

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	HERMAN L. LOEB, LLC
Well Name	METZBURK 1-21
Doc ID	1431838

Tops

Name	Top	Datum
Blaine Anhy	1167	1029
Chase	2437	-241
Heebner Shale	4034	-1838
Lansing 'A'	4192	-1996
Lansing/KC 'H'	4348	-2152
KC 'I'	4392	-2196
KC 'J'	4440	-2244
BKC	4572	-2376
Marmaton	4618	-2422
Miss Chert	4760	-2564
Viola	4838	-2642

LITHOLOGY STRIP LOG

WellSight Systems

Scale 1:240 (5"=100') Imperial

Well Name: Metzburk #1-21
Location: 591' FNL & 2153' FWL, Sec. 21-T27S-R18W, Kiowa Co., KS.
Licence Number: 15-097-21844-00-00 Region: Einsel Field Ext.
Spud Date: 10/15/2018 Drilling Completed: 10/22/2018
Surface Coordinates: 591' FNL & 2153' FWL, Sec. 21-T27S-R18W

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2185' K.B. Elevation (ft): 2196'
Logged Interval (ft): 3900' To: 4850' Total Depth (ft): 4850'
Formation: Viola at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3494'; Chemical Gel 3494' to 4850'
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Herman L. Loeb, LLC.
Address: P.O. Box 838
Lawrenceville, IL. 62439-0838

GEOLOGIST

Name: Jon D. Christensen
Company: Consulting Petroleum Geologist
Address: 277 S. Maple Dunes Ct.
Wichita, KS. 67235-7500

Cores

None Taken

DSTs

DST #1(Upper K.C. 'I' zone) 4385' - 4402'(Corrected Depths to Log) Test Times 30"-60"-45"-90" IFP Strong Blow BOB/24 Min. built to 16.5" in 30 Min.; FFP Strong Blow BOB built to 44.2" in 45 Min., Max. 1.9" Blowback on FSI; REC: 763' Rich Gas in Pipe, 62' GOCWM(45%G, 15%O, 15%W, 25%M), not Enough Water for CI measurement; IFP 10-26#, ISIP 1008#, FFP 30-40#, FSIP 846#, IHP 2113#, FHP 2072#, BHT 120 Deg. F.

DST #2(Conglomerate/Miss Chert) 4724' - 4774'(Corrected Depths to Log) Test Times 30"-45"-30"-60" IFP Weak 1.8" Blow, FFP No Blow, no Blowback on SI's; REC: 5' Drilling Mud, no shows of oil or gas; IFP 17-20#, ISIP 37#, FFP 19-19#, FSIP 33#, IHP 2274#, FHP 2252#, BHT 122 Deg. F.

Comments

10/15/18 MIRU Sterling Drilling Co. Rig #4, Spud at 6:15 PM.; 10/16/18 TD. 608' - Cementing Surface Casing; 10/17/18 Drilling at 1620'; 10/18/18 Drilling at 3480'; 10/19/18 Drilling at 3940'; 10/20/18 Drilling at 4392'; 10/21/18 Drilling at 4490'; 10/22/18 TD. 4775' - TOH for DST #2 - Reached TD. at 11:20 PM; 10/23/18 RTD. 4850' - LTD. 4850' - Finished Logging - P & A completed at 4:30 PM.

Set new 8 5/8"(23#) Surface Casing at 604' KB. with 350 sacks cement(Basic Energy Services). Cement did Circulate. PD. at 7:30 AM. 10/16/18.

Surveys: 0.50 Deg. at 608'(Surface Casing); 0.75 Deg. at 3940'(Bit Trip); 0.75 Deg. at 4403'(DST #1); 0.75 Deg. at 4775'(DST #2).


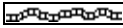
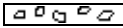










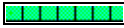

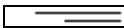
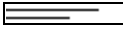



Pipe Strap at 3940'(Bit Trip): Strap 0.93' Short to the Board, no correction made to the Board.

After review of the Halliburton logs, DST's and sample data, the operator elected to Plug and Abandon the #1-21 Metzburk at RTD. 4850' on 10/23/18 due to lack of commercial amounts of recoverable hydrocarbons.








































































LOG TOPS: Blaine Anhy. 1167(+1029), Chase 2437(-241), Stotler Lmst. 3395(-1199), Howard 3602(-1406), Heebner Shale 4034(-1838), Toronto 4050(-1854), Brown Lmst. 4182(-1986), Lansing 'A' 4192(-1996), Lansing/KC 'H' 4348(-2152), K.C. 'I' 4392(-2196), K.C. 'J' 4440(-2244), Stark Shale 4482(-2286), Hushpuckney Shale 4532(-2336), Hertha 4538(-2342), Base Kansas City 4572(-2376), Marmaton 4618(-2422), Cherokee Shale 4700(-2504), Miss. Chert 4760(-2564), Kinderhook Shale 4768(-2572), Kinderhook Sand 4791(-2595), Viola 4838(-2642).

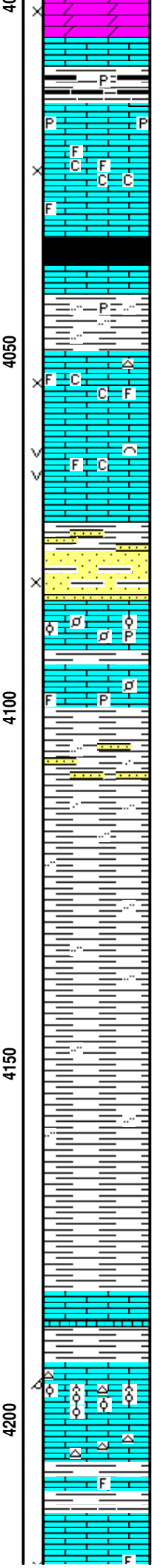
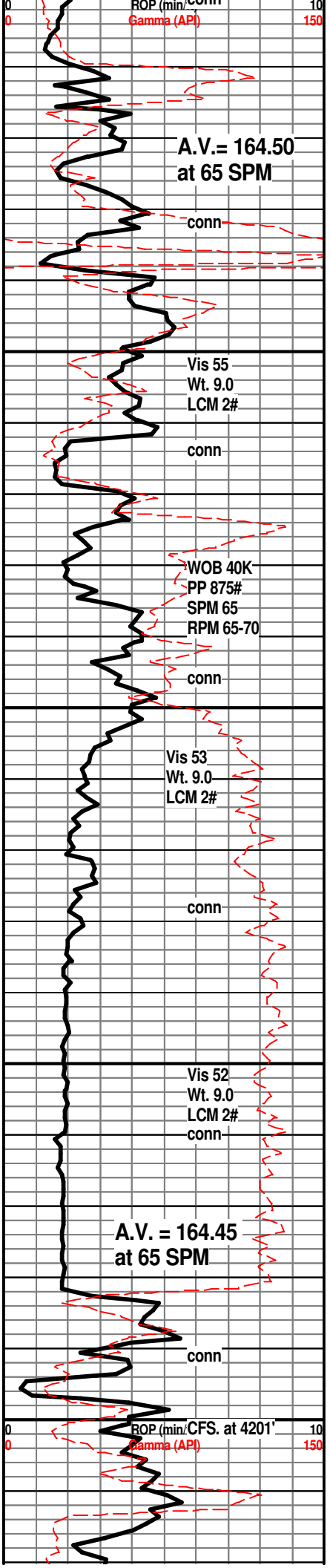
NOTE: This log was shifted upward by 1' for correlation purposes with the Halliburton logs.

