



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1095856
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: _____



1095856

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:
 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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	H & C Oil Operating Inc.
Well Name	Griffith 2-2
Doc ID	1095856

All Electric Logs Run

Dual Compensated Porosity
Dual Induction
Microresistivity
Sonic Cement Bond

Form	ACO1 - Well Completion
Operator	H & C Oil Operating Inc.
Well Name	Griffith 2-2
Doc ID	1095856

Tops

Name	Top	Datum
Anhydrite	1988	+442
Topeka	3460	-1030
Heebner	3679	-1249
Toronto	3701	-1271
Lansing	3714	-1284
Base Kansas City	3937	-1507
Marmaton	4032	-1602
Conglomerate Sand	4132	-1702

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

October 04, 2012

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

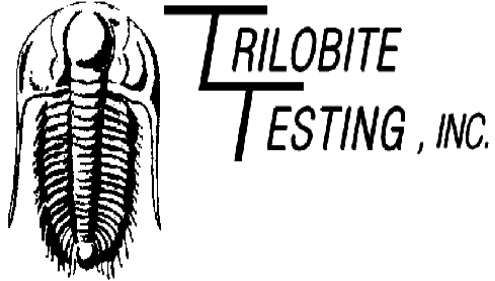
Re: ACO1
API 15-065-23845-00-00
Griffith 2-2
SE/4 Sec.02-10S-23W
Graham County, Kansas

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 R. Ramsay



DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Griffith #2-2

2-10s-23w Graham,KS

Start Date: 2012.07.16 @ 21:53:00

End Date: 2012.07.17 @ 06:36:00

Job Ticket #: 46128 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.24 @ 09:34:02



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H & C Oil Company Inc
 PO Box 86
 Plainville, KS 67663
 ATTN: Marc Downing

2-10s-23w Graham,KS

Griffith #2-2

Job Ticket: 46128

DST#: 1

Test Start: 2012.07.16 @ 21:53:00

GENERAL INFORMATION:

Formation: **LKC "C"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:42:30
 Time Test Ended: 06:36:00
 Interval: **3731.00 ft (KB) To 3753.00 ft (KB) (TVD)**
 Total Depth: 3753.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2430.00 ft (KB)
 2425.00 ft (CF)
 KB to GR/CF: 5.00 ft

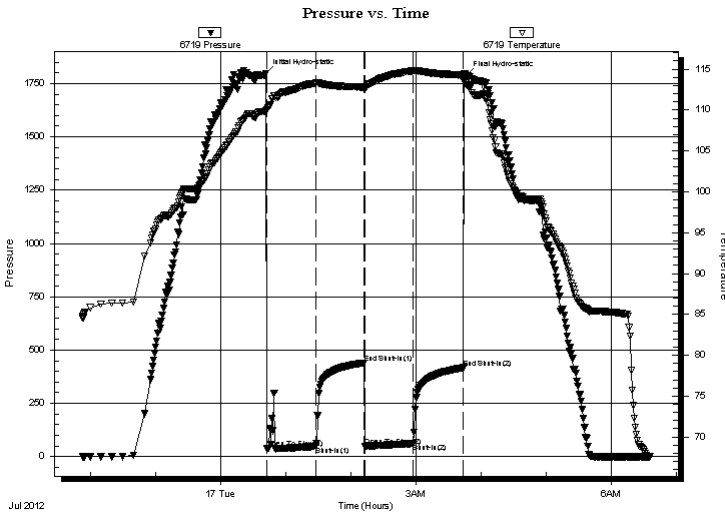
Serial #: 6719

Inside

Press @ Run Depth: 61.40 psig @ 3732.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.07.16 End Date: 2012.07.17 Last Calib.: 2012.07.17
 Start Time: 21:53:05 End Time: 06:36:00 Time On Btm: 2012.07.17 @ 00:42:00
 Time Off Btm: 2012.07.17 @ 03:46:30

TEST COMMENT: 45 - IF: Bled off surge blow, blow built to 3"
 45 - IS: Bled off, No blow back
 45 - FF: Blow started at 8 min., built to 2 1/4"
 45 - FS: Bled off, No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1795.70	109.88	Initial Hydro-static
1	39.80	109.98	Open To Flow (1)
46	48.30	113.30	Shut-In(1)
91	439.81	112.81	End Shut-In(1)
91	49.50	112.70	Open To Flow (2)
136	61.40	114.79	Shut-In(2)
182	417.02	114.28	End Shut-In(2)
185	1787.30	113.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	MW w/trace of Oil 55%w, 45%m	0.88
7.00	SOCM w/trace of water 97%m, 3%o	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H & C Oil Company Inc

2-10s-23w Graham,KS

PO Box 86
Plainville, KS 67663

Griffith #2-2

Job Ticket: 46128

DST#: 1

ATTN: Marc Downing

Test Start: 2012.07.16 @ 21:53:00

Tool Information

Drill Pipe:	Length: 3743.00 ft	Diameter: 3.80 inches	Volume: 52.50 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 52.50 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3731.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool slid 6' - 8' before open, chased 3' to bottom at open - hole lost about 15' of mud - 2" surge blow at open

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3716.00	
Hydraulic tool	5.00			3721.00	
Packer	5.00			3726.00	20.00 Bottom Of Top Packer
Packer	5.00			3731.00	
Stubb	1.00			3732.00	
Recorder	0.00	6719	Inside	3732.00	
Recorder	0.00	8671	Outside	3732.00	
Perforations	18.00			3750.00	
Bullnose	3.00			3753.00	22.00 Bottom Packers & Anchor
Total Tool Length:	42.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Company Inc

2-10s-23w Graham,KS

PO Box 86
Plainville, KS 67663

Griffith #2-2

Job Ticket: 46128

DST#: 1

ATTN: Marc Downing

Test Start: 2012.07.16 @ 21:53:00

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.36 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	MW w/trace of Oil 55%w, 45%m	0.884
7.00	SOCM w/trace of water 97%m, 3%o	0.098

Total Length: 70.00 ft Total Volume: 0.982 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

