

CONFIDENTIAL

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

ORIGINAL

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

7/7/13

OPERATOR: License # 5135  
Name: John O. Farmer, Inc.  
Address 1: P.O. Box 352  
Address 2:  
City: Russell State: KS Zip: 67665 + 0 3 5 2  
Contact Person: Marge Schulte  
Phone: ( 785 ) 483-3145, Ext. 214  
CONTRACTOR: License # 31548  
Name: Discovery Drilling Company, Inc.  
Wellsite Geologist: Randall Kilian

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 #:

5-9-11 5-15-11  
Spud Date or Date Reached TD Completion Date or Recompletion Date

API No. 15 - 147-20,643-00-00  
Spot Description:  
S2 N2 SW NE Sec. 18 Twp. 4 S. R. 20  East  West  
1,940 Feet from  North /  South Line of Section  
2,000 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE  NW  SE  SW  
County: Phillips  
Lease Name: Hofaker "A" Well #: 2  
Field Name: (wildcat)  
Producing Formation: None  
Elevation: Ground: 2095' Kelly Bushing: 2103'  
Total Depth: 3646' Plug Back Total Depth:  
Amount of Surface Pipe Set and Cemented at: 231.16 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: 14,000 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:

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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: John O. Farmer III  
Title: John O. Farmer III, President Date: 7-7-11

KCC Office Use ONLY  
 Letter of Confidentiality Received Date: 7/7/11 - 7/7/13  
 Confidential Release Date: JUL 11 2011  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: NS Date: 7-14-11  
RECEIVED  
KCC WICHITA

Operator Name: John O. Farmer, Inc. Lease Name: Hofaker "A"  
 Sec. 18 Twp. 4 S. R. 20  East  West County: Phillips

**JAN 15 1960**

**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 <i>(Attach Additional Sheets)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	Sample
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Anhydrite	1702'	(+401)
Electric Log Run	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Topeka	3083'	(-980)
Electric Log Submitted Electronically <i>(If no, Submit Copy)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Heebner Shale	3293'	(-1190)
List All E. Logs Run:		Toronto	3319'	(-1216)
<b>Compensated Density Neutron Log, Dual Induction Log, Micro Resistivity Log</b>		Lansing	3336'	(-1233)
		Base/KC	3536'	(-1433)
		L.T.D.	3647'	(-1544)

CASING RECORD <input type="checkbox"/> New <input checked="" 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#	231.16'	Common	150	3% C.C., 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 (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:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
<input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify)	



# Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

## DRILLER'S LOG

Operator: John O. Farmer, Inc. Lic# 5135 Contractor: Discovery Drilling Co., Inc. LIC#31548  
P.O. Box 352 PO Box 763  
Russell, KS 67665 Hays, KS 67601

Lease: Hofaker "A" # 2 Location: S/2/N/2/SW/NE  
Section 18/4S/20W  
Phillips Co., KS

Loggers Total Depth: 3647' API#15- 147-20,643-00-00  
Rotary Total Depth: 3646' Elevation: 2095 GL / 2103 KB  
Commenced: 5/9/2011 Completed: 5/15/2011  
Casing: 8 5/8" @ 231.16'W/150sks Status: D & A

### DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>1733'</u>
Dakota Sand	<u>1003'</u>	Shale & Lime	<u>2042'</u>
Shale	<u>1095'</u>	Shale	<u>2386'</u>
Cedar Hill Sand	<u>1258'</u>	Shale & Lime	<u>2783'</u>
Red Bed Shale	<u>1421'</u>	Lime & Shale	<u>3257'</u>
Anhydrite	<u>1704'</u>	RTD	<u>3646'</u>
Base Anhydrite	<u>1733'</u>		

STATE OF KANSAS )  
) ss  
COUNTY OF ELLIS )

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

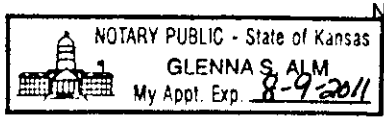
\_\_\_\_\_  
Thomas H. Alm

Subscribed and sworn to before me on 5-18-2011

My Commission expires: 8-9-2011

(Place stamp or seal below)

\_\_\_\_\_  
Notary Public



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JUL 07 2011  
**KCC**

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JUL 11 2011  
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# ALLIED CEMENTING CO., LLC. 039608

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Russell

DATE <u>5/9/11</u>	SEC. <u>1F</u>	TWP. <u>4</u>	RANGE <u>20</u>	CALLED OUT	ON LOCATION	JOB START <u>5:15P</u>	JOB FINISH <u>5:45P</u>
LEASE <u>Hofaker</u>	WELL # <u>A 2</u>	LOCATION <u>Logan 3/4 N</u>			COUNTY <u>Phillips</u>	STATE <u>Ks.</u>	
OLD OR NEW (Circle one)		<u>234 W Sinto</u>			<b>COPY</b>		

CONTRACTOR Discovery Drilling Rig #1

TYPE OF JOB Surface Job

HOLE SIZE 12 1/4 T.D. 231

CASING SIZE 8 5/8 DEPTH 231.16

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. 15'

PERFS. \_\_\_\_\_

DISPLACEMENT 13.76 bbl

EQUIPMENT \_\_\_\_\_

PUMP TRUCK CEMENTER Shane

# 409 HELPER Tony

BULK TRUCK

# 472-187 DRIVER Nick

BULK TRUCK

# \_\_\_\_\_ DRIVER \_\_\_\_\_

OWNER \_\_\_\_\_

CEMENT AMOUNT ORDERED 150 Com 32cc 22661

COMMON	<u>150</u>	@ <u>16.25</u>	<u>2437.50</u>
POZMIX		@	
GEL	<u>3</u>	@ <u>21.25</u>	<u>63.75</u>
CHLORIDE	<u>5</u>	@ <u>58.20</u>	<u>291.00</u>
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>158</u>	@ <u>2.25</u>	<u>355.50</u>
MILEAGE	<u>11.54/mile</u>		<u>1390.40</u>
			TOTAL <u>4538.15</u>

REMARKS:  
Ran 5 jts. + Landing Jt.  
Est Circulation  
Mixed 150 str.  
Cement Circulated!

