

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Coolhand #1-26
Location: 1666' FNL & 335' FWL, Sec. 26-T33S-R26W, Meade Co., KS.
Licence Number: 15-119-21344-0000 Region: Wildcat
Spud Date: 7/23/2013 Drilling Completed: 8/17/2013
Surface Coordinates: 1666' FNL & 335' FWL, Sec. 26-T33S-R26W

Bottom Hole Same as above
Coordinates:
Ground Elevation (ft): 2284' K.B. Elevation (ft): 2295'
Logged Interval (ft): 4350' To: 7500' Total Depth (ft): 7500'
Formation: Arbuckle FM. at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 2990'; Chemical Gel 2990' to 7500'

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OPERATOR

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GEOLOGIST

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Cores

None Taken

DSTs

DST #1(Pawnee) 5284' - 5317'(Corrected Depths to LOG) Test Times 15"-45"-45"-90" IFP Weak 0.5" Blow, FFP Strong Blow BOB/13", No Blowback on SI's; REC: 465' Gas in Pipe, 35' GOCM(6%G, 6%O, 88%M), no water; IFP 18-21#, ISIP 1121#, FFP 21-32#, FSIP 1810# and building, IHP 2564#, FHP 2557#, BHT 119 Deg. F.

DST #2(Miss. Chester/Chester 'C') 5683' - 5736'(Corrected Depths to LOG) Test Times 15"-45"-30"-60" IFP Weak Blow built to 1.5", FFP Weak 1.5" Blow building to 2", no Blowback on SI's; REC: 35' Gas in Pipe, 25' Drlg. Mud, no oil shows; IFP 31-27#, ISIP 101#, FFP 27-31#, FSIP 90#, IHP 2776#, FHP 2705#, BHT 119 Deg. F.

DST #3(Miss. Spergen) 6345' - 6395'(Straddle packer test) (Corrected Depths to LOG) Test Times 15"-45"-30"-90" IFP Strong Blow Gas to Surface/8", BOB Blowback in 31" on ISIP; FFP Gas to Surface throughout Max. Gas Gauge 230.7 MCFG(20# on 0.5" Choke) that decreased to 163.2 MCFGPD after 30" of FFP; REC: 155' GCMW(5%G, 20%W, 75%M), 310' MSW(5%M, 95%W) CI 98,000, Mud 3500; IFP 145-302#, ISIP 2230#, FFP 154-222#, FSIP 2233#, IHP 3100#, FHP 3105#, BHT 140 Deg. F.

Comments

7/23/13 MIRU Koda Drilling, set 91'(KB) of 20" Conductor; 8/2 through 8/3/13 MIRU Sterling Drilling Rig #2, Spud 12 1/4" Hole at 2:30 AM. on 8/3/13 - Drilling at 411'; 8/4/13 TD. 1408' - WOC; 8/5/13 Drilling at 1906'; 8/6/13 Drilling at 2990'; 8/7/13 Drilling at 3770'; 8/8/13 Drilling at 4920'; 8/9/13 Drilling at 5214'; 8/10/13 TD. 5321' - TOH with DST #1; 8/11/13 Drilling at 5538'; 8/12/13 TD. 5740' - TIH/CCH - Lost Circ.; 8/13/13 Drilling at 5794'; 8/14/13 TD. 6444' - CFS; 8/15/13 TD. 6444' - TIH after DST #3; 8/16/13 TD. 6950' - CFS; 8/17/13 Drilling at 7445' - RTD. 7500' at 9:50 AM., LTD. 7500'; 8/18/13 RTD. 7500', LTD. 7500' - LDDP; 8/19/13 Running 5 1/2" Production Casing - PD. at 10:30 AM.

20" Conductor set at 91'(KB) with 9.5 Yards Grout + 8 sx. of Cement. New 8 5/8"(24#) Surface Casing set at 1403' with 480 sacks of Cement(Basic Energy Services). Cement did Circulate. PD. 4:45 AM. 8/4/13.

Set new 15.5#(17#) Production Casing at 7388' w/300 sx. of "Loeb Blend" cement(Basic Energy Services). PD. at 10:30 AM. 8/19/13. Set Port Collar at 2609'.

Surveys: 0.50 Degree at 1408'(Surface Casing); 1.0 Deg. at 5050'(Bit Trip); 1.75 Deg. at 5321'(DST #1); 0.75 Deg. at 5740'(DST #2); 0.75 Deg. at 6444'(DST #3); 1.0 Deg. at 7500' RTD.

Pipe Strap at 5050'(Bit Trip): Strap 0.92' Short to the Board, no correction made to the Board.

NOTE: While drilling the Surface Hole with 12 1/4" bit, a gas pocket was encountered from 565' and continued while drilling until approx. 690' that blew gas, mud and water from the hole.

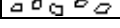

****Encountered a significant 75 Unit Gas kick in the upper Hollenberg Porosity zone from a Drilling Break from 2488' - 2500' Drillers Depths. Gas kick recycled also.****





LOG TOPS: Hollenberg Porosity 2481(-186), Heebner Shale 4380(-2085), Toronto 4396(-2101), Lansing 4556(-2261), Stark Shale 5053(-2758), BKC 5161(-2866), Marmaton 5178(-2883), Pawnee 5297(-3002), Cherokee Shale 5356(-3061), Atoka 5514(-3219), Morrow Shale 5616(-3321), Miss. Chester 5636(-3341), St. Genevieve 5921(-3626), St. Louis 6021(-3726), Spergen 6354(-4059), Cowley 6788(-4493), Viola 7112(-4817), Simpson Shale 7304(-5009), Simpson Sand 7354(-5059), Arbuckle 7378(-5083).





After review of the Halliburton Logs, DST data, samples and positive shows of commercial amounts of Hydrocarbons, the operator elected to set new 5 1/2"(17#) Production Casing for completion in the Spergen, Chester and Pawnee Zones. A Port Collar was set at 2609' for completion at a later date in the Hollenberg porosity zone.

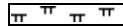

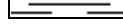

NOTE: This log was shifted upward by 2' to 4' for correlation purposes with the Halliburton LOGS.



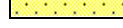

ROCK TYPES

| | |
|--|------|
|  | Anhy |
|  | Bent |
|  | Brec |
|  | Cht |

| | |
|---|-------|
|  | Clyst |
|  | Coal |
|  | Congl |
|  | Dol |

| | |
|---|------|
|  | Gyp |
|  | Igne |
|  | Lmst |
|  | Meta |

| | |
|--|-------|
|  | Mrlst |
|  | Salt |
|  | Shale |
|  | Shcol |

| | |
|---|-------|
|  | Shgy |
|  | Sltst |
|  | Ss |
|  | Till |

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclrag
- 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

