

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

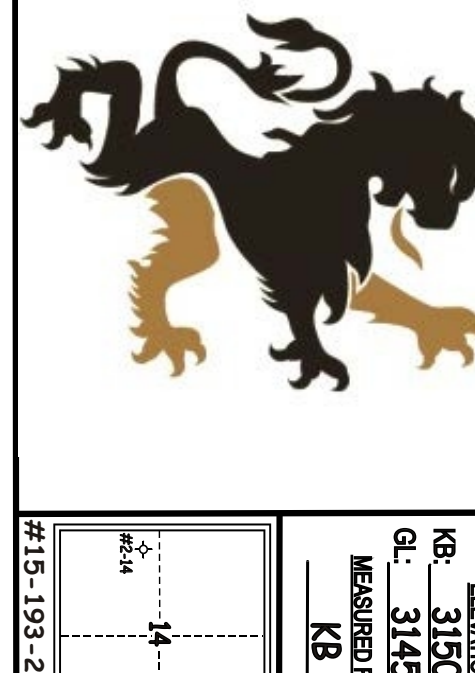
DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (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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KITT NOAH

PETROLEUM GEOLOGIST
Kansas License #229



GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

ELEVATION: KB 3150
GL: 3145
MEASURED FROM: KB

#15-193-21.045

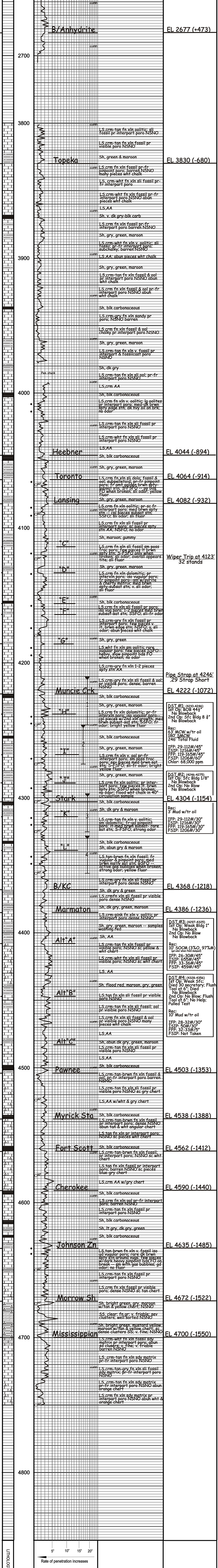
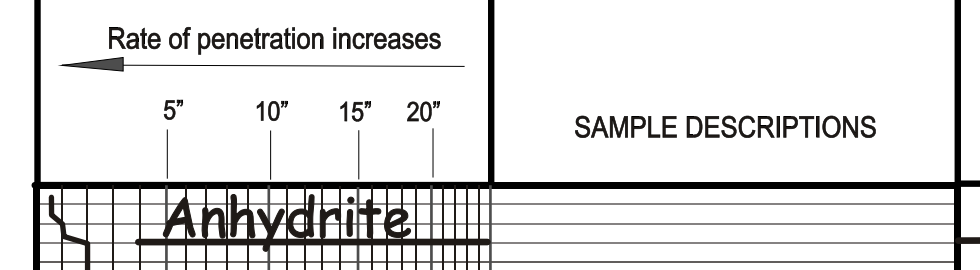
OPERATOR: Hartman Oil Co., Inc.
LEASE: Krug WELL NO: #2-14
LOCATION: 2305'FS & 335'FW SEC: 14 TWP: 10S RNG: 33W
COUNTY: Thomas STATE: Kansas

FORMATION TOP LOG DATE
Anhydrite 2650 (+500)
B/Anhydrite 2677 (+473)
Heebner 4044 (-894)
Toronto 4064 (-914)
Lansing 4082 (-932)
Stark 4304 (-1154)
B/KC 4368 (-1218)
Marmaton 4386 (-1236)
Pawnee 4590 (-1440)
Cherokee 4700 (-1550)
Mississippian 4750 (-1600)
LTD 4752 (-1602)

CONTRACTOR: WW Drilling Rig #10
COM: 6-1-2019 COM: 6-10-2019
RFD: 4750 LTD: 4752
SAMPLES SAVED FROM: 3800 to TD
DRILLING TIME SAVED FROM: 3800 to TD
SAMPLES EXAMINED FROM: 3820 to TD
GEOLOGICAL SUPERVISION FROM: 3820 to TD
MUD UP: 3907 MUD TYPE: chemical
Mudco - Reid Atkins
DRILL STEM TESTS TAKEN: 4
Diamond - Kevin Mack

SURVERS: Pioneer Energy Services
Dual Compensated Porosity
Microlog

LEGEND



ELEVATION: KB 3150

OPERATOR: Hartman Oil Co., Inc. LOCATION: 2305'FS & 335'FW
LEASE: Krug WELL NO: #2-14 SEC: 14 TWP: 10S RNG: 33W
API: 15-193-21.045 FIELD: Wildcat COUNTY: Thomas STATE: Kansas