SERVICE

DEPTH OF JOB \_\_\_\_\_

PUMP TRUCK CHARGE \_\_\_\_\_ 1125.00

EXTRA FOOTAGE @ \_\_\_\_\_

MILEAGE 160 @ 7.00 1120.00

MANIFOLD @ \_\_\_\_\_

LVA 160 @ 4.00 640.00

TOTAL 2885.00

CHARGE TO: John O. Farmer

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

*Thanks!*

PRINTED NAME \_\_\_\_\_

SIGNATURE [Signature]

TOTAL \_\_\_\_\_

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

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# ALLIED CEMENTING CO., LLC. 039614

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Russell

DATE <u>5/15/11</u>	SEC. <u>18</u>	TWP. <u>4</u>	RANGE <u>20</u>	CALLED OUT	ON LOCATION	JOB START <u>10:30 AM</u>	JOB FINISH <u>11:30 AM</u>
LEASE <u>Hofacker</u>	WELL # <u>2</u>	LOCATION <u>Logan 3/4 N 2 3/4 W</u>	COUNTY <u>Phillips</u>		STATE <u>KS</u>		
OLD OR NEW (Circle one)			<u>Sints</u>		COPY		

CONTRACTOR Discovery Drilling Rig #1 OWNER \_\_\_\_\_

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D. \_\_\_\_\_

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE 4 1/2 DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

DISPLACEMENT \_\_\_\_\_

CEMENT AMOUNT ORDERED 20 694 4861 #441

COMMON	<u>132</u>	@	<u>16.25</u>	<u>2145.00</u>
POZMIX	<u>88</u>	@	<u>8.50</u>	<u>748.00</u>
GEL	<u>7</u>	@	<u>21.25</u>	<u>148.75</u>
CHLORIDE		@		
ASC		@		
<u>Flo Seal 55#</u>		@	<u>2.70</u>	<u>148.50</u>
HANDLING	<u>228</u>	@	<u>2.25</u>	<u>513.00</u>
MILEAGE	<u>111 sk/mile</u>			<u>2006.40</u>
TOTAL				<u>5709.65</u>

**EQUIPMENT**

PUMP TRUCK CEMENTER Shane Heakl

# 409 HELPER Todd

BULK TRUCK

# 477 DRIVER Niele

BULK TRUCK

# \_\_\_\_\_ DRIVER \_\_\_\_\_

**REMARKS:**

1720' 25 sks

1050' 100 sks

280' 40 sks

40' 10 sks

Ret H/L 30 sks Mouse Hole 15 sks

**SERVICE**

DEPTH OF JOB				
PUMP TRUCK CHARGE				<u>1250.00</u>
EXTRA FOOTAGE		@		
MILEAGE	<u>160</u>	@	<u>7.00</u>	<u>1120.00</u>
MANIFOLD		@		
<u>Cur</u>	<u>160</u>	@	<u>4.00</u>	<u>640.00</u>

TOTAL 3,010.00

CHARGE TO: John O'Farmer

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**PLUG & FLOAT EQUIPMENT**

_____	@		
_____	@		
_____	@		
_____	@		
_____	@		

TOTAL \_\_\_\_\_

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME \_\_\_\_\_

SIGNATURE Cliff Mayfield

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES \_\_\_\_\_

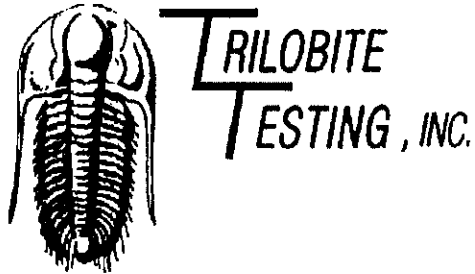
DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

**KCC**  
 JUL 07 2013  
**CONFIDENTIAL**

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JUL 11 2011

KCC WICHITA



## DRILL STEM TEST REPORT

Prepared For: **John O Farmer**

PO Box 352  
Russell, KS 67665

ATTN: Randy Killian

**18-4-20 Phillips,KS**

**Hofaker A #2**

Start Date: 2011.05.12 @ 11:21:00

End Date: 2011.05.12 @ 17:13:30

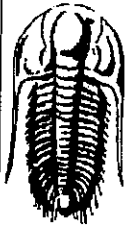
Job Ticket #: 042007      DST #: 1

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JUL 07 2013  
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JUL 11 2011

**KCC WICHITA**

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

John O Farmer

Hofaker A #2

PO Box 352  
Russell, KS 67665

18-4-20 Phillips,KS

Job Ticket: 042007

DST#: 1

ATTN: Randy Killian

Test Start: 2011.05.12 @ 11:21:00

## GENERAL INFORMATION:

Formation: Toronto

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:51:00

Time Test Ended: 17:13:30

Test Type: Conventional Bottom Hole

Tester: James Winder

Unit No: 46

Interval: 3287.00 ft (KB) To 3329.00 ft (KB) (TVD)

