



DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc.**

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Kraus #24-1

24 8s 22w Graham KS

Start Date: 2012.09.02 @ 14:40:00

End Date: 2012.09.02 @ 20:48:30

Job Ticket #: 46186 DST #: 1

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

Printed: 2012.09.11 @ 11:43:54



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46186

DST#: 1

ATTN: Marc Downing

Test Start: 2012.09.02 @ 14:40:00

GENERAL INFORMATION:

Formation: **LKC-A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:48:00

Time Test Ended: 20:48:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3332.00 ft (KB) To 3370.00 ft (KB) (TVD)

Reference Elevations: 2116.00 ft (KB)

Total Depth: 3370.00 ft (KB) (TVD)

2108.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 12.29 psig @ 3336.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.02

End Date:

2012.09.02

Last Calib.:

2012.09.02

Start Time: 14:40:05

End Time:

20:48:29

Time On Btm:

2012.09.02 @ 16:35:00

Time Off Btm:

2012.09.02 @ 18:56:00

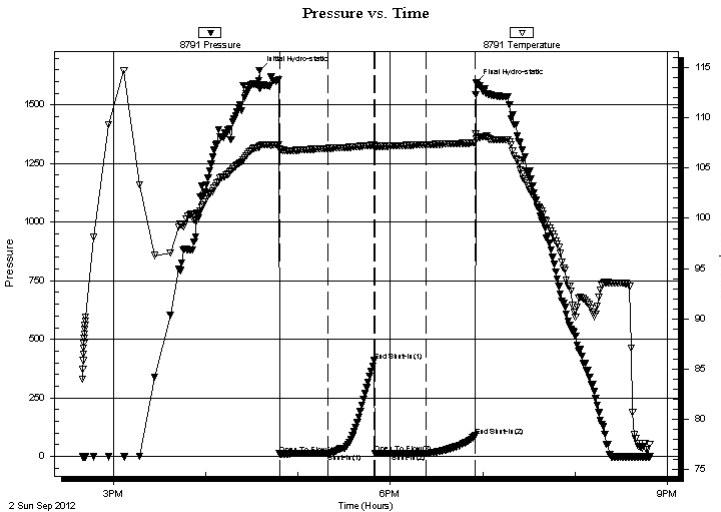
TEST COMMENT: IF: Weak surface blow, Died in 3 mins.

IS: No blow back

FF: No blow

FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1647.38	107.14	Initial Hydro-static
13	10.65	106.88	Open To Flow (1)
45	11.86	106.96	Shut-In(1)
75	408.69	107.31	End Shut-In(1)
75	12.78	107.13	Open To Flow (2)
108	12.29	107.34	Shut-In(2)
140	87.75	107.52	End Shut-In(2)
141	1593.17	107.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud with 2" free oil	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46186

DST#: 1

ATTN: Marc Downing

Test Start: 2012.09.02 @ 14:40:00

Tool Information

Drill Pipe:	Length: 3343.00 ft	Diameter: 3.80 inches	Volume: 46.89 bbl	Tool Weight: 2000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 46.89 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3332.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	58.00 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			3317.00	
Hydraulic tool	5.00			3322.00	
Packer	5.00			3327.00	20.00 Bottom Of Top Packer
Packer	5.00			3332.00	
Stubb	1.00			3333.00	
Perforations	2.00			3335.00	
Change Over Sub	1.00			3336.00	
Recorder	0.00	8791	Inside	3336.00	
Recorder	0.00	8673	Outside	3336.00	
Blank Spacing	30.00			3366.00	
Change Over Sub	1.00			3367.00	
Bullnose	3.00			3370.00	38.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46186

DST#: 1

ATTN: Marc Downing

Test Start: 2012.09.02 @ 14:40:00

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: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud with 2" free oil	0.070

Total Length: 5.00 ft Total Volume: 0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

