

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	BEREXCO LLC
Well Name	FKS UNIT 1-18
Doc ID	1577720

All Electric Logs Run

Dual compensated porosity
Dual induction
Microlog
Borehole compensated sonic



HP Oilfield Services, LLC
 383 Inverness Parkway, Suite 330
 Englewood, CO. 80112

WF

JUN 02 2021

Invoice

Date	Invoice #
5/14/2021	15868

Bill To
Berexco 101 East 3rd Trenton, NE 69044

Lease
FKS Unit #1-18

Bcp

Order by / P.O. No.	Terms
	Net 30

Description	Unit	Hrs / Qty	U/M	Rate	Amount
Cement Service for FKS Unit # 1-18 Field Ticket #: 1255 K-C Description: Please see Attached Field Ticket					
Pump Charge for Cement	CMT-103	1	ea	1,150.00	1,150.00
Pumptruck Mileage Charge	CMT-103	50	ea	7.15	357.50
Mileage Delivery of Bulk Material - 50 x 14.1 = 705 x 1.75 = 1233.75	CMT-103	705	ea	1.75	1,233.75
Class C Cement	CMT	300	SKS	17.60	5,280.00T
Calcium Chloride	CMT	564	lb	1.00	564.00T
Baffle Plate - 8 5/8"	CMT	1	ea	162.00	162.00T
Centralizers - 8 5/8" x 12 1/4"	CMT	2	ea	110.00	220.00T
Top Wooden Plug - 8 5/8" (4/Box)	CMT	1	ea	165.00	165.00T
Discount - Non-Taxable Items	CMT	1	ea	-1,096.50	-1,096.50
Discount - Taxable Items	CMT	1	ea	-2,556.40	-2,556.40T
Subtotal prior to Sales Taxes					5,479.35
Sales Tax	CMT			6.50%	249.25

Thank you for your business.	Total	\$5,728.60
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RECEIVED
 MAY 25 2021
 TRENTON

per bid



HP Oilfield Services, LLC
 383 Inverness Parkway, Suite 330

WFC

ce **Invoice**

JUN 09 2021

Date	Invoice #
5/24/2021	16061

Bill To
Berexco 101 East 3rd Trenton, NE 69044

Lease
FKS Unit # 1-18

Order by / P.O. No.	Terms
	Net 30

Description	Unit	Hrs / Qty	U/M	Rate	Amount
Cement Service for FKS Unit # 1-18 Field Ticket #: 1183 K-C Description: Please see Attached Field Ticket					
Pump Charge for Cement	CMT-103	1	ea	1,500.00	1,500.00
Pumptruck Mileage Charge	CMT-103	50	ea	7.15	357.50
Mileage Delivery of Bulk Material - 50 x 11.61 = 580.50 x 1.75 = 1015.88	CMT-103	580.5	ea	1.75	1,015.88
Liteweight Blend V	CMT	270	SKS	16.00	4,320.00T
Weldrl Pol-E-Flake	CMT	68	lb	3.00	204.00T
Wooden Plug - 8 5/8"	CMT	1	ea	165.00	165.00T
Discount - Non-Taxable Items	CMT	1	ea	-1,005.68	-1,005.68
Discount - Taxable Items	CMT	1	ea	-1,641.15	-1,641.15T
Subtotal prior to Sales Taxes					4,915.55
Sales Tax	CMT			6.50%	198.11

P+A

RECEIVED
 JUN 01 2021
 TRENTON

Thank you for your business.	Total	\$5,113.66
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785-953-0222

TICKET NUMBER 7783 K-C
LOCATION Hugo town
FOREMAN Walt Dinkel

FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
5-24-2021		FKS Unit # 1-18	18	21 ^S	35 ^W	Kearny
CUSTOMER	MAILING ADDRESS		TRUCK #	DRIVER	TRUCK #	DRIVER
Borexco LLC	Lakin North to Rd 340 2 3/4 E N. S.		103	Cory D		
CITY	STATE	ZIP CODE	801-351	Jason A		
				Ramon		

JOB TYPE PTA HOLE SIZE 7 7/8 HOLE DEPTH _____ CASING SIZE & WEIGHT _____
 CASING DEPTH _____ DRILL PIPE 4 1/2 xH TUBING _____ OTHER _____
 SLURRY WEIGHT 13.5 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 4 BPM
 DISPLACEMENT _____ DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety Meeting, Rig up on Duke #4, Plug as ordered

- 50 SKs @ 1440'
- 80 SKs @ 1070'
- 40 SKs @ 530'
- 50 SKs @ 470'
- 20 SKs @ 60' w/ Plug
- 30 SKs in RH.

