



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1217205  
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: \_\_\_\_\_

1217205

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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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**JAMES C. MUSGROVE**

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

Office (620) 588-4250

Res. Claflin (620) 587-3444

Mai Oil Operations  
Littler #4  
SE-SE-NE-SW (1570' FSL & 2155' FWL)  
Section 31-16s-19w  
Rush County, Kansas  
Page 1

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

**Contractor:** Southwind Drilling Co. (Rig #3)  
**Commenced:** January 2, 2014  
**Completed:** January 8, 2014  
**Elevation:** 2083' K.B; 2051' D.F; 2075' G.L.  
**Casing program:** Surface; 8 5/8" @ 1096'  
Production; 5 1/2" @ 3899'  
**Sample:** Samples saved and examined 3300' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 3300 ft. to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Drill Stem Tests:** There were one (1) Drill Stem Test ran by Trilobite Testing Co.  
**Electric Log:** By Nabors; Dual Induction, Compensated Density/Neutron Log and Micro.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	1304	+779
Base Anhydrite	1340	+743
Heebner	3406	-1323
Toronto	3424	-1341
Lansing	3449	-1366
Base Kansas City	3713	-1630
Pawnee/Marmaton	3753	-1670
Arbuckle	3838	-1755
Rotary Total Depth	3900	-1817
Log Total Depth	3900	-1817

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

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

**LANSING SECTION**

3474-3480' Limestone; tan, gray, finely crystalline, oolitic, oomoldic, fair oomoldic porosity, trace spotty brown stain, no show of free oil and no odor in fresh samples.  
3490-3500' Limestone; gray, oolitic/fossiliferous, oomoldic in part, fair oomoldic porosity, poor stain, no free oil and no odor in fresh samples.

- 3525-3546' Limestone; cream, tan, finely crystalline, oolitic, poor visible porosity, plus gray/tan chert.
- 3550-3560' Limestone; tan, gray, finely crystalline, oolitic, oomoldic, good oomoldic porosity (barren).
- 3596-3610' Limestone; white/cream, finely crystalline, oolitic/fossiliferous, scattered porosity, slightly chalky, no shows.
- 3620-3630' Limestone; white, light gray, finely crystalline, poor porosity, chalky.
- 3638-3656' Limestone; white, light gray, oolitic, oomoldic, fair oomoldic porosity, chalky (barren).
- 3670-3686' Limestone; cream, white, finely crystalline, oolitic, poor porosity, chalky in part.
- 3691-3710' Limestone; cream, tan, finely crystalline, oolitic, dense.

**PAWNEE SECTION**

- 3753-3790' Limestone; cream/white, finely crystalline, chalky (dense) plus chert, peach, cream, tan, boney, no shows.

**ARBUCKLE SECTION**

- 3838-3844' Dolomite; cream, tan, finely crystalline, sucrosic, scattered intercrystalline porosity, light brown stain, trace of free oil and faint odor in fresh samples.

**Drill Stem Test #1 3786-3844'**

**Times: 30-45-45-60**

**Blow: Strong**

**Recovery: 3' clean oil  
 378' oil cut muddy water  
 (10% gas, 20% water, 70% mud)  
 724' oil and gas cut muddy water  
 (10% gas, 10% oil, 70% water, 10% mud)  
 315' very slightly oil cut muddy water  
 (3% oil, 87% water, 10% mud)**

**Pressures: ISIP 1174 psi  
 FSIP 1175 psi  
 IFP 52-356 psi  
 FFP 363-671 psi  
 HSH 1912-1838 psi**

- 3844-3856' Dolomite; tan, cream, finely crystalline, sub oomoldic, fair porosity, trace stain, trace of free oil and faint odor in fresh samples.
- 3856-3870' Dolomite; cream, tan, finely crystalline, sucrosic, poor scattered porosity, black stain, no free oil, plus chert, white/cream, boney.

Mai Oil Operations  
Littler #4  
SE-SE-NE-SW (1570' FSL & 2155' FWL)  
Section 31-16s-19w  
Rush County, Kansas  
Page 3

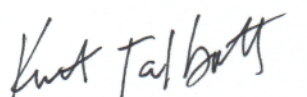
3876-3880' Dolomite and chert as above.

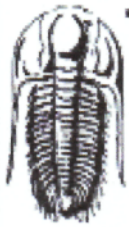
3880-3900' Dolomite; tan, cream, finely crystalline, poor porosity, dense.

<b>Rotary Total Depth</b>	<b>3900</b>
<b>Log Total Depth</b>	<b>3900</b>

**Recommendations:** 5 ½" production casing was set and cemented in the Littler #4.

Respectfully submitted;

  
Kurt Talbott,  
Petroleum Geologist



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Mai Oil Operations Inc  
 8411 Preston Rd Ste 800  
 Dallas Tx 75225 + 5520  
 ATTN: Kurt Talbott

**31-16s-19w Rush,KS**  
**Littler #4**  
 Job Ticket: 54778 **DST#: 1**  
 Test Start: 2014.01.07 @ 21:43:47

**GENERAL INFORMATION:**

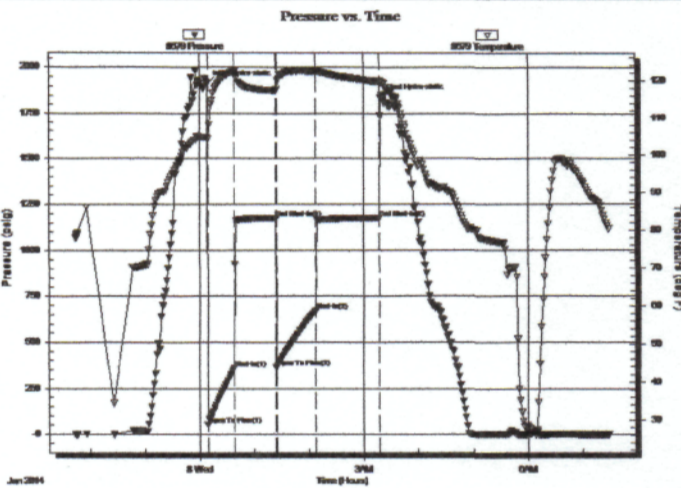
Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 00:08:47  
 Tester: Jeff Brown  
 Time Test Ended: 07:30:47  
 Unit No: 67  
 Interval: **3786.00 ft (KB) To 3844.00 ft (KB) (TVD)**  
 Reference Elevations: 2083.00 ft (KB)  
 Total Depth: 3844.00 ft (KB) (TVD)  
 2075.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 KB to GR/CF: 8.00 ft