ROCK TYPES

 Anhy  Bent  Brec  Cht	 Clyst  Coal  Congl  Dol	 Gyp  Igne  Lmst  Meta	 Mrlst  Salt  Shale  Shcol	 Shgy  Sltst  Ss  Till
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ACCESSORIES

MINERAL  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau	 Gyp  Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff	FOSSIL  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Gastro  Oolite	 Ostra  Pelec  Pellet  Pisolite  Plant  Strom STRINGER  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst	 Sltstrg  Ssstrg TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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DOL; lt to med brn, sucrosic, fair interxn, dull yel min fluor, no stn or odor, ns.

SH; dk gy, blk, platy, pyr, some hd - blocky

LM; lt to med brn, hard, some pyr, foss ip, scat chalk and chalky mtx, poor interpart por, v. dull yel fluor, no stn or odor, ns.

HEEBNER SHALE 4034(-1838)
 SH; blk, carb ip, platy, some soft
 LM; med to dk brn, dense, blocky

SH; med gy grn, grn, silty ip, occ pyr

TORONTO 4050(-1854)
 LM; off wh, tan, fxln w/scat foss mat, poor interxn/interpart por, minor chalky mtx, lt yel fluor, no stn or odor, ns.

LM; tan to cream, lt brn, med xln to gran, scat well dev. vug por, foss ip, rare chalky mtx, lt yel fluor, no stn or odor, no gas kick

DOUGLAS SHALE 4074(-1878)
 SH; lt gy, soft, sandy
 SS; lt gy, vf to occ f gr qtz, mica, poor intergran por, most tite, poorly sorted, argil ip, ns.

LM; med to dk brn, gy brn, foss, well cem ooids and pellets, hd, no vis por, rare pyr, tite

LM; med to dk gy, gy brn, foss, hd, blocky, no vis por, no fluor, rare pyr, ns.

SH; lt to med gy, silty to sandy, interbdd vf gr tite ss

SH; lt to med gy, smooth, occ silty

SH; lt to med gy, platy, occ silty

SH; lt to med gy, platy, most smooth

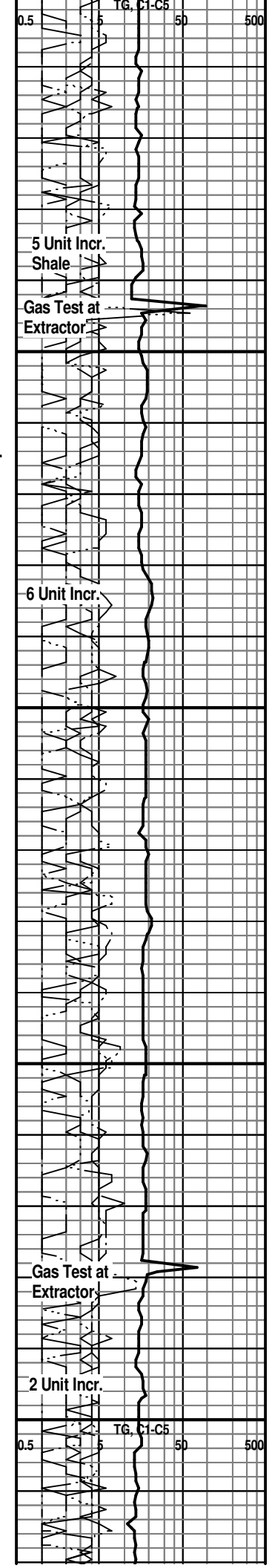
BROWN LMST. 4182(-1986)
 LM; med to dk brn, hd, blocky, tite

LANSING 'A' ZONE 4192(-1996)
 LM; tan to med brn, oolitic, most w/gd oomoldic por, brittle ip, dull to lt yel fluor, no stn or odor, no vis gas bubbles, no cut, some oolitic cht

LM; tan to cream, most dense, scat wh cht, tite

LM; med gy, foss ip, hd

LANSING 'B' 4213(-2017)
 LM; tan to cream, off wh, foss, scat fair interpart and small vug por, no fluor, no stn or odor, ns.



conn
WOB 40K
PP 1030#
SPM 65
RPM 65-70

conn
Vis 55
Wt. 9.1
LCM 1#

conn

WOB 40K
PP 1035#
SPM 65
RPM 65
conn

Vis 56
Wt. 9.1
LCM 1#

conn

A.V. = 164.45
at 65 SPM

conn

DST #1
4385' - 4402'

ROP (min) CFS. at 4402' 10
Gamma (A) 150

Vis 65
Wt. 9.1
LCM 1#
conn
CFS. at 4417'

R-Rough Drilling

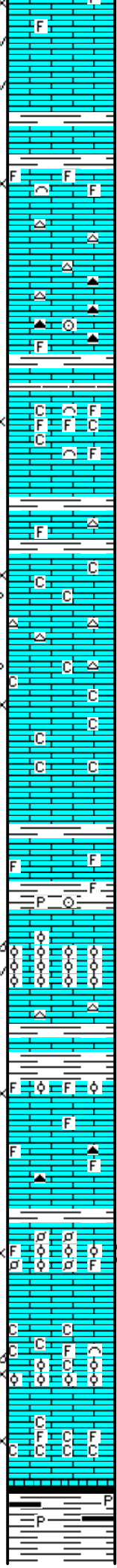
CFS. at 4429'

4250

4300

4350

4400



LM; lt gy, f to med xln, scat gd vug por, occ calc fld vugs, no fluor, no stn or odor, no gas kick, ns.

