



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

PO Box 783188
Wichita, Ks. 67278

ATTN: Jeff Christian

34-23s-18w-Pawnee

Wheaton #1

Start Date: 2003.09.29 @ 11:46:13

End Date: 2003.09.29 @ 17:15:43

Job Ticket #: 18178 DST #: 1

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18178

DST#: 1

ATTN: Jeff Christian

Test Start: 2003.09.29 @ 11:46:13

GENERAL INFORMATION:

Formation: **Lansing "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:21:13

Time Test Ended: 17:15:43

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 24

Interval: **4055.00 ft (KB) To 4085.00 ft (KB) (TVD)**

Reference Elevations: 2125.00 ft (KB)

Total Depth: 4085.00 ft (KB) (TVD)

2116.00 ft (CF)

Hole Diameter: 6.80 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 6753

Inside

Press@RunDepth: 21.81 psig @ 4056.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2003.09.29 End Date: 2003.09.29

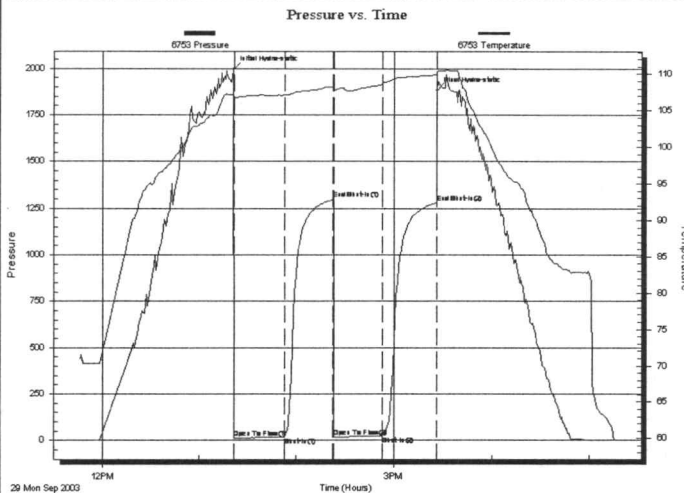
Last Calib.: 1899.12.30

Start Time: 11:46:15 End Time: 17:15:43

Time On Btm: 2003.09.29 @ 13:20:58

Time Off Btm: 2003.09.29 @ 15:26:13

TEST COMMENT: IFP-Very Weak Intermittant Surface Blow
FFP-No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1993.85	107.34	Initial Hydro-static
1	10.78	106.78	Open To Flow (1)
32	17.88	107.10	Shut-In(1)
62	1297.41	108.24	End Shut-In(1)
63	18.48	107.92	Open To Flow (2)
92	21.81	108.70	Shut-In(2)
125	1280.23	109.91	End Shut-In(2)
126	1881.92	110.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud	0.42

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18178

DST#: 1

ATTN: Jeff Christian

Test Start: 2003.09.29 @ 11:46:13

Tool Information

Drill Pipe:	Length: 4064.00 ft	Diameter: 3.80 inches	Volume: 57.01 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 57.01 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4055.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	51.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4035.00	
Shut In Tool	5.00			4040.00	
Hydraulic tool	5.00			4045.00	
Packer	5.00			4050.00	21.00 Bottom Of Top Packer
Packer	5.00			4055.00	
Stubb	1.00			4056.00	
Recorder	0.00	6753	Inside	4056.00	
Perforations	26.00			4082.00	
Recorder	0.00	13252	Outside	4082.00	
Bullhose	3.00			4085.00	30.00 Bottom Packers & Anchor
Total Tool Length:	51.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18178

