

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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Form	ACO1 - Well Completion
Operator	Hupfer Operating, Inc.
Well Name	BURMEISTER 'A' A-2
Doc ID	1427467

All Electric Logs Run

Micro Resistivity log
Cement Bond
Comensated Density Neutron
Dual Inductions

Form	ACO1 - Well Completion
Operator	Hupfer Operating, Inc.
Well Name	BURMEISTER 'A' A-2
Doc ID	1427467

Tops

Name	Top	Datum
Heebner	2919	-1135
Toronto	2936	-1152
Douglas	2949	-1165
Douglas Sand	2980	-1196
Brown Lime	3043	-1259
Lansing	3063	-1279
Arbuckle	3335	-1551
RTD	3365	-1581

Form	ACO1 - Well Completion
Operator	Hupfer Operating, Inc.
Well Name	BURMEISTER 'A' A-2
Doc ID	1427467

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
2	3229	3231			600 Gals 15% Mud Acid
	3220	3225			Swabbed good show oil & gas
	3200	3203			All Lansing
3	3128	3134			All Lansing - 1500 Gals 15% Mud Acid
	3064	3068			Swabbed good show oil & gas
					P.OP





# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

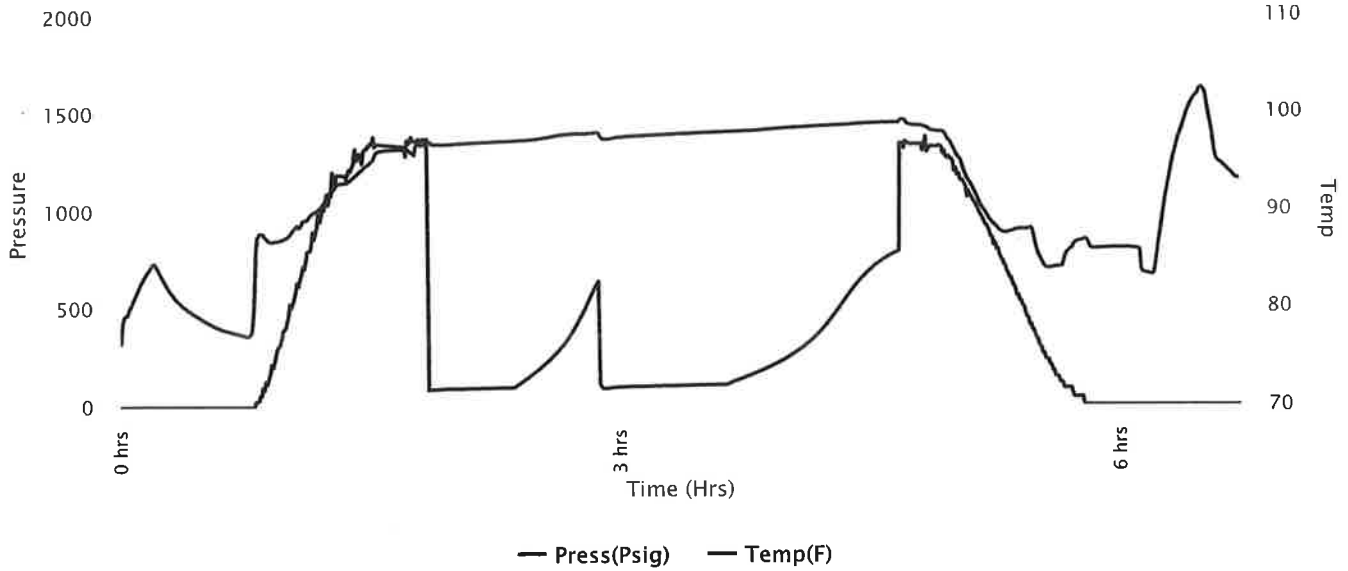
**DATE**  
August  
**17**  
2018

**DST #1**      **Formation:** Toronto/Douglas Sand      **Test Interval:** 2914 - 3000'      **Total Depth:** 3000'  
Time On: 10:05 08/17      Time Off: 16:38 08/17  
Time On Bottom: 11:53 08/17      Time Off Bottom: 14:38 08/17

Electronic Volume Estimate:  
**648'**

<u>1st Open</u>	1st Close	<u>2nd Open</u>	2nd Close
Minutes: 30	Minutes: 30	Minutes: 45	Minutes: 60
Current Reading: 23.3" at 30 min	Current Reading: 0" at 30 min	Current Reading: 55.6" at 45 min	Current Reading: 0" at 60 min
Max Reading: 23.3"	Max Reading: 0"	Max Reading: 55.6"	Max Reading: 0"

Inside Recorder





**Company: Hupfer Operating, Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
 Elevation: 1778 EGL  
 Field Name: Chase-Silica  
 Pool: Infield  
 Job Number: 216

**Operation:**  
 Test Complete

**DATE**  
 August  
**17**  
 2018

**DST #1**      **Formation:** Toronto/Douglas Sand  
**Test Interval:** 2914 - 3000'      **Total Depth:** 3000'  
 Time On: 10:05 08/17      Time Off: 16:38 08/17  
 Time On Bottom: 11:53 08/17      Time Off Bottom: 14:38 08/17

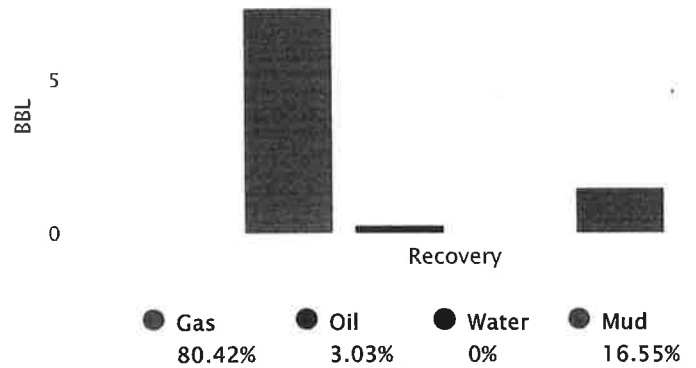
Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
585	7.0526463	G	100	0	0	0
240	2.1432963	SLOCSLGCM	16	13	0	71

Total Recovered: 825 ft  
 Total Barrels Recovered: 9.1959426

**Reversed Out**  
 NO

**Recovery at a glance**



Initial Hydrostatic Pressure	1290	PSI
Initial Flow	89 to 101	PSI
<b>Initial Closed in Pressure</b>	<b>645</b>	<b>PSI</b>
Final Flow Pressure	98 to 115	PSI
<b>Final Closed in Pressure</b>	<b>795</b>	<b>PSI</b>
Final Hydrostatic Pressure	1279	PSI
Temperature	100	°F
Pressure Change Initial Close / Final Close	0.0	%





**Company: Hupfer Operating,  
Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling  
Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**17**  
2018

<b>DST #1</b>	<b>Formation:</b> Toronto/Douglas Sand	<b>Test Interval: 2914 - 3000'</b>	<b>Total Depth: 3000'</b>
	Time On: 10:05 08/17	Time Off: 16:38 08/17	
	Time On Bottom: 11:53 08/17	Time Off Bottom: 14:38 08/17	

**BUCKET MEASUREMENT:**

1st Open: Surface blow building. BOB in 18 mins.  
1st Close: No blow back.  
2nd Open: 2 in. blow building. BOB in 3 1/2 mins.  
2nd Close: No blow back.

