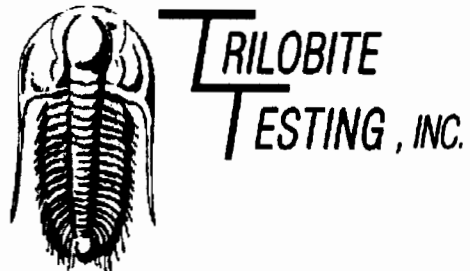


15-069-23452

9-7s-23w



DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operations ,Inc.**

PO Box 86
Plainville,Ks. 67663

ATTN: Marc Downing

9-7s-23w-Graham KS

Mills #9-1

Start Date: 2008.07.31 @ 00:54:37

End Date: 2008.07.31 @ 06:38:37

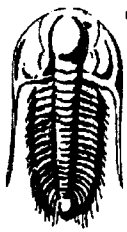
Job Ticket #: 32659 DST #: 1

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

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CONSERVATION DIVISION
WICHITA, KS



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operations, Inc.

PO Box 86
Plainville, Ks. 67663

ATTN: Marc Downing

Mills #9-1

9-7s-23w-Graham KS

Job Ticket: 32659

DST#: 1

Test Start: 2008.07.31 @ 00:54:37

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:10:37

Time Test Ended: 06:38:37

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 32

Interval: **3758.00 ft (KB) To 3796.00 ft (KB) (TVD)**

Total Depth: 3796.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 2462.00 ft (KB)

2457.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6719 Inside

Press@RunDepth: 24.58 psig @ 3763.00 ft (KB)

Start Date: 2008.07.31

End Date:

2008.07.31

Start Time: 00:54:39

End Time:

06:38:37

Capacity: 7000.00 psig

Last Calib.: 2008.07.31

Time On Btm: 2008.07.31 @ 03:10:07

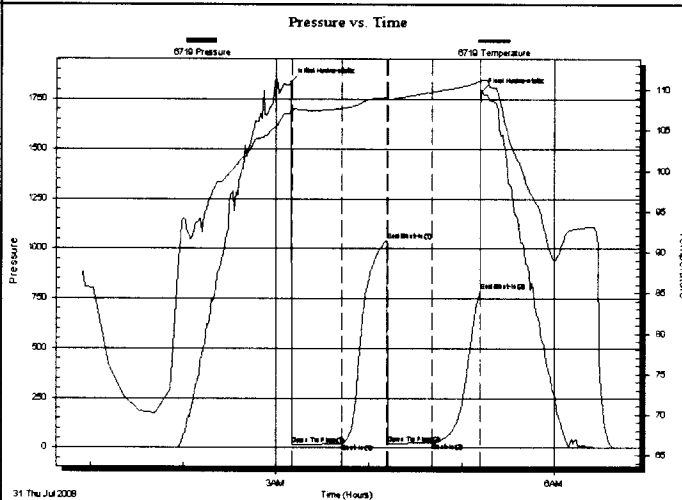
Time Off Btm: 2008.07.31 @ 05:12:37

TEST COMMENT: IFP-Weak Blow, Built to 1/14"

IS-Dead

FFP-Weak Surface Blow in Final 3 Min. of Intv

FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1836.55	107.73	Initial Hydro-static
1	14.20	107.04	Open To Flow (1)
33	19.61	107.71	Shut-In(1)
62	1041.91	109.07	End Shut-In(1)
62	21.79	108.82	Open To Flow (2)
91	24.58	109.74	Shut-In(2)
122	787.18	111.06	End Shut-In(2)
123	1790.96	111.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud Cut Oil-60%O-40%M	0.14
15.00	Oil Cut Mud-20%O-80%M	0.21

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operations, Inc.