Reference Elevations: 2103.00 ft (KB)

Total Depth: 3329.00 ft (KB) (TVD)

2095.00 ft (CF)

Hole Diameter: 7.88 inches-Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8366

Inside

Press@RunDepth: 38.14 psig @ 3288.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.05.12

End Date:

2011.05.12

Last Calib.:

2011.05.12

Start Time: 11:21:05

End Time:

17:13:29

Time On Btm

2011.05.12 @ 12:47:30

Time Off Btm

2011.05.12 @ 15:59:30

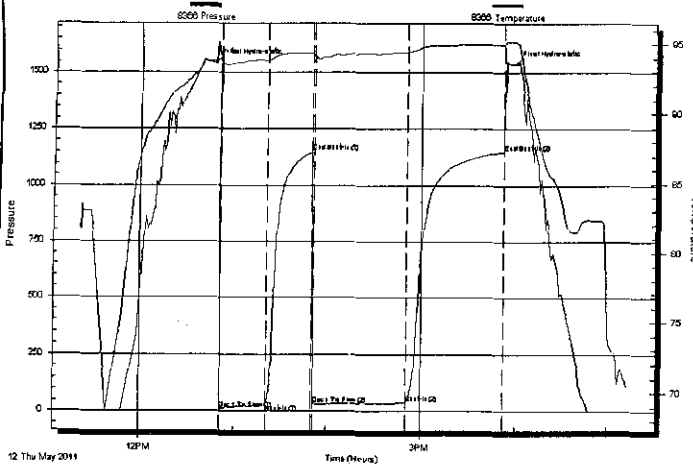
TEST COMMENT: IF: Blow built to 2"

IS: No blow back

FF: Blow started at 6 min., built to 1 1/2"

FSI: No blow back

Pressure vs. Time



## PRESSURE SUMMARY

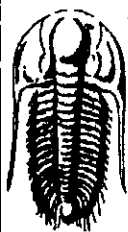
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1544.62	93.76	Initial Hydro-static
4	12.28	93.10	Open To Flow (1)
34	29.90	93.82	Shut-In(1)
63	1148.18	94.37	End Shut-In(1)
64	31.03	94.04	Open To Flow (2)
124	38.14	94.41	Shut-In(2)
185	1151.47	94.99	End Shut-In(2)
192	1538.54	95.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Mud w/trace oil 100% m	0.56

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer

Hofaker A #2

PO Box 352  
Russell, KS 67665

18-4-20 Phillips, KS

Job Ticket: 042007

DST#: 1

ATTN: Randy Killian

Test Start: 2011.05.12 @ 11:21:00

## Tool Information

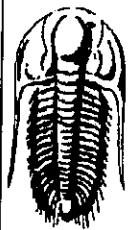
Drill Pipe:	Length: 3267.00 ft	Diameter: 3.80 inches	Volume: 45.83 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 45.98 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3287.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3272.00	
Hydraulic tool	5.00			3277.00	
Packer	5.00			3282.00	20.00 Bottom Of Top Packer
Packer	5.00			3287.00	
Stubb	1.00			3288.00	
Recorder	0.00	8366	Inside	3288.00	
Recorder	0.00	8320	Outside	3288.00	
Perforations	5.00			3293.00	
Blank Spacing	33.00			3326.00	
Bullnose	3.00			3329.00	42.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>62.00</b>				





**TRILOBITE**  
**TESTING, INC**

# DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer

Hofaker A #2

PO Box 352  
Russell, KS 67665

18-4-20 Phillips,KS

Job Ticket: 042007

DST#: 1

ATTN: Randy Killian

Test Start: 2011.05.12 @ 11:21:00

## 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:

ppm

Viscosity: 78.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.55 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	Mud w/trace oil 100% <sub>m</sub>	0.559

Total Length: 60.00 ft

Total Volume: 0.559 bbl

Num Fluid Samples: 0

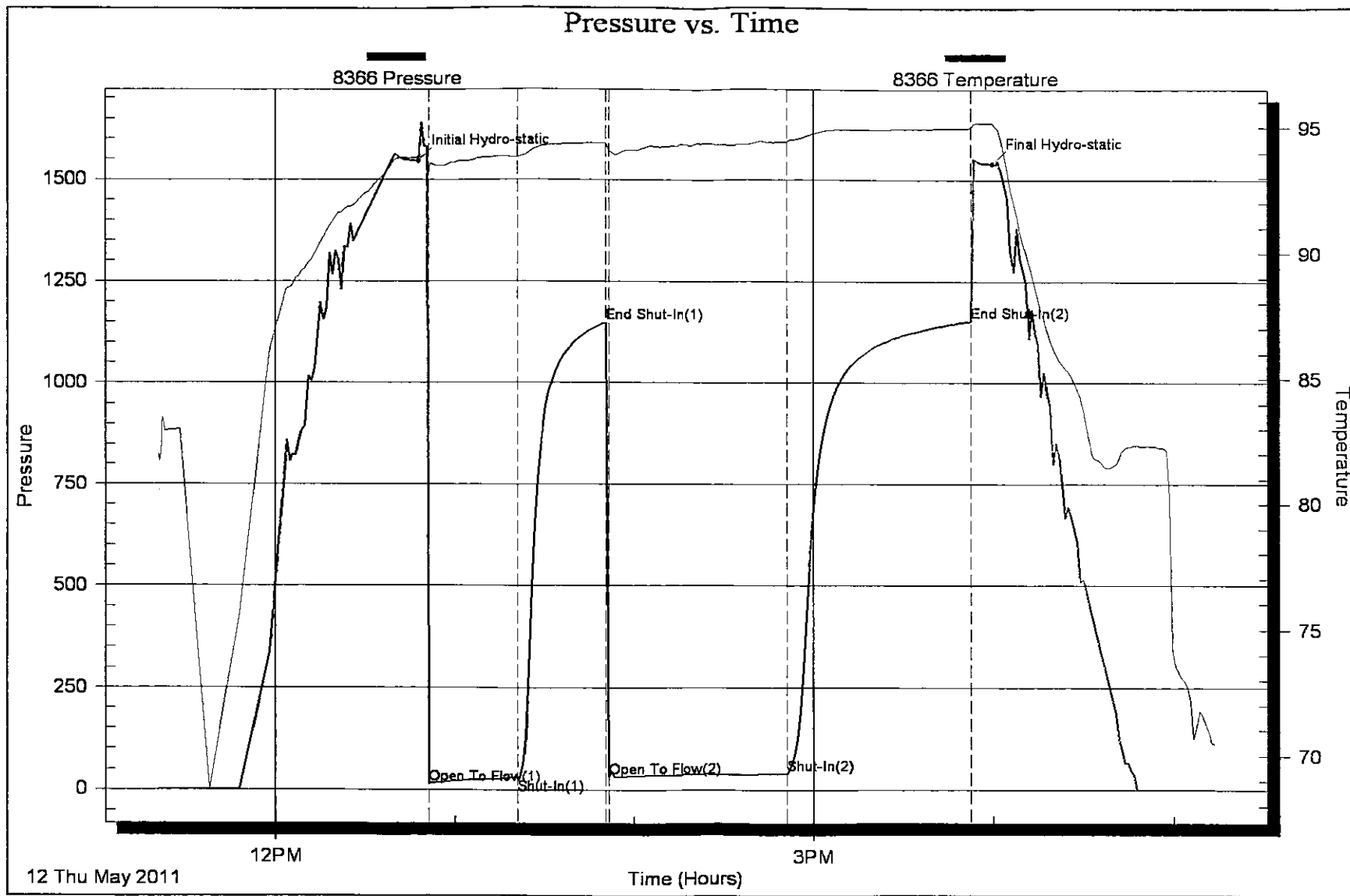
Num Gas Bombs: 0

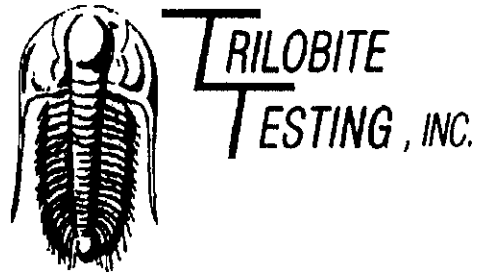
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **John O Farmer**

PO Box 352  
Russell, KS 67665

ATTN: Randy Killian

**18-4-20 Phillips,KS**

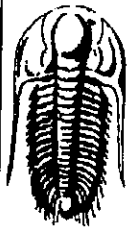
**Hofaker A #2**

Start Date: 2011.05.13 @ 03:08:00

End Date: 2011.05.13 @ 09:39:30

Job Ticket #: 042008      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

John O Farmer

Hofaker A #2

PO Box 352  
Russell, KS 67665

18-4-20 Phillips, KS

Job Ticket: 042008      DST#: 2

ATTN: Randy Killian

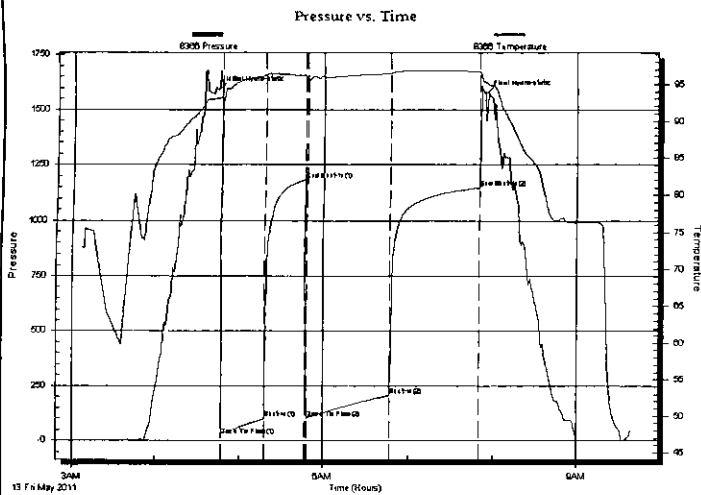
Test Start: 2011.05.13 @ 03:08:00

## GENERAL INFORMATION:

Formation: LKC "A - D"  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:47:30  
 Time Test Ended: 09:39:30  
 Interval: 3325.00 ft (KB) To 3400.00 ft (KB) (TVD)  
 Total Depth: 3400.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole  
 Tester: James Winder  
 Unit No: 46  
 Reference Elevations: 2103.00 ft (KB)  
 2095.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8366** Inside  
 Press@RunDepth: 208.18 psig @ 3326.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.05.13 End Date: 2011.05.13 Last Calib.: 2011.05.13  
 Start Time: 03:08:05 End Time: 09:39:29 Time On Btm: 2011.05.13 @ 04:44:00  
 Time Off Btm: 2011.05.13 @ 07:54:30

