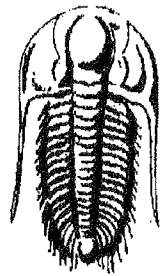


15-167-23545

7-15s-13w

IND



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water, Ste 300
Wichita, KS 67202-1216

ATTN: Bob Stolze

7-15-13 Russell KS

Anderson "M" MV#2

Start Date: 2008.11.01 @ 16:10:33

End Date: 2008.11.01 @ 23:51:33

Job Ticket #: 33536 DST #: 1

**KCC
FEB 27 2009
CONFIDENTIAL**

KANSAS CORPORATION COMMISSION

FEB 27 2009

**CONSERVATION DIVISION
WICHITA, KS**

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

Murfin Drilling Co.

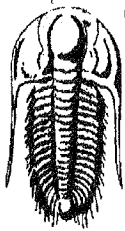
Anderson "M" MV#2

7-15-13 Russell KS

DST # 1

Oread

2008.11.01



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

Anderson "M" MV#2

250 N Water, Ste 300
Wichita, KS 67202-1216

7-15-13 Russell KS

Job Ticket: 33536

DST#: 1

ATTN: Bob Stolzle

Test Start: 2008.11.01 @ 16:10:33

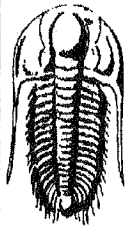
Tool Information

Drill Pipe:	Length: 2734.00 ft	Diameter: 3.82 inches	Volume: 38.76 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 42000.00 lb
		Total Volume: - bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	2773.00 ft			Final 37000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	90.00 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			2751.00	
Shut In Tool	5.00			2756.00	
Hydraulic tool	5.00			2761.00	
Safety Joint	3.00			2764.00	
Packer	4.00			2768.00	23.00 Bottom Of Top Packer
Packer	5.00			2773.00	
Stubb	1.00			2774.00	
Perforations	4.00			2778.00	
Change Over Sub	1.00			2779.00	
Recorder	0.00	8319	inside	2779.00	
Recorder	0.00	8369	inside	2779.00	
Blank Spacing	32.00			2811.00	
Change Over Sub	1.00			2812.00	
Perforations	25.00			2837.00	
Bullnose	3.00			2840.00	67.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.
250 N Water, Ste 300
Wichita, KS 67202-1216
ATTN: Bob Stolze

Anderson "M" MV#2
7-15-13 Russell KS
Job Ticket: 33536 **DST#: 1**
Test Start: 2008.11.01 @ 16:10:33

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: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.18 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: inches			

