



Woolsey Operating Company, LLC

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

Measured Depth Log

Well Name: Warren Fee #12
Location: Section 19 - Township 32 South - Range 12 West
License Number: 15-007-24191-00-00 Region: Barber County, Kansas
Spud Date: July 5, 2014 Drilling Completed: July 15, 2014
Surface Coordinates: 2465' FSL and 1145' FWL
App. NE NE NW SW
Bottom Hole
Coordinates:
Ground Elevation (ft): 1646' K.B. Elevation (ft): 1658'
Logged Interval (ft): 3600' To: 4925' Total Depth (ft): 4925'
Formation: Lansing/Kansas City -----> Simpson Group
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: Bill Klaver
Company: Woolsey Operating Co. LLC
Address: 125 N. Market, Wichita Kansas, 67202

COMMENTS

Surface Casing: Spud at 4:45 pm on 7/5/2014. Set 5 joints of new 13 3/8" X 48#/ft casing at 235' KB (tally 220') with 300 sx Class A, 2% gel, 3% (by Allied). Plug down 12:15 am on 7/6/2014. Cement did circulate.
Production Casing: 5 1/2" X 10.5#/ft

Deviation Surveys: 1 at 235', 1/4 at 1014', 1/4 at 1519', 1/4 at 1994', 1/4 at 2534', 0 at 3010', 1/4 at 3518', 1/2 at 4090', 1/2 at 4310', 1 at 4496', 1 at 4925'.
Pipe Strap @ 4496', Board: 4500.39', Strap: 4496.65, strap 3.74' short. No correction was made to the board.
Fossil Drilling Company Rig #3 Bit Record:
1) 17 1/2 Smith RR in at 0' out at 235', 3 hours
2) 7 7/8" Varel HE-21 in at 235' out at 4496', 90 1/2 hours
3) 7 7/8" Varel HE-29 in at 4496' out at 4925', 28 1/2 hours

Gas Detector: Woolsey Operating Co. Gas Trailer #2

Mud System: Mud Co. Brad Bortz, Engineer

DSTs: Trilobite Testing, Leal Cason, Bob Hamel, Testers

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

DSTs

DST #1 Mississippi 4448'-4496', 30"-60"-60"-120" SB BOB in 30 seconds, GTS in 22 minutes. Recovered: 3875' GIP, 376' HO&GCM (10%Gas, 40% Oil, 50% Mud), 120' G&OCM (10%Gas, 20% Oil, 70% Mud), 62' GCM (30% Gas, 70% Mud). IHP 2180, IFP 91-127, ISIP 1351, FFP 101-239, FSIP 1313, FHP 2153, BHT 126 degrees. Gas Flow Rates: IFP GTS in 22 minutes, 30" 57.7 MCF. Final Flow: 10" 46.6 MCF, 20" 54.5 MCF, 30" 64.0 MCF, 40" 70.4 MCF, 50" 73.6 MCF, 60" 76.7 MCF.

DST #2 Viola, 4630'-4754', 30"-60"-60"-90", Weak blow building to 6" on IFP, Weak blow building to BOB in 55" during FFP. Rec: 126' GIP, 126' SOCM (10% Oil, 90% Mud). IHP 2341, IFP 76-83, ISIP 390, FFP 88-100, FSIP 513, FHP 2264. BHT 130 deg.

