



Woolsey Operating Company, LLC



Woolsey Operating Company, LLC

Scale 1:600 (2"=100') Metric
Measured Depth Log

Well Name:	Ricke #4-H		
Location:	Section 5 - Township 35 South - Range 11 West		
License Number:	15-007-23861-01-00	Region:	Barber County, Kansas
Spud Date:	May 17, 2012	Drilling Completed:	June 14, 2012
Surface Coordinates:	1055' FNL & 360' FWL App SE SW NW NW		
Bottom Hole Coordinates:			
Ground Elevation (m):	1375'	K.B. Elevation (m):	1392'
Logged Interval (m):	4100'	To: 8380' Total Depth (m):	8380'
Formation:	Mississippian Chert		
Type of Drilling Fluid:	Chemical / Poly Plus (Water)		

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, Kansas 67202


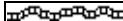


GEOLOGIST





Name: Bill Klaver
Company: Woolsey Operating Company, LLC
Address: 125 N. Market Suite 1000
Wichita, Kansas 67202





Casing Info

Set 20" X 53#/ft conductor pipe at 40' with 4 yards of grout.
Ran 10 joints of 13 3/8" X 54.5#/ft set at 270' with 240 sx.
Ran 122 joints of 7" X 23#/ft set at 5071' with 230 sx





ROCK TYPES

 Anhy
 Bent
 Brec
 Cht

 Clyst
 Coal
 Congl
 Dol

 Gyp
 Igne
 Lmst
 Meta

 Mrlst
 Salt
 Shale
 Shcol

 Shgy
 Sltst
 Ss
 Till

ACCESSORIES

MINERAL

Anhy
 Arggrn
 Arg
 Bent
 Bit
 Brecfrag
 Calc
 Carb
 Chtdk
 Chtlt
 Dol
 Feldspar
 Ferrpel
 Ferr
 Glau

Gyp
 Hvymin
 Kaol
 Marl
 Minxl
 Nodule
 Phos
 Pyr
 Salt
 Sandy
 Silt
 Sil
 Sulphur
 Tuff

FOSSIL

Algae
 Amph
 Belm
 Bioclst
 Brach
 Bryozoa
 Cephal
 Coral
 Crin
 Echin
 Fish
 Foram
 Fossil
 Gastro
 Oolite

Ostra
 Pelec
 Pellet
 Pisolite
 Plant
 Strom

STRINGER

Anhy
 Arg
 Bent
 Coal
 Dol
 Gyp
 Ls
 Mrst

Sltstrg
 Ssstrg

TEXTURE

Boundst
 Chalky
 Cryxln
 Earthy
 Finexln
 Grainst
 Lithogr
 Microxln
 Mudst
 Packst
 Wackest

OTHER SYMBOLS

POROSITY

Earthy
 Fenest
 Fracture
 Inter
 Moldic
 Organic
 Pinpoint

Vuggy

SORTING

Well
 Moderate
 Poor

ROUNDING

Rounded
 Subrnd
 Subang
 Angular

OIL SHOW

Even

Spotted
 Ques
 Dead

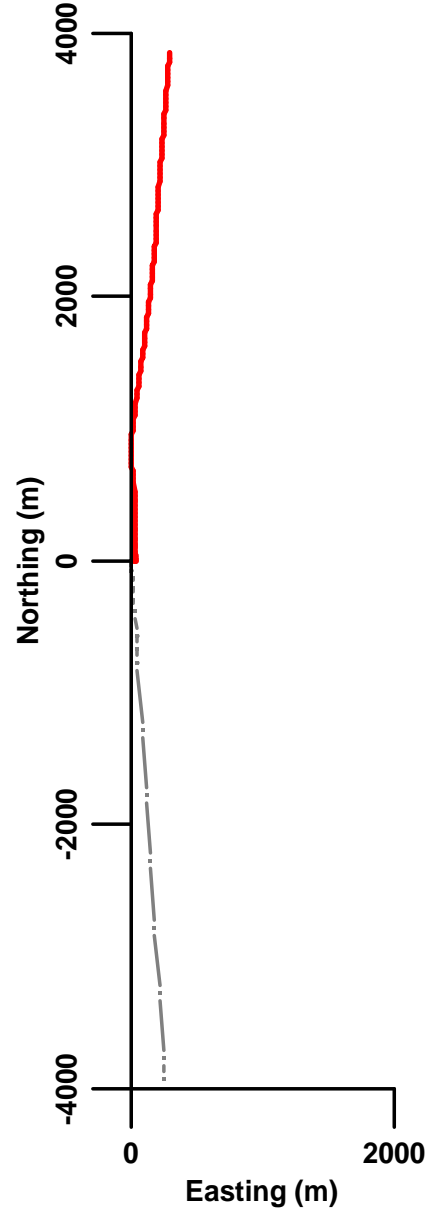
INTERVAL

Core
 Dst

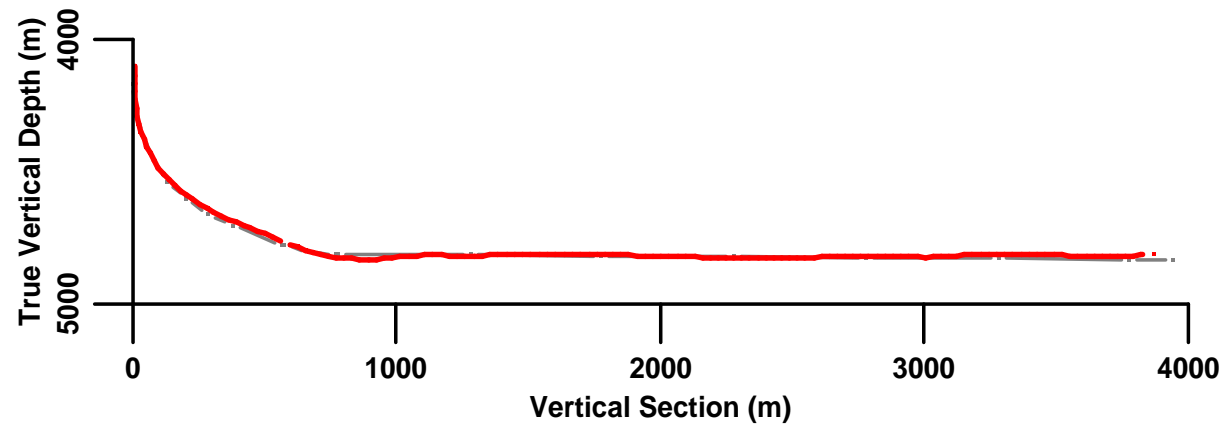
EVENT

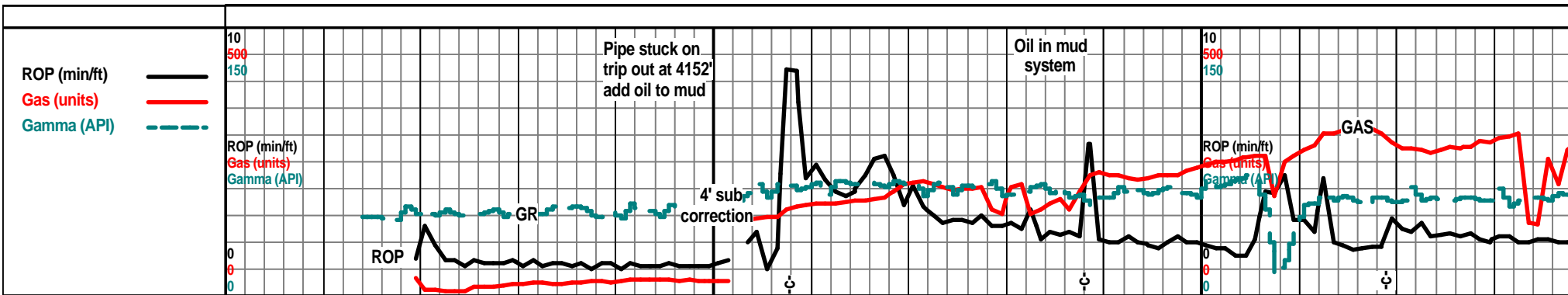
Rft
 Sidewall

Plan



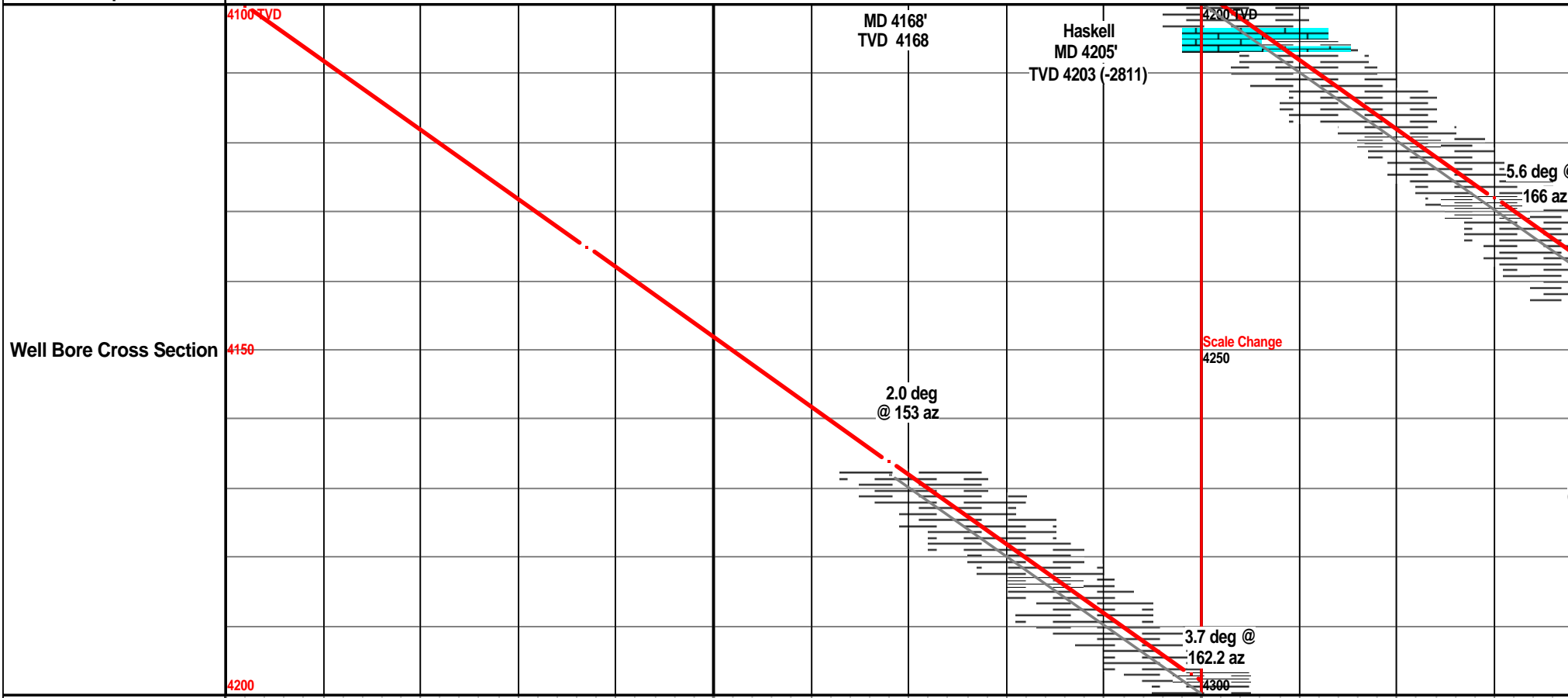
Elevation



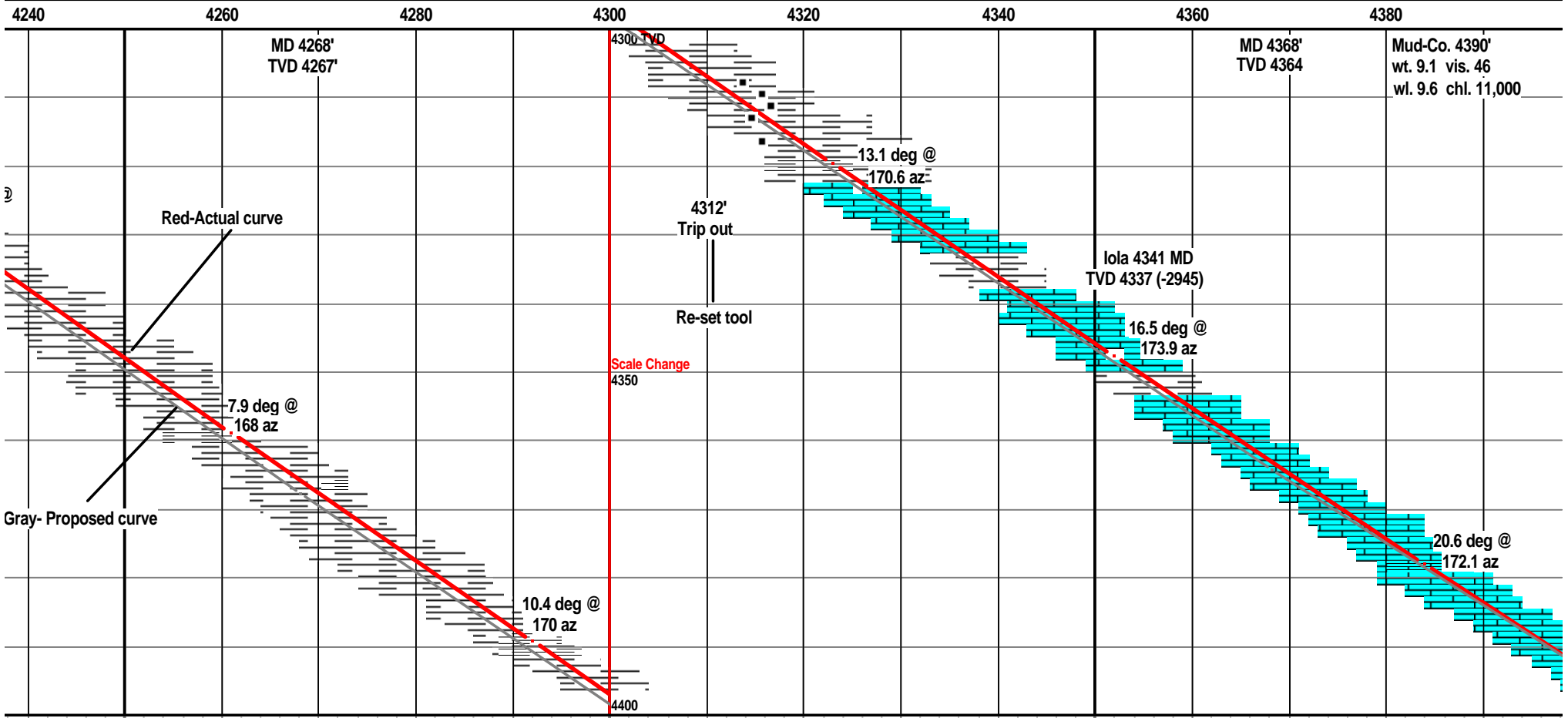
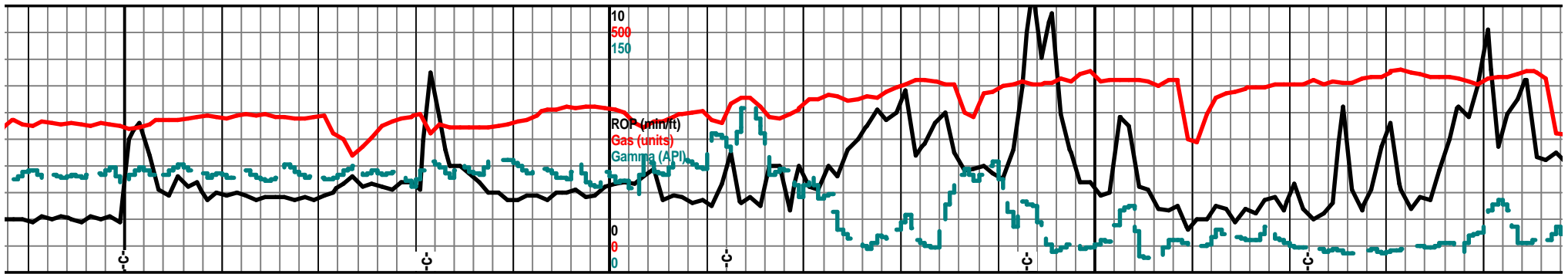


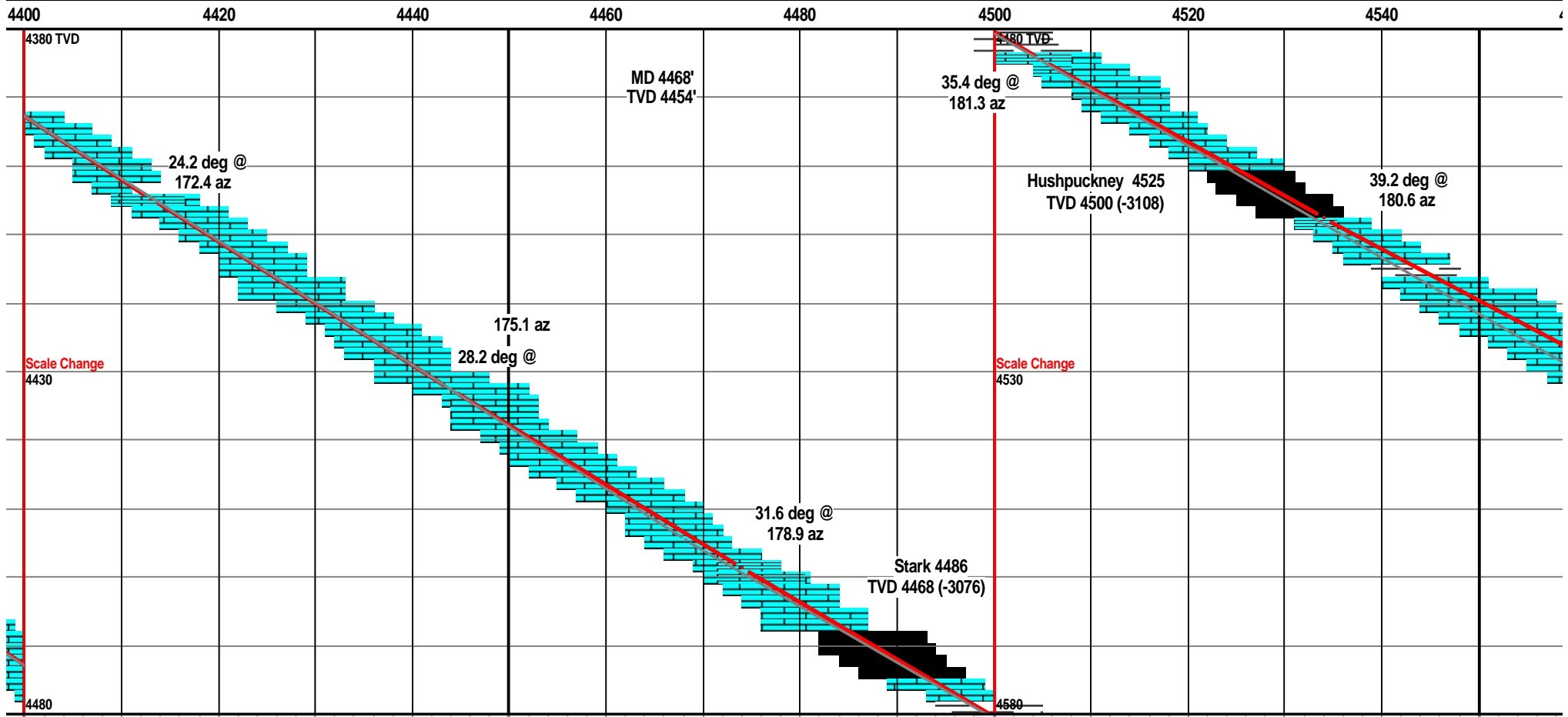
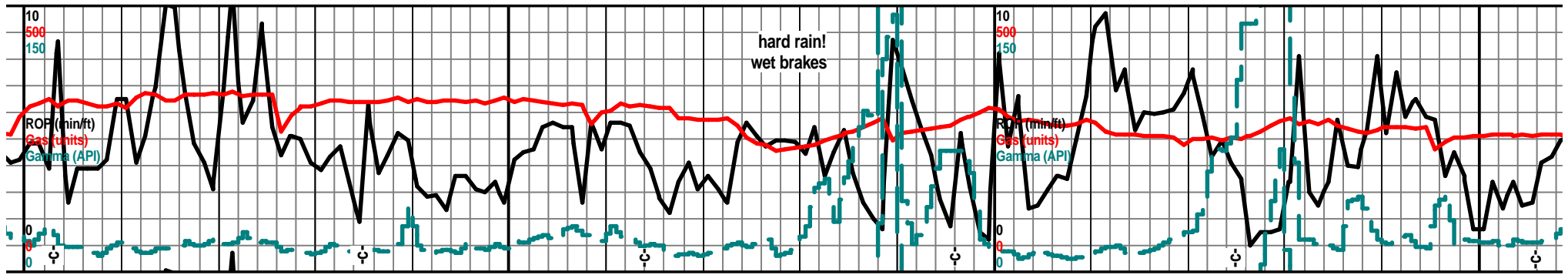
Oil Shows

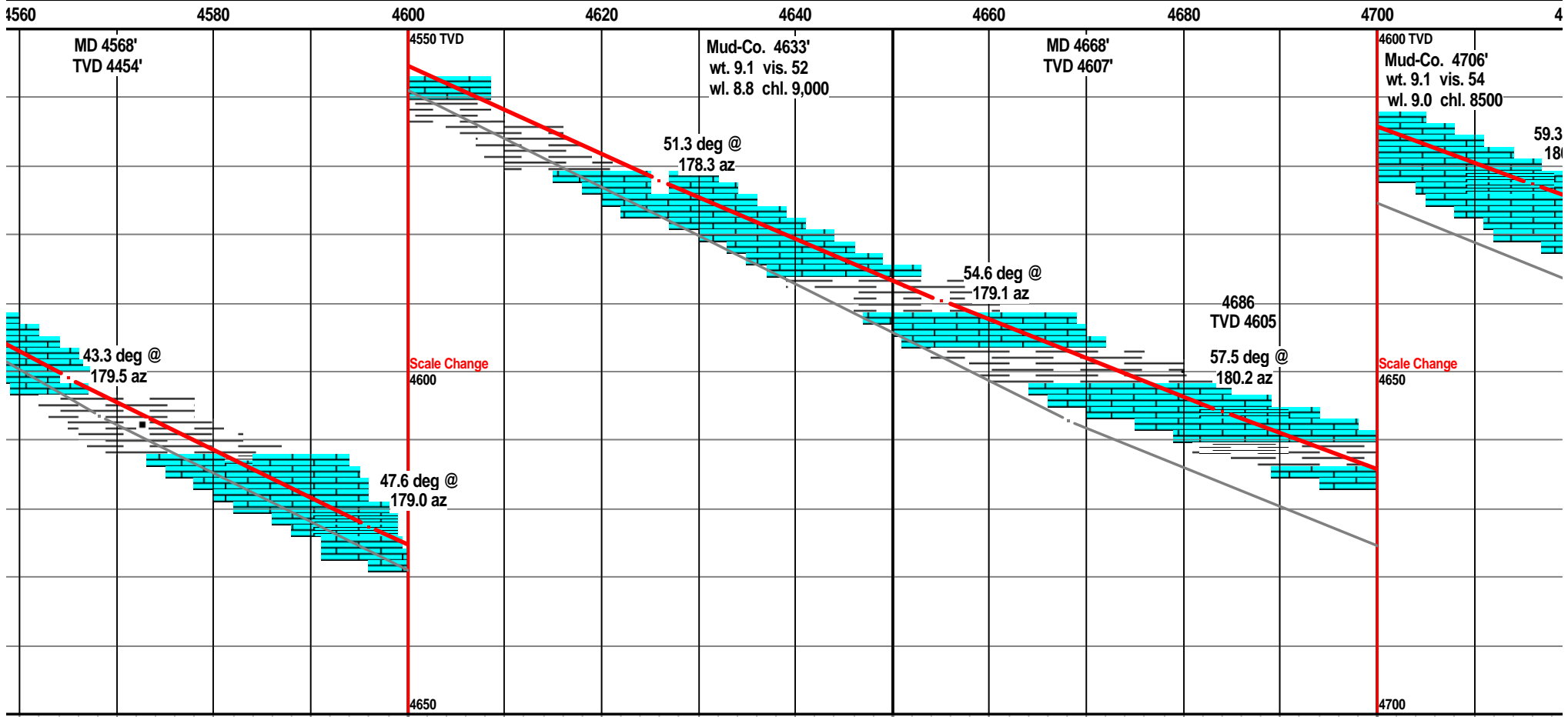
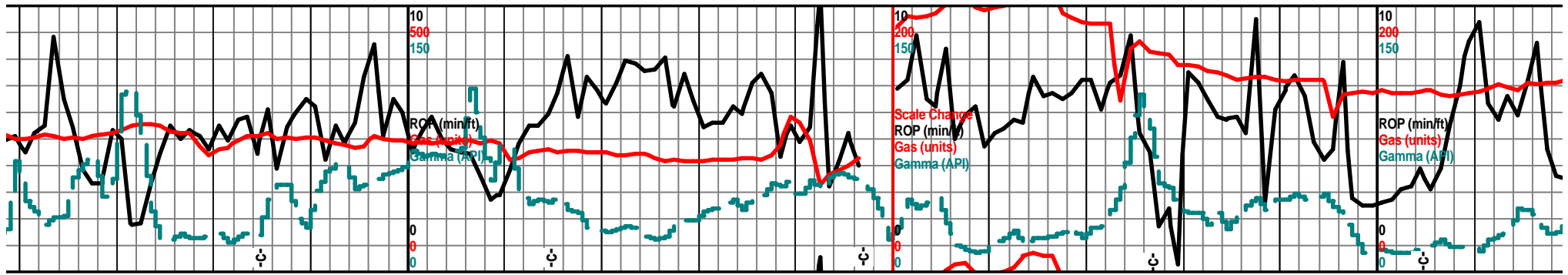
Depth 00 4120 4140 4160 4180 4200 4220

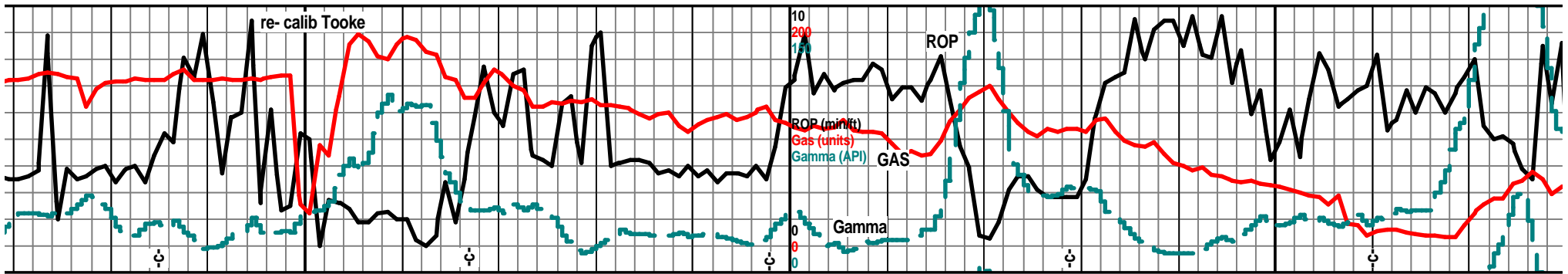


Porosity	24%
	18%
	12%
	6%
Porosity Type	

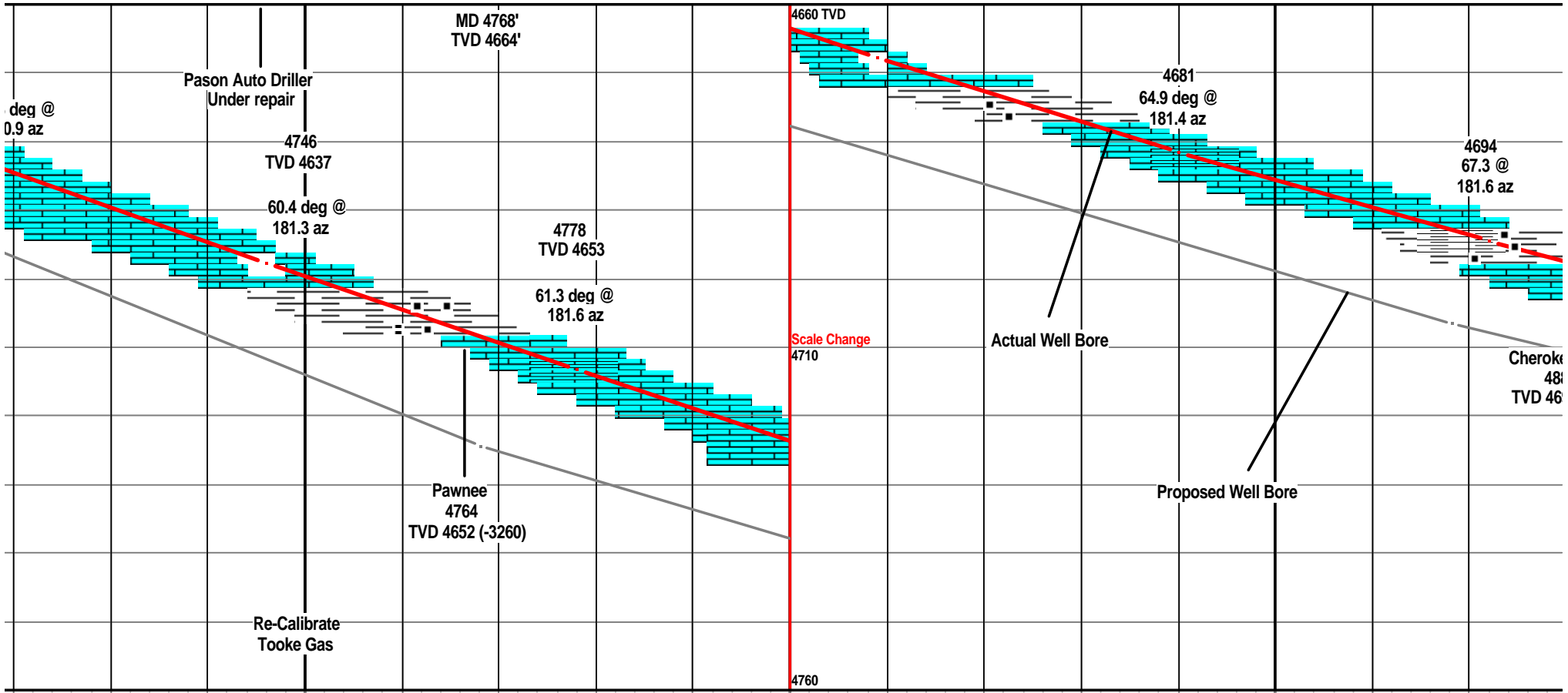


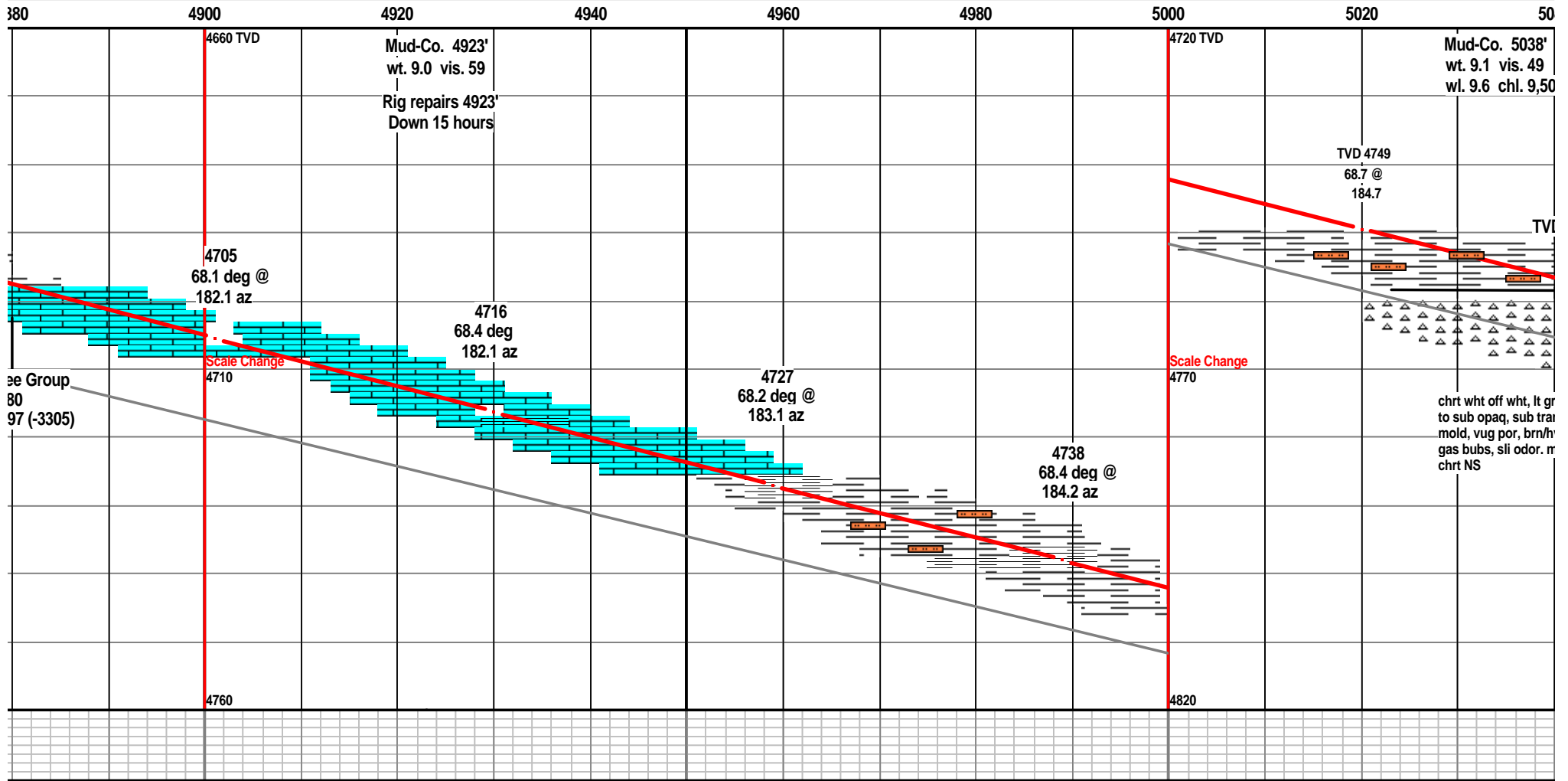
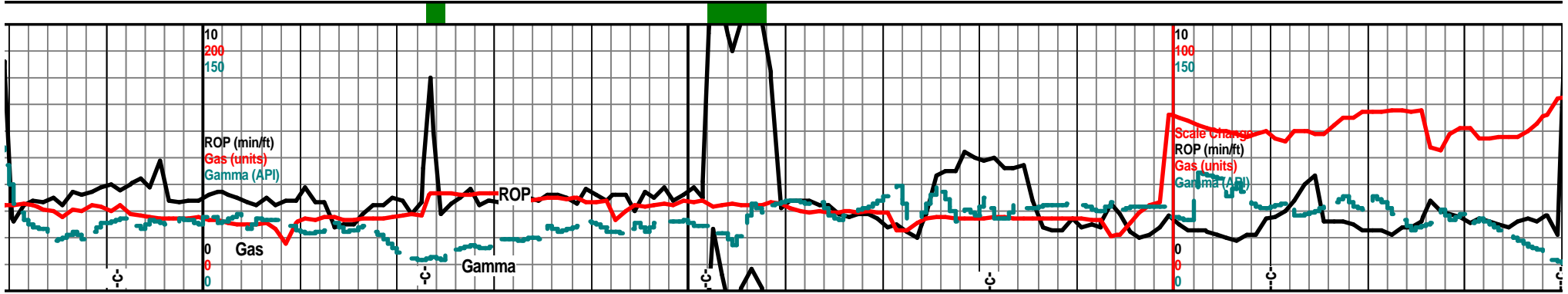


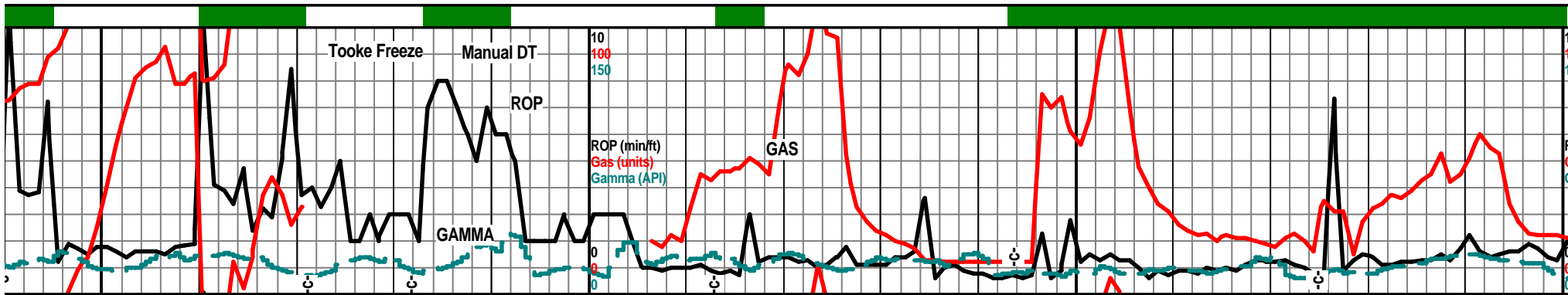




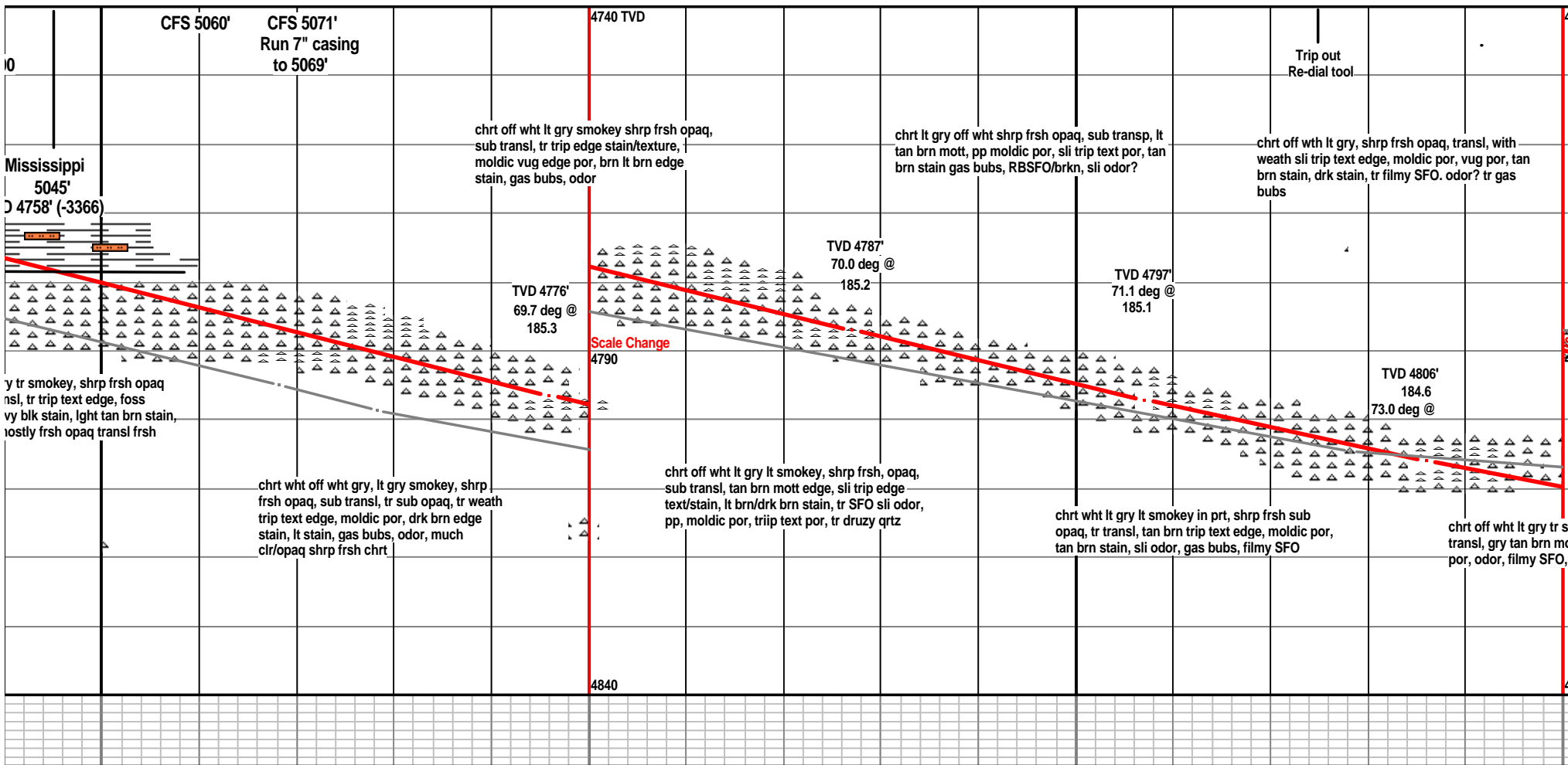
720 4740 4760 4780 4800 4820 4840 4860 4880

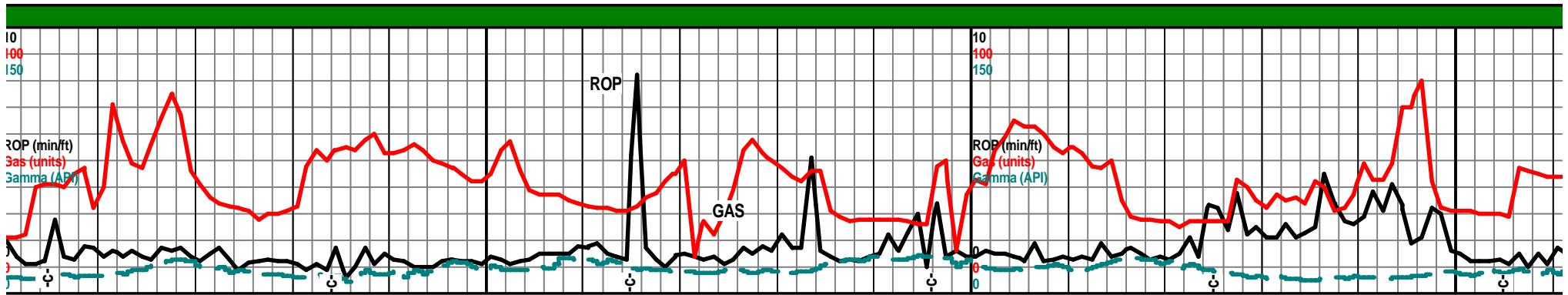




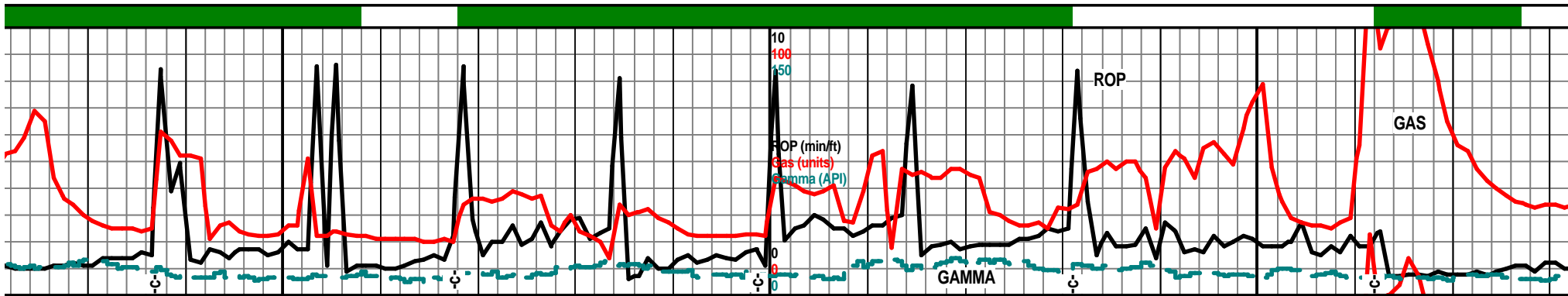


40 5060 5080 5100 5120 5140 5160 5180 5200





10	5220	5240	5260	5280	5300	5320	5340	536
1760 TVD	Mud Co. 5214' wt. 8.3 vis. 26 chl. 800		CFS 5265'		CFS 5296'	4760 TVD		
	chrt off wht gry tan, shrp frsh opaq sub opaq, tan brn mott, trip text, gd vug moldic por, tan brn stain, filmy SFO odor gas bubs dull UV,		chrt wht off wht lt gry shrp frsh opaq, weath trip edge, foss mold, pp/moldic por, inter gran por, sli odor, gas bubs, tan brn blk stain, filmy SFO dull UV		crt tan smokey off wht shrp frsh opaq, semi transp, w/weath trip edge. tan brn stain, dark stain, dolo/lst wht lt tan f xln gran soft chlyk glau, chrt inclu		chrt wht lt gry opaq, transl, chrt off wht lt gry shrp frsh w/weath trip text edge, pp moldic por, tan brn stain, tr gas bubs, tr dolo/lst tan off wht fn xln gran tr soft chlyk glau, stain odor?	
	TVD 4814' 75.4 deg @ 183.6		TVD 4821' 78.1 deg @ 183.3		TVD 4826' 81.9 deg @ 183.6		Actual well bore	
Scale Change 1840						4810		
						TVD 4830, 84.1 deg @ 181.5		TVD 4832' 87.0 deg @ 180.7
	mokey, shrp frsh opaq sub jt, trip text edge, moldic/vug tan brn stain, gas bubs	chrt crm tan off wht lt gry shrp frsh opaq sub transl, tan brn lt tan mott, weath trip text, gd vug/pp por, moldic por, tan brn stain, gas bubs, filmy SFO odor		chrt wht off wht lt gry shrp frsh opaq, with tan brn trip weath edge, stain, tan brn stain gas bubs, lst/dolo wht off wht f xln gran chlyk chrty, off wht tan gry chrt inclu, glau, tr stain		chrt wht clr lt gry opaq, semi transl, shrp frsh blkly, with tan brn weath trip edge text, pp moldic por, brn stain ssfo, odor? lst/dolo wht lt gry f xln gran blkly sub chlyk chrt inclu w/stain, drk ssfo.		chrt lt gry smokey trans dolo edge, dolo wht lt t: chlyk, with weath chrt i: por, dark stain gas bub:
1860						4860		



5540 5560 5580 5600 5620 5640 5660 5680

Mud Co. 5568'
wt. 8.4 vis. 28
chl. 1,000

4760 TVD

chr wht off wht lt gry, shrp frsh opa sub transl, weath trip edge text, tan brn stain, gas bubs, dull UV, sli odor, tr dolo wht off wht f vf xln dns soft chlky with chrt inclu, tan brn trip text edge.

chr wht lt grh smokey shrp frsh transl, chr tan lt brn tan gry with weath trip edge text, pp moldic por, vug por, tan brn stain, filmy sfo, gas bubs, dull UV

chr lt gry, lst smokey, tan, shrp frsh opaq transp, with weath vug, pp, moldic por, dark stain, filmy sfo, floating drops, gas bubs, chrt aa with weath tan brn trip text edges, vug, moldic por, dark stain, sfo, odor, dull UV

chr lt gry lt smokey shrp frsh opaq transl, with weath trip text edges, pp moldic por, vug por, tan brn stain, vssfo, floating oil drops, gas bubs, dull UV

24'
g @

TVD 4821'
94.9 deg @
173.4

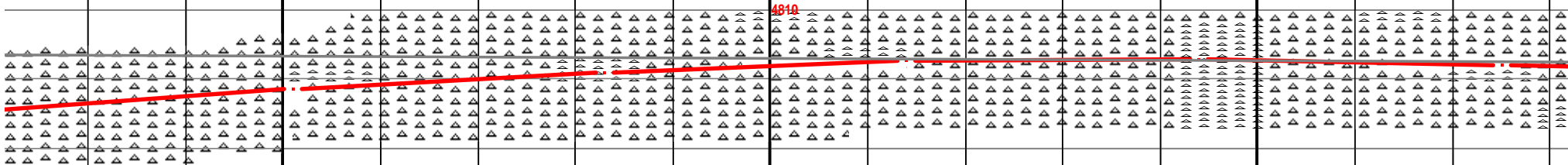
TVD 4819'
93.9 @
172.7

TVD 4817'
92.1 deg @
172.5

4817'
89.0 deg @
172.3

4818'
87.7 deg @
172.2

4810



y, shrp frsh opa sub p text edge, dolo tan crm nclu, tan brn pp moldic sfo, gas bubs

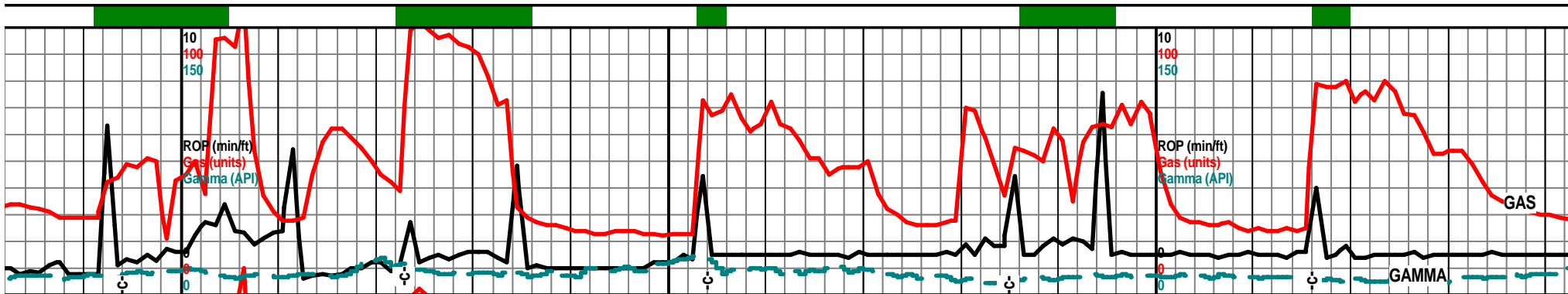
wht off wht lt gry, with tan brn mott trip text edge, pp moldic por, vug por, tan brn stain, filmy sfo, floating drops, gas bubs, sli odor, lots gry lt smokey shrp frsh opa transl chrt

chr off wht lt gry smokey, with tan brn mott trip text edge, pp, vug and moldic por, tan to brn stain, filmy sfo, sli odor, gas bub, gry smokey frsh opa transl chrt

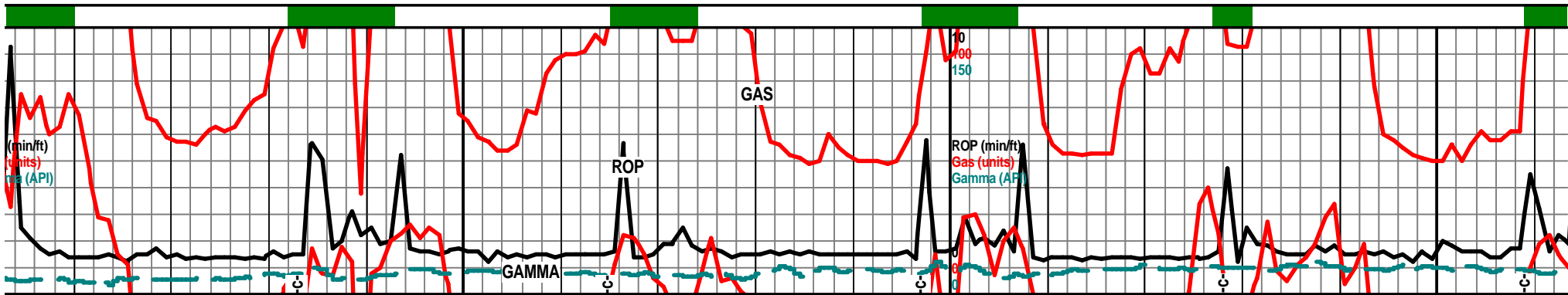
chr off wht lt gry smokey, shrp frsh opa, ang blkly transp with weath trip text edges, dark stain, sli odor, filmy sfo, dull UV, gas bubs

chr off wht lt gry smokey, opa transl, with weath m moldic por, pp por, tan brn drops, gas bubs, dull UV

4860



5700	5720	5740	5760	5780	5800	5820	5840
4760 TVD				MD 5786' TVD 4818'	4760 TVD		
chrt lt gry tan smokey shrp frsh opa, sub transp, tr foss, marked decrease in weath trip text chrt, tr weath tan drk brn trip text chrt, stain, drk sfo, odor, gas bubs,		mostly chrt, off wht lt gry shrp frsh opa, sub transl, blk ang, tr with weath trip text edge por and stain, vug, moldic por, dark stain, filmy SFO, tr gas bubs, dull UV, sli odor		chrt lt gry off wht smokey, shrp frsh opa blk semi transl, weath trip weath edges, pp moldic por, dark stain, filmy sfo, dull UV sli odor		chrt off wht lt gry tr smokey, shrp, frsh, opa, transl, semi transp, chrt aa with dark tan brn weath trip text edge, pp vug moldic por, tan brn tr blk stain, sli odor, filmy sfo dull UV.	
4818' 88.9 deg @ 172.6		4819' 89.1 deg @ 173.1		4819' 90.1 deg @ 173.1		4819' 91.5 deg @ 172.9	4818' 91.4 deg @ 172.7
4810					4810		
dull gry, shrp frsh stly trip edges, vug and stain, sso, floating	chrt off wht lt gry lt smokey shrp frsh opa, transl, sub transp, chrt lt try off wht, with tan brn weath trip text edges, tan brn stain, sso, filmy sfo, gas bubs, sli odor, vug, moldic por, pp por,		new--off wht lt greenish dolo, vf xln gran soft sub, glau, chlky, chrt in prt, chrt inclu with weath trip txt pp moldic por, tan brn stain filmy sfo, odor, gas bubs, much chrt lt gry off wht smokdy shrp frsh opa sub transl		chrt off wht lt gry, tr smokey in prt, shrp, frsh, opa, sub transl, transp in prt, tr foss, weath trip edges, pp moldic, vug por, tan brn stain, sli odor, gas bubs, tr wht off wht lt gry dolo, f xln gran soft chlky chrt inclu		chrt crm tan lt gry smokey transl, weath tan brn trip moldic vug por, tan brn s bubs, sli odor, tr dolo crn gran soft chlky chrt inclu
4860					4860		



6020 6040 6060 6080 6100 6120 6140 6160

TVD Mud- Co. 6091' 4760 TVD
 wt. 8.4 vis. 29
 wl. N/C chl. 1,200

chrt lt gry clr smokey shrp frsh with weath trip edge text, mosity gry tan brn mott, crs weath trip edge text, tan brn stain, abun gas bubs, tan brn SFO w/brkn, dull UV, fair odor

chrt lt gry off wht shrp frsh opaql transl, tr glau, chrt gry smokey with tan brn mott weath trip edge text, stain, brn stain, SFO/brkn, sli odor, gas gubs, dull UV good shows!

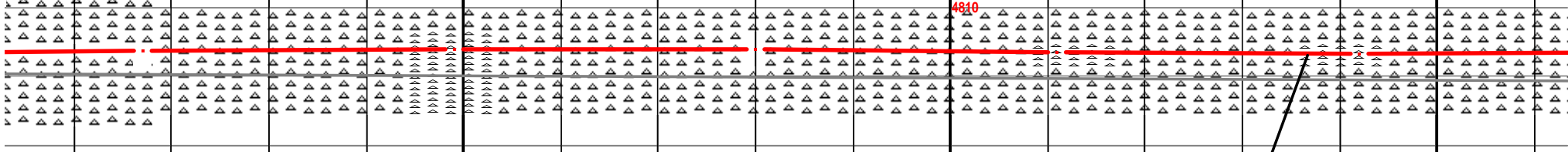
chrt off wht lt gry lt smokey, shrp frsh blkly opaql, semi transl, tr foss, chrt aa with weath trip text edge, pp vug moldic por, tan brn stain, drk stain, tr SFO/brken gas gubs sli odor

chrt tl gry off wht clr, shrp frsh opaql transl, chrt lt gry off wht with weath trip edge, tn brn stain, tan stain dull UV, pp, moldic. vug por, odor, SFO when brkn gas bubs

4816' 4815' 4815' 4816' 4816'

90.0 deg @ 90.5 deg @ 89.3 deg @ 89.2 deg @ 90.0 deg @

170.0 171.1 171.1 173.3 173.2



Actual well bore

weath trip text, gd pp stain, SFO/brkn, gas

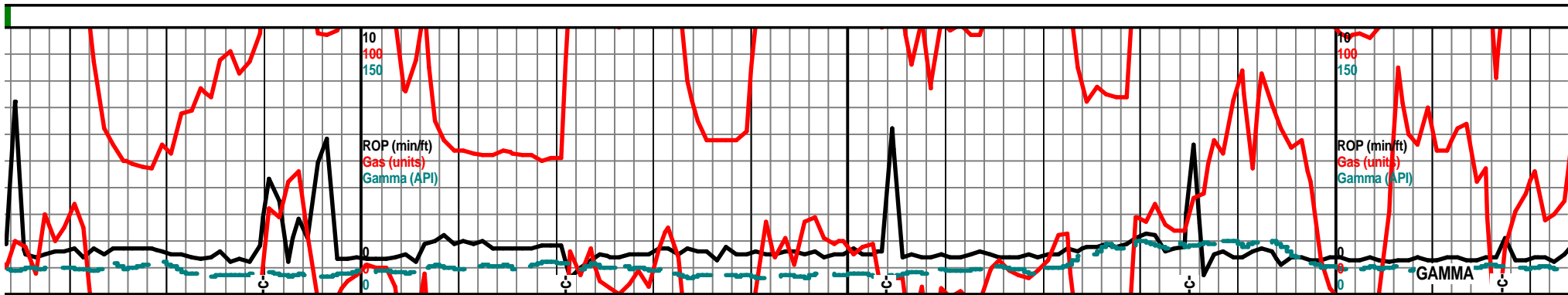
chrt off wht lt gry shrp frsh opaql, blkly ang transl, chrt tan brn mott, weath trip text, gd pp/moldic/vug por, tan brn stain, odor, gas bubs, SFO when brken, floating oil droplets sli odor

chrt off wht lt gry lt smokey, shrp frsh, opaql, semi transl, foss, chrt aa with weath trip text edges, pp moldic por, vug por, tan brn stain, drk SFO, drk stain, dull UV, sli odor, gas bubs, floating free oil

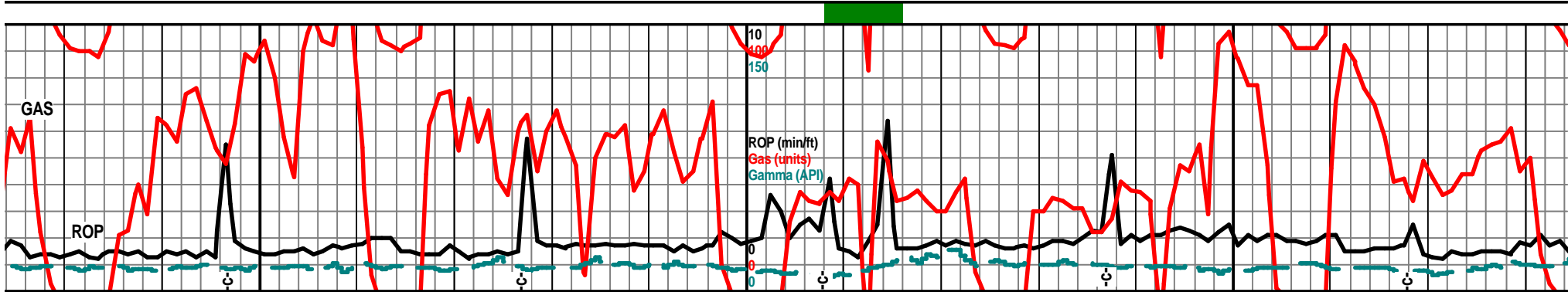
chrt off wht lt gry shrp frsh opaql transl, tr foss frags, chrt wht off wht gry smokey shrp frsh with weath trip text edges, drk tan brn stain gd vug moldic pp por, drk SFO when brkn, gas bubs, sli odor

chrt clr off wht lt gry tr lt semi transl, tr transp, with tan brn stain, brn sfo when UV

4860



6180	6200	6220	6240	6260	6280	6300	6320
	4760 TVD		6221' Bit Trip 6 pm Friday June 8, 2012		Mud-Co. 6280' wt. 8.4 vis. 28 chl. 1,200	4760 TVD	
chrt off wht lt gry tr lt smokey shrp frsh opa transl, transp in prt, with weath trip text edges, tan brn stain, dark SFO, gas bubs, pp vug moldic por	chrt off wht lt gry lt smokey shrp frsh opa transl, semi transp, chrt off wht gry smokey with weath trip text edges, pp moldic por, tan brn stain, odor, gas bubs, dull UV	chrt lt gry lt smokey shrp frsh opa transl, chrt lt gry tan brn mott, weath trip text pp, vug & moldic por, tan brn stain, SSFO, filmy SFO, gas bubs sli odor	chrt lt gry lt smokey shrp frsh opa transl, chrt lt gry tan brn mott, weath trip text pp, vug & moldic por, tan brn stain, SSFO, filmy SFO, gas bubs sli odor	chrt lt gry lt smokey shrp frsh opa transl, chrt lt gry tan brn mott, weath trip text pp, vug & moldic por, tan brn stain, SSFO, filmy SFO, gas bubs sli odor	chrt lt gry lt smokey shrp frsh opa transl, chrt lt gry tan brn mott, weath trip text pp, vug & moldic por, tan brn stain, SSFO, filmy SFO, gas bubs sli odor	chrt gry tan wht mott, weath trip text, pp, moldic por, vug por, tan brn tr blk stain, filmy sfo, floating droplets, gas bubs, chrt lt gry lt smokey shrp frsh blk opa transl	
4816' 90.6 deg @ 172.9	4816' 89.5 deg @ 172.9	4816' 89.3 deg @ 173.2	4816' 89.3 deg @ 173.2	4817' 89.3 deg @ 173.2	4817' 89.6 deg @ 173.1		
nokey shrp frsh, opa weath trip text edge, brkn, tr gas bubs, dull	chrt lt gry off wht tr lt smokey, shrp frsh opa blk semi transl, sli transp, with weath trip text edge, tan brn stain, abun gas bubs, dull UV, filmy SFO, odor, gd vug pp moldic por	chrt off wht lt gry lt smokey shrp frsh opa, tansl semi transp, chrt off gry lt smokey shrp frsh with tan brn weath trip text, pp moldic vug por, tan brn stain SSFO, tr gas bubs dull UV	chrt off wht lt gry lt smokey shrp frsh opa, tansl semi transp, chrt off gry lt smokey shrp frsh with tan brn weath trip text, pp moldic vug por, tan brn stain SSFO, tr gas bubs dull UV	chrt lt gry lt smokey shrp frsh opa blk transl semi transp, chrt gry tan brn mott, weath trip text, gd vug, moldic por, pp por, tan brn stain, ssfo, gas bubs odor, dull UV	chrt lt gry lt smokey shrp frsh opa blk transl semi transp, chrt gry tan brn mott, weath trip text, gd vug, moldic por, pp por, tan brn stain, ssfo, gas bubs odor, dull UV	chrt wht lt gry lt smokey shrp transl, transp in prt, with we brn tan tr blk edge stain, vss bubs, odor	
	4860					4860	



6340

6360

6380

6400

6420

6440

6460

6480

4760 TVD

chrt as before, bec frsher, mstly lt gry lt smokey frsh chrt, shrp blk, opa, semi transl, 30% with weath trip edge por, vug pp por, tan brn stain gas bubs, abun oil droplets floating dull UV

chrt lt gry smokey shrp frsh blk opa trans, with weath trip text edge, tan brn mott trip chrt, vug moldic por, pp por, tan drk tan brn stain, oil floaters, odor tr gas bubs.

chrt tan brn drk brn mott, weath trip text, pp, moldic, vug por, tan brn, tr blk stain, sfo, fair odor, floating SFO, dull UV, abun gas bubs, tr chrt lt gry smokey shrp frsh opa with weath edge aa

chrt off wht lt gry lt smokey, shrp frsh opa, transl, semi transp, mstly frsh, with weath trip text edges, moldic and vug por, tan brn stain, drk brn stain, dull UV, filmy SFO

4817'
89.6 deg @
173.3

4817'
89.9 deg @
172.9

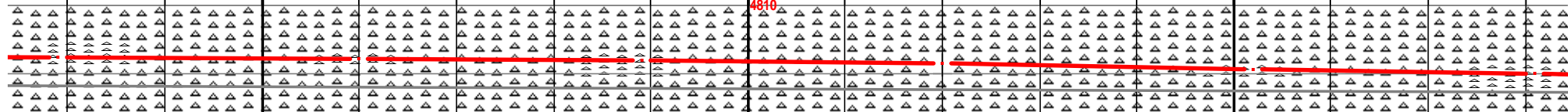
4817'
89.6 deg @
172.8

4818'
88.8 deg @
173.0

4819'
88.5 deg @
172.7

4820'
88.2 deg @
172.1

4810



3 frsh opa, semi th sli trip edge text, fo when brkn, tr gas

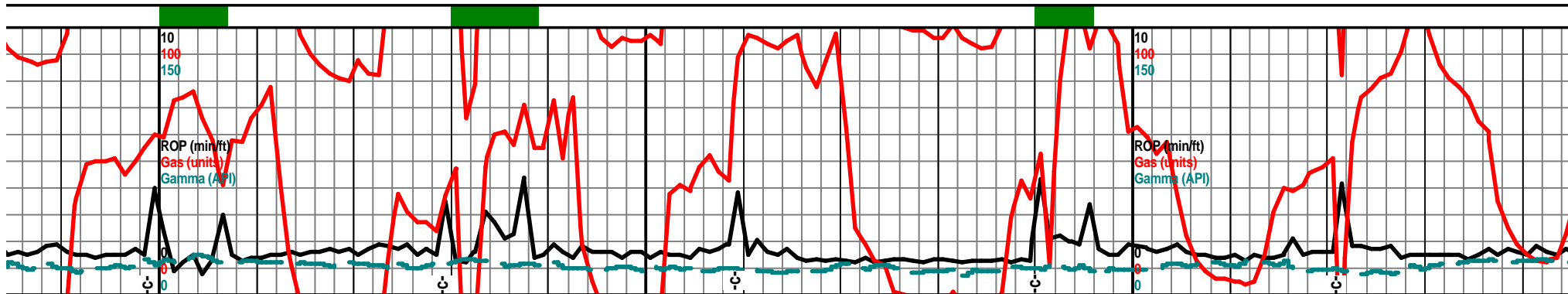
chrt lt gry lt smokey shrp frsh blk, opa transl, semi transp, gry tan brn mott, weath trip text/por, vug moldic pp por, tan brn stain odor dull UV, gas bubs,

chrt off wht lt gry lt smokey shrp frsh blk opa, transl, simi transp, with weath tan brn mott trip text edges, weath edges, pp moldic por, vug por tan brn stain, ssfo, odor gas bubs

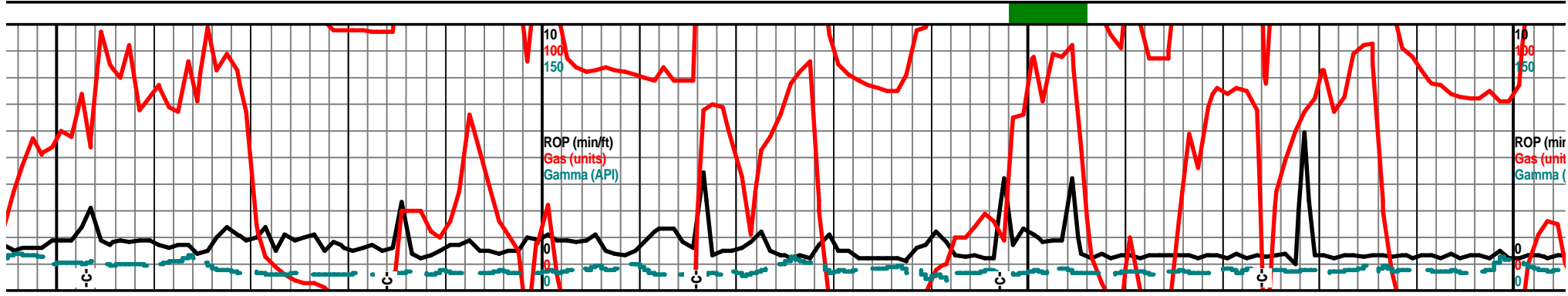
chrt lt gry lt smokey, shrp frsh, opa, transl, semi transp, spl 70% chrt, chrt aa with weath trip text edge, pp moldic por, vug por, tan brn stain, drk brn stain, gas bubs, filmy sfo odor

chrt wht lt gry lt smokey sh semi transp, tr vit, with wea edge, pp, moldic, vug por, 1 gas bubs, much floating oil

4860

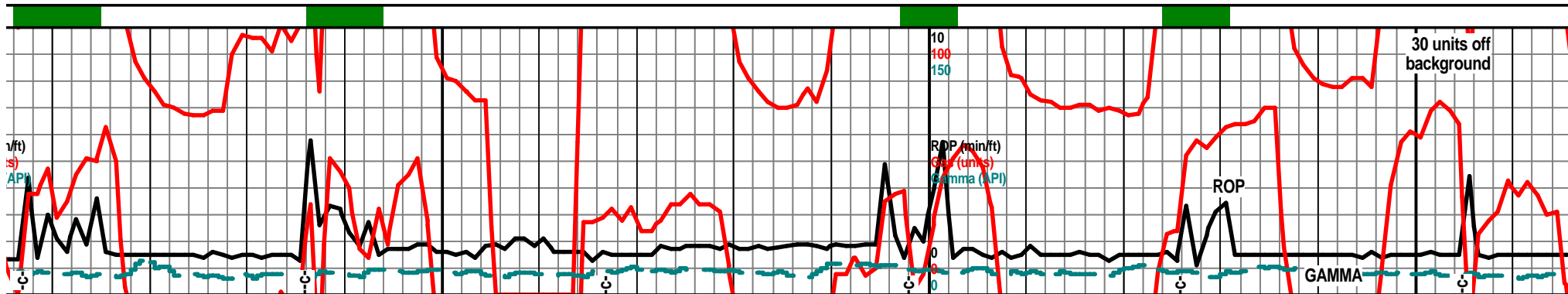


	6500	6520	6540	6560	6580	6600	6620	6640
	4760 TVD			down hole vibrater = fine samples		4760 TVD		
	chrt off wht lt gry lt smokey gry, shrp frsh opa, trans, semi transp, with trace weath trip text edges, tan brn edge stain, vug, moldic por, oil droplets, dull UV, spls 70% frsh chrt		chrt lt gry lt smokey, shrp frsh opa blk ang, transl, semi transp, tan brn weath trip edge, tan brn stain, odor?, vug moldic por, dullUV, tr gas bubs, oil floaters		chrt lt gry smokey shrp frsh opa blk ang, opa, transl, semi transp, tan brn weath trip edge, vug moldic por tan brn stain, filmy sfo, sli odor, ssfo		chrt lt gry lt smokey shrp frsh opa blk ang transl, semi transp, tan brn weath trip text edges, tan brn stain, tr gas bubs, oil floaters, dull UV	
@	4821' 87.9 deg @ 173.1		4822' 87.9 deg @ 174.7		4823' 88.0 deg @ 174.8	4824' 88.5 deg @ 174.6		4825' 88.3 deg @ 174.1
	4810					4810		
	rp frsh opa, transl, th tan brn trip text tan brn stain, sli odor, droplets!!	chrt lt gry smokey gry, shrp frsh opa blk transl, semi transp, with weath trip text edge, brn blk stain, pp vug and moldic por, ssfo, gas bubs, oil floaters		chrt lt gry lt smokey shrp frsh opa blk, with gran weath trip text edge, pp moldic por, pp por, tan brn stain, ssfo. gas bubs odor?,		chrt lt gry lt smokey gry shrp frsh opa blk ang, chrt aa with tan brn weath trip text edges, tan brn stain, drk stain, tr gas bubs odor? tr lst wht f xln soft chiky chrt		chrt lt gry lt smokey gry sh semi transp, with tan brn tan brn stain, gas bubs, v chrt f xln hrd blk ang
	4860					4860		



6660 6680 6700 6720 6740 6760 6780 6800

			4760 TVD					MD 6786' TVD 4824'	4760 TVD
									7 am 6800' Sunday June 10, 2
chrt lt gry lt smokey gry shrp frsh opa q blky ang pcs, transl, semi transp, with tan brn weath gran trip edge text, tan brn stain, vssfo, gas bubs, tr lst wht xln chrty, semi chlky		chrt lt gry, lt smokey gry shrp frsh opa q blky ang, with weath trip text edge, pp moldic por, tan brn stain, drk blk stain, oil droplets, sli odor, tr gas bubs, 60% frsh chrt		chrt lt gry lt smokey gry, shrp frsh opa q, blky ang, with weath sli trip weath edges, drk tan brn mott, pp moldic vug por, tan brn stain, dolo/lst wht vf xln chlky chrty/chrt inclu, tr glau, w/weath edge, dark stain		chrt lt gry lt smokey, shrp frsh opa q, blky ang pcs, transl, semi transp, with tan brn weath trip text edges, pp vug molic por, tan brn stain, drk stain, sli odor, gas bubs, floaters, tr lst/dolo wht off wht f xln gran soft chlky tr glau with chrt inclu			
	4826' 88.2 deg @ 173.8	4827' 88.1 deg @ 173.8	4810	4828' 88.0 deg @ 173.8	4828' 88.8 deg @ 173.2	4829' 89.0 deg @ 173.2	4810		
vrp frsh opa q, transl, weath gran edge text, sfo, dull UV, tr lst wht	chrt lt gry lt smokey gry shrp frsh opa q transl, semi transp, with weath tan brn trip text edge, vug/moldic por, pp por, tan brn stain, tr gas bubs, dull UV	chrt lt gry lt smokey tr wht, shrp frsh blky ang pc, opa q, transl semi transp, with weath tan brn trip text edge, pp moldic vug por, tan brn stain, drk sfo, tr gas, odor?		chrt lt gry frsh shrp opa q transl, semi transp, blky ang pcs with weath tan brn trip edge text, vug pp, moldic por, tan brn stain, sli odor, dull UV, oil floaters, tr lst dolo, wht off wht f xln gran chlky soft with chrt inclu tr glau		chrt lt gry lt smokey shrp frsh trancl, with incr tan brn weath stain, vug pp and moldic por, gas bubs			
			4860				4860		



6820 6840 6860 6880 6900 6920 6940 6960

1012

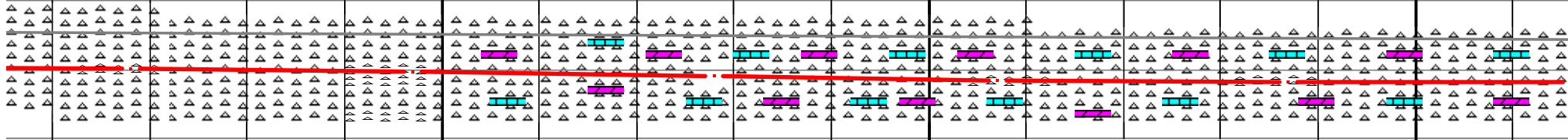
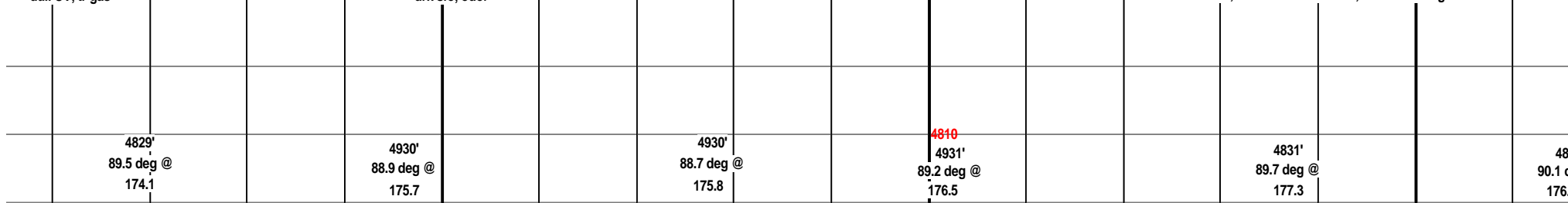
Mud-Co. 6896' 4760 TVD
 wt. 8.4 vis. 27
 chl. 1,300 ppm

chrt lt gry lt smokey, shrp frsh opa, blk ang pcs, with weath gran trip text, vug pp and moldic por, tan brn in color, tan brn stain, oil floaters, dull UV, tr gas

chrt lt gry shrp frsh opa blk ang pcs, withtan brn trip text edges, chrty dolo/lst, wht off wht f xln glau, chrty inclu with weath vug moldic por, stain drk sfo, odor

chrt lt gry shrp frsh opa with weath sli trip text edges. vug and moldic por, chrty dolo/lst wht off wht f xln gran soft chrty, weath por, pp moldic por, tan brn stain,

chrt lt gry smokey shrp frsh opa, blk ang pcs, transl, semi transp, weath tan brn trip text edge, tan brn stain, chrty dolo wht off wht f xln gran soft, with weath chrty inclu, tan brn stain gas bubs



blk ang opa, pcs, trip text tan brn dull UV, floaters,

chrt lt gry lt smokey gry, shrp frsh opa blk ang pcs, with weath trip text edges, brn blk stain, sli odor, drk sfo dull UV, tr lst/dolo wht off wht f xln gran chiky chrty tr glau

chrt off wht lt gry shrp frsh opa with weath edges, pp moldic por, tan brn stain, chrty dolo/lst wht off wht f xln gran soft chrty with tan brn stain glau gas bubs

chrt lt gry lt smokey shrp frsh opa blk ang pcs, transl, semi transp. with tan brn weath trip edge text, tan brn stain, chrty dolo wht off wht lt green, f xln blk ang gran chrty, moldic vug por, stain VSSFOS odor

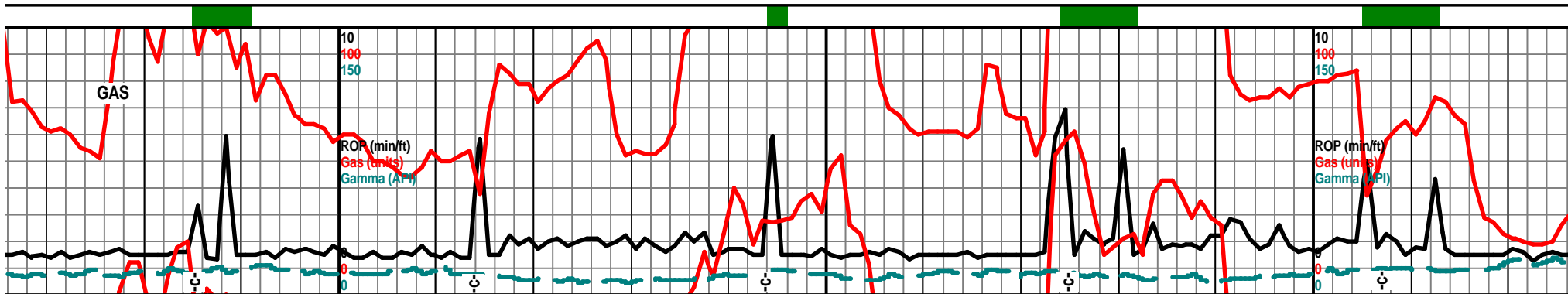
chrt as before, dolo, lst/dolo, blk gran and dns sub chiky, stain, pp moldic por, chrty, cl moldic por, tan brn stain, ocl

4829' 4930' 4930' 4810' 4831' 48

89.5 deg @ 88.9 deg @ 88.7 deg @ 89.2 deg @ 89.7 deg @ 90.1 c

174.1 175.7 175.8 176.5 177.3 176.

4860



6980 7000 7020 7040 7060 7080 7100 7120

4760 TVD
 Bit Trip
 7105'
 9 pm June 10, 2012

chrt aa in spl, dolo wht off wht lt tan f vr xln gran, tr sub chlky, pp por, tan brn stain, chrt inclu with weath chrt, pp moldic por, tan brn stain

chrt off wht lt gry lt smokey shrp frsh blkyc pcs, opa, transl, semi transp. tr weath sli trip edge, tr tan brn stain, dolo/lst wht off wht f xln gran sub chlky chrt tr tan brn stain

chrt lt gry lt smokey color gry shrp frsh opa, blkyc ang pcs, incr weath trip text egde material, incr tan brn stain, vug moldic por, lst/dolo wht f xln soft chlky chrt, glau, tr tan brn stain

sample quality??

31' leg @ 7

4831' 91.3 deg @ 176.7

4830' 92.5 deg @ 174.6

4828' 93.7 deg @ 176.5

4826' 93.5 deg @ 176.2

4810

4825' 91.0 deg @ 176.8



wht off wht, f vf xln glau, with tan brn hrt lt gry w/weath pp or

chrt lt gry lt smokey shrp frsh blkyc pcs, with tr weath tan brn sli trip edge stain, chrt dolo wht off wht f xln gran soft chlky chrt, chrt with weath trip text, tan brn stain,

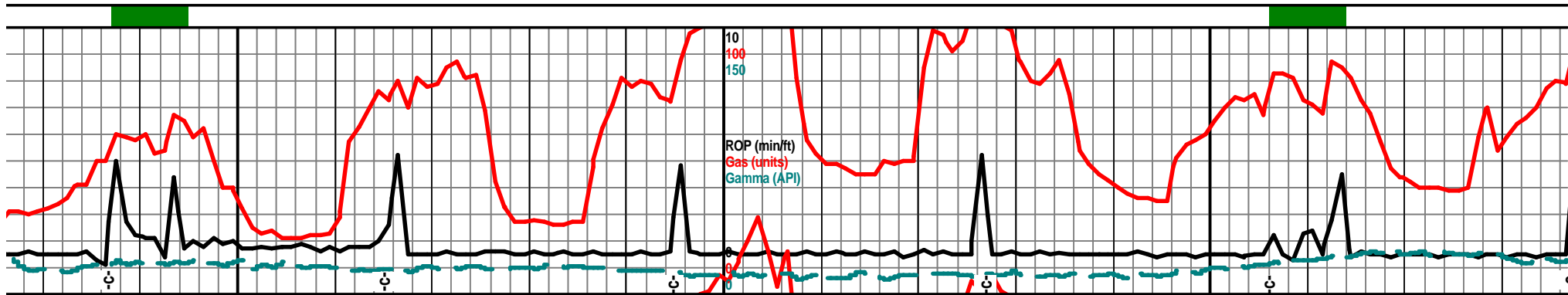
chrt lt gry lt gry/smokey shrp frsh opa, blkyc ang pcs, transl, semi transp, tr weath sli trip edge stain, tan brn sfo, tr floating droplets dolo/lst wht off wht f xln gran tr chlky tr chrt glau

chrt lt gry off wht frsh shrp tr foss, blkyc ang pcs, opa, transl, semi transp, with weath tan brn trip text edge pp moldic por, stain, dolo.lst wht off wht f xln gran chlky chrt, glau, chrt inclu with weath text, stain

chrt lt gry lt smokey shrpfrsh opa ang pcs, with weath trip text edge drk sfo, dull UV, sli odor, lst wht blkyc ang tr chlky chrt withtan br inclu,

4860

4860



7140 7160 7180 7200 7220 7240 7260 7280

MD 728
TVD 482

chrt lt gry smmokey shrp frsh blkly ang pcs, with tan brn weath trip text edges/faces, pp moldic vug por, tan brn stain, sli odor, dull UV, oil floaters

chrt off wht lt gry lt smokey shrp frsh opa, blkly ang pcs, transl, semi transp, with weath trip text edge, pp vug mildic por, tan brn stain, tr oil floaters, sli odor?, tr dolo/1st edge tr glau

chrt lt gry lt smokey shrp frsh blkly ang pcs, with weath trip text edge/surface, tan brn stain, pp vug moldic por, dull UV, ssfo, fair odor,

chrt off wht lt gry lt smokey, shrp frsh opa, blkly ang pc, with tan brn weath trip text edges/faces, pp vug moldic por, tan brn stain, fair odor, floating droplets dull UV

Actual well bore

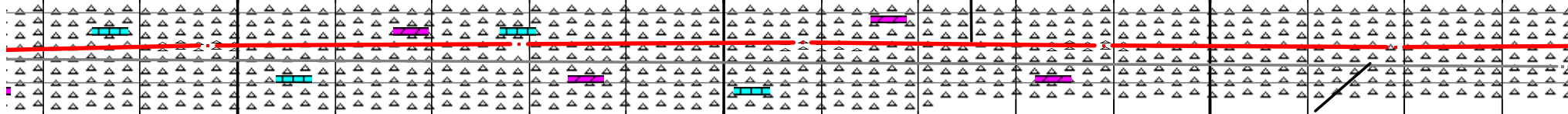
4824'
90.8 deg @
176.3

4824'
90.6 deg @
176.4

4810 4824'
89.6 deg @
175.8

4824'
89.3 deg @
175.3

4824'
89.9 deg @
175.4



Proposed well bore

transl hrd blkly, tan brn stain, off wht lt green n stain chrt

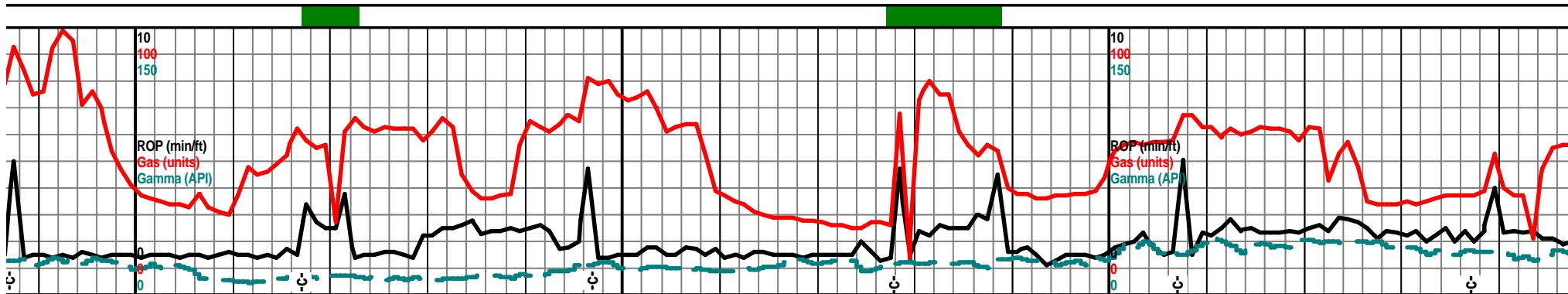
chrt off wht lt gry dolo in prt wht off wht f xln gran chiky soft, chrt lt grh smokey shrp frsh opa with tan brn weath trip edge text, pp moldic por, uv g por, tan brn stain

chrt off wht lt gry tr smokey, shrp frsh opa transl, semi transp with weath trip text edges/faces, tan brn stain, vug, pp, moldic por, tan brn sfo dull UV gas bubs, sli odor, oil floaters

chrt lt gry off wht lt smokey shrp frsh opa transl, semi transp, with tan brn weath trip text edge/face, tan brn stain, pp vug and moldic por, odor, gas bubs, tr 1st dolo wht off wht f xln gran chiky chrt, chrt inclu with show aa

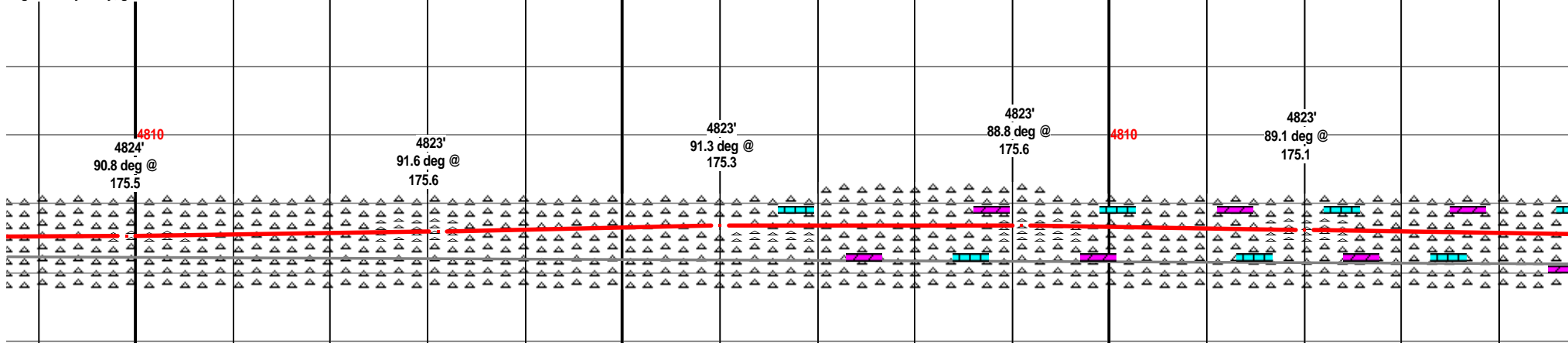
chrt off wht lt gry, lt gry/smokey transl, semi transp, with weath trip tan brn stain, vssfo, dolo/1st wht off wht f xln gran chiky glau, chrt inclu, tan brn stain

4860



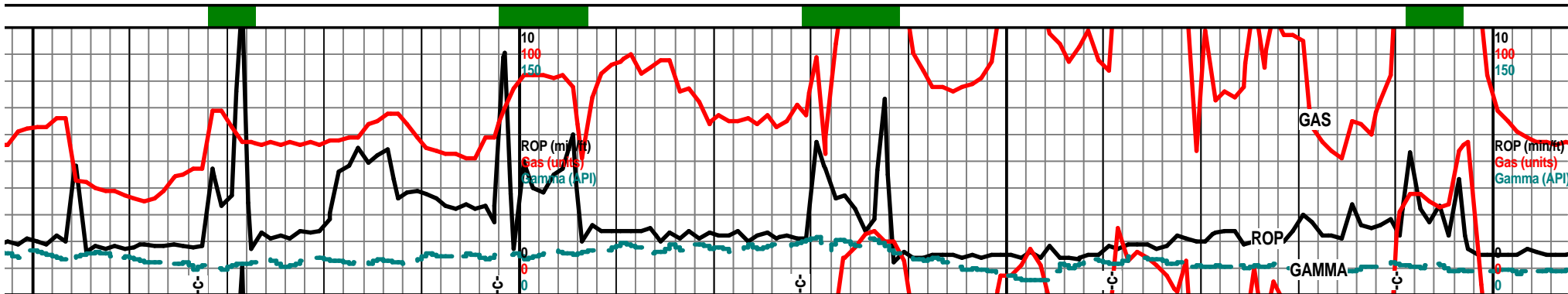
7300 7320 7340 7360 7380 7400 7420 7440

6' 27'	4760 TVD							4760 TVD			
	chrt wht lt gry off wht lt smokey frhs shrp blk ang pcs, opa, transl, with weath tan brn trip text edge, lst/dolo wht off wht tr green tint, f vf xln gran chlky chrt, glau		chrt as before, incr chrt off wht lt tan, blk ang pcs, less sharp, semi transp, chrt lt gry shrp frsh blk pcs, some with weath tan brn edge, tan brn stain dull UV		chrt off wht lt gry shrp frsh opa blk ang pcs, semi transp, transl, tr with weath edge stain, pp moldic por, mostly shrp frsh				dolo chrt dolo wht f vf xln blk ang dns glau, wht chrt inclu of off wht lt gry shrp blk opa tr weath trip text, tan brn stain tan brn ssfo, dull UV nodor		



	shrp frsh opa, rip text edges, tan wht f xln gran sin sli odor.	chrt lt gry lt smokey shrp frsh blk opa pcs, transl, semi transp, tr glau, chrt lt gry shrp frsh with tr weath trip text edges/face tan brn stain	chrt lt gry off wht tr lt tan shrp frsh blk ang opa, transl, semi transp, 80% chrt aa, tr chrt with tan brn weath edge stain pp moldic por	chrt of gry/gry/smokey shrp frsh blk ang opa pcs, transl, semi transl, with tr weath trip edge, mosly frsh shrp blk		dolo wht off wht f vf xln gran blk chrt, chrt inclu, chrt lt gry shrp f semi transp, with weath trip text stain, ssfo, nodor floating oil dro
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4860 4860



7460

7480

7500

7520

7540

7560

7580

7600

4760 TVD

7520' 7 am
Monday
June 12, 2012

Mud-Co. 7585'
wt. 8.4 vis. 27
chl. 900 ppm

4760 TVD

dolo chrty dolo, wht off wht lt green tint in prt, f xln blkly ang soft chlky, chrt lt gry smokey shrp frsh, weath pp vug por, tan brn stain, nodor, floating oil drops tr gas bubs, dull UV

dolo crm off wht, f vf xln gran soft chrty, chrt inclu, chrt with weath gran sli trip text, all tan brn in color, pp bug and moldic por, tan brn stain, floaters, dull UV, odor?

chrt off wht lt gry, shrp frsh opa, transl blkly ang pcs, chrt lt gry smokey shrp frsh opa with weath edge, tan brn in color, tan brn stain, vug moldic por, floating droplets, sli odor

chrt off wht lt gry, gry/smokey shrp frsh, blkly ang pcs, transl, w/trace weath edge text, pp moldic por, tan brn stain, tr gas bubs, dull UV

4824'
88.5 deg. @
174.9

4825'
88.3 deg @
175.6

4810

4825'
90.9 deg @
175.6

4824'
94.2 deg @
176.4

4822'
94.1 deg @
176.2

4820'
93.4 deg @
175.9

7 dns tr glau, frsh opa transl, edge, tan brn plets

dolo chrty dolo wht off wht tr lt green tint, glau, lt gry smokey chrt inclu, chrt lt gry smokey shrp frsh, with sli weath tan brn edges, tan brn stain, pp moldic por,

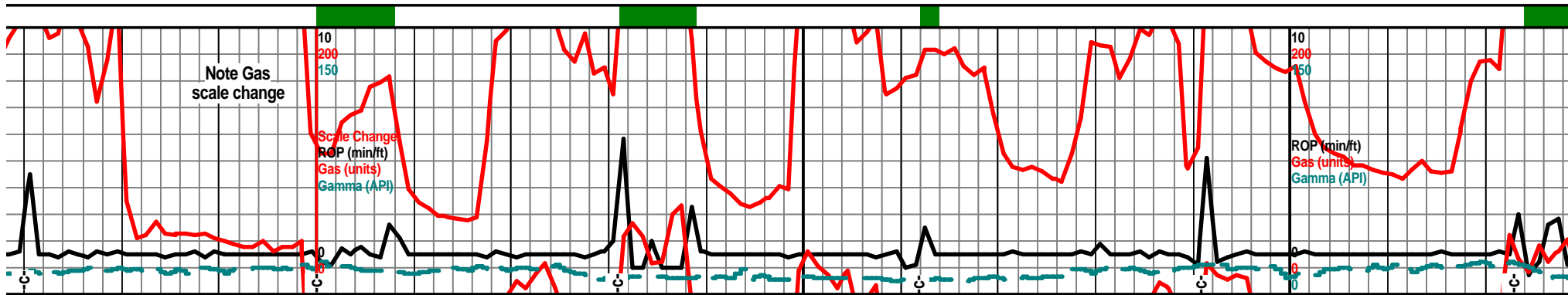
chrty dolo, off wht lt gry shrp frsh, lt smokey opa transl, tan brn stain on weath pp moldic por, dull UV, odor?, tr floating droplets. tr dolo wht lt green tint f vf xln gran chrty chlky soft glau with chrt inclu with sho

chrt lt gry opa shrp blkly ang pcs, transl, transp in most, with weath edge, pp moldic por, tan brn stain, floaters, sli odor? dull UV tr dolo as before..

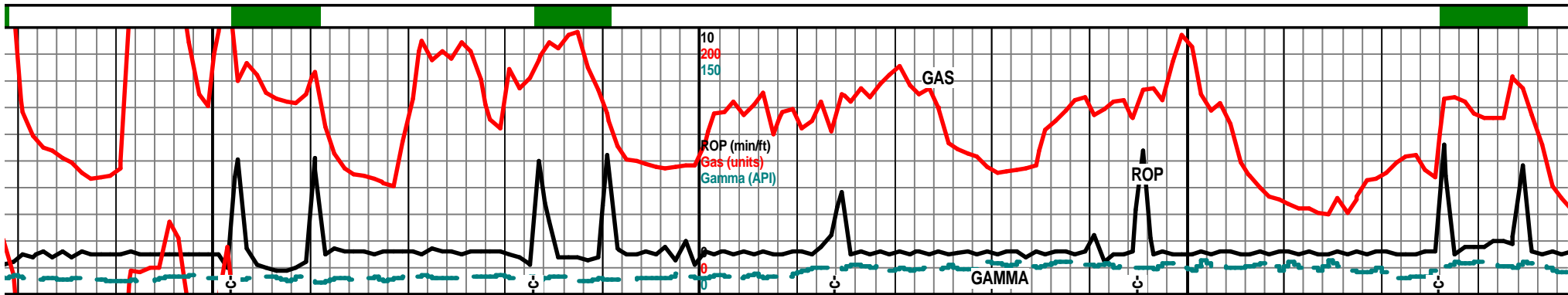
chrt lt gry shrp frsh opa, blkly ang transl, tr tan drk brn weath text moldic por, tan brn stain, floating dull UV

4860

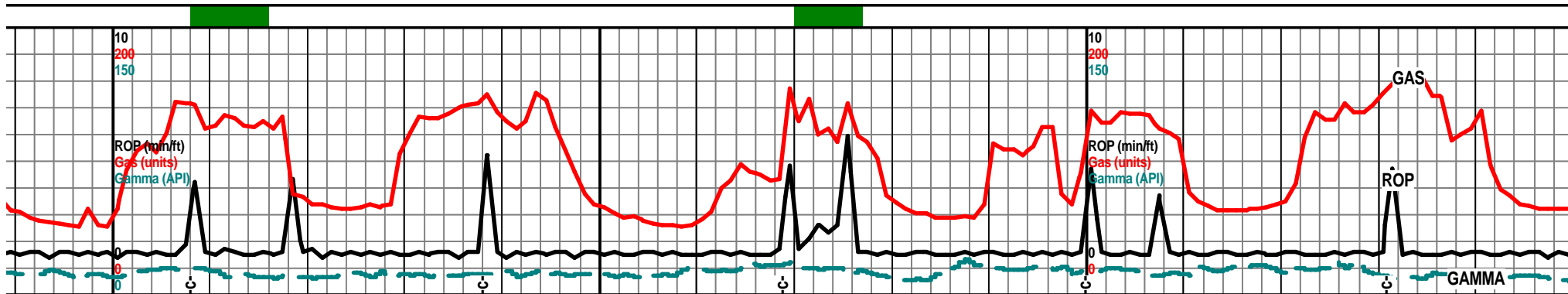
4860



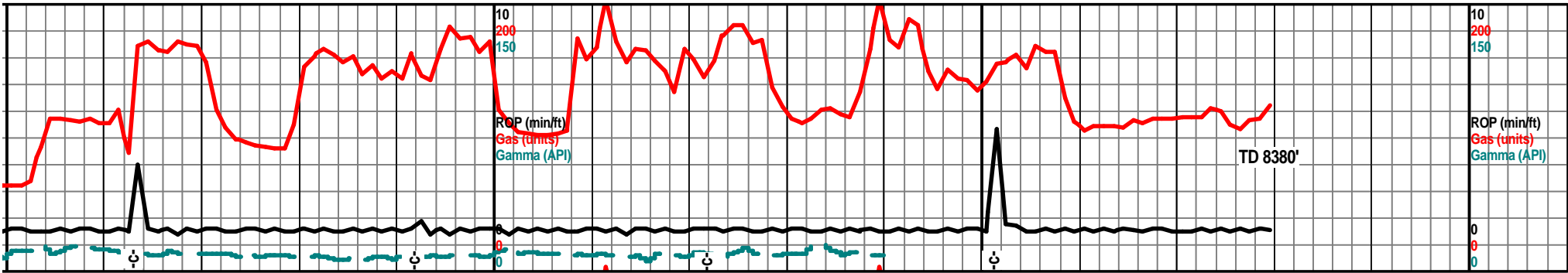
7780	7800	7820	7840	7860	7880	7900	7920
	4760 TVD					4760 TVD	
	Mud-Co. 7800' wt. 8.4 vis. 28 chl. 1,200 ppm Bit Trip 7800'						
chrt lt gry, lt gry/wht mott, shrp frsh opa, blk ang sharp shards, with trace weath text edges/face, tan brn stain color edges, oil floaters, 75% frsh chrt		chrt lt gry lt smokey, gry wht mott, shrp frsh blk ang shards, transl, with weath text edges/faces, tan brn stain, vug moldic por,		chrt lt gry lt smokey shrp frsh blk ang shards, transl, with weath text edges/face, tan brn stain, sli odor		chrt lt gry smokey shrp frsh opa trans, shrp blk, with gd weath text, trip text edge stain/faces, pp vug moldic por, tan brn stain, ssfo, gas bubs odor? dull UV	
4815' 91.4 deg @ 175.5		4814' 90.2 deg @ 175.7		4815' 89.1 deg @ 175.3		4815' 90.7 deg @ 174.8	
4810							
shrp frsh, sl, with trace il floaters		chrt off wht lt gry lt smokey shrp frsh opa shrp frsh shards, tr foss, opa transl, blk ang pcs, tr tan brn stain, pp vug moldic por		chrt wht off wht lt gry gry wht mott, shrp, frsh, transl, opa, blk ang sharp shards, tr tan brn stain along weath trip text edge/face, dull UV		chrt gry gry smokey weath gran, dark brn weath text, trip text edges/faces, tan brn stain, gas bubs, SFO, floating oil droplets, fair odor	chrt lt gry off wht/gry mott, tr blue shrp frsh opa transl, gd vis weath edges/faces, tan brn stain, pp vug, brn SFO, abun gas bubs, dull UV, fl odor
	4860					4860	



7940	7960	7980	8000	8020	8040	8060	8080	
			4760 TVD					
	Increase fresh chert, less weath trip text..							
chrt lt gry off wht gry mott, tr blue gry smokey shrp frsy opaql transl, gd vis weath trip text edge/face text, tan brn stain, pp moldic/vug por, rnrn SFO, gas bubs, fair odor, dull UV		chrt as before, chrt wht shrp, cloudy weath text, blkly ang, tr gran opaql dec weath text, fresher, dec visible show		chrt wht/gry mott, lt gry wht, shrp frsh cloudy, semi transp, blkly ang pcs, with fair weath trip text edges/faces, tan brn stain, sli odor, tr lt brn SFO dull UV		chrt wht off wht, wht gry mott, frsh shrp blkly ang pcs, shrp shards, opaql transl, with tr weath trip text edges, tr tan brn stain, pp, vug, moldic por,		
4815' 90.8 deg @ 175.5	4815' 89.0 deg @ 174.9	4816' 87.4 deg @ 175.5	4810'	4817' 88.0 deg @ 175.0 az	4818' 89.0 deg @ 174.8 az			
gry smokey, trip text moldic por, loating oil, fair	chrt lt gry, gry wht mott, tr lt blue smokey gry, shrp frsh opaql with weath trip text edge face, tan brn stain, pp, vug& moldic por, tan brn SFO, gas bubs sli odor, dull UV	chrt wht off wht tr lt gry shrp frsh cloudy, chrt off wht lt gry tr smokey shrp frsh opaql transl, with gd weath trip text edge/face, tan brn stain tan brn SFO, sli odor, gas bubs,		chrt wht off wht lt gry shrp frsh blkly ang pcs, sharp shards, transl, tr weath sli trip edges, tr tan brn stain, nodor, incr frsh chrt less weath edge material		chrtly off wht wht, wht lt gry mott, s transl, sharp shards, tr weath trip tr brn stain, mostly barren frsh chrt, t		
			4860					



8100	8120	8140	8160	8180	8200	8220	8240
4760 TVD					4760 TVD		
hrt wht off wht lt gry gry wht mott frsh shrp ansl, blk ang hrd pcs, shards, with tr weath trip xt edges, tan brn stain, tr gas bubs, oil floaters		chrt wht off wht lt gry/wht shrp frsh blk ang pcs, transl, semi transp, shards, tr tan brn colored semi weath trip edge, vug moldic por, tan brn stain		chrt off wht wht lt gry/wht, cloudy, opa, shrp blk shards, semi transp, mostly transl, tr weath semi trip edge text, tan brn color, tan brn stain dull UV oil floaters, incr dead black stain		chrt wht off wht lt gry wht mott, frsh shrp blk ang opa pcs, transl, semi transp, foss content? with semi weath edges, tan brn weath trip edges, tan lt brn stain, nodor, many transp oil floaters	chrt sh tex
4818' 88.3 deg @ 175.1	4819' 88.8 deg @ 175.8	4820' 89.3 deg @ 176.5 az		4820' 90.0 deg @ 175.4 az		4820' 90.3 deg @ 175.1 az	4820' 90.7 deg @ 174.9 az
4810					4810		
hrp frsh opa ext edge, tan r tan brn stain,	chrt off wht lt gry, lt gry smokey to wht cloudy, shrp frsh opa transl, sharp shards, tr tan brn color edges, weath gran trip text edge, tan brn stain, vug moldic por, oil floaters, tr gas bubs	chrt off wht wht/gry, shrp frsh opa, blk ang pcs, transl, semi transp, sharp shards, tr tan brn colored semi weath trip edge text, vug moldic por, tan brns stain, incr dead blk stain		chrt wht off wht lt gry shrp frsh opa, transl, semi transp, tr weath sli trip text edges/faces, tan brn stain, tr gas bubs, dull UV		chrt wht, off wht, wht/gry mott, shrp blk ang shards, transl, semi transp brn semi trip edge text, tan brn stain many floating transl oil droplets noc	
4860					4860		



8260		8280		8300		8320		8340		8360		8380		8400	
				4760 TVD										4760 TVD	
cht wht off wth lt gry shrp frsh opa, blk ang ards, transl, semi transp, tr foss, tr weath trip edge, tan brn stain, tr gas bubs, oil floaters				cht wht off wth lt gry shrp frsh opa, blk ang pcs, sharp shards, tr weath trip text, edge/face, tan brn in color, tan brn stain, odor? gas bubs, drk dead blk stain, oil floaters				cht wht off wth lt gry shrp frsh opa, transl, semi tranp, blk ang pce, with weath trip text, pp vug moldic por, tan brn stain, sli odor							
Actual well bore															
4819' 91.2 deg @ 174.6 az				4818' 91.3 deg @ 175.0 az				4818' 91.1 deg @ 174.6 az				4816' 91.1 deg @ 174.6 az			
frsh opa, sli weath tan, tr gas bubs, for				cht off wth lt gry lt gry wht mott, frsh shrp, opa transl, semi transp, with weath edge/face, tr trip text, tan brn stain, drk stain, blk dead stain, oil floaters, oil droplets				cht off wth wht gry mott, frsh shrp opa, transl, semi transp, sharp shards, with weath semi trip tan brn text, tan brn stain, sli odor pp vug and moldic por				shrt lt gry off wth lt gry wht mott, sharp frsh opa, blk ang pcs, shards, with weath trip text edges/faces, tan brn stain, sli odor, gas bubs, dull UV, pp moldic and vug por.			
				Proposed well bore								Last 50' projected by Calmena			
				4860								4860			

