

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1242627
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1242627

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method: Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	H & C Oil Operating Inc.
Well Name	North Fork Farms 3-1
Doc ID	1242627

All Electric Logs Run

Dual Compensated Porosity Log
Dual Induction Log
Microresistivity Log
Borehole Compensated Sonic Log
Sector Bond/Gamma Ray CCL Log

Form	ACO1 - Well Completion
Operator	H & C Oil Operating Inc.
Well Name	North Fork Farms 3-1
Doc ID	1242627

Tops

Name	Top	Datum
Anhydrite	1877	+547
Topeka	3447	-1023
Heebner	3660	-1236
Toronto	3680	-1256
Lansing	3696	-1272
BKC	3938	-1514
Marmaton	4044	-1620
Arbuckle	4220	-1796
TD	4282	-1858



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

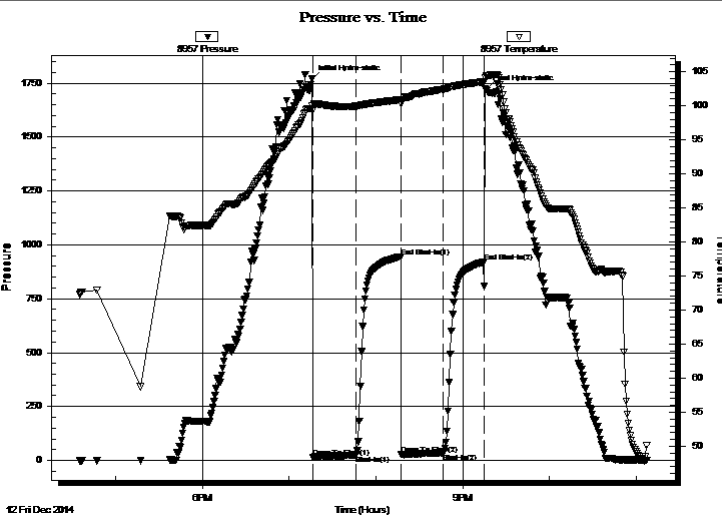
Last Calib.: 2014.12.12

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)



**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
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3661.00 ft			Final	42000.00 lb
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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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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
Total Tool Length:	55.00				



**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: 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 in³

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:

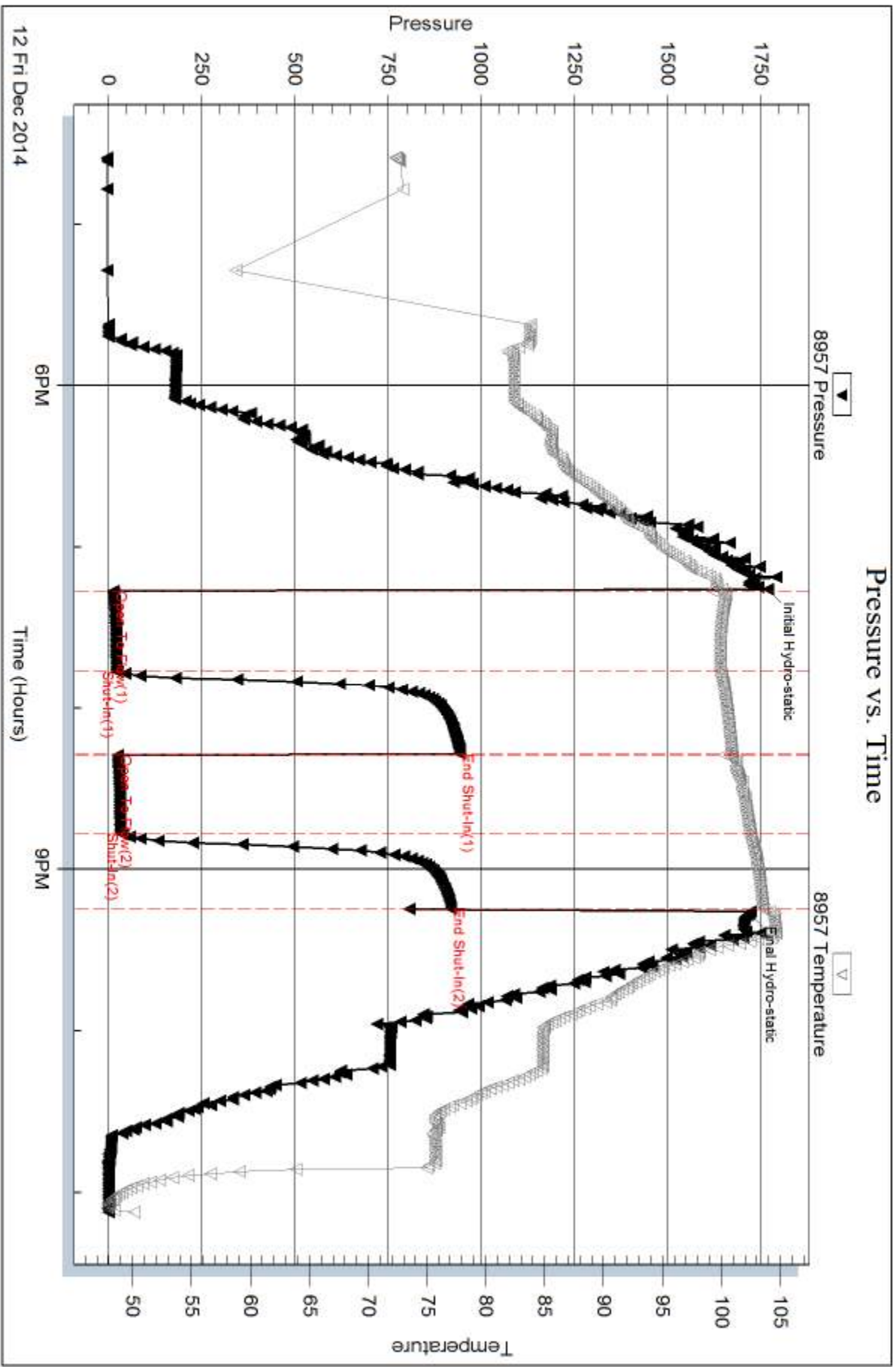
Serial #: 8957

Inside

H&C Oil Operating Inc.

