



Scale: 5" / 100'  
Measured Depth Log

**Well Name** B-Farm LD 18-034HC

**Location** Sec 7-T1S-R67W

**State** COLORADO

**Country** USA

**API Number** 05 001 10098 0000

**Geographic Region** DJ BASIN

**Spud Date** 12/31/2017

**County** ADAMS

**Rig Number** PRECISION 460

**AFE #** 18DC0002

**Field** WATTENBERG

**Drilling Completed** 1/13/2018

**Ground Elevation** 5124.6'

**K.B. Elevation** 5144.6'

**Logged Interval** 6000' MD To 13833' MD

**Formation** CODELL

**Total Depth** 13833' MD

**Type of Drilling Fluid** OIL BASED MUD

## Operator

**Company** Great Western Oil and Gas

**Address** 1801 Broadway, Ste 500  
Denver, CO 80202



## Geologist

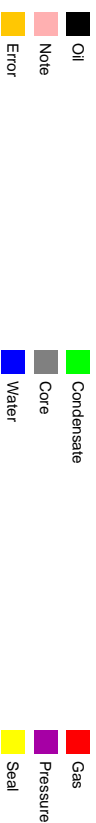
**Name** Joey Luce and Gabriel Rubio

**Company** Terra Guidance

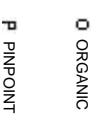
**Address** 1298 O Road  
Loma CO 81524  
(970) 260-5408



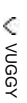
## Color Coding



## Oil Show



DEAD



EVEN

QUESTIONABLE

SPOTTED STAINING BIT

## Engineering



CASING



CONNECTION (LEFT)



CONNECTION (RIGHT)

FENESTRAL



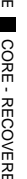
CONNECTION G

FRACTURE



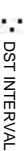
CORE - LOST

INTERCRYSTALLINE



CORE - RECOVERED

INTEROOLITIC



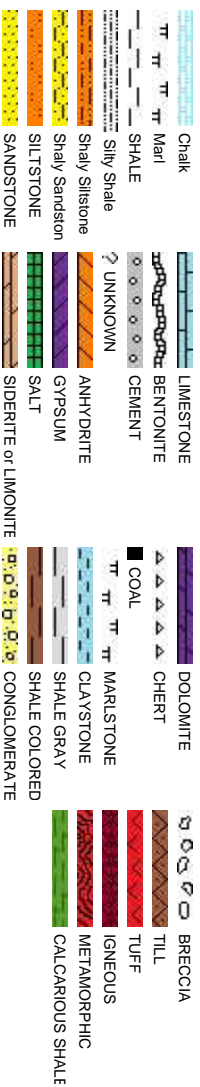
DST INTERVAL

MOLDIC



FAULT

## Rock Types



## Porosity

E EARTHY

FENESTRAL

FRACTURE

INTERCRYSTALLINE

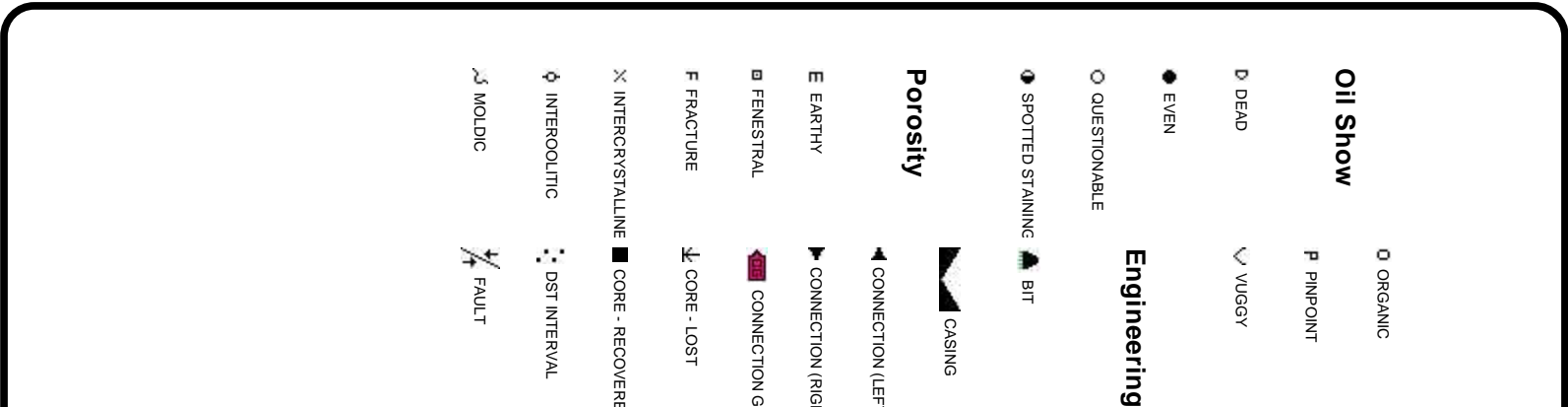
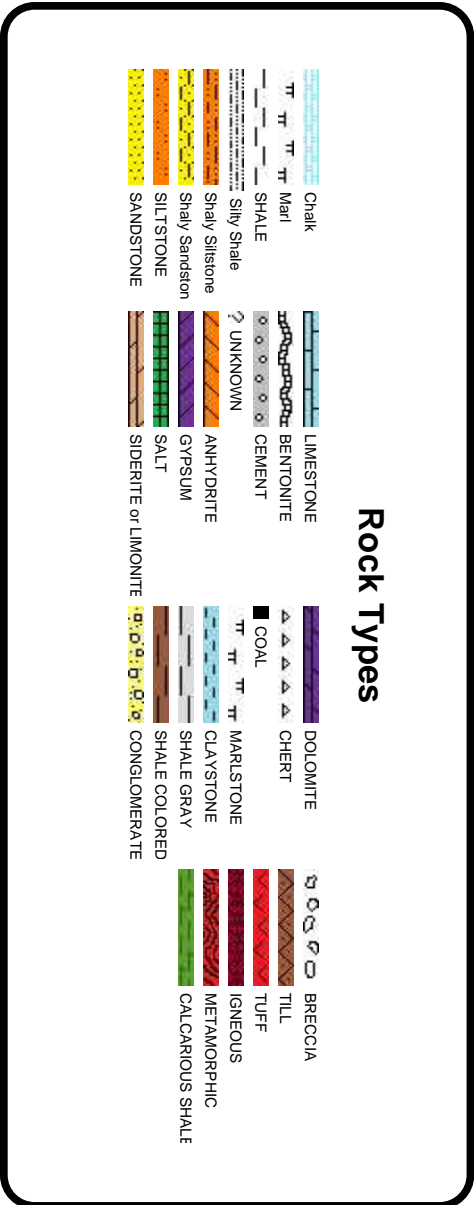
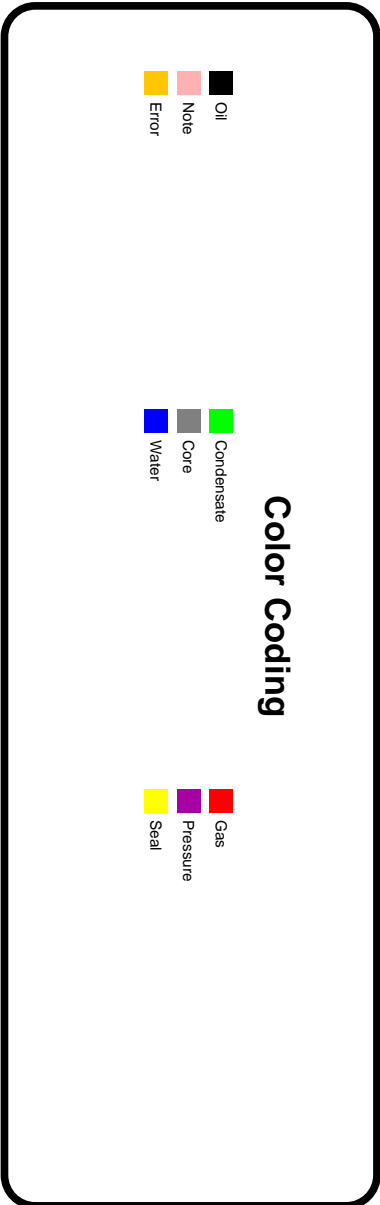
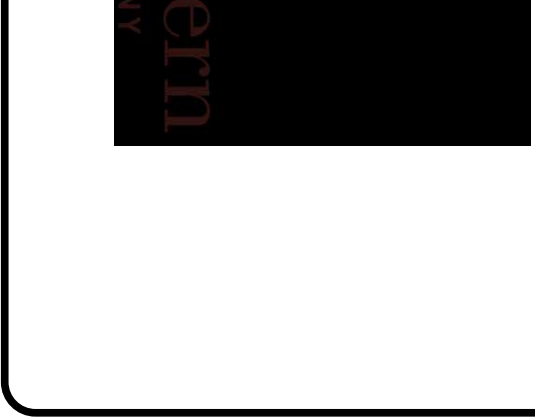
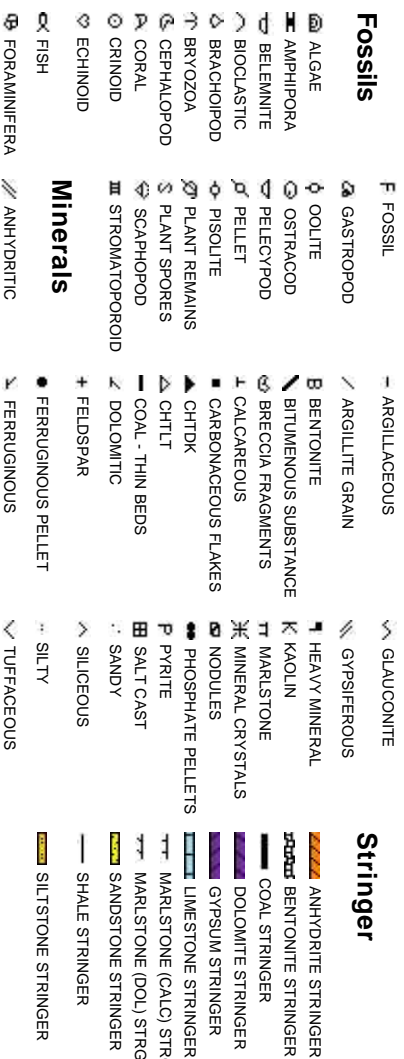
INTEROOLITIC

MOLDIC



FAULT

## Accessories




Other Symbols

 FORMATION TOP

L LITHOGRAPHIC

Rounding

 GAS SHOW

MX MICROXLN

 MINDEPTH MN DEPTH


A ANGULAR

MS MUDSTONE

 NORMAL FAULT

R ROUNDED

PS PACKSTONE

 OIL SHOW

B SUBANG

WS WACKSTONE

 OVERTURNED STRATA


S SUBRND

 REVERSE FAULT

Textures

 SIDEWALL CORE (LEFT)

M MODERATE


 SIDEWALL CORE (RIGHT) BS BOUNDSTONE

P POOR


AS SLIDE

C CHALKY

W WELL


 SURVEY

CX CRYPTOXLN

 TRIP GAS

E EARTHY

 WIRELINE TESTED - LEFT FX FINELYXLN

 WIRELINE TESTED - RT BS GRAINSTONE

CALCARIUS SHALE

CALCARIOUS SHALE

TERRA GUIDANCE  
BEGAN LOGGING @ 03:12 MST 01/10/2018  
BLOODHOUND GAS CHROMATOGRAPH #5122  
100' Sample Collection

ROP  
ROP  
Gamma

GAPS IN GAMMA DATA DUE  
TO HIGH RATES OF PENETRATION

BG: BACKGROUND GAS  
TG: TRIP GAS  
DTG: DOWNTIME GAS  
MG: MAX GAS

GAS  
C1  
C2  
C3  
C4  
CO2

Depth

5,960 5,970 5,980 5,990 6,000 6,010 6,020 6,030 6,040 6,050 6,060 6,070 6,080 6,090 6,100 6,110 6,120 6,130

Images



% Lithology

TVD Scale  
5800' - 9000'

MD: 6.004'  
INC: 27.26°  
AZM: 55.75°  
TVD: 5,792.66'  
VS: -222.44'

Bit #: 2  
Type: Ulterra SPL516  
Size: 8.5"  
Depth In: 1,718'  
Jets: 5x12,3x11  
S/N: 38776

Well Bore  
TVD

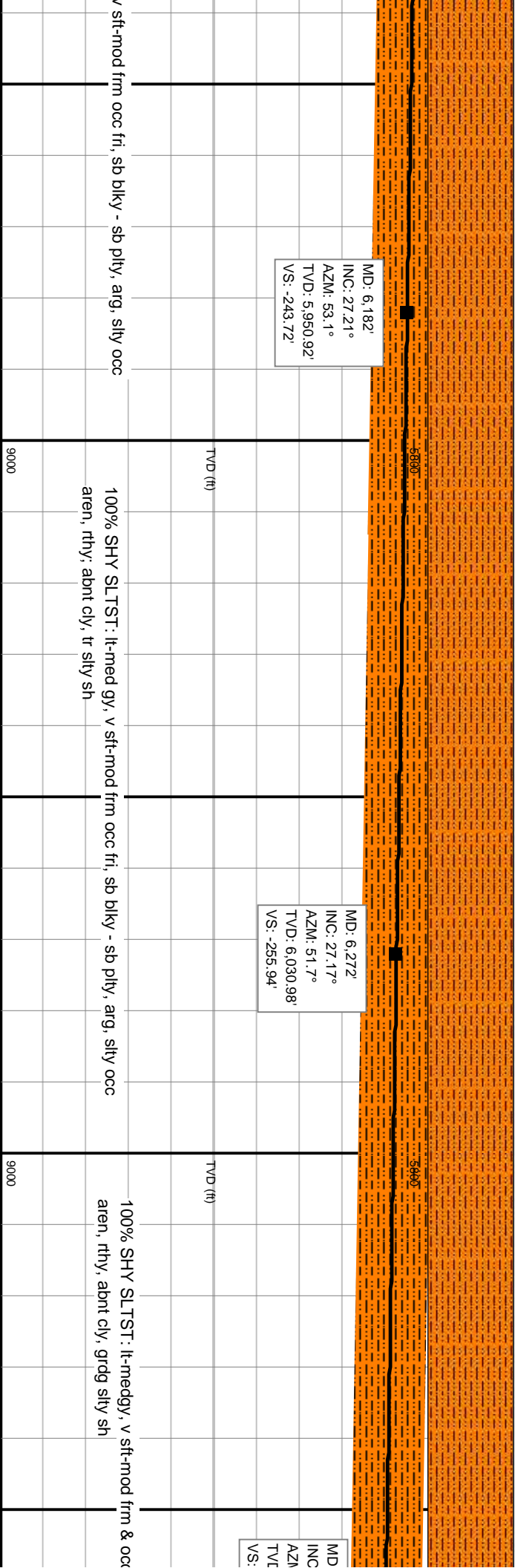
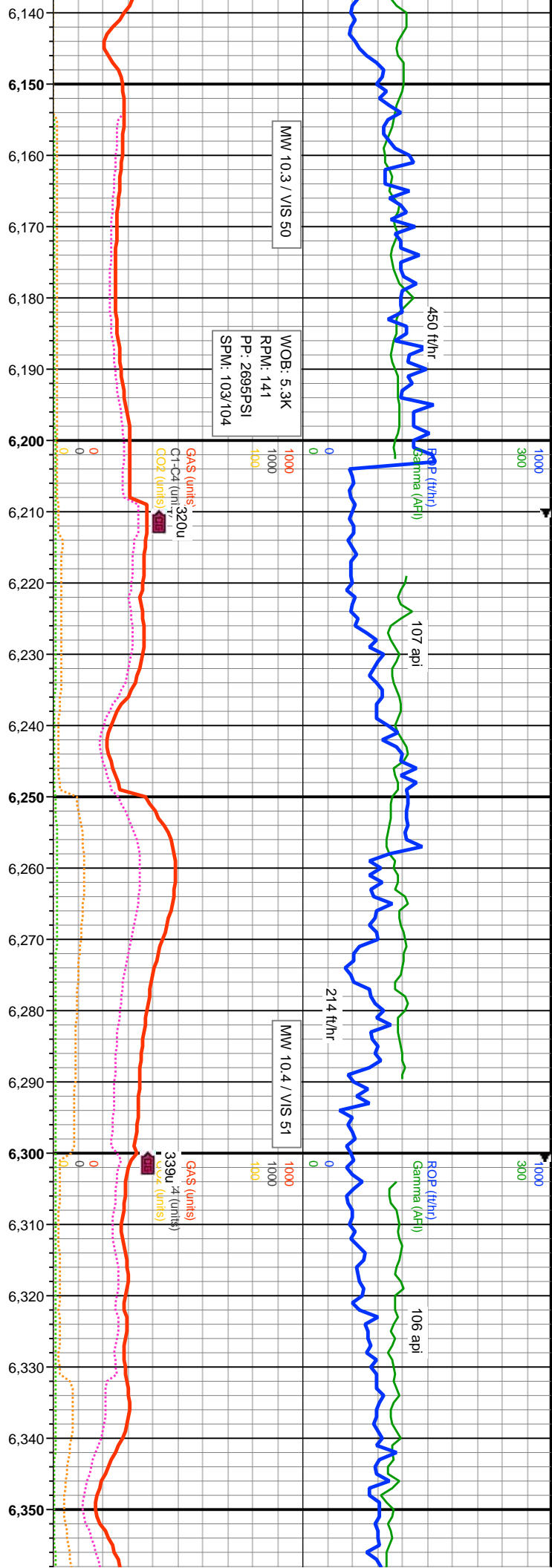
TVD (ft)

100% SHY SLTST: lt-med gy, v sft-mod frm occ fri, sb blkly - sb pty, arg, silty occ  
aren, rthy; abnt cly, tr silty sh

