

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name Resolute E25-63-1HN

Location SESE SEC26 T6N R65W

State COLORADO

County WELD

Country USA

Rig Number PRECISION 828

API Number 05-123-38155

AFE # 139764

Region DENVER JULESBURG BASIN

Field WATTENBERG

Spud Date 6/7/2014

Drilling Completed 6/14/2014

Surface Coordinates 328' FSL, 280' FEL

Lat/Long: 40.45059/-104.62175

Ground Elevation 4676'

K.B. Elevation 4692'

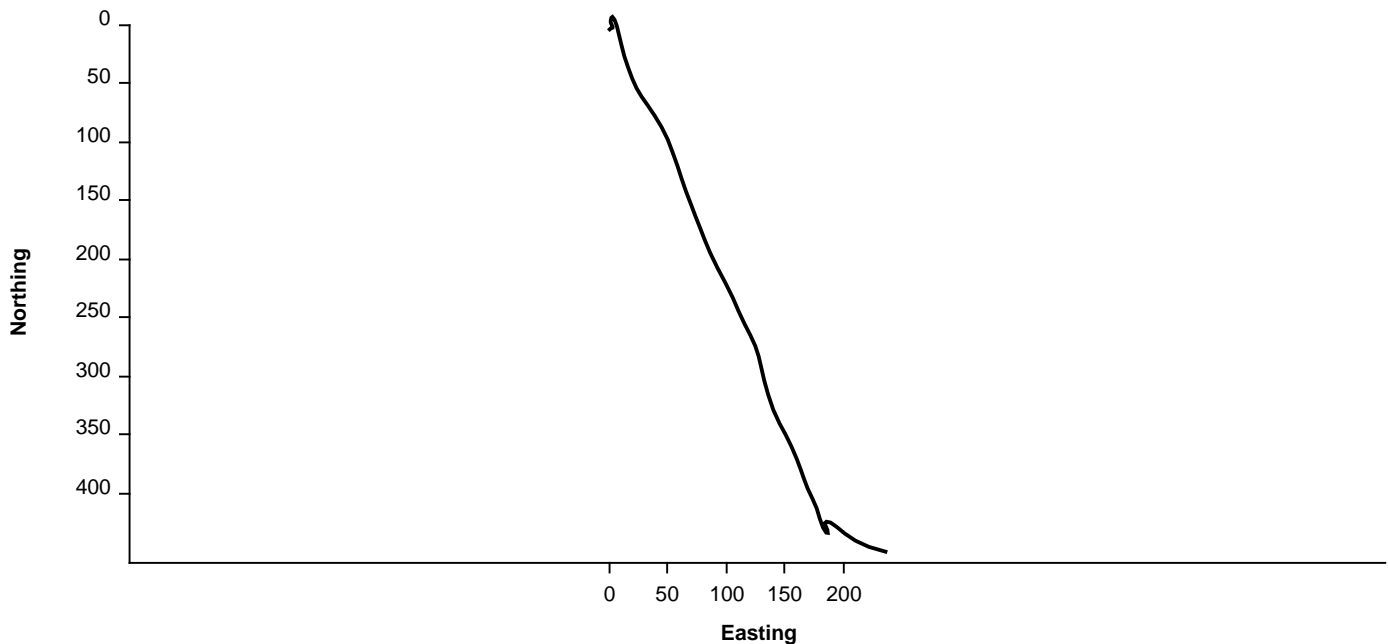
Logged Interval 594' **To** 6430'

Total Depth 11387'

