



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1111626
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
-----------------------------------	-----------------	---

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: _____



1111626

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No 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: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

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: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
--	---	---

Marc Downing
 Consulting Petroleum Geologist
 1411 Washington Circle
 Hays, KS 67601
 Phone: 620-428-1356 (cell) 785-621-2286

GEOLOGIC REPORT LOG

COMPANY **H&C Oil Operating, Inc.**
 WELL **Workman Trust #13-1**
 FIELD **Wildcat**

LOCATION **99S Euc + 231S Fel**

SEC. **13** TWP. **4S** RGE. **24W**

COUNTY **Greene**
 STATE **Kansas**

OPERATOR **H&C Oil Operating, Inc.**
 CONTRACTOR **American Energy, Inc.**
 COMM. **10-21-12** COMP. **10-24-12**

CASING RECORD
 SURF. **4 5/8" @ 240'**
 PROD. **5 1/2" @ 394'**
 TOTAL DEPTH LOG: **394'**

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Top Anhydrite	2184	2152	+5	NA
Base Anhydrite	2190	2191	+280	NA
Taroka	3494	3490	-1014	NA
HEEBNER	3681	3677	-1213	419
Taranta	3705	3702	-1234	419
LKC	3718	3718	-1254	419
BKC	3761	3761	-1459	419

REFERENCE WELL FOR STRUCTURE **Rand Oil Operations**
Workman #1 NE-NE-54 Sec. 13-4S-24W

DRILL STEM TESTS

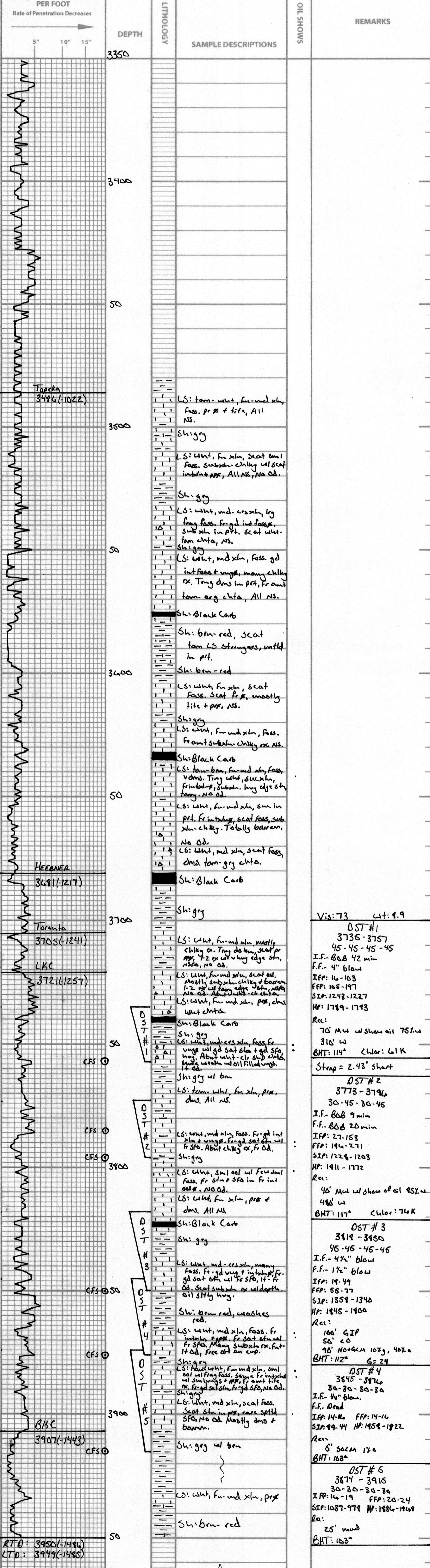
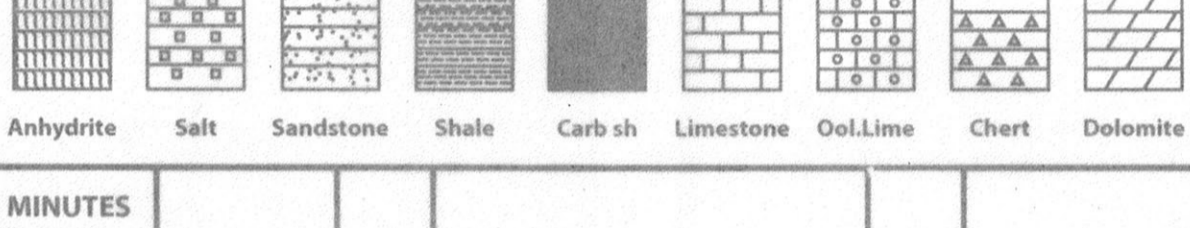
No.	Interval	IFP/Time	ISP/Time	FFP/Time	ESP/Time	HR-FHP	RECOVERY

REMARKS AND RECOMMENDATIONS:
 Due to structural position, DST recovery & log evaluation, it was decided to set 5 1/2" production casing for completion.

Reference:
 LKC "H" : 3483-37 (DST #3)

Marc Downing

LEGEND



Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

January 30, 2013

Charles Ramsay
H & C Oil Operating Inc.
PO BOX 86
PLAINVILLE, KS 67663-0086

Re: ACO1
API 15-065-23866-00-00
Workman Trust 13-1
NE/4 Sec.13-06S-24W
Graham County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Charles Ramsay



DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663-0086

ATTN: Charles Ramsey

Workman Trust #13-1

13-6s-24w Graham,KS

Start Date: 2012.10.24 @ 23:30:27

End Date: 2012.10.25 @ 06:42:51

Job Ticket #: 48581 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.31 @ 09:22:11

H&C Oil Operating Inc

13-6s-24w Graham,KS

Workman Trust #13-1

DST # 1

LKC "C"

2012.10.24



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc
 PO Box 86
 Plainville KS 67663-0086
 ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
 Job Ticket: 48581 **DST#: 1**
 Test Start: 2012.10.24 @ 23:30:27

GENERAL INFORMATION:

Formation: **LKC "C"**
 Deviated: **No Whipstock:** ft (KB)
 Test Type: **Conventional Bottom Hole (Initial)**
 Time Tool Opened: 01:50:22
 Tester: **Ray Schwager**
 Time Test Ended: 06:42:51
 Unit No: **42**
Interval: 3735.00 ft (KB) To 3757.00 ft (KB) (TVD)
 Reference Elevations: **2464.00 ft (KB)**
 Total Depth: **3757.00 ft (KB) (TVD)**
 2459.00 ft (CF)
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 KB to GR/CF: **5.00 ft**

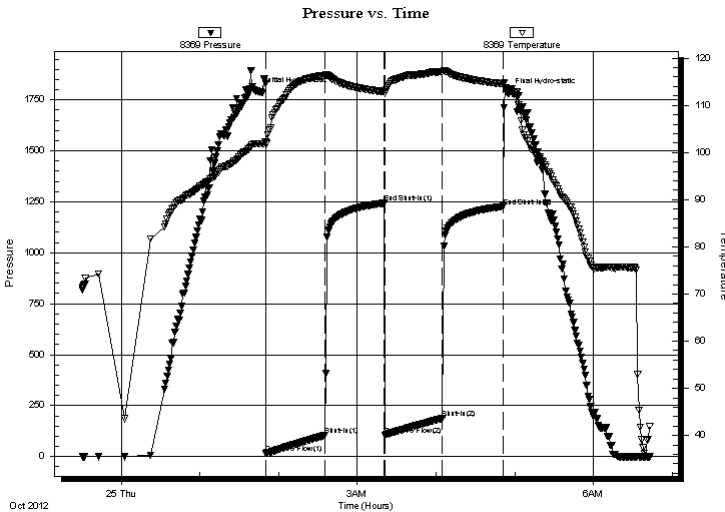
Serial #: 8369

Inside

Press @ Run Depth: **187.56 psig @ 3736.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2012.10.24** End Date: **2012.10.25** Last Calib.: **2012.10.25**
 Start Time: **23:30:27** End Time: **06:42:51** Time On Btm: **2012.10.25 @ 01:44:52**
 Time Off Btm: **2012.10.25 @ 04:54:51**

TEST COMMENT: 45-IFP-w k to strg in 42 min
 45-ISIP-no bl
 45-FFP-w k to a fr bl surface to 4" bl
 45-FSIP-no bl

PRESSURE SUMMARY



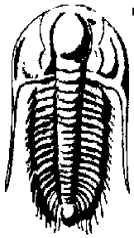
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1789.81	101.91	Initial Hydro-static
6	16.15	101.91	Open To Flow (1)
51	103.95	116.17	Shut-In(1)
96	1243.16	112.84	End Shut-In(1)
96	105.70	112.61	Open To Flow (2)
140	187.56	117.21	Shut-In(2)
187	1227.41	114.53	End Shut-In(2)
190	1783.65	113.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	MW 25%M75%W w/show of oil	0.98
310.00	Water	4.35

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating Inc
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS

Workman Trust #13-1

Job Ticket: 48581 **DST#: 1**

Test Start: 2012.10.24 @ 23:30:27

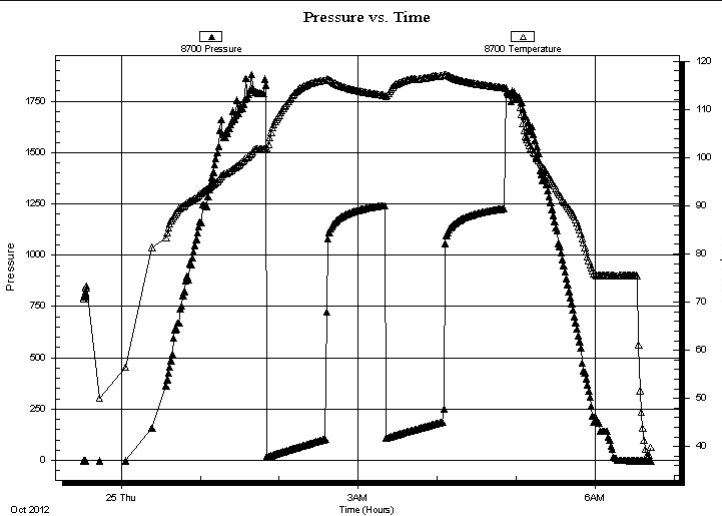
GENERAL INFORMATION:

Formation: **LKC "C"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:50:22 Tester: Ray Schwager
 Time Test Ended: 06:42:51 Unit No: 42
 Interval: **3735.00 ft (KB) To 3757.00 ft (KB) (TVD)** Reference Elevations: 2464.00 ft (KB)
 Total Depth: 3757.00 ft (KB) (TVD) 2459.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8700 Outside

Press @ Run Depth: psig @ 3736.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.10.24 End Date: 2012.10.25 Last Calib.: 2012.10.25
 Start Time: 23:31:27 End Time: 06:41:51 Time On Btm:
 Time Off Btm:

TEST COMMENT: 45-IFP-w k to strg in 42 min
 45-ISIP-no bl
 45-FFP-w k to a fr bl surface to 4" bl
 45-FSIP-no bl



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
70.00	MW 25%M75%W w/show of oil	0.98
310.00	Water	4.35

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48581 **DST#: 1**
Test Start: 2012.10.24 @ 23:30:27