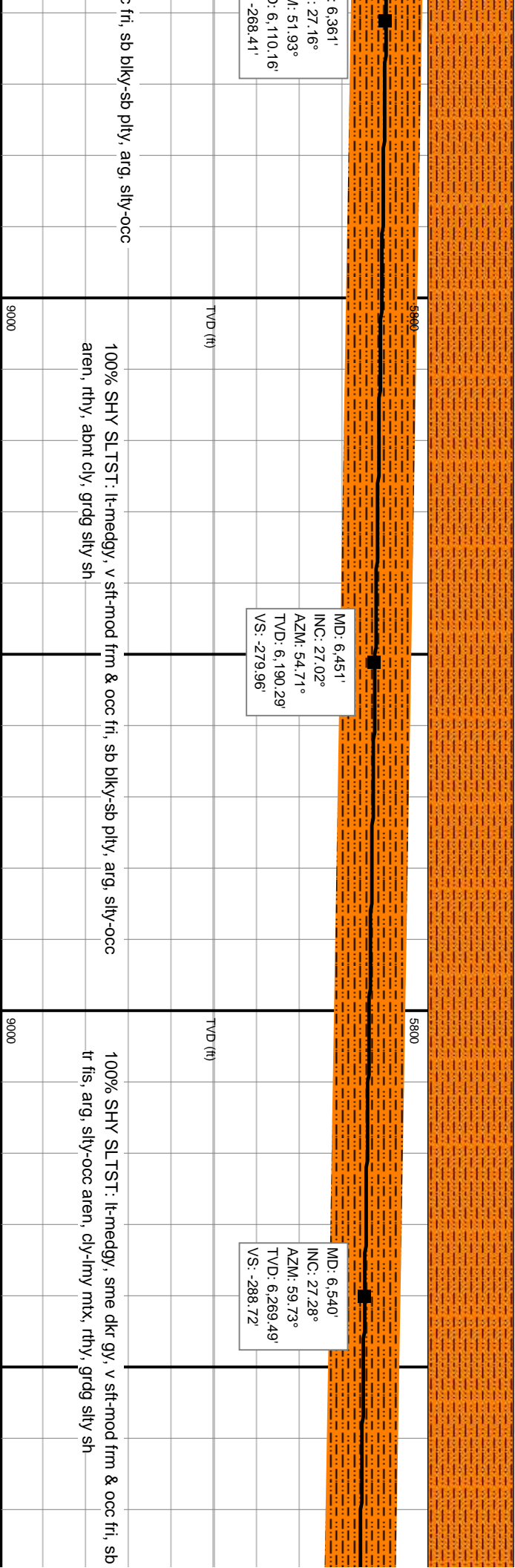
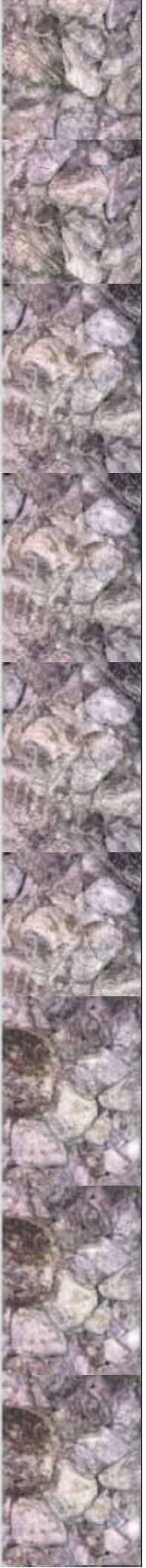
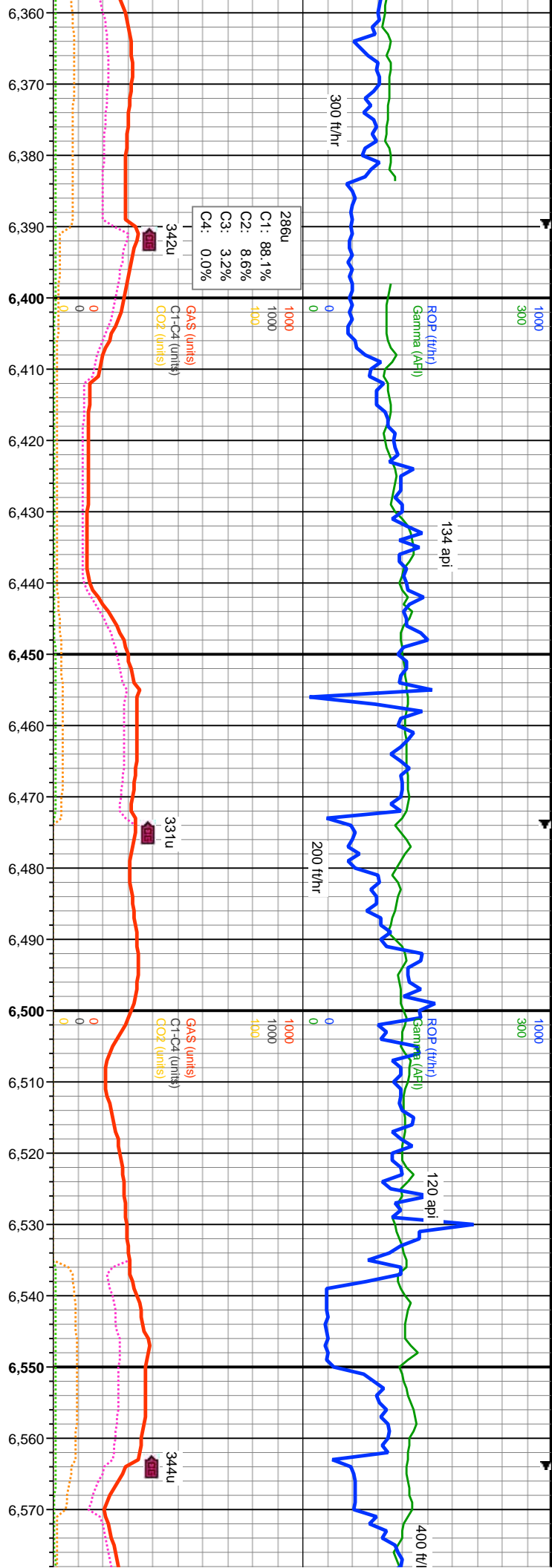
MD: 6.093'  
INC: 27.25°  
AZM: 54.68°  
TVD: 5,871.78'  
VS: -232.63'

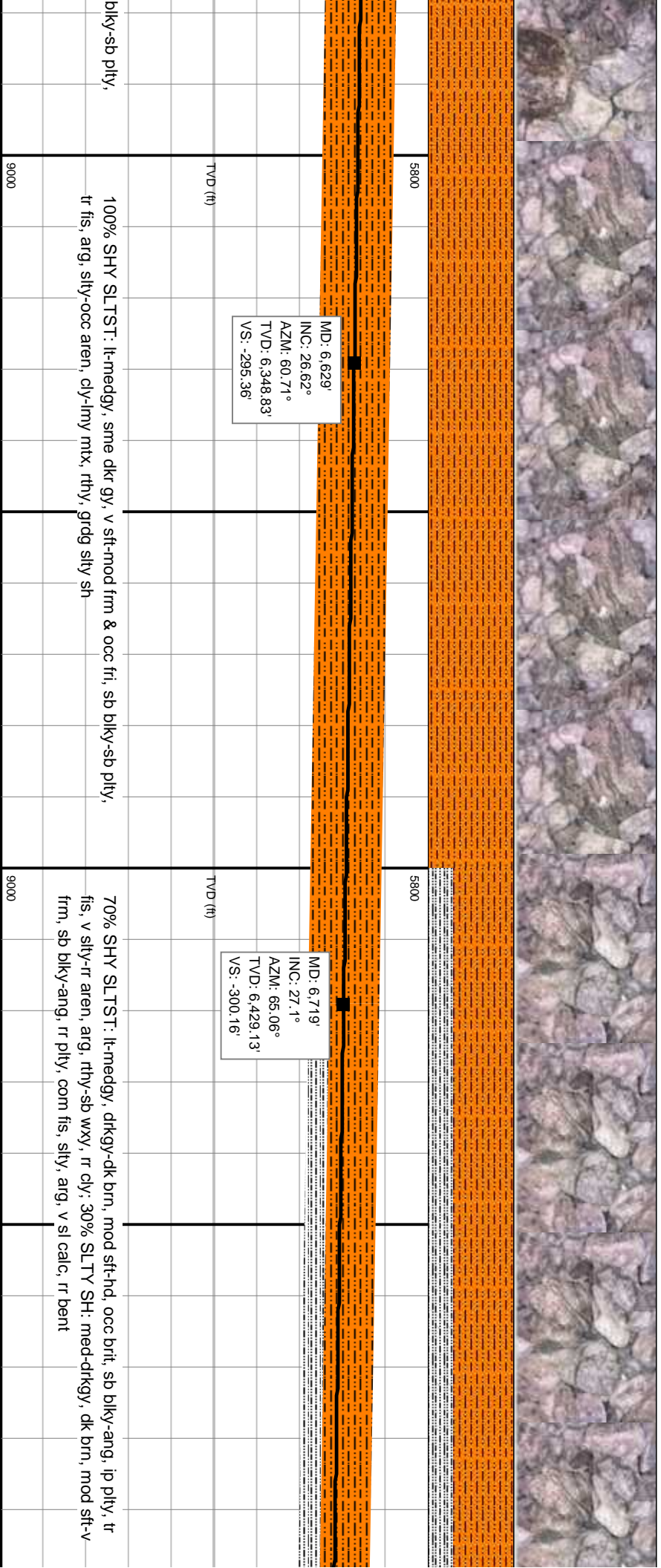
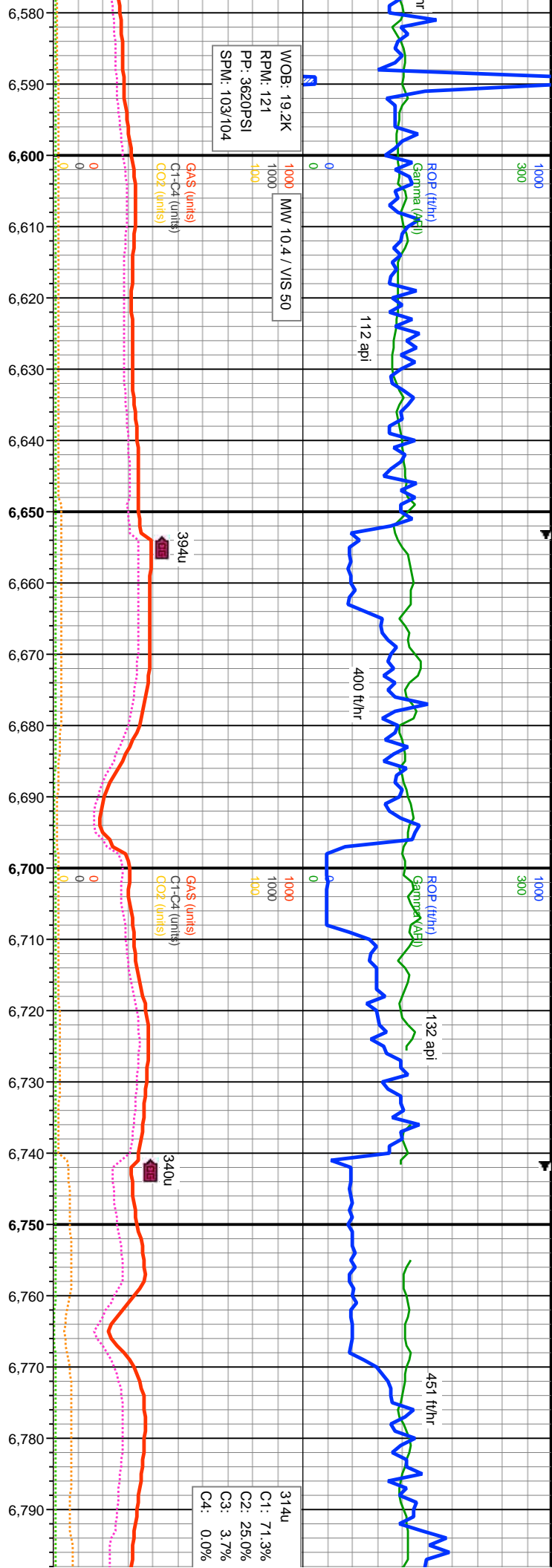
TVD (ft)

100% SHY SLTST: lt-med gy, \  
aren, rthy; abnt cly, tr silty sh

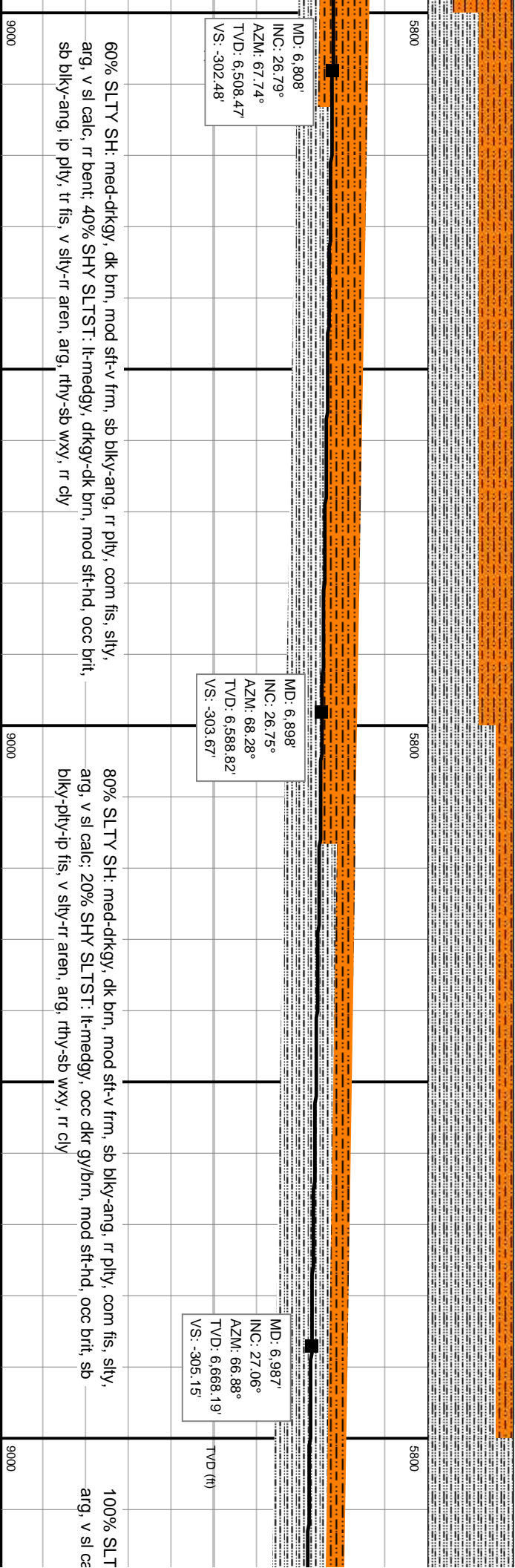
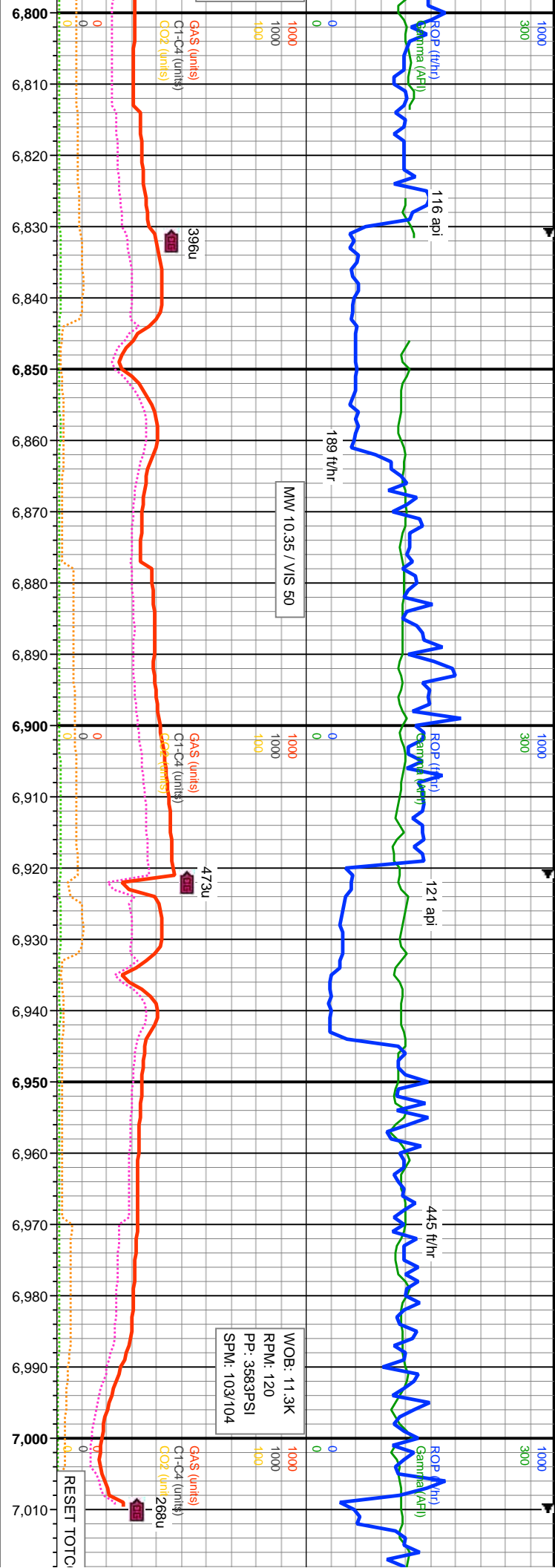




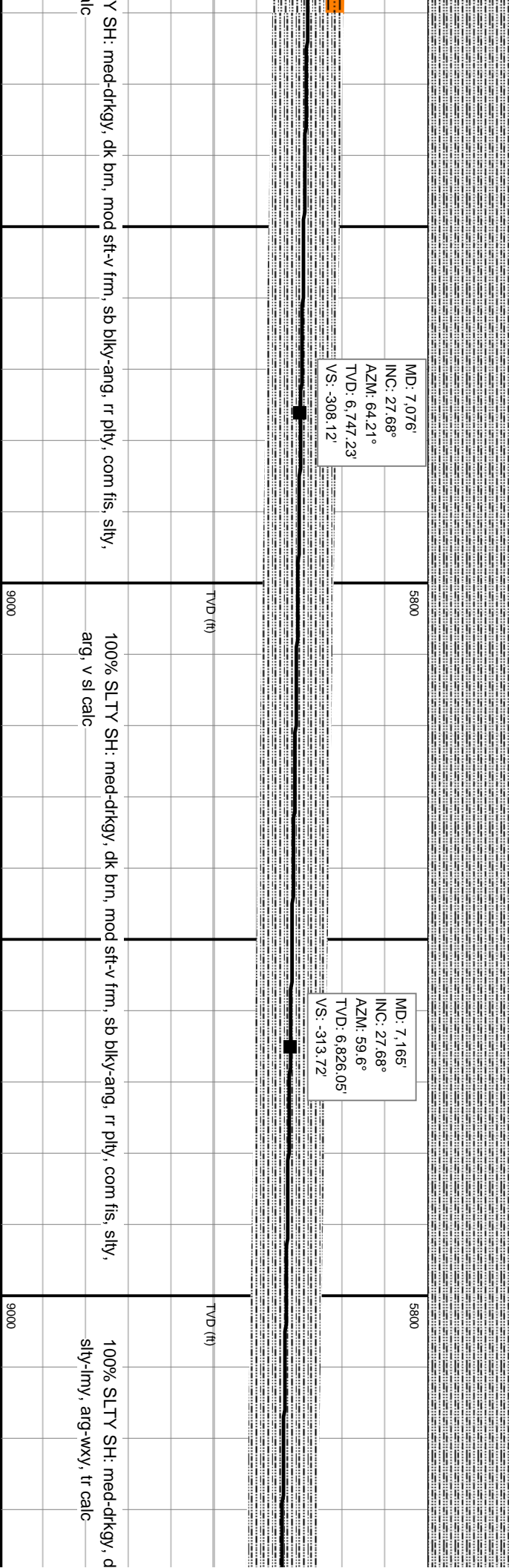
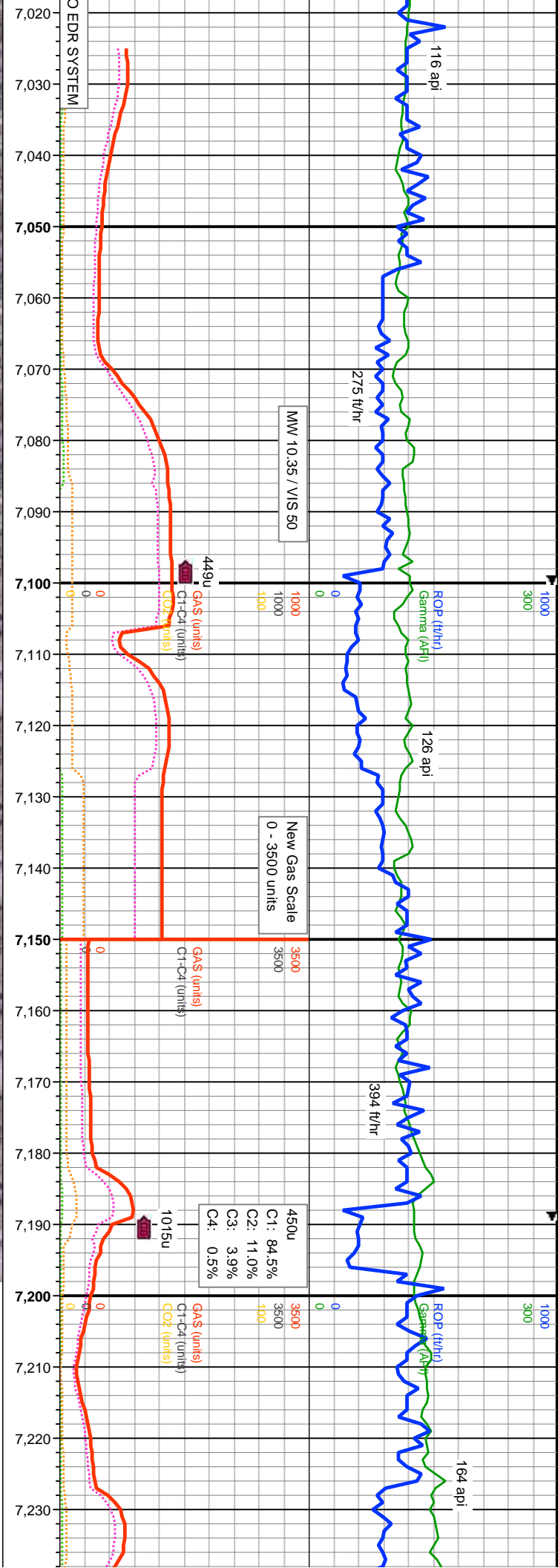


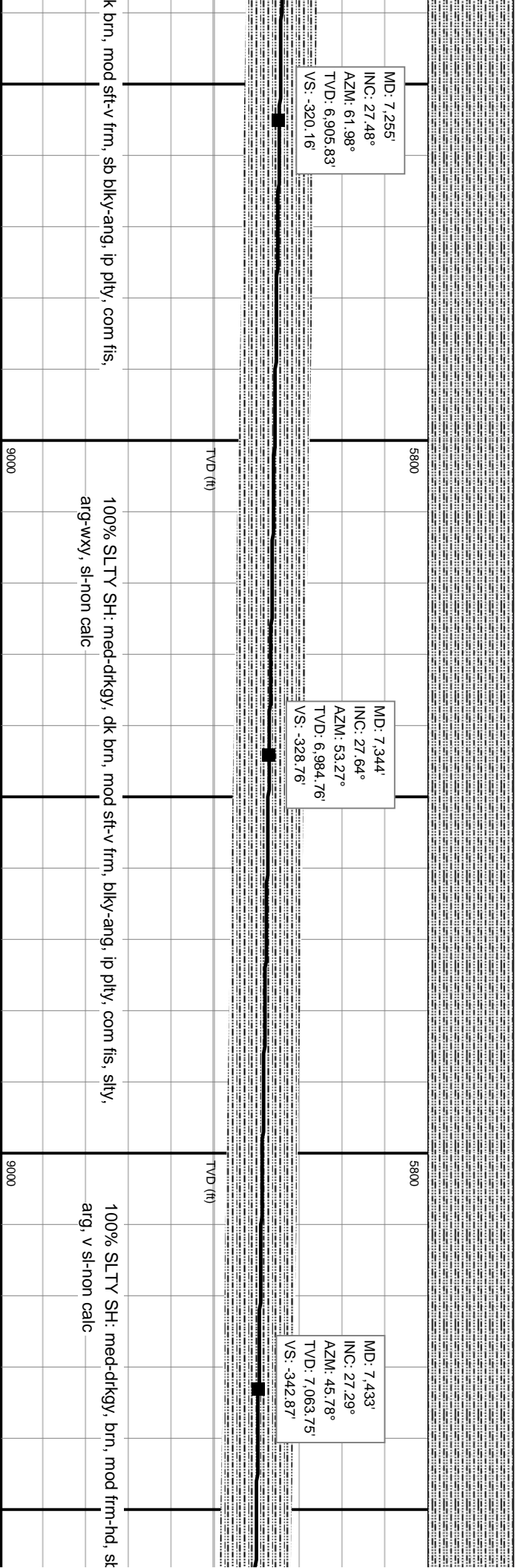
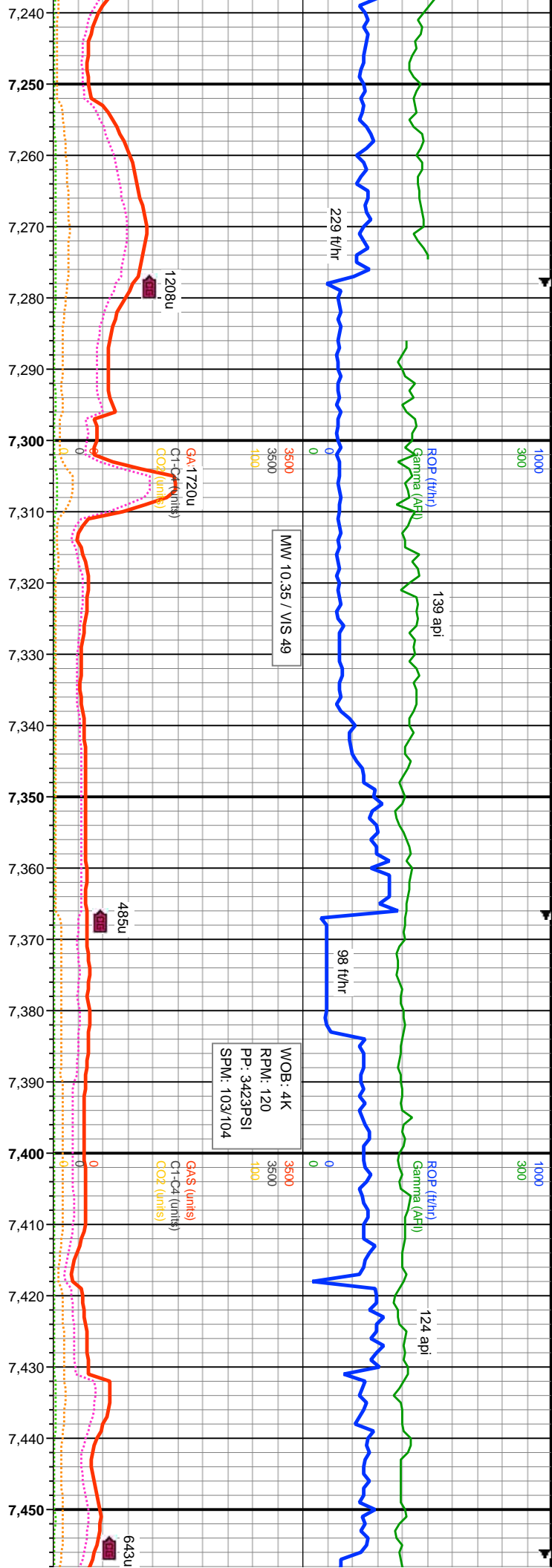




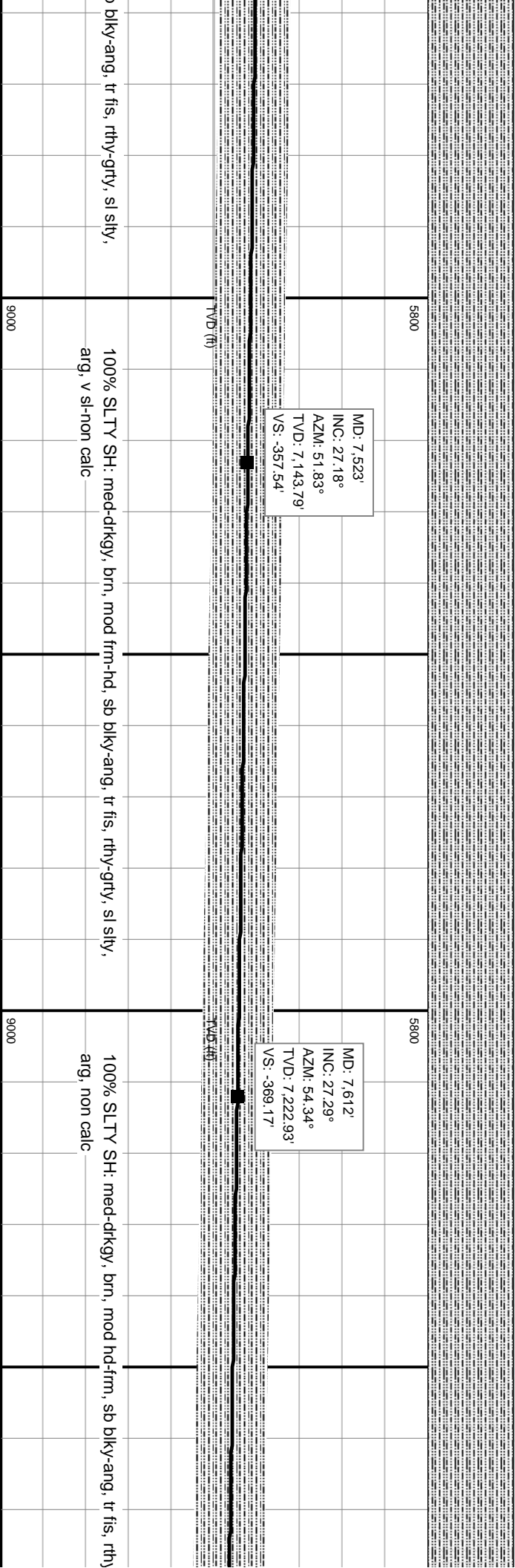
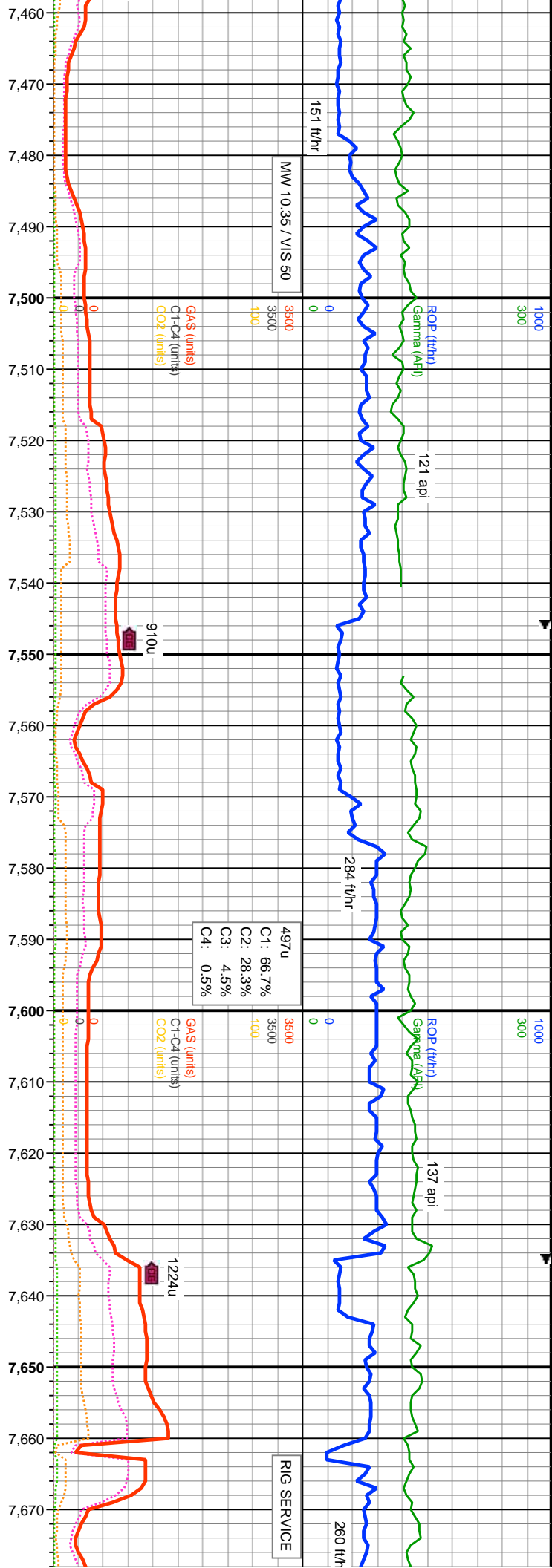




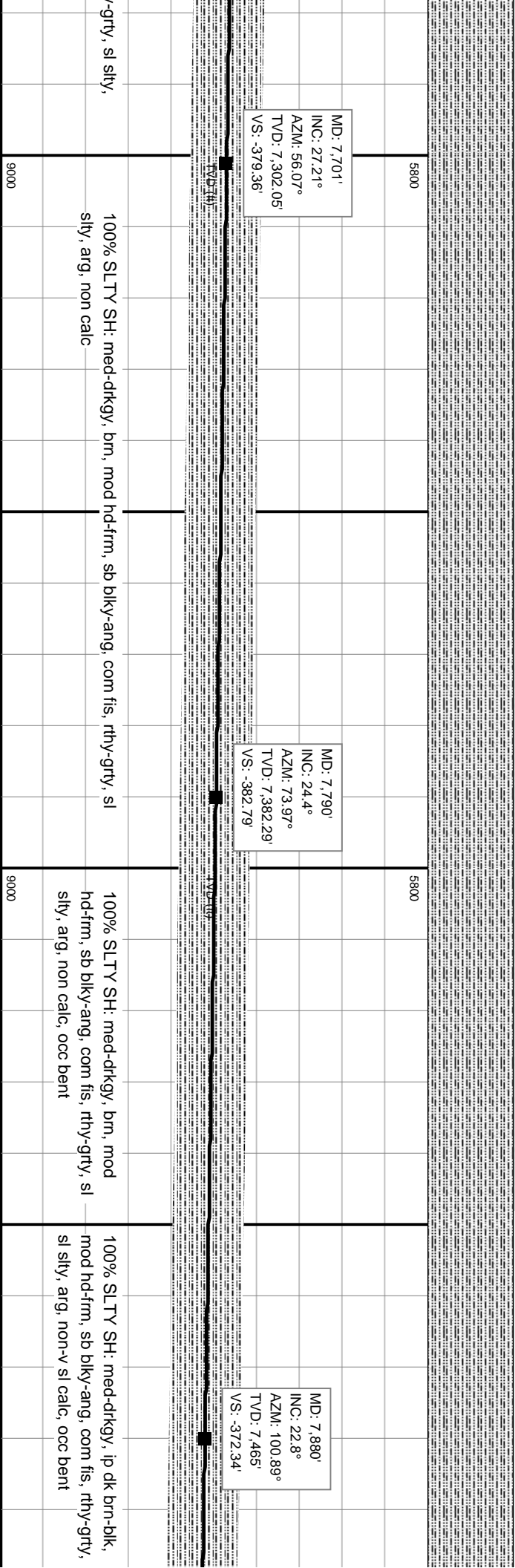
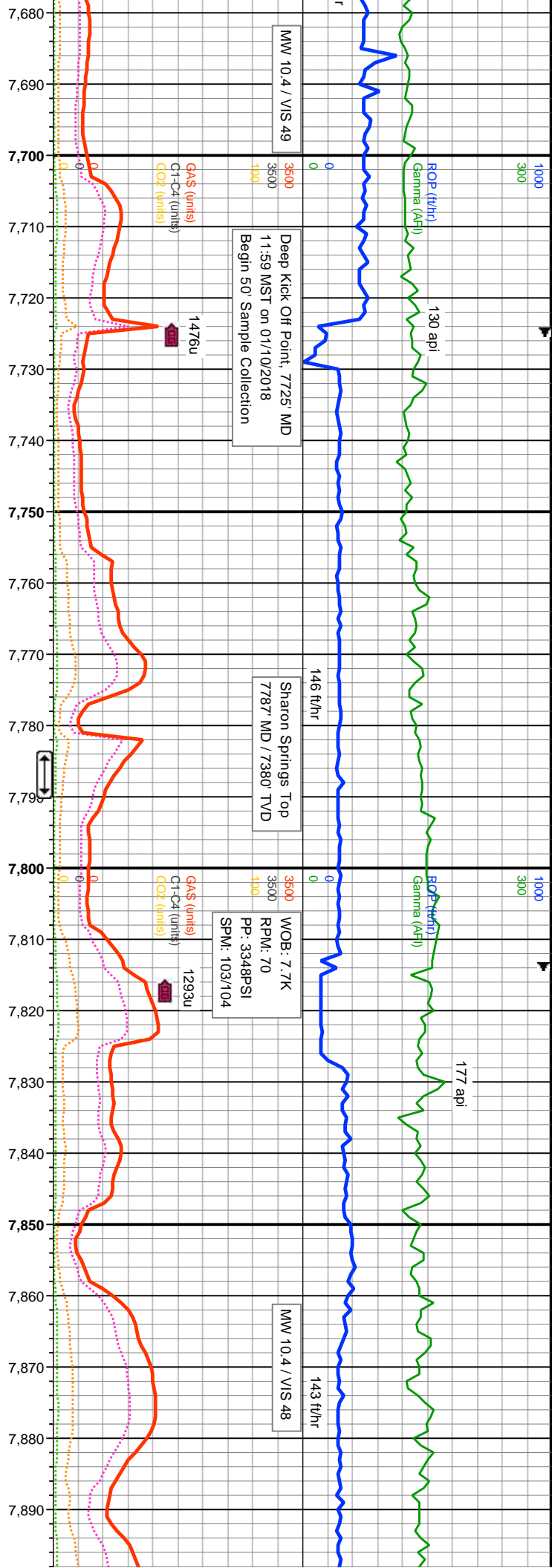