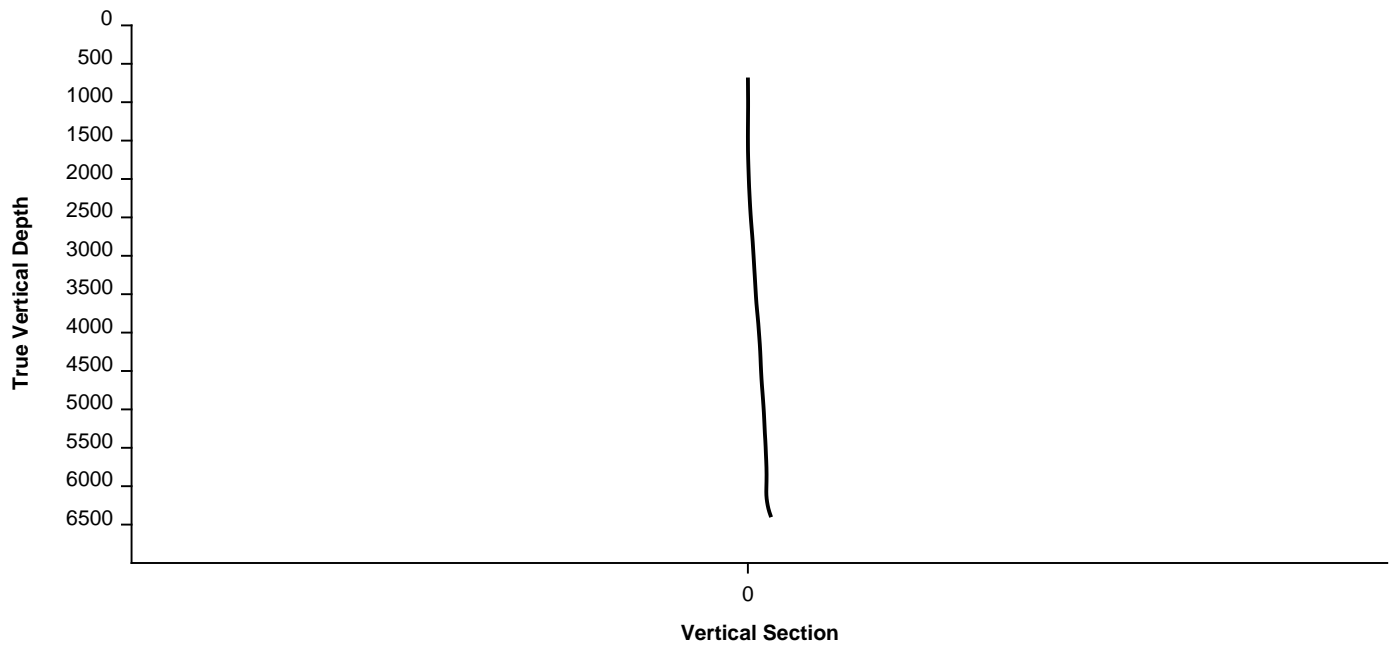
Formation FOX HILLS, PIERRE, PARKMAN, SUSSEX, SHANNON, TEEPEE BUTTES

Type of Drilling Fluid FRESH WATER, LSND

Survey Plan



Survey Elevation



Other

WELLSITE GEOLOGISTS: GARY MYERS, GABRIEL RUBIO

GEOLOGIC SERVICES PROVIDED BY COLUMBINE LOGGING, INC.

LOG CONTINURES ON FILE: Resolute E25-63-1HN Horiz.mplot

Operator

Company NOBLE ENERGY INC.

