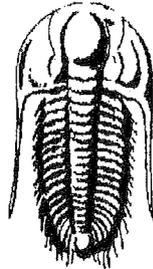


15-051-25745

27-12s-17w

IMPED



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641
Hays KS 67601

ATTN: Tony Richardson

27 12S 17W Ellis KS

Schmeidler #1

Start Date: 2008.02.24 @ 15:54:49

End Date: 2008.02.24 @ 22:09:13

Job Ticket #: 31632 DST #: 1

Black Diamond

Schmeidler #1

27 12S 17W Ellis KS

DST # 1

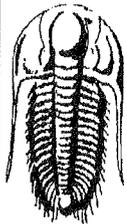
Arbuckle

2008.02.24

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

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KANSAS CORPORATION COMMISSION
MAY 07 2008
CONSERVATION DIVISION
WICHITA, KS



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Black Diamond

Schmeidler #1

PO Box 641
Hays KS 67601

27 12S 17W Ellis KS

ATTN: Tony Richardson

Job Ticket: 31632

DST#: 1

Test Start: 2008.02.24 @ 15:54:49

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:50:44

Time Test Ended: 22:09:13

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3592.00 ft (KB) To 3645.00 ft (KB) (TVD)**

Total Depth: 3645.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2080.00 ft (KB)

2076.00 ft (CF)

KB to GR/CF: 4.00 ft

Serial #: 8018

Inside

Press@RunDepth: 22.60 psig @ 3595.00 ft (KB)

Start Date: 2008.02.24

End Date:

2008.02.24

Start Time: 15:54:49

End Time:

22:09:13

Capacity: 7000.00 psig

Last Calib.: 2008.02.24

Time On Btm: 2008.02.24 @ 17:48:14

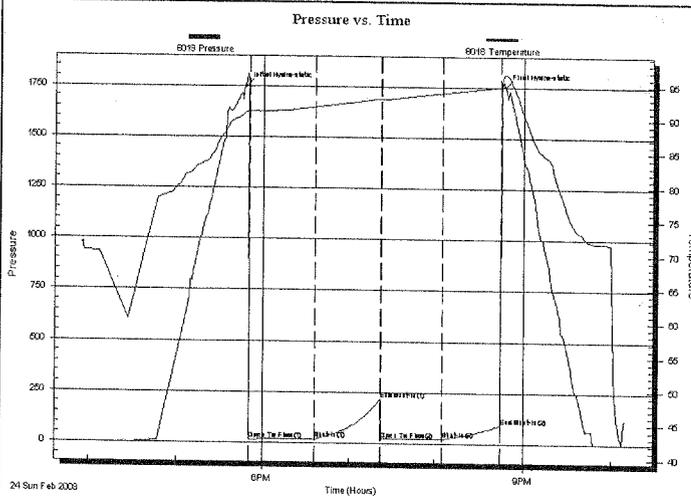
Time Off Btm: 2008.02.24 @ 20:47:13

TEST COMMENT: IFP 1 " weak blow died 33 min.

ISI No blow back

FFP No blow

FSI No blow back



PRESSURE SUMMARY

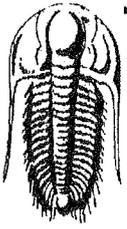
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1747.14	90.92	Initial Hydro-static
3	14.70	91.09	Open To Flow (1)
48	19.06	91.78	Shut-In(1)
94	213.65	93.02	End Shut-In(1)
94	20.79	92.90	Open To Flow (2)
137	22.60	93.90	Shut-In(2)
176	89.82	94.85	End Shut-In(2)
179	1748.35	96.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	VSOCM 3%O 97%M	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Diamond

