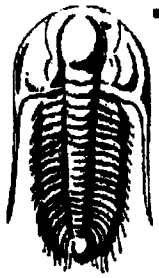
15-163-23682 4-9s-18w



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

CONFIDENTIAL
MAY 27 2008
KCC

ATTN: David Doyel

4 9S 18W Rooks KS

Mosher Farms #2-4

Start Date: 2008.02.02 @ 10:48:33
End Date: 2008.02.02 @ 19:08:27
Job Ticket #: 31805 DST #: 1

RECEIVED
KANSAS CORPORATION COMMISSION
MAY 29 2008
CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Murfin Drilling Co Inc
Mosher Farms #2-4
4 9S 18W Rooks KS
DST # 1
Toronto-LKC A-D
2008.02.02

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

Mosher Farms #2-4

4 9S 18W Rooks KS

Job Ticket: 31805 **DST#: 1**

Test Start: 2008.02.02 @ 10:48:33

GENERAL INFORMATION:

Formation: **Toronto-LKC A-D**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:09:28
Time Test Ended: 19:08:27

Test Type: Conventional Bottom Hole
Tester: Ray Schwager
Unit No: 42

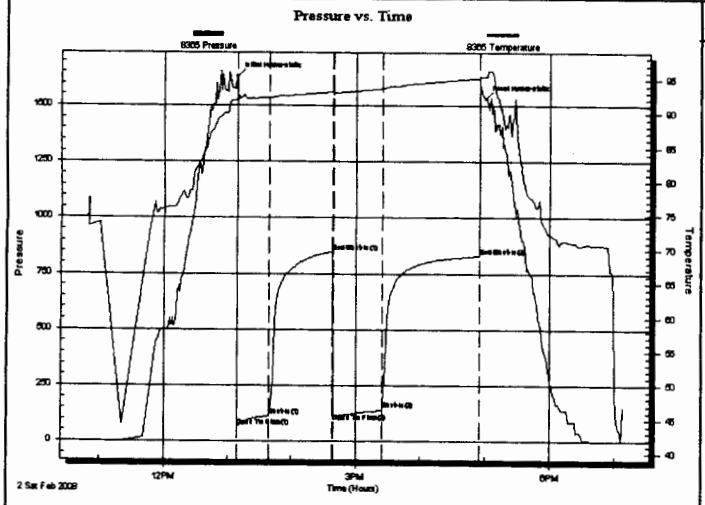
Interval: 3137.00 ft (KB) To 3248.00 ft (KB) (TVD)
Total Depth: 3248.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 2004.00 ft (KB)
1999.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8365 **Inside**
Press@RunDepth: 141.73 psig @ 3235.01 ft (KB)
Start Date: 2008.02.02 End Date: 2008.02.02
Start Time: 10:48:33 End Time: 19:08:27

Capacity: 7000.00 psig
Last Calib.: 2008.02.02
Time On Btm: 2008.02.02 @ 13:08:58
Time Off Btm: 2008.02.02 @ 17:00:27

TEST COMMENT: IFP Wk to a gd bl 1/2 " to 7 " bl
FFP Wk to a gd bl 1/2 " to 8 1/2 " bl
Times 30 60 45 90
Surface bl bk on shut-in



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1628.86	92.02	Initial Hydro-static
1	64.99	91.70	Open To Flow (1)
30	112.41	92.26	Shut-In(1)
90	847.63	93.15	End Shut-In(1)
90	123.64	92.71	Open To Flow (2)
136	141.73	93.64	Shut-In(2)
226	829.55	95.17	End Shut-In(2)
232	1530.42	95.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	HO&GCM 10%G 30%O 60%M	1.01
50.00	CO	0.70
0.00	280 ' GIP	0.00

