

**CONFIDENTIAL**

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

**ORIGINAL**

10/11/12

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: none

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 #: \_\_\_\_\_

<u>09/16/2011</u>	<u>09/23/2011</u>	<u>09/24/2011</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 065-23748-00-00  
Spot Description: \_\_\_\_\_  
N2 SW SE NE Sec. 33 Twp. 7 S. R. 24  East  West  
2,010 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: J&R Goddard Well #: 33-1  
Field Name: Wildcat  
Producing Formation: none  
Elevation: Ground: 2368 Kelly Bushing: 2373  
Total Depth: 3897 Plug Back Total Depth: \_\_\_\_\_  
Amount of Surface Pipe Set and Cemented at: 275 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 #: \_\_\_\_\_

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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: 10/11/2011

**KCC Office Use ONLY**

- Letter of Confidentiality Received  
Date: 10/11/11 - 10/11/12
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: MS Date: 10/18/11

Operator Name: H&C Oil Operating, Inc. Lease Name: J&R Goddard Well #: 33-1  
 Sec. 33 Twp. 7 S. R. 24  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: Microresistivity log, Dual induction, Dual compensated porosity log, borehole compensated sonic log,	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:60%;">Name</th> <th style="width:20%;">Top</th> <th style="width:20%;">Datum</th> </tr> </thead> <tbody> <tr> <td>Top Anhydrite</td> <td>2034</td> <td>+339</td> </tr> <tr> <td>Base Anhydrite</td> <td>2065</td> <td>+308</td> </tr> <tr> <td>Topeka</td> <td>3404</td> <td>-1031</td> </tr> <tr> <td>Heebner</td> <td>3610</td> <td>-1237</td> </tr> <tr> <td>Toronto</td> <td>3636</td> <td>-1263</td> </tr> <tr> <td>LKC</td> <td>3654</td> <td>-1281</td> </tr> <tr> <td>BKC</td> <td>3854</td> <td>-1481</td> </tr> </tbody> </table>	Name	Top	Datum	Top Anhydrite	2034	+339	Base Anhydrite	2065	+308	Topeka	3404	-1031	Heebner	3610	-1237	Toronto	3636	-1263	LKC	3654	-1281	BKC	3854	-1481
Name	Top	Datum																							
Top Anhydrite	2034	+339																							
Base Anhydrite	2065	+308																							
Topeka	3404	-1031																							
Heebner	3610	-1237																							
Toronto	3636	-1263																							
LKC	3654	-1281																							
BKC	3854	-1481																							

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	275	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

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) _____	CONFIDENTIAL PRODUCTION INTERVAL: OCT 11 2012  <b>KCC</b>
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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. 5161

Date	9-16-11	Sec.	33	Twp.	7	Range	24	County	Graham	State	Ks	On Location		Finish	11:30 PM
Lease	S+R Goddard			Well No.	33-1			Location Pennoke, Ks - 2w to 190 Rd, 3N							
Contractor	American Eagle #3				Owner	1/4 W, 3/4 into									
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.	278'		Charge To	H+C oil								
Csg.	8 7/8"		Depth	278'		Street									
Tbg. Size			Depth			City	State								
Tool			Depth			The above was done to satisfaction and supervision of owner agent or contractor.									
Cement Left in Csg.	15'		Shoe Joint	15'		Cement Amount Ordered 160 sx Common 3% Ce									
Meas Line			Displace	16 3/4 Bl											

**EQUIPMENT**

Pumptrk	1	No.	Cementer	Cisco		27% Gel
			Helper			Common 160
Bulktrk	14	No.	Driver	Dony		Poz. Mix
			Driver			
Bulktrk	p.u.	No.	Driver	Rick		Gel. 3
			Driver			Calcium 5

**JOB SERVICES & REMARKS**

Remarks:	S+R Goddard #33-1					Hulls	5
Rat Hole						Salt	
Mouse Hole						Flowseal	
Centralizers						Kol-Seal	
Baskets						Mud CLR 48	
D/V or Port Collar						CFL-117 or CD110 CAF 38	
						Sand	
	Cement did Circulate.					Handling	168
						Mileage	

**FLOAT EQUIPMENT**

	Guide Shoe	
	Centralizer	
	Baskets	
	AFU Inserts	
	Float Shoe	
	Latch Down	
	Pumptrk Charge	Surface
	Mileage	26

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X Signature *Bradford Rich*

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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. 5342

Date	9-24-11	Sec.	33	Twp.	7	Range	24	County	Carroll	State	KS	On Location		Finish	5:30 p.m.
Lease	J. K. Caldwell			Well No.	331			Location	Penokee 2W 3N						
Contractor	American Equip #3							Owner	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.						
Type Job	Perry Plug							Charge To	H+C						
Hole Size	7 7/8			T.D.	3897			Depth							
Csg.				Tbg. Size				Depth							
Tool				Tool				Depth							
Cement Left in Csg.				Shoe Joint				Street							
Meas Line				Displace				City				State			
								The above was done to satisfaction and supervision of owner agent or contractor.							
								Cement Amount Ordered 205 60% 40% 1/4" H <sub>2</sub> O							

### EQUIPMENT

Pumptrk	5	No.	Cement Helper	Common	123
Bulktrk		No.	Driver	Poz. Mix	82
Bulktrk	14	No.	Driver Brian	Gel.	7

### JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	3.5" SIC
Mouse Hole	Flowseal 50 #
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
1st	2055 255K
2nd	1220 1005K
3rd	325 405K
4th	40' 105K
	Sand
	Handling 212
	Mileage

### FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	8 5/8 wooden Plug
AFU Inserts	
Float Shoe	
Latch Down	

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Pumptrk Charge

Mileage

26 Plug

Discount

Total Charge

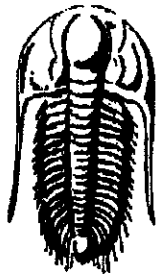
X Signature

Burdgerd Ruler

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OCT 11 2012

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**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville, KS 67663

ATTN: Marc Downing

**J&R Goddard #33-1**

**33-7s-24w Graham,KS**

Start Date: 2011.09.20 @ 21:02:00

End Date: 2011.09.21 @ 03:56:30

Job Ticket #: 43057                      DST #: 1

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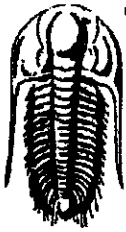
Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

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OCT 11 2012  
Printed: 2011.09.28 @ 14:20:24

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H&C Oil Operating Inc. 33-7s-24w Graham,KS J&R Goddard #33-1 DST # 1 LKC "C" 2011.09.20



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

H&C Oil Operating Inc.