Schmeidler #1

PO Box 641
Hays KS 67601

27 12S 17W Ellis KS

Job Ticket: 31632

DST#: 1

ATTN: Tony Richardson

Test Start: 2008.02.24 @ 15:54:49

Tool Information

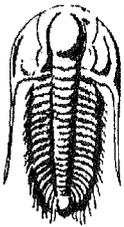
Drill Pipe:	Length: 3457.00 ft	Diameter: 3.88 inches	Volume: 50.56 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 126.00 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose: 50000.00 lb
		Total Volume:	51.18 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3592.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.00 ft			
Tool Length:	73.00 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			3577.00	
Hydraulic tool	5.00			3582.00	
Packer	5.00			3587.00	20.00 Bottom Of Top Packer
Packer	5.00			3592.00	
Stubb	1.00			3593.00	
Perforations	1.00			3594.00	
Change Over Sub	1.00			3595.00	
Recorder	0.00	8018	Inside	3595.00	
Recorder	0.00	6755	Inside	3595.00	
Blank Spacing	31.00			3626.00	
Change Over Sub	1.00			3627.00	
Perforations	15.00			3642.00	
Bullnose	3.00			3645.00	53.00 Bottom Packers & Anchor

Total Tool Length: 73.00

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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Diamond

Schmeidler #1

PO Box 641
Hays KS 67601

27 12S 17W Ellis KS

Job Ticket: 31632

DST#: 1

ATTN: Tony Richardson

Test Start: 2008.02.24 @ 15:54:49

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: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.75 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	VSOCM 3%O 97%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:

1517W-17E-12S-17W
2008 2 0 YAM
1517

DST Test Number: 1

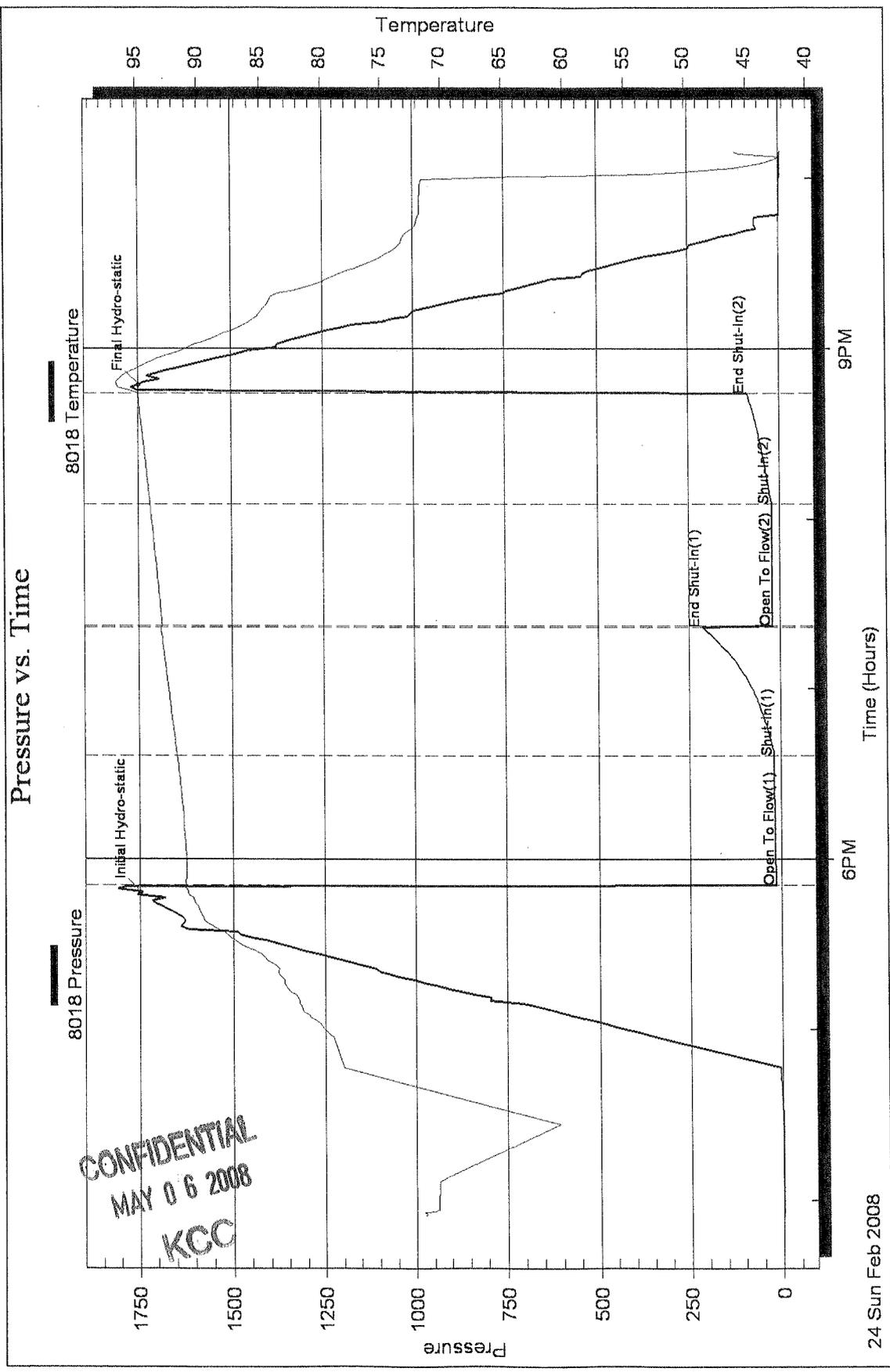
27 12S 17W Ellis KS

Black Diamond

Inside

Serial #: 8018

Pressure vs. Time



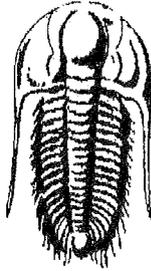
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 MAY 06 2008
 KCC

24 Sun Feb 2008

6PM

9PM

Time (Hours)



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641
Hays KS 67601

ATTN: Tony Richardson

27 12S 17W Ellis KS

Schmeidler #1

Start Date: 2008.02.25 @ 06:35:00

End Date: 2008.02.25 @ 13:40:24

Job Ticket #: 31633 DST #: 2

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MAY 06 2008
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Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Diamond

Schmeidler #1

PO Box 641
Hays KS 67601

27 12S 17W Ellis KS

Job Ticket: 31633

DST#: 2

ATTN: Tony Richardson

Test Start: 2008.02.25 @ 06:35:00

GENERAL INFORMATION:

Formation: **Arbuckle (2)**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:22:25

Time Test Ended: 13:40:24

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3644.00 ft (KB) To 3655.00 ft (KB) (TVD)**

Total Depth: 3655.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2080.00 ft (KB)

2076.00 ft (CF)

KB to GR/CF: 4.00 ft

Serial #: 8018

Inside

Press@RunDepth: 66.10 psig @ 3645.00 ft (KB)

Start Date: 2008.02.25

End Date:

2008.02.25

Capacity: 7000.00 psig

Last Calib.: 2008.02.25

Start Time: 06:35:00

End Time:

13:40:24

Time On Btm: 2008.02.25 @ 08:19:55

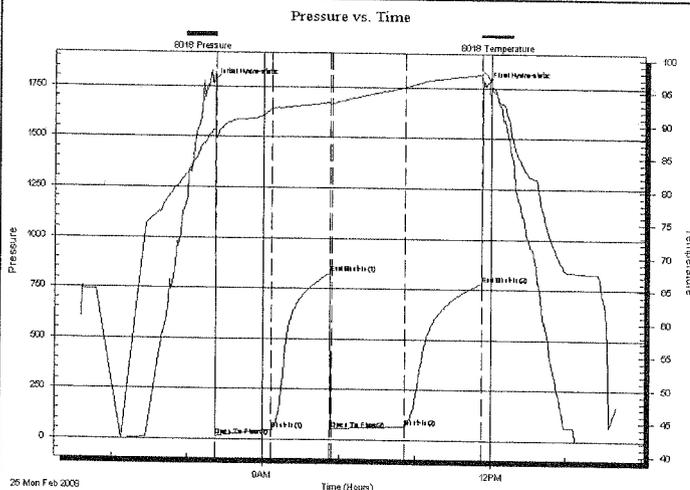
Time Off Btm: 2008.02.25 @ 11:55:54

TEST COMMENT: IFP Weak to fair blow sur 4 1/2 "

