

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Zimmerman 'A' #1-13
Location: 2310' FNL & 2284' FEL, Sec. 13-T27S-R20W, Kiowa Co., KS.
Licence Number: 15-097-21779-00-00
Spud Date: 11/29/2013
Surface Coordinates: 2310' FNL & 2284' FEL, Sec. 13-T27S-R20W
Region: Wildcat
Drilling Completed: 12/6/2013

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2268' K.B. Elevation (ft): 2281'
Logged Interval (ft): 3900' To: 4950' Total Depth (ft): 4950'
Formation: Mississippian at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3296'; Chemical Gel 3296' to 4950'

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OPERATOR

Company: Strata Exploration, Inc.
Address: P.O. Box 401
Fairfield, IL. 62839-0401

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') 4225' - 4242' Test Times 15"-45"-30"-60" IFP Weak Blow built to 4.5", FFP Weak 1" Blow, no Blowback on SI's; REC: 50' Gas in Pipe, 110' MSW(88%W, 12%M) CI 76,000, Mud 4700; IFP 29-40#, ISIP 1445#, FFP 43-69#, FSIP 1438#, IHP 2110#, FHP 2062#, BHT 112 Deg. F.

DST #2(Cherokee Sand/Miss. Chert) 4786' - 4864' Test Times 15"-45"-30"-60" IFP Weak 1.25" Blow, FFP Weak 2" Blow, no Blowback on SI's; REC: 60' Gas in Pipe, 40' GOCM(4%G, 4%O, 92%M), no Water; IFP 25-34#, ISIP 160#, FFP 33-41#, FSIP 102#, IHP 2410#, FHP 2400#, BHT 112 Deg. F.

Comments

11/29/13 MIRU Sterling Drilling Rig #5 Spud at 7:15 PM., 11/30/13 Drilling at 560'; 12/1/13 Drilling at 1000'; 12/2/13 Drilling at 2800'; 12/3/13 Drilling at 4015'; 12/4/13 TD. 4242' - TIH after DST #1; 12/5/13 Drilling at 4640'; 12/6/13 TD. 4864' - DST #2, reached Total Depth of 4950' at 5:40 PM.; 12/7/13 RTD. 4950', LTD. 4948', Unfreeze Rig - set Production Casing.

Set new 8 5/8"(23#) Surface Casing at 608' with 370 sacks cement(Basic Energy Services). Cement did Circulate. PD. 1:15 PM. 11/30/13.

Surveys: 1.0 Deg. at 613'(Surface Casing); 0.50 Degree at 3997'(Bit Trip); 1.25 Deg. at 4242'(DST #1); 0.75 Deg. at 4864'(DST #2).


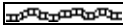
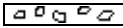










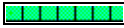

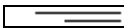
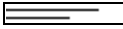



Pipe Strap at 3997'(Bit Trip): Strap 0.18' Short to the Board, no correction made to the Board.

NOTE: Pulled PDC bit at 3997'. Ran in with Conventional "button" bit to drill on to Total Depth.








































































After review of the Halliburton Logs, DST data, and positive shows of hydrocarbons, the operator elected to set new 5 1/2" Production Casing for completion in the Cherokee Sand and Mississippian zones.

LOG TOPS: Chase 2498(-217), Stotler Lmst. 3428(-1147), Howard 3632(-1351), Queen Hill Shale 3941(-1660), Heebner Shale 4069(1788), Toronto 4091(-1810), Brown Lmst. 4212(-1931), Lansing 'A' 4222(-1941), Lans/KC. 'H' 4387(-2106), Stark Shale 4538(-2257), Base Kansas City 4615(-2334), Marmaton 4660(-2379), Pawnee 4707(-2426), Cherokee Shale 4751(-2470), Cheokee Sand 4820(-2539), Miss. Chert 4836(-2555), Miss. Osage Marker 4862(-2581), Basal Miss. Lime 4929(-2648).

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  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	 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
 [M] Inter
 [O] Moldic
 [P] Organic
 [P] Pinpoint

[V] Vuggy

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

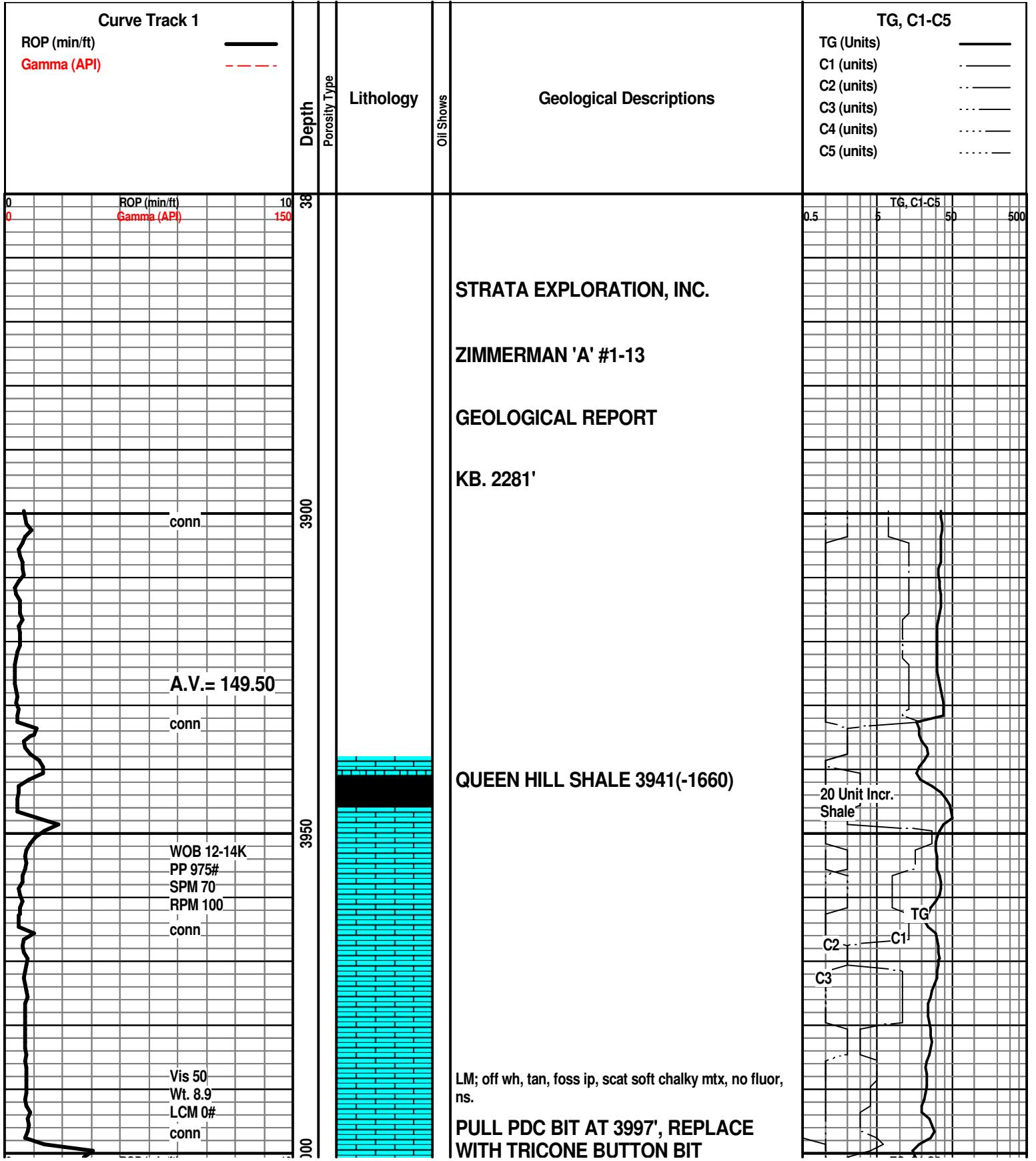
- ROUNDING**
 [R] Rounded
 [r] Subrnd
 [a] Subang
 [A] Angular

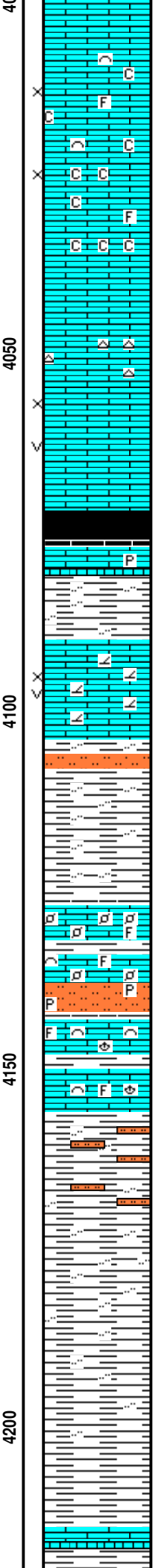
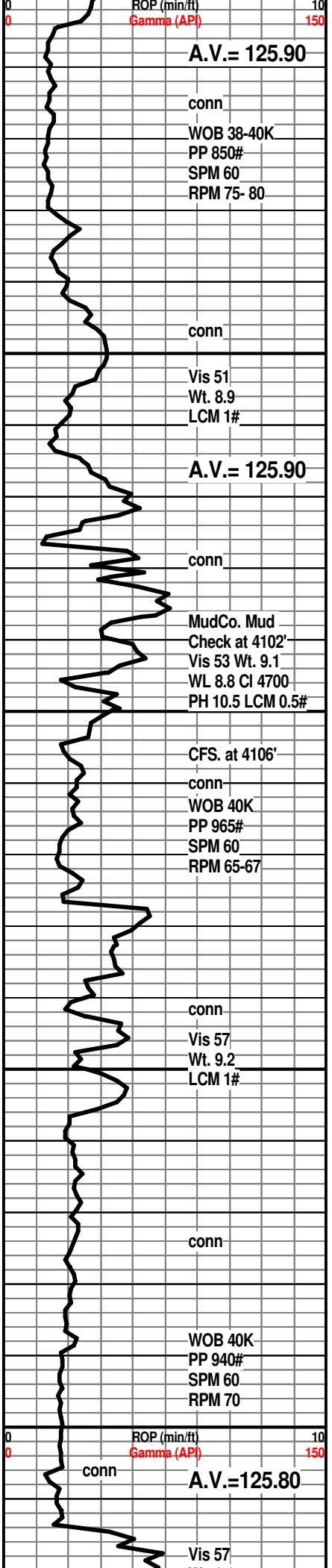
OIL SHOW
 [●] Even

- [●] Spotted
 [○] Ques
 [D] Dead

- INTERVAL**
 [■] Core
 [□] Dst

- EVENT**
 [▽] Rft
 [▲] Sidewall





LM; tan to off wh, foss ip, dense, no vis por, no fluor, ns.

LM; tan to buff, lt brn, foss w/scat med xln lmst, fair interpart/interxln por, abnt soft chalk and occ chalky mtz, dull yel min fluor, no stn, ns.

LM; tan to lt brn, blocky, most micritic, scat gy occ foss cht, no vis por, ns.

LM; tan to off wh, buff, foss w/fair foss-cast por, occ small vug por, dull yel fluor, no stn or odor, ns.

HEEBNER SHALE 4072(-1791)
SH; blk, carb ip, blocky, gassy
LM; med to dk brn, dense, micritic, rare pyr

SH; grn, gy grn, silty ip, some waxy

TORONTO 4090(-1809)
LM; off wh, sucrosic text - dolo ip, scat fair vug/interxln por, dull to lt yel fluor, occ cse spar calc xtals, no vis gas bubbles, no stn, no apparent gas kick, no oil shows

DOUGLAS SHALE 4104(-1823)
SH; lt gy, silty w/interbdd sltst, soft ip

SH; lt to med gy, gy grn, soft ip, occ silty

LM; med gy, med brn, highly foss, scat pellets and hash, some well cem, no vis por, no fluor, ns.

SLTST; lt gy, mica, platy, occ pyr

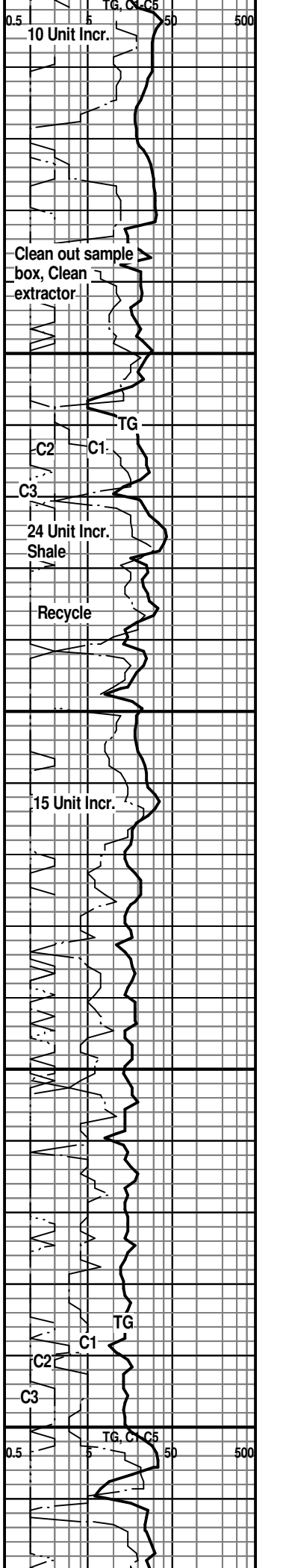
LM; med brn, med gy, foss, some v. hd, blocky, occ soft dk gy shaly lmst interbdd, no vis por, no fluor, ns.

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

SH; lt to med gy, firm, occ silty

SH; lt to med gy, platy, most smooth, occ silty

BROWN LMST. 4214(-1933)
LM; med brn, hd, rare well cem foss, blocky



Wt. 9.2
LCM 0.5#

**DST #1
Lansing 'A'
4225' - 4242'**

conn

CFS. at 4242'

MudCo. Mud
Check at 4268'
Vis 63 Wt. 9.3
WL 9.2 Cl 5600
PH 9.5 LCM 0#

conn

WOB 40K
PP 975#
SPM 58
RPM 75

A.V.= 125.80

conn

Vis 68
Wt. 9.5
LCM 0#

conn

WOB 40K
PP 975#
SPM 58
RPM 76

conn

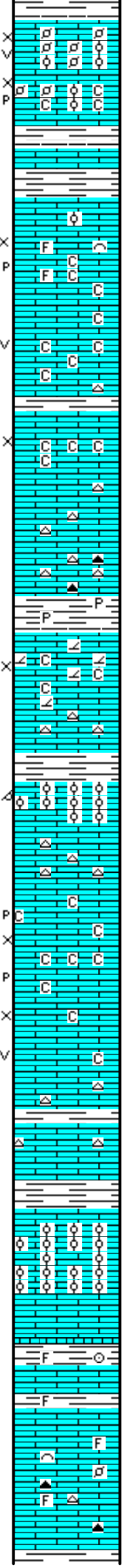
ROP (min/ft)
Gamma (API)

Vis 60
Wt. 9.3+
LCM 0#

conn

WOB 40K
PP 970#

4250
4300
4350
4400



LANSING 'A' 4223(-1934)

LM; lt brn, foss - oolitic, scat ooids and pellets, fair interpart w/small vug por, lt yel fluor, sev. gas bubbles, no vis oil stn, Gas show only

LM; off wh, buff, foss, med xln w/fair interxln and p-p por, chalky ip, lt yel fluor, trc gas bubb.

DST #1: Lansing 'A' 4225' - 4242'

LANSING 'B' 4248(-1967)

LM; tan to off wh, buff, foss w/occ poor interpart & p-p por, scat soft chalk and chalky mtx, v. dull yel fluor, trc blk tar/gils, no live show

LM; lt gy, lt gy brn, tan, fxln w/occ vug por, v. dull yel min fluor, chalky ip, few pcs w/dead oil stn/gils, no live shows, no odor, no gas kick

LM; tan to cream, buff, f to med xln, scat spar calc xtals, poor interxln por, minor soft chalky mtx, no fluor, no stn or odor, ns.

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

SH; med to dk gy, platy, occ pyr

LM; wh, off wh, fxln to sucrosic text, partly dolomitic, fair interxln por, occ soft chalky mtx, no fluor, no stn or odor, ns.

LM; tan to lt brn, foss ip, cherty, no vis por, ns.

LANSING 'G' POROSITY 4330(-2049)

LM; tan to lt brn, oolitic, scat foss hash also, partly oomoldic w/fair oomoldic por, v. dull yel fluor, no stn or odor, ns.

LM; off wh, buff, wh, f to med xln, fair interxln w/occ p-p por, interbdd chalky mtx. v. dull yel to no fluor, no stn, no gas kick, ns.

LM; tan to cream, buff, f to med xln, poor to fair interxln w/scat small vug por, lt yel min fluor, no stn or odor, ns.

LM; med brn, foss, scat gy cht, tite

SH; med gy grn, dk gy, platy

LANSING/K.C. 'H' 4390(-2109)

LM; lt brn, oolitic, med size molds, v. gd oomoldic w/occ vug por, lt yel min fluor, brittle ip, rare overgrowths, no stn or odor, no sample shows

LM; tan to lt brn, micritic, scat gy/wh cht, tite

SH; grn, gy grn, foss ip.

LM; tan to off wh, foss to fxln, scat poor interpart por, occ lt brn to amber cht, no fluor, no stn or odor, ns.

KANSAS CITY 'I' 4440(-2159)

5 Unit Incr.

8 Unit Incr.
SHOW

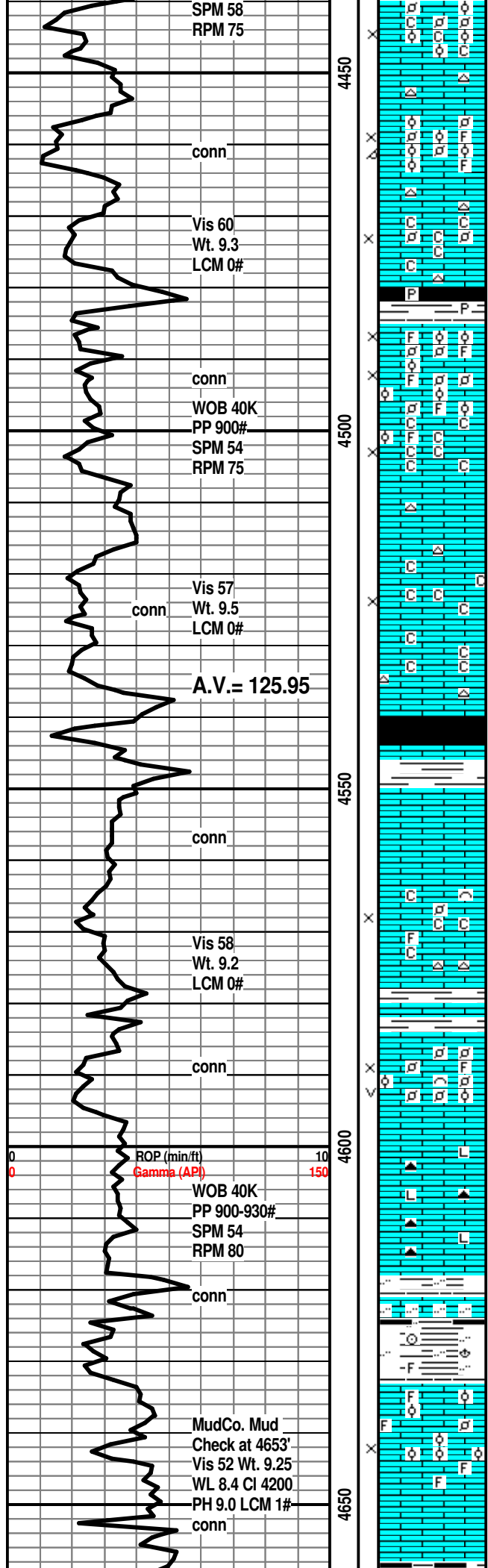
3 Unit Incr.

TG
C1
C2
C3

4 Unit Incr.

0.5 50 500 TG C1-C5

3 Unit Incr.



LM; off wh, tan, finely pelletal - oolitic, compact small ooids, loosely cem - fair interpart por, dull yel fluor, minor chalky mtx, no stn or odor, ns.

LM; off wh, lt gy, finely pelletal - abnt compact ooids and foss hash, fair to gd interpart por, trc oomoldic lmst, dull yel min fluor, no vis stn, no odor

LM; off wh, tan, foss - pelletal ip, much soft chalk and chalky mtx, poor interpart por, dull yel fluor, ns.

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

KANSAS CITY 'J' 4485(-2204)

LM; tan to lt brn, foss - pelletal to oolitic, poor to fair interpart por, trc oomoldic lmst, dull to lt yel fluor, poss faint odor, no vis stn, no gas kick

LM; wh, off wh, buff, foss ip, much soft chalky and chalky lmst, poor interpart por, no fluor, ns.

LM; lt brn, blocky, micritic, hd, rare gy/wh cht

LM; offwh, lt gy, fxln w/much chalk and chalky mtx, poor interxln por, rare wh cht, soft ip, no fluor, ns.

STARK SHALE 4540(-2259)

SH; blk, carb ip, trc gas, blocky ip.

SH; grn, gy, rust red, some varic.

SWOPE 4550(-2269)

POOR SAMPLES - MUCH SHALE AND ANHYDRITE SLOUGHING

LM; off wh, tan, foss ip, scat small pellets, interbdd soft occ chalky lmst, no fluor, no vis por, ns.

SH; med to dk gy, smooth, platy

HERTHA 4584(-2303)

LM; tan to buff, cream, foss w/small pellets and foss hash, trc oolitic, fair interpart w/rare small vug por, no fluor, no stn or odor, ns.

LM; med to dk brn, rare foss, some litho, scat smoky to dk brn, cht, dense, no flour, ns.

BASE KANSAS CITY 4618(-2337)

LM; med brn, gritty - silty text, firm

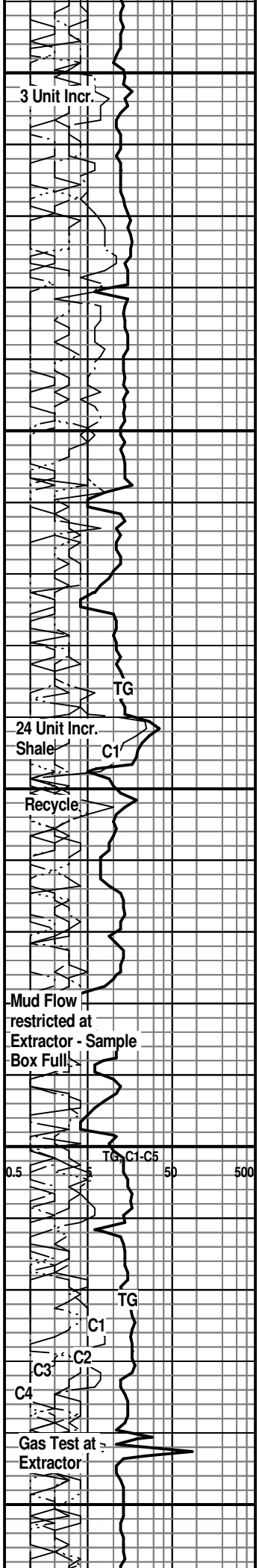
SH; varic, grn, gy, rust red, dk gy - blk, fiss, occ foss, silty

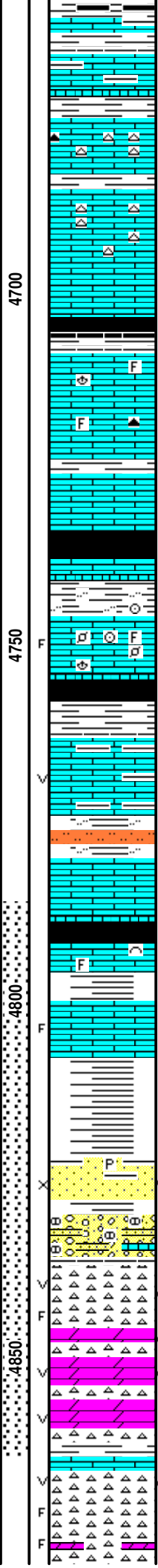
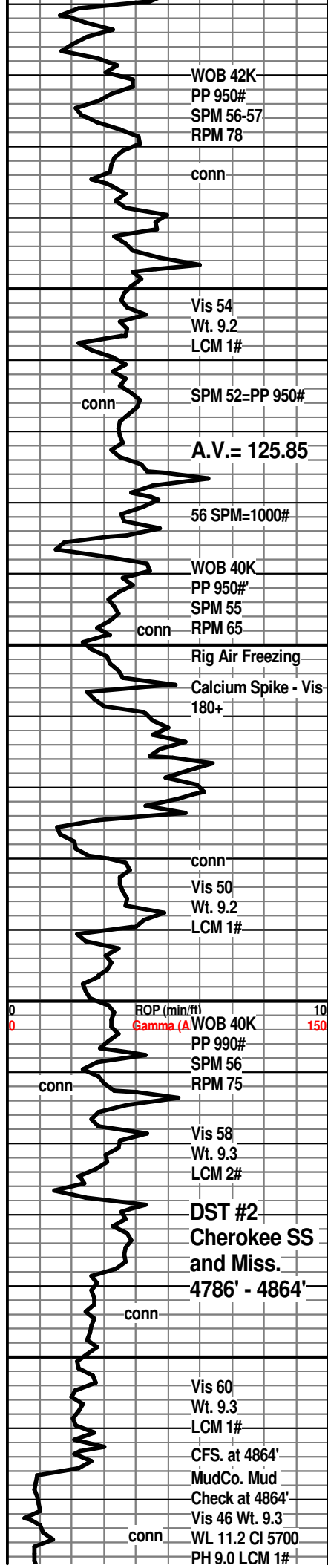
PLEASANTON 4633(-2352)

LM; tan, pink, foss w/scat well cem foss pellets /hash, well cem, no vis por, no fluor, ns.

LM; tan to off wh, buff, foss w/interbdd oolitic/pelletal lmst, fair interpart por, dull yel to no fluor, no vis stn, questionable odor

SH; grn, dk av grn, trc dk av/blk, fiss





MARMATON 4662(-2381)
LM; lt brn, gy brn, pale grn tint - argil ip, most dense, rare well cem foss, interbdd grn shales, no fluor, ns.

LM; off wh, tan, buff, most dense - micritic, cherty w/tan to amber cht, no vis por, ns.

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

SH; blk, fiss, blocky
PAWNEE 4709(-2425)
LM; tan to lt brn, blocky, rare well cem foss mat, no vis por, rare smoky/blk cht, no fluor, no stn or odor, ns.

LM; lt to med brn, hd, blocky, no vis por, rare gy/smoky cht, ns.
LABETTE SHALE 4734(-2453)
SH; blk, carb ip, trc gas, blocky
SH; grn, gy grn, silty ip.
LM; lt to med brn, hd, foss ip, occ pyr, no vis por, dull yel fluor, trc frags w/blk tar/gils, no live shows, no odor

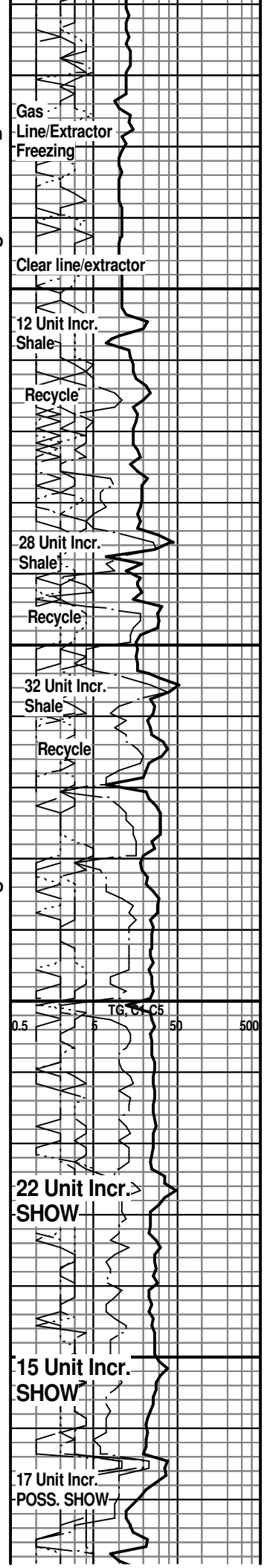
CHEROKEE SHALE 4755(-2474)
SH; blk, carb ip, rare pyr, platy
LM; tan to lt brn, gy brn, some argil lmst, rare pcs. w/small vug por - dead oil/gils, dull yel fluor, no live shows, no odor, most tite
SH; varic, grn, rust red, brn, silty ip w/interbdd soft sltst.
LM; tan to off wh, buff, most dense - micritic, blocky, no vis por, no fluor, much anhy slough
SH; blk, carb ip, platy
LM; lt to med brn, hd, rare foss, tite
LM; tan to lt brn, fxln, few pcs. w/trc frags, rare blk tar/gils dead oil, v. dull yel fluor, no odor, no gas kick

BASE CHEROKEE LMST. 4808(-2527)
SH; varic, grn, brn, gy, rust red(sample washes red), platy to flakey, occ silty

CHEROKEE SAND 4822(-2541)
SS; clr, med gr, qtz, subrnd, clusters, some tite, some w/gd intergran por, argil ip, much even med brn stn, gd oil odor, SFO, med yel fluor, instant cut
CONGL; weath lmst nodules, shaly ss

MISSISSIPPI CHERT 4837(-2556)
CHT; wh, pale grn, lt brn(scatt. oil stn), fresh w/occ trip cht, partly dolo w/grainy text, dull to occ med yel fluor, fairly strong odor, scat vug por in trip cht w/live oil stn

CHTY DOL; pale grn, gritty, scat lrg qtz xtals w/live oil, sev. pcs. w/well dev. vug por, lt - med brn spotted/even live oil stn, SSO, strong odor
DST #2: Cher. SS + Miss. 4786' - 4864'
MISS. OSAGE MARKER 4865(-2584)
CHT; lt gy, wh, opaque, fresh, scat vug por w/lt brn live oil stn, occ frags, gd odor, scat brite yel fluor
CHT; wh, porc, fractured, all fresh, trc off wh to wh



A.V. = 126.15

conn

WOB 40K
PP 850#
SPM 56
RPM 70-75

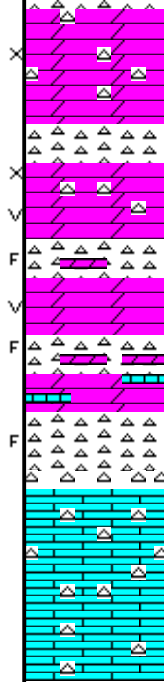
conn

Vis 59
Wt. 9.2
LCM 1#
CFS. at RTD.

4900

4950

00



cherty dolo, no vis stn, no fluor, ns.

DOL; buff, tan, sucrosic, hd to soft, occ fair interxln por, cherty ip, med yel min fluor, faint odor, no vis oil stn, no cut

DOL; off wh, tan, buff, sucrosic, cherty ip, fair to occ gd interxln w/some vug por, med yel min fluor, no stn, v. faint odor, ns.

DOL and CHT; wh fresh cht, fracs ip, w/interbdd off wh to tan sucrosic cherty dolo, rare small vug por, lt yel min fluor, no stn or odor, ns, interbdd hd lmy dolo.

CHT; wh, transl qtz xtals, fresh, some porc, trc fracs, no fluor, ns.

BASAL MISS. LMST. 4929(-2648)

LM; lt brn, pred. micritic, scat med spar xtals, cherty ip w/wh to gy occ foss cht, no vis por, no fluor, ns.

RTD. 4950' at 5:40 PM. 12/6/13

LTD. 4948'

Halliburton "Quad Stack" ACRT(DIL),
NEU/DEN w/PE, Microlog, Sonic

Recycle of B.U.
Gas - NOT REAL
GAS KICK^{2,3}

Recycle

