



DRILL STEM TEST REPORT

Prepared For: **Threshold Dev. Co.**

777 Taylor St. Penthouse 11d
Fort Worth Tx 76102

ATTN: Chris Peters

18-33S-8E Cowley KS

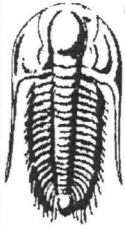
Richardson Const.#1

Start Date: 2003.05.25 @ 10:39:39

End Date: 2003.05.25 @ 17:32:24

Job Ticket #: 17844 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

Threshold Dev. Co.
 777 Taylor St. Penthouse 11d
 Fort Worth Tx 76102
 ATTN: Chris Peters

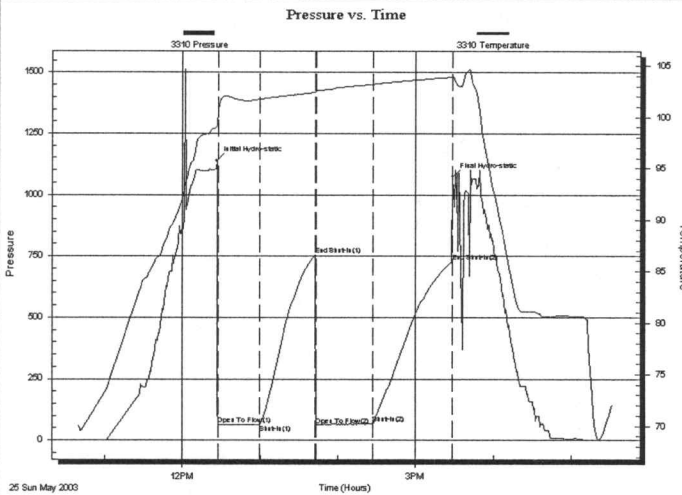
Richardson Const.#1
18-33S-8E Cowley KS
 Job Ticket: 17844 **DST#: 2**
 Test Start: 2003.05.25 @ 10:39:39

GENERAL INFORMATION:

Formation: **Pawnee**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:27:39
 Time Test Ended: 17:32:24
 Test Type: Conventional Bottom Hole
 Tester: Wenrich
 Unit No: 24
 Interval: **2191.00 ft (KB) To 2211.00 ft (KB) (TVD)**
 Total Depth: 2211.00 ft (KB) (TVD)
 Reference Elevations: 1090.00 ft (KB)
 1084.00 ft (CF)
 Hole Diameter: 7.79 inches Hole Condition: KB to GR/CF: 6.00 ft

Serial #: 3310 **Inside**
 Press@RunDepth: 65.79 psig @ 2192.00 ft (KB) Capacity: 7000.00 psig
 Start Date: 2003.05.25 End Date: 2003.05.25 Last Calib.: 1899.12.30
 Start Time: 10:39:44 End Time: 17:32:23 Time On Btm: 2003.05.25 @ 12:26:24
 Time Off Btm: 2003.05.25 @ 15:28:24

TEST COMMENT: IF: Fair blow .1/2"-5" in bucket
 IS: No blow.
 FF: Fair blow .1/2"-6" in bucket.
 No blow.



PRESSURE SUMMARY

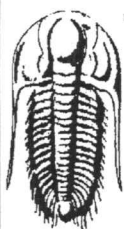
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1137.97	99.09	Initial Hydro-static
2	62.14	100.61	Open To Flow (1)
34	63.27	101.79	Shut-In(1)
76	754.93	102.39	End Shut-In(1)
77	59.98	102.51	Open To Flow (2)
121	65.79	103.20	Shut-In(2)
182	726.15	103.88	End Shut-In(2)
182	1074.64	103.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	mw os	0.30
30.00	m	0.15

Gas Rates

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



TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Threshold Dev. Co.