Tool Information

Drill Pipe:	Length: 3745.00 ft	Diameter: 3.80 inches	Volume: 52.53 bbl	Tool Weight: 2200.00 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: 70000.00 lb
			<u>Total Volume: 52.53 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3735.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 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
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3715.00	
Shut In Tool	5.00			3720.00	
Hydraulic tool	5.00			3725.00	
Packer	5.00			3730.00	21.00 Bottom Of Top Packer
Packer	5.00			3735.00	
Stubb	1.00			3736.00	
Recorder	0.00	8369	Inside	3736.00	
Recorder	0.00	8700	Outside	3736.00	
Perforations	18.00			3754.00	
Bullnose	3.00			3757.00	22.00 Bottom Packers & Anchor
Total Tool Length:	43.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48581 **DST#: 1**
Test Start: 2012.10.24 @ 23:30:27

Mud and Cushion Information

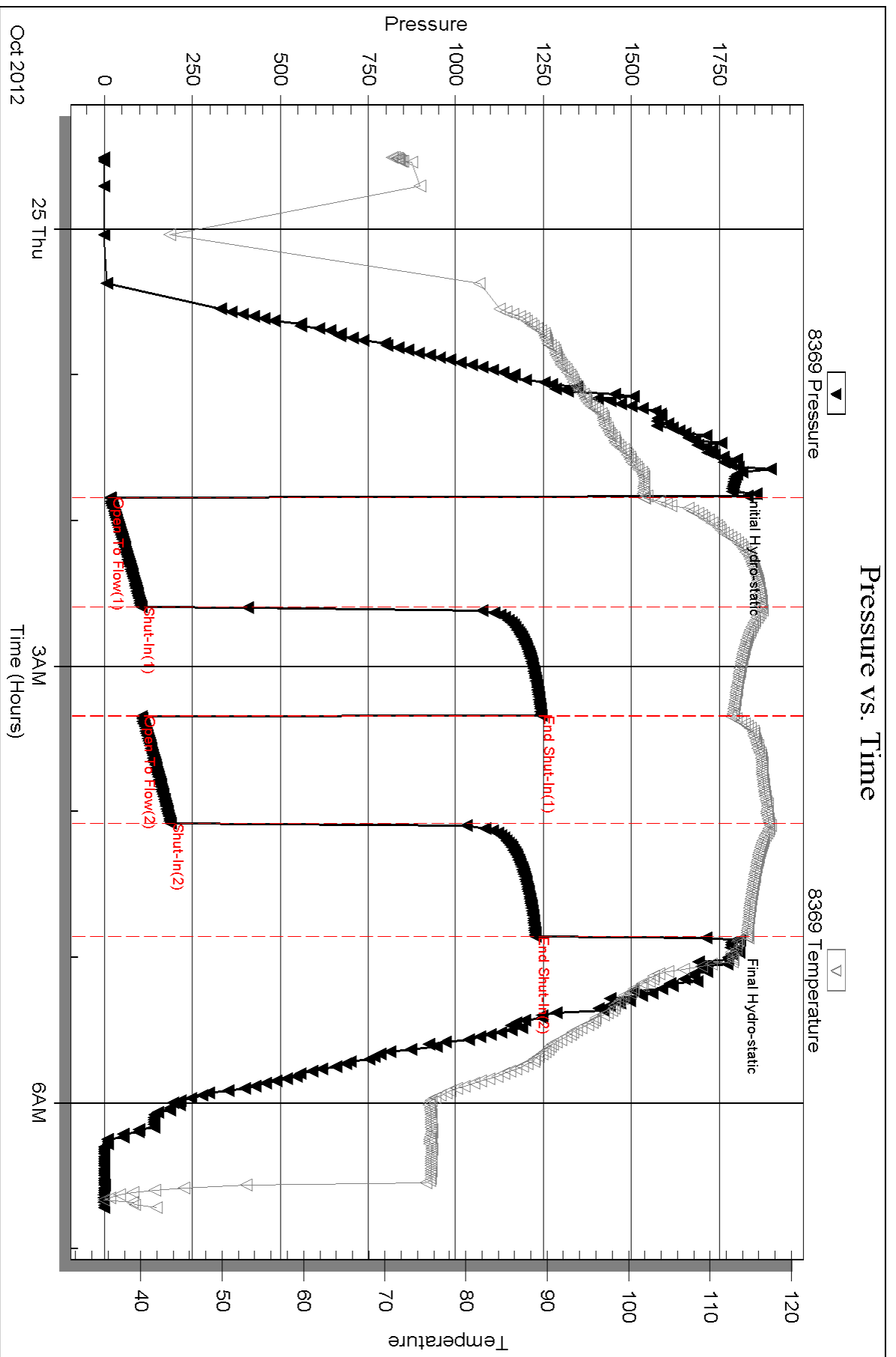
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	61000 ppm
Viscosity: 73.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.53 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	MW 25%M75%W w/show of oil	0.982
310.00	Water	4.348

Total Length: 380.00 ft Total Volume: 5.330 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW .17@50F



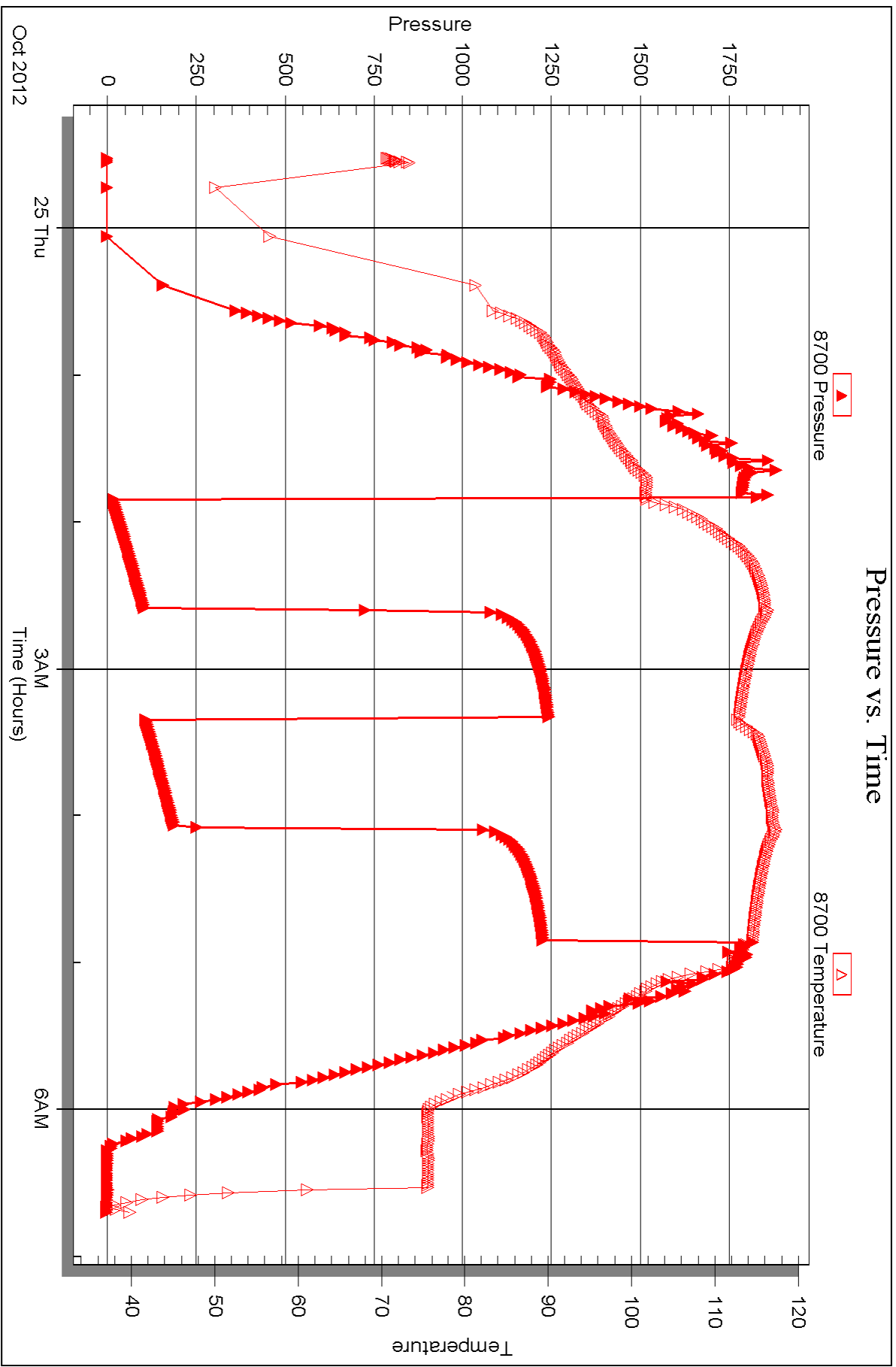
Serial #: 8700

Outside

H&C Oil Operating Inc

Workman Trust #13-1

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663-0086

ATTN: Charles Ramsey

Workman Trust #13-1

13-6s-24w Graham,KS

Start Date: 2012.10.25 @ 14:50:51

End Date: 2012.10.25 @ 21:28:45

Job Ticket #: 48582 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.31 @ 09:20:41

H&C Oil Operating Inc

13-6s-24w Graham,KS

Workman Trust #13-1

DST # 2

LKC E-F

2012.10.25



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc
 PO Box 86
 Plainville KS 67663-0086
 ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
 Job Ticket: 48582 **DST#: 2**
 Test Start: 2012.10.25 @ 14:50:51

GENERAL INFORMATION:

Formation: **LKC E-F**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:52:16
 Time Test Ended: 21:28:45
 Interval: **3773.00 ft (KB) To 3796.00 ft (KB) (TVD)**
 Total Depth: 3796.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ray Schwager
 Unit No: 42
 Reference Elevations: 2464.00 ft (KB)
 2459.00 ft (CF)
 KB to GR/CF: 5.00 ft

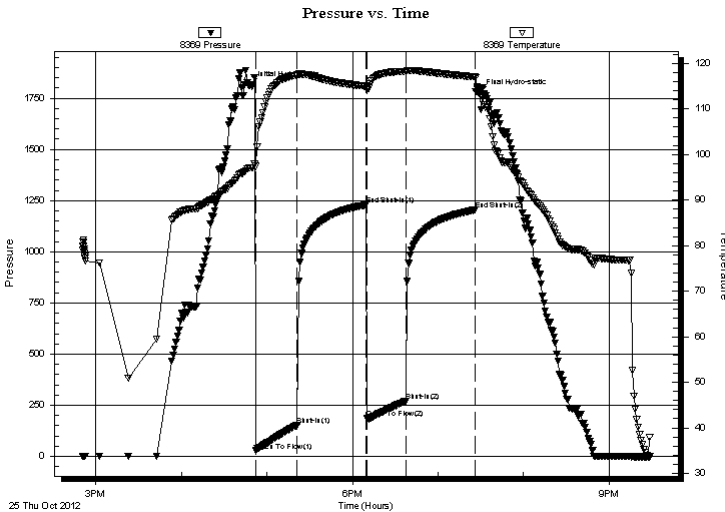
Serial #: 8369

Inside

Press @ Run Depth: 271.29 psig @ 3774.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.10.25 End Date: 2012.10.25 Last Calib.: 2012.10.25
 Start Time: 14:50:51 End Time: 21:28:45 Time On Btm: 2012.10.25 @ 16:48:16
 Time Off Btm: 2012.10.25 @ 19:28:45

