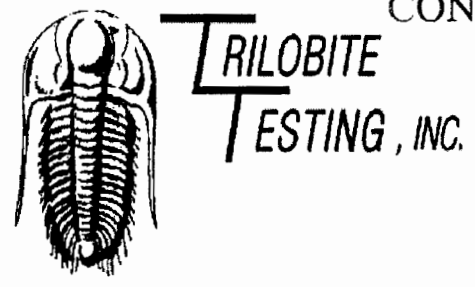


RELEASED  
FROM  
CONFIDENTIAL



DRILL STEM TEST REPORT

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

**CONFIDENTIAL**  
2500 W. Main Ste 300  
Wichita KS. 67202

**ORIGINAL KCC**  
ATTN: Raul Brito

13-12S-33W Logan KS **JAN 09 2002**

**Stoecker #1-13** **CONFIDENTIAL**

Start Date: 2002.12.15 @ 01:20:13  
End Date: 2002.12.15 @ 05:20:43  
Job Ticket #: 15230 DST #: 1

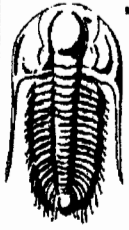
Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Murfin Drilling Company Inc.  
Stoecker #1-13  
13-12S-33W Logan KS  
DST # 1  
Lans "H"  
2002.12.15

CONFIDENTIAL

ORIGINAL

79724



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

Stoecker #1-13

250 N. Water Ste 300  
Wichita KS. 67202

13-12S-33W Logan KS

ATTN: Raul Brito

Job Ticket: 15230

DST#: 1

Test Start: 2002.12.15 @ 01:20:13

GENERAL INFORMATION:

Formation: **Lans "H"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 02:43:58  
Time Test Ended: 05:20:43

KCC

JAN 09 2002

Test Type: Conventional Bottom Hole  
Tester: Rod Steinbrink  
Unit No: 22

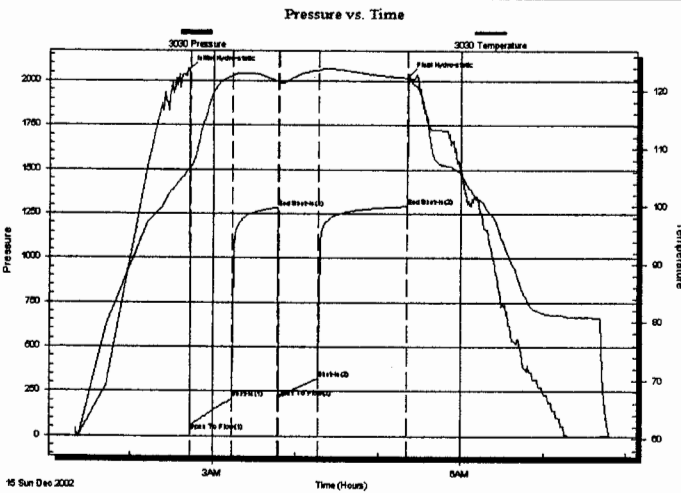
Interval: **4215.00 ft (KB) To 4245.00 ft (KB) (TVD)**  
Total Depth: 4245.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair

CONFIDENTIAL

Reference Elevations: 3114.00 ft (KB)  
3109.00 ft (CF)  
KB to GR/CF: 5.00 ft

Serial #: **3030** Inside  
Press@RunDepth: 323.04 psig @ 4216.00 ft (KB) Capacity: 7000.00 psig  
Start Date: 2002.12.15 End Date: 2002.12.15 Last Calib.: 1899.12.30  
Start Time: 01:20:15 End Time: 07:48:43 Time On Btm: 2002.12.15 @ 02:42:43  
Time Off Btm: 2002.12.15 @ 05:22:13

TEST COMMENT: IF; Fair to strong off bttm in 10 mins  
IS; Surface return steady throughout  
FF; Fair to strong off bttm in 10 mins  
FS; Surface return off bttm in 35 mins



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2064.09	106.41	Initial Hydro-static
2	23.63	106.81	Open To Flow (1)
32	206.74	122.60	Shut-In(1)
64	1284.13	121.64	End Shut-In(1)
65	213.21	121.56	Open To Flow (2)
94	323.04	123.60	Shut-In(2)
158	1291.74	122.21	End Shut-In(2)
160	2033.93	122.14	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
270.00	CGO 15%gas 85%oil	2.65
90.00	OCM 10%oil 5%w tr 85%mud	1.26
120.00	MW 80%w tr 20	1.68
240.00	Wtr 100%w tr	3.37

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15230

**DST#: 1**

ATTN: Raul Brito

Test Start: 2002.12.15 @ 01:20:13

**Tool Information**

Drill Pipe:	Length: 4080.00 ft	Diameter: 3.80 inches	Volume: 57.23 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: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 57.84 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4215.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	50.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

**KCC**  
**JAN 09 2002**  
**CONFIDENTIAL**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			4200.00	
Hydraulic tool	5.00			4205.00	
Packer	5.00			4210.00	20.00 Bottom Of Top Packer
Packer	5.00			4215.00	
Stubb	1.00			4216.00	
Recorder	0.00	3030	Inside	4216.00	
Perforations	24.00			4240.00	
Recorder	0.00	13371	Outside	4240.00	
Bullnose	5.00			4245.00	30.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>50.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15230

