

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Unruh #3-33
Location: 615' FSL & 516' FWL, Sec. 33-T27S-R18W, Kiowa County, KS.
Licence Number: 15-097-21712-0000 Region: Einsel Field
Spud Date: 12/27/2011 Drilling Completed: 1/5/2012
Surface Coordinates: 615' FSL & 516' FWL, Sec. 33-T27S-R18W

Bottom Hole Same as above
Coordinates:
Ground Elevation (ft): 2200' K.B. Elevation (ft): 2211'
Logged Interval (ft): 3900' To: 4900' Total Depth (ft): 4900'
Formation: Kinderhook at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3236'; Chemical Gel 3236' to 4900'

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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') 4216' - 4232' Test Times 15"-45"-30"-60" IFP Weak 0.5" to 2.5" Blow, FFP Weak 1.5" Blow, no Blowback on SI's; REC: 70' Gas in Pipe, 10' Mud w/oil Specks, no water; IFP 18-22#, ISIP 885#, FFP 24-30#, FSIP 976#, IHP 2120#, FHP 2110#, BHT 113 Deg. F.

DST #2(Mississippi Chert) 4762' - 4815' Test Times 15"-45"-20"-100" IFP Very Strong Blow Gas to Surface in 4.5 Min., Gauged Max. 334 MCFG., FFP Flowline plugged with mud/cuttings/LCM - replaced flowline - Reopened surface valve with a Strong Gas Blow and OIL TO SURFACE - Shut in tool, unload oil and gas. Drop bar and reverse circulate oil to pits. REC: 4625' CGO(44%G, 56%O) (API 36.2 Deg.), 120' GO CM(22%G, 23%O, 55%M), No Water; IFP 727-927#, ISIP 1409#, FFP 1012-1281#, FSIP 1410#, IHP 2367#, FHP 2343#, BHT 127 Deg. F.

Comments

12/23/11 MIRU Sterling Drilling Co. Rig #2; 12/24 through 12/26/11 Shut Down for Christmas; 12/27/11 Spud at 12:00 PM. ; 12/28/11 TD. 232' - WOC; 12/29/11 TD. 576' - WOC; 12/30/11 Drilling at 1325'; 12/31/11 Drilling at 2460'; 1/1/12 Drilling at 3115'; 1/2/12 Drilling at 3890'; 1/3/12 TD. 4232' - DST #1; 1/4/12 Drilling at 4558'; 1/5/12 TD. 4815' - DST #2, RTD. 4900' at 9:45 PM., LTD. 4898' (Halliburton); 1/6/12 RTD. 4900'/LTD 4898'- Logging, Plans to set 5 1/2" Production Casing

Set new 13 3/8"(48#) Conductor Casing at 230' w/250 sx.(Basic Energy Services). Cement did Circulate. PD. 9:30 PM. 12/27/11.


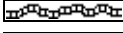
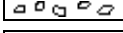
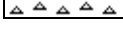
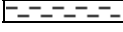







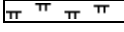

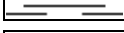
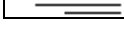
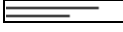


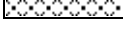
Set new 8 5/8"(23#) Surface Casing at 569' w/350 sx.(Basic Energy Services). Cement did Circulate. PD. 4:30 AM. 12/29/11.

Surveys: 0.75 Deg. at 576'(Surface Casing); 1 Deg. at 4232'(DST #1); 0.75 Deg. at 4815'(DST #2).








































































Pipe Strap at 4232'(DST #1): Strap 0.37' Long to the Board, no correction made to the Board.

After review of the Halliburton Logs, DST data, structural position and positive shows of commercial amounts of hydrocarbons, the operator elected to set new 5 1/2" 15.5# Production Casing for completion in the Mississippian Chert.