Richardson Const.#1

777 Taylor St. Penthouse 11d
Fort Worth Tx 76102

18-33S-8E Cowley KS

Job Ticket: 17844

DST#: 2

ATTN: Chris Peters

Test Start: 2003.05.25 @ 10:39:39

Tool Information

Drill Pipe:	Length: 1739.00 ft	Diameter: 3.80 inches	Volume: 24.39 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: 445.00 ft	Diameter: 2.25 inches	Volume: 2.19 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 26.58 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	2191.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	40.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			2172.00	
S.I. Tool	5.00			2177.00	
HMV	5.00			2182.00	
Packer	4.00			2186.00	20.00 Bottom Of Top Packer
Packer	5.00			2191.00	
Stubb	1.00			2192.00	
Recorder	0.00	3310	Inside	2192.00	
Perforations	17.00			2209.00	
Recorder	0.00	10242	Outside	2209.00	
Bullnose	2.00			2211.00	20.00 Bottom Packers & Anchor
Total Tool Length:	40.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

Threshold Dev. Co.
777 Taylor St. Penthouse 11d
Fort Worth Tx 76102
ATTN: Chris Peters

Richardson Const.#1
18-33S-8E Cowley KS
Job Ticket: 17844 **DST#: 2**
Test Start: 2003.05.25 @ 10:39:39

Mud and Cushion Information

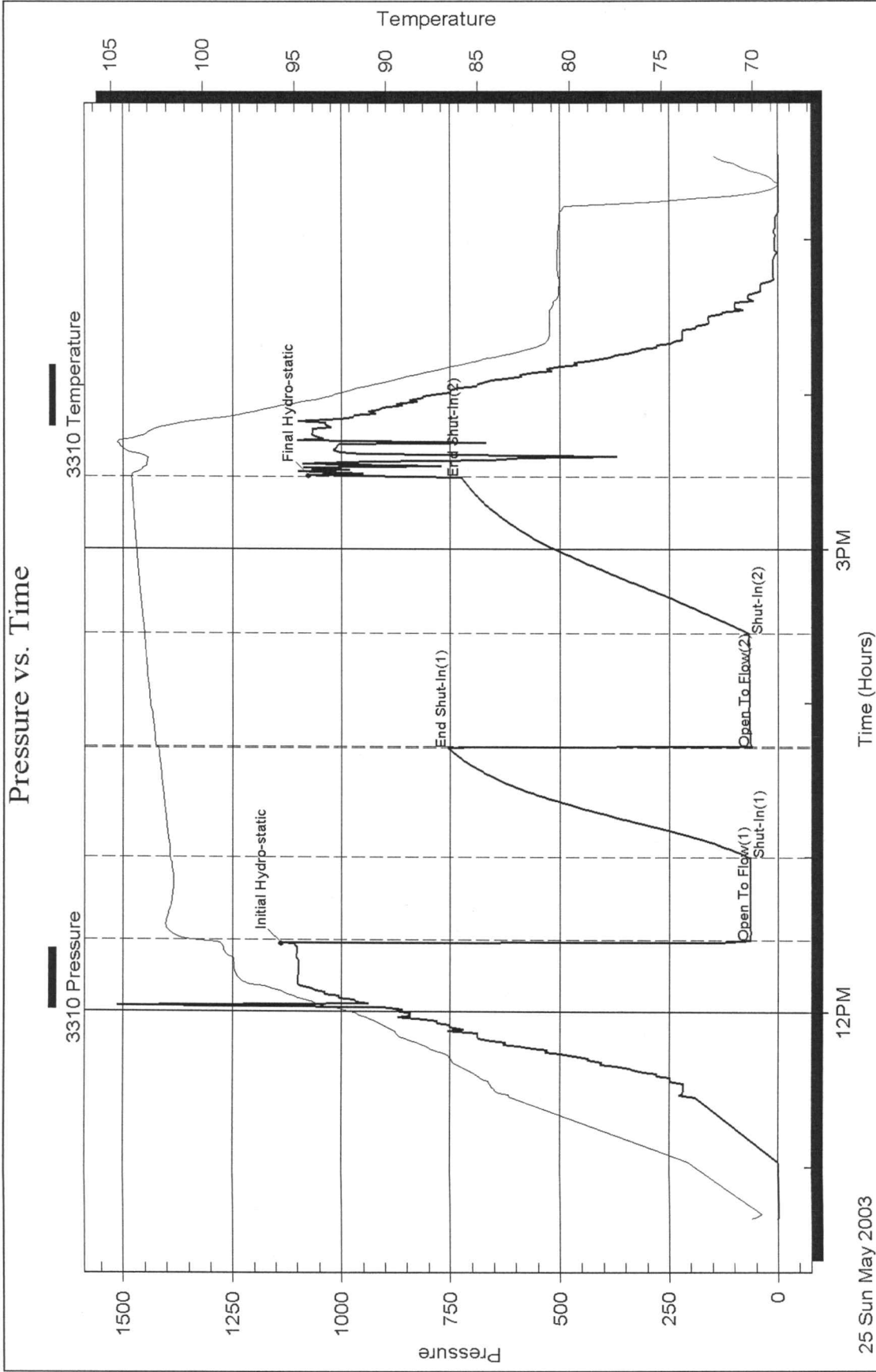
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 39.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.38 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1500.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	mw os	0.295
30.00	m	0.148