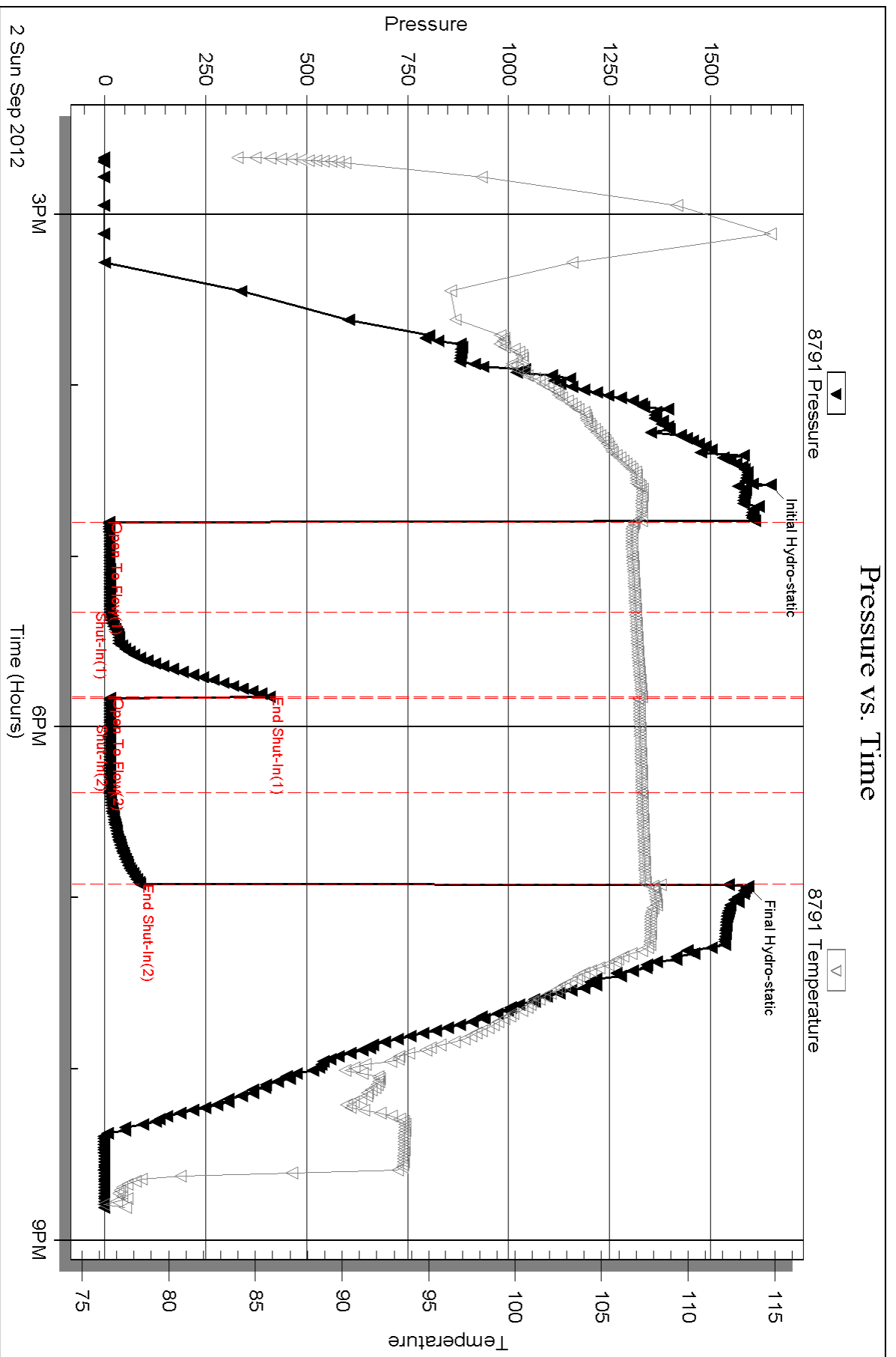
Serial #: 8791

Inside

H&C Oil Operating Inc.

Kraus #24-1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 46186

Printed: 2012.09.11 @ 11:43:59



DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc.**

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Kraus #24-1

24 8s 22w Graham KS

Start Date: 2012.09.03 @ 04:00:00

End Date: 2012.09.03 @ 09:57:30

Job Ticket #: 46187 DST #: 2

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

Printed: 2012.09.11 @ 11:42:43



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46187

DST#: 2

ATTN: Marc Downing

Test Start: 2012.09.03 @ 04:00:00

GENERAL INFORMATION:

Formation: **LKC-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:36:30

Time Test Ended: 09:57:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3365.00 ft (KB) To 3388.00 ft (KB) (TVD)

Reference Elevations: 2116.00 ft (KB)

Total Depth: 3388.00 ft (KB) (TVD)

2108.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 190.97 psig @ 3366.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.03

End Date:

2012.09.03

Last Calib.:

2012.09.03

Start Time:

04:00:05

End Time:

09:57:29

Time On Btm:

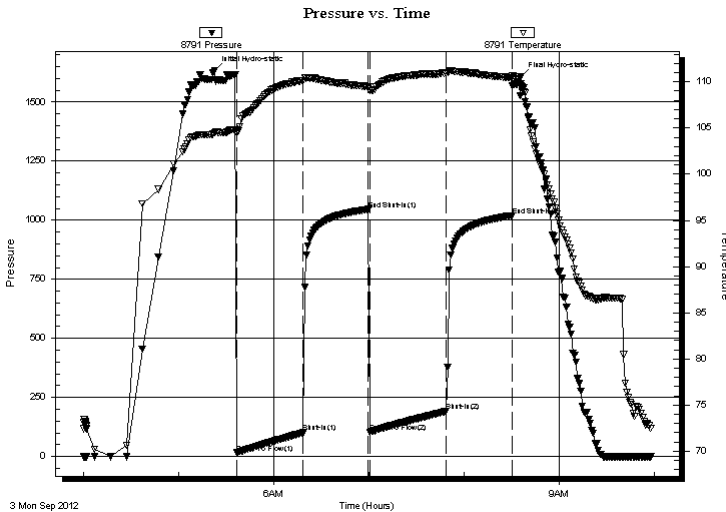
2012.09.03 @ 05:22:30

Time Off Btm:

2012.09.03 @ 08:36:00

TEST COMMENT: IF: Weak blow, Built to 3" Over 45 mins.
IS: No blow back over 45 mins.
FF: Weak blow, Built to 5" over 45 mins.
FS: No blow back over 45 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1634.36	104.47	Initial Hydro-static
14	15.27	104.48	Open To Flow (1)
56	100.94	110.17	Shut-In(1)
97	1046.21	109.48	End Shut-In(1)
98	103.64	109.08	Open To Flow (2)
146	190.97	110.89	Shut-In(2)
188	1019.91	110.45	End Shut-In(2)
194	1607.26	109.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	Water-100%	4.53

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46187

DST#: 2

ATTN: Marc Downing

Test Start: 2012.09.03 @ 04:00:00

Tool Information

Drill Pipe:	Length: 3375.00 ft	Diameter: 3.88 inches	Volume: 49.36 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	480000.0 lb
			<u>Total Volume: 49.36 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3365.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	23.00 ft				
Tool Length:	43.00 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			3350.00	
Hydraulic tool	5.00			3355.00	
Packer	5.00			3360.00	20.00 Bottom Of Top Packer
Packer	5.00			3365.00	
Stubb	1.00			3366.00	
Recorder	0.00	8791	Inside	3366.00	
Recorder	0.00	8673	Outside	3366.00	
Perforations	19.00			3385.00	
Bullnose	3.00			3388.00	23.00 Bottom Packers & Anchor
Total Tool Length:	43.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46187

DST#: 2

ATTN: Marc Downing

Test Start: 2012.09.03 @ 04:00:00

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:

60000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: 0.10 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
310.00	Water-100%	4.534