**DST#: 1**

ATTN: Raul Brito

Test Start: 2002.12.15 @ 01:20:13

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 43.00 sec/qt  
Water Loss: 7.96 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 2300.00 ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 36.5 deg API  
Water Salinity: 8000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
270.00	CGO 15%gas 85%oil	2.649
90.00	OCM 10%oil 5%w tr 85%mud	1.262
120.00	MW 80%w tr 20	1.683
240.00	Wtr 100%w tr	3.367

Total Length: 720.00 ft      Total Volume: 8.961 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW 1.0 @ 55 deg = 8,000 Chlorides

Serial #: 3030

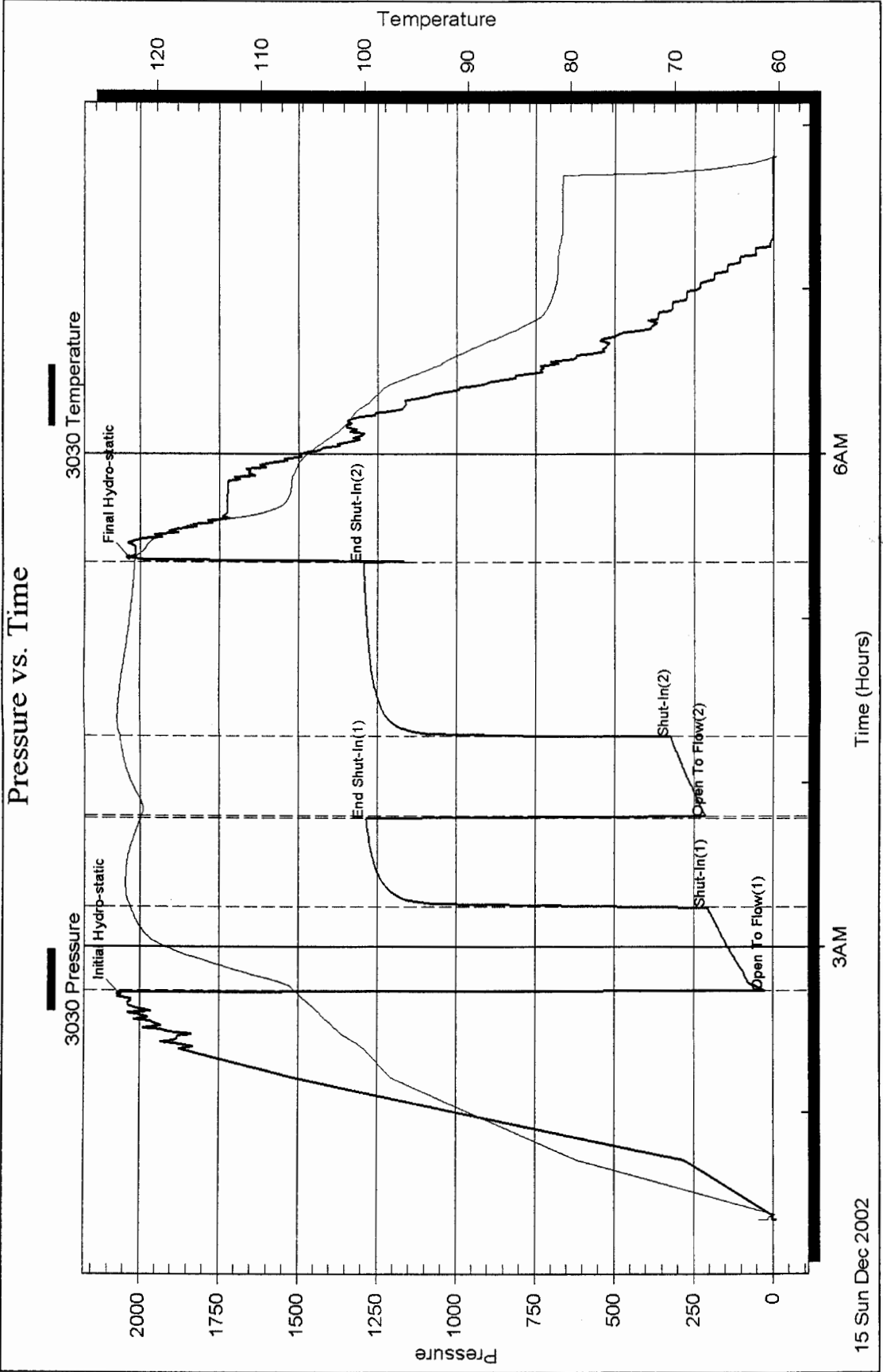
Inside

Murfin Drilling Company Inc.

13-12S-33W Logan KS

DST Test Number: 1

### Pressure vs. Time



15 Sun Dec 2002

3AM

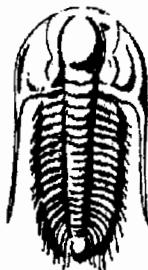
6AM

Time (Hours)

Trilobite Testing, Inc

Ref. No: 15230

Printed: 2002.12.30 @ 13:36:58 Page 5



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

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

250 N. Water Ste 300  
Wichita KS. 67202

ATTN: Raul Brito

**13-12S-33W Logan KS**

**Stoecker #1-13**

Start Date: 2002.12.15 @ 21:59:48

End Date: 2002.12.16 @ 01:38:48

Job Ticket #: 15231                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Company Inc.

