

11/23/12

CONFIDENTIAL

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

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 #: _____

10/1/2011	10/8/2011	10/9/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15.135.25298.00.00

Spot Description: _____
SE SW NE NW Sec. 32 Twp. 17 S. R. 26 East West
1,130 Feet from North / South Line of Section
1,930 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW

County: Ness

Lease Name: Solze Well #: 32-1

Field Name: Delos

Producing Formation: None

Elevation: Ground: 2560 Kelly Bushing: 2568

Total Depth: 4575 Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: 265 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: 1500 ppm Fluid volume: 320 bbls

Dewatering method used: Evaporation

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 B. Ramsay

Title: President Date: 11/16/11

KCC Office Use ONLY

- Letter of Confidentiality Received
Date: 11-23-11 - 11-23-12
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: WJ Date: 12-5-11

Operator Name: H&C Oil Operating, Inc. Lease Name: Solze Well #: 32-1
 Sec. 32 Twp. 17 S. R. 26 East West County: Ness

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 (Attach Additional Sheets) 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 (If no, Submit Copy) List All E. Logs Run: Microresistivity log, Dual compensated porosity, Borehole compensated sonic, Dual induction	<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>1937</td> <td>+631</td> </tr> <tr> <td>Base Anhydrite</td> <td>1968</td> <td>+600</td> </tr> <tr> <td>Heebner</td> <td>3844</td> <td>-1276</td> </tr> <tr> <td>Lansing</td> <td>3883</td> <td>-1315</td> </tr> <tr> <td>Stark</td> <td>4140</td> <td>-1572</td> </tr> <tr> <td>BKC</td> <td>4208</td> <td>-1640</td> </tr> <tr> <td>Marmaton</td> <td>4250</td> <td>-1682</td> </tr> </tbody> </table>	Name	Top	Datum	Top Anhydrite	1937	+631	Base Anhydrite	1968	+600	Heebner	3844	-1276	Lansing	3883	-1315	Stark	4140	-1572	BKC	4208	-1640	Marmaton	4250	-1682
Name	Top	Datum																							
Top Anhydrite	1937	+631																							
Base Anhydrite	1968	+600																							
Heebner	3844	-1276																							
Lansing	3883	-1315																							
Stark	4140	-1572																							
BKC	4208	-1640																							
Marmaton	4250	-1682																							

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
surface	12 1/4"	8 5/8"	23	265	common	165	2%gel, 3%cc

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 (Amount and Kind of Material Used)	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 (If vented, Submit ACO-18.)	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled (Submit ACO-5) (Submit ACO-4) <input type="checkbox"/> Other (Specify) _____	INTERVAL: NOV 23 2011 KCC
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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. 5347

Date	10-9-11	Sec.	32	Twp.	17	Range	26	County	Ness	State	KS	On Location		Finish	12:30 AM
Lease	50122		Well No.	32-1		Location Uteca 1W2S 2W1N E1/4									
Contractor	D. Scoville #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.	4525											
Csg.			Depth	Hq @											
Tbg. Size			Depth	Street											
Tool			Depth	City State											
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 290 60/100 442661 147770											

EQUIPMENT

Pumptrk	5	No.	Cementer	Craig	Common	174
			Helper			
Bulktrk		No.	Driver	Lon	Poz. Mix	116
			Driver			
Bulktrk	10	No.	Driver	Brian	Gel.	10
			Driver			

JOB SERVICES & REMARKS

Remarks:	Calcium
Rat Hole 30	Hulls
Mouse Hole 20	Salt
Centralizers	Flowseal 72#
Baskets	Kol-Seal
D/V or Port Collar	Mud CLR 48
1st 1950 50 SK	CFL-117 or CD110 CAF 38
2nd 1412 80 SK	Sand
3rd 510 40 SK	Handling 300
4th 300 50 SK	Mileage
5th 60 20 SK	

FLOAT EQUIPMENT

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

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KCC WICHITA

Pumptrk Charge plug
Mileage 30

CONFIDENTIAL Tax

NOV 23 2012 Discount

KCC Total Charge

X Signature *John Smith*

QUALITY OILWELL CEMENTING, INC.