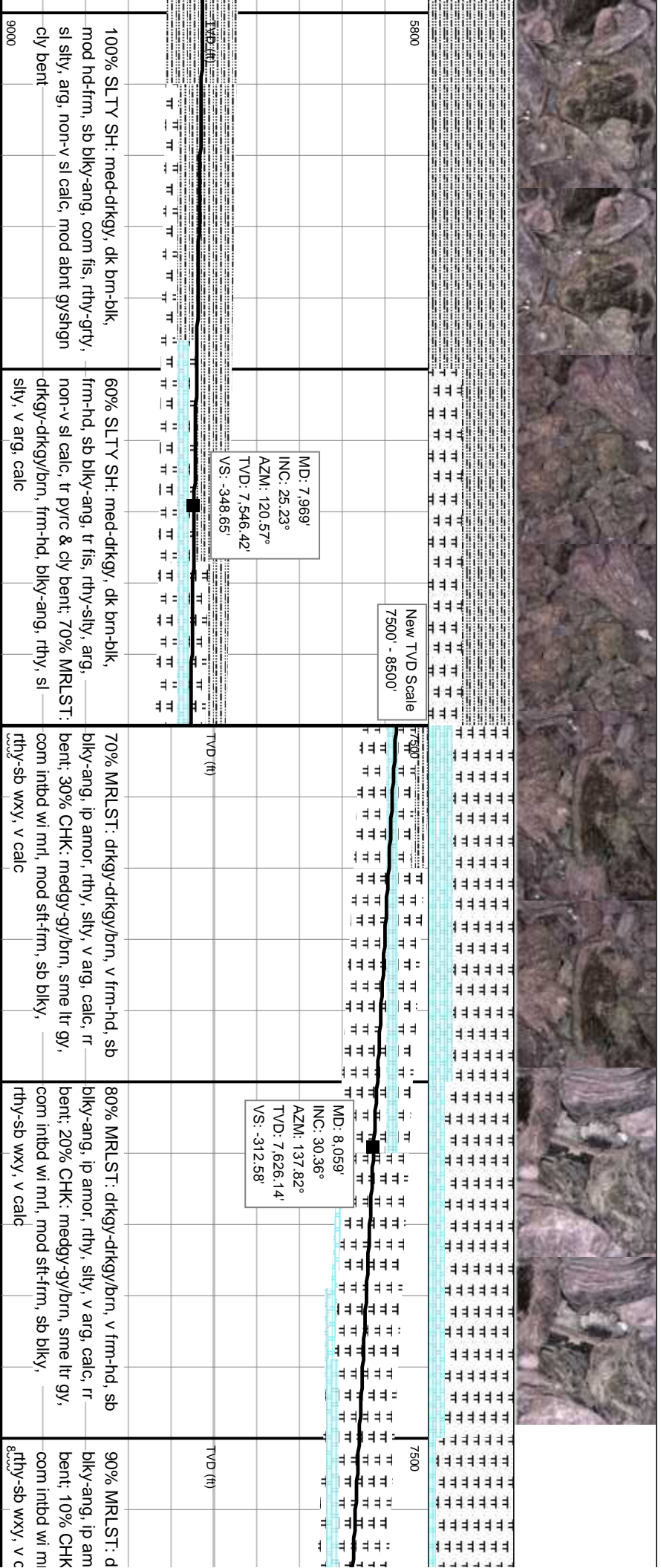
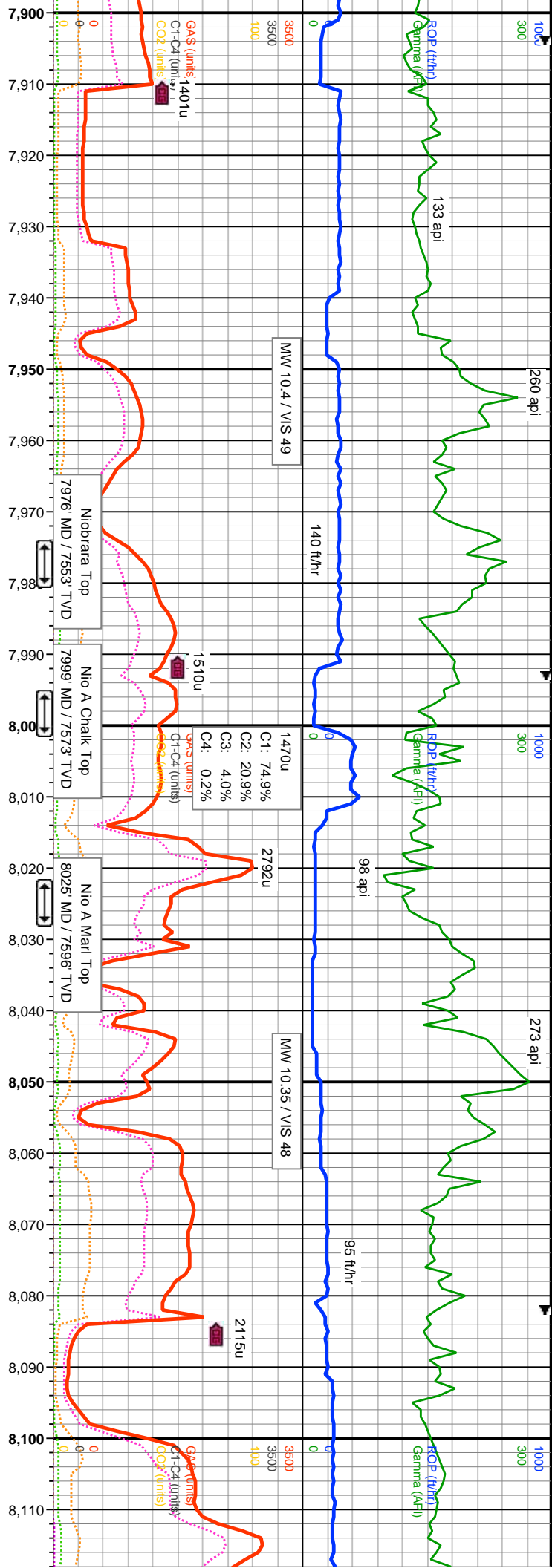




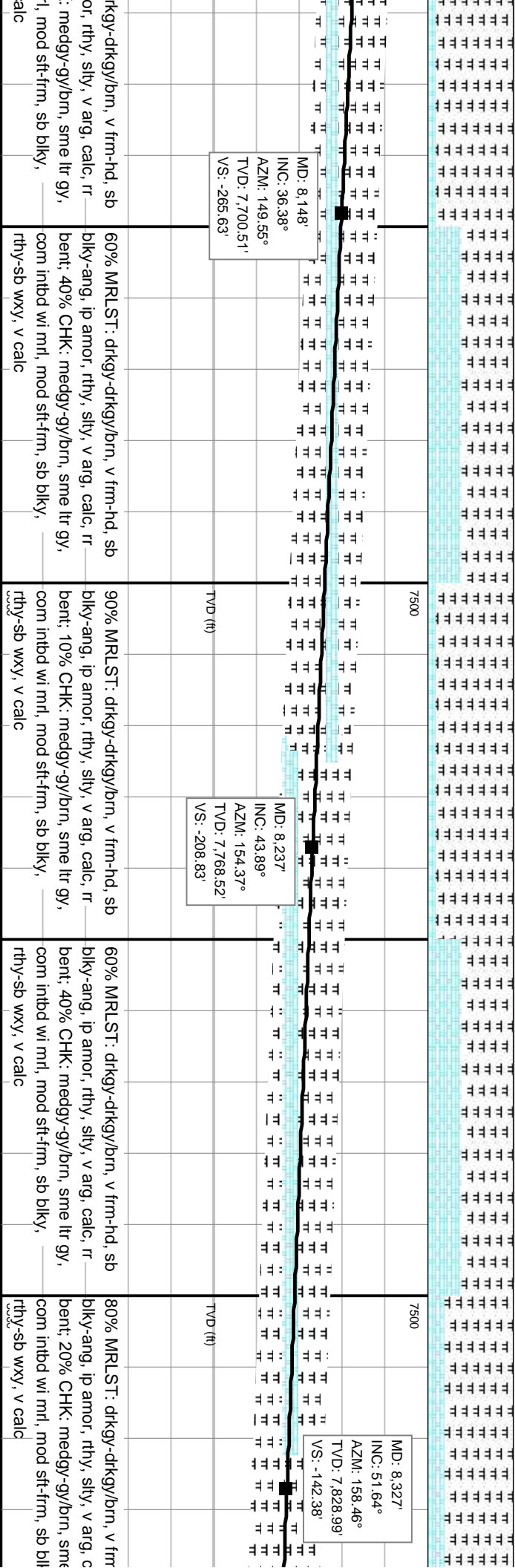
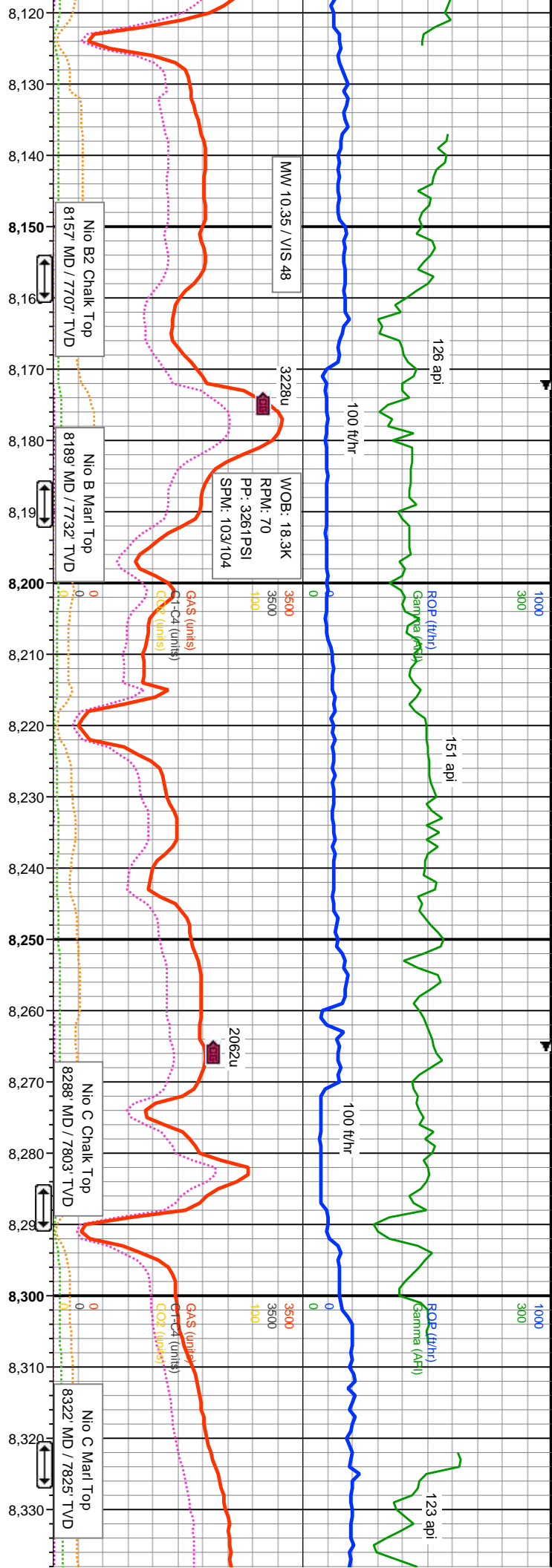




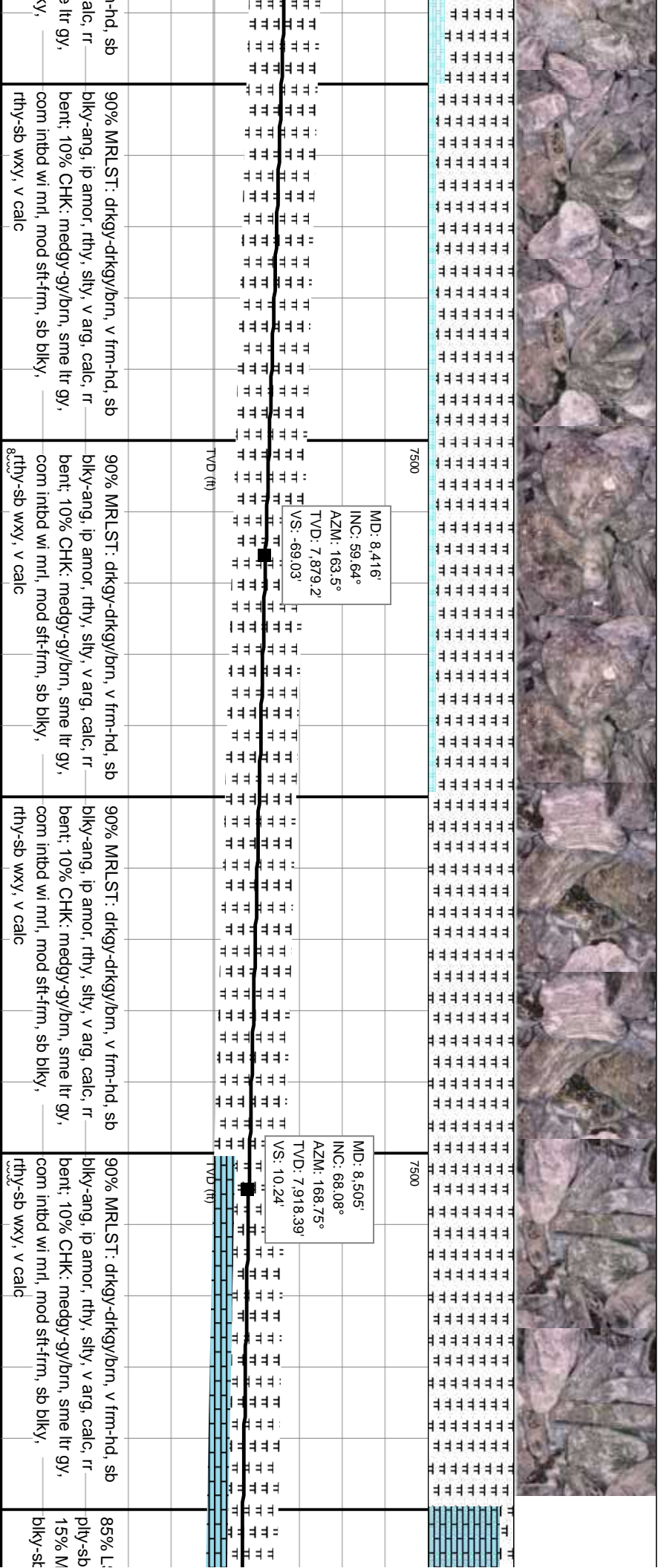
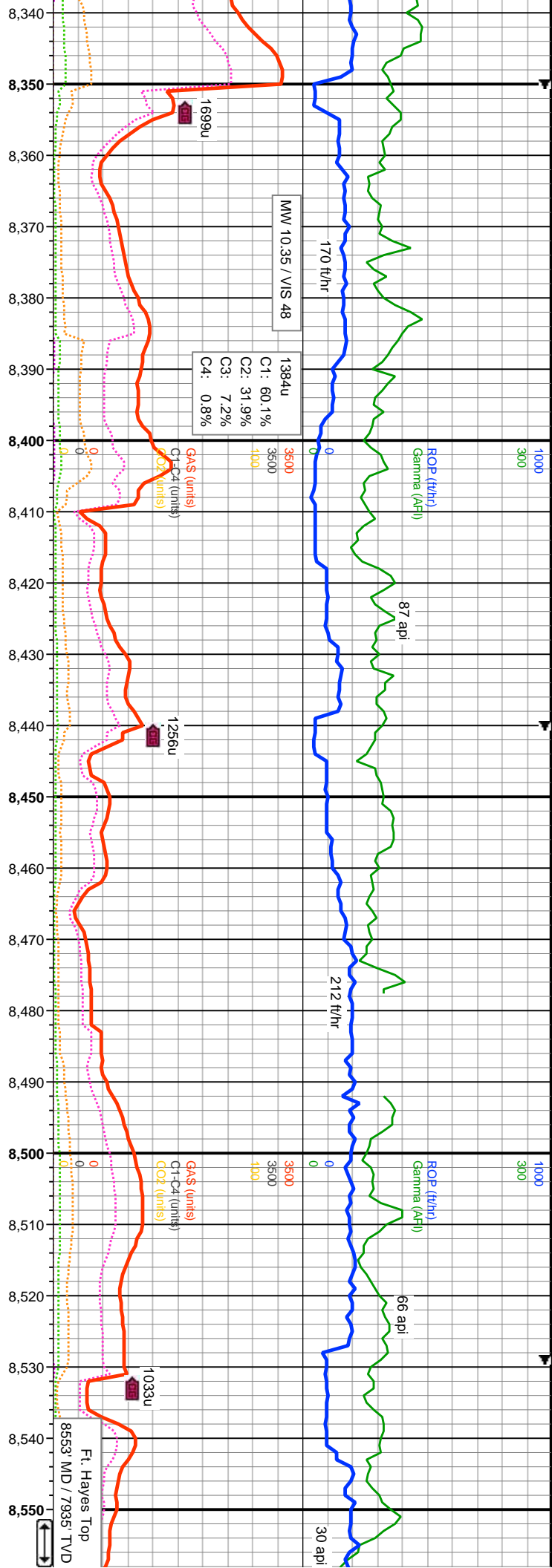


