

# LITHOLOGY STRIP LOG

## WellSight Systems

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

Well Name: Richardson #1-3  
Location: 1700' FNL & 1305' FEL, Sec. 3-T28S-R18W, Kiowa Co., KS.  
Licence Number: 15-097-21721-0000 Region: Greensburg Field  
Spud Date: 3/31/2012 Drilling Completed: 4/10/2012  
Surface Coordinates: 1700' FNL & 1305' FEL, Sec. 3-T28S-R18W

Bottom Hole Same as above  
Coordinates:  
Ground Elevation (ft): 2208' K.B. Elevation (ft): 2219'  
Logged Interval (ft): 3400' To: 4890' Total Depth (ft): 4890'  
Formation: Kinderhook at Total Depth  
Type of Drilling Fluid: Freshwater/Gel to 3360'; Chemical Gel 3360' to 4890'

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') 4230' - 4246' Test Times 15"-45"-30"-60" IFP Fair Blow built to 8"; FFP Weak Blow built to 3", no Blowback on SI's; REC: 155' Gas in Pipe, 40' GOCM(4%G, 7%O, 89%M), 60' MSW w/oil specks(CI 119,000, Mud 9000); IFP 22-39#, ISIP 1302#, FFP 44-70#, FSIP 1259#, IHP 2064#, FHP 2052#, BHT 110 Deg. F.

DST #2(Lansing 'B') 4257' - 4282' Test Times 15"-45"-45"-90"  
IFP Weak 0.25" Blow, FFP Weak 0.25" Blow, Died; no Blowback on SI's; REC: 5' Drlg. Mud w/few oil specks;  
IFP 14-18#, ISIP 104#, FFP 13-20#, FSIP 178#, IHP 2112#, FHP 2010#, BHT 109 Deg. F.

DST #3(Mississippi Chert) 4780' - 4832' Test Times 15"-45"-45"-90" IFP Weak Blow built to 1.5"; FFP Weak 1"  
Blow, no Blowback on SI's; REC: 15' Mud w/oil specks, no detectable GIP, no water; IFP 84-56#, ISIP 80#, FFP  
61-55#, FSIP 77#, IHP 2448#, FHP 2305#, BHT 121 Deg. F.

### Comments


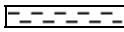

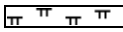
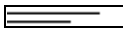
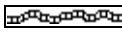


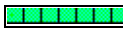

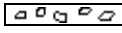


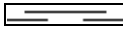

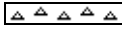


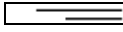

3/31/12 MIRU Sterling Drilling Rig #2, Spud at 4:15 PM.; 4/1/12 TD. 622' - Running Surface Casing; 4/2/12 Drilling at 1173'; 4/3/12 Drilling at 2520'; 4/4/12 Drilling at 3306'; 4/5/12 Drilling at 3850'; 4/6/12 TD. 4246' - DST #1; 4/7/12 TD. 4282' - Laydown Test tool after DST #2; 4/8/12 Drilling at 4615'; 4/9/12 TD. 4832' - Make up test tool for DST #3; 4/10/12 RTD. 4890' - reached TD. at 2:00 AM. Rig up Loggers(Halliburton)

Set new 8 5/8"(23#) Surface Casing at 622' w/ 350 sx. Cement did Circulate(Basic Energy Services). PD. 8:30 AM. 4/1/12.








































































Surveys: 0.5 Deg. at 622'(Surface Casing); 0.75 Deg. at 4246'(DST #1); 0.75 Deg. at 4832'(DST #3).

Pipe Strap at 4246'(DST#1): Strap 1.06' Short to the Board, no correction made to the Board.
























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

### OTHER SYMBOLS

<b>POROSITY</b>	 Vuggy	<b>ROUNDING</b>	 Spotted	<b>EVENT</b>
 Earthy		 Rounded	 Ques	 Rft
 Fenest	<b>SORTING</b>	 Subrnd	 Dead	 Sidewall
 Fracture	 Well	 Subang		
 Inter	 Moderate	 Angular	<b>INTERVAL</b>	
 Moldic	 Poor		 Core	
 Organic		<b>OIL SHOW</b>	 Dst	
 Pinpoint		 Even		

**Curve Track 1**

ROP (min/ft) ———  
 Gamma (API) - - - - -

TG, C1-C5  
 TG (Units) ———  
 C1 (units) - - - - -  
 C2 (units) . . . . .  
 C3 (units) . . . . .  
 C4 (units) . . . . .  
 C5 (units) . . . . .

Depth

Porosity Type

Lithology

Oil Shows

Geological Descriptions

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

Displace Mud at  
 3360'

**STRATA EXPLORATION, INC.**

**RICHARDSON #1-3**

**GEOLOGICAL REPORT**

**KB. 2219'**

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

conn  
**A.V.= 115.80**

**STOTLER LMST. 3420(-1201)**

**Bit trip at 3427' TOH for Plugged bit**

Vis 60  
 Wt. 8.5  
 LCM 0#  
 conn

**Start 10' Wet and Dry Samples at 3450'**

WOB 40K  
 PP 850  
 SPM 60  
 RPM 75-80

SH; med gy, silty ip, most smooth, platy, rarely pyr

conn

LM; lt to med brn, hd, blocky, foss ip, tite

LM; lt brn, gy brn, foss, scat cse well cem foss frags, no vis por, minor finely pelletal, lt yel min fluor, no stn, ns, interbdd grn silty sh.

