

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Southborough #1
Location: 890' FNL & 1650' FEL, Sec. 2-T31S-R3W, Sumner Co., KS.
Licence Number: 15-191-22768-0000 Region: Moyer NW
Spud Date: 1/16/2015 Drilling Completed: 1/24/2015
Surface Coordinates: 890' FNL & 1650' FEL, Sec. 2-T31S-R3W

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 1308' K.B. Elevation (ft): 1317'
Logged Interval (ft): 2000' To: 4271' Total Depth (ft): 4271'
Formation: Simpson Fm. at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 2570'; Chemical Gel 2570' to 4271'

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(Stalnaker Sand) 2930' - 2984'(Corrected Depths to Log) Test Times 15"-45"- OUT, IFP Strong Blow BOB/15 Sec., FFP NONE, 6" Blowback on SI; REC: 285' GCWM(2%G, 28%W, 70%M), 189' GCWM(5%G, 35%W, 60%M), 1512' SW(CI 150,000 - MudCo. corrected, Mud 3500); IFP 879-1090#, ISIP 1148#, FFP NONE, FSIP NONE, IHP 1433#, FHP 1389#, BHT 110 Deg. F.

DST #2(Upper Kansas City) 3210' - 3262'(Corrected Depths to Log) Test Times 60"-60" - OUT; IFP Strong Blow BOB/16", FFP NONE, No Blowback on SI; REC: 90' Drlg. Mud, 126' MSW(76%W, 24%M), 225' MSW(88%W, 12%M) (CI 83,000 - MudCo. corrected, Mud 5000); IFP 41-220#, ISIP 1079#, FFP NONE, FSIP NONE, IHP 1603#, FHP 1633#, BHT 111 Deg. F.

DST #3(Mississippi Chert/Lime) 3832' - 3860'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Strong Blow BOB/15 Sec., FFP Gas to Surface in 30 Sec., Gauged 83.1 MCFG(38# on a 0.25" Choke) in 45" of FFP, no Blowback on SI's; REC: 80' G&OCMW(24%G, 4%O, 40%W, 32%M) (CI 26,000 - MudCo. corrected, Mud 4000); IFP 28-44#, ISIP 1483#, FFP 22-87#, FSIP 1467#, IHP 1962#, FHP 1883#, BHT 121 Deg. F.

Comments

1/16/15 MIRU Sterling Drilling Co. Rig #4, Spud at 4:45 PM.; 1/17/15 TD. 263' - WOC; 1/18/15 Drilling at 1400'; 1/19/15 TD. 2517' - Mud Pump Repairs; 1/20/15 TD. 2982' - TOH with DST #1; 1/21/15 TD. 3260' - TIH for DST #2; 1/22/15 Drilling at 3512'; 1/23/15 TD. 3858' - Short Trip for DST #3; 1/24/15 Drilling at 4130', Reached TD. 4271' at 3:30 PM; 1/25/15 RTD. 4271', LTD. 4274' - LDDP for Setting 4 1/2" Production Casing.

Set new 8 5/8"(24#) Surface Casing at 260' KB. with 250 sacks of Cement(Basic Energy Services). Cement did Circulate. PD. at 2:00 AM. on 1/17/15.

Set new 4 1/2"(10.5#) Production Casing at 3992' with 200 sacks of "Loeb Blend" Cement(Basic Energy Services). PD. at 3:00 PM. on 1/25/15.

Surveys: 1.0 Degree at 263'(Surface Casing); 0.25 Deg. at 2517'(Bit Trip); 1.0 Deg. at 2982'(DST #1); 1.50 Deg. at 3260'(DST #2); 0.75 Deg. at 3858'(DST #3); 0.75 Deg. at 4271' RTD.


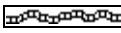
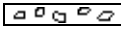
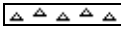
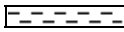







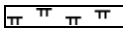
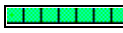
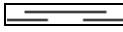
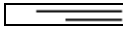
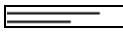



Pipe Strap at 2517'(Bit Trip): Strap 0.66' Short to the Board, no Correction made to the Board.

After review of the Nabors openhole logs, DST data, and positive indications of commercially recoverable amounts of hydrocarbons, the operator elected to set new 4 1/2" Production casing for completion in the Mississippian.








































































NOTE: This log was shifted downward by 2' - 3' for correlation purposes with the Nabors logs.

LOG TOPS: Topeka 2022(-705), Heebner Shale 2558(-1241), Toronto 2572(-1255), Iatan Lmst. 2870(-1553), Stalnaker Sand 2914(-1597), Kansas City 3181(-1864), Stark Shale 3310(-1993), Swope 3344(-2027), Hertha 3360(-2043), Marmaton 3484(-2167). Cherokee Shale 3621(-2304), Reworked Miss. 3822(-2505), Miss. Lmst. 3838(-2521), Kinderhook Shale 4194(-2877), Woodford Sh. 4243(-2926), Simpson Sand 4260(-2943).

ROCK TYPES

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

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
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

OTHER SYMBOLS

- POROSITY**
- Earthy
 - Fenest
 - Fracture
 - Inter
 - Moldic
 - Organic
 - Pinpoint

- Vuggy
- SORTING**
- Well
 - Moderate
 - Poor

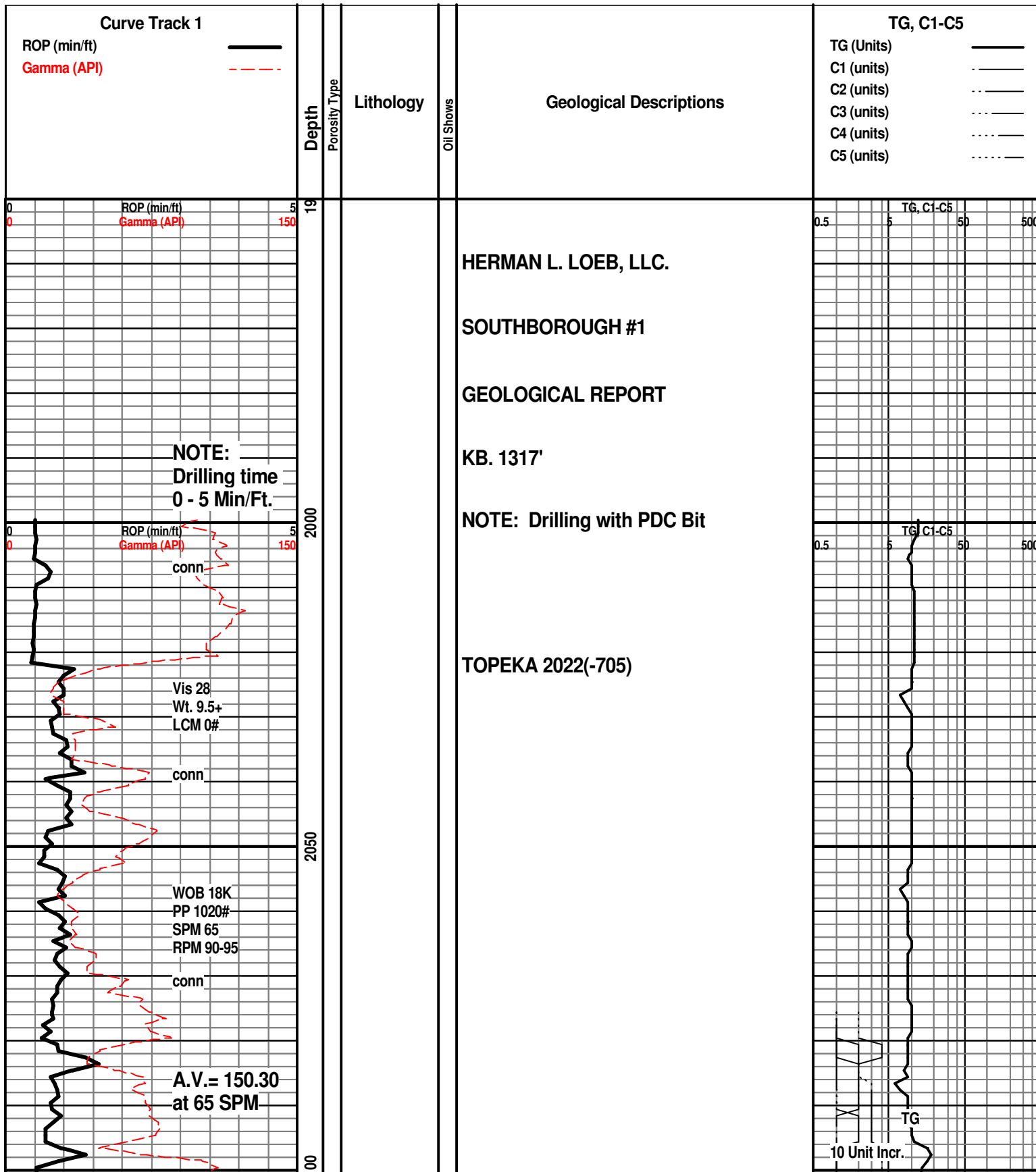
- ROUNDING**
- Rounded
 - Subrnd
 - Subang
 - Angular

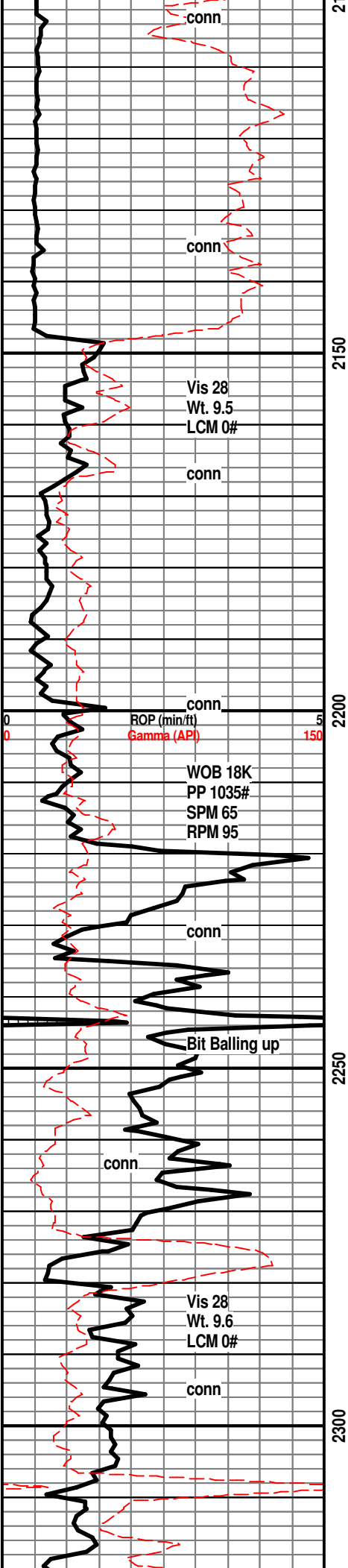
- Spotted
- Ques
- Dead

- EVENT**
- Rft
 - Sidewall

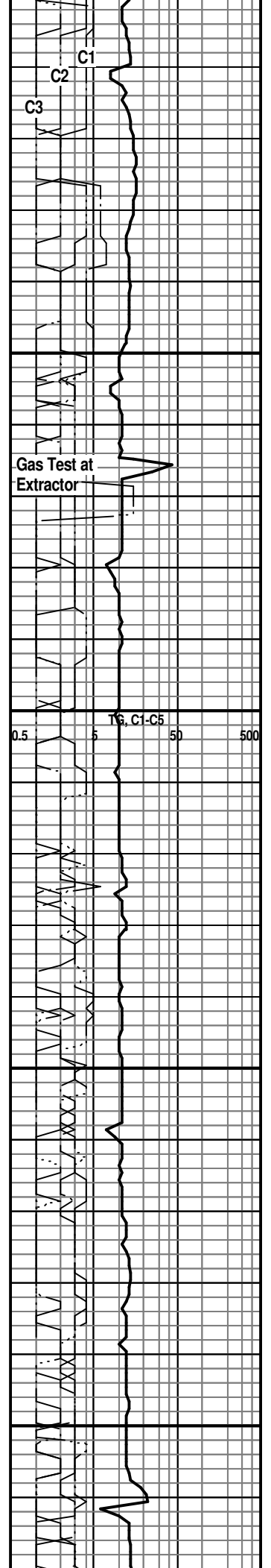
- OIL SHOW**
- Even

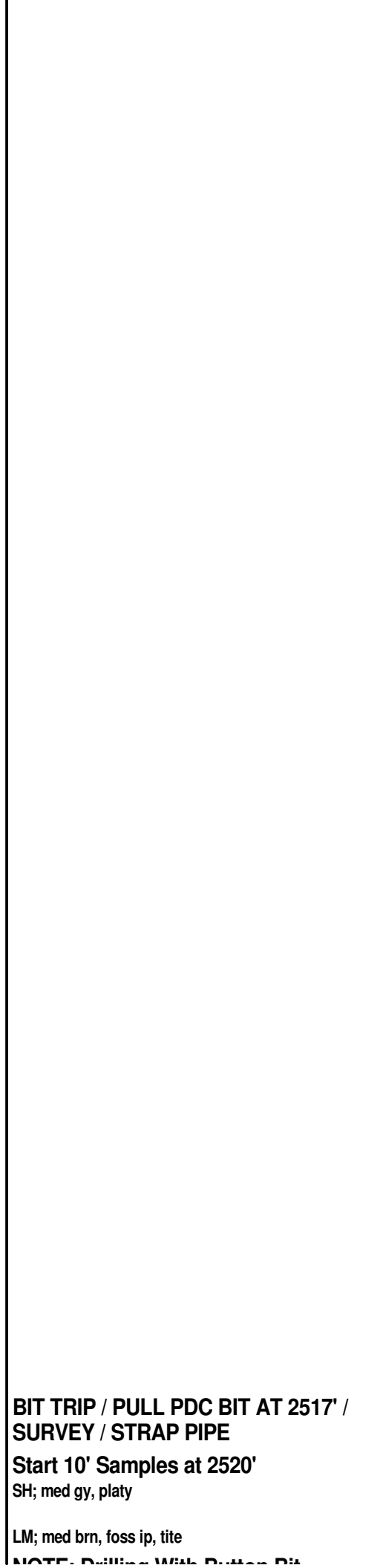
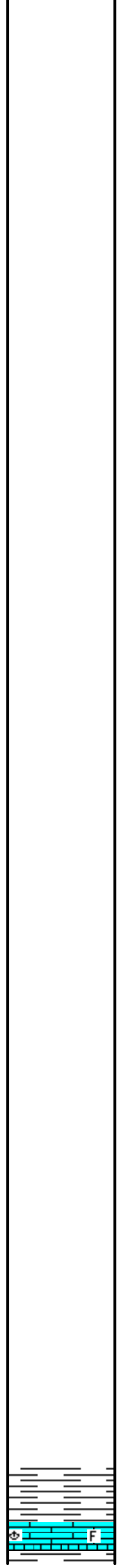
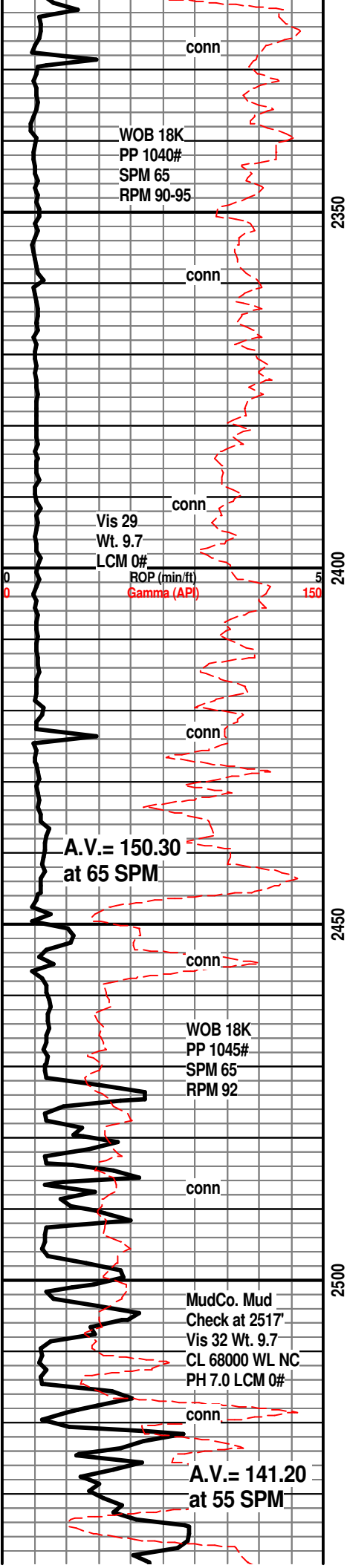
- INTERVAL**
- Core
 - Dst





LOWER TOPEKA 2148(-831)





BIT TRIP / PULL PDC BIT AT 2517' / SURVEY / STRAP PIPE

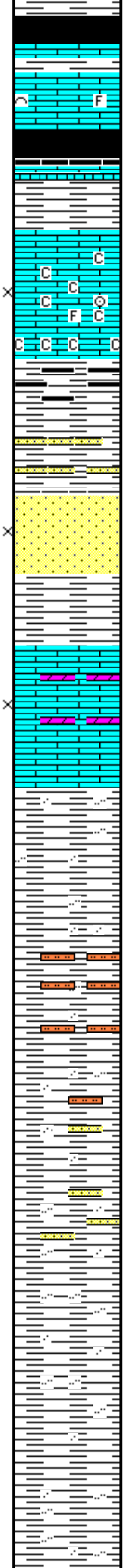
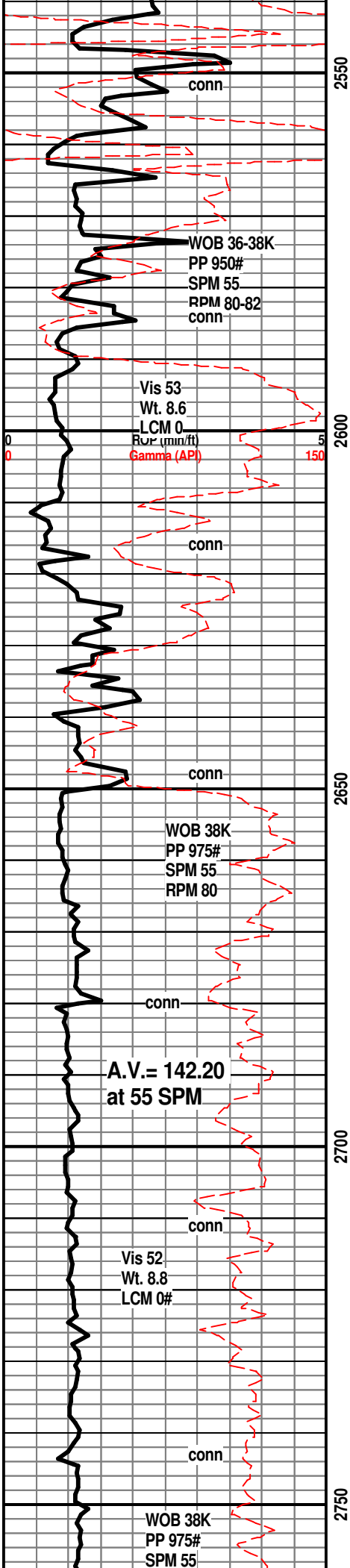
Start 10' Samples at 2520'

SH; med gy, platy

LM; med brn, foss ip, tite

NOTE: Drilling With Downer Bit

Gas Test at Extractor



NOTE: Drilling with Button Bit
SH; dk gy - blk, platy, trc gas bubbles

LM; med to dk gy, foss ip, v. hd

HEEBNER SHALE 2558(-1241)
SH; blk, carb ip, platy
LM; med to dk brn, dense

Displace Mud System at 2570'
TORONTO 2572(-1255)
LM; off wh, buff, cream, fxln w/much soft chalk and chalky mtz, occ fair interxln por, minor foss mat, dull yel min fluor, no stn or odor, ns.

SH; dk gy, blk, platy

SH; med gy, silty to sandy, interbdd hd vf gr qtz ss, some mica

SS; lt gy, lt gy brn, most f gr qtz, clusters, mica ip, fair to gd intergran por, subang - subrng gr, no fluor, no gas kick

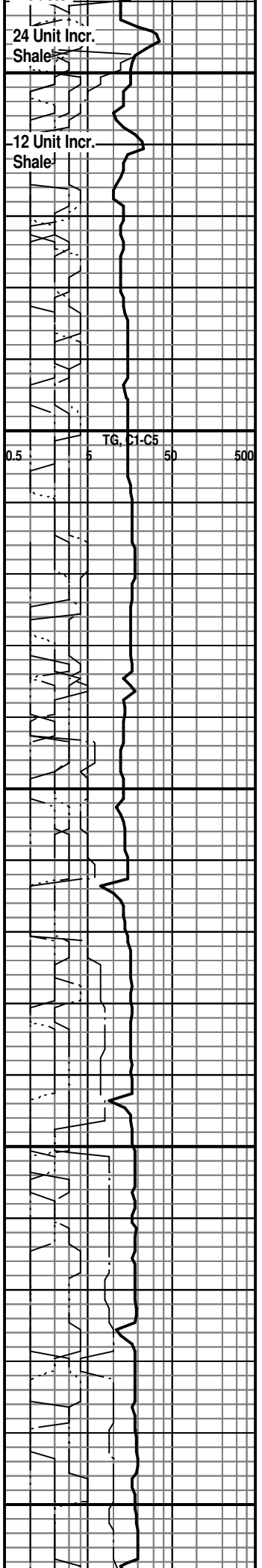
LM; tan to lt brn, foss ip, f to med xln w/fair interxln por, rarely sucrosic text, lt/med yel min fluor, no stn, ns.

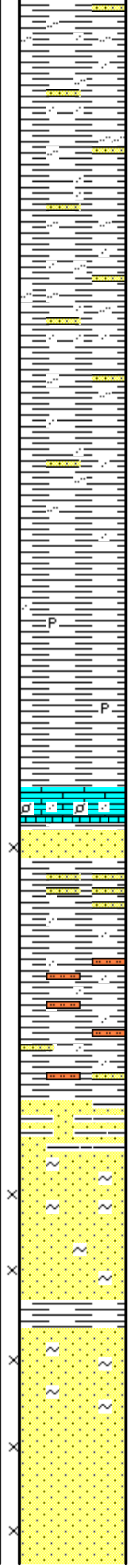
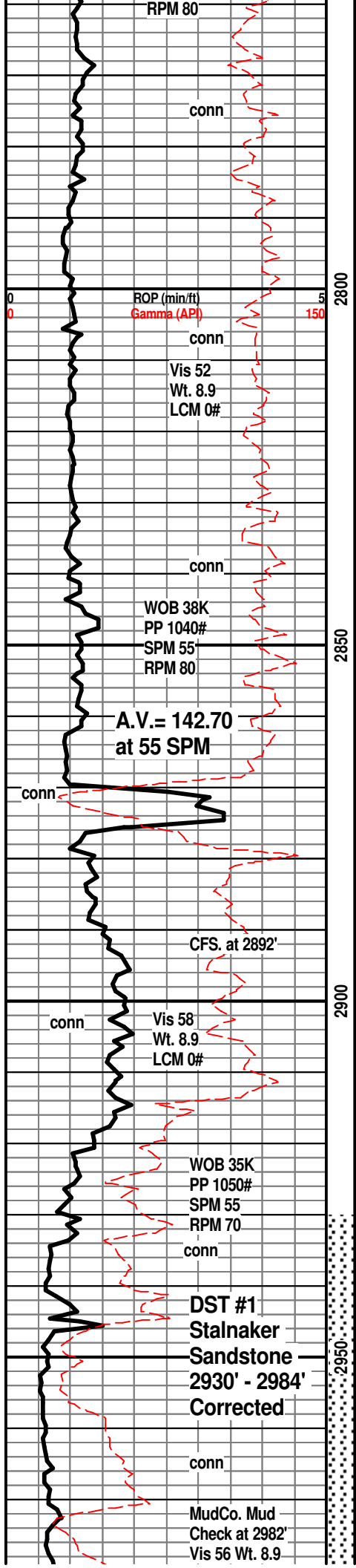
SH; lt to med gy, silty to sandy, platy

SH; lt to med gy, silty to sandy, interbdd thin sltst bds

SH; lt to med gy, silty to sandy, platy, interbdd vf to f mica qtz clusters, tite

SH; lt to med gy, silty to sandy, platy, occ mica





SH; lt to med gy, silty to sandy, platy, interbdd vf to f gr qtz

SH; lt to med gy, platy, sandy w/occ mica ss strngs.

SH; med gy, platy, decr. silt/sand content, most smooth, rare pyr

IATAN LMST. 2870(-1553)

LM; med brn, dense, w/foss to sandy lmst/lmy f gr qtz ss, most dense, no fluor, no vis gas

UPPER STALNAKER SS 2876(-1559)

SS; clr, lt gy, most f gr qtz, clusters, most well cem, few fri clusters w/fair intergran por, no vis fluor, no stn, questionable gas bubbles, interbdd sandy sh and tite vf gr ss

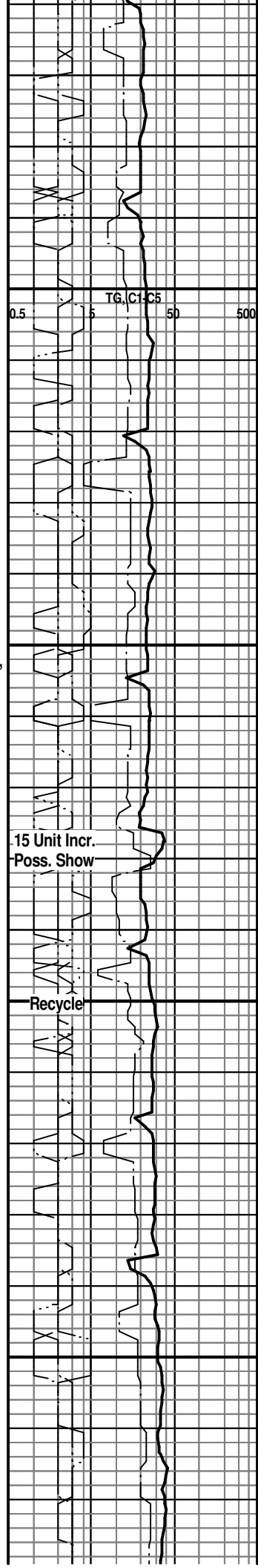
SH & SLTST; lt gy, mica, v. firm, interbdd sltst and sandy sh.

STALNAKER SS 2914(-1597)

SS; lt gy, occ clr, vf to f gr qtz, clusters, most fri w/fair to gd intergran por, minor grn glau, occ mica, calc, subang - subng gr, no fluor, no stn or odor, no gas kick, appears to be fairly good reservoir sand

SH; lt to med gy, silty w/interbdd sltst, platy, occ mica clusters, most w/gd intergran por, occ mica and glau, clean, fri, no fluor, no stn or odor, ns, appears to be good reservoir sand

SS; clr, lt gy, pred med gr qtz, clusters, subrnd to subang, fri, clean, most w/gd intergran por, no fluor, no stn, appears to be good reservoir sand



WL 8.8 CI 3500
PH 11.5 LCM 0#

DST #1: Stalaker Sand 2930' - 2984' Corrected Depth to Log

LM; med brn, cse foss frags, sandy, pyr ip, tite

SH; lt gy, silty w/interbdd sltst, firm

SH; lt to med gy, silty, platy

SH; lt to med gy, silty to occ sandy, firm

SH; most med gy, firm, platy, occ silty

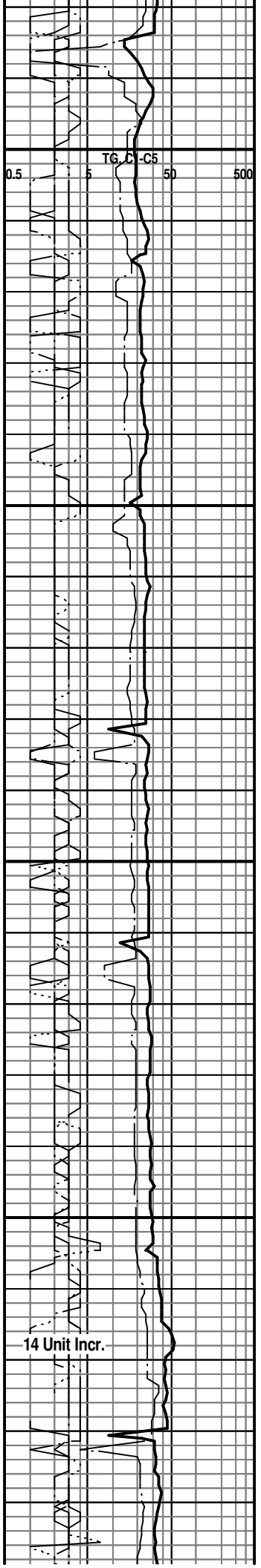
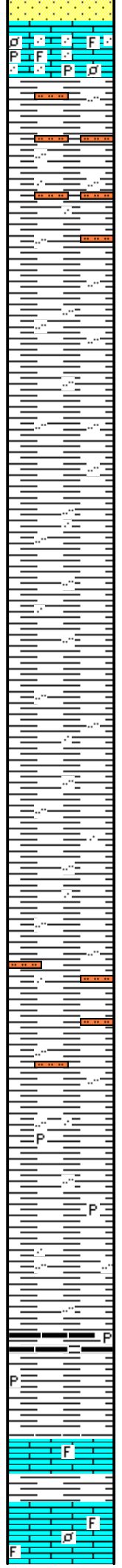
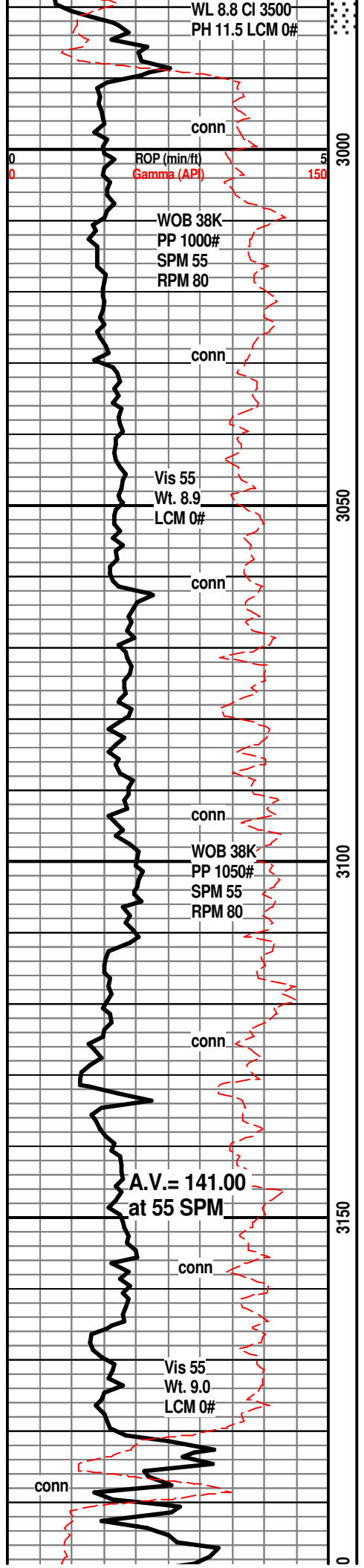
SH; lt to med gy, silty to occ sandy, interbdd sltst, platy

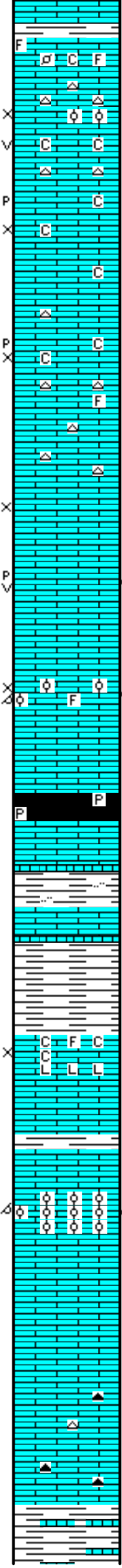
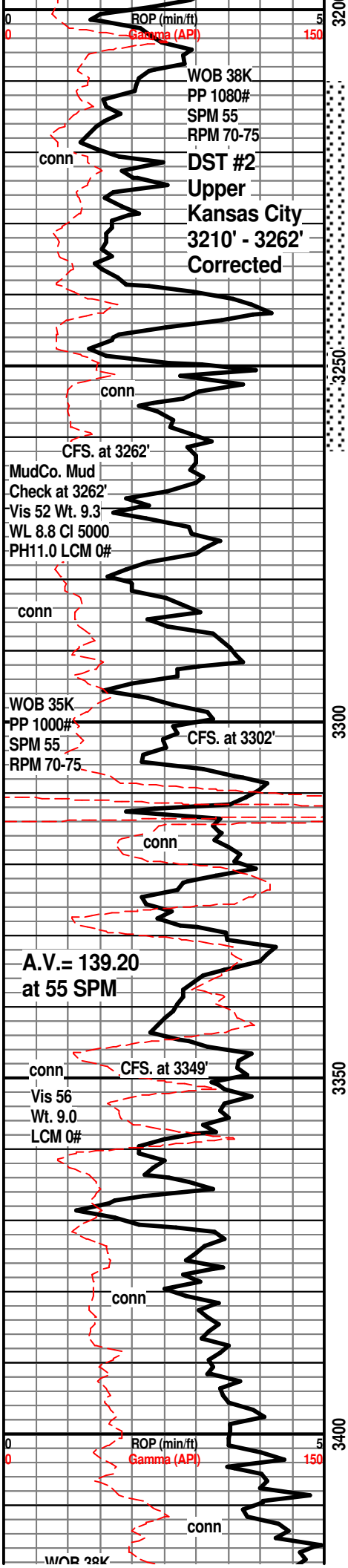
SH; lt to med gy, platy, silty ip, rare pyr

SH; med to occ dk gy/ gy brn, some carb mat, occ pyr

KANSAS CITY 3181(-1864)
LM; med brn, most micritic, rare foss, well cem, no fluor, no vis por, ns.

LM; tan to lt brn, buff, fxln w/scat foss mat, well cem, lt yel min fluor, no vis por, ns.





LM; tan to cream, off wh, foss, most well cem, trc chalky mtx, no vis por, no fluor, scat foss wh cht, ns.

LM; tan to cream, buff, off wh, fxln w/occ sucrosic text, fair interxln w/rare vugs, minor chalky mtx, trc oolitic lmst, no fluor, no stn or odor, ns.

LM; off wh, buff, fxln, soft ip, scat fair p-p and interxln por, occ spar calc, chalky mtx ip, dull yel fluor, no stn or odor, ns.

LM; tan to cream, f to med xln, partly chalky mtx, fair p-p/interxln por, dull yel min fluor, no stn or odor, no gas kick

LM; med brn, most dense, rare foss mat, scat gy cht, no vis por, no fluor, ns.

DST #2: Upr. Kansas City 3210' - 3262' Corrected Depth to Log

LM; tan to lt brn, f to med xln, poor to fair interxln por, occ spar calc xtals, dull yel fluor, ns.

LM; lt brn, fxln, scat fair p-p and small vug por, med yel fluor, fair odor, few pcs w/spotted lt brn oil stn, most tite

LM; med brn, foss - partly oolitic, poor to fair interpart/occ oomoldic por, trc med brn stn, v. spotted lt yel fluor, no odor, no gas kick, very weak show

STARK SHALE 3310(-1993)

SH; v. dk brn, blk, soft ip, occ pyr

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

SH; med gy, rare gy grn, silty ip, interbdd thin lmst strng.

SWOPE 3344(-2027)

LM; off wh, buff, tan, fxln w/much soft chalk and chalky mtx, foss ip, poor interxln por, dull yel min fluor, no vis stn/odor, no gas kick, barren

HERTHA 3360(-2043)

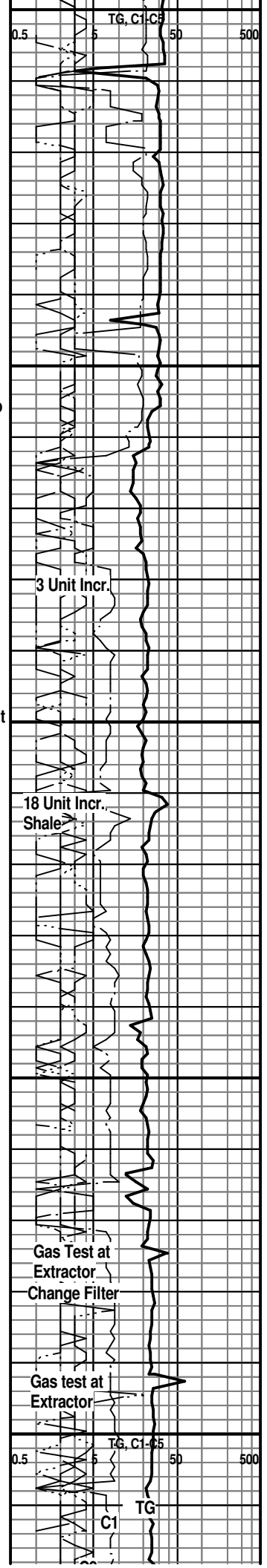
LM; tan to lt brn, oolitic, mostly poor oomoldic por, 2-3 pcs. w/spotted lt brn oil stn, no odor, v. dull yel fluor, looks dead, no apparent gas kick

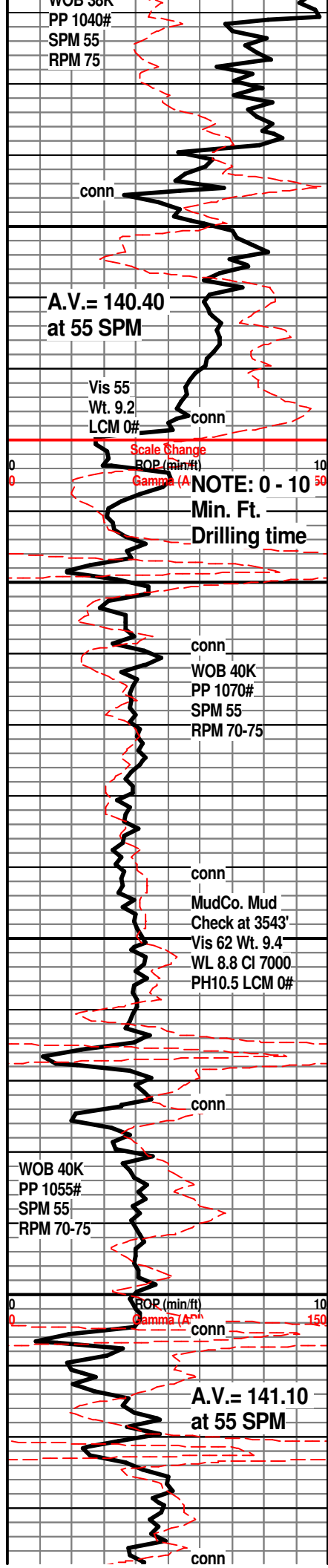
LM; lt to med brn, dense, some litho, no vis por, no fluor, ns.

LM; dk brn, dk gy brn, dense, blocky, scat brn/tan cht, tite

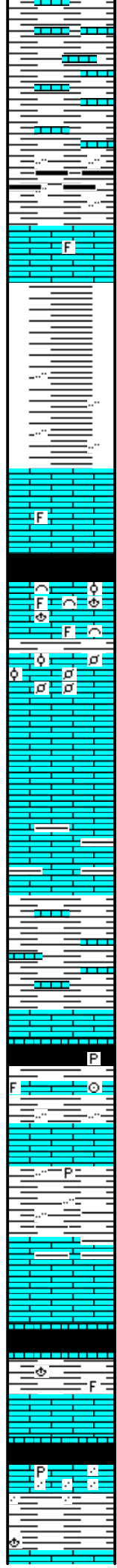
BASE KANSAS CITY 3410(-2093)

SH; med gy, gy brn, lmv ip, interbdd blk lmv sh





3450
3500
3550
3600



SH; lt grn, soft, silty ip, some varic. sh

LM; tan to lt gy brn, foss ip, most dense, blocky, no vis por, no fluor, ns.

SH; varic, grn, gy, brn, rust red, platy, some sticky

SH; varic, much grn, gy grn, silty ip.

MARMATON 3484(-2167)

LM; tan to lt brn, buff, rare foss, most micritic, no vis por, lt yel min fluor, ns.

SH; blk, platy, carb ip.

LM; tan to lt brn, v. foss, well cem, lt - med yel min fluor, scat spar calc cmt, no vis por, ns.

LM; lt to med brn, foss w/occ small pellets/oils, well cem, bcm dense micritic lmst w/no fluor, no vis por, ns.

LM; dk brn, dk gy brn, argil, hd

SH; med to dk gy brn, lmy w/interbdd dense shaly lmst.

SH; blk, carb ip, soft to blocky, trc pyr

LM; lt to med brn, foss ip, hd, blocky, no vis por, scat dull yel min fluor, ns.

LM; lt gy, buff, firm, some gritty text, occ pyr, no vis por, lt yel min fluor, ns.

LM; med gy, gy brn, argil, interbdd lmy sh

SH; blk, carb, gassy ip.

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

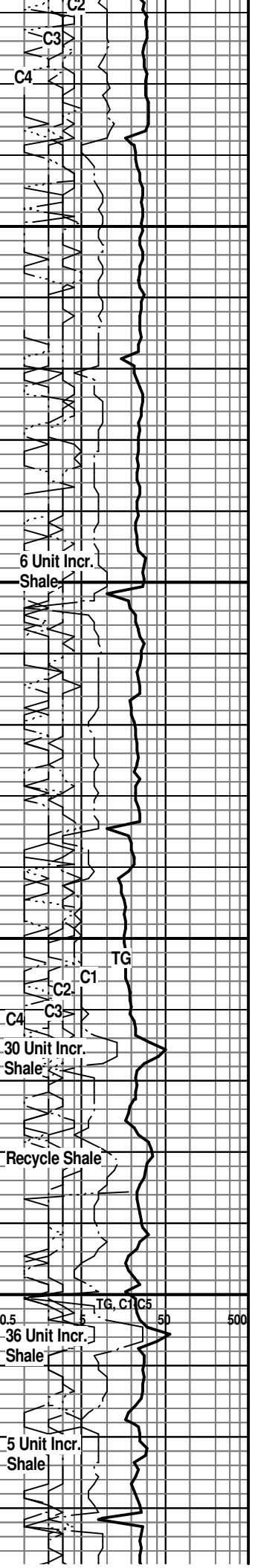
LM; med brn, v. hd, micritic, no vis por/fluor, ns.

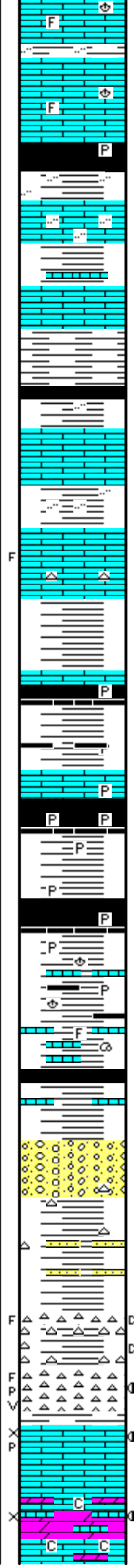
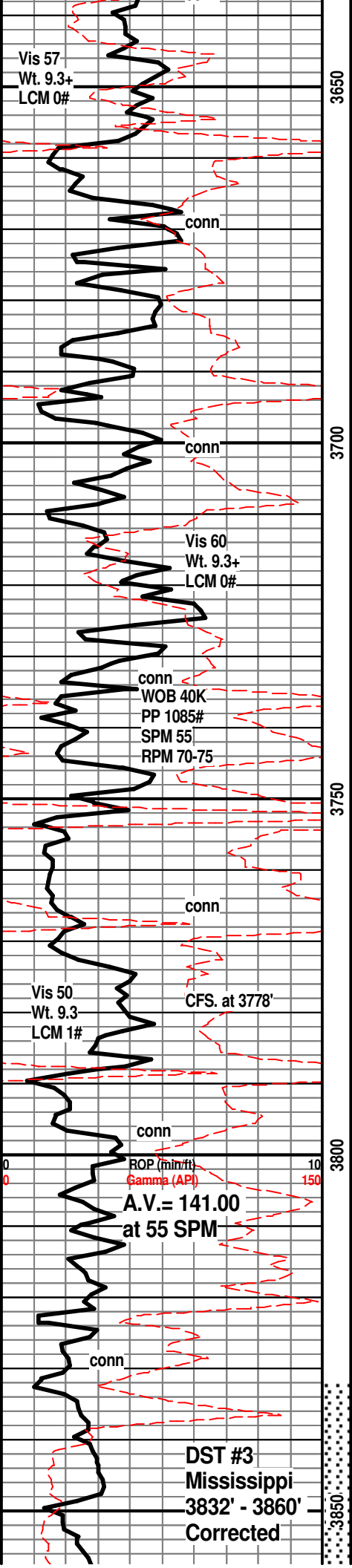
CHEROKEE SHALE 3621(-2304)

SH; blk, carb ip, platy

LM; lt brn, tan, fxln to sandy, some vf gr qtz in lmst mtx, v. hd, pyr ip, tite

LM; lt to med brn, foss ip, well cem, lt yel min fluor, no





LM; lt to med brn, foss ip, well cem, lt yel min fluor, no vis por, no stn or odor, ns.
SH; grn, silty ip, firm

LM; med brn, micritic, blocky, no vis por, no lt yel min fluor, rare well cem foss, ns.
SH; blk, pyr, blocky
SH; varic, grn, maroon, brn, silty ip.
LM; med brn, blocky, hd, some gritty text - silty ip, tite

LM; med brn, tan, fxln to micritic, hd, lt yel min fluor, ns.
SH; med gy, varic, platy

LM; tan to lt brn, hd, blocky, micritic, most w/lt yel min fluor, no stn or odor, ns.
SH; varic, platy, occ silty

LM; lt to med brn, hd, trc brn cht, most dense - micritic, occ fracs fld w/spar calc, tite
SH; blk, carb ip, trc gas, pyr, trc coaly frags

SH; varic, grn, yel, brn, platy
LM; med gy brn, hd, some pyr

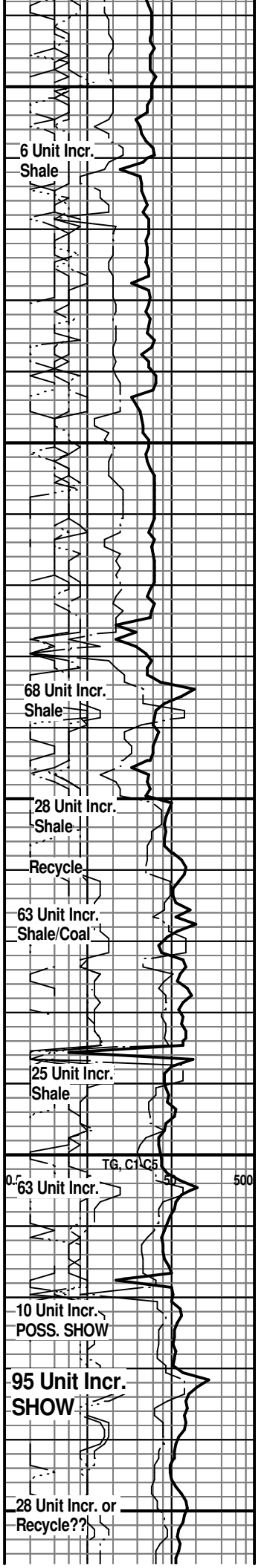
SH; varic, platy, interbdd blk carb sh and coal beds, abnt pyr ip.
COAL/SH; blk, pyr, trc gas, brittle

SH; varic, lmy ip w/thin lmy sh strngs, occ pyr, foss, scat carb mat.
SH; varic, platy to flakey

CONGL; off wh cht, cse gr grn ss, no vis stn, no fluor, interbdd gy to grn cse qtz gr in mostly varic shales

REWORKED MISS. 3822(-2505)
CHT; wh, off wh, foss ip, fresh and trip, med brn to blk stn, occ dead tar/gils, occ fracs w/p - p/vug por, fair odor, brite yel fluor, gas bubbles

MISSISSIPPI LMST. 3838(-2521)
LM; wh, off wh, cse xln, fair vug, p-p & interxln por, lt brn live stn, SSFO, few gas bubbles, faint odor, med yel fluor at top of zone
LM; off wh, tan, lt brn, cse xln w/interbdd dolomitic lmst & sucrosic dolo, fair interxln por, some chalky - soft, trc oil stn, no odor, no cut, no vis gas bubbles



conn CFS. at 3860'
 MudCo. Mud
 Check at 3860'
 Vis 49 Wt. 9.4
 WL 9.0 Cl 4000
 PH 10.5 LCM 3#

conn
 WOB 42K
 PP 1035#
 SPM 55
 RPM 75

conn

Vis 60
 Wt. 9.3
 LCM 2#

conn

conn
 WOB 42K
 PP 1040#
 SPM 55
 RPM 77

ROP (min/ft) 10
 Gamma (API) 150

conn

Vis 57
 Wt. 9.3
 LCM 2#

A.V. = 141.00
 at 55 SPM

conn

WOB 42K
 PP 1055
 SPM 55
 RPM 77

3900

3950

4000

4050



DST #3: Mississippi 3832' - 3860' Corrected Depth to Log

CHT; lt gy, foss ip, most fresh, occ weathered areas, dense, poss frags, no fluor, no vis stn, questionable odor, no apparent gas kick

DOL; lt brn, tan, cherty w/interbdd dolomitic cht, most well cem, rare dull yel fluor, poor to fair interxln por, ns.

DOL; lt brn, lt gy brn, sucrosic, interbdd gy cht, poor interxln por, no fluor, ns.

LM; lt gy brn, tan, dolomitic w/interbdd gy sucrosic lmy dolomite, occ cse xln lmst, most dense, scat gy cht, occ grn clay min. - glau, lt yel min flour thru, no vis stn, no odor, ns.

LM; med gy brn, dense, blocky, hd, rarely cherty

DOL; lt brn, off wh, very cherty, w/interbdd dolomitic cht, poor interxln por, no fluor, no vis stn, ns.

DOL; off wh, lt brn, fresh off wh cht w/much dolo, looks tite, no fluor, ns.

DOL CHT; lt gy, off wh, lt brn, hd, occ bands of cherty dolomite interbdd, no vis por, no fluor, ns.

DOL CHT; lt gy, off wh, fresh cht, hd, rare grn glau clay incl, dolomitic, no fluor, ns.

DOL CHT; lt gy, some dove gy, fresh - sharp, occ dolomitic, pyr ip, poss frags, no fluor, ns.

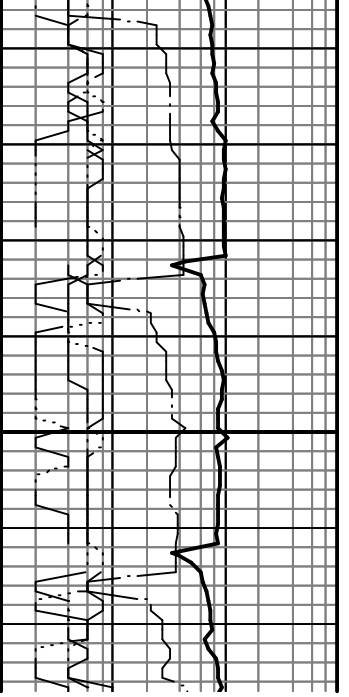
Mud is very gassy after DST #3

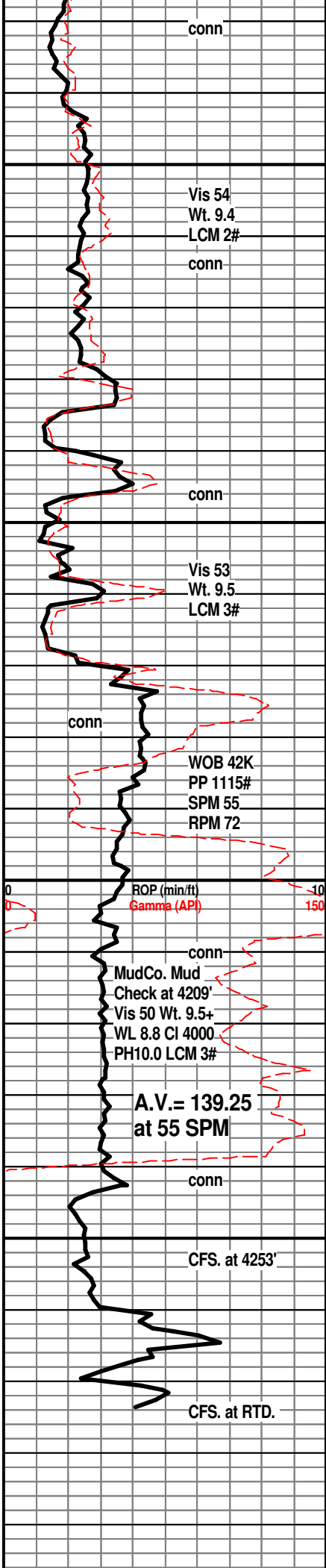
Recycle

Recycle

TG, G, C, S 50 500

0.5





4100

4150

4200

4250



DOL CHT; off wh, wh, lt gy, fresh gy cht, dolomitic w/bands of lt brn sucrosic dolo, looks tite, no fluor, ns.

CHRTY DOL; lt brn, off wh, mostly sucrosic dolo w/interbdd wh to off wh cht, tite, no vis por, no fluor, ns.

DOL; lt brn, lmy ip, some hd, blocky ip, cherty, no vis por, no fluor, ns.

CHRTY LMST; wh, off wh, abnt wh cht, some gran text, interbdd dolomitic cht, minor chalk and chalky mtx, v. dull yel min fluor, no stn or odor, ns.

LM; off wh, tan, cherty, hd, rarely dolomitic, no vis por, no fluor, ns.

KINDERHOOK SHALE 4194(-2877)

SH; med gy, occ gy grn, silty ip, v. firm, occ pyr

SLTST; med gy, platy, firm, occ pyr

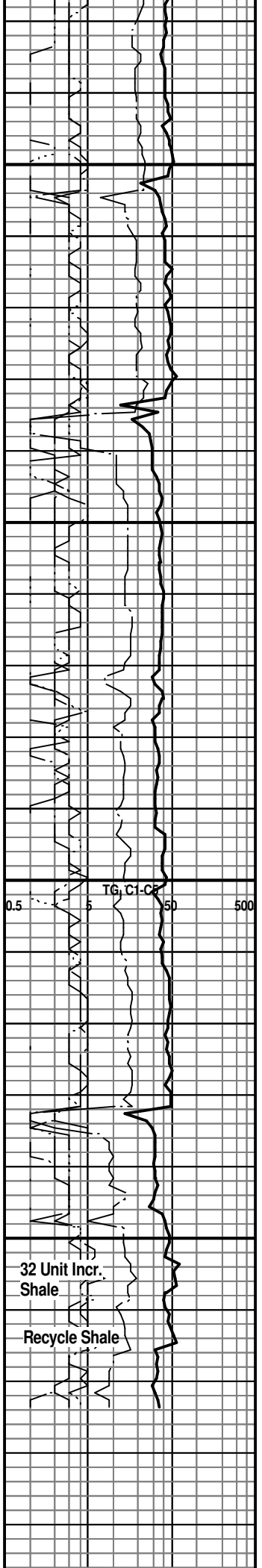
SH; med to dk gy, silty ip, v. firm

WOODFORD SHALE 4243(-2926)

SH; v. dk brn to blk, hydrocarbon odor, carb.

SIMPSON SAND 4260(-2943)

SS; clr, lt/med brn, hd dolomitic sand/sandy dolo at top - well cem, clean med gr qtz clusters are barren of show, slight sulfur odor, poor to gd intergran por in clean sand, no fluor, no vis oil stn, no gas kick



RTD. 4271' at 3:30 PM. 1/24/15

50

4300

LTD. 4274'

**Nabors Completion and Production:
DIL, NEU/DEN w/PE, Microlog**