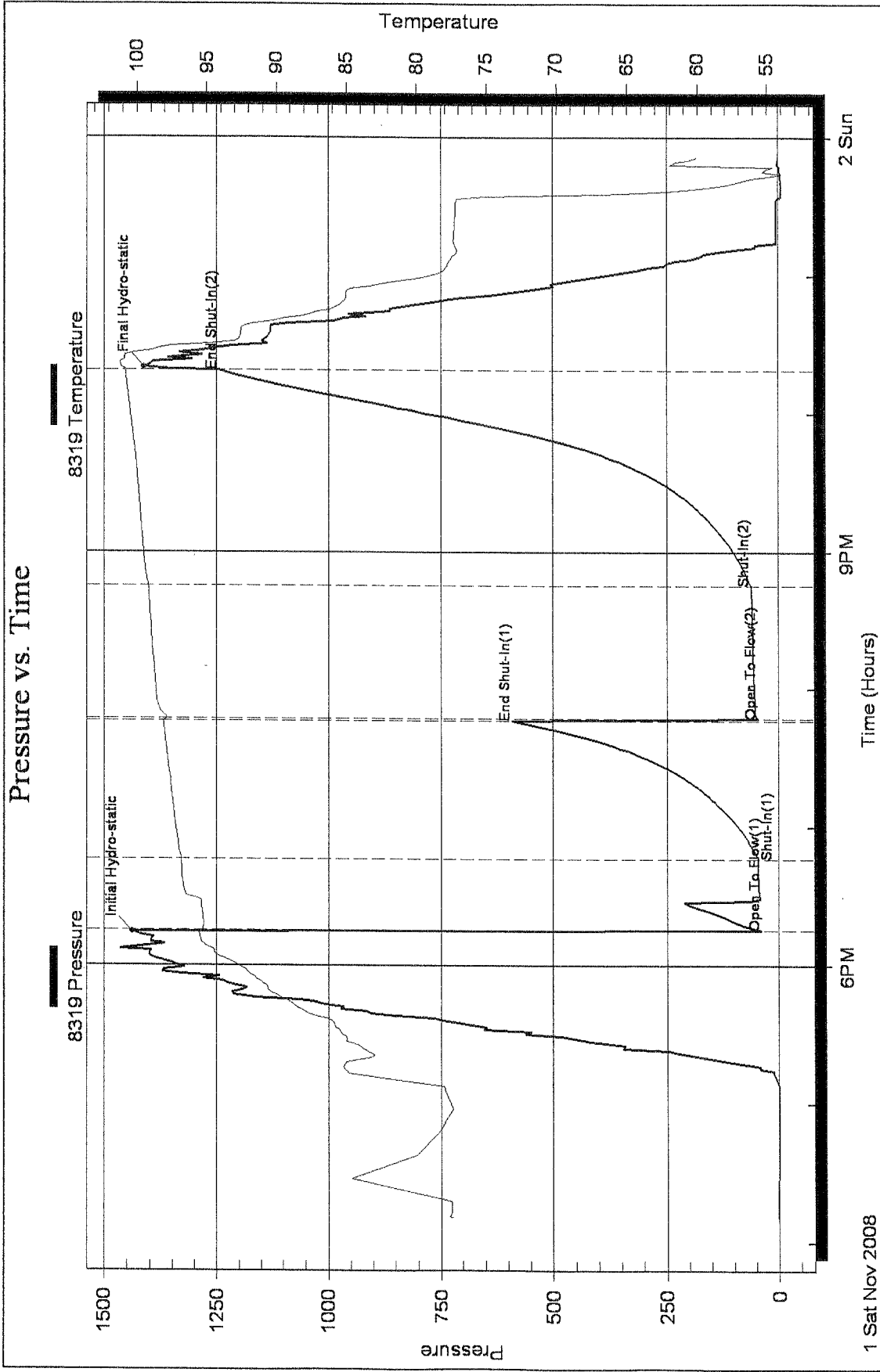
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
105.00	GsyOCM 15%G	1.220
0.00	700' GIP	0.000

Total Length: 105.00 ft Total Volume: 1.220 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water, Ste 300
Wichita, KS 67202-1216

ATTN: Bob Stolze

7-15-13 Russell KS

Anderson "M" MV#2

Start Date: 2008.11.02 @ 06:36:38

End Date: 2008.11.02 @ 12:17:02

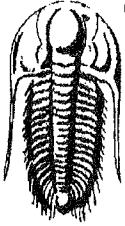
Job Ticket #: 33537 DST #: 2

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KANSAS CORPORATION COMMISSION

FEB 27 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 Co.
 250 N Water, Ste 300
 Wichita, KS 67202-1216
 ATTN: Bob Stolze

Anderson "M" MV#2
7-15-13 Russell KS
 Job Ticket: 33537 **DST#: 2**
 Test Start: 2008.11.02 @ 06:36:38

GENERAL INFORMATION:

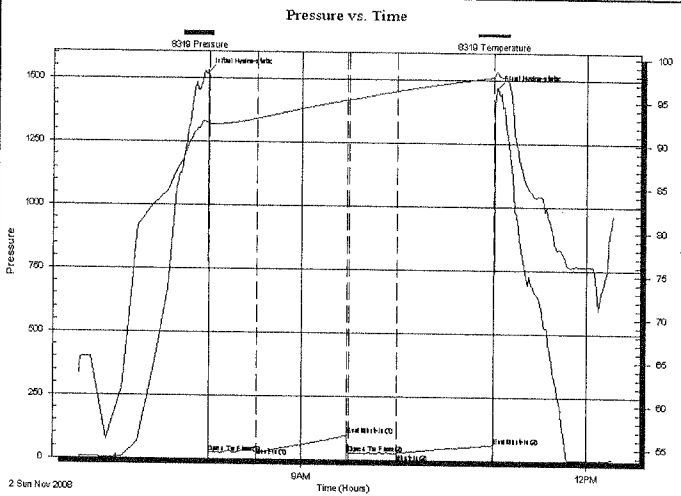
Formation: **Tor**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:00:03
 Time Test Ended: 12:17:02
 Interval: **2875.00 ft (KB) To 2910.00 ft (KB) (TVD)**
 Total Depth: 2910.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Kyle Kinderknecht
 Unit No: 31
 Reference Elevations: 1770.00 ft (KB)
 1765.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8319