Mills #9-1

PO Box 86
Plainville, Ks. 67663

9-7s-23w-Graham KS

Job Ticket: 32659

DST#: 1

ATTN: Marc Downing

Test Start: 2008.07.31 @ 00:54:37

Tool Information

Drill Pipe:	Length:	3749.00 ft	Diameter:	3.80 inches	Volume:	52.59 bbl	Tool Weight:	2000.00 lb	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb	
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	38000.00 lb	
						Total Volume:	52.59 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft							String Weight: Initial	35000.00 lb
Depth to Top Packer:	3758.00 ft							Final	35000.00 lb
Depth to Bottom Packer:	ft								
Interval between Packers:	38.00 ft								
Tool Length:	59.00 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			3738.00	
Shut In Tool	5.00			3743.00	
Hydraulic tool	5.00			3748.00	
Packer	5.00			3753.00	21.00 Bottom Of Top Packer
Packer	5.00			3758.00	
Stubb	1.00			3759.00	
Perforations	4.00			3763.00	
Recorder	0.00	8360	Inside	3763.00	
Recorder	0.00	6719	Inside	3763.00	
Perforations	30.00			3793.00	
Bullnose	3.00			3796.00	38.00 Bottom Packers & Anchor

Total Tool Length: 59.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operations, Inc.

Mills #9-1

PO Box 86
Plainville, Ks. 67663

9-7s-23w-Graham KS

Job Ticket: 32659

DST#: 1

ATTN: Marc Downing

Test Start: 2008.07.31 @ 00:54:37

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 6.79 in³

Resistivity: ohm.m

Salinity: 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
10.00	Mud Cut Oil-60%O-40%M	0.140
15.00	Oil Cut Mud-20%O-80%M	0.210

Total Length: 25.00 ft Total Volume: 0.350 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

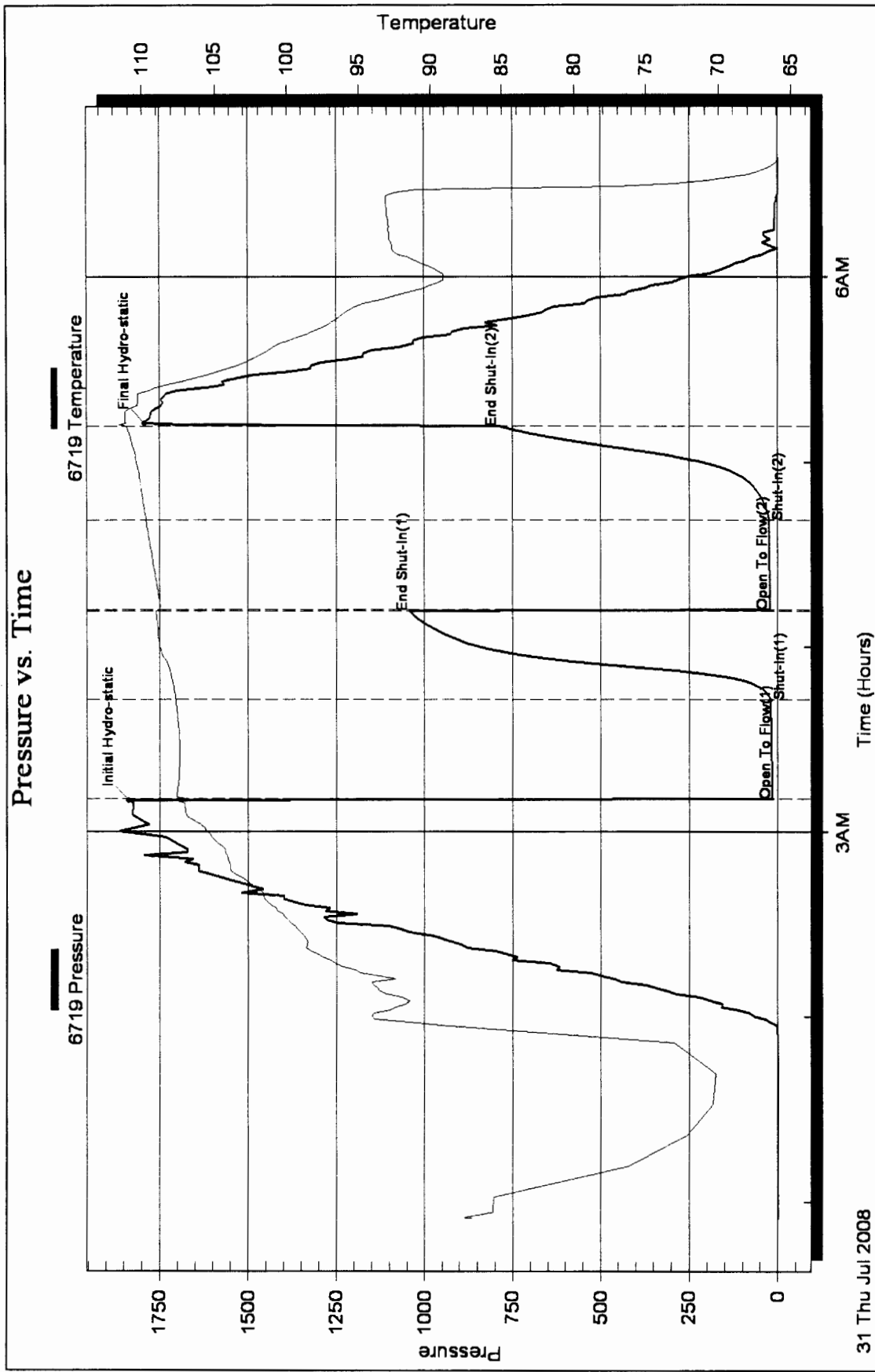
Serial #:

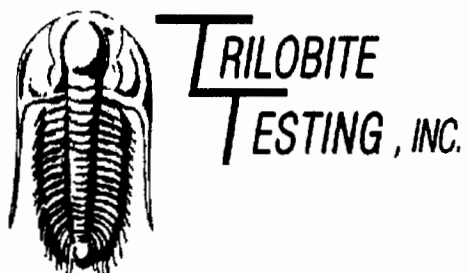
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operations ,Inc.**

PO Box 86
Plainville,Ks. 67663

ATTN: Marc Downing

9-7s-23w-Graham KS

Mills #9-1

Start Date: 2008.07.31 @ 19:04:17

End Date: 2008.08.01 @ 01:48:17

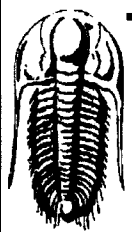
Job Ticket #: 32660 DST #: 2

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

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WICHITA, KS



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H&C Oil Operations, Inc.

PO Box 86
Plainville, Ks. 67663

ATTN: Marc Downing

Mills #9-1

9-7s-23w-Graham KS

Job Ticket: 32660

DST#: 2

Test Start: 2008.07.31 @ 19:04:17

GENERAL INFORMATION:

Formation: **LKC-"E-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:42:17

Time Test Ended: 01:48:17

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 32

Interval: **3840.00 ft (KB) To 3897.00 ft (KB) (TVD)**

Total Depth: 3897.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 2462.00 ft (KB)

2457.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6719 Inside

Press@RunDepth: 254.76 psig @ 3843.00 ft (KB)

Start Date: 2008.07.31

End Date:

2008.08.01

Start Time: 19:04:19

End Time:

01:48:17

Capacity: 7000.00 psig

Last Calib.: 2008.08.01

Time On Btm: 2008.07.31 @ 20:41:47

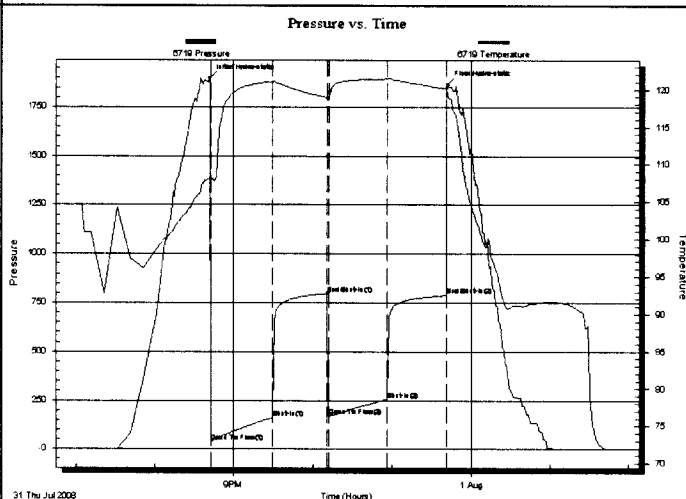
Time Off Btm: 2008.07.31 @ 23:42:17

TEST COMMENT: IFP-Good Blow, BOB in 12 Mn.

