

TRILOBITE
TESTING, INC.

Release
NOV 04 2003
From
Confidential

DRILL STEM TEST REPORT

CONFIDENTIAL

Prepared For: **Murfin Drilg Co, Inc.**

ORIGINAL 250 N. Water, Ste 300
Wichita, Ks. 67202

AUG 13 2002

ATTN: Scott Robinson

CONFIDENTIAL

32-13-19-Ellis-Ks

Riedel #16

Start Date: 2002.07.28 @ 00:27:09

End Date: 2002.07.28 @ 07:40:08

Job Ticket #: 16312

DST #: 1

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KCC WICHITA

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 Drig Co, Inc.

 250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16

32-13-19-Elis-Ks

Job Ticket: 16312

DST#: 1

Test Start: 2002.07.28 @ 00:27:09

GENERAL INFORMATION:

 Formation: **Topeka**

 Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 02:15:38

Time Test Ended: 07:40:08

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

 Interval: **3272.00 ft (KB) To 3284.00 ft (KB) (TVD)**

 Total Depth: **3284.00 ft (KB) (TVD)**

 Hole Diameter: **7.88 inches** Hole Condition: **Good**

 Reference Elevations: **2256.00 ft (KB)**
2251.00 ft (CF)

 KB to GR/CF: **5.00 ft**

 Serial #: **2357**

Inside

 Press@RunDepth: **107.04 psig @ 3273.01 ft (KB)**

 Start Date: **2002.07.28**

 End Date: **2002.07.28**

 Start Time: **00:27:09**

 End Time: **07:40:08**

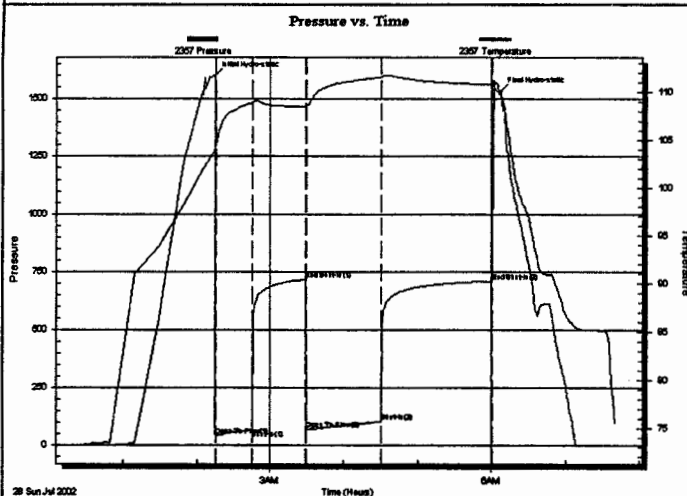
 Capacity: **7000.00 psig**

 Last Calib.: **2002.07.28**

 Time On Btm: **2002.07.28 @ 02:14:38**

 Time Off Btm: **2002.07.28 @ 06:07:38**

TEST COMMENT: Slid tool 3' to bottom-IF-Weak building to 5"
FF-Weak building to 1/2"
Times-30-45-60-90



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1599.73	104.04	Initial Hydro-static
1	43.50	104.50	Open To Flow (1)
31	69.57	108.86	Shut-In (1)
75	716.43	108.52	End Shut-In (1)
76	71.38	108.53	Open To Flow (2)
136	107.04	111.54	Shut-In (2)
226	710.10	110.77	End Shut-In (2)
233	1533.28	109.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
185.00	Mdy Wtr 70%w 30%rn	1.80
0.01	Rw .65 @ 80 = 8500ppm	0.00

Gas Rates

Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig Co, Inc.

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16

32-13-19-Ellis-Ks

Job Ticket: 16312

DST#:1

Test Start: 2002.07.28 @ 00:27:09

Tool Information

Drill Pipe:	Length: 3181.00 ft	Diameter: 3.80 inches	Volume: 44.62 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 87.00 ft	Diameter: 2.25 inches	Volume: 0.43 bbl	Weight to Pull Loose:	80000.00 lb
		Total Volume:	45.05 bbl	Tool Chased	3.00 ft
Drill Pipe Above KB:	19.01 ft			String Weight: Initial	59000.00 lb
Depth to Top Packer:	3272.00 ft			Final	59000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	12.02 ft				
Tool Length:	35.02 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments:

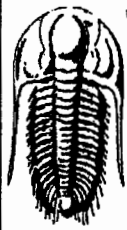
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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			3250.00		
S.I. Tool	5.00			3255.00		
HMV	5.00			3260.00		
Safety Joint	2.00			3262.00		
Packer	5.00			3267.00	23.00	Bottom Of Top Packer
Packer	5.00			3272.00		
Stubb	1.00			3273.00		
Recorder	0.01	2357	Inside	3273.01		
Perforations	8.00			3281.01		
Recorder	0.01	13254	Outside	3281.02		
Bullnose	3.00			3284.02	12.02	Bottom Packers & Anchor

Total Tool Length: 35.02


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drig Co, Inc.

Riedel #16

 250 N. Water, Ste 300
Wichita, Ks. 67202

32-13-19-Ellis-Ks

Job Ticket: 16312

DST#: 1

ATTN: Scott Robinson

Test Start: 2002.07.28 @ 00:27:09

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: 42.00 sec/qt

Cushion Volume:

bbl

 Water Loss: 8.73 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
185.00	Mdy Wtr 70%w 30%m	1.802
0.01	Rw .65 @ 80 = 8500ppm	0.000

Total Length: 185.01 ft

Total Volume: 1.802 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

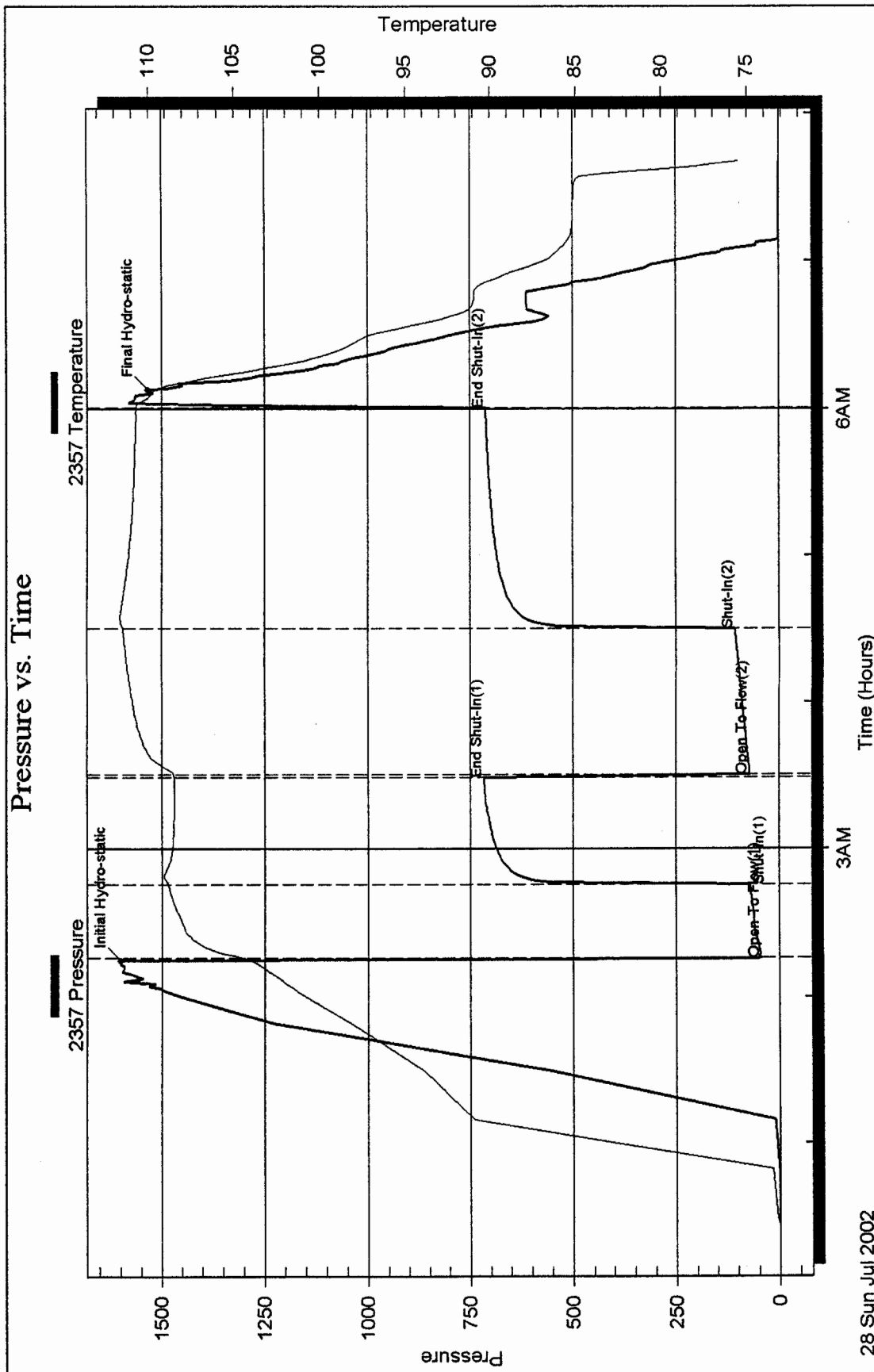
DST Test Number: 1

32-13-19-Elis-Ks

Inside Murfin Drtg Co, Inc.