LM; tan to lt brn, highly foss, much foss hash, fair interpart por, mod soft, no fluor, ns.

LM; med brn, hd, blocky, most micritic, scat brn cht, no vis por, ns.

LM; med to dk brn, rare foss, scat dk brn cht, tite

SH; dk gy, platy, smooth

LM; tan to cream, off wh, med xln w/abt foss mat, gd interpart por, scat soft chalky mtx, dull yel fluor, no stn or odor, ns.

LM; tan to lt brn, foss, hd, well cem, no vis por, rare off wh cht, tite

LM; wh, off wh, fxln, occ soft chalk and chalky mtx, scat fair interxln and p-p por, dull yel min fluor, ns.

LM; off wh, cream, fxln, fair interxln and scat p-p por, interbdd wh cht, much soft chalky mtx, no fluor, no stn or odor, ns.

LM; tan to cream, f to med xln, rare sucrosic text, most tite, ns.

LM; med brn, foss, hd

SH; grn, gy grn, some red, pyr, occ foss

LANSING/K.C. 'H' 4348(-2152)

LM; tan to lt brn, oolitic, brittle, most w/gd oomoldic, occ vug por, v. dull yel min fluor, no stn or odor, no gas kick, barren

LM; tan to lt brn, hd, cherty ip, tite

SH; grn, gy grn, platy

LM; tan to cream, buff, foss - finely oolitic, scat small ooids and foss mat, poor vis interpart por, dull yel fluor, no stn or odor, ns.

LM; tan to cream, foss ip, most well cem, scat amber/brn cht, no vis por, no fluor, ns.

KANSAS CITY 'I' 4392(-2196)

LM; tan - lt brn, foss, finely oolitic - foss, fair to occ gd interpart por, med to brite yel fluor, gd odor, SFO, gas bubbles, gd cut, spotted to even v. lt brn oil stn

DST #1: K.C. 'I' zone 4385' - 4402'

LM; tan to lt brn, foss, partly oolitic, much soft chalk and chalky mtx, fair interpart/some moldic por, no fluor, quest. gas bubbles, no stn or odor, 99% barren of show

LM; tan to cream, wh, med xln ip w/rare foss mat, poor interpart por, chalky - chalk has brite yel fluor, strong odor, no vis stn, no gas kick

SH; blk, dk gy, pyr ip, platy

KANSAS CITY 'I' 4440(-2244)

4 Unit Incr.

Gas Test at Extractor

15 Unit Incr.

SHOW

TG. CH-C5 50 500

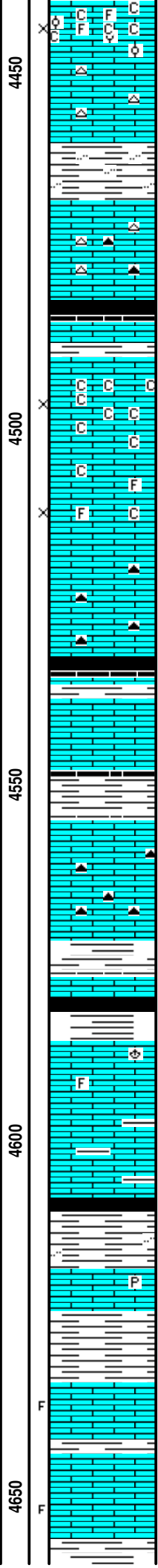
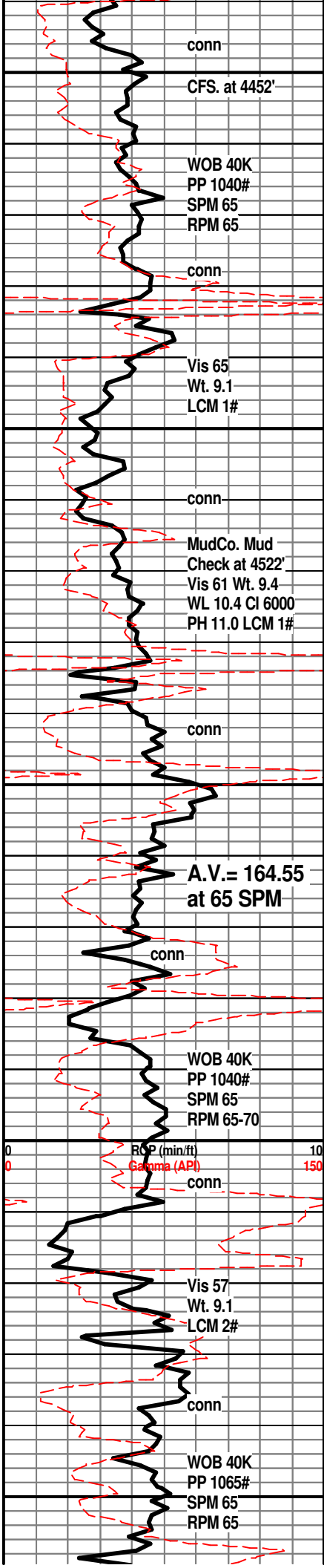
Poss. 17 Unit Incr.

Mud Gassy after

DST #1

18 Unit Incr.

Shale



LM; cream to buff, off wh, foss w/scat well cem ooids/foss hash, much chalk and chalky mtx, poor interpart por, no fluor, 1 pc w/spotted oil stn(poss from above), most with ns.

LM; tan to cream, most dense, micritic, scat dk brn to off wh cht, tite

SH; med to dk gy, platy, silty ip.

LM; med brn, rare gy brn, dense, scat amber to brn cht, no vis por, ns.

STARK SHALE 4482(-2286)
SH; blk, carb ip, platy, some soft

K.C. SWOPE 4490(-2294)
LM; off wh, wh, buff, med xln ip, v. chalky w/much soft chalk, poor interxln por, no fluor, no stn or odor, ns.

LM; tan to cream, fxln w/rare foss mat, poor interxln por, minor chalky mtx, no fluor, no stn or odor, ns.

LM; med to dk brn, blocky, occ dk brn cht, no vis por, ns.