- Siltstrg
- 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

INTERVAL

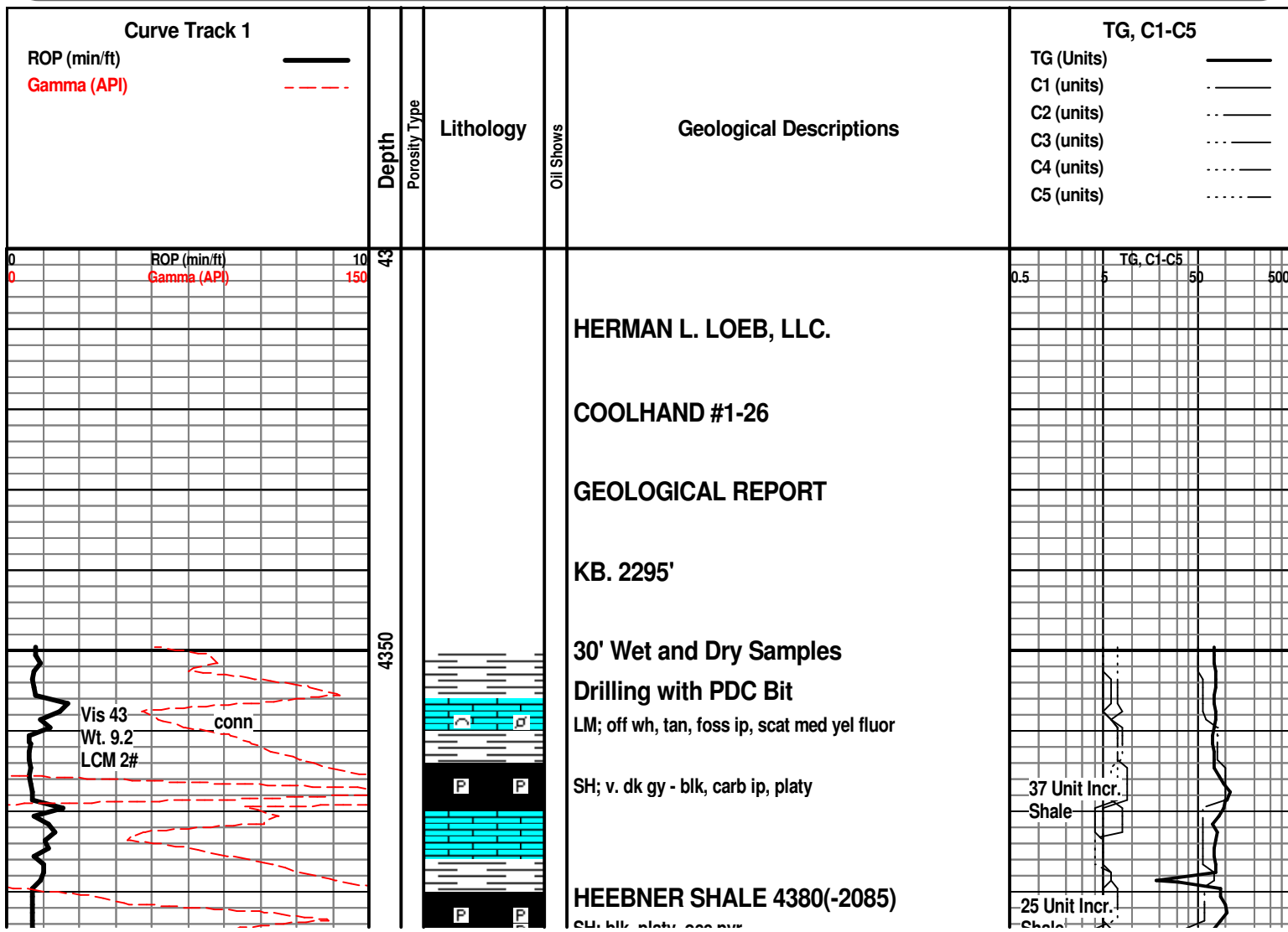
- Core
- Dst

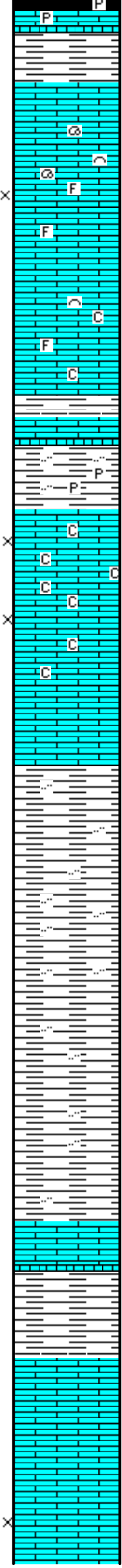
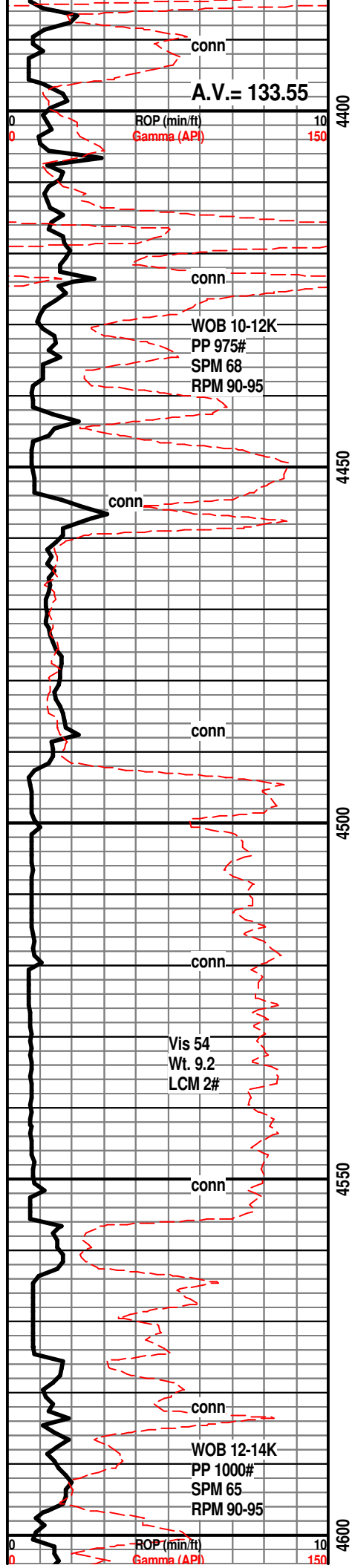
EVENT

- Rft
- Sidewall

OIL SHOW

- Even





SH; blk, platy, occ pyr

TORONTO 4396(-2101)
LM; lt to med brn, dense, blocky, occ pyr

LM; lt to med brn, hd, most blocky, tite

LM; wh, off wh, tan, scat foss mat, most well cem, scat lt to med yel min fluor, poor interpart por, no stn, ns.

LM; tan, off wh, scat foss mat, minor chalky mtx, lt to occ med yel min fluor, no stn or odor, ns.

SH; lt to med gy, pyr ip, occ silty

LM; wh, off wh, fxln w/scat cse spar calc xtals, fair interln por, minor soft chalky mtx, lt yel to wh min fluor, no stn or odor, ns.

LM; off wh, tan, fxln, most dense, scat chalky mtx, trc off wh cht, lt yel/wh min fluor, no stn, ns.

SH; med gy, silty ip, platy

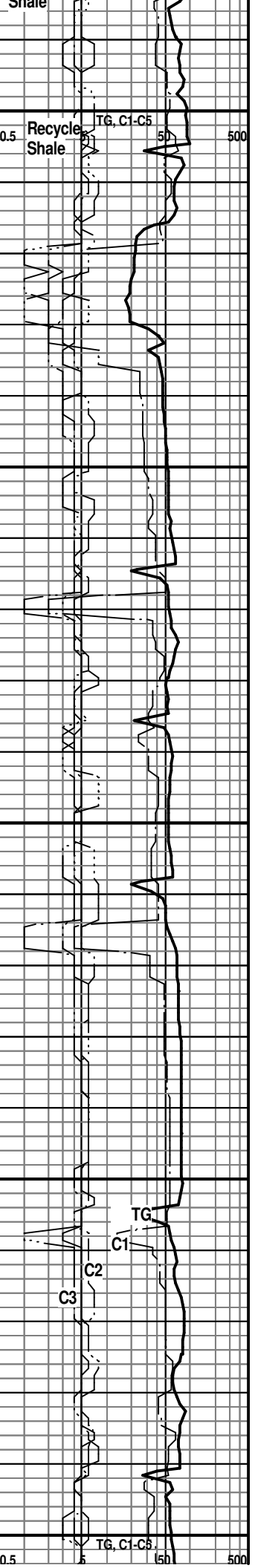
SH; med gy, occ gy grn, silty, platy

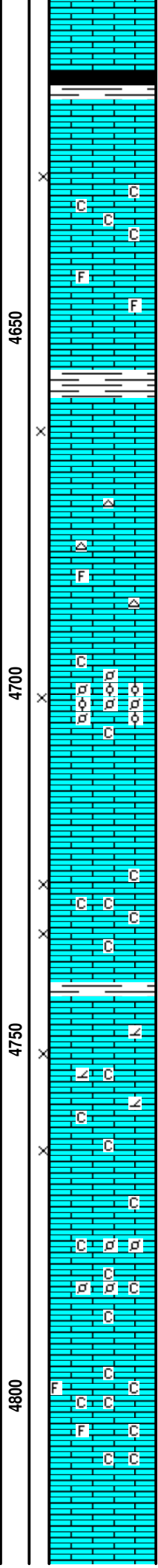
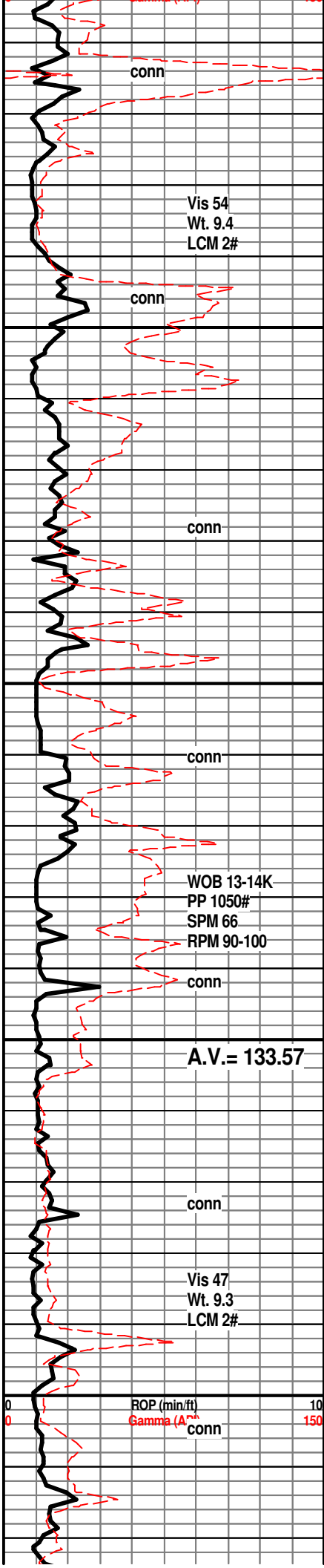
LANSING 4556(-2261)
LM; med brn, dense, scat well cem foss mat, no vis por, ns.

SH; grn, gy gyn, platy

LM; lt to med brn, blocky ip, scat hd dense micritic lmst, rare tan/amber cht, no vis por, ns.

LM; tan to lt brn, fxln to micritic, blocky, trc poor interln por, no fluor, ns.





SH; blk, platy, firm

LM; off wh, tan, buff, f to med xln, poor to fair interxln por ip, minor chalky mtx, lt yel/wh min fluor, no stn or odor, ns.

LM; off wh, lt gy, buff, med xln w/scat spar calc xtals, fair interxln por, lt to occ med yel min fluor, no vis stn, no gas kick, ns.

LM; off wh, tan, cream, foss w/scat finely pelletal/partly oolitic lmst, fair interpart por, soft chalky mtx ip, lt yel min fluor, no stn or odor, no gas kick

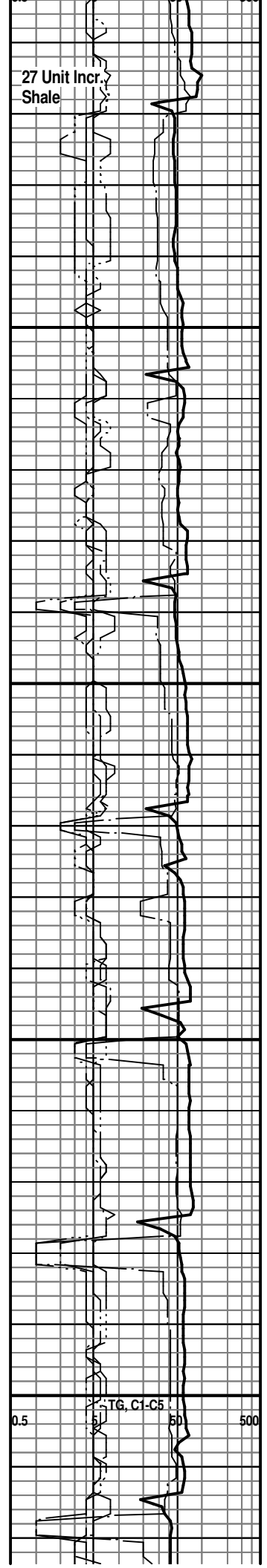
LM; tan to cream, buff, f to med xln, much soft chalk and chalky mtx, fair interxln por, dull to lt yel min fluor, no stn, ns.

LM; tan to lt brn, gran text ip, partly sucrosic, interbdd soft med xln chalky lmst, fair interxln por, dull yel min fluor, no stn, ns.

