



KANSAS CORPORATION COMMISSION 1093990  
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 # \_\_\_\_\_

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

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

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

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

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

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

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

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

Total 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**

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



1093990

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

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

**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 type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ 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:  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
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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: _____ _____
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**JAMES C. MUSGROVE**

Petroleum Geologist  
212 Main Street  
P.O. Box 215  
Claffin, KS 67525

Office (620) 588-4250

Res. Claffin (620) 587-3444

Arrington CJM Inc.  
Powers #1-2  
660' FSL & 660' FEL  
(Lat. 38-86° N, Long. 100-50° W)  
Section 2-14s-25w  
Gove County, Kansas  
Page 1

**5 1/2" Production Casing Set**

**Contractor:** Murfin Drilling Co. (Rig #2)  
**Commenced:** April 10, 2012  
**Completed:** April 15, 2012  
**Elevation:** 2716' K.B; 2714' D.F; 2705' G.L.  
**Casing program:** Surface; 8 5/8" @ 300'  
Production; 5 1/2" @ 4419'  
**Sample:** Samples saved and examined 3400' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 3400 ft to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Drill Stem Tests:** None.  
**Electric Log:** By Halliburton; ACRT.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	2165	+551
Base Anhydrite	2197	+519
Heebner	3806	-1090
Toronto	3826	-1110
Lansing	3842	-1126
Stark Shale	4081	-1365
Base Kansas City	4148	-1432
Marmaton	4176	-1460
Pawnee	4257	-1541
Ft Scott	4341	-1625
Cherokee Shale	4368	-1652
Johnson Zone	4415	-1699
Mississippian	Not penetrated	
Rotary Total Depth	4420	-1704
Log Total Depth	4390	-1674

(All tops and zones corrected to Electric Log measurements).

**SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.**

**TOPEKA SECTION**

3578-3806' There were several zones of well-developed porosity encountered in the drilling of the Topeka Section but no show of oil and/or gas was noted.

**TORONTO SECTION**

3826-3840' Limestone; cream, tan, finely crystalline, chalky in part, poor visible porosity, no shows.

**LANSING SECTION**

3842-3856' Limestone; cream, tan, finely crystalline, loose fossil fragments, poor visible porosity (dense).  
Limestone; white, cream, finely crystalline, finely oolitic, poor visible porosity, chalky in part, few cherty.

3881-3894' Limestone; white, tan, finely crystalline, finely oolitic, poor pinpoint and intercrystalline, chalky, few cherty, no shows.

3900-3910' Limestone; white, cream, oolitic, chalky, no shows.

3910-3920' Limestone; cream, tan, finely crystalline, poor developed pinpoint and intercrystalline type porosity, spotty dark brown stain, trace of free oil and very faint odor in fresh samples.

3936-3946' Limestone; white, cream, slightly dolomitic, poor intercrystalline and finely vuggy type porosity, black spotty stain, trace free oil (dead appearing) and no odor in fresh samples.

3952-3962' Limestone; white, tan, finely crystalline, visible porosity (dense).

3962-3980' Limestone; white, cream, finely crystalline, chalky, poor visible porosity, plus gray and tan chert.

3980-3990' Limestone; white, cream, chalky, poor porosity.

3993-4002' Limestone; cream, gray, finely crystalline, fossiliferous, loose fossil fragments, poor visible porosity, chalky in part.

4014-4027' Limestone; cream, white, finely crystalline, fossiliferous in part, slightly cherty, no stain, no free oil and faint odor in fresh samples.

4040-4052' Limestone; cream, white, finely crystalline, chalky, no shows.

4067-4074' Limestone; white, gray, finely crystalline, poor intercrystalline porosity, few chalky, trace light brown stain, trace of free oil and faint odor in fresh samples.

4098-4110' Limestone; cream, tan, finely crystalline, sucrosic in part, spotty light brown stain, trace of free oil and no odor in fresh samples.

Arrington CJM Inc.  
Powers #1-2  
660' FSL & 660' FEL  
(Lat. 38-86° N, Long. 100-50° W)  
Section 2-14s-25w  
Gove County, Kansas  
Page 3

4130-4140' Limestone; gray, cream, finely crystalline, poor porosity, plus white chert.