CREWS

Jim Wenrich, (Part Time) Tool Pusher

Daniel Orrantea, Daylights

Ron Burns, Evening

Jim Morris (no show--ran off, relief filled in), Morning

Chris Slatts, Relief

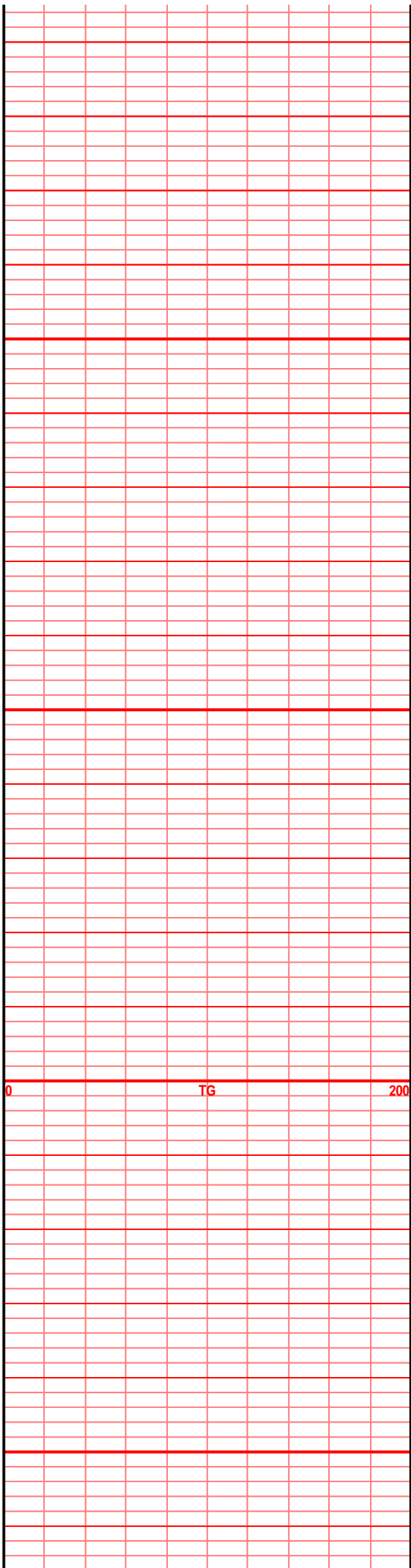
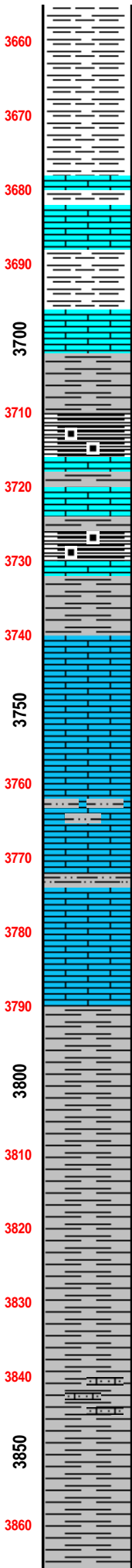
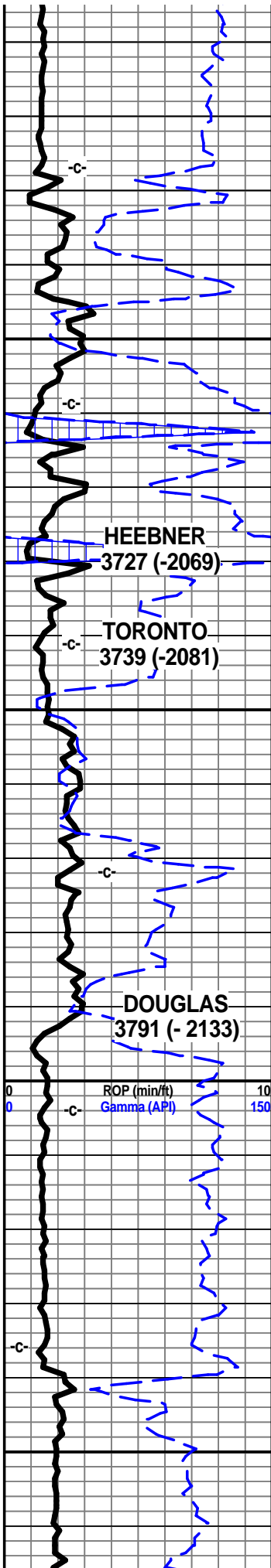
One minute drill time was recorded from 3600' to rotary total depth. Ten foot and circulating samples were collected from 4200' to rotary total depth. All samples were requested by and delivered to the survey at the completion of the test.

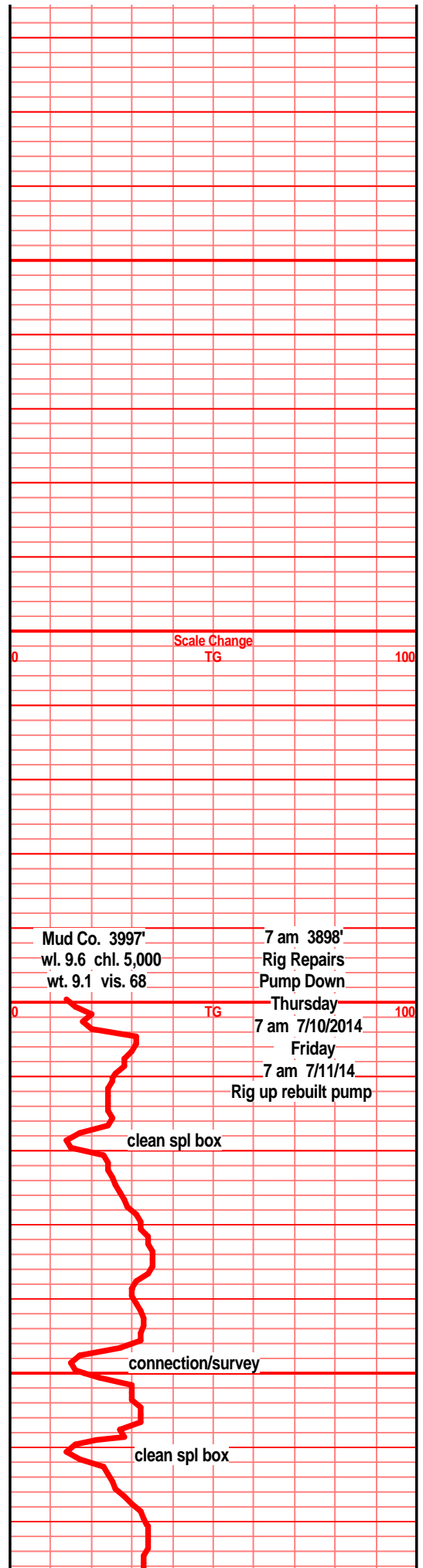
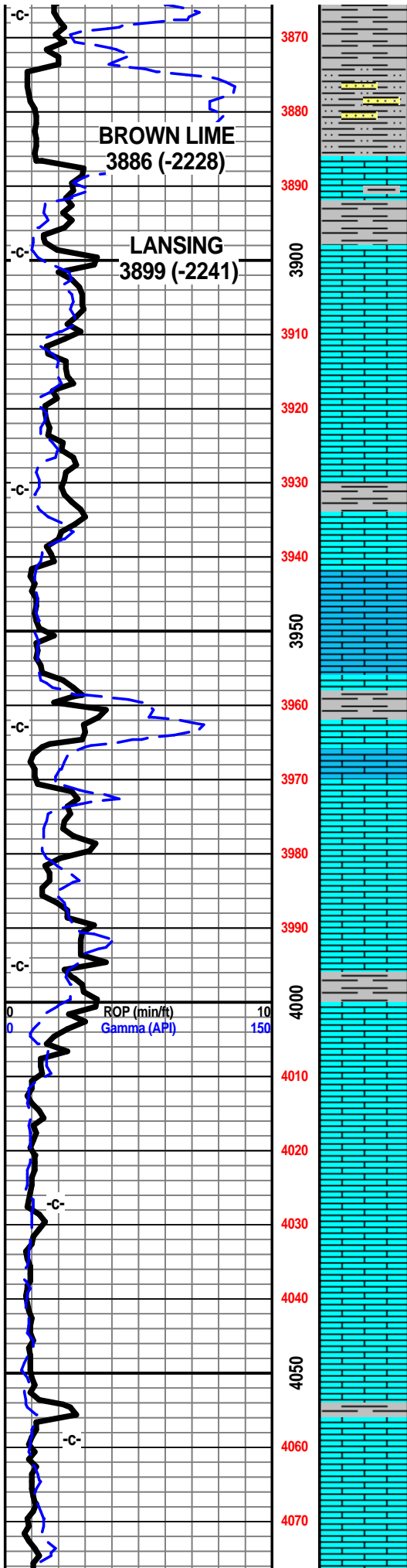
7am Daily Progress:

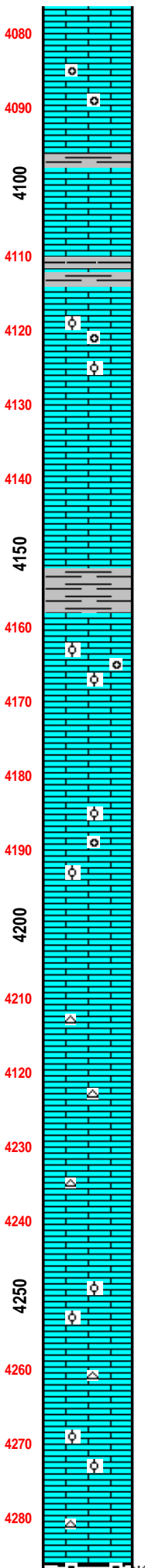
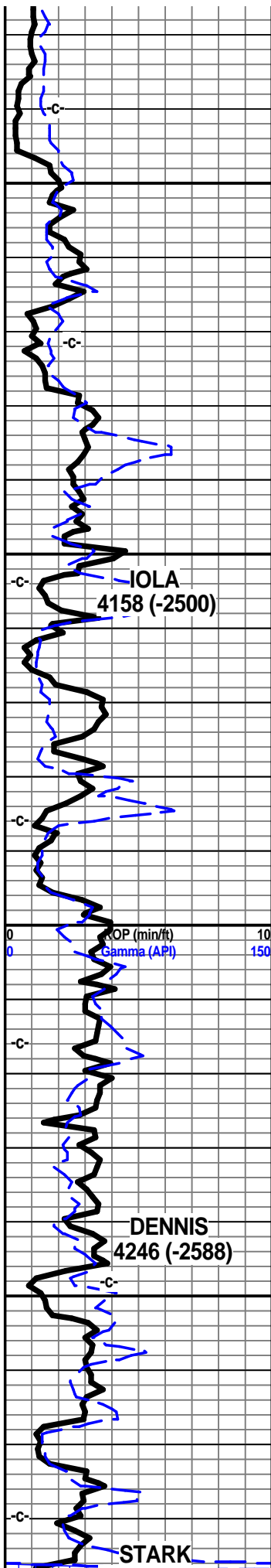
- July 5, 2014 MIRT/SPUD
- July 6, 2014 WOC
- July 7, 2014 Drilling at 1542'
- July 8, 2014 Drilling at 2404'
- July 9, 2014 Drilling at 3314'
- July 10, 2014 Rig Repairs at 3897' (pump)
- July 11, 2014 Rig up rebuilt pump (3897')
- July 12, 2014 Drilling at 4338'
- July 13, 2014 DST #1 at 4496' (Miss)
- July 14, 2014 DST #2 at 4754' (Viola)
- July 15, 2014 CFS at 4858'. E-logs out 10 pm.

E-log Tops:

- Chase 1968 (-310)
- Onaga 2786 (-1128)
- Wabaunsee 2842 (-1184)
- LeCompton 3511 (-1853)
- Kanwaka 3552 (-1894)
- Heebner 3724 (-2066)
- Toronto 3744 (-2086)
- Douglas Grp 3768 (-2110)
- Amazonia Lst 3783 (-2125)
- Brown Lime 3885 (-2227)
- Lansing 3890 (-2232)
- KC Iola 'G' 4157 (-2499)
- KC Dennis 'I' 4246 (-2588)
- Stark 4284 (-2626)
- KC Swope 'K' 4290 (-2632)
- Hushpuckney 4320 (-2662)
- KC Hertha 'K' 4331 (-2673)
- B/Kansas City 4376 (-2718)
- Pawnee 4425 (-2767)
- Mississippi Unc. 4443 (-2785)
- Keokuk Porosity 4443 (-2785)
- Keokuk Porosity Base 4457 (-2799)
- Compton 4570 (-2912)
- Kinderhook 4636 (-2978)
- Woodford 4700 (-3042)
- Viola 4732 (-3074)
- Simpson Group 4828 (-3170)
- Simpson 'D' Sand 4846 (-3188)
- Wilcox Sand 4860 (-3202)
- McLish 4877 (-3219)
- LTD 4923 (-3265)







