

15-195-22618

8-12s-24w

IND



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company, Inc.**

250 N Water
Suite 300
Wichita, KS 67202

ATTN: Paul Gunzelman

8-12s-24wTrego KS

Dietz "L" #1-8

Start Date: 2009.08.24 @ 02:00:11

End Date: 2009.08.24 @ 10:07:11

Job Ticket #: 35238 DST #: 1

**KCC
DEC 16 2009
CONFIDENTIAL**

**RECEIVED
KANSAS CORPORATION COMMISSION**

DEC 16 2009

**CONSERVATION DIVISION
WICHITA, KS**

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

Murfin Drilling Company, Inc.

Dietz "L" #1-8

8-12s-24wTrego KS

DST # 1

Lansing "B"

2009.08.24



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

Dietz "L" #1-8

250 N Water
Suite 300
Wichita, KS 67202
ATTN: Paul Gunzelman

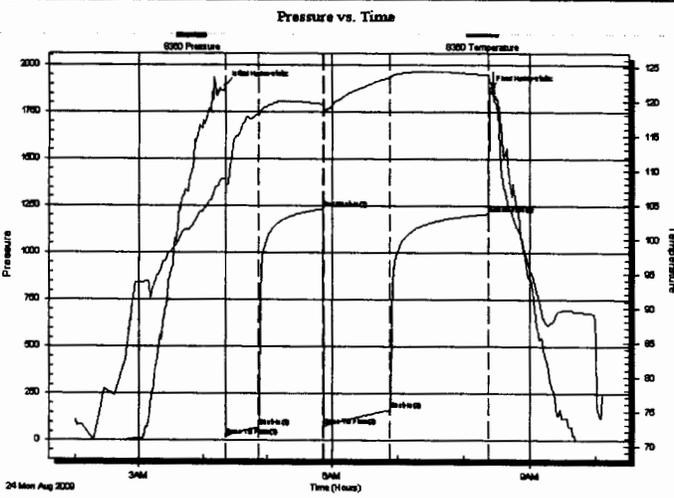
8-12s-24w Trego KS
Job Ticket: 35238 DST#: 1
Test Start: 2009.08.24 @ 02:00:11

GENERAL INFORMATION:

Formation: **Lansing "B"**
 Deviated: No Whipstock ft (KB)
 Time Tool Opened: 04:21:11
 Time Test Ended: 10:07:11
 Interval: **3874.00 ft (KB) To 3896.00 ft (KB) (TVD)**
 Total Depth: 3896.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Jason McLemore
 Unit No: 32
 Reference Elevations: 2494.00 ft (KB)
 2489.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8360 Inside
 Press@RunDepth: 164.59 psig @ 3878.00 ft (KB) Capacity: 7000.00 psig
 Start Date: 2009.08.24 End Date: 2009.08.24 Last Callib.: 2009.08.24
 Start Time: 02:00:13 End Time: 10:07:11 Time On Btrc: 2009.08.24 @ 04:20:41
 Time Off Btrc: 2009.08.24 @ 08:23:41

TEST COMMENT: IFF-Good Blow ,Built to 10-1/2"
 ISI-Dead
 FFP-Good Blow ,BOB in 41 Min.
 FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1893.52	108.69	Initial Hydro-static
1	20.90	107.95	Open To Flow (1)
32	72.26	118.16	Shut-In(1)
91	1234.29	119.62	End Shut-In(1)
92	80.17	118.93	Open To Flow (2)
153	164.59	123.48	Shut-In(2)
242	1209.01	123.85	End Shut-In(2)
243	1873.88	122.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
290.00	Muddy Water-90%W-10%M	3.79
10.00	Tar	0.14

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

Dietz "L" #1-8

250 N Water
Suite 300
Wichita, KS 67202
ATTN: Paul Gunzelman

8-12s-24w Trego KS
Job Ticket: 35238 **DST#: 1**
Test Start: 2009.08.24 @ 02:00:11