ISI-Blowback Built to 2"

FFP-Good Blow, BOB in 10 Mn.

FSI-Blowback Built to 2-1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1898.20	108.07	Initial Hydro-static
1	36.61	107.85	Open To Flow (1)
48	161.24	121.05	Shut-In (1)
90	797.08	118.93	End Shut-In (1)
91	167.87	119.06	Open To Flow (2)
135	254.76	121.44	Shut-In (2)
180	788.03	120.15	End Shut-In (2)
181	1867.42	119.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	Free Oil	0.56
30.00	MCO-70%O-30%M	0.42
120.00	OCMV-15%O-30%W-55%M	1.68
300.00	MW-90%W-10%M	4.21

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operations, Inc.

Mills #9-1

PO Box 86
Plainville, Ks. 67663

9-7s-23w-Graham KS

Job Ticket: 32660

DST#: 2

ATTN: Marc Downing

Test Start: 2008.07.31 @ 19:04:17

Tool Information

Drill Pipe:	Length: 3844.00 ft	Diameter: 3.80 inches	Volume: 53.92 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 44000.00 lb
			Total Volume: 53.92 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3840.00 ft			Final 37000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	78.00 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			3820.00	
Shut In Tool	5.00			3825.00	
Hydraulic tool	5.00			3830.00	
Packer	5.00			3835.00	21.00 Bottom Of Top Packer
Packer	5.00			3840.00	
Stubb	1.00			3841.00	
Perforations	1.00			3842.00	
Recorder	0.00	8360	Outside	3842.00	
Change Over Sub	1.00			3843.00	
Recorder	0.00	6719	Inside	3843.00	
Blank Spacing	31.00			3874.00	
Change Over Sub	1.00			3875.00	
Perforations	19.00			3894.00	
Bullnose	3.00			3897.00	57.00 Bottom Packers & Anchor

Total Tool Length: 78.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operations, Inc.

Mills #9-1

PO Box 86
Plainville, Ks. 67663

9-7s-23w-Graham KS

Job Ticket: 32660

DST#: 2

ATTN: Marc Downing

Test Start: 2008.07.31 @ 19:04:17

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

50000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	Free Oil	0.561
30.00	MCO-70%O-30%M	0.421
120.00	OCMV-15%O-30%W-55%M	1.683
300.00	MW-90%W-10%M	4.208

Total Length: 490.00 ft

Total Volume: 6.873 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

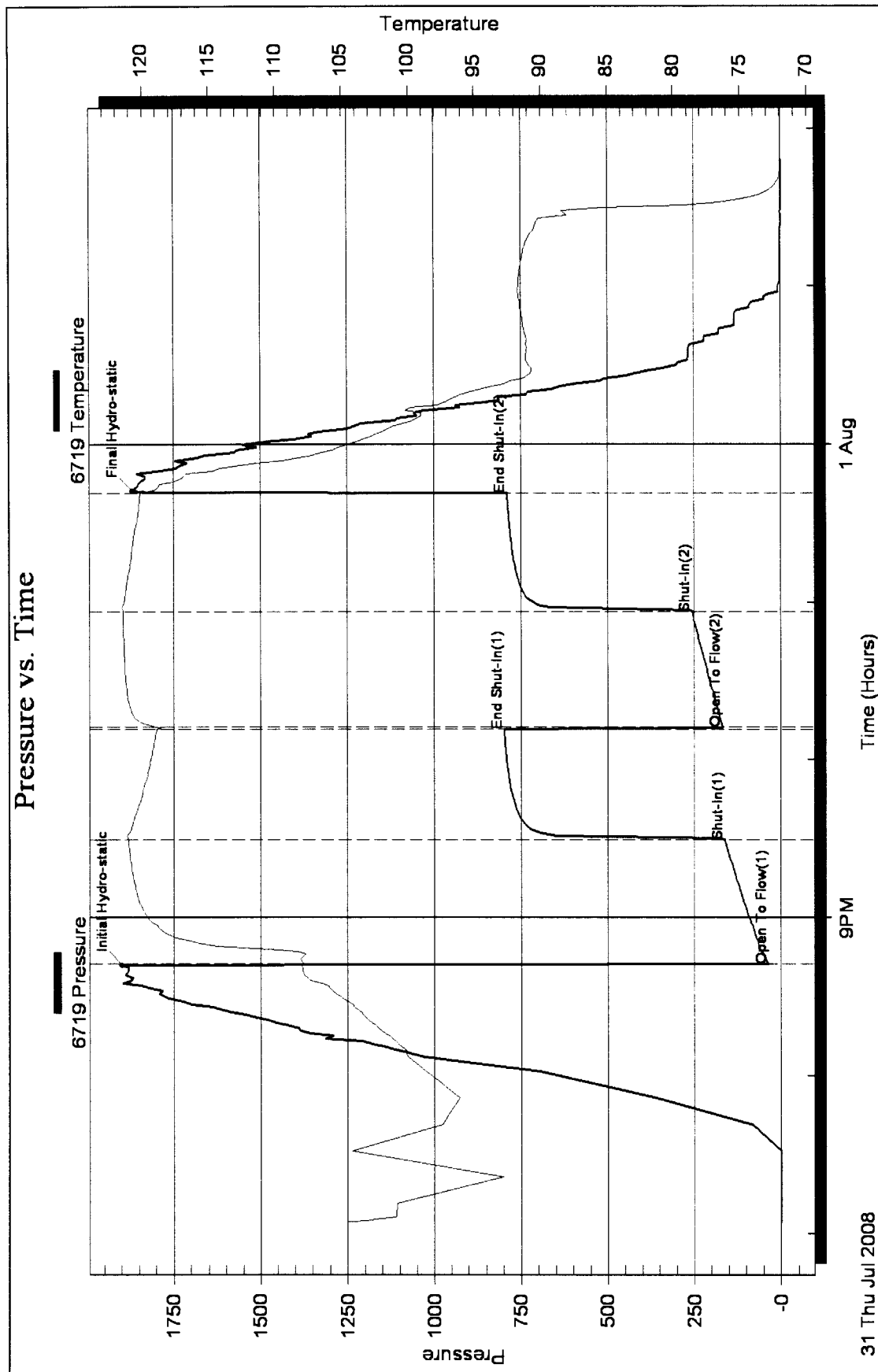
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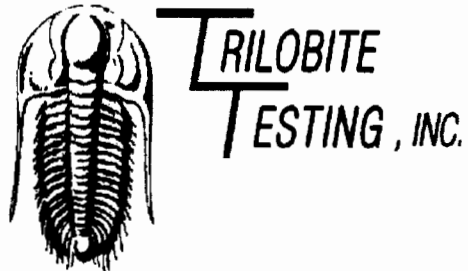
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operations ,Inc.**

PO Box 86
Plainville,Ks. 67663

ATTN: Marc Downing

9-7s-23w-Graham KS

Mills #9-1

Start Date: 2008.08.01 @ 10:09:21

End Date: 2008.08.01 @ 15:43:21

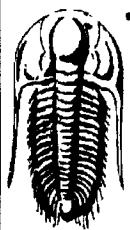
Job Ticket #: 32661 DST #: 3

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

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WICHITA, KS



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operations, Inc.

