



GEOSEARCH LOGGING INC.

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

Well Name: Gould 2240H
 Location: Upshur, Co, West Virginia
 License Number: 47-097-03739
 Spud Date: 10/01/2010
 Surface Coordinates: Lat: 39.0797
 Long: -80.2801
 Bottom Hole Coordinates: Lat: 39.0797
 Long: -80.2801
 Ground Elevation (ft): 1,200' K.B. Elevation (ft): 1,216'
 Logged Interval (ft): 2,800' To: 6,640' Total Depth (ft): 3,840'
 Formation: Marcellus
 Type of Drilling Fluid: Air drilling, Oil-based mud

Region: APPALACHIA
Drilling Completed: 10/19/2010

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: XTO ENERGY
 Address: 600 E. Exchange Avenue
 Fort Worth, TX 76164

GEOLOGIST

Name: Kelley Hartley, Tim Barfield, Michael Marshall, Noah Sluiter
 Company: Geosearch Logging, Inc
 Address: P.O. Box 6005
 Edmund, OK 73083-6005
 (403) 340-5545

Comments

2 Manned Logging Service
 Start logging Date: 10/05/2010
 OBM start date: 10/11/2010
 Released Logging Date: 10/19/2010
 Drilling Contractor: UDI#209
 PC 149, ML126,HASP: V #21, H: 33

ROCK TYPES

Anhy
 Bent
 Brec
 Cht
 Clyst
 Coal
 Congl

Dol
 Gyp
 Igne
 Lmst
 Meta
 Mrlst
 Salt

Shale
 Shcol
 Shgy
 Sltst
 Ss
 Till
 Sandstn

Siltstn
 Granwash
 Dolowash
 Cement
 Granite
 Hotshale

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclfrag
- Calc
- Carb
- Chtdk
- Chtlit
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl

- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral

- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol

- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

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

OTHER SYMBOLS

POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

OIL SHOWS

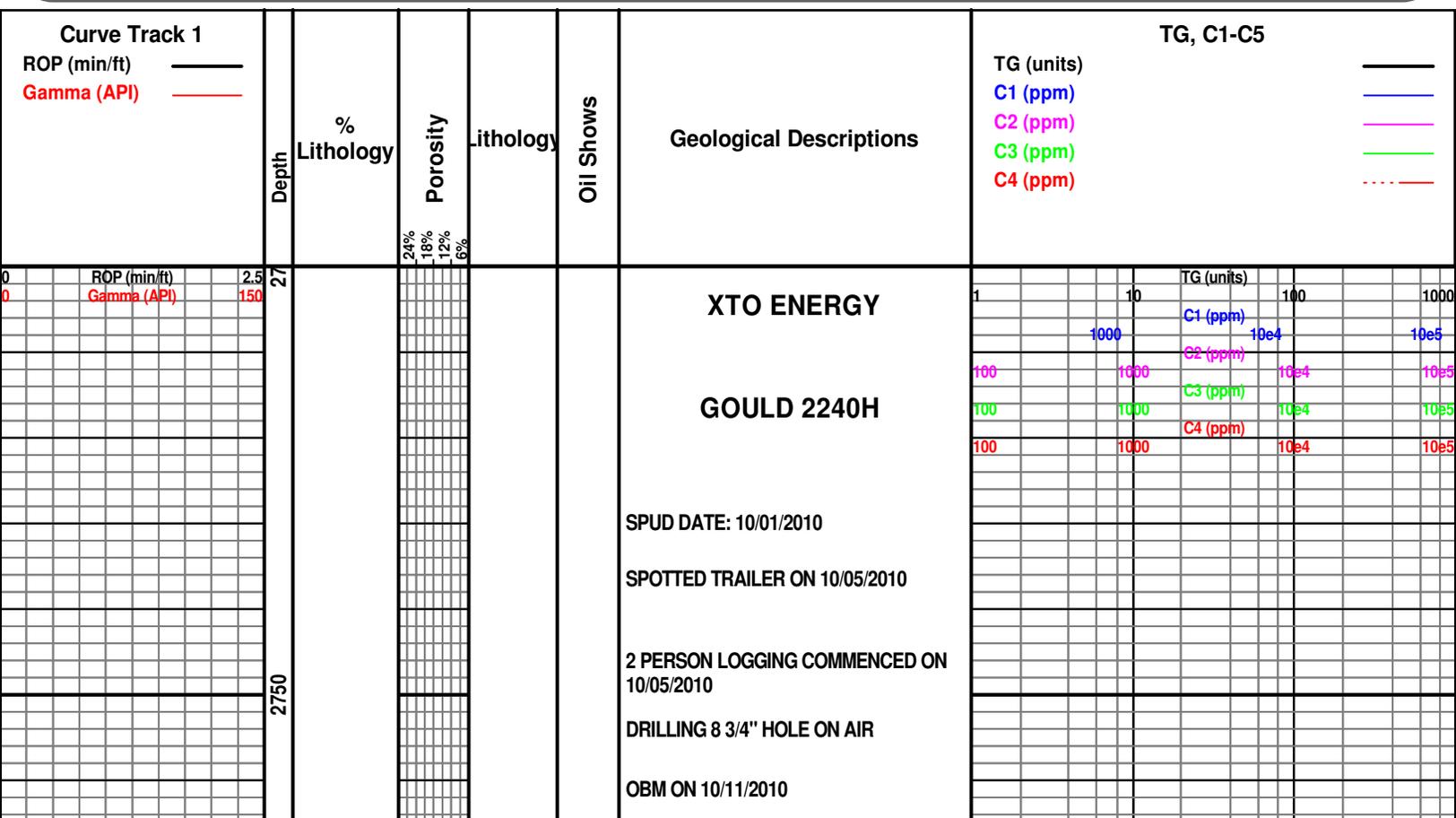
- Even
- Spotted
- Ques
- Dead
- Poor
- Fair
- Good
- Excelent
- Csgshoe

INTERVALS

- Core
- Dst

EVENTS

- Rft
- Sidewall



Bit#4. Smith- Hammer
 @2,787'. Size: 8.75". Serial#
 PS0890 Type: F47HY

ROP (min/ft) 2.5
 Gamma (API) 150
 WOB: 16k
 PP: 405
 RPM: 45

M dialed to 1.83

WOB: 18k
 PP: 376
 RPM: 45

2800

2850

2900

2950

STARTING FORMATION: 5TH

FORMATION SAMPLES @ 2,800' WITH
 30' SPOT SAMPLES

SH: lt gy-gy, frm-sli hd, hd ip,
 amorph-blky, plty ip, n calc, micmica ip;
 SLTST: gy, med gy ip, sli hd-frm, n-vry sli
 calc, micmica, tr fn pyr

SLTST: gy, sli hd, hd/frm ip, n-vry sli calc,
 micmica, tr fn pyr; SH: gy-lt gy, frm-sli hd,
 hd ip, amorph-blky, plty ip, n calc,
 micmica ip; tr SS

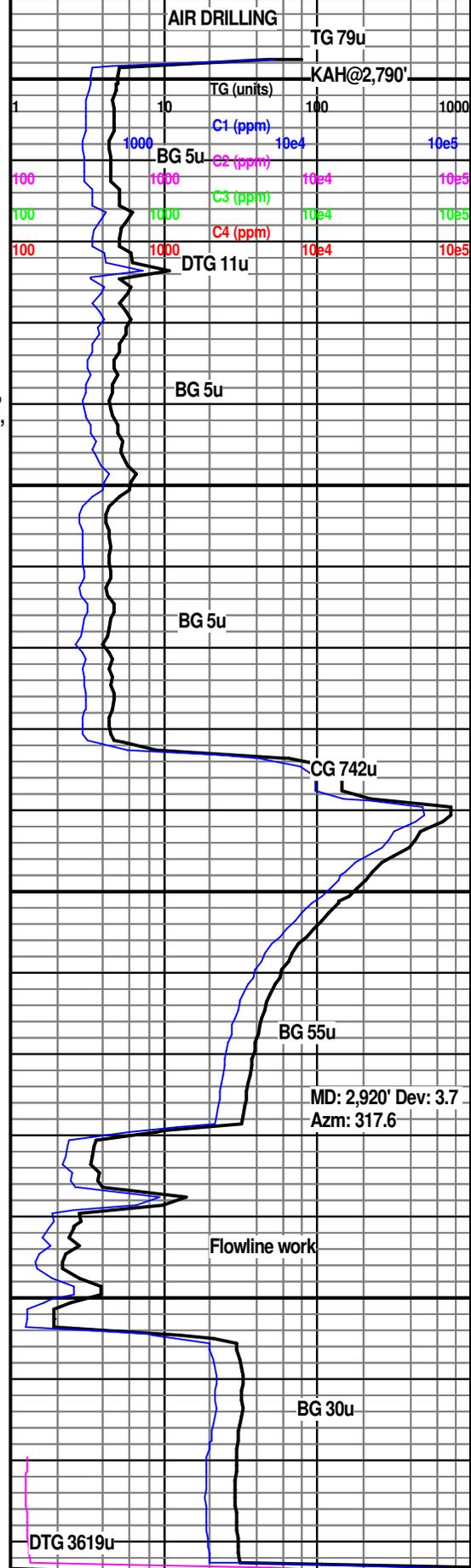
SH: lt gy-gy, frm-sli hd, hd ip,
 amorph-blky, plty ip, n calc, micmica ip;
 SLTST: gy, sli hd, frm-hd ip, n-v sli calc,
 micmica, tr fn pyr

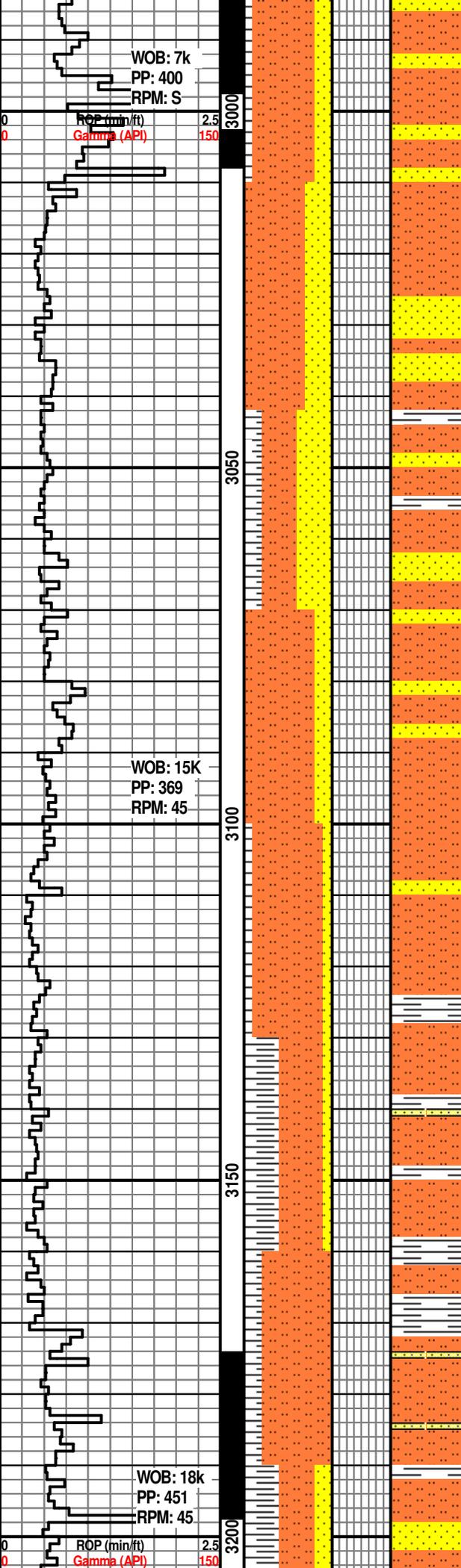
SH: lt gy-gy, frm-sli hd, hd ip,
 amorph-blky, plty ip, n calc, micmica ip;
 SLTST: lt gy-gy, frm, tr hd, n-v sli calc,
 micmica, tr fn pyr

SH: lt gy-gy, frm-sli hd, hd ip,
 amorph-blky, plty ip, n calc, micmica ip,
 slty, v slty ip; SLTST: lt gy-gy, frm, hd ip,
 n calc, micmica, tr fn pyr

**SPEECHLEY TOP @
 2,950'MD**

SLTST: lt gy-gy, sli frm-frm, sli hd-hd ip,
 n-v sli calc, micmica, tr fn pyr; SS: lt
 gy-gy, off wht ip, v fn gr, p-mod srt, sb
 ang-sb rnd, sli hd-hd, fri ip, n calc,
 micmica, fn pyr ip





SLTST: lt gy-gy, sli frm-frm, n calc; SS; lt gy-gy, v fn gr, p-mod srt, sb ang-sb rnd, sli hd, n calc; SH: lt gy-gy, frm-sli hd, amorph, n calc, slty, v slty ip

SLTST: lt gy-gy, sli frm-frm, n calc; SS; lt gy-gy, off wht ip, v fn gr, p-mod srt, sb ang-sb rnd, sli hd, n calc; rr SH