North Fork Farms 3-1

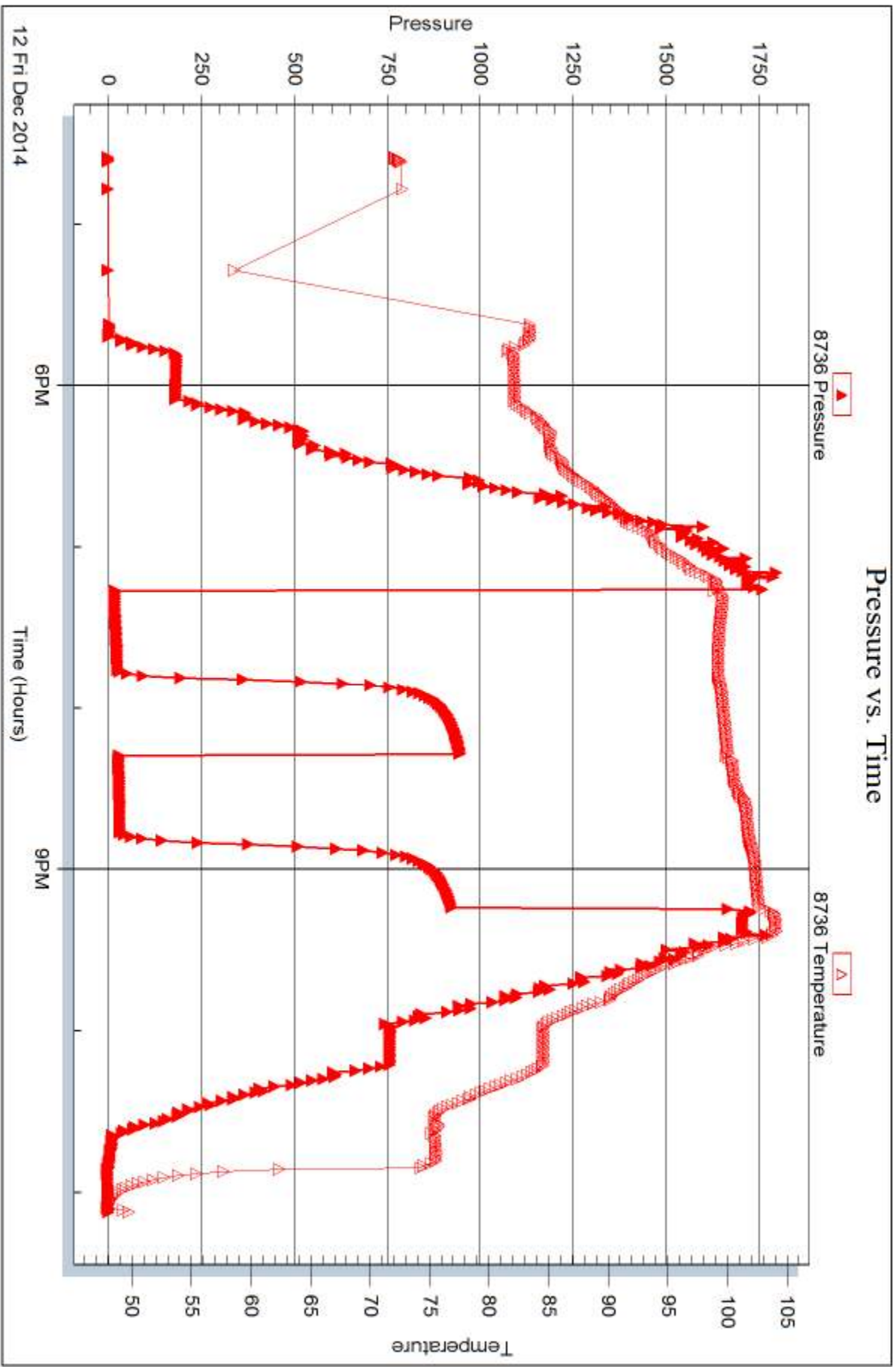
DST Test Number: 1



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:

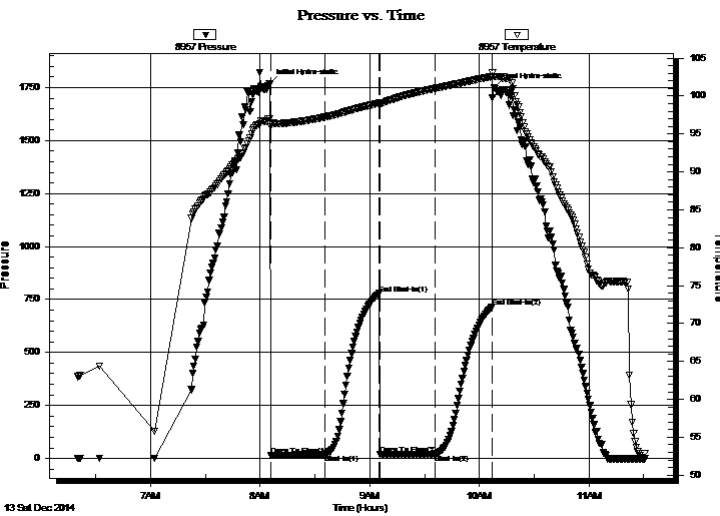
Formation: **LKC "A"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:05:45
 Time Test Ended: 11:30:30
 Interval: **3691.00 ft (KB) To 3730.00 ft (KB) (TVD)**
 Total Depth: 3730.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: 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)



**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
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3691.00 ft			Final	44000.00 lb
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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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
Total Tool Length:	60.00				



**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: 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: 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
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:

Serial #: 8957

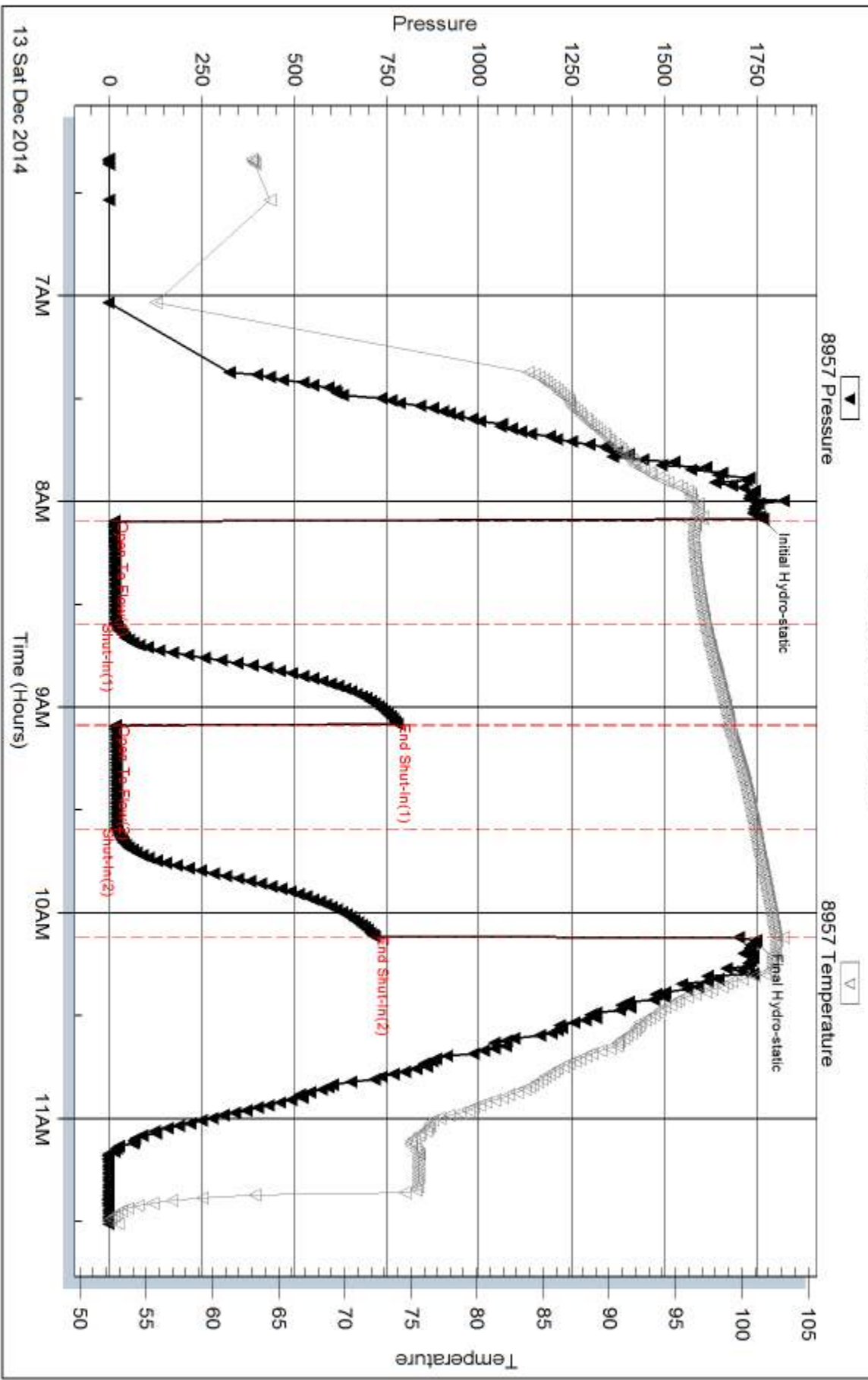
Inside

H&C Oil Operating Inc.

North Fork Farms 3-1

DST Test Number: 2

Pressure vs. Time

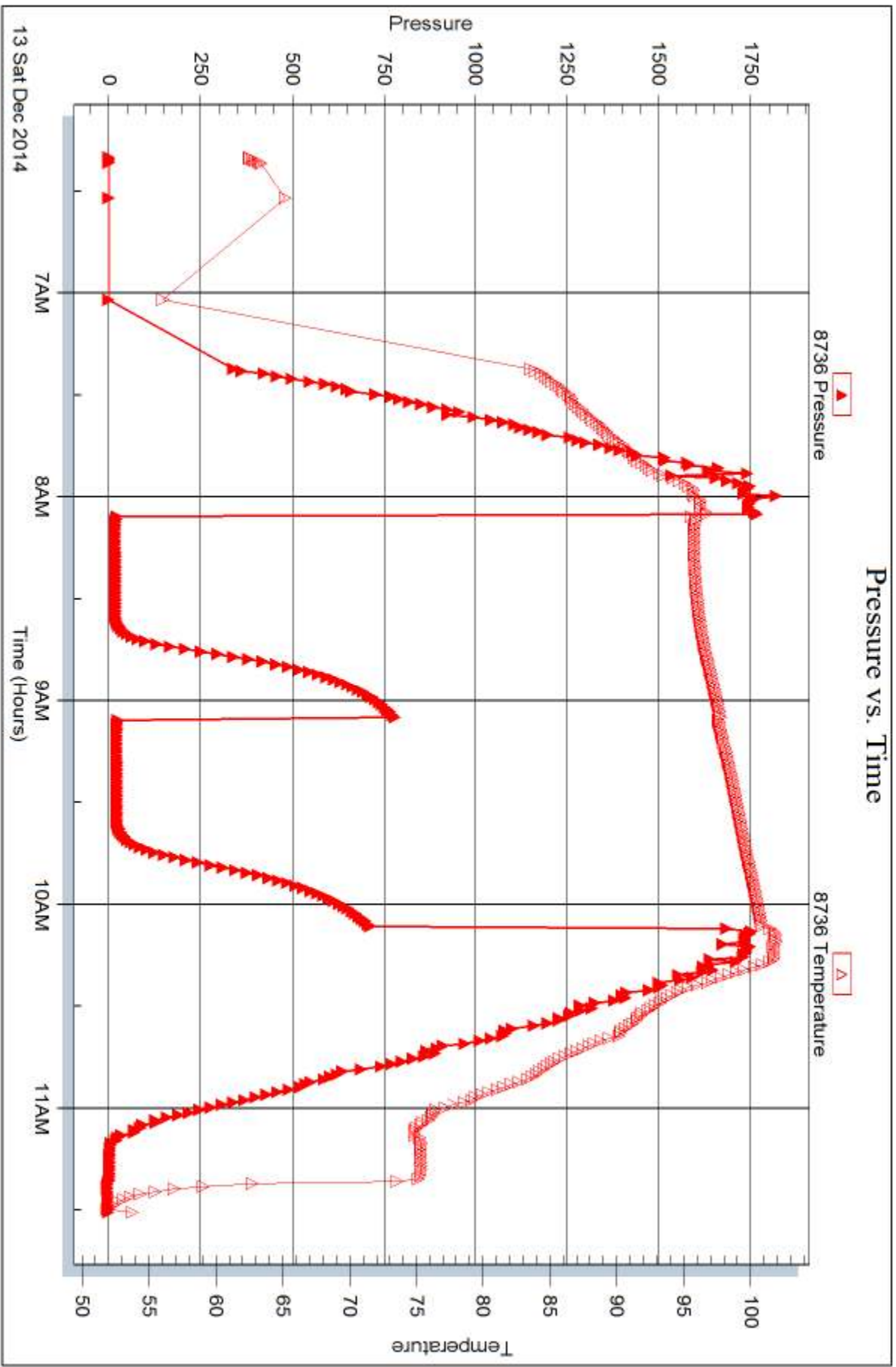


Serial #: 8736

Outside H&C Oil Operating Inc.

North Fork Farms 3-1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 62549

Printed: 2014.12.18 @ 11:18:20



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

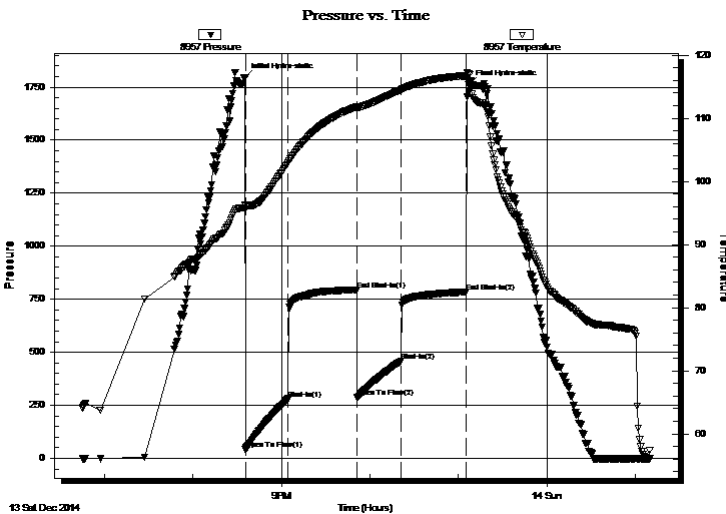
Serial #: 8957

Inside

Press@RunDepth: 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)



**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: - bbl</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: bbl

Water Loss: 7.59 in³

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
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

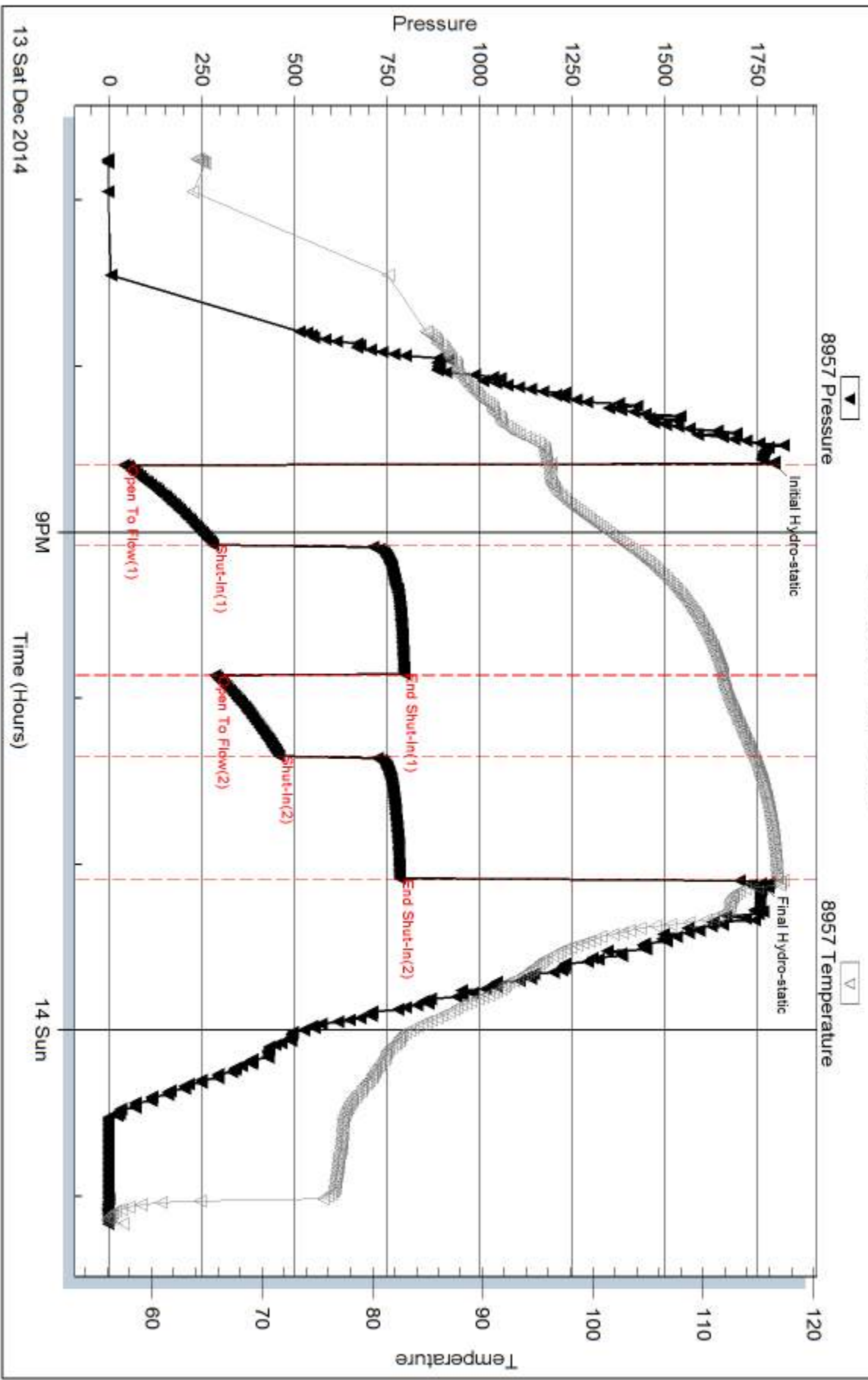
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

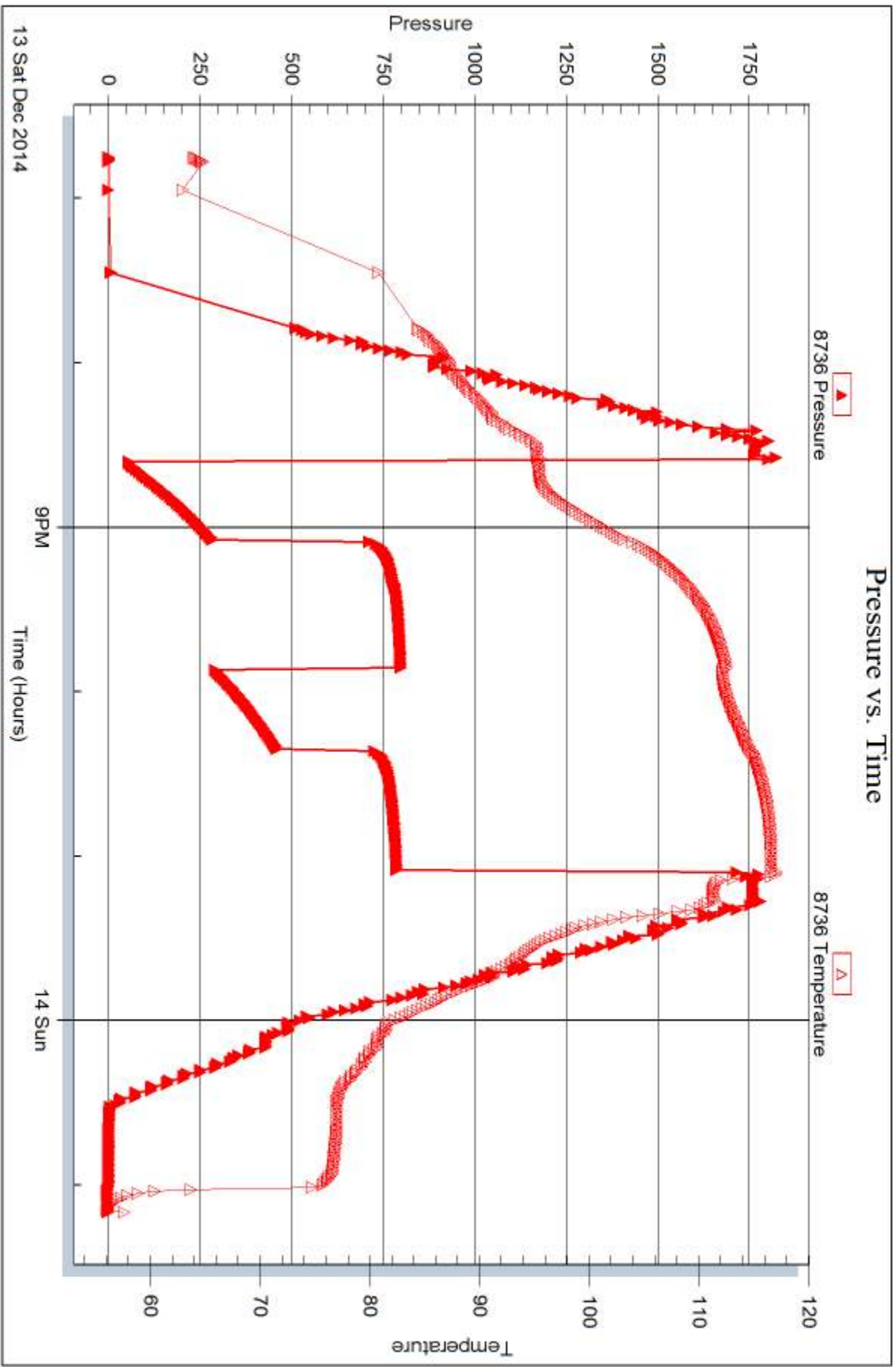


Serial #: 8736

Outside H&C Oil Operating Inc.

North Fork Farms 3-1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62550

Printed: 2014.12.18 @ 11:17:58



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: 2014.12.14 @ 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



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:

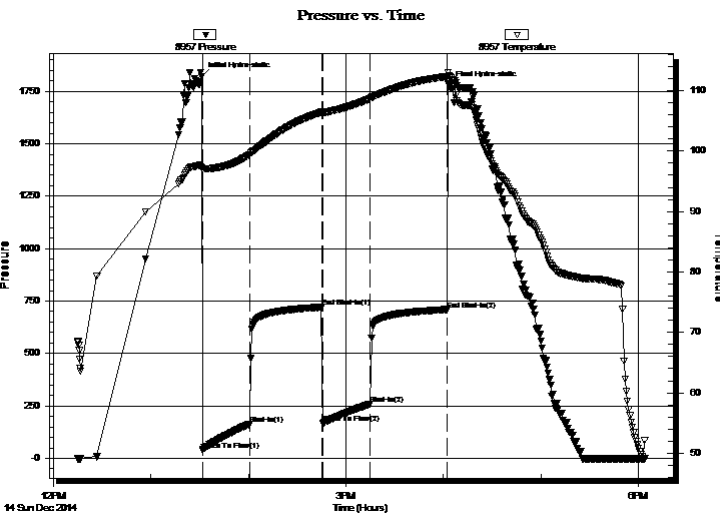
Formation: **LKC "E-G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:32:00
 Time Test Ended: 18:04:15
 Interval: **3761.00 ft (KB) To 3837.00 ft (KB) (TVD)**
 Total Depth: 3837.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: 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

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
------------------	-------------	------------	----------	------------	----------------

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: bbl

Water Loss: 7.59 in³

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
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

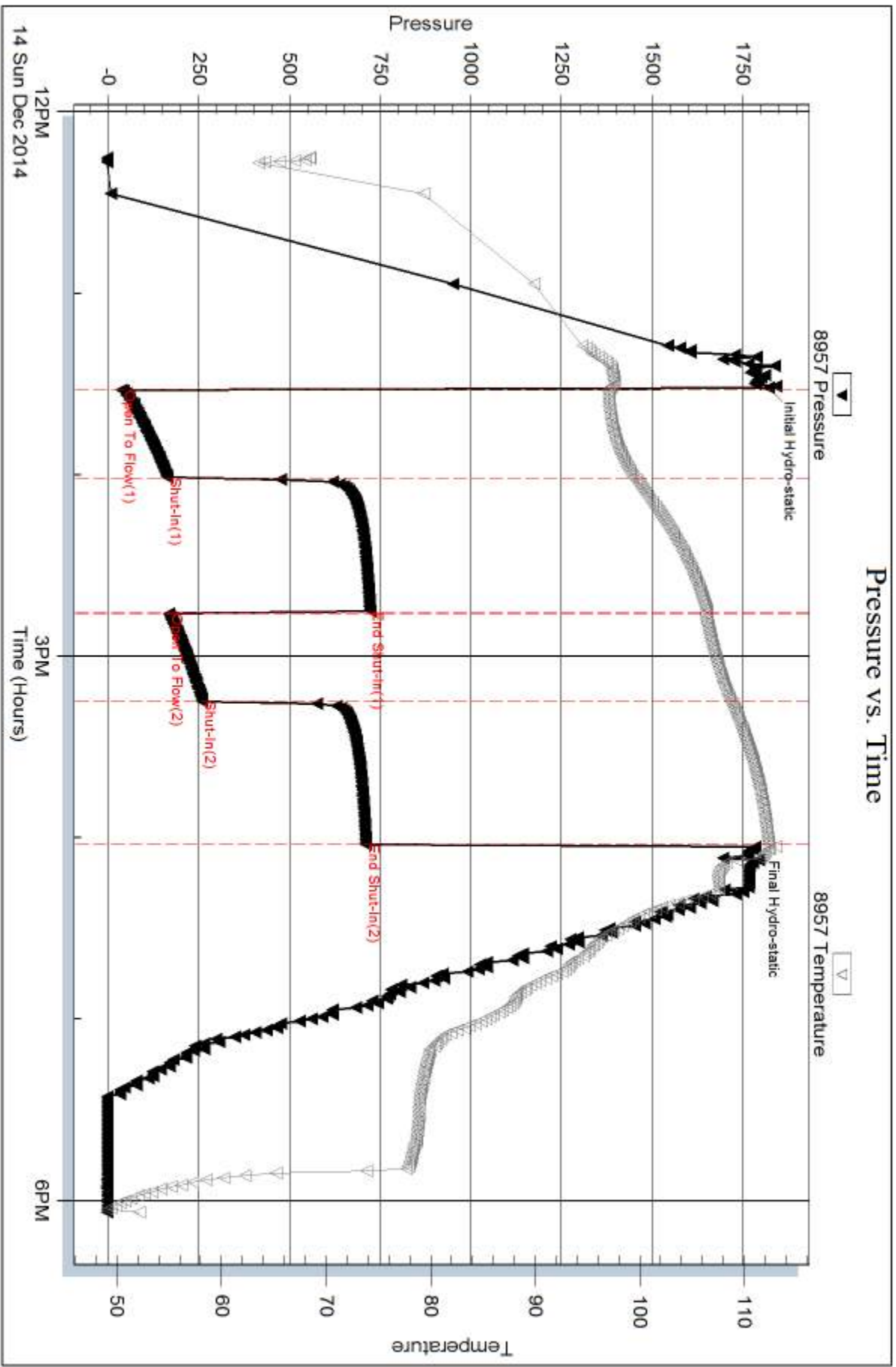
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

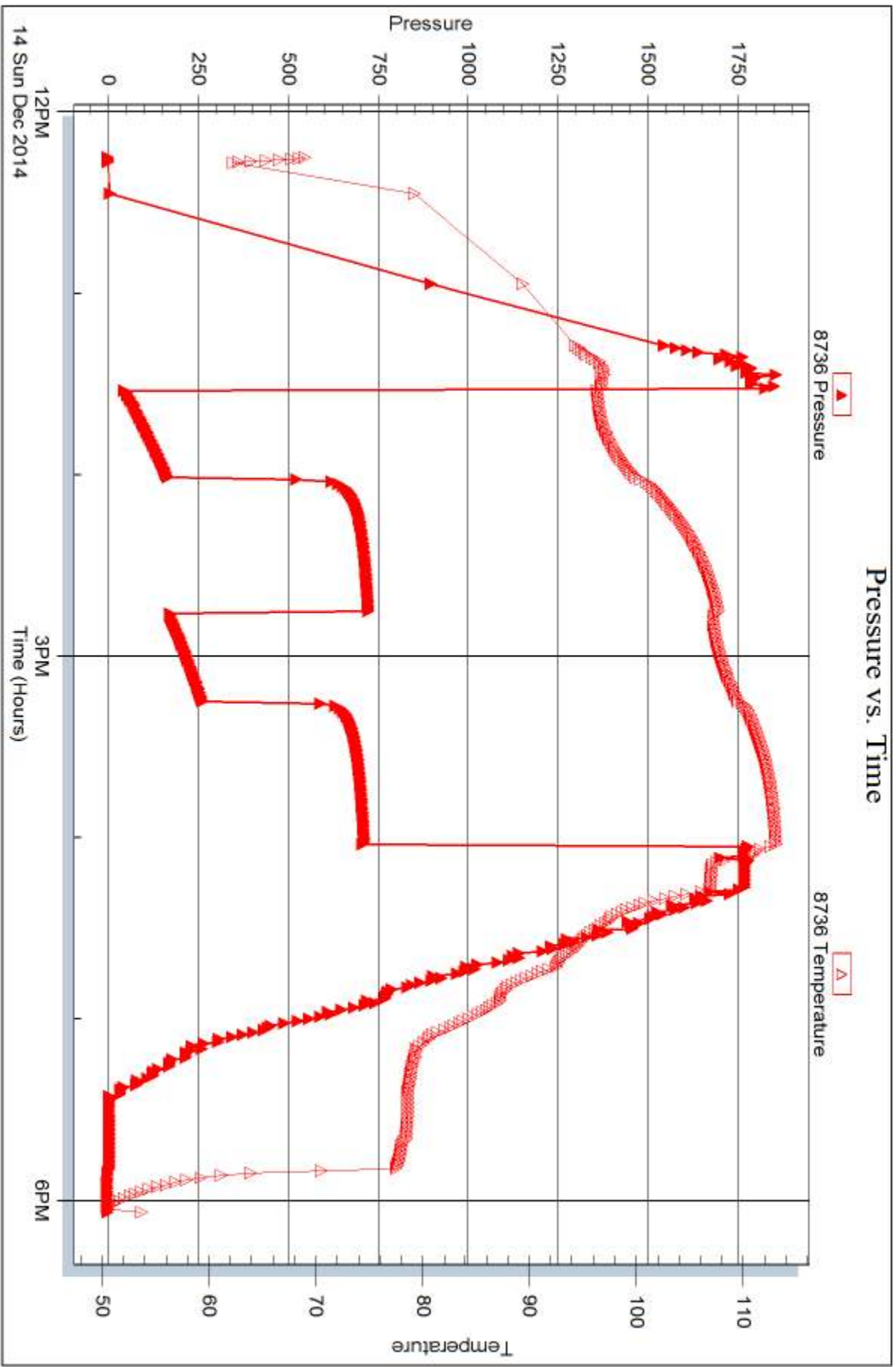


Serial #: 8736

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:

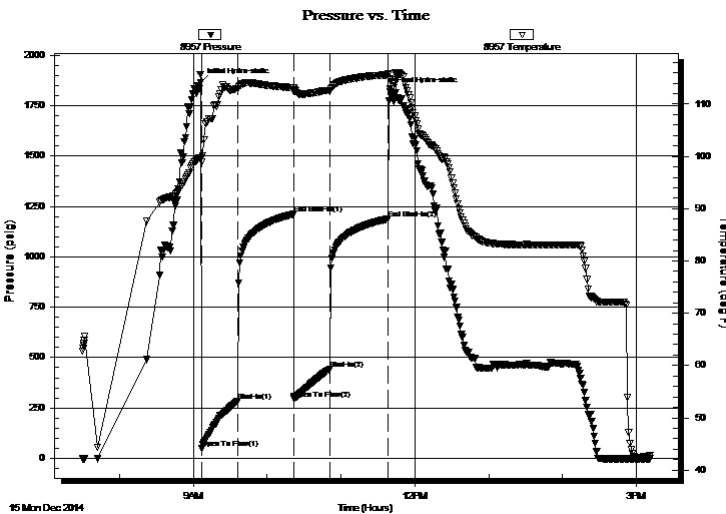
15:11:14

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



**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
				String Weight: Initial	45000.00 lb
Drill Pipe Above KB:	20.00 ft			Final	49000.00 lb
Depth to Top Packer:	3824.00 ft				
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

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 in³

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
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

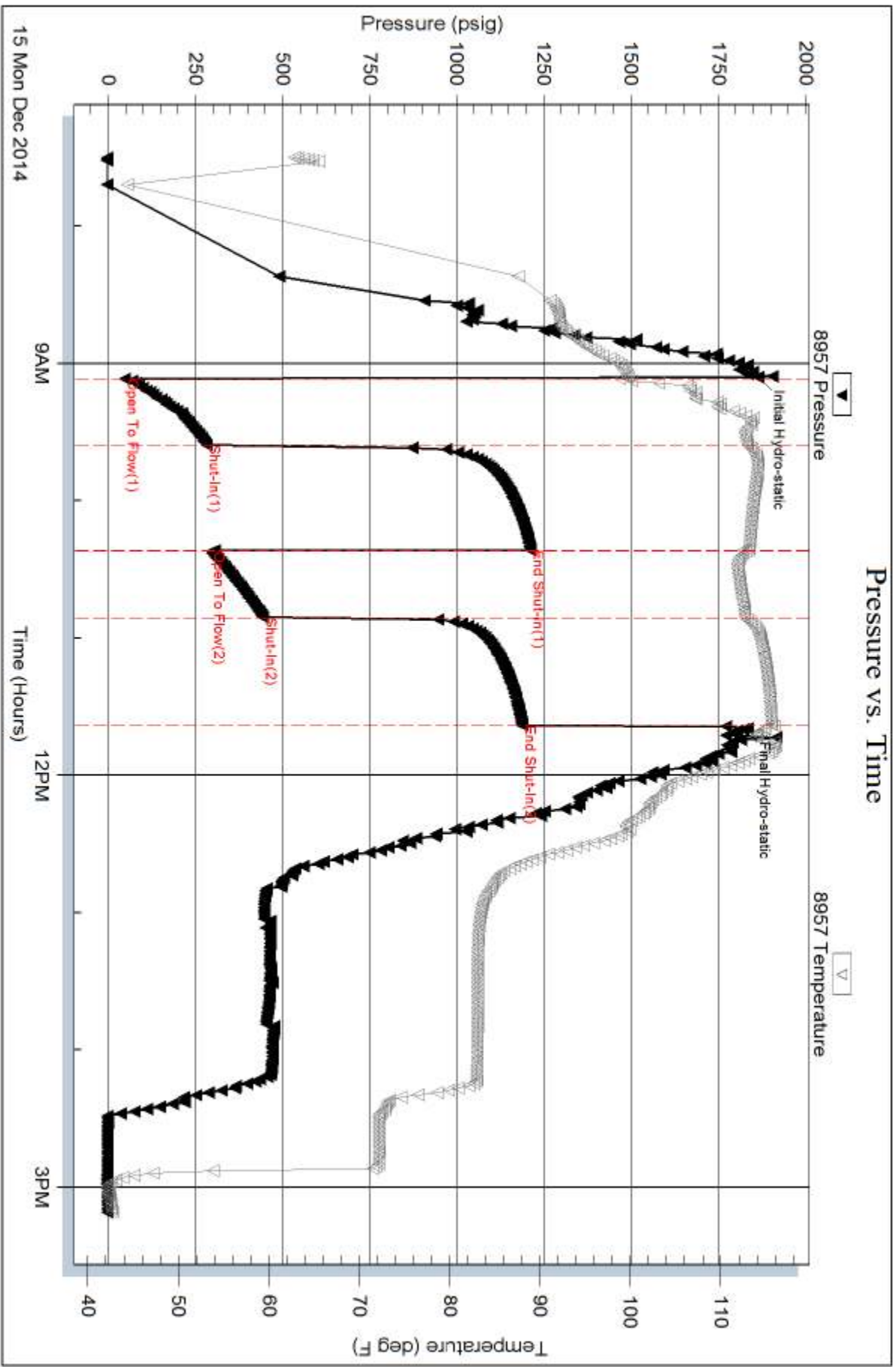
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

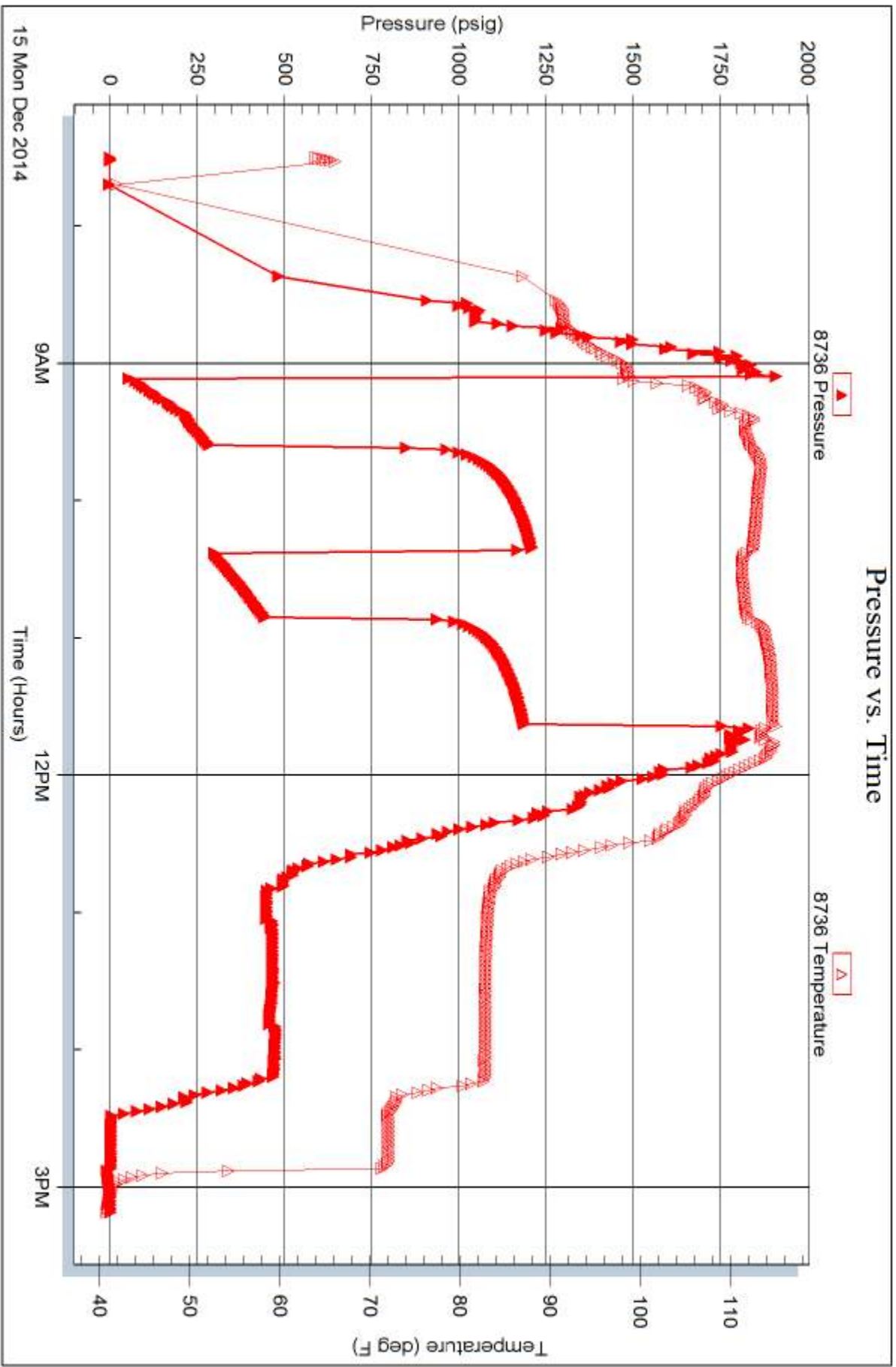


Serial #: 8736

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 88.1 136.40 Comments _____
 (G) Final Shut-In 921 Sampler _____
 (H) Final Hydrostatic 1720 Straddle _____
 Shale Packer _____
 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

MP/DST Disc't _____

Approved By _____ Our Representative Beth Duce

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	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 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 _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 30 Extra Recorder _____
 Final Shut-In 30 Day Standby _____
 Accessibility _____
 Sub Total 1286.40 Sub Total 0
 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 1#
 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 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 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 Butt Drive

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

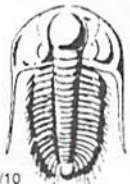
Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>Water</u>				
<u>350</u>	<u>MCW</u>				
				<u>70%</u>	<u>30%</u>

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

(A) Initial Hydrostatic <u>1,821</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>12:00</u>
(B) First Initial Flow <u>37</u>	<input type="checkbox"/> Jars _____	T-Started <u>12:15</u>
(C) First Final Flow <u>164</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>13:30</u>
(D) Initial Shut-In <u>721</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>16:00</u>
(E) Second Initial Flow <u>168</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>18:05</u>
(F) Second Final Flow <u>259</u>	<input checked="" type="checkbox"/> Mileage <u>88.4</u> 136.40	Comments _____
(G) Final Shut-In <u>709</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>6,777</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>45</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1286.40</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1286.40</u>	

Approved By _____ Our Representative Brian D...

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. 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^UH-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>640ft</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. ...

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.

QUALITY OILWELL CEMENTING, INC.

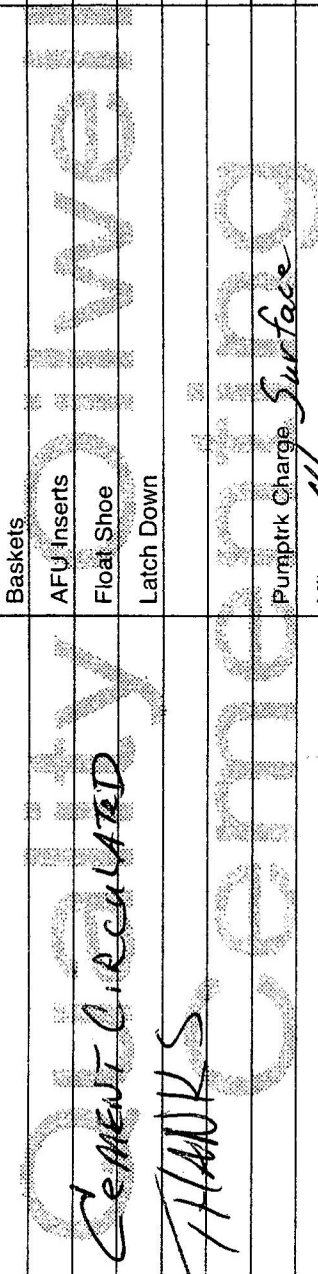
Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1059

Date	12-8-14	3	12	23	23	TRAGO	KANSAS	On Location	6:00 PM
Lease	NORTH FORK FARMS		Well No.	3-1		Location	WAKENEY KS. IN 1/4 EGS EATO		
Contractor	Discovery DRUG RIG #1								
Type Job	SURFACE								
Hole Size	12 1/4								
Csg.	8 5/8 NEW								
Tbg. Size	23 # csg.								
Tool									
Cement Left in Csg.	15'								
Meas Line	Displace 134 BBL								
EQUIPMENT									
Pumptrk	No.	Cementer							
	18	Helper	GIRVIN G.						
Bulktrk	No.	Driver	CODY B.						
	14	Driver	LONNIE MA.						
		Driver							
		Driver							
JOB SERVICES & REMARKS									
Remarks:									
Rat Hole									
Mouse Hole									
Centralizers									
Baskets									
D/V or Port Collar									
	Serc 223								
	Handling 158								
	Mileage								
	Guide Shoe								
	Centralizer								
	Baskets								
	AFU Inserts								
	Float Shoe								
	Latch Down								
	Pumptrk Charge Surface								
	Mileage 41								
	Tax								
	Discount								
	Total Charge								
X Signature									



QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-288C 7

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1007

Date	12-17-14	Sec.	3	Twp.	12	Range	23	County	Trego	State	KS	On Location		Finish	11:00 AM
Lease	North Fork Farms														
Contractor	Discovery #1														
Type Job	Top to bottom														
Hole Size	7 7/8														
Csg.	5 1/2 14*														
Tbg. Size															
Tool															
Cement Left in Csg.	Shoe Joint 23.05														
Meas Line	Displace 103 1/2 661														
EQUIPMENT															
Pumpirk	No.	Cementier													
	17	Helper	Travis												
Bulkirk	No.	Driver	Lonn'e m.												
	19	Driver	Tylor												
Bulkirk	No.	Driver	Lonn'e m.												
	9	Driver													
JOB SERVICES & REMARKS															
Remarks:															
Rat Hole	30sx														
Mouse Hole	15sx														
Centralizers															
Baskets															
D/V or Port Collar															
Pipe on bottom broke circulation. Pumped 500gal Mud CLR-48 with 10.661fw behind it. Plugged Rat hole with 30sx and Mouse hole with 15sx. Hooked to 5 1/2 and Mixed 490sx QMDC 1/2 Flo and 160sx Q Pro-C. 10% salt, 5% Gilsomite. Shut down washed Pump and lines. Released Plug and displaced with 103 1/2 661 Plug landed and held.															
Lift Pressure 1200 psi															
Plug landed at 1800 psi															
Owner: Wakeeney, IN, Enz To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. Charge To: H&C oil Street: _____ City: _____ State: _____ The above was done to satisfaction and supervision of owner agent or contractor. Cement Amount Ordered: 535 sx QMDC 1/2 Flo, 160 sx Q-proc, 10% salt, 5% Gilsomite Common: 160 Q pro-c Poz. Mix: 535 Q MDC Gel: _____ Calcium: _____ Hulls: _____ Salt: 14 Flowseal: 175# Kol-Seal: 800# Mud CLR 48: 500gal CFL-117 or CD110 CAF 38 Sand: _____ Handling: 717 Mileage: _____ Guide Shoe: _____ Centralizer: 16 Baskets: 3 AFU-Inserts: _____ Float Shoe: 1 Latch Down: 1 Pumpirk Charge: prod string Mileage: 4'															
														Tax	
														Discount	
														Total Charge	

X Signature: 