Total Length: 310.00 ft Total Volume: 4.534 bbl

Num Fluid Samples: 0

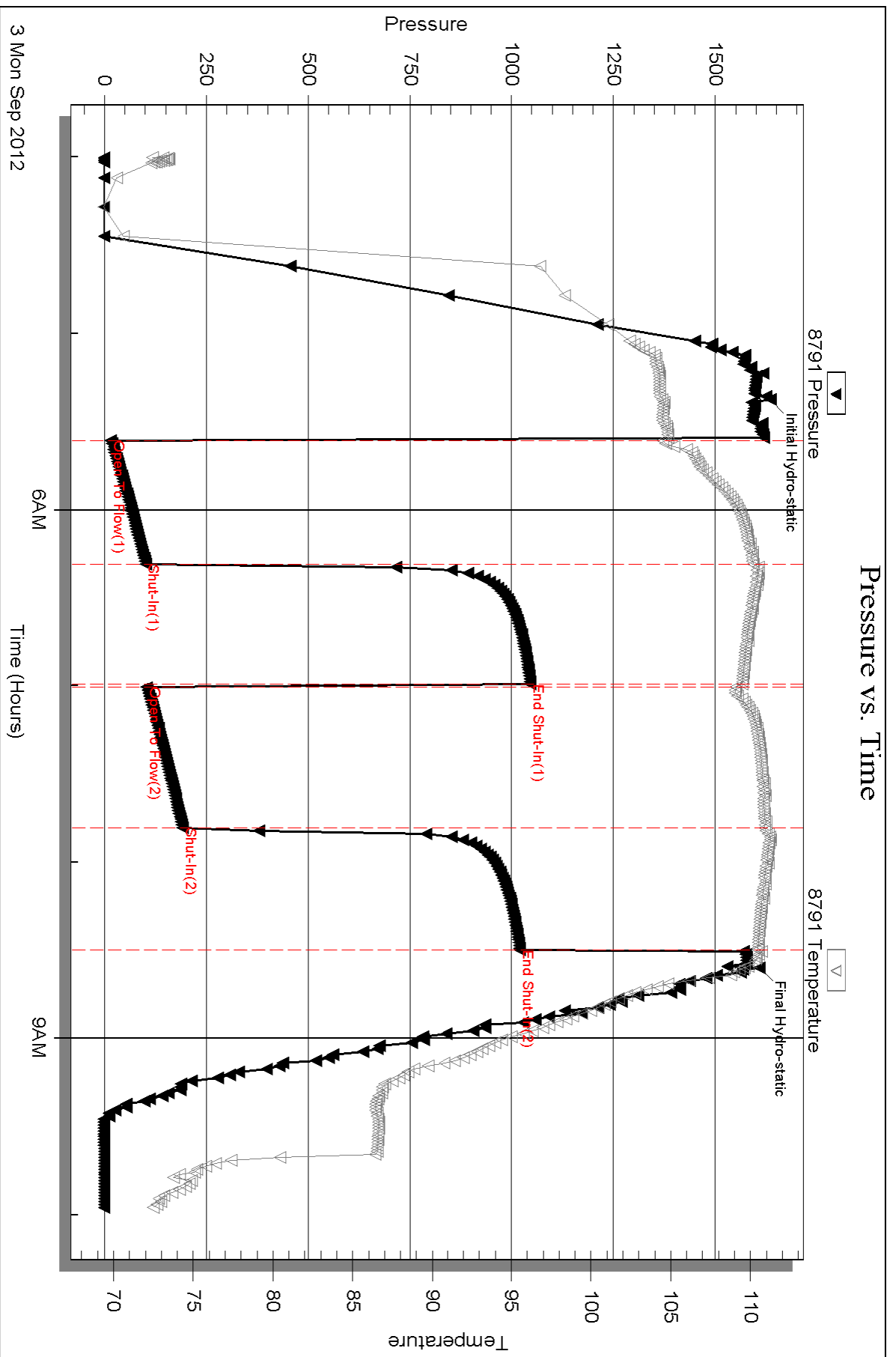
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .1@80=60000



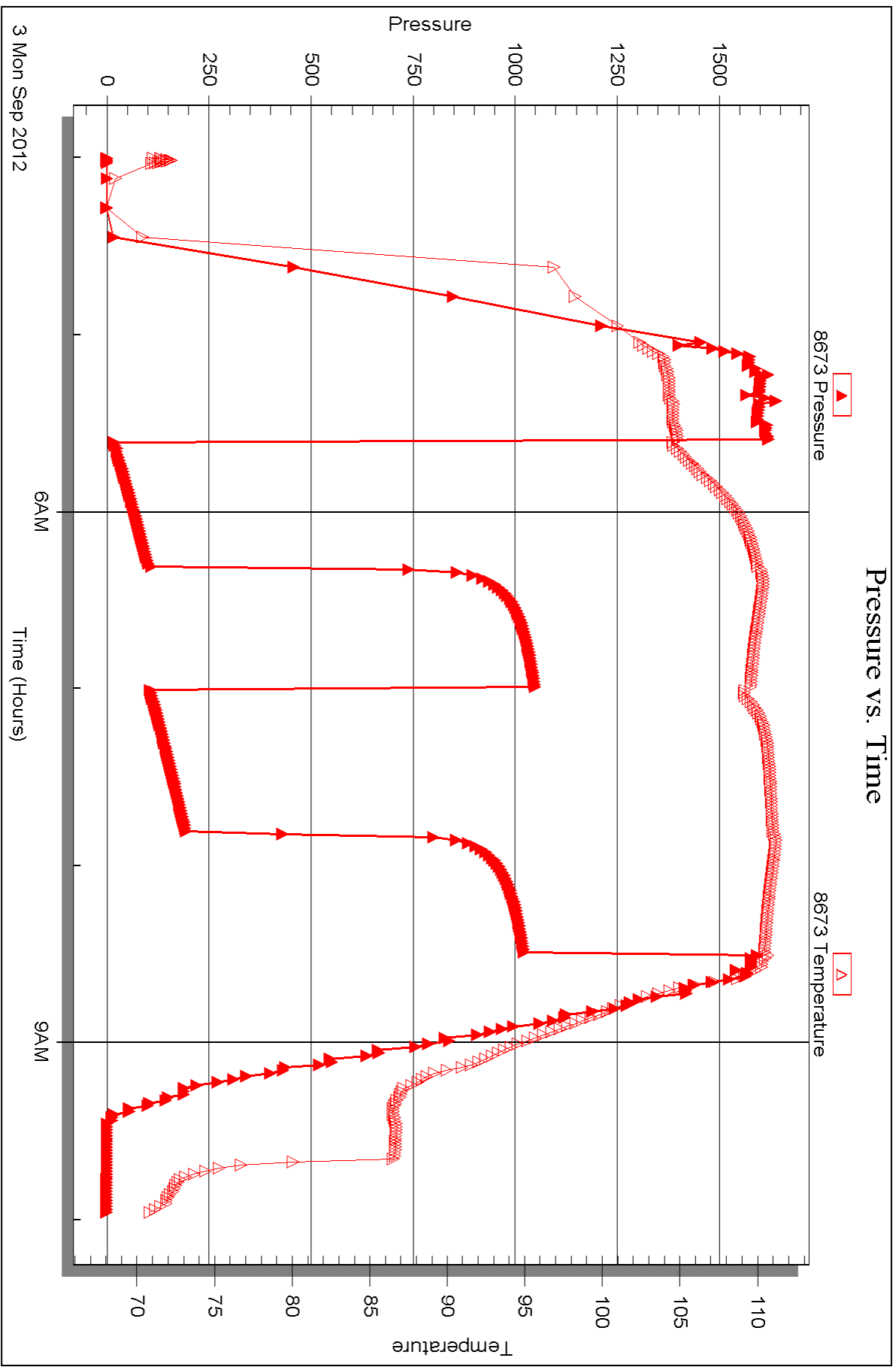
Serial #: 8673

Outside

H&C Oil Operating Inc.

