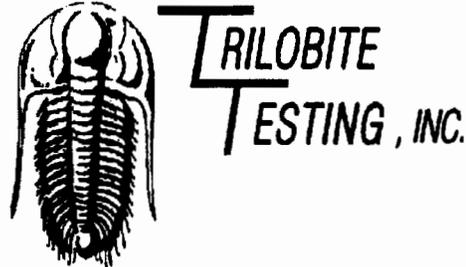


15-163-23794

8-6s-19w



### DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641  
Hays, Ks  
67601

ATTN: Ken Vehige

**8 6s 19w Rooks KS**

**Rocken 3 Farms #1**

Start Date: 2009.02.06 @ 20:05:51

End Date: 2009.02.07 @ 00:18:46

Job Ticket #: 35160                      DST #: 1

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

KANSAS CORPORATION COMMISSION

APR 10 2009  
RECEIVED

Black Diamond

Rocken 3 Farms #1

8 6s 19w Rooks KS

DST # 1

Toronto - LKC "A"

2009.02.06



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond

**Rocken 3 Farms #1**

PO Box 641  
Hays, Ks  
67601  
ATTN: Ken Vehige

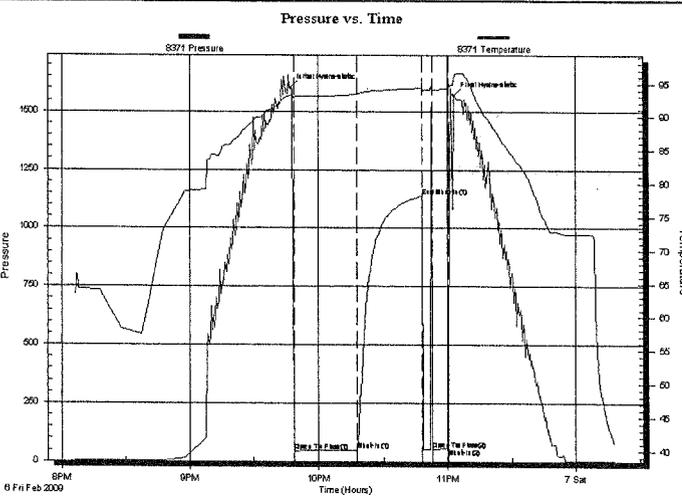
**8 6s 19w Rooks KS**  
Job Ticket: 35160      **DST#: 1**  
Test Start: 2009.02.06 @ 20:05:51

## GENERAL INFORMATION:

Formation: **Toronto - LKC "A"**  
 Deviated: No      Whipstock:      ft (KB)  
 Test Type: Conventional Bottom Hole  
 Time Tool Opened: 21:48:46      Tester: Brian Fairbank  
 Time Test Ended: 00:18:46      Unit No: 41  
 Interval: **3245.00 ft (KB) To 3315.00 ft (KB) (TVD)**      Reference Elevations: 2076.00 ft (KB)  
 Total Depth: 3315.00 ft (KB) (TVD)      2068.00 ft (CF)  
 Hole Diameter: 7.88 inches      Hole Condition:      KB to GR/CF: 8.00 ft

**Serial #: 8371      Inside**  
 Press@RunDepth: 49.65 psig @ 3254.00 ft (KB)      Capacity: 7000.00 psig  
 Start Date: 2009.02.06      End Date: 2009.02.07      Last Calib.: 2009.02.07  
 Start Time: 20:05:51      End Time: 00:18:46      Time On Btm: 2009.02.06 @ 21:47:16  
 Time Off Btm: 2009.02.06 @ 23:02:46

**TEST COMMENT:** IFF - weak blow - died 24 min.  
 ISI - no blow back  
 FFP - no blow - flushed tool - surface blow died 2 min.  
 TIME - 30-30-2-flush-10



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1599.85	93.26	Initial Hydro-static
2	45.28	92.81	Open To Flow (1)
31	49.65	93.39	Shut-In(1)
61	1137.70	94.34	End Shut-In(1)
66	53.58	94.02	Open To Flow (2)
73	55.41	94.26	Shut-In(2)
76	1570.42	95.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	mud 100%	0.63