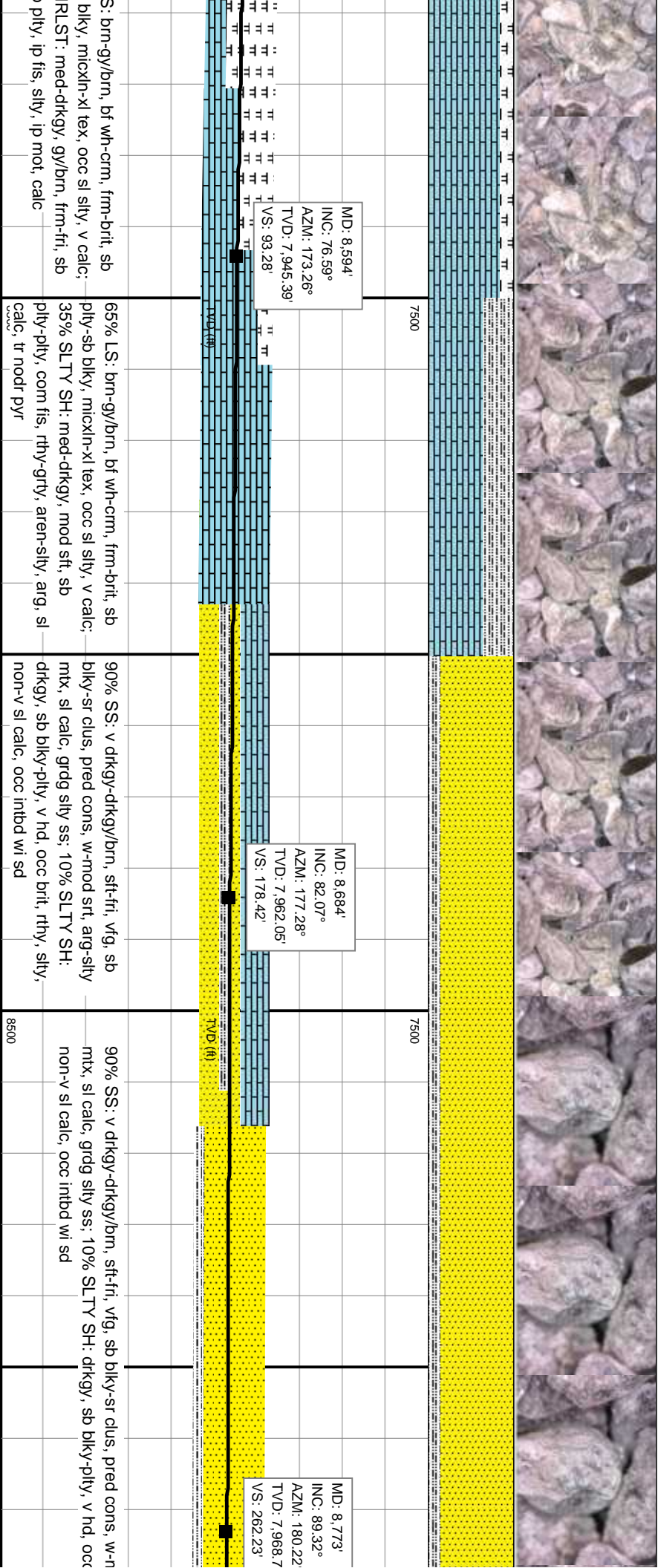
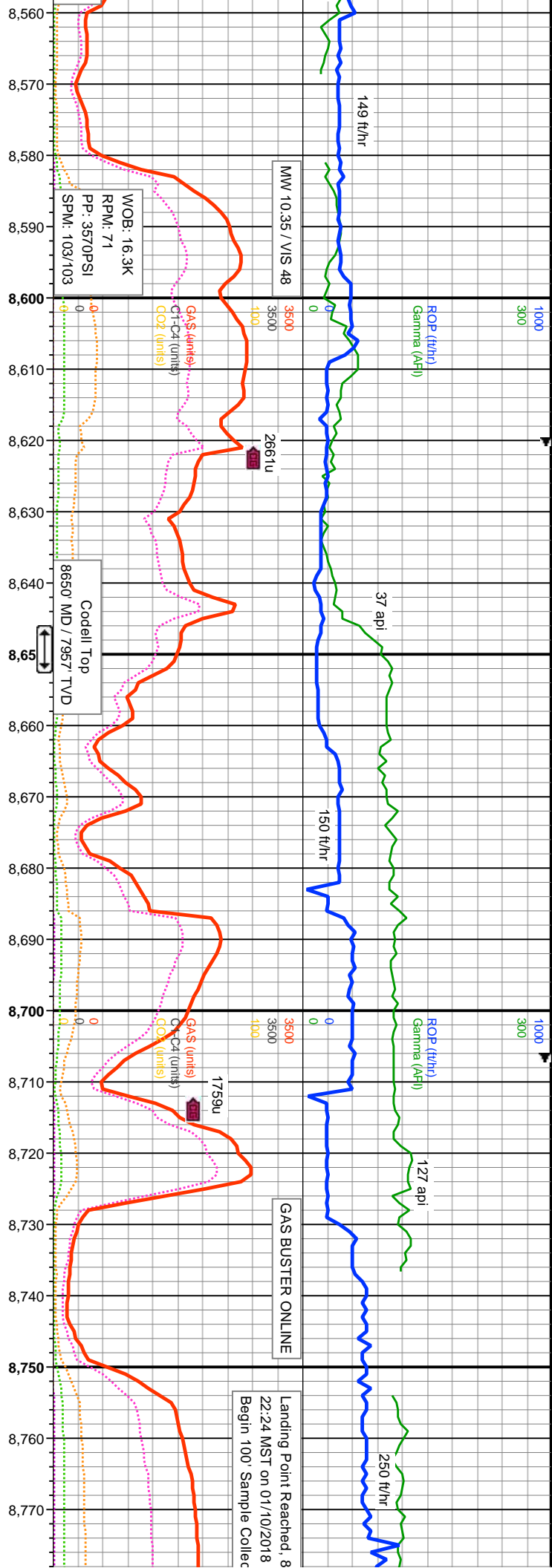








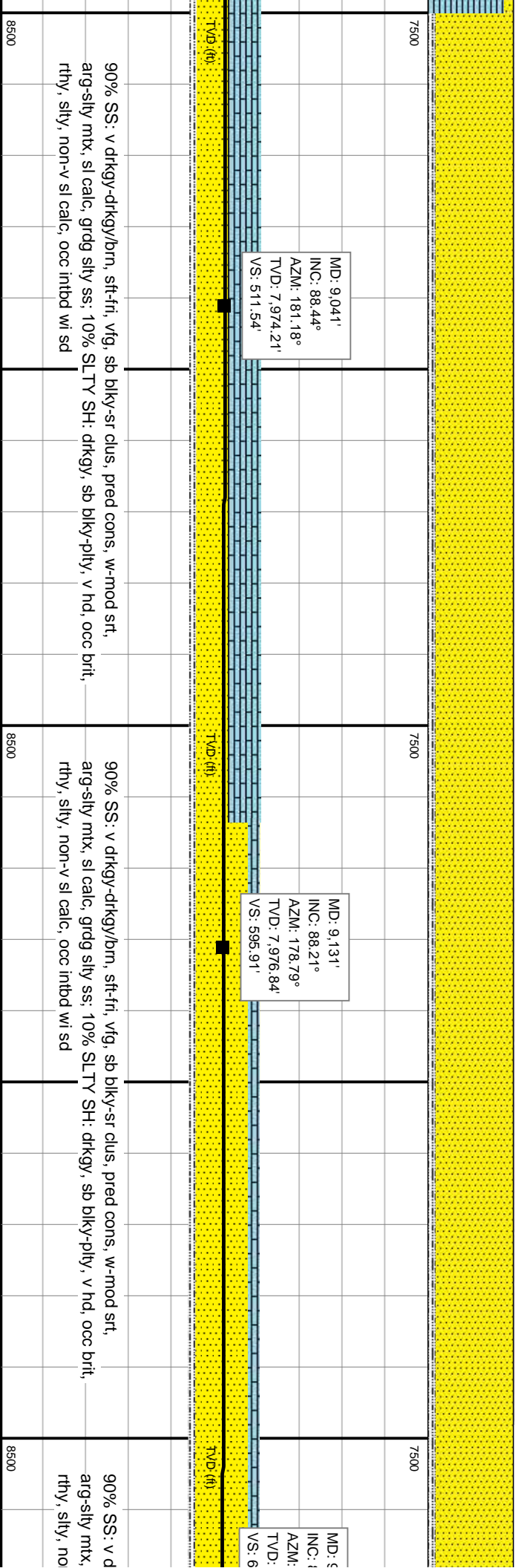
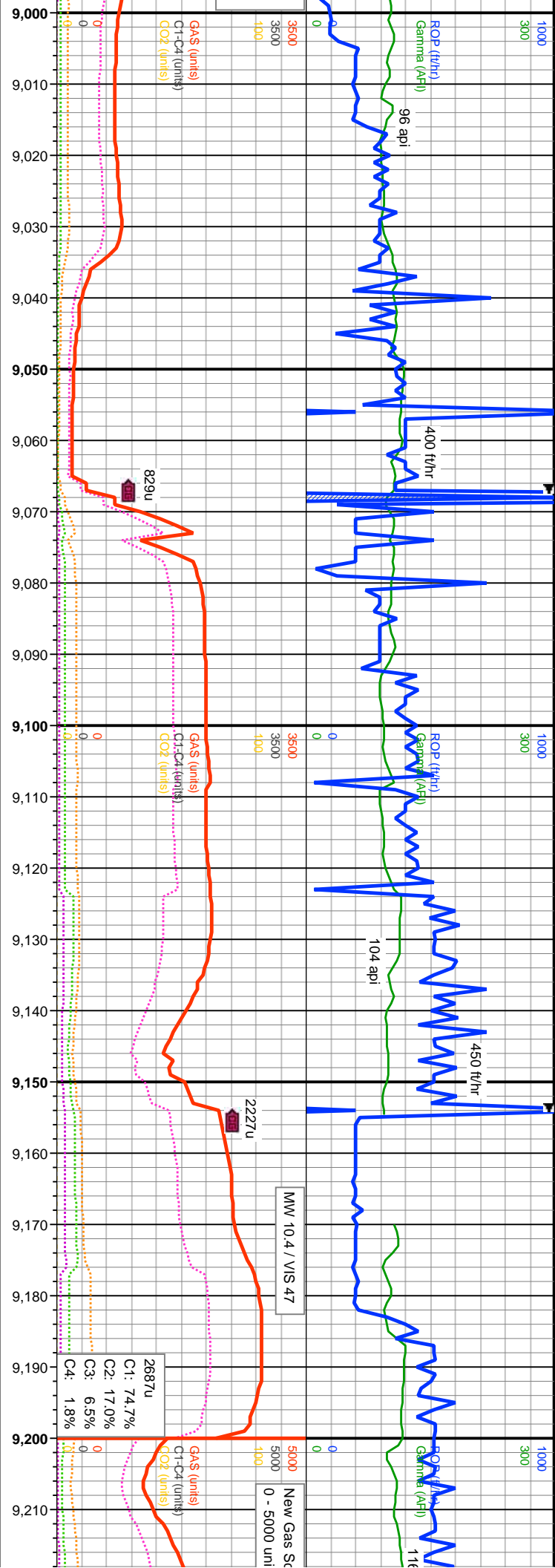






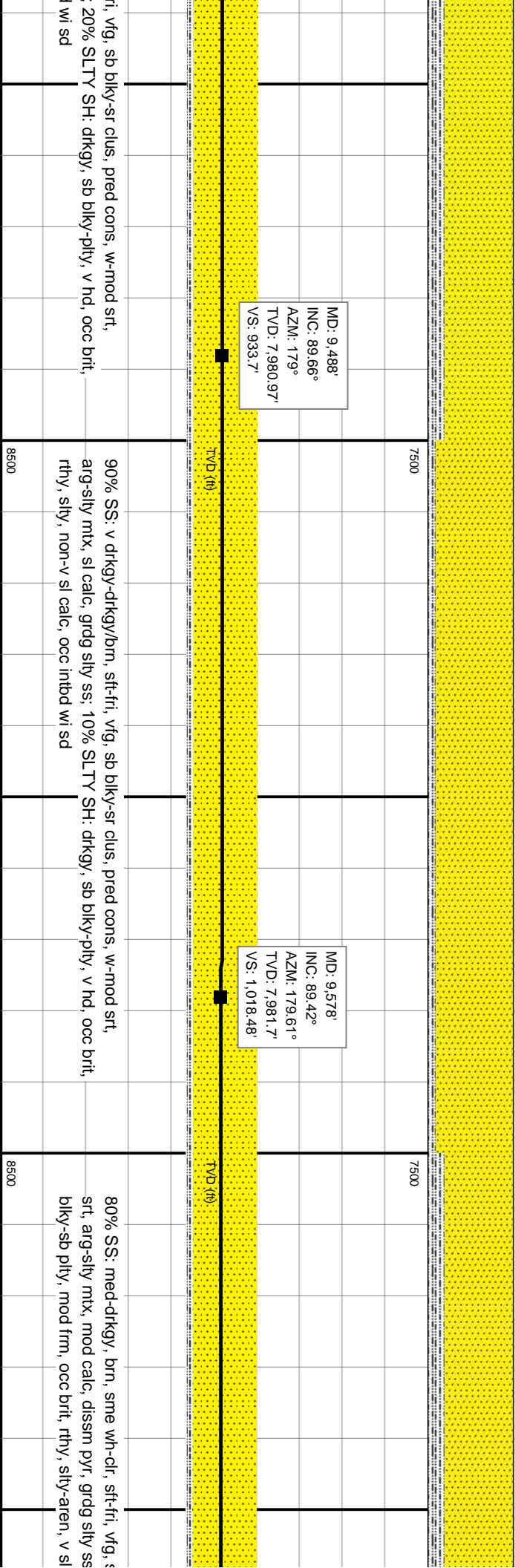
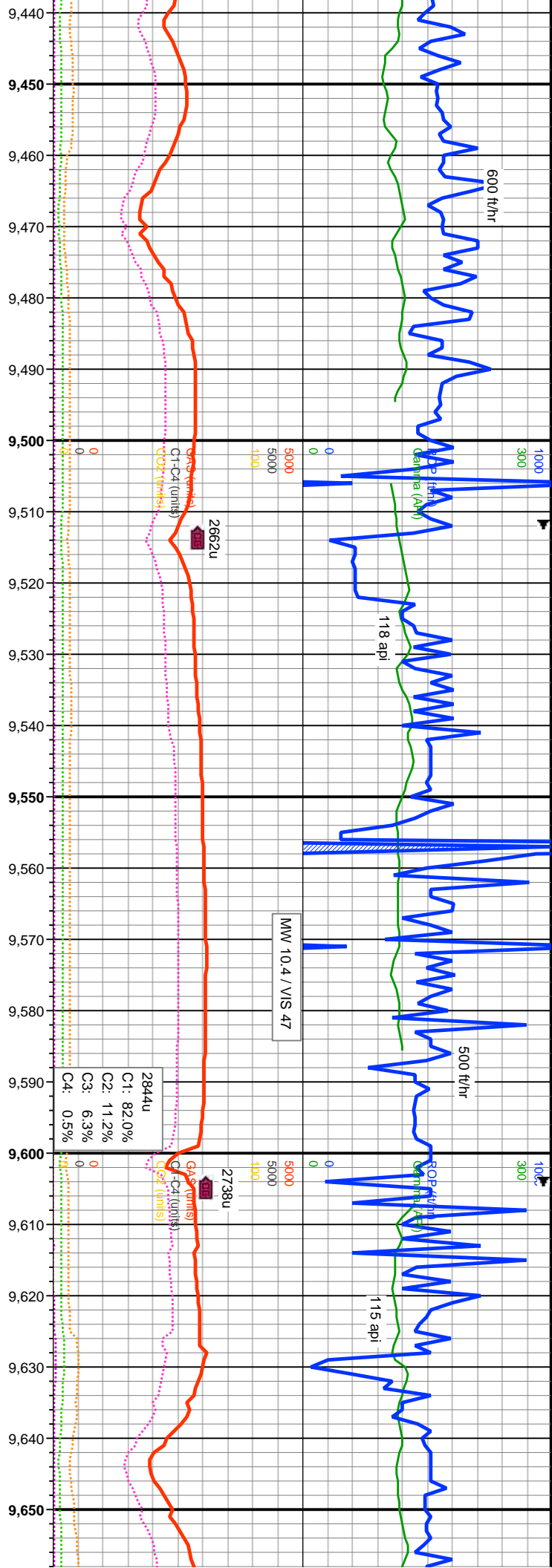




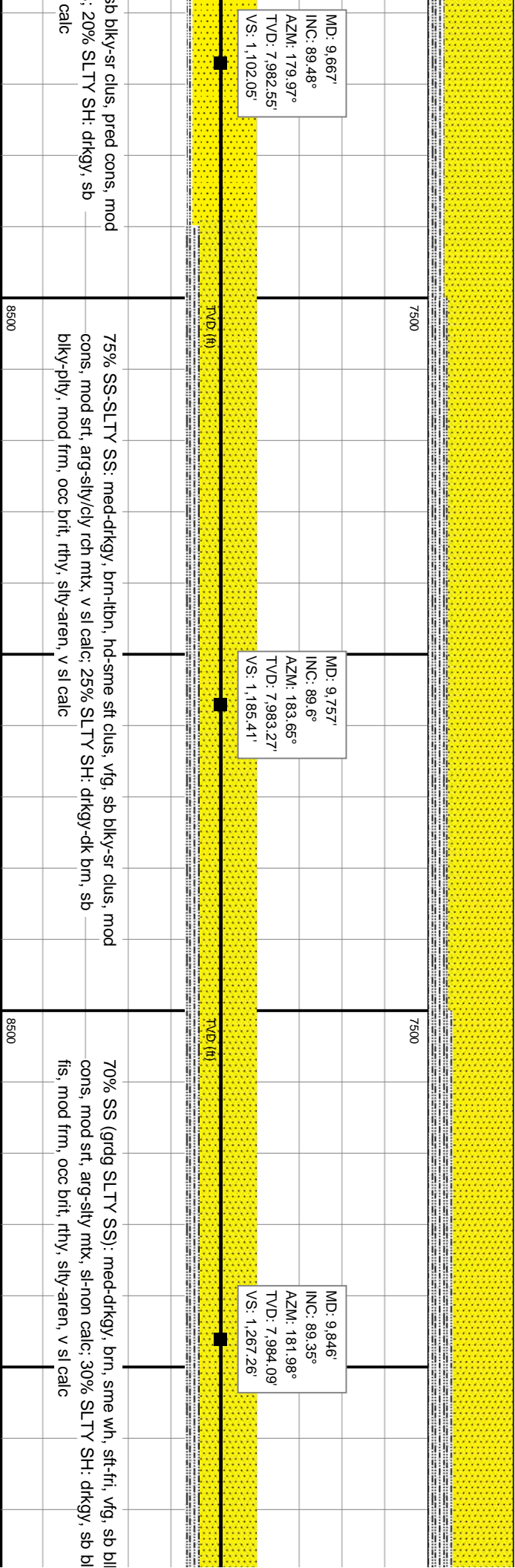
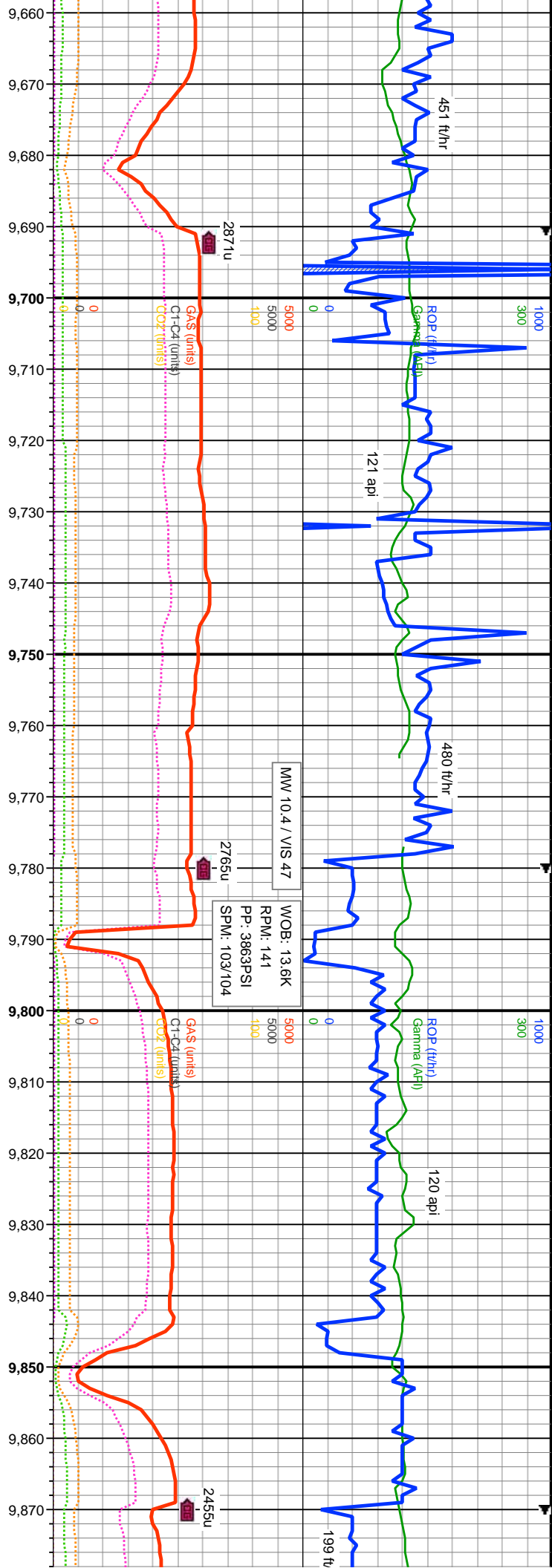