Thank You
Walt + Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
	1	PUMP CHARGE		
	50	MILEAGE	1,500 ⁰⁰	1,500 ⁰⁰
	11.61	Ton Mileage Delivery	7 ¹⁵	357 ⁵⁰
			1 ⁷⁵	1,015 ⁸⁸
	270 - SKs	Light weight Blend V	16 ⁰⁰	4,320 ⁰⁰
	68 #	Flo Seal	3 ⁰⁰	204 ⁰⁰
	1	8 5/8 Woodson Plug	165 ⁰⁰	165 ⁰⁰
				7,582 ³⁸
		Less 35% Disc.	-	2,646 ⁸³
				4,915 ⁵⁵
		SALES TAX		
		ESTIMATED TOTAL		

AUTHORIZATION Carlyle Brown TITLE _____ DATE _____
 I acknowledge that the payments 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.

el



Company: Berexco, LLC
Lease: FKS Unit #1-18

SEC: 18 TWN: 21S RNG: 35W
 County: KEARNY
 State: Kansas
 Drilling Contractor: Duke Drilling
 Company, Inc - Rig 4
 Elevation: 3171 EGL
 Field Name: Wildcat
 Pool: WILDCAT
 Job Number: 483
 API #: 15-093-21985-00-00

Operation:
 Test Complete

DATE
 May
20
 2021

DST #1 **Formation: Pawnee** **Test Interval: 4577 - 4600'** **Total Depth: 4600'**

Time On: 12:00 05/20 Time Off: 23:15 05/20
 Time On Bottom: 15:00 05/20 Time Off Bottom: 19:30 05/20

Electronic Volume
 Estimate:
 546'

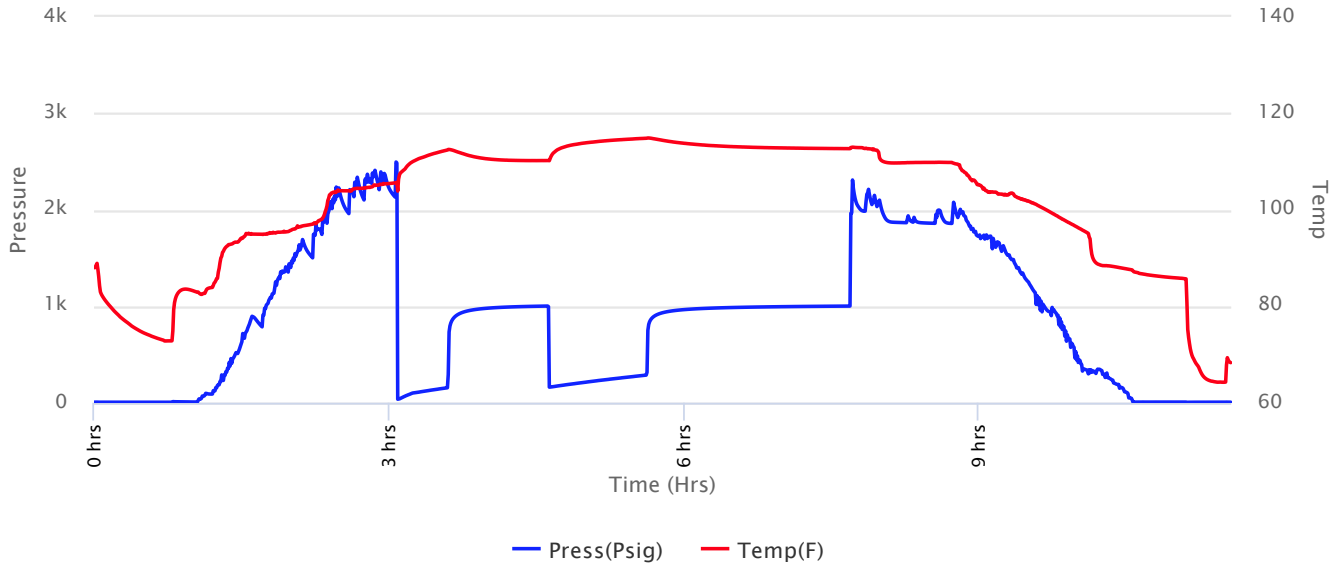
1st Open
 Minutes: 30
 Current Reading:
 14.3" at 30 min
 Max Reading: 14.3"

1st Close
 Minutes: 60
 Current Reading:
 0" at 60 min
 Max Reading: 0"

2nd Open
 Minutes: 60
 Current Reading:
 21.7" at 60 min
 Max Reading: 21.7"

2nd Close
 Minutes: 120
 Current Reading:
 0" at 120 min
 Max Reading: 0"

Inside Recorder





Company: Berexco, LLC
Lease: FKS Unit #1-18

SEC: 18 TWN: 21S RNG: 35W
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 Time On: 12:00 05/20 Time Off: 23:15 05/20
 Time On Bottom: 15:00 05/20 Time Off Bottom: 19:30 05/20