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  Hvymn  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff	FOSSIL  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Gastro  Oolite	 Ostra  Pelec  Pellet  Pisolite  Plant  Strom STRINGER  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst	 Sltstrg  Ssstrg TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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OTHER SYMBOLS

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

[V] Vuggy

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

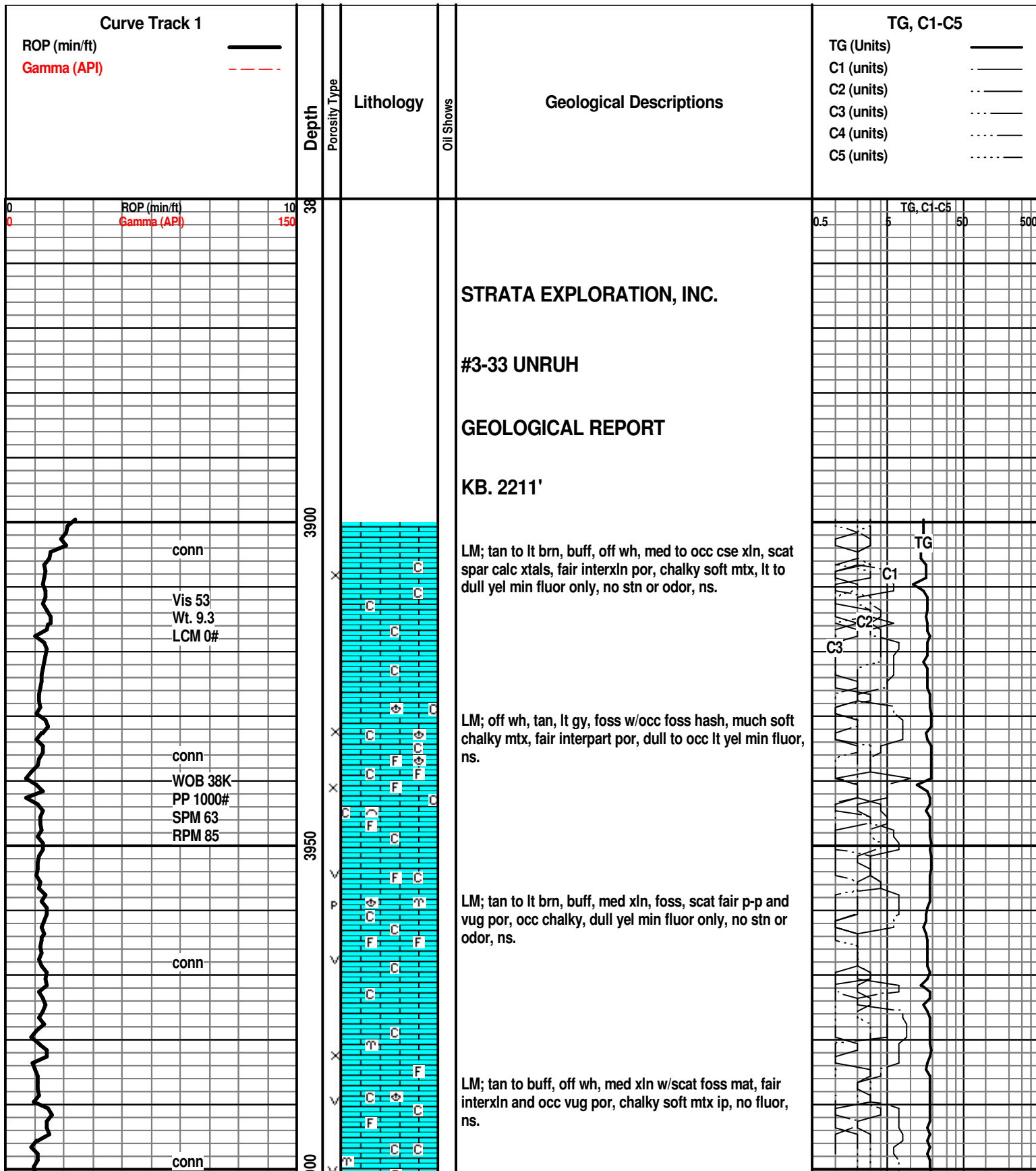
- ROUNDING**
 [R] Rounded
 [r] Subrnd
 [a] Subang
 [A] Angular

