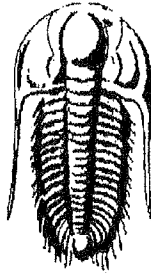


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31-12s-32w

IND



**TRILOBITE  
TESTING, INC.**

**KCC  
APR 11 2008  
CONFIDENTIAL**

Murfin Drilling Co

Stodi Unit #1-31

31 12 32 Logan KS

DST # 1

L/KC "E,F"

2007.12.27

### DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300  
Wichita KS 67202

ATTN: Tom Funk

**31 12 32 Logan KS**

**Stodi Unit #1-31**

Start Date: 2007.12.27 @ 19:53:00

End Date: 2007.12.28 @ 02:37:00

Job Ticket #: 29747                      DST #: 1

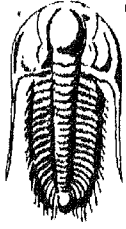
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**APR 16 2008**

CONSERVATION DIVISION  
WICHITA, KS

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





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co  
250 N Water Ste 300  
Wichita KS 67202

**Stodi Unit #1-31**

**31 12 32 Logan KS**

Job Ticket: 29747

**DST#: 1**

ATTN: Tom Funk

Test Start: 2007.12.27 @ 19:53:00

### Tool Information

Drill Pipe:	Length: 3999.00 ft	Diameter: 3.80 inches	Volume: 56.10 bbl	Tool Weight: 2000.00 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: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 56.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4135.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	68.00 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			4108.00	
Shut In Tool	5.00			4113.00	
Hydraulic tool	5.00			4118.00	
Jars	5.00			4123.00	
Safety Joint	3.00			4126.00	
Packer	5.00			4131.00	28.00 Bottom Of Top Packer
Packer	4.00			4135.00	
Stubb	1.00			4136.00	
Perforations	1.00			4137.00	
Recorder	0.00	8017	Inside	4137.00	
Recorder	0.00	8351	Inside	4137.00	
Change Over Sub	1.00			4138.00	
Drill Pipe	31.00			4169.00	
Change Over Sub	1.00			4170.00	
Bullnose	5.00			4175.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 68.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Co  
250 N Water Ste 300  
Wichita KS 67202  
ATTN: Tom Funk

**Stodi Unit #1-31**  
**31 12 32 Logan KS**  
Job Ticket: 29747      **DST#: 1**  
Test Start: 2007.12.27 @ 19:53:00

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 43.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.18 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 9900.00 ppm			
Filter Cake: 2.00 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
390.00	Mud	4.350

Total Length: 390.00 ft      Total Volume: 4.350 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

