



Woolsey Operating Company, LLC
Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Ricke A #2
Location: Section 13 - Township 34 South - Range 11 West
License Number: 15-007-24171-0000 Region: Barber County, Kansas
Spud Date: May 14, 2014 Drilling Completed: May 23, 2014
Surface Coordinates: 1980' FNL & 330' FWL
W 1/2 SW 1/4 NW 1/4
Bottom Hole Coordinates:
Ground Elevation (ft): 1396' K.B. Elevation (ft): 1408'
Logged Interval (ft): 4000' To: 5210' Total Depth (ft): 5210'
Formation: Kansas City Group ----> Simpson Group
Type of Drilling Fluid: Chemical Mud, displaced at 3232'
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: Bill Klaver
Company: Woolsey Operating Co. LLC
Address: 125 N. Market, Wichita Kansas, 67202

COMMENTS

Surface Casing: Spud 3 pm on May 14, 2014, ran 5 joints of new 13 3/4" X 45#/ft casing to 225' KB (tally 210') with 300 sx Class A, 2% gel, 3% cc. Plug down 11:30 pm, cement did circulate.
Production Casing: 5 1/2" X 10.5#/ft

Deviation Surveys: 1 at 217', 3/4 at 1009', 1/4 at 1518', 1/2 at 2023', 1/2 at 2500', 3/4 at 3006', 1/4 at 3543', 1 1/4 at 4018', 1 3/4 at 4208', 1 at 4336', 3/4 at 4525', 1 @ 4722', 1 at 5210'.

Pipe Strap @ 4722', Board: 4747.68', Strap: 4744.43. Strap 3.25' short. No corrections were made to the board.

Fossil Drilling Company Rig #3 Bit Record:

- 1) 17 1/4" Varel RR-RT in at 0' out at 225', 2.5 hours
 - 2) 7 7/8" Varel HE-21 in at 225' out at 4722', 99 1/2 hours
 - 3) 7 7/8" Varel HE-32 RR in at 4722', out at 5210', 40 1/4 hours
- Bit #2 averaged 45'/hour, #3 averaged 12.1'/hour.

Gas Detector: Woolsey Operating Co. Gas Trailer #2

Mud System: Mud Co./Service Mud. Brad Bortz, Engineer

DSTs: Trilobite Testing. Leal Cason, Tester

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

DSTs

DST #1, Mississippi, 4570'-4722', 30"-60"-60"-120", SB BOB in 1 1/2 minutes, GTS in 25 minutes into 2nd flow, TSTM. Recovered: 4311' GIP, 261' GCM (10% Gas, 90% Mud). IHP 2333, IFP 66-85, ISIP 1147, FFP 91-137, FSIP 1158, FHP 2289. BHT 125 deg.