HUSHPUCKNEY SH. 4532(-2336)
SH; blk, carb, platy - blocky ip.

K.C. HERTHA 4538(-2342)
LM; tan to buff, lt brn, dense, micritic, no vis por, no fluor, ns.

SH; med to dk gy, trc blk, platy, firm

LM; med to dk brn, dense, blocky, scat dk brn cht, tite

BASE KANSAS CITY 4572(-2376)
SH; gy grn, trc rust red/brn, platy

SH; grn, gy grn, maroon, trc blk, red/brn, platy

PLEASANTON 4586(-2390)
LM; lt brn, most hd- blocky, micritic, rare well cem foss, tite, ns.

LM; lt to med gy, gy grn, some grnish brn, argil ip, most blocky, dull yel min fluor, no vis por, no stn or odor, ns.

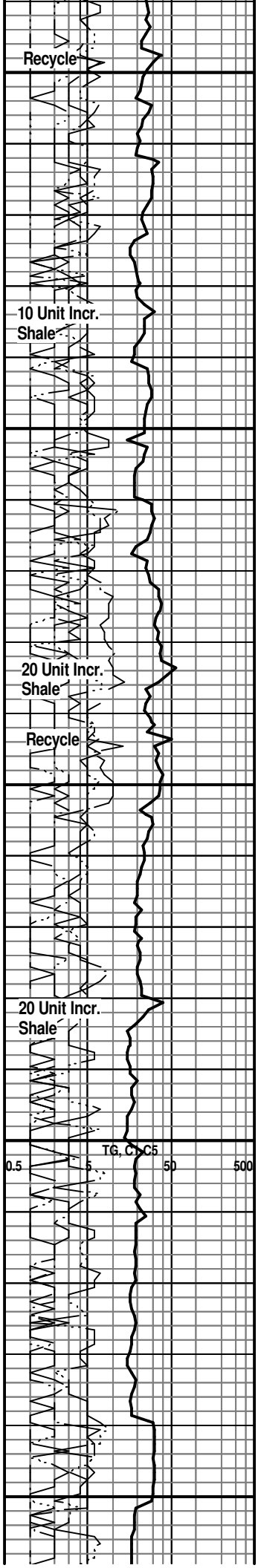
SH; blk, gy grn, maroon, silty ip, fairly soft

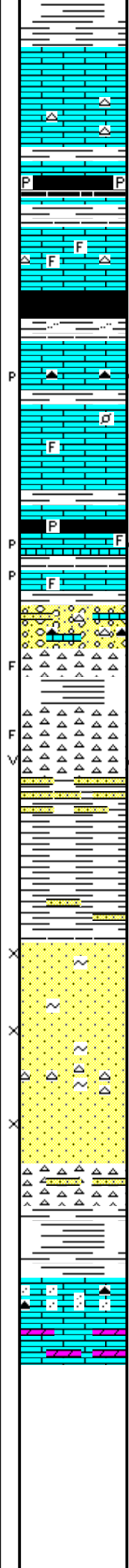
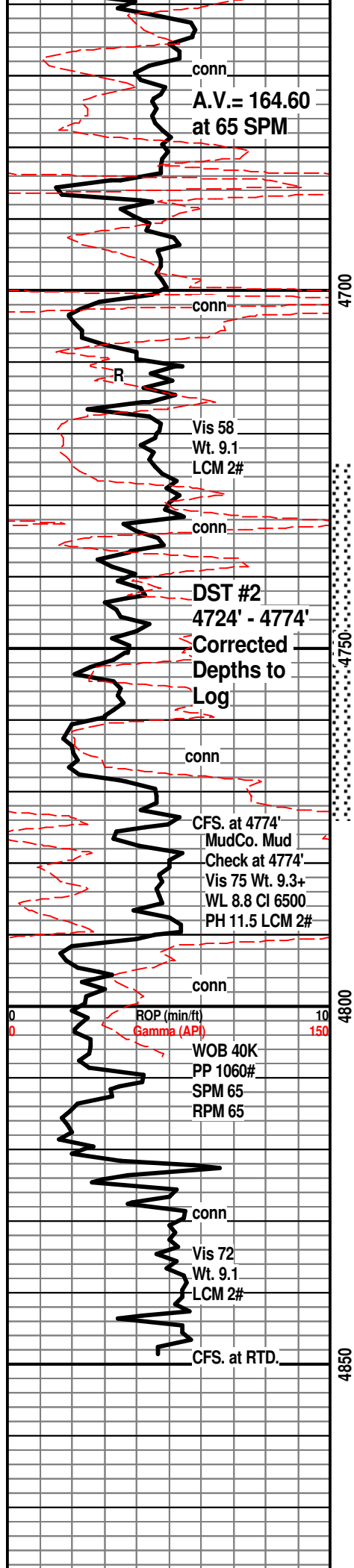
MARMATON 4618(-2422)
LM; med brn, occ dk brn, hd, scat pyr, tite

SH; med gy, gy grn, rare maroon, platy, smooth

LM; lt brn, most dense, blocky, scat fracs w/blk tar - gilsonite on frac faces, most dense, scat lt yel fluor, no odor, no live shows

LM; med brn, micritic, few pcs w/blk tar and gilsonite, trc fracs, dull to lt yel fluor, no odor, no live shows, most tite





SH; v. dk gy, blk, grn, maroon, yel, platy

PAWNEE 4666(-2470)
 LM; lt brn, fxl to micritic, most dense, scat opaque calc xtals, lt yel min fluor in some, no vis stn, no odor, no gas kick
 LM; lt to med brn, blocky, hd, scat tan/lt brn cht, no vis por, rare lt yel min fluor, ns.

LABETTE SHALE 4684(-2488)
 SH; blk, carb, pyr ip
 LM; tan to lt brn, foss ip, some med xln, most dense, scat brn/amber cht, no fluor, ns.

