

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. 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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Geological Report

Sanders #11

1170' FNL & 330' FWL

Sec. 10 T14s R17w

Ellis County, Kansas



Blackhawk Production Co.

General Data

Well Data: Blackhawk Production Co.
Sanders #11
1170' FNL & 330' FWL
Sec. 10 T14s R17w
Ellis County, Kansas
API # 15-051-27011-0000

Drilling Contractor: Discovery Drilling Co. Inc. Rig #2

Geologist: Jason T Alm

Spud Date: August 19, 2021

Completion Date: August 26, 2021

Elevation: 2010' Ground Level
2018' Kelly Bushing

Directions: Toulon KS, East 2 mi on hwy 40 to 310 rd, north ½
mi, east into location

Casing: 1225' 8 5/8" surface casing
3629' 5 1/2" production casing

Samples: 10' wet and dry, 2950' to RTD

Drilling Time: 2850' to RTD

Electric Logs: ELI "Gus Pfannenstiel"
CNL/CDL, DIL, MEL

Drillstem Tests: Two, Trilobite Testing, Inc. "Dustin Day"

Problems: None

Remarks: None

Formation Tops

Formation	Blackhawk Production Co. Sanders #11 Sec. 10 T14s R17w 1170' FNL & 330' FWL
Anhydrite	1209' +809
Base	1246' +772
Topeka	3013' -995
Heebner	3264' -1246
Toronto	3284' -1266
Lansing	3310' -1292
BKC	3538' -1520
Arbuckle	3549' -1531
LTD	3631' -1613
RTD	3630' -1612

Significant Sample Zone Descriptions

LKC C

(3332' -1314): Covered in DST #1

Ls – Fine crystalline, oolitic packstone with good moldic porosity, light to good brown oil stain in porosity, slight to fair show of free oil in sample, fair show of free oil on cup, light to good odor, good yellow fluorescents, good cut, 72 gas units.

LKC D

(3352' -1334): Not Tested

Ls – Fine crystalline, oolitic in part with poor to fair scattered oolitic and vuggy porosity, light to fair oil stain in porosity, no show of free oil, no odor, 25 gas units.

LKC G

(3396' -1378): Not Tested

Ls – Fine crystalline, oolitic packstone with good moldic porosity, light to spotted fair oil stain in porosity, slight show of free oil, light odor, fair yellow fluorescents, 60 gas units.

Arbuckle

(3550' -1532): Covered in DST #2

Dolo – Fine to medium sucrosic/rhombic-crystalline with fair inter-crystalline and scattered vuggy porosity, light to good oil stain with fair even saturation, fair show of free oil on cup, good odor, 90-115 gas units.

Drill Stem Tests

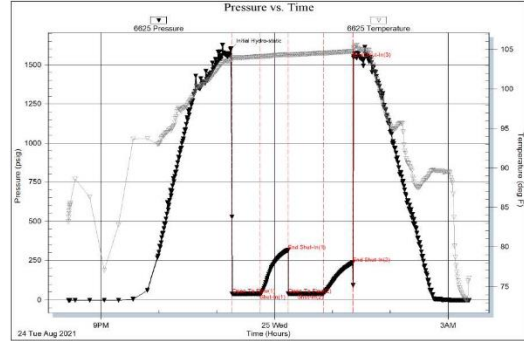
Trilobite Testing, Inc.
“Dustin Day”

DST #1 LKC C zone

Interval (3322' – 3350') Anchor Length 28'

IHP	– 1602 #	
IFP	– 30" – Built to 4 ½ in.	38-39 #
ISI	– 30" – Dead	315 #
FFP	– 30" – Dead	39-39 #
FSI	– 30" – Dead	234 #
FHP	– 1544 #	
BHT	– 105°F	

Recovery: 45' Mud

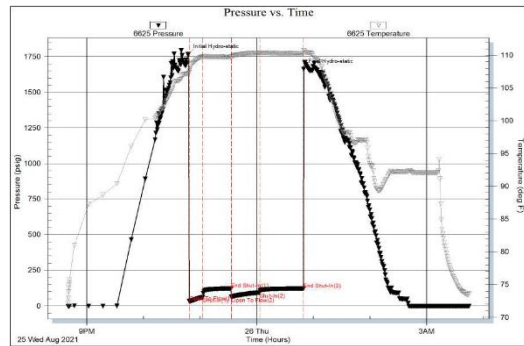


DST #2 Arbuckle

Interval (3553' – 3570') Anchor Length 17'

IHP	– 1766 #	
IFP	– 15" – B.O.B. 2 min.	31-61 #
ISI	– 30" – Built to ¾ in.	121 #
FFP	– 30" – B.O.B. 12 min.	62-94 #
FSI	– 45" – Built to ¼ in.	121 #
FHP	– 1662 #	
BHT	– 110°F	

