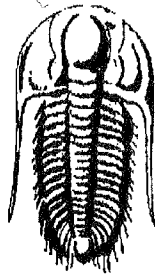


15-039-21086

14-3s-27w

IND



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

CONFIDENTIAL

APR 02 2009

KCO

250 N Water
Ste. 300
Wichita Ks. 67202

ATTN: Paul Gunzelman

14 3s 27w Decatur KS

M&M Bailey

Start Date: 2009.02.06 @ 01:25:00

End Date: 2009.02.06 @ 09:00:30

Job Ticket #: 35793 DST #: 1

KANSAS CORPORATION COMMISSION

JUN 04 2009

RECEIVED

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling CO. Inc.

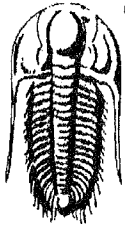
M&M Bailey

14 3s 27w Decatur KS

DST # 1

Toronto-LKC-AB

2009.02.06



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling CO. Inc.

M&M Bailey

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

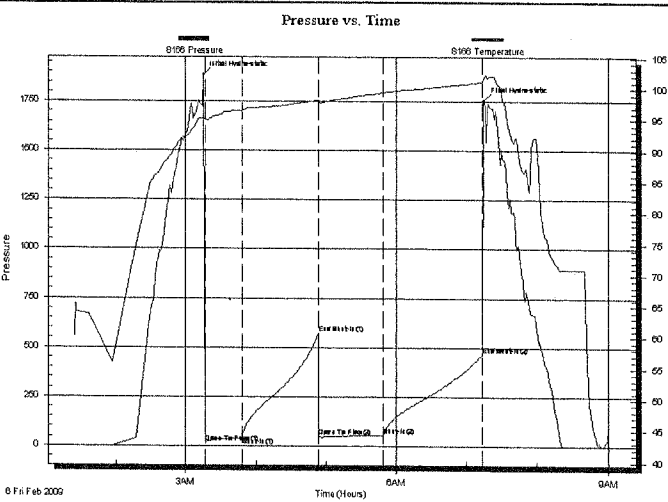
14 3s 27w Decatur KS
Job Ticket: 35793 **DST#: 1**
Test Start: 2009.02.06 @ 01:25:00

GENERAL INFORMATION:

Formation: **Toronto-LKC-A-B**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:16:30
 Time Test Ended: 09:00:30
 Test Type: Conventional Bottom Hole
 Tester: Chuck Kreuzer
 Unit No: 30
 Interval: **3578.00 ft (KB) To 3654.00 ft (KB) (TVD)**
 Total Depth: 3654.00 ft (KB) (TVD)
 Reference Elevations: 2684.00 ft (KB)
 2681.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 3.00 ft

Serial #: 8166 **Inside**
 Press@RunDepth: 54.66 psig @ 3584.00 ft (KB) Capacity: 7000.00 psig
 Start Date: 2009.02.06 End Date: 2009.02.06 Last Calib.: 2009.02.06
 Start Time: 01:25:05 End Time: 09:00:29 Time On Btm: 2009.02.06 @ 03:15:30
 Time Off Btm: 2009.02.06 @ 07:14:30

TEST COMMENT: IF: Weak blow built to 3 1/2 in. over 30 mins.
 IS: No blow back.
 FF: Weak blow built to 4 1/4 in. over 30 mins.
 FS: No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1882.98	95.34	Initial Hydro-static
1	16.74	95.08	Open To Flow (1)
33	44.43	96.52	Shut-In(1)
98	572.24	98.20	End Shut-In(1)
98	47.70	97.94	Open To Flow (2)
154	54.66	99.43	Shut-In(2)
238	465.78	101.13	End Shut-In(2)
239	1754.71	101.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
61.00	HOCM-30%o70%m	0.30
40.00	o-95%o5%g	0.20

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO. Inc.