**PAWNEE SECTION**

4257-4270' Limestone; gray, white, finely crystalline, fossiliferous, poor pinpoint type porosity, chalky, questionable stain, no show of free oil and no odor in fresh samples.

4270-4300' Limestone; cream, buff, finely crystalline, poor visible porosity, trace dark brown and black stain, no free oil and no odor in fresh samples.

Limestone; white, tan, finely crystalline, dense.

**MYRICK STATION SECTION**

4310-4328' Limestone; gray, buff, dense, poor porosity, no shows.

**FT SCOTT SECTION**

4341-4360' Limestone; white, gray, finely crystalline, slightly oolitic, poor porosity, no shows.

**CHEROKEE SECTION**

4370-4390' Limestone; white, tan, finely crystalline, slightly oolitic, poor visible porosity, no shows.

4404-4412' Limestone; cream, tan, finely crystalline, poor visible porosity, chalky.

**JOHNSON ZONE SECTION**

4415-4420' Limestone; tan, gray, finely crystalline, poor visible porosity, dense.

Rotary Total Depth      4420 (-1704)  
Log Total Depth        4390 (-1674)

**Remarks:**

Per operation recommendation, the Powers #1-2 was drilled to the Rotary Total Depth of 4420, no Mississippian Section was encountered and the well was TD in the Johnson Zone (Cherokee).

Respectfully submitted;

*Kurt Talbott*

Kurt Talbott,  
Petroleum Geologist

ARRINGTON CJM

HADAWAY CONSULTING &amp; ENGINEERING, LLC

## Casing/Cement Detail

Well Name:	POWERS #1-12		Date:	4/17/2012
MD (ft):	4420	PV/YP	/	
TVD (ft):	4420	API W.L.	/	THDS OFF TALLY CSG DEL TO LOC 4671.05
Hole Size (in)	7.875	Gel Strength	/	NUMBER OF JTS DEL TO LOC 112
Mud Weight (ppg)	9.1	BHT (deg. F)	100	JTS LEFT OUT 6
<b>Casing Detail:</b>				JTS RUN 106

## Bottom to Top

Size (OD)	Length	No. of Jts	Weight (Lb/Ft)	Grade	Conn.	Drift	Description
5.5	4.00		15.5	J55	LTC	4.825	IR BASKET SHOE
5.5	84.41	2	15.5	J55	LTC	4.825	CSG
5.5			15.5	J55	LTC	4.825	latch ring plug at 4331'
5.5	20.18	1	15.5	J55	LTC	4.825	SHORT JT
5.5	2020.32	48	15.5	J55	LTC	4.825	CSG
5.5	2.00		15.5	J55	LTC	4.825	DV TOOL AT 2289
5.5	2293.92	55	15.5	J55	LTC	4.825	CSG SJ ONE JT DWN.

	106	TOTAL No. of Joints
4424.83		TOTAL PIPE RUN IN HOLE
4.83		LESS LANDING JT - Ft above KB
4420.00		TOTAL SETTING DEPTH - KB

## Centralizers/Scratchers/Other

Type: 12 CENTS  
Placement: EVERY 4TH JT TO 2100'

## Cementing Detail:

Cementing Company: ALLIED

Description	Type cmt	Sxs	Wt. (ppg)	Yield (cf/sk)
FIRST STAGE	CLASS ASCA	210	14.50	1.57
2ND STAGE	60/40 POZ	425	12.50	1.90

## Cement Job Details &amp; Cement Additives

FIRST STAGE CMT: CLASS ASCA WITH 5#/SX GILSONITE, 0.003% FL160 PLUS DEFOAMER. DISPLACED WITH 50 BBLs WTR AND THEN 50 BBLs OF MUD. BUMPED PLUG TO 2200 PSIG.  
DROPPED OPENING BOMB. OPEN DV TOOL. CIRC 4 HRS. CMT 2ND STAGE WITH 425 SX OF 60/40 POZ WITH 8% GEL, 0.25#/ SX FLO-SEAL. DISPLACED WITH 50 BBLs WTR. BUMPED PLUG TO 1400 PSIG AND CLOSED DV TOOL AND HELD.

