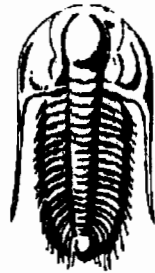


33-6s-20w

15-163-23795-00-00

KGS ✓



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641
Hays, KS 67601

ATTN: Tony R

33-6-20 Rooks KS

JMEV Unit #1

Start Date: 2009.01.30 @ 11:37:33

End Date: 2009.01.30 @ 16:52:03

Job Ticket #: 34974 DST #: 1

RECEIVED

APR 20 2009

KCC WICHITA

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Black Diamond

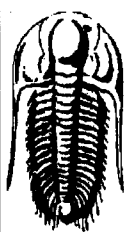
JMEV Unit #1

33-6-20 Rooks KS

DST # 1

Tor-A

2009.01.30



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Black Diamond

PO Box 641
Hays, KS 67601

ATTN: Tony R

JME/V Unit #1

33-6-20 Rooks KS

Job Ticket: 34974

DST#: 1

Test Start: 2009.01.30 @ 11:37:33

GENERAL INFORMATION:

Formation: **Tor - A**

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

Time Tool Opened: 13:21:33

Time Test Ended: 16:52:03

Test Type: **Conventional Bottom Hole**

Tester: **Kyle Kinderknecht**

Unit No: **47**

Interval: **3419.00 ft (KB) To 3480.00 ft (KB) (TVD)**

Total Depth: **3480.00 ft (KB) (TVD)**

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

Reference Elevations: **2237.00 ft (KB)**

2229.00 ft (CF)

KB to GR/CF: **8.00 ft**

Serial #: **8319** Inside

Press@RunDepth: **30.13 psig @ 3422.00 ft (KB)**

Start Date: **2009.01.30**

End Date:

2009.01.30

Capacity: **7000.00 psig**

Last Calib.: **2009.01.30**

Start Time: **11:37:38**

End Time:

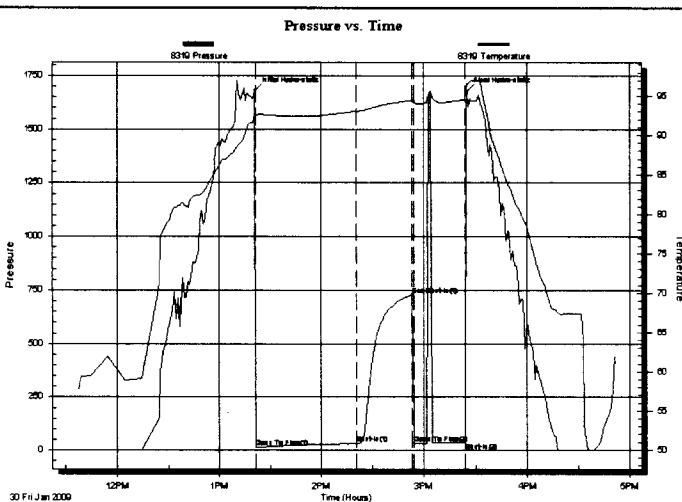
16:52:02

Time On Btm: **2009.01.30 @ 13:21:03**

Time Off Btm: **2009.01.30 @ 15:25:03**

TEST COMMENT: IF Slow build to 1 1/2"

FF No blow flushed tool/ no blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1680.50	92.82	Initial Hydro-static
1	13.34	92.45	Open To Flow (1)
60	30.13	93.05	Shut-In(1)
92	727.71	94.46	End Shut-In(1)
93	31.43	94.18	Open To Flow (2)
123	37.82	94.60	Shut-In(2)
124	1679.84	96.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	Mud	0.43