**TEST COMMENT:** IF: Blow built to BOB (11") in 15 min.  
 ISI: No blow back  
 FF: Blow built to BOB in 20 min.  
 FSI: No blow back



## PRESSURE SUMMARY

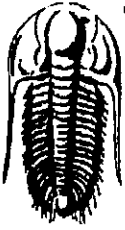
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1591.06	93.08	Initial Hydro-static
4	24.58	92.54	Open To Flow (1)
34	100.98	96.16	Shut-In(1)
63	1182.83	96.16	End Shut-In(1)
64	100.38	95.43	Open To Flow (2)
123	208.18	96.44	Shut-In(2)
187	1146.57	96.72	End Shut-In(2)
191	1573.84	95.31	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	MVW w/trace oil 50%w, 50%m	0.59
186.00	MCW w/trace oil 81%w, 19%m	2.61
162.00	MVW w/trace oil 57%w, 43%m	2.27

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

John O Farmer

**Hofaker A #2**

PO Box 352  
Russell, KS 67665

**18-4-20 Phillips,KS**

Job Ticket: 042008

DST#: 2

ATTN: Randy Killian

Test Start: 2011.05.13 @ 03:08:00

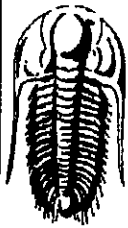
### Tool Information

Drill Pipe:	Length: 3297.00 ft	Diameter: 3.80 inches	Volume: 46.25 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 46.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3325.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3310.00	
Hydraulic tool	5.00			3315.00	
Packer	5.00			3320.00	20.00 Bottom Of Top Packer
Packer	5.00			3325.00	
Stubb	1.00			3326.00	
Recorder	0.00	8366	Inside	3326.00	
Recorder	0.00	8320	Outside	3326.00	
Perforations	5.00			3331.00	
Blank Spacing	64.00			3395.00	
Perforations	2.00			3397.00	
Bullnose	3.00			3400.00	75.00 Bottom Packers & Anchor

**Total Tool Length: 95.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer

Hofaker A #2

PO Box 352  
Russell, KS 67665

18-4-20 Phillips, KS

Job Ticket: 042008

DST#: 2

ATTN: Randy Killian

Test Start: 2011.05.13 @ 03:08:00

## 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:

29000 ppm

Viscosity: 66.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	MW w /trace oil 50%w , 50%m	0.587
186.00	MCW w /trace oil 81%w , 19%m	2.609
162.00	MW w /trace oil 57%w , 43%m	2.272

Total Length: 410.00ft      Total Volume: 5.468 bbl

Num Fluid Samples: 0

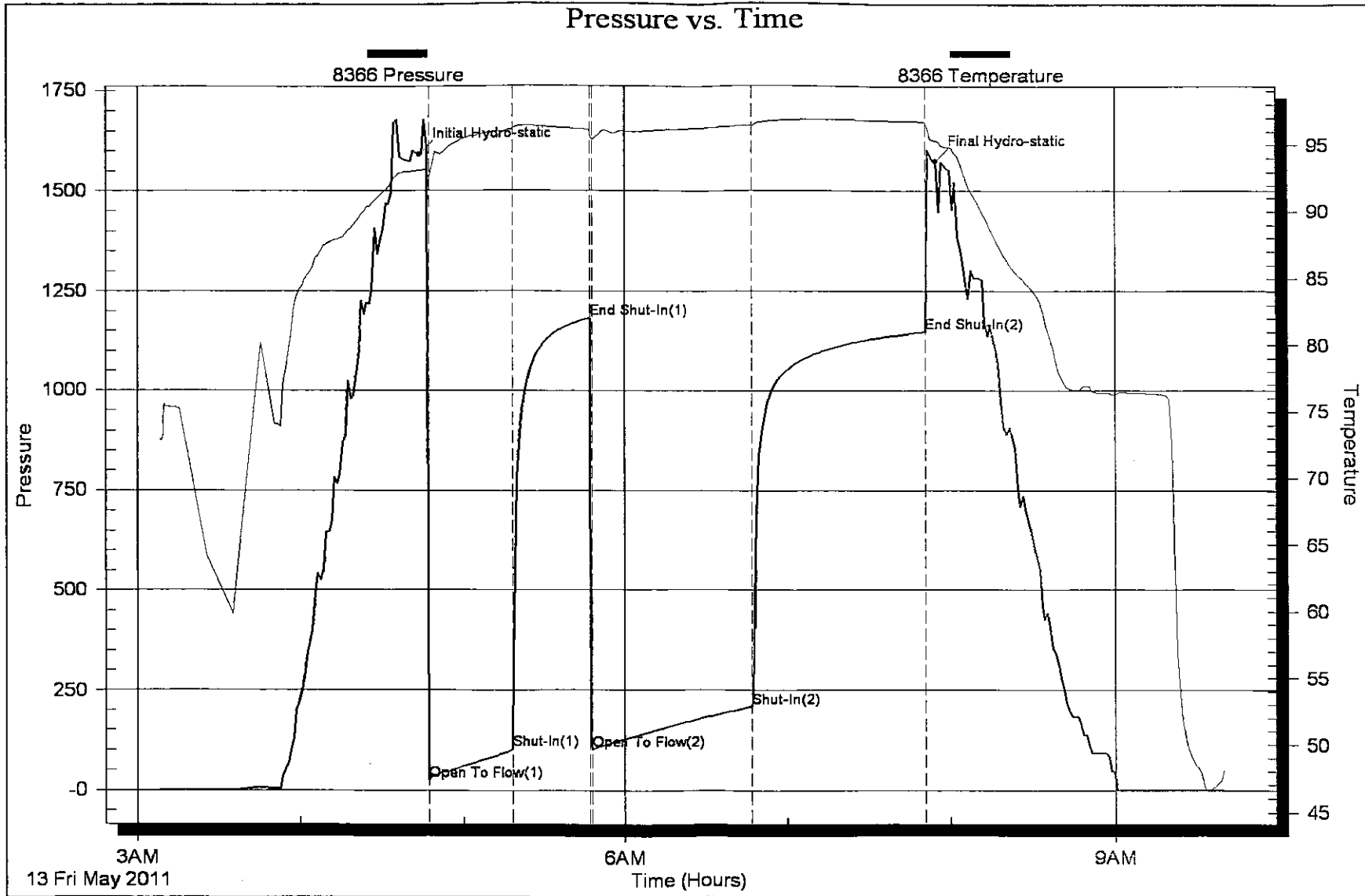
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .326 ohms @ 52.2 deg F