Address 1625 Broadway
Denver, CO 80202

Rock Types



SANDSTONE



SHALY SANDSTONE



SHALY SILTSTONE



SILTSTONE



SILTY SHALE

Geologist






Name EVAN HOWELL

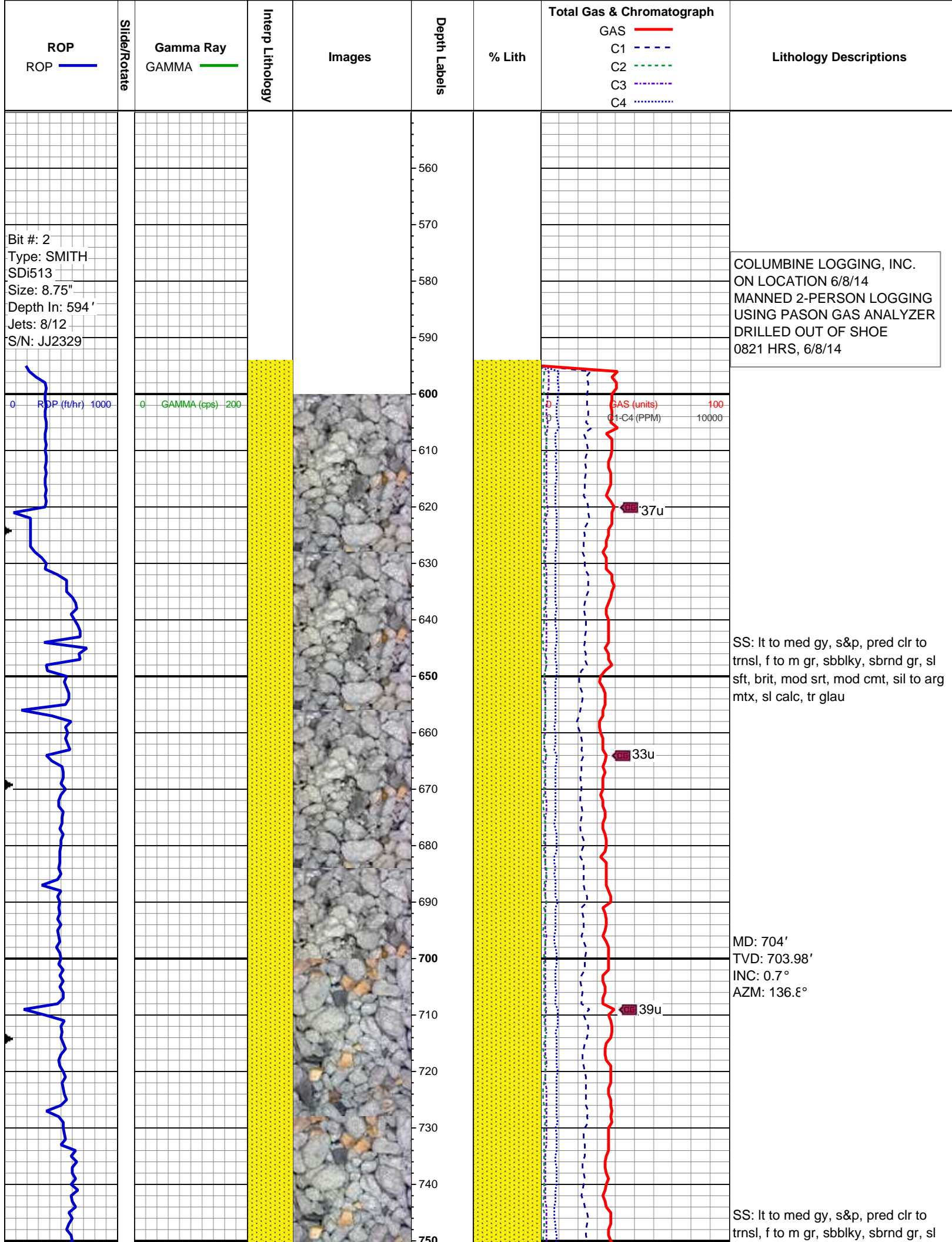
Company NOBLE ENERGY, INC.

