

15-033-21271

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KANSAS CORPORATION COMMISSION

JAN 07 2002



TRILOBITE
TESTING, INC.

CONSERVATION DIVISION

ORIGINAL

DRILL STEM TEST REPORT

Prepared For: Mull Drlg.Co.Inc.

KCC

P.O.Box 2758
Wichita Ks. 67201

JAN 04 2002

CONFIDENTIAL CONFIDENTIAL

ATTN: Kim Shoemaker

Release

22-31s-19w Comanche

MAR 03 2003

Vaughn Trust #1-22

From

Start Date: 2001.10.22 @ 07:19:28

CONFIDENTIAL

End Date: 2001.10.22 @ 15:39:58

Job Ticket #: 15329

DST #: 1

Release

MAR 03 2003

From

CONFIDENTIAL

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Mull Drlg.Co.Inc.

Vaughn Trust #1-22

22-31s-19w Comanche

DST # 1

Altamont

2001.10.22



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mull Drig.Co.Inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15329

DST#: 1

ATTN: Kim Shoemaker

Test Start: 2001.10.22 @ 07:19:28

GENERAL INFORMATION:

Formation: **Altamprjt**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:46:28
 Time Test Ended: 15:39:58

Test Type: Conventional Bottom Hole
 Tester: Gary Pevoteaux
 Unit No: 13

Interval: **4986.00 ft (KB) To 5000.00 ft (KB) (TVD)**
 Total Depth: 5000.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor

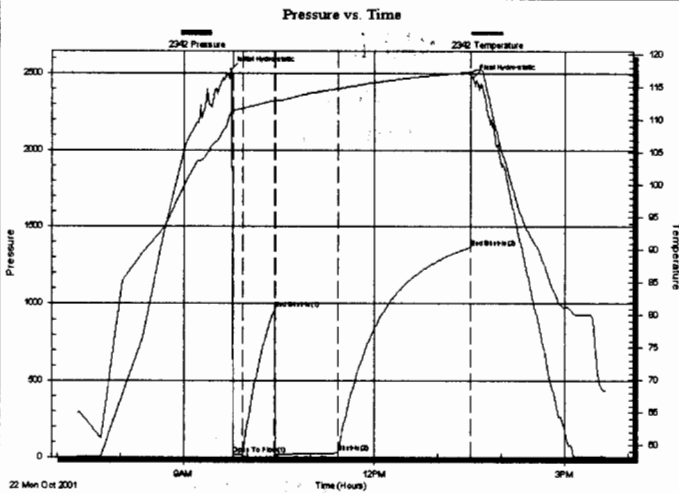
Reference Elevations: 2272.00 ft (KB)
 2263.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: **2342** Inside

Press@RunDepth: 27.69 psig @ 4987.00 ft (KB)
 Start Date: 2001.10.22 End Date: 2001.10.22
 Start Time: 07:19:29 End Time: 15:39:58

Capacity: 7000.00 psig
 Last Calib.: 2001.09.17
 Time On Btm: 2001.10.22 @ 09:44:28
 Time Off Btm: 2001.10.22 @ 13:32:58

TEST COMMENT: IF:Strong blow . B.O.B. in 15 secs.
 IS:No blow .
 FF:Strong blow . B.O.B. immediately.
 FSI:No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2520.93	111.01	Initial Hydro-static
2	16.94	111.37	Open To Flow (1)
11	18.79	111.75	Shut-In(1)
42	965.50	112.99	End Shut-In(1)
43	17.62	112.99	Open To Flow (2)
101	27.69	114.75	Shut-In(2)
227	1366.92	117.26	End Shut-In(2)
229	2470.99	117.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	SOCM 5%g 1%o 94%m	0.42
0.00	2600 ft. of GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drig.Co.Inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15329 **DST#: 1**

ATTN: Kim Shoemaker

Test Start: 2001.10.22 @ 07:19:28

Tool Information

Drill Pipe:	Length: 4967.00 ft	Diameter: 3.80 inches	Volume: 69.67 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 69.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4986.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	41.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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JAN 04 2002