DST#: 1

ATTN: Jeff Christian

Test Start: 2003.09.29 @ 11:46:13

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud	0.421

Total Length: 30.00 ft

Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

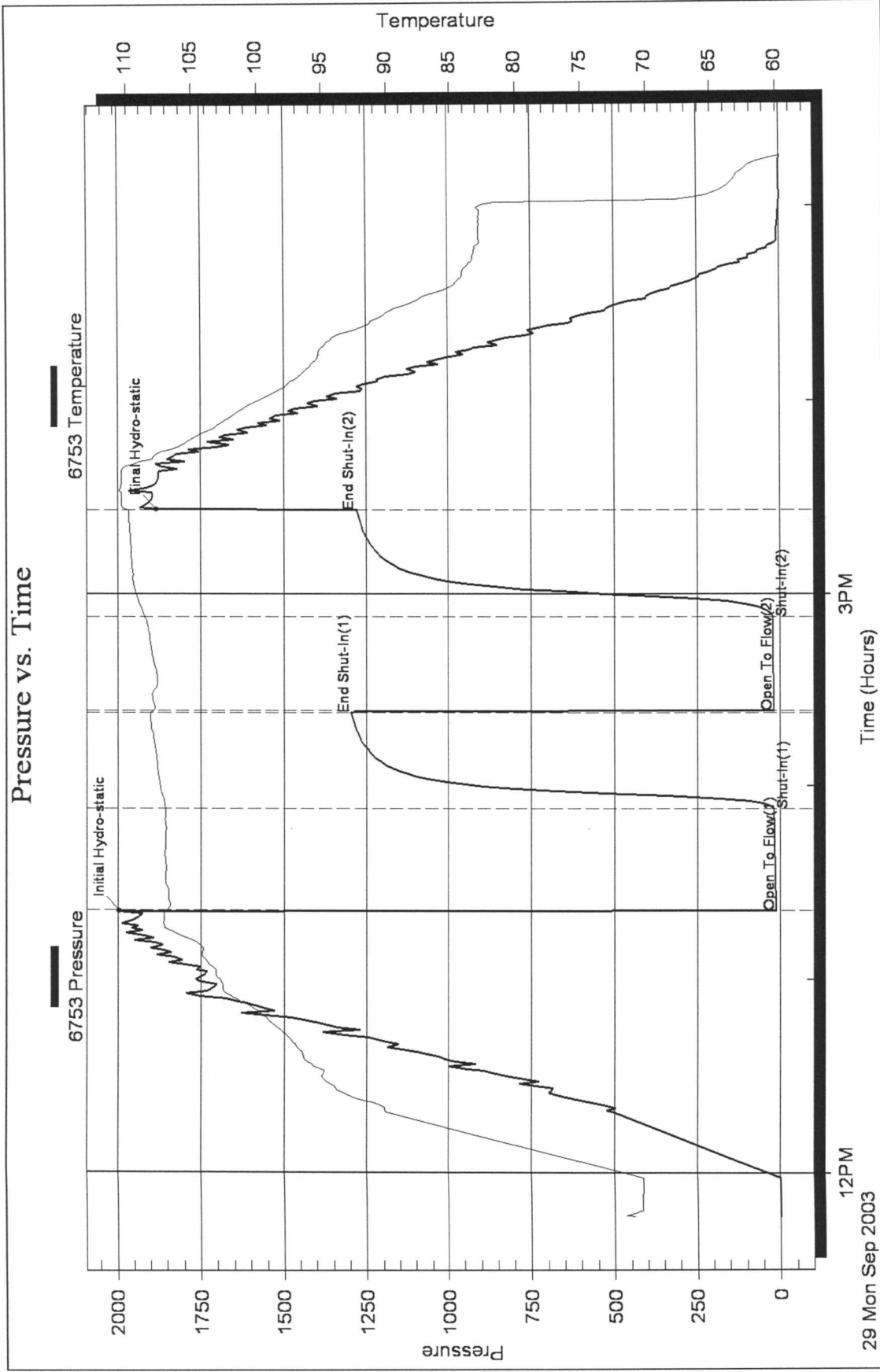
Serial #: 6753

Inside

Ritchie Exploration Inc.

