



## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **North Fork Farms 3-1**

### **3-12s-23w Trego,KS**

Start Date: 2014.12.12 @ 16:35:00

End Date: 2014.12.12 @ 23:07:45

Job Ticket #: 62548                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.18 @ 11:23:56



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

ATTN: Marc Downing

Job Ticket: 62548

**DST#: 1**

Test Start: 2014.12.12 @ 16:35:00

## GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:16:15

Time Test Ended: 23:07:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 81

**Interval: 3661.00 ft (KB) To 3696.00 ft (KB) (TVD)**

Reference Elevations: 2423.00 ft (KB)

Total Depth: 3696.00 ft (KB) (TVD)

2416.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8957**

**Inside**

Press@RunDepth: 33.30 psig @ 3662.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.12

End Date:

2014.12.12

Last Calib.:

2014.12.12

Start Time: 16:35:05

End Time:

23:07:44

Time On Btm:

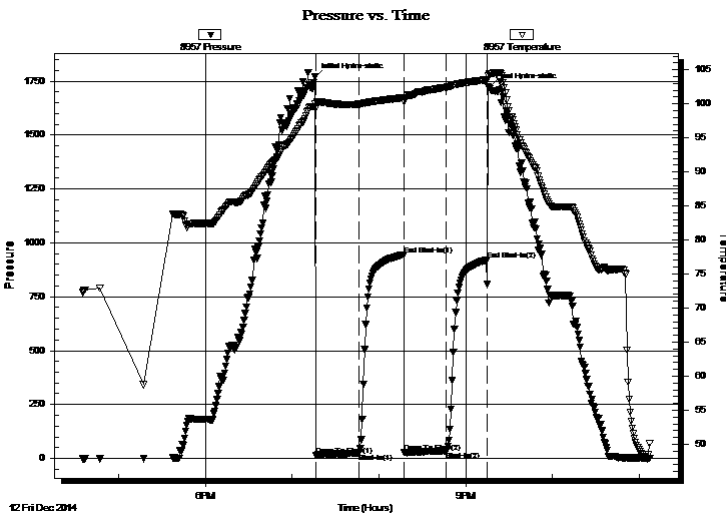
2014.12.12 @ 19:15:30

Time Off Btm:

2014.12.12 @ 21:16:15

TEST COMMENT: IF-3/4" blow  
IS-No blow  
FF-1/4" blow  
FS-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1768.92	100.04	Initial Hydro-static
1	14.29	99.25	Open To Flow (1)
31	22.73	99.94	Shut-In(1)
62	944.46	100.90	End Shut-In(1)
62	26.97	100.25	Open To Flow (2)
91	33.30	102.44	Shut-In(2)
119	920.99	103.52	End Shut-In(2)
121	1719.94	104.35	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud	0.22

## Gas Rates

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



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**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

ATTN: Marc Downing

Job Ticket: 62548 **DST#: 1**  
Test Start: 2014.12.12 @ 16:35:00

## GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:16:15

Time Test Ended: 23:07:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 81

**Interval: 3661.00 ft (KB) To 3696.00 ft (KB) (TVD)**

Reference Elevations: 2423.00 ft (KB)

Total Depth: 3696.00 ft (KB) (TVD)

2416.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8736 Outside**

Press@RunDepth: psig @ 3662.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.12 End Date: 2014.12.12

Last Calib.: 2014.12.12

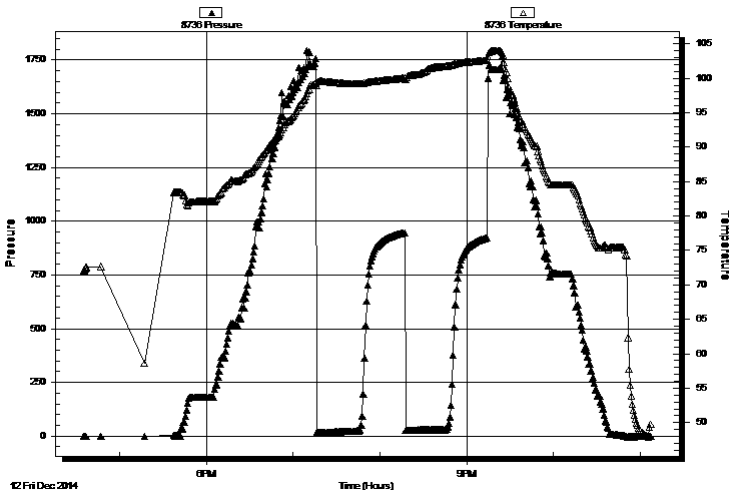
Start Time: 16:35:05 End Time: 23:07:44

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-3/4" blow  
IS-No blow  
FF-1/4" blow  
FS-No blow

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud	0.22

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 62548

**DST#: 1**

ATTN: Marc Downing

Test Start: 2014.12.12 @ 16:35:00

## Tool Information

Drill Pipe:	Length: 3630.00 ft	Diameter: 3.80 inches	Volume: 50.92 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - 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:	55000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	42000.00 lb
Drill Pipe Above KB:	19.00 ft			Final	42000.00 lb
Depth to Top Packer:	3661.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	35.00 ft				
Tool Length:	55.00 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			3646.00	
Hydraulic tool	5.00			3651.00	
Packer	5.00			3656.00	20.00 Bottom Of Top Packer
Packer	5.00			3661.00	
Stubb	1.00			3662.00	
Recorder	0.00	8957	Inside	3662.00	
Recorder	0.00	8736	Outside	3662.00	
Perforations	31.00			3693.00	
Bullnose	3.00			3696.00	35.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>55.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 62548

**DST#: 1**

ATTN: Marc Downing

Test Start: 2014.12.12 @ 16:35:00

### 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 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	Mud	0.218

Total Length: 35.00 ft      Total Volume: 0.218 bbl

Num Fluid Samples: 0

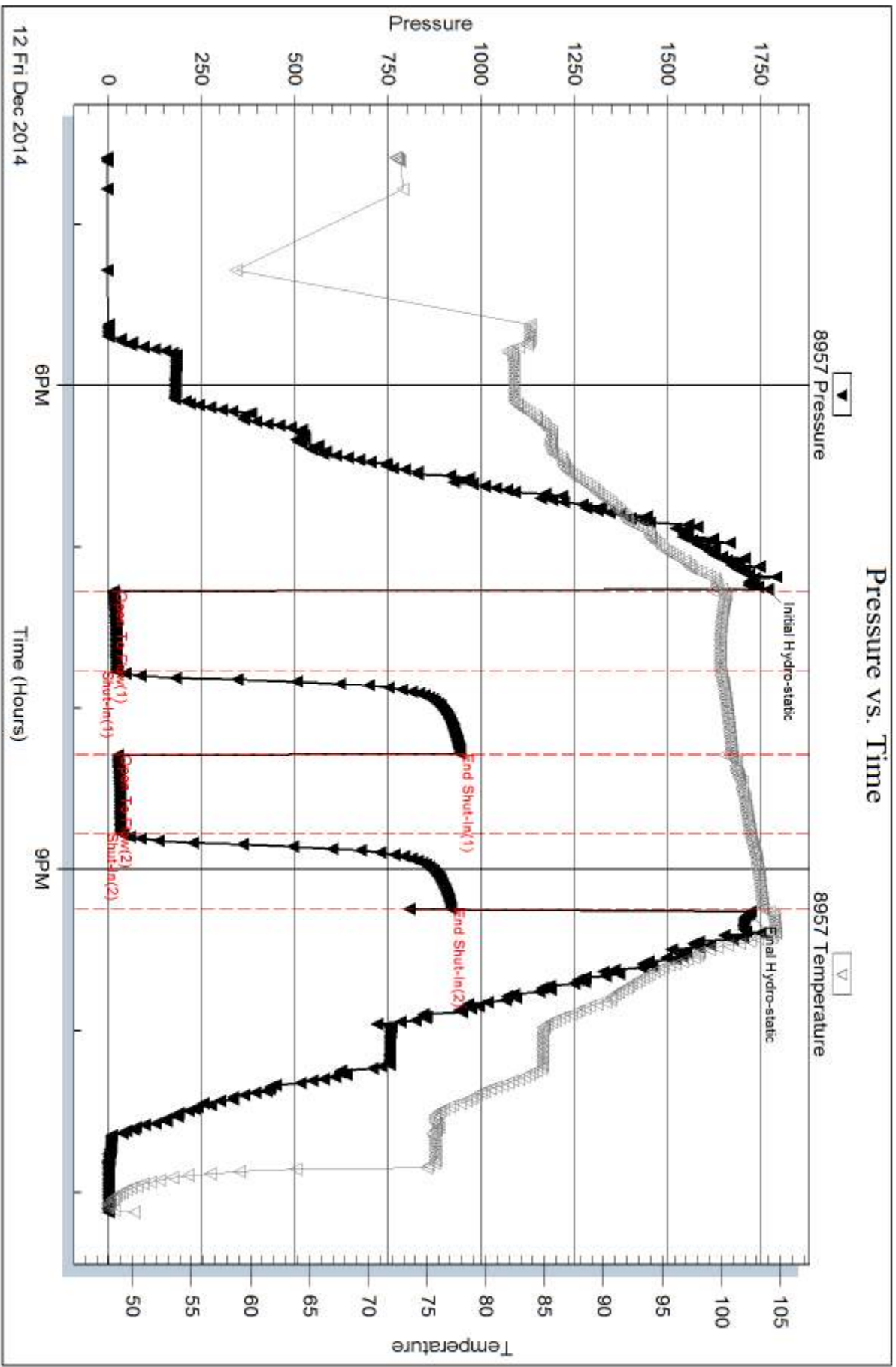
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