## Gas Rates

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



**TRILOBITE**  
TESTING, INC

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Diamond

Rocken 3 Farms #1

PO Box 641  
Hays, Ks  
67601

8 6s 19w Rooks KS

ATTN: Ken Vehige

Job Ticket: 35160

DST#: 1

Test Start: 2009.02.06 @ 20:05:51

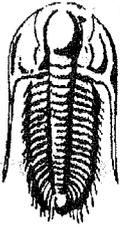
### Tool Information

Drill Pipe:	Length: 3207.00 ft	Diameter: 3.80 inches	Volume: 44.99 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 115000.0 lb
			<u>Total Volume: 45.14 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3245.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:  
Tool slid 10' to bottom

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3230.00	
Hydraulic tool	5.00			3235.00	
Packer	5.00			3240.00	20.00 Bottom Of Top Packer
Packer	5.00			3245.00	
Stubb	1.00			3246.00	
Perforations	7.00			3253.00	
Change Over Sub	1.00			3254.00	
Recorder	0.00	8018	Inside	3254.00	
Recorder	0.00	8371	Inside	3254.00	
Blank Spacing	32.00			3286.00	
Change Over Sub	1.00			3287.00	
Perforations	25.00			3312.00	
Bullnose	3.00			3315.00	70.00 Bottom Packers & Anchor

**Total Tool Length: 90.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Black Diamond

**Rocken 3 Farms #1**

PO Box 641  
Hays, Ks  
67601

**8 6s 19w Rooks KS**

Job Ticket: 35160

**DST#: 1**

ATTN: Ken Vehige

Test Start: 2009.02.06 @ 20:05:51

## 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: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.73 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	mud 100%	0.629

Total Length: 65.00 ft      Total Volume: 0.629 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

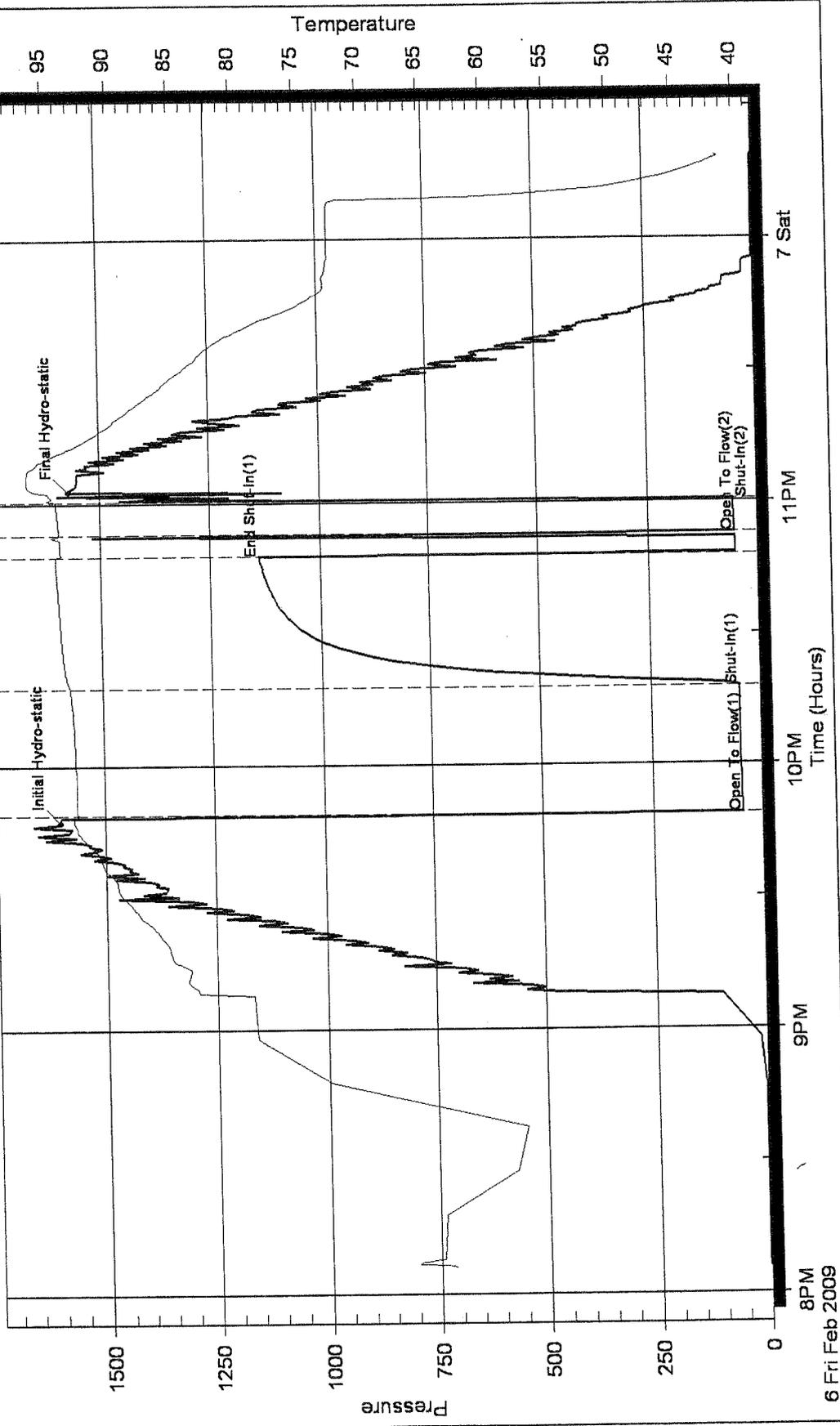
Laboratory Location:

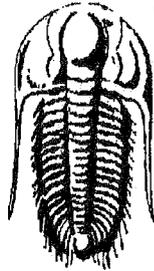
Recovery Comments:

### Pressure vs. Time

8371 Temperature

8371 Pressure





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641  
Hays, Ks  
67601

ATTN: Ken Vehige

**8 6s 19w Rooks KS**

**Rocken 3 Farms #1**

Start Date: 2009.02.07 @ 09:06:49

End Date: 2009.02.07 @ 13:42:13

Job Ticket #: 35161                      DST #: 2

Black Diamond

Rocken 3 Farms #1

8 6s 19w Rooks KS

DST # 2

LKC "C-D"

2009.02.07

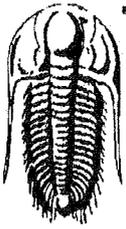
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ph: 785-625-4778 fax: 785-625-5620





**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Black Diamond  
PO Box 641  
Hays, Ks  
67601  
ATTN: Ken Vehige

**Rocken 3 Farms #1**  
**8 6s 19w Rooks KS**  
Job Ticket: 35161      **DST#: 2**  
Test Start: 2009.02.07 @ 09:06:49

**Tool Information**

Drill Pipe:	Length: 3268.00 ft	Diameter: 3.80 inches	Volume: 45.84 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 45.99 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3315.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments: Tool slid 10' to bottom				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3300.00	
Hydraulic tool	5.00			3305.00	
Packer	5.00			3310.00	20.00      Bottom Of Top Packer
Packer	5.00			3315.00	
Stubb	1.00			3316.00	
Perforations	7.00			3323.00	
Change Over Sub	1.00			3324.00	
Recorder	0.00	8018	Inside	3324.00	
Recorder	0.00	8371	Inside	3324.00	
Blank Spacing	32.00			3356.00	
Change Over Sub	1.00			3357.00	
Perforations	20.00			3377.00	
Bullnose	3.00			3380.00	65.00      Bottom Packers & Anchor

**Total Tool Length: 85.00**



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Black Diamond

**Rocken 3 Farms #1**

PO Box 641  
Hays, Ks  
67601

**8 6s 19w Rooks KS**

ATTN: Ken Vehige

Job Ticket: 35161

**DST#: 2**

Test Start: 2009.02.07 @ 09:06:49

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 8.71 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 1000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

deg API

ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	Mw/ O spts. on top M100%	0.349

Total Length: 45.00 ft      Total Volume: 0.349 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

