

**Decollement  
Consulting  
Inc.**

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

**Well Name:** David Bender #1A  
**Location:** NW SW Section 12, T4N- R60W Morgan County, CO  
**License Number:** 05-087-08178-00  
**Spud Date:** 8 FEB 14  
**Surface Coordinates:** 1385' FSL, 600' FWL  
**Region:** Denver Basin  
**Drilling Completed:** 15 FEB 14

**Bottom Hole** xx  
**Coordinates:**  
**Ground Elevation (ft):** 4462' **K.B. Elevation (ft):** 4476'  
**Logged Interval (ft):** 550' **To:** 6585' **Total Depth (ft):** 6585'  
**Formation:** Pierre to Skull Creek  
**Type of Drilling Fluid:** Low Solids Non-Dispersed

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

#### **OPERATOR**

**Company:** Aurora Power Resources, Inc.  
**Address:** 6051 North Course, Suite 200  
Houston, Texas 77070

#### **GEOLOGIST**

**Name:** David Eastwood, Peter Vollmer, R. Michael Kelch  
**Company:** Decollement Consulting  
**Address:** 13300 Braun Road  
Golden Colorado  
80401

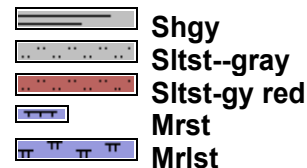
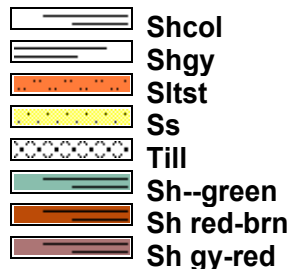
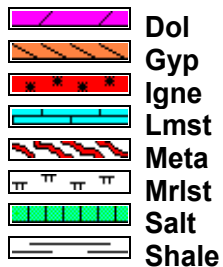
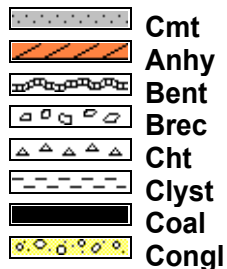
#### **Cores**

## DSTs

## Comments

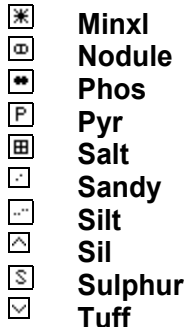
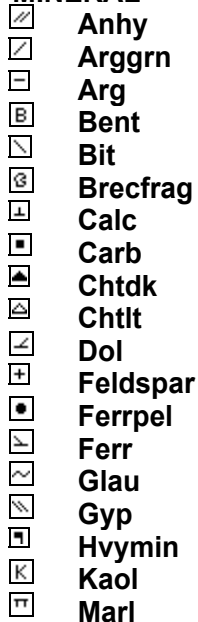
EDR Pason with Pason IR Gas Detection

## ROCK TYPES

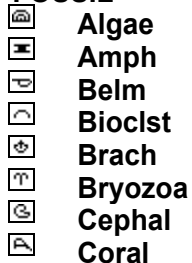


## ACCESSORIES

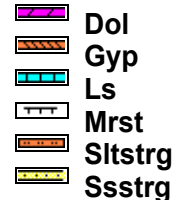
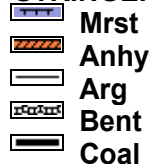
### MINERAL