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4960.00	
S.I. Tool	5.00			4965.00	
HMV	5.00			4970.00	
Jars	5.00			4975.00	
Safety Joint	2.00			4977.00	
Packer	4.00			4981.00	27.00 Bottom Of Top Packer
Packer	5.00			4986.00	
Stubb	1.00			4987.00	
Recorder	0.00	2342	Inside	4987.00	
Perforations	8.00			4995.00	
Recorder	0.00	10248	Outside	4995.00	
Bullnose	5.00			5000.00	14.00 Bottom Packers & Anchor

Total Tool Length: 41.00

**Release
MAR 03 2003
From
Confidential**



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drig.Co.Inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15329

DST#: 1

ATTN: Kim Shoemaker

Test Start: 2001.10.22 @ 07:19:28

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:

6000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.20 inches

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Recovery Information

ORIGINAL

Recovery Table

Length ft	Description	Volume bbl
30.00	SOCM 5%g 1%o 94%m	0.421
0.00	2600 ft. of GIP	0.000

Total Length: 30.00 ft

Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 2342

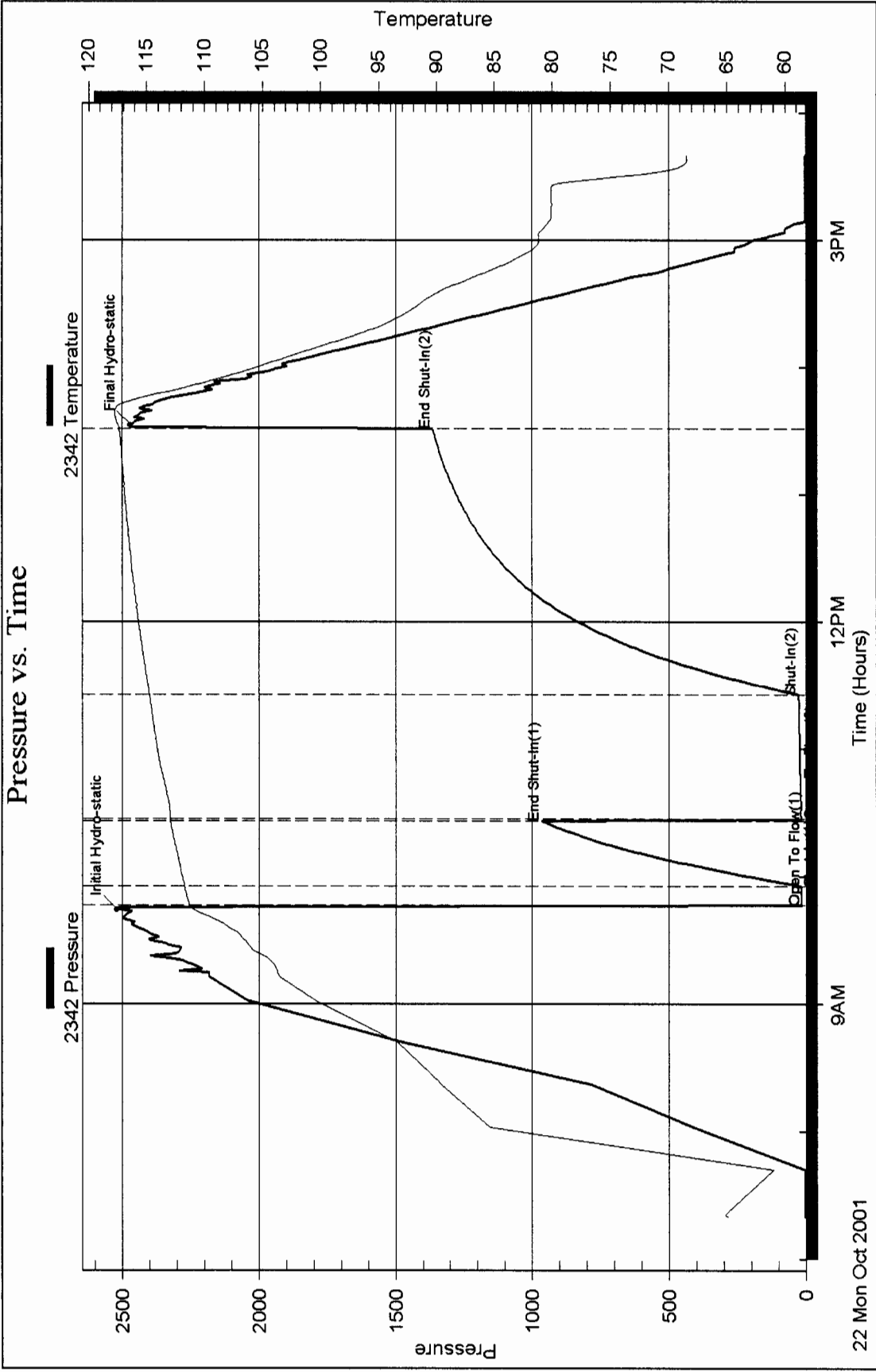
Inside

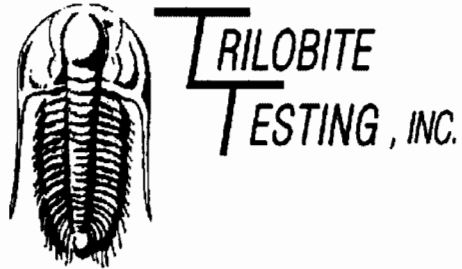
Mull Drlg. Co. Inc.

22-31s-19w Comanche

DST Test Number: 1

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Mull Drlg.Co.Inc.**

