUN 19 2009

KCC



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg.Co.Inc.**

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

31-22s-15w Pawnee Ks

Bowman A#1-31

Start Date: 2009.02.25 @ 05:24:46

End Date: 2009.02.25 @ 13:01:16

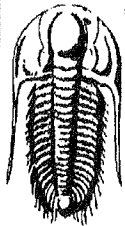
Job Ticket #: 35052 DST #: 4

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

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 35052

DST#: 4

Test Start: 2009.02.25 @ 05:24:46

GENERAL INFORMATION:

Formation: **Lans E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:13:46

Time Test Ended: 13:01:16

Interval: **3596.00 ft (KB) To 3620.00 ft (KB) (TVD)**

Total Depth: 3620.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 39

Reference Elevations: 2015.00 ft (KB)

2010.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8167 Inside

Press@RunDepth: 71.39 psig @ 3597.00 ft (KB)

Start Date: 2009.02.25

End Date:

2009.02.25

Start Time: 05:24:51

End Time:

13:01:15

Capacity: 7000.00 psig

Last Calib.: 2009.02.25

Time On Btm: 2009.02.25 @ 07:13:31

Time Off Btm: 2009.02.25 @ 11:17:15

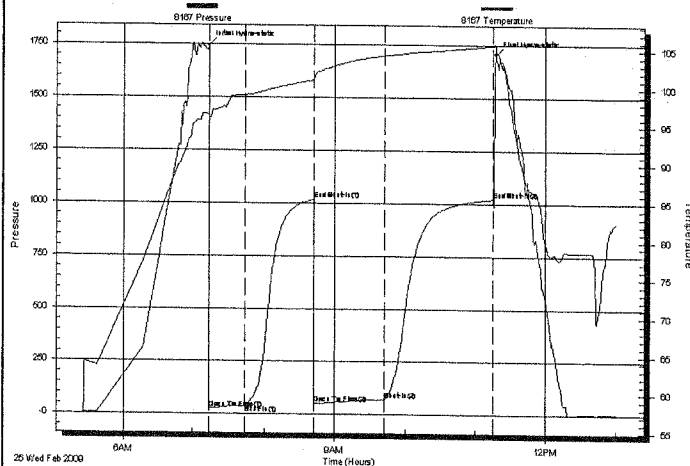
TEST COMMENT: IF: Weak to fair blow. Slow increase to 7 "

IS: No blow

FF: Fair to strong blow. BOB in 50 mins

FS: Weak blow. 1/4" or less

Pressure vs. Time



PRESSURE SUMMARY

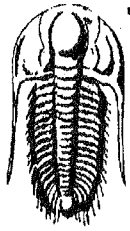
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1744.95	96.56	Initial Hydro-static
1	23.36	96.08	Open To Flow (1)
31	40.23	99.12	Shut-In(1)
89	1017.35	101.09	End Shut-In(1)
89	52.04	101.14	Open To Flow (2)
150	71.39	104.33	Shut-In(2)
242	1021.04	105.68	End Shut-In(2)
244	1706.47	105.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GOCWM 5%g 15%o 32%w 47% m/Rw 350.59s@71	
1.00	Clean oil / Clean oil @ top of tool	0.01
0.00	340 ft. of GIP	0.00

Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)
--	----------------	-----------------	------------------


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

 JUN 18 2009 **TOOL DIAGRAM**

Murfin Drig.Co.Inc.

Bowman A#1-31

 250 N.Water,Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 35052

DST#: 4

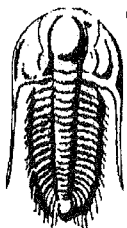
ATTN: Bob Stolzle

Test Start: 2009.02.25 @ 05:24:46

Tool Information

Drill Pipe:	Length: 3468.00 ft	Diameter: 3.80 inches	Volume: 48.65 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 73000.00 lb
		Total Volume: 49.24 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3596.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	47.00 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			3574.00	
Shut In Tool	5.00			3579.00	
Hydraulic tool	5.00			3584.00	
Safety Joint	3.00			3587.00	
Packer	4.00			3591.00	23.00 Bottom Of Top Packer
Packer	5.00			3596.00	
Stubb	1.00			3597.00	
Recorder	0.00	8167	Inside	3597.00	
Recorder	0.00	8370	Inside	3597.00	
Perforations	18.00			3615.00	
Bullnose	5.00			3620.00	24.00 Bottom Packers & Anchor
Total Tool Length:		47.00			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg.Co.Inc.

Bowman A#1-31

250 N.Water,Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 35052

DST#: 4

ATTN: Bob Stolze

Test Start: 2009.02.25 @ 05:24:46

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 7.57 in³

Resistivity: 0.00 ohm.m

Salinity: 10500.00 ppm

Filter Cake: 0.20 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

deg API

Water Salinity: 17600 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GOCWM 5%g 15%o 32%w 47%rw .39ohm	0.590
1.00	Clean oil / Clean oil @ top of tool	0.014
0.00	340 ft. of GIP	0.000

Total Length: 121.00 ft

Total Volume: 0.604 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

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JUN 19 2009

DST Test Number: 4

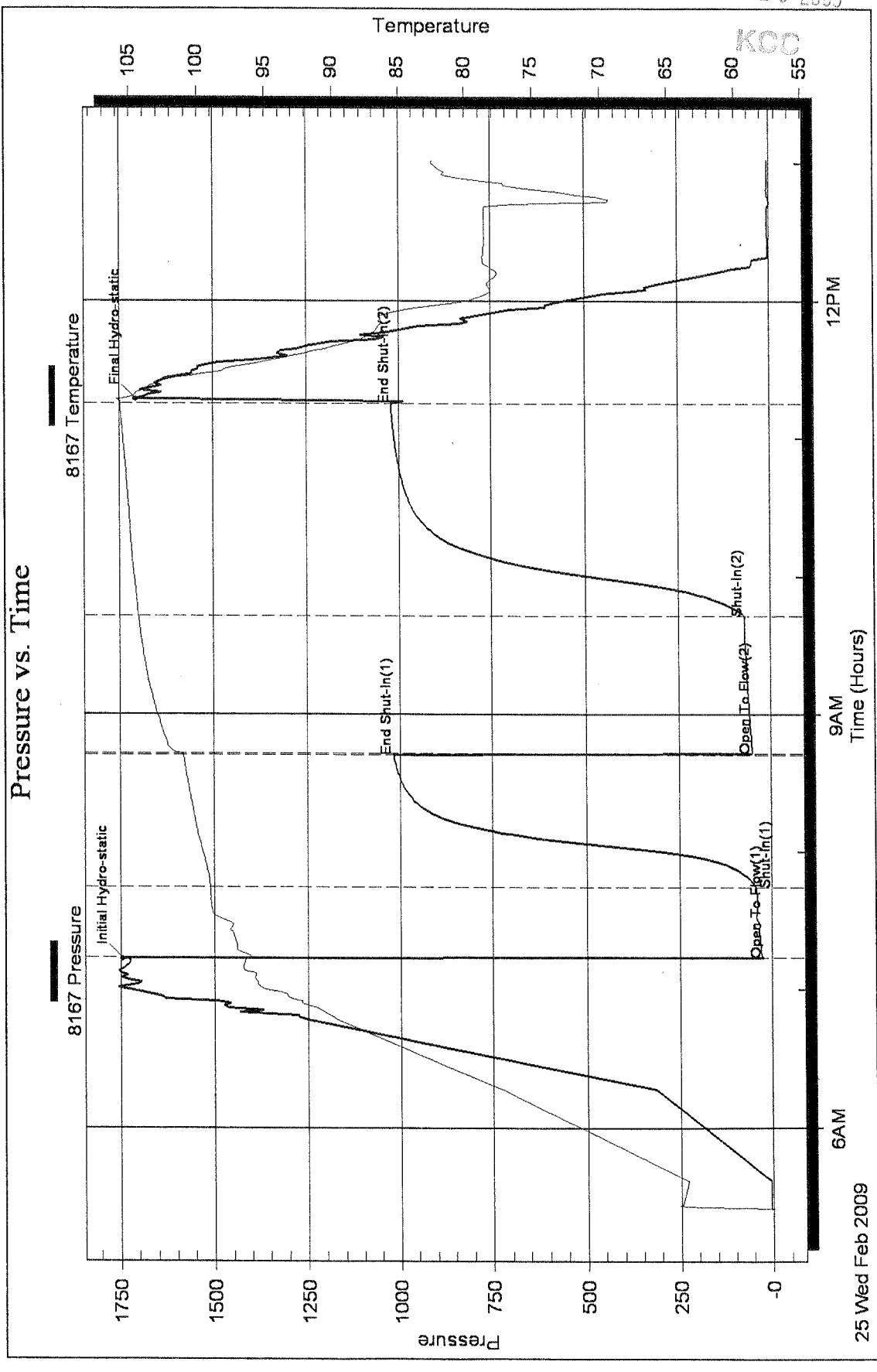
31-22s-15w Pawnee Ks

Murfin Dtg. Co. Inc.

Inside

Serial #: 8167

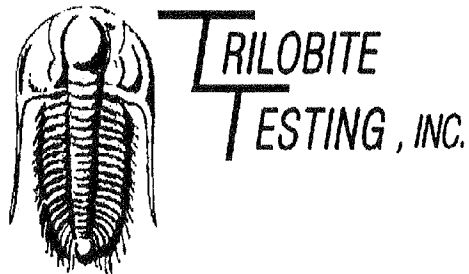
Pressure vs. Time



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JUN 19 2009

KCC



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg.Co.Inc.**

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

31-22s-15w Pawnee Ks

Bowman A#1-31

Start Date: 2009.02.25 @ 19:08:53

End Date: 2009.02.26 @ 02:54:38

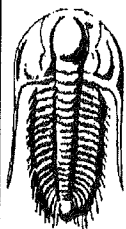
Job Ticket #: 35053 DST #: 5

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

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drig.Co.Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 35053

DST#: 5

Test Start: 2009.02.25 @ 19:08:53

GENERAL INFORMATION:

Formation: **Lans. G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:07:38

Time Test Ended: 02:54:38

Interval: **3625.00 ft (KB) To 3625.00 ft (KB) (TVD)**

Total Depth: 3635.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 39

Reference Elevations: 2015.00 ft (KB)

2010.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8167

Inside

Press@RunDepth: 295.97 psig @ 3626.00 ft (KB)

Start Date: 2009.02.25

End Date: 2009.02.26

Start Time: 19:08:58

End Time: 02:54:37

Capacity: 7000.00 psig

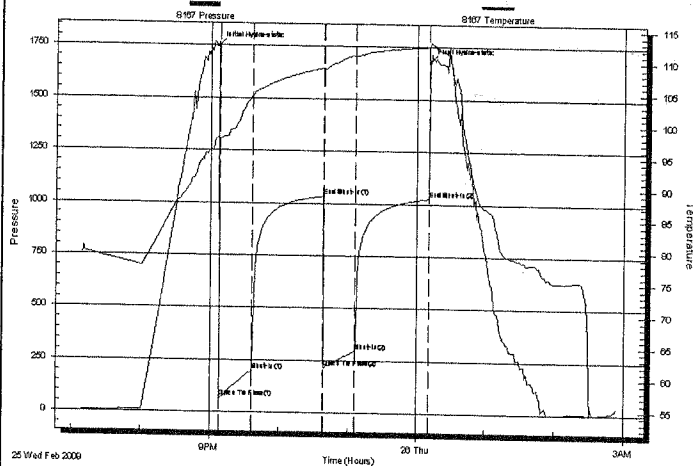
Last Calib.: 2009.02.26

Time On Btm: 2009.02.25 @ 21:06:08

Time Off Btm: 2009.02.26 @ 00:11:23

TEST COMMENT: IF: Strong blow BOB in 2 1/2 mins
IS: Strong blow BOB
FF: Strong blow BOB in 3 mins
FS: Strong blow BOB

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1745.43	97.78	Initial Hydro-static
2	71.30	97.54	Open To Flow (1)
30	198.36	104.59	Shut-In (1)
92	1033.80	108.96	End Shut-In (1)
93	218.03	108.98	Open To Flow (2)
120	295.97	110.82	Shut-In (2)
185	1024.76	112.38	End Shut-In (2)
186	1680.25	112.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
370.00	GCW 5%g 95%w /Rw .1@56 deg	4.10
125.00	Clean oil	1.75
185.00	GMCO 28%g 16%m 56%o	2.60
0.00	1890 ft.of GIP	0.00

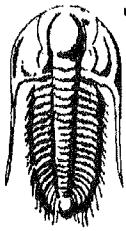
Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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JUN 19 2009

TOOL DIAGRAM


**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drlg. Co. Inc.

250 N. Water, Ste. 300
Wichita, KS 67202

ATTN: Bob Stolze

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 35053

DST#: 5

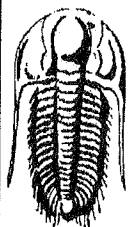
Test Start: 2009.02.25 @ 19:08:53

Tool Information

Drill Pipe:	Length: 3499.00 ft	Diameter: 3.80 inches	Volume: 49.08 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 74000.00 lb
		Total Volume:	49.67 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3625.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	33.00 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			3603.00	
Shut In Tool	5.00			3608.00	
Hydraulic tool	5.00			3613.00	
Safety Joint	3.00			3616.00	
Packer	4.00			3620.00	23.00 Bottom Of Top Packer
Packer	5.00			3625.00	
Stubb	1.00			3626.00	
Recorder	0.00	8167	Inside	3626.00	
Recorder	0.00	8370	Inside	3626.00	
Perforations	4.00			3630.00	
Bullnose	5.00			3635.00	10.00 Bottom Packers & Anchor

Total Tool Length: 33.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilg.Co.Inc.

Bowman A#1-31

250 N.Water,Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 35053

DST#: 5

ATTN: Bob Stolzle

Test Start: 2009.02.25 @ 19:08:53

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 7.58 in³

Resistivity: 0.00 ohm.m

Salinity: 10500.00 ppm

Filter Cake: 0.20 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

18 deg API

Water Salinity:

97000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
370.00	GCW 5%g 95%w /Rw .1@56 deg	4.097
125.00	Clean oil	1.753
185.00	GMCO 28%g 16%m 56%o	2.595
0.00	1890 ft.of GIP	0.000

Total Length: 680.00 ft

Total Volume: 8.445 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 5

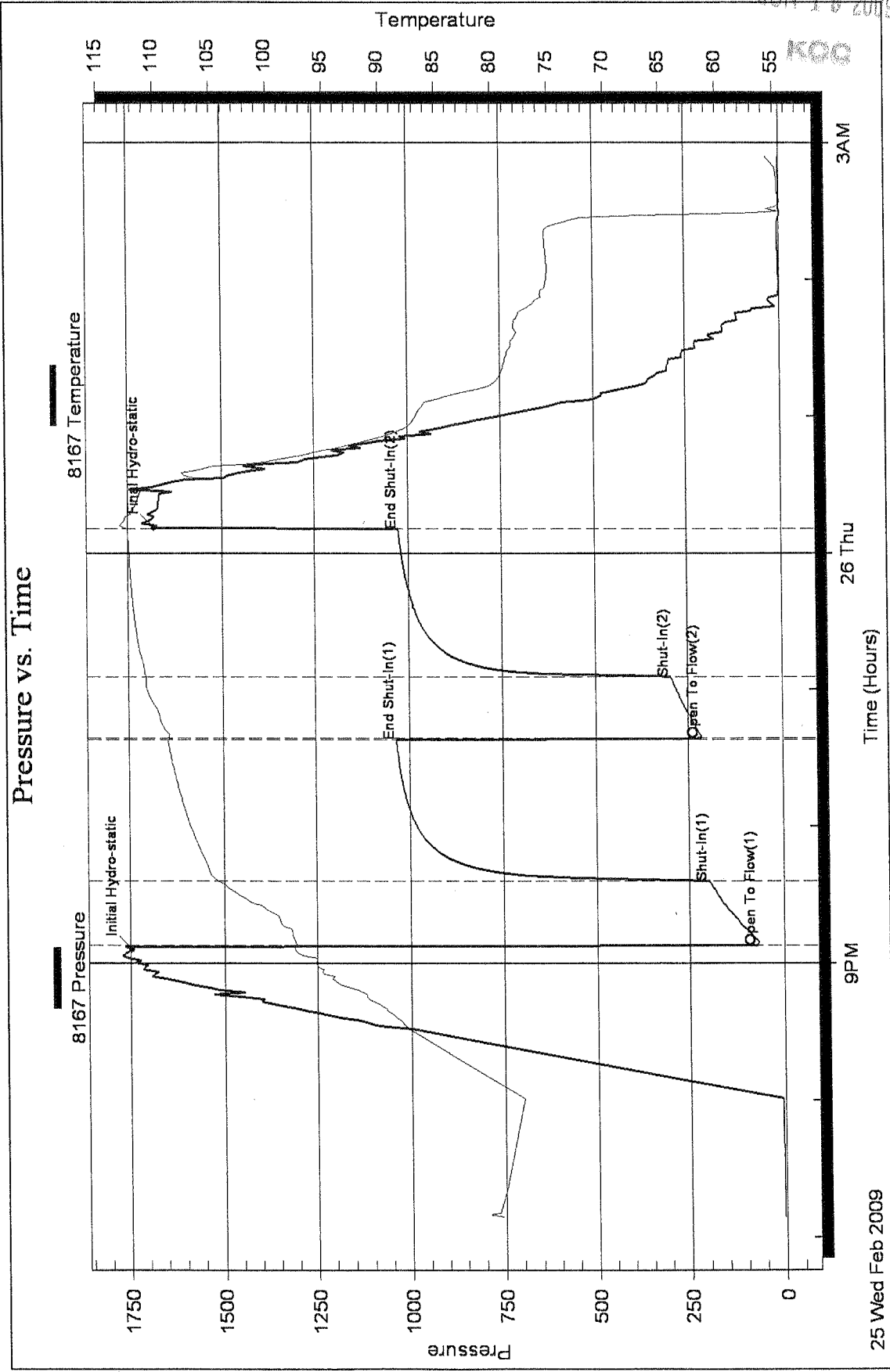
31-22s-15w Pawnee Ks

Murfin Drig. Co. Inc.

Inside

Serial #: 8167

Pressure vs. Time



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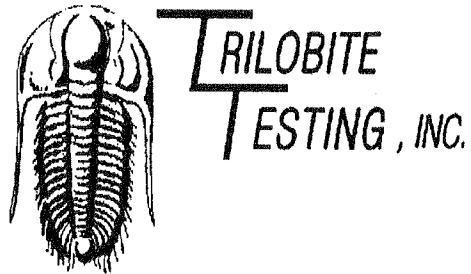
JUN 10 2009

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JUN 19 2009

KCC



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg.Co.Inc.**

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolze

31-22s-15w Pawnee Ks

Bowman A#1-31

Start Date: 2009.02.26 @ 21:04:23

End Date: 2009.02.27 @ 05:19:53

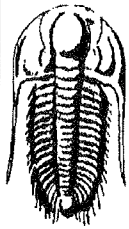
Job Ticket #: 35054 DST #: 6

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

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KCC WICHITA



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolze

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 35054

DST#: 6

Test Start: 2009.02.26 @ 21:04:23

GENERAL INFORMATION:

Formation: **Lans L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:04:38

Time Test Ended: 05:19:53

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 39

Interval: 3763.00 ft (KB) To 3790.00 ft (KB) (TVD)

Total Depth: 3790.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2015.00 ft (KB)

2010.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8167 Inside

Press@RunDepth: 62.25 psig @ 3764.00 ft (KB)

Start Date: 2009.02.26

End Date: 2009.02.27

Start Time: 21:04:28

End Time: 05:19:52

Capacity: 7000.00 psig

Last Calib.: 2009.02.27

Time On Btm: 2009.02.26 @ 23:03:38

Time Off Btm: 2009.02.27 @ 03:03:07

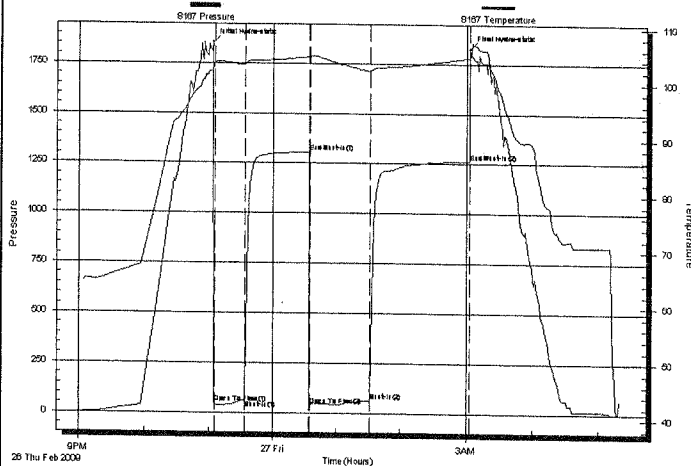
TEST COMMENT: IF: Strong blow BOB in 35 secs.GTS in 11 mins.(see gas flow report)

IS: Strong blow BOB

FF: Strong blow (see gas flow report)

FSI: Strong blow BOB

Pressure vs. Time



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1850.80	102.12	Initial Hydro-static
1	45.48	103.45	Open To Flow (1)
30	62.49	103.31	Shut-In(1)
91	1306.06	104.75	End Shut-In(1)
92	38.06	104.81	Open To Flow(2)
148	62.25	102.20	Shut-In(2)
240	1263.55	104.64	End Shut-In(2)
240	1824.89	104.84	Final Hydro-static

Recovery

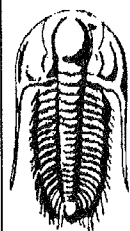
Length (ft)	Description	Volume (bbl)
120.00	GCM 4%g 96%rm	0.59

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	15.00	107.70
Last Gas Rate	0.25	23.00	59.33
Max. Gas Rate	0.25	23.00	59.33

JUN 19 2009

TOOL DIAGRAM


TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfine Drig.Co.Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 35054

DST#: 6

Test Start: 2009.02.26 @ 21:04:23

Tool Information

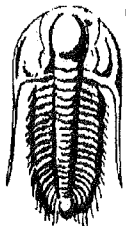
Drill Pipe:	Length: 3624.00 ft	Diameter: 3.80 inches	Volume: 50.84 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 71000.00 lb
		Total Volume:	51.43 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3763.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	50.00 ft			
Number of Packers:	2	Diameter:	6.75 inches	

Tool Comments:

Hit solid bridge @ approx. 3520'. Hit bridge several times to get by.
(total string w.t.)

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3741.00	
Shut In Tool	5.00			3746.00	
Hydraulic tool	5.00			3751.00	
Safety Joint	3.00			3754.00	
Packer	4.00			3758.00	23.00 Bottom Of Top Packer
Packer	5.00			3763.00	
Stubb	1.00			3764.00	
Recorder	0.00	8167	Inside	3764.00	
Recorder	0.00	8370	Inside	3764.00	
Perforations	21.00			3785.00	
Bullnose	5.00			3790.00	27.00 Bottom Packers & Anchor

Total Tool Length: 50.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg.Co.Inc.

Bowman A#1-31

250 N.Water,Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 35054

DST#: 6

ATTN: Bob Stolze

Test Start: 2009.02.26 @ 21:04:23

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 21.34 in³

Resistivity: 0.00 ohm.m

Salinity: 12500.00 ppm

Filter Cake: 0.20 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

deg API

Water Salinity: 12500 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GCM 4%g 96%m	0.590

Total Length: 120.00 ft

Total Volume: 0.590 bbl

Num Fluid Samples: 0

Num Gas Bombs: 1

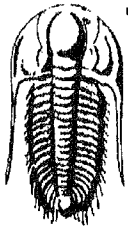
Serial #: gp-6

Laboratory Name:

Laboratory Location:

Recovery Comments:

JUN 18 2009

**TRILOBITE**
TESTING, INC.**DRILL STEM TEST REPORT****GAS RATES**

Murfin Drlg.Co.Inc.

Bowman A#1-31250 N.Water,Ste.300
Wichita, KS 67202**31-22s-15w Pawnee Ks**

Job Ticket: 35054

DST#: 6

ATTN: Bob Stolzle

Test Start: 2009.02.26 @ 21:04:23

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m³/d)
1	20	0.38	15.00	107.70
1	20	0.38	15.00	107.70
1	30	0.38	16.00	111.36
2	10	0.38	11.00	93.05
2	20	0.38	10.00	89.38
2	30	0.38	7.00	78.39
2	50	0.25	21.00	56.16
2	60	0.25	23.00	59.33

Serial #: 8167

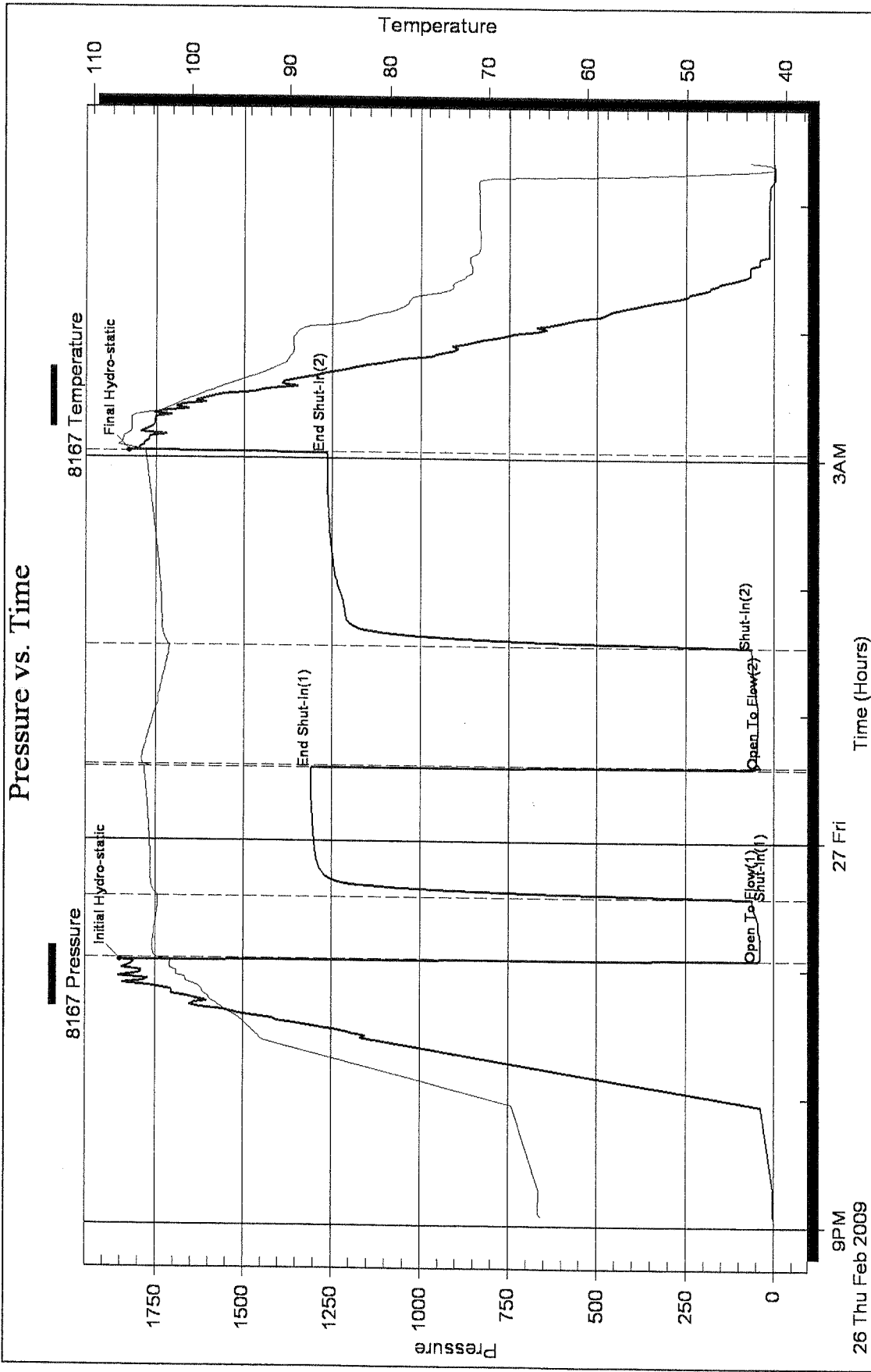
Inside

Murfin Dtg. Co. Inc.

31-22s-15w Pawnee Ks

DST Test Number: 6

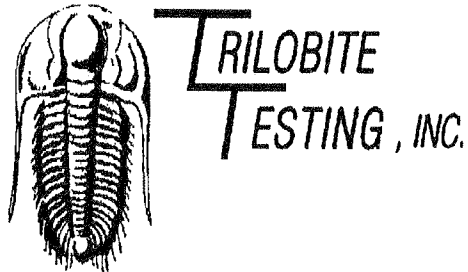
Pressure vs. Time



CONFIDENTIAL

JUN 19 2009

KCC



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg.Co.Inc.**

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

31-22s-15w Pawnee Ks

Bowman A#1-31

Start Date: 2009.02.28 @ 01:17:24

End Date: 2009.02.28 @ 10:22:09

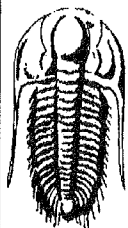
Job Ticket #: 35055 DST #: 7

RECEIVED

JUN 19 2009

KCC WICHITA

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg.Co.Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 35055

DST#: 7

Test Start: 2009.02.28 @ 01:17:24

GENERAL INFORMATION:

Formation: **Viola/Cong./Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:23:09

Time Test Ended: 10:22:09

Interval: **3885.00 ft (KB) To 3975.00 ft (KB) (TVD)**

Total Depth: 3975.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 39

Reference Elevations: 2015.00 ft (KB)

2010.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8167 Inside

Press@RunDepth: 95.49 psig @ 3886.00 ft (KB)

Start Date: 2009.02.28

End Date: 2009.02.28

Start Time: 01:17:29

End Time: 10:22:09

Capacity: 7000.00 psig

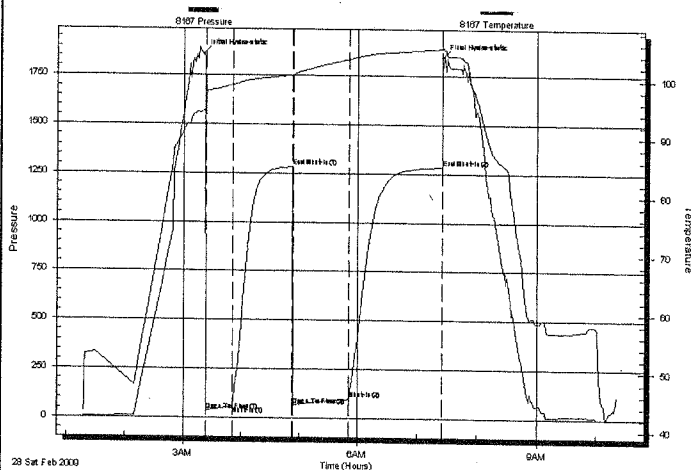
Last Calib.: 2009.02.28

Time On Btm: 2009.02.28 @ 03:20:39

Time Off Btm: 2009.02.28 @ 07:25:23

TEST COMMENT: IF: Strong blow . BOB in 1 min
IS: Weak blow . 1/2 - 1"
FF: Strong blow . BOB in 35 secs
FSI: Weak blow . 1 - 3"

Pressure vs. Time



PRESSURE SUMMARY

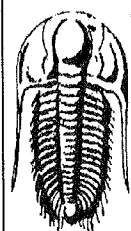
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1859.11	94.68	Initial Hydro-static
3	31.06	96.74	Open To Flow (1)
31	57.37	99.06	Shut-In (1)
92	1284.63	100.82	End Shut-In (1)
93	61.79	100.68	Open To Flow (2)
151	95.49	103.49	Shut-In (2)
245	1283.55	105.34	End Shut-In (2)
245	1845.14	105.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	Drlg.mud	1.71
0.00	3300 ft. of GIP	0.00

Gas Rates

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


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

JUN 19 2009

TOOL DIAGRAM

Murfin Drlg.Co.Inc.

Bowman A#1-31

250 N.Water,Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 35055

DST#: 7

ATTN: Bob Stolzle

Test Start: 2009.02.28 @ 01:17:24

Tool Information

Drill Pipe:	Length: 3749.00 ft	Diameter: 3.80 inches	Volume: 52.59 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 67000.00 lb
		Total Volume: 53.18 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3885.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 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
Change Over Sub	1.00			3863.00	
Shut In Tool	5.00			3868.00	
Hydraulic tool	5.00			3873.00	
Safety Joint	3.00			3876.00	
Packer	4.00			3880.00	23.00 Bottom Of Top Packer
Packer	5.00			3885.00	
Stubb	1.00			3886.00	
Recorder	0.00	8167	Inside	3886.00	
Recorder	0.00	8370	Inside	3886.00	
Perforations	20.00			3906.00	
Change Over Sub	1.00			3907.00	
Blank Spacing	62.00			3969.00	
Change Over Sub	1.00			3970.00	
Bullnose	5.00			3975.00	90.00 Bottom Packers & Anchor
Total Tool Length:		113.00			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg.Co.Inc.

Bowman A#1-31

250 N.Water, Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 35055

DST#: 7

ATTN: Bob Stolzle

Test Start: 2009.02.28 @ 01:17:24

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 8.78 in³

Resistivity: 0.00 ohm.m

Salinity: 13600.00 ppm

Filter Cake: 0.20 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

deg API

Water Salinity: 13600 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	Drlg.mud	1.712
0.00	3300 ft. of GIP	0.000

Total Length: 200.00 ft

Total Volume: 1.712 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

JUN 19 2009

DST Test Number: 7

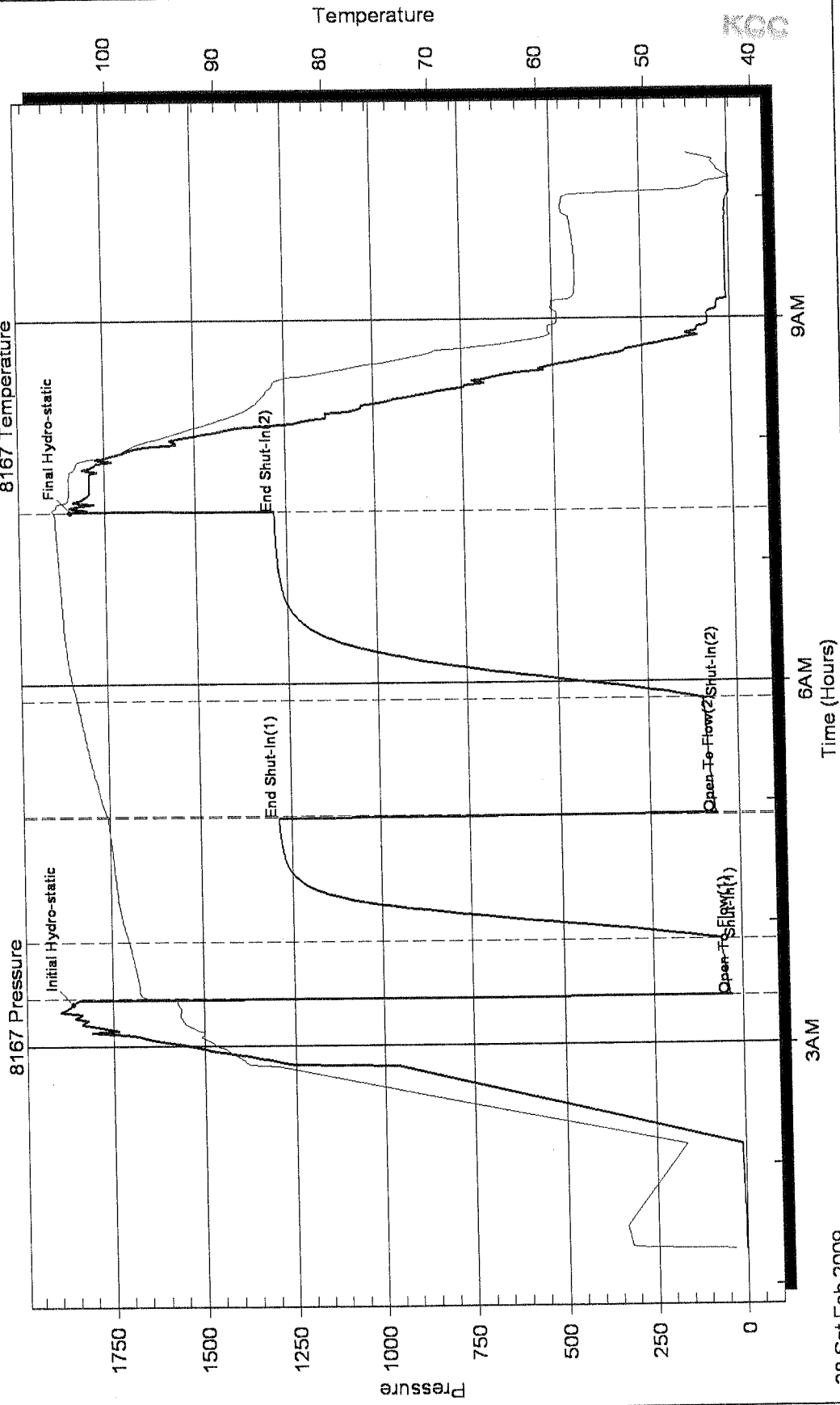
31-22s-15w Pawnee Ks

Murfin Drilling Co. Inc.

Inside

Serial #: 8167

Pressure vs. Time



28 Sat Feb 2009

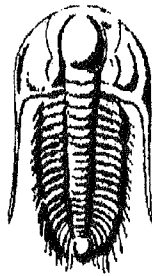
Ref. No: 35055

Trilobite Testing, Inc

CONFIDENTIAL

JUN 19 2009

KCC



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg.Co.Inc.**

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

31-22s-15w Pawnee Ks

Bowman A#1-31

Start Date: 2009.02.28 @ 17:52:55

End Date: 2009.03.01 @ 03:09:25

Job Ticket #: 35056 DST #: 8

RECEIVED

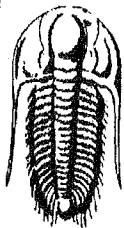
JUN 19 2009

KCC WICHITA

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drlg.Co.,Inc.

250 N.Water,Ste.300
Wichita, KS 67202

ATTN: Bob Stolzle

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 35056

DST#: 8

Test Start: 2009.02.28 @ 17:52:55

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:02:25

Time Test Ended: 03:09:25

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 39

Interval: **3940.00 ft (KB) To 3990.00 ft (KB) (TVD)**

Total Depth: 3990.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2015.00 ft (KB)

2010.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8167 Inside

Press@RunDepth: 1318.38 psig @ 3941.00 ft (KB)

Start Date: 2009.02.28

End Date: 2009.03.01

Start Time: 17:53:00

End Time: 03:09:25

Capacity: 7000.00 psig

Last Calib.: 2009.03.01

Time On Btm: 2009.02.28 @ 20:00:25

Time Off Btm: 2009.02.28 @ 23:12:09

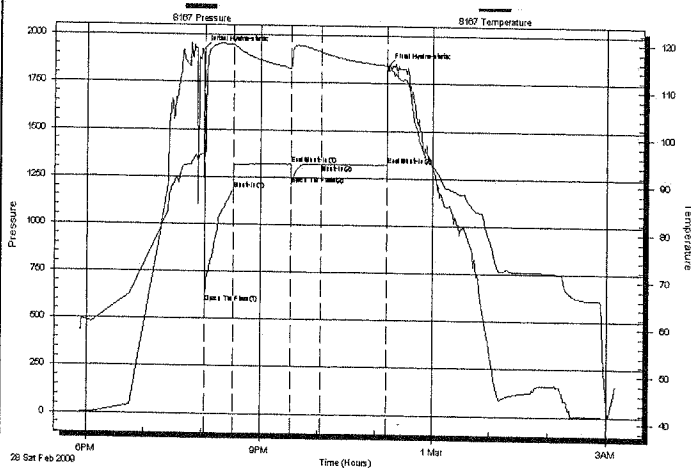
TEST COMMENT: IF: Strong blow BOB in 50 secs

IS: No blow

FF: Strong blow BOB in 45 secs Blow decreasing to surface blow (choke open 1/4" or less) by end of FFP.

FSI: No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1917.55	96.35	Initial Hydro-static
2	581.46	95.70	Open To Flow (1)
32	1181.06	119.47	Shut-In (1)
92	1317.47	114.41	End Shut-In (1)
92	1212.33	114.38	Open To Flow (2)
123	1318.38	118.11	Shut-In (2)
192	1319.03	115.31	End Shut-In (2)
192	1838.71	115.53	Final Hydro-static

Recovery

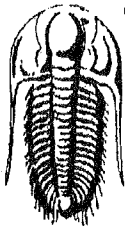
Length (ft)	Description	Volume (bbl)
2210.00	SW /Rw .27 ohms@51 deg.	29.91
440.00	MW 39% m 61% w	6.17
250.00	Drlg. mud	3.51

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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JUN 10 2009

TOOL DIAGRAM


**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drlg. Co. Inc.

250 N. Water, Ste. 300
Wichita, KS 67202

ATTN: Bob Stolzie

Bowman A#1-31

31-22s-15w Pawnee Ks

Job Ticket: 35056

DST#: 8

Test Start: 2009.02.28 @ 17:52:55

Tool Information

Drill Pipe:	Length: 3810.00 ft	Diameter: 3.80 inches	Volume: 53.44 bbl	Tool Weight: 2400.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 81000.00 lb
		Total Volume:	54.03 bbl	Tool Chased 7.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3940.00 ft			Final 70500.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

7+ft. of fill on btm. Slid tool. Packers failing/ Picked up & re-set tool.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3918.00	
Shut In Tool	5.00			3923.00	
Hydraulic tool	5.00			3928.00	
Safety Joint	3.00			3931.00	
Packer	4.00			3935.00	23.00 Bottom Of Top Packer
Packer	5.00			3940.00	
Stubb	1.00			3941.00	
Recorder	0.00	8167	Inside	3941.00	
Recorder	0.00	8370	Inside	3941.00	
Perforations	10.00			3951.00	
Change Over Sub	1.00			3952.00	
Blank Spacing	32.00			3984.00	
Change Over Sub	1.00			3985.00	
Bullnose	5.00			3990.00	50.00 Bottom Packers & Anchor

Total Tool Length: 73.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilg.Co.Inc.

Bowman A#1-31

250 N.Water,Ste.300
Wichita, KS 67202

31-22s-15w Pawnee Ks

Job Ticket: 35056

DST#: 8

ATTN: Bob Stolze

Test Start: 2009.02.28 @ 17:52:55

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 70.00 sec/qt

Water Loss: 7.99 in³

Resistivity: 0.00 ohm.m

Salinity: 11000.00 ppm

Filter Cake: 0.20 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

deg API

Water Salinity: 41000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2210.00	SW /Rw .27 ohms@51 deg.	29.907
440.00	MW 39% _m 61% _w	6.172
250.00	Drilg.mud	3.507

Total Length: 2900.00 ft

Total Volume: 39.586 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

JUN 19 2009

DST Test Number: 8

31-22s-15w Pawnee KS

Murfin Drig Co. Inc.

Inside

Serial #: 8167

Pressure vs. Time

