

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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#1 Gerstberger Unit

2,547' FNL & 2,484' FWL

93' N & 174' E of E/2 E/2 W/2 Section 1-15S-37W

Logan County, Kansas

API# 15-109-21576-0000

Elevation: GL: 3,302', KB: 3,310'

Sample Tops			Ref. Well
Anhydrite	2590	+720	-10
B/Anhydrite	2611	+699	-11
Stotler	3622	-312	-16
Heebner	3974	-664	-12
Toronto	3994	-684	-12
Lansing	4032	-722	-10
Muncie	4204	-894	-15
Stark	4297	-987	-20
Hush	4349	-1039	-18
BKC	4384	-1074	-10
Marmaton	4417	-1107	+2
Altamont	4435	-1125	-2
Pawnee	4508	-1198	-2
Myrick	4557	-1247	+1
Ft. Scott	4573	-1263	-2
Cherokee	4600	-1290	-1
Johnson	4694	-1384	-8
Morrow	4751	-1441	-7
Miss	4835	-1525	-13
RTD	4900	-1590	



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

12051
11935
FIELD TICKET & TREATMENT REPORT
CEMENT

TICKET NUMBER 55928
LOCATION Cattley US
FOREMAN Mils Shaw
Invoice #84597 ^{1/5}

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
11-20-18	7173	Gerstberger unit 1	1	15 S	37 W	Lyon
CUSTOMER <u>Ritchie Exploration</u>			TRUCK #			
MAILING ADDRESS <u>P.O. Box 783188</u>			DRIVER			
CITY <u>Wichita</u>			TRUCK #			
STATE <u>KS</u>			DRIVER			
ZIP CODE <u>67278-3188</u>			TRUCK #			
			DRIVER			

JOB TYPE Surface HOLE SIZE 12 1/4" HOLE DEPTH 221 CASING SIZE & WEIGHT 8 5/8" / 23 #
CASING DEPTH _____ DRILL PIPE _____ TUBING _____ OTHER _____
SLURRY WEIGHT 14.7 SLURRY VOL 1.36 WATER gal/sk _____ CEMENT LEFT IN CASING 20'
DISPLACEMENT 12.25 bbls DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety Meeting and Rig up on W/D drilling Rig #17 Circulate casing mix 175 SX
Surface Blend 2 displac 12.25 bbls water Shut in Cement did Circulate

Thanks Mils Shaw

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE 0471	1	PUMP CHARGE	1150.00	1150.00
CE 0002	40	MILEAGE	7.15	286.00
CE 0711	8.22 Tbls	Top Mileage delivery	660.00	660.00
CE 5871	175 SX	Surface blend II	24.00	4200.00
			Subtotal	6296.00
		Loss 25% discount		1574.00
			Subtotal	4722.00
			SALES TAX	252.00
			ESTIMATED TOTAL	4974.00

Ravin 3737

AUTHORIZATION [Signature] TITLE Toolpusher DATE 11-20-18

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.



Dec. 3. 2018 2:24PM
 PRESSURE PUMPING LLC
 PO Box 884, Chanute, KS 66720
 620-431-9210 or 800-467-8676

12107
 11994

No. 0731 P. 12

TICKET NUMBER 55966
 LOCATION Dalley, KS
 FOREMAN Walt Dinkel

FIELD TICKET & TREATMENT REPORT
 CEMENT

Invoice #814666

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
11-30-18	7173	Gerstberger Unit #1	1	15-S	39-W	Logan
CUSTOMER		Ritchie Explorations	Russell Springs +			
MAILING ADDRESS		P.O. Box 783188	TRUCK #	DRIVER	TRUCK #	DRIVER
CITY		Wichita	731	Cory Davis	70	Walt Dinkel
STATE		KS	8-South			
ZIP CODE		67278-3188	8-South			

JOB TYPE PTA HOLE SIZE 7 7/8 HOLE DEPTH 4900' CASING SIZE & WEIGHT _____
 CASING DEPTH _____ DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 13.5 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT In CASING _____
 DISPLACEMENT _____ DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety Meeting, Rig up on WW#12, Plug as ordered.

50 - SKs @ 2600'
100 - SKs @ 1500 240 SKs 69/64 per, 40% Gal, 1/4" Flo-Seal
50 - SKs @ 275
10 SKs @ 40' w/ Wiper Plug
30 SKs in RH

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
Ceo 450	1	PUMP CHARGE	1,500.00	1,500.00
Ceo 009	40	MILEAGE	7.25	286.00
Ceo 710	10.352	Ton Mileage Delivery	1.75	18.12
CC5829	240 SKs	Lite Weight Blend V	16.00	3,840.00
CC6075	60 #	Flo-Seal	3.00	180.00
CP 8228	1	85/8 Wooden Plug	165.00	165.00
CC5326	100 #	Salt	.75	75.00
				6,693.40
				Less 25% - 1,673.35
				5,020.05
SCANNED				
SALES TAX				251.10
ESTIMATED TOTAL				5,271.15

AUTHORIZATION [Signature] TITLE Tool Pusher DATE 11-30-18



Company: Ritchie Exploration, Inc.

Lease: Gerstberger Unit #1

SEC: 1 TWN: 15S RNG: 37W
County: LOGAN
State: Kansas
Drilling Contractor: WW Drilling, LLC - Rig 12
Elevation: 3298 EST
Field Name: Wildcat
Pool: Wildcat
Job Number: 287

Operation:
Uploading recovery & pressures

DATE
November
27
2018

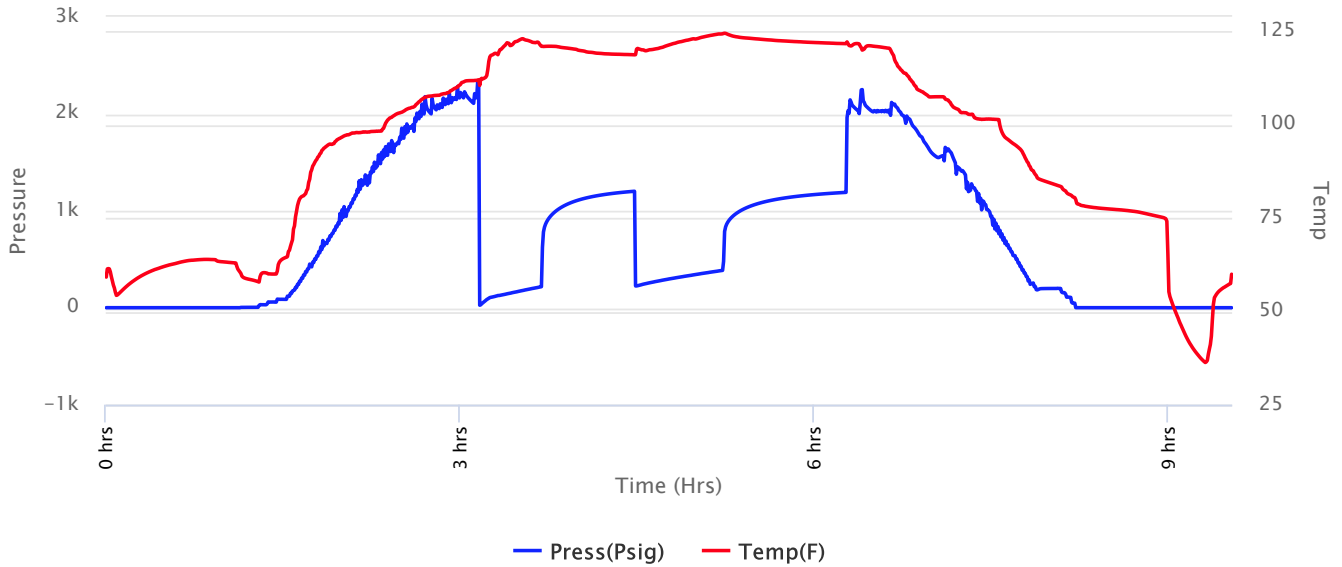
DST #1 **Formation: Altamont** **Test Interval: 4403 - 4487'** **Total Depth: 4487'**

Time On: 00:03 11/27 Time Off: 09:20 11/27
Time On Bottom: 03:08 11/27 Time Off Bottom: 06:08 11/27

Electronic Volume Estimate:
832'

<u>1st Open</u>	<u>1st Close</u>	<u>2nd Open</u>	<u>2nd Close</u>
Minutes: 30	Minutes: 45	Minutes: 45	Minutes: 60
Current Reading: 30.3" at 30 min	Current Reading: 0" at 45 min	Current Reading: 32.9" at 45 min	Current Reading: 0" at 60 min
Max Reading: 30.3"	Max Reading: 0"	Max Reading: 32.9"	Max Reading: 0"

Inside Recorder





Company: Ritchie Exploration, Inc.

Lease: Gerstberger Unit #1

SEC: 1 TWN: 15S RNG: 37W
 County: LOGAN
 State: Kansas
 Drilling Contractor: WW Drilling, LLC - Rig 12
 Elevation: 3298 EST
 Field Name: Wildcat
 Pool: Wildcat
 Job Number: 287

Operation:
 Uploading recovery & pressures

DATE
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27
 2018

DST #1 **Formation: Altamont** **Test Interval: 4403 - 4487'** **Total Depth: 4487'**

Time On: 00:03 11/27 Time Off: 09:20 11/27
 Time On Bottom: 03:08 11/27 Time Off Bottom: 06:08 11/27

Recovered

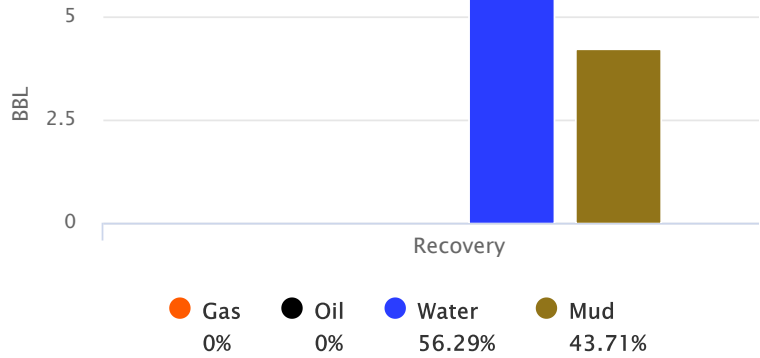
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
615	8.75145	HMCW	0	0	53	47
185	0.9702495	SLMCW	0	0	86	14

Total Recovered: 800 ft
 Total Barrels Recovered: 9.7216995

Reversed Out
 NO

Initial Hydrostatic Pressure	2165	PSI
Initial Flow	26 to 217	PSI
Initial Closed in Pressure	1201	PSI
Final Flow Pressure	225 to 385	PSI
Final Closed in Pressure	1190	PSI
Final Hydrostatic Pressure	2144	PSI
Temperature	125	°F
Pressure Change Initial Close / Final Close	1.0	%

Recovery at a glance





**Company: Ritchie Exploration,
Inc.**

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SEC: 1 TWN: 15S RNG: 37W
County: LOGAN
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 12
Elevation: 3298 EST
Field Name: Wildcat
Pool: Wildcat
Job Number: 287

Operation:
Uploading recovery &
pressures

DATE
November
27
2018

DST #1 Formation: Altamont Test Interval: 4403 - Total Depth: 4487'
4487'
Time On: 00:03 11/27 Time Off: 09:20 11/27
Time On Bottom: 03:08 11/27 Time Off Bottom: 06:08 11/27

BUCKET MEASUREMENT:

1st Open: 1/2" blow building to BOB 10 1/2 min
1st Close: No BB
2nd Open: 1/4" blow building to BOB 15 min.
2nd Close: No BB

REMARKS:

Tool Sample: 0% Gas 0% Oil 98% Water 2% Mud
Ph: 8.0
Measured RW: .32 @ 60 degrees °F
RW at Formation Temp: 0.162 @ 125 °F
Chlorides: 25,000 ppm



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County: LOGAN
State: Kansas
Drilling Contractor: WW Drilling, LLC - Rig 12
Elevation: 3298 EST
Field Name: Wildcat
Pool: Wildcat
Job Number: 287

Operation:
Uploading recovery & pressures

DATE
November
27
2018

DST #1 **Formation: Altamont** **Test Interval: 4403 - 4487'** **Total Depth: 4487'**
Time On: 00:03 11/27 Time Off: 09:20 11/27
Time On Bottom: 03:08 11/27 Time Off Bottom: 06:08 11/27

Down Hole Makeup

Heads Up: 11.22 FT	Packer 1: 4397.74 FT
Drill Pipe: 4202.84 FT <i>ID-3 1/2</i>	Packer 2: 4402.74 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4387.16 FT
Collars: 178.55 FT <i>ID-2 1/4</i>	Bottom Recorder: 4474 FT
Test Tool: 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 84.26	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 5 FT <i>4 1/2-FH</i>	
Change Over: 1 FT	
Drill Pipe: (in anchor): 62.26 FT <i>ID-3 1/2</i>	
Change Over: 1 FT	
Perforations: (below): 14 FT <i>4 1/2-FH</i>	



**Company: Ritchie Exploration,
Inc.**

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Rig 12
Elevation: 3298 EST
Field Name: Wildcat
Pool: Wildcat
Job Number: 287

Operation:
Uploading recovery &
pressures

DATE
November
27
2018

DST #1 Formation: Altamont Test Interval: 4403 - Total Depth: 4487'
4487'

Time On: 00:03 11/27 Time Off: 09:20 11/27
Time On Bottom: 03:08 11/27 Time Off Bottom: 06:08 11/27

Mud Properties

Mud Type: Chemical **Weight:** 9.6 **Viscosity:** 62 **Filtrate:** 8.9 **Chlorides:** 7,000 ppm



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Lease: Gerstberger Unit #1

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County: LOGAN
State: Kansas
Drilling Contractor: WW Drilling, LLC - Rig 12
Elevation: 3298 EST
Field Name: Wildcat
Pool: Wildcat
Job Number: 287

Operation:
Uploading recovery & pressures

DATE
November
27
2018

DST #1 Formation: Altamont Test Interval: 4403 - 4487' Total Depth: 4487'

Time On: 00:03 11/27 Time Off: 09:20 11/27
Time On Bottom: 03:08 11/27 Time Off Bottom: 06:08 11/27

Gas Volume Report

1st Open

2nd Open

Time	Orifice	PSI	MCF/D
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Time	Orifice	PSI	MCF/D
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