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Diamond

JME/V Unit #1

PO Box 641
Hays, KS 67601

33-6-20 Rooks KS

Job Ticket: 34974

DST#: 1

ATTN: Tony R

Test Start: 2009.01.30 @ 11:37:33

Tool Information

Drill Pipe:	Length: 3384.00 ft	Diameter: 3.82 inches	Volume: 47.97 bbl	Tool Weight:	1500.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	85000.00 lb
		Total Volume:	48.12 bbl	Tool Chased	3.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	65000.00 lb
Depth to Top Packer:	3419.00 ft			Final	65000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	61.00 ft				
Tool Length:	81.00 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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Change Over Sub	1.00			3400.00	
Shut In Tool	5.00			3405.00	
Hydraulic tool	5.00			3410.00	
Packer	4.00			3414.00	20.00 Bottom Of Top Packer
Packer	5.00			3419.00	
Stubb	1.00			3420.00	
Perforations	1.00			3421.00	
Change Over Sub	1.00			3422.00	
Recorder	0.00	8319	Inside	3422.00	
Recorder	0.00	8369	Inside	3422.00	
Blank Spacing	32.00			3454.00	
Change Over Sub	1.00			3455.00	
Perforations	22.00			3477.00	
Bullnose	3.00			3480.00	61.00 Bottom Packers & Anchor

Total Tool Length: 81.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Diamond

JME/V Unit #1

PO Box 641
Hays, KS 67601

33-6-20 Rooks KS

Job Ticket: 34974

DST#: 1

ATTN: Tony R

Test Start: 2009.01.30 @ 11:37:33

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: 46.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.78 in³