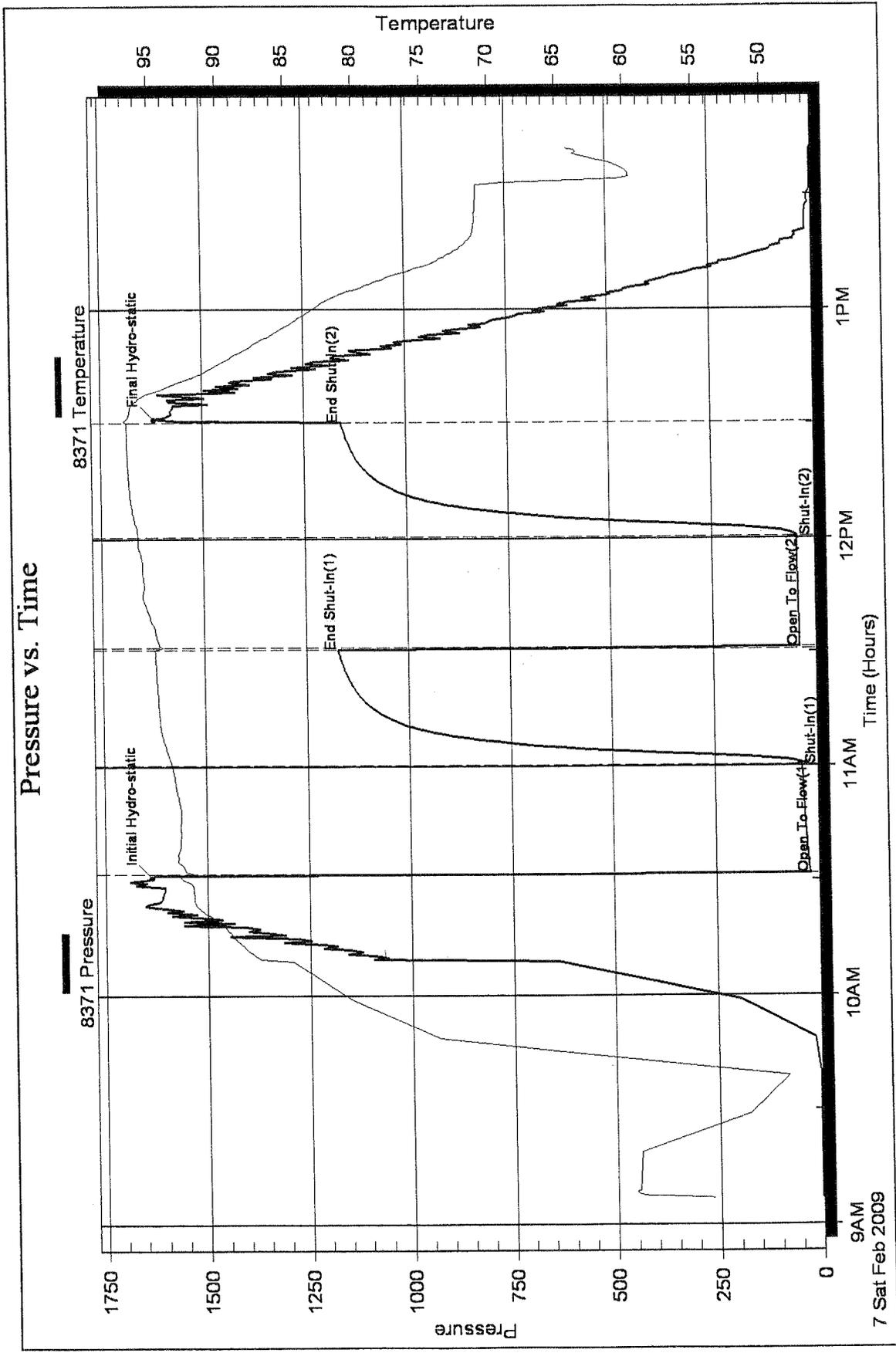
Serial #:

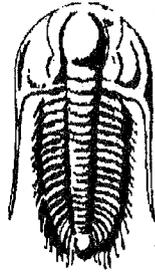
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641  
Hays, Ks  
67601

ATTN: Ken Vehige

**8 6s 19w Rooks KS**

**Rocken 3 Farms #1**

Start Date: 2009.02.08 @ 00:36:33

End Date: 2009.02.08 @ 07:22:57

Job Ticket #: 35162                      DST #: 3

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

Black Diamond

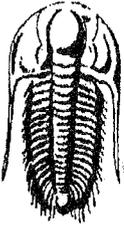
Rocken 3 Farms #1

8 6s 19w Rooks KS

DST # 3

LKC "L-J"

2009.02.08



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond

**Rocken 3 Farms #1**

PO Box 641  
Hays, Ks  
67601

**8 6s 19w Rooks KS**

Job Ticket: 35162

DST#: 3

ATTN: Ken Vehige

Test Start: 2009.02.08 @ 00:36:33

## GENERAL INFORMATION:

Formation: **LKC "I-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:16:28

Time Test Ended: 07:22:57

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3427.00 ft (KB) To 3501.00 ft (KB) (TVD)**