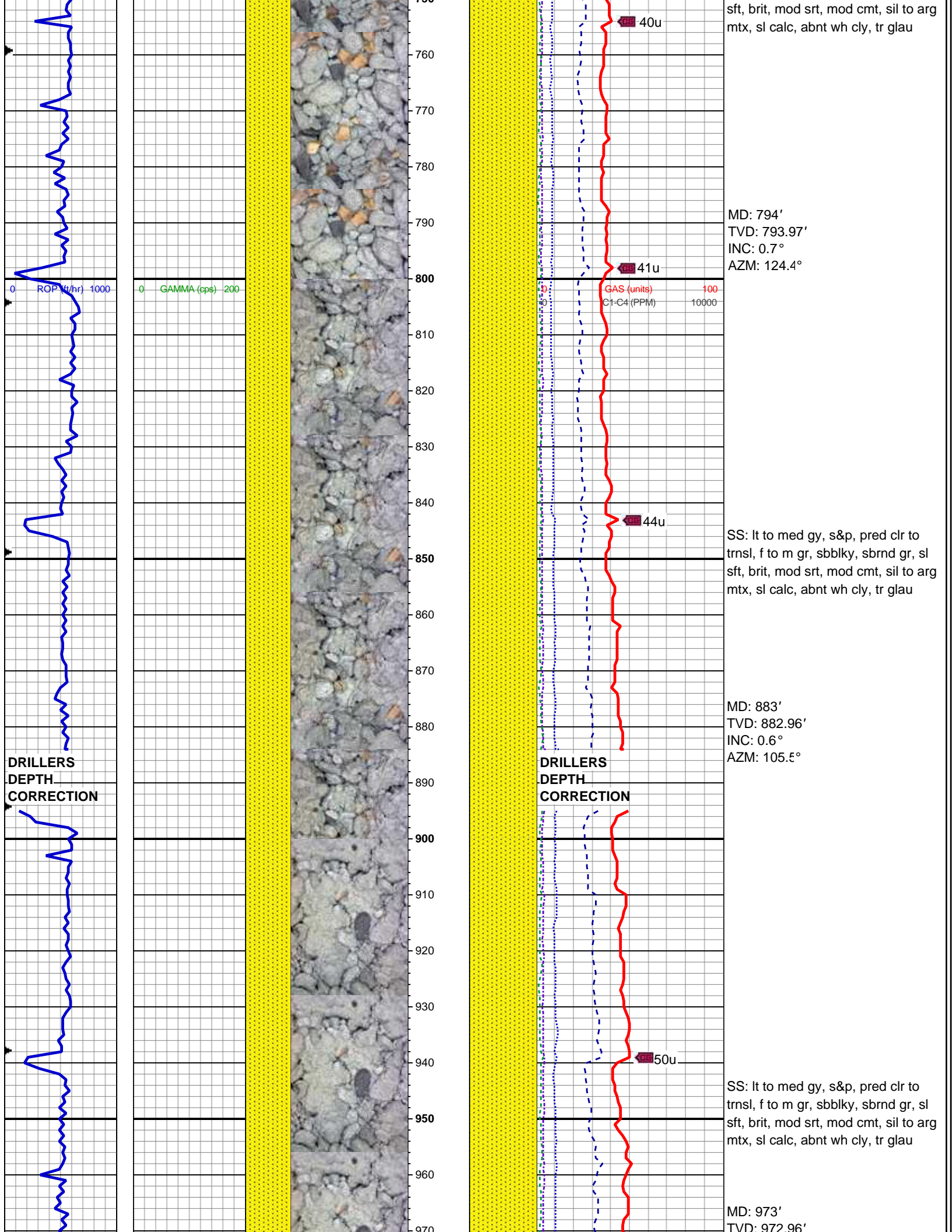
Address 1625 Broadway
Denver, CO 80202

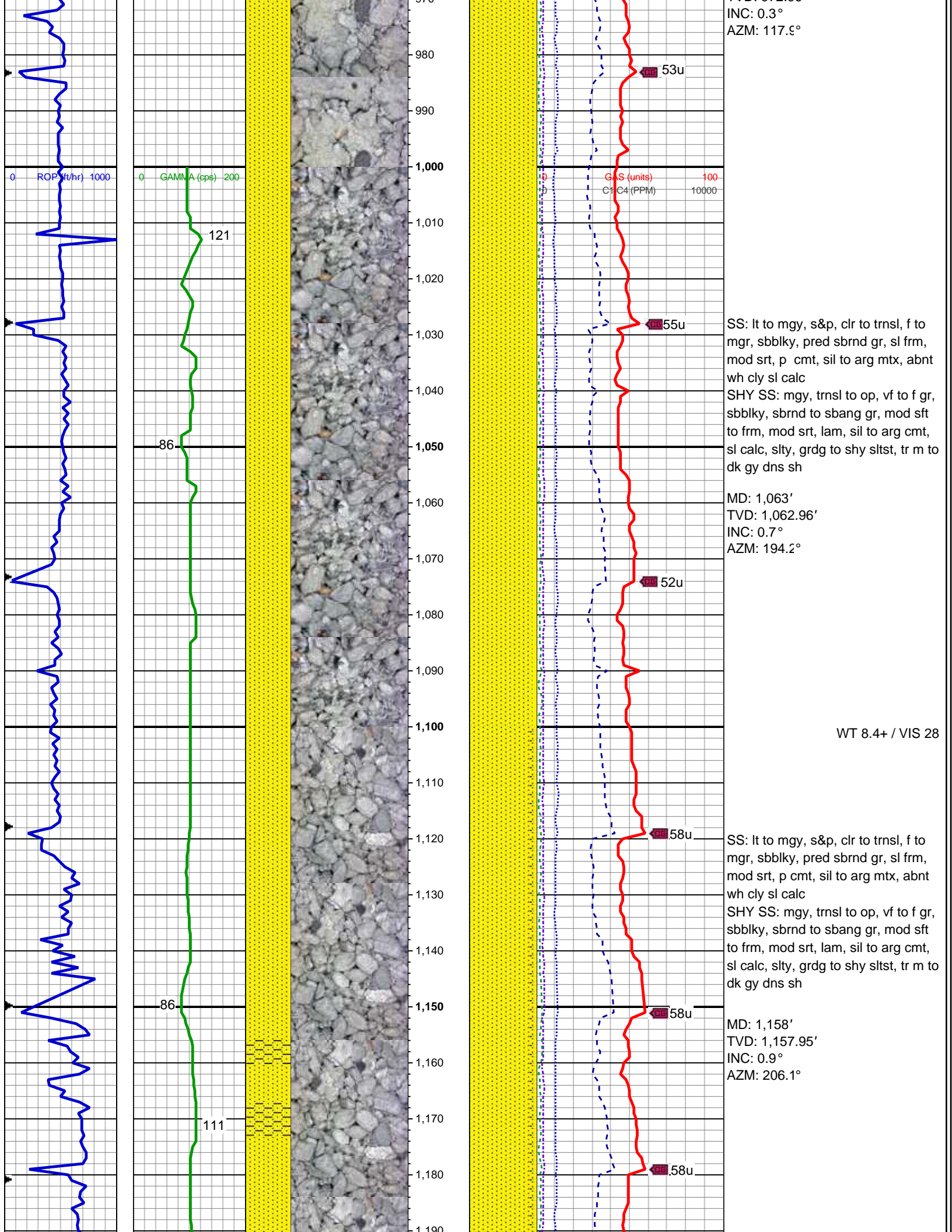