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
50.00	Mud	0.431

Total Length: 50.00 ft

Total Volume: 0.431 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

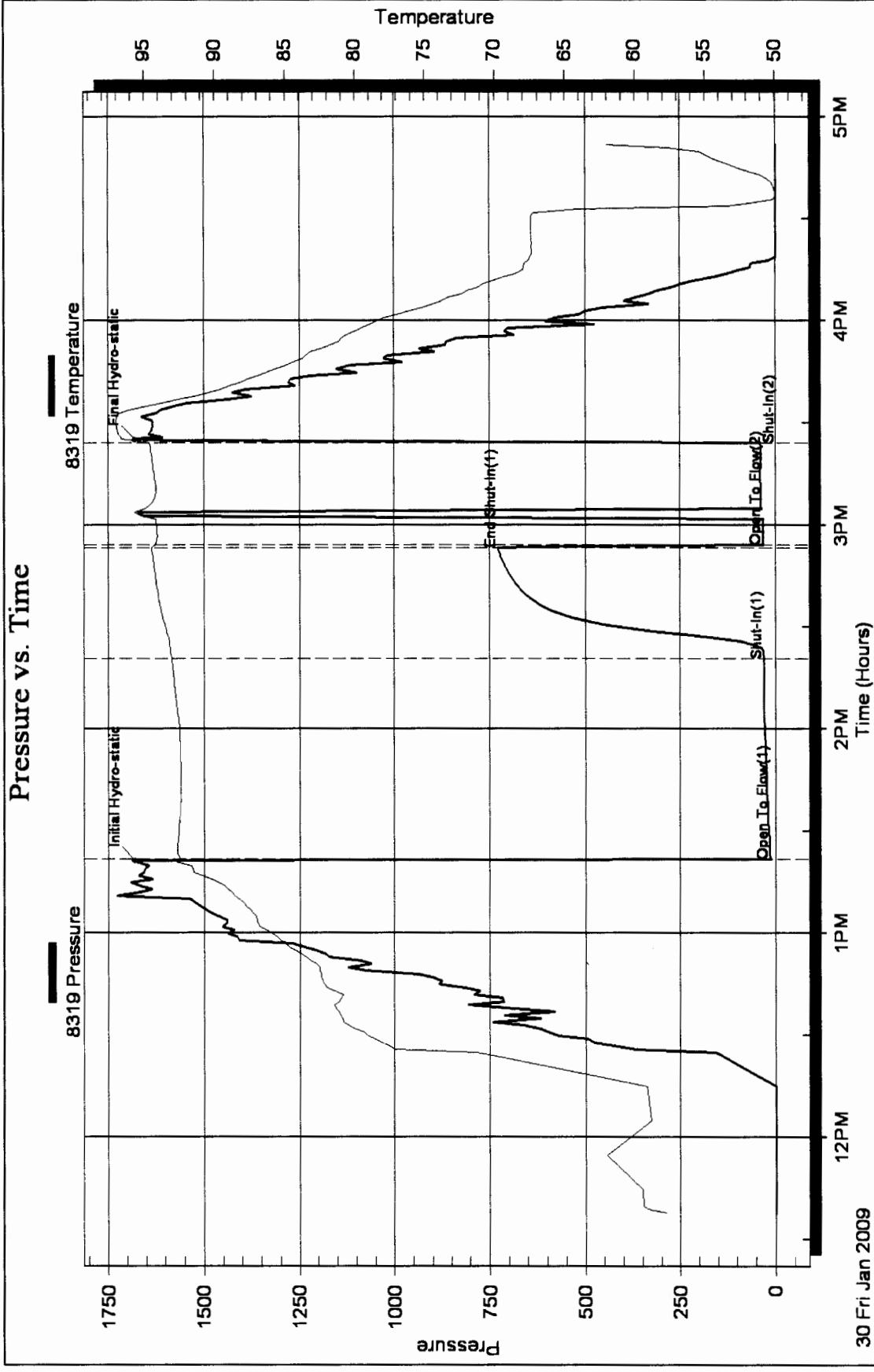
Serial #: 8319

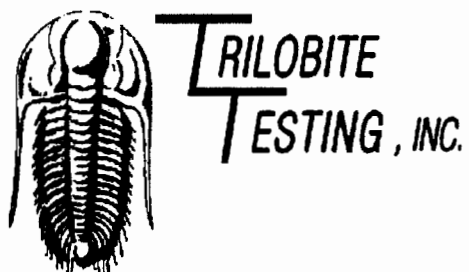
Inside

Black Diamond

33-6-20 Rocks KS

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641
Hays, KS 67601

ATTN: Tony R

33-6-20 Rooks KS

JME/V Unit #1

Start Date: 2009.02.01 @ 04:22:45

End Date: 2009.02.01 @ 08:45:45

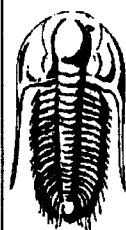
Job Ticket #: 34975 DST #: 2

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APR 20 2009

KCC WICHITA

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Black Diamond

PO Box 641
Hays, KS 67601

ATTN: Tony R

JME/V Unit #1

33-6-20 Rooks KS

Job Ticket: 34975

DST#: 2

Test Start: 2009.02.01 @ 04:22:45

GENERAL INFORMATION:

Formation: **Arb**

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

Time Tool Opened: 06:11:45

Time Test Ended: 08:45:45

Test Type: Conventional Straddle

Tester: Kyle Kinderknecht

Unit No: 47

Interval: **3712.00 ft (KB) To 3732.00 ft (KB) (TVD)**

Total Depth: **3760.00 ft (KB) (TVD)**

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

Reference Elevations: **2237.00 ft (KB)**

2229.00 ft (CF)

KB to GR/CF: **8.00 ft**

Serial #: **8319** Inside

Press@RunDepth: **24.64 psig @ 3713.00 ft (KB)**

Start Date: **2009.02.01**

End Date:

2009.02.01

Start Time: **04:22:50**

End Time:

08:45:44

Capacity: **7000.00 psig**

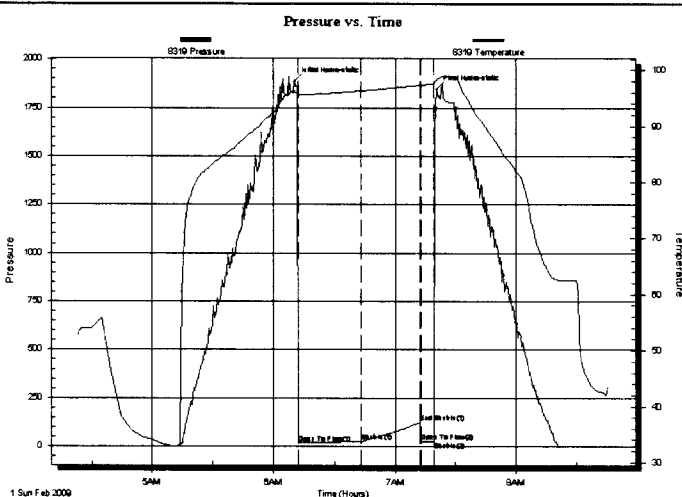
Last Calib.: **2009.02.01**

Time On Btm: **2009.02.01 @ 06:10:15**

Time Off Btm: **2009.02.01 @ 07:20:45**

TEST COMMENT: IF 1" Died to surface

FF No blow



PRESSURE SUMMARY

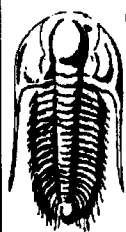
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1885.45	96.26	Initial Hydro-static
2	18.19	95.32	Open To Flow (1)
33	24.64	96.27	Shut-In(1)
62	125.70	97.30	End Shut-In(1)
63	25.30	97.29	Open To Flow(2)
69	25.96	97.53	Shut-In(2)
71	1846.81	98.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud / oil spots	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

Black Diamond

PO Box 641
Hays, KS 67601

ATTN: Tony R

JME/V Unit #1

33-6-20 Rooks KS

Job Ticket: 34975

DST#: 2

Test Start: 2009.02.01 @ 04:22:45

Tool Information

Drill Pipe:	Length: 3670.00 ft	Diameter: 3.82 inches	Volume: 52.02 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	72000.00 lb
			<u>Total Volume: 52.17 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	3712.00 ft			Final	68000.00 lb
Depth to Bottom Packer:	3732.00 ft				
Interval between Packers:	20.00 ft				
Tool Length:	75.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3686.00	
Shut In Tool	5.00			3691.00	
Hydraulic tool	5.00			3696.00	
Jars	4.00			3700.00	
Safety Joint	3.00			3703.00	
Packer	4.00			3707.00	27.00 Bottom Of Top Packer
Packer	5.00			3712.00	
Stubb	1.00			3713.00	
Recorder	0.00	8319	Inside	3713.00	
Perforations	15.00			3728.00	
Blank Off Sub	1.00			3729.00	
Blank Spacing	3.00			3732.00	20.00 Tool Interval
Packer	0.00			3732.00	
Stubb	1.00			3733.00	
Recorder	0.00	8369	Below	3733.00	
Perforations	24.00			3757.00	
Perforations	3.00			3760.00	28.00 Bottom Packers & Anchor
Total Tool Length:		75.00			



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Diamond

JME/V Unit #1

PO Box 641
Hays, KS 67601

33-6-20 Rooks KS

Job Ticket: 34975

DST#: 2

ATTN: Tony R

Test Start: 2009.02.01 @ 04:22:45

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: 46.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.77 in³

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
10.00	Mud / oil spots	0.049