Recovered

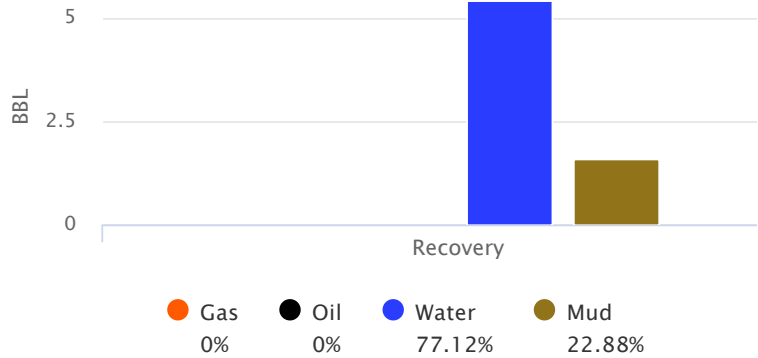
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
113	1.60799	WCM	0	0	20	80
126	1.79298	SLMCW	0	0	88	12
369	3.6394952	SLMCW	0	0	97	3

Total Recovered: 608 ft
 Total Barrels Recovered: 7.0404652

Reversed Out
 NO

Initial Hydrostatic Pressure	2218	PSI
Initial Flow	49 to 153	PSI
Initial Closed in Pressure	1001	PSI
Final Flow Pressure	167 to 281	PSI
Final Closed in Pressure	1002	PSI
Final Hydrostatic Pressure	2061	PSI
Temperature	115	°F
Pressure Change Initial	0.0	%
Close / Final Close		

Recovery at a glance



GIP cubic foot volume: 0



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Elevation: 3171 EGL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 483
API #: 15-093-21985-00-00

Operation:
Test Complete

DATE
May
20
2021

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Time On: 12:00 05/20 Time Off: 23:15 05/20
Time On Bottom: 15:00 05/20 Time Off Bottom: 19:30 05/20

BUCKET MEASUREMENT:

1st Open: Blow built to BoB in 19 min 54 sec.
1st Close: No Return Blow.
2nd Open: Surface Blow started at 2 min. Built to BoB in 29 min. 43 sec.
2nd Close: No Return Blow

REMARKS:

Tool Sample: 0% Gas 0% Oil 90% Water 10% Mud
Ph: 7
Measured RW: .13 @ 65 degrees °F
RW at Formation Temp: 0.077 @ 115 °F
Chlorides: 65000 ppm



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 Elevation: 3171 EGL
 Field Name: Wildcat
 Pool: WILDCAT
 Job Number: 483
 API #: 15-093-21985-00-00

Operation:
 Test Complete

DATE
 May
20
 2021

DST #1 **Formation: Pawnee** **Test Interval: 4577 - 4600'** **Total Depth: 4600'**
 Time On: 12:00 05/20 Time Off: 23:15 05/20
 Time On Bottom: 15:00 05/20 Time Off Bottom: 19:30 05/20

Down Hole Makeup

Heads Up: 31.03 FT	Packer 1: 4572 FT
Drill Pipe: 4402.38 FT <i>ID-3 1/2</i>	Packer 2: 4577 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4561.42 FT
Collars: 173.08 FT <i>ID-2 1/4</i>	Bottom Recorder: 4598 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: 23	Surface Choke: 1"
<u>Anchor Makeup</u>	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 19 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): 3 FT <i>4 1/2-FH</i>	



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Field Name: Wildcat
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Operation:
Test Complete

DATE
May
20
2021

DST #1 Formation: Pawnee Test Interval: 4577 - Total Depth: 4600'
4600'

Time On: 12:00 05/20 Time Off: 23:15 05/20
Time On Bottom: 15:00 05/20 Time Off Bottom: 19:30 05/20

Mud Properties

Mud Type: Chem. **Weight:** 9.3 **Viscosity:** 82 **Filtrate:** 12 **Chlorides:** 9100 ppm



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Elevation: 3171 EGL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 483
API #: 15-093-21985-00-00

Operation:
Test Complete

DATE
May
20
2021

DST #1 Formation: Pawnee Test Interval: 4577 - Total Depth: 4600'
4600'
Time On: 12:00 05/20 Time Off: 23:15 05/20
Time On Bottom: 15:00 05/20 Time Off Bottom: 19:30 05/20

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



Company: Berexco, LLC
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 State: Kansas
 Drilling Contractor: Duke Drilling
 Company, Inc - Rig 4
 Elevation: 3171 EGL
 Field Name: Wildcat
 Pool: WILDCAT
 Job Number: 483
 API #: 15-093-21985-00-00

Operation:
 Uploading recovery &
 pressures

DATE
 May
21
 2021

DST #2 Formation: FT Scott Test Interval: 4612 - 4640' Total Depth: 4640'

Time On: 11:42 05/21 Time Off: 20:57 05/21
 Time On Bottom: 13:48 05/21 Time Off Bottom: 18:18 05/21

Electronic Volume
 Estimate:
 154'