CREWS

Jim Wenrich, (Part Time) Tool Pusher

Daniel Orrantea, Daylights

Ron Burns, Evening

Colter Fishgrab, Morning

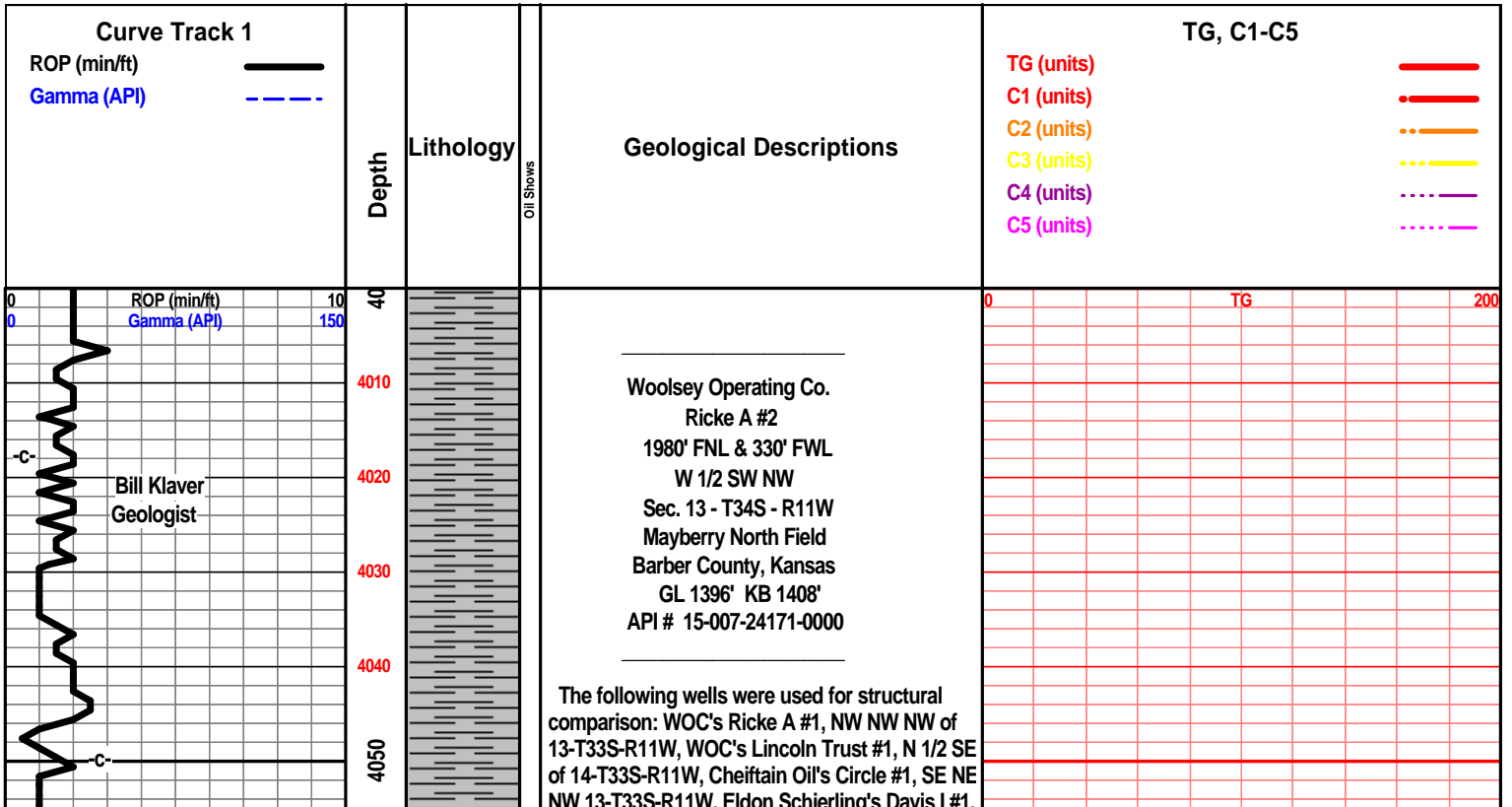
Chris Statts, Relief

ROCK TYPES

	Anhy		Shy dolo		Sltst		Shale 3
	Bent		Dol		Ss		Silty dol
	Brec		Gyp		Black sh		Dol lmst
	Cht		Sdy lmst		Gry sh		Dol 2
	Clyst		Lmst		Shale		Granite wash
	Coal		Mrlst		Shyslts		Lmst
	Congl		Salt		Sltys		Calc dol
	Sdy dolo		Shale		Ss 2		Shale 3

ACCESSORIES

MINERAL		Chlorite		Pelec		Grysh	
	Anhy		Dol		Gryslt		
	Arg		Sand		Lms		
	Bent		Silty		Sandylms		
	Bit	FOSSIL		Plant		Sh	
	Brecfrag		Algae		Strom		Sltstn
	Calc		Amph		Fuss	TEXTURE	
	Carb		Belm		Oomoldic		Boundst
	Chtdk		Bioclst	STRINGER		Anhy	
	Chtlt		Brach		Arg		Chalky
	Dol		Bryozoa		Bent		Cryxln
	Ferrpel		Cephal		Coal		Earthy
	Ferr		Coral		Dol		Finexln
	Glau		Crin		Gyp		Grainst
	Gyp		Echin		Ls		Lithogr
	Marl		Fish		Mrst		Microxln
	Nodule		Foram		Sltstrg		Mudst
	Phos		Fossil		Ssstrg		Packst
	Pyr		Gastro		Carbsh		Wackst
	Salt		Oolite		Clystn		
	Sandy		Ostra		Dol		
	Silt						



C SW NE, 11 T33S-R11W.

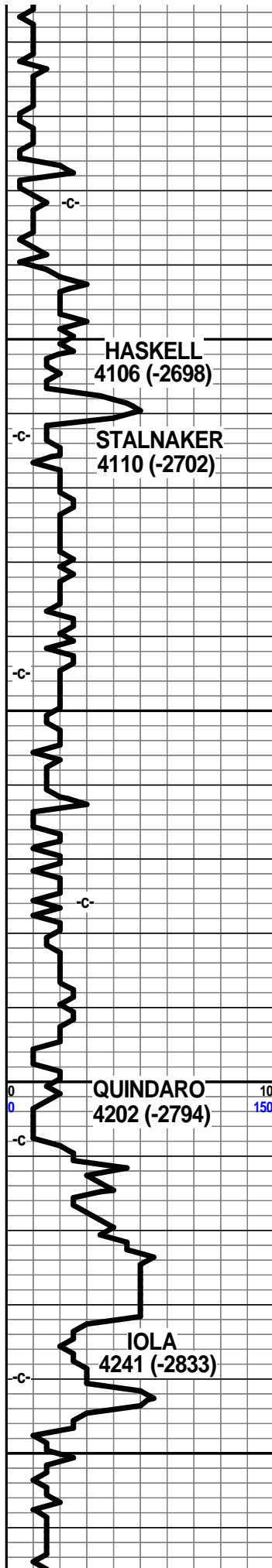
One minute drill time was recorded from 4000' to rotary total depth. Ten foot samples and circulating samples were roughneck gathered from 4400' to rotary total depth and delivered to the Survey at the completion of the test.

7 am Daily Progress:

- May 14, 2014 MIRT/SPUD
 - May 15, 2014 WOC at 225'
 - May 16, 2014 Drilling at 1615'
 - May 17, 2014 Drilling at 2550'
 - May 18, 2014 Drilling at 3400'
 - May 19, 2014 Drilling at 4195'
 - May 20, 2014 Drilling at 4558'
 - May 21, 2014 DST #1 at 4722'
 - May 22, 2104 Drilling at 4964'
 - May 23, 2014 Drilling at 5195'
- Logging by 2 pm

E-Log Tops:

- Herington
- Onaga
- Wabaunsee
- LeCompton
- Kanwaka
- Elgin Sand
- Heebner
- Toronto
- Douglas Group
- Amazonia
- Douglas Sand
- Haskell
- Lansing
- Kansas City 'G'
- Kansas City 'H'
- Kansas City 'I'
- Stark
- Swope
- Hushpuckney
- Hertha
- B/Kansas City
- Altamont
- Pawnee
- Cherokee Group
- Mississippi
- C3
- C2A
- C2
- Osage
- Northview Shale
- Compton
- Kinderhook
- Woodford
- Misener Sand
- Viola
- Simpson Group
- Wilcox Sand