PO Box 86  
Plainville, KS 67663

ATTN: Marc Downing

**33-7s-24w Graham,KS**

**J&R Goddard #33-1**

Job Ticket: 43057

**DST#: 1**

Test Start: 2011.09.20 @ 21:02:00

### GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:59:00

Time Test Ended: 03:56:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: **3668.00 ft (KB) To 3690.00 ft (KB) (TVD)**

Total Depth: 3690.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2373.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6799**

Inside

Press@RunDepth: 76.76 psig @ 3669.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.09.20

End Date: 2011.09.21

Last Calib.: 2011.09.21

Start Time: 21:02:05

End Time: 03:56:29

Time On Btm: 2011.09.20 @ 22:58:15

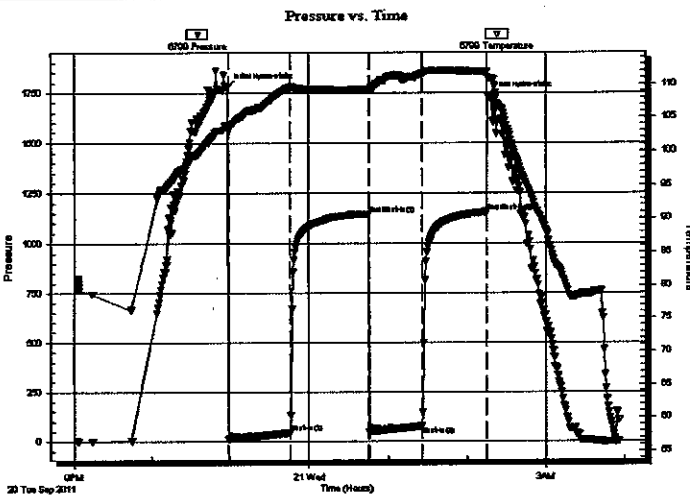
Time Off Btm: 2011.09.21 @ 02:15:30

TEST COMMENT: IF- Surface blow built to 7 1/2"

IS- No Return

FF- Surface blow started at 5 min. Built to 5"

FS- No Return



### PRESSURE SUMMARY

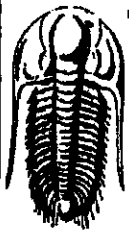
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1780.07	103.87	Initial Hydro-static
1	11.08	103.02	Open To Flow (1)
48	44.71	109.51	Shut-In(1)
107	1146.68	109.19	End Shut-In(1)
108	47.90	109.20	Open To Flow (2)
148	76.76	111.56	Shut-In(2)
197	1157.52	111.78	End Shut-In(2)
198	1734.65	110.94	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud (heavy) 100M	0.07
130.00	MV30M70W	1.82

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc.

**33-7s-24w Graham,KS**

PO Box 86  
Plainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43057

**DST#: 1**

ATTN: Marc Downing

Test Start: 2011.09.20 @ 21:02:00

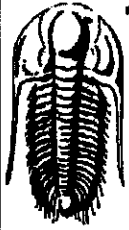
### Tool Information

Drill Pipe:	Length: 3652.00 ft	Diameter: 3.80 inches	Volume: 51.23 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: 50000.00 lb
			<u>Total Volume: 51.23 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3668.00 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:				

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3648.00	
Shut In Tool	5.00			3653.00	
Hydraulic tool	5.00			3658.00	
Packer	5.00			3663.00	21.00 Bottom Of Top Packer
Packer	5.00			3668.00	
Stubb	1.00			3669.00	
Recorder	0.00	8648	Inside	3669.00	
Recorder	0.00	6799	Inside	3669.00	
Perforations	16.00			3685.00	
Bullnose	5.00			3690.00	22.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>43.00</b>				

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TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc.

**33-7s-24w Graham, KS**

PO Box 86  
Rainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43057

**DST#: 1**

ATTN: Marc Downing

Test Start: 2011.09.20 @ 21:02:00

### 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:

18000 ppm

Viscosity: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud (heavy) 100M	0.070
130.00	MW30M70W	1.824