M&M Bailey

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

14 3s 27w Decatur KS
Job Ticket: 35793 **DST#: 1**
Test Start: 2009.02.06 @ 01:25:00

Tool Information

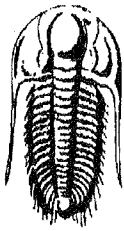
Drill Pipe:	Length: 3444.00 ft	Diameter: 3.80 inches	Volume: 48.31 bbl	Tool Weight: 20000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 121.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 80000.00 lb
		Total Volume:	48.91 bbl	Tool Chased 2.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3578.00 ft			Final 51000.00 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:				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3560.00	
Hydraulic tool	5.00			3565.00	
Safety Joint	3.00			3568.00	
Packer	5.00			3573.00	23.00 Bottom Of Top Packer
Packer	5.00			3578.00	
Stubb	1.00			3579.00	
Perforations	4.00			3583.00	
Change Over Sub	1.00			3584.00	
Recorder	0.00	8166	Inside	3584.00	
Recorder	0.00	8356	Inside	3584.00	
Blank Spacing	61.00			3645.00	
Change Over Sub	1.00			3646.00	
Perforations	5.00			3651.00	
Bullnose	3.00			3654.00	76.00 Bottom Packers & Anchor
Total Tool Length:	99.00				



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO. Inc.

M&M Bailey

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

14 3s 27w Decatur KS
Job Ticket: 35793 **DST#: 1**
Test Start: 2009.02.06 @ 01:25:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2600.00 ppm			
Filter Cake: 2.00 inches			

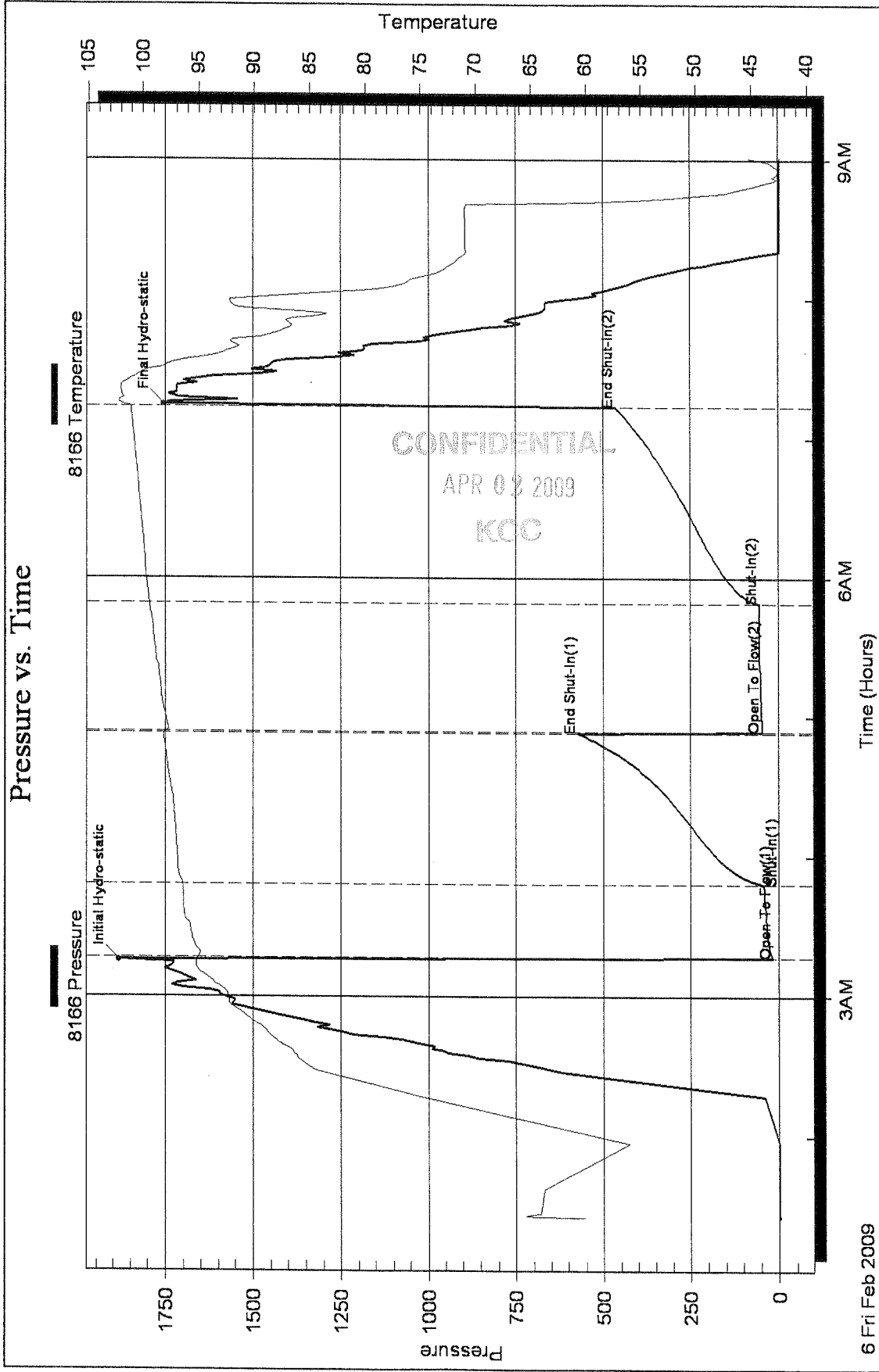
Recovery Information

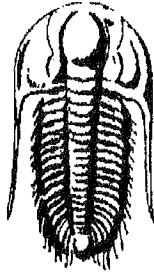
Recovery Table

Length ft	Description	Volume bbl
61.00	HOCM-30%o70%m	0.300
40.00	o-95%o5%g	0.197

Total Length: 101.00 ft Total Volume: 0.497 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING, INC.

CONFIDENTIAL
APR 02 2009

KCC

DRILL STEM TEST REPORT

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

250 N Water
Ste. 300
Wichita Ks. 67202

ATTN: Paul Gunzelman

14 3s 27w Decatur KS

M&M Bailey

Start Date: 2009.02.06 @ 18:40:00

End Date: 2009.02.07 @ 01:06:00

Job Ticket #: 35794 DST #: 2

KANSAS CORPORATION COMMISSION

JUN 04 2009

RECEIVED

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

Murfin Drilling CO. Inc.

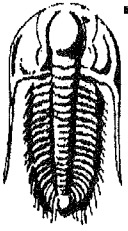
M&M Bailey

14 3s 27w Decatur KS

DST # 2

LKC-D-G

2009.02.06



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO. Inc.

M&M Bailey

250 N Water
Ste. 300
Wichita Ks. 67202

14 3s 27w Decatur KS

ATTN: Paul Gunzelman

Job Ticket: 35794

DST#: 2

Test Start: 2009.02.06 @ 18:40:00

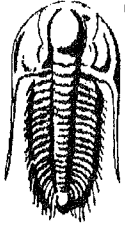
Tool Information

Drill Pipe:	Length: 3539.00 ft	Diameter: 3.80 inches	Volume: 49.64 bbl	Tool Weight: 20000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 300000.0 lb
Drill Collar:	Length: 121.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 80000.00 lb
		<u>Total Volume:</u>	<u>50.24 bbl</u>	Tool Chased 50.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3661.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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APR 02 2009
KCC

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3643.00	
Hydraulic tool	5.00			3648.00	
Safety Joint	3.00			3651.00	
Packer	5.00			3656.00	23.00 Bottom Of Top Packer
Packer	5.00			3661.00	
Stubb	1.00			3662.00	
Perforations	4.00			3666.00	
Change Over Sub	1.00			3667.00	
Recorder	0.00	8166	Inside	3667.00	
Recorder	0.00	8356	Inside	3667.00	
Blank Spacing	31.00			3698.00	
Change Over Sub	1.00			3699.00	
Perforations	14.00			3713.00	
Bullnose	3.00			3716.00	55.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO. Inc.

M&M Bailey

250 N Water

14 3s 27w Decatur KS

Ste. 300

Job Ticket: 35794

DST#: 2

Wichita Ks. 67202

Test Start: 2009.02.06 @ 18:40:00

ATTN: Paul Gunzelman

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: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.79 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	0.025

Total Length:

5.00 ft

Total Volume:

0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

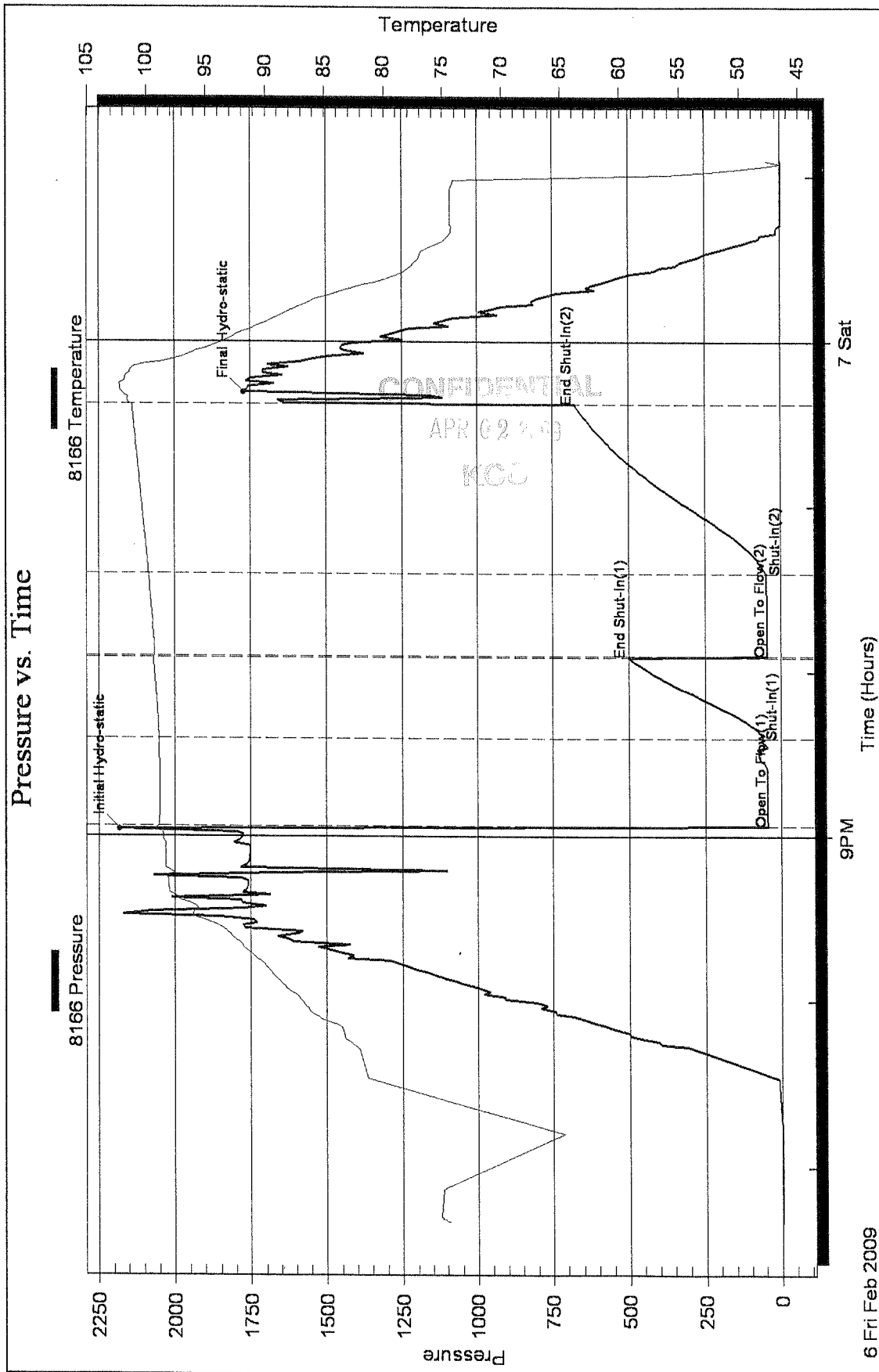
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

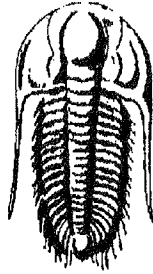
Pressure vs. Time



6 Fri Feb 2009 9PM

7 Sat

Time (Hours)



TRILOBITE
TESTING, INC.

APR 02 2009

KCC

DRILL STEM TEST REPORT

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

250 N Water
Ste. 300
Wichita Ks. 67202

ATTN: Paul Gunzelman

14 3s 27w Decatur KS

M&M Bailey

Start Date: 2009.02.07 @ 12:10:00

End Date: 2009.02.07 @ 20:04:00

Job Ticket #: 35795 DST #: 3

KANSAS CORPORATION COMMISSION

JUN 04 2009

RECEIVED

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

Murfin Drilling CO. Inc.

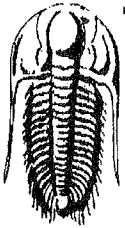
M&M Bailey

14 3s 27w Decatur KS

DST # 3

LKC-H-K

2009.02.07



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling CO. Inc.