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

Mosher Farms #2-4

4 9S 18W Rooks KS

Job Ticket: 31805 **DST#: 1**

Test Start: 2008.02.02 @ 10:48:33

Tool Information

Drill Pipe:	Length:	3025.00 ft	Diameter:	3.80 inches	Volume:	42.43 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:	25000.00 lb
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	Weight to Pull Loose:	70000.00 lb
					Total Volume:	43.02 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		31.00 ft					String Weight: Initial	58000.00 lb
Depth to Top Packer:		3137.00 ft					Final	58000.00 lb
Depth to Bottom Packer:		ft						
Interval betw een Packers:		111.02 ft						
Tool Length:		134.02 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			3115.00		
Shut In Tool	5.00			3120.00		
Hydraulic tool	5.00			3125.00		
Safety Joint	2.00			3127.00		
Packer	5.00			3132.00	23.00	Bottom Of Top Packer
Packer	5.00			3137.00		
Stubb	1.00			3138.00		
Perforations	2.00			3140.00		
Blank Spacing	95.00			3235.00		
Recorder	0.01	8365	Inside	3235.01		
Recorder	0.01	8371	Outside	3235.02		
Perforations	10.00			3245.02		
Bullnose	3.00			3248.02	111.02	Bottom Packers & Anchor
Total Tool Length:	**134.02**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

Mosher Farms #2-4

4 9S 18W Rooks KS

Job Ticket: 31805 **DST#: 1**

Test Start: 2008.02.02 @ 10:48:33

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	31 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.19 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1600.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

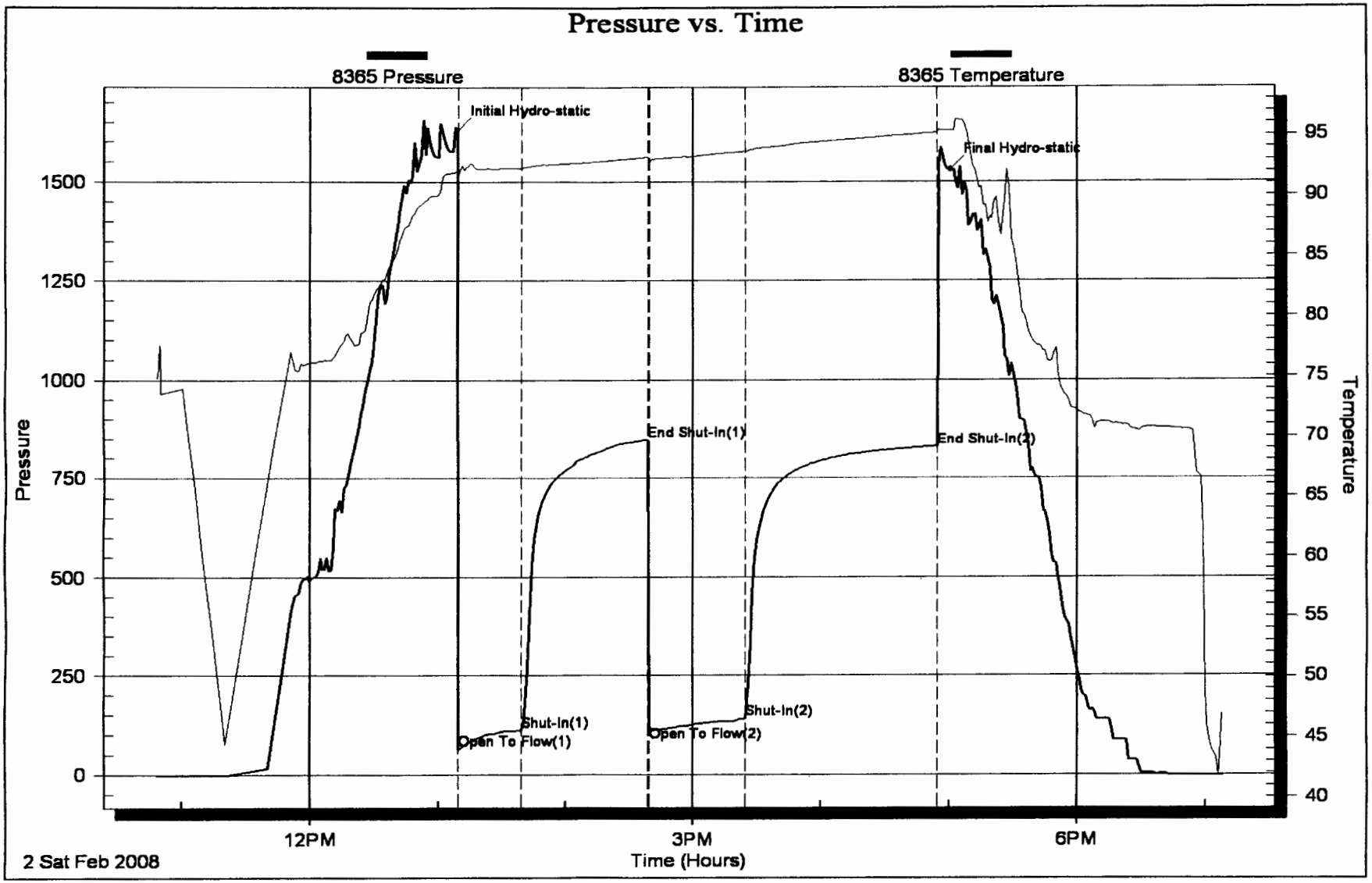
Length ft	Description	Volume bbl
150.00	HO&GCM 10%G 30%O 60%M	1.011
50.00	CO	0.701
0.00	280 ' GIP	0.000