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

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

No. 5006

Date	10-1-11	Sec.	32	Twp.	17	Range	26	County	Ness	State	Kansas	On Location	8:30 PM	
Lease	Seize	Well No.	32-1		Location								Utica 16 8S 2W 1N Emlc	
Contractor	Discovery Drilling Rig 3							Owner						To Quality Oilwell Cementing, Inc.
Type Job	Surface							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.		265		Charge To						HAC Oil	
Csg.	8 3/4 23 1/2		Depth		265		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.	10-15		Shoe Joint				Cement Amount Ordered						165 Common Full 265	
Meas Line			Displace		16 Bbl									

EQUIPMENT

Pumptrk	9	No.	Cementer	Steve	Common	165
			Helper			
Bulktrk	14	No.	Driver	Matt	Poz. Mix	
			Driver			
Bulktrk		No.	Driver	Corey	Gel.	3
			Driver		Calcium	5

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 CAP 38
	Sand
	Handling 173
	Mileage

Cement did Circulate

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

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KCC WICHITA

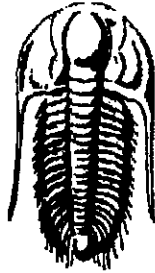
Pumptrk Charge Surface
Mileage 38

CONFIDENTIAL Tax

NOV 23 2011 Discount
Total Charge

KCC

X Signature Don Parker



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663 + 0086

ATTN: Marc Downing

Solze #32-1

32-17s-26w Ness,KS

Start Date: 2011.10.06 @ 19:25:00

End Date: 2011.10.07 @ 03:31:00

Job Ticket #: 44653 DST #: 1

H & C Oil Operating, Inc
32-17s-26w Ness,KS
Solze #32-1
DST # 1
Cher Sd / Miss
2011.10.06

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NOV 23 2011

KCC WICHITA

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

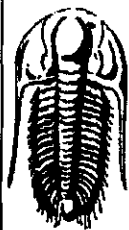
ph: 785-625-4778 fax: 785-625-5620

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NOV 23 2011

Printed: 2011.10.17 @ 13:53:47

KCC



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H & C Oil Operating, Inc

32-17s-26w Ness, KS

PO Box 86
Plainville, KS 67663 + 0086

Solze #32-1

Job Ticket: 44653

DST#: 1

ATTN: Marc Downing

Test Start: 2011.10.06 @ 19:25:00

GENERAL INFORMATION:

Formation: **Cher Sd / Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:48:00

Time Test Ended: 03:31:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 42

Interval: **4437.00 ft (KB) To 4502.00 ft (KB) (TVD)**

Total Depth: 4502.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2568.00 ft (KB)

2560.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8700

Outside

Press@RunDepth: 40.89 psig @ 4474.00 ft (KB)

Start Date: 2011.10.06

End Date:

2011.10.07

Start Time: 19:25:05

End Time:

03:30:59

Capacity: 8000.00 psig

Last Calib.: 2011.10.07

Time On Btm: 2011.10.06 @ 22:47:30

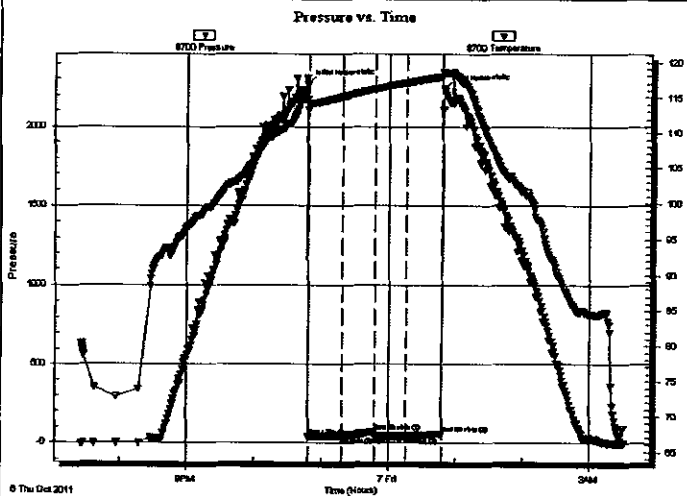
Time Off Btm: 2011.10.07 @ 00:49:00

TEST COMMENT: 30 - IF- 1/4" blow, died in 28 Min

30 - IS- No blow back

30 - FF- No blow back

30 - FS- No blow back



PRESSURE SUMMARY

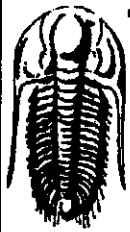
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2269.20	114.77	Initial Hydro-static
1	35.97	113.33	Open To Flow (1)
31	40.10	115.11	Shut-In(1)
60	68.92	116.20	End Shut-In(1)
60	39.83	116.20	Open To Flow (2)
89	40.89	117.11	Shut-In(2)
120	58.22	117.97	End Shut-In(2)
122	2241.53	118.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M, Oil scum, 100%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