Serial #: 2357

Pressure vs. Time



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Ref. No: 16312

Trilobite Testing, Inc

Printed: 2002.08.02 @ 14:56:32 Page 5



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co, Inc.**

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

32-13-19-Ellis-Ks

Riedel #16

Start Date: 2002.07.28 @ 19:16:38

End Date: 2002.07.29 @ 02:08:07

Job Ticket #: 16313

DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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Murfin Drlg Co, Inc.

Riedel #16

32-13-19-Ellis-Ks

DST # 2

Lower Topeka

2002.07.28


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drig Co., Inc.

 250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16

32-13-19-Ellis-Ks

Job Ticket: 16313

DST#: 2

Test Start: 2002.07.28 @ 19:16:38

GENERAL INFORMATION:

 Formation: **Lower Topeka**

 Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 20:57:37

Time Test Ended: 02:08:07

 Test Type: **Conventional Bottom Hole**

 Tester: **Dan Bangle**

 Unit No: **21**

 Interval: **3442.00 ft (KB) To 3462.00 ft (KB) (TVD)**

 Total Depth: **3462.00 ft (KB) (TVD)**

 Hole Diameter: **7.88 inches** Hole Condition: **Good**

 Reference Elevations: **2256.00 ft (KB)**
2251.00 ft (CF)

 KB to GR/CF: **5.00 ft**

 Serial #: **2357**

Inside

 Press@RunDepth: **80.77 psig @ 3443.01 ft (KB)**

 Start Date: **2002.07.28**

End Date:

2002.07.29

 Start Time: **19:16:38**

End Time:

02:08:07

 Capacity: **7000.00 psig**

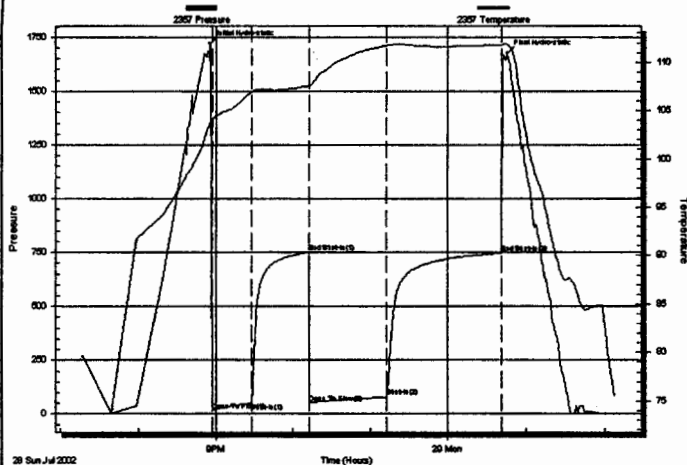
 Last Calib.: **2002.07.29**

 Time On Btm: **2002.07.28 @ 20:55:37**

 Time Off Btm: **2002.07.29 @ 00:45:37**

TEST COMMENT: IF-Weak building to 1"
FF-Weak building to 1/4"
Times-30-45-60-90

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1718.24	103.62	Initial Hydro-static
2	18.02	104.13	Open To Flow (1)
32	50.63	106.88	Shut-in(1)
77	750.50	107.55	End Shut-in(1)
78	53.33	107.56	Open To Flow (2)
137	80.77	111.71	Shut-in(2)
226	746.13	111.78	End Shut-in(2)
230	1674.10	111.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
145.00	Mdy Wtr w/ show of oil on top 50%w	50.1.24
0.01	Rw .77 @ 75 = 7500ppm	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig Co, Inc.

Riedel #16

250 N. Water, Ste 300
Wichita, Ks. 67202

32-13-19-Ellis-Ks

Job Ticket: 16313

DST#:2

ATTN: Scott Robinson

Test Start: 2002.07.28 @ 19:16:38

Tool Information

Drill Pipe:	Length: 3336.00 ft	Diameter: 3.80 inches	Volume: 46.80 bbl	Tool Weight: 1100.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 87.00 ft	Diameter: 2.25 inches	Volume: 0.43 bbl	Weight to Pull Loose: 65000.00 lb
		Total Volume:	47.23 bbl	Tool Chased 0.01 ft
Drill Pipe Above KB:	4.01 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3442.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.02 ft			
Tool Length:	43.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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C.O. Sub	1.00			3420.00	
S.I. Tool	5.00			3425.00	
HMV	5.00			3430.00	
Safety Joint	2.00			3432.00	
Packer	5.00			3437.00	23.00 Bottom Of Top Packer
Packer	5.00			3442.00	
Stubb	1.00			3443.00	
Recorder	0.01	2357	Inside	3443.01	
Perforations	16.00			3459.01	
Recorder	0.01	13254	Outside	3459.02	
Bullnose	3.00			3462.02	20.02 Bottom Packers & Anchor

Total Tool Length: 43.02

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**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drig Co, Inc.

Riedel #16

250 N. Water, Ste 300
Wichita, Ks. 67202

32-13-19-Ellis-Ks

Job Ticket: 16313

DST#: 2

ATTN: Scott Robinson

Test Start: 2002.07.28 @ 19:16:38

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: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.34 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
145.00	Mdy Wtr w / show of oil on top 50%w 505m	1.241
0.01	Rw .77 @ 75 = 7500ppm	0.000

Total Length: 145.01 ft

Total Volume: 1.241 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 2

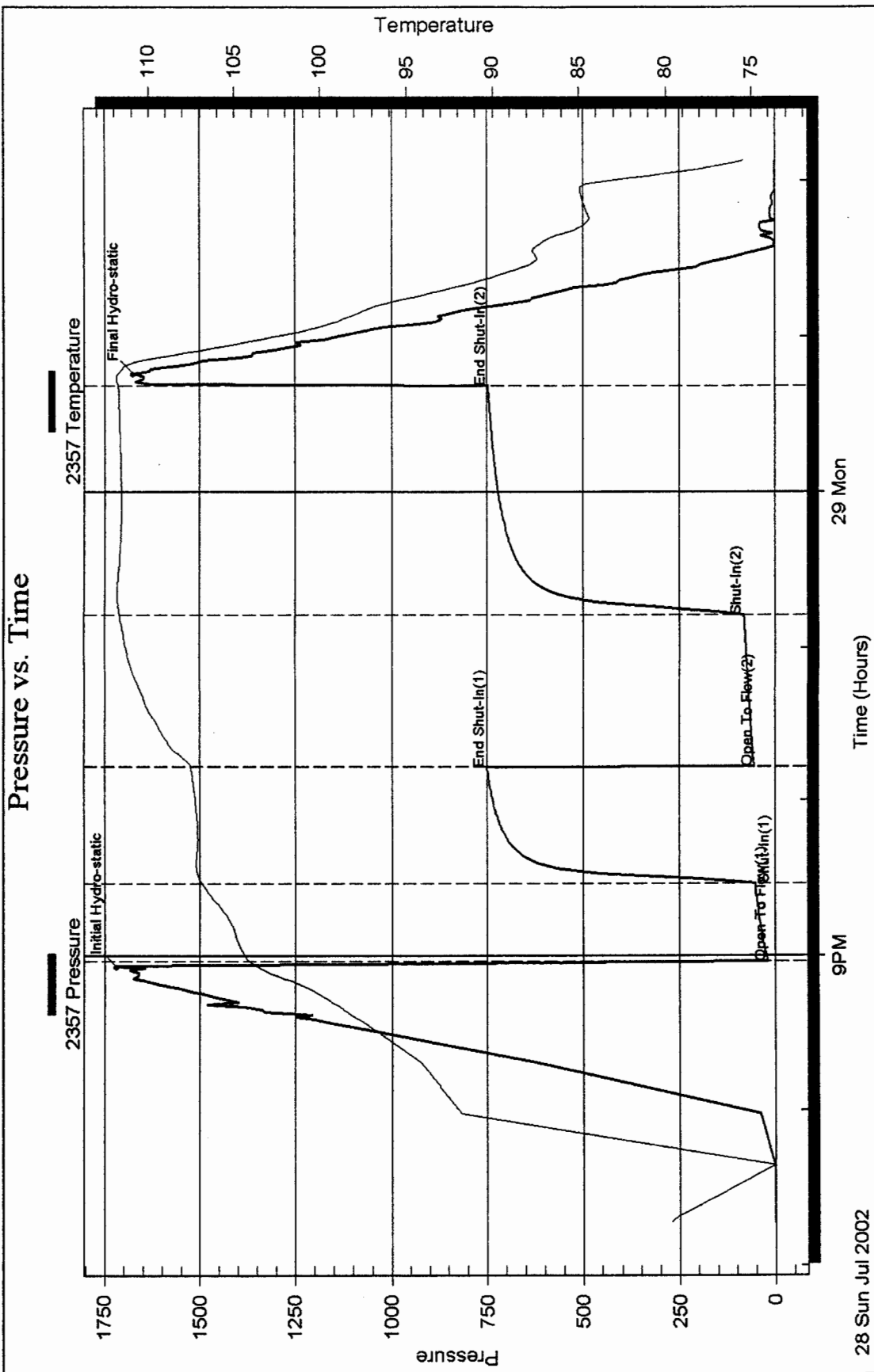
32-13-19-Ellis-Ks

Murfin Drilling Co., Inc.

