

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Banta 'F' #1-21
Location: 795' FSL & 790' FWL, Sec. 21-T27S-R18W, Kiowa Co., KS.
Licence Number: 15-097-21822-00-00 Region: Einsel
Spud Date: 6/5/2015 Drilling Completed: 6/12/15
Surface Coordinates: 795' FSL & 790' FWL, Sec. 21-T27S-R18W

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2211' K.B. Elevation (ft): 2224'
Logged Interval (ft): 4000' To: 4820' Total Depth (ft): 4820'
Formation: Kinderhook at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 2777'; Chemical Gel 2777' to 4820'

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: 9002 W. Silver Hollow St.
Wichita, KS. 67205-8856

Cores

None Taken

DSTs

DST #1(Kansas City 'I' Upper Porosity) 4410' - 4427'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Fair Blow built to 11", FFP Strong Blow BOB Immediately, no Gas to Surface, no Blowback on SI's; REC: 1685' Rich Gas in Pipe, 45' GOCWM(22%G, 10%O, 17%W, 51%M), 60' GOCWM(33%G, 20%O, 17%W, 30%M) CI 42,000, Mud 6000; IFP 17-27#, ISIP 1232#, FFP 23-29#, FSIP 1200#, IHP 2142#, FHP 2159#, BHT 120 Deg. F.

DST #2(Kansas City 'J' zone) 4454' - 4470'(Corrected Depths to Log) Test Times 15"-45"-30"-60" IFP Fair Blow built to 6" in 15 Min., FFP Good 8" Blow, no Gas to Surface, no Blowback on SI's; REC: 190' MSW(10%M, 90%W) CI 75,000, Mud 6000, no Shows of oil or gas; IFP 19-64#, ISIP 1353#, FFP 70-128#, FSIP 1340#, IHP 2178#, FHP 2044#, BHT 124 Deg. F.

Comments

6/5/15 MIRU Sterling Drilling Co. Rig #5, Spud at 4:15 PM. , 6/6/15 Drilling at 483'; 6/7/15 Drilling at 1246'; 6/8/15 Drilling at 3159'; 6/9/15 TD. 4243' - TIH after Bit Trip; 6/10/15 TD. 4431' - DST #1; 6/11/15 Drilling at 4495'; 6/12/15 Drilling at 4750' - Reached TD. 4820' at 11:10 AM., Logged well; 6/13/15 RTD. 4820' - Nipple down BOP - run 5 1/2" Production Casing.

Set new 8 5/8"(23#) Surface Casing at 545' KB. with 400 sacks cement(Basic Energy Services). Cement did Circulate. PD. at 12:30 PM. on 6/6/15.

Set new and used 5 1/2"(15.5#) Production casing at 4817' with 200 sacks of "Loeb Blend" cement(Basic Energy Services. PD. at 1:30 PM. on 6/13/15.

Surveys: 0.75 Deg. at 550'(Surface Casing); 0.25 Deg. at 4243'(Bit Trip); 0.50 Deg. at 4431'(DST #1); 1.0 Deg. at 4820' RTD.


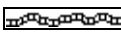
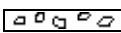
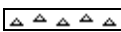
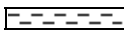







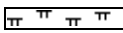
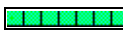
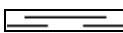
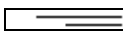
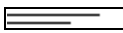



Pipe Strap at 4243'(Bit Trip): Strap 0.79' Short to the Board, no correction made to the Board.

After review of the Halliburton Logs, DST data, sample shows and positive indications of commercially recoverable hydrocarbons, the operator elected to set 5 1/2" Production Casing for completion in the Kansas City 'I' and Cherokee Sand zones.








































































LOG TOPS: Chase 2447(-223), Stotler Lmst. 3397(-1173), Howard 3603(-1379), Heebner Shale 4049(-1825), Toronto 4064(-1840), Brown Lmst. 4202(-1978), Lansing 'A' 4212(-1988), Kansas City 'I' 4417(-2193), Kansas City 'J' 4459(-2235), Stark Shale 4506(-2282), Hertha 4565(-2341), Base Kansas City 4600(-2376), Marmaton 4636(-2412), Pawnee 4686(-2462), Cherokee Shale 4724(-2500), Cherokee Sand 4758(-2534), Miss. Chert 4772(-2548), Kinderhook Shale 4809(-2585).

NOTE: This log was shifted upward by 3' to 4' 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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OTHER SYMBOLS

- POROSITY**
 [E] Earthy
 [F] Fenest
 [X] Fracture
 [I] Inter
 [M] Moldic
 [O] Organic
 [P] Pinpoint

- [V] Vuggy
SORTING
 [W] Well
 [M] Moderate
 [P] Poor

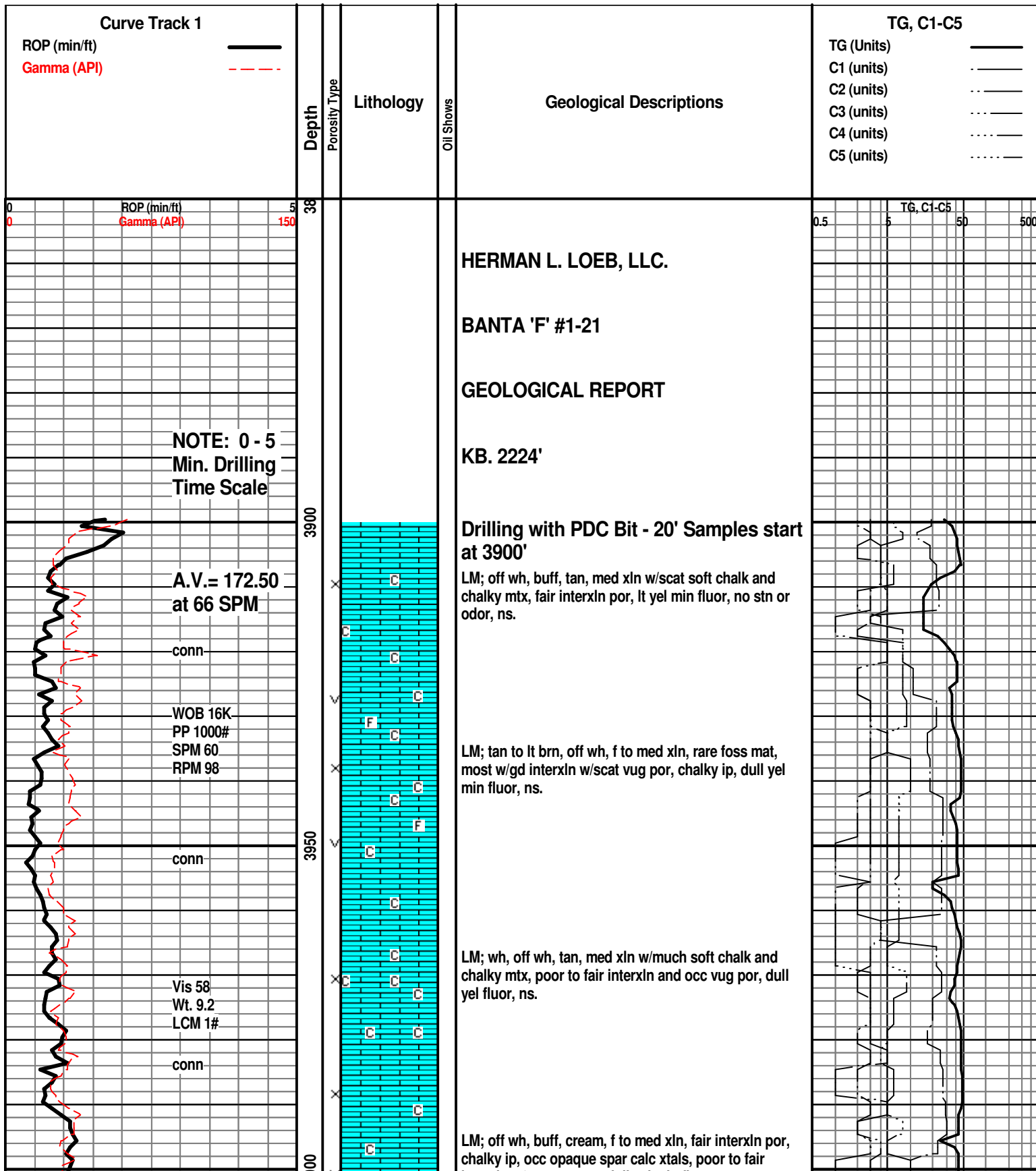
- ROUNDING**
 [R] Rounded
 [r] Subrnd
 [a] Subang
 [A] Angular

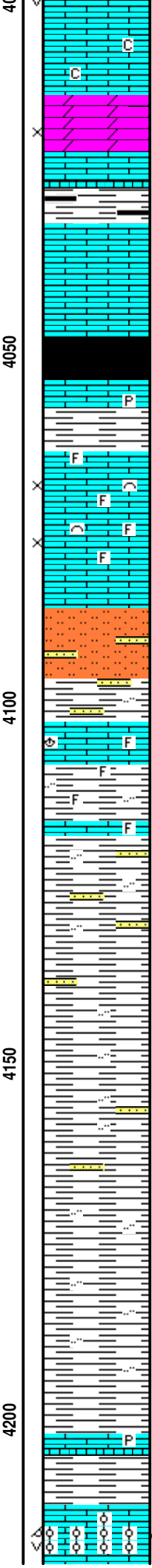
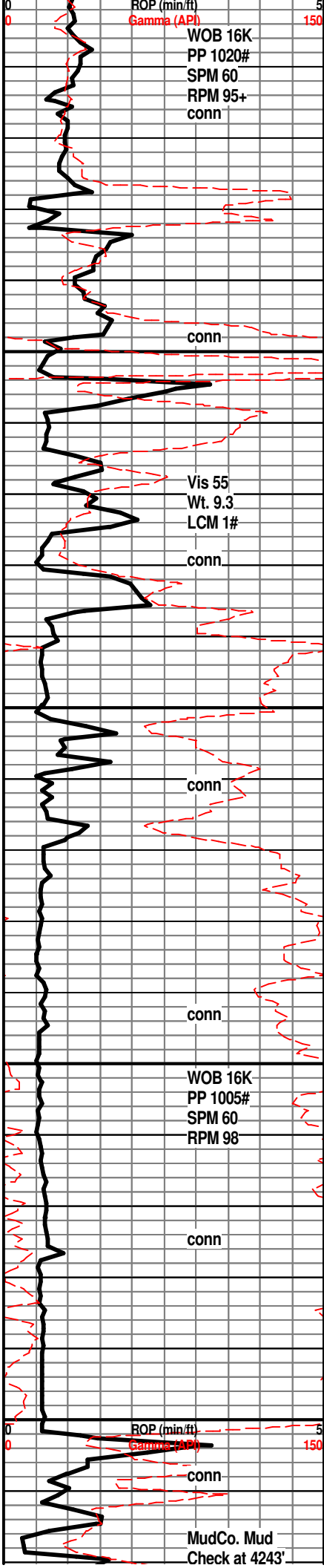
- [S] Spotted
 [Q] Ques
 [D] Dead

- EVENT**
 [Rft] Rft
 [Sd] Sidewall

- INTERVAL**
 [Core] Core
 [Dst] Dst

- OIL SHOW**
 [Even] Even





interxln w/occ vug por, dull yel min fluor, ns.

DOL; lt brn, sucrosic, fair interxln por, lt yel min fluor, no stn or odor, ns.

SH; dk gy, some blk, platy

LM; med brn, occ med gy brn, fxln w/most dense, scat poor interxln por, ns.

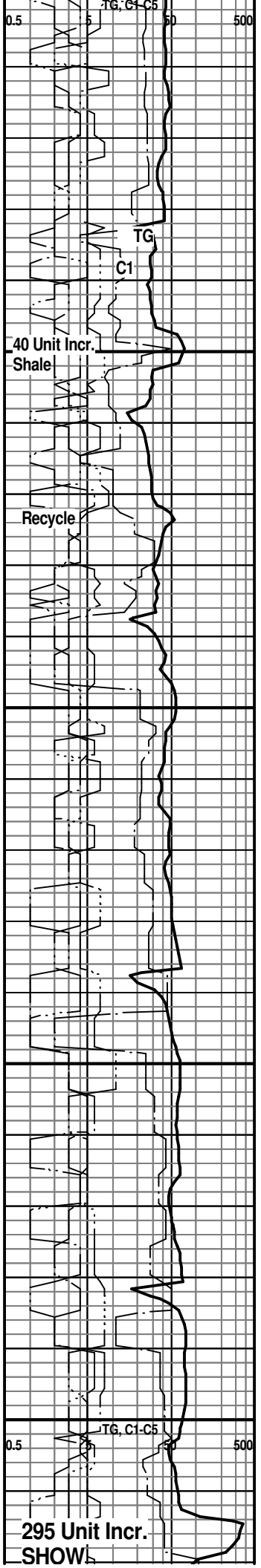
HEEBNER SHALE 4048(-1824)
 SH; blk, carb ip, platy
 LM; med brn, dense, pyr ip.

TORONTO 4064(-1840)
 LM; lt gy, off wh, foss w/scat fair interxln w/occ vug por, lt/med yel fluor, no vis stn, no odor, ns.
 LM; off wh, wh, buff, scat foss mat, fxln w/gd interxln por, lt yel fluor, no stn or odor, ns.

DOUGLAS SHALE 4086(-1862)
 SLTST; lt gy, sandy ip w/interbdd vf to f gr qtz ss, fair intergran por, ns.
 LM; med to dk brn, foss, well cem, tite
 SH; lt gy, silty ip, foss
 LM; dk brn, foss, hd
 SH; med gy, silty to sandy, platy
 SH; most med gy, platy, silty to sandy
 SH; med gy, platy, most smooth, some flakey

BROWN LMST. 4202(-1978)
 LM; med brn, dense, hd-sharp, trc pyr

LANSING 'A' 4212(-1988)
 LM; tan to lt brn, oolitic, fair to gd oomoldic w/scat vug por, lt yel fluor, few gas bubbles, trc. v. spotted lt brn stn. v. faint odor



Vis 67 Wt. 9.5
WL 9.2 CI 8000
PH 10.0 LCM 0#

conn

CFS. at 4243'

Scale Change
ROP (min/ft)
Gamma (A)

WOB 40K
PP 1025#
SPM 56
RPM 65-70

A.V. = 153.60
at 56 SPM

conn

Vis 60
Wt. 9.2
LCM 1#

conn

WOB 40K
PP 950#
SPM 56
RPM 65

conn

Vis 56
Wt. 9.3
LCM 1#

conn

ROP (min/ft)
Gamma (A)

A.V. = 154.00
at 56 SPM

DST #1
K.C. 'I' zone
4410' - 4427'
CFS. at 4427'

MudCo. Mud
Check at 4431'
Vis 55 Wt. 9.3
WL 9.0 CI 6000

stn, v. faint odor

LM; lt brn, hd, trc lt gy cht, tite

SH; med gy, gy grn, platy

LANSING 'B' 4234(-2010)

LM; off wh, lt gy, foss ip, most well cem, no vis stn, no fluor, ns.

Bit Trip at 4243'

LM; lt gy, rare gy brn, fxl n w/poor interxln and vug por, lt yel fluor, no vis stn, no odor, ns.

LM; off wh, tan, buff, foss ip, scat fair interpart por, minor chalky mtx, no vis stn, no odor, ns.

LM; lt to med brn, blocky, hd, occ brn to gy brn cht, no stn or odor, ns.

LM; off wh, buff, med xln w/some sucrosic text, partly dolomitic, scat vug por, dull to lt yel fluor, no vis stn, no odor, ns.

LM; med brn, dense - micritic, scat tan to med brn/gy brn cht, tite

LM; tan to lt brn, sucrosic text, scat well dev. vug por, bcm chalky w/lrg incr. in chalky mtx, dull yel fluor, ns.

DOL; tan to lt brn, sucrosic, lmy w/fair interxln por, lt yel fluor, interbdd wh to off wh cht, no stn or odor, ns.

LM; off wh, tan, med to cse xln, abnt opaque spar calc xtals, scat fair vug and interxln por, occ chalky, no fluor, no stn or odor, ns.

LM; med brn, foss ip, well cem, no fluor, ns.

LANSING/K.C. 'H' 4370(-2146)

LM; tan to med brn, oolitic, fair to gd oomoldic por, rare vug por, dull yel fluor, brittle, no stn or odor, no sample shows

LM; tan to buff, most dense, rare off wh cht, tite

SH; med gy, gy grn, platy, foss ip.

LM; off wh, buff, foss, poor to fair interpart w/some p-p por, few pcs. w/spotted lt brn oil stn, v. faint odor, med yel fluor, weak cut, most looks tite

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

KANSAS CITY 'I' 4417(-2193)

LM; tan to off wh, finely pelletal w/few ooids, fair interpart por, med to occ brite yel fluor, fair odor, spotted/even lt brn stn, SSFO, gas bubbles

DST #1: K.C. 'I' zone 4410' - 4427'

LM; tan, wh, buff, foss to med xln w/fair p-p and vug por, much soft chalky mtx, fair to strong odor, spotty brite yel fluor, trc FO, spotted to rarely even lt brn stn, mostly barren por, few gas bubbles

Recycle

TG

C2 C1

C3

Gas Test at
Extractor

10 Unit Incr.

14 Unit Incr.

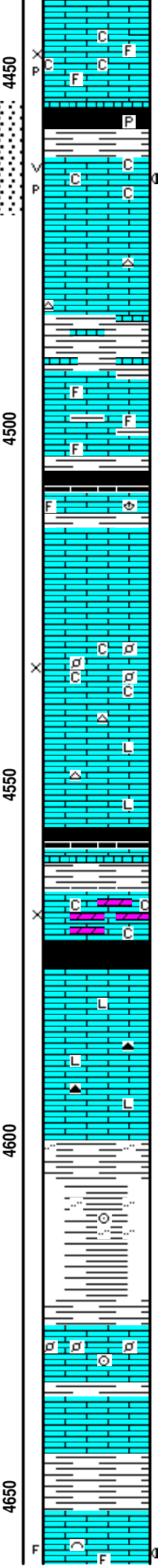
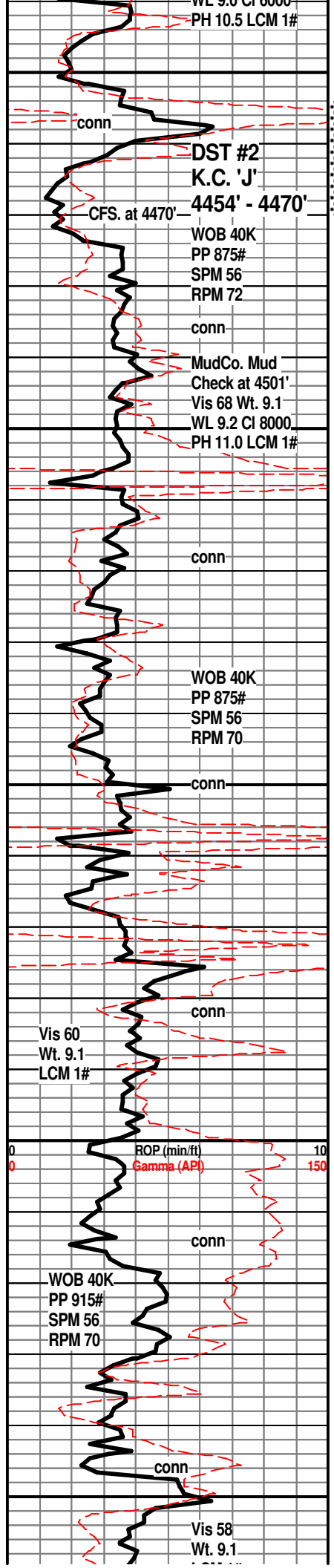
0.5 Poss. Show

50 Unit Incr.
SHOW

Gas/Oil in Mud

60 Unit Incr.

Poss. Show



mostly barren ip, new gas bubbles

LM; off tan, foss ip, poor to fair interpart w/some p-p por, v. sl. odor, rare med yel fluor, no vis oil stn, no vis gas bubb, occ chalky

SH; blk, carb, pyr ip.

KANSAS CITY 'J' 4462(-2238)
LM; tan to cream, buff, f to med xln, fair p-p and scat vug por, few pcs w/spotted lt brn stn, faint odor, occ med yel fluor, few gas bubbles, some barren por, chalky ip.

DST #2: K.C. 'J' zone 4454' - 4470'(Corrected Depths to Log)

SH; med gy, gy brn, lmy ip, firm

LM; med to dk brn, gy brn, foss ip, some argil, no vis por, ns.

STARK SHALE 4506(-2282)
SH; blk, carb ip, platy

SWOPE 4514(-2290)
LM; off wh, tan, buff, fxln to micritic, most blocky, no vis por, no fluor, ns.

LM; off wh, tan, lt brn, med xln to foss, scat small pellets ip, loosely cem - fair interpart por, chalky mtx, fairly soft, dull yel fluor, no stn or odor, ns.

LM; tan to buff, fxln to micritic, some litho, hd, rare gy cht, tite

SH; blk, carb, platy

HERTHA 4565(-2341)
LM; off wh, buff, fxln w/scat sucrosic text, partly dolomitic, occ lt yel min fluor, poor to fair interxln por, occ chalky mtx, no stn, ns.

LM; med to dk brn, hd, litho ip, dense, scat brn to rarely smoky cht, tite

BASE KANSAS CITY 4600(-2376)
SH; grn, gy grn, platy, silty ip.

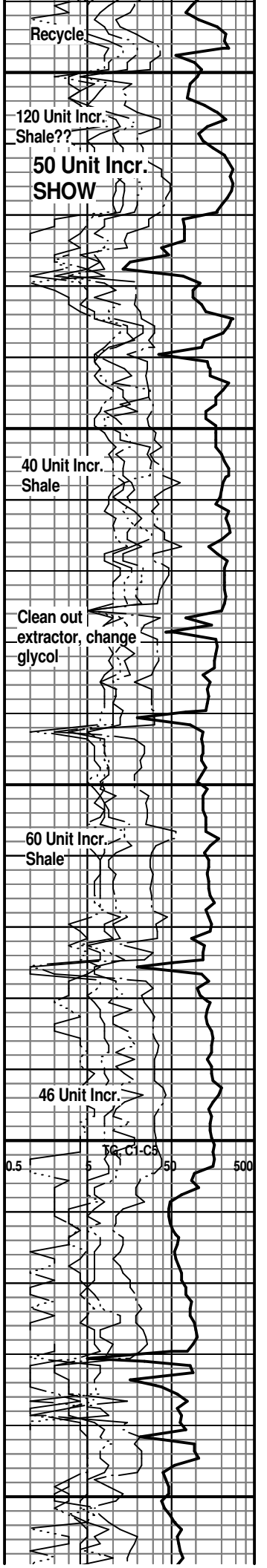
SH; med gy, gy grn, rare rust red/yel, platy, occ silty, foss ip.

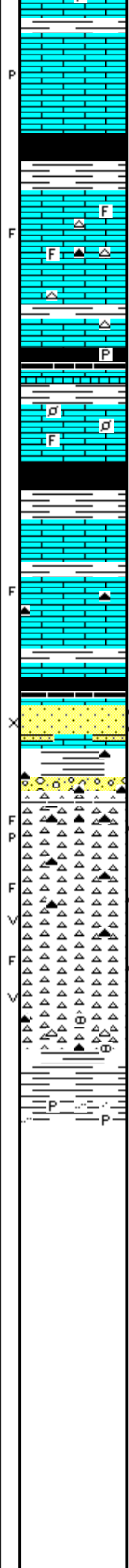
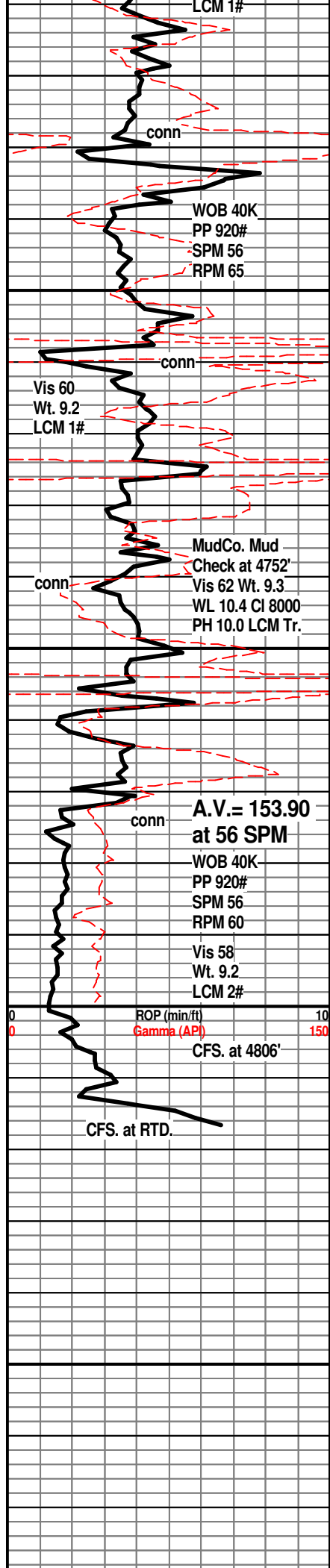
PLEASANTON 4626(-2402)
LM; off wh, lt gy brn, foss ip, scat rnd pellets, few crin, most well cem, dull yel fluor, no stn or odor, no gas kick, ns.

MARMATON 4636(-2412)
LM; lt brn, rare lt grn tint, some argil, blocky, no vis por, no fluor, ns.

SH; grn, gy grn, platy, firm

ALTAMONT 4652(-2428)
LM; off wh, buff, fxln, rare foss mat, trc frags w/dk brn spotty oil stn, v. faint odor, med yel fluor, no live





shows, no gas kick

LM; off wh, tan, buff, fxl, most micritic, blocky, few pcs w/v. poor p-p por, spotty dk brn to blk oil stn, v. faint odor(poss. from above zone), med yel fluor, no live shows

SH; blk, v. dk gy, platy

PAWNEE 4686(-2462)

LM; lt brn, fxl w/scat foss mat, most well cem, rare lt brn/amber cht w/occ edge stn, no odor, no other por dev, no gas kick, looks tite

LM; med brn, hd, blocky, occ gy cht, tite

SH; blk, carb ip, platy, occ pyr

LM; lt to med brn, rare gy brn, foss ip - occ pellets and hash, well cem, no vis por, ns.

CHEROKEE SHALE 4724(-2500)

SH; blk, carb ip, platy

LM; lt to med brn, blocky, hd - sharp, no vis por, ns.

LM; tan to lt brn, fxl, scat amber cht, few pcs w/blk tar/gils, poss. frags, most tite, no fluor, no odor, no live shows

LM; med gy brn, most dense, trc blk tar, tite

CHEROKEE SAND 4758(-2534)

SS; clr, lt gy, f to occ med gr qtz, clusters, some w/gd intergran por, some tite, spotted to even med brn stn, fair odor, dull yel fluor, few gas bubbles, gd cut, Trc lite FO droplets

MISSISSIPPI CHERT 4772(-2548)

CHT; org, org/grn, off wh, most fresh, frags, occ trip cht w/spotted live med brn stn, scat blk tar/gils, poor p-p por, dull yel fluor, no odor

CHT; off wh, lt gy, org/brn, most fresh, scat vug por w/qtz overgrowths, frags in some, rare med brn live stn, no odor, dull yel fluor

CHT; wh, off wh, fresh w/scat trip, better por than above, frags w/dk brn edge stn, scat vug por, no odor, trc gas bubbles

CHT; varic, red foss cht, some nodular cht, grn gritty cht

KINDERHOOK SHALE 4809(-2585)

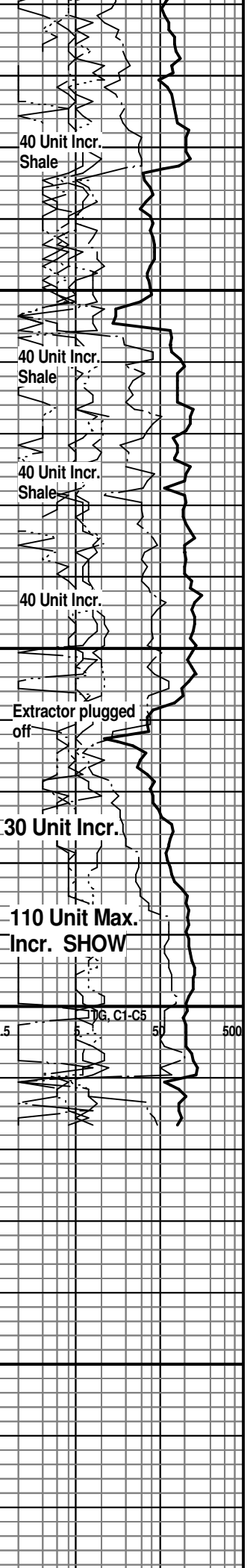
SH; med gy, gy grn, silty to occ sandy, pyr ip.

RTD. 4820' at 11:10 AM. on 6/12/15

LTD. 4820'

Halliburton ACRT, NEU/DEN with PE, Microlog

NOTE: This log was shifted upward by 3' to 4' for correlation purposes with the Halliburton Logs.



Grid	00			Grid
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