Other Symbols

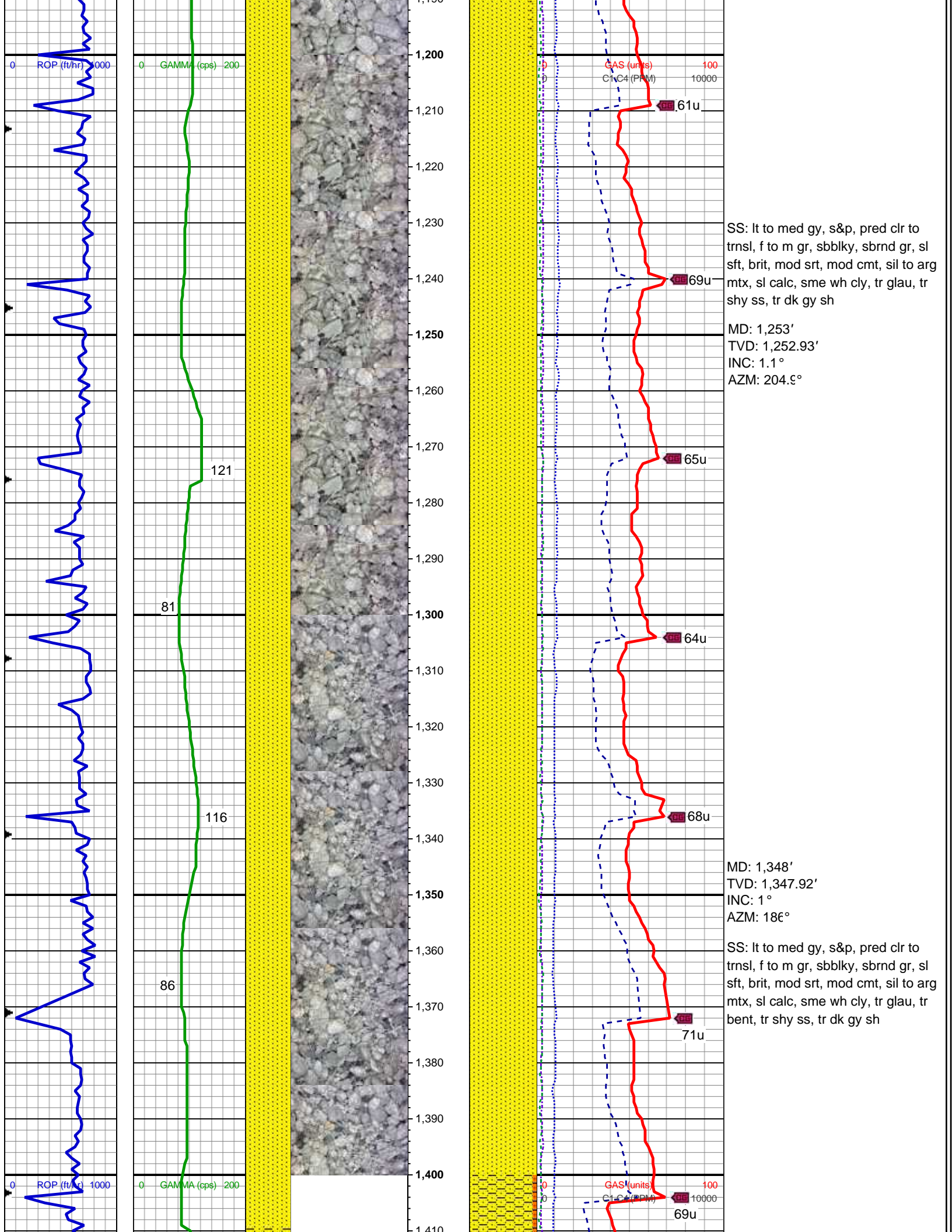
Engineering

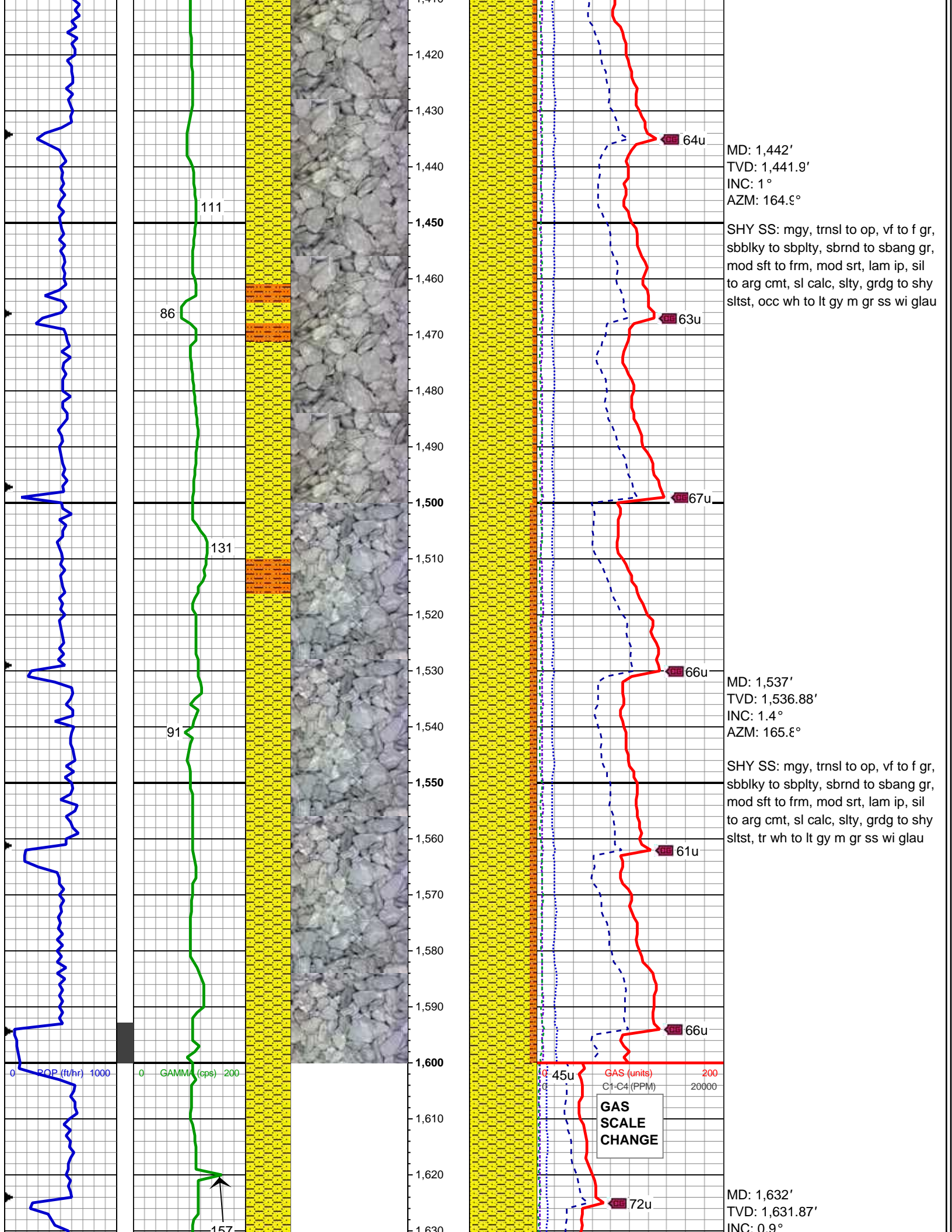
-  BIT CHANGE
-  CONNECTION (RIGHT)
-  CONNECTION GAS
-  MN DEPTH MN DEPTH
-  MN DEPTH (RIGHT)