Inside

Press@RunDepth: 27.30 psig @ 2881.00 ft (KB) Capacity: 7000.00 psig
 Start Date: 2008.11.02 End Date: 2008.11.02 Last Calib.: 2008.11.02
 Start Time: 06:36:38 End Time: 12:17:02 Time On Btm: 2008.11.02 @ 07:59:33
 Time Off Btm: 2008.11.02 @ 11:02:33

TEST COMMENT: IF 1/2" died 18 min
 FF Weak surface died 5 min



PRESSURE SUMMARY

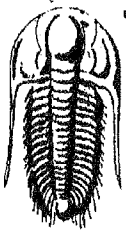
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1524.95	92.47	Initial Hydro-static
1	23.93	92.17	Open To Flow (1)
31	43.36	92.94	Shut-In (1)
89	96.36	95.15	End Shut-In (1)
90	25.19	95.16	Open To Flow (2)
120	27.30	96.19	Shut-In (2)
181	61.70	97.88	End Shut-In (2)
183	1466.52	98.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud scum of oil	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.
250 N Water, Ste 300
Wichita, KS 67202-1216

ATTN: Bob Stolzie

Anderson "M" MV#2
7-15-13 Russell KS
Job Ticket: 33537 **DST#: 2**
Test Start: 2008.11.02 @ 06:36:38

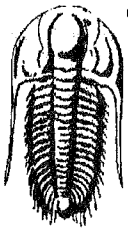
Tool Information

Drill Pipe:	Length: 2828.00 ft	Diameter: 3.82 inches	Volume: 40.09 bbl	Tool Weight: 1500.00 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: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 45000.00 lb
			Total Volume: 40.23 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	2875.00 ft			Final 36000.00 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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2853.00	
Shut In Tool	5.00			2858.00	
Hydraulic tool	5.00			2863.00	
Safety Joint	3.00			2866.00	
Packer	4.00			2870.00	23.00 Bottom Of Top Packer
Packer	5.00			2875.00	
Stubb	1.00			2876.00	
Perforations	4.00			2880.00	
Change Over Sub	1.00			2881.00	
Recorder	0.00	8319	Inside	2881.00	
Recorder	0.00	8369	Inside	2881.00	
Change Over Sub	1.00			2882.00	
Perforations	25.00			2907.00	
Bullnose	3.00			2910.00	35.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.
250 N Water, Ste 300
Wichita, KS 67202-1216
ATTN: Bob Stolzie

Anderson "M" MV#2
7-15-13 Russell KS
Job Ticket: 33537 DST#: 2
Test Start: 2008.11.02 @ 06:36:38

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: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.18 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: inches			

