

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: #1-32 Heft
Location: 990' FSL & 1642' FWL, Sec. 32-T27S-R18W, Kiowa Co., KS.
Licence Number: 15-097-21685-0000 Region: Einsel Field
Spud Date: 3/7/2011 Drilling Completed: 3/16/2011
Surface Coordinates: 990' FSL & 1642' FWL, Sec. 32-T27S-R18W

Bottom Hole Same as above
Coordinates:
Ground Elevation (ft): 2222' K.B. Elevation (ft): 2231'
Logged Interval (ft): 3400' To: 4826' Total Depth (ft): 4826'
Formation: Kinderhook at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3306'; Chemical Gel 3306' to TD.

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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') 4219' - 4236' Test Times 15"-45"-45"-90" IFP Strong Blow BOB/10 Sec., FFP Fair Blow slowly built to BOB/45", no Gas to Surface; REC: 615' Gas in Pipe, 20' SGCM(3%G, 97%M), no oil or water; IFP 13-23#, ISIP 217#, FFP 16-32#, FSIP 191#, IHP 2095#, FHP 2070#, BHT 109 Deg. F.

DST #2(Kansas City 'I') 4417' - 4435' Test Times 15"-45"-45"-90" IFP Strong Blow BOB/1.5 Min., Gas to Surface in 15"; FFP GTS throughout, Gauged 43.0 MCFGPD/45" of FFP; Strong BOB Blowback on both SI's; REC: 515' Total Fluid: 215' CGO(35%G, 65%O), 190' GM&WCO(41%G, 36%O, 18%W, 5%M), 60' GM&WCO(55%G, 28%O, 8%W, 9%M), 50' MSW(96%W, 4%M) CI 59,000, Mud 3000; Oil 42 Deg. API(Green color); IFP 52-69#, ISIP 1309#, FFP 72-190#, FSIP 1290#, IHP 2161#, FHP 2097#, BHT 117 Deg. F.

DST #3(Mississippi Chert) 4786' - 4818' Test Times 15"-45"-60"-120" IFP Strong Blow BOB/4 Min., FFP GTS throughout, Gauged Max. 340 MCFGPD; Strong BOB Blowback on both SI's; REC: 80' Drlg. Mud, 65' SOCM(2%O, 98%M), no Water; IFP 85-82#, ISIP 1465#, FFP 82-92#, FSIP 1463#, IHP 2384#, FHP 2354#, BHT 117 Deg. F.

Comments

3/7/11 MIRU Sterling Drilling Co. Rig #4, Spud at 1:30 PM.; 3/8/11 TD. 525' - WOC; 3/9/11 Drilling at 1740'; 3/10/11 Drilling at 2820'; 3/11/11 Drilling at 3450'; 3/12/11 Drilling at 4070'; 3/13/11 TD. 4236' - TOH w/DST #1; 3/14/11 TD. 4435' - TIH for DST #2; 3/15/11 Drilling at 4635'; 3/16/11 TD. 4818' - TOH for DST #3; 3/17/11 RTD. 4826' - LTD. 4826' - CCH to LDDP to run 5 1/2" Production Casing.

Set 8 5/8"(23#) Surface Casing at 522' w/400 sx/(Basic Energy Services). Cement Did Circulate. PD. 3:15 AM. 3/8/11.


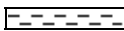

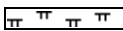
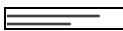
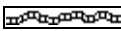




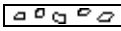


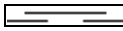

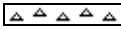


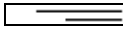

Surveys: 0.5 Degree at 525'(Surface Casing); 0.5 Deg. at 4236'(DST #1); 0.75 Deg. at 4435'(DST #2); 0.5 Deg. at 4818'(DST #3).

Pipe Strap at 4236'(DST #1): Strap 0.43' Long to the Board, no correction made to the Board.








































































After review of the Halliburton LOGS, DST's, 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 Miss. Chert and Kansas City 'I' zones.

LOG TOPS:























ROCK TYPES

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

ACCESSORIES

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

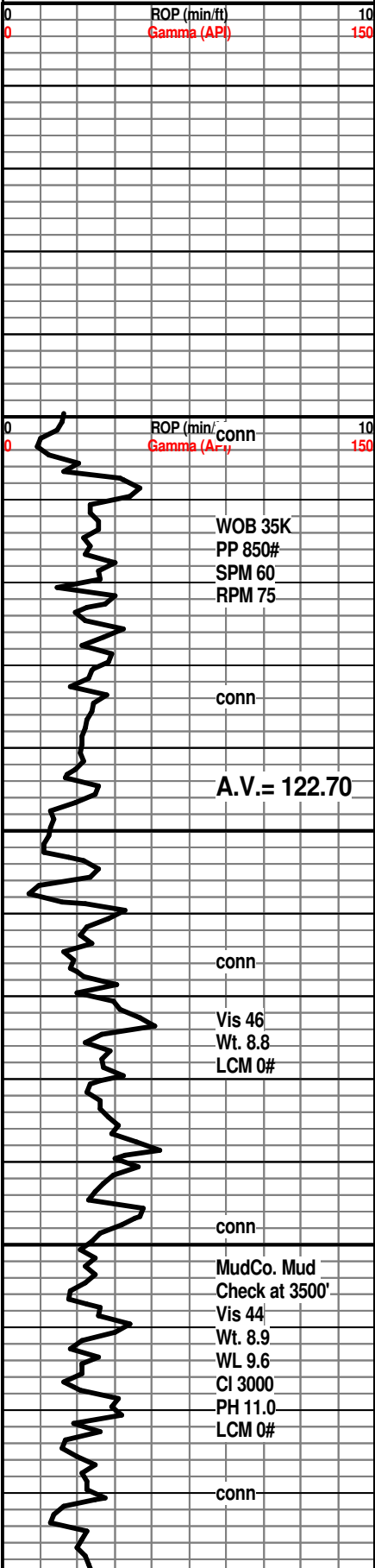
OTHER SYMBOLS

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

Curve Track 1

ROP (min/ft) ———

Gamma (API) - - - - -

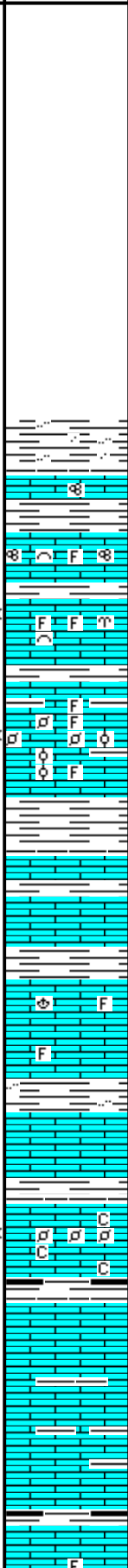


Depth

Porosity Type

Lithology

Oil Shows



Geological Descriptions

STRATA EXPLORATION, INC.

#1-32 HEFT

GEOLOGICAL REPORT

KB. 2231'

SH; lt to med gy, silty to sandy, firm

STOTLER LMST. 3407(-1176)

LM; lt to med brn, foss, well cem, dull yel min fluor, dense, ns.

LM; tan to lt brn, occ buff, v. foss - abnt fusulinids, most well cem, trc poor interpart por, dull yel min fluor, no stn or odor, ns.

LM; lt to med brn, occ gy brn, some argil, most v. foss, finely pelletal ip, scat poor interpart por, some oolitic lmst, dull yel min fluor, ns.

SH; med gy, occ gy grn, firm

LM; med to dk brn, gy brn, hd, micritic, tite

LM; off wh, tan to buff, fxl n w/scat foss mat, most well cem, interbdd hd micrite, no vis por, no stn or odor, ns.

SH; med gy, occ silty, firm

LM; med brn, dense, micritic, tite

LM; off wh, tan, fxl n, foss ip, scat finely pelletal lmst, minor chalky mtx, lt yel min fluor, no stn or odor, n.s

SH; dk gy, trc blk, platy

LM; lt to med brn, occ med gy brn, most dense, interbdd hd argil lmst, rare lt yel min fluor, no stn or odor, no vis por, ns.

SH; med/dk gy, some blk, platy

LM; lt to med brn, occ med gy brn, most dense, interbdd hd argil lmst, rare lt yel min fluor, no stn or odor, no vis por, ns.

TG, C1-C5

TG (Units) ———

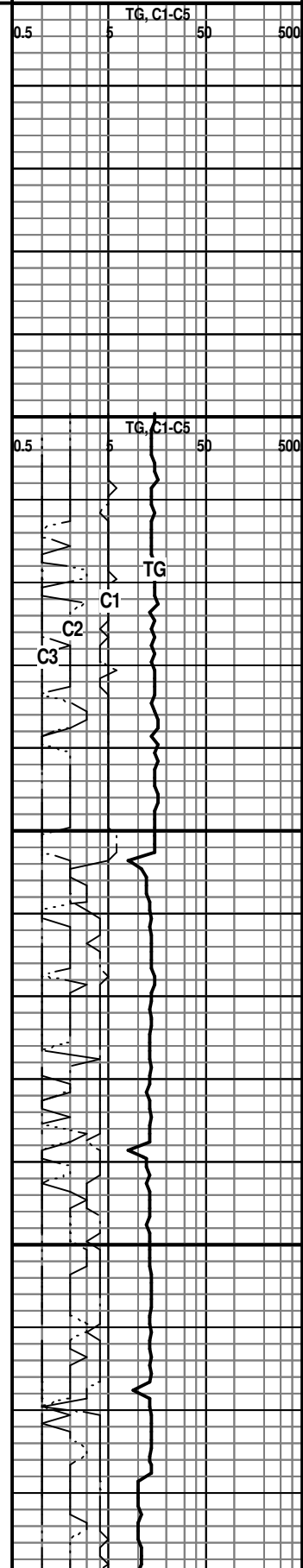
C1 (units) - - - - -

C2 (units)

C3 (units)

C4 (units)

C5 (units)



WOB 35K
PP 850#
SPM 60
RPM 75

conn

A.V. = 122.70

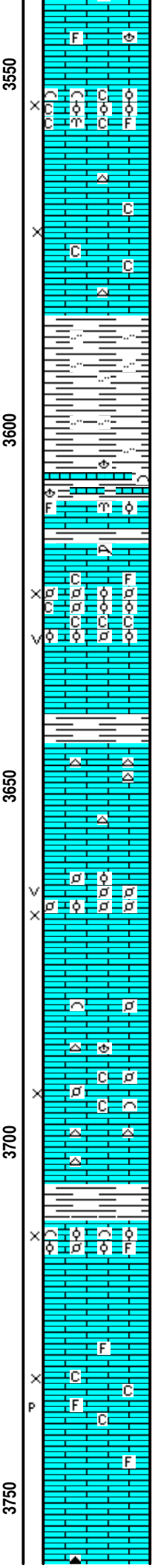
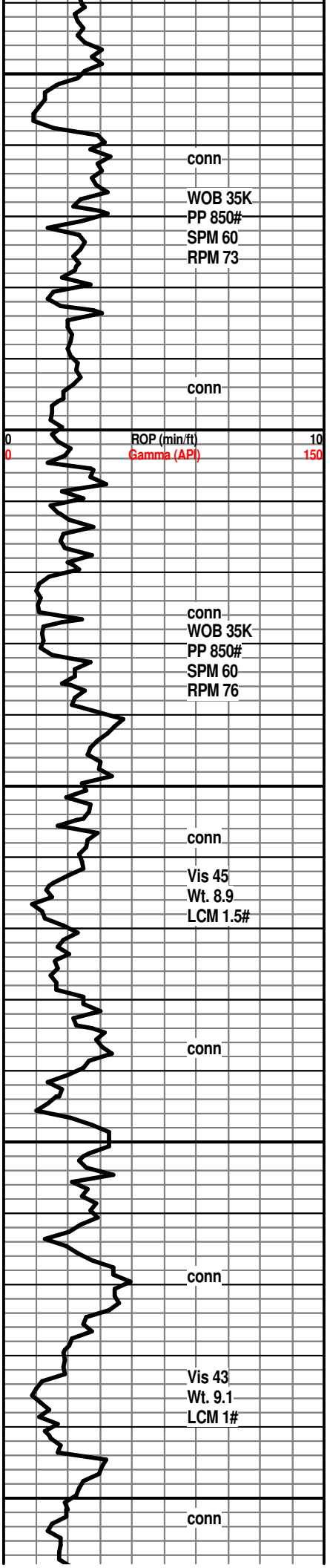
conn

Vis 46
Wt. 8.8
LCM 0#

conn

MudCo. Mud
Check at 3500'
Vis 44
Wt. 8.9
WL 9.6
CI 3000
PH 11.0
LCM 0#

conn



LM; lt wh, tan to lt brn, most dense, blocky, occ foss mat, no vis por, ns.

LM; off wh, wh, buff, v. foss - partly oolitic, gd interpart por, much foss hash, chalky soft mtx, lt yel fluor, no stn or odor, no gas kick, ns.

LM; off wh, med to cse xln, fair interxln por, scat soft chalky mtx, trc wh cht, no stn or odor, ns.

SH; med to dk gy, firm, occ silty

SH; grn, gy grn, foss, soft

SH; dk gy, foss, lmy ip, hd

HOWARD 3612(-1381)
 LM; off wh, tan to buff, lt brn, foss ip, most dense, blocky, no vis por, no fluor, ns.

LM; tan to cream, buff, cse xln to gran, foss - pelletal, gd interpart w/vug por, soft, minor chalky mtx, lt yel min fluor, no stn or odor, no gas kick, ns.

SH; grn, gy grn, olive grn, platy

LM; lt brn, tan, most dense, scat cse spar calc xtals, interbdd tan/lt brn cht, no vis por, ns.

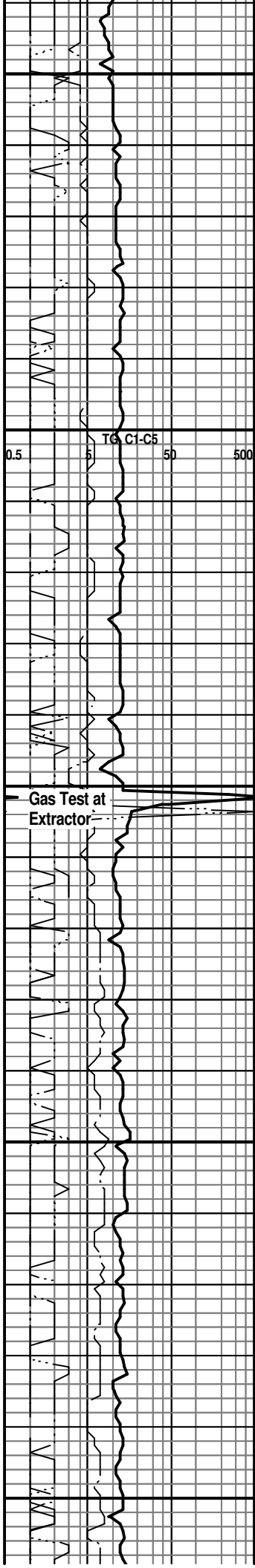
LM; tan to lt brn, buff, med xln w/foss mat - finely pelletal, fair to gd interxln por, occ vug por, lt yel fluor, no stn or odor, no gas kick, ns.

LM; tan to lt brn, off wh, f to med xln, scat foss mat, fair interxln por, minor chalky mtx, dull yel fluor, no stn or odor, ns, bcm cherty at base

SH; med to dk gy, platy to flakey

TOPEKA 3711(-1480)
 LM; off wh, tan, foss - oolitic ip, fair interpart por, some foss hash, lt yel min fluor, no stn, ns.

LM; tan to buff, off wh, f to med xln, gd vis interxln w/scat p-p por, foss ip, no fluor, no stn or odor, minor chalky mtx, ns.



WOB 35K
PP 850#
SPM 60
RPM 74

conn

ROP (min/ft)
Gamma (API)

conn

Vis 48
Wt. 9.1+
LCM 1#

conn

WOB 35K
PP875#
SPM 60
RPM 77
conn

conn

conn

Vis 52
Wt. 9.2
LCM 2#

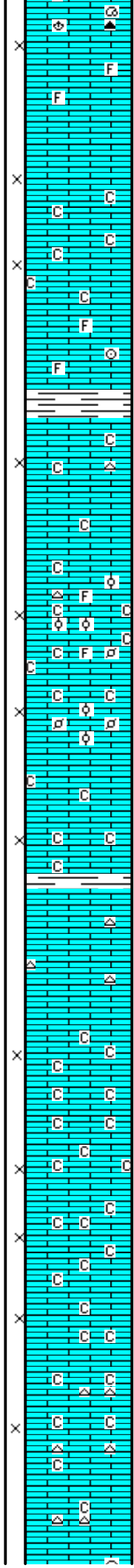
conn

3800

3850

3900

3950



LM; tan to cream, lt brn, most med xln, scat foss, fair interxln por, mat, interbdd amber foss cht, occ lt yel fluor, most barren, ns.

LM; tan to lt brn, some mottled text, interbdd sucrosic text lmst, chalky - soft mtx ip, dull yel min fluor only, no stn or odor, ns.

LM; med brn, dense, blocky, foss ip, tite

SH; med gy, grn, platy

LM; tan to lt brn, f to med xln, interbdd sucrosic text, soft, fair interxln por, minor chalky mtx, trc gy/tan cht, dull yel min fluor only, no stn or odor, ns.

LM; wh, off wh, buff, fxln, scat cse foss frags and oolitic lmst, incr. chalk and chalky mtx, dull yel min fluor, no stn or odor, ns.

LM; tan to off wh, wh, f to med xln, scat gd interxln por, occ soft-chalky mtx, dull yel min fluor, no stn or odor, ns.

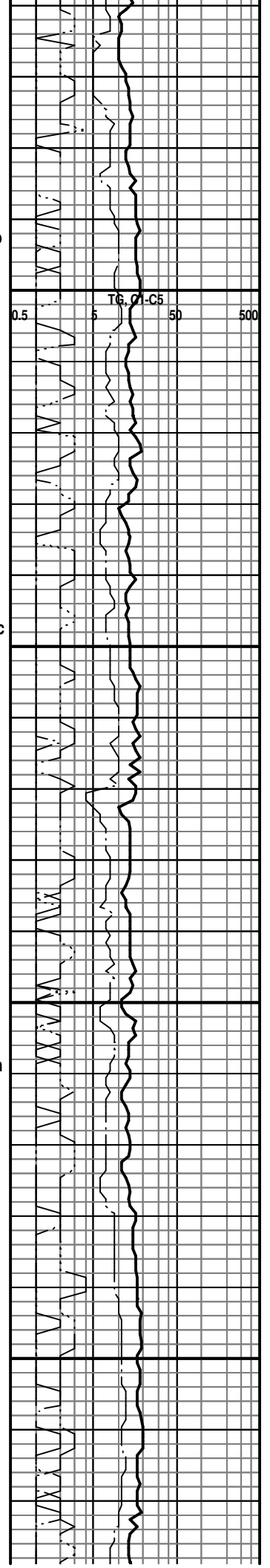
LM; tan to lt brn, hd, most micritic, blocky, scat tan to lt gy cht, tite

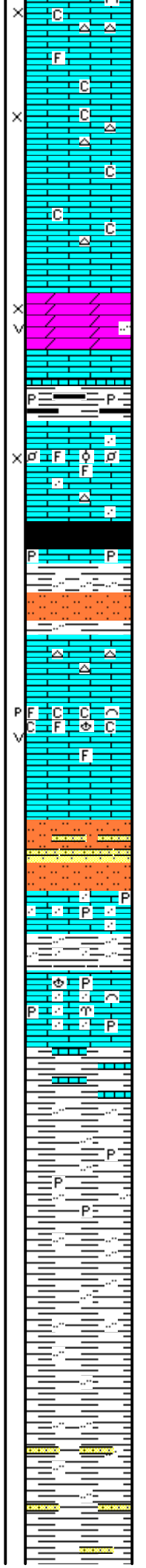
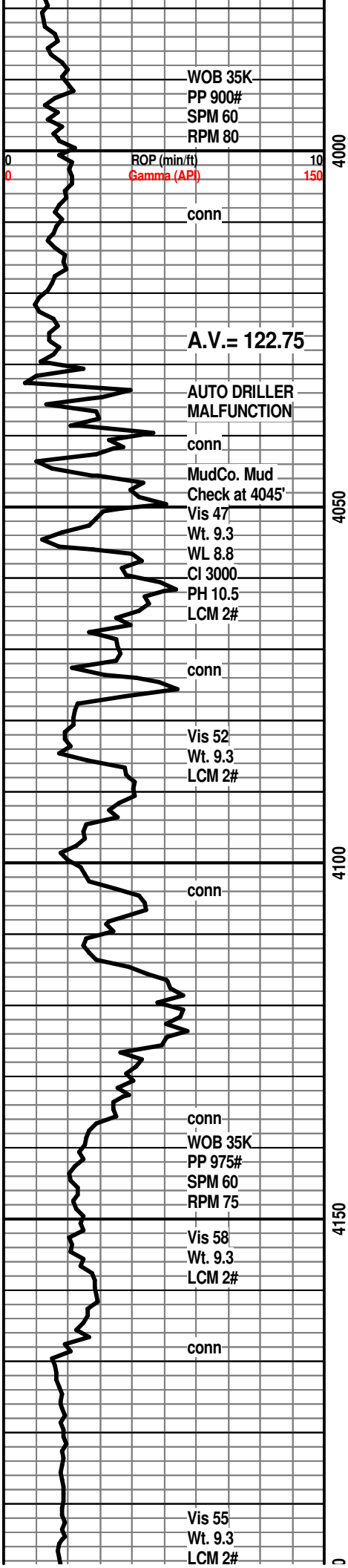
LM; tan to cream, off wh, med xln to occ gran text, fair interxln por, much soft chalky mtx, dull to occ lt yel min fluor, no stn or odor, ns.

LM; wh to off wh, med xln, some gran text, much chalk and chalky mtx, fair to gd interxln por, dull yel min fluor, ns.

LM; tan to off wh, cream, f to med xln, gd interxln por ip, occ chalky, interbdd lt gy to tan chert, no stn or odor, no gas kick, ns.

TG, C-C5
0.5 5 50 500





LM; tan to cream, buff, lt brn, med xln to occ gran text, fair interxln por, some well cem, occ soft chalky mtx, dull yel min fluor, ns.

DOL; tan to lt brn, sucrosic, fair interxln/ trc vug por, lt yel min fluor, no stn or odor, ns.

SH; dk gy to blk, fiss, occ pyr

LM; lt to med brn, rare dk brn, foss ip, interbdd pelletal lmst, fair to poor interpart por, some sl. sandy text, dull yel min fluor only, ns.

HEEBNER SHALE 4052(-1821)

SH; blk, carb ip, gassy ip.
LM; med brn, hd, micritic, occ pyr

SH; grn, gy grn, silty w/interbdd sltst.

TORONTO 4068(-1837)

LM; tan to cream, micritic, blocky, cherty ip, tite

LM; off wh, cream, buff, med xln, scat foss mat, fair p-p and occ vug por, rare spar calc xtals, minor chalky mtx, lt yel min fluor, no stn or odor, ns.

DOUGLAS SHALE 4094(-1863)

SLTST; lt gy, sandy, mica ip, interbdd vf gr qtz ss

LM; med gy brn, sandy, hd, pyr ip, tite

SH; lt to med gy, silty to sandy, firm

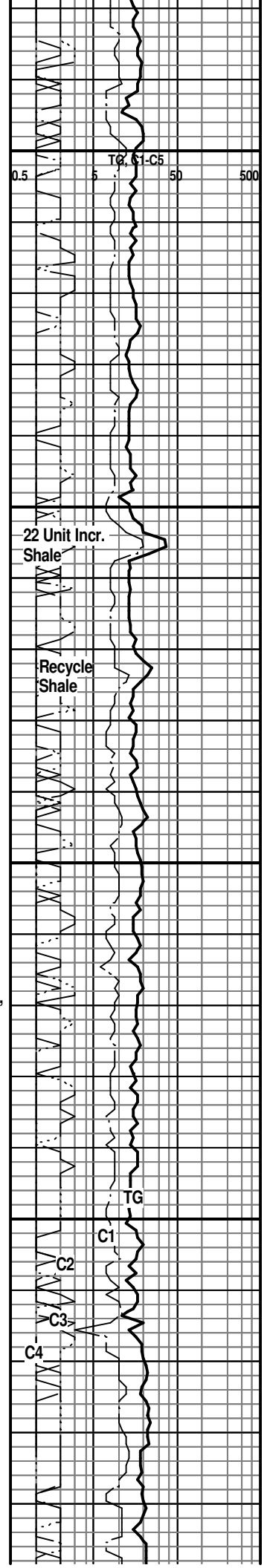
LM; med to dk brn, gy brn, foss, pyr, v. hd, some sandy, no fluor, tite

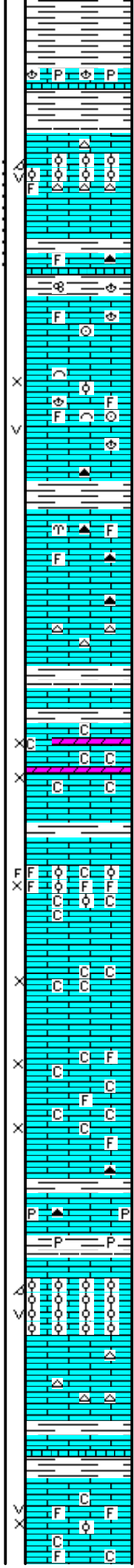
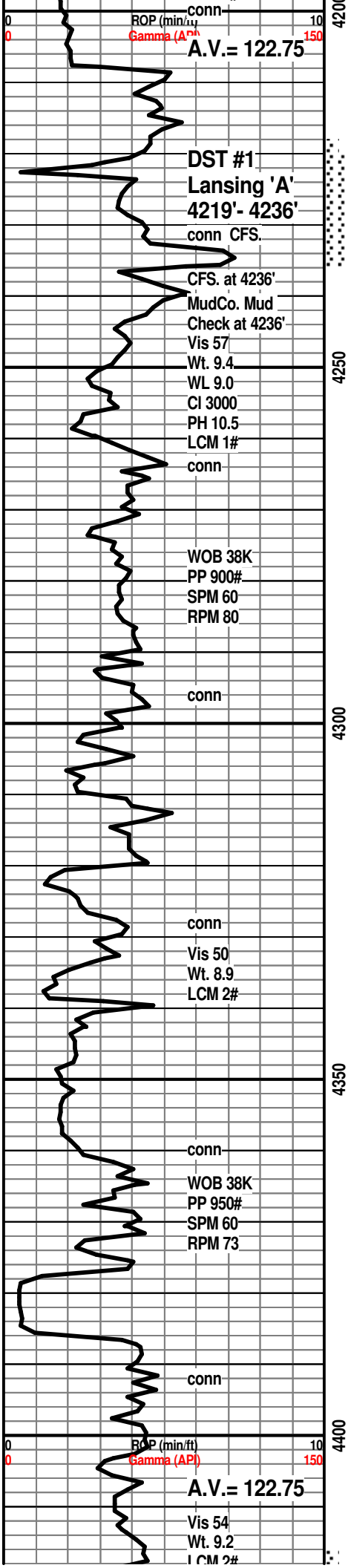
SH; lt to med gy, sandy to silty, lmy w/interbdd shaly lmst

SH; med gy grn, grn, most smooth, occ silty, rare dissep pyr

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

SH; med gy, silty to sandy, interbdd vf to f gr qtz ss strngs, firm





BROWN LMST. 4208(-1977)
LM; med brn, dense, occ pyr, foss ip.

LANSING 'A' 4217(-1986)
LM; med brn, tan, oolitic, lrg molds w/gd oomoldic por, occ lrg vug por, rare oolitic cht, brittle/fri, med yel fluor, trc med brn oil stn, sev. gas bubbles, no odor, weak cut, gas show

DST #1: Lansing 'A' 4219' - 4236'
SH; med gy, grn, platy, occ foss

LANSING 'B' 4240(-2009)
LM; tan to cream, off wh, fxln, foss ip, most well cem, lt yel fluor, no stn or odor, ns.

LM; tan to off wh, cream, foss, scat cse foss frags and spar calc xtals, fair interpart and vug por, lt yel fluor, no stn or odor, ns.

SH; med gy, grn, firm
LM; med to dk brn, foss ip, most well cem, occ brn foss cht, hd, no vis por, no fluor, ns.

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

SH; med gy to grn, platy, smooth
LM; tan to cream, off wh, sucrosic text, interbdd dolo. & dolo. lmst, fair interxln por, much soft chalky mtx, lt yel min fluor, no stn or odor, ns.

LM; off wh, tan to cream, foss - partly oolitic, poor to fair interpart por, much soft chalky mtx, trc blk tarry dead oil, trc frags, lt yel fluor, no odor, no gas kick

LM; tan to buff, cream, f to med xln, scat sucrosic text, fair interxln por, lt yel fluor, occ soft chalky mtx, no stn or odor, ns.

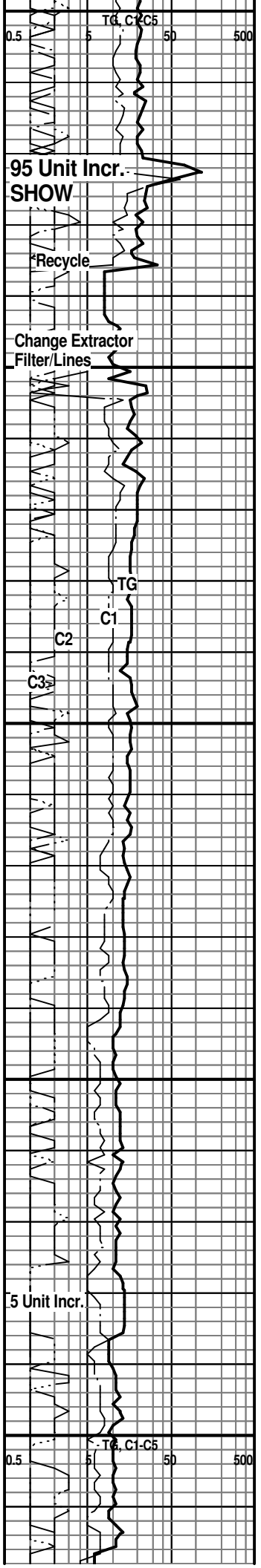
LM; off wh, tan to cream, f to med xln, fair interxln por, interbdd sucrosic text, chalky ip, rare foss mat, lt to med yel min fluor, no stn or odor, ns.

LM; med brn, hd, occ pyr, tite, trc blk cht
SH; med to dk gy, fiss, pyr ip.

LANSING/K.C. 'H' 4375(-2144)
LM; lt to med brn, oolitic, gd oomoldic por, scat vug por, brittle ip, med yel fluor, no vis stn, no odor, no sample shows

LM; med brn, dense, occ cherty, tite
SH; lt to med gy, fiss, flakey

LM; tan to cream, buff, foss, med xln, scat fair to poor interpart por, trc small vug por, soft chalky mtx ip, lt yel min fluor, no stn or odor, ns.



DST #2
K.C. 'I'
4417' - 4435'
 CFS. at 4435'
 MudCo. Mud
 Check at 4435'
 Vis 59
 Wt. 9.3
 WL 9.2
 CI 3000
 PH 10.5
 LCM 1#

WOB 38K
 PP 950#
 SPM 60
 RPM 75

conn

conn

Vis 48
 Wt. 9.1
 LCM 2#

conn

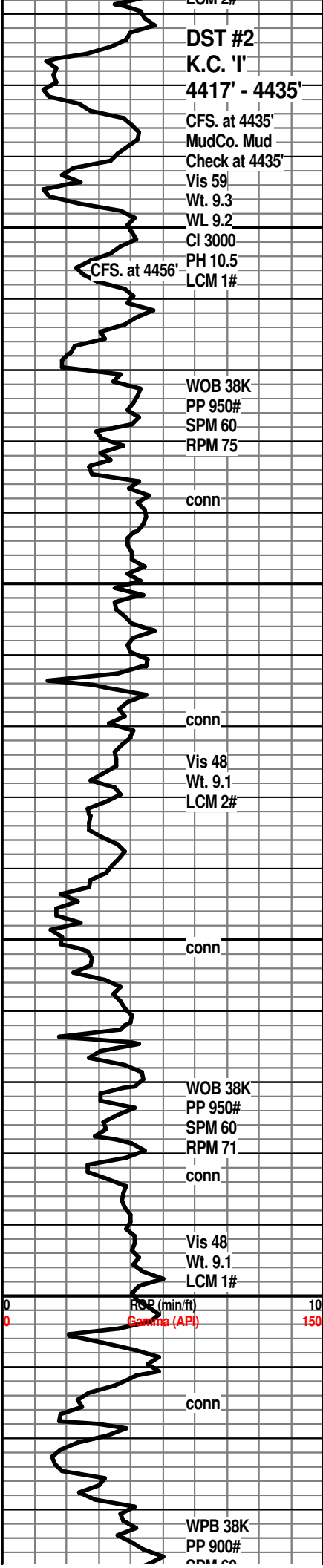
WOB 38K
 PP 950#
 SPM 60
 RPM 71

conn

Vis 48
 Wt. 9.1
 LCM 1#

conn

WPB 38K
 PP 900#
 SPM 60

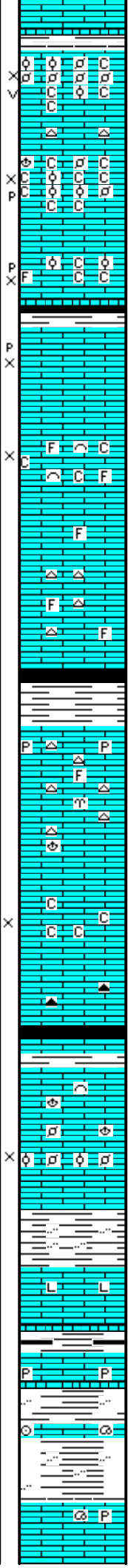


4450

4500

4550

4600



K.C. 'I' 4425(-2194)

LM; off wh, finely pelletal to oolitic, weakly cem, some chalky mtz, v. gd oil odor, fair to gd interpart and vug por, spotted/even v. lt brn oil stn, brite yel fluor, SFO, few gas bubbles, gd cut

DST #2: K.C. 'I' 4417' - 4435'

LM; tan to off wh, buff, med xln w/foss mat, fair/gd interpart por, occ p-p por, most w/soft chalky mtz, dull yel fluor, no vis stn, poss faint odor(oil/gas in mud), no sample shows

LM; off wh, wh, tan, fxln, foss ip. w/scat small oolites, occ chalky mtz, poor interxln w/occ p-p por, dull yel fluor, no stn or odor, ns.

K.C. 'J' DENNIS 4464(-2233)

LM; tan to cream, buff, fxln, scat fair interxln w/rare p-p por, few pcs. w/blk tar/gilsonite- dead oil only, no live shows, no odor, dull yel fluor, no gas kick

LM; off wh, tan to cream, foss, scat poor vis interpart por, lt to med yel fluor, chalky mtz ip, some chalk has brite yel fluor, no stn or odor, no gas kick, ns.

LM; tan to lt brn, most dense, occ foss frags - well cem, scat tan cht, no vis por, ns.

STARK SHALE 4512(-2281)

SH; blk, carb ip, platy

SWOPE 4520(-2289)

LM; lt to med brn, mottled text, occ pyr, most dense, blocky, occ gy to tan cht, ns.

LM; off wh, wh, tan, med xln, poor to fair interxln por, soft chalky mtz, dull yel min fluor only, no stn or odor, ns.

SH; blk, carb ip, trc gas, soft to brittle

HERTHA 4568(-2337)

LM; med brn, occ med gy brn, most blocky, hd, scat well cem foss frags, minor pyr, no vis por, no stn or odor, ns.

LM; tan to lt brn, foss, finely pelletal w/scat small ooids, most well cem, trc poor interpart por, no fluor, ns.

SH; dk gy, gy brn, gritty/silty text, lmy

LM; med to dk brn, hd, litho, dense

BASE KANSAS CITY 4605(-2374)

SH; dk gy, grn, brn, trc blk, platy

LM; dk brn, dense, occ pyr, hd

SH; varic, pred gy, dk gy, rust red, grn, platy, silty ip, interbdd nodular hd foss lmst.

PLEASANTON 4629(-2398)

LM; lt to med gy, lt brn, most hd, micritic, rare well cem foss mat. occ ovr. no vis por. no stn or odor. ns.

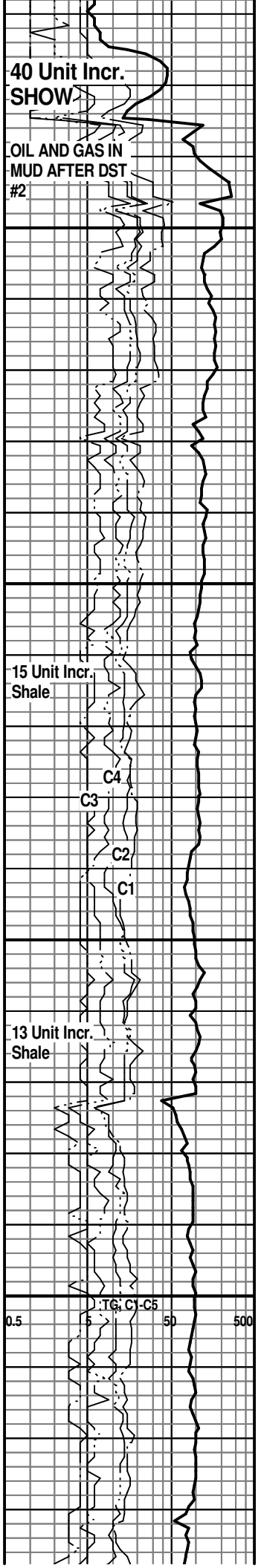
40 Unit Incr. SHOW

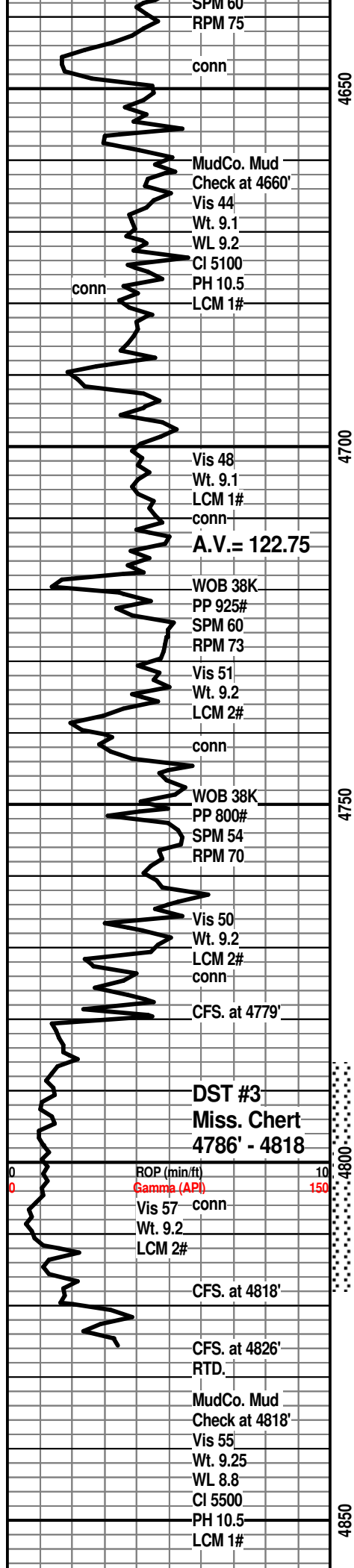
OIL AND GAS IN MUD AFTER DST #2

15 Unit Incr. Shale

13 Unit Incr. Shale

0.5 5 50 500





SPM 60
RPM 75
conn

MudCo. Mud
Check at 4660'
Vis 44
Wt. 9.1
WL 9.2
CI 5100
PH 10.5
LCM 1#

Vis 48
Wt. 9.1
LCM 1#
conn
A.V. = 122.75
WOB 38K
PP 925#
SPM 60
RPM 73
Vis 51
Wt. 9.2
LCM 2#
conn

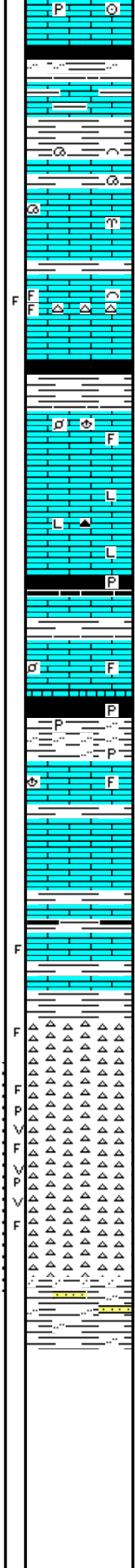
WOB 38K
PP 800#
SPM 54
RPM 70
Vis 50
Wt. 9.2
LCM 2#
conn

CFS. at 4779'

DST #3
Miss. Chert
4786' - 4818

ROP (min/ft)
Gamma (AP)
Vis 57
Wt. 9.2
LCM 2#

CFS. at 4818'
CFS. at 4826'
RTD.
MudCo. Mud
Check at 4818'
Vis 55
Wt. 9.25
WL 8.8
CI 5500
PH 10.5
LCM 1#



SH; dk gy, blk, varic, soft - flakey, occ silty
MARMATON 4649(-2418)
LM; lt to med brn, argil ip - grn clay/shale incl, most dense, tite
SH; med to dk gy, gy grn, foss ip, firm
LM; tan to lt brn, most dense, micritic, blocky, rare foss mat, scat lt to med yel min fluor, no stn or odor, ns.
LM; tan to off wh, cream, foss ip, scat wh cht w/blk dead oil stn - poss frags, dull yel fluor, poor por, scat blk dead oil stn on few pcs, no live shows, no odor, no cut
SH; blk, dk gy, platy, soft ip.
PAWNEE 4695(-2464)
LM; tan to lt brn, foss ip, much dense micrite, scat cse spar calc xtals, few pcs. w/blk tar/gilsonite, no vis por, no live shows, tite
LM; lt to med brn, rare dk brn, dense, litho, hd, rare smoky cht, no fluor, ns.
SH; blk, carb, gassy ip, rare pyr
LM; lt brn, tan, foss ip, most well cem, no vis por, no fluor, no stn or odor, ns.
CHEROKEE SHALE 4735(-2504)
SH; blk, dk gy, platy, some silty shales, pyr ip.
LM; lt to med brn, fxln to foss, most well cem, hd, dull yel min fluor, no stn or odor, ns.
LM; tan to cream, buff, f to mxln, most well cem, poor/no vis por, scat spar calc xtals, dull yel min fluor, trc blk tarry dead oil/gil, no live shows
SH; med to dk gy, trc blk, fiss
LM; tan to lt brn, most dense, poss frags - dk brn/blk stn on edges on few pcs, dull yel fluor, no live shows
MISSISSIPPI CHERT 4780(-2549)
CHT; wh, org, off wh, most fresh, rare oil stn, few frags vis, scat blk tarry dead oil, looks tite
● CHT; wh, off wh, fresh and trip cht, much med brn oil stn, SSFO, fair odor, scat even to spotted oil stn, gas bubbles, fair trip por, some edge stn - frags, med to brite yel fluor
● CHT; wh, off wh, fresh and trip, some p-p and gd vug por w/even med brn oil stn, gas bubbles, frags w/blk tar on frac faces, much brite yel fluor, fair odor
KINDERHOOK SHALE 4816(-2585)
SH; grn, sandy, firm, f gr qtz embdd in shale
DST #3: Miss. Chert 4786' - 4818'
SH; med grn, gy grn, firm, occ silty to sandy
RTD. 4826' at 5:30 PM. 3/16/11
LTD. 4826'
Halliburton DIL, NEU/DEN, Microlog



15 Unit Incr.

28 Unit Incr. Shale

10 Unit Incr.

98 Unit MAX. Incr. SHOW

OIL/GAS IN MUD AFTER DST #3

