

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas  DH  EOR

OG  GSW

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 EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

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  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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](mailto: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 <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 Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  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
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
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>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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# 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. 1391

Date	9-8-20	Sec.	16	Twp.	13	Range	20	County	Ellis	State	KS	On Location		Finish	11:30pm	
Location								Ellis Is Binto								
Lease	Brenard							Well No.	8							
Contractor	Discrey #4							Owner								
								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	Surface							Charge To								
								Production Drilling								
Hole Size	12 1/4			T.D.	224			Street								
Csg.	8 5/8			Depth	223			City								
								State								
Tbg. Size								Depth								
								The above was done to satisfaction and supervision of owner agent or contractor.								
Tool								Cement Amount Ordered								
Cement Left in Csg.	10'			Shoe Joint				150 80/20 3/CC 2/6EL								
Meas Line	Displace							133L								
<b>EQUIPMENT</b>												Common				
Pumptrk	20	No.	Cement	Craig				120				Poz. Mix				
				Helper								30				
Bulktrk		No.	Driver	TIM				3				Gel.				
				Driver								6				
Bulktrk	9	No.	Driver	Doy				6				Calcium				
				Driver												
<b>JOB SERVICES &amp; REMARKS</b>												Hulls				
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																
8 5/8 on bottom. Best Circulation.																
Handling 159																
MIX 150SK + DISPLAC																
Mileage																
<b>CEMENT CIRCULATED</b>												<b>FLOAT EQUIPMENT</b>				
Guide Shoe																
Centralizer																
Baskets																
AFU Inserts																
Float Shoe																
Latch Down																
Pumptrk Charge																
Surface																
Mileage																
17																
Thanks																
Signature												Tax				
John Archer												Discount				
												Total Charge				

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

No. 1394

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

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

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9.14-20	16	13	20	Ellis	KS		7:30p
Location				Ellis 15E 20-0			

Lease	Well No.	Owner	
Rougant	8	To Quality Oilwell Cementing, Inc.	
Contractor	Type Job	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Discovery #4	Bottom Stage		
Hole Size	T.D.	Charge To	
7 7/8	3990	Production & Drilling	
Csg.	Depth	Street	
5 1/2	3951		
Tbg. Size	Depth	City	
		State	
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
DV Tool	1563		
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered	
3913	3913	225 com	
Meas Line	Displace	500 gal mud clear 100L KCL	
	93BL		

**EQUIPMENT**

Pumptrk	No.	Cementor	Helper	Common
20		Jim		225
Bulktrk	No.	Driver		Poz. Mix
9		Tom		
Bulktrk	No.	Driver		Gel.
12		Tom		
		Driver		Calcium
				Halls

**JOB SERVICES & REMARKS**

Remarks:	Salt
Rat Hole	Flowseal
Mouse Hole	Kol-Seal
Centralizers	Mud CLR 48 500 gal
Baskets	CFL-117 or CD110 CAP 38
D/V or Port Collar	Sand
5 1/2 set @ 3951. Run @ 3911.87	Handling 225
500 gal 500 Triplex Shaly	Mileage
100L KCL Cement	

**FLOAT EQUIPMENT**

5 1/2 with 225K Clear Lines & Displace	Guide Shoe
Plug with 54 water 300L mud	Centralizer 9
300L water to land plug	Baskets 5
Plug land @ 1500#	AFU Inserts DV Tool
Little pressure - 200#	Float Shoe Triplex Shaly
	Latch Down L

Pumptrk Charge	17	prod string	Bottom stage
Mileage			

Thanks

X Signature

Tax  
Discount  
Total Charge

# 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. 1395

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-14-20	16	13	20	Ellis	KS		10:30

Location Ellis 15 E into

Lease <u>Brought</u>	Well No. <u>8</u>	Owner
Contractor <u>Discovery #4</u>	<u>Top Stage</u>	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>DV job</u>		
Hole Size <u>7 7/8</u>	T.D. <u>3940</u>	Charge To <u>Production Drilling</u>
Csg. <u>5 1/2</u>	Depth <u>3951</u>	Street
Tbg. Size	Depth	City State
Tool <u>DV Tool</u>	Depth <u>1563</u>	The above was done to satisfaction and supervision of owner agent or contractor.
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered <u>250 80/20 QMDC 1/4 #10</u>
Meas Line	Displace <u>37 BC</u>	

**EQUIPMENT**

Pumptrk <u>20</u>	No.	Cement	Common <u>250 80/20 QMDC</u>
		Helper	Poz. Mix
Bulktrk	No.	Driver <u>1.0K</u>	Gel.
		Driver	Calcium
Bulktrk <u>14</u>	No.	Driver <u>1.0M</u>	Hulls
		Driver	Salt

**JOB SERVICES & REMARKS**

Remarks:	
Rat Hole <u>305K</u>	Flowseal <u>62#</u>
Mouse Hole <u>155K</u>	Kol-Seal
Centralizers	Mud CLR 48
Baskets	CFL-117 or CD110 CAF 38
D/V or Port Collar	Sand

Plug Reheater Mousehole.  
Cement DV Tool with 205.5K.  
Clear lines + Displace Plug  
Plug level @ 1500'  
Cement Circulated!