P.O.Box 2758
Wichita Ks. 67201

ATTN: Kim Shoemaker

22-31s-19w Comanche

Vaughn Trust #1-22

Start Date: 2001.10.23 @ 19:50:47

End Date: 2001.10.24 @ 06:24:47

Job Ticket #: 15330 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Mull Drlg.Co.Inc.

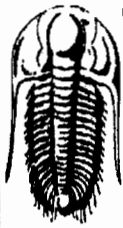
Vaughn Trust #1-22

22-31s-19w Comanche

DST # 2

Miss.

2001.10.23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mull Drlg.Co.Inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15330

DST#:2

ATTN: Kim Shoemaker

Test Start: 2001.10.23 @ 19:50:47

GENERAL INFORMATION:

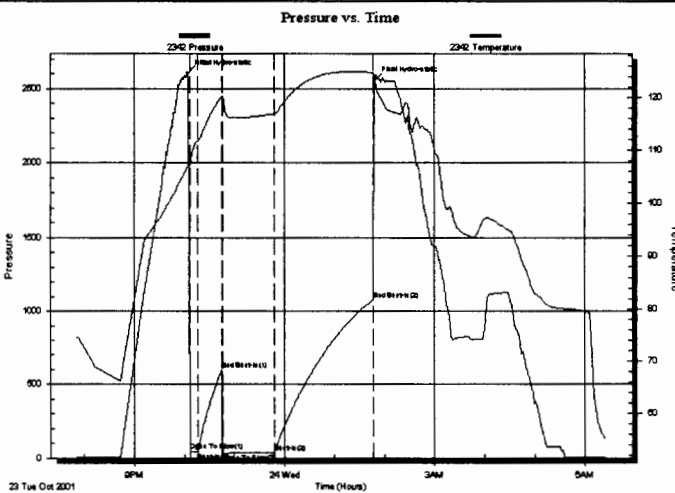
Formation: **Miss.**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:07:17
 Time Test Ended: 06:24:47
 Interval: **5158.00 ft (KB) To 5226.00 ft (KB) (TVD)**
 Total Depth: 5226.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole
 Tester: Gary Pevoteaux
 Unit No: 13
 Reference Elevations: 2272.00 ft (KB)
 2263.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 2342

Inside

Press@RunDepth: 38.68 psig @ 5159.00 ft (KB)
 Start Date: 2001.10.23 End Date: 2001.10.24
 Start Time: 19:50:48 End Time: 06:24:47
 Capacity: 7000.00 psig
 Last Calib.: 2001.09.17
 Time On Btm: 2001.10.23 @ 22:04:47
 Time Off Btm: 2001.10.24 @ 01:49:17

