

CONFIDENTIAL

ORIGINAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

8/12/12

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: Marc Downing
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
- Conv. to GSW
- Plug Back: Plug Back Total Depth
- Commingled Permit #:
- Dual Completion Permit #:
- SWD Permit #:
- ENHR Permit #:
- GSW Permit #:

7/23/2011 07/30/2011 07/30/2011
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 065-23695-00-00

Spot Description:

S2 SE NE NW Sec. 21 Twp. 6 S. R. 23 East West
1,100 Feet from North / South Line of Section
2,310 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: Graham

Lease Name: Rice Estate Well #: 21-1

Field Name: Wildcat

Producing Formation: none

Elevation: Ground: 2355 Kelly Bushing: 2360

Total Depth: 3840 Plug Back Total Depth:

Amount of Surface Pipe Set and Cemented at: 263 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 #: AUG 12 2012

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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: 8/11/11

KCC Office Use ONLY

- Letter of Confidentiality Received Date: 8/12/11 - 8/12/12
- Confidential Release Date: RECEIVED
- Wireline Log Received
- Geologist Report Received AUG 12 2011
- UIC Distribution
- ALT I II III Approved by: KCC WICHITA

Operator Name: H&C Oil Operating, Inc. Lease Name: Rice Estate Well #: 21-1
 Sec. 21 Twp. 6 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 log, Dual compensated porosity, borehole compensated sonic log	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Top</th> <th style="text-align: left;">Datum</th> </tr> </thead> <tbody> <tr> <td>Top Anhydrite</td> <td>2008</td> <td>+352</td> </tr> <tr> <td>Base Anhydrite</td> <td>2039</td> <td>+321</td> </tr> <tr> <td>Topeka</td> <td>3368</td> <td>-1008</td> </tr> <tr> <td>Heebner</td> <td>3565</td> <td>-1205</td> </tr> <tr> <td>Toronto</td> <td>3590</td> <td>-1230</td> </tr> <tr> <td>LKC</td> <td>3607</td> <td>-1247</td> </tr> <tr> <td>BKC</td> <td>3798</td> <td>-1438</td> </tr> </tbody> </table>	Name	Top	Datum	Top Anhydrite	2008	+352	Base Anhydrite	2039	+321	Topeka	3368	-1008	Heebner	3565	-1205	Toronto	3590	-1230	LKC	3607	-1247	BKC	3798	-1438
Name	Top	Datum																							
Top Anhydrite	2008	+352																							
Base Anhydrite	2039	+321																							
Topeka	3368	-1008																							
Heebner	3565	-1205																							
Toronto	3590	-1230																							
LKC	3607	-1247																							
BKC	3798	-1438																							

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	263	common	160	3%cc, 2%gel

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
		CONFIDENTIAL	
		AUG 12 2012	
		KCC	

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> 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 (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) (Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: RECEIVED _____ AUG 12 2011
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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. 5113

Date	7-27-11	Sec.	21	Twp.	6	Range	23	County	Graham	State	Ks	On Location		Finish	10:45 AM
Lease	Rice Estate			Well No.	21-1			Location	Hill City, Ks - 12N to CC Rd, 2w to 250th						
Contractor	American Eagle #3							Owner	IS, 1/2w, 5/5						
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.	263'			Charge To	H+C oil						
Csg.	8 5/8"			Depth	263'			Tbg. Size							
Tool								Street							
Cement Left in Csg.	15'			Shoe Joint	15'			City	State						
Meas Line				Displace	15 3/4 BLS			The above was done to satisfaction and supervision of owner agent or contractor.							
								Cement Amount Ordered	160 Common 3% U 2% Gel						

EQUIPMENT

Pumptrk	1	No.	Cementer	Cisco	Common	160
			Helper			
Bulktrk	14	No.	Driver	Matt	Poz. Mix	
			Driver			
Bulktrk	p.u.	No.	Driver	Rick	Gel.	3
			Driver			

JOB SERVICES & REMARKS

Remarks:	Cement did Circulate.	Calcium	5
Rat Hole		Hulls	
Mouse Hole		Salt	
Centralizers		Flowseal	
Baskets		Kol-Seal	
D/V or Port Collar		Mud CLR 48	
		CFL-117 or CD110 CAF 38	
		Sand	
		Handling	168
		Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge / Surface
Mileage 41

X Signature *Bradford Perkins*

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KCC WICHITA

QUALITY OILWELL CEMENTING, INC.