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

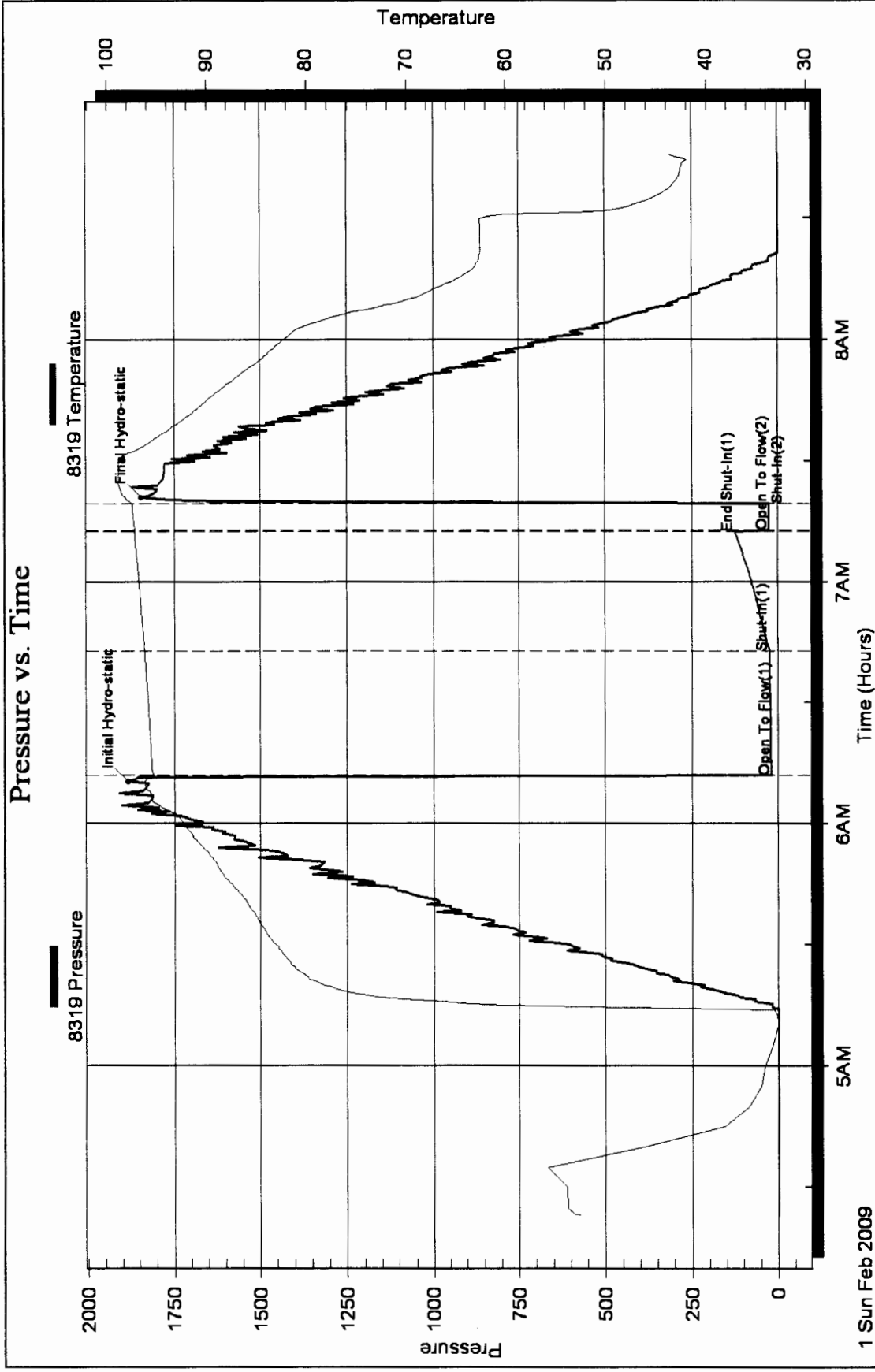
Num Gas Bombs: 0

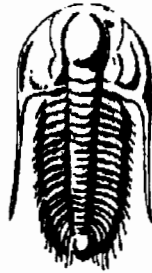
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641
Hays, KS 67601

ATTN: Tony R

33-6-20 Rooks KS

JME/V Unit #1

Start Date: 2009.02.01 @ 08:54:30

End Date: 2009.02.01 @ 12:51:30

Job Ticket #: 34976 DST #: 3

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

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Black Diamond

PO Box 641
Hays, KS 67601

ATTN: Tony R

JME/V Unit #1

33-6-20 Rooks KS

Job Ticket: 34976

DST#: 3

Test Start: 2009.02.01 @ 08:54:30

GENERAL INFORMATION:

Formation: **LKC**

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

Time Tool Opened: 10:08:00

Time Test Ended: 12:51:30

Test Type: Conventional Straddle

Tester: Kyle Kinderknecht

Unit No: 47

Interval: **3490.00 ft (KB) To 3575.00 ft (KB) (TVD)**

Total Depth: 3760.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2237.00 ft (KB)