BBLs:	103	BBLs:	50
Type Fluid:	MUD AND WTR	Type Fluid:	WTR
Weight (ppg):	8.34	Weight (ppg):	8.34
Rate (bpm):	5.00	Rate (bpm):	5
Pressure (psig):	1200	Pressure (psig):	800
Bump Plug (Y/N):	Y	Bump Plug (Y/N):	Y
w/ (psig):	2200	w/ (psig):	1400
Returns Throughout Job (Full, Partial, None)	FULL	Returns Throughout Job (Full, Partial, None)	FULL
Barrels Cement to Surface	NONE	Barrels Cement to Surface	4

ARRINGTON CJM IN

HADAWAY CONSULTING &amp; ENGINEERING, LLC

## Casing/Cement Detail

Well Name:	POWERS #1-12			Date:	4/11/2012		
MD (ft):	308	PV/YP	0/0	THDS OFF TALLY CSG DEL TO LOC			
TVD (ft):	308	API W.L.		507.30			
Hole Size (in)	12.250	Gel Strength	0/0	NUMBER OF JTS DEL TO LOC			
Mud Weight (ppg)	8.3	BHT (deg. F)		12			
Casing Detail:			JTS LEFT OUT				
			5				
			JTS RUN				
			7				
<b>Bottom to Top</b>							
Size (OD)	Length	No. of Jts	Weight (Lb/Ft)	Grade	Conn.	Drift	Description
8.625	306.00	7	24	J-55	STC	7.972	SURFACE
		7 TOTAL No. of Joints					
306.00		TOTAL PIPE RUN IN HOLE					
		LESS LANDING JT - Ft above KB					
306.00		TOTAL SETTING DEPTH - KB					
<b>Centralizers/Scratchers/Other</b>							
Type:	2						
Placement:	FIRST ONE AND EVERY 4TH INT						
<b>Cementing Detail:</b>							
Cementing Company:	ALLIED						
Description	Type cmt	Sxs	Wt. (ppg)	Yield (cf/sk)			
LEAD	STANDARD "A"	185	15.60	1.34			
<b>Cement Job Details &amp; Cement Additives</b>							
USED 185 SKS CLASS A CEMENT MIXED @ 2 1/2 BBLs A MIN RELEASED PLUG STAR DISPLACEMENT @ 4 BBL A MIN DISPLACED 18.5 BBL @ 250 PSI STOP PUMP SHUT IN HEAD. RETURNED 4 BBLs CEMENT TO CELLAR. JOB WENT GOOD. PERFECT DISP WAS 19.5 BBLs, UNDERDISPLACED BY 1 BBL. CMT WAS 185 SX STANDARD "A", 3% CC, 2% GE 0.25#/SX POLY-E-FLAKE. STRAP WELDED FIRST 3 JTS AND TACK WELDED REST OF COLLARS TO SURF.							
<b>Test Results</b>							
BBLs: 18.5				BBLs:			
Type Fluid: FRESH WATER				Type Fluid:			
Weight (ppg): 8.3				Weight (ppg):			
Rate (bpm): 4.00				Rate (bpm):			
Pressure (psig): 250				Pressure (psig):			
Bump Plug (Y/N): DID NOT BUMP				Bump Plug (Y/N):			
w/ (psig): 250				w/ (psig):			
Returns Throughout Job (Full, Partial, None)				Returns Throughout Job (Full, Partial, None)			
FULL				FULL			
Barrels Cement to Surface: 4				Barrels Cement to Surface:			

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

September 19, 2012

Ed Culver  
Arrington CJM, Inc.  
300 Houston Ave.  
PO BOX 608  
CANADIAN, TX 79014

Re: ACO1  
API 15-063-21978-00-00  
Powers 1-2  
SE/4 Sec.02-14S-29W  
Gove 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,  
Ed Culver



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

September 19, 2012

Ed Culver  
Arrington CJM, Inc.  
300 Houston Ave.  
PO BOX 608  
CANADIAN, TX 79014

Re: ACO-1  
API 15-063-21978-00-00  
Powers 1-2  
SE/4 Sec.02-14S-29W  
Gove County, Kansas

Dear Ed Culver:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 04/11/2012 and the ACO-1 was received on September 19, 2012 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department