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

100585
40785

Invoice # 900928

TICKET NUMBER 56129
LOCATION Oakley, Ks
FOREMAN Walt Dinkel
~~Cory Davis~~

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-1-19	3613	Kearney 2-14	14	103	330	Thomas
CUSTOMER	Hartman Oil Sp. 100 North to Rdc West to Rd 23 1 1/2 N		TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS	10500 E. Berkley Square Pkwy.		731	Neil White		
CITY	STATE	ZIP CODE	566	Walt Dinkel		
Wichita	Ks	67206				

JOB TYPE Surface HOLE SIZE 12 1/4" HOLE DEPTH 34.5' CASING SIZE & WEIGHT 8 5/8-24#
CASING DEPTH 341' DRILL PIPE _____ TUBING _____ OTHER _____
SLURRY WEIGHT 15.2 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 15'-20'
DISPLACEMENT 20 3/4 DISPLACEMENT PSI _____ MIX PSI _____ RATE 4 BPM

REMARKS: Safety Meeting, Rig up on well #10, circ casing on bottom, mix 260 sks con, 3 bbl 2% bel, Displaced 20 3/4 BBL H₂O, shut in
Cement did circ
approx 3 BBL to RT

Thank You
Walt + crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
C00471	1	PUMP CHARGE	1,150.00	1,150.00
C00002	10	MILEAGE	7.5	75.00
C00711	12.22	Tan Muleshoe Delivery	1.75	660.00
C05871	260 sks	Surface Blend II	24.00	6,240.00
SCANNED			Disc 25%	8,121.50
				2,030.30
				6,091.20
			SALES TAX	374.40
			ESTIMATED TOTAL	6,465.53

Form 3737

AUTHORIZATION

[Signature]

TITLE

DATE

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.



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

100602
 40801

TICKET NUMBER 56130
 LOCATION Oakley, KS
 FOREMAN Walt Dinkel

FIELD TICKET & TREATMENT REPORT
 CEMENT

Invoice # 900944

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-9-19	3613	Krug 2-14	14	10 ^s	33 ^w	Thomas
CUSTOMER <u>Hartman Oil</u>			Oakley north to RDC west to rd 23 1 1/2 N 855			
MAILING ADDRESS <u>10500 E. Beckley Square Plwy, Ste</u>			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY <u>Wichita</u> STATE <u>KS</u> ZIP CODE <u>67206</u>			731	Walt Dinkel		
			70	Walt Dinkel		
			1098	Xavier Colby		

JOB TYPE PTA HOLE SIZE 7 7/8 HOLE DEPTH _____ CASING SIZE & WEIGHT _____
 CASING DEPTH _____ DRILL PIPE 4 1/2 x H TUBING _____ OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING _____
 DISPLACEMENT _____ DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety Meeting, Rig up on well #10, Plug as ordered

50 SKS @ 2700'
 100 SKS @ 1875' 240 SKS 60' spacing, 4 #6 Gal, 1/4" #1 Etc Sac
 50 SKS @ 400'
 10 SKS @ 40' w/ Plug
 30 SKS in R.H.

Thank You
 Walt + crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CC0450	1	PUMP CHARGE	1,500 ⁰⁰	1,500 ⁰⁰
CC0002	10	MILEAGE	7 ⁵⁰	71 ⁵⁰
CC0711	10.32	Ten Mileage Delivery	1 ⁷⁵	660 ⁰⁰
CC5829	240 SKS	Lite Weight Blend V	16 ⁰⁰	3,840 ⁰⁰
CC6075	60	Etc Sac	3 ⁰⁰	180 ⁰⁰
CP8228	1	8 5/8 Wooden Plug	165 ⁰⁰	165 ⁰⁰
				6,416 ⁵⁰
SCANNER Less 25%				- 1,604 ¹³
				4,812 ³⁷
				251.10
SALES TAX				251.10
ESTIMATED TOTAL				5063.48

Ravin 3737

AUTHORIZATION [Signature]

TITLE _____

DATE _____

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.



Company: Hartman Oil Company, Inc.
Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
 County: THOMAS
 State: Kansas
 Drilling Contractor: WW Drilling, LLC - Rig 10
 Elevation: 3148 EGL
 Field Name: Nollette East
 Pool: Infield
 Job Number: 354
 API #: 15-193-21045

Operation:
 Test Complete

DATE
 June
06
 2019

DST #2 **Formation: L/KC "I"** **Test Interval: 4246 - 4275'** **Total Depth: 4275'**
 Time On: 09:45 06/06 Time Off: 15:10 06/06
 Time On Bottom: 11:33 06/06 Time Off Bottom: 13:33 06/06

Electronic Volume Estimate:
 3'

