



Woolsey Operating Company, LLC

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

Measured Depth Log

Well Name: Miller #6

Location: Section 31 Township 34 South - Range 11 West

License Number: 15-007-023697-0000

Region: Barber County, KS

Spud Date: May 4, 2011

Drilling Completed: May 14, 2011

Surface Coordinates: 400' FNL, 1720 FEL or Approx. NE NW NE

Field: Stranathan

Bottom Hole Coordinates: Verticle Hole

Ground Elevation (ft): 1391'

K.B. Elevation (ft): 1402'

Logged Interval (ft): 4000' To: 5392' Total Depth (ft): 5392'

Formation: Douglas Group ----> Simpson Group

Type of Drilling Fluid: Chemical Mud displaced at 3367'

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Woolsey Operating Company,LLC

Address: 125 N. Market, Suite 1000

Wichita, KS 67202

GEOLOGIST

Name: Billy G. Klaver

Company: Woolsey Operating Co. LLC

Address: 125 N. Market, Wichita Kansas, 67202

COMMENTS

Surface Casing: Set 6 joints new 10 3/4" X 32.75#/ft casing at 233' KB (tally 234') w/240 sx Class A, 2% gel, 3% cc. Cement did circulate. Plug down 7 pm on April 4, 2011

Production Casing:

Deviation Surveys: 1 at 235', 1/2 at 1715', 3/4 at 2215', 1/2 at 2714', 1/2 at 3210', 1/2 at 3710', 3/4 at 4212', 3/4 at 4770'

Pipe Strap @ 4770', strap: 4771.90', board: 4774.90', strap 3' short. No correction was made to the board.

Duke Drilling Rig 10 Bit Record:

#1 14 3/4" HTC RR in at GL, out at 235'. 235' in 3.5 hours.

#2 7 7/8" Varel HE-21 in at 235', out at 4770', 4535' in 103 hours.

#3 7 7/8" Varel HE-29 in at 4770' out at

Gas Detector: Woolsey Operating Co. Gas Trailer #2

Mud System: Mud-Co. Brad Bortz, Aaron Rush, Engineers

DST's: Trilobite Testing, Chris Staatz, Tester

OH Logs: Superior Well Service, Dual Induction Laterolog w/SP, CNL-FDC w/PE, GR & Caliper

DSTs

DST #1 Cherokee Sand, Mississippi. 4650'-4770', 30"-60"-60"-120". SB BOB 2 minutes into IFP. GTS 12 minutes into FFP, TSTM. Rec: 4630' GIP, 50' GCM (2%G, 98%M). IHP 2215, IFP 46-30, ISIP 820, FFP 31-32, FSIP 998, FHP 2166. BHT 124.

CREWS

Joe Livingston, Tool Pusher



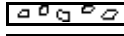
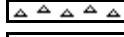


Scott Edwards, Daylight







Colby Crawford, Evening


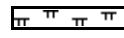
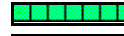



Alex Ordonez, Morning






Ron Burns, Relief

ROCK TYPES

 Anhy
 Bent
 Brec
 Cht
 Clyst
 Coal

 Congl
 Sdy dolo
 Shy dolo
 Dol
 Gyp
 Sdy lmst

 Lmst
 Mrlst
 Salt
 Shale
 Sltst
 Ss

 Black sh
 Gry sh
 Shale
 Shyltst
 Sltysht

ACCESSORIES

MINERAL

- Anhy
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Ferrpel
- Ferr
- Glau
- Gyp
- Marl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt

- Chlorite
- Dol
- Sand
- Slty

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra

- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomoldic

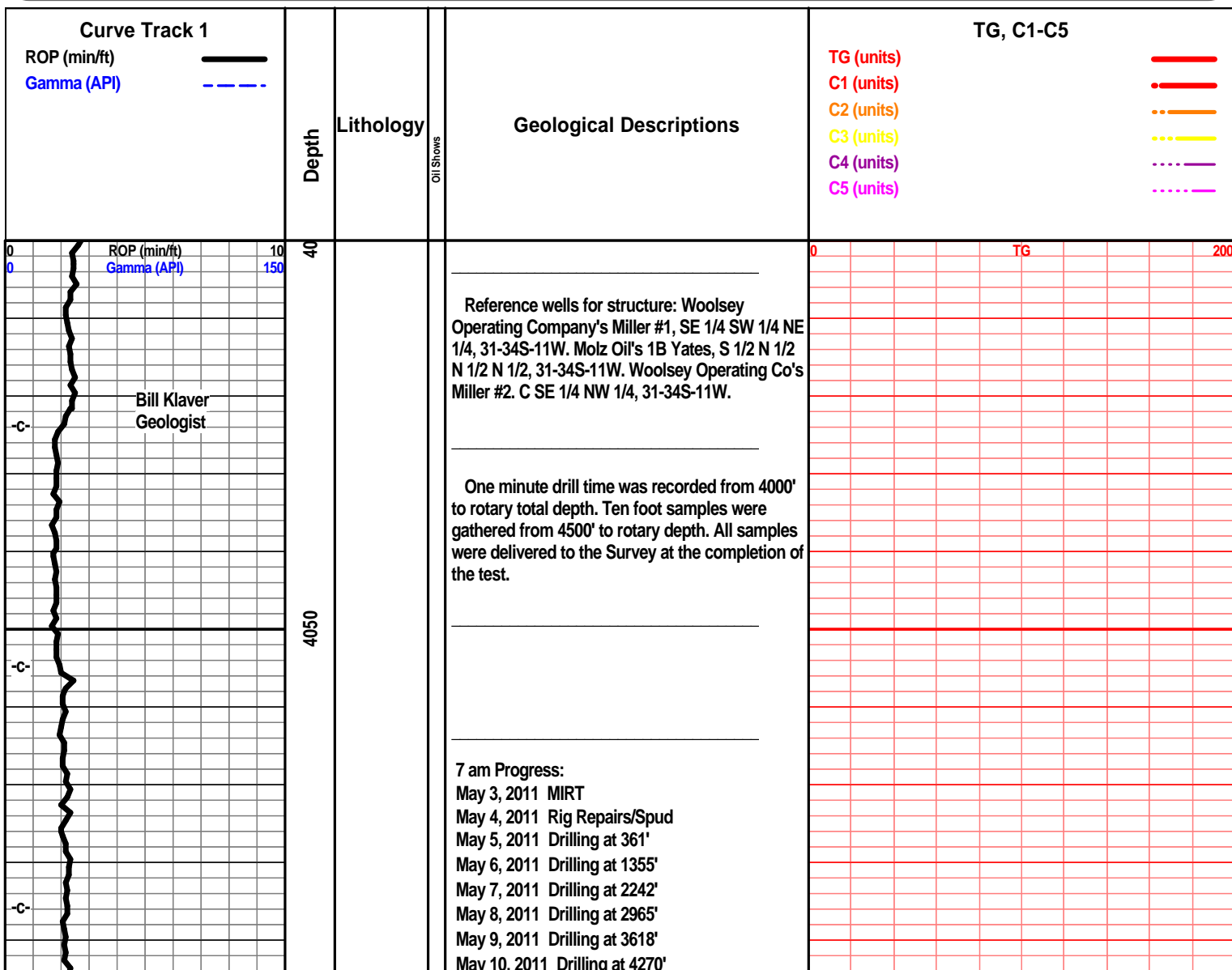
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Slstn

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Slstn
- Ssstn
- Carbsh
- Clystn
- Dol

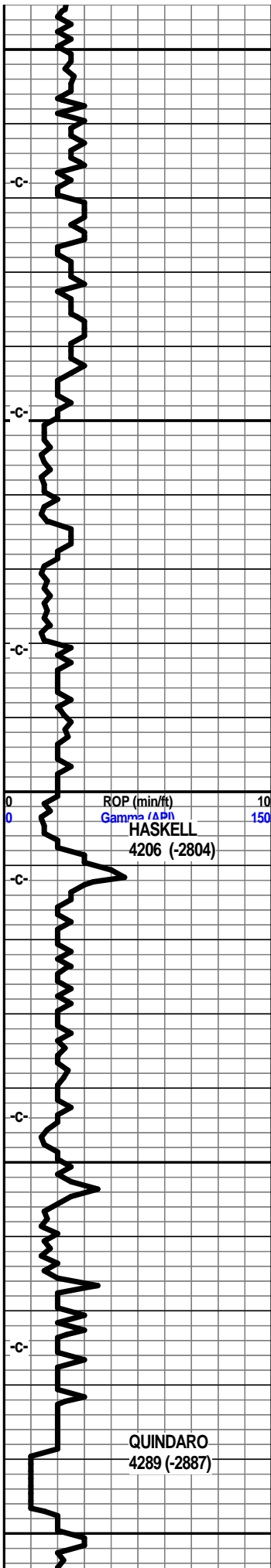
TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackst

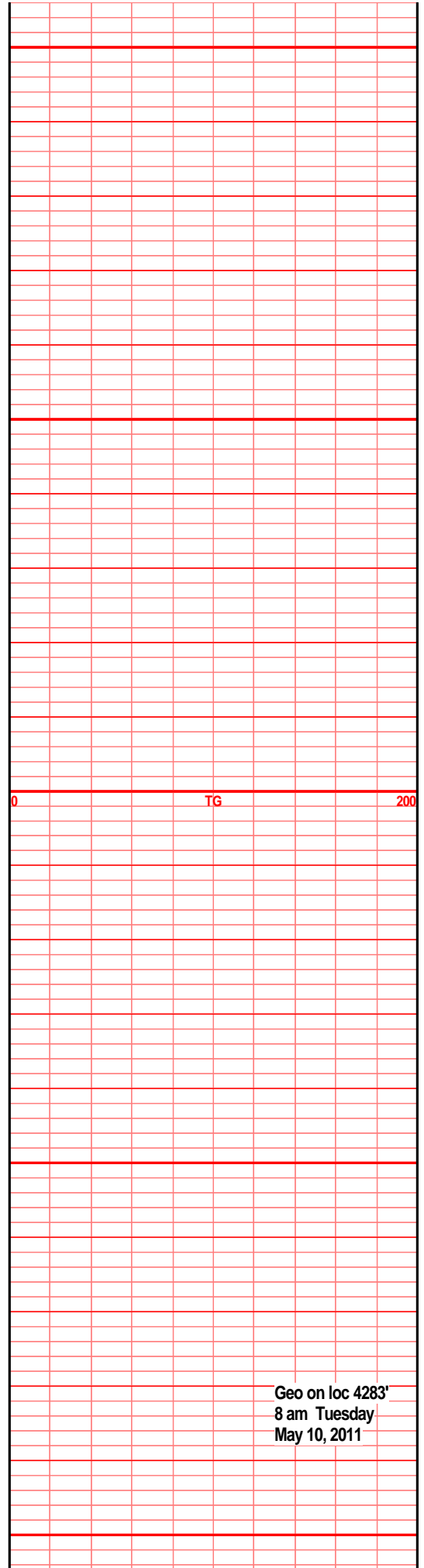


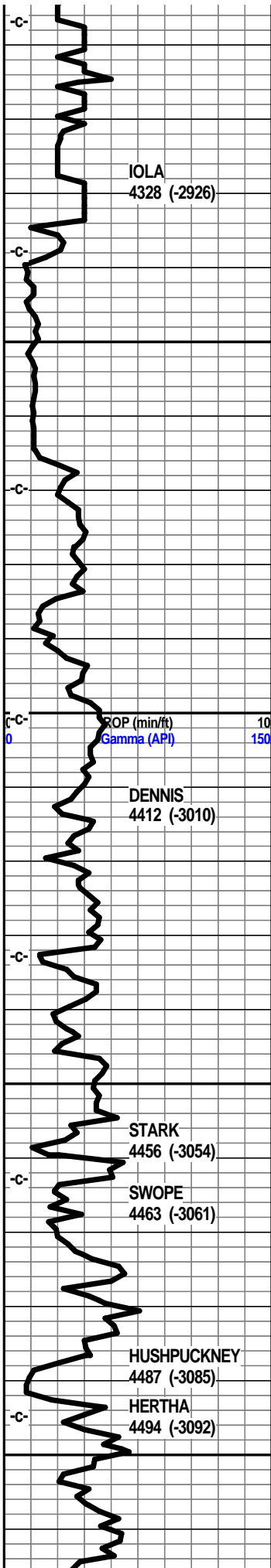
May 11, 2011 Drilling at 4675'
 May 12, 2011 CTCH at 4770'
 May 13, 2011 Drilling at 5090'
 May 14, 2011 Drilling at 5312'
 at RTD of 5392' 1:45 pm. E-Logs
 out at 10:30 pm on 5/14/11

- E-Log Tops:
- Herington
 - Onaga
 - Wabaunsee
 - LeCompton
 - Kanwaka
 - Elgin Sand
 - Heebner
 - Toronto
 - Douglas Group
 - Douglas Shale
 - Haskell
 - Quindaro
 - Kansas City 'F'
 - Kansas City 'Iola'
 - Dennis
 - Stark
 - Swope
 - Hushpuckney
 - Hertha
 - B/Kansas City
 - Pawnee
 - Cherokee
 - Cherokee Sand
 - Mississippi
 - C3
 - C2A
 - C2
 - C1
 - Osage
 - Northview Shale
 - Compton
 - Kinderhook
 - Woodford
 - Misener
 - Maquoketa
 - Viola
 - Simpson Group
 - Wilcox
 - McLish Shale
 - McLish Sand



4100
 4150
 4200
 4250
 4300



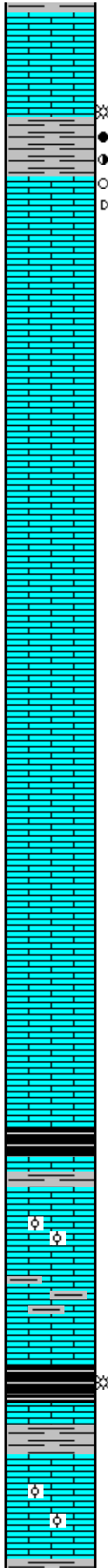


4350

4400

4450

4500



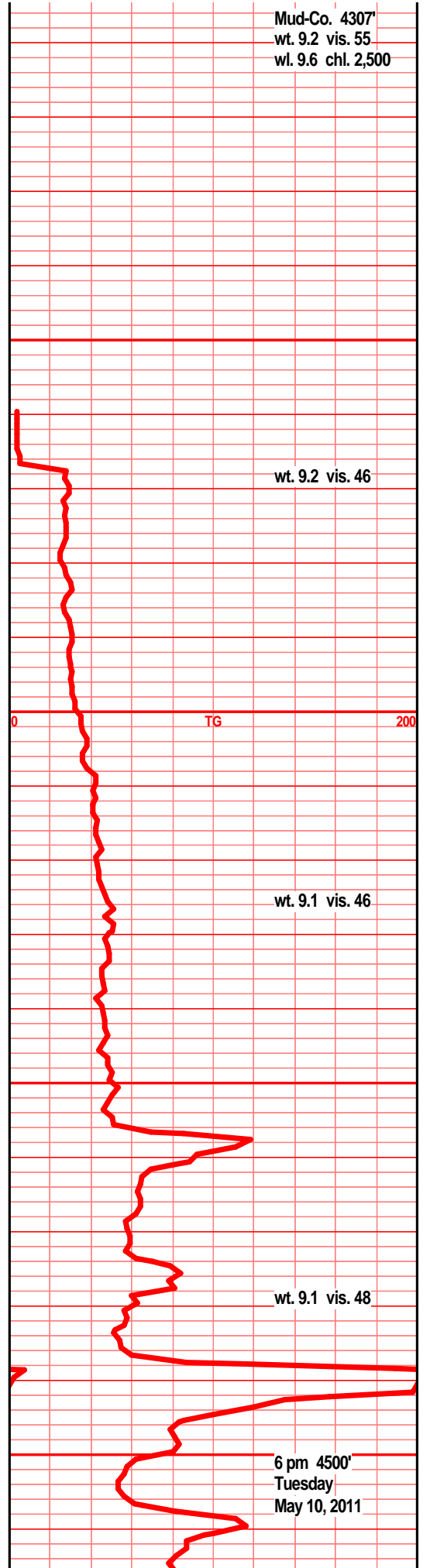
- Oil & Gas Show Legend**
- Gas
 - Even Stain/Saturation
 - Spotted Stain/Saturation
 - Questionable
 - Dead/Gilsonitic

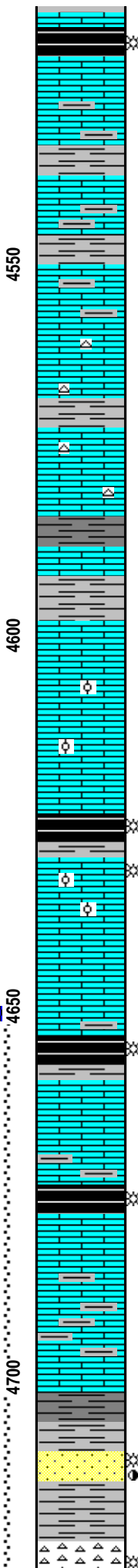
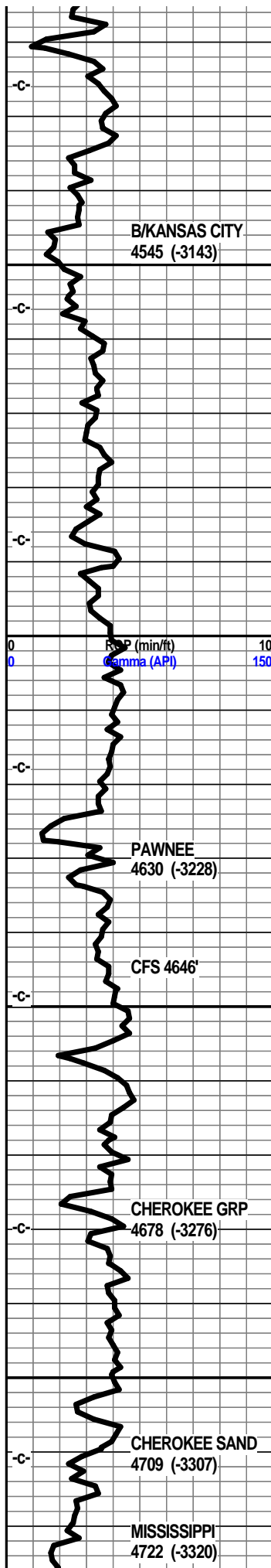
lst crm off wht tan buff f xln gran sub chlky gran
foss frags, foss ool, pelletal,

shl drk gry blk, blk carb, wxy grsy, gas bubs, lst
tan buff f xln sub chlky foss frags, foss ool, calc
xln fill

lst crm tan buff f vf xln gran blkly flky sub chlky,
foss frags, tr foss ool, calc xln fill

lst crm tan buff tr lt brn f xln blkly ang gran flky
sub chlky foss frags, tr foss ool, calc xln fill





shl gry blk, wxy grsy, carb, gas bubs, lst tan gry buff f vf xln dns hrd blkly ang sub chlky tr foss frags, arg in prt

lst tan gry lt brn f vf xln dns hrd, blkly ang arg, micro foss, calc xln fill, shl gry brn

shl gry, drk gry green blk, silty gritty calc, lst tan brn gry f vf xln dns hrd blk arg silty

lst crm tan lt brn f vf xln dns hrd blkly, calc in prt, micro foss frags, calc xln fill

lst crm tan gry, lt brn f vf xln dns hrd blkly ang, calc xln fill, micro foss frags, arg in prt, silty, shl gry gry green silty calc in prt

lst crm buff drk tan f vf xln blkly dna ang hrd, tr micro foss, calc xln fill, tr chrt tan lt gry shrp frsh opa shls gry green silty mic,

lst crm tan lt gry/brn f vf xln dns hrd blkly, micro foss frags, calc xln fill, tr chrt tan lt gry shrp frsh opa, shl gry blk, gry green, shly spls...

shl gry calc, lst tan crm buff f vf xln blkly ang hrd, sub chlky, micro foss frags, tr calc xln fill

lst crm buff tan f vf xln blkly ang tr sub chlky, micro foss frags, calc xln fill, tr micro ool,

lst crm buff drk tan f vf xln dns hrd blkly, massive, tr sub chlky,

shl drk gry blk, carb in prt, lst crm tan buff, f vf xln sub chlky, blkly ang pcs, foss frags, ool, micro ool, pelletal, calc xln fill, NVP, tr gas bubs, nodor, nsfo

lst crm buff tan f vf xln dns hrd blkly ang pcs, sli sub chlky tr foss frags, ool, calc xln fill,

shl drk gry blk, blk carb, lst tan buff drk tan gry f vf xln blkly ang dns hrd, tr sub chlky, calc xln fill

lst tan drk tan tr buff f vf xln dns hrd blkly massive, micro foss frags, calc xln fill, shl gry drk gry brn silty calc

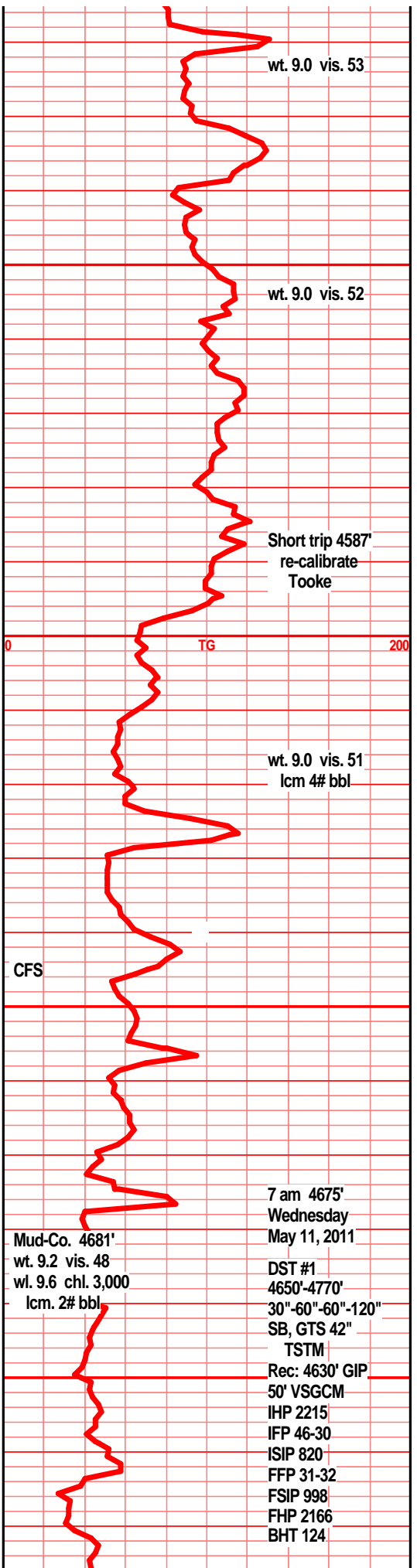
lst tan drk tan lt gry/tan, f vf xln dns hrd blkly ang pcs, tr sub chlky, foss frags, micro foss frags, calc xln fill, tr arg, shls gry drk gry calc gritty, shl blk carb

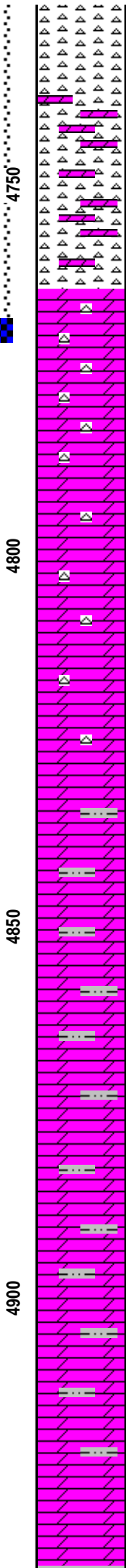
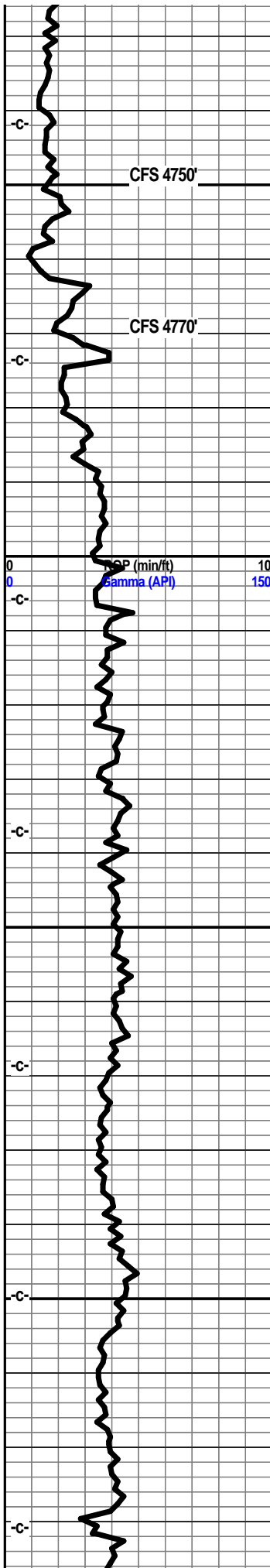
lst crm atn lt gry tr lt brn f vf xln dns hrd blkly ang micro foss frags, msly dns hrd massive

shl gry green brn silty gritty tr calc, lst tan brn buff f vf xln dns hrd blkly massive arg in prt, tr sub chlky, tr micro foss frags, tr calc xln fill

sst lt gry/tan- brn/blk mott, drk brn/blk, vf grnd, sub ang to ang grns, w/srtd, sub fria to hrd blkly clstrs, clay fill arg soft in prt, gran, blk dead stain, tr gas bub, sli odor-better when brkn, nsfo

chrt wht lt gry, gry/smokey, tr tan lt yllw, shrp





frsh, opa, blk, opa, mstly frsh with frac por, tr brn stain along fracs, tr gas bubs, sli odor, filmy RBSFO

chrt wht lt gry, gry/smokey shrp frsh opa, frac por, tr brn edge stain, tr gas, chrt dolo, dolo wht tan brn w/smokey/gry chrt incu, weath gran trip text, tr spongy text, pp moldic por, good odor, gd gas bubs, brn stain, SFO/brkn, chrt gry smokey shrp frsh, tan brn trip text dolo edge, pp/moldic por, gd odor, SSFO/brkn, dull UV

chrt lt gry tan lt smokey, shrp frsh opa, chrt dolo drk tan brn f xln gran, sli surc text, weath trip text, much glau, pp/moldic por, inter xln por, gd odor, stain, fair gas bubs, SFO, FSFO w/brkn, 60" spl-dolo crm tan vf xln blk dns hrd, silic text, glau

dolo tan lt gry crm f vf xln dns hrd gritty gran, tr silic text, tr glau, tr brn stain, tr gas, chrt tan lt gry shrp frsh

dolo tan lt pale gry f vf xln dns hrd blk gritty, tr sndy text, tr glau, tr chrt wht lt gry shrp frsh

dolo, sltstn, mdstn tan crm tr lt gry f vf xln gritty, silty, gran, tr silic text, tr glau, tr chrt wht lt gry shrp frsh

dolo, sltstn, ta crm lt gry f vf xln gran gritty blk dns tr silic text, chrtwth lt gry shrp frsh opa

dolo sltstn, drkcrm tan bec gry drk gry w/depth f vf xln dns blk hrd ang silic text, incr arg, tr chrt gry shrp frsh

lst dolo f vf lxn dns hrd blk arg silty, gran, tr silic text, chrt gry smokey shrp frsh opa

dolo, calc in prt, gry drk gry f vf xln blk dns ang hrd arg silty, gritty, silic tx in prt, tr chrt gry smokey shrp opa

dolo, dolo silt f vf xln gran blk dns ang hrd arg, silic text in prt silty, shly, chrt gry smokey shrp frsh

dolo gry med gry f vf xln girty silty arg, silic text in prt, chrt in prt, chrt gry smokey shrp frsh

dolo silty mdstn grm med grn f vf xln dns hrd, gritty silty, shls gry med gry silty gritty calc in prt

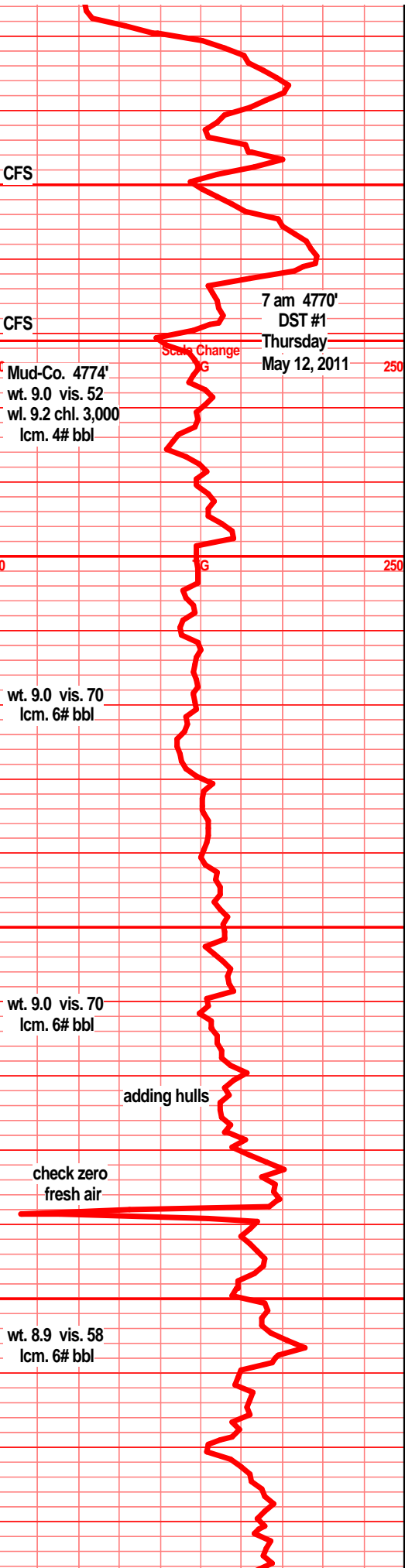
dolo silty dolo gry med gry blk ang dns hrd, gritty, tr silic text, shls gry silty gritty tr calc

dolo silty dolo, gry med gry blk dns hrd silty gritty, shls gry dolo, silty gritty calc tr bright blue green shl

shl gry drk gry green silty gritty, gran, silty dolo drk gry med gry silty gritty arg

shl drk gry /drk gry green silty gritty, silty dolo, gry med gry gritty gran tr silic text,

shl arv green drk green silty gritty silty dolo



7 am 4770'
DST #1
Thursday
May 12, 2011

Mud-Co. 4774'
wt. 9.0 vis. 52
wl. 9.2 chl. 3,000
lcm. 4# bbl

wt. 9.0 vis. 70
lcm. 6# bbl

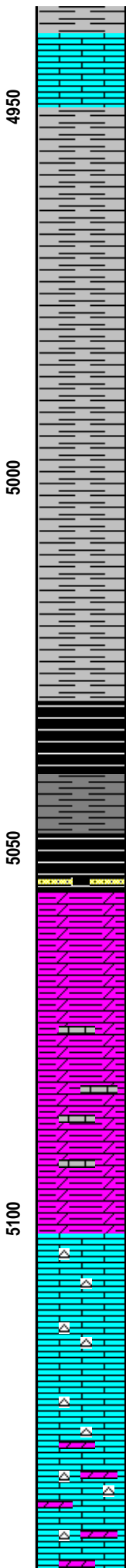
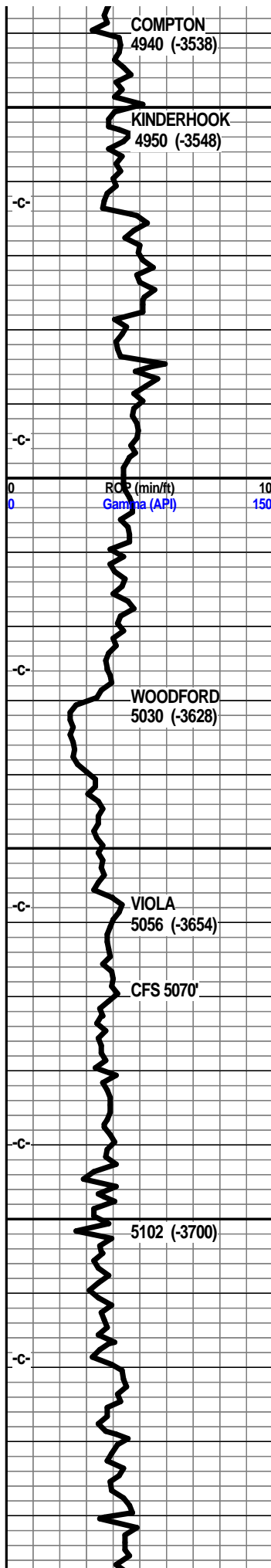
wt. 9.0 vis. 70
lcm. 6# bbl

wt. 8.9 vis. 58
lcm. 6# bbl

Scale Change

adding hulls

check zero
fresh air



shl gry green, drk green silty gritty, silty dol, med/drk gry blkly dns ang calc in prt

lst off wht crm lt tan vf xln dolo in prt, blkly dns tr sub chlky, chrt wht shrp frsh foss opa

shl gry drk med gry, gry green brn, silty gritty, bedded, tr pyritic

shl gr med gry brn silty, gritty, bedded tr pyritic

shl gyr drk gry brn/blk, silty gritty, tr gran tr pyritic bands

shl gry med gry, gry/brn, silty gritty

shl gry drk gry brn blk, silty gritty

shl gry dkr gry gry/green, brn/blk silty gritty beds, pyritic in prt

shl gry gry blk, blk drk brn/blk silty blkly ang pcs

shl drk reddish brn blk, carb, blk carb, gritty, blkly ang soft pcs, grsy wxy, abun gas bubs

shl drk gry blk, blk carb, drk reddish brn/blk, carb gritty gran grsy wxy, abun gas bubs

shl gry blk, blk carb, drk red/brn carb, wxy grsy, silty, gritty abun gas bubs, sst (2-3 clstrs) clr blk clstrs, f sli med grnd, ang grns, prly srtd, w/cem, sub fria to tite hrd clstrs, min fill, clay fill, shl clsts, blk gilson stain, NSFO, no gas bubs or odor

dolo, silty dolo, tan crm lt gry f xln soft gran mush, silty gritty, arg

dolo, silty dolo, tan crm gry, f xln gritty soft, tr lst wht off wht f xln blkly flky sli chlky, pyritic

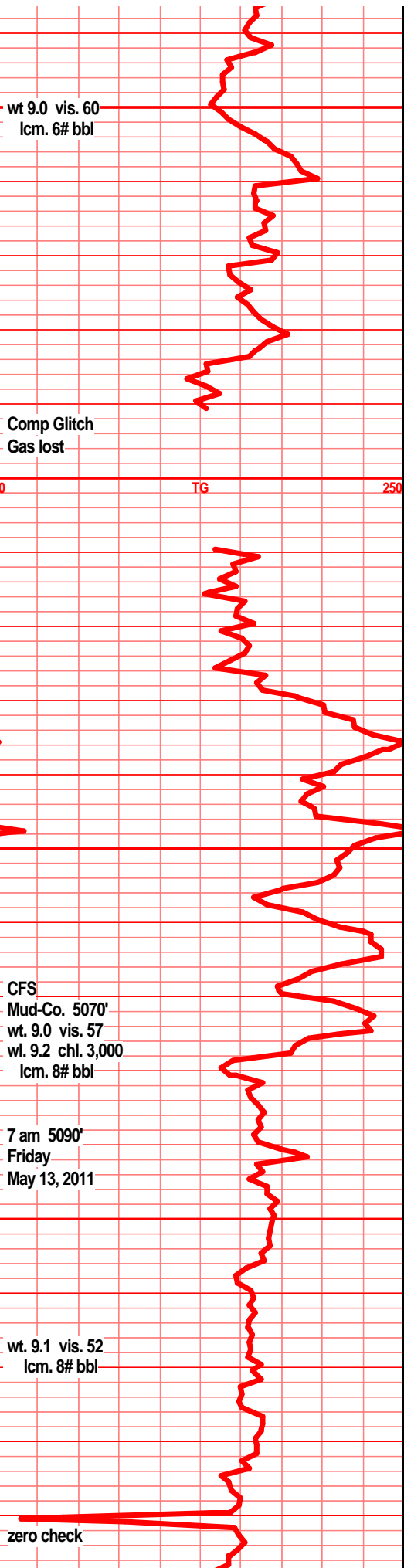
dolo shl dolo gry tan crm slft msush gran gritty, tr gas bubs, arg

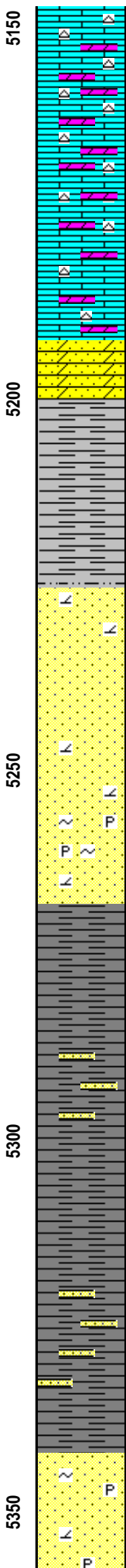
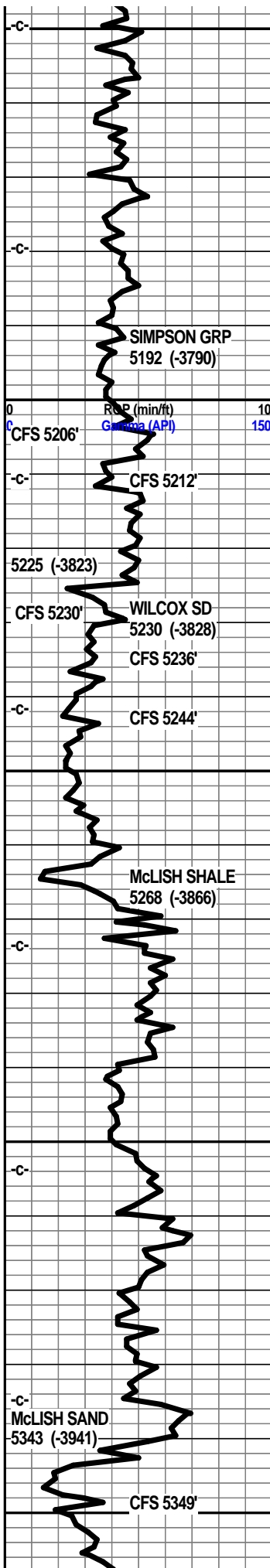
lst wht off wht lt gry tint f sli med xln blkly flky tr sub chlky, pyritic, inter xln por, chrt wht shrp frsh opa

lst wth off wht lt gry gry tint, f med xln blkly ang flky sub chlky in prt, inter xln por, pyritic, min fill, tr foss frags, chrt wht shrp frsh opa

lst off wht lt gry/gry mott, f sli med xln, blkly flky tr sub chlky inter xln por, pyritic in prt chrt wht shrp, dolo dull tan vf xn dns hrd blkly chrty, chrt dull tan shrp frsh foss

lst gry med xln lst aa, lst/dolo in prt f xln gran blkly dns, sub chlky, flky, chrty, chrt lt gry dull tan shrp frsh foss





lst dolo in prt wht tan lt gry f vf xln sub chlky gran gritty chrty, tr foss frags, tr min fill, chrty lt gry dull tan shrp frsh foss frags in prt pyritic in prt

lst wht tan lt gry f sli med lxn blkly flky sub chlky tr pyritic, inter xln por, mstly dns hrd, dolo, chrty dolo tan lt brn vf xln gran sub chlky calc, chrty, chrty gry dull tan shrp frsh foss

lst wht tan lt gry tint f med xln flky blkly tr sub chlky foss frags, min fill, chrty wht opa, dolo tan lt brn vf xln gran hrd dns, chrty, chrty tan gry shrp frsh opa foss

much chrty aa, dolo tan brn f vf xln gran tr suc text, inter xln por, sub chlky calc, tr sndy gritty NS, sst tan clstrs, f grnd, sub ang grns, w/srtd sub fria, gd inter grn por, stain, tr gas bubs, VSSFO, odor/brkn

shl green teal green, wxy grsy

shl green, teal green, slick, wxy, grsy, tr pyritic, tr snd grn inclu

sst clr clstrs, f grnd sub rded/ang grns w/srtd, prly cem, fria, inter grn por, lt tan stain, SSFO, nodor, blk grsy stain, no gas

sst clr tan clstr f grnd, sub rded grns, w/srtd, sub fria, prly cem, tr dolo fill, gran tr min fill, grsy dead SFO no odor, no gas.

sst clr lt tan clstrs f grnd sub rded grns, tr rded grns, w/srtd, sub fria/fria, prly cem, tr calc cem, gd inter grn por, tr min fill, NS, sst clr brn clstrs, f vf grnd, sub rded grns, w/srtd, sub fria, prly to fair cem, silic/dolo xln fill, tr min fill, grsy dead SFO, NSFO, no gas, nodor

sst clr tan drk tan clstrs, f grnd, sub rded/rded grns, w/srtd, sug fria/fria, mstly tite, fair/prly cem, silic cem, tr min fill, tr pyritic, dolo xln fill NS

sh drk gry gry green, teal green grsy wxy, snd grn inclu pyritic

shl green, glue/gry, teal green, wxy, grsy, pyritic, abun snd grn inclu in prt, tr glau

shl green, teal green, fnly silty, wxy grsy, pyritic in prt, abun snd grn inclu in prt

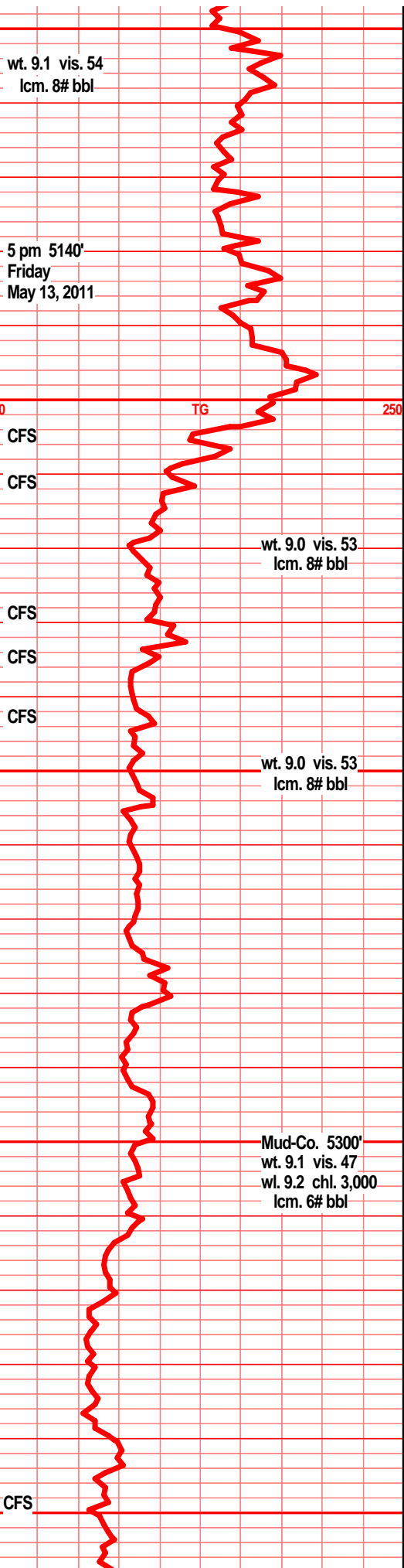
shl drk teal green silty grsy sndy in prt, vry pyritic, glau fill

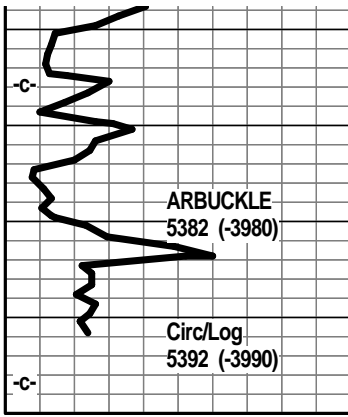
shl drk gry/green, drk teal green, wxy grsy sndy, snd grn inclu, tr hv pyritic, glau fill

shl gry drk teal green silty, grsy, wxy, pyritic fill, glau fill, sndy gritty

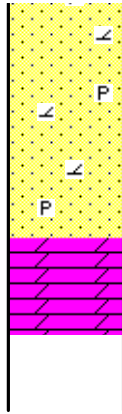
sst clr tan lt brn clstrs, f grnd sub ang/ang grnd, fair/prly srtd, sub fria, fair cem, min fill, sst gry f grnd sub ang grns, prly srtd, v/well cem silic cem, pyritic, clay clasts, tr glau, min fill, quartz text hrd

sst clr tan, lt gry clstrs, f grnd sub ang grns, prly





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srted, f/well cem, silic cem, tr dolo fill, glau, min fill tr clay clasts, sst gry f grnd clstrs, prly srted, sub ang grns, pyritic, quart text, hrd blkly ang clstrs

sst clr tan drk tan, gry clstrs, f grnd, sub ang tr ang grns, prly srted, sub fria, tr tite blkly, inter grn por, silic cem, sst gry lt gry f grnd clstrs, sub ang, prly srted, sub fria to tite, pyritic, min fill, clay clasts, glau, clay fill, arg

dolo crm, gry tan buff vf xln dns hrd blkly ang, sucr text in prt, tr sndy gritty, poor inter xln por, tr glau, mstly hrd dns

