

# LITHOLOGY STRIP LOG

## WellSight Systems

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

Well Name: Sampson #2-19 SWD Facility  
Location: 1978' FNL&1777' FWL, Sec. 19-T27S-R18W, Kiowa County, KS.  
Licence Number: 15-097-21772-00-00 Region: Unnamed  
Spud Date: 10/5/2013 Drilling Completed: 10/11/2013  
Surface Coordinates: 1978' FNL & 1777' FWL, Sec. 19-T27S-R18W

Bottom Hole Same as Above  
Coordinates:  
Ground Elevation (ft): 2205' K.B. Elevation (ft): 2216'  
Logged Interval (ft): 3900' To: 5555' Total Depth (ft): 5555'  
Formation: Arbuckle at Total Depth  
Type of Drilling Fluid: Freshwater/Gel to 3311'; Chemical Gel 3311' to 5555'  
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

None Taken

## Comments

10/5/13 MIRU Sterling Drilling Rig #2, Spud at 2:30 PM.; 10/6/13 TD. 160' - Wait on Welder; 10/7/13 TD. 691' - Bit Trip; 10/8/13 Drilling at 2641'; 10/9/13 Drilling at 3725'; 10/10/13 Drilling at 4885'; 10/11/13 Drilling at 5375'; 10/12/13 RTD. 5555', LTD. 5555', Logs completed, Nipple Down BOP, set 5 1/2" Production Casing.

Set new 13 3/8"(54.5#) Conductor at 154' with 175 sx.(Basic Energy Services). Cement did circulate.

Set new 8 5/8"(24#) Surface Casing at 582' with 350 sx. Cement(Basic Energy Services). Cement did Circulate. PD. at 7:00 PM. 10/7/13.

Set new 5 1/2"(15.5#) Production Casing at 5287' with 200 sx.(Basic Energy Services). PD. at 12:00 AM. 10/13/13. Port Collar set at 3027'.

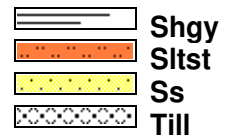
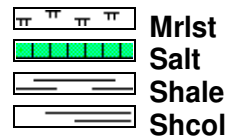
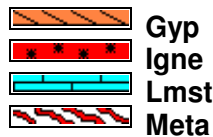
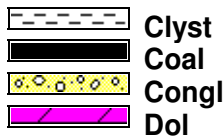
Surveys: 0.75 Deg. at 160'(Conductor Casing); 0.25 Deg. at 587'(Surface Casing); 1.0 Deg. at 5555' RTD.

Pulled a 40 Stand Wiper Trip at 5190' above the Arbuckle. Bottom 30 Stands very tight, then free.

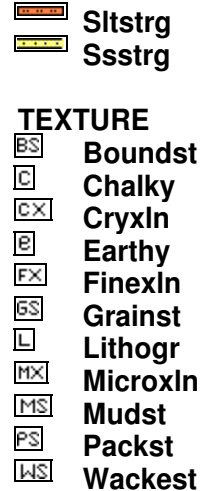
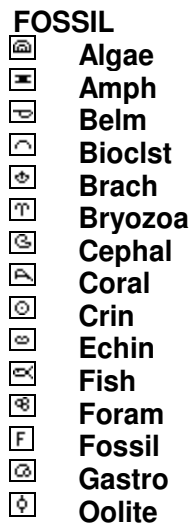
After review of the Halliburton Logs, the operator elected to set new 5 1/2" Production Casing for completion in the Arbuckle as a SWDW.

LOG TOPS: Chase 2459(-243), Stotler Lmst. 3406(-1190), Howard 3605(-1389), Heebner Shale 4048(-1832), Toronto 4063(-1847), Brown Lmst. 4202(-1986), Lansing 'A' 4210(-1994), KC 'I' 4426(-2210), Stark Shale 4508(-2292), Hertha 4558(-2342), Base Kansas City 4596(-2380), Marmaton 4639(-2423), Cherokee Shale 4723(-2507), Miss. Chert 4785(-2569), Kinderhook Shale 4855(-2639), Kinderhook Sand 4885(-2669), Viola 4975(-2759), Simpson Shale 5161(-2945), Simpson Dolomite 5165(-2949), Arbuckle 5260(-3044).