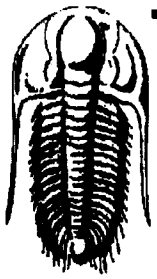
Total Length: 200.00 ft Total Volume: 1.712 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8365 Pressure
8365 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Shut-In(2)
Open To Flow(1)
Open To Flow(2)
Pressure
Temperature
1500
1250
1000
750
500
250
0
95
90
85
80
75
70
65
60
55
50
45
40
12PM
3PM
6PM
2 Sat Feb 2008
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

4 9S 18W Rooks KS

Mosher Farms #2-4

Start Date: 2008.02.03 @ 04:09:36
End Date: 2008.02.03 @ 11:21:00
Job Ticket #: 31806 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

Mosher Farms #2-4

4 9S 18W Rooks KS

Job Ticket: 31806 **DST#: 2**

Test Start: 2008.02.03 @ 04:09:36

GENERAL INFORMATION:

Formation: **LKC E-G**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:19:01
Time Test Ended: 11:21:00

Test Type: Conventional Bottom Hole
Tester: Ray Schwager
Unit No: 42

Interval: 3248.00 ft (KB) To 3290.00 ft (KB) (TVD)
Total Depth: 3290.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

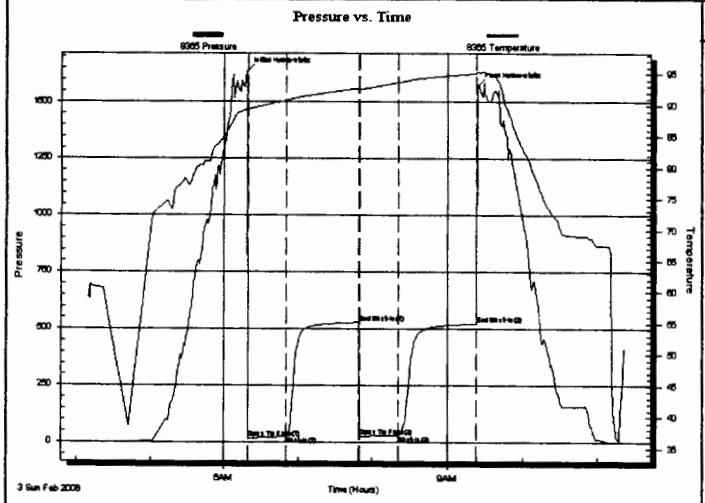
Reference Elevations: 2004.00 ft (KB)
1999.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8365 **Inside**