Vis 60  
 Wt. 8.5  
 LCM 0#  
 conn

LM; dk brn, rarely gy brn, dense, micritic

LM; off wh, tan, buff, fxl n w/scat foss mat, trc dk brn cht, most well cem, rare lt yel min fluor, no stn or odor, ns.

WOB 40K  
 PP 950#  
 SPM 60  
 RPM 75-80  
 conn

LM; tan to lt brn, buff, dense, scat well cem foss, no vis por, ns.

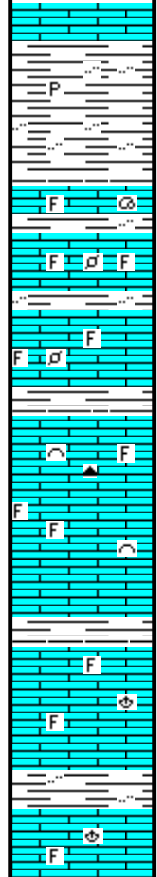
SH; grn, gy grn, soft, silty ip.

LM; tan to gy brn, foss ip, most well cem, interbdd

3400

3450

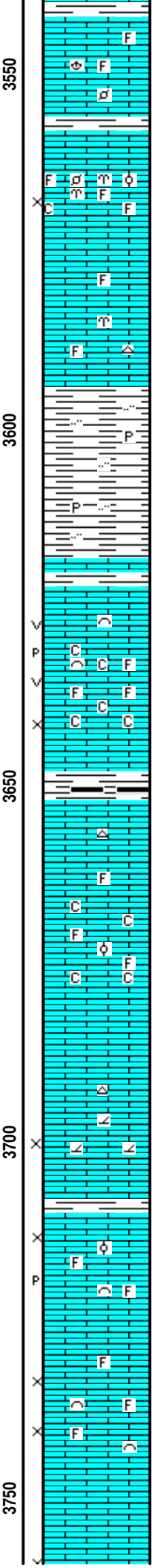
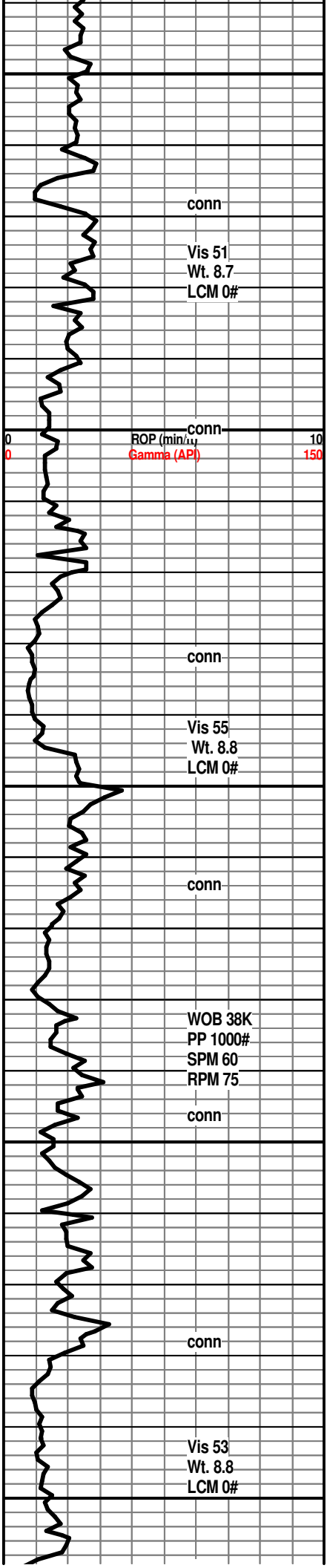
3500



0.5 TG, C1-C5 5 50 500

0.5 TG, C1-C5 5 50 500

C2 C1 C3 TG



shales, no vis por, ns.

LM; lt brn, tan, rarely off wh, fxln w/scat foss mat, lt yel spotted fluor, no stn, ns.

LM; lt brn, highly foss, fair to gd interpart por, occ lt yel min fluor only, minor soft chalky mtx, no stn or odor, no gas kick, barren, ns.

LM; tan to lt brn, occ med brn, foss ip, most well cem, no vis por, trc tan to gy cht, no fluor, ns.

SH; med gy, firm, occ silty, minor amt. of pyr

SH; med to occ dk gy, firm, occ silty

**HOWARD 3618(-1399)**

LM; off wh, wh, buff, foss, scat well dev. p-p and occ vug por, chalky soft mtx, lt yel fluor, no stn or odor, no gas kick

LM; off wh, tan, buff, med xln to occ gran, gd interxln w/occ vug por, chalky soft mtx, no fluor, ns.

SH; dk gy to occ blk, platy

LM; tan to cream, buff, fxln, most hd, blocky, no vis por, trc off wh cht, ns.

LM; tan to off wh, cream, foss, occ gran to med xln w/spar calc xtals, most w/chalky mtx, dull yel to no fluor, no stn, ns.