4080 Ist wht crm tan f sli med xln, gran, sub chlky, foss frags, foss ool, pelletal, inter xln foss mold por

4090 Ist wht off wht crm f sli med xln gran soft sub chlky foss frags, foss ool/pelletal, inter xln, foss mold por

4100

4110 Ist wht off wht tr lt gry f xln blkly ang dns hrd, sub chlky, tr foss frags, arg, shls gry drk gry brn silty calc

4120 Ist wht off wht buff f sli med xln gran blkly dns sub chlky, foss frags, ool, pelletal, inter xln por, foss mold por

4130

4140 Ist tan buff off wht f xln gran blkly ang bec hrd dns sub chlky, tr micro foss frags, inter xln por,

4150 Ist off wht buff wht f xln gran blkly ang sub chlky foss frags, foss ool, pelletal, inter xln por, foss mold por,

4160 Ist off wht crm buff f xln foss frags, tr micro foss, sub chlky in prt, oomold, foss mold por, tr calc xln fill

4170 Ist crm buff lt gry in prt f xln blkly foss soft sub chlky, foss frags, ool/pelletal, calc xln fill, foss mold, tr oomold por

4180 Ist crm buff tr lt gry f xln blkly ang dns some hrd, with tan buff f sli med xln gran blkly sub chlky, calc xln fill, foss mold, inter xln por

4190

4200 Ist crm buff tan tr lt gry f sli med xln gran sub chlky foss frags, foss mold por, Ist gry tan f xln blkly dns hrd ang foss frags

4210 Ist crm buff tan f xln gran sub chlky foss frags, foss ool, calc xln fill, inter xln & foss mold por, mstly gry tan dns blkly ang

4220 Ist crm buff tan lt gry f xln blkly ang dns hrd blkly ang, foss frags, calc xln fill, chrt lt gry shrp frsh opa

4230 Ist crm buff tan f xln blkly ang dns hrd, foss frags, foss ool, tr oomold por, calc xln fill,

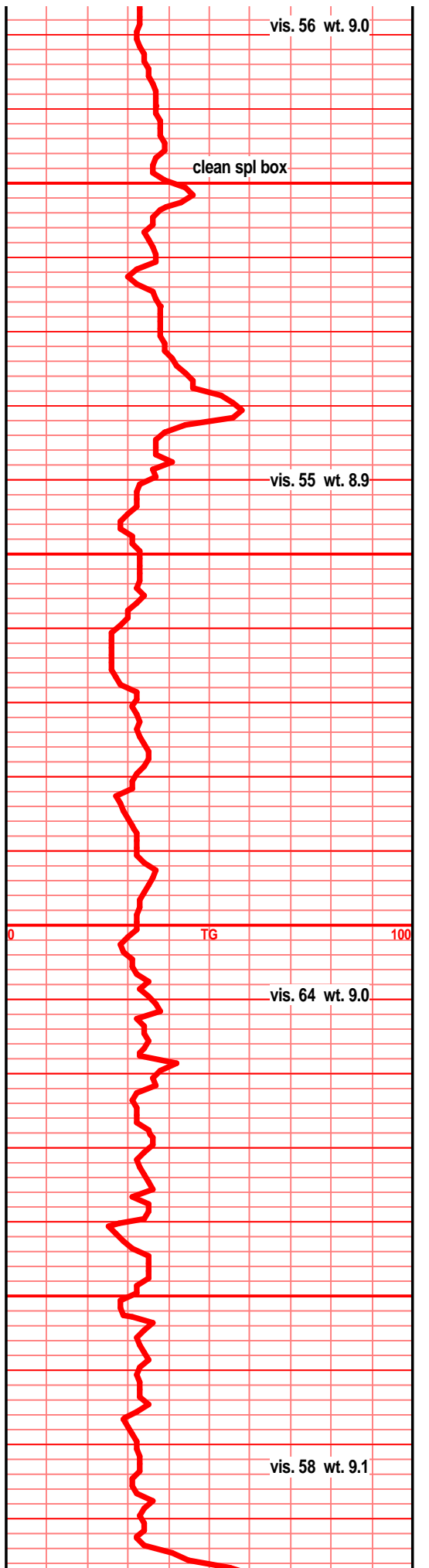
4240 Ist crm buff tan f xln blkly ang dns sub chlky foss frags, foss ool, tr chrt off wht lt gry shrp frsh opa