Stoecker #1-13

13-12S-33W Logan KS

DST # 2

Lans "I"

2002.12.15





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15231

**DST#: 2**

ATTN: Raul Brito

Test Start: 2002.12.15 @ 21:59:48

### Tool Information

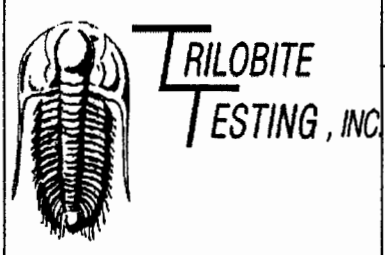
Drill Pipe:	Length: 4113.00 ft	Diameter: 3.80 inches	Volume: 57.69 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4255.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	45.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			4240.00	
Hydraulic tool	5.00			4245.00	
Packer	5.00			4250.00	20.00 Bottom Of Top Packer
Packer	5.00			4255.00	
Stubb	1.00			4256.00	
Recorder	0.00	3030	Inside	4256.00	
Perforations	19.00			4275.00	
Recorder	0.00	13371	Outside	4275.00	
Bullnose	5.00			4280.00	25.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>45.00</b>				

19726



# DRILL STEM TEST REPORT FLUID SUMMARY

Murfin Drilling Company Inc.	Stoecker #1-13
250 N. Water Ste 300 Wichita KS. 67202	<b>13-12S-33W Logan KS</b>
ATTN: Raul Brito	Job Ticket: 15231      DST#: 2
	Test Start: 2002.12.15 @ 21:59:48

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 35 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 7000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.17 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 3200.00 ppm		
Filter Cake: inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	FO 5%gas 95%oil	0.148
90.00	OCM 5%gas 10%oil 85%mud	0.443
310.00	SOCW 5oil 98%w tr	4.303
1925.00	Ste 100%	27.003

Total Length: 2355.00 ft      Total Volume: 31.897 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW 1.4 @ 45 deg= 7000 Chlorides

Serial #: 3030

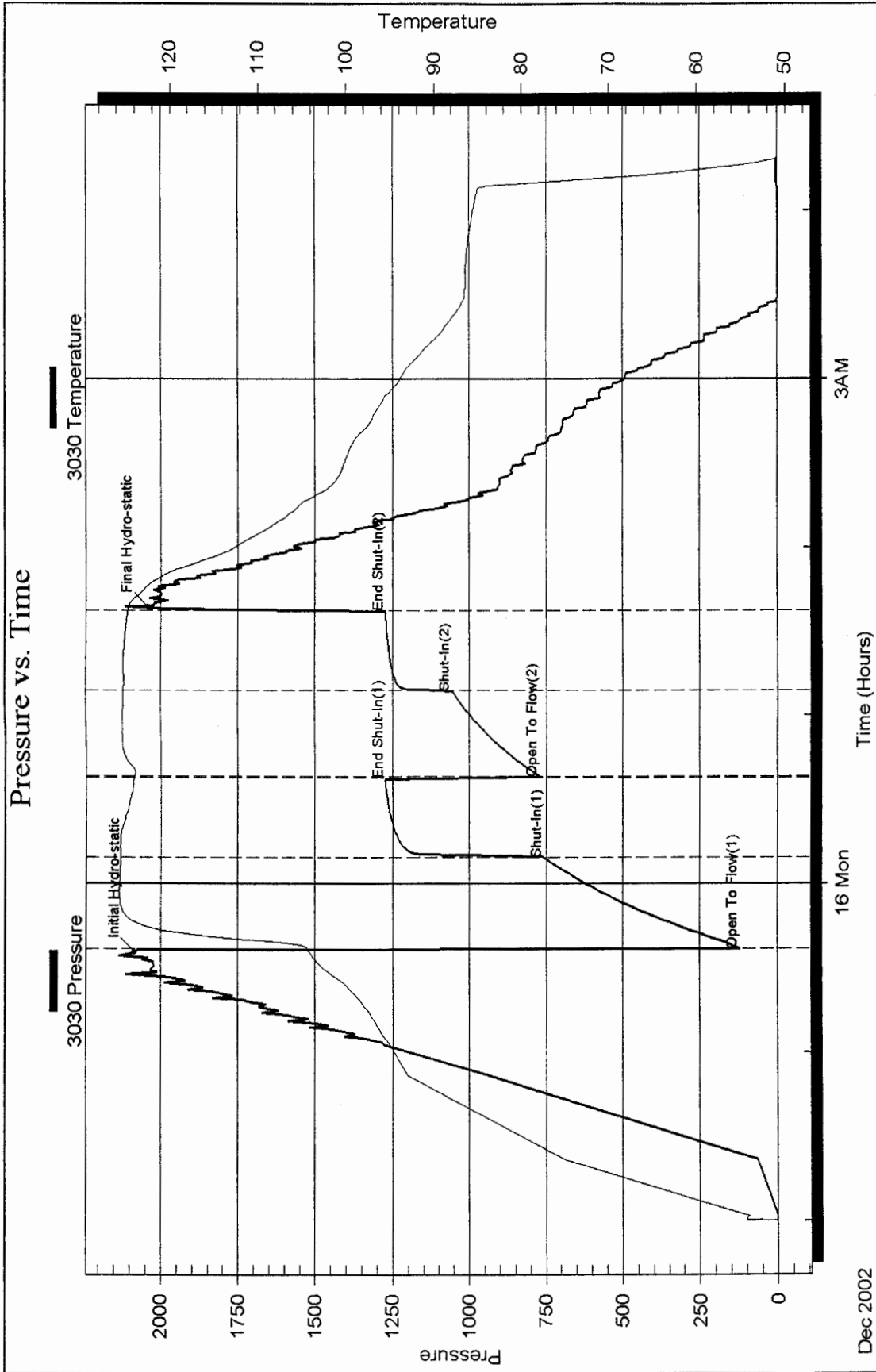
Inside

Murfin Drilling Company Inc.