SLTST: gy -med gy, sli frm-frm, calc-sli calc, micmica; SS; lt gy-off wht, v-fn gr, p-mod srt, sb ang-sb rnd, sli hd, calc cmt; SH: med lt gy, gy ip, frm-sli hd, sli frm ip, sli calc, micmica, tr fn pyr; tr LS/ calc cxis

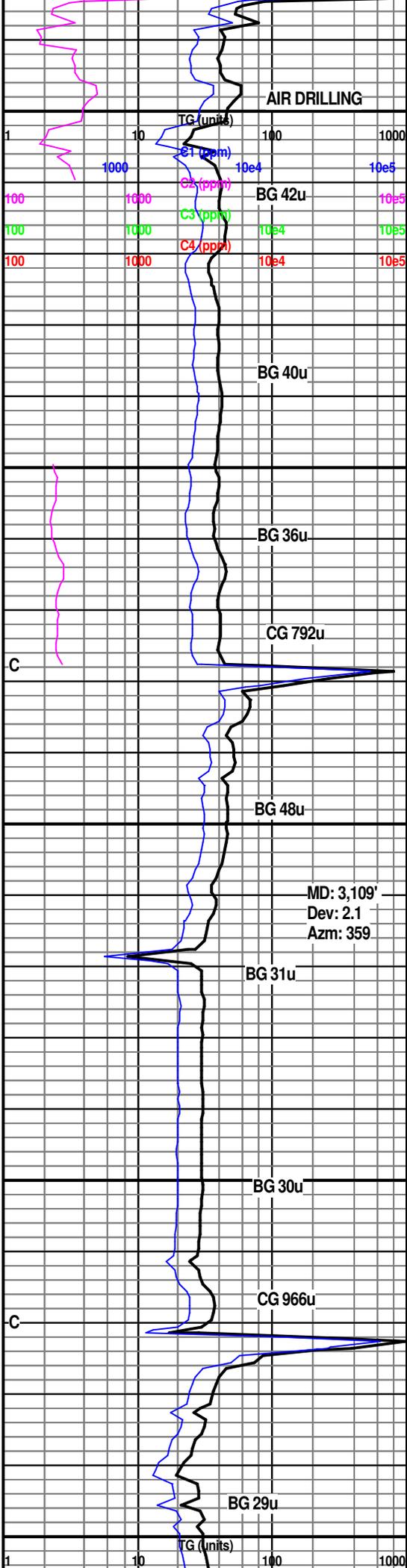
SLTST: gy-med gy, lt gy ip, sli frm-frm, n-sli calc, micmica; SS; lt gy-gy, v fn gr, p-mod srt, sb ang-sb rnd, sli hd, calc/silc cmt

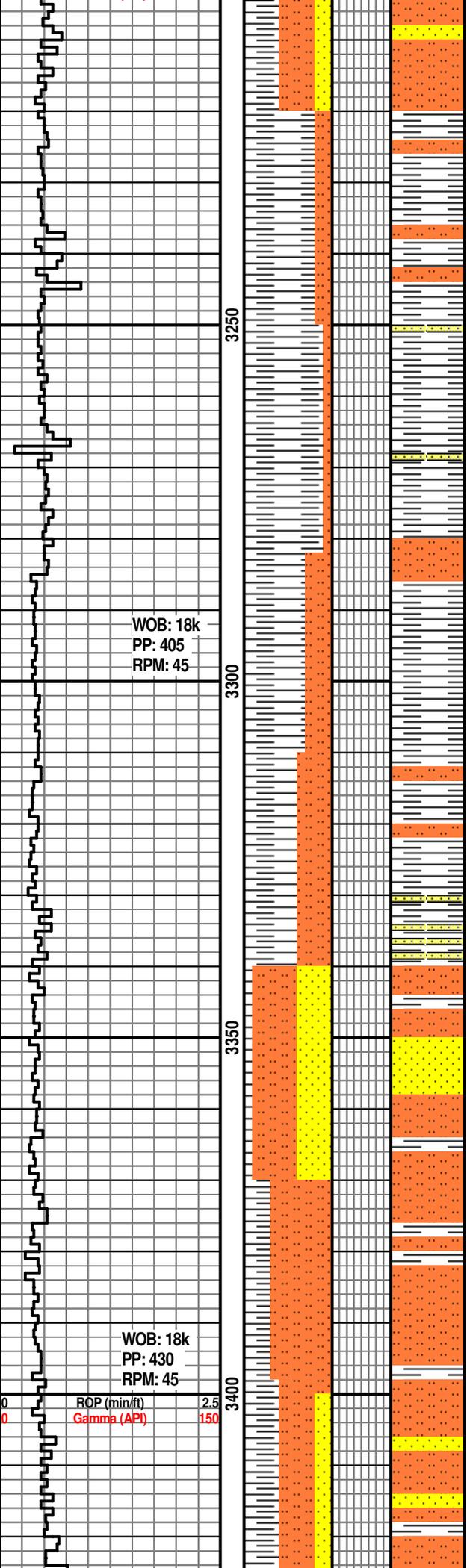
SLTST: lt gy-gy, sli frm-frm, n calc, micmica; SS: lt gy-gy, v fn grn, p-mod srt, sbang-srnd, sli hd, silc cmt; SH: med lt gy, gy ip, sli frm-frm, n calc, micmica

SLTST: lt gy-gy, sli frm-frm, n calc; SH: med lt gy, gy ip, frm-sli frm, n calc; SS: off wht-lt gy, v fn gr, p-mod srt, sb ang-ang, sli hd, silc cmt

SLTST: lt gy-gy, sli frm-frm, n calc, fn pyr ip; SH: lt gy-gy, frm-sli frm, n calc; rr SS

SLTST: lt gy-gy, sli frm-frm, n-sli calc; SS: wht-lt gy, vf gr, p-mod srt, sb ang-sb





rnd, sli hd, sli/calc cmt; SH: med lt gy, gy ip, sli frm- frm, n calc

SH: lt-med gy, gy ip, sli frm- frm, n calc, micmica; SLTST: lt gy-gy, sli frm- frm, n-sli calc, micmica, f pyr ip

SH: lt-med gy, gy ip, sli frm- frm, n calc, micmica, slty, v slty ip; SLTST: lt gy-gy, sli frm- frm, n-sli calc, micmica, f pyr ip

SH: lt gy-gy, dk gy ip, sli frm- frm, n cal, micmica, slty, v slty ip; SLTST: med-dk gy, sli frm- frm, n-sli calc, micmica, f pyr ip

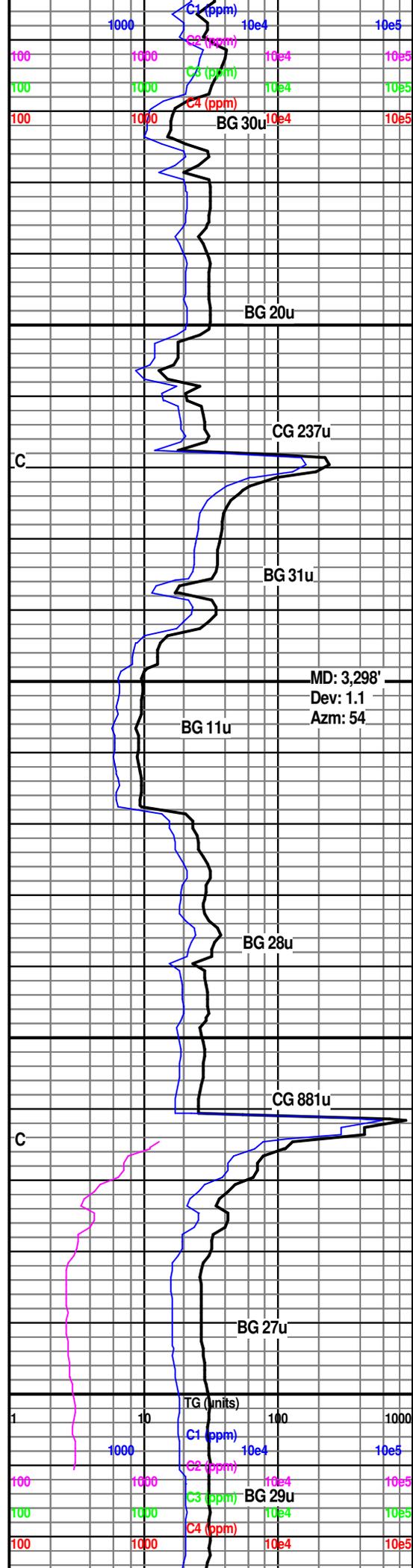
SH: lt gy-gy, sli frm- frm, n calc, micmica, slty, v slty ip; SLTST: lt- med gy, dk gy ip, sli frm- frm, n-sli calc, micmica, f pyr ip

BALLTOWN SANDS TOP @ 3,340'MD

SLTST: dk gy, lt gy, sli frm- frm, sli calc-calc, calc incl; SS: wht- off-wht, vf gr, p-mod srt, sb ang-sb rnd, sli hd, calc cmt; SH: med gy, sli frm- frm, n-sli calc; calc xls ip

SLTST: lt gy-gy, sli frm- frm, sli calc; SH: lt-med gy, sli frm- frm, n-sli calc

SLTST: lt gy-gy, sli frm- frm, sli calc-calc; SS: wht-off wht, vf gr, p-mod srt, sb ang-sb rnd, sli hd, calc cmt; SH: gy, sli frm- frm, n-sli calc; rr LS



1000 C1 (ppm) 10e4 10e5
1000 C2 (ppm) 10e4 10e5
1000 C3 (ppm) 10e4 10e5
1000 C4 (ppm) 10e4 10e5
BG 30u

BG 20u

CG 237u

BG 31u

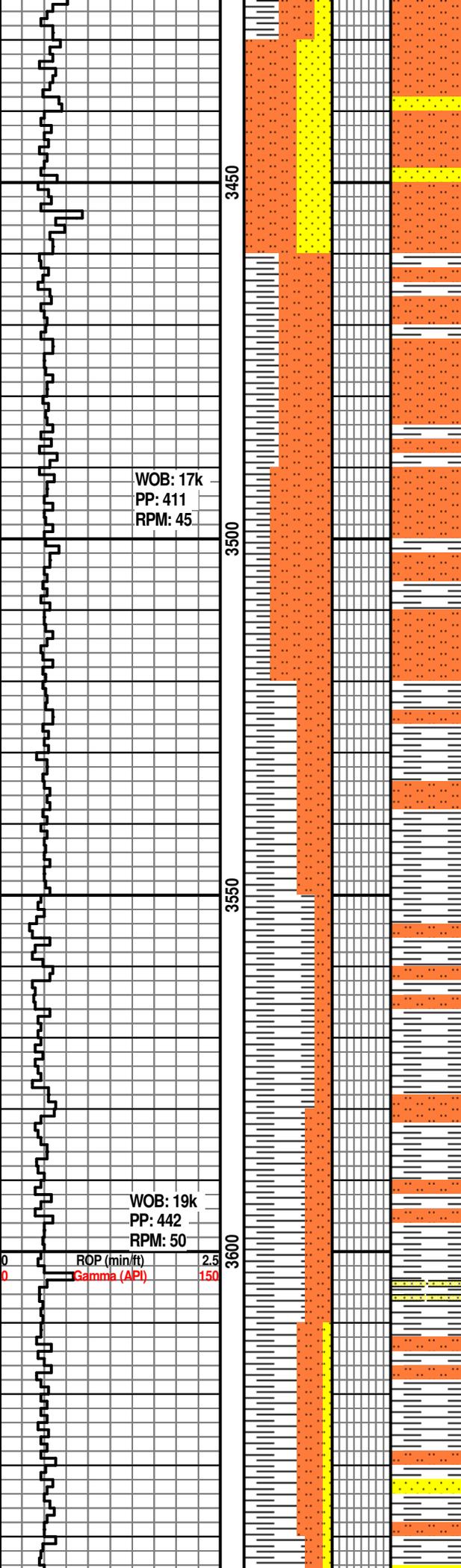
MD: 3,298'
Dev: 1.1
Azm: 54
BG 11u

BG 28u

CG 881u

BG 27u

TG (units) 100 1000
1000 C1 (ppm) 10e4 10e5
1000 C2 (ppm) 10e4 10e5
1000 C3 (ppm) 10e4 10e5
1000 C4 (ppm) 10e4 10e5
BG 29u



SLTST: lt gy-gy, sli frm- frm, sli calc-calc;
SS: wht-off wht, frm ip, p srt, sb ang, fri,
vf gr, calc cmt, arg, f pyr ip

SLTST: lt gy-gy, sli frm-frm, sli calc-calc,
micmica, tr f pyr; SH: gy-med gy, sli frm-
frm, n-sli calc

