

# LITHOLOGY STRIP LOG

## WellSight Systems

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

Well Name: Aaron Einsel #3-4  
Location: 1582' FNL & 667' FEL, Sec. 4-T28S-R18W, Kiowa Co., KS.  
Licence Number: 15-097-21723-0000 Region: Greensburg SW  
Spud Date: 4/12/2012 Drilling Completed: 4/22/2012  
Surface Coordinates: 1582' FNL & 667' FEL, Sec. 4-T28S-R18W

Bottom Hole Same as above  
Coordinates:  
Ground Elevation (ft): 2196' K.B. Elevation (ft): 2207'  
Logged Interval (ft): 3400' To: 4900' Total Depth (ft): 4900'  
Formation: Kinderhook at Total Depth  
Type of Drilling Fluid: Freshwater/Gel to 3160'; Chemical Gel 3160' to 4900'

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

### OPERATOR

Company: Strata Exploration, Inc.  
Address: P.O. Box 401  
Fairfield, IL. 62837-0401

### 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(Lansing 'A') 4214' - 4230'(Corrected Depths to LOG) Test Times 15"-45"-45"-90" IFP Fair Blow built to BOB/15", FFP Fair Blow built to 10.5", no Blowback on SI's; REC: 372' Gas in Pipe, 2' Clean Oil, 62' WOCM(30%O, 26%W, 44%M), 62' MSW(95%W, 5%M), CI 70,000, Mud 8000; IFP 21-34#, ISIP 1384#, FFP 39-75#, FSIP 1380#, IHP 2123#, FHP 2025#, BHT 115 Deg. F.

DST #2(Basal Cherokee Lmst.) 4761' - 4779'(Corrected Depths to LOG) Test Times 15"-45"-60"-120" IFP Strong Blow BOB/3", 2" Blowback on ISI, FFP Strong Blow BOB/As soon as Tool Open, no Gas to Surface, no Blowback on FSI; REC: 1364' Gas in Pipe, 5' Drlg. Mud, no oil, no water; IFP 18-24#, ISIP 493#, FFP 13-16#, FSIP 313#, IHP 2408#, FHP 2298#, BHT 121 Deg. F.

DST #3(Mississippi Chert) 4896' - 4811'(Corrected Depths to LOG) Test Times 15"-45"-45"-90" IFP Strong Blow BOB/10 Sec. Gas to Surface in 12 Min., Gauged 353 MCFG in 15 Min; FFP Gas to Surface throughout, decreased to 178 MCFG in 45" of FFP, no Blowback on SI's; REC: 4777' GIP, 5' Drlg. Mud, no oil, no water; IPF 50-77#, ISIP 1358#, FFP 55-42#, FSIP 1278#, IHP 2417#, FHP 2306#, BHT 115 Deg. F.

## Comments

4/12/12 MIRU Sterling Drilling Rig #2, Spud at 6:15PM.; 4/13/12 TD. 580' - Running 8 5/8" Surface Casing; 4/14/12 Drilling at 1495'; 4/15/12 Drilling at 2708'; 4/16/12 Drilling at 3377'; 4/17/12 Drilling at 3752'; 4/18/12 TD. 4234' - CCH for DST #1; 4/19/12 Drilling at 4394'; 4/20/12 TD. 4722' - CFS; 4/21/12 TD. 4783' - TIH after DST #2; 4/22/12 Drilling at 4890' - reached TD. at 7:15 AM. - CCH, TOH for Logs(Halliburton) - LTD. 4896'; 4/23/12 RTD. 4900', LTD. 4896' - LDDP for setting new 5 1/2" Production Casing.

Set new 8 5/8"(23#) Surface Casing at 580' w/350 sx. Cement did Circulate(Basic Energy Services). PD. 9:00 AM. 4/13/12.

Set new 5 1/2"(15.5#) Production Casing at 4894' w/200 sx.(Basic Energy Services). PD. 5:30 PM. 4/23/12.

Surveys: 0.5 Deg. at 580'(Surface Casing); 0.75 Deg. at 3477'(Bit Trip); 0.75 Deg. at 4234'(DST #1); 1.25 Deg. at 4783'(DST #2); 1 Deg. at 4900' RTD.

No Pipe Strap was taken on the well, windy conditions prevailed during DST's.

After review of the Halliburton Logs, DST data, structural position and shows of commercial amounts of hydrocarbons, the operator elected to set new 5 1/2" Production Casing for completion in the Mississippi Chert.

LOG TOPS: Blaine Gypsum 1130(+1077), Chase 2448(-241), Stotler Lmst. 3410(-1203), Howard 3612(-1405), Heebner Shale 4047(-1840), Toronto 4059(-1852), Brown Lmst. 4202(-1995), Lansing 'A' 4214(-2007), Lansing/KC. 'H' 4373(-2166), KC. 'I' 4421(-2214), Stark Shale 4511(-2304), Base Kansas City 4608(-2401), Pleasanton 4629(-2422), Marmaton 4654(-2447), Pawnee 4697(-2490), Cherokee Shale 4735(-2528), Miss. Chert 4792(-2585), Kinderhook Shale 4840(-2633), Kinderhook Sand 4870(-2663).







































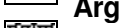
































NOTE: This log was shifted upward by 3' to 5' for correlation purposes with the Halliburton LOGS.

Prior to abandonment of the Aaron Einsel #3-4, the Cherokee Lmst. zone should be perforated and tested from 4769' - 4772'. Also, the Altamont section of the Marmaton exhibited minor oil shows with a gas kick, and should be tested from 4666' - 4670'. The Lansing 'A' zone should be tested from 4217' - 4222'(see DST #1) log depths.

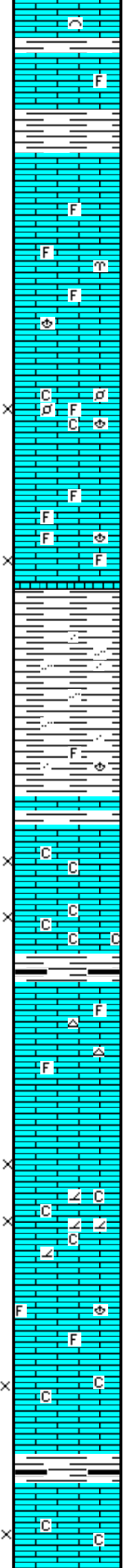
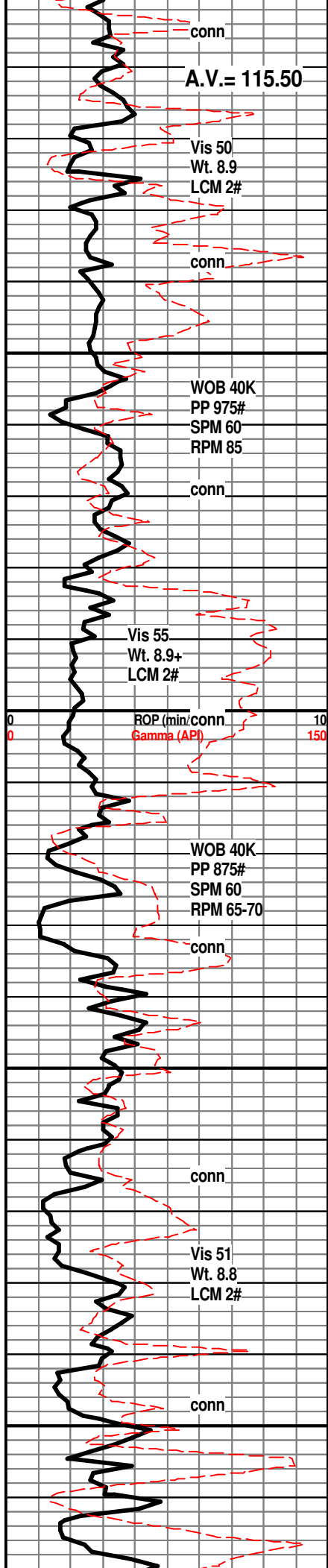
### ROCK TYPES

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

### ACCESSORIES

<b>MINERAL</b>		<b>FOSSIL</b>	
 Anhy	 Gyp	 Algae	 Ostra
 Arggrn	 Hvymin	 Amph	 Pelec
 Arg	 Kaol	 Belm	 Pellet
 Bent	 Marl	 Bioclst	 Pisolite
 Bit	 Minxl	 Brach	 Plant
 Brecfrag	 Nodule	 Bryozoa	 Strom
 Calc	 Phos	 Cephal	<b>STRINGER</b>
 Carb	 Pyr	 Coral	 Anhy
 Chtdk	 Salt	 Crin	 Arg
 Chtlt	 Sandy	 Echin	 Bent
 Dol	 Silt	 Fish	 Coal
 Feldspar	 Sil	 Foram	 Dol
 Ferrpel	 Sulphur	 Fossil	 Gyp
 Ferr	 Tuff	 Gastro	 Ls
 Glau		 Oolite	 Mrst
			<b>TEXTURE</b>
			 Sltstrg
			 Ssstrg
			 Boundst
			 Chalky
			 Cryxln
			 Earthy
			 Finexln
			 Grainst
			 Lithogr
			 Microxln
			 Mudst
			 Packst
			 Wackest





LM; med brn, gy brn, hd, blocky, dense, rare foss mat, tite

LM; med to dk brn, micritic, v. hd, tite, rare foss.

SH; med gy, grn, brn, platy, smooth

LM; tan to lt brn, lt gy brn, most micritic, blocky, rare foss mat, no vis por, dull yel fluor, no stn or odor, ns,

LM; tan to cream, buff, foss ip, most well cem, hd, lt yel min fluor, ns.

LM; off wh, cream, highly foss - some med xln, gd interpart por, occ soft chalky mtz, lt yel fluor, no stn or odor, no gas kick, ns.

LM; tan to lt brn, fxln w/occ foss mat, interbdd hd blocky micrite, poor to no vis por, scat lt yel min fluor, no stn or odor, ns.

SH; med gy, silty to occ sandy, firm

SH; lt to med gy, firm, silty, foss ip.

**HOWARD 3612(-1405)**

LM; off wh, wh, buff, f to med xln, some gran text, fair to gd interxln por, much soft chalky mtz, lt yel min fluor, no stn or odor, no gas kick, barren, ns.

SH; dk gy, trc blk, platy

LM; lt gy to lt brn, most v. hd, micritic, scat well cem foss, no vis por, minor off wh cht, ns.

LM; tan to off wh, buff, fxln w/occ sucrosic text, partly dolomitic, fair to gd interxln por, interbdd fairly soft chalky lmst, lt yel fluor, no stn or odor, no gas kick, ns.

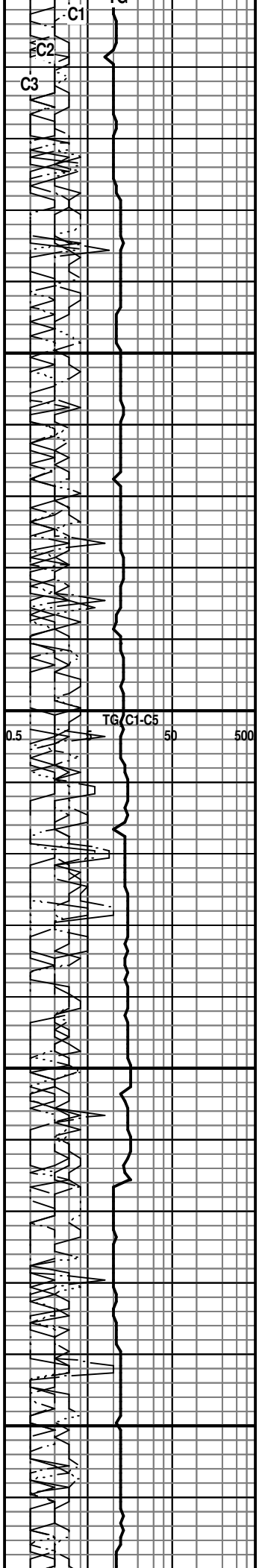
LM; lt brn, foss, well cem, blocky, hd

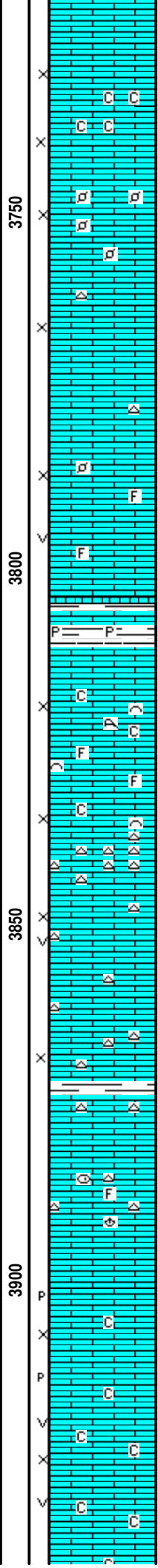
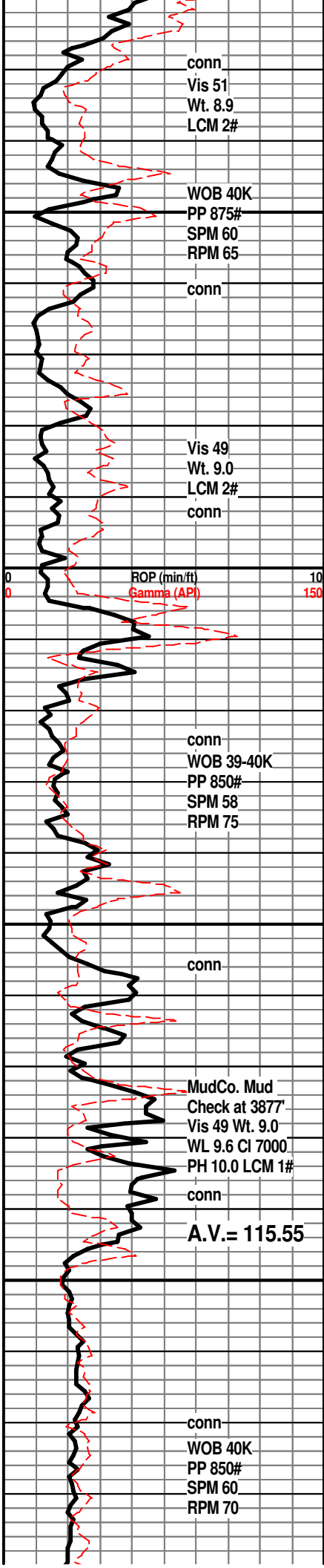
LM; off wh, buff, med xln to occ gran text, fair interxln por, rarely chalky mtz, dull yel min fluor only, ns.

SH; dk gy, trc blk, platy

**TOPEKA 3708(-1501)**

LM; off wh, tan, lt brn, f to occ med xln, fair interxln por, minor chalky mtz, no fluor, ns.





LM; tan to cream, fxln, v. gd interxln por, occ soft chalky mtx, lt yel fluor, no stn or odor, ns.

LM; tan to cream, buff, foss to med xln, fair to gd interxln/interpart por, rare lt gy cht, no fluor, no stn or odor, ns.

LM; tan to lt brn, buff, med to occ cse xln, gd interxln w/scat vug por, occ foss mat, dull yel min fluor, no stn, ns.

SH; med to dk gy, firm, pyr, interbdd tan lmst

LM; tan to lt brn, med to occ cse xln, spar calc xtals w/occ foss frags, fair interpart por, minor soft chalky mtx, no fluor, no stn or odor, ns.

LM; tan, off wh, f to med xln, abnt wh/gy cht, no vis por, hd

LM; tan to lt brn, buff, med xln to occ gran, fair interxln w/occ vug por, rare gy cht, lt yel min fluor, ns.

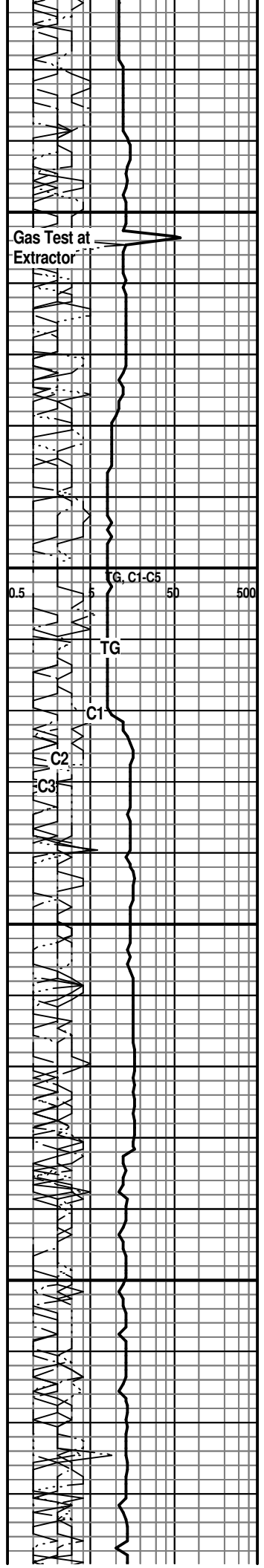
LM; lt brn, lt gy, med xln, scat gy to off wh cht, poor to fair interxln por, no fluor, ns.

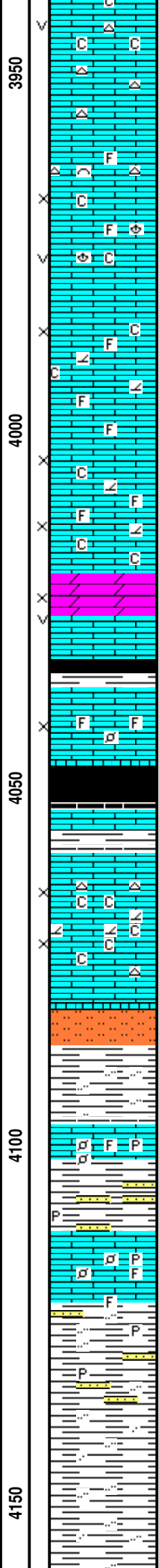
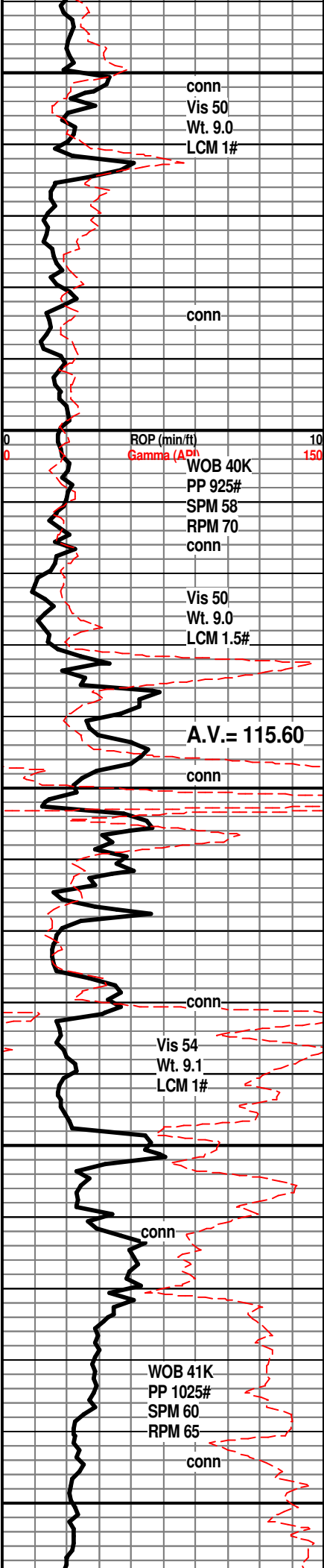
SH; med gy grn, platy

LM; lt to med gy brn, foss ip, hd, well cem, blocky, scat gy cht, tite

LM; tan to lt brn, buff, off wh, f to med xln, gd interxln por, scat cse opaque spar calc xtals, fair p-p and interxln por, lt yel min fluor, no stn or odor, ns.

LM; tan to cream, buff, med xln, scat hd cherty lmst, interbdd soft chalky lmst, occ vug por, lt to occ med yel min fluor, no stn or odor, ns.





LM; tan to cream, lt brn, foss to med xln, gd interxln w/scat vug por, minor chalky mtx, dull yel min fluor, no stn, ns.

LM; tan to buff, lt brn, med to cse xln, scat foss mat, fair interpart/interxln por, trc sucrosic text dolomitic lmst, lt yel min fluor, ns.

LM; tan, off wh, buff, fxln w/occ sucrosic text, chalky ip, interbdd dolomitic lmst, lt yel fluor, ns.

DOL; tan to lt brn, sucrosic, gd interxln w/scat vug por, trc finely rhombic, lt yel min fluor, no stn or odor, ns,

SH; dk gy - blk, platy, carb ip.

LM; tan to lt brn, fxln w/occ foss mat, poor to fair interxln por, no fluor, no stn or odor, ns.

**HEEBNER SHALE 4047(-1840)**

SH; blk, carb ip, platy

LM; med brn, hd, micritic, tite

**TORONTO 4059(-1852)**

LM; off wh, lt gy, fxln w/scat sucrosic text - partly dolomitic, much soft chalk and chalky mtx, occ wh cht, fair interxln por, lt yel fluor, no stn or odor, no gas kick, ns.

**DOUGLAS SHALE 4081(-1874)**

SLTST; lt gy, mica ip, firm, platy

SH; lt gy, silty ip, platy

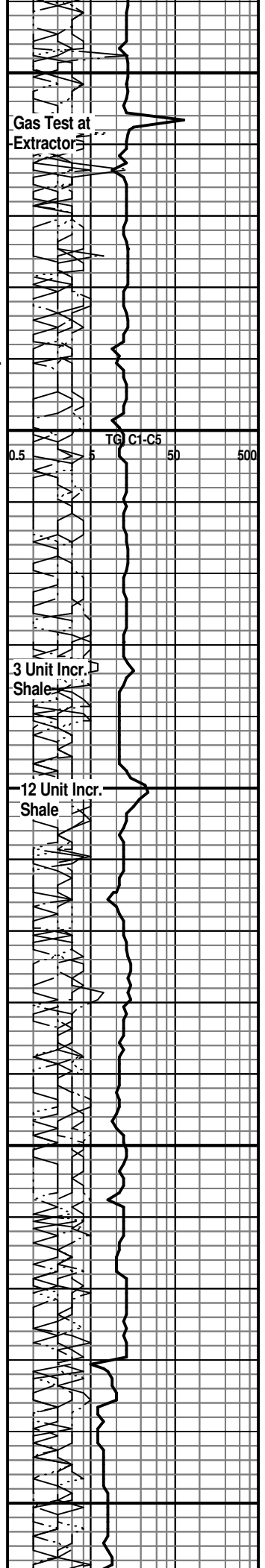
LM; med brn, v. foss - finely pelletal, hd, occ pyr

SH; lt to med gy, fiss, interbdd vf gr qtz ss strngs.

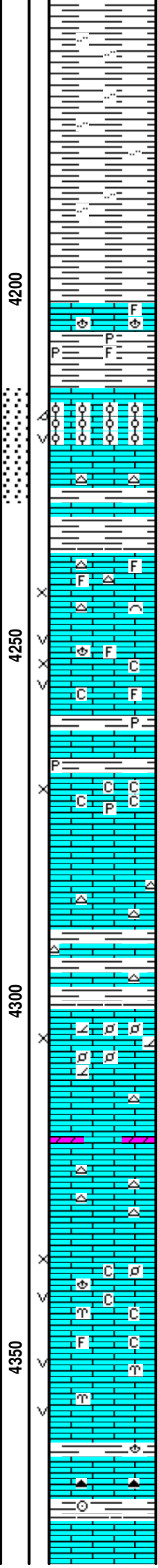
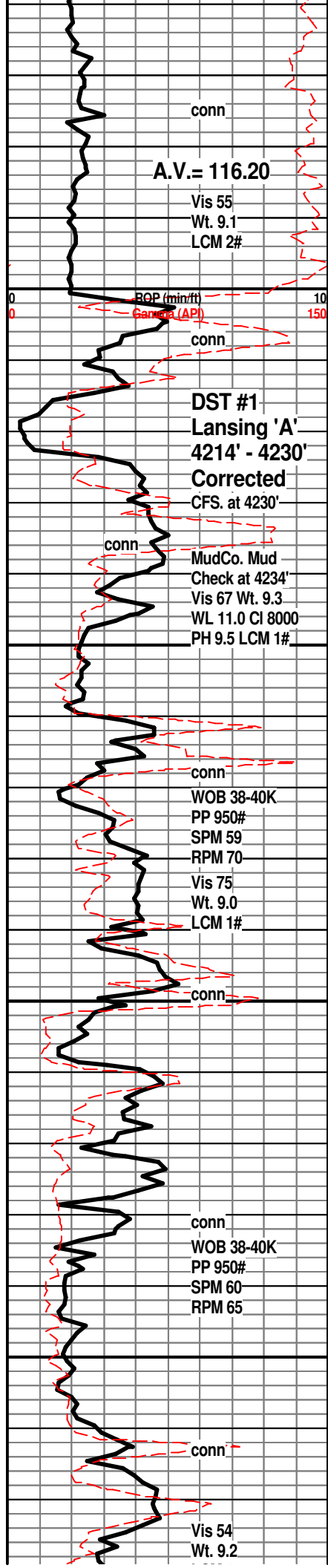
LM; med to occ dk brn, foss, hd, well cem, scat gritty sandy text, no vis por, dull yel min fluor, no stn or odor, ns.

SH; lt gy, gy grn, silty ip, platy, scat pyr, scat vf gr ss strngs.

SH; lt to med gy, silty to sandy, most smooth







SH; lt to med gy, silty ip, platy

**BROWN LMST. 4202(-1995)**  
LM; med brn, dense, blocky, hd, foss ip.  
SH; med gy, foss/pyr, v. firm

**LANSING 'A' 4214(-2007)**  
LM; lt to med brn, oolitic, med to lrg molds, v. gd oomoldic por, occ vug por, med to occ brite yel fluor, gas bubbles, SSFO - light brn, faint to fair odor, spotted to occ even lt brn stn, fair cut, some barren por

**DST #1: Lansing 'A' 4214' - 4230'**  
**LANSING 'B' 4237(-2030)**  
LM; tan to lt brn, foss ip, most well cem, scat off wh cht, poor - no vis por, lt yel fluor, no stn or odor, no gas kick

LM; lt gy, tan, med xln w/scat foss mat, vug and interxln por, occ soft chalky mtz, lt yel min fluor only, no stn or odor, no gas kick, ns.

SH; med gr grn, firm, occ pyr  
LM; off wh, buff, tan, f to med xln, fair interxln por, much soft chalky mtz, dull yel min fluor only, no stn or odor, ns.

LM; med to kd brn, most dense, micritic, blocky, occ brn foss cht, tite

LM; med gy brn, hd, scat gy cht, tite  
LM; tan to off wh, buff, foss- finely pelletal ip, fair interpart por, scat sucrosic text - partly dolomitic, sparse lt yel min fluor, no stn or odor, ns.

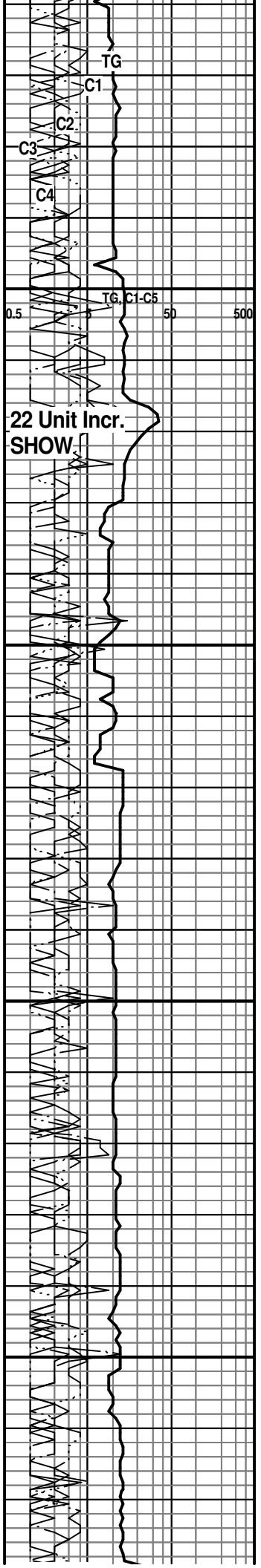
LM; lt brn, foss ip, occ finely pelletal, minor sucrosic text, trc. dolomitic lmst, most tite, cherty ip, dull yel fluor, no stn, ns.

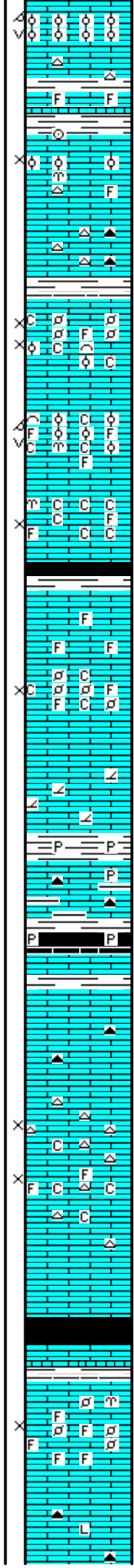
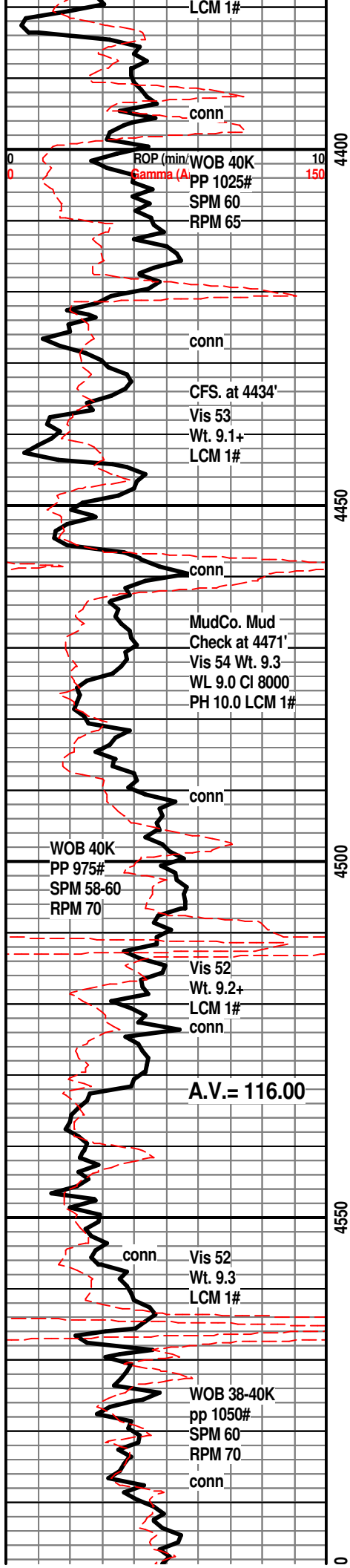
LM; off wh, wh, f to med xln, scat fair interxln w/occ vug por, minor foss mat, interbdd fairly soft chalky lmst, lt yel min fluor only, no stn or odor, no gas kick, ns.

LM; off wh, wh, foss, well dev. vug por ip, no stn or odor, barren, ns.

LM; med brn, dense, scat dk gy cht, tite

**LANSING/KC. 'H' 4373(-2166)**  
LM; lt brn, foss - oolitic, small to med size molds, gd





oolimoldic w/rare vug por, brittle ip, v. dull yel to no fluor, no stn or odor, no vis gas, no real gas kick(gas test at extractor/change filter caused gas increase not the formation)

SH; med gy, grn, foss ip.

LM; tan to lt brn, foss, oolitic ip, most well cem, poor interpart por, no fluor, no stn or odor, ns.

LM; tan to lt brn, hd, micritic, scat med/dk brn cht, tite

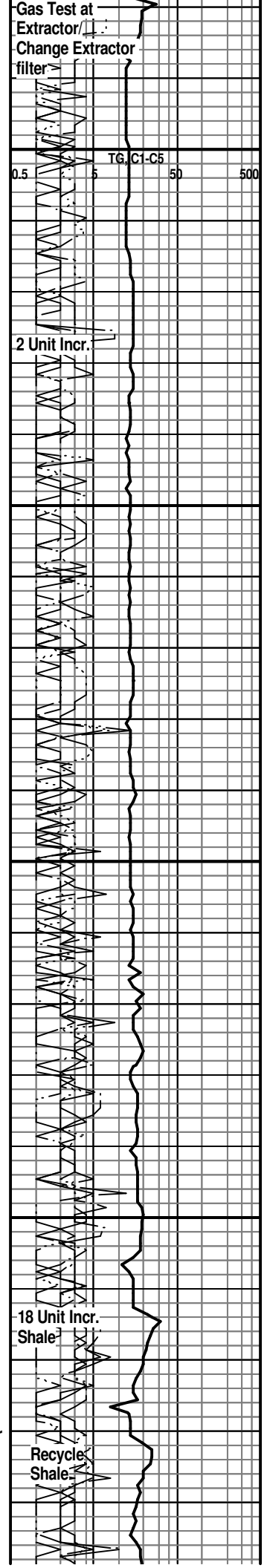
**KC. 'I' ZONE 4421(-2214)**  
LM; off wh, tan, v. foss, finely pelletal to oolitic, fair to gd interpart por in some, occ soft chalky mtx, dull yel min fluor only, no vis stn, no odor, no vis gas bubbles, no sample shows  
LM; off wh, tan, buff, highly foss - oolitic, scat well dev. oomoldic por, vug por also, minor chalky mtx, v. dull yel fluor, no stn or odor, barren, ns.  
LM; off wh, wh, buff, med xln w/scat foss mat, much soft wh chalk and chalky mtx, poor to fair interpart por, dull yel min fluor, ns.  
SH; blk, fiss, soft

**KC. 'J' DENNIS 4462(-2255)**  
LM; tan to lt brn, buff, fxln, scat well cem foss, most dense, blocky, no vis por, ns.  
LM; tan to cream, buff, foss, scat fair interpart por, occ soft chalky mtx, lt yel min fluor, no stn or odor, no gas kick, ns.  
LM; med gy brn, gritty text, partly dolomitic, hd, no vis por, ns.  
SH; med to dk gy, v. firm, occ pyr  
LM; med to dk brn, hd, argil ip, scat dk gy/blk cht, tite

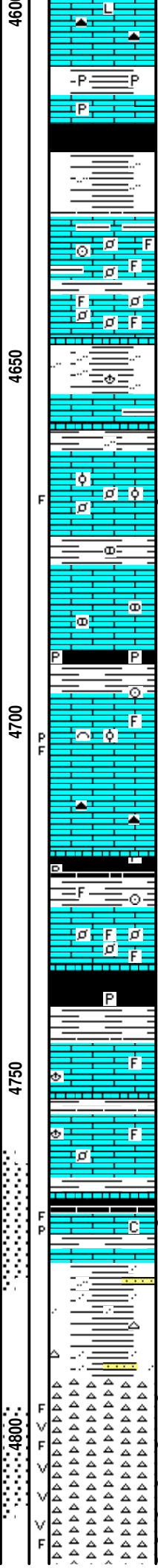
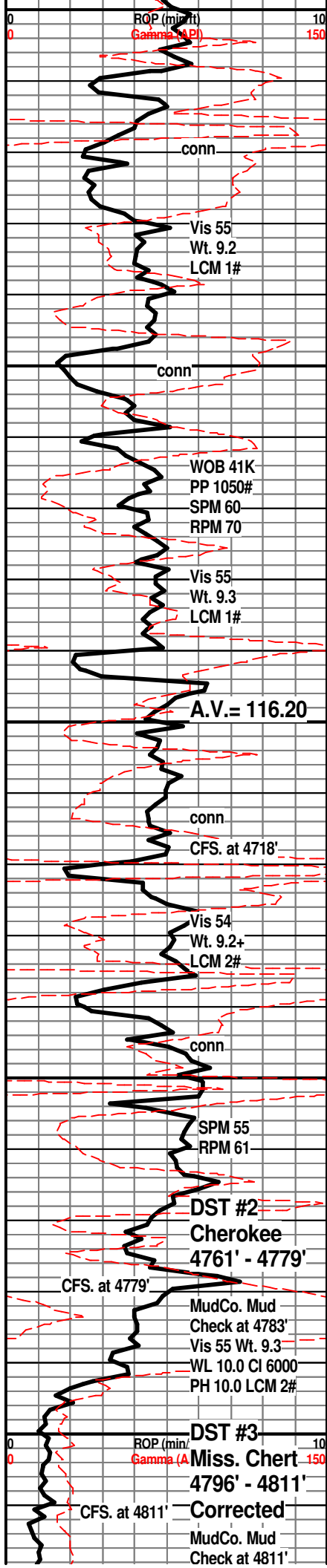
**STARK SHALE 4511(-2304)**  
SH; blk, platy, soft ip, occ pyr

**SWOPE 4518(-2311)**  
LM; lt gy, gy brn, dense, hd, micritic, scat blk cht  
LM; off wh, wh, buff, med xln, abnt opaque to transl. spar calc xtals, fair to gd interxln por, interbdd wh/off wh foss cht, dull yel min fluor, no stn or odor, no gas kick  
LM; off wh, tan, buff, foss ip, much soft chalky mtx, interbdd wh foss cht, no stn or odor, ns.  
SH; blk, carb, platy, trc gas

**HERTHA 4573(-2366)**  
LM; tan to lt brn, foss, scat foss pellets and hash, most well cem - poor interpart por, occ cherty, lt yel min fluor only, no stn or odor, ns.  
LM; med to dk brn, hd, micritic to litho, interbdd dk brn cht. hd







**BASE KANSAS CITY 4608(-2406)**

SH; varic, red, grn brn, fiss, occ pyr

LM; lt to med gy, pyr ip, hd

SH; varic, grn, rust red, brn, yel, lavender, blk, fiss to flakey, occ silty

**PLEASANTON 4629(-2422)**

LM; off wh, tan, lt brn, foss ip, scat pale grn argil lmst, hd, no vis por, no stn or odor, ns.

LM; off wh, tan, foss w/small pellets, some dense - micritic, no vis por, ns.

SH; varic, grn, maroon, brn, silty ip, foss

**MARMATON 4654(-2447)**

LM; tan, lt brn w/grn tint, hd, micritic, blocky

LM; off wh, wh, buff, fxln, trc frags, trc v. light to dk brn hvy oil stn, much brite yel fluor, scat well cem oolites and pellets, no odor, no cut, poss. gas bubbles, v. weak show in samples

LM; tan to off wh, buff, most dense, micritic, scat lt yel fluor, occ nodular, no vis por, no stn or odor, ns.

SH; dk gy - blk, platy, occ pyr

**PAWNEE 4697(-2490)**

LM; lt brn, foss ip, most dense, few pcs. w/dk brn heavy residual oil stn, no odor, poor p-p w/some frac por, scat lt yel fluor, no vis gas bubbles, weak cut, looks tite

LM; med brn, most dense, micritic, scat brn foss cht, tite

SH; blk, blocky, pyr, trc gas

SH; grn, foss, firm

LM; tan to buff, lt brn, foss - abnt small pellets and hash, well cem, dense, lt yel min fluor, ns.

**CHEROKEE SHALE 4735(-2528)**

SH; blk, dk gy, platy, carb ip, rarely pyr

LM; tan to lt brn, fxln, scat well cem foss mat, no vis por, no fluor, trc blk tar/gilsonite, no live shows, no odor, looks tite

LM; lt to med brn, hd, micritic, rare well cem foss mat, no vis por, no fluor, no stn, ns.

SH; dk gy, blk, fiss

LM; off wh, f to med xln, spar calc xtals, frags w/live edge stn, scat p-p por w/med brn stn, med yel fluor, SSFO, no odor, minor chalky mtx, gd cut, tar/gilsonite, trc gas bubbles

**DST #2: Cherokee Lmst. 4761' - 4779'**

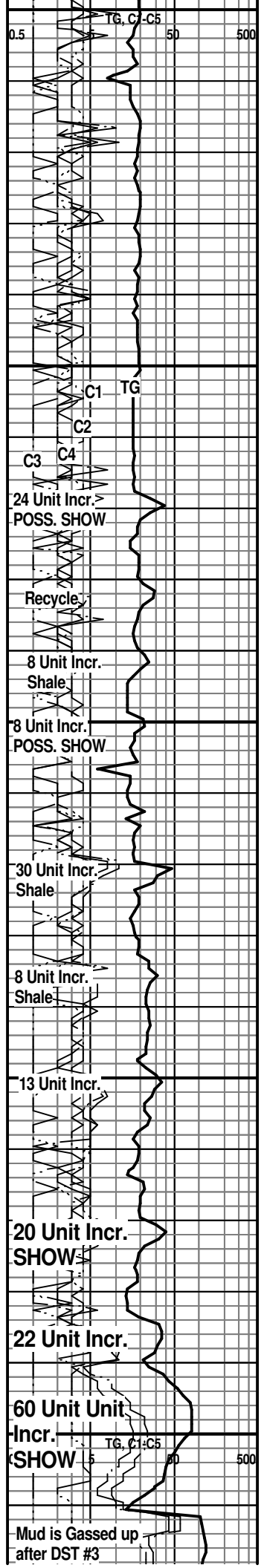
SH; varic, grn, rust red, maroon, yel, w/weath lmst, some varic cht, trc med gr rnd qtz ss

**MISSISSIPPI CHERT 4792(-2585)**

CHT; wh, fresh and tripolite, frags w/scat weathered bands w/vug por, med brn spotted to occ even oil stn, SSFO, faint oil/gas odor, scat med to brite yel fluor, gas bubbles

**DST #3: Miss. Chert 4796' - 4811'**

CHT; wh, fresh and trip, much med to brite yel fluor, SFO, scat frags and vuq por, gd odor, few gas bubbles.



Vis 53 Wt. 9.3  
WL 8.8 CI 5000  
PH 10.5 LCM 1#

conn

Vis 80  
Wt. 9.2  
LCM 1#

conn

CFS. at RTD.

4850

4900

4950



bands of well weathered cht-SFO

CHT; wh, pred fresh, scat vug por, occ dk brn stn, no odor, abnt varic sandy shales and occ varic. cherts

LM: med red brn, hd, cherty ip, some nodular, weathered/oxidized, tite

**KINDERHOOK SHALE 4840(-2633)**

SS; wh, occ grn, f gr qtz, fri ip, clusters, fair intergran por, occ glau, subrnd, no fluor, no stn or odor, ns.

SH; med gy grn, platy, sandy ip, scat grn vf to f gr qtz ss strngs

**KINDERHOOK SAND 4870(-2663)**

SS; wh, clr, pale grn, all f gr qtz, clusters, fri, fair to gd intergran por, trc glau, subrnd to subang gr, calc cmt, no fluor, no stn or odor, barren, ns.

SS; lt gy, wh, pale grn, f gr qtz, clusters, some v. hd - siliceous, most fri w/fair to gd intergran por, occ glau, no fluor, no stn or odor, barren, ns.

RTD. 4900' at 7:15 AM. 4/22/12

LTD. 4896'  
Halliburton DIL, NEU/DEN w/PE,  
Microlog, MIRL

NOTE: This log was shifted upward by 3 to 5' for correlation purposes with the Halliburton LOGS.