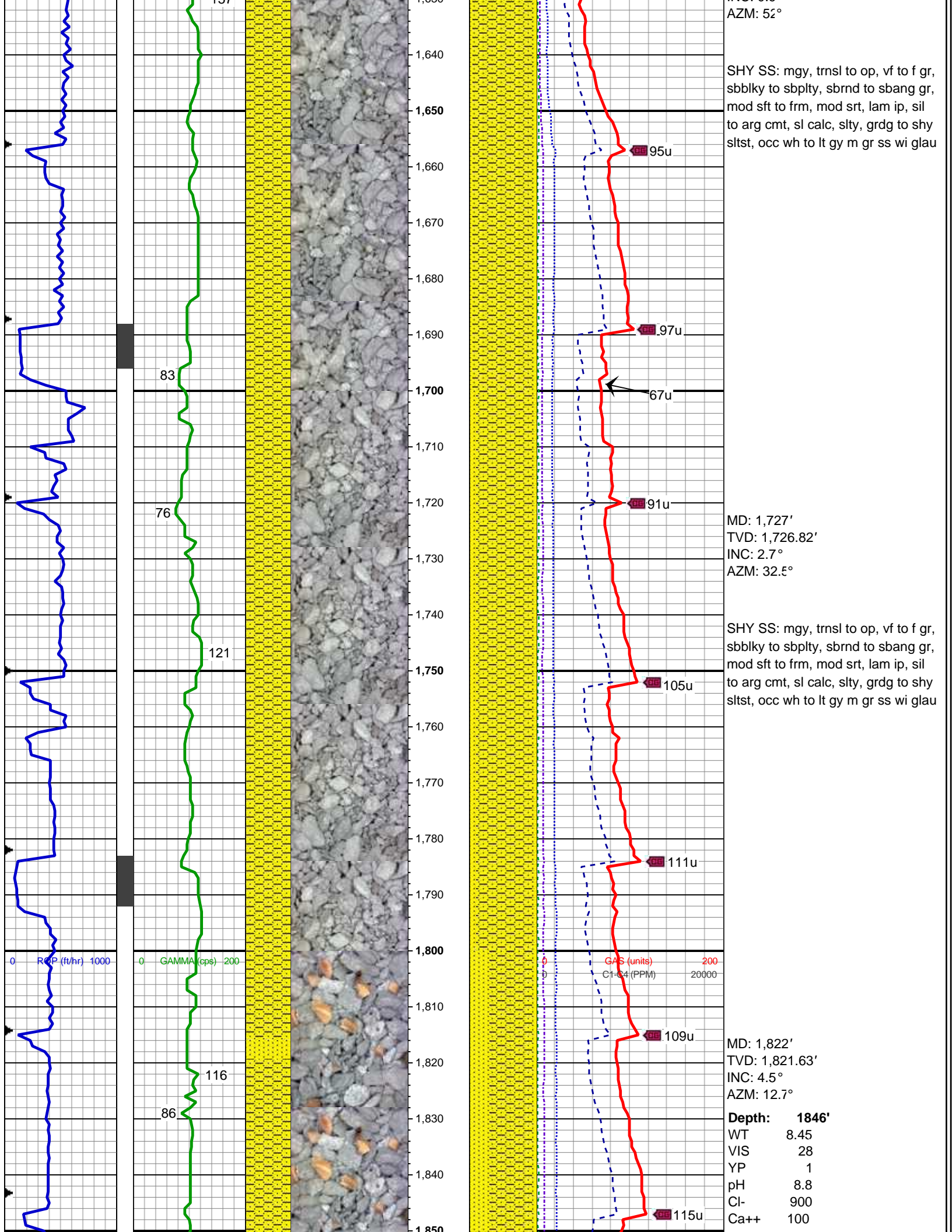