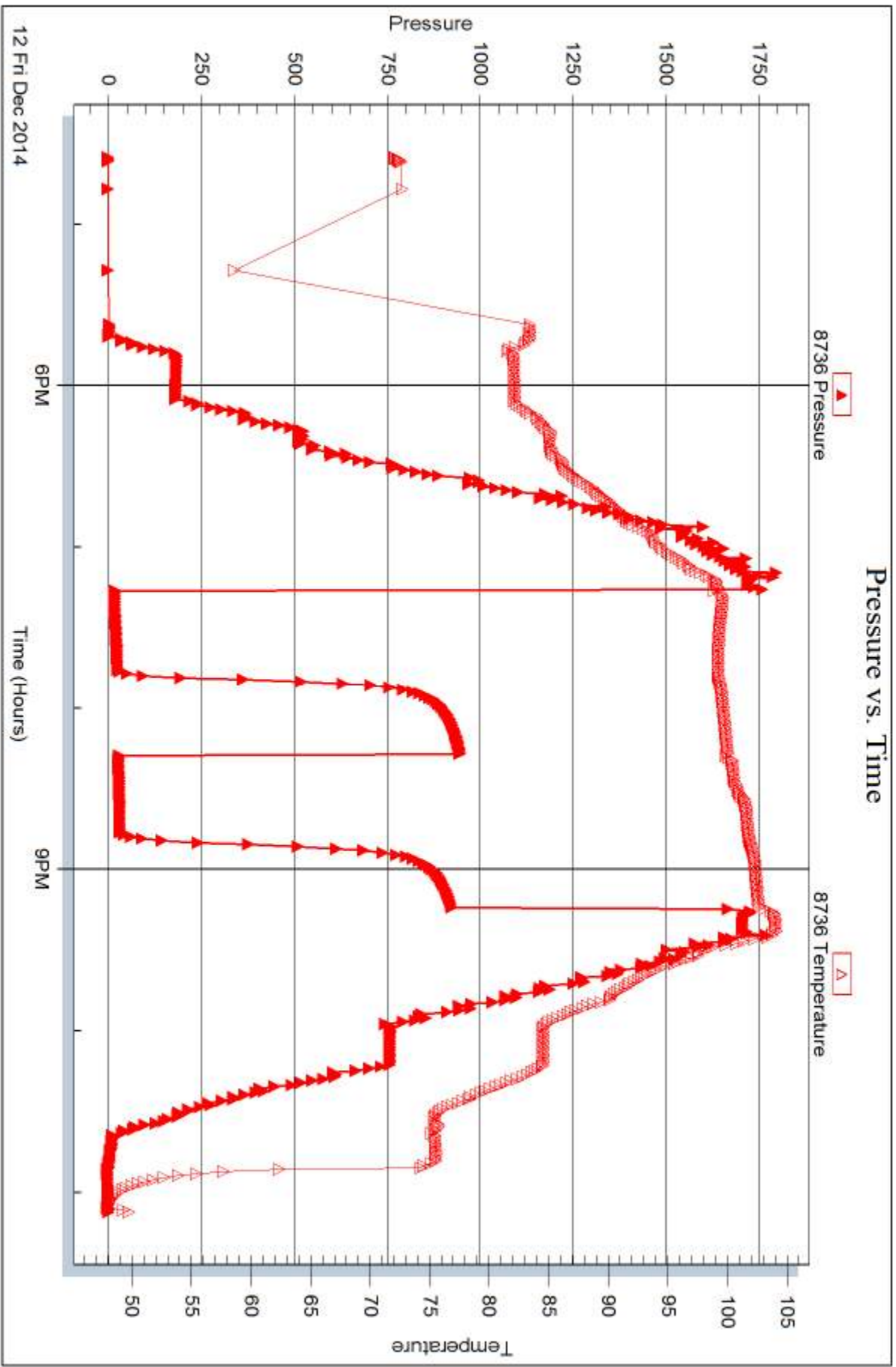


Serial #: 8736

Outside H&C Oil Operating Inc.

North Fork Farms 3-1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 62548

Printed: 2014.12.18 @ 11:23:58



## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **North Fork Farms 3-1**

### **3-12s-23w Trego,KS**

Start Date: 2014.12.13 @ 06:20:00

End Date: 2014.12.13 @ 11:30:30

Job Ticket #: 62549                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.18 @ 11:18:18





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

ATTN: Marc Downing

Job Ticket: 62549

**DST#: 2**

Test Start: 2014.12.13 @ 06:20:00

## GENERAL INFORMATION:

Formation: **LKC "A"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:05:45  
 Time Test Ended: 11:30:30  
 Interval: **3691.00 ft (KB) To 3730.00 ft (KB) (TVD)**  
 Total Depth: 3730.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brett Dickinson  
 Unit No: 81  
 Reference Elevations: 2423.00 ft (KB)  
 2416.00 ft (CF)  
 KB to GR/CF: 7.00 ft

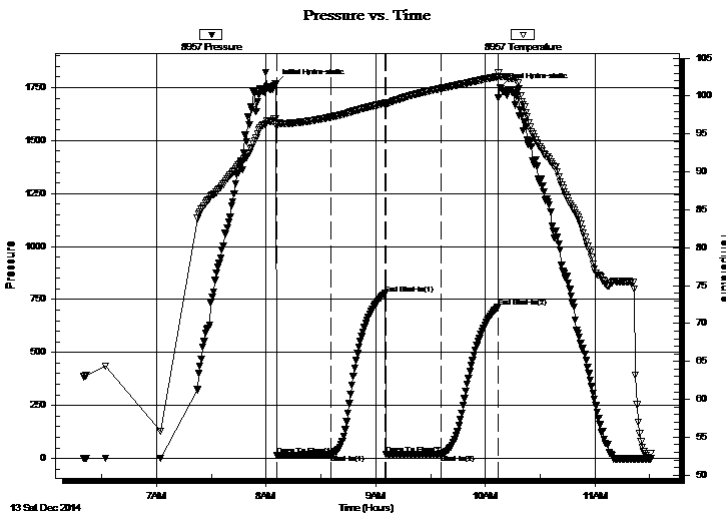
## Serial #: 8957

Inside

Press@RunDepth: 20.80 psig @ 3692.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.12.13 End Date: 2014.12.13 Last Calib.: 2014.12.13  
 Start Time: 06:20:05 End Time: 11:30:29 Time On Btm: 2014.12.13 @ 08:05:15  
 Time Off Btm: 2014.12.13 @ 10:08:15

TEST COMMENT: IF-Surface blow  
 IS-No blow  
 FF-Surface blow  
 FS-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1767.06	96.99	Initial Hydro-static
1	14.01	95.98	Open To Flow (1)
31	17.44	97.23	Shut-In(1)
60	777.66	99.08	End Shut-In(1)
61	18.75	98.81	Open To Flow (2)
91	20.80	100.99	Shut-In(2)
122	716.18	102.56	End Shut-In(2)
123	1747.69	102.60	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

\* Recovery from multiple tests

## Gas Rates

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



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TESTING, INC**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

**3-12s-23w Trego,KS**

**North Fork Farms 3-1**

Job Ticket: 62549

**DST#: 2**

Test Start: 2014.12.13 @ 06:20:00

## GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:05:45

Time Test Ended: 11:30:30

**Interval: 3691.00 ft (KB) To 3730.00 ft (KB) (TVD)**

Total Depth: 3730.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 81

Reference Elevations: 2423.00 ft (KB)

2416.00 ft (CF)

KB to GR/CF: 7.00 ft

**Serial #: 8736 Outside**

Press@RunDepth: psig @ 3692.00 ft (KB)

Start Date: 2014.12.13

End Date: 2014.12.13

Start Time: 06:20:05

End Time: 11:30:29

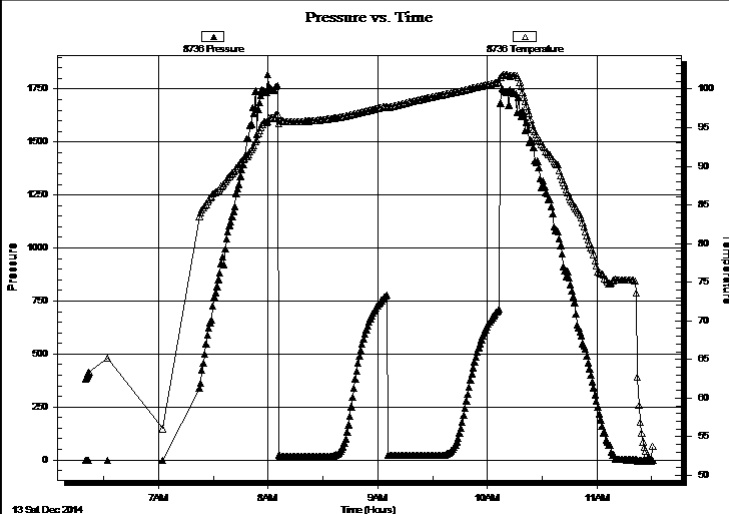
Capacity: 8000.00 psig

Last Calib.: 2014.12.13

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Surface blow  
IS-No blow  
FF-Surface blow  
FS-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 62549

**DST#: 2**

ATTN: Marc Downing

Test Start: 2014.12.13 @ 06:20:00

## Tool Information

Drill Pipe:	Length: 3661.00 ft	Diameter: 3.80 inches	Volume: 51.35 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - 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:	45000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	44000.00 lb
Drill Pipe Above KB:	20.00 ft			Final	44000.00 lb
Depth to Top Packer:	3691.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	60.00 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			3676.00	
Hydraulic tool	5.00			3681.00	
Packer	5.00			3686.00	20.00 Bottom Of Top Packer
Packer	5.00			3691.00	
Stubb	1.00			3692.00	
Recorder	0.00	8957	Inside	3692.00	
Recorder	0.00	8736	Outside	3692.00	
Perforations	36.00			3728.00	
Bullnose	3.00			3731.00	40.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>60.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

H&C Oil Operating Inc.