## ROCK TYPES



## ACCESSORIES



OTHER SYMBOLS

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

[V] Vuggy

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

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

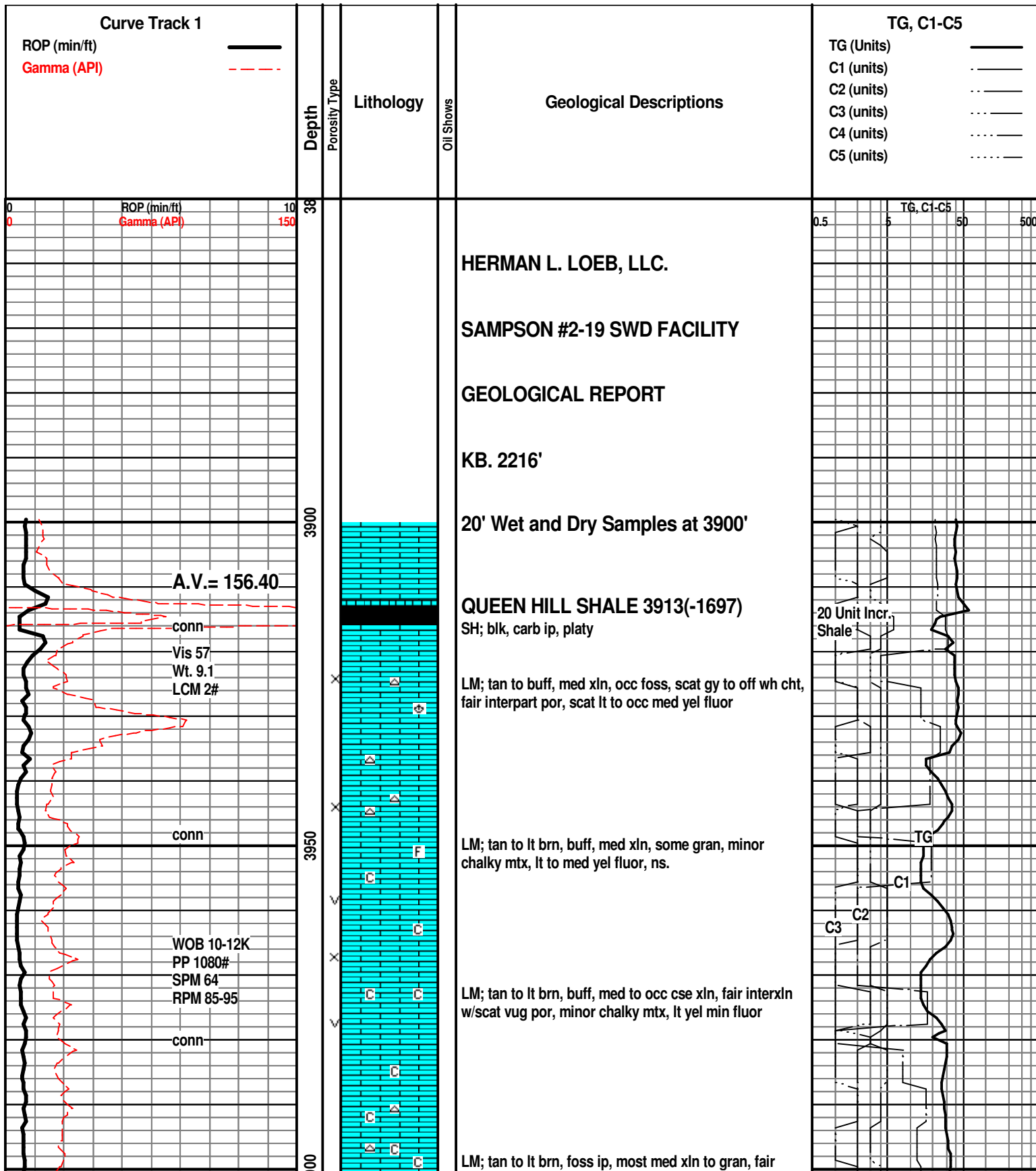
**OIL SHOW**

- [●] Even

- [⊙] Spotted
- [○] Ques
- [D] Dead

- INTERVAL**
- [■] Core
  - [□] Dst

- EVENT**
- [▽] Rft
  - [▲] Sidewall



Curve Track 1

ROP (min/ft)  
Gamma (API)

ROP (min/ft)  
Gamma (API)

TG, C1-C5

TG (Units)  
C1 (units)  
C2 (units)  
C3 (units)  
C4 (units)  
C5 (units)

ROP (min/ft)  
Gamma (API)

TG, C1-C5

A.V. = 156.40

conn  
Vis 57  
Wt. 9.1  
LCM 2#

conn

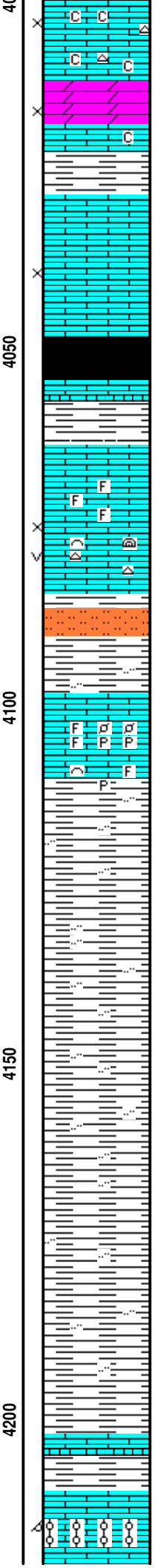
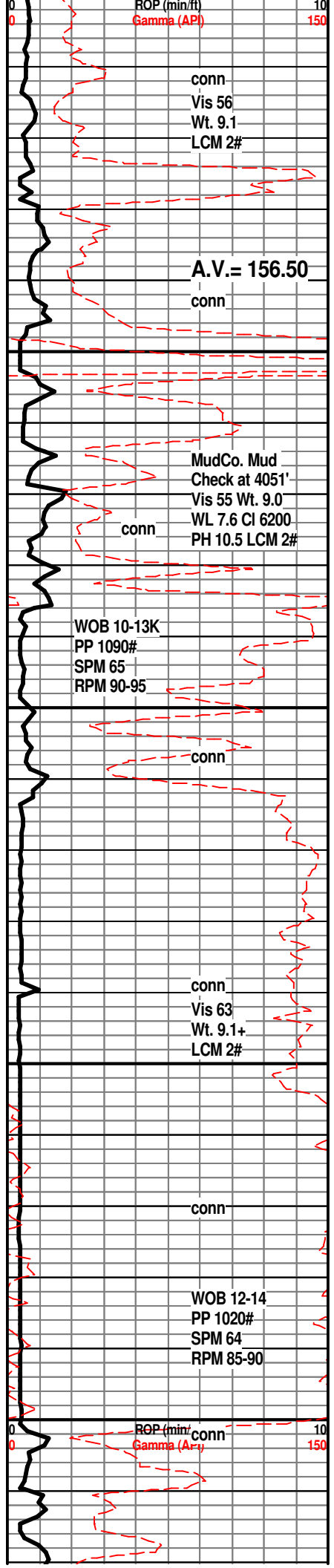
WOB 10-12K  
PP 1080#  
SPM 64  
RPM 85-95

conn

20 Unit Incr.  
Shale

TG  
C1  
C2  
C3

LM; tan to lt brn, foss ip, most med xln to gran, fair



interpart por, lt yel fluor, scat gy to wh cht, bcm very chalky

DOL; lt brn, tan, sucrosic, gd interln por, minor chalky mtx, ns.

LM; tan to lt brn, fxln, scat tan to lt gy cht, poor interln por, ns.

**HEEBNER SHALE 4048(-1832)**  
SH; blk, carb ip, platy

**TORONTO 4063(-1847)**  
LM; off wh, wh, buff, foss ip, scat tite micrite, dull yel min fluor, no stn or odor, ns.

LM; lt brn, tan, foss w/algal mat, fair interpart w/occ small vug por, lt yel fluor, cherty ip, ns.