Total Depth: 3501.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2076.00 ft (KB)

2068.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8371**

Inside

Press@RunDepth: 65.46 psig @ 3441.00 ft (KB)

Start Date: 2009.02.08

End Date:

2009.02.08

Start Time: 00:36:33

End Time:

07:22:57

Capacity: 7000.00 psig

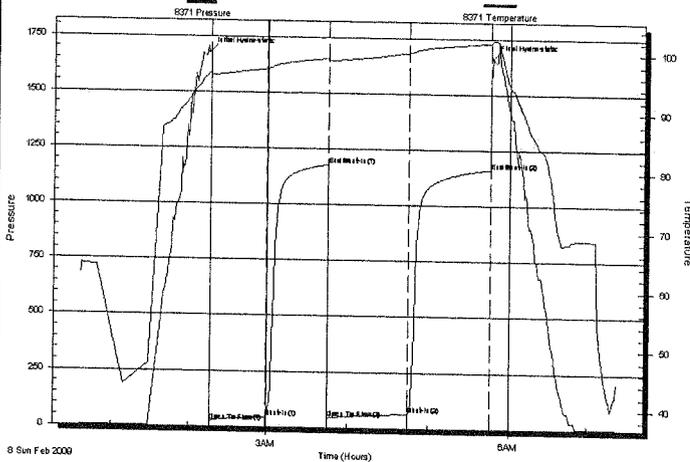
Last Calib.: 2009.02.08

Time On Btm: 2009.02.08 @ 02:15:28

Time Off Btm: 2009.02.08 @ 05:46:57

TEST COMMENT: IFP - weak to good blow 1/2" - 9"  
ISI - weak sur blow back  
FFP - BOB 37 min.  
FSI - weak sur blow back

Pressure vs. Time



## PRESSURE SUMMARY

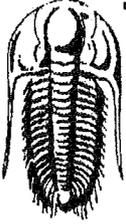
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1678.60	96.52	Initial Hydro-static
1	22.54	95.78	Open To Flow (1)
44	44.08	97.22	Shut-In (1)
90	1177.11	99.09	End Shut-In (1)
90	43.77	98.65	Open To Flow (2)
150	65.46	100.14	Shut-In (2)
210	1161.67	101.86	End Shut-In (2)
212	1661.43	102.34	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
80.00	HOCM 40%O, 60%M	0.84
45.00	FREE OIL 95%O, 5%M	0.63
0.00	140' GIP	0.00

## Gas Rates

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



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Diamond

Rocken 3 Farms #1

PO Box 641  
Hays, Ks  
67601

8 6s 19w Rooks KS

Job Ticket: 35162

DST#: 3

ATTN: Ken Vehige

Test Start: 2009.02.08 @ 00:36:33

### Tool Information

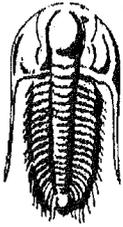
Drill Pipe:	Length: 3387.00 ft	Diameter: 3.80 inches	Volume: 47.51 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 47.66 bbl</u>	Tool Chased 8.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	3427.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	94.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:  
Tool slid 8' to bottom

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

Shut In Tool	5.00			3412.00	
Hydraulic tool	5.00			3417.00	
Packer	5.00			3422.00	20.00 Bottom Of Top Packer
Packer	5.00			3427.00	
Stubb	1.00			3428.00	
Perforations	12.00			3440.00	
Change Over Sub	1.00			3441.00	
Recorder	0.00	8018	Inside	3441.00	
Recorder	0.00	8371	Inside	3441.00	
Blank Spacing	31.00			3472.00	
Change Over Sub	1.00			3473.00	
Perforations	25.00			3498.00	
Bullnose	3.00			3501.00	74.00 Bottom Packers & Anchor

**Total Tool Length: 94.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Black Diamond

**Rocken 3 Farms #1**

PO Box 641  
Hays, Ks  
67601

**8 6s 19w Rooks KS**

Job Ticket: 35162

**DST#: 3**

ATTN: Ken Vehige

Test Start: 2009.02.08 @ 00:36:33

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API: 29 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.77 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 1800.00 ppm		
Filter Cake: inches		

