

SHANKSLOG

P. O. Box 1179
Carlsbad, N.M. 88220
(575)-885-0458
DAVE SHANKS

COMPANY: 3 BEARS

WELL: LIBBY BERRY FEE SWD #1

FIELD: COUNTY: LEA STATE: NM

LOCATION: SEC 26, T20S/R34E

2010 FNL/710FEL

Interval Logged: 550 To: 11287 G.L.: 3620 K.B: 3641

Date Logged: 3/27/2018 To: 4-14-18 Spud Date: 3/23/18

Rig: SILVER OAK #8 Unit No.: 9

Loggers: T. CRAWFORD/ C. HOUSER / B. OBERBECK/A. FROST

Api No.: 30-025-44288

Filename: libby_berryfee_swd1.mlw

Geologist: J.SMITH

Created By MainLog

Abbreviations:

NB...New Bit
CO...Circ Out
NR...No Returns
TG...Trip Gas
WOB...Wt on Bit
RPM...Rev/Min
SG...Survey Gas
DST...Drill Stem Test
DS...Directional Survey
CG...Connection gas
LAT...Logged After Trip
PP...Pump Pressure
SPM...Strokes/Min
DTG...Down Time Gas

Mud Data

WT..Weight V..Viscosity
PH..Acidity F..Filtrate
CHL..Chlorides SC..Solids Content

Lithology Symbols:

Anhydrite Siltstone Dolomite Coal Carb Shale Red Sh Cust Sh1 Cust Sh4
Salt Chert Conglomerate Shale Granite Wash Org Sh Cust Sh2 Cust Sh5
Granite Sandstone Limestone Bentonite Quartz Wash Green Sh Cust Sh3 Cust Sh6

Accessories

Glauconite Pyrite Fossils Oolites
Fractures Cement

Gas Chromatograph Analysis:

TG
C1
C2
C3
IC4
NC4
IC5
NC5

Drilling Rate
MIN/FT

Vis
Por

Tr /

p
f
g

Lithology

%
Oil
Flu

Tr /

p f g
p f g

Descriptions/Remarks

Total Gas/Chromatograph

COMMENCE 2 MAN LOGGING
3-27-2018

2.5

NB#2 IN @ 540'
BAKER GTXO1, 17.5"

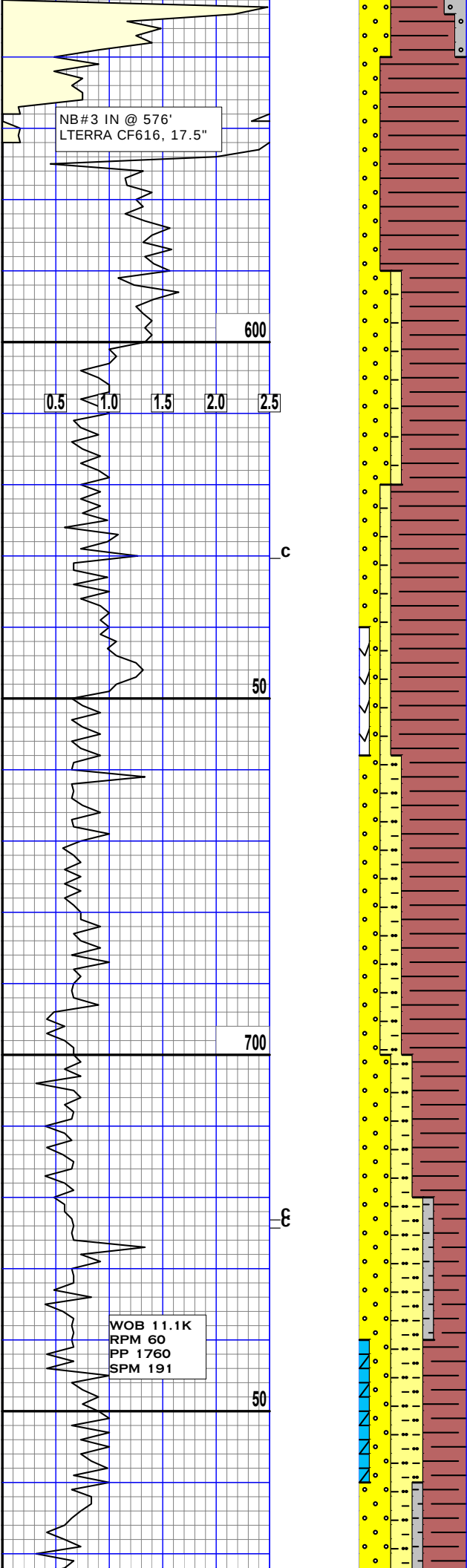
50

CH

SHud 1t grey grey blk

CALIBRATE ALL EQUIPMENT

5



sme sbblky,hd,sme frm
chlky,ea,grty,tr slt
argen,tr cmnt

SH:rd,lt gry,gry,blky
sbblky-blky,tr hd,sme
frm,chlky,ea,grty,tr
slt,argen

SH:rd,lt gry,lt tn,gry
sbblky-blky,frm-mod frm
smth,sme clay,slty,tr
calc

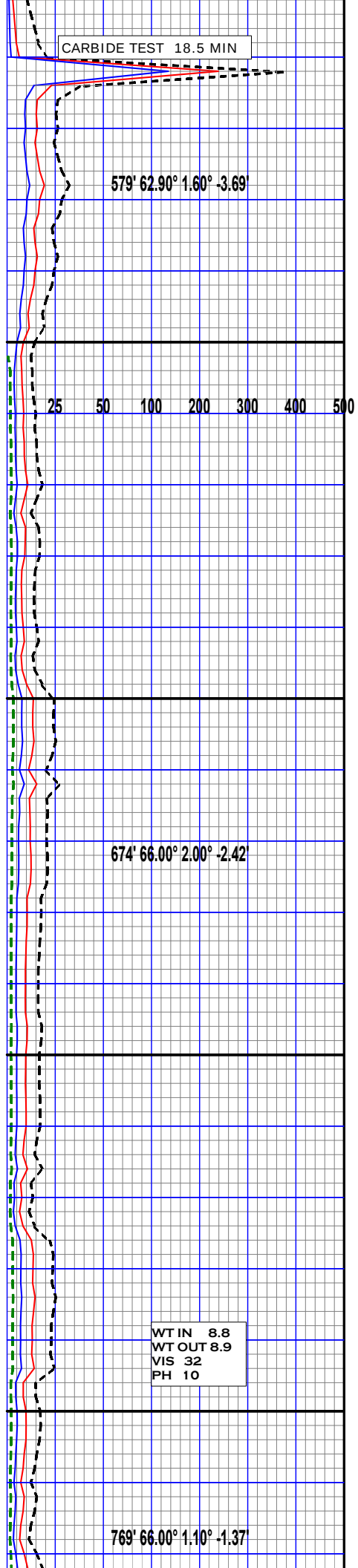
SH:rd,lt gry,gry,blky
sbblky-blky,frm-mod frm
smth,sme rd clay,slty
gyp,tr calc,tr anhy

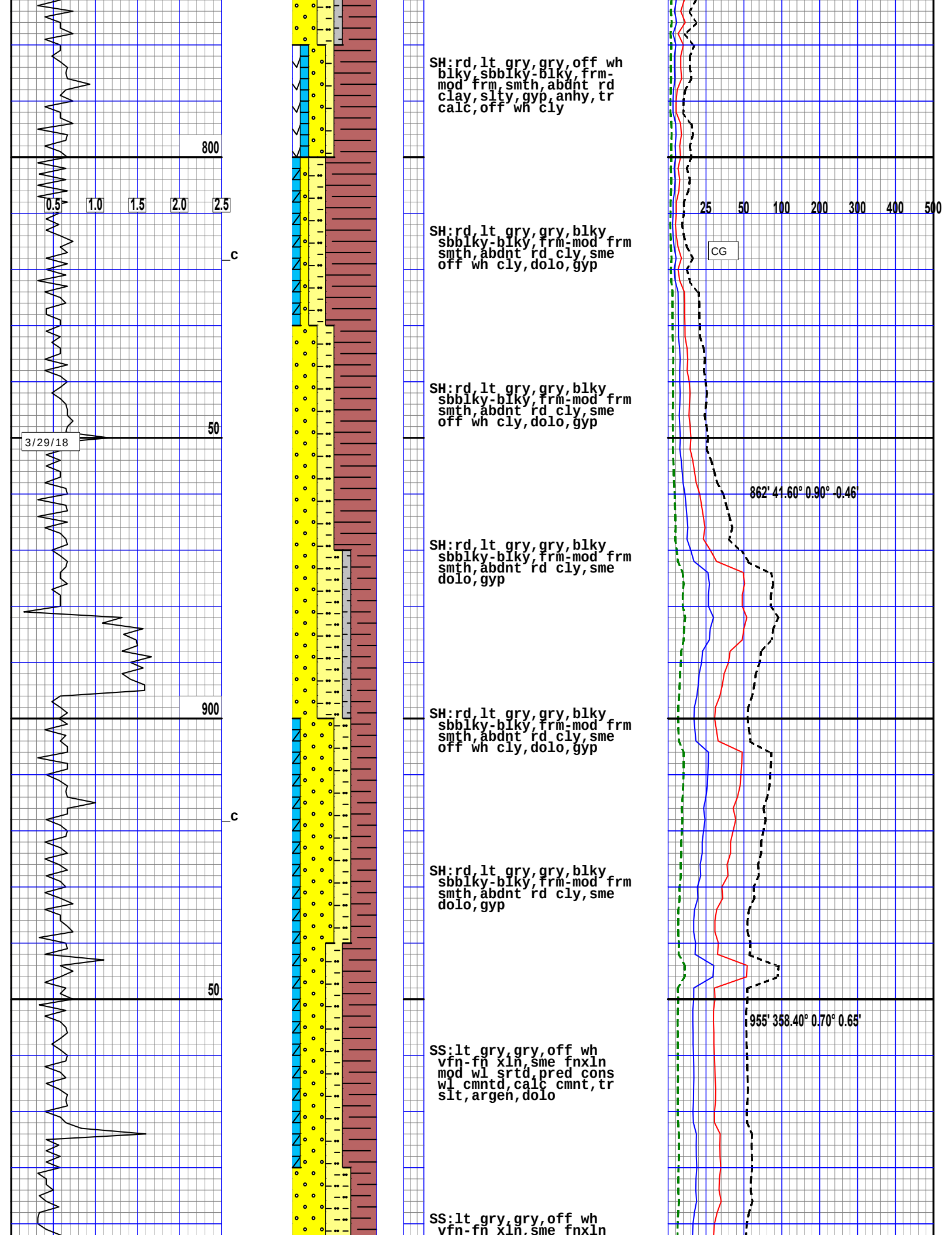
SS:lt gry,gry,lt tn,off
wh,vfn-fn xln,sbang sme
sbrnd-sbang,mod wl srt
pred cons,rd cly mtrx
sme off wh cly,calc,tr
slty,argl

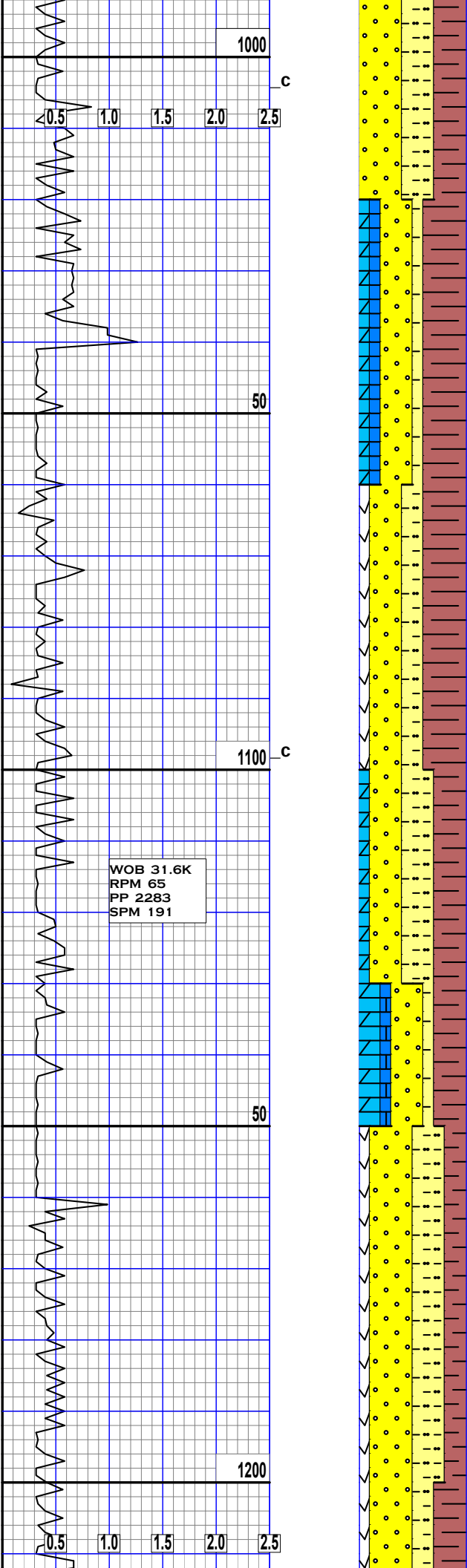
SH:rd,lt gry,gry,blky
sbblky-blky,frm-mod frm
smth,sme rd clay,slty
gyp,tr calc,off wh cly

SS:lt gry,gry,lt tn,off
wh,vfn-fn xln,sbang,tr
sbrnd-sbang,mod wl srt
pred cons,rd cly mtrx
sme off wh cly,calc,tr
slty

SS:lt gry,gry,off wh
vfn-fn xln,sme fnxln
mod wl srt,pred cons
wl cmntd,calc cmnt,tr
slt,argen,dolo







mod wlsrtd, pred cons
wl cmntd, calc cmnt, tr
slt, argen, dolo

SH: rd, lt gry, gry, off wh
blky, sbbiky, blky, frm-
mod frm, smth, abdnt rd
clay, slty, gyp, anhy, tr
calc, off wh cly

SS: lt gry, gry, off wh, lt
tn, vfn-fn xln, sme fnxln
mod srt, pred cons, wl
cmntd, calc cmnt, abdnt
slt, sme off wh/rd cly

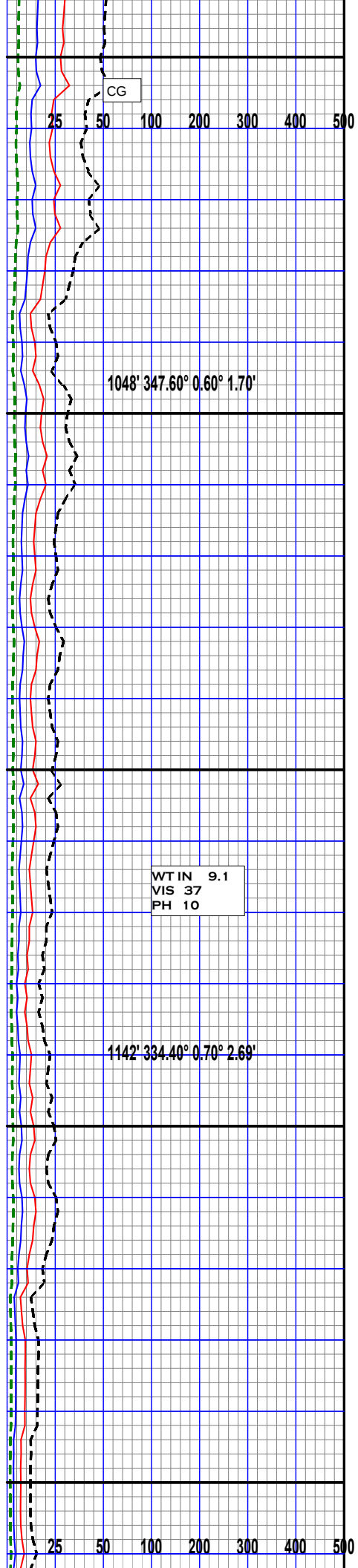
SH: rd, lt gry, gry, off wh
blky, sbbiky, blky, frm-
mod frm, smth, abdnt rd
clay, slty, gyp, tr anhy
calc, off wh cly

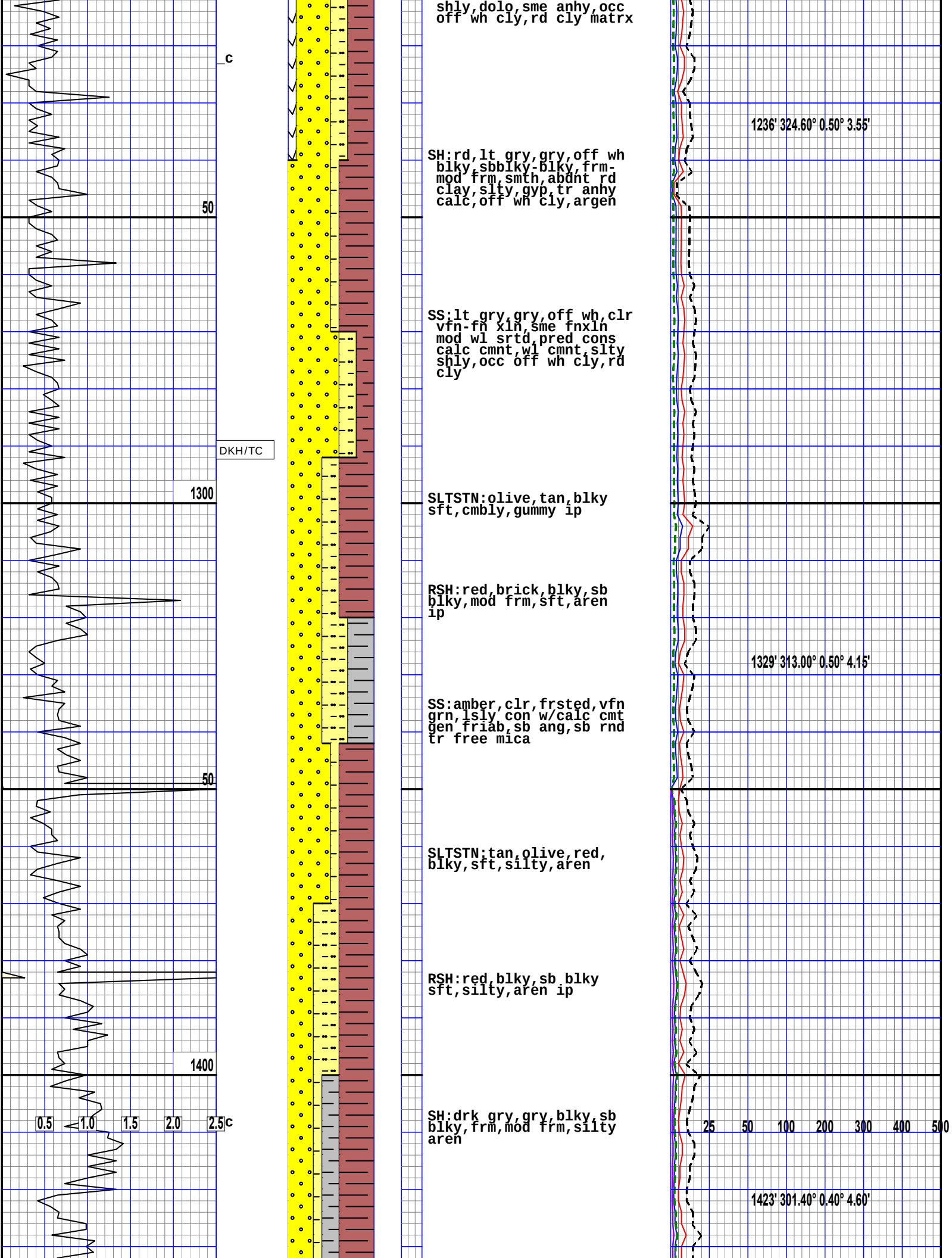
LS: lt gry, gry, lt tn vfn
xln, sme fn-vfnxln, frm
mod frm, sme hd, sft, calc
cmnt, agren, rd gyp, sme
off wh & rd clys,

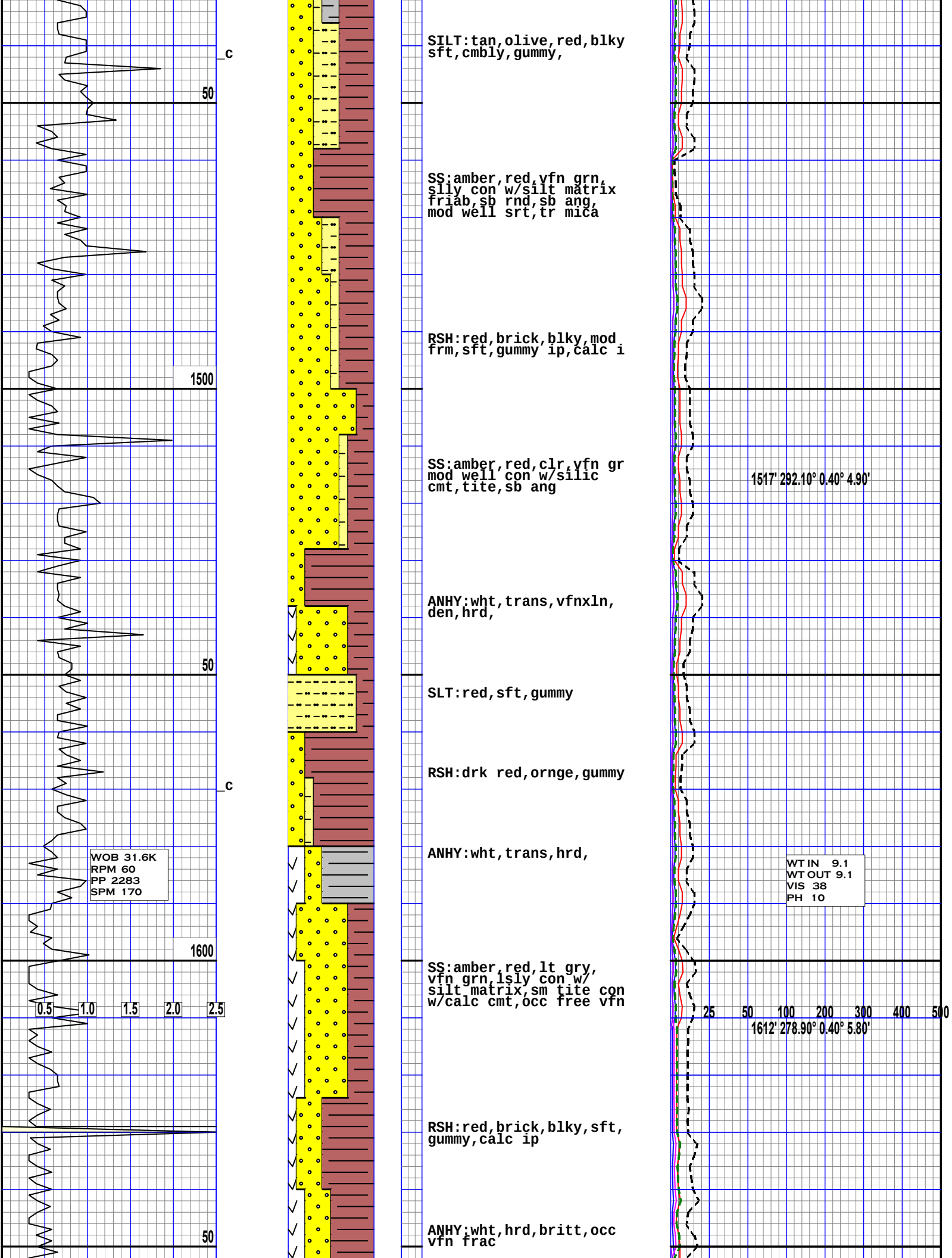
LS: lt gry, gry, lt tn vfn
xln, sme fn-vfnxln, frm
mod frm, sme hd, sft, calc
cmnt, agren, rd gyp, sme
off wh & rd clys,

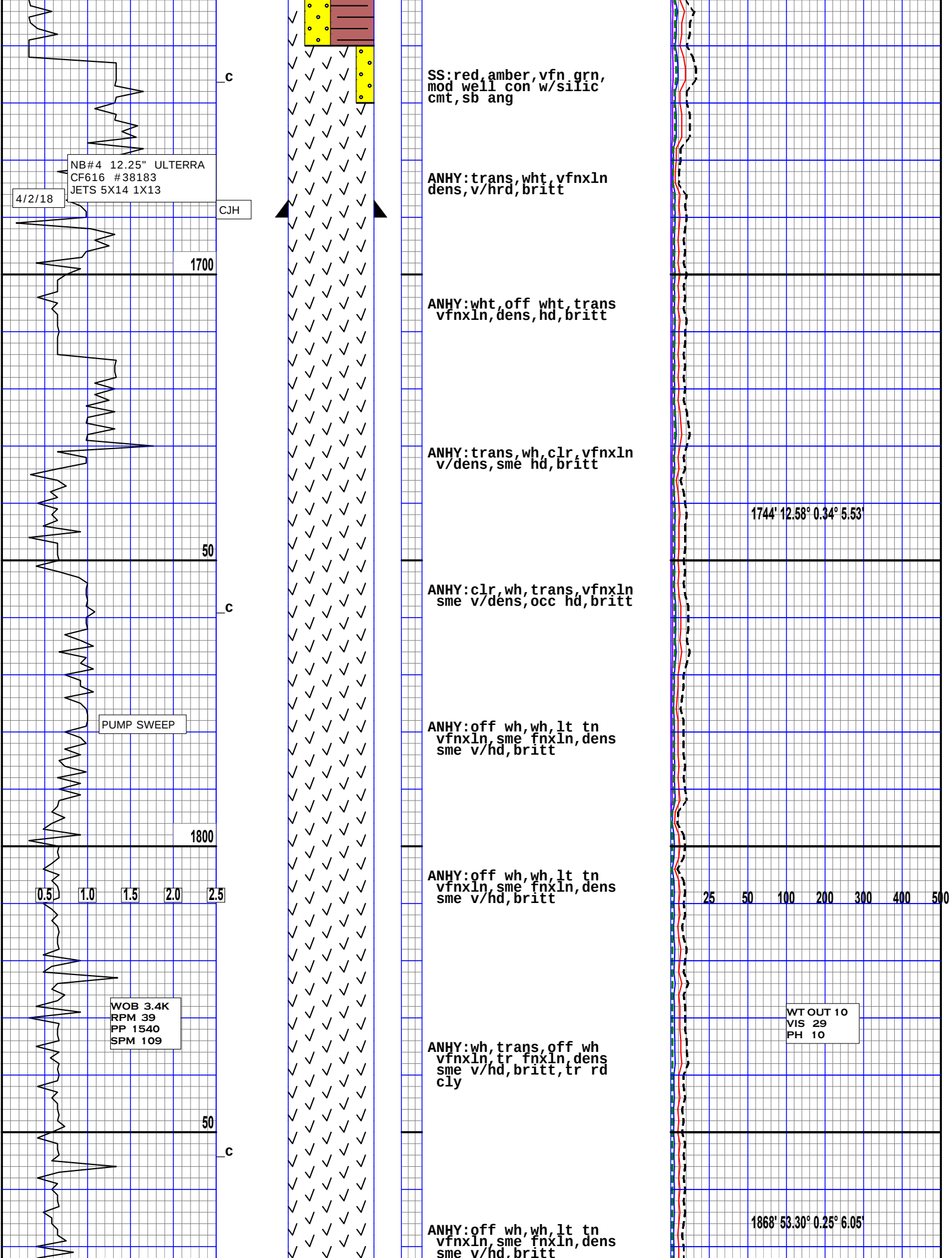
SS: lt gry, gry, off wh, lt
tn, vfn-fn xln, sme fnxln
wl srt, pred cons, tr
uncons, wl cmntd, calc
cmnt, abdnt slt, sme off
wh/rd cly, tr anhy

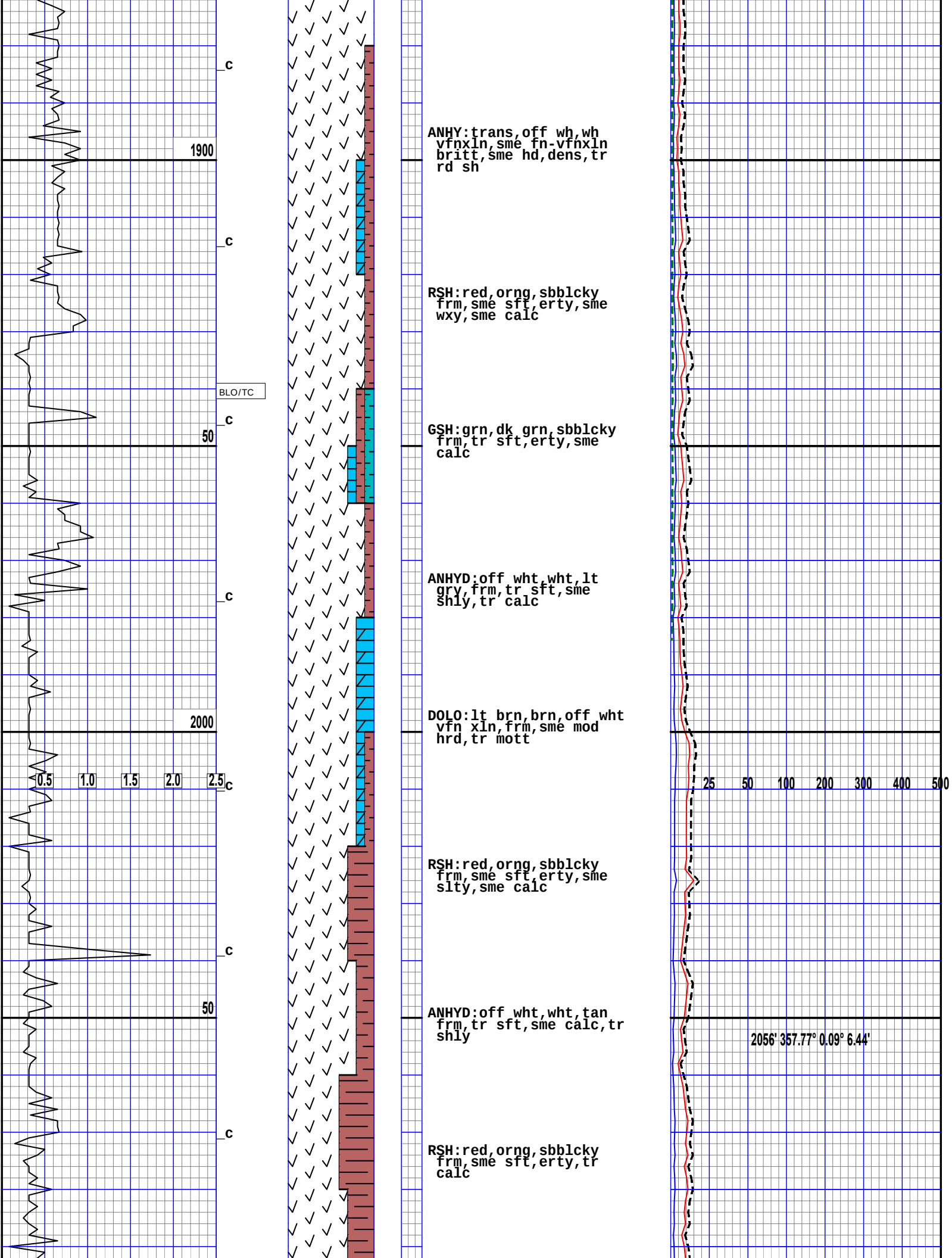
SS: lt gry, gry, off wh, clr
lt tn, vfn-fn xln, sme
fnxln, wl srt, pred cons
wl cmntd, calc cmnt, slty

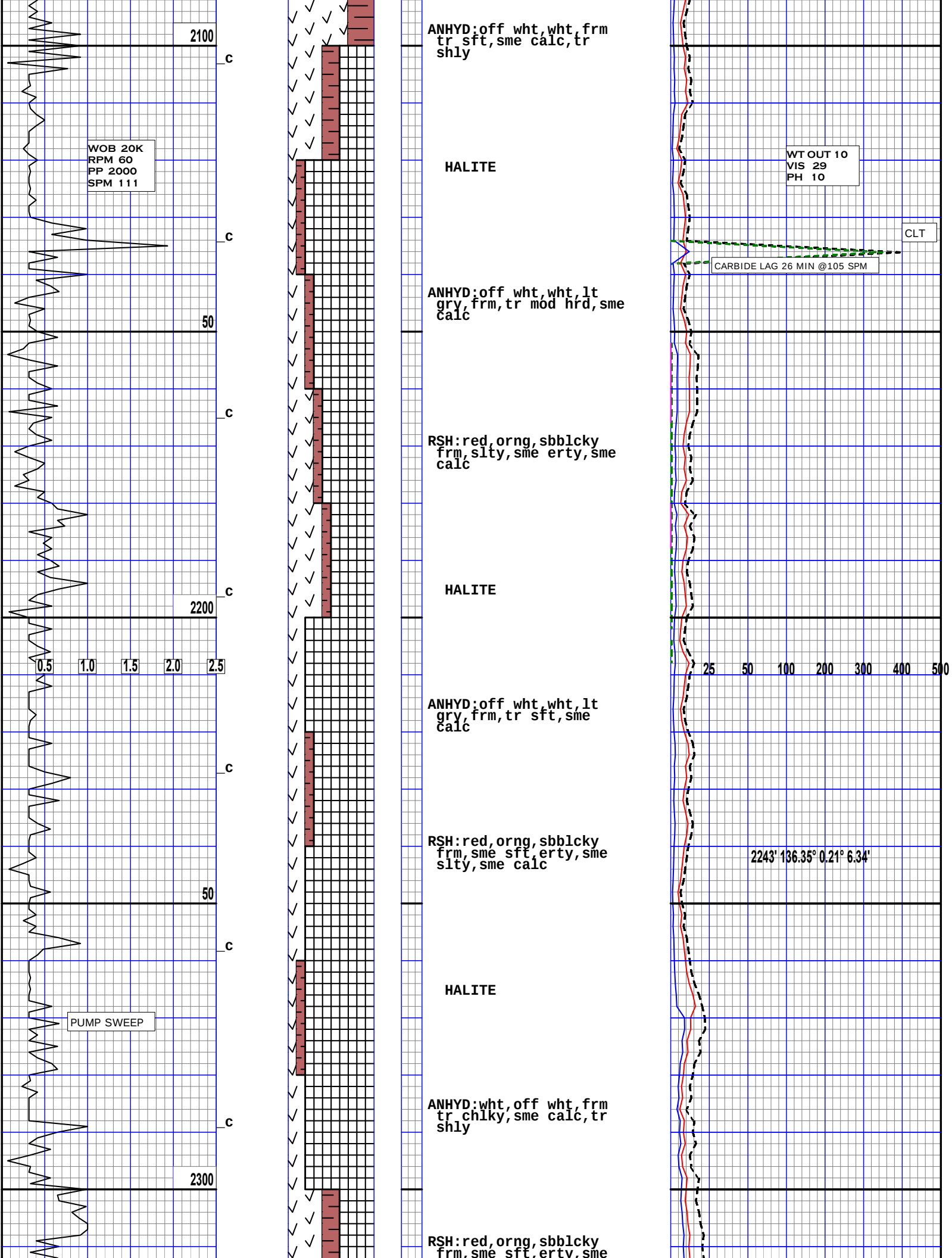


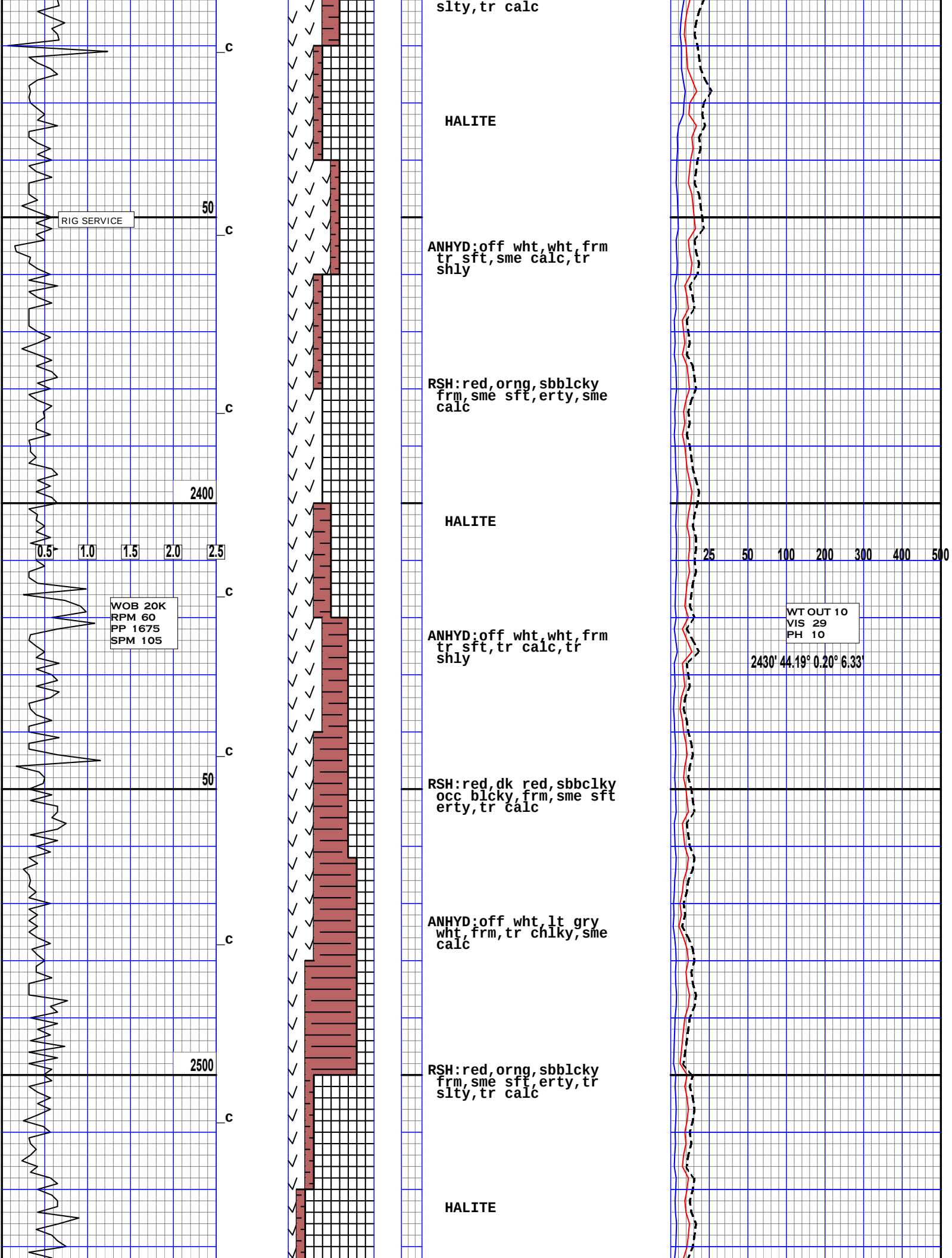


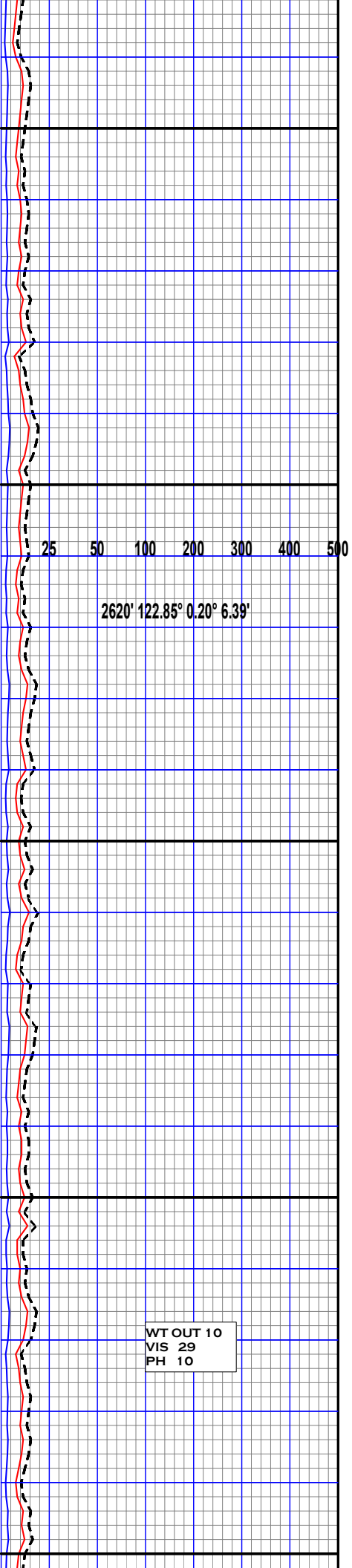
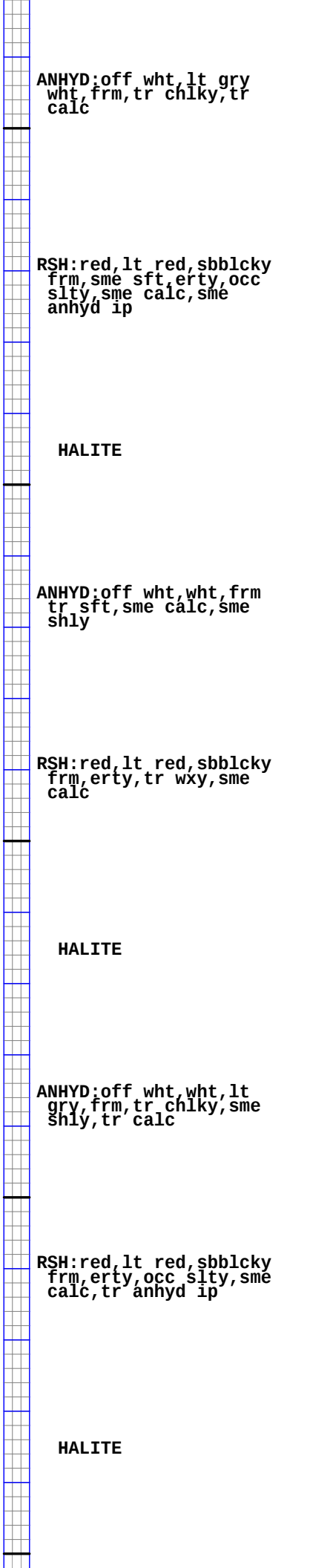
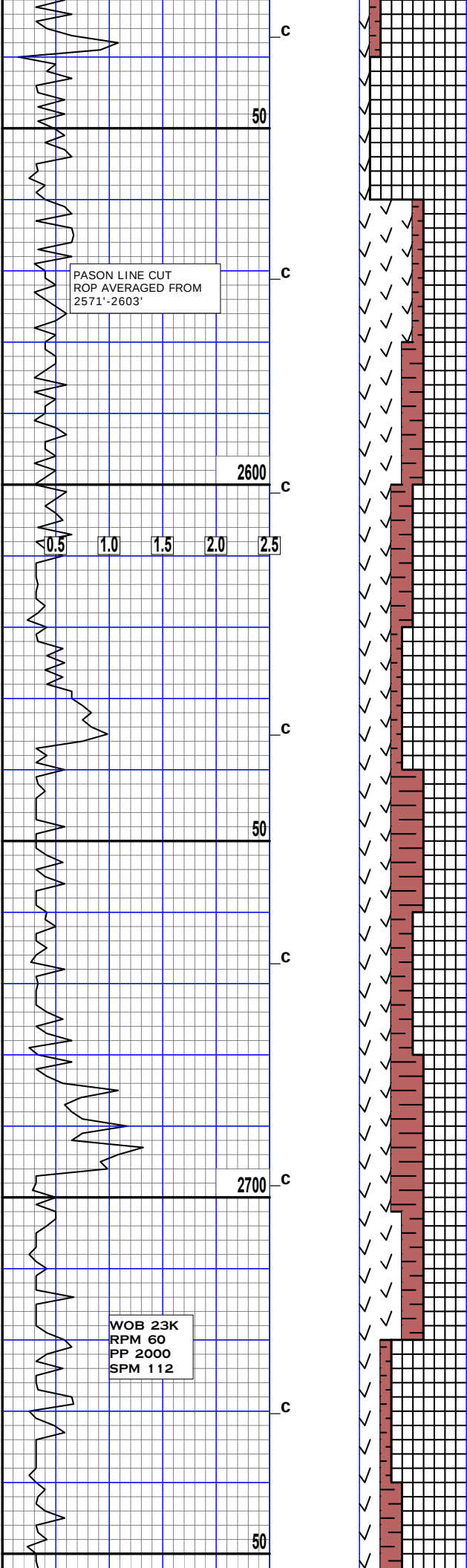












ANHYD:off wht,lt gry
wht,frm,tr chiky,tr
calc

RSH:red,lt red,sbblcky
frm,sme sft,erty,occ
silty,sme calc,sme
anhyd ip

HALITE

ANHYD:off wht,wht,frm
tr sft,sme calc,sme
shly

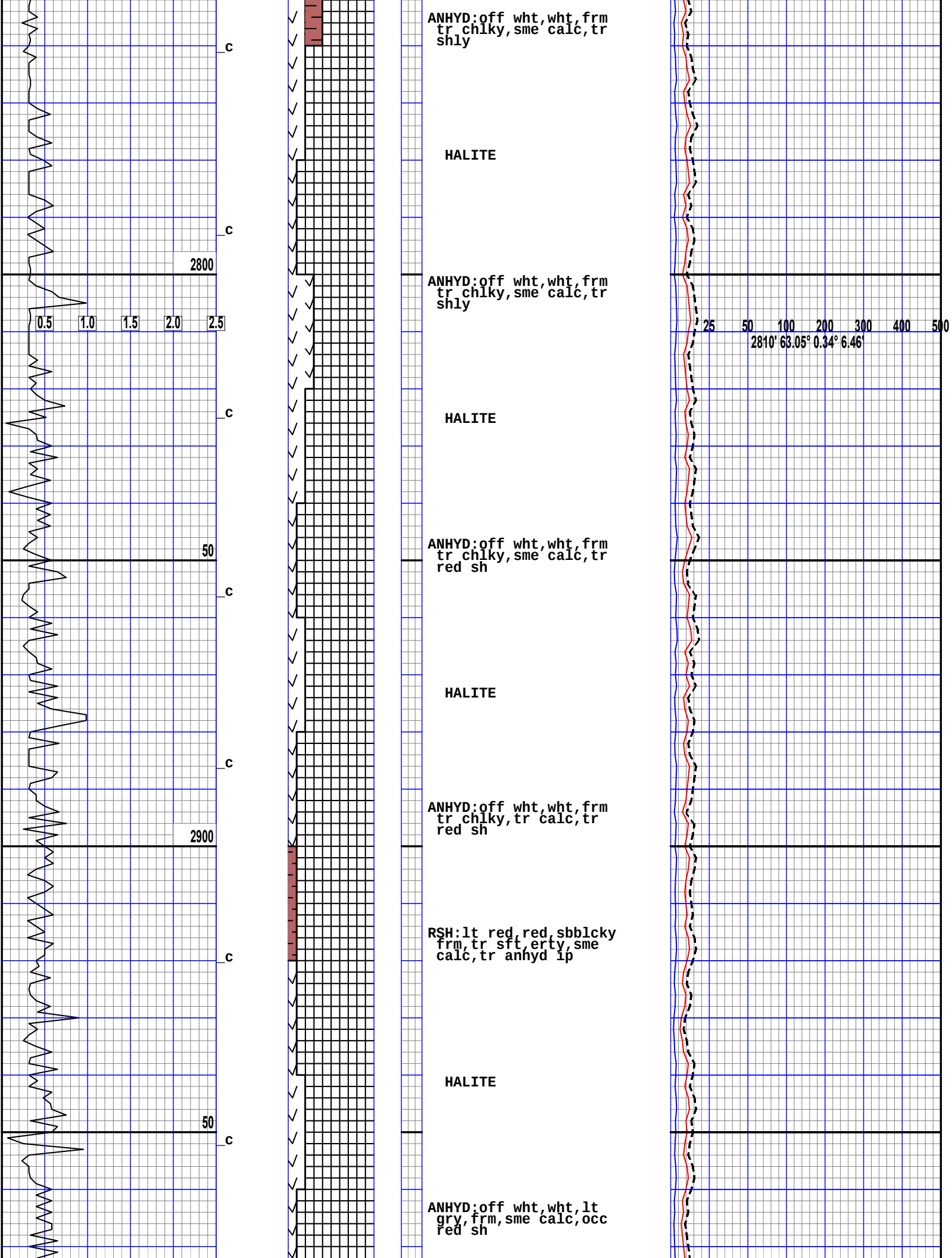
RSH:red,lt red,sbblcky
frm,erty,tr wxy,sme
calc

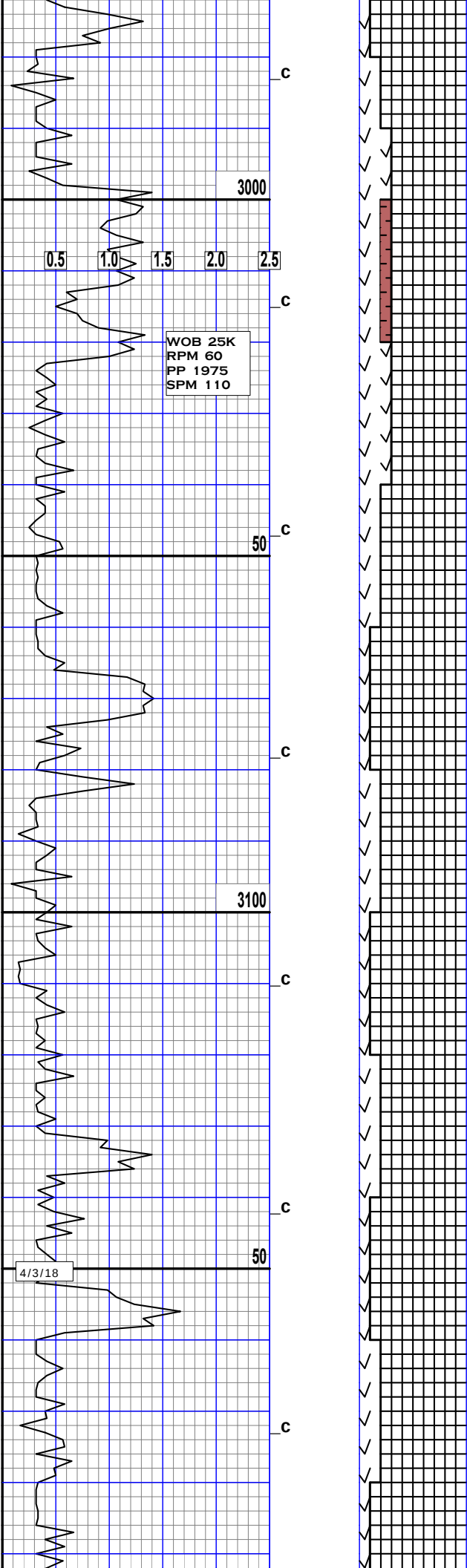
HALITE

ANHYD:off wht,wht,lt
gry,frm,tr chiky,sme
shly,tr calc

RSH:red,lt red,sbblcky
frm,erty,occ silty,sme
calc,tr anhyd ip

HALITE





HALITE

RSH:red,lt red,sbblcky
frm,tr sft,erty,sme
calc

ANHYD:off wht,wht,frm
tr chiky,sme calc,tr
shly

HALITE

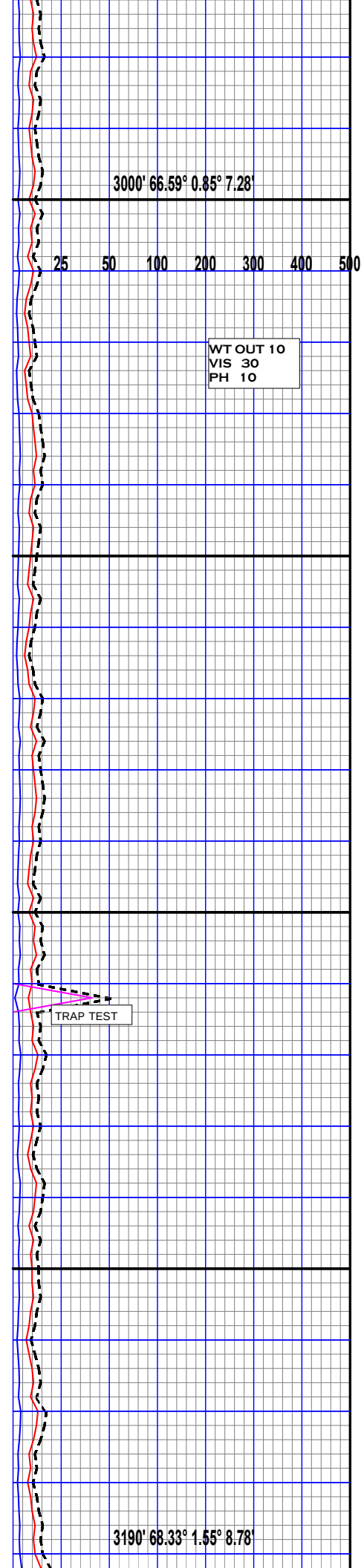
ANHYD:off wht,wht,frm
sme chiky,tr calc,tr
shly

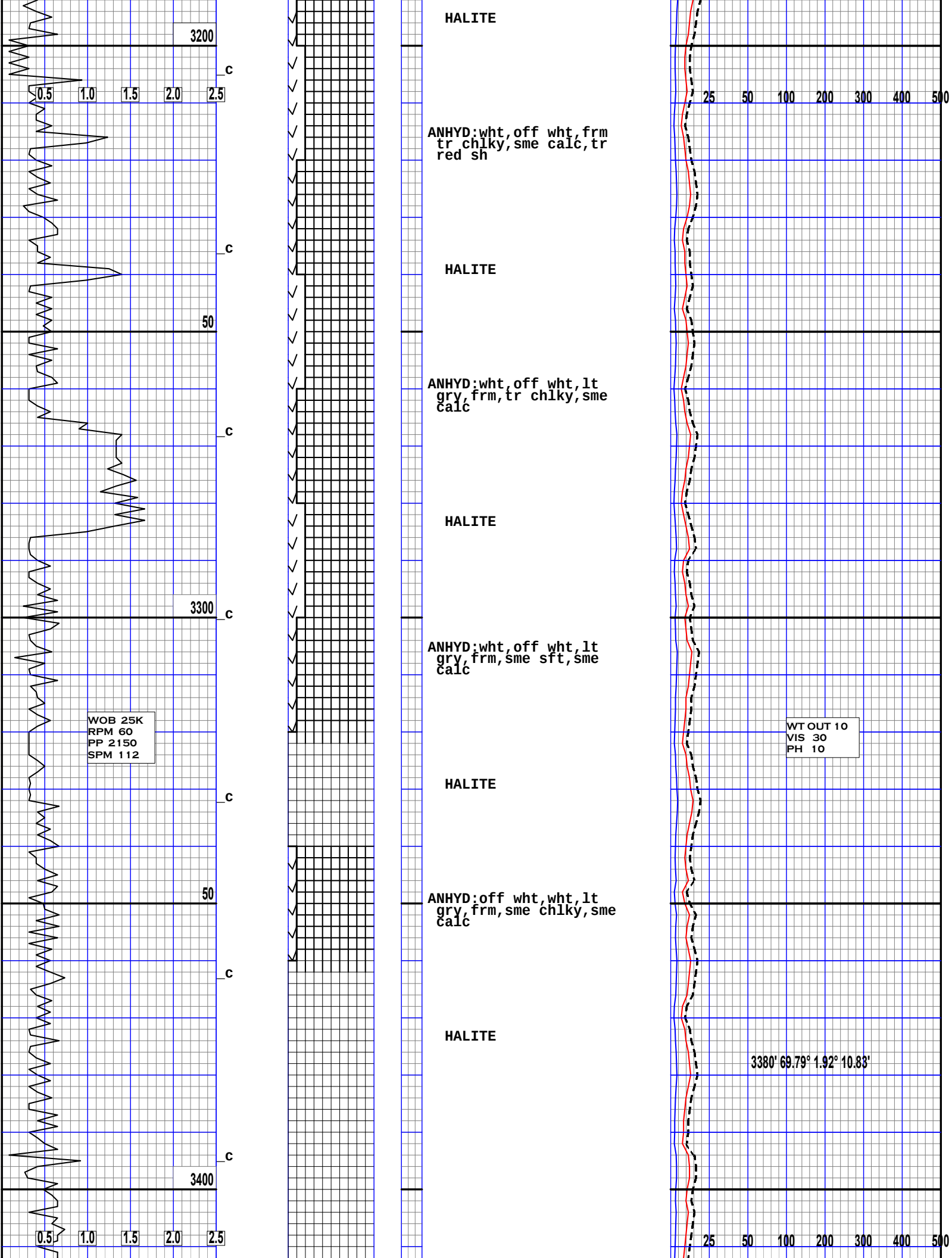
HALITE

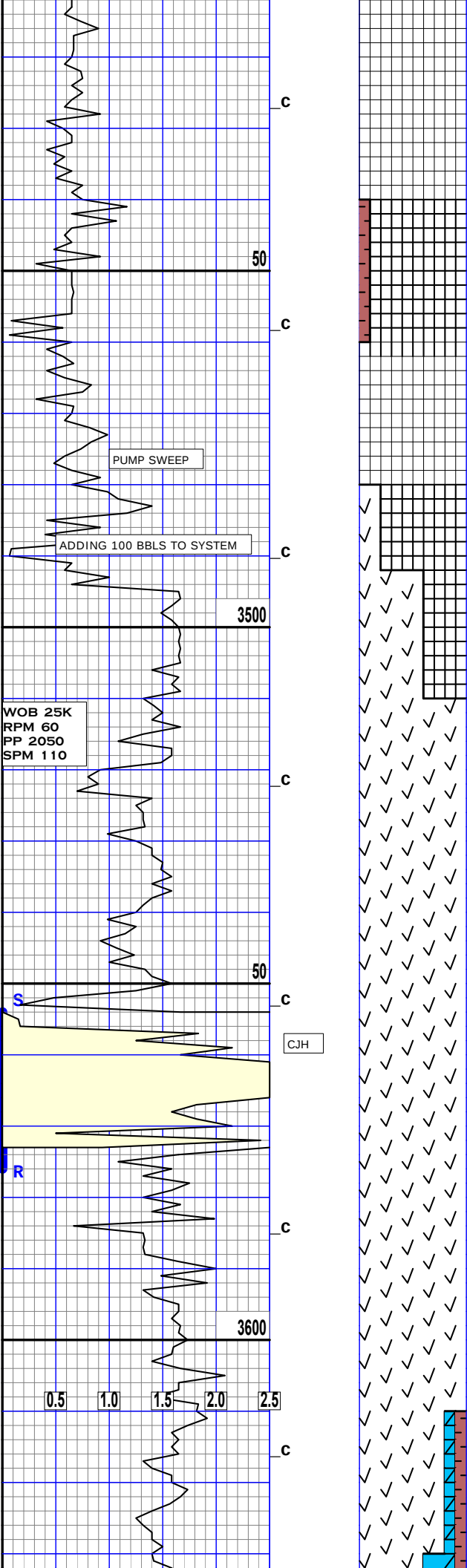
ANHYD:off wht,wht,frm
tr sft,sme calc,occ
red sh

HALITE

ANHYD:wht,off wht,lt
gry,frm,tr chiky,sme
calc







HALITE

RSH:red,orng,sbblcky
frm,sme sft,erty,tr
wxy,tr calc

HALITE

ANHYD:off wht,wht,lt
gry,tr mod hrd,sme
calc

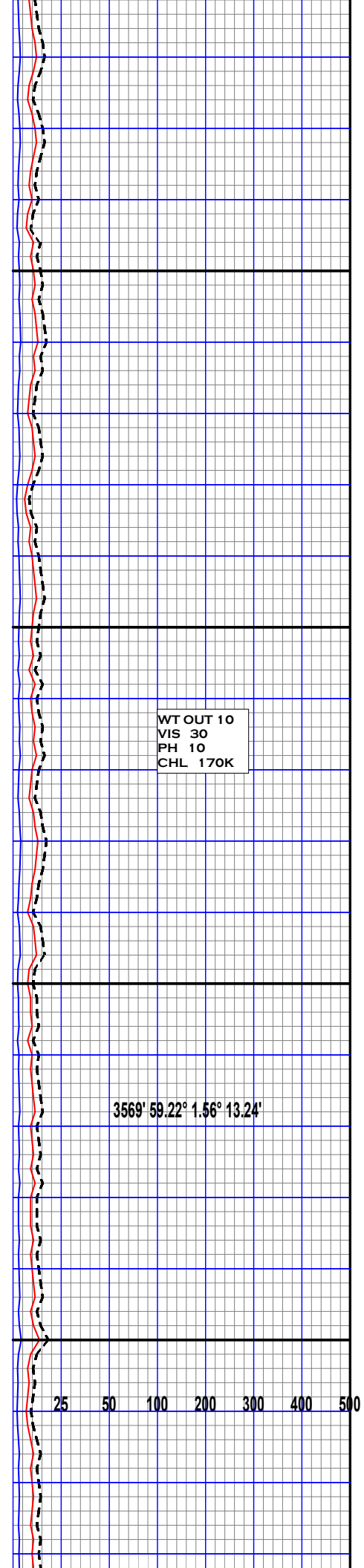
ANHYD:off wht,wht,lt
gry,frm,tr mod hrd,sme
calc

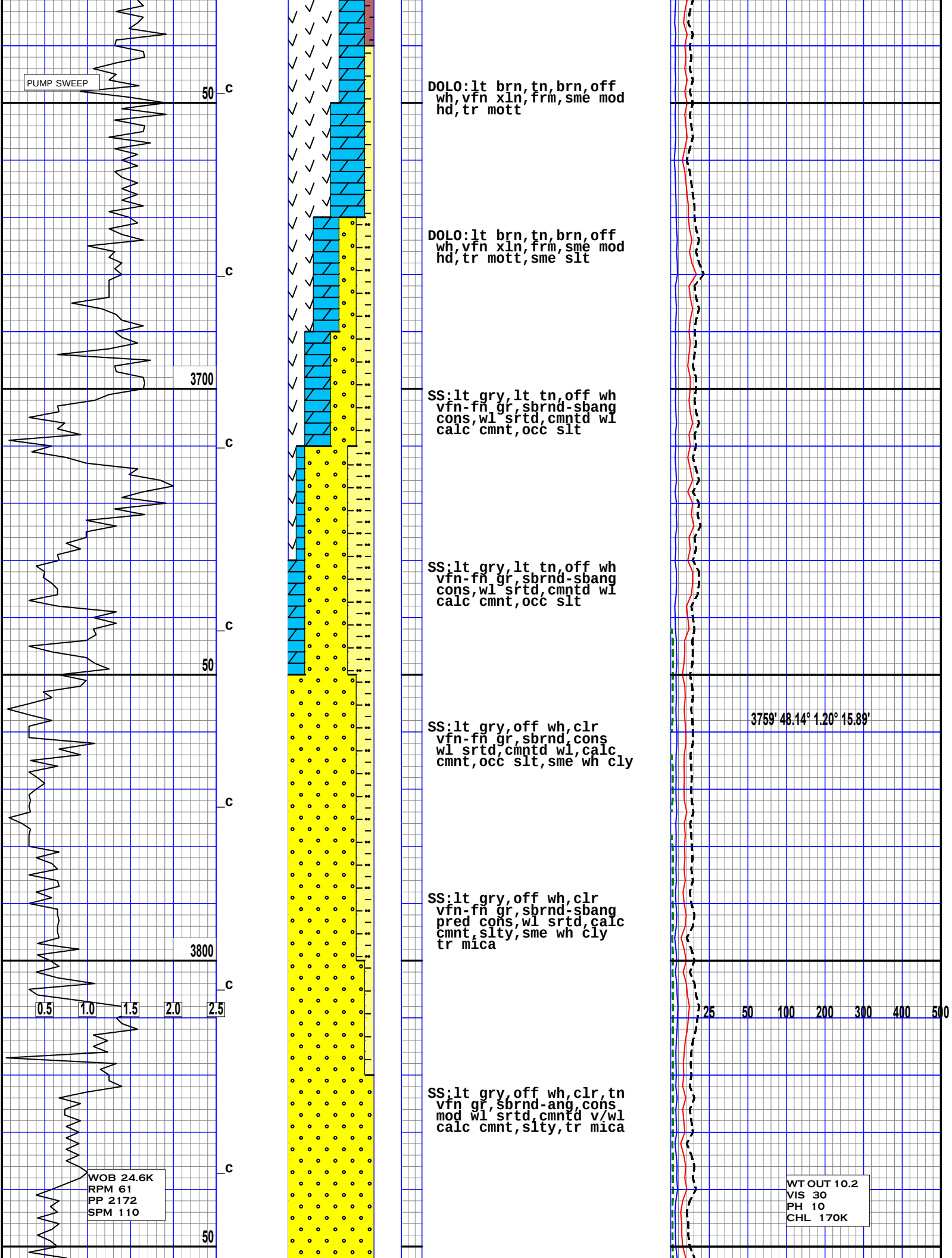
ANHYD:off wht,wht,lt
gry,frm,tr mod hrd,sme
calc

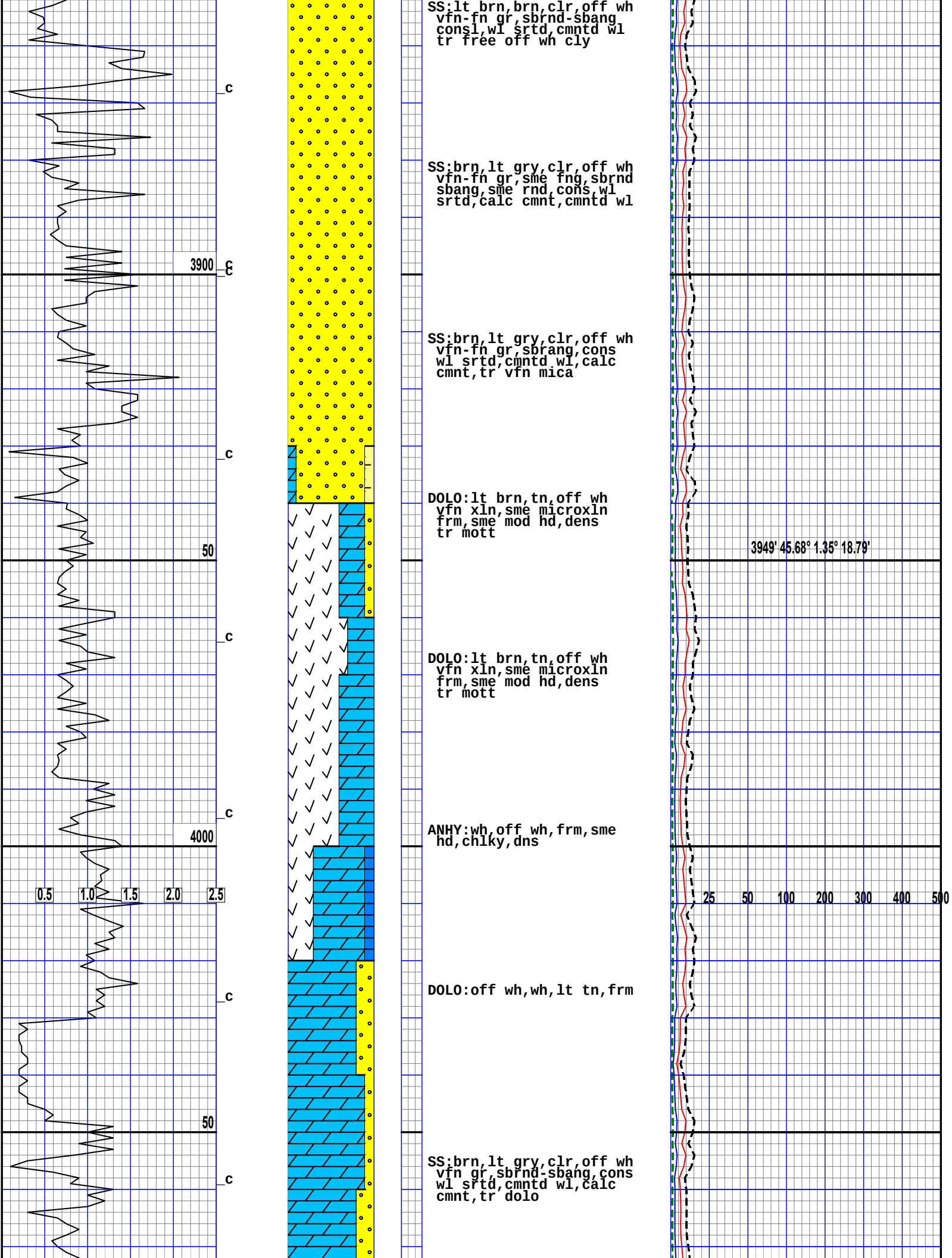
ANHYD:off wht,wht,lt
gry,frm,tr mod hrd,sme
calc, tr rd SH

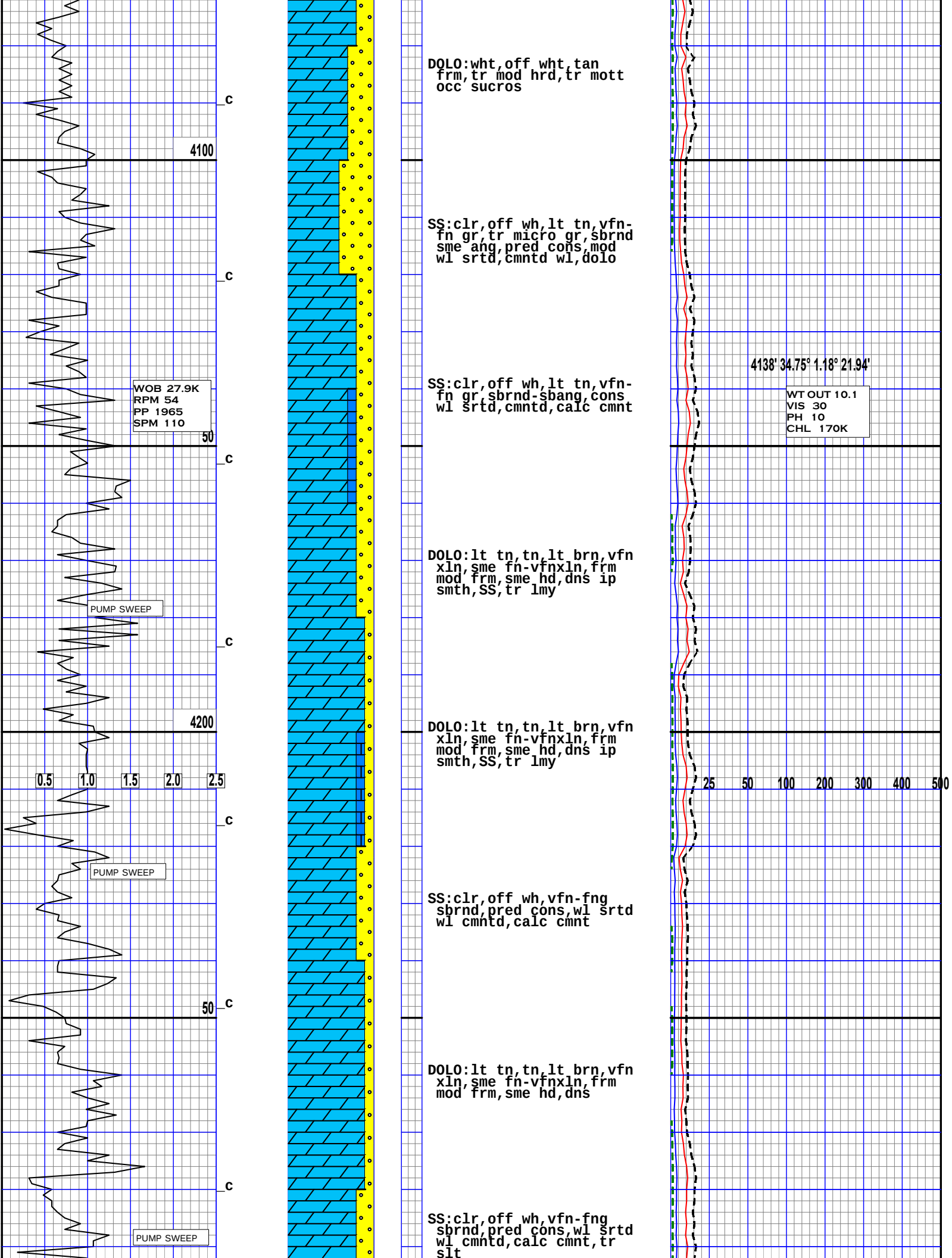
ANHYD:off wht,wht,lt
gry,frm,tr mod hrd,sme
calc

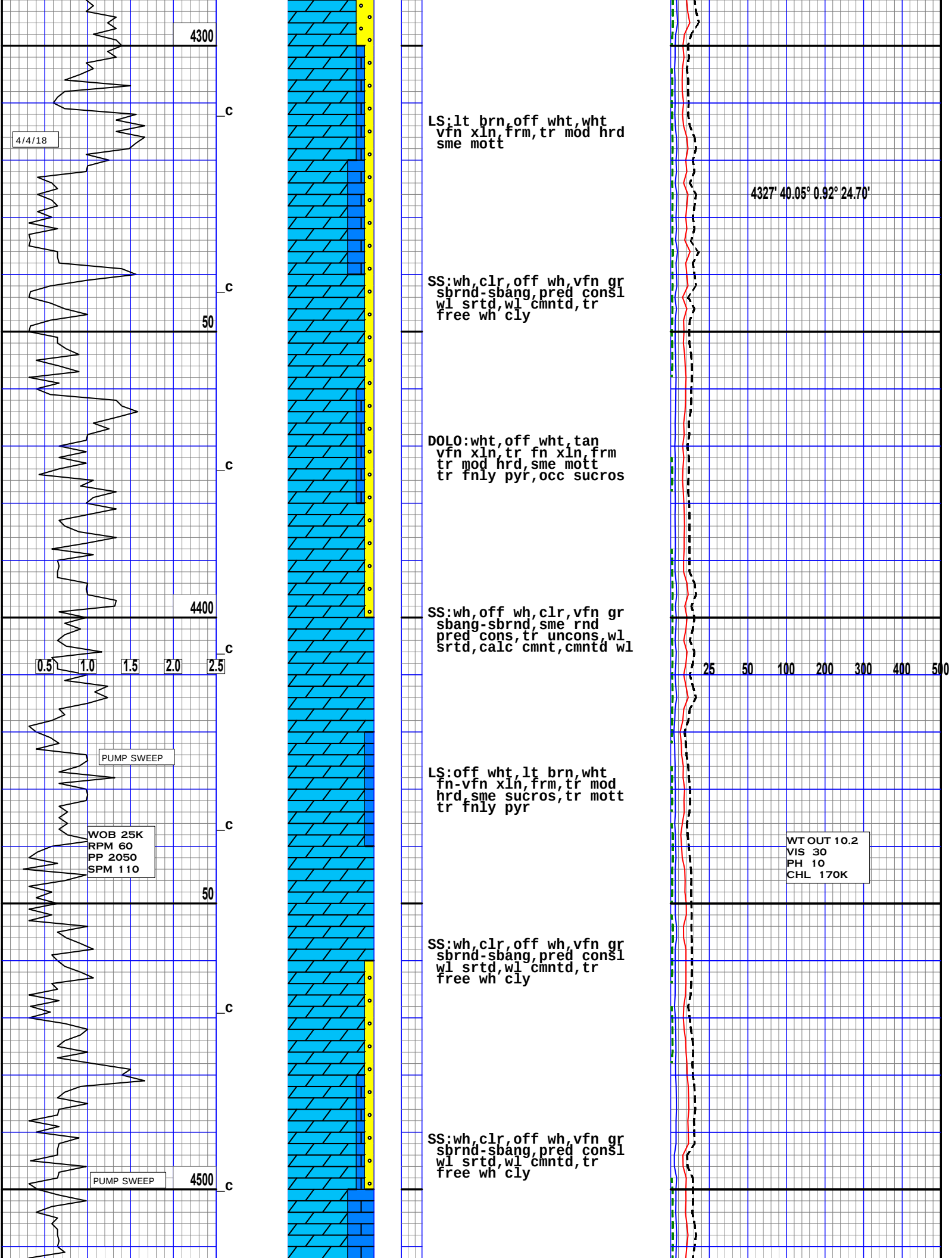
RSH:red,orng,sbblcky
frm,sme sft,ea,tr wxy
tr calc, tr doló

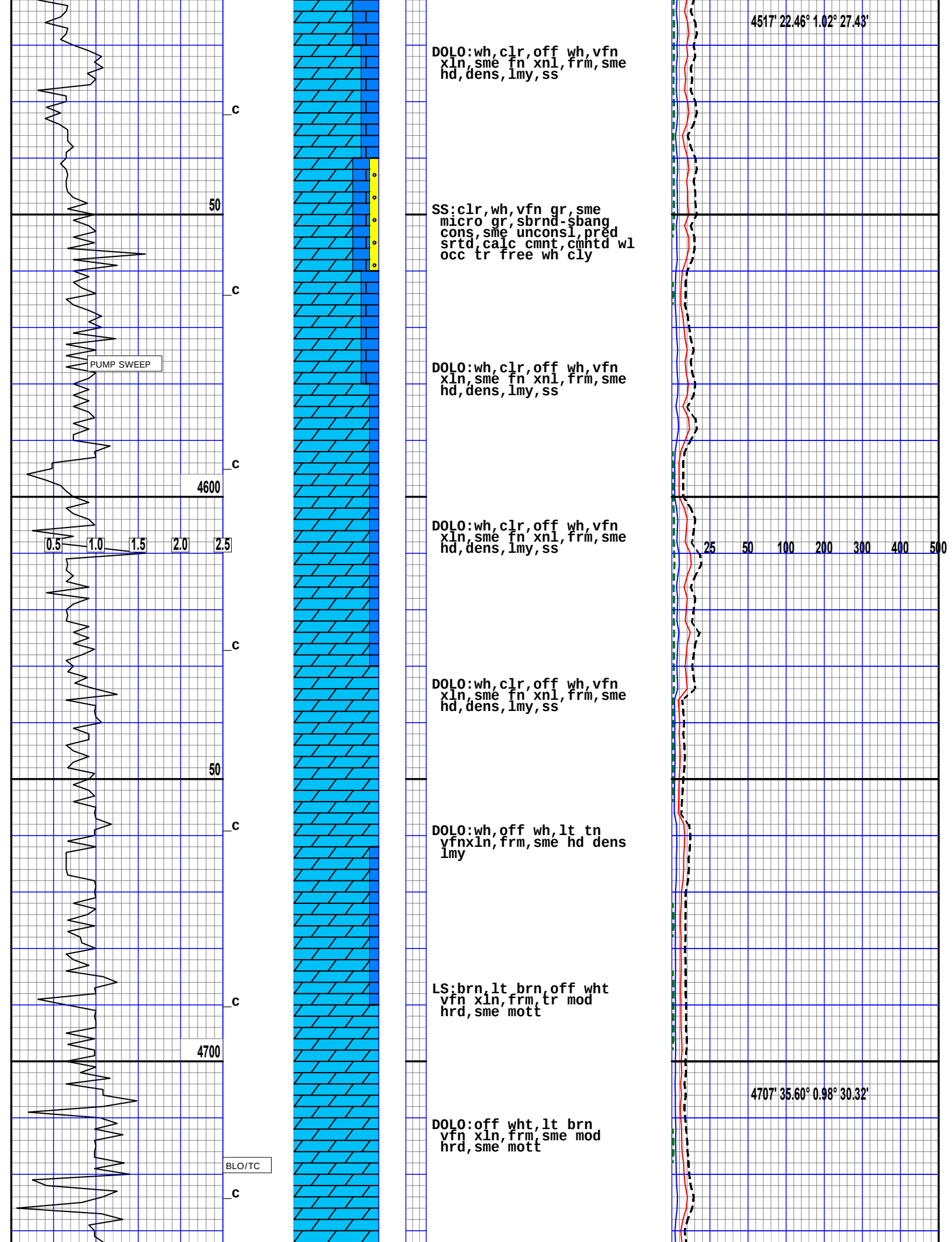


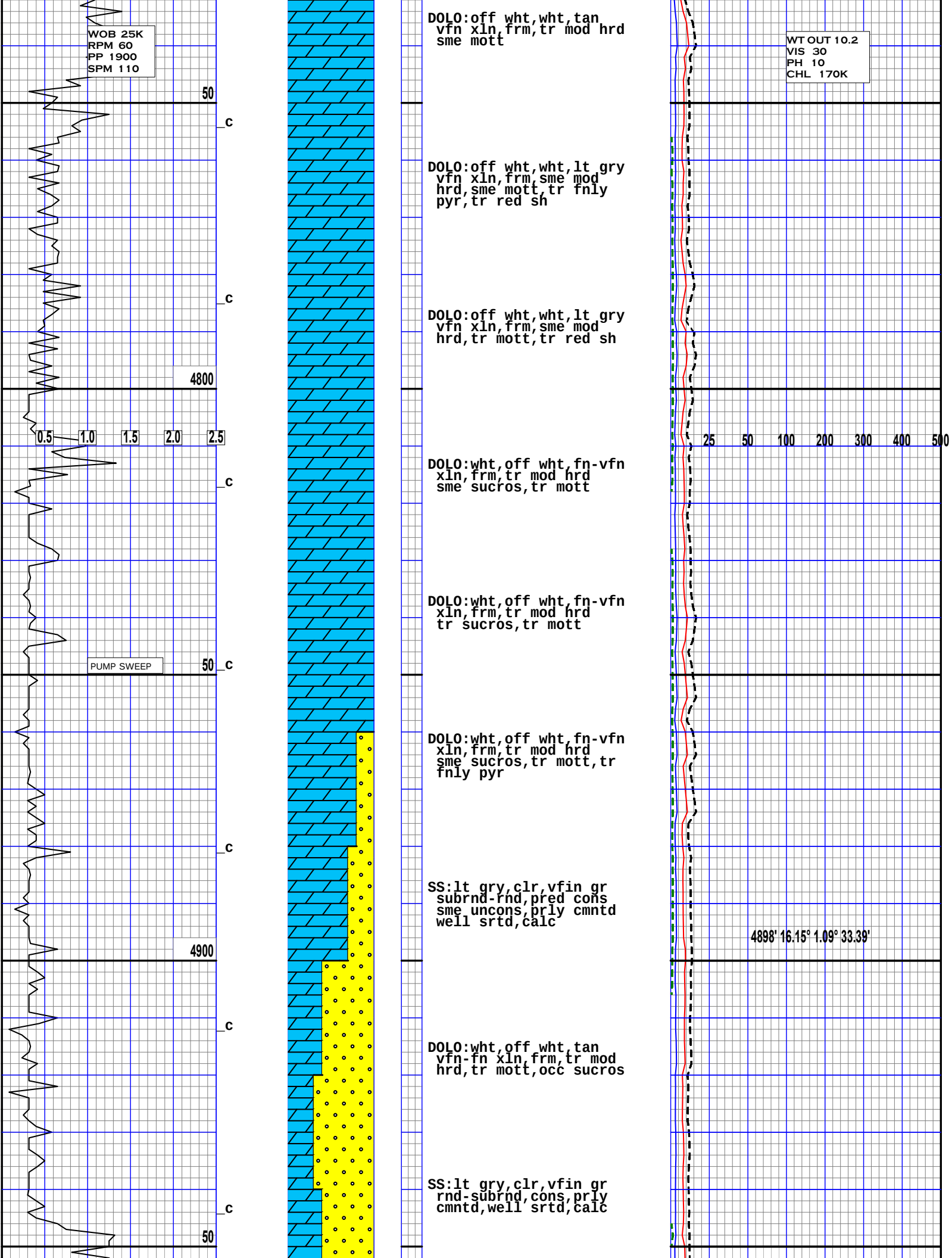


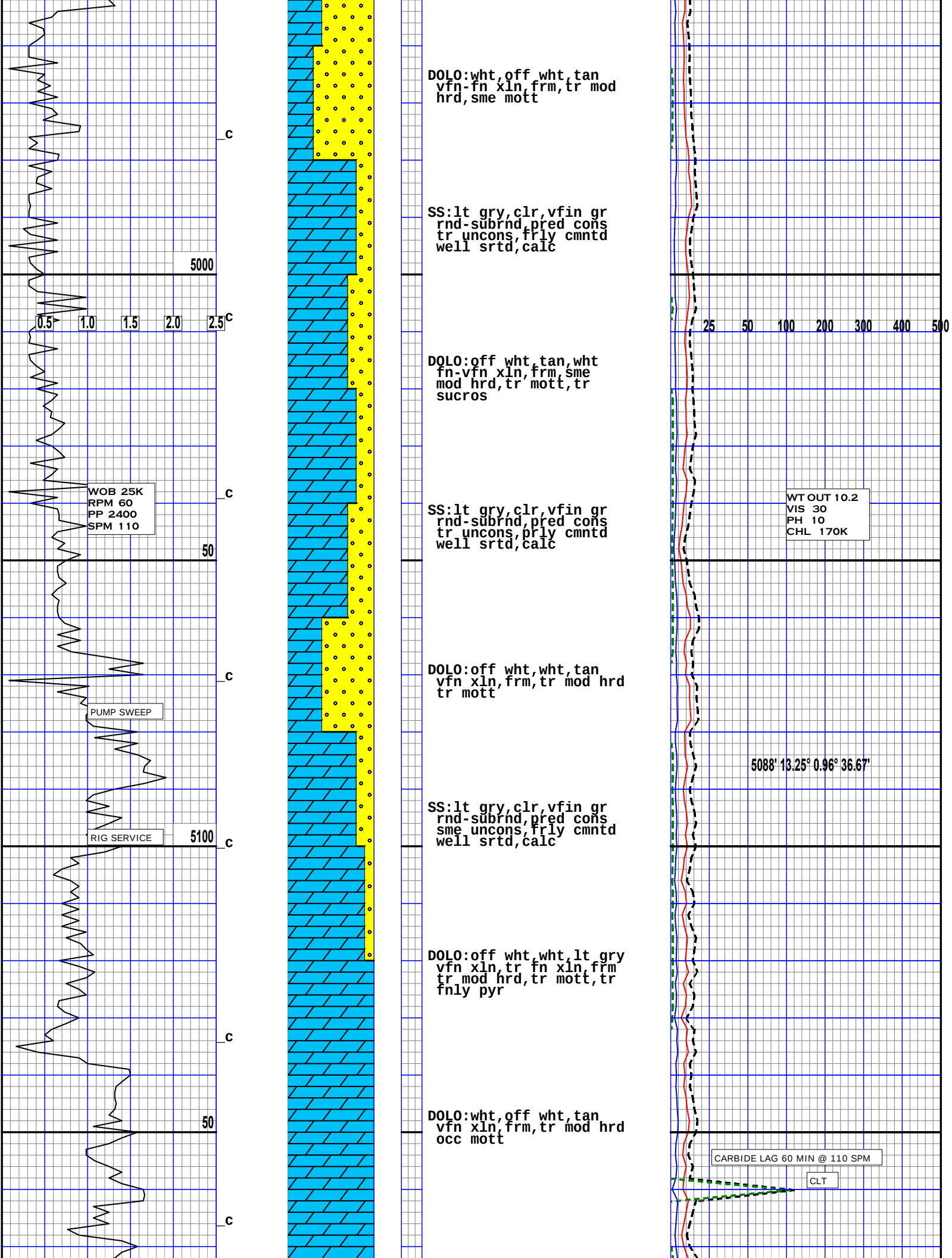


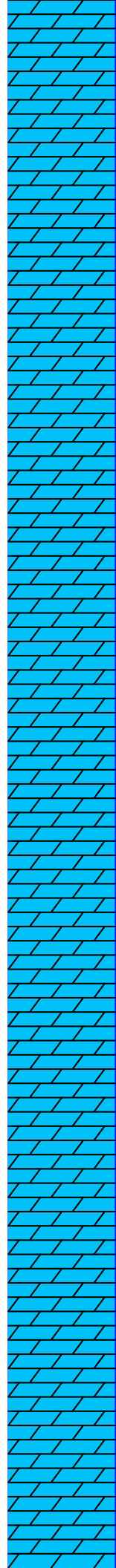
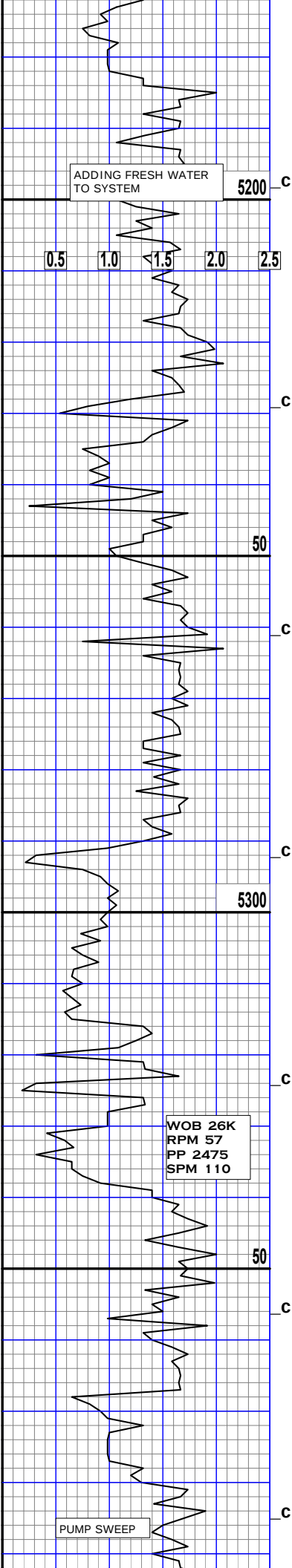












DOLO:wht,off wht,tan
vfn xln,frm,tr mod hrd
sme mott

DOLO:wht,off wht,tan
vfn xln,frm,sme mod hrd
sme mott

DOLO:off wht,wht,lt brn
vln xln,frm,tr mod hrd
tr mott

DOLO:off wht,wht,tan
vfn xln,tr fn xln,frm
tr mod hrd,tr mott

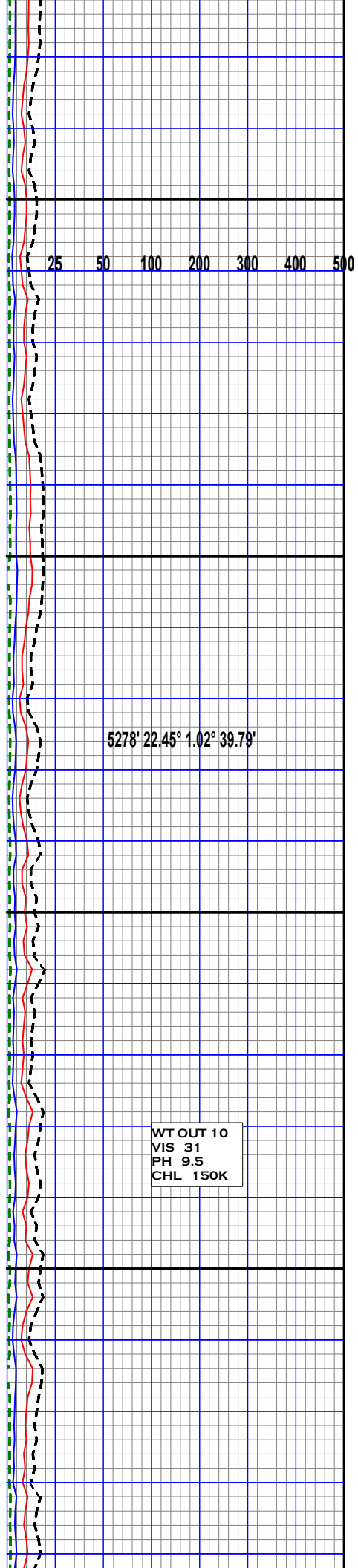
DOLO:wht,off wht,tan
vfn xln,frm,tr mod hrd
sme mott,tr sucros

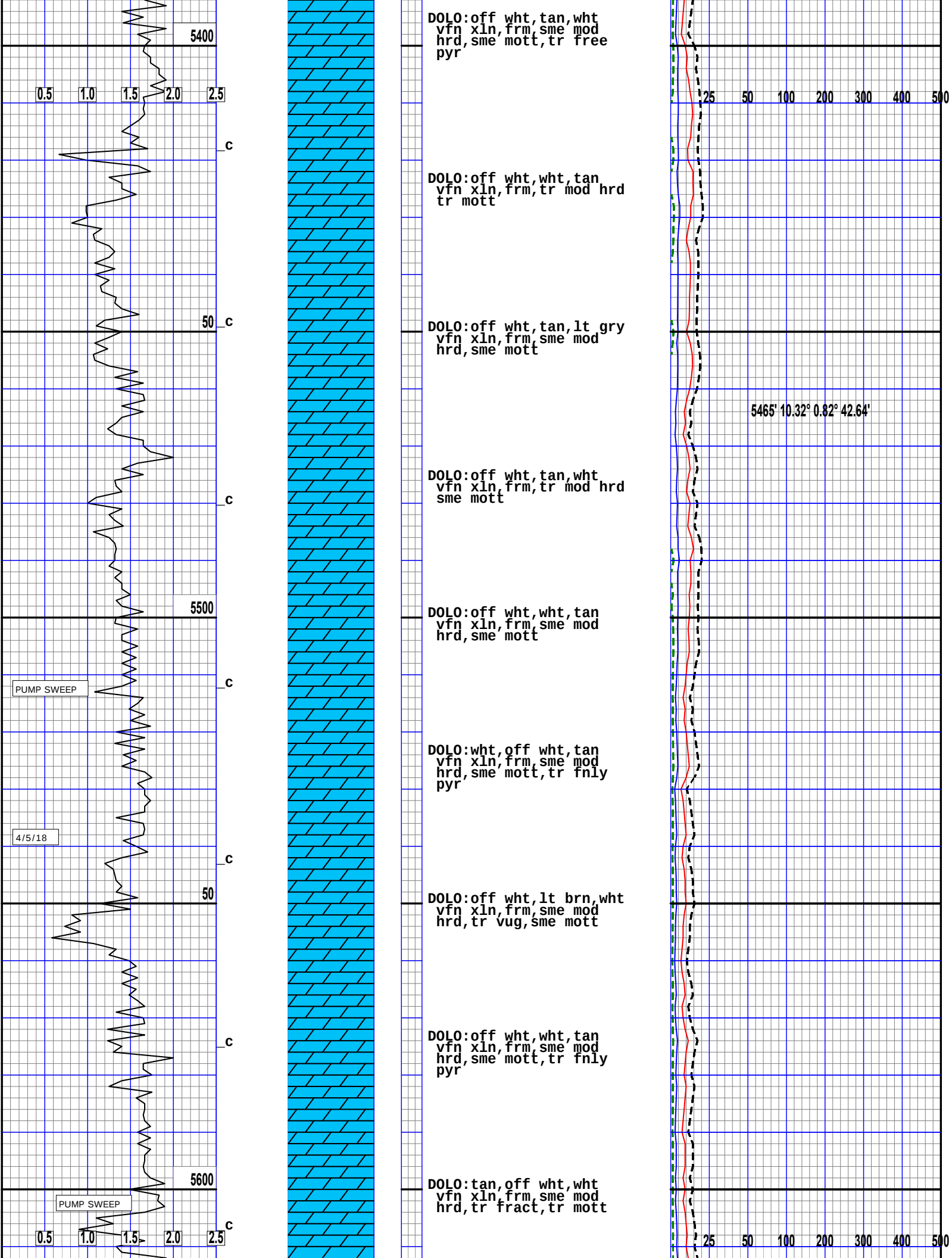
DOLO:off wht,wht,tan
vfn xln,frm,sme mod
hrd,tr vug,sme sucros
tr mott

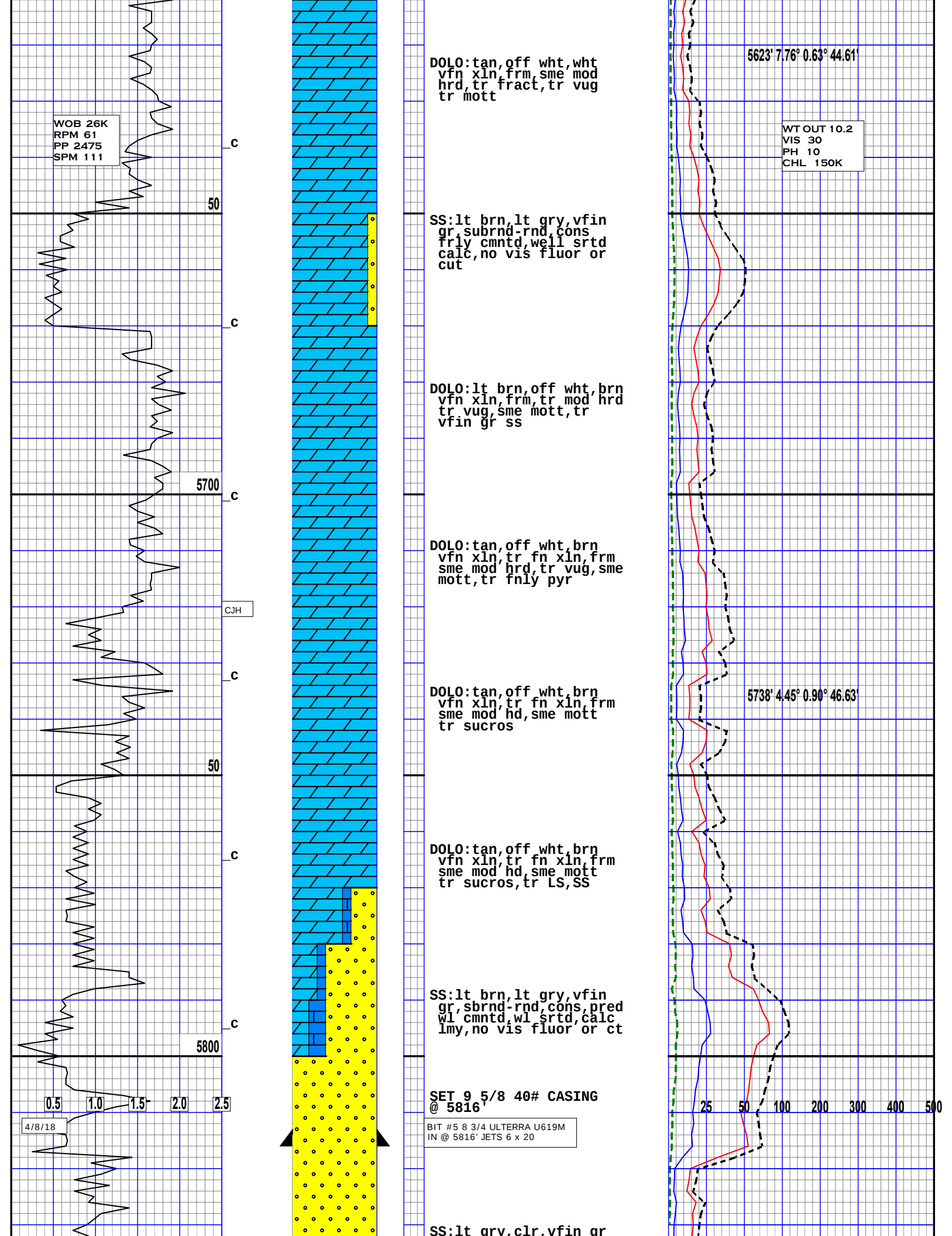
DOLO:off wht,wht,tan
vfn xln,frm,sme mod
hrd,sme sucros,tr fnly
pyr,tr vfin ool

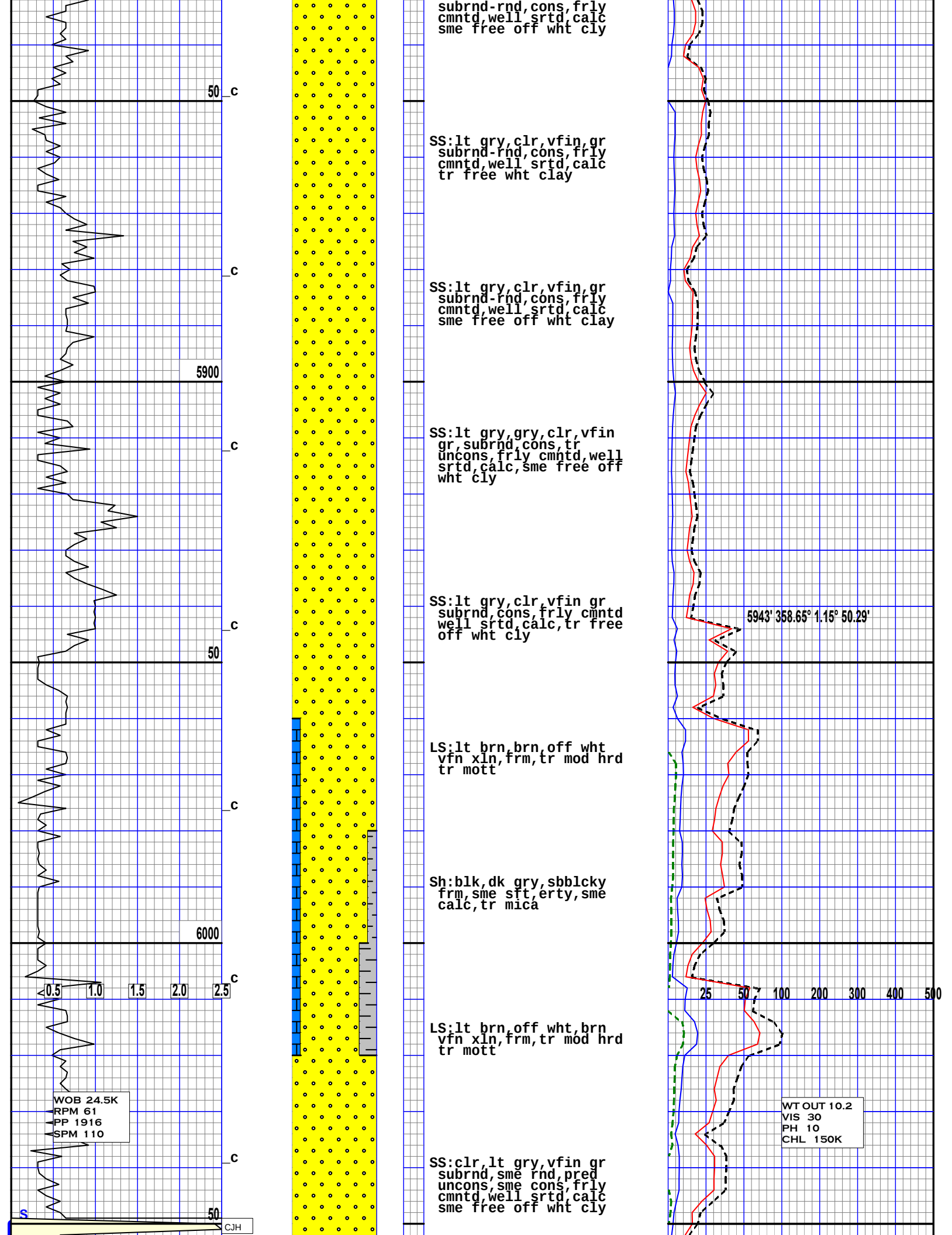
DOLO:off wht,wht,tan
vfn xln,frm,sme mod
hrd,tr rexln,tr mott
tr sucros

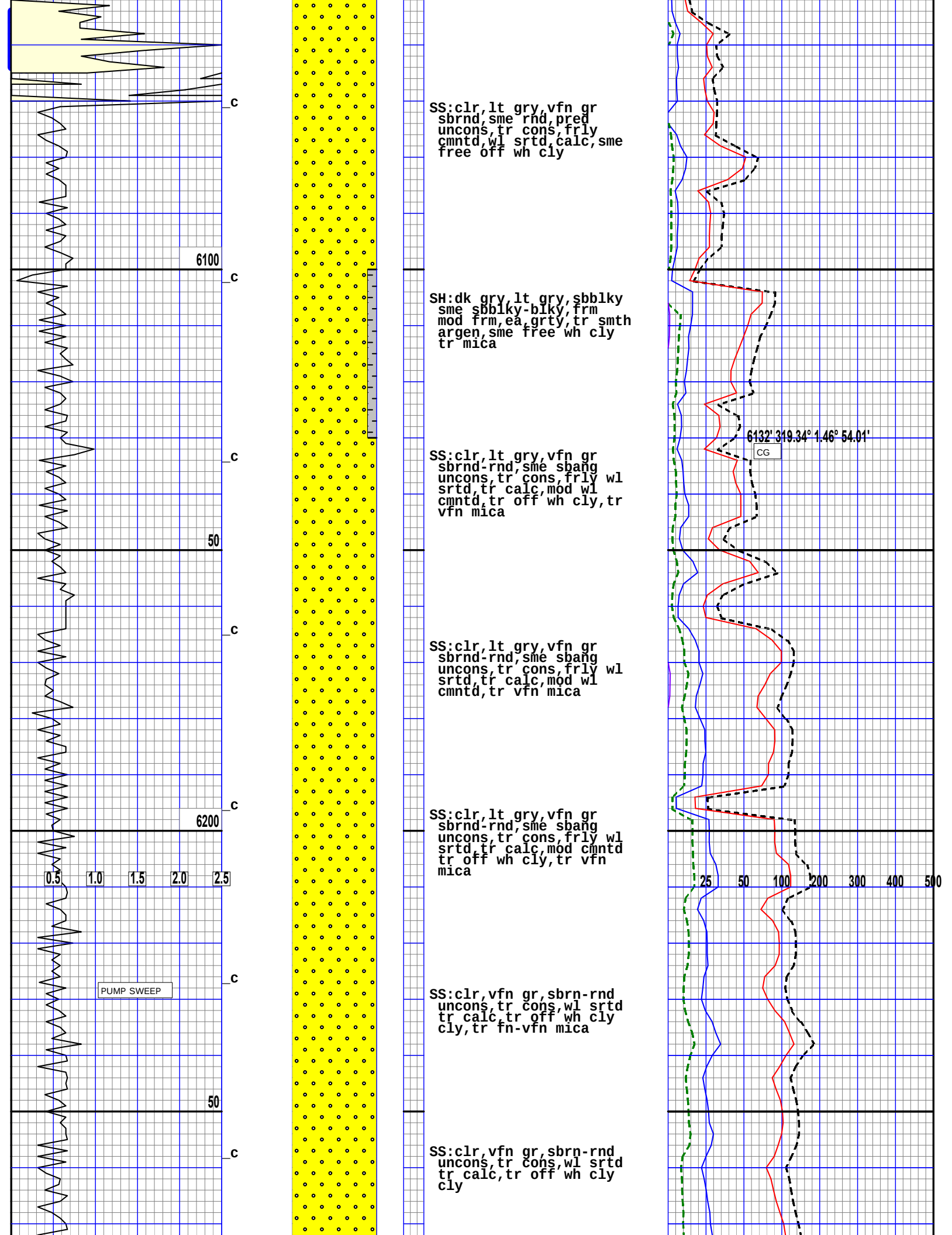
DOLO:off wht,wht,tan
vfn xln,frm,tr mod hrd
tr mmott,tr sucros

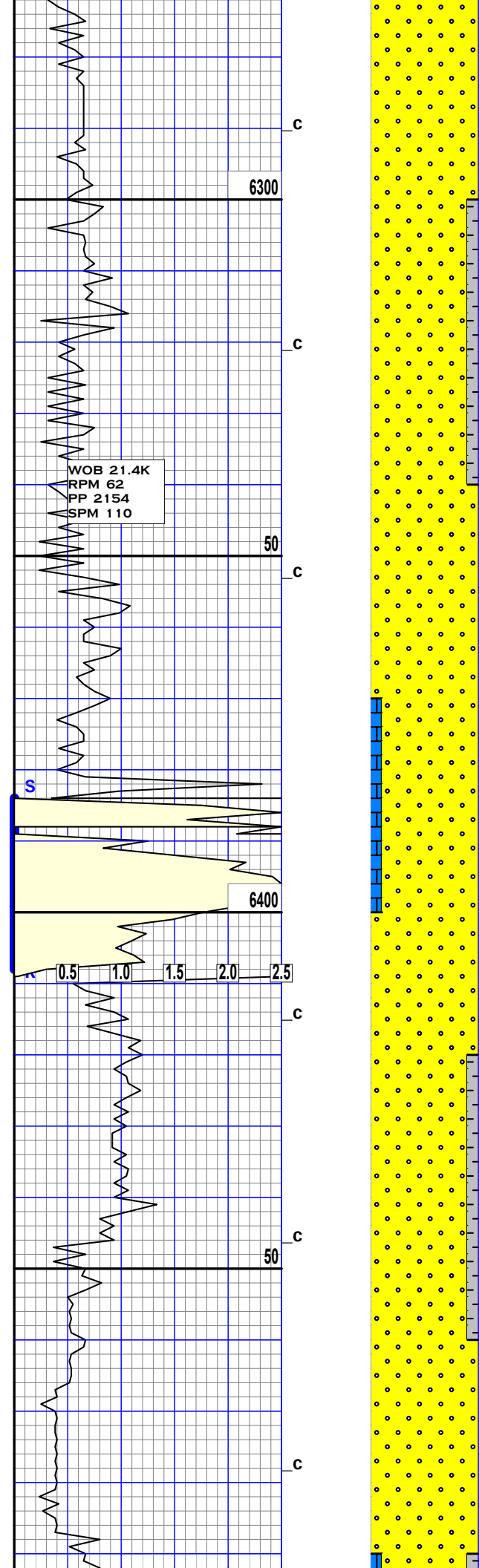












SS:clr,vfn gr,sbrn-rnd
uncons,tr cons,wl srted
tr calc,tr off wh cly

SH:dk gry,lt gry,sbblky
sme sbblky-blky,frm
mod frm,ea grty,tr smth
argen,sme free wh cly

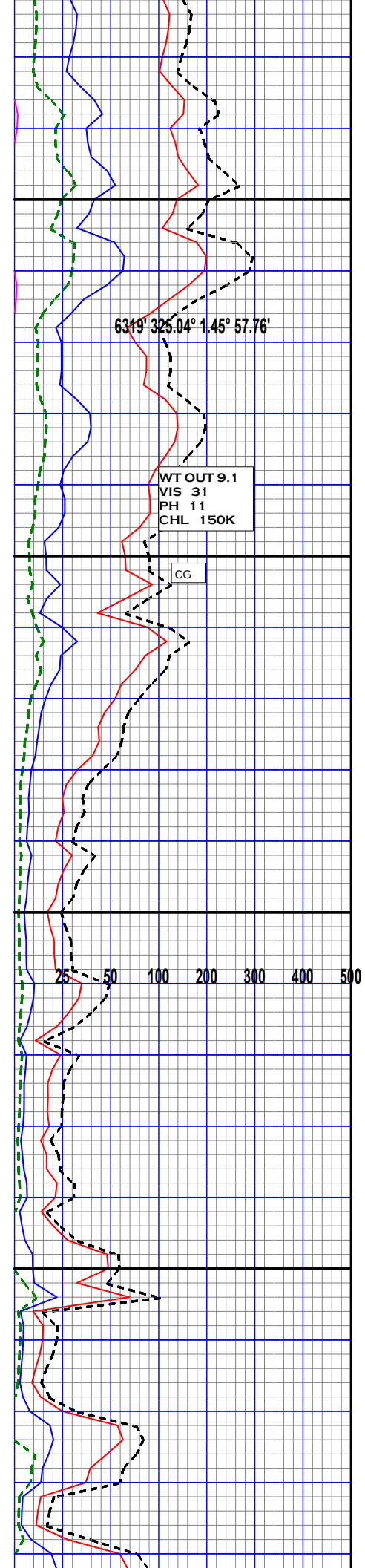
SS:clr,off wh,lt gry,gry
vfn gr,sme fn-vfn gr
sbrnd-rnd,uncons,tr con
mod wl srted,calc

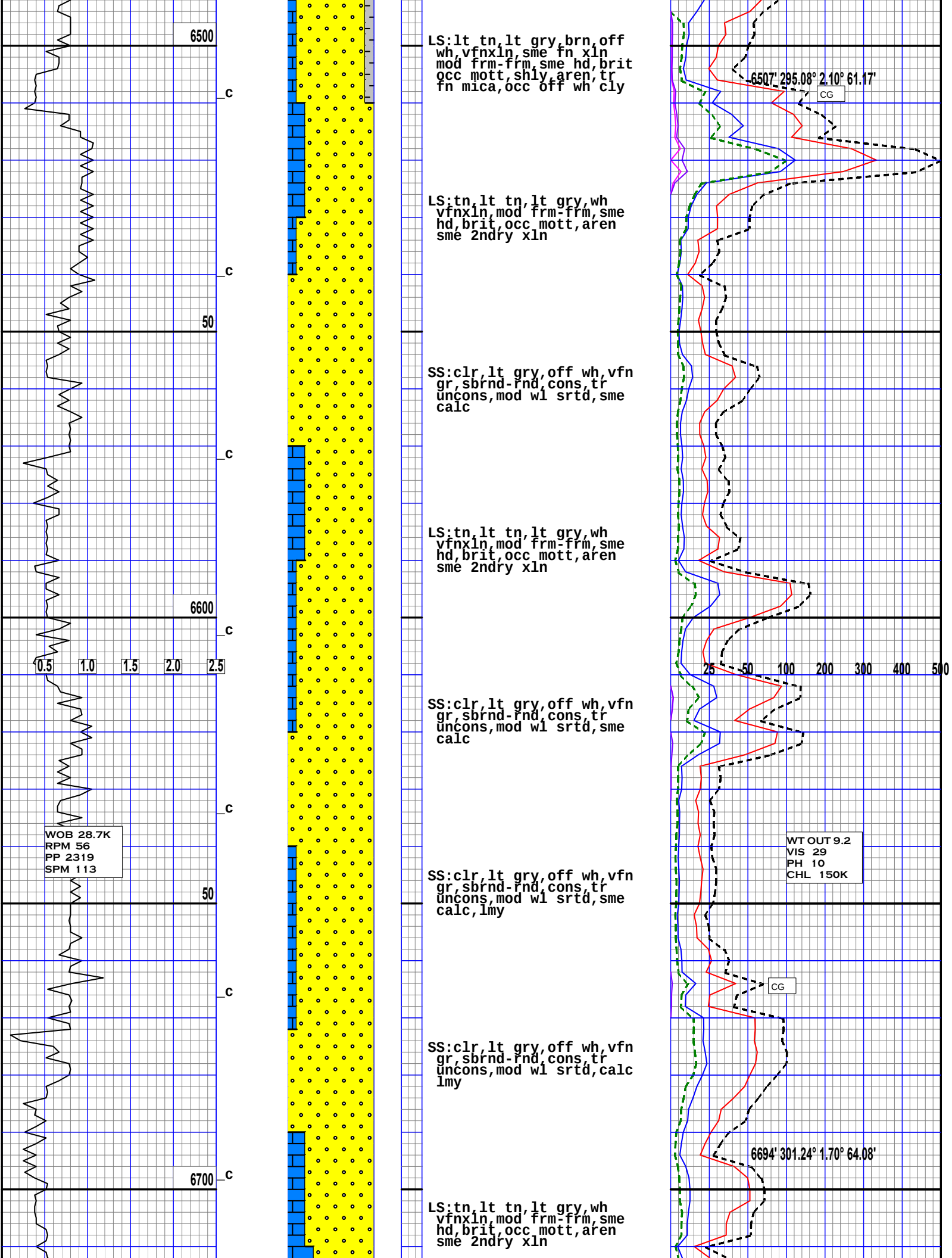
LS:lt gry,gry,off wh,vfn
xin,sme fn xin,frm mod-
frm,sme hd,brit,mott,tr
off wh cly,aren

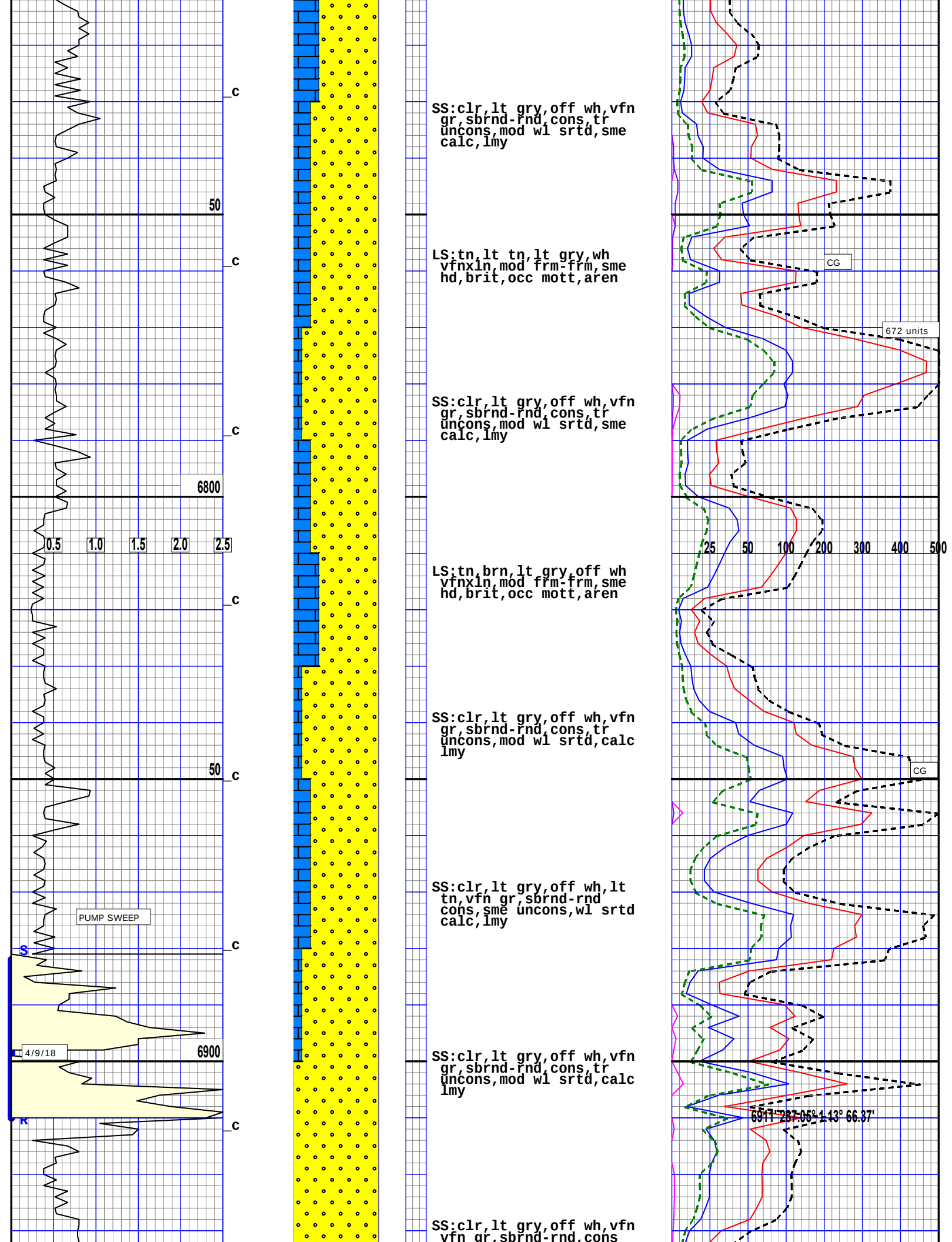
SS:clr,off wh,lt gry,gry
vfn gr,sme fn-vfn gr
sbrnd-rnd,uncons,tr con
mod wl srted,calc,tr vfn
mica

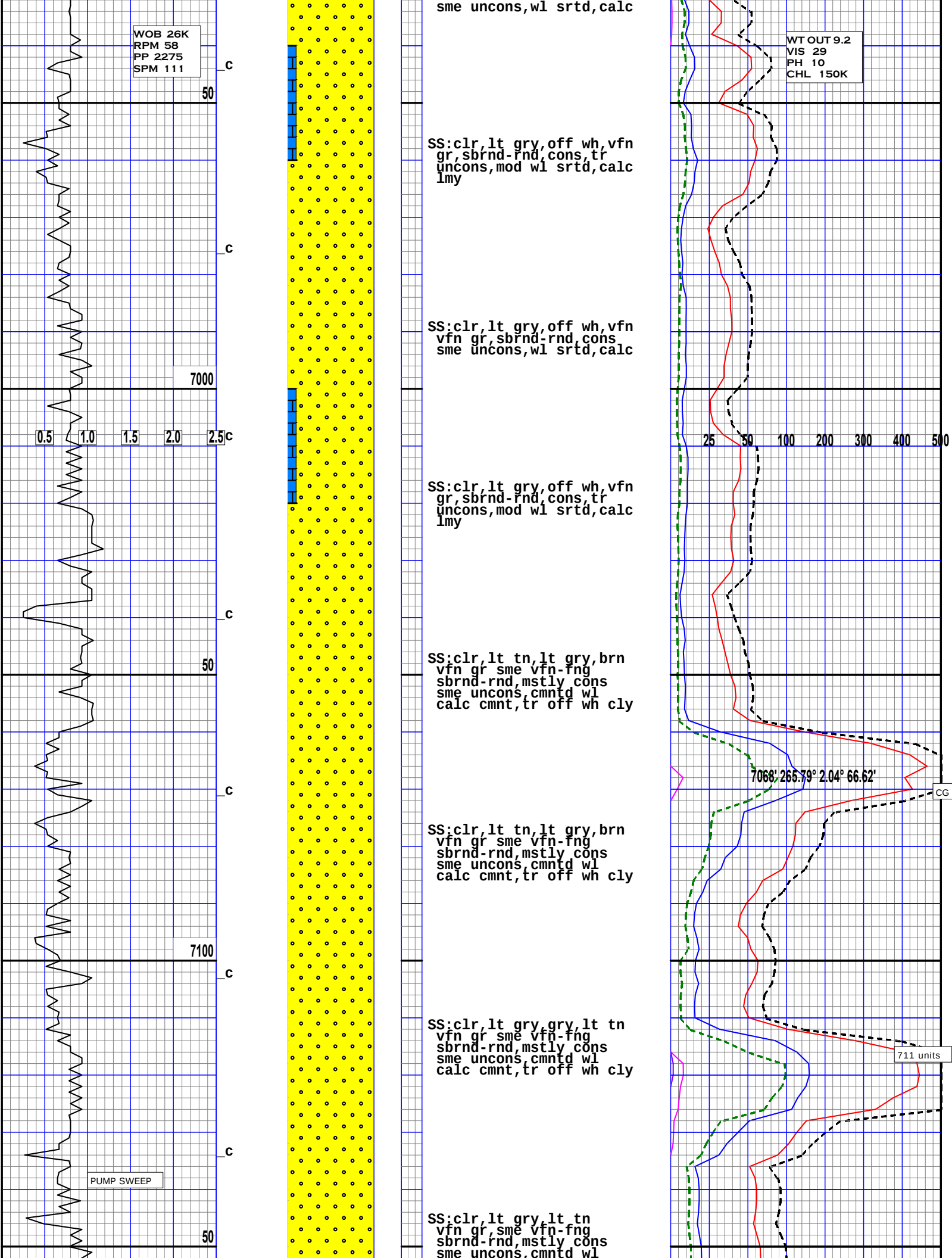
SS:clr,off wh,lt gry,gry
vfn gr,sme fn-vfn gr
sbrnd-rnd,uncons,tr con
mod wl srted,calc,tr vfn
mica

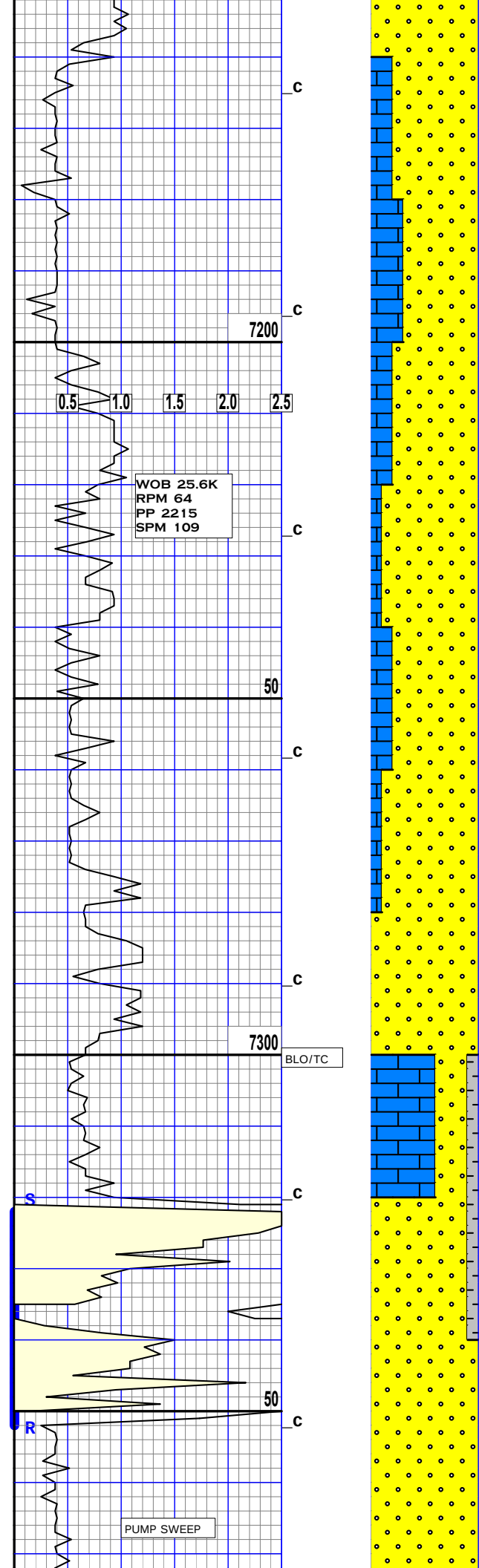
SS:clr,lt gry,off wh,vfn
gr,sbrnd-rnd,uncons,tr
con,mod wl srted,calc,tr
fn mica











calc cmnt, tr off wh cly

LS:lt,tn,tn,brn,off wh
fn-vfnxln,sme fnxln,frm
mod frm,tr hd,brit,sme
mott,aren,tr fn mica

SS:clr,lt gry,lt tn,brn
fn gr,sme vfn gr,sbrnd-
rnd,sbang,cons,pred wl
srted,calc cmnt,cmntd wl
lmy,tr off wh cly,tr
vfn mica

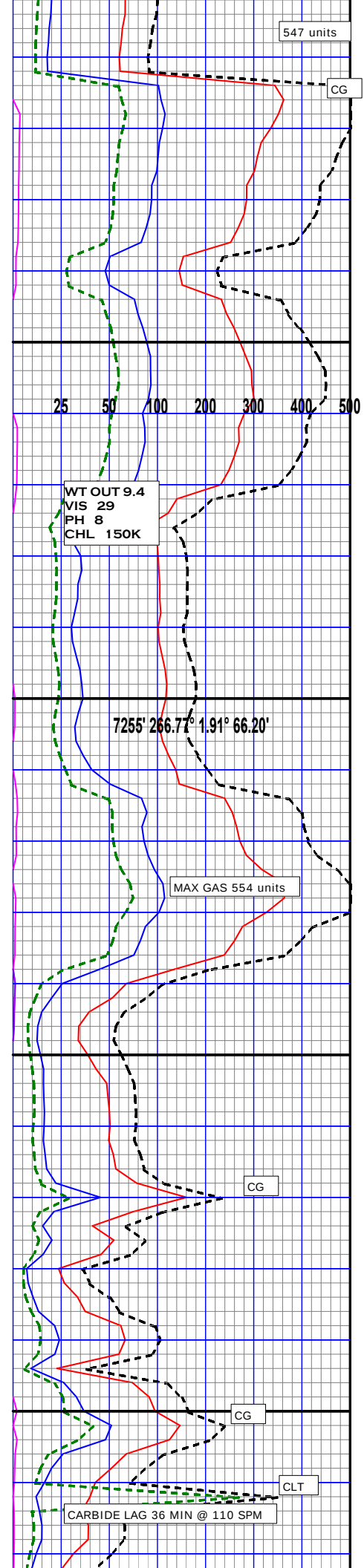
SS:clr,lt gry,lt tn
vfn gr,sme vfn-fng
sbrnd-rnd,mstly cons
sme uncon,cmntd wl
calc cmnt,tr off wh cly

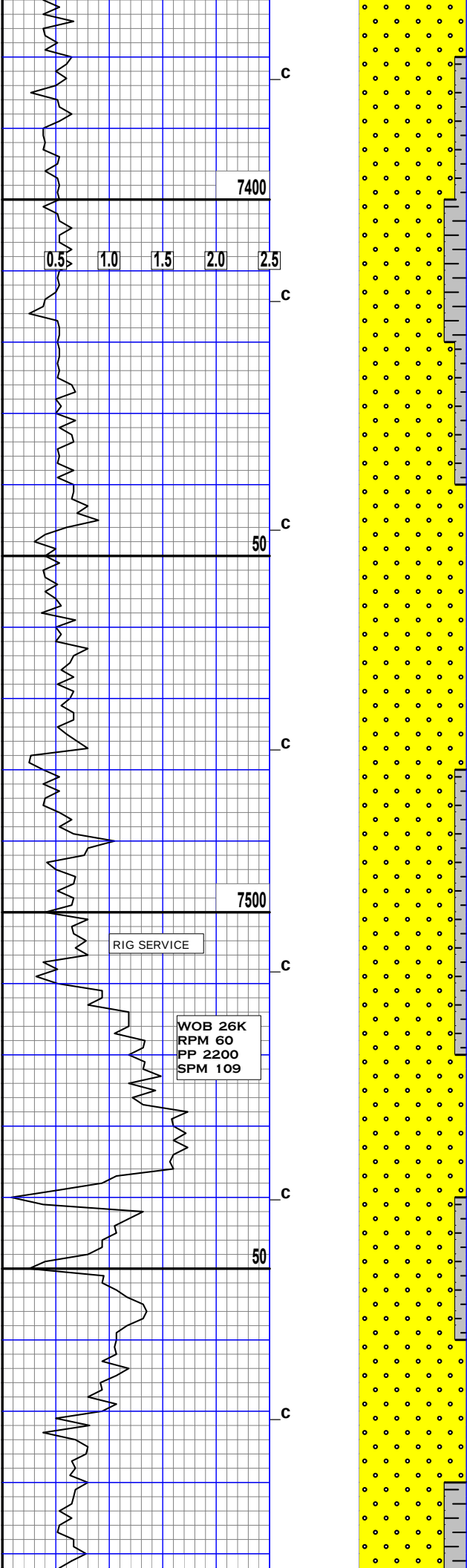
SS:clr,lt gry,lt tn
vfn gr,sme vfn-fng
sbrnd-rnd,mstly cons
sme uncon,calc cmntd
cmntd wl,lmy

LS:lt,brn,brn,off wht
vfn-fn xln,frm,tr mod
hrd,sme mott

SH:blk,dk gry,sbbckly
frm,tr sft,erty,sme
mica,tr calc

SS:clr,lt gry,vfn gr
sbrnd-rnd,pred cons
sme uncon,brly cmntd
well srted,calc,tr free
wht cly,tr shly





SS:clr,lt gry,vfin gr
subrnd-rnd,pred cons
tr uncon,frly cmntd
well srt'd,calc,sme
free off wht cly,tr
fnly pyr,tr free pyr

SH:dk gry,dk brn,sbblcky
frm,sme sft,slty,tr
erty,sme aren,sme calc
tr mica

SS:clr,lt gry,vfin gr
rnd-subrnd,pred cons
tr uncon,frly cmntd
well srt'd,calc,tr shly
tr free off wht cly

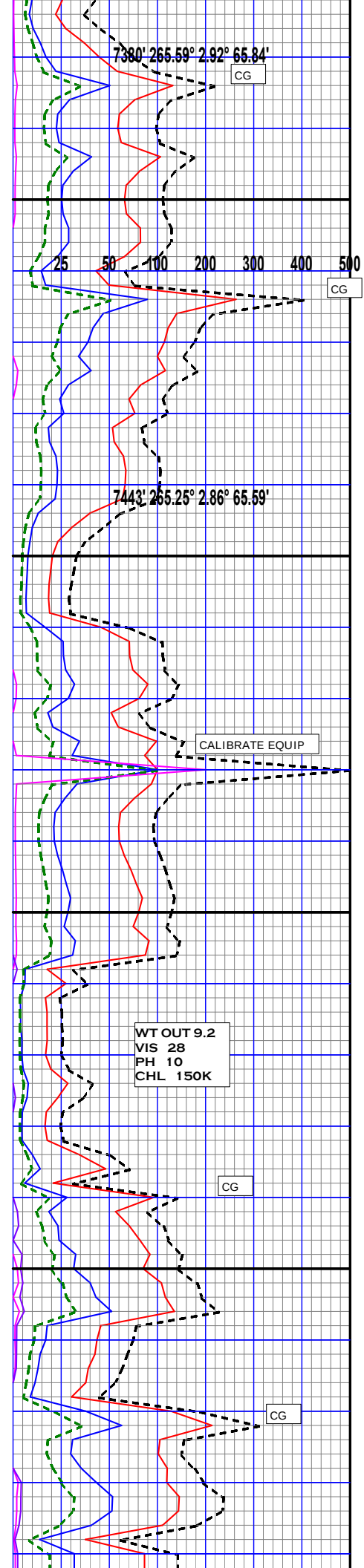
SS:lt gry,clr,vfin gr
subrnd-rnd,cons,frly
cmntd,well srt'd,calc
sme shly,tr free off
wht cly

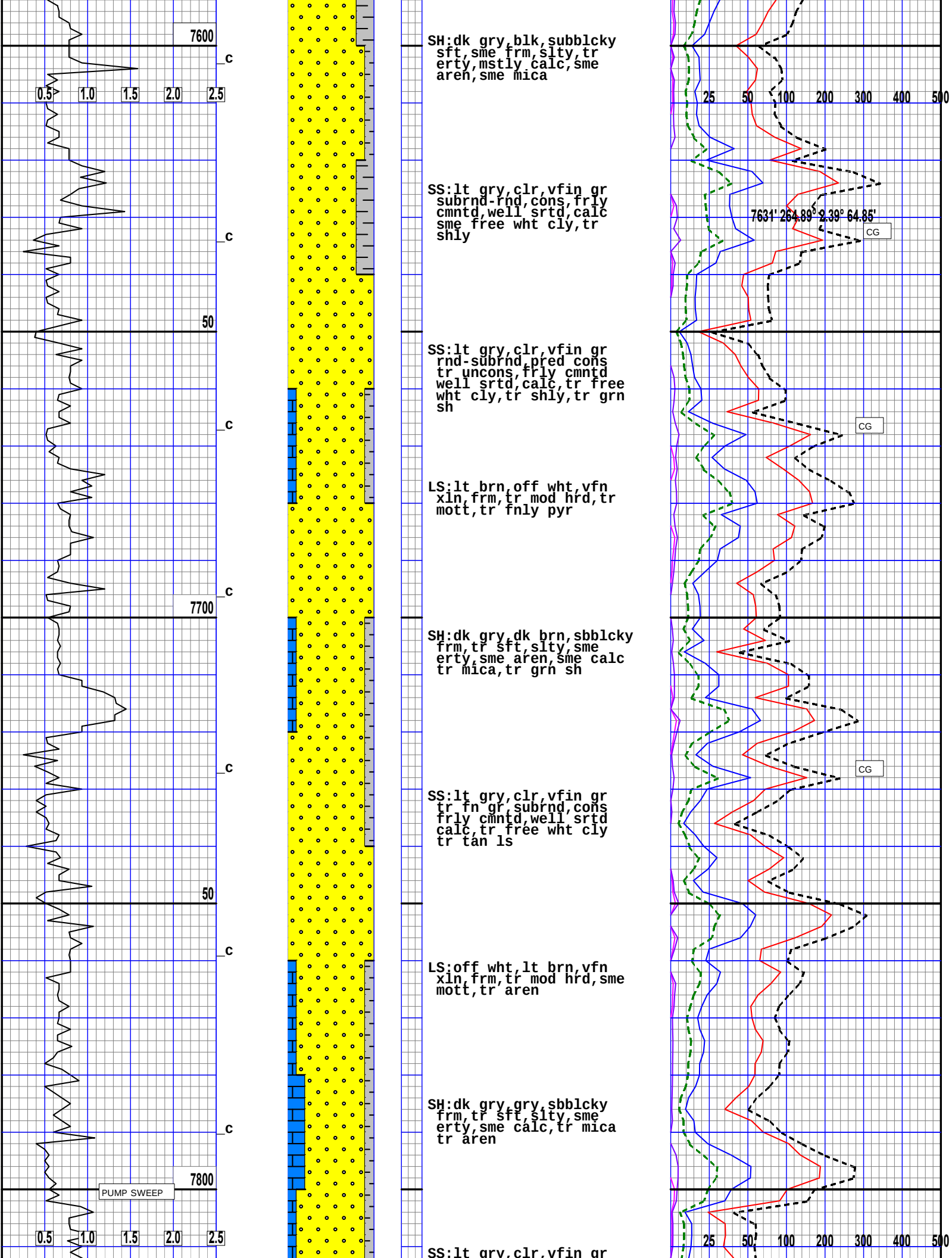
SH:dk gry,dk brn,sbblcky
frm,sme sft,slty,tr
erty,sme aren,sme calc
tr mica

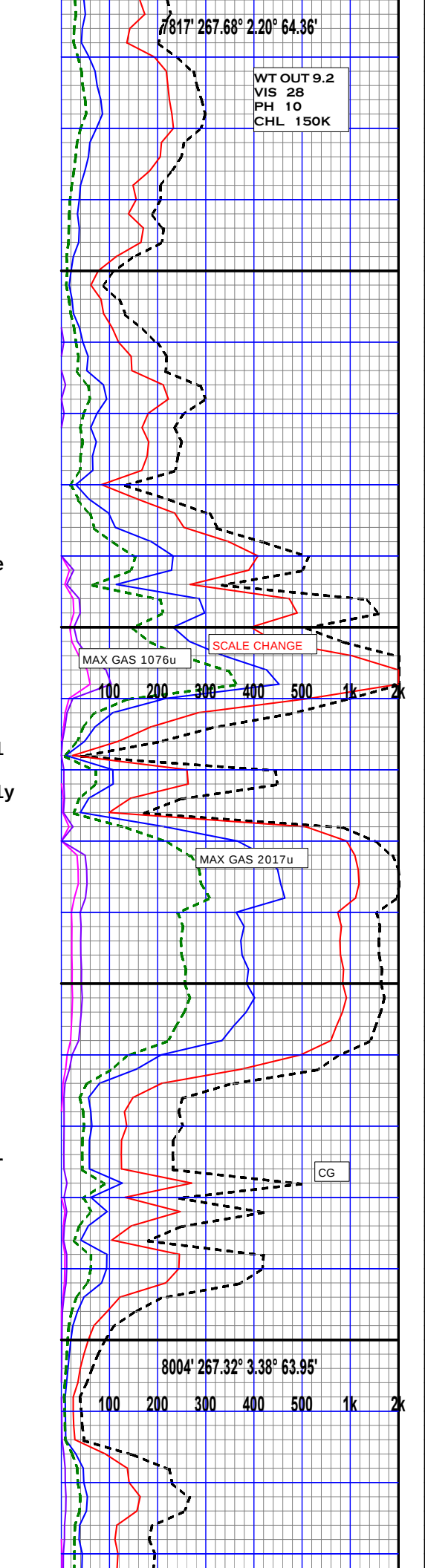
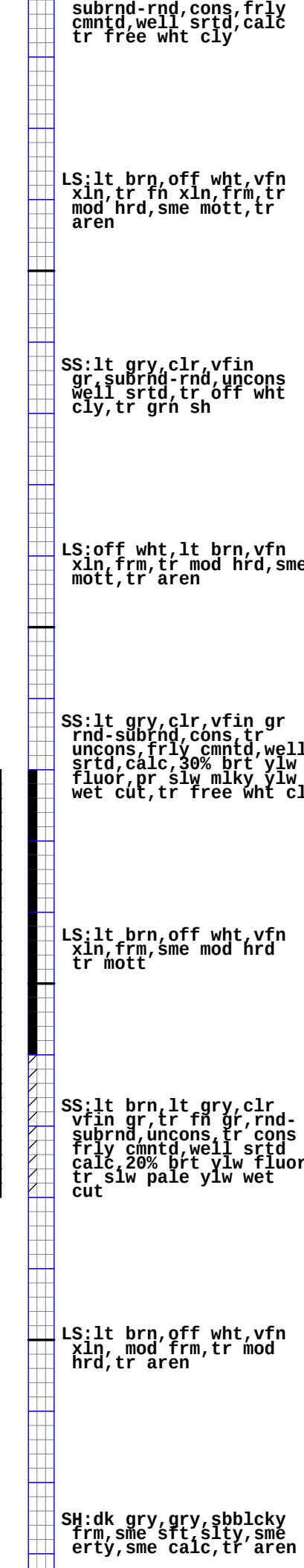
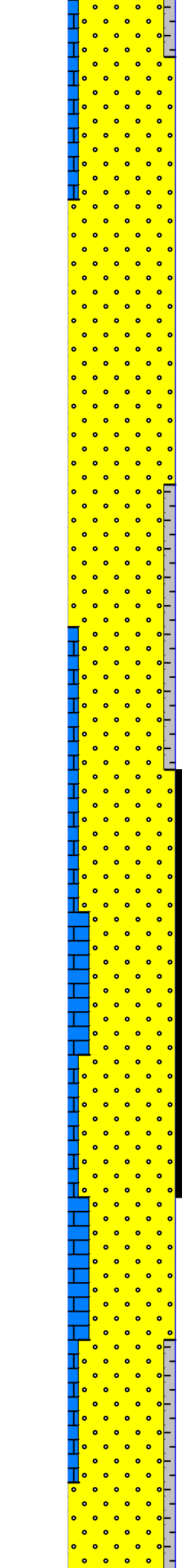
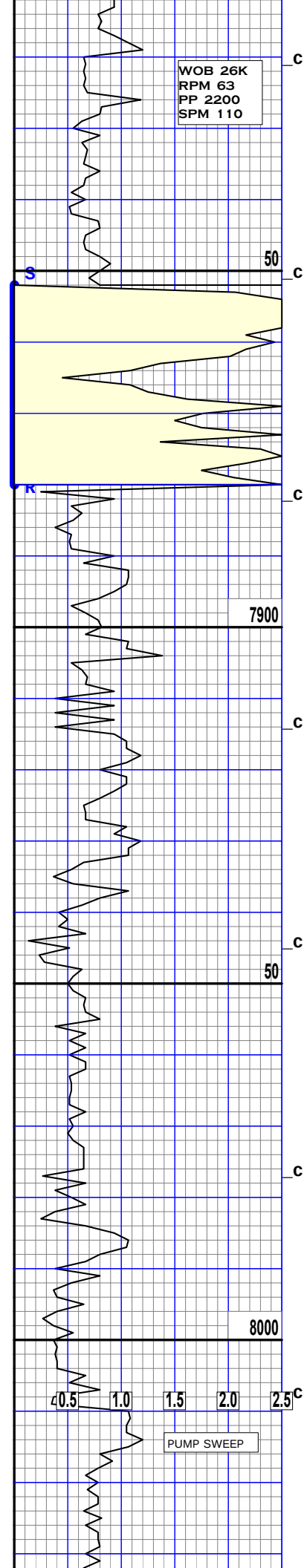
SS:lt gry,clr,tan,vfin
gr,subrnd-rnd,cons
frly cmntd,well srt'd
calc,sme shly,sme free
off wht cly,tr slty

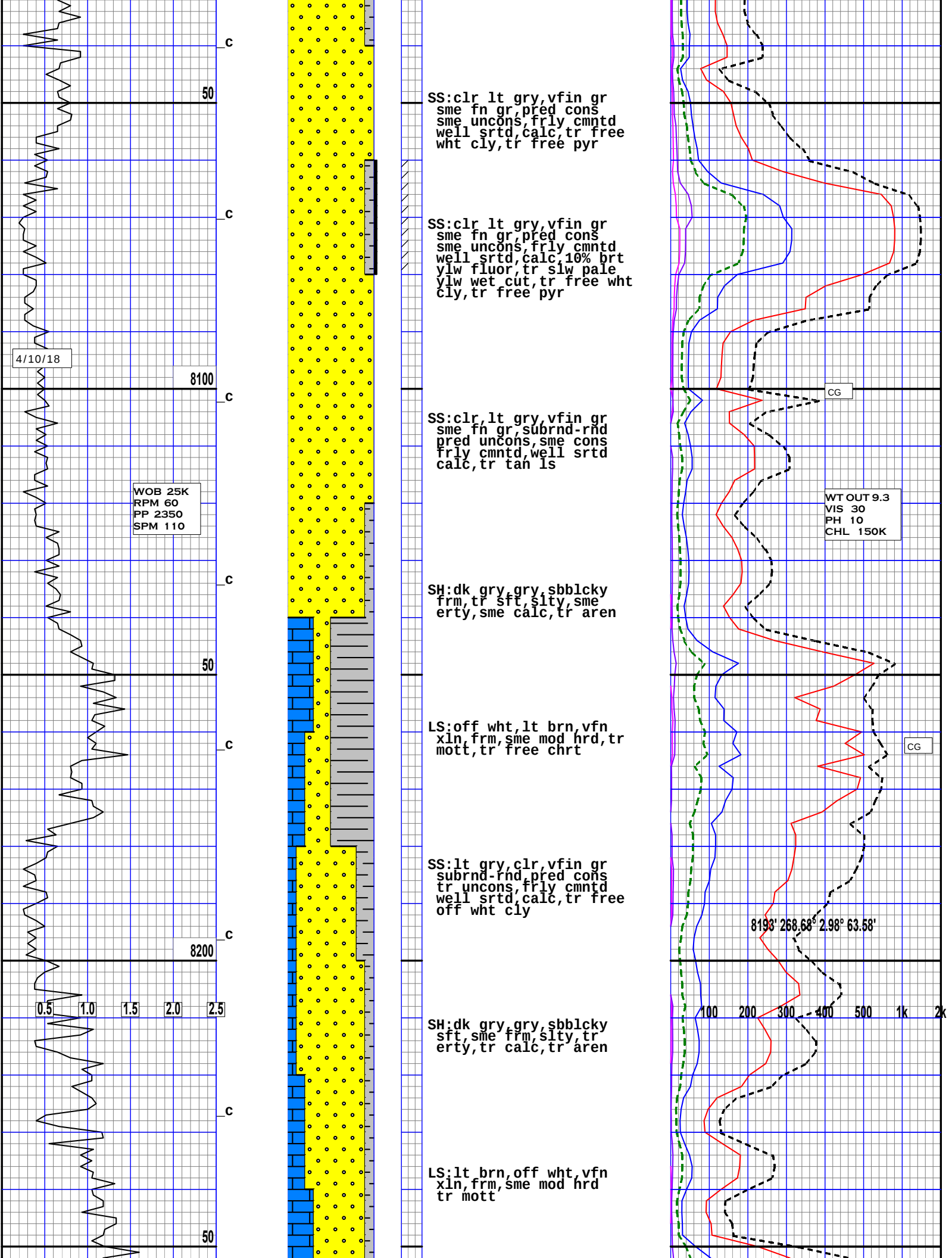
SH:dk gry,blk,sbblcky
sft,sme frm,erty,sme
slty,sme calc,tr mica
tr aren

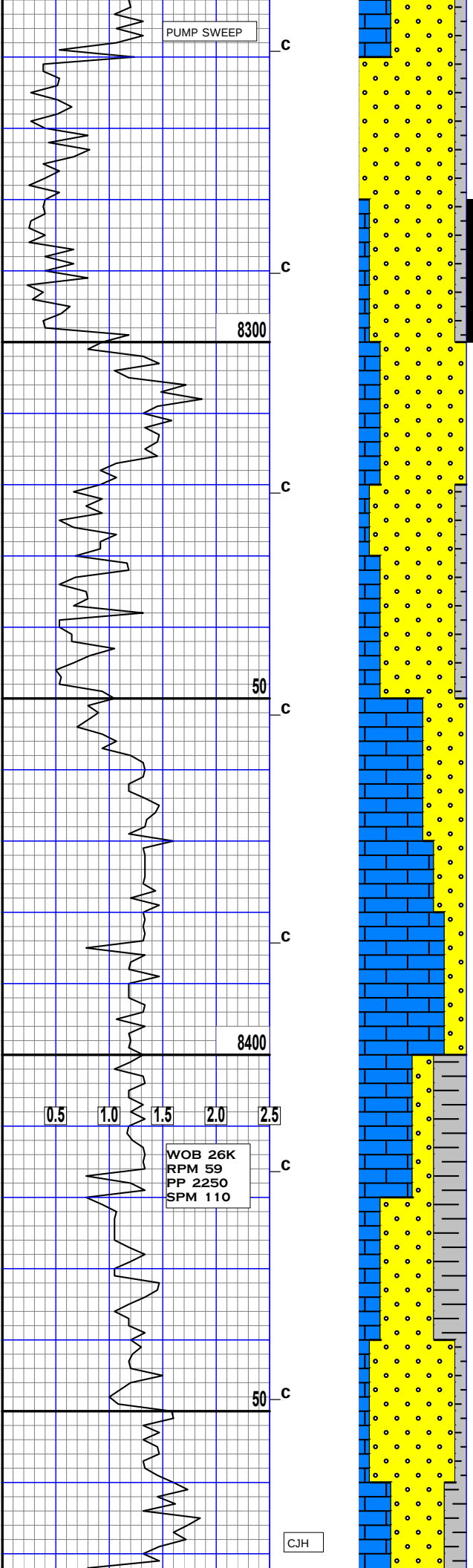
SS:lt gry,clr,vfin gr
subrnd-rnd,cons,frly
cmntd,well srt'd,calc
sme free off wht cly











SH:dk gry,gry,sbbkcky
frm,tr sft,sity,sme
calc,sme mica,tr aren

SS:lt gry,clr,vfin gr
subrnd-rnd,cons,friy
cmntd,well srt'd,calc
20% brt ylw fluor,no
vis cut,tr free wht
cly

LS:lt brn,off wht,vfn
xln,frm,sme mod hrd,tr
mott

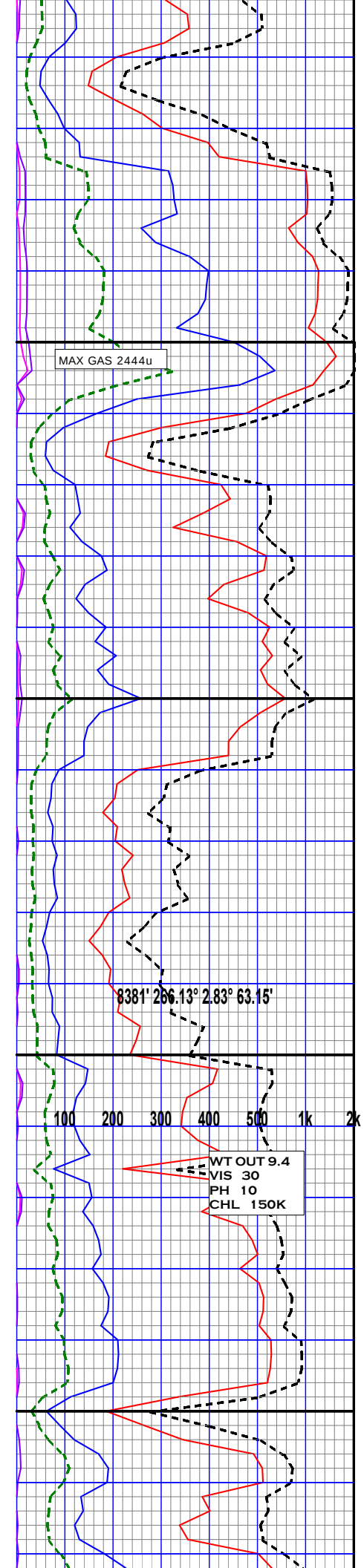
SS:lt gry,clr,vfin gr
subrnd-rnd,pred cons
sme uncon,sfriy cmntd
well srt'd,calc,sme
free wht cly,tr fnly
pyr,tr foss,tr ls
includ

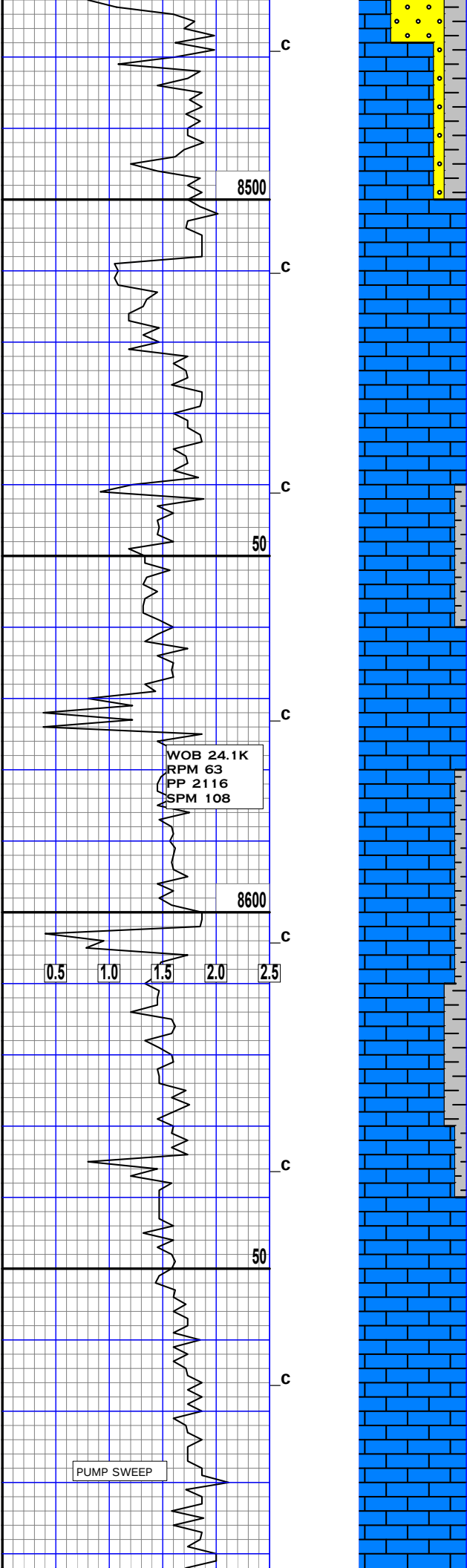
LS:lt brn,off wht,brn
fn-vfn,xln,frm,sme
mod hrd,mstly mott
tr vfn ool,tr fnly pyr
tr aern

SH:dk gry,gry,subbkcky
frm,tr sft,sity,sme
calc,tr mica

SS:clr,lt gry,vfn gr
subrnd,tr rnd,pred
uncons,sme cons,friy
cmntd,well srt'd,calc
sme shly,sme lt gry
cly

LS:off wht,lt brn,fn-
vfn xln,frm,tr mon hrd
sme mott,tr aren





LS: off wh, lt gry, lt tn
vfnxln, sme fn xln, frm
sme mod frm, brit, tr
shly, tr aren, sme wh cly

LS: lt gry, lt tn, lt brn
vfnxln, sme fn xln, frm
sme mod frm, brit, smth
lamn, tr shly

LS: lt gry, lt tn, lt brn
vfnxln, sme fn xln, frm
sme mod frm, brit, smth
lamn, shly

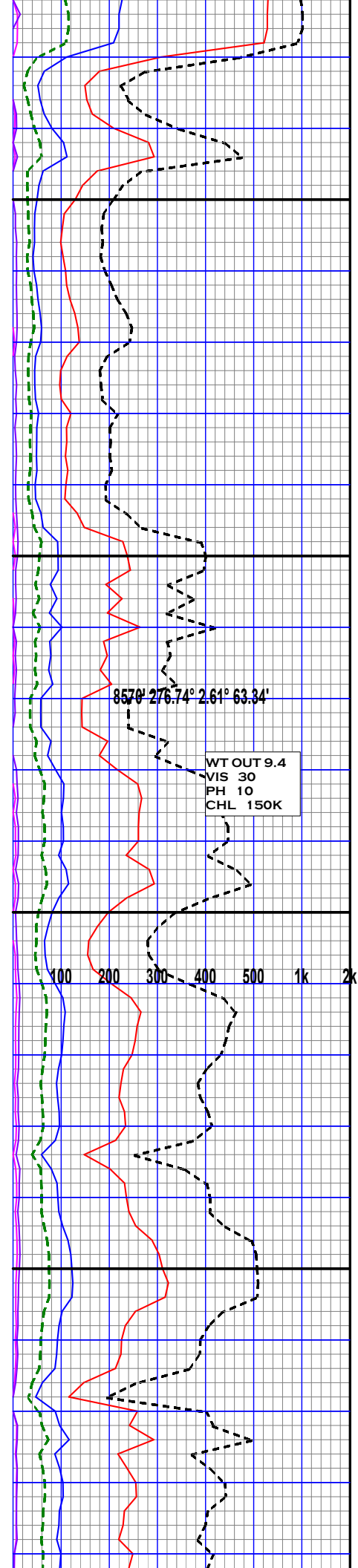
LS: lt gry, lt tn, vfn-fn
xln, sme fn xln, frm
sme frm-hd, brit, smth
lamn, tr shly

SH: dk gry, gry, sbblky
frm, tr sft, slty, grty
sme calc

LS: lt gry, tn, vfn-fn
xln, sme fn xln, frm
sme frm-hd, brit, smth
lamn, shly

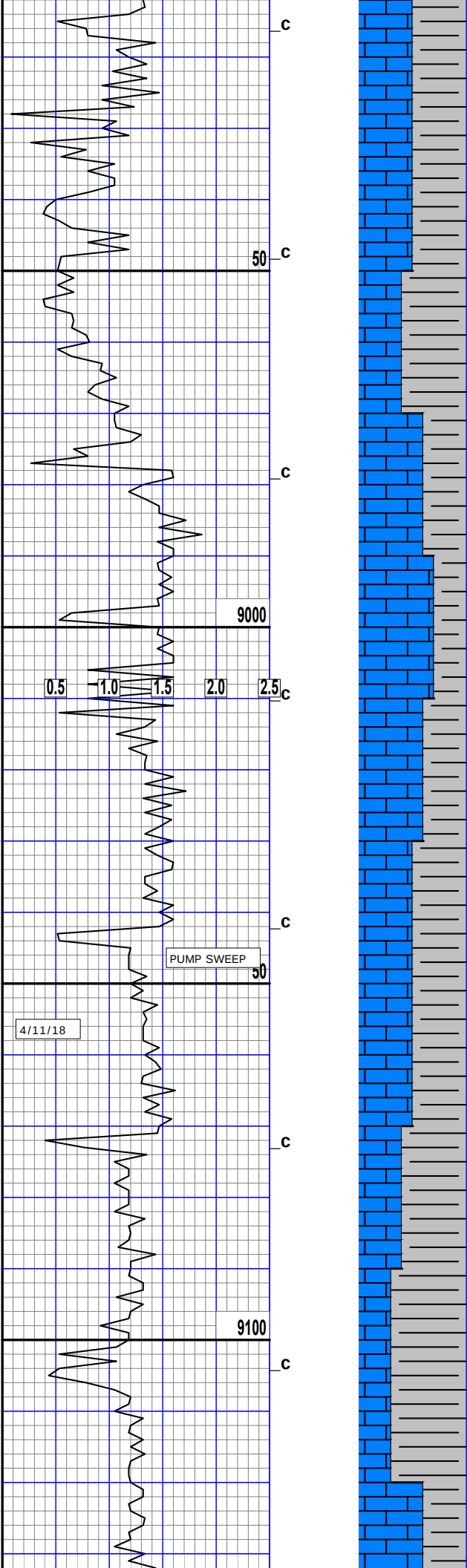
LS: lt gry, gry, vfn-fn xln
frm mod-frm, occ hd, brit
smth, lamn, sme 2ndry xln

LS: gry, lt gry, lt tn, vfn-
fn xln, mod frm-frm, tr
hd, lamn, smth, tr mott



8570° 276.74° 2.61° 63.34°

WT OUT 9.4
VIS 30
PH 10
CHL 150K



SH:dk gry,blk,sbblky,tr
blky,frm mod-frm,sme hd
grty,ea,tr slt,lmy

LS:gry,lt gry,brn,vfn-fn
xln,sme fn xln,frm-mod
frm,tr hd,occ sft,brit
tr mica,sme occ wht cly

SH:dk gry,blk,sbblky,tr
blky,frm mod-frm,sme hd
grty,ea,tr slt,lmy

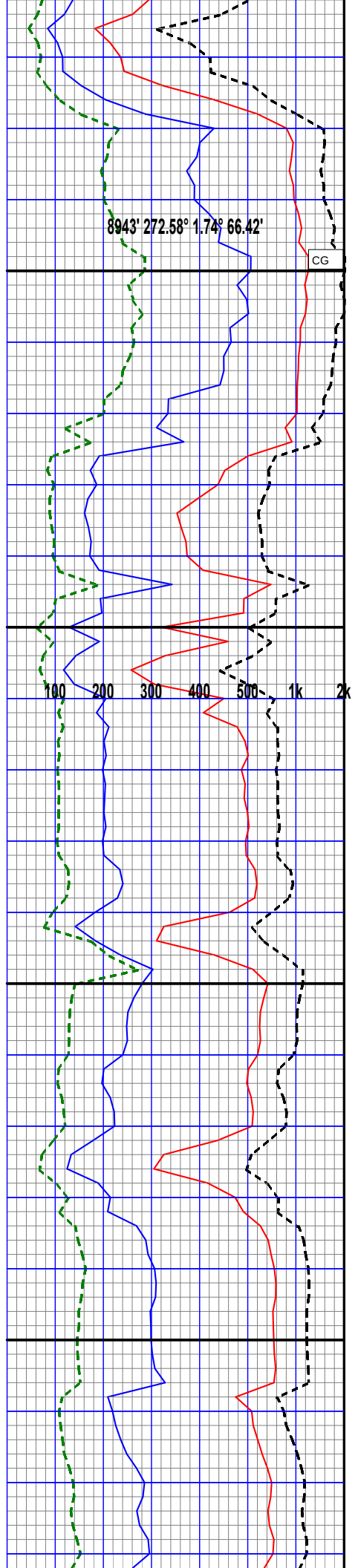
LS:gry,lt gry,brn,vfn-fn
xln,sme fn xln,frm-mod
frm,tr hd,occ sft,brit
tr mica,sme occ wht cly

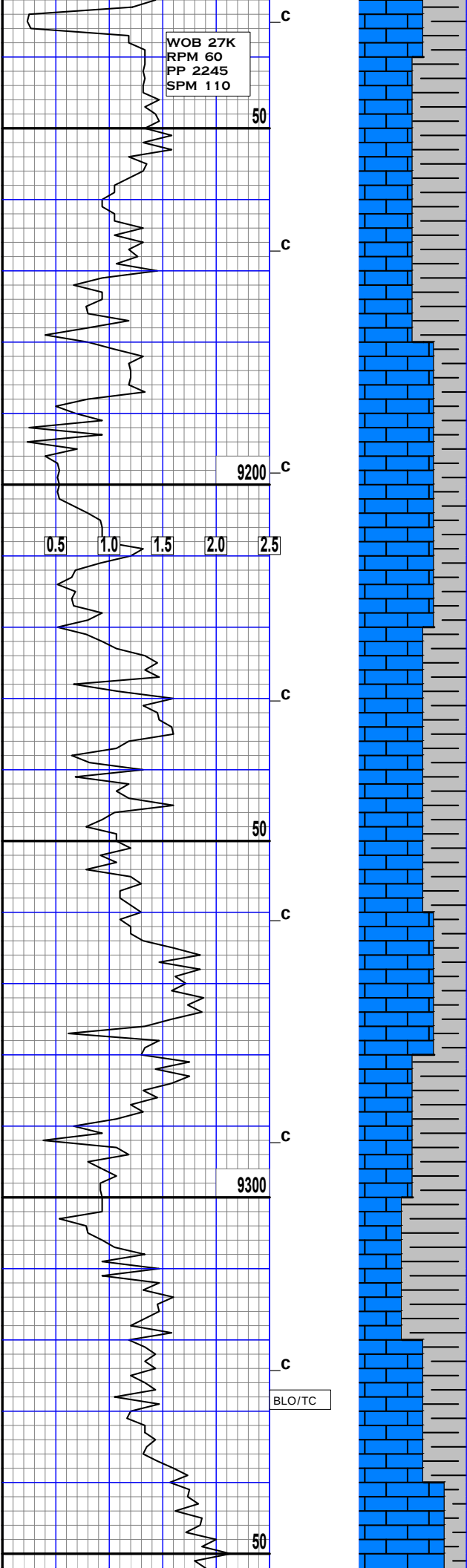
SH:dk gry,blk,sbblky,tr
blky,frm mod-frm,sme hd
grty,ea,tr slt,lmy

SH:dk gry,blk,sbblky,tr
blky,frm mod-frm,sme hd
grty,ea,tr slt,lmy

SH:blk,dk gry,sbblky
frm mod-frm,sme hd
grty,ea,tr slt,lmy

SH:dk gry,blk,sbblky,tr
blky,frm mod-frm,sme hd
grty,ea,tr slt,lmy





LS:gry,lt gry,brn,vfn-fn
xln,sme fn xln,frm-mod
frm,tr hd,occ sft,brit
tr mica,sme occ wht cly

LS:gry,lt gry,brn,vfn-fn
xln,sme fn xln,frm-mod
frm,tr hd,occ sft,brit
tr mica,sme occ wht cly

SH: blk,dk gry,sbblky
sme blk,frm mod-frm
tr hd,sme sft,brit,ea
flky,lmy

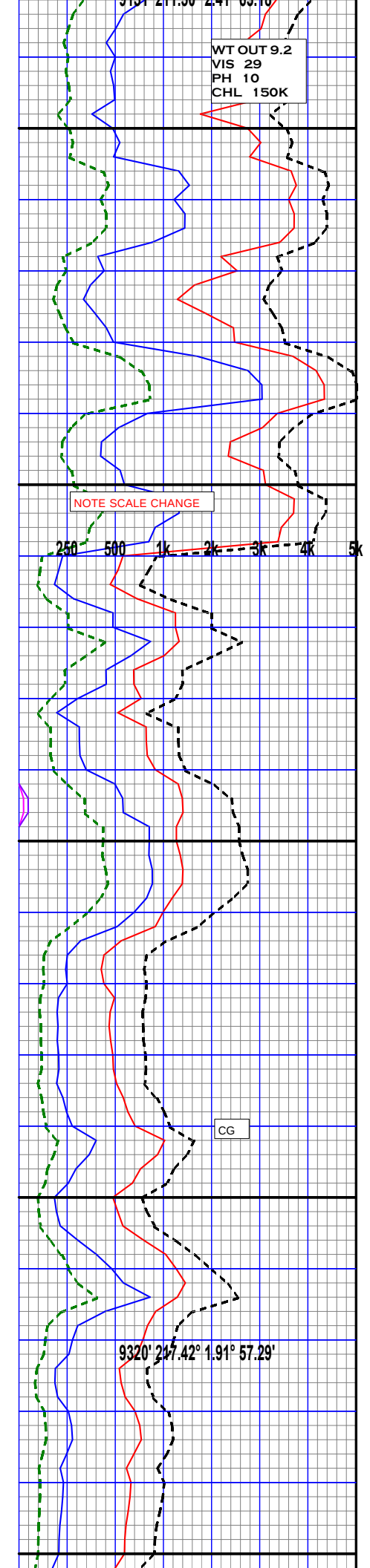
LS:dk gry,gry,brn,lt tn
vfn-fn xln,tr vfnxln
frm mod-frm,sme vhd,tr
mott,shly

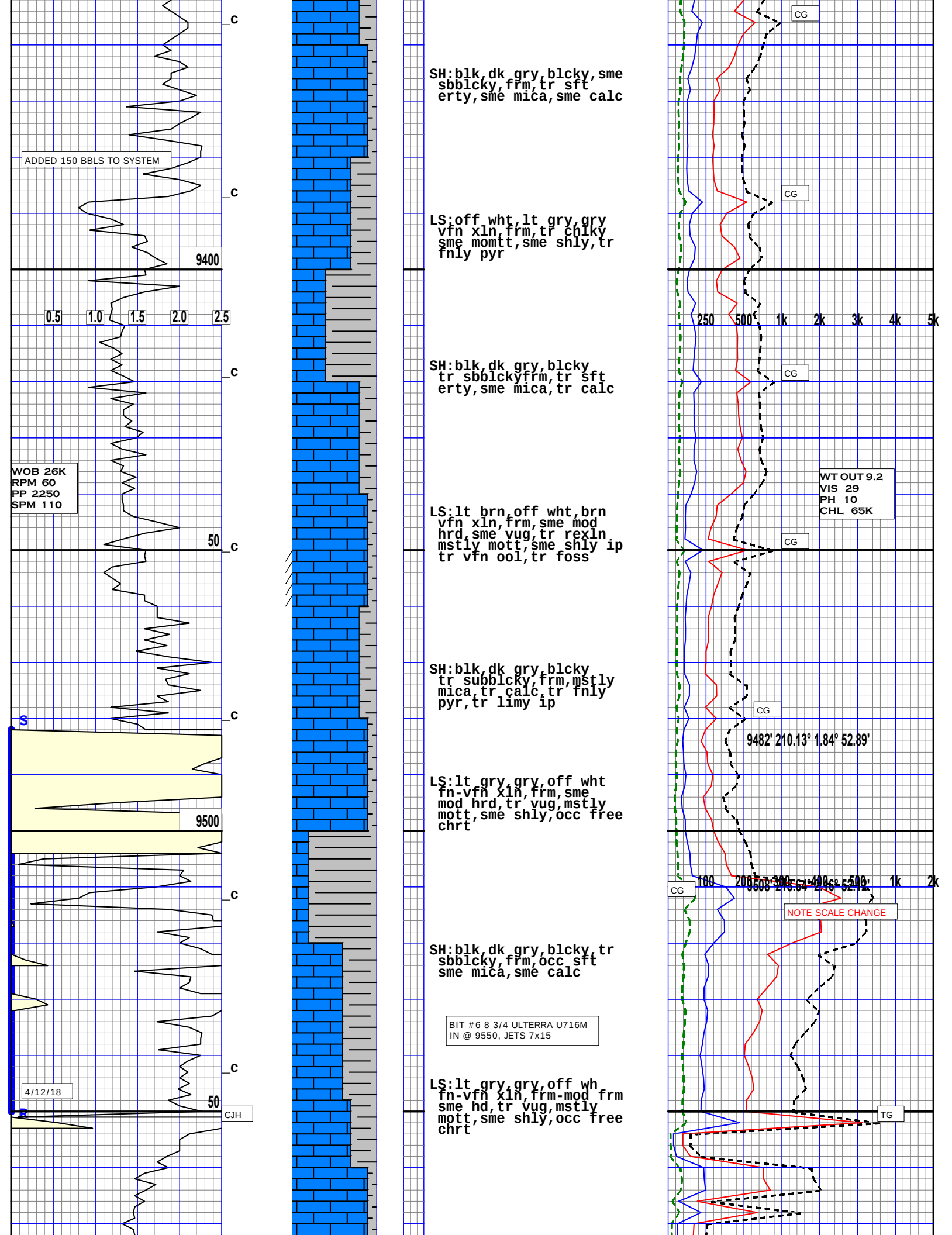
SH:blk,dk gry,sbblky
sme blk,frm mod-frm
tr hd,sme sft,brit,ea
flky,tr slty,lmy

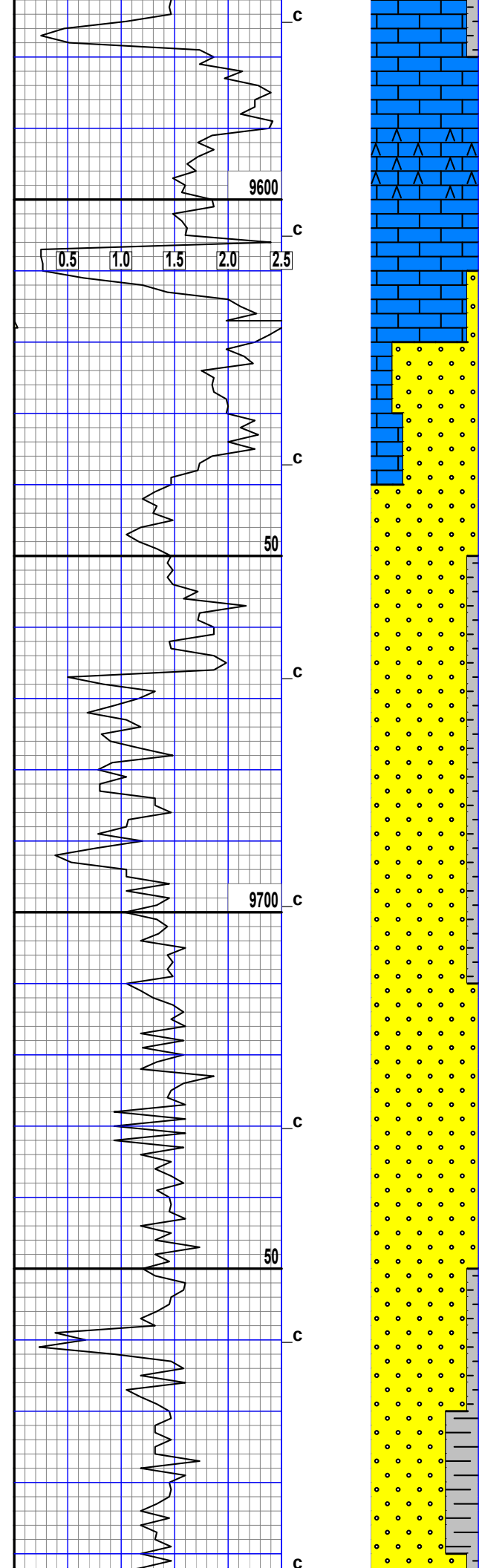
SH:blk,dk gry,sbblky
tr blk,frm mod-frm
sme hd,tr sft,brit,ea
flky,tr slty,lmy

SH:blk,dk gry,sbblky
tr blk,frm mod-frm
sme hd,brit,ea,grty
flky,tr slty,lmy

LS:brn,lt gry,gry,vfn
xln,frm,tr mod hrd,sme
mott,tr shly,tr free
pyr







LS:lt gry, gry, off wh
fn-vfn, xln, frm-mod frm
sme hd, tr vug, mstly
mott, sme shly, occ free
off wh cly, occ free
chrt

LS:dk gry, gry, off wh, vfn
fn xln, sme fn xln, frm
sme hd, tr vug, occ mott
tr chrt, occ free off
wh cly

SS:clr, lt tn, lt gry, off
wh, vfn-fng, sme fng
sbrnd, sbrnd-rnd, tr ang
pred cons, mod wl srt
calc cmnt, cmntd wl, tr
off wh cly

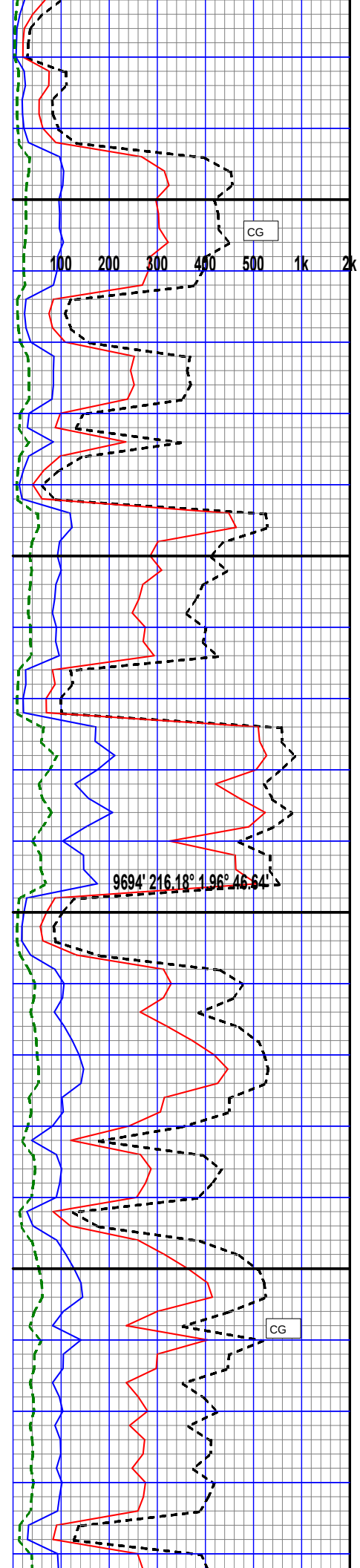
SS:clr, lt tn, off wh, vfn
-fng, sbrnd, sbrnd-rnd, tr
sbrng, pred cons, mod wl
srt calc cmnt, cmntd
wl, tr pyrt, off wh cly

SS:clr, off wh, vfn-fng
sbrnd-rnd, tr sbrng, pred
cons, wl srt, calc cmnt
cmntd wl, shly, tr off wh
cly

SS:clr, off wh, vfn-fng
sbrnd-rnd, tr sbrng, pred
cons, wl srt, calc cmnt
cmntd wl, tr off wh cly

SS:clr, off wh, vfn-fng
sbrnd-rnd, tr sbrng, pred
cons, wl srt, calc cmnt
cmntd wl, tr off wh cly

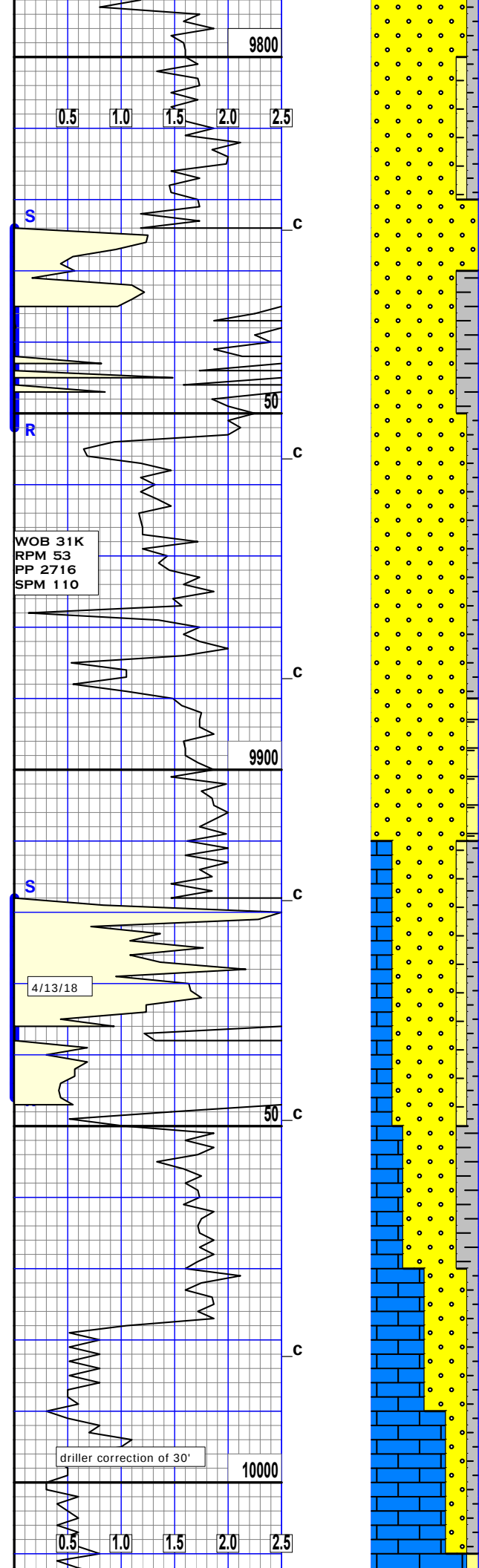
SH:lt gry, gry, off wh
sbrly, tr blk, frm mod-
frm, sme sft, tr hd, aren
tr mica, occ off wh cly



CG

9694' 216.18° 196° 46.64'

CG



SS:clr,off wh,vfn-fng
sbrnd-rnd,tr'sbang,pred
cons,wl srted,calc cmnt
cmntd wl,tr off wh cly
silty

SH:lt gry,gry,off wh
sbbiky,tr'bkly,frm mod-
frm,sme sft,tr'hd,aren
occ off wh cly

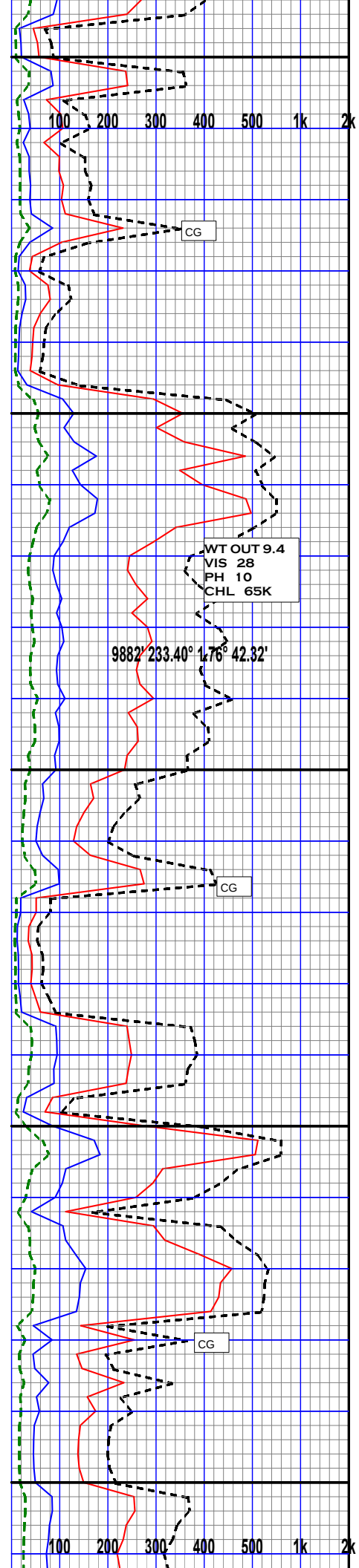
SS:clr,off wh,vfn-fng
sbrnd-rnd,pred cons
sme uncon,wl srted,calc
cmnt,cmntd wl,tr off wh
cly

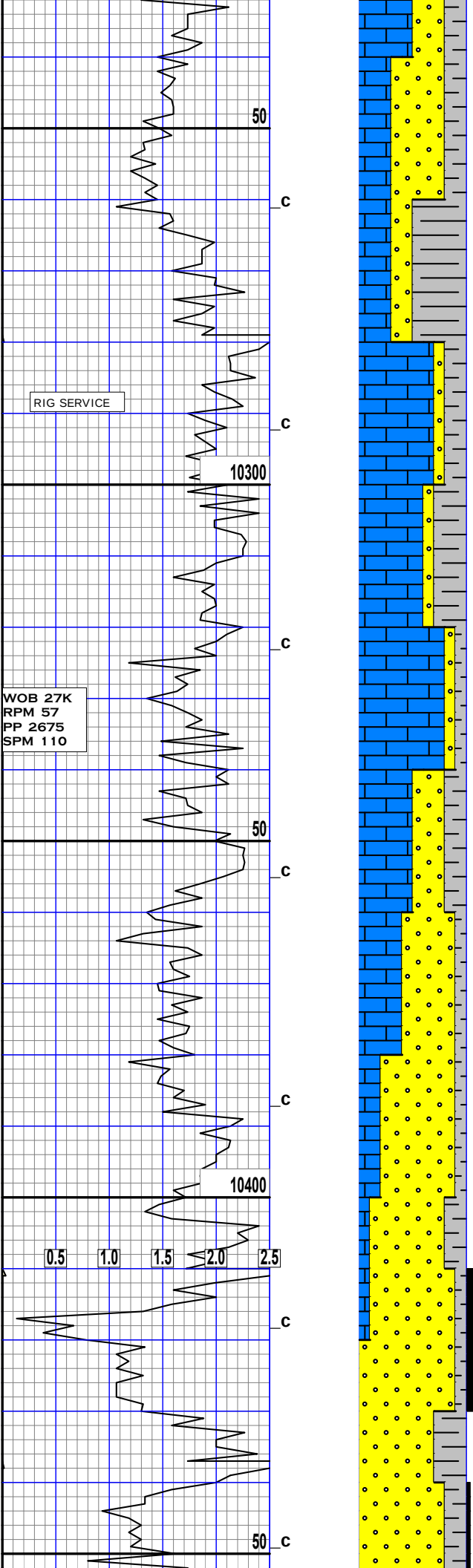
SS:clr,off wh,lt tn,vfn
gr,sme fng,sbrnd-rnd,tr
sbang,pred cons,wl srted
calc cmnt,cmntd wl,tr
pyrt,sme off wh cly,v/
silty

LS:blk,dk gry,gry,lt tn
vfnxln,sme tn xln,frm
mod-frm,occ hd,tr mott
shly,aren,sme free wh
cly

SS:clr,off wh,vfn-fng
sbrnd-rnd,pred cons
sme uncon,wl srted,calc
cmnt,cmntd wl,tr mica

LS:blk,dk gry,gry,lt tn
vfnxln,sme tn xln,frm
mod-frm,occ hd,tr mott
shly,aren,sme free wh
cly





SS:lt gry,clr,vfin gr
subrnd-rnd,cons,friy
cmntd,well srted,calc
abndt' free wht cly

LS:lt brn,off wht,fn-
vfn xln,frm,sme mod
hrd,sme shly,tr free
pyr

SH:dk gry,gry,blcky
sme sbblcky,frm,sme
sft,erty,sme calc
sme mica,tr free pyr

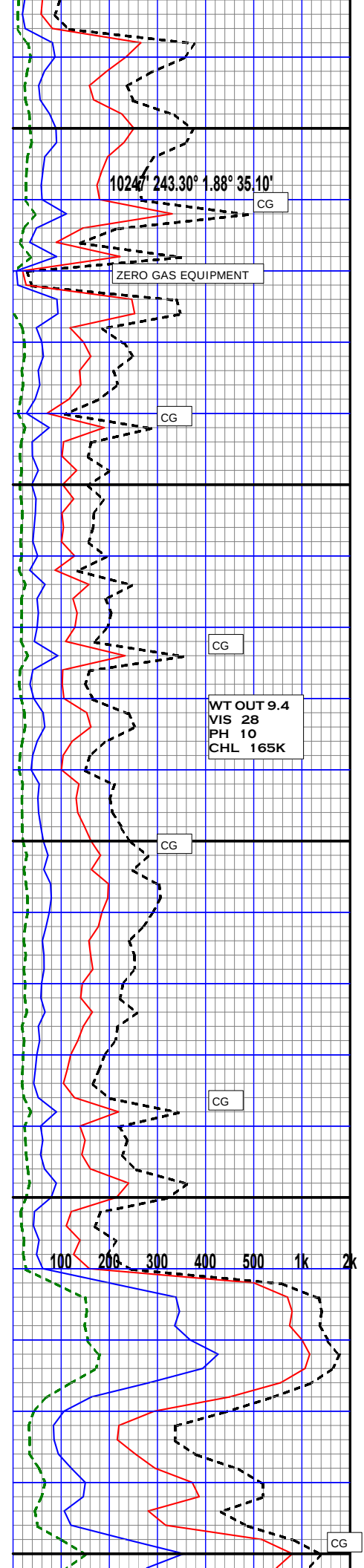
SS:lt gry,gry,vfin gr
subrnd,cons,friy cmntd
well srted,calc,sme
limy

LS:off wht,lt gry,tan
fn-vfn xln,frm,sme mod
hrd,sme mott,tr shly
tr aren

SS:lt gry,clr,vfin gr
subrnd,prcd cons,tr
uncons,friy cmntd,well
srted,calc,tr free lt
gry cly

SH:dk gry,blk,blcky,sme
sbblcky,frm,sme sft
erty,sme calc,tr mica

SS:lt gry,clr,vfin gr
subrnd-rnd,cons,friy
cmntd,well srted,calc
20% pale ylw fluor,pr
slw pale yle wet cut



10247' 243.30° 1.88° 35.10'

CG

ZERO GAS EQUIPMENT

CG

CG

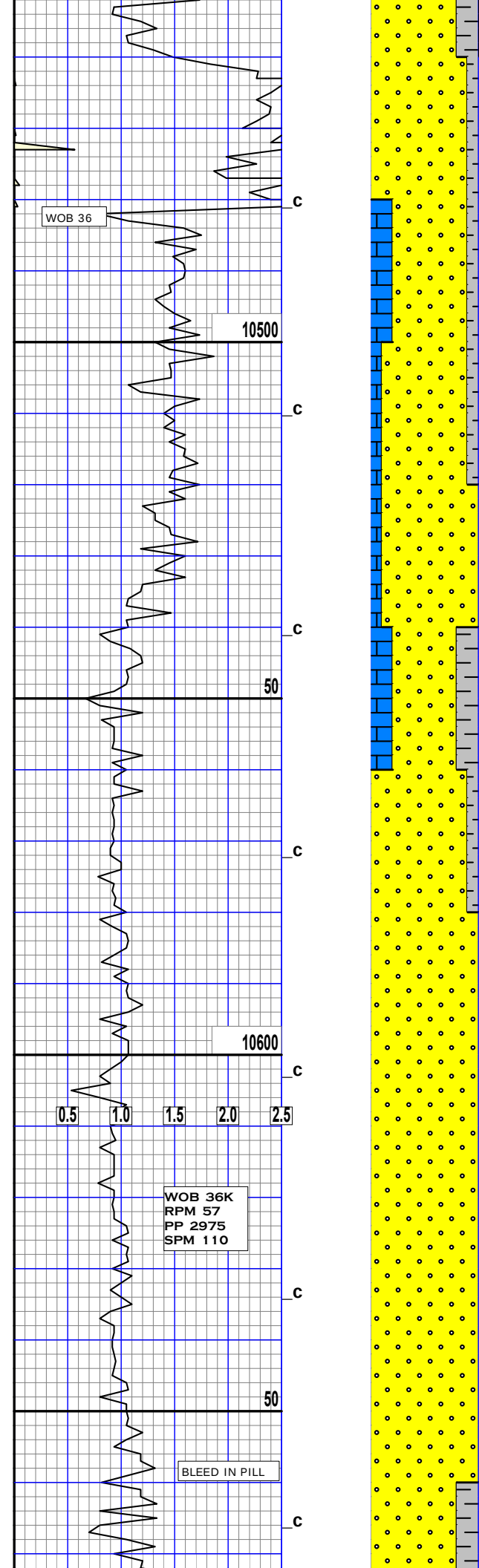
WT OUT 9.4
VIS 28
PH 10
CHL 165K

CG

CG

100 200 300 400 500 1k 2k

CG



SS:lt gry,clr,vfin gr
rnd-sbrnd,cons,frly-
well cmntd,well srt
calc,10% brt ylw fluor
no vis cut,sme shly

LS:lt brn,off wht,fn-
vfn xln,frm,sme mod
hrd,sme shly,tr free
wht cly

SS:lt gry,clr,gry,vfin
gr,rnd-sbrnd,cons,frly
cmntd,sme uncon,well
srt,calc,sme shly

LS:off wht,lt brn,vfn
xln,frm,sme mod hrd
sme sft,sme shly,sme
free pyr,tr sh

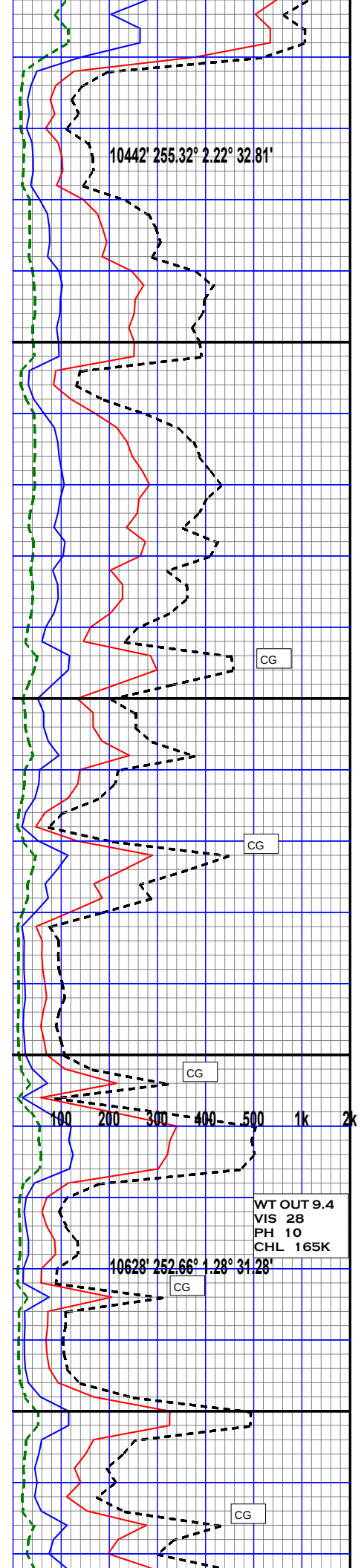
SS:lt gry,gry,clr,vfin
gr,occ fn gr,sbrnd-
rnd,cons,frly cmntd
well srt,calc,sme
free wht cly

SS:lt gry,clr,gry,vfin
gr,sbrnd-rnd,cons,frly
cmntd,well srt,calc
sme free off wht cly

SS:lt gry,clr,gry,vfin
gr,rnd-sbrnd,cons,sme
uncons,frly cmntd,well
srt,calc,abndt free
wht cly

SS:lt gry,clr,vfin gr
sbrnd-rnd,cons,frly
cmntd,tr well cmntd
well srt,calc,sme
free off wht cly

SH:dk gry,blk,blcky,frm
tr mod hrd,erty,sme



10442' 255.32° 2.22° 32.81'

CG

CG

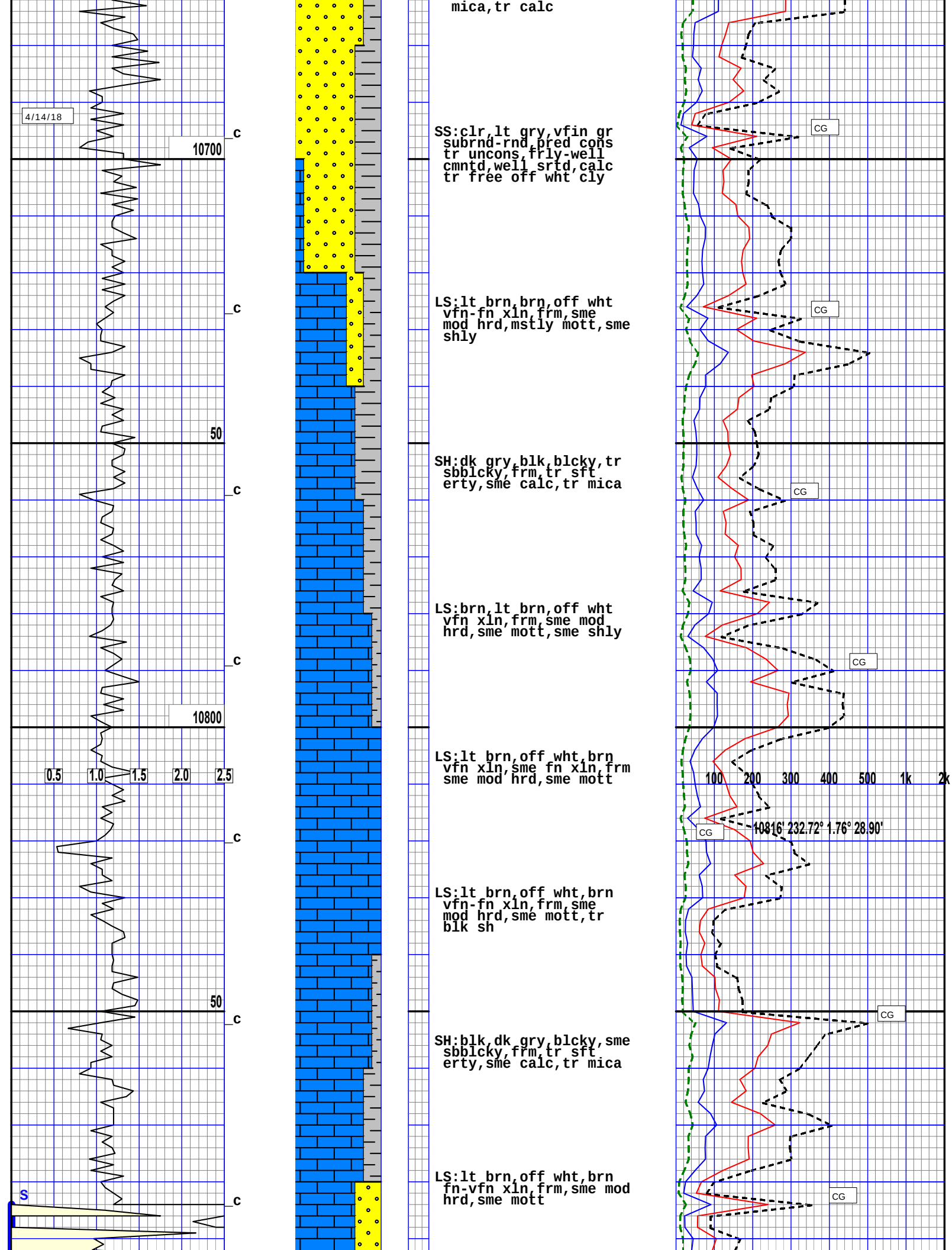
CG

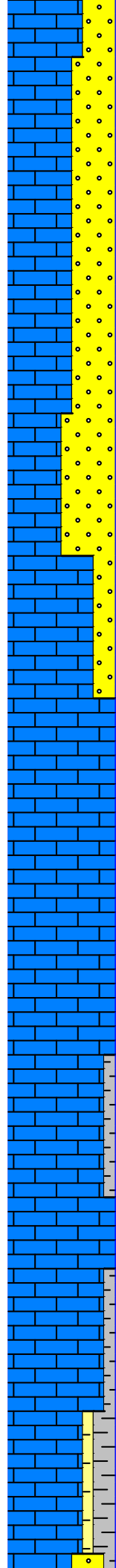
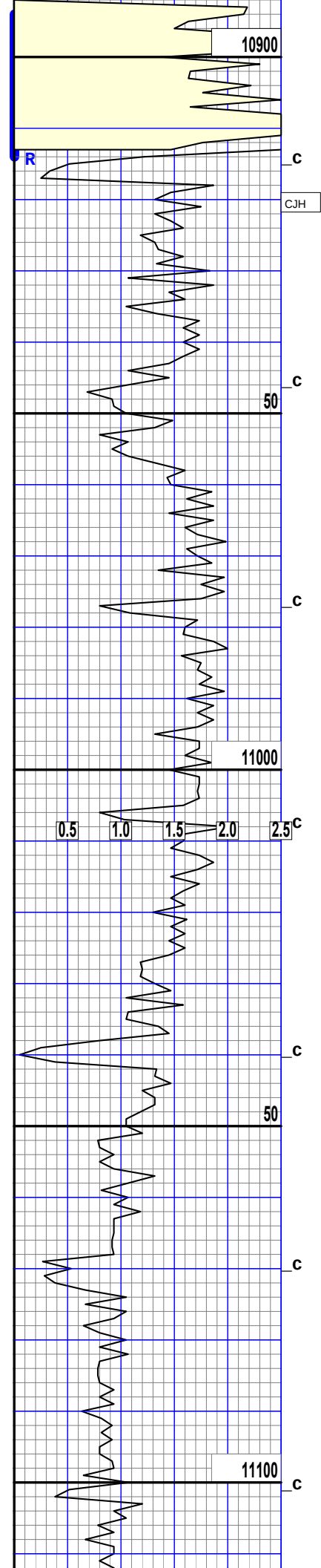
10628' 252.66° 1.28° 31.28'

CG

WT OUT 9.4
VIS 28
PH 10
CHL 165K

CG





SS:clr,lt gry,vfin gr
sbrnd-rnd,pred cons
tr uncon,frly-wl cmntd
wl srted,calc

LS:lt brn,off wh,brn
fn-vfn xln,frm,sme mod
hd,sme mott,aren,tr
free wh cly

SS:clr,lt gry,vfin gr
sbrnd-rnd,pred cons
tr uncon,wl cmntd
wl srted,calc

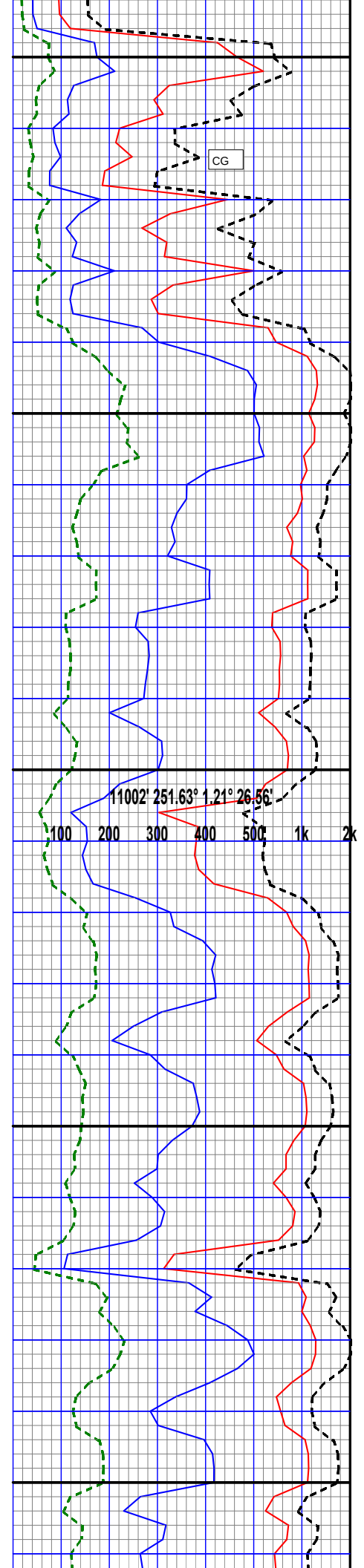
LS:lt brn,off wh,brn
fn-vfn xln,frm,sme mod
hd,sme mott,tr'aren,tr
free wh cly

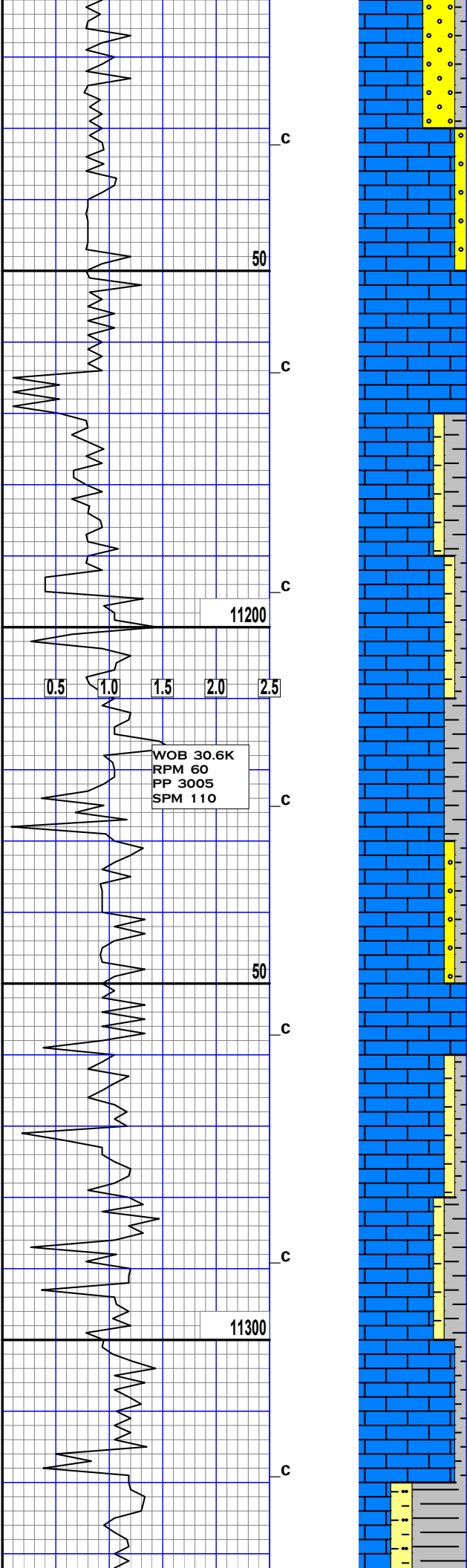
LS:lt brn,off wh,brn
fn-vfn xln,frm,sme mod
hd,sme mott,tr'aren,tr
mica,sme free wh cly

LS:lt brn,off wh,brn
fn-vfn xln,frm,sme mod
hd,sme mott,tr'aren,tr
mica,shly,tr mica

LS:lt gry,lt brn,tn,off
wh,fn-vfn xln,frm,tr
hd,sme frm mod-frm,shly
tr mica,sme free wh cly

SH:dk gry,blk,gry,sbblky
frm mod-frm,sme sft
ea,grtty,slty,tr mica





LS:lt gry,lt brn,tn,off
wh,fn-vfn,xln,frm,tr
hd,sme frm mod-frm,shly
tr mica,sme free wh cly

LS:lt gry,lt brn,tn,off
wh,fn-vfn,xln,frm,tr
hd,sme frm mod-frm,shly
sme mica,sme wh cly

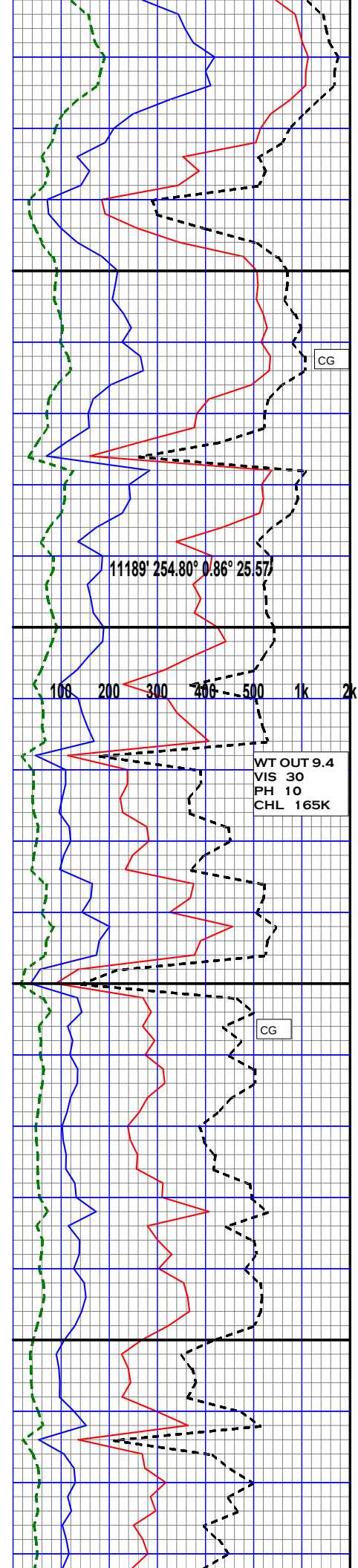
LS:lt gry,lt brn,tn,off
wh,fn-vfn,xln,frm,tr
hd,shly,slty,tr mica
sme free off wh cly

LS:lt gry,lt brn,tn,off
wh,fn-vfn,xln,frm mod-
frm,tr hd,shly,sme
free off wh cly

LS:lt gry,lt brn,off wh
fn-vfn,xln,frm mod-frm
sme hd,shly,aren,tr
free off wh cly

SH:dk gry,blk,gry,sbblky
sme sbblky-blky,frm mod-
frm,sme sft,tr hd slty
lmy,tr mica,tr off wh
free cly

LS:lt gry,lt brn,off wh
fn-vfn,xln,frm mod-frm
sme hd,shly,aren,tr
free off wh cly

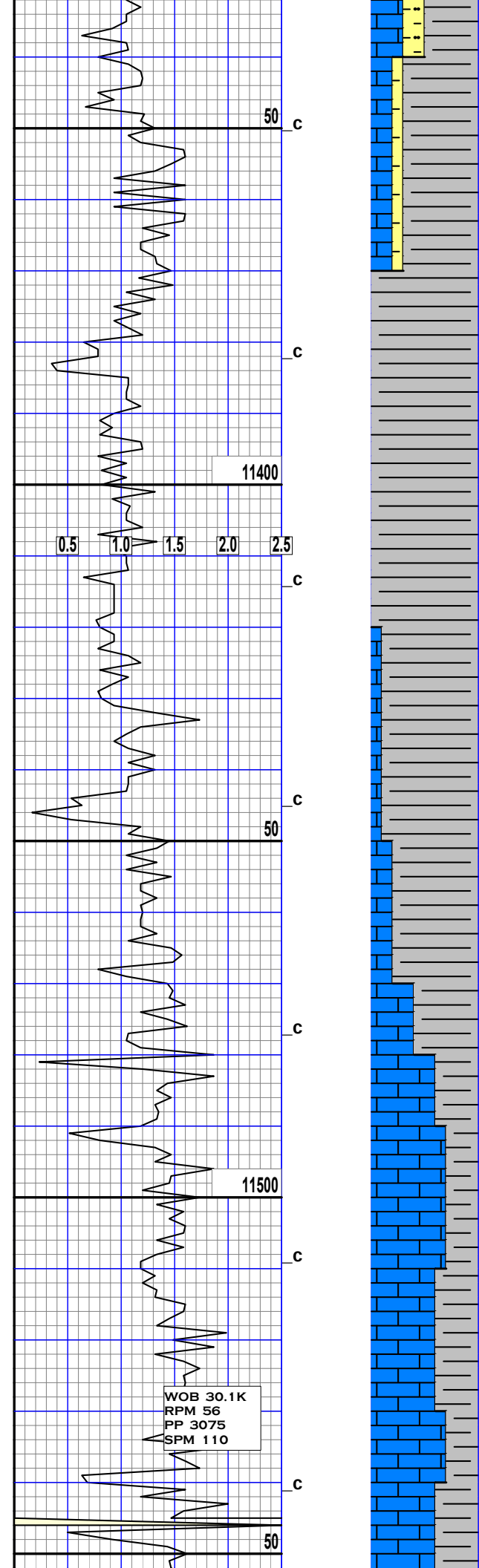


CG

11189' 254.80° 0.86° 25.57'

WT OUT 9.4
VIS 30
PH 10
CHL 165K

CG



SH:dk gry, blk, gry, sbblky
sme sbblky-blky, frm mod
frm, sme sft, tr hd, slty
lmy, tr mica

SH:blk, dk gry, sbblky, tr
blky, mod frm-frm, sme
sft, tr hd, ea, fissl, tr
mica, tr lmy

SH:blk, sbblky, mod frm-
frm, sme sft, grtty, ea
v/cIn smpl

SH:blk, sbblky, mod frm-
frm, sme sft, grtty, ea
fissl, tr vfn mica

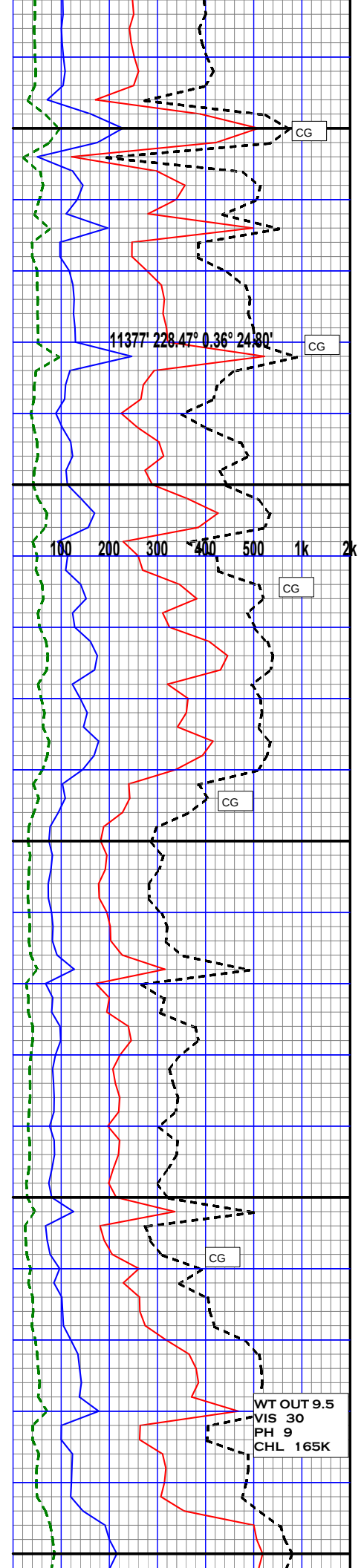
SH:blk, sbblky, frm-mod
sft, sme frm, ea, grtty
lmy, tr mica

SH:blk, sbblky, frm-mod
sft, sme frm, ea, grtty
lmy, tr wh cly

LS:lt gry, lt brn, off wh
fn-vfn xln, frm mod-frm
sme hd, shly, aren, tr
free off wh cly

LS:lt gry, lt brn, off wh
fn-vfn xln, frm mod-frm
sme hd, shly, aren, tr
free off wh cly

SH:blk, sbblky, frm-mod
sft, sme frm, ea, grtty



CG

11377' 228.47° 0.36° 24.80'

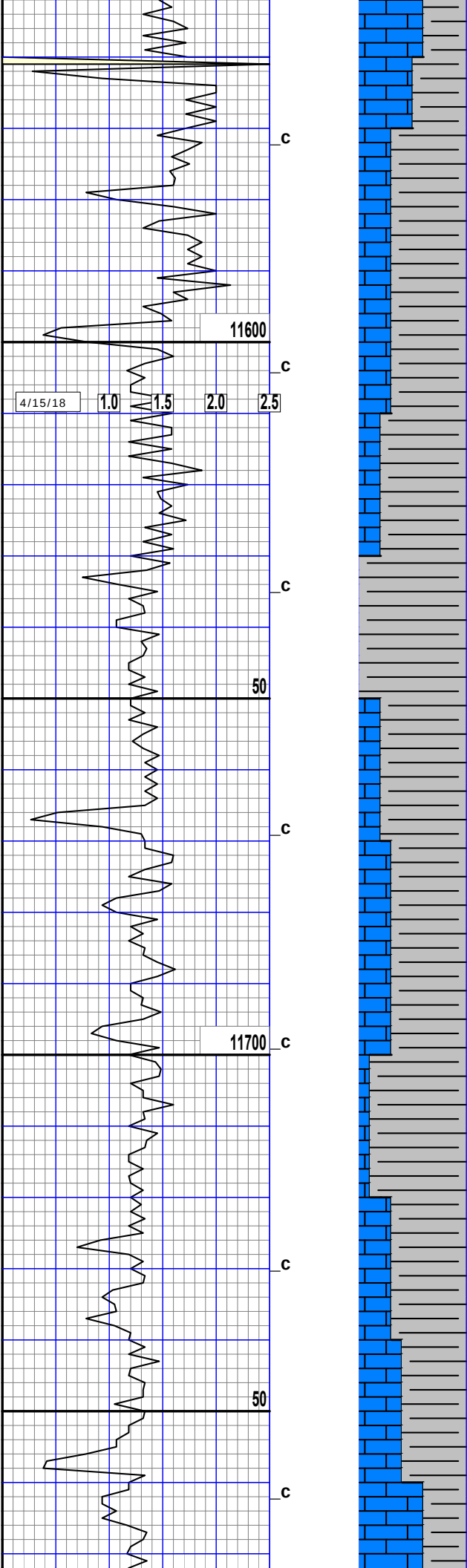
CG

CG

CG

CG

WT OUT 9.5
VIS 30
PH 9
CHL 165K



lmy
SH: blk, sbblky, frm-mod
sft, sme frm, ea, grtty
tr free wh cly, tr mica

SH: blk, sbblky, frm-mod
sft, sme frm, ea, grtty
tr free wh cly

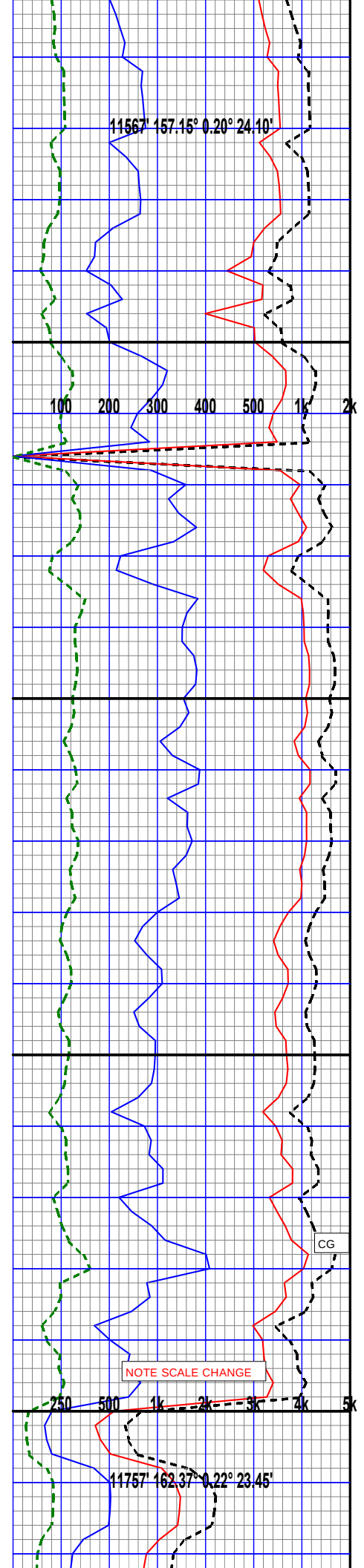
SH: blk, dk gry, gry, sbblky
sme blk, frm mod-frm
tr hd, brit, ea, grty, tr
lmy

LS: dk gry, gry, brn, lt tn
vfn-fn xln, sme fn xln
frm mod-frm, sme hd, tr
mica, sme free wh cly

SH: blk, dk gry, gry, sbblky
sme blk, frm mod-frm
tr hd, brit, ea, grty, tr
lmy

LS: dk gry, gry, lt gry
vn-fng, frm mod-hd, brit
tr mica, shly

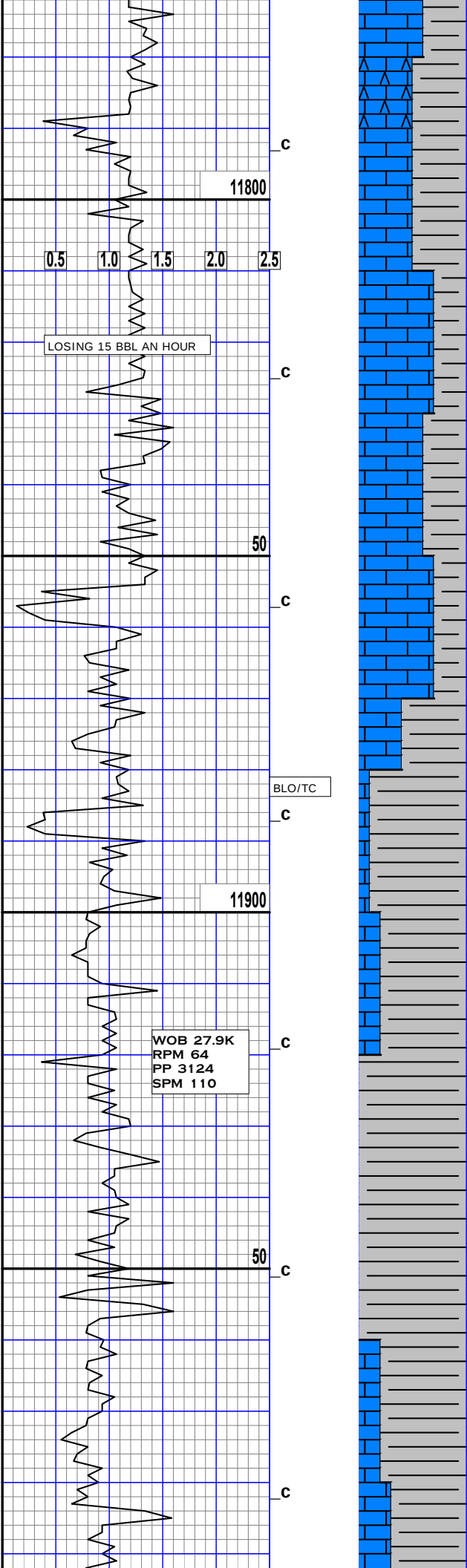
SH: blk, dk gry, gry, sbblky
sme blk, frm mod-frm
tr hd, brit, ea, grty, tr
lmy



11567° 157.15° 0.20° 24.10°

NOTE SCALE CHANGE

11757° 162.37° 0.22° 23.45°



LS: dk gry, gry, lt gry
vn-fng, frm mod-hd, brit
tr mica, shly, tr free
chrt

SH: blk, dk gry, gry, sbblky
sme blk, frm mod-frm
tr hd, brit, ea, grty, tr
lmy

LS: lt gry, gry, dk gry
vfn-fn xln, sme fnxln
frm, sme hd, brit, shly
tr mica, tr free wh cly

LS: lt gry, gry, dk gry
vfn-fn xln, sme fnxln
frm, sme hd, brit, shly
tr mica, tr free wh cly

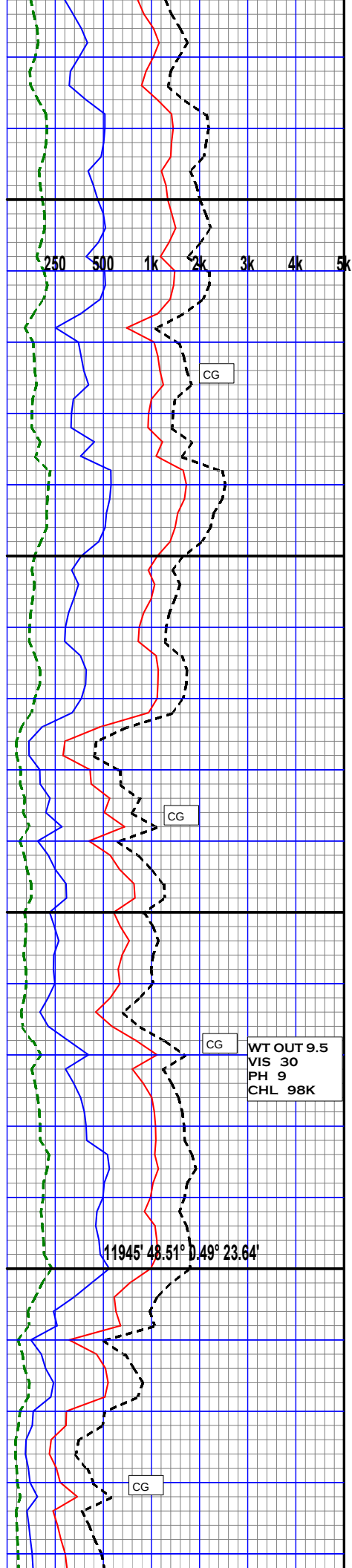
SH: blk, dk gry, sbblky
frm, sme sft, erty, mstly
mica, sme calc

LS: lt brn, off wht, brn
vfn xln, frm, sme mod
hrd, sme mott

SH: blk, dk gry, sbblky
occ blk, frm, sme sft
erty, sme calc, tr mica

SH: blk, dk gry, sbblky
tr blk, frm, sme sft
erty, sme calc, sme mica

LS: lt brn, off wht, brn
vfn-fn xln, frm, tr mod
hrd, sme mott, sme shly



250 500 1k 2k 3k 4k 5k

CG

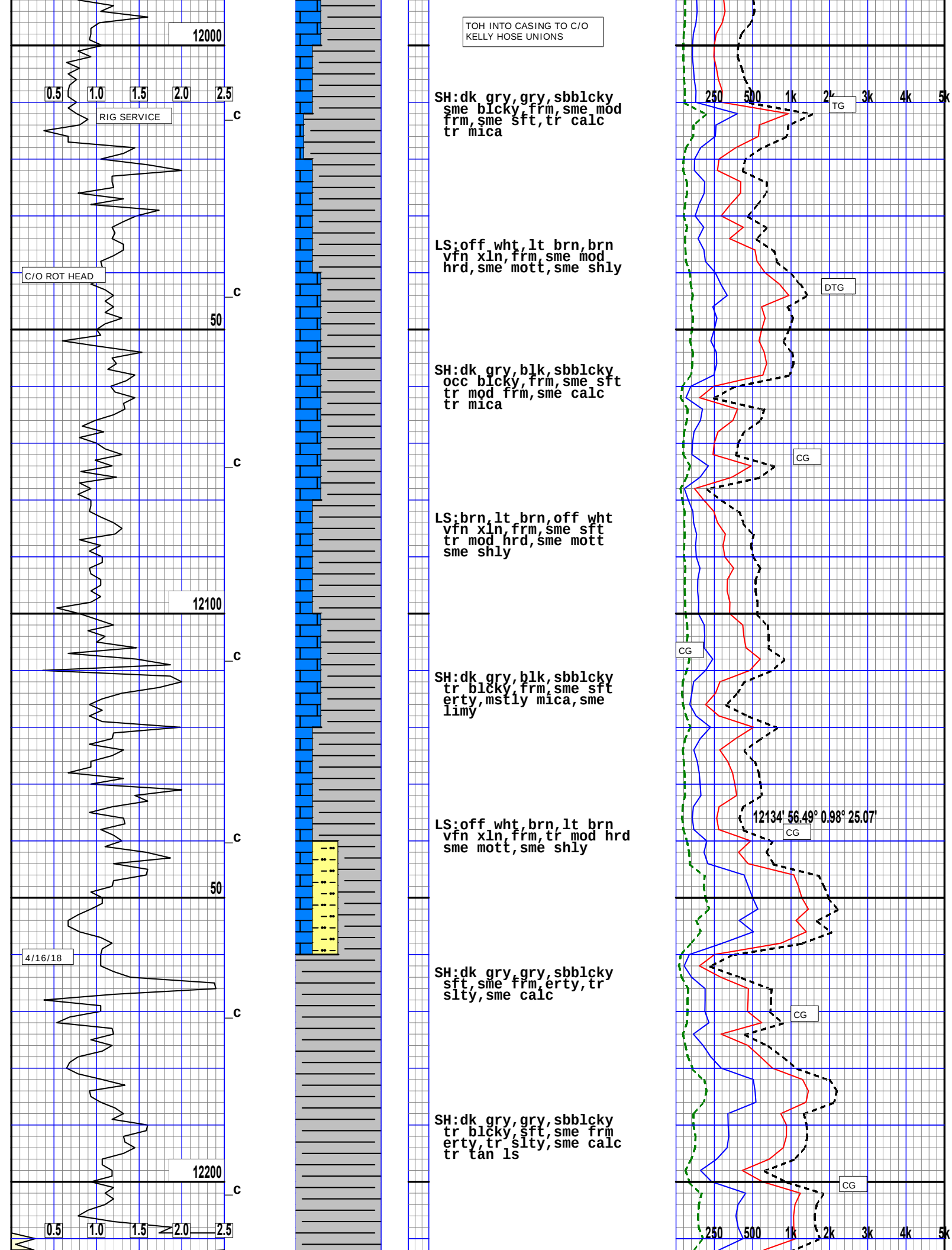
CG

CG

WT OUT 9.5
VIS 30
PH 9
CHL 98K

11945' 48.51° D 49° 23.64'

CG



WOB 26K
RPM 58
PP 2800
SPM 110

c

50

c

12300

c

c

50

c

CJH

c

SCALE CHANGE 0-5

1 2 3 12400

1 2 3 4 5

c

LS:off wht,tan,brn,vfn
-fn xln,frm,sme chiky
sme mott,sme shly

SH:dk gry,gry,sbblicky
tr blicky,frm,sme sft
erty,sme calc

LS:lt brn,brn,off wht
vfn xln,frm,sme mod
hrd,sme mott,tr shly
tr free pyr

SH:dk gry,gry,sbblicky
sme blicky,frm,sme sft
erty,sme calc

LS:off wht,lt brn,gry
vfn xln,frm,sme mod
hrd-hrd,mstly mott
sme chrty,tr shly

SH:gry,dk gry,blcky
tr sbblicky,frm,erty
tr calc

CH:dk brn,dk gry,opg
tr transl,sme lmy

LS:off wh,lt brn,gry
vfn xln,frm,sme mod
hd-hd,mstly mott
sme chrty,tr shly

CH:dk brn,dk gry,opg
tr transl,sme lmy,tr
shly

WT OUT 9.4
VIS 29
PH 10
CHL 98K

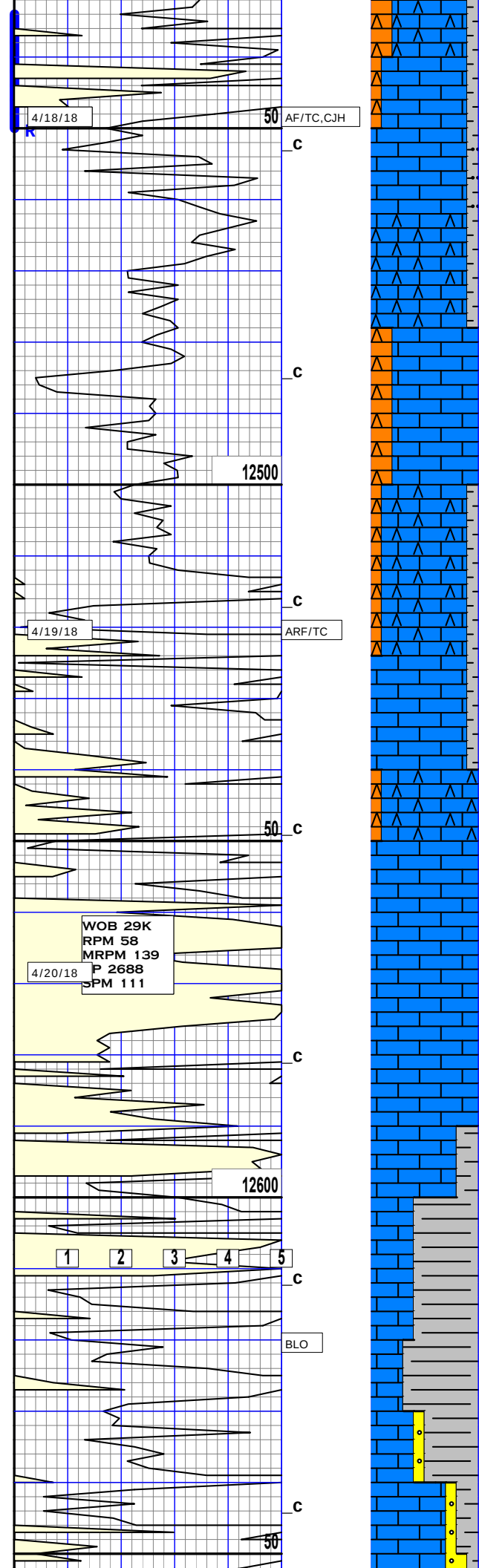
CG

CG

CG

12322 56.69° 1.47° 27.28'

250 500 1k 2k 3k 4k 5k



LS:off wh,lt brn,lt gry
vfn xln,frm mod-frm,tr
hd,sme mott,shly,tr
sity

CH:dk brn,dk gry,opq
tr transl,lmv

LS:off wh,lt brn,lt gry
vfn xln,frm mod-frm,tr
hd,sme mott,CH,shly

BIT # 7 8 3/4 ULTERRA U716M
IN @ 12525, JETS 7x14

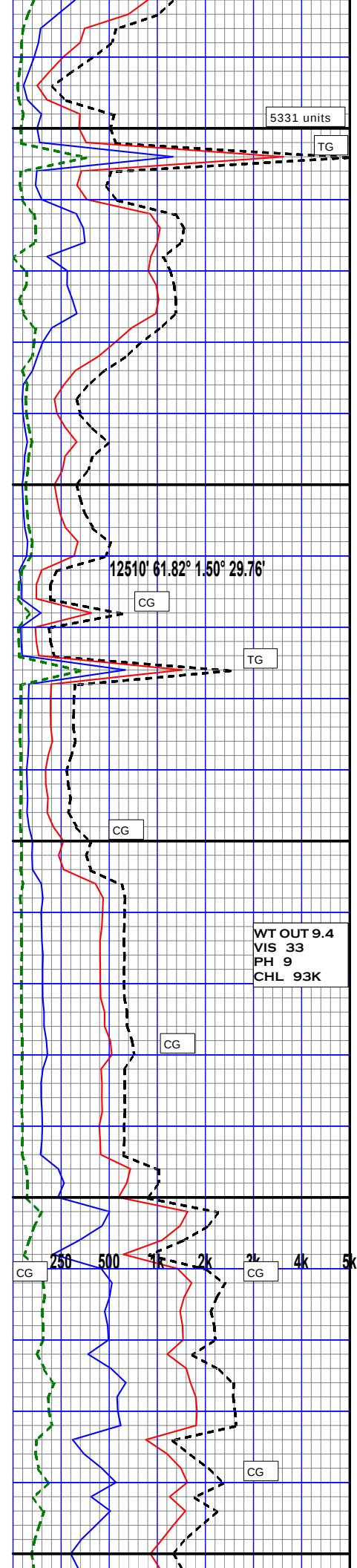
LS:off wht,wht,lt gry
vfn xln,mod frm-frm
sme mott,tr aren,tr CH

LS:wht,off wht,lt brn
vfn xln,frm mod-frm
tr hrd,sme mott

LS:off wht,wht,lt gry
vfn xln,mod frm-frm
sme hrd,tr mott

SH:blk,drk brn,blcky,
occ sbblky,mod frm,sme
sft,erthy txt,tr fissl,
sme smth,calc

LS:off wht,lt gry,fn
xln,frm,sme mod hrd
sme mott,tr shly,tr
fnly pyr



5331 units

TG

12510' 61.82° 1.50° 29.76'

CG

TG

CG

WT OUT 9.4
VIS 33
PH 9
CHL 93K

CG

CG

250

500

1k

2k

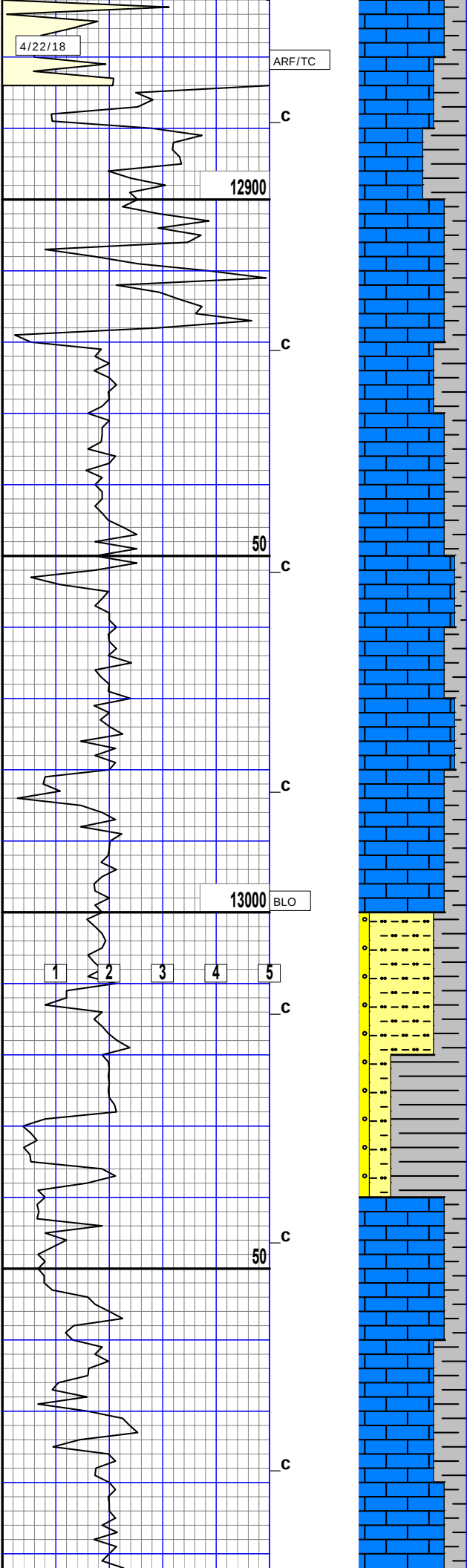
2k

CG

4k

5k

CG



SH:blk,dk gry,gry,blcky
sme sbblcky,frm,tr mod
frm,erhy,sme calc

BIT #8 8 3/4 HTC TD507FX
IN @ 12883, JETS 7-18

LS:off wht,wht,lt gry
vfn xln,frm,sme mod
hrd,sme mott

SH:blk,drk gry,gry,blcky
tr sbblcky,frm,tr vry
frm,erthy txt,sme smth,
calc ip

LS:wht,off wht,lt gry
vfn xln, frm,sme mod
frm,sme mott,tr mica

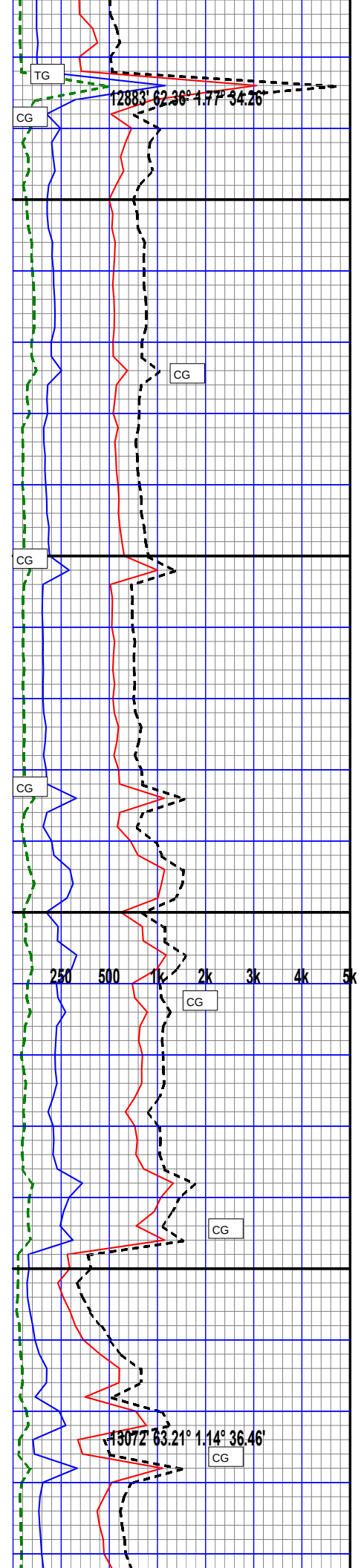
SH:blk,drk gry,gry,blcky
occ sbblcky,frm,vry frm
erthy txt,tr smth,calc,
c ln

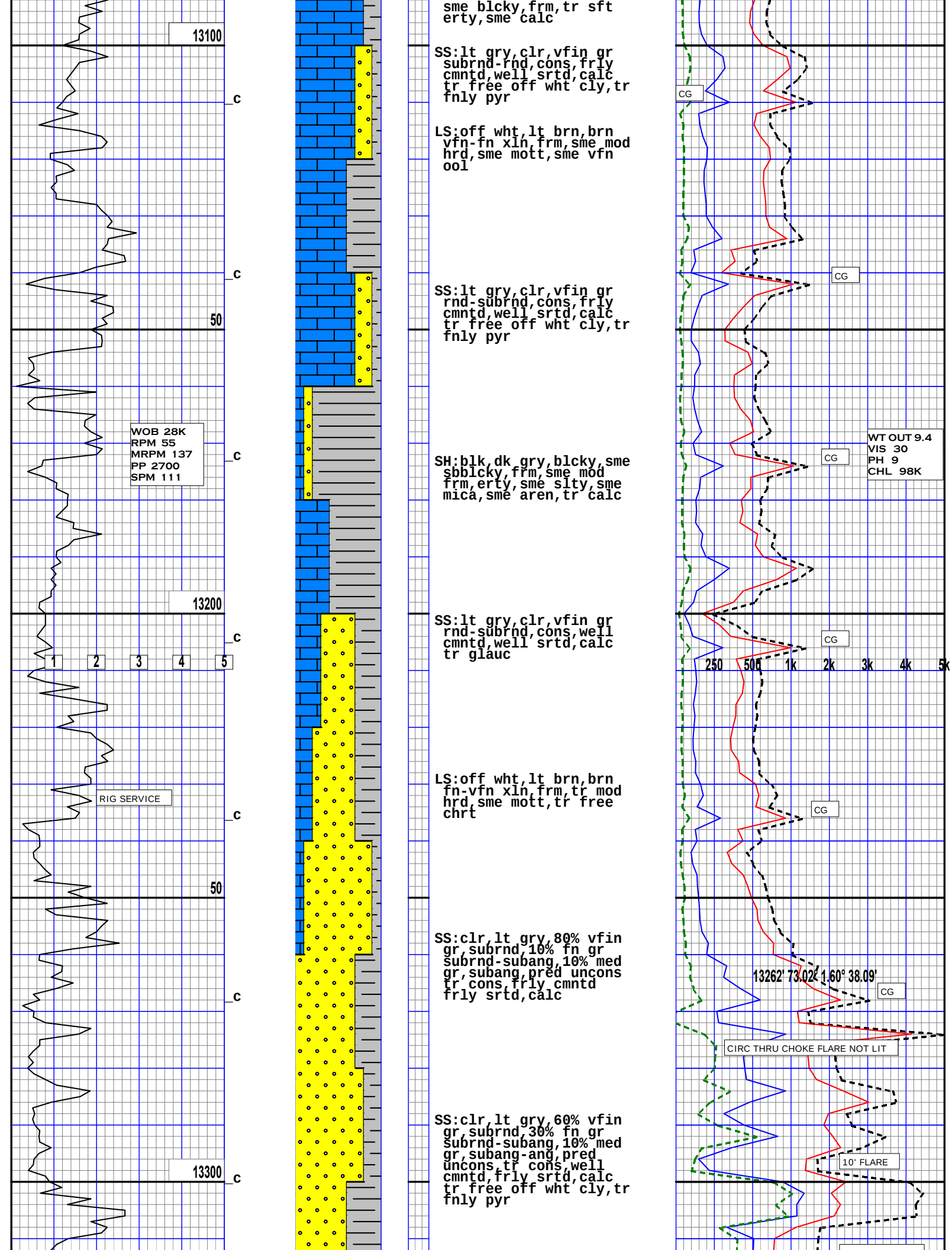
SLTSTN:off wht,lt gry
sft,sme frm,sme shly
sme aren,tr calc

SS:lt gry,clr,vfin gr
rnd-sbrnd,cons,friy
cmntd,well srted,sme
calc,sme slty

LS:off wht,lt gry,wht
fn-vfn xln,frm,tr mod
hrd,sme mott,tr free
chrt

SH:blk,dk gry,dbblcky





LS:off wht,lt brn,brn
fn-vfn xln,frm,tr mod
hrd,sme mott

```
SH:dk gry,blk,sbblcky
tr blcky,frm,sme sft
erty,sme slty,sme calc
tr mica
```

```
SS:lt gry,clr,vfin gr
subrnd-rnd,cons,frly
cmntd,well' srt'd,calc
tr glauc
```

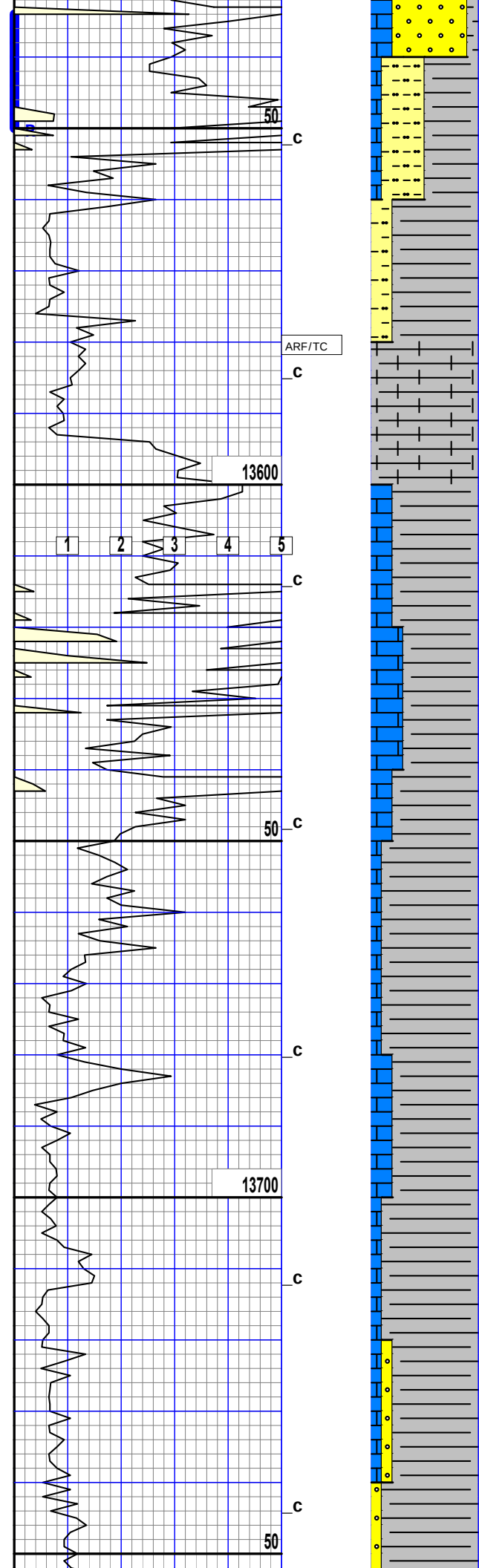
LS:off wht,brn,lt brn
fn-vfn xln,frm,sme
chlky,sme mott,tr shly

```
SH:dk gry,blk,sbbldky
sme bldky,frm,sme sft
erty,sme slty,sme calc
sme mica
```

LS:off wht,lt brn,brn
fn xln,frm,sme mod hrd
sme mott

SH:dk gry,blk,sbblcky
frm,sme sft,erty,tr
slty,sme calc,tr mica

```
SS:clr,lt gry,50% vfin
gr,subang-ang,10% fn
gr,subrnd-subang,40%
fn gr,subang-ang
uncons,prly srted,tr
free pyr
```



SLTSTN:lt gry,gry,frm
sme sft,sme shly,sme
calc

SH:dk gry,gry,sbbcky
frm,sme sft,erty,sme
sity,sme calc,tr mica

SH:dk gry,gry,blcky,frm
sme mod frm,erty,sity
lmy

LS:off wht,wht,lt brn
vfn xln,frm,sme mod
frm,calc,tr sity

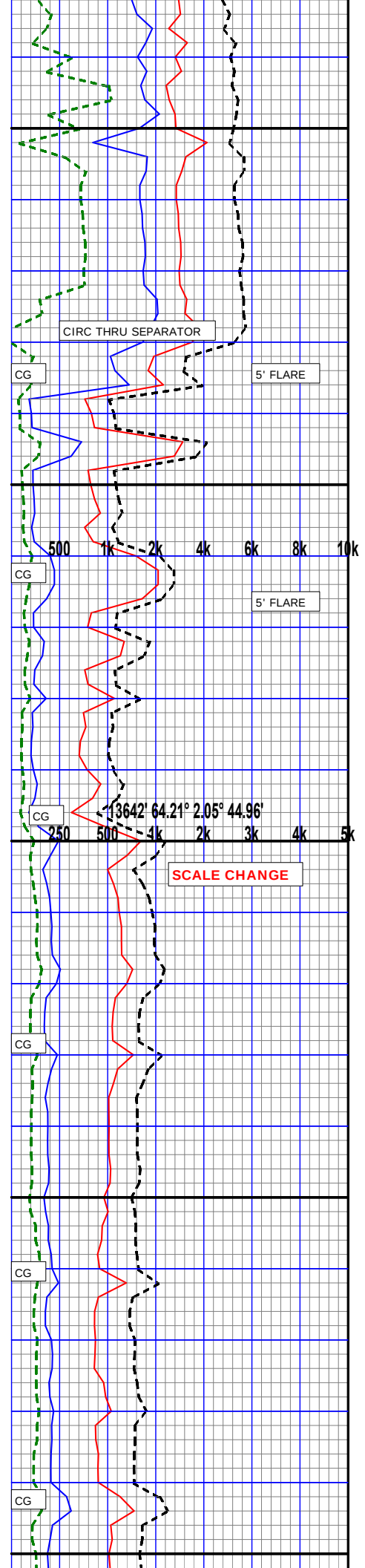
SH:dk gry,gry,blk,blcky
occ sbbcky,frm,sme vy
frm,tr hrd,erty,occ
smth,calc ip

LS:wht,off wht,lt brn
vfn xln,frm,sme mod
hrd,sity,tr mott

SH:gry,lt gry,blk,blcky
tr sbbcky,mod frm,sme
frm,tr sft,erty txt
occ smth,tr lmy

SS:off wht,tan,lt brn
vfn-fn gr,sbang,sbrnd
cons,mod cmtd,well
srted,calc

SH:gry,lt gry,blcky
sme sbbcky,frm,sme
vr frm,tr sft,erty



CIRC THRU SEPARATOR

CG

5' FLARE

CG

5' FLARE

CG

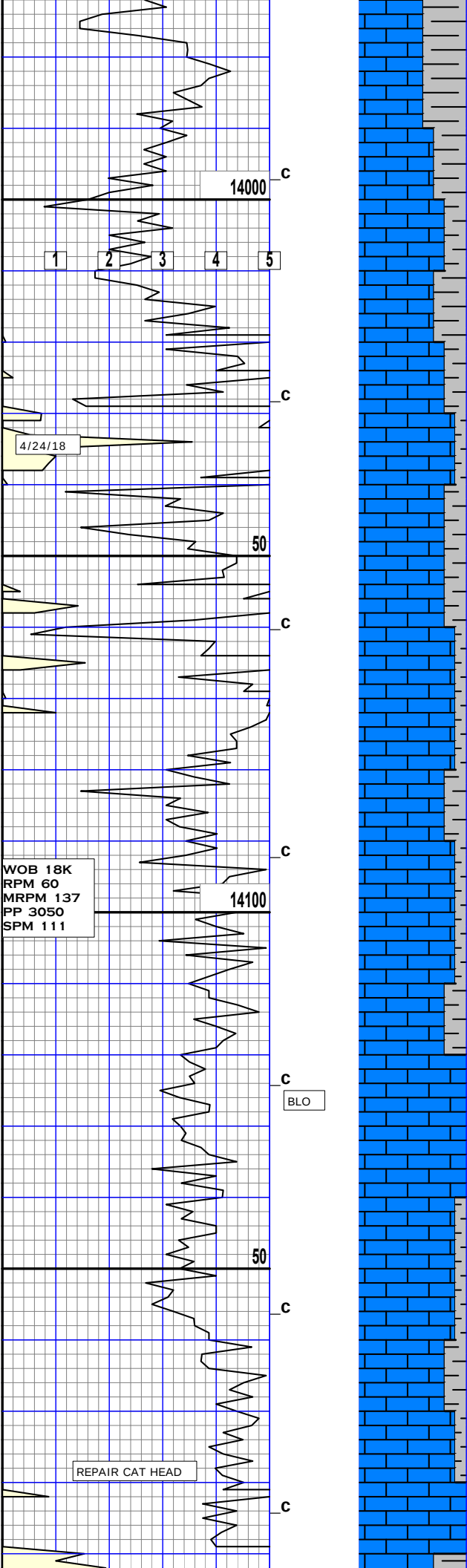
13642' 64.21° 2.05° 44.96'

SCALE CHANGE

CG

CG

CG



LS:off wht,tn,crm,lt brn
vfn-fn xln,mod frm-frm,
tr hrd,slty,occ mott,
tr shly

LS:off wht,wht,crm,lt
brn,tn,vfn xln,sme fn
xln,occ hrd,tr slty,
mott

SH:gry,lt gry,blcky
sme sbblcky,vr frm,sme
frm,erty,occ calc

LS:off wht,wht,lt brn
vfn xln,vr frm-frm,sme
mod hrd,tr pyr,sme
mott

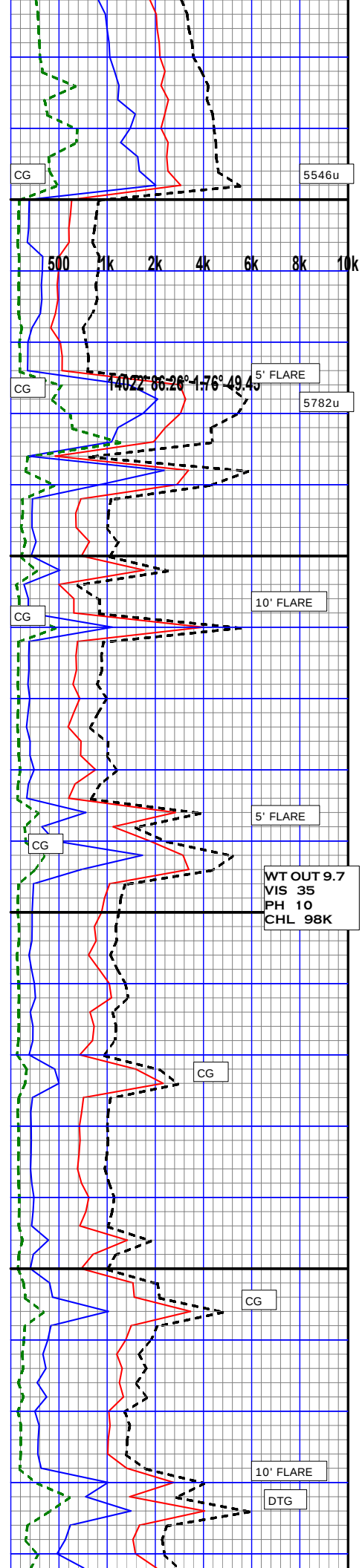
LS:off wht,tn,crm,lt brn
vfn-fn xln,mod frm,vy
frm,tr hrd,mott,cln

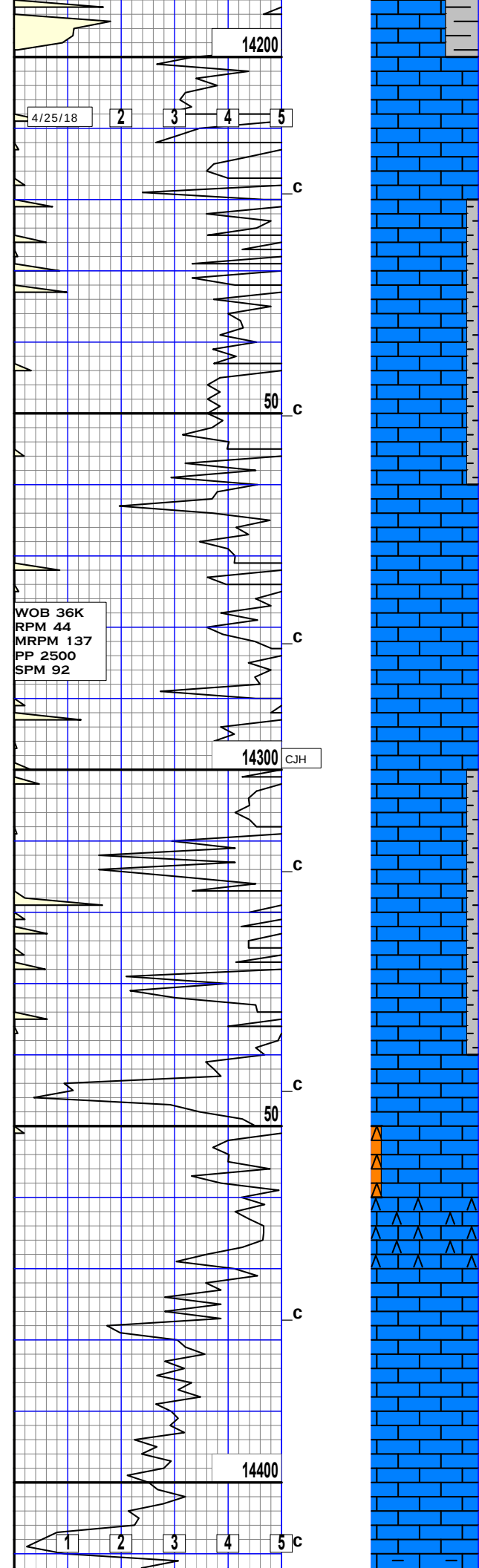
SH:dk gry,gry,lt gry
blk,blcky,tr sbblcky,
mod frm,occ sft,erthy
txt,calc

LS:off wht,lt gry,brn
fn xln,frm,sme mod hrd
sme mott,tr shly

SH:blk,dk gry,blcky,tr
sbblcky,frm,sme sft
erty,sme calc,tr mica

LS:off wht,lt gry,brn
vfn xln,frm,tr mod hrd





tr mott

LS:off wht,wht,lt brn
vfn-fn xln,frm,tr mod
hrd,tr mott

SH:blk,dk gry,blcky,frm
sme britt,sme calc,tr
mica

LS:lt brn,brn,off wht
vfn xln,sme fn xln,frm
sme mod hrd,sme mott
tr fnly pyr

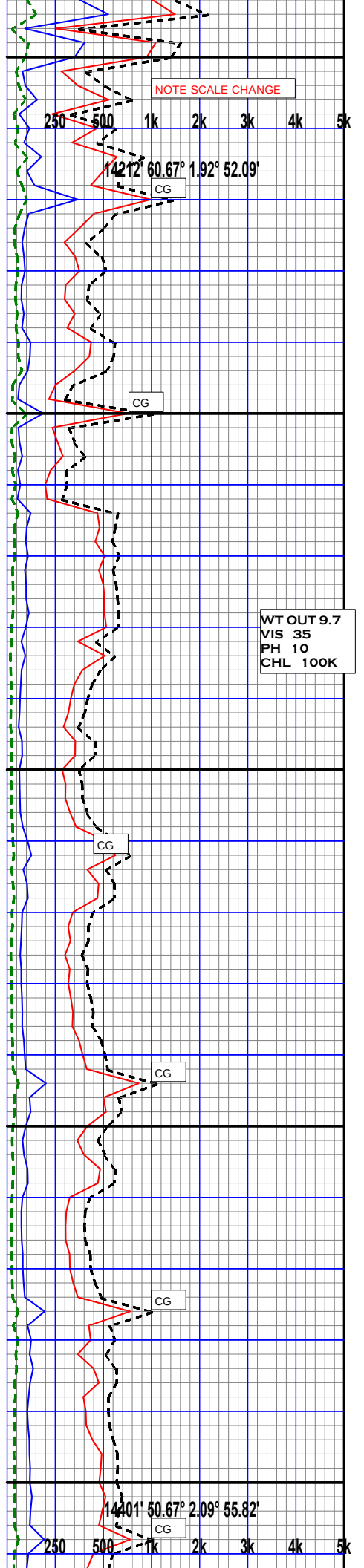
LS:lt brn,brn,off wh,fn-
vfn xln,sme fn xln,frm
sme mod hd,sme mott,tr
fnly pyr

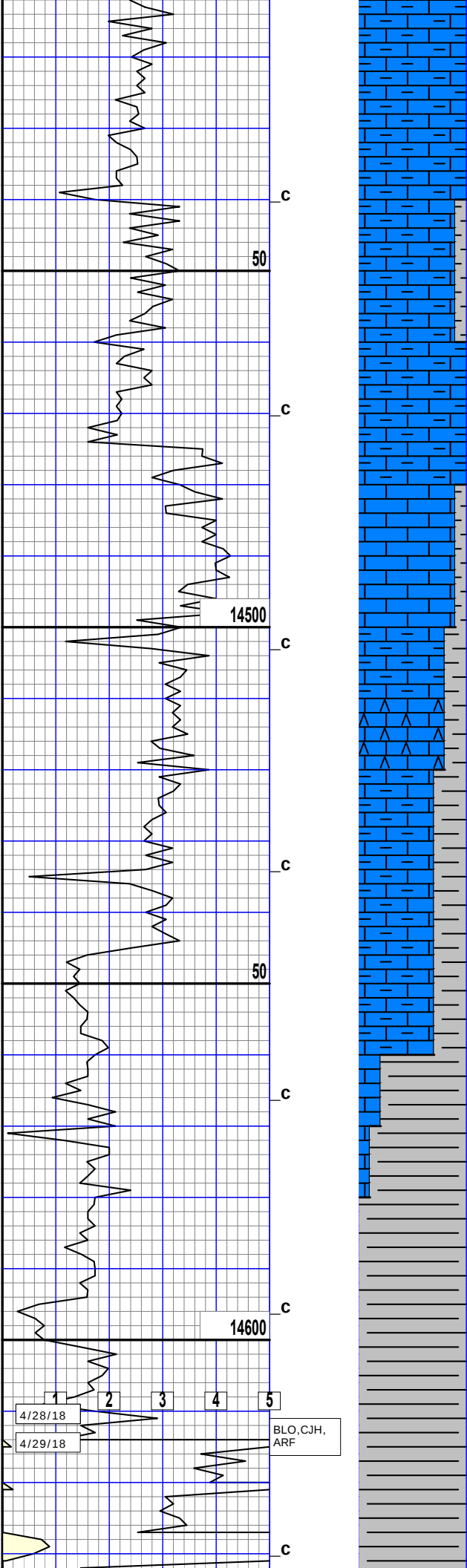
SH:blk,dk gry,sbblky,frm
tr hd,occ calc,britt,ea
tr vfn mica

CH:dk brn,dk gry,tranl
hd,lmy,tr shly

LS:lt gry,lt brn,off
wh,fn-vfn xln,sme fn
xln,frm,sme mod hd,sme
mott

LS:lt grv,lt brn,off





wh, vfn-fn xln, frm mod-frm, sme mott, tr shly

LS: lt gry, lt brn, off wh, vfn-fn xln, frm mod-frm, sme mott, tr shly

SH: blk, dk gry, sbblky, frm mod-frm, tr hd, sme sft brit, ea, occ calc, ea

LS: lt gry, lt brn, gry vfn-fn xln, frm mod-frm tr hd, sme mott, shly, occ tr ch

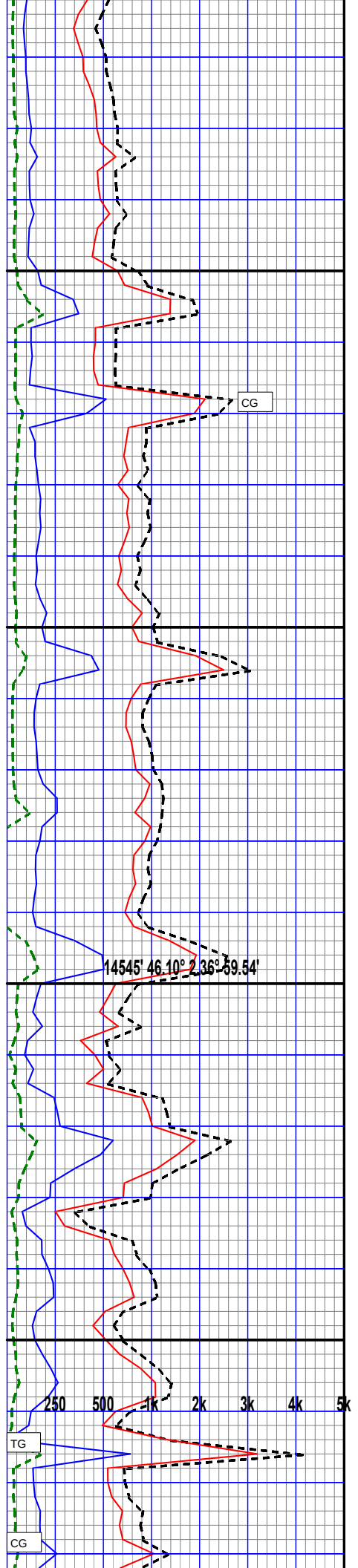
SH: dk brn, lt brn, blk sbblky, frm mod-frm, tr hd, brit, ea, occ calc, ea

LS: lt gry, lt brn, gry vfn-fn xln, frm mod-frm tr hd, sme mott, shly

SH: blk, dk brn, sbblky, frm mod-frm, tr hd, sme sft brit, ea, occ calc

SH: dk brn, lt brn, blk sbblky, tr blk, mod-frm occ frm, brit, erthy txt tr fissl, tr pyr

BIT #9, 8 3/4 HUGHES
T8507FX IN @ 14615
JETS 3x18 - 4x16

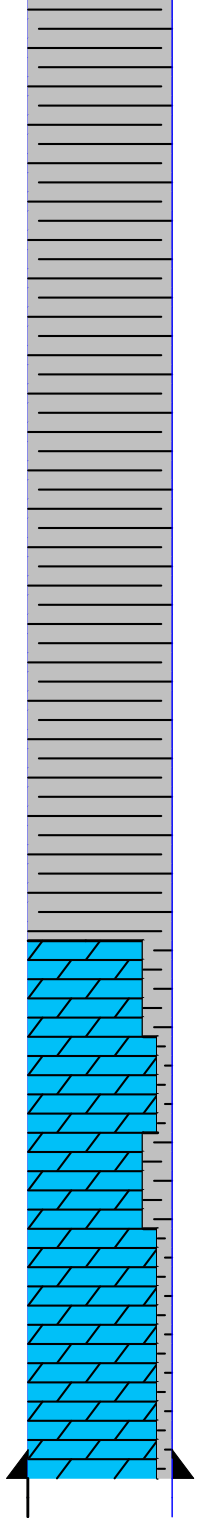
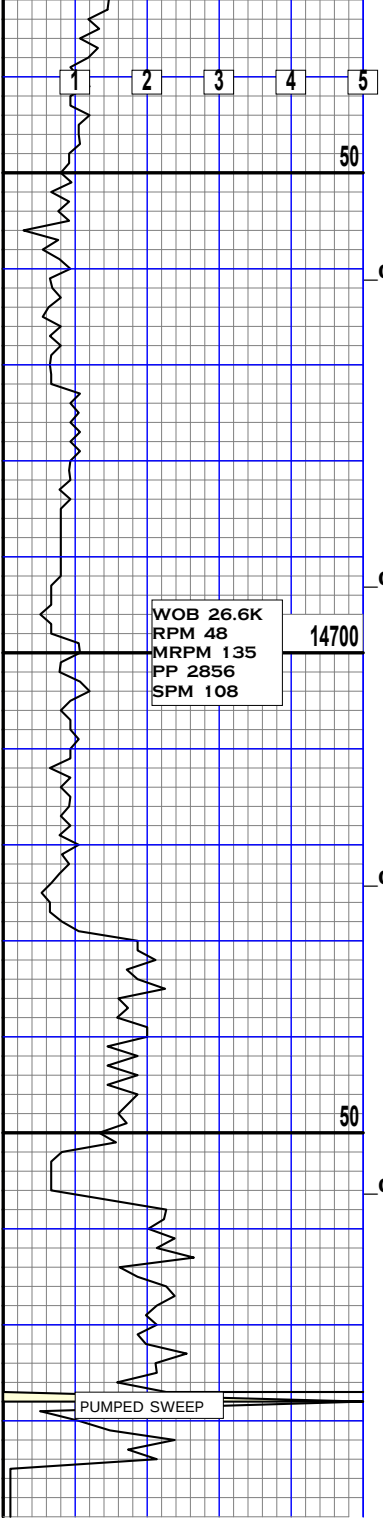


CG

14545' 46.10° 2.36° 89.54'

TG

CG



SH:dk brn,lt brn,dk gry
sbblky,occ blk,mod-frn
tr vy frm,brit,erthy
txt,sme pyr ip

SH:dk brn,lt brn,blk
sbblky,tr blk,mod-frn
sme frm,brit,erthy txt
cln

SH:dk brn,lt brn,dk gry
sbblky,occ blk,mod-frn
occ vy frm,brit,erthy
txt,tr pyr inclu

DOLO:wht,off wht,sme crm
vfn-fn xln,mod frm-frn,
tr hrd,cln

SH:dk brn,lt brn,dk gry
sbblky,tr blk,mod-frn
occ frm,brit,erthy txt
sme pyr

DOLO:wht,off wht,tr crm
vfn-fn xln,mod frm-frn,
occ vy frm,mott

TD FOR CASING