**DOUGLAS SHALE 4084(-1868)**  
SH; lt to med gy, grn, platy, silty w/interbdd sltst.

LM; med brn, highly foss, hd - micritic ip, scat pyr, no vis por, ns.

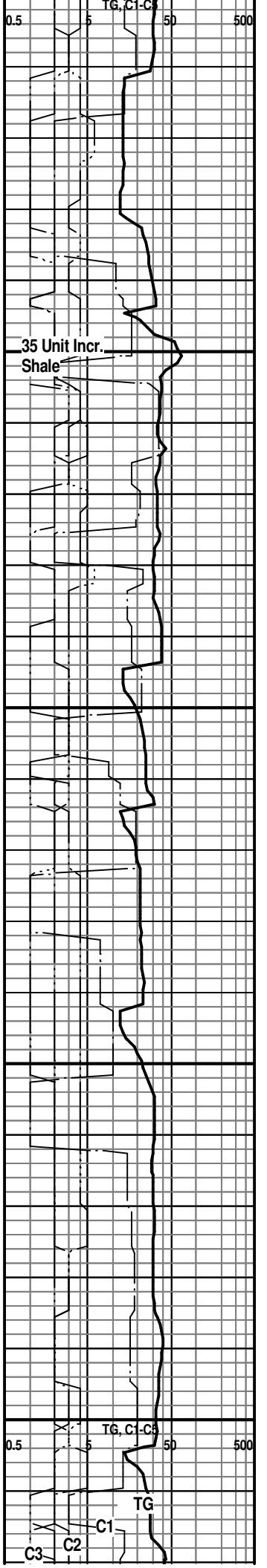
SH; lt to med gy, platy, silty ip.

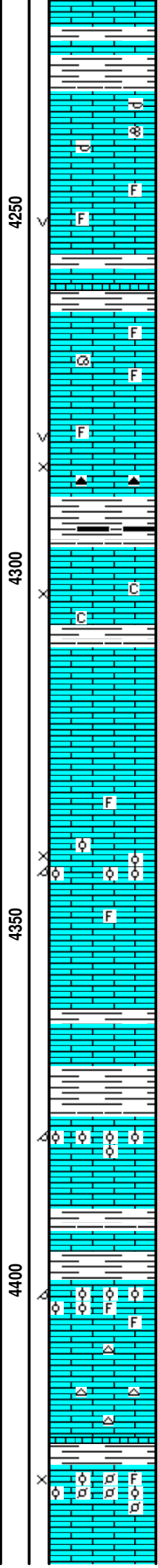
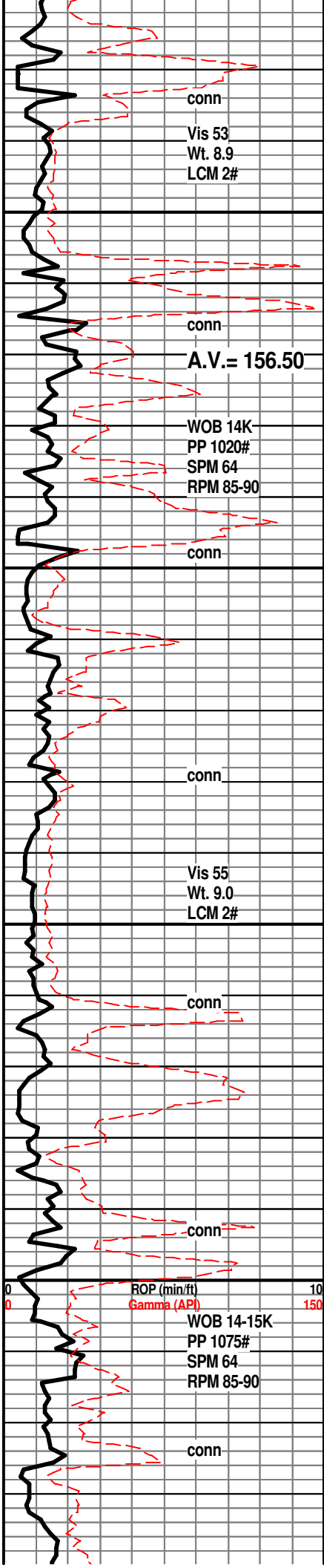
SH; lt to med gy, platy to flakey, soft ip, occ silty w/interbdd sltst.

SH; pred med gy, silty, firm, smooth

**BROWN LMST. 4202(-1986)**  
LM; med to dk brn, dense, blocky

**LANSING 'A' 4210(-1994)**  
LM; lt brn, tan, foss to oolitic, med size molds w/fair oomoldic por, few pcs w/med to brite yel fluor, no vis stn, no odor, no apparent gas kick





SH; med gy grn, platy

LM; tan to lt gy, off wh, foss ip, most well cem, tite

LM; lt gy, buff, f to med xln, occ vug por, dull yel fluor, no stn, ns.

LM; tan to lt brn, fxln, scat well cem foss mat, most dense, no fluor, ns.

LM; off wh, wh, buff, f to med xln, scat fair interxln w/occ vug por, dull yel fluor, scat dk gy foss cht, ns.

SH; dk gy, trc blk, platy

LM; off wh, buff, f to med xln, scat sucrosic text, gd interxln por, minor chalky mtx, ns.

LM; tan to off wh, buff, fxln w/scat foss mat, most dense, blocky, scat dull yel fluor, ns.

LM; off wh, wh, buff, foss w/rare oolitic lmst, fair interpart/oomoldic por, no odor, lt yel fluor, ns.