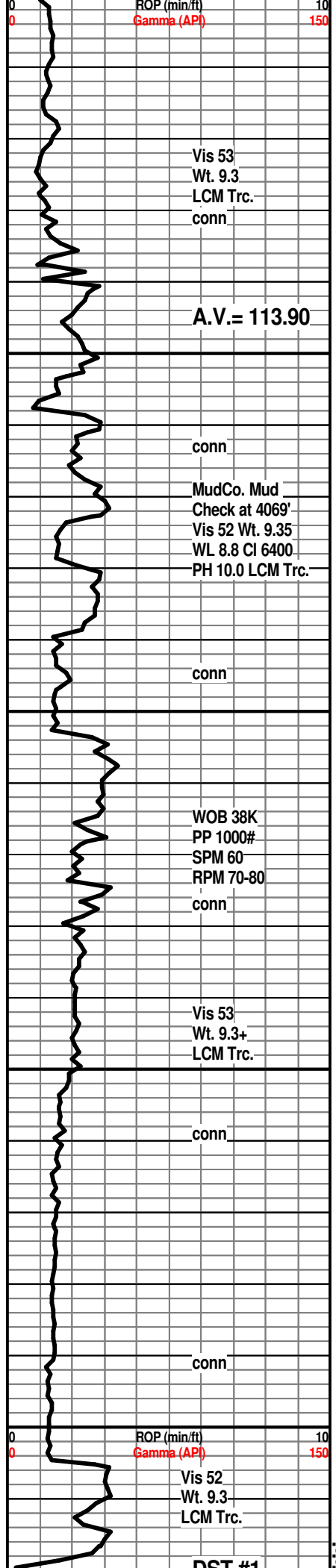
OIL SHOW
 [●] Even

- [●] Spotted
 [○] Ques
 [D] Dead

- INTERVAL**
 [■] Core
 [□] Dst

- EVENT**
 [▽] Rft
 [▲] Sidewall





ROP (min/ft)
Gamma (API)

Vis 53
Wt. 9.3
LCM Trc.
conn

A.V. = 113.90

MudCo. Mud
Check at 4069'
Vis 52 Wt. 9.35
WL 8.8 CI 6400
PH 10.0 LCM Trc.

WOB 38K
PP 1000#
SPM 60
RPM 70-80
conn

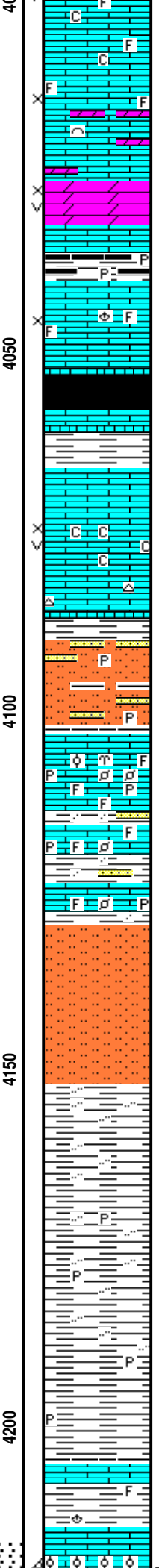
Vis 53
Wt. 9.3+
LCM Trc.
conn

conn

ROP (min/ft)
Gamma (API)

Vis 52
Wt. 9.3
LCM Trc.

DST #1



LM; tan to lt brn, buff, med xln w/scat foss mat, occ soft chalky mtx, interbdd med xln to finely rhombic dolo. lmst, fair interxln por, dull to lt yel fluor, ns.

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

SH; dk gy, trc blk, platy, pyr ip.

LM; tan to lt brn, micritic, foss ip w/fair to poor interpart por, scat cse spar calc xtals, dull yel fluor, no stn or odor, ns.

HEEBNER SHALE 4053(-1842)

SH; blk, carb, trc. gas, some blocky
LM; med brn, hd, micritic

TORONTO 4066(-1854)

LM; med to dk brn, hd, blocky, tite
LM; off wh, lt gy, sucrosic to med xln, soft chalky mtx ip, lt to med yel min fluor, fair interxln w/scat small vug por, no stn or odor, rare off wh/lt gy cht, ns.

DOUGLAS SHALE 4087(-1876)

SLTST; lt gy, sandy ip, mica, interbdd thin vf gr qtz ss strngs, rarely pyr
LM; med to occ dk brn, highly foss ip, most hd - micritic, blocky, lt yel fluor, pry ip, no vis por, no stn or odor, ns.
LM; lt to med brn, foss, occ pyr, hd, blocky, dense
LM; lt to med brn, foss, interbdd sandy sh/shaly ss

SLTST; lt gy, firm, occ mica

SH; lt to med gy, smooth, occ silty

SH; lt to med gy, firm, platy, occ silty, scat pyr

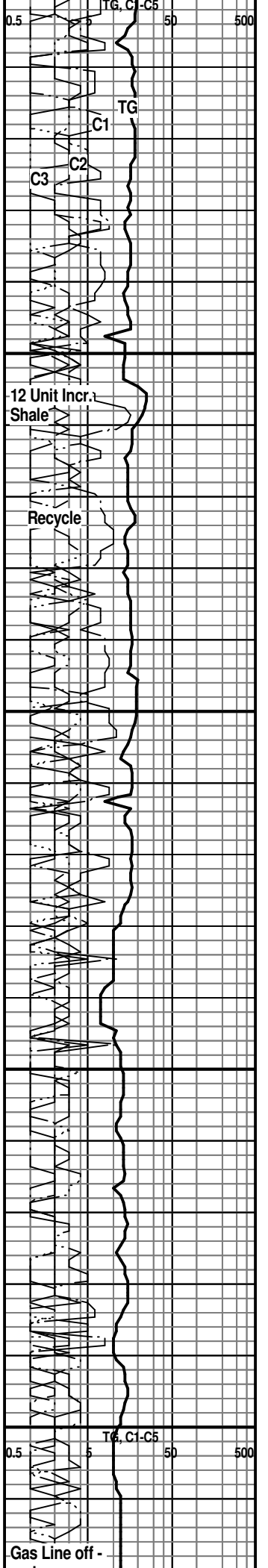
SH; med gy, fiss-flakey, smooth, occ pyr

BROWN LMST. 4205(-1994)

LM; med brn, hd-sharp, micritic, dense
SH; med gy to grn, platy, foss ip.

LANSING 'A' 4214(-2003)

LM; lt brn, tan, foss-oolitic, brittle, gd oomoldic por, scat vug por. med to hrite vel fluor. SSFO. spotted lt brn



TG, C1-C5

Gas Line off

conn
DST #1
Lansing 'A'
4216' - 4232'
 CFS. at 4232'
 MudCo. Mud
 Check at 4232'
 Vis 47 Wt. 9.4
 WL 10.8 CI 7400
 PH 9.0 LCM Trc.

conn
 WOB 38K
 PP 1000#
 SPM 60
 RPM 83

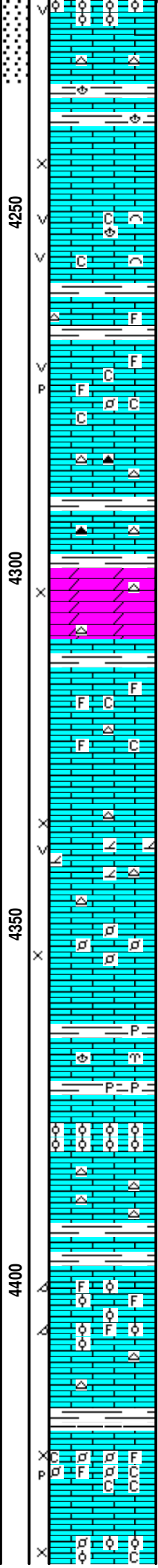
conn
 Vis 55
 Wt. 9.4
 LCM Trc.

conn
 Vis 53
 Wt. 9.4
 LCM 0#

conn
 WOB 40K
 PP 1050#
 SPM 60
 RPM 80

conn
 Vis 50
 Wt. 9.4
 LCM 0#
 conn

CFS. at 4434'



Swat veg por, med to brn yel msh; SPM 60, spotted lt brn stn, faint odor, few gas bubbles, fair cut, gas detector gas line loose - readings not reliable, recycle of gas kick

DST #1(Lansing 'A') 4216' - 4232'

LANSING 'B' 4238(-2027)

LM; off wh, lt gy, med xln, poor interxln por, scat spar mat, interbdd off wh chalky soft lmst, no fluor, no stn or odor, ns.

LM; lt gy, rare tan, med xln, scat well dev. vug por, minor chalky mtx, occ foss, dull yel min fluor only, no stn or odor, no gas kick, ns.

LM; med brn, hd, foss ip, scat gy cht

LM; tan to lt brn, fxln, occ gd p-p and vug por, rare foss mat, interbdd off wh chalky soft lmst, no fluor, no stn or odor, ns.

LM; med brn, buff, most dense, blocky, hd, no vis por, scat tan to amber occ foss cht, ns.

LM; med to dk brn, med xln to micritic, occ cherty, no vis por, ns.

DOL; tan to off wh, rare lt brn, sucrosic to finely rhombic, fair interxln por, trc wh cht, dull yel fluor, ns.