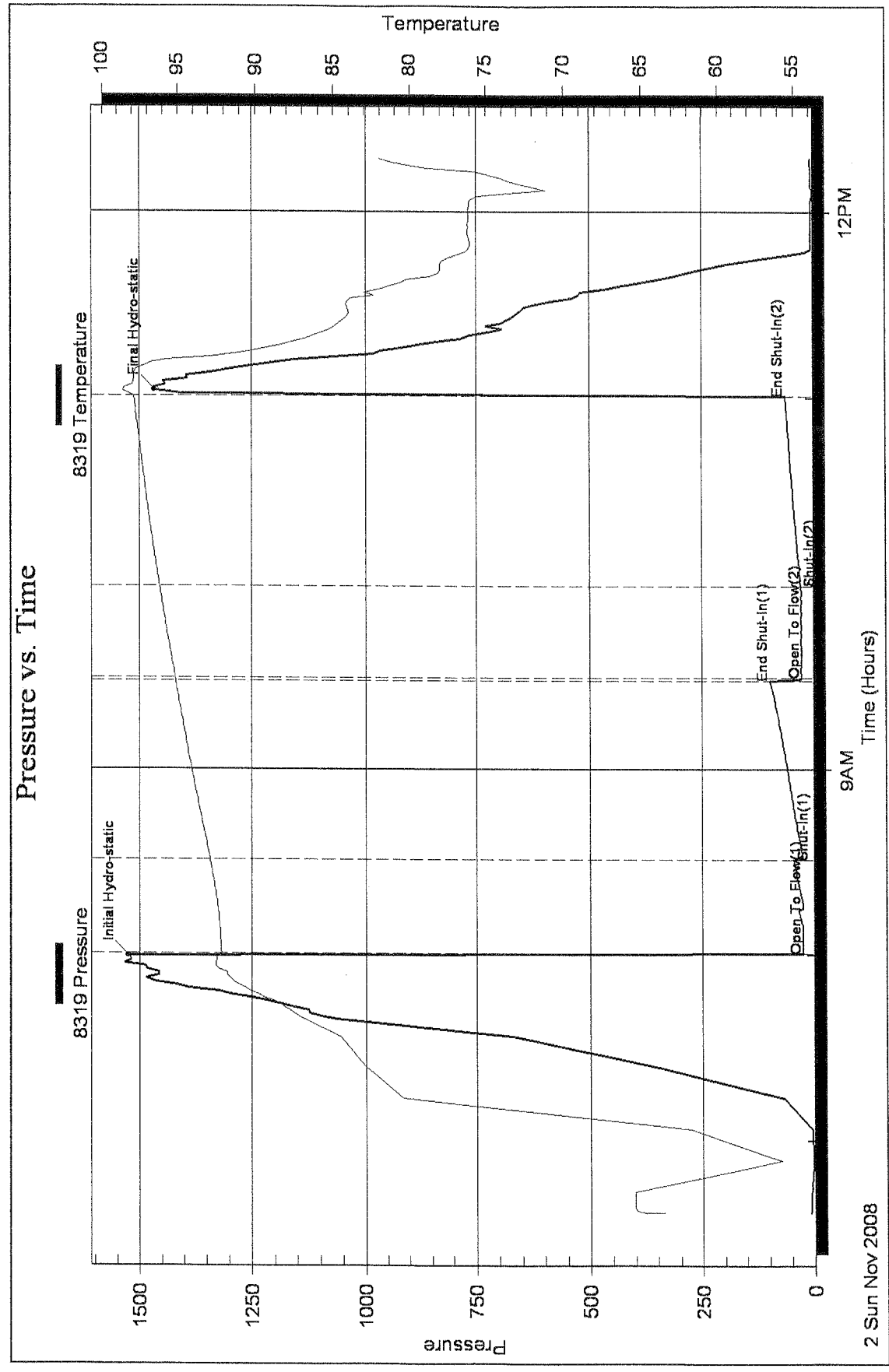
Recovery Information

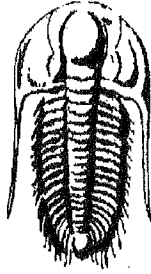
Recovery Table

Length ft	Description	Volume bbl
20.00	Mud scum 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





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water, Ste 300
Wichita, KS 67202-1216

ATTN: Bob Stolzle

7-15-13 Russell KS

Anderson "M" MV#2

Start Date: 2008.11.03 @ 08:20:43

End Date: 2008.11.03 @ 17:35:43

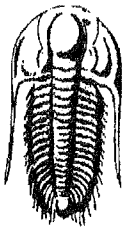
Job Ticket #: 33538 DST #: 3

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

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CONSERVATION DIVISION
WICHITA, KS



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co.
250 N Water, Ste 300
Wichita, KS 67202-1216
ATTN: Bob Stolzle

Anderson "M" MV#2
7-15-13 Russell KS
Job Ticket: 33538 **DST#: 3**
Test Start: 2008.11.03 @ 08:20:43