PO Box 86
Plainville, Ks. 67663

ATTN: Marc Downing

Mills #9-1

9-7s-23w-Graham KS

Job Ticket: 32661

DST#: 3

Test Start: 2008.08.01 @ 10:09:21

GENERAL INFORMATION:

Formation: **LKC-"K-L"**

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

Time Tool Opened: 12:22:21

Time Test Ended: 15:43:21

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 32

Interval: **3900.00 ft (KB) To 3930.00 ft (KB) (TVD)**

Total Depth: 3930.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 2462.00 ft (KB)

2457.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6719

Inside

Press@RunDepth: 14.82 psig @ 3905.00 ft (KB)

Start Date: 2008.08.01

End Date:

2008.08.01

Start Time: 10:09:23

End Time:

15:43:21

Capacity: 7000.00 psig

Last Calib.: 2008.08.01

Time On Btm: 2008.08.01 @ 12:21:51

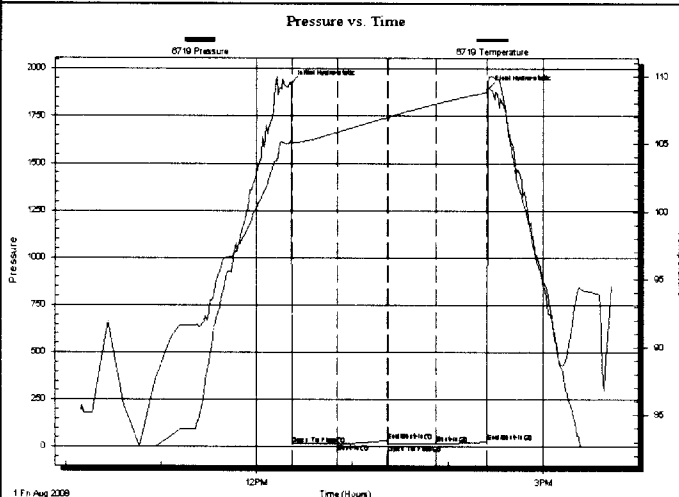
Time Off Btm: 2008.08.01 @ 14:24:51

TEST COMMENT: IFF-Weak Surface Blow, Dead in 15 Min.

ISI-Dead

FFP-Dead

FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1922.85	105.40	Initial Hydro-static
1	14.07	105.12	Open To Flow (1)
29	15.06	105.84	Shut-In(1)
60	33.03	106.93	End Shut-In(1)
61	13.77	106.94	Open To Flow (2)
91	14.82	107.95	Shut-In(2)
123	26.19	108.83	End Shut-In(2)
123	1894.48	109.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud W/Oil Scum	0.04

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operations, Inc.

Mills #9-1

PO Box 86
Plainville, Ks. 67663

9-7s-23w-Graham KS

Job Ticket: 32661

DST#: 3

ATTN: Marc Downing

Test Start: 2008.08.01 @ 10:09:21

Tool Information

Drill Pipe:	Length: 3906.00 ft	Diameter: 3.80 inches	Volume: 54.79 bbl	Tool Weight:	2000.00 lb	
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb	
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	38000.00 lb	
			Total Volume:	54.79 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	35000.00 lb	
Depth to Top Packer:	3900.00 ft			Final	35000.00 lb	
Depth to Bottom Packer:	ft					
Interval between Packers:	30.00 ft					
Tool Length:	51.00 ft					
Number of Packers:	2	Diameter:	6.75 inches			
Tool Comments:						

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3880.00	
Shut In Tool	5.00			3885.00	
Hydraulic tool	5.00			3890.00	
Packer	5.00			3895.00	21.00 Bottom Of Top Packer
Packer	5.00			3900.00	
Stubb	1.00			3901.00	
Perforations	4.00			3905.00	
Recorder	0.00	8360	Inside	3905.00	
Recorder	0.00	6719	Inside	3905.00	
Perforations	22.00			3927.00	
Bullnose	3.00			3930.00	30.00 Bottom Packers & Anchor

Total Tool Length: 51.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operations, Inc.

Mills #9-1

PO Box 86
Plainville, Ks. 67663

9-7s-23w-Graham KS

Job Ticket: 32661

DST#: 3

ATTN: Marc Downing

Test Start: 2008.08.01 @ 10:09:21

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: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud W/Oil Scum	0.042

Total Length:

3.00 ft

Total Volume:

0.042 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

