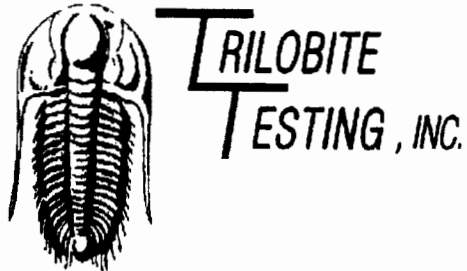


15-163-23746

12-9s-20w



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St N Ste 700
PO Box 783188
Wichita KS 67278

ATTN: Roger Fisher

12 9S 20W Rooks KS

Pittman # 12A

Start Date: 2008.07.21 @ 18:24:29

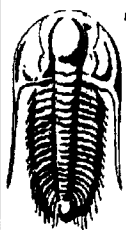
End Date: 2008.07.21 @ 23:17:53

Job Ticket #: 32844 DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N Ste 700
PO Box 783188
Wichita KS 67278
ATTN: Roger Fisher

Pittman # 12A

12 9S 20W Rooks KS

Job Ticket: 32844

DST#: 1

Test Start: 2008.07.21 @ 18:24:29

GENERAL INFORMATION:

Formation: **Tor. - LKC "A"**

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

Time Tool Opened: 20:26:24

Time Test Ended: 23:17:53

Test Type: **Conventional Bottom Hole**

Tester: **Brian Fairbank**

Unit No: **41**

Interval: **3281.00 ft (KB) To 3340.00 ft (KB) (TVD)**

Total Depth: **3340.00 ft (KB) (TVD)**

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

Reference Elevations: **2100.00 ft (KB)**

2095.00 ft (CF)

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

Serial #: 8371

Outside

Press@RunDepth: **24.38 psig @ 3285.00 ft (KB)**

Start Date: **2008.07.21**

End Date:

2008.07.21

Start Time: **18:24:29**

End Time:

23:17:53

Capacity: **7000.00 psig**

Last Calib.: **2008.07.21**

Time On Btm: **2008.07.21 @ 20:25:24**

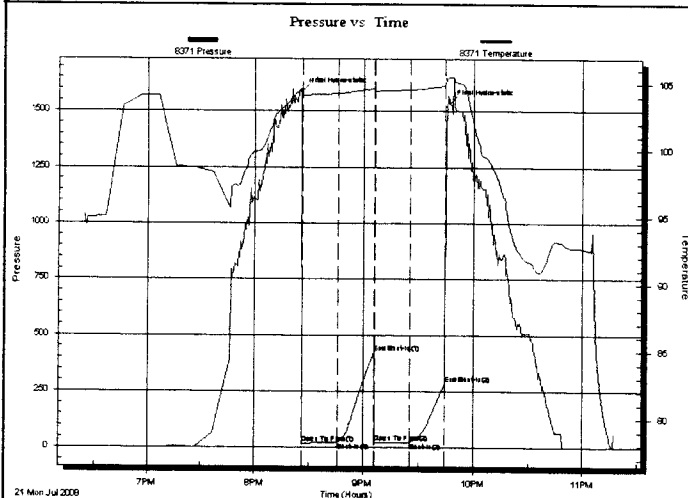
Time Off Btm: **2008.07.21 @ 21:46:54**

TEST COMMENT: **IFP - sur blow - died 4 min.**

ISI - no blow back

FFP - no blow

FSI - no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1588.58	104.60	Initial Hydro-static
1	18.73	104.07	Open To Flow (1)
21	22.97	104.26	Shut-In(1)
40	420.86	104.63	End Shut-In(1)
41	22.80	104.42	Open To Flow (2)
60	24.38	104.55	Shut-In(2)
79	282.87	104.84	End Shut-In(2)
82	1536.00	105.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud	0.01