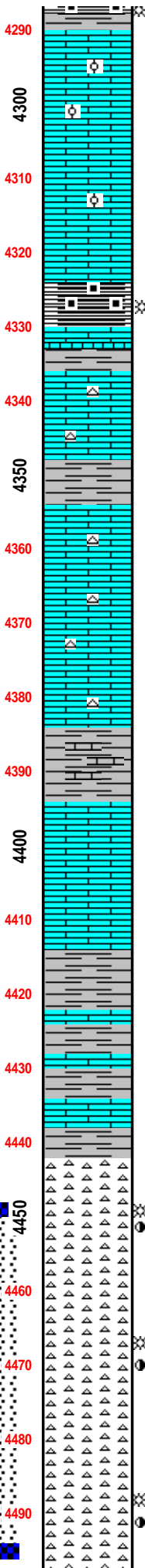
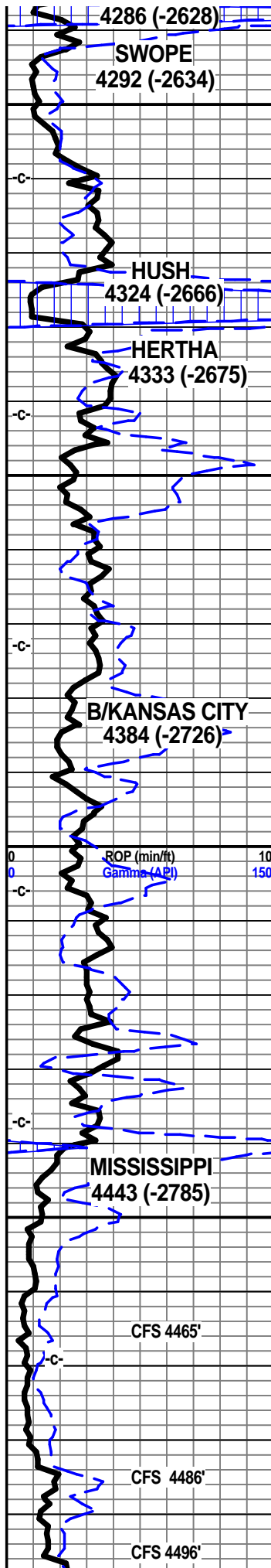
4250 Ist crm buff tan lt brn, f xln blkly ang sub chlky, mstly dns hrd, calc xln fill, foss frags ool, pelletal

4260 Ist gry tan tr gry brn buff f xln blkly ang dns hrd, arg, chlky gran text, foss frags, foss ool, tr arg,

4270 Ist tan crm buff lt brn f xln blkly ang gran sub chlky foss frags, foss ool, foss mold por, inter xln por, calc xln fill

4280 Ist crm buff tan tr lt brn f xln gran blkly ang sub chlky foss frags, calc xln fill, foss ool/pelletal





shl drk gry, mstly blk, blkly ang splinters, wxy grsy text, abun gas bubs, lst aa in this sample

lst crm tan buff, tr lt brn f xln blkly ang dns hrd, foss frags, tr sub chlky, gran, foss ool, calc xln fill, chrt tan lt brn shrp frsh opa, inter xln por, foss mold por

lst crm tan lt brn buff f xln gran sub chlky blkly dns calc xln fill, foss frags ool, chrt tan lt gry shrp

shl drk gry blk, blk carb, wxy grsy text, blkly ang pcs, abun gas bubs, flood 4350' sample

lst buff lt gry tan f vf xln dns hrd blkly ang, sub chlky, micro foss frags, tr arg, silty, chrt gry tan shrp frsh opaq foss

lst tan lt gry buff off wht, f tr vf xln dns hrd blkly ang tr sub chlky, micro foss frags, calc xln fill, chrt gry tan shrp frsh opa, shl gry dull gry calc

lst dull tan buff to lt gry f vf xln dns hrd blkly ang, hrd, tr sub chlky, micro foss frags, much calc xln fill, chrt lt gry, gry/blk shrp frsh opaq

lst buff crm tan lt gry f vf xln gran blkly ang dns hrd, calc xln fill, tr sub chlky, micro foss frags, chrt lt gry shrp frsh

lst tan gry gry/brn f xln gran arg silty gritty, shl gry green brn silty platey calc in prt

lst crm buff tan lt gry, f tr vr xln gran blkly ang arg, silty gritty, lst buff tan f xln gran sub chlky foss frags, micro foss frags, chrt tan gry shrp frsh foss opa

lst tan buff lt gry f vf xln dns hrd blkly ang arg, silty gritty, tr foss frags, crsly ool in prt, micro foss frags, tr chrt lt gry shrp frsh opa

lst tan buff lt gry f vf xln gran dns hrd arg, silty in prt, shls, gry green, silty hard calc

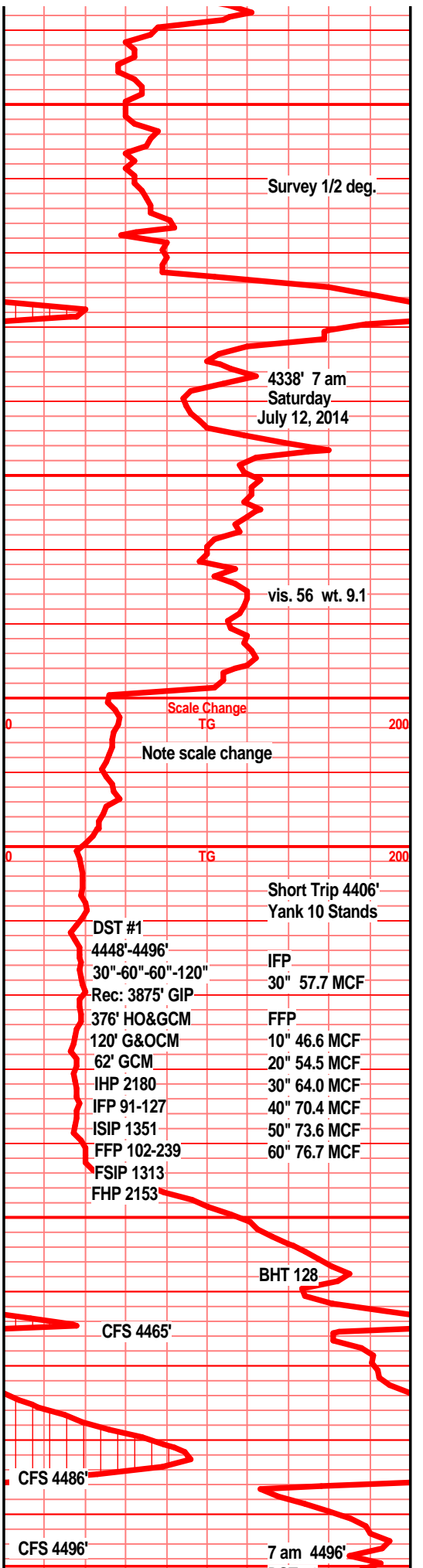
shl gry green, gry brn silty tr ratty, gritty calc in prt, lst tan gry f mic xln dns hrd blkly ang arg