SH; med to dk gy, platy

**LANSING/K.C. 'H' 4377(-2161)**

LM; off wh, buff, foss-oolitic, poor to fair oomoldic por, lt yel fluor, no stn or odor, no gas kick

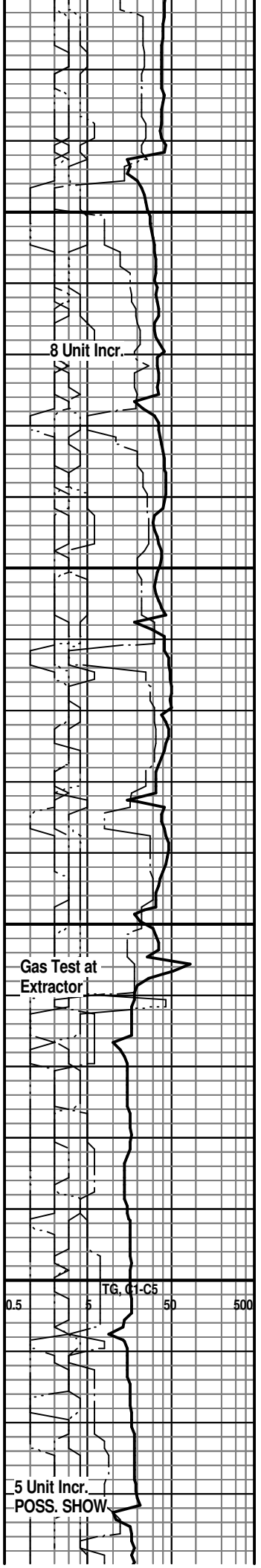
LM; med to dk brn, hd, blocky

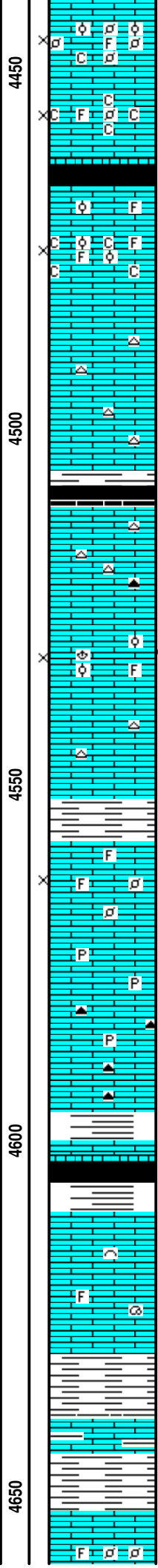
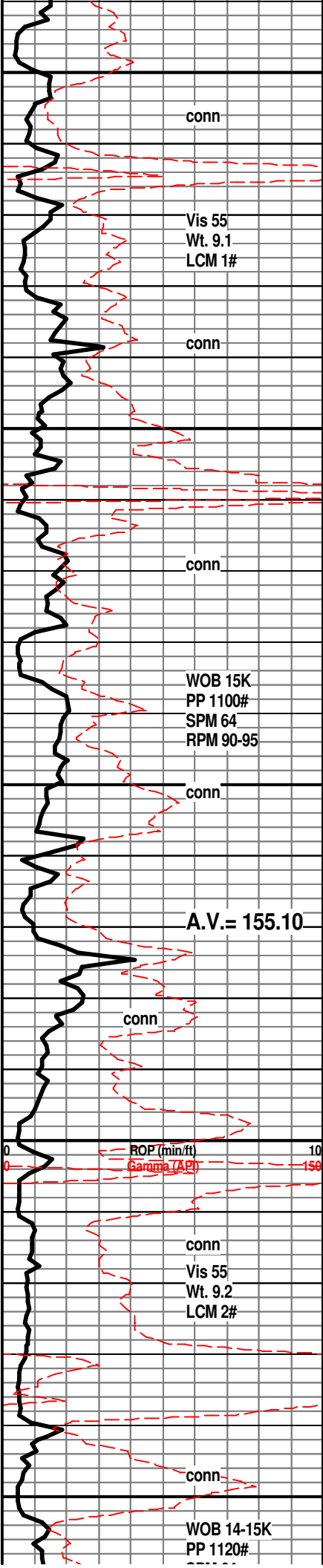
LM; wh, off wh, tan, foss - oolitic ip, fair to gd interpart/oomoldic por, lt yel fluor, no stn, no gas kick, ns.

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

**K.C. 'I' 4426(-2210)**

LM; tan to buff, finely pelletal, scat small ooids, loosely cem - fair interpart por, lt yel fluor, no vis stn, no odor





LM; off wh, tan, foss w/scat oolites and pellets, gd interpart por, lt yel fluor, no stn or odor, no gas kick, bcm chalky

**K.C. 'J' 4466(-2250)**

LM; tan to off wh, buff, foss ip w/scat oolitic lmst, fair interpart por, chalky mtx, lt yel fluor, no stn or odor, no apparent gas kick

LM; lt brn, tan, hd, scat gy to off wh cht, tite

**STARK SHALE 4508(-2292)**

SH; blk, carb ip, platy

LM; med brn, most micritic, blocky, cherty ip, tite

LM; tan to buff, lt brn, foss w/fair interpart por, minor oolitic lmst, trc spotted lt/med brn oil stn, no odor, weak/fair cut

LM; lt to med brn, hd, cherty ip.

**HERTHA 4558(-2342)**

LM; tan to off wh, buff, f to med xln, poor to fair interxln por, scat foss mat, fair interpart por, lt yel fluor, no stn or odor, ns.