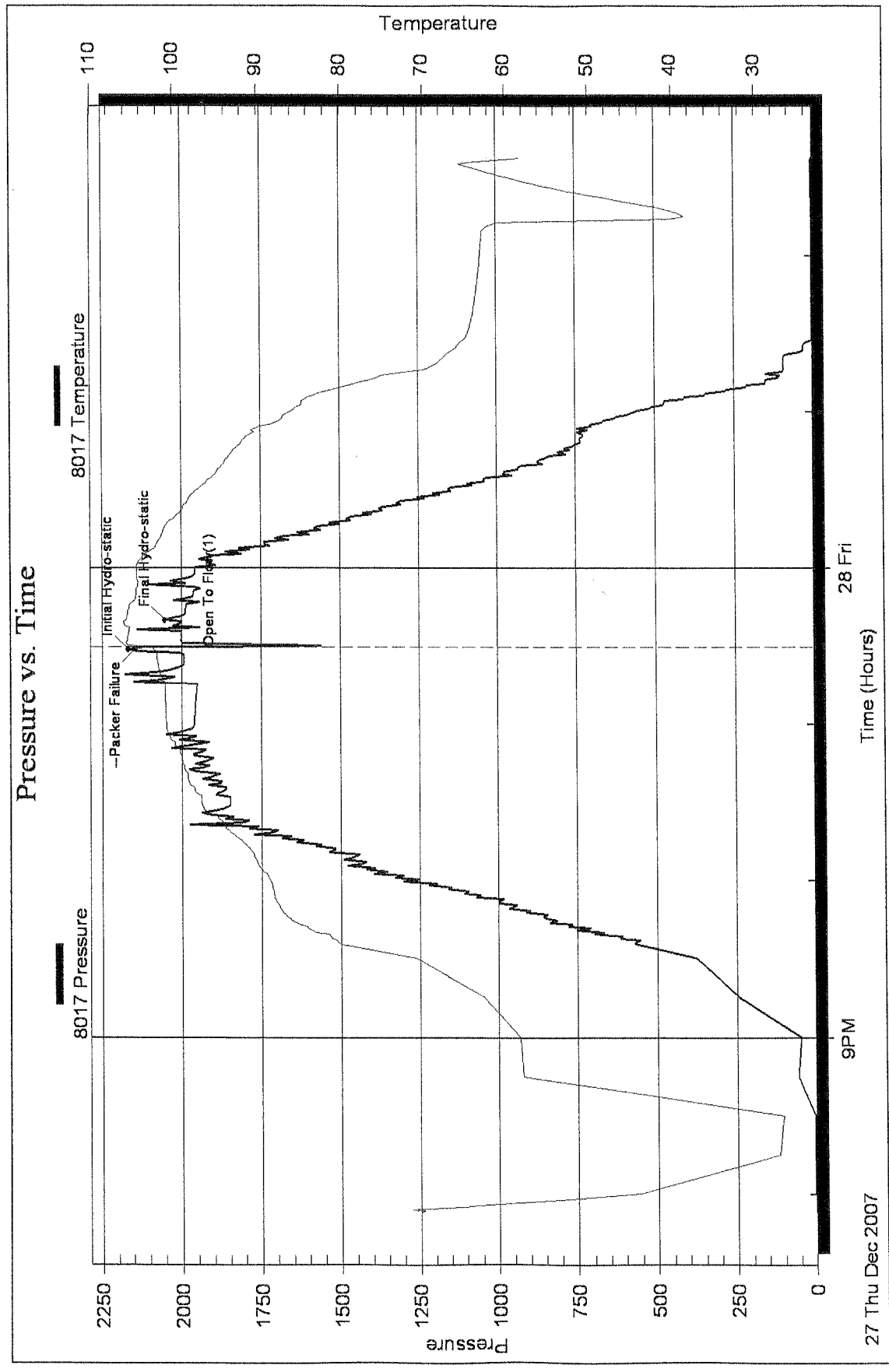
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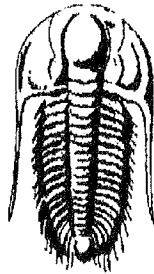
Inside

Murfin Drilling Co

31 12 32 Logan KS

DST Test Number: 1





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300  
Wichita KS 67202

ATTN: Tom Funk

**31 12 32 Logan KS**

**Stodi Unit #1-31**

Start Date: 2007.12.31 @ 10:24:30

End Date: 2007.12.31 @ 19:26:25

Job Ticket #: 29769                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Co

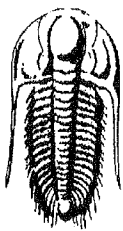
Stodi Unit #1-31

31 12 32 Logan KS

DST # 2

LKC H-1

2007.12.31



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co  
250 N Water Ste 300  
Wichita KS 67202  
ATTN: Tom Funk