13-12S-33W Logan KS

DST Test Number: 2

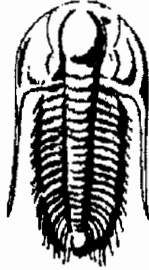
### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 15231

Printed: 2002.12.30 @ 13:37:19 Page 5



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

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

250 N. Water Ste 300  
Wichita KS. 67202

ATTN: Raul Brito

**13-12S-33W Logan KS**

**Stoecker #1-13**

Start Date: 2002.12.16 @ 11:01:56

End Date: 2002.12.16 @ 17:46:41

Job Ticket #: 15232                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Company Inc.

Stoecker #1-13

13-12S-33W Logan KS

DST # 3

Lans "J"

2002.12.16

12/16/02  
10:00 AM  
100-10000



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15232

**DST#: 3**

ATTN: Raul Brito

Test Start: 2002.12.16 @ 11:01:56

### GENERAL INFORMATION:

Formation: **Lans "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:41:41

Time Test Ended: 17:46:41

Test Type: Conventional Bottom Hole

Tester: Rod Steinbrink

Unit No: 22

Interval: **4284.00 ft (KB) To 4302.00 ft (KB) (TVD)**

Total Depth: 4203.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3114.00 ft (KB)

3109.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 3030**

**Inside**

Press@RunDepth: 226.11 psig @ 4285.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2002.12.16

End Date:

2002.12.16

Last Calib.: 1899.12.30

Start Time: 11:01:58

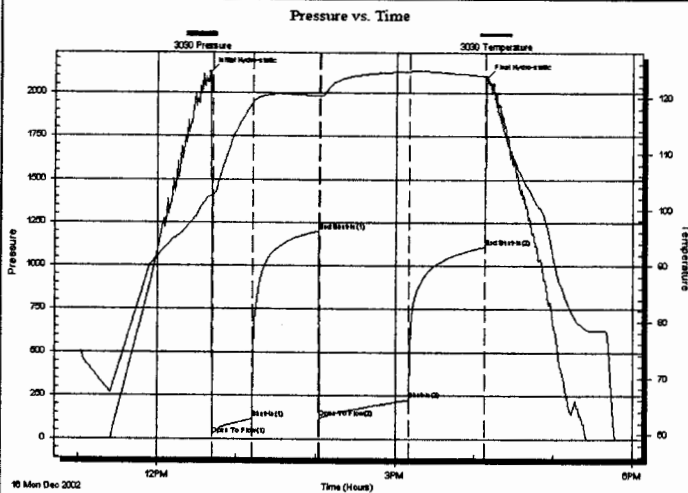
End Time:

17:46:41

Time On Btm: 2002.12.16 @ 12:40:26

Time Off Btm: 2002.12.16 @ 16:09:11

**TEST COMMENT:** F; Fair to strong off bttm in 18 mins  
IS; No return blow  
FF; Weak to fair off bttm in 31 mins  
FSI; No return blow



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2119.52	102.54	Initial Hydro-static
2	22.37	102.64	Open To Flow (1)
32	118.14	118.97	Shut-in(1)
82	1201.68	120.36	End Shut-in(1)
82	122.05	120.33	Open To Flow (2)
150	226.11	124.72	Shut-in(2)
208	1112.01	123.95	End Shut-in(2)
209	2085.58	123.84	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
1.00	Free Oil	0.00
434.00	Wtr	4.96

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15232

**DST#: 3**

ATTN: Raul Brito

Test Start: 2002.12.16 @ 11:01:56

### Tool Information

Drill Pipe:	Length: 4145.00 ft	Diameter: 3.80 inches	Volume: 58.14 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: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 58.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: initial 50000.00 lb
Depth to Top Packer:	4284.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4269.00	
Hydraulic tool	5.00			4274.00	
Packer	5.00			4279.00	20.00 Bottom Of Top Packer
Packer	5.00			4284.00	
Stubb	1.00			4285.00	
Recorder	0.00	3030	Inside	4285.00	
Perforations	12.00			4297.00	
Recorder	0.00	13371	Outside	4297.00	
Bullnose	5.00			4302.00	18.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>38.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15232

**DST#: 3**

ATTN: Raul Brito

Test Start: 2002.12.16 @ 11:01:56

**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:	9000 ppm
Viscosity: 43.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.95 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3200.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
1.00	Free Oil	0.005
434.00	Wtr	4.958

Total Length: 435.00 ft      Total Volume: 4.963 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW 1.0 @ 50 deg = 9000 Chlorides