LM; med brn, occ dk brn, hd, cherty ip, scat pyr, tite

**BASE KANSAS CITY 4586(-2370)**

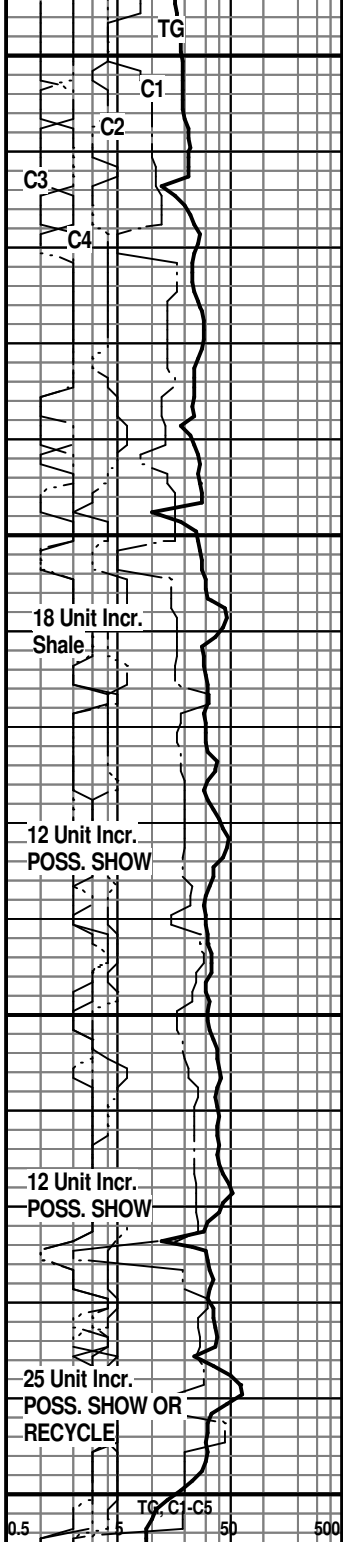
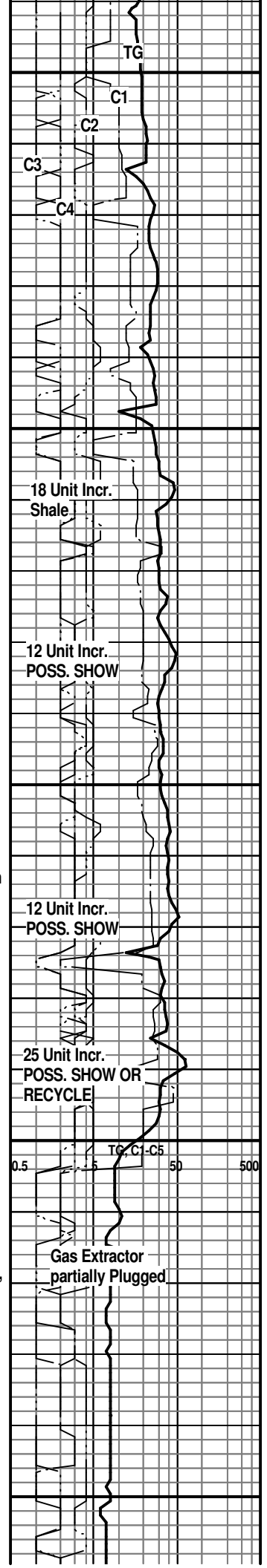
SH; med gy, grn, blk, maroon, yel, varic, interbdd grn sltst, platy

LM; off wh, tan, foss ip, interbdd dense gy micritic lmst, no vis por, no stn or fluor

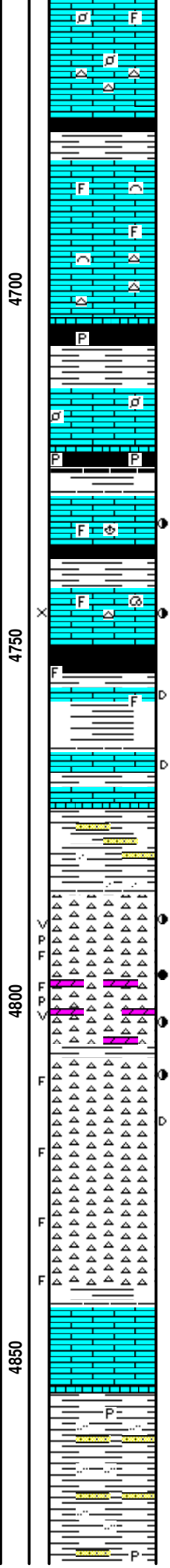
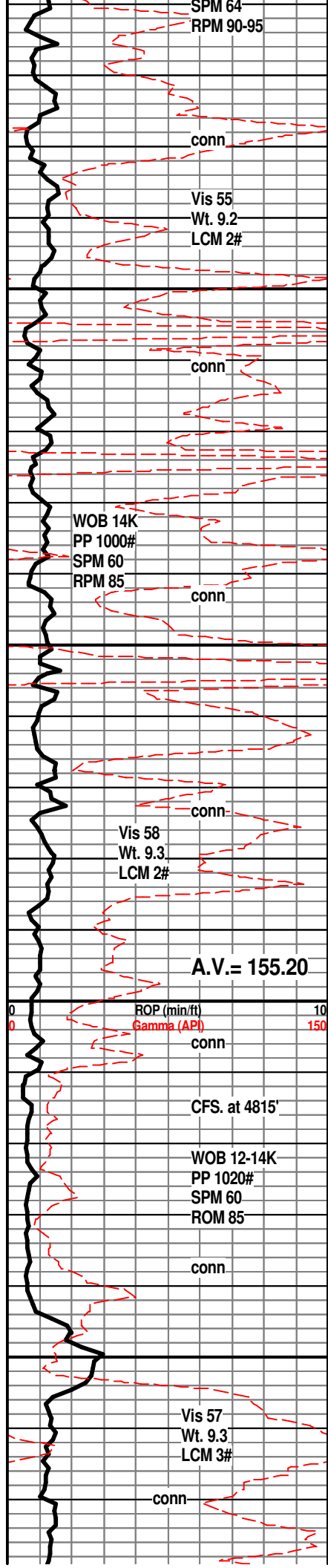
SH; grn, gy grn, platy

**MARMATON 4639(-2423)**

LM; lt to med gy, grn, hd, rare argil, tite



Gas Extractor partially Plugged



LM; tan to lt brn, buff, ross w/scat small pellets and ooids, most well cem, blocky, dull yel to no stn or fluor

SH; med to dk gy, blk, firm

**PAWNEE 4672(-2456)**

LM; lt brn, lt gy brn, foss ip, most dense, micritic, no vis por, no fluor, no sample shows

SH; blk, carb ip, platy, trc pyr

LM; med brn, hd, scat well cem dk pellets, no stn or fluor

**CHEROKEE SHALE 4723(-2507)**

SH; blk, platy, carb ip, scat pyr

LM; tan to lt brn, foss ip, most well cem, few pcs w/med to dk brn spotted oil stn, med/brite yel fluor, faint odor, poor interxln por

SH; dk gy - blk, platy

SH; varic, platy, interbdd dense med brn occ foss lmst, rare blk tar/gils, no live shows

LM; med brn, hd, scat blk dead oil/gilsonite, dull yel fluor

SH; varic, red/maroon, grn, interbdd sandy sh w/med gr subrnd qtz, no clean ss developed

**MISS. CHERT 4785(-2569)**

CHT; wh, off wh, fresh and trip, fair to gd p-p and occ vug por, blk tar/gils on some, frags also, med to occ brite yel fluor, spotted to rarely even live lt to med brn oil stn, SFO, fair oil/gas odor, gd cut in few pcs, trc. gas bubbles, trc pale grn dolomite