Press@RunDepth: 30.42 psig @ 3255.01 ft (KB)
Start Date: 2008.02.03 End Date: 2008.02.03
Start Time: 04:09:36 End Time: 11:21:00

Capacity: 7000.00 psig
Last Calib.: 2008.02.03
Time On Btm: 2008.02.03 @ 06:18:31
Time Off Btm: 2008.02.03 @ 09:24:00

TEST COMMENT: IFP Wk bl thru-out 1/4 " bl
FFP Surface bl
Times 30 60 30 60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1633.41	89.57	Initial Hydro-static
1	16.18	89.05	Open To Flow (1)
32	24.55	90.74	Shut-In(1)
91	528.29	92.68	End Shut-In(1)
92	25.50	92.52	Open To Flow (2)
123	30.42	93.63	Shut-In(2)
185	521.19	95.06	End Shut-In(2)
186	1572.08	95.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud w/show of Oil	0.10

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

Mosher Farms #2-4

4 9S 18W Rooks KS

Job Ticket: 31806 **DST#: 2**

Test Start: 2008.02.03 @ 04:09:36

Tool Information

Drill Pipe:	Length:	3120.00 ft	Diameter:	3.80 inches	Volume:	43.77 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:	25000.00 lb
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	Weight to Pull Loose:	65000.00 lb
					Total Volume:	44.36 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		15.00 ft					String Weight: Initial	56000.00 lb
Depth to Top Packer:		3248.00 ft					Final	56000.00 lb
Depth to Bottom Packer:		ft						
Interval betw een Packers:		42.02 ft						
Tool Length:		65.02 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			3226.00		
Shut In Tool	5.00			3231.00		
Hydraulic tool	5.00			3236.00		
Safety Joint	2.00			3238.00		
Packer	5.00			3243.00	23.00	Bottom Of Top Packer
Packer	5.00			3248.00		
Stubb	1.00			3249.00		
Perforations	6.00			3255.00		
Recorder	0.01	8365	Inside	3255.01		
Recorder	0.01	8371	Outside	3255.02		
Blank Spacing	32.00			3287.02		
Bullnose	3.00			3290.02	42.02	Bottom Packers & Anchor
Total Tool Length:	**65.02**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

Mosher Farms #2-4

4 9S 18W Rooks KS

Job Ticket: 31806 **DST#: 2**

Test Start: 2008.02.03 @ 04:09:36

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:	7.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3300.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