**Serial #: 8679**

**Inside**

Press@RunDepth: 670.78 psig @ 3822.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.07 End Date: 2014.01.08 Last Calib.: 2014.01.08  
 Start Time: 21:43:48 End Time: 07:28:47 Time On Btm: 2014.01.08 @ 00:08:17  
 Time Off Btm: 2014.01.08 @ 03:18:17

**TEST COMMENT:** IFP=Strong blow BOB in 2-1/2 min  
 IS=Dead no blow back  
 FFP=Strong blow BOB in 2-3/4 min  
 FS=Dead no blow back



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1912.08	104.70	Initial Hydro-static
1	51.97	104.13	Open To Flow (1)
30	355.83	122.05	Shut-In(1)
76	1174.43	117.21	End Shut-In(1)
76	362.50	117.61	Open To Flow (2)
119	670.78	122.29	Shut-In(2)
189	1175.36	119.58	End Shut-In(2)
190	1838.45	119.42	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
315.00	VSOCMW 3%O 10%M 87%W	4.42
724.00	GOCMW 10%G 10%O 10%M 70%W	10.16
378.00	OCWM 10%O 20%W 70%M	5.30
3.00	Free Oil	0.04

**Gas Rates**

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

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 7040

Date 1-3-14	Sec. 31	Twp. 16	Range 19	County Rush	State KS	On Location	Finish 4:00 PM
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Location Lubenthal 15 7 25 1 1/2 W N 1/4

Lease <u>Littler</u>	Well No. #4	Owner
Contractor <u>Southwind</u>	#3	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Type Job <u>Surface</u>		
Hole Size <u>12 1/4</u>	T.D. <u>1097</u>	Charge To <u>Man Oil</u>
Csg. <u>4 5/8</u>	Depth <u>1097</u>	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. <u>30</u>	Shoe Joint	Cement Amount Ordered <u>450 60/140 3% cc 2% (cc)</u>
Meas Line	Displace <u>67 3/4 bbl</u>	

**EQUIPMENT**

Pumptrk 5	No.	Cementer	Common
		Helper <u>Lonnie W</u>	Poz. Mix
Bulktrk 19	No.	Driver <u>Chad</u>	Gel.
Bulktrk <u>Pu</u>	No.	Driver <u>Brett</u>	Calcium

**JOB SERVICES & REMARKS**

Remarks:	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
		Total Charge

X Signature [Signature]

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 7042

Date	Sec.	Twp.	Range	County	State	On Location	Finish
1-9-14	31	16	19	Rush	KS		7:30 AM

Location Liebenthal 15 7w 25 16w Waco

Lease	Well No.	Owner	
Littler	#4	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Contractor	Type Job	Charge To	
Southwood #3	Production string	Man O.I.	
Hole Size	T.D.	Street	
7 7/8	3900		
Csg.	Depth	City	
5 1/2	3899'	State	
Tbg. Size	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
		Cement Amount Ordered 160 60% 40 10% 5-11 2% 6-11 1/4 11-16	
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered	
21.49	21.49		
Meas Line	Displace		
	94 1/2 bbl		

**EQUIPMENT**

Pumptrk	No.	Cementer	Helper	Common
5		Lannie	W	Poz. Mix
Bulktrk	No.	Driver		Gel.
1		Lannie	M	Calcium
Bulktrk	No.	Driver		Hulls
Pu		Brett		Salt

**JOB SERVICES & REMARKS**

Remarks:	Salt
Rat Hole - 30 cr	Flowseal
Mouse Hole	Kol-Seal
Centralizers - 1, 2, 3, 4, + 5	Mud CLR 48 - 1000 gal
Baskets - 2	CFL-117 or CD110 CAF 38
D/V or Port Collar	Sand
	Handling
	Mileage

**FLOAT EQUIPMENT**

Mix 1000 gal Mud Flush	5 1/2
Pluggal Rat Hole 1 30 cr	Guide Shoe
Mix 130 cr 60% 40 down 5 1/2	Centralizer - 5
Displaced 94 1/2 bbl	Baskets - 1
Mud pressure @ 700 lbs	AFU Inserts
Landed Plug @ 1400 lbs	Float Shoe
Plus held	Latch Down - 1
	Rubber Plug - 1
	Pumptrk Charge
	Mileage

X Signature *Kent*

tax  
Discount  
Total Charge



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/>

Shari Feist Albrecht, Chair  
Jay Scott Emler, Commissioner  
Pat Apple, Commissioner

Sam Brownback, Governor

August 12, 2014

Allen Bangert  
Mai Oil Operations, Inc.  
8411 PRESTON RD STE 800  
DALLAS, TX 75225-5520

Re: ACO-1  
API 15-165-22050-00-00  
Littler 4  
SW/4 Sec.31-16S-19W  
Rush County, Kansas

Dear Allen Bangert:

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 01/02/2014 and the ACO-1 was received on August 06, 2014 (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