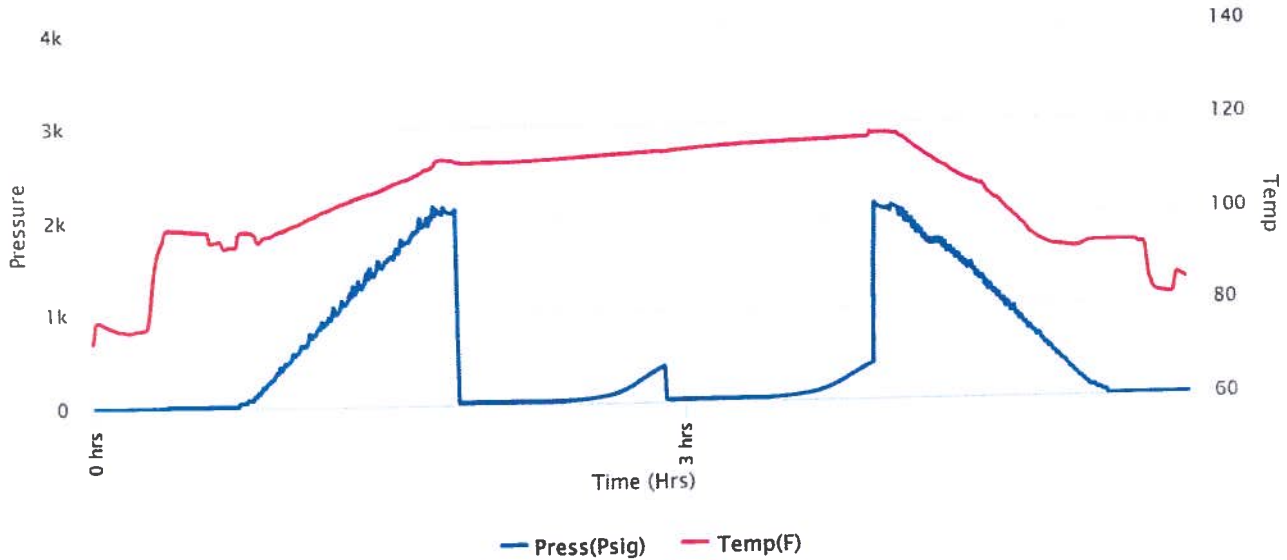
1st Open
 Minutes: 30
 Current Reading: .1" at 30 min
 Max Reading: .1"

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: 30
 Current Reading: 0" at 30 min
 Max Reading: 0"

Inside Recorder





Company: Hartman Oil Company, Inc.
Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
 County: THOMAS
 State: Kansas
 Drilling Contractor: WW Drilling, LLC - Rig 10
 Elevation: 3148 EGL
 Field Name: Nollette East
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 Time On: 09:45 06/06 Time Off: 15:10 06/06
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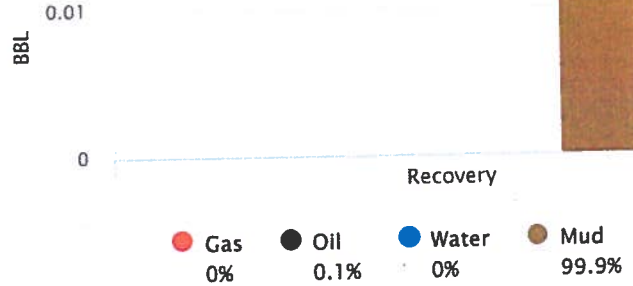
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLS					
3	0.01476	M (trace oil)	0	.1	0	99.9

Total Recovered: 3 ft
 Total Barrels Recovered: 0.01476

Reversed Out
NO

Recovery at a glance

Initial Hydrostatic Pressure	2074	PSI
Initial Flow	24 to 23	PSI
Initial Closed In Pressure	376	PSI
Final Flow Pressure	24 to 25	PSI
Final Closed In Pressure	375	PSI
Final Hydrostatic Pressure	2058	PSI
Temperature	116	°F
Pressure Change Initial Close / Final Close	0.2	%



GIP cubic foot volume: 0



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Test Complete

DATE
June
06
2019

DST #2	Formation: L/KC "I"	Test Interval: 4246 - 4275'	Total Depth: 4275'
	Time On: 09:45 06/06	Time Off: 15:10 06/06	
	Time On Bottom: 11:33 06/06	Time Off Bottom: 13:33 06/06	

BUCKET MEASUREMENT:

1st Open: Weak, surface blow building to 1/8 in. in 30 mins.

1st Close: No blow back.

2nd Open: No blow.

2nd Close: No blow back.