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
80.00	HOCM 40%O, 60%M	0.840
45.00	FREE OIL 95%O, 5%M	0.631
0.00	140' GIP	0.000

Total Length: 125.00 ft      Total Volume: 1.471 bbl

Num Fluid Samples: 0

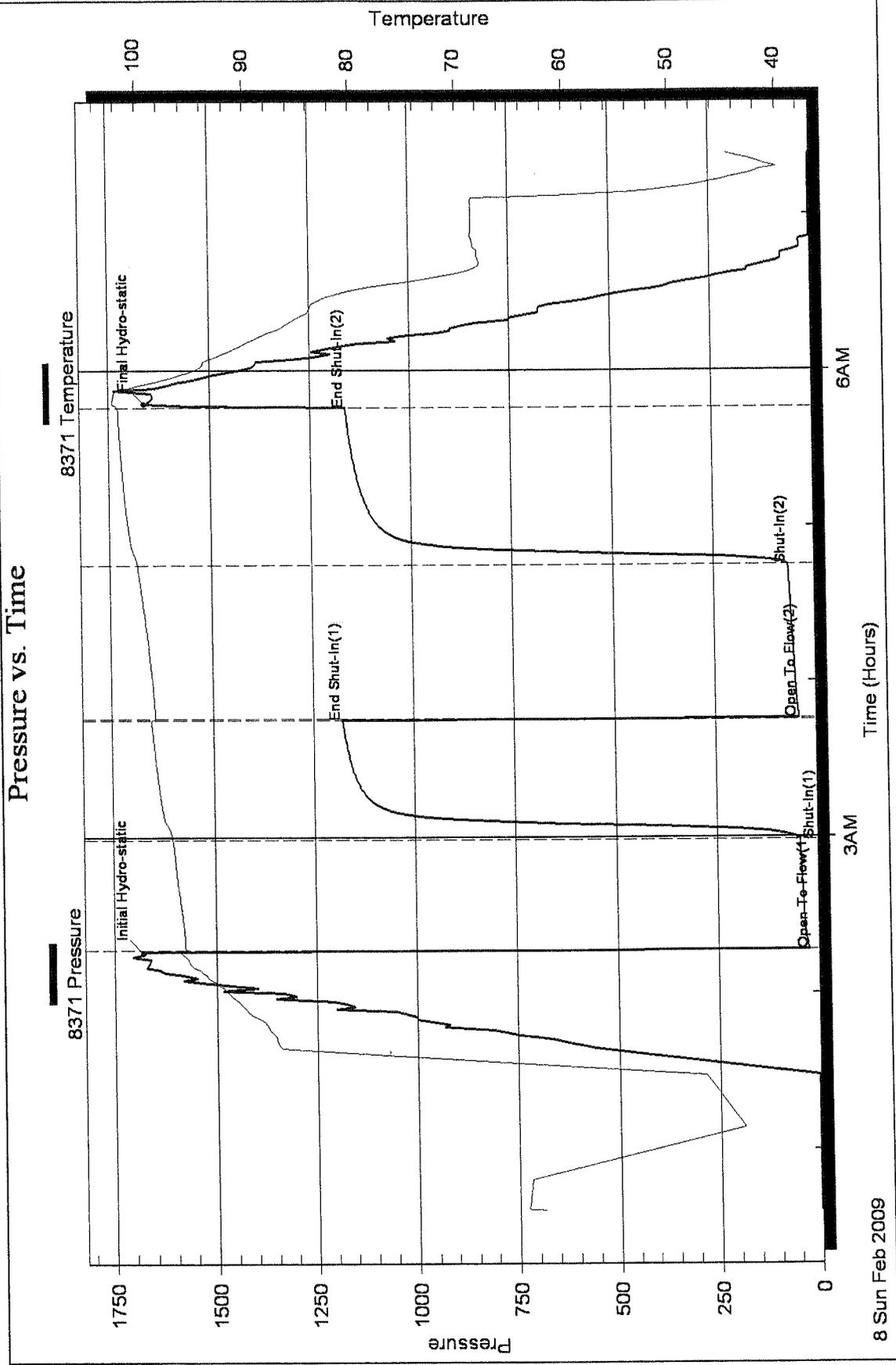
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



8 Sun Feb 2009