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

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

No. 5313

Date	7-30-11	Sec.	21	Twp.	6	Range	23	County	Graham	State	KS	On Location		Finish	5:00 A.M.
Lease	Rice Estate		Well No.	21-1		Location Hill 1/4 - 2/4 RD W to 2500' N to RR 2 3/4 W S into									
Contractor	American Eagle #3							Owner							
Type Job	Rotary Plug							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.		3840		Charge To		HAC						
Csg.			Depth				Street								
Tbg. Size			Depth				City		State						
Tool			Depth				Cement Left in Csg.		Shoe Joint						
Cement Left in Csg.			Shoe Joint				The above was done to satisfaction and supervision of owner agent or contractor.								
Meas Line			Displace				Cement Amount Ordered		205 60/40 40/40 40/40						

EQUIPMENT

Pumptrk	5	No.	Cementer	Chris	Helper		Common	123
Bulktrk		No.	Driver	Wade	Driver		Poz. Mix	P2
Bulktrk	10	No.	Driver	Jason	Driver		Gel.	7

JOB SERVICES & REMARKS

Remarks:	Hulls			
Rat Hole	30SK	Salt		
Mouse Hole		Flowseal	50#	
Centralizers		Kol-Seal		
Baskets		Mud CLR 48		
D/V or Port Collar		CFL-117 or CD110 CAF 38		
1st	2025	25SK	Sand	
2nd	1204	100SK	Handling	212
3rd	310	40SK	Mileage	
4th	40'	10SK		

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	3 5/8 Wooden Plug
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Plug
Mileage	41

X Signature	Broadhead Parker	Tax	
		Discount	
		Total Charge	

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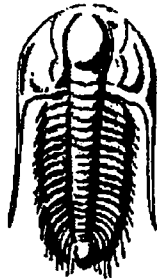
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

PO Box 89
Plainville, KS 67663

ATTN: Marc Downing

21-6s-23w Graham,KS

Rice Estate #21-1

Start Date: 2011.07.27 @ 12:48:00

End Date: 2011.07.27 @ 18:37:15

Job Ticket #: 43374 DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

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API# 15.065.23695.00.00

H&C Oil Operating Inc.

Rice Estate #21-1

21-6s-23w Graham,KS

DST # 1

Lans. "A"

2011.07.27



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

Rice Estate #21-1

PO Box 89
Plainville, KS 67663

21-6s-23w Graham,KS

ATTN: Marc Downing

Job Ticket: 43374

DST#: 1

Test Start: 2011.07.27 @ 12:48:00

GENERAL INFORMATION:

Formation: **Lans. "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:04:30

Time Test Ended: 18:37:15

Test Type: Conventional Bottom Hole

Tester: Kevin Mack

Unit No: 43

Interval: **3596.00 ft (KB) To 3618.00 ft (KB) (TVD)**

Reference Elevations: 2359.00 ft (KB)

Total Depth: 3618.00 ft (KB) (TVD)

2354.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6799

Inside

Press@RunDepth: 40.98 psig @ 3597.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.07.27