REMARKS:

Tool Sample: 0% Gas 1% Oil 0% Water 99% Mud



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Test Complete

DATE
June
06
2019

DST #2 Formation: L/KC "I" Test Interval: 4246 - Total Depth: 4275'
4275'
Time On: 09:45 06/06 Time Off: 15:10 06/06
Time On Bottom: 11:33 06/06 Time Off Bottom: 13:33 06/06

Down Hole Makeup

Heads Up: 35.08 FT	Packer 1: 4240.5 FT
Drill Pipe: 4126.6 FT <i>ID-3 1/2</i>	Packer 2: 4246 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4229.92 FT
Collars: 121.41 FT <i>ID-2 1/4</i>	Bottom Recorder: 4248 FT
Test Tool: 34.07 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 29	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 0 FT <i>4 1/2-FH</i>	
Change Over: 0 FT	
Drill Pipe: (In anchor): 0 FT <i>ID-3 1/2</i>	
Change Over: 0 FT	
Perforations: (below): 28 FT <i>4 1/2-FH</i>	



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:

Test Complete

DATE

June
06
2019

DST #2 **Formation: L/KC "I"** **Test Interval: 4246 - 4275'** **Total Depth: 4275'**
Time On: 09:45 06/06 Time Off: 15:10 06/06
Time On Bottom: 11:33 06/06 Time Off Bottom: 13:33 06/06

Mud Properties

Mud Type: Chemical

Weight: 9.2

Viscosity: 54

Filtrate: 7.2

Chlorides: 2,500 ppm



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
07
2019

DST #4 Formation: LKC "L" Test Interval: 4328 - Total Depth: 4356'
4356'
Time On: 13:01 06/07 Time Off: 18:23 06/07
Time On Bottom: 15:34 06/07 Time Off Bottom: 16:42 06/07

Electronic Volume
Estimate:
0'

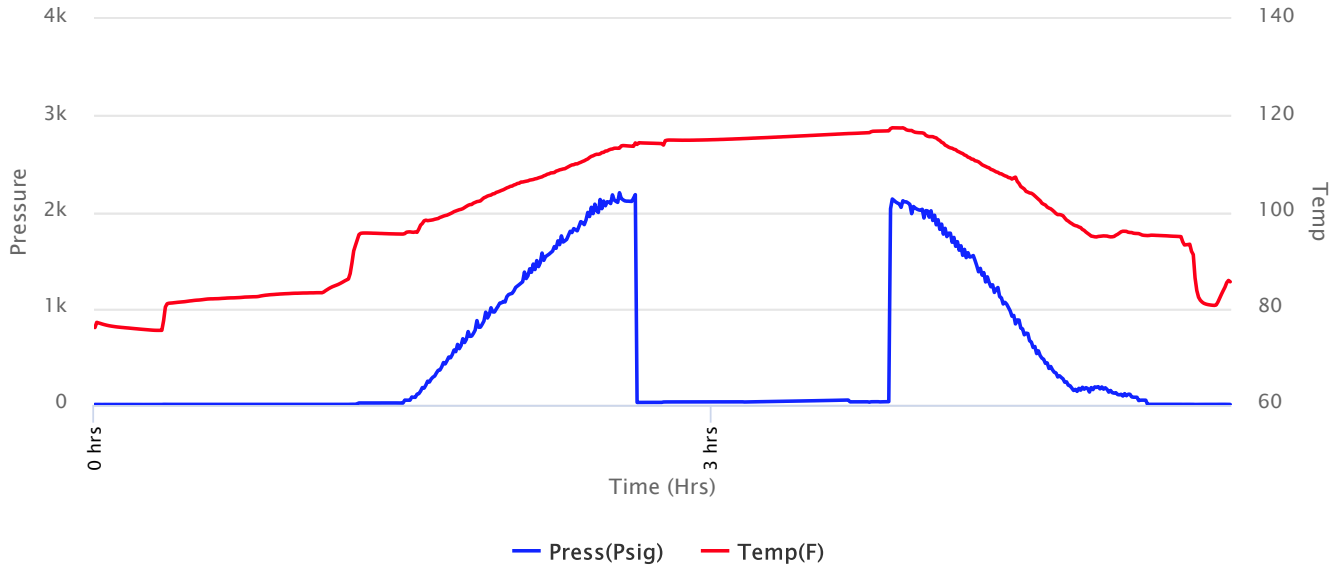
1st Open
Minutes: 30
Current Reading:
0" at 30 min
Max Reading: 0"

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

2nd Open
Minutes: 5
Current Reading:
0" at 5 min
Max Reading: 0"

2nd Close
N/A

Inside Recorder





**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
07
2019

DST #4 **Formation: LKC "L"** **Test Interval: 4328 - 4356'** **Total Depth: 4356'**
Time On: 13:01 06/07 Time Off: 18:23 06/07
Time On Bottom: 15:34 06/07 Time Off Bottom: 16:42 06/07

