



## Woolsey Operating Company, LLC

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

Well Name: Warren Fee #11  
Location: Section 19 - Township 32 South - Range 12 West  
License Number: 15-007-24190-00-00 Region: Barber County, Kansas  
Spud Date: July 19, 2014 Drilling Completed: July 26, 2014  
Surface Coordinates: 1900' FNL and 1950' FWL  
App. SE NW SE NW  
Bottom Hole Coordinates:  
Ground Elevation (ft): 1644' K.B. Elevation (ft): 1656'  
Logged Interval (ft): 3600' To: 4905' Total Depth (ft): 4905'  
Formation: Lansing/Kansas City ----> Simpson Group  
Type of Drilling Fluid: Chemical Mud

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

Spud at 5 pm on July 19, 2014, set 5 joints of 13 3/8" X 48#/ft new surface casing at 235' KB (tally 219.9). Cemented with 300 sx Class A, 2% gel, 3% cc (by Allied). Plug down at 12:15 am on July 20, 2014. Cement did circulate.

Production Casing: 4 1/2" X 10.5#/ft

Deviation Surveys: 1 at 235', 1/4 at 1015', 3/4 at 1520', 3/4 at 2026', 3/4 at 2501', 1/4 at 3008', 1/2 at 3515', 1/2 at 3990', 1 at 4505', 1 at 4905'.

Pipe Strap @ 4505', Strap: 4530.44', Board: 4527.95'. Strap 2.49' long. No correction was made to the board.

Fossil Drilling Co. Rig #3 Bit Record:

- 1) 17 1/2" Smith RR in at 0' out at 234'. 3.5 hours
- 2) 7 7/8" Varel HE-21 in at 234', out at 4505', 84 hours
- 3) 7 7/8" Varel HE-29 RR in at 4505' out at 4905', 29 1/2 hours.

Gas Detector: Woolsey Operating Co. Gas Trailer #2

Mud System: Mud-Co. Brad Bortz, Engineer

DSTs: Trilobite Testing, Ryan Reynolds, Tester

E-Logs: Pioneer Wireline Services, Dual Compensated Porosity, Dual Induction, Caliper, Gamma Ray, PE.

Doug Kerr, Engineer




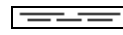
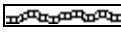



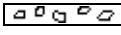



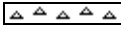



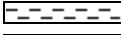




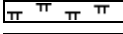







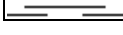


### DSTs

DST #1 4445'-4505', 30"-60"-60"-120". SB BOB in 4 1/2 minutes, weak 6" blow throughout the 2nd flow period.  
 Rec: 555' GIP, 90' SOCM (2%Oil, 98%Mud). IHP 2220, IFP 25-38, ISIP 391, FFP 38-48, FSIP 683, FHP 2150. BHT 126 degrees.

### CREWS

Jim Wenrich (Part Time) Tool Pusher  
 Daniel Orrantea, Daylights  
 Ron Burns, Evening  
 Jimmie Holt, 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		Shysltst		Lmst
	Congl		Salt		Sltlysh		Calc dol
	Sdy dolo		Shale		Ss 2		Shale 3

### ACCESSORIES

#### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

- 
- 

- Fuss
- Oomoldic

#### MINERAL

- Anhy
- Arg
- Bent
- Bit
- Breclfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Ferrpel
- Ferr
- Glau
- Gyp
- Marl
- Nodule
- Phos
- Pyr