Total Length: 90.00 ft Total Volume: 0.443 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



25 Sun May 2003

12PM

3PM



DRILL STEM TEST REPORT

Prepared For: **Threshold Dev. Co.**

777 Taylor St. Penthouse 11d
Fort Worth Tx 76102

ATTN: Chris Peters

18-33S-8E Cowley KS

Richardson Const.#1

Start Date: 2003.05.26 @ 00:34:33

End Date: 2003.05.26 @ 07:36:48

Job Ticket #: 17845 DST #: 3

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



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DRILL STEM TEST REPORT

Threshold Dev. Co.
777 Taylor St. Penthouse 11d
Fort Worth Tx 76102
ATTN: Chris Peters

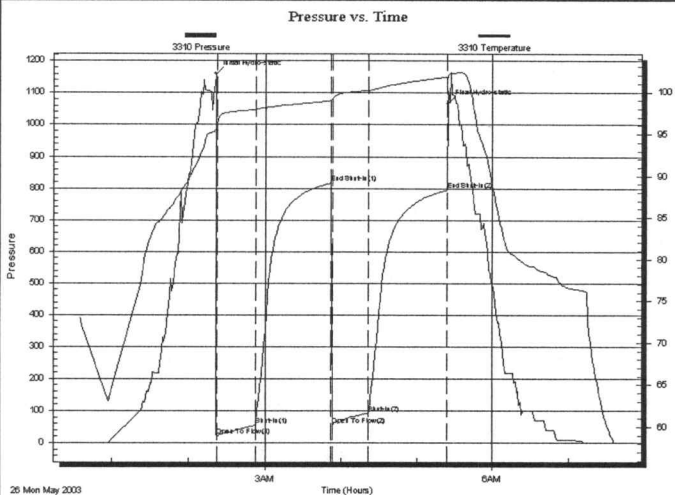
Richardson Const.#1
18-33S-8E Cowley KS
Job Ticket: 17845 **DST#: 3**
Test Start: 2003.05.26 @ 00:34:33

GENERAL INFORMATION:

Formation: **Ft. Scott**
Deviated: **No Whipstock:** ft (KB)
Time Tool Opened: 02:22:33
Time Test Ended: 07:36:48
Interval: **2232.00 ft (KB) To 2250.00 ft (KB) (TVD)**
Total Depth: **2250.00 ft (KB) (TVD)**
Hole Diameter: **7.79 inches** Hole Condition: **Poor**
Test Type: **Conventional Bottom Hole**
Tester: **Wenrich**
Unit No: **24**
Reference Elevations: **1090.00 ft (KB)**
1084.00 ft (CF)
KB to GR/CF: **6.00 ft**

