

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

10/14/12

Form ACO-1
June 2009

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 8914
Name: H&C Oil Operating, Inc.
Address 1: P.O. Box 86
Address 2: _____
City: Plainville State: KS Zip: 67663 + _____
Contact Person: Charles Ramsay
Phone: (785) 434-7434
CONTRACTOR: License # 33493
Name: American Eagle Drilling LLC
Wellsite Geologist: Clayton Erickson
Purchaser: Coffeyville Resources

Designate Type of Completion:
 New Well Re-Entry Workover
 Oil WSW SWD SLOW
 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
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____

08/27/11 09/04/11 10/3/11
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 065-23767-00-00
Spot Description: _____
W2_NE_SE Sec. 2 Twp. 10 S. R. 23 East West
1,980 Feet from North / South Line of Section
990 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Graham
Lease Name: Griffith Well #: 2-1
Field Name: Wildcat
Producing Formation: Lansing Kansas City
Elevation: Ground: 2416 Kelly Bushing: 2421
Total Depth: 4280 Plug Back Total Depth: 4214
Amount of Surface Pipe Set and Cemented at: 273 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: 2378 Feet
If Alternate II completion, cement circulated from: 2378
feet depth to: surface w/ 370 sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit) **CONFIDENTIAL**
Chloride content: _____ ppm Fluid volume: _____ bbls
Dewatering method used: _____
Location of fluid disposal if hauled offsite: **KCC**
Operator Name: _____
Lease Name: _____ License #: _____
Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West
County: _____ Permit #: _____

OCT 14 2012

OCT 19 2011

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INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

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.

Signature: Charles R Ramsay
Title: President Date: 10/14/11

KCC Office Use ONLY

Letter of Confidentiality Received
Date: 10/14/11 - 10/14/12
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: US Date: 10-28-11

Operator Name: H&C Oil Operating, Inc. Lease Name: Griffith Well #: 2-1
 Sec. 2 Twp. 10 S. R. 23 East West County: Graham

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: Dual induction, Microresistivity, Dual compensated porosity log, Compensated borehole sonic, Cement bond log	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Name</td> <td style="width:20%;">Top</td> <td style="width:20%;">Datum</td> </tr> <tr> <td>Anhydrite</td> <td>1978</td> <td>+443</td> </tr> <tr> <td>Heebner</td> <td>3660</td> <td>-1239</td> </tr> <tr> <td>Lansing</td> <td>3695</td> <td>-1274</td> </tr> <tr> <td>Base KC</td> <td>3923</td> <td>-1503</td> </tr> <tr> <td>Marmaton</td> <td>4020</td> <td>-1599</td> </tr> <tr> <td>Arbuckle</td> <td>4232</td> <td>-1811</td> </tr> </table>	Name	Top	Datum	Anhydrite	1978	+443	Heebner	3660	-1239	Lansing	3695	-1274	Base KC	3923	-1503	Marmaton	4020	-1599	Arbuckle	4232	-1811
Name	Top	Datum																				
Anhydrite	1978	+443																				
Heebner	3660	-1239																				
Lansing	3695	-1274																				
Base KC	3923	-1503																				
Marmaton	4020	-1599																				
Arbuckle	4232	-1811																				

CASING RECORD <input checked="" 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
Surface	12 1/4"	8 5/8"	23#	273'	common	160	3%cc, 2% gel
production	7 7/8"	5 1/2"	14#	4266'	common	180	10% salt, 5% gilsonite
					QMDC	370	1/4# floeal

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				

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
4	3892-3898'	500 gallons MCA, 2000 gallons NE FE	3898
5 1/2" plug	4000'		4000
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		KCC WICHITA	

TUBING RECORD: Size: <u>2 3/8"</u> Set At: <u>3995'</u> Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. <u>10/13/2011</u>		Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls. <u>83</u>	Gas Mcf <u>0</u>	Water Bbls. <u>0</u>
		Gas-Oil Ratio	Gravity <u>36</u>

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 checked="" 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 (Specify) _____	PRODUCTION INTERVAL: <u>3892-3898</u>
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QUALITY OILWELL CEMENTING, INC.

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

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

No. 5281

Date	8/27/11	Sec.	2	Twp.	10	Range	23	County	Graham	State	KS	On Location		Finish	5:00PM
Lease	Griffith		Well No.	2-1		Location Hill City, S to H Rd, 1 E, 1 1/2 S, W into									
Contractor	American Eagle Rig #3					Owner									
Type Job	Surface					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.									
Hole Size	12 1/4"		T.D.	273'		Charge To									
Csg.	8 5/8"		Depth	273'		HTC Oil Operating, Inc.									
Tbg. Size			Depth			Street									
Tool			Depth			City									
Cement Left in Csg.	13'		Shoe Joint			State									
Meas Line			Displace	16 1/2 Bbk		The above was done to satisfaction and supervision of owner agent or contractor.									
						Cement Amount Ordered 160 sx Com 3 3/8 c/w 2 1/2 gel									

EQUIPMENT

Pumptrk	9	No.	Cementer	Paul	Common	160
			Helper			
Bulktrk	14	No.	Driver	Matt	Poz. Mix	
			Driver			
Bulktrk	PV	No.	Driver	Brian	Gel.	3
			Driver			

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
Est Circ.	Sand
Mix 160 sx	Handling 168
Displace	Mileage
Cement Circulated	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Thank You!!