Tool Information

Drill Pipe:	Length: 3833.00 ft	Diameter: 3.80 inches	Volume: 53.77 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
		Total Volume:	53.92 bbl	Tool Chased: 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3874.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	50.00 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			3847.00	
Shut In Tool	5.00			3852.00	
Hydraulic tool	5.00			3857.00	
Jars	5.00			3862.00	
Safety Joint	2.00			3864.00	
Packer	5.00			3869.00	28.00 Bottom Of Top Packer
Packer	5.00			3874.00	
Stubb	1.00			3875.00	
Perforations	3.00			3878.00	
Recorder	0.00	8360	Inside	3878.00	
Recorder	0.00	6755	Inside	3878.00	
Perforations	15.00			3893.00	
Bullnose	3.00			3896.00	22.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

Dietz "L" #1-8

250 N Water
Suite 300
Wichita, KS 67202
ATTN: Paul Gunzelman

8-12s-24w Trego KS
Job Ticket: 35238 DST#: 1
Test Start: 2009.08.24 @ 02:00:11

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:	48000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
290.00	Muddy Water-90%W-10%M	3.786
10.00	Tar	0.140

Total Length: 300.00 ft Total Volume: 3.926 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW .102 @ 85F = 48000 ppm chlorides

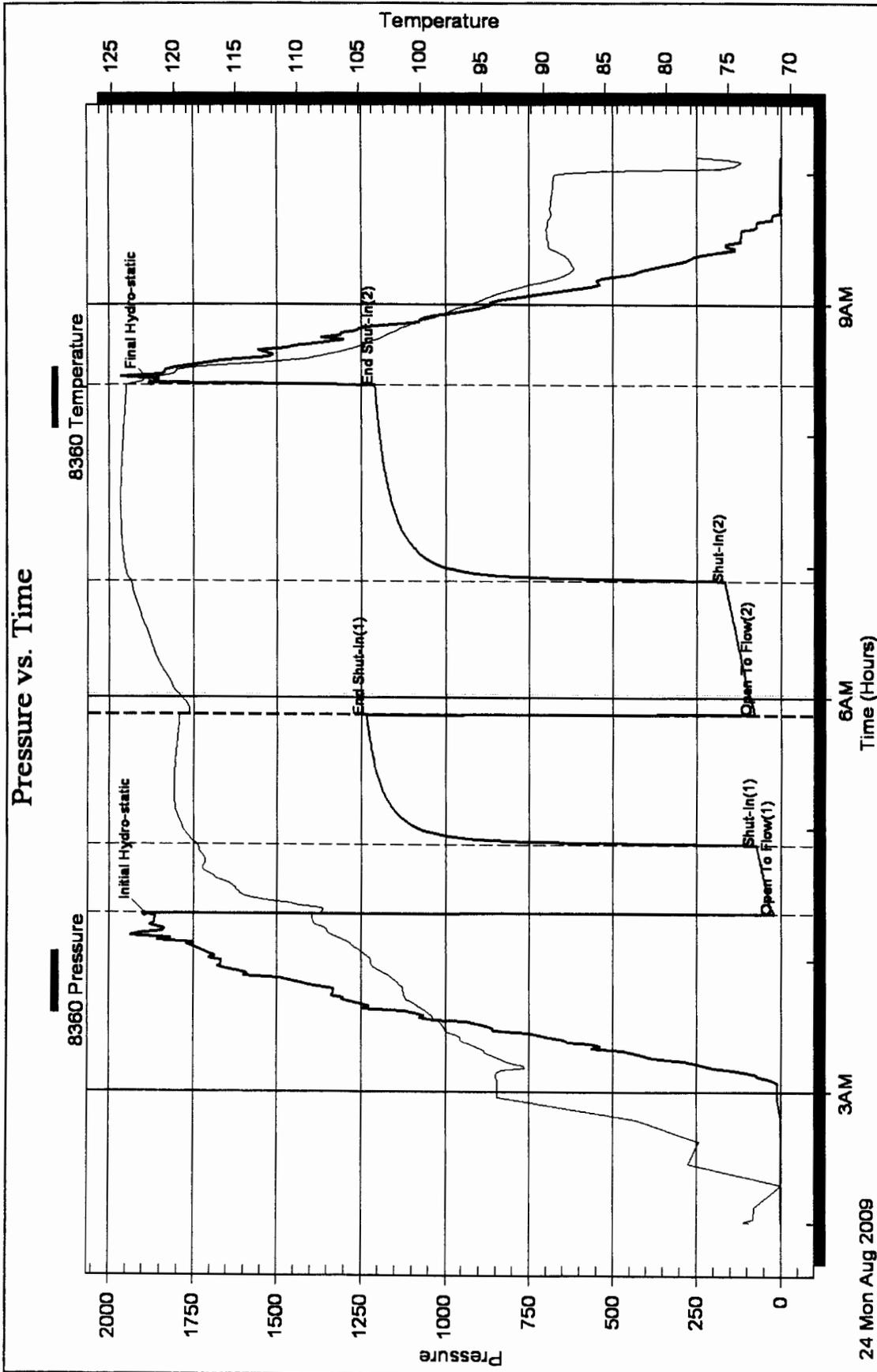
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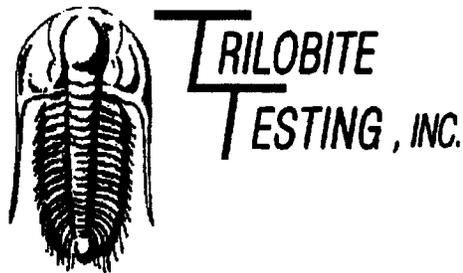
Inside