Serial #: 3310 **Inside**
Press@RunDepth: **91.90 psig @ 2233.00 ft (KB)** Capacity: **7000.00 psig**
Start Date: **2003.05.26** End Date: **2003.05.26** Last Calib.: **1899.12.30**
Start Time: **00:34:38** End Time: **07:36:47** Time On Btm: **2003.05.26 @ 02:21:33**
Time Off Btm: **2003.05.26 @ 05:24:32**

TEST COMMENT: IF: Strong blow .BOB in 2 mins.
IS: No blow.
FF: Strong blow .BOB immediately .GTS in 29 mins. Not gaugeable.
FS: No blow.



PRESSURE SUMMARY

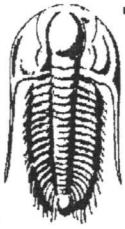
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1159.98	95.64	Initial Hydro-static
1	21.15	96.20	Open To Flow (1)
32	54.77	97.91	Shut-In(1)
91	816.39	98.99	End Shut-In(1)
92	54.93	99.16	Open To Flow (2)
120	91.90	100.20	Shut-In(2)
183	795.14	101.83	End Shut-In(2)
183	1066.71	101.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	gmco 40%g 45%o 15m	0.98

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Threshold Dev. Co.

Richardson Const.#1

777 Taylor St. Penthouse 11d
Fort Worth Tx 76102

18-33S-8E Cowley KS

Job Ticket: 17845

DST#: 3

ATTN: Chris Peters

Test Start: 2003.05.26 @ 00:34:33

Tool Information

Drill Pipe:	Length: 1772.00 ft	Diameter: 3.80 inches	Volume: 24.86 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: 445.00 ft	Diameter: 2.25 inches	Volume: 2.19 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 27.05 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	2232.00 ft			Final 44000.00 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
C.O. Sub	1.00			2213.00	
S.I. Tool	5.00			2218.00	
HMV	5.00			2223.00	
Packer	4.00			2227.00	20.00 Bottom Of Top Packer
Packer	5.00			2232.00	
Stubb	1.00			2233.00	
Recorder	0.00	3310	Inside	2233.00	
Perforations	15.00			2248.00	
Recorder	0.00	10242	Outside	2248.00	
Bullnose	2.00			2250.00	18.00 Bottom Packers & Anchor
Total Tool Length:	38.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

Threshold Dev. Co.

Richardson Const.#1

777 Taylor St. Penthouse 11d
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18-33S-8E Cowley KS

Job Ticket: 17845

DST#: 3

ATTN: Chris Peters

Test Start: 2003.05.26 @ 00:34:33

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:

ppm

Viscosity: 37.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	gmco 40%g 45%o 15m	0.984