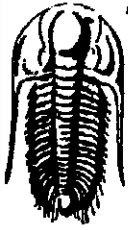
H & C Oil Operating, Inc
 PO Box 86
 Plainville, KS 67663 + 0086
 ATTN: Marc Downing

32-17s-26w Ness,KS
Solze #32-1
 Job Ticket: 44653 DST#: 1
 Test Start: 2011.10.06 @ 19:25:00

Tool Information

Drill Pipe:	Length: 4394.00 ft	Diameter: 3.80 inches	Volume: 61.64 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			Total Volume: 61.79 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4437.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	93.00 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			4410.00	
Shut In Tool	5.00			4415.00	
Hydraulic tool	5.00			4420.00	
Jars	5.00			4425.00	
Safety Joint	2.00			4427.00	
Packer	5.00			4432.00	28.00 Bottom Of Top Packer
Packer	5.00			4437.00	
Stubb	1.00			4438.00	
Perforations	3.00			4441.00	
Change Over Sub	1.00			4442.00	
Drill Pipe	31.00			4473.00	
Change Over Sub	1.00			4474.00	
Recorder	0.00	6625	Inside	4474.00	
Recorder	0.00	8700	Outside	4474.00	
Perforations	25.00			4499.00	
Bullnose	3.00			4502.00	65.00 Bottom Packers & Anchor
Total Tool Length:	93.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Operating, Inc
 PO Box 86
 Plainville, KS 67663 + 0086
 ATTN: Marc Downing

32-17s-26w Ness,KS
Solze #32-1
 Job Ticket: 44653 **DST#: 1**
 Test Start: 2011.10.06 @ 19:25:00

Mud and Cushion Information

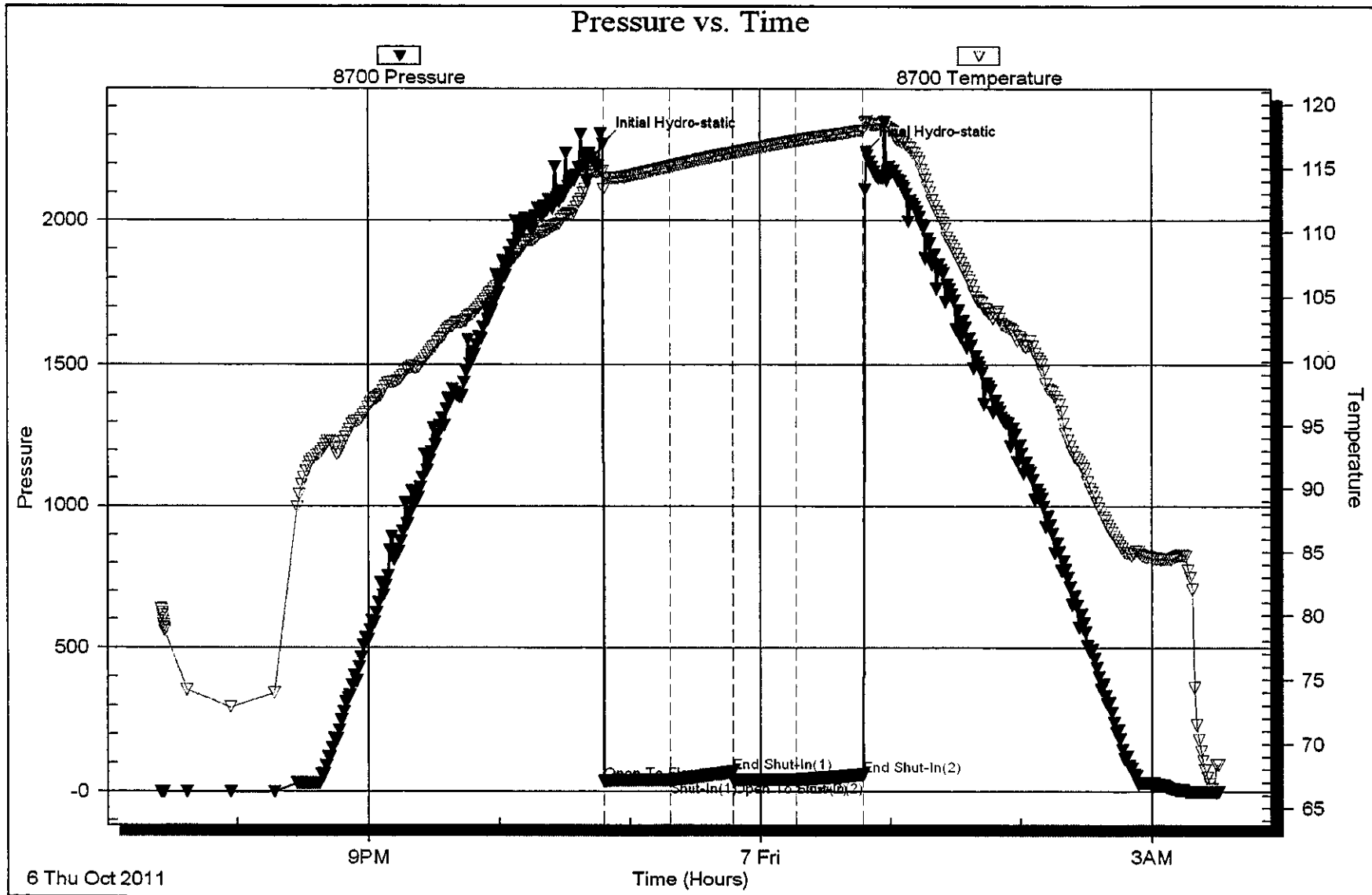
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: inches			