Kraus #24-1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc.**

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Kraus #24-1

24 8s 22w Graham KS

Start Date: 2012.09.03 @ 17:40:00

End Date: 2012.09.03 @ 23:16:00

Job Ticket #: 46187 DST #: 3

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

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46187

DST#: 3

ATTN: Marc Downing

Test Start: 2012.09.03 @ 17:40:00

GENERAL INFORMATION:

Formation: **LKC D,E,F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:33:00

Time Test Ended: 23:16:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3384.00 ft (KB) To 3427.00 ft (KB) (TVD)

Reference Elevations: 2116.00 ft (KB)

Total Depth: 3427.00 ft (KB) (TVD)

2108.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 24.31 psig @ 3390.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.03

End Date:

2012.09.03

Last Calib.:

2012.09.03

Start Time: 17:40:05

End Time:

23:15:59

Time On Btm:

2012.09.03 @ 19:31:00

Time Off Btm:

2012.09.03 @ 21:25:30

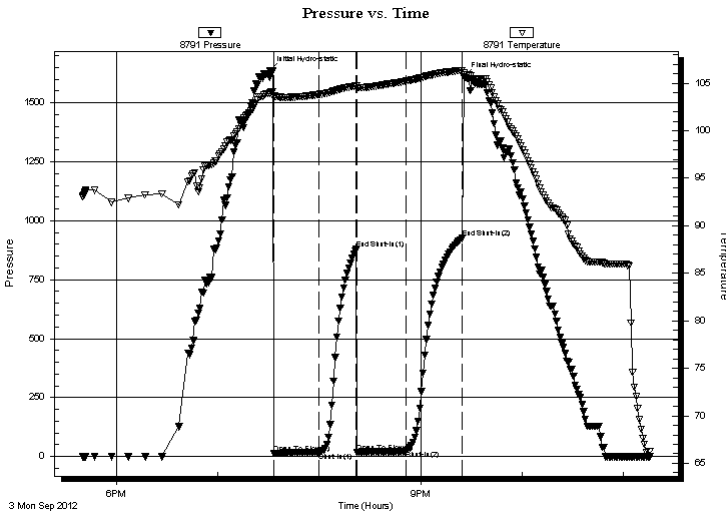
TEST COMMENT: IF: Weak surface blow, Died in 20 mins.

IS: No blow back over 30 mins.

FF: No blow over 30 mins.

FS: No blow back over 30 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1637.31	104.00	Initial Hydro-static
2	13.54	103.52	Open To Flow (1)
29	18.06	103.83	Shut-In(1)
51	879.37	104.74	End Shut-In(1)
52	18.89	104.41	Open To Flow (2)
81	24.31	105.23	Shut-In(2)
114	925.68	106.36	End Shut-In(2)
115	1611.13	106.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud with oil specs	0.14

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46187

DST#: 3

ATTN: Marc Downing

Test Start: 2012.09.03 @ 17:40:00

Tool Information

Drill Pipe:	Length: 3377.00 ft	Diameter: 3.80 inches	Volume: 47.37 bbl	Tool Weight:	2000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	48000.00 lb
			<u>Total Volume: 47.37 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3384.00 ft			Final	43000.00 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
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Shut In Tool	5.00			3369.00	
Hydraulic tool	5.00			3374.00	
Packer	5.00			3379.00	20.00 Bottom Of Top Packer
Packer	5.00			3384.00	
Stubb	1.00			3385.00	
Perforations	4.00			3389.00	
Change Over Sub	1.00			3390.00	
Recorder	0.00	8791	Inside	3390.00	
Recorder	0.00	8673	Outside	3390.00	
Blank Spacing	31.00			3421.00	
Change Over Sub	1.00			3422.00	
Perforations	2.00			3424.00	
Bullnose	3.00			3427.00	43.00 Bottom Packers & Anchor

Total Tool Length: 63.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46187

DST#: 3

ATTN: Marc Downing

Test Start: 2012.09.03 @ 17:40:00

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud w ith oil specs	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