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x Signature *Bradford Parker*

Pumptrk Charge	Surface	Tax	
Mileage	42	Discount	
		KCC Total Charge	

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QUALITY OILWELL CEMENTING, INC.

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

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

No. 5291

Date	9/5/11	Sec.	2	Twp.	10	Range	23	County	Graham	State	KS	On Location		Finish	2:45 AM
Lease	Griffith			Well No.	2-1			Location	Hill City, Sto H Rd, 1 E, 1/2 S, W into						
Contractor	American Eagle Rig #3							Owner	To Quality Oilwell Cementing, Inc.						
Type Job	Production String - Top							You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size	7 7/8"			T.D.	4280'			Charge To	HCO:1 Operating, Inc.						
Csg.	5 1/2" 14#			Depth	4269'			Street							
Tbg. Size				Depth				City	State						
Tool	DV Jt #47			Depth	2380'			The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.				Shoe Joint				Cement Amount Ordered 400 sx Q-MDC 4# Floate							
Meas Line				Displace	58 1/4 Bbls.										

EQUIPMENT

Pumptrk	9	No.	Cementor	Paul
			Helper	
Bulktrk	12	No.	Driver	Matt
			Driver	
Bulktrk	PV	No.	Driver	Doug
			Driver	Michael

Common	400 Q MDC
Poz. Mix	
Gel.	

JOB SERVICES & REMARKS

Remarks:
Rat Hole 30 sx
Mouse Hole
Centralizers
Baskets
D/V or Port Collar Jt. #47 - 2380'
Open DV Tool
Circ. 1-hour
Plug Rat Hole
Mix 370 sx
Displace
Load Plug / Close DV Tool
Cement Circulated

Calcium
Hulls
Salt
Flowseal 200#
Kol-Seal
Mud CLR 48
CFL-117 or CD110 CAF 38
Sand
Handling 400
Mileage

FLOAT EQUIPMENT

Guide Shoe
Centralizer
Baskets
AFU Inserts
Float Shoe
Latch Down

48 Ticket
5290

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Thank You!!

Pumptrk Charge prod Long String
Mileage N/A

TOP
stag

X Signature *Charles Ramsey*

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Tax
Discount
Total Charge

QUALITY OILWELL CEMENTING, INC.

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

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

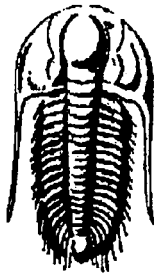
No. 5290

Date	9/5/11	Sec.	2	Twp.	10	Range	23	County	Graham	State	KS	On Location		Finish	12:30AM
Lease	Griffith	Well No.	2-1	Location Hill City, Sto H Rd, 1 E, 1/2 S, W into											
Contractor	American Eagle Rig #3							Owner							
Type Job	Production String - Bottom							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.							
Hole Size	7 7/8"		T.D.		4280'		Charge To								
Csg.	5 1/2" 14#		Depth		4269'		WTC Oil Operating, Inc.								
Tbg. Size			Depth				Street								
Tool	DN Jt #47		Depth		2380'		City								
Cement Left in Csg.	18.79'		Shoe Joint		18.79'		State								
Meas Line			Displace		103 3/4 Bbls.		The above was done to satisfaction and supervision of owner agent or contractor.								
EQUIPMENT							Cement Amount Ordered								
Pumptrk	9	No.	Cementer	Paul		Common		180							
Bulktrk	14	No.	Driver	Matt		Poz. Mix									
Bulktrk	PV	No.	Driver	Michael		Gel.		Doug							
JOB SERVICES & REMARKS							Calcium								
Remarks:							Hulls								
Rat Hole							Salt 15								
Mouse Hole							Flowseal								
Centralizers							2, 4, 6, 8, 10, 12, 14, 16, 18, 43, 49, 85, 88 Seal 900#								
Baskets							1, 4, 47, 62, 86								
D/V or Port Collar							Jt #47 - 2380'								
Est. Circ.							1-hour								
Pump							500 gal Mud Clear - 48								
Mix							180 ex								
Displace							45 Bbls. water / 58 3/4 Mud								
Land Plug							5 1/2" FLOAT EQUIPMENT								
Float Hold							Guide Shoe								
							Centralizer 13 - Turbos								
							Baskets 5								
							AFU Inserts								
							Float Shoe								
							Latch Down 1 - DN Tool								
							RECEIVED OCT 19 2011								
							KCC WICHITA								
							Bottom Stage								
							Pumptrk Charge prod Long String								
							Mileage 42								
							Tax								
							Discount								
							Total Charge								

Thank You!!