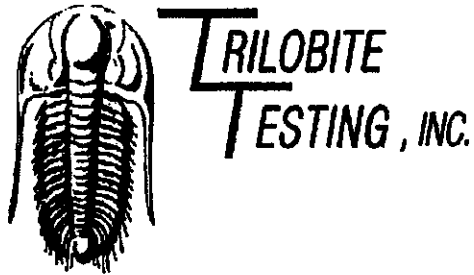
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	M, Oil scum, 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 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 + 0086

ATTN: Marc Downing

Solze #32-1

32-17s-26w Ness,KS

Start Date: 2011.10.07 @ 10:13:00

End Date: 2011.10.07 @ 17:28:30

Job Ticket #: 44654 DST #: 2

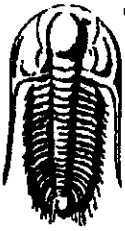
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.10.17 @ 13:54:26

H & C Oil Operating, Inc 32-17s-26w Ness,KS Solze #32-1 DST # 2 Miss 2011.10.07



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H & C Oil Operating, Inc
 PO Box 86
 Plainville, KS 67663 + 0086
 ATTN: Marc Downing

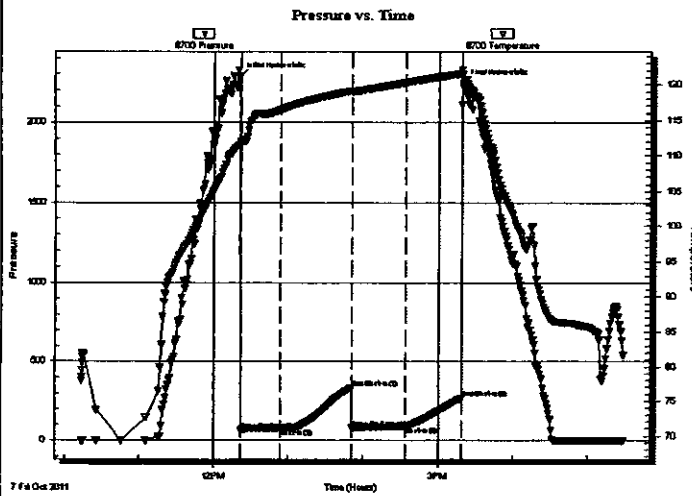
32-17s-26w Ness, KS
Solze #32-1
 Job Ticket: 44654 **DST#: 2**
 Test Start: 2011.10.07 @ 10:13:00

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:21:30
 Time Test Ended: 17:28:30
 Interval: **4437.00 ft (KB) To 4514.00 ft (KB) (TVD)**
 Total Depth: 4514.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Cody Bloedorn
 Unit No: 42
 Reference Elevations: 2568.00 ft (KB)
 2560.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8700 Outside
 Press@RunDepth: 87.90 psig @ 4505.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.10.07 End Date: 2011.10.07 Last Calib.: 2011.10.07
 Start Time: 10:13:05 End Time: 17:28:29 Time On Btm: 2011.10.07 @ 12:20:30
 Time Off Btm: 2011.10.07 @ 15:19:00