**3-12s-23w Trego, KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 62549

**DST#: 2**

ATTN: Marc Downing

Test Start: 2014.12.13 @ 06:20:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

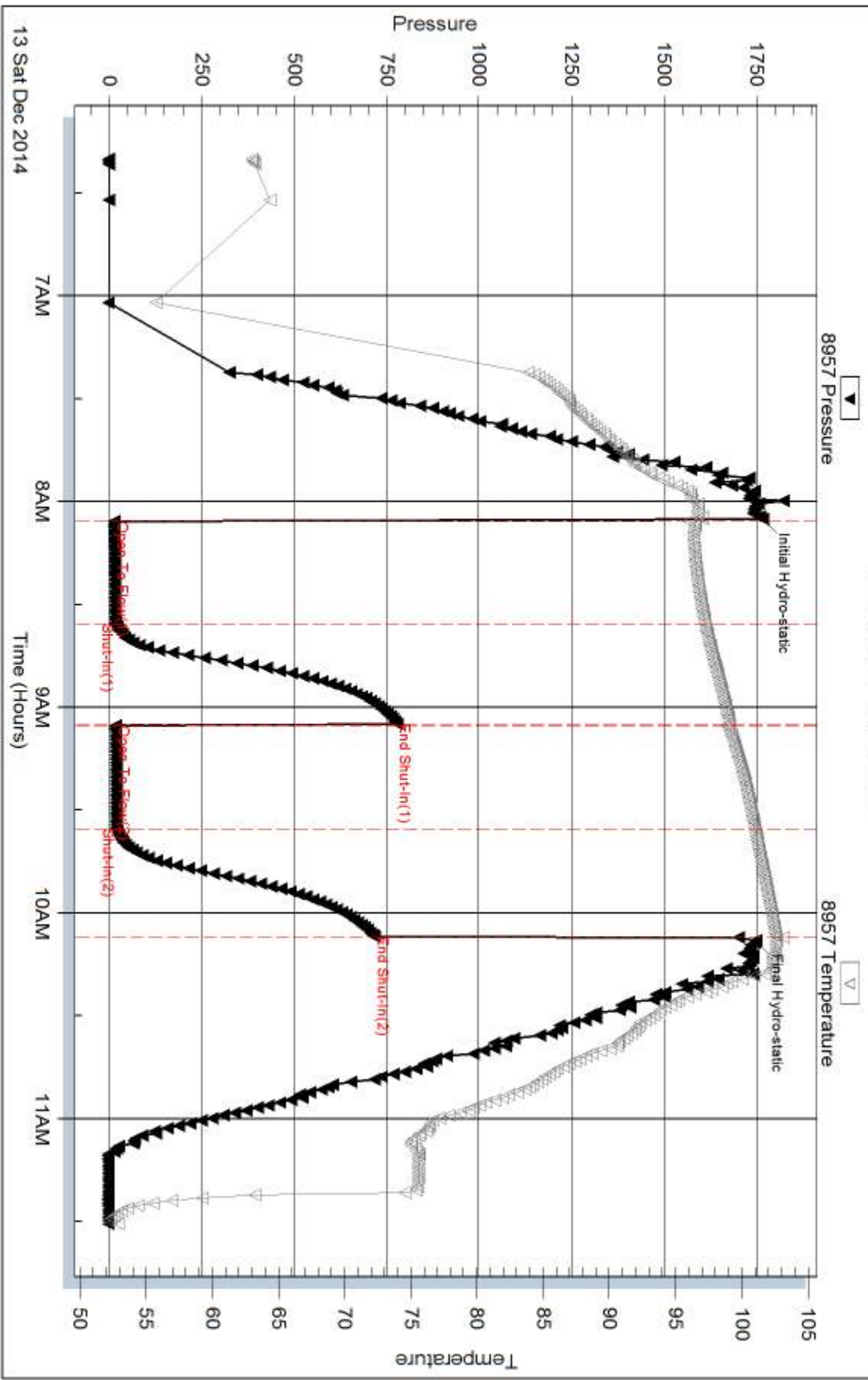
Serial #:

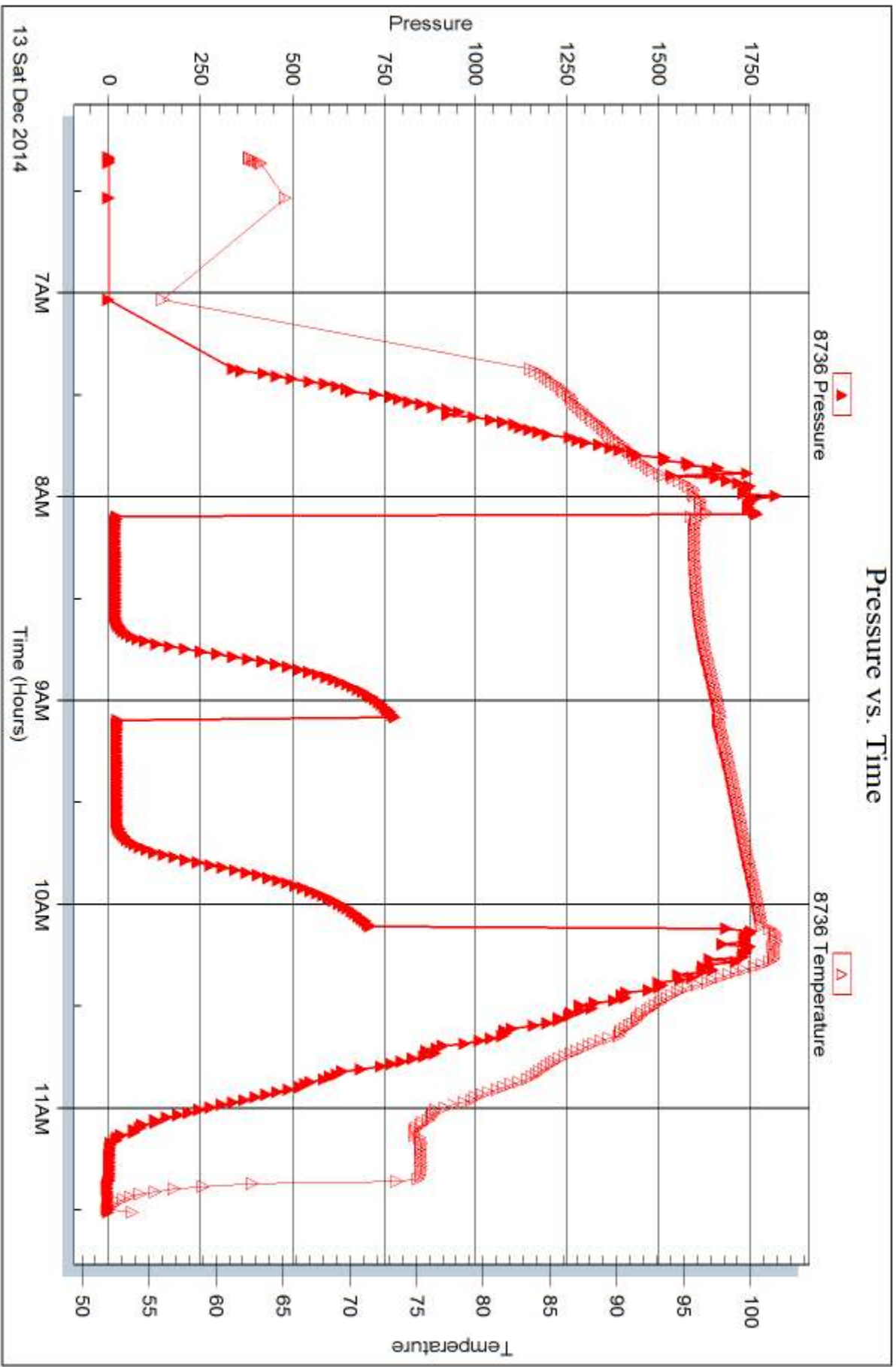
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **North Fork Farms 3-1**

### **3-12s-23w Trego,KS**

Start Date: 2014.12.13 @ 18:45:00

End Date: 2014.12.14 @ 01:10:00

Job Ticket #: 62550                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.18 @ 11:17:56



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

ATTN: Marc Downing

Job Ticket: 62550

**DST#: 3**

Test Start: 2014.12.13 @ 18:45:00

## GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:35:30

Time Test Ended: 01:10:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 81

**Interval: 3722.00 ft (KB) To 3765.00 ft (KB) (TVD)**

Reference Elevations: 2423.00 ft (KB)

Total Depth: 3765.00 ft (KB) (TVD)

2416.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8957**

**Inside**

Press@RunDepth: 457.91 psig @ 3729.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.13

End Date:

2014.12.14

Last Calib.: 2014.12.14

Start Time: 18:45:05

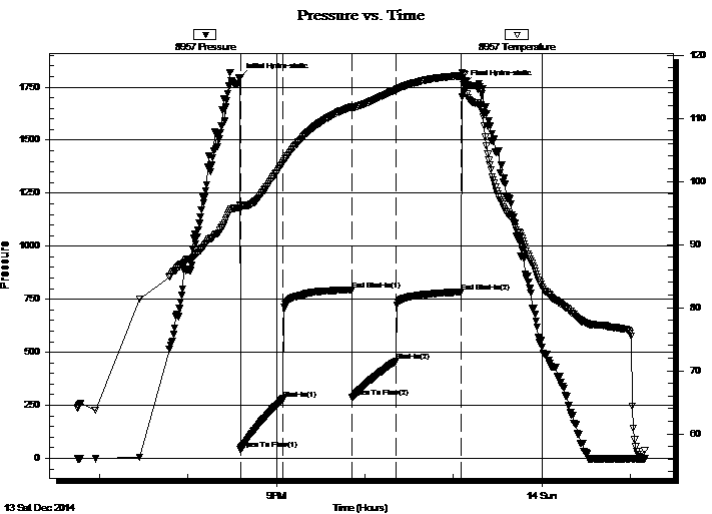
End Time:

01:09:59

Time On Btm: 2014.12.13 @ 20:34:45

Time Off Btm: 2014.12.13 @ 23:07:00

TEST COMMENT: IF-BOB in 4 min  
IS-No blow  
FF-BOB in 6 1/2 min  
FS-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1792.91	95.84	Initial Hydro-static
1	41.02	95.64	Open To Flow (1)
30	281.30	102.93	Shut-In(1)
77	795.04	111.76	End Shut-In(1)
77	286.09	111.61	Open To Flow (2)
107	457.91	114.47	Shut-In(2)
151	784.15	116.71	End Shut-In(2)
153	1759.76	117.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
785.00	VSMCW 5%M 95%W	10.74
145.00	OS MCW 40%M 60%W	2.03

\* Recovery from multiple tests

## Gas Rates

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





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# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

ATTN: Marc Downing

Job Ticket: 62550

**DST#: 3**

Test Start: 2014.12.13 @ 18:45:00

### GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:35:30

Time Test Ended: 01:10:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 81

**Interval: 3722.00 ft (KB) To 3765.00 ft (KB) (TVD)**

Reference Elevations: 2423.00 ft (KB)

Total Depth: 3765.00 ft (KB) (TVD)

2416.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8736 Outside**

Press@RunDepth: psig @ 3729.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.13

End Date:

2014.12.14

Last Calib.:

2014.12.14

Start Time: 18:45:05

End Time:

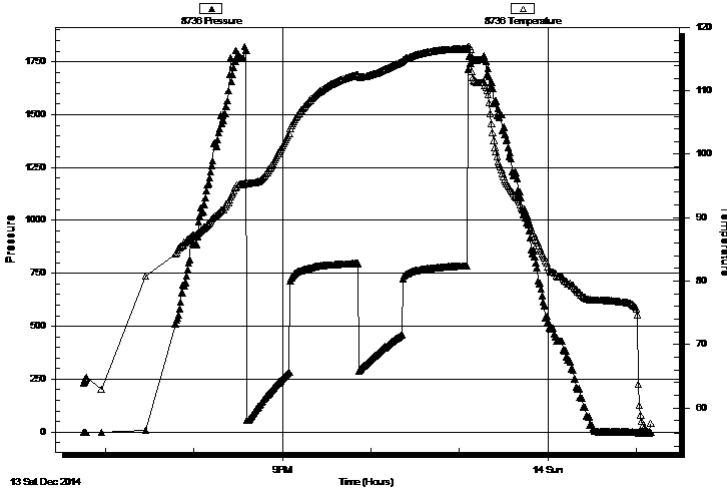
01:09:44

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-BOB in 4 min  
IS-No blow  
FF-BOB in 6 1/2 min  
FS-No blow

Pressure vs. Time



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
785.00	VSMCW 5%M 95%W	10.74
145.00	OS MCW 40%M 60%W	2.03

### 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.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 62550

**DST#: 3**

ATTN: Marc Downing

Test Start: 2014.12.13 @ 18:45:00

## Tool Information

Drill Pipe:	Length: 3687.00 ft	Diameter: 3.80 inches	Volume: 51.72 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - 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:	65000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3722.00 ft			Final	48000.00 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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3707.00	
Hydraulic tool	5.00			3712.00	
Packer	5.00			3717.00	20.00 Bottom Of Top Packer
Packer	5.00			3722.00	
Stubb	1.00			3723.00	
Perforations	5.00			3728.00	
Change Over Sub	1.00			3729.00	
Recorder	0.00	8957	Inside	3729.00	
Recorder	0.00	8736	Outside	3729.00	
Drill Pipe	32.00			3761.00	
Change Over Sub	1.00			3762.00	
Bullnose	3.00			3765.00	43.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 62550

**DST#: 3**

ATTN: Marc Downing

Test Start: 2014.12.13 @ 18:45:00

## 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:

65000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
785.00	VSMCW 5%M 95%W	10.738
145.00	OS MCW 40%M 60%W	2.034

Total Length: 930.00 ft

Total Volume: 12.772 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

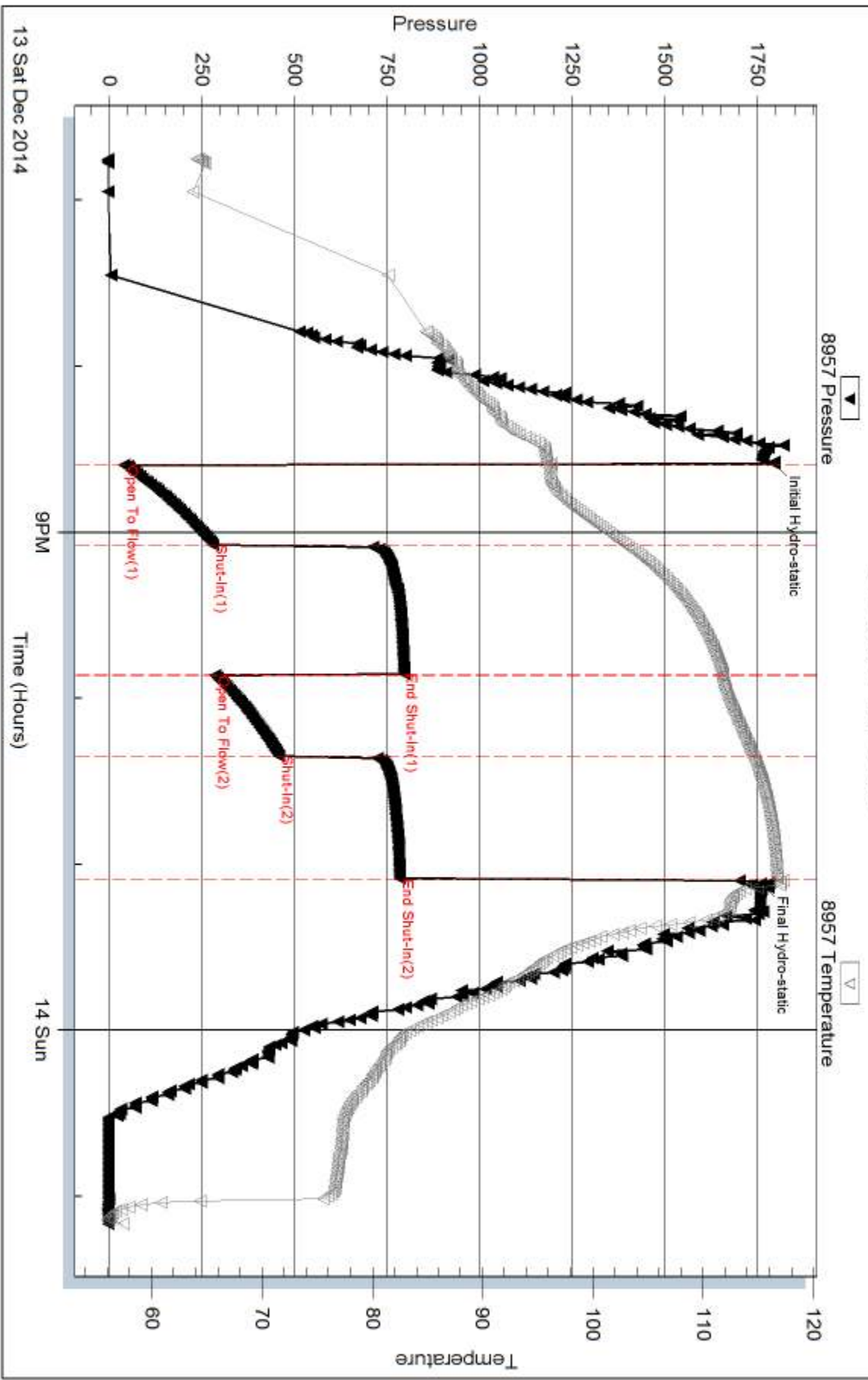
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