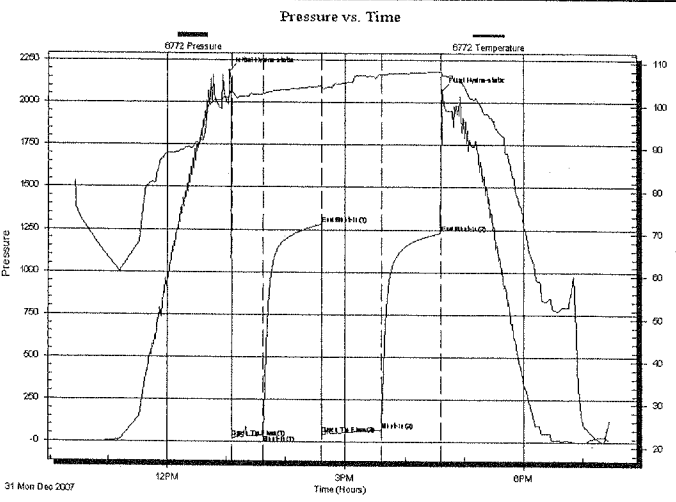
**Stodi Unit #1-31**  
**31 12 32 Logan KS**  
Job Ticket: 29769      DST#: 2  
Test Start: 2007.12.31 @ 10:24:30

## GENERAL INFORMATION:

Formation: **LKC H-I**  
Deviated: No    Whipstock:                      ft (KB)  
Time Tool Opened: 13:05:55  
Time Test Ended: 19:26:25  
Test Type: Conventional Bottom Hole  
Tester: Brandon Turley  
Unit No: 35  
Interval: **4201.00 ft (KB) To 4270.00 ft (KB) (TVD)**  
Reference Elevations: 3088.00 ft (KB)  
Total Depth: 4270.00 ft (KB) (TVD)                      3076.00 ft (CF)  
Hole Diameter: 7.88 inches    Hole Condition: Good                      KB to GR/CF: 12.00 ft

**Serial #: 6772      Outside**  
Press@RunDepth: 69.24 psig @ 4202.00 ft (KB)      Capacity: 7000.00 psig  
Start Date: 2007.12.31      End Date: 2007.12.31      Last Calib.: 2007.12.31  
Start Time: 10:24:30      End Time: 19:26:25      Time On Btm: 2007.12.31 @ 13:03:40  
Time Off Btm: 2007.12.31 @ 16:36:39

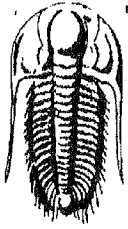
TEST COMMENT: IF 1/4 blow built to 2 in 30 min.  
IS No return  
FF Surface blow built to 2 in 60 min.  
FS No return



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2183.83	102.68	Initial Hydro-static
3	22.60	103.36	Open To Flow (1)
34	39.19	102.73	Shut-In(1)
93	1281.89	104.67	End Shut-In(1)
93	44.31	103.98	Open To Flow (2)
153	69.24	107.40	Shut-In(2)
212	1229.17	108.11	End Shut-In(2)
213	2070.07	107.26	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
114.00	WCM trace of Oil 10%W 90%M	0.56

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  
ATTN: Tom Funk

**Stodi Unit #1-31**  
**31 12 32 Logan KS**  
Job Ticket: 29769      **DST#: 2**  
Test Start: 2007.12.31 @ 10:24:30

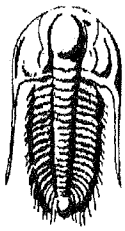
**Tool Information**

Drill Pipe:	Length: 3997.00 ft	Diameter: 3.80 inches	Volume: 56.07 bbl	Tool Weight: 1500.00 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: 188.00 ft	Diameter: 2.25 inches	Volume: 0.92 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 56.99 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4201.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	69.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4175.00	
Shut In Tool	5.00			4180.00	
Hydraulic tool	5.00			4185.00	
Jars	5.00			4190.00	
Safety Joint	2.00			4192.00	
Packer	5.00			4197.00	27.00 Bottom Of Top Packer
Packer	4.00			4201.00	
Stubb	1.00			4202.00	
Recorder	0.00	6769	Inside	4202.00	
Recorder	0.00	6772	Outside	4202.00	
Perforations	30.00			4232.00	
Change Over Sub	1.00			4233.00	
Drill Pipe	31.00			4264.00	
Change Over Sub	1.00			4265.00	
Bullnose	5.00			4270.00	69.00 Bottom Packers & Anchor