Murfin Drilling Company, Inc.

8-12s-24w Trego KS

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company, Inc.**

250 N Water
Suite 300
Wichita, KS 67202

ATTN: Paul Gunzelman

8-12s-24wTrego KS

Dietz "L" #1-8

Start Date: 2009.08.24 @ 20:29:14

End Date: 2009.08.25 @ 04:05:44

Job Ticket #: 35239 DST #: 2

RECEIVED
KANSAS CORPORATION COMMISSION
DEC 16 2009
CONSERVATION DIVISION
WICHITA, KS

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 Drilling Company, Inc.

250 N Water
Suite 300
Wichita, KS 67202
ATTN: Paul Gunzelman

Dietz "L" #1-8

8-12s-24wTrego KS

Job Ticket: 35239 **DST#: 2**

Test Start: 2009.08.24 @ 20:29:14

GENERAL INFORMATION:

Formation: **Lansing, "E-G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:16:44

Time Test Ended: 04:05:44

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 32

Interval: **3918.00 ft (KB) To 3979.00 ft (KB) (TVD)**

Total Depth: 3979.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 2494.00 ft (KB)

2489.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8360

Inside

Press@RunDepth: 179.29 psig @ 3922.00 ft (KB)

Start Date: 2009.08.24

End Date:

2009.08.25

Capacity:

7000.00 psig

Start Time:

20:29:16

End Time:

04:05:44

Last Calib.:

2009.08.25

Time On Btm:

2009.08.24 @ 22:16:14

Time Off Btm:

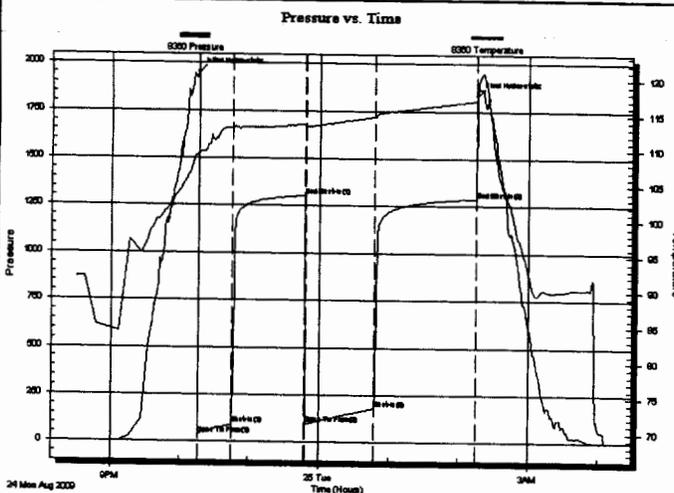
2009.08.25 @ 02:15:44

TEST COMMENT: IFF-Good Blow, BOB in 28 Min.