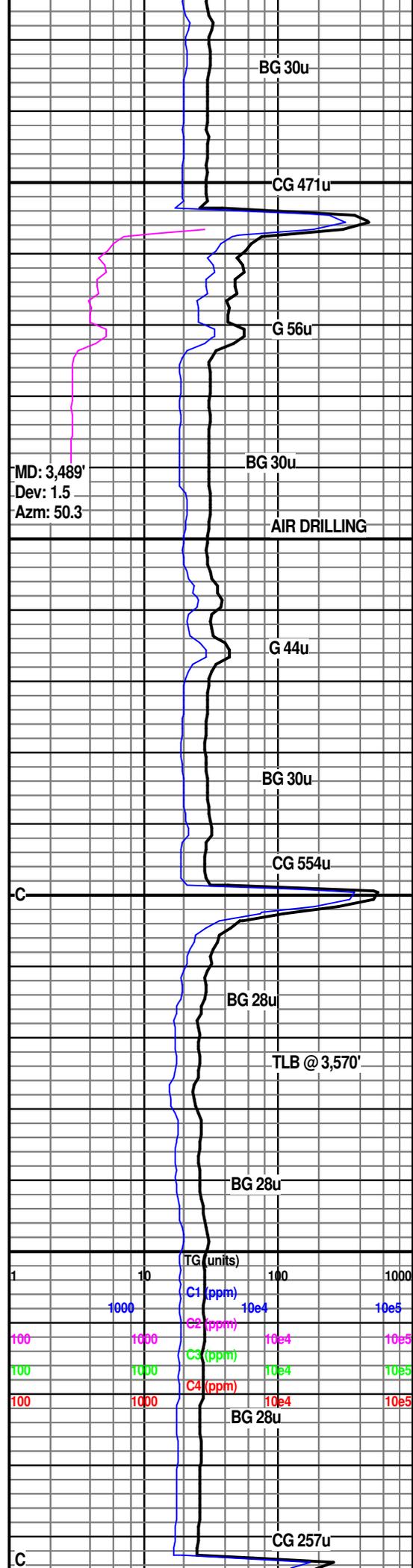
SLTST: lt gy-gy, sli frm- frm, sli calc-calc,
micmica, tr f pyr, calc incl ip; SH: gy-med
gy, sli frm- frm, n-sli calc, calc xls i

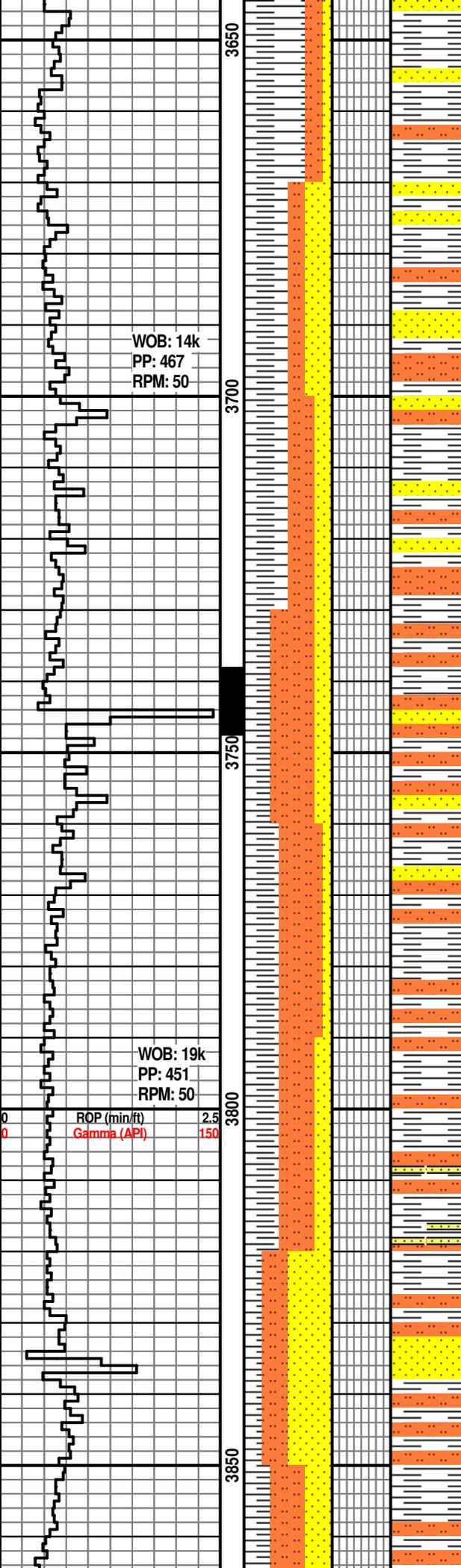
SH: gy-med gy, sli frm- frm, n-sli calc,
sly-v slty, micmica, f pyr; SLTST: lt
gy-gy, sli frm- frm, n calc, micmica, tr f
pyr

SH: gy, dk gy, blk, bnd, dull
SLTST: lt gy-gy, sli frm- frm, n calc

SH: gy, dk gy, blk, bnd, dull, tr SS;
SLTST: lt gy-gy, sli frm-frm, n calc

SH: gy, dk gy, blk, bnd, dull
SS: gy, dk gy, consol, vf gr, tr dk brn, sb
rnd-sb ang





WOB: 14k
PP: 467
RPM: 50

WOB: 19k
PP: 451
RPM: 50

ROP (min/ft) 2.5
Gamma (API) 150

SH: gy, dk gy, blk, bnd, dull
SS: gy, dk gy, consol, vf gr, tr dk brn, sb
rnd-sb ang, tr calc

SS: gy, dk gy, consol, vf gr, tr dk brn, sb
rnd-sb ang, tr calc
SLTST: lt gy-gy, sli frm-frm, n calc

SS: gy, dk gy, consol, vf gr, tr dk brn, sb
rnd-sb ang, tr calc
SLTST: lt gy-gy, frm-hd

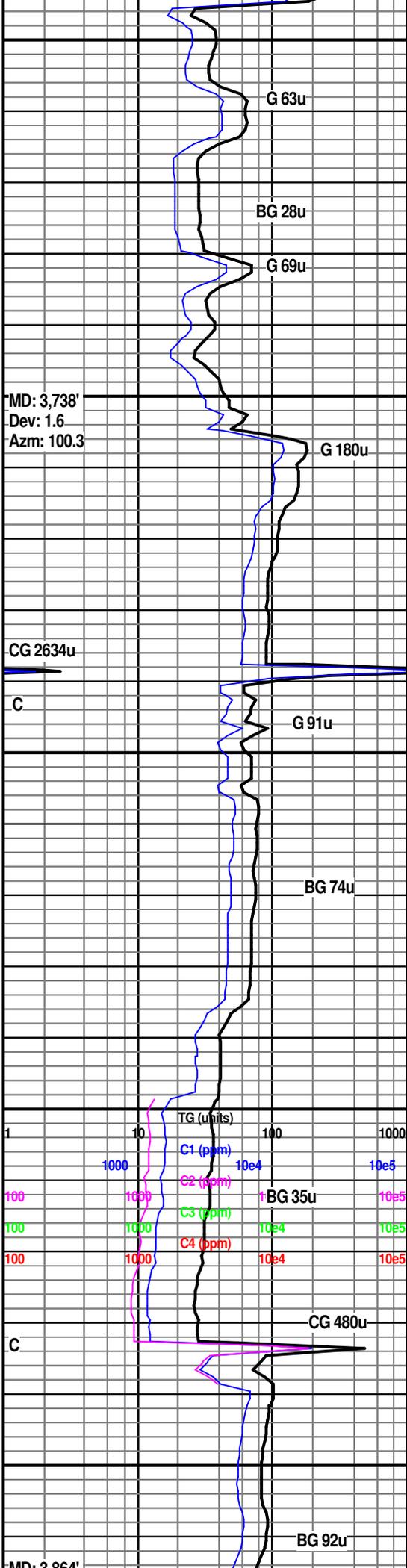
SLTST: gy, dk gy, tr dk rd-brn, hd, blk, tr
ply, slty

SH: gy, dk gy, blk, bnd, dull
SS: gy, dk gy, consol, vf gr, tr dkbrn, sb
rnd, sb ang

SS: gy, dk gy, consol, vf gr, sb rnd-sb
ang, tr calc
SLTST: gy-lt gy, frm-hd

SS: gy, lt gy, tr rk gry, wl consol, vf gr, sb
ang, sb rnd, tr rnd, vit, tr sm, srt

SS: gy, dk gy, consol, vf gr, sb rnd-sb
ang, vit, SLTST: gy-lt gy, frm-hd



G 63u

BG 28u

G 69u

MD: 3,738'
Dev: 1.6
Azm: 100.3

G 180u

CG 2634u

C

G 91u

BG 74u

TG (units) 1000 100 10000 100000
C1 (ppm) 1000 100 10000 100000
C2 (ppm) 1000 100 10000 100000
C3 (ppm) 1000 100 10000 100000
C4 (ppm) 1000 100 10000 100000

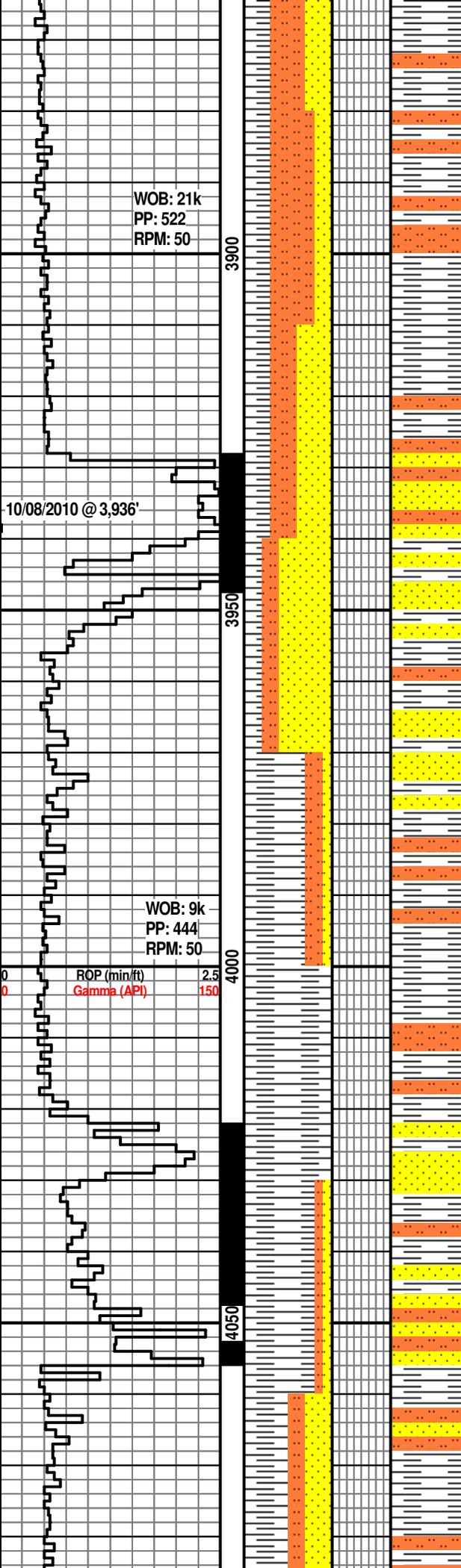
BG 35u

CG 480u

C

BG 92u

MD: 2,964'



ang, vit, SLTST: gy-lt gy, mfrhd

SH: gy, dk gy, blk, bnd, dull;
SS: gry, wl consol, vf gr, sb rnd, sb ang
vit, tr sm

SS: gy, v lt gy, wl consol, vf gr, sb ang-sb
rnd, tr, sm, vit, srt, sil cmt

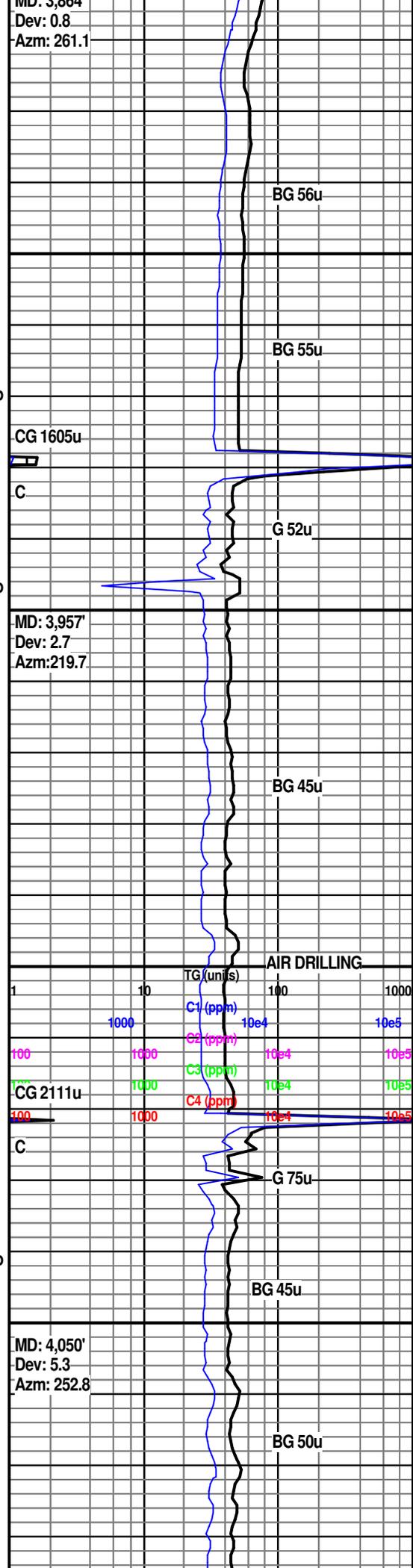
SS: gy, v lt gy, wl consol, vf gr, sb ang-sb
rnd, sm, vit, srt, sil cmt

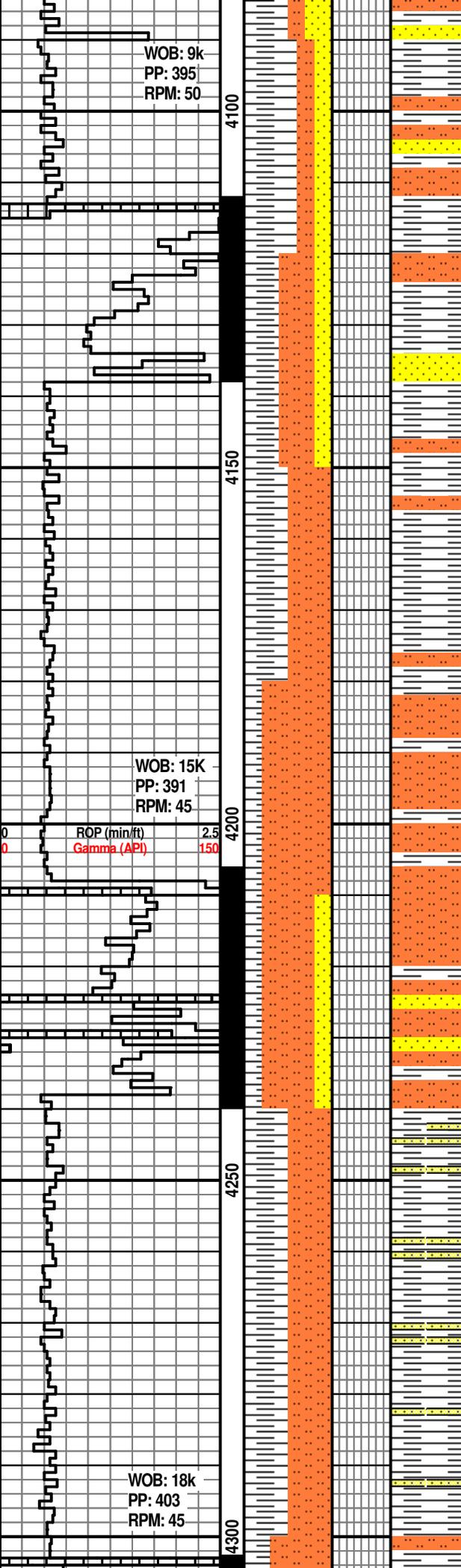
SH: gy, dk gy, m frm-hd, blk, bnd, dull;
SLTST: gy-lt gy, frm-hd

SH: gy, dk gy, sli frm-hd, blk, bnd, dull

SLTST: gy-lt gy, frm-hd
SS: gy, v lt gy, wl consol, vf gr, sb ang-sb
rnd, sm, vit, srt, sil cmt

SS: dk gy, dk rd brn, wl consol, vf gr, sb
ang, tr sb rnd, vit, sm, wl srt, tr arg





SS: dk gy, dk rd brn, wl consol, vf gr, sb ang, tr sb rnd, vit, sm, wl srt, tr arg

SS: dk gy, dk rd brn, wl consol, vf gr, sb ang-sb rnd, vit, sm, wl srt, arg

SLTST: med lt gy, sli frm-frm, sli calc micmica, f pyr ip; SH: med gy, sli frm-frm, n-sli calc

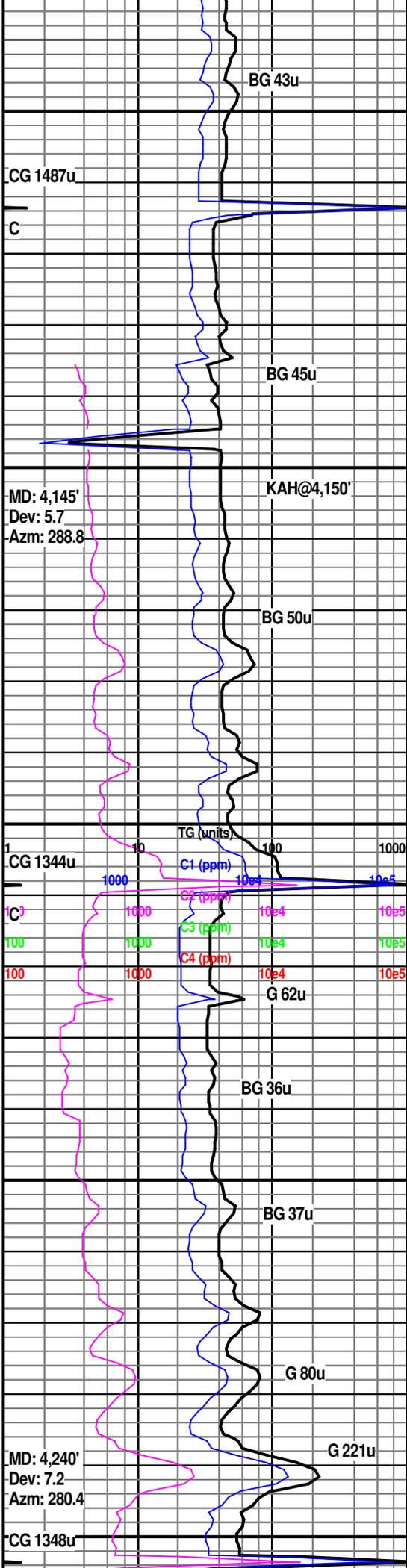
SLTST: med lt gy, sli frm-frm, amorph, sli calc micmica, f pyr ip; SH: med gy, frm-sli frm, amorph-blky, n-sli calc, slty-v slty

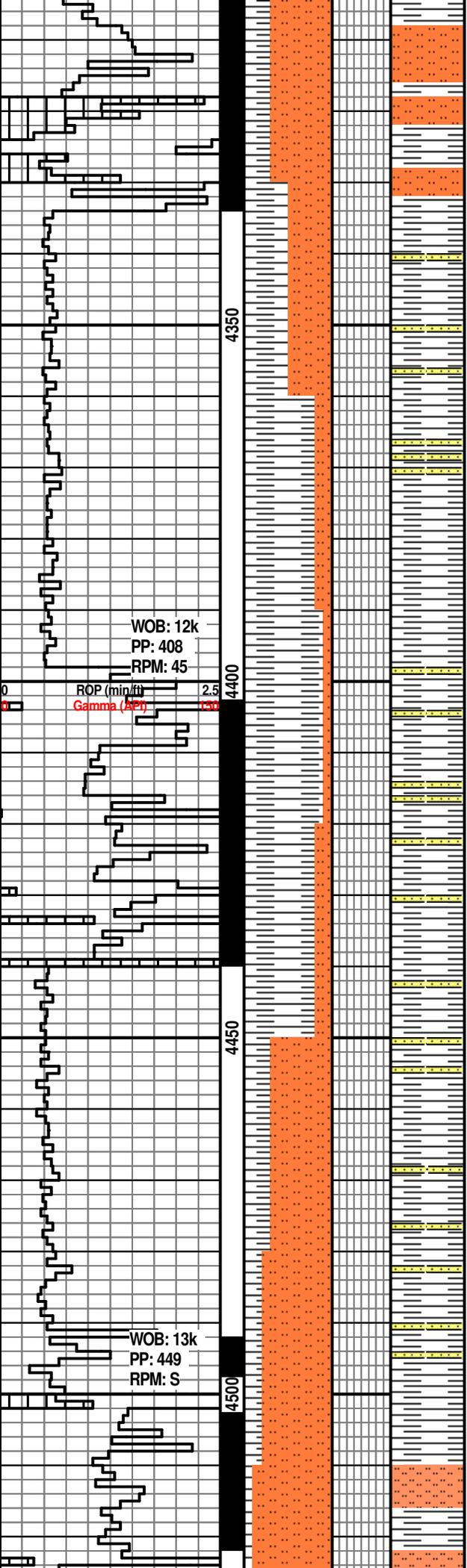
SLTST: gy-lt gy, sli frm-frm, blky-amorph, sli calc, micmica; SH: gy-lt gy, frm-sli hd, plty-blky, amorph ip, n calc, micmica ip, tr f pyr; SS: off wht-gy, sli hd, vf gr, p-mod srt, sb ang-sb rnd, calc cmt

SH: gy-lt gy, frm-sli hd, amorph, n calc, micmica ip, f pyr ip, slty-v slty; SLTST: gy-lt gy, frm-sli frm, amorph-blky, n calc, micmica

SH: gy-lt gy, sli hd-hd, amorph, blky ip, n calc, micmica ip, f pyr ip, slty-v slty; SLTST: gy-lt gy, hd, sli hd, v hd ip, amorph, n calc, micmica

SLTST: med gy, prl-brn ip, hd-v hd, sli hd





ip, blk-orph, n-sli calc, calc ip, micmica, f pyr; SH: lt gy, sli hd-hd, blk-orph, n calc, micmica ip, f pyr ip, slty-v slty

SH: med-dk gy, lt gy ip, brn ip, sli hd, blk-orph, n calc, micmica ip, slty; SLTST: brn, prl-brn ip, med gy ip, sli hd-hd, amorph, platy-blky ip, sli calc, rr calc, micmica, f pyr

SH: gy, lt gy ip, frm-sli hd, amorph, n calc, micmica, slty, v slty ip; SLTST: brn ip, med gy ip, sli hd blk-orph, n calc, micmica, f pyr

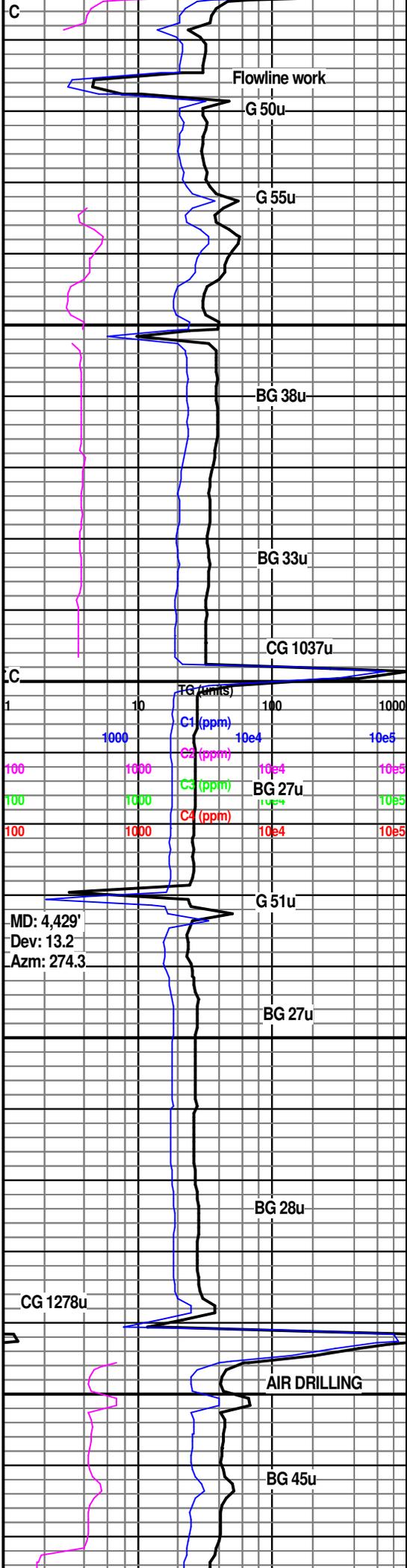
SH: gy- lt gy, frm-sli hd, pred amorph, platy-blky ip, n-v sli calc, micmica, slty-v slty; SLTST: med gy- gy, sli hd, blk, amorph ip, sli calc-calc, micmica, f pyr

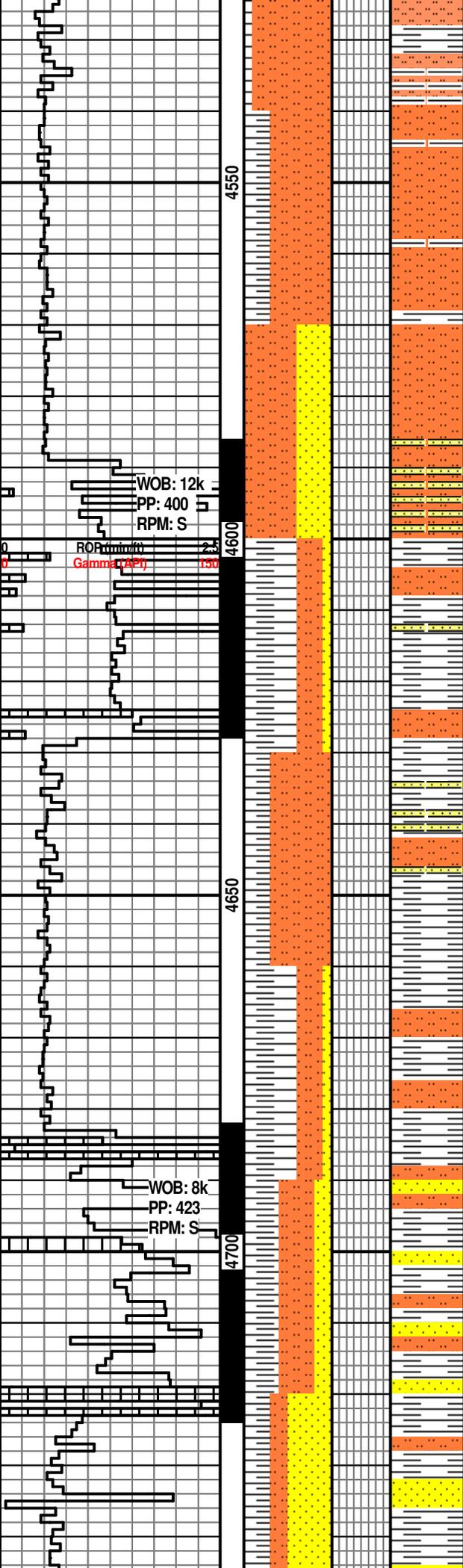
SH: gy, brn ip, sli frm-frm, amorph, n calc, micmica f pyr ip, slty ip; SLTST: med gy-gy, brn ip, sli frm-frm, blk-orph, pred n calc, sli calc, micmica, f-pp pyr ip

SLTST: brn, prl brn ip, sli frm-frm, blk-orph, tr plty ip, pred n calc, sli calc, micmica, f-pp pyr ip; SH: gy-lt gy, sli frm-frm, plty-amorph, tr blk, n calc, micmica, f pyr ip, slty ip

SLTST: brn-prl brn, sli hd, amorph, sli calc, n calc ip, micmica, f pyr ip; SH: lt gy, frm-sli hd, amorph, n calc

SLTST: brn, sli hd, amorph, n-v sli calc, micmica, f pyr ip; SH: lt gy, frm-sli hd, amorph, n calc, micmica, fn pyr ip, v slty





ip

SLTST: lt gy, v lt blu ip, frm-sli hd, sli frm ip, amorph, n-v sli calc, micmica, f pyr ip; SH: lt gy, sli hd-hd, amorph, blk ip, n calc, slty, v slty ip

SLTST: gy-lt gy, sli frm-frm blk-amorph, sli calc-calc, micmica, f pyr; SS; v lt gy-gy, v-f gr, med gr ip, pred p srt, m-w srt ip, sb rnd-sb ang, rnd ip, sli hd-hd, calc cmt

SH: lt gy, sli frm-frm, sli hd ip, plty-blky, n calc, slty; SLTST: gy-lt gy, frm-sli frm, blk, n-sli calc; tr SS; gy, v f gr, m-p srt, sb rnd-sb ang, sli hd, silc cmt

SLTST: gy-lt gy, brn ip, frm-sli hd, blk-amorph, n calc, sli calc ip; SH: lt gy, sli frm-frm, sli hd ip, plty-blky, n calc, slty

SLTST: gy-lt gy, brn ip, frm-sli hd, blk-amorph, n calc, sli calc ip; SH: lt gy, sli frm-frm, sli hd ip, plty-blky, n calc, slty

SS: lt gy, consol, vf gr, sb rnd, tr sb ang, vit, sm, srt, tr arg
SLTST: dk gy, frm-v hd, vf gr

SS: lt gry, consol, vf gr, sb rnd, tr sb ang, vit, sm, srt, tr arg
SLTST: dk gy, frm-v hd, vf gr

MD: 4,523'
Dev: 15.0
Azm: 74.3

BG 39u

BG 38u

CG 1023u

C

BG 31u

MD: 4,618'
Dev: 17.4
Azm: 270.4

BG 32u

BG 33u

CG 1523u

C

TLB @ 4690

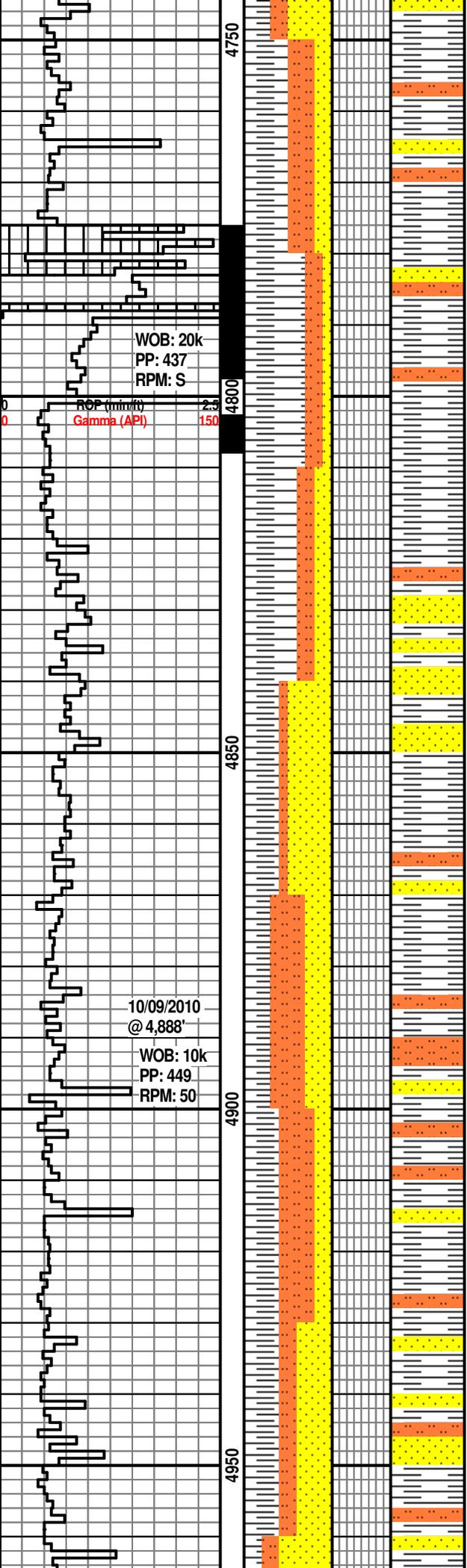
BG 38u

G 57u

MD: 4,714'
Dev: 19.4
Azm: 267.0

G 57u

BG 37u



SH: gy, dk gy, tr lt gy, m frm-v hd, amorph, blk, bnd, dull, tr rthy

SH: gy, dk gy, tr lt gy, m frm-v hd, amorph, blk, tr plty, bnd, dull, tr rthy, pyr inc

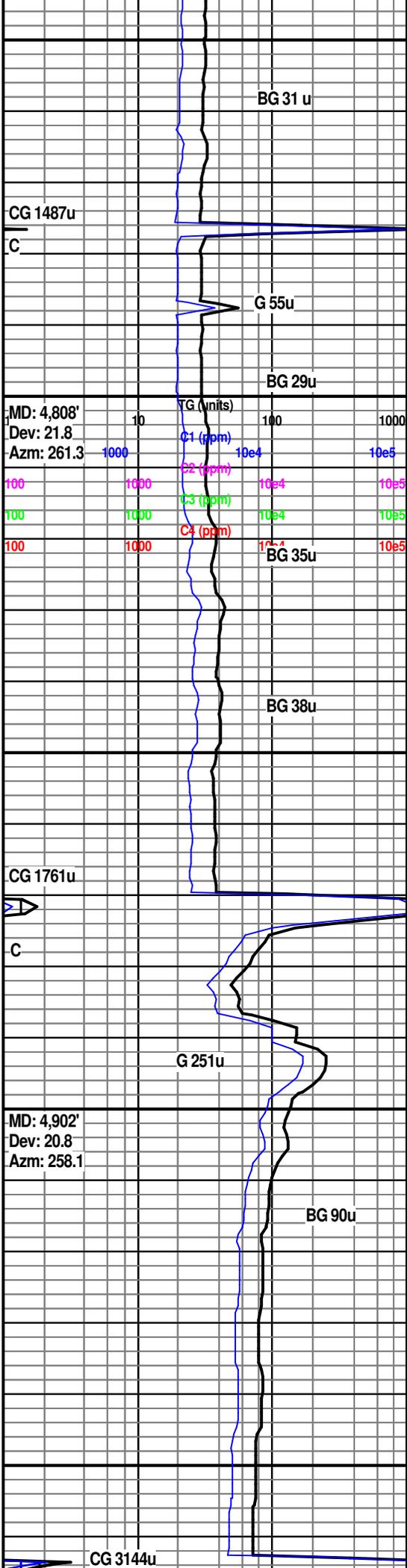
SH: gy, tr lt gy, sft-frm, blk, tr plty, bnd, dull, tr rthy

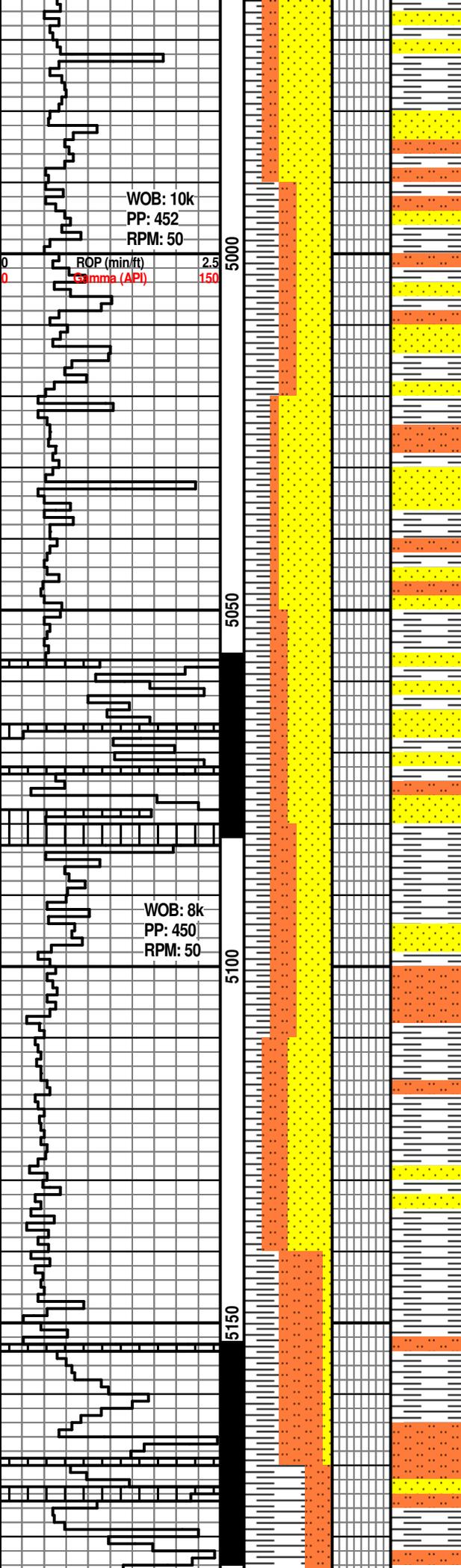
SS: gy, lt gy, wl consol, vf gr, sb ang, sb rnd, sm, srt

SLTST: gy-lt gy- brn, frm-sli hd, blk, n calc, SH: lt gy, frm-sli frm, plty-blk, n calc

SS: gy, lt gy, wl consol, vf gr, sb ang, sb rnd, sm, srt
SLTST: dk gy, tr gy-brn, m consol, blk, slty

SS: gy, lt gy, wl consol, vf gr, sb ang, sb rnd, sm, srt





SS: gy, lt gy, wl consol, vf gr, sb ang, sb rnd, sm, srt
SLTST: dk gy, tr gy-brn, m consol, blk, slty

SS: gy, lt gy, wl consol, vf gran, sb ang, sb rnd, sm, vit, srt

SS: ry, lt gy, wl consol, vf gran, sb ang, sb rnd, sm, vit, srt

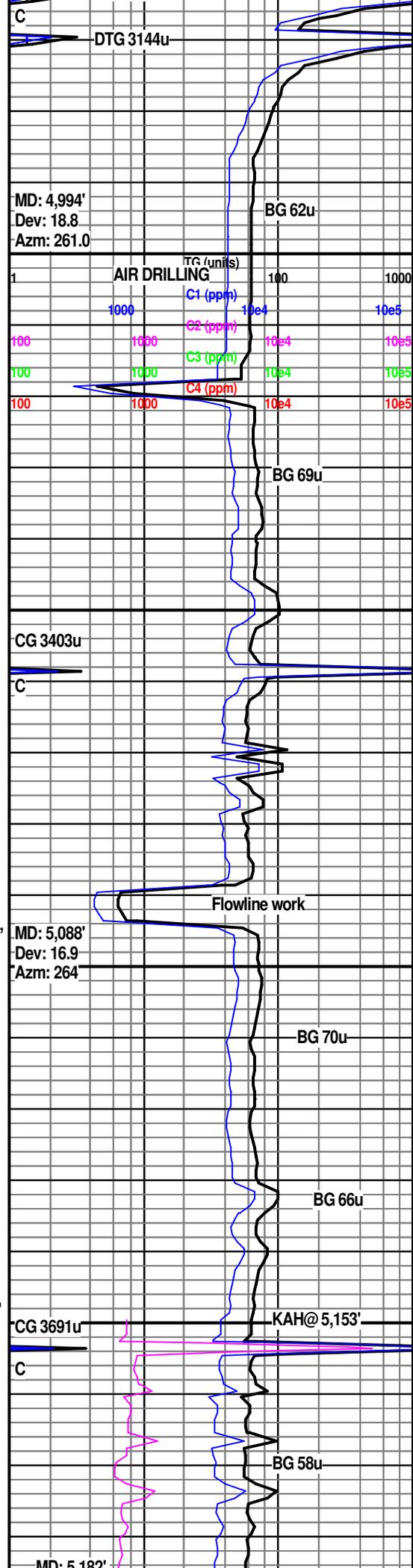
SS: gy, lt gy, wl consol, vf gran, sb ang, sb rnd, sm, vit, srt

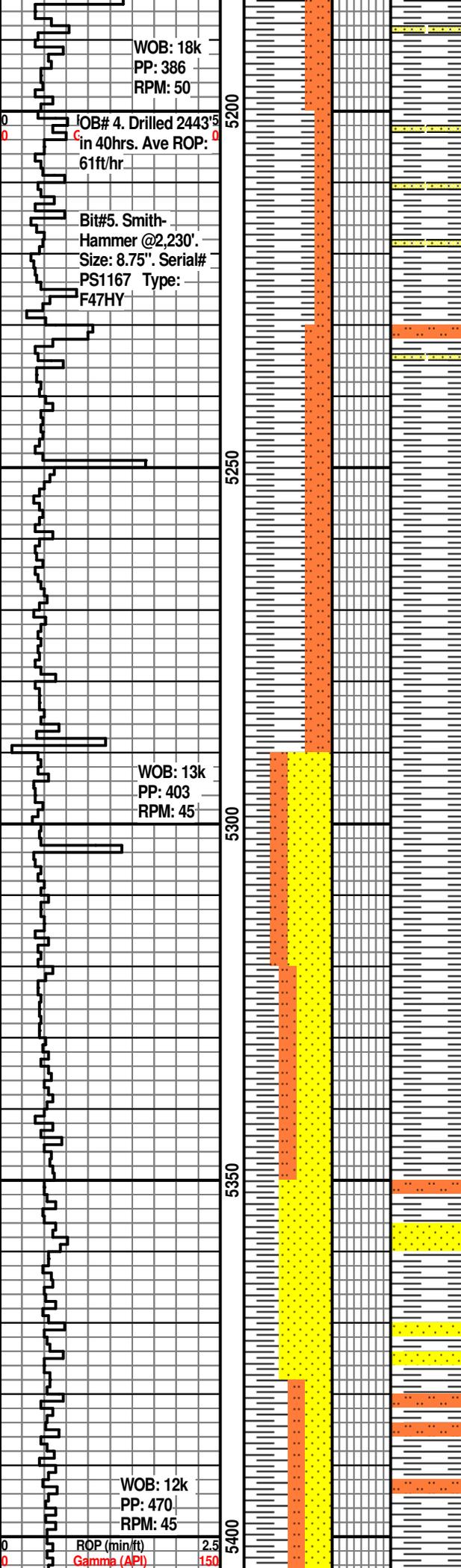
SS: gy, lt gy, wl consol, vf gran, sb ang, sb rnd, srt; SLTST: dk gy, m consol, blk, grny

SS: gy, lt gy, wl consol, vf gran, sb ang, sb rnd, srt; SLTST: dk gy, dk red-brn, m consol, blk, grny

SLTST: gy-ltgy, frm-sli hd amorph, n calc, micmica; SH: ltgy, gy ip, frm-sli frm, plty, n calc; tr SS: gy, v-f grn, p-m srt, sbang-sbrnd, sli hd-frm, silc cmt

SH: ltgy, gy ip, frm-sli frm, plty-blky, amorph ip, n calc, micmica, tr fn pyr; SLTST: gy-ltgy, frm-sli hd amorph, n-vry





WOB: 18k
PP: 386
RPM: 50

OB# 4. Drilled 2443'
in 40hrs. Ave ROP:
61ft/hr

Bit#5. Smith-Hammer @2,230'.
Size: 8.75". Serial#
PS1167 Type:
F47HY

WOB: 13k
PP: 403
RPM: 45

WOB: 12k
PP: 470
RPM: 45

ROP (min/ft) 2.5
Gamma (API) 150

SLTST: gy-ltgy, frm-sli frm, amorph, n calc, micmica

SH: ltgy, gy ip, frm-sli frm, plty-blky, amorph ip, n calc, micmica, tr frn pyr, slty ip; SLTST: gy-ltgy, frm-sli hd, hd, amorph, n-vry sli calc, micmica, pp pyr ip

SH: ltgy, gy ip, frm-sli frm, plty-blky, amorph ip, n calc, micmica, slty ip; SLTST: gy-ltgy, sli hd-hd, amorph, n calc, micmica, pp pyr ip

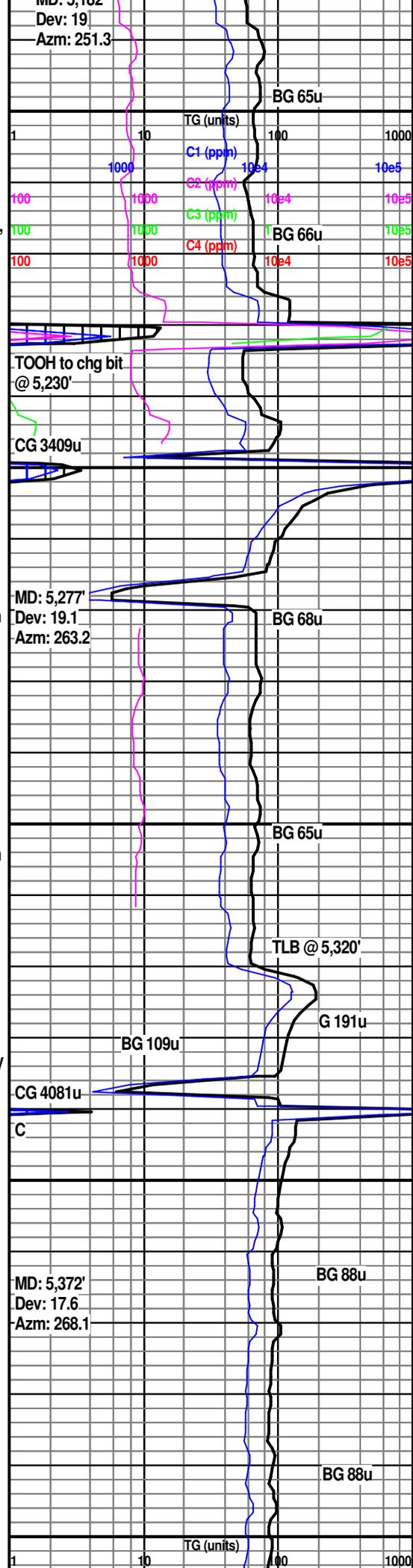
SH: ltgy-gy, frm-sli frm, plty-blky, amorph ip, n calc, micmica, slty ip; SLTST: gy-ltgy, sli hd-frm, amorph, sli calc-calc, micmica

SH: ltgy-gy, frm-sli frm, plty-blky, amorph ip, n calc, micmica

SS: gy, lt gy, wl consol, vf gran, sb ang, sb rnd, tr rnd, sm, srt, sil cmt; SH: ltgy, gy ip, frm-sli frm, plty-blky, amorph ip, n calc, micmica, slty ip

SS: gy, lt gy, wl consol, vf gran, sb ang, sb rnd, tr rnd, sm, srt, sil cmt

SH: gy, lt gy, occ dk Gy, m frm, tr sft, blky, tr plty, rthy, dull



MD: 5,182
Dev: 19
Azm: 251.3

BG 65u

TG (units) 1 10 100 1000

C1 (ppm) 10e4 10e5

C2 (ppm) 10e4 10e5

C3 (ppm) 10e4 10e5

C4 (ppm) 10e4 10e5

BG 66u

TOOH to chg bit @ 5,230'

CG 3409u

MD: 5,277
Dev: 19.1
Azm: 263.2

BG 68u

BG 65u

TLB @ 5,320'

G 191u

BG 109u

CG 4081u

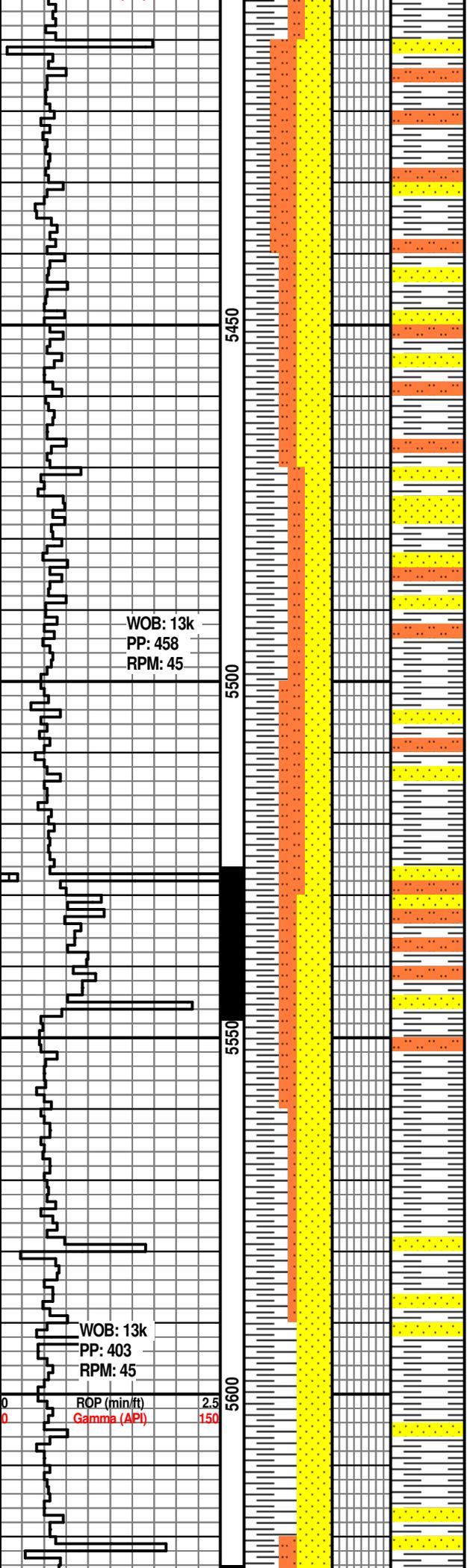
C

BG 88u

MD: 5,372
Dev: 17.6
Azm: 268.1

BG 88u

TG (units) 1 10 100 1000



SLTST: dk gy,gy, tr blk, frm-hd, blk, arg, arg, sity; SS: lt gry, v wl consol, vf gran, sb ang, sb rnd, wl srt, sil cmt

SS: lt gy, gy, v wl consol, vf gran, sb ang, sb rnd, sm, tr vit, wl srt, sil cmt, arg

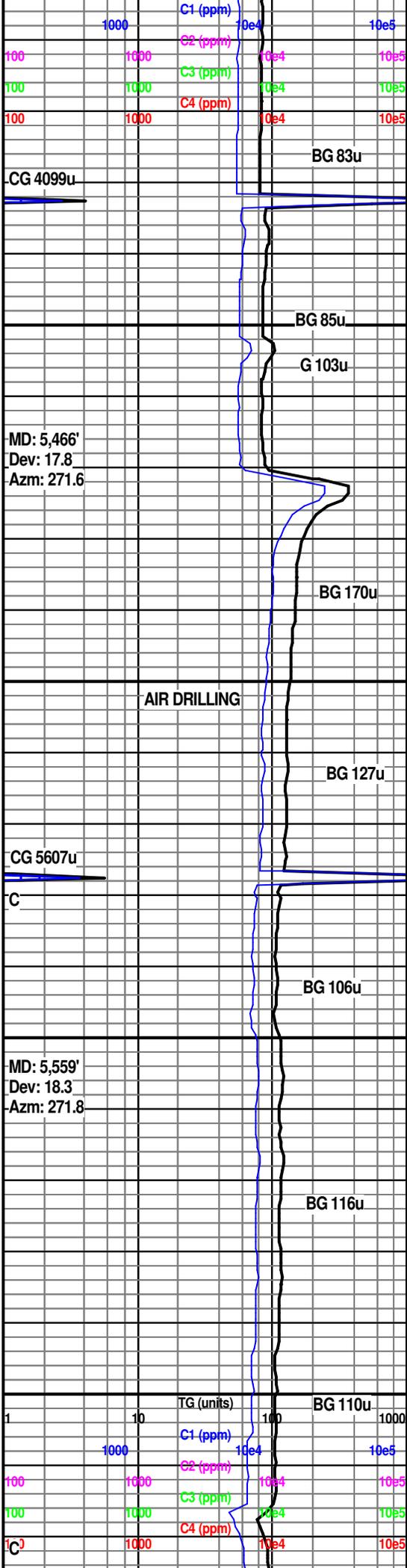
SH: gy, lt gy, tr dk gy, sft-frm, blk, amor, tr brit, bnd, dull, tr rthy, sm, n calc