- Salt
- Sandy
- Silt
- Chlorite
- Dol
- Sand
- Slty

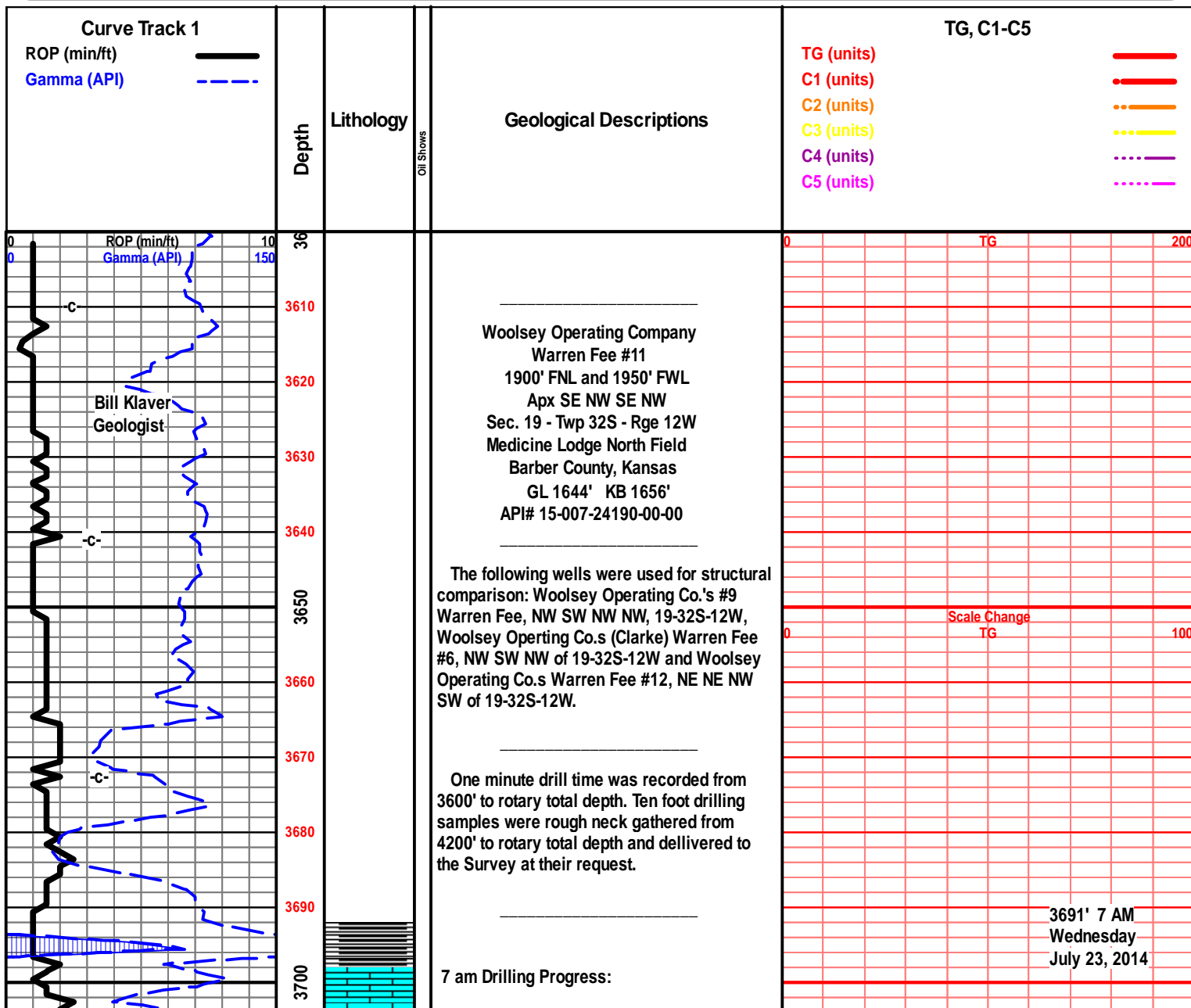
#### STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn
- Dol

- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

#### TEXTURE

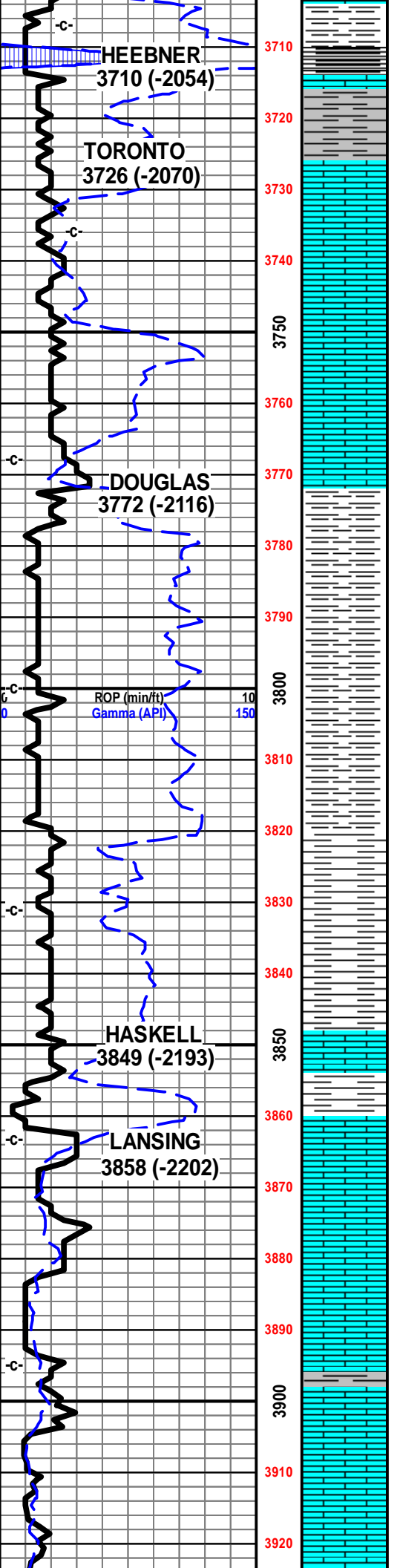
- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest



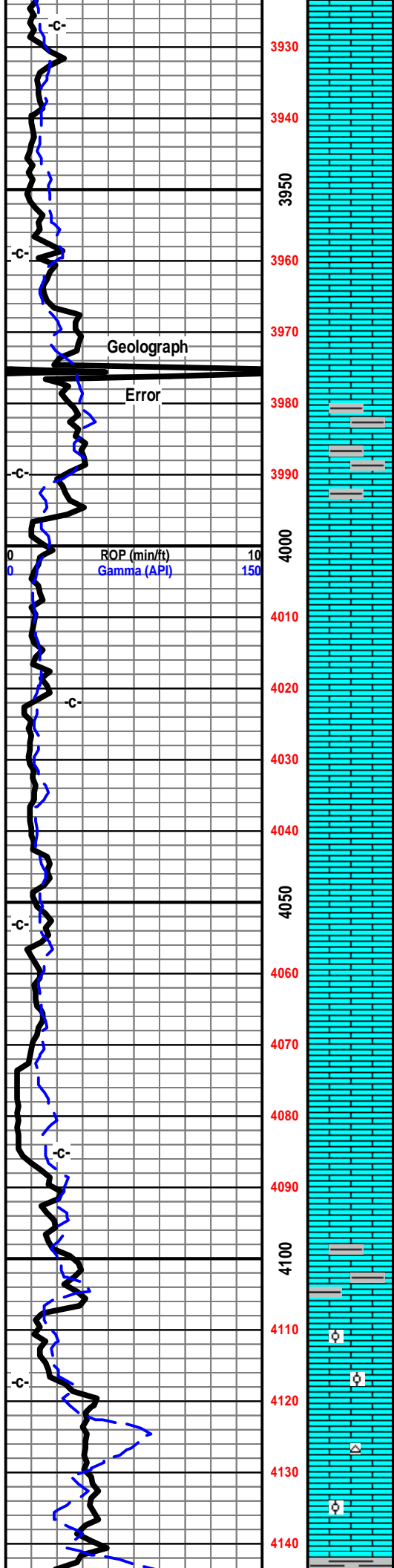
July 19, 2014 MIRT/SPUD  
 July 20, 2014 WOC (drill plug 8:15 am)  
 July 21, 2014 Drilling at 1840'  
 July 22, 2014 Drilling at 2780'  
 July 23, 2014 Drilling at 3691'  
 July 24, 2014 Drilling at 4328'  
 July 25, 2014 TOO H w/DST #1 at 4505'  
 July 26, 2014 Drilling at 4750'  
 July 27, 2014 E-logs out 5 am

**E-Log Tops**

- Herrington 1961 (-305)
- Onaga 2778 (-1122)
- Wabaunsee 2834 (-1178)
- LeCompton 3503 (-1847)
- Kanwaka 3547 (-1891)
- Elgin Sand DND
- Heebner 3708 (-2052)
- Toronto 3731 (-2075)
- Douglas Group 3749 (-2093)
- Douglas Shale 3777 (-2121)
- Brown Lime 3852 (-2196)
- Lansing 3862 (-2206)
- Iola 4147 (-2491)
- Dennis 4245 (-2589)
- Stark 4276(-2620)
- Swope 4282 (-2626)
- Hushpuckney 4314 (-2658)
- Hertha 4324 (-2668)
- B/Kansas City 4370 (-2714)
- Pawnee 4422 (-2766)
- Mississippi 4444 (-2788)
- Keokuk Porosity 4444 (-2788)
- Keokuk Porosity Base 4463 (-2807)
- Compton 4560 (-2904)
- Kingerhook 4626 (-2970)
- Woodford 4693 (-3037)
- Viola 4724 (-3068)
- Simpson 4817 (-3161)
- Wilcox 4847 (-3191)
- McLish Shale 4861 (-3205)
- LTD 4908 (-3252)



0 TG 100



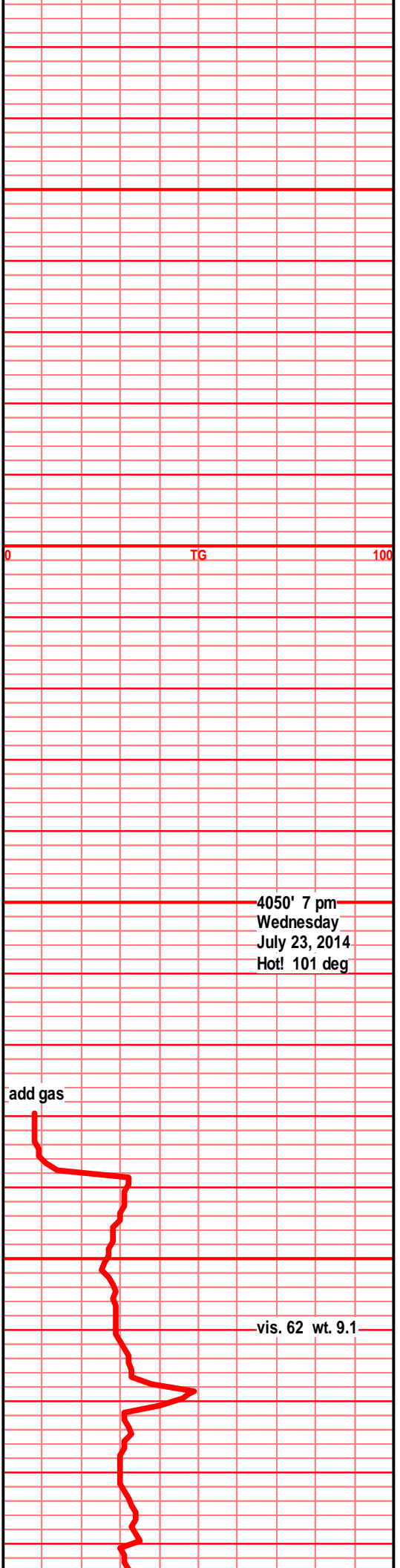
1st crm off wht lt gry f xln gran soft sub chlky, foss frags, foss ool, inter ool por, pelletal, calc xln fill