End Date: 2011.07.27

Last Calib.: 2011.07.27

Start Time: 12:48:05

End Time: 18:37:14

Time On Btm: 2011.07.27 @ 15:03:45

Time Off Btm: 2011.07.27 @ 17:11:30

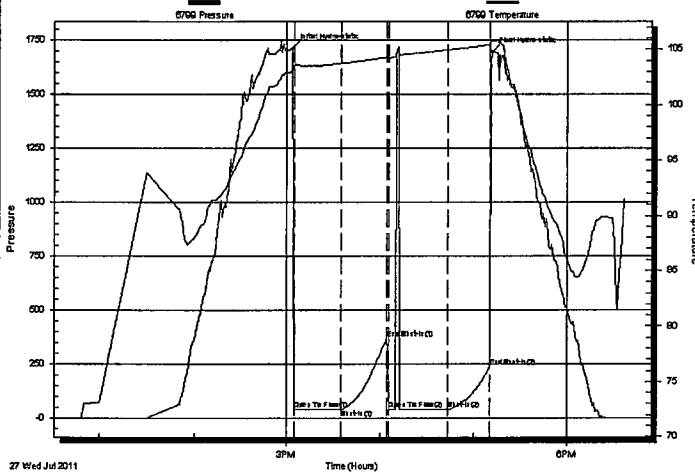
TEST COMMENT: IF: Blow died at 2 min

IS: No Return

FF: No Blow Flushed tool at 5 min. No Blow

FS: No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1710.56	103.13	Initial Hydro-static
1	41.68	103.58	Open To Flow (1)
31	42.55	103.75	Shut-In(1)
61	369.37	104.32	End Shut-In(1)
63	41.85	104.27	Open To Flow (2)
100	40.98	104.96	Shut-In(2)
127	236.94	105.41	End Shut-In(2)
128	1696.06	105.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
57.00	Mud 100M	0.80

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

Rice Estate #21-1

PO Box 89
Plainville, KS 67663

21-6s-23w Graham,KS

Job Ticket: 43374

DST#: 1

ATTN: Marc Downing

Test Start: 2011.07.27 @ 12:48:00

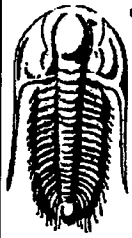
Tool Information

Drill Pipe:	Length: 3595.00 ft	Diameter: 3.80 inches	Volume: 50.43 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: 55000.00 lb
			<u>Total Volume: 50.43 bbl</u>	Tool Chased 20.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	3596.00 ft			Final 40000.00 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:
had to chase tool approx 20' to bottom

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3576.00	
Shut In Tool	5.00			3581.00	
Hydraulic tool	5.00			3586.00	
Packer	5.00			3591.00	21.00 Bottom Of Top Packer
Packer	5.00			3596.00	
Stubb	1.00			3597.00	
Recorder	0.00	8648	Inside	3597.00	
Recorder	0.00	6799	Inside	3597.00	
Perforations	16.00			3613.00	
Bullnose	5.00			3618.00	22.00 Bottom Packers & Anchor
Total Tool Length:	43.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

Rice Estate #21-1

PO Box 89
Plainville, KS 67663

21-6s-23w Graham,KS

Job Ticket: 43374

DST#: 1

ATTN: Marc Downing

Test Start: 2011.07.27 @ 12:48:00

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: 5.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
57.00	Mud 100M	0.800