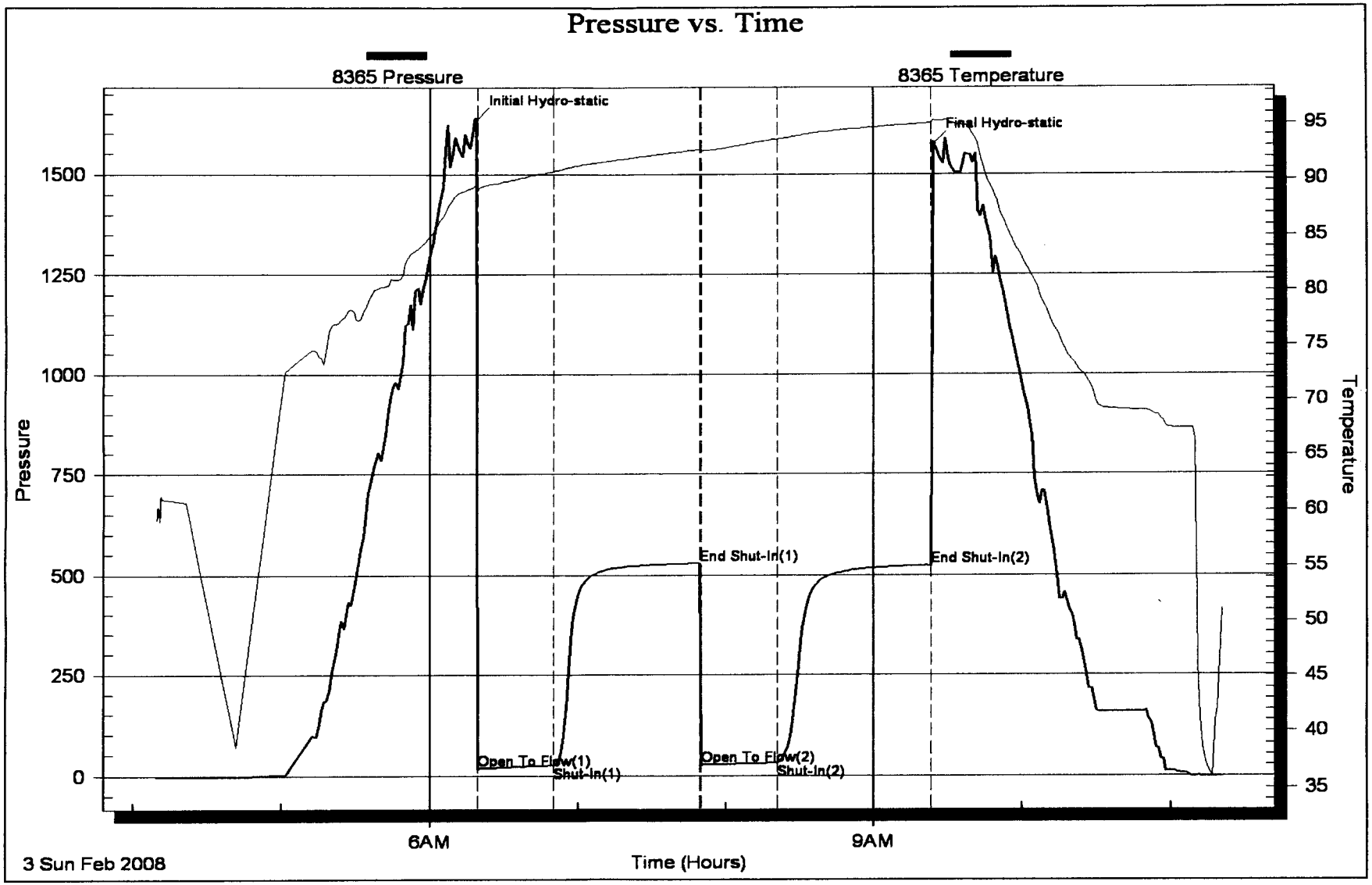
Length ft	Description	Volume bbl
20.00	Mud w/show of Oil	0.098

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
8365 Pressure
8365 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1500
1250
1000
750
500
250
0
95
90
85
80
75
70
65
60
55
50
45
40
35
6AM
9AM
3 Sun Feb 2008
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

4 9S 18W Rooks KS

Mosher Farms #2-4

Start Date: 2008.02.03 @ 23:22:57
End Date: 2008.02.04 @ 07:06:21
Job Ticket #: 31807 DST #: 3

RECEIVED
KANSAS CORPORATION COMMISSION
MAY 29 2008
CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

Mosher Farms #2-4

4 9S 18W Rooks KS

Job Ticket: 31807 **DST#: 3**

Test Start: 2008.02.03 @ 23:22:57

GENERAL INFORMATION:

Formation: **LKC H-L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:28:22
Time Test Ended: 07:06:21

Test Type: Conventional Bottom Hole
Tester: Ray Schwager
Unit No: 42

Interval: 3290.00 ft (KB) To 3400.00 ft (KB) (TVD)
Total Depth: 3400.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