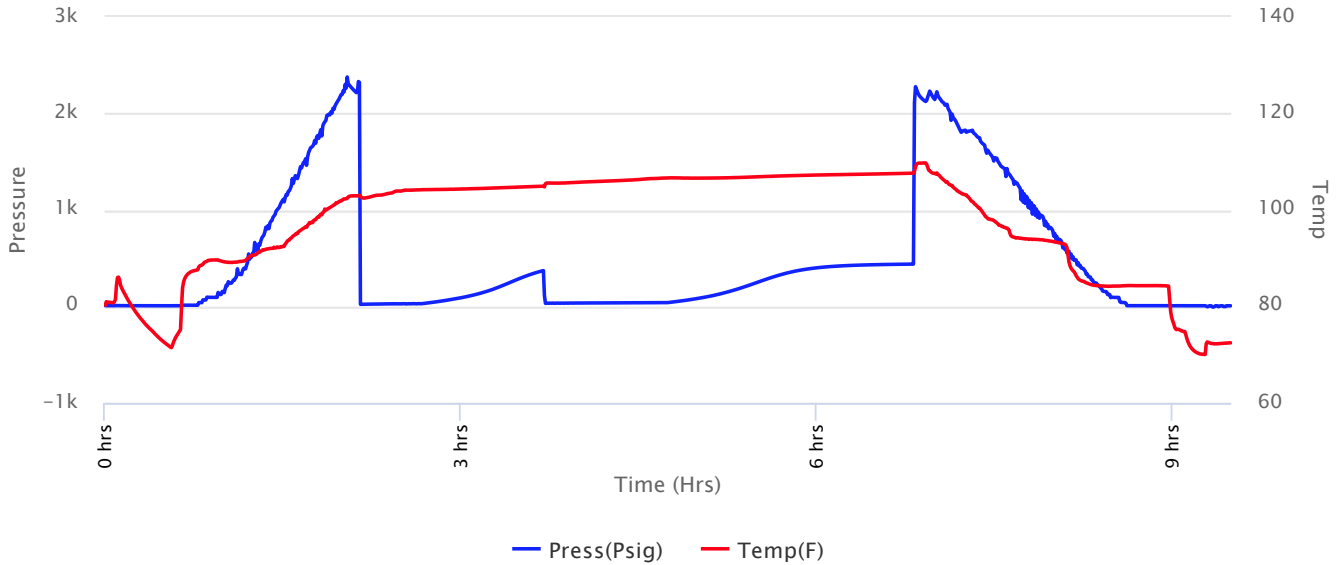
1st Open
 Minutes: 30
 Current Reading:
 .6" at 30 min
 Max Reading: .6"

1st Close
 Minutes: 60
 Current Reading:
 0" at 60 min
 Max Reading: 0"

2nd Open
 Minutes: 60
 Current Reading:
 3.7" at 60 min
 Max Reading: 3.7"

2nd Close
 Minutes: 120
 Current Reading:
 0" at 120 min
 Max Reading: 0"

Inside Recorder





Company: Berexco, LLC
Lease: FKS Unit #1-18

SEC: 18 TWN: 21S RNG: 35W
 County: KEARNY
 State: Kansas
 Drilling Contractor: Duke Drilling
 Company, Inc - Rig 4
 Elevation: 3171 EGL
 Field Name: Wildcat
 Pool: WILDCAT
 Job Number: 483
 API #: 15-093-21985-00-00

Operation:
 Uploading recovery &
 pressures

DATE
 May
21
 2021

DST #2 **Formation: FT Scott** **Test Interval: 4612 - 4640'** **Total Depth: 4640'**
 Time On: 11:42 05/21 Time Off: 20:57 05/21
 Time On Bottom: 13:48 05/21 Time Off Bottom: 18:18 05/21

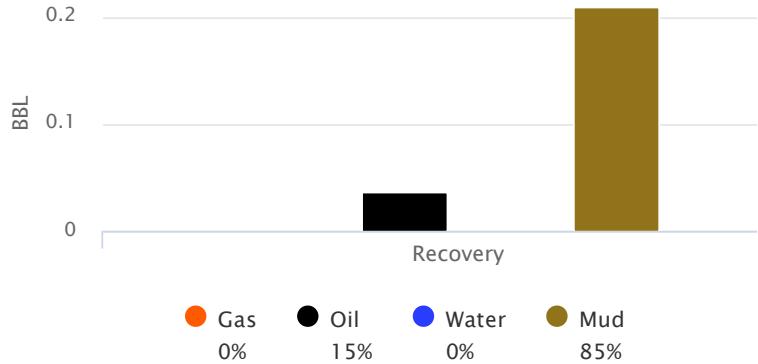
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
50	0.246	SLOCM	0	15	0	85

Total Recovered: 50 ft
 Total Barrels Recovered: 0.246

Reversed Out
NO

Initial Hydrostatic Pressure	2235	PSI
Initial Flow	22 to 27	PSI
Initial Closed in Pressure	371	PSI
Final Flow Pressure	33 to 39	PSI
Final Closed in Pressure	438	PSI
Final Hydrostatic Pressure	2222	PSI
Temperature	108	°F
Pressure Change Initial Close / Final Close	0.0	%