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Pittman # 12A

8100 E 22nd St N Ste 700

PO Box 783188

Wichita KS 67278

ATTN: Roger Fisher

12 9S 20W Rooks KS

Job Ticket: 32844

DST#: 1

Test Start: 2008.07.21 @ 18:24:29

Tool Information

Drill Pipe:	Length: 3146.00 ft	Diameter: 3.80 inches	Volume: 44.13 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	60000.00 lb
		Total Volume:	44.74 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	38000.00 lb
Depth to Top Packer:	3281.00 ft			Final	38000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	59.00 ft				
Tool Length:	79.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3266.00	
Hydraulic tool	5.00			3271.00	
Packer	5.00			3276.00	20.00 Bottom Of Top Packer
Packer	5.00			3281.00	
Stubb	1.00			3282.00	
Perforations	2.00			3284.00	
Change Over Sub	1.00			3285.00	
Recorder	0.00	8018	Inside	3285.00	
Recorder	0.00	8371	Outside	3285.00	
Blank Spacing	31.00			3316.00	
Change Over Sub	1.00			3317.00	
Perforations	20.00			3337.00	
Bullnose	3.00			3340.00	59.00 Bottom Packers & Anchor

Total Tool Length: 79.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Pittman # 12A

8100 E 22nd St N Ste 700

12 9S 20W Rooks KS

PO Box 783188

Job Ticket: 32844

DST#: 1

Wichita KS 67278

Test Start: 2008.07.21 @ 18:24:29

ATTN: Roger Fisher

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: 53.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.75 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	mud	0.015

Total Length: 3.00 ft

Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

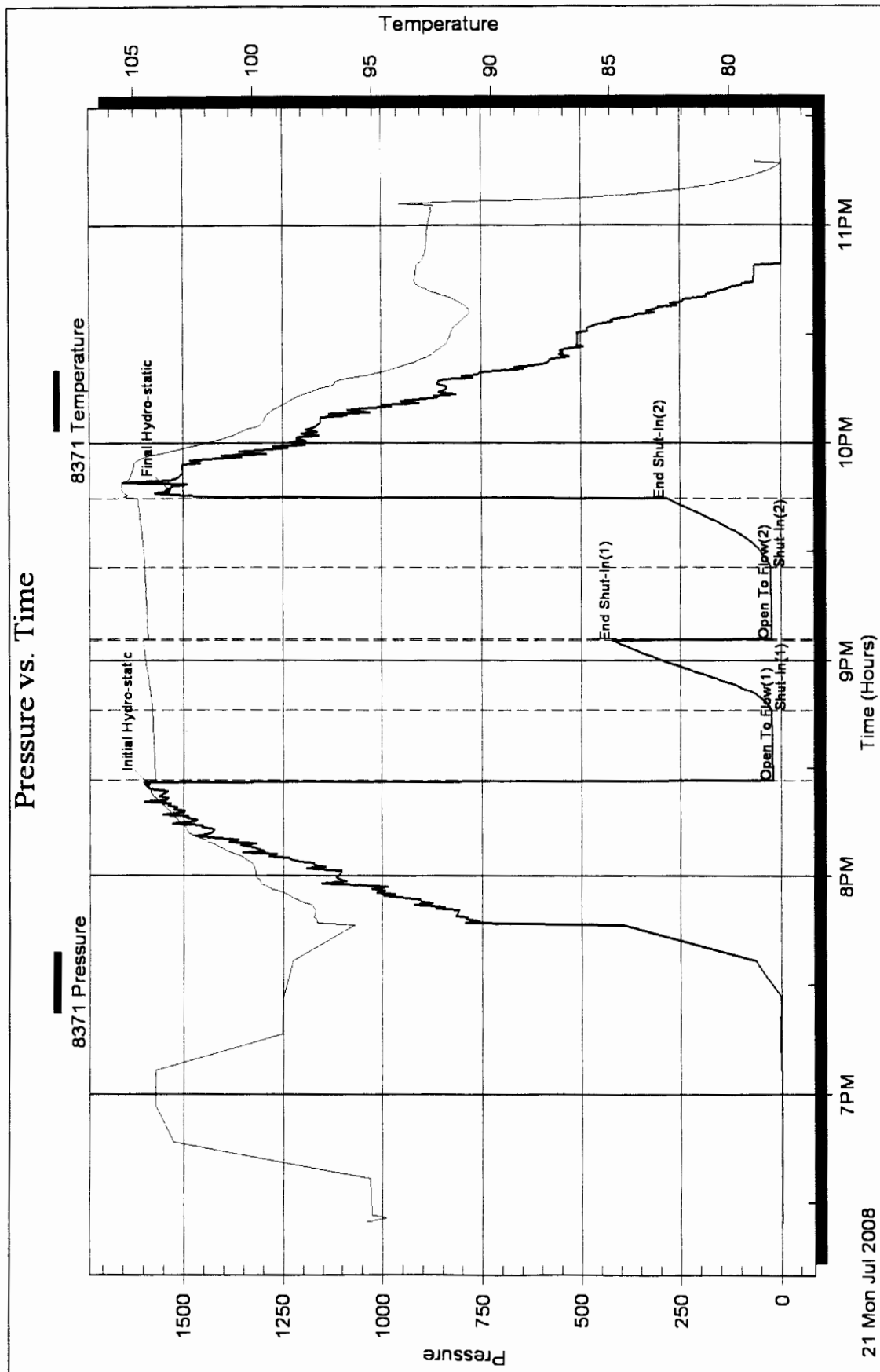
Serial #:

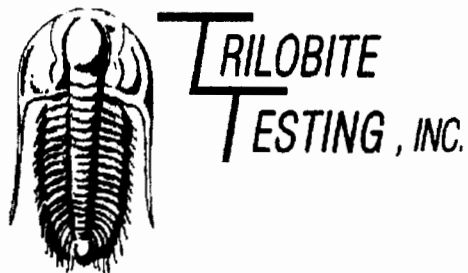
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St N Ste 700
PO Box 783188
Wichita KS 67278

ATTN: Roger Fisher

12 9S 20W Rooks KS

Pittman # 12A

Start Date: 2008.07.22 @ 07:58:00

End Date: 2008.07.22 @ 13:16:54

Job Ticket #: 32845 DST #: 2

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N Ste 700
PO Box 783188
Wichita KS 67278
ATTN: Roger Fisher

Pittman # 12A

12 9S 20W Rooks KS

Job Ticket: 32845

DST#: 2

Test Start: 2008.07.22 @ 07:58:00

GENERAL INFORMATION:

Formation: **LKC "C-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:49:25

Time Test Ended: 13:16:54

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3347.00 ft (KB) To 3390.00 ft (KB) (TVD)**

Total Depth: 3390.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2100.00 ft (KB)

2095.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8371

Outside

Press@RunDepth: 43.30 psig @ 3351.00 ft (KB)

Start Date: 2008.07.22

End Date:

2008.07.22

Start Time: 07:58:00

End Time:

13:16:54

Capacity: 7000.00 psig

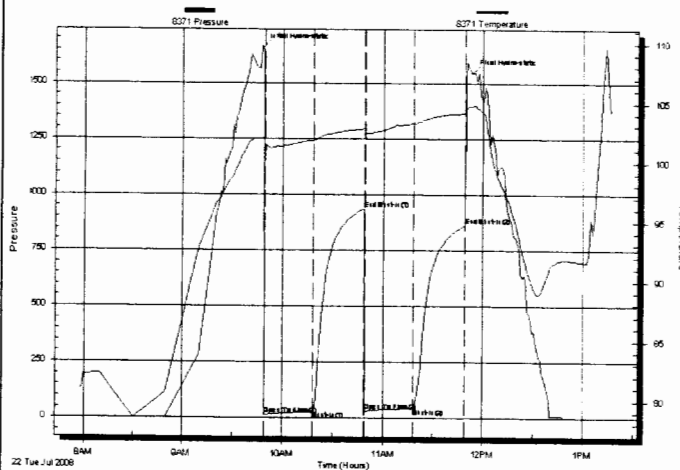
Last Calib.: 2008.07.22

Time On Btm: 2008.07.22 @ 09:47:55

Time Off Btm: 2008.07.22 @ 11:53:25

TEST COMMENT: IFP - sur blow throughout
ISI - no blow back
FFP - no blow
FSI - no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1658.23	102.07	Initial Hydro-static
2	15.51	100.76	Open To Flow (1)
30	29.22	101.86	Shut-In (1)
61	936.21	102.84	End Shut-In (1)
61	31.63	102.41	Open To Flow (2)
90	43.30	103.27	Shut-In (2)
121	860.90	104.14	End Shut-In (2)
126	1544.20	104.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud w/ O spts	0.05

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Pittman # 12A

8100 E 22nd St N Ste 700

12 9S 20W Rooks KS

PO Box 783188

Job Ticket: 32845

DST#: 2

Wichita KS 67278

Test Start: 2008.07.22 @ 07:58:00

ATTN: Roger Fisher

Tool Information

Drill Pipe:	Length: 3205.00 ft	Diameter: 3.80 inches	Volume: 44.96 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	45000.00 lb
		Total Volume:	45.57 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial	36000.00 lb
Depth to Top Packer:	3347.00 ft			Final	36000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	43.00 ft				
Tool Length:	63.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3332.00	
Hydraulic tool	5.00			3337.00	
Packer	5.00			3342.00	20.00 Bottom Of Top Packer
Packer	5.00			3347.00	
Stubb	1.00			3348.00	
Perforations	2.00			3350.00	
Change Over Sub	1.00			3351.00	
Recorder	0.00	8018	Inside	3351.00	
Recorder	0.00	8371	Outside	3351.00	
Blank Spacing	31.00			3382.00	
Change Over Sub	1.00			3383.00	
Perforations	4.00			3387.00	
Bullnose	3.00			3390.00	43.00 Bottom Packers & Anchor

Total Tool Length: 63.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Pittman # 12A

8100 E 22nd St N Ste 700
PO Box 783188
Wichita KS 67278
ATTN: Roger Fisher

12 9S 20W Rooks KS

Job Ticket: 32845

DST#: 2

Test Start: 2008.07.22 @ 07:58:00

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: 53.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.74 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud w / O spts	0.049