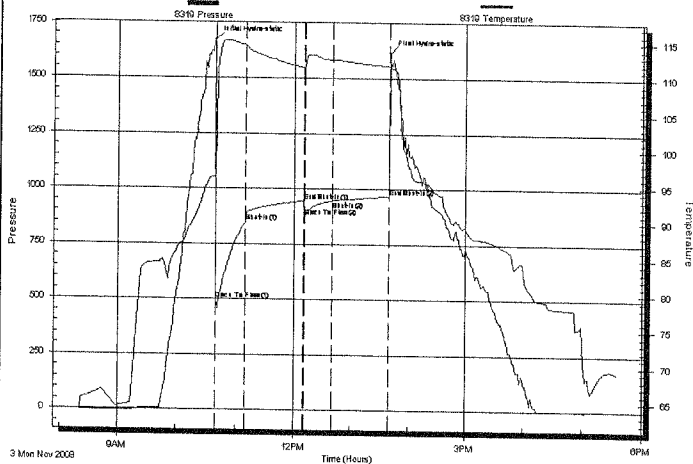
GENERAL INFORMATION:

Formation: **Arb**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:39:43
Time Test Ended: 17:35:43
Interval: **3168.00 ft (KB) To 3222.00 ft (KB) (TVD)**
Total Depth: 3222.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Kyle Kinderknecht
Unit No: 31
Reference Elevations: 1770.00 ft (KB)
1765.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8319 Inside
Press@RunDepth: 946.10 psig @ 3174.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2008.11.03 End Date: 2008.11.03 Last Calib.: 2008.11.03
Start Time: 08:20:48 End Time: 17:35:43 Time On Btm: 2008.11.03 @ 10:39:13
Time Off Btm: 2008.11.03 @ 13:40:42

TEST COMMENT: IF BOB 45 sec
FF BOB 1min 15 sec

Pressure vs. Time



PRESSURE SUMMARY

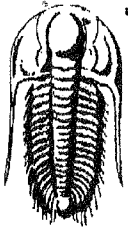
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1672.16	96.46	Initial Hydro-static
1	497.61	96.18	Open To Flow (1)
31	849.53	114.60	Shut-In(1)
91	946.94	111.55	End Shut-In(1)
92	875.55	111.51	Open To Flow (2)
121	946.10	112.62	Shut-In(2)
181	966.85	111.71	End Shut-In(2)
182	1616.95	111.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
313.00	GsystOCW 5%G 5%O 90%W	4.17
1440.00	GsyOCW 20%G 30%O 50%W	20.41
380.00	GsyOCW 30%G 40%O 30%W	5.39
167.00	GsyWCO 15%G 55%O 30%W	2.37
0.00	240' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.
250 N Water, Ste 300
Wichita, KS 67202-1216
ATTN: Bob Stolzle

Anderson "M" MV#2
7-15-13 Russell KS
Job Ticket: 33538 **DST#: 3**
Test Start: 2008.11.03 @ 08:20:43

Tool Information

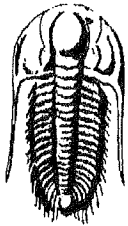
Drill Pipe:	Length: 3142.00 ft	Diameter: 3.82 inches	Volume: 44.54 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 52000.00 lb
		Total Volume:	44.68 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 37000.00 lb
Depth to Top Packer:	3168.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	77.00 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			3146.00	
Shut In Tool	5.00			3151.00	
Hydraulic tool	5.00			3156.00	
Safety Joint	3.00			3159.00	
Packer	4.00			3163.00	23.00 Bottom Of Top Packer
Packer	5.00			3168.00	
Stubb	1.00			3169.00	
Perforations	4.00			3173.00	
Change Over Sub	1.00			3174.00	
Recorder	0.00	8319	inside	3174.00	
Recorder	0.00	8369	inside	3174.00	
Blank Spacing	31.00			3205.00	
Change Over Sub	1.00			3206.00	
Perforations	13.00			3219.00	
Bullnose	3.00			3222.00	54.00 Bottom Packers & Anchor

Total Tool Length: 77.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.
250 N Water, Ste 300
Wichita, KS 67202-1216
ATTN: Bob Stolze

Anderson "M" MV#2
7-15-13 Russell KS
Job Ticket: 33538 **DST#: 3**
Test Start: 2008.11.03 @ 08:20:43

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:	28000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.18 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6900.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
313.00	GsystOCW 5%G 5%O 90%W	4.168
1440.00	GsyOCW 20%G 30%O 50%W	20.413
380.00	GsyOCW 30%G 40%O 30%W	5.387
167.00	GsyWCO 15%G 55%O 30%W	2.367
0.00	240' GIP	0.000

Total Length: 2300.00 ft Total Volume: 32.335 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW .27 @ 73 deg.

Pressure vs. Time