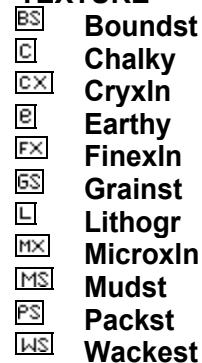
### FOSSIL



### STRINGER

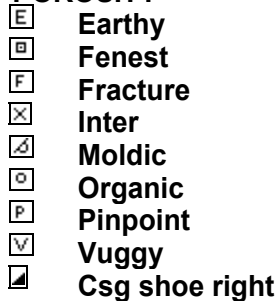


### TEXTURE



## OTHER SYMBOLS

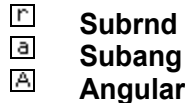
### POROSITY



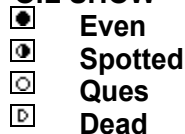
### SORTING



### ROUNDING



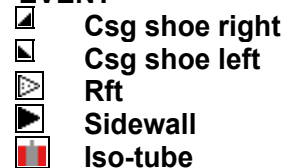
### OIL SHOW

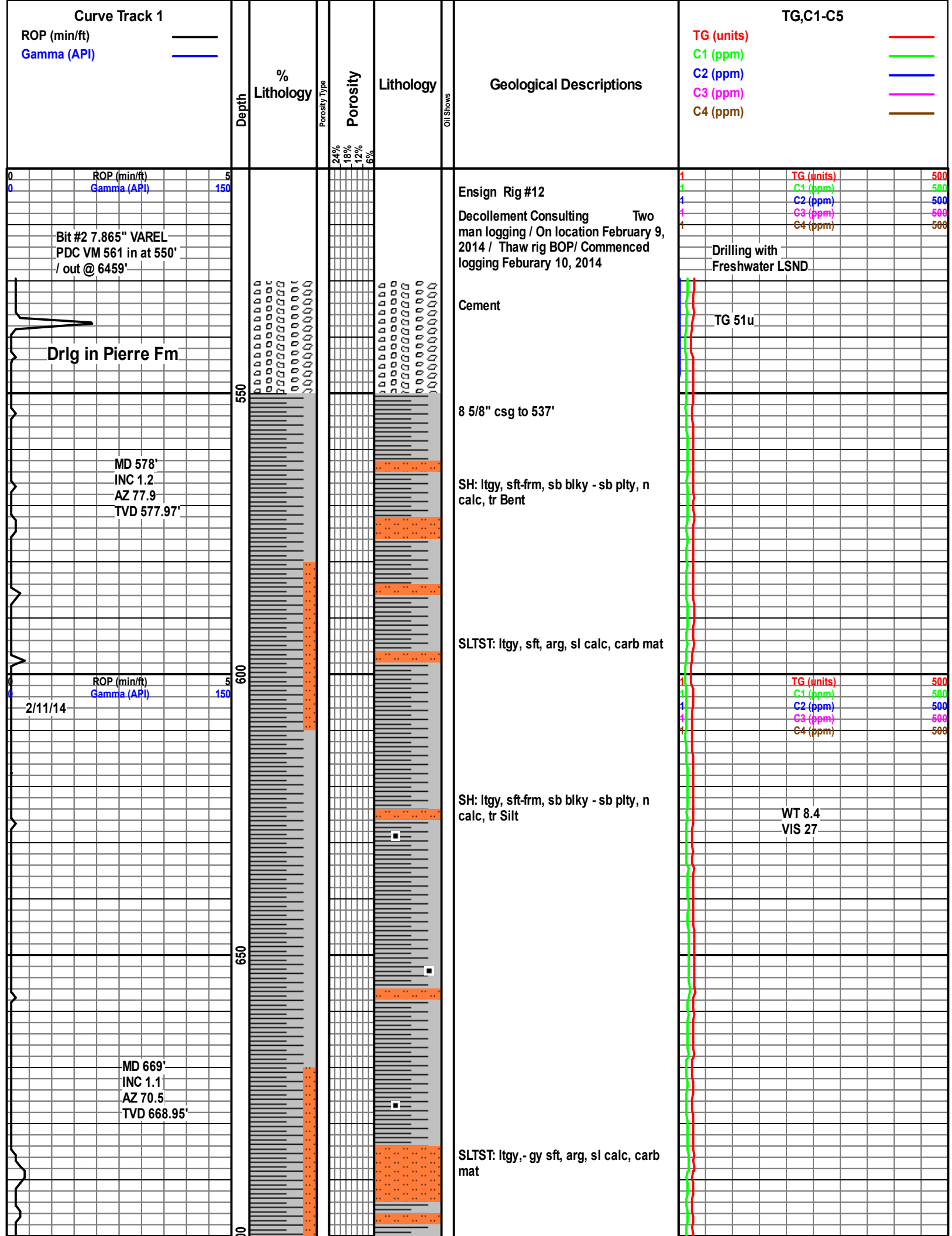


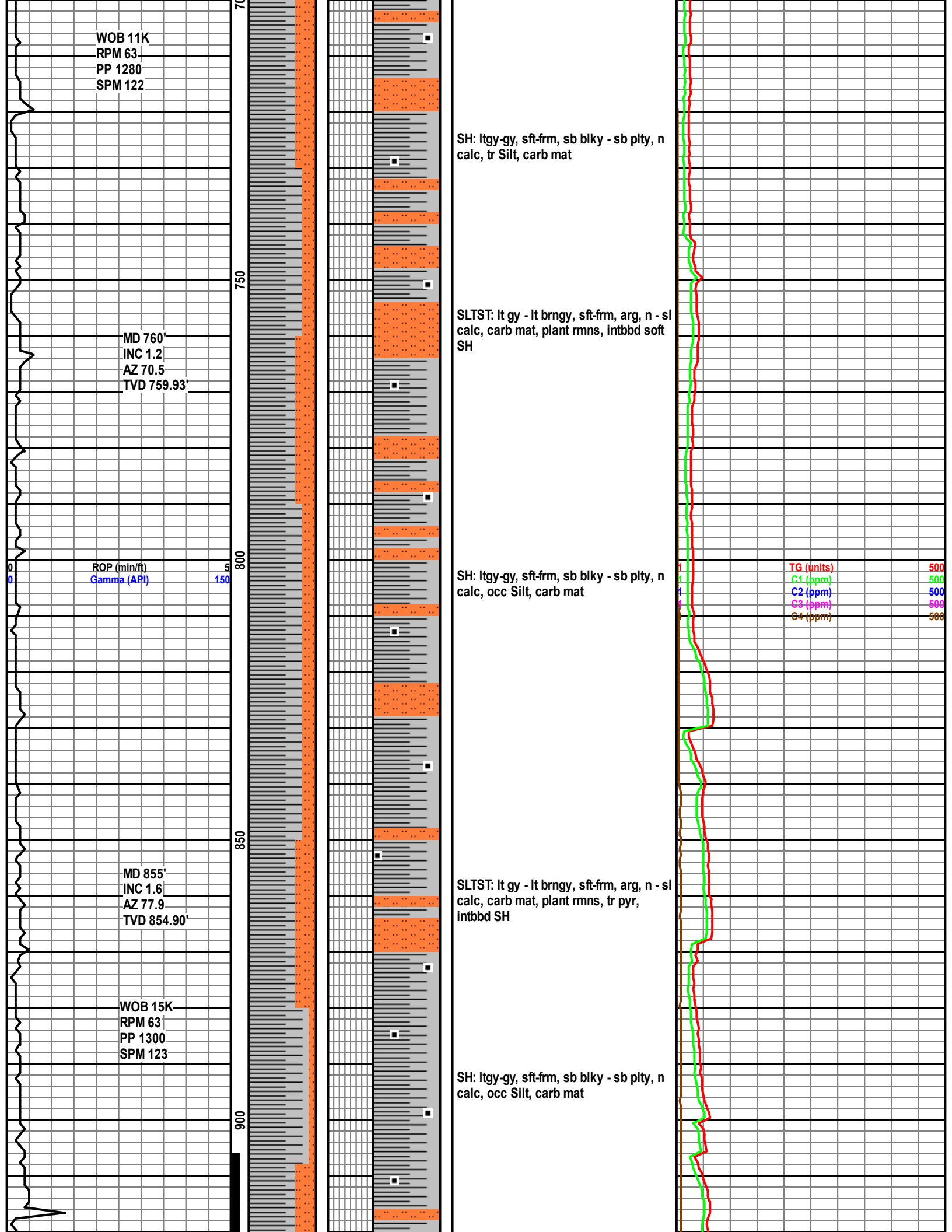
### INTERVAL

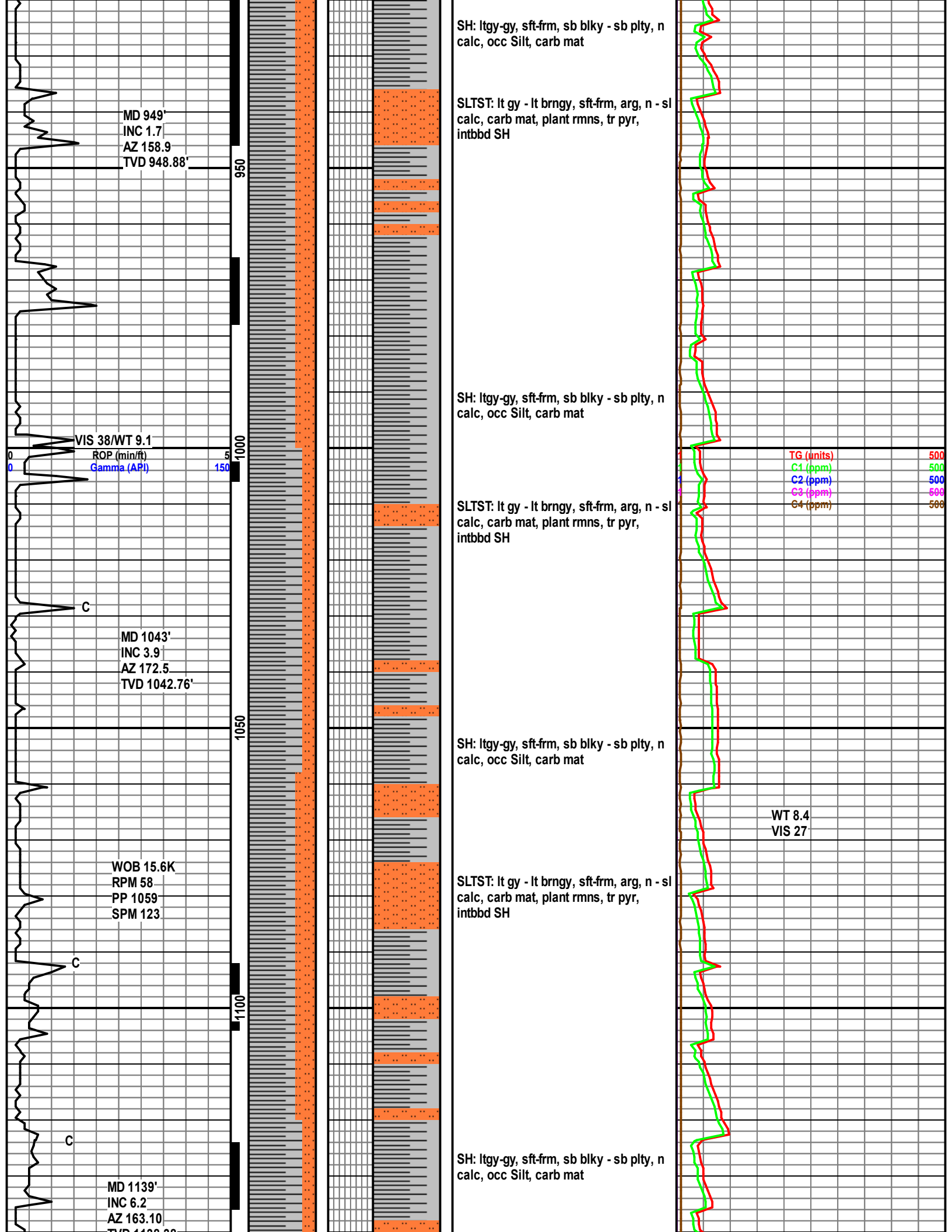


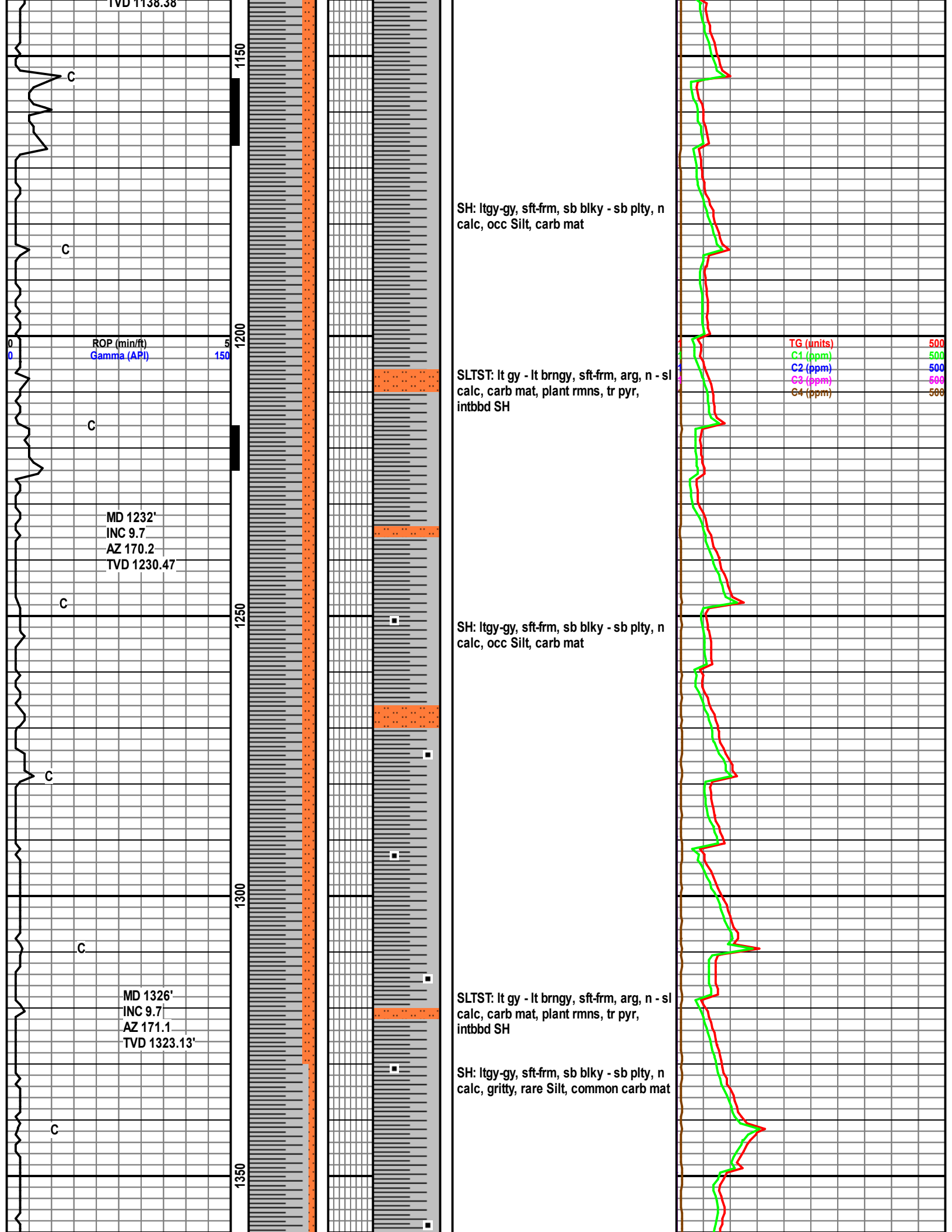
### EVENT

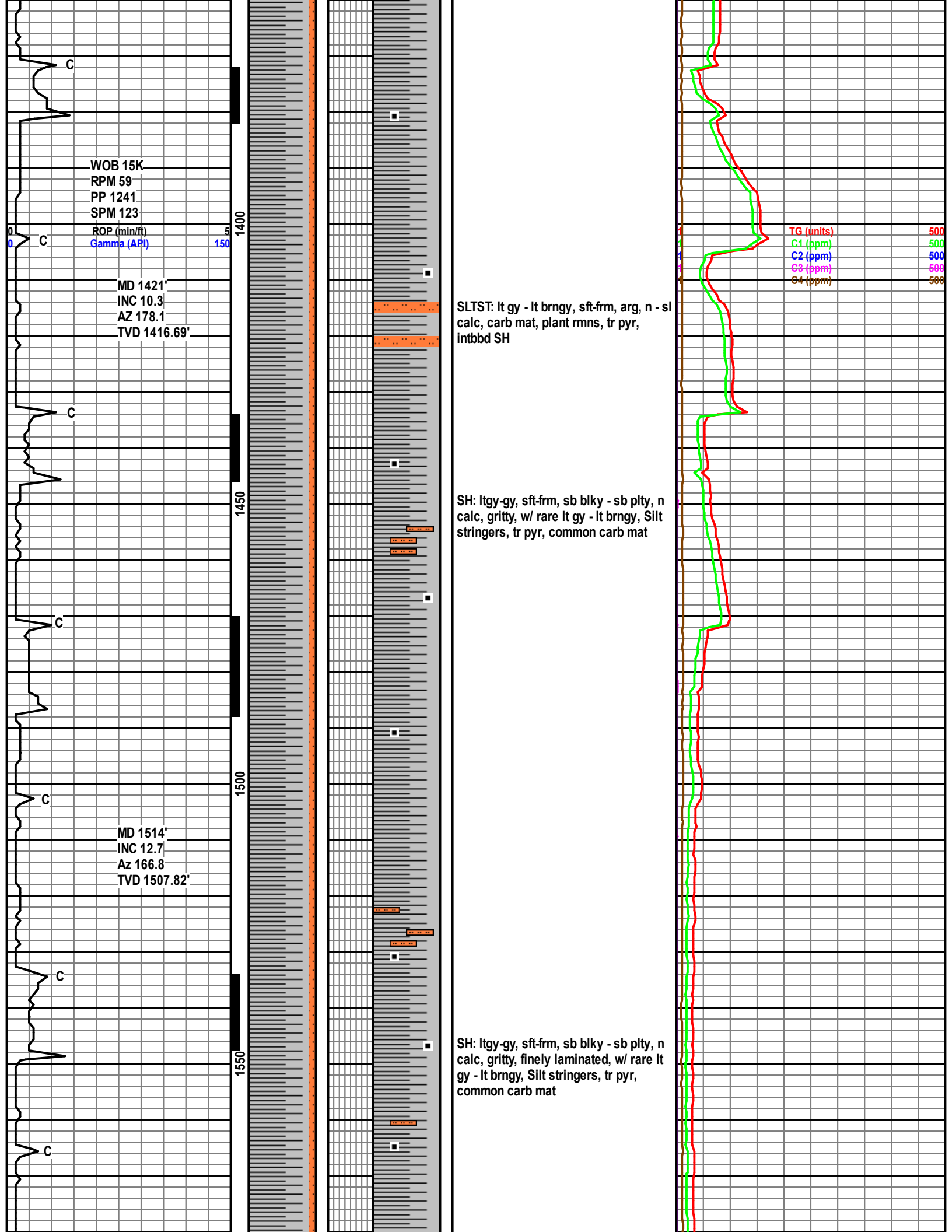


