



**Woolsey Operating Company, LLC**

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

Measured Depth Log

Well Name: Sternberger #B-1  
Location: Section:12 Township: 35S Range: 12W  
License Number: 15-007-24128-0000  
Spud Date: 01/31/2014  
Region: Barber Co., Kansas  
Drilling Completed: 02/14/2014  
Surface Coordinates: SE SW SW  
330' FSL, 1090' FWL  
Bottom Hole Vertical Hole  
Coordinates:  
Ground Elevation (ft): 1357 K.B. Elevation (ft): 1369  
Logged Interval (ft): 4300 To: 5460 Total Depth (ft): 5460  
Formation: Brown Limestone--->SIMPSON  
Type of Drilling Fluid: CHEMICAL MUD

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: Joel Gearhart  
Company: Woolsey Operating Co. LLC  
Address: 125 N. Market, Wichita Kansas, 67202

## COMMENTS

Surface Casing: Set 5 jts 13 3/8" x 48#/ft new surface casing at 224' (tally 21.61') w/ 300 sx Class A, 2% gel, 3% cc (by Allied). Plug down at 4:45 am on 2/1. Cmt did circ.

Production Casing: Set 118 jts (tally 5312.53') 5 1/2" x 15.5#/ft production casing at 5324' w/ 50 sx 60/40 pozmix, 4% gel, 1/4# Celoflake and 125 sx Class H, 10% salt, 10% Gypseal, 6# Gilsonite, 1/4# Celoflake, .8% fluid loss (by Allied). Plug down at 1:30 pm on 2/15

Deviation Surveys: 1-226', 1-1112', 1/4-1658', 1-2222', 1/4-2698', 1-3173', 3/4-3680', 1-4186', 1-4695', 1-4855'  
Strap: 4882.36', Board: 4885.75', Strap is 3.39' short to the Board. No corrections were made to the Board.

Contractor Bit Record: Fossil Drilling Rig #3

- 1.) 17 1/2" STC RR in-0' out-226'; 4 hrs
- 2.) 7 7/8" Varel HE-21 in-226' out-796'; in-884' out-4855'; 139.25 hrs
- 3.) 12 1/4" Varel RR in 796' out-884'; 8 hrs
- 4.) 7 7/8" Varel HE-29 in-4855' out-5460'; 56 hrs

Gas Detector: Woolsey Operating Company LLC., Gas Trailer #2

Mud System: Mud-Co., Brad Bortz, Engineer

DSTs: Trilobite Testing, Gary Pevoteaux

E-Logs: Nabors Completion and Production services, Dual Induction Laterlog w/ SP, CNL-FDC w/ PE, Gamma and Caliper

## DSTs

DST #1 Mississippi 4710-4855

30-60-60-120, IFP: Strong Blow, BOB in 1 min. ISI: Weak Blow 1/2-3", FFP: Strong Blow, BOB in 3 sec, GTS/25", Ga 6-7 MCFGPD, FSI: Weak Blow 1/2-1", REC: 150' GOCM (16%G 3%O 81%M), 180' GOCM (11%G, 11%O 78%M), IHP: 2340, FHP: 2201, ISIP: 1529, FSIP: 1607, FP: 53-100/110-169

## CREWS

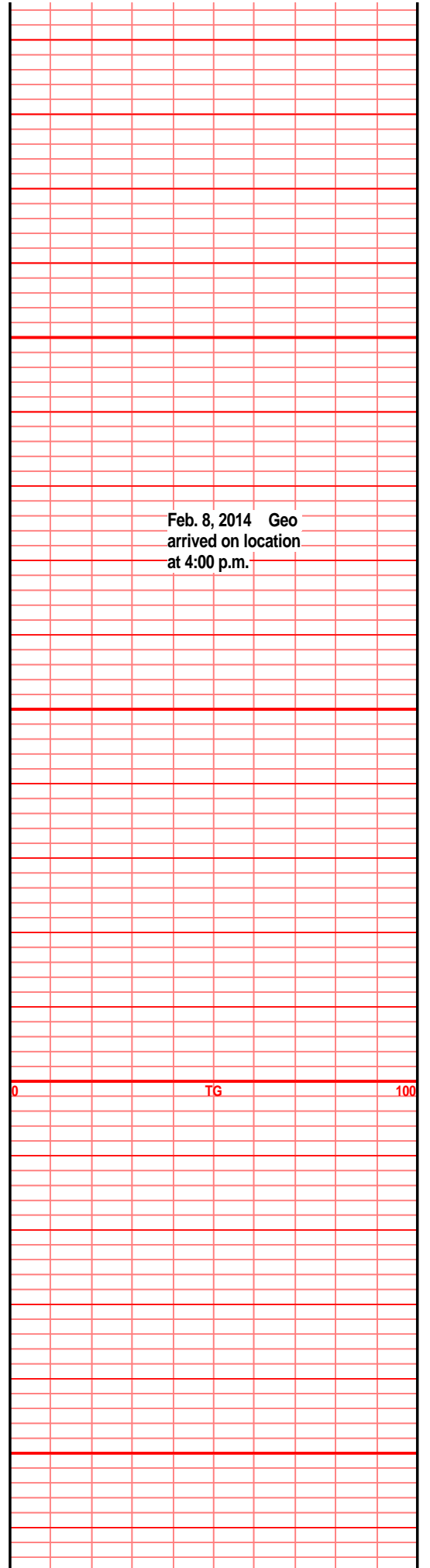
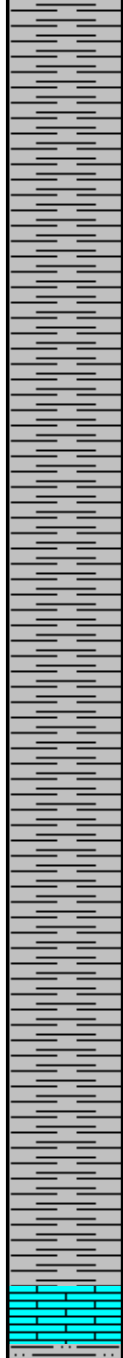
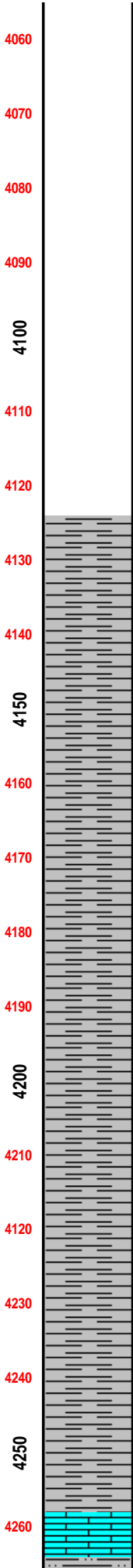
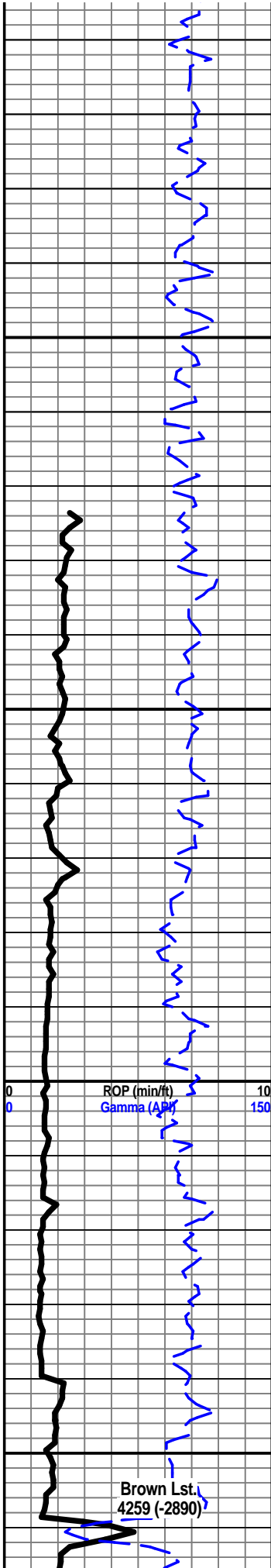
Fossil Drilling Rig #3

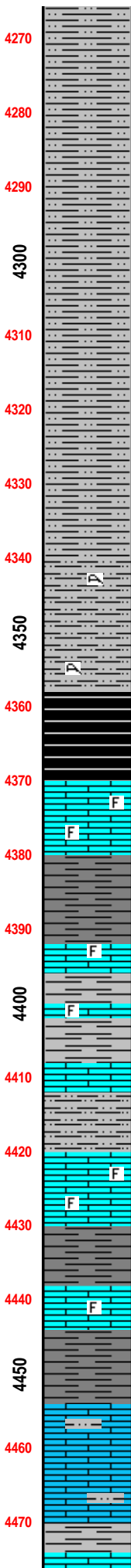
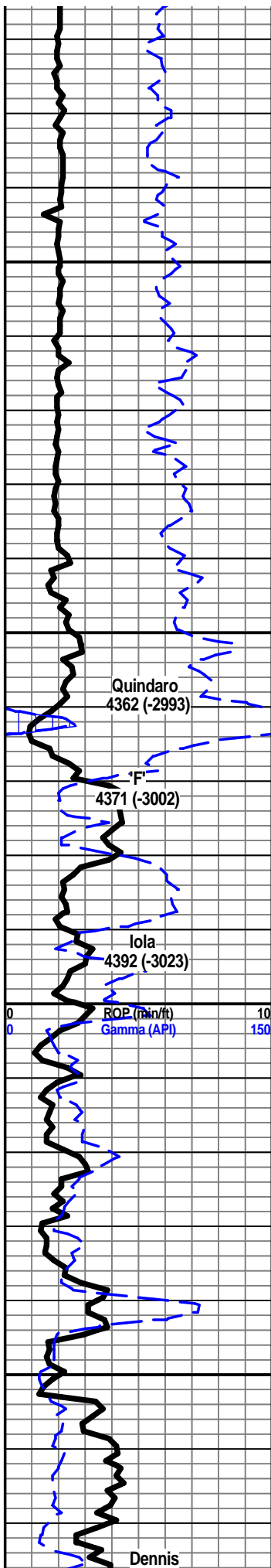
Jim Wenrick, Toolpusher  
Doug Dimitt, Morning  
Daniel Orrantia, Daylight  
Ron Burns, Evening  
Andres Maestas, Relief



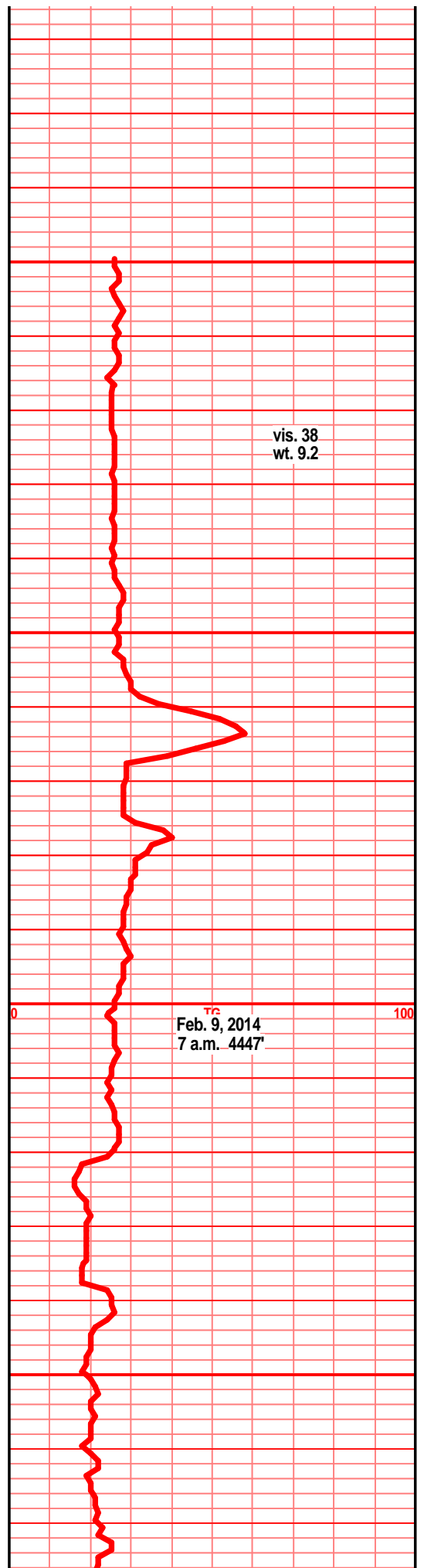
- Hertha 1873 (-504)
- Council Grove 2261 (-892)
- Onaga 2746 (-1377)
- Wabunsee 2803 (-1434)
- LeCompton 3594 (-2225)
- Kanwaka 3620 (-1854)
- Heebner 3812 (-2443)
- Toronto 3824 (-2455)
- Douglas Grp 3851 (-2482)
- Douglas Shl 3918 (-2549)
- Haskell 4256 (-2887)
- Quindaro 3972 (-2988)
- KC 'F' 4367 (-2998)
- KC 'Iola' 4387 (-3018)
- KC 'Drum' 4440 (-3071)
- KC 'Dennis' 4474 (-3105)
- Stark 4511 (-3142)
- Swope 4523 (-3154)
- Hushpuckney 4543 (-3174)
- Hertha 4556 (-3187)
- BKC 4592 (-3223)
- Pawnee 4702 (-3333)
- Cherokee Grp 4747 (-3378)
- Mississippi Unc. 4810 (-3441)
- C2A 4810 (-3441)
- C2A Base 4857 (-3488)
- C2 4863 (-3494)
- C2 Base 4912 (-3543)
- C1 4917 (-3548)
- C1 Base 4939 (-3570)
- Osage 5044 (-3675)
- Northview Shl 5047 (-3678)
- Compton 5052 (-3683)
- Kinderhook 5060 (-3691)
- Woodford 5158 (-3789)
- Misener Sd 5159 (3790)
- Viola 5179 (-3810)
- Simpson Grp 5317 (-3948)
- Simpson Sd 5324 (-3955)
- Wilcox 5335 (-3966)
- McLish Shl 5420 (-4051)

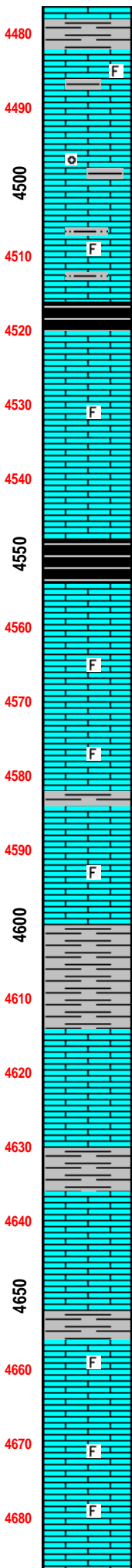
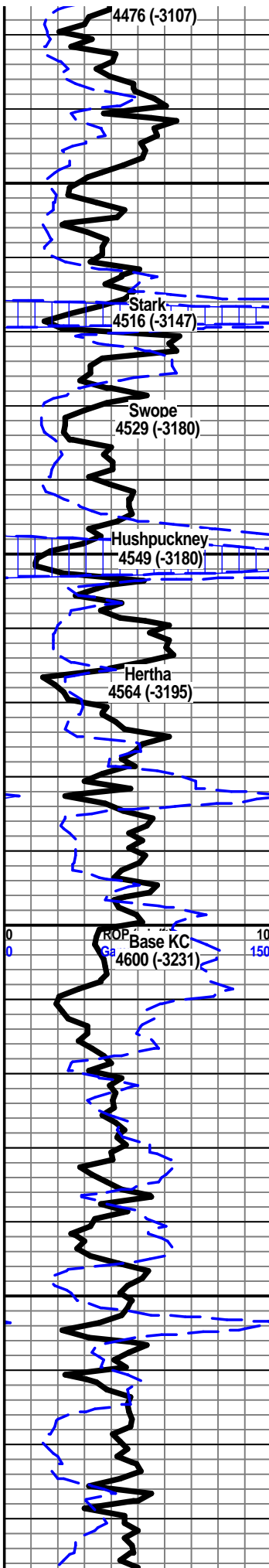
Feb. 8, 2014 Geo  
 arrived on location  
 at 4:00 p.m.





4270  
4280  
4290  
4300 gry-drk gry shl, slty, tabular, micas  
4310 gry-drk gry shl, slty, tabular, micas  
4320 gry-drk gry shl, slty, tabular, micas, bedding  
4330 gry-drk gry shl, slty, tabular, micas, bedding, increasingly getting more silty  
4340 gry-drk gry silt, shly, gritty text, tabular, micas  
4350 gry-drk gry silt, shly, gritty text, tabular, micas  
4360 blk shl, slty, carb, hrd, sub ang, gas bubs on brk, nso  
4370 blk shl, slty, carb, hrd, sub ang, gas bubs on brk, nsooff wt-gry wt lst, chrty, xln, sub ang, hrd off wt-lt brn chrt, sft, sub ang  
4380 off wt-brn lst, chrty, xln, sub ang, foss frags, off wt-lt brn chrt, sft, sub ang, brn chrt, xln, shrp edges, hrd  
4390 drk gry shl, slty, tabular, hrd  
4400 off wt-brn lst, chrty, xln, sub ang, hrd, foss frags  
4410 off wt-lt brn lst, chrty, vry xln, rough, sub ang, foss frags, calc fill, gry shl, silty, tabular  
4420 off wt lst, xln, chrty, sub ang, hrd, gry-drk gry slt, shly, pyritic, sub ang  
4430 off wt lst, chrty, xln, hrd, sub ang, foss frags  
4440 off wt lst, chrty, xln, hrd, sub ang, foss frags, drk gry shl, slty, sub ang blks, hrd  
4450 gry shl, slty, sub ang blks, hrd  
4460 drk brn-gry brn lst, xln, hrd, sub ang, foss frags, ltlt chrty, drk gry sh, silty, pyritic, sub ang, hrd  
4470 drk gray tan lst, xln, gritty text, ltlt chrty, silt lams, hrd, gry shy slt, sub ang, hrd  
drk gray tan lst, xln, gritty text, ltlt chrty, silt lams, hrd, gry shy slt, sub ang, hrd





off wt-gry tan lst, xin, chrty, lttl sily, foss frags, sub ang, hrd, gry tabular shl, hrd

gry brn lst, vxln, sub ang, hrd, foss frags, calc fill, gritty txt, oomoldic, shl frags

gry brn lst, vxln, sub ang, hrd, foss frags, calc fill, gritty txt, oomoldic, clay clasts

gry brn-brn lst, lttl chrty, xin, sub ang, hrd, foss frags, lttl silty, drk gry shl, silty, pyritic

blk shl, carb, sub ang, hrd, gas bubs on brk, nso

off wt lst, xin, chrty, wt chrt, pinpoint porosity, foss frags, clay clasts, sub ang, hrd

off wt-lt tan lst, xin, chrty, wt chrt, sub ang, hrd/brittle, gry-drk gry shl, tabular, pyritic, hrd

drk gry-blk shl, tabular, hrd, gas bubs on brk, nso

off wt-lt tan lst, xin, lttl chrty/chlky brk, wt chrt, sub ang, hrd

lt tan-gry tan lst, xin, chrty/chlky brk, sub ang, hrd, foss frags

lt tan-gry tan lst, xin, chrty/chlky brk, sub ang, hrd, foss frags

off wt lst, xin, chrty, wt chrt, foss frags, calc fill, sub ang, hrd, gry-drk gry shl, tabular, hrd

off wt-tan lst, xin, chrty, wt xin chrt, foss frags, clay clasts, sub ang, hrd

drk gry-gry grn shl, silty, gritty, sub ang, waxy brk

gry tan lst, fxln, chrty, wt chlky chrt, dirty appearance, sub ang, hrd, grn spots

gry grn-grn lst, vry xin, oolitic, calc fill, wt calc growth, sub ang, hrd, gry grn shl, vfn snd inclusions, sub ang

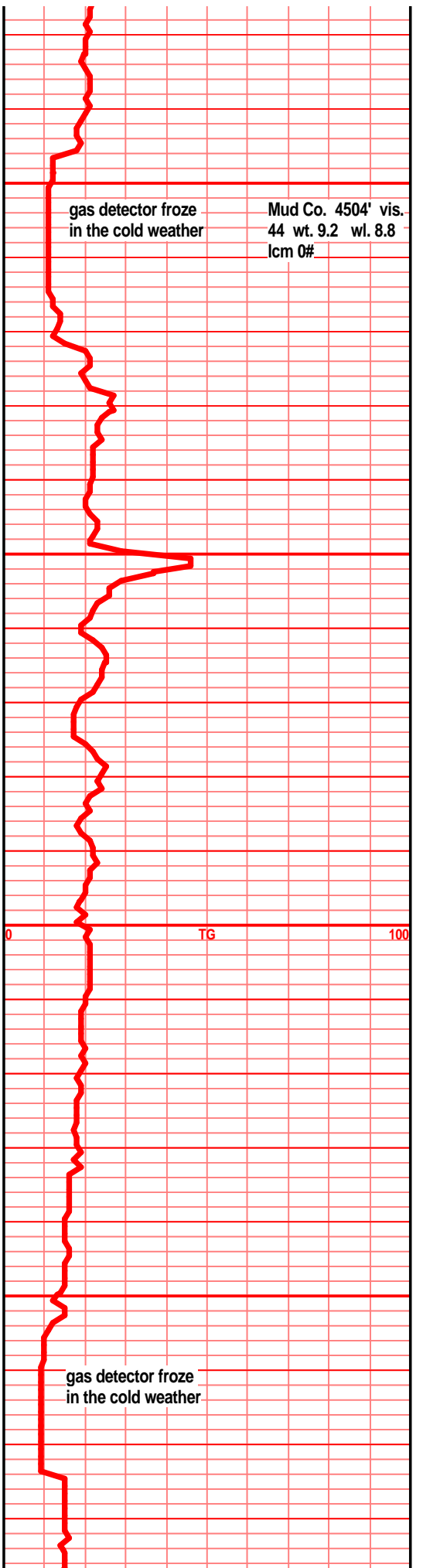
gry-gry tan lst, xin, veins of chrt, off wt-lt brn chrt, sub ang, hrd, pyritic

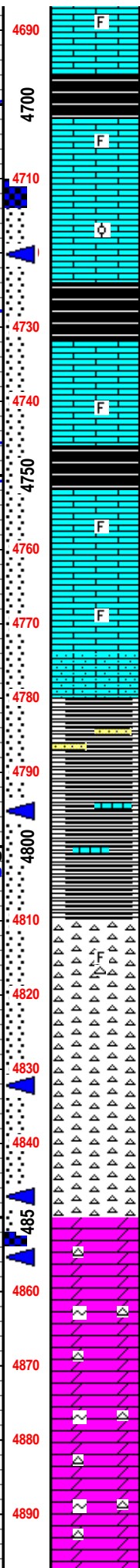
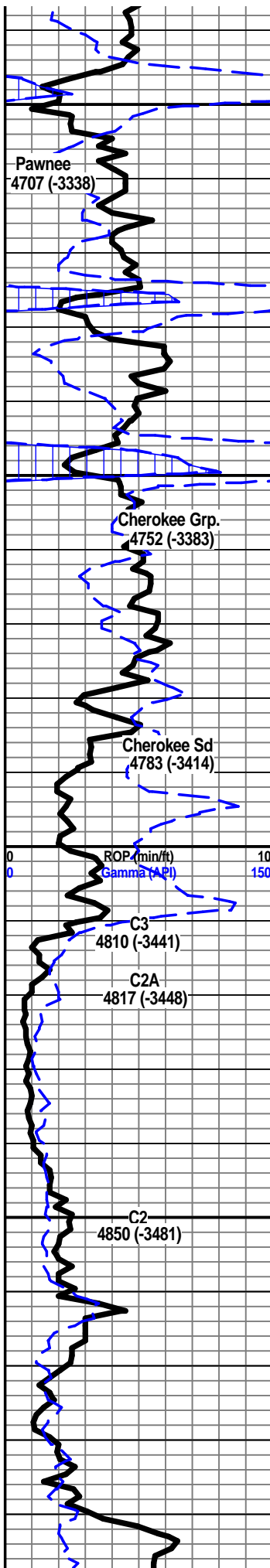
brn-gry brn lst, xin, sub ang, hrd, foss frags, drk gry shl, tabular

tan-gry tan lst, fxln, lttl chrty, off wt, trace foss, sub ang, hrd

tan-gry tan lst, fxln, lttl chrty, off wt, trace foss, sub ang, hrd

tan-gry tan lst, fxln, lttl chrty, off wt, trace foss, sub ang, hrd





tan-gry tan lst, fxln, ltl chrt, off wt, trace foss, sub ang, hrd

blk shl, carb, sub ang, hrd, pyritic, occasional gas bubs on brk

tan lst, dirty look, xln, trace off wt chrt, foss frags, sub ang, hrd, occasional gas bubs on brk, nso

tan lst, dirty look, xln, trace off wt chrt, foss frags, sub ang, hrd, micro oolites

blk shl, sub ang, hrd, gas bubs on brk

tan lst, chrt, xln, off wt chlky chrt, foss frags, ltl calc fill, sub ang, hrd

blk shl, sub ang, hrd, gas bubs on brk

tan lst, xln, trace foss, ltl off wt chrt clky, sub ang, hrd, chunks of lt brn chrt, brks to brt wt

tan lst, xln, trace foss, ltl off wt chrt clky, sub ang, hrd, chunks of lt brn chrt, brks to brt wt

drk brn sndy lst, fxln, sub ang, hrd, poor srted sub ang grns, nsg, nso, teal-blu sndy shl w/ lst inclusions, fn grns, drk gry clay clasts, brt wt edges, sub ang, hrd, small clusters of sstn, lt gry, transparent, clay clasts, well cmntd, poor srted, sub ang grns

lt blu shl, sft, waxy brk, w/ traces of fn snd inclusions, blu shl, hrd, lmy inclusions

yellow grn shl, sft, sub ang, lt blu shl, hrd, sub ang

brt wt chrt, xln, shrp edges, foss frags, ang, hrd, drk brn stain, dead looking stain

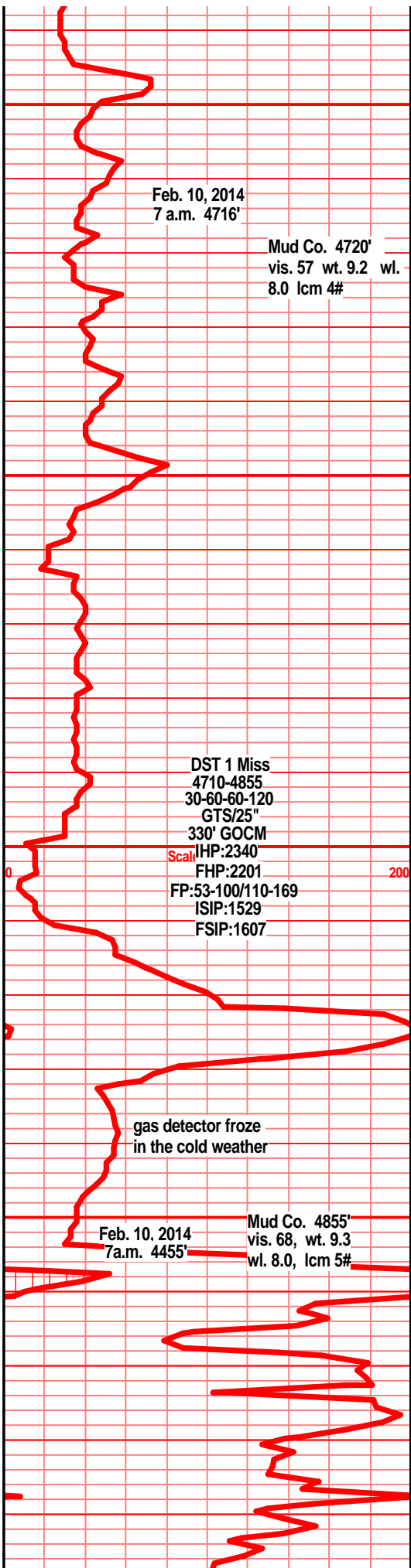
brt wt chrt, spongy/weathered text, pinpoint porosity, hrd, brittle, sub ang, good strong odor, spits oil w/ gas bubs, gsfo, gsg, brn stain

brt wt chrt, spongy/weathered text, pinpoint porosity, hrd, sub ang, good strong odor, spits oil w/ gas bubs, gsfo, gsg, drk brn-blk stain

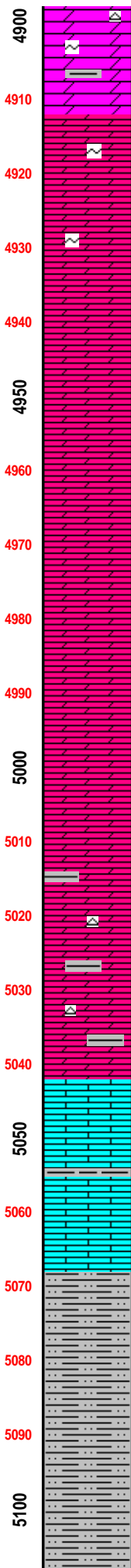
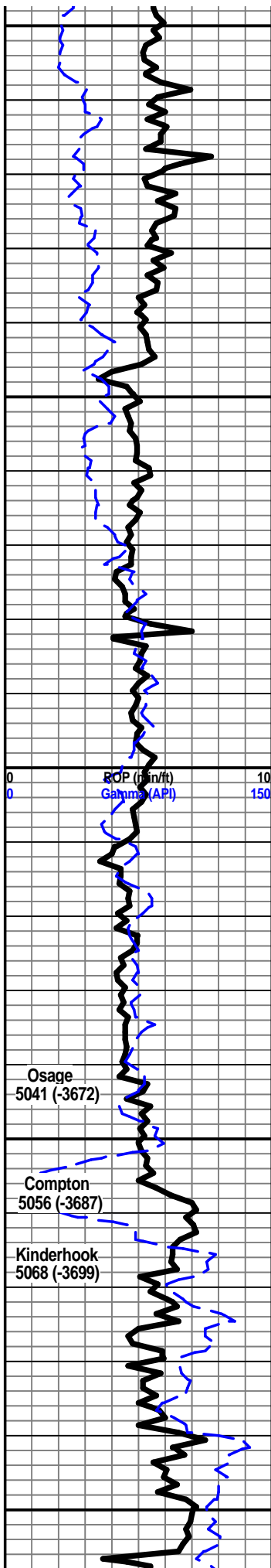
off wt-lt tan chrt dolo, weathered, mottled txt, pinpoint por, lt br-drk br stn, occasional gas bub on brk, poor odor, nsfo, brt wt chrt, frsh, shrp, stain along dolo/chrt contact, sub ang clusters, hrd

off wt-tan chrt dolo, mottled txt, spongy look, ppt por, fxln, brn-lt brn stain, nsfo, chrt brt wt frsh, shrp, hrd, gd odor, ltl glauconite, off wt chrt, ltl mottled, lt brn stain, ppt por, nsfo, nsg, sub ang, hrd

wt wthrd chrt, mottled, ppt por, blk stn, tar like, good odor, nsfo, nsg, off wt-lt tan dolo, rough txt, drk brn stain, nsfo, nsg, good odor, sub







ang, hrd

tan-tan gry dolo, dirty look, lttl wthrd txt, lttl gritty look, sub ang, traces of wt chrt, traces of clay clasts, sub ang, hrd, brt wt frsh chrt, ang, shrp eds, hrd

lt gry-drk gry dolo, xln, silty, gritty, glauc, blk, sub ang, hrd

lt gry-drk gry silty dolo, trc vfn sand, gritty, glauc, dirty look, trc wt frsh chrt, blk, sub ang, hrd

lt gry-drk gry silty dolo, trc vfn sand, gritty, glauc, dirty look, trc wt frsh chrt, blk, sub ang, hrd

drk gry dolo, sandy, vfn grns, silty, gritty, blk, sub ang, hrd

drk gry dolo, silty, sndy, vfn snd grns, gritty, sub ang, blk, hrd

drk gry dolo, silty, sndy, vfn snd grns, gritty, sub ang, blk, hrd

drk gry dolo, silty, sndy, vfn snd grns, gritty, sub ang, blk, hrd

drk gry dolo, silty, sndy, vfn snd grns, gritty, sub ang, blk, hrd

drk gry dolo, silty, sndy, vfn snd grns, gritty, sub ang, blk, hrd

drk gry dolo, silty, sndy, vfn snd grns, gritty, sub ang, blk, hrd

drk gry dolo, silty, micro clay clasts, gritty, sub ang, hrd, trc drk gry dolo shl, tabular, hrd

drk gry dolo, shly, gritty, sub ang, hrd, drk gry dolo shls, trc frsh brt wt chrt, shrp ang, hrd

drk gry dolo, shly, gritty, sub ang, hrd, drk gry dolo shls, trc frsh brt wt chrt, shrp ang, hrd

drk gry dolo, shly, gritty, sub ang, hrd, drk gry dolo shls, trc frsh brt wt chrt, shrp ang, hrd

tan lst, trc chrt, wt chlky chrt, trc fossils, sub ang, hrd, silty in prt, vfn slit grns, vfn pyrite grns

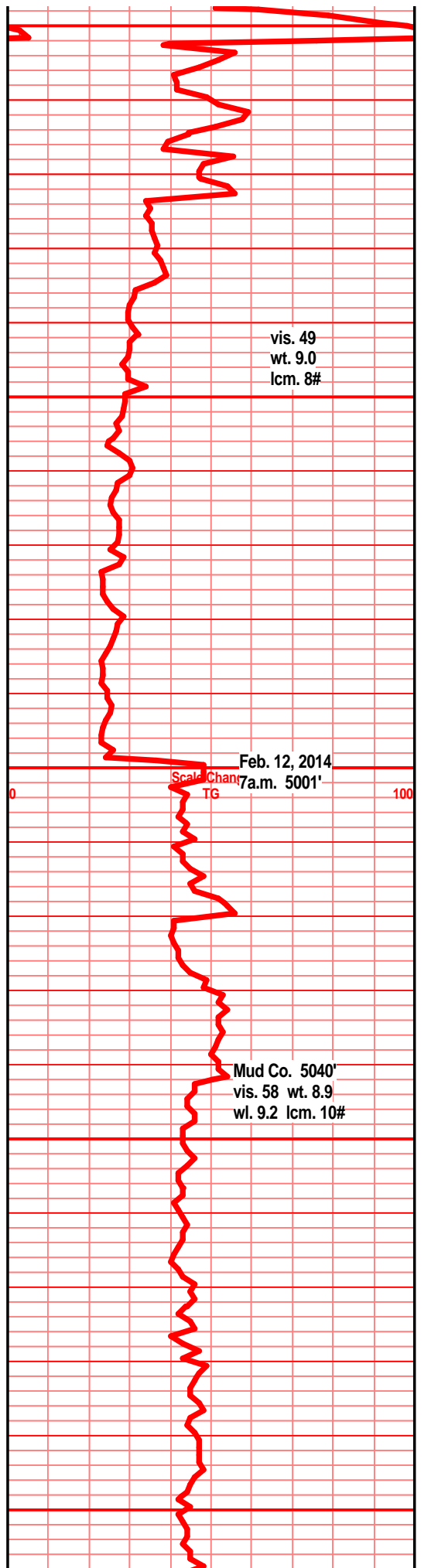
lt blu/grn shl, trc of silt, waxy look, tabular, trc foss, tan-tan brn lst, trc wt chrt, fn xln, foss frags, sub ang, hrd

drk gry shl, silty, brwn hue, pyritic, blk, hrd

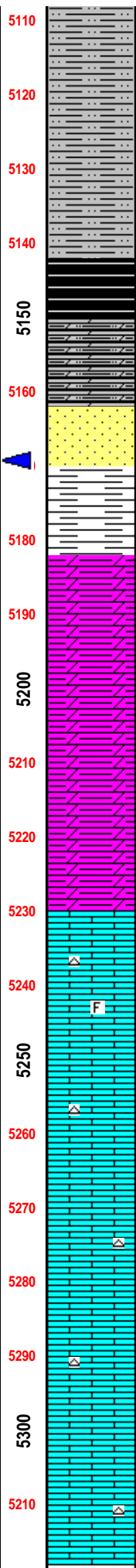
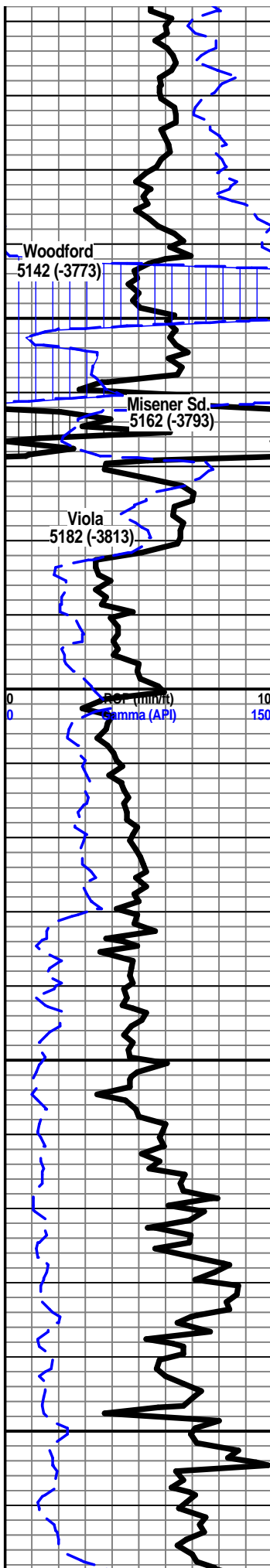
drk gry shl, silty, brwn hue, pyritic, blk, hrd

drk gry shl, silty, brwn hue, pyritic, blk

drk gry shl, silty, brwn hue, pyritic, blk







gry-ark gry sni, silty, brwn hue, pyritic, blk, waxy brk

gry-drk gry shl, silty, brwn hue, pyritic, blk, waxy brk

gry-drk gry shl, silty, brwn hue, pyritic, blk, waxy brk

drk gry silty, brn hue, pyritic, blk, ang, sub ang, waxy brk

blk slty shl, carb, red hue, gas bubs on brk

lt off wt-clear sst, clear grns, fn grnd, sub ang grns, fairly well cmntd, poor sortd, brn clay clasts, slight film of oil, no gas, hrd dnse sub ang clusters

gry-lt grn shl, waxy look, pyritic, trcs of fn snd, rough gritty txt, blk, sub ang, soft

red brn shly dolo, silty, gritty, slightly carb, sub ang, sft, gas bubs on brk

red brn shly dolo, silty, gritty, slightly carb, sub ang, sft, gas bubs on brk

red brn shly dolo, silty-fn snd inclus, gritty, sub ang, brks easy, sub ang

red brn shly dolo, silty-fn snd inclus, gritty, sub ang, brks easy, sub ang

drk red brn shly dolo, silty-fn snd inclus, gritty, sub ang, brks easy, sub ang, tan lst, xln, trc of wthrd chlky wt chrt, trcs of clay clasts, foss frags, sub ang, hrd

tan lst, xln-coarse xln, big calc xls, clay clasts, wt wthrd chrt on eds, foss frags, sub ang, hrd, off wt-wt chrt, xln, ang, hrd, trcs of brn on eds

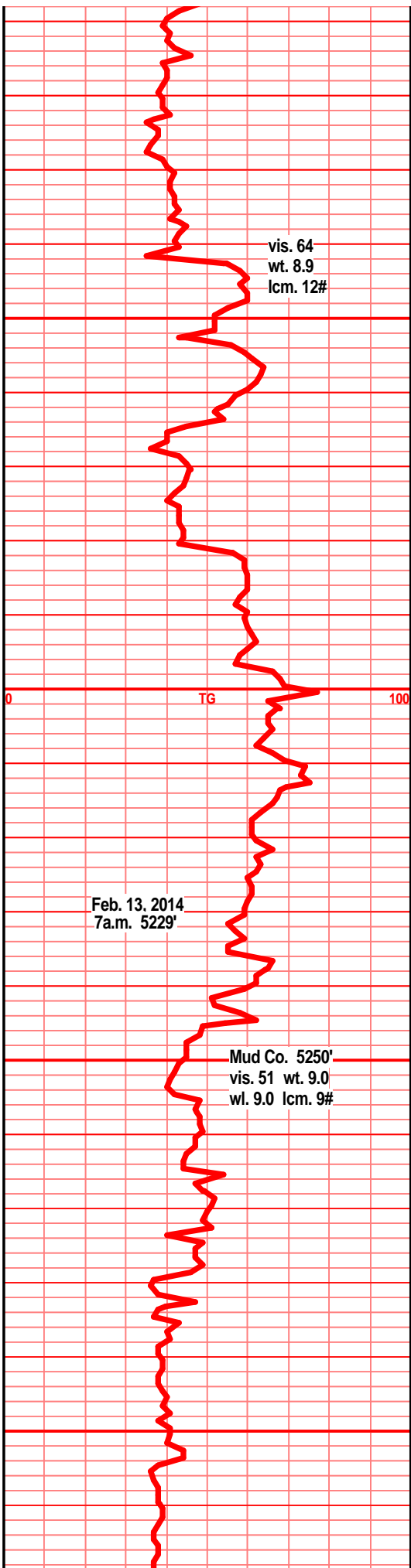
tan-gry tan lst, xln, silty, clay clasts, pyritic, mottled, gritty, trc wt chrt, sub ang, hrd, chunks of frsh wt chrt, xln, shrp, brn edges, hrd

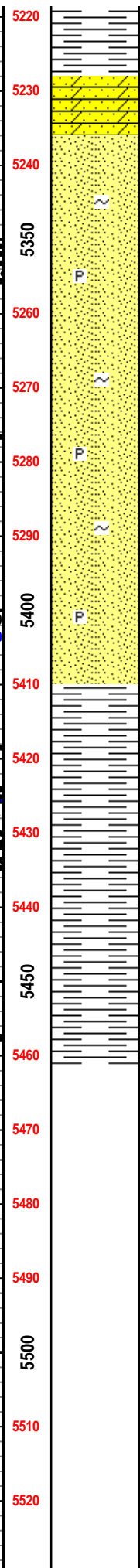
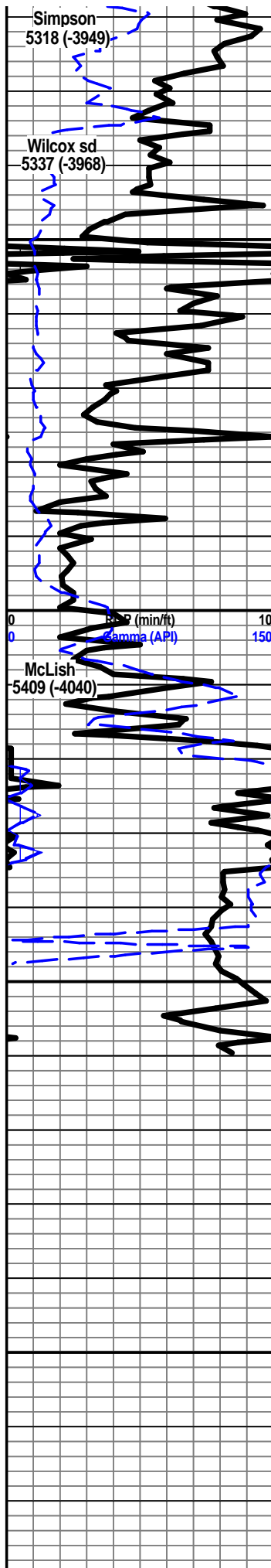
tan-gry tan lst, xln, silty, clay clasts, pyritic, mottled, gritty, trc wt chrt, sub ang, hrd, chunks of frsh wt chrt, xln, shrp, brn edges, hrd

gry-drk gry slty lst, gritty, trc fn snd inclus, xln, trc wt chlky chrt on eds, clay clasts, sub ang, hrd, dull brn xln chert, ang, shrp eds

gry-drk gry slty lst, xln, gritty, trc fn snd inclus, trc wt chlky chrt on eds, clay clasts, sub ang, hrd, dull brn xln chert, ang, shrp eds

gry-gry brn lst, xln, slightly dolo, silty, trc vfn snd inclus, trc chlky chrt on eds, clay clasts, sub ang, hrd, dull brn chrt, shrp, ang, hrd





grn-teal grn shl, dolo look, fn snd grn inclus, pyritic, blk, blu grn dolo sst, fn grn, poor srtd, friable, clay clasts, sub ang grns, dnse clusters, grn shl, waxy, blk, sft

lt gry-off wt sst, fn grnd, well sorted, sub friable, sub ang-sub round grns, blk oil stain, brn oil smears on brk, gilsimitc show, trc gas, no odor, filmy show free oil, no uv

gry-off wt sst, fn grnd, clear grns, well sorted, sub fiabile, sub rounded grns, clay clasts, blk tar-like oil stain, nsfo, no gas, no odor

frost wt-off wt sst, fn grnd, clear grns, well sorted, sub fiabile, sub rounded grns

frost wt-off wt sst, fn grnd, clear grns, well sorted, sub fiabile, sub rounded grns, glauc, pyrite

frost wt-off wt sst, fn grnd, clear grns, well sorted, sub fiabile, sub rounded grns, glauc, pyrite

frost wt-off wt sst, fn grnd, clear grns, well sorted, sub fiabile, sub rounded grns, glauc, pyrite

frost wt-off wt sst, fn grnd, clear grns, well sorted, sub fiabile, sub rounded grns, glauc, pyrite, grn shl, fn snd inclus, blk shl clasts, tabular, hrd

grn shl, fn snd inclus, blk shl clasts, pyritic, tabular, hrd

grn shl, fn snd inclus, glauc, blk shl clasts, tabular, hrd

grn shl, fn snd inclus, blk shl clasts, tabular, hrd, lt grn shl, glauc tabular, waxy

lt grn shl, glauc, tabular, waxy, sft