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

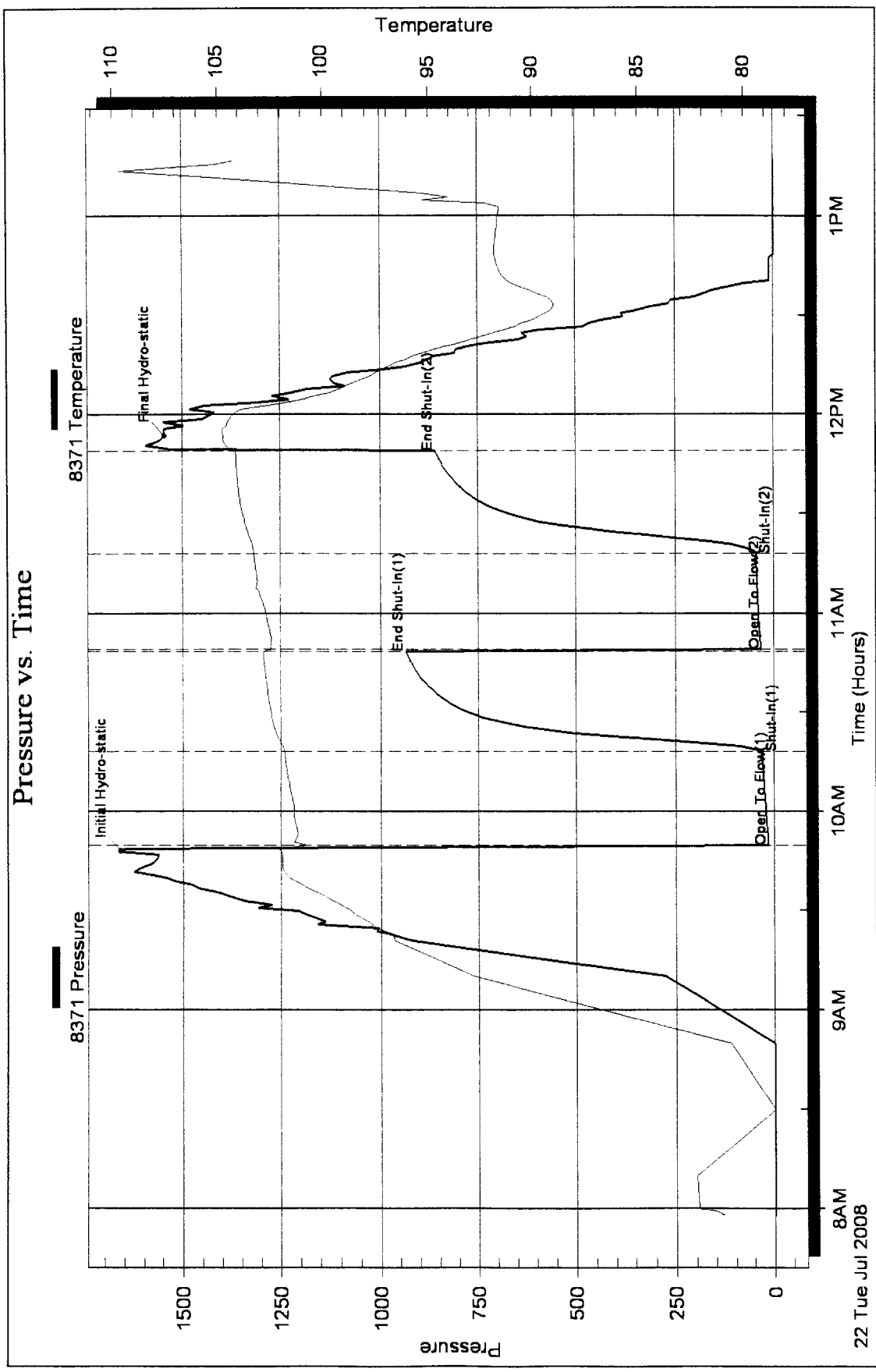
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St N Ste 700
PO Box 783188
Wichita KS 67278

ATTN: Roger Fisher

12 9S 20W Rooks KS

Pittman # 12A

Start Date: 2008.07.23 @ 03:13:03

End Date: 2008.07.23 @ 10:10:57

Job Ticket #: 32846 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration

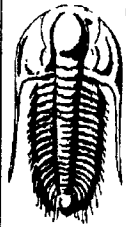
Pittman # 12A

12 9S 20W Rooks KS

DST # 3

LKC "H-K"

2008.07.23



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N Ste 700
PO Box 783188
Wichita KS 67278
ATTN: Roger Fisher

Pittman # 12A

12 9S 20W Rooks KS

Job Ticket: 32846

DST#: 3

Test Start: 2008.07.23 @ 03:13:03

GENERAL INFORMATION:

Formation: **LKC "H-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:04:28

Time Test Ended: 10:10:57

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3443.00 ft (KB) To 3528.00 ft (KB) (TVD)**

Total Depth: 3528.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2100.00 ft (KB)

2095.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8371

Outside

Press@RunDepth: 117.97 psig @ 3447.00 ft (KB)

Start Date: 2008.07.23

End Date:

2008.07.23

Start Time: 03:13:03

End Time:

10:10:57

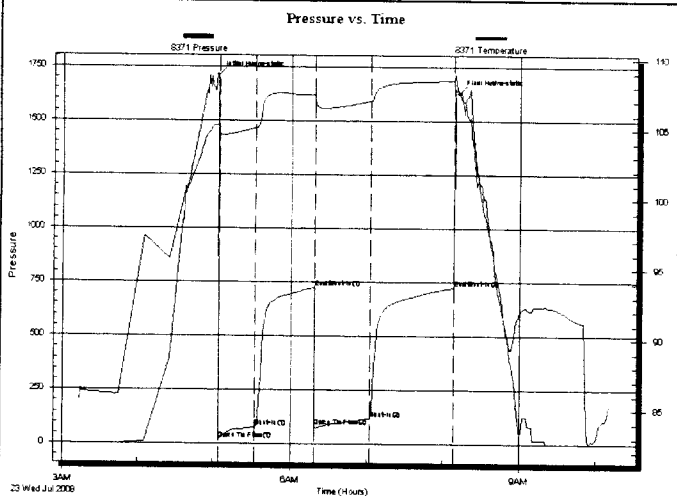
Capacity: 7000.00 psig

Last Calib.: 2008.07.23

Time On Btm: 2008.07.23 @ 05:03:28

Time Off Btm: 2008.07.23 @ 08:11:57

TEST COMMENT: IFP - BOB 18 min.
ISI - 1/2" blow back died 14 min.
FFP - BOB 9 min.
FSI - 1/2" blow back died 18 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1709.22	105.31	Initial Hydro-static
1	20.27	104.74	Open To Flow(1)
29	77.74	105.11	Shut-In(1)
75	724.99	107.45	End Shut-In(1)
76	79.77	107.06	Open To Flow(2)
119	117.97	107.04	Shut-In(2)
186	724.42	108.51	End Shut-In(2)
189	1627.23	107.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	GMCO 15%G, 65%O, 20%M	0.32
195.00	GMCO 5%G, 50%O, 45%M	2.19
5.00	FREE OIL 95%O, 5%M	0.07
0.00	500' GIP	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

Ritchie Exploration

Pittman # 12A

8100 E 22nd St N Ste 700

12 9S 20W Rooks KS

PO Box 783188

Job Ticket: 32846

DST#: 3

Wichita KS 67278

Test Start: 2008.07.23 @ 03:13:03

ATTN: Roger Fisher

Tool Information

Drill Pipe:	Length: 3330.00 ft	Diameter: 3.80 inches	Volume: 46.71 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 45000.00 lb
		Total Volume: 47.32 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3443.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	105.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3428.00	
Hydraulic tool	5.00			3433.00	
Packer	5.00			3438.00	20.00 Bottom Of Top Packer
Packer	5.00			3443.00	
Stubb	1.00			3444.00	
Perforations	2.00			3446.00	
Change Over Sub	1.00			3447.00	
Recorder	0.00	8018	Inside	3447.00	
Recorder	0.00	8371	Outside	3447.00	
Blank Spacing	62.00			3509.00	
Change Over Sub	1.00			3510.00	
Perforations	15.00			3525.00	
Bullnose	3.00			3528.00	85.00 Bottom Packers & Anchor

Total Tool Length: 105.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Pittman # 12A

8100 E 22nd St N Ste 700

12 9S 20W Rooks KS

PO Box 783188

Job Ticket: 32846

DST#: 3

Wichita KS 67278

Test Start: 2008.07.23 @ 03:13:03

ATTN: Roger Fisher

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.75 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	GMCO 15%G, 65%O, 20%M	0.320
195.00	GMCO 5%G, 50%O, 45%M	2.189
5.00	FREE OIL 95%O, 5%M	0.070
0.00	500' GIP	0.000

Total Length: 265.00 ft

Total Volume: 2.579 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