1st crm tan off wht lt gry f xln gran sub chlky, foss frags, calc xln fill, foss ool/pelletal

1st wht off wht lf lt gry f xln gran soft sub chlky, foss frags, foss ool, calc xln fill,

1st off wht lt tan buff f xln gran blkly dns sub chlky foss frags, foss ool/pelletal calc xln fill

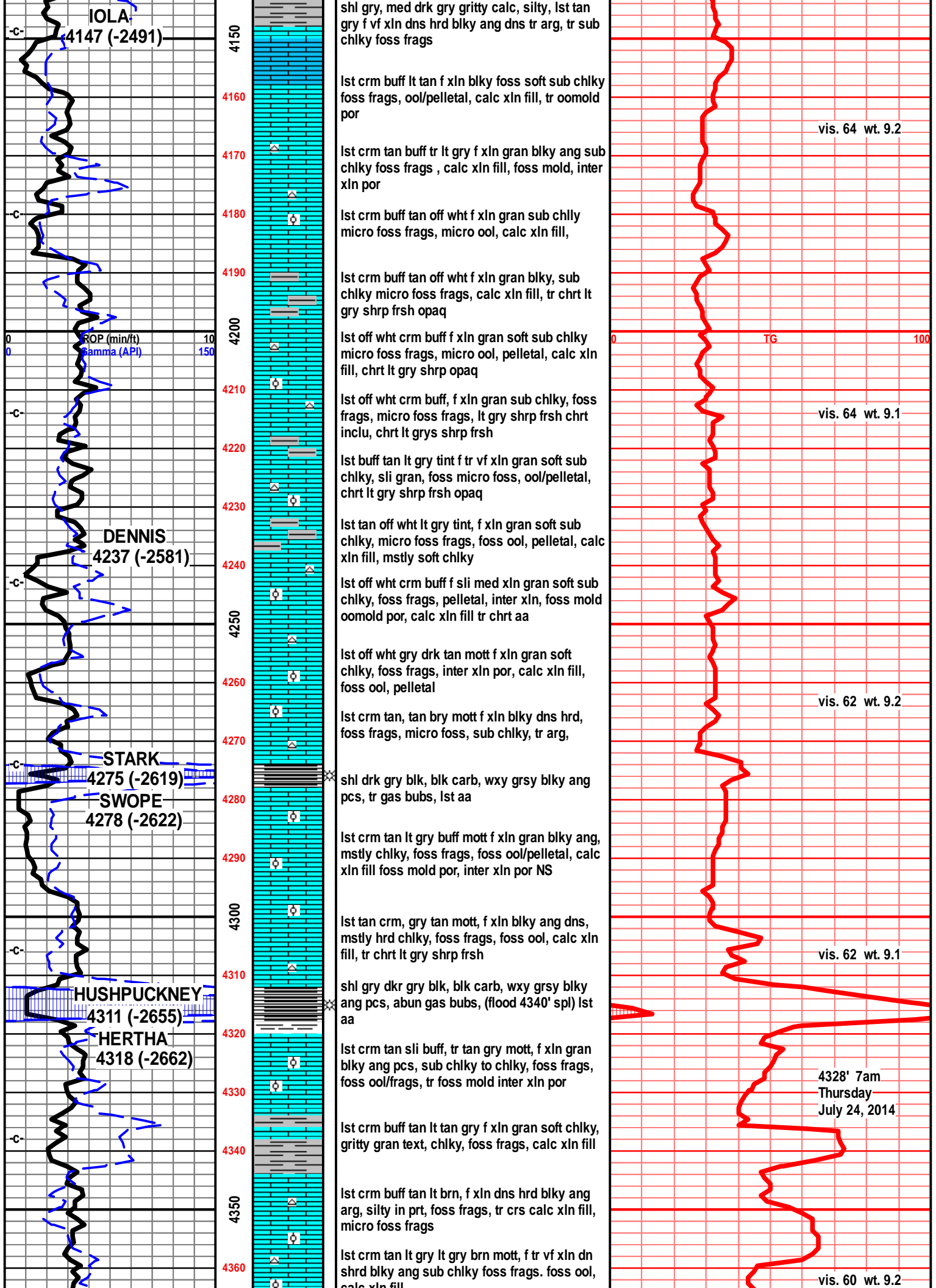
1st tan buff off wht f xln gran sub chlky foss frags, ool'pelletal, inter xln por, calc xln fill,



4050' 7 pm  
Wednesday  
July 23, 2014  
Hot! 101 deg

add gas

vis. 62 wt. 9.1



Calc xln m

shls gry med drk gry, green, silty gritty, calc is some, 1st tan tan/gry brn mott f xln gran gritty silty arg tr foss frags, chrt lt gry shrp frsh opaq