**REMARKS:**

Tool slid 10-12 ft. when setting the tool & kept losing fluid.  
Tool Sample: 0% Gas 31% Oil 0% Water 69% Mud



# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**17**  
2018

**DST #1**      **Formation:**      **Test Interval: 2914 -**      **Total Depth: 3000'**  
                         **Toronto/Douglas**      **3000'**  
                         **Sand**  
Time On: 10:05 08/17      Time Off: 16:38 08/17  
Time On Bottom: 11:53 08/17      Time Off Bottom: 14:38 08/17

### Down Hole Makeup

<b>Heads Up:</b> 22.18 FT	<b>Packer 1:</b> 2908.63 FT
<b>Drill Pipe:</b> 2723.88 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 2913.63 FT
<b>Weight Pipe:</b> 186.77 FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 2900.63 FT
<b>Collars:</b> 0 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 2983 FT
<b>Test Tool:</b> 26.16 FT <i>ID-3 1/2-FH</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 86.37	<b>Surface Choke:</b> 1"
<b>Anchor Makeup</b>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 3 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 62.37 FT <i>ID-3 1/2</i>	
<b>Change Over:</b> 1 FT	
<b>Perforations: (below):</b> 18 FT <i>4 1/2-FH</i>	



**Company: Hupfer Operating,  
Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling  
Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**17**  
2018

**DST #1**      **Formation:**      **Test Interval: 2914 -**      **Total Depth: 3000'**  
Toronto/Douglas      3000'  
Sand  
Time On: 10:05 08/17      Time Off: 16:38 08/17  
Time On Bottom: 11:53 08/17      Time Off Bottom: 14:38 08/17

**Mud Properties**

**Mud Type:** Chemical      **Weight:** 8.6      **Viscosity:** 48      **Filtrate:** 8.6      **Chlorides:** 5,000 ppm



# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**18**  
2018

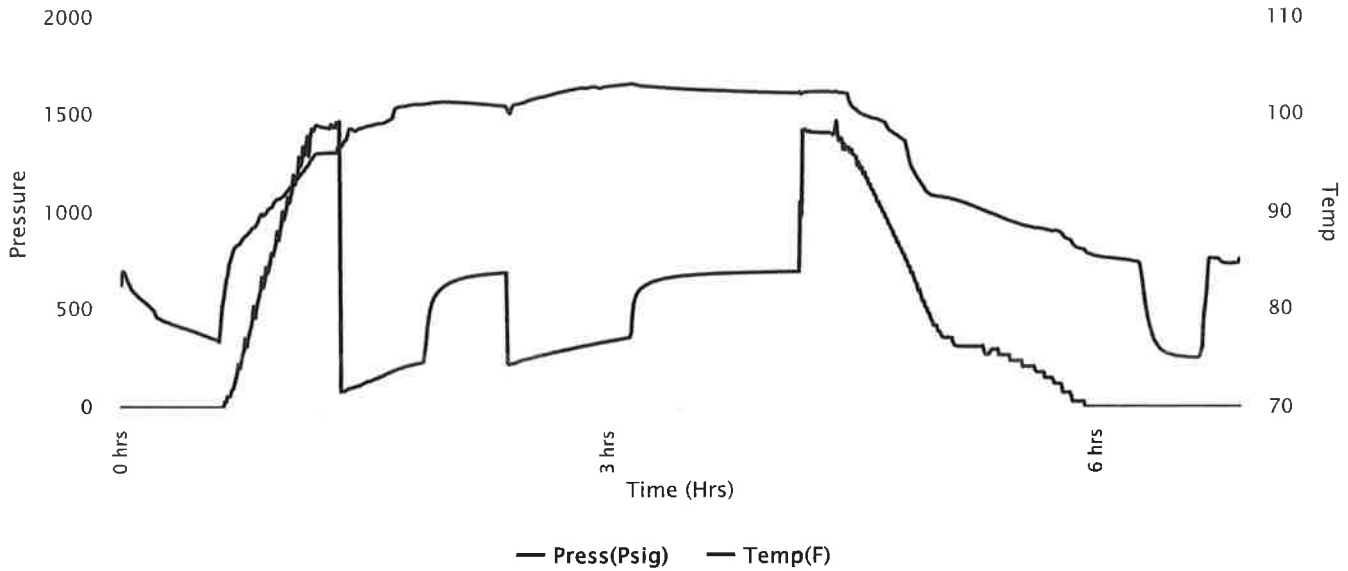
**DST #2    Formation: Lans "A-F"    Test Interval: 3045 - 3136'    Total Depth: 3136'**

Time On: 02:32 08/18    Time Off: 09:15 08/18  
Time On Bottom: 03:51 08/18    Time Off Bottom: 06:36 08/18

Electronic Volume Estimate:  
2958'

<u>1st Open</u>	1st Close	<u>2nd Open</u>	2nd Close
Minutes: 30	Minutes: 30	Minutes: 45	Minutes: 60
Current Reading: 354.1" at 30 min	Current Reading: 1.4" at 30 min	Current Reading: 216.8" at 45 min	Current Reading: 52.2" at 60 min
Max Reading: 354.1"	Max Reading: 1.4"	Max Reading: 216.8"	Max Reading: 52.2"

Inside Recorder





**Company: Hupfer Operating, Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
 Elevation: 1778 EGL  
 Field Name: Chase-Silica  
 Pool: Infield  
 Job Number: 216

**Operation:**  
 Test Complete

**DATE**  
 August  
**18**  
 2018

**DST #2**      **Formation: Lans "A-F"**      **Test Interval: 3045 - 3136'**      **Total Depth: 3136'**  
 Time On: 02:32 08/18      Time Off: 09:15 08/18  
 Time On Bottom: 03:51 08/18      Time Off Bottom: 06:36 08/18

Recovered

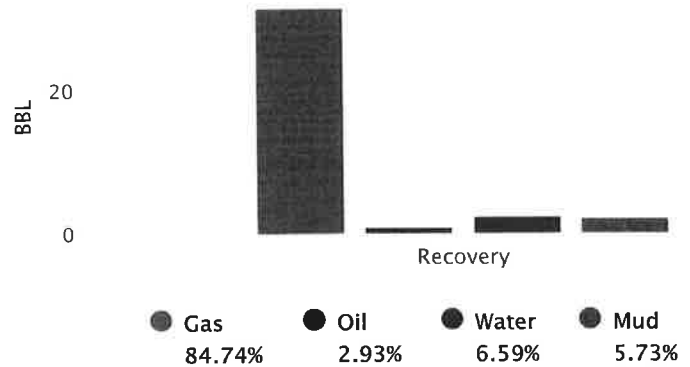
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
2265	30.9590463	G	100	0	0	0
10	0.0742	M (trace oil)	0	.1	0	99.9
185	1.3727	SLGCSLWCHMCO	3	53	8	36
310	3.1393963	SLOCSLWCHGCM	33	10	17	40
250	2.2855963	SLGCSLOCSLMCW	1	3	81	15

Total Recovered: 3020 ft

Total Barrels Recovered: 37.8309389

Reversed Out  
 NO

**Recovery at a glance**



Initial Hydrostatic Pressure	1442	PSI
Initial Flow	84 to 236	PSI
<b>Initial Closed in Pressure</b>	<b>696</b>	<b>PSI</b>
Final Flow Pressure	227 to 362	PSI
<b>Final Closed in Pressure</b>	<b>700</b>	<b>PSI</b>
Final Hydrostatic Pressure	1432	PSI
Temperature	104	°F
Pressure Change Initial Close / Final Close	0.0	%



**Company: Hupfer Operating, Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**18**  
2018

**DST #2      Formation: Lans "A-F"      Test Interval: 3045 - 3136'      Total Depth: 3136'**  
Time On: 02:32 08/18      Time Off: 09:15 08/18  
Time On Bottom: 03:51 08/18      Time Off Bottom: 06:36 08/18

**BUCKET MEASUREMENT:**

1st Open: 3 1/2 in. blow building. BOB in 1 1/2 mins.  
1st Close: 1 in. blow back.  
2nd Open: Surface blow building. BOB in 4 mins..  
2nd Close: BOB blow back 4 1/2 mins. after bled off (20 mins.)

**REMARKS:**

Gas to surface 24 1/2 mins. into final shut-in period.  
Tool Sample: 0% Gas 2% Oil 95% Water 3% Mud  
Ph: 7.0  
Measured RW: .10 @ 74 degrees °F  
RW at Formation Temp: 0.073 @ 104 °F  
Chlorides: 72,000 ppm



# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**18**  
2018

**DST #2**      **Formation: Lans "A-F"**      **Test Interval: 3045 - 3136'**      **Total Depth: 3136'**  
Time On: 02:32 08/18      Time Off: 09:15 08/18  
Time On Bottom: 03:51 08/18      Time Off Bottom: 06:36 08/18

### Down Hole Makeup

**Heads Up:** 16.18 FT  
**Drill Pipe:** 2848.88 FT  
*ID-3 1/2*  
**Weight Pipe:** 186.77 FT  
*ID-2 7/8*  
**Collars:** 0 FT  
*ID-2 1/4*  
**Test Tool:** 26.16 FT  
*ID-3 1/2-FH*

**Packer 1:** 3039.63 FT  
**Packer 2:** 3044.63 FT  
**Top Recorder:** 3031.63 FT  
**Bottom Recorder:** 3114 FT  
**Well Bore Size:** 7 7/8  
**Surface Choke:** 1"  
**Bottom Choke:** 5/8"

**Total Anchor:** 91.37  
**Anchor Makeup**

**Packer Sub:** 1 FT  
**Perforations: (top):** 3 FT  
*4 1/2-FH*  
**Change Over:** 1 FT  
**Drill Pipe: (in anchor):** 62.37 FT  
*ID-3 1/2*  
**Change Over:** 1 FT  
**Perforations: (below):** 23 FT  
*4 1/2-FH*



**Company: Hupfer Operating, Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**18**  
2018

**DST #2**      **Formation: Lans "A-F"**      **Test Interval: 3045 - 3136'**      **Total Depth: 3136'**  
Time On: 02:32 08/18      Time Off: 09:15 08/18  
Time On Bottom: 03:51 08/18      Time Off Bottom: 06:36 08/18

**Mud Properties**

**Mud Type:** Chemical      **Weight:** 8.6      **Viscosity:** 48      **Filtrate:** 8.8      **Chlorides:** 5,000 ppm





# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**19**  
2018

**DST #3    Formation: Arbuckle    Test Interval: 3303 - 3345'    Total Depth: 3345'**  
Time On: 05:22 08/19    Time Off: 11:57 08/19  
Time On Bottom: 07:05 08/19    Time Off Bottom: 09:50 08/19

Electronic Volume Estimate:  
51'

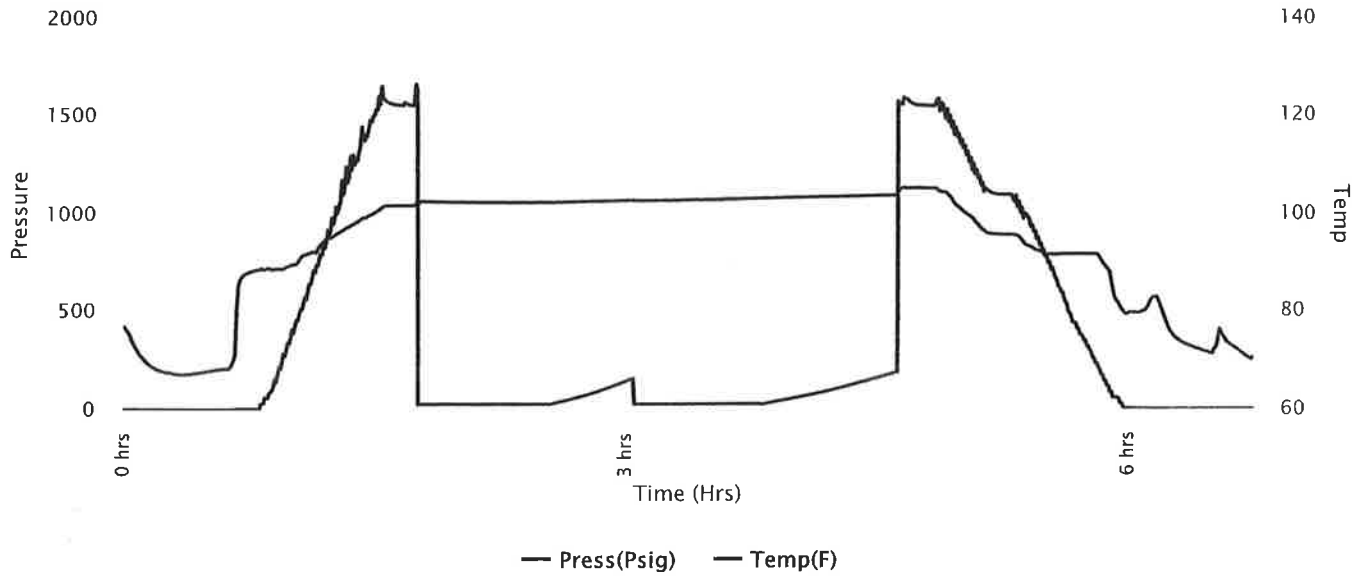
**1st Open**  
Minutes: 45  
Current Reading:  
3.2" at 45 min  
Max Reading: 3.2"

**1st Close**  
Minutes: 30  
Current Reading:  
0" at 30 min  
Max Reading: 0"

**2nd Open**  
Minutes: 45  
Current Reading:  
0" at 45 min  
Max Reading: 0"

**2nd Close**  
Minutes: 45  
Current Reading:  
0" at 45 min  
Max Reading: 0"

Inside Recorder





# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W ,  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**19**  
2018

**DST #3**    **Formation: Arbuckle**    **Test Interval: 3303 - 3345'**    **Total Depth: 3345'**

Time On: 05:22 08/19    Time Off: 11:57 08/19  
Time On Bottom: 07:05 08/19    Time Off Bottom: 09:50 08/19

### Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
30	0.2226	M (trace oil)	0	.5	0	99.5

Total Recovered: 30 ft  
Total Barrels Recovered: 0.2226

Reversed Out  
NO

### Recovery at a glance

Initial Hydrostatic Pressure	1560	PSI
Initial Flow	30 to 33	PSI
<b>Initial Closed in Pressure</b>	<b>164</b>	<b>PSI</b>
Final Flow Pressure	34 to 34	PSI
<b>Final Closed in Pressure</b>	<b>195</b>	<b>PSI</b>
Final Hydrostatic Pressure	1559	PSI
Temperature	105	°F
Pressure Change Initial Close / Final Close	0.0	%

BBL  
0.2  
0.1  
0



Recovery

● Gas 0%    ● Oil 0.5%    ● Water 0%    ● Mud 99.5%



**Company: Hupfer Operating,  
Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling  
Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**

Test Complete

**DATE**

August

**19**

2018

**DST #3      Formation: Arbuckle      Test Interval: 3303 -      Total Depth: 3345'**  
**3345'**

Time On: 05:22 08/19

Time Off: 11:57 08/19

Time On Bottom: 07:05 08/19      Time Off Bottom: 09:50 08/19

**BUCKET MEASUREMENT:**

1st Open: 2 in. blow building to a 2 3/4 in. blow.

1st Close: No blow back.

2nd Open: Surface blow.

2nd Close: No blow back.

**REMARKS:**

Tool slid about 5 ft. when setting the tool.

Tool Sample: 0% Gas 2% Oil 0% Water 98% Mud



# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**19**  
2018

**DST #3**      **Formation: Arbuckle**      **Test Interval: 3303 - 3345'**      **Total Depth: 3345'**  
Time On: 05:22 08/19      Time Off: 11:57 08/19  
Time On Bottom: 07:05 08/19      Time Off Bottom: 09:50 08/19

### Down Hole Makeup

<b>Heads Up:</b> 8.3300000000002 FT	<b>Packer 1:</b> 3298 FT
<b>Drill Pipe:</b> 3099.4 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 3303 FT
<b>Weight Pipe:</b> 186.77 FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3290 FT
<b>Collars:</b> 0 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 3305 FT
<b>Test Tool:</b> 26.16 FT <i>ID-3 1/2-FH</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 42	<b>Surface Choke:</b> 1"
<u>Anchor Makeup</u>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 0 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 0 FT	
<b>Drill Pipe: (in anchor):</b> 0 FT <i>ID-3 1/2</i>	
<b>Change Over:</b> 0 FT	
<b>Perforations: (below):</b> 41 FT <i>4 1/2-FH</i>	



**Company: Hupfer Operating,  
Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling  
Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**

Test Complete

**DATE**

August

**19**

2018

**DST #3    Formation: Arbuckle    Test Interval: 3303 -    Total Depth: 3345'**  
**3345'**

Time On: 05:22 08/19

Time Off: 11:57 08/19

Time On Bottom: 07:05 08/19

Time Off Bottom: 09:50 08/19

**Mud Properties**

**Mud Type:** Chemical

**Weight:** 9.0

**Viscosity:** 44

**Filtrate:** 10.4

**Chlorides:** 8,000 ppm



# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**19**  
2018

**DST #4    Formation: Arbuckle    Test Interval: 3303 - 3355'    Total Depth: 3355'**

Time On: 19:25 08/19    Time Off: 00:54 08/20  
Time On Bottom: 21:06 08/19    Time Off Bottom: 23:21 08/19

Electronic Volume Estimate:  
37'

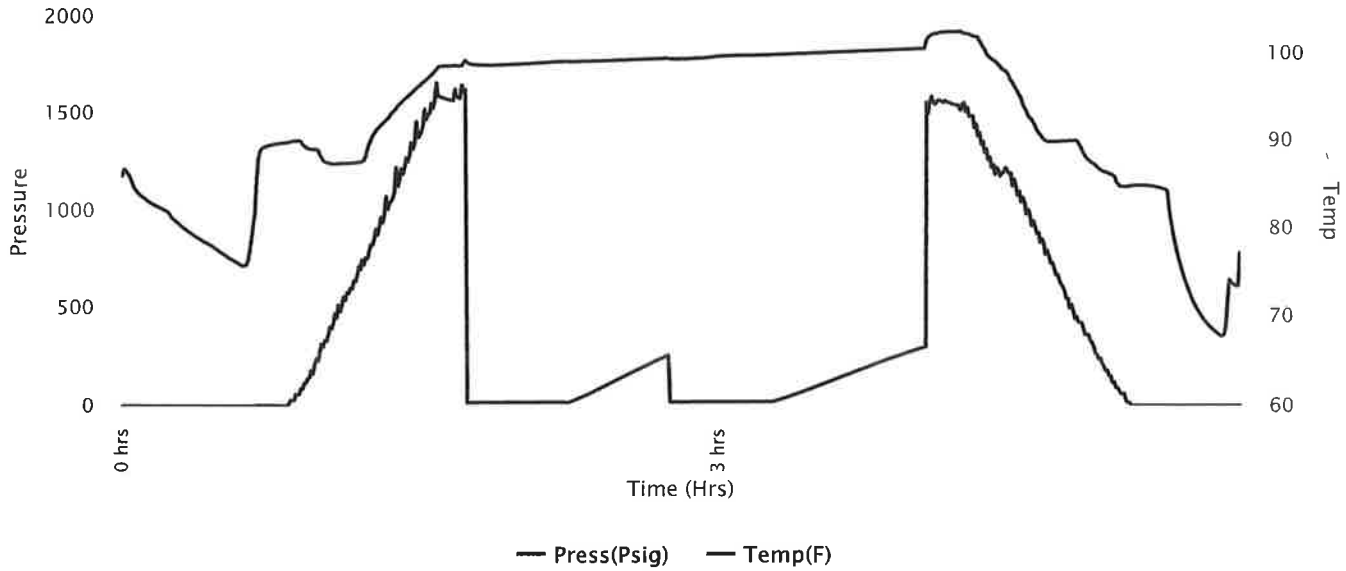
1st Open  
Minutes: 30  
Current Reading:  
2.3" at 30 min  
Max Reading: 2.3"

1st Close  
Minutes: 30  
Current Reading:  
0" at 30 min  
Max Reading: 0"

2nd Open  
Minutes: 30  
Current Reading:  
0" at 30 min  
Max Reading: 0"

2nd Close  
Minutes: 45  
Current Reading:  
0" at 45 min  
Max Reading: 0"

Inside Recorder





# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**19**  
2018

**DST #4    Formation: Arbuckle    Test Interval: 3303 - 3355'    Total Depth: 3355'**

Time On: 19:25 08/19    Time Off: 00:54 08/20  
Time On Bottom: 21:06 08/19    Time Off Bottom: 23:21 08/19

Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
20	0.1484	M (trace oil)	0	.3	0	99.7

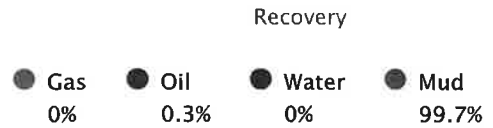
Total Recovered: 20 ft

Total Barrels Recovered: 0.1484

**Reversed Out**  
NO

### Recovery at a glance

Initial Hydrostatic Pressure	1574	PSI	0.1
Initial Flow	20 to 23	PSI	BBL
<b>Initial Closed in Pressure</b>	<b>266</b>	<b>PSI</b>	
Final Flow Pressure	24 to 26	PSI	
<b>Final Closed in Pressure</b>	<b>305</b>	<b>PSI</b>	0
Final Hydrostatic Pressure	1571	PSI	
Temperature	101	°F	
Pressure Change Initial Close / Final Close	0.0	%	





**Company: Hupfer Operating,  
Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling  
Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**19**  
2018

**DST #4    Formation: Arbuckle    Test Interval: 3303 -    Total Depth: 3355'**  
**3355'**

Time On: 19:25 08/19    Time Off: 00:54 08/20  
Time On Bottom: 21:06 08/19    Time Off Bottom: 23:21 08/19

**BUCKET MEASUREMENT:**

1st Open: 1 in. blow building to a 2 in. blow.  
1st Close: No blow back.  
2nd Open: Surface blow.  
2nd Close: No blow back.

**REMARKS:**

Tool slid 2-3 ft. when setting the tool.  
Tool Sample: 0% Gas 3% Oil 0% Water 97% Mud





# Company: Hupfer Operating, Inc

## Lease: Burmeister "A" #A-2

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**19**  
2018

**DST #4**    **Formation: Arbuckle**    **Test Interval: 3303 - 3355'**    **Total Depth: 3355'**  
Time On: 19:25 08/19    Time Off: 00:54 08/20  
Time On Bottom: 21:06 08/19    Time Off Bottom: 23:21 08/19

### Down Hole Makeup

<b>Heads Up:</b> 7.7 FT	<b>Packer 1:</b> 3298.18 FT
<b>Drill Pipe:</b> 3098.95 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 3303.18 FT
<b>Weight Pipe:</b> 186.77 FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3290.18 FT
<b>Collars:</b> 0 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 3342 FT
<b>Test Tool:</b> 26.16 FT <i>ID-3 1/2-FH</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 51.82	<b>Surface Choke:</b> 1"
<u>Anchor Makeup</u>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 3 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 31.82 FT <i>ID-3 1/2</i>	
<b>Change Over:</b> 1 FT	
<b>Perforations: (below):</b> 14 FT <i>4 1/2-FH</i>	



**Company: Hupfer Operating,  
Inc**

**Lease: Burmeister "A" #A-2**

SEC: 33 TWN: 19S RNG: 11W  
County: BARTON  
State: Kansas  
Drilling Contractor: Discovery Drilling  
Company, Inc. - Rig 2  
Elevation: 1778 EGL  
Field Name: Chase-Silica  
Pool: Infield  
Job Number: 216

**Operation:**  
Test Complete

**DATE**  
August  
**19**  
2018

**DST #4      Formation: Arbuckle      Test Interval: 3303 -      Total Depth: 3355'**  
3355'

Time On: 19:25 08/19      Time Off: 00:54 08/20  
Time On Bottom: 21:06 08/19      Time Off Bottom: 23:21 08/19

**Mud Properties**

**Mud Type:** Chemical      **Weight:** 8.8      **Viscosity:** 44      **Filtrate:** 12.8      **Chlorides:** 9,000 ppm



# Musgrove

Petroleum Geology  
212 Main Street, Claflin KS

## GEOLOGIST'S REPORT

### DRILLING TIME AND SAMPLE LOG

COMPANY <u>Hupfer Operating, Inc.</u>	ELEVATIONS
LEASE <u>Burmeister 'A' #2</u>	KB <u>1784'</u>
FIELD <u>Chase-Silica</u>	DF _____
LOCATION <u>W2-SW-SE-SE (360' FSL &amp; 430' FWL)</u>	GL <u>1778'</u>
SEC <u>33</u> TWSP <u>19S</u> RGE <u>11W</u>	Measurements Are All From <u>KB</u>
COUNTY <u>Barton</u> STATE <u>Kansas</u>	
CONTRACTOR <u>Discovery Drilling, inc. ( Rig # 2)</u>	CASING
SPUD <u>08/13/2018</u> COMP <u>08/20/2018</u>	SURFACE <u>8 5/8"@258'</u>
RTD <u>3355'</u> LTD <u>3337'</u>	PRODUCTION <u>5 1/2"@3365'</u>
MUD UP <u>2500'</u> TYPE MUD <u>Chemical</u>	ELECTRICAL SURVEYS
	Gemini Wireline;
	DIL, CDNL, Micro Log

SAMPLES SAVED FROM \_\_\_\_\_ 2600' TO \_\_\_\_\_ RTD

DRILLING TIME KEPT FROM \_\_\_\_\_ 2800' TO \_\_\_\_\_ RTD

SAMPLES EXAMINED FROM \_\_\_\_\_ 2800' TO \_\_\_\_\_ RTD

GEOLOGICAL SUPERVISION FROM \_\_\_\_\_ 2800' TO \_\_\_\_\_ RTD

GEOLOGIST ON WELL Jim Musgrove

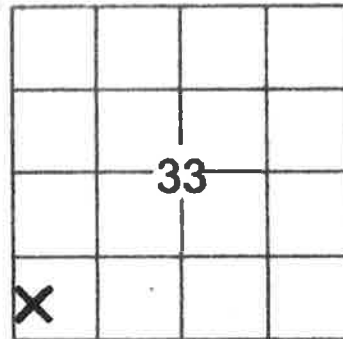
FORMATION TOPS	LOG		<del>SAMPLES</del>	
Anhydrite	517	+1267	RTD	3365 (-1581)
B. Anhydrite	541	+1243	LTD	3355 (-1571)
Heebner	2919	(-1135)		
Toronto	2936	(-1152)		
Douglas	2949	(-1165)		
Douglas Sd.	2980	(-1196)		
Brown Lime	3043	(-1259)		
Lansing	3063	(-1279)		
Base KC	3306	(-1522)		
Conglomerate Chert	3316	(-1532)		
Arbuckle	3335	(-1551)		

33

X

SAMPLES SAVED FROM 2600' TO RTD  
 DRILLING TIME KEPT FROM 2800' TO RTD  
 SAMPLES EXAMINED FROM 2800' TO RTD  
 GEOLOGICAL SUPERVISION FROM 2800' TO RTD  
 GEOLOGIST ON WELL Jim Musgrove

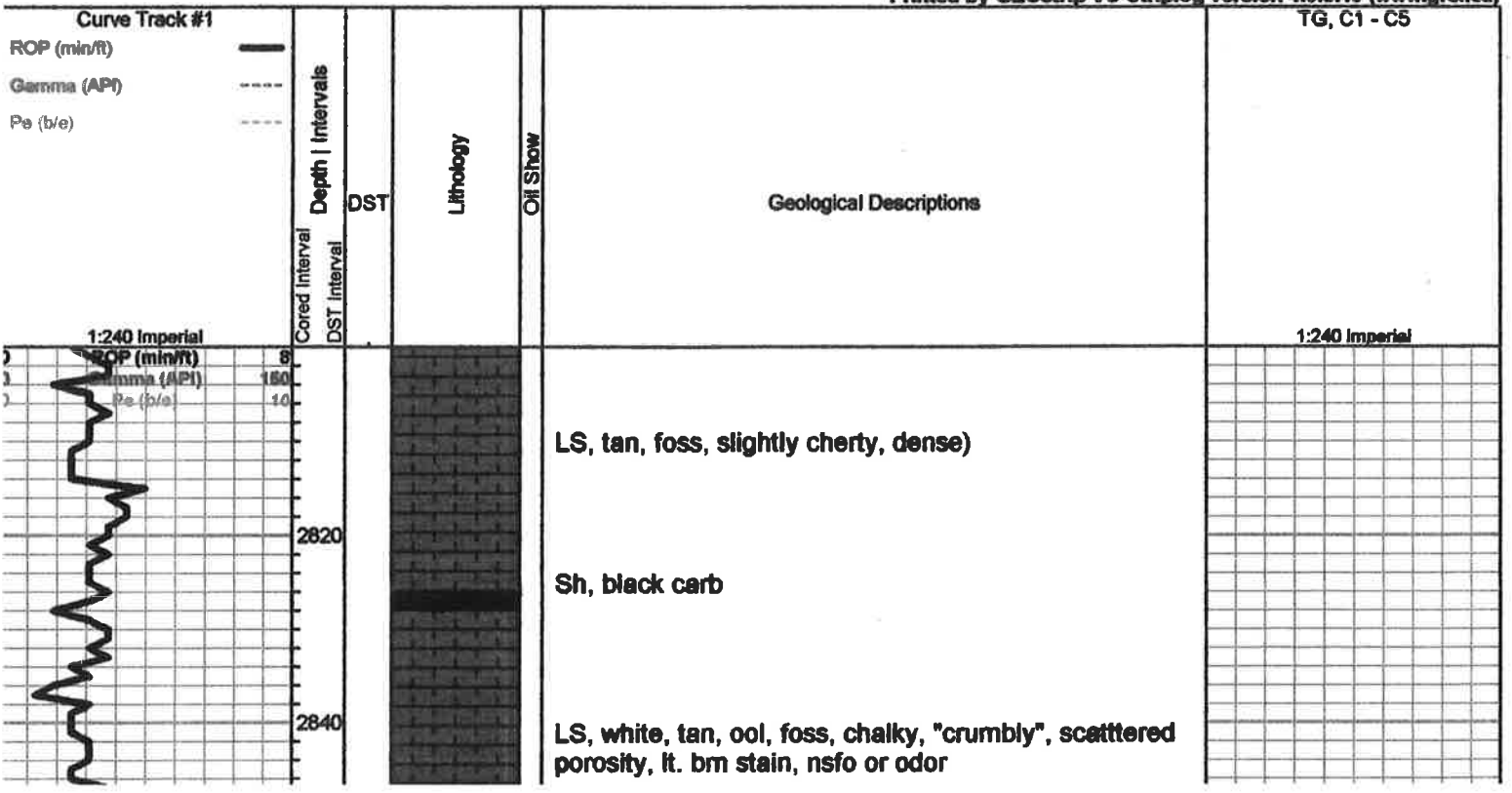
FORMATION TOPS	LOG		<del>SAMPLES</del>	
Anhydrite	517	+1267	RTD	3365 (-1581)
B. Anhydrite	541	+1243	LTD	3355 (-1571)
Heebner	2919	(-1135)		
Toronto	2936	(-1152)		
Douglas	2949	(-1165)		
Douglas Sd.	2980	(-1196)		
Brown Lime	3043	(-1259)		
Lansing	3063	(-1279)		
Base KC	3306	(-1522)		
Conglomerate Chert	3316	(-1532)		
Arbuckle	3335	(-1551)		

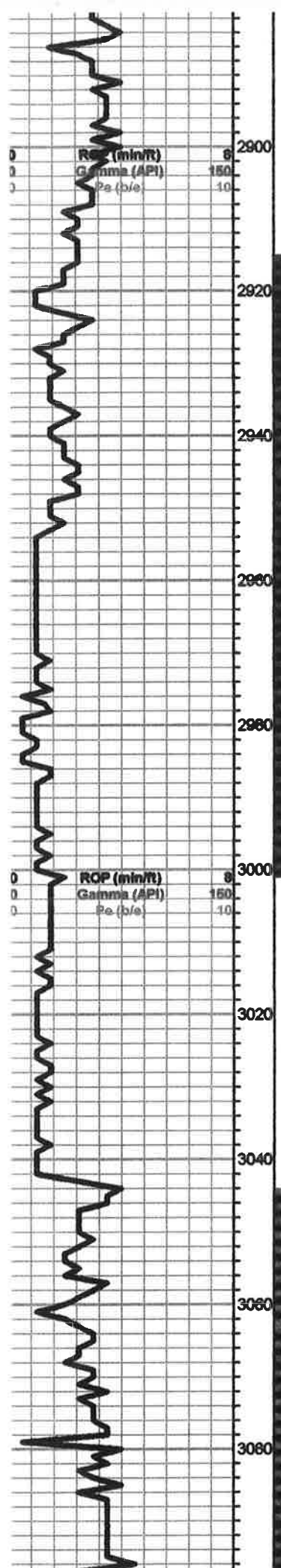


**LEGEND**

- Oil Show**
- Good Show
  - Fair Show
  - Poor Show
  - Spotted or Trace
  - Questionable Str
  - D Dead Oil Str
  - Fluorescence
  - \* Gas
- DST**
- DST Int
  - DST alt
  - Core
  - || tail pipe

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





LS, a/a

LS, white, cream, tan, fxl, chalky--> cherty, tr. gry chert

Heebner 2919.0 (-1135.0)

Sh, black carb

Toronto 2934.0 (-1150.0)

LS, white, cream, fxl, scattered inxln porosity, brown/blk stain, sfo, no odor

Douglas 2949.0 (-1165.0)

Sh, gry/ gryish, green, silty

DST#1 2914-3000

30-30-45-60

1st Open:  
BOB 18 mins.

2nd Open:  
BOB 3.5 mins

Recovery;  
585' GIP

240' SOGCM  
(16%G, 13%O, 0%  
W, 71%M)

ISIP 645 psi  
FSIP 795 psi  
IFP 89-101 psi  
FFP 98-115 psi  
HSH 124-1279 psi

Douglas Sd 2978.0 (-1194.0)

Sd. white, gry, vfg, qtz, sub rounded, friable, fair ingranular porosity, blk/bm stain, sat. sfo, ??? odor

Sh, gry, gryish green silty

Sh, a/a

Brown Lime 3042.0 (-1258.0)

LS, tan/ bm, fxl, slightly cherty, dense

Sh, gry, gryish green

Lansing 3060.0 (-1276.0)

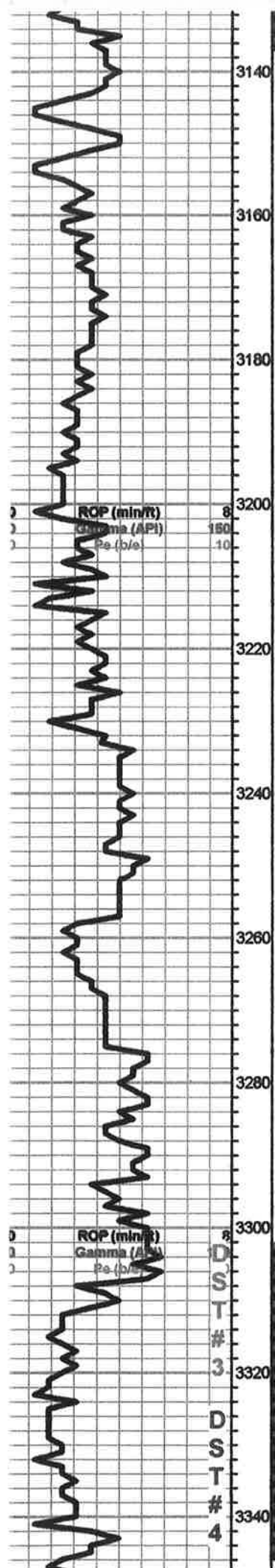
LS, white, cream, chalky, poor vis. porosity, tr. brn spity stain, nsfo, no odor

DST#2 3045-3136

30-30-45-60

1st Open  
BOB 1.5 min

LS, white, cream, fxl, chalky in part, fine vuggy-p.p. porosity, golden brown stain, sfo, ft. odor



LS, tan, oom, fair oom porosity, ft. bm stain, tr. fo, no odor

LS, a/a, ft. odor

LS, white, cream, tan, fxl, cherty in pts, few chalky

Tr. Sh, black carb

LS, white/ cream, oom, chalky in pt, dk brown -blk stain, nsfo, no odor

LS, white, tan, ool, chalky poor vis. porosity, bm stain, tr. fo, ft. odor

LS, white/ gry, ool, sub oom, chalky, tr. brown/ blk stain, nsfo, ft. odor

LS, white/ gry, slightly cherty (dense)

Tr. gry/ maroon- blk shale

LS, white, ool, chalky, tr. brown/ blk stain, tr. fo, no odor  
Sh, black carb

BKC 3307.0 (-1523.0)

Sh, maroon-green, tr. white chert

Chert, gry, opaque, & gry ool chert

Tr. gry soft sh/ clay

Arbuckle 3335.0 (-1551.0)

Dol. tan, buff., suc. scattered p.p. porosity, bm stain/ sat. sfo, odor

Dol. a/a, inc. cherty, tr. stain, tr. fo

(3%G, 53%O, 8%W, 36%M)

310' O&GCMW  
(33%G, 10%O, 17%W, 40%M)

250' SLO&GCMW  
(17%G, 39%O, 8%W, 15%M)

Pressures  
ISIP 696 psi  
FSIP 700 psi  
IFP 84-236 psi  
FFP 227-362 psi  
HSH 1442-1432 psi

DST#3 3303-3345  
30-30-45-45

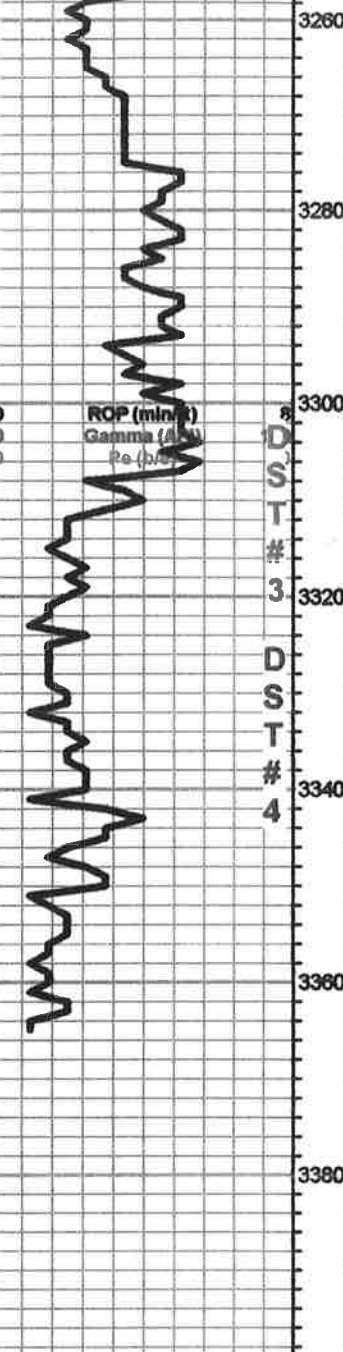
1st Open:  
weak

2nd Open:  
weak  
Recovery:  
30' mud, tr. oil

Pressures:  
ISIP 164 psi  
FSIP 195 psi  
IFP 30-33 psi  
FFP 34-34 psi  
HSH 1560 - 1559 psi

DST #4 3303-3355  
30-30-45-45

1st Open:  
Weak



3260  
3280  
3300  
3320  
3340  
3360  
3380

LS, white/ gry, slightly cherty (dense)

Tr. gry/ maroon- blk shale

LS, white, ool, chalky, tr. brown/ blk stain, tr. fo, no odor  
Sh, black carb

BKC 3307.0 (-1523.0)

Sh, maroon-green, tr. white chert

Chert, gry, opaque, & gry ool chert

Tr. gry soft sh/ clay

Arbuckle 3335.0 (-1551.0)

Dol. tan, buff., suc. scattered p.p. porosity, bm stain/ sat. sfo, odor

Dol. a/a, inc. cherty, tr. stain, tr. fo

Dol. tan, white, fxl, suc. fr. p.p. porosity, blk/ bm, stain, sfo, odor, + white & cream, chalk

Dol., a/a, poor - fair porosity, + cream, boney chert; tr. stain, wk sfo, ft./ fr. odor

\*RTD 3365.0 (-1581.0)

LTD 3337.0 (-1553.0)

30-30-45-45

1st Open:  
weak

2nd Open:  
weak

Recovery:  
30' mud, tr. oil

Pressures:

ISIP 164 psi  
FSIP 195 psi  
IFP 30-33 psi  
FFP 34-34 psi  
HSH 1560 - 1559 psi

DST #4 3303-3355

30-30-45-45

1st Open:  
Weak

Recovery:  
20' Mud w/ tr. oil

Pressures:

ISIP 266 psi  
FSIP 305 psi  
IFP 20-23 psi  
FFP 24-26 psi  
HSH 1524-1571 psi



# Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

## DRILLER'S LOG

Operator: Hupfer Operating, Inc. Lic# 30380 Contractor: Discovery Drilling Co., Inc. LIC#31548  
P.O. Box 3912 PO Box 763  
Shawnee, KS 66203 + 0912 Hays, KS 67601

Lease: Burmeister "A" # A-2 Location: 360 FSL - 430 FWL  
NE/SW/SW/SW  
Section 33/ 19S/ 11W  
Barton County, KS

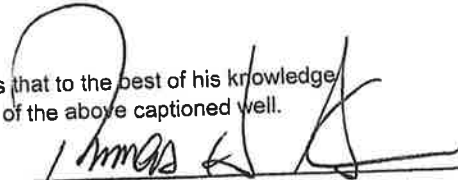
Loggers Total Depth: 3347 @ 3355'RTD API#15- 009-26,223-00-00  
Rotary Total Depth: 3365' Elevation: 1776 GL - 1784 KB  
Commenced: 8/13/2018 Completed: 8/20/2018  
Casing: 8 5/8" @ 258'W/275sks Status: Oil Well  
5 1/2" @ 3352'W/135sks

## DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>545'</u>
Dakota Sand	<u>158'</u>	Shale & Lime	<u>1374'</u>
Shale	<u>214'</u>	Shale	<u>1540'</u>
Cedar Hill Sand	<u>225'</u>	Shale & Lime	<u>1821'</u>
Red Bed Shale	<u>343'</u>	Lime & Shale	<u>3042'</u>
Anhydrite	<u>524'</u>	RTD	<u>3365'</u>
Base Anhydrite	<u>545'</u>		

STATE OF KANSAS )  
) ss  
COUNTY OF ELLIS )

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

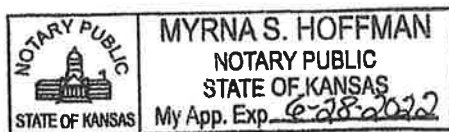
  
Thomas H. Alm

Subscribed and sworn to before me on 8-30-18

My Commission expires: 6-28-2022

(Place stamp or seal below)

  
Notary Public





# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 923

Cell 785-324-1041

Date	8-13-18	Sec.	33	Twp.	19	Range	11	County	Barton	State	Ks	On Location		Finish	9:30 PM
------	---------	------	----	------	----	-------	----	--------	--------	-------	----	-------------	--	--------	---------

Lease	Burmeister A	Well No.	A-2	Owner	E/into
-------	--------------	----------	-----	-------	--------

Contractor	Discovery	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	Hupfer operating
----------	---------	-----------	------------------

Hole Size	12 1/4"	T.D.	258'
Csg.	8 5/8"	Depth	258'

Tbg. Size		Depth		City		State	
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.			

Cement Left in Csg.	15'	Shoe Joint	15'	Cement Amount Ordered	275 80% 3% CC 2% Gel 1/2 # Flowseal
---------------------	-----	------------	-----	-----------------------	-------------------------------------

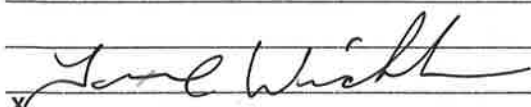
Meas Line	Displace	15 1/2 BLS				
<b>EQUIPMENT</b>						
Pumptrk	16	No.	Cementer	David	Common	220
Bulktrk	9	No.	Helper		Poz. Mix	55
			Driver	James	Gel.	10.5
Bulktrk	P.U.	No.	Driver	Rick	Calcium	10

<b>JOB SERVICES &amp; REMARKS</b>		
Remarks:	Cement did Circulate	

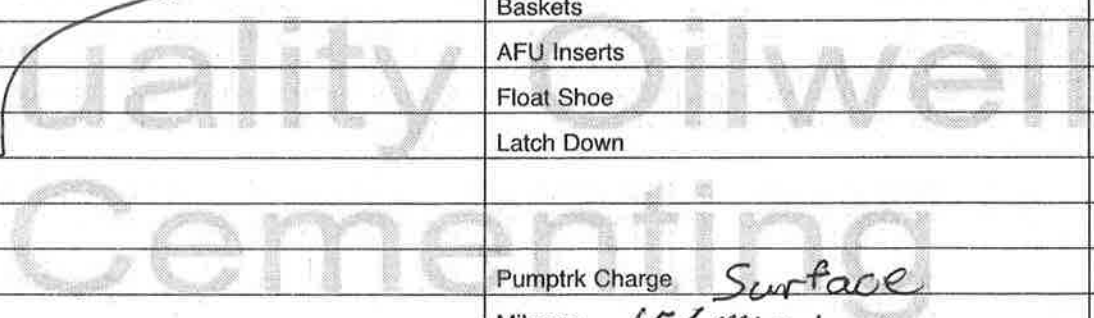
Rat Hole	Flowseal	137 #
Mouse Hole	Kol-Seal	<del>13</del>
Centralizers	Mud CLR	48
Baskets	CFL-117 or CD110 CAF	38
D/V or Port Collar	Sand	
	Handling	290
	Mileage	

<b>FLOAT EQUIPMENT</b>		
	Guide Shoe	
	Centralizer	
	Baskets	
	AFU Inserts	
	Float Shoe	
	Latch Down	

Pumptrk Charge	Surface
Mileage	15 (111 mi)

 Signature	Tax	
	Discount	
	Total Charge	

Thanks



# QUALITY OILWELL CEMENTING, INC.

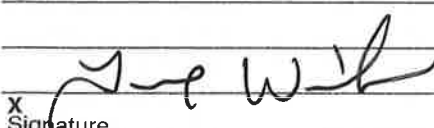
Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 928

Cell 785-324-1041

Date	8-26-18	Sec.	33	Twp.	19	Range	11	County	Barton	State	Ks	On Location		Finish	3:15 PM	
Lease	Burmeisters							Location	Ellinwood - E around 2nd Curve, 1/4 N, E 1/4							
Well No.	A-2							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.							
Contractor	Discovery #2							Charge To	Hupfer Operating Inc.							
Type Job	Longstring							Street								
Hole Size	7 7/8"							T.D.	3365'							
Csg.	5 1/2" used 14#							Depth	3352'							
Tbg. Size								City	State							
Tool								The above was done to satisfaction and supervision of owner agent or contractor.								
Cement Left in Csg.	23'							Shoe Joint	23'							
Cement Amount Ordered	180 Q Pro C 10% Salt 5% Gilsomite															
Meas Line	Displace 81 1/4 BLS							500 gal mud clear	48							
<b>EQUIPMENT</b>																
Pumptrk	16	No.	Cementer		David		Common 180									
Bulktrk	15	No.	Driver		Doug		Poz. Mix									
Bulktrk	P.U.	No.	Driver		Rick		Gel.									
<b>JOB SERVICES &amp; REMARKS</b>																
Remarks:								Hulls								
Rat Hole								Salt 15								
Mouse Hole								Flowseal								
Centralizers	<del>1, 2, 4, 6, 8, 10, 12</del> 2, 4, 6, 8, 10, 12							Kol-Seal 750 #								
Baskets	5							Mud CLR 48 500 gal								
D/V or Port Collar	Pipe on bottom break Circulation							CFL-117 or CD110 CAF 38								
pump 500 gal mud clear 48 plug Rathole							Sand									
w/ 20 sx plug mousehole w/ 15 sx. Hook							Handling 202									
to 5 1/2" casing + mix 135 sx cement.							Mileage									
shut down wash pump + lines. Displace							<b>FLOAT EQUIPMENT</b>									
plug w/ 81 1/4 BLS. Released + hold.							Guide Shoe									
Lift pressure 700 #							Centralizer 6									
Land plug to 1500 #							Baskets 1									
							AFU Inserts									
							Float Shoe 1									
							Latch Down 1									
							Pumptrk Charge									
							Mileage									
 X Signature							Tax Discount Total Charge									