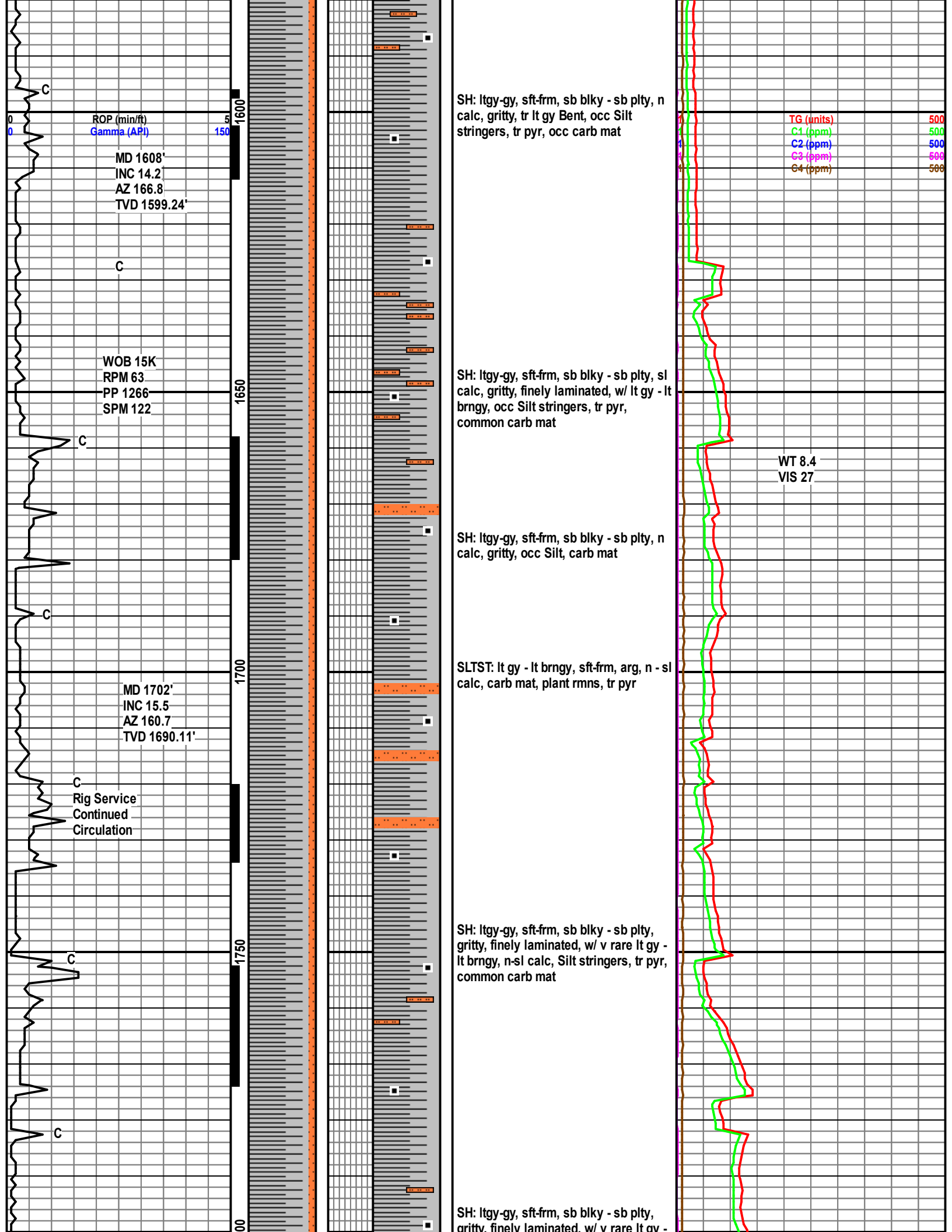




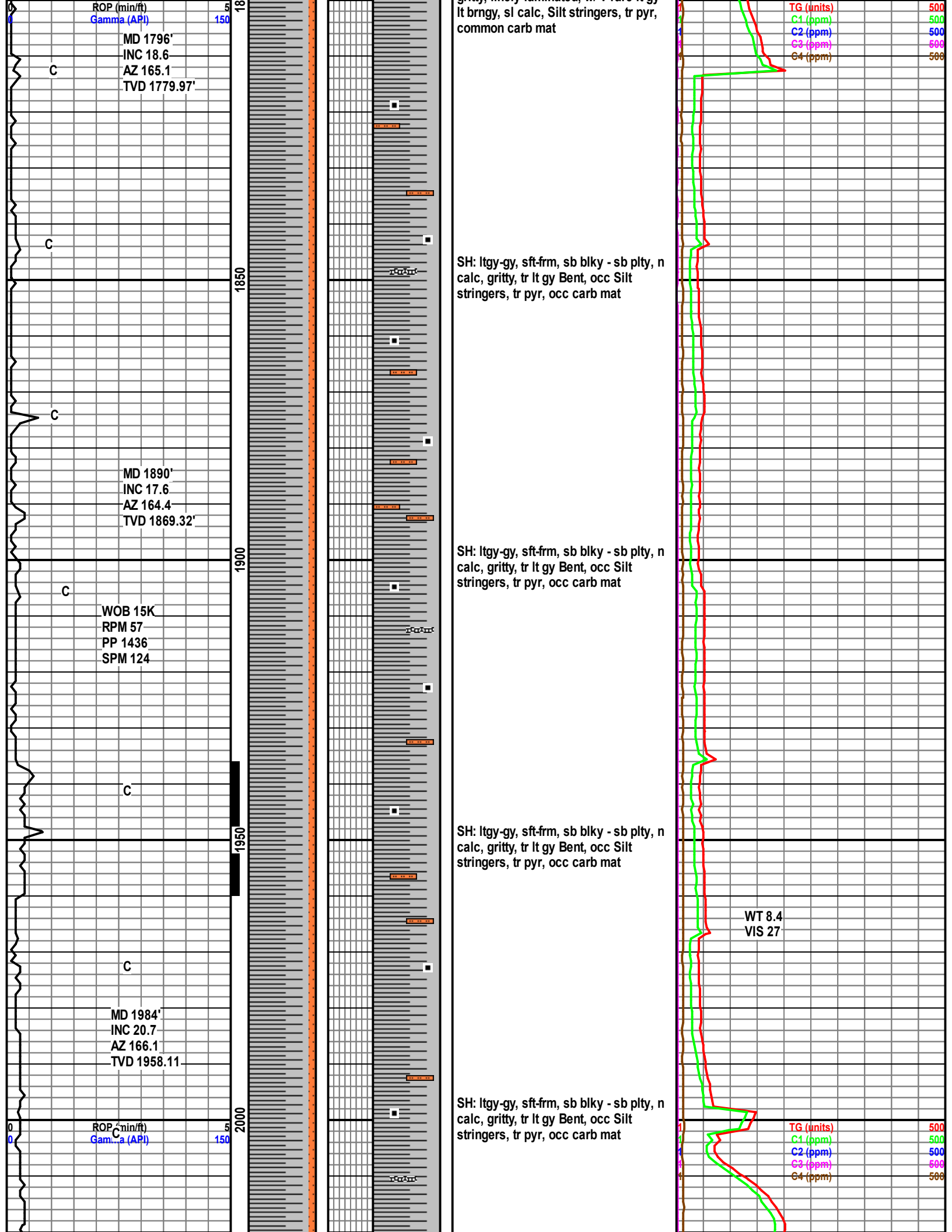


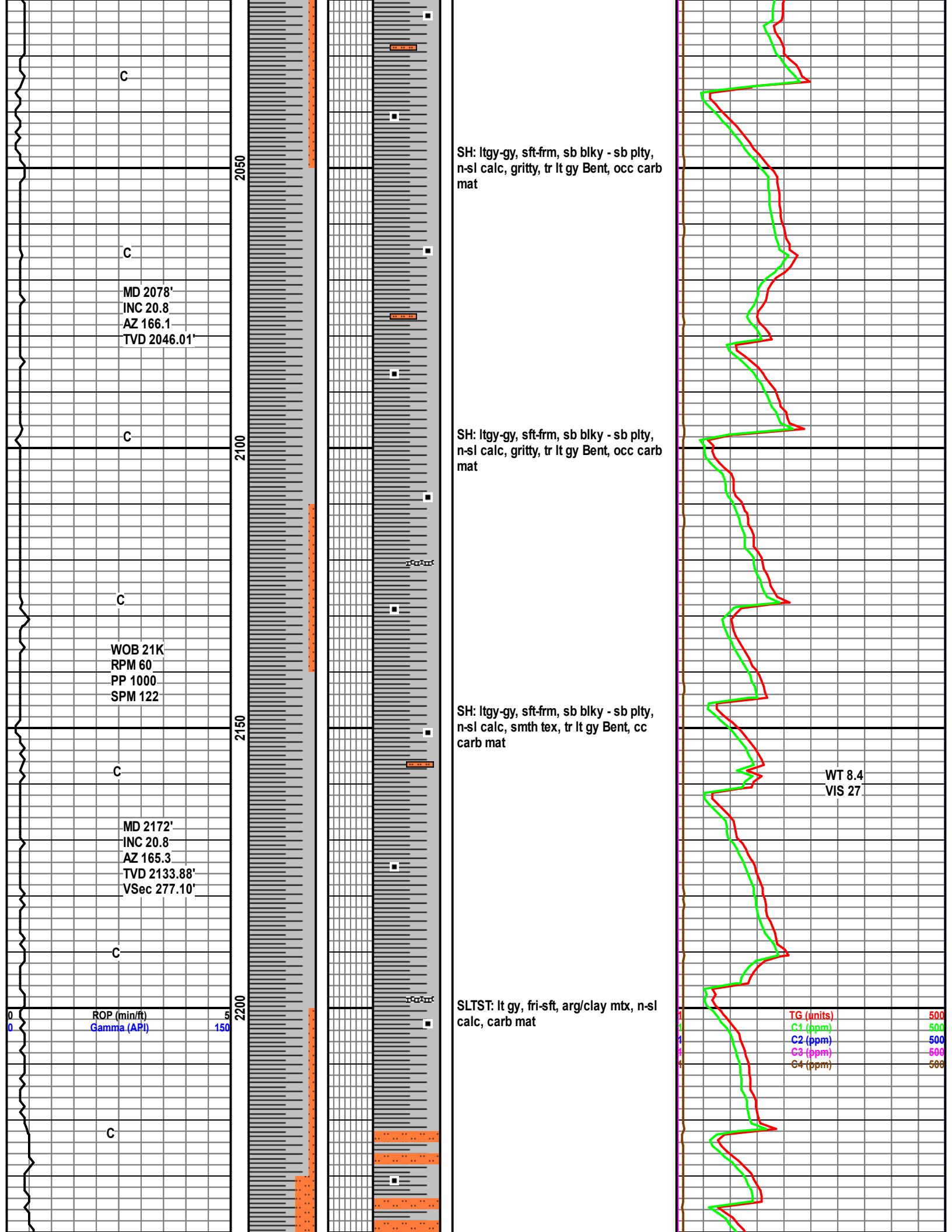


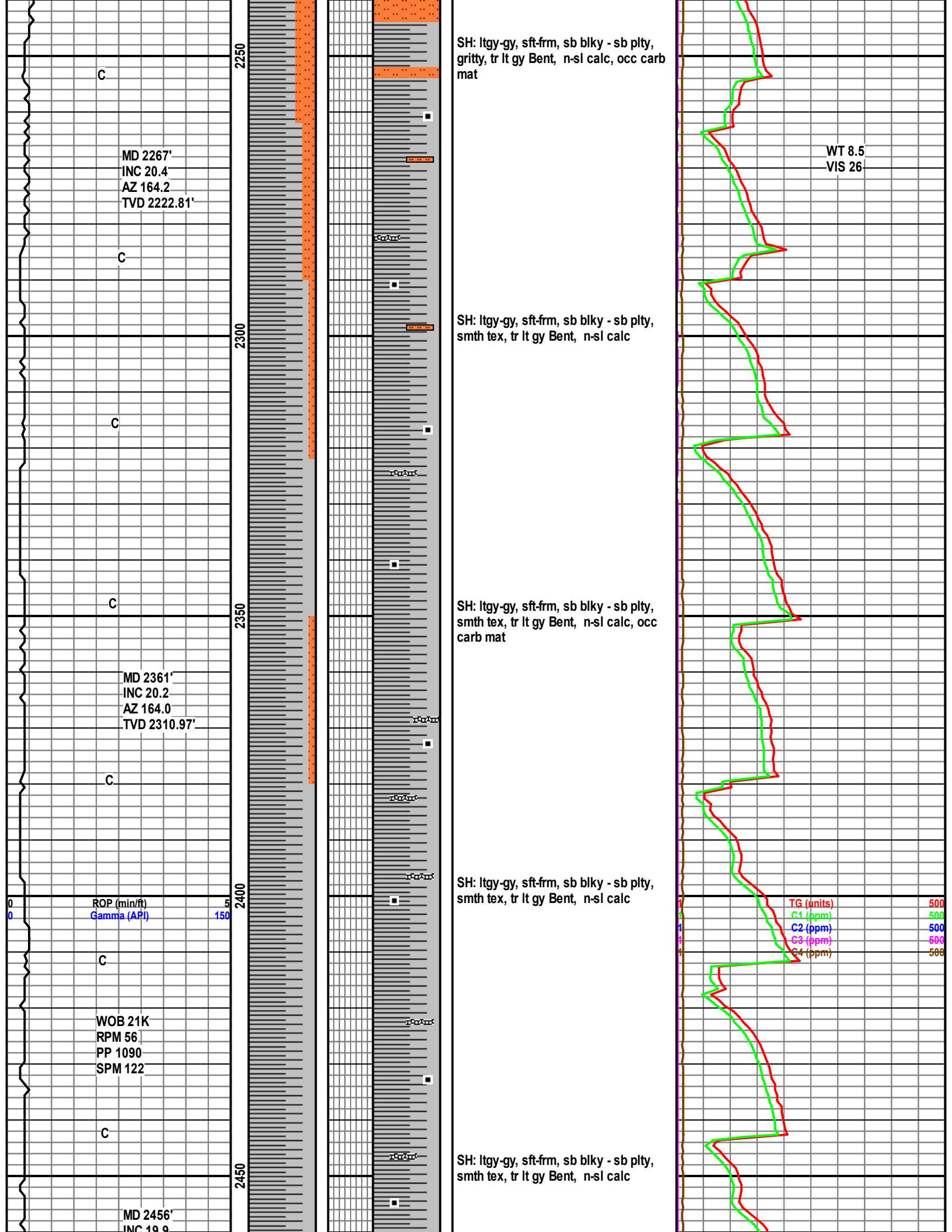


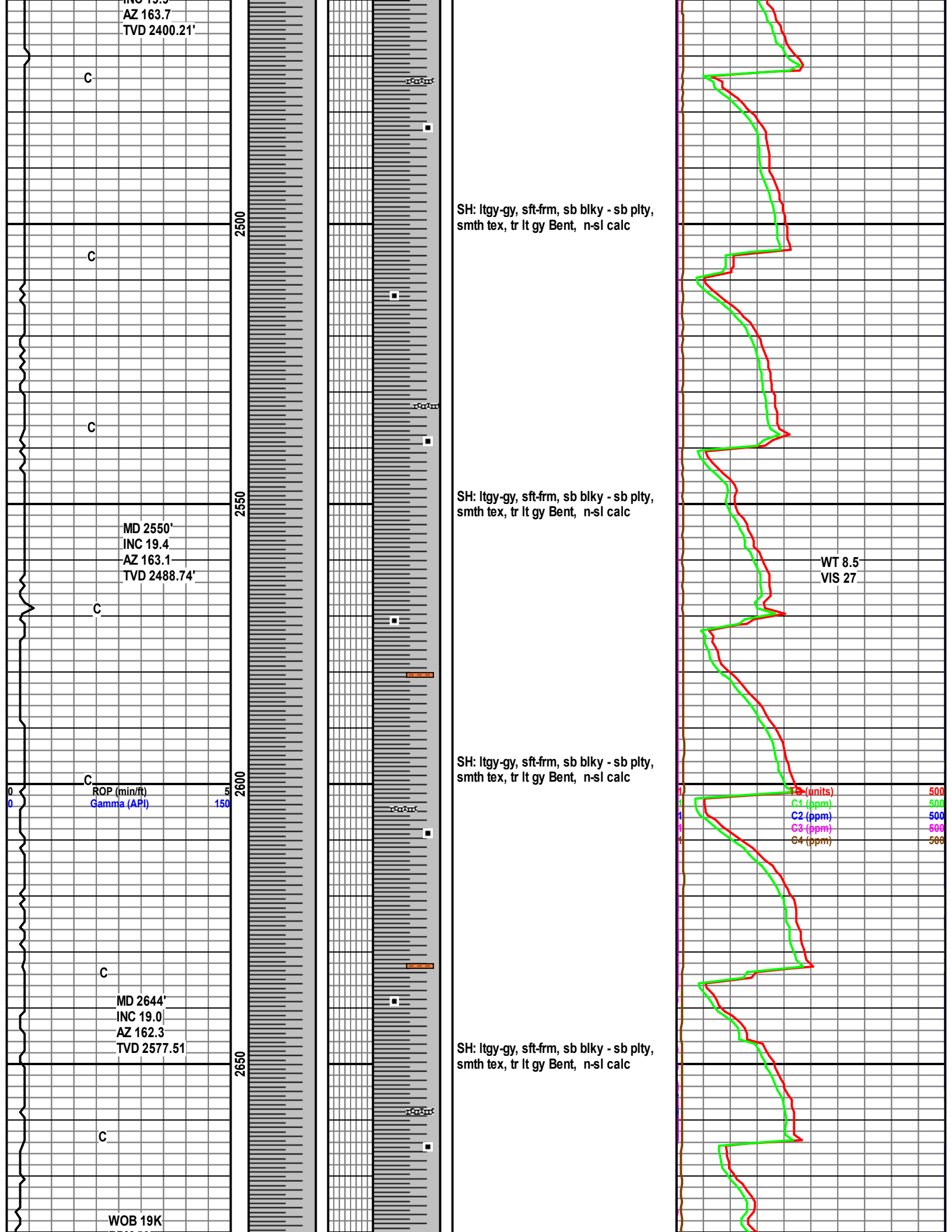












RPM 59  
PP 1010  
SPM 122

C

2700

2/12/14

C

MD 2739'  
INC 18.1  
AZ 161.7  
TVD 2667.57'

2750

C

C

2800

ROP (min/ft)  
Gamma (API)

5  
150

C

MD 2833'  
INC 17.4  
AZ 161.2  
TVD 2757.10  
Vsec 497.04

2850

C

C

2900

SH: ltgy-gy, sft frm, sb blkly - sb plty,  
smth tex, tr lt gy Bent, n-sl calc, tr Silt