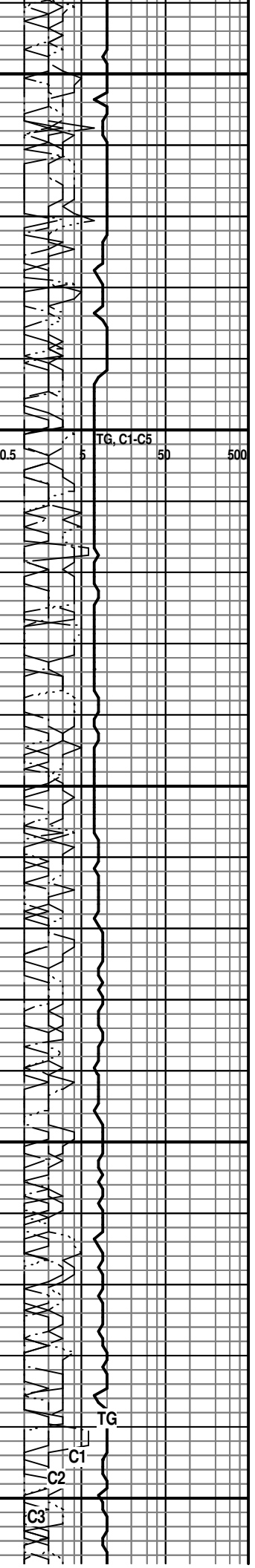
LM; lt brn, fxln to occ sucrosic text, partly dolomitic, most well cem, occ fair interxln por, no fluor, scat tan cht, no stn, ns.

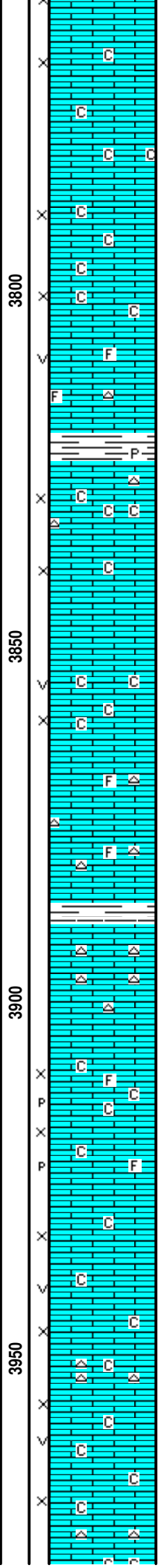
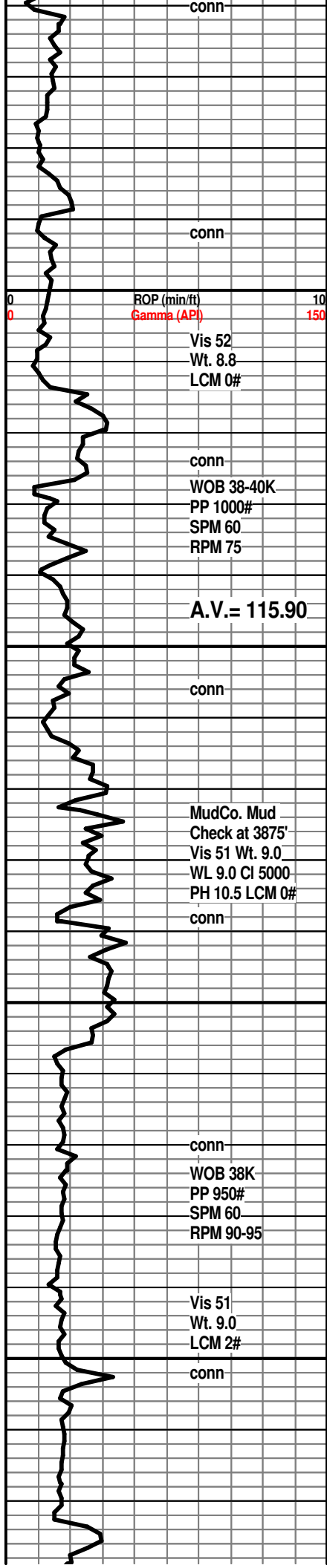
**TOPEKA 3710(-1491)**

LM; tan to lt brn, foss, f to rarely med xln ip, scat fair interxln w/occ p-p por, dull yel min fluor only, no stn or odor, no gas kick, ns.

LM; off wh, cream, tan, fxln w/gd interxln por, interbdd foss lmst, gd interpart por also, lt yel min fluor only, no stn or odor, ns.

LM; tan to lt brn, fxln to occ sucrosic text, interbdd





opaque cse spar calc xtals, fair to gd interpart por, scat lt yel min fluor only, no stn or odor, ns.

LM; wh, off wh, buff, f to med xln, fair interxln por, scat spar calc xtals, interbdd soft chalky lmst, dull yel min fluor, ns.

LM; tan to lt brn, med to occ cse xln, vug por in some, scat foss mat, no fluor, no stn or odor, ns.

SH; med gy, grn, platy, occ pyr

LM; off wh, tan, lt brn, f to med xln, some gran text, fair interxln por, interbdd soft chalky lmst, scat gy/brn occ foss cht, no fluor, ns.

LM; tan to lt brn, buff, foss ip, most med xln to occ gran text, occ soft chalky mtz, fair interxln w/rare vug por, lt yel min fluor, no stn or odor, ns.

LM; tan to lt brn, occ buff, most dense, blocky, trc gy foss cht, no vis por, ns.

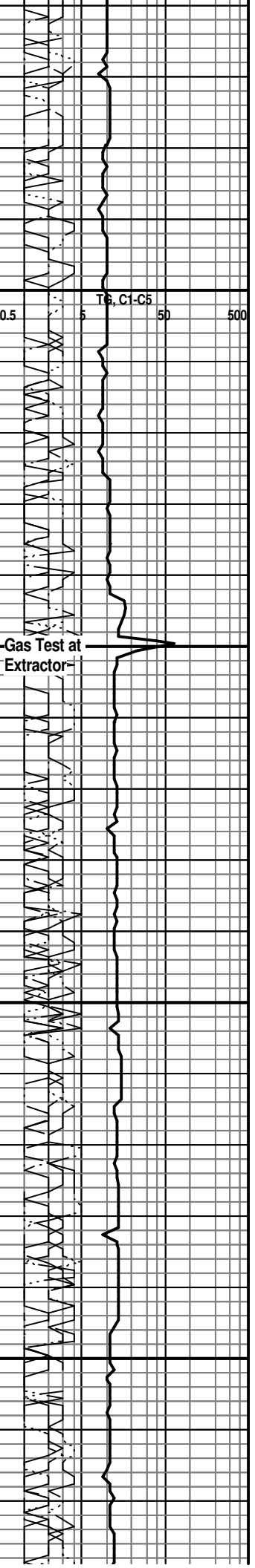
SH; dk gy, platy, smooth

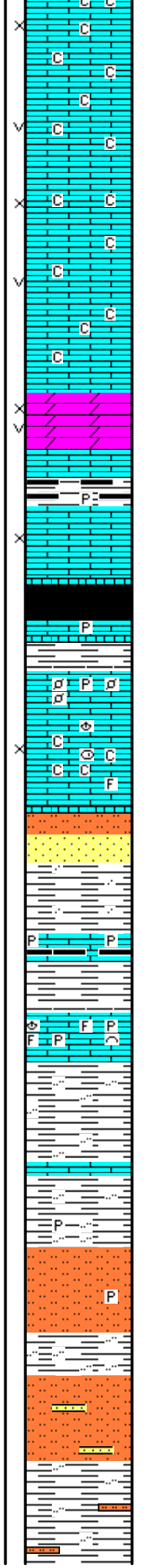
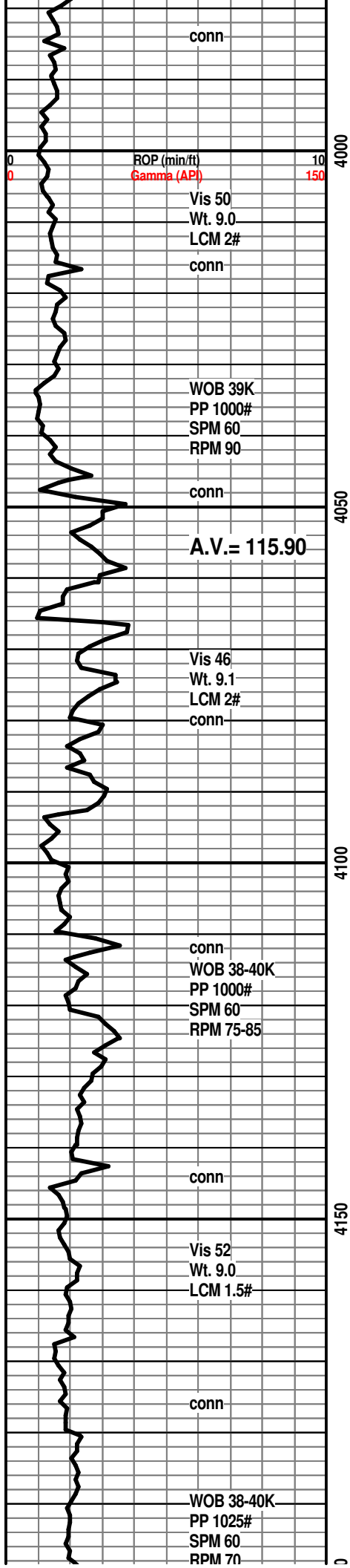
LM; tan to lt brn, hd, micritic, cherty ip, tite

LM; tan to off wh, buff, fxln, occ sucrosic text, fair to gd interxln w/occ p-p por, rarely foss, minor chalky mtz, dull yel to no fluor, no gas kick, ns.

LM; tan to lt brn, buff, med to occ cse xln, gran, scat spar calc xtals, rare tan/gy cht, gd interxln w/vug por in some, scat chalk and chalky mtz, dull yel fluor, ns.

LM; off wh, lt gy, f to med xln, interbdd dense micrite, blocky ip. trc av/brn occ foss cht. scat soft chalky lmst.





dull yel min fluor, ns.

LM; tan to lt brn, buff, most med xln, some sucrosic text, gd interxln and vug por, scat opaque spar calc xtals, chalky mtx ip, ns.

DOL; lt brn, sucrosic, gd interxln w/occ small vug por, lt yel min fluor, no stn/odor, barren, ns.

SH; dk gy, blk, platy, occ pyr

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

**HEEBNER SHALE 4061(-1842)**  
SH; blk, carb ip, soft to blocky, trc gas  
LM; med brn, dense, hd, pyr ip.

**TORONTO 4073(-1854)**  
LM; lt gy to lt gy brn, hd, dense, foss - finely pelletal ip, occ pyr, tite  
LM; off wh, wh, foss ip, much soft med xln chalky lmst, poor to fair interxln por, lt yel min fluor, no stn or odor, no gas kick, ns.

**DOUGLAS SHALE 4093(-1874)**  
SS and SLTST; lt gy, firm, vf gr ss, clusters, with gy occ mica sltst, no fluor, ns.

SH; gy grn, silty to sandy

LM; dk brn, foss w/blk hd pyr lmy sh.

LM; med gy brn, v. foss, hd, well cem, occ pyr

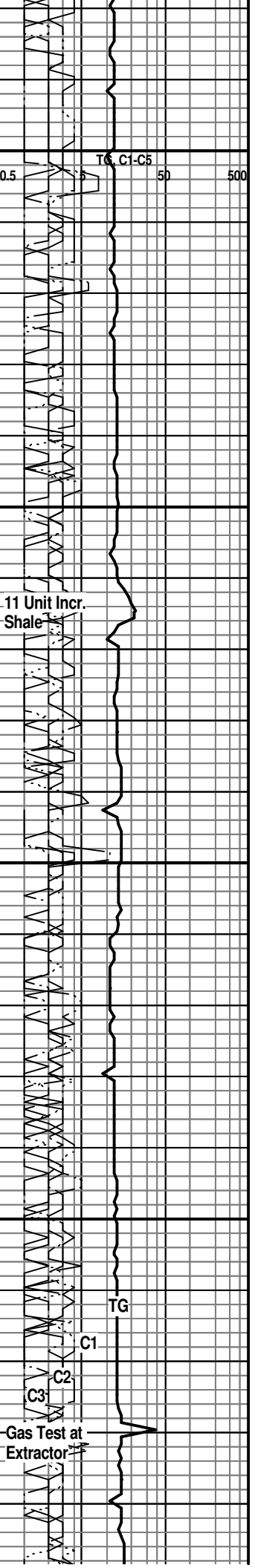
SH; lt to med gy, silty ip, firm

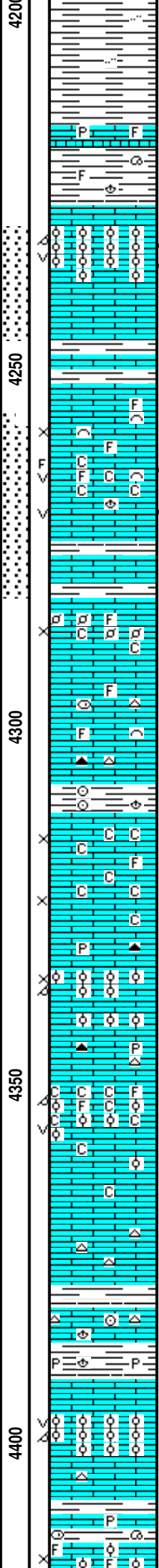
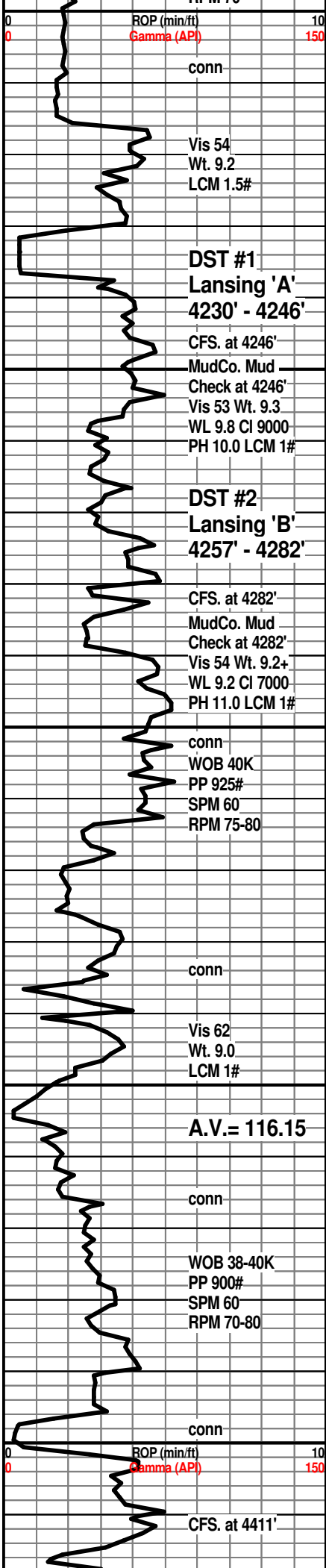
SH; med gy, smooth to sticky, some v. soft, occ pyr, silty

SLTST & SH; lt gy, med gy grn, platy, occ mica, firm, rarely pyr

SLTST; lt gy, mica, interbdd vf gr qtz ss, firm

SH; lt to med gy, platy, occ silty





SH; med to occ dk gy, firm, smooth, flakey to v. sticky

**BROWN LMST. 4216(-1997)**  
LM; med brn, v. hd, foss ip, occ pyr

SH; med gy grn, foss, firm

**LANSING 'A' 4227(-2008)**  
LM; lt to med brn, oolitic, med to occ lrg moldic por, scat vugs also, med to occ brite yel fluor, spotted/even lt brn oil stn, SFO, fair to gd odor, few gas bubbles, fair cut, some barren por.

**DST #1: Lansing 'A' 4230' - 4246'**

**LANSING 'B' 4252(-2033)**  
LM; off wh, tan, f to med xln, scat foss mat, fair interxln por, rare spots of dead residual oil, dull yel fluor, no odor, no gas kick

LM; off wh, lt gy, flxn to foss, scat vug por, frags w/lt brn edge stn, SSFO, fair/gd odor, much brite yel fluor, spotted to occ even lt brn stn, trc gas bubbles

**DST #2: Lansing 'B' 4257' - 4282'**

LM; off wh, buff, f to med xln, rarely foss - finely pelletal, soft partly chalky mtx, fair interpart por, lt yel fluor, no stn or odor, ns.

LM; lt to med brn, most hd, blocky, scat well cem foss mat, no vis por, scat tan to dk gy occ foss cht, no fluor, ns.

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

LM; off wh, wh, tan, f to med xln, fair interxln w/scat vug por, rarely foss, soft chalky mtx ip, rare lt yel fluor, no stn or odor, no gas kick, ns.

LM; lt brn, foss - oolitic ip, brittle, scat small to med size ooids, most compact, fair interpart por, dull yel fluor, ns.

LM; lt to med brn, foss ip, much dense hd micrite, pyr ip, no fluor, no stn or odor, ns.

LM; off wh, wh, tan, foss - oolitic, fair oomoldic and occ vug por, much v. soft chalk and chalky mtx, trc blk tar/gilsonite - dead residual oil, v. dull yel fluor, no odor, no gas kick

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

LM; lt to med brn, hd, foss ip, scat tan cht, tite

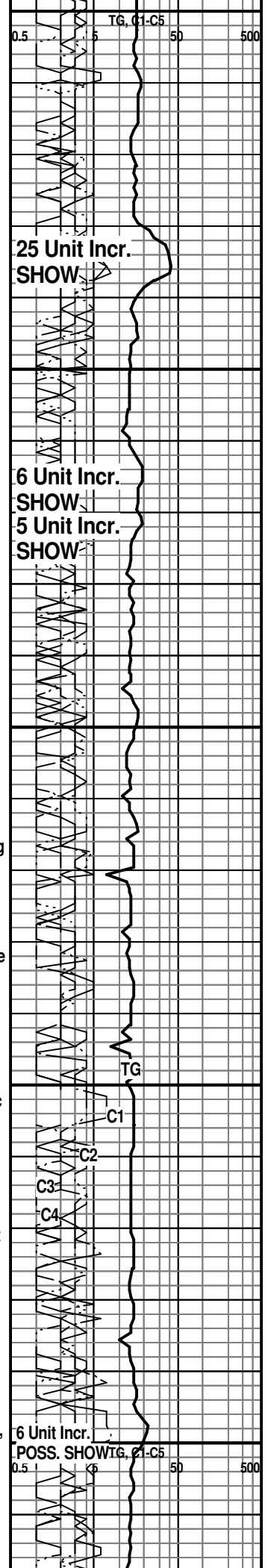
SH; dk gy, firm, pyr ip.

**LANSING/KC. 'H' 4391(-2172)**  
LM; tan to lt brn, oolitic, med to occ lrg moldic por, brittle ip, rare vug por, dull to occ lt yel fluor, no vis stn, no odor, quest. gas bubbles in a few pcs., weak to no show, most barren

LM; med to dk brn, hd, pyr

SH; med gy grn, platy, foss ip.

LM; tan to buff, foss - partly oolitic, fair to gd interpart



Vis 67  
Wt. 9.1  
LCM 1#  
conn

conn  
WOB 38-40K  
PP 950#  
SPM 60  
RPM 78

conn

Vis 50  
Wt. 9.0  
LCM 1#

conn

WOB 40K  
PP 1000#  
SPM 60  
RPM 75

conn

Vis 55  
Wt. 9.2  
LCM 2#

conn

ROP (min/ft)  
Gamma (API)

MudCo. Mud  
Check at 4615'  
Vis 53 Wt. 9.3  
WL 9.2 Cl 8500  
PH 10.5 LCM 1#

conn

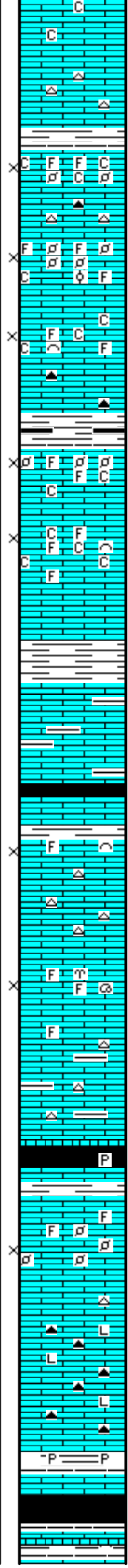
WOB 39K

4450

4500

4550

4600



por, minor soft chalky mtx, dull yel fluor, no stn, no gas kick, ns.

LM; tan to lt brn, blocky, hd, no vis por, scat tan to off wh cht, tite

**KC. 'I' 4439(-2220)**

LM; off wh, buff, tan, foss to finely pelletal, scat soft chalky mtx, poor interpart por, no fluor, no stn or gas kick, occ amber cht, ns.

LM; wh, off wh, foss - pelletal w/scat oolitic lmst, fair interpart por, some rextalized, minor chalky mtx, dull yel min fluor only, ns.

LM; off wh, tan, wh, foss to fxln, chalky soft mtx, fair interpart por, barren, no fluor, no stn or odor, ns.

SH; dk gy, trc blk, platy

**KC. 'J' DENNIS 4481(-2262)**

LM; off wh, tan, foss - finely pelletal ip, loosely cem - fair interpart por, occ chalky mtx, lt yel min fluor only, no stn or odor, ns.

LM; tan to buff, off wh, fxln w/scat foss hash, poor interpart por, minor chalky mtx, ns.

SH; med to dk gy, gy brn, lmy ip, hd

LM; gy brn, lt brn, argil, interbdd argil lmst, no vis por, tite

**STARK SHALE 4528(-2309)**

SH; blk, carb ip, platy, blocky

**SWOPE 4536(-2317)**

LM; tan to lt brn, foss ip, scat gy cht, trc poor to fair interpart por, most tite, no fluor, ns.

LM; tan to off wh, buff, fxln w/scat foss mat, poor interpart por, cherty ip, no fluor, no stn or gas kick, ns.

LM; lt to med brn, occ gy brn, some argil lmst, cherty ip, most dense, no fluor, ns.

SH; blk, platy, carb ip, occ pyr

**HERTHA 4586(-2367)**

LM; lt brn, foss ip, most well cem, scat finely pelletal lmst, no vis por, lt yel min fluor only, no stn or odor, ns.

LM; med to occ dk brn, dense, litho, cherty w/dk brn to occ dk gy cht, most micritic, tite

**BASE KANSAS CITY 4622(-2403)**

SH; varic; maroon, grn, gy, pyr ip.

SH; dk gy, blk, platy, soft

**PLEASANTON 4633(-2414)**

10 Unit Incr. Shale

14 Unit Incr. Shale

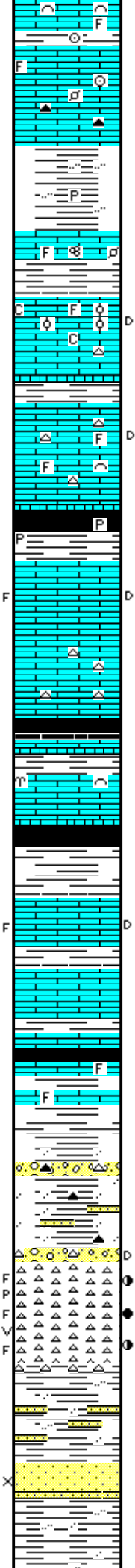
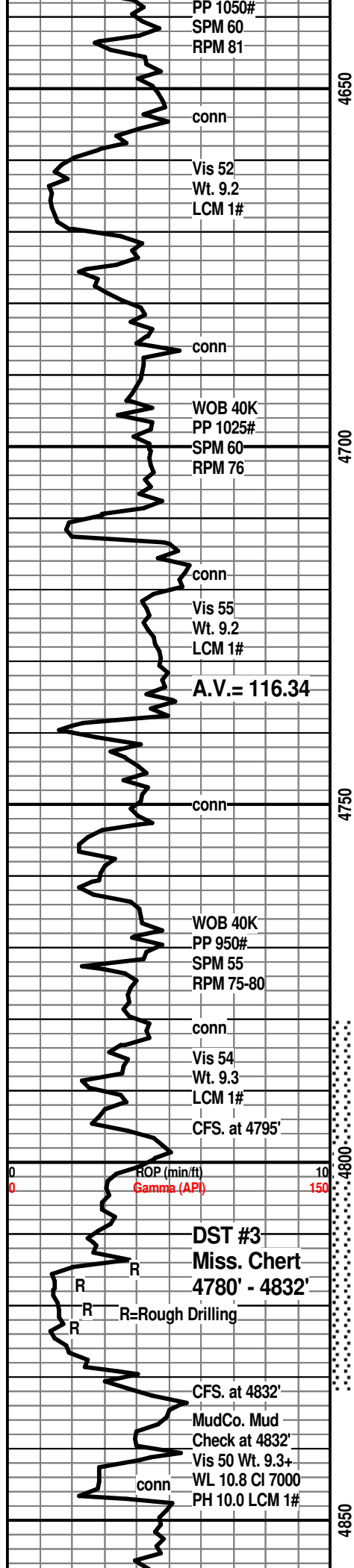
TG. Cl. 55

Gas Test

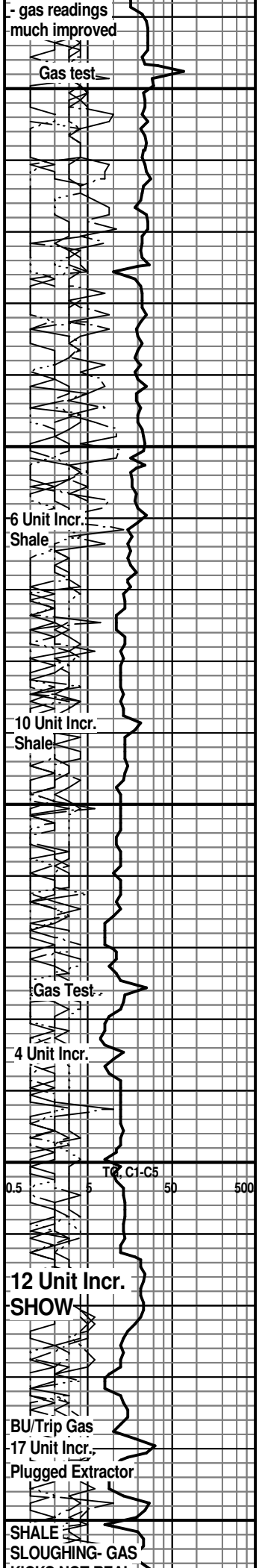
Gas line pinched - replace line

Clean out extractor





LM; lt brn, scat cse foss frags and hash, most well cem, no fluor, no stn or odor, ns.  
 LM; lt to med brn, scat foss mat, most dense, blocky, micritic, scat amber cht, no fluor, no stn or odor, ns.  
 SH; varic, brn, maroon, grn, platy to flakey, occ silty, rare dissem pyr  
**MARMATON 4670(-2451)**  
 LM; lt brn, pale grn tint, foss ip, hd, tite  
 LM; wh, off wh, fxln, scat well cem foss mat/ooids, partly chalky mtx, few pcs. w/blk tarry dead oil, no live show, lt yel fluor, looks tite  
 LM; tan to off wh, buff, foss ip, most well cem, trc blk tar/dead oil, poor/no vis por, occ tan/lt brn cht, dull yel min fluor only, no odor, looks tite  
 SH; dk gy, blk, platy, occ pyr  
**PAWNEE 4716(-2497)**  
 LM; tan to lt brn, buff, most dense, micritic, few pcs w/blk tar-gils on closed fracs, hd, rare dull yel fluor, no odor, no gas kick  
 LM; tan to lt brn, most dense, blocky, micritic, scat tan to off wh cht, no vis por, lt yel fluor, no stn or odor, ns.  
 SH; blk, carb ip, platy  
 LM; tan to lt brn, hd, most micritic, blocky, scat rare well cem foss, no fluor, no stn or odor, ns.  
**CHEROKEE SHALE 4753(-2534)**  
 SH; dk gy, blk, some varic - grn, brn, silty ip.  
 LM; tan to lt brn, most dense, micritic, few pcs w/frac face w/blk tar/dead oil, trc med/brite yel fluor, no odor, no gas kick  
 LM; lt brn, most dense, micritic, hd, no vis por, no fluor, tite  
 SH; blk, platy, thinly bdd  
 LM; lt to med brn, dense, foss ip, most well cem, hd, lt yel fluor, no vis stn, no odor, interbdd varic shales, ns.  
 SH; varic, some org cht congl., hd  
 SH; varic, rust red, yel, grn, interbdd red/org fresh cht, sandy w/ f gr qtz ss, some blk dead tar/gils on chert  
**MISSISSIPPI CHERT 4814(-2595)**  
 CHT; wh, off wh, fresh and tripolite, fair p-p and occ vul por, abnt fracs w/edge oil stn, spotted med brn stn, Trc. FO., few gas bubbles, faint odor, med to occ brite yel fluor, fair cut  
**KINDERHOOK SHALE 4829(-2610)**  
**DST #3: Miss. Chert 4780' - 4832'**  
 SH; gy/grn, much sloughing varic sh, sandy w/ occ soft grn vf gr ss strngs  
 SS; clr, wh, f gr qtz, clusters, very little in samples, fri, no vis oil stn, well srt, no fluor, questionable gas bubbles, fair intergran por  
 SH; med gy, varic SHALE SLOUGHING BADLY - much



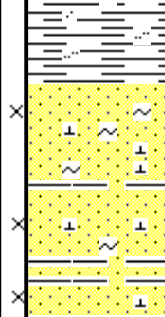
CFS. at 4860'

conn  
Vis 65  
Wt. 9.2  
LCM 1#

CFS. at 4890'  
RTD.

4900

50



varic sandy shale

**KINDERHOOK SAND 4866(-2647)**

SS; clr, wh, most f gr qtz, fri clusters, calc, clean, well srt, most w/gd intergran por, occ glau, no stn or odor, barren, ns.

SS; wh, clr, pale grn, f gr qtz, interbdd shaly ss, some siliceous - v. hd, most fri clusters, glau ip, no stn or odor, ns.

RTD. 4890' at 2:00 AM. 4/10/12

LTD.

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

KICKS NOT REAL