Inside

Serial #: 2357

Pressure vs. Time



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Ref. No: 16313

Trilobite Testing, Inc



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co, Inc.**

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

32-13-19-Ellis-Ks

Riedel #16

Start Date: 2002.07.29 @ 12:51:13

End Date: 2002.07.29 @ 19:40:13

Job Ticket #: 16314 DST #: 3

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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 Drig Co, Inc.

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16

32-13-19-Ellis-Ks

Job Ticket: 16314

DST#: 3

Test Start: 2002.07.29 @ 12:51:13

GENERAL INFORMATION:

Formation: **Tor/ A-B- LKC**Deviated: **No Whipstock:** ft (KB)

Time Tool Opened: 14:17:43

Time Test Ended: 19:40:13

Test Type: **Conventional Bottom Hole**Tester: **Dan Bangle**Unit No: **21**Interval: **3484.00 ft (KB) To 3570.00 ft (KB) (TVD)**Total Depth: **3570.00 ft (KB) (TVD)**Hole Diameter: **7.88 inches** Hole Condition: **Good**Reference Elevations: **2256.00 ft (KB)****2251.00 ft (CF)**KB to GR/CF: **5.00 ft**Serial #: **2357**

Inside

Press@RunDepth: **191.90 psig @ 3489.01 ft (KB)**Start Date: **2002.07.29**

End Date:

2002.07.29

Start Time: **12:51:14**

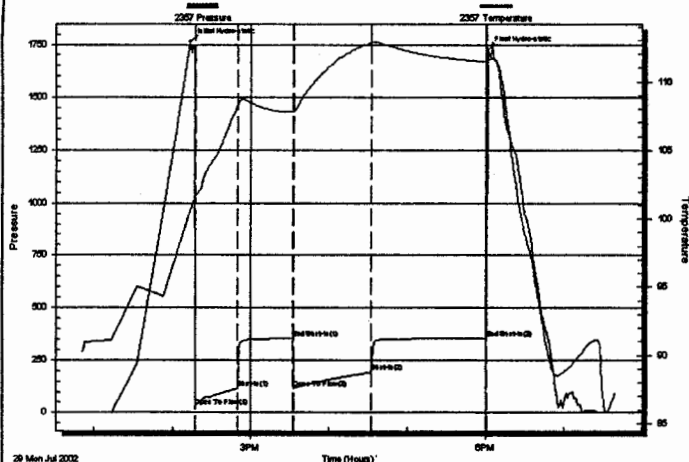
End Time:

19:40:13

Capacity: **7000.00 psig**Last Calib.: **2002.07.29**Time On Btm: **2002.07.29 @ 14:13:43**Time Off Btm: **2002.07.29 @ 18:01:43**

TEST COMMENT: IF-Weak building to strong BOB in 21 min
 FF-Weak building to strong BOB in 30 min
 Times-30-45-60-90

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1762.19	100.56	Initial Hydro-static
4	30.46	101.61	Open To Flow (1)
37	114.97	108.26	Shut-In(1)
79	352.50	107.81	End Shut-In(1)
80	117.24	107.81	Open To Flow (2)
139	191.90	112.80	Shut-In(2)
227	352.84	111.42	End Shut-In(2)
228	1726.39	111.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
350.00	Mdy Wtr 60%w 40%m	4.12
0.01	Rw .18 @ 75 = 43000ppm	0.00
20.00	CO	0.28
310.00	GIP	4.35

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig Co, Inc.

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16

32-13-19-Ellis-Ks

Job Ticket: 16314

DST#:3

Test Start: 2002.07.29 @ 12:51:13

Tool Information

Drill Pipe:	Length: 3398.00 ft	Diameter: 3.80 inches	Volume: 47.67 bbl	Tool Weight:	1100.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 87.00 ft	Diameter: 2.25 inches	Volume: 0.43 bbl	Weight to Pull Loose:	65000.00 lb
		Total Volume:	48.10 bbl	Tool Chased	0.01 ft
Drill Pipe Above KB:	24.01 ft			String Weight: Initial	61000.00 lb
Depth to Top Packer:	3484.00 ft			Final	62000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	86.02 ft				
Tool Length:	109.02 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			3462.00		
S.I. Tool	5.00			3467.00		
HMV	5.00			3472.00		
Safety Joint	2.00			3474.00		
Packer	5.00			3479.00	23.00	Bottom Of Top Packer
Packer	5.00			3484.00		
Stubb	1.00			3485.00		
Perforations	3.00			3488.00		
C.O. Sub	1.00			3489.00		
Recorder	0.01	2357	Inside	3489.01		
Blank Spacing	62.00			3551.01		
C.O. Sub	1.00			3552.01		
Recorder	0.01	13254	Outside	3552.02		
Perforations	15.00			3567.02		
Bullnose	3.00			3570.02	86.02	Bottom Packers & Anchor

Total Tool Length: 109.02


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfri Drig Co, Inc.

Riedel #16

250 N. Water, Ste 300
Wichita, Ks. 67202

32-13-19-Ellis-Ks

Job Ticket: 16314

DST#: 3

ATTN: Scott Robinson

Test Start: 2002.07.29 @ 12:51:13

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: 36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: 43000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 5200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
350.00	Mdy Wtr 60%w 40%m	4.117
0.01	Rw .18 @ 75 = 43000ppm	0.000
20.00	CO	0.281
310.00	GIP	4.348

Total Length: 680.01 ft

Total Volume: 8.746 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 2357

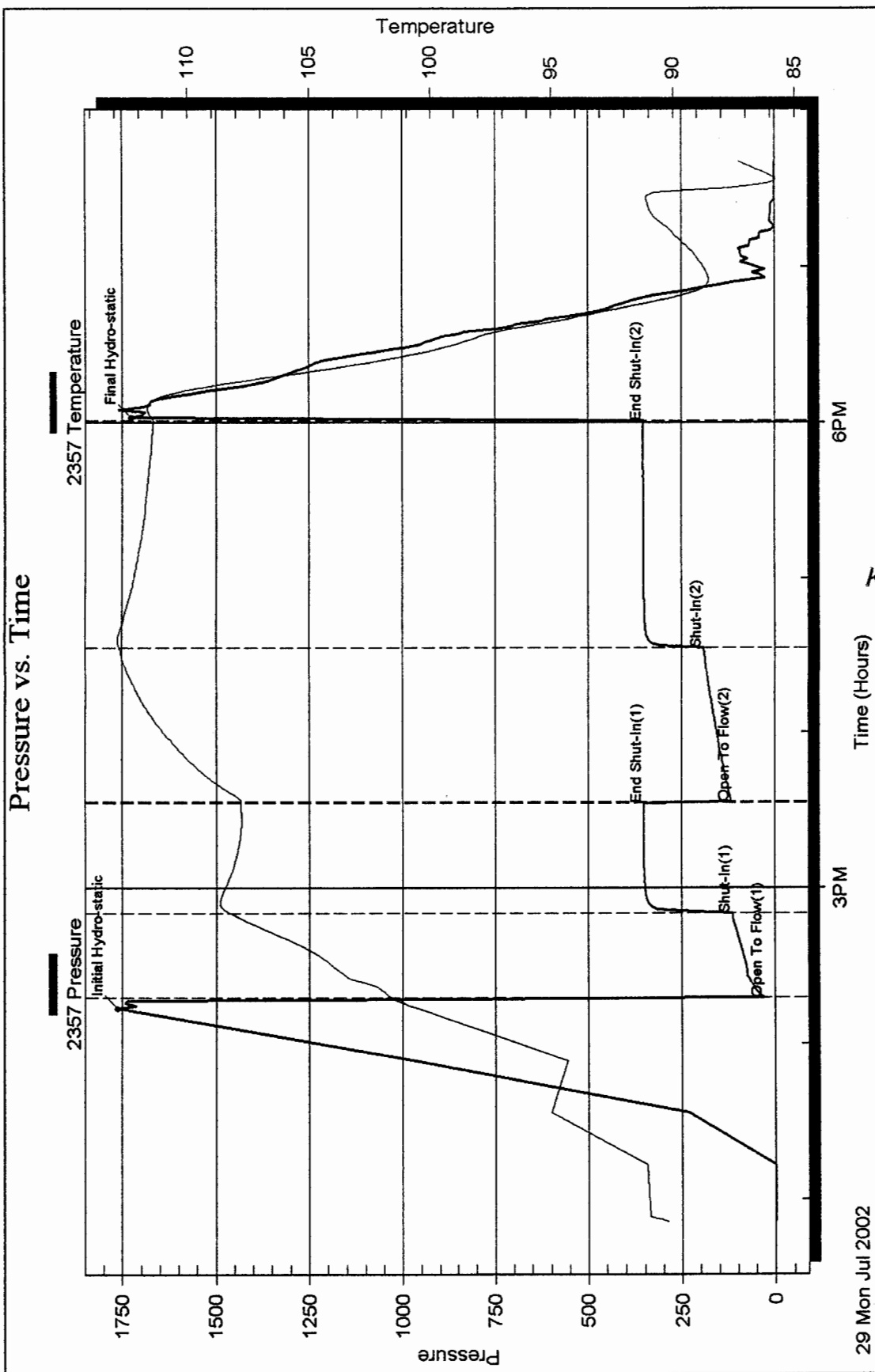
Inside

Murfin Drig Co, Inc.