Total Length: 57.00 ft

Total Volume: 0.800 bbl

Num Fluid Samples: 0

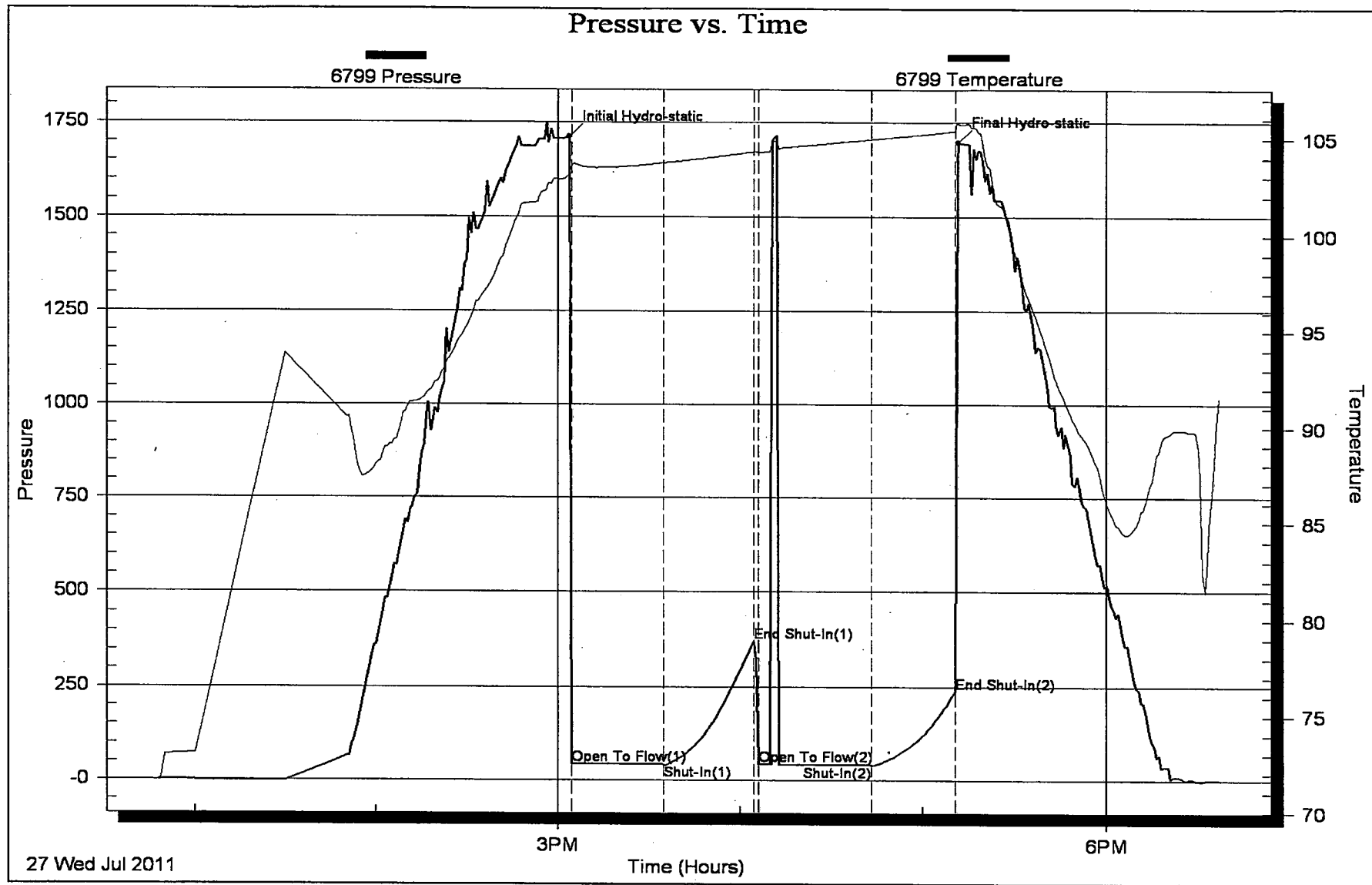
Num Gas Bombs: 0

Serial #:

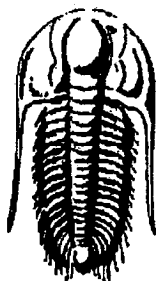
Laboratory Name:

Laboratory Location:

Recovery Comments:



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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

PO Box 89
Plainville, KS 67663

ATTN: Marc Downing

21-6s-23w Graham,KS

Rice Estate #21-1

Start Date: 2011.07.28 @ 10:37:00

End Date: 2011.07.28 @ 15:41:15

Job Ticket #: 43375 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.

Rice Estate #21-1

PO Box 89
Plainville, KS 67663

21-6s-23w Graham,KS

Job Ticket: 43375

DST#: 2

ATTN: Marc Downing

Test Start: 2011.07.28 @ 10:37:00

GENERAL INFORMATION:

Formation: **LKC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:33:15

Time Test Ended: 15:41:15

Test Type: Conventional Bottom Hole

Tester: Kevin Mack

Unit No: 43

Interval: **3705.00 ft (KB) To 3740.00 ft (KB) (TVD)**

Total Depth: 3740.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2359.00 ft (KB)

2354.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **6799**

Inside

Press@RunDepth: 17.71 psig @ 3706.00 ft (KB)

Start Date: 2011.07.28

End Date:

2011.07.28

Start Time: 10:37:05

End Time:

15:41:14

Capacity: 8000.00 psig

Last Calib.: 2011.07.28

Time On Btrr: 2011.07.28 @ 12:32:45

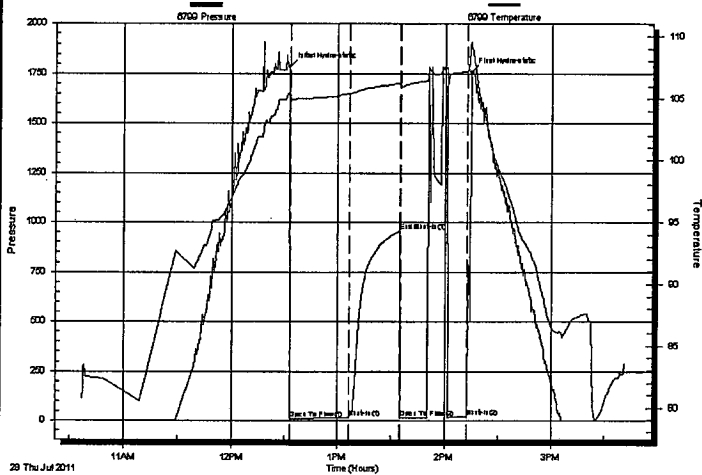
Time Off Btrr: 2011.07.28 @ 14:14:30

TEST COMMENT: IF: Surface Blow started at 5 min. Built to 1/8"

IS: No Return

FF: No Blow Flushed tool at 15 min. No Blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1785.42	105.39	Initial Hydro-static
1	10.04	104.92	Open To Flow (1)
34	17.71	105.41	Shut-In(1)
62	958.01	106.23	End Shut-In(1)
63	14.48	105.96	Open To Flow (2)
100	18.84	107.14	Shut-In(2)
102	1758.83	109.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	MUD 100M	0.21

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

Rice Estate #21-1

PO Box 89
Plainville, KS 67663

21-6s-23w Graham,KS

Job Ticket: 43375

DST#: 2

ATTN: Marc Downing

Test Start: 2011.07.28 @ 10:37:00

Tool Information

Drill Pipe:	Length: 3691.00 ft	Diameter: 3.80 inches	Volume: 51.78 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: 120000.0 lb
			Total Volume: 51.78 bbl	Tool Chased ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3705.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3685.00	
Shut In Tool	5.00			3690.00	
Hydraulic tool	5.00			3695.00	
Packer	5.00			3700.00	21.00 Bottom Of Top Packer
Packer	5.00			3705.00	
Stubb	1.00			3706.00	
Recorder	0.00	8648	Inside	3706.00	
Recorder	0.00	6799	Inside	3706.00	
Perforations	29.00			3735.00	
Bullnose	5.00			3740.00	35.00 Bottom Packers & Anchor
Total Tool Length:	56.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

Rice Estate #21-1

PO Box 89
Plainville, KS 67663

21-6s-23w Graham,KS

Job Ticket: 43375

DST#: 2

ATTN: Marc Downing

Test Start: 2011.07.28 @ 10:37:00

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: 55.00 sec/qt

Cushion Volume: bbl

Water Loss: 5.39 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	MJD 100M	0.210