CHEROKEE SHALE 4700(-2504)
 SH; blk, dk gy, gy grn, silty ip.
 LM; lt to med brn, most dense, few pcs w/dk brn spotted oil stn, poor p-p por, lt yel fluor, no F.O., v. faint odor, gd cut, looks tite

LM; tan to cream, most dense - micritic, massive bdd, rare foss mat, rare dk brn/blk dead stn, no fluor, no odor, no gas kick

SH; blk, carb, thinly bdd, pyr ip.
 LM; lt brn, foss ip, scat blk tar/gils, dk brn stn, dull yel fluor, p-p por, no odor, gd cut

CONGL; yel/org cht, grn - red brn weath lmst, some nodular grn lmst, trc f gr qtz ss
 CHT; org, yel, transl, wh, most fresh, scat blk tar and gils, fracs w/scat edge stn, no fluor, no odor

MISS. CHERT 4760(-2564)
 CHT; wh, tan, pale org, most fresh/occ trip cht w/blk tar/gils, faint sweet odor, scat lt yel fluor, fracs with rare vug por, occ spotted live oil stn, few gas bubbles

KINDERHOOK SHALE 4768(-2572)
 SH; med gy, gy grn, interbdd clr, f gr qtz ss, fri, abnt blk tar/gilsonite, some grn vf gr ss

DST #2: Miss. Chert 4724' - 4774'
 SH; med gy, gy grn, sandy w/interbdd grn ss strngs.

KINDERHOOK SAND 4791(-2595)
 SS; clr, pale grn, most f gr qtz, some hd - qtzitic at top, most well srt, fri clusters, fair to occ gd intergran por, scat dead tar/gilsonite, no fluor, no live shows, rare glau

SS; pale grn, wh, siliceous, scat wh cht, much tite, rare glau

SS; wh, clr, most f gr qtz, clusters, fri, fair/gd intergran por, well srt, barren, no stn /odor, ns.

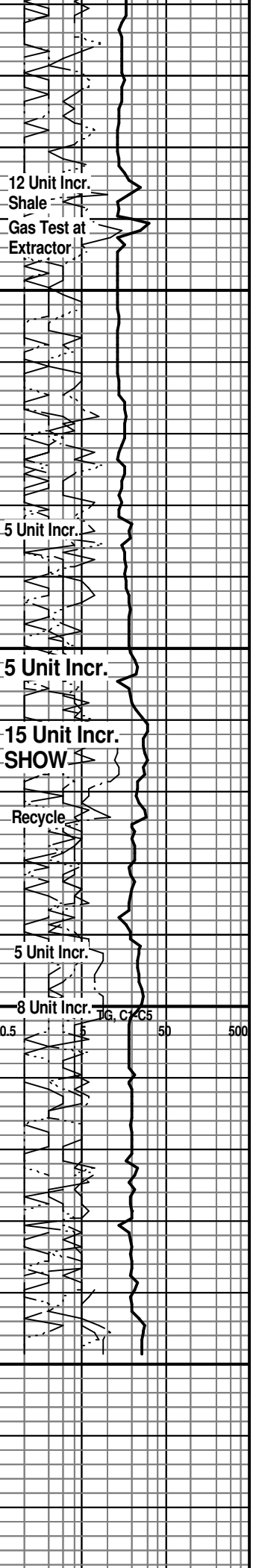
CHT; clr, v. hd, blocky, no fluor, tite, interbdd hd qtzitic ss

SH; varic, platy to flakey

VIOLA 4838(-2642)
 LM; rose red/brn, pink, sandy, most dense, no vis por, no fluor, scat brite org cht
 LM; med brn, gritty text, partly dolomitic, most dense, no vis por, no fluor, ns.

RTD. 4850' at 11:20 PM. on 10/22/18

LTD. 4850'
 Halliburton ACRT, NEU/DEN w/PE,
 Microlog





Company: Herman L. Loeb, LLC
Lease: Metzburk #1-21

SEC: 21 TWN: 27S RNG: 18W
 County: KIOWA
 State: Kansas
 Drilling Contractor: Sterling Drilling
 Company - Rig 4
 Elevation: 2196 KB
 Field Name: N/A
 Pool: WILDCAT
 Job Number: 249

Operation:
 Uploading recovery &
 pressures

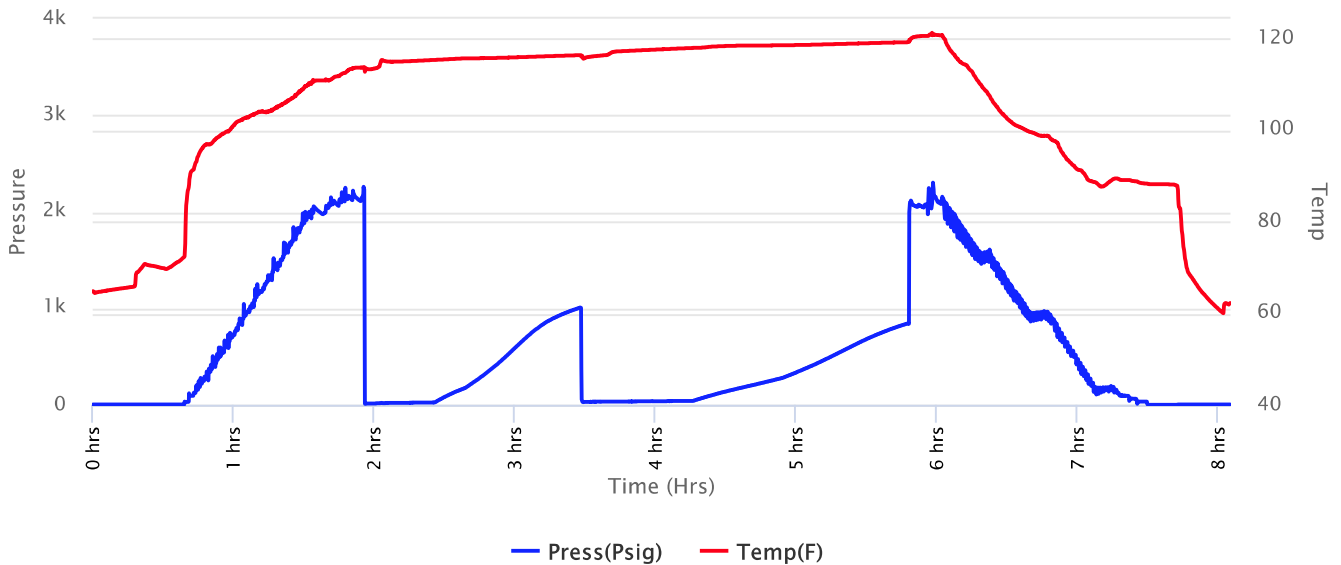
DATE
 October
20
 2018

DST #1 **Formation: KC I** **Test Interval: 4386 - 4403'** **Total Depth: 4403'**
 Time On: 11:53 10/20 Time Off: 19:45 10/20
 Time On Bottom: 13:45 10/20 Time Off Bottom: 17:30 10/20