**Total Tool Length: 96.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co

**Stodi Unit #1-31**

250 N Water Ste 300  
Wichita KS 67202

**31 12 32 Logan KS**

Job Ticket: 29769

**DST#: 2**

ATTN: Tom Funk

Test Start: 2007.12.31 @ 10:24:30

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 47.00 sec/qt

Water Loss: 9.16 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 10100.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

0 deg API

Water Salinity: 40000 ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
114.00	WCM trace of Oil 10%W 90%M	0.561

Total Length: 114.00 ft      Total Volume: 0.561 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

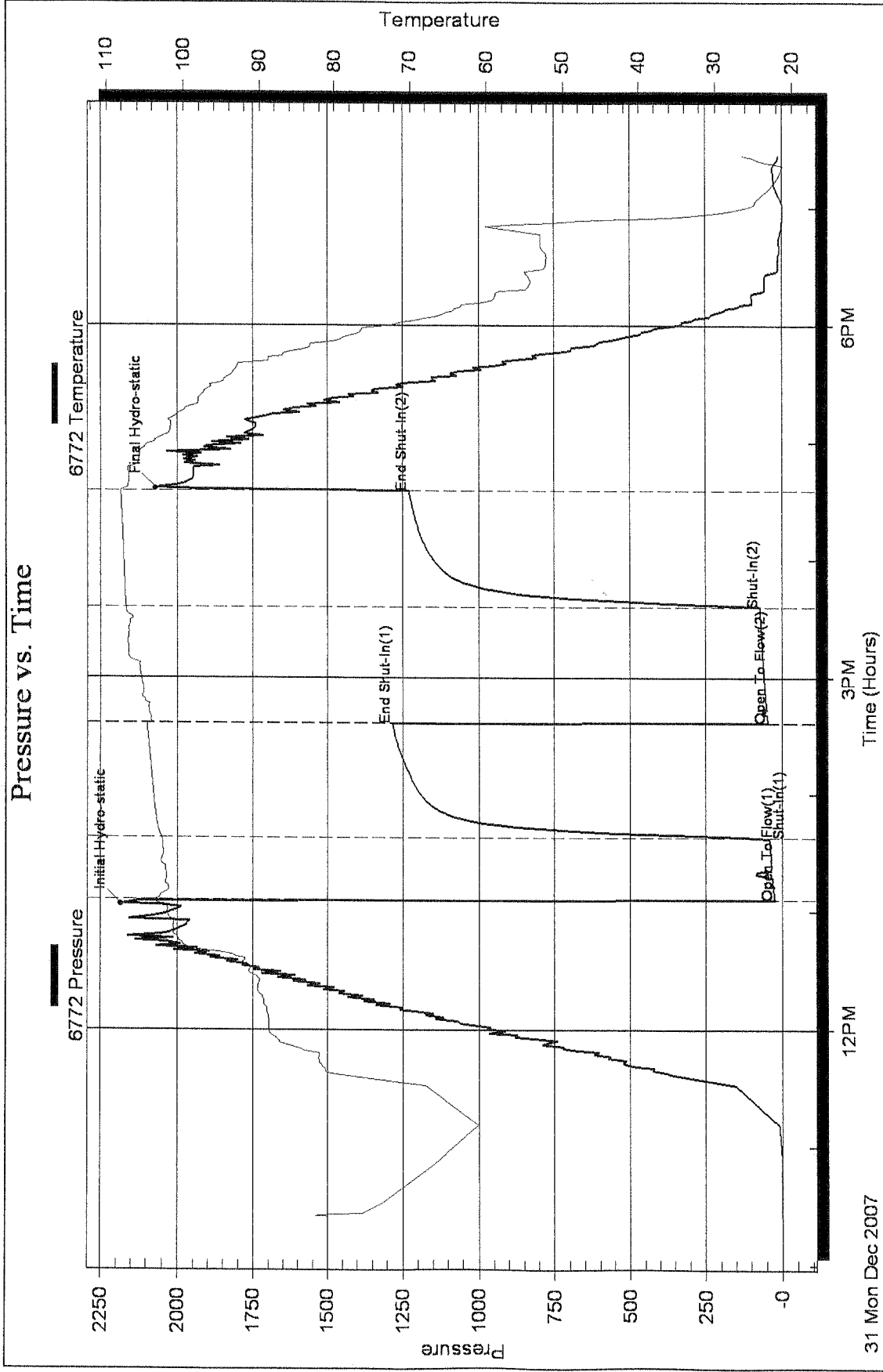
Serial #:

Laboratory Name:

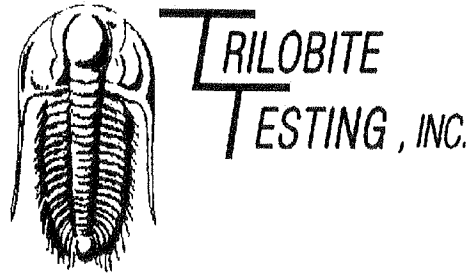
Laboratory Location:

Recovery Comments:

### Pressure vs. Time



31 Mon Dec 2007



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300  
Wichita KS 67202

ATTN: Tom Funk

**31 12 32 Logan KS**

**Stodi Unit #1-31**

Start Date: 2008.01.01 @ 06:19:42

End Date: 2008.01.01 @ 14:20:21

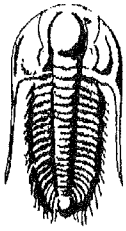
Job Ticket #: 29769                      DST #: 3

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**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co  
250 N Water Ste 300  
Wichita KS 67202  
ATTN: Tom Funk

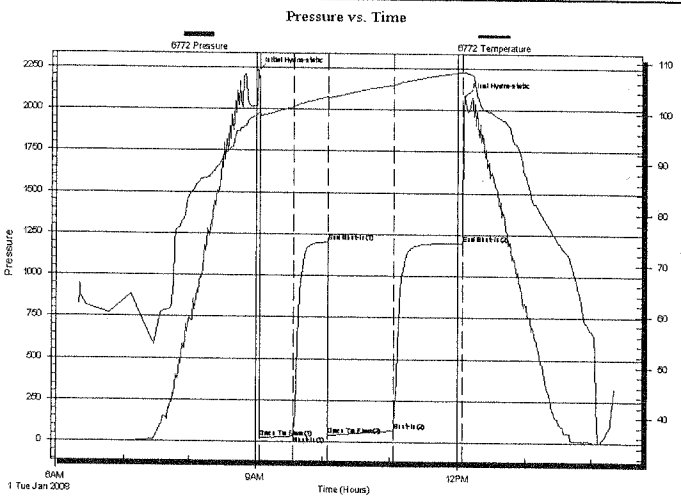
**Stodi Unit #1-31**  
**31 12 32 Logan KS**  
Job Ticket: 29769      **DST#: 3**  
Test Start: 2008.01.01 @ 06:19:42

## GENERAL INFORMATION:

Formation: **J-K**  
Deviated: **No** Whipstock:                      **ft (KB)**  
Time Tool Opened: 09:03:52  
Time Test Ended: 14:20:21  
Interval: **4268.00 ft (KB) To 4315.00 ft (KB) (TVD)**  
Total Depth: **4315.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**  
Test Type: **Conventional Bottom Hole**  
Tester: **Brandon Turley**  
Unit No: **35**  
Reference Elevations: **3088.00 ft (KB)**  
**3076.00 ft (CF)**  
KB to GR/CF: **12.00 ft**

**Serial #: 6772**      **Outside**  
Press@RunDepth: **71.02 psig @ 4269.00 ft (KB)**      Capacity: **7000.00 psig**  
Start Date: **2008.01.01**      End Date: **2008.01.01**      Last Calib.: **2008.01.01**  
Start Time: **06:19:42**      End Time: **14:20:21**      Time On Btm: **2008.01.01 @ 09:02:07**  
Time Off Btm: **2008.01.01 @ 12:06:21**

TEST COMMENT: IF Surface blow died in 3 min.  
IS No return  
FF Surface blow built to 2 in 60 min.  
FS No return