Total Length: 135.00 ft

Total Volume: 1.894 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

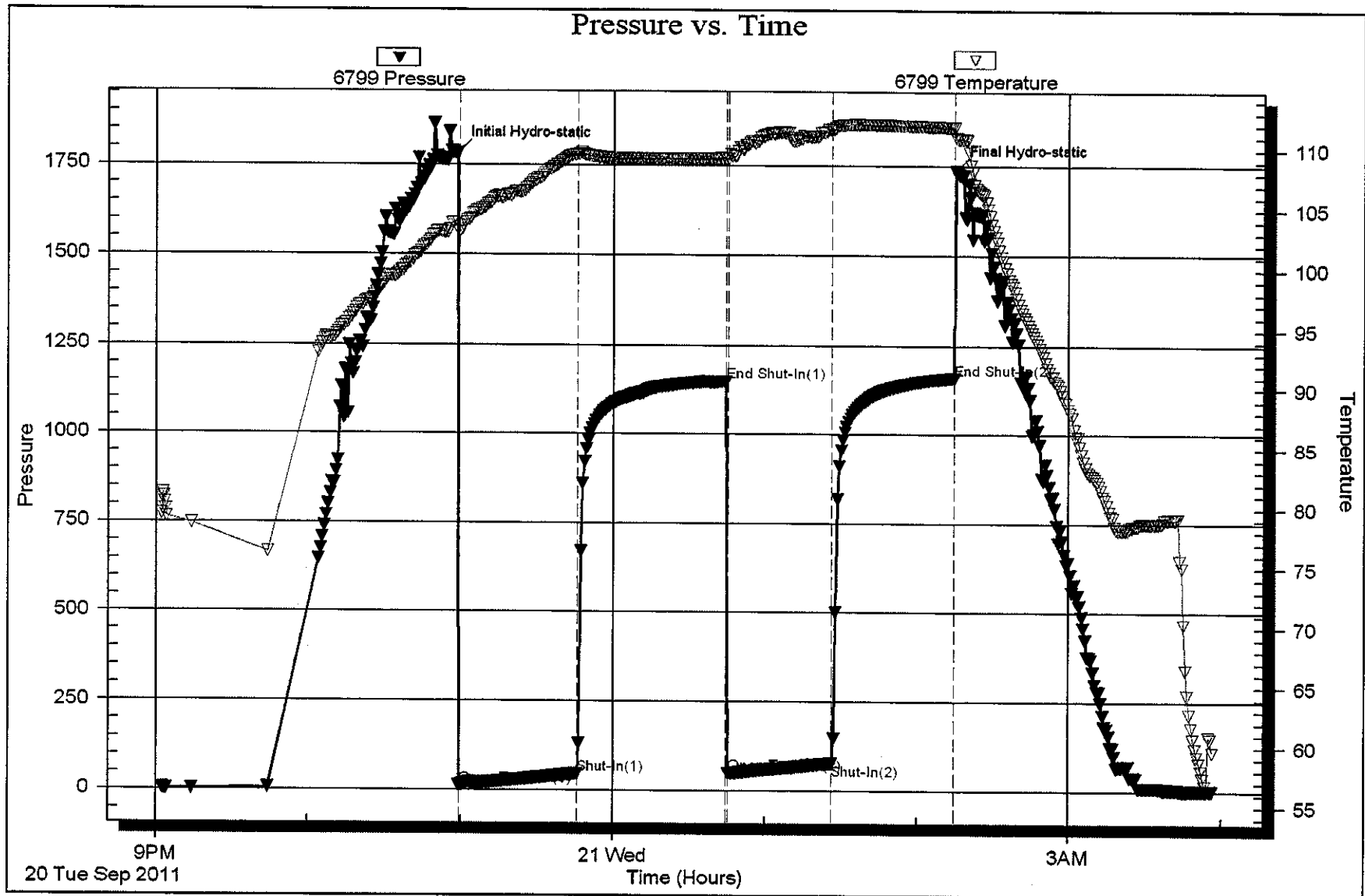
Serial #:

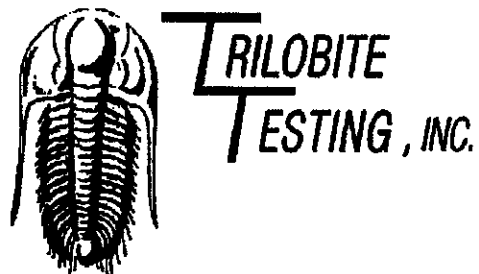
Laboratory Name:

Laboratory Location:

Recovery Comments: RW .38 @ 69 deg. = 18000ppm







## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville, KS 67663

ATTN: Marc Downing

**J&R Goddard #33-1**

**33-7s-24w Graham,KS**

Start Date: 2011.09.21 @ 10:10:00

End Date: 2011.09.21 @ 15:11:00

Job Ticket #: 43058                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.09.28 @ 14:20:50

H&C Oil Operating Inc.

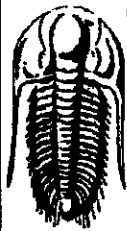
33-7s-24w Graham,KS

J&R Goddard #33-1

DST # 2

LKC "D"

2011.09.21



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

H&C Oil Operating Inc.

PO Box 86  
Plainville, KS 67663

ATTN: Marc Downing

**33-7s-24w Graham,KS**

**J&R Goddard #33-1**

Job Ticket: 43058      DST#: 2

Test Start: 2011.09.21 @ 10:10:00

### GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No      Whipstock:      ft (KB)

Time Tool Opened: 11:43:45

Time Test Ended: 15:11:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: **3688.00 ft (KB) To 3709.00 ft (KB) (TVD)**

Total Depth: 3709.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches      Hole Condition: Good

Reference Elevations: 2373.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6799**

**Inside**

Press@RunDepth: 12.33 psig @ 3689.00 ft (KB)

Start Date: 2011.09.21

End Date: 2011.09.21

Start Time: 10:10:05

End Time: 15:10:59

Capacity: 8000.00 psig

Last Calib.: 2011.09.21

Time On Btm: 2011.09.21 @ 11:43:30

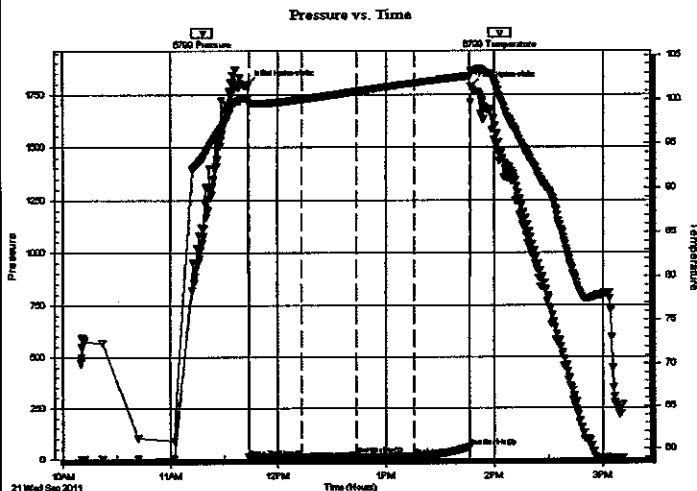
Time Off Btm: 2011.09.21 @ 13:47:00

TEST COMMENT: IF- Surface blow built to 1/4"