ISI-Dead

FFP-Good Blow, BOB in 45 Min.

FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1951.45	109.81	Initial Hydro-static
1	37.17	109.48	Open To Flow (1)
30	90.94	113.05	Shut-in(1)
92	1302.64	113.66	End Shut-in(1)
92	95.95	113.23	Open To Flow (2)
151	179.29	114.70	Shut-in(2)
239	1289.58	116.98	End Shut-in(2)
240	1833.28	117.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
179.00	Muddy Water-85%W-15%M	2.23
120.00	Muddy Water W/Oil Scum 55%W-45%M	1.68
1.00	Free Oil	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

Dietz "L" #1-8

250 N Water
Suite 300
Wichita, KS 67202
ATTN: Paul Gunzelman

8-12s-24w Trego KS
Job Ticket: 35239 **DST#: 2**
Test Start: 2009.08.24 @ 20:29:14

Tool Information

Drill Pipe:	Length: 3865.00 ft	Diameter: 3.80 inches	Volume: 54.22 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			Total Volume: 54.37 bbl	Tool Chased: 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3918.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	89.00 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			3891.00	
Shut In Tool	5.00			3896.00	
Hydraulic tool	5.00			3901.00	
Jars	5.00			3906.00	
Safety Joint	2.00			3908.00	
Packer	5.00			3913.00	28.00 Bottom Of Top Packer
Packer	5.00			3918.00	
Stubb	1.00			3919.00	
Perforations	3.00			3922.00	
Recorder	0.00	8360	Inside	3922.00	
Change Over Sub	1.00			3923.00	
Recorder	0.00	6755	Inside	3923.00	
Blank Spacing	32.00			3955.00	
Change Over Sub	1.00			3956.00	
Perforations	20.00			3976.00	
Bullnose	3.00			3979.00	61.00 Bottom Packers & Anchor
Total Tool Length:	89.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

Dietz "L" #1-8

250 N Water
Suite 300
Wichita, KS 67202

8-12s-24wTrego KS

Job Ticket: 35239

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2009.08.24 @ 20:29:14

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: 34000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
179.00	Muddy Water-85%W-15%M	2.229
120.00	Muddy Water W/Oil Scum 55%W-45%M	1.683
1.00	Free Oil	0.014

Total Length: 300.00 ft Total Volume: 3.926 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .21 @ 65F= 34000 chlorides