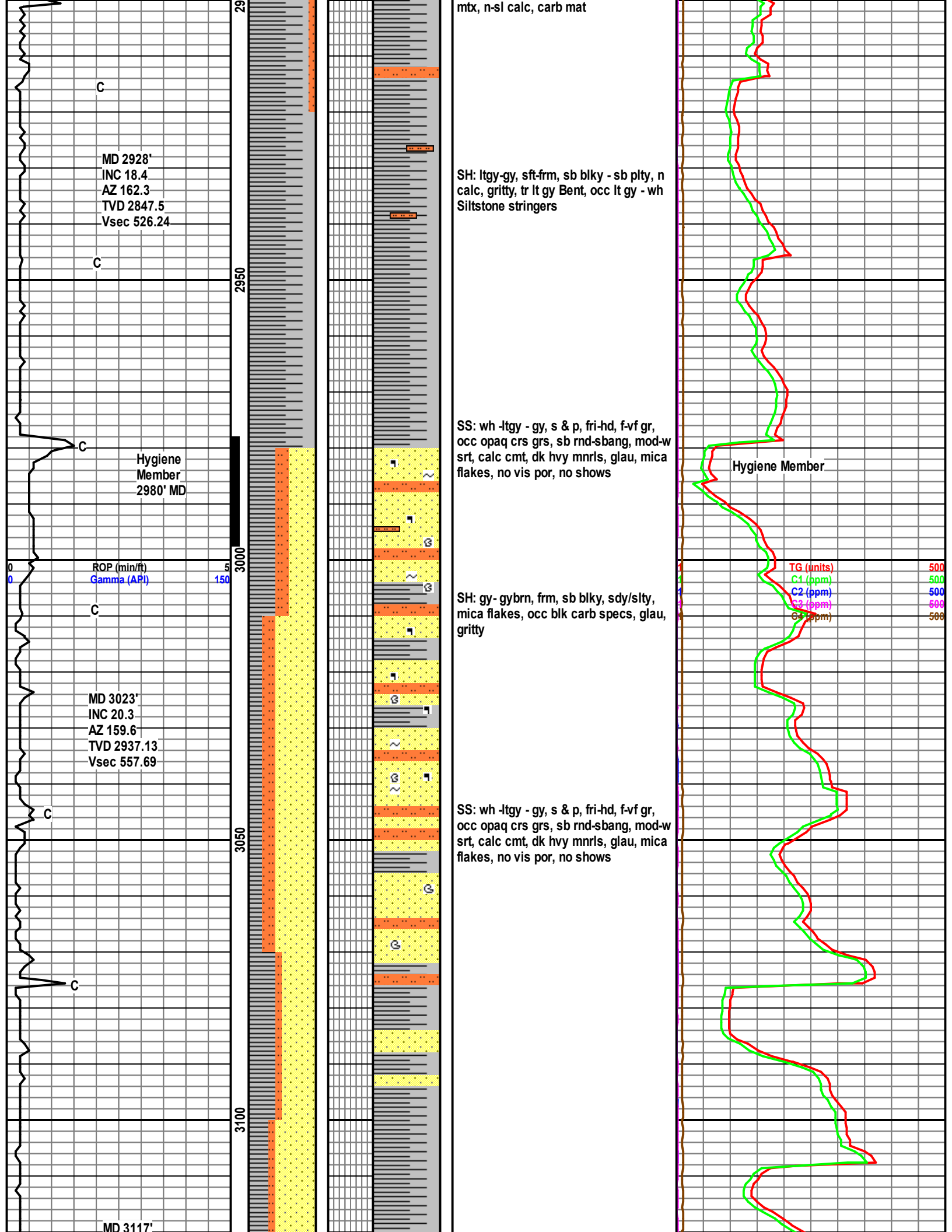
SH: ltgy-gy, sft frm, sb blkly - sb plty,  
smth tex, tr lt gy Bent, n-sl calc, tr Silt

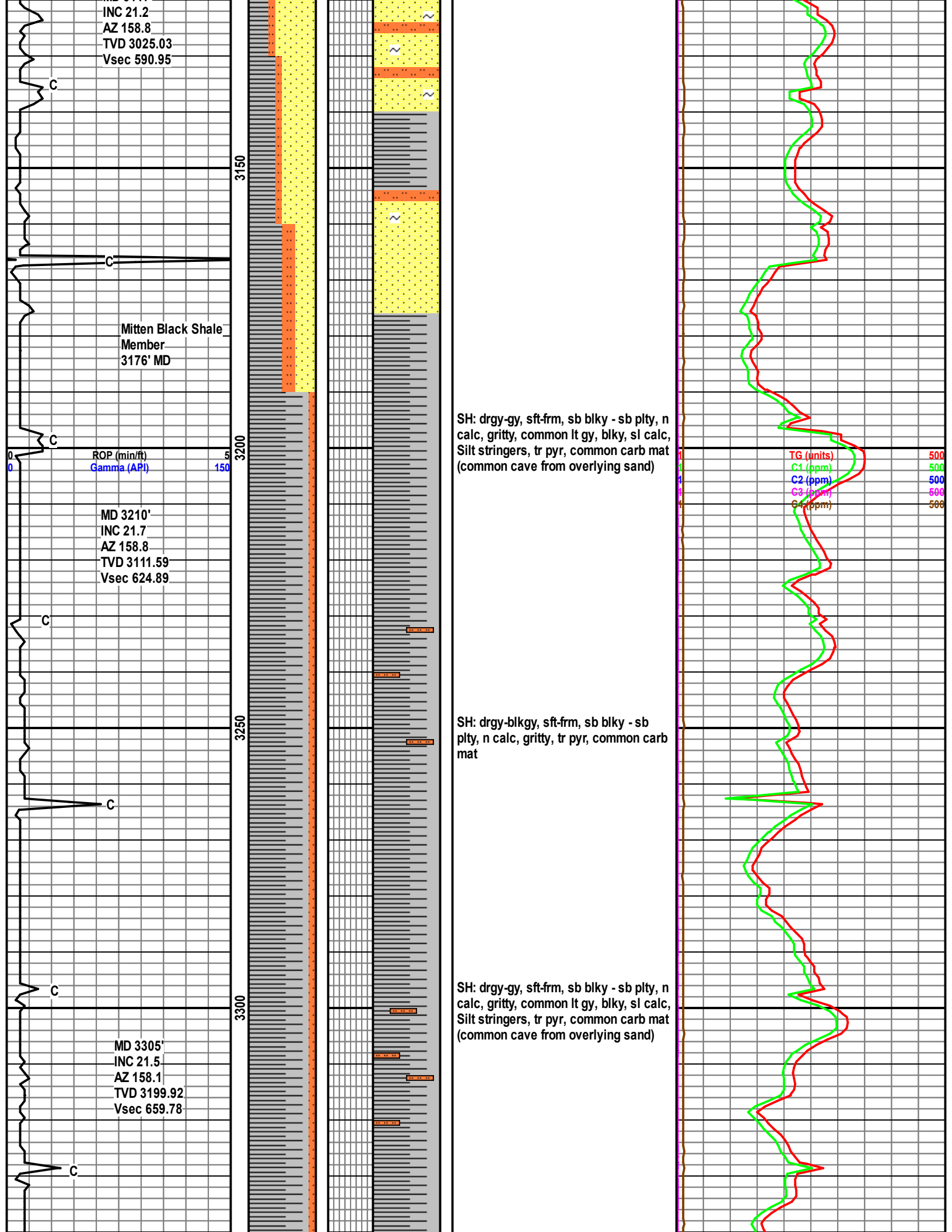
SH: ltgy-gy, sft frm, sb blkly - sb plty,  
smth tex, tr lt gy Bent, n-sl calc, scat  
Silt

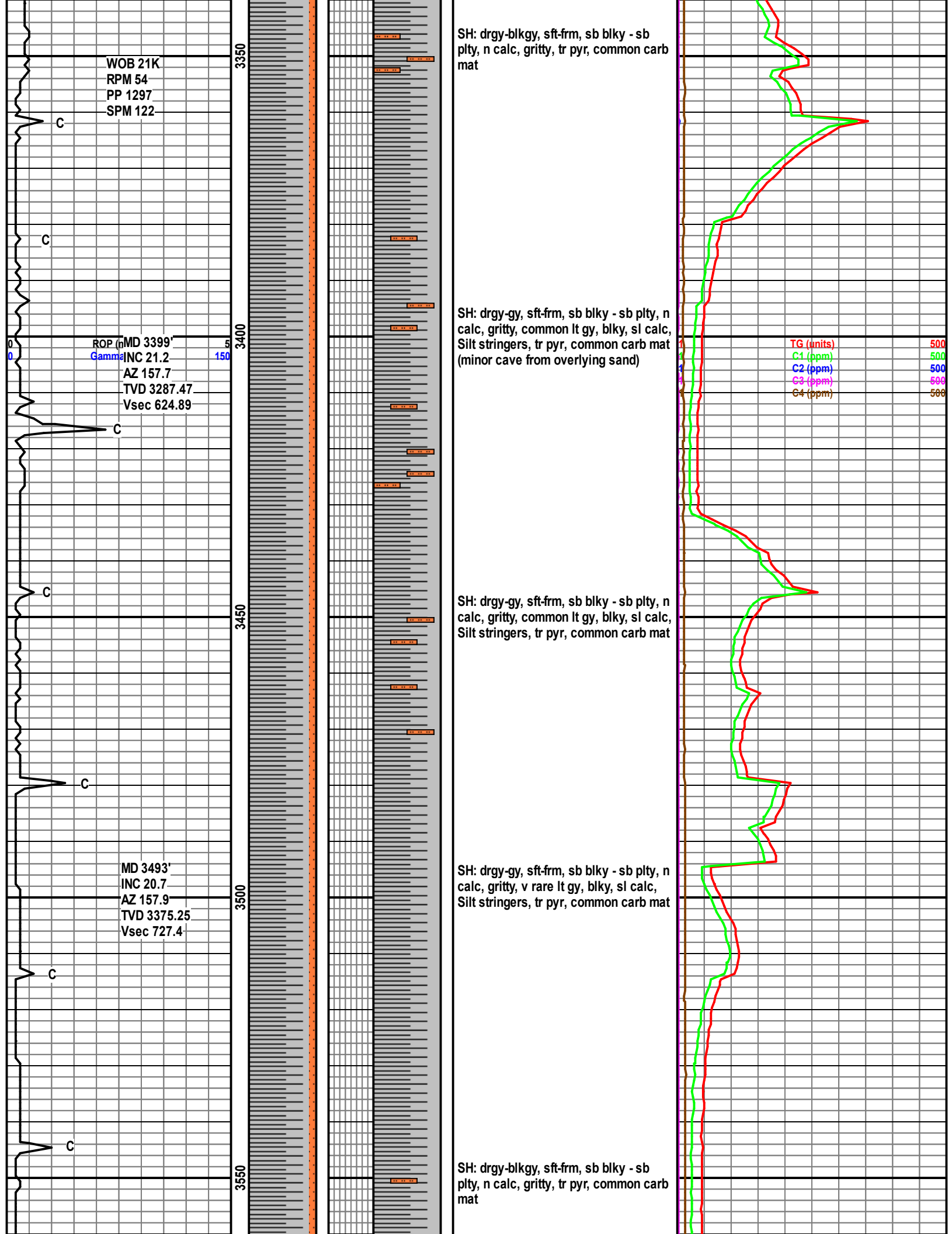
SH: ltgy-gy, sft frm, sb blkly - sb plty,  
smth tex, tr lt gy Bent, n-sl calc, scat  
Silt

SLTST: lt gy-wh, s & p, fri-sft, arg/clay

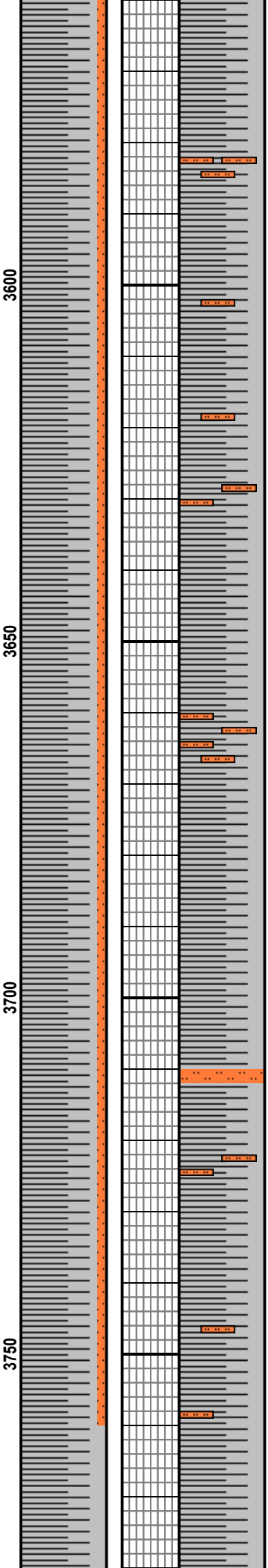
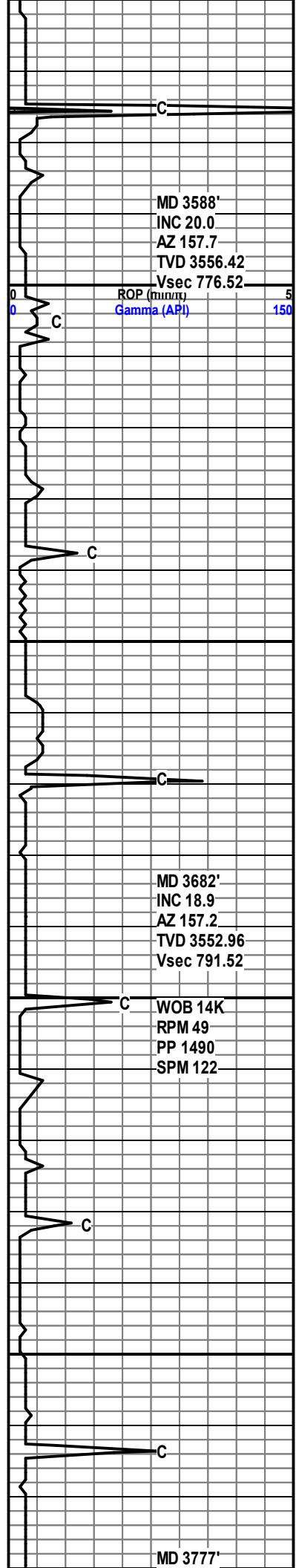
TG (units) 500  
C1 (ppm) 500  
C2 (ppm) 500  
C3 (ppm) 500  
C4 (ppm) 500









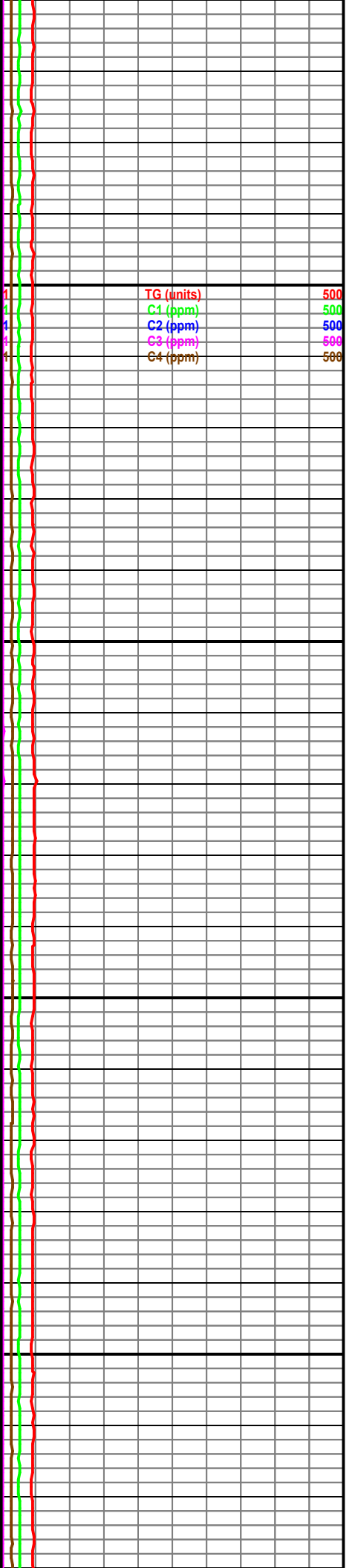


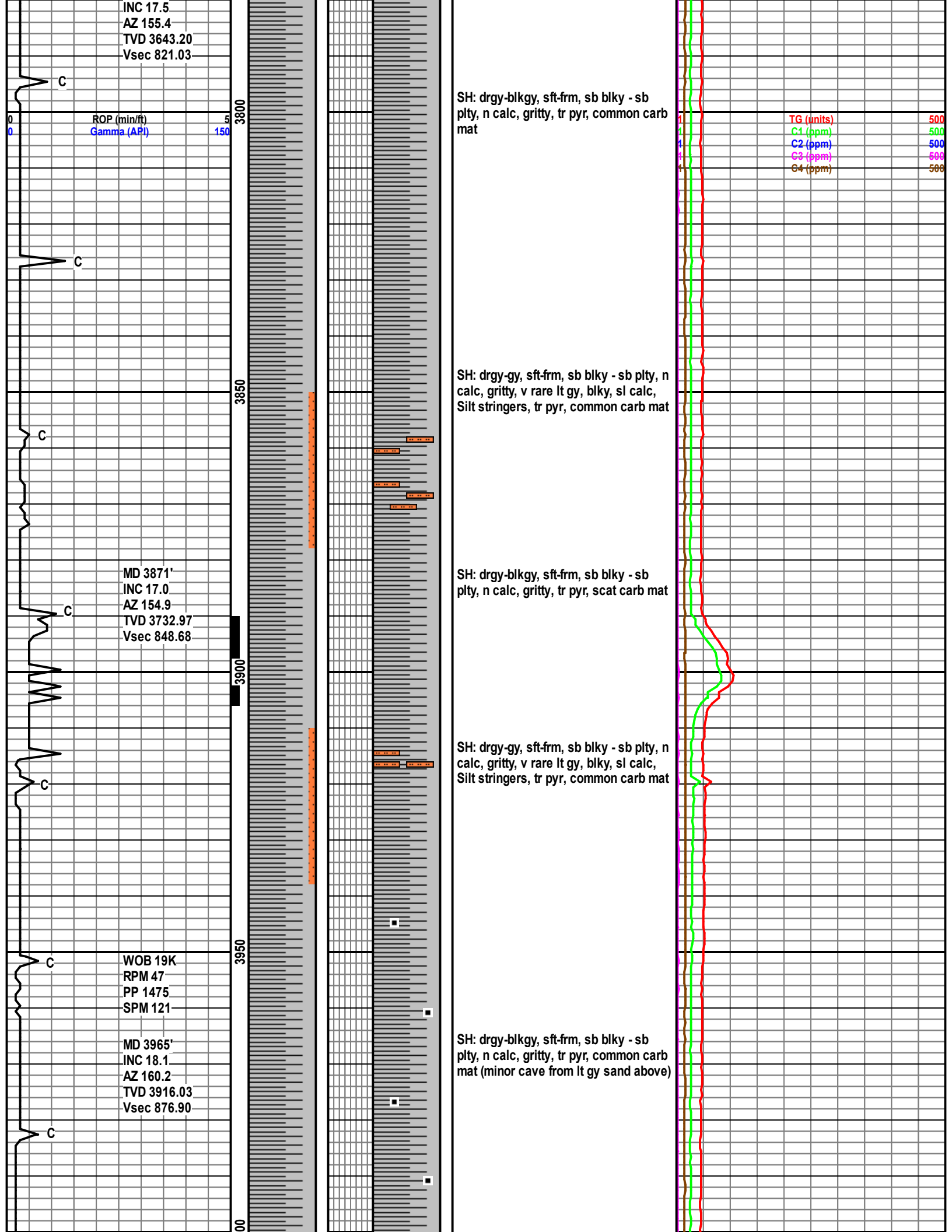
SH: drgy-gy, sft frm, sb blk - sb pty, n calc, gritty, v rare lt gy, blk, sl calc, Silt stringers, tr pyr, common carb mat

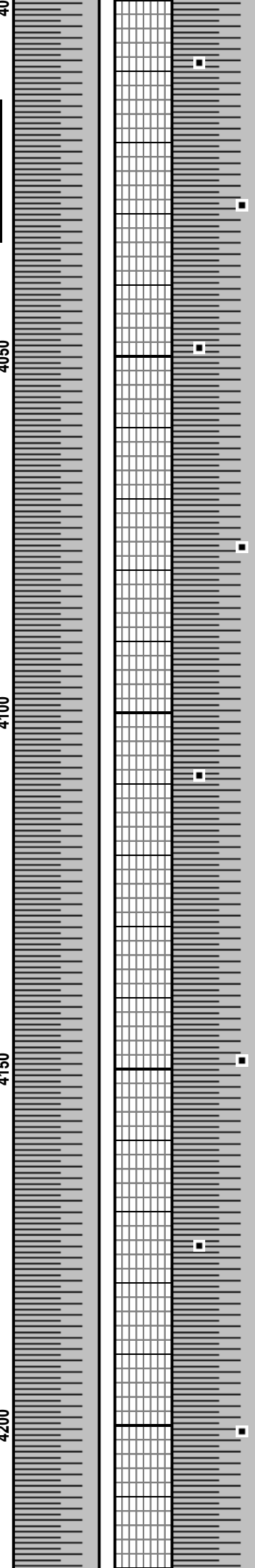
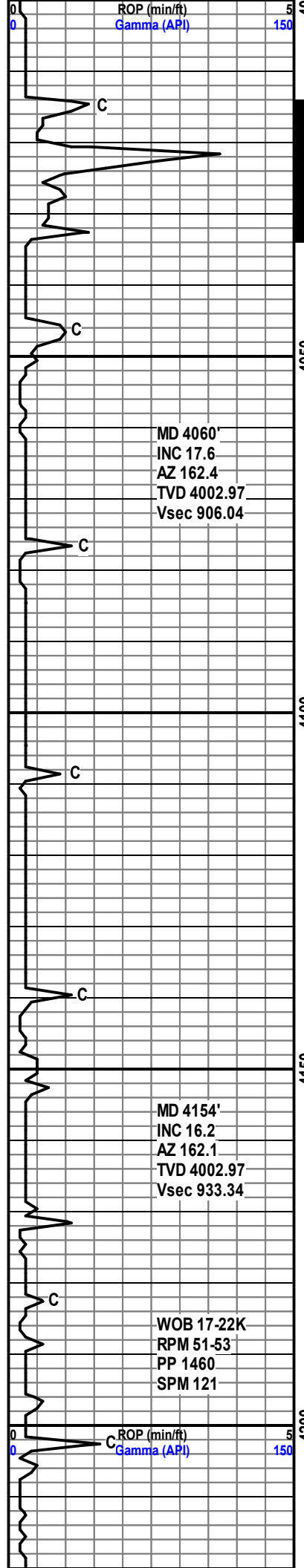
SH: drgy-blkgy, sft frm, sb blk - sb pty, n calc, gritty, tr pyr, common carb mat

SH: drgy-blkgy, sft frm, sb blk - sb pty, n calc, gritty, tr pyr, common carb mat

SH: drgy-blkgy, sft frm, sb blk - sb pty, n calc, gritty, tr pyr, common carb mat





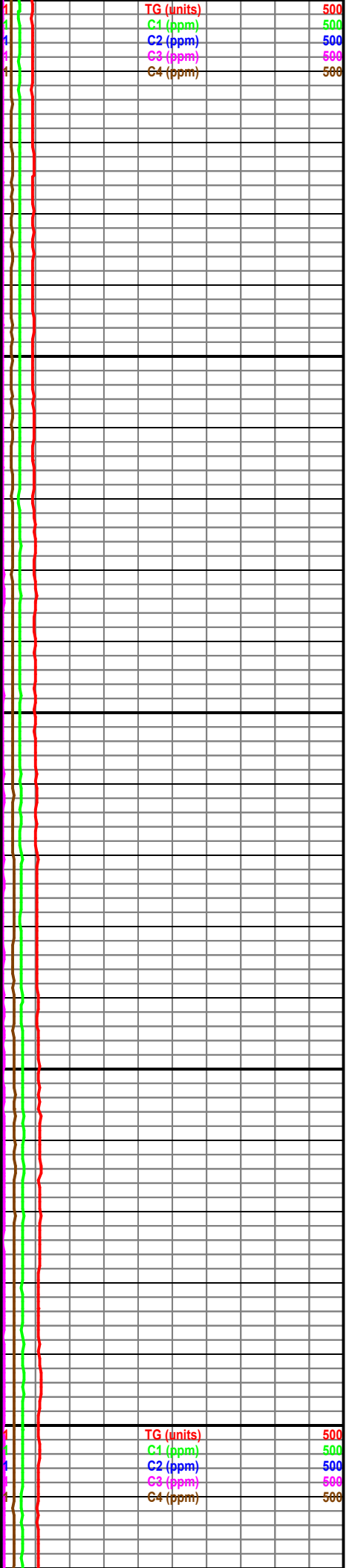


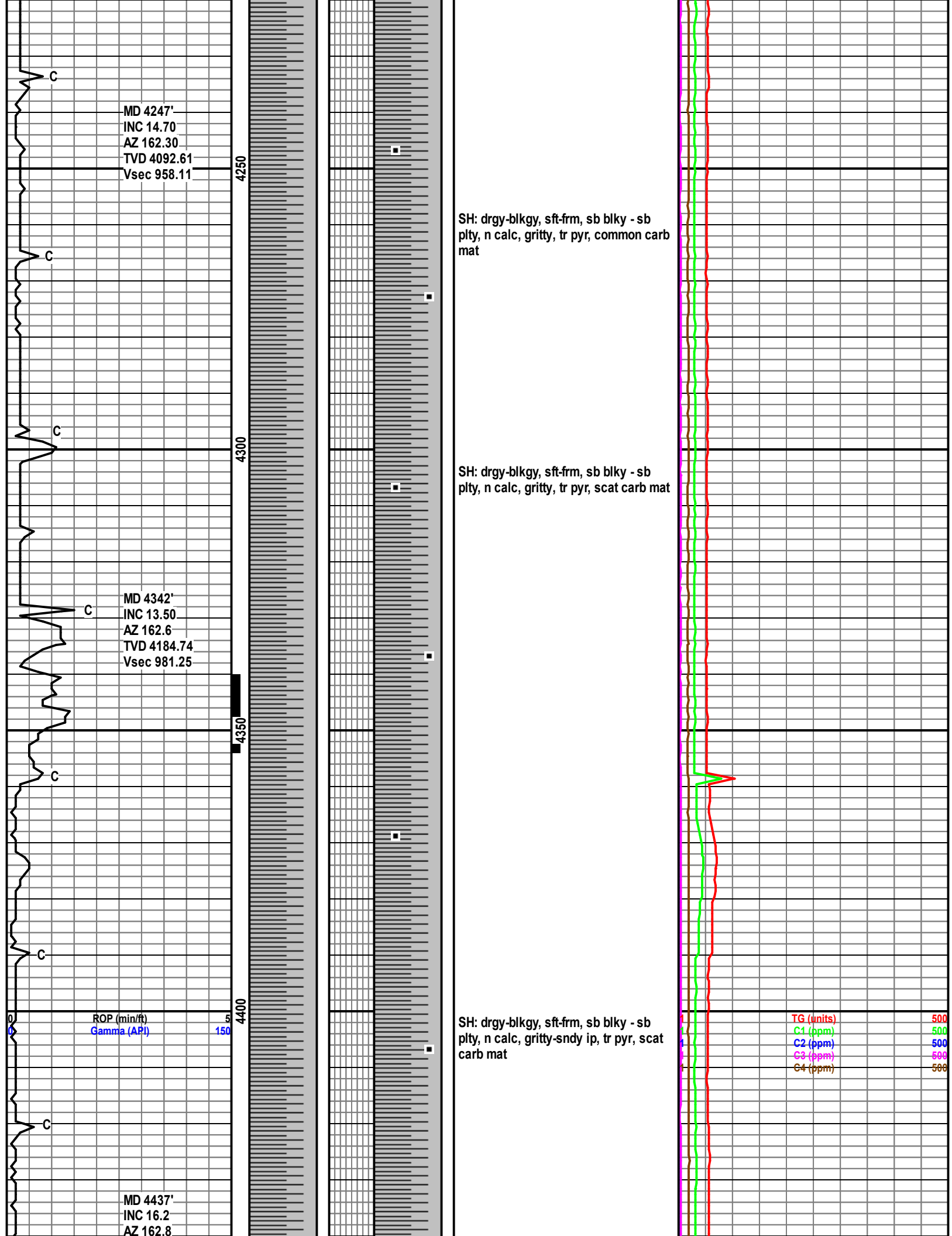
SH: drgy-blkgy, sft frm, sb blkgy - sb  
plty, n calc, gritty, tr pyr, common carb  
mat (rare cave from lt gy sand above)

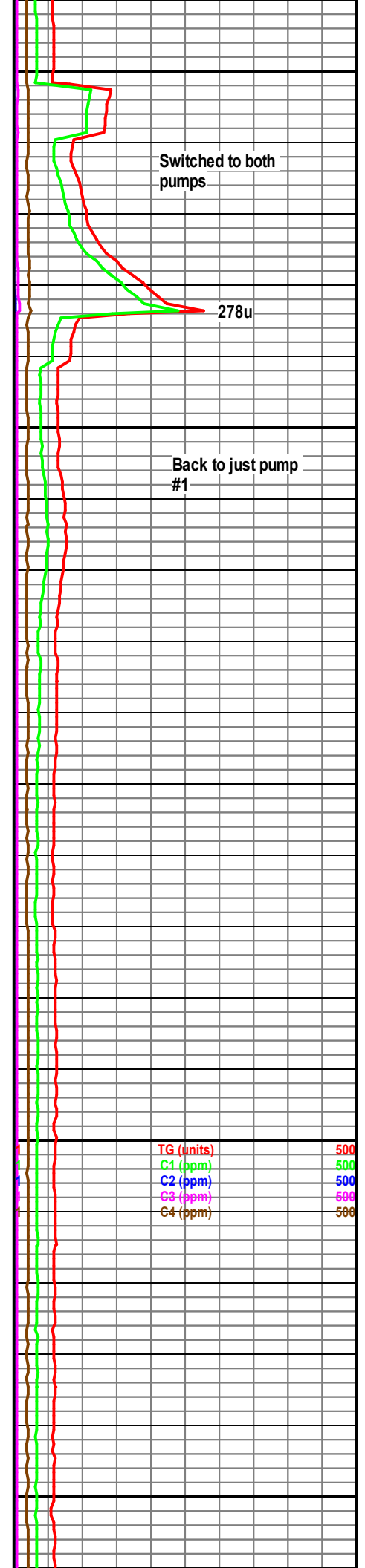
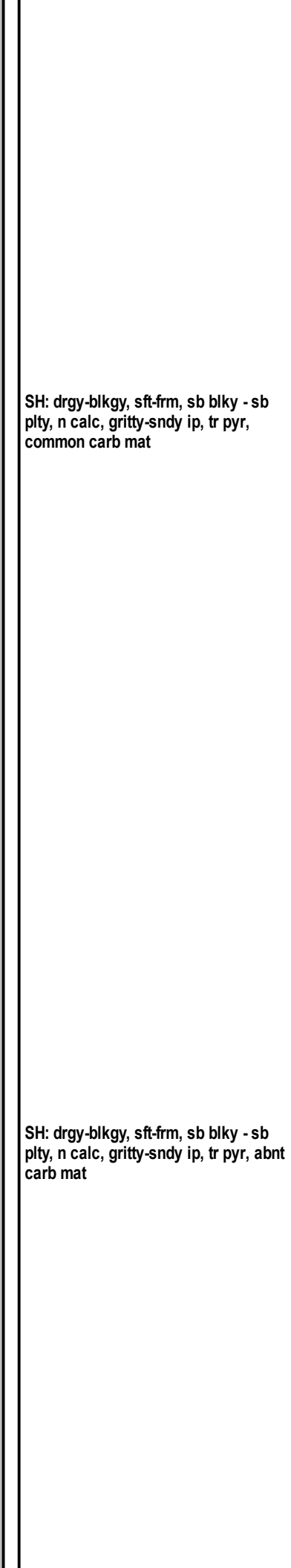
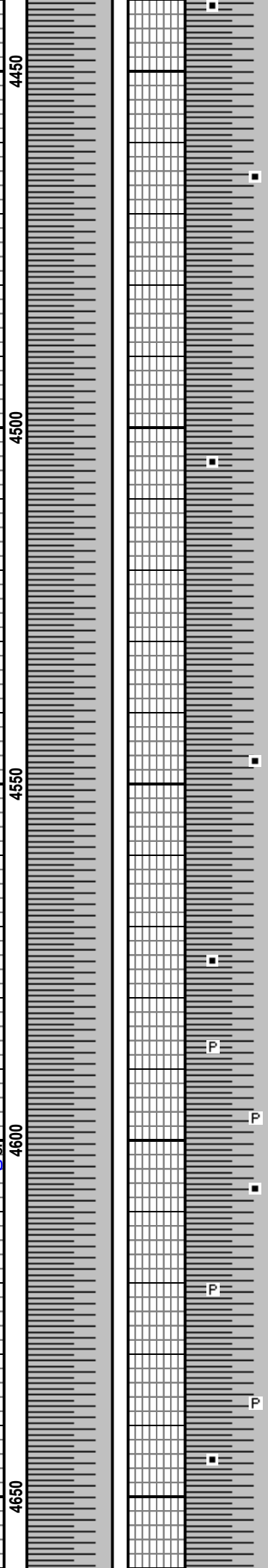
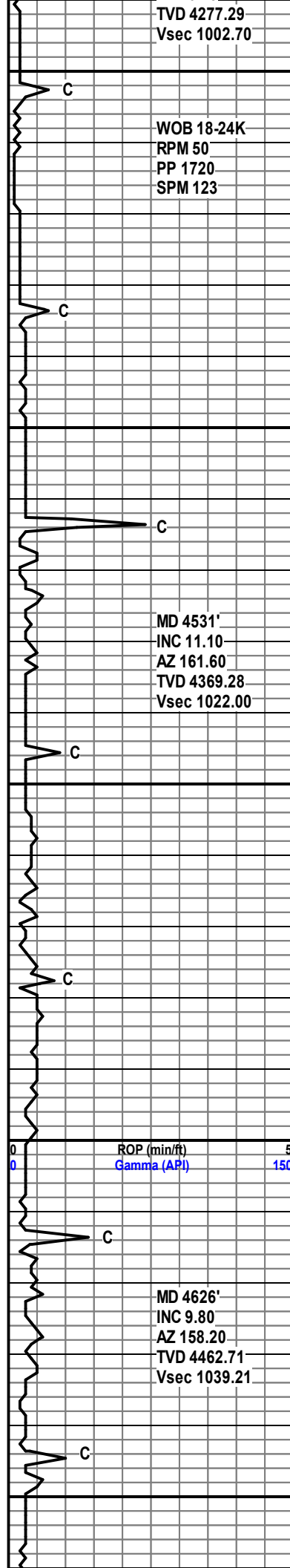
SH: drgy-blkgy, sft frm, sb blkgy - sb  
plty, n calc, gritty, tr pyr, scat carb mat

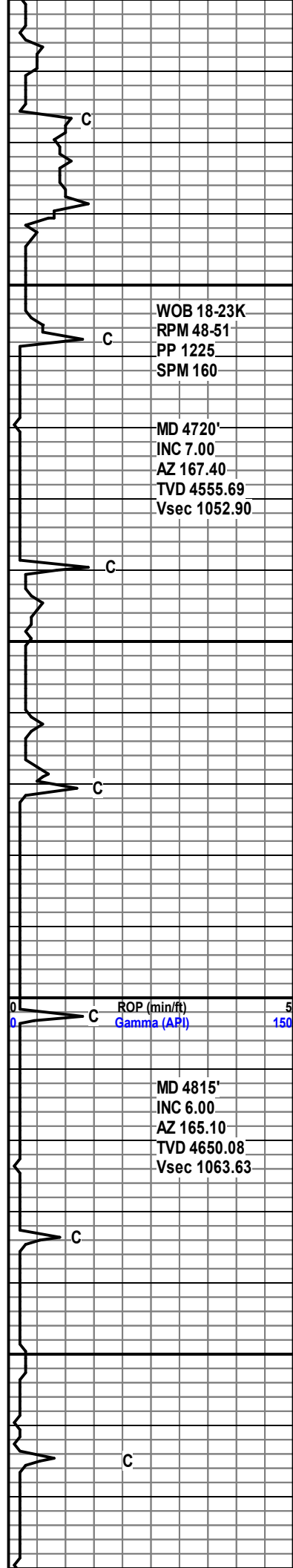
SH: drgy-blkgy, sft frm, sb blkgy - sb  
plty, n calc, gritty, tr pyr, common carb  
mat

SH: drgy-blkgy, sft frm, sb blkgy - sb  
plty, n calc, gritty, tr pyr, scat carb mat









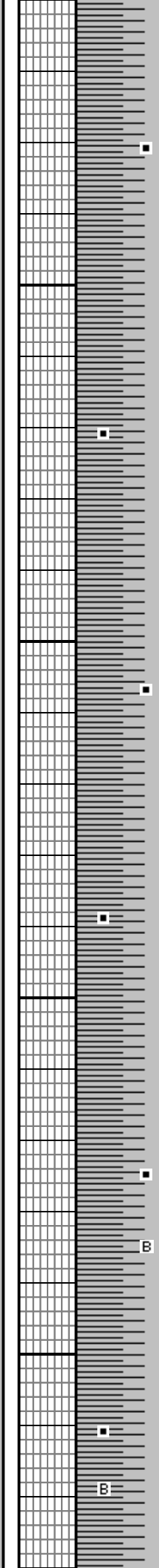
4700  
4750  
4800  
4850

WOB 18-23K  
RPM 48-51  
PP 1225  
SPM 160

MD 4720'  
INC 7.00  
AZ 167.40  
TVD 4555.69  
Vsec 1052.90

ROP (min/ft)  
Gamma (API)

MD 4815'  
INC 6.00  
AZ 165.10  
TVD 4650.08  
Vsec 1063.63

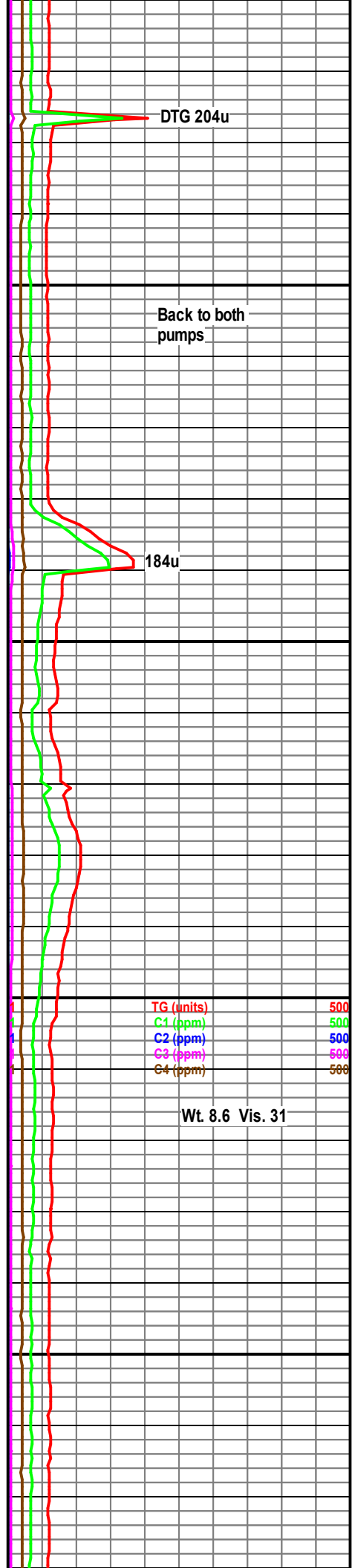


SH: drgy-blkgy, sft-frm, sb blkgy - sb  
plty, n calc, gritty-sndy ip, tr pyr, abnt  
carb mat, tr Bent

SH: drgy-blkgy, sft-frm, sb blkgy - sb  
plty, n calc, gritty-sndy ip, tr pyr, abnt  
carb mat, tr Bent

SH: drgy-blkgy, sft-frm, sb blkgy - sb  
plty, n calc, gritty-sndy ip, abnt carb  
mat

SH: drgy-blkgy, sft-frm, sb blkgy - sb  
plty, n calc, gritty-sndy ip, abnt carb  
mat



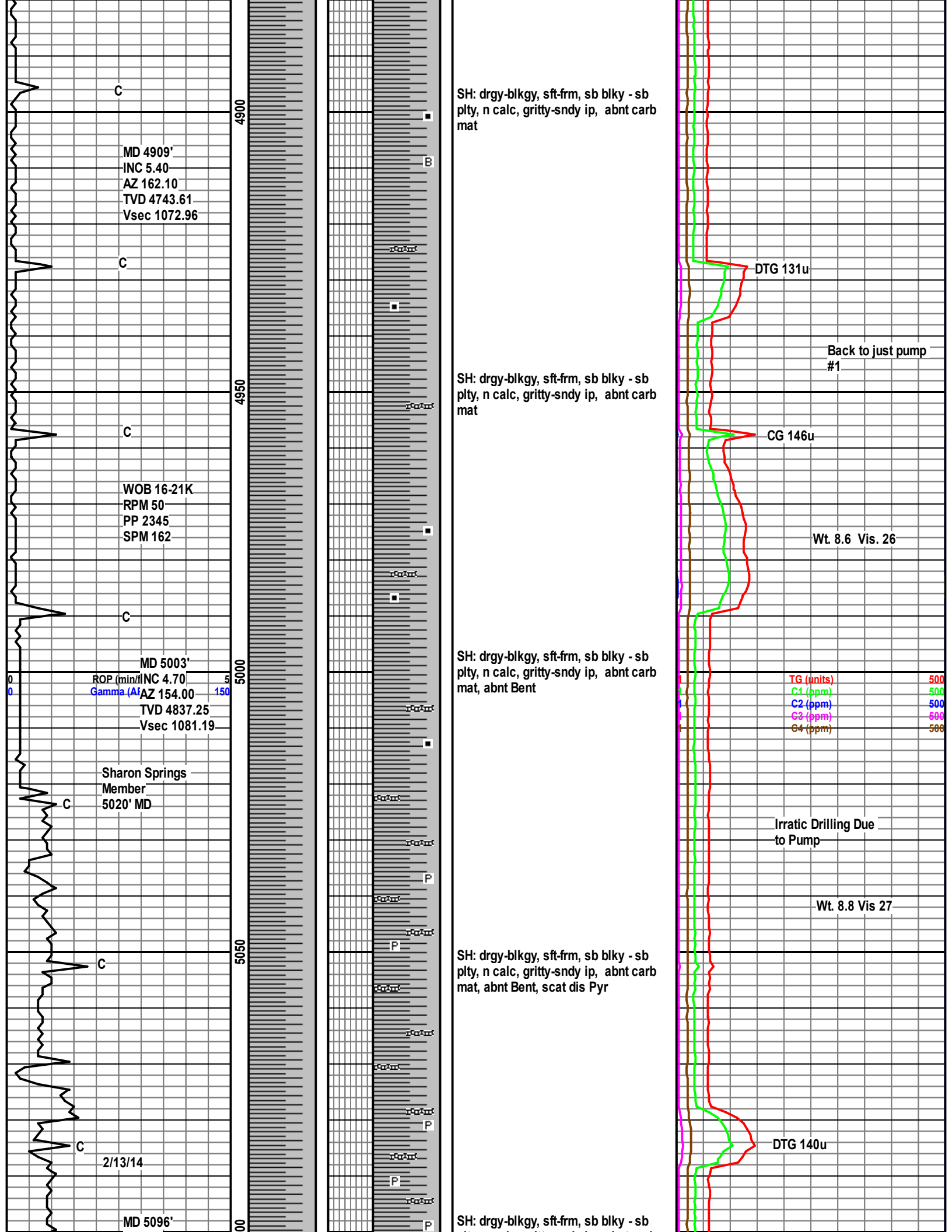
DTG 204u

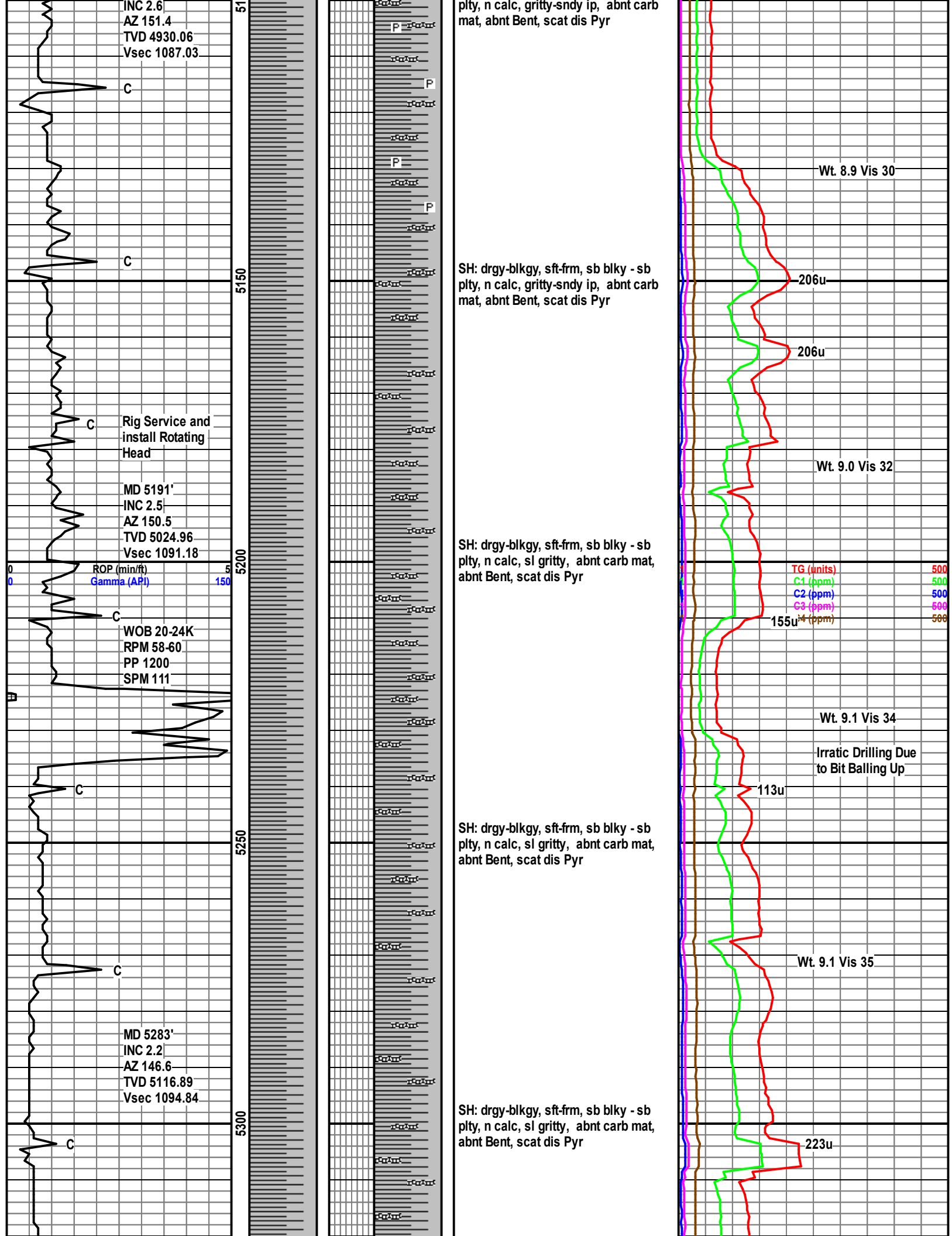
Back to both  
pumps

184u

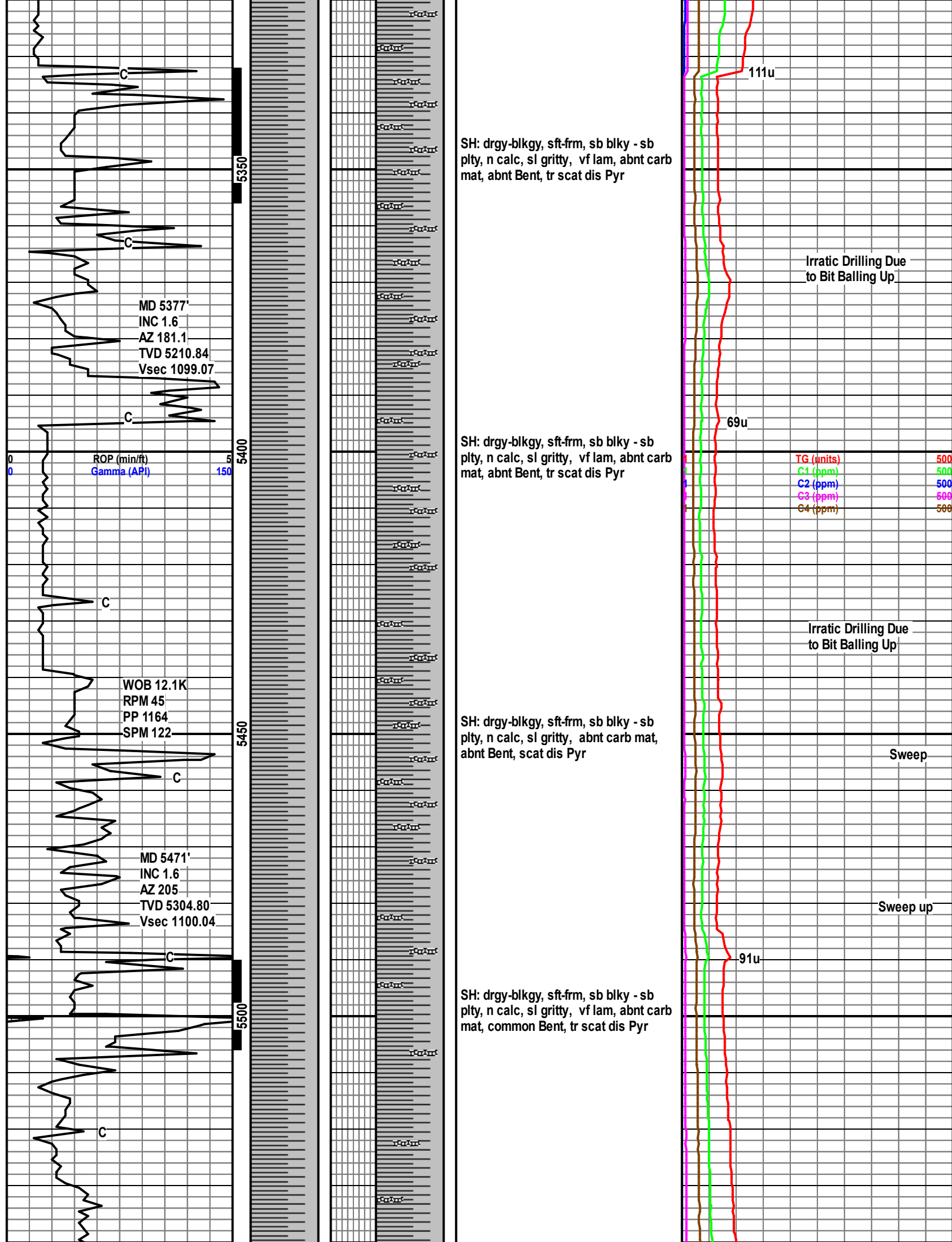
TG (units)  
C1 (ppm)  
C2 (ppm)  
C3 (ppm)  
C4 (ppm)

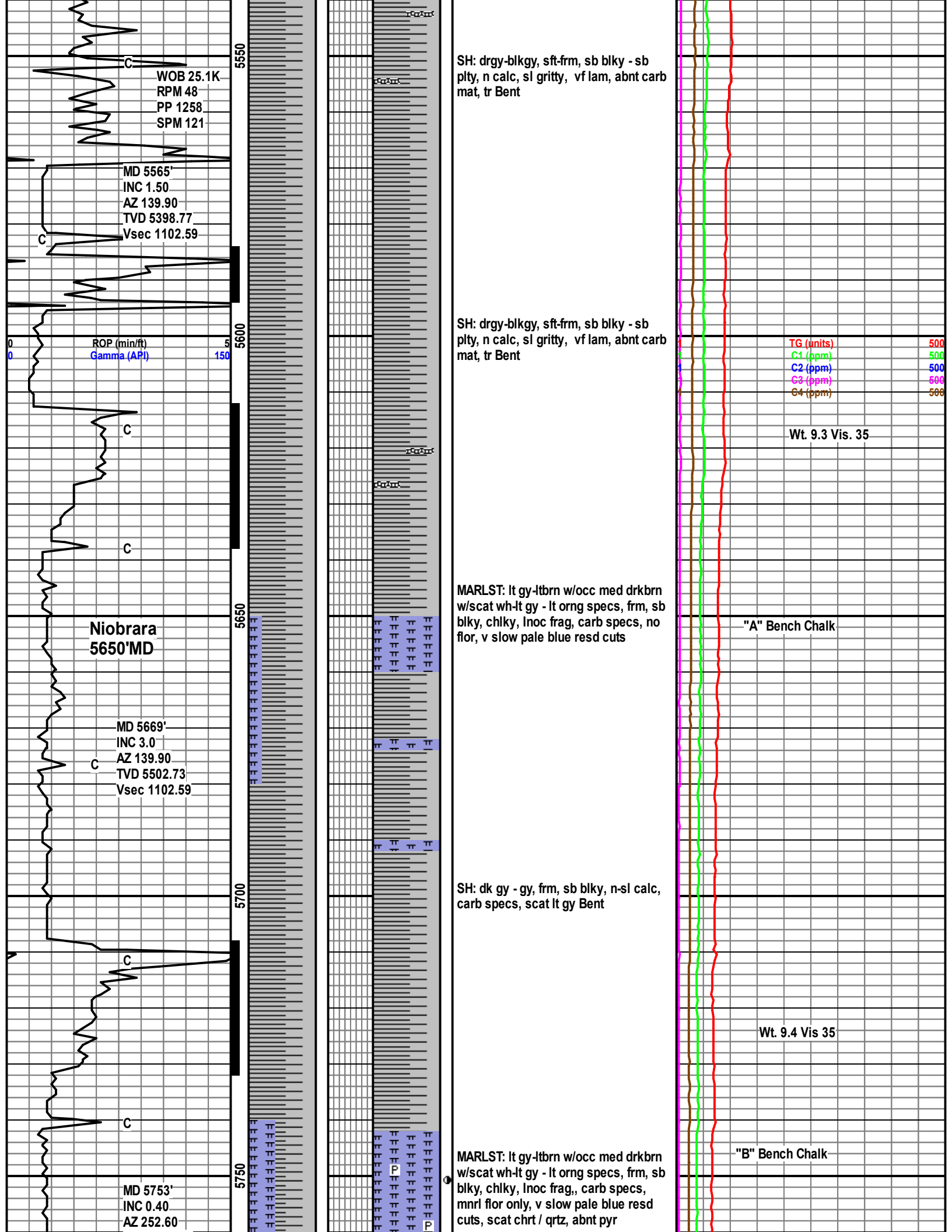
Wt. 8.6 Vis. 31

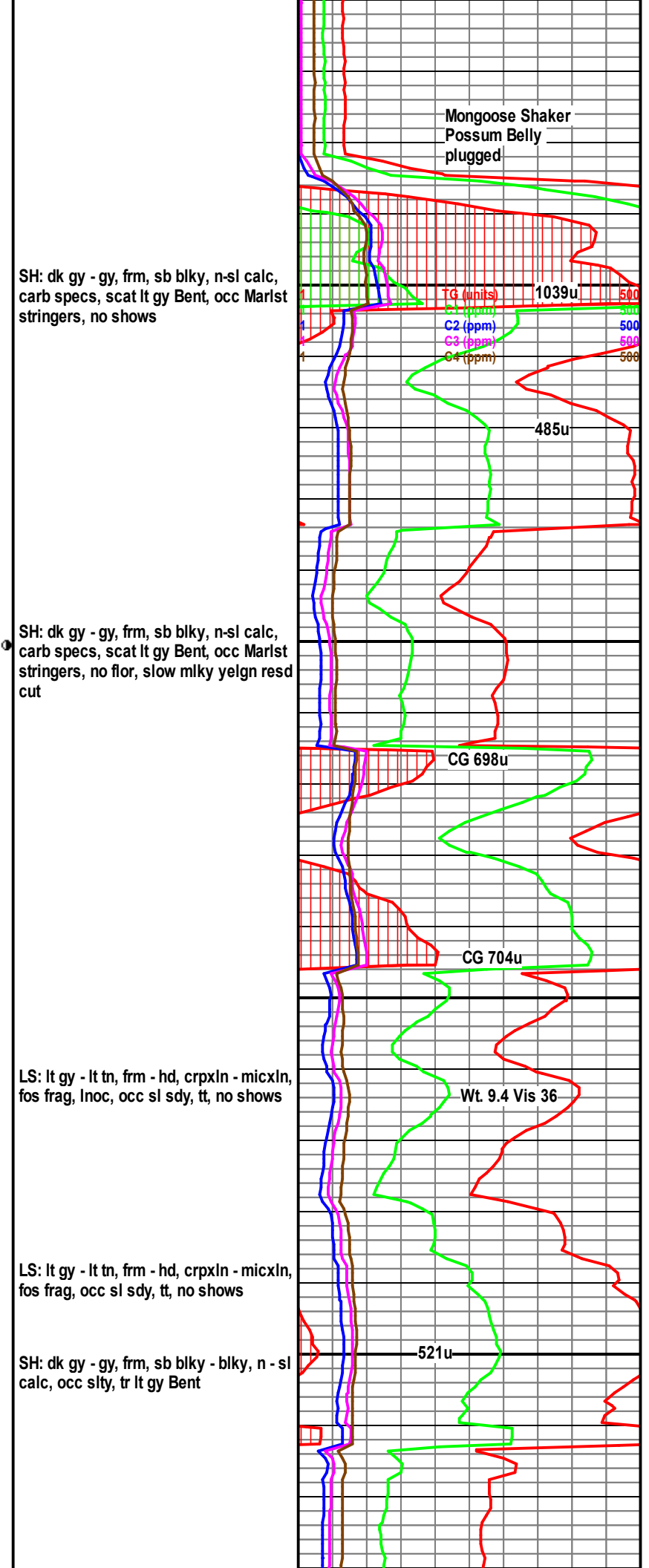
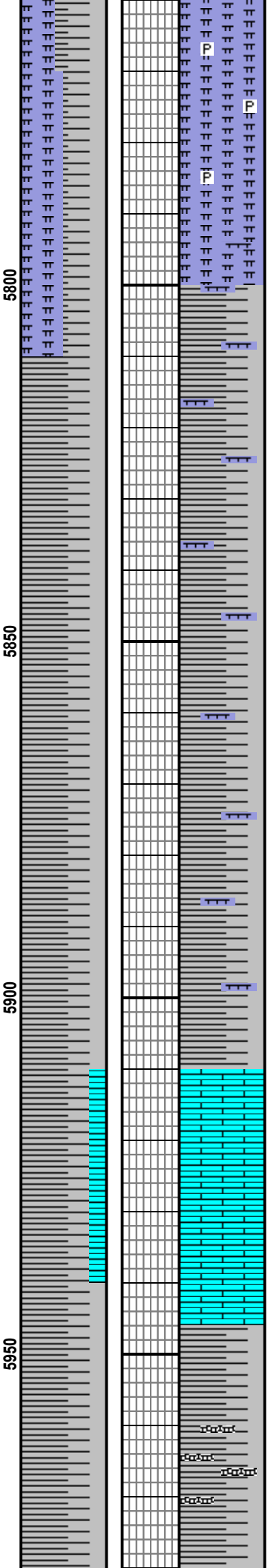
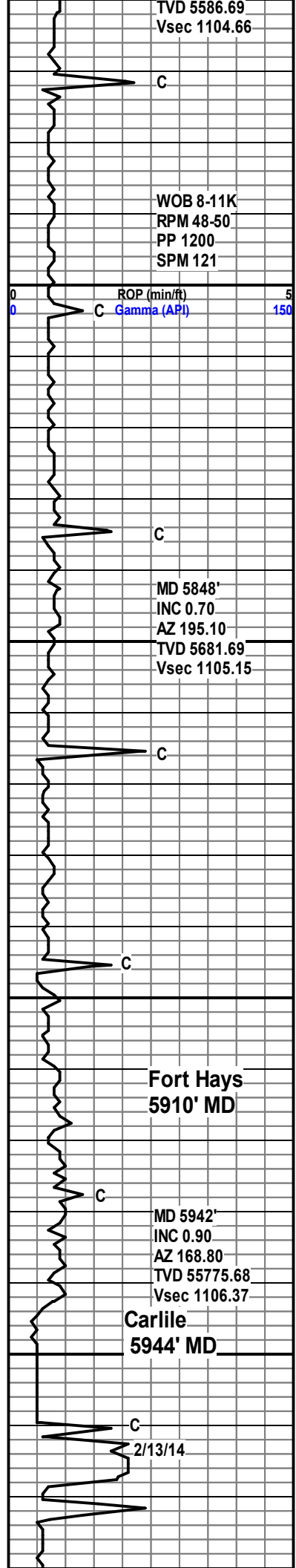