Recovery at a glance



GIP cubic foot volume: 0



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SEC: 18 TWN: 21S RNG: 35W
County: KEARNY
State: Kansas
Drilling Contractor: Duke Drilling
Company, Inc - Rig 4
Elevation: 3171 EGL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 483
API #: 15-093-21985-00-00

Operation:
Uploading recovery &
pressures

DATE
May
21
2021

DST #2 Formation: FT Scott Test Interval: 4612 - Total Depth: 4640'
4640'
Time On: 11:42 05/21 Time Off: 20:57 05/21
Time On Bottom: 13:48 05/21 Time Off Bottom: 18:18 05/21

BUCKET MEASUREMENT:

1st Open: Weak Surface Blow built to 1/2" Over 30 min.

1st Close: No Return Blow.

2nd Open: 1/4" Blow built to 3 3/4" over 60 minutes.

2nd Close: No Return Blow

REMARKS:

Tool Sample: 0% Gas 10% Oil 2% Water 88% Mud



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SEC: 18 TWN: 21S RNG: 35W
 County: KEARNY
 State: Kansas
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 Company, Inc - Rig 4
 Elevation: 3171 EGL
 Field Name: Wildcat
 Pool: WILDCAT
 Job Number: 483
 API #: 15-093-21985-00-00

Operation:
 Uploading recovery &
 pressures

DATE
 May
21
 2021

DST #2 Formation: FT Scott Test Interval: 4612 - 4640' Total Depth: 4640'
 Time On: 11:42 05/21 Time Off: 20:57 05/21
 Time On Bottom: 13:48 05/21 Time Off Bottom: 18:18 05/21

Down Hole Makeup

Heads Up: 27.53 FT	Packer 1: 4607 FT
Drill Pipe: 4433.88 FT <i>ID-3 1/2</i>	Packer 2: 4612 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4596.42 FT
Collars: 173.08 FT <i>ID-2 1/4</i>	Bottom Recorder: 4638 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: 28	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 24 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): 3 FT <i>4 1/2-FH</i>	



Company: Berexco, LLC
Lease: FKS Unit #1-18

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Elevation: 3171 EGL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 483
API #: 15-093-21985-00-00

Operation:
Uploading recovery &
pressures

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2021

DST #2 Formation: FT Scott Test Interval: 4612 - Total Depth: 4640'
4640'
Time On: 11:42 05/21 Time Off: 20:57 05/21
Time On Bottom: 13:48 05/21 Time Off Bottom: 18:18 05/21

Mud Properties

Mud Type: Chem. **Weight:** 9.1 **Viscosity:** 56 **Filtrate:** 8.0 **Chlorides:** 7000 ppm

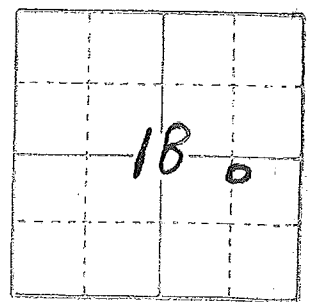
COMPANY Berexco LLC
 LEASE FKS Unit NO. 1-18
 LOCATION 2510'FSL + 1315'FEL
 SEC. 18 TWP. 21S RNG. 35W
 COUNTY Kearny STATE Kansas
 FIELD Wildcat

CONTRACTOR Duke Rig #4
 COMM. 5-14-2021 COMP. 5-24-2021
 RTD 5050 LTD 5056
 No. of DST'S Two No. of CORES None

SAMPLES SAVED FROM 3900 TO TD
 DRILLING TIME KEPT FROM 3800 TO TD
 SAMPLES EXAMINED FROM 3900 TO TD
 GEOLOGICAL SUPERVISION FROM 3800 TO TD
 GEOLOGIST ON WELL Edwin H. Grieves

FORMATION TOPS

FORMATION	SAMPLE	LOG	SUBSEA
Top Heebner	3923	3930	- 749
Toronto	3947	3950	- 769
Lausing Fm	3978	3988	- 807
Lansing "H"	4215	4216	- 1035
Kansas City "A"	4313	4312	- 1131
Kansas City "B"	4364	4366	- 1185
BKC	4451	4450	- 1269
Marmaton	4486	4490	- 1309
Marmaton "B"	4506	4507	- 1326
Pawnee	4581	4582	- 1401
Ft Scott	4609	4519	- 1438
Cherokee	4627	4639	- 1458
Morrow	4864	4862	- 1681
Meramec	4928	4928	- 1747
TD	5050	5056	



API# 15-093-21985

ELEVATIONS
 KB 3181
 DF 3180
 GL 3172

MEASUREMENTS ARE ALL FROM KB

CASING RECORD

8 5/8"	432'	W/300	SA.
—	—	W/—	SA.
—	—	W/—	SA.
—	—	W/—	SA.