## PRESSURE SUMMARY

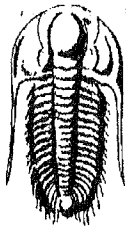
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2226.53	99.78	Initial Hydro-static
2	24.36	98.96	Open To Flow (1)
32	34.09	101.11	Shut-In (1)
63	1201.58	103.11	End Shut-In (1)
63	41.21	102.86	Open To Flow (2)
121	71.02	105.46	Shut-In (2)
183	1198.96	108.06	End Shut-In (2)
185	2079.02	108.02	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
104.00	Mud w/O spots 100%M	0.51

## 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  
ATTN: Tom Funk

**Stodi Unit #1-31**  
**31 12 32 Logan KS**  
Job Ticket: 29769      **DST#: 3**  
Test Start: 2008.01.01 @ 06:19:42

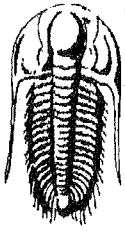
### Tool Information

Drill Pipe:	Length: 3970.00 ft	Diameter: 3.80 inches	Volume: 55.69 bbl	Tool Weight: 1500.00 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: 279.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.06 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4268.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	74.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4242.00	
Shut In Tool	5.00			4247.00	
Hydraulic tool	5.00			4252.00	
Jars	5.00			4257.00	
Safety Joint	2.00			4259.00	
Packer	5.00			4264.00	27.00      Bottom Of Top Packer
Packer	4.00			4268.00	
Stubb	1.00			4269.00	
Recorder	0.00	6769	Inside	4269.00	
Recorder	0.00	6772	Outside	4269.00	
Perforations	8.00			4277.00	
Change Over Sub	1.00			4278.00	
Drill Pipe	31.00			4309.00	
Change Over Sub	1.00			4310.00	
Bullnose	5.00			4315.00	47.00      Bottom Packers & Anchor

**Total Tool Length: 74.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co  
250 N Water Ste 300  
Wichita KS 67202  
ATTN: Tom Funk