32-13-19-Elis-Ks

DST Test Number: 3

Pressure vs. Time

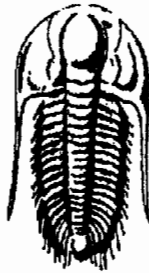


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Ref. No: 16314

Trilobite Testing, Inc

Printed: 2002.08.02 @ 14:57:11 Page 5



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co, Inc.**

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

32-13-19-Ellis-Ks

Riedel #16

Start Date: 2002.07.30 @ 03:19:28

End Date: 2002.07.30 @ 10:30:58

Job Ticket #: 16315

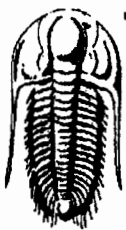
DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drlg Co, Inc.

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16

32-13-19-Ellis-Ks

Job Ticket: 16315

DST#: 4

Test Start: 2002.07.30 @ 03:19:28

GENERAL INFORMATION:

Formation: C-D LK

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:54:28

Time Test Ended: 10:30:58

Interval: 3578.00 ft (KB) To 3622.00 ft (KB) (TVD)

Total Depth: 3622.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Reference Elevations: 2256.00 ft (KB)

2251.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2357

Inside

Press@RunDepth: 442.62 psig @ 3582.01 ft (KB)

Start Date: 2002.07.30

End Date:

2002.07.30

Start Time: 03:19:29

End Time:

10:30:58

Capacity: 7000.00 psig

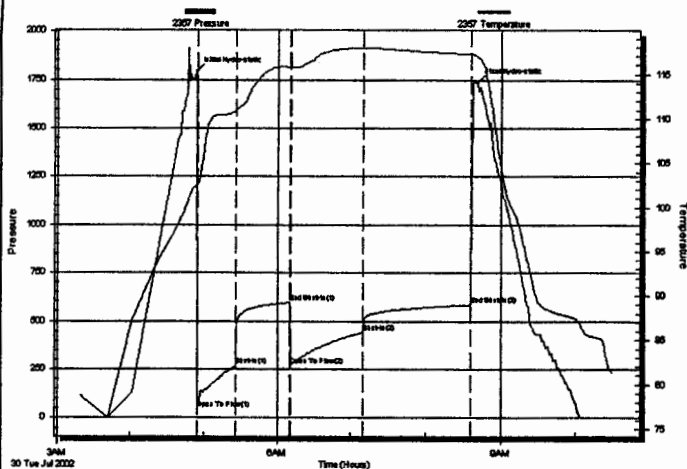
Last Calib.: 2002.07.30

Time On Btm: 2002.07.30 @ 04:53:58

Time Off Btm: 2002.07.30 @ 08:40:58

TEST COMMENT: IF- Strong BOB in 5 min
FF-Strong BOB in 20 min
Times-30-45-60-90

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1791.88	102.58	Initial Hydro-static
1	45.14	102.61	Open To Flow (1)
32	268.84	110.94	Shut-in (1)
76	596.31	115.76	End Shut-in (1)
77	268.26	115.74	Open To Flow (2)
136	442.62	117.89	Shut-in (2)
222	585.51	117.20	End Shut-in (2)
227	1737.38	116.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
434.00	Mdy water 80%w 20%m	5.30
392.00	Gsy OCMdy Wtr 20%g 20%o 30%w 30%	5.50
30.00	CGsy O 20%g 80%o	0.42
340.00	GIP	4.77

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg Co, Inc.

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16

32-13-19-Ellis-Ks

Job Ticket: 16315

DST#: 4

Test Start: 2002.07.30 @ 03:19:28

Tool Information

Drill Pipe:	Length: 3491.00 ft	Diameter: 3.80 inches	Volume: 48.97 bbl	Tool Weight: 1100.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 87.00 ft	Diameter: 2.25 inches	Volume: 0.43 bbl	Weight to Pull Loose: 70000.00 lb
			Total Volume: 49.40 bbl	Tool Chased 0.01 ft
Drill Pipe Above KB:	23.01 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	3578.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.02 ft			
Tool Length:	67.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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

C.O. Sub	1.00			3556.00	
S.I. Tool	5.00			3561.00	
HMV	5.00			3566.00	
Safety Joint	2.00			3568.00	
Packer	5.00			3573.00	23.00 Bottom Of Top Packer
Packer	5.00			3578.00	
Stubb	1.00			3579.00	
Perforations	2.00			3581.00	
C.O. Sub	1.00			3582.00	
Recorder	0.01	2357	Inside	3582.01	
Blank Spacing	31.00			3613.01	
C.O. Sub	1.00			3614.01	
Perforations	5.00			3619.01	
Recorder	0.01	13254	Outside	3619.02	
Bullnose	3.00			3622.02	44.02 Bottom Packers & Anchor

Total Tool Length: 67.02

 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT		FLUID SUMMARY
	Murfin Drig Co, Inc. 250 N. Water, Ste 300 Wichita, Ks. 67202 ATTN: Scott Robinson		Riedel #16 32-13-19-Ellis-Ks Job Ticket: 16315 DST#: 4 Test Start: 2002.07.30 @ 03:19:28

Mud and Cushion Information			
Mud Type: Gel Chem	Cushion Type:	Oil API:	34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length:	Water Salinity:	63000 ppm
Viscosity: 47.00 sec/qt	Cushion Volume:		
Water Loss: 8.36 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure:		
Salinity: 5200.00 ppm			
Filter Cake: inches			

Recovery Information		
Recovery Table		
Length ft	Description	Volume bbl
434.00	Mdy water 80%w 20%m	5.295
392.00	Gsy OCMdy Wtr 20%g 20%o 30%w 30%m	5.499
30.00	CGsy O 20%g 80%o	0.421
340.00	GIP	4.769
Total Length: 1196.00 ft Total Volume: 15.984 bbl Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: Laboratory Name: Laboratory Location: Recovery Comments:		

Serial #: 2357

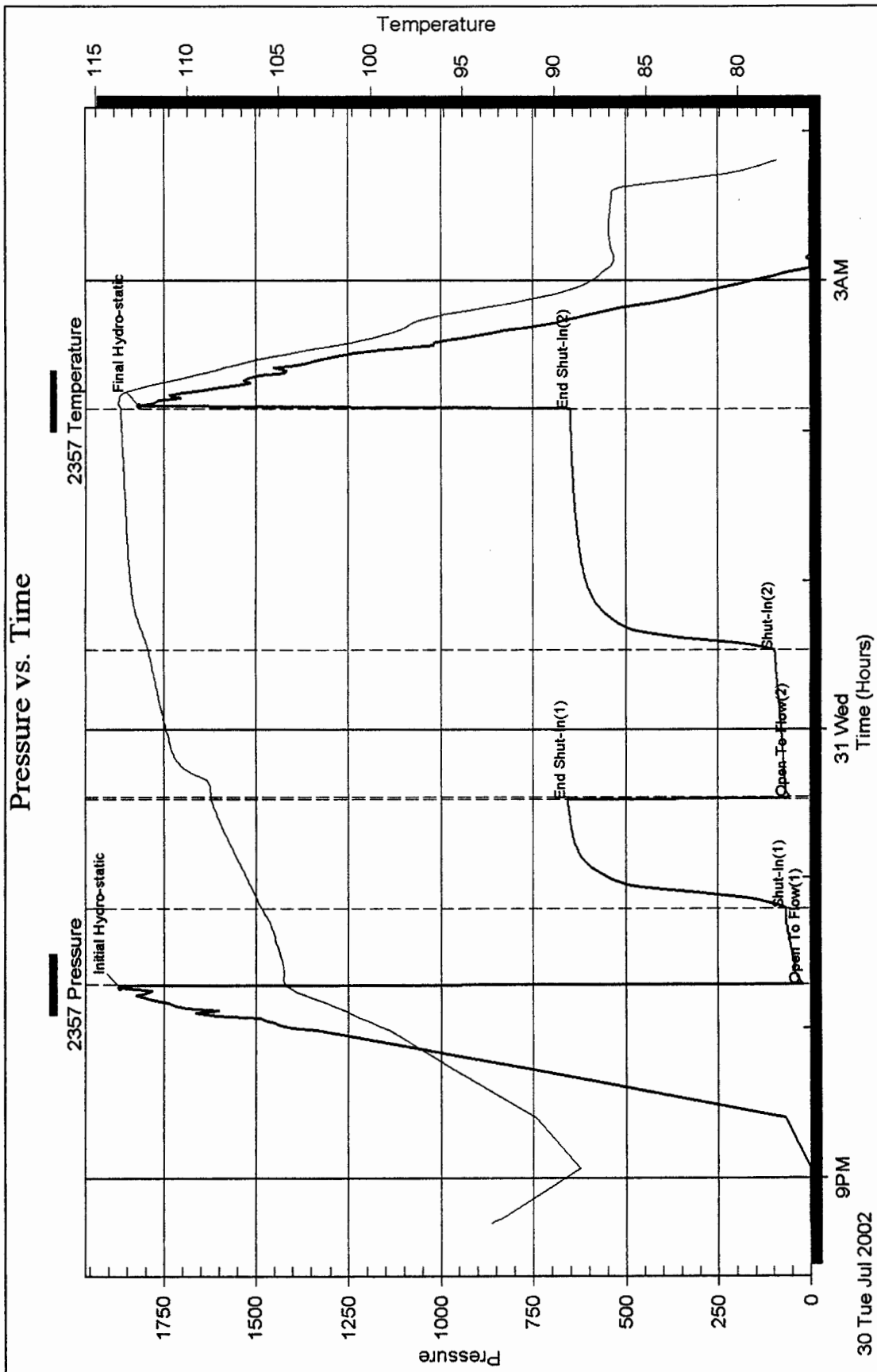
Inside

Murfin Drig Co, Inc.

32-13-19-Ellis-Ks

DST Test Number: 4

Pressure vs. Time

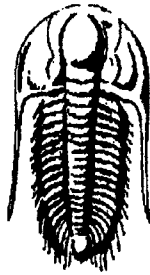


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Trilobite Testing, Inc

Ref. No: 16315

Printed: 2002.08.02 @ 14:57:31 Page 5



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co, Inc.**

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

32-13-19-Ellis-Ks

Riedel #16

Start Date: 2002.07.30 @ 20:41:35

End Date: 2002.07.31 @ 03:48:35

Job Ticket #: 16316

DST #: 5

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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 Drig Co, Inc.

 250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16
32-13-19-Ellis-Ks

Job Ticket: 16316

DST#: 5

Test Start: 2002.07.30 @ 20:41:35

GENERAL INFORMATION:

 Formation: **H-I-J LKC**

 Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 22:17:35

Time Test Ended: 03:48:35

 Test Type: **Conventional Bottom Hole**

 Tester: **Dan Bangle**

 Unit No: **21**

 Interval: **3650.00 ft (KB) To 3725.00 ft (KB) (TVD)**

 Total Depth: **3284.00 ft (KB) (TVD)**

 Hole Diameter: **7.88 inches** Hole Condition: **Good**

 Reference Elevations: **2256.00 ft (KB)**
2251.00 ft (CF)

 KB to GR/CF: **5.00 ft**
Serial #: 2357
Inside

 Press@RunDepth: **96.59 psig @ 3653.01 ft (KB)**

 Start Date: **2002.07.30**

End Date:

2002.07.31

 Start Time: **20:41:36**

End Time:

03:48:35

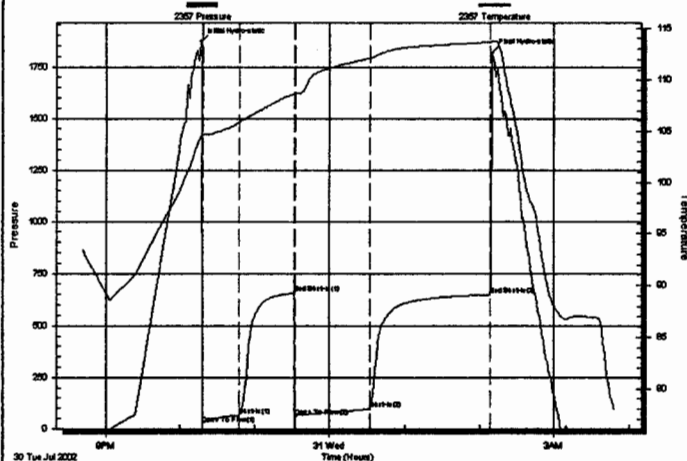
 Capacity: **7000.00 psig**

 Last Calib.: **2002.07.31**

 Time On Btm: **2002.07.30 @ 22:16:35**

 Time Off Btm: **2002.07.31 @ 02:10:05**
TEST COMMENT: IF-Strong BOB in 21 min
FF-Strong BOB in 30 min
Times-30-45-60-90

Pressure vs. Time


PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1869.06	104.50	Initial Hydro-static
1	21.67	104.64	Open To Flow (1)
31	65.57	105.92	Shut-In(1)
75	656.83	108.69	End Shut-In(1)
76	57.28	108.71	Open To Flow (2)
136	96.59	112.13	Shut-In(2)
232	648.62	113.67	End Shut-In(2)
234	1816.83	113.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	Silty OCM 3%o 97% m	0.30
124.00	HO&GCM 50%g 20%o 30% m	1.51
558.00	GIP	7.83

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig Co, Inc.

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16

32-13-19-Ellis-Ks

Job Ticket: 16316

DST#: 5

Test Start: 2002.07.30 @ 20:41:35

Tool Information

Drill Pipe:	Length: 3554.00 ft	Diameter: 3.80 inches	Volume: 49.85 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 87.00 ft	Diameter: 2.25 inches	Volume: 0.43 bbl	Weight to Pull Loose:	65000.00 lb
			Total Volume: 50.28 bbl	Tool Chased	0.01 ft
Drill Pipe Above KB:	14.01 ft			String Weight: Initial	61000.00 lb
Depth to Top Packer:	3650.00 ft			Final	61000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	75.02 ft				
Tool Length:	98.02 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3628.00	
S.I. Tool	5.00			3633.00	
HMV	5.00			3638.00	
Safety Joint	2.00			3640.00	
Packer	5.00			3645.00	23.00 Bottom Of Top Packer
Packer	5.00			3650.00	
Stubb	1.00			3651.00	
Perforations	1.00			3652.00	
C.O. Sub	1.00			3653.00	
Recorder	0.01	2357	Inside	3653.01	
Blank Spacing	62.00			3715.01	
C.O. Sub	1.00			3716.01	
Recorder	0.01	13254	Outside	3716.02	
Pump	6.00			3722.02	
Bullnose	3.00			3725.02	75.02 Bottom Packers & Anchor

Total Tool Length: 98.02


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drig Co, Inc.

Riedel #16

 250 N. Water, Ste 300
Wichita, Ks. 67202

32-13-19-Ellis-Ks

Job Ticket: 16316

DST#: 5

ATTN: Scott Robinson

Test Start: 2002.07.30 @ 20:41:35

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: 49.00 sec/qt

Cushion Volume:

bbl

 Water Loss: 7.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	Sily OCM 3%o 97%m	0.305
124.00	HO&GCM 50%g 20%o,30%m	1.512
558.00	GIP	7.827

Total Length: 744.00 ft

Total Volume: 9.644 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

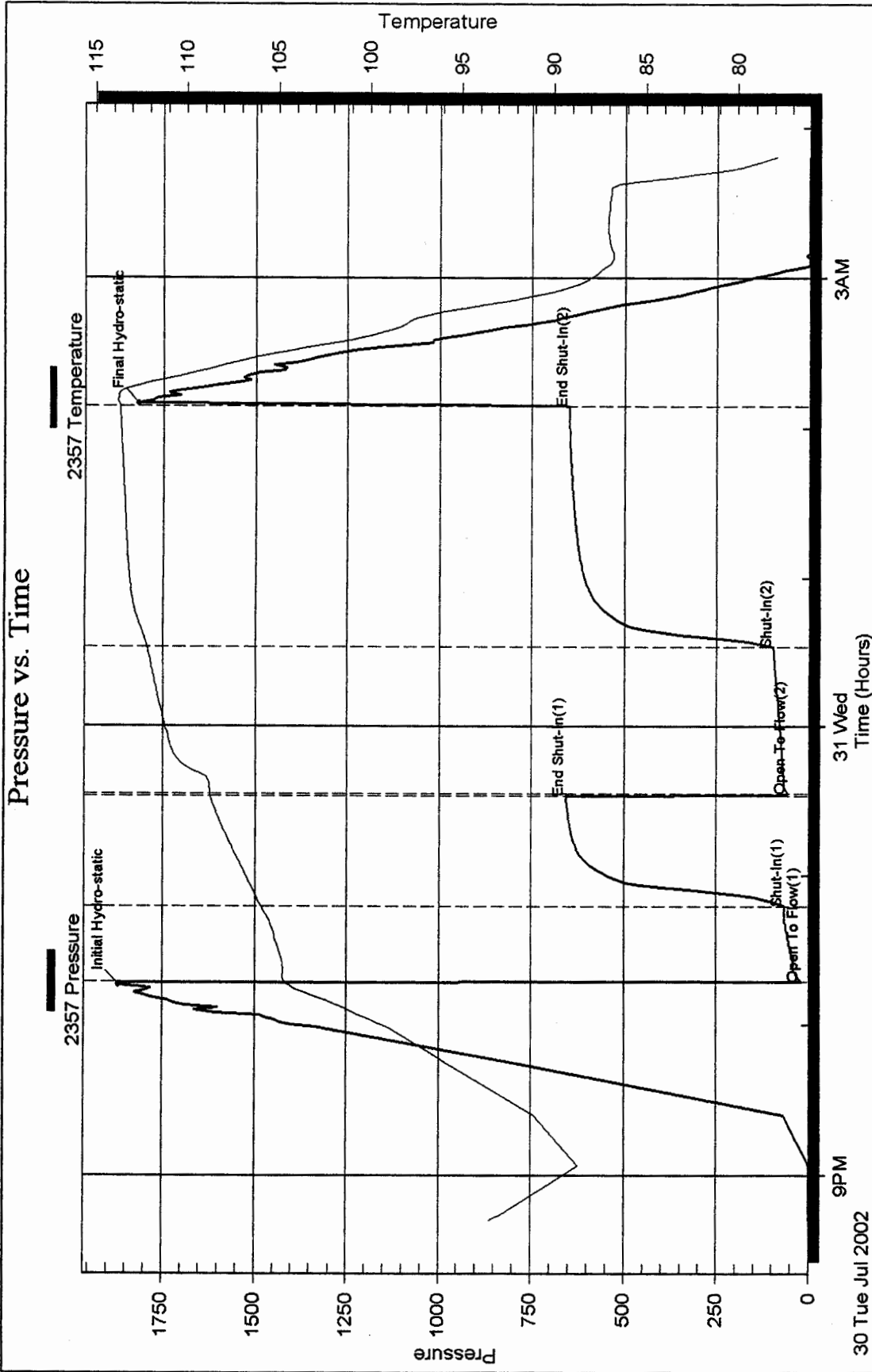
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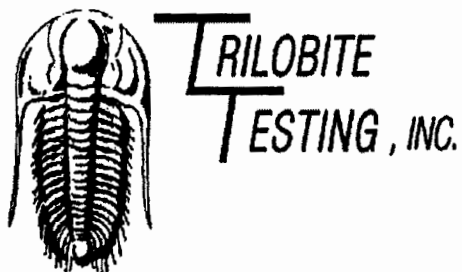
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32-13-19-Ellis-Ks

DST Test Number: 5



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DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co, Inc.**

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

32-13-19-Ellis-Ks

Riedel #16

Start Date: 2002.08.01 @ 21:27:01

End Date: 2002.08.02 @ 04:35:01

Job Ticket #: 16319

DST #: 6

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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 Drig Co, Inc.