IS- No Return

FF- No Blow

FS- No Return



### PRESSURE SUMMARY

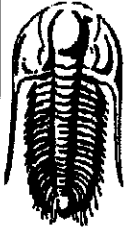
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1800.23	100.11	Initial Hydro-static
1	10.74	99.60	Open To Flow (1)
30	11.85	100.00	Shut-In(1)
60	23.21	100.92	End Shut-In(1)
61	13.67	100.92	Open To Flow (2)
92	12.33	101.86	Shut-In(2)
123	58.35	102.64	End Shut-In(2)
124	1790.95	103.28	Final Hydro-static

### 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.

**33-7s-24w Graham,KS**

PO Box 86  
Plainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43058

**DST#: 2**

ATTN: Marc Downing

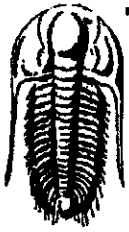
Test Start: 2011.09.21 @ 10:10:00

**Tool Information**

Drill Pipe:	Length: 3687.00 ft	Diameter: 3.80 inches	Volume: 51.72 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 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: 50000.00 lb
		Total Volume: 51.72 bbl		Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3688.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	42.00 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			3668.00	
Shut In Tool	5.00			3673.00	
Hydraulic tool	5.00			3678.00	
Packer	5.00			3683.00	21.00 Bottom Of Top Packer
Packer	5.00			3688.00	
Stubb	1.00			3689.00	
Recorder	0.00	8648	Inside	3689.00	
Recorder	0.00	6799	Inside	3689.00	
Perforations	15.00			3704.00	
Bullnose	5.00			3709.00	21.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>42.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

H&C Oil Operating Inc.

**33-7s-24w Graham,KS**

PO Box 86  
Plainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43058

**DST#: 2**

ATTN: Marc Downing

Test Start: 2011.09.21 @ 10:10:00

**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:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 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

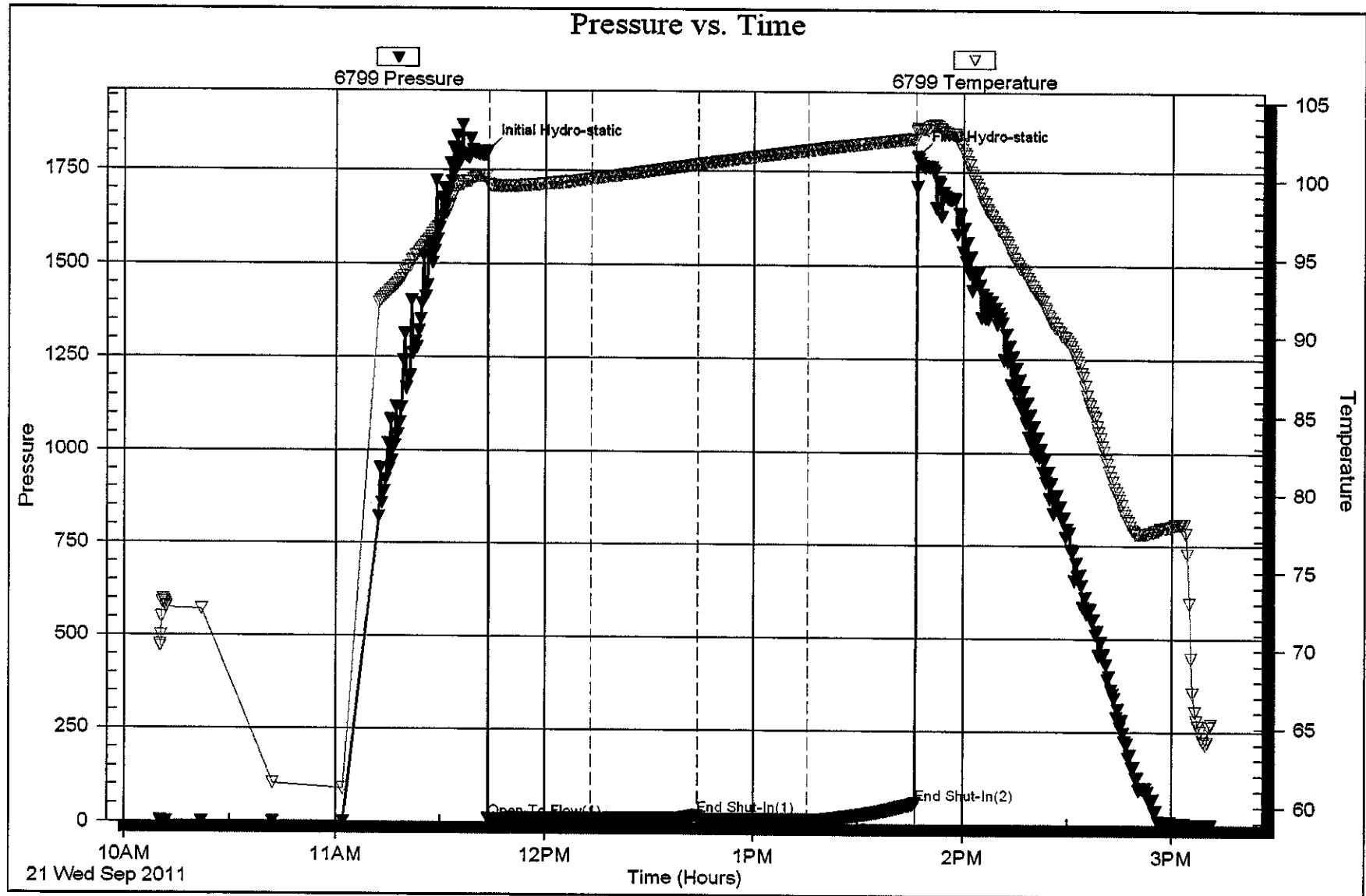
Num Gas Bombs: 0

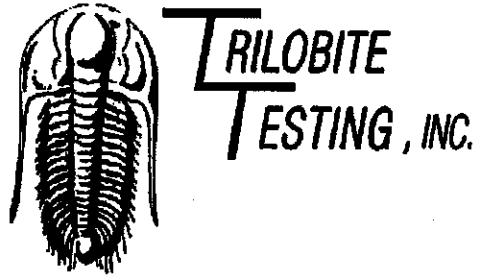
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville, KS 67663