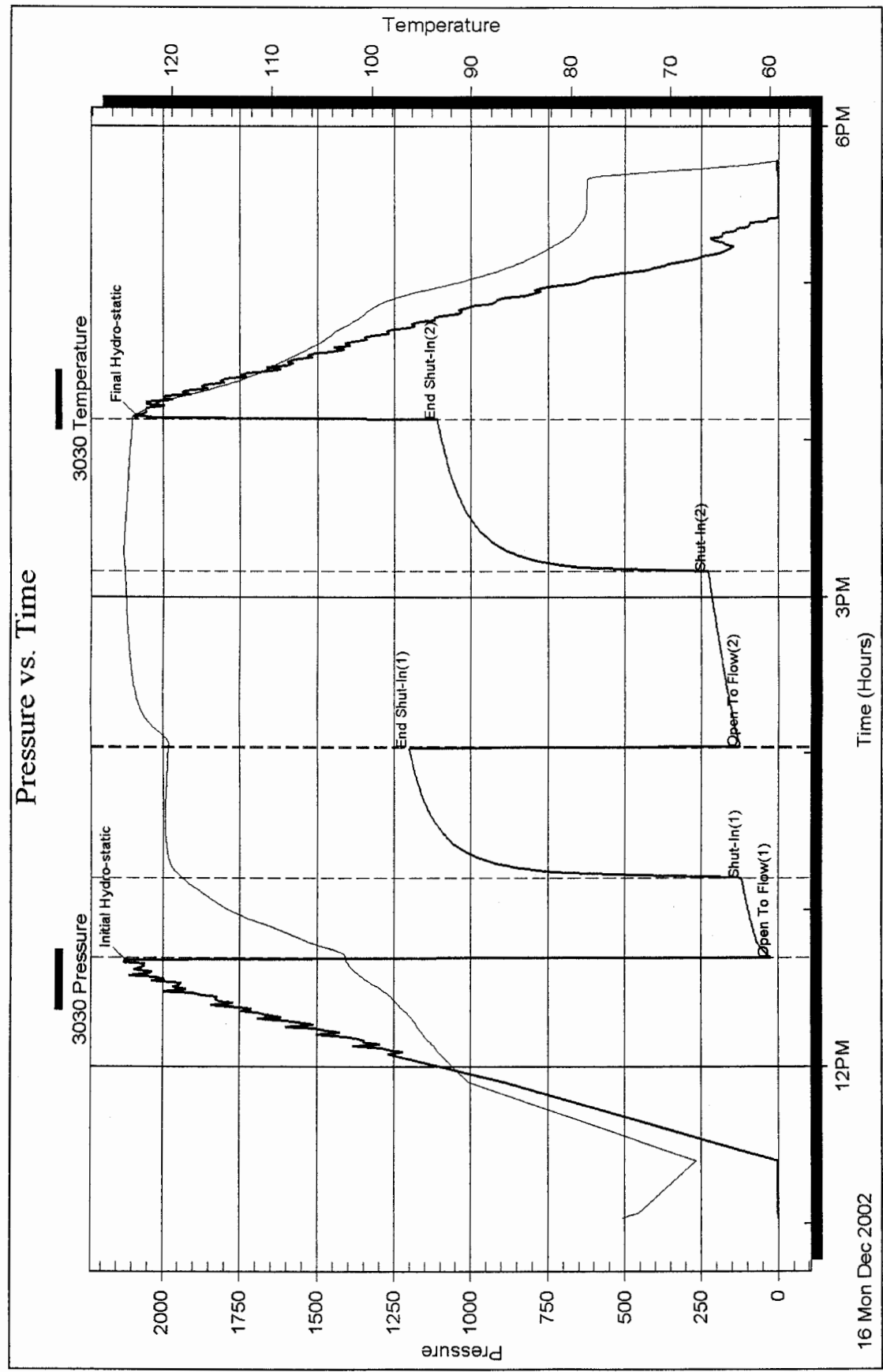
Serial #: 3030

Inside

Murfin Drilling Company Inc.

13-12S-33W Logan KS

DST Test Number: 3



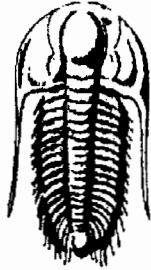
16 Mon Dec 2002

12PM

3PM

6PM

Time (Hours)



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

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

250 N. Water Ste 300  
Wichita KS. 67202

ATTN: Raul Brito

**13-12S-33W Logan KS**

**Stoecker #1-13**

Start Date: 2002.12.17 @ 05:44:07

End Date: 2002.12.17 @ 12:39:50

Job Ticket #: 15233                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Company Inc.

Stoecker #1-13

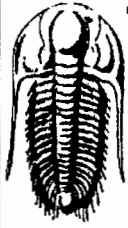
13-12S-33W Logan KS

DST # 4

Lans. "L"

2002.12.17

12/17/02  
15233  
13-12S-33W



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15233

**DST#: 4**

ATTN: Raul Brito

Test Start: 2002.12.17 @ 05:44:07

### GENERAL INFORMATION:

Formation: **Lans. "L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:25:20

Time Test Ended: 12:39:50

Test Type: Conventional Bottom Hole

Tester: Rod Steinbrink

Unit No: 22

Interval: **4340.00 ft (KB) To 4370.00 ft (KB) (TVD)**

Total Depth: 4370.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3114.00 ft (KB)

3109.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 3030**

**Inside**

Press@RunDepth: 370.77 psig @ 4341.00 ft (KB)

Start Date: 2002.12.17

End Date:

2002.12.17

Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Start Time: 05:44:07

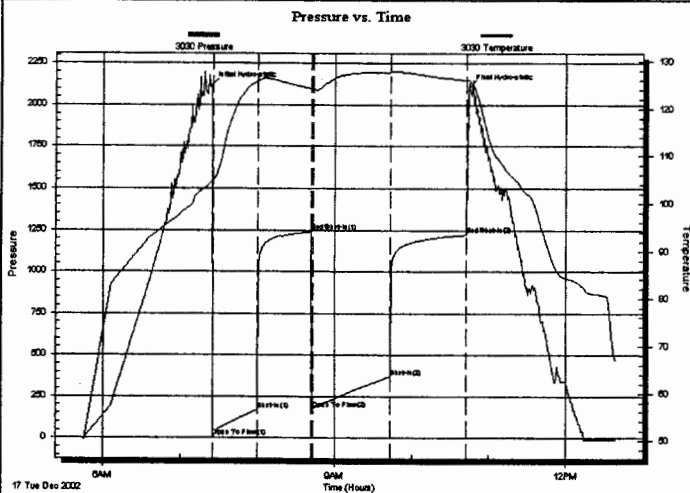
End Time:

12:39:50

Time On Btrn: 2002.12.17 @ 07:23:35

Time Off Btrn: 2002.12.17 @ 10:44:50

**TEST COMMENT:** IF; Weak to fair off btm in 16 mins  
IS; No return  
FF; Weak to fair off btm in 25 mins  
FSI; No return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2112.55	104.59	Initial Hydro-static
2	7.43	105.07	Open To Flow (1)
36	169.27	125.78	Shut-In(1)
79	1239.37	124.19	End Shut-In(1)
79	174.40	124.12	Open To Flow (2)
140	370.77	127.71	Shut-In(2)
200	1222.92	125.95	End Shut-In(2)
202	2105.89	125.86	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
810.00	Wtr	10.22

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc.

Stoecker #1-13

250 N. Water Ste 300  
Wichita KS. 67202

13-12S-33W Logan KS

Job Ticket: 15233

DST#: 4

ATTN: Raul Brito

Test Start: 2002.12.17 @ 05:44:07

### Tool Information

Drill Pipe:	Length: 4208.00 ft	Diameter: 3.80 inches	Volume: 59.03 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: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 59.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4340.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	50.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4325.00	
Hydraulic tool	5.00			4330.00	
Packer	5.00			4335.00	20.00 Bottom Of Top Packer
Packer	5.00			4340.00	
Stubb	1.00			4341.00	
Recorder	0.00	3030	Inside	4341.00	
Perforations	24.00			4365.00	
Recorder	0.00	13371	Outside	4365.00	
Bullnose	5.00			4370.00	30.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>50.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15233

**DST#: 4**

ATTN: Raul Brito

Test Start: 2002.12.17 @ 05:44:07

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 57.00 sec/qt  
Water Loss: 7.58 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 4800.00 ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: 15000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
810.00	Wtr	10.223

Total Length: 810.00 ft      Total Volume: 10.223 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW .49 @ 65 = 15000 Chlorides