1st tan, drk tan gry tan mott f xln dns hrd blkly ang gritty arg, silty, sub chlky, foss frags, ool, chrt gry tan shrp frsh opaq

1st crm buff tan, tr lt gry, f xln gran blkly sub chlky, gritty, tr sndy in prt, foss frags, micro ool, tr chrt, lt gry shrp frsh

shls gry green, med gry green, silty gritty calc, 1st tan gry f xln dns hrd blkly ang chlky gran gritty, arg in prt.

shls gry green, red brn silty gritty calc, 1st tan gry, gry brn mott f xln gran blkly ang dns, arg, silty, sub chlky, tr micro foss frags,

1st crm/gry mott, f xln blkly ang dns hrd, silty gritty, arg, sub chlky, micro foss frags, tr chrt tan clr opaq shrp frsh blkly ang pcs, mucho shls aa

chrt wht off wht tr bone wht, tr lt gry, shrp frsh sub opaq, blkly ang shards. chrt crm tan brn mott, tr frsh with weath gran trip text edge, chrt wht tan brn mott, spongy gran trip text, gd moldic, pp por, gd vis por, good odor, abun gas bubs, fair stain, SFO, filmy SFO on spl wtr,

chrt wht off wht, bone wht, lt smokey gry, tr tan lt brn shrp frsh sub opaq w/ tan brn tr blk stained weath sli trip text edges, tr chrt with wht tan spongy text, pp moldic por, vug por along edge, SFO, fair odor, gas bubs, oil droplets

chrt wht off wht, lt gry tan in prt, tr tan yellow tint, shrp frsh sub opaq, with weath text edges, trip text, some wht tan brn w/weath spongy text, gd vis por, tan brn stain, SFO, filmy SFO on spl wtr gas bubs, fair odor

chrt wht off wht lt smokey gry, shrp, sub opaq, frsh blkly ang shards w/ drk brn blk stained sli weath trip text edges, drk brn blk stain, sli odor, gas bubs, SSFO

1st crm buff tan tr lt gry tint f vf xln dns hrd blkly ang pcs, tr chrt, tr chrt inclu,

1st crm buff tan, tr tan/off wht lt grn, f vf xln dns hrd blkly ang, chrt in prt, chrt inclu shrp wht frsh sub opaq

1st crm buff drk tan, tr w/lt gry green tint, f vf xln blkly dns hrd, chrt, wht shrp frsh inclu,

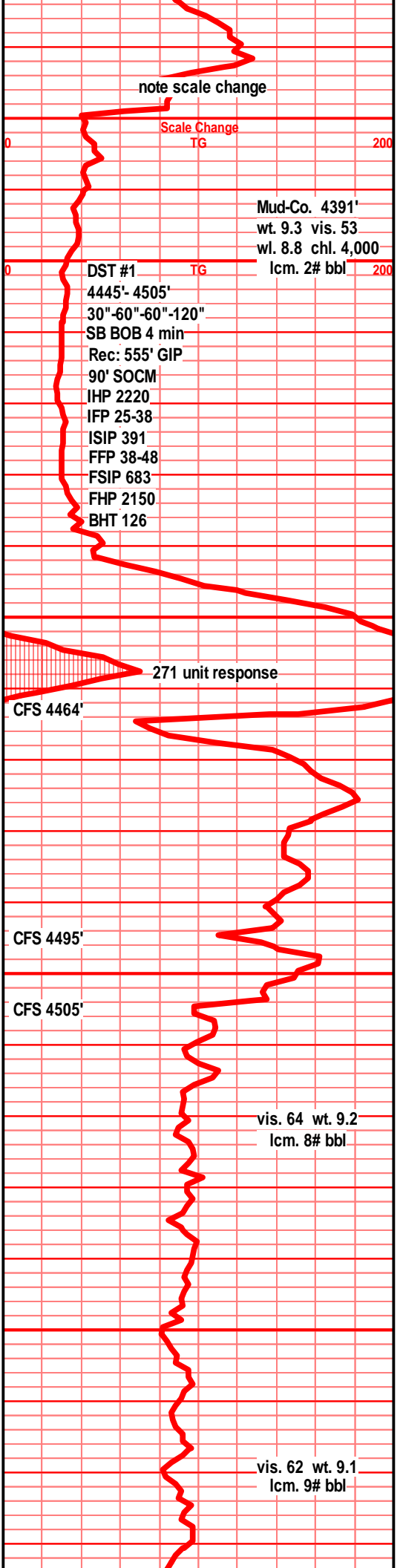
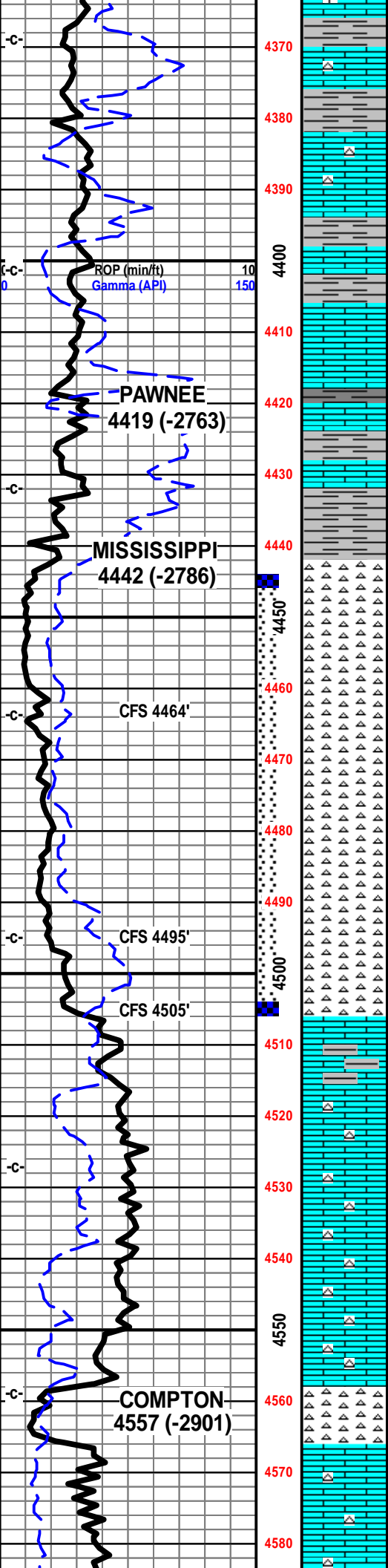
1st crm buff lt gry green in prt, f vf xln, sub chlky in prt, chrt, chrt wht off wht shrp frsh sub opaq, blkly ang shrds

1st crm buff tan f vf xln dns hrd blkly sub chlky, 1st brn reddish f xln gran gritty arg silty

chrt wht off wht, vry lt gry, shrp frsh blkly ang shrp shards, tr with hvy blk edge stain, nodor, nsfo

1st wht off wht, lt tan to tan, f mic xln dns blkly ang hrd, tr sub chlky to firm micro foss frags chrt dull tan/gry shrp

1st off wht drk tan f mic xln dns hrd blkly tr sub



note scale change

Scale Change TG

Mud-Co. 4391' wt. 9.3 vis. 53 wl. 8.8 chl. 4,000 lcm. 2# bbl

DST #1 TG 4445'-4505' 30"-60"-60"-120" SB BOB 4 min Rec: 555' GIP 90' SOCM IHP 2220 IFP 25-38 ISIP 391 FFP 38-48 FSIP 683 FHP 2150 BHT 126

271 unit response

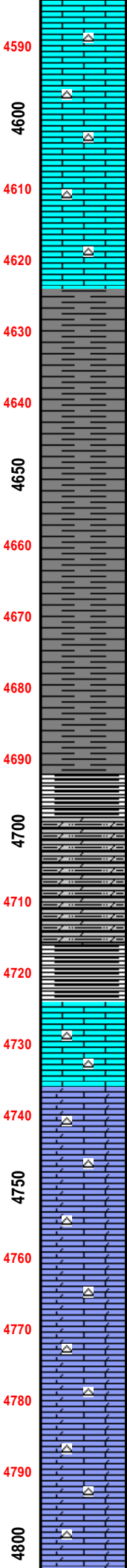
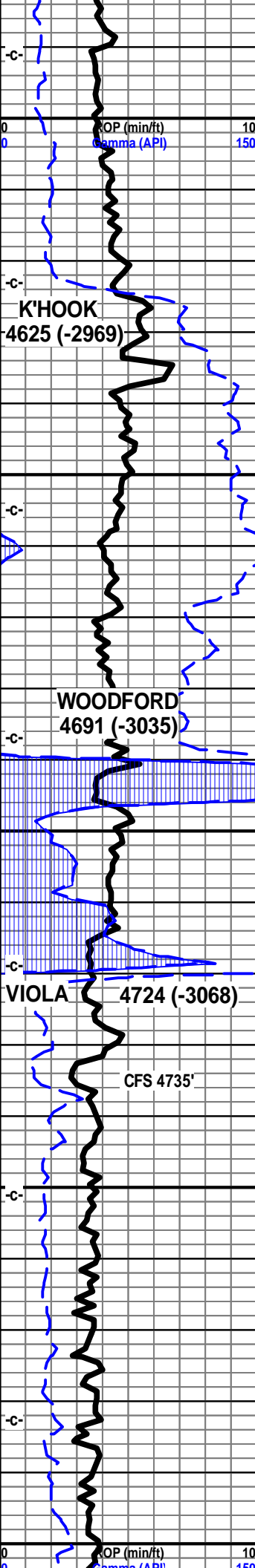
CFS 4464'

CFS 4495'

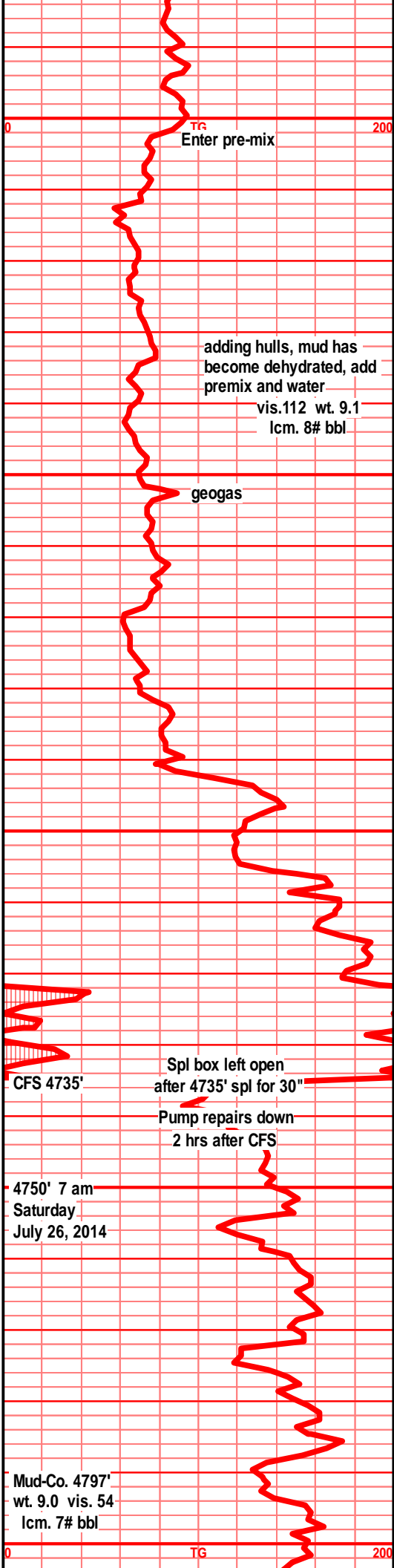
CFS 4505'

vis. 64 wt. 9.2 lcm. 8# bbl

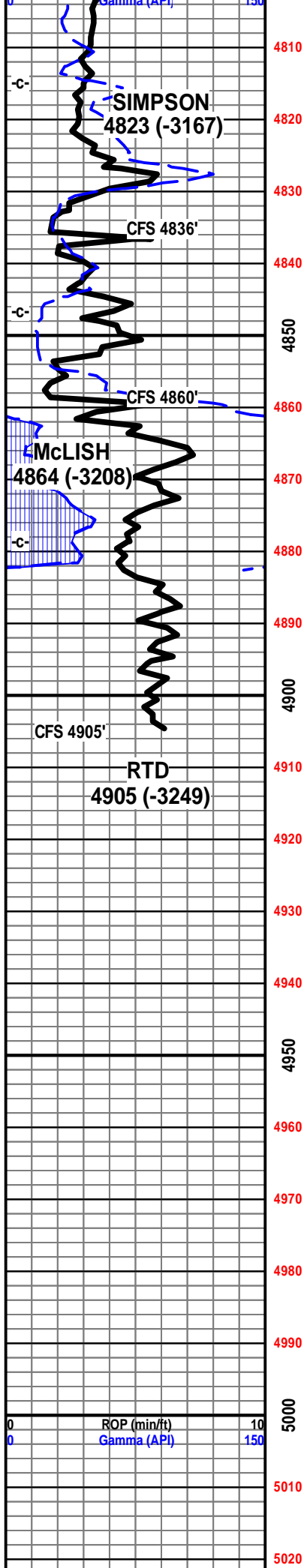
vis. 62 wt. 9.1 lcm. 9# bbl



chlky micro foss frags, chrt dull tan/gry shrp frsh sub opa  
 Ist off wht drk tan, f mic xln dns hrd sub chlky, micro foss frags, chrt, chrt dull tan/gry shrp frsh sub opa  
 Ist off wht, tan, drk tan, f mic xln, blk ang dns hrd, micro foss frags, chrt, chrt dull gry/tan shrp frsh sub opa  
 Ist wht off wht tan f mic xln dns hrd blk ang tr sub chlky, micro foss frags, tr calc fill, chrt chrt dull tan/gry shrp frsh sub opa, chrt inclu  
 shl gry drk med drk gry, bedded, platey, pyritic streaks, silty sli gritty  
 shl gry med drk gry tr blk, blk ang pcs, bedded, tr pyritic bands, silty gritty  
 shl drk gry, gry/reddish tint, blk, silty gritty in prt, pyritic, gas bubs  
 shl gry drk gry blk, drk blk/brn/reddish tint, pyritic in prt, bedded, silty gritty, tr gas bubs  
 shl gry med gry/blk, tr drk brnsh tint, silty fnly gritty, tr beds, pyritic, gas bubs  
 shl drk gry blk, tr brn tint, silty fnly gritty, pyritic  
 shl gry dkr gry blk, silty, gritty bedded  
 shl blk carb text, dolo silty shly dolo, drk gry reddish blk, blk ang pcs, silty gritty, snd grn inclu, pyritic, abun gas bubs, filmy cond sheen  
 dolo silty/shly dolo, drk gry med gry/blk, fnly silty gritty tr sli calc, pyritic tr gas  
 dolo silty dolo drk gry, gry blk, fnly silty tr gritty, tr calc, pyritic  
 dolo silty dolo, drk gry/blk, reddish blk, blk carb text, silty gritty, tr pyritic, abun gas bubs  
 Ist, dolo in prt, wht off wht lt crm, f med xln tr crs calc xstls, blk ang, gd inter xln por, lt transl SFO, gas bubs, nodor?, blk dead flky stain, tr crsly suc text, chrt lt gry off wht shrp sub opa,  
 Ist wht gry mott f med xln tr crs xln, blk dns hrd pyritic, chrt, inter xln por, chrt wht off wht tan shrp frsh sub opa  
 Ist/dolo in prt, crm tan lt brn f xln, micro suc in prt, dns ang hrd pcs, gran gritty tr sndy text, chrt dull tan lt brn shrp frsh sub opa  
 dolo/lt crm tan lt gry/brn f xln, gran, sli suc sndy text, chrt, chrt dull tan brn shrp frsh sub opa  
 Ist/dolo crm tan brn f vf xln dns blk ang, micro suc, sndy gritty text, pyritic in prt, chrt, chrt dull tan shrp frsh  
 Ist/dolo crm tan brn f vf xln blk ang hrd pcs, tr sub chlky, micro suc, gran gritty sli sndy text chrt, chrt dull tan lt brn shrp frsh sub opa  
 dolo, Ist in prt, crm tan dull tan tr drk tan brn f







vn xin blkly ang dns hrd, sli sucr fnly sndy text, chrty, chrty dull tan brn shrp frsh sub opa

dolo, lst in prt, crm tan dull tan brn, f mic xin dns hrd blkly, sli sucr fnly sndy text, mstly hrd dns, vry chrt, mucho chrt, dull tan brn shrp frsh sub opa

shl gry green, blue gry teal green slick wxy grsy text, sst gry, gry green, f grnd, sub ang to ang grns, dolo in prt, vry well cem, silic cem, prly srtd, pyritic, hrd blkly ang clstrs NS

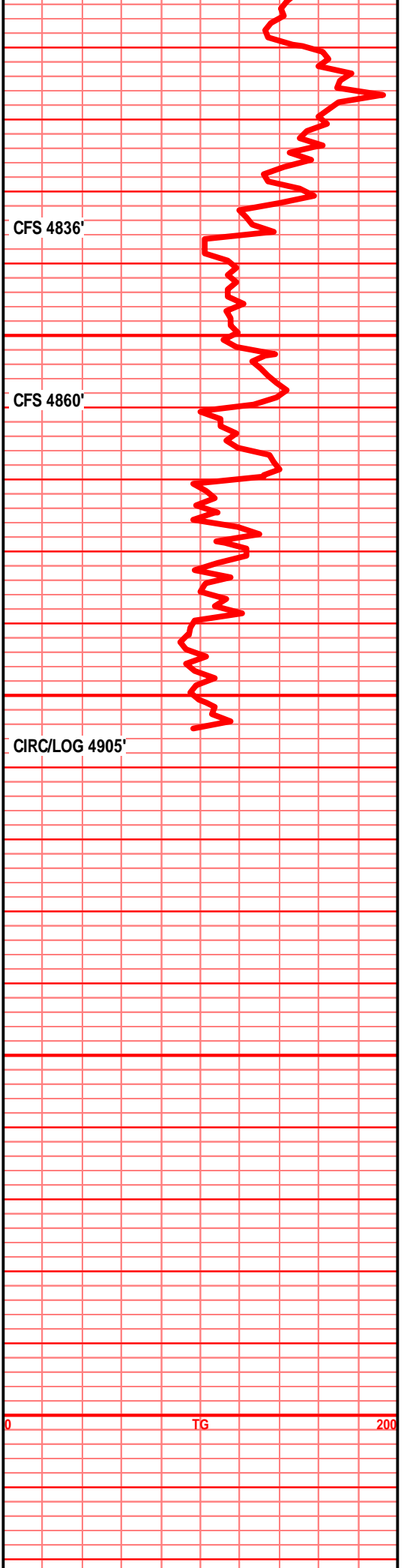
ssst gry lt gry tr tan clstrs, f grnd sub ang grnd, fair srtd, w/cem, silic cem, sub fria, blkly ang hrd clstrs, tr clay fill, tr pyritic

ssst off wht tan blkly ang clstrs, fn grnd, sub ang grns, fair sorting, f to well cem, silic cem, sub fria in prt, tr inter gran por, tr clay/pyritic fill, much glau in prt

shl drk gry, drk gry green, teal green, slick wxy grsy pcs, pyritic, tr glau

shl gry green teal green, silty gritty in prt, tr snd grn inclu, pyritic, wxy grsy text, blkly ang pcs

shl gry drk gry teal green, slick wxy grsy blkly ang pcs, tr silty gritty, tr snd grn inclu, pyritic,



BILL KLAVER

5030  
5040  
5050  
5060  
5070  
5080  
5090  
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Woolsey Operating Company  
Warren Fee #11  
1900' FNL and 1900' FWL  
Apx. SE NW SE NW  
Sec. 19 - Twp 32S - Rge 12W  
Medicine Lodge North Field  
Barber County, Kansas  
GL 1644' KB 1656'  
API# 15-007-24190-00-00

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BILL KLAVER