CHT; wh, off wh, pale grn, argil ip, trip with incr. fresh, frags w/live and dead oil stn on frac faces, fair oil/gas odor, med to occ brite yel fluor, decreasing shows, scat cse qtz xtals

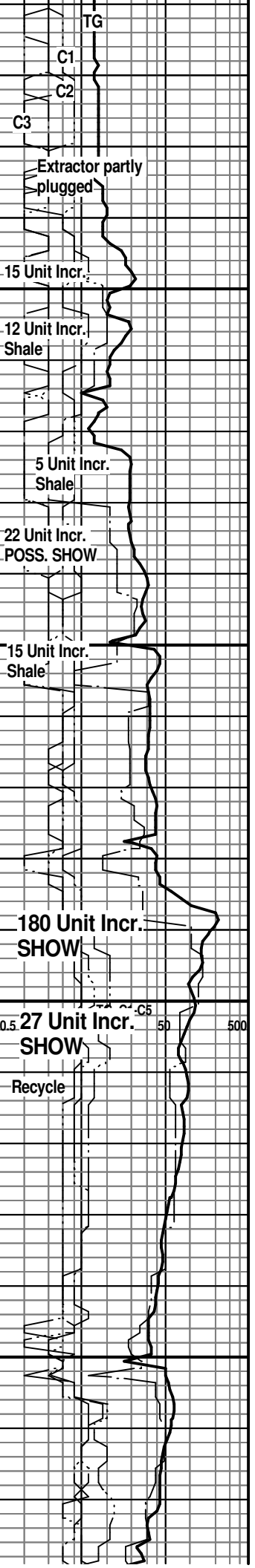
CHT; wh, off wh, rare tan, all fresh porc. cht, frags, trc blk tar/gils, no fluor, no live shows

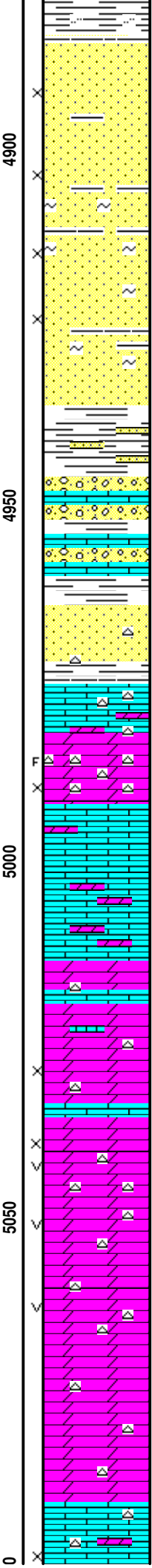
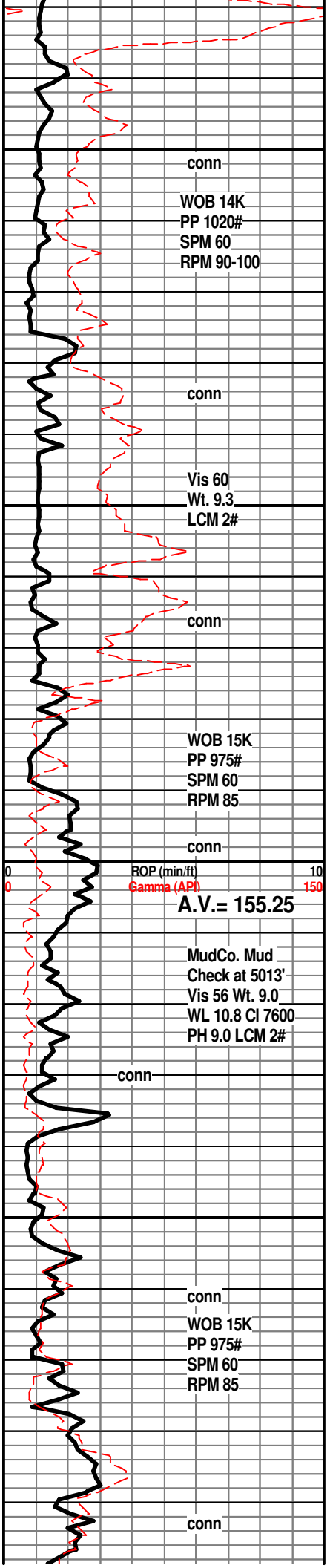
SH; red/maroon, varic, platy

LM; red/brn, med brn, oxidized ip, hd

**KINDERHOOK SHALE 4855(-2639)**

SH; med gy, gy grn, silty ip, firm, rarely pyr, interbdd vf gr grn qtz ss





**KINDERHOOK SAND 4885(-2669)**

SS; wh, off wh, lt gy, pred f gr qtz, clusters, some fri w/fair intergran por, scat blk tar/gils, dull yel to no fluor, interbdd argil ss and sandy shale, no live shows, no gas kick

SS; wh, pale grn, shaly ip w/scat glau/chlorite, fair intergran por, no fluor, no stn

SH; med gy, grn, some varic, interbdd lt/med gy f gr qtz ss, well cem

CONGL; wh cht, weathered lmst, shales, mixture of lithologies

**VIOLA 4975(-2759)**

LM; lt brn, tan, most micritic, cherty w/scat off wh to dove gy cht, no vis por, no stn or fluor

DOL; off wh, lt gy, cherty ip, sucrosic, fair interxn por w/poss frags, no stn or fluor

LM & LMY DOL; lt brn, lt gy brn, dense

DOL; lt to med gy, fxln to occ sucrosic, lmy ip, poor to fair interxn por, minor wh to off wh cht, no stn or fluor

DOL; off wh, wh, buff, med rhombic, well dev. vug and interxn por, some lrg vugs, dull yel min fluor, no stn or odor, ns.

DOL; off wh, wh, f to med rhombic, cherty ip, scat gd interxn and vug por, no fluor, ns.

LM; tan to off wh, lt brn, partly dolomitic, most well cem, blocky, interbdd off wh to wh cht, no vis por

Gas Test at Extractor

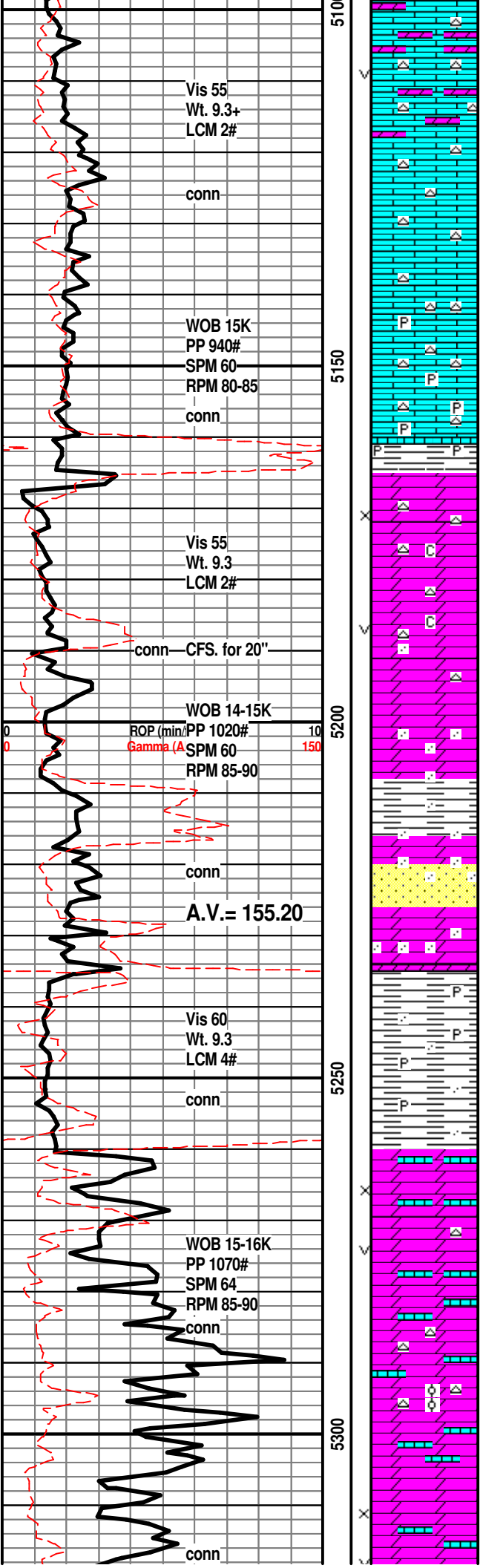
TG, C1-C5  
0.5 5 500

10 Unit Incr.

11 Unit Incr.

TG  
C1  
C2  
C3  
C4





Vis 55  
Wt. 9.3+  
LCM 2#

conn

WOB 15K  
PP 940#  
SPM 60  
RPM 80-85

conn

Vis 55  
Wt. 9.3  
LCM 2#

conn - CFS. for 20"

WOB 14-15K  
ROP (min)/PP 1020# 10  
Gamma (A) SPM 60 150  
RPM 85-90

conn

A.V. = 155.20

Vis 60  
Wt. 9.3  
LCM 4#

conn

WOB 15-16K  
PP 1070#  
SPM 64  
RPM 85-90

conn

conn

DOL LMST; tan to lt brn, scat sucrosic text w/much lmst interbdd, occ wh to off wh cht, poor to fair interln and occ vug por

LM; tan to lt brn, dolomitic, sucrosic to finely rhombic, occ lrg calc spar calc xtals, most dense, no fluor

LM; lt brn, tan, fxltn to dolomitic, cherty, most dense, occ dissem pyr, no fluor

**SIMPSON SHALE 5161(-2945)**

SH; grn, platy - waxy, pyr ip.

**SIMPSON DOLOMITE 5165(-2949)**

DOL; off wh, wh, buff, sucrosic to finely rhombic, scat wh fresh cht, minor chalky mtx, fair to gd interln w/occ vug por, dull yel min fluor

**PULL 40 STAND WIPER TRIP AT 5190':  
Bottom 30 Stands very tight, then free**

DOL; off wh, buff, f to med rhombic, gd interln w/vug por, interbdd med gr rnd qtz, dull yel min fluor

SH; med gy, grn, sea grn, waxy, occ pyr, sandy ip.

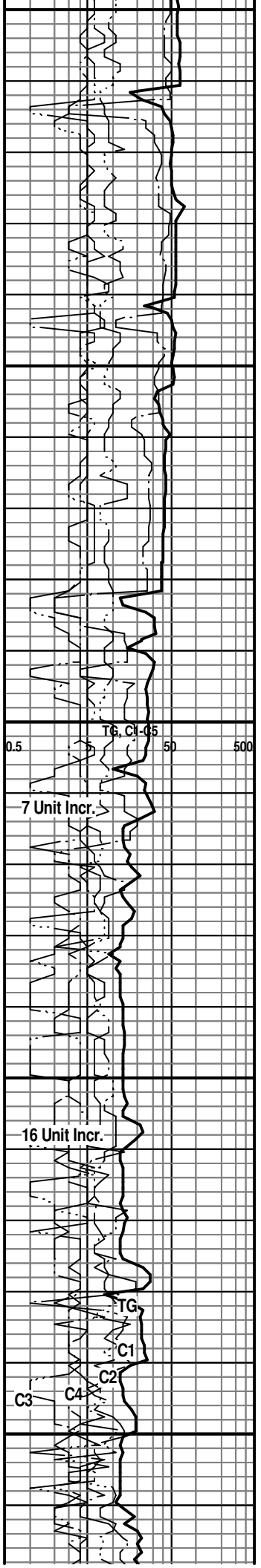
DOL; med gy, grn, sandy ip w/pale org dolomitic ss interbdd, no fluor, no stn

SH; med grn, gy grn, sandy ip, some waxy-smooth text, scat pyr

**ARBUCKLE 5260(-3044)**

DOL; tan to lt brn, f to med rhombic, some well cem, scat dense lmy dolomite, scat fair vug and interln por, med to brite yel min fluor, no stn or odor, ns.