TEST COMMENT: 45 - IF- 7" blow
 45 - IS- No blow back
 45 - FF- 4 1/4" blow
 45 - FS- No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2285.06	111.98	Initial Hydro-static
1	59.27	111.63	Open To Flow (1)
34	76.94	116.47	Shut-In(1)
90	332.36	119.10	End Shut-In(1)
91	77.00	118.95	Open To Flow (2)
134	87.90	120.31	Shut-In(2)
178	266.91	121.56	End Shut-In(2)
179	2241.98	121.42	Final Hydro-static

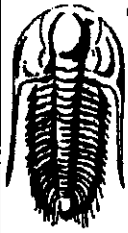
Recovery

Length (ft)	Description	Volume (bbl)
62.00	GHOCVM, 10%G, 30%W, 30%M, 30%O	0.59
20.00	GHOCVM 10%G 10%W 50%M 30%O	0.28
10.00	Free Oil 100%O	0.14
0.00	124' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H & C Oil Operating, Inc
 PO Box 86
 Plainville, KS 67663 + 0086
 ATTN: Marc Downing

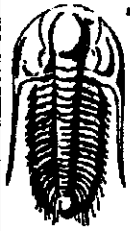
32-17s-26w Ness,KS
Solze #32-1
 Job Ticket: 44654 **DST#: 2**
 Test Start: 2011.10.07 @ 10:13:00

Tool Information

Drill Pipe:	Length: 4394.00 ft	Diameter: 3.80 inches	Volume: 61.64 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 61.79 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4437.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	77.00 ft			
Tool Length:	105.00 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			4410.00	
Shut In Tool	5.00			4415.00	
Hydraulic tool	5.00			4420.00	
Jars	5.00			4425.00	
Safety Joint	2.00			4427.00	
Packer	5.00			4432.00	28.00 Bottom Of Top Packer
Packer	5.00			4437.00	
Stubb	1.00			4438.00	
Perforations	3.00			4441.00	
Change Over Sub	1.00			4442.00	
Drill Pipe	62.00			4504.00	
Change Over Sub	1.00			4505.00	
Recorder	0.00	6625	Inside	4505.00	
Recorder	0.00	8700	Outside	4505.00	
Perforations	6.00			4511.00	
Bullnose	3.00			4514.00	77.00 Bottom Packers & Anchor
Total Tool Length:	105.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Operating, Inc
PO Box 86
Plainville, KS 67663 + 0086
ATTN: Marc Downing

32-17s-26w Ness, KS
Solze #32-1
Job Ticket: 44654 **DST#: 2**
Test Start: 2011.10.07 @ 10:13:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	39 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	51.00 sec/qt	Cushion Volume:	bbbl		
Water Loss:	8.75 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