Electronic Volume
 Estimate:
 806'

<u>1st Open</u>	<u>1st Close</u>	<u>2nd Open</u>	<u>2nd Close</u>
Minutes: 30	Minutes: 60	Minutes: 45	Minutes: 90
Current Reading: 16.5" at 30 min	Current Reading: 1.2" at 60 min	Current Reading: 44.2" at 45 min	Current Reading: .8" at 90 min
Max Reading: 16.5"	Max Reading: 1.7"	Max Reading: 44.2"	Max Reading: 1.9"

Inside Recorder





Company: Herman L. Loeb, LLC
Lease: Metzburk #1-21

SEC: 21 TWN: 27S RNG: 18W
 County: KIOWA
 State: Kansas
 Drilling Contractor: Sterling Drilling
 Company - Rig 4
 Elevation: 2196 KB
 Field Name: N/A
 Pool: WILDCAT
 Job Number: 249

Operation:
 Uploading recovery &
 pressures

DATE
 October
20
 2018

DST #1 **Formation: KC I** **Test Interval: 4386 - 4403'** **Total Depth: 4403'**
 Time On: 11:53 10/20 Time Off: 19:45 10/20
 Time On Bottom: 13:45 10/20 Time Off Bottom: 17:30 10/20

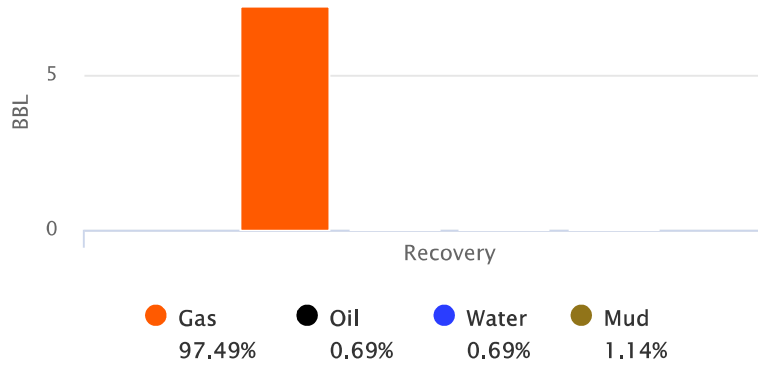
<u>Recovered</u>		<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
<u>Foot</u>	<u>BBLs</u>					
763	7.09841496	G	100	0	0	0
62	0.33976	SLWCSLOCMCG	45	15	15	25

Total Recovered: 825 ft
 Total Barrels Recovered: 7.43817496

Reversed Out
 NO

Initial Hydrostatic Pressure	2113	PSI
Initial Flow	10 to 26	PSI
Initial Closed in Pressure	1008	PSI
Final Flow Pressure	30 to 40	PSI
Final Closed in Pressure	846	PSI
Final Hydrostatic Pressure	2072	PSI
Temperature	120	°F
Pressure Change Initial Close / Final Close	16.0	%

Recovery at a glance





Company: Herman L. Loeb, LLC
Lease: Metzburk #1-21

SEC: 21 TWN: 27S RNG: 18W
County: KIOWA
State: Kansas
Drilling Contractor: Sterling Drilling
Company - Rig 4
Elevation: 2196 KB
Field Name: N/A
Pool: WILDCAT
Job Number: 249

Operation:
Uploading recovery &
pressures

DATE
October
20
2018

DST #1 **Formation: KC I** **Test Interval: 4386 - 4403'** **Total Depth: 4403'**
Time On: 11:53 10/20 Time Off: 19:45 10/20
Time On Bottom: 13:45 10/20 Time Off Bottom: 17:30 10/20

BUCKET MEASUREMENT:

1st Open: BOB in 24 min
1st Close: Built to 1.7
2nd Open: BOB in 15 min
2nd Close: Built to 1.9

REMARKS:

Tool Sample: 50% Gas 20% Oil 10% Water 20% Mud



Company: Herman L. Loeb, LLC
Lease: Metzburk #1-21

SEC: 21 TWN: 27S RNG: 18W
 County: KIOWA
 State: Kansas
 Drilling Contractor: Sterling Drilling
 Company - Rig 4
 Elevation: 2196 KB
 Field Name: N/A
 Pool: WILDCAT
 Job Number: 249

Operation:
 Uploading recovery &
 pressures

DATE
 October
20
 2018

DST #1 **Formation: KC I** **Test Interval: 4386 - 4403'** **Total Depth: 4403'**
 Time On: 11:53 10/20 Time Off: 19:45 10/20
 Time On Bottom: 13:45 10/20 Time Off Bottom: 17:30 10/20

Down Hole Makeup

Heads Up: 30.31 FT	Packer 1: 4381 FT
Drill Pipe: 4173.73 FT <i>ID-3 1/4</i>	Packer 2: 4386 FT
Weight Pipe: FT <i>ID-2 7/8</i>	Top Recorder: 4370.42 FT
Collars: 214.84 FT <i>ID-2 3/8</i>	Bottom Recorder: 4389 FT
Test Tool: 28.74 FT <i>ID-3 1/2-FH</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 17	Surface Choke: 1"
<u>Anchor Makeup</u>	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 1 FT <i>4 1/2-FH</i>	
Change Over: FT	
Drill Pipe: (in anchor): FT <i>ID-3 1/4</i>	
Change Over: FT	
Perforations: (below): 15 FT <i>4 1/2-FH</i>	



Company: Herman L. Loeb, LLC
Lease: Metzburk #1-21

SEC: 21 TWN: 27S RNG: 18W
County: KIOWA
State: Kansas
Drilling Contractor: Sterling Drilling
Company - Rig 4
Elevation: 2196 KB
Field Name: N/A
Pool: WILDCAT
Job Number: 249

Operation:
Uploading recovery &
pressures

DATE
October
20
2018

DST #1 **Formation: KC I** **Test Interval: 4386 - 4403'** **Total Depth: 4403'**
Time On: 11:53 10/20 Time Off: 19:45 10/20
Time On Bottom: 13:45 10/20 Time Off Bottom: 17:30 10/20