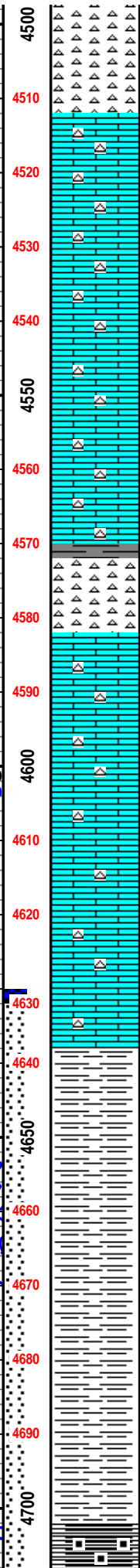
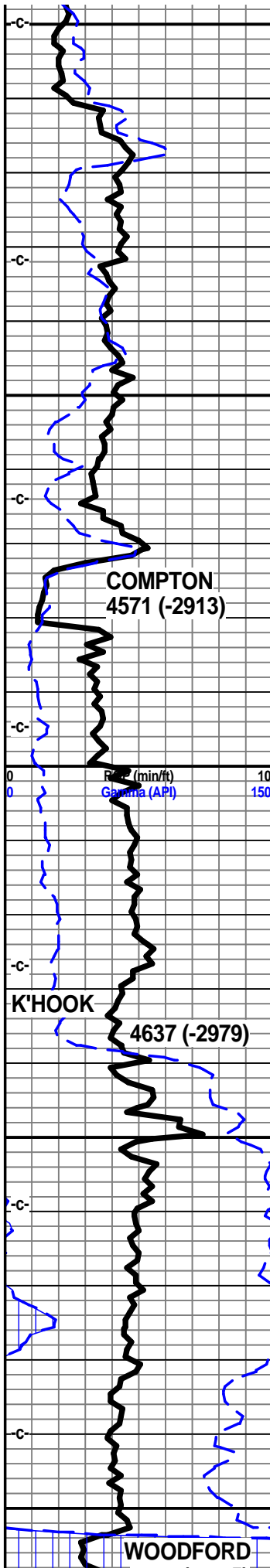
chrt wht, bone wht, tan, lite smokey blue, shrp frsh blkly ang sub opa, tr weath edge w/brn blk stain, tr pp/moldic odor, tr ssfo, tr gas bubs, tr hvy blk grsy stain

chrt wht bone wht, tr tan, lt blue grey, shrp frsh blkly ang sub opa, tr pp sli moldic weath edge text, pp sli moldic por, tan brn stain, sli odor, vssfo, gas bubs

chrt wht, bone wht, tr tan, some drkr tan, tr lt blue smokey, mstly shrp frsh blkly ang opa with better tan brn stained weath pp/moldic text edges, some spongy trip text, f/gd pp moldic por, frac por?, tr hvy blk stain, odor, ssfo, gas bubs

chrt wht off wht, lt tan/yellow tint, tr lt gry smokey blue, shrp frsh blkly ang pcs, sub opa, tr weath edge text, tr pp moldic odor, tr ssfo, gas bubs





tr weath edge text, tr pp por, odor, sil tan brn stain

chrt wht off wht lt gry and tr brn shrp frsh with tan brn stained weath sli trip text edges, pp moldic por

chrt wht, bone wht, tan & brn, shrp frsh blkly ang sub opaq pcs, with tan brn stained weath sli trip text edges, tr spongy text, brn stain, ssfo/gas bubs, lst wht off wht lt gry, lt green tint, f vf xln dns hrd blkly, chrty, chrt wht shrp frsh opaq

lst wht off wht, f vf xln dns hrd blkly ang vry dns pcs, chrt inclu in prt, w/sli weath text, tr stain, abun frsh wht sub opaq chrts

lst crm gry, lt gry green tint, f mic xln, dns hrd blkly ang pcs, with chrt inclu, wht shrp frsh opaq, spls poor, all recirc uphole chrts

lst crm lt gry lt green vf xln blkly ang dns hrd, lst brnish red, f vf xln dns gran arg, silty gritty, clr/wht frsh chrt inclu

lst reddish brn f vf xln gran silty gritty arg, blkly ang, micro foss frags, clr/wht shrp frsh chrt inclu

chrt wht off wht, vry lt gry, shrp frsh blkly ang shrp, sub opaq, tr heavy edge stain 2-3 pcs, nsfo, nodor

lst off wht tan f micro xln, dns hrd blkly ang, tr firm sub chlky, tr micro foss frags, wht lt tan shrp frsh chrt

lst off wht, crm, tr lt tan f micro xln dns hrd blkly ang, firmly sub chlky, micro foss frags, tr wht shrp frsh chrts

lst crm tan drk buff f micro xln dns hrd blkly ang massive, chrty in prt, chrt dull tan/dull lt gry shrp frsh blkly ang sub opaq