Serial #: 8360

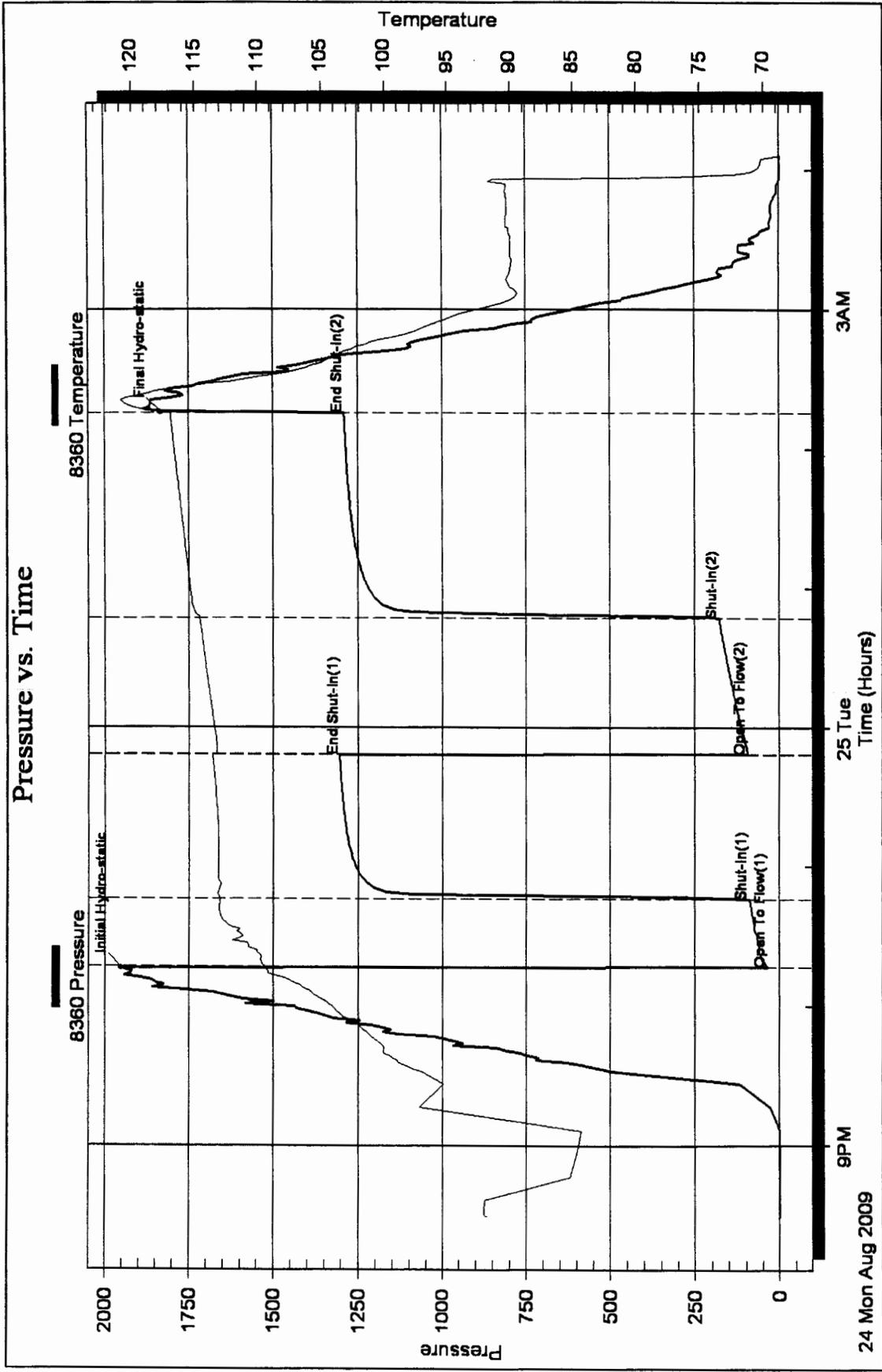
Inside

Murfin Drilling Company, Inc.

8-12s-24w Trego KS

DST Test Number: 2

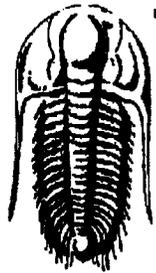
Pressure vs. Time



Tribolite Testing, Inc

Ref. No: 35239

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company, Inc.**

250 N Water
Suite 300
Wichita, KS 67202

ATTN: Paul Gunzelman

8-12s-24wTrego KS

Dietz "L" #1-8

Start Date: 2009.08.25 @ 12:18:27

End Date: 2009.08.25 @ 21:00:27

Job Ticket #: 35240 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Company, Inc.

Dietz "L" #1-8

8-12s-24wTrego KS

DST # 3

"L"