X Signature *Chris Ramsey*

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663+0086

ATTN: Clayton Erickson

2-10s-23w Graham,KS

Griffith #2-1

Start Date: 2011.08.31 @ 14:16:05

End Date: 2011.08.31 @ 20:15:29

Job Ticket #: 44241 DST #: 1

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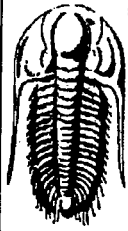
OCT 19 2011

KCC WICHITA

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.
PO Box 86
Plainville, KS 67663+0086
ATTN: Clayton Erickson

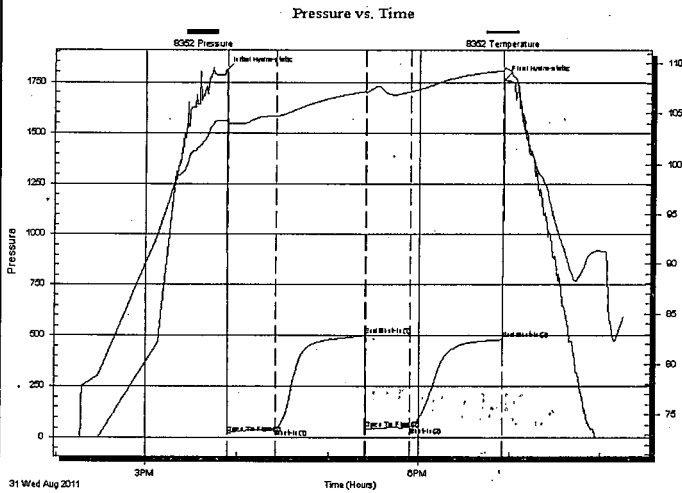
Griffith #2-1
2-10s-23w Graham,KS
Job Ticket: 44241 DST#: 1
Test Start: 2011.08.31 @ 14:16:05

GENERAL INFORMATION:

Formation: **LKC"A-C"**
Deviated: **No** Whipstock: ft (KB)
Time Tool Opened: 15:53:40
Time Test Ended: 20:15:29
Interval: **3688.00 ft (KB) To 3755.00 ft (KB) (TVD)**
Total Depth: 3755.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Test Type: Conventional Bottom Hole
Tester: Andy Carreira
Unit No: 39
Reference Elevations: 2421.00 ft (KB)
2416.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8352 Outside
Press@RunDepth: 53.98 psig @ 3695.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.08.31 End Date: 2011.08.31 Last Calib.: 2011.08.31
Start Time: 14:16:05 End Time: 20:15:29 Time On Btm: 2011.08.31 @ 15:52:30
Time Off Btm: 2011.08.31 @ 18:55:59

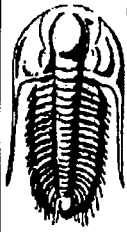
TEST COMMENT: IF:(30min) Weak, 1" blow.
IS:(60min) No Return
FF:(30min) Surface blow in 9 min. Blew Throughout
FS:(60min) No Return



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1804.86	104.29	Initial Hydro-static
2	21.11	103.52	Open To Flow (1)
33	42.53	104.75	Shut-In(1)
92	500.04	107.21	End Shut-In(1)
93	44.49	107.06	Open To Flow (2)
122	53.98	107.21	Shut-In(2)
183	480.63	109.28	End Shut-In(2)
184	1761.02	109.54	Final Hydro-static

Recovery		
Length (ft.)	Description	Volume (bbl)
65.00	SOSM	0.64

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc.

Griffith #2-1

PO Box 86
Plainville, KS 67663+0086

2-10s-23w Graham,KS

Job Ticket: 44241

DST#: 1

ATTN: Clayton Erickson

Test Start: 2011.08.31 @ 14:16:05

Tool Information

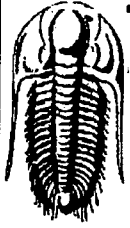
Drill Pipe:	Length: 3633.00 ft	Diameter: 3.80 inches	Volume: 50.96 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 51.11 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3688.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3661.00	
Shut In Tool	5.00			3666.00	
Hydraulic tool	5.00			3671.00	
Jars	5.00			3676.00	
Safety Joint	3.00			3679.00	
Packer	5.00			3684.00	28.00 Bottom Of Top Packer
Packer	4.00			3688.00	
Stubb	1.00			3689.00	
Perforations	5.00			3694.00	
Change Over Sub	1.00			3695.00	
Recorder	0.00	8017	Inside	3695.00	
Recorder	0.00	8352	Outside	3695.00	
Drill Pipe	31.00			3726.00	
Change Over Sub	1.00			3727.00	
Perforations	25.00			3752.00	
Bullnose	3.00			3755.00	67.00 Bottom Packers & Anchor
Total Tool Length:	95.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.
PO Box 86
Plainville, KS.67663+0086
ATTN: Clayton Erickson

Griffith #2-1
2-10s-23w Graham,KS
Job Ticket: 44241 DST#: 1
Test Start: 2011.08.31 @ 14:16:05

Mud and Cushion Information

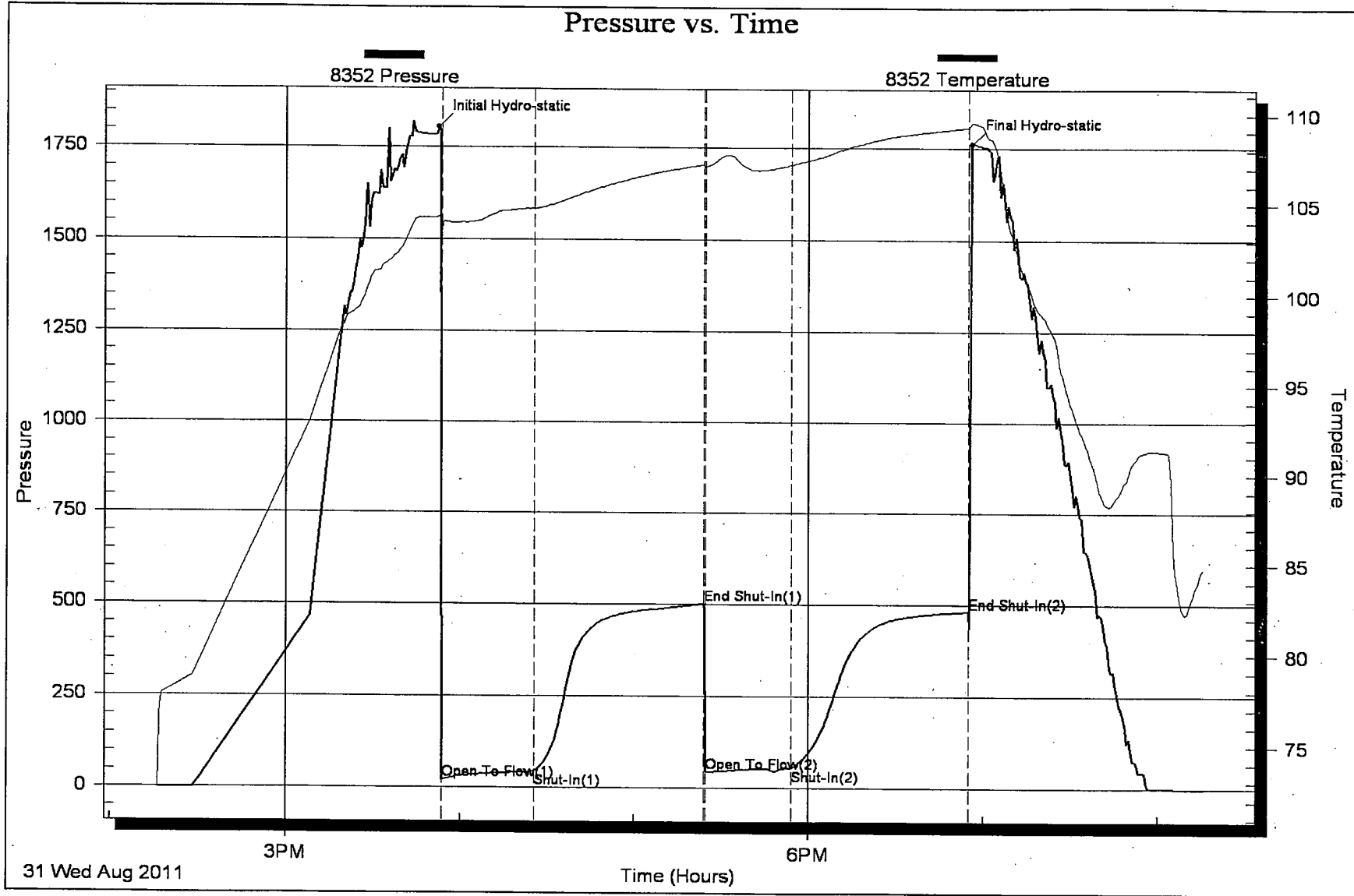
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.76 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 0.00 ppm			
Filter Cake: inches			

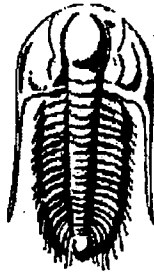
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	SOSM	0.638

Total Length: 65.00 ft Total Volume: 0.638 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663+0086

ATTN: Clayton Erickson

2-10s-23w Graham,KS

Griffith #2-1

Start Date: 2011.09.01 @ 06:30:05

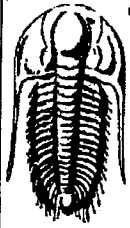
End Date: 2011.09.01 @ 12:53:09

Job Ticket #: 44242 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.
PO Box 86
Plainville, KS 67663+0086
ATTN: Clayton Erickson

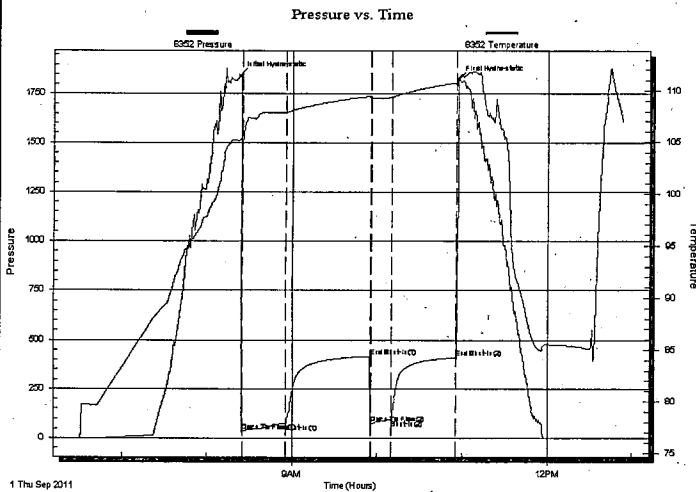
Griffith #2-1
2-10s-23w Graham, KS
Job Ticket: 44242 DST#: 2
Test Start: 2011.09.01 @ 06:30:05

GENERAL INFORMATION:

Formation: **LKC"E-F"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:24:40
Time Test Ended: 12:53:09
Interval: **3750.00 ft (KB) To 3800.00 ft (KB) (TVD)**
Total Depth: 3800.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Test Type: Conventional Bottom Hole
Tester: Andy Carreira
Unit No: 39
Reference Elevations: 2421.00 ft (KB)
2416.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8352 Outside
Press@RunDepth: 95.67 psig @ 3757.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.09.01 End Date: 2011.09.01 Last Calib.: 2011.09.01
Start Time: 06:30:05 End Time: 12:53:10 Time On Btm: 2011.09.01 @ 08:23:00
Time Off Btm: 2011.09.01 @ 10:56:29

TEST COMMENT: IF:(30min) BOB, 4 min.
IS:(60min) Return intermittent surface blow.
FF:(15min) BOB, 5 min.
FS:(45min) Return surface blow, died in 15 min.