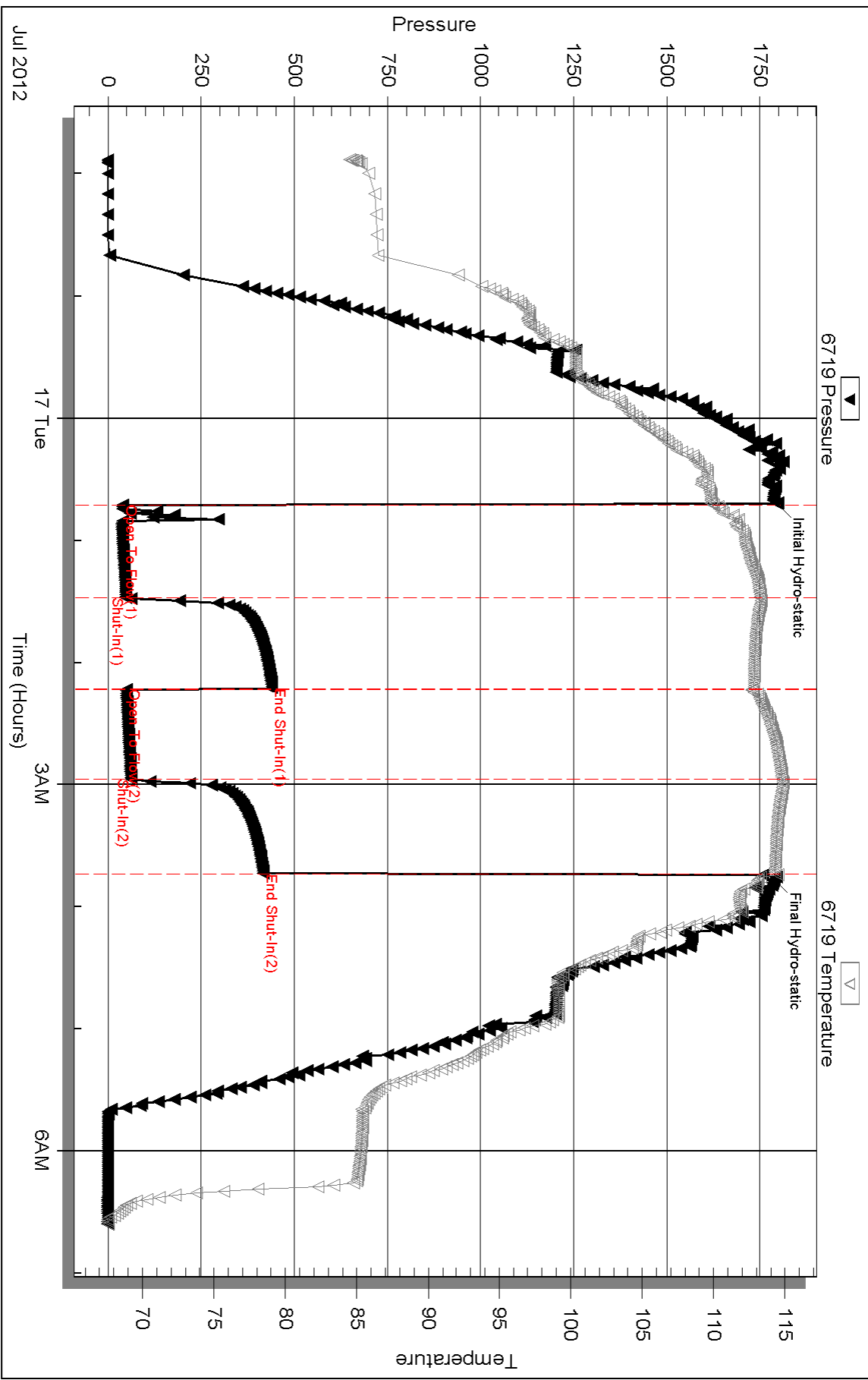
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

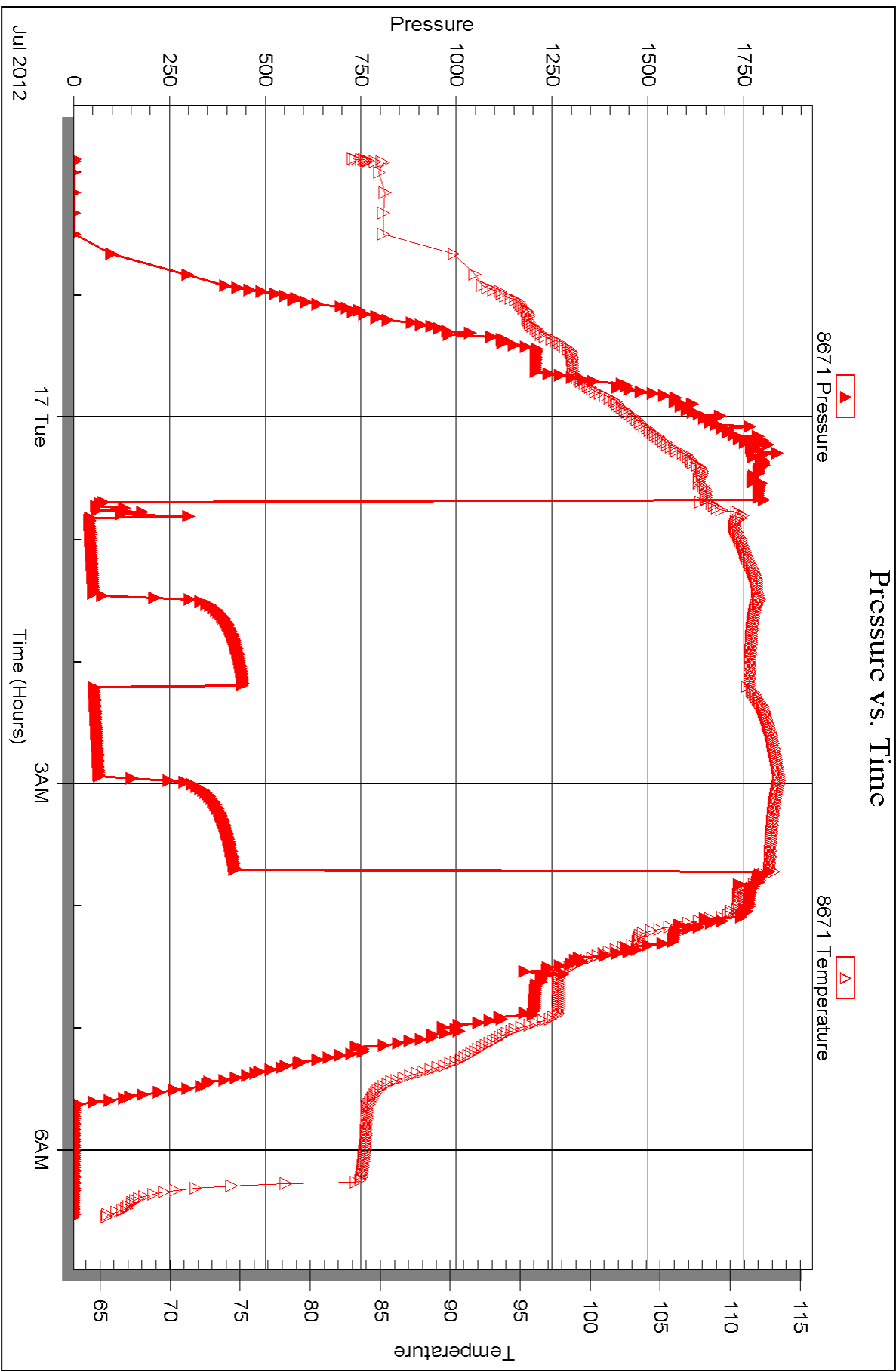


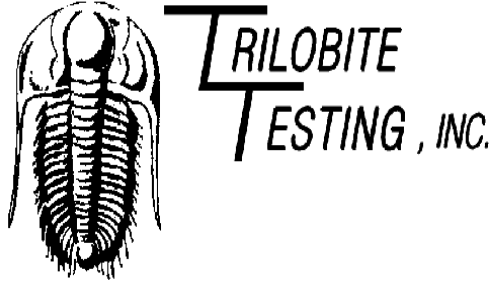
Serial #: 8671

Outside H & C Oil Company Inc

Griffith #2-2

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Griffith #2-2

2-10s-23w Graham,KS

Start Date: 2012.07.17 @ 16:10:00

End Date: 2012.07.17 @ 22:22:00

Job Ticket #: 46129 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.24 @ 09:33:26