**Stodi Unit #1-31**  
**31 12 32 Logan KS**  
Job Ticket: 29769      **DST#: 3**  
Test Start: 2008.01.01 @ 06:19:42

## Mud and Cushion Information

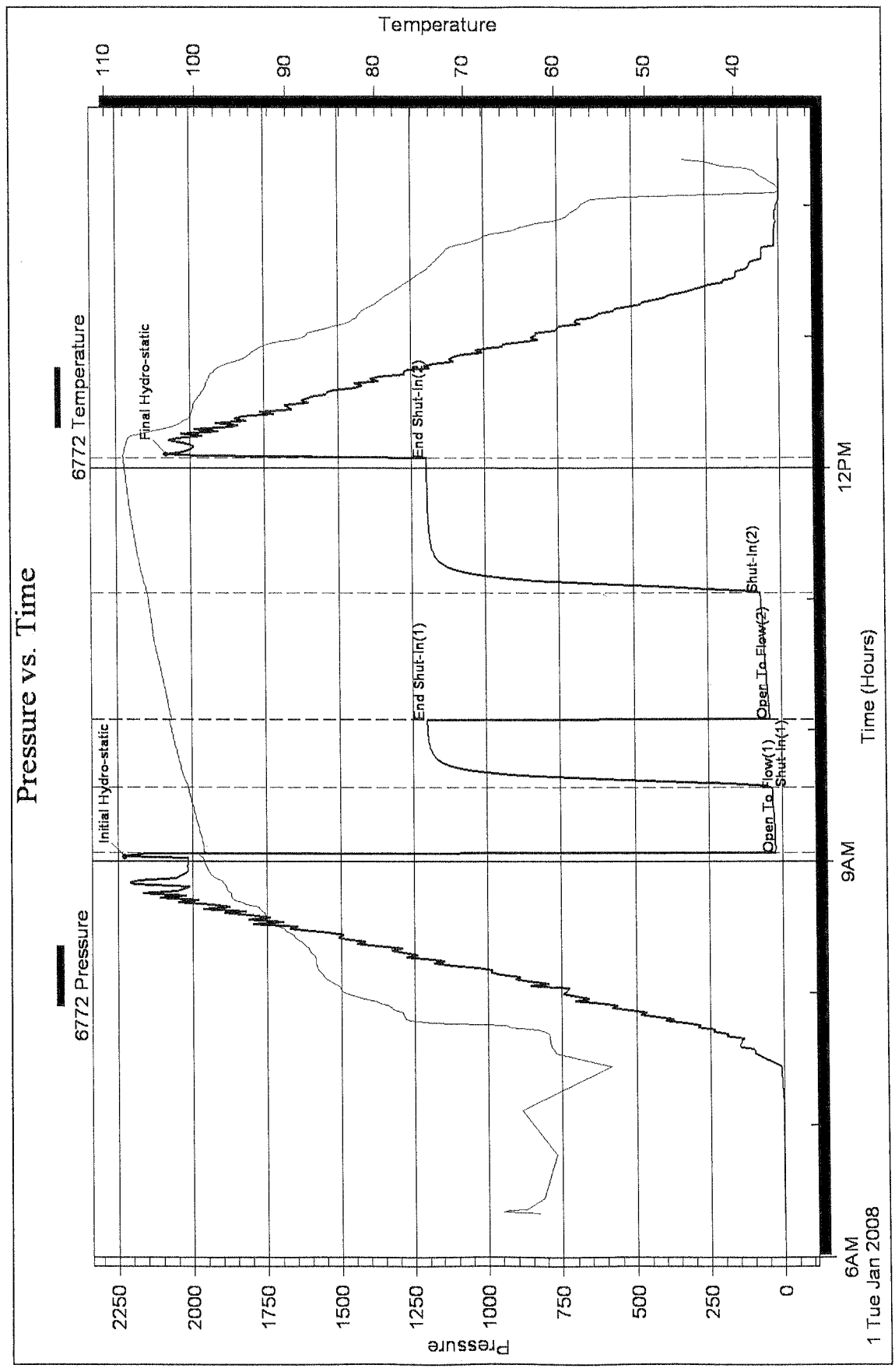
Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 78.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.77 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 9500.00 ppm			
Filter Cake: 2.00 inches			

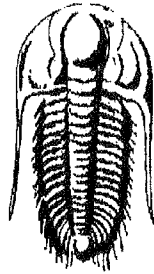
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
104.00	Mud w/O spots 100%M	0.511

Total Length: 104.00 ft      Total Volume: 0.511 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water Ste 300  
Wichita KS 67202

ATTN: Tom Funk

**31 12 32 Logan KS**

**Stodi Unit #1-31**

Start Date: 2008.01.03 @ 06:16:40

End Date: 2008.01.03 @ 15:28:35

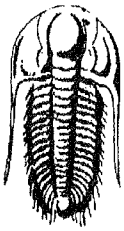
Job Ticket #: 29770                      DST #: 4

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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  
 ATTN: Tom Funk

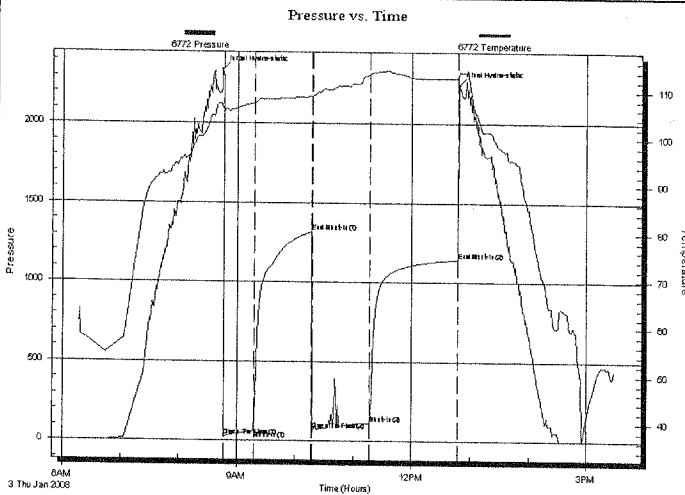
**Stodi Unit #1-31**  
**31 12 32 Logan KS**  
 Job Ticket: 29770      **DST#: 4**  
 Test Start: 2008.01.03 @ 06:16:40