PRESSURE SUMMARY

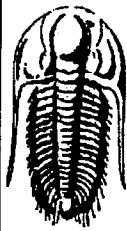
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1843.35	105.18	Initial Hydro-static
2	35.88	104.67	Open To Flow (1)
33	73.51	107.88	Shut-In(1)
92	418.06	109.45	End Shut-In(1)
93	75.07	109.28	Open To Flow (2)
107	95.67	109.34	Shut-In(2)
153	411.66	110.77	End Shut-In(2)
154	1823.31	111.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	GOCM g=20% o=35% m=45%	0.60
62.00	GMCO g=20% m=30% o=50%	0.87
61.00	GMCO g=40% m=30% o=30%	0.86
15.00	GMCO g=20% m=30% o=50%	0.21
0.00	GIP= 1005ft	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc.

Griffith #2-1

PO Box 86
Plainville, KS 67663+0086

2-10s-23w Graham,KS

Job Ticket: 44242

DST#: 2

ATTN: Clayton Erickson

Test Start: 2011.09.01 @ 06:30:05

Tool Information

Drill Pipe:	Length: 3719.00 ft	Diameter: 3.80 inches	Volume: 52.17 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 52.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3750.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3723.00	
Shut In Tool	5.00			3728.00	
Hydraulic tool	5.00			3733.00	
Jars	5.00			3738.00	
Safety Joint	3.00			3741.00	
Packer	5.00			3746.00	28.00 Bottom Of Top Packer
Packer	4.00			3750.00	
Stubb	1.00			3751.00	
Perforations	5.00			3756.00	
Change Over Sub	1.00			3757.00	
Recorder	0.00	8017	Inside	3757.00	
Recorder	0.00	8352	Outside	3757.00	
Drill Pipe	31.00			3788.00	
Change Over Sub	1.00			3789.00	
Perforations	8.00			3797.00	
Bullnose	3.00			3800.00	50.00 Bottom Packers & Anchor
Total Tool Length:	78.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

Griffith #2-1

PO Box 86
Plainville, KS 67663+0086

2-10s-23w Graham,KS

Job Ticket: 44242 DST#: 2

ATTN: Clayton Erickson

Test Start: 2011.09.01 @ 06:30:05

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: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.37 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1400.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

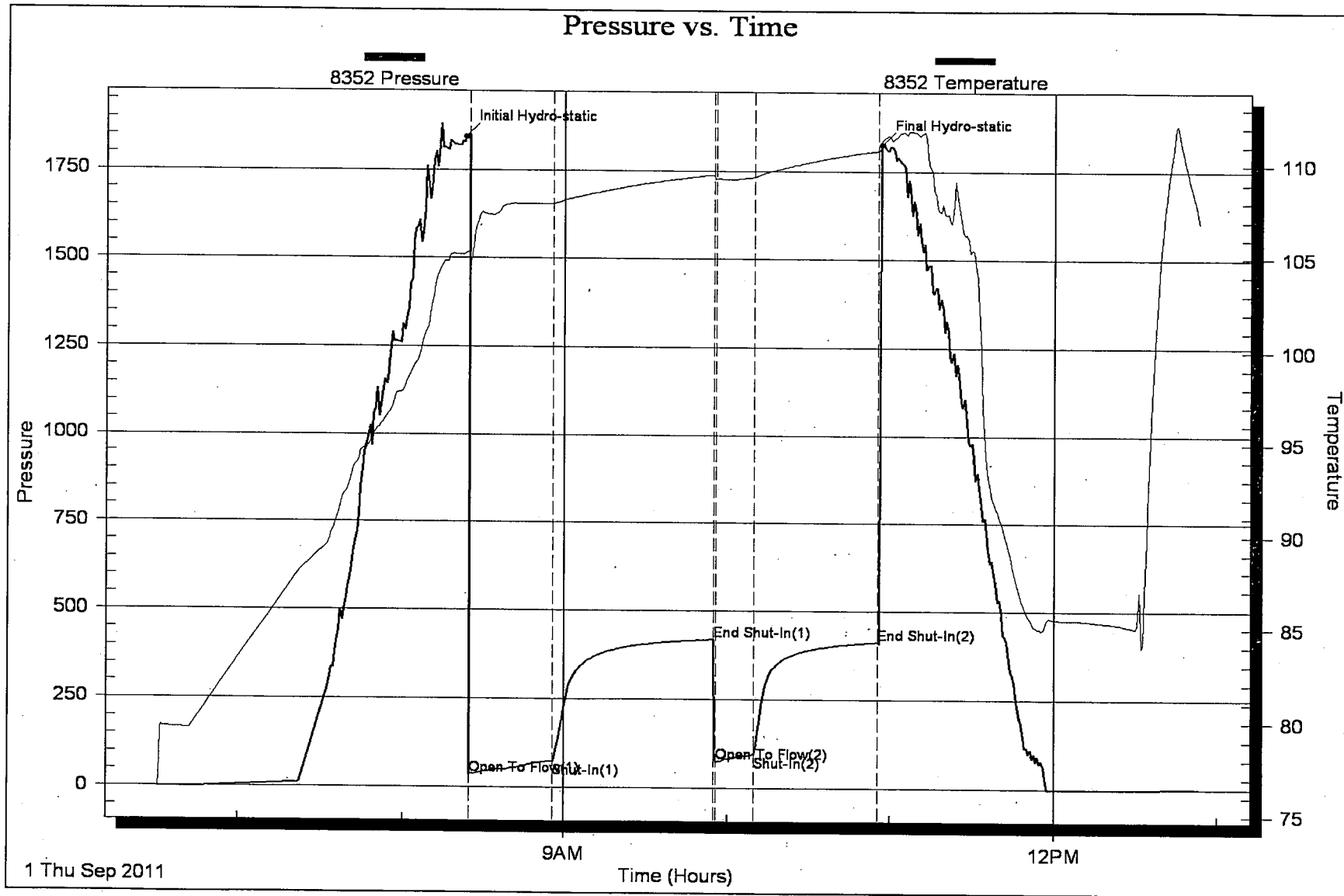
Length ft	Description	Volume bbl
62.00	GOOM g=20% o=35% m=45%	0.596
62.00	GMCO g=20% m=30% o=50%	0.870
61.00	GMCO g=40% m=30% o=30%	0.856
15.00	GMCO g=20% m=30% o=50%	0.210
0.00	GIP= 1005ft	0.000