Serial #: 3030

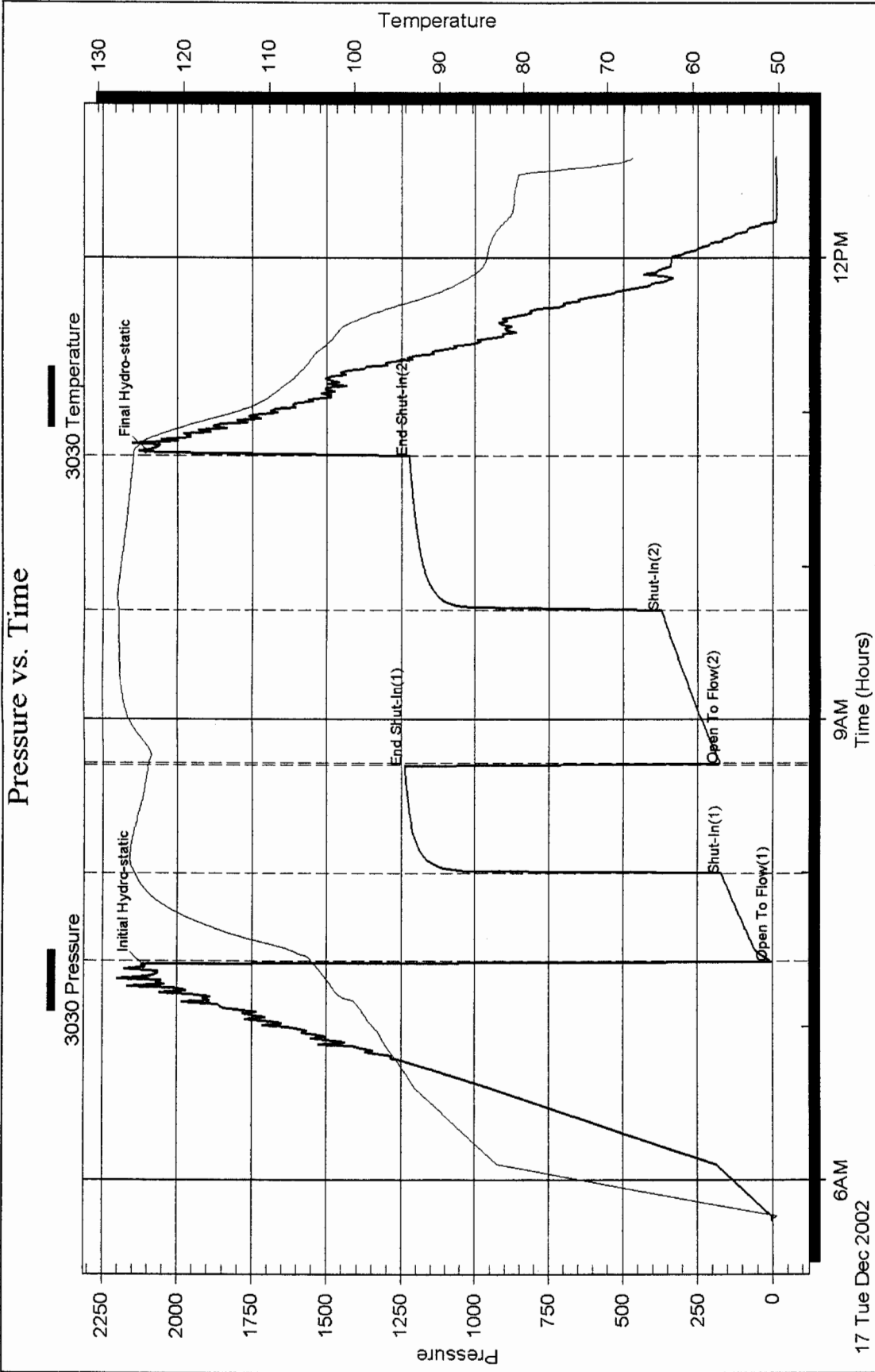
Inside

Murfin Drilling Company Inc.

13-12S-33W Logan KS

DST Test Number: 4

### Pressure vs. Time

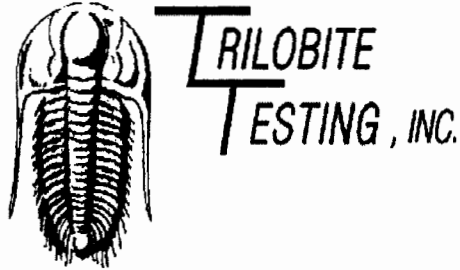


17 Tue Dec 2002 6AM

9AM Time (Hours)

12PM

12/17/02  
11:00 AM



## DRILL STEM TEST REPORT

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

250 N. Water Ste 300  
Wichita KS. 67202

ATTN: Raul Brito

**13-12S-33W Logan KS**

**Stoecker #1-13**

Start Date: 2002.12.18 @ 15:20:05

End Date: 2002.12.18 @ 20:56:50

Job Ticket #: 15234                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

Stoecker #1-13

250 N. Water Ste 300  
Wichita KS. 67202

13-12S-33W Logan KS

Job Ticket: 15234

DST#: 5

ATTN: Raul Brito

Test Start: 2002.12.18 @ 15:20:05

### GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:00:20

Time Test Ended: 20:56:50

Test Type: Conventional Bottom Hole

Tester: Rod Steinbrink

Unit No: 22

Interval: **4589.00 ft (KB) To 4669.00 ft (KB) (TVD)**

Total Depth: 4669.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3114.00 ft (KB)

3109.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **3030**

Inside

Press@RunDepth: 50.72 psig @ 4590.00 ft (KB)

Start Date: 2002.12.18

End Date:

2002.12.18

Start Time: 15:20:07

End Time:

20:56:50

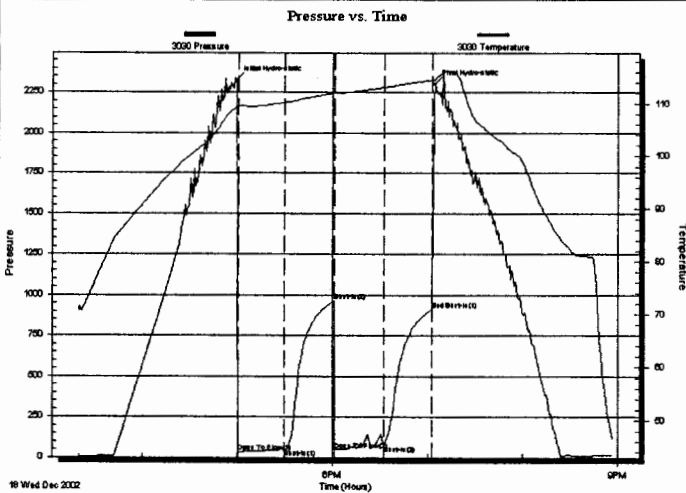
Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2002.12.18 @ 16:59:05

Time Off Btm: 2002.12.18 @ 19:04:05

TEST COMMENT: IF; Weak 1/4" blow steady thru  
FF; No return blow



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2324.21	109.35	Initial Hydro-static
2	32.61	109.59	Open To Flow (1)
31	50.72	110.28	Shut-in(1)
62	961.87	112.01	Shut-in(2)
63	47.67	112.04	Open To Flow (2)
93	74.23	113.11	Shut-in(3)
124	910.95	114.50	End Shut-in(1)
125	2303.00	114.65	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
10.00	Drlg. Mud	0.05