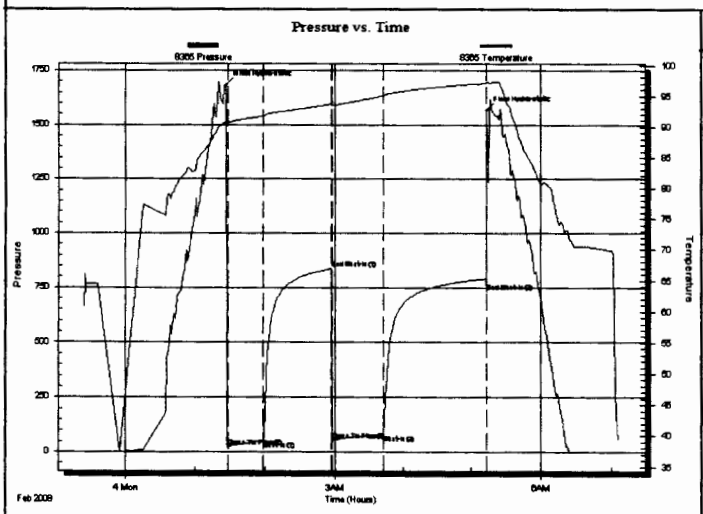
Reference Elevations: 2004.00 ft (KB)
1999.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8365 **Inside**

Press@RunDepth: 79.15 psig @ 3302.01 ft (KB)
Start Date: 2008.02.03 End Date: 2008.02.04
Start Time: 23:22:57 End Time: 07:06:21

Capacity: 7000.00 psig
Last Calib.: 2008.02.04
Time On Btm: 2008.02.04 @ 01:27:22
Time Off Btm: 2008.02.04 @ 05:13:51

TEST COMMENT: IFP Wk bl thru-out 1/4 " to 1 1/2 " bl
FFP Wk bl thru-out 1/4 " bl
Times 30 60 45 90
Surface bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1682.21	90.86	Initial Hydro-static
1	22.89	90.55	Open To Flow (1)
31	50.47	91.78	Shut-In(1)
90	836.45	93.67	End Shut-In(1)
91	53.09	93.43	Open To Flow (2)
136	79.15	95.10	Shut-In(2)
226	730.23	97.08	End Shut-In(2)
227	1568.59	97.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	SOCM 1%O 99%M	0.59

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

Mosher Farms #2-4

4 9S 18W Rooks KS

Job Ticket: 31807 **DST#: 3**

Test Start: 2008.02.03 @ 23:22:57

Tool Information

Drill Pipe:	Length:	3151.00 ft	Diameter:	3.80 inches	Volume:	44.20 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:	25000.00 lb
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	Weight to Pull Loose:	80000.00 lb
					Total Volume:	44.79 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		4.00 ft					String Weight: Initial	56000.00 lb
Depth to Top Packer:		3290.00 ft					Final	56000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		109.02 ft						
Tool Length:		132.02 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			3268.00		
Shut In Tool	5.00			3273.00		
Hydraulic tool	5.00			3278.00		
Safety Joint	2.00			3280.00		
Packer	5.00			3285.00	23.00	Bottom Of Top Packer
Packer	5.00			3290.00		
Stubb	1.00			3291.00		
Perforations	11.00			3302.00		
Recorder	0.01	8365	Inside	3302.01		
Recorder	0.01	8371	Outside	3302.02		
Blank Spacing	94.00			3396.02		
Bullnose	3.00			3399.02	109.02	Bottom Packers & Anchor
Total Tool Length:	**132.02**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

250 N Water Ste 300
Wichita KS 67202-1216

ATTN: David Doyel

Mosher Farms #2-4

4 9S 18W Rooks KS

Job Ticket: 31807 **DST#: 3**

Test Start: 2008.02.03 @ 23:22:57

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:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.60 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4900.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