Total Length: 200.00 ft

Total Volume: 0.984 bbl

Num Fluid Samples: 0

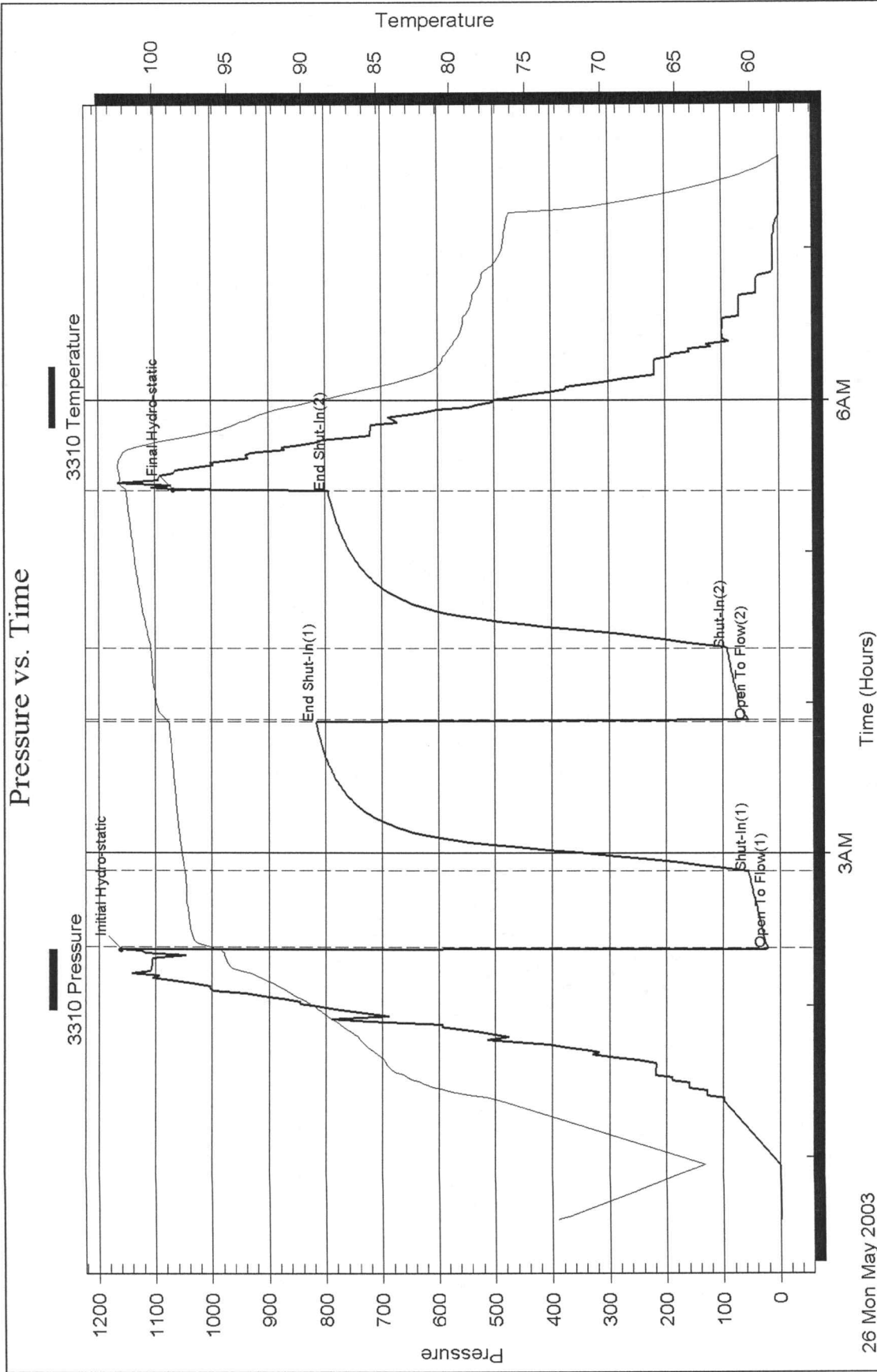
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





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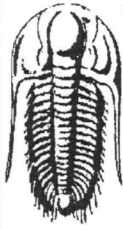
Richardson Const.#1

Start Date: 2003.05.27 @ 13:39:54

End Date: 2003.05.27 @ 19:46:24

Job Ticket #: 17846 DST #: 4

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



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DRILL STEM TEST REPORT

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777 Taylor St. Penthouse 11d
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ATTN: Chris Peters

Richardson Const.#1
18-33S-8E Cowley KS
Job Ticket: 17846 **DST#: 4**
Test Start: 2003.05.27 @ 13:39:54

GENERAL INFORMATION:

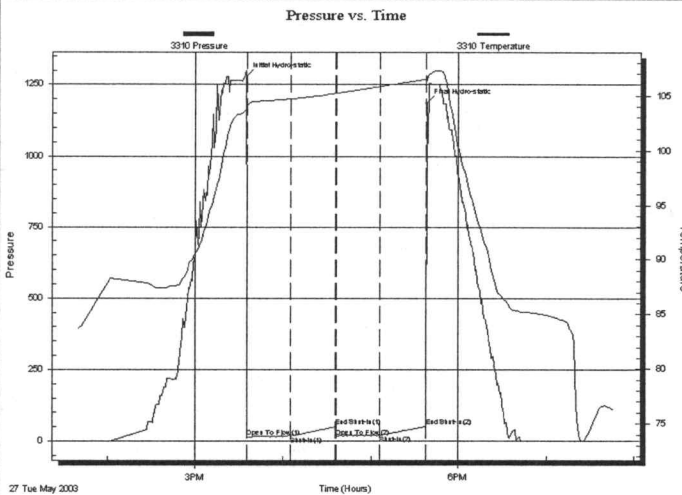
Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:35:39
Time Test Ended: 19:46:24
Interval: **2535.00 ft (KB) To 2549.00 ft (KB) (TVD)**
Total Depth: 2605.00 ft (KB) (TVD)
Hole Diameter: 7.79 inches Hole Condition:
Test Type: Conventional Straddle
Tester: Wenrich
Unit No: 24
Reference Elevations: 1090.00 ft (KB)
1084.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 3310

Inside

Press@RunDepth: 20.39 psig @ 2536.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2003.05.27 End Date: 2003.05.27 Last Calib.: 1899.12.30
Start Time: 13:39:59 End Time: 19:46:23 Time On Btm: 2003.05.27 @ 15:35:09
Time Off Btm: 2003.05.27 @ 17:38:09

TEST COMMENT: IF:Weak blow .Surface blow .
IS:No blow .
FF:Weak blow .1/2" in bucket.
FSI:No blow .



PRESSURE SUMMARY

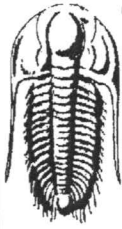
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1279.20	103.80	Initial Hydro-static
1	12.50	104.10	Open To Flow (1)
31	16.00	104.71	Shut-In(1)
61	50.31	105.21	End Shut-In(1)
62	15.12	105.22	Open To Flow (2)
91	20.39	105.83	Shut-In(2)
123	50.77	106.50	End Shut-In(2)
123	1186.23	106.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	ocm 10%o 90%m	0.07

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Threshold Dev. Co.

Richardson Const.#1

777 Taylor St. Penthouse 11d
Fort Worth Tx 76102

18-33S-8E Cowley KS

Job Ticket: 17846

DST#: 4

ATTN: Chris Peters

Test Start: 2003.05.27 @ 13:39:54

Tool Information

Drill Pipe:	Length: 2100.00 ft	Diameter: 3.80 inches	Volume: 29.46 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: 445.00 ft	Diameter: 2.25 inches	Volume: 2.19 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 31.65 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	2535.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	2549.00 ft			
Interval between Packers:	14.00 ft			
Tool Length:	91.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			2516.00	
S.I. Tool	5.00			2521.00	
HMV	5.00			2526.00	
Packer	4.00			2530.00	20.00 Bottom Of Top Packer
Packer	5.00			2535.00	
Stubb	1.00			2536.00	
Recorder	0.00	3310	Inside	2536.00	
Perforations	9.00			2545.00	
Recorder	0.00	13630	Outside	2545.00	
Blank Off Sub	1.00			2546.00	
T.C.	3.00			2549.00	14.00 Tool Interval
Packer	1.00			2550.00	
T.C.	1.00			2551.00	
C.O. Sub	1.00			2552.00	
Blank Spacing	30.00			2582.00	
C.O. Sub	0.00			2582.00	
Perforations	22.00			2604.00	
Recorder	0.00	10242	Below	2604.00	
Bullnose	2.00			2606.00	57.00 Bottom Packers & Anchor

Total Tool Length: 91.00



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Richardson Const.#1
18-33S-8E Cowley KS
Job Ticket: 17846 **DST#: 4**
Test Start: 2003.05.27 @ 13:39:54

ATTN: Chris Peters

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:	ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.79 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1100.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	ocm 10%o 90%m	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