LM; tan to off wh, lt brn, fxln, scat foss mat, most well cem, occ soft chalky mtx, no vis por, no stn or odor, ns.

LM; tan to buff, off wh, fxln to occ sucrosic text, partly dolomitic, fair interxln and vug por, lt yel min fluor, scat off wh to wh cht, no stn or odor, no gas kick, ns.

LM; tan to lt brn, fxln w/interbdd finely pelletal lmst, fair interpart por, lt yel min fluor, no stn or odor, ns.

SH; med to occ dk gy, fiss, occ pyr

LM; med brn, hd, foss ip, tite

LANSING/KC. 'H' 4374(-2163)

LM; lt brn, oolitic, most small to med size moldic por, brittle, lt yel min fluor, rare vug por, no stn or odor, no gas kick, ns.

LM; med brn, hd, occ cherty, micritic, tite

SH; lt gy to gy grn, fiss

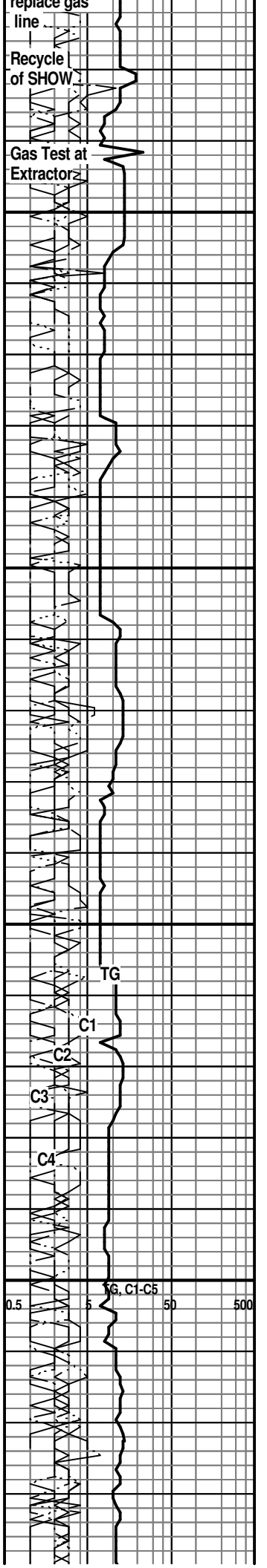
LM; tan to lt brn, oolitic/oolicastic, finely pelletal ip, fair oomoldic por, some v. soft, lt yel min fluor, no stn or odor, no gas kick, ns.

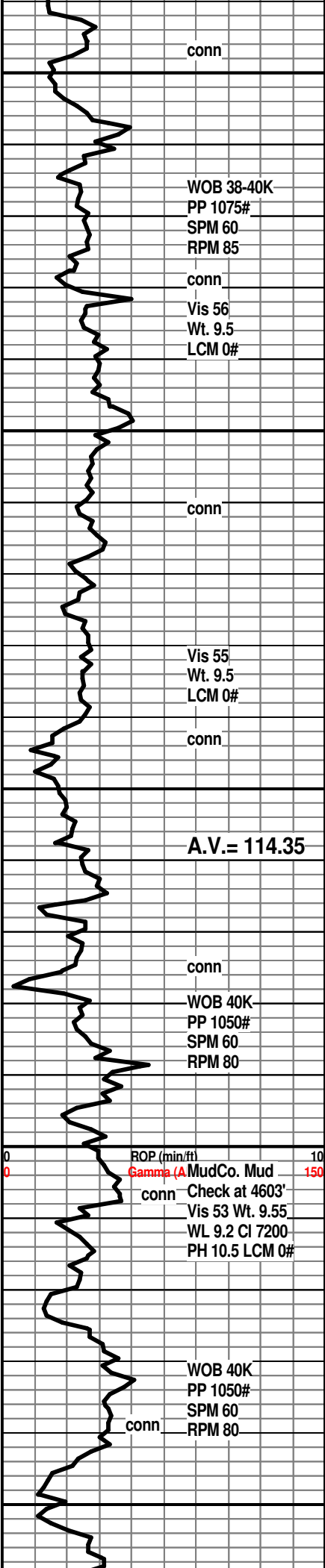
LM; tan to cream, buff, fxln to micritic, scat cht, ns.

K.C. 'I' 4421(-2210)

LM; tan to cream, foss to finely pelletal, fair interpart w/swcat p-p por, minor soft chalky mtx, dull yel min fluor, no stn or odor, no gas kick, barren, ns.

LM; tan to cream, off wh, v. foss - partly oolitic, fair to





conn

WOB 38-40K
PP 1075#
SPM 60
RPM 85

conn

Vis 56
Wt. 9.5
LCM 0#

conn

Vis 55
Wt. 9.5
LCM 0#

conn

A.V. = 114.35

conn

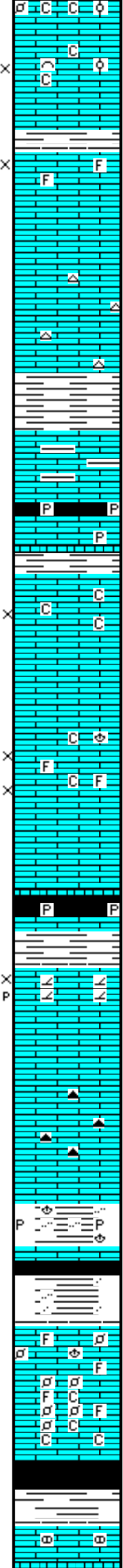
WOB 40K
PP 1050#
SPM 60
RPM 80

ROP (min/ft) 10
Gamma (A) MudCo. Mud 150
conn Check at 4603'
Vis 53 Wt. 9.55
WL 9.2 CI 7200
PH 10.5 LCM 0#

WOB 40K
PP 1050#
SPM 60
RPM 80

conn

4450
4500
4550
4600
4650



gd interpart por, scat soft chalky mtx ip, dull yel min fluor, no gas kick, ns.

LM; off wh, lt gy, foss ip, some med xln w/fair interxln por, scat off wh chert, dull yel fluor, no stn or odor, no gas kick, ns.

K.C. 'J' 4461(-2250)
LM; tan to off wh, fxln, scat foss mat, poor vis interpart por, lt yel min fluor, no vis stn, no odor, no gas kick, ns.

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

SH; med to dk gy, firm

LM; lt to med brn, most dense, some argil, tite

STARK SHALE 4510(-2299)
SH; blk, carb ip, plat rarely pyr
LM; dk brn, gy brn, hd, occ pyr

SWOPE 4520(-2309)
LM; lt gy, off wh, fxln, soft ip, poor to fair vis interxln por, scat soft partly chalky mtx, dull yel min fluor, no stn or odor, no sample shows

LM; tan to cream, buff, fxln to micritic, minor soft chalky mtx, dull/lt yel min fluor, ns.

LM; tan to cream, buff, off wh, fxln, scat foss mat, fair to gd interxln por, interbdd soft chalky lmst and chalky mtx, lt yel min fluor, no stn or odor, ns.

SH; blk, carb ip, occ pyr, gassy

HERTHA 4575(-2364)
LM; tan to cream, buff, fxln to sucrosic text, dolomitic ip, some v. gd interxln w/occ p-p por, soft, lt yel fluor, no stn or odor, no gas kick, ns.

LM; med gy to med brn, minor sandy text, most micritic, scat no vis por, interbdd smoky/dk brn/ blk cht, no fluor, no sample shows

BASE KANSAS CITY 4608(-2397)
SH; varic: grn, gy grn, fiss, rarely pyr, occ foss

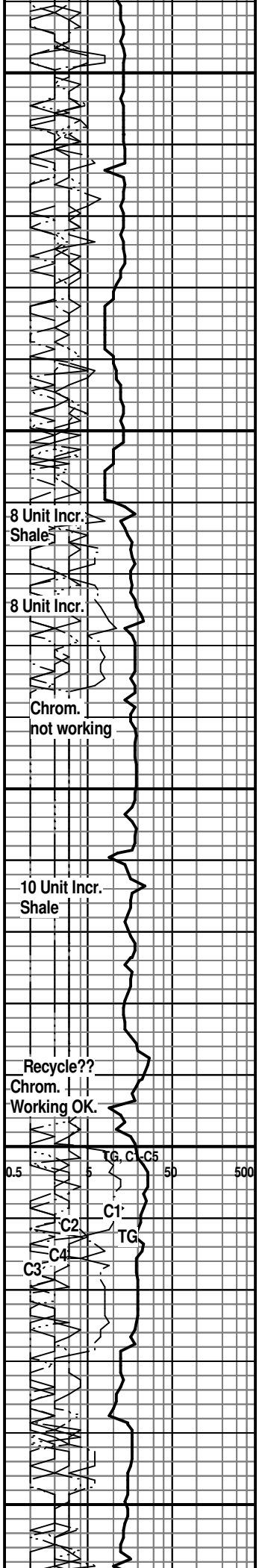
SH; dk gy-blk, fiss, with varic shales, silty to sandy ip.

PLEASANTON 4625(-2414)
LM; med brn, gy brn, foss, most well cem, blocky, lt yel min fluor, no stn or odor, ns.

LM; wh, off wh, lt gy/tan, v. foss ip, finely pelletal, scat soft chalky mtx, lt yel min fluor, no stn or odor, ns.

SH; dk gy, blk, varic - rust red, yel, brn, silty ip.

MARMATON 4653(-2442)
LM; lt gy, tan w/grn tint, some nodular - weathered appearance, most dense, ns.



8 Unit Incr. Shale

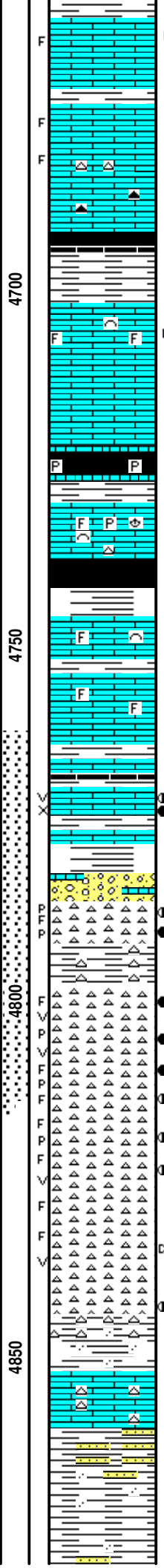
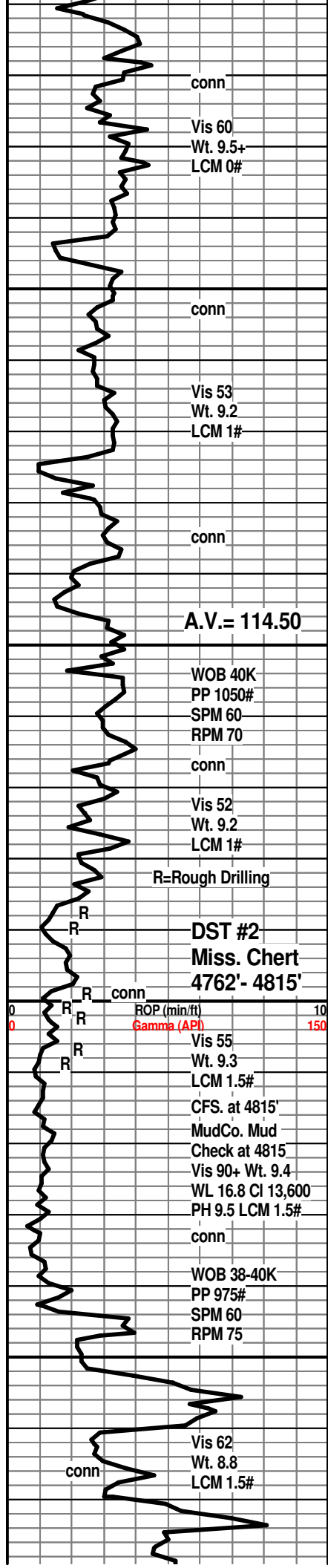
8 Unit Incr.

Chrom. not working

10 Unit Incr. Shale

Recycle?? Chrom. Working OK.

TG, C1-C5
C1
C2
C3
C4
TG



LM; tan to lt brn, foss ip, scat blk tar/dead residual oil, poss frags w/edge stn, lt to rare med yel fluor, no odor, poor cut, no live shows

LM; lt brn, tan, buff, most dense - blocky, micritic, scat tan to amber cht, frags w/spar calc, dull yel min fluor, no vis stn, ns.

SH; blk, platy, carb ip, w/gy to grn blocky v. firm shale

PAWNEE 4702(-2491)
LM; tan to cream, buff, fxln w/scat mostly well cem foss mat, few pcs. w/spotted tar/gilsonite, rare lt yel min fluor, no odor, no gas kick

LM; tan to lt brn, hd, micritic, scat tan to lt brn cht, no vis por, ns.