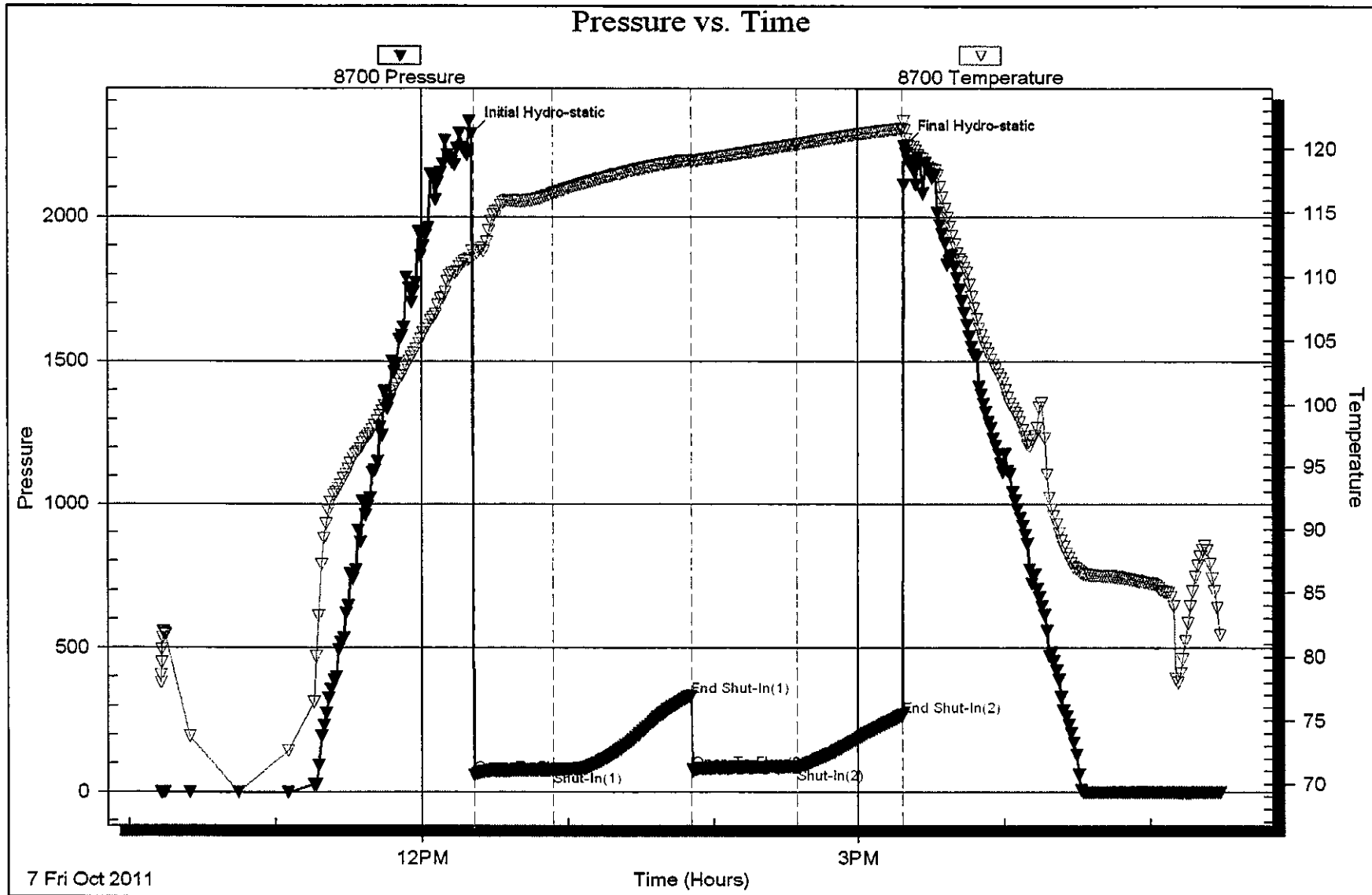
Length ft	Description	Volume bbbl
62.00	GHOCVM, 10%G, 30%W, 30%M, 30%O	0.587
20.00	GHOCVM 10%G 10%W 50%M 30%O	0.281
10.00	Free Oil 100%O	0.140
0.00	124' GIP	0.000

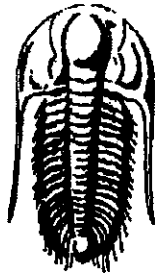
Total Length: 92.00 ft Total Volume: 1.008 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity: 39 @ 60 Degrees = 39





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663 + 0086

ATTN: Marc Downing

Solze #32-1

32-17s-26w Ness,KS

Start Date: 2011.10.08 @ 09:30:00

End Date: 2011.10.08 @ 17:22:00

Job Ticket #: 44655 DST #: 3

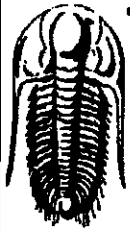
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.10.17 @ 13:54:54

H & C Oil Operating, Inc
32-17s-26w Ness, KS
Solze #32-1
DST # 3
Ft. Scott
2011.10.08



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H & C Oil Operating, Inc
 PO Box 86
 Plainville, KS 67663 + 0086
 ATTN: Marc Downing

32-17s-26w Ness, KS
Solze #32-1
 Job Ticket: 44655 **DST#: 3**
 Test Start: 2011.10.08 @ 09:30:00

GENERAL INFORMATION:

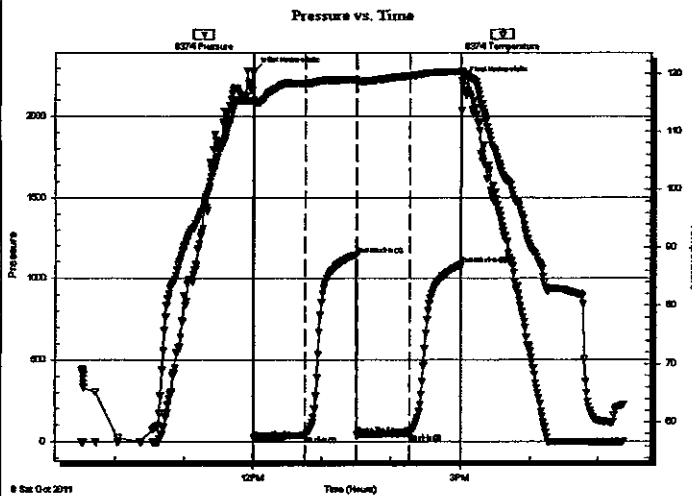
Formation: **Ft. Scott**
 Deviated: **No Whipstock:** ft (KB)
 Time Tool Opened: 12:01:00
 Time Test Ended: 17:22:00
 Test Type: **Conventional Straddle (Reset)**
 Tester: **Cody Bloedorn**
 Unit No: **42**
 Interval: **4405.00 ft (KB) To 4427.00 ft (KB) (TVD)**
 Total Depth: **4502.00 ft (KB) (TVD)**
 Reference Elevations: **2568.00 ft (KB)**
2560.00 ft (CF)
 Hole Diameter: **7.88 inches** Hole Condition: **Good**
 KB to GR/CF: **8.00 ft**

Serial #: 8374

Outside

Press@RunDepth: **51.24 psig @ 4406.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2011.10.08** End Date: **2011.10.08** Last Calib.: **2011.10.08**
 Start Time: **09:30:05** End Time: **17:21:59** Time On Btm: **2011.10.08 @ 12:00:30**
 Time Off Btm: **2011.10.08 @ 15:01:00**

TEST COMMENT: 45 - IF- 2 1/4" Blow
 45 - IS- No blow back
 45 - FF- 4" blow
 45 - FS- Surface blow, died in 25 Min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2278.69	115.40	Initial Hydro-static
1	21.35	114.89	Open To Flow (1)
45	39.13	118.27	Shut-In(1)
90	1146.07	118.91	End Shut-In(1)
90	44.33	118.46	Open To Flow (2)
135	51.24	119.57	Shut-In(2)
180	1082.46	120.22	End Shut-In(2)
181	2218.99	120.33	Final Hydro-static

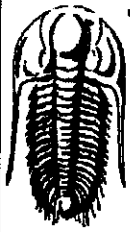
Recovery

Length (ft)	Description	Volume (bbl)
62.00	MMV, Oil scum, 40%M, 60%VV	0.59
26.00	VSOCMM, 5%O, 5%W, 90%M	0.36
5.00	Free Oil, 100%O	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H & C Oil Operating, Inc
 PO Box 86
 Plainville, KS 67663 + 0086
 ATTN: Marc Downing

32-17s-26w Ness,KS
Solze #32-1
 Job Ticket: 44655 **DST#: 3**
 Test Start: 2011.10.08 @ 09:30:00

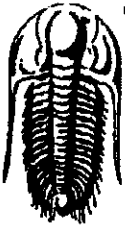
Tool Information

Drill Pipe:	Length: 4365.00 ft	Diameter: 3.80 inches	Volume: 61.23 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 61.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4405.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	4427.00 ft			
Interval between Packers:	22.00 ft			
Tool Length:	205.00 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			4378.00	
Shut In Tool	5.00			4383.00	
Hydraulic tool	5.00			4388.00	
Jars	5.00			4393.00	
Safety Joint	2.00			4395.00	
Packer	5.00			4400.00	28.00 Bottom Of Top Packer
Packer	5.00			4405.00	
Stubb	1.00			4406.00	
Recorder	0.00	8374	Outside	4406.00	
Recorder	0.00	6625	Inside	4406.00	
Perforations	20.00			4426.00	
Blank Off Sub	1.00			4427.00	22.00 Tool Interval
Packer	5.00			4432.00	
Change Over Sub	1.00			4433.00	
Drill Pipe	124.00			4557.00	
Recorder	0.00	8700	Below	4557.00	
Change Over Sub	1.00			4558.00	
Perforations	21.00			4579.00	
Bullnose	3.00			4582.00	155.00 Bottom Packers & Anchor

Total Tool Length: 205.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Operating, Inc
 PO Box 86
 Plainville, KS 67663 + 0086
 ATTN: Marc Downing

32-17s-26w Ness, KS
Solze #32-1
 Job Ticket: 44655 **DST#: 3**
 Test Start: 2011.10.08 @ 09:30:00