 250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

Riedel #16
32-13-19-Ellis-Ks

Job Ticket: 16319

DST#: 6

Test Start: 2002.08.01 @ 21:27:01

GENERAL INFORMATION:

 Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:09:31

Time Test Ended: 04:35:01

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

 Interval: **3885.00 ft (KB) To 3897.00 ft (KB) (TVD)**

Reference Elevations: 2256.00 ft (KB)

Total Depth: 3897.00 ft (KB) (TVD)

2251.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 2357
Inside

Press@RunDepth: 194.34 psig @ 3886.01 ft (KB)

Capacity: 7000.00 psig

Start Date: 2002.08.01

End Date:

2002.08.02

Last Calib.: 2002.08.02

Start Time: 21:27:02

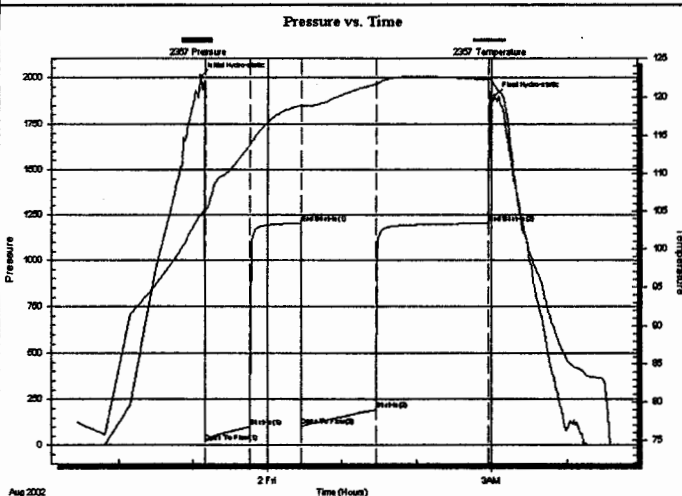
End Time:

04:35:01

Time On Btm: 2002.08.01 @ 23:05:31

Time Off Btm: 2002.08.02 @ 03:02:31

TEST COMMENT: IF-Strong BOB in 21 min
FF-Weak building to 8" fair blow
Times- 30-45-60-90



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2005.61	104.40	Initial Hydro-static
4	19.77	105.22	Open To Flow (1)
41	103.12	113.86	Shut-In(1)
82	1204.00	118.93	End Shut-In(1)
82	104.16	118.94	Open To Flow (2)
142	194.34	121.67	Shut-In(2)
232	1203.11	122.25	End Shut-In(2)
237	1901.40	121.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
392.00	Mdy water w/ show of oil on top 90%	4.71

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig Co, Inc.

Riedel #16

250 N. Water, Ste 300
Wichita, Ks. 67202

32-13-19-Ellis-Ks

Job Ticket: 16319

DST#: 6

ATTN: Scott Robinson

Test Start: 2002.08.01 @ 21:27:01

Tool Information

Drill Pipe:	Length: 3776.00 ft	Diameter: 3.80 inches	Volume: 52.97 bbl	Tool Weight: 1000.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 87.00 ft	Diameter: 2.25 inches	Volume: 0.43 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume:	53.40 bbl	Tool Chased 0.01 ft
Drill Pipe Above KB:	1.01 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3885.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.02 ft			
Tool Length:	35.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			3863.00		
S.I. Tool	5.00			3868.00		
HMV	5.00			3873.00		
Safety Joint	2.00			3875.00		
Packer	5.00			3880.00	23.00	Bottom Of Top Packer
Packer	5.00			3885.00		
Stubb	1.00			3886.00		
Recorder	0.01	2357	Inside	3886.01		
Perforations	8.00			3894.01		
Recorder	0.01	13254	Outside	3894.02		
Bullnose	3.00			3897.02	12.02	Bottom Packers & Anchor

Total Tool Length: 35.02

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 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT		FLUID SUMMARY
	Murfin Drig Co, Inc. 250 N. Water, Ste 300 Wichita, Ks. 67202 ATTN: Scott Robinson	Riedel #16 32-13-19-Ellis-Ks Job Ticket: 16319 DST#: 6 Test Start: 2002.08.01 @ 21:27:01	

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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 9000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
392.00	Mdy water w/ show of oil on top 90%w 10%	4.706

Total Length: 392.00 ft	Total Volume: 4.706 bbl
-------------------------	-------------------------

Num Fluid Samples: 0	Num Gas Bombs: 0	Serial #:
Laboratory Name:	Laboratory Location:	
Recovery Comments:		

DST Test Number: 6

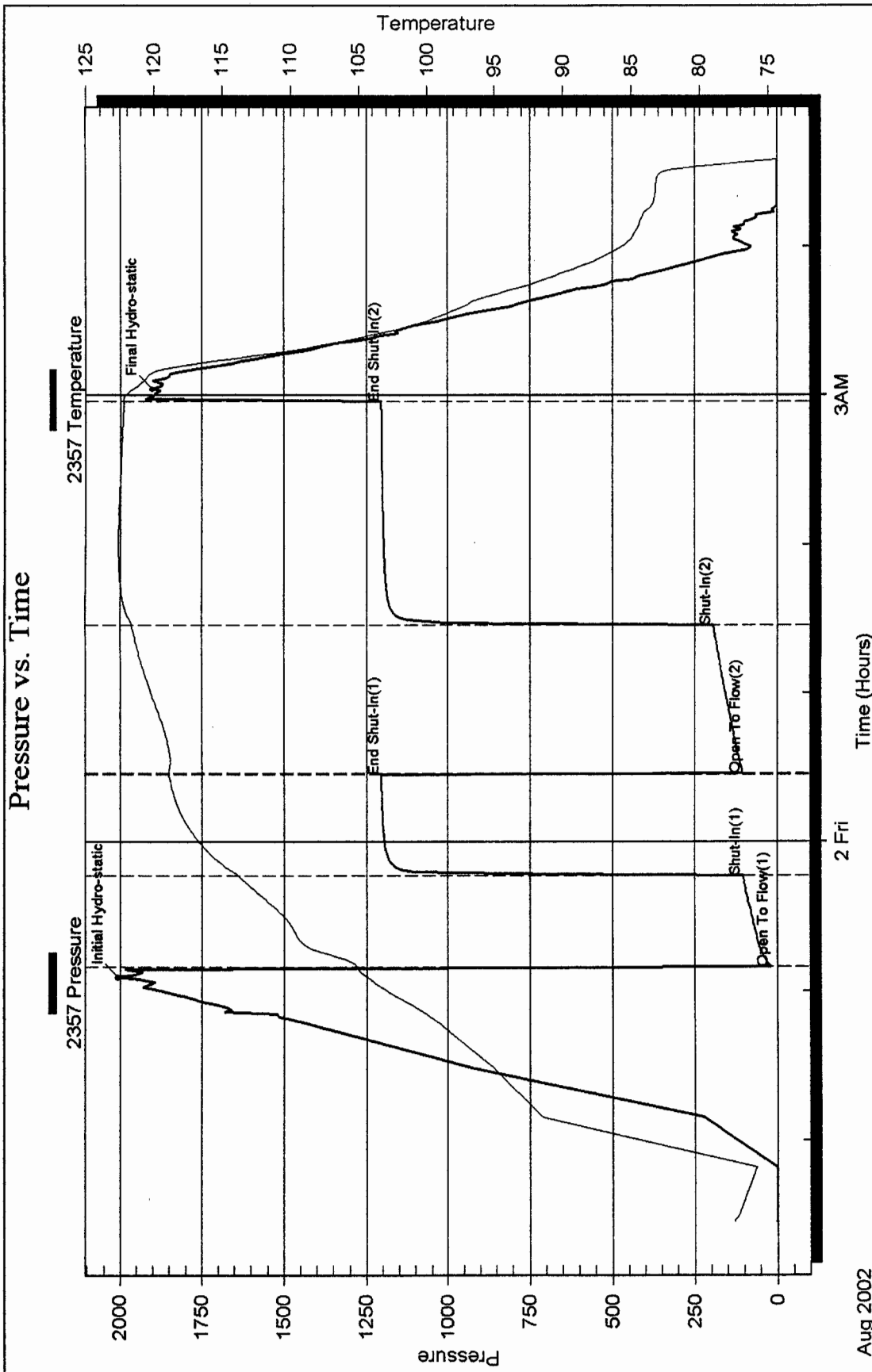
32-13-19-Ells-Ks

Murfin Drig Co, Inc.