Mud Properties

Mud Type: Chemical **Weight:** 9.3 **Viscosity:** 75 **Filtrate:** 10.4 **Chlorides:** 6000 ppm



Company: Herman L. Loeb, LLC
Lease: Metzburk #1-21

SEC: 21 TWN: 27S RNG: 18W
 County: KIOWA
 State: Kansas
 Drilling Contractor: Sterling Drilling
 Company - Rig 4
 Elevation: 2196 KB
 Field Name: N/A
 Pool: WILDCAT
 Job Number: 249

Operation:
 Uploading recovery &
 pressures

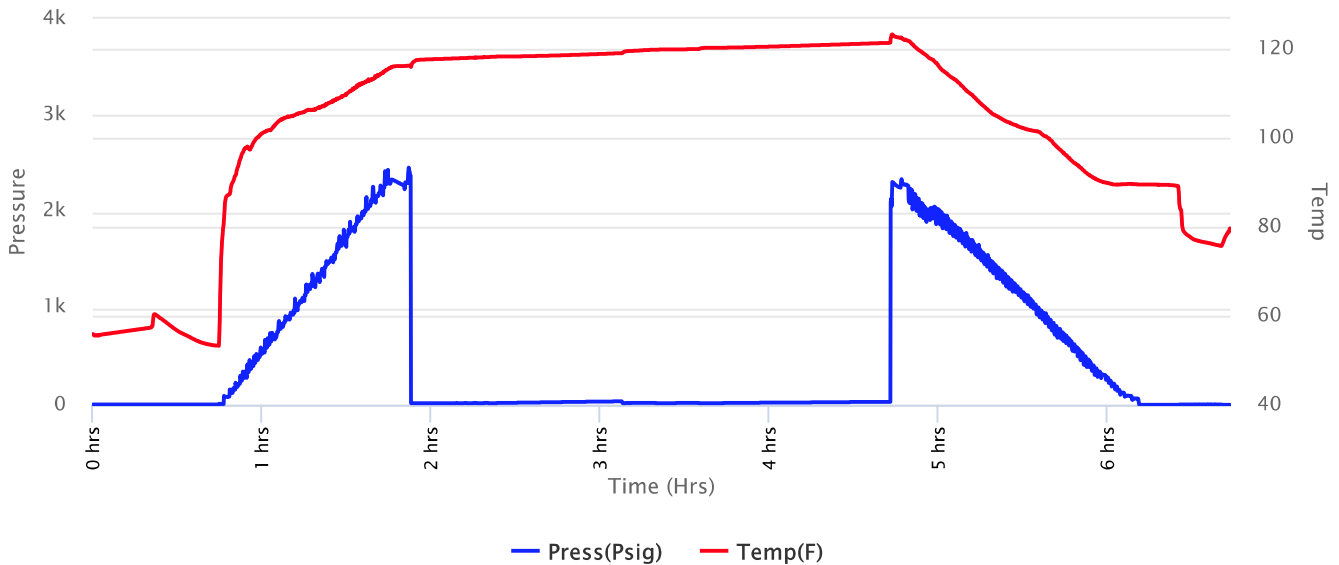
DATE
 October
22
 2018

DST #2 **Formation: Congl/** **Test Interval: 4725 - 4775'** **Total Depth: 4775'**
 Time On: 08:17 10/22 Time Off: 14:49 10/22
 Time On Bottom: 10:05 10/22 Time Off Bottom: 12:50 10/22

Electronic Volume
 Estimate:
 41'

<u>1st Open</u>	<u>1st Close</u>	<u>2nd Open</u>	<u>2nd Close</u>
Minutes: 30	Minutes: 45	Minutes: 30	Minutes: 60
Current Reading: 1.7" at 30 min	Current Reading: 0" at 45 min	Current Reading: 0" at 30 min	Current Reading: 0" at 60 min
Max Reading: 1.8"	Max Reading: 0"	Max Reading: 0"	Max Reading: 0"

Inside Recorder



1/5
3



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1007589	1718	10/30/2018
INVOICE NUMBER			
92835382			

Pratt (620) 672-1201
 B HERMAN L LOEB LLC
 I PO Box: 838
 L LAWRENCEVILLE
 L IL US 62439
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Metzburk 1-21
 O LOCATION
 B COUNTY Kiowa
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

6076-6420-METZBURK

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41142025	20920		Net - 30 days	11/29/2018

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 10/23/2018 to 10/23/2018				
0041142025				
171817358A Cement-New Well Casing/Pi 10/23/2018 Cement PTA				
60/40 POZ	170.00	EA	7.20	1,224.00 T
Cement Gel	294.00	EA	0.15	44.10 T
"Unit Mileage Chg (PU, cars one way)"	40.00	MI	2.70	108.00
Heavy Equipment Mileage	80.00	MI	4.50	360.00
Proppant & Bulk Del. Chgs., per ton mil	294.00	EA	1.50	441.00
Blending & Mixing Service Charge	170.00	SK	0.84	142.80
Depth Charge; 1001'-2000'	1.00	EA	900.00	900.00
"Service Supervisor, first 8 hrs on loc.	1.00	EA	105.00	105.00

PAID
86203
NOV 20 2018
SCANNED

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	3,324.90
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	95.11
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	3,420.01
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		

Customer <i>Helmen Looh</i>	Lease No.	Date <i>10/23/2019</i>
Lease <i>metzborck</i>	Well # <i>1-21</i>	
Field Order # <i>17335</i>	Station <i>Pratt, KS</i>	Casing
Type Job <i>242/PTA</i>	Formation	Depth
		County <i>Neosho</i>
		State <i>KS</i>
		Legal Description <i>21-23-150</i>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>4 1/2"</i>	<i>4 1/2"</i>			Pre Pad	Max		5 Min.	
Depth <i>1184</i>	Depth	From	To	Pad	Min		10 Min.	
Volume <i>16.2</i>	Volume	From	To	Frac	Avg		15 Min.	
Max Press	Max Press	From	To		HHP Used		Annulus Pressure	
Well Connection	Annulus Vol.	From	To	Flush <i>MUD - 115PPG</i>	Gas Volume		Total Load	
Plug Depth <i>750'</i>	Packer Depth	From	To					