ATTN: Marc Downing

**J&R Goddard #33-1**

**33-7s-24w Graham,KS**

Start Date: 2011.09.21 @ 21:25:00

End Date: 2011.09.22 @ 04:36:15

Job Ticket #: 43059                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.09.28 @ 14:21:08

H&C Oil Operating Inc.

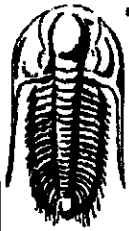
33-7s-24w Graham,KS

J&R Goddard #33-1

DST # 3

LKC "F"

2011.09.21



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

H&C Oil Operating Inc.

PO Box 86  
Plainville, KS 67663

ATTN: Marc Downing

**33-7s-24w Graham,KS**

**J&R Goddard #33-1**

Job Ticket: 43059

**DST#: 3**

Test Start: 2011.09.21 @ 21:25:00

### GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 23:17:45

Time Test Ended: 04:36:15

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Kevin Mack**

Unit No: **43**

Interval: **3707.00 ft (KB) To 3726.00 ft (KB) (TVD)**

Total Depth: **3726.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2373.00 ft (KB)**

**2368.00 ft (CF)**

KB to GR/CF: **5.00 ft**

**Serial #: 6799**

**Inside**

Press@RunDepth: **1055.93 psig @ 3708.00 ft (KB)**

Start Date: **2011.09.21**

End Date: **2011.09.22**

Capacity: **8000.00 psig**

Last Calib.: **2011.09.22**

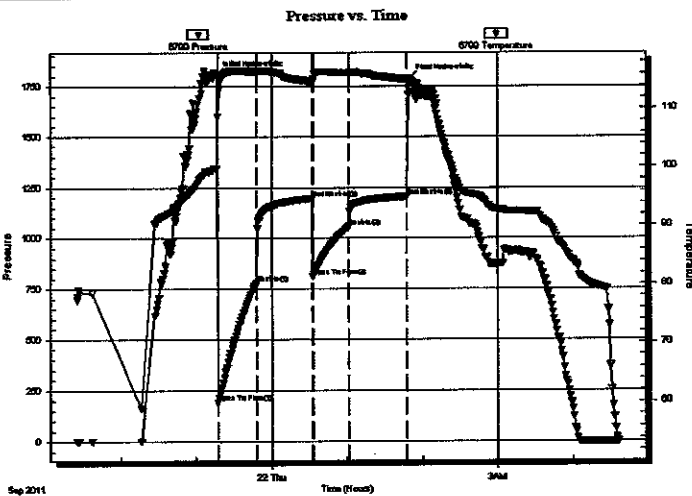
Start Time: **21:25:05**

End Time: **04:36:14**

Time On Btm: **2011.09.21 @ 23:16:45**

Time Off Btm: **2011.09.22 @ 01:49:30**

TEST COMMENT: IF- BoB in 1 min.  
IS- No Return  
FF- BoB in 1 1/2 min.  
FS- No Return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1808.73	99.67	Initial Hydro-static
1	192.24	108.54	Open To Flow (1)
31	778.18	116.31	Shut-In(1)
75	1195.93	114.73	End Shut-In(1)
76	813.07	115.17	Open To Flow (2)
105	1055.93	116.10	Shut-In(2)
151	1205.17	114.89	End Shut-In(2)
153	1787.36	114.78	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
1778.00	MV 90W 10M	24.94
372.00	VM 30W 70M	5.22

### Gas Rates

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





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc.

**33-7s-24w Graham, KS**

PO Box 86  
Plainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43059

**DST#: 3**

ATTN: Marc Downing

Test Start: 2011.09.21 @ 21:25:00

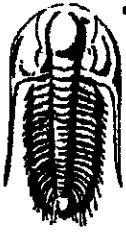
### Tool Information

Drill Pipe:	Length: 3718.00 ft	Diameter: 3.80 inches	Volume: 52.15 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: 52000.00 lb
			<u>Total Volume: 52.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3707.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 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			3687.00	
Shut In Tool	5.00			3692.00	
Hydraulic tool	5.00			3697.00	
Packer	5.00			3702.00	21.00 Bottom Of Top Packer
Packer	5.00			3707.00	
Stubb	1.00			3708.00	
Recorder	0.00	8648	Inside	3708.00	
Recorder	0.00	6799	Inside	3708.00	
Perforations	13.00			3721.00	
Bullnose	5.00			3726.00	19.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>40.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

H&C Oil Operating Inc.