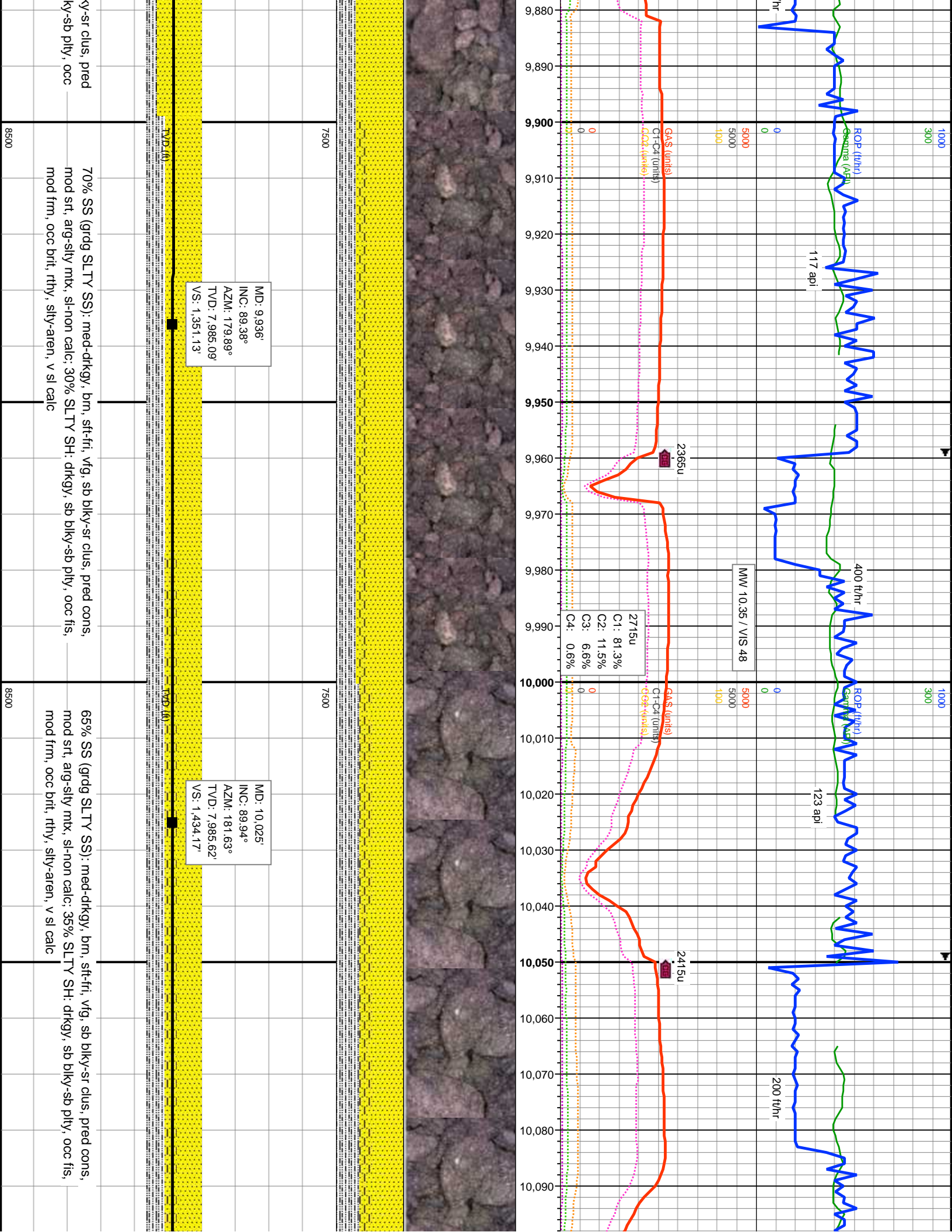








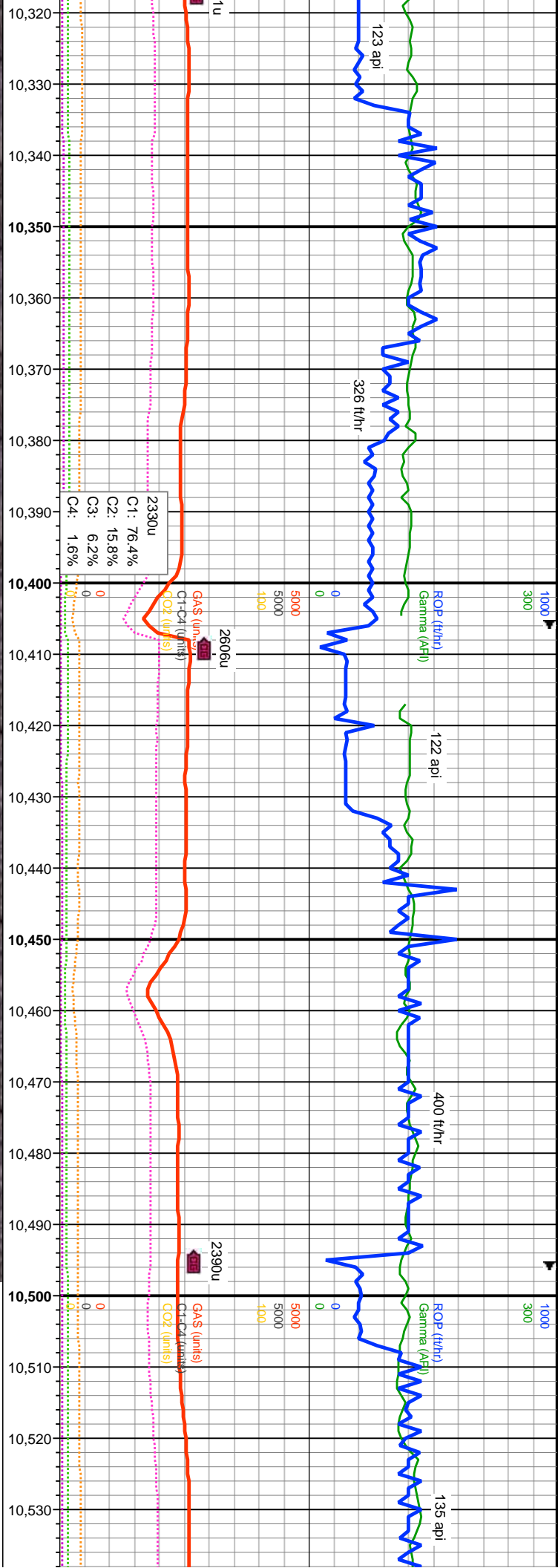












MD: 10,383'  
INC: 89.75°  
AZM: 178.59°  
TVD: 7,986.34'  
VS: 1,764.86'

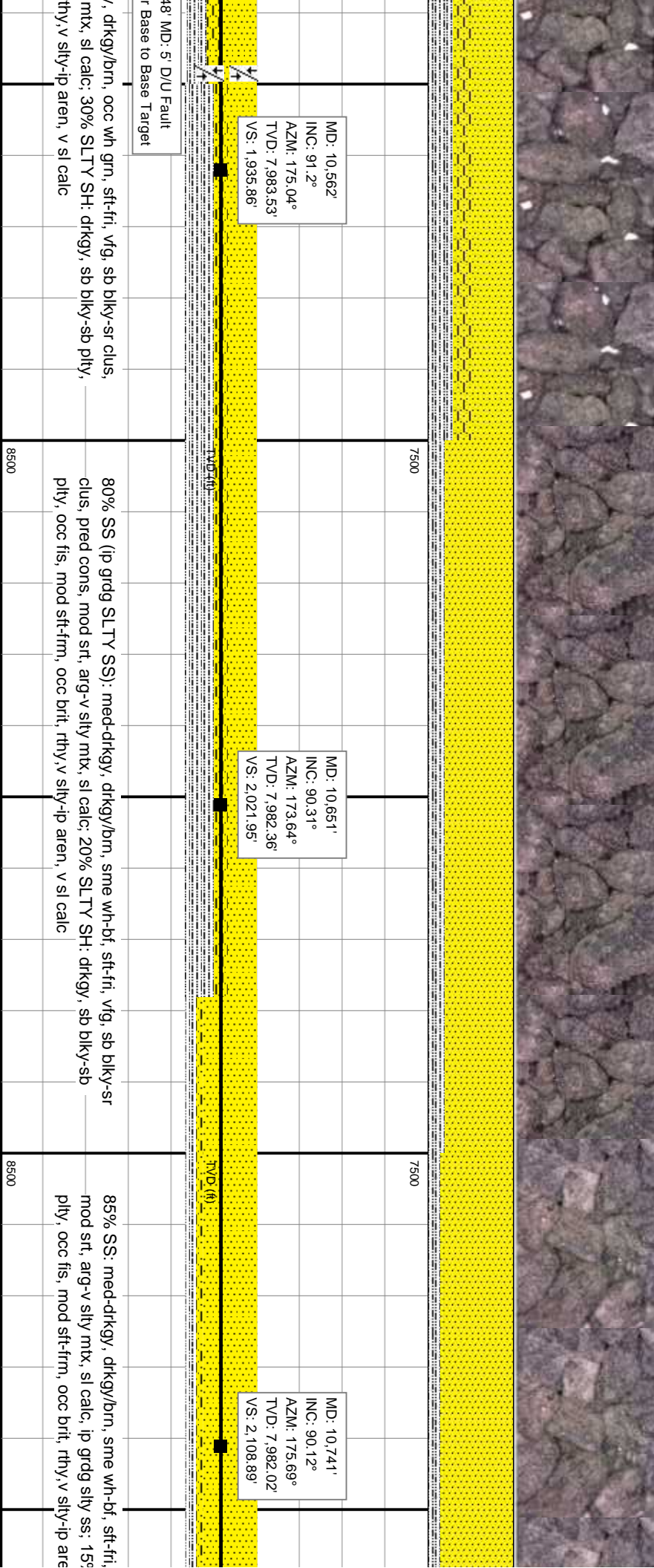
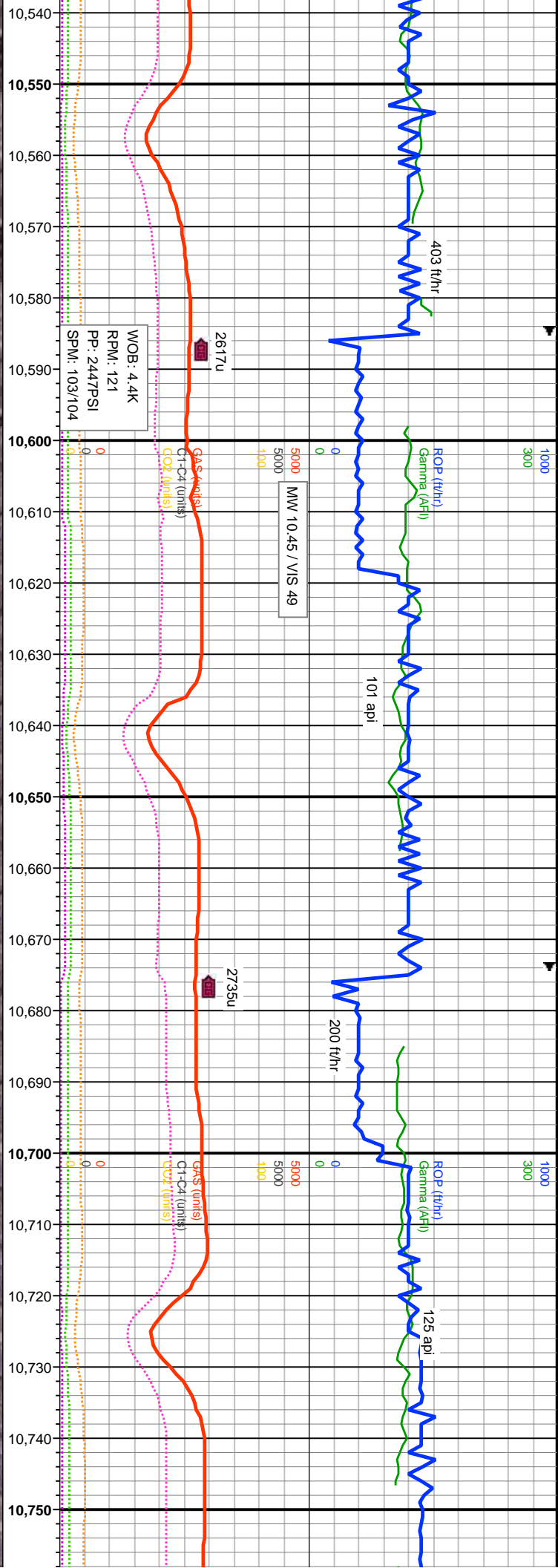
MD: 10,472'  
INC: 91.32°  
AZM: 176.86°  
TVD: 7,985.51'  
VS: 1,849.48'

105-  
Nea

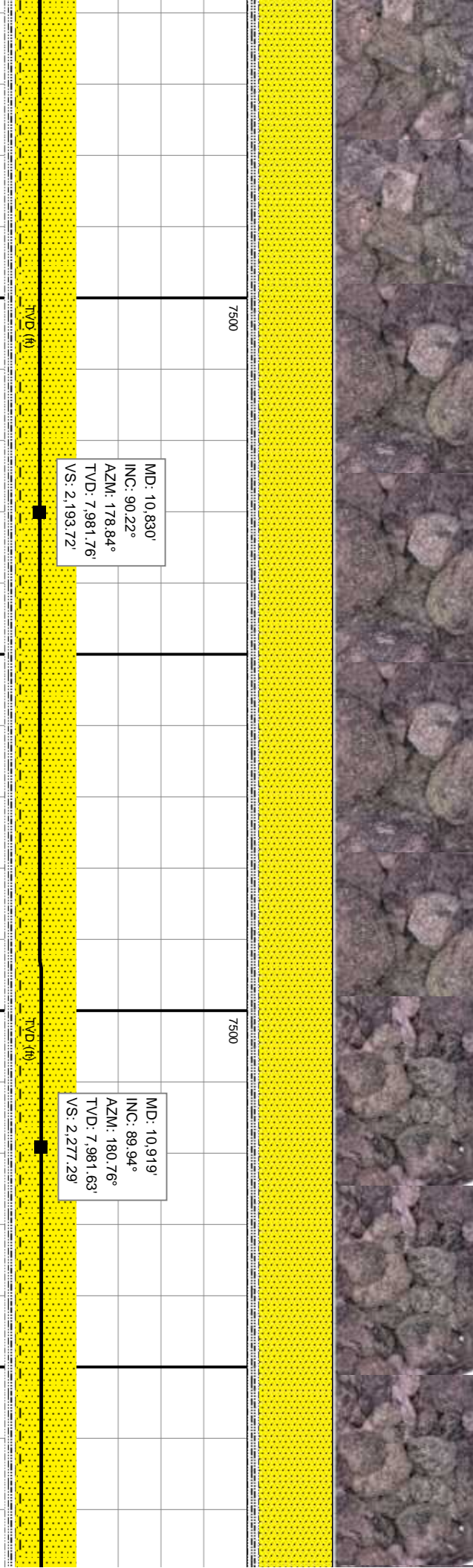
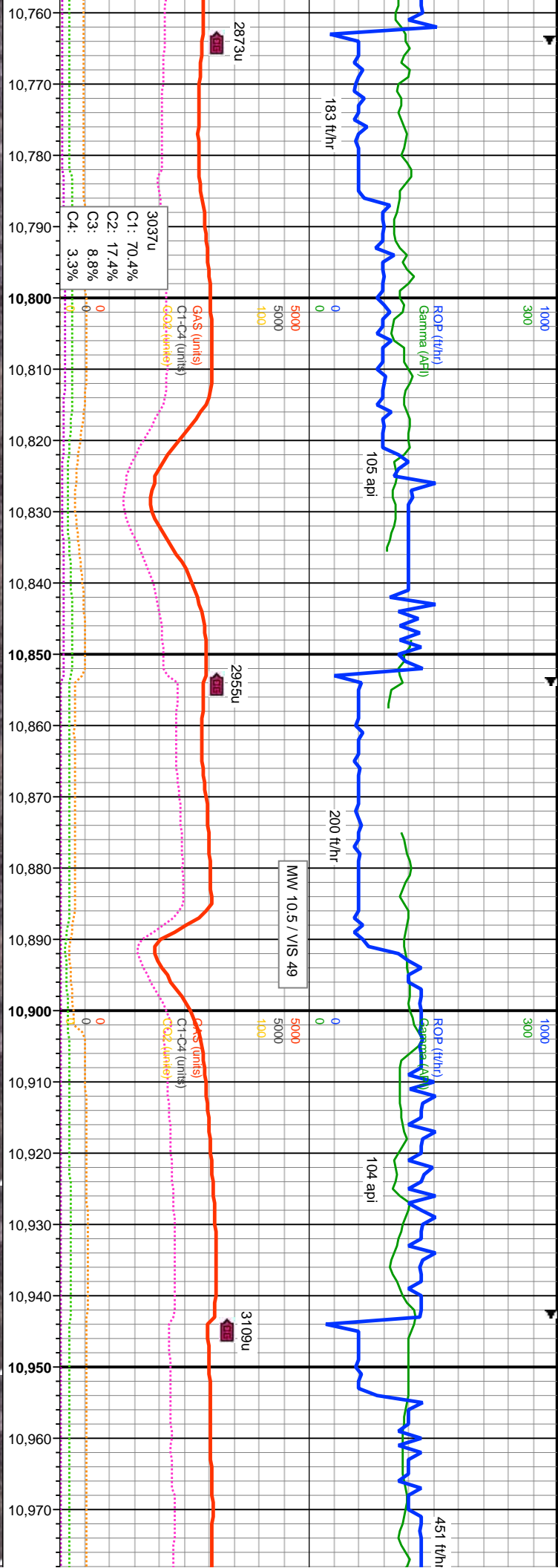
Y SS: drkgy, drkgy/brn, occ wh gm, sft-fri, vfg, sb blkv-sr clus, pred cons, arg-v silty mx, si-non calc, 50% SLTY SH: drkgy, sb blkv-sb plty, occ fis, m, occ brt, rthy, v silty-ip aren, v sl calc

60% SLTY SS: drkgy, drkgy/brn, occ wh gm, sft-fri, vfg, sb blkv-sr clus, pred cons, mod srt, arg-v silty mx, si-non calc, 40% SLTY SH: drkgy, sb blkv-sb plty, occ fis, mod sft-frm, occ brt, rthy, v silty-ip aren, v sl calc

70% SS-SLTY SS: med-drkgy, pred cons, mod srt, arg-v silty, occ fis, mod sft-frm, occ brt, r