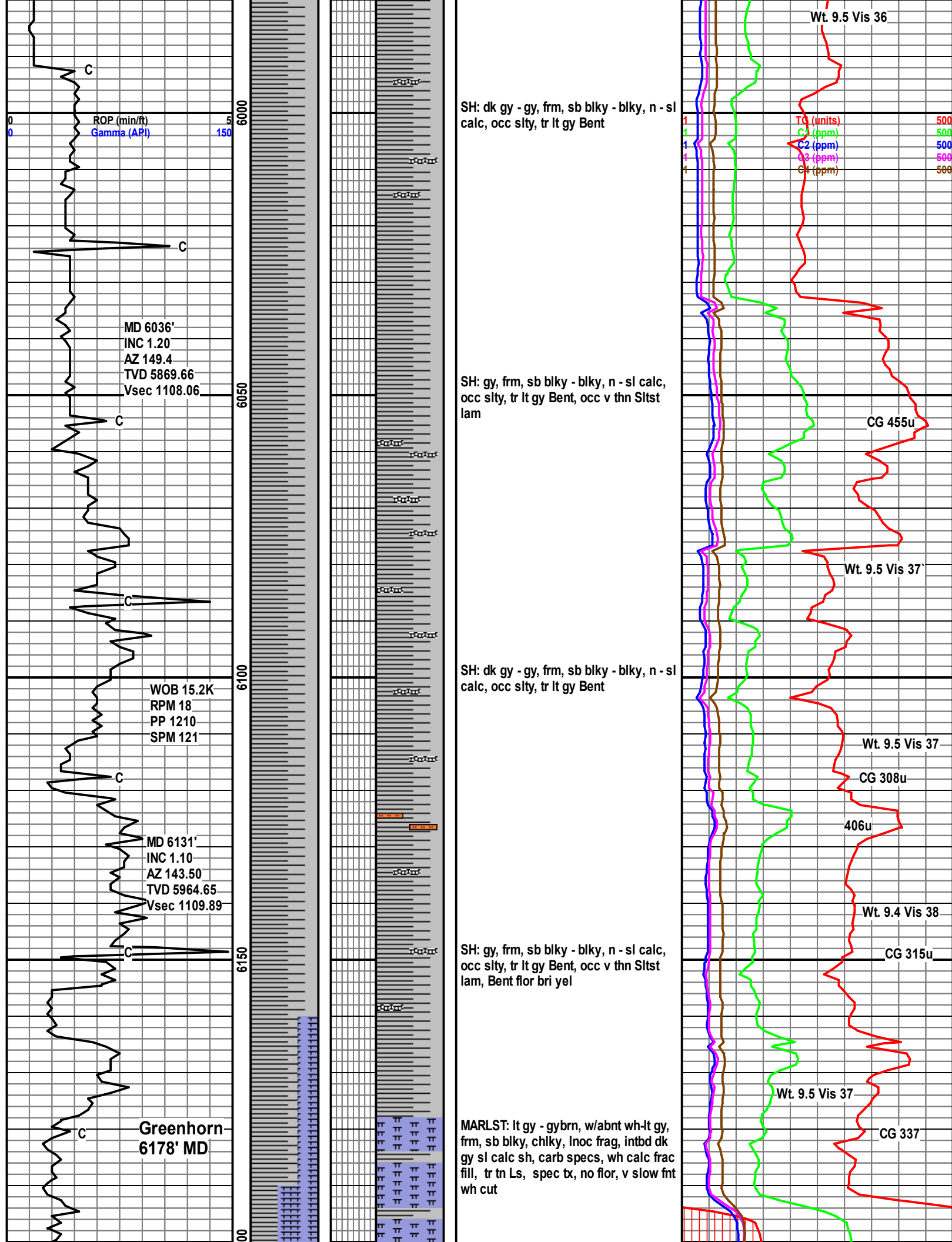


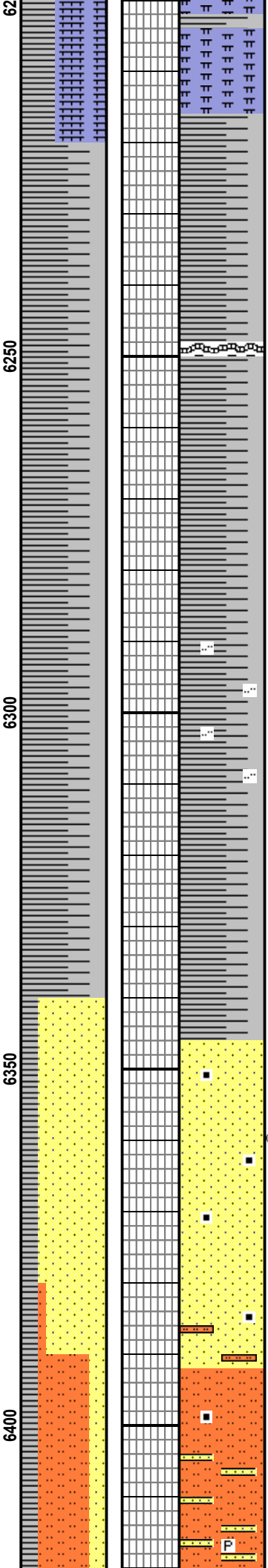
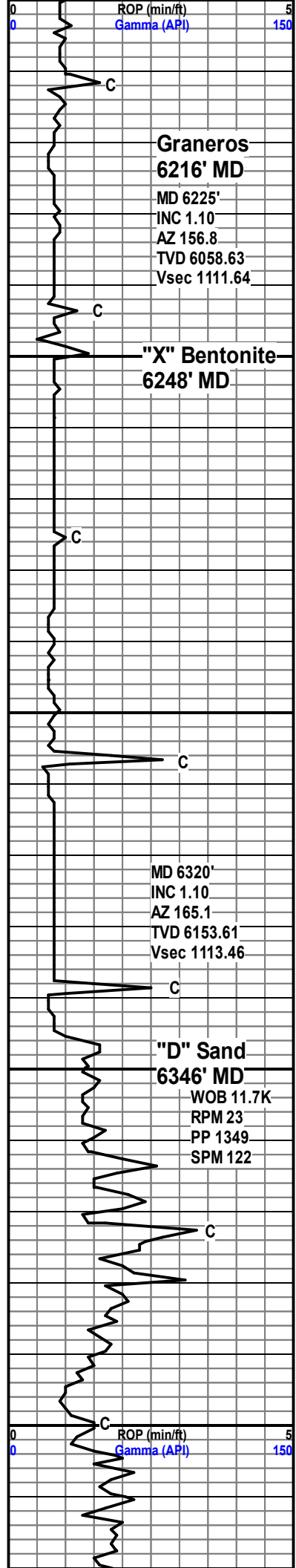












SH: dkgy - blk gy, frm, plty - sb plty, fisl, sl calc, occ sl - mod slty, occ lt gy Bent, tr vf xtl pyr, no show

lt gry Bent bd, flr bright yel

SH: dk gy - gy, frm, sbblky - blk, n - sl calc, occ slty, tr lt gy Bent

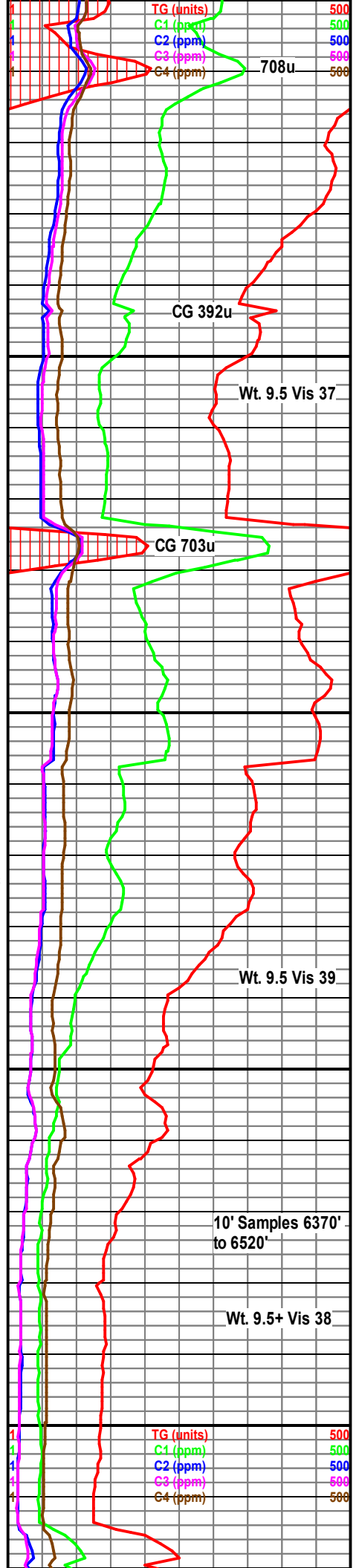
SH: dkgy - blk gy, frm, plty - sbplty w/ occ fis, sl-n calc, occ sl - mod slty, occ lt gy Bent, tr vf xtl pyr, no show

SS: wh - ltgy & tn, occ dk specs, hd, vf - occ f gr, sb ang - sb rnd, fr - w srt, sil cmt, tr blk carb mat, occ wh clay fill, tr vf xtl pyr, dull yel flr, v rr wk slow strmg pale yel cut or wk yel dif cuts, v wk show

SS: wh - tn, occ dk specs, hd, vf - occ fgr, sbang - sbrnd, slty in part, sil cmt, tr blk -dkbrn carb mat, occ wh clay fill, tr vf xtl pyr, dull yel flr, v wk yel diffuse cuts, v wk show

SLTST: m-dk gy, fm, sb blk-sb plty, frm-hd, n calc, tr blk carb mat, n por, tr pyr, m gritty sh stringers, n flr, n cut

SLTST: m-dk gy, fm, sbblky-sbplty, frm-hd, n calc, tr blk carb mat, no vis



"J" Sand  
6427' MD

WOB 8.5K  
RPM 20  
PP 1040  
SPM 122

TOOH f/ bit & Motor  
2/15/14 @ 6459' MD

NB #3 Roller Type / 7  
7/8 STLY2603 in @  
6459' MD

Base  
"J" Sand  
6483' MD

TD 6585' MD  
Drillers Depth  
2/15/14  
1409 Hours MST

ROP (min/ft)  
Gamma (API)

por, tr pyr, m-vf gr lt gy SS strs, NCSOF

SS: wh - v lt gy scat s & p, fri - hd, vf - f  
gr, sbang - sbrnd, n calc, v wk sil cmt,  
cl qtz gr, tr dk hvy mnrl gr, tr grn glau  
gr, wh clay mtrx/cmt (Kaolinite), scat  
blk carb specs, n-tr vis por, spty dull  
yel flor, spty wk dull yel resd cut

Sample contamination from trip

SLTST: m-dk br, fm, sbblky-sbplty, frm,  
n calc, mica, tr pyr; m-vf gr lt gy - gy, p  
lith, SS strs & bds, abnt mafic & rx frag  
gr (n glau in SS), cl mtrx; abnt wh kaol  
fill and bd, no vis por, n flor, n cut

Wt. 9.6 Vis 39

Clean Shaker Possum Belly

Wt. 9.5 Vis 39

TG 334u

Crude Oil coming over shakers,  
bright yellow fluorescence  
6455'-6485 MD

CG 230u

CG 228u

DTG 230u  
Generator Down  
CG 229u

TG (units)	500
C1 (ppm)	500
C2 (ppm)	500
C3 (ppm)	500