TEST COMMENT: IF:Strong blow . B.O.B. in 15 secs.
 IS:GTS in 1 min. while blow ing dow n.
 FF:Strong blow . (see gas volume report)
 FS:No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2605.20	106.93	Initial Hydro-static
3	50.52	107.25	Open To Flow (1)
12	40.36	111.68	Shut-in(1)
41	601.50	120.18	End Shut-in(1)
42	32.89	120.16	Open To Flow (2)
103	38.68	116.89	Shut-in(2)
222	1079.05	124.75	End Shut-in(2)
225	2557.61	123.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	SGCM	0.87
0.00	Gas in all fluid free pipe.	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	1.00	5.76
Last Gas Rate	0.13	4.00	6.89
Max. Gas Rate	0.13	4.00	6.89



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drig.Co.inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15330

DST#: 2

ATTN: Kim Shoemaker

Test Start: 2001.10.23 @ 19:50:47

Tool Information

Drill Pipe:	Length: 5153.00 ft	Diameter: 3.80 inches	Volume: 72.28 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 72.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	5158.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	95.00 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			5132.00	
S.I. Tool	5.00			5137.00	
HMV	5.00			5142.00	
Jars	5.00			5147.00	
Safety Joint	2.00			5149.00	
Packer	4.00			5153.00	27.00 Bottom Of Top Packer
Packer	5.00			5158.00	
Stubb	1.00			5159.00	
Recorder	0.00	2342	Inside	5159.00	
Perforations	1.00			5160.00	
C.O. Sub	1.00			5161.00	
Blank Spacing	59.00			5220.00	
C.O. Sub	1.00			5221.00	
Recorder	0.00	10248	Outside	5221.00	
Bullnose	5.00			5226.00	68.00 Bottom Packers & Anchor

Total Tool Length: 95.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drig.Co.Inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15330

DST#: 2

ATTN: Kim Shoemaker

Test Start: 2001.10.23 @ 19:50:47

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:

5000 ppm

Viscosity: 74.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.36 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	SGCM	0.870
0.00	Gas in all fluid free pipe.	0.000

Total Length: 62.00 ft Total Volume: 0.870 bbl

Num Fluid Samples: 0

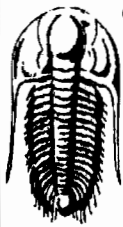
Num Gas Bombs: 1

Serial #: gp

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Mull Drig.Co.Inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15330

DST#: 2

ATTN: Kim Shoemaker

Test Start: 2001.10.23 @ 19:50:47

Gas Rates Information

Temperature: 59 deg C

Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
2	10	0.13	1.00	5.76
2	20	0.13	2.00	6.14
2	30	0.13	3.00	6.51
2	40	0.13	3.00	6.51
2	50	0.13	3.00	6.51
2	60	0.13	4.00	6.89