lst dull tan off wht f mic xln dns hrd blkly tr micro foss, chrty in prt, chrt dull tan lt gry shrp frsh sub opaq

lst dull tan drk buff f mic xln dns hrd blkly ang, vry dns firmly sub chlky in prt, chrty in prt, chrt dull tan lt gry shrp frsh

shl gry, med drk gry silty gritty

shl gry drk med gry, fnly gritty, silty, sli gran in prt,

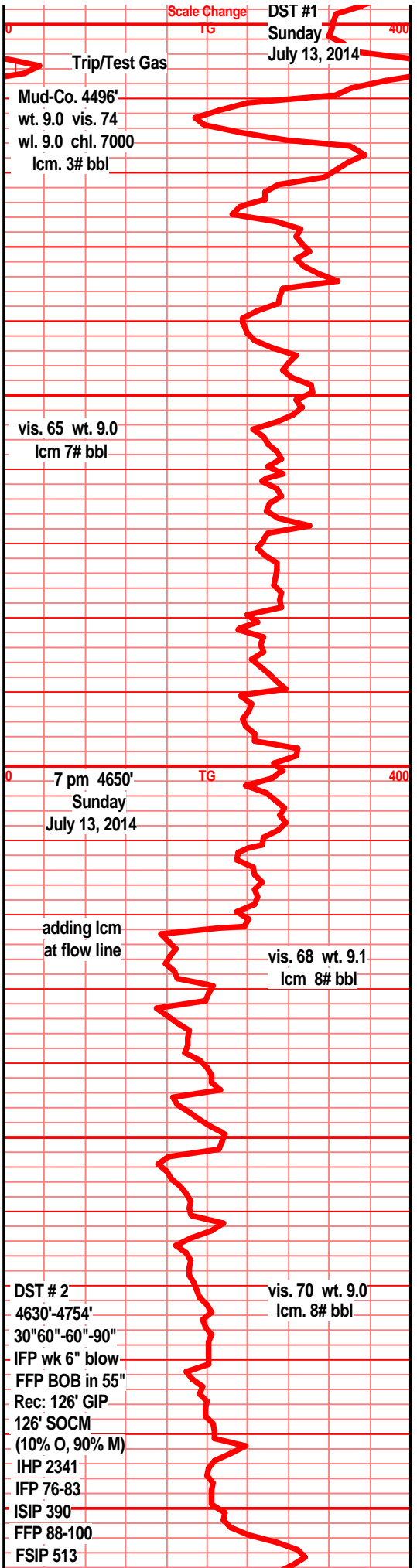
shl gry med drk gry fnly gritty, silty, blk carb flecks

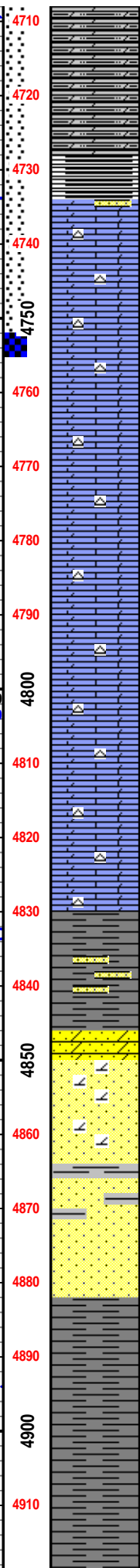
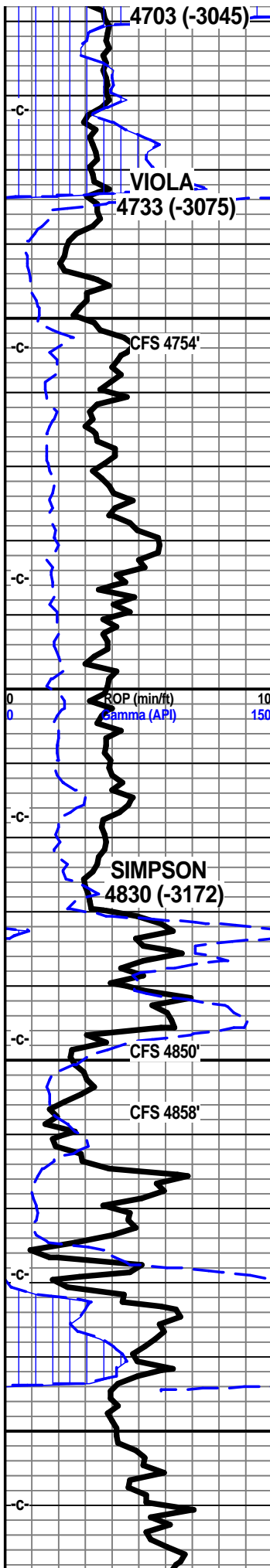
shl gry drk med drk gry silty gritty, bedded/banded, tr splintery tr gas bubs

shl gry drk med drk gry fnly silty gritty tr fnly pyritic, bedded/banded

shl gry med drk gry silty fnly gritty, bedded/banded, tr gas bubs

dolo, silty dolo, drk gry, reddish blk, silty gritty, blk ang pcs, carb text, pyritic, abun gas bubs,





filmy cond sho/sheen

dolo shly/silty dolo, drk gr med gry/blk fnly gran/gritty, tr silty calc, pyritic in prt

dolo silty shly, med drk gry, gry blk, silty gritty pcs, pyritic,

dolo, silty shly dolo, drk gry, med gry blk, reddish blk, pyritic silty gritty, tr blk carb text, abun gas bubs

qtz grains, singular, crs grained, ang, clr, druzi appearance

dolo, lst/dolo, wht off wht lt crm, f med xln, tr crs xln, blk ang, gd inter xln por, tr crsly suc text, tr chrt, chrt lt gry smokey, shrp sub opa, SSFO, filmy transl SFO, gas bubs, nodor?

lst tr dolo, buff drk tan f mic xln blk dns firmly sub chky, gran gritty text, chrt, chrt dull tan shrp frsh sub opa

lst dolo in prt, tan dull tan lt gry brn f mic xln dns hrd blk ang, gran gritty text, chrt, chrt dull tan shrp frsh sub opa

lst dolo in prt dull tan drk buff f mic xln blk hrd dns, massive, firmly sub chky, gran gritty sli sndy text, chrt, chrt dull tan shrp frsh opa

lst dolo in prt, dull tan tan, drk buff f mic xln dns hrd, blk, firmly sub chky, gran, gritty sndy text, chrt, chrt dull tan shrp

lst, dolo in prt, tan buff lt brn f vf xln dns hrd blk, gran gritty sndy text, firmly sub chky, chrt chrt dull tan brn shrp frsh sub opa

lst, dolo in prt, tan dull brn, f vf xln dns hrd blk ang, sli crs suc text, sndy gritty text, much chrt dull tan brn shrp frsh blk ang pcs sub opa

shl drk gry green teal green, slick wxy grsy text, pyritic, tr snd grn inclu, blk ang pcs

shl drk gry green, teal green, slick wxy grsy text, pyritic, snd grn inclu, dolo sd, green clstrs, f grnd, sub rded, prly srted, w/cem, silic cem, pyritic, clay/shl fill

sst clr/lt gry clstrs, f grnd, sub rded/sub ang grns, fair to w/srted, w/cem, silic cem, tr pyritic, hrd tite clstrs NS

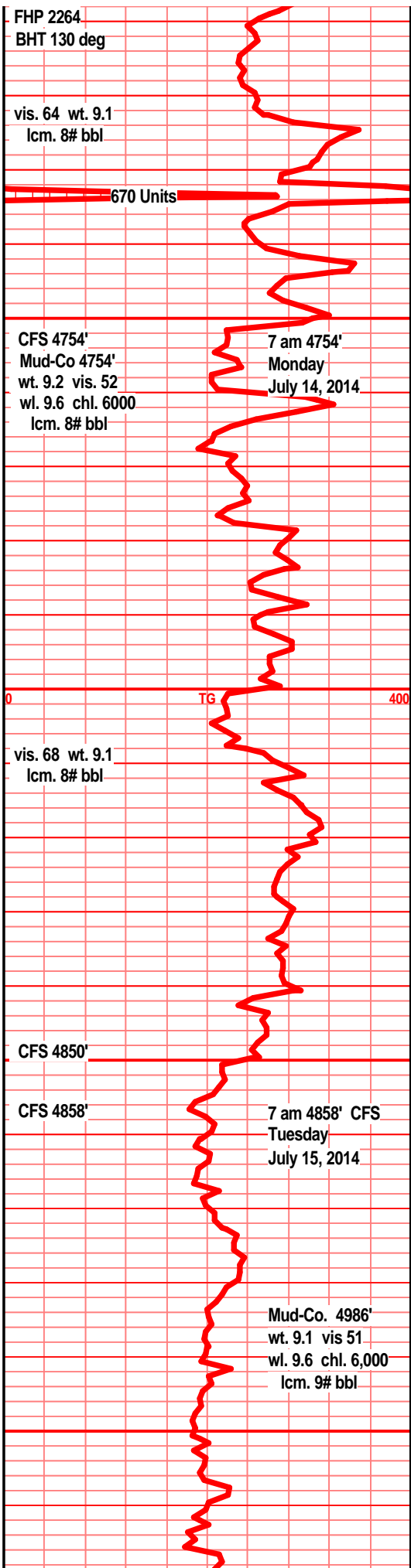
sst clr tan clstrs, f grnd, sub rded tr sub ang grns, w to fair srted, fair to poor cem, silic cem, sub fria in prt, tr inter grn por, silic fill, min fill, tr clay fill, tr gilsonitic flakes, NS

sst clr lt gry clstrs, f grnd, sub rded to sub ang grns, fair to well srted, mstly w/cem, sub fria silic cem, tr clay fill, tr mineral fill tr dead gilsonitic stain, some hvy silic fill, sst wht tan f grnd sub rded to rded grns, w/srted, prly cem fria, inter gran por, tr calc, w scat/clay fill

shl drk gry green drk blue gry green teal green, slick, wxy grsy text, snd grn inclu, pyritic, glau.

shl drk gry green teal green, silty tr gritty, snd grn inclu, grsy wxy text.

shl drk gry green, drk teal green, silty, snd grn





RTD
4925' (-3267)

4920
4930
4940
4950
4960
4970
4980
4990
5000
5010
5020
5030
5040
5050
5060
5070
5080
5090
00

inclu, pyritic bands, wxy grsy text.

CIRC/LOG



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

0 TG 400

Woolsey Operating Company
Warren Fee #12
2465' FNL & 1145' FWL
App. NE NE NW SW
Sec. 19 - Twp 32S - Rge 12W
Medicine Lodge North Field
Barber County, Kansas
GL 1646' KB 1658'
API # 15-007-24191-00-00
Bill Klaver, Geologist