Recovery: 450' GIP
 42' GMCO 90% Oil
 63' GOCM 5% Oil
 95' GOMCW 5% Oil, 60% Water



Structural Comparison

	Blackhawk Production Co.	Phoenix Drilling & Expl.		Paxco Inc.	
	Sanders #11			Sander #12	
	Sec. 10 T14s R17w	Sec. 10 T14s R17w		Sec. 10 T14s R17w	
Formation	1170' FNL & 330' FWL	NE SW NW		2172' FNL & 447' FWL	
Anhydrite	1209' +809	1198' +825	(-16)	1211' +809	FL
Base	1246' +772	NA	NA	1248' +772	FL
Topeka	3013' -995	NA	NA	3012' -992	(-3)
Heebner	3264' -1246	3267' -1244	(-2)	3268' -1248	(+2)
Toronto	3284' -1266	3289' -1266	FL	3287' -1267	(+1)
Lansing	3310' -1292	3313' -1290	(-2)	3313' -1293	(+1)
BKC	3538' -1520	NA	NA	3546' -1526	(+6)
Arbuckle	3549' -1531	3558' -1535	(+4)	3558' -1538	(+7)

Summary

The location for the Sanders #11 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Two Drill Stem Tests were conducted, one of which recovered commercial amounts of oil from the Arbuckle Formation. After all gathered data had been examined the decision was made to run 5 ½ inch production casing to further evaluate the Sanders #11 well.

Recommended Perforations

Primary:

Arbuckle 2 nd Break	(3588' – 3592')	Not Tested
If wet set plug and move up to top break		
Arbuckle 1 st Break	(3562' – 3570')	DST #2
	(3551' – 3558')	DST #2

Before Abandonment:

LKC G	(3399' – 3407')	Not Tested
LKC D	(3355' – 3357')	Not Tested
LKC C	(3335' – 3340')	DST #1

Respectfully Submitted,

Jason T Alm
 Hard Rock Consulting, Inc.
 AAPG # 10134582



Geologic Report

Drilling Time and Sample Log

Operator Blackhawk Production Co.		Elevation 2018'	
Lease Sanders No. 11		KB 2010'	
API # 15-051-27011-0000		DF 2010'	
Field Toulon		GL 2010'	
Location 1170' FNL & 335' FWL		Casing Record	
Sec. 10	Twp. 14s	Reg. 17w	Surface 8.518" @ 1223'
County Ellis	State Kansas	Production 5 1/2" @ 3629'	
Formation	Sample tops	Log Tops	Datum
Anhydrite	1208'	1209'	+809
Base	1245'	1246'	+772
Topeka	3013'	3013'	-995
Heebner	3264'	3264'	-1246
Toronto	3282'	3284'	-1266
Lansing	3309'	3310'	-1292
BKC	3538'	3538'	-1520
Arbuckle	3550'	3549'	-1531
Total Depth	3630'	3631'	1613

Drilling Contractor	Discovery Drilling Co., Inc. Rig #2	
Commenced	8-19-2021	Completed 8-26-2021
Samples Saved From	2950'	To RTD
Drilling Time Kept From	2850'	To RTD
Samples Examined From	2950'	To RTD
Geological Supervision From	2950'	To RTD

Displacement **2800'**

Mud Type **Chemical**

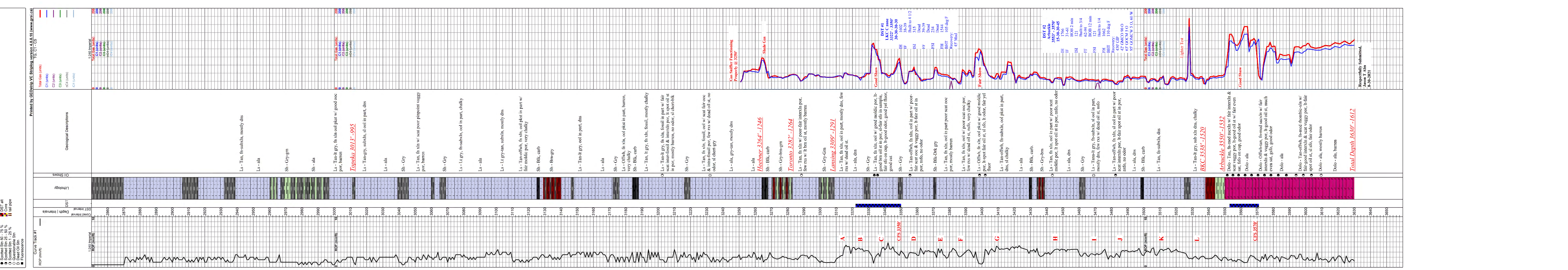
Summary and Recommendations

The location for the Sanders #11 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Two Drill Stem Tests were conducted, one of which recovered commercial amounts of oil from the Arbuckle Formation. After all gathered data had been examined the decision was made to run 5 1/2 inch production casing to further evaluate the Sanders #11 well.

Respectfully Submitted,

Jason T Alm
Hard Rock Consulting, Inc.

<p>ROCK TYPES</p> <ul style="list-style-type: none"> Carbon Sh shale, red shale, gm shale, gry Dolom Lmsst fvr7> 	<p>OTHER SYMBOLS</p> <ul style="list-style-type: none"> DST Int DST all Core tail pipe Even Sln Spotted Sln 50 - 75 % Spotted Sln 25 - 50 % Spotted Sln 1 - 25 % Dark Oil Sln Fluorescence
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Respectfully Submitted,
Jason T Alm
8-30-2021

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

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

No. 2509

Date 8/21/21 Sec. 10 Twp. 14 Range 17 County Ellis State Ks On Location _____ Finish 10:30 AM

Lease Sanders Well No. 11 Location Hays 40T Towson 2E 1/4

Contractor Discovery Digs Owner To Quality Oilwell Cementing, Inc.

Type Job Long Surface 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 1/4 T.D. 1223 Charge To Black Hawk Producer

Cog. 8 5/8 Depth 1223 Street _____

Tbg. Size _____ Depth _____ City _____ State _____

Tool _____ Depth _____ The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Cog. 17 Shoe Joint 2.0 Cement Amount Ordered 450 @ 20 3/4 cc 2 1/2 gal

Meas Line _____ Displace 76 BBL

EQUIPMENT

No.	Cementer	Common
Pumptrk <u>17</u>	Helper <u>Doug</u>	<u>360</u>
Bulktrk <u>13</u>	Driver <u>Doug</u>	Poz. Mix <u>90</u>
Bulktrk <u>21</u>	Driver <u>Doug</u>	Gel <u>8</u>
	Driver	Calcium <u>16</u>

JOB SERVICES & REMARKS

Remarks: _____ Hulls _____
 Rat Hole _____ Salt _____
 Mouse Hole _____ Flowseal _____
 Centralizers _____ Kol-Seal _____
 Baskets _____ Mud CLR 48 _____
 DV or Port Collar _____ CFL-117 or CD110 CAF 38 _____
 Sand _____
Ran 1223 8 5/8 Est Cir Handling 474
Mixed 450 cc Mileage _____

FLOAT EQUIPMENT

Guide Shoe 1 1/2 Black Hawk Producer
 Centralizer 1 9/16 Black Hawk Producer
 Baskets _____
 AFU Inserts _____
 Float Shoe _____
 Latch Down _____

Pumptrk Charge Long Surface

Mileage 15

Thanks

Signature _____ Tax _____
 Discount _____
 Total Charge _____

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

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

No. 2417

Date	8-27-21	Sec.	10	Twp.	14	Range	17	County	Ellis	State	KS	On Location	Finish	4:00 AM
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Location *7000 N 4002E 1/2 N*

Lease *Sanders* Well No. *11* Owner

Contractor *Discovery* To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish
Type Job *Prod string* cementer and helper to assist owner or contractor to do work as listed.

Hole Size *7 7/8* T.D. *3630* Charge To *Blackhawk Prod.*

Csg. *5 1/2 15'* 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. *42.36* Shoe Joint *42.36* Cement Amount Ordered *350 lite Qm DC 440*

Meas Line Displace *85.32* *150 cum 10% S.W.P. 5% B.I.*

113

EQUIPMENT

Pumptrk	17 No.	Cementer	<i>8-11</i>	Common	<i>150</i>
		Helper	<i>CP-6</i>	Poz. Mix	<i>350 8% Qm DC</i>
Bulktrk	14 No.	Driver	<i>Jason</i>	Gel.	
Bulktrk	21 No.	Driver	<i>Duke</i>	Calcium	

JOB SERVICES & REMARKS

Remarks: Halls

Rat Hole *30* Salt *13*

Mouse Hole *15* Flowseal *100 #*

Centralizers Kol-Seal *750 #*

Baskets Mud CLR 48

DV or Port Collar CFL-117 or CD110 CAF 38

pipe set @ 3627 Sand

Shoe Jt 42.36 Handling *520*

Insert 3585 Mileage

FLOAT EQUIPMENT

Cemty 350sk Qm DC by P10 Guide Shoe

Followed 150sk Centralizer *8*

pump plug at 85.3 bbl Baskets *3*

Land plug @ 1500 AFU Inserts

Float did hold Float Shoe

Cem did circ Latch Down *1*

40sk TO PIT

Pumptrk Charge

Mileage *15/mi Prod string*

Tax

Discount

Total Charge

X Signature

Thanks

120

F
2
9
16
23
30