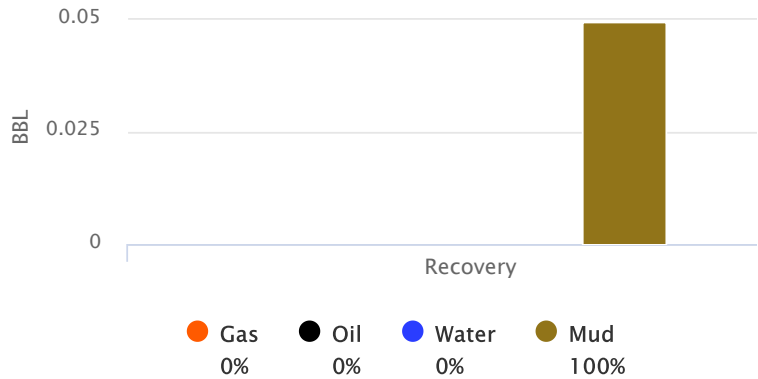
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
10	0.0492	M	0	0	0	100

Total Recovered: 10 ft
Total Barrels Recovered: 0.0492

**Reversed Out
NO**

Initial Hydrostatic Pressure	2110	PSI
Initial Flow	26 to 32	PSI
Initial Closed in Pressure	50	PSI
Final Flow Pressure	32 to 33	PSI
Final Closed in Pressure	0	PSI
Final Hydrostatic Pressure	2081	PSI
Temperature	117	°F
Pressure Change Initial Close / Final Close	0.0	%

Recovery at a glance



GIP cubic foot volume: 0



**Company: Hartman Oil
Company, Inc.**

Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
07
2019

DST #4 Formation: LKC "L" Test Interval: 4328 - Total Depth: 4356'
4356'
Time On: 13:01 06/07 Time Off: 18:23 06/07
Time On Bottom: 15:34 06/07 Time Off Bottom: 16:42 06/07

BUCKET MEASUREMENT:

1st Open: Weak surface blow died in 30 sec. - Flushed tool ar 6 min. - Surface blow died in 30 sec.

1st Close: No Return

2nd Open: No Blow- Flushed tool at 6 min into Final Flow - Weak Surface Blow died in 15 sec.

2nd Close: N/A - Pulled tool during Final Flow Period.

REMARKS:

Flushed tool at 6 min. Into Initial flow Period./

Flushed tool again at 6 min. into Final Flow Period.

Pulled tools once blow died after second tool flush.

Show of oil spots in tool sample.

Tool Sample: 0% Gas .1% Oil 0% Water 99.9% Mud



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
07
2019

DST #4 Formation: LKC "L" Test Interval: 4328 - Total Depth: 4356'
4356'
Time On: 13:01 06/07 Time Off: 18:23 06/07
Time On Bottom: 15:34 06/07 Time Off Bottom: 16:42 06/07

Down Hole Makeup

Heads Up: 16.6 FT	Packer 1: 4322.5 FT
Drill Pipe: 4190.12 FT <i>ID-3 1/2</i>	Packer 2: 4328 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4311.92 FT
Collars: 121.41 FT <i>ID-2 1/4</i>	Bottom Recorder: 4330 FT
Test Tool: 34.07 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 28	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 0 FT <i>4 1/2-FH</i>	
Change Over: 0 FT	
Drill Pipe: (in anchor): 0 FT <i>ID-3 1/2</i>	
Change Over: 0 FT	
Perforations: (below): 27 FT <i>4 1/2-FH</i>	



**Company: Hartman Oil
Company, Inc.**

Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
07
2019

DST #4 Formation: LKC "L" Test Interval: 4328 - Total Depth: 4356'
4356'

Time On: 13:01 06/07 Time Off: 18:23 06/07
Time On Bottom: 15:34 06/07 Time Off Bottom: 16:42 06/07

Mud Properties

Mud Type: Chem **Weight:** 9.1 **Viscosity:** 51 **Filtrate:** 8.0 **Chlorides:** 3200 ppm



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
07
2019

DST #4 Formation: LKC "L" Test Interval: 4328 - Total Depth: 4356'
4356'
Time On: 13:01 06/07 Time Off: 18:23 06/07
Time On Bottom: 15:34 06/07 Time Off Bottom: 16:42 06/07

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
06
2019

DST #3 Formation: LKC "K" Test Interval: 4297 - 4325' Total Depth: 4325'
Time On: 23:38 06/06 Time Off: 05:56 06/07
Time On Bottom: 01:30 06/07 Time Off Bottom: 04:30 06/07

Electronic Volume
Estimate:
34'

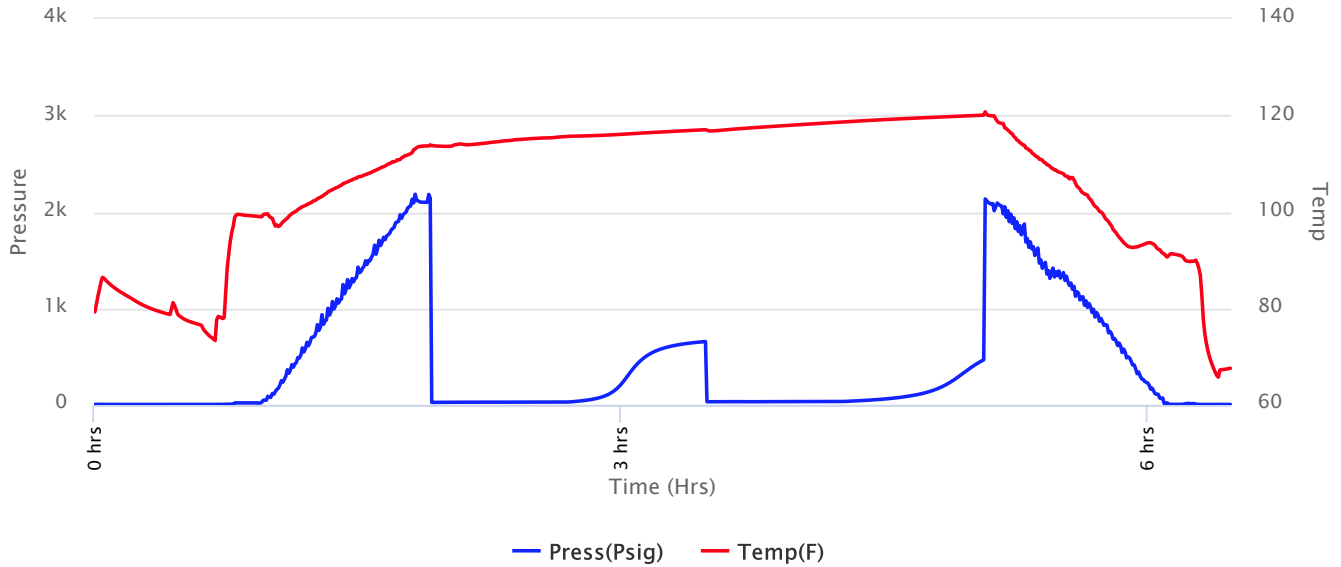
1st Open
Minutes: 45
Current Reading:
1" at 45 min
Max Reading: 1"

1st Close
Minutes: 45
Current Reading:
0" at 45 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: Hartman Oil Company, Inc.
Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
 County: THOMAS
 State: Kansas
 Drilling Contractor: WW Drilling, LLC - Rig 10
 Elevation: 3148 EGL
 Field Name: Nollette East
 Pool: Infield
 Job Number: 354
 API #: 15-193-21045

Operation:
 Uploading recovery & pressures

DATE
 June
06
 2019

DST #3 **Formation: LKC "K"** **Test Interval: 4297 - 4325'** **Total Depth: 4325'**
 Time On: 23:38 06/06 Time Off: 05:56 06/07
 Time On Bottom: 01:30 06/07 Time Off Bottom: 04:30 06/07

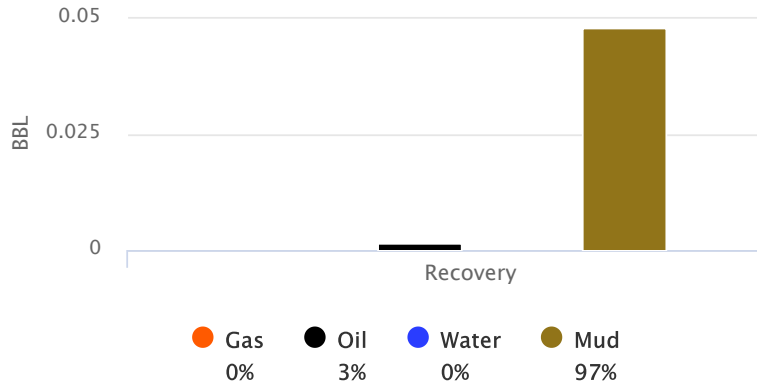
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
10	0.0492	SLOCM	0	3	0	97

Total Recovered: 10 ft
 Total Barrels Recovered: 0.0492

Reversed Out
NO

Initial Hydrostatic Pressure	2100	PSI
Initial Flow	26 to 30	PSI
Initial Closed in Pressure	655	PSI
Final Flow Pressure	33 to 36	PSI
Final Closed in Pressure	459	PSI
Final Hydrostatic Pressure	2082	PSI
Temperature	120	°F
Pressure Change Initial Close / Final Close	30.0	%

Recovery at a glance



GIP cubic foot volume: 0



**Company: Hartman Oil
Company, Inc.**

Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
06
2019

DST #3 Formation: LKC "K" Test Interval: 4297 - Total Depth: 4325'
4325'
Time On: 23:38 06/06 Time Off: 05:56 06/07
Time On Bottom: 01:30 06/07 Time Off Bottom: 04:30 06/07

BUCKET MEASUREMENT:

1st Open: Surface blow built to 1" over 45 min.
1st Close: No Return
2nd Open: No Blow
2nd Close: No Return

REMARKS:

Tool Sample: 0% Gas 5% Oil 0% Water 95% Mud



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
06
2019

DST #3 Formation: LKC "K" Test Interval: 4297 - Total Depth: 4325'
4325'
Time On: 23:38 06/06 Time Off: 05:56 06/07
Time On Bottom: 01:30 06/07 Time Off Bottom: 04:30 06/07

Down Hole Makeup

Heads Up: 15.9 FT	Packer 1: 4291.5 FT
Drill Pipe: 4158.42 FT <i>ID-3 1/2</i>	Packer 2: 4297 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4280.92 FT
Collars: 121.41 FT <i>ID-2 1/4</i>	Bottom Recorder: 4299 FT
Test Tool: 34.07 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 28	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 0 FT <i>4 1/2-FH</i>	
Change Over: 0 FT	
Drill Pipe: (in anchor): 0 FT <i>ID-3 1/2</i>	
Change Over: 0 FT	
Perforations: (below): 27 FT <i>4 1/2-FH</i>	



Company: Hartman Oil Company, Inc.

Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC - Rig 10
Elevation: 3148 EGL
Field Name: Nollette East
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery & pressures

DATE
June
06
2019

DST #3 Formation: LKC "K" Test Interval: 4297 - 4325' Total Depth: 4325'
Time On: 23:38 06/06 Time Off: 05:56 06/07
Time On Bottom: 01:30 06/07 Time Off Bottom: 04:30 06/07

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: NOLLETTE EAST
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
05
2019

DST #1 Formation: LKC "H" Test Interval: 4210 - Total Depth: 4246'
4246'
Time On: 20:28 06/05 Time Off: 03:35 06/06
Time On Bottom: 22:37 06/05 Time Off Bottom: 01:52 06/06

Electronic Volume
Estimate:
297'

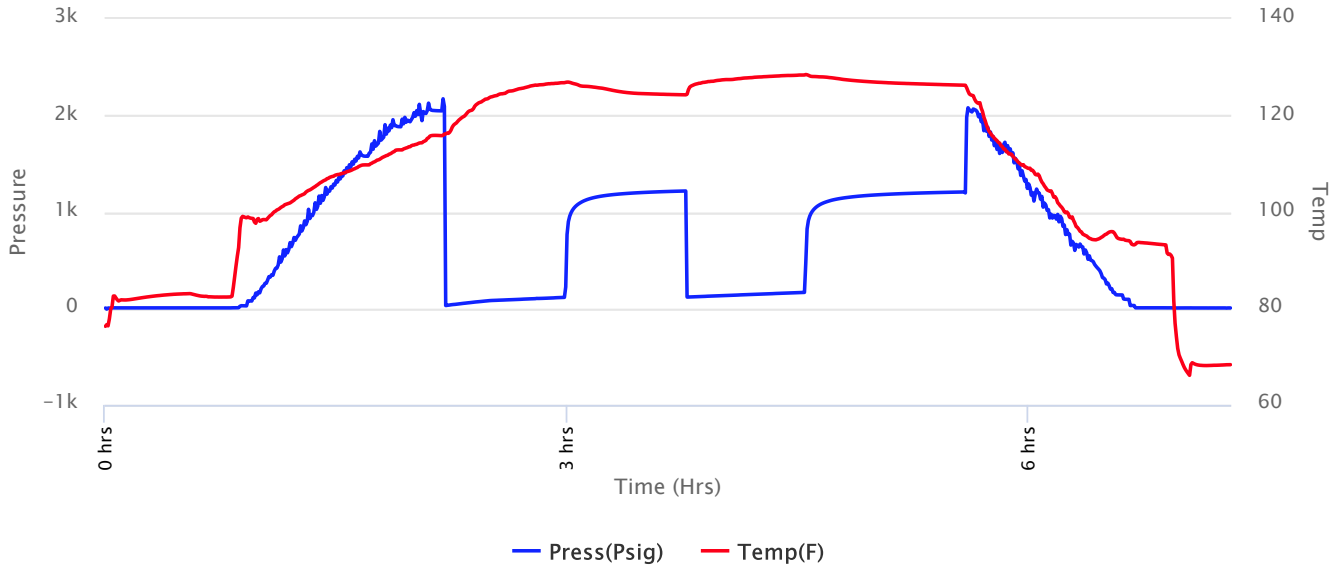
1st Open
Minutes: 45
Current Reading:
10.7" at 45 min
Max Reading: 10.7"

1st Close
Minutes: 45
Current Reading:
0" at 45 min
Max Reading: 0"

2nd Open
Minutes: 45
Current Reading:
8.8" at 45 min
Max Reading: 8.8"

2nd Close
Minutes: 60
Current Reading:
0" at 60 min
Max Reading: 0"

Inside Recorder





Company: Hartman Oil Company, Inc.
Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
 County: THOMAS
 State: Kansas
 Drilling Contractor: WW Drilling, LLC - Rig 10
 Elevation: 3148 EGL
 Field Name: NOLLETTE EAST
 Pool: Infield
 Job Number: 354
 API #: 15-193-21045