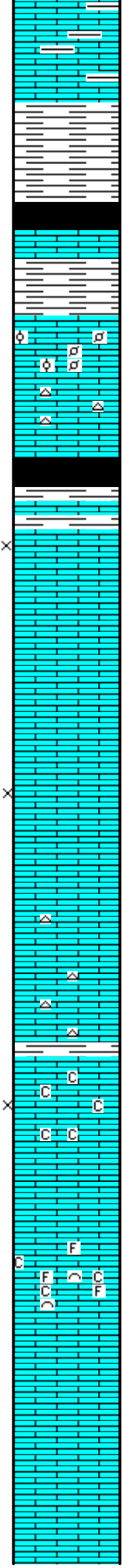
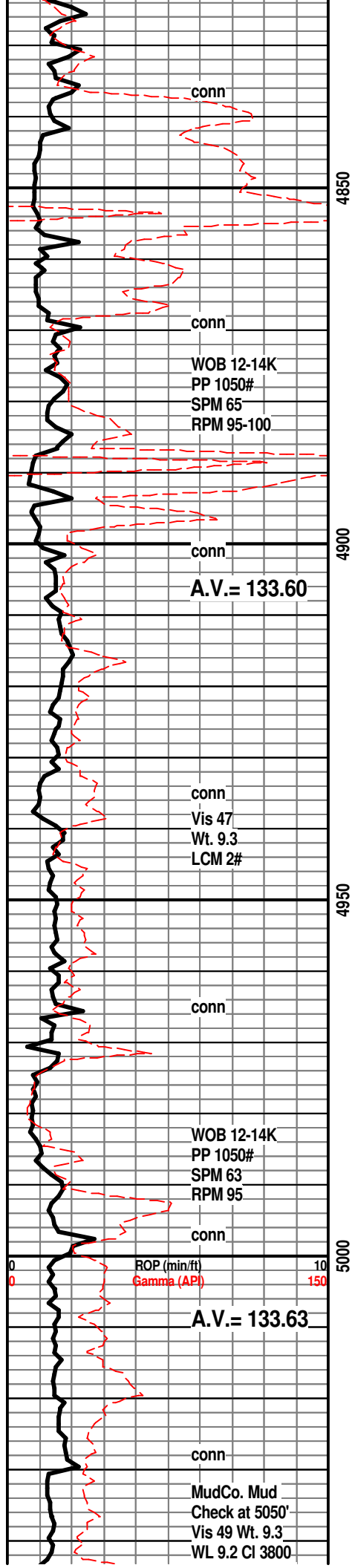
LM; off wh, wh, tan, foss w/scat fine pelletal lmst, much soft chalky and chalky mtx, rare dull yel min fluor, no stn, ns.

LM; wh, off wh, fxln w/fair interxln por, abnt soft chalk and chalky mtx, interbdd foss lmst, no fluor, no stn or odor, ns.

27 Unit Incr. Shale



0.5 TG, C1-C5 50 500



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

SH; med gy, grn, some dk gy, platy

SH; v. dk gy - blk ip, platy, smooth

LANSING/K.C. 'H' 4868(-2573)

LM; tan to lt brn, foss ip w/scat well cem small pellets and ooids, no vis por, hd, occ tan cht, no fluor, ns.

SH; blk, carb ip, soft

LM; wh, off wh, f to med xln, gd interxln por, soft, dull yel fluor, no stn, no gas kick, ns.

LM; lt gy, gran to med xln, fair interxln por, no stn or odor, no gas kick, ns.

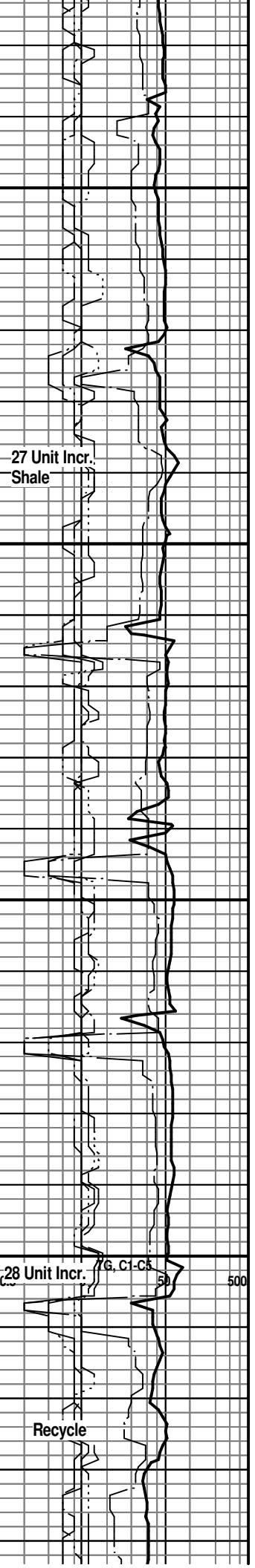
LM; tan to lt gy, lt brn, most micritic, hd, scat tan/off wh cht, no vis por, ns.

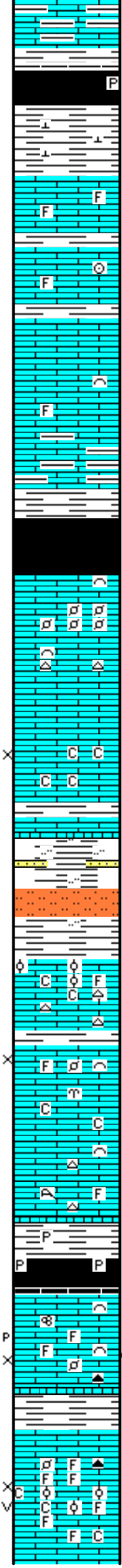
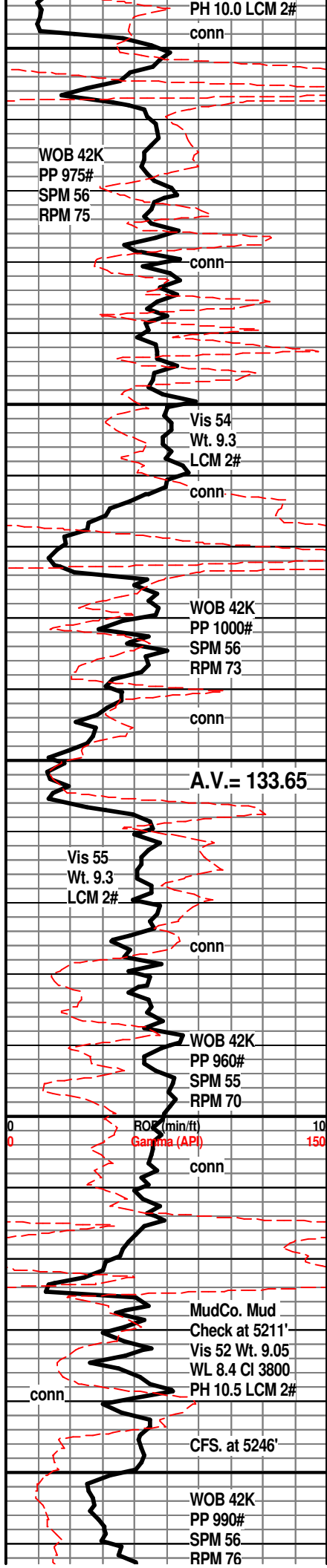
LM; wh, off wh, f to med xln, gd interxln por, occ soft chalky mtx, dull to lt yel/wh min fluor, no stn, no gas kick, ns.

LM; tan to off wh, fxln w/scat foss mat, trc poor interpart por, minor soft chalky mtx, spotty lt yel fluor, no stn or odor, no sample shows

LM; tan to off wh, buff, fxln to dense, most w/no vis por, no fluor, ns.

LM; med to dk brn, gy grn, blocky, argil ip w/interbdd dk gy lmy shale





BIT TRIP AT 5050'

STARK SHALE 5053(-2758)

SH; blk, carb ip, rare pyr, soft

SH; med to dk gy, calc, firm

LM; lt to med brn, foss ip, most well cem, blocky, no vis por, no fluor, ns.

LM; tan to buff, lt brn, foss w/interbdd fxln to partly sucrosic text, poor/no vis por, dull yel fluor, ns.

LM; dk gy, argil, dense, interbdd dk gy shale

SH; blk, carb, gassy w/gas odor, blocky

HERTHA 5124(-2829)

LM; tan to lt brn, foss, scat finely pelletal lmst, most well cem, no vis por, v. dull yel min fluor, no stn, scat lt/med brn cht, ns.

LM; tan to off wh, buff, f to med xln, soft, interbdd chalky mtz, fair interxln por, v. dull yel min fluor, no stn or odor, no gas kick, ns.

BASE KANSAS CITY 5161(-2866)

SH; lt gy, grn, silty w/interbdd slitst, pyr ip, trc vf gr qtz ss strng.

MARMATON 5178(-2883)

LM; tan to cream, off wh, foss w/scat oolites and foss hash, most well cem, minor chalky mtz, scat lt brn/tan cht, no vis por, no stn or odor, no gas kick

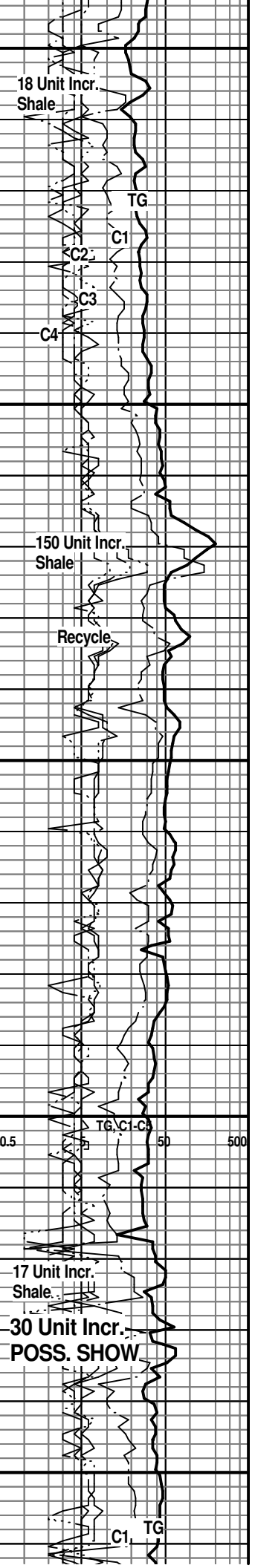
LM; tan to buff, lt brn, foss ip, most fxln, trc poor interxln por, minor soft chalky mtz, dull yel/wh min fluor, no stn or odor, no gas kick, ns.