2229.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8319

Inside

Press@RunDepth: 30.59 psig @ 3502.00 ft (KB)

Start Date: 2009.02.01

End Date:

2009.02.01

Start Time: 08:54:35

End Time:

12:51:30

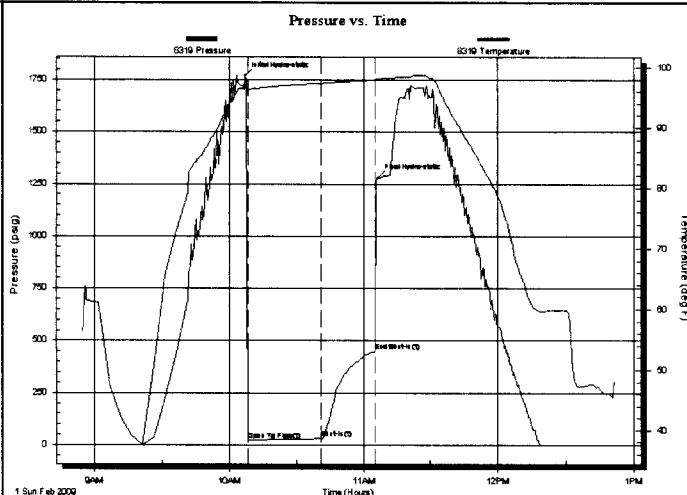
Capacity: 7000.00 psig

Last Calib.: 2009.02.01

Time On Btm: 2009.02.01 @ 10:07:00

Time Off Btm: 2009.02.01 @ 11:06:30

TEST COMMENT: IF 1 1/2" Died 30 min



PRESSURE SUMMARY

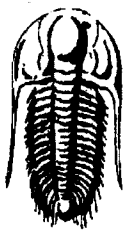
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1767.89	96.61	Initial Hydro-static
1	22.13	96.34	Open To Flow (1)
34	30.59	97.36	Shut-In (1)
58	450.26	97.90	End Shut-In (1)
60	1278.44	98.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud	0.07

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Diamond

JME/V Unit #1

PO Box 641
Hays, KS 67601

33-6-20 Rooks KS

Job Ticket: 34976

DST#: 3

ATTN: Tony R

Test Start: 2009.02.01 @ 08:54:30

Tool Information

Drill Pipe:	Length: 3450.00 ft	Diameter: 3.82 inches	Volume: 48.91 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 73000.00 lb
		Total Volume: 49.06 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3490.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	3575.00 ft			
Interval between Packers:	85.00 ft			
Tool Length:	289.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3471.00	
Shut In Tool	5.00			3476.00	
Hydraulic tool	5.00			3481.00	
Packer	4.00			3485.00	20.00 Bottom Of Top Packer
Packer	5.00			3490.00	
Stubb	1.00			3491.00	
Perforations	10.00			3501.00	
Change Over Sub	1.00			3502.00	
Recorder	0.00	8319	Inside	3502.00	
Blank Spacing	63.00			3565.00	
Change Over Sub	1.00			3566.00	
Perforations	5.00			3571.00	
Blank Off Sub	1.00			3572.00	
Blank Spacing	3.00			3575.00	85.00 Tool Interval
Packer	0.00			3575.00	
Stubb	1.00			3576.00	
Perforations	21.00			3597.00	
Recorder	0.00	8369	Below	3597.00	
Change Over Sub	1.00			3598.00	
Blank Spacing	157.00			3755.00	
Change Over Sub	1.00			3756.00	
Bullnose	3.00			3759.00	184.00 Bottom Packers & Anchor

Total Tool Length: 289.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Diamond

JME/V Unit #1

PO Box 641
Hays, KS 67601

33-6-20 Rooks KS

Job Ticket: 34976

DST#: 3

ATTN: Tony R

Test Start: 2009.02.01 @ 08:54:30

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 7.97 in³

Resistivity: ohm.m

Salinity: 1100.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: deg API

Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud	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:

Serial #: 8319

Inside

Black Diamond

33-6-20 Rocks KS

DST Test Number: 3