EL. LOG Ind-SP-GR
Den-Neut-GR-Caliper
ML-Sonic

REMARKS Earth-Tech had an unmanned gas detection trailer on well from 3800 feet to total depth.

Handwritten signatures and notes:
 1000
 Andrew J. ...
 Edwin H. ...
 Grieves

- = METHANE
- = ETHANE
- = PROPANE
- = ISOBUTANE
- = BUTANE
- = ISOPENTANE
- = PENTANE

LITHOLOGY

CHROMATOGRAPH

HOT WIRE BY TOTAL GAS VOLUME

SANDSTONE
 LIMESTONE
 SHALE
 CHERT

SILTSTONE
 DOLOMITE
 GRANITE WASH
 SAND & GYP

DRILL TIME

SANDSTONE
 LIMESTONE
 SHALE
 CHERT

SLISTONE
 DOLOMITE
 GRANITE WASH
 SAND & GYP

HOT WIRE BY
 TOTAL GAS VOLUME

CH = PROPANE
 CO = BUTANE
 C2 = ISOBUTANE
 C3 = PENTANE

DRILL TIME
 SCALE

SAMPLE DESCRIPTION

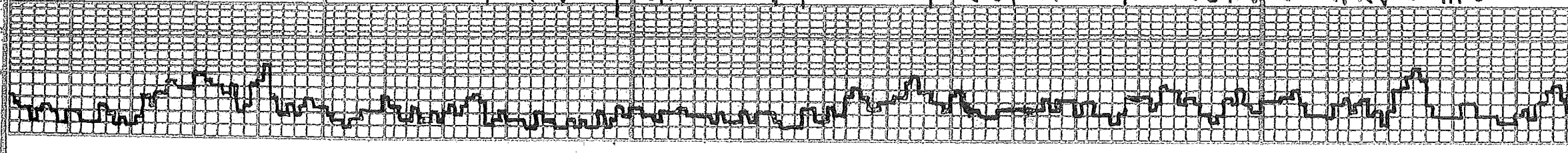
GAS SCALE

5 10 15

3800

10

100



Lms. abrwht. to cream-chalk. tan; crypto.
 to v. v. fn. xln. sub-chalk, sub-sucro. to
 sucro; d. yel. fluor. IP's; No Cut; abn. pr
 to fr. mic. pp. por.

Lms. lt. gray to grayish-tan; crypto. to v. fn. xln.
 TRS. sub-chalk, sub-sucro. packets and
 sub-lithogr.; v. d. yel. fluor. IP's; No Cut;
 No Vis POR

Sh. v. drk gray. to black-carb.

Sh lt. gray to H. green - soft + mushy
when wet; Silty IP's

Lms. tan. wht. to cream-chalk + tan; grayish. IP's;
 crypto. to v. fn. xln.; sub-chalk; sub-sucro
 to sucro + TRS. packets; d. yel. fluor.
 IP's; No Cut; abn. pr; fr. to fr. qd. micro-pp
 + poss. inter xln. por

Interbedded Limestones and Shales

1. Lms. h. tan. wht. to cream-chalk to tan
 crypto. to v. fn. xln.; sub-chalk; sub-sucro.
 to sucro; packets + tan sub-lithogr.
 d. yel. fluor. IP's; No Cut; h. xln. to abn.
 pr. to fr. + tan qd. micro-pp + prob
 inter xln. por.

2. Lms. H. gray to grayish. tan; crypto. to tan
 xln.; tan; sub-chalk; sub-sucro; packets
 + tan sub-lithogr.; TRS d. yel. fluor.
 No Cut; No Vis POR.

3. Scattered thin Sh's med to dk gray
 calc. to v. drk gray to blk-carb. looking

3900

TRAP CHECK

Need more
 3923-742

Toronto
 3947-766

Lansing Fm
 3978-797

2-1/2 in. TRS. Sub-chalk, sub-sucro, packstn
+ TRS sub-lithology; TRS dub. Yel. fluor.
No cut; No Vis POR.

3. Scattered thin Sh's med to dark gray
calc. to v. drk gray to blk carb. looking

— Sh. black-carb

4070-4138 Interbedded Lmst's + Shales
4100
Similar to 3978-4068 with
abn wht. to cream-chalk. IP's and
TRs chert lt to med gray - opaque

Lms v. abn. wht. to cream-chalk + lt gray to
tan; crypto to v. fn. xln. sub-chalk
sub-sucro. to sucro. + packstn. IP's.
dub. yel. fluor. IP's; No cut; hv. TRs. POR
fr + TRs. gd. micro-pp + prod. interxln.
POR

Interbedded Limestones and Shales
1. Lms. lt. gray, tanish IP's; crypto to v. fn.
xln. sub-sucro; packstn + sub-lithog
dub. yel. fluor. IP's; No cut; No Vis POR

2. Sh. v. drk. gray - calc IP's to blk-carb

Lms. TRs. wht. to cream-chalk + lt gray to tan;
crypto to v. fn. xln. sub-chalk; sub-sucro
to TRs sucro + packstn; TRs. dub. lt. yel. to
lt. yel. fluor.; No cut; hv. TRs. pr. micro pp
& poss. TRs. interxln. POR.