Customer Representative <i>Lynn Schloss</i>	Station Manager <i>Justin Washburn</i>	Treater <i>Dean Francis</i>
Service Units <i>92911 84966 20920 70959 19862</i>		
Driver Names <i>Dean Ed Ed Devin David</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>1:45pm</i>					<i>ON LOCATION / SETTING METERS</i>
					<i>170SK 10/40 PPG, 4% B/G</i>
					<i>13.78 PPG, 1.43 VISC, 1.52 WSP</i>
					<i>1184'</i>
<i>2:45pm</i>	<i>100</i>		<i>8</i>	<i>5</i>	<i>PUMP 8 BBL'S WATER</i>
	<i>100</i>		<i>13</i>	<i>5</i>	<i>MIX 50SK CEMENT</i>
	<i>100</i>		<i>10</i>	<i>5</i>	<i>DISPOSED 10 BBL'S MUD</i>
					<i>130'</i>
	<i>100</i>		<i>15</i>	<i>5</i>	<i>PUMP 15 BBL'S WATER</i>
	<i>100</i>		<i>13</i>	<i>5</i>	<i>MIX 50SK CEMENT</i>
	<i>100</i>		<i>5</i>	<i>5</i>	<i>DISPOSED 5 BBL'S WATER</i>
					<i>60'</i>
	<i>50</i>		<i>5</i>	<i>3</i>	<i>MIX 20SK CEMENT</i>
					<i>RH</i>
	<i>80</i>		<i>7</i>	<i>3</i>	<i>MIX 30SK CEMENT</i>
					<i>MH</i>
	<i>0</i>		<i>5</i>	<i>3</i>	<i>MIX 20SK CEMENT</i>
<i>4:30pm</i>					<i>JOB COMPLETE / DEAN FRANCIS</i>

10/22



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1007589	1718	10/17/2018
INVOICE NUMBER			
92826740			

Pratt (620) 672-1201
 B HERMAN L LOEB LLC
 L PO Box: 838
 L LAWRENCEVILLE
 T IL US 62439
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Metzburk 1-21
 O LOCATION
 B COUNTY Kiowa
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

6076 → 6420 → Metzburk

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41139524	86779		Net - 30 days	11/16/2018

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 10/16/2018 to 10/16/2018</i>				
0041139524				
171817434A Cement-New Well Casing/Pi 10/16/2018 Cement Surface				
A-Con' Blend	175.00	EA	10.84	1,896.93 T
60/40 POZ	175.00	EA	7.23	1,264.62 T
Celloflake	88.00	LB	2.23	196.08 T
Calcium Chloride	948.00	LB	0.63	599.43 T
Top Rubber Cement Plug, 8 5/8"	1.00	EA	135.49	135.49
Guide Shoe - Regular, 8 5/8" (Blue)	1.00	EA	228.84	228.84
Baffle Plate Aluminum, 8 5/8" (Blue)	1.00	EA	102.37	102.37
"Unit Mileage Chg (PU, cars one way)"	40.00	MI	2.71	108.40
Heavy Equipment Mileage	80.00	MI	4.52	361.32
Proppant & Bulk Del. Chgs., per ton mil	632.00	EA	1.51	951.48
Blending & Mixing Service Charge	350.00	SK	0.84	295.08
Plug Container Utilization Charge	1.00	EA	150.55	150.55
Depth Charge; 501'-1000'	1.00	EA	722.64	722.64
"Service Supervisor, first 8 hrs on loc.	1.00	EA	104.84	104.84

PAID
85892
 NOV 08 2018
SCANNED

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	7,118.07
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	296.78
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	7,414.85
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		

Customer <i>Hecman Loch</i>	Lease No.	Date <i>10/16/18</i>
Lease <i>Metzbrink</i>	Well # <i>1-21</i>	
Field Order # <i>17434</i>	Station <i>P.H. Kansas 1718</i>	Casing <i>8.625</i>
		Depth <i>604.0</i>
Type Job <i>8.625 surface p.p. 2-42</i>	Formation	County <i>Kiowa</i>
		State <i>KS</i>
		Legal Description <i>21-275-16W</i>

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
<i>8.625</i>				Pre Pad	Max		5 Min.
Depth <i>604.0</i>	Depth	From	To	Pad	Min		10 Min.
Volume <i>24.6</i>	Volume	From	To	Frac	Avg		15 Min.
Max Press <i>340</i>	Max Press	From	To				
Well Connection <i>50</i>	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative	Station Manager	Treater
Service Units <i>76666 77466 80778 19959 21010</i>		
Driver Names <i>Fen's Mike Mike</i>	<i>5051 5056</i>	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>0300</i>					<i>Arrive on location / safety meeting</i>
<i>0330</i>					<i>Rig up / prep</i>
<i>0430</i>					<i>Prep for 60' / 40' / 2" well / pump out /</i>
					<i>Trailing - 60' / 40' / 2" - 42.25</i>
<i>0630</i>	<i>150</i>		<i>10</i>	<i>5</i>	<i>Pump H2O space</i>
<i>0635</i>	<i>140</i>			<i>5</i>	<i>Start lead acid @ 12 ppb</i>
<i>0645</i>	<i>140</i>		<i>38</i>	<i>4</i>	<i>875x A-100 away @ 12 ppb</i>
<i>0655</i>	<i>140</i>		<i>77</i>	<i>4</i>	<i>1755x A-100 away @ 12 ppb / 1st 1st 60/40 15 ppb</i>
<i>0703</i>	<i>220</i>		<i>18</i>		<i>875x 60/40 p. 2 away @ 15 ppb</i>
<i>0710</i>	<i>220</i>		<i>37</i>	<i>4</i>	<i>1755x 60/40 p. 2 away @ 15 ppb 40 D/P</i>
<i>0715</i>	<i>200</i>			<i>5</i>	<i>start H2O displacement</i>
<i>0725</i>	<i>210</i>		<i>26</i>	<i>3</i>	<i>source cement away 26 bbls displacement ^{slow down}</i>
<i>0730</i>	<i>550</i>		<i>26</i>	<i>3</i>	<i>Land Plug / Last 2 cc ps 220 ps</i>
					<i>Shut in head + manifold / test on location</i>
					<i>Rig down / Leave location</i>
					<i>Source cement @ surface @ 26 Bbls / 1 hr</i>
					<i>Displacement = 100 Bbls / 22.51 cement @ 4.5</i>
					<i>Hot = 980 27' Tot = 127.73'</i>
					<i>Hot = 127.73' Tot = surface</i>
					<i>Thank You!!!</i>