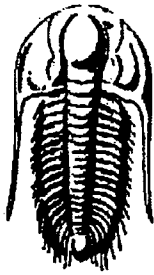
Total Length: 200.00 ft Total Volume: 2.532 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663+0086

ATTN: Clayton Erickson

2-10s-23w Graham,KS

Griffith #2-1

Start Date: 2011.09.02 @ 01:57:05

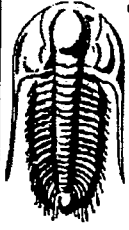
End Date: 2011.09.02 @ 10:25:59

Job Ticket #: 44243 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.
PO Box 86
Plainville, KS 67663+0086
ATTN: Clayton Erickson

Griffith #2-1
2-10s-23w Graham,KS
Job Ticket: 44243 **DST#: 3**
Test Start: 2011.09.02 @ 01:57:05

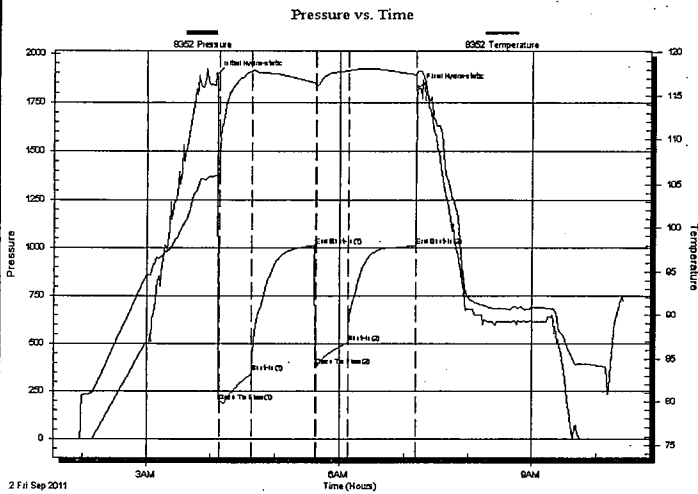
GENERAL INFORMATION:

Formation: **LKC" H,I,J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:07:40
Time Test Ended: 10:25:59
Interval: **3807.00 ft (KB) To 3870.00 ft (KB) (TVD)**
Total Depth: 3870.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Reference Elevations: 2421.00 ft (KB)
2416.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole
Tester: Andy Carreira
Unit No: 39

Serial #: 8352 **Outside**
Press@RunDepth: 506.92 psig @ 3814.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.09.02 End Date: 2011.09.02 Last Calib.: 2011.09.02
Start Time: 01:57:05 End Time: 10:25:59 Time On Btmr: 2011.09.02 @ 04:05:30
Time Off Btmr: 2011.09.02 @ 07:13:30

TEST COMMENT: IF:(30min) BOB, 30 seconds.
IS:(60min) BOB, 12 min after bleed off.
FF:(30min) BOB, Immediately. Gas to surface 25 min.
FS:(60min) BOB, 7 min after bleed off.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1893.58	106.02	Initial Hydro-static
3	194.97	106.75	Open To Flow (1)
34	350.87	117.81	Shut-In(1)
92	1011.82	116.50	End Shut-In(1)
94	385.86	116.16	Open To Flow (2)
123	506.92	117.82	Shut-In(2)
186	1010.16	117.39	End Shut-In(2)
188	1829.31	117.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO g=20% m=25% o=55%	1.41
1180.00	CGO	16.55

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc.