SS: lt gy, gy, v wl consol, vf gran, sb ang, sb rnd, sm, tr vit, wl srt, sil cmt, arg

SH: gy, lt gy, tr dk gy, sft-frm, blk, amor, tr brit, rnd, dull, tr rthy, sm, n calc

SH: gy, lt gr, tr dk gy, sft-frm, blk, amor, tr brit, bnd, dull, tr rthy, sm, n calc

SS: lt gy, gy, v wl consol, vf gran, sb ang, sb rnd, sm, tr vit, wl srt, sil cmt, arg



BG 83u

BG 85u

G 103u

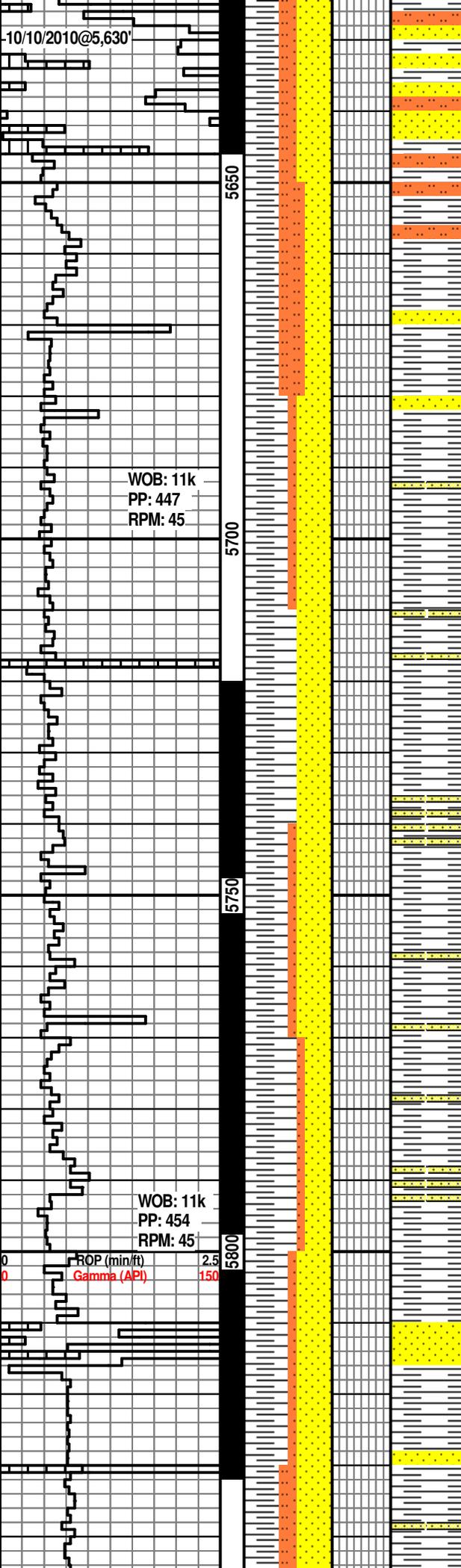
BG 170u

BG 127u

BG 106u

BG 116u

BG 110u



SS: lt gy, gy, consol-wl consol, vf gran, sb ang, sm, srt, sil cmt

BG 88u

SS: lt gy, gy, consol-wl consol, vf gran, sb ang, sm, srt, sil cmt, pyr
SLTST: dk gy, gy, tr blk, frm-hd, blk, arg, slty

BG 91u

SS: lt gy, gy, wl consol, vf gran, sb ang, sm, srt-wl srt, sil cmt, tr pyr

BG 91u

BENSON SANDS @ 5,712'

CG 5028u

SH: gy, lt gy, dk gry, tr brn, sft-hd, blk, ply, bnd, tr brit, rthy, dull, tr wxy, n calc, tr pyr

C

MD: 5,747'

Dev: 16

Azm: 267.7

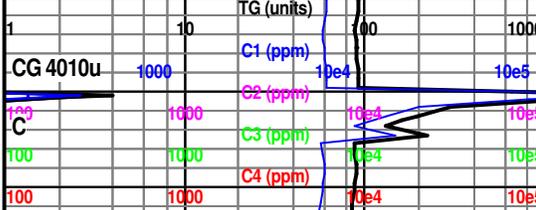
BG 91u

SS: lt gy, gy, wl consol, tr qtzt, vf gran, sb ang, sm, srt-wl srt, sil cmt, tr arg

SH: gy, lt gy, dk gy, sft-frm, blk, bnd, tr brit, rthy, dull, n calc

BG 92u

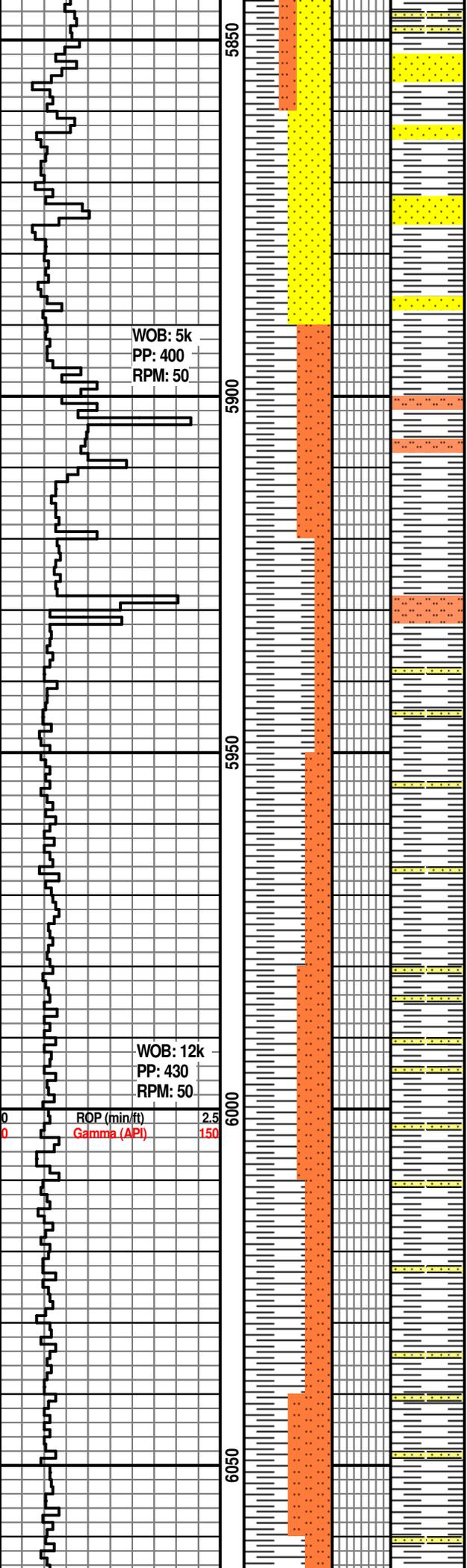
SS: lt gy, gy, wl consol, tr qtzt, vf gran, sb ang, sm, srt-wl srt, sil cmt, tr arg; SLTST: drk gy, gy, tr blk, frm-hd, blk, arg, slty



SS: lt gy, gy, wl consol, vf gran, sb ang,

MD: 5,842'

Dev: 17



sm, srt-wl srt, sil cmt, trpyr

SS: lt gy, gy, wl consol, vf gran, sb ang, sm, srt-wl srt, sil cmt

SH: ltgy, gy ip, frm-sli frm, plty, n calc; SLTST: gy-ltgy, frm-sli hd amorph, n calc, micmica

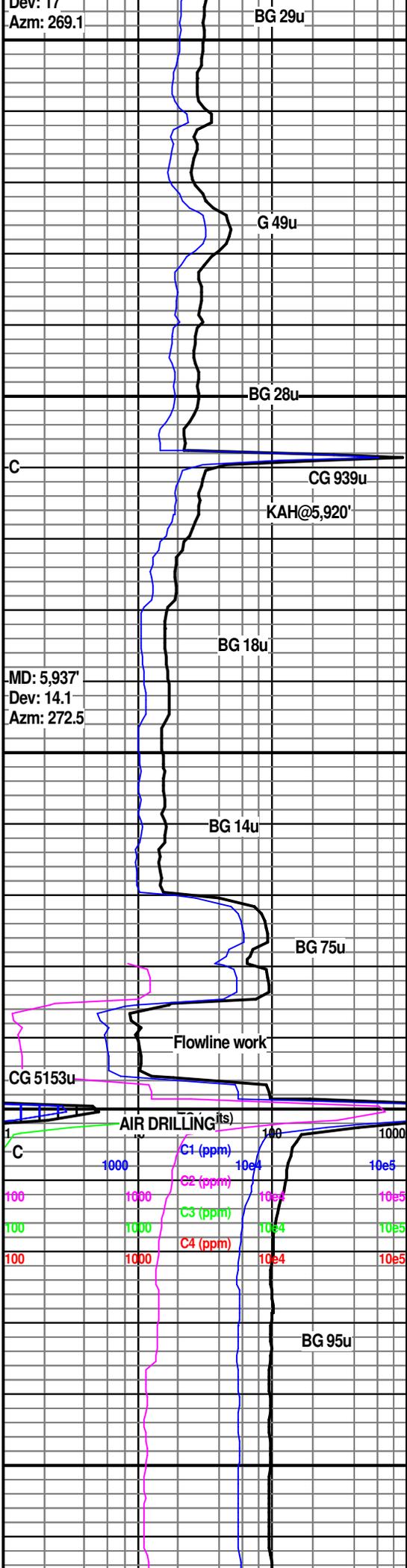
SH: ltgy-gy ip, tn ip, frm-sli frm, plty-blky, amorph ip, n calc, micmica; SLTST: gy-ltgy, frm-sli hd, amorph, blky ip, n calc, micmica, tr fn pyr

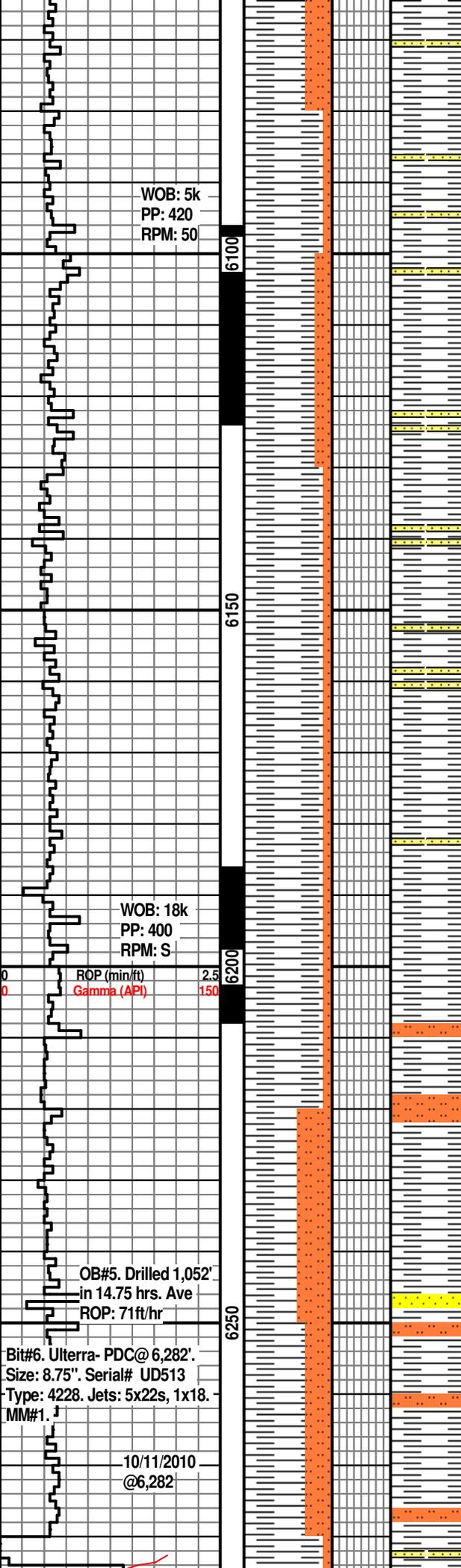
SH: ltgy-gy, med gy ip, tr dkgy, frm-sli frm, plty-blky, n calc, micmica; SLTST: gy-medgy, dkgy ip, sli hd, frm ip, amorph, n calc, micmica, fn pyr, rnd pyr nod ip

SH: gy-med gy, tr dkgy, frm-sli hd, plty-blky, n calc, micmica, Incl pyr ip; SLTST: med-dk gy, tr ltgy, sli hd, frm ip, amorph-blky, n calc, micmica, fn pyr, rnd pyr nod

SH: gy-med gy, frm-sli frm sli hd ip, plty-blky, n calc, micmica, fn pyr; SLTST: med-dk gy, sli hd, frm ip, amorph-blky, n calc, micmica, fn pyr, rnd pyr nod ip

SH: gy-med gy, frm-sli frm, plty-blky, n calc, micmica; SLTST: med-dk gy, sli hd, frm ip, amorph-blky, n calc, micmica, fn pyr





SH: gy-med gy, frm-sli frm, plty-blky, n calc, micmica, slty, v slty ip; SLTST: med gy- gy, dkgy ip, sli hd-frm, amorph, blky, n calc, micmica, fn pyr

SH: gy-med gy, frm-sli frm, plty-blky, n calc, micmica, slty; SLTST: med gy-gy, dkgy ip, sli hd-frm, amorph, blky, n calc, micmica, fn pyr

SH: med-dk gy, gy ip, frm-sli frm, plty-blky, n calc, micmica, slty; SLTST: med gy-gy, dkgy ip, sli hd-frm, amorph, blky, n calc, micmica, fn pyr

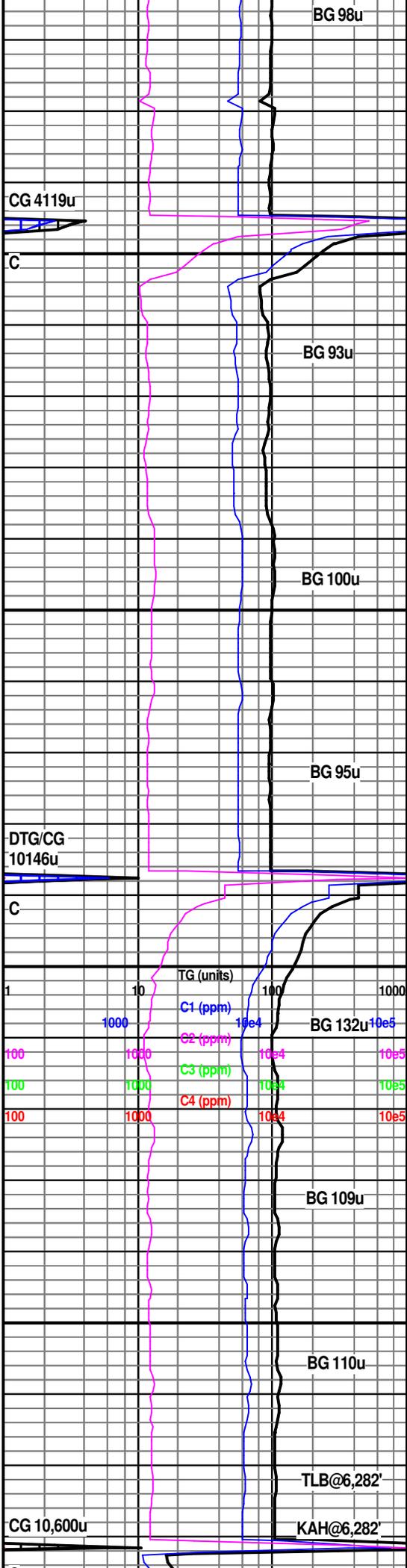
SH: medgy-gy, frm-sli frm, plty-blky, n-sli calc, micmica, slty, calc incl ip; SLTST: gy-ltgy, sli hd-frm, amorph-blky, n calc, micmica, fn pyr

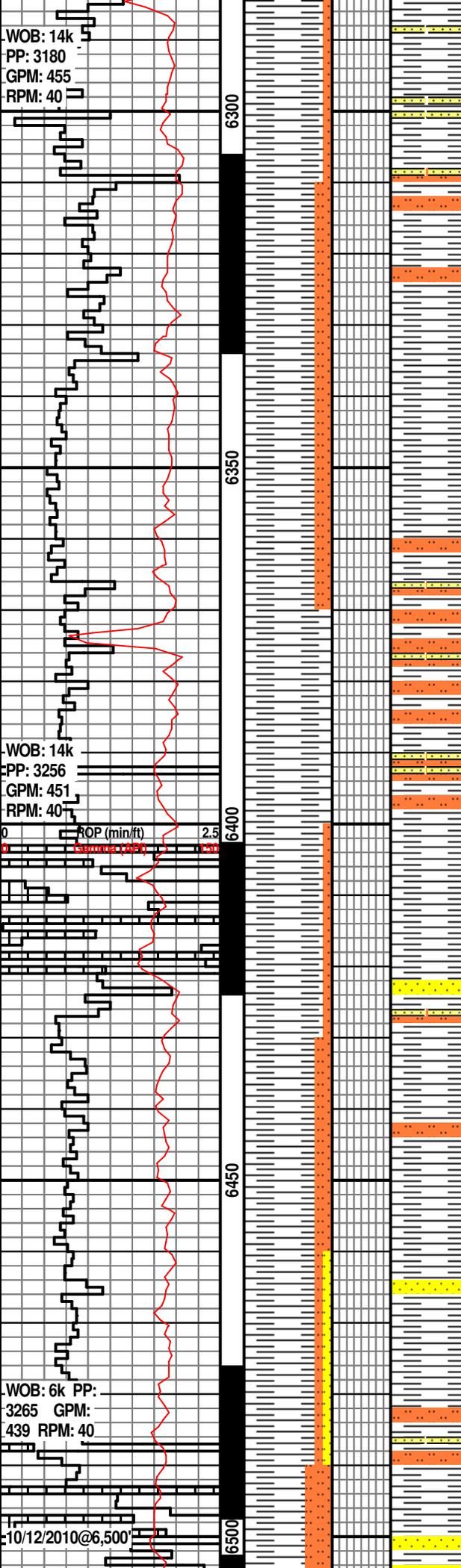
SH: medgy-gy, frm-sli frm, plty-blky, n-sli calc, micmica, slty, fn pyr incl ip; SLTST: gy, dkgy ip, sli hd-frm, amorph-blky, n calc, micmica

SH: medgy-gy, frm-hd, amorph, fn pyr ip; SLST: dkgy-blk, amorph-blky, micmica

SH: medgy-gy, sft-medfrm, plty-blky, slty; SLST: dkgy-blk, sft-medfrm, sub rnd-sub ang, v fn pyr ip

Switching to Oil-Based mud @ 6,282'MD





SH: medgy-gy-dkgy, vddkgy-blk ip, sft-medfrm, plty-blky, slty; SLST: dkgy-blk, sft-medfrm, sub rnd-sub ang, v fn pyr ip

SH: gy-dkgy, tr blk, sft-med frm, blk, slty; SLST: dkgy-blk, sft-med frm, sub rnd-sub ang

SH: gy-dkgy, tr blk, sft-med frm, blk, slty; SLST: dkgy-blk, sft-med frm, sub rnd-sub ang

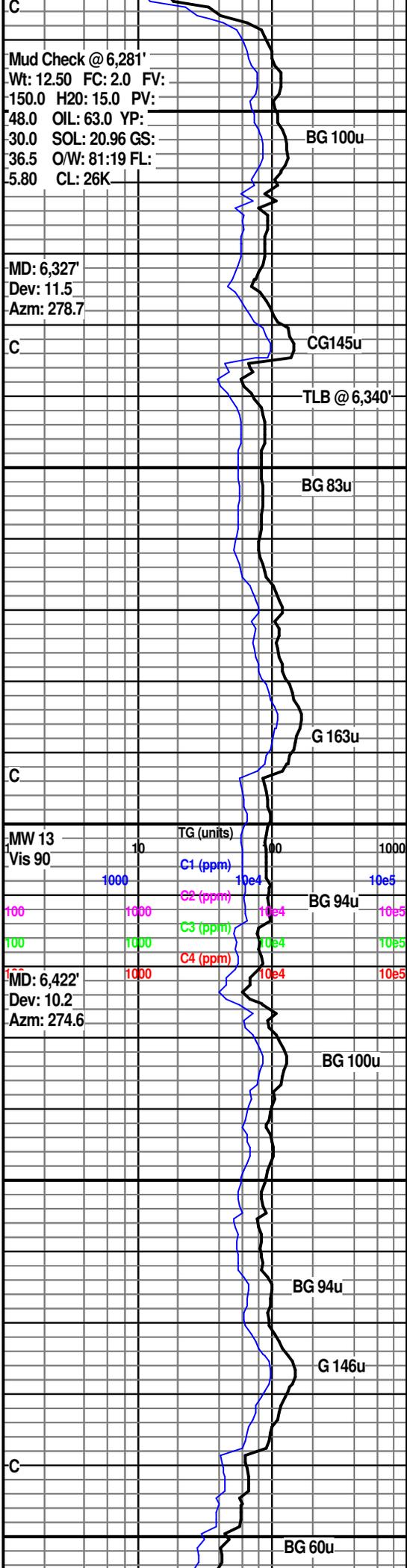
SH: gy, dk gy, tr blk, tr red-brn, sft, tr m frm, blk, amor, lam, bnd, rthy, dull, slty

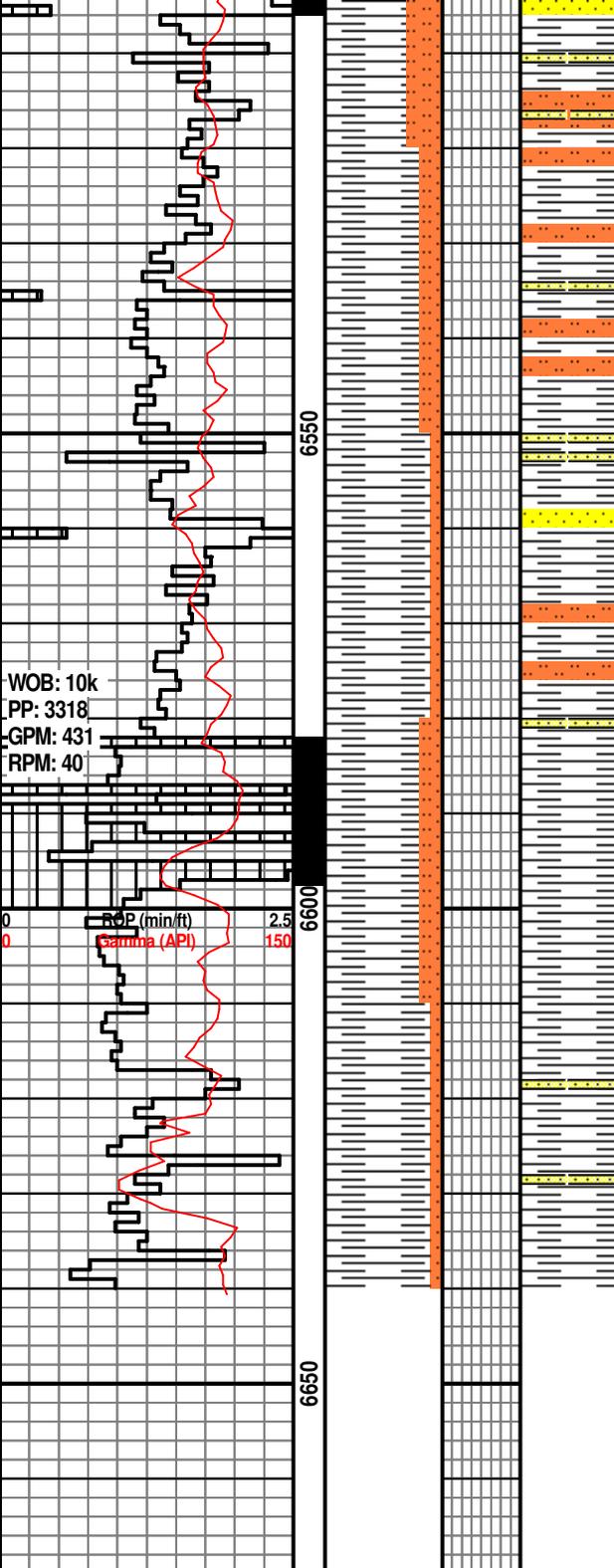
SH: gy, dk gy, tr blk, tr red-brn, sft-frm, blk, amor, lam, bnd, rthy, dull, slty

SLTST: dk gy, tr red, frm-hd, vf slty gran, sb ang

SH: gy, lt gy, dk gy, tr red, v sft-m frm, blk, amor, tr lam, bnd, tr brit, rthy, dull

SH: dk gy, gy, dk tn-brn, dk brn, m frm,





amor, blk, bnd, rthy, dull, sm, tr SS

SH: dk gy, gy, dk tn-brn, dk brn, sft-m frm, occ hd, amor, blk, bnd, rthy, dull, sm, tr SS

SH: dk gy, gy, dk brn, sft-m frm, amor, blk, bnd, rthy, dull, sm, tr SS

SH: medgy-gy, sft-slifrm, plty-blky, amorph ip, slty; SLST: med gy, sft-sli frm, frm ip, amorph

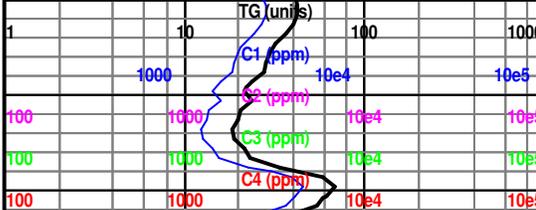
SH: dkgy-blk, sft-slifrm, flky-blky, fiss ip, silty ip; SLST: gy-dkgy, sft-sli hd, amorph

KO @ 6,641'

See Gould 2240H Horizontal log

MD: 6,517'
 Dev: 8.6
 Azm: 271.5

MW 13.3
 Vis 84
 KAH@6.580'
 C



G 58u

BG 40u

G 94u

G 72u

G 58u

BG 38u