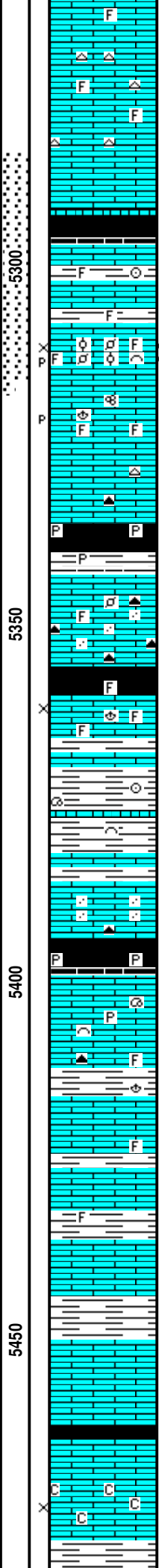
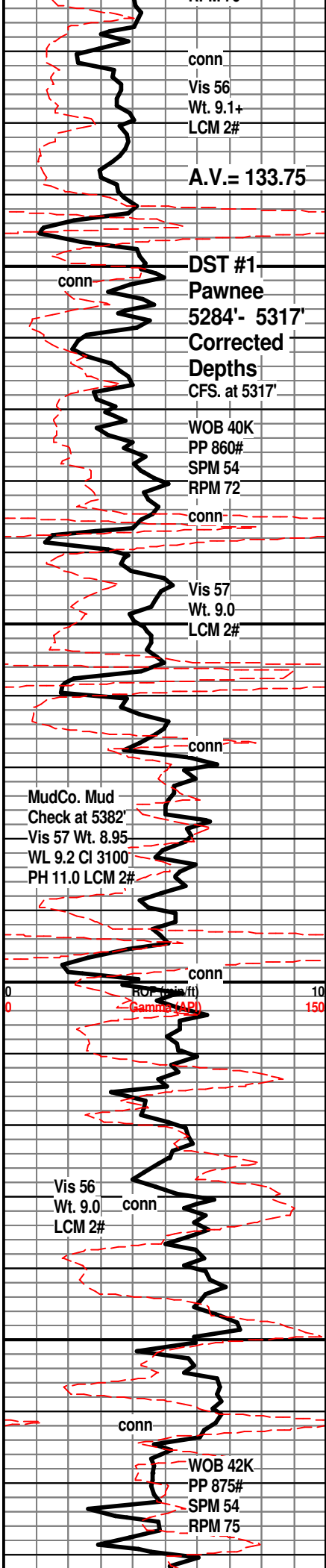
SH; dk gy - blk, platy, occ pyr

NOVINGER ZONE 5225(-2930)

LM; tan to lt brn, buff, foss ip, poor interpart w/scat p-p por, trc light clr oil droplets, few pcs w/bleeding gas, med to occ brite yel/wh fluor, faint odor, fair to gd cut in few pcs, thin zone that looks tite

LM; tan to cream, off wh, foss w/gd interpart and scat vug por, rarely oolitic, occ soft chalky mtz, lt yel/wh min fluor, no stn or odor, no gas kick, ns.





LM; tan to lt brn, buff, fxln to micritic, much dense tite lms, interbdd brn to amber/gy spicular cht, minor soft chalky mtx, no vis stn, no odor, ns.

SH; blk, carb ip, platy, trc gas
PAWNEE 5297(-3002)

LM: lt to med brn, dense, micritic, blocky, tite, interbdd grn occ foss shales
 LM; tan to cream, foss to med xln, fair/occ gd interxln w/scat p-p por, spotted/even lt brn stn, trc gassy FO, gd odor, med/brite yel fluor, fair to gd cut

DST #1: Pawnee 5284' - 5317'(Corrected Depths to LOG)

LM; off wh, cream, tan, foss ip w/spotty p-p por, few pcs. w/lt brn oil stn, v. faint odor(could be slough from zone above), scat med yel fluor, most dense, occ cherty

SH; blk, carb, occ pyr

LM; med brn, foss ip, scat smoky to dk brn cht, no vis por, dull yel min fluor, no stn or odor, interbdd hd gritty tite lms, ns.

CHEROKEE SHALE 5356(-3061)

SH; blk, blocky, trc gas, trc foss.
 LM; med brn, foss w/trc poor interpart por, lt yel min fluor, no stn or odor, ns.

SH; med gy, grn, v. firm, calc w/interbdd hd dk gy/gy brn lms strngs, foss ip

LM; med brn, dense, some gritty text - sandy ip, most dense, no vis por, no fluor, ns.

SH; blk, carb ip, occ pyr, gassy

LM; lt to med brn, scat foss mat, most well cem, blocky, rare spar calc xtals, minor pyr, no vis por, dull yel min fluor, ns.

SH; med gy, platy, foss ip.

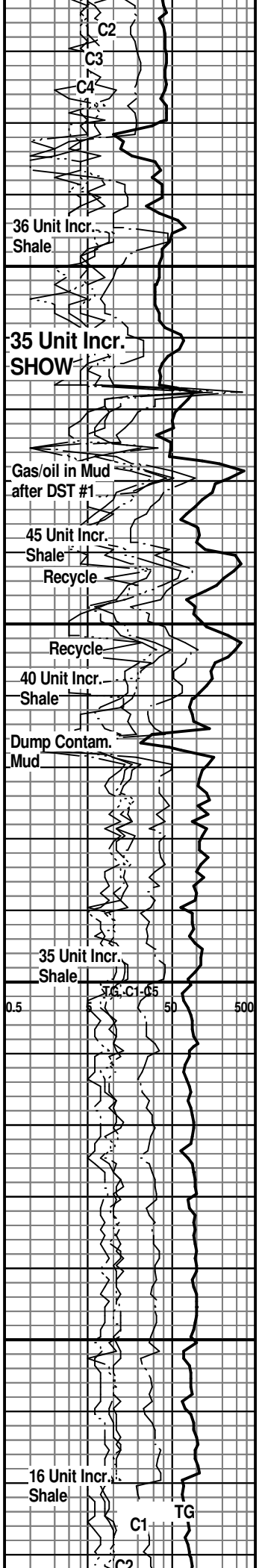
LM; med to occ dk brn, foss ip, interbdd med to dk gy shales, tite

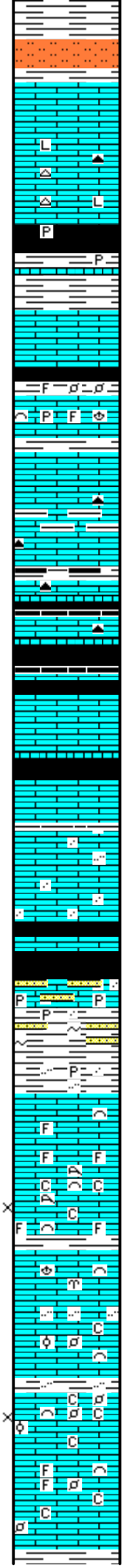
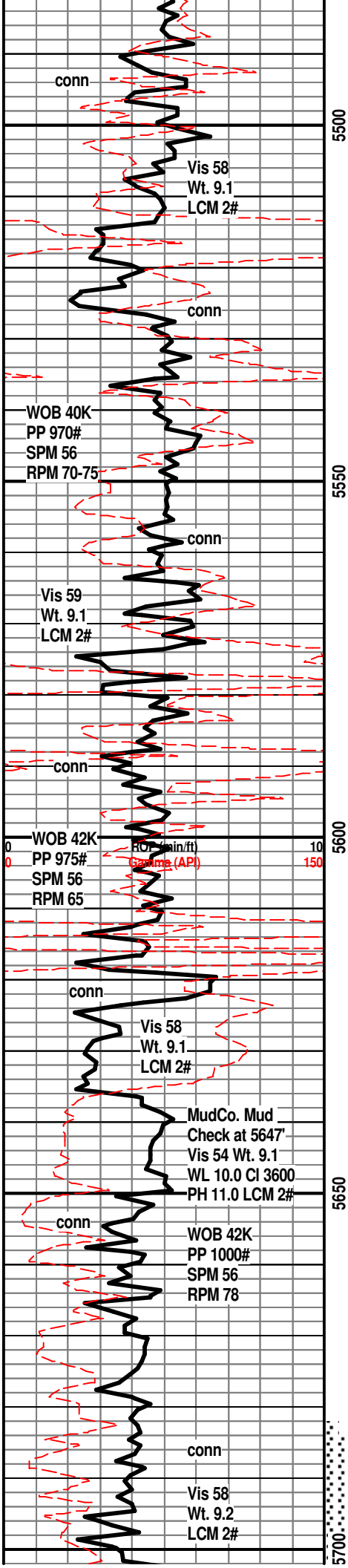
LM; tan to lt brn, fxln, most dense - micritic, blocky, no vis por, ns.

LM; tan to buff, lt brn, micritic, no vis por, ns.

SH; dk gy - blk, platy

LM; tan to off wh, buff, med xln w/interbdd soft chalky mtx, fair interxln por, dull yel min fluor, no stn or odor, no gas kick





SH; med to dk gy, sandy to silty, interbdd sltst, v. firm

LM; med brn, dense, some litho, hd, rare brn to smoky cht, tite

ATOKA 5514(-3219)

SH; dk gy - blk, platy, occ pyr, interbdd hd shaly lmt strng.

LM; med brn, most micritic, blocky, no vis por, no fluor, ns.

SH; dk gy - blk, foss - small pellets, firm

LM; med brn, foss ip, blocky, rare pyr, tite

LM; med brn, gy brn, argil ip, most dense, micritic, no vis por, no fluor, rare brn/amber cht, ns.

SH; dk gy, blk, platy

LM; med to dk brn, dk gy, dense, micritic, rare smoky/brn cht

SH; blk, carb ip, platy

LM; med to dk gy, rare dk gy brn, dense, tite

SH; dk gy - blk, platy

LM; med to dk brn, dk gy, hd, interbdd thin grn shale strngs, tite

LM; med to dk brn, dense, some gritty to sandy text, no vis por, no fluor, ns.

MORROW SHALE 5616(-3321)

LM; med/dk gy, sandy, v. hd, pyr ip, no vis por, no fluor, interbdd v. lmy tite ss, ns.

SH; med gy, soft - fiss, occ dissem pyr, interbdd vf to f gr qtz argil ss strng w/trc glau, no clean ss dev, ns.

MISS. CHESTER 5636(-3341)

LM; med brn, cse xln, scat cse foss frags and spar calc xtals, lt yel/wh fluor, no stn, ns.

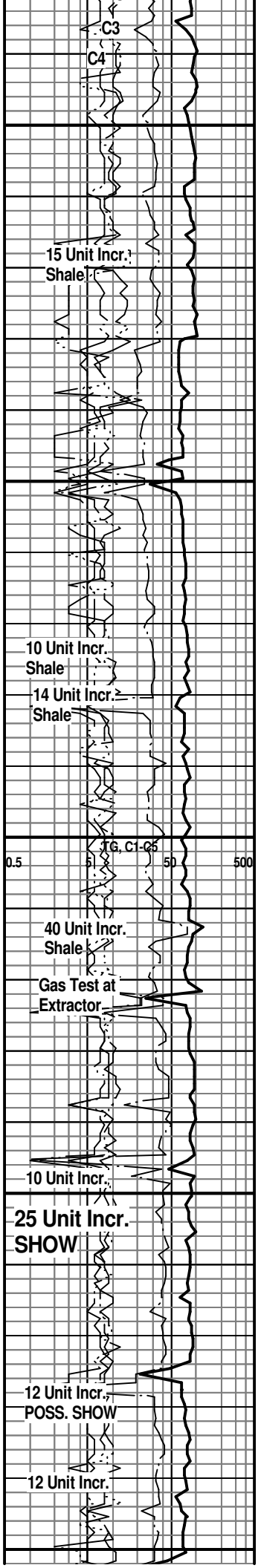
LM; lt brn, cse xln w/scat foss frags - few corals, med yel fluor, trc gas bubbles, poor/fair interxln por, no vis stn/odor, no cut, chalky mtx

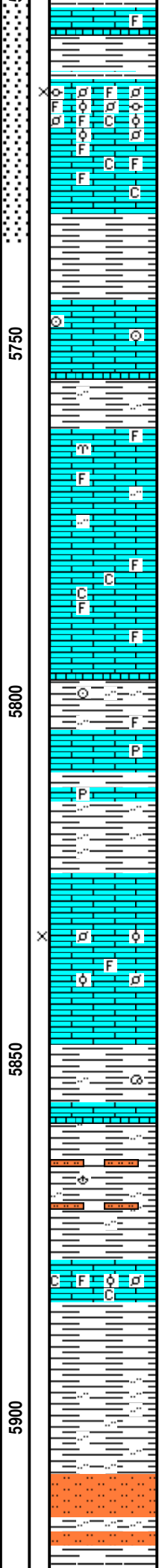
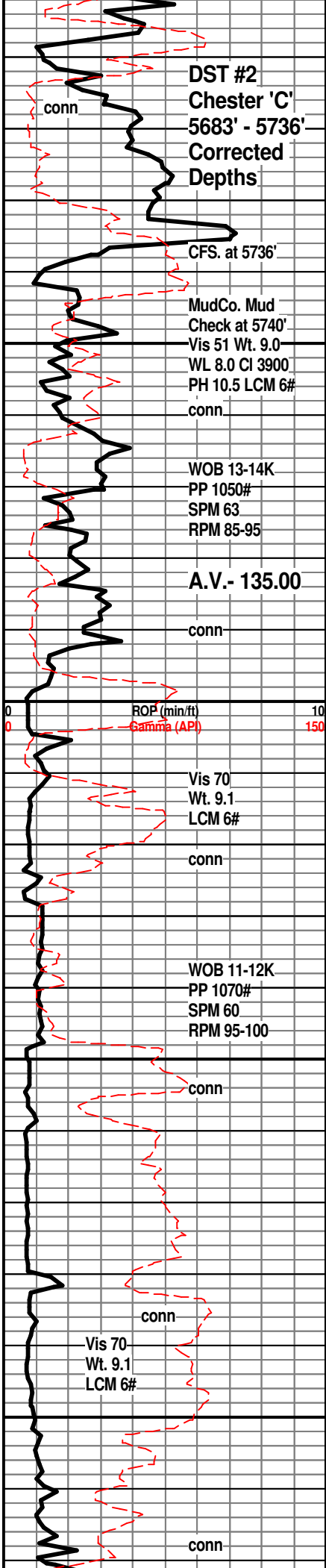
LM; med brn, gy brn, scat cse xln w/foss frags, well cem, dull yel fluor, no vis por, ns.

SH; grn, silty, platy

LM; off wh, tan, buff, med to cse xln w/abnt foss frags, scat pellets and ooids, partly chalky mtx, lt/med yel fluor, scat poor to fair interxln por, no vis stn, trc gas bubbles, no odor

LM; med gy, med gy brn, argil ip, foss - well cem, no vis





LM; med gy, med gy brn, argil ip, foss - well cem, no vis por, dull to lt yel fluor, no stn, ns.

SH; med gy, v. soft, fiss

CHESTER 'C' ZONE 5713(-3418)

LM; tan to lt brn, v. foss w/cse foss fragments and oolites/pellets, loosely cem, fair interpart por, med yel fluor, faint gas odor, sev. gas bubbles visible, no oil stn, no cut - gas show

LM; tan to lt brn, foss, most well cem, minor soft chalky mtx, lt yel fluor, no vis stn, tite

**DST #2: Chester 'C' 5683' - 5736'
Corrected Depths to LOG**

NOTE: Drilling with PDC bit

LM; lt brn, foss ip(crinoids), dense, argil ip, tite

SH; med gy, gy brn, grn, trc blk, platy, occ silty

LM; tan to lt brn, med to occ cse xln, most dense, foss ip, dull yel fluor, ns.

SAMPLES VERY FINE - GROUND UP

LM; tan to lt gy, buff, fxln w/scat foss mat, most well cem, minor chalky mtx, interbdd micrite, dull to lt yel fluor, no stn or odor, no gas kick, ns.

SH; med gy, soft, platy, occ foss

LM; tan to lt brn, off wh, fxln to dense, scat pyr, hd, tite

SH; med gy, gy grn, silty ip.

POOR SAMPLES - GROUND UP

LM; tan to cream, buff, med xln w/abnt foss mat, trc poor interxln por, dull to occ lt yel fluor, no vis stn, no gas kick, ns.

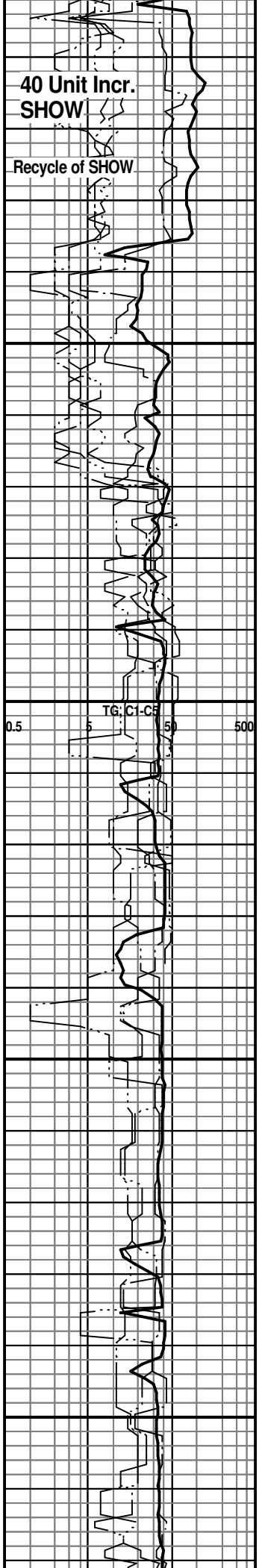
SH; med gy, gy grn, foss, soft ip, platy

SH; med gy, gy grn, fiss, occ silty w/interbdd sltst.

LM; tan to off wh, lt brn, cse xln w/abnt foss mat, pellets and oolites, soft chalky mtx ip, dull yel fluor, no stn or odor, ns.

SH; gy grn, some bright sea grn, silty ip, platy

SLTST; grn, gy grn, some lmy ip, most soft



WOB 11-13K
PP 1075#
SPM 62
RPM 98

conn

5950

conn
MudCo. Mud
Check at 5986'
Vis 60 Wt. 8.9
WL 11.6 Cl 3400
PH 9.0 LCM 4#

ROP (min./ft)
Gamma (API)

10
150

6000

conn

WOB 13-15K
PP 950#
SPM 60
RPM 98

conn

6050

conn

Vis 59
Wt. 9.0
LCM 6#

A.V.= 135.15

6100

conn



ST. GENEVIEVE 5921(-3626)

LM; lt gy, pale gy grn, sandy, interbdd hd grn sandy
lmst, no vis por, no fluor, interbdd grn to gy grn
nodular lmst, ns.

LM; off wh, wh, sandy w/scat small rnd carb pellets, f gr
qtz embdd in dense mtx, no vis por, v. dull yel to no
fluor, no stn, ns.

SLTST; grn, sandy ip, trc grn vf gr qtz argil ss, no clean
ss.

LM; off wh, wh, lt to med gy, v. sandy w/vf to f gr qtz in
dense lmst mtx, no vis por, no fluor, ns.

SH; varic, platy, sandy ip.

LM; off wh, lt gy, sandy to occ finely pelletal, trc small
oolites in dense mtx, no vis por, no stn, ns.

LM; off wh, wh, lt gy, sandy ip, scat small pellets and
ooids, minor chalky mtx, no fluor, no stn, ns.

SH; grn, gy grn, platy, smooth

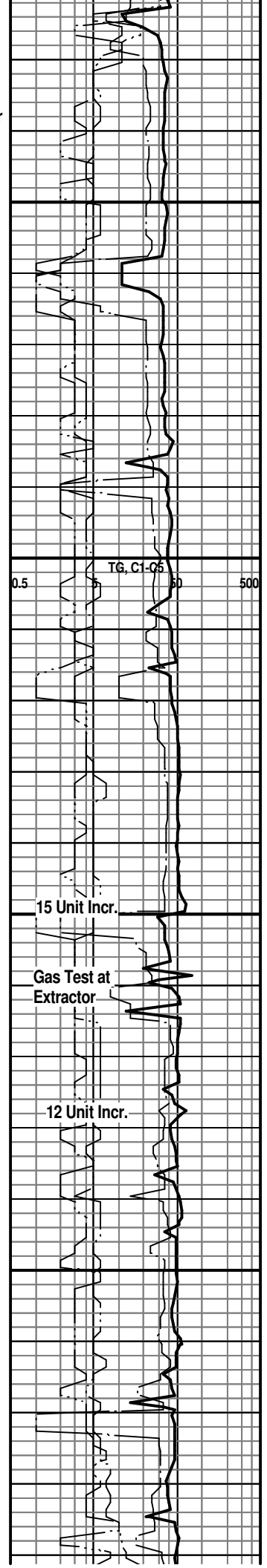
ST. LOUIS 6021(-3726)

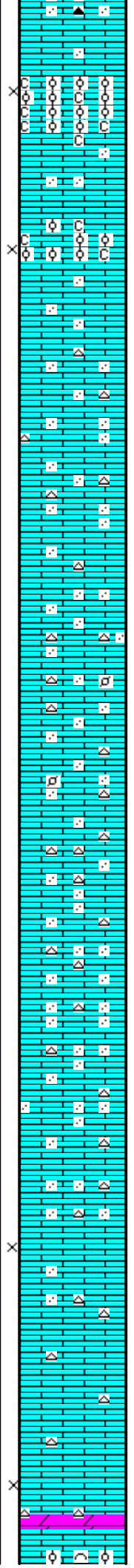
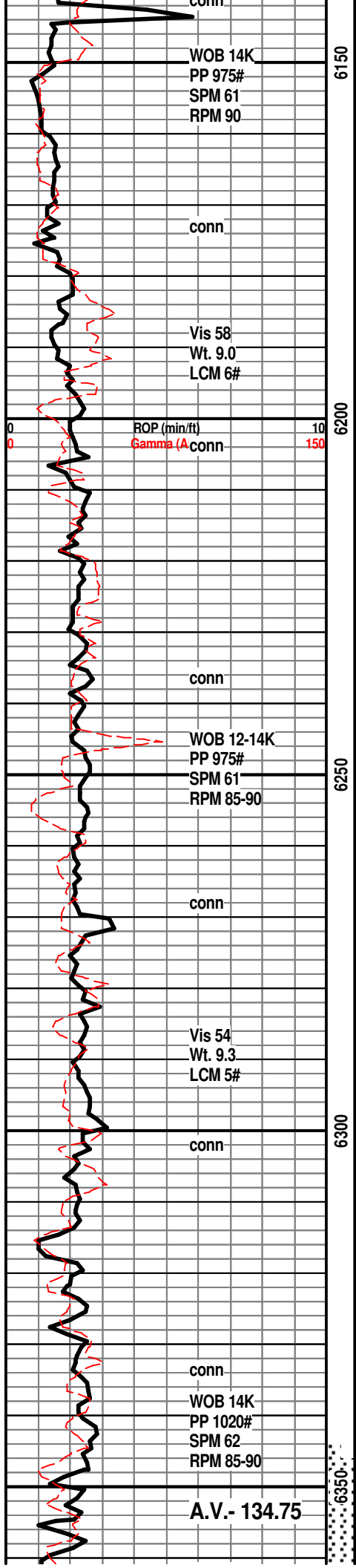
LM; tan to buff, off wh, sandy w/vf gr qtz in dense mtx,
trc opaque to org cht, well cem, no vis por, no fluor, no
stn or odor, ns.

LM; tan to lt brn, sandy to finely pelletal, abnt vf to f gr
qtz in mtx, rare small to med size oolites/pellets - well
cem, scat dull yel min fluor, no stn or odor, ns.

LM; off wh, lt gy, tan, sandy w/interbdd rnd small carb
pellets, minor chalky mtx, scat dull yel fluor, no stn or
odor, ns.

LM; wh, off wh, oolitic, med size oolites, weakly cem,
fair interpart por, much soft chalky mtx, v. dull yel min
fluor, no stn or odor, no gas kick, ns.





fluor, no stn or odor, no gas kick, ns.

LM; tan to lt brn, oolitic, most w/med size oolites, partly chalky mtx, fair interpart por, no fluor, no stn or odor, no cut, no sample shows

LM; tan to lt brn, most sandy w/vf to f gr qtz in mtx, well cem, no vis por, interbdd opaque to lt gy cht, no fluor, ns.

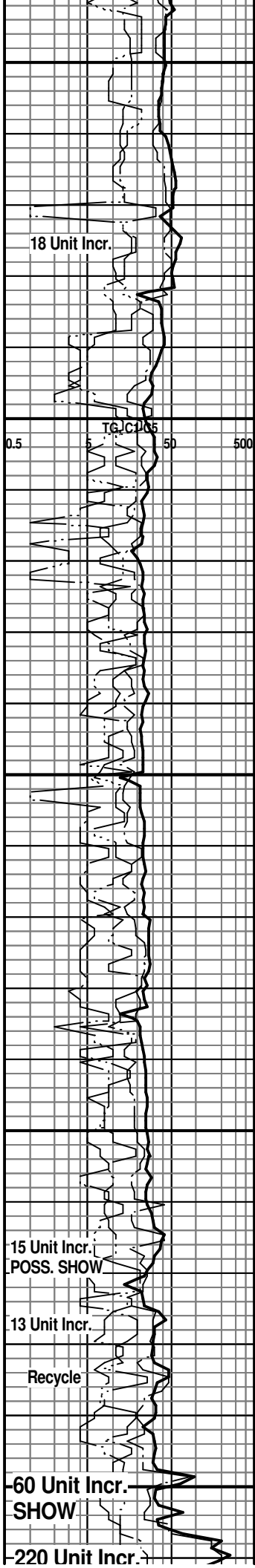
LM; tan to lt brn, most dense, sandy w/rare small rnd carb pellets, interbdd lt gy to opaque fresh cht, no vis por, ns.

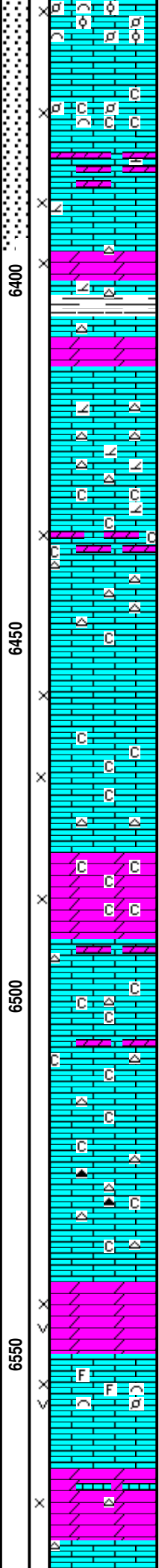
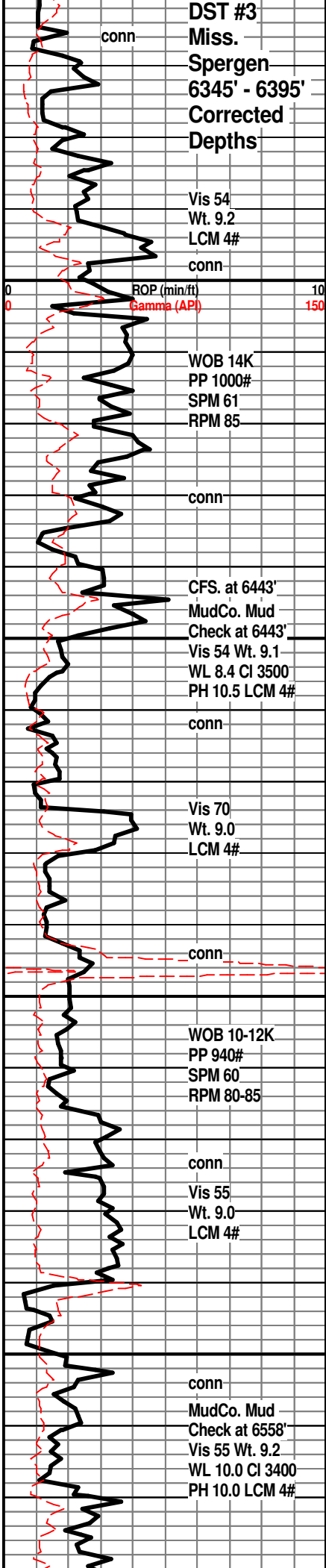
LM; lt brn, occ med brn, sandy throughout, most dense, blocky, no vis por, scat lt gy to off wh cht, tite

LM; tan to lt gy, sucrosic, poor to fair interxln por, v. dull yel fluor, no stn or odor, no vis gas bubbles, ns.

LM; lt to med brn, most micritic, dense, scat tan to off wh cht, no vis por, ns.

MISS. SPERGEN 6354(-4059)
DOL; lt gy, sucrosic, lmy ip, fair interxln por, dull yel fluor, poss gas bubbles, no cut, no odor





LM; lt brn, highly foss, many pellets, ooids and scat hash, gd interpart por, lt yel fluor, sev. gas bubbles, v. faint gas odor, no cut - gas show only

LM; lt brn, foss/partly dolomitic, some v. chalky soft, dull to lt yel fluor, fair to gd interpart por, trc gas bubbles no vis stn, no cut, no odor

LM; tan, cream, dolomitic ip, fair interxln por, lt to rarely med yel fluor, no odor, poss gas bubbles, no cut

DST #3: Miss. Spergen 6345' - 6395'(Straddle Test) Corrected Depths to LOG

LM; lt brn, tan, f/xln w/scat sucrosic text, interbdd dolo and dolomitic lmst, cherty w/gy and opaque cht, scat lt yel fluor, no vis stn, poor to no vis por, ns.

LM; tan to off wh, med xln to sucrosic text, chalky ip, partly dolomitic, fair interxln por, lt yel fluor, no stn or odor, no gas kick, ns.

LM; lt brn, gy brn, off wh, med xln w/scat chalky mtx, partly dolomitic, fairly soft, poor to fair interxln por, no fluor, ns.

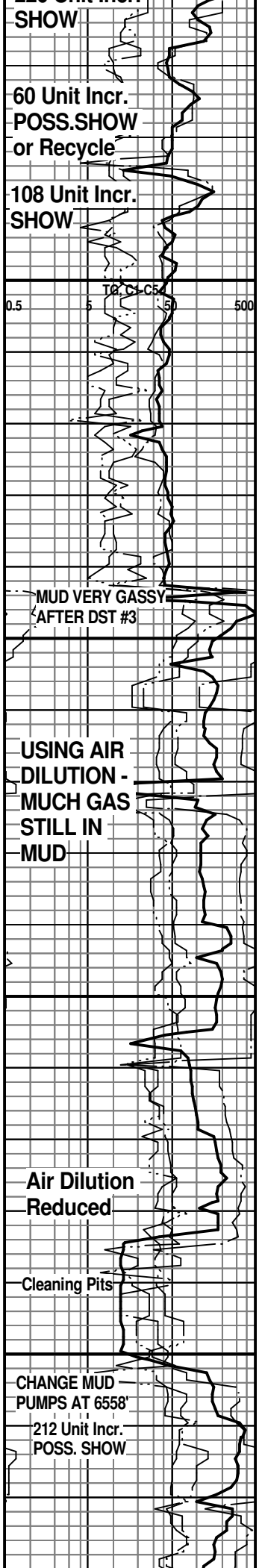
DOL; tan to off wh, lt brn, f to med xln w/much chalk and chalky mtx, partly dolomitic, poor to fair interxln por, interbdd wh to off wh cht, dull yel fluor, no vis stn, no odor, ns.

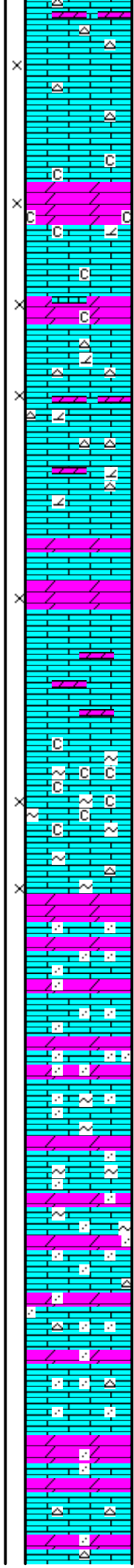
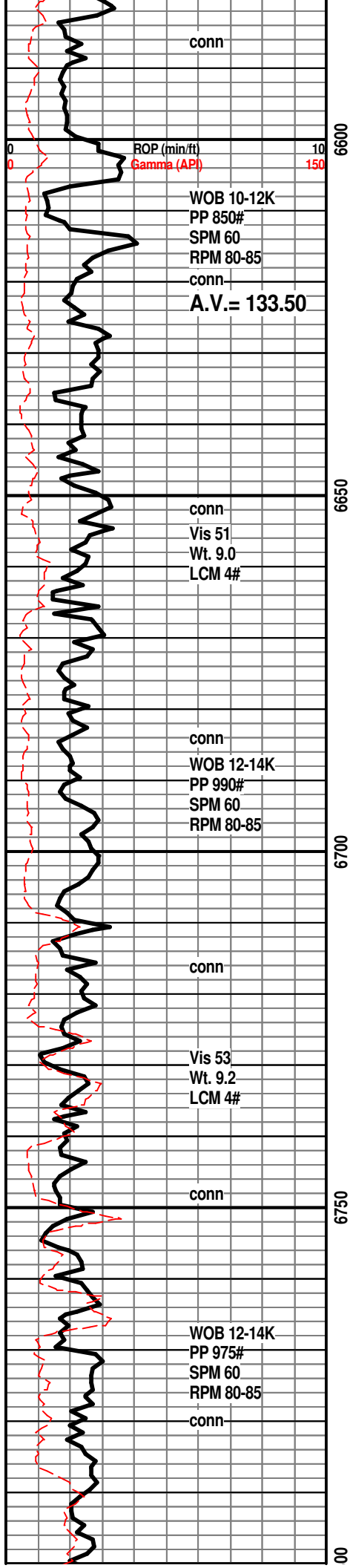
LM; tan to buff, off wh, med xln w/chalky mtx, scat wh to amber/specked chert, no vis por, v. dull yel min fluor, no stn or odor, ns.

DOL; lt brn, sucrosic, soft, gd interxln por, dull yel fluor, occ vug por, questionable gas bubbles, no odor, no oil stn, no cut

LM; off wh, foss, fair interpart and vug por, lt yel fluor, no vis stn, no odor

DOL; lt gy, lt brn, sucrosic, fair to gd interxln por, strks of dolomitic lmst, dull yel fluor, no stn or odor, no vis gas bubbles, no sample shows





LM; tan to lt brn with gy strks, interbdd dolomitic lmst, dull yel to no fluor, scat off wh to gy cht, poor to fair interxln por, no stn or odor, ns.

DOL; off wh, wh, tan, med xln w/much chalk and chalky mtz, fair interxln por, some v. soft, interbdd dolomitic lmst, dull yel fluor, no stn, ns.

LM; off wh, buff, tan, rarely lt gy, dolomitic, interbdd sucrosic dolomite, cherty ip, poor to fair interxln por, scat lt gy to off wh cht, dull yel/wh min fluor, no stn or odor, ns.

DOL& LM; off wh to lt gy, sucrosic, firm, limy, interbdd dolomitic lmst, most tite w/poor intergran por, lt to med yel min fluor, no stn or odor, ns.

LMY DOLO; off wh, lt gy, med xln w/interbdd sucrosic dolomitic lmst, some soft w/poor interxln por, lt to med yel min fluor, no stn or odor, ns.

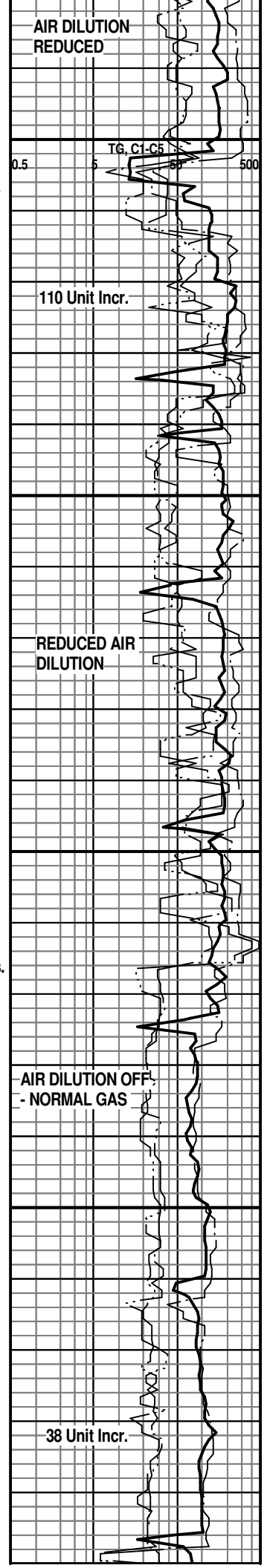
LM; off wh/wh, lt gy, med xln, abnt soft chalk and chalky mtz, partly dolomitic, scat grn clay(glau?) inclusions, poor to fair interxln por, dull to lt yel fluor, ns.

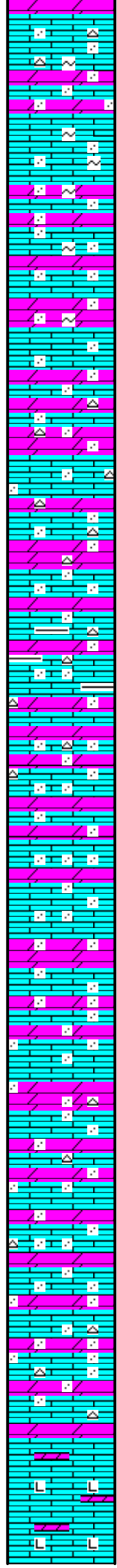
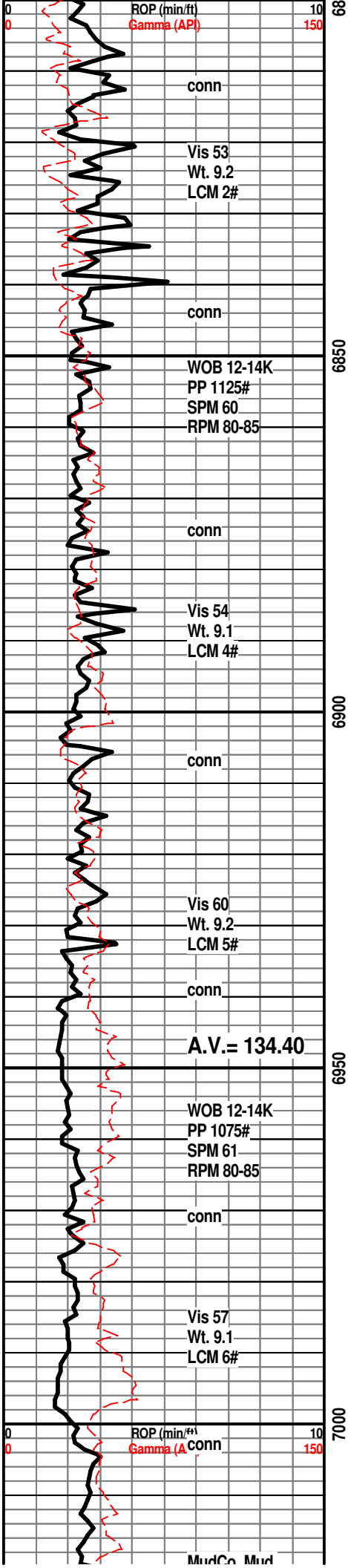
LMY DOLO; med gy, hd, gritty text, most dense, scat opaque spar calc xtals, dull yel min fluor, no vis por, ns.

LM; med gy, rare lt gy, most dense, interbdd dolo. lmst w/abnt grn glau clay inclusions, no vis por, dull to occ lt yel min fluor, ns.

MISS. COWLEY 6788(-4493)

LMY DOLO; med gy brn, gritty, interbdd dolo. lmst, cherty ip, dense, dull to lt yel min fluor, ns.





LMY DOLO; med gy, occ dk gy, rare gy brn, gritty text, interbdd med xln lmy dolo. w/scat grn glau inclusions, dull yel min fluor, ns.

LMY DOLO; med gy, rare lt gy, hd, gritty text, no vis por, rare grn glau inclusions, dull to occ lt yel fluor, ns.

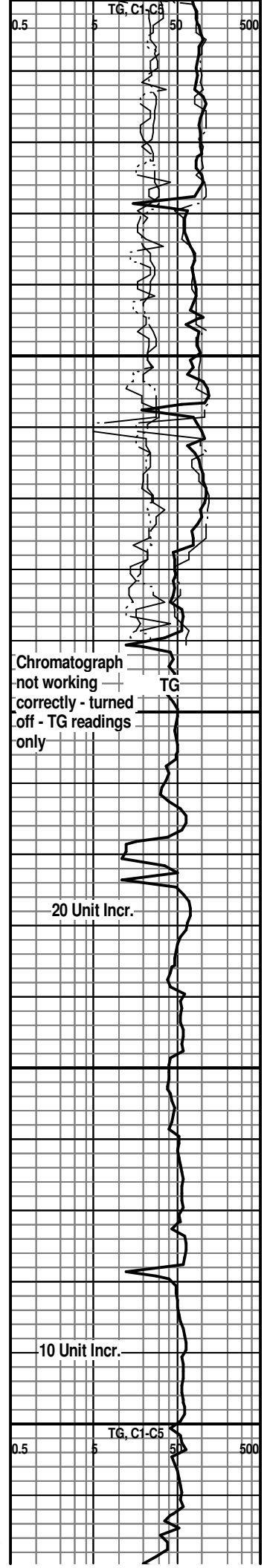
LMY DOLO; med gy brn to dk gy, gritty, interbdd dolo. Imst - some argil, hd, blocky, rare off wh cht, tite

LMY DOLO; med to dk gy brn, dk brn, gritty text, interbdd hd dolo. Imst, scat lt gy cht, dull yel min fluor, no stn or odor, ns.

LMY DOLO; med to dk gy, gy brn, gritty text, interbdd dolo. Imst, dense, no vis por, dull yel min fluor, no stn or odor, no gas kick

LMY DOLO; med to dk brn, occ gy brn, dense, gritty, occ tan to brn cht, no fluor, no vis por, ns.

LM; med to dk brn, hd, blocky, less sandy to gritty text, decr. dolomitic content, dense, some nealy litho, no vis por. no fluor. ns.



Induc. Mud
Check at 7023'
Vis 65 Wt. 9.1
WL 9.2 CI 2700
PH 9.5 LCM 4#
conn
WOB 10-12K
PP 1075#
SPM 61
RPM 80-85

Vis 60
Wt. 9.2
LCM 4#
CFS. at 7069'

WOB 12K
PP 1100#
SPM 61
RPM 80-85

conn

Vis 60
Wt. 9.1
LCM 4#
conn

CFS. at 7155'

conn

WOB 12-14K
PP 1050#
SPM 60
RPM 80

conn

ROP (min/ft) 10
Gamma (A) Vis 59 150
Wt. 9.1
LCM 4#

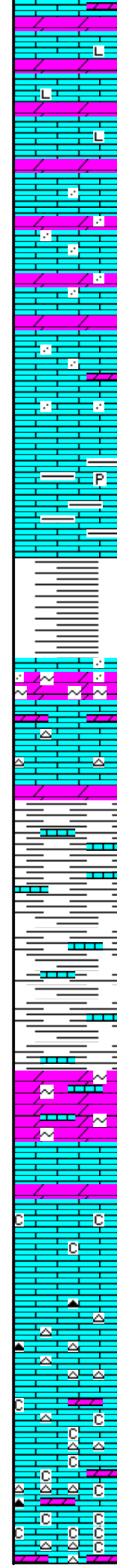
conn

7050

7100

7150

7200



LM; med to dk brn, dolomitic, some gritty text, blocky, hd, no vis por, trc lt brn dolomite, no stn or odor, no gas kick, ns.

LM; med to dk brn, gy brn, rarely to not dolomitic, argil w/interbdd shaly lmst, rarely pyr, no vis por, no fluor, ns.

SH; yel, grn, maroon, platy to flakey

VIOLA 7112(-4817)

LM; lt gy, gy grn, gritty ip, most dense, interbdd tan/lt gy dolomite w/glau incl, dull yel to no fluor, no vis por, ns.

LM; tan to lt gy/grn, hd, partly dolomitic, most dense, no vis por, scat dove gy cht, no fluor, ns.

SH; med to dk gy, v. firm, dolomite and lmst. sloughing, some v. lmy

SH; varic to dk gy, lmy, platy, hd

DOL; lt to med gy, sucrosic, glau ip, firm, poor to fair interxln por, no fluor, no stn, ns.

LM; tan to buff, lt brn, med xln ip, partly dolomitic, scat chalky mtx, interbdd lt to dove gy cht, dull yel min fluor, no stn, ns.

LM; off wh, tan, wh, f to med xln, partly dolomitic, much soft chalky mtx, abnt opaque/off wh and dove gy cht, dull yel min fluor, poor interxln por, no stn or odor, no gas kick, ns.

DOL; med brn, sucrosic, fair interxln por, lt vel min

TG

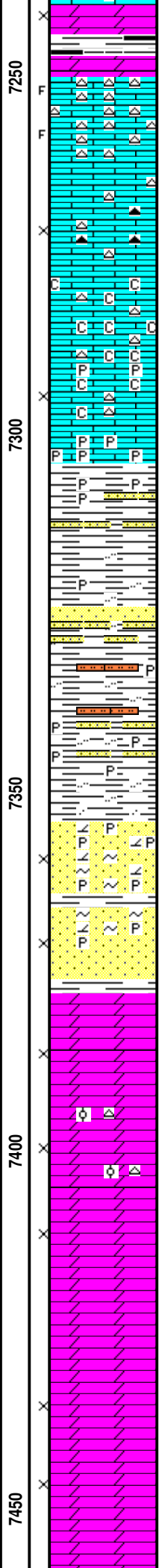
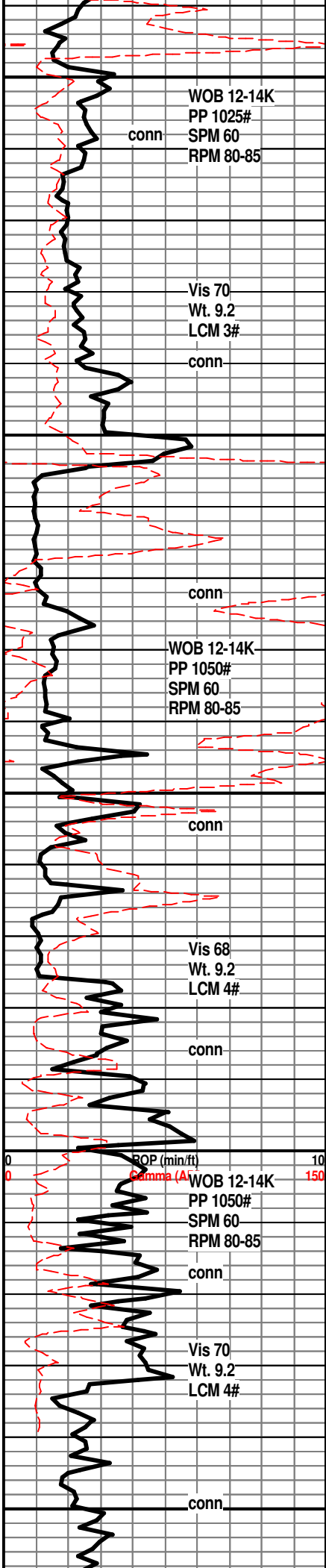
Chromatograph working again.

TG, 21-C

0.5

50

500



fluor, soft ip, no stn or odor, ns.

SH; dk gy, trc blk, platy

LM; off wh, wh, tan, med xln w/abnt wh/off wh fresh cht, some fracs vis, no stn or odor, no gas kick, ns.

LM; med brn, occ dk brn, sucrosic, firm, poor to fair interxln por, scat gy to dk brn cht, dull to occ lt yel min fluor, no stn or odor, ns.

LM; wh, off wh, f to med xln, chalky, strngs of hd pyr, poor to fair interxln por, cherty ip, dull yel min fluor, no stn or odor, ns.

SIMPSON SHALE 7304(-5009)

SH; grn, sea grn, some turquoise grn, pyr ip, interbdd sltst and vf gr qtz ss, platy, no clean ss dev., no fluor, ns.

SH; sea grn, some turquoise grn, silty to sandy w/strngs of vf to f gr qtz ss, pyr ip, platy

SIMPSON SAND 7354(-5059)

SS; lt gy, clr, brn, partly dolomitic, most med gr qtz, subrnd to subang, clusters, pyr ip, some "salt and pepper" gr w/dk gy/blk and grn clay incl, fair intergran por, no fluor, no stn/odor, ns.

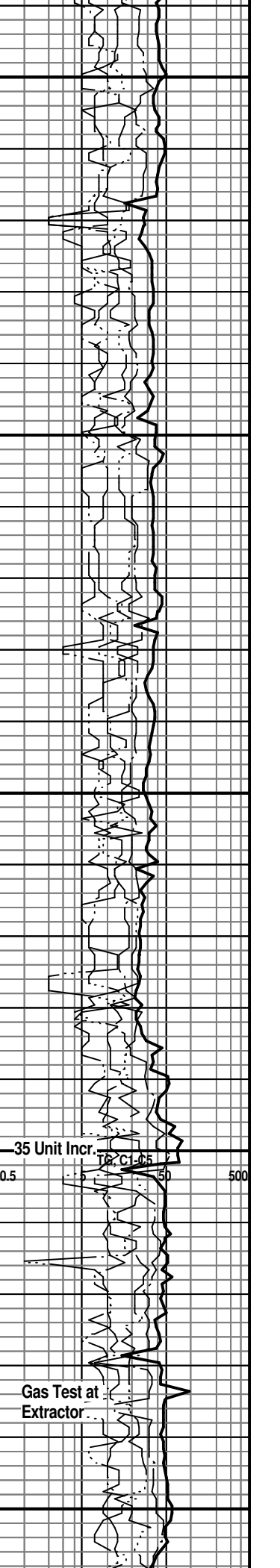
SS; clr, lt gy, most med gr qtz, rnd to subrnd gr, fair to gd intergran por, cleaner ss at base, no fluor, no stn, no gas kick, ns.

ARBUCKLE 7378(-5083)

DOL; tan to cream, buff, finely rhombic, compact w/poor interxln por, med yel min fluor, no stn or odor, no gas kick, ns.

DOL; tan to buff, sucrosic, lmy ip, fairly tight, med yel min fluor, few pcs of wh oolitic cht, poor to no vis por, no stn or odor, ns.

DOL; tan to buff, lt brn, sucrosic to occ finely rhombic, med to occ brite yel min fluor, poor to fair interxln por, ns.



WOB 14-15K
PP 1000#
SPM 58-60
RPM 80-85

MudCo. Mud
Check at 7489'
Vis 70 Wt. 9.2
WL 9.2 Cl 2000 PH
9.0 LCM 4.5#

CFS. at' RTD.



DOL; tan, off wh, lt brn, sucrosic to finely rhombic, fair to occ gd interxln w/scat vug por, med yel min fluor, occ wh cht, some lmy hd dolomite, no stn or odor, no gas kick, ns.

DOL; tan to buff, lt brn, f to med rhombic, scat fair vug por, rare off wh to wh cht, med yel min fluor, no stn or odor, no gas kick, ns,

RTD. 7500' at 9:50 AM. 8/17/13

LTD. 7500'

Halliburton DIL, NEU/DEN w/PE,
Microlog, Sonic

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

7500

7550