ISI No blow back

FFP Weak blow throughout sur 3 "

FSI No blow back



PRESSURE SUMMARY

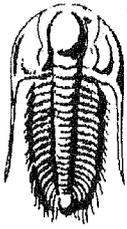
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1770.52	89.09	Initial Hydro-static
3	13.66	87.80	Open To Flow (1)
47	46.86	92.28	Shut-In (1)
93	829.06	93.33	End Shut-In (1)
94	52.22	93.12	Open To Flow (2)
152	66.10	95.67	Shut-In (2)
213	779.26	97.67	End Shut-In (2)
216	1762.92	97.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	HOCM 50%O 50%M	0.15
120.00	G FREE OIL 5%G 90%O 5%M	0.82
0.00	30' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Diamond

Schmeidler #1

PO Box 641
Hays KS 67601

27 12S 17W Ellis KS

Job Ticket: 31633

DST#: 2

ATTN: Tony Richardson

Test Start: 2008.02.25 @ 06:35:00

Tool Information

Drill Pipe:	Length: 3519.00 ft	Diameter: 3.88 inches	Volume: 51.46 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: 126.00 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose: 55000.00 lb
		<u>Total Volume:</u>	<u>52.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3644.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	11.00 ft			
Tool Length:	31.00 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			3629.00	
Hydraulic tool	5.00			3634.00	
Packer	5.00			3639.00	20.00 Bottom Of Top Packer
Packer	5.00			3644.00	
Stubb	1.00			3645.00	
Recorder	0.00	8018	inside	3645.00	
Recorder	0.00	6755	inside	3645.00	
Perforations	7.00			3652.00	
Bullnose	3.00			3655.00	11.00 Bottom Packers & Anchor
Total Tool Length:	31.00				

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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Diamond

Schmeidler #1

PO Box 641
Hays KS 67601

27 12S 17W Ellis KS

Job Ticket: 31633

DST#: 2

ATTN: Tony Richardson

Test Start: 2008.02.25 @ 06:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 9.55 in³

Resistivity: ohm.m

Salinity: 5000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

27 deg API

Water Salinity:

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	HOCM 50%O 50%M	0.148
120.00	G FREE OIL 5%G 90%O 5%M	0.823
0.00	30' GIP	0.000