SH; blk, carb, gassy ip, occ pyr

LM; med brn, hd, foss ip, blocky, no vis por, scat gy cht w/pyr, no fluor, ns.

CHEROKEE SHALE 4738(-2527)
SH; dk gy - blk, platy, interbdd varic fiss shales

LM; tan to lt brn, hd, blocky, foss ip, well cem, dull yel min fluor, no vis por, ns.

LM; tan to cream, lt brn, fxln, rare well cem foss, no vis por, no fluor, ns.

SH; dk gy to blk, thinly bdd.

LM; off wh, tan, fxln, spotted to occ even med/dk brn stn, lt yel fluor, med to brite yel fluor, SSFO, fair vug and interxln por, trc gas bub, no odor

CONGL; weath varic cht, nodular lmst, varic sh.

MISSISSIPPI CHERT 4786(-2575)
CHT; wh, off wh, fresh and trip, frags w/lt-med brn spotted to even oil stn, tripolite w/fair p-p por, some grainy text, faint odor, gas bubbles, SFO, med to brite yel fluor, gd cut

CHT; wh, off wh, fresh and trip, much well weathered grainy text tripolite, gd p-p w/some well dev. vug por, spotted to even lt/med brn stn, faint/fair odor, brite yel fluor, SFO, gas bubbles, gd cut, incr. fresh chert

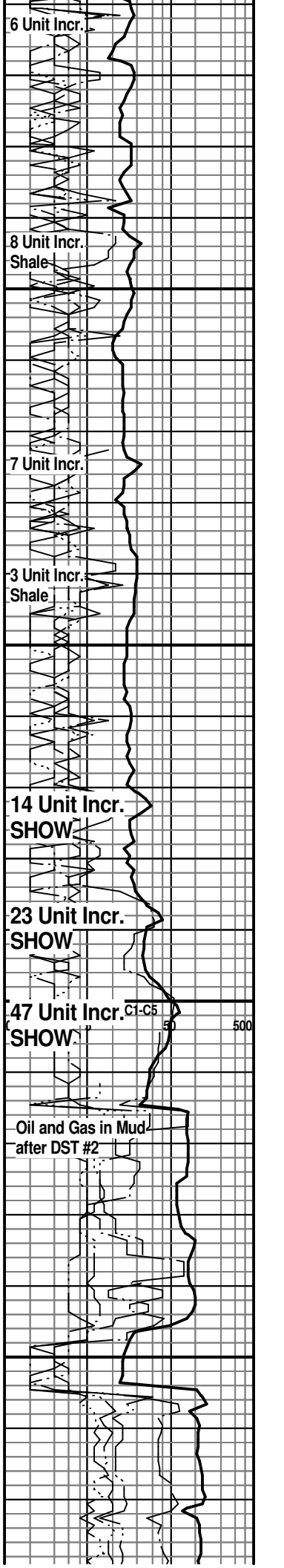
DST #2: Miss. Chert 4762' - 4815'
CHT; wh, off wh, fresh and trip, decr. amt of trip cht, pred fresh, much(50%) with brite yel fluor, frags, faint odor, spotted lt brn oil stn, SSFO, trc gas bubbles, decr. amount of show

CHT; wh, transl, rare varic, porc, pred fresh cht, frags ip, scat gils in vug por, 35-40% brite yel fluor, decr. show, faint odor

CHT; varic, org, wh, yel scat lrg. clr qtz xtals, trc clr f gr rd ss w/spotted lt brn oil stn, interbdd varic shales

LM; lt to med brn, occ rose red, cherty, dense

KINDERHOOK SHALE 4860(-2649)
SH; med gy grn, sandy to silty, interbdd grn vf to f gr qtz ss strngs



SH; grn, gy grn, sandy ip, scat grn ss strngs, firm,
interbdd varic shales - wash red

KINDERHOOK SAND 4889(-2678)

SS; clr, wh, occ grn, most f gr qtz, clusters,
subrnd-subang gr, some qtzitic - hd, fair intergran por,
no fluor, no stn or odor, ns.

RTD. 4900' at 9:45 PM. 1/5/12

LTD. 4898'

Halliburton DIL, NEU/DEN, Microlog,
MIRL

Vis 60
Wt. 9.0
LCM 1.5#
conn
CFS. at 4900'
RTD.

4900

50

x

x