Inside

Serial #: 2357

Pressure vs. Time

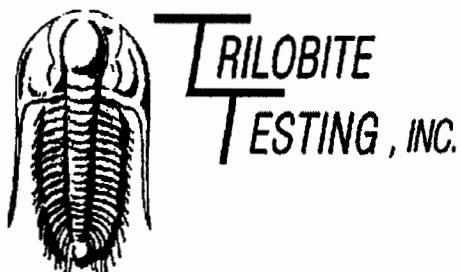


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Ref. No: 16319

Trilobite Testing, Inc

Printed: 2002.08.02 @ 15:00:12 Page 5



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co, Inc.**

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

32-13-19-Ellis-Ks

Riedel #16

Start Date: 2002.08.01 @ 08:16:50

End Date: 2002.08.01 @ 15:25:50

Job Ticket #: 16318

DST #: 7

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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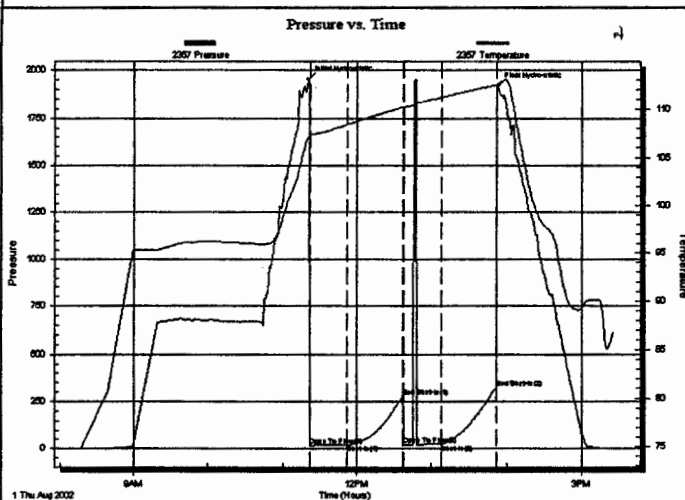
 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT	
	Murfin Drig Co, Inc.	Riedel #16
	250 N. Water, Ste 300 Wichita, Ks. 67202	32-13-19-Ellis-Ks
	ATTN: Scott Robinson	Job Ticket: 16318 DST#: 7 Test Start: 2002.08.01 @ 08:16:50

GENERAL INFORMATION:

Formation: Arbuckle	Test Type: Conventional Bottom Hole
Deviated: No Whipstock: ft (KB)	Tester: Dan Bangle
Time Tool Opened: 11:21:50	Unit No: 21
Time Test Ended: 15:25:50	
Interval: 3832.00 ft (KB) To 3885.00 ft (KB) (TVD)	Reference Elevations: 2256.00 ft (KB)
Total Depth: 3885.00 ft (KB) (TVD)	2251.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good	KB to GR/CF: 5.00 ft

Serial #: 2357	Inside		
Press@RunDepth: 24.17 psig @ 3835.01 ft (KB)	Capacity: 7000.00 psig		
Start Date: 2002.08.01	End Date: 2002.08.01	Last Calib.: 2002.08.01	
Start Time: 08:16:51	End Time: 15:25:50	Time On Btrn: 2002.08.01 @ 11:20:20	
		Time Off Btrn: 2002.08.01 @ 13:52:50	

TEST COMMENT: IF-Weak died in 11 min
 FF-No blow - flushed tool
 Times-30-45-30-45-

**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1951.53	107.01	Initial Hydro-static
2	18.28	107.30	Open To Flow (1)
33	20.71	108.44	Shut-In(1)
77	273.23	110.22	End Shut-In(1)
78	21.03	110.25	Open To Flow (2)
108	24.17	111.18	Shut-In(2)
152	322.50	112.46	End Shut-In(2)
153	1916.85	112.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w oil show in tool	0.02

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig Co, Inc.

Riedel #16

250 N. Water, Ste 300
Wichita, Ks. 67202

32-13-19-Ellis-Ks

Job Ticket: 16318

DST#: 7

ATTN: Scott Robinson

Test Start: 2002.08.01 @ 08:16:50

Tool Information

Drill Pipe:	Length: 3743.00 ft	Diameter: 3.80 inches	Volume: 52.50 bbl	Tool Weight: 1200.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 87.00 ft	Diameter: 2.25 inches	Volume: 0.43 bbl	Weight to Pull Loose: 65000.00 lb
			Total Volume: 52.93 bbl	Tool Chased 0.01 ft
Drill Pipe Above KB:	21.01 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3832.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.02 ft			
Tool Length:	76.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				
Rig broke down when test tool was going in hole.				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3810.00	
S.I. Tool	5.00			3815.00	
HMV	5.00			3820.00	
Safety Joint	2.00			3822.00	
Packer	5.00			3827.00	23.00 Bottom Of Top Packer
Packer	5.00			3832.00	
Stubb	1.00			3833.00	
Perforations	1.00			3834.00	
C.O. Sub	1.00			3835.00	
Recorder	0.01	2357	Inside	3835.01	
Blank Spacing	31.00			3866.01	
C.O. Sub	1.00			3867.01	
Recorder	0.01	13254	Outside	3867.02	
Perforations	15.00			3882.02	
Bullnose	3.00			3885.02	53.02 Bottom Packers & Anchor

Total Tool Length: 76.02

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 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT		FLUID SUMMARY
	Murfin Drig Co, Inc. 250 N. Water, Ste 300 Wichita, Ks. 67202 ATTN: Scott Robinson	Riedel #16 32-13-19-Ellis-Ks Job Ticket: 16318 DST#: 7 Test Start: 2002.08.01 @ 08:16:50	

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: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 8200.00 ppm			
Filter Cake: inches			

Recovery Information		
Recovery Table		
Length ft	Description	Volume bbl
5.00	Mud w oil show in tool	0.025
Total Length: 5.00 ft Total Volume: 0.025 bbl Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: Laboratory Name: Laboratory Location: Recovery Comments:		

Serial #: 2357

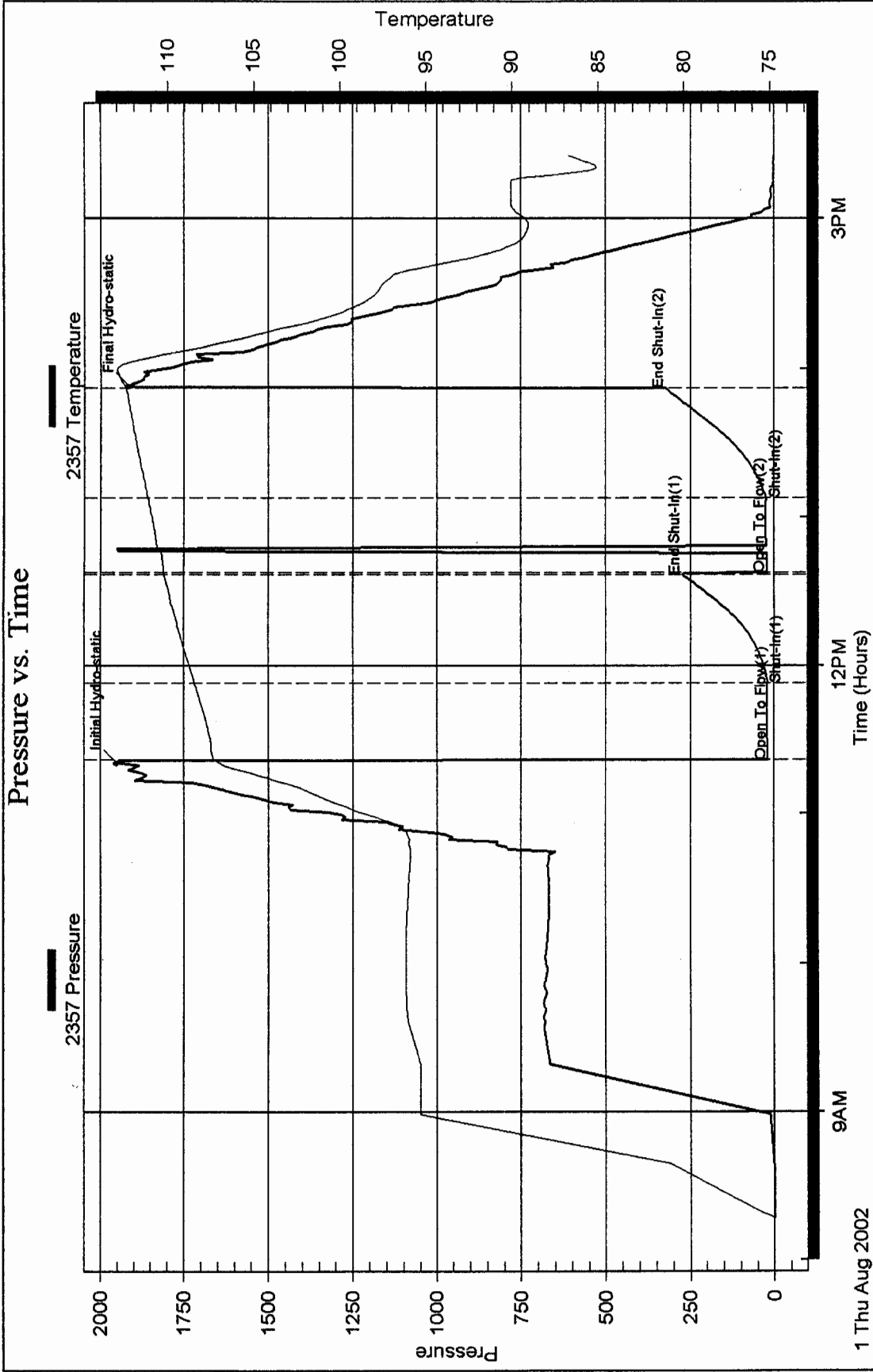
Inside

Murfin Drig Co, Inc.