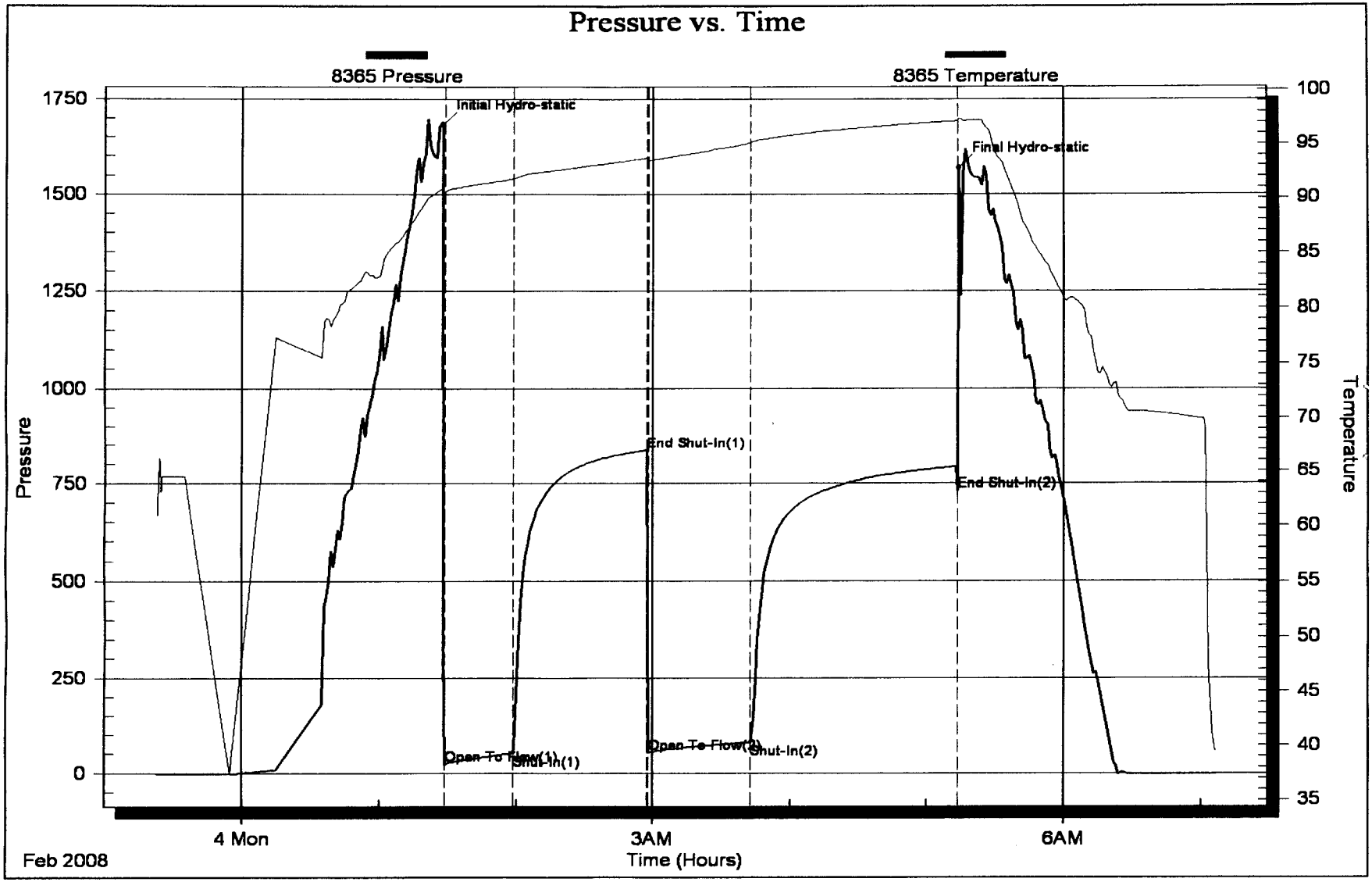
Length ft	Description	Volume bbl
120.00	SOCM 1%O 99%M	0.590

Total Length: 120.00 ft Total Volume: 0.590 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8365 Pressure
8365 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
0
100
95
90
85
80
75
70
65
60
55
50
45
40
35
4 Mon
3AM
6AM
Time (Hours)
Feb 2008