

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Redetzke #5-22
Location: 1070' FNL&1520' FEL, Sec. 22-T22S-R25W, Hodgeman Co., KS.
Licence Number: 15-083-21826-0000 Region: Hallet Field
Spud Date: 8/7/2012 Drilling Completed: 8/15/2012
Surface Coordinates: 1070' FNL & 1520' FEL, Sec. 22-T22S-R25W

Bottom Hole Same as above
Coordinates:
Ground Elevation (ft): 2519' K.B. Elevation (ft): 2530'
Logged Interval (ft): 3900' To: 4720' Total Depth (ft): 4720'
Formation: Mississippian at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3311'; Chemical Gel 3311' to 4720'
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

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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(Miss. Spergen Dolomite) 4580' - 4618' Test Times 15"-45"-30"-60" IFP Weak 0.5" Blow, FFP Weak 0.25" Blow built to 1", No Blowback on SI's; REC: 45' Gas in Pipe, 45' OCM(11%O, 89%M), no Water; IFP 19-28#, ISIP 547#, FFP 36-43#, FSIP 281#, IHP 2258#, FHP 2117#, BHT 118 Deg. F.

DST #2(Miss. Spergen Dolomite) 4620' - 4650' Test Times 15"-45"-45"-90" IFP Weak Blow building to Fair 6.5" Blow, FFP Weak Blow building to Fair 7" Blow, No Blowback on SI's; REC: 1' Clean Oil, 84' SOCMW(2%O, 55%W, 43%M), 125' MW w/oil specks(88%W, 12%M), 125' SW(CI 55,000 Mud 2600); IFP 21-106#, ISIP 430#, FFP 112-170#, FSIP 424#, IHP 2281#, FHP 2277#, BHT 124 Deg. F.

Comments

8/7/12 MIRU Sterling Drilling Co. Rig #2, Spud at 5:30 PM; 8/8/12 TD. 583' - WOC; 8/9/12 Drilling at 1235'; 8/10/12 Drilling at 2512'; 8/11/12 Drilling at 3183'; 8/12/12 Drilling at 3740'; 8/13/12 Drilling at 4260'; 8/14/12 Drilling at 4616'; 8/15/12 TD. 4650' - TIH for DST #2; 8/16/12 RTD. 4720', LTD 4720', TIH to LDDP; 8/17/12 RTD. 4720' - Production Casing set -Rig Down.

Set new 8 5/8"(24#) Surface Casing at 578' w/ 325 sx. Cement(Basic Energy Services). Cement did Circulate. PD. 6:00 AM. 8/8/12.

Set new 5 1/2"(15.5#) Production Casing at 4715' w/200 sx. of "Loeb Blend"(Basic Energy Services). PD. 8:30 PM. 8/16/12. DV. tool set at 1721'.


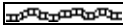
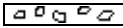










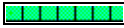

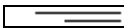
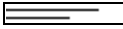



Surveys: 0.50 Deg. at 583'(Surface Casing); 1 Deg. at 4618'(DST #1); 1 Deg. at 4720' RTD.

Pipe Strap at 4618'(DST #1): Strap 0.54' Short to the Board(fairly windy conditions), no correction made to the Board.








































































After review of the Superior Well Service Logs, structural position, and a need for another Water Injection Well for the Hallet Waterflood, the operator elected to set new 5 1/2" Production Casing for completion as a Water Injection Well in the Mississippian Spergen.

LOG TOPS: Anhydrite 1695(+835), Base Anhydrite 1726(+804), Chase 2533(-3), Heebner Shale 3910(-1380), Toronto 3924(-1394), Lansing 3956(-1426), Lansing/KC. 'H' 4150(-1620), Stark Shale 4260(-1730), Base Kansas City 4263(-1733), Marmaton 4386(-1856), Fort Scott 4504(-1974), Cherokee Shale 4526(-1996), Conglomerate Chert 4582(-2052), Miss. Spergen 4598(-2068), Miss. Warsaw 4668(-2138).

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
 - [B] Fenest
 - [F] Fracture
 - [X] Inter
 - [M] Moldic
 - [O] Organic
 - [P] Pinpoint

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

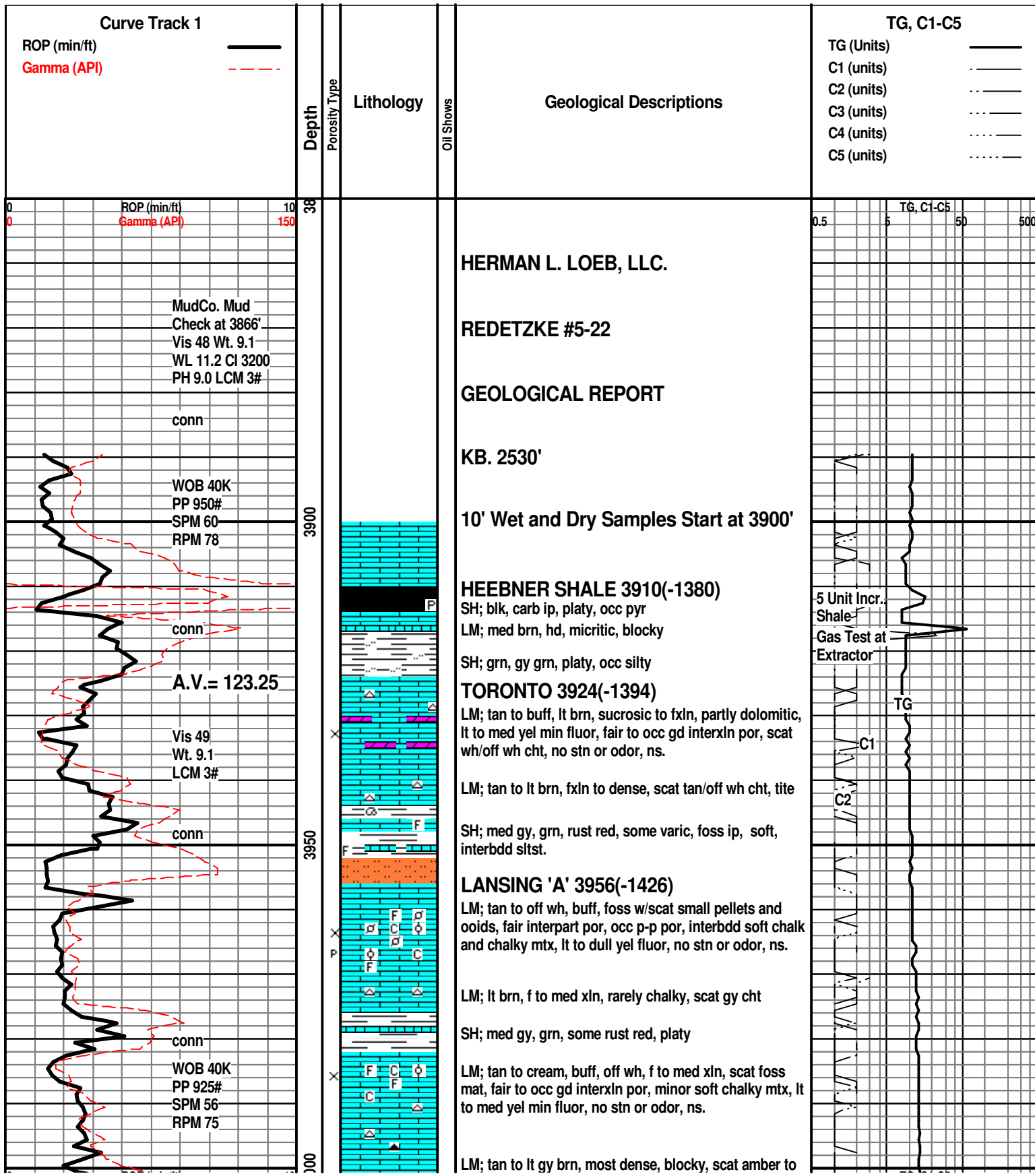
- ROUNDING**
- [R] Rounded
 - [r] Subrnd
 - [a] Subang
 - [A] Angular

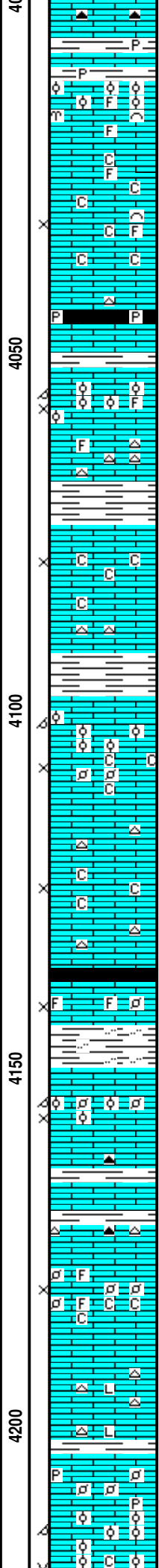
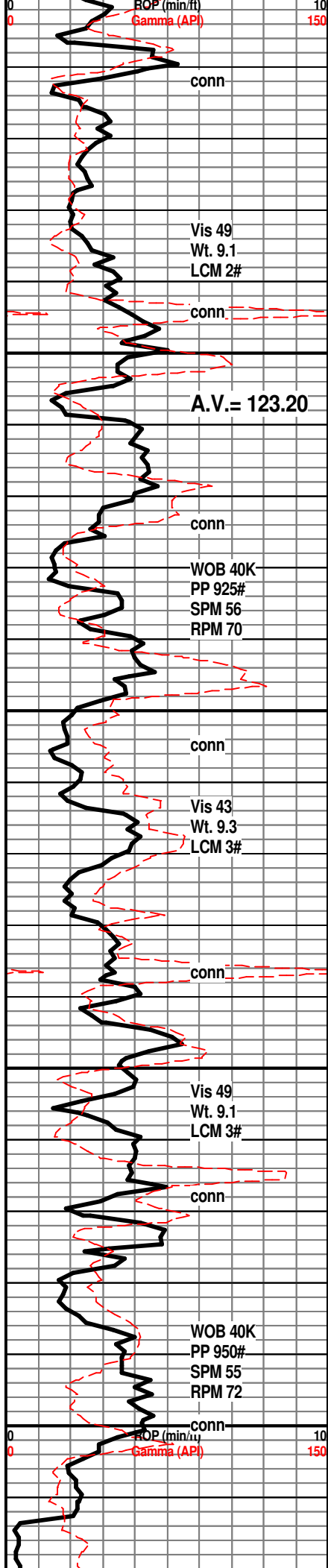
- [S] Spotted
- [Q] Ques
- [D] Dead

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

- INTERVAL**
- [C] Core
 - [D] Dst

- OIL SHOW**
- [E] Even





org cht, hd, no vis por, ns.

SH; med gy grn, fiss, occ pyr

LM; med brn, oolitic ip, fair interpart por, scat foss hash, lt yel min fluor only, no stn or odor, no gas kick, ns.

LM; tan to buff, lt brn, f to med xln, scat foss mat, poor interxln/interpart por, soft chalky mtx, lt to med yel min flour, no stn, ns.

SH; blk, carb ip, occ pyr

LM; lt brn, foss - oolitic, med size molds, brittle ip, fair oomoldic/interpart por, lt yel min fluor, ns.

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

SH; med gy, grn, rust red, platy

LM; wh, off wh, f to med xln, partly sucrosic text, gd interxln por, occ soft - chalky, dull yel min fluor, no stn, ns.

LM; tan to lt brn, hd, blocky, scat off wh to gy cht, no por, ns.

SH; med gy, grn, fiss to flakey

LM; off wh, wh, buff, foss w/occ oolitic lmst, much soft chalky mtx, fair oomoldic/interpart por, lt to med yel min flour, no stn or odor, ns.

LM; lt gy, gy brn, lt brn, foss ip, scat poor interxln por, dull yel min fluor, occ gy cht, no stn or odor, ns.

MUNCIE CREEK SHALE 4136(-1606)
 SH; v. dk gy - blk, fiss
 LM; med brn, foss ip, fair interpart por, ns.

SH; med gy, gy grn, firm, occ silty

LANSING/KC. 'H' 4150(-1620)
 LM; lt brn, tan, foss - partly oolitic/pelletal, fair interpart/oolicastic por, med yel min flour, no vis stn, no odor, no gas kick, ns.

SH; med gy grn, med gy, soft

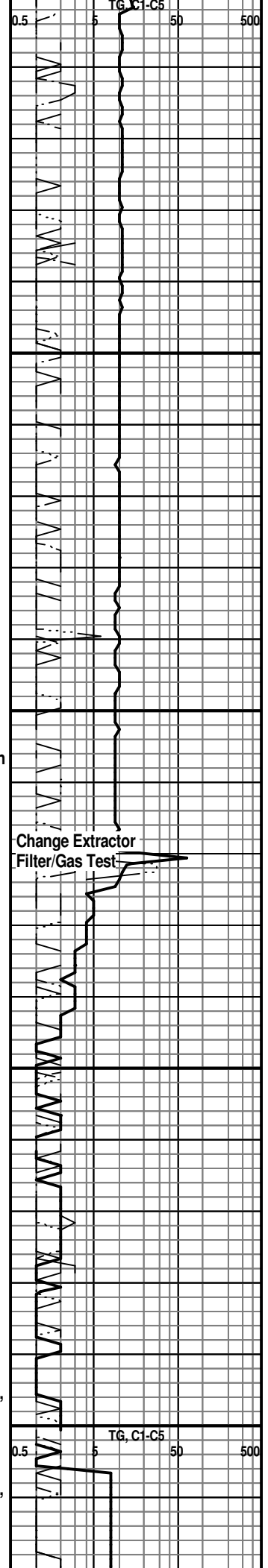
LM; dk brn, v. hd, blocky, scat gy/amber cht, tite

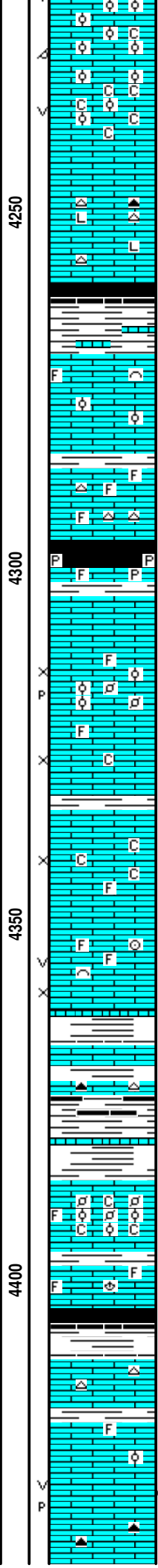
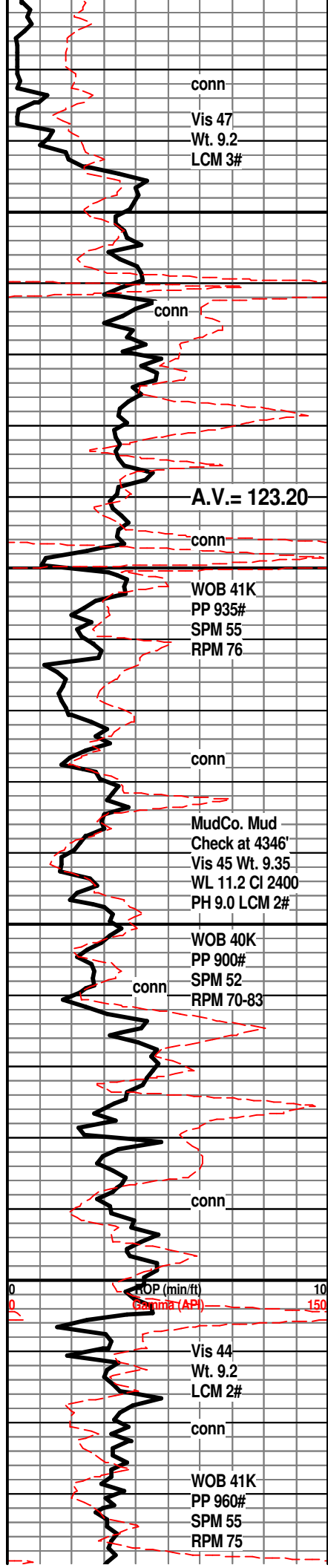
LM; off wh, tan, buff, foss w/scat small pellets and rnd carb mat, chalky soft mtx, dull yel min fluor, por interpart por, no stn or odor, ns.

LM; off wh, buff, lt gy, hd, blocky, most micritic, litho ip, scat off wh cht, tite

K.C. 'J' 4204(-1674)
 LM; lt brn, foss - finely pelletal to oolitic, most well cem, scat pyr, dull yel min fluor, no stn, ns.

LM; tan to cream, buff, highly oolitic, most med size molds, v. ad oomoldic w/scat vlg por, rarely chalky.





med, v. ga calcareous w/scat vug por, rarely chanky, med yel min fluor, faint sulfur odor, no stn, no gas kick, ns.

LM; tan to buff, lt brn, oolitic, bcm v. chalky, gd oomoldic w/occ vug por, med yel min fluor, ns.

LM; med to dk brn, dense, micritic to litho, hd, occ tan to amber cht, tite

STARK SHALE 4260(-1730)
SH; blk, carb, blocky, trc gas
SH; med to dk gy, gy brn, lmy

LM; med brn, foss ip, most dense w/no vis por, scat lt yel min fluor, no stn, ns.

LM; lt brn, tan, foss ip, most well cem, scat gy to tan cht, no fluor, no stn, ns.

SH; blk, carb ip, soft to blocky, pyr ip.
LM; dk brn, hd, pyr, foss ip.

HERTHA 4304(-1774)

LM; tan to off wh, buff, foss - finely pelletal, scat oolites, fair interpart w/scat p-p por, dull yel fluor, no stn or odor, ns.

LM; tan to off wh, buff, med to occ cse xln, scat cse spar calc xtals, fair interxln por, no stn or odor, ns.

LM; off wh, wh, tan, fxln, poor interxln por, scat soft chalky mtx, dull yel min fluor, no stn or odor, ns.

LM; tan to lt brn, foss ip, occ fair interpart w/minor small vug por, lt yel min fluor, no stn or odor, ns.

BASE KANSAS CITY 4363(-1833)
SH; varic: grn, rust red, brn, gy, platy

LM; med brn, hd, blocky, scat tan/org cht, tite

SH; v. dk gy - blk, varic, platy, interbdd argil lmst.

MARMATON 4386(-1856)
LM; off wh, foss/oolitic, abnt small ooids and pellets, well cem, some chalky mtx, dull yel min fluor, no stn or odor, no gas kick

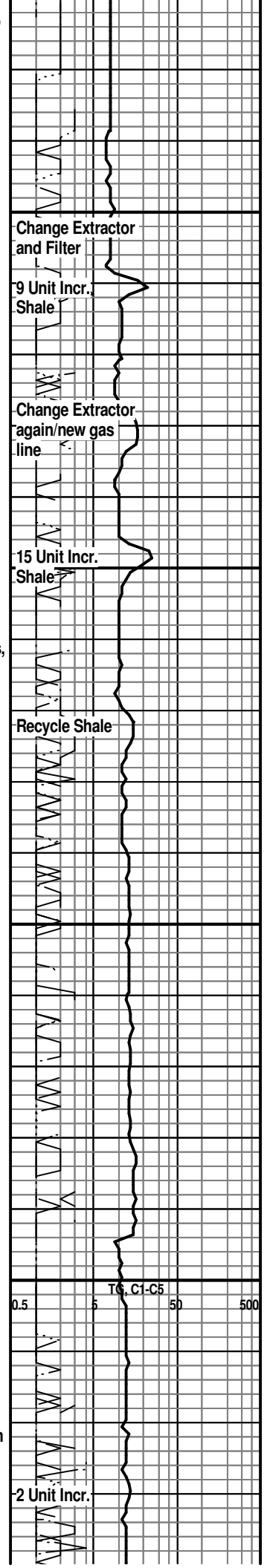
LM; off wh, wh, buff, foss ip, scat spar calc xtals, med yel min fluor, no stn or odor, ns.

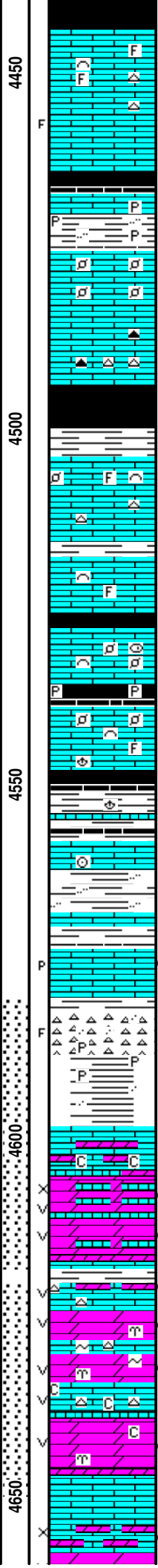
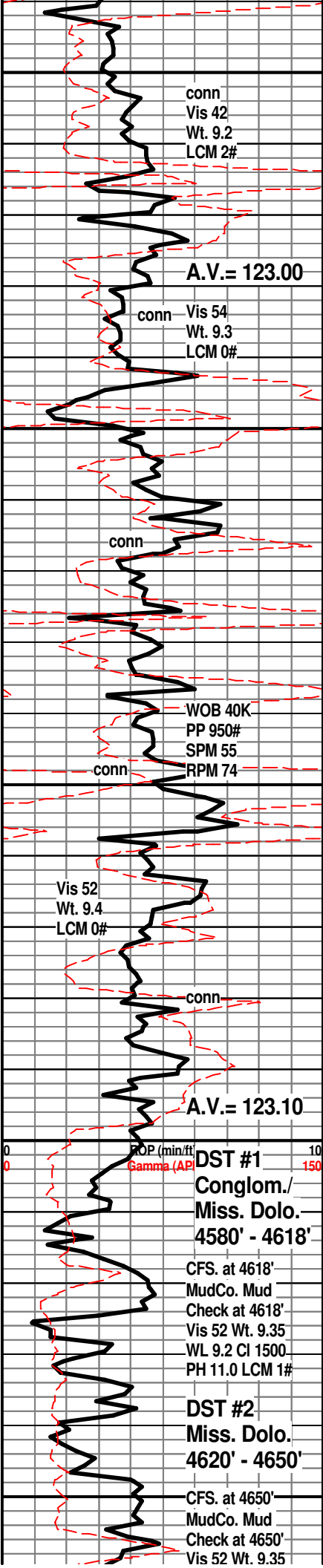
SH; blk, dk gy, varic, fiss to flakey

LM; off wh, wh, tan, fxln to micritic, scat off wh cht, no vis por, no stn, ns.

LM; off wh, buff, fxln, most dense, blocky, rare well cem foss, no fluor, no stn, ns.

LM; off wh, tan, fxln, scat cse spar calc xtals, occ vug and p-p por, rare pcs w/spotted lt brn live oil stn, med/brite yel fluor, v. faint odor only when crushed, no F.O., fair cut, looks tite





LM; v. dk gy, blk, platy, soft

LM; tan to buff, lt brn, scat foss mat - most well cem, blocky, occ cherty, dull to lt yel fluor, no stn or odor, ns.

LM; tan to cream, buff, med xln ip, trc cse spar calc xtals, trc frags, occ lt yel fluor, no stn or odor, ns.

SH; blk, carb ip, platy, trc gas

SH; gy grn, fiss, occ silty, pyr ip.

PAWNEE 4475(-1945)
LM; off wh, buff, lt gy, finely pelletal - foss, most well cem, no vis por, lt yel min fluor only, no stn or odor, ns.

LM; lt brn, tan, hd, scat gy/amber cht, no vis por, tite

SH; blk, carb, gassy, blocky

FORT SCOTT 4504(-1974)
LM; lt to med brn, foss ip, hd, well cem, scat brn/tan cht, no fluor, tite

LM; lt to med brn, blocky, scat well cem foss mat, dull yel min fluor, no vis por, no stn, ns.

CHEROKEE SHALE 4526(-1996)
SH; blk, carb ip, platy
LM; lt to med brn, med xln w/occ foss, some mottled text, no vis por, dull yel fluor, ns.
SH; blk, carb ip, platy, occ pyr
LM; tan to buff, lt brn, fxln w/scat foss mat, occ small pellets, most well cem, poor interpart por, dull yel fluor, no stn or odor, ns.

SH; med gy, grn, blk, some varic, platy, foss ip, interbdd thin hd lmst strngs

LM; tan to buff, lt brn, f to occ med xln, hd, interbdd gy to gy grn silty shales, no fluor, ns.

SH; varic, platy, v. firm, occ silty

LM; off wh, buff, tan, fxln, rare p-p por, v. spotty med brn oil stn, some blk tar/gils, no odor, scat med yel fluor, most tite w/ no vis por

CONGLOM. CHERT 4582(-2052)
CHT; yel, brite org, some varic, pyr ip, fresh - sharp, rare frags, shaly w/interbdd varic occ sandy sh, no stn or odor, no gas kick, ns.
SH; varic, much red, rust red

MISS. UNCONFORMITY 4598(-2068)
LM; off wh, med/cse xln, dolomitic, chalky

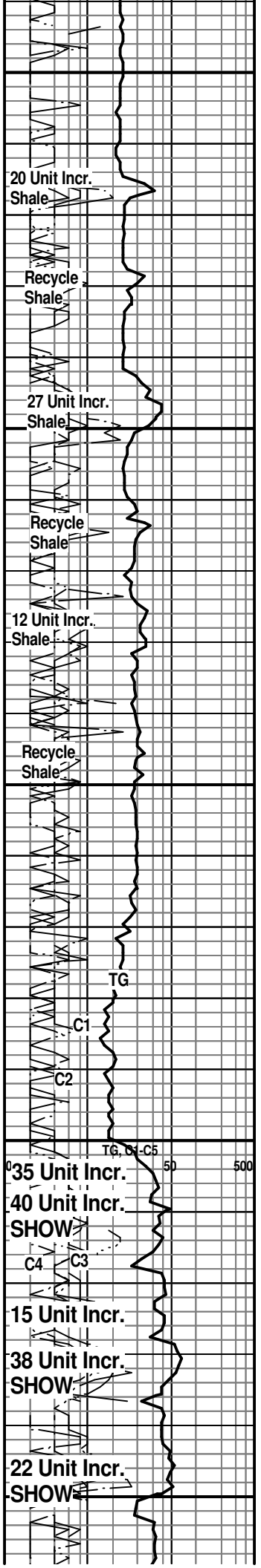
DOL; tan/buff sucrosic, foss ip, fair to gd interxln w/some well dev. vug por, brite yel fluor, gd odor, SFO, most w/even lt/med brn oil stn, fair to gd cut, interbdd dolomitic lmst

DST #1: Congl./Miss. Dolo. 4580' - 4618'
LM; off wh, tan, dolomitic, interbdd vuggy dolomitic lmst, lt to med yel fluor, gd odor, SSFO

DOL; tan to buff, off wh, sucrosic, lmy, foss ip, trc grn glau, much well dev. vug por, SFO, most w/even lt brn stn, some bleeding oil, med to brite yel fluor, gd odor, gd cut, gas bubbles

DOL; tan, lt brn, buff, sucrosic, interbdd dolomitic lmst, gd vug por, minor chalky mtx, occ foss, gd odor, brite yel fluor, SFO

DST #2: Miss. Dolomite 4620' - 4650'
LM; off wh, lt gy, tan, dolomitic, interbdd med rhombic dolo, poor interxln por, lt/med yel fluor, spotted med



WL 8.8 CI 2600
PH 10.5 LCM 1#

conn
Vis 57
Wt. 9.3
LCM 1#

WOB 40K
PP 1000#
SPM 55
RPM 72

conn
Vis 57
Wt. 9.4
LCM 1#
CFS. at 4720' RTD.

4700

4750

00



brn stn, faint odor, scat gy cht w/bk tar - glisonite

MISS. WARSAW 4668(-2138)

DOL; tan, lt gy, buff, sucrosic, fair interxln w/scat vug por, no fluor, no stn or odor, occ off wh cht, ns.

LM; lt gy brn, dolomitic w/interbdd sucrosic dolomite, poor to fair interxln w/scat vug por, minor glau, no fluor, no stn or odor, ns.

LM; tan, buff, lt gy brn, hd, scat dolomitic lmst w/poor vug por, most dense, rare gy cht, no fluor, no stn or odor, ns.

DOL; tan to cream, lt gy brn, sucrosic, occ lmy, fair interxln por, scat tan/amber cht, interbdd soft chalky and chalky lmy dolo., no fluor, ns.

RTD. 4720' at 9:15 PM. 8/15/12

LTD. 4720'

Superior Well Services DIL, NEU/DEN
w/PE, Microlog

18 Unit Incr.