Total Length: 15.00ft Total Volume: 0.210 bbl

Num Fluid Samples: 0

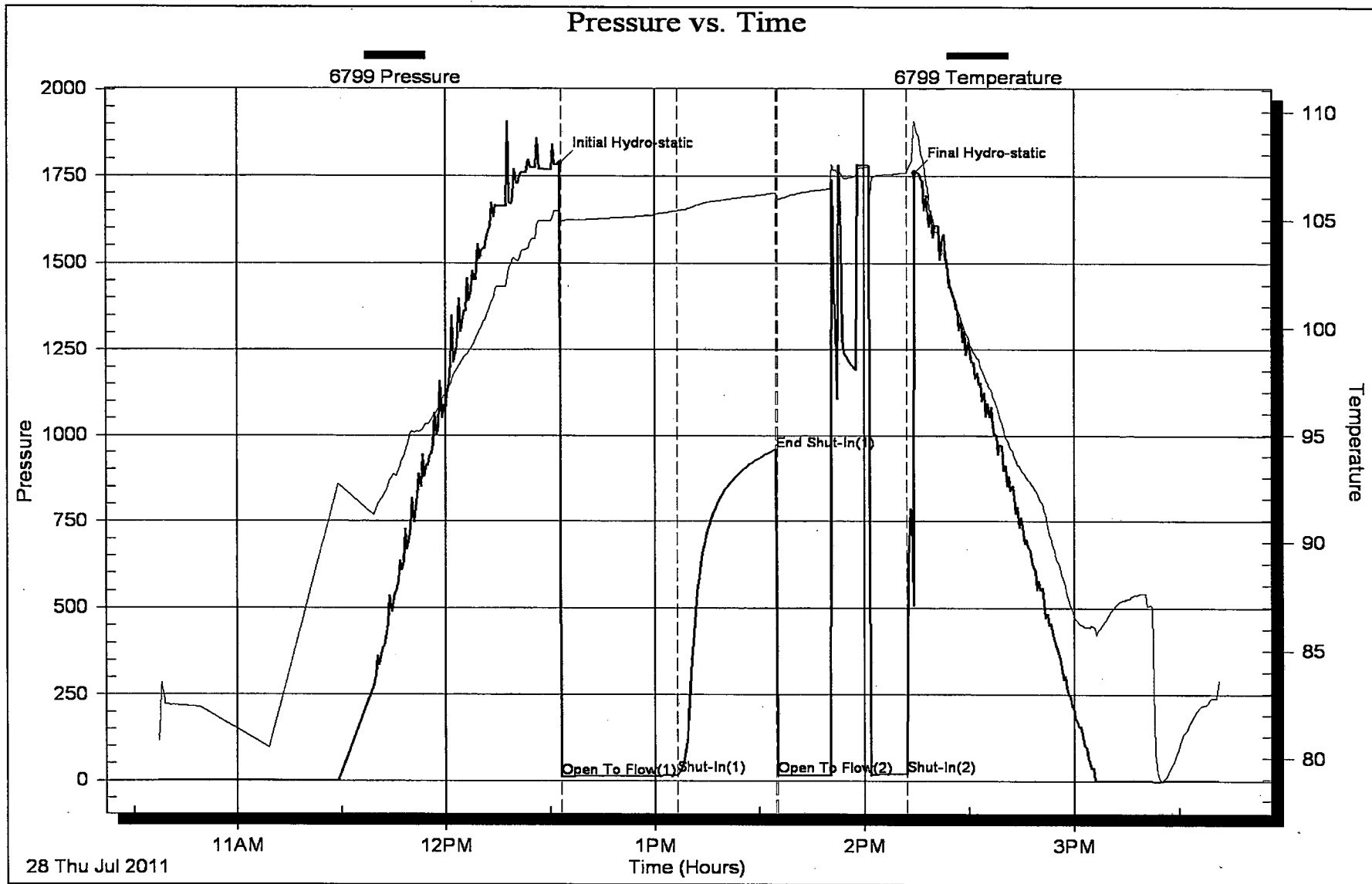
Num Gas Bombs: 0

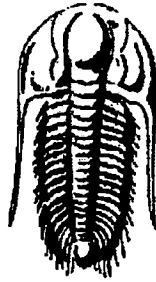
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

PO Box 89
Plainville, KS 67663

ATTN: Marc Downing

21-6s-23w Graham,KS

Rice Estate #21-1

Start Date: 2011.07.28 @ 22:12:00

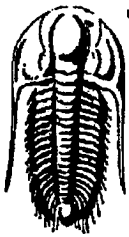
End Date: 2011.07.29 @ 04:48:30

Job Ticket #: 43751 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.

Rice Estate #21-1

PO Box 89
Plainville, KS 67663

21-6s-23w Graham, KS

ATTN: Marc Downing

Job Ticket: 43751

DST#: 3

Test Start: 2011.07.28 @ 22:12:00

GENERAL INFORMATION:

Formation: **LKC "J":**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:14:00
 Time Test Ended: 04:48:30

Test Type: Conventional Bottom Hole
 Tester: Kevin Mack
 Unit No: 43

Interval: **3734.00 ft (KB) To 3764.00 ft (KB) (TVD)**
 Total Depth: 3764.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2359.00 ft (KB)
 2354.00 ft (CF)
 KB to GR/CF: 5.00 ft

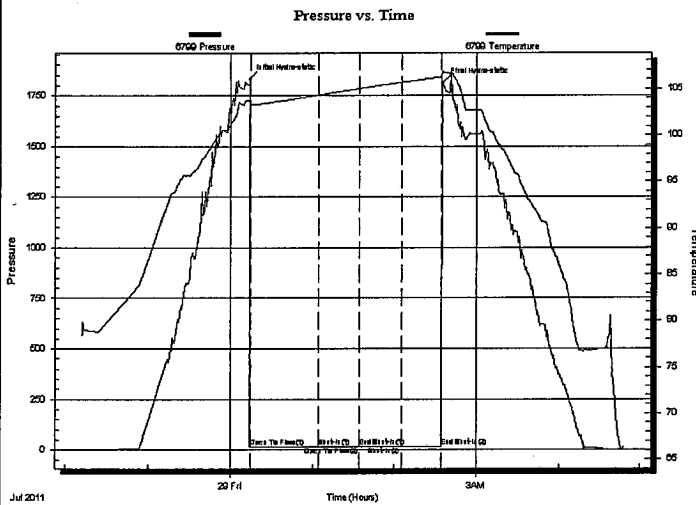
Serial #: 6799

Inside

Press@RunDepth: 13.82 psig @ 3735.00 ft (KB)
 Start Date: 2011.07.28 End Date: 2011.07.29
 Start Time: 22:12:05 End Time: 04:48:29

Capacity: 8000.00 psig
 Last Calib.: 2011.07.29
 Time On Btmr: 2011.07.29 @ 00:13:45
 Time Off Btmr: 2011.07.29 @ 02:35:15

TEST COMMENT: IF: Surface blow built to 1/8"
 IS: No Return
 FF: No Blow
 FS: No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1834.33	103.66	Initial Hydro-static
1	14.03	103.20	Open To Flow (1)
51	14.51	104.31	Shut-In(1)
81	14.19	104.99	End Shut-In(1)
81	14.20	105.00	Open To Flow (2)
112	13.82	105.65	Shut-In(2)
141	14.24	106.22	End Shut-In(2)
142	1814.42	106.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

Rice Estate #21-1

PO Box 89
Plainville, KS 67663

21-6s-23w Graham, KS

Job Ticket: 43751

DST#: 3

ATTN: Marc Downing

Test Start: 2011.07.28 @ 22:12:00

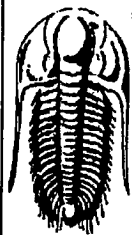
Tool Information

Drill Pipe:	Length: 3720.00 ft	Diameter: 3.80 inches	Volume: 52.18 bbl	Tool Weight: 2500.00 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: 48000.00 lb
			<u>Total Volume: 52.18 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3734.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	59.00 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			3706.00	
Shut In Tool	5.00			3711.00	
Hydraulic tool	5.00			3716.00	
Jars	5.00			3721.00	
Safety Joint	3.00			3724.00	
Packer	5.00			3729.00	29.00 Bottom Of Top Packer
Packer	5.00			3734.00	
Stubb	1.00			3735.00	
Recorder	0.00	8648	Inside	3735.00	
Recorder	0.00	6799	Inside	3735.00	
Perforations	24.00			3759.00	
Bullnose	5.00			3764.00	30.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

Rice Estate #21-1

PO Box 89
Plainville, KS 67663

21-6s-23w Graham, KS

Job Ticket: 43751

DST#: 3

ATTN: Marc Downing

Test Start: 2011.07.28 @ 22:12:00

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: 55.00 sec/qt

Cushion Volume: bbl

Water Loss: 5.39 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100M	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:

