



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1156535  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

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
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

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

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1156535

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

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

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				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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**#1 Huseman 20C**  
2275' FSL & 563' FWL  
35' S & 97' W of N/2 NW SW Section 20-16S-31 W  
Scott County, Kansas  
API# 15-171-20949-0000  
Elevation: 2947' GL, 2952' KB

Sample Tops			Ref. Well
Anhydrite	2350'	+602	-10
B/Anhydrite	2373'	+579	-12
Stotler	3557'	-605	-7
Heebner	3936'	-984	+2
Lansing	3973'	-1021	+3
Muncie Shale	4149'	-1197	+5
Stark Shale	4251'	-1299	-3
Hush	4293'	-1341	-12
BKC	4337'	-1385	-1
Marmaton	4368'	-1416	+1
Altamont	4390'	-1438	+2
Pawnee	4464'	-1512	+3
Myrick	4494'	-1542	+4
Fort Scott	4509'	-1557	+6
Cherokee Shale	4531'	-1579	+5
Johnson	4574'	-1622	+7
B/Johnson	4607'	-1655	+5
Morrow Sand	4610'	-1658	+8
Mississippian	4626'	-1674	+19
RTD	4750'	-1798	





**CONSOLIDATED**  
Oil Well Services, LLC

259072

TICKET NUMBER 39985  
LOCATION Okoy 125  
FOREMAN Fuzz

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
5-22-13	7173	Huseman 20c #1	20	165	31W	Scott
CUSTOMER Relative Exploration			KS			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY			8W	463	Cory D	
STATE			30	693	Tim W	
ZIP CODE			1/2 W		Jeremy R	New Emp. Ride along
			W&S			

JOB TYPE Production HOLE SIZE 77/8 HOLE DEPTH 4750' CASING SIZE & WEIGHT 4 1/2 10.5  
CASING DEPTH 4751 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER P. Collar #58  
SLURRY WEIGHT 14 SLURRY VOL 1.42 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 20 50  
DISPLACEMENT 75.2 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting on w.w #10. Float equip Turbos 1, 3, 5, 9, 9, 12, 15, 19, 57, 59, 73 Baskets 17, 58, 72 P. collar #58. Rig up and circulate 1 hr. Pump 5 BBL water, 500 gal mud flush, 5 BBL water. Mix 30SKs RL. Mix 225sk OWC w/ 5\* Kalseal. 25% CDI-26. down 5 1/2 casing. Wash pump and lines. Drop plug and displace 77 1/2 BBL 800\* bit 1400\* land. float held.

Thanks Fuzz & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401C	1	PUMP CHARGE	3175 <sup>00</sup>	3175 <sup>00</sup>
5406	40	MILEAGE	5 <sup>25</sup>	210 <sup>00</sup>
9407A	12 Ton	Ton Mileage Delivery	1 <sup>25</sup>	840 <sup>00</sup>
1126	255 SKs	OWC	23 <sup>70</sup>	6043 <sup>50</sup>
1110A	1275 *	Kalseal	1.56	714 <sup>00</sup>
1137	60 *	CDI-26	10 <sup>20</sup>	612 <sup>00</sup>
1144G	500 gal	mud flush	1 <sup>00</sup>	500 <sup>00</sup>
4201	1	4 1/2 - G-Shoe	145 <sup>00</sup>	145 <sup>00</sup>
4226	1	4 1/2 - AFU Insert	202 <sup>25</sup>	202 <sup>25</sup>
4139	10	4 1/2 - Turbolizers	60 <sup>00</sup>	600 <sup>00</sup>
4404	1	4 1/2 - rubber plug	55 <sup>25</sup>	55 <sup>25</sup>
4284	1	4 1/2 - Port Collar (L)	1984 <sup>50</sup>	1984 <sup>50</sup>
4103	3	4 1/2 - Baskets (W)	275 <sup>00</sup>	825 <sup>00</sup>
		subtotal		15907 <sup>50</sup>
		less 10%		1590 <sup>75</sup>
		subtotal		14316 <sup>75</sup>

Ravin 3737

*Cory Rowe*



**completed**

SALES TAX 870.70  
ESTIMATED TOTAL 15189.45

AUTHORIZATION \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

*[Signature]*



# Richie Exploration, Inc. Huseman 20C No. 1 2275' FSL and 563' FWL 35'S and 97'W of N2 NW SW Sec 20 T16S R31W Scott County, Kansas

## Geological Report by

**Macklin M. Armstrong, P.G.**  
License Number 743

Scale 1:240 Imperial		
Well Name:	Huseman 20C No. 1	
Surface Location:	Sec 20 T16S R31W	
Bottom Location:	2275' FSL and 563' FWL	
API:	15-171-20949	
License Number:	4767	
Spud Date:	5/13/2013	Time: 2:45 PM
Region:	Scott County, Kansas	
Drilling Completed:	5/21/2013	Time: 6:30 PM
Surface Coordinates:		
Bottom Hole Coordinates:	2947.00ft	
K.B. Elevation:	2952.00ft	
Logged Interval:	3450.00ft	To: 4750.00ft
Total Depth:	4750.00ft	
Formation:	Mississippian	
Drilling Fluid Type:	Chemical/Fresh Water Gel	

<b>OPERATOR</b>	
Company:	Richie Exploration, Inc.
Address:	8100 East 22nd Street North, No. 700 Wichita, Kansas 67278
Contact Geologist:	Mike Engelbrecht
Contact Phone Nbr:	316-691-9500
Well Name:	Huseman 20C No. 1
Location:	Sec 20 T16S R31W
Pool:	Oil
State:	Kansas
API:	15-171-20949
Field:	Wildcat
Country:	USA

<b>SURFACE CO-ORDINATES</b>	
Well Type:	Vertical
Longitude:	100° 46' 40.012"
Latitude:	38° 38' 56.279"
N/S Co-ord:	
E/W Co-ord:	

<b>CONTRACTOR</b>		
Contractor:	WW Drilling	
Rig #:	10	
Rig Type:	mud rotary	
Spud Date:	5/13/2013	Time: 2:45 PM
TD Date:	5/21/2013	Time: 6:30 PM
Rig Release:	5/22/2013	Time: 4:00 PM

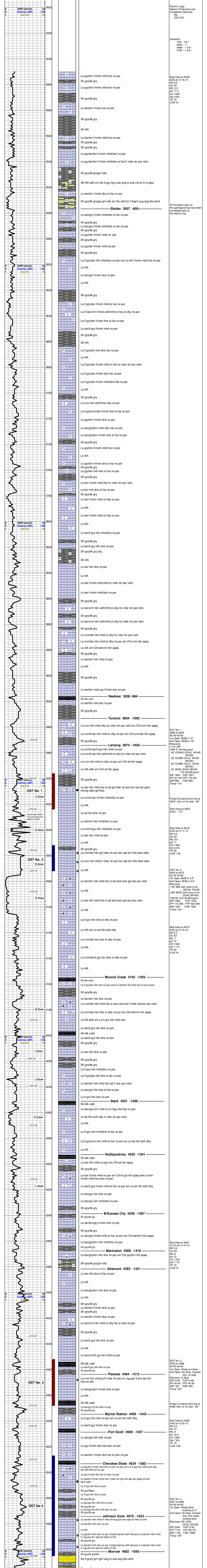
<b>ELEVATIONS</b>			
K.B. Elevation:	2952.00ft	Ground Elevation:	2947.00ft
K.B. to Ground:	5.00ft		

<b>NOTES</b>						
Date	Depth at 7 am	Activity				
5-13-13	MIRU	Spud at 2:45 pm				
5-14-13	710	Drilling				
5-15-13	2734	Drilling				
5-16-13	3410	Drilling				
5-17-13	4000	CFS				
5-18-13	4072	TIH for DST No. 2				
5-19-13	4312	CFS				
5-20-13	4488	TIH after DST No. 3				
5-21-13	4605	TIH after DST No. 4				
5-22-13	4750	Set 4 1/2"				
Surface Casing: 8 5/8" 20# at 244'						
Production Casing: 4 1/2" 10.5# at 4747'						
Deviation: 244' - 3/4", 4024' - 1", 4488' - 1 3/4", 4750' - 1 3/4"						
Bit Record:	Make	Size	Type	Depth In	Depth Out	Hours
	SM	12 1/4"	F27	Surface	244	2/3/4
	SM	7 7/8"	F27	244	4750	107 1/4
Drill Stem Tests:						
DST No. 1 3996 to 4024 Formation: Lansing C Zone						
30-45-45-60						
Recovery: 1116' GIP						
268' O (40 degree gravity)						
42' OCMW (10%O, 40%W, 50%M)						
62' OCMW (5%O, 30%M, 85%W)						
62' OCMW (5%O, 10%M, 85%W)						
62' MCW (5%M, 95%W - Chl 39,000 ppm)						
IHP 1954	FHP 1857					
IHP 2245	FHP 2120					
IHP 52-164	FHP 172-261					
ISIP 996	FSIP 983					
Temp 116°						
DST No. 2 4052 to 4072 Formation: Lansing E Zone						
30-45-45-60						
Recovery: 120' MW with trace of oil (30%M, 70%W)						
248' MCW with trace of oil (5%M, 95%W)						
1554' W (Chl 30,000 ppm)						
IHP 1992	FHP 1918					
IHP 113-598	FHP 622-945					
ISIP 1067	FSIP 1064					
Temp 123°						
DST No. 3 4452 to 4488 Formation: Pawnee						
30-45-45-60						
Recovery: 5' Mud						
IHP 2194	FHP 2149					
IHP 45-45	FHP 45-49					
IHP 71-81	FHP 86-101					
ISIP 1139	FSIP 1098					
Temp 126°						
DST No. 4 4527 to 4605 Formation: Cherokee Lime and Johnson Zone						
30-45-45-60						
Recovery: 60' OCM (5%O, 95%M)						
IHP 2245	FHP 2120					
IHP 71-81	FHP 86-101					
ISIP 1139	FSIP 1098					
Temp 126°						
Formation	Sample	E-Log	Datum	Well 1	Well 2	Well 3
Anhydrite	2350	2348	+604	-8	-10	+14
B/Anhydrite	2373	2368	+584	-7	-8	+13
Stotler	3557	3555	-603	-5	+3	+20
Heebner	3936	3934	-982	+4	+10	+23
Toronto	3954	3952	-1000	+5	+5	+24
Lansing	3974	3972	-1020	+4	+14	+26
Muncie Creek	4155	4152	-1202	0	+4	+14
Stark	4251	4252	-1300	-4	+1	+12
Hushpuckney	4293	4293	-1341	-12	+1	+17
B/Kansas City	4339	4339	-1387	-1	-2	+20
Marmaton	4368	4367	-1415	+2	+1	+18
Altamont	4383	4383	-1430	+10	+5	+30
Pawnee	4464	4464	-1512	+3	+10	+22
Myrick Station	4495	4495	-1543	+3	+8	+21
Fort Scott	4509	4509	-1557	+6	+10	+23
Cherokee Shale	4534	4534	-1582	+2	+6	+24
Johnson Zone	4575	4575	-1623	+6	+7	+23
Morrow	4602	4603	-1650	+16	+16	+27
Mississippian	4626	4626	-1674	+19	+22	+31
Total Depth	4750	4750	-1798			
Well 1: Chief Drilling Company Grothusen No. 1 NE NW NE Sec 30 T16S R31W						
Well 2: White and Ellis Drilling Grothusen No. 1 NW SE NW Sec 29 T16S R31W						
Well 3: Chief Drilling Company Socolofsky No. 1 NW SE NW Sec 28 T16S R31W						
Pipe was set to further test the Lansing zone.						
Respectfully submitted, Macklin M. Armstrong						

<b>ROCK TYPES</b>	
Lmst fw7s	shale, gry
shale, grn	Carbon Sh
	Stool
	Ss

<b>ACCESSORIES</b>	
<b>MINERAL</b>	<b>FOSSIL</b>
▲ Chert, dark	○ Fossil
▲ Chert, light	○ Colite
▲ Silty	○ Omolitic
▲ Silty White	
<b>STRINGER</b>	<b>TEXTURE</b>
--- Sandstone	C Chalky

<b>OTHER SYMBOLS</b>	
DST	
DST Int	
DST alt	
Core	







Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

August 27, 2013

John Niernberger  
Ritchie Exploration, Inc.  
8100 E 22ND ST N # 700  
BOX 783188  
WICHITA, KS 67278-3188

Re: ACO1  
API 15-171-20949-00-00  
Huseman 20C 1  
SW/4 Sec.20-16S-31W  
Scott County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
John Niernberger