Griffith #2-1

PO Box 86
Plainville, KS 67663+0086

2-10s-23w Graham,KS

ATTN: Clayton Erickson

Job Ticket: 44243

DST#: 3

Test Start: 2011.09.02 @ 01:57:05

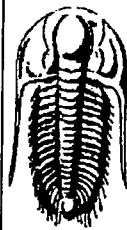
Tool Information

Drill Pipe:	Length: 3754.00 ft	Diameter: 3.80 inches	Volume: 52.66 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 52.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3807.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	63.00 ft			
Tool Length:	91.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3780.00	
Shut In Tool	5.00			3785.00	
Hydraulic tool	5.00			3790.00	
Jars	5.00			3795.00	
Safety Joint	3.00			3798.00	
Packer	5.00			3803.00	28.00 Bottom Of Top Packer
Packer	4.00			3807.00	
Stubb	1.00			3808.00	
Perforations	5.00			3813.00	
Change Over Sub-	1.00			3814.00	
Recorder	0.00	8017	Inside	3814.00	
Recorder	0.00	8352	Outside	3814.00	
Drill Pipe	31.00			3845.00	
Change Over Sub	1.00			3846.00	
Perforations	21.00			3867.00	
Bullnose	3.00			3870.00	63.00 Bottom Packers & Anchor
Total Tool Length:	91.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

Griffith #2-1

PO Box 86
Plainville, KS 67663+0086

2-10s-23w Graham,KS

Job Ticket: 44243 **DST#: 3**

ATTN: Clayton Erickson

Test Start: 2011.09.02 @ 01:57:05

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: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.38 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1400.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

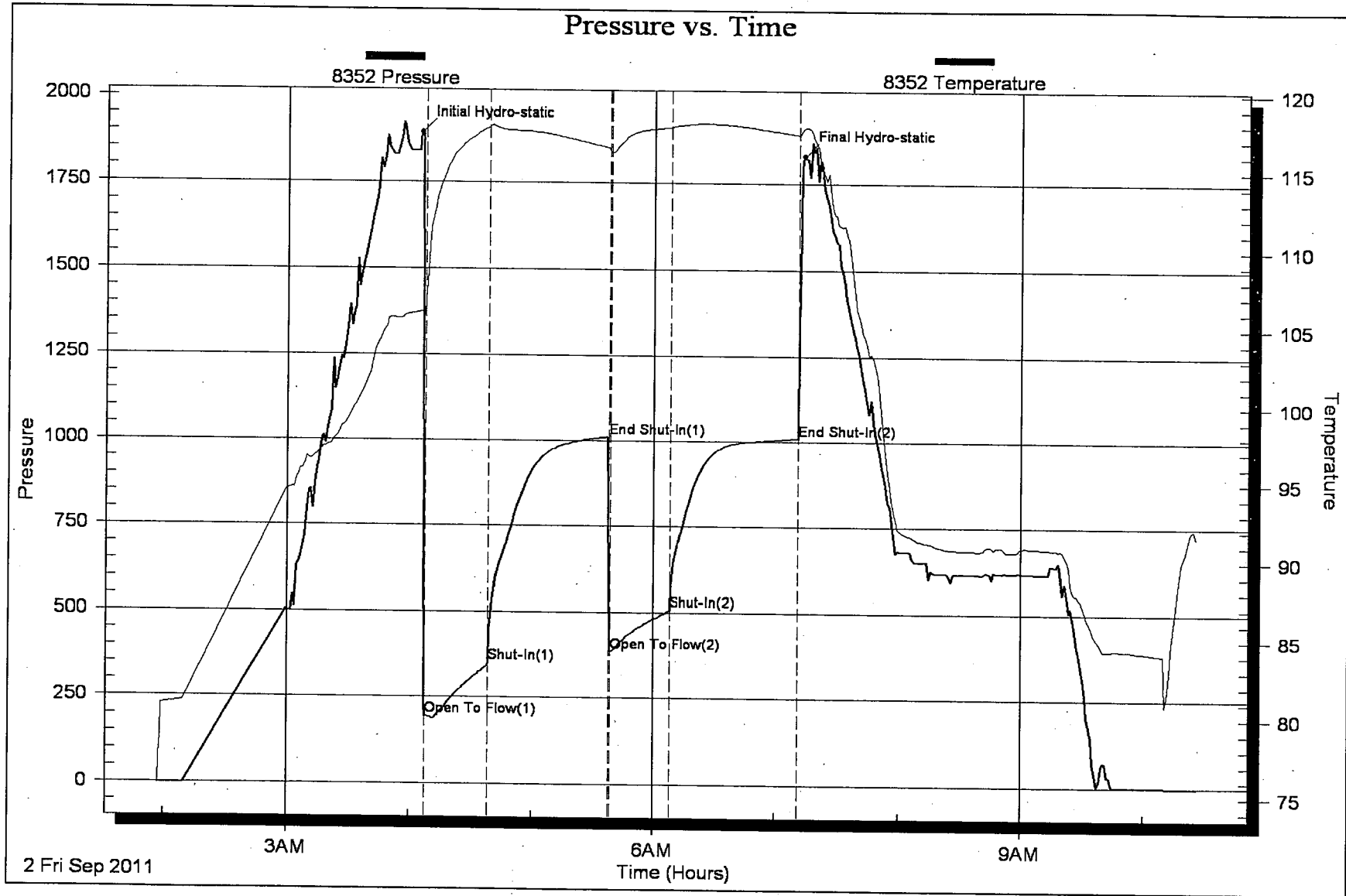
Length ft	Description	Volume bbl
120.00	GMCO g=20% m=25% o=55%	1.410
1180.00	CGO	16.552