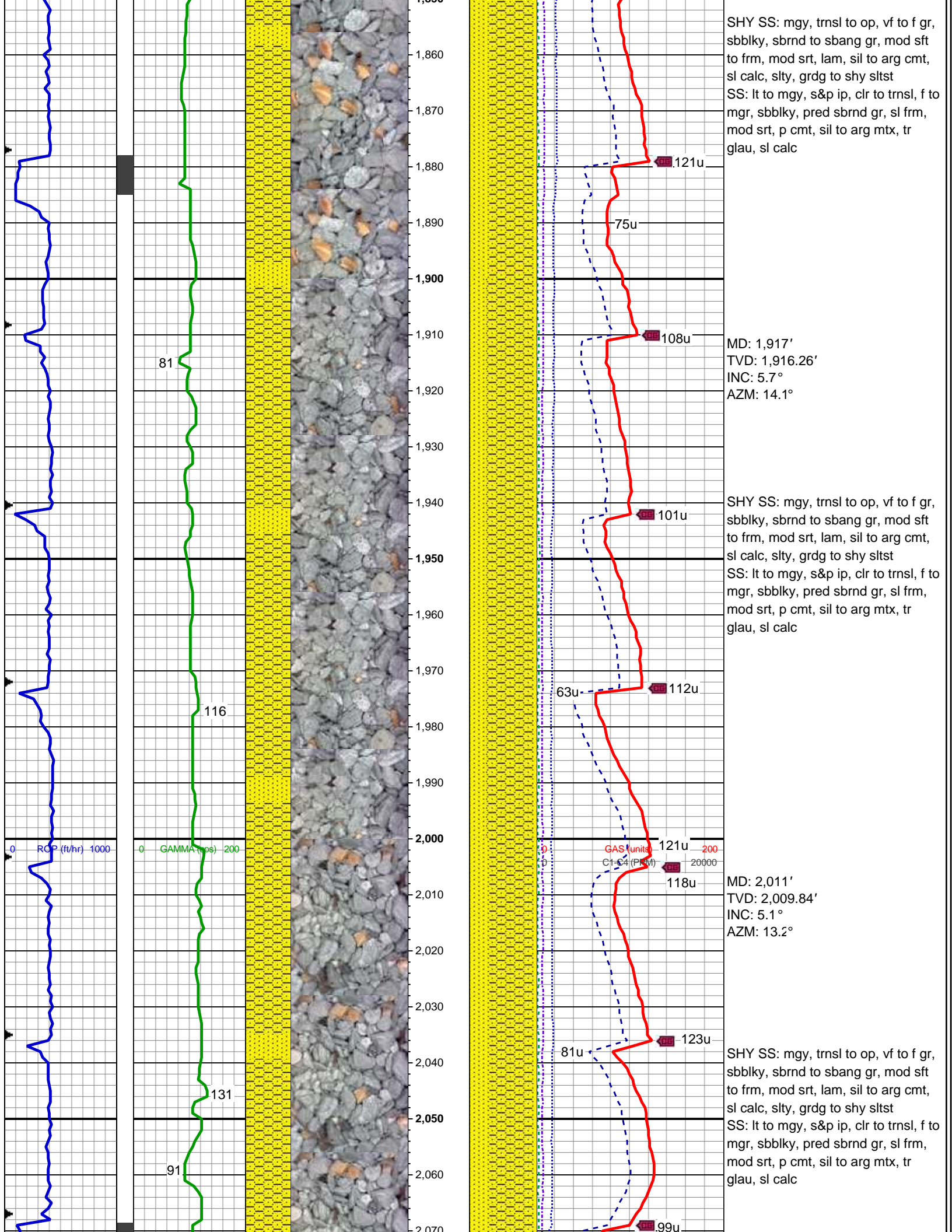