2009.08.25



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

250 N Water
Suite 300
Wichita, KS 67202
ATTN: Paul Gunzelman

Dietz "L" #1-8

8-12s-24wTrego KS

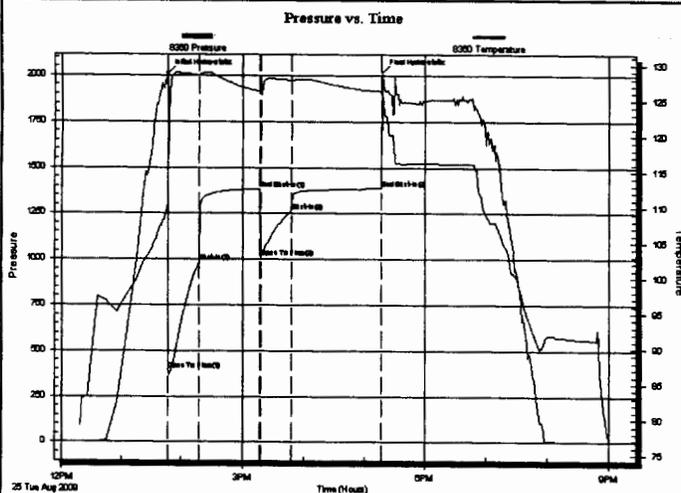
Job Ticket: 35240 **DST#: 3**
Test Start: 2009.08.25 @ 12:18:27

GENERAL INFORMATION:

Formation: "I"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:46:57
Time Test Ended: 21:00:27
Test Type: Conventional Bottom Hole
Tester: Jason McLemore
Unit No: 32
Interval: **4012.00 ft (KB) To 4030.00 ft (KB) (TVD)**
Reference Elevations: 2494.00 ft (KB)
Total Depth: 4030.00 ft (KB) (TVD) 2489.00 ft (CF)
Hole Diameter: 7.80 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8360 Inside
Press@RunDepth: 1262.27 psig @ 4017.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2009.08.25 End Date: 2009.08.25 Last Calib.: 2009.08.25
Start Time: 12:18:29 End Time: 21:00:27 Time On Btrm: 2009.08.25 @ 13:46:27
Time Off Btrm: 2009.08.25 @ 17:17:57

TEST COMMENT: IFF-Strong,BOB in 15 Seconds,2" Cracked But no Gas To Surface
IS-Blow back BOBin 9 Min.,Gas To Surface 10 Min. into shut in
FFP-Strong,BOB in 30 Seconds
FS-Blow back BOB in 6 Min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2011.12	110.74	Initial Hydro-static
1	396.01	112.08	Open To Flow (1)
31	983.39	128.51	Shut-In(1)
91	1383.80	126.25	End Shut-In(1)
92	1011.57	125.95	Open To Flow (2)
122	1262.27	127.82	Shut-In(2)
211	1386.33	126.24	End Shut-In(2)
212	2015.83	126.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Gassy OCM-20%G-20%O-60%M	1.40
3687.00	Gassy Oil-40%G-60%O	51.72
0.00	155' GP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

250 N Water
Suite 300
Wichita, KS 67202
ATTN: Paul Gunzelman

Dietz "L" #1-8

8-12s-24w Trego KS

Job Ticket: 35240 **DST#: 3**

Test Start: 2009.08.25 @ 12:18:27

Tool Information

Drill Pipe:	Length: 3960.00 ft	Diameter: 3.80 inches	Volume: 55.55 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume: 55.70 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4012.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	46.00 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			3985.00	
Shut In Tool	5.00			3990.00	
Hydraulic tool	5.00			3995.00	
Jars	5.00			4000.00	
Safety Joint	2.00			4002.00	
Packer	5.00			4007.00	28.00 Bottom Of Top Packer
Packer	5.00			4012.00	
Stubb	1.00			4013.00	
Perforations	4.00			4017.00	
Recorder	0.00	8360	Inside	4017.00	
Recorder	0.00	6755	Inside	4017.00	
Perforations	10.00			4027.00	
Bullnose	3.00			4030.00	18.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

Dietz "L" #1-8

250 N Water
Suite 300
Wichita, KS 67202
ATTN: Paul Gunzelman

8-12s-24wTrego KS
Job Ticket: 35240 **DST#: 3**
Test Start: 2009.08.25 @ 12:18:27

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	32 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.77 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Gassy OCM-20%G-20%O-60%M	1.401
3687.00	Gassy Oil-40%G-60%O	51.719
0.00	155' GIP	0.000

Total Length: 3807.00 ft Total Volume: 53.120 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