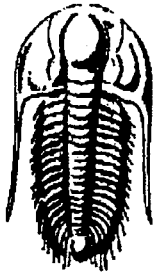
Total Length: 1300.00 ft Total Volume: 17.962 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663+0086

ATTN: Clayton Erickson

2-10s-23w Graham,KS

Griffith #2-1

Start Date: 2011.09.02 @ 16:54:05

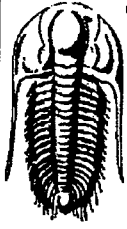
End Date: 2011.09.02 @ 23:20:39

Job Ticket #: 44244 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.
PO Box 86
Plainville, KS 67663+0086
ATTN: Clayton Erickson

Griffith #2-1
2-10s-23w Graham,KS
Job Ticket: 44244 **DST#: 4**
Test Start: 2011.09.02 @ 16:54:05

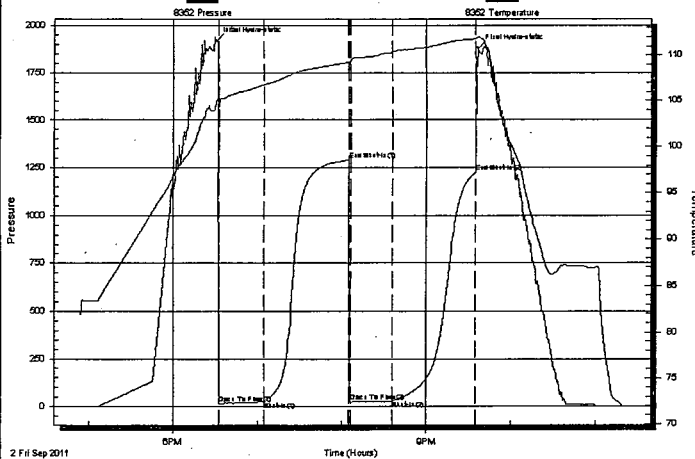
GENERAL INFORMATION:

Formation: **LKC"K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:32:30
Time Test Ended: 23:20:39
Interval: **3883.00 ft (KB) To 3895.00 ft (KB) (TVD)**
Total Depth: 3895.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Reference Elevations: 2421.00 ft (KB)
2416.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole
Tester: Andy Carreira
Unit No: 39

Serial #: 8352 Outside
Press@RunDepth: 28.95 psig @ 3884.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.09.02 End Date: 2011.09.02 Last Calib.: 2011.09.02
Start Time: 16:54:05 End Time: 23:20:40 Time On Btm: 2011.09.02 @ 18:30:50
Time Off Btm: 2011.09.02 @ 21:36:29

TEST COMMENT: IF:(30min) Weak, built to 1.5 inches
IS:(60min) No Return
FF:(30min) Weak, built to 1.5 inches
FS:(60min) No Return

Pressure vs. Time



PRESSURE SUMMARY

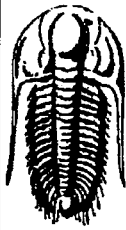
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1920.47	105.04	Initial Hydro-static
2	16.49	104.27	Open To Flow (1)
35	26.71	106.75	Shut-In(1)
95	1291.03	109.21	End Shut-In(1)
96	23.82	109.30	Open To Flow (2)
125	28.95	110.33	Shut-In(2)
184	1226.68	111.77	End Shut-In(2)
186	1881.49	112.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOOM g=5% o=25% n=70%	0.57
0.00	GIP= 120ft	0.00

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: Clayton Erickson

Griffith #2-1
2-10s-23w Graham,KS
Job Ticket: 44244 **DST#: 4**
Test Start: 2011.09.02 @ 16:54:05

Tool Information

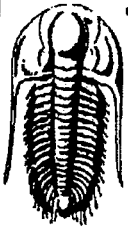
Drill Pipe:	Length: 3850.00 ft	Diameter: 3.80 inches	Volume: 54.01 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 54.16 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3883.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	40.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3856.00	
Shut In Tool	5.00			3861.00	
Hydraulic tool	5.00			3866.00	
Jars	5.00			3871.00	
Safety Joint	3.00			3874.00	
Packer	5.00			3879.00	28.00 Bottom Of Top Packer
Packer	4.00			3883.00	
Stubb	1.00			3884.00	
Recorder	0.00	8017	Inside	3884.00	
Recorder	0.00	8352	Outside	3884.00	
Perforations	8.00			3892.00	
Bullnose	3.00			3895.00	12.00 Bottom Packers & Anchor

Total Tool Length: 40.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.
PO Box 86
Plainville, KS 67663+0086
ATTN: Clayton Erickson

Griffith #2-1
2-10s-23w Graham, KS
Job Ticket: 44244 **DST#: 4**
Test Start: 2011.09.02 @ 16:54:05

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: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOCM g=5% o=25% m=70%	0.568
0.00	GIP= 120ft	0.000

Total Length: 60.00 ft Total Volume: 0.568 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