— Sh. v. drk. gray to black-carb

4215-4241
Interbedded Lmst + Sh similar 3978 to
4068

Lms. hv. TRs. to abn. wht. to cream-chalk +
lt. to med gray. to tan; crypto to v. fn. xln.
Sub-chalk; sub-sucro + packstn.
w/ TRs. to hv. TRs. oolitic + TRs. sub-lithog
TRs. dub. lt. yel. fluor.; No cut; No Vis POR

Lms. hv. TRs. wht. to cream-chalk + tan;
crypto. to v. fn. xln. extra. oolitic + fan
sh. oolitic IP's; med. xln. sub-sucro +
packstn; yel. to glau. yel. fluor.; No cut
abn. gd. to excel. oolitic POR.
Very Quest. Perm.

Lansing H
4215-4034

4500

Lms. grayish-tan to tan; crypto. to
M.F. xln; sub-succo. + packets; sl. to
oolitic; IP's; No. Vis. Por. oolitic
d. yel. fluor. IP's; No. Vis. Por. oolitic
Por. + TRS v. pr. to mic. carb. pp. Por.

Lms. tan to lt. to med. gray. - sl. to extra. shly
IP's grading to calc. shly; crypto. to TRS
v. med. gray. sub-succo. packets + tan. sub-lithog.
sl. TRS; yel. to dk. d. yel. fluor. No. Vis. Por.

4580-4581 Sh. black-carb

4581-4590 Lms. lt. to med. gray - sl. to
extra. shly + tan; calc. to xln;
sub-lithog. shly; packets to sl. TRS;
No. Vis. Por.

4590-4606 Lms. 2bn. wht. to cam - chlk. +
grayish-tan to tan w/ TRS. sp. det. calc. tan

oil sh. crypto. to v. tan; sub-chlk., sub-succo. to
succo. + packets; sl. oolitic to oolitic; IP's;
sl. TRS; yel. to glen. yel. fluor. w/ staining to gl. to tan. ring

calc. TRS; pr. oolitic; IP's; No. Vis. Por. to pr.
mic. carb. to TRS. pr. to mic. carb. to TRS.

Sh. black-carb

Lms. lt. gray to tan; crypto. to v. tan; xln. to
4615-4621 Lms. tan; crypto. to v. tan; xln. to
extra. oolitic; matrix sub-succo. to succo. TRS
to sub-lithog. matrix; TRS. even to hv. TRS. staining
tan oil sh. w/ glen. yel. fluor. staining
to gl. to tan. ring cut; 2bn. pr. TRS; gl.
to TRS. extra. into oolitic; IP's
mic. carb. + pr. det. inter. in por.

4621-4627 Lms. tan; crypto. to v. tan; xln.
sub-succo. + packets; oolitic; IP's; d. yel.
fluor.; No. Vis. Por.

4627-4632 Sh. v. dk. gray to blk. carb.

4632-4807 Interbedded Lmst. + Sh. S.

1. Lms. lt. gray to tan; crypto. to v. tan; xln.
TRS. sub-chlk., sub-succo., packets +
sub-lithog.; phantom oolitic to oolitic
IP's; d. yel. fluor.; No. Vis. Por.

2. Lmst. lt. to med. gray - sl. to extra. shly
grading to calc. shly. crypto. to v. tan; xln.;
sub-chlk. to red shly and packets in
No. Fluor.; No. Vis. Por.

3. Sh. med. to v. dk. gray; sl. to extra
calc. IP's

4. Sh. v. dk. gray to black-carb

5. Scattered TRS. Chert lt. gray + wht
mottled IP's + tan all opaque

4526-4525

RAWME
4581-1490

SHOW 7U

BIKSH 8U

SHOW 19U

24609-1472

Chenakkee

4627-1474

RECYCLE 6U

RECYCLE 30U

RECYCLE 12U

RECYCLE 8U

4700

MOB 45000
RPM 3000
SPM 800
PI 800

4800

4807-4864 Interbedded Lms & Shales
Similar 4692-4807 w/v. abn Shs.
Reds, browns, lt. greens, grayish
greens to greens, h. gr., blue greens
No chert

Trap Check

MORROW FM
#928-1683

4864-4928 Interbedded Shs & Lms
w/v. v. v. slits Sdgr. + Siltstns

1. Shs greens to blue green + abn med to dk. gray.
2. Lms. crin. to tan; crypto. to v. fa. x. h.; sub-chlk, sub-sucro. + packets th; abn. sli. to v. oolitic, dul. yel-fluor. IP's No Cut; No Vis Por.
3. v. v. slits. loose Qtz. gas; v. fa to fa. + trs. med.; ang. to sub-angled - clear to frosted and extra slits of silt clusters brn. from oil stn.; dul. yel. yel. fluor.; slow streamng. cuts; No Vis Por.

4900

MORROW FM
#928-1747

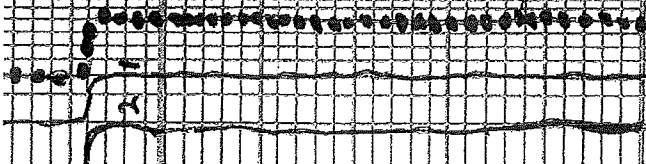
4972-4972 Lms. tan grayish. IP's; crypto. to v. v. fa. x. h.; extra med. oolitic w/hoy trs. Qtz. gas. - ang.; matrix sub-chlk; sub-sucro. to trs. sucro; dul. yel. fluor.; No Cut; No Vis Por

4972-5050 Lms. trs. wht. to gray chlk IP's w/chlk oolite IP's + tan; v. to extra oolitic (sm, med to lg) matrix sub-chlk; sub-sucro + packets; dul. yel. to yel. fluor.; No Cut No Vis Por

5000

colitic sm, med to lg. m wtr. ix
 sub-chalk sub-5-600 packsta,
 dul. yel. to yel. fluor., No cat
 No Vis Por

5000



TD 5050

7 7/8" Bit Info:

1. PDC in 432 - out 3596
2. New JZ HA-537 in 3596 out 5050 TD

Dev. SURV.

1. 435 ^{3/4"} 1°
2. 1219 ^{1/2"} 3/4°
3. 2236 ^{3/4"} 1/2°
4. 3225 ^{1/4"} TD

Cir. Points

1. 4494
2. 4510
3. 4525
4. 4550
5. 4600
6. 4640
7. 4840
8. 4869
9. 4890
10. 4915
11. 4940
12. 5050 TD

Daily. Dalg. Progress:

1. 3530 AT 7AM 5-17-21
2. 3951 AT TAM 5-18-21
3. 4416 AT TAM 5-19-21
4. 4600 AT TAM 5-20-21
5. 4640 AT TAM 5-21-21
6. 4711 AT TAM 5-22-21
7. 4919 AT TAM 5-23-21
8. 5050 AT TAM 5-24-21

DST#1 Pawnee 4577-4600
 IO BOB 20 min Blow Built to 4 3/4" in 30 min
 FO Surf. blow Built to 2 3/4" in 60 min BOB 30 min

Rec 608 ft fluid

- 113' WM 80% mud 20% wtr.
- 126' MW 17% mud 88% wtr.
- 369' MW 38% mud 97% wtr.
- Tool Samp 10% mud 90% wtr.
- chl 6500 ppm pit chl 9000 ppm R_w = 13065%
- MAX Temp. 114°F
- IHP 2217# FFP 166-28 in 60 min
- IIFP 48-152 in 30 min FSIP 1001# in 120 min
- ZSIP 1000# in 60 min FHP 2060#

DST#2 Ft Scott 4612-4640

IO weat. surf. blow built to 1/2" in 30 min
 FO 1/4" blow built to 3 3/4" in 60 min
 Rec 50 ft OCM 15% oil 85% mud
 Tool Samp 10% oil 2% wtr. 3% loss Rig etc
 88% Mud Max Temp 107°F

- IHP 2234#
- IIFP 21-26# in 30 min
- ISIP 370# in 60 min
- FFP 32-38# in 60 min
- FSIP 437# in 120 min
- FHP 2221#

Mud Info.:

5-18-21 10:01 5-21 5-22 5-23

2234#
 21-26 # 1 in 30 min
 370 # 1 in 60 min
 32-38 # 1 in 60 min
 437 # 1 in 120 min
 1221 #

Mud Info:

DATE	5-18-21	5-19-21	5-20-21	5-21	5-22	5-23
Depth	4031	4472	4600	4640	4723	4940
Wt	9.3	9.3	9.3	9.1	9.3	9.5
Vis	60	64	82	56	54	62
PV	18	18	20	17	16	18
YP	22	23	25	20	19	22
GS	15/144	15/145	17/151	14/136	14/135	15/141
WL	8.8	8.0	12.0	8.0	8.8	9.0
cake	3/32	3/32	3/32	1/32	3/32	3/32
pH	9.0	10.0	9.0	10.5	10.0	10.0
SL	900	7800	9100	7000	7600	8000
Ca	60	60	80	40	40	60
LCM	2.0	2.0	2.0	2.0	2.0	2.0

OPERATOR Berexco LLC
 LEASE EKS Unit
 ELEVATION 3181 KB RTD 5050 NO. 1-18

LOCATION 2510' F5L + 1315' FEL
 SEC. 18 TWP. 21S RANG. 35W
 COUNTY Kearney STATE Kansas