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H & C Oil Company Inc
 PO Box 86
 Plainville, KS 67663
 ATTN: Marc Downing

2-10s-23w Graham,KS

Griffith #2-2

Job Ticket: 46129

DST#: 2

Test Start: 2012.07.17 @ 16:10:00

GENERAL INFORMATION:

Formation: **LKC "E - F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:03:00
 Time Test Ended: 22:22:00
 Interval: **3774.00 ft (KB) To 3803.00 ft (KB) (TVD)**
 Total Depth: 3803.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2430.00 ft (KB)
 2425.00 ft (CF)
 KB to GR/CF: 5.00 ft

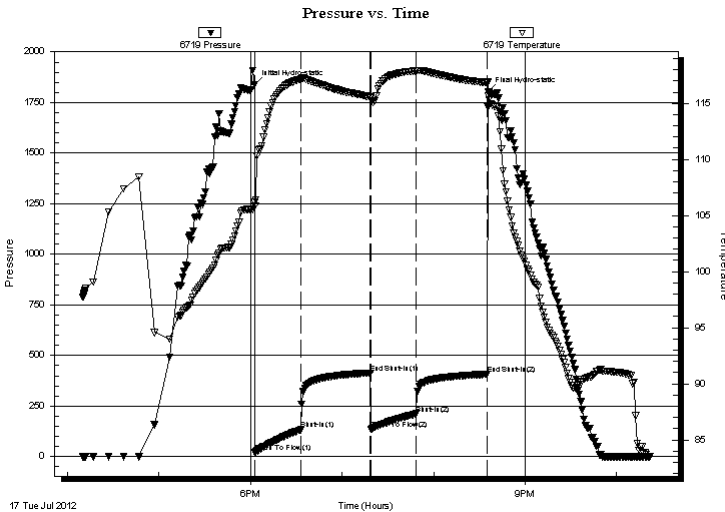
Serial #: 6719

Inside

Press @ Run Depth: 211.58 psig @ 3775.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.07.17 End Date: 2012.07.17 Last Calib.: 2012.07.17
 Start Time: 16:10:05 End Time: 22:21:59 Time On Btm: 2012.07.17 @ 18:02:30
 Time Off Btm: 2012.07.17 @ 20:36:00

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 9 1/2 min.
 45 - IS: Bled off, No blow back
 30 - FF: Blow built to BOB in 19 min.
 45 - FS: Bled off, No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1840.33	106.17	Initial Hydro-static
1	22.95	105.84	Open To Flow (1)
31	133.46	117.18	Shut-In(1)
76	414.12	115.60	End Shut-In(1)
77	137.04	115.46	Open To Flow (2)
106	211.58	117.88	Shut-In(2)
153	407.75	116.83	End Shut-In(2)
154	1802.98	115.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
315.00	MCW w/trace of Oil 90%w , 10%m	4.42
105.00	MCW w/trace of Oil 75%w , 25%m	1.47

* 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 Company Inc

2-10s-23w Graham,KS

PO Box 86
Plainville, KS 67663

Griffith #2-2

Job Ticket: 46129

DST#: 2

ATTN: Marc Downing

Test Start: 2012.07.17 @ 16:10:00

Tool Information

Drill Pipe:	Length: 3774.00 ft	Diameter: 3.80 inches	Volume: 52.94 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	54000.00 lb
			<u>Total Volume: 52.94 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3774.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	29.00 ft				
Tool Length:	49.00 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			3759.00	
Hydraulic tool	5.00			3764.00	
Packer	5.00			3769.00	20.00 Bottom Of Top Packer
Packer	5.00			3774.00	
Stubb	1.00			3775.00	
Recorder	0.00	6719	Inside	3775.00	
Recorder	0.00	8671	Outside	3775.00	
Perforations	25.00			3800.00	
Bullnose	3.00			3803.00	29.00 Bottom Packers & Anchor
Total Tool Length:	49.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Company Inc

2-10s-23w Graham,KS

PO Box 86
Plainville, KS 67663

Griffith #2-2

Job Ticket: 46129

DST#: 2

ATTN: Marc Downing

Test Start: 2012.07.17 @ 16:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

60000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
315.00	MCW w/trace of Oil 90%w , 10%m	4.419
105.00	MCW w/trace of Oil 75%w , 25%m	1.473

Total Length: 420.00 ft Total Volume: 5.892 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

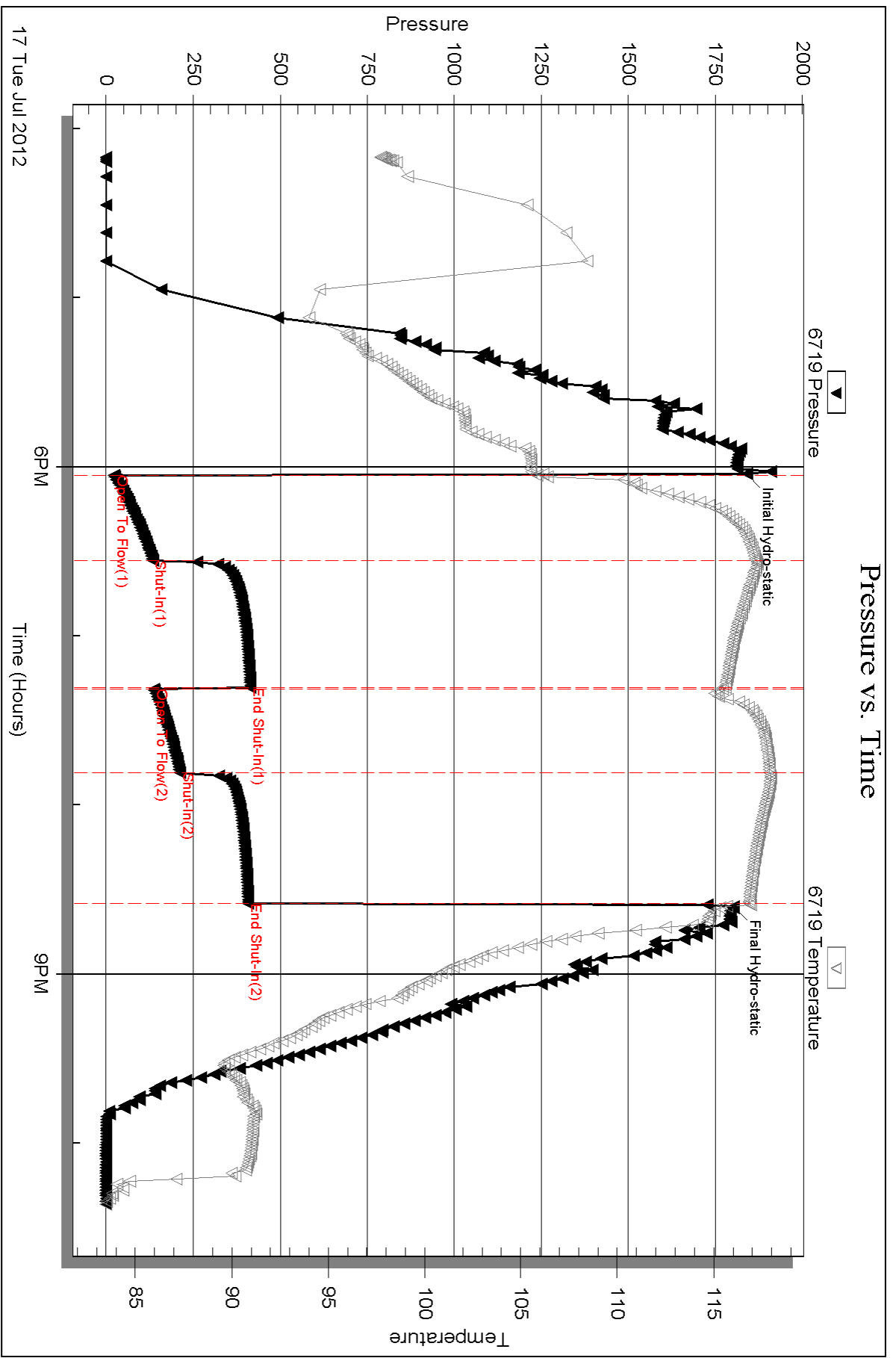
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .105 ohms @ 85 deg F