**33-7s-24w Graham,KS**

PO Box 86  
Rainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43059

**DST#: 3**

ATTN: Marc Downing

Test Start: 2011.09.21 @ 21:25:00

**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:

27000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
1778.00	MW 90W 10M	24.941
372.00	VM 30W 70M	5.218

Total Length: 2150.00 ft      Total Volume: 30.159 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

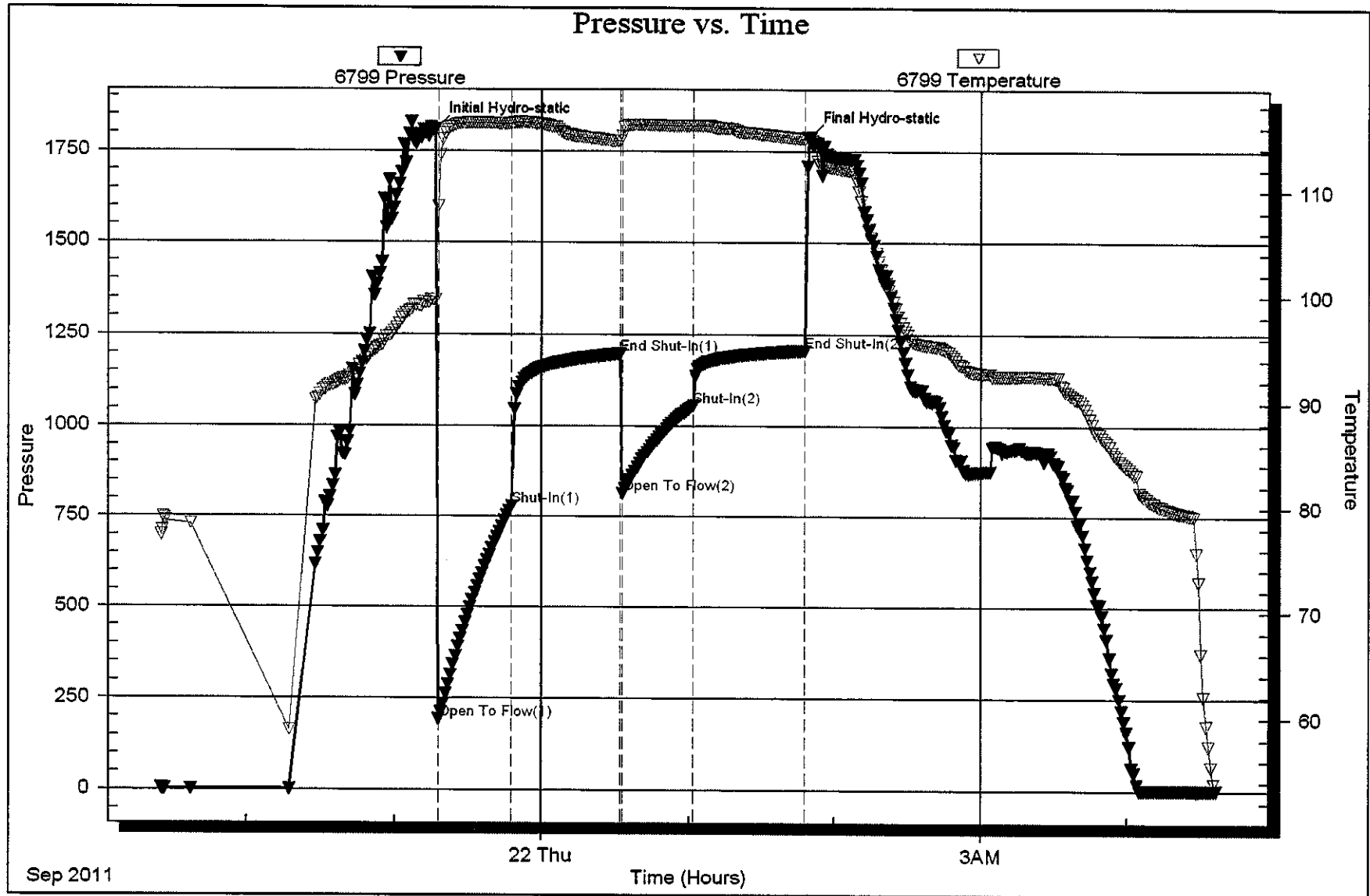
Serial #:

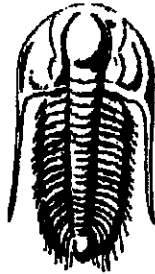
Laboratory Name:

Laboratory Location:

Recovery Comments: RW .29 @ 61 Deg. = 27000 ppm

Dumped 6 stands of fluid then dropped bar.





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville, KS 67663

ATTN: Marc Downing

**J&R Goddard #33-1**

**33-7s-24w Graham,KS**

Start Date: 2011.09.22 @ 13:21:00

End Date: 2011.09.22 @ 19:34:45

Job Ticket #: 43060                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.09.28 @ 14:21:27

H&C Oil Operating Inc.

33-7s-24w Graham,KS

J&R Goddard #33-1

DST # 4

LKC "H"

2011.09.22



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

H&C Oil Operating Inc.

PO Box 86  
Plainville, KS 67663

ATTN: Marc Downing

**33-7s-24w Graham,KS**

**J&R Goddard #33-1**

Job Ticket: 43060      DST#: 4

Test Start: 2011.09.22 @ 13:21:00

### GENERAL INFORMATION:

Formation: **LKC "H"**

Deviated: **No** Whipstock:      ft (KB)

Time Tool Opened: 15:09:00

Time Test Ended: 19:34:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: **3754.00 ft (KB) To 3785.00 ft (KB) (TVD)**

Total Depth: 3785.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2373.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6799**

**Inside**

Press@RunDepth: 202.73 psig @ 3755.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.09.22      End Date: 2011.09.22

Last Calib.: 2011.09.22

Start Time: 13:21:05      End Time: 19:34:44

Time On Btm: 2011.09.22 @ 15:08:30

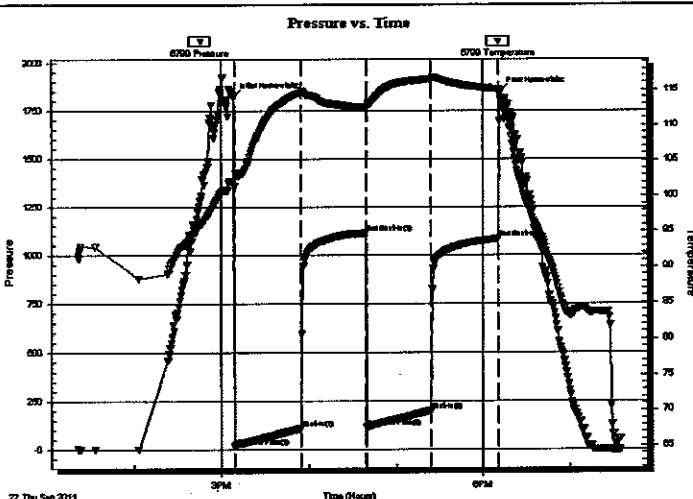
Time Off Btm: 2011.09.22 @ 18:11:30

TEST COMMENT: IF- BoB in 21 min.