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15234

**DST#: 5**

ATTN: Raul Brito

Test Start: 2002.12.18 @ 15:20:05

### Tool Information

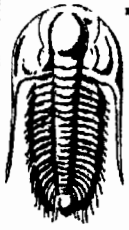
Drill Pipe:	Length: 4457.00 ft	Diameter: 3.80 inches	Volume: 62.52 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 63.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4589.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	100.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			4574.00	
Hydraulic tool	5.00			4579.00	
Packer	5.00			4584.00	20.00 Bottom Of Top Packer
Packer	5.00			4589.00	
Stubb	1.00			4590.00	
Recorder	0.00	3030	Inside	4590.00	
Perforations	9.00			4599.00	
Change Over Sub	1.00			4600.00	
Anchor	63.00			4663.00	
Change Over Sub	1.00			4664.00	
Recorder	0.00	13371	Outside	4664.00	
Bullnose	5.00			4669.00	80.00 Bottom Packers & Anchor

**Total Tool Length: 100.00**



**TRILOBITE  
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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Company Inc.

**Stoecker #1-13**

250 N. Water Ste 300  
Wichita KS. 67202

**13-12S-33W Logan KS**

Job Ticket: 15234

**DST#: 5**

ATTN: Raul Brito

Test Start: 2002.12.18 @ 15:20:05

**Mud and Cushion Information**

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 53.00 sec/qt  
Water Loss: 7.98 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 4600.00 ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: ppm

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
10.00	Drig. Mud	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 3030

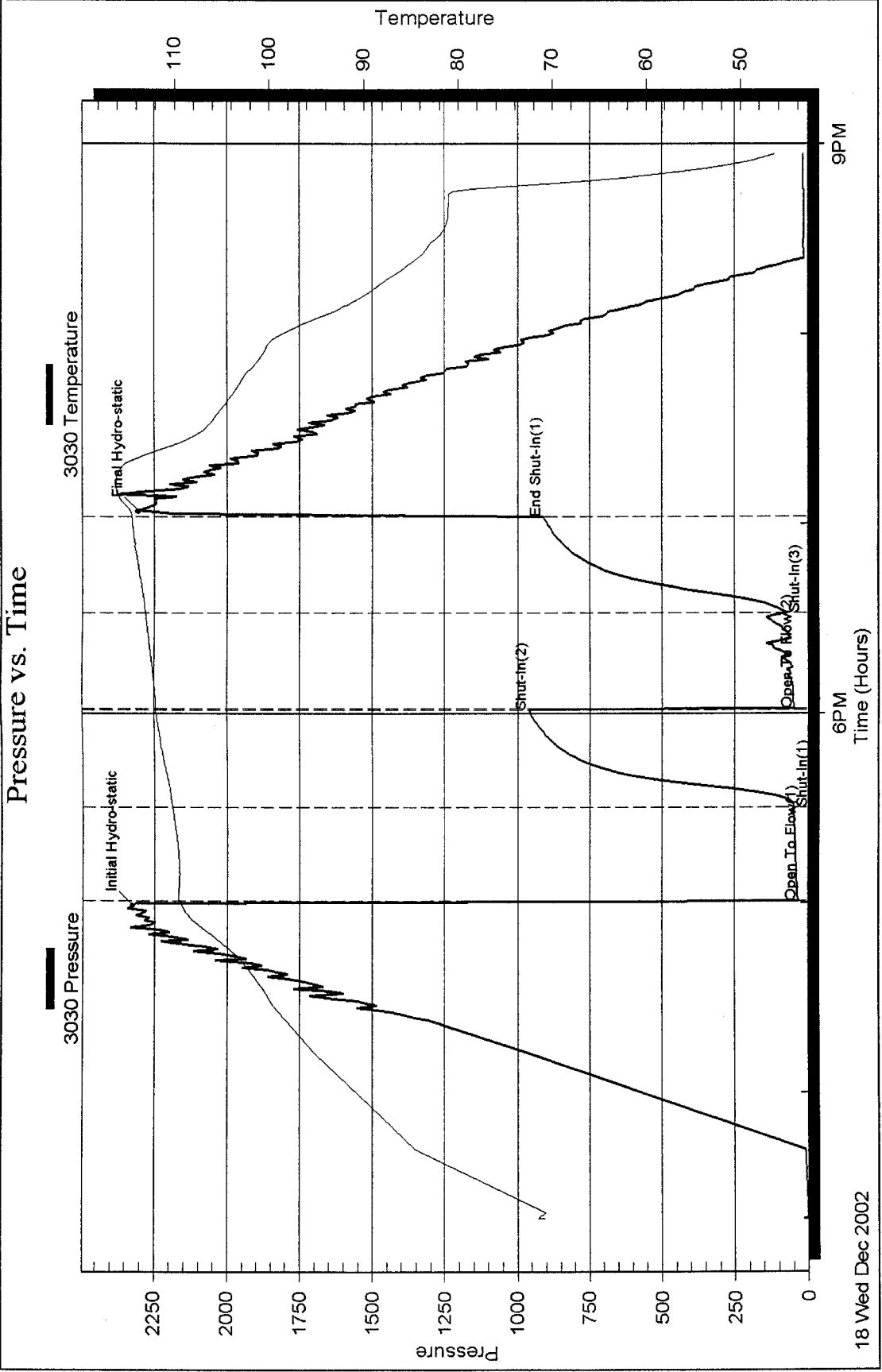
Inside

Murfin Drilling Company Inc.

13-12S-33W Logan KS

DST Test Number: 5

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 15234

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