Serial #: 2342

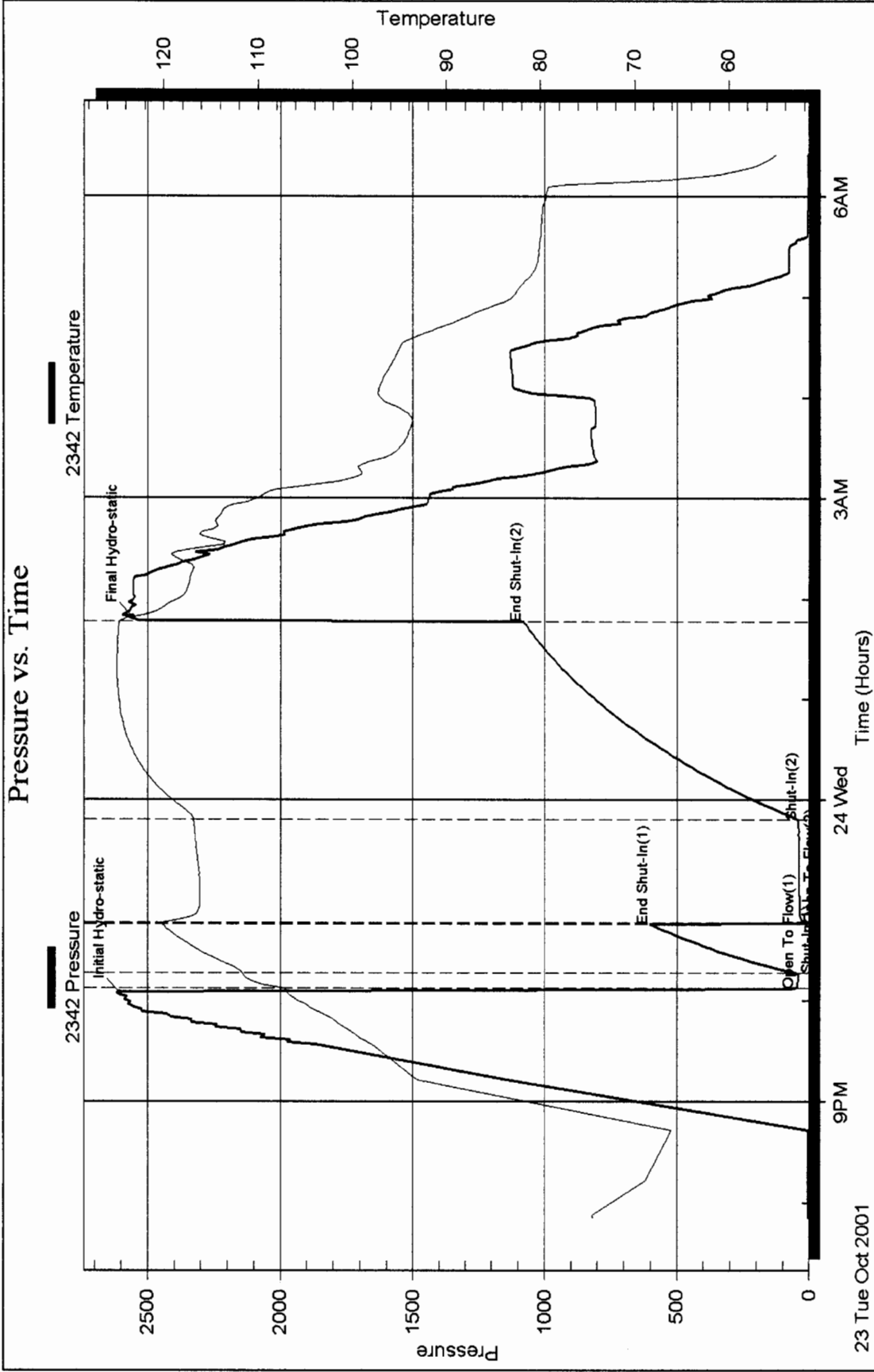
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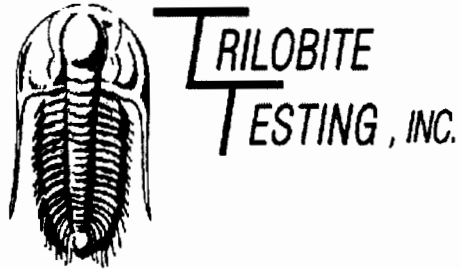
Mull Drig. Co. Inc.

22-31s-19w Comanche

DST Test Number: 2

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Mull Drlg.Co.Inc.**

P.O.Box 2758
Wichita Ks. 67201

ATTN: Kim Shoemaker

22-31s-19w Comanche

Vaughn Trust #1-22

Start Date: 2001.10.25 @ 21:17:15

End Date: 2001.10.26 @ 07:11:45

Job Ticket #: 15331 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mull Drig.Co.Inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15331

DST#: 3

ATTN: Kim Shoemaker

Test Start: 2001.10.25 @ 21:17:15

GENERAL INFORMATION:

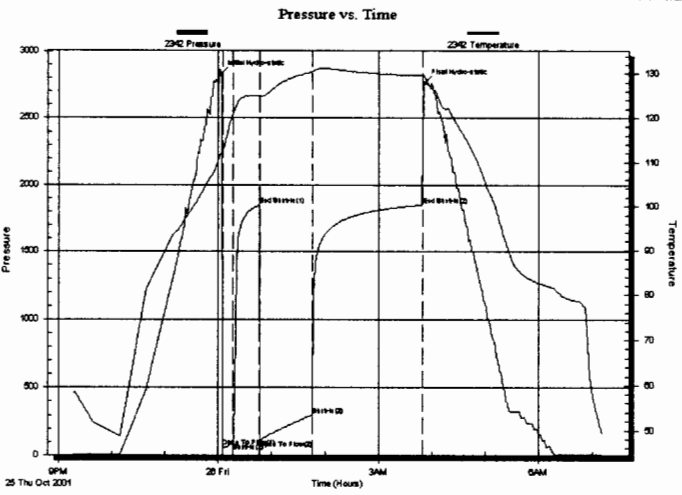
Formation: **Mississippian**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole
 Time Tool Opened: 00:05:15 Tester: Gary Pevoteaux
 Time Test Ended: 07:11:45 Unit No: 13
 Interval: **5515.00 ft (KB) To 5570.00 ft (KB) (TVD)** Reference Elevations: 2272.00 ft (KB)
 Total Depth: 5570.00 ft (KB) (TVD) 2263.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 9.00 ft

Serial #: 2342

Inside

Press@RunDepth: 300.12 psig @ 5516.00 ft (KB) Capacity: 7000.00 psig
 Start Date: 2001.10.25 End Date: 2001.10.26 Last Calib.: 2001.09.17
 Start Time: 21:17:16 End Time: 07:11:45 Time On Btm: 2001.10.26 @ 00:03:15
 Time Off Btm: 2001.10.26 @ 03:51:45

TEST COMMENT: IF:Strong blow . B.O.B. in 75 secs.
 IS:Weak blow . 1/2 - 1".
 FF:Strong blow . B.O.B. in 2 mins.
 FSI:Weak blow . 2 - 5".



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2829.87	111.88	Initial Hydro-static
2	60.50	112.79	Open To Flow (1)
14	92.56	120.71	Shut-In(1)
43	1847.07	124.99	End Shut-In(1)
44	112.96	124.95	Open To Flow (2)
103	300.12	130.36	Shut-In(2)
226	1851.69	129.53	End Shut-In(2)
229	2762.56	129.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	GCW with oil specs Rw .133 ohnms @ 44.35	
120.00	SOCGW 2%o 13%g 85%w	1.68
65.00	O&GCM 13%o 33%g 54%m	0.91
120.00	O&GCM 10%o 30%g 60%m	1.68
0.00	3030 ft. of gas in pipe.	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drig.Co.Inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15331

DST#: 3

ATTN: Kim Shoemaker

Test Start: 2001.10.25 @ 21:17:15

Tool Information

Drill Pipe:	Length: 5494.00 ft	Diameter: 3.80 inches	Volume: 77.07 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 71000.00 lb
			<u>Total Volume: 77.07 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	5515.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	82.00 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			5489.00	
S.I. Tool	5.00			5494.00	
HMV	5.00			5499.00	
Jars	5.00			5504.00	
Safety Joint	2.00			5506.00	
Packer	4.00			5510.00	27.00 Bottom Of Top Packer
Packer	5.00			5515.00	
Stubb	1.00			5516.00	
Recorder	0.00	2342	Inside	5516.00	
Perforations	1.00			5517.00	
C.O. Sub	1.00			5518.00	
Blank Spacing	31.00			5549.00	
C.O. Sub	1.00			5550.00	
Perforations	15.00			5565.00	
Recorder	0.00	10248	Outside	5565.00	
Bullnose	5.00			5570.00	55.00 Bottom Packers & Anchor
Total Tool Length:	82.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drig.Co.Inc.

Vaughn Trust #1-22

P.O.Box 2758
Wichita Ks. 67201

22-31s-19w Comanche

Job Ticket: 15331

DST#: 3

ATTN: Kim Shoemaker

Test Start: 2001.10.25 @ 21:17:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

104000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
310.00	GCW with oil specs Rw .133 ohnms @ 40 d	4.348
120.00	SOCGW 2%o 13%g 85%w	1.683
65.00	O&GCM 13%o 33%g 54%m	0.912
120.00	O&GCM 10%o 30%g 60%m	1.683
0.00	3030 ft. of gas in pipe.	0.000

Total Length: 615.00 ft

Total Volume: 8.626 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 2342

Inside

Mull Drig.Co.Inc.

22-31s-19w Comanche

DST Test Number: 3

Pressure vs. Time