**FLOAT EQUIPMENT**

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Pumptrk Charge	<u>prod string</u>	<u>TOP</u>
Mileage	<u>17</u>	<u>stage</u>

Thanks

Tax	
Discount	
Total Charge	

X  
Signature

*[Handwritten Signature]*

# **Geological Report**

**Brungardt #8**  
1680' FSL & 985' FWL  
Sec. 16 T13s R20w  
Ellis County, Kansas



**Production Drilling, Inc.**

## General Data

Well Data: Production Drilling, Inc.  
Brungardt #8  
1680' FSL & 985' FWL  
Sec. 16 T13s R20w  
Ellis County, Kansas  
API # 15-051-26988-0000

Drilling Contractor: Discovery Drilling Co., Inc. Rig #4

Geologist: Jason T Alm

Spud Date: September 8, 2020

Completion Date: September 14, 2020

Elevation: 2203' Ground Level  
2211' Kelly Bushing

Directions: Ellis KS, north ½ mi, east into location

Casing: 222' 8 5/8" surface casing  
3943' 5 1/2" production casing

Samples: 10' wet and dry, 3200' to RTD

Drilling Time: 3100' to RTD

Electric Logs: Gemini "Casey Patterson"  
CNL/CDL, DIL

Drillstem Tests: None

Problems: None

Remarks: DV @ 1563', Packer Shoe @ 3943'



## Formation Tops

<b>Formation</b>	<b>Production Drilling, Inc. Brungardt #8 Sec. 16 T13s R20w 1680' FWL &amp; 985' FWL</b>
Anhydrite	<b>1542' +669</b>
Base	<b>1588' +623</b>
Topeka	<b>3224' -1013</b>
Heebner	<b>3456' -1245</b>
Toronto	<b>3478' -1267</b>
Lansing	<b>3494' -1283</b>
BKC	<b>3742' -1531</b>
Marmaton	<b>3782' -1571</b>
Arbuckle	<b>3889' -1678</b>
LTD	<b>3986' -1775</b>
RTD	<b>3990' -1779</b>

## Sample Zone Descriptions

- Topeka 30' zone (3250' -1039): Not Tested**  
 Ls – Fine crystalline, micro-oolitic packstone in part with fair to good oomoldic porosity, light to fair oil stain, light spotted saturation in part, fair show of free oil when broken, light yellow-green fluorescents, good odor.
- LKC A zone (3494' -1283): Not Tested**  
 Ls – Fine crystalline, oolitic in part with poor scattered oolitic and inter-crystalline porosity, light to fair oil stain in porosity, slight show of free oil when broken, light odor, dull yellow fluorescents.
- LKC C zone (3526' -1315): Not Tested**  
 Ls – Fine crystalline, oolitic packstone with fair oolitic porosity, light to fair oil stain in porosity, few rocks with light saturation, fair show of free oil when broken, fair to good odor, dull to fair yellow fluorescents.
- LKC D zone (3543' -1331): Not Tested**  
 Ls – Fine crystalline, oolitic in part with fair to scattered good inter-crystalline and vuggy porosity, light to good oil stain in porosity, few rocks with even brown saturation, fair show of free oil, fair to good odor, fair yellow fluorescents.

- LKC F zone** (3574' -1363): **Not Tested**  
 Ls – Fine crystalline, oolitic with fair vuggy and scattered poor oolitic porosity, light to fair scattered oil stain, slight show of free oil when broken, light odor, dull yellow fluorescents.
- LKC H zone** (3627' -1416): **Not Tested**  
 Ls – Fine crystalline, slightly oolitic with poor to fair scattered vuggy porosity, light to fair oil stain in porosity, very slight show of free oil on cup, light odor, very dull yellow fluorescents.
- LKC I zone** (3649' -1438): **Not Tested**  
 Ls – Fine crystalline, oolitic packstone with fair oomoldic and oolitic porosity, light to good oil stain, few rocks with good even saturation, fair show of free oil, good odor, light to fair yellow fluorescents.
- LKC J zone** (3675' -1464): **Not Tested**  
 Ls – Fine crystalline, oolitic packstone in part with good oomoldic porosity, light to heavy oil stain and saturation, good show of free oil on cup and in sample, good odor, light to fair yellow fluorescents.
- Marmaton** (3782' -1571): **Not Tested**  
 Ls – Chert – Fine crystalline, slightly oolitic in part, very heavy orange to white chert, few pieces with pinpoint vuggy porosity, light spotted oil stain in porosity, fair show of free oil on cup, good odor, dull very scattered fluorescents.

## Structural Comparison

Formation	Production Drilling, Inc.	Victor Drilling Co.		Arvel C Smith	
	Brungardt #8 Sec. 16 T13s R20w 1680' FWL & 985' FWL	Brungardt #4 Sec. 16 T13s R20w NE SW SW		Brungardt #8 Sec. 16 T13s R20w NE NW SW	
Anhydrite	1542' +669	NA	NA	NA	NA
Base	1588' +623	NA	NA	NA	NA
Topeka	3224' -1013	3224' -1013	FL	3234' -1021	(+8)
Heebner	3456' -1245	3457' -1246	(+1)	3461' -1251	(+6)
Toronto	3478' -1267	3477' -1266	(-1)	3474' -1272	(+5)
Lansing	3494' -1283	3497' -1286	(+3)	3500' -1290	(+7)
BKC	3742' -1531	3742' -1532	(+1)	3746' -1535	(+4)
Marmaton	3782' -1571	3788' -1577	(+6)	3788' -1578	(+7)
Arbuckle	3889' -1678	3848' -1637	(-41)	3854' -1644	(-34)

### Summary

The location for the Brungardt #8 well was found via 3-D seismic survey. The new well ran structurally as expected on all datums except the Arbuckle. No Drill Stem Tests were conducted. After all gathered data had been examined the decision was made to run 5 ½ inch casing and convert the well into a saltwater disposal.

Respectfully Submitted,

Jason T Alm  
Hard Rock Consulting, Inc.