



Woolsey Operating Company, LLC

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

Measured Depth Log

Well Name: MAC #1
Location: Section 12 - Township 35 South - Range 13 West
License Number: 15-007-24152-0000 Region: Barber County, Kansas
Spud Date: March 29, 2014 Drilling Completed:
Surface Coordinates: C of N/2 NE SE
2310' FSL & 660' FEL
Bottom Hole
Coordinates:
Ground Elevation (ft): 1457' K.B. Elevation (ft): 1469'
Logged Interval (ft): 4000' To: 5565' Total Depth (ft): 5565'
Formation: Kansas City Group ----> Simpson Group
Type of Drilling Fluid: Chemical Mud displaced at 3420'
Printed by WellSight Log Viewer 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: Mr. Bill Klaver
Company: Woolsey Operating Co. LLC
Address: 125 N. Market, Wichita Kansas, 67202

COMMENTS

Surface Casing: Spud at 2:30 pm on March 29, 2014, set 5 joints of new 13 3/8" X 48#/ft surface casing at 219' KB (tally 204') with 300 sx Class A, 2% gel, 3% cc (by Allied). Plug down at 9:30 pm on March 29, 2014. Cement did circulate.

Production Casing:

Deviation Surveys: 1/4 at 219', 1 at 1017', 3/4 at 1494', 1/2 at 2001', 1/4 at 2507', 3/4 at 3046', 1/4 at 3500', 3/4 at 3996', 1/4 at 4505', 3/4 at 4838', 1/2 at 5565'

Pipe Strap @ 4838', Board: 4852.89', Strap: 4852.42', Strap .47' short to the board. No corrections were made to the board.

Fossil Drilling Rig #3 Bit Record:

- 1) 17 1/2" Reed RR in at 0', out at 219'. 219' in 2.25 hours.
- 2) 7 7/8" Varel HE-21 in at 219' out at 4838', 107 1/4 hours
- 3) 7 7/8" Varel HE-29 RR in at 4808' out at 5315', 32 3/4 hours
- 4) 7 7/8" Varel HE-29 RR in at 5315' out at 5565', 25 1/4 hours

Gas Detector: Woolsey Operating Company, Gas Trailer #2

Mud System: Mud Co. Brad Bortz, Engineer

DSTs: Trilobite Testing, Leal Cason, Gary Pevoteaux, Testers

Company Man: Mike Tharp, WOC

E-Logs: Nabors Completion and Production Services, Dual Induction Laterolog w/SP, CNL-FDC w/PE, Gamma Ray and Caliper. Ian Mabb, Engineer

DSTs

DST #1 Cherokee Sand 4766'-4838'. 30"-60"-30"-60" Weak surface blow during IFP, weak blow died in 5 minutes during FFP, Recovered 10' Mud. IHP 2360, IFP 21-23, ISIP 167, FFP 24-26, FSIP 316, FHP 2292.

DST #2 Mississippian, 4862'-4928', 30"-60"-60"-120" SB BOB in 45 seconds, GTS 9 minutes into 2nd flow period. Rec: 4409' GIP, 120' MOCW (10% Mud, 10% Oil, 80% Water), 243' GMOCW (10% Gas, 16% Mud, 24% Oil, 50% Water), 93' GCM (20% Gas, 80% Mud). API Rw 0.13 at 40 degrees. Chlorides 125,000 ppm.

Gas Flow Rates 2nd Flow Period: 10"- 33.9 MCF, 20"- 40.2 MCF, 30"- 43.4 MCF, 40"- 46.6 MCF, 50"- 49.8 MCF, 60"- 52.9 MCF. IHP 2443, IFP 113-168, ISIP 1549, FFP 155-280, FSIP 1529, FHP 2417. BHT 124 degrees

DST #3 Misener Sand, 5200'-5315' 30"-60"-30"-60", SB BOB 4 minutes into IFP, SB BOB 12 minutes into FFP. Rec: 280' GIP, 135' GOCWM (22% Gas, 6% Oil, 22% Water, 50% Mud), 180' GOCWM (5% Gas, 7% Oil, 36% Water, 52% Mud). Chlorides 49,000 ppm, API Rw 0.23 at 46 degrees. IHP 2600, IFP 60-150, ISIP 1936, FFP 162-203, FSIP 1926, FHP 2508. BHT N/A

Barber County, Kansas
API # 15-007-24152-0000

Offset comparison wells used for structural control included WOC's Rogg #1, N/2 N/2 SW, 7-35S-R12W. Edmiston Oil's Haskard 2B, C SE NE, 12-35S-R13W. WOC's Myers #1 A, NE NE NE, 13-35S-R 13W.

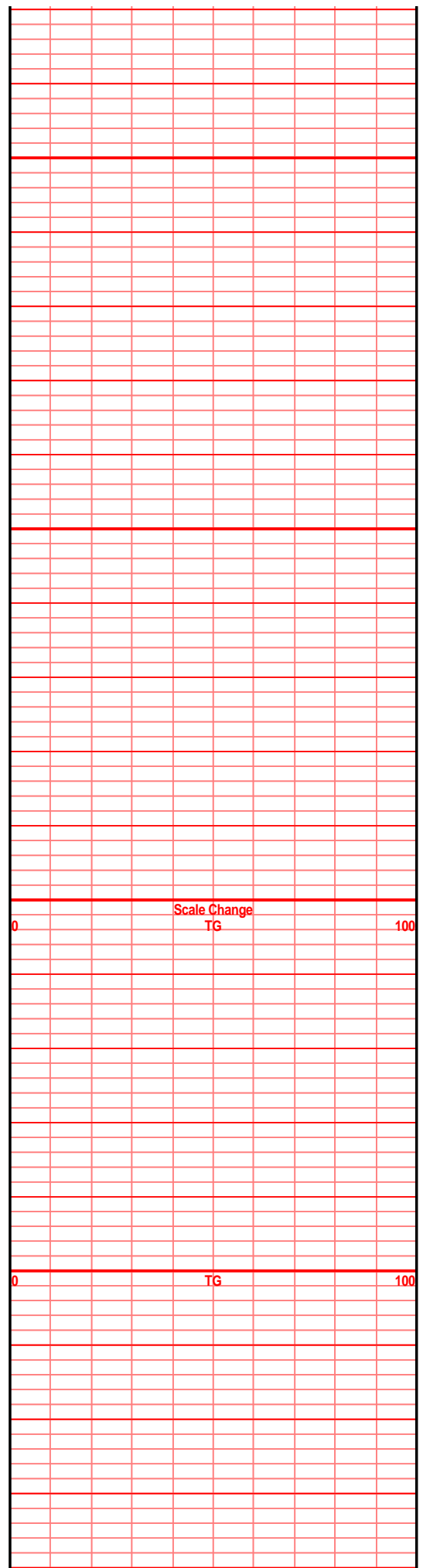
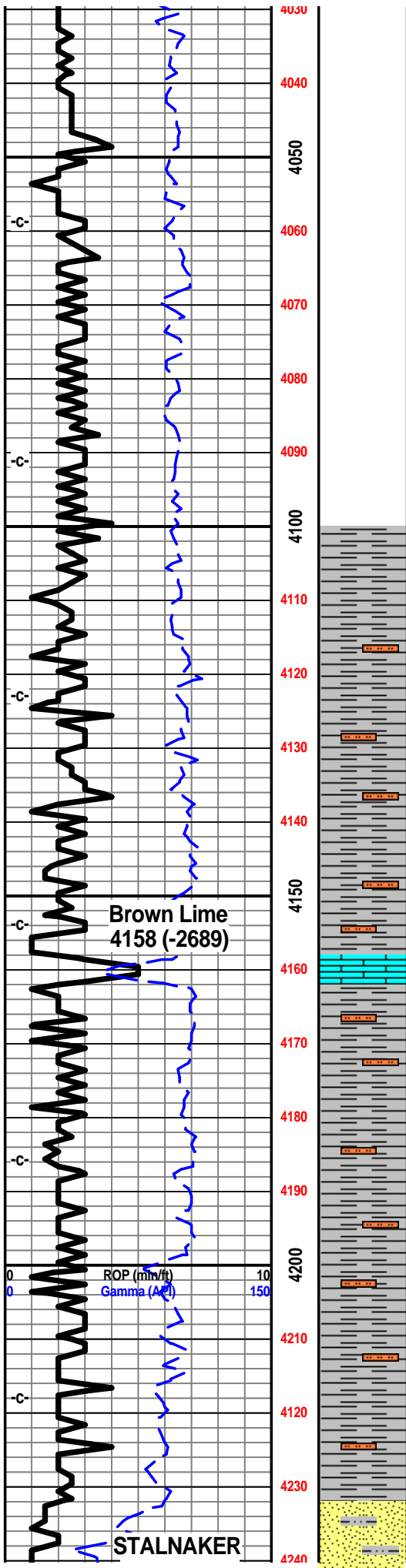
One minute drill time was recorded from 4000' to rotary total depth. Ten foot rotary cuttings were collected from 4600' to rotary total depth and delivered to the Survey at the completion of the test.

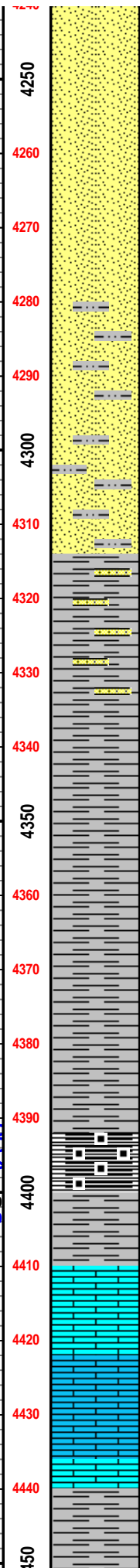
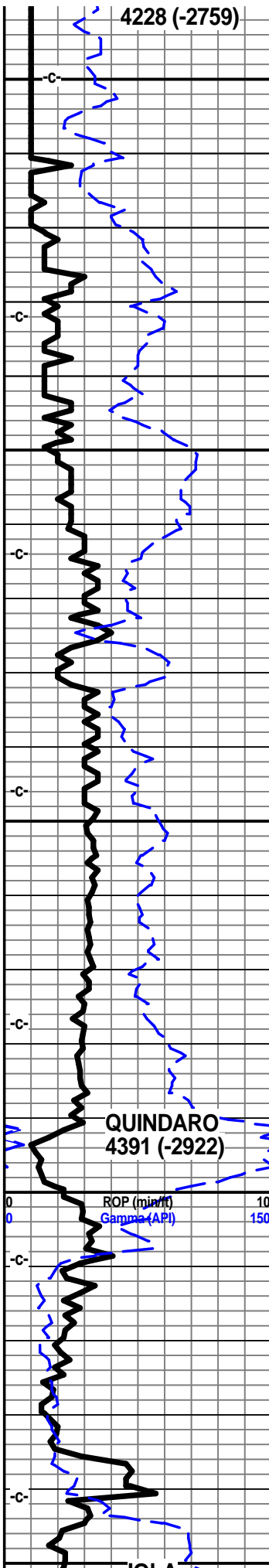
7 am Progress:

- March 28, 2014 MIRT
- March 29, 2014 Spud 2:20 pm
- March 30, 2014 Drilling at 250'
- March 31, 2014 Drilling at 1850'
- April 1, 2014 Drilling at 2700'
- April 2, 2014 Drilling at 3590'
- April 3, 2014 Drilling at 4230'
- April 4, 2014 Drilling at 4701'
- April 5, 2014 CTCH at 4808'
- April 6, 2014 Drilling at 4957'
- April 7, 2014 Drilling at 5230'
- April 8, 2014 DST #3 at 5315'
- April 9, 2014 CFS at 5505'
- April 10, 2014

E-Log Tops

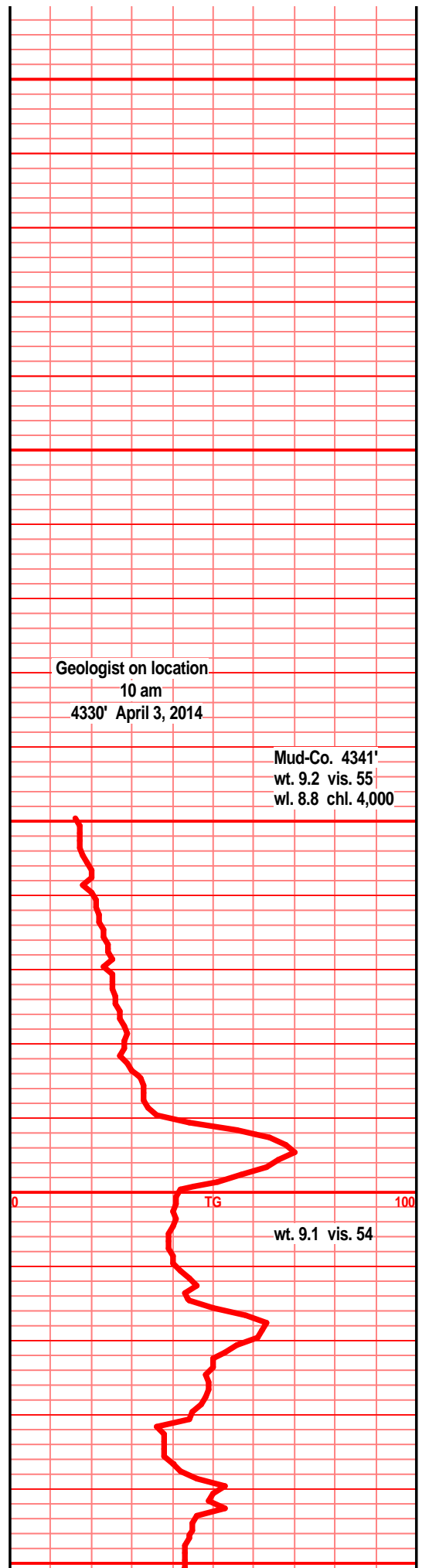
- Chase 1979 (-510)
- Onaga 2857 (-1388)
- Wabaunsee 2909 (-1440)
- LeCompton 3653 (-2184)
- Kanwaka 3677 (-2208)
- Elgin Sand 3723 (-2254)
- Heebner 3884 (-2415)
- Toronto 3896 (-2427)
- Douglas Group 3955 (-2486)
- Douglas Shale 4023 (-2554)
- Brown Lime 4154 (-2685)
- Quindaro 4385 (-2916)
- Kansas City 'F' 4404 (-2935)
- Kansas City 'G' 4452 (-2983)
- Kansas City 'I' 4538 (-3069)
- Stark 4574 (-3105)
- Kansas City 'J' 4584 (-3115)
- Hushpuckney 4604 (-3135)
- Kansas City 'K' 4617 (-3148)
- B/Kansas City 4652 (-3183)
- Pawnee 4749 (-3280)
- Cherokee Group 4798 (-3329)
- Cherokee Sand 4830 (-3361)
- Mississippi 4862 (-3393)
- C3 4862 (-3393)
- C2A 4892 (-3423)

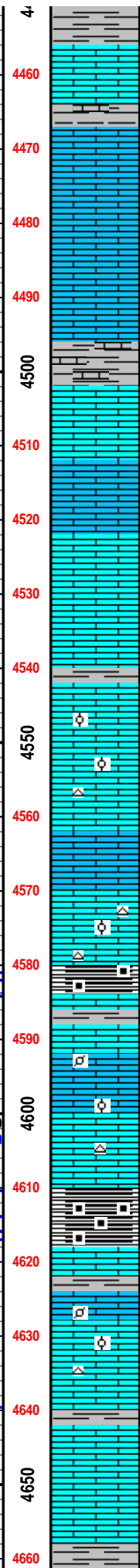
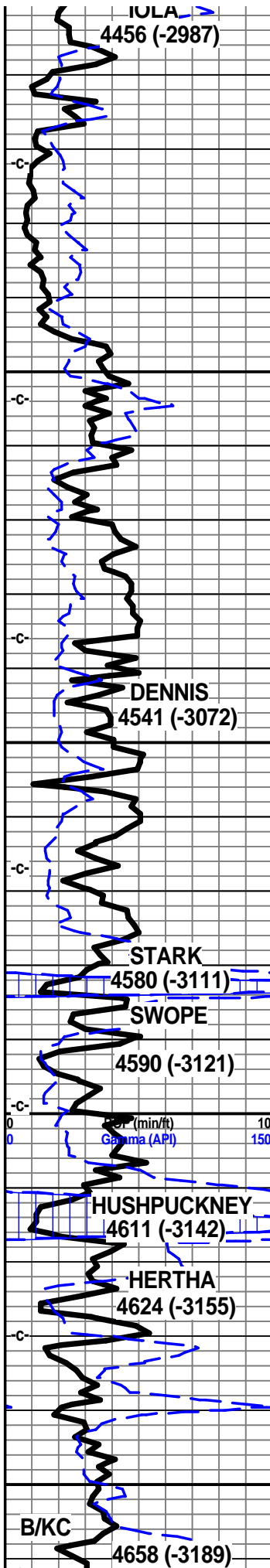




- C2 4928 (-3459)
- Osage 5062 (-3593)
- Northview Shale 5147 (-3678)
- Compton 5168 (-3699)
- Kinderhook 5197 (-3728)
- Woodford 5262 (-3793)
- Misener 5299 (-3830)
- Viola 5310 (-3841)
- Simpson Group 5455 (-3986)
- Wilcox 5514 (-4045)
- McLish Shale 5519 (-4050)

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





4460
4470
4480
4490
4500
4510
4520
4530
4540
4550
4560
4570
4580
4590
4600
4610
4620
4630
4640
4650
4660

Ist crm tan off wht f sli med xln, gran sub chlky
foss frags, calc xln fill, tr pelletal, ool

Ist crm tan off wht f xln gran soft sub chlky
foss frags, tr ool, calc xln fill tr chrt lt gry shrp
frsh opa

Ist crm tan off wht f xln gran soft, sub chlky,
foss frags, calc xln fill,

Ist off wht crm tr tan f sli med xln gran soft, sub
chlky, foss frags, gran calc xln fill tr chrt lt gry
off wht shrp frsh opa

Ist aa, shl drk gry blk, blk carb, wxy gry blk
ang pcs, abun gas bubs, platy soft

Ist crm tan off wht f xln, soft gran, sub chlky to
chlky, foss frags, foss ool/pelletal, inter ool
por, inter xln por

Ist crm tan off wht f xln, chlky soft gran foss
frag, foss ool, calc xln fill, inter foss frag
moldic por

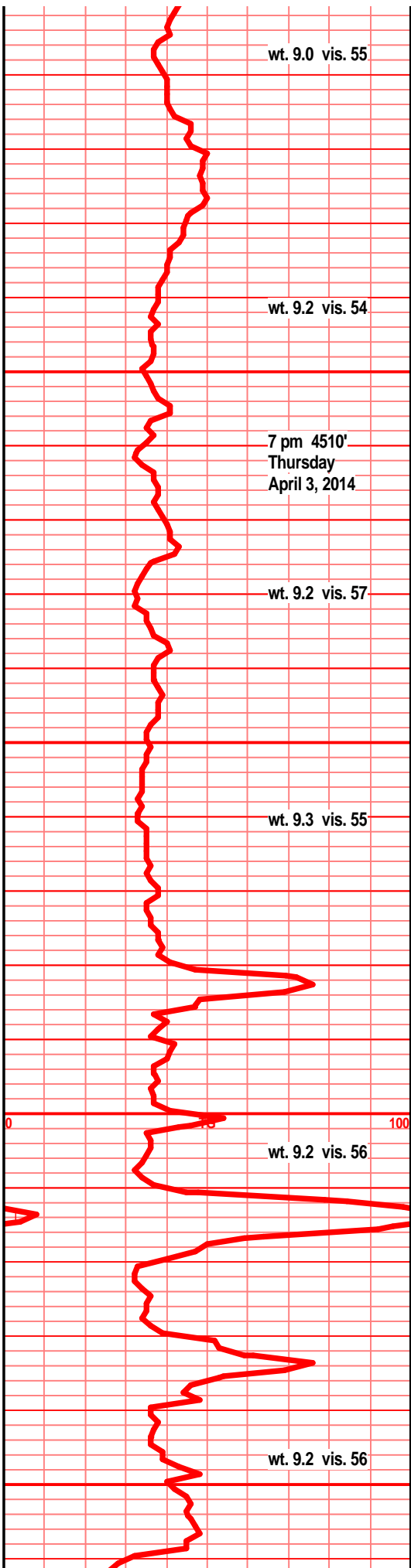
flood blk carb shl, blk ang wxy grsy pcs, abun
gas bubs,

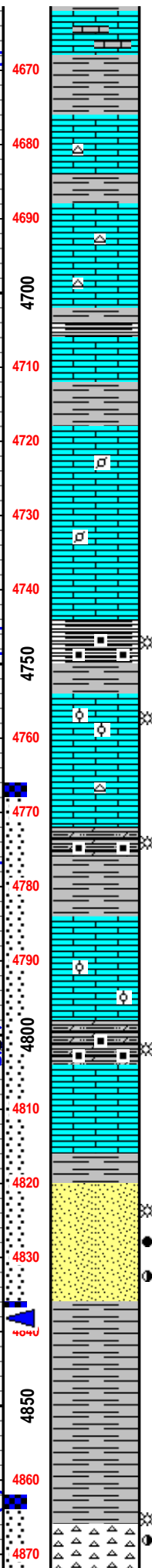
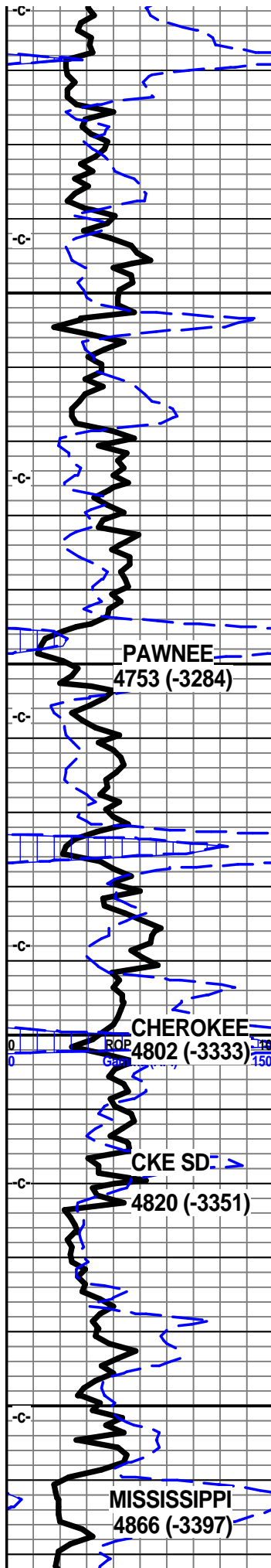
Ist crm tan lt gry f xln gran soft, sub chlky, arg
in prt, calc xln fill, foss frags, inter xln por,

Ist crm tan lt gry f xln gran soft sub chlky, foss
frags, foss ool micro ool, pelletal inter xln por,

Ist tan gry f xln blk ang dns, bec hrd, sub
chlky in prt, micro foss frags, tr chrt tan gry
shrp frsh opa

shl gry blk, gry brn, calc fill/text, silty gritty,





pyritic, soft gran in prt

shl lt gry green, silty, gritty micro sndy, calc, shl gry green lt gry brn silty gritty gran calc in prt

shl gry brn green blk, ratty silty gritty, pyritic in prt, lst tan buff f sli med xln blk ang dns hrd tr micro foss frags

lst buff crm tan f sli med xln blk ang dns hrd, tr micro foss frags, tr chrt tan off wht shrp frsh opaq

shl gry dkr gry blk brn, lst tan buff crm tr lt brn f vf xln blk ang dns hrd, tr sub chlky, tr crs calc xln fill, micor foss frags

lst crm buff tan f sli med xln, blk ang dns hrd, crs calc xln fill, foss frags, ool/pelletal, mico foss frags/calc fill

lst buff crm tan f sli med xln, blk ang dns hrd, foss frags, foss ool/pelletal, miro foss frags, crs calc xln fill

lst buff crm tan f sli med xln, blk ang crsly calc xln pcs, foss frags, micro ool/pelletal,

shl gry drk med gry, silty gritty calc, shl drk gry blk carb, blk wxy grsy pcs abun gas bubs

lst crm buff tan f xln dns hrd blk ang pcs, foss frags, pelletal, ool, mico ool in prt, sub chlky in prt, crs calc xln fill, tr inter xln por, fair gas bubs, nodor, poor sho

lst tan buff crm f xln mstly dns hrd blk ang sub chlky pcs, micro foss frags, ool/pelletal, calc xln filled, tr inter xln por, shls gry drk gry blk, blk carb, wxy grsy blk pcs, gas bubs, brn strk

lst crm buff tan bec dkr gry, f mic xln dkns hrd blk ang arg, tr foss frags, tr gritty sndy text, lst aa

shl gry blk, dkr gry blk carb wxy grsy blk ang pcs, abun gas bubs, slt tan drk tan gry, f vf xln dns hrd blk ang arg, tr micro foss frags, gritty,

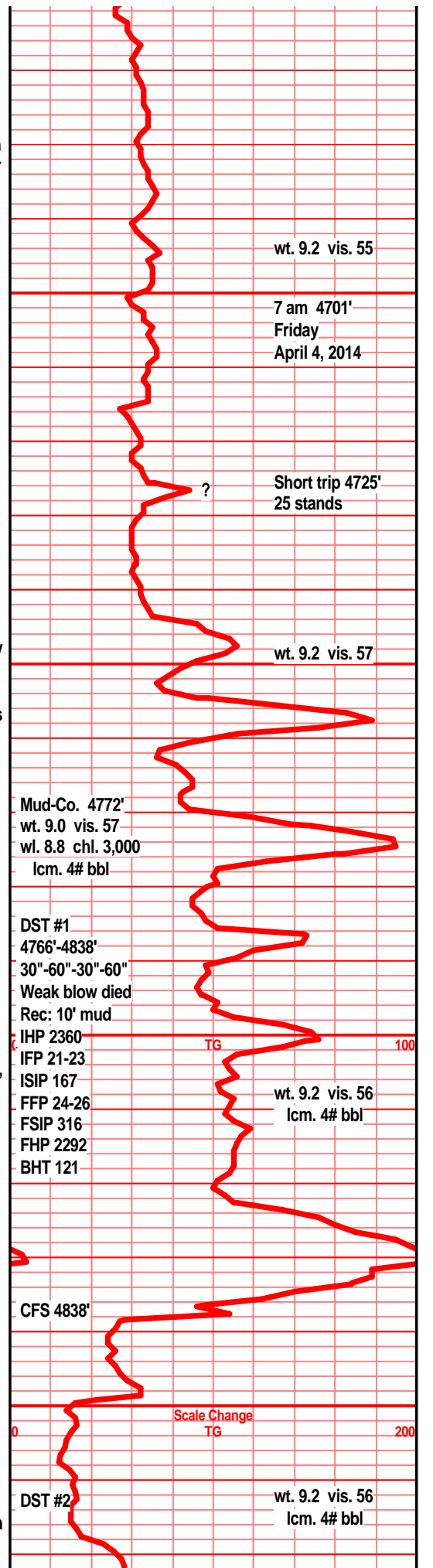
lst crm lt gry buff f vf xln dns hrd blk ang, micro foss tr sub chlky, arg

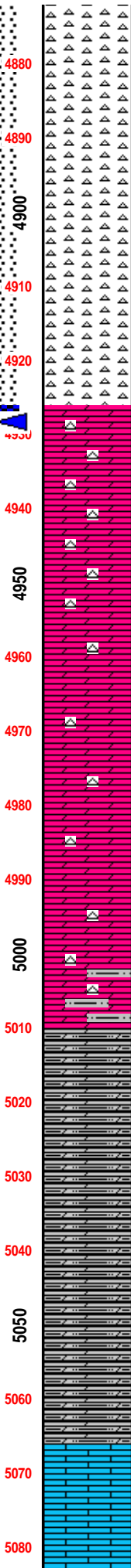
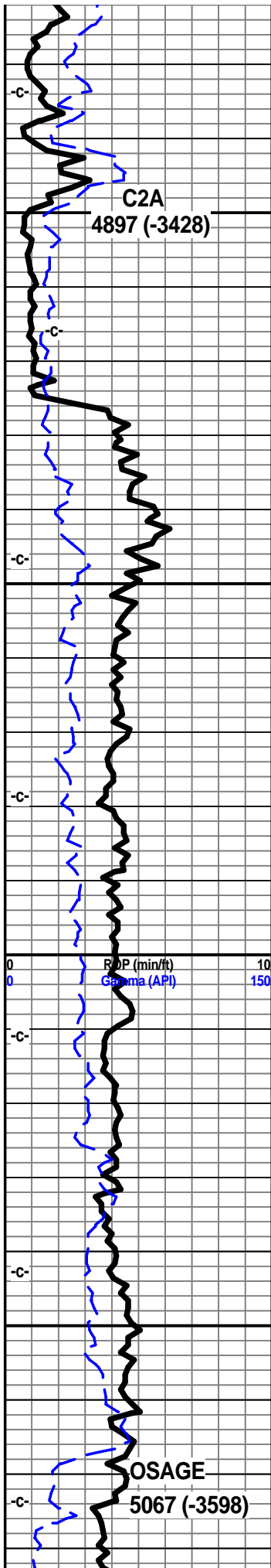
sst drk tan lt brn f vf grnd, sub ang/sub rded grns, w/srtd, poor to fair cem, calc tr silic cem, mstly fria, tr sub fria, soft crumbly text, inter grain por, gd/strong odor, bleeding oil/spitting gas, free oil floating in spl tray, gd SFO,

shl gry green, blkue gry green, silty gritty, gran, tr yellw reds, tr vari color, ratty in prt,

shl gry green blue green silty gritty, soft ratty, yellw red vari color

chrt wht off wh bone wht shrp frsh, opaq, blk ang pcs, with sli weath edge, drk blk stain, pp moldic por gas bubs, blk SFO, fair odor, tr gran spongy edge text





chrt wht off wht bone wht frsh shrp blkly ang
opaq pcs w/tan brn mott sli weath edge, pp
moldic por, w/ weath sponge text edge gd
odor, f/gd SFO, gas bubs,

chrt off wht tr bone wht, shrp frsh blkly opa
pcs, tan/brn/blk stained sli weath edges, chrt
wht tan brn mott, weath sli trip sli sponge edge
text, pp moldic por, drk stain, gassy, gd odor,
floating oil drops

chrt wht off wht shrp frsh opa w/tan drk brn
weath trip sli spongy soft weath edges/sides,
gd vis vug/pp/moldic por, gd odor, gd sfo, gas
bubs, chrt gry blk drk brn mott, weath trip
spongy text with lt blue frsh chrt inclu, gd
moldic pp vug por, even stain sat, gd odor, gd
sfo, gassy, dull UV

dolo crm lt tan tr lt gry/tan f vf xln blkly ang dns
hrd, sli sucr, tr inter xln por, w' chrt, frsh wht
opaq, tr blk stain vssfo

dolo crm tan f vf xln, chrty, sli sucr in prt, tr
sndy gritty text, tr glau, blkly ang dns hrd pcs,
tr inter xln por, tr stain, vssfo, odor? chrt wht
shrp frsh with dolo edge, tr blk stain nodor

dolo drk tan, tan gry f vf xln dns hrd blkly ang
pcs, silty gritty, sndy text, tr chrt off wht, wht
shrp frsh opa

dolo drk tan, tan gry f vf xln dns hrd blkly ang,
silty gritty, sndy in prt, tr glau, chrty in prt, chrt
wht shrp frsh opa

dolo drk tan off tan, bec tan gry to lt gry, f vf
xln dns hrd blkly ang silty gritty tr sndy text, tr
chrty, chrt wht shrp frsh opa

dolo tan gry f vf xln dns hrd blkly ang silty sndy
text gritty tr glau,

dolo drk tan be msly gry f vf xln dns hrd blkly
ang tr chrty, silty gritty tr glau, sndy hrd bec
arg text

dolo tan gry lt gry to gry f vf xln dns hrd gritty
sndy tr glau, chrty in prt, chrt tan lt gry shrp
frsh opa

dolo drk tan gry, gry f vf xln dns hrd blkly ang,
arg silty gritty tr sndy text

dolo silty dolo, tan drk tan gry, bec gry f vf xln
dns hrd blkly ang gritty gran, sli sndy in prt,
bec more gry arg silty

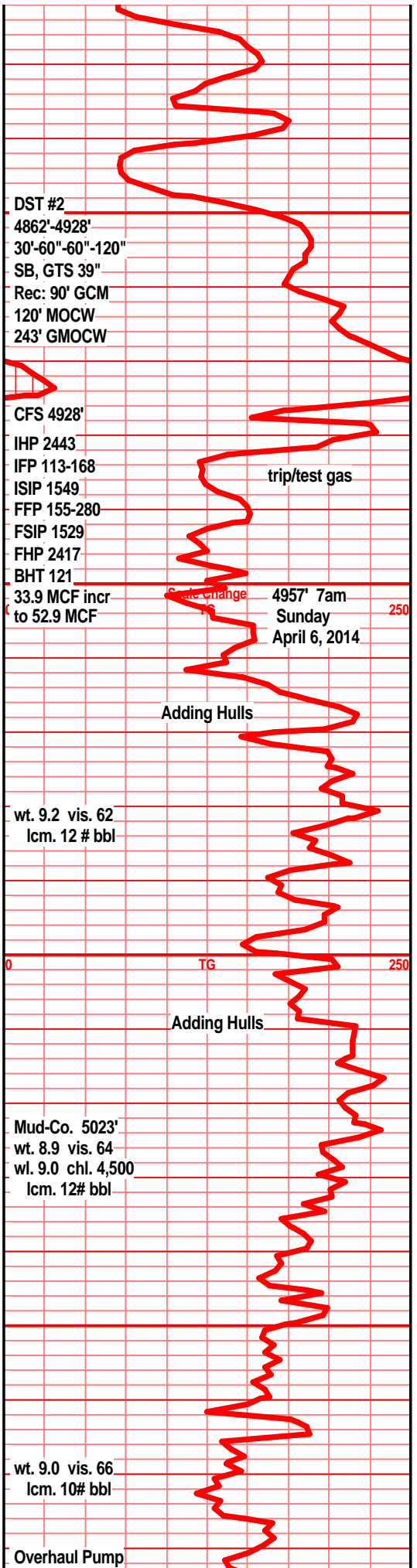
dolo, silty dolo, drk tan gry f vf xln dns hrd blkly
ang silty gritty, tr sndy, arg tr chrty, chrt tan
shrp frsh sub opa

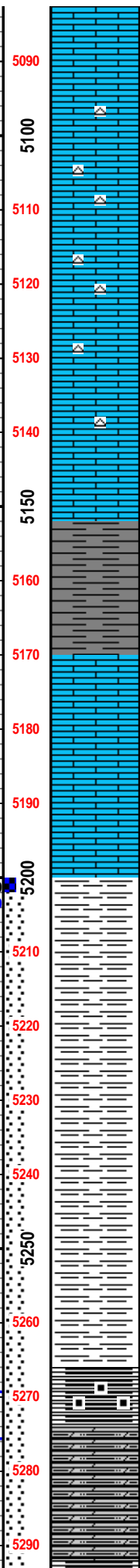
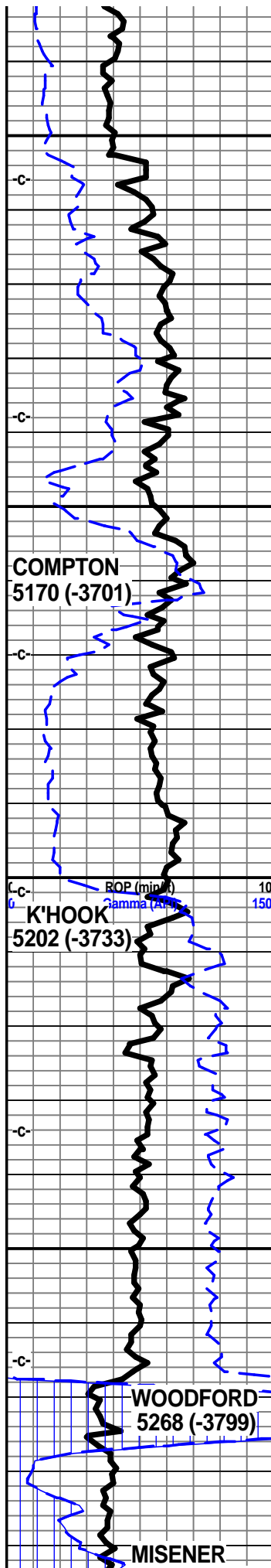
dolo silty dolo gry med gry, drker w/depth, f vf
xln dns hrd blkly arg, silty gritty tr sndy

dolo silty dolo gry med gry f vf xln dns hrd blkly
ang gritty sndy arg

dolo silty dolo, gry med gry f vf xln dns hrd
blkly ang gritty silty arg

dolo silty dolo, gry med tr drk gry f vf xln dns
hrd blkly ang pcs, silty gritty tr sndy, tr chrty,
chrt dull gry shrp frsh





dolo shls aa, lst wht off wht f sli med xln, blk ang tr sub chlky, micro foss frags, crs calc xln, pyritic, lst first found in 5100' spl, lagged to 5086'

lst crm wht f sli med xln blk ang sub chlky, crs foss frags, crs calc xstl inclusions

lst crm wht off wht f sli med xln, blk ang, tr sub chlky, crs foss frags, crs calc xstl inclu, chrt wht shrp frsh opa

lst crm wht off wht f xli med xln, blk ang sub chlky, crs foss frags, crs calc xstln inclu,

lst wht crm off wht gry tint, f sli med xln pyritic in prt, dns sub chlky, crs foss frags in prt, crs calc xln inclu

lst wht off wht gry tint in prt, f sli med xln, crs foss frags, crs calc xln inclu, tr sub chlky, tr chrt wht shrp frsh opa

lst wht off wht crm f sli med xln blk ang dns sub chlky, foss frags

shl gry green, silty, gritty, sndy gran text in most

shl gry, gry/green, silty, gritty gran sndy text in prt

lst dull tan crm/buff f xln, blk ang, crs foss frags in prt,

lst dull tan off wht sli buff, sli gry/green tint, f xln blk ang dns foss frags, tr crs frags in prt

lst dull tan, buff, tr w/lt gry tint, f vf xln dns hrd blk ang pcs, tr foss frags, tr crs calc xstl inclu

shl drk gry, gry/blk silty gritty, gas bubs

shl gry med gry blk, silty gritty, bedded/banded, gas bubs

shl gry med gry blk silty gritty, tr random gas bubs, pyritic

shl gry med gry blk, tr greenish tint, tr blk, semi carb text, silty gritty, gas bubs

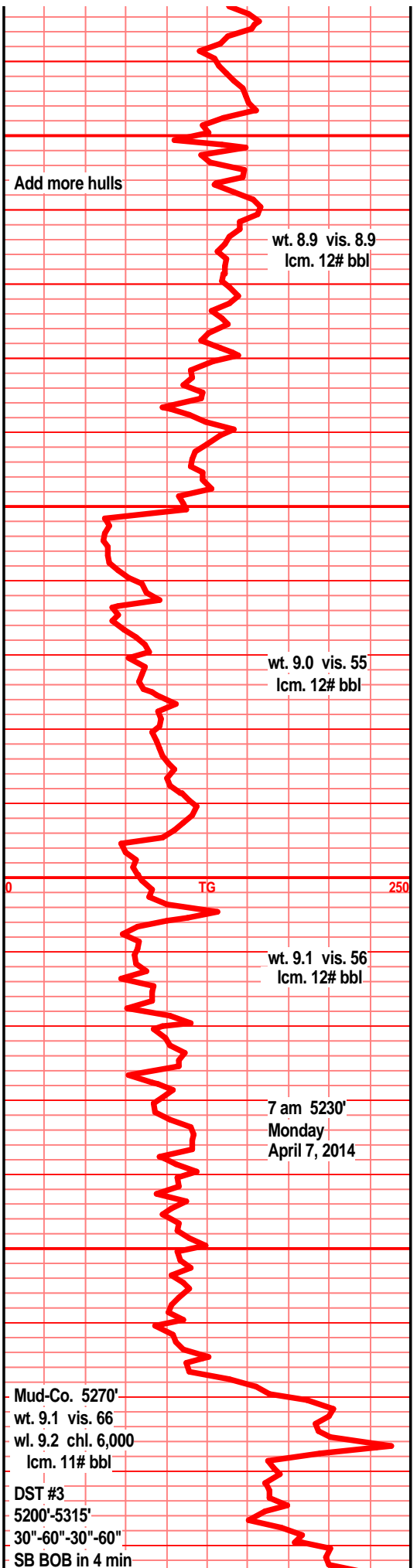
shl gry med gry blk, sli carb in prt, silty gritty pyritic in prt, silty gritty bedded/banded

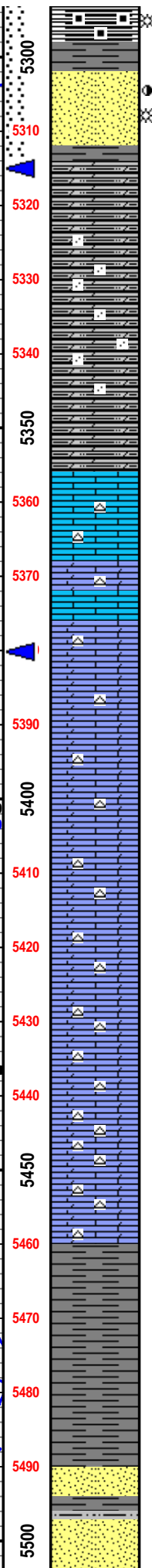
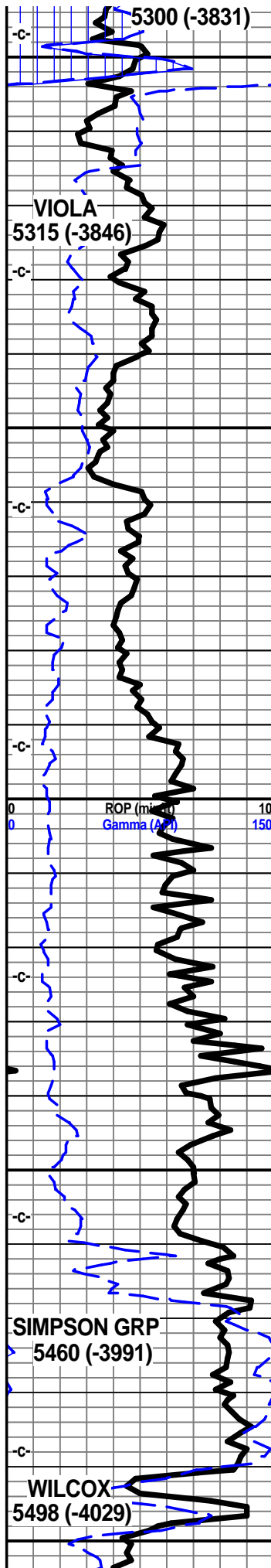
shl gry blk greenish, tr reddish brn, tr blk carb text, silty gritty gas bubs

dolo, silty dolstn, shly gritty. reddish brn/blk carb text, sndy gritty, v fn grnd sub rded snd grn inclu, cuppric, pyritic, abun gas bubs, filmy show, cond? nodor

dolostn, reddish/brn/blk, blk ang hrd pcs, silty, gritty, pyritic, cuppric, odd sub rded snd grn inclu, abun gas bubs, filmy show, brn/red streak

dolostn, drk brn/reddish/blk, silty gritty, sndy/vfn rded snd grn inclu, cuppric, pyritic





shl, tan, red and grn mott, capric, pyritic, abun gas bubs, filmy show

sst wht off wht clstrs, f grnd, sub ang/ang grns, fair to prly srted, w/cem, inter grain por, tr arg, tr pyritic, brn/gry clay clast, NS, sst clear clstrs, f grnd, sub ang grns, fair to prly strd prly cem, mstly fria, inter grain por, tr clay clasts, sli odor, filmy RBSFO and gas on break, VSS transl FO droplets on break

dolo, silt dolostn, gry lt gry f grnd, silty gritty, micro sndy text, arg, hrd blkly ang dns pcs

dolo silty dolostn, gry med gry silty gritty, micro sndy in prt, tr gas bubs

dolo, silty dolostn, gry med gry, silty gritty, sndy text, blkly ang hrd pcs, tr pyritic, tr soft gran mddy, gas bubs

dolo silty sndy dolo, gry med gry, hrd blkly ang silty snd pcs, calc content, dolo tan gry f vf xln dns hrd sndy dns

lst crm off wht lt gry mott, f sli med xln blkly ang dns hrd, sub chlky, crs foss frags, crs calc xln inclu, tr inter xln inter granular por, xstln por, pyritic, chrt wht tan shrp frsh sub opa, dolo dull tan lt gry/brn f vf xln dns hrd blkly gran, gritty sndy text, chrt dull tan shrp frsh sub opa,

lst dolo in prt, tan crm drk tan brn f vf xln gran sub chlky, tr crs foss frags, tr crs calc xln inclu, tr pyritic, chrt dull tan lt gry/brn shrp frsh sub opa, dolo tan brn f xln gran sli sucr dns blkly sndy text, chrt tan dull tan shrp frsh opa

lst, dolo in prt, tan dull tan lt brn f vf xln gran blkly ang dns, tr sub chlky, tr foss frags, chrt, chrt tan dull tan brn shrp frsh sub opa, dolo tan brn f xln gran sucr text, blkly dns, chrt

lst, sli dolo in prt, drk crm tan lt brn f vf xln dns hrd blkly, tr sub chlky, tr foss frags, chrt in prt, mucho chrt tan dull tan/brn shrp frsh sub opa

lst drk crm tan lt brn f vf xln blkly ang dns hrd, tr micro foss frags, pyritic, tr sub chlky, dolo tan lt brn f vf xln blkly ang dns sucr, gritty sli sndy text, much chrt dull tan brn foss shrp frsh sub opa

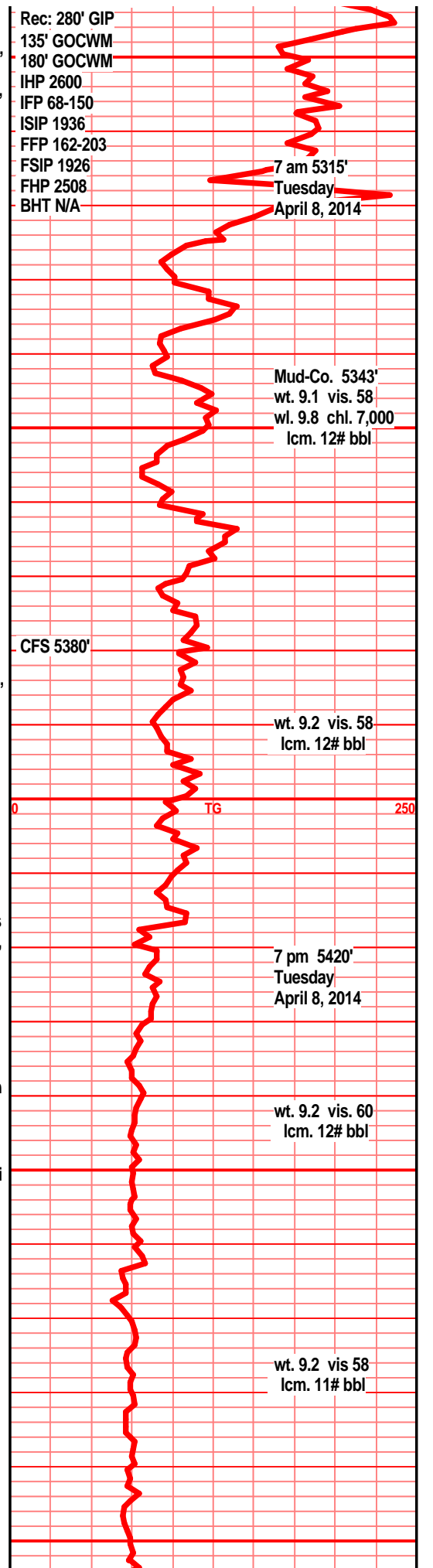
lst, dolo in prt, drk crm tan mstly ull tan brn, f vf xln dns, hrd blkly, sli sucr, sub chlky, gran sli sucr, much chrt, dull tan lt brn shrp frsh sub opa,

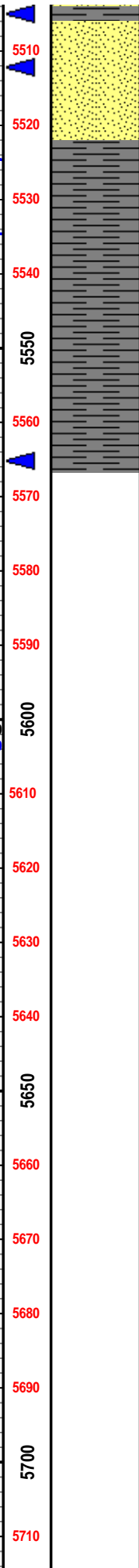
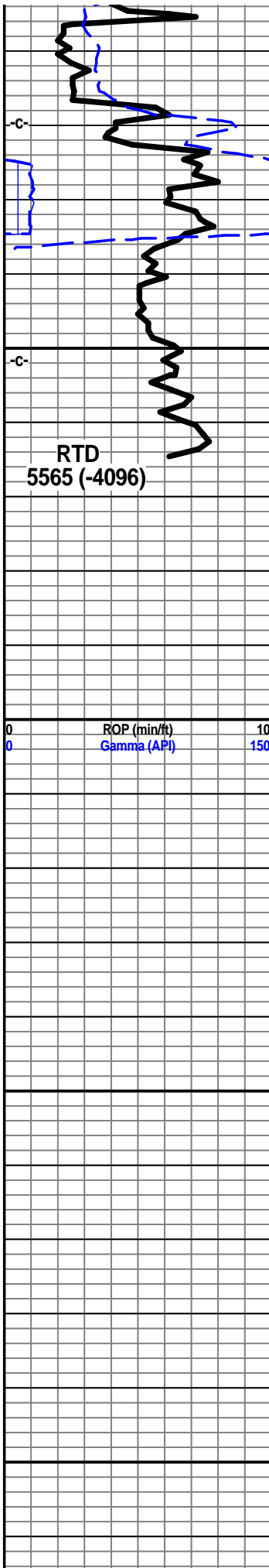
shl gry green teal green, slick wxy grsy text, pyritic bands

shl gry, green/teal green, wxy grsy, text, pyritic text, single snd grn inclu

shl drk gry, gry/green, teal green, slick, wxy grsy text, tr pyritic, tr sing snd grn inclu

sst lt gry green clstrs, vf grnd, w/srtd, sub ang grns, w/cem, silic cem, pyritic, sst wht off wht lt gry/green tint clstrs, f grnd, sub ang/sub rded grns, w/srtd, w/cem, sub fria, tr arg, tr clay fill tr pyritic tr inter gran por NS





5510
sst wht clstrs f grnd, sub ang/sub rded grns, prly srted, prly cem, sub fria to fria, gran soft clstrs, much glau, calc fill, mstly silic cem, NS

5520
sst wht off wht clstrs, f grnd, sub ang/sub rded grns, f/prly srted, w/cem, f/w cem, sub fria, much glau, tr tan brn dolo fill, tr clay/blk mineral fill

5530
shl drk gry, gry/green, teal green, fnly silty, slick wxy grsy text. pyritic bands, tr vfn w/rded clr snd grn inluc

5540
shl gry/green, teal green, vry fnly silty, wxy grsy text, pyritic bands, blkly ang pcs

5550
shl gry green, drk gry/green, teal green, slick wxy grsy text, pyritic bands, tr vfn well rded sub rded snd grn incl, tr glau