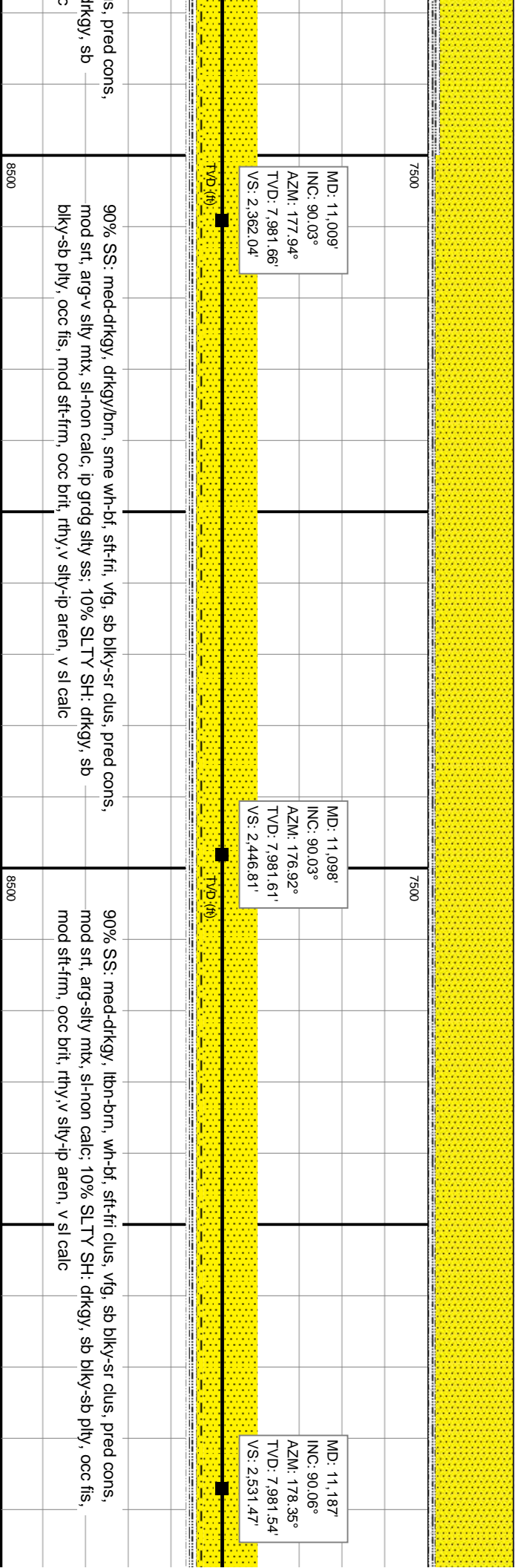
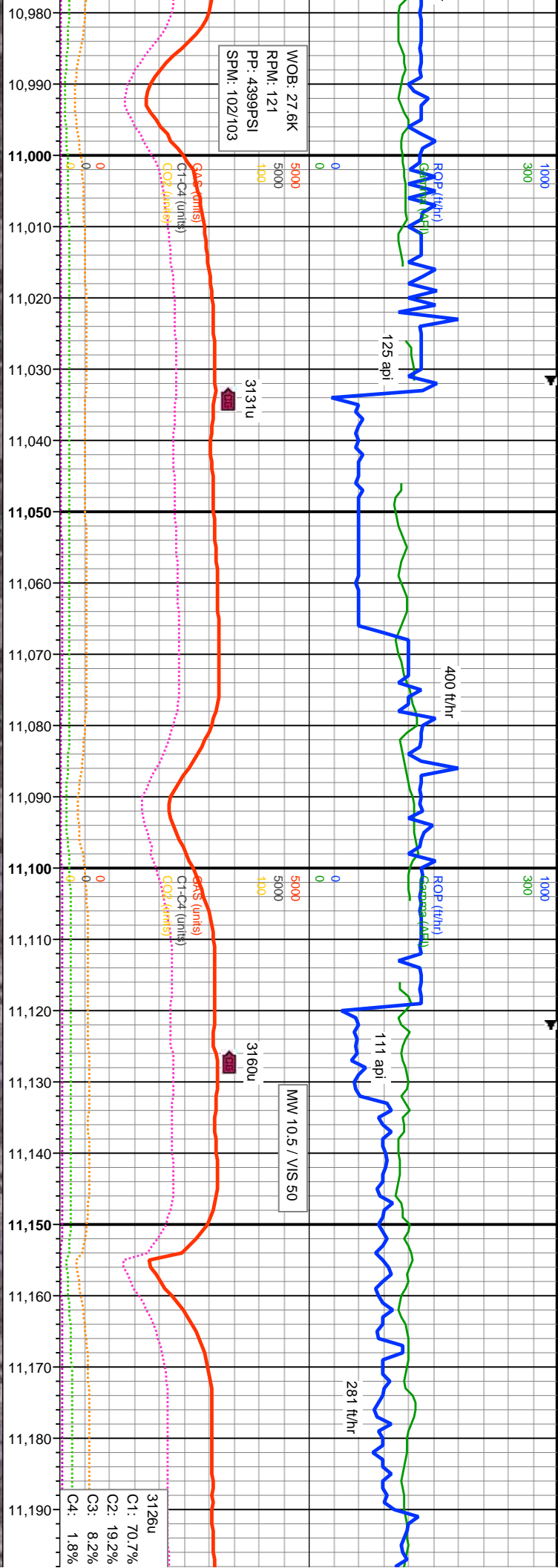


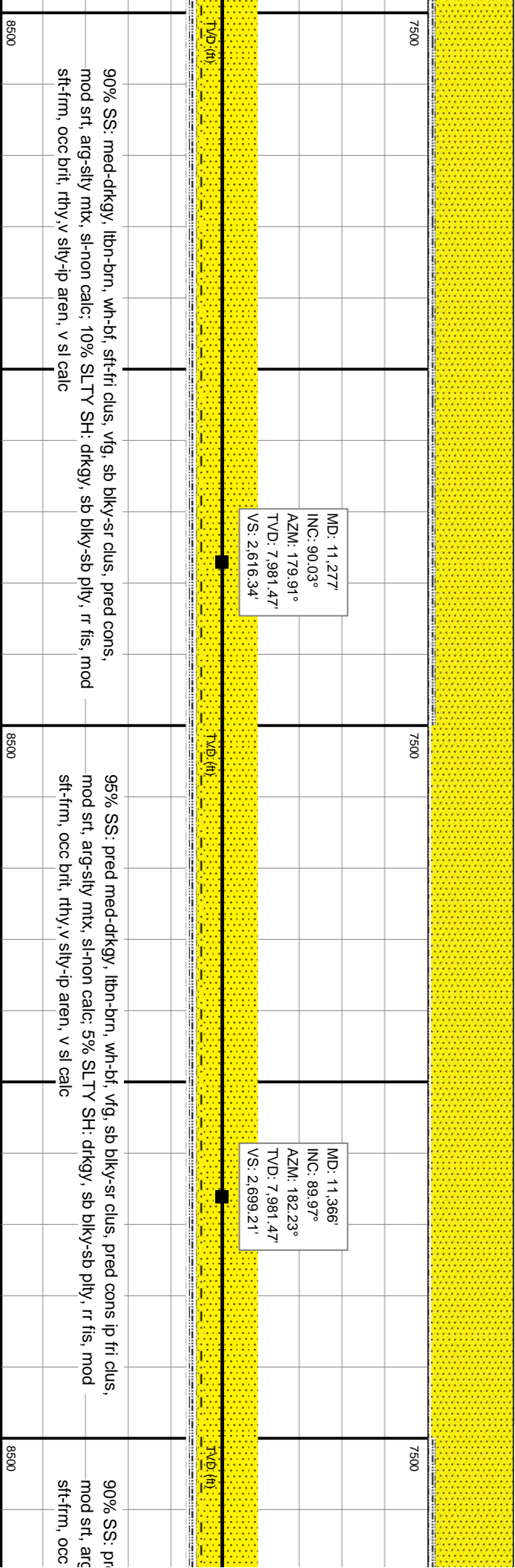
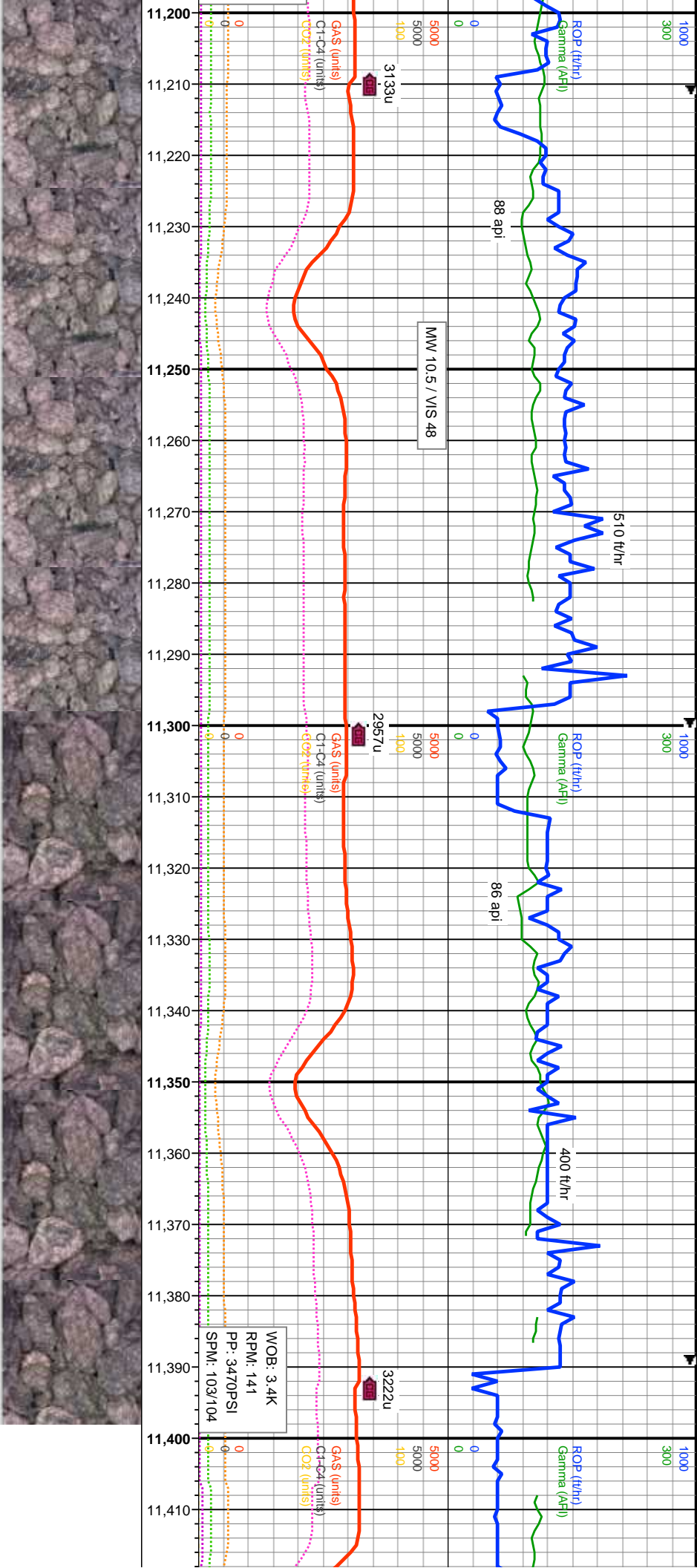


85% SS: med-drkgy, drkgy/bm, sme wh-bf, sft-frt, vfg, sb blk-y-sr clus, pred cons, mod str, arg-v silty mtx, sl calc, ip grdg silty ss, 15% SLTY SH: drkgy, sb blk-y-sb pily, occ fis, mod sft-frm, occ brt, rthy, v silty-ip aren, v sl calc

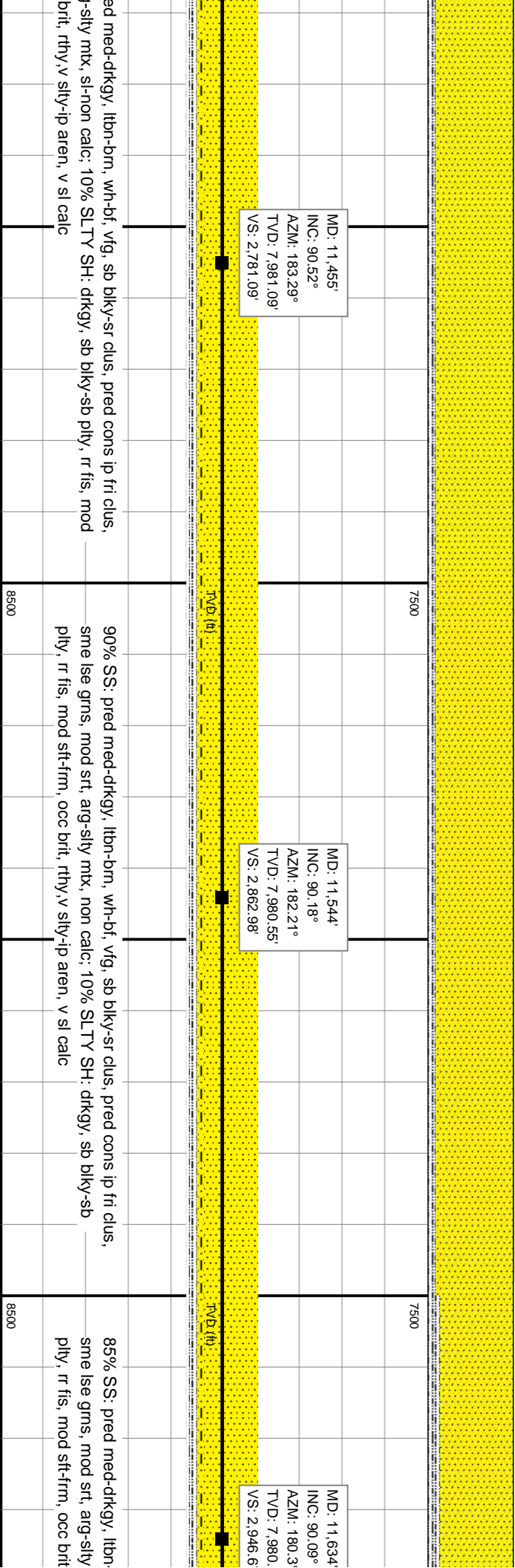
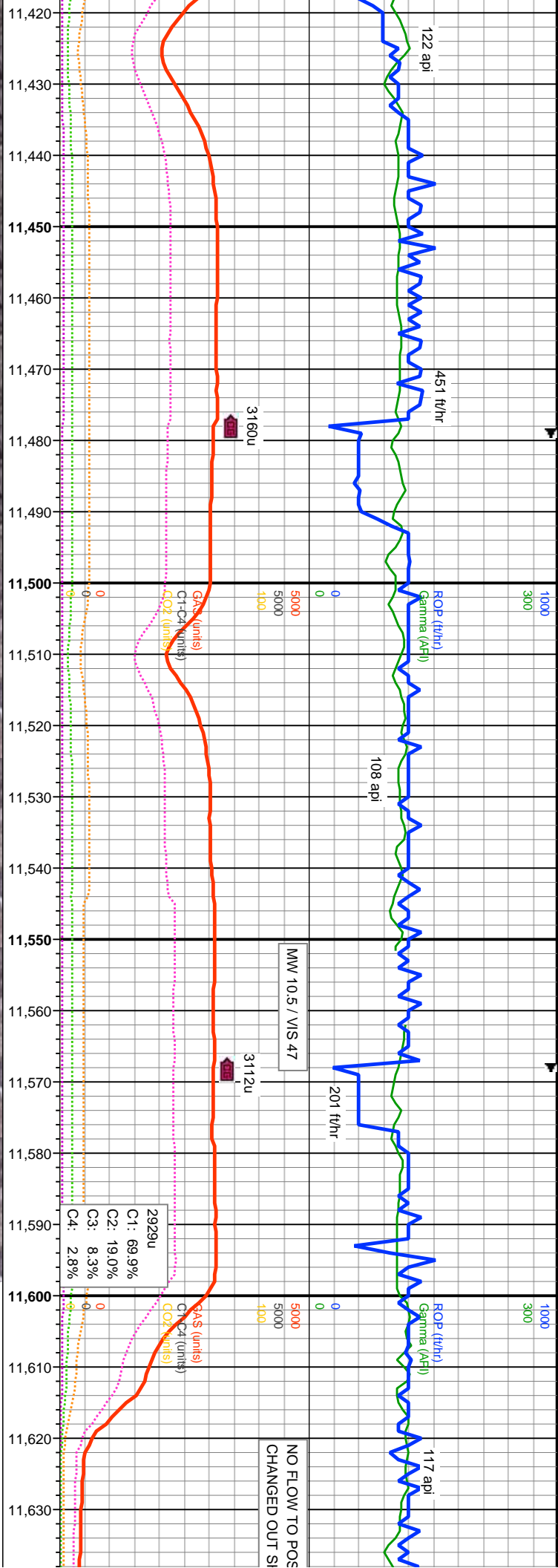
85% SS: med-drkgy, drkgy/bm, sme wh-bf, sft-frt, vfg, sb blk-y-sr clus, pred cons, mod str, arg-v silty mtx, sl calc, ip grdg silty ss, 15% SLTY SH: drkgy, sb blk-y-sb pily, occ fis, mod sft-frm, occ brt, rthy, v silty-ip aren, v sl calc



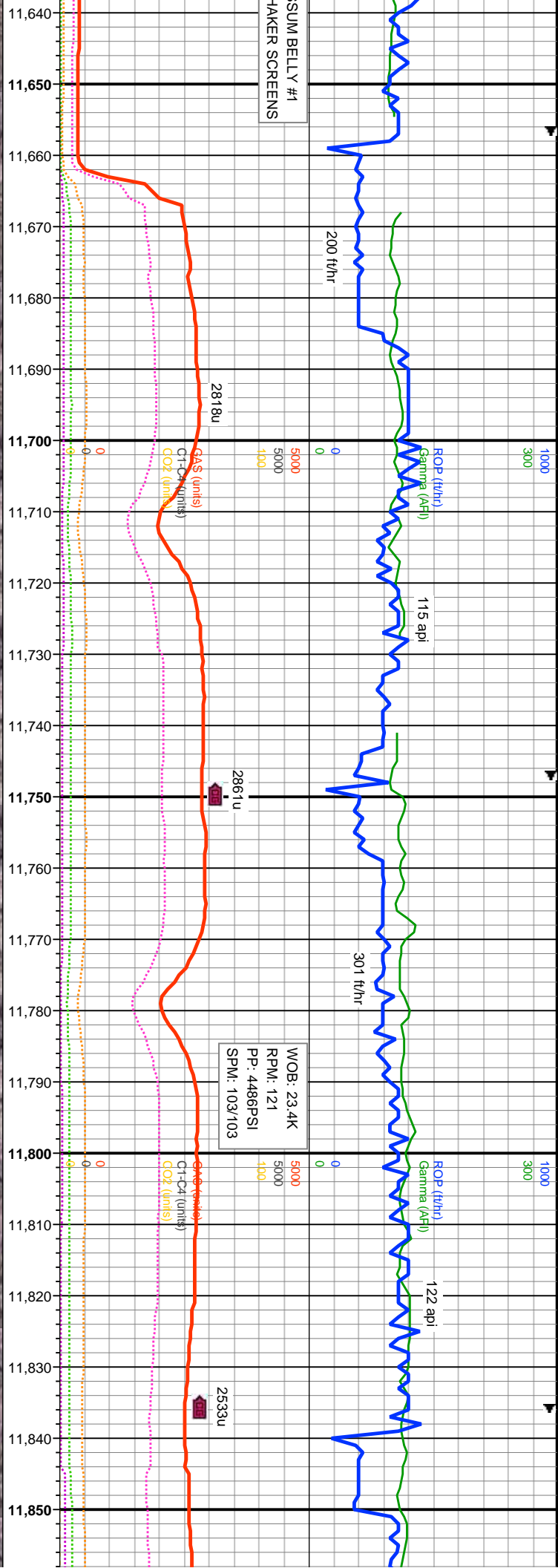












SUM BELLY #1  
TAKER SCREENS

200 ft/hr

115 API

301 ft/hr

122 API

WOB: 23.4K  
RPM: 121  
PP: 4486PSI  
SPM: 103/103

2533u

2818u

2861u

MD: 11,723'  
INC: 90.43°  
AZM: 180.24°  
TVD: 7,979.93'  
VS: 3,029.99'