Total Length: 150.00 ft

Total Volume: 0.971 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

31633-150
2008 2 25

Serial #: 8018

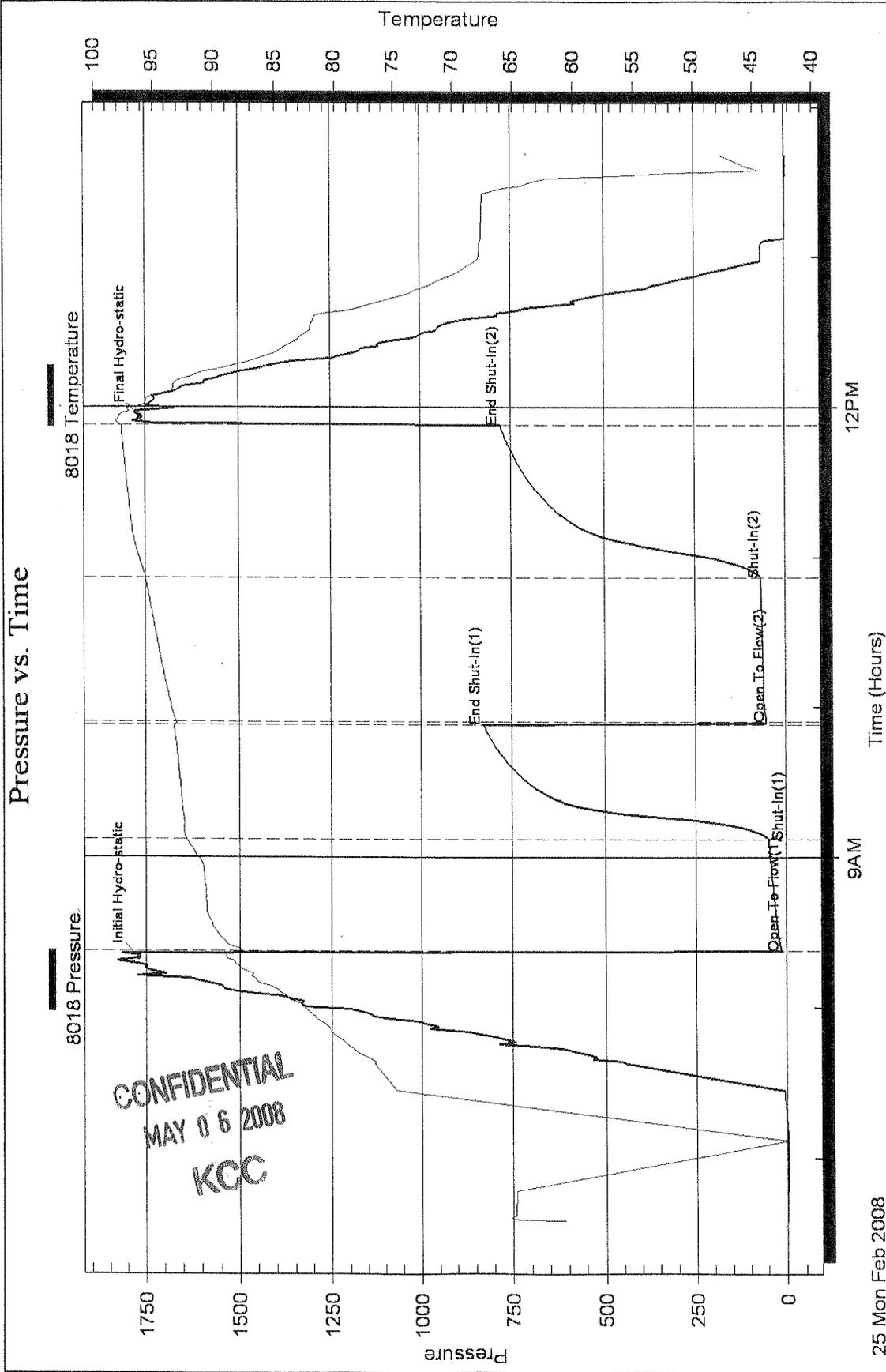
Inside

Black Diamond

27 12S 17W Ellis KS

DST Test Number: 2

Pressure vs. Time

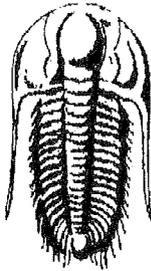


25 Mon Feb 2008

9AM

12PM

Time (Hours)



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641
Hays KS 67601

ATTN: Tony Richardson

27 12S 17W Ellis KS

Schmeidler #1

Start Date: 2008.02.25 @ 23:57:59

End Date: 2008.02.26 @ 07:18:23

Job Ticket #: 31634 DST #: 3

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Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Black Diamond

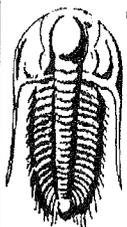
Schmeidler #1

27 12S 17W Ellis KS

DST # 3

Arbuckle (3)

2008.02.25



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Black Diamond

Schmeidler #1

PO Box 641
Hays KS 67601

27 12S 17W Ellis KS

ATTN: Tony Richardson

Job Ticket: 31634

DST#: 3

Test Start: 2008.02.25 @ 23:57:59

GENERAL INFORMATION:

Formation: **Arbuckle (3)**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:15:24

Time Test Ended: 07:18:23

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3644.00 ft (KB) To 3663.00 ft (KB) (TVD)**

Total Depth: 3663.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2080.00 ft (KB)

2076.00 ft (CF)

KB to GR/CF: 4.00 ft

Serial #: **8018**

Inside

Press@RunDepth: 134.95 psig @ 3645.00 ft (KB)

Start Date: 2008.02.25

End Date:

2008.02.26

Start Time: 23:57:59

End Time:

07:18:23

Capacity: 7000.00 psig

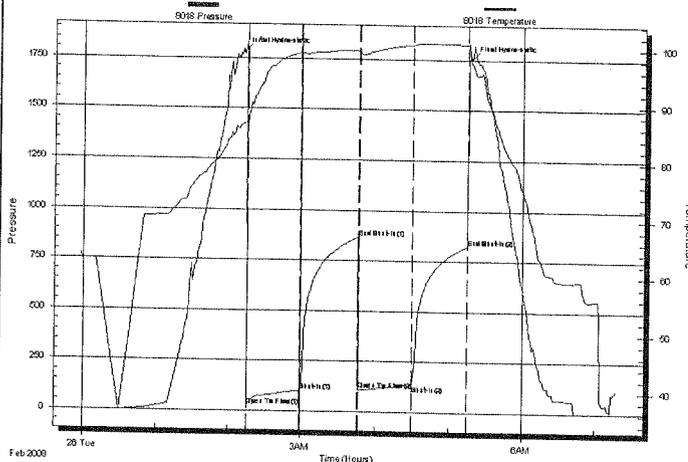
Last Calib.: 2008.02.26

Time On Btm: 2008.02.26 @ 02:12:24

Time Off Btm: 2008.02.26 @ 05:17:23

TEST COMMENT: IFP BOB 13 min.
ISI Sur blow back died 19 min.
FFP BOB 29 min.
FSI Sur blow back throughout

Pressure vs. Time



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1781.91	86.79	Initial Hydro-static
3	22.27	86.17	Open To Flow (1)
47	101.84	99.15	Shut-In(1)
94	864.82	99.64	End Shut-In(1)
94	108.20	99.31	Open To Flow (2)
137	134.95	100.75	Shut-In(2)
183	824.56	100.86	End Shut-In(2)
185	1752.64	97.52	Final Hydro-static

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Recovery

Length (ft)	Description	Volume (bbl)
125.00	MW 50%W 50%M	0.61
50.00	VSGOWCM 5%G 5%O 5%W 85%M	0.72
125.00	G FREE OIL 5%G 90%O 5%M	1.83
0.00	15' GIP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Diamond

Schmeidler #1

PO Box 641
Hays KS 67601

27 12S 17W Ellis KS

Job Ticket: 31634

DST#: 3

ATTN: Tony Richardson

Test Start: 2008.02.25 @ 23:57:59

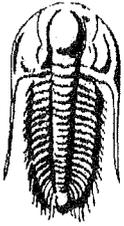
Tool Information

Drill Pipe:	Length: 3518.00 ft	Diameter: 3.88 inches	Volume: 51.45 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: 126.00 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose: 55000.00 lb
		<u>Total Volume:</u>	<u>52.07 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3644.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3629.00	
Hydraulic tool	5.00			3634.00	
Packer	5.00			3639.00	20.00 Bottom Of Top Packer
Packer	5.00			3644.00	
Stubb	1.00			3645.00	
Recorder	0.00	8018	Inside	3645.00	
Recorder	0.00	6755	Inside	3645.00	
Perforations	15.00			3660.00	
Bullnose	3.00			3663.00	19.00 Bottom Packers & Anchor
Total Tool Length:	39.00				

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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Diamond

Schmeidler #1

PO Box 641
Hays KS 67601

27 12S 17W Ellis KS

Job Ticket: 31634

DST#: 3

ATTN: Tony Richardson

Test Start: 2008.02.25 @ 23:57:59

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 9.77 in³

Resistivity: ohm.m

Salinity: 6000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: 25 deg API

Water Salinity: 18500 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	MW 50%W 50%M	0.615
50.00	VSGOWCM 5%G 5%O 5%W 85%M	0.722
125.00	G FREE OIL 5%G 90%O 5%M	1.828
0.00	15' GIP	0.000

Total Length: 300.00 ft Total Volume: 3.165 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

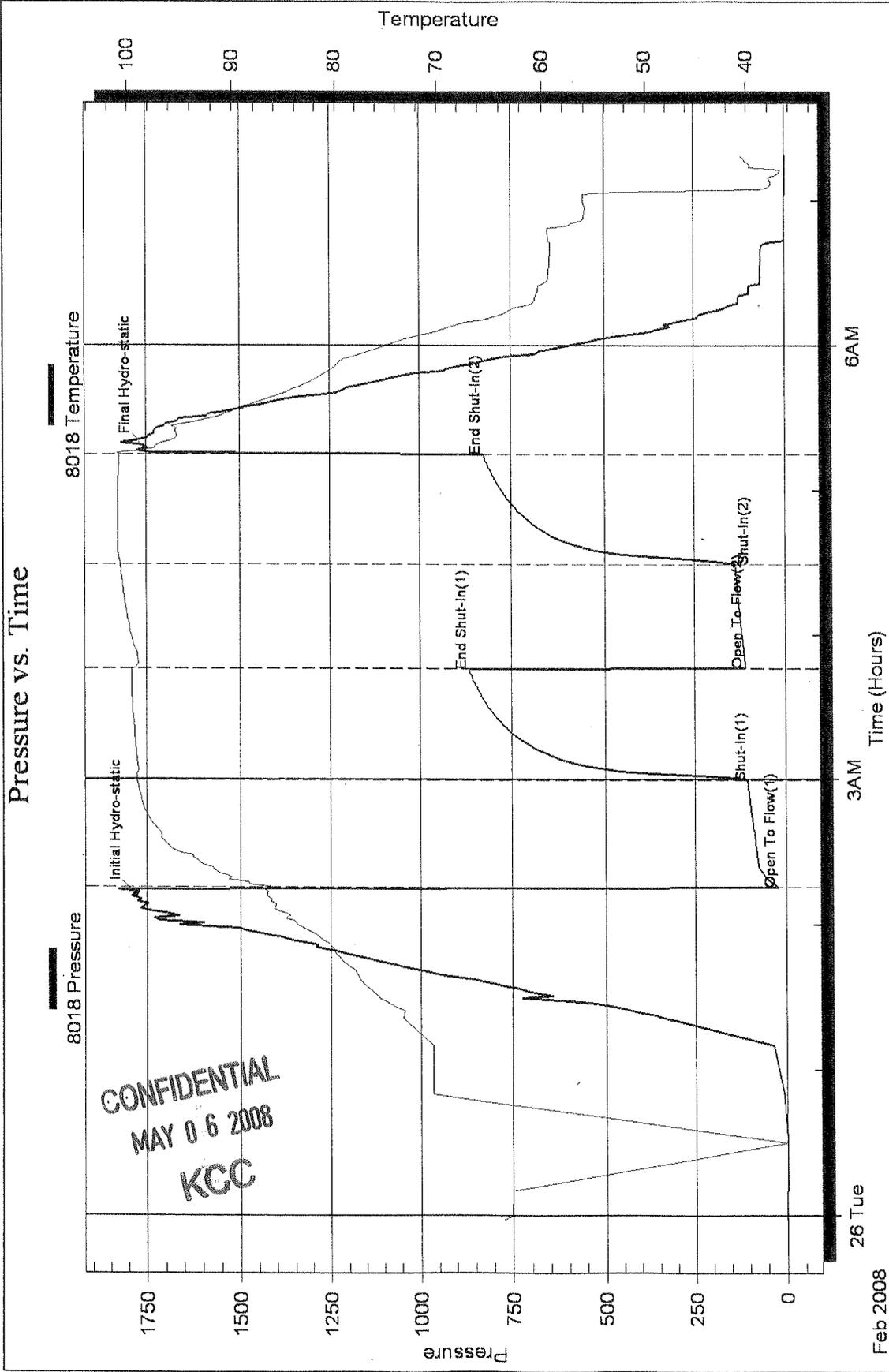
Laboratory Name:

Laboratory Location:

Recovery Comments:

Handwritten notes:
1-10-08
RHS A - YAM
10

Pressure vs. Time



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