## DRILL STEM TEST REPORT

Prepared For: **John O Farmer**  
PO Box 352  
Russell, KS 67665

ATTN: Randy Killian

**18-4-20 Phillips,KS**

**Hofaker A #2**

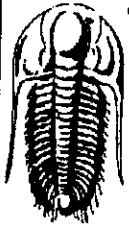
Start Date: 2011.05.13 @ 14:40:00

End Date: 2011.05.13 @ 21:01:00

Job Ticket #: 042009      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

John O Farmer  
 PO Box 352  
 Russell, KS 67665  
 ATTN: Randy Killian

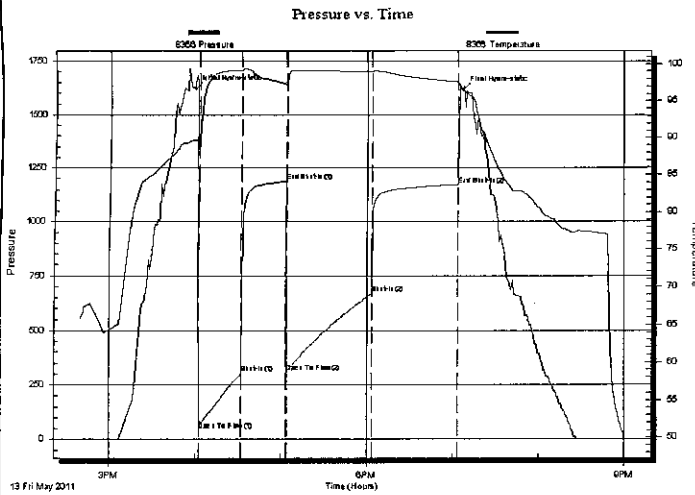
**Hofaker A #2**  
**18-4-20 Phillips,KS**  
 Job Ticket: 042009 **DST#: 3**  
 Test Start: 2011.05.13 @ 14:40:00

## GENERAL INFORMATION:

Formation: **LKC "F"**  
 Deviated: **No Whipstock:** ft (KB) **Test Type:** Conventional Bottom Hole  
 Time Tool Opened: 16:02:30 **Tester:** James Winder  
 Time Test Ended: 21:01:00 **Unit No:** 46  
**Interval:** 3392.00 ft (KB) To 3415.00 ft (KB) (TVD) **Reference Elevations:** 2103.00 ft (KB)  
**Total Depth:** 3415.00 ft (KB) (TVD) **2095.00 ft (CF)**  
**Hole Diameter:** 7.88 inches **Hole Condition:** Fair **KB to GR/CF:** 8.00 ft

**Serial #: 8366** Inside  
 Press@RunDepth: 666.85 psig @ 3393.00 ft (KB) **Capacity:** 8000.00 psig  
 Start Date: 2011.05.13 **End Date:** 2011.05.13 **Last Calib.:** 2011.05.13  
 Start Time: 14:40:05 **End Time:** 21:00:59 **Time On Btm:** 2011.05.13 @ 15:59:00  
**Time Off Btm:** 2011.05.13 @ 19:07:00

**TEST COMMENT:** IF: Blow built to BOB (11") in 3 3/4 min.  
 IS: Blow back built to 1/4"  
 FF: Blow built to BOB in 4 1/2 min.  
 FS: No blow back



## PRESSURE SUMMARY

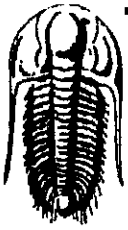
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1620.47	89.61	Initial Hydro-static
4	40.60	89.03	Open To Flow (1)
34	304.23	99.08	Shut-In(1)
64	1187.99	97.27	End Shut-In(1)
65	306.87	97.29	Open To Flow (2)
125	666.85	98.86	Shut-In(2)
185	1172.90	97.56	End Shut-In(2)
188	1613.73	96.47	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
700.00	Water 98%w, 2%m	9.54
560.00	MCW 90%w, 10%m	7.86
135.00	MCW 76%w, 24%m	1.89
0.00	Trace of Oil in very top	0.00

## Gas Rates

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



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer

Hofaker A #2

PO Box 352  
Russell, KS 67665

18-4-20 Phillips, KS

Job Ticket: 042009

DST#: 3

ATTN: Randy Killian

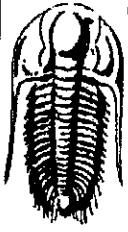
Test Start: 2011.05.13 @ 14:40:00

## Tool Information

Drill Pipe:	Length: 3360.00 ft	Diameter: 3.80 inches	Volume: 47.13 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 47.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3392.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3377.00	
Hydraulic tool	5.00			3382.00	
Packer	5.00			3387.00	20.00 Bottom Of Top Packer
Packer	5.00			3392.00	
Stubb	1.00			3393.00	
Recorder	0.00	8366	Inside	3393.00	
Recorder	0.00	8320	Outside	3393.00	
Perforations	19.00			3412.00	
Bullnose	3.00			3415.00	23.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>43.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer

Hofaker A #2

PO Box 352  
Russell, KS 67665

18-4-20 Phillips,KS

Job Ticket: 042009

DST#: 3

ATTN: Randy Killian

Test Start: 2011.05.13 @ 14:40:00

## 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:

26000 ppm

Viscosity: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
700.00	Water 98%w, 2%m	9.537
560.00	MCW 90%w, 10%m	7.855
135.00	MCW 76%w, 24%m	1.894
0.00	Trace of Oil in very top	0.000

Total Length: 1395.00 ft      Total Volume: 19.286 bbl

Num Fluid Samples: 0

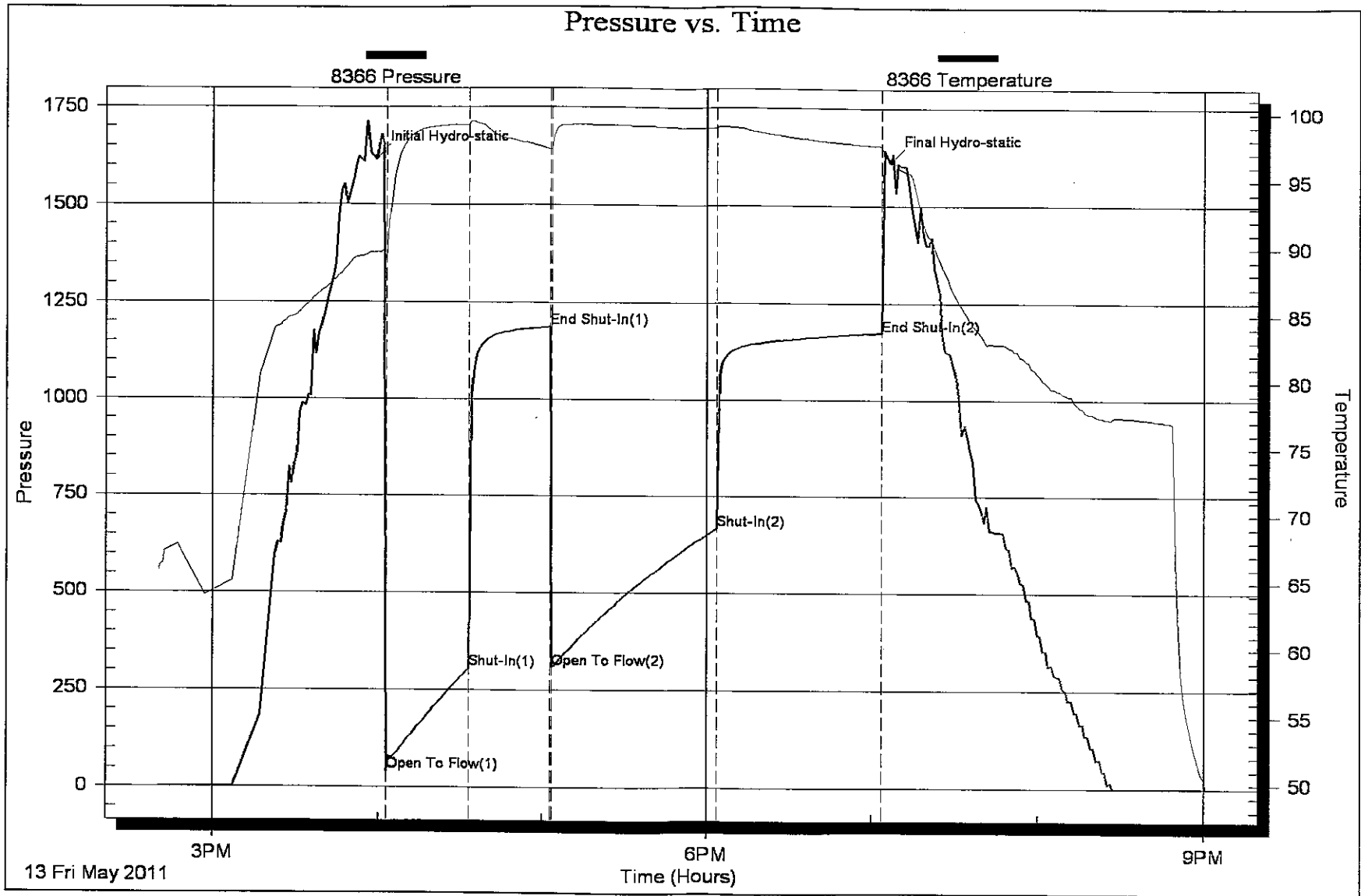
Num Gas Bombs: 0

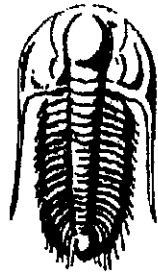
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .329 ohms @ 56 deg F





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **John O Farmer**

PO Box 352  
Russell, KS 67665

ATTN: Randy Killian

**18-4-20 Phillips,KS**

**Hofaker A #2**

Start Date: 2011.05.14 @ 08:42:00

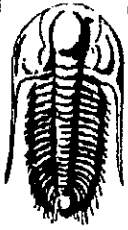
End Date: 2011.05.14 @ 14:47:30

Job Ticket #: 042010      DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

John O Farmer

Hofaker A #2

PO Box 352  
Russell, KS 67665

18-4-20 Phillips, KS

Job Ticket: 042010      DST#: 4

ATTN: Randy Killian

Test Start: 2011.05.14 @ 08:42:00

## GENERAL INFORMATION:

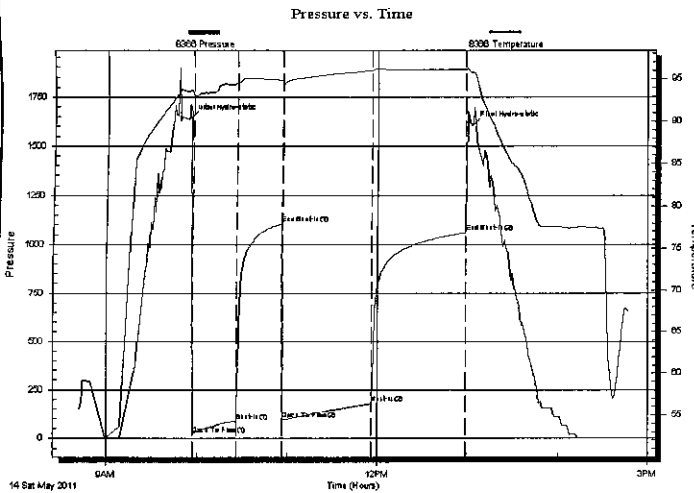
Formation: **LKC "H - L"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:56:30  
 Time Test Ended: 14:47:30  
 Interval: **3437.00 ft (KB) To 3530.00 ft (KB) (TVD)**  
 Total Depth: **3530.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: Fair  
 Test Type: Conventional Bottom Hole  
 Tester: James Winder  
 Unit No: 46  
 Reference Elevations: 2103.00 ft (KB)  
 2095.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8366

Inside

Press@RunDepth: 177.75 psig @ 3438.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2011.05.14      End Date: 2011.05.14      Last Calib.: 2011.05.14  
 Start Time: 08:42:05      End Time: 14:47:29      Time On Btm: 2011.05.14 @ 09:54:00  
 Time Off Btm: 2011.05.14 @ 13:03:30

**TEST COMMENT:** IF: Blow built to BOB (11") in 16 3/4 min.  
 IS: No blow back  
 FF: Blow built to BOB in 20 min.  
 FSI: Blow back built to 1 1/4"



## PRESSURE SUMMARY

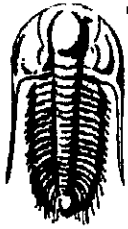
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1639.40	93.61	Initial Hydro-static
3	20.48	92.96	Open To Flow (1)
32	88.35	94.43	Shut-In(1)
63	1106.33	94.86	End Shut-In(1)
63	95.38	94.39	Open To Flow (2)
123	177.75	96.00	Shut-In(2)
186	1060.37	96.05	End Shut-In(2)
190	1606.80	95.72	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbbl)
30.00	SOMCM 62% m, 32% w, 3% o, 3% g	0.15
90.00	MCW 75% w, 24% m, 1% o	1.25
125.00	OWCM 62% m, 29% w, 5% g, 4% o	1.75
70.00	OCM 87% m, 10% o, 3% g	0.98
35.00	CO 85% o, 8% g, 7% m	0.49

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

John O Farmer

**Hofaker A #2**

PO Box 352  
Russell, KS 67665

**18-4-20 Phillips,KS**

Job Ticket: 042010

**DST#: 4**

ATTN: Randy Killian

Test Start: 2011.05.14 @ 08:42:00

**Tool Information**

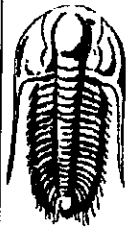
Drill Pipe:	Length: 3391.00 ft	Diameter: 3.80 inches	Volume: 47.57 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	76000.00 lb
			<u>Total Volume: 47.72 bbl</u>	Tool Chased	5.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3437.00 ft			Final	57000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	93.00 ft				
Tool Length:	113.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

**Tool Comments:**

Tool slid 5 or 6 feet to bottom before opening - No mud loss

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3422.00	
Hydraulic tool	5.00			3427.00	
Packer	5.00			3432.00	20.00 Bottom Of Top Packer
Packer	5.00			3437.00	
Stubb	1.00			3438.00	
Recorder	0.00	8366	Inside	3438.00	
Recorder	0.00	8320	Outside	3438.00	
Perforations	24.00			3462.00	
Blank Spacing	64.00			3526.00	
Perforations	1.00			3527.00	
Bullnose	3.00			3530.00	93.00 Bottom Packers & Anchor

**Total Tool Length: 113.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer

Hofaker A #2

PO Box 352  
Russell, KS 67665

18-4-20 Phillips, KS

Job Ticket: 042010

DST#: 4

ATTN: Randy Killian

Test Start: 2011.05.14 @ 08:42:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

23.8 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

30000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.55 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	SO/WCM 62% m, 32% w, 3% o, 3% g	0.148
90.00	MCW 75% w, 24% m, 1% o	1.253
125.00	OWCM 62% m, 29% w, 5% g, 4% o	1.753
70.00	OCM 87% m, 10% o, 3% g	0.982
35.00	CO 85% o, 8% g, 7% m	0.491

Total Length: 350.00 ft      Total Volume: 4.627 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 25 api @ 72 deg F

RW = .246 ohms @ 67.5 deg F