TEST COMMENT: 30-IFP-w k to strg in 9 min
 45-ISIP-no bl
 30-FFP-w k to strg in 20 min
 45-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1811.20	97.14	Initial Hydro-static
4	27.26	97.43	Open To Flow (1)
33	153.91	117.45	Shut-In(1)
81	1228.37	115.01	End Shut-In(1)
82	186.17	114.16	Open To Flow (2)
109	271.29	118.27	Shut-In(2)
158	1203.79	117.06	End Shut-In(2)
161	1772.43	113.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	MW 20%M80%W w /show of oil	0.56
480.00	Water	6.73

* 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
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48582 **DST#: 2**
Test Start: 2012.10.25 @ 14:50:51

Tool Information

Drill Pipe:	Length: 3776.00 ft	Diameter: 3.80 inches	Volume: 52.97 bbl	Tool Weight:	2200.00 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:	60000.00 lb
			<u>Total Volume: 52.97 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3773.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	23.00 ft				
Tool Length:	44.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3753.00	
Shut In Tool	5.00			3758.00	
Hydraulic tool	5.00			3763.00	
Packer	5.00			3768.00	21.00 Bottom Of Top Packer
Packer	5.00			3773.00	
Stubb	1.00			3774.00	
Recorder	0.00	8369	Inside	3774.00	
Recorder	0.00	8700	Outside	3774.00	
Perforations	19.00			3793.00	
Bullnose	3.00			3796.00	23.00 Bottom Packers & Anchor
Total Tool Length:	44.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48582 **DST#: 2**
Test Start: 2012.10.25 @ 14:50:51

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:	76000 ppm
Viscosity: 69.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.53 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: 1.00 inches			

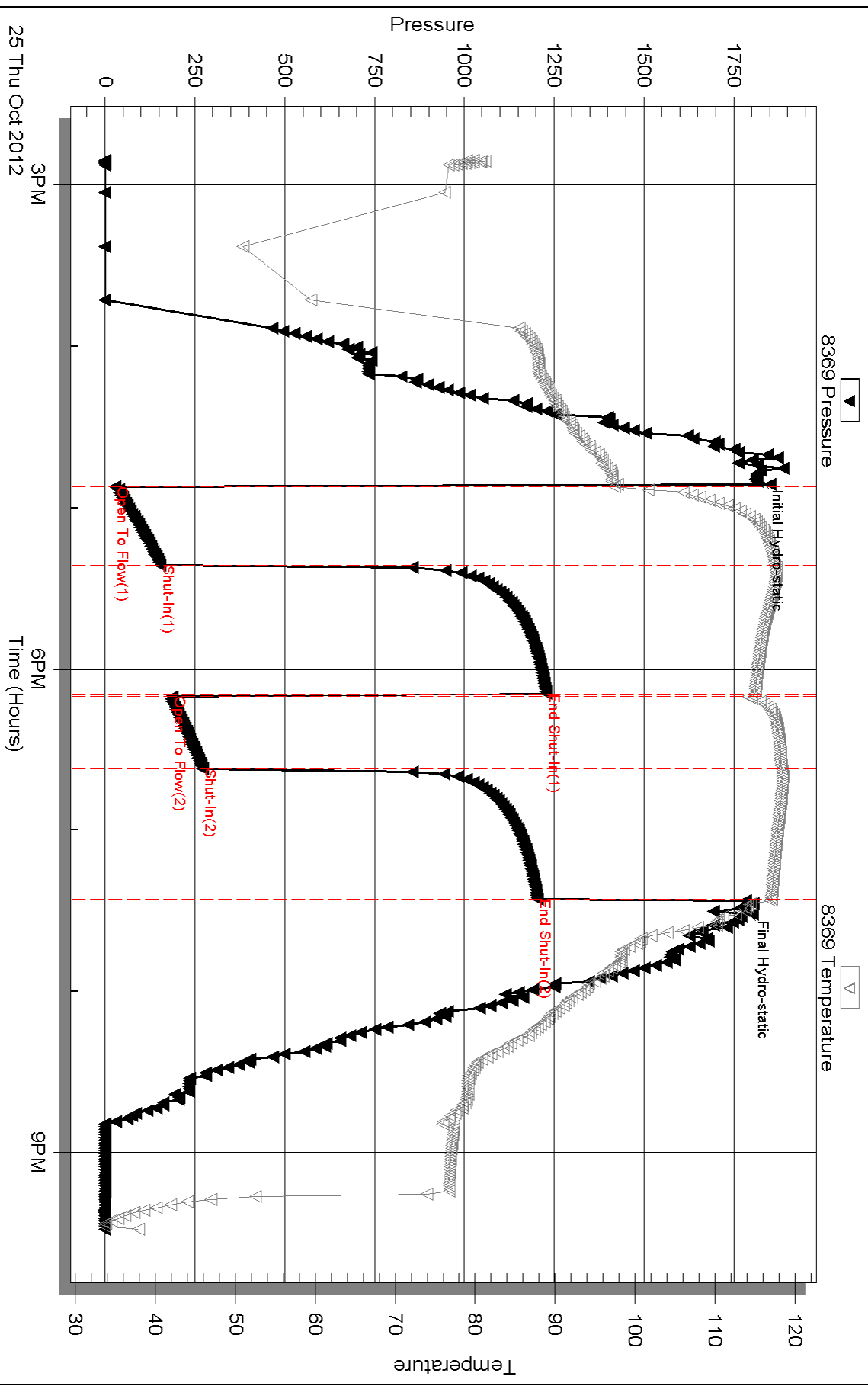
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	MW 20%M80%W w/show of oil	0.561
480.00	Water	6.733

Total Length: 520.00 ft Total Volume: 7.294 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: Rw .14@50F

Pressure vs. Time

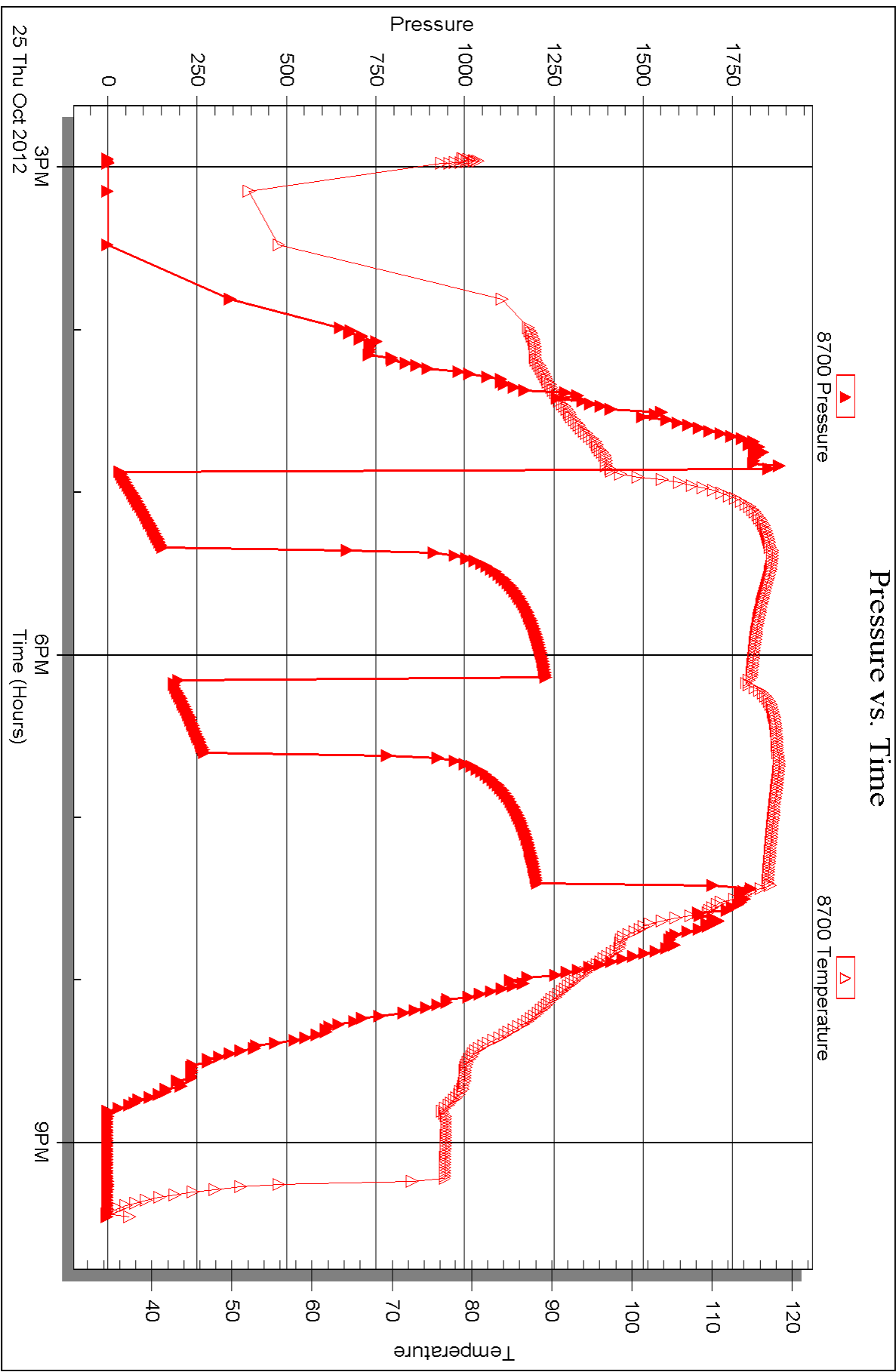


Serial #: 8700

Outside H&C Oil Operating Inc

Workman Trust #13-1

DST Test Number: 2





DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663-0086

ATTN: Charles Ramsey

Workman Trust #13-1

13-6s-24w Graham,KS

Start Date: 2012.10.26 @ 07:10:42

End Date: 2012.10.26 @ 13:53:06

Job Ticket #: 48583 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.31 @ 09:19:26

H&C Oil Operating Inc

13-6s-24w Graham,KS

Workman Trust #13-1

DST # 3

LKC "H"

2012.10.26



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating Inc
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48583 **DST#: 3**
Test Start: 2012.10.26 @ 07:10:42

GENERAL INFORMATION:

Formation: **LKC "H"**
Deviated: **No** Whipstock: ft (KB)
Time Tool Opened: 09:08:07
Time Test Ended: 13:53:06
Interval: 3818.00 ft (KB) To 3850.00 ft (KB) (TVD)
Total Depth: 3850.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 2464.00 ft (KB)
2459.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 42

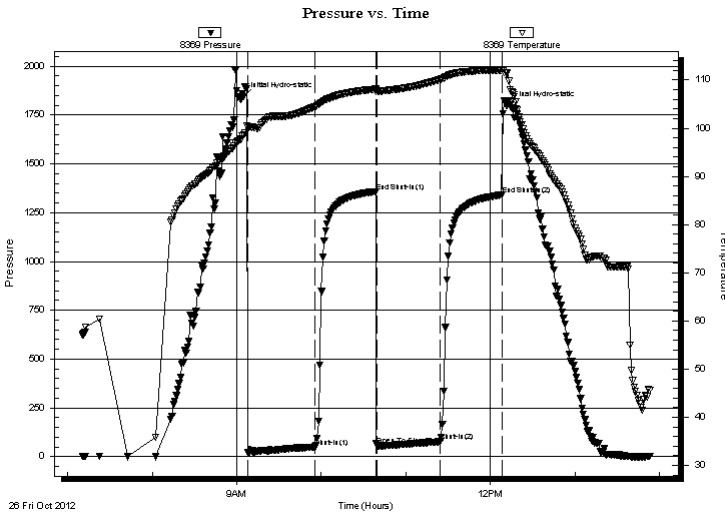
Serial #: 8369

Inside

Press @ Run Depth: 77.64 psig @ 3819.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.10.26 End Date: 2012.10.26 Last Calib.: 2012.10.26
Start Time: 07:10:42 End Time: 13:53:06 Time On Btm: 2012.10.26 @ 09:05:07
Time Off Btm: 2012.10.26 @ 12:11:36

TEST COMMENT: 45-IFP-w k k to a fr bl 1/2" to 4 1/2" bl
45-ISIP-no bl
45-FFP-w k bl thru-out 1/4" to 1 1/2" bl
45-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1845.95	98.63	Initial Hydro-static
3	18.82	100.01	Open To Flow (1)
51	49.84	104.46	Shut-In(1)
94	1358.10	108.07	End Shut-In(1)
95	55.75	107.72	Open To Flow (2)
140	77.64	110.12	Shut-In(2)
183	1340.93	111.98	End Shut-In(2)
187	1800.68	111.43	Final Hydro-static

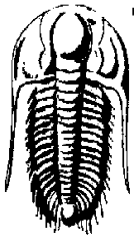
Recovery

Length (ft)	Description	Volume (bbl)
0.00	100' GIP	0.00
50.00	CO	0.70
90.00	HO&GCM 10%G40%O50%M	1.26

* 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
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48583 **DST#: 3**
Test Start: 2012.10.26 @ 07:10:42

GENERAL INFORMATION:

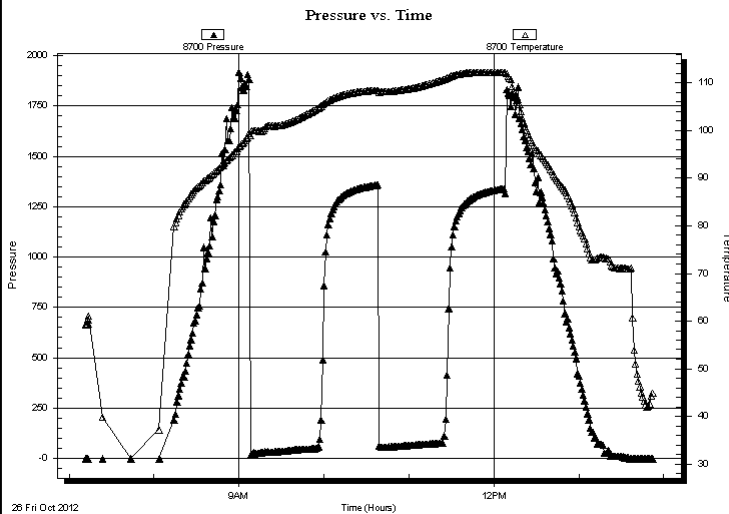
Formation: **LKC "H"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:08:07
Time Test Ended: 13:53:06

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 42

Interval: **3818.00 ft (KB) To 3850.00 ft (KB) (TVD)**
Reference Elevations: 2464.00 ft (KB)
2459.00 ft (CF)
Total Depth: 3850.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
KB to GR/CF: 5.00 ft

Serial #: 8700 Outside
Press @ Run Depth: psig @ 3819.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.10.26 End Date: 2012.10.26 Last Calib.: 2012.10.26
Start Time: 07:11:40 End Time: 13:52:34 Time On Btm:
Time Off Btm:

TEST COMMENT: 45-IFP-w k to a fr bl 1/2" to 4 1/2" bl
45-ISIP-no bl
45-FFP-w k bl thru-out 1/4" to 1 1/2" bl
45-FSIP-no bl



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	100' GIP	0.00
50.00	CO	0.70
90.00	HO&GCM 10%G40%O50%M	1.26

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
 PO Box 86
 Plainville KS 67663-0086
 ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
 Job Ticket: 48583 **DST#: 3**
 Test Start: 2012.10.26 @ 07:10:42

Tool Information

Drill Pipe:	Length: 3808.00 ft	Diameter: 3.80 inches	Volume: 53.42 bbl	Tool Weight: 2200.00 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: 55000.00 lb
			<u>Total Volume: 53.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3818.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	53.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3798.00	
Shut In Tool	5.00			3803.00	
Hydraulic tool	5.00			3808.00	
Packer	5.00			3813.00	21.00 Bottom Of Top Packer
Packer	5.00			3818.00	
Stubb	1.00			3819.00	
Recorder	0.00	8369	Inside	3819.00	
Recorder	0.00	8700	Outside	3819.00	
Perforations	28.00			3847.00	
Bullnose	3.00			3850.00	32.00 Bottom Packers & Anchor
Total Tool Length:	53.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48583 **DST#: 3**
Test Start: 2012.10.26 @ 07:10:42

Mud and Cushion Information

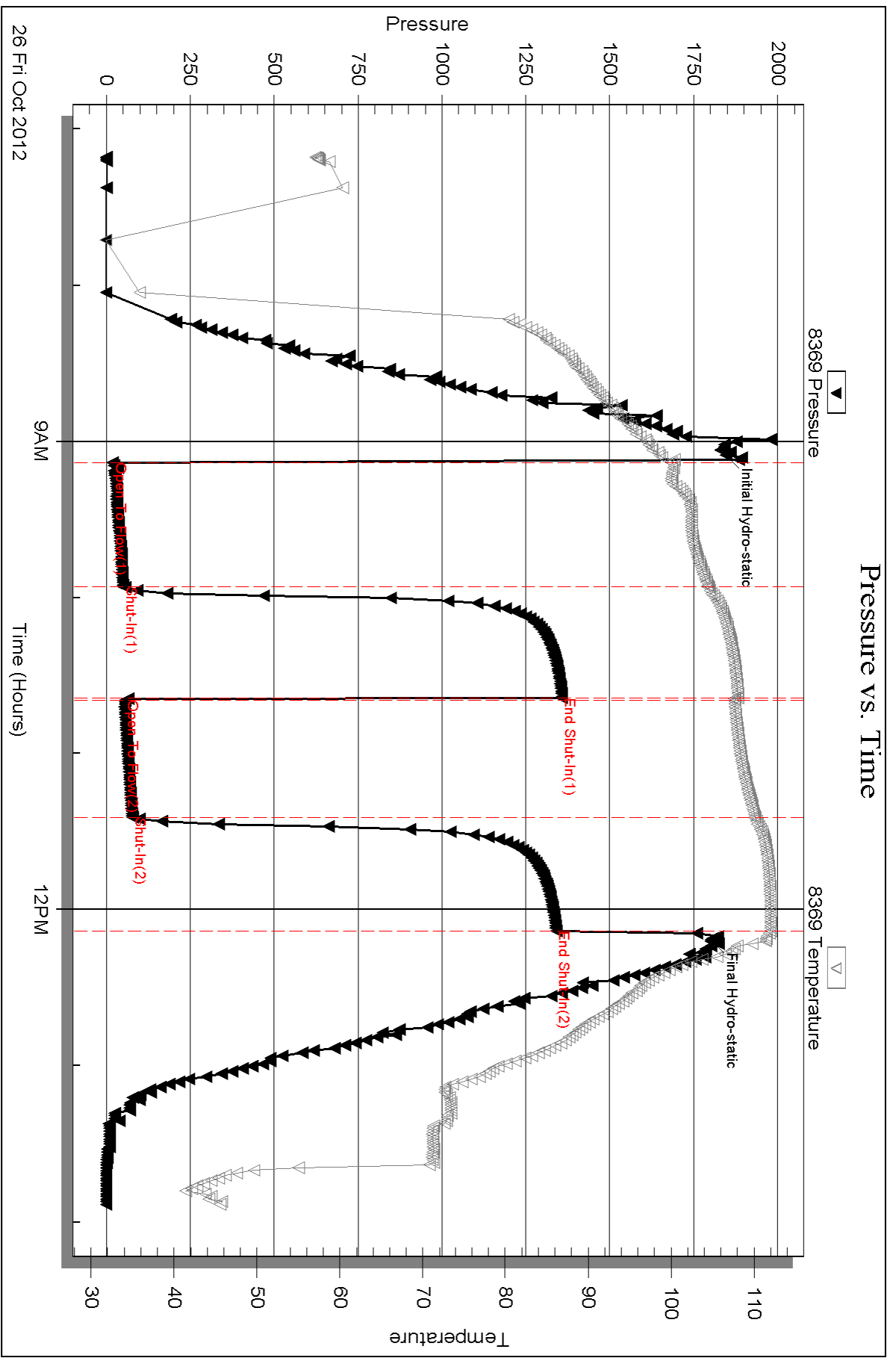
Mud Type: Gel Chem	Cushion Type:	Oil API: 24 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 71.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.53 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	100' GIP	0.000
50.00	CO	0.701
90.00	HO&GCM 10%G40%O50%M	1.262

Total Length: 140.00 ft Total Volume: 1.963 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



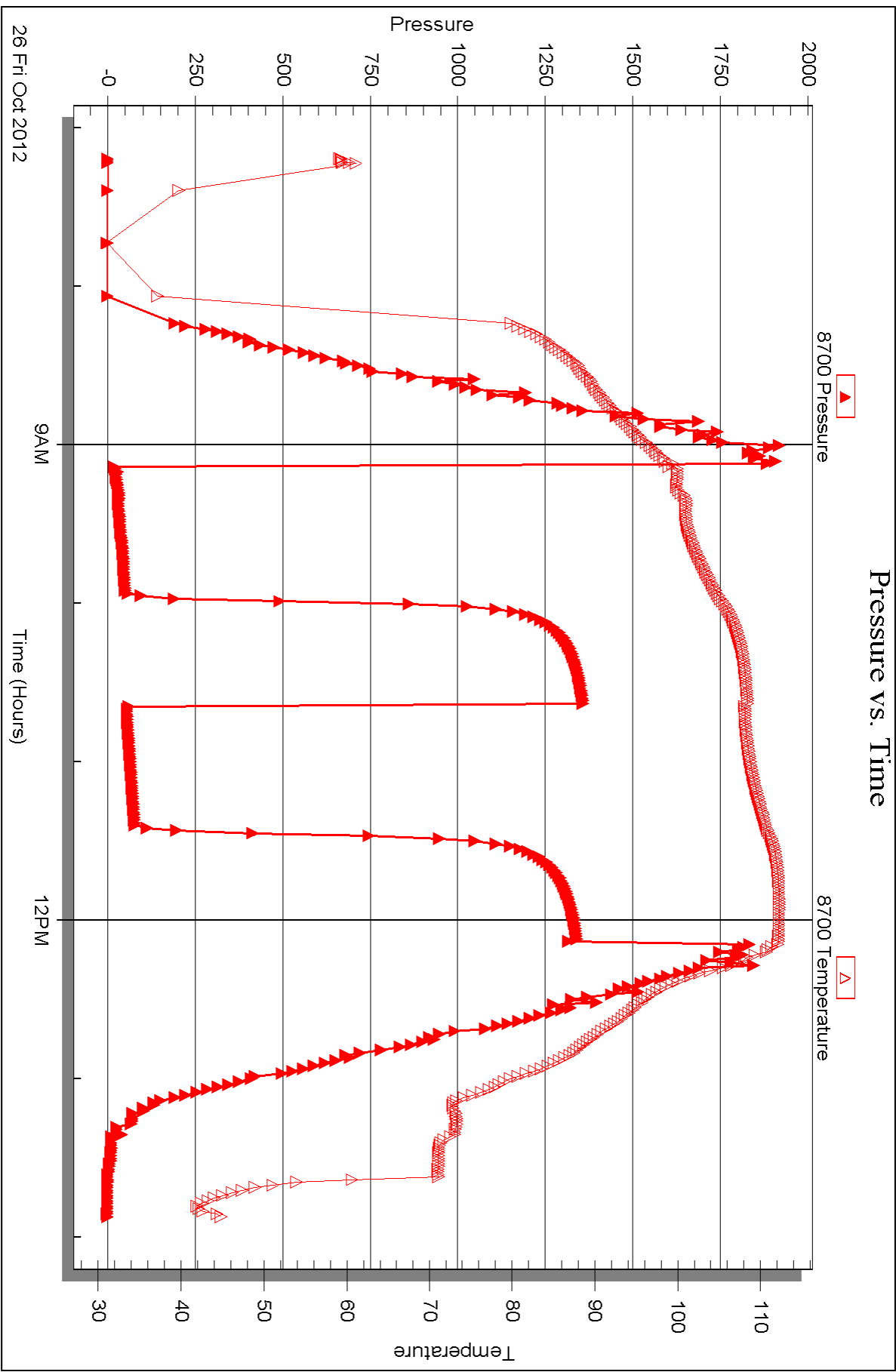
Serial #: 8700

Outside

H&C Oil Operating Inc

Workman Trust #13-1

DST Test Number: 3





DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663-0086

ATTN: Charles Ramsey

Workman Trust #13-1

13-6s-24w Graham,KS

Start Date: 2012.10.26 @ 21:41:01

End Date: 2012.10.27 @ 04:21:25

Job Ticket #: 48584 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.31 @ 09:18:23

H&C Oil Operating Inc

13-6s-24w Graham,KS

Workman Trust #13-1

DST # 4

LKC "J"

2012.10.26



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc
 PO Box 86
 Plainville KS 67663-0086
 ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
 Job Ticket: 48584 **DST#: 4**
 Test Start: 2012.10.26 @ 21:41:01

GENERAL INFORMATION:

Formation: **LKC "J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 00:21:56
 Tester: Ray Schwager
 Time Test Ended: 04:21:25
 Unit No: 42
Interval: 3845.00 ft (KB) To 3876.00 ft (KB) (TVD)
 Reference Elevations: 2464.00 ft (KB)
 Total Depth: 3876.00 ft (KB) (TVD) 2459.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

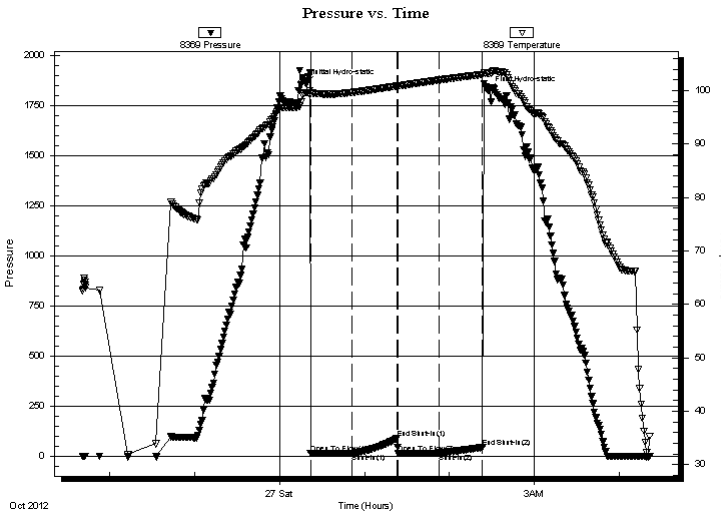
Serial #: 8369

Inside

Press @ Run Depth: 16.50 psig @ 3846.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.10.26 End Date: 2012.10.27 Last Calib.: 2012.10.27
 Start Time: 21:41:01 End Time: 04:21:25 Time On Btm: 2012.10.27 @ 00:18:56
 Time Off Btm: 2012.10.27 @ 02:27:25

TEST COMMENT: 30-IFP-w k bl 1/4" bl
 30-ISIP-no bl
 30-FFP-no bl
 30-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1858.83	99.60	Initial Hydro-static
3	14.98	99.52	Open To Flow (1)
33	16.24	99.65	Shut-In(1)
64	89.60	100.83	End Shut-In(1)
65	14.56	100.86	Open To Flow (2)
94	16.50	101.94	Shut-In(2)
125	44.57	103.01	End Shut-In(2)
129	1822.54	103.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOCM 1%O99%M w/show of co	0.07

* 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
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48584 **DST#: 4**
Test Start: 2012.10.26 @ 21:41:01

GENERAL INFORMATION:

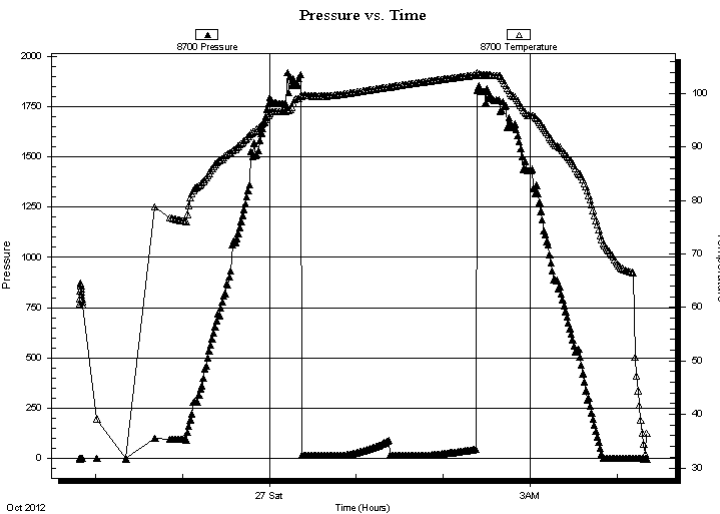
Formation: **LKC "J"**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 00:21:56 Tester: Ray Schwager
Time Test Ended: 04:21:25 Unit No: 42
Interval: 3845.00 ft (KB) To 3876.00 ft (KB) (TVD) Reference Elevations: 2464.00 ft (KB)
Total Depth: 3876.00 ft (KB) (TVD) 2459.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8700

Outside

Press @ RunDepth: psig @ 3846.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2012.10.26 End Date: 2012.10.27	Last Calib.: 2012.10.27
Start Time: 21:49:01 End Time: 04:20:55	Time On Btm:
	Time Off Btm:

TEST COMMENT: 30-IFP-w k bl 1/4" bl
30-ISIP-no bl
30-FFP-no bl
30-FSIP-no bl



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOCM 1%O99%M w/show of co	0.07

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
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48584 **DST#: 4**
Test Start: 2012.10.26 @ 21:41:01

Tool Information

Drill Pipe:	Length: 3839.00 ft	Diameter: 3.80 inches	Volume: 53.85 bbl	Tool Weight: 2200.00 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: 60000.00 lb
			<u>Total Volume: 53.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3845.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3825.00	
Shut In Tool	5.00			3830.00	
Hydraulic tool	5.00			3835.00	
Packer	5.00			3840.00	21.00 Bottom Of Top Packer
Packer	5.00			3845.00	
Stubb	1.00			3846.00	
Recorder	0.00	8369	Inside	3846.00	
Recorder	0.00	8700	Outside	3846.00	
Perforations	27.00			3873.00	
Bullnose	3.00			3876.00	31.00 Bottom Packers & Anchor
Total Tool Length:	52.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48584 **DST#: 4**
Test Start: 2012.10.26 @ 21:41:01

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: 70.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.54 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1500.00 ppm			
Filter Cake: 1.00 inches			

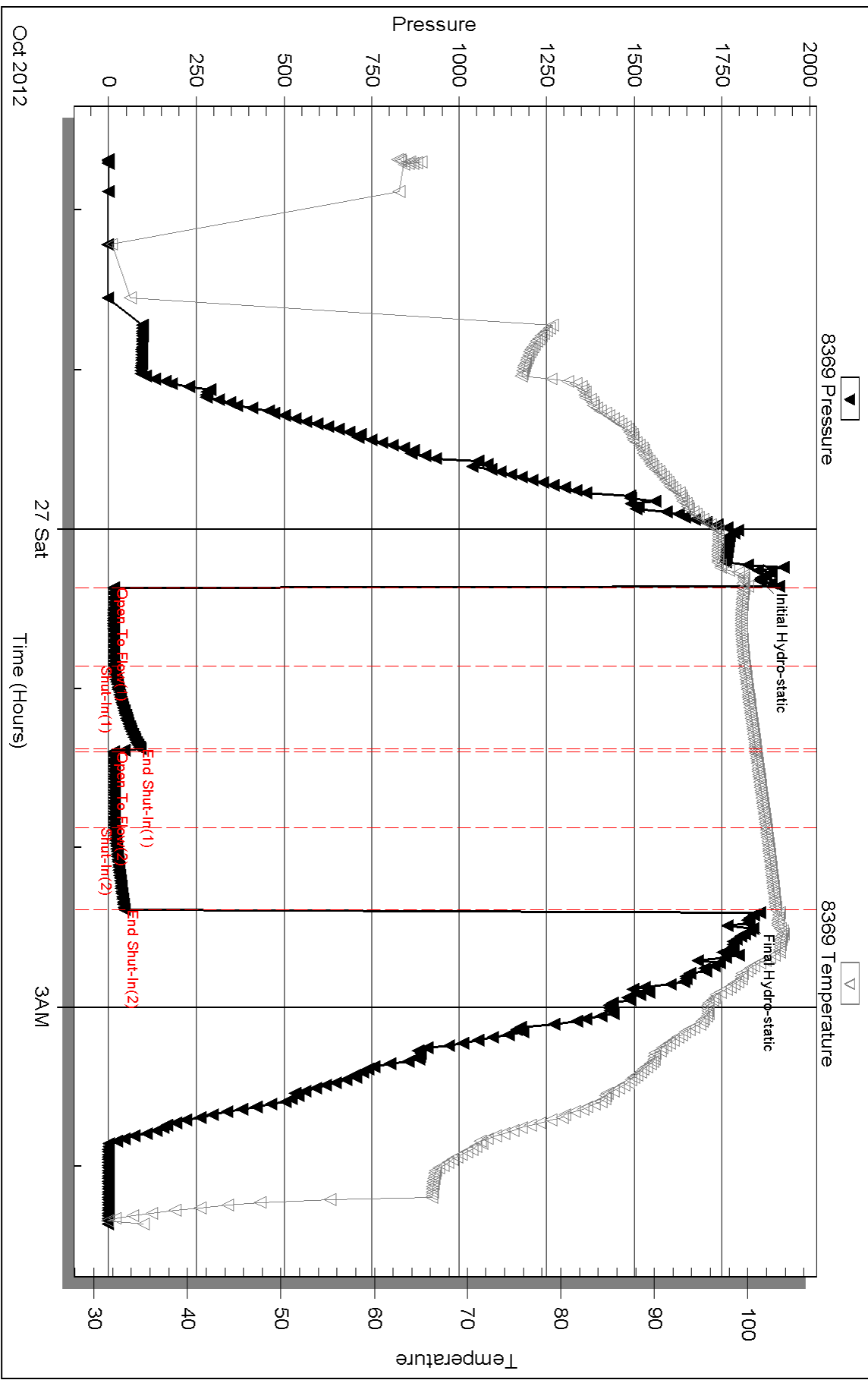
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	SOCM 1%O99%M w/show of co	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:

Pressure vs. Time



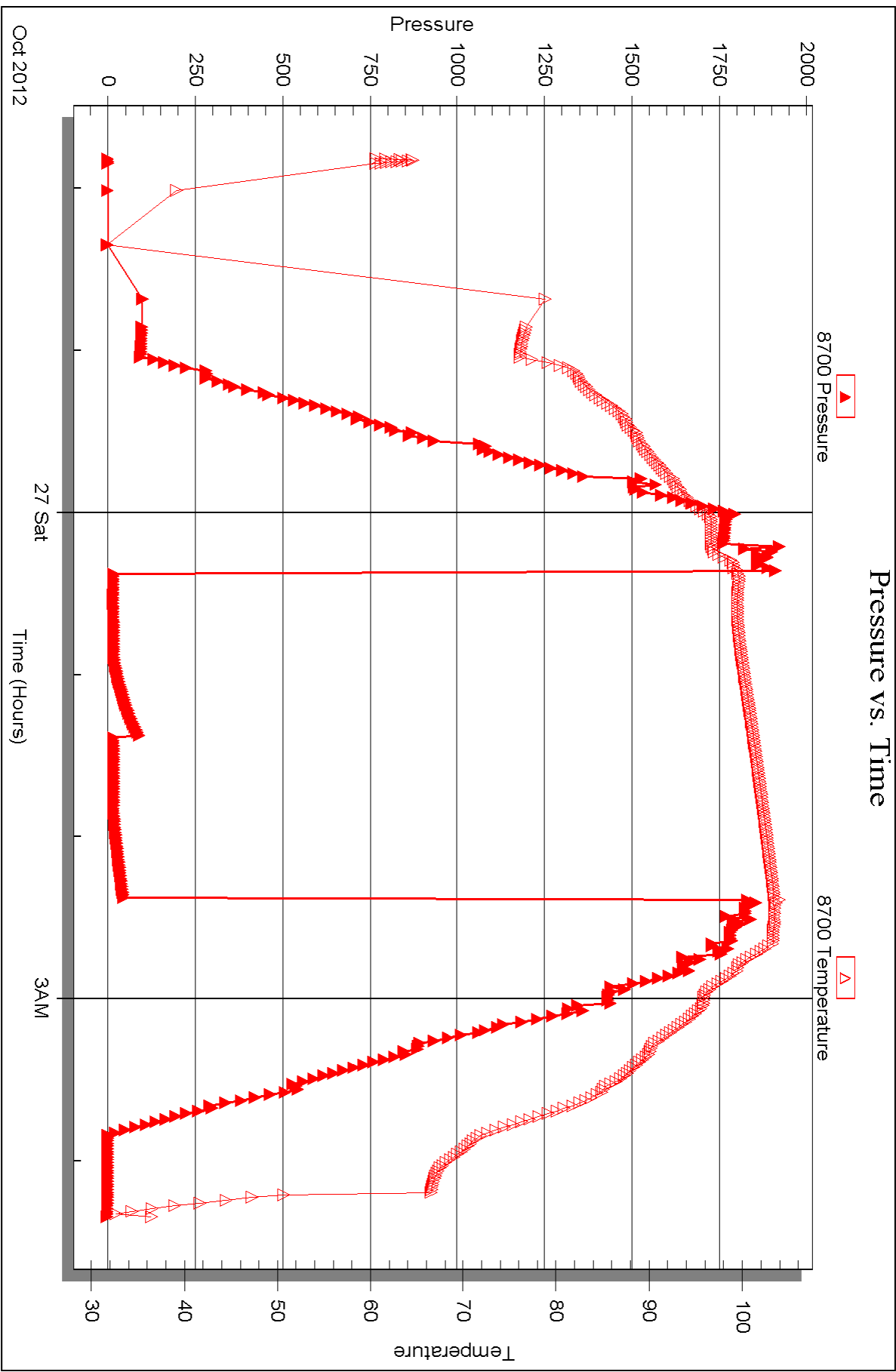
Serial #: 8700

Outside

H&C Oil Operating Inc

Workman Trust #13-1

DST Test Number: 4





DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663-0086

ATTN: Charles Ramsey

Workman Trust #13-1

13-6s-24w Graham,KS

Start Date: 2012.10.27 @ 13:10:26

End Date: 2012.10.27 @ 18:42:20

Job Ticket #: 48585 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.31 @ 09:16:14

H&C Oil Operating Inc

13-6s-24w Graham,KS

Workman Trust #13-1

DST # 5

LKC "K"

2012.10.27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating Inc
 PO Box 86
 Plainville KS 67663-0086
 ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
 Job Ticket: 48585 **DST#: 5**
 Test Start: 2012.10.27 @ 13:10:26

GENERAL INFORMATION:

Formation: **LKC "K"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 15:13:21
 Tester: Ray Schwager
 Time Test Ended: 18:42:20
 Unit No: 42
 Interval: **3874.00 ft (KB) To 3915.00 ft (KB) (TVD)**
 Reference Elevations: 2464.00 ft (KB)
 Total Depth: 3915.00 ft (KB) (TVD)
 2459.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

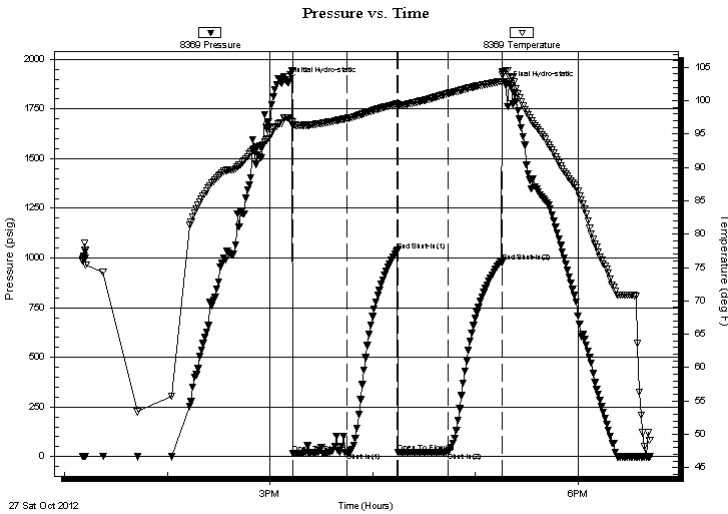
Serial #: 8369

Inside

Press @ Run Depth: 23.68 psig @ 3879.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.10.27 End Date: 2012.10.27 Last Calib.: 2012.10.27
 Start Time: 13:10:26 End Time: 18:42:20 Time On Btm: 2012.10.27 @ 15:10:21
 Time Off Btm: 2012.10.27 @ 17:17:51

TEST COMMENT: 30-IFP-w k bl thru-out 1/4"bl
 30-ISIP-no bl
 30-FFP-no bl 1st 10min, then surface bl thru-out
 30--FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1885.90	97.46	Initial Hydro-static
3	15.80	96.23	Open To Flow (1)
35	19.48	97.33	Shut-In(1)
64	1037.25	99.53	End Shut-In(1)
65	20.29	99.27	Open To Flow (2)
94	23.68	101.06	Shut-In(2)
125	978.31	102.92	End Shut-In(2)
128	1868.33	104.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	Mud	0.35

* 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
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48585 **DST#: 5**
Test Start: 2012.10.27 @ 13:10:26

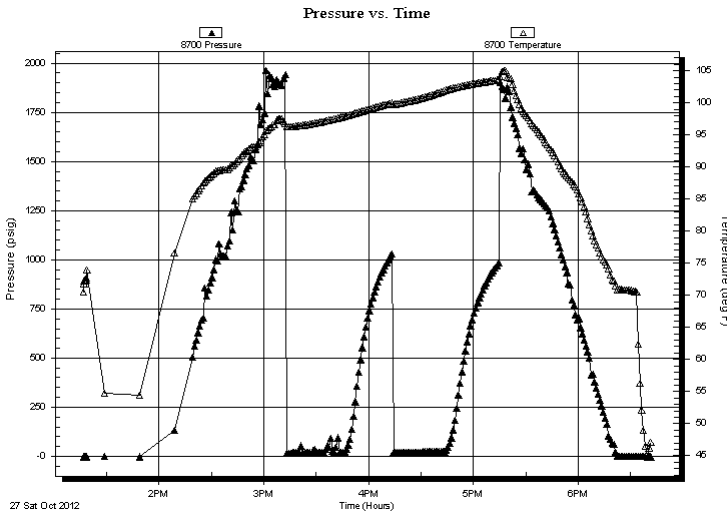
GENERAL INFORMATION:

Formation: **LKC "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:13:21
Time Test Ended: 18:42:20
Interval: **3874.00 ft (KB) To 3915.00 ft (KB) (TVD)**
Total Depth: 3915.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 42
Reference Elevations: 2464.00 ft (KB)
2459.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8700 Outside
Press @ Run Depth: psig @ 3879.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.10.27 End Date: 2012.10.27 Last Calib.: 2012.10.27
Start Time: 13:16:57 End Time: 18:41:51 Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP-w k bl thru-out 1/4"bl
30-ISIP-no bl
30-FFP-no bl 1st 10min, then surface bl thru-out
30--FSIP-no bl



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
25.00	Mud	0.35

* 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
 PO Box 86
 Plainville KS 67663-0086
 ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
 Job Ticket: 48585 **DST#: 5**
 Test Start: 2012.10.27 @ 13:10:26

Tool Information

Drill Pipe:	Length: 3869.00 ft	Diameter: 3.80 inches	Volume: 54.27 bbl	Tool Weight: 2200.00 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: 55000.00 lb
			<u>Total Volume: 54.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3874.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	41.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3854.00	
Shut In Tool	5.00			3859.00	
Hydraulic tool	5.00			3864.00	
Packer	5.00			3869.00	21.00 Bottom Of Top Packer
Packer	5.00			3874.00	
Stubb	1.00			3875.00	
Perforations	4.00			3879.00	
Recorder	0.00	8369	Inside	3879.00	
Recorder	0.00	8700	Outside	3879.00	
Blank Spacing	33.00			3912.00	
Bullnose	3.00			3915.00	41.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

13-6s-24w Graham,KS
Workman Trust #13-1
Job Ticket: 48585 **DST#: 5**
Test Start: 2012.10.27 @ 13:10:26

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: 71.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.53 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	Mud	0.351

Total Length: 25.00 ft Total Volume: 0.351 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8369

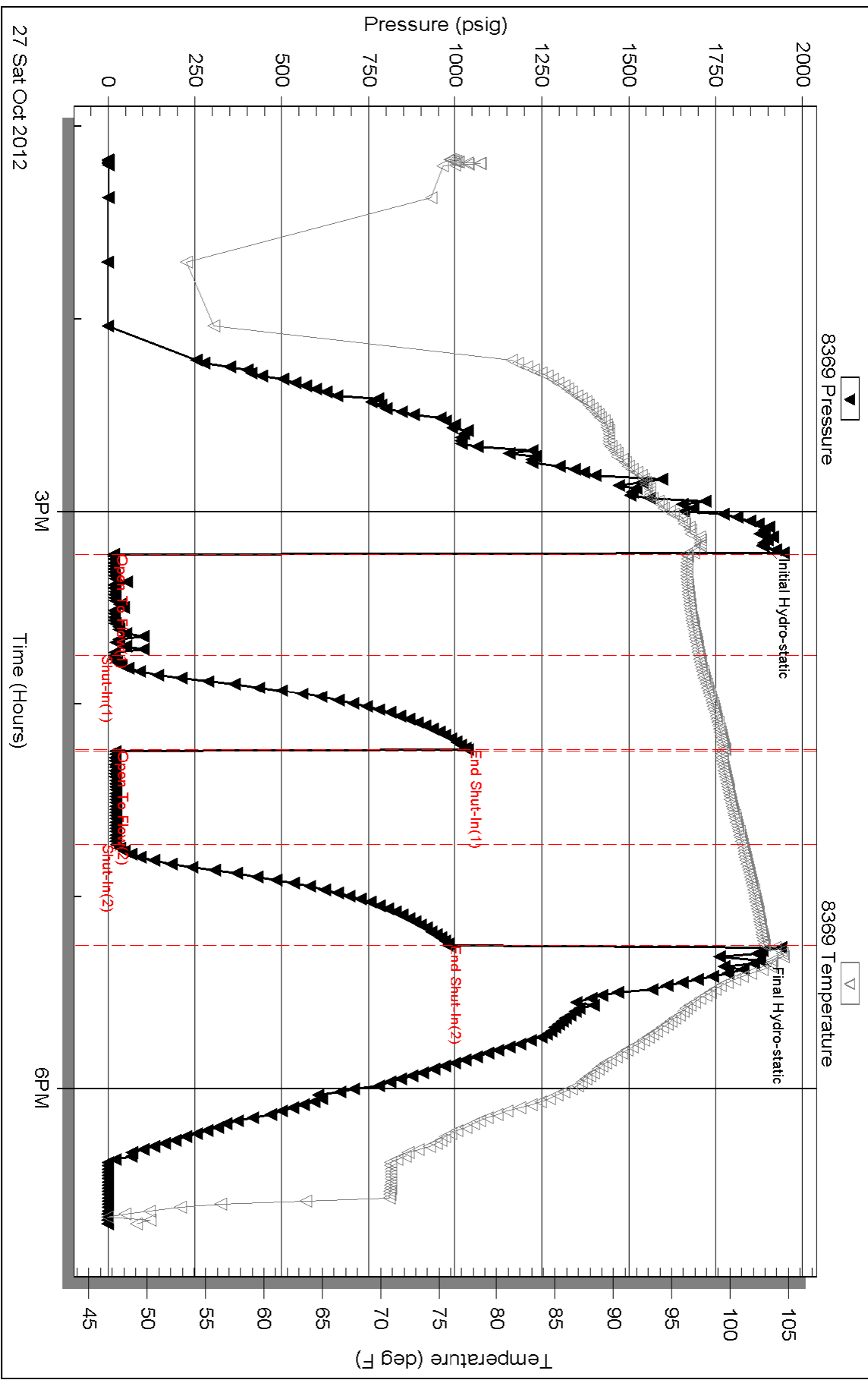
Inside

H&C Oil Operating Inc

Workman Trust #13-1

DST Test Number: 5

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48585

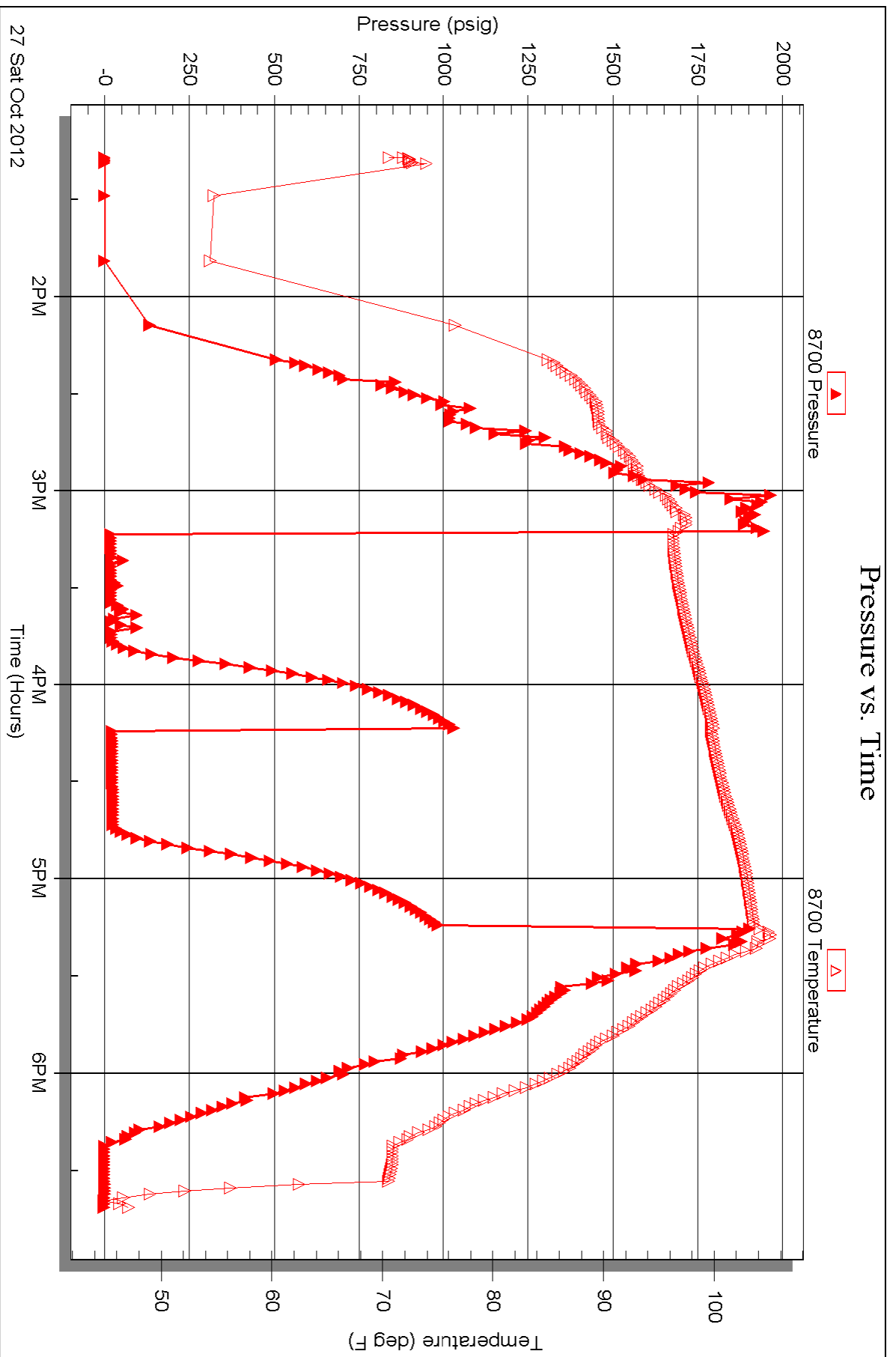
Printed: 2012.10.31 @ 09:16:19

Serial #: 8700

Outside H&C Oil Operating Inc

Workman Trust #13-1

DST Test Number: 5





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48581

Well Name & No. WORKMAN TRUST #13-1 Test No. 1 Date 10-24-12
 Company H+C OIL Operating Inc Elevation 2464 KB 2459 GL
 Address PO Box 86 PLAINVILLE, Ks 67663-0086
 Co. Rep / Geo. MARC DOWNING Rig AM Eagle rig 3
 Location: Sec. 13 Twp. 6^s Rge. 24^w Co. GRAHAM State Ks

Interval Tested 3735-3757 Zone Tested LKC "C"
 Anchor Length 22 Drill Pipe Run 3745 Mud Wt. 8.9
 Top Packer Depth 3730 Drill Collars Run - Vis 73
 Bottom Packer Depth 3735 Wt. Pipe Run - WL 7.6
 Total Depth 3757 Chlorides 500 ppm System LCM 2#

Blow Description IFF - WEAK TO A STRONG BLOW IN 42 MIN
ISIP - NO BLOW
FFP - WEAK TO A FAIR BLOW SURFACE TO 4" BLOW
FSIP - NO BLOW

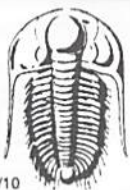
Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>mw w/slow of oil</u>		<u>75</u>	<u>25</u>	
<u>310</u>	<u>WATER</u>				

Rec Total 380 BHT 114 Gravity - API RW .17 @ 50 ° F Chlorides 61000 ppm

(A) Initial Hydrostatic 1789 Test 1150 T-On Location 2045
 (B) First Initial Flow 16 Jars - T-Started 2330
 (C) First Final Flow 103 Safety Joint - T-Open 0150
 (D) Initial Shut-In 1243 Circ Sub - T-Pulled 0450
 (E) Second Initial Flow 105 Hourly Standby - T-Out 0642
 (F) Second Final Flow 187 Mileage 155 RT 240.25 Comments -
 (G) Final Shut-In 1227 Sampler -
 (H) Final Hydrostatic 1783 Straddle - Ruined Shale Packer -
 Shale Packer - Ruined Packer -
 Extra Packer - Extra Copies -
 Extra Recorder - Sub Total 0
 Day Standby - Total 1390.25
 Accessibility - MP/DST Disc't -
 Sub Total 1390.25

Approved By _____ Our Representative RAY Schwager Thank you

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. 48582

Well Name & No. WORKMAN TRUST #13-1 Test No. 2 Date 10-25-12
 Company H+C OIL OPERATING INC Elevation 2464 KB 2459 GL
 Address PO Box 86 Plainville, Ks 67663-0086
 Co. Rep / Geo. MARC DOWNING Rig Am Eagle rig 3
 Location: Sec. 13 Twp. 6^s Rge. 24^w Co. GRAHAM State Ks

Interval Tested 3773-3796 Zone Tested LKC E-F
 Anchor Length 23 Drill Pipe Run 3776 Mud Wt. 9
 Top Packer Depth 3768 Drill Collars Run - Vis 69
 Bottom Packer Depth 3773 Wt. Pipe Run - WL 7.6
 Total Depth 3796 Chlorides 2000 ppm System LCM 2#
 Blow Description IFP - WEAK TO STRONG IN 9 MIN
ISTP - NO BLOW
FFP - WEAK TO STRONG IN 20 MIN
FSTP - NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>mw w/show foil</u>			<u>85</u>	<u>15</u>
<u>480</u>	<u>WATER</u>				

Rec Total 520 BHT 117 Gravity - API RW .14 @ 50 ° F Chlorides 76000 ppm

(A) Initial Hydrostatic 1811 Test 1150 T-On Location 1430
 (B) First Initial Flow 27 Jars T-Started 1450
 (C) First Final Flow 153 Safety Joint T-Open 1650
 (D) Initial Shut-In 1228 Circ Sub T-Pulled 1920
 (E) Second Initial Flow 186 Hourly Standby T-Out 2128
 (F) Second Final Flow 271 Mileage 240.25 Comments _____
 (G) Final Shut-In 1203 Sampler _____
 (H) Final Hydrostatic 1772 Straddle _____
 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 1390.25

MP/DST Disc't _____

Approved By _____ Our Representative RAY SCHWAGER *THANK YOU*

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. 48583

Well Name & No. WORKMAN TRUST #13-1 Test No. 3 Date 10-26-12
 Company H+C OIL OPERATING INC Elevation 2464 KB 2459 GL
 Address PO Box 86 PLAINVILLE, KS 67663-0086
 Co. Rep / Geo. MARC DOWNING Rig AM Eagle rig 3
 Location: Sec. 13 Twp. 6^s Rge. 24^w Co. GRAHAM State KS

Interval Tested 3818-3850 Zone Tested LKC "H"
 Anchor Length 32 Drill Pipe Run 3808 Mud Wt. 8.9
 Top Packer Depth 3813 Drill Collars Run - Vis 71
 Bottom Packer Depth 3818 Wt. Pipe Run - WL 7.6
 Total Depth 3850 Chlorides 2000 ppm System LCM 2#
 Blow Description IFP - WEAK TO A FAIR BLOW 1/2" TO 4 1/2" BLOW
ISTP - NO BLOW
FFP - WEAK BLOW THRU-OUT 1/4" TO 1 1/2" BLOW
FSIP - NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>100</u>	<u>GIP</u>				
<u>50</u>	<u>CO</u>				
<u>90</u>	<u>HO+GCM</u>	<u>10</u>	<u>40</u>		<u>50</u>
Rec Total	<u>140</u>				

BHT 112 Gravity 24 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1845 Test 1150 T-On Location 0635
 (B) First Initial Flow 18 Jars - T-Started 0710
 (C) First Final Flow 49 Safety Joint - T-Open 0910
 (D) Initial Shut-In 1358 Circ Sub - T-Pulled 1210
 (E) Second Initial Flow 55 Hourly Standby - T-Out 1353
 (F) Second Final Flow 77 Mileage 240.25 Comments -
 (G) Final Shut-In 1340 Sampler -
 (H) Final Hydrostatic 1800 Straddle - Ruined Shale Packer -
 Shale Packer - Ruined Packer -
 Extra Packer - Extra Copies -
 Initial Open 45 Extra Recorder - Sub Total 0
 Initial Shut-In 45 Day Standby - Total 1390.25
 Final Flow 45 Accessibility - MP/DST Disc't -
 Final Shut-In 45 Sub Total 1390.25

Approved By _____ Our Representative RAY SCHWAGER *Thank you*
 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. 48584

Well Name & No. WORKMAN TRUST #13-1 Test No. 4 Date 10-26-12
 Company H+C OIL OPERATING INC Elevation 2464 KB 2459 GL
 Address PO BOX 86 PLAINVILLE, KS 67663-0086
 Co. Rep / Geo. MARC DOWNING Rig AM EAGLE 1193
 Location: Sec. 13 Twp. 6^S Rge. 24^W Co. GRAHAM State K

Interval Tested 3845-3876 Zone Tested 1KC "J"
 Anchor Length 31 Drill Pipe Run 3839 Mud Wt. 9.1
 Top Packer Depth 3840 Drill Collars Run - Vis 70
 Bottom Packer Depth 3845 Wt. Pipe Run - WL 7.6
 Total Depth 3876 Chlorides 1500 ppm System LCM 1 1/2 #
 Blow Description IFP - WEAK Blow thru-out 1/4" Blow
ISTP - NO Blow
FFP - NO Blow
FSTP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>50CM</u>	<u>1</u>		<u>99</u>	
	<u>w/show of clean oil</u>				

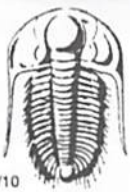
Rec Total 5 BHT 103 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1858 Test 1150 T-On Location 2120
 (B) First Initial Flow 14 Jars T-Started 2140
 (C) First Final Flow 16 Safety Joint T-Open 0020
 (D) Initial Shut-In 89 Circ Sub T-Pulled 0220
 (E) Second Initial Flow 14 Hourly Standby T-Out 0421
 (F) Second Final Flow 16 Mileage 240.25 Comments _____
 (G) Final Shut-In 44 Sampler _____
 (H) Final Hydrostatic 1822 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 1390.25
 Total 1390.25
 MP/DST Disc't _____

Approved By _____ Our Representative RAY SCHWAGN THANK YOU
 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. 48585

Well Name & No. Workman Trust #13-1 Test No. 5 Date 10-27-12
 Company H+C OIL OPERATING INC Elevation 2464 KB 2459 GL
 Address PO Box 86 Plainville, Ks 67663-0086
 Co. Rep / Geo. MARC Downing Rig Am Eagle rig 3
 Location: Sec. 13 Twp. 6^s Rge. 24^w Co. GRAHAM State Ks

Interval Tested 3874-3915 Zone Tested LKC "K"
 Anchor Length 41 Drill Pipe Run 3869 Mud Wt. 9.2
 Top Packer Depth 3869 Drill Collars Run - Vis 71
 Bottom Packer Depth 3874 Wt. Pipe Run - WL 7.6
 Total Depth 3915 Chlorides 2000 ppm System LCM 1 1/2#

Blow Description IFP - WEAK Blow thru-out 1/4" Blow
ISIP - NO Blow ~~IFP - NO Blow~~
FFP - NO Blow 1st 10 min, then surface Blow thru-out
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</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 25 BHT 103 Gravity - API RW - @ - F Chlorides - ppm

(A) Initial Hydrostatic 1885 Test 1150 T-On Location 1230
 (B) First Initial Flow 15 Jars - T-Started 1310
 (C) First Final Flow 19 Safety Joint - T-Open 1510
 (D) Initial Shut-In 1037 Circ Sub - T-Pulled 1710
 (E) Second Initial Flow 20 Hourly Standby - T-Out 1842
 (F) Second Final Flow 23 Mileage 240.25 Comments -
 (G) Final Shut-In 978 Sampler -
 (H) Final Hydrostatic 1868 Straddle -
 Shale Packer -
 Shale Packer -
 Extra Packer -
 Extra Recorder -
 Day Standby -
 Accessibility -
 Ruined Shale Packer -
 Ruined Packer -
 Extra Copies -
 Sub Total 0
 Total 1390.25
 MP/DST Disc't -
 Sub Total 1390.25

Approved By _____

Our Representative Ray Schwager

Thank you

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. 6168

Date	11-7-12	Sec.	13	Twp.	6	Range	24	County	GRAHAM KANSAS	State	On Location	Finish	12:15pm
Lease <u>WORKMAN TRUST</u> Well No. <u>13-1</u> Contractor <u>CKTOS</u> Type Job <u>PORT COLLAR</u> Hole Size _____ Csg. <u>5 1/2"</u> T.D. <u>3950</u> Tbg. Size <u>2 3/8</u> Depth _____ Tool <u>PORT COLLAR</u> Depth <u>2151</u> Cement Left in Csg. _____ Shoe Joint _____ Meas Line _____ Displace _____													
Owner <u>H&C OIL</u> 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 <u>H&C OIL</u> Street <u>PO BOX 810</u> City <u>PAIKSVILLE</u> State <u>KS</u> <u>67166-3</u> The above was done to satisfaction and supervision of owner agent or contractor. Cement Amount Ordered <u>350 QMIX. K FLO SEAL</u> Common <u>300</u> Poz. Mix _____ Gel. _____ Calcium _____ Hulls _____ Salt _____ Flowseal <u>87#</u> Kol-Seal _____ Mud CLR 48 _____ CFL-117 or CD110 CAF 38 _____ Sand _____ Handling <u>350</u> Mileage _____ FLOAT EQUIPMENT Guide Shoe _____ Centralizer _____ Baskets _____ AFU Inserts _____ Float Shoe _____ Latch Down _____													
EQUIPMENT													
Pumptrk #	15	No.	Cementor	Helper	<u>NTK</u>								
Bulktrk #	13	No.	Driver	<u>DOUG</u>									
Bulktrk #	DU	No.	Driver	<u>AND</u>									
JOB SERVICES & REMARKS													
Remarks:													
Rat Hole													
Mouse Hole													
Centralizers													
Baskets													
D/V or Port Collar	TESTED TOOL TO 1,000# - HELD OPENED TOOL PUMPED 80 BBLs MUD MIXED & PUMPED 300 SKS QMDC - CLOSED TOOL TESTED 1,000# - RAN 5 JOINTS - WASHED OUT.												
Pumptrk Charge													
Mileage	<u>48</u> Port Collar												
Tax													
Discount													
Total Charge													

THANK YOU!

X Signature [Handwritten Signature]

QUALITY OILWELL CEMENTING, INC.

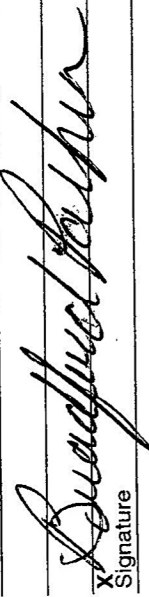
Federal Tax I.D.# 20-2886107

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

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

No. 6129

Date	02-20-12	Sec.	13	Twp.	6	Range	24	County	Graham KS	State	KS	On Location	4:00pm.
Lease	Workmen Trust		Well No.		13N								
Contractor	American Eagle #3												
Type Job	Surface												
Hole Size	12 1/4												
T.D.	281												
Depth	780												
Tbg. Size													
Tool													
Cement Left in Csg.	15'												
Meas Line	Displace 16 1/2 BBL												
EQUIPMENT													
Pumptrk	No.	Cemented											
Helper	16												
Driver	No.	Travels											
Driver	3												
Driver	No.	Days											
Driver	5												
JOB SERVICES & REMARKS													
Remarks:													
Rat Hole													
Mouse Hole													
Centralizers													
Baskets													
DN or Port Collar													
8 5/8 on bottom. Est Circulation.													
Mix 180 ckg & Displace													
Cement Circulated!													
FLOAT EQUIPMENT													
Guide Shoe													
Centralizer													
Baskets													
AFU Inserts													
Float Shoe													
Latch Down													
Pumptrk Charge	Surface												
Mileage	48												
												Tax	
												Discount	
												Total Charge	

X
Signature 

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. 6156

Date	10-28-12	13	6	24	Graham	Kansas		9:15 pm
Lease	Wockmans Trust		Well No.	#13-1	Location Hill City, Nto cc Ro - 6 1/2 w - S/INTO			
Contractor	A.E. #3				Owner H&C OIL OPERATING INC.			
Type Job	PROD. STING				To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cement and helper to assist owner or contractor to do work as listed.			
Hole Size	7 7/8		T.D.		Charge To H&C OIL OPERATING INC.			
Csg.	5 1/2" 14# NEW		Depth	3,956'	Street Po Box 86			
Tbg. Size			Depth		City PLAINVILLE State KS, 67763			
Tool	PORT-COLLAR		Depth	2,158'	The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left in Csg.			Shoe Joint	19.59	Cement Amount Ordered 180 com - 10 SALT - 5 gal - 50% 180			
Meas Line			Displace	96 Bbls.	Common			
EQUIPMENT								
Pumptrk #	9	No.	Cementer		Common			
			Helper	NICK	Poz. Mix			
Bulktrk #	1	No.	Driver	LONNIE W.	Gel.			
Bulktrk	PLU	No.	Driver	CISCO	Calcium			
JOB SERVICES & REMARKS								
Remarks:	Salt 16							
Rat Hole	Flowseal 16							
Mouse Hole	Koi-Seal 900#							
Centralizers	Mud CLR 48 500 gal.							
Baskets	CFL-117 or CD110 CAF 38							
D/V or Port Collar	Sand							
	Handling 195							
	Mileage FLOAT EQUIPMENT							
	Guide Shoe							
	Centralizer 10 - 5 1/2" TUBES							
	Baskets 5 - 5 1/2"							
	AFU Inserts							
	Float Shoe 1 - 5 1/2"							
	Latch Down 1 - 5 1/2" w/ Plus							
	1 part collar							
	Pumptrk Charge prod long string							
	Mileage 48							
	Tax							
	Discount							
	Total Charge							

THANK YOU!

X Signature *[Handwritten Signature]*