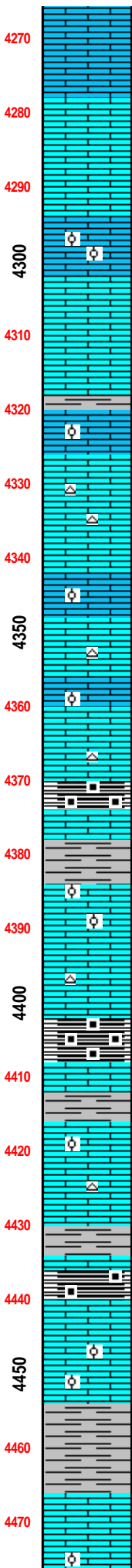
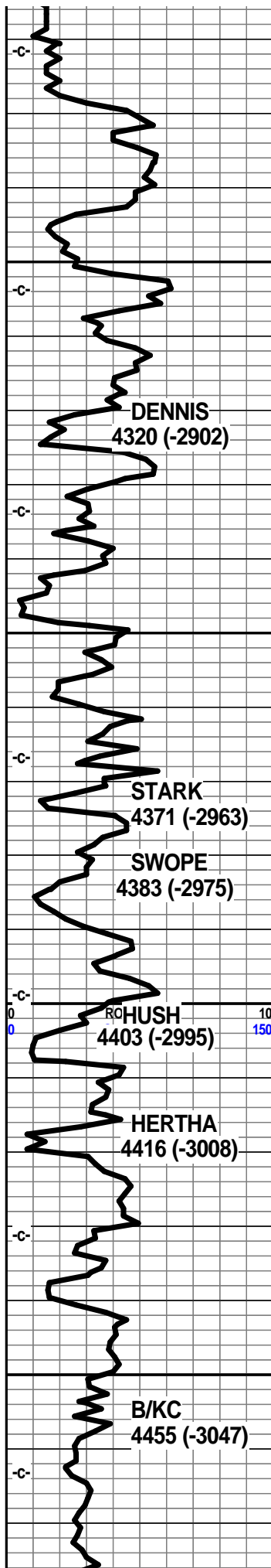
4060
4070
4080
4090
4100
4110
4120
4130
4140
4150
4160
4170
4180
4190
4200
4210
4220
4230
4240
4250
4260

Scale Change
TG 0 100

At call geologist
of 4200' at 7:15 am
May 19, 2014

Mud Co. 4241'
wt. 9.1 vis. 52
wl. 9.0 chl. 6,500

Geo on loc 4245'
9:30 am
May 19, 2014



McLish Shale LTD

4270
4280
4290
4300
4310
4320
4330
4340
4350
4360
4370
4380
4390
4400
4410
4420
4430
4440
4450
4460
4470

lst off wht crm f sli med xln gran soft chlky, foss frags, foss ool, inter xln por, foss mold por

lst wht off wht crm f xln gran blkly sub chlky foss frags, calc xln fill, flky soft chly text, foss ool/pelletal

shl gry med gry, lst tan off wht crm tr buff f sli med xln gran soft sub chlky foss frags, foss mold por, inter xln por

lst wht off wht crm f xln blkly ang dns tr hrd, sub chlky, foss frags, tr ool, pelletal, foss mold por, calc xln fill, tr chrt lt gry shrp frsh opa

lst crm tan off wht f xln blkly ang sub chlky, foss frags, tr ool, pelletal, calc xln fill, tr foss mold por, chrt aa

lst wht off wht crm f sli med xln, gran soft, foss frags, inter xln por, calc xln fill, foss ool/pelletal, chrt lt gry opa shrp

lst wht off wht crm f xln grn soft sub chlky tr chlky, foss frags, inter xln por, mstly calc xln filled,

shl gry, drk gry blk, blk carb, blkly ang wxy gassy pcs, random gas bubs

shl gry, med gry calc, limy blkly flky, lst tan lt gry brn f tr vf xln dns hrd blkly, tr calc xln fill tr foss frags

lst crm gry tan f xln gran blkly ang dns, foss frags, foss ool, calc xln fill, some sub chlky

lst drk gry tan f vf xln dns hrd blkly ang dns arg, with shl gry drk gry msly drk blkly, wxy grsy text, carb gas bubs, blkly ang pcs

shl gry dkr gry brn, lst tan gry, tr crm tan f vf xln dns hrd blkly ang dns hrd tr arg, tr calc xln fill, tr sub chlky

lst crm tan off wht f sli med xln, blkly ang dns sub chlky, foss frags, foss ool, foss mold por, calc xln fill,

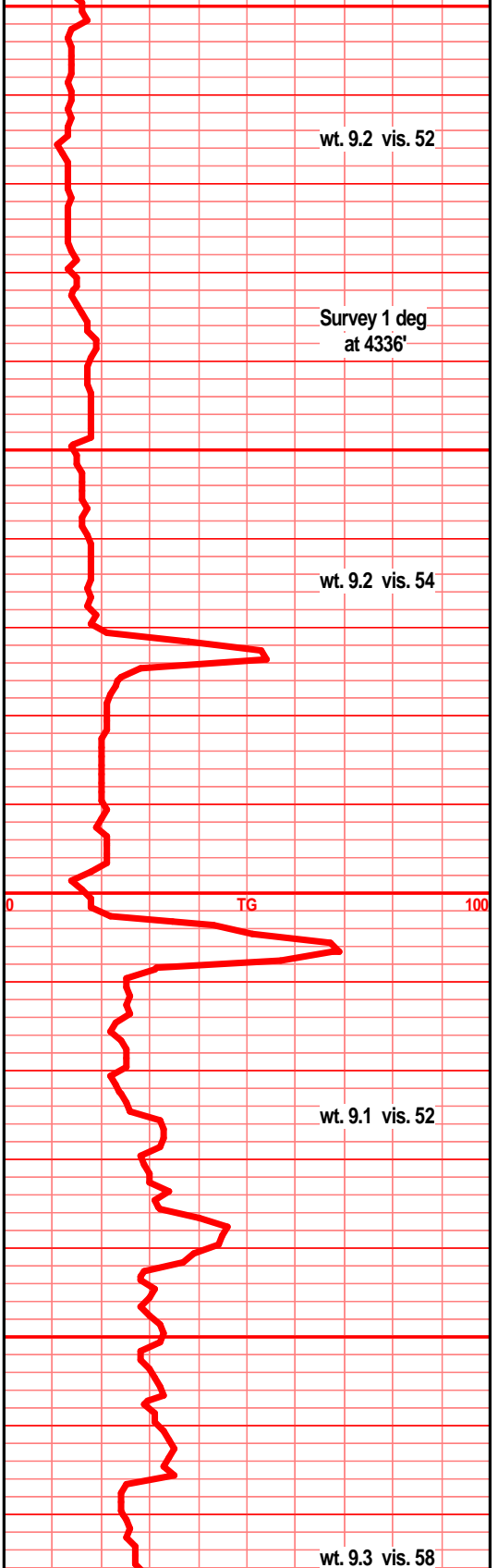
lst crm gry med gry tan f vf xln dns hrd blkly ang arg, silts, shl gry med gry dns hrd calc, some blk carb, wxy grsy text,

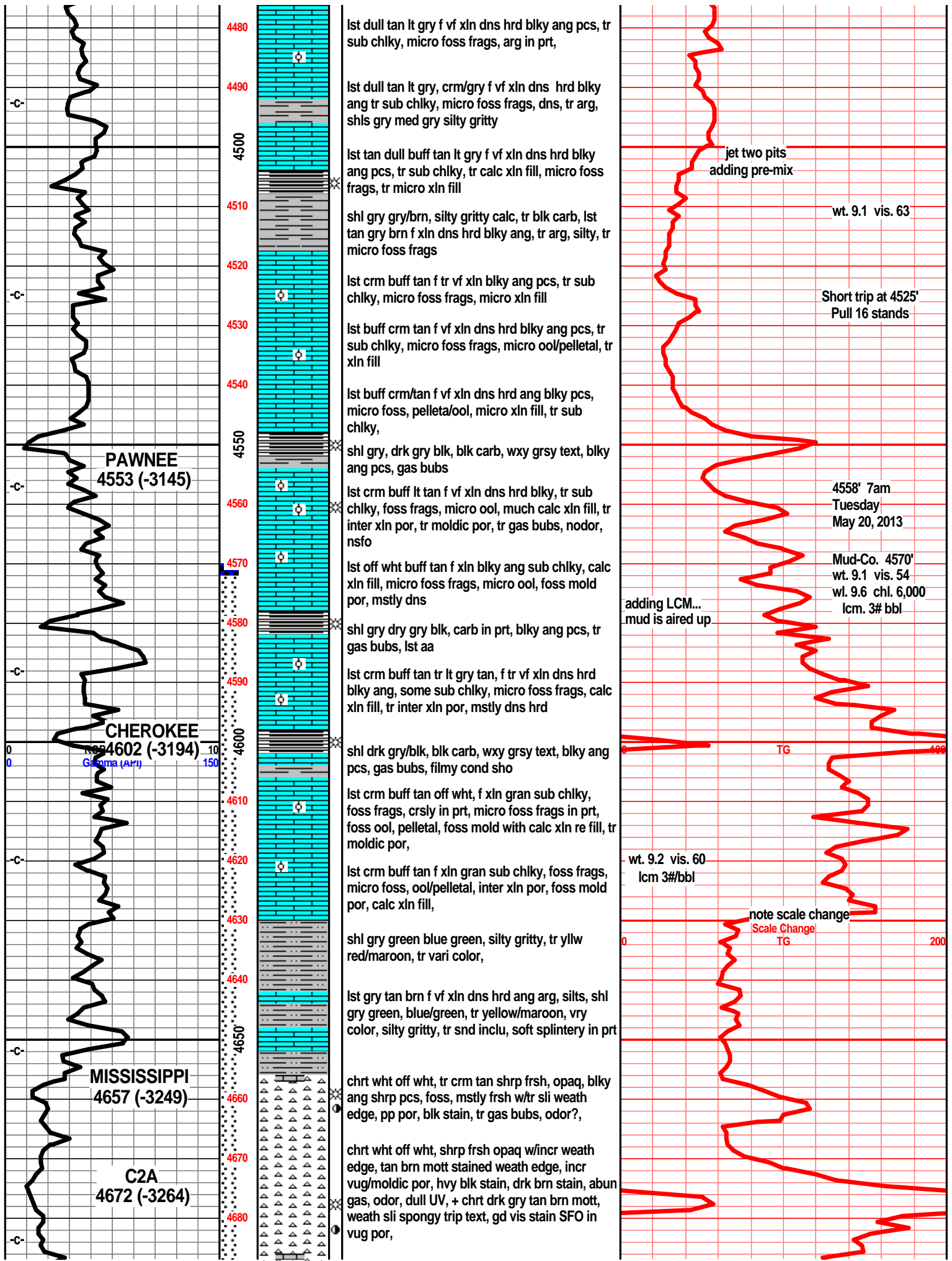
lst gry tan, mostly brn gry f vf xln dns hrd blkly dns hrd, tr sub chlky, tr foss frags, calc xln fill, shls gry calc silty gritty

lst tan gry, drk brn f vf xln dns hrd blkly ang pcs, foss frags, foss ool/pelletal, calc xln fill, shl gry med drk gry green, silty gritty calc in prt

shl gry green silty, gritty, calc in prt, tr sndy/gritty text, lst tan brn lt gry f xln dns hrd blkly ang tr micro foss frags, tr calc xln fill

Manual/ Tooke
4285'





4480
4490
4500
4510
4520
4530
4540
4550
4560
4570
4580
4590
4600
4610
4620
4630
4640
4650
4660
4670
4680

lst dull tan lt gry f vf xln dns hrd blk ang pcs, tr sub chlky, micro foss frags, arg in prt,
 lst dull tan lt gry, crm/gry f vf xln dns hrd blk ang tr sub chlky, micro foss frags, dns, tr arg, shls gry med gry silty gritty
 lst tan dull buff tan lt gry f vf xln dns hrd blk ang pcs, tr sub chlky, tr calc xln fill, micro foss frags, tr micro xln fill
 shl gry gry/brn, silty gritty calc, tr blk carb, lst tan gry brn f xln dns hrd blk ang, tr arg, silty, tr micro foss frags
 lst crm buff tan f tr vf xln blk ang pcs, tr sub chlky, micro foss frags, micro xln fill
 lst buff crm tan f vf xln dns hrd blk ang pcs, tr sub chlky, micro foss frags, micro ool/pelletal, tr xln fill
 lst buff crm/tan f vf xln dns hrd ang blk pcs, micro foss, pelleta/ool, micro xln fill, tr sub chlky,
 shl gry, drk gry blk, blk carb, wxy grsy text, blk ang pcs, gas bubs
 lst crm buff lt tan f vf xln dns hrd blk, tr sub chlky, foss frags, micro ool, much calc xln fill, tr inter xln por, tr moldic por, tr gas bubs, nodor, nsfo
 lst off wht buff tan f xln blk ang sub chlky, calc xln fill, micro foss frags, micro ool, foss mold por, mstly dns
 shl gry dry gry blk, carb in prt, blk ang pcs, tr gas bubs, lst aa
 lst crm buff tan tr lt gry tan, f tr vf xln dns hrd blk ang, some sub chlky, micro foss frags, calc xln fill, tr inter xln por, mstly dns hrd
 shl drk gry/blk, blk carb, wxy grsy text, blk ang pcs, gas bubs, filmy cond sho
 lst crm buff tan off wht, f xln gran sub chlky, foss frags, crsly in prt, micro foss frags in prt, foss ool, pelletal, foss mold with calc xln re fill, tr moldic por,
 lst crm buff tan f xln gran sub chlky, foss frags, micro foss, ool/pelletal, inter xln por, foss mold por, calc xln fill,
 shl gry green blue green, silty gritty, tr yllw red/maroon, tr vari color,
 lst gry tan brn f vf xln dns hrd ang arg, silts, shl gry green, blue/green, tr yellow/maroon, vry color, silty gritty, tr snd inclu, soft splintery in prt
 chrt wht off wht, tr crm tan shrp frsh, opa, blk ang shrp pcs, foss, mstly frsh w/tr sli weath edge, pp por, blk stain, tr gas bubs, odor?,
 chrt wht off wht, shrp frsh opa w/incr weath edge, tan brn mott stained weath edge, incr vug/moldic por, hvy blk stain, drk brn stain, abun gas, odor, dull UV, + chrt drk gry tan brn mott, weath sli spongy trip text, gd vis stain SFO in vug por,

PAWNEE
4553 (-3145)

CHEROKEE
4602 (-3194)

MISSISSIPPI
4657 (-3249)

C2A
4672 (-3264)

jet two pits
adding pre-mix

wt. 9.1 vis. 63

Short trip at 4525'
Pull 16 stands

4558' 7am
Tuesday
May 20, 2013

Mud-Co. 4570'
wt. 9.1 vis. 54
wl. 9.6 chl. 6,000
lcm. 3# bbl

adding LCM...
mud is aired up

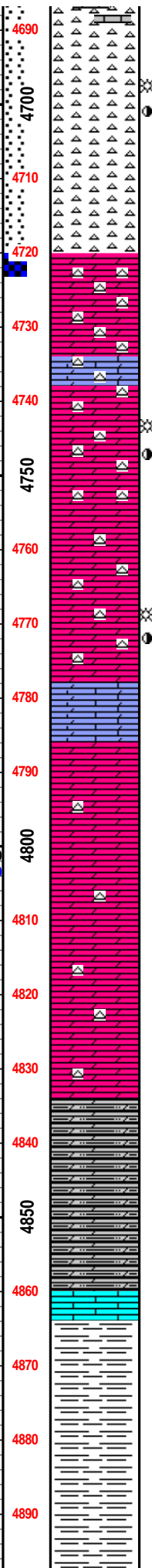
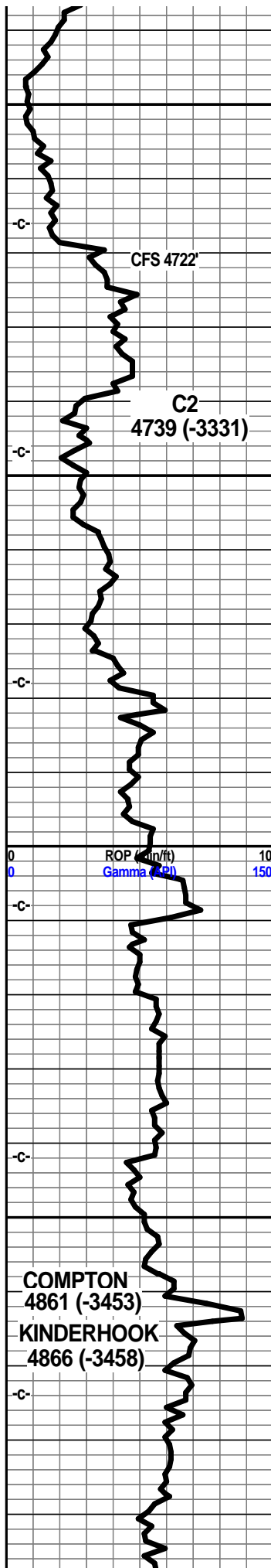
TG

wt. 9.2 vis. 60
lcm 3#/bbl

note scale change

Scale Change
TG

200



4690 chrt wht off wht drk brn/blk mott, sli spongy trip weath text, mosly soft, fair to good vug/moldic por, gd stain, SFO in/around vugs, fair to good odor, incr gas bubs, dull UV + chrt off wht lt gry speckled/mott, frsh shrp blk ang sub opa, w/sli weath edges, w/blk stain, gas bubs

4700

4710

4720 chrt wht off wht, lt gry, shrp frsh opa, w/off wht brn mott weath edge/sli spongy trip text, vug moldic por, drk brn stain/SFO fair/gd odor, gas bubs,

4730 dolo crm tan lt tan gry f vf xln blk ang dns tr sub chky, tr gran/sucr text, tr inter xln por, tr lt gry blue frsh shrp chrt inclu, tr tan lt brn stain, nodor, tr glau fill

4740 chrt dolo, tan crm off wht dolo, f vf xln gran sub sucr text, inter xln por, w/chrt inclu, gry tan brn, tr weath text edges, vug moldic por, drk brn stain SFO, gas bubs, sli odor, tr glau, weath chrt with dolo edges

4750

4760 dolo crm tan, lt gry tan f vf lxn gran sli sucr text, sub chky, soft in prt, glau, iinter xln por, tan brn stain, chrt dolo, tan buff, tan gry f xln blk ang sub chky, w/tan wht gry chert inclu, tr w/weath sli spongy trip text, pp moldic, tr vug por, tr stain, some gas bubs, nodor

4770

4780 dolo lst tan buff, tan gry f vf xln dns hrd blk ang, tr gran sub sucr text, tr inter xln por, msly hard dns, tr glau, tr chrt wht lt gry frsh shrp opa nodor

4790 dolo, silty limy dolo, tan crm, tan gry mott, f vf xln dns hrd blk ang tr soft, tr gran sub sucr text, glau, chrt inclu, wht lt gry shrp frsh opa

4800

4810 dolo tan gry tan f vf xln gran blk ang dns hrd, tr softer gran sub sucr text, chrt in prt, wht lt gry shrp frsh chrt inclu

4820 dolo gry tan f vf xln gran blk ang hrd dns, sub chky, sli gran sub sucr text, wht lt gry shrp frsh chrt inclu

4830 dolo aa, lst tan off wht lt gry green tint, blk ang hrd dns tr foss frags, chrt aa

4840 dolo crm gry med gry f vf xln dns hrd blk ang, gran arg in prt, silty gritty, tr gran sub sucr text.

4850 dolo lt tr med gry f vf xln gran blk ang dns arg, tr silty gritty, tr gran sub sucr text, shls gry blk blk ang hard gritty

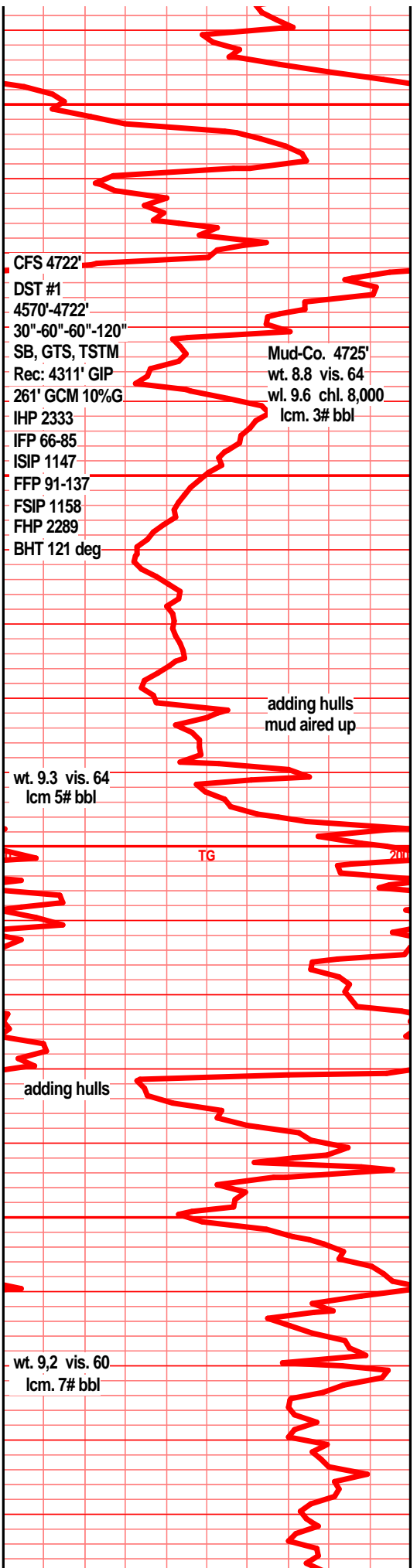
4860 shl gry drk gryblk, silty gritty, dolo, gry med gry f vf xln dns hrd blk ang dns arg silty gritty

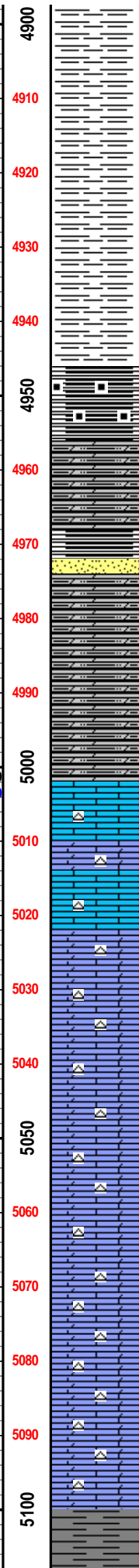
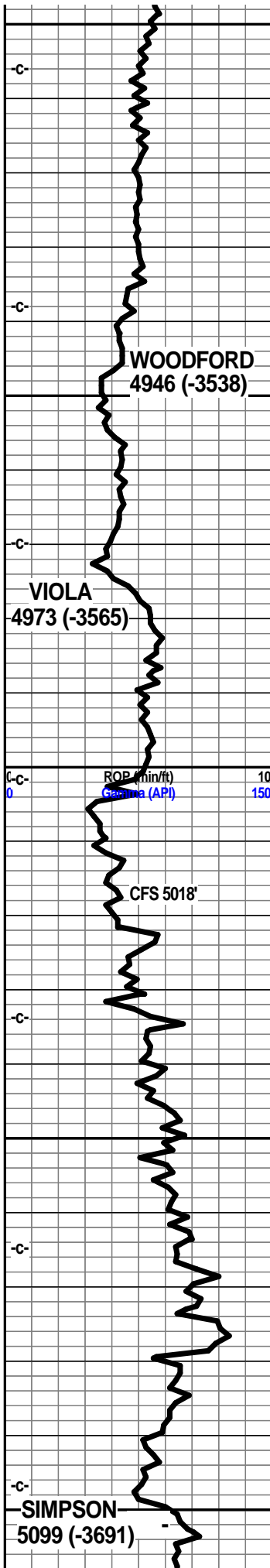
4870 dolo gry f vf xln gran blk ang dns hrd arg, sli sucr text, tr chrt wht lt gry shrp opa

4880 lst wht off wht crm f vf xln dns hrd massive, tr glau, tr sub chky, tr pyritic fill, dolo aa

4890 shl gry, gry med gry, tr greenish silty gritty

shl gry drk gry silty gritty bedded platey





shl gry drk gry greenish silty gritty

shl mde gry gry brn blk silty gritty

Samples very poor at this point, mud is heavy combined with a very poorly designed sample box. Box is to wide, to short and to shallow.

shl dolo shls drk gry blk, blk w/reddish tint blkly ang hrd pcs, abun gas bubs cupric, pyritic

silty dolo, brn blk, red brn tint, fnly silty, gritty, tr gas bubs

silty shly dolo, drk brn/blk, reddish tint, fnly silty gritty, tr w/carb text, abun gas bubs.

sst wht tan tr clr clstrs, f grnd, sub ang grns, fair to well sorted, mstly vry well cem, silic cem, sub fria to dns hrd qrtzitic text, abun min fill, pyritic, clay clasts, tr gas bubs, sli film on brk, nodor, NSFO

dolo silty dolo, lt gry, gry, tr med gry, f xln silty gritty gran, tr soft, gas bubs

dolo silty dolo, gry med gry, f xln, gritty gran soft, tr mushy, gas bubs

lst wht off wht lt crm, wht gry mott, f sli med xln, blkly ang, tr sub chiky, foss frags, crs calc xln text, inter xln por, chrt wht shrp frsh opa, sub opa, foss, tr gas bubs, filmy SFO on break (rare) nodor

lst wht off wht, wht gry mott f sli med xln, gran blkly tr sub chiky, foss frags, crs calc xstls, pyritic, crs foss in prt, chrt wht shrp frsh opa

lst aa, incr lst/dolo, tan off wht crm drk tan f xln blkly ang dns hrd, gran, vry sli sucr text, chrt tan gry shrp frsh opa, dolo tan lt brn f sli med xln gran sndy gritty text, tr foss, sub chiky gran text

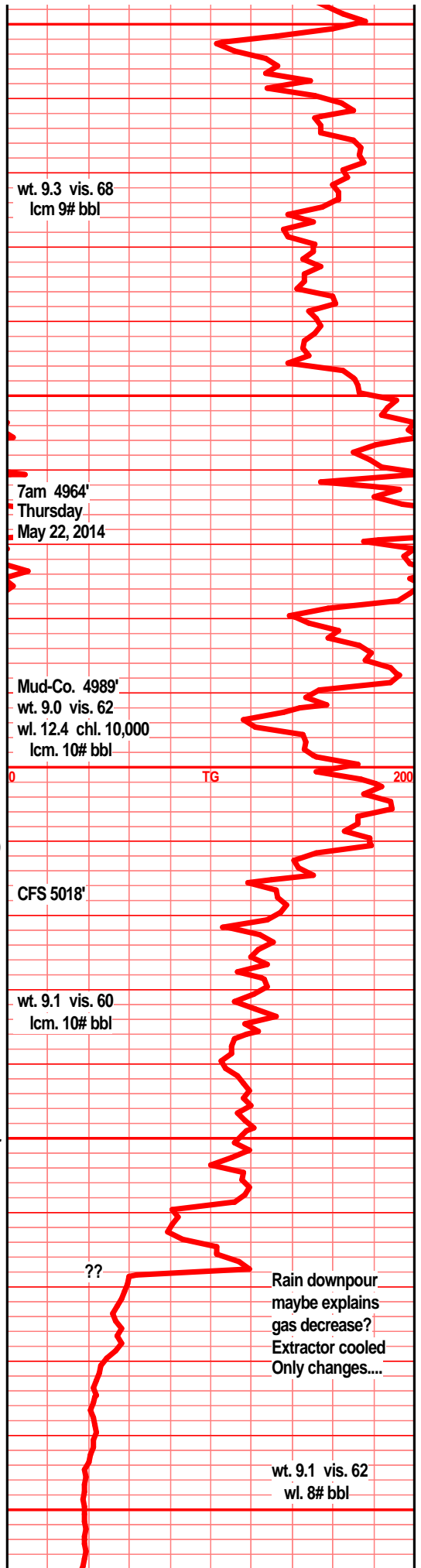
lst/dolo dull tan f vf xln gran sndy gritty sub sucr text, hrd blkly ang pcs, chrt dull tan brn shrp frsh sub opa, tr lst crm wht off wht mott f med xln blkly ang dns tr sub chiky, lrg calc xstl inclu, pyritic

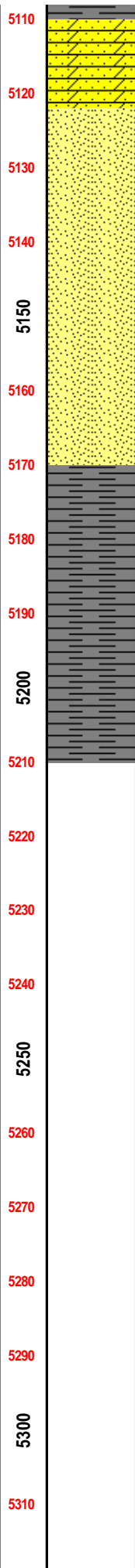
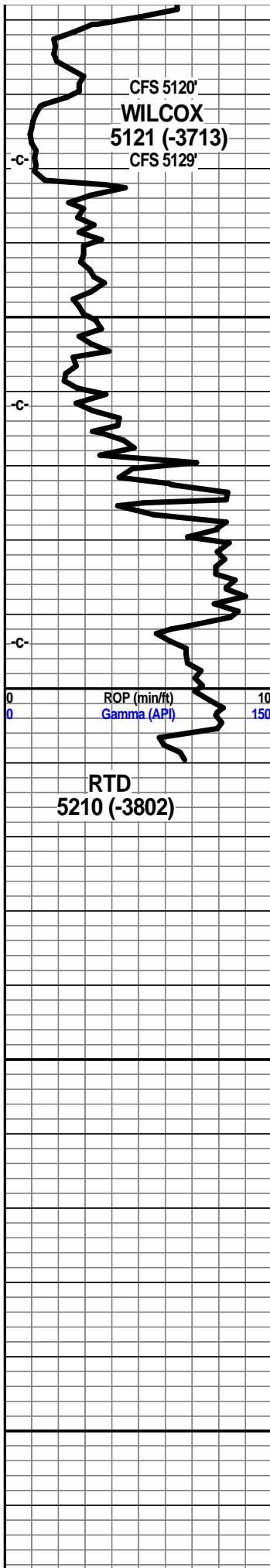
lst/dolo tan, tan lt brn f vf xln gran blkly dna hrd, tr sub chiky, sli sucr text, chrt, chrt dull tan brn shrp frsh sub opa

lst/dolo tan drk tan brn f vf xln dns hrd blkly ang sli gran chiky, sli sub sucr text, chrt, chrt dull tan brn shrp frsh sub opa

lst/dolo tan drk crm brn f vf xln dns hrd blkly ang sli chiky gran sub sucr pcs, foss frags, chrt, chrt dull drk tan brn shrp frsh sub opa

shl gry green drk gry green silty slick, wih snd grn inclu





sst/sndy dolo, sst clstrs, gry off wht tr green tint, f grnd, sub ang tr sub rded grns, prly srtd, w/cem, blkly ang dns hrd clstrs, pyritic, gry green clay fill

sst clr wht clstrs, f grnd, sub ang/sub rded grns, fair to well srtd, sub fria and tite, poorly cem, silic cem, gd inter grn por,

sst wht off wht clr tr lt tan clstrs, f grnd, sub ang/sub rded grns, well srtd, sub fria and tite, poorly cem, silic cem, dolo text in some, tr clay min fill, tr dead gilsonitic flky stain, tr filmy RBSO on spl water

sst lt tan crm off wht clstrs, f grnd, sub ang/sub rded grns, well srtd, soft fria to tite sub fria, silic cem, drker tan dolo text in some, dead flky gilsonitic stain, tr clay min fill

sst off wht tan clstrs, f grnd sub ang/sub fred grains, w to fairly well sorted, soft to mostly fria, gd inter grn por, dead flky gilsonitic stain, tr clay mineral fill

shl drk gry green drk teal green, silty, snd grn inclu, pyritic bands,

shl gry drk gry green, deep teal green, silty, tiny snd grn inclu, pyritic bands

shl gry drk gry, gry green, silty gritty, slick, hrd, snd grn inclu, pyritic bands.

