



KANSAS CORPORATION COMMISSION 1102838  
OIL & GAS CONSERVATION DIVISION

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 # 31341  
Name: Craig, Ward dba Craig Oil Company  
Address 1: 15 S MAIN  
Address 2: \_\_\_\_\_  
City: RUSSELL State: KS Zip: 67665 + 2901  
Contact Person: Ward Craig  
Phone: ( 785 ) 483-1543  
CONTRACTOR: License # 33905  
Name: Royal Drilling Inc  
Wellsite Geologist: Jeff Lawler  
Purchaser: parmon

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 #: \_\_\_\_\_  
11/2/2012    11/8/2012    11/8/2012  
Spud Date or    Date Reached TD    Completion Date or  
Recompletion Date       Recompletion Date

API No. 15 - 15-167-23833-00-00  
Spot Description: \_\_\_\_\_  
NE\_NW\_SW\_NW Sec. 7 Twp. 15 S. R. 13  East  West  
1610 Feet from  North /  South Line of Section  
615 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE  NW  SE  SW  
County: Russell  
Lease Name: Krug Well #: 10  
Field Name: \_\_\_\_\_  
Producing Formation: N/A  
Elevation: Ground: 1862 Kelly Bushing: 1871  
Total Depth: 3365 Plug Back Total Depth: \_\_\_\_\_  
Amount of Surface Pipe Set and Cemented at: 418 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: 80000 ppm Fluid volume: 600 bbls  
Dewatering method used: Evaporated  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: \_\_\_\_\_  
Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_  
Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**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.

Submitted Electronically

**KCC Office Use ONLY**

Letter of Confidentiality Received  
Date: \_\_\_\_\_  
 Confidential Release Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: Deanna Garrison Date: 01/16/2013

1102838

Operator Name: Craig, Ward dba Craig Oil Company Lease Name: Krug Well #: 10  
 Sec. 7 Twp. 15 S. R. 13  East  West County: Russell

**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 type="checkbox"/> Yes <input checked="" 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:  RAG LOG SONIC LOG	<input 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></td> <td>841</td> <td>-1030</td> </tr> <tr> <td>topeka</td> <td>2752</td> <td>-881</td> </tr> <tr> <td>LKC</td> <td>3045</td> <td>-1174</td> </tr> <tr> <td>BKC</td> <td>3290</td> <td>-1419</td> </tr> <tr> <td>ARBUCKLE</td> <td>3319</td> <td>-1448</td> </tr> </tbody> </table>	Name	Top	Datum		841	-1030	topeka	2752	-881	LKC	3045	-1174	BKC	3290	-1419	ARBUCKLE	3319	-1448
Name	Top	Datum																	
	841	-1030																	
topeka	2752	-881																	
LKC	3045	-1174																	
BKC	3290	-1419																	
ARBUCKLE	3319	-1448																	

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	12.25	8.625	23	418	Common	225	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)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
---	---	--

# QUALITY OILWELL CEMENTING, INC.

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

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

No. 8178

Date	11-3-12	Sec.	7	Twp.	15	Range	13	County	Russell	State	Ks	On Location		Finish	3:00 AM
------	---------	------	---	------	----	-------	----	--------	---------	-------	----	-------------	--	--------	---------

Lease King Well No. 10 Location Russell, Ks - S to Winter set Rd, 1 1/2 E to 187th, 1 3/4 N, E 1/4 into

Contractor Royal #2 To Quality Oilwell Cementing, Inc.  
Type Job Sustace 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 1/2" T.D. 418' Charge To Ward Craig  
Csg. Depth 418' Street

Tbg. Size Depth City State  
Tool 2 Depth 200 The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 20' Shoe Joint 20' Cement Amount Ordered 225 5x Common 3% CC

Meas Line Displace 25 1/2 BUS 2% Gel

EQUIPMENT			Common
Pumptrk	9	No. Cementer Helper <u>Cody</u>	Poz. Mix
Bulktrk	10	No. Driver <u>King</u>	Gel
Bulktrk	10	No. Driver <u>King</u>	Calcium

JOB SERVICES & REMARKS  
Remarks Cement did Circulate Salt

Rat Hole Flowseal

Mouse Hole Kol-Seal

Centralizers Mud CLR 48

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

Handling

Mileage

### FLOAT EQUIPMENT

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge

Mileage

Tax

Discount

Signature Ward Craig Total Charge

# QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025  
Call 785-324-1041

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

No. 3171

Date	11-8-12	Sec.	7	Twp.	15	Range	13	County	RUSSELL	State	KANSAS	On Location		Finish	7:00 Pm.
------	---------	------	---	------	----	-------	----	--------	---------	-------	--------	-------------	--	--------	----------

Location RUSSELL TO MARIETTA ROAD 1/2 MI E/TOWN

Lease	<u>KEUG</u>	Well No.	<u>#10</u>	Owner	<u>WARREN CROTT</u>
-------	-------------	----------	------------	-------	---------------------

Contractor QUAL #2  
To Quality Oilwell Cementing, Inc.  
Type Job P.T.A  
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	<u>7 7/8"</u>	T.D.	<u>3365</u>	Charge To	<u>WARREN CROTT</u>
-----------	---------------	------	-------------	-----------	---------------------

Csg.	<u>4 1/2"</u>	Depth		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.	Shoe Joint	Cement Amount Ordered	<u>205 bbl / 40,000 lbs 4 1/2" x 4 1/2"</u>
---------------------	------------	-----------------------	---

Meas Line	Displace	
-----------	----------	--

**EQUIPMENT**

Pumptrk	<u>#15</u>	No.	<u>Cementer</u>	Common
			<u>Helper NICK</u>	Poz. Mix
Bulktrk	<u>#12</u>	No.	<u>Driver LONNIE W.</u>	Gel.
Bulktrk	<u>PU</u>	No.	<u>Driver C. S. CO.</u>	Calcium

**JOB SERVICES & REMARKS**

Remarks: Hulls Salt

Rat Hole Flowseal

Mouse Hole Kol-Seal

Centralizers Mud CLR 48

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

1st @ 3318' 25 SKS Handling

2nd @ 860' 25 SKS Mileage

3rd @ 470' 100 SKS

4th @ 40' 10 SKS Guide Shoe

RH 30 SKS Centralizer

MH 15 SKS Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge

Mileage

X Signature Robert P. ...

Tax  
Discount  
Total Charge



## DRILL STEM TEST REPORT

Prepared For: **Craig Oil Company**

15 South Main  
Russell, Kansas 67665+2901

ATTN: Jeff Lawler

**Krug #10**

**7/15S/13W/Russell**

Start Date: 2012.11.07 @ 16:19:00

End Date: 2012.11.07 @ 20:57:30

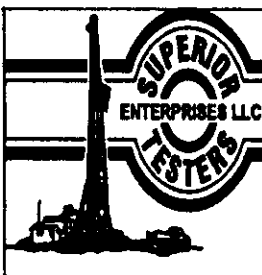
Job Ticket #: 16911                      DST #: 1

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2012.11.11 @ 08:26:48

Craig Oil Company      7/15S/13W/Russell      Krug #10      DST # 1      Arbuckle      2012.11.07





# DRILL STEM TEST REPORT

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67665+2901  
 ATTN: Jeff Lawler

7/15S/13W/Russell  
 Krug #10  
 Job Ticket: 16911      DST#: 1  
 Test Start: 2012.11.07 @ 16:19:00

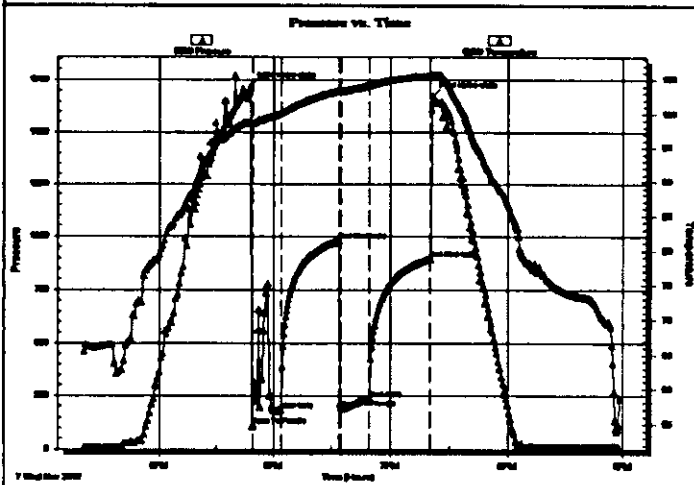
## GENERAL INFORMATION:

Formation: Arbutckle  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Straddle (Initial)  
 Time Tool Opened: 17:49:00      Tester: Ken Swinney  
 Time Test Ended: 20:57:30      Unit No: 3325 Great Bend/64  
 Interval: 3283.00 ft (KB) To 3340.00 ft (KB) (TVD)      Reference Elevations: 1869.00 ft (KB)  
 Total Depth: 3365.00 ft (KB) (TVD)      1862.00 ft (CF)  
 Hole Diameter: 7.80 inches Hole Condition: Fair      KB to GR/CF: 7.00 ft

## Serial #: 6999

Press@RunDepth: 897.17 psia @ ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2012.11.07      End Date: 2012.11.07      Last Calib.: 2012.11.07  
 Start Time: 16:20:00      End Time: 20:58:00      Time On Btm: 2012.11.07 @ 17:48:30  
 Time Off Btm: 2012.11.07 @ 19:21:30

TEST COMMENT: 1ST Open 15 Minutes/Good blow/Blow built to bottom of bucket in 5 minutes  
 1ST Shut In 30 Minutes/No blow back  
 2ND Open 15 Minutes/Good blow/Blow built to bottom of bucket in 5 minutes  
 2ND Shut In 30 Minutes/No blow back



## PRESSURE SUMMARY

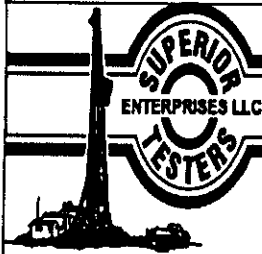
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1723.23	98.78	Initial Hydro-static
1	112.13	98.52	Open To Flow (1)
16	183.96	100.10	Shut-in(1)
46	979.34	103.40	End Shut-in(1)
47	192.09	103.32	Open To Flow (2)
61	237.96	104.15	Shut-in(2)
92	897.17	105.54	End Shut-in(2)
93	1674.70	105.70	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%	0.42
600.00	Muddy Water with skim of oil	8.42
0.00	Mud 45% Water 54% Oil 1%	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcfd)



# DRILL STEM TEST REPORT

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67665+2901  
 ATTN: Jeff Lawler

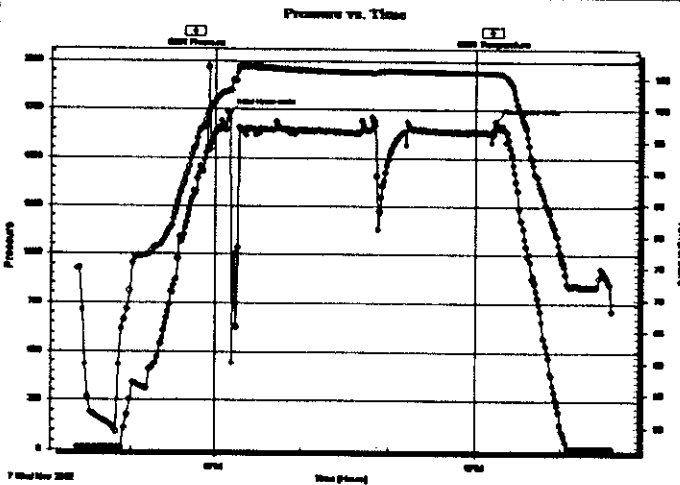
7/15S/13W/Russell  
 Krug #10  
 Job Ticket: 16911 DST#: 1  
 Test Start: 2012.11.07 @ 16:19:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: **No Whipstock:** ft (KB)  
 Time Tool Opened: 17:49:00  
 Time Test Ended: 20:57:30  
 Interval: **3283.00 ft (KB) To 3340.00 ft (KB) (TVD)**  
 Total Depth: **3365.00 ft (KB) (TVD)**  
 Hole Diameter: **7.80 inches** Hole Condition: **Fair**  
 Test Type: **Conventional Straddle (Initial)**  
 Tester: **Ken Swinney**  
 Unit No: **3325 Great Bend/64**  
 Reference Elevations: **1869.00 ft (KB)**  
**1862.00 ft (CF)**  
 KB to GR/CF: **7.00 ft**

Serial #: **6651** Below  
 Press@RunDepth: psia @ **3360.28 ft (KB)** Capacity: **5000.00 psia**  
 Start Date: **2012.11.07** End Date: **2012.11.08** Last Calib.: **2012.11.11**  
 Start Time: **16:20:00** End Time: **03:44:23** Time On Btm: **2012.11.07 @ 18:10:30**  
 Time Off Btm: **2012.11.07 @ 21:14:00**

TEST COMMENT: 1ST Open 15 Minutes/Good blow/Blow built to bottom of bucket in 5 minutes  
 1ST Shut in 30 Minutes/No blow back  
 2ND Open 15 Minutes/Good blow/Blow built to bottom of bucket in 5 minutes  
 2ND Shut in 30 Minutes/No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1732.27	103.23	Initial Hydro-static
184	1690.52	105.86	Final Hydro-static

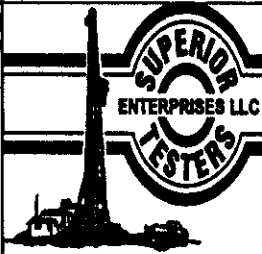
## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%	0.42
600.00	Muddy Water with skim of oil	8.42
0.00	Mud 45% Water 54% Oil 1%	0.00

## Gas Rates

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





# DRILL STEM TEST REPORT

TOOL DIAGRAM

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67665+2901  
 ATTN: Jeff Lawler

7/15S/13W/Russell  
 Krug #10  
 Job Ticket: 16911      DST#: 1  
 Test Start: 2012.11.07 @ 16:19:00

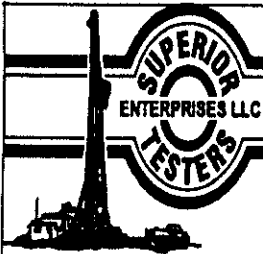
**Tool Information**

Drill Pipe:	Length: 3291.00 ft	Diameter: 3.80 inches	Volume: 46.16 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 46.16 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	24.80 ft			String Weight: Initial 33000.00 lb
Depth to Top Packer:	3283.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	3337.10 ft			
Interval between Packers:	54.10 ft			
Tool Length:	97.08 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3271.20	
Hydraulic Tool	5.00			3276.20	
Packer	5.00			3281.20	16.80      Bottom Of Top Packer
Packer	1.80			3283.00	
Perforations	5.00			3288.00	
Change over sub	0.64			3288.64	
Drill Pipe	30.50			3319.14	
Change over sub	0.66			3319.80	
Handling sub	5.00			3324.80	
Perforations	10.00			3334.80	
Recorder	0.00	6748	Inside	3334.80	
Recorder	0.00	6749	Inside	3334.80	
Blank Off Sub	0.67			3335.47	
Travel Collar	1.63			3337.10	
Packer	1.60			3338.70	54.10      Tool Interval
Packer	1.58			3340.28	
Perforations	20.00			3360.28	
Recorder	0.00	6651	Below	3360.28	
Bullnose	3.00			3363.28	26.18      Bottom Packers & Anchor

**Total Tool Length: 97.08**



# DRILL STEM TEST REPORT

FLUID SUMMARY

Craig Oil Company  
15 South Main  
Russell, Kansas 67665+2901  
ATTN: Jeff Lawler

7/15S/13W/Russell  
Krug #10  
Job Ticket: 16911      DST#: 1  
Test Start: 2012.11.07 @ 16:19:00

## 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: 63.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 3000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud 100%	0.421
600.00	Muddy Water with skim of oil	8.416
0.00	Mud 45% Water 54% Oil 1%	0.000

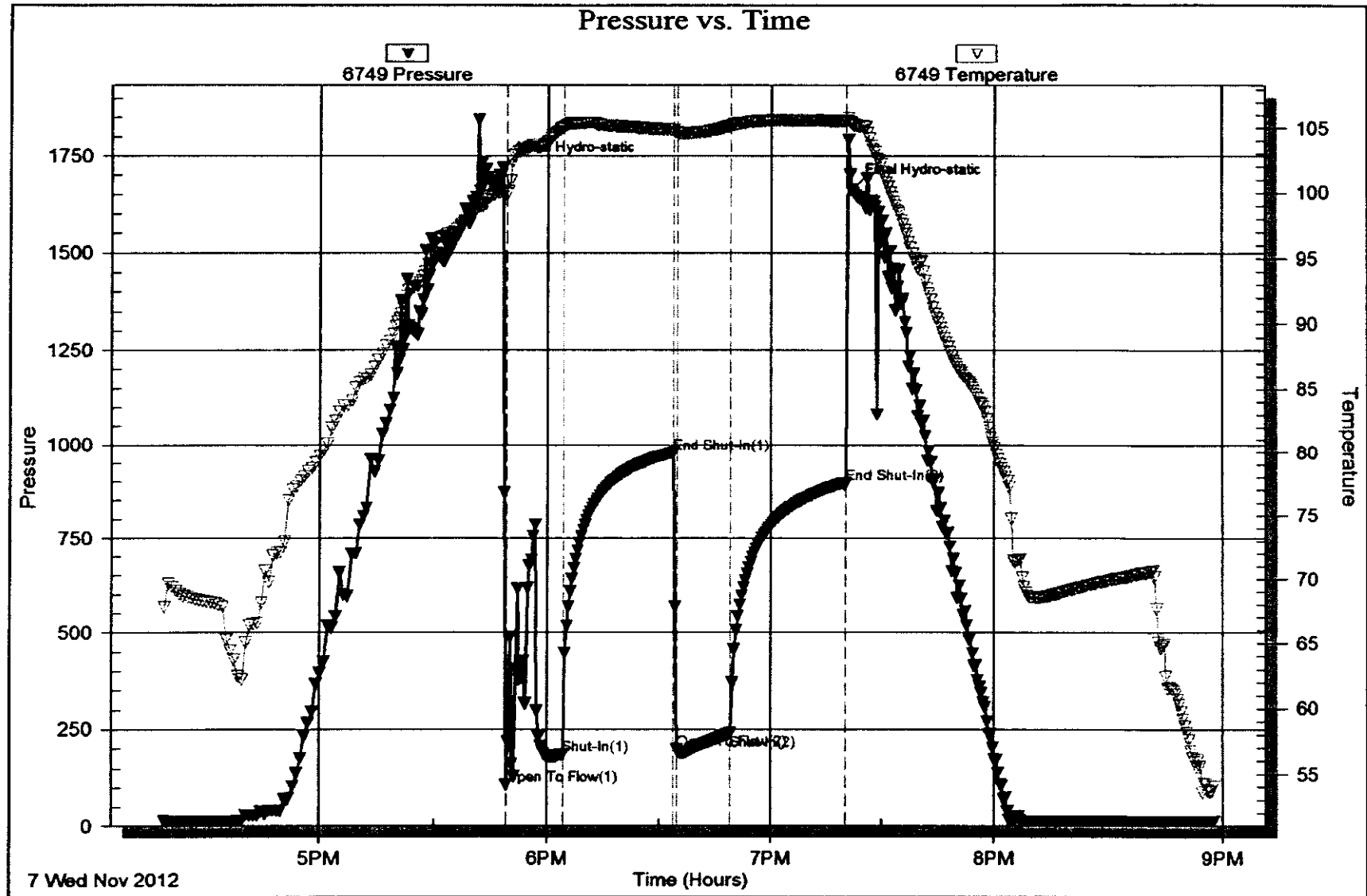
Total Length: 630.00 ft      Total Volume: 8.837 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

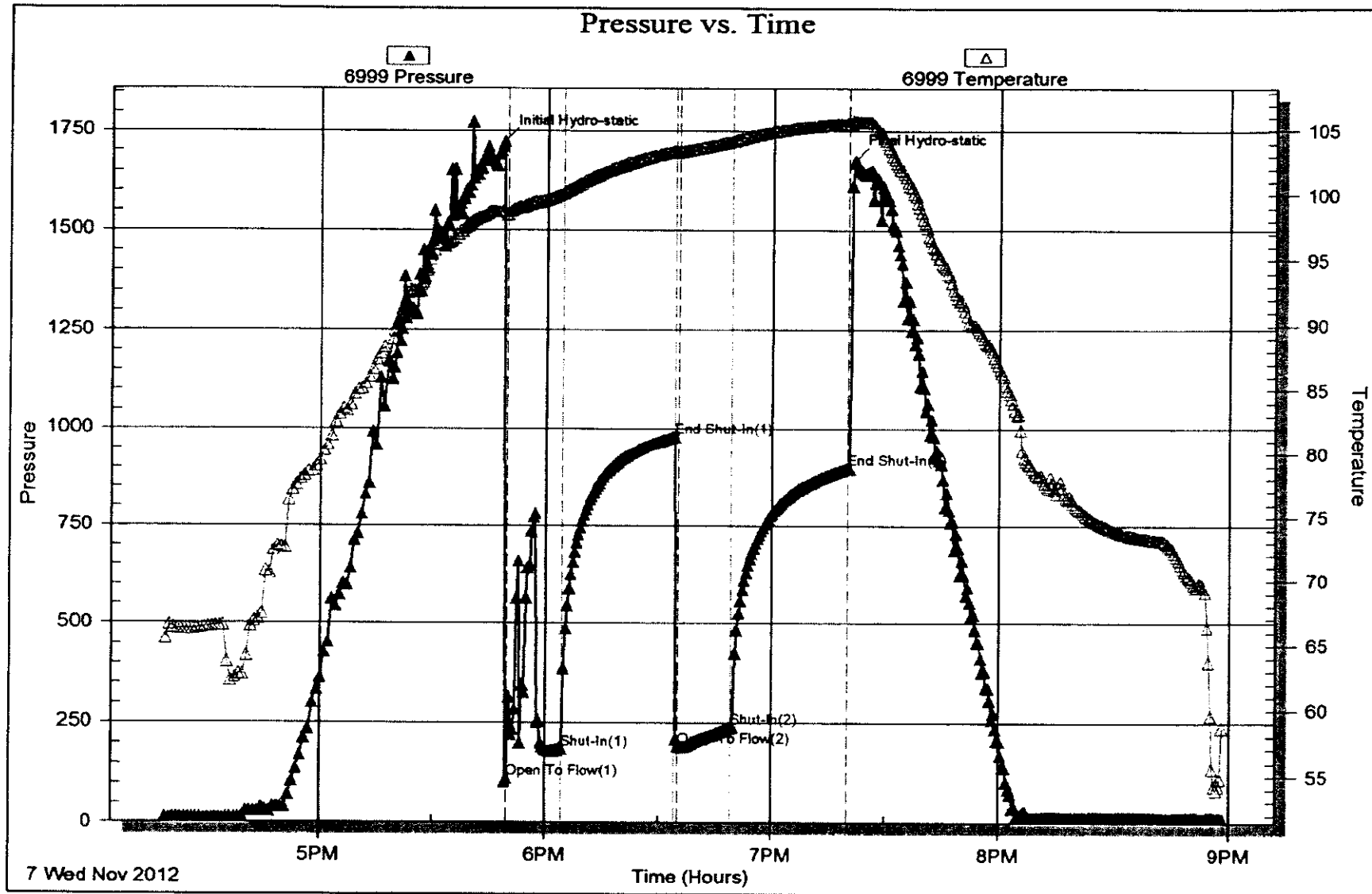
Serial #: 6749

Inside Craig Oil Company

Krug #10

DST Test Number: 1



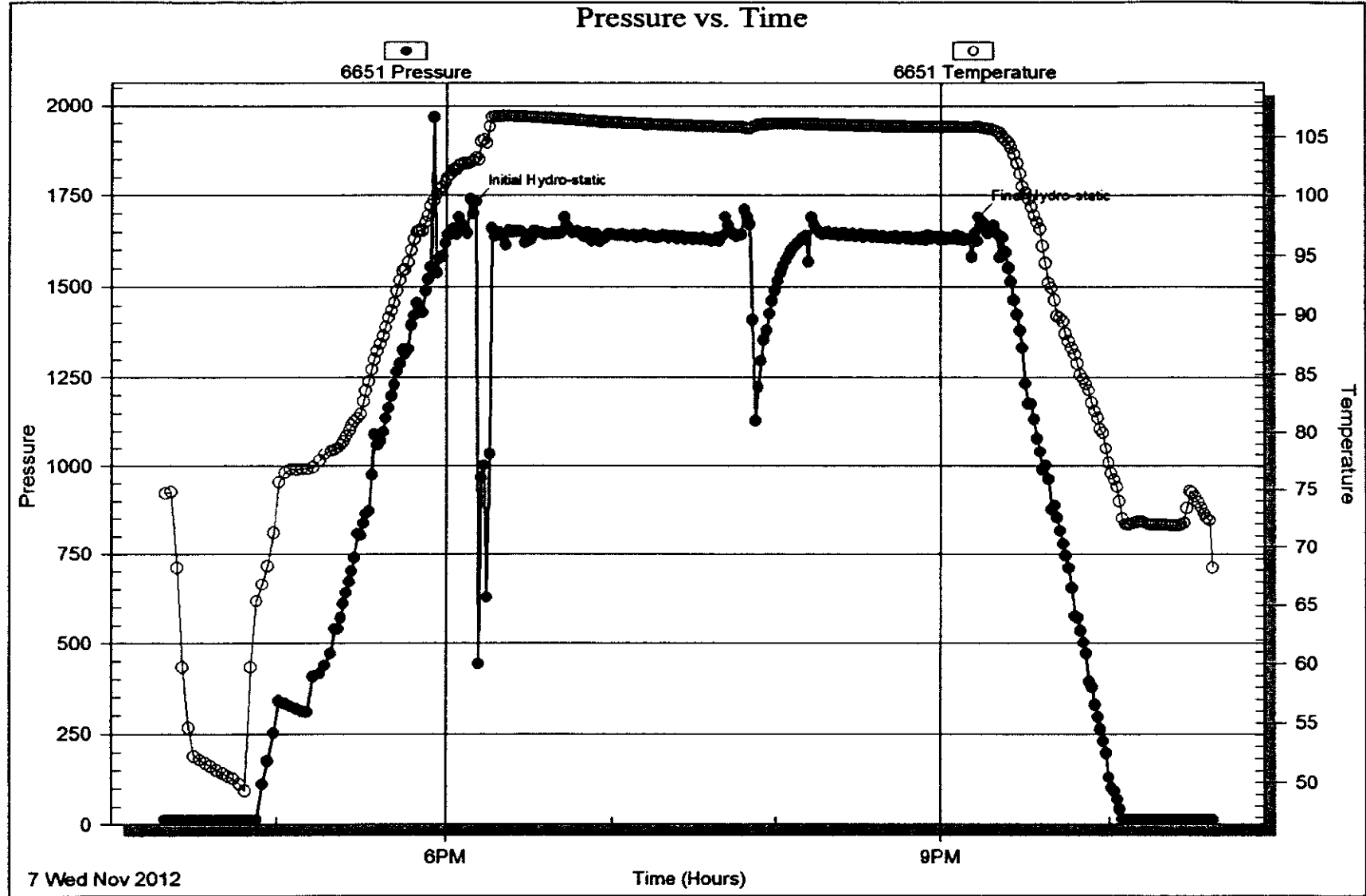


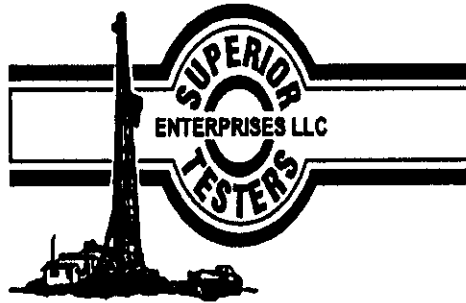
Serial #: 6651

Below Craig Oil Company

Krug #10

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Craig Oil Company**

15 South Main  
Russell, Kansas 67665+2901

ATTN: Jeff Lawler

**Krug #10**

**7/15S/13W/Russell**

Start Date: 2012.11.07 @ 00:00:00

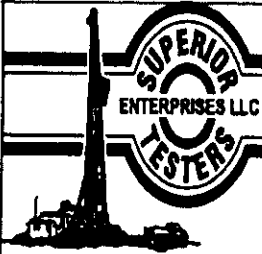
End Date:

Job Ticket #: 16912                      DST #: 2

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2012.11.11 @ 08:27:33

Craig Oil Company  
7/15S/13W/Russell  
Krug #10  
DST # 2  
Arbuckle  
2012.11.07



# DRILL STEM TEST REPORT

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67685+2901  
 ATTN: Jeff Lawler

7/15S/13W/Russell  
 Krug #10  
 Job Ticket: 16912      DST#: 2  
 Test Start: 2012.11.07 @ 00:00:00

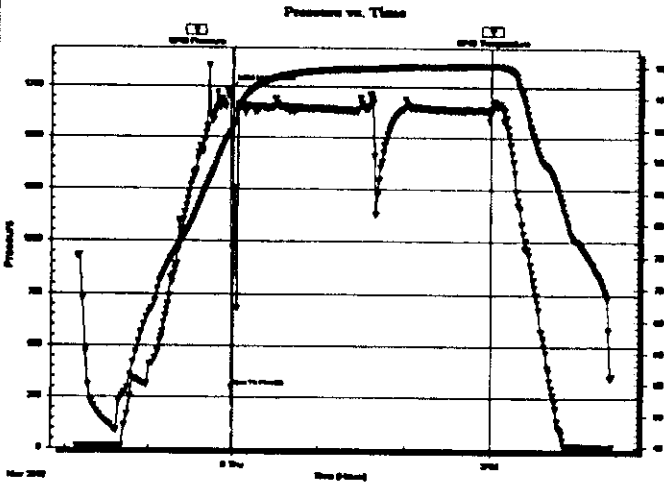
## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: **No Whipstock:**      ft (KB)  
 Time Tool Opened:  
 Time Test Ended:  
 Interval: **3331.00 ft (KB) To 3341.00 ft (KB) (TVD)**  
 Total Depth: **3365.00 ft (KB) (TVD)**  
 Hole Diameter: **7.80 inches** Hole Condition: **Poor**

Test Type: **Conventional Straddle (Initial)**  
 Tester: **Ken Swinney**  
 Unit No: **3325 Great Bend/64**  
 Reference Elevations:      **1869.00 ft (KB)**  
    **1862.00 ft (CF)**  
 KB to GR/CF:      **7.00 ft**

Serial #: **6749**      Inside  
 Press@RunDepth:      psia @      **3335.00 ft (KB)**  
 Start Date:      **2012.11.07**      End Date:      **2012.11.08**  
 Start Time:      **22:08:00**      End Time:      **04:25:30**  
 Capacity:      **5000.00 psia**  
 Last Calib.:      **2012.11.08**  
 Time On Btm:      **2012.11.07 @ 23:58:00**  
 Time Off Btm:

TEST COMMENT: 1ST Open      30 Minutes/Weak blow /Blow built to 4 1/2 inches then died to 4 inches  
 1ST Shut in      60 Minutes/No blow back  
 2ND Open      30 Minutes/Dead no blow /Flush tool/Weak surface blow died in 7 minutes  
 2ND Shut in      60 Minutes/No blow back



## PRESSURE SUMMARY

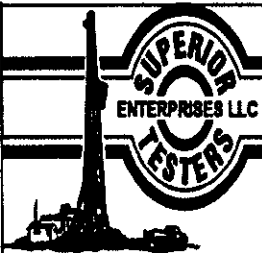
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1732.22	94.74	Initial Hydro-static
1	300.69	94.55	Open To Flow (1)

## Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud 100%	0.49

## Gas Rates

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



## DRILL STEM TEST REPORT

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67665+2901  
 ATTN: Jeff Lawler

**7/15S/13W/Russell**  
**Krug #10**  
 Job Ticket: 16912          DST#: 2  
 Test Start: 2012.11.07 @ 00:00:00

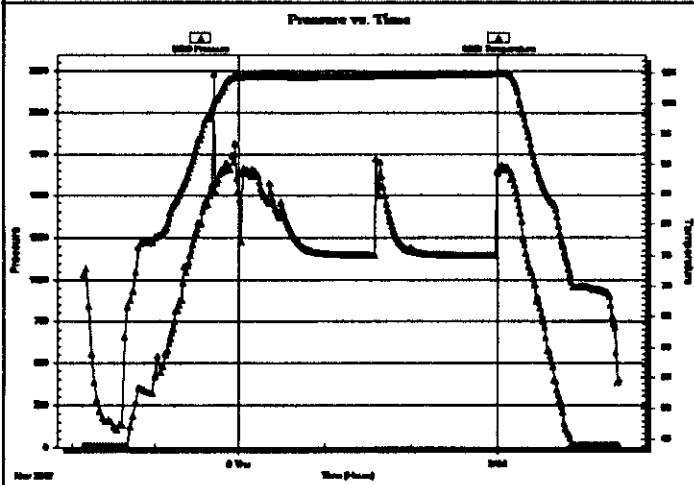
**GENERAL INFORMATION:**

Formation:      **Arbuckle**  
 Deviated:      **No Whipstock:**                  **ft (KB)**  
 Time Tool Opened:  
 Time Test Ended:  
 Interval:      **3331.00 ft (KB) To 3341.00 ft (KB) (TVD)**  
 Total Depth:      **3365.00 ft (KB) (TVD)**  
 Hole Diameter:      **7.80 inches** Hole Condition: **Poor**

Test Type: **Conventional Straddle (Initial)**  
 Tester:      **Ken Sw Inney**  
 Unit No:      **3325 Great Bend/64**  
 Reference Elevations:      **1869.00 ft (KB)**  
     **1862.00 ft (CF)**  
 KB to GR/CF:                  **7.00 ft**

**Serial #: 6999**      **Below**  
 Press@RunDepth:      **psia @ 3359.48 ft (KB)**      Capacity:                          **5000.00 psia**  
 Start Date:                  **2012.11.07**      End Date:                          **2012.11.08**      Last Calib.:                      **2012.11.08**  
 Start Time:                  **22:08:00**      End Time:                          **04:26:00**      Time On Btm:                      **Time Off Btm:**

**TEST COMMENT:** 1ST Open      30 Minutes/Weak blow /Blow built to 4 1/2 inches then died to 4 inches  
 1ST Shut in      60 Minutes/No blow back  
 2ND Open      30 Minutes/Dead no blow /Flush tool/Weak surface blow died in 7 minutes  
 2ND Shut in      60 Minutes/No blow back



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation

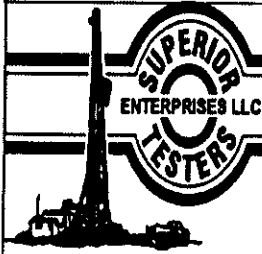
**Recovery**

Length (ft)	Description	Volume (bbl)
35.00	Mud 100%	0.49

**Gas Rates**

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





# DRILL STEM TEST REPORT

TOOL DIAGRAM

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67665+2901  
 ATTN: Jeff Lawler

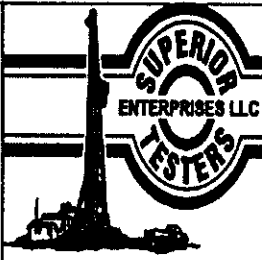
7/15S/13W/Russell  
 Krug #10  
 Job Ticket: 16912      DST#: 2  
 Test Start: 2012.11.07 @ 00:00:00

**Tool Information**

Drill Pipe:	Length: 3322.00 ft	Diameter: 3.80 inches	Volume: 46.60 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 46.60 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	7.80 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3331.00 ft			Final 33000.00 lb
Depth to Bottom Packer:	3362.48 ft			
Interval between Packers:	31.48 ft			
Tool Length:	48.28 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3319.20	
Hydraulic Tool	5.00			3324.20	
Packer	5.00			3329.20	16.80      Bottom Of Top Packer
Packer	1.80			3331.00	
Perforations	4.00			3335.00	
Recorder	0.00	6651	Inside	3335.00	
Recorder	0.00	6749	Inside	3335.00	
Blank Off Sub	0.67			3335.67	
Travel Collar	1.63			3337.30	
Packer Anchor Side	1.60			3338.90	
Packer Tail Side	1.58			3340.48	
Handling Sub	5.00			3345.48	
Perforations	14.00			3359.48	
Recorder	0.00	6999	Below	3359.48	
Bullnose	3.00			3362.48	31.48      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>48.28</b>				



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Craig Oil Company

7/15S/13W/Russell

15 South Main  
Russell, Kansas 67665+2901

Krug #10

Job Ticket: 16912

DST#: 2

ATTN: Jeff Lawler

Test Start: 2012.11.07 @ 00:00:00

### 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: 63.00 sec/qt

Cushion Volume:

bbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbl
35.00	Mud 100%	0.491

Total Length: 35.00 ft

Total Volume: 0.491 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

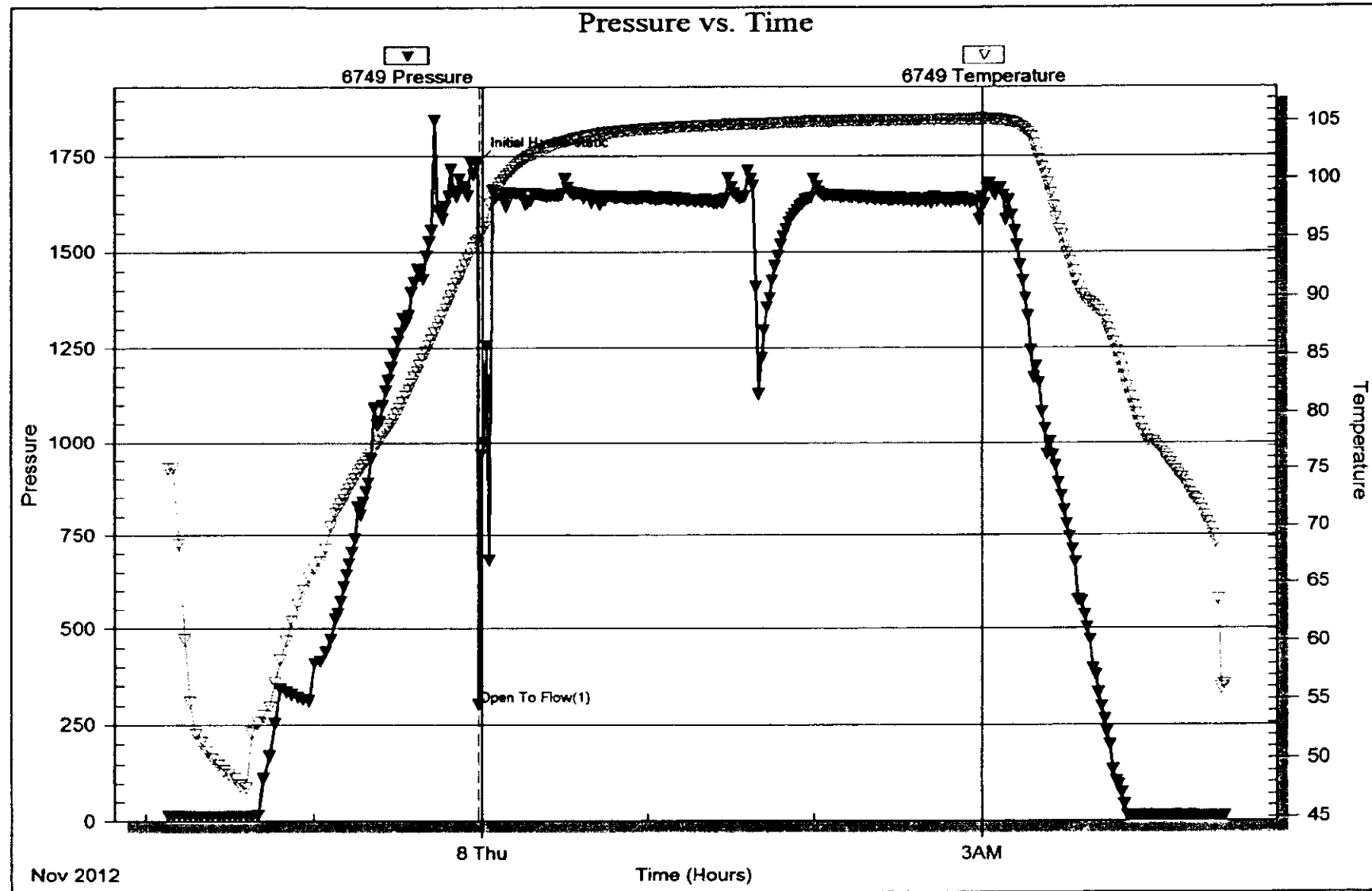
Recovery Comments:

Serial #: 6749

Inside Craig Oil Company

Krug #10

DST Test Number: 2

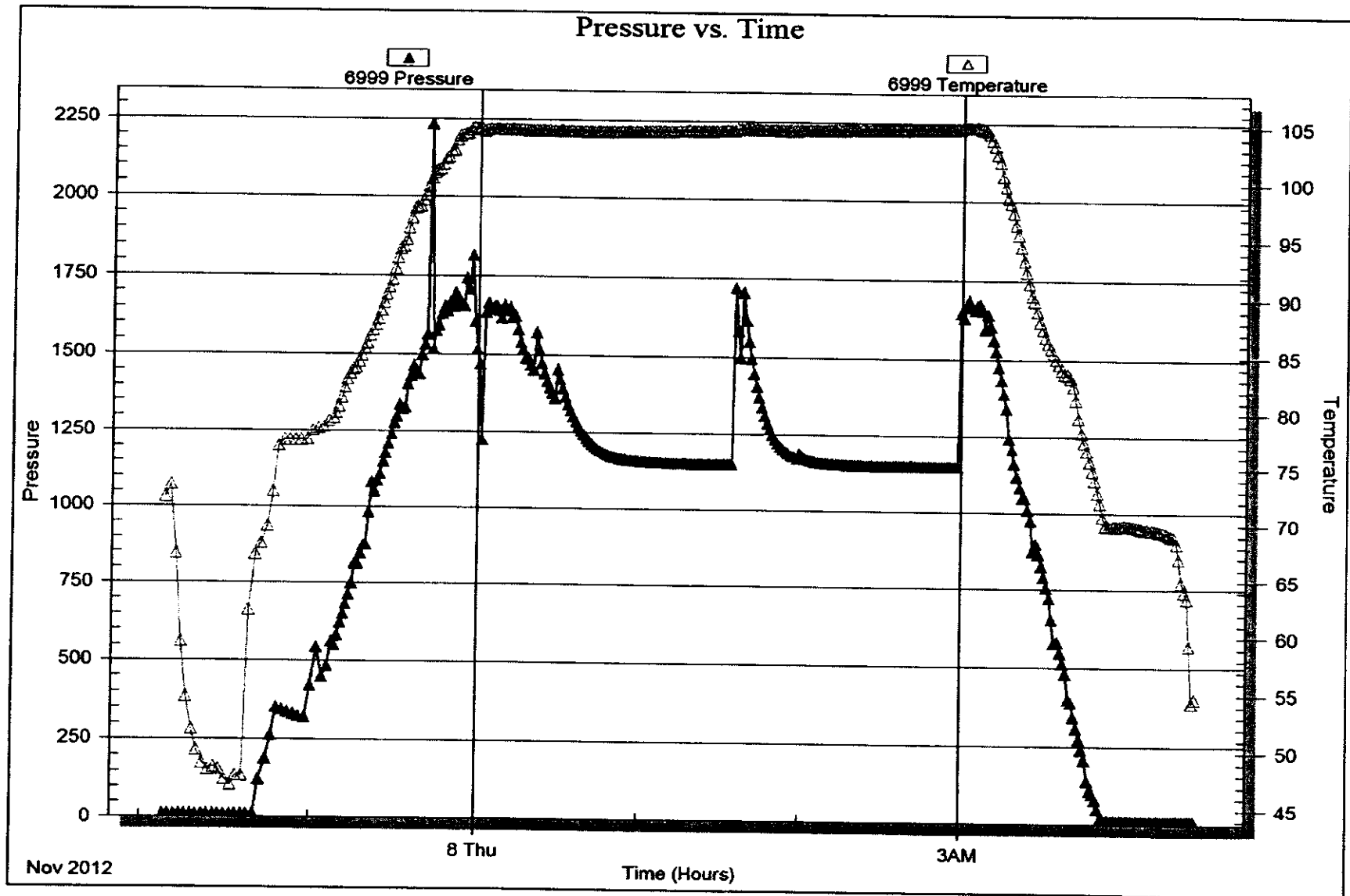


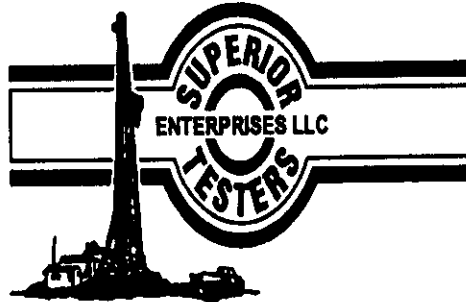
Serial #: 6999

Below Craig Oil Company

Krug #10

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Craig Oil Company**  
15 South Main  
Russell, Kansas 67665+2901

ATTN: Jeff Lawler

**Krug #10**

**7/15S/13W/Russell**

Start Date: 2012.11.08 @ 09:00:00  
End Date: 2012.11.08 @ 14:30:00  
Job Ticket #: 16913                      DST #: 3

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2012.11.11 @ 08:27:49

Craig Oil Company

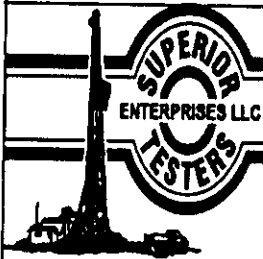
7/15S/13W/Russell

Krug #10

DST # 3

Lansing/Kansas City

2012.11.08



# DRILL STEM TEST REPORT

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67665+2901  
 ATTN: Jeff Lawler

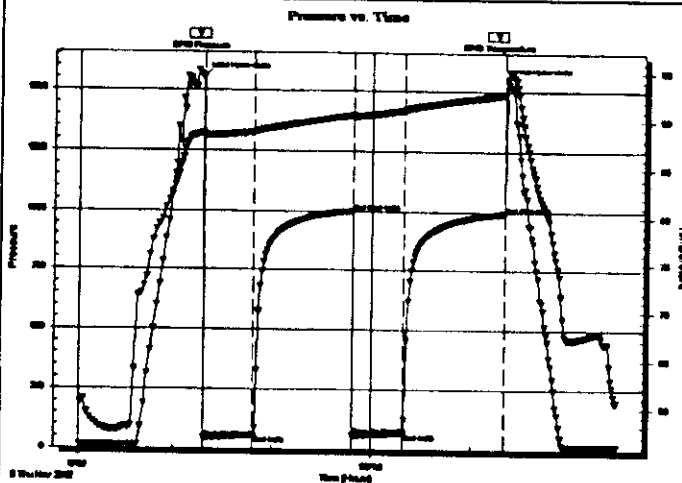
7/15S/13W/Russell  
 Krug #10  
 Job Ticket: 16913      DST#: 3  
 Test Start: 2012.11.08 @ 09:00:00

## GENERAL INFORMATION:

Formation: Lansing/Kansas City  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:18:30  
 Time Test Ended: 14:30:00  
 Interval: 3058.00 ft (KB) To 3100.00 ft (KB) (TVD)  
 Total Depth: 3365.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Initial)  
 Tester: Ken Swinney  
 Unit No: 3325 Great Bend/64  
 Reference Elevations: 1869.00 ft (KB)  
 1862.00 ft (CF)  
 KB to GR/CF: 7.00 ft

Serial #: 6749      Inside  
 Press@RunDepth: 66.81 psia @ 3094.00 ft (KB)  
 Start Date: 2012.11.08      End Date: 2012.11.08  
 Start Time: 09:01:00      End Time: 14:30:00  
 Capacity: 5000.00 psia  
 Last Calib.: 2012.11.08  
 Time On Btm: 2012.11.08 @ 10:18:00  
 Time Off Btm: 2012.11.08 @ 13:21:30

TEST COMMENT: 1ST Open 30 Minutes/Weak blow/Blow built to 3 1/2 inches  
 1ST Shut In 60 Minutes/Very weak surface blow back  
 2ND Open 30 Minutes/Weak blow/Blow built to 2 1/2 inches  
 2ND Shut In 60 Minutes/Light surface blow back



## PRESSURE SUMMARY

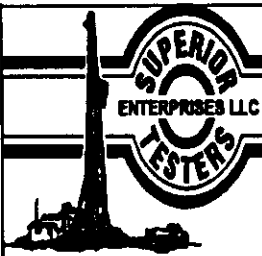
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1552.67	88.73	Initial Hydro-static
1	43.99	88.25	Open To Flow (1)
31	55.70	88.81	Shut-In(1)
90	1001.60	90.57	End Shut-In(1)
91	56.34	90.30	Open To Flow (2)
121	66.81	91.11	Shut-In(2)
183	993.54	92.76	End Shut-In(2)
184	1537.36	94.39	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
50.00	Mud 100%	0.70

## Gas Rates

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



# DRILL STEM TEST REPORT

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67865+2901  
 ATTN: Jeff Lawler

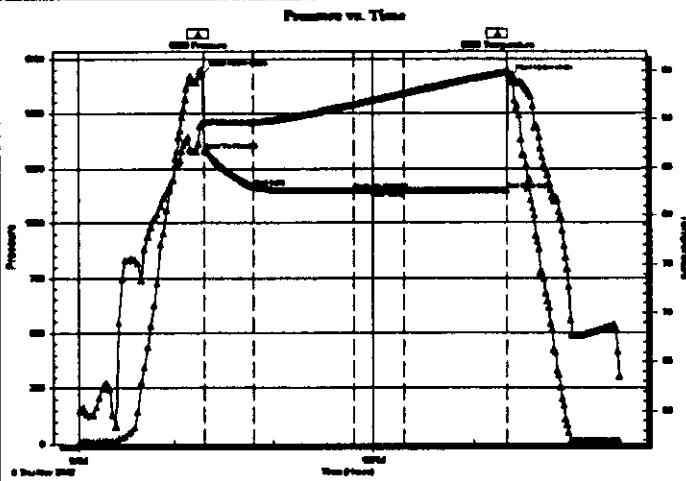
7/15S/13W/Russell  
 Krug #10  
 Job Ticket: 16913 DST#: 3  
 Test Start: 2012.11.08 @ 09:00:00

## GENERAL INFORMATION:

Formation: Lansing/Kansas City  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:18:30  
 Time Test Ended: 14:30:00  
 Interval: 3058.00 ft (KB) To 3100.00 ft (KB) (TVD)  
 Total Depth: 3365.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Initial)  
 Tester: Ken Swinney  
 Unit No: 3325 Great Bend/64  
 Reference Elevations: 1869.00 ft (KB)  
 1862.00 ft (CF)  
 KB to GRVCF: 7.00 ft

Serial #: 6999 Below  
 Press@RunDepth: 1147.59 psia @ 3360.25 ft (KB)  
 Start Date: 2012.11.08 End Date: 2012.11.08  
 Start Time: 08:01:00 End Time: 14:28:30  
 Capacity: 5000.00 psia  
 Last Calib.: 2012.11.08  
 Time On Btm: 2012.11.08 @ 10:17:30  
 Time Off Btm: 2012.11.08 @ 13:21:30

TEST COMMENT: 1ST Open 30 Minutes/Weak blow/Blow built to 3 1/2 inches  
 1ST Shut in 60 Minutes/Very weak surface blow back  
 2ND Open 30 Minutes/Weak blow/Blow built to 2 1/2 inches  
 2ND Shut in 60 Minutes/Light surface blow back



## PRESSURE SUMMARY

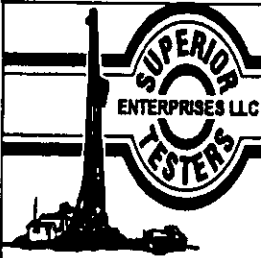
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1681.99	89.84	Initial Hydro-static
2	1331.33	89.83	Open To Flow (1)
31	1166.21	89.87	Shut-in(1)
91	1147.75	91.51	Open To Flow (2)
121	1147.88	92.83	Shut-in(2)
183	1147.59	94.87	End Shut-in(1)
184	1659.97	94.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
50.00	Mud 100%	0.70

## Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mc/d)



# DRILL STEM TEST REPORT

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67665+2901  
 ATTN: Jeff Lawler

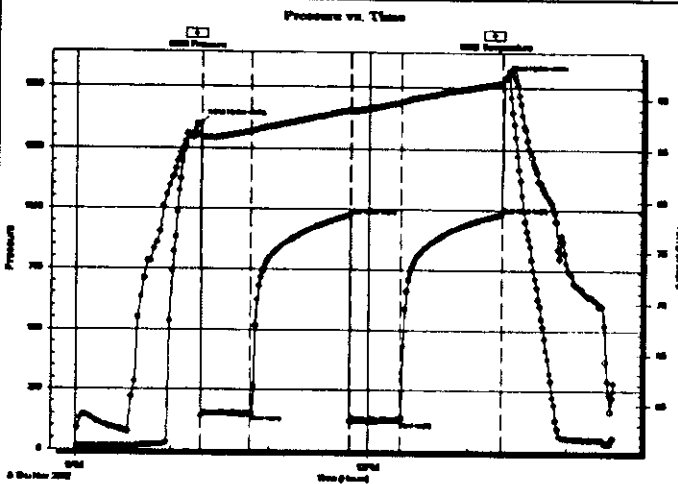
7/15S/13W/Russell  
 Krug #10  
 Job Ticket: 16913      DST#: 3  
 Test Start: 2012.11.08 @ 09:00:00

## GENERAL INFORMATION:

Formation: Lansing/Kansas City  
 Deviated: No Whipstock:      ft (KB)  
 Time Tool Opened: 10:18:30  
 Time Test Ended: 14:30:00  
 Interval: 3058.00 ft (KB) To 3100.00 ft (KB) (TVD)  
 Total Depth: 3365.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Initial)  
 Tester: Ken Swinney  
 Unit No: 3325 Great Bend/64  
 Reference Elevations: 1869.00 ft (KB)  
 1862.00 ft (CF)  
 KB to GR/CF: 7.00 ft

Serial #: 6838      Inside  
 Press@RunDepth: 981.73 psia @ 3094.00 ft (KB)  
 Start Date: 2012.11.08      End Date: 2012.11.08      Capacity: 5000.00 psia  
 Start Time: 09:01:00      End Time: 14:29:30      Last Calib.: 2012.11.08  
 Time On Btm: 2012.11.08 @ 10:18:00  
 Time Off Btm: 2012.11.08 @ 13:21:30

TEST COMMENT: 1ST Open 30 Minutes/Weak blow/Blow built to 3 1/2 inches  
 1ST Shut in 60 Minutes/Very weak surface blow back  
 2ND Open 30 Minutes/Weak blow/Blow built to 2 1/2 inches  
 2ND Shut in 60 Minutes/Light surface blow back



## PRESSURE SUMMARY

Time (Mn.)	Pressure (psia)	Temp (deg F)	Annotation
0	1349.65	86.44	Initial Hydro-static
1	140.60	86.27	Open To Flow (1)
31	146.62	86.78	Shut-in(1)
90	975.26	88.82	End Shut-in(1)
91	115.49	88.72	Open To Flow (2)
121	118.72	89.62	Shut-in(2)
183	981.73	91.51	End Shut-in(2)
184	1541.46	91.96	Final Hydro-static

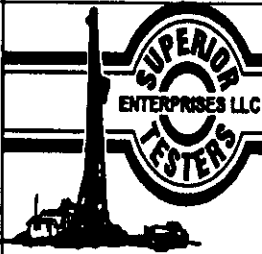
## Recovery

Length (ft)	Description	Volume (bbl)
50.00	Mud 100%	0.70

## Gas Rates

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





# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Craig Oil Company

7/15S/13W/Russell

15 South Main  
Russell, Kansas 67665+2901

Krug #10

Job Ticket: 16913

DST#: 3

ATTN: Jeff Lawler

Test Start: 2012.11.08 @ 09:00:00

## Tool Information

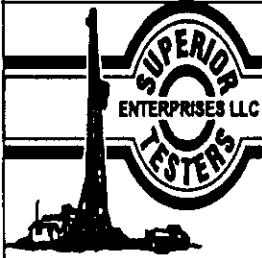
Drill Pipe:	Length: 3047.00 ft	Diameter: 3.80 inches	Volume: 42.74 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 42.74 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	5.80 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3058.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	3363.25 ft			
Interval between Packers:	305.25 ft			
Tool Length:	322.05 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3046.20	
Hydraulic Tool	5.00			3051.20	
Packer	5.00			3056.20	16.80 Bottom Of Top Packer
Packer	1.80			3058.00	
Handling Sub	5.00			3063.00	
Perforations	31.00			3094.00	
Recorder	0.00	6838	Inside	3094.00	
Recorder	0.00	6749	Inside	3094.00	
Blank Off Sub	0.67			3094.67	
Travel Collar	1.63			3096.30	
Packer Anchor side	1.60			3097.90	
Packer Tail Side	1.58			3099.48	
Perforations	5.00			3104.48	
Change over sub	0.79			3105.27	
Drill Pipe	249.32			3354.59	
Change Over Sub	0.66			3355.25	
Perforations	5.00			3360.25	
Recorder	0.00	6999	Below	3360.25	
Bullnose	3.00			3363.25	305.25 Bottom Packers & Anchor

**Total Tool Length: 322.05**



# DRILL STEM TEST REPORT

FLUID SUMMARY

Craig Oil Company  
 15 South Main  
 Russell, Kansas 67665+2901  
 ATTN: Jeff Lawler

7/15S/13W/Russell  
 Krug #10  
 Job Ticket: 16913      DST#: 3  
 Test Start: 2012.11.08 @ 09:00:00

## 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: 46.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 8000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	Mud 100%	0.701

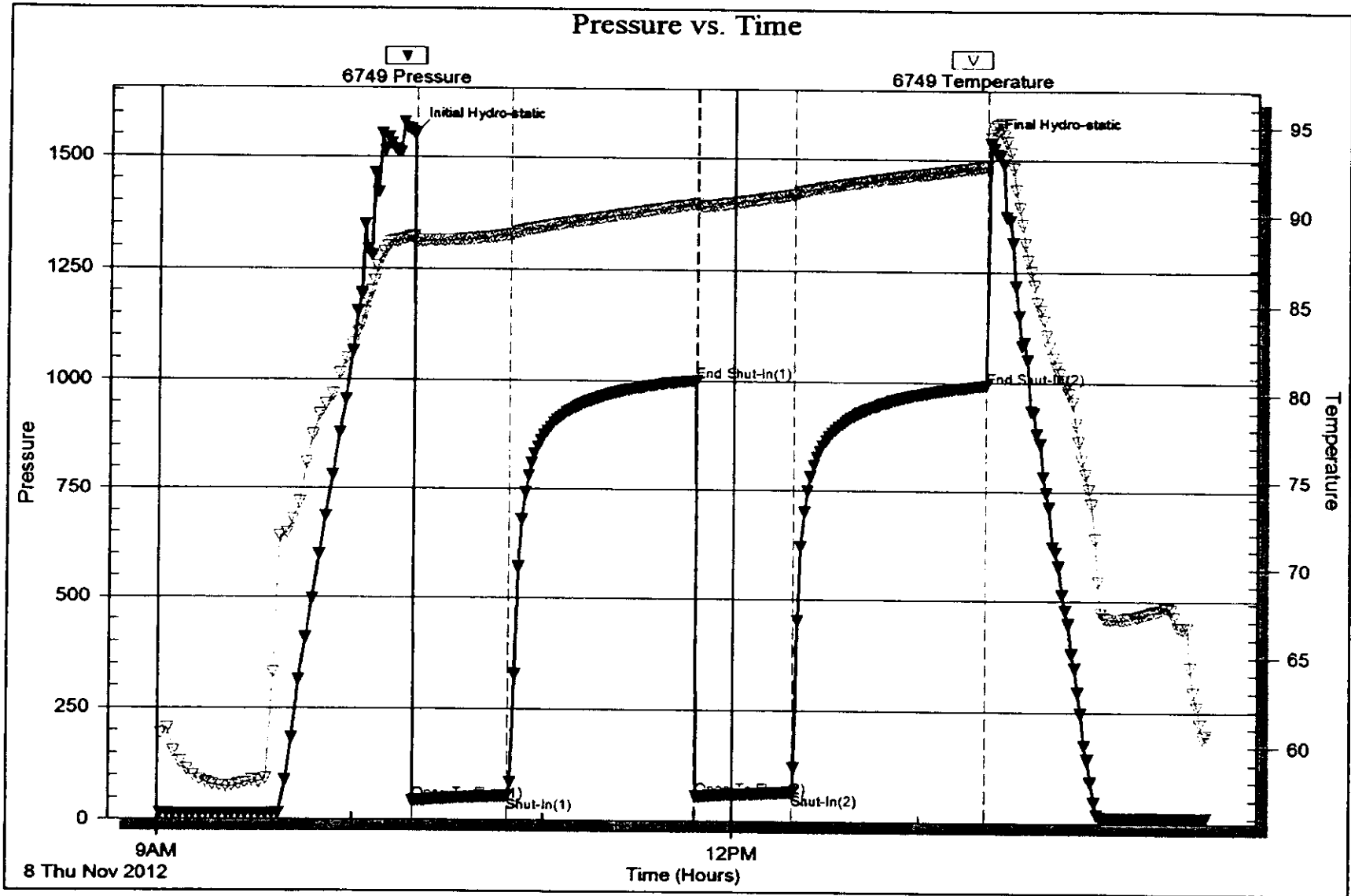
Total Length: 50.00 ft      Total Volume: 0.701 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

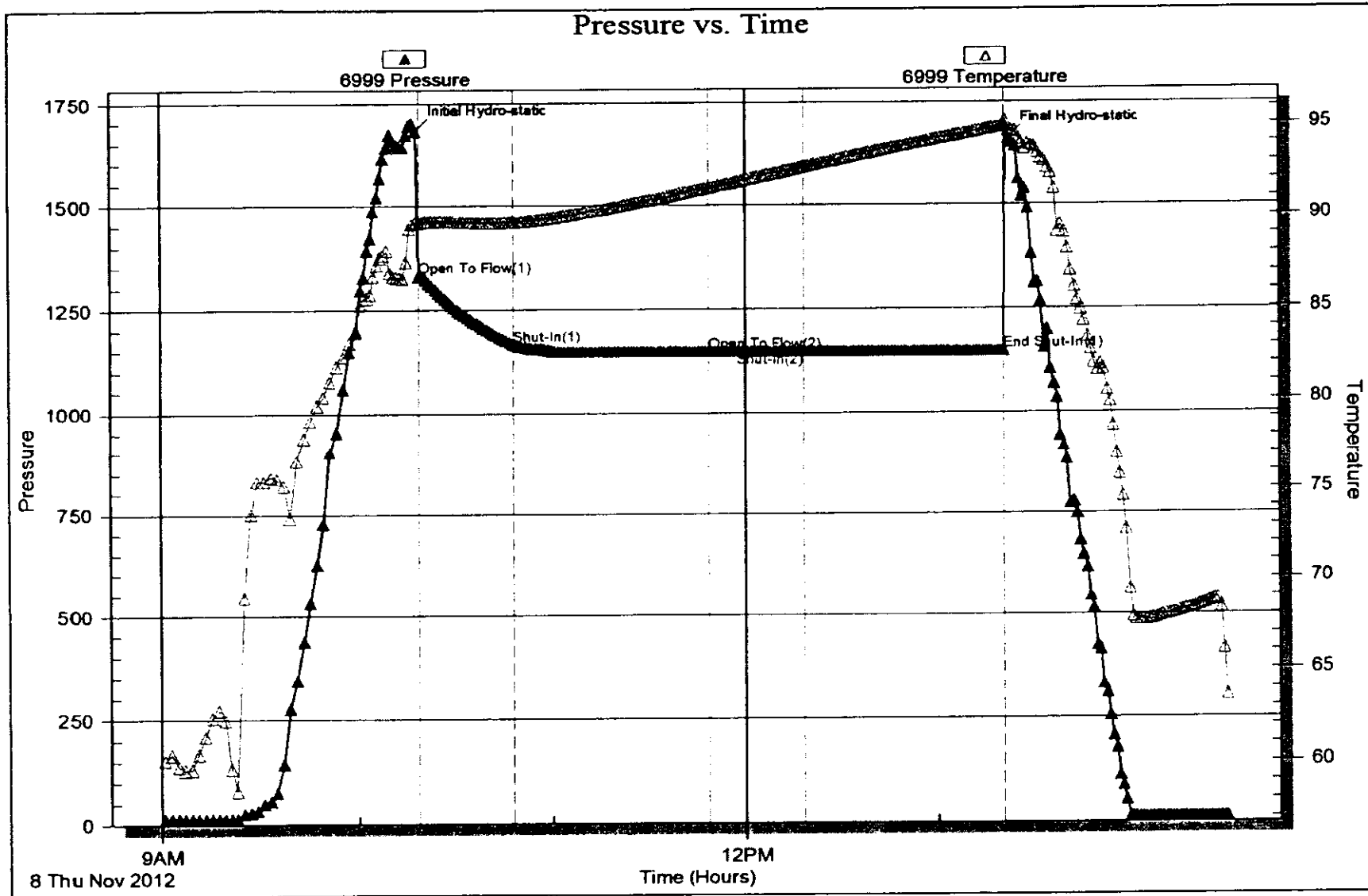
Serial #: 6749

Inside Craig Oil Company

Krug #10

DST Test Number: 3





Serial #: 6838

Inside Craig Oil Company

Krug #10

DST Test Number: 3