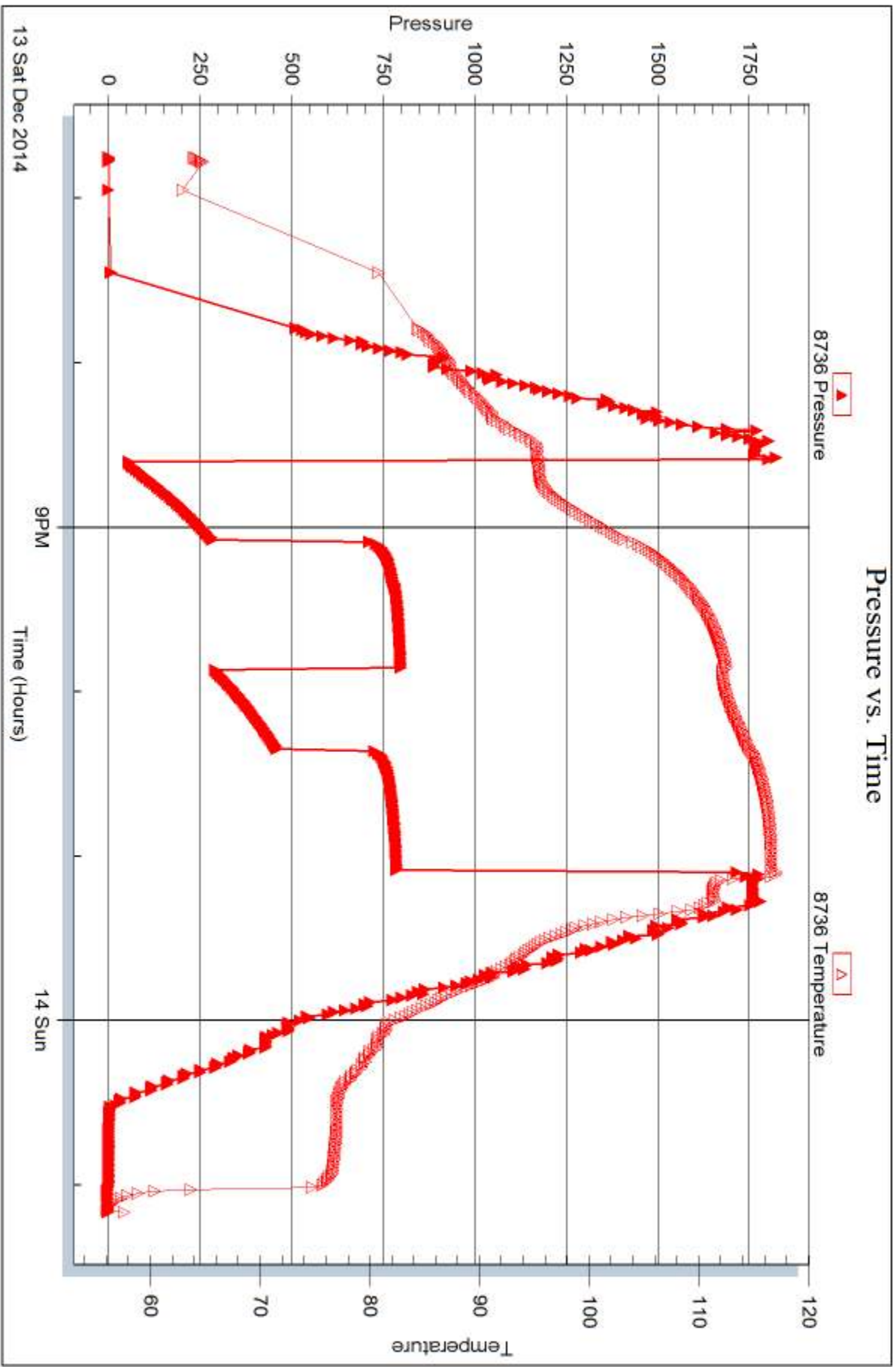


Serial #: 8736

Outside H&C Oil Operating Inc.

North Fork Farms 3-1

DST Test Number: 3





## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **North Fork Farms 3-1**

### **3-12s-23w Trego,KS**

Start Date: 2014.12.14 @ 12:15:00

End Date: 2014.12.14 @ 18:04:15

Job Ticket #: 53827                      DST #: 4

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.18 @ 11:16:26

H&C Oil Operating Inc.

3-12s-23w Trego,KS

North Fork Farms 3-1

DST # 4

LKC "E-G"

2014.12.14



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

ATTN: Marc Downing

Job Ticket: 53827

**DST#: 4**

Test Start: 2014.12.14 @ 12:15:00

## GENERAL INFORMATION:

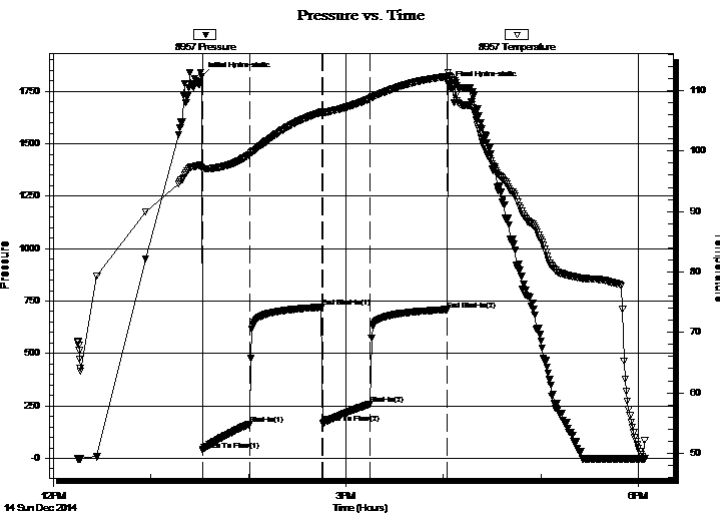
Formation: **LKC "E-G"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:32:00  
 Time Test Ended: 18:04:15  
 Interval: **3761.00 ft (KB) To 3837.00 ft (KB) (TVD)**  
 Total Depth: 3837.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brett Dickinson  
 Unit No: 81  
 Reference Elevations: 2423.00 ft (KB)  
 2416.00 ft (CF)  
 KB to GR/CF: 7.00 ft

## Serial #: 8957

Inside

Press@RunDepth: 258.80 psig @ 3762.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.12.14 End Date: 2014.12.14 Last Calib.: 2014.12.14  
 Start Time: 12:15:05 End Time: 18:04:14 Time On Btm: 2014.12.14 @ 13:31:15  
 Time Off Btm: 2014.12.14 @ 16:03:30

TEST COMMENT: IF-BOB in 7 min  
 IS-No blow  
 FF-BOB in 15 min  
 FS-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1820.51	97.25	Initial Hydro-static
1	36.96	96.86	Open To Flow (1)
30	164.06	99.45	Shut-In(1)
74	720.84	106.43	End Shut-In(1)
75	167.97	106.24	Open To Flow (2)
104	258.80	108.65	Shut-In(2)
151	709.34	112.32	End Shut-In(2)
153	1777.29	112.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	Water	2.25
350.00	MCW 30%M 70&W	4.91

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

ATTN: Marc Downing

Job Ticket: 53827

**DST#: 4**

Test Start: 2014.12.14 @ 12:15:00

## GENERAL INFORMATION:

Formation: **LKC "E-G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:32:00

Time Test Ended: 18:04:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 81

Interval: **3761.00 ft (KB) To 3837.00 ft (KB) (TVD)**

Reference Elevations: 2423.00 ft (KB)

Total Depth: 3837.00 ft (KB) (TVD)

2416.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8736 Outside**

Press@RunDepth: psig @ 3762.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.14

End Date: 2014.12.14

Last Calib.: 2014.12.14

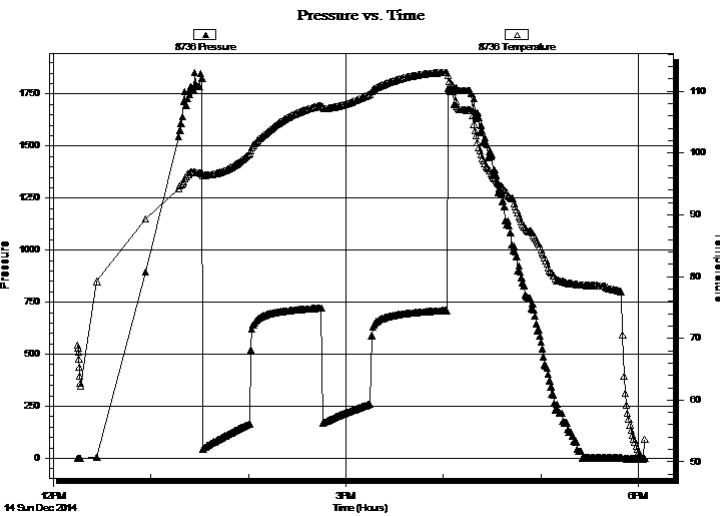
Start Time: 12:15:05

End Time: 18:04:14

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-BOB in 7 min  
IS- No blow  
FF-BOB in 15 min  
FS- No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	Water	2.25
350.00	MCW 30%M 70&W	4.91

\* 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.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 53827

**DST#: 4**

ATTN: Marc Downing

Test Start: 2014.12.14 @ 12:15:00

## Tool Information

Drill Pipe:	Length: 3731.00 ft	Diameter: 3.80 inches	Volume: 52.34 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 52.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3761.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.00 ft			
Tool Length:	96.00 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			3746.00	
Hydraulic tool	5.00			3751.00	
Packer	5.00			3756.00	20.00 Bottom Of Top Packer
Packer	5.00			3761.00	
Stubb	1.00			3762.00	
Recorder	0.00	8957	Inside	3762.00	
Recorder	0.00	8736	Outside	3762.00	
Perforations	5.00			3767.00	
Change Over Sub	1.00			3768.00	
Drill Pipe	63.00			3831.00	
Change Over Sub	1.00			3832.00	
Perforations	2.00			3834.00	
Bullnose	3.00			3837.00	76.00 Bottom Packers & Anchor

**Total Tool Length: 96.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 53827

**DST#: 4**

ATTN: Marc Downing

Test Start: 2014.12.14 @ 12:15:00

## 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 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
180.00	Water	2.252
350.00	MCW 30%M 70&W	4.910

Total Length: 530.00 ft

Total Volume: 7.162 bbl

Num Fluid Samples: 0

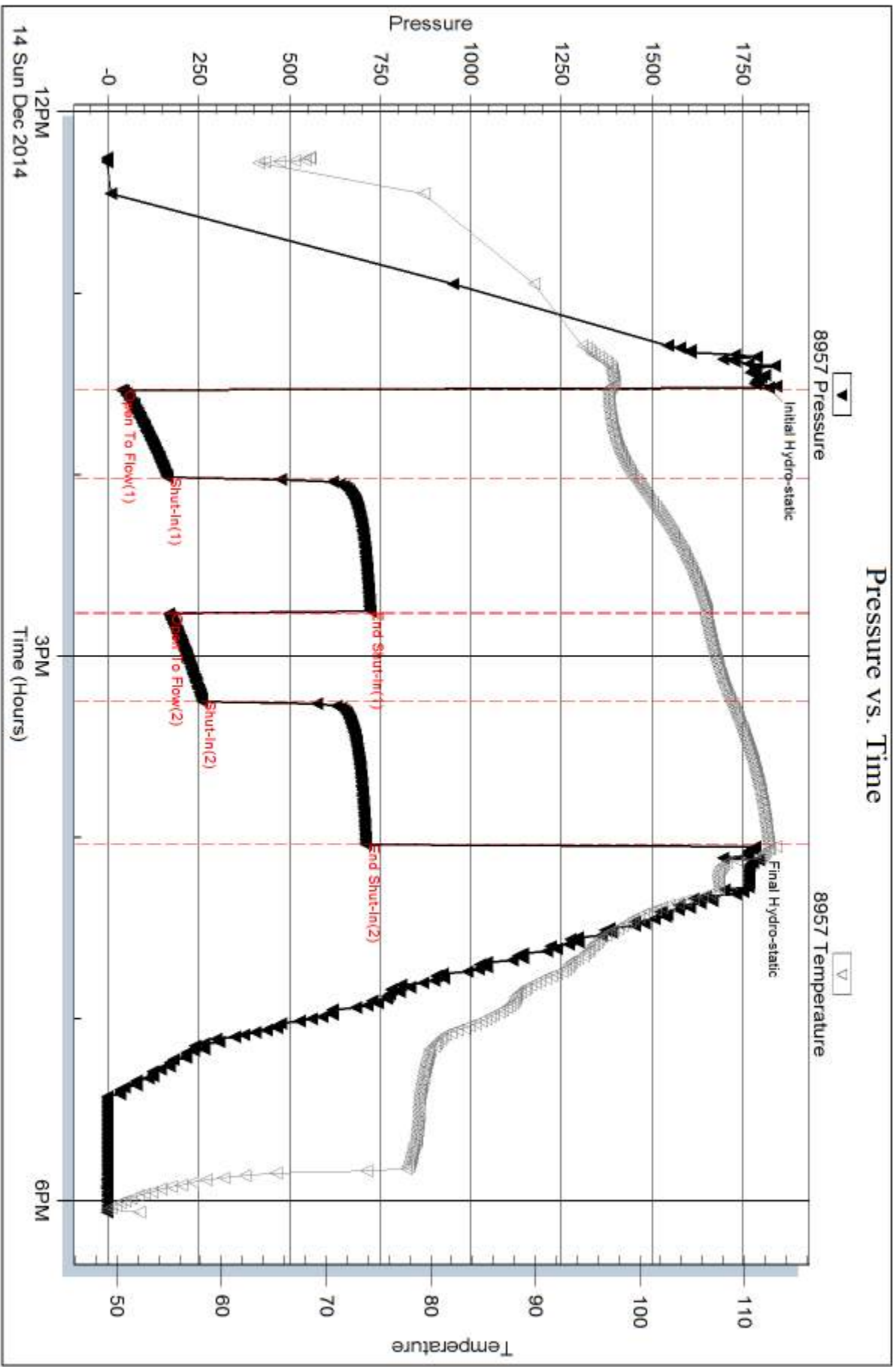
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

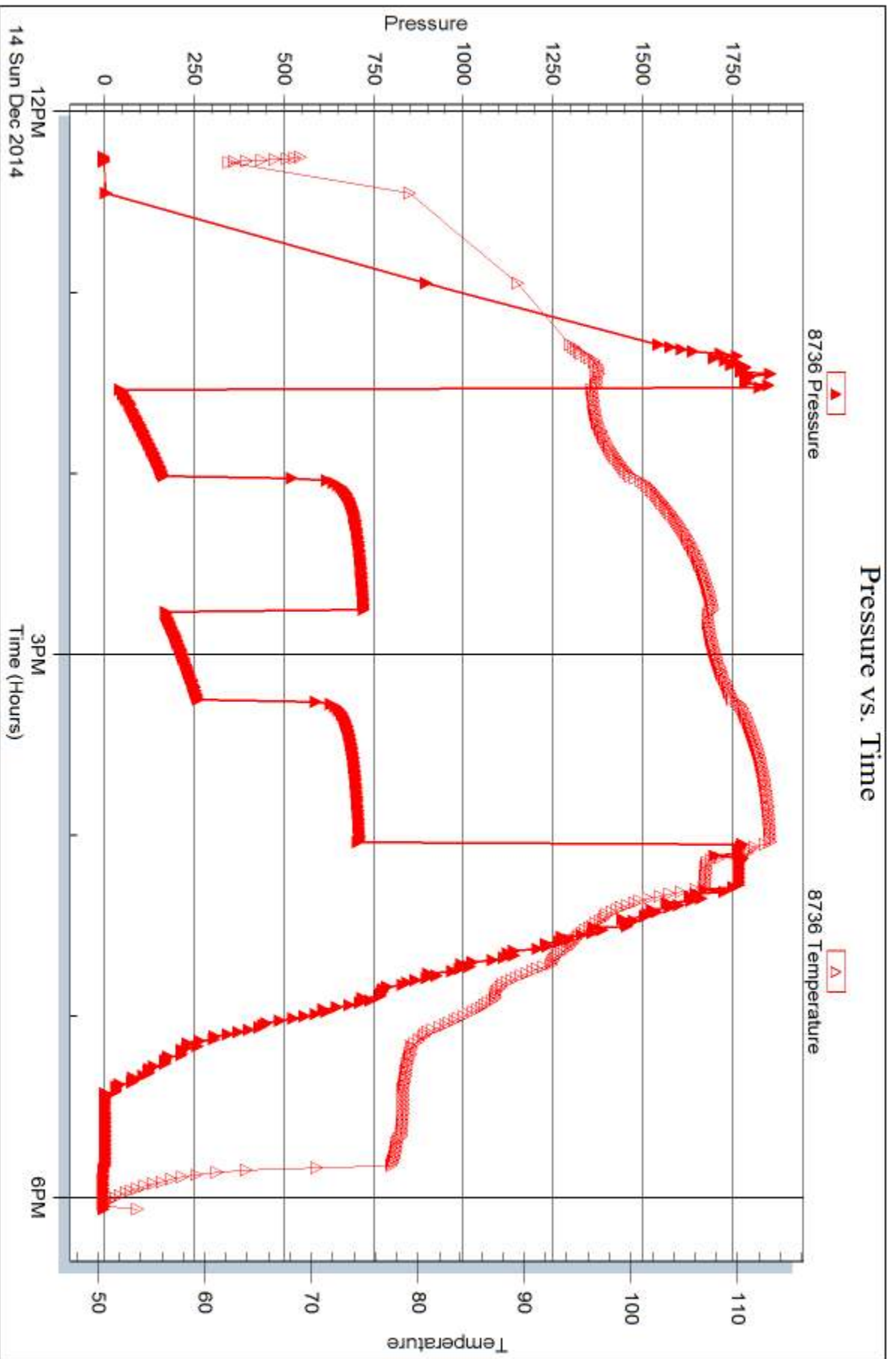


Serial #: 8736

Outside H&C Oil Operating Inc.

North Fork Farms 3-1

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 53827

Printed: 2014.12.18 @ 11:16:27



## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville KS 67663

ATTN: Marc Downing

### **North Fork Farms 3-1**

### **3-12s-23w Trego,KS**

Start Date: 2014.12.15 @ 07:30:00

End Date: 2014.12.15 @ 15:11:15

Job Ticket #: 53828                      DST #: 5

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.18 @ 11:07:36



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

ATTN: Marc Downing

Job Ticket: 53828

**DST#: 5**

Test Start: 2014.12.15 @ 07:30:00

## GENERAL INFORMATION:

Formation: **KC"H-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:06:45

Time Test Ended: 15:11:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 81

**Interval: 3824.00 ft (KB) To 3920.00 ft (KB) (TVD)**

Reference Elevations: 2423.00 ft (KB)

Total Depth: 3920.00 ft (KB) (TVD)

2416.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8957**

**Inside**

Press@RunDepth: 443.41 psig @ 3892.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.15

End Date:

2014.12.15

Last Calib.: 2014.12.15

Start Time: 07:30:05

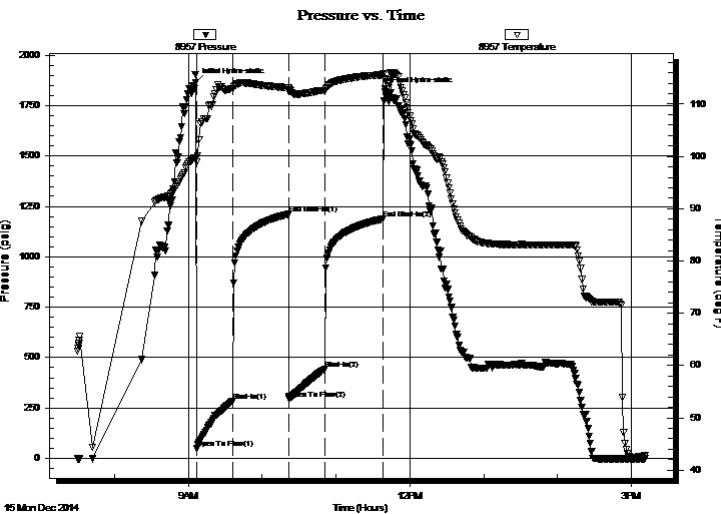
End Time:

15:11:14

Time On Btm: 2014.12.15 @ 09:06:00

Time Off Btm: 2014.12.15 @ 11:40:00

**TEST COMMENT:** IF-BOB in 3 min  
IS-2" blow back  
FF-BOB in 2 1/2 min  
FS-2" blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1864.59	99.62	Initial Hydro-static
1	47.74	98.87	Open To Flow (1)
30	282.55	112.99	Shut-In(1)
76	1212.04	113.07	End Shut-In(1)
76	296.15	112.72	Open To Flow (2)
105	443.41	112.66	Shut-In(2)
153	1188.07	115.58	End Shut-In(2)
154	1821.37	114.69	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1000.00	GO 30%G 70%O	13.75
60.00	GMCO 20%G 30%M 50%O	0.84
0.00	640ft GIP	0.00

## Gas Rates

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

\* Recovery from multiple tests



# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

ATTN: Marc Downing

Job Ticket: 53828

**DST#: 5**

Test Start: 2014.12.15 @ 07:30:00

## GENERAL INFORMATION:

Formation: **KC"H-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:06:45

Time Test Ended: 15:11:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 81

**Interval: 3824.00 ft (KB) To 3920.00 ft (KB) (TVD)**

Total Depth: 3920.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2423.00 ft (KB)

2416.00 ft (CF)

KB to GR/CF: 7.00 ft

**Serial #: 8736** **Outside**

Press@RunDepth: psig @ 3892.00 ft (KB)

Start Date: 2014.12.15

End Date:

2014.12.15

Start Time: 07:30:05

End Time:

15:10:59

Capacity: 8000.00 psig

Last Calib.:

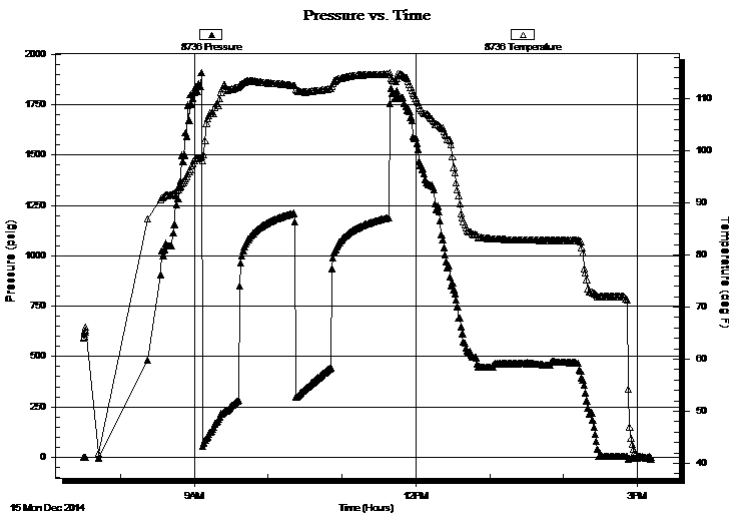
2014.12.15

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-BOB in 3 min  
IS-2" blow back  
FF-BOB in 2 1/2 min  
FS-2" blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
1000.00	GO 30%G 70%O	13.75
60.00	GMCO 20%G 30%M 50%O	0.84
0.00	640ft GIP	0.00

## 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.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 53828

**DST#: 5**

ATTN: Marc Downing

Test Start: 2014.12.15 @ 07:30:00

## Tool Information

Drill Pipe:	Length: 3794.00 ft	Diameter: 3.80 inches	Volume: 53.22 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - 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:	50000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3824.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	96.00 ft				
Tool Length:	116.00 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			3809.00	
Hydraulic tool	5.00			3814.00	
Packer	5.00			3819.00	20.00 Bottom Of Top Packer
Packer	5.00			3824.00	
Stubb	1.00			3825.00	
Perforations	2.00			3827.00	
Change Over Sub	1.00			3828.00	
Blank Spacing	63.00			3891.00	
Change Over Sub	1.00			3892.00	
Recorder	0.00	8957	Inside	3892.00	
Recorder	0.00	8736	Outside	3892.00	
Perforations	25.00			3917.00	
Bullnose	3.00			3920.00	96.00 Bottom Packers & Anchor

**Total Tool Length: 116.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc.

**3-12s-23w Trego,KS**

PO Box 86  
Plainville KS 67663

**North Fork Farms 3-1**

Job Ticket: 53828

**DST#: 5**

ATTN: Marc Downing

Test Start: 2014.12.15 @ 07:30:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

30 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 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
1000.00	GO 30%G 70%O	13.754
60.00	GMCO 20%G 30%M 50%O	0.842
0.00	640ft GIP	0.000

Total Length: 1060.00 ft      Total Volume: 14.596 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

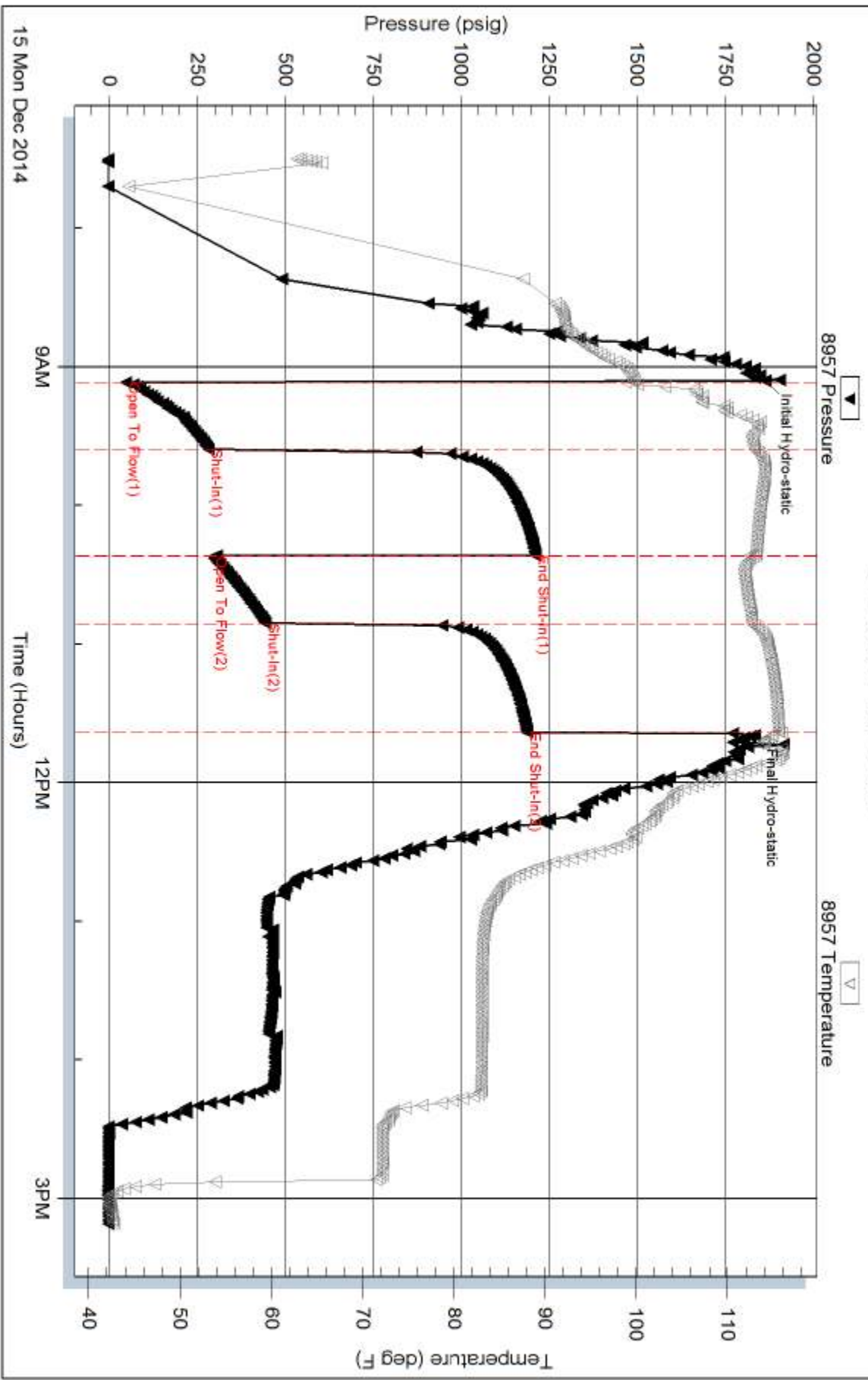
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

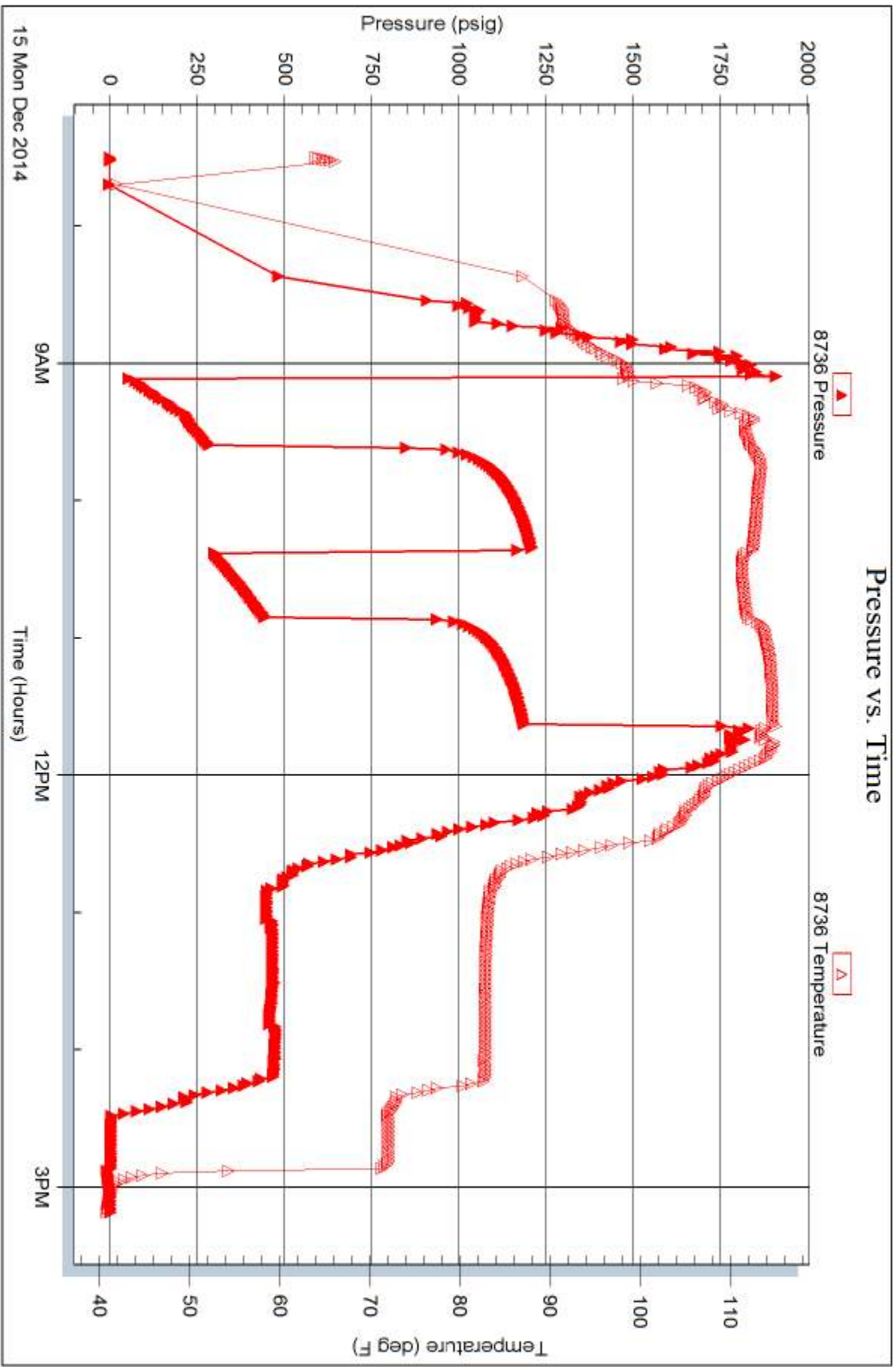


Serial #: 8736

Outside H&C Oil Operating Inc.

North Fork Farms 3-1

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 53828

Printed: 2014.12.18 @ 11:07:38



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62548

Well Name & No. North Fork Farms #3-1 Test No. 1 Date 12/12/14  
 Company H+C Oil Operating Inc. Elevation 2423 KB 2416 GL  
 Address PO Box 86 Plainville KS 67663  
 Co. Rep / Geo. Marc D Rig Discovery #1  
 Location: Sec. 3 Twp. 12 Rge. 23 Co. Trego State KS

Interval Tested 3661-3696 Zone Tested Toronto  
 Anchor Length 35 Drill Pipe Run \_\_\_\_\_ Mud Wt. \_\_\_\_\_  
 Top Packer Depth 3656 Drill Collars Run 30 Vis \_\_\_\_\_  
 Bottom Packer Depth 3661 Wt. Pipe Run - WL \_\_\_\_\_  
 Total Depth 3696 Chlorides \_\_\_\_\_ ppm System LCM \_\_\_\_\_  
 Blow Description IF - 3/4 in blow  
ISF - No blow  
FF - 1/4 in blow  
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>35</u>	<u>Mud</u>				
_____	_____				
_____	_____				
_____	_____				
_____	_____				

Rec Total 35 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1769  Test 1150 T-On Location 15:15  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 16:35  
 (C) First Final Flow 23  Safety Joint \_\_\_\_\_ T-Open 19:15  
 (D) Initial Shut-In 944  Circ Sub \_\_\_\_\_ T-Pulled 21:15  
 (E) Second Initial Flow 27  Hourly Standby \_\_\_\_\_ T-Out 23:10  
 (F) Second Final Flow 33  Mileage 88-T 136.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 921  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1720  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1286.40

Initial Open 30  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 30  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Copies \_\_\_\_\_  
 Final Shut-In 30 Sub Total 0  
 Total 1286.40  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Beth Dyer

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.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62549

Well Name & No. North Fork Farms # 3-1 Test No. 2 Date 12/13/14  
 Company H&C Oil Operating Inc Elevation 2423 KB 2416 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Marc D Rig Discovery #1  
 Location: Sec. 3 Twp. 12 Rge. 23 Co. Trego State KS

Interval Tested 3691-3730 Zone Tested KC "A"  
 Anchor Length 39 Drill Pipe Run \_\_\_\_\_ Mud Wt. \_\_\_\_\_  
 Top Packer Depth 3686 Drill Collars Run 30 Vis \_\_\_\_\_  
 Bottom Packer Depth 3691 Wt. Pipe Run \_\_\_\_\_ WL \_\_\_\_\_  
 Total Depth 3730 Chlorides \_\_\_\_\_ ppm System LCM \_\_\_\_\_  
 Blow Description IF - surface blow  
ISI - No blow  
FF - weak surface blow  
FST - No blow

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

Rec Total 10 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1,767  Test 1150 T-On Location 6:10  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 6:20  
 (C) First Final Flow 17  Safety Joint \_\_\_\_\_ T-Open 8:08  
 (D) Initial Shut-In 228  Circ Sub \_\_\_\_\_ T-Pulled 10:08  
 (E) Second Initial Flow 19  Hourly Standby \_\_\_\_\_ T-Out 11:30  
 (F) Second Final Flow 21  Mileage 88rT 136.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 216  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,748  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30

Sub Total 1286.40  
 Total 1286.40  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Beth Durbin

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.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62550

Well Name & No. North Fork Farms #3-1 Test No. 3 Date 12/13/14  
 Company H&C Oil Operating Inc. Elevation 2423 KB 2416 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Marc D Rig Discovery #1  
 Location: Sec. 3 Twp. 12 Rge. 23 Co. Trego State KS

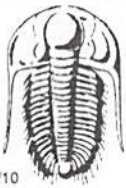
Interval Tested 3722-3765 Zone Tested KC "c-d"  
 Anchor Length 43 Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.8  
 Top Packer Depth 3717 Drill Collars Run 30 Vis 58  
 Bottom Packer Depth 3722 Wt. Pipe Run - WL 7.6  
 Total Depth 3765 Chlorides 4,000 ppm System LCM 17  
 Blow Description IF-BOB in 4 min  
ISI - No blow  
FF-BOB in 6 1/2 min  
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>145</u>	<u>05 MCW</u>		<u>60</u>	<u>40</u>	
<u>785</u>	<u>vsmcw</u>		<u>95</u>	<u>5</u>	
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud

Rec Total 930 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW .2 @ 40 °F Chlorides 65,000 ppm  
 (A) Initial Hydrostatic 1,793  Test 1150 T-On Location 18:30  
 (B) First Initial Flow 41  Jars \_\_\_\_\_ T-Started 18:45  
 (C) First Final Flow 281  Safety Joint \_\_\_\_\_ T-Open 20:35  
 (D) Initial Shut-In 795  Circ Sub \_\_\_\_\_ T-Pulled 22:35  
 (E) Second Initial Flow 286  Hourly Standby \_\_\_\_\_ T-Out 1:10  
 (F) Second Final Flow 458  Mileage 88-T 136.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 784  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,760  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1286.40  
 Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30  
 Sub Total 1286.40  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Butt Drilling

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.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53827

Well Name & No. North Fork Farms #3-1 Test No. 4 Date 12/14/14  
 Company H&C Oil Operating Inc. Elevation 2423 KB 2416 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Marc D Rig Discovery #1  
 Location: Sec. 3 Twp. 12 Rge. 23 Co. Trego State KS

Interval Tested 3761-3837 Zone Tested AC "E-G"  
 Anchor Length 76 Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.8  
 Top Packer Depth 3756 Drill Collars Run 30 Vis 58  
 Bottom Packer Depth 3761 Wt. Pipe Run - WL 7.6  
 Total Depth 3837 Chlorides 4,000 ppm System LCM 1#  
 Blow Description IF - BOB in 7min  
ISI - No blow  
FF - BOB in 15min  
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>Water</u>				
<u>350</u>	<u>MCW</u>				
				<u>70%</u>	<u>30%</u>

Rec Total 530 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

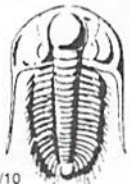
(A) Initial Hydrostatic 1,821  Test 1150 T-On Location 12:00  
 (B) First Initial Flow 37  Jars \_\_\_\_\_ T-Started 12:15  
 (C) First Final Flow 164  Safety Joint \_\_\_\_\_ T-Open 13:30  
 (D) Initial Shut-In 721  Circ Sub \_\_\_\_\_ T-Pulled 16:00  
 (E) Second Initial Flow 168  Hourly Standby \_\_\_\_\_ T-Out 18:05  
 (F) Second Final Flow 259  Mileage 88.7 136.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 709  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 6,777  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 45

Sub Total 1286.40  
 Total 1286.40  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Brian Dineen

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53828

Well Name & No. North Fork Farms #3-1 Test No. 5 Date 12/15/14  
 Company H&C Oil Operating Inc. Elevation 2423 KB 2416 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Marc D Rig Discovery #1  
 Location: Sec. 3 Twp. 12 Rge. 23 Co. Trego State KS

Interval Tested 3824-3920 Zone Tested KC<sup>U</sup>H-K  
 Anchor Length 96 Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.8  
 Top Packer Depth 3819 Drill Collars Run 30 Vis 58  
 Bottom Packer Depth 3824 Wt. Pipe Run - WL 7.6  
 Total Depth 3920 Chlorides 4,000 ppm System LCM 1#

Blow Description 2F-BOB in 3min  
FSI-2in blow  
FF-BOB in 2 1/2 min  
FSI-2in blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1000</u>	<u>60</u>	<u>30</u>	<u>70</u>		
<u>60</u>	<u>GMCO</u>	<u>20</u>	<u>50</u>		<u>30</u>
<u>6404</u>	<u>GIP</u>				

Rec Total 1060 BHT 116 Gravity 30 API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1,865  Test 1150 T-On Location 7:05  
 (B) First Initial Flow 48  Jars \_\_\_\_\_ T-Started 7:30  
 (C) First Final Flow 283  Safety Joint \_\_\_\_\_ T-Open 9:06  
 (D) Initial Shut-In 1,212  Circ Sub 50 T-Pulled 11:36  
 (E) Second Initial Flow 296  Hourly Standby \_\_\_\_\_ T-Out 15:13  
 (F) Second Final Flow 443  Mileage 88-1x2 Comments \_\_\_\_\_  
 (G) Final Shut-In 1,188  Sampler 136.40+136.40 KC VCSed out  
 (H) Final Hydrostatic 1,821  Straddle \_\_\_\_\_ loaded tools 12/16/14

Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Shale Packer \_\_\_\_\_  
 Final Flow 30  Extra Packer \_\_\_\_\_  
 Final Shut-In 45  Extra Recorder \_\_\_\_\_  
 Sub Total 1472.80  Day Standby \_\_\_\_\_  
 Total 1472.80  Accessibility \_\_\_\_\_  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Brett D. [Signature]

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