DOL; lt brn, tan, cherty ip, most fine rhombic, interbdd dense lmy dolomite, trc oolitic cht, med to brite yel min fluor, most appears tite

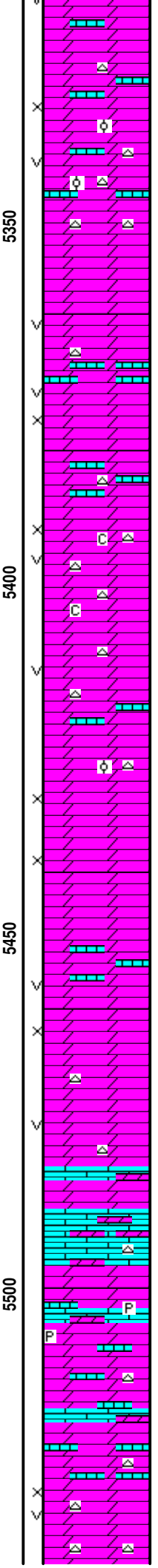
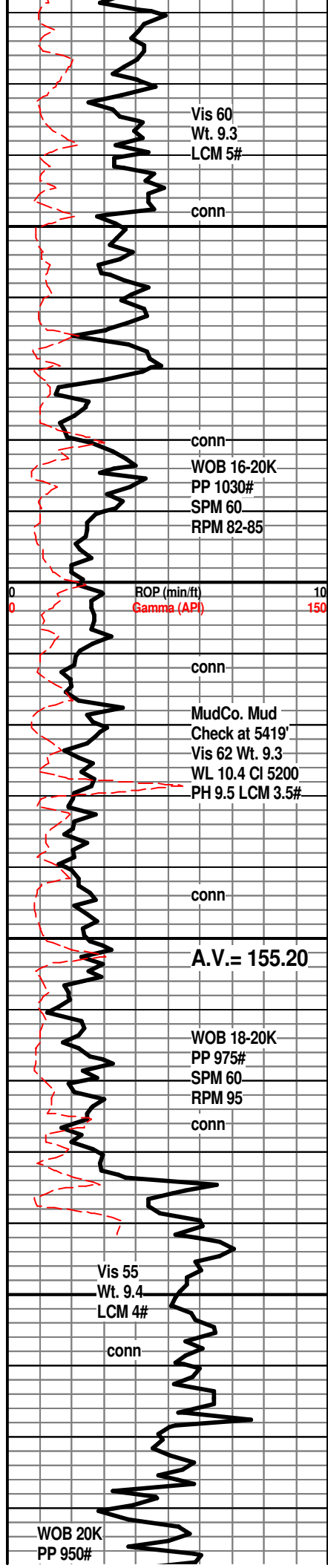


TG, C1-05 50 500

7 Unit Incr.

16 Unit Incr.

TG  
C1  
C2  
C3 C4



DOL; tan to lt brn, fine to med rhombic ip, scat fair interxln and vug por, med to brite yel fluor, no vis stn, no odor

DOL; tan to lt brn, fine rhombic, much well cem dense lmy dolomite, scat small vug por, rare off wh cht, few pcs. of oolitic dolomitic lmst, med yel fluor

DOL; off wh, buff, tan, f to med rhombic, scat lrg dolo. rhombs and spar calc xtals, some fair to gd interxln and vug por, brite yel min fluor

DOL; off wh to lt brn, f rhombic to sucrosic, soft ip w/minor chalky mtx, scat fair interxln and vug por, interbdd wh fresh cht, med/brite yel min fluor

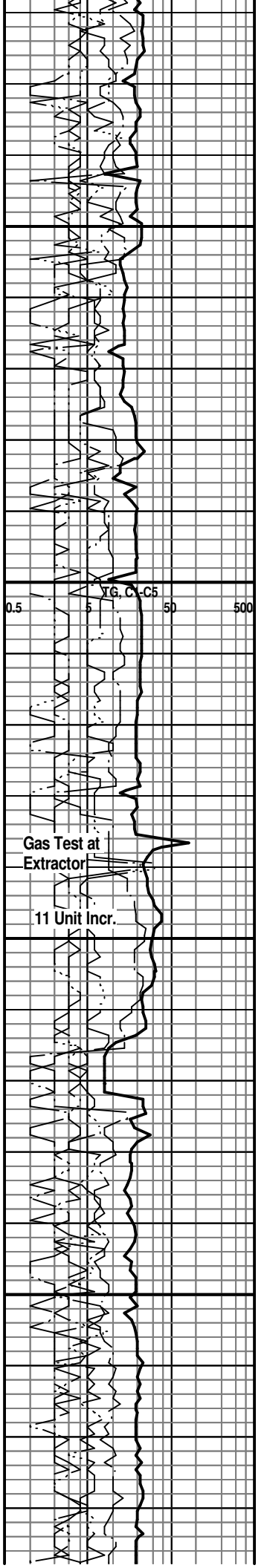
DOL; lt brn, occ med brn, sucrosic to occ med rhombic, fair interxln por, trc oolitic cht, sev. cse spar calc xtals, med/brite yel min fluor

DOL; tan to lt brn, fine rhombic, interbdd well cem dense lmy dolo, fair interxln w/scat small vug por, occ cse spar calc xtals, med/brite yel min fluor

DOL; lt brn, lmy, sucrosic text, v. hd, interbdd dense dolomitic lmst, poor to no vis por, med/brite yel fluor, occ cherty

DOL; lt to med brn, sucrosic to fine rhombic, dense, rarely pyr, scat cse spar calc xtals, no vis por, lmy ip.

DOL; tan to lt brn, finely rhombic to dense, scat fair interxln w/occ vug por, cherty ip, interbdd dense lmy dolo



SPM 60  
RPM 85

conn

CFS. at RTD.

5550

5600

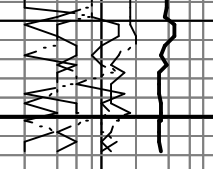


DOL; off wh, tan, lt brn, sucrosic to fine rhombic, abnt  
cse spar calc xtals, trc vug por, cherty ip, med/brite yel  
min fluor

RTD. 5555' at 7:15 PM. 10/11/13

LTD. 5555'

HALLIBURTON - DIL, NEU/DEN W/PE,  
MICROLOG, SONIC



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

0.5	5	TG, C1-C5	50	500
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