## GENERAL INFORMATION:

Formation: **Ft. Scott- Johnson**  
 Deviated: No Whipstock:      ft (KB)  
 Test Type: Conventional Bottom Hole  
 Time Tool Opened: 08:46:50      Tester: Brandon Turley  
 Time Test Ended: 15:28:35      Unit No: 35  
 Interval: **4545.00 ft (KB) To 4648.00 ft (KB) (TVD)**      Reference Elevations: 3088.00 ft (KB)  
 Total Depth: 4648.00 ft (KB) (TVD)      3076.00 ft (CF)  
 Hole Diameter: 7.88 inches      Hole Condition: Good      KB to GR/CF: 12.00 ft

**Serial #: 6772      Outside**  
 Press@RunDepth: 113.13 psig @ 4546.00 ft (KB)      Capacity: 7000.00 psig  
 Start Date: 2008.01.03      End Date: 2008.01.03      Last Calib.: 2008.01.03  
 Start Time: 06:16:40      End Time: 15:28:35      Time On Btm: 2008.01.03 @ 08:44:50  
 Time Off Btm: 2008.01.03 @ 12:48:34

**TEST COMMENT:** IF 1/4 blow built to 4 in 30 min.  
 IS No return  
 FF Surface blow built to 2 in 60 min.  
 FS No return



## PRESSURE SUMMARY

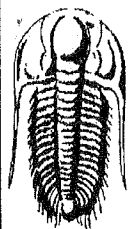
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2336.79	107.21	Initial Hydro-static
2	27.50	105.59	Open To Flow (1)
33	60.57	107.45	Shut-In(1)
92	1316.24	108.90	End Shut-In(1)
93	70.64	108.59	Open To Flow (2)
153	113.13	113.71	Shut-In(2)
243	1143.00	112.88	End Shut-In(2)
244	2244.26	113.54	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
190.00	WCM 5%W 95%M	0.98

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co

**Stodi Unit #1-31**

250 N Water Ste 300  
Wichita KS 67202

**31 12 32 Logan KS**

Job Ticket: 29770

**DST#: 4**

ATTN: Tom Funk

Test Start: 2008.01.03 @ 06:16:40

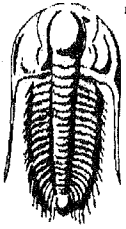
### Tool Information

Drill Pipe:	Length: 4349.00 ft	Diameter: 3.80 inches	Volume: 61.01 bbl	Tool Weight: 1500.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 100000.0 lb
			<b>Total Volume: 61.92 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4545.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	103.00 ft			
Tool Length:	130.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4519.00	
Shut In Tool	5.00			4524.00	
Hydraulic tool	5.00			4529.00	
Jars	5.00			4534.00	
Safety Joint	2.00			4536.00	
Packer	5.00			4541.00	27.00 Bottom Of Top Packer
Packer	4.00			4545.00	
Stubb	1.00			4546.00	
Recorder	0.00	6769	Inside	4546.00	
Recorder	0.00	6772	Outside	4546.00	
Perforations	32.00			4578.00	
Change Over Sub	1.00			4579.00	
Drill Pipe	63.00			4642.00	
Change Over Sub	1.00			4643.00	
Bullnose	5.00			4648.00	103.00 Bottom Packers & Anchor

**Total Tool Length: 130.00**



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

**Stodi Unit #1-31**

250 N Water Ste 300  
Wichita KS 67202

**31 12 32 Logan KS**

ATTN: Tom Funk

Job Ticket: 29770

DST#: 4

Test Start: 2008.01.03 @ 06:16:40

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 62.00 sec/qt

Water Loss: 9.18 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 8600.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: 0 deg API

Water Salinity: 24000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
190.00	WCM 5%W 95%M	0.980

Total Length: 190.00 ft      Total Volume: 0.980 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