M&M Bailey

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

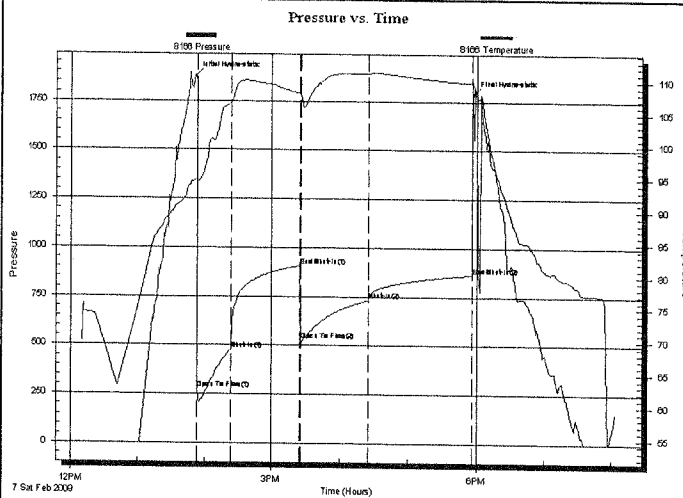
14 3s 27w Decatur KS
Job Ticket: 35795 **DST#: 3**
Test Start: 2009.02.07 @ 12:10:00

GENERAL INFORMATION:

Formation: **LKC-H-K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:54:00
 Time Test Ended: 20:04:00
 Interval: **3718.00 ft (KB) To 3802.00 ft (KB) (TVD)**
 Total Depth: 3802.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Chuck Kreuzer
 Unit No: 30
 Reference Elevations: 2684.00 ft (KB)
 2681.00 ft (CF)
 KB to GR/CF: 3.00 ft

Serial #: 8166 **Inside**
 Press@RunDepth: 731.91 psig @ 3722.00 ft (KB) Capacity: 7000.00 psig
 Start Date: 2009.02.07 End Date: 2009.02.07 Last Calib.: 2009.02.07
 Start Time: 12:10:05 End Time: 20:03:59 Time On Btm: 2009.02.07 @ 13:52:00
 Time Off Btm: 2009.02.07 @ 17:56:59

TEST COMMENT: IF: Strong blow B.O.B in 1 min.
 ISl: Bled off for 5 min., Weak surface blow after 5 mins., built to 1/4 in. in 40 mins. Died.
 FF: Strog blow B.O.B in 2 mins.
 FSl: Bled off, No blow back.



PRESSURE SUMMARY

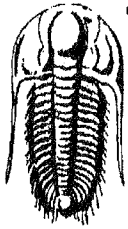
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1874.69	94.80	Initial Hydro-static
2	275.82	94.61	Open To Flow (1)
32	479.12	106.58	Shut-In(1)
93	906.42	108.09	End Shut-In(1)
94	526.78	107.93	Open To Flow (2)
153	731.91	111.19	Shut-In(2)
244	863.02	109.75	End Shut-In(2)
245	1788.83	109.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
868.00	mw -70%w 30%m	11.07
806.00	w m-20%w 80%m	11.31

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO. Inc.
250 N Water
Ste. 300
Wichita Ks. 67202
ATTN: Paul Gunzelman

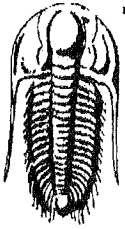
M&M Bailey
14 3s 27w Decatur KS
Job Ticket: 35795 **DST#: 3**
Test Start: 2009.02.07 @ 12:10:00

Tool Information

Drill Pipe:	Length: 3574.00 ft	Diameter: 3.80 inches	Volume: 50.13 bbl	Tool Weight: 24000.00 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: 121.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 100000.0 lb
		Total Volume:	50.73 bbl	Tool Chased 5.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3718.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	112.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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APR 02 2009
KCC

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3695.00	
Hydraulic tool	5.00			3700.00	
Jars	5.00			3705.00	
Safety Joint	3.00			3708.00	
Packer	5.00			3713.00	28.00 Bottom Of Top Packer
Packer	5.00			3718.00	
Stubb	1.00			3719.00	
Perforations	2.00			3721.00	
Change Over Sub	1.00			3722.00	
Recorder	0.00	8166	Inside	3722.00	
Recorder	0.00	8356	Inside	3722.00	
Blank Spacing	61.00			3783.00	
Change Over Sub	1.00			3784.00	
Perforations	15.00			3799.00	
Bullnose	3.00			3802.00	84.00 Bottom Packers & Anchor
Total Tool Length:	112.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO. Inc.

M&M Bailey

250 N Water

14 3s 27w Decatur KS

Ste. 300

Job Ticket: 35795

DST#: 3

Wichita Ks. 67202

ATTN: Paul Gunzelman

Test Start: 2009.02.07 @ 12:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

80000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 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 bbbl
868.00	mw-70%w 30%m	11.074
806.00	w m-20%w 80%m	11.306

Total Length: 1674.00 ft

Total Volume: 22.380 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .132 @ 53F

Pressure vs. Time