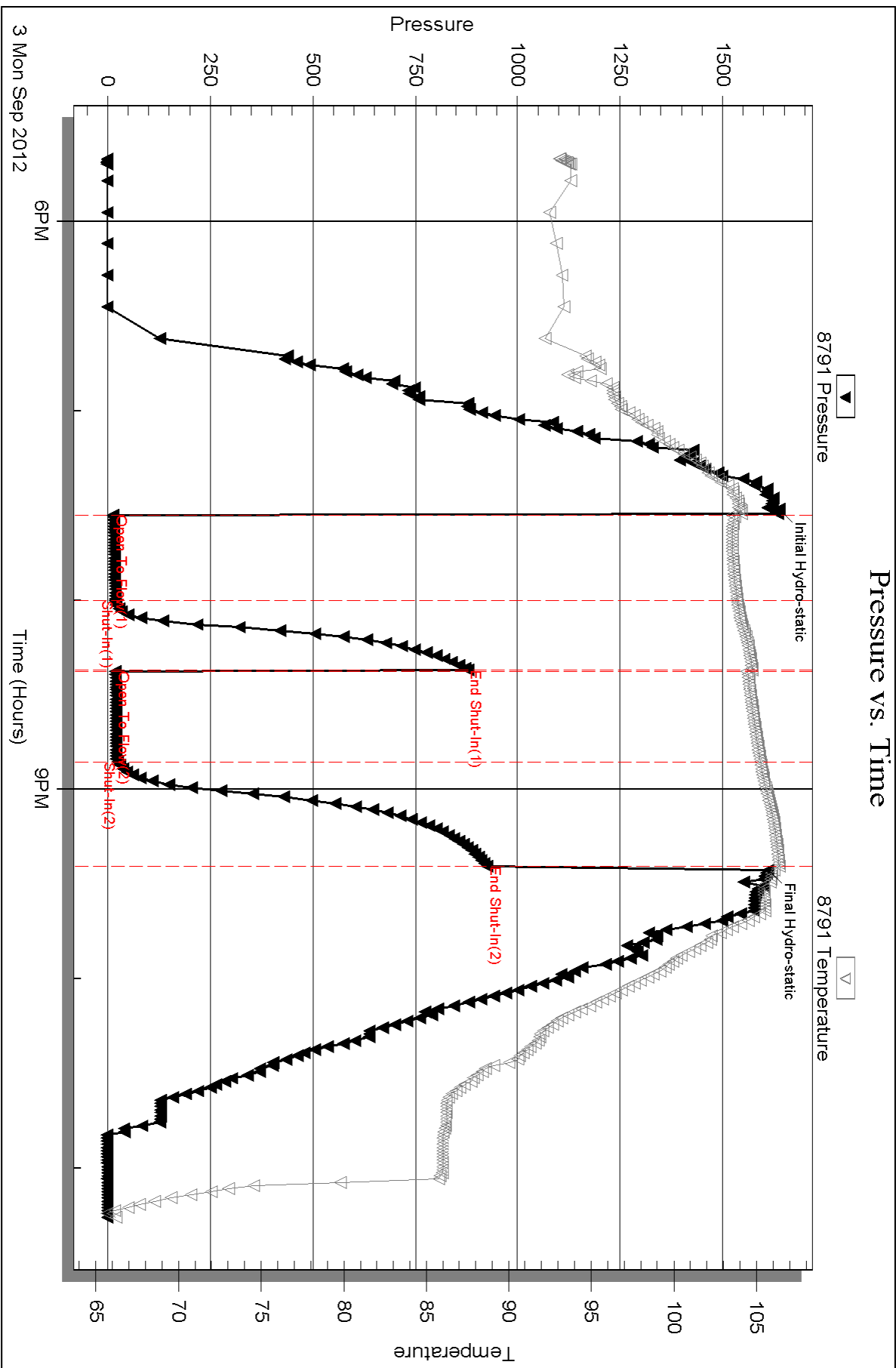
Serial #: 8791

Inside

H&C Oil Operating Inc.

Kraus #24-1

DST Test Number: 3

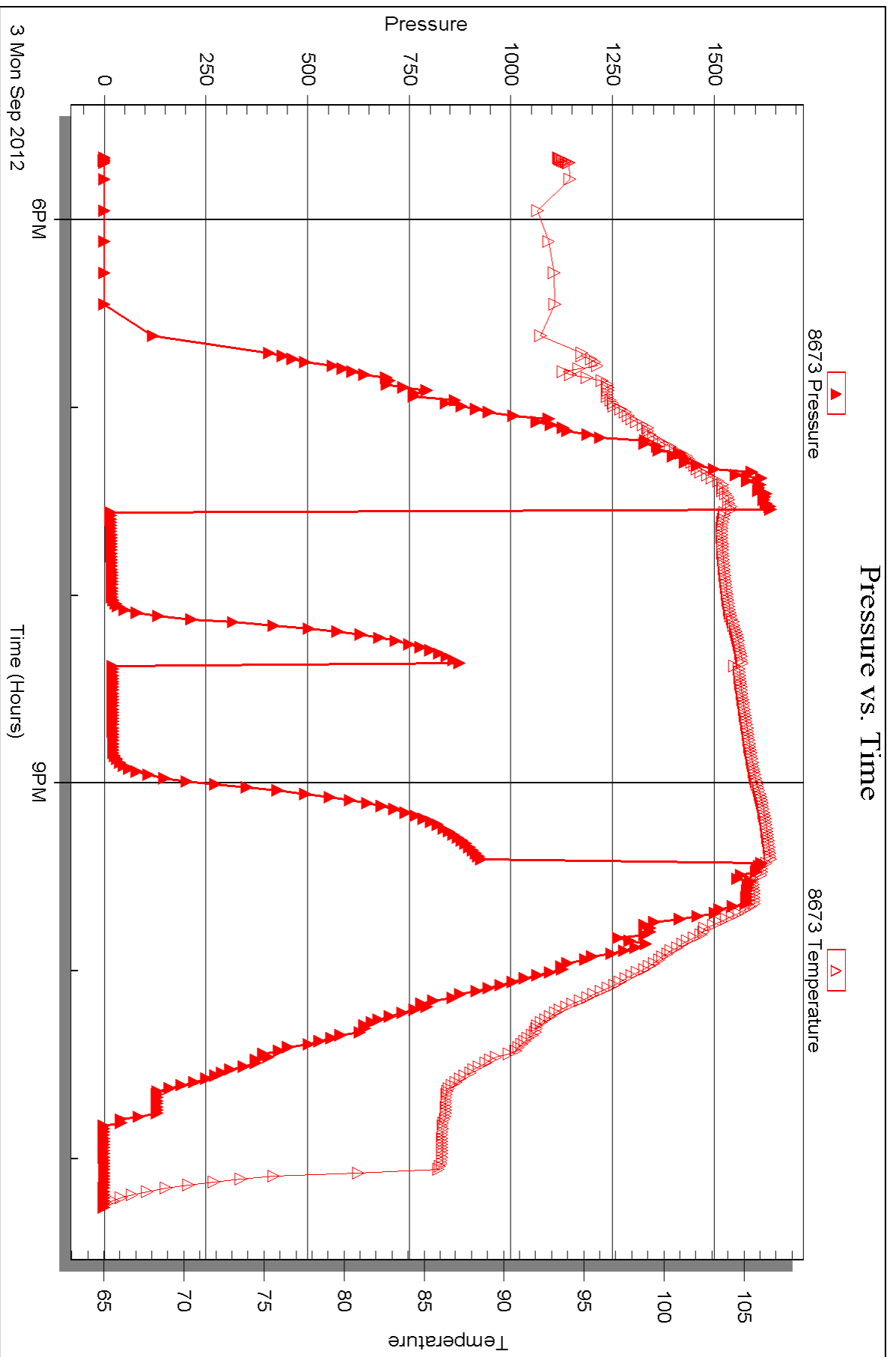


Serial #: 8673

Outside H&C Oil Operating Inc.

Kraus #24-1

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 46187

Printed: 2012.09.11 @ 11:42:03



DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc.**

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Kraus #24-1

24 8s 22w Graham KS

Start Date: 2012.09.04 @ 10:00:00

End Date: 2012.09.04 @ 14:38:00

Job Ticket #: 46188 DST #: 4

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

Printed: 2012.09.11 @ 11:41:06



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46188

DST#: 4

ATTN: Marc Downing

Test Start: 2012.09.04 @ 10:00:00

GENERAL INFORMATION:

Formation: **LKC H,J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:19:30

Time Test Ended: 14:38:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreutzer Jr.

Unit No: 61

Interval: 3452.00 ft (KB) To 3515.00 ft (KB) (TVD)

Reference Elevations: 2116.00 ft (KB)

Total Depth: 3515.00 ft (KB) (TVD)

2108.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 21.76 psig @ 3458.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.04

End Date:

2012.09.04

Last Calib.:

2012.09.04

Start Time: 10:00:05

End Time:

14:37:59

Time On Btm:

2012.09.04 @ 11:18:00

Time Off Btm:

2012.09.04 @ 13:25:30

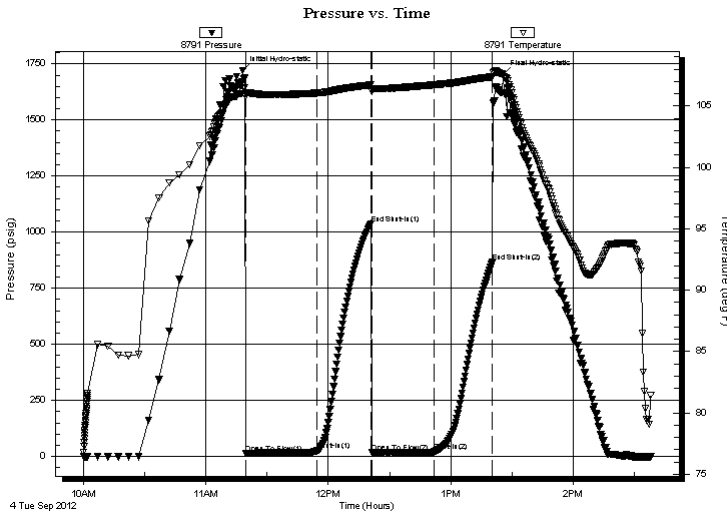
TEST COMMENT: IF: Weak blow, Died in 8 mins.

IS: No blow back

FF: No blow

FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1721.00	106.14	Initial Hydro-static
2	14.19	105.78	Open To Flow (1)
37	25.54	106.05	Shut-In(1)
63	1038.53	106.72	End Shut-In(1)
64	17.69	106.19	Open To Flow (2)
94	21.76	106.72	Shut-In(2)
123	867.55	107.38	End Shut-In(2)
128	1702.79	107.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud-100%m	0.14

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46188

DST#: 4

ATTN: Marc Downing

Test Start: 2012.09.04 @ 10:00:00

Tool Information

Drill Pipe:	Length: 3438.00 ft	Diameter: 3.80 inches	Volume: 48.23 bbl	Tool Weight: 2000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 48.23 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3452.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	80.00 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			3437.00	
Hydraulic tool	5.00			3442.00	
Packer	5.00			3447.00	20.00 Bottom Of Top Packer
Packer	5.00			3452.00	
Stubb	1.00			3453.00	
Perforations	4.00			3457.00	
Change Over Sub	1.00			3458.00	
Recorder	0.00	8791	Inside	3458.00	
Recorder	0.00	8673	Outside	3458.00	
Blank Spacing	30.00			3488.00	
Change Over Sub	21.00			3509.00	
Bullnose	3.00			3512.00	60.00 Bottom Packers & Anchor

Total Tool Length: 80.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

24 8s 22w Graham KS

PO Box 86
Plainville KS 67663

Kraus #24-1

Job Ticket: 46188

DST#: 4

ATTN: Marc Downing

Test Start: 2012.09.04 @ 10:00:00

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: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1900.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud-100%m	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

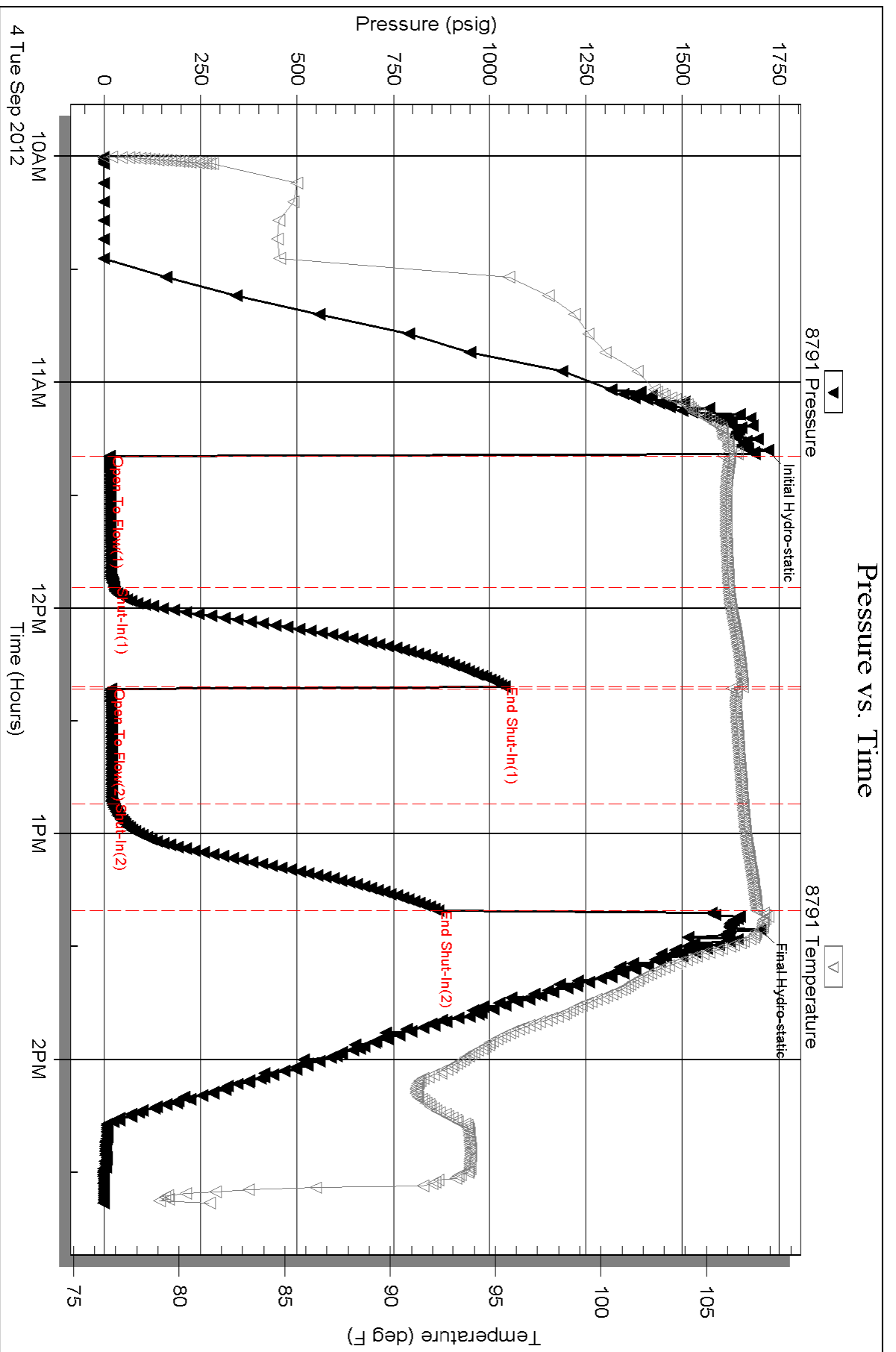
Serial #: 8791

Inside

H&C Oil Operating Inc.

Kraus #24-1

DST Test Number: 4



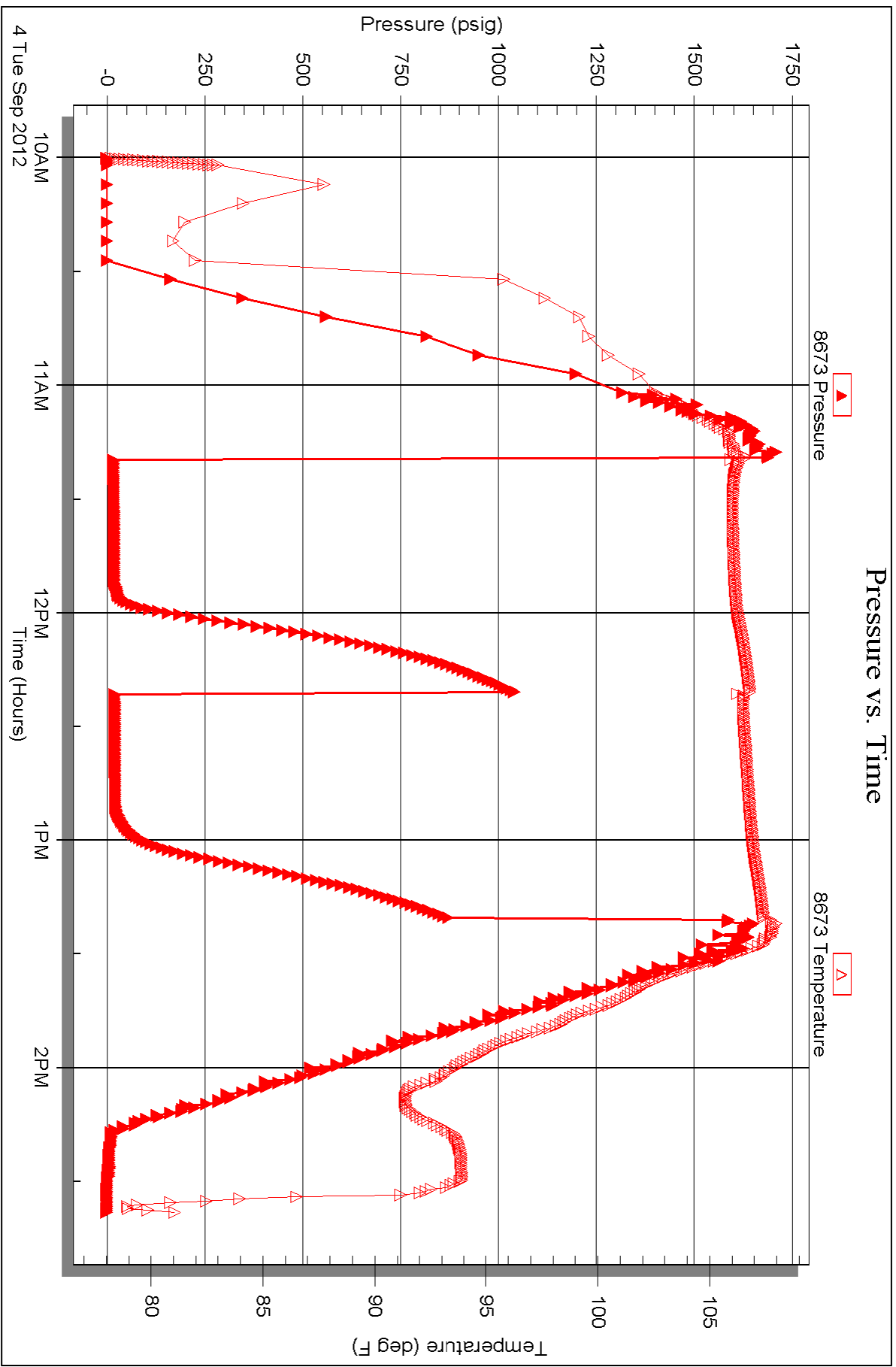
Serial #: 8673

Outside

H&C Oil Operating Inc.

Kraus #24-1

DST Test Number: 4





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. **46186**

4/10

Well Name & No. Kraus #24-1 Test No. 1 Date 9-2-2012
 Company HEC oil operating Inc Elevation 2116 KB 2108 GL
 Address P.O. Box 86 Plainville KS. 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #2
 Location: Sec. 24 Twp. 8S Rge. 22W Co. Graham State Ks

Interval Tested 3332 3370 Zone Tested LKC-A
 Anchor Length 38 Drill Pipe Run 3343 Mud Wt. 9.0
 Top Packer Depth 3327 Drill Collars Run -0- Vis 45
 Bottom Packer Depth 3332 Wt. Pipe Run -0- WL 6.8
 Total Depth 3370 Chlorides 1,700 ppm System LCM 1#

Blow Description IFI: Weak surface blow, Died in 3mins.
ISI: No blow back
FF: No blow
FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud with air, oil on top</u>				

Rec Total 5 BHT 107 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1647</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>13:40</u>
(B) First Initial Flow <u>11</u>	<input type="checkbox"/> Jars	T-Started <u>14:40</u>
(C) First Final Flow <u>12</u>	<input type="checkbox"/> Safety Joint	T-Open <u>16:50</u>
(D) Initial Shut-In <u>409</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>18:50</u>
(E) Second Initial Flow <u>13</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>20:50</u>
(F) Second Final Flow <u>12</u>	<input checked="" type="checkbox"/> Mileage <u>80x2 = 160x1.55 = 248</u>	Comments _____
(G) Final Shut-In <u>88</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>1593</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1398</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1398</u>	

Approved By _____ Our Representative Chuck Kuyta

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. **46187**

4/10

Well Name & No. Kraus # 24-1 Test No. 2 Date 9-3-2012
 Company H&C oil operating Inc. Elevation 2116 KB 2108 GL
 Address P.O. Box 86 Plainville Ks. 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #2
 Location: Sec. 24 Twp. 8S Rge. 22W Co. Graham State Ks.

Interval Tested 3365 3388 Zone Tested LKC-C
 Anchor Length 23 Drill Pipe Run 3375 Mud Wt. 9.0
 Top Packer Depth 3360 Drill Collars Run -0- Vis 45
 Bottom Packer Depth 3365 Wt. Pipe Run -0- WL 6.8
 Total Depth 3388 Chlorides 1,700 ppm System LCM 1#

Blow Description IF: Weak blow, Built to 3 in over 45 mins.

ISF: No blow back over 45 mins.

FF: Weak blow, Built to 5 in. over 45 mins.

FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>water</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 310 BHT 111 Gravity 1.1 API RW .1 @ 80 °F Chlorides 69,000 ppm

(A) Initial Hydrostatic 1634 Test 1150 T-On Location 3:30

(B) First Initial Flow 15 Jars T-Started 4:00

(C) First Final Flow 101 Safety Joint T-Open 5:36

(D) Initial Shut-In 1046 Circ Sub T-Pulled 8:30

(E) Second Initial Flow 104 Hourly Standby T-Out 9:57

(F) Second Final Flow 191 Mileage 80x2 = 160x1.55 248 Comments

(G) Final Shut-In 1020 Sampler

(H) Final Hydrostatic 1607 Straddle Ruined Shale Packer

Initial Open 45 Shale Packer Ruined Packer

Initial Shut-In 45 Extra Packer Extra Copies

Final Flow 45 Extra Recorder Sub Total 0

Final Shut-In 45 Day Standby Total 1398

Accessibility MP/DST Disc't

Approved By _____ Our Representative Chuck Hester

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 46187

Well Name & No. Kraus #24-1 Test No. 3 Date 9-3-2012
 Company H&C Oil Operating Inc. Elevation 2116 KB 2108 GL
 Address P.O. Box 86 Plainville KS. 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #2
 Location: Sec. 24 Twp. 8S Rge. 22W Co. Graham State KS

Interval Tested 3384 3427 Zone Tested LKC - D - F
 Anchor Length 43 Drill Pipe Run 3377 Mud Wt. 9.1
 Top Packer Depth 3379 Drill Collars Run -0- Vis 58
 Bottom Packer Depth 3384 Wt. Pipe Run -0- WL 7.6
 Total Depth 3427 Chlorides 2000 ppm System LCM 1

Blow Description IF: Weak blow, surface blow died in 20 mins.
ISF: No blow back
FF: No blow
FSF: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>mud with oil specs</u>				

Rec Total 10 BHT 105 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1637</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>17:00</u>
(B) First Initial Flow <u>14</u>	<input type="checkbox"/> Jars	T-Started <u>17:48</u>
(C) First Final Flow <u>18</u>	<input type="checkbox"/> Safety Joint	T-Open <u>19:33</u>
(D) Initial Shut-In <u>879</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>21:20</u>
(E) Second Initial Flow <u>19</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>23:16</u>
(F) Second Final Flow <u>24</u>	<input checked="" type="checkbox"/> Mileage <u>80x2=160x</u> 248	Comments _____
(G) Final Shut-In <u>926</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1611</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1398</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1398</u>	

Approved By _____ Our Representative Chuck Key
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. **46188**

Well Name & No. Kraus #24-1 Test No. 4 Date 9-4-2012
 Company H&C operating Inc Elevation 2116 KB 2108 GL
 Address P.O. Box 86 Plainville Ks. 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle
 Location: Sec. 24 Twp. 8S Rge. 22W Co. Graham State Ks

Interval Tested 3452 3512 Zone Tested LKC-H₂T
 Anchor Length 60 Drill Pipe Run 3438 Mud Wt. 9.1
 Top Packer Depth 3447 Drill Collars Run -0- Vis 58
 Bottom Packer Depth 3452 Wt. Pipe Run -0- WL 7.6
 Total Depth 3512 Chlorides 1,900 ppm System LCM 1

Blow Description IFI: Weak blow dead in 8 mins.

ISFI: No blow back

FF: No blow

FSFI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>mud</u>				

Rec Total 10 BHT 106 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1721 Test 1150 T-On Location 9:50
 (B) First Initial Flow 14 Jars _____ T-Started 10:00
 (C) First Final Flow 26 Safety Joint _____ T-Open 11:19
 (D) Initial Shut-In 1039 Circ Sub _____ T-Pulled 13:20
 (E) Second Initial Flow 18 Hourly Standby _____ T-Out 14:38
 (F) Second Final Flow 22 Mileage 80x2=160x1.55 ⁴⁹⁶ Comments Loaded tools on
 (G) Final Shut-In 868 Sampler _____ 9-5-12 at 18:13
 (H) Final Hydrostatic 1703 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 800
 Day Standby 1d 3.5hrs Total 2446
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1646

Approved By _____

Our Representative Chuck [Signature]

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