Operation:
 Uploading recovery & pressures

DATE
 June
05
 2019

DST #1 **Formation: LKC "H"** **Test Interval: 4210 - 4246'** **Total Depth: 4246'**
 Time On: 20:28 06/05 Time Off: 03:35 06/06
 Time On Bottom: 22:37 06/05 Time Off Bottom: 01:52 06/06

Recovered

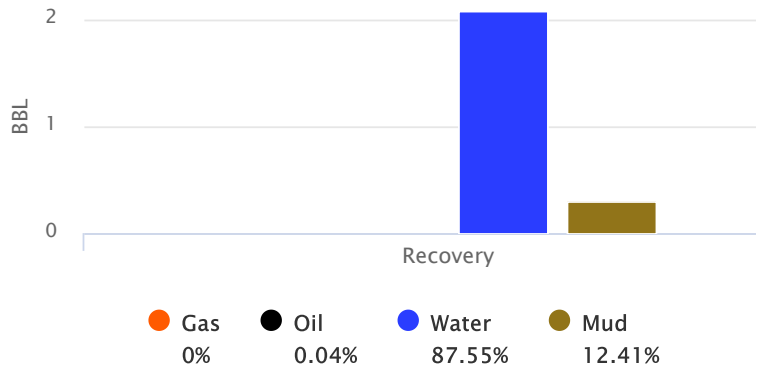
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
63	0.89649	MCW (trace O)	0	.1	79.9	20
63	0.8833629	SLMCW	0	0	90	10
60	0.2952	SLMCW	0	0	94	6
60	0.2952	SLMCW	0	0	97	3

Total Recovered: 246 ft
 Total Barrels Recovered: 2.3702529

Reversed Out
NO

Initial Hydrostatic Pressure	2048	PSI
Initial Flow	29 to 112	PSI
Initial Closed in Pressure	1216	PSI
Final Flow Pressure	119 to 165	PSI
Final Closed in Pressure	1206	PSI
Final Hydrostatic Pressure	2066	PSI
Temperature	129	°F
Pressure Change Initial Close / Final Close	0.8	%

Recovery at a glance



GIP cubic foot volume: 0



**Company: Hartman Oil
Company, Inc.**

Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: NOLLETTE EAST
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
05
2019

DST #1 Formation: LKC "H" Test Interval: 4210 - Total Depth: 4246'
4246'
Time On: 20:28 06/05 Time Off: 03:35 06/06
Time On Bottom: 22:37 06/05 Time Off Bottom: 01:52 06/06

BUCKET MEASUREMENT:

1st Open: Surface blow built to BoB in 44 min. 30 sec.
1st Close: No Return
2nd Open: Surface blow started at 3 min. Built to 8 3/4" over 45 min.
2nd Close: No Return

REMARKS:

Tool Sample: 0% Gas 1% Oil 86% Water 13% Mud
Ph: 7
Measured RW: .03 @ 60 degrees °F
RW at Formation Temp: 0.015 @ 129 °F
Chlorides: 68000 ppm



**Company: Hartman Oil
Company, Inc.
Lease: Krug #2-14**

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 10
Elevation: 3148 EGL
Field Name: NOLLETTE EAST
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery &
pressures

DATE
June
05
2019

DST #1 Formation: LKC "H" Test Interval: 4210 - Total Depth: 4246'
4246'
Time On: 20:28 06/05 Time Off: 03:35 06/06
Time On Bottom: 22:37 06/05 Time Off Bottom: 01:52 06/06

Down Hole Makeup

Heads Up: 8.68999999999999 FT	Packer 1: 4203.5 FT
Drill Pipe: 4063.21 FT <i>ID-3 1/2</i>	Packer 2: 4210 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4192.92 FT
Collars: 121.41 FT <i>ID-2 1/4</i>	Bottom Recorder: 4212 FT
Test Tool: 35.07 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 36	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 0 FT <i>4 1/2-FH</i>	
Change Over: 0 FT	
Drill Pipe: (in anchor): 0 FT <i>ID-3 1/2</i>	
Change Over: 0 FT	
Perforations: (below): 35 FT <i>4 1/2-FH</i>	



Company: Hartman Oil Company, Inc.

Lease: Krug #2-14

SEC: 14 TWN: 10S RNG: 33W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC - Rig 10
Elevation: 3148 EGL
Field Name: NOLLETTE EAST
Pool: Infield
Job Number: 354
API #: 15-193-21045

Operation:
Uploading recovery & pressures

DATE
June
05
2019

DST #1 Formation: LKC "H" Test Interval: 4210 - 4246' Total Depth: 4246'

Time On: 20:28 06/05 Time Off: 03:35 06/06
Time On Bottom: 22:37 06/05 Time Off Bottom: 01:52 06/06

Mud Properties

Mud Type: Chem **Weight:** 9.1 **Viscosity:** 50 **Filtrate:** 6.4 **Chlorides:** 1500 ppm