32-13-19-Elis-Ks

DST Test Number: 7

Pressure vs. Time



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Ref. No: 16318

Trilobite Testing, Inc

Printed: 2002.08.02 @ 15:00:30 Page 5



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg Co, Inc.**

250 N. Water, Ste 300
Wichita, Ks. 67202

ATTN: Scott Robinson

32-13-19-Ellis-Ks

Riedel #16

Start Date: 2002.08.01 @ 21:27:01

End Date: 2002.08.02 @ 04:35:01

Job Ticket #: 16319

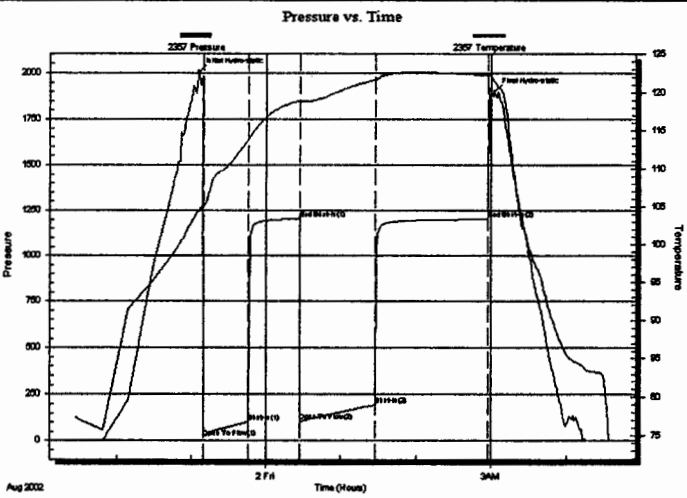
DST #: 8

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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 Drig Co, Inc. 250 N. Water, Ste 300 Wichita, Ks. 67202 ATTN: Scott Robinson		Riedel #16 32-13-19-Ellis-Ks Job Ticket: 16319 DST#: 8 Test Start: 2002.08.01 @ 21:27:01																																									
GENERAL INFORMATION:																																											
Formation: Arbuckle Deviated: No Whipstock: ft (KB) Time Tool Opened: 23:09:31 Time Test Ended: 04:35:01		Test Type: Conventional Bottom Hole Tester: Dan Bangle Unit No: 21																																									
Interval: 3885.00 ft (KB) To 3897.00 ft (KB) (TVD) Total Depth: 3897.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good		Reference Elevations: 2256.00 ft (KB) 2251.00 ft (CF) KB to GR/CF: 5.00 ft																																									
Serial #: 2357 Inside																																											
Press@RunDepth: 194.34 psig @ 3886.01 ft (KB) Start Date: 2002.08.01 End Date: 2002.08.02 Start Time: 21:27:02 End Time: 04:35:01		Capacity: 7000.00 psig Last Calib.: 2002.08.02 Time On Btmr: 2002.08.01 @ 23:05:31 Time Off Btmr: 2002.08.02 @ 03:02:31																																									
TEST COMMENT: IF-Strong BOB in 21 min FF-Weak building to 8" fair blow Times- 30-45-60-90																																											
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig Co, Inc.

Riedel #16

250 N. Water, Ste 300
Wichita, Ks. 67202

32-13-19-Ellis-Ks

Job Ticket: 16319

DST#: 8

ATTN: Scott Robinson

Test Start: 2002.08.01 @ 21:27:01

Tool Information

Drill Pipe:	Length: 3776.00 ft	Diameter: 3.80 inches	Volume: 52.97 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 87.00 ft	Diameter: 2.25 inches	Volume: 0.43 bbl	Weight to Pull Loose:	70000.00 lb
			Total Volume: 53.40 bbl	Tool Chased	0.01 ft
Drill Pipe Above KB:	1.01 ft			String Weight: Initial	62000.00 lb
Depth to Top Packer:	3885.00 ft			Final	63000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	12.02 ft				
Tool Length:	35.02 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

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Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3863.00	
S.I. Tool	5.00			3868.00	
HMV	5.00			3873.00	
Safety Joint	2.00			3875.00	
Packer	5.00			3880.00	23.00 Bottom Of Top Packer
Packer	5.00			3885.00	
Stubb	1.00			3886.00	
Recorder	0.01	2357	Inside	3886.01	
Perforations	8.00			3894.01	
Recorder	0.01	13254	Outside	3894.02	
Bullnose	3.00			3897.02	12.02 Bottom Packers & Anchor

Total Tool Length: 35.02

 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT		FLUID SUMMARY
	Murfin Drlg Co, Inc. 250 N. Water, Ste 300 Wichita, Ks. 67202 ATTN: Scott Robinson		Riedel #16 32-13-19-Ellis-Ks Job Ticket: 16319 DST#: 3 Test Start: 2002.08.01 @ 21:27:01

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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 9000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table		
Length ft	Description	Volume bbl
392.00	Mdy water w/ show of oil on top 90%w 10%	4.706

Total Length: 392.00 ft	Total Volume: 4.706 bbl	
Num Fluid Samples: 0	Num Gas Bombs: 0	Serial #:
Laboratory Name:	Laboratory Location:	
Recovery Comments:		

DST Test Number: 8

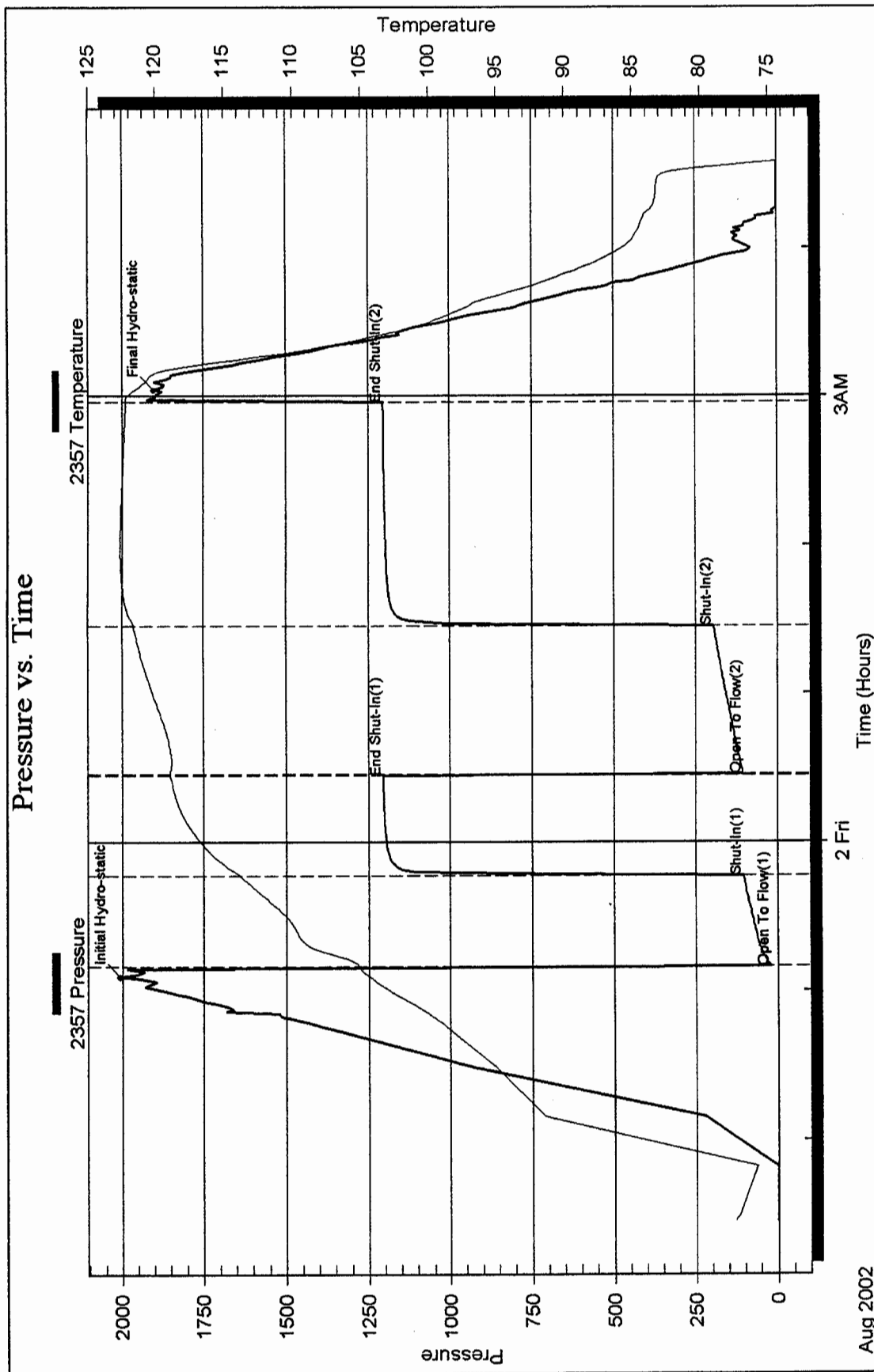
32-13-19-Elis-Ks

Murfin Drig Co. Inc.

Inside

Serial #: 2357

Pressure vs. Time



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