

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: #4-10 Stapleton
Location: 335' FNL & 1000' FWL, Sec. 10-T30S-R32W, Haskell Co., KS.
Licence Number: 15-081-21946
Spud Date: 6/28/2011
Surface Coordinates: 335' FNL & 1000' FWL, Sec. 10-T30S-R32W
Region: Diaden Field Ext.
Drilling Completed: 7/9/2011

Bottom Hole Same as above
Coordinates:
Ground Elevation (ft): 2894' K.B. Elevation (ft): 2907'
Logged Interval (ft): 4400' To: 5625' Total Depth (ft): 5625'
Formation: St. Louis at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3119'; Chemical Gel 3119' to 5625'.

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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(Upper Morrow Sand) 5240' - 5325' Test Times 15"-45"-45"-90" IFP Strong Blow BOB/4", FFP BOB/Immed. - decreasing Blow, no GTS, no Blowback on SI's; REC: 3500' Gas in Pipe, 20' OCM(5%O, 95%M), no water; IFP 64-67#, ISIP 890#, FFP 63-67#, FSIP 1474#, IHP 2541#, FHP 2443#, BHT 130 Deg. F.

DST #2(Lower Morrow/Upper Chester SS) 5324' - 5409' Test Times 15"-45"-45"-90" IFP Good Blow Building to BOB/15", FFP Strong Blow BOB/Immed. - decreasing Blow, no GTS, no Blowback on SI's; REC: 680' Gas in Pipe, 60' OCM(Trc. G, 5%O, 95%M), 60' GMO(10%G, 50%O, 40%M), no water; IFP 72-83#, ISIP 327#, FFP 71-86#, FSIP 332#, IHP 2615#, FHP 2471#, BHT 134 Deg. F.

DST #3(St. Louis 'A' + 'B') 5518' - 5569' Test Times 15"-45"-45"-90" IFP Strong Blow GTS in 3 Min., FFP GTS throughout, Gauged 586 MCFG during IFP decreasing to 107 MCFG/45" of FFP, no Blowback on SI's; REC: 240' Total Fluid: 60' GOCM(20%G, 5%O, 75%M), 180' GO(5%G, 95%O), no water; IFP 182-91#, ISIP 1092#, FFP 70-74#, FSIP 1274#, IHP 2678#, FHP 2537#, BHT 134 Deg. F.

Comments

6/28/11 MIRU Sterling Drilling Rig #5, Spud at 11:00 PM.; 6/29/11 Drilling at 670'; 6/30/11 TD. 1813' - Wiper Trip for Surface Csg.; 7/1/11 Drilling at 1840'; 7/2/11 Drilling at 3100'; 7/3/11 Drilling at 4060'; 7/4/11 Drilling at 4560'; 7/5/11 Drilling at 4930'; 7/6/11 Drilling at 5235'; 7/7/11 TD. 5325' - TIH after DST #1; 7/8/11 TD. 5409' - TOH with DST #2; 7/9/11 TD. 5569' - TIH for DST #3; 7/10/11 RTD. 5625', LTD 5618' - Logging

8 5/8" (23#) Surface Casing at 1808' KB. w/605 sx.(Basic Energy Services). Cement Did Circulate. PD. 3:30 PM. 6/30/11.

Surveys: 1.25 Deg. at 1813'(Surface Casing); 1.0 Deg. at 4400'(Bit Trip); 0.75 Deg. at 5325'(DST #1); 1.50 Deg. at 5569'(DST #3).

NOTE: Ran STC MI616 PDC bit from under Surface Casing to 4400'. Bit Trip at 4400'; resumed drilling operations with "conventional button bit".

Pipe Strap at 4400'(Bit Trip): Strap 0.92' Long to the Board, no correction made to the Board.

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

LOG TOPS:

ROCK TYPES

	Anhy		Clyst		Gyp		Mrlst		Shgy
	Bent		Coal		Igne		Salt		Sltst
	Brec		Congl		Lmst		Shale		Ss
	Cht		Dol		Meta		Shcol		Till

ACCESSORIES

MINERAL		Gyp	FOSSIL		Ostra		Sltstrg
		Hvymin			Pelec		Ssstrg
		Kaol			Pellet	TEXTURE	
		Marl			Pisolite		Boundst
		Minxl			Plant		Chalky
		Nodule			Strom		Cryxln
		Phos		STRINGER			Earthy
		Pyr			Anhy		Finexln
		Salt			Arg		Grainst
		Sandy			Bent		Lithogr
		Silt			Coal		Microxln
		Sil			Dol		Mudst
		Sulphur			Gyp		Packst
		Tuff			Ls		Wackest
					Mrst		

OTHER SYMBOLS

POROSITY		Vuggy	ROUNDING		Spotted	EVENT	
					Ques		Rft
					Dead		Sidewall
	SORTING						
		Well		INTERVAL			
		Moderate			Core		
		Poor	OIL SHOW		Dst		

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

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

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

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

39

4000

4050

4100

STRATA EXPLORATION, INC.

#4-10 STAPLETON

GEOLOGICAL REPORT

KB. 2907'

Drilling with PDC Bit, no Samples Saved

NOTE: Annular Velocity not set correctly - gas kicks are not "laying over" the drilling breaks

NOTE: Tops are picked on drilling time

TG, C1-C5 50 500

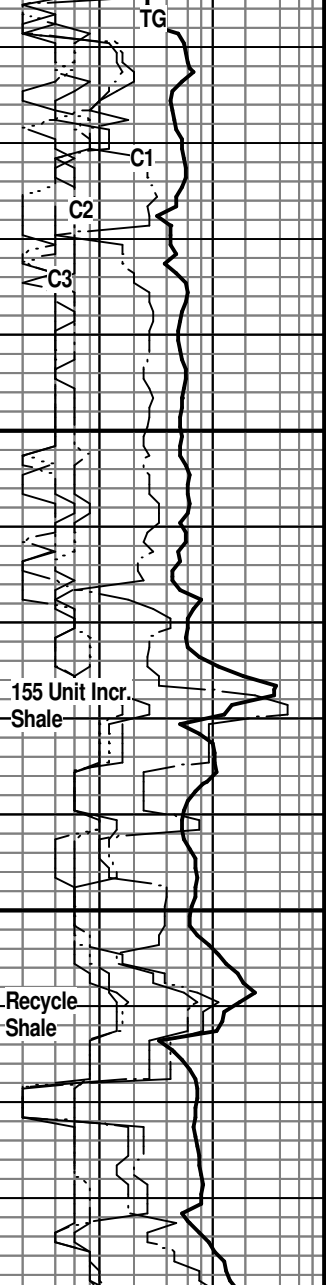
TG, C1-C5 50 500

conn

conn

conn

conn



NOTE: Tops are picked on drilling time only over this interval

HEEBNER SHALE 4148(-1241)

TORONTO 4168(-1261)

LANSING 'A' 4248(-1341)

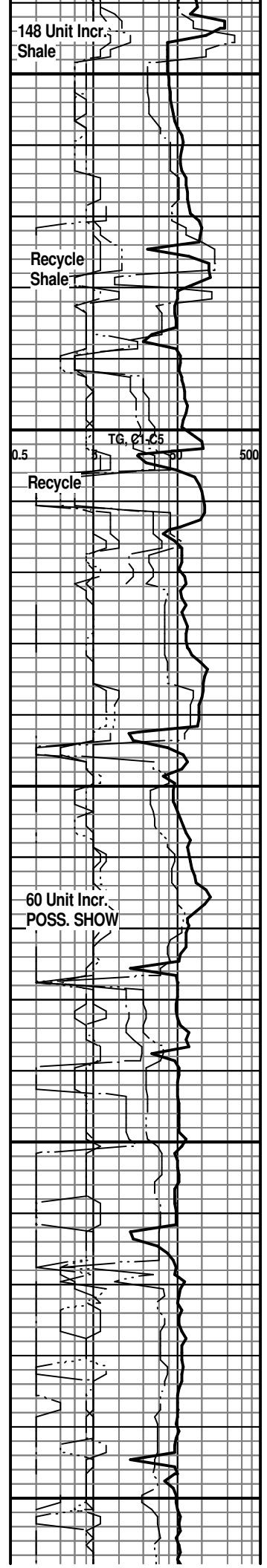
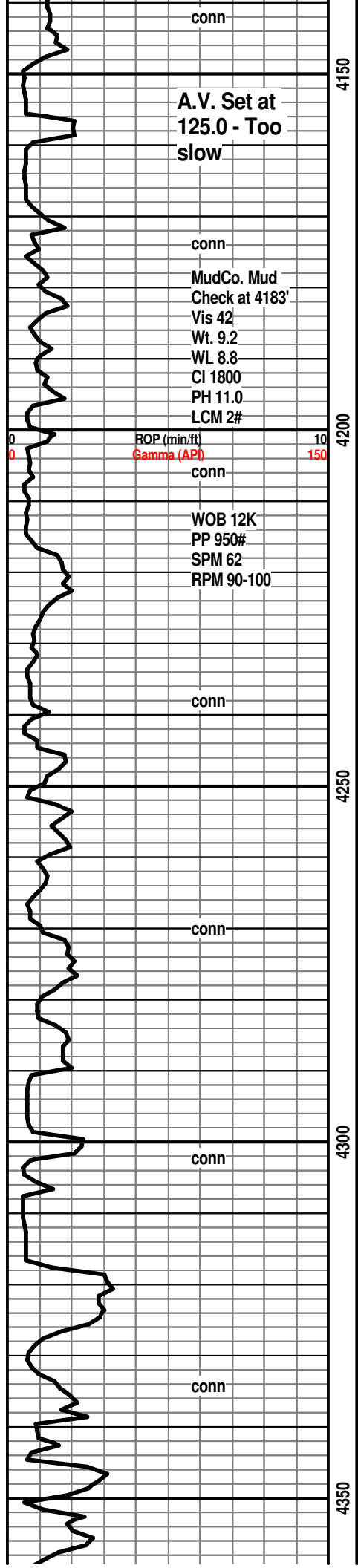
LANSING 'B' 4305(-1398)

148 Unit Incr.
Shale

Recycle
Shale

0.5 TG, 21.65
Recycle

60 Unit Incr.
POSS. SHOW



conn
WOB 10-12K
PP 1000#
SPM 62
RPM 95

conn
ROP (min/ft)
Gamma (API)
A.V. = 130.0

conn

conn
WOB 41K
PP 1000#
SPM 57
RPM 71

Vis 54
Wt. 9.1
LCM 3#

conn

conn
A.V. = 131.0

Vis 52
Wt. 9.2
LCM 3#

conn

WOB 38-40K
PP 1000#
SPM 60
RPM 70-75

conn - MudCo. Mud

4400

4450

4500

4550



LM; tan to off wh, lt brn, f to med xln, some gran text, fair interxln por, no stn or odor, lt yel min fluor, rare tan to gy cht, ns.

10' Wet and Dry Samples at 4400' Bit trip at 4400' - Pull PDC Bit

LM; off wh, wh, tan, f to med xln, some gran, much soft wh chalky mtx, fair to gd interxln por, lt yel min fluor only, scat foss mat - minor oolitic lmst interbdd, occ wh fresh cht, no stn or odor, ns.

LM: tan to lt brn, buff, dense, most micritic, rare foss wh cht, tite

LANSING 'F' 4441(-1534)

LM; lt brn, oolitic, most med to lrg oomoldic por, occ well dev. vug por also, chalky mtx ip, med to brite yel min fluor, no stn or odor, ns.

LM; lt brn, tan, oolitic, most med to occ lrg moldic por, scat well dev. vug por also, occ chalky mtx, no stn or odor, ns.

LM; off wh, tan, oolitic, bcm v. chalky-soft, interbdd wh cherty lmst, lt yel min fluor only, no stn or odor, ns.

LM; med to dk brn, dense, blocky, interbdd tan to smoky cht, tite

SH; med to dk gy, gy brn, gritty text - silty ip, firm, interbdd hd lmy shale

SH; blk, carb ip, faint gassy odor, rare pyr

LM; lt gy brn, lt brn, most dense, scat well cem foss and oolitic mat, no vis por, rarely pyr, dull yel fluor, no stn or odor, ns.

SH; dk gy to blk, fiss, pyr ip.

SH; dk gy to blk, fiss, soft ip.

LM: med gy to gy brn, foss ip, most hd, micritic, no vis por, scat pyr, no fluor, ns

LM; tan to cream, buff, fxln, scat foss mat ip, poor to fair interpart por, minor soft chalky mtx, no fluor, no stn, ns.

LM; med brn, hd, micritic, dense, scat dk gy cht, no vis por, ns.

TG, C1-C2

0.5 50 500

42 Unit Incr. Shale

Recycle

TG

C1

Check at 4595'
 Vis 48
 Wt. 9.2
 WL 8.8
 CI 1900
 PH 10.5
 LCM 2#

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

conn

WOB 40K
 PP 1000#
 SPM 60
 RPM 80

conn

Vis 60
 Wt. 9.3
 LCM 2#

conn

Vis 60
 Wt. 9.2
 LCM 2#

A.V.= 134.50

CFS. at 4704'
 conn

WOB 40K
 PP 1025#
 SPM 59
 RPM 85

A.V.= 134.50

conn

CFS. at 4750'
 Vis 56
 Wt. 9.3
 LCM 2#

conn

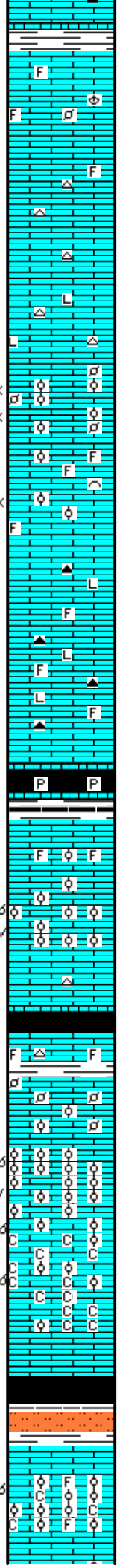
WOB 40K
 PP 1000#
 SPM 58
 RPM 80

4600

4650

4700

4750



SH; med gy to grn, platy to flakey, smooth

LM; med gy to gy brn, most blocky, dense, no vis por, rare well cem foss mat, v. dull golden yel fluor, no stn or odor, ns.

LM; tan to lt brn, fxln to occ sandy text, fair interxln por, interbdd gy occ foss cht, dull yel min fluor only, no stn or odor, ns.

LM; med brn, hd, occ cherty, micritic to litho, ns.

LM; tan to lt brn, buff, fxln w/much finely pelletal to oolitic lmst, soft, fair to gd interpart por, dull yel min fluor, no stn or odor, no gas kick, ns.

LM; lt to med brn, foss - oolitic ip, poor interpart por, scat cse opaque calc xtals w/lt yel min fluor, no stn or odor, ns.

LM; tan to med brn, most dense, litho ip, hd, rare well cem foss, occ dk gy to blk cht, no fluor, ns.

SH; blk, carb, platy, occ pyr, trc gas w/gas odor, thinly bdd hd lmst strngs.

KANSAS CITY 'A' 4694(-1787)

LM; tan to cream, buff, rare med brn, foss ip - well cem, blocky, trc blk tarry dead oil, med to occ brite yel fluor, no odor, poor/no vis por, tite

LM; lt brn, tan, oolitic ip, occ foss hash, poor to fair oomoldic por, scat poorly interconn. vug por, dull yel to no fluor, trc blk tar/gilsonite, no live shows

SH; blk, carb ip, gassy ip.

KANSAS CITY 'B' 4724(-1817)

LM; lt to med brn, gy brn, foss, occ finely pelletal to oolitic - well cem, scat lt blue fluor, no stn vis.

LM; lt brn, tan, oolitic, med size moldic por, brittle ip, scat well dev. vug por, lt yel fluor, no stn or odor, barren, no gas kick, ns.

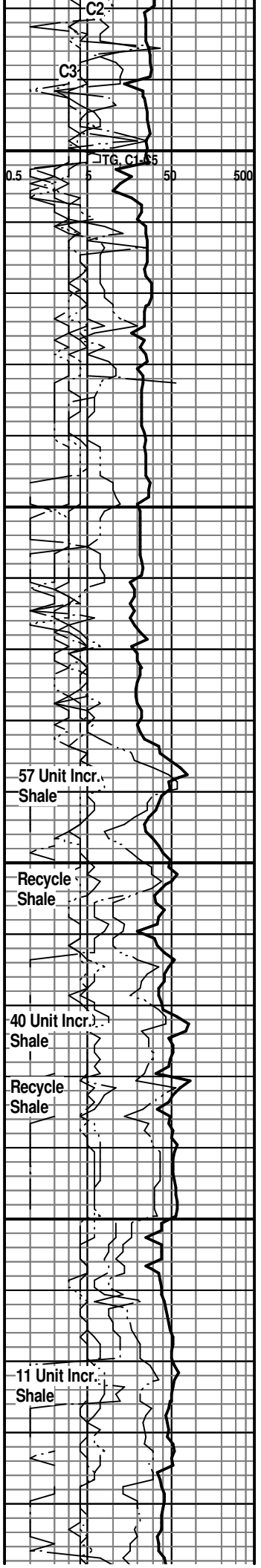
LM; lt brn, tan, oolitic, most med size moldic por, abnt wh soft chalk, much pure chalk, lt yel min fluor, no stn or odor, no gas kick, ns.

LM; med to dk brn, foss-pelletal-oolitic, hd, well cem, tite

SH; blk, v. dk gy, gy brn, firm, silty w/sltst

KANSAS CITY 'C' 4784(-1879)

LM; lt brn, off wh, oolitic to foss, interbdd cse xln lmst, fair oomoldic por, minor chalky mtx, no fluor, no stn or odor, no gas kick, ns.



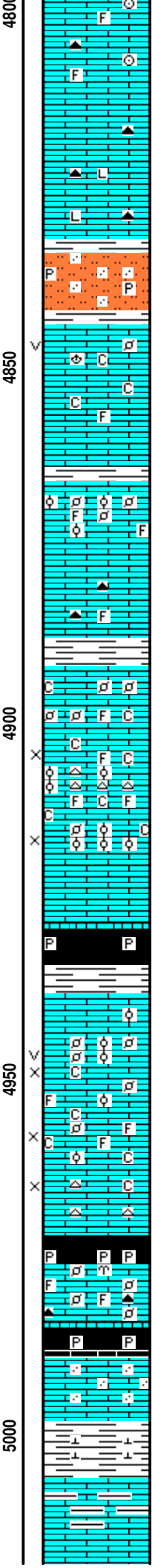
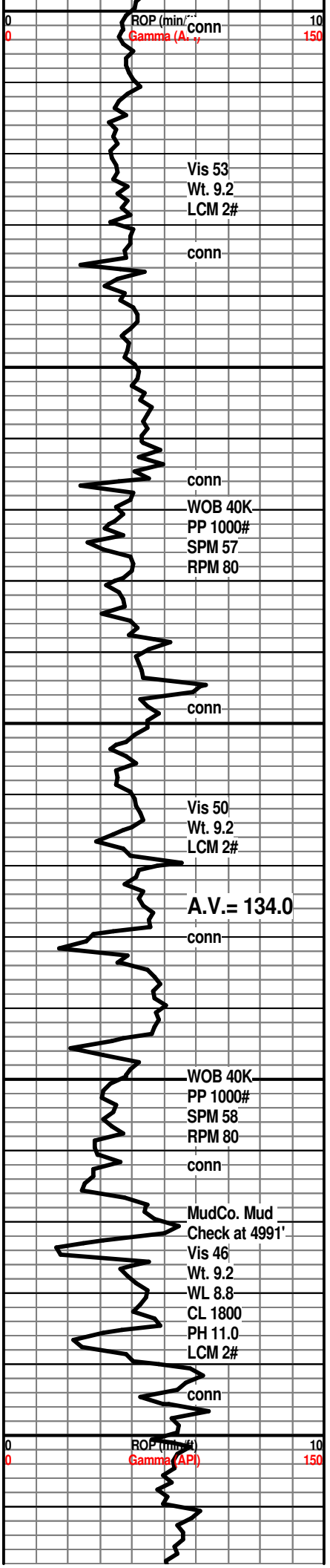
57 Unit Incr. Shale

Recycle Shale

40 Unit Incr. Shale

Recycle Shale

11 Unit Incr. Shale



LM; tan to lt brn, most micritic, blocky, scat well cem foss mat, trc dk brn cht, no vis por, no stn or odor, ns.

LM; med to dk brn, hd, micritic to litho, blocky, scat dk gy to occ smoky cht, tite

SLTST; lt gy to off wh, sl sandy ip, soft, rarely pyr

MARMATON 4844(-1937)
LM; off wh, tan to cream, cse xln w/rare foss mat, most well cem, trc small vug por, minor chalky mtx, lt yel min fluor, scat cse spar calc frags, no stn or odor, no gas kick, ns.

SH; med gy to grn, fiss

LM; med brn, foss - partly oolitic/finely pelletal, well cem, no vis por, dull yel min fluor, no stn or odor, no sample shows

LM; med brn, rare gy brn, most dense, interbdd gritty lmst, rare dk gy/brn foss cht, dull yel min fluor, ns.

SH; med gy, silty, firm

LM; tan to cream, off wh, fxln, scat fine foss pellets, minor soft chalky mtx, no vis por, dull yel min fluor only, ns.

LM; off wh to cream, v. foss w/abnt foss mat, oolitic ip, poor to fair interpart por, interbdd wh oolitic cht, lt yel min fluor, occ soft chalky mtx, no stn or odor, ns.

SH; blk, carb, gassy, some brittle, occ pyr

PAWNEE 4938(-2031)
LM; tan to cream, buff, rare lt brn, f to med xln, occ foss w/small mostly well cem pellets and ooids, scat fair interpart and p-p por, lt yel fluor, no stn or odor, no gas kick, ns.

LM; tan to off wh, cream, foss w/poor to fair interpart por, rare small pellets/ooids, chalky soft mtx ip, dull yel fluor, no stn or odor

LM; tan to off wh, lt brn, fxln, poor vis interxln por, dull yel to no fluor, occ tan/off wh cht, no vis stn, no odor, no sample shows

SH; blk, carb, gassy, pyr, blocky/brittle

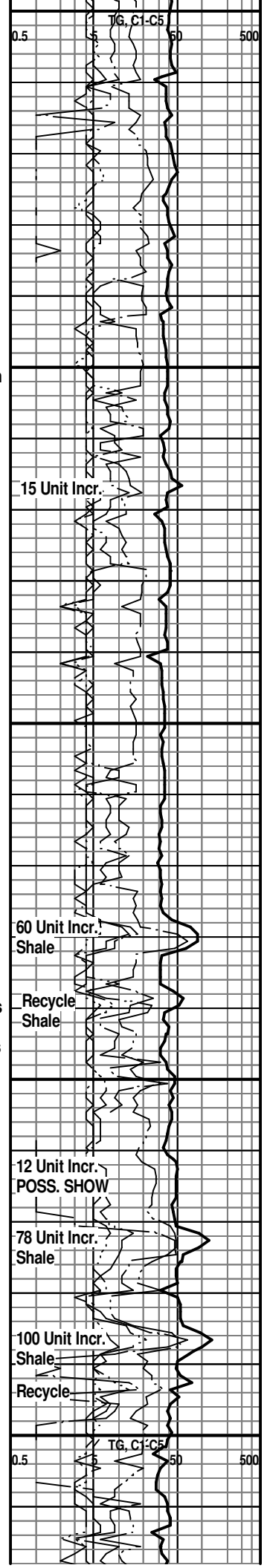
FORT SCOTT 4976(-2069)
LM; lt to med brn, highly foss - finely pelletal, all well cem, hd, no vis por, scat lt yel fluor, no stn or odor, no gas kick, ns.

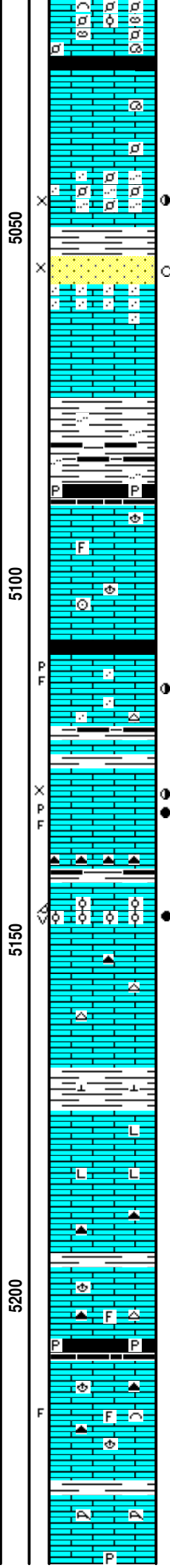
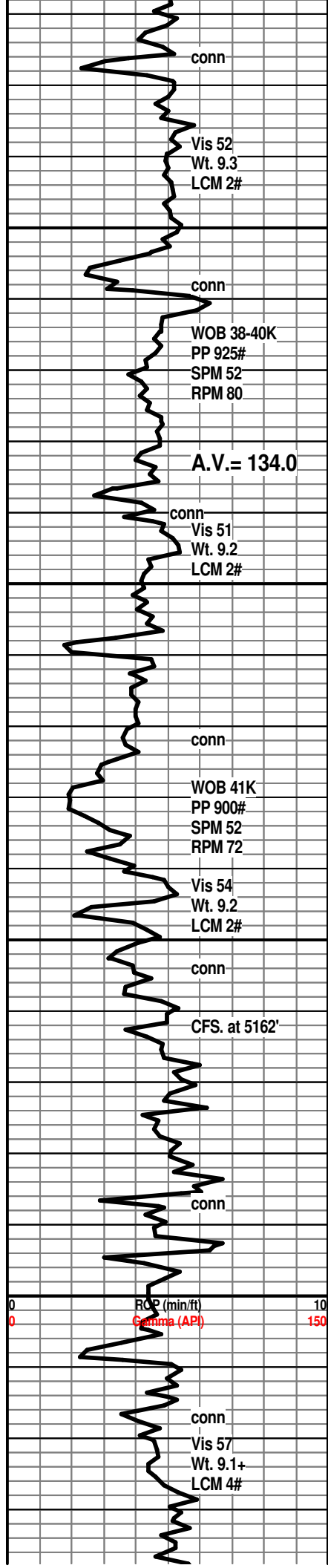
CHEROKEE SHALE 4985(-2078)
SH; blk, carb ip, gassy, occ pyr

LM; med brn, hd, some gritty text - sandy ip, scat pale yel/blue min fluor, no vis por, no stn or odor, ns.

SH; med to dk gy to grn, firm, calc

LM; med brn, gy brn, med to cse xln, interbdd argil lmst, scat lt yel fluor, no vis por, no stn or odor, ns.





LM; med brn, highly foss, pelletal, sponge spic, well cem, blocky, no vis por, no stn, ns.

SH; blk, carb ip, platy, trc gas

LM; med to occ dk brn, foss, pelletal ip, most well cem, micritic ip, no vis por, dull yel fluor, no stn or odor, ns.

LM; med to dk brn, foss-pelletal, sandy ip, loosely cem foss mat, scat lt yel fluor, no odor, gas bubbles, scat dk brn oil stn, fair cut, no apparent gas kick

SS; wh to tan, vf gr qtz, lmy - calc, fair intergran por, dull yel fluor, few gas bubbles, sl. greasy luster/questionable oil stn, weak/no cut

LM; tan to lt brn, sandy ip w/interbdd f gr qtz ss in lmst, well cem, no vis por, scat tan cht, no fluor, ns.

SH; dk gy, rare blk, silty, v. firm

SH; blk, platy, firm, occ pyr
ATOKA 5089(-2182)

LM; tan to lt brn, micritic, rarely foss, no vis por, no fluor, tite, ns.

LM; lt brn, occ med brn, micritic, blocky, hd, no vis por, scat foss frags, no fluor, no stn, ns.

SH; blk, carb ip, platy, gassy ip.
LM; med to dk brn, sandy text ip, dense, rare pcs w/poor p-p por, scat dk brn oil stn, faint odor, poss frags, dull yel flour, looks tite
SH; dk gy, trc blk, fiss- firm

LM; lt brn, fxl n to sandy text, fair interxln w/scat p-p por, much med brn spotted to even live oil stn, SSFO., fair oil odor, most w/brite yel fluor, fair to gd cut, trc gas bubbles
LM; tan to med brn, dk gy foss cht, tite, ns.

LM; tan to lt brn, oolitic, fair oomoidic w/rare vug por, much even lt/med brn oil stn, sev. gas bubbles, brite yel fluor, faint odor, gd cut, Trc. F.O., some w/poor por. interconnection

LM; lt to med brn, med xln, scat gy foss cht, no vis por, no stn or odor, no fluor, ns.

SH; med to dk gy, firm, calc.

LM; dk brn, dk gy brn, dense, litho, v. hd, no vis por, no fluor, ns.

LM; dk brn, gy brn, hd, blocky, scat cse opaque calc xtal, occ smoky cht, tite

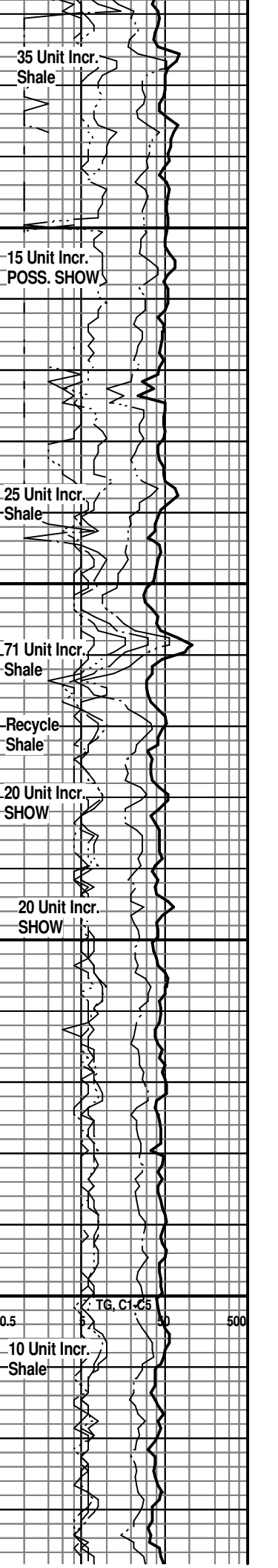
SH; dk gy, soft, fiss

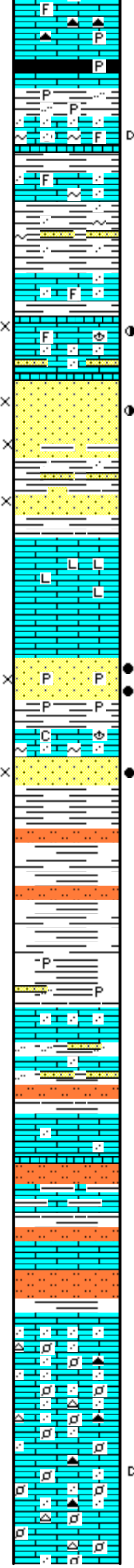
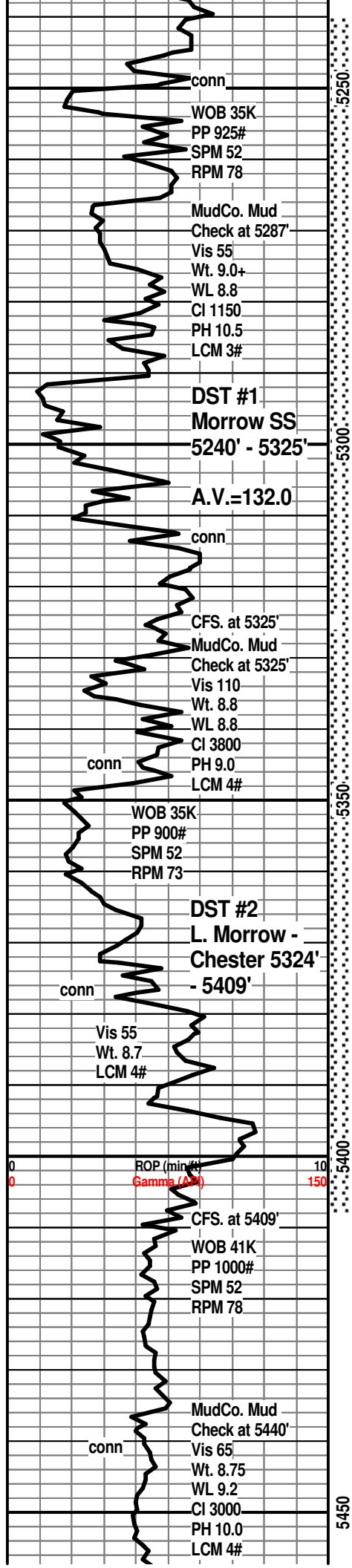
LM; tan to lt brn, rare buff, foss ip, scat gy to dk gy cht, no vis por, ns.
ATOKA SHALE MARKER 5206(-2299)

SH; blk, carb ip, platy, pyr ip.

LM; med brn, med gy brn, rare lt brn, foss ip, scat dk brn to smoky cht, poss frags - scat edge calc xtals, no fluor, no stn or odor, no gas kick

LM; med gy brn, dense, occ mottled text, interbdd foss-corals, blocky, no vis por, no stn or odor, no fluor, ns.





LM; to dk gy brn, tan, sandy ip, occ glau, rare foss mat, lt yel fluor, poss. faint odor, rare dk brn residual oil stn, poor vis por

SH; blk, trc coaly frags - carb, pyr ip.

MORROW SHALE 5246(-2339)

SH; med "mouse" gy, rare pale grn, pyr ip, platy

SH; lt to med gy, grn, firm, sandy ip w/interbdd vf gr qtz ss strngs, glau ip, no clean ss dev.

LM; med brn, sandy, scat foss mat, sandy ip w/interbdd gy fgr qtz ss, occ dk brn/blk oil stn, dull golden yel fluor, faint odor, interbdd hd siliceous lmst and varic shales

UPPER MORROW SS 5291(-2384)

SS; lt gy, vf to f gr qtz, soft w/gd intergran por, dull yel fluor, gas bubbles, faint gassy odor, trc lt brn oil stn, fair cut

SANDY SH; gy to grn, rust red, lam. f gr ss & sh

SS; clr, med gr, subrnd, some well cem/some fri, calc, gas bubbles, dull yel fluor, no odor, no vis stn, no cut

LM; med to dk gy brn, v. hd, micritic to litho, blocky, no vis por, tite, ns.

DST #1: Upr. Morrow SS 5240' - 5325'

SS; clr-dk brn(oil stn), most f gr qtz, poor to gd intergran por, dull golden yel fluor, gd odor, SFO, few gas bubbles, pyr ip, exc. streaming cut

CHESTER 5340(-2433)

SS; dk brn-blk, f gr qtz, even oil stn, golden yel fluor, SSFO, some tar/gilsonite, gd odor, gd cut

SH; pale gy, grn, platy, soft ip, trc rusty red slitst

SH; varic, grn, maroon, gy, platy to flakey, occ pyr, interbdd sandy shales

LM; med gy to pale gy grn, sl. sandy text, hd, blocky, scat dull yel fluor, no stn, ns.

SH; varic, maroon, grn, rust/brn, rare lavender, platy, interbdd shaly tite ss strngs and slitst

LM; rust/brick red. pale org, rose red, off wh, weathered ip, hd, dull yel min fluor, ns.

SLTST; rust red, brn, interbdd of off wh to brick red partly shaly lmst

DST #2: Lwr Morrow/-Chester 5324' - 5409'

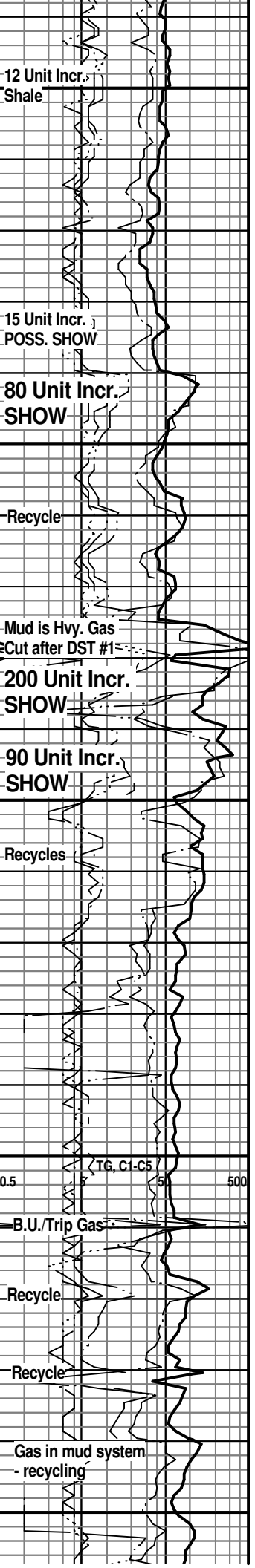
SH; varic, platy, interbdd silty sh & slitst

ST. GENEVIEVE 5422(-2515)

LM; wh, off wh, tan, interbdd well cem vf to f gr qtz, finely pelletal ip, scat brite org cht, no vis por, no stn, ns.

LM; wh to off wh, sandy to finely pelletal, minor chalky mtx, occ org fresh cht, no vis por, no fluor, ns.

LM; off wh, tan, rare lt gy, finely pelletal, decr. qtz sand content, interbdd amber to org cht, no fluor, rare pcs w/blk dead oil/tarry flakes, no live oil shows



conn
Vis 65
Wt. 8.7
LCM 5#
WOB 40K
PP 775#
SPM 52
RPM 76

conn

Vis 58
Wt. 8.8
LCM 6#

A.V.=139.0

conn
DST #3
St. Louis
5518' - 5569'

CFS. at 5569'
MudCo. Mud
Check at 5569'
Vis 69
Wt. 8.8
WL 9.6
CI 4300
PH 9.0
LCM 4#

ROP (min/conn) 10
Gamma (API) 150

Vis 60
Wt. 8.8
LCM 4#

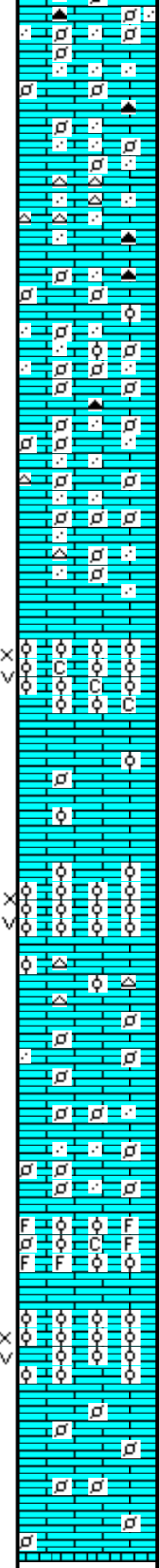
CFS. at 5625' RTD.

5500

5550

5600

5650



LM; off wh, wh, tan, occ lt gy, sandy ip, rnd tan/off wh/buff carb pellets in dense mtx, occ brite org cht, no fluor, no stn or odor, ns.

LM; off wh, tan, lt gy, firm, sandy, decr. amt. of rnd foss pellets, scat opaque to amber/org cht, no vis por, no fluor, ns.

LM; off wh, tan to lt brn, finely pelletal, rare small oolites, well cem, scat rnd pellets w/med gr qtz in dense mtx, no fluor, no stn or odor, ns.

LM; tan to off wh, lt brn, most dense, occ brite org cht, well cem vf to f gr qtz, small rnd carb pellets, no vis por, no stn or odor, ns.

ST. LOUIS 'A' 5525(-2618)

LM: wh, off wh, oolitic, most med size oolites, occ chalky mtx, fair interpart w/some vug por, spotted dk brn oil stn, gas bubbles, fair oil odor, brite yel fluor, fair cut, some well cem

LM; tan to lt brn, finely pelletal to oolitic, hd, well cem, no vis por, tite

ST. LOUIS 'B' 5551(-2644)

LM; off wh, tan, oolitic, med size oolites, clusters, SFO, brite yel fluor, gas bubbles, most w/med brn even oil stn, fair to gd interpart w/some well dev. vug por, gd cut, gd odor

LM; lt brn, tan, sandy, scat wh oolitic cht, tite

DST #3: St. Louis 'A & B' 5518' - 5569'

LM; off wh, tan, rare lt brn, finely pelletal, some med gr rnd qtz in dense mtx, no vis por, no fluor, ns.

LM; off wh, tan to lt brn, foss - oolitic, abnt cse foss frags, well cem, minor chalky mtx, dull/lt yel fluor, no stn or odor, ns.

ST. LOUIS 'C' 5598(-2907)

LM; tan, off wh, oolitic, med size ooids, fairly good interpart por w/scat vug por, lt brn oil stn, SSFO(lighter oil than 'B' zone), gas bubbles, gd cut, med to brite yel fluor, fair to gd odor

LM; tan to lt brn, finely pelletal, minor chalky mtx, most well cem, blocky, no vis por, tite

RTD. 5625' at 11:45 PM 7/9/11

LTD. 5618'

Halliburton DIL, NEU/DEN w/PE,
Microlog

30 Unit Incr.
SHOW

Recycle More than
Gas Kick!!

75 Unit Incr.
SHOW

Recycle

Mud is Heavy Gas
cut after DST #3

Recycles

65 Unit Incr. C1-C5
SHOW

50 500