MD: 11,812'  
INC: 90.31°  
AZM: 181.79°  
TVD: 7,979.36'  
VS: 3,112.89'

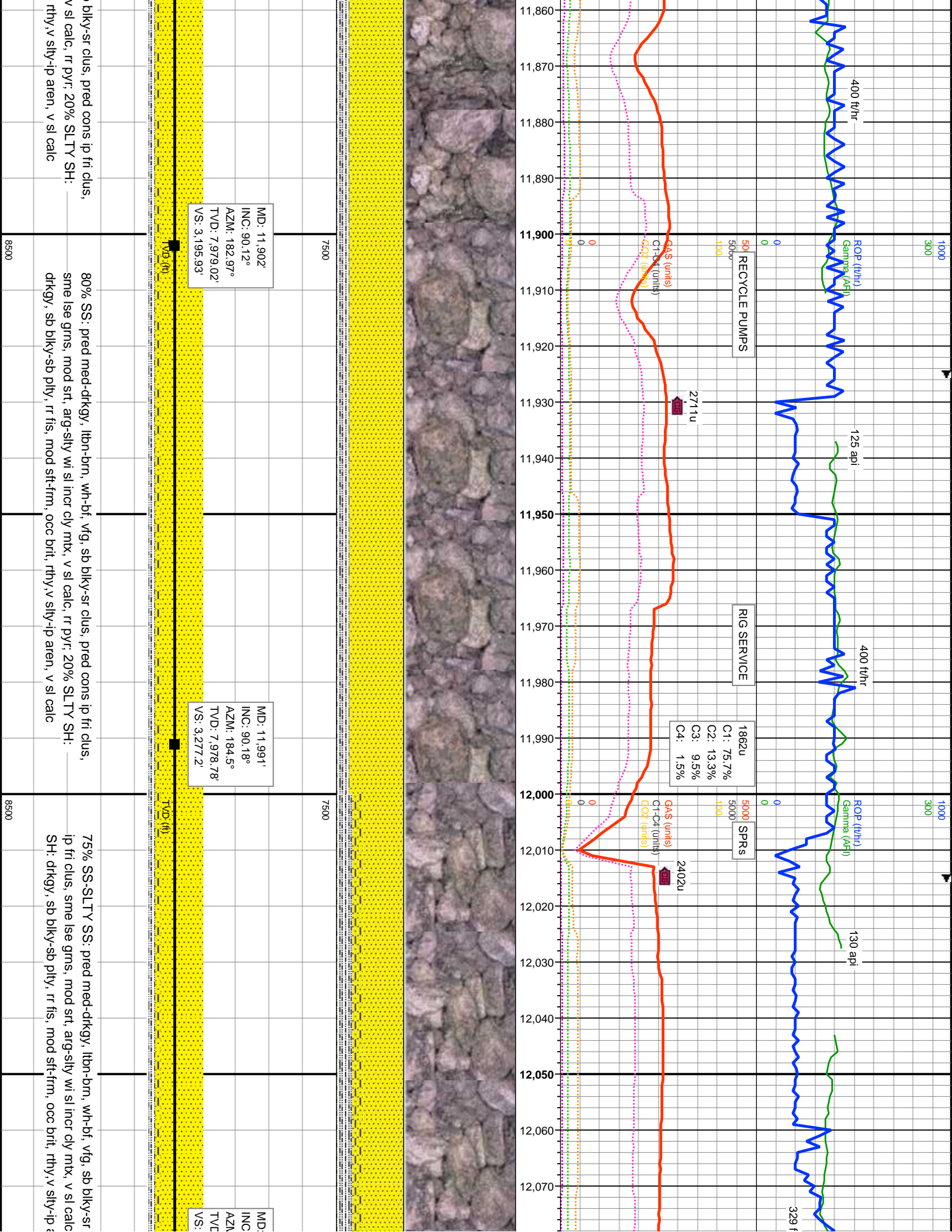
TVD (ft)

TVD (ft)

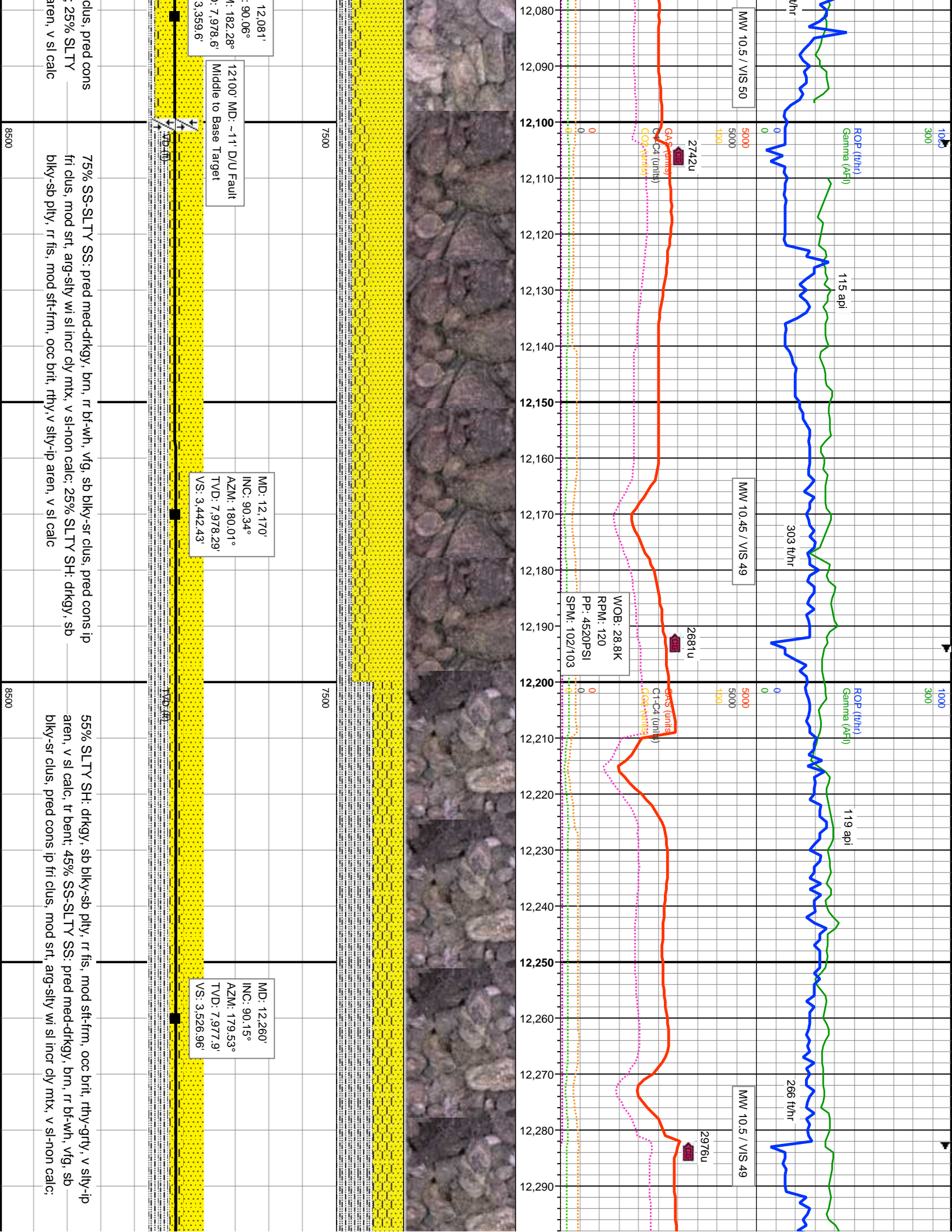
bm, wh-bf, vfg, sb blkly-sr clus, pred cons ip fri clus, mtx, non calc, 15% SLTY SH: drkgy, sb blkly-sb rthy, v silty-ip aren, v sl calc

85% SS: pred med-drkgy, ltbn-brn, wh-bf, vfg, sb blkly-sr clus, pred cons ip fri clus, sme lse grns, mod srt, arg-sily mtx, v sl calc, dissm pyr, 15% SLTY SH: drkgy, sb blkly-sb pily, rr fis, mod sft-firm, occ brit, rthy, v silty-ip aren, v sl calc

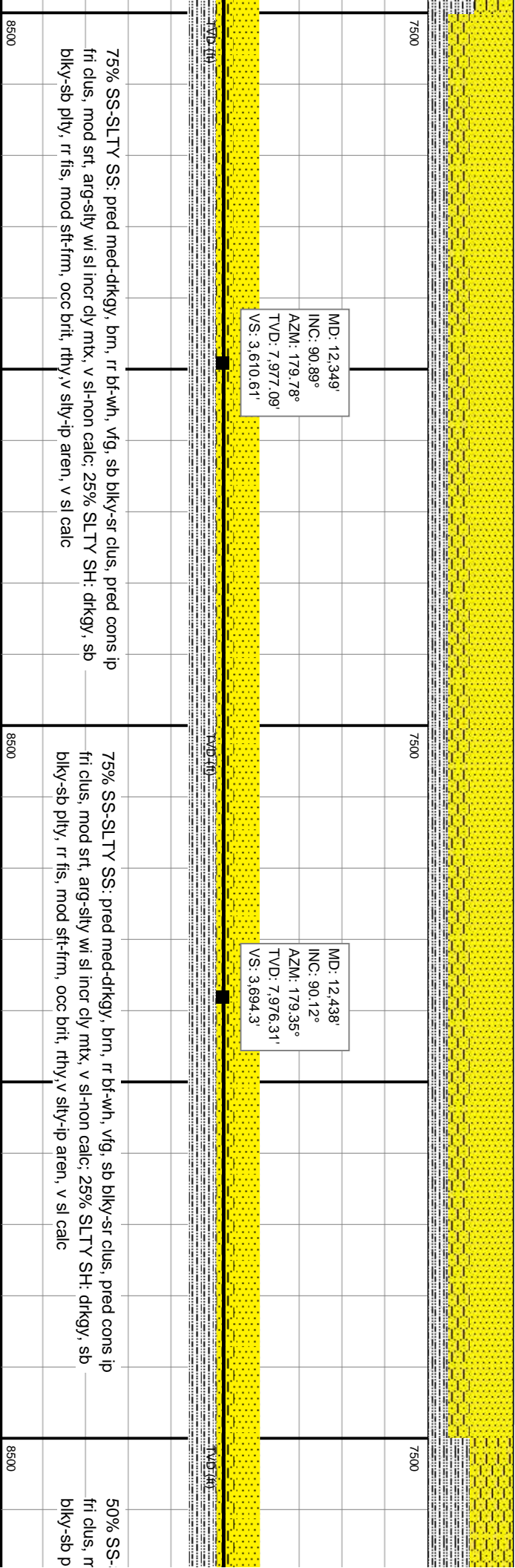
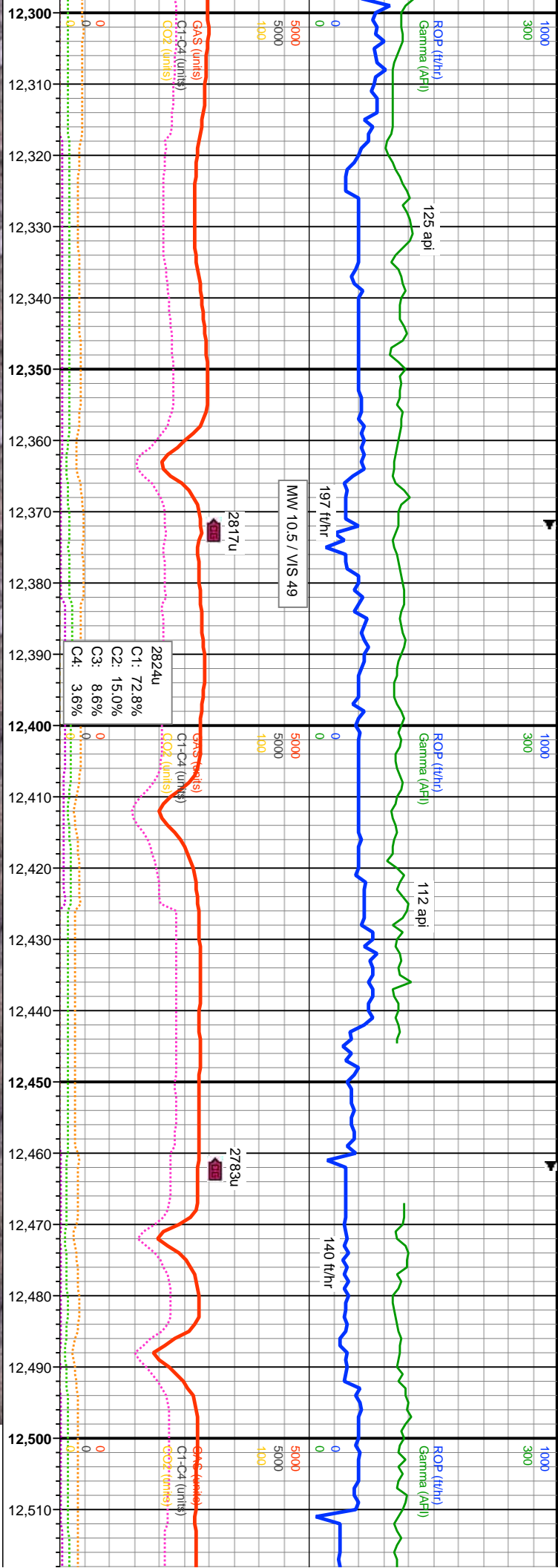
80% SS: pred med-drkgy, ltbn-brn, wh-bf, vfg, sb blkly-sr clus, pred cons ip fri clus, sme lse grns, mod srt, arg-sily mtx, v sl calc, dissm pyr, 15% SLTY SH: drkgy, sb blkly-sb pily, rr fis, mod sft-firm, occ brit

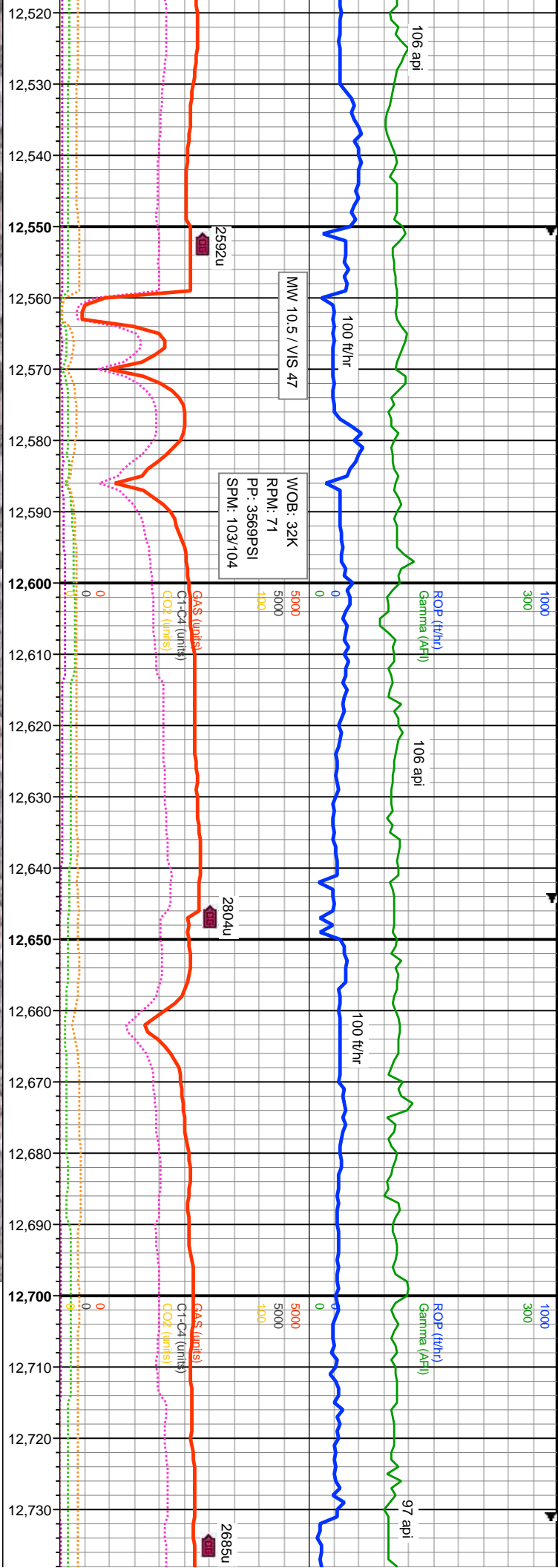












MD: 12,528'  
INC: 91.54°  
AZM: 179.89°  
TVD: 7.975'  
VS: 3.778.9'

MD: 12,617'  
INC: 90.15°  
AZM: 178.95°  
TVD: 7.973.69'  
VS: 3.862.66'

MD: 12,706'  
INC: 90.15°  
AZM: 177.26°  
TVD: 7.973.46'  
VS: 3.947.1'

SLTY SS: pred med-dkgy, brn, rr bf-wh, vfg, sb blk-sr clus, pred cons ip  
mod srt, arg-sily wi sl incr cly mtx, v sl-non calc; 50% SLTY SH: dkgy, sb  
lty, rr fis, mod sft-frm, occ brit, rthy, v sily-ip aren, v sl calc

70% SLTY SH: dkgy, sb blk-sb pty, rr fis, mod sft-frm, occ brit, rthy, v sily-ip aren,  
v sl calc 30% SS-SLTY SS: pred med-dkgy, brn, rr bf-wh, vfg, sb blk-sr clus, pred  
cons ip fri clus, mod srt, arg-sily wi sl incr cly mtx, v sl-non calc; rr flor

80% SLTY SH: dkgy, sb blk-sb p  
v sl calc 20% SS-SLTY SS: pred r  
cons ip fri clus, mod srt, arg-sily w