Chlorides = 60,000 ppm

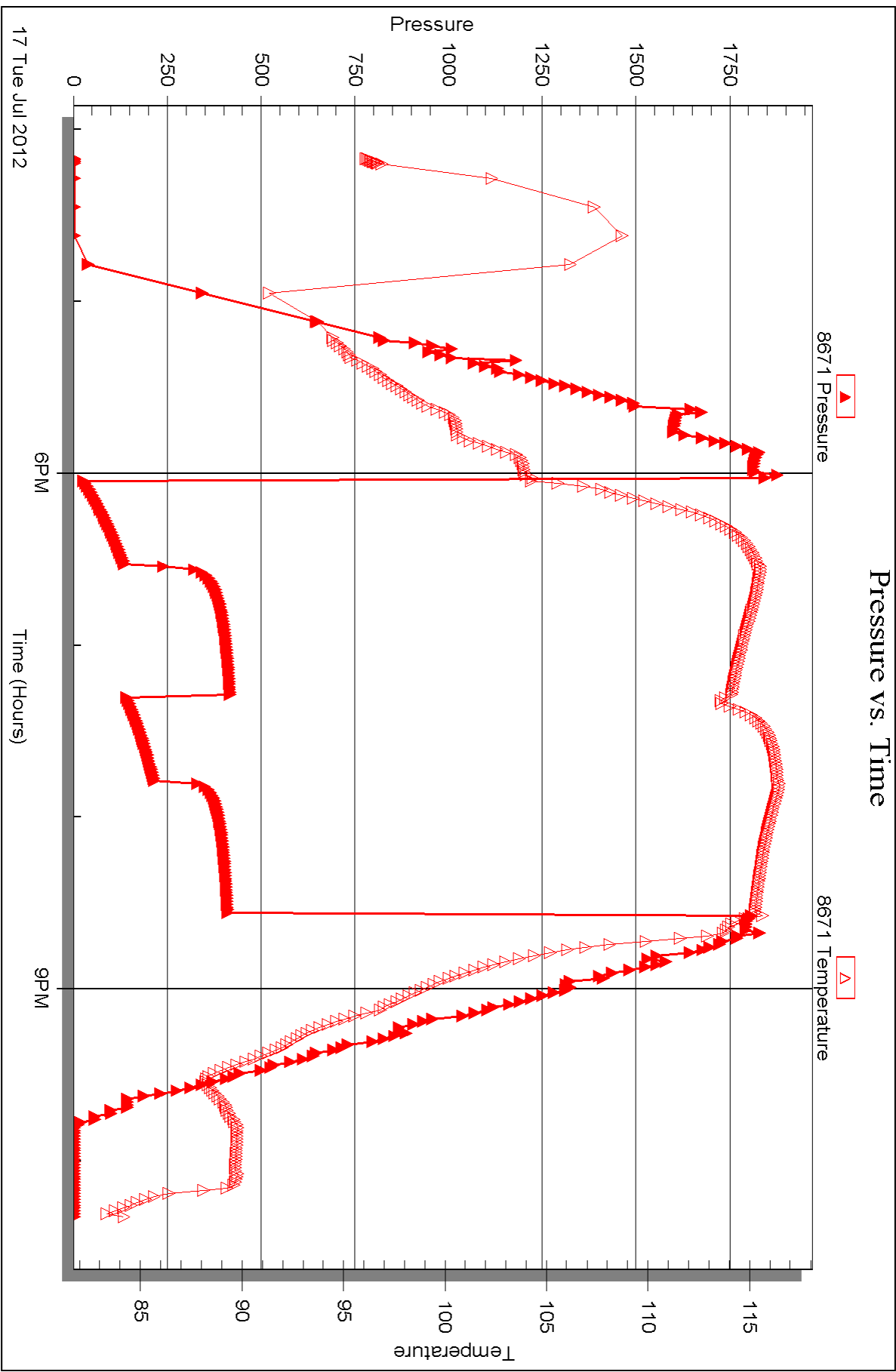


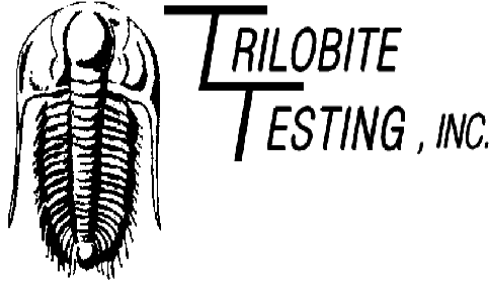
Serial #: 8671

Outside H & C Oil Company Inc

Griffith #2-2

DST Test Number: 2





DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Griffith #2-2

2-10s-23w Graham,KS

Start Date: 2012.07.18 @ 10:40:00

End Date: 2012.07.18 @ 17:19:30

Job Ticket #: 46130 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.24 @ 09:32:33



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H & C Oil Company Inc
 PO Box 86
 Plainville, KS 67663
 ATTN: Marc Downing

2-10s-23w Graham,KS

Griffith #2-2

Job Ticket: 46130

DST#: 3

Test Start: 2012.07.18 @ 10:40:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:21:00
 Time Test Ended: 17:19:30
 Interval: **3824.00 ft (KB) To 3894.00 ft (KB) (TVD)**
 Total Depth: 3894.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2430.00 ft (KB)
 2425.00 ft (CF)
 KB to GR/CF: 5.00 ft

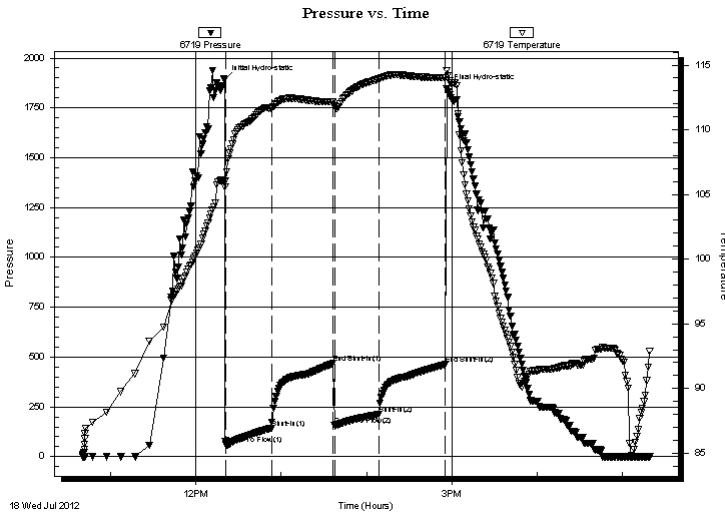
Serial #: 6719

Inside

Press @ Run Depth: 211.77 psig @ 3825.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.07.18 End Date: 2012.07.18 Last Calib.: 2012.07.18
 Start Time: 10:40:05 End Time: 17:19:29 Time On Btm: 2012.07.18 @ 12:20:00
 Time Off Btm: 2012.07.18 @ 14:56:30