IS- No Return

FF- BoB in min.

FS- No Return



### PRESSURE SUMMARY

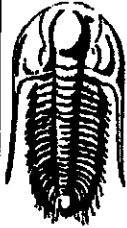
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1825.12	102.04	Initial Hydro-static
1	17.69	101.40	Open To Flow (1)
47	111.39	114.62	Shut-In(1)
91	1113.70	112.41	End Shut-In(1)
92	117.52	112.66	Open To Flow (2)
136	202.73	116.49	Shut-In(2)
182	1084.56	115.03	End Shut-In(2)
183	1848.18	114.49	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud (heavy) 100M	0.07
119.00	MV 5M 95W	1.67
320.00	MV 30M 70W	4.49

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

H&C Oil Operating Inc.

**33-7s-24w Graham,KS**

PO Box 86  
Plainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43060

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.09.22 @ 13:21:00

**Tool Information**

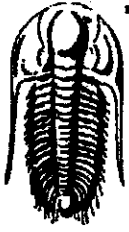
Drill Pipe:	Length: 3746.00 ft	Diameter: 3.80 inches	Volume: 52.55 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 52.55 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3754.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

**Tool Description**

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

Change Over Sub	1.00			3734.00	
Shut In Tool	5.00			3739.00	
Hydraulic tool	5.00			3744.00	
Packer	5.00			3749.00	21.00 Bottom Of Top Packer
Packer	5.00			3754.00	
Stubb	1.00			3755.00	
Recorder	0.00	8648	Inside	3755.00	
Recorder	0.00	6799	Inside	3755.00	
Perforations	25.00			3780.00	
Bullnose	5.00			3785.00	31.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>52.00</b>				



**TRIOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc.

**33-7s-24w Graham, KS**

PO Box 86  
Plainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43060

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.09.22 @ 13:21:00

### 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:

30000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
5.00	Mud (heavy) 100M	0.070
119.00	MW 5M 95W	1.669
320.00	MW 30M 70W	4.489

Total Length: 444.00 ft      Total Volume: 6.228 bbl

Num Fluid Samples: 0

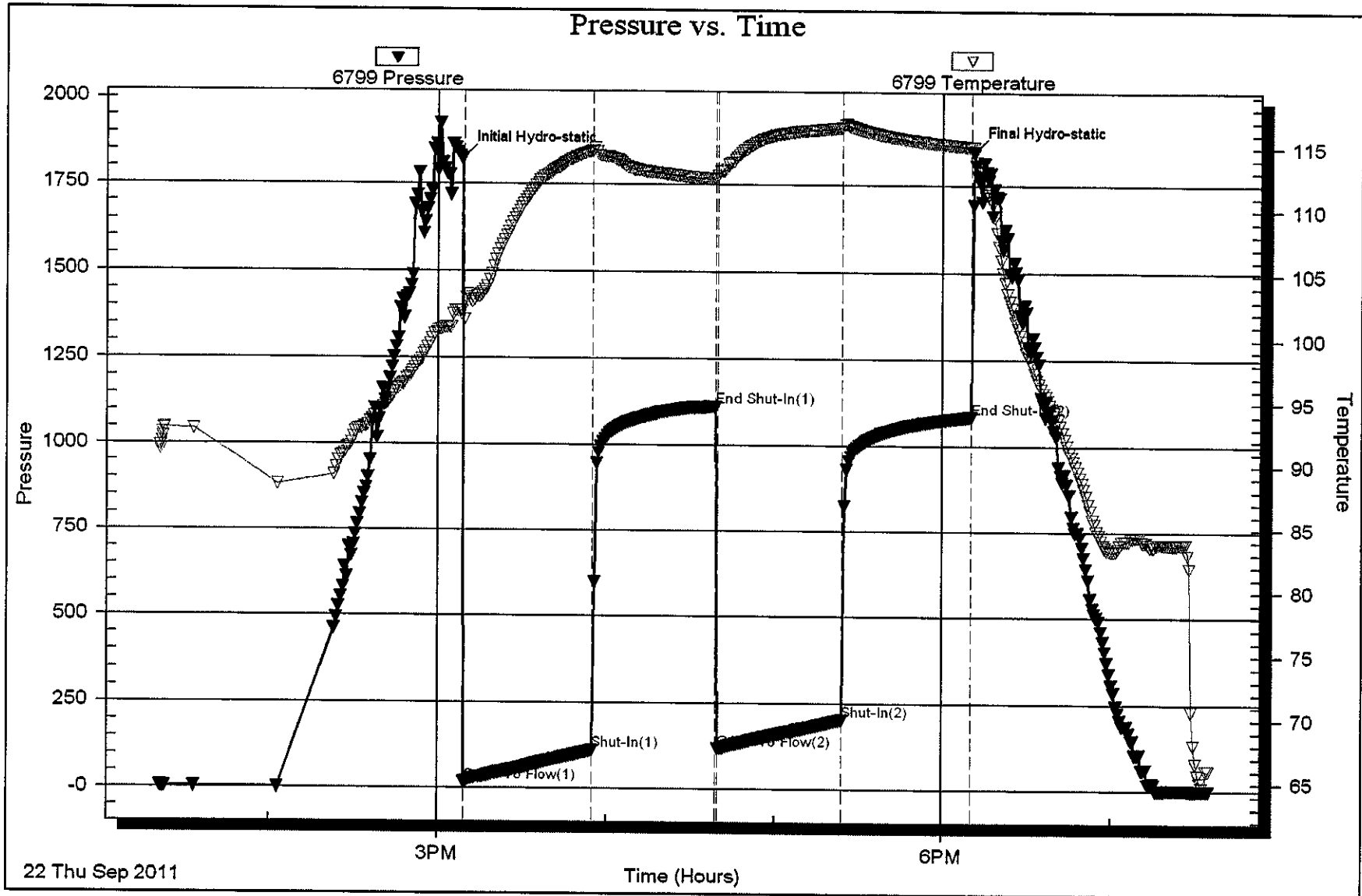
Num Gas Bombs: 0

Serial #:

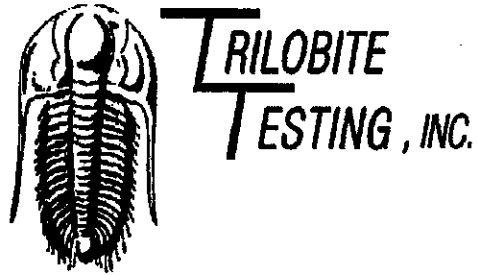
Laboratory Name:

Laboratory Location:

Recovery Comments: TW .21 @ 79 deg = 30000ppm







## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville, KS 67663

ATTN: Marc Downing

**J&R Goddard #33-1**

**33-7s-24w Graham,KS**

Start Date: 2011.09.23 @ 02:33:00

End Date: 2011.09.23 @ 08:16:30

Job Ticket #: 43061                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.09.28 @ 14:21:47

H&C Oil Operating Inc.

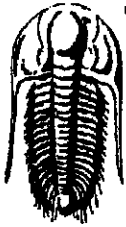
33-7s-24w Graham,KS

J&R Goddard #33-1

DST # 5

LKC "J"

2011.09.23



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc.

**33-7s-24w Graham,KS**

PO Box 86  
Plainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43061

**DST#: 5**

ATTN: Marc Downing

Test Start: 2011.09.23 @ 02:33:00

## GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 04:25:30

Time Test Ended: 08:16:30

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Kevin Mack**

Unit No: **43**

Interval: **3781.00 ft (KB) To 3818.00 ft (KB) (TVD)**

Total Depth: **3818.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2373.00 ft (KB)**

**2368.00 ft (CF)**

KB to GR/CF: **5.00 ft**

**Serial #: 6799** **Inside**

Press@RunDepth: **16.79 psig @ 3782.00 ft (KB)**

Start Date: **2011.09.23**

End Date: **2011.09.23**

Capacity: **8000.00 psig**

Last Calib.: **2011.09.23**

Start Time: **02:33:05**

End Time: **08:16:29**

Time On Btm: **2011.09.23 @ 04:25:00**

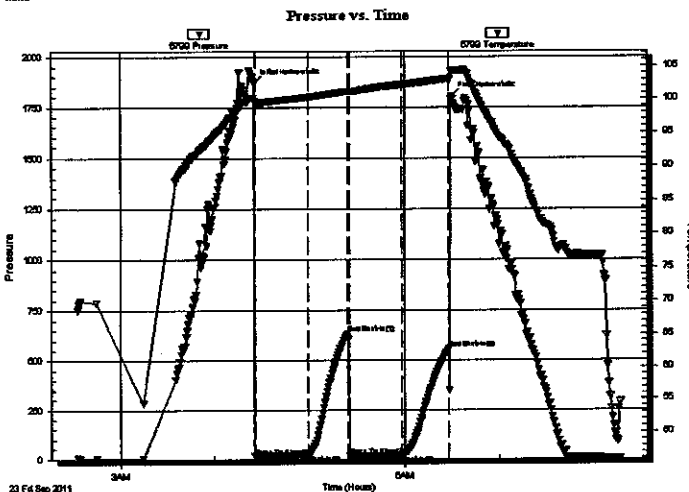
Time Off Btm: **2011.09.23 @ 06:29:30**

TEST COMMENT: **IF- 1/8" Blow built to 1"**

**IS- No Return**

**FF- No Blow**

**FS- No Return**



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1872.84	100.22	Initial Hydro-static
1	15.38	99.70	Open To Flow (1)
35	20.71	100.36	Shut-In(1)
59	637.61	101.26	End Shut-In(1)
61	16.92	101.21	Open To Flow (2)
94	16.79	102.27	Shut-In(2)
123	557.74	103.15	End Shut-In(2)
125	1806.54	104.30	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.

**33-7s-24w Graham,KS**

PO Box 86  
Plainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43061

**DST#: 5**

ATTN: Marc Downing

Test Start: 2011.09.23 @ 02:33:00

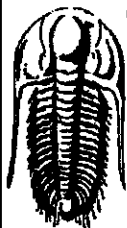
### Tool Information

Drill Pipe:	Length: 3780.00 ft	Diameter: 3.80 inches	Volume: 53.02 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: 47000.00 lb
			<u>Total Volume: 53.02 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3781.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	58.00 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			3761.00	
Shut In Tool	5.00			3766.00	
Hydraulic tool	5.00			3771.00	
Packer	5.00			3776.00	21.00 Bottom Of Top Packer
Packer	5.00			3781.00	
Stubb	1.00			3782.00	
Recorder	0.00	8648	Inside	3782.00	
Recorder	0.00	6799	Inside	3782.00	
Perforations	31.00			3813.00	
Bullnose	5.00			3818.00	37.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>58.00</b>				



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

H&C Oil Operating Inc.

**33-7s-24w Graham,KS**

PO Box 86  
Plainville, KS 67663

**J&R Goddard #33-1**

Job Ticket: 43061      **DST#: 5**

ATTN: Marc Downing

Test Start: 2011.09.23 @ 02:33:00

### 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: 61.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 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:

