

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

Lithology Symbols:

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

Accessories

Glauconite Pyrite Fossils Oolites
 Fractures Cement

Gas Chromatograph Analysis:

TG -----
 C1 -----
 C2 -----
 C3 -----
 IC4 -----
 NC4 -----
 IC5 -----
 NC5 -----

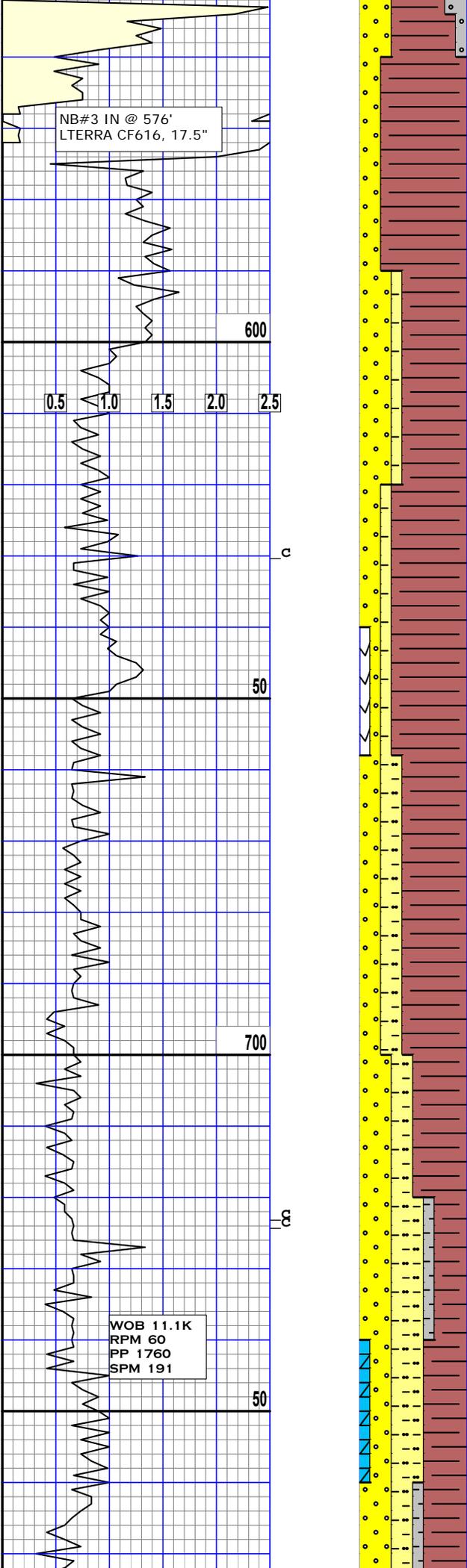
Drilling Rate MIN/FT	Vis Por Tr /	Lithology	% Oil Flu Tr /	Cut Tr /	Descriptions/Remarks	Total Gas/Chromatograph
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COMMENCE 2 MAN LOGGING
 3-27-2018

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

CALIBRATE ALL EQUIPMENT





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

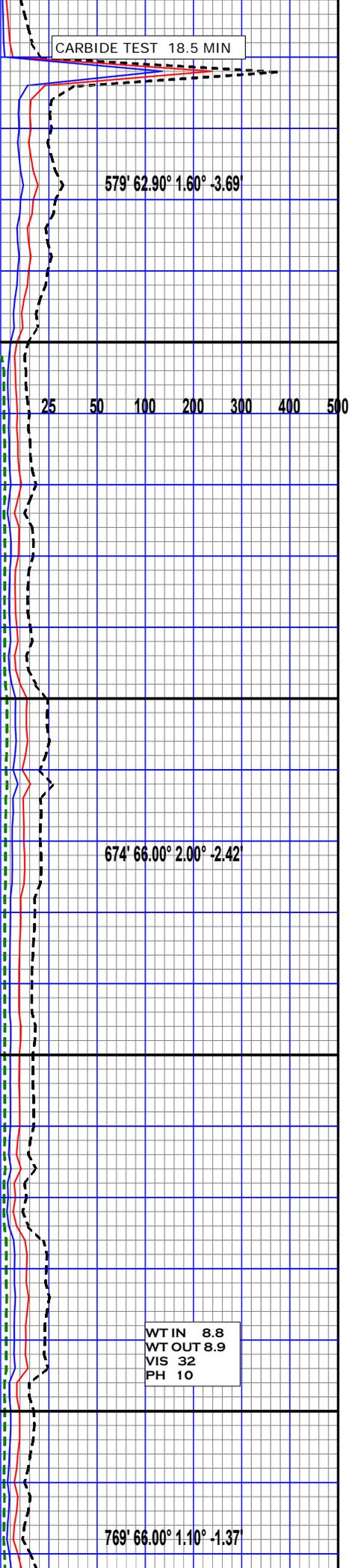
CARBIDE TEST 18.5 MIN

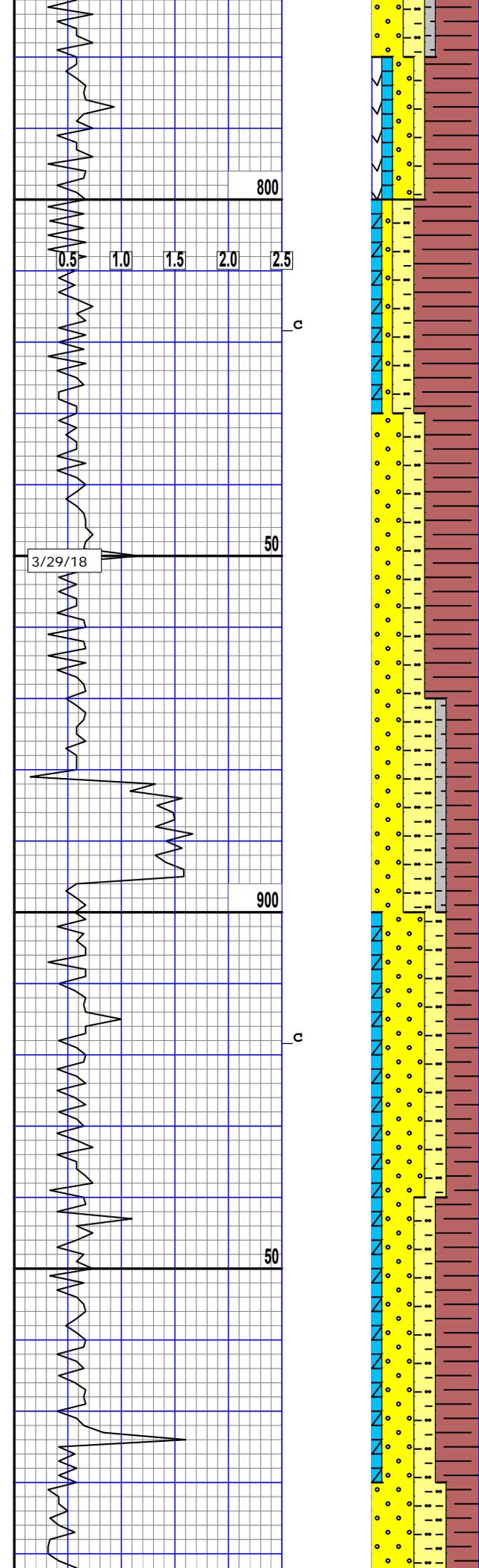
579' 62.90° 1.60° -3.69'

674' 66.00° 2.00° -2.42'

WT IN 8.8
WT OUT 8.9
VIS 32
PH 10

769' 66.00° 1.10° -1.37'





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

SH:rd,lt gry,gry,blk
 sbblk-blky,frm-mod frm
 smth,abdnt rd cly,sme
 off wh cly,dolo,gyp

SH:rd,lt gry,gry,blk
 sbblk-blky,frm-mod frm
 smth,abdnt rd cly,sme
 off wh cly,dolo,gyp

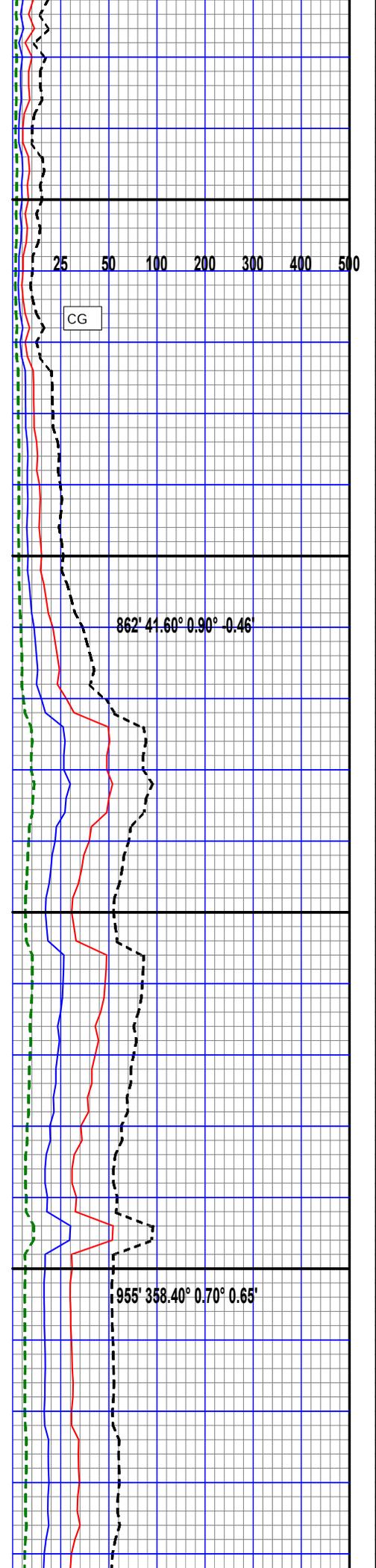
SH:rd,lt gry,gry,blk
 sbblk-blky,frm-mod frm
 smth,abdnt rd cly,sme
 dolo,gyp

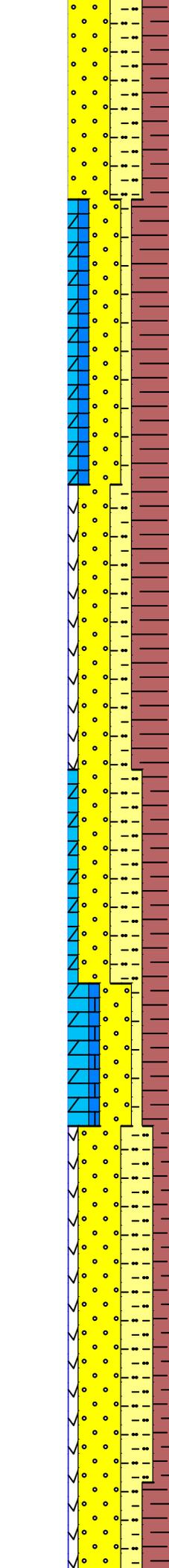
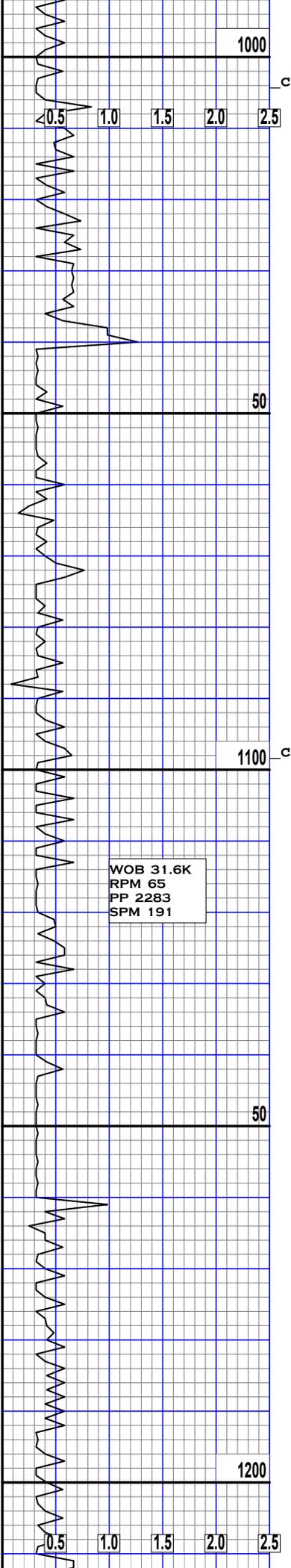
SH:rd,lt gry,gry,blk
 sbblk-blky,frm-mod frm
 smth,abdnt rd cly,sme
 off wh cly,dolo,gyp

SH:rd,lt gry,gry,blk
 sbblk-blky,frm-mod frm
 smth,abdnt rd cly,sme
 dolo,gyp

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

SS:lt gry,gry,off wh
 vfn-fn xln,sme fnxln





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

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

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

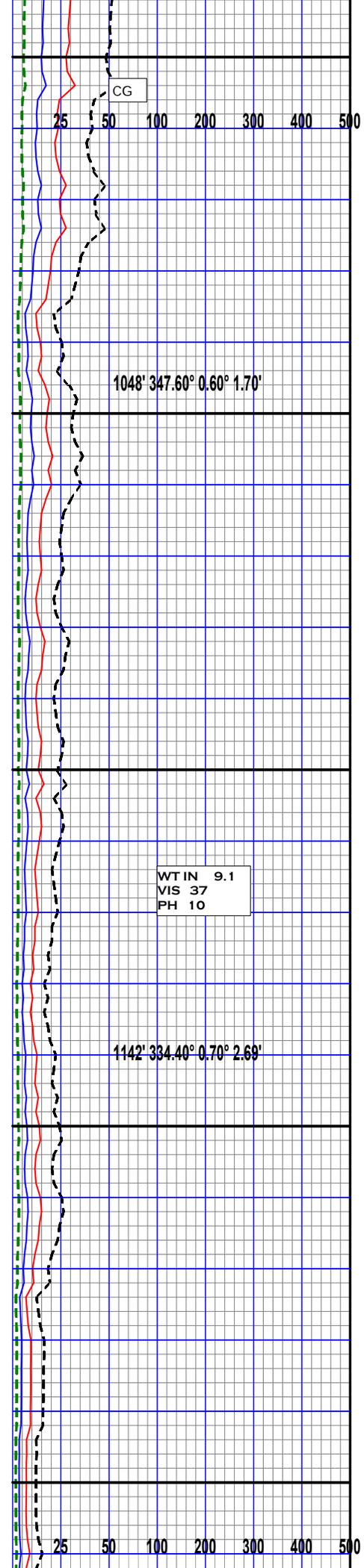
SH: rd, lt gry, gry, off wh
blky, sbblky-blky, frm-
mod frm, smth, abndt rd
clay, slty, gyp, tr anhy
calc, off wh cly

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

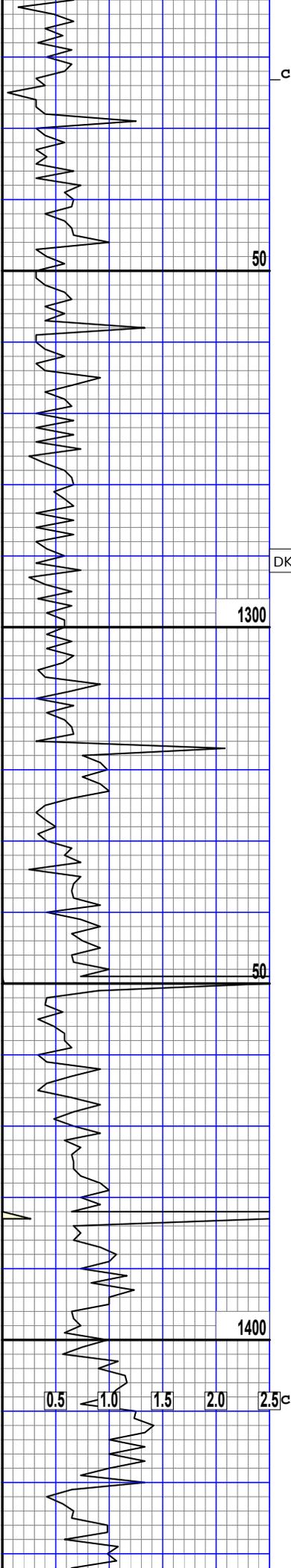
SS: lt gry, gry, off wh, lt
tn, vfn-fn xln, sme fnxln
wl srted, pred cons, tr
uncons, wl cmntd, calc
cmnt, abndt slt, sme off
wh/rd cly, tr anhy

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



WOB 31.6K
RPM 65
PP 2283
SPM 191

WTIN 9.1
VIS 37
PH 10



c

50

DKH/TC

1300

50

1400

0.5 1.0 1.5 2.0 2.5 c

shly,dolo,sme anhy,occ
off wh cly,rd cly matr

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

SS:lt gry,gry,off wh,clr
vfn-fn xln,sme fnxln
mod wl srtd,pred cons
calc cmnt,wl cmnt,silty
shly,occ off wh cly,rd
cly

SLTSTN:olive,tan,blky
sft,cmbly,gummy ip

RSH:red,brick,blky,sb
blky,mod frm,sft,aren
ip

SS:amber,clr,frsted,vfn
grn,lsly con w/calc cmt
gen friab,sb ang,sb rnd
tr free mica

SLTSTN:tan,olive,red,
blky,sft,silty,aren

RSH:red,blky,sb blky
sft,silty,aren ip

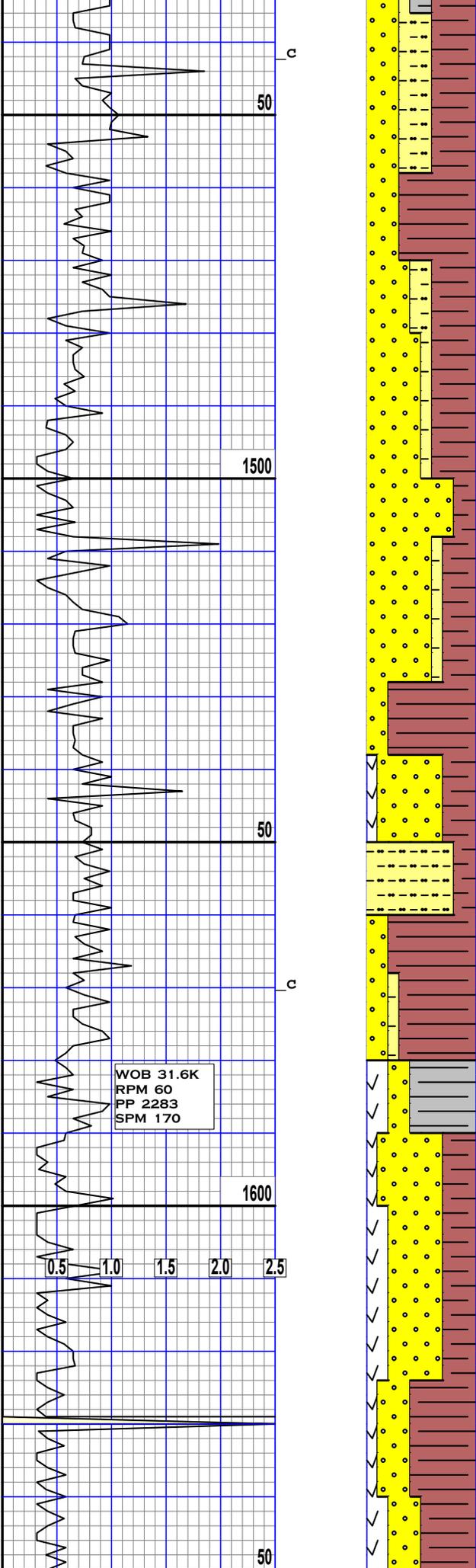
SH:drk gry,gry,blky,sb
blky,frm,mod frm,silty
aren

1236' 324.60° 0.50° 3.55'

1329' 313.00° 0.50° 4.15'

1423' 301.40° 0.40° 4.60'

25 50 100 200 300 400 500



SILT:tan,olive,red,blky
sft,cmbly,gummy,

SS:amber,red,vfn grn,
sly con w/silt matrix
friab,sb rnd,sb ang,
mod well srt,tr mica

RSH:red,brick,blky,mod
frm,sft,gummy ip,calc i

SS:amber,red,clr,vfn gr
mod well con w/silic
cmt,tite,sb ang

1517' 292.10° 0.40° 4.90'

ANHY:wht,trans,vfnxln,
den,hrd,

SLT:red,sft,gummy

RSH:drk red,orange,gummy

ANHY:wht,trans,hrd,

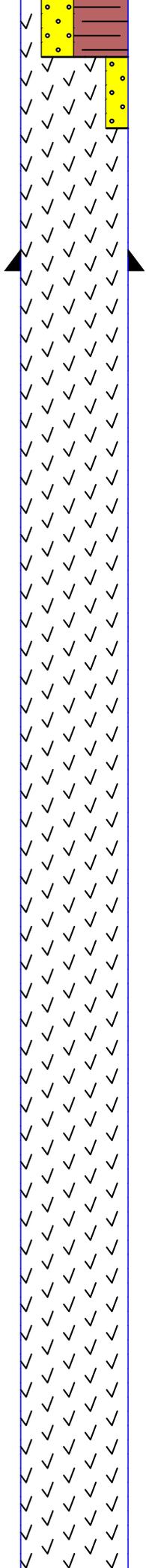
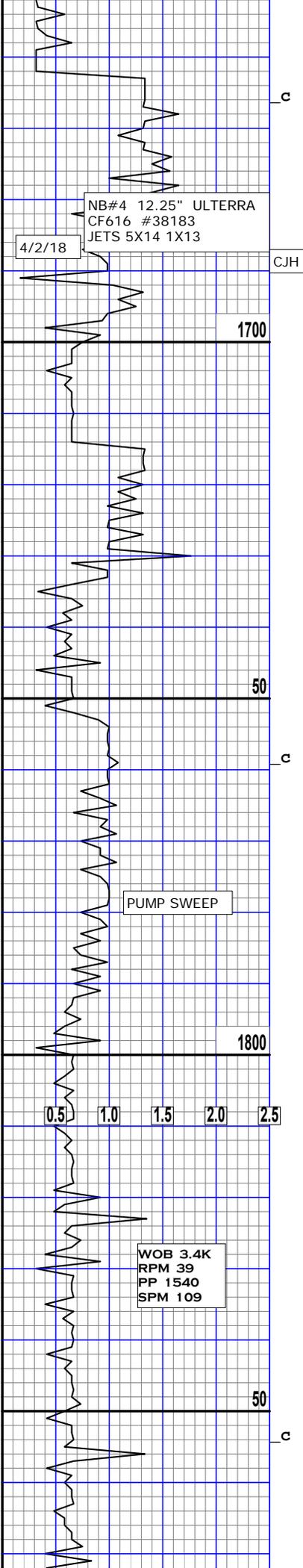
WT IN 9.1
WT OUT 9.1
VIS 38
PH 10

SS:amber,red,lt gry,
vfn grn,lsly con w/
silt matrix,sm tite con
w/calc cmt,occ free vfn

25 50 100 200 300 400 500
1612' 278.90° 0.40° 5.30'

RSH:red,brick,blky,sft,
gummy,calc ip

ANHY:wht,hrd,britt,occ
vfn frac



SS:red,amber,vfn grn,
mod well con w/silic
cmt,sb ang

ANYH:trans,wht,vfnxln
dens,v/hrd,britt

ANYH:wht,off wht,trans
vfnxln,dens,hd,britt

ANYH:trans,wh,clr,vfnxln
v/dens,sme hd,britt

ANYH:clr,wh,trans,vfnxln
sme v/dens,occ hd,britt

ANYH:off wh,wh,lt tn
vfnxln,sme fnxln,dens
sme v/hd,britt

ANYH:off wh,wh,lt tn
vfnxln,sme fnxln,dens
sme v/hd,britt

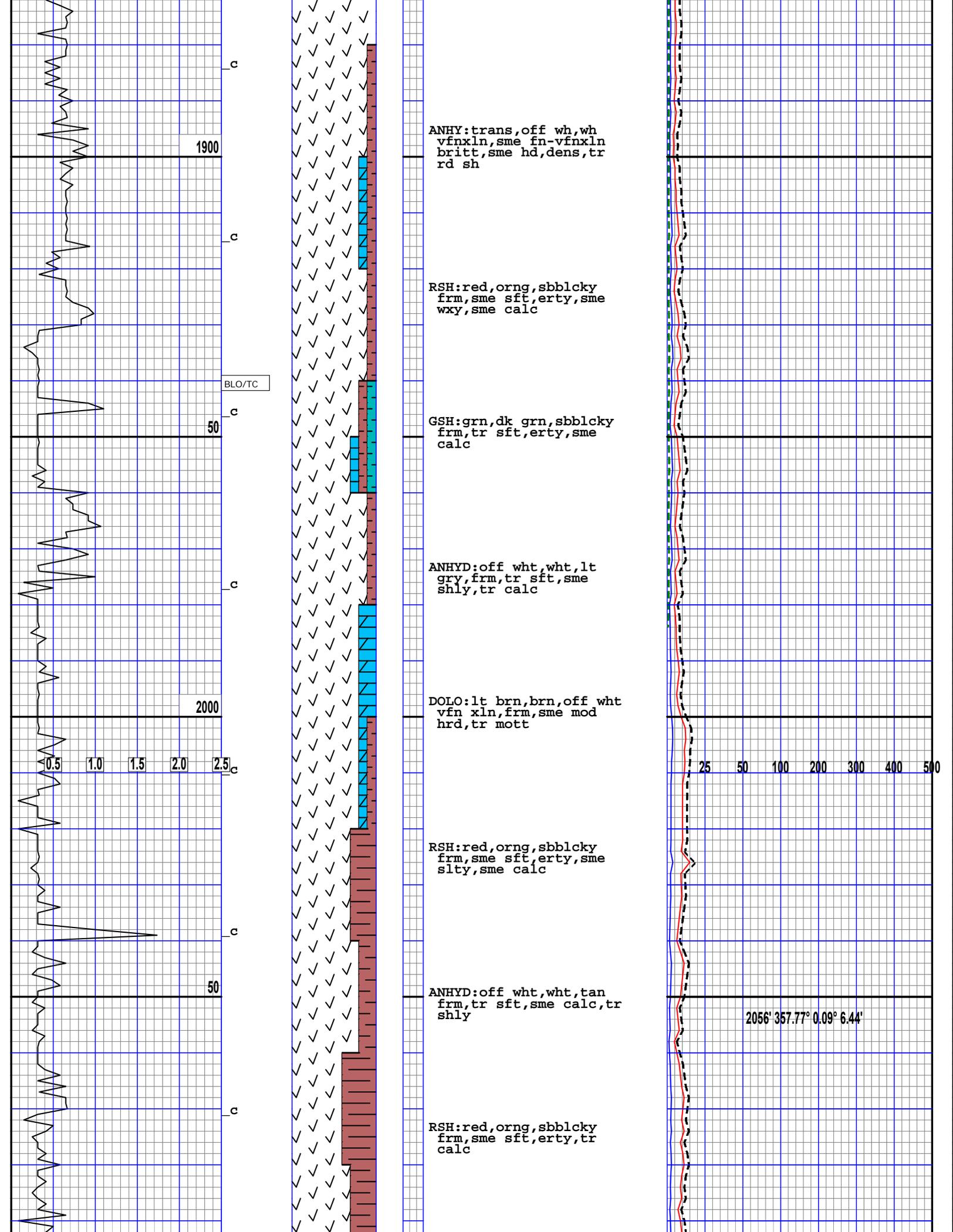
ANYH:wh,trans,off wh
vfnxln,tr fnxln,dens
sme v/hd,britt,tr rd
cly

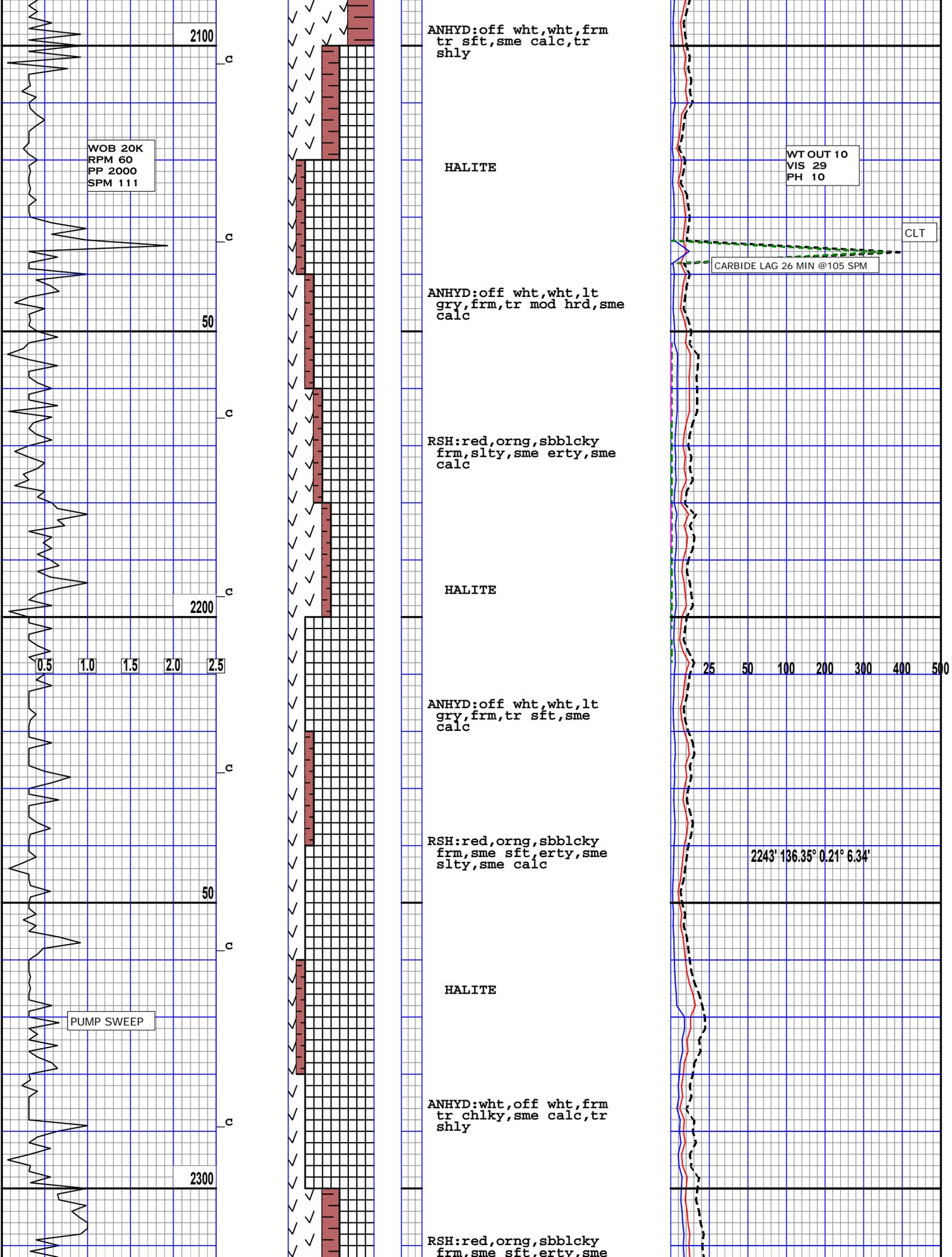
ANYH:off wh,wh,lt tn
vfnxln,sme fnxln,dens
sme v/hd,britt

1744' 12.58° 0.34° 5.53'

WT OUT 10
VIS 29
PH 10

1868' 53.30° 0.25° 6.05'





2100

c

WOB 20K
RPM 60
PP 2000
SPM 111

c

50

c

2200

0.5 1.0 1.5 2.0 2.5

c

50

c

PUMP SWEEP

2300

c

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

HALITE

WT OUT 10
VIS 29
PH 10

CLT

CARBIDE LAG 26 MIN @105 SPM

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

RSH:red,orng,sbblcky
frm,slty,sme erty,sme
calc

HALITE

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

25 50 100 200 300 400 500

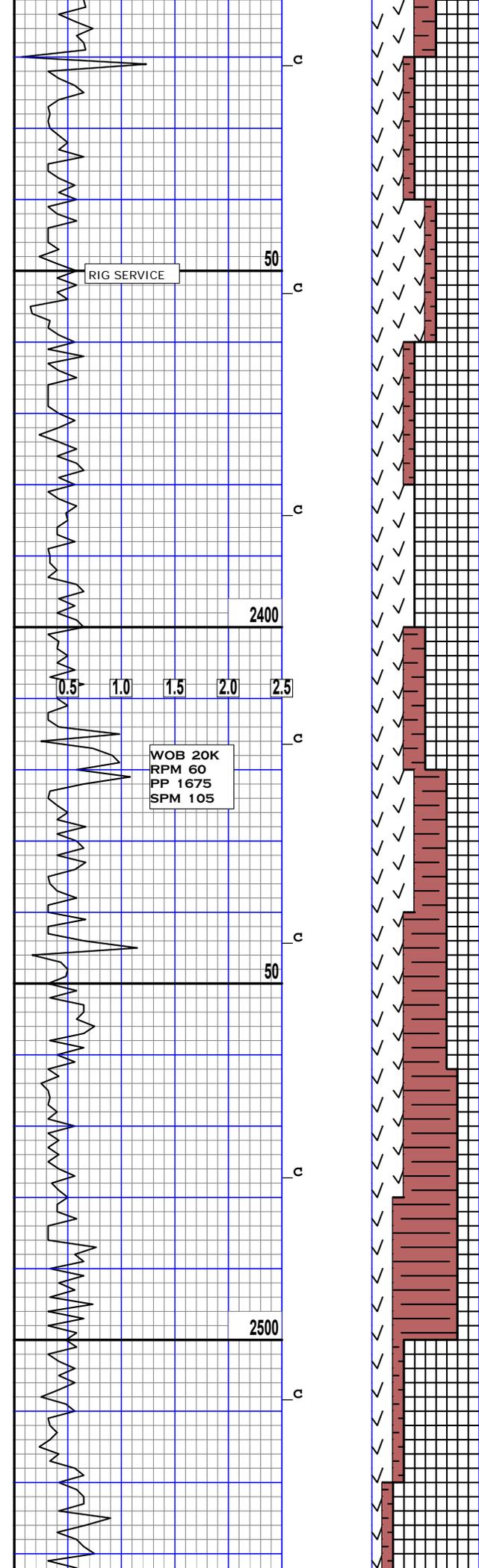
RSH:red,orng,sbblcky
frm,sme sft,erty,sme
slty,sme calc

2243' 136.35° 0.21° 6.34'

HALITE

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

RSH:red,orng,sbblcky
frm,sme sft,erty,sme



slty, tr calc

HALITE

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

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

HALITE

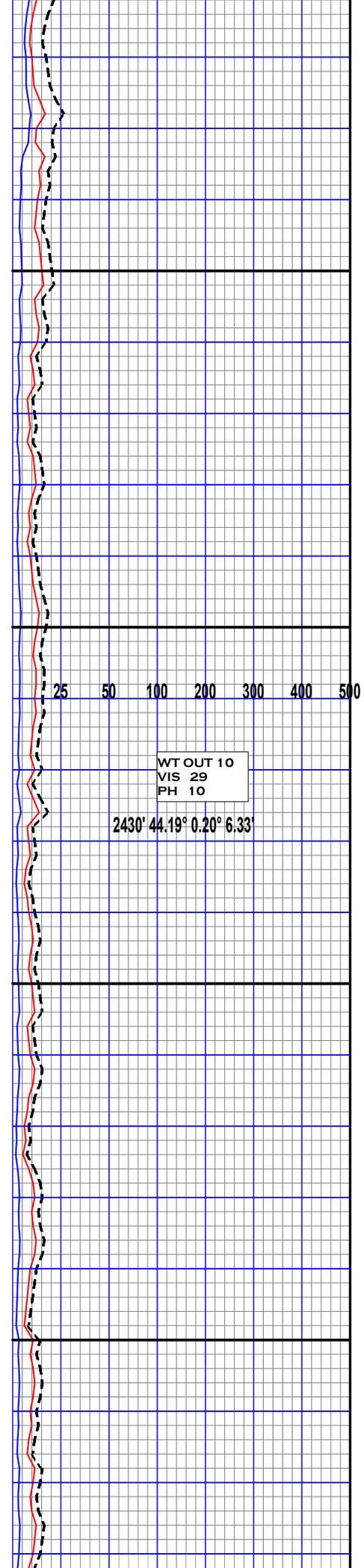
ANHYD:off wht, wht, frm
tr sft, tr calc, tr
shly

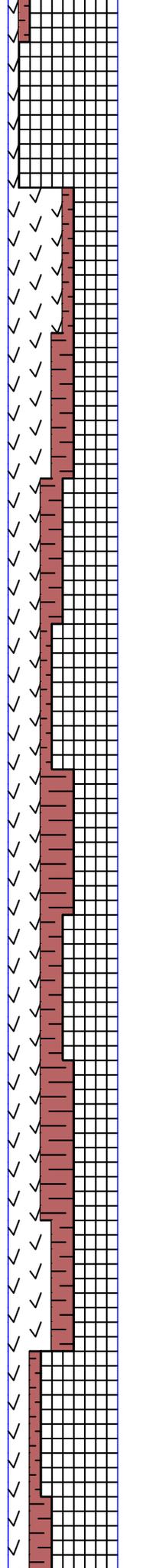
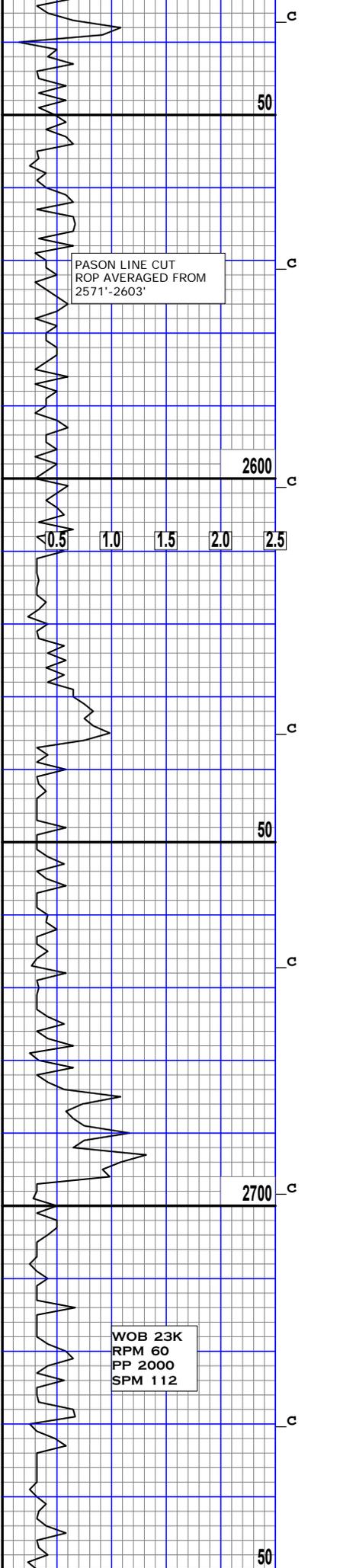
RSH:red, dk red, sbblcky
occ blkky, frm, sme sft
erty, tr calc

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

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

HALITE





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

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

HALITE

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

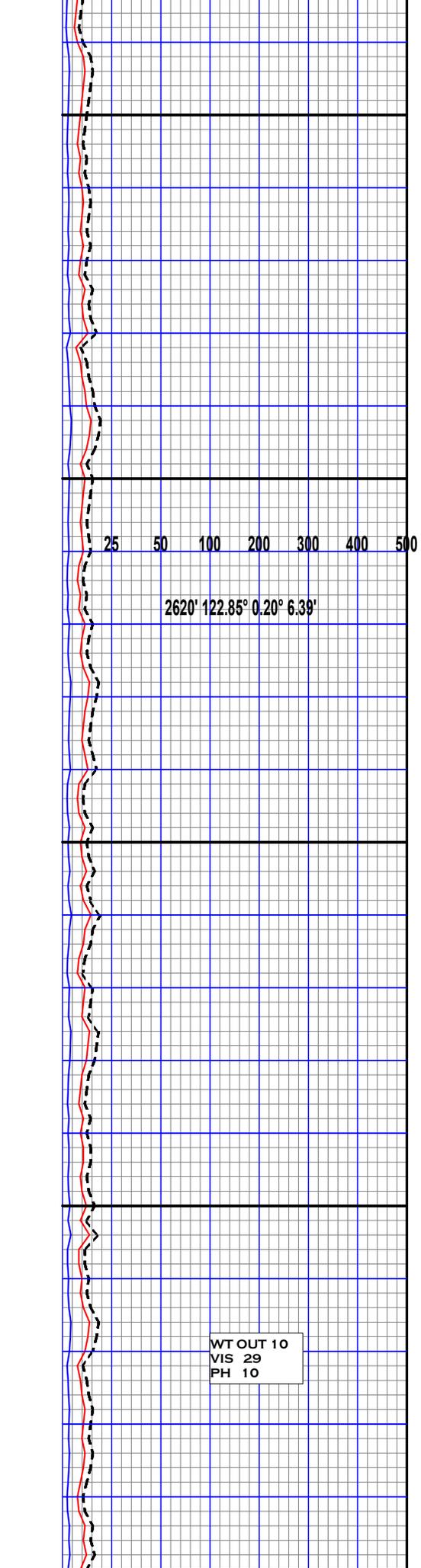
RSH:red,lt red,sbblcky
frm,erty,tr wxy,sme
calc

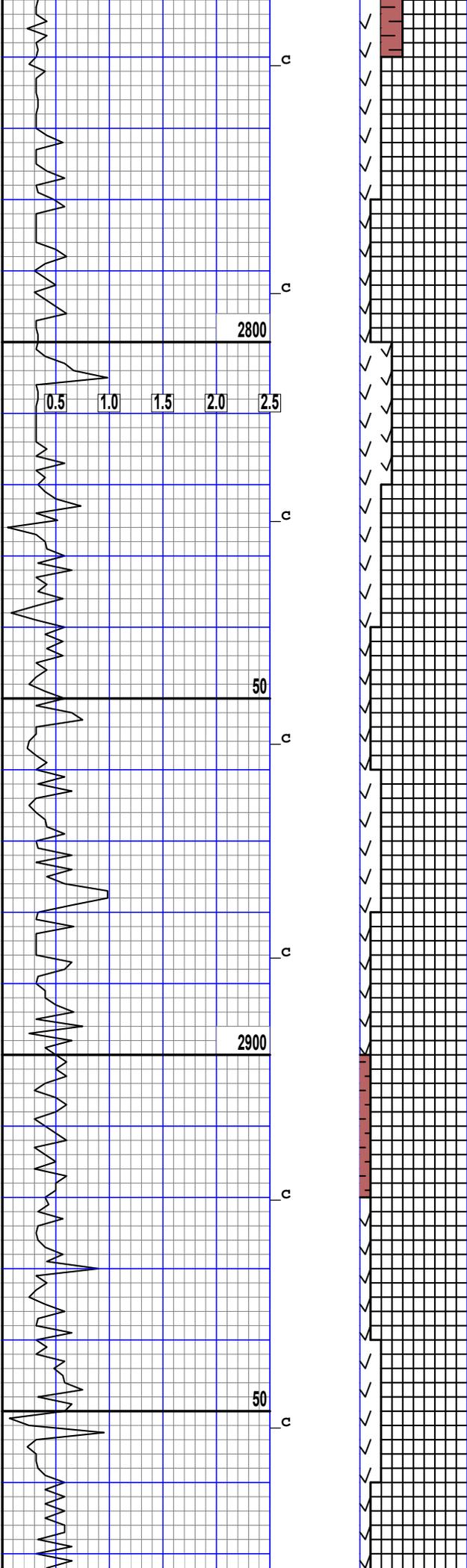
HALITE

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

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

HALITE





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

HALITE

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

HALITE

ANHYD:off wht,wht,frm
tr chlky,sme calc,tr
red sh

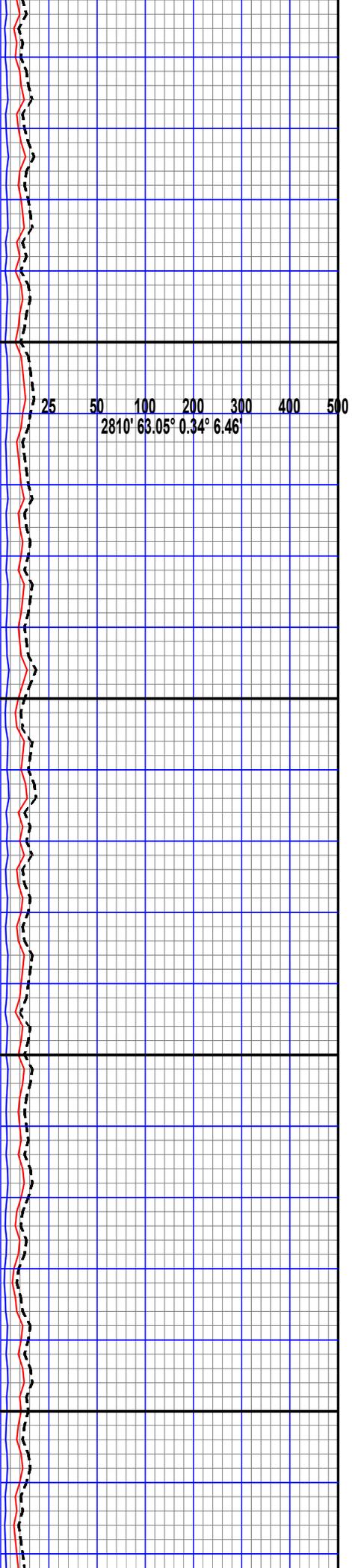
HALITE

ANHYD:off wht,wht,frm
tr chlky,tr calc,tr
red sh

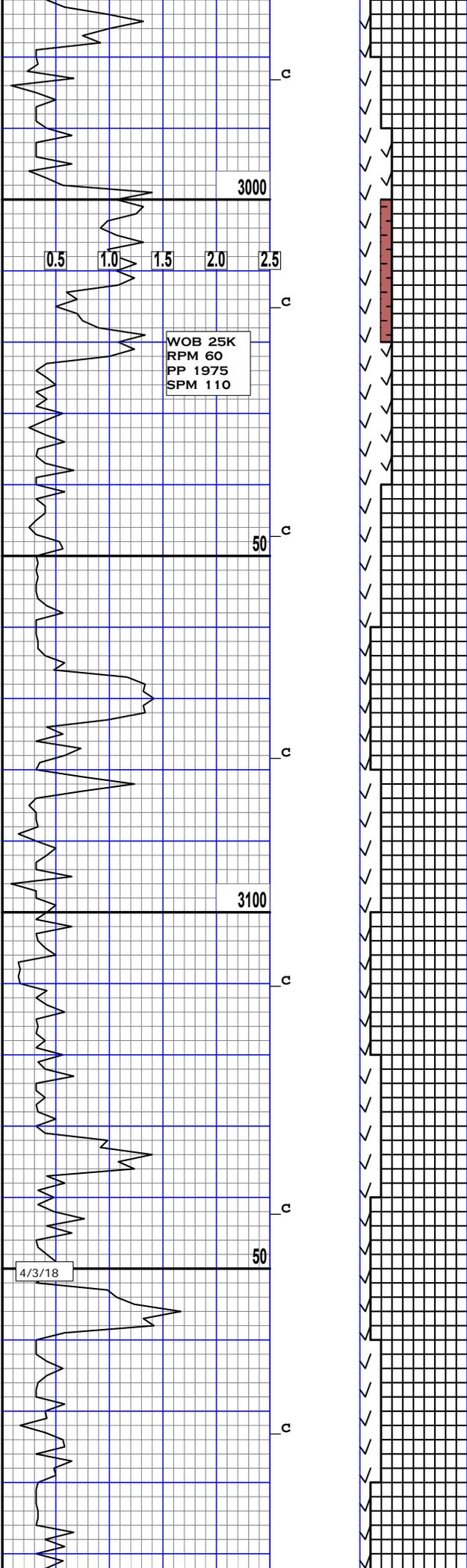
RSH:lt red,red,sbblcky
frm,tr sft,erty,sme
calc,tr anhyd ip

HALITE

ANHYD:off wht,wht,lt
gry,frm,sme calc,occ
red sh



25 50 100 200 300 400 500
2810' 63.05° 0.34° 6.46'



HALITE

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

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

HALITE

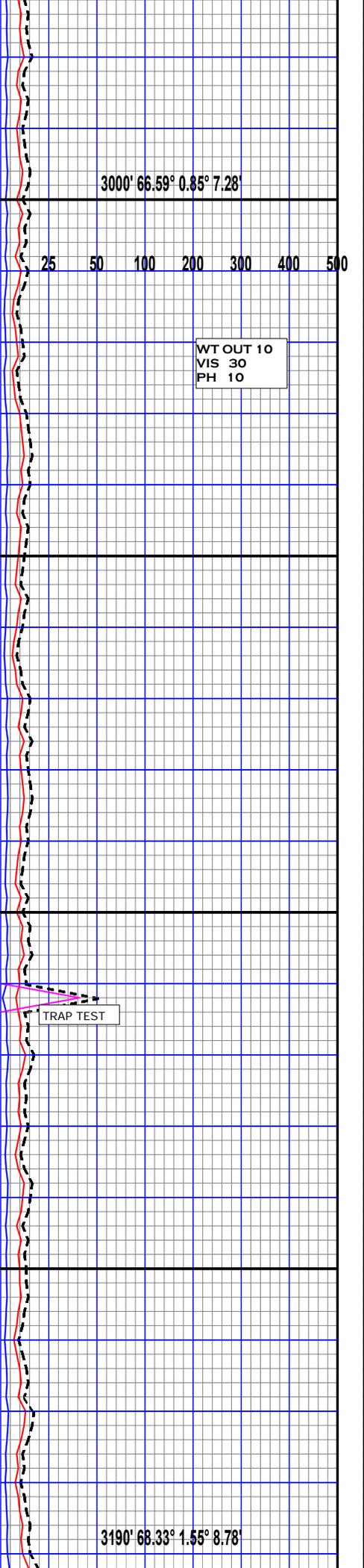
ANHYD:off wht,wht,frm
sme chlky,tr calc,tr
shly

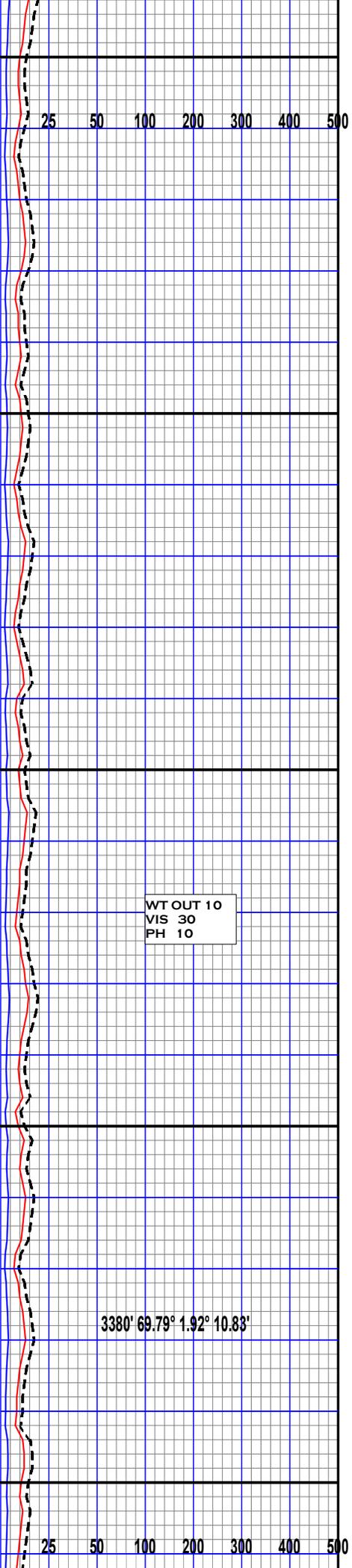
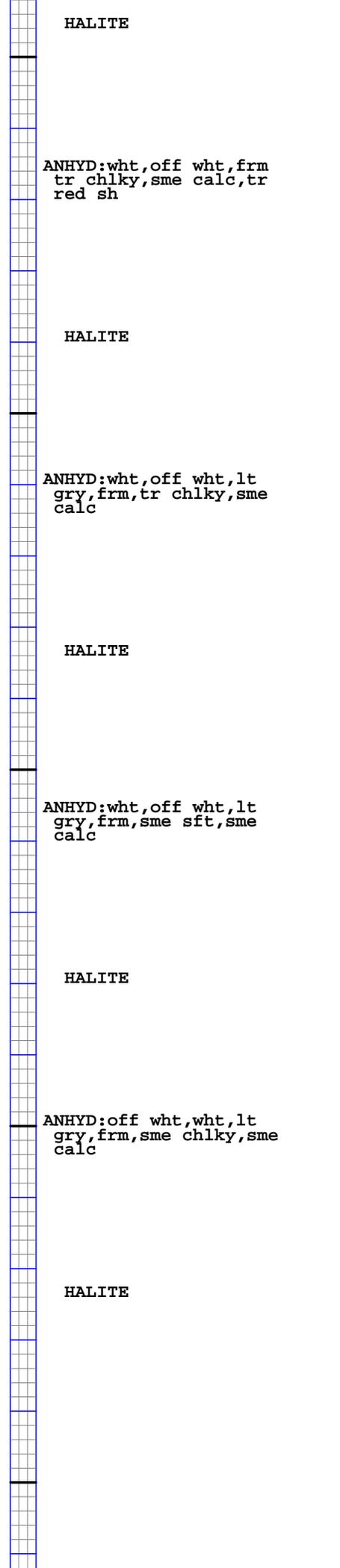
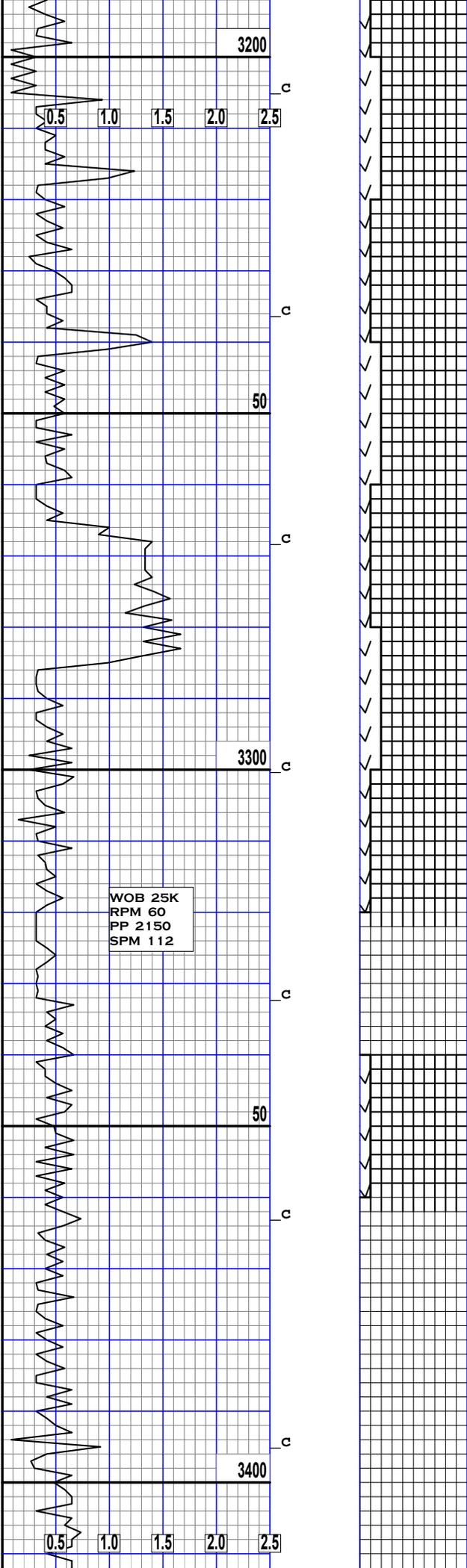
HALITE

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

HALITE

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





3200

c

0.5 1.0 1.5 2.0 2.5

c

50

c

3300

c

WOB 25K
RPM 60
PP 2150
SPM 112

c

50

c

3400

c

0.5 1.0 1.5 2.0 2.5

HALITE

ANHYD:wht,off wht,frm
tr chlky,sme calc,tr
red sh

HALITE

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

HALITE

ANHYD:wht,off wht,lt
gry,frm,sme sft,sme
calc

HALITE

ANHYD:off wht,wht,lt
gry,frm,sme chlky,sme
calc

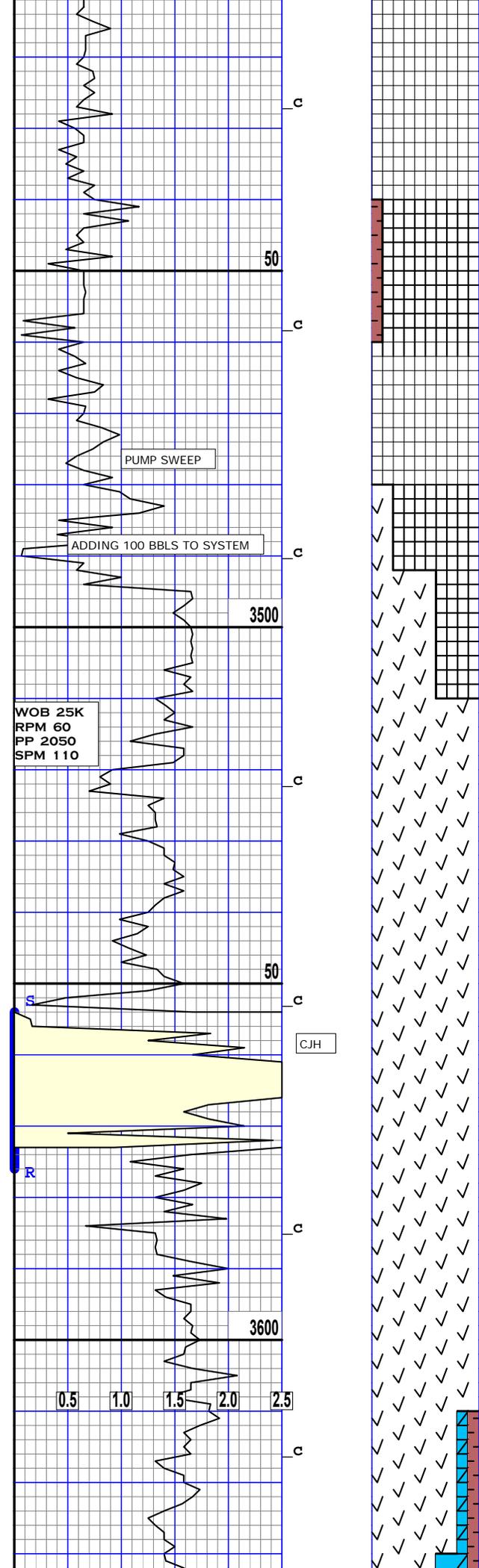
HALITE

3380' 69.79° 1.92' 10.83'

25 50 100 200 300 400 500

25 50 100 200 300 400 500

WT OUT 10
VIS 30
PH 10



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

WT OUT 10
VIS 30
PH 10
CHL 170K

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

3569' 59.22° 1.56° 13.24'

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 dolo

25 50 100 200 300 400 500

PUMP SWEEP

50 c

DOLO:lt brn,tn,brn,off
wh,vfn xln,frm,sme mod
hd,tr mott

c

DOLO:lt brn,tn,brn,off
wh,vfn xln,frm,sme mod
hd,tr mott,sme slit

3700

c

SS:lt gry,lt tn,off wh
vfn-fn gr,sbrnd-sbang
cons,wl srted,cmntd wl
calc cmnt,occ slit

c

SS:lt gry,lt tn,off wh
vfn-fn gr,sbrnd-sbang
cons,wl srted,cmntd wl
calc cmnt,occ slit

50

c

SS:lt gry,off wh,clr
vfn-fn gr,sbrnd,cons
wl srted,cmntd wl,calc
cmnt,occ slit,sme wh cly

3759' 48.14° 1.20° 15.89'

3800

c

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

0.5 1.0 1.5 2.0 2.5

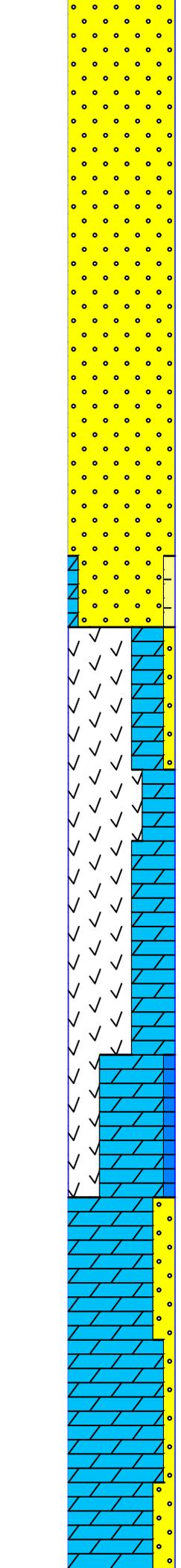
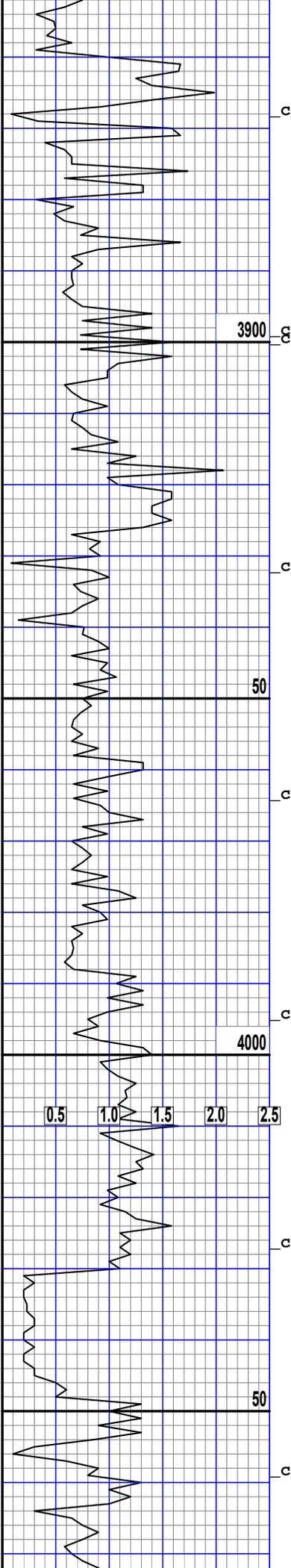
25 50 100 200 300 400 500

SS:lt gry,off wh,clr,tn
vfn gr,sbrnd-ang,cons
mod wl srted,cmntd v/wl
calc cmnt,slty,tr mica

WOB 24.6K
RPM 61
PP 2172
SPM 110

50

WT OUT 10.2
VIS 30
PH 10
CHL 170K



SS:lt brn,brn,clr,off wh
vfn-fn gr,sbrnd-sbang
consl,wl srted,cmntd wl
tr free off wh cly

SS:brn,lt gry,clr,off wh
vfn-fn gr,sme fng,sbrnd
sbang,sme rnd,cons,wl
srted,calc cmnt,cmntd wl

SS:brn,lt gry,clr,off wh
vfn-fn gr,sbrang,cons
wl srted,cmntd wl,calc
cmnt,tr vfn mica

DOLO:lt brn,tn,off wh
vfn xln,sme microxln
frm,sme mod hd,dens
tr mott

DOLO:lt brn,tn,off wh
vfn xln,sme microxln
frm,sme mod hd,dens
tr mott

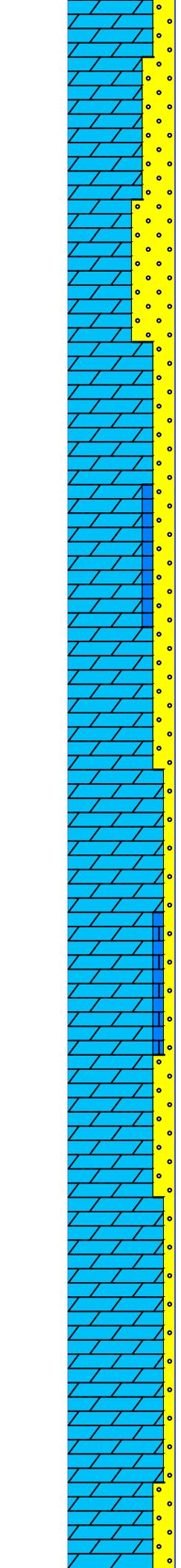
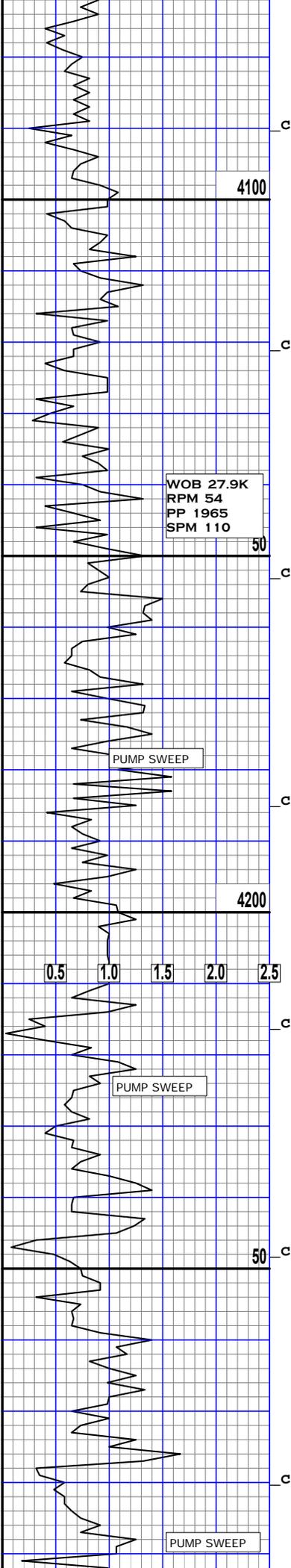
ANHY:wh,off wh,frm,sme
hd,chlky,dns

DOLO:off wh,wh,lt tn,frm

SS:brn,lt gry,clr,off wh
vfn gr,sbrnd-sbang,cons
wl srted,cmntd wl,calc
cmnt,tr dolo

3949' 45.68° 1.35° 18.79'





DOLO:wht,off wht,tan
frm,tr mod hrd,tr mott
occ sucros

SS:clr,off wh,lt tn,vfn-
fn gr,tr micro gr,sbrnd
sme ang,pred cons,mod
wl srttd,cmntd wl,dolo

SS:clr,off wh,lt tn,vfn-
fn gr,sbrnd-sbang,cons
wl srttd,cmntd,calc cmnt

DOLO:lt tn,tn,lt brn,vfn
xln,sme fn-vfnxln,frm
mod frm,sme hd,dns ip
smth,SS,tr lmy

DOLO:lt tn,tn,lt brn,vfn
xln,sme fn-vfnxln,frm
mod frm,sme hd,dns ip
smth,SS,tr lmy

SS:clr,off wh,vfn-fng
sbrnd,pred cons,wl srttd
wl cmntd,calc cmnt

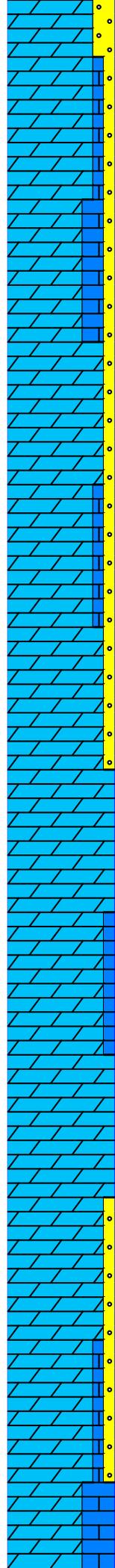
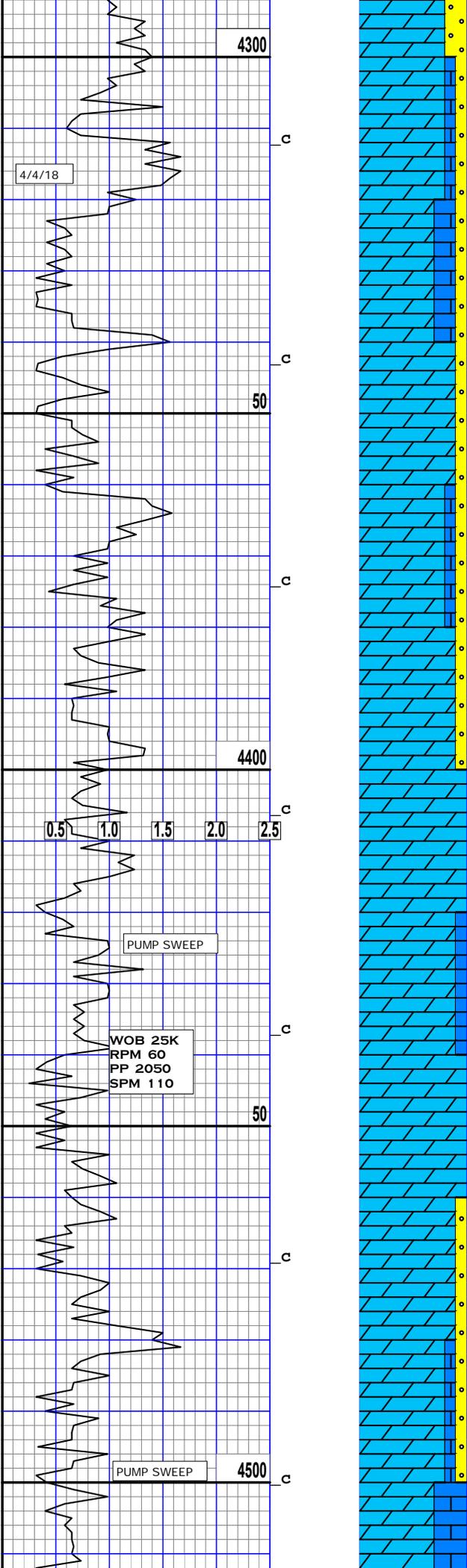
DOLO:lt tn,tn,lt brn,vfn
xln,sme fn-vfnxln,frm
mod frm,sme hd,dns

SS:clr,off wh,vfn-fng
sbrnd,pred cons,wl srttd
wl cmntd,calc cmnt,tr
slt

4138' 34.75° 1.18° 21.94'

WT OUT 10.1
VIS 30
PH 10
CHL 170K

25 50 100 200 300 400 500



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

4327' 40.05° 0.92° 24.70'

SS:wh,clr,off wh,vfn gr
sbrnd-sbang,pred consl
wl srted,wl cmntd,tr
free wh cly

DOLO:wht,off wht,tan
vfn xln,tr fn xln,frm
tr mod hrd,sme mott
tr fnly pyr,occ sucros

SS:wh,off wh,clr,vfn gr
sbang-sbrnd,sme rnd
pred cons,tr uncons,wl
srted,calc cmnt,cmntd wl

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

WT OUT 10.2
VIS 30
PH 10
CHL 170K

SS:wh,clr,off wh,vfn gr
sbrnd-sbang,pred consl
wl srted,wl cmntd,tr
free wh cly

SS:wh,clr,off wh,vfn gr
sbrnd-sbang,pred consl
wl srted,wl cmntd,tr
free wh cly

25 50 100 200 300 400 500

4517' 22.46° 1.02° 27.43'

DOLO:wh,clr,off wh,vfn
xln,sme fn xnl,frm,sme
hd,dens,lmy,ss

SS:clr,wh,vfn gr,sme
micro gr,sbrnd-sbang
cons,sme unconsl,pred
srted,calc cmnt,cmntd wl
occ tr free wh cly

DOLO:wh,clr,off wh,vfn
xln,sme fn xnl,frm,sme
hd,dens,lmy,ss

DOLO:wh,clr,off wh,vfn
xln,sme fn xnl,frm,sme
hd,dens,lmy,ss

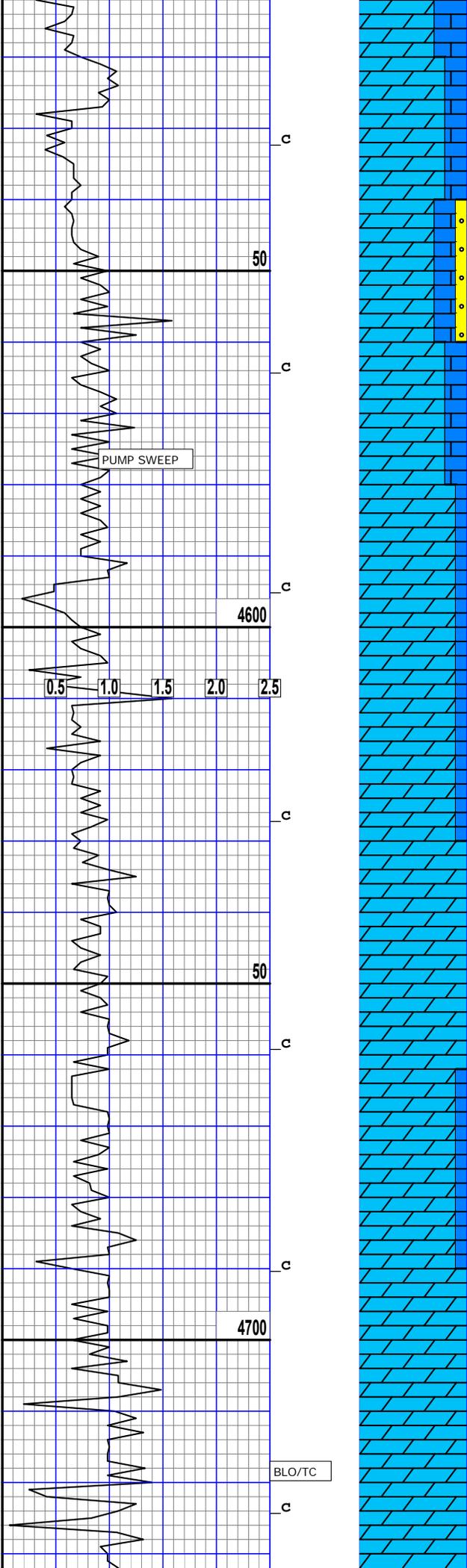
DOLO:wh,clr,off wh,vfn
xln,sme fn xnl,frm,sme
hd,dens,lmy,ss

DOLO:wh,off wh,lt tn
vfnxln,frm,sme hd dens
lmy

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

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

4707' 35.60° 0.98° 30.32'



c
50
c
4600
c
50
c
4700
c

BLO/TC

25 50 100 200 300 400 500

WOB 25K
RPM 60
PP 1900
SPM 110

50

c

c

4800

0.5 1.0 1.5 2.0 2.5

c

50

PUMP SWEEP

c

4900

c

50

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

DOLO:off wht,wht,lt gry
vfn xln,frm,sme mod
hrd,sme mott,tr fnly
pyr,tr red sh

DOLO:off wht,wht,lt gry
vfn xln,frm,sme mod
hrd,tr mott,tr red sh

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

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

DOLO:wht,off wht,fn-vfn
xln,frm,tr mod hrd
sme sucros,tr mott,tr
fnly pyr

SS:lt gry,clr,vfin gr
subrnd-rnd,pred cons
sme uncons,prly cmntd
well srted,calc

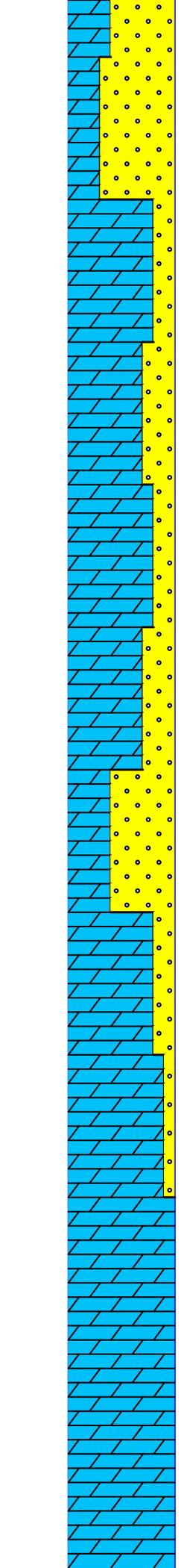
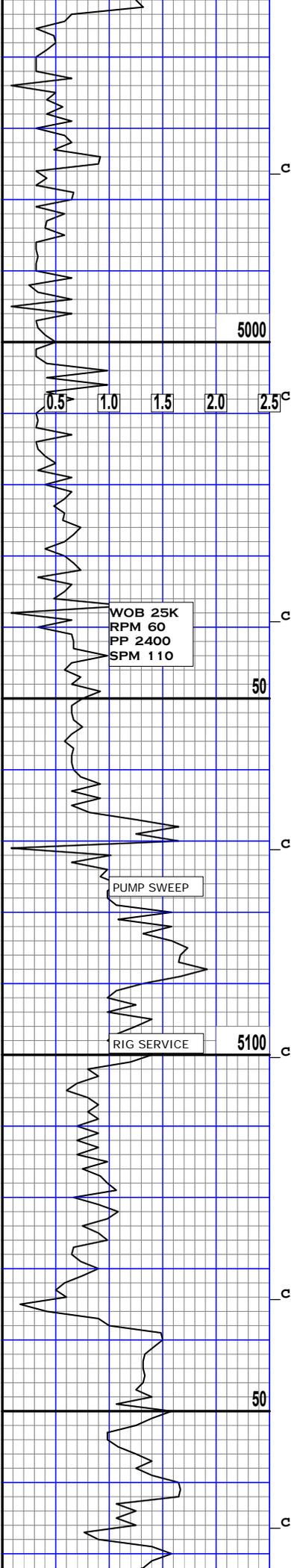
DOLO:wht,off wht,tan
vfn-fn xln,frm,tr mod
hrd,tr mott,occ sucros

SS:lt gry,clr,vfin gr
rnd-subrnd,cons,prly
cmntd,well srted,calc

WT OUT 10.2
VIS 30
PH 10
CHL 170K

25 50 100 200 300 400 500

4898' 16.15° 1.09° 33.39'



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

SS:lt gry,clr,vfin gr
rnd-subrnd,pred cons
tr uncons,frly cmntd
well srtd,calc

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

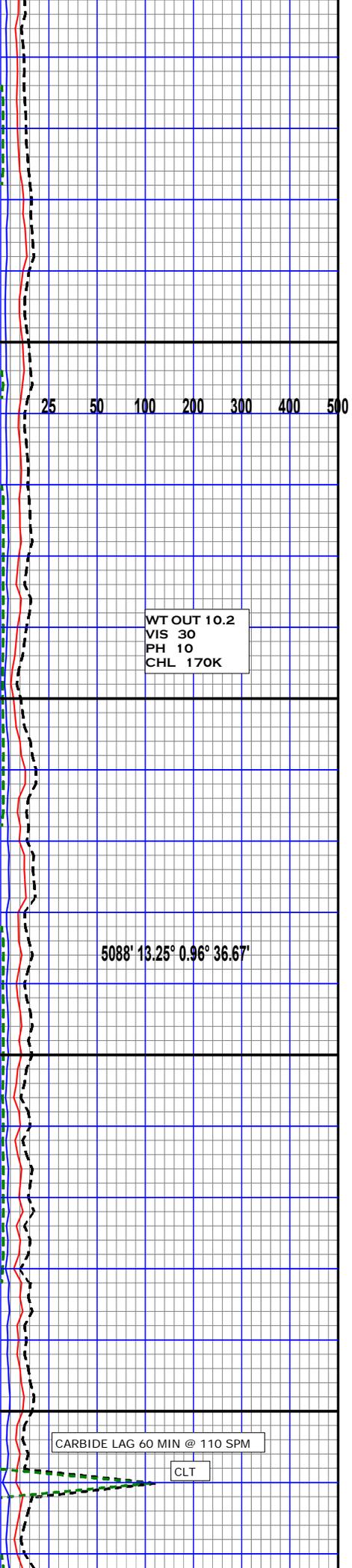
SS:lt gry,clr,vfin gr
rnd-subrnd,pred cons
tr uncons,frly cmntd
well srtd,calc

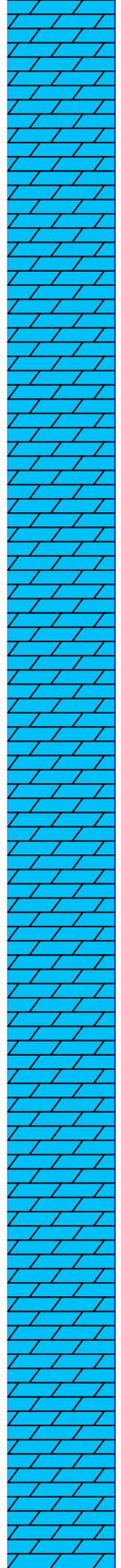
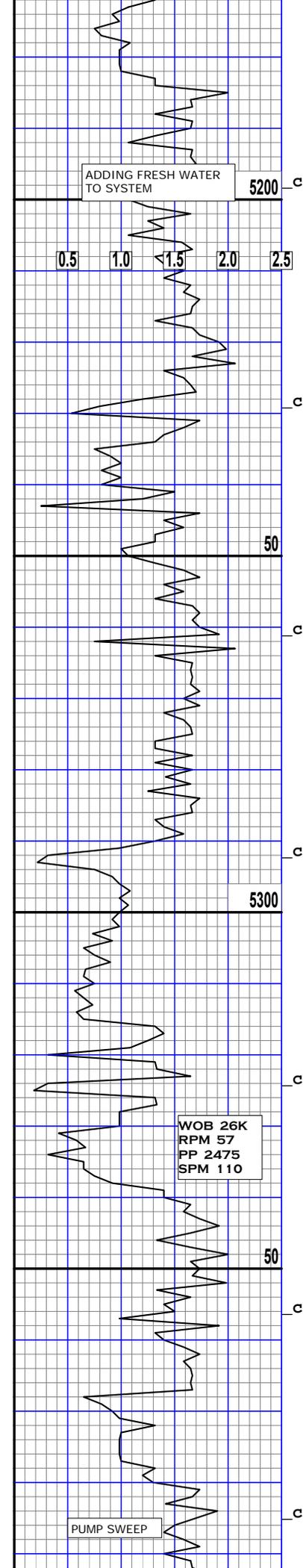
DOLO:off wht,wht,tan
vfn xln,frm,tr mod hrd
tr mott

SS:lt gry,clr,vfin gr
rnd-subrnd,pred cons
sme uncons,frly cmntd
well srtd,calc

DOLO:off wht,wht,lt gry
vfn xln,tr fn xln,frm
tr mod hrd,tr mott,tr
fnly pyr

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





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

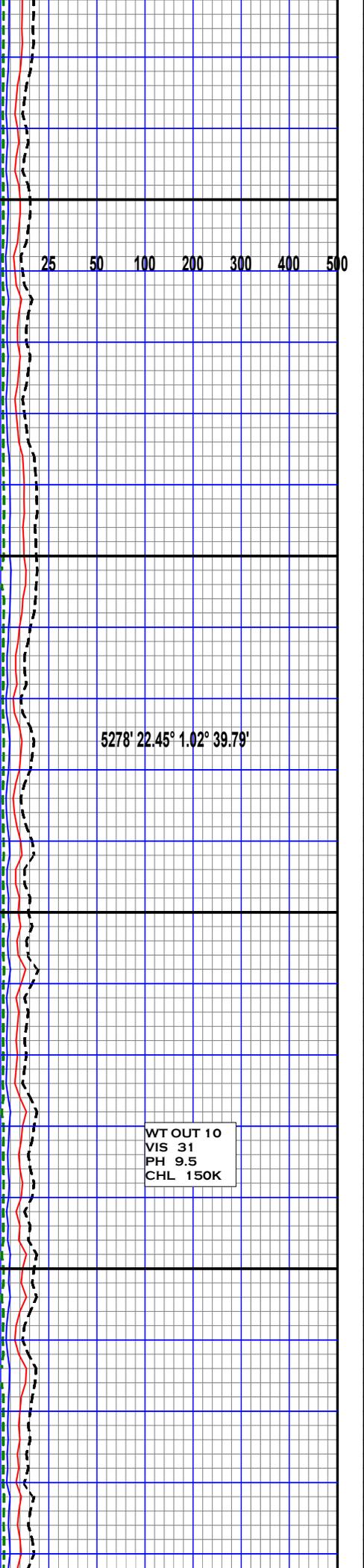
DOLO:wht,off wht,tan
vfn xln,frm,tr mod hrd
sme mott,tr sucros

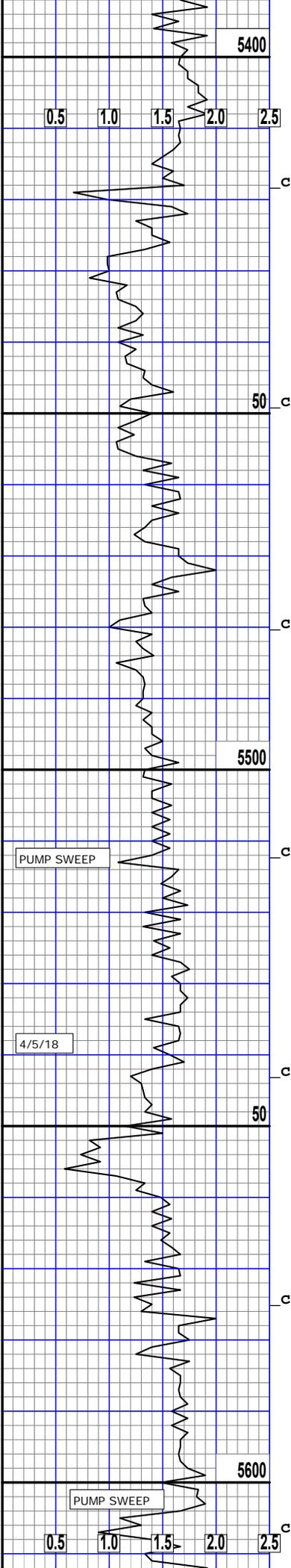
DOLO:off wht,wht,tan
vfn xln,frm,sme mod
hrd,tr vug,sme sucros
tr mott

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





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

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

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

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

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

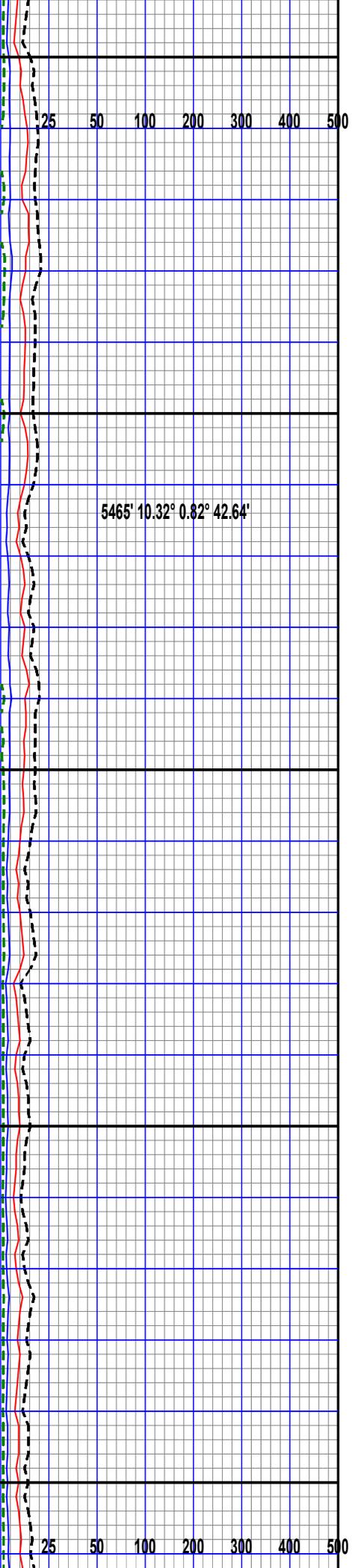
DOLO:wht,off wht,tan
vfn xln,frm,sme mod
hrd,sme mott,tr fnly
pyr

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

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

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

5465' 10.32° 0.82° 42.64'



WOB 26K
RPM 61
PP 2475
SPM 111

c

50

c

5700

c

CJH

c

50

c

5800

c

0.5 1.0 1.5 2.0 2.5

4/8/18

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

5623' 7.76° 0.63° 44.61'

WT OUT 10.2
VIS 30
PH 10
CHL 150K

SS:lt brn,lt gry,vfin
gr,sbrnd-rnd,cons
frly cmntd,wll srtd
calc,no vis fluor or
cut

DOLO:lt brn,off wht,brn
vfn xln,frm,tr mod hrd
tr vug,sme mott,tr
vfin gr ss

DOLO:tan,off wht,brn
vfn xln,tr fn xln,frm
sme mod hrd,tr vug,sme
mott,tr fnly pyr

DOLO:tan,off wht,brn
vfn xln,tr fn xln,frm
sme mod hd,sme mott
tr sucros

5738' 4.45° 0.90° 46.63'

DOLO:tan,off wht,brn
vfn xln,tr fn xln,frm
sme mod hd,sme mott
tr sucros,tr LS,SS

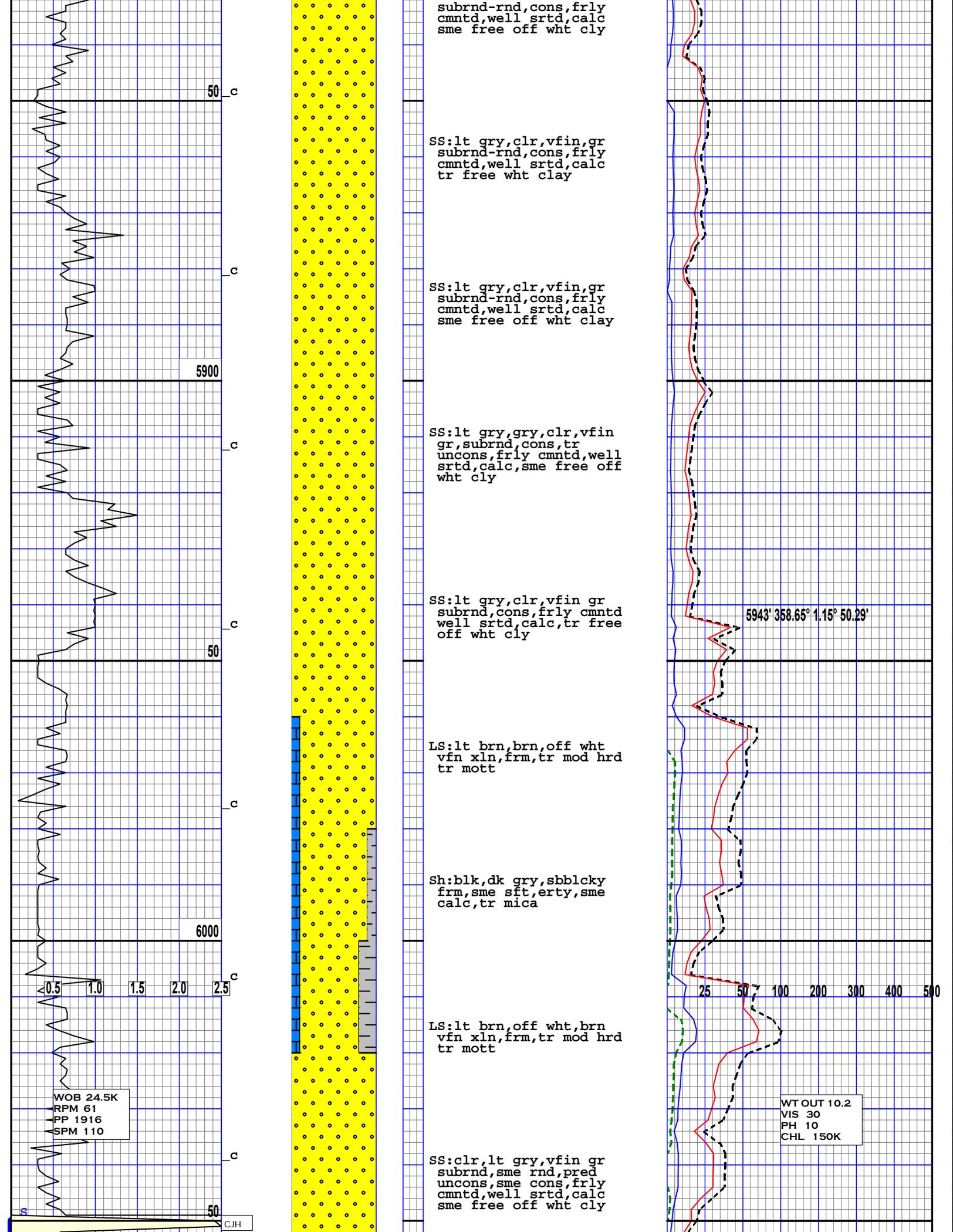
SS:lt brn,lt gry,vfin
gr,sbrnd-rnd,cons,pred
wl cmntd,wl srtd,calc
lmy,no vis fluor or ct

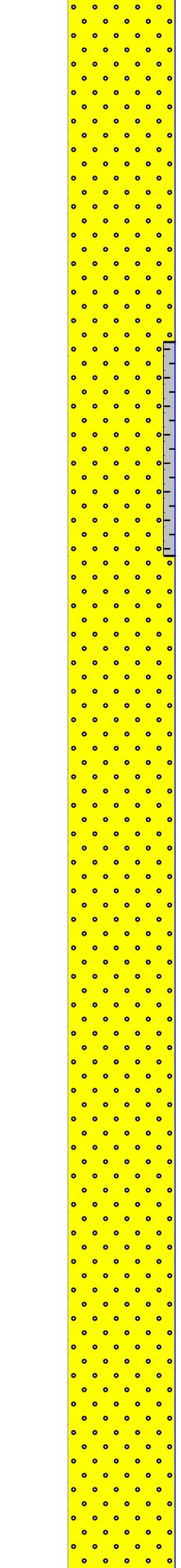
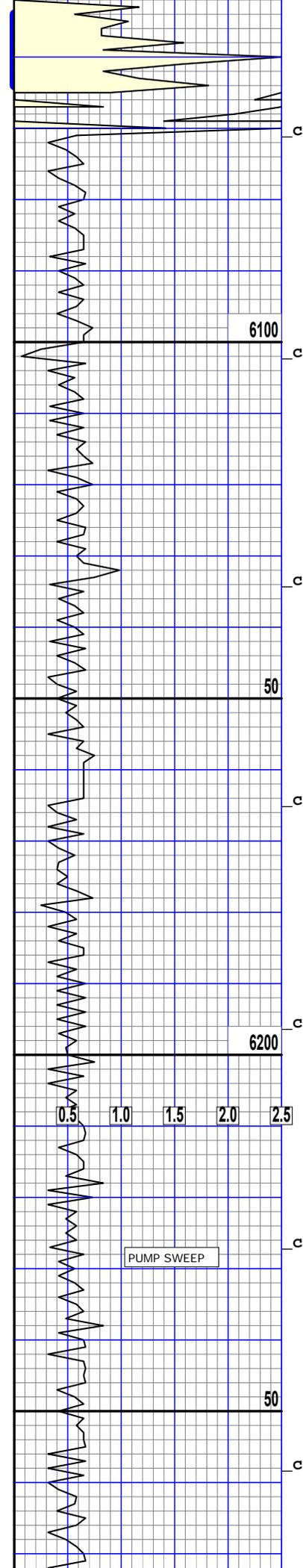
SET 9 5/8 40# CASING
@ 5816'

BIT #5 8 3/4 ULTERRA U619M
IN @ 5816' JETS 6 x 20

SS:lt gry,clr,vfin gr

25 50 100 200 300 400 500





SS:clr,lt gry,vfn gr
 sbrnd,sme rnd,pred
 uncons,tr cons,frly
 cmntd,wl srted,calc,sme
 free off wh cly

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

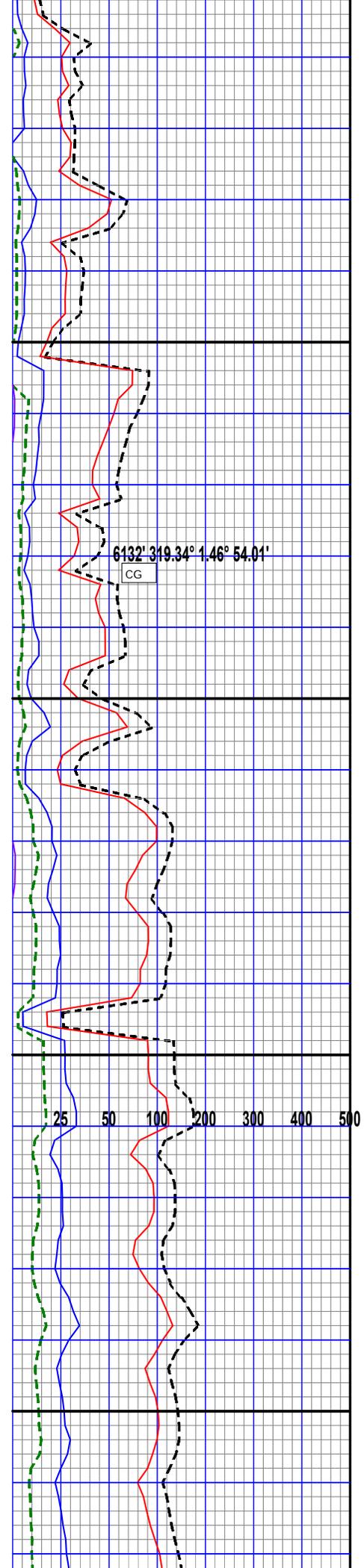
SS:clr,lt gry,vfn gr
 sbrnd-rnd,sme sbang
 uncons,tr cons,frly wl
 srted,tr calc,mod wl
 cmntd,tr off wh cly,tr
 vfn mica

SS:clr,lt gry,vfn gr
 sbrnd-rnd,sme sbang
 uncons,tr cons,frly wl
 srted,tr calc,mod wl
 cmntd,tr vfn mica

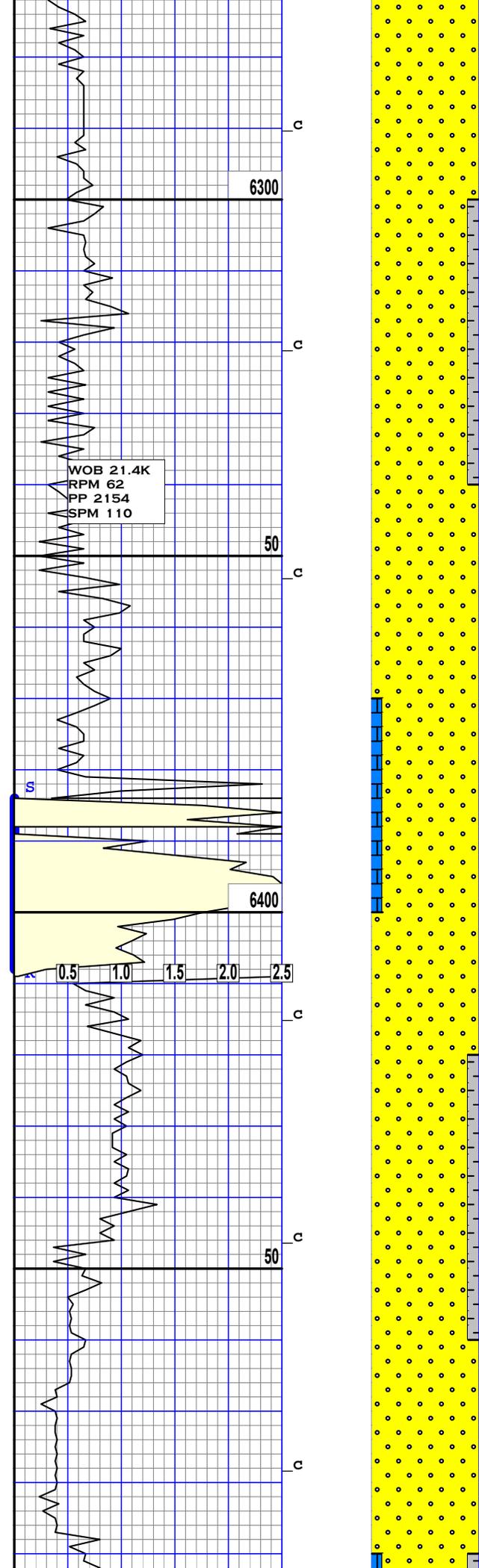
SS:clr,lt gry,vfn gr
 sbrnd-rnd,sme sbang
 uncons,tr cons,frly wl
 srted,tr calc,mod cmntd
 tr off wh cly,tr vfn
 mica

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

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



6132' 319.34° 1.46° 54.01'
 CG



SS:clr,vfn gr,sbrn-rnd
uncons,tr cong,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

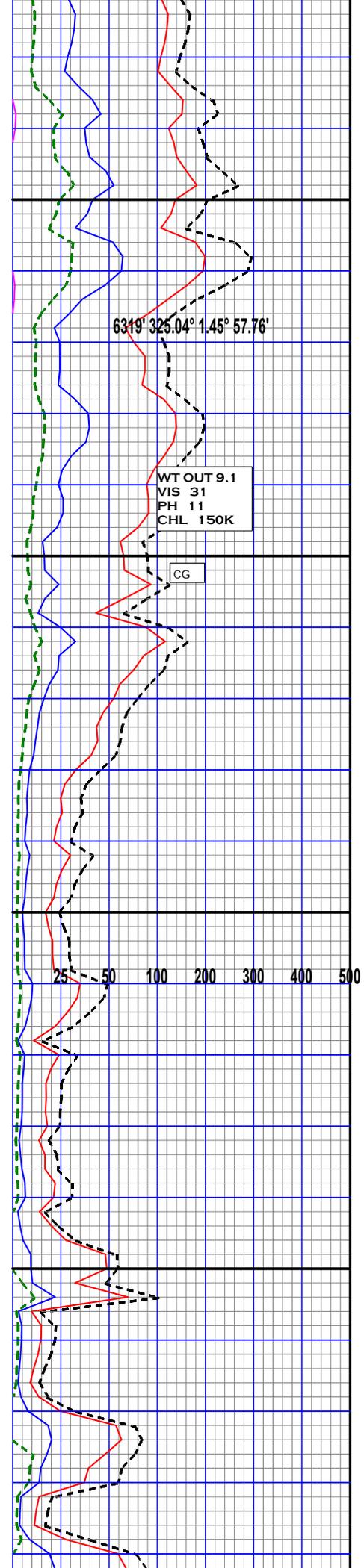
SS:clr,off wh,lt gry,gry
vfn gr,sme fn-vfn gr
sbrnd-rnd,uncons,tr con
mod wl srted,calc

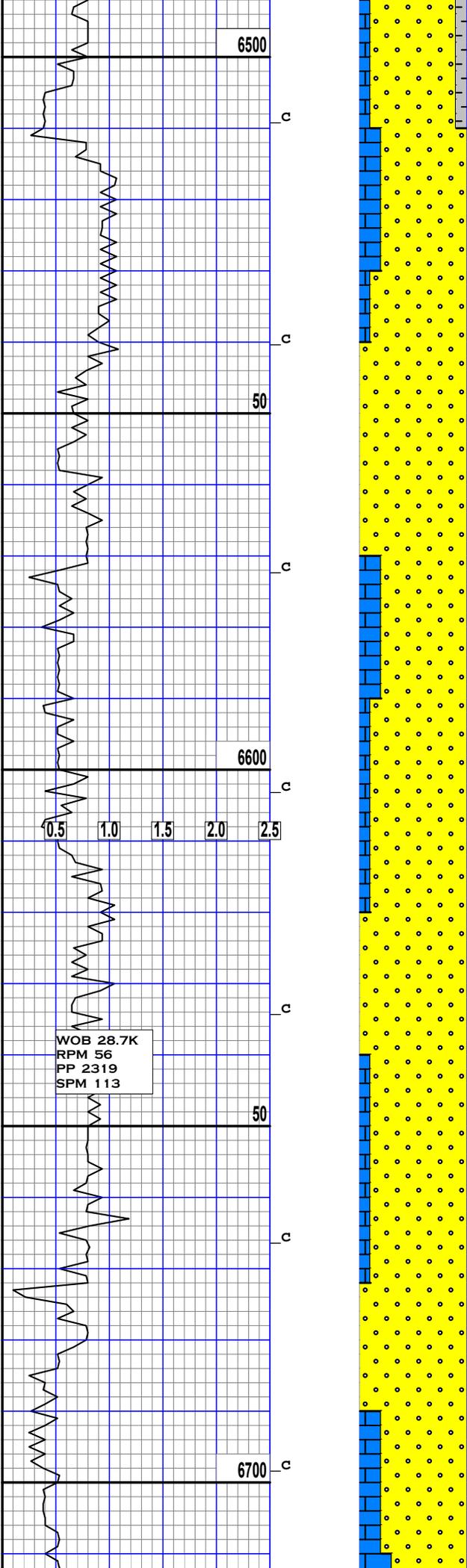
LS:lt gry,gry,off wh,vfn
xln,sme fn xln,frm mod-
frm,sme hd,brit,mott,tr
off wh cly,aren

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





LS:lt tn,lt gry,brn,off
wh,vfnxln,sme fn xln
mod frm-frm,sme hd,brit
occ mott,shly,aren,tr
fn mica,occ off wh cly

LS:tn,lt tn,lt gry,wh
vfnxln,mod frm-frm,sme
hd,brit,occ mott,aren
sme 2ndry xln

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

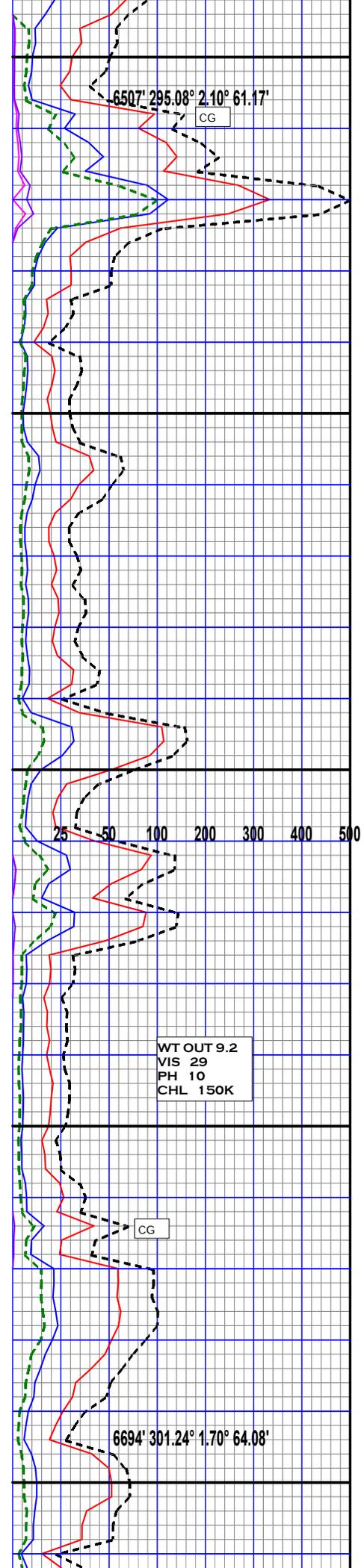
LS:tn,lt tn,lt gry,wh
vfnxln,mod frm-frm,sme
hd,brit,occ mott,aren
sme 2ndry xln

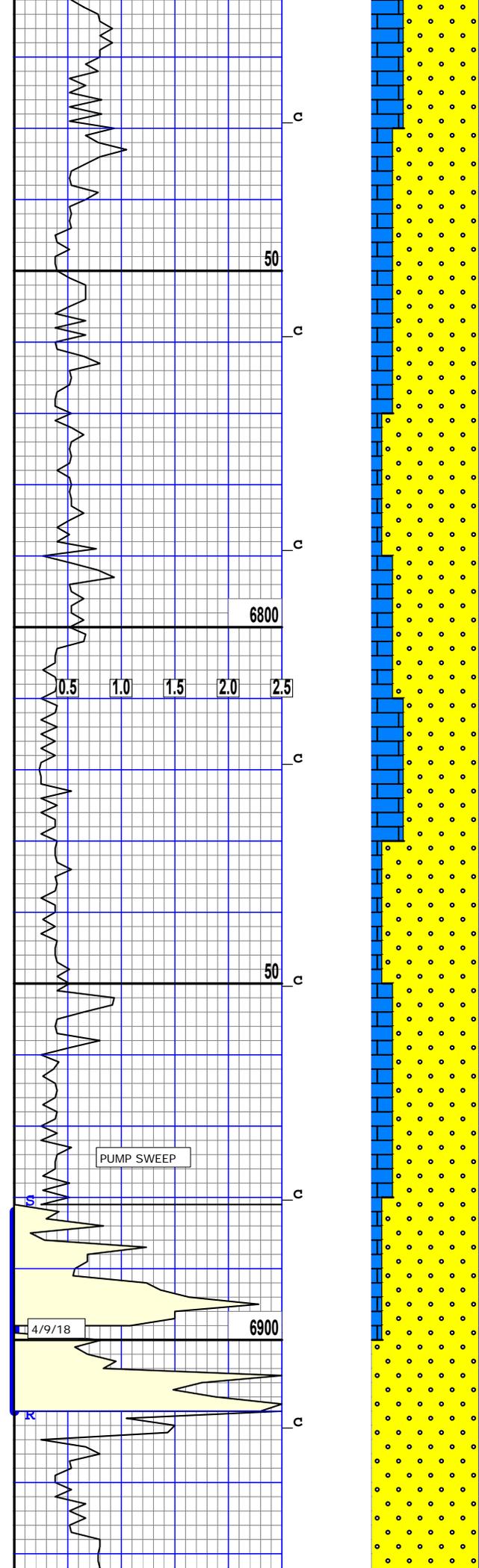
SS:clr,lt gry,off wh,vfn
gr,sbrnd-rnd,cons,tr
uncons,mod wl srted,sme
calc

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

SS:clr,lt gry,off wh,vfn
gr,sbrnd-rnd,cons,tr
uncons,mod wl srted,calc
lmy

LS:tn,lt tn,lt gry,wh
vfnxln,mod frm-frm,sme
hd,brit,occ mott,aren
sme 2ndry xln





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

LS:tn,lt tn,lt gry,wh
vfnxn,mod frm-frm,sme
hd,brit,occ mott,aren

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

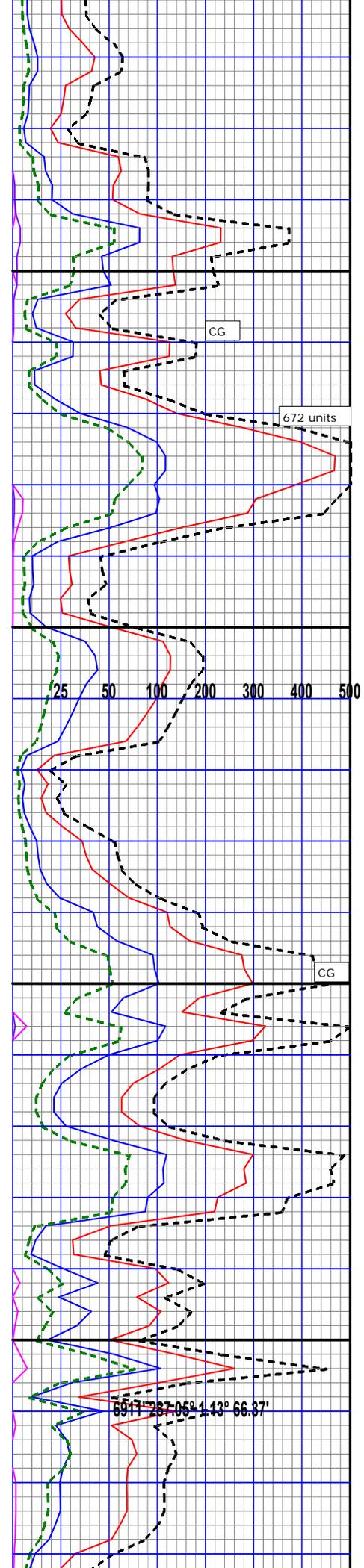
LS:tn,brn,lt gry,off wh
vfnxn,mod frm-frm,sme
hd,brit,occ mott,aren

SS:clr,lt gry,off wh,vfn
gr,sbrnd-rnd,cons,tr
uncons,mod wl srted,calc
lmy

SS:clr,lt gry,off wh,lt
tn,vfn gr,sbrnd-rnd
cons,sme uncons,wl srted
calc,lmy

SS:clr,lt gry,off wh,vfn
gr,sbrnd-rnd,cons,tr
uncons,mod wl srted,calc
lmy

SS:clr,lt gry,off wh,vfn
vfn gr,sbrnd-rnd,cons



WOB 26K
RPM 58
PP 2275
SPM 111

WT OUT 9.2
VIS 29
PH 10
CHL 150K

SS:clr,lt gry,off wh,vfn
gr,sbrnd-rnd,cons,tr
uncons,mod wl srted,calc
lmy

SS:clr,lt gry,off wh,vfn
vfn gr,sbrnd-rnd,cons
sme uncon,wl srted,calc

SS:clr,lt gry,off wh,vfn
gr,sbrnd-rnd,cons,tr
uncons,mod wl srted,calc
lmy

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

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

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

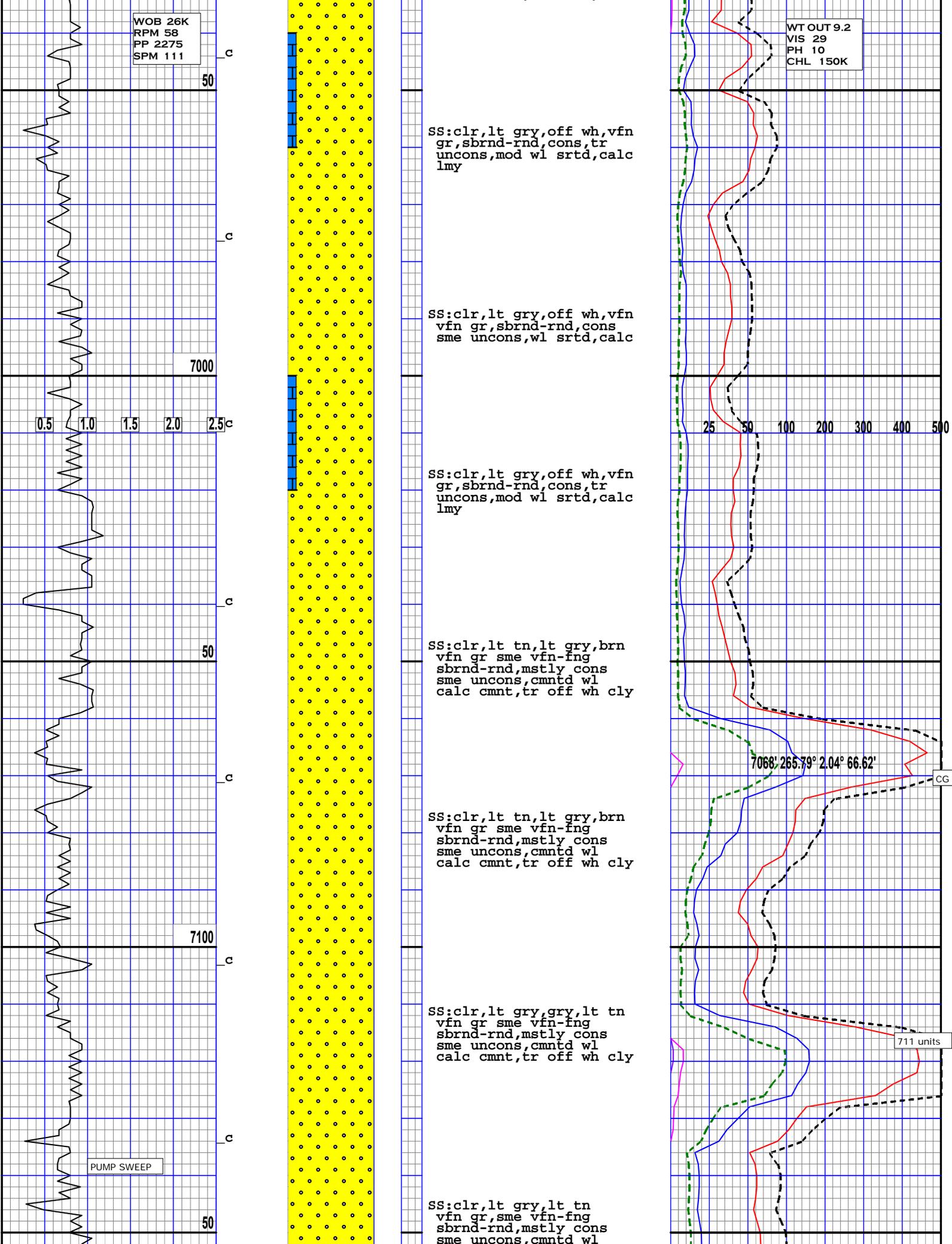
SS:clr,lt gry,lt tn
vfn gr,sme vfn-fng
sbrnd-rnd,mstly cons
sme uncon,cmntd wl

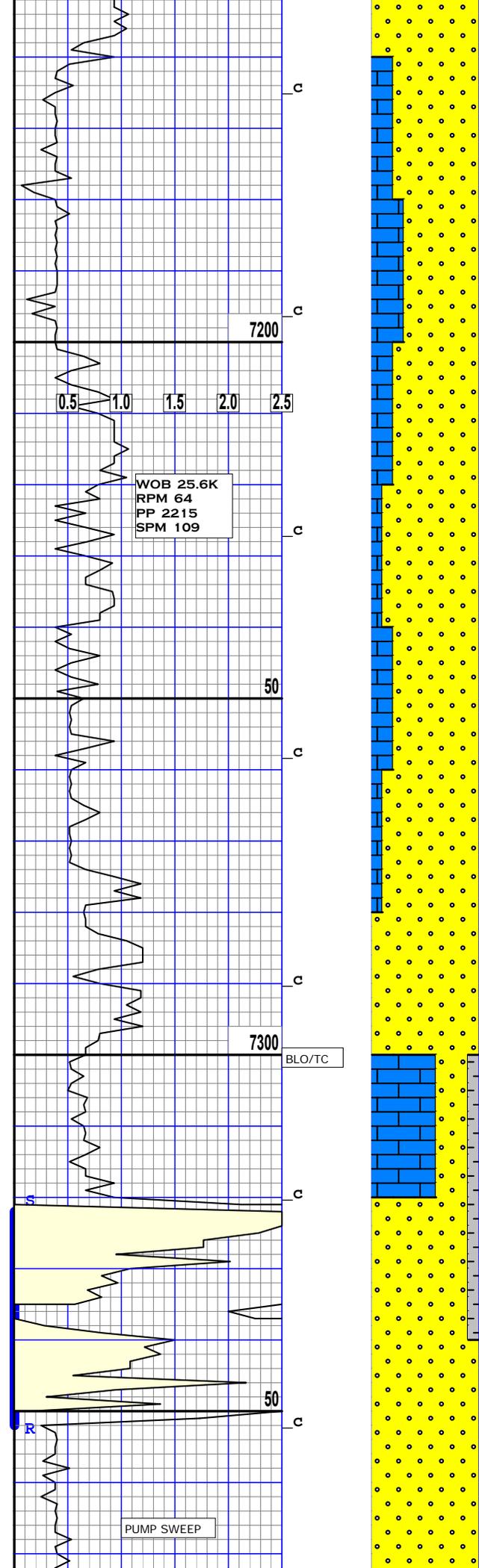
7068',265.79° 2.04° 66.62'

CG

711 units

PUMP SWEEP





calc cmnt, tr off wh cly

LS:lt tn,tn,brn,off wh
fn-vfnxn, sme fnxn, 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

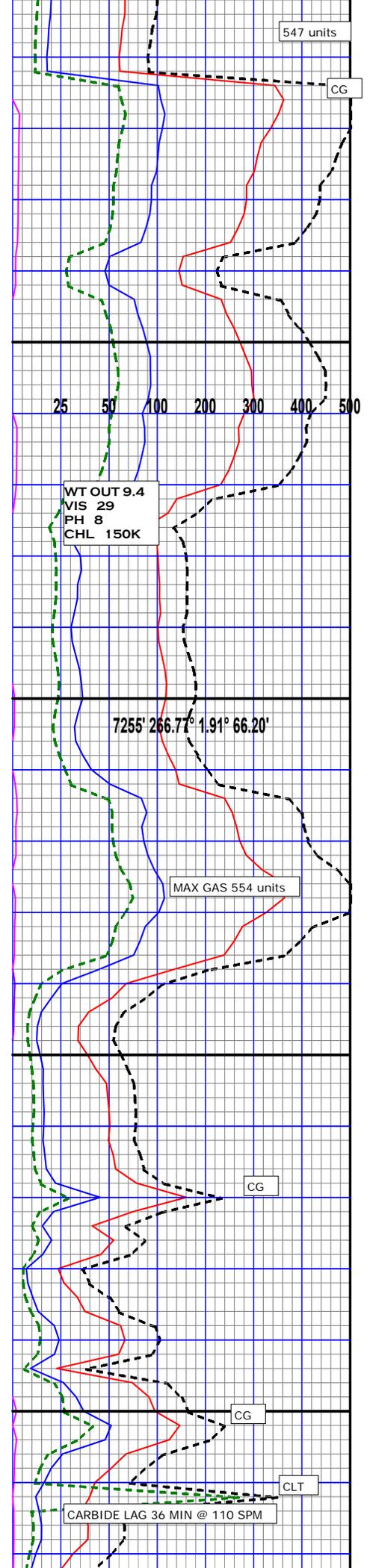
SS:clr,lt gry,lt tn
vfn gr, sme vfn-fng
sbrnd-rnd, mstly cons
sme uncons, cmntd wl
calc cmnt, tr off wh cly

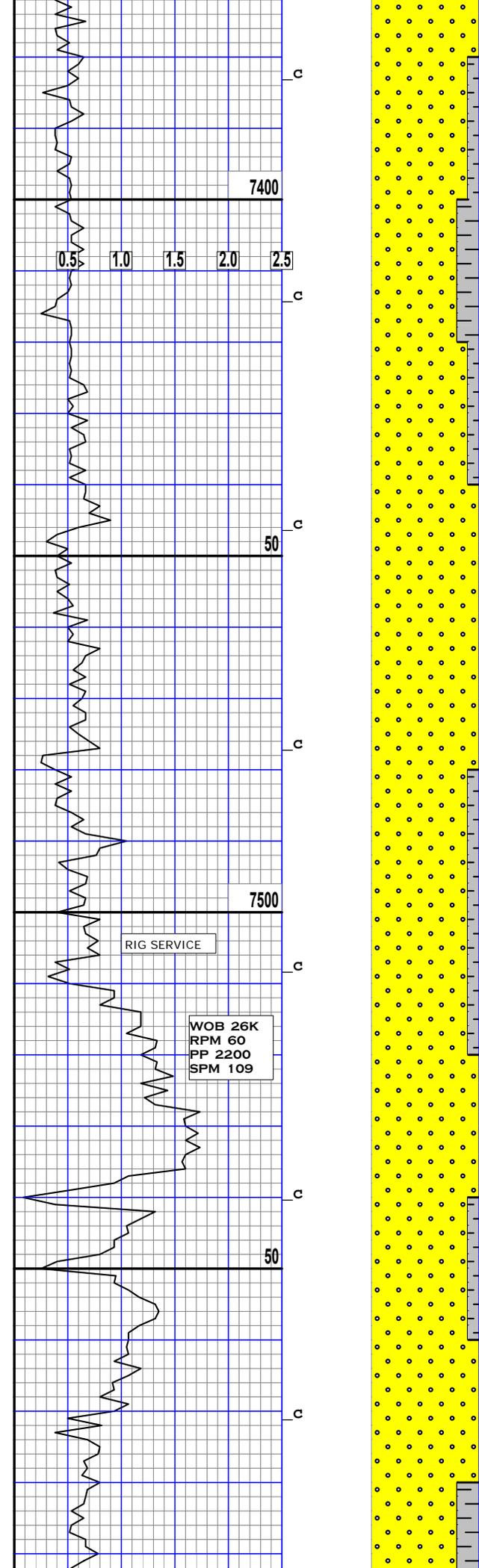
SS:clr,lt gry,lt tn
vfn gr, sme vfn-fng
sbrnd-rnd, mstly cons
sme uncons, calc cmntd
cmntd wl, lmy

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

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

SS:clr,lt gry,vfn gr
subrnd-rnd, pred cons
sme uncons, prly cmntd
well srted, calc, tr free
wht cly, tr shly





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

7380' 265.59° 2.92° 65.84'

CG

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

25 50 100 200 300 400 500

CG

SS:clr,lt gry,vfin gr
 rnd-subrnd,pred cons
 tr uncons,frly cmntd
 well srtd,calc,tr shly
 tr free off wht cly

7443' 265.25° 2.86° 65.59'

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

CALIBRATE EQUIP

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

7500

RIG SERVICE

WOB 26K
 RPM 60
 PP 2200
 SPM 109

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

WT OUT 9.2
 VIS 28
 PH 10
 CHL 150K

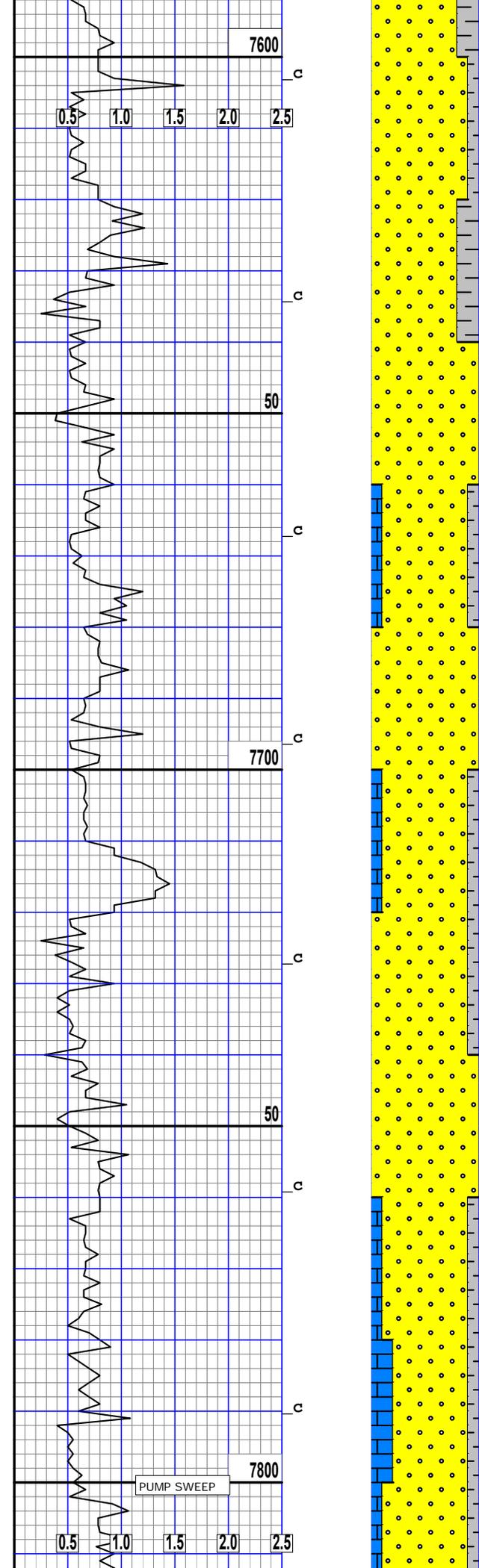
CG

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

50

CG

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



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

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

SS:lt gry,clr,vfin gr
rnd-subrnd,pred cons
tr uncon,frly cmntd
well srtd,calc,tr free
wht cly,tr shly,tr grn
sh

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

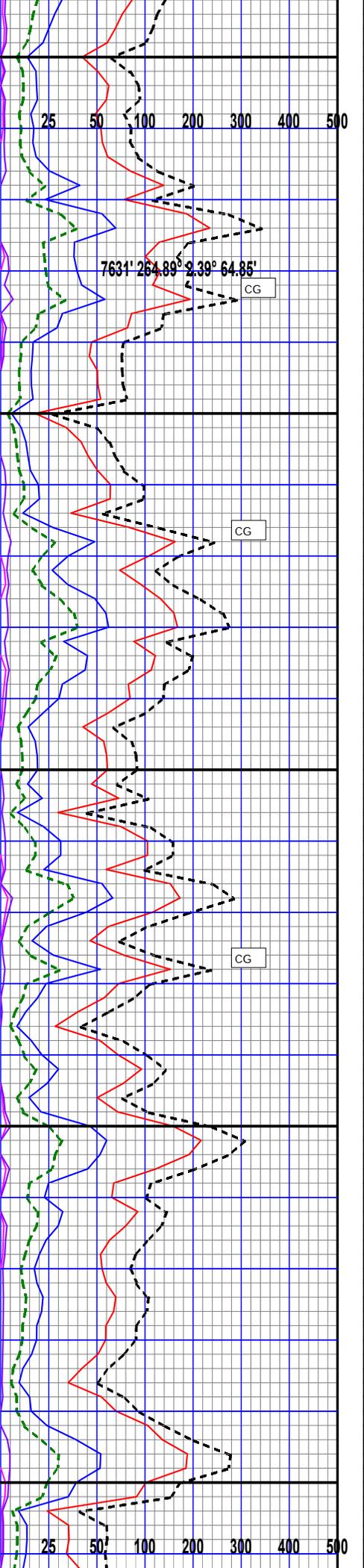
SH:dk gry,dk brn,sbblcky
frm,tr sft,slty,sme
erty,sme aren,sme calc
tr mica,tr grn sh

SS:lt gry,clr,vfin gr
tr fn gr,subrnd,cons
frly cmntd,well srtd
calc,tr free wht cly
tr tan ls

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

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

SS:lt gry,clr,vfin gr



WOB 26K
RPM 63
PP 2200
SPM 110

WT OUT 9.2
VIS 28
PH 10
CHL 150K

subrnd-rnd, cons, frly
cmntd, well srted, calc
tr free wht cly

7817' 267.68° 2.20° 64.36'

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

SS:lt gry, clr, vfin
gr, subrnd-rnd, uncon
well srted, tr off wht
cly, tr grn sh

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

SS:lt gry, clr, vfin gr
rnd-subrnd, cons, tr
uncons, frly cmntd, well
srted, calc, 30% brt ylw
fluor, pr slw mlky ylw
wet cut, tr free wht cly

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

SS:lt brn, lt gry, clr
vfin gr, tr fn gr, rnd-
subrnd, uncon, tr cons
frly cmntd, well srted
calc, 20% brt ylw fluor
tr slw pale ylw wet
cut

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

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

MAX GAS 1076u

SCALE CHANGE

MAX GAS 2017u

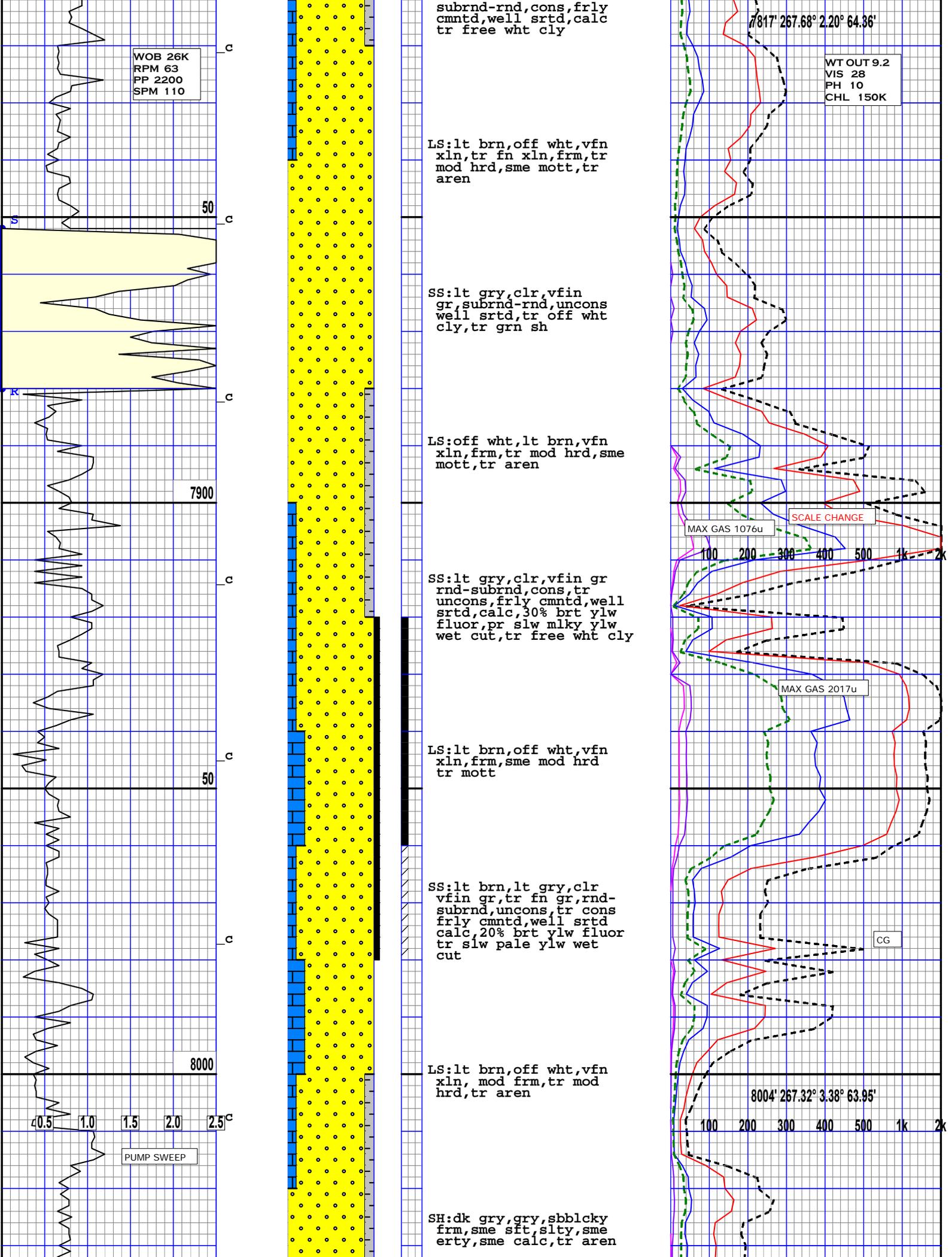
CG

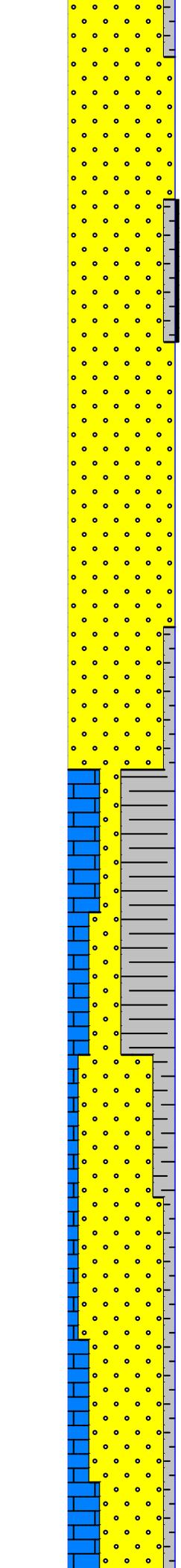
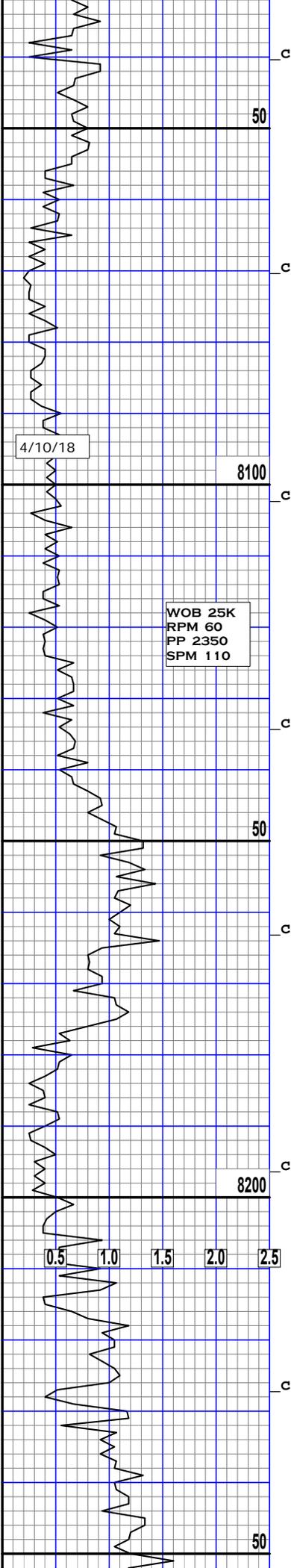
8004' 267.32° 3.38° 63.95'

40.5 1.0 1.5 2.0 2.5^c

PUMP SWEEP

100 200 300 400 500 1k 2k





SS:clr lt gry,vfin gr
sme fn gr,pred cons
sme uncon,frly cmntd
well srtd,calc,tr free
wht cly,tr free pyr

SS:clr lt gry,vfin gr
sme fn gr,pred cons
sme uncon,frly cmntd
well srtd,calc,10% brt
ylw fluor,tr slw pale
ylw wet cut,tr free wht
cly,tr free pyr

SS:clr,lt gry,vfin gr
sme fn gr,subrnd-rnd
pred uncon,sme cons
frly cmntd,well srtd
calc,tr tan ls

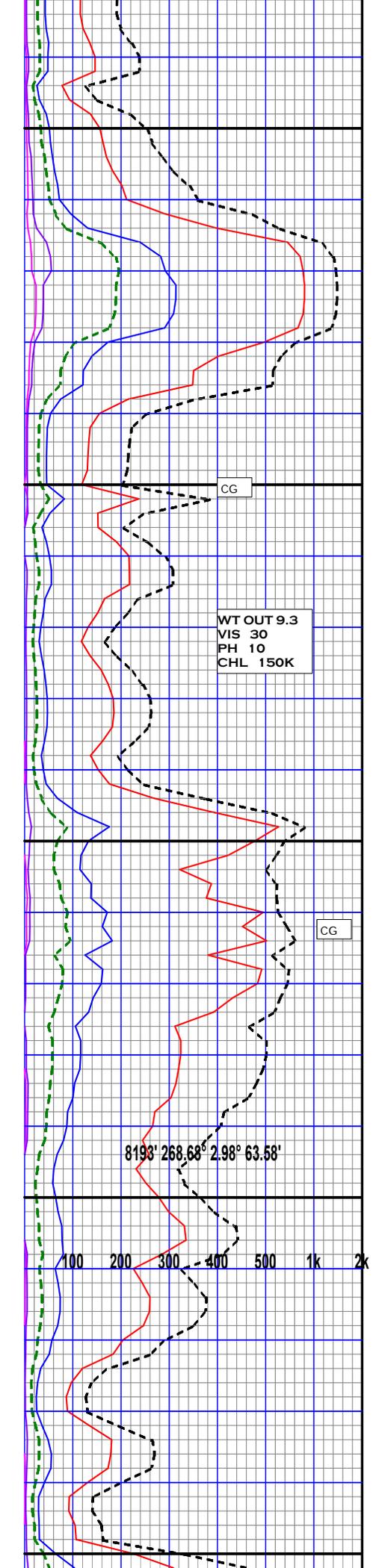
SH:dk gry,gry,sbblcky
frm,tr sft,slty,sme
erty,sme calc,tr aren

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

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

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

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



WOB 25K
RPM 60
PP 2350
SPM 110

WT OUT 9.3
VIS 30
PH 10
CHL 150K

8193' 268.68° 2.98° 63.58'

4/10/18

0.5 1.0 1.5 2.0 2.5

PUMP SWEEP

c

c

8300

c

50

c

c

8400

0.5 1.0 1.5 2.0 2.5

WOB 26K
RPM 59
PP 2250
SPM 110

c

50

c

CJH

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

SS:lt gry,clr,vfin gr
subrnd-rnd,cons,frly
cmntd,well srted,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,frly cmntd
well srted,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,subblcky
frm,tr sft,sity,sme
calc,tr mica

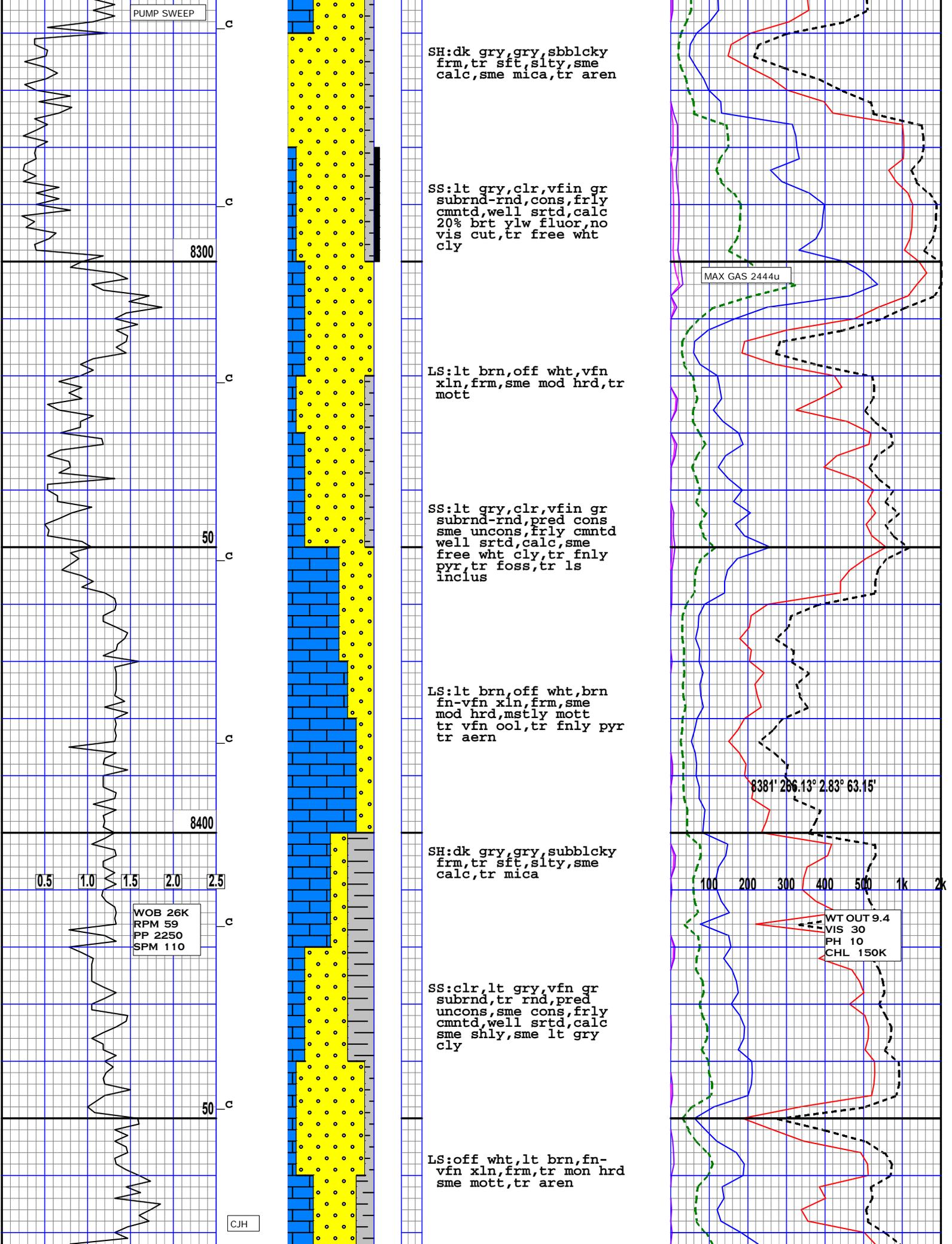
SS:clr,lt gry,vfn gr
subrnd,tr rnd,pred
uncons,sme cons,frly
cmntd,well srted,calc
sme shly,sme lt gry
cly

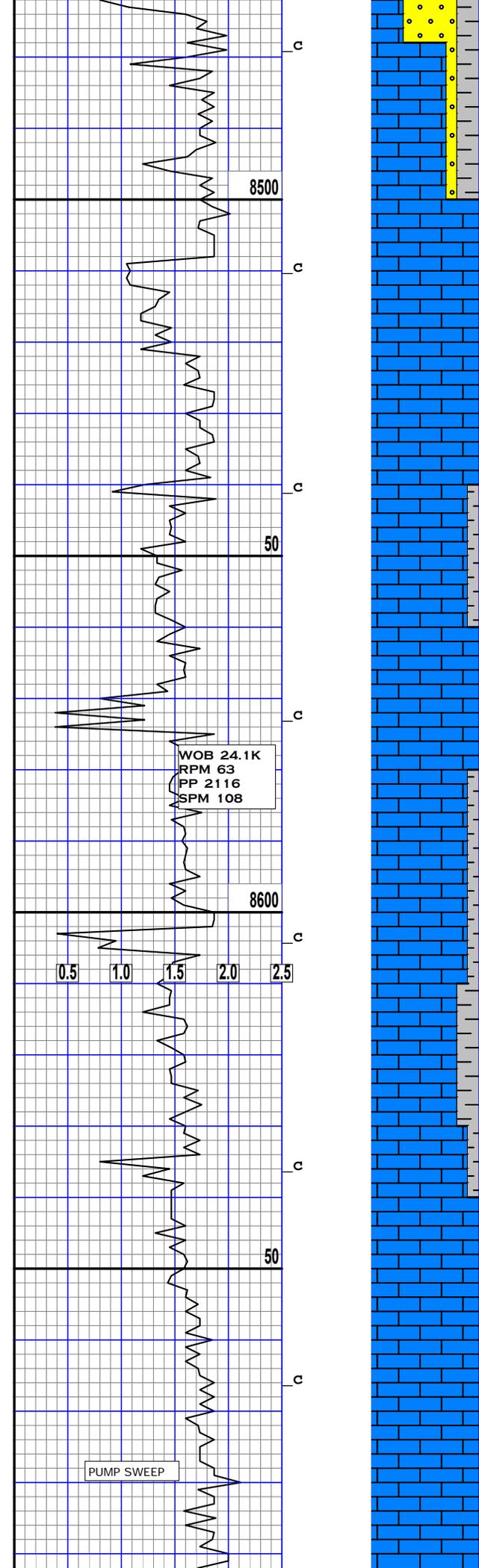
LS:off wht,lt brn,fn-
vfn xln,frm,tr mon hrd
sme mott,tr aren

MAX GAS 2444u

8381' 266.13° 2.83' 63.15'

WT OUT 9.4
VIS 30
PH 10
CHL 150K





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,sity,grty
sme calc

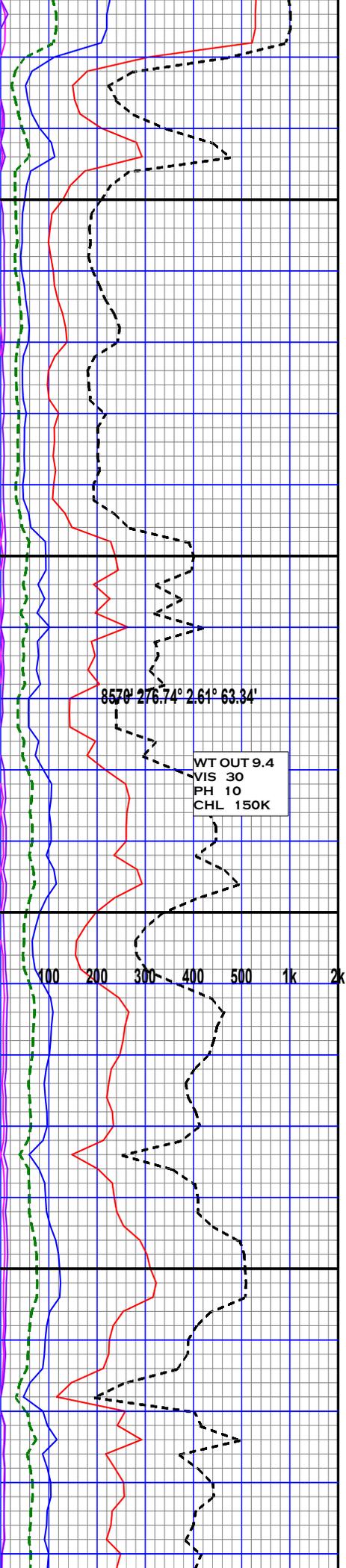
LS:lt gry,tn,vfn-fn
xln,sme fn xln,frm
sme frm-hd,brit,smth
lamn,shly

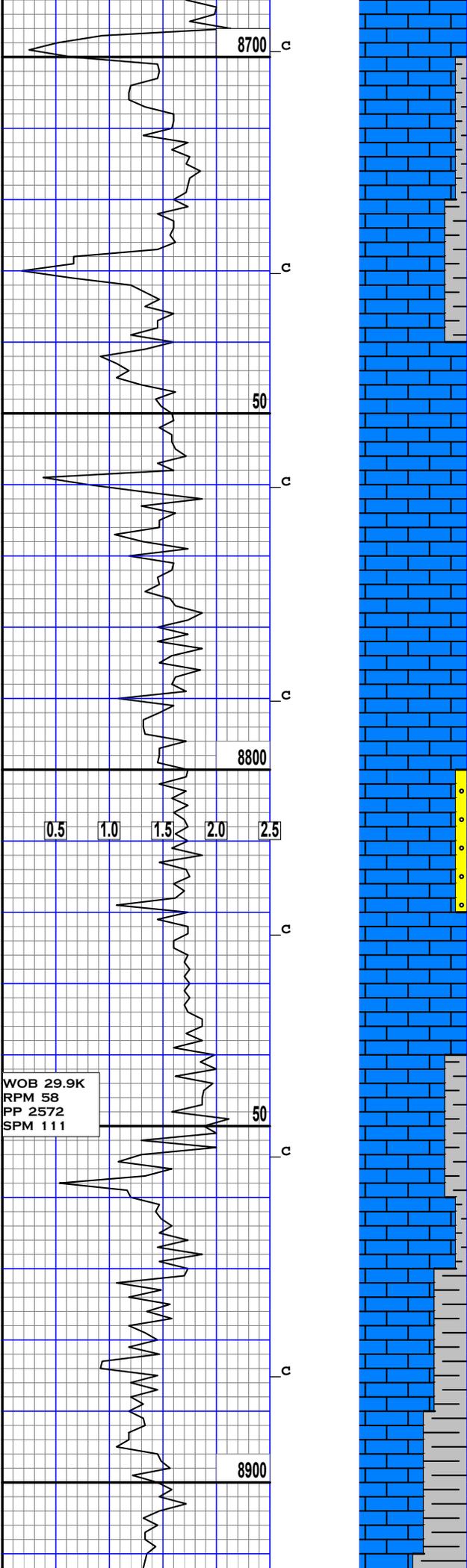
LS:lt gry,gry,vfn-fn xln
frm mod-frm,occ hd,brit
smth,lamn,sme 2ndry xln

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





LS:gry,dk gry,lt gry
vfn-xln,sme fnxln
frm mod-frm,sme hd,brit
tr sft,shly

LS:dk gry,gry,lt gry,fn-
vfn xln,sme fn xln,frm
mod-frm,occ hd,brit,tr
lamm,shly

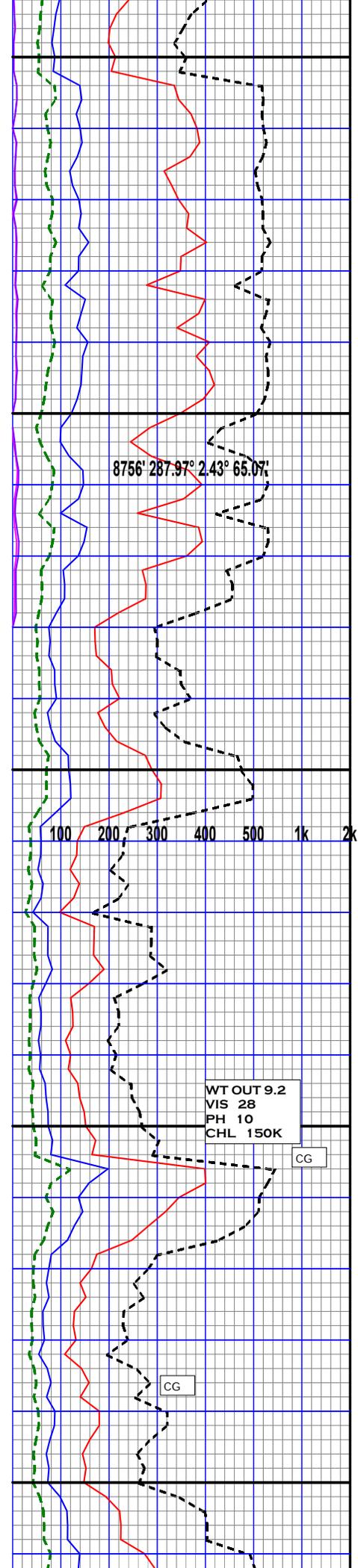
LS:dk gry,gry,lt gry,fn-
vfn xln,sme fn xln,frm
mod-frm,occ hd,brit,tr
lamm

LS:dk gry,gry,lt gry,fn-
vfn xln,sme fn xln,frm
mod-frm,occ hd,brit,tr
lamm,tr aren

LS:gry,lt gry,lt tn,fn-
vfn xln,sme fn xln,frm
mod-frm,occ hd,brit,tr
lamm

LS:gry,lt gry,lt tn,blk
vfn xln,sme fn xln,frm
mod-frm,occ hd,brit,tr
vfn mica,shly

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

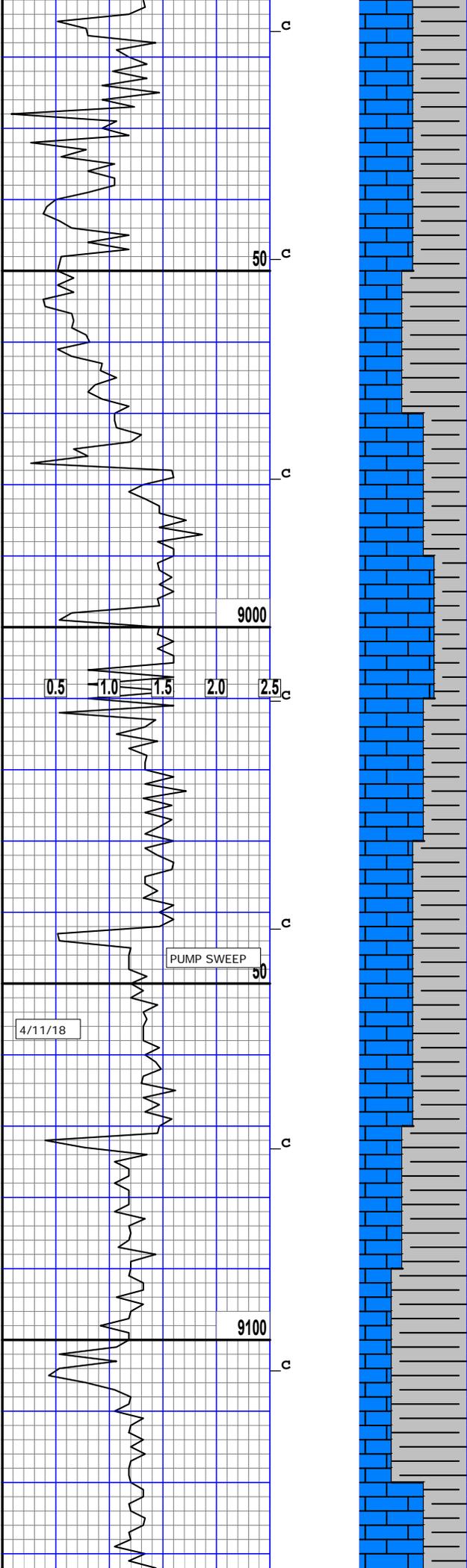


8756' 287.97° 2.43° 65.07%

WT OUT 9.2
VIS 28
PH 10
CHL 150K

CG

CG



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

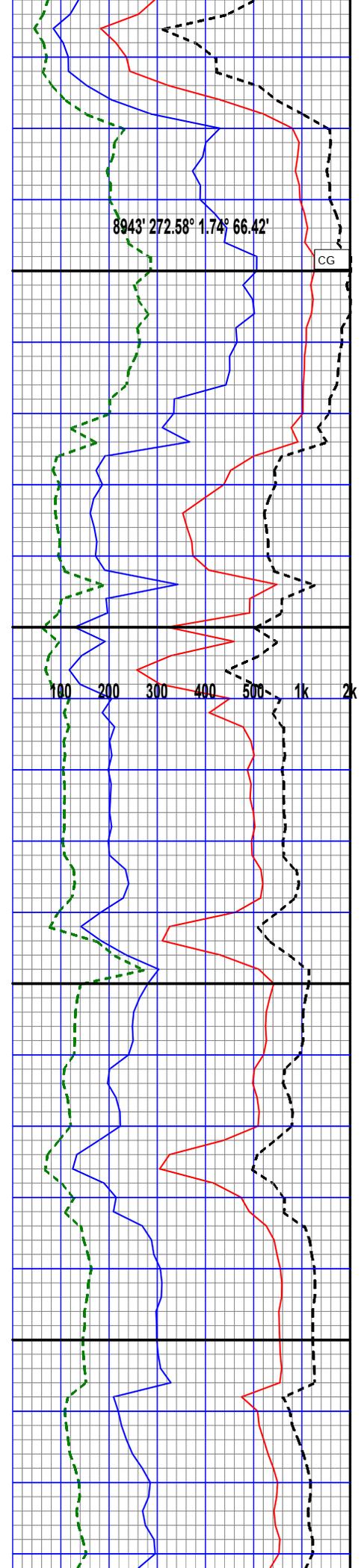
LS:gry,lt gry,brn,vfn-fn
 xln,sme fn xln,frm-mod
 frm,tr hd,occ sft,brit
 tr mica,sme occ wht cly

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

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



8943' 272.58° 1.74° 66.42'

WOB 27K
RPM 60
PP 2245
SPM 110

50

c

9200

0.5 1.0 1.5 2.0 2.5

c

50

c

9300

c

BLO/TC

50

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

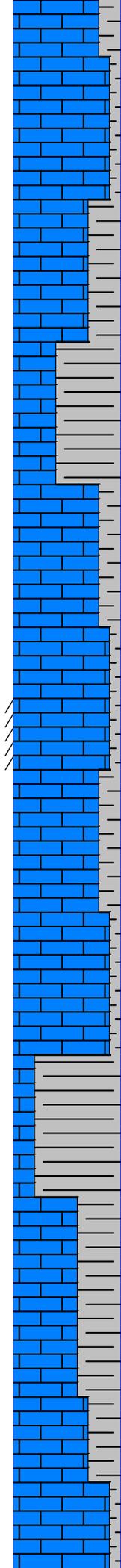
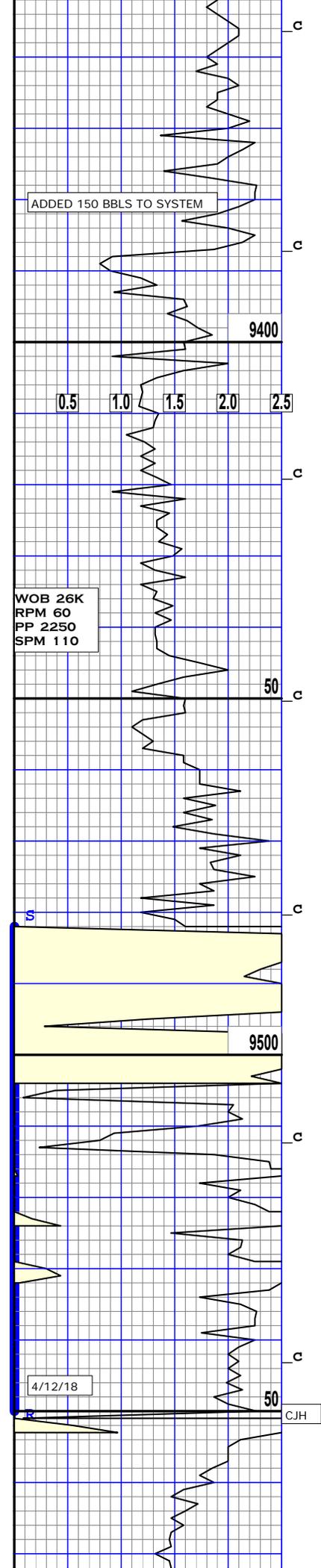
WT OUT 9.2
VIS 29
PH 10
CHL 150K

NOTE SCALE CHANGE

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

CG

9320' 247.42° 1.91° 57.29'



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

LS:off wht,lt gry,gry
 vfn xln,frm,tr chlky
 sme momtt,sme shly,tr
 fnly pyr

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

LS:lt brn,off wht,brn
 vfn xln,frm,sme mod
 hrd,sme vug,tr rexln
 mstly mott,sme shly ip
 tr vfn ool,tr foss

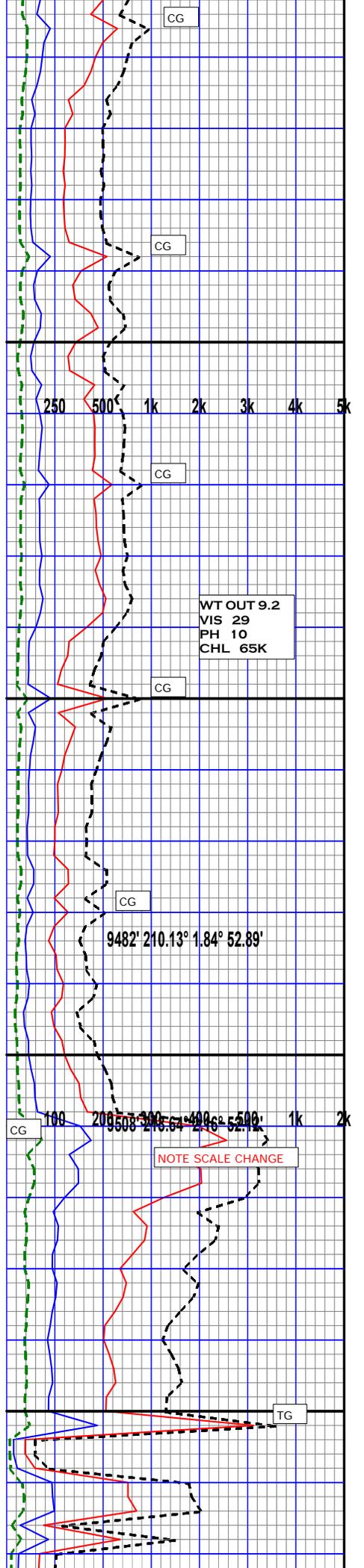
SH:blk,dk gry,blcky
 tr subblcky,frm,mstly
 mica,tr calc,tr fnly
 pyr,tr limy ip

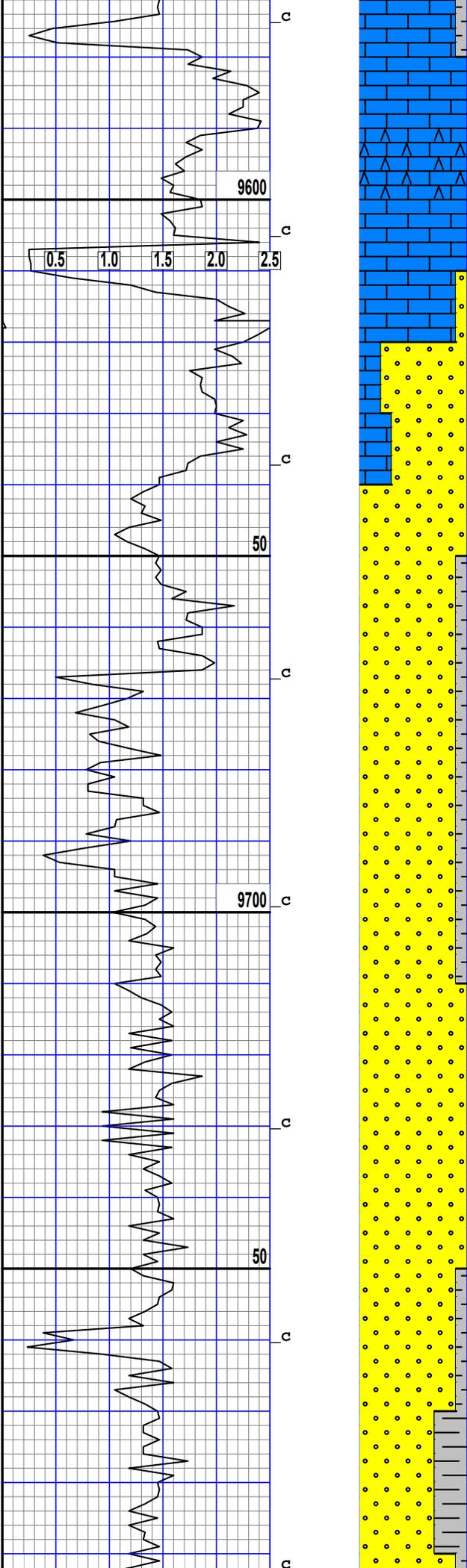
LS:lt gry,gry,off wht
 fn-vfn xln,frm,sme
 mod hrd,tr vug,mstly
 mott,sme shly,occ free
 chrt

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

BIT #6 8 3/4 ULTERRA U716M
 IN @ 9550, JETS 7x15

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





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

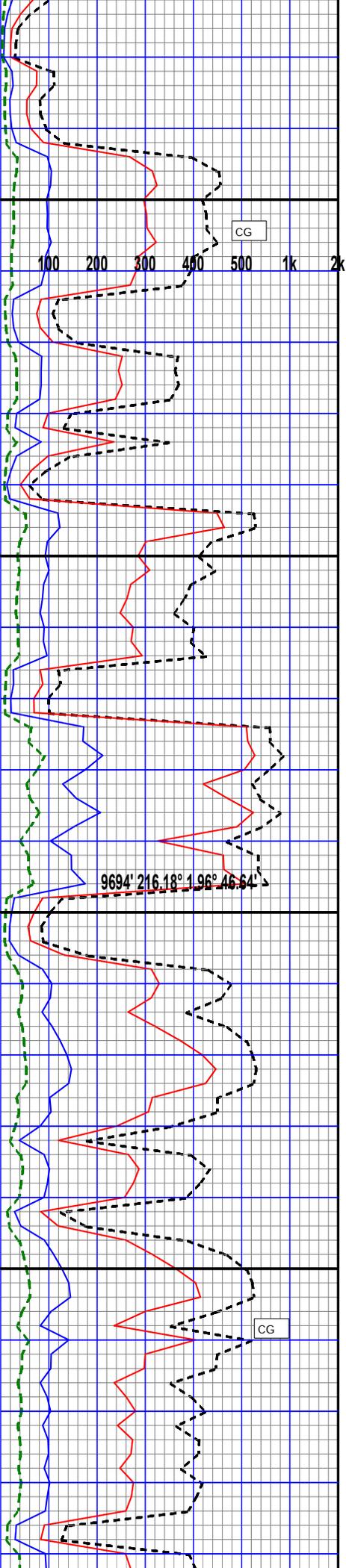
SS:clr,lt tn,off wh,vfn
-fng,sbrnd,sbrnd-rnd,tr
sbang,pred cons,mod wl
srt calc cmnt,cmntd
wl,tr pyrt,off wh cly

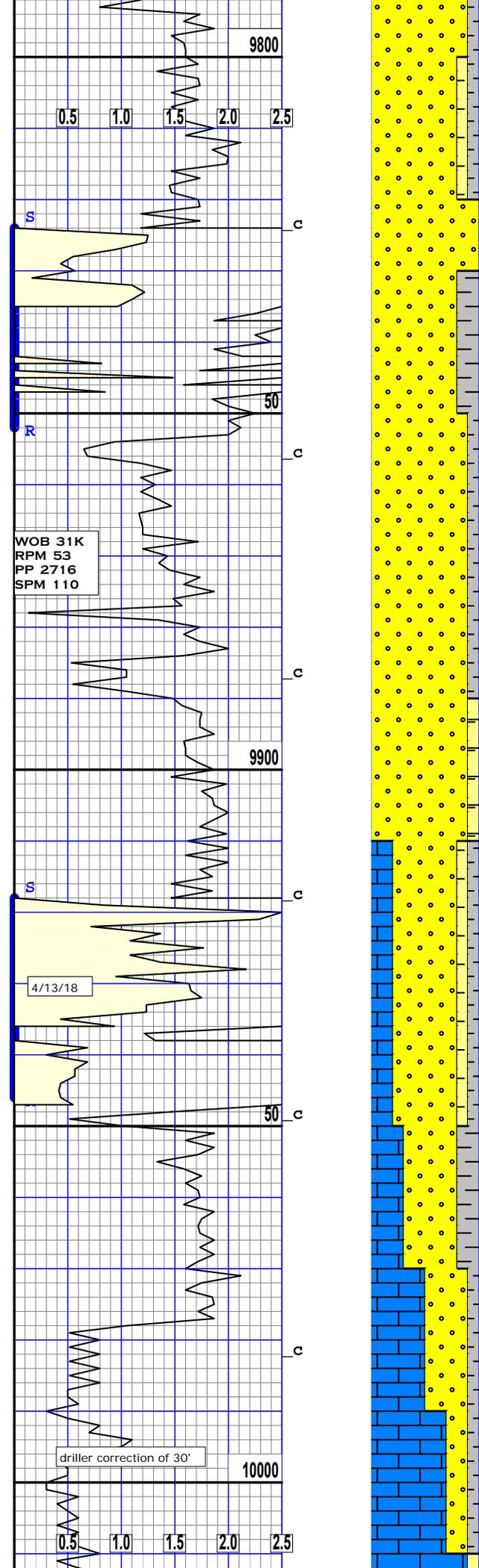
SS:clr,off wh,vfn-fng
sbrnd-rnd,tr sbang,pred
cons,wl srt,calc cmnt
cmntd wl,shly,tr off wh
cly

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

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

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





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
sblky,tr blk,frm mod-
frm,sme sft,tr hd,aren
occ off wh cly

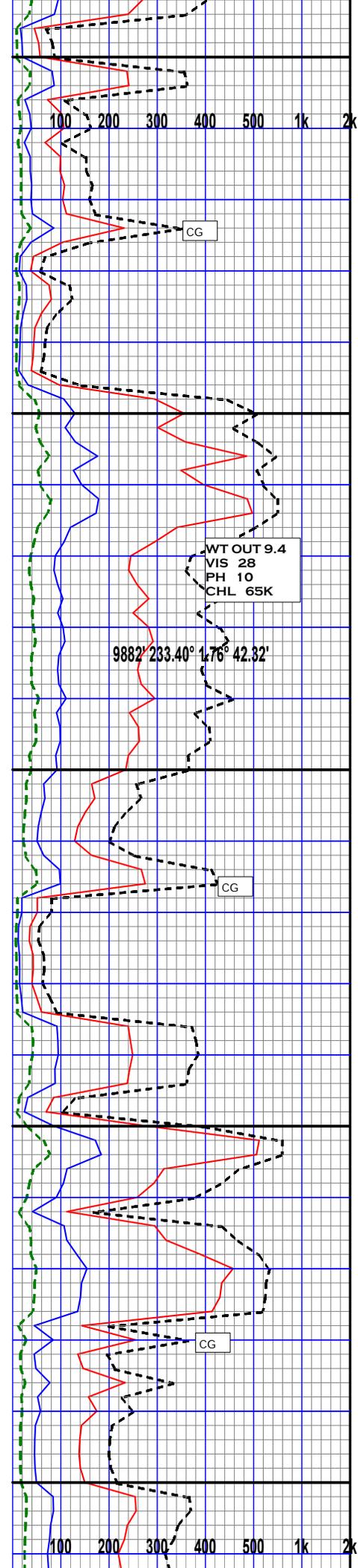
SS:clr,off wh,vfn-fng
sbrnd-rnd,pred cons
sme uncon,wl srted,calc
cmnt,cmntd wl,tr off wh
cly

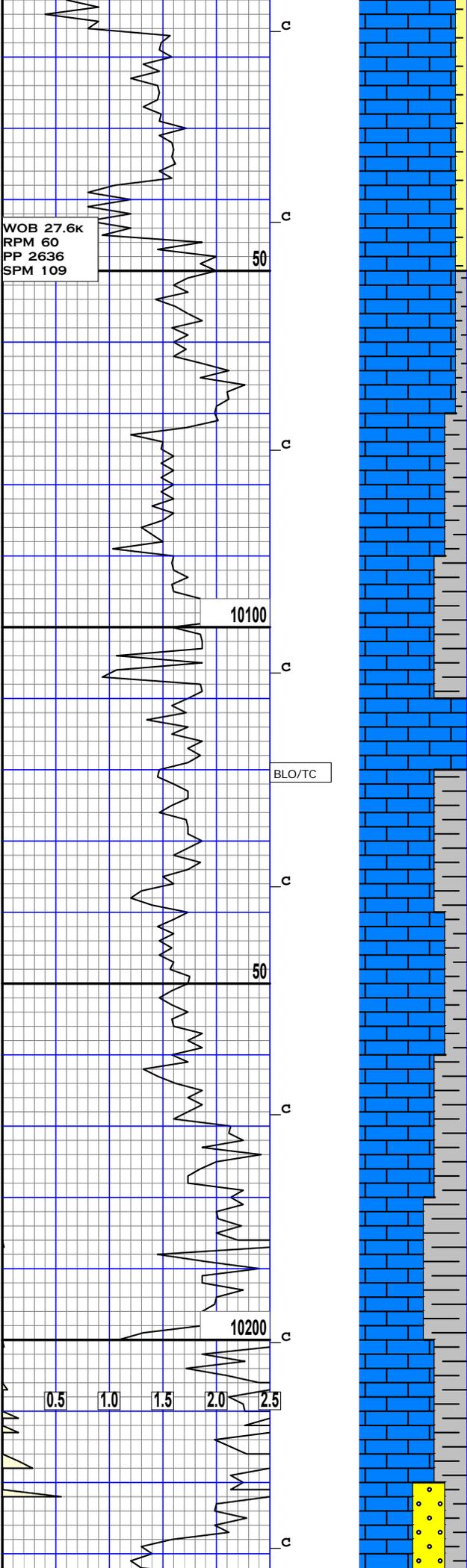
SS:clr,off wh,lt tn,vfn
gr,sme fng,sbrnd-rnd,tr
sbang,pred cons,wl srted
calc cmnt,cmntd wl,tr
pyrt,sme off wh cly,v/
silty

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





WOB 27.6k
RPM 60
PP 2636
SPM 109

c

c

c

10100

c

BLO/TC

c

50

c

10200

c

0.5 1.0 1.5 2.0 2.5

c

LS:lt tn,brn,off wh,gry
vfn-fnxln,frm mod-frm
sme sft,tr hd,occ mott
slty,tr free chrt

LS:lt tn,brn,off wh,gry
vfn-fnxln,frm mod-frm
sme sft,tr hd,occ mott
slty

LS:lt tn,brn,off wh,gry
vfn-fnxln,frm mod-frm
sme sft,tr hd,occ mott
slty,shly

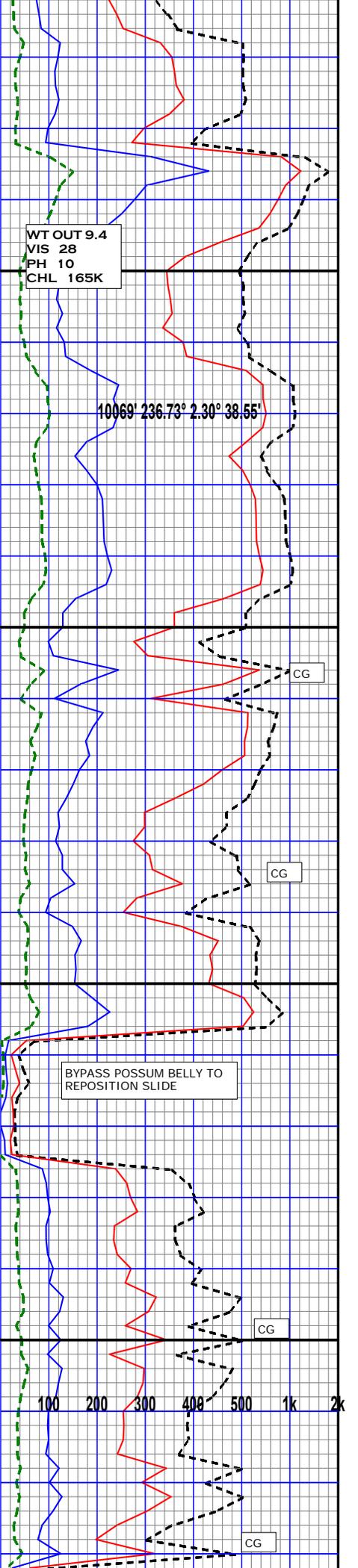
SH:dk gry,blk,gry,sbblky
sme blk,frm,sme sft,tr
hd,ea,grtty,lmy,tr slt

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

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

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

SH:blk,dk gry,blk,frm
erty,mstly mica,sme
calc,tr free pyr



WT OUT 9.4
VIS 28
PH 10
CHL 165K

10069' 236.73° 2.30° 38.55'

CG

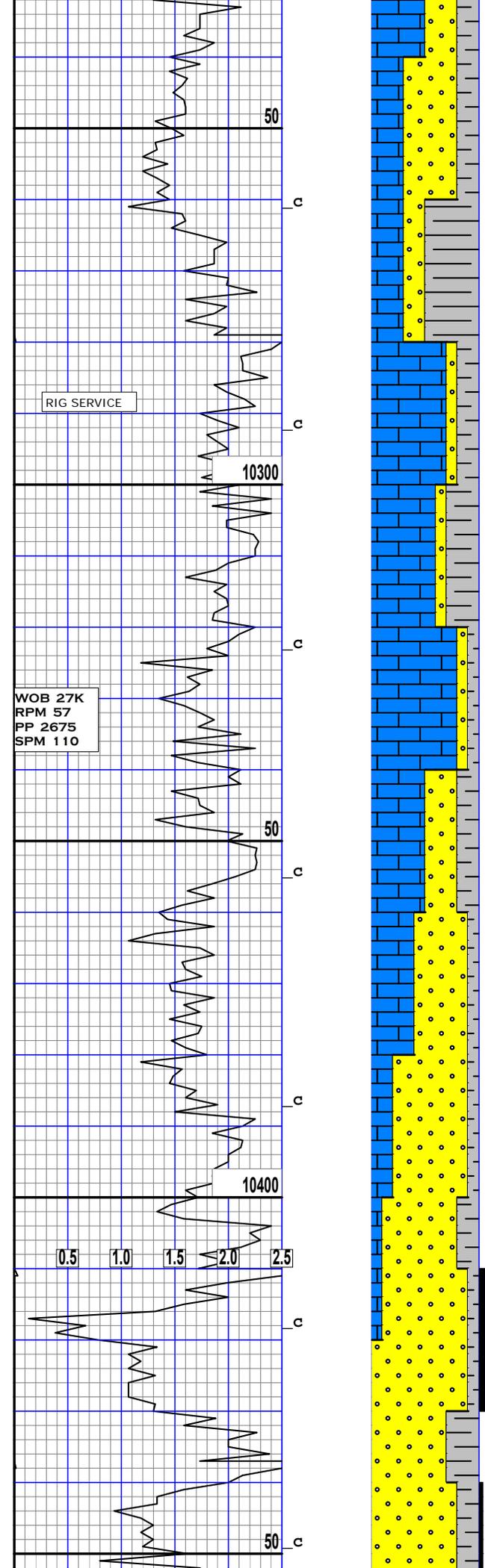
CG

BYPASS POSSUM BELLY TO
REPOSITION SLIDE

CG

CG

100 200 300 400 500 1k 2k



SS:lt gry,clr,vfin gr
subrnd-rnd,cons,frly
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 sbbcky,frm,sme
sft,erty,sme calc
sme mica,tr free pyr

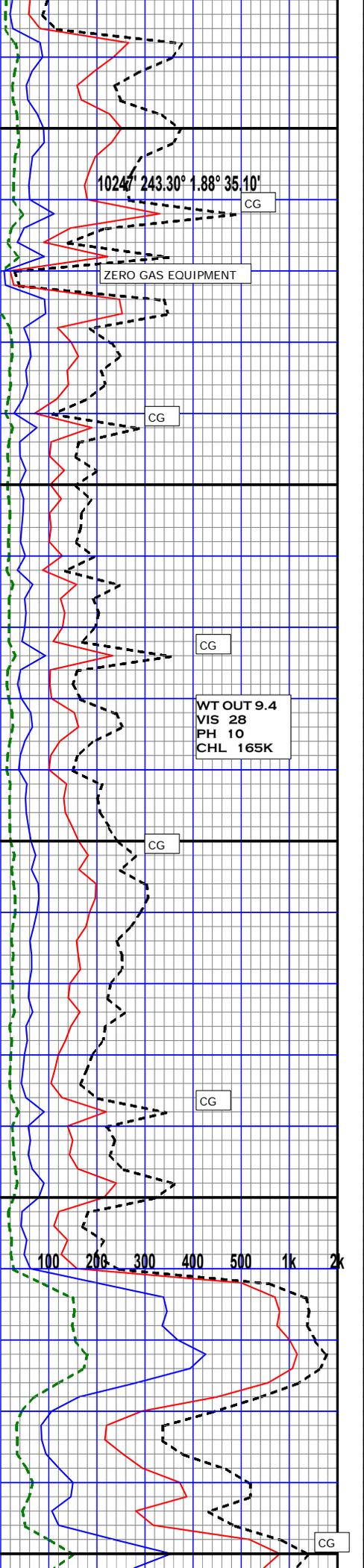
SS:lt gry,gry,vfin gr
subrnd,cons,frly cmntd
well srted,calc,sme
limy

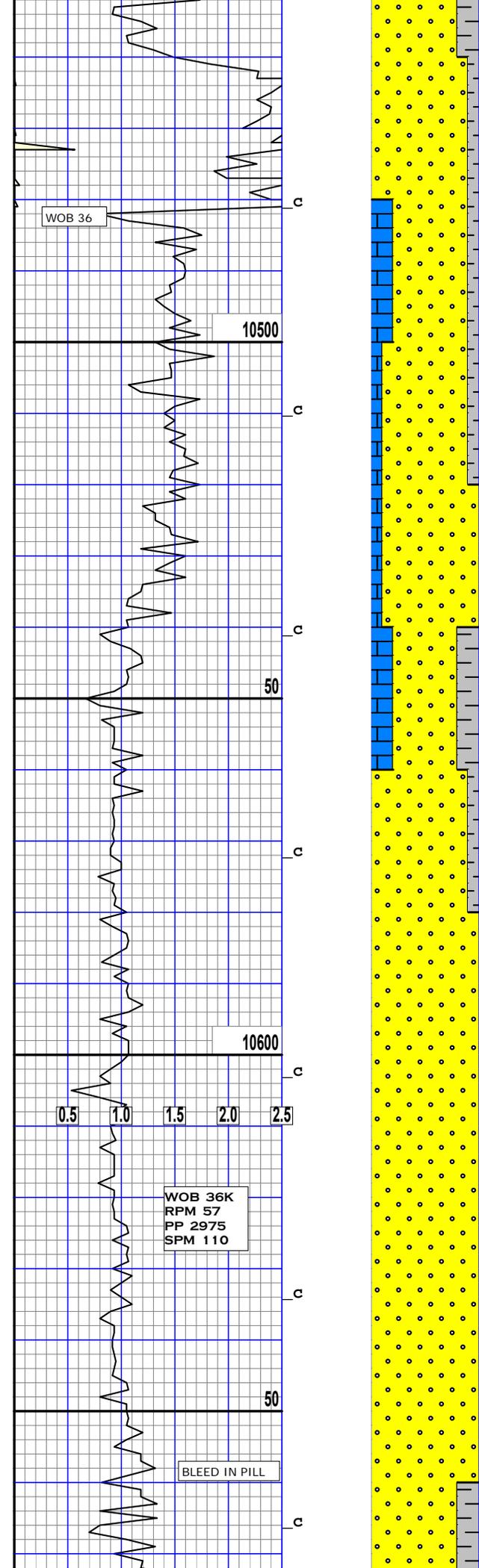
LS:off wht,lt gry,tan
fn-vfn xln,frm,sme mod
hrd,sme mott,tr shly
tr aren

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

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

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





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

10442' 255.32° 2.22° 32.81'

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 uncons,well
 srted,calc,sme shly

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

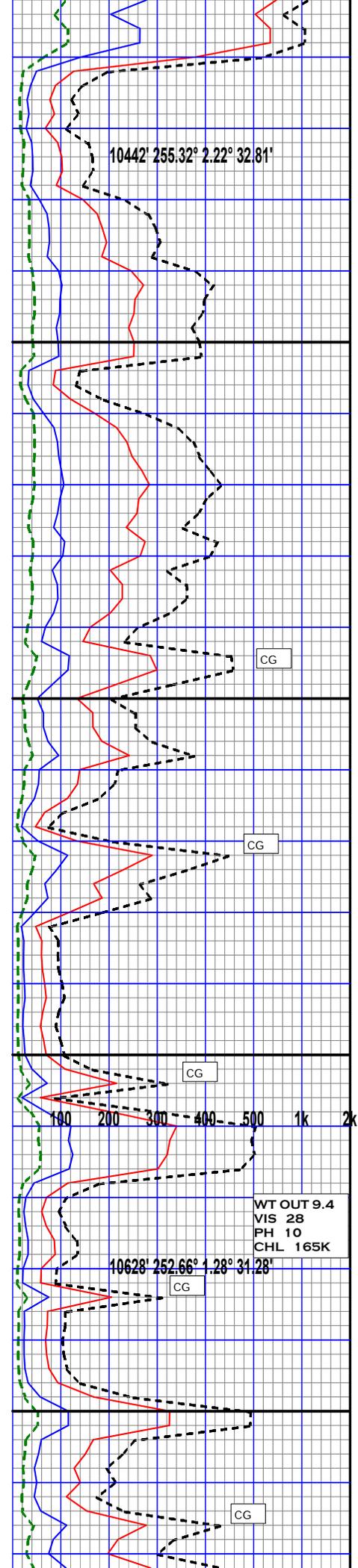
SS:lt gry,gry,clr,vfin
 gr,occ in gr,subrnd-
 rnd,cons,frly cmntd
 well srted,calc,sme
 free wht cly

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

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

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

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

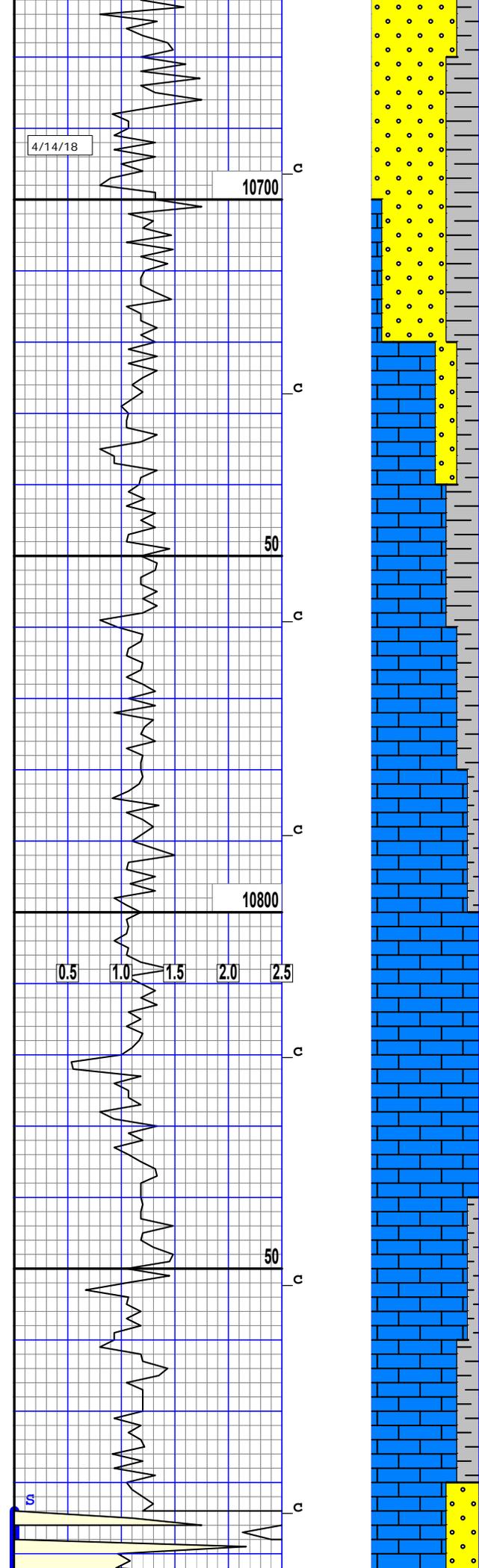


WT OUT 9.4
 VIS 28
 PH 10
 CHL 165K

10628' 252.66° 1.28° 31.28'

WOB 36K
 RPM 57
 PP 2975
 SPM 110

BLEED IN PILL



mica, tr calc

SS:clr,lt gry,vfin gr
subrnd-rnd, pred cons
tr uncons, frly-well
cmntd, well srted, calc
tr free off wht cly

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

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

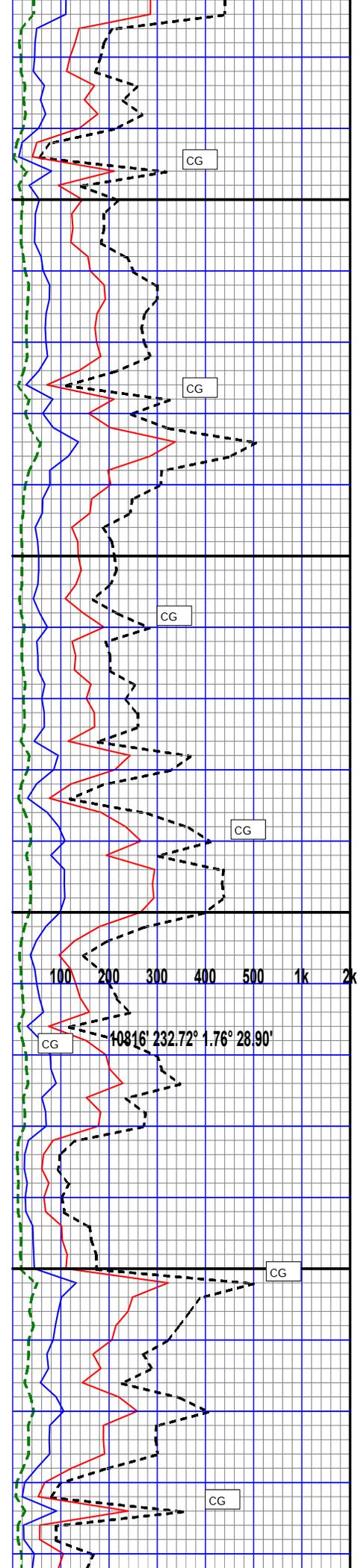
LS:brn,lt brn,off wht
vfn xln,frm,sme mod
hrd,sme mott,sme shly

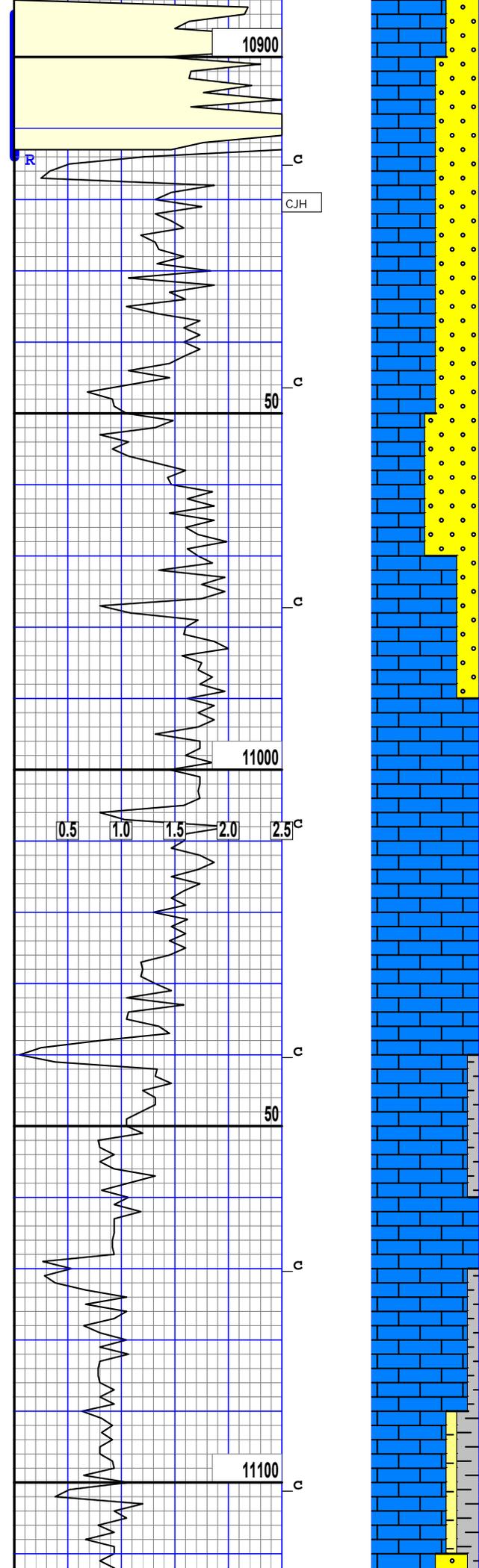
LS:lt brn,off wht,brn
vfn xln,sme fn xln,frm
sme mod hrd,sme mott

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

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

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





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

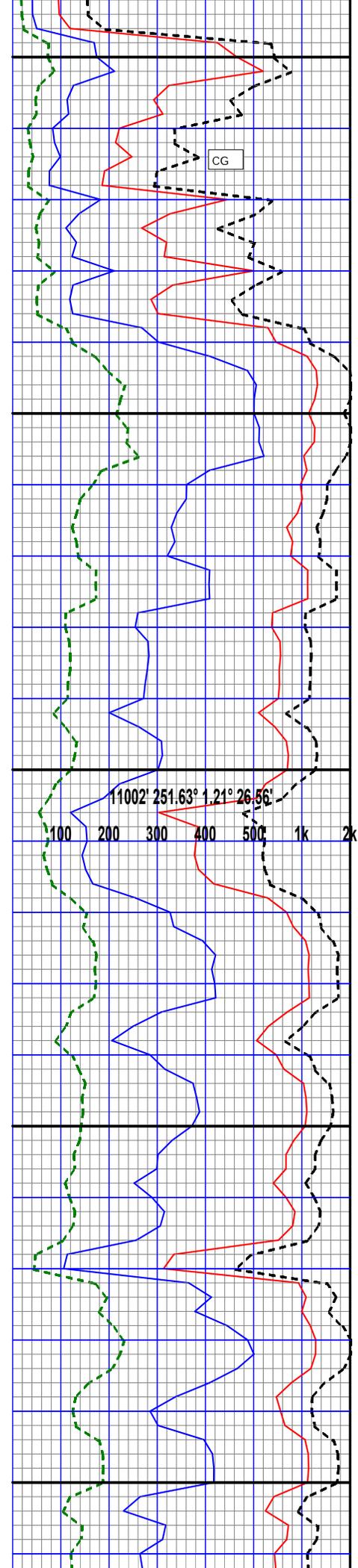
LS:lt brn,off wh,brn
fn-vfn xln,frm,sme mod
hd,sme mott,tr aren,tr
free wh cly

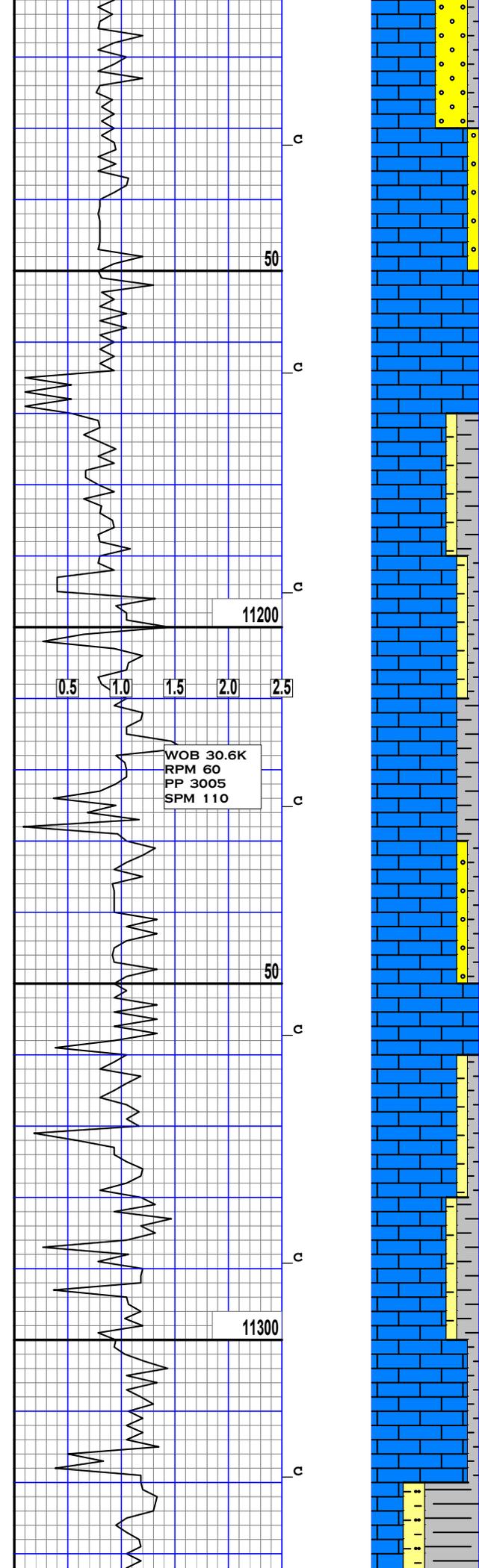
LS:lt brn,off wh,brn
fn-vfn xln,frm,sme mod
hd,sme mott,tr aren,tr
mica,sme free wh cly

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

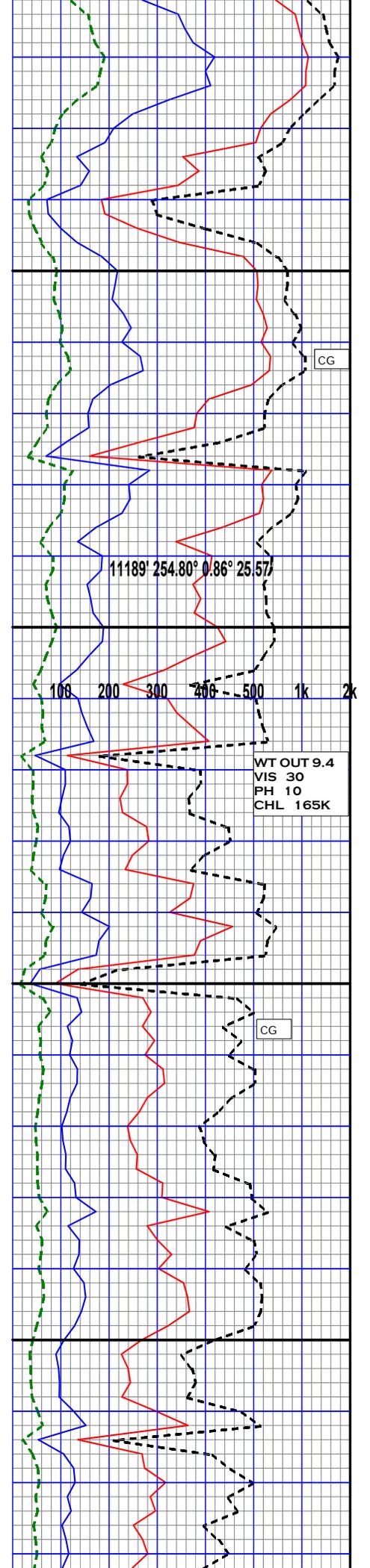
LS:lt gry,lt brn,tn,off
wh,fn-vfn xln,frm,tr
hd,shly,slty,tr mica
sme free off wh cly

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

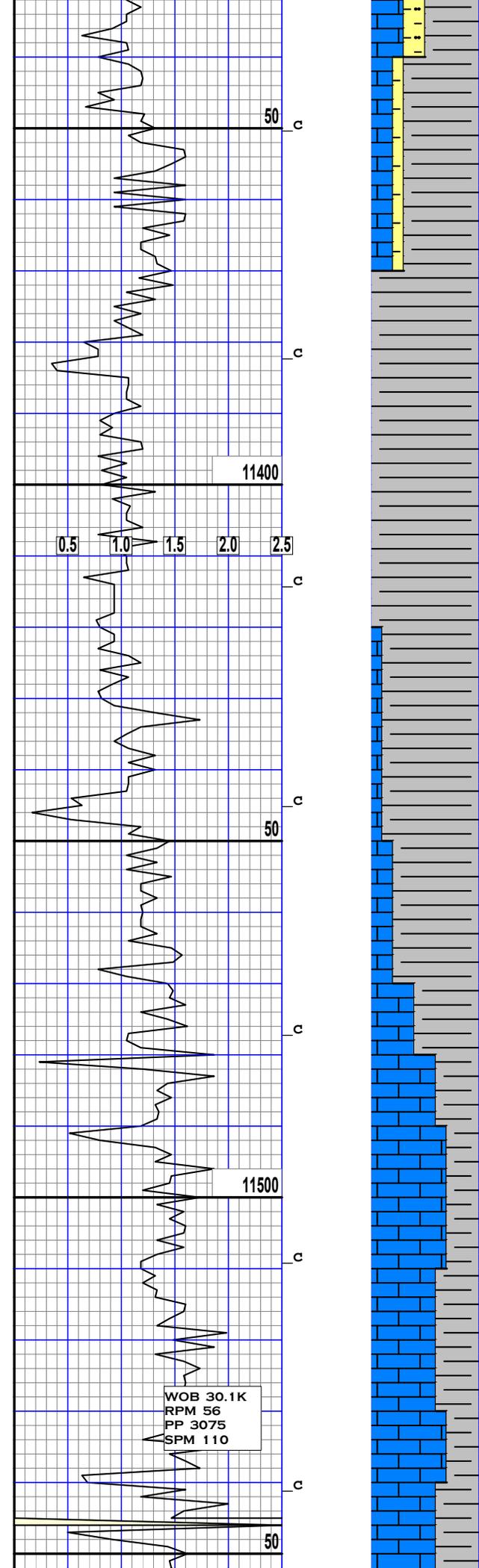
LS:lt gry,lt brn,off wh
fn-vfn xln,frm mod-frm
sme hd,shly,aren,tr
free off wh cly



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/cln smpl

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

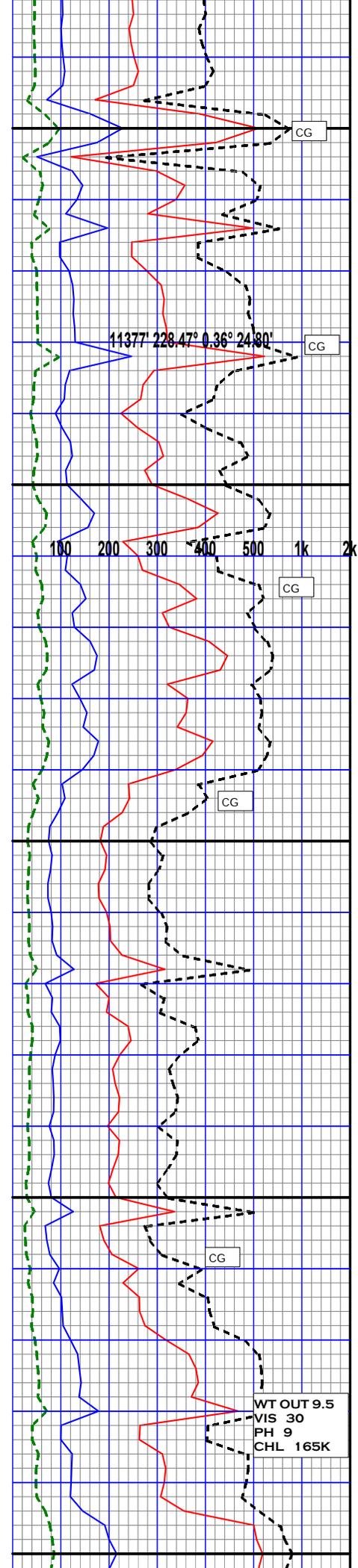
SH:blk,sbblky,frm-mod
sft,sme frm,ea,grtty
lmy,tr mica

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

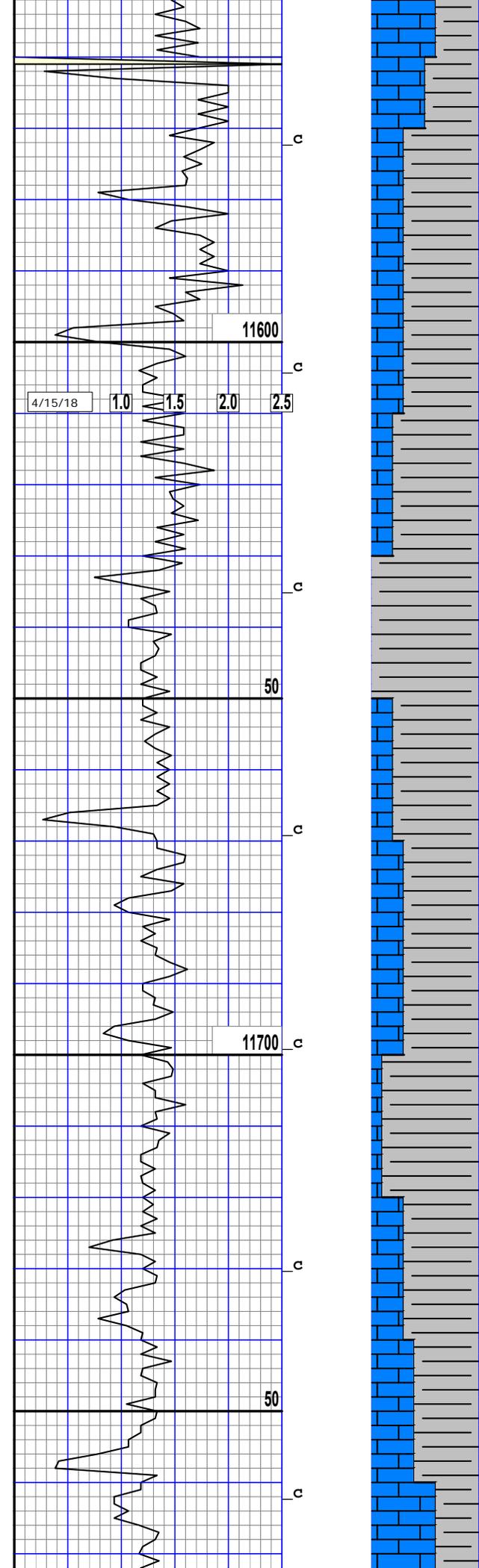
LS:lt gry,lt brn,off wh
fn-vfn xln,frm mod-frm
sme hd,shly,aren,tr
free off wh cly

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



WOB 30.1K
RPM 56
PP 3075
SPM 110

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

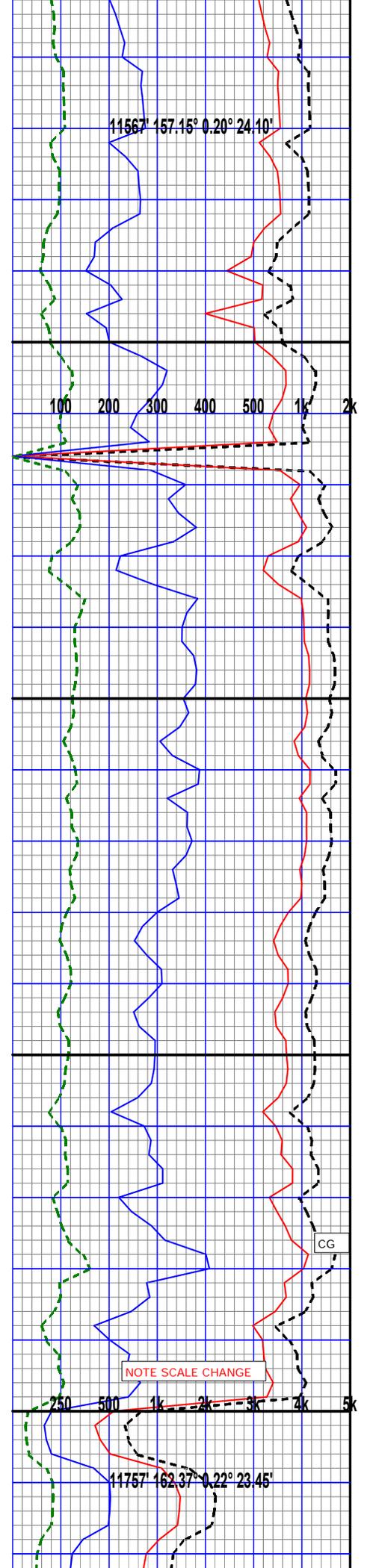
SH:blk,dk gry,gry,sbblky
 sme blky,frm mod-frm
 tr hd,brit,ea,grty,tr
 lmy

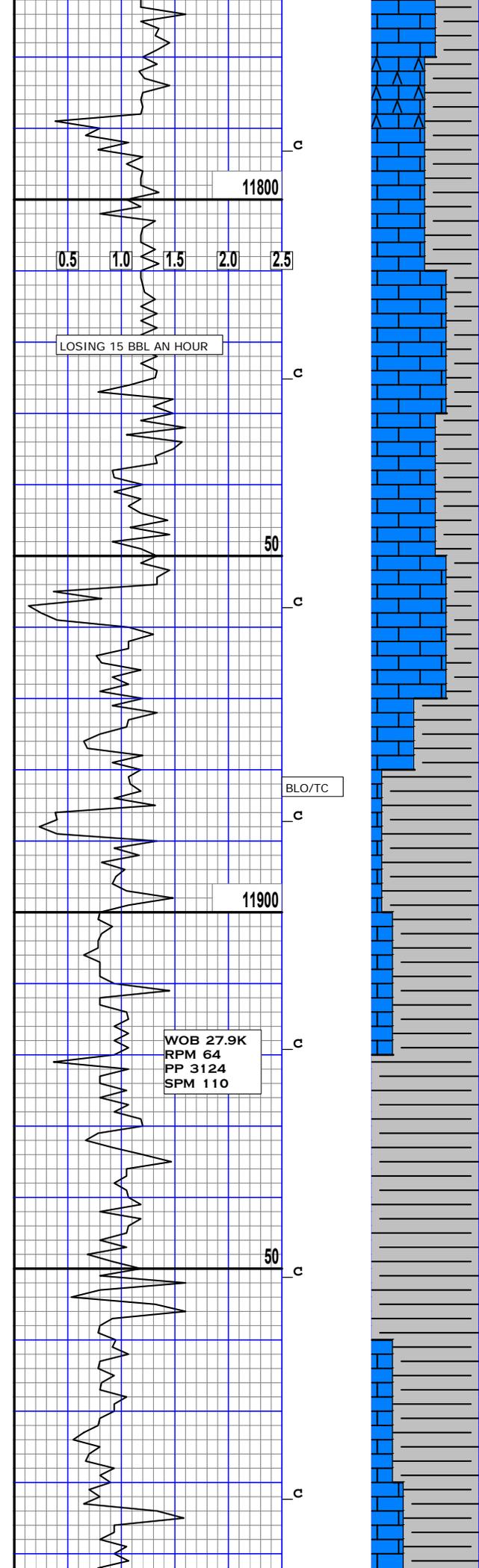
LS:dk gry,gry,brn,lt tn
 vfn-fn xln,sme fn xln
 frm mod-frm,sme hd,tr
 mica,sme free wh cly

SH:blk,dk gry,gry,sbblky
 sme blky,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 blky,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,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

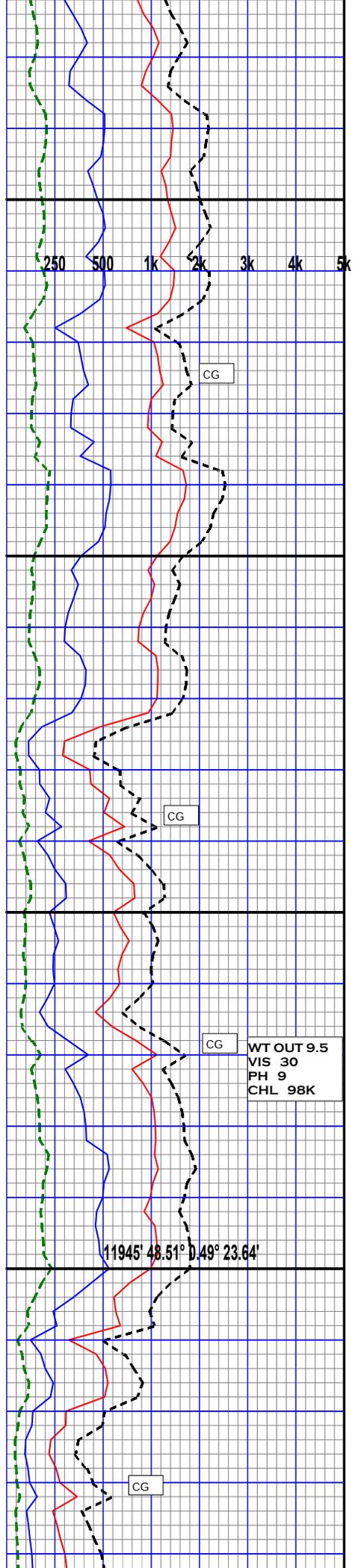
SH:blk,dk gry,sbblcky
 frm,sme sft,erty,mstly
 mica,sme calc

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

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

SH:blk,dk gry,sbblcky
 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



12000

TOH INTO CASING TO C/O
KELLY HOSE UNIONS

0.5 1.0 1.5 2.0 2.5

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

RIG SERVICE

SH:dk gry,gry,sbblcky
sme blkky,frm,sme mod
frm,sme sft,tr calc
tr mica

TG

C/O ROT HEAD

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

DTG

50

SH:dk gry,blk,sbblcky
occ blkky,frm,sme sft
tr mod frm,sme calc
tr mica

CG

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

12100

SH:dk gry,blk,sbblcky
tr blkky,frm,sme sft
erty,mstly mica,sme
limy

CG

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

12134' 56.49° 0.98° 25.07'

CG

4/16/18

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

CG

SH:dk gry,gry,sbblcky
tr blkky,sft,sme frm
erty,tr slty,sme calc
tr tan ls

CG

12200

0.5 1.0 1.5 2.0 2.5

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

WOB 26K
RPM 58
PP 2800
SPM 110

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

WT OUT 9.4
VIS 29
PH 10
CHL 98K

c

CG

50

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

c

CG

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

12300

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

c

12322 56.69° 1.47° 27.28'

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

50

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

c

CH:dk brn,dk gry,opq
tr transl,sme limy

CJH

SCALE CHANGE 0-5

c

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

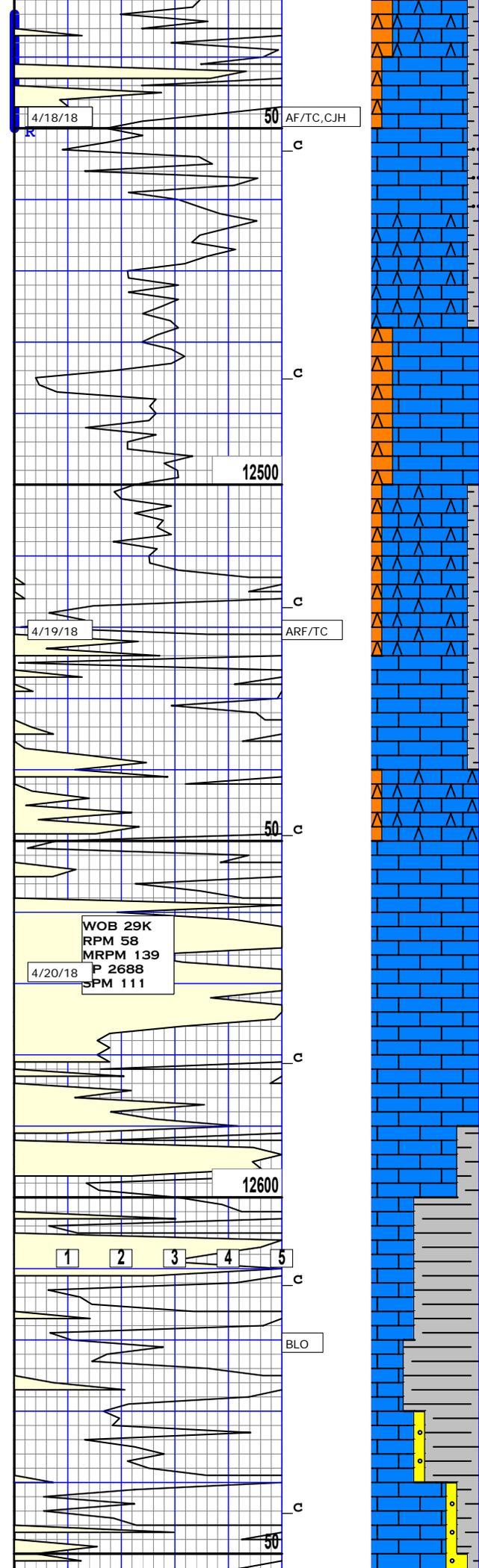
12400

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

c

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

s



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

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

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

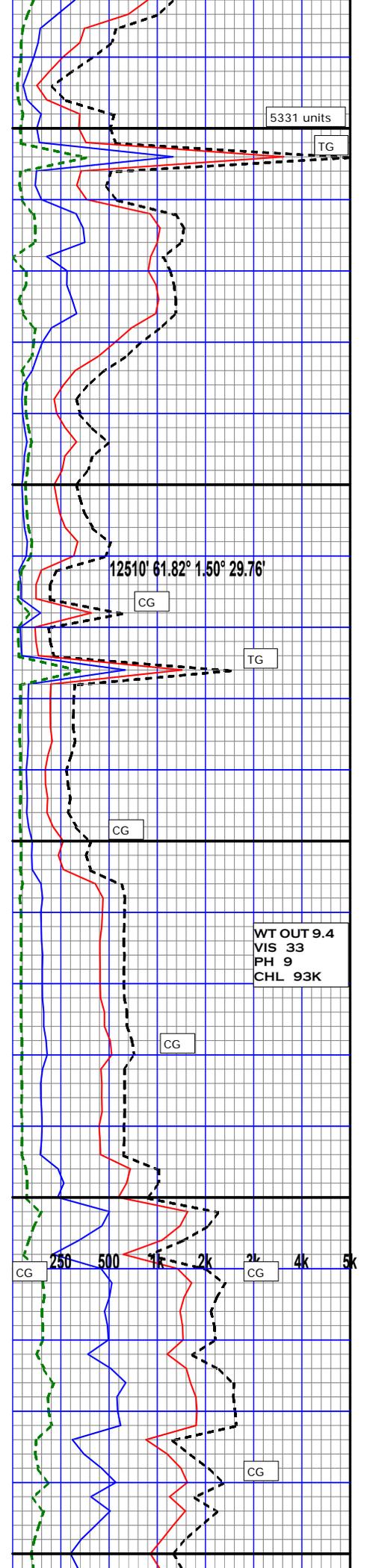
LS:off wht,wht,lt gry
vfn xln,mod frm-frm
sme mott,tr aren,tr CH

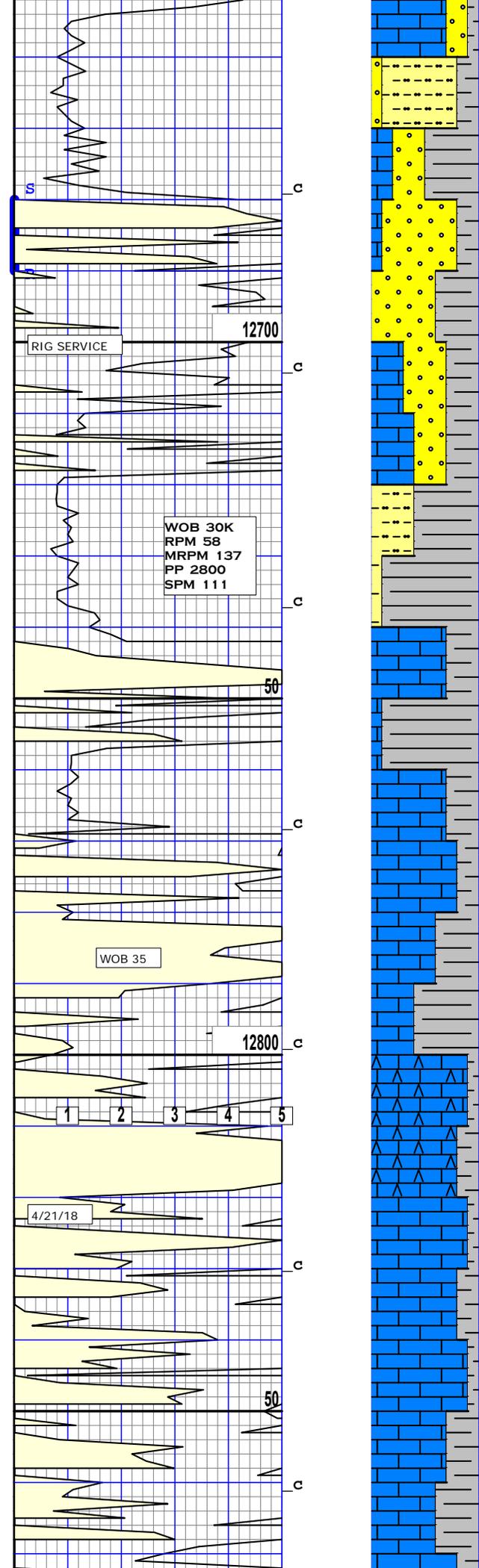
LS:wht,off wht,lt brn
vfn xln,frm mod-frm
tr hrd,sme mott

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





SS:lt gry,gry,clr,vfin
 gr,tr fn gr,subrnd
 pred cons,tr unconc
 frly cmntd,well srted
 calc,sme sity,sme free
 off wht cly

SS:clr,lt gry,vfin gr
 sme fn gr,subrnd-rnd
 sme subang,pred cons
 sme unconc,frly-well
 cmntd,frly srted,calc
 sme free off wht cly

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

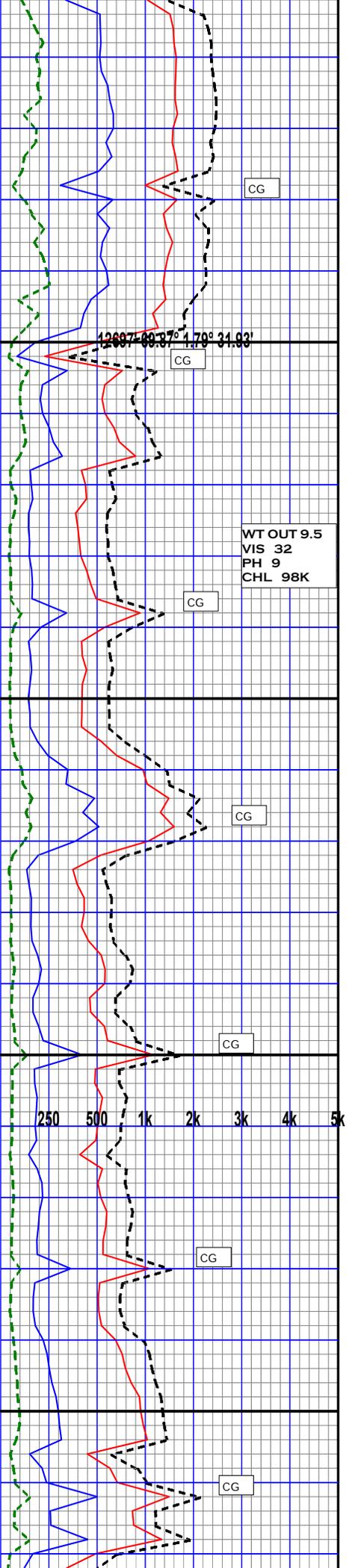
SH:dk gry,gry,blk
 sbblkky,frm,sme sft
 erty,tr slty,sme calc

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

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

SH:blk,dk gry,blkky,tr
 sbblkky,frm,sme mod
 frm,erty,sme calc

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



12007-80.37° 1.70° 31.03'

CG

CG

WT OUT 9.5
 VIS 32
 PH 9
 CHL 98K

CG

CG

CG

CG

CG

12700

RIG SERVICE

WOB 30K
 RPM 58
 MRPM 137
 PP 2800
 SPM 111

c

c

c

c

c

c

WOB 35

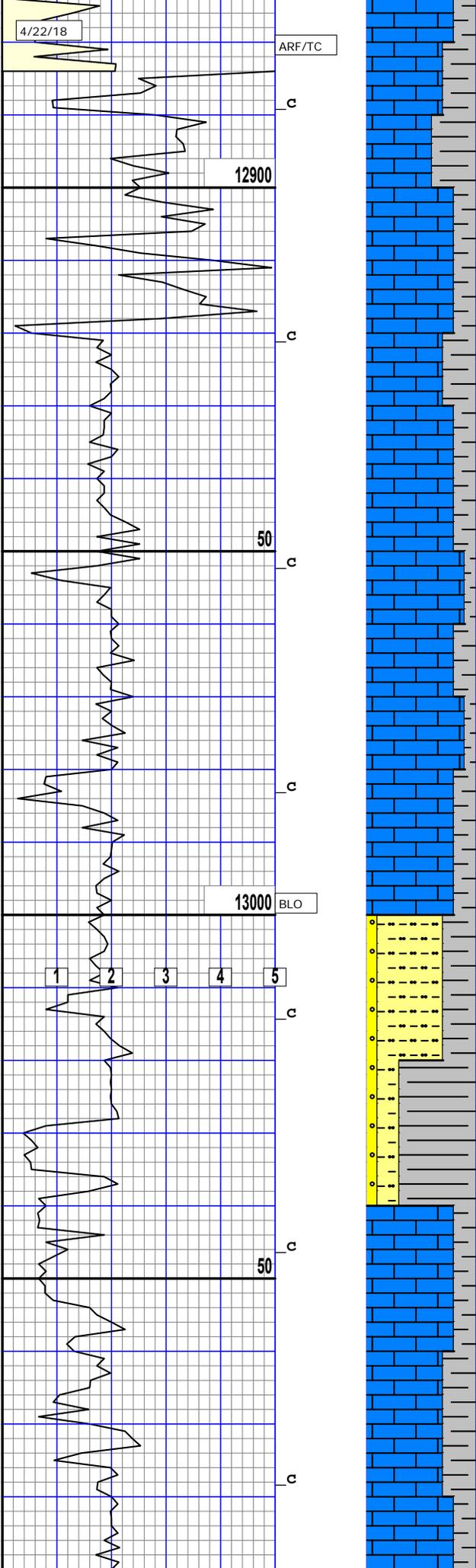
12800

1 2 3 4 5

4/21/18

50

c



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

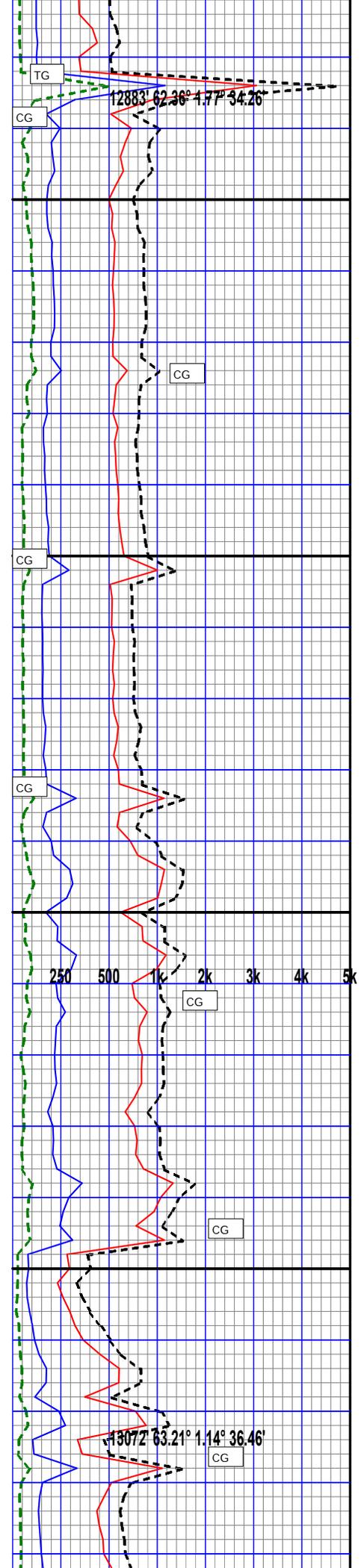
SH:blk,drk gry,gry,blcky
occ sbblcky,frm,vry frm
erthy txt,tr smth,calc,
cln

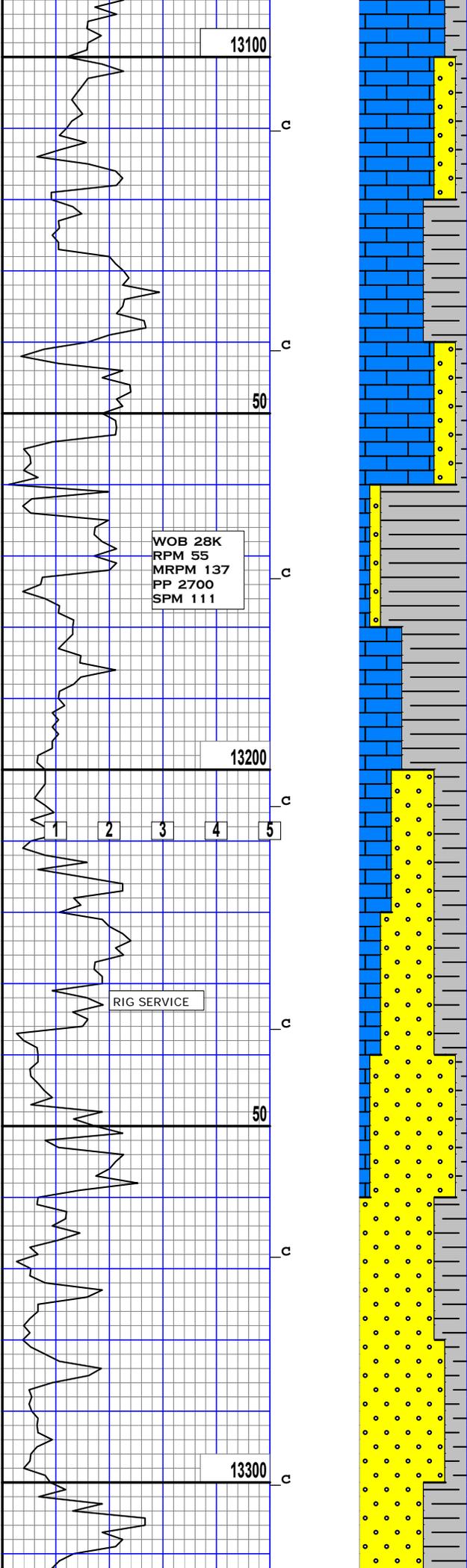
SLTSTN:off wht,lt gry
sft,sme frm,sme shly
sme aren,tr calc

SS:lt gry,clr,vfn gr
rnd-subrnd,cons,fry
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





sme blkcy, frm, tr sft
erty, sme calc

SS:lt gry,clr,vfin gr
subrnd-rnd,cons,frly
cmntd,well srted,calc
tr free off wht cly,tr
fnly pyr

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

SS:lt gry,clr,vfin gr
rnd-subrnd,cons,frly
cmntd,well srted,calc
tr free off wht cly,tr
fnly pyr

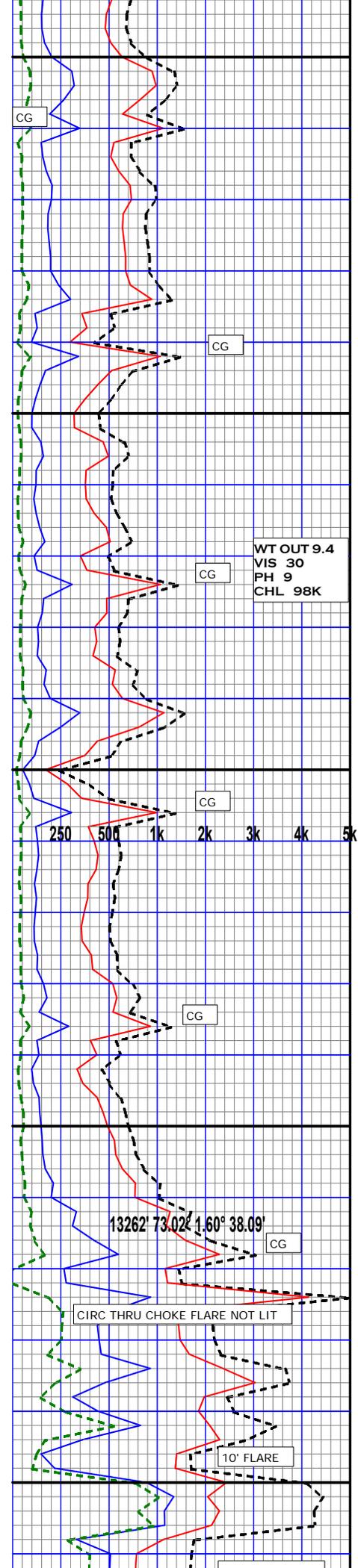
SH:blk,dk gry,blkcy,sme
sbbkcy,frm,sme mod
frm,erty,sme slty,sme
mica,sme aren,tr calc

SS:lt gry,clr,vfin gr
rnd-subrnd,cons,well
cmntd,well srted,calc
tr glauc

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

SS:clr,lt gry,80% vfin
gr,subrnd,10% fn gr
subrnd-subang,10% med
gr,subang,pred uncon
tr cons,frly cmntd
frly srted,calc

SS:clr,lt gry,60% vfin
gr,subrnd,30% fn gr
subrnd-subang,10% med
gr,subang-ang,pred
uncons,tr cons,well
cmntd,frly srted,calc
tr free off wht cly,tr
fnly pyr



SHUT WELL IN @ 13322'
CIRC & CONDITION MUD

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

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

SS:lt gry,clr,vfin gr
subrnd-rnd,cons,frly
cmntd,well srted,calc
tr glauc

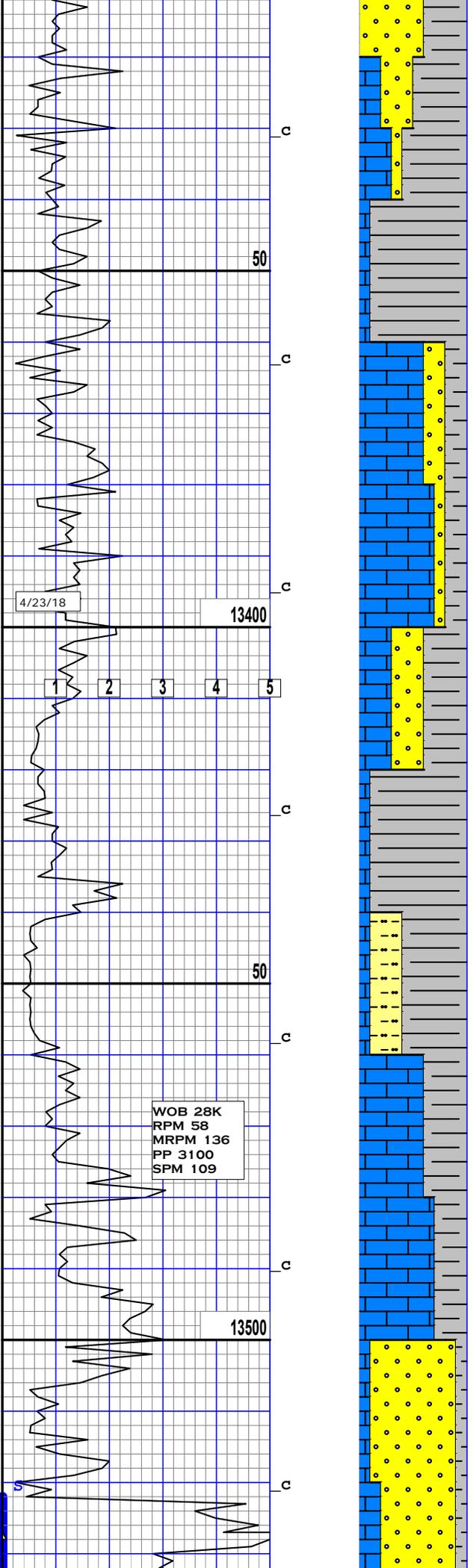
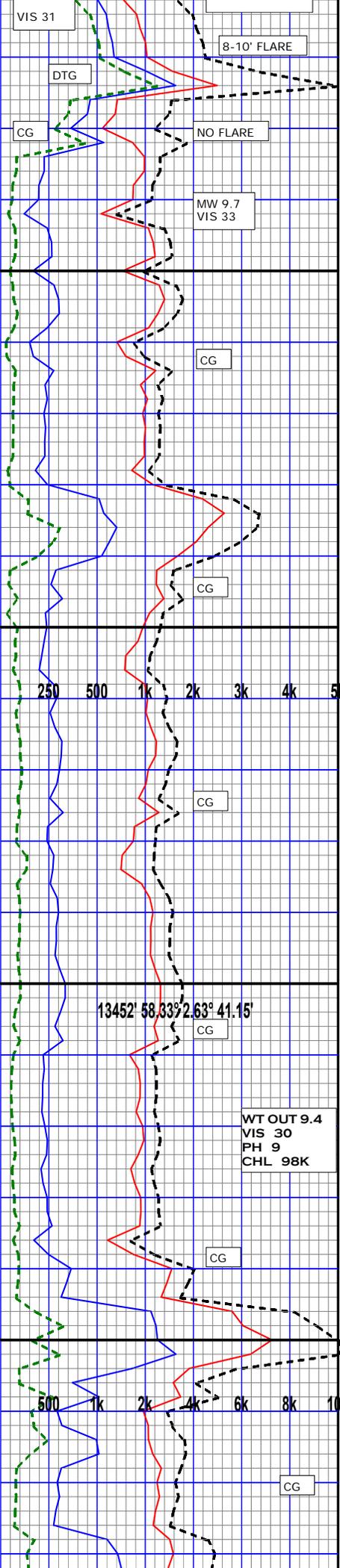
LS:off wht,brn,lt brn
fn-vfn xln,frm,sme
chlky,sme mott,tr shly

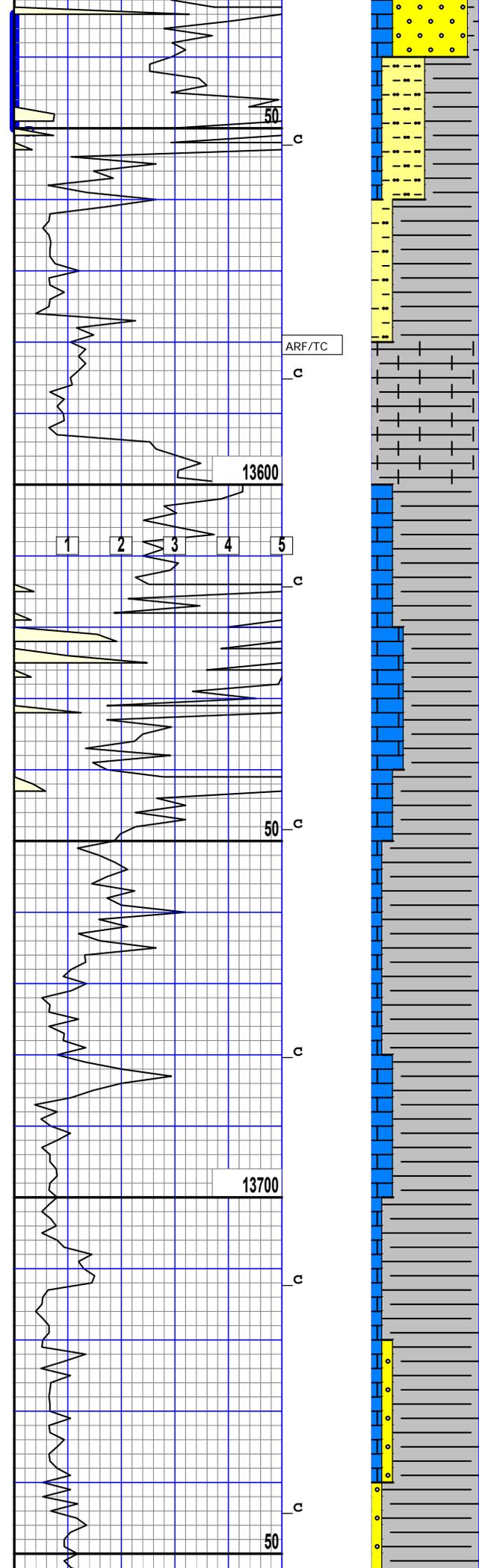
SH:dk gry,blk,sbblcky
sme blkky,frm,sme sft
erty,sme slty,sme calc
sme mica

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,sbblcky
frm,sme sft,erty,sme
slty,sme calc,tr mica

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

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

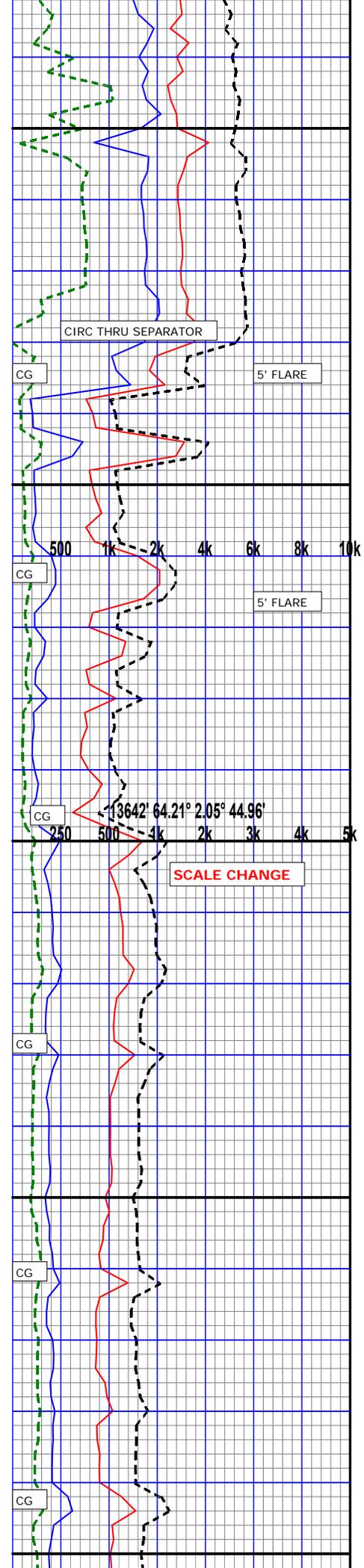
SH:dk gry,gry,blk,blcky
occ sbblcky,frm,sme vy
frm,tr hrd,erty,occ
smth,calc ip

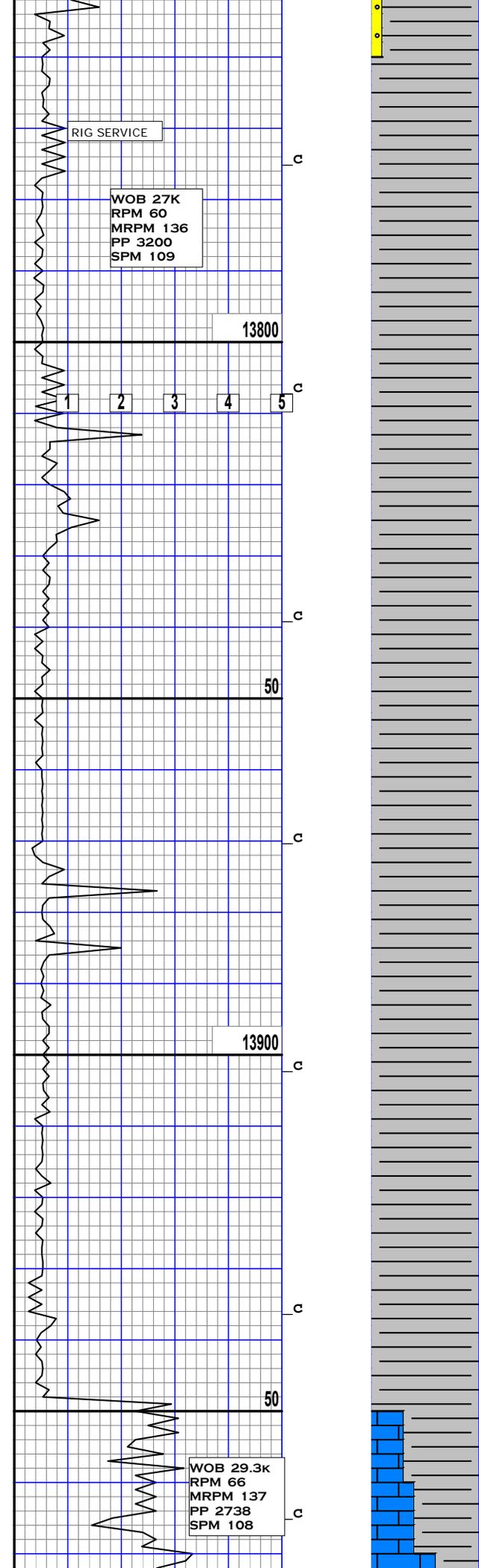
LS:wht,off wht,lt brn
vfn xln,frm,sme mod
hrd,slty,tr mott

SH:gry,lt gry,blk,blcky
tr sbblcky,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 cmdt,well
srted,calc

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





sme smth,calc

SH:dk gry,gry,lt gry
tr blk,blcky,occ sub
blcky,mod frm,tr sft
sme brittl,erty,tr
calc

SH:gry,lt gry,blcky
occ sbblcky,mod frm,tr
frm,tr sft,erthy txt,
occ smth,calc,tr fre
pyr

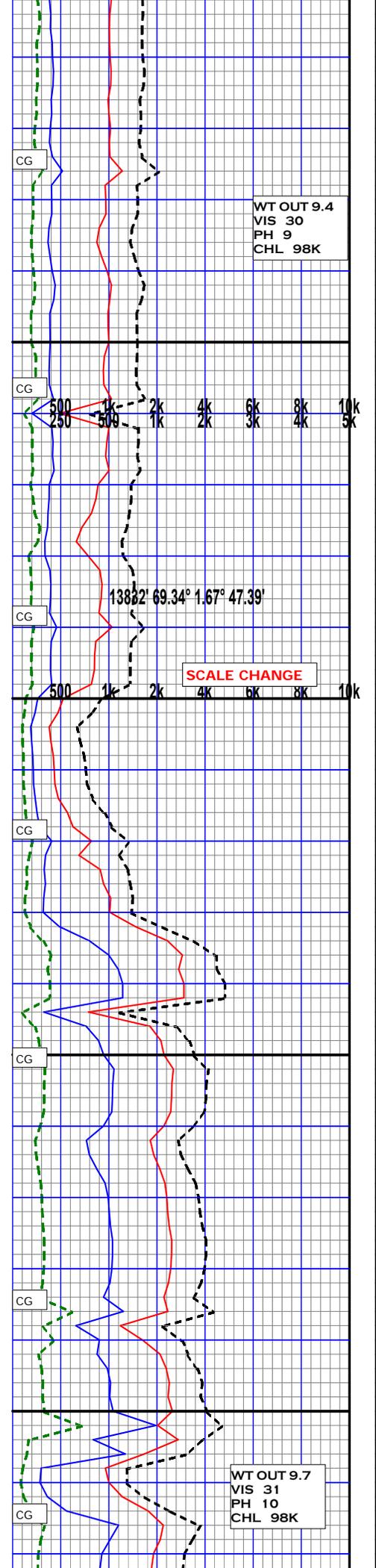
SH:dk gry,gry,lt gry
blk,blcky,sme sbblcky,
mod frm,tr sft,brittl,
erthy,calc inclu,sme
pyrtc

SH:gry,lt gry,blcky
sme sbblcky,frm,sme
vr frm,tr sft,erty
sme smth,calc

SH:dk gry,gry,lt gry
tr blk,blcky,occ sub
blcky,mod frm,tr sft
sme brittl,erty,tr
calc

SH:dk gry,gry,blk,lt gry
blky-sbblky,mod frm,tr
sft,brittl,erthy txt,
occ smth,calc ip,tr pyr

SH:dk gry,gry,lt gry
blk,blcky,sme sbblcky,
mod frm,tr sft,brittl,
erthy,calc inclu,sme
pyrtc

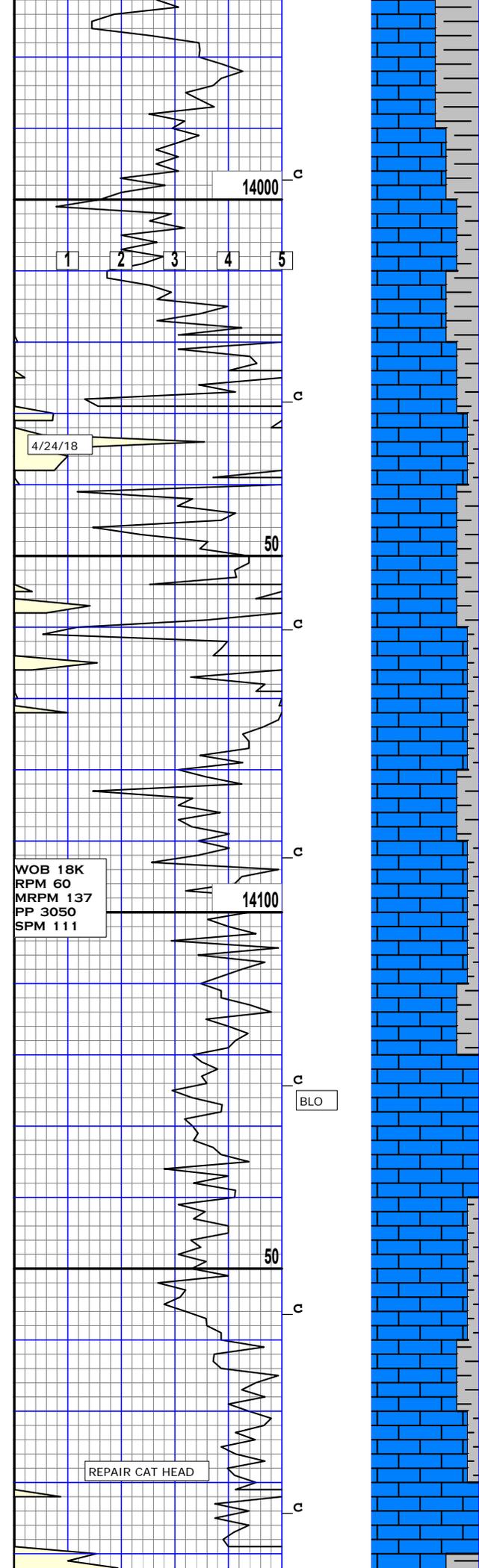


WT OUT 9.4
VIS 30
PH 9
CHL 98K

13882 69.34° 1.67° 47.39'

SCALE CHANGE

WT OUT 9.7
VIS 31
PH 10
CHL 98K



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 sbbcky,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

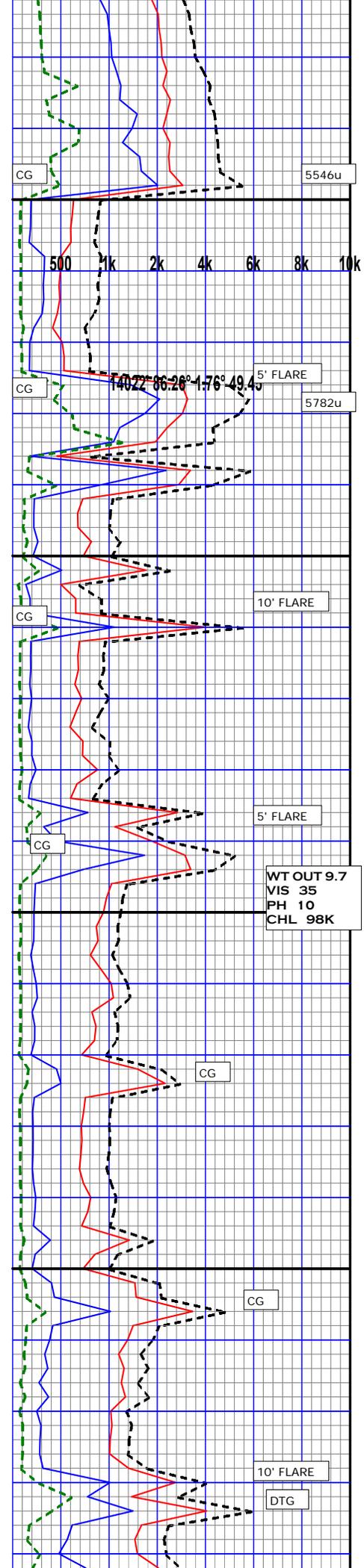
LS:off wht,tn,crm,lt brn
vfn-fn xln,mod frm,vy
frm,tr hrd,mott,cln

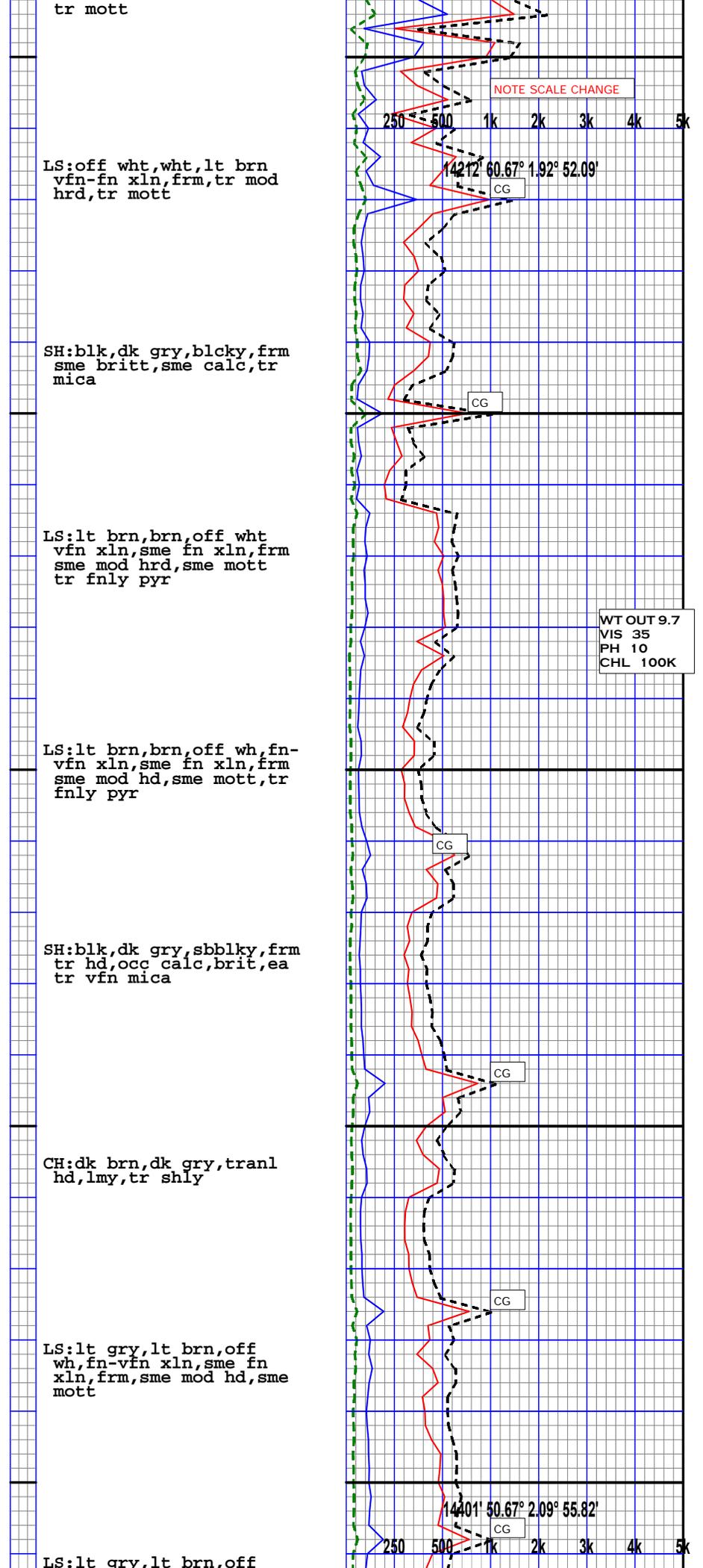
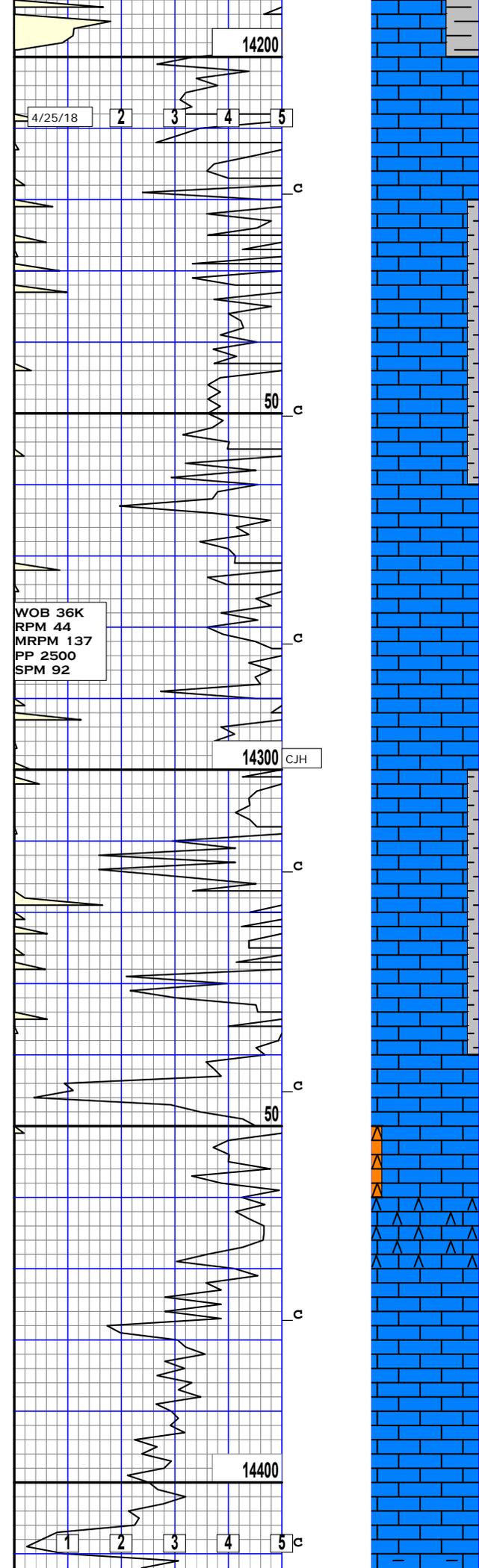
SH:dk gry,gry,lt gry
blk,blcky,tr sbbcky,
mod frm,occ sft,erthy
txt,calc

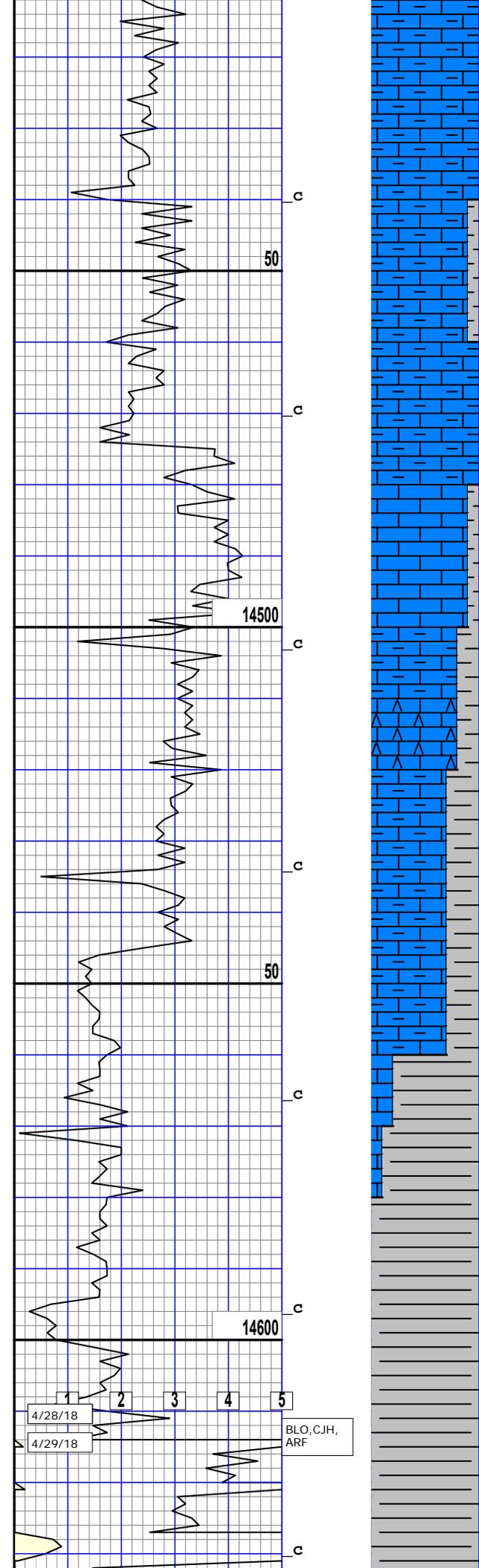
LS:off wht,lt gry,brn
fn xln,frm,sme mod hrd
sme mott,tr shly

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

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







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

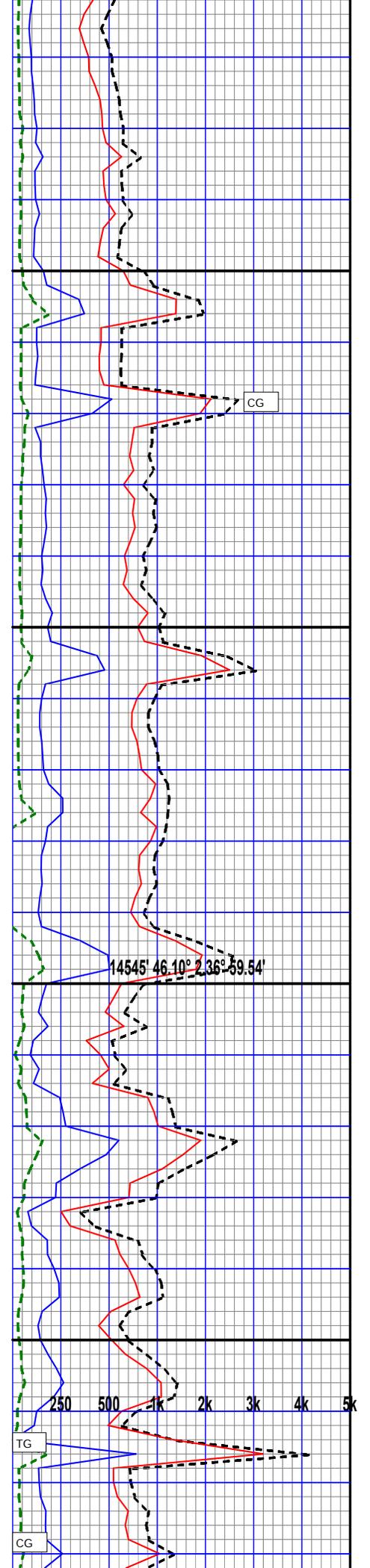
SH:dk brn,lt brn,blk sbblky, frm mod-frm, tr hd, brit, ea, occ calc, ea

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

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

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



CG

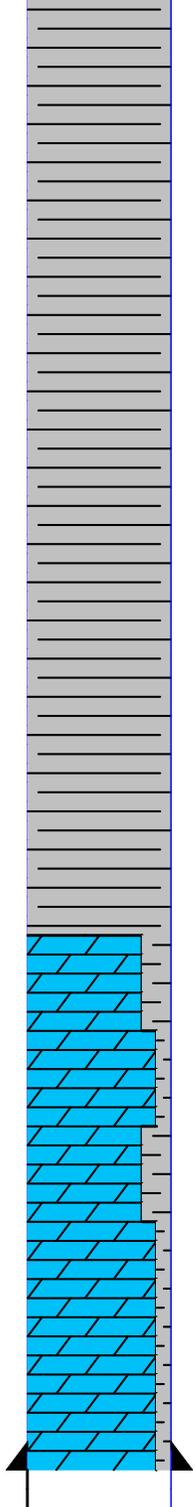
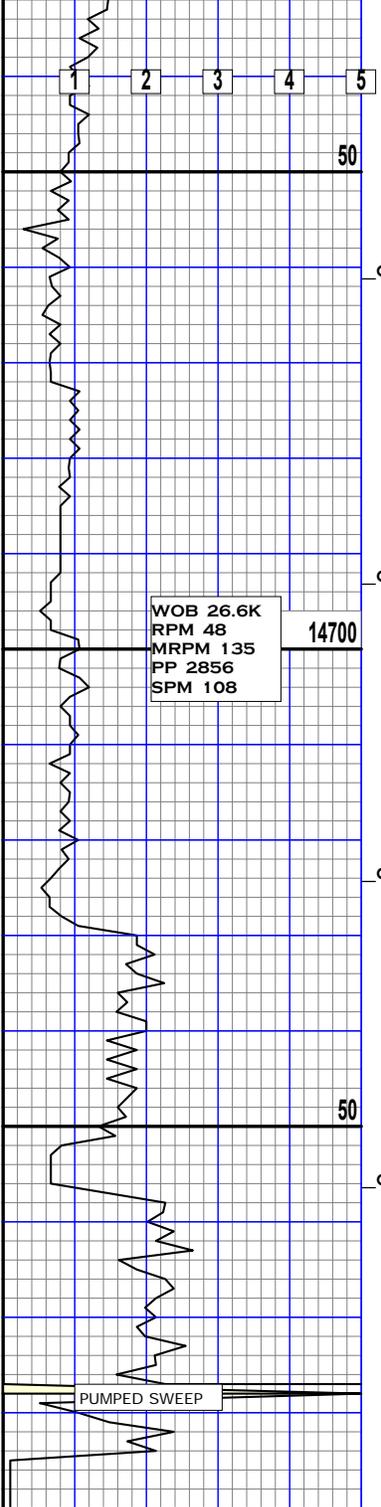
14545' 46.10° 2.36° 89.54'

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

TG

CG

1 2 3 4 5
4/28/18
4/29/18
BLO,CJH,
ARF



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

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

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

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

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

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

TD FOR CASING