34-23s-18w-Pawnee

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

PO Box 783188
Wichita, Ks. 67278

ATTN: Jeff Christian

34-23s-18w-Pawnee

Wheaton #1

Start Date: 2003.09.30 @ 02:00:15

End Date: 2003.09.30 @ 08:34:15

Job Ticket #: 18179 DST #: 2

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

ATTN: Jeff Christian

Job Ticket: 18179

DST#: 2

Test Start: 2003.09.30 @ 02:00:15

GENERAL INFORMATION:

Formation: **Lansing "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:09:30

Time Test Ended: 08:34:15

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 24

Interval: **4092.00 ft (KB) To 4123.00 ft (KB) (TVD)**

Reference Elevations: 2125.00 ft (KB)

Total Depth: 4123.00 ft (KB) (TVD)

2116.00 ft (CF)

Hole Diameter: 6.80 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 6753 Inside

Press@RunDepth: 13.83 psig @ 4093.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2003.09.30

End Date: 2003.09.30

Last Calib.: 1899.12.30

Start Time: 02:00:17

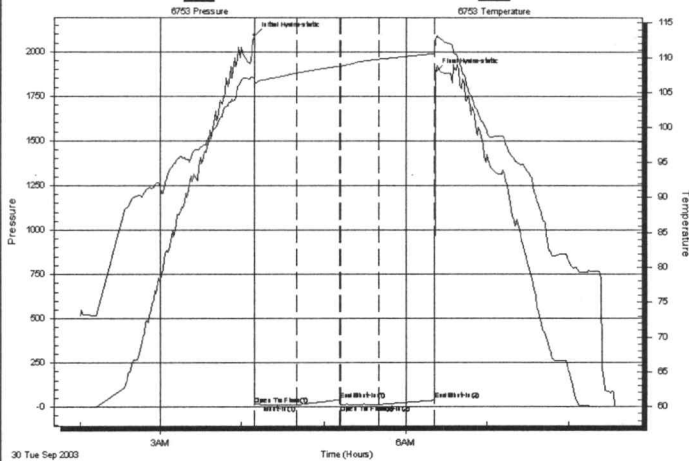
End Time: 08:34:15

Time On Btm: 2003.09.30 @ 04:09:15

Time Off Btm: 2003.09.30 @ 06:21:45

TEST COMMENT: IFF- Weak Blow , Built to 2", No Blow back
FFP-Weak Blow , Built to 1/2 " No Blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2092.13	107.03	Initial Hydro-static
1	14.16	106.43	Open To Flow (1)
31	11.86	107.75	Shut-In(1)
63	40.43	108.75	End Shut-In(1)
63	12.22	108.75	Open To Flow (2)
91	13.83	109.71	Shut-In(2)
132	37.81	110.53	End Shut-In(2)
133	1885.60	112.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud With Oil Stain, Spots in Tool	0.14

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18179

DST#: 2

ATTN: Jeff Christian

Test Start: 2003.09.30 @ 02:00:15

Tool Information

Drill Pipe:	Length: 4095.00 ft	Diameter: 3.80 inches	Volume: 57.44 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: lb
			<u>Total Volume: 57.44 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial lb
Depth to Top Packer:	4092.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4072.00	
Shut In Tool	5.00			4077.00	
Hydraulic tool	5.00			4082.00	
Packer	5.00			4087.00	21.00 Bottom Of Top Packer
Packer	5.00			4092.00	
Stubb	1.00			4093.00	
Recorder	0.00	6753	Inside	4093.00	
Perforations	27.00			4120.00	
Recorder	0.00	13252	Outside	4120.00	
Bullnose	3.00			4123.00	31.00 Bottom Packers & Anchor
Total Tool Length:	52.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18179

DST#: 2

ATTN: Jeff Christian

Test Start: 2003.09.30 @ 02:00:15

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud With Oil Stain, Spots in Tool	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 2

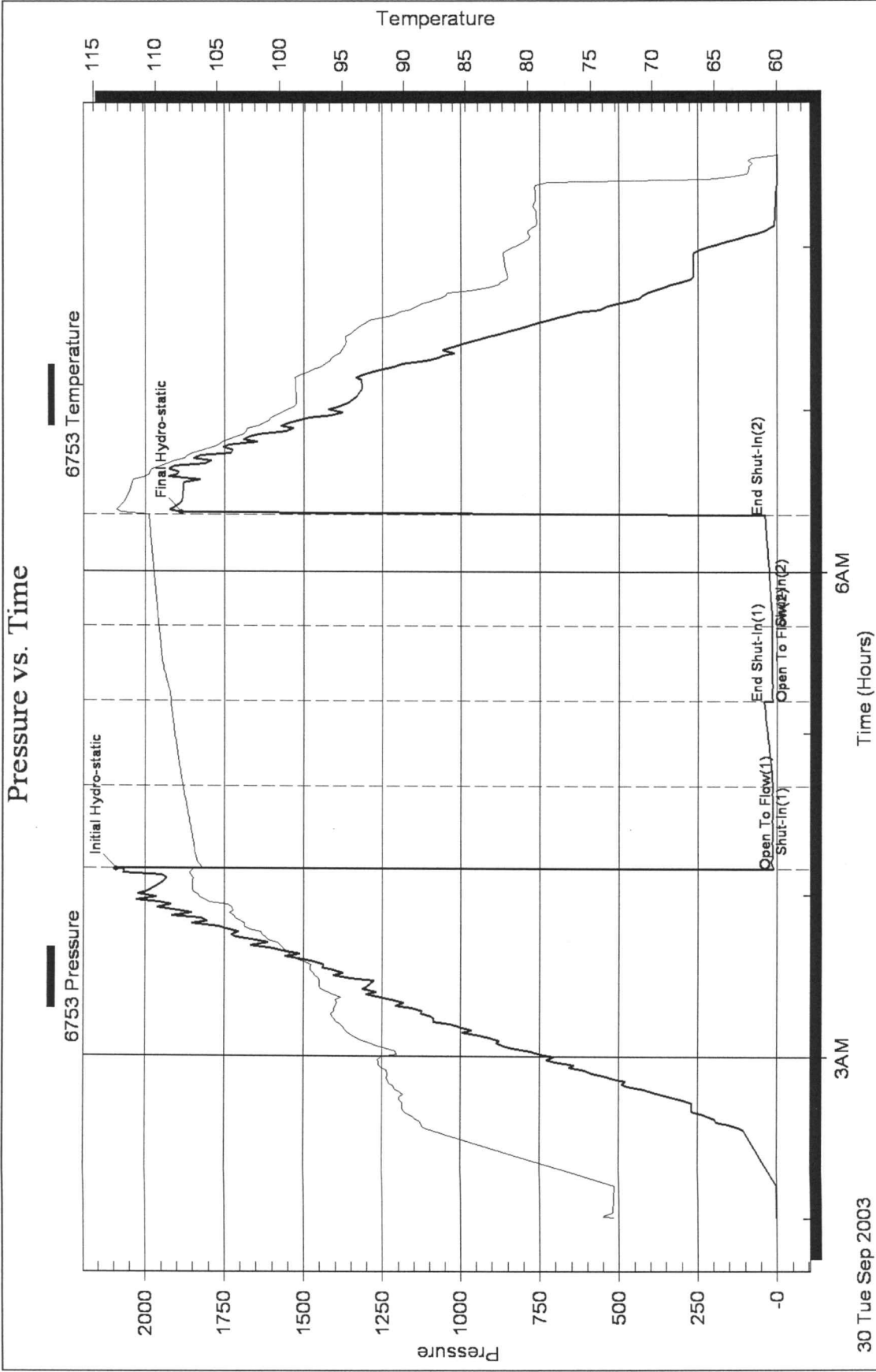
34-23s-18w-Pawnee

Ritchie Exploration Inc.

Inside

Serial #: 6753

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

PO Box 783188
Wichita, Ks. 67278

ATTN: Jeff Christian

34-23s-18w-Pawnee

Wheaton #1

Start Date: 2003.10.01 @ 10:06:08

End Date: 2003.10.01 @ 16:57:38

Job Ticket #: 18180 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Ritchie Exploration Inc.

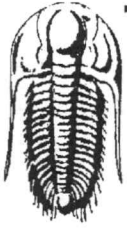
Wheaton #1

34-23s-18w-Pawnee

DST # 3

Mississippi

2003.10.01



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18180

DST#: 3

ATTN: Jeff Christian

Test Start: 2003.10.01 @ 10:06:08

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:44:38

Time Test Ended: 16:57:38

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 24

Interval: 4310.00 ft (KB) To 4424.00 ft (KB) (TVD)

Reference Elevations: 2125.00 ft (KB)

Total Depth: 4424.00 ft (KB) (TVD)

2116.00 ft (CF)

Hole Diameter: 6.80 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 6753

Inside

Press@RunDepth: 118.63 psig @ 4407.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2003.10.01

End Date:

2003.10.01

Last Calib.:

1899.12.30

Start Time: 10:06:10

End Time:

16:57:38

Time On Btm:

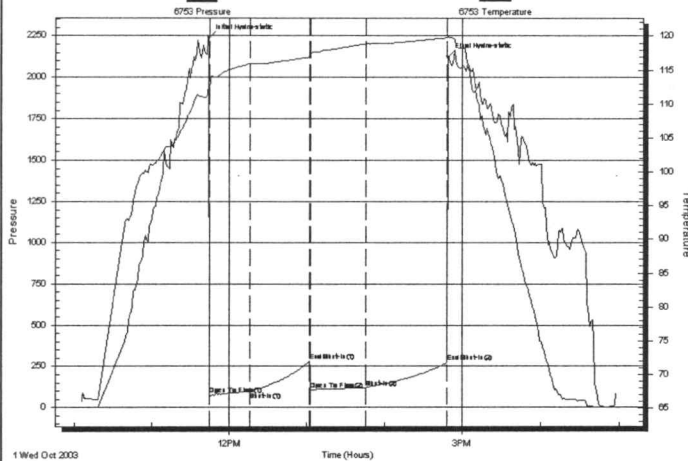
2003.10.01 @ 11:44:23

Time Off Btm:

2003.10.01 @ 14:48:38

TEST COMMENT: IFP-Good Blow , Built to 8", No Blow back
FFP- Fair Blow , Built to 5", No Blow back

Pressure vs. Time



PRESSURE SUMMARY

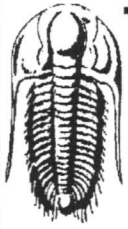
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2235.27	112.71	Initial Hydro-static
1	76.59	111.76	Open To Flow (1)
32	94.18	115.93	Shut-In(1)
78	279.57	116.89	End Shut-In(1)
79	108.41	117.26	Open To Flow (2)
122	118.63	118.86	Shut-In(2)
184	273.32	119.75	End Shut-In(2)
185	2125.83	119.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
116.00	Mud , Oil Spots In Tool	1.63

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.
PO Box 783188
Wichita, Ks. 67278
ATTN: Jeff Christian

Wheaton #1
34-23s-18w-Pawnee
Job Ticket: 18180 **DST#: 3**
Test Start: 2003.10.01 @ 10:06:08

Tool Information

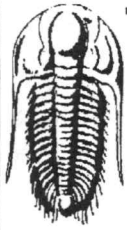
Drill Pipe:	Length: 4314.00 ft	Diameter: 3.80 inches	Volume: 60.51 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 60.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4310.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	114.00 ft			
Tool Length:	135.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4290.00	
Shut In Tool	5.00			4295.00	
Hydraulic tool	5.00			4300.00	
Packer	5.00			4305.00	21.00 Bottom Of Top Packer
Packer	5.00			4310.00	
Stubb	1.00			4311.00	
Change Over Sub	1.00			4312.00	
Blank Spacing	94.00			4406.00	
Change Over Sub	1.00			4407.00	
Recorder	0.00	6753	Inside	4407.00	
Perforations	14.00			4421.00	
Recorder	0.00	13252	Outside	4421.00	
Bullnose	3.00			4424.00	114.00 Bottom Packers & Anchor

Total Tool Length: 135.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18180

DST#: 3

ATTN: Jeff Christian

Test Start: 2003.10.01 @ 10:06:08

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: 12.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
116.00	Mud , Oil Spots In Tool	1.627

Total Length: 116.00 ft

Total Volume: 1.627 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

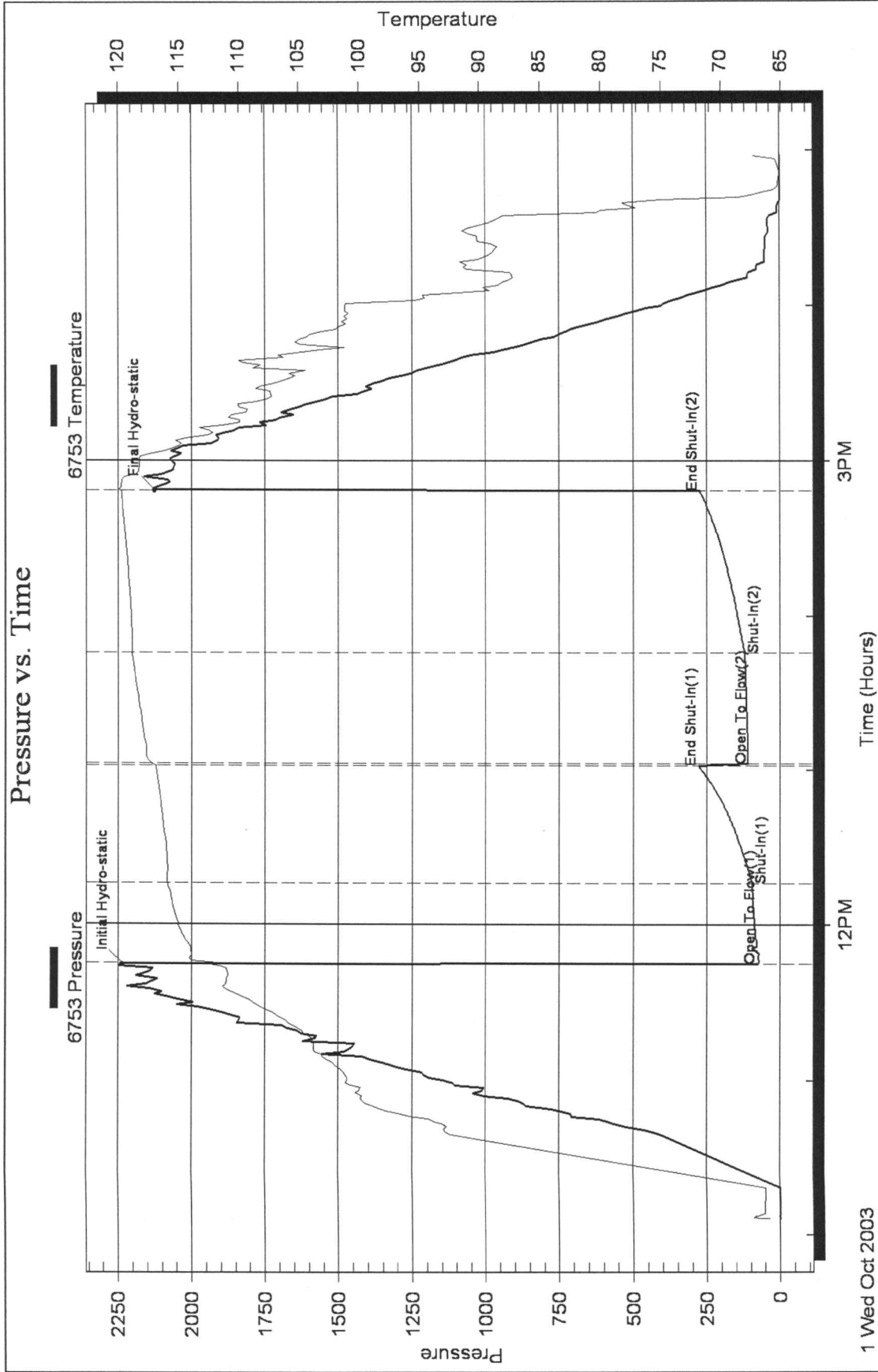
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

PO Box 783188
Wichita, Ks. 67278

ATTN: Jeff Christian

34-23s-18w-Pawnee

Wheaton #1

Start Date: 2003.10.02 @ 01:00:50

End Date: 2003.10.02 @ 09:17:35

Job Ticket #: 18180 DST #: 4

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18180

DST#: 4

ATTN: Jeff Christian

Test Start: 2003.10.02 @ 01:00:50

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:22:05

Time Test Ended: 09:17:35

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 24

Interval: **4424.00 ft (KB) To 4435.00 ft (KB) (TVD)**

Reference Elevations: 2125.00 ft (KB)

Total Depth: 4435.00 ft (KB) (TVD)

2116.00 ft (CF)

Hole Diameter: 6.80 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 6753

Inside

Press@RunDepth: 414.21 psig @ 4425.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2003.10.02

End Date: 2003.10.02

Last Calib.: 1899.12.30

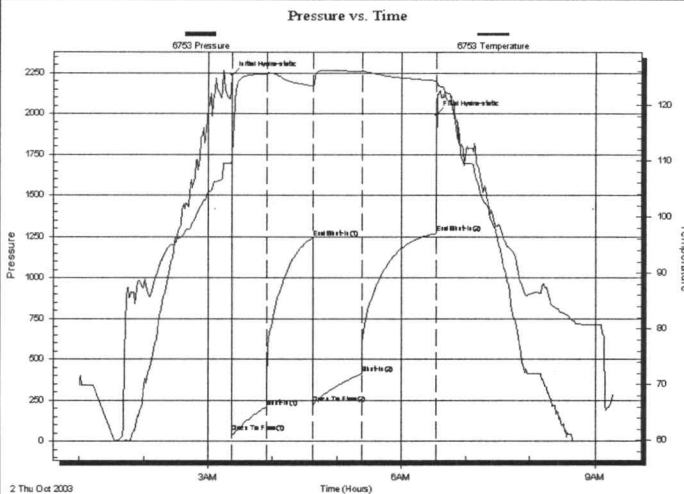
Start Time: 01:00:52

End Time: 09:17:35

Time On Btm: 2003.10.02 @ 03:21:50

Time Off Btm: 2003.10.02 @ 06:32:05

TEST COMMENT: IFP-Strong Blow , BOB in 1 min, Blow back Built to 7"
FFP-Strong Blow , BOB in 2 min,



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2236.21	109.78	Initial Hydro-static
1	57.48	109.37	Open To Flow (1)
33	210.18	125.62	Shut-In(1)
76	1245.19	123.42	End Shut-In(1)
76	233.55	122.93	Open To Flow(2)
121	414.21	126.11	Shut-In(2)
190	1269.07	124.40	End Shut-In(2)
191	1993.73	124.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
720.00	Muddy Water	10.10
120.00	Oil Stained Muddy Water 3%Oil, 40% Wat	1.68
660.00	Gas In Pipe	9.26

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18180

DST#: 4

ATTN: Jeff Christian

Test Start: 2003.10.02 @ 01:00:50

Tool Information

Drill Pipe:	Length: 4428.00 ft	Diameter: 3.80 inches	Volume: 62.11 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 62.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4424.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	11.00 ft			
Tool Length:	32.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4404.00	
Shut In Tool	5.00			4409.00	
Hydraulic tool	5.00			4414.00	
Packer	5.00			4419.00	21.00 Bottom Of Top Packer
Packer	5.00			4424.00	
Stubb	1.00			4425.00	
Recorder	0.00	6753	Inside	4425.00	
Perforations	7.00			4432.00	
Recorder	0.00	13252	Outside	4432.00	
Bullnose	3.00			4435.00	11.00 Bottom Packers & Anchor
Total Tool Length:	32.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

Wheaton #1

PO Box 783188
Wichita, Ks. 67278

34-23s-18w-Pawnee

Job Ticket: 18180

DST#: 4

ATTN: Jeff Christian

Test Start: 2003.10.02 @ 01:00:50

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:

59000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 12.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
720.00	Muddy Water	10.100
120.00	Oil Stained Muddy Water 3%Oil, 40% Water	1.683
660.00	Gas In Pipe	9.258

Total Length: 1500.00 ft

Total Volume: 21.041 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