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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	MW, Oil scum, 40%M, 60%W	0.587
26.00	VSOCMM, 5%O, 5%W, 90%M	0.365
5.00	Free Oil, 100%O	0.070

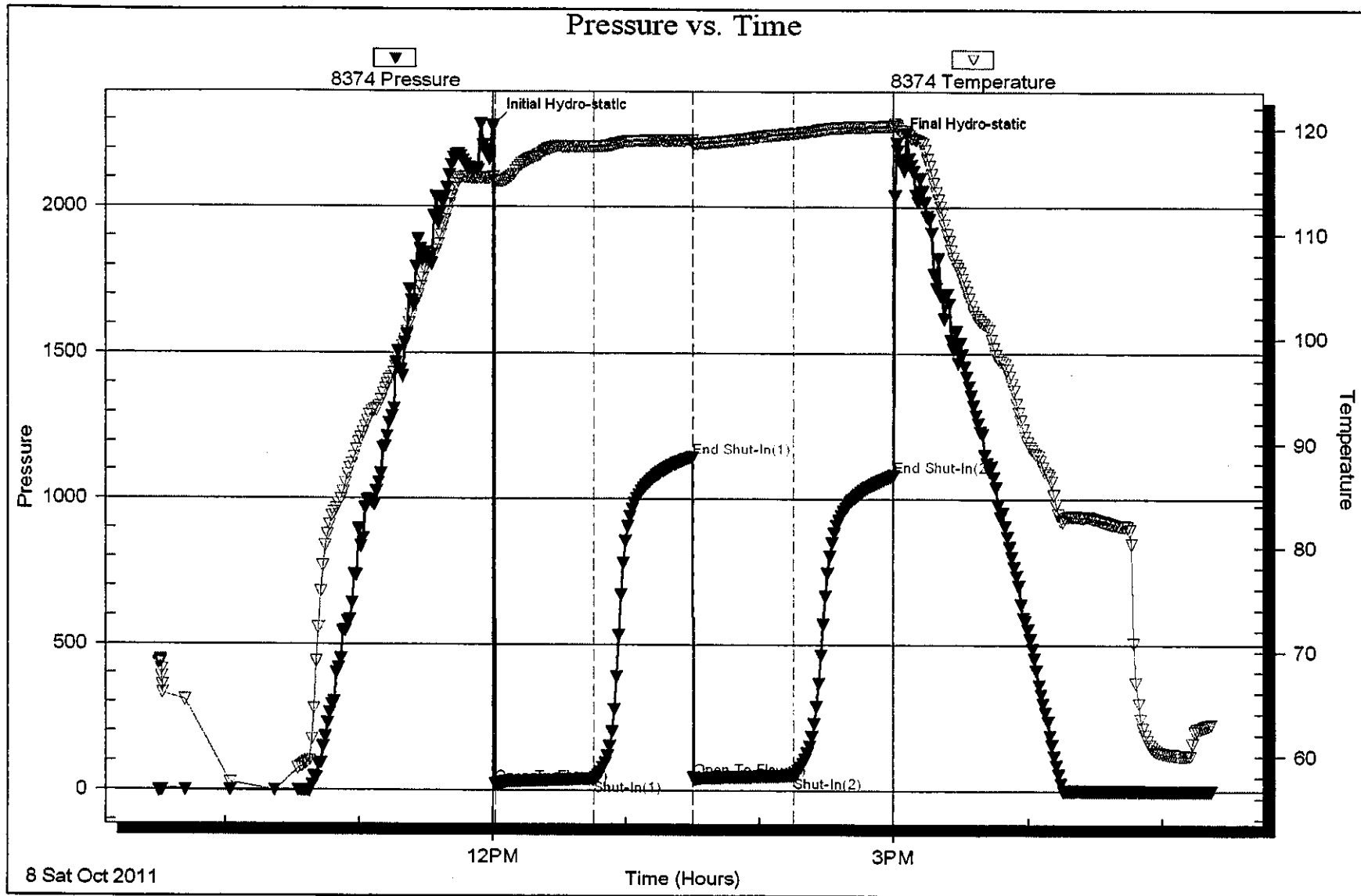
Total Length: 93.00 ft Total Volume: 1.022 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: Water Salinity: .13 @ 60 Degrees = 70,000

Serial #: 8374

Outside H & C Oil Operating, Inc

Solze #32-1

DST Test Number: 3



Serial #: 8700

Below (Strat) Oil Operating, Inc

Solze #32-1

DST Test Number: 3