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 1 min. 40 sec.
 45 - IS: Bled off, Blow back built to 9"
 30 - FF: Blow built to BOB in 3 1/2 min.
 45 - FS: Bled off, Blow back built to 10"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1893.84	105.95	Initial Hydro-static
1	61.73	106.04	Open To Flow (1)
33	142.93	111.63	Shut-In(1)
77	467.57	112.14	End Shut-In(1)
78	157.87	111.86	Open To Flow (2)
109	211.77	113.91	Shut-In(2)
156	462.27	114.01	End Shut-In(2)
157	1845.42	114.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	GMCO 62%o, 26%m, 12%g	0.87
218.00	GMO 42%g, 34%o, 24%m	3.06
270.00	CGO 79%o, 20%g, 1%m	3.79
0.00	GIP = 1500' (top 650' very low odor)	0.00

* 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 Company Inc

2-10s-23w Graham,KS

PO Box 86
Plainville, KS 67663

Griffith #2-2

Job Ticket: 46130

DST#: 3

ATTN: Marc Downing

Test Start: 2012.07.18 @ 10:40:00

Tool Information

Drill Pipe:	Length: 3836.00 ft	Diameter: 3.80 inches	Volume: 53.81 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 53.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3824.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3809.00	
Hydraulic tool	5.00			3814.00	
Packer	5.00			3819.00	20.00 Bottom Of Top Packer
Packer	5.00			3824.00	
Stubb	1.00			3825.00	
Recorder	0.00	6719	Inside	3825.00	
Recorder	0.00	8671	Outside	3825.00	
Perforations	28.00			3853.00	
Blank Spacing	33.00			3886.00	
Perforations	5.00			3891.00	
Bullnose	3.00			3894.00	70.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Company Inc

2-10s-23w Graham,KS

PO Box 86
Plainville, KS 67663

Griffith #2-2

Job Ticket: 46130

DST#: 3

ATTN: Marc Downing

Test Start: 2012.07.18 @ 10:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	GMCO 62%o, 26%m, 12%g	0.870
218.00	GMO 42%g, 34%o, 24%m	3.058
270.00	CGO 79%o, 20%g, 1%m	3.787
0.00	GIP = 1500' (top 650' very low odor)	0.000

Total Length: 550.00 ft Total Volume: 7.715 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

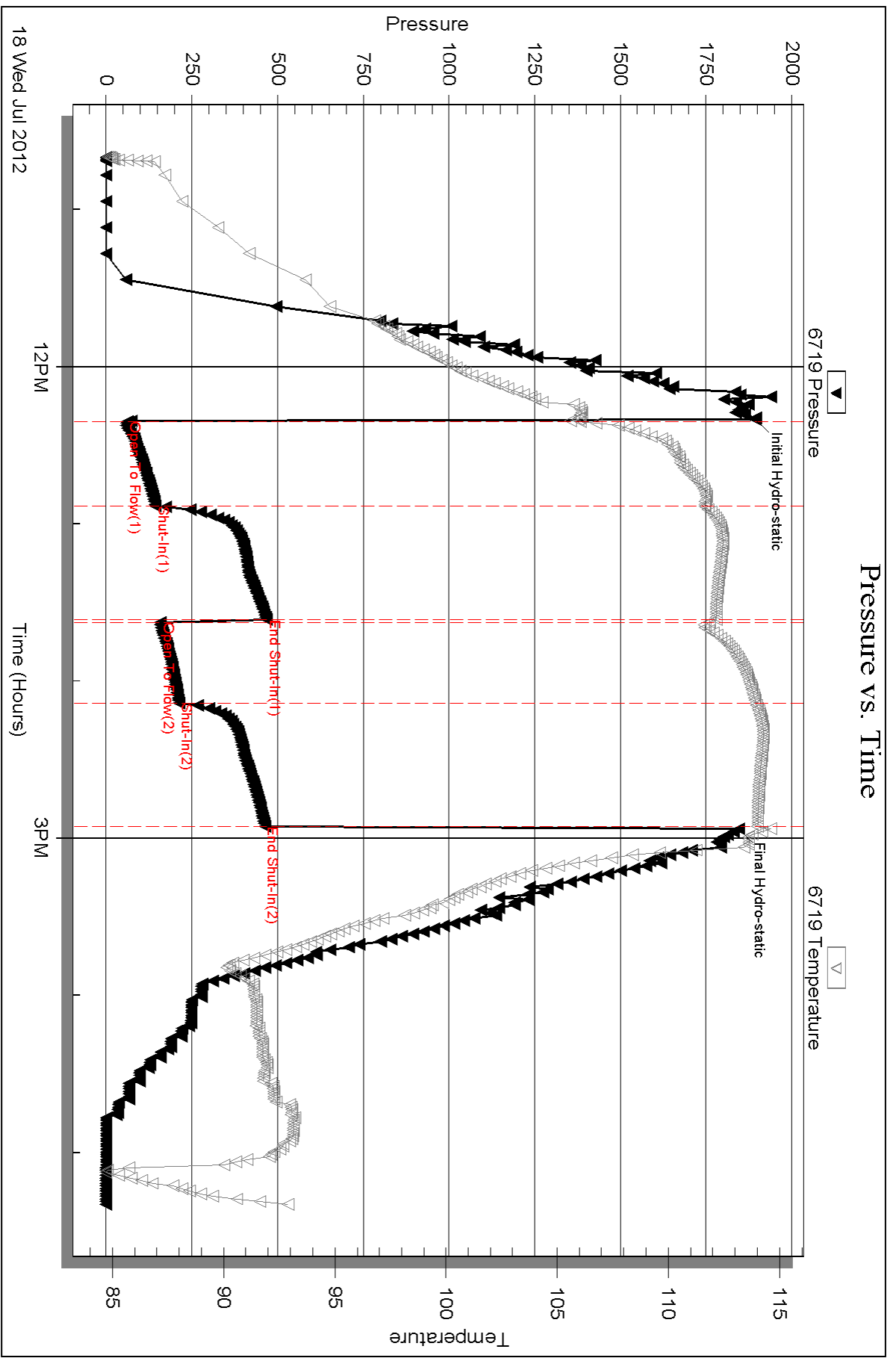
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 44.8 api @ 108 deg F

Corrected Gravity = 40 api

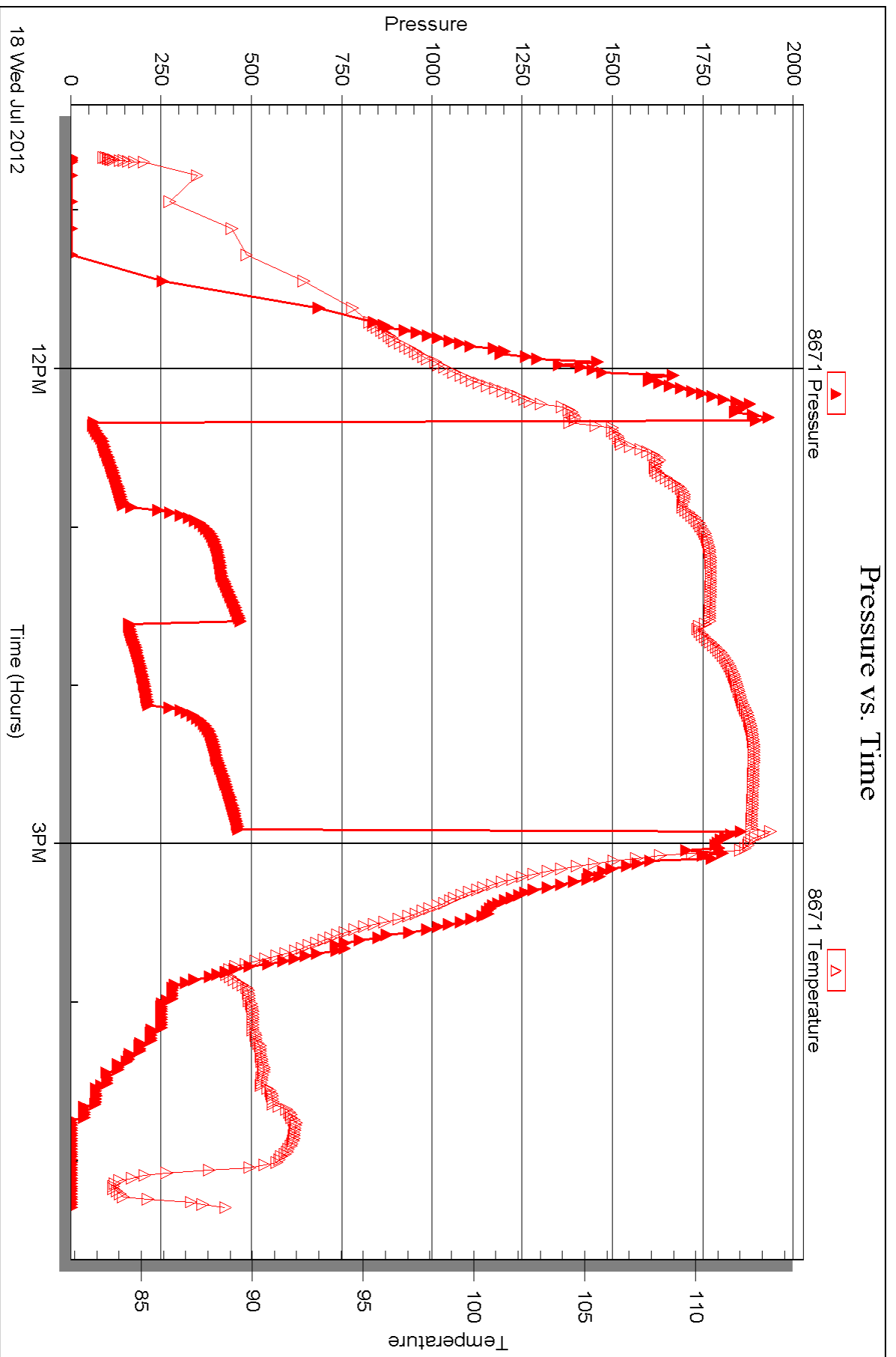


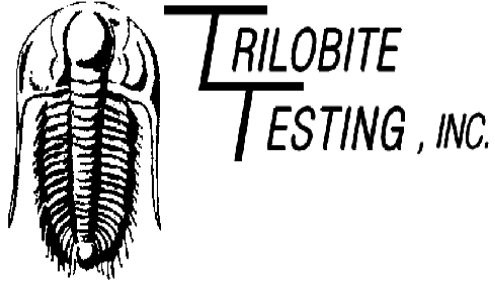
Serial #: 8671

Outside H & C Oil Company Inc

Griffith #2-2

DST Test Number: 3





DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Griffith #2-2

2-10s-23w Graham,KS

Start Date: 2012.07.19 @ 02:50:05

End Date: 2012.07.19 @ 08:58:29

Job Ticket #: 46131 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.24 @ 09:31:45



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H & C Oil Company Inc
 PO Box 86
 Plainville, KS 67663
 ATTN: Marc Downing

2-10s-23w Graham,KS

Griffith #2-2

Job Ticket: 46131

DST#: 4

Test Start: 2012.07.19 @ 02:50:05

GENERAL INFORMATION:

Formation: **LKC "K - L"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:16:00
 Time Test Ended: 08:58:29
 Interval: **3891.00 ft (KB) To 3935.00 ft (KB) (TVD)**
 Total Depth: 3935.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2430.00 ft (KB)
 2425.00 ft (CF)
 KB to GR/CF: 5.00 ft

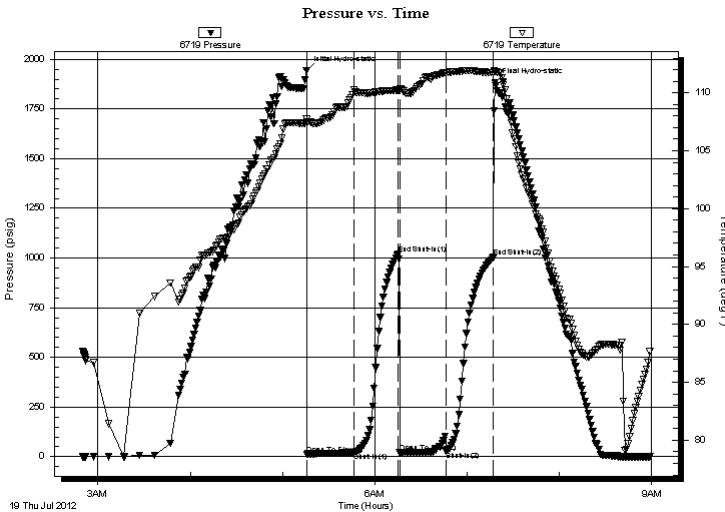
Serial #: 6719

Inside

Press @ RunDepth: 26.60 psig @ 3892.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.07.19 End Date: 2012.07.19 Last Calib.: 2012.07.19
 Start Time: 02:50:05 End Time: 08:58:29 Time On Btm: 2012.07.19 @ 05:15:30
 Time Off Btm: 2012.07.19 @ 07:17:59

TEST COMMENT: 30 - IF: Blow built to 1 1/4"
 30 - IS: Bled off, No blow back
 30 - FF: Blow started at 10 min., built to 1/4"
 30 - FS: Bled off, No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1944.04	107.73	Initial Hydro-static
1	13.32	107.48	Open To Flow (1)
31	20.11	110.21	Shut-In(1)
60	1018.85	110.22	End Shut-In(1)
61	20.37	110.24	Open To Flow (2)
91	26.60	111.74	Shut-In(2)
122	1003.21	111.76	End Shut-In(2)
123	1883.88	111.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	Mud w /trace of Oil 100%m	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 Company Inc

2-10s-23w Graham,KS

PO Box 86
Plainville, KS 67663

Griffith #2-2

Job Ticket: 46131

DST#: 4

ATTN: Marc Downing

Test Start: 2012.07.19 @ 02:50:05

Tool Information

Drill Pipe:	Length: 3899.00 ft	Diameter: 3.80 inches	Volume: 54.69 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 54.69 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3891.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	64.00 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			3876.00	
Hydraulic tool	5.00			3881.00	
Packer	5.00			3886.00	20.00 Bottom Of Top Packer
Packer	5.00			3891.00	
Stubb	1.00			3892.00	
Recorder	0.00	6719	Inside	3892.00	
Recorder	0.00	8671	Outside	3892.00	
Perforations	8.00			3900.00	
Blank Spacing	32.00			3932.00	
Bullnose	3.00			3935.00	44.00 Bottom Packers & Anchor
Total Tool Length:	64.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Company Inc

2-10s-23w Graham,KS

PO Box 86
Plainville, KS 67663

Griffith #2-2

Job Ticket: 46131

DST#: 4

ATTN: Marc Downing

Test Start: 2012.07.19 @ 02:50:05

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: 62.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
25.00	Mud w /trace of Oil 100% _m	0.351

Total Length: 25.00 ft Total Volume: 0.351 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

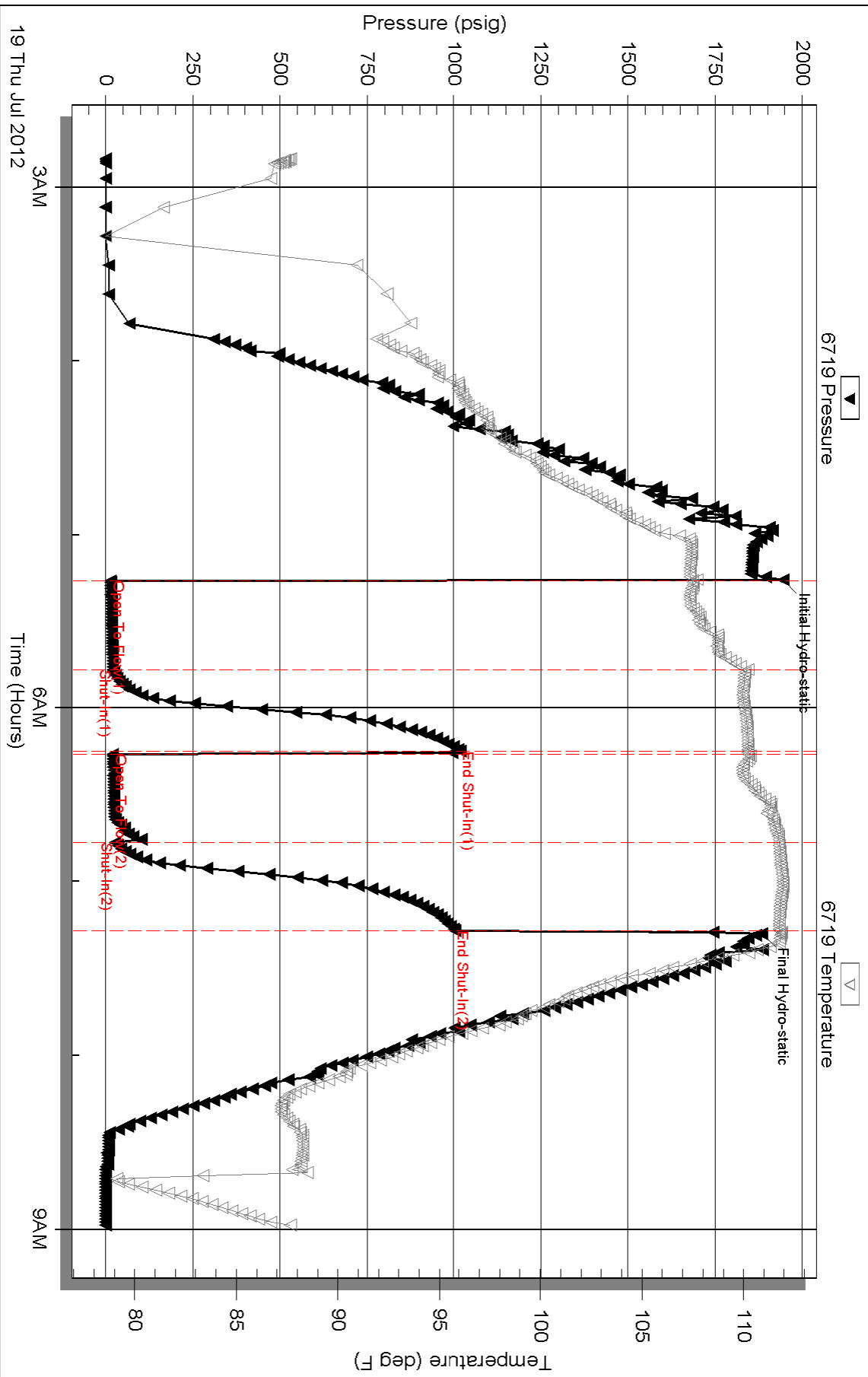
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Serial #: 8671

Outside H & C Oil Company Inc

Griffith #2-2

DST Test Number: 4





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. **46128**

4/10

Well Name & No. Griffith #2-2 Test No. 1 Date 7-16-12
 Company H&C Oil Operating Inc Elevation 24~~25~~30 KB 2425 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig ~~XXXXXXXXXX~~ American Eagle #3
 Location: Sec. 2 Twp. 10s Rge. 23w Co. Graham State KS

Interval Tested 3731-3753 Zone Tested LKC "C"
 Anchor Length 22 Drill Pipe Run 3743 Mud Wt. ~~8.8~~ 9.2
 Top Packer Depth 3726 Drill Collars Run - Vis 50
 Bottom Packer Depth 3731 Wt. Pipe Run - WL 6.4
 Total Depth 3753 Chlorides 1100 ppm System LCM 1

Blow Description IF: Bled off surge blow, blow built to 3"
ISI: Bled off,
FF: Blow started at 8 min., built to 2 1/4"
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>7</u>	<u>50cm</u>	<u>3</u>	<u>trace</u>	<u>97</u>	
<u>63</u>	<u>MW w/trace of oil</u>	<u>trace</u>	<u>55</u>	<u>45</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 70 BHT 114 Gravity - API RW .214 @ 71.6 °F Chlorides 33,000 ppm

(A) Initial Hydrostatic 1796 Test X 1150 T-On Location 21:00
 (B) First Initial Flow 40 Jars X T-Started 21:53
 (C) First Final Flow 48 Safety Joint X T-Open 00:42
 (D) Initial Shut-In 440 Circ Sub X NA T-Pulled 3:44
 (E) Second Initial Flow 50 Hourly Standby 1/2 hr 50 T-Out 6:30
 (F) Second Final Flow 61 Mileage 160RT 248
 (G) Final Shut-In 417 Sampler
 (H) Final Hydrostatic 1787 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

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

Sub Total 1448
 Total 1448
 MP/DST Disc't

Comments Tool slid 6'-8' before open - chased 3' to bottom at open - lost 15' mud 2" surge blow

Approved By _____ Our Representative James Winder

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. 46129

4/10

Well Name & No. Griffith #2-2 Test No. 2 Date 7-17-12
 Company H & C Oil Operating Inc Elevation 2430 KB 2425 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 2 Twp. 10s Rge. 23w Co. Graham State KS

Interval Tested 3774-3803 Zone Tested LKC "E-F"
 Anchor Length 29 Drill Pipe Run 3774 Mud Wt. 9.2
 Top Packer Depth 3769 Drill Collars Run - Vis 51
 Bottom Packer Depth ~~3774~~ 3774 Wt. Pipe Run - WL 8.4
 Total Depth 3803 Chlorides 1300 ppm System LCM 1

Blow Description IF: Blow built to BOB (11") in 9 1/2 min.
ISI: Bled off, No blowback
FF: Blow built to BOB in 19 min.
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>105</u>	<u>MCW w/trace of oil</u>	<u>trace</u>	<u>75</u>	<u>25</u>	
<u>315</u>	<u>MCW w/trace of oil</u>	<u>trace</u>	<u>90</u>	<u>10</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 420 BHT 117 Gravity - API RW .105 @ 85 °F Chlorides 60,000 ppm

(A) Initial Hydrostatic 1840 Test * 1150 T-On Location 15:15
 (B) First Initial Flow 23 Jars T-Started 16:10
 (C) First Final Flow 133 Safety Joint T-Open 18:03
 (D) Initial Shut-In 414 Circ Sub *NA T-Pulled 20:35
 (E) Second Initial Flow 137 Hourly Standby ☑ T-Out 22:15
 (F) Second Final Flow 212 Mileage 160RT 248 Comments _____
 (G) Final Shut-In 408 Sampler _____
 (H) Final Hydrostatic 1803 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____

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

Sub Total 0
 Total 1398
 MP/DST Disc't _____

Sub Total 1398

Approved By _____ Our Representative James Winder

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. 46130

Well Name & No. Griffith #2-2 Test No. 3 Date 7-18-12
 Company H+C Oil Operating Inc Elevation 2430 KB 2425 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 2 Twp. 10s Rge. 23w Co. Graham State KS

Interval Tested 3824-3894 Zone Tested LKC "H-J"
 Anchor Length 70 Drill Pipe Run 3836 Mud Wt. 9.0
 Top Packer Depth 3819 Drill Collars Run - Vis 68
 Bottom Packer Depth 3824 Wt. Pipe Run - WL 6.8
 Total Depth 3894 Chlorides 1300 ppm System LCM 1

Blow Description IF: Blow built to BOB (11") in 1min 40sec
ISI: Bled off, Blowback built to 9"
FF: Blow built to BOB in 3 1/2 min.
FST: Bled off, Blowback built to 10"

Rec	Feet of	%gas	%oil	%water	%mud
<u>270</u>	<u>CGO</u>	<u>20</u>	<u>79</u>	<u>-</u>	<u>1</u>
<u>218</u>	<u>GMO</u>	<u>42</u>	<u>34</u>	<u>-</u>	<u>24</u>
<u>62</u>	<u>GMCO</u>	<u>12</u>	<u>62</u>	<u>-</u>	<u>26</u>
Rec	Feet of <u>GIP = 1506' (Top 650' very low odor)</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 550 Fluid 1500 GAS BHT 114 Gravity 40 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>1894</u>	<input type="checkbox"/> Test <u>1150</u>	T-On Location <u>10:15</u>
(B) First Initial Flow <u>62</u>	<input checked="" type="checkbox"/> Jars	T-Started <u>10:40</u>
(C) First Final Flow <u>143</u>	<input checked="" type="checkbox"/> Safety Joint	T-Open <u>12:21</u>
(D) Initial Shut-In <u>468</u>	<input checked="" type="checkbox"/> Circ Sub <u>XNA</u>	T-Pulled <u>14:55</u>
(E) Second Initial Flow <u>158</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>17:15</u>
(F) Second Final Flow <u>212</u>	<input type="checkbox"/> Mileage <u>160 RT</u> 248	Comments
(G) Final Shut-In <u>462</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1845</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer

Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer
Initial Shut-In <u>45</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>45</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>1398</u>
	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1398</u>	

Approved By _____ Our Representative James Winder

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. **46131**

Well Name & No. Griffith #2-2 Test No. 4 Date 7-19-12
 Company H+C Oil Operating Inc. Elevation 2430 KB 2425 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 2 Twp. 10s Rge. 23w Co. Graham State KS

Interval Tested 3891 - 3935 Zone Tested LKC "K-L"
 Anchor Length 44 Drill Pipe Run 3899 Mud Wt. 9.1
 Top Packer Depth 3886 Drill Collars Run - Vis 62
 Bottom Packer Depth 3891 Wt. Pipe Run - WL 6.8
 Total Depth 3935 Chlorides 2900 ppm System LCM 2

Blow Description IF: Blow built to 1/4"
ISI: Bled off, No blowback
FF: Blow started at 10 min., built to 1/4"
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>Mud w/trace of Oil</u>	<u>-</u>	<u>trace</u>	<u>-</u>	<u>100</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 25 BHT 112 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>1944</u>	<input type="checkbox"/> Test <u>1150</u>	T-On Location <u>2:00 2:00</u>
(B) First Initial Flow <u>13</u>	<input checked="" type="checkbox"/> Jars	T-Started <u>2:50</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint	T-Open <u>5:16</u>
(D) Initial Shut-In <u>1019</u>	<input checked="" type="checkbox"/> Circ Sub <u>XNA</u>	T-Pulled <u>7:17</u>
(E) Second Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>8:50</u>
(F) Second Final Flow <u>27</u>	<input type="checkbox"/> Mileage <u>160 RT</u> 248	Comments
(G) Final Shut-In <u>1003</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1884</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>1398</u>
	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1398</u>	

Approved By _____ Our Representative James Winder

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

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

752

No.

Cell 785-324-1041

Date	7-12-12	Sec.	2	Twp.	10	Range	23	County	Gravem	State	KS	On Location	300 a.m.	Finish
Lease	Griffith	Well No.	2-2	Location Wakarusa Redline 1B2s winto										
Contractor	Amgrisen Bayle #3													
Type Job	Surface													
Hole Size	1 7/8													
Csg.	8 5/8													
Tbg. Size	HAC													
Tool														
Cement Left in Csg.	1.5'													
Meas Line	Displace 14BL													
EQUIPMENT														
Pumptrk	No.	Cementer	Crew 3											
Bulktrk	No.	Driver	Mutt											
Bulktrk	No.	Driver	Lodi											
JOB SERVICES & REMARKS														
Remarks:														
Rat Hole														
Mouse Hole														
Centralizers														
Baskets														
D/V or Port Collar	8 5/8 bottom first circulation - Mix 150000 Displace. Cement Circulate													
	Common 150													
	Poz. Mix													
	Gel. 3													
	Calcium 5													
	Hulls													
	Salt													
	Flowseal													
	Kol-Seal													
	Mud CLR 48													
	CFL-117 or CD110 CAF 38													
	Sand													
	Handling 158													
	Mileage													
	FLOAT EQUIPMENT													
	Guide Shoe													
	Centralizer													
	Baskets													
	AFU Inserts													
	Float Shoe													
	Latch Down													
	Pumptrk Charge Surface													
	Mileage 45													
	Tax													
	Discount													
	Total Charge													
Signature <i>Paul Howard Kuhn</i>														