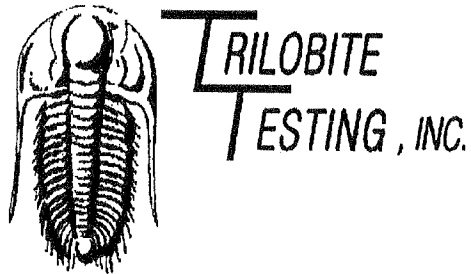


15-039-21090

33-3s-27w

Ind



DRILL STEM TEST REPORT

CONFIDENTIAL
MAY 27 2009
KCC

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

250 N. Water
Ste. 300
Wichita Ks. 67202

ATTN: Paul Gunzelman

33 3 27 Decatur KS

DK Brown 1-33

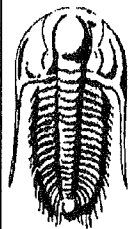
Start Date: 2009.03.08 @ 11:05:00

End Date: 2009.03.08 @ 17:41:00

Job Ticket #: 35799 DST #: 1

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

RECEIVED
MAY 21 2009
KCC WICHITA



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

250 N. Water
Ste. 300
Wichita Ks. 67202
ATTN: Paul Gunzelman

DK Brown 1-33

33 3 27 Decatur KS

Job Ticket: 35799

DST#: 1

Test Start: 2009.03.08 @ 11:05:00

GENERAL INFORMATION:

Formation: **Toronto-Lans F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:16:30

Time Test Ended: 17:41:00

Interval: **3494.00 ft (KB) To 3610.00 ft (KB) (TVD)**

Total Depth: 3610.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Chuck Kreutzer Jr.

Unit No: 30

Reference Elevations: 2604.00 ft (KB)

2600.00 ft (CF)

KB to GR/CF: 4.00 ft

Serial #: 8166 Inside

Press@RunDepth: 74.78 psig @ 3496.00 ft (KB)

Start Date: 2009.03.08 End Date: 2009.03.08

Start Time: 11:05:05 End Time: 17:40:59

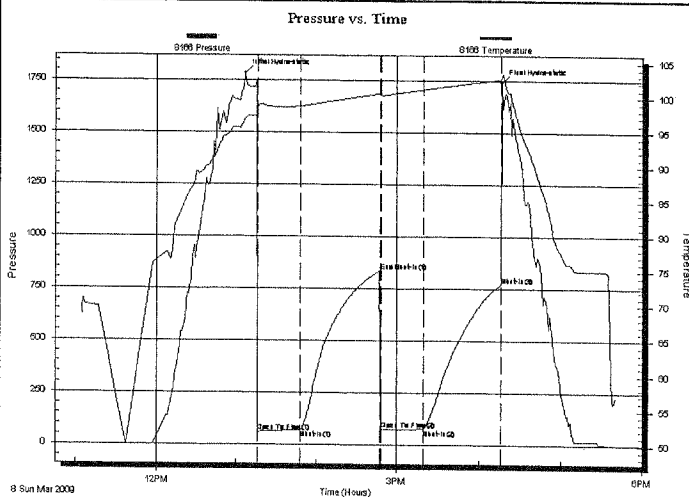
Capacity: 7000.00 psig

Last Calib.: 2009.03.08

Time On Btm: 2009.03.08 @ 13:07:30

Time Off Btm: 2009.03.08 @ 16:16:30

TEST COMMENT: IF: Weak surface blow built to 1 1/4 in. over 30 mins.
IS: No blow back.
FF: Weak surface blow after 20 mins., Never built passed surface.
FSI: No blow back.



PRESSURE SUMMARY

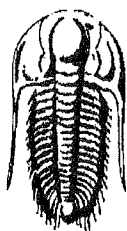
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1783.83	96.92	Initial Hydro-static
9	59.97	98.48	Open To Flow (1)
41	68.35	98.71	Shut-In(1)
100	834.78	100.53	End Shut-In(1)
101	71.27	100.33	Open To Flow(2)
132	74.78	101.12	Shut-In(2)
188	770.55	102.62	Shut-In(3)
189	1741.48	102.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud with oil specs	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.

DK Brown 1-33

250 N. Water
Ste. 300
Wichita Ks. 67202

33 3 27 Decatur KS

Job Ticket: 35799

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2009.03.08 @ 11:05:00

Tool Information

Drill Pipe:	Length: 3295.00 ft	Diameter: 3.80 inches	Volume: 46.22 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 50000.00 lb
			Total Volume: 47.11 bbl	Tool Chased 8.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3494.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	116.00 ft			
Tool Length:	139.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

CONFIDENTIAL

MAY 27 2009

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3476.00	
Hydraulic tool	5.00			3481.00	
Safety Joint	3.00			3484.00	
Packer	5.00			3489.00	23.00 Bottom Of Top Packer
Packer	5.00			3494.00	
Stubb	1.00			3495.00	
Perforations	1.00			3496.00	
Recorder	0.00	8166	Inside	3496.00	
Recorder	0.00	8356	Inside	3496.00	
Change Over Sub	1.00			3497.00	
Blank Spacing	93.00			3590.00	
Change Over Sub	1.00			3591.00	
Perforations	16.00			3607.00	
Bullnose	3.00			3610.00	116.00 Bottom Packers & Anchor

Total Tool Length: 139.00

RECEIVED

MAY 21 2009

KCC WICHITA



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

DK Brown 1-33

250 N. Water
Ste. 300
Wichita Ks. 67202
ATTN: Paul Gunzelman

33 3 27 Decatur KS

Job Ticket: 35799

DST#: 1

Test Start: 2009.03.08 @ 11:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 5.99 in³

Resistivity: ohm.m

Salinity: 2800.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft
bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud w with oil specs	0.098

Total Length: 20.00 ft

Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

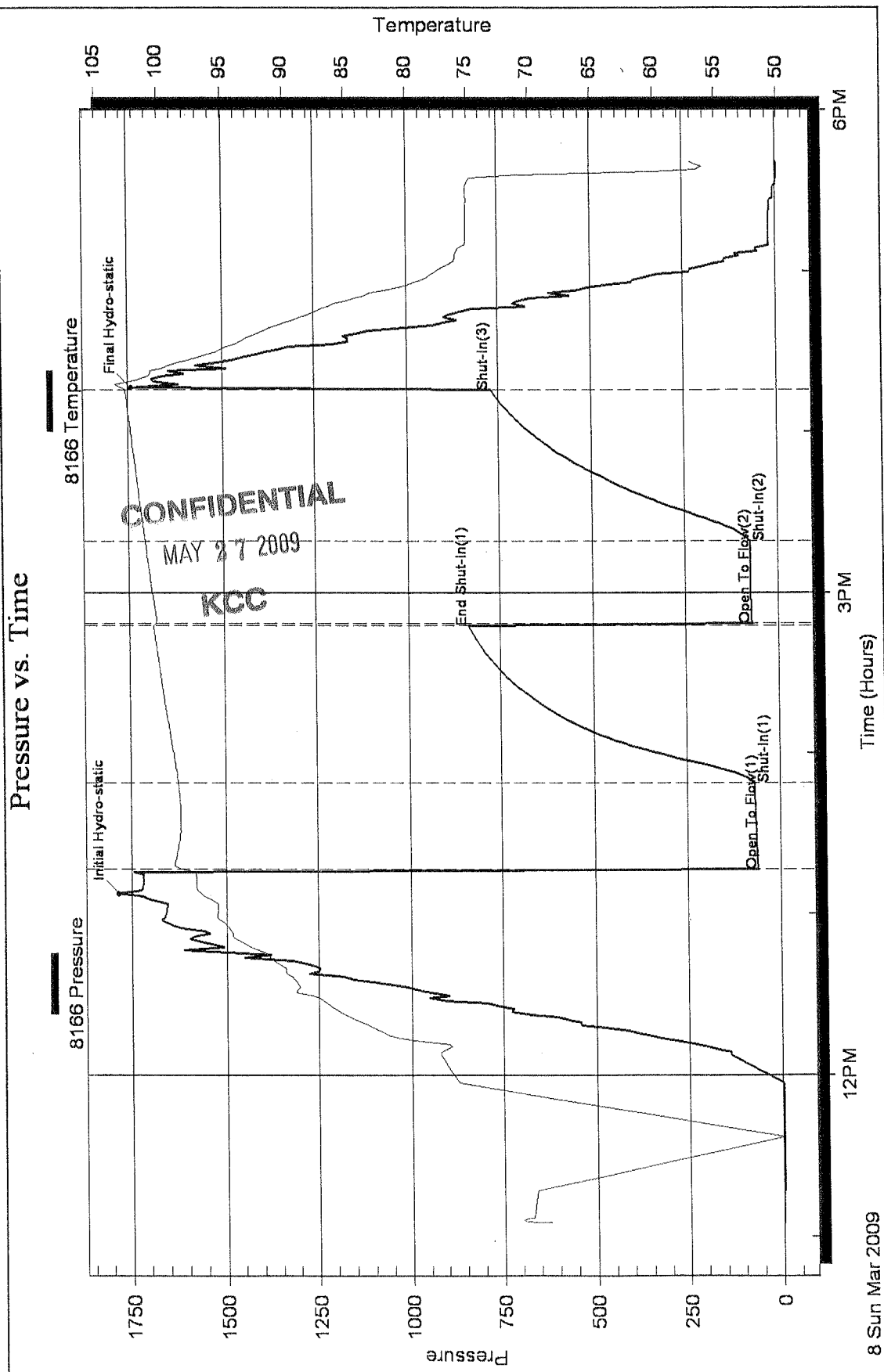
Serial #:

Laboratory Name:

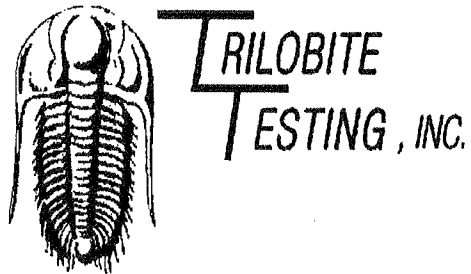
Laboratory Location:

Recovery Comments:

Pressure vs. Time



RECEIVED
MAY 21 2009
KCC WICHITA



DRILL STEM TEST REPORT

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

250 N. Water
Ste. 300
Wichita Ks. 67202

CONFIDENTIAL

MAY 27 2009

KCC

ATTN: Paul Gunzelman

33 3 27 Decatur KS

DK Brown 1-33

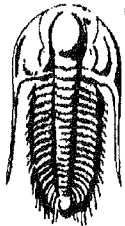
Start Date: 2009.03.09 @ 01:16:04

End Date: 2009.03.09 @ 08:13:04

Job Ticket #: 35800 DST #: 2

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

RECEIVED
MAY 21 2009
KCC WICHITA



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

250 N. Water
Ste. 300
Wichita Ks. 67202
ATTN: Paul Gunzelman

DK Brown 1-33

33 3 27 Decatur KS

Job Ticket: 35800

DST#: 2

Test Start: 2009.03.09 @ 01:16:04

GENERAL INFORMATION:

Formation: **LKC-G-H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:13:04

Time Test Ended: 08:13:04

Test Type: Conventional Bottom Hole

Tester: Chuck Kreutzer Jr.

Unit No: 30

Interval: **3588.00 ft (KB) To 3668.00 ft (KB) (TVD)**

Total Depth: 3668.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2604.00 ft (KB)

2600.00 ft (CF)

KB to GR/CF: 4.00 ft

Serial #: 8166

Inside

Press@RunDepth: 52.27 psig @ 3590.00 ft (KB)

Start Date: 2009.03.09

End Date: 2009.03.09

Start Time: 01:16:09

End Time: 08:13:03

Capacity: 7000.00 psig

Last Calib.: 2009.03.09

Time On Btm: 2009.03.09 @ 03:10:34

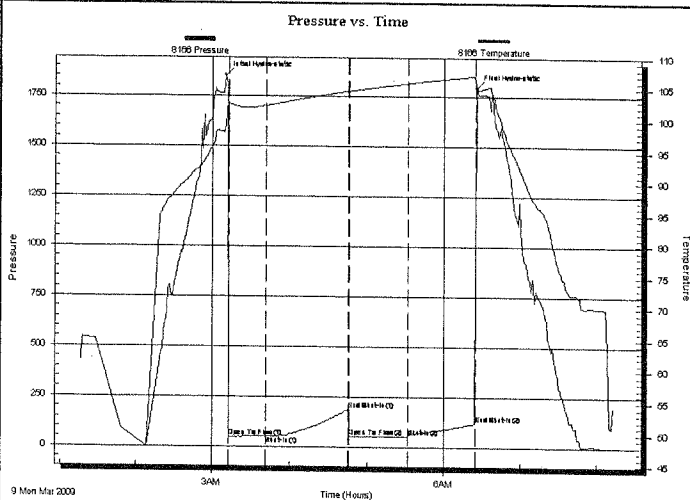
Time Off Btm: 2009.03.09 @ 06:25:34

TEST COMMENT: IF: Weak blow built to 1 1/4 in. over 30 mins.

ISI: No blow back.

FF: No blow over 30 mins.

FSI: No blow back.



PRESSURE SUMMARY

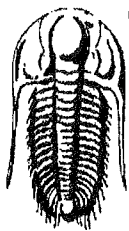
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1852.47	99.04	Initial Hydro-static
3	48.44	102.62	Open To Flow (1)
31	50.98	102.28	Shut-In(1)
95	189.00	104.67	End Shut-In(1)
96	52.02	104.66	Open To Flow (2)
141	52.27	105.91	Shut-In(2)
194	118.98	107.08	End Shut-In(2)
195	1794.57	105.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud with oil specs.	0.02

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

DK Brown 1-33

250 N. Water

33 3 27 Decatur KS

Ste. 300

Job Ticket: 35800

DST#: 2

Wichita Ks. 67202

Test Start: 2009.03.09 @ 01:16:04

ATTN: Paul Gunzelman

Tool Information

Drill Pipe:	Length: 3389.00 ft	Diameter: 3.80 inches	Volume: 47.54 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 50000.00 lb
			Total Volume: 48.43 bbl	Tool Chased 10.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3588.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	103.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

CONFIDENTIAL

MAY 27 2009

KCC

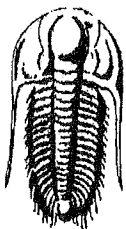
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3570.00	
Hydraulic tool	5.00			3575.00	
Safety Joint	3.00			3578.00	
Packer	5.00			3583.00	23.00 Bottom Of Top Packer
Packer	5.00			3588.00	
Stubb	1.00			3589.00	
Perforations	1.00			3590.00	
Recorder	0.00	8166	Inside	3590.00	
Recorder	0.00	8356	Inside	3590.00	
Change Over Sub	1.00			3591.00	
Blank Spacing	63.00			3654.00	
Change Over Sub	1.00			3655.00	
Perforations	10.00			3665.00	
Bullnose	3.00			3668.00	80.00 Bottom Packers & Anchor

Total Tool Length: 103.00

RECEIVED

MAY 21 2009

KCC WICHITA



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

DK Brown 1-33

250 N. Water

33 3 27 Decatur KS

Ste.300

Job Ticket: 35800

DST#: 2

Wichita Ks. 67202

ATTN: Paul Gunzelman

Test Start: 2009.03.09 @ 01:16:04

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: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud with oil specs.	0.025

Total Length: 5.00 ft

Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

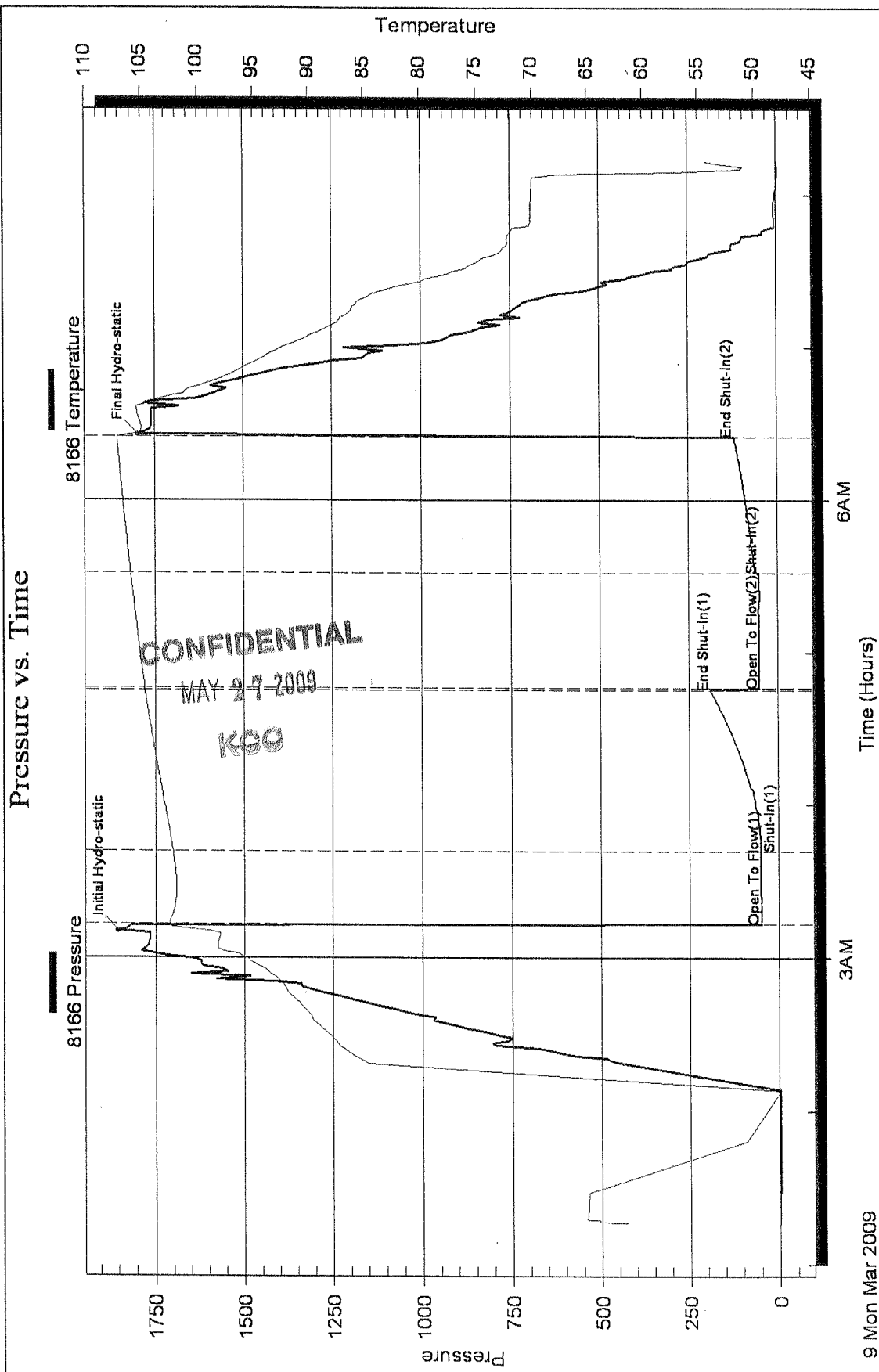
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

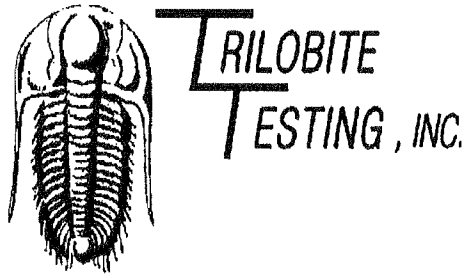
Pressure vs. Time



RECEIVED
MAY 21 2009
KCC WICHITA

Ref. No: 35800

Trilobite Testing, Inc



DRILL STEM TEST REPORT

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

250 N. Water
Ste. 300
Wichita Ks. 67202

CONFIDENTIAL

MAY 27 2009

KCC

ATTN: Paul Gunzelman

33 3 27 Decatur KS

DK Brown 1-33

Start Date: 2009.03.09 @ 17:20:00

End Date: 2009.03.10 @ 00:36:00

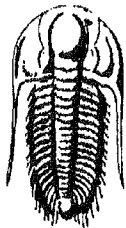
Job Ticket #: 34451 DST #: 3

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

RECEIVED

MAY 21 2009

KCC WICHITA



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

250 N. Water
Ste. 300
Wichita Ks. 67202
ATTN: Paul Gunzelman

DK Brown 1-33

33 3 27 Decatur KS

Job Ticket: 34451

DST#: 3

Test Start: 2009.03.09 @ 17:20:00

GENERAL INFORMATION:

Formation: **LKC-J-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:42:30

Time Test Ended: 00:36:00

Test Type: Conventional Bottom Hole

Tester: Chuck Kreutzer Jr.

Unit No: 30

Interval: **3666.00 ft (KB) To 3742.00 ft (KB) (TVD)**

Total Depth: 3742.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2604.00 ft (KB)

2600.00 ft (CF)

KB to GR/CF: 4.00 ft

Serial #: 8166

Inside

Press@RunDepth: 32.68 psig @ 3668.00 ft (KB)

Start Date: 2009.03.09

End Date: 2009.03.10

Start Time: 17:20:05

End Time: 00:35:59

Capacity: 7000.00 psig

Last Calib.: 2009.03.10

Time On Btm: 2009.03.09 @ 19:37:30

Time Off Btm: 2009.03.09 @ 22:54:30

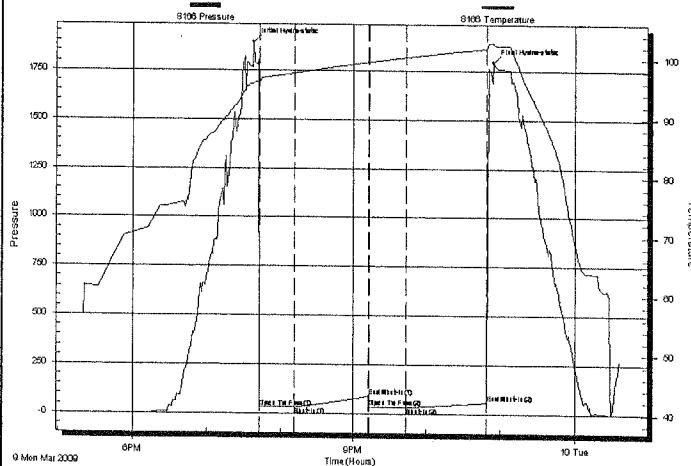
TEST COMMENT: IF: Weak blow built to 1 1/2 in.

ISI: No blow back.

FF: No blow after 30 mins.

FSI: No blow back.

Pressure vs. Time



PRESSURE SUMMARY

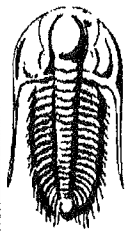
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1892.58	95.94	Initial Hydro-static
5	30.20	96.01	Open To Flow (1)
33	31.89	97.64	Shut-In(1)
95	88.78	99.56	End Shut-In(1)
96	31.77	99.54	Open To Flow (2)
126	32.68	100.36	Shut-In(2)
192	57.07	101.89	End Shut-In(2)
197	1793.53	102.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud	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.

DK Brown 1-33

250 N. Water
Ste. 300
Wichita Ks. 67202

33 3 27 Decatur KS

Job Ticket: 34451

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2009.03.09 @ 17:20:00

Tool Information

Drill Pipe:	Length: 3481.00 ft	Diameter: 3.80 inches	Volume: 48.83 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 52000.00 lb
			Total Volume: 49.72 bbl	Tool Chased 10.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3666.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

CONFIDENTIAL

MAY 27 2009

KCC

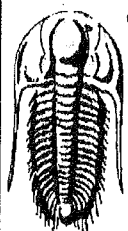
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3648.00	
Hydraulic tool	5.00			3653.00	
Safety Joint	3.00			3656.00	
Packer	5.00			3661.00	23.00 Bottom Of Top Packer
Packer	5.00			3666.00	
Stubb	1.00			3667.00	
Perforations	1.00			3668.00	
Recorder	0.00	8166	Inside	3668.00	
Recorder	0.00	8356	Inside	3668.00	
Change Over Sub	1.00			3669.00	
Blank Spacing	63.00			3732.00	
Change Over Sub	1.00			3733.00	
Perforations	6.00			3739.00	
Bullnose	3.00			3742.00	76.00 Bottom Packers & Anchor

Total Tool Length: 99.00

RECEIVED

MAY 21 2009

KCC WICHITA



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

DK Brown 1-33

250 N. Water
Ste. 300
Wichita Ks. 67202
ATTN: Paul Gunzelman

33 3 27 Decatur KS

Job Ticket: 34451

DST#: 3

Test Start: 2009.03.09 @ 17:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 55.00 sec/qt

Water Loss: 6.39 in³

Resistivity: ohm.m

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

deg API

Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud	0.049

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

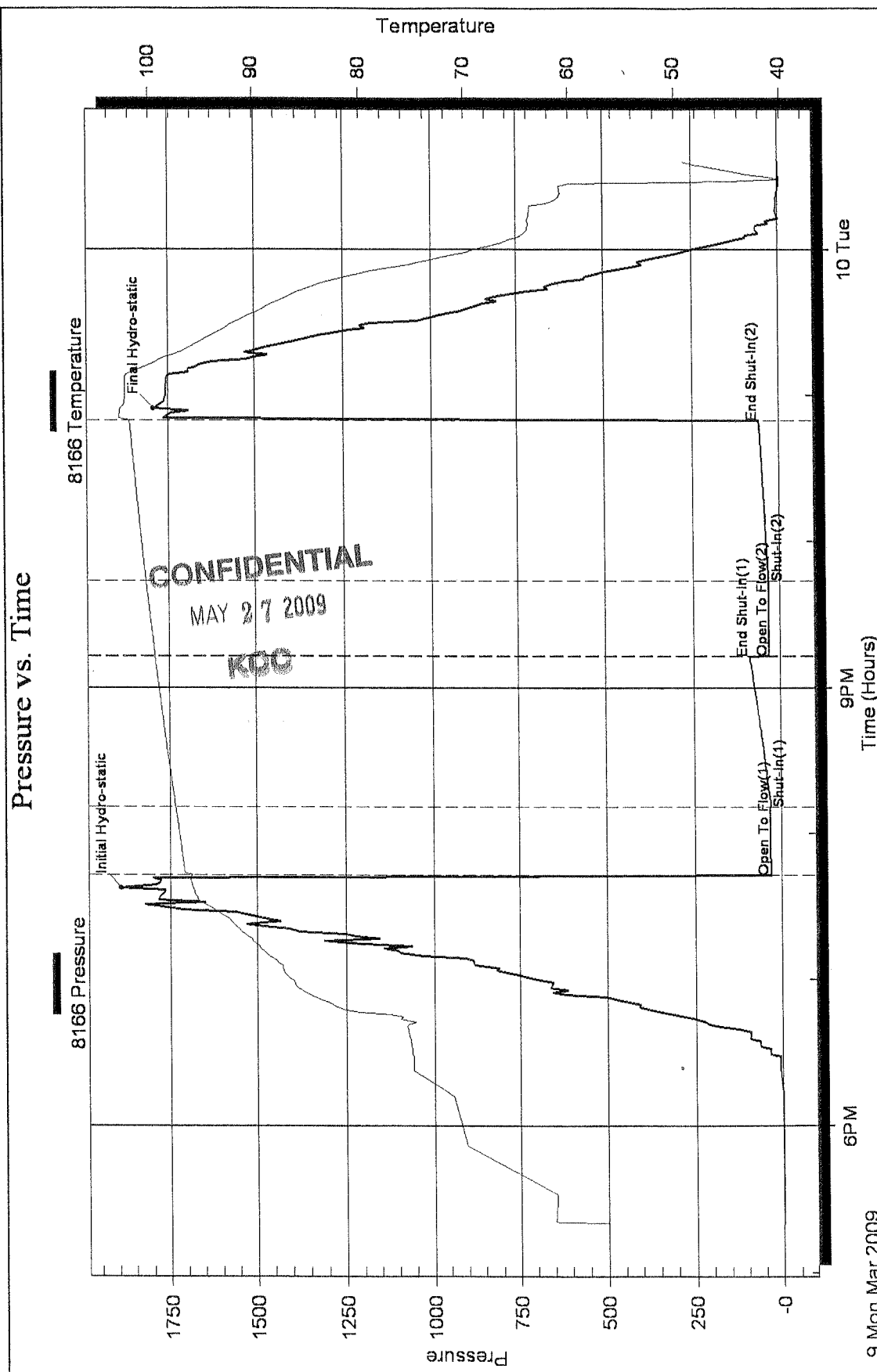
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



RECEIVED
MAY 21 2009
KCC WICHITA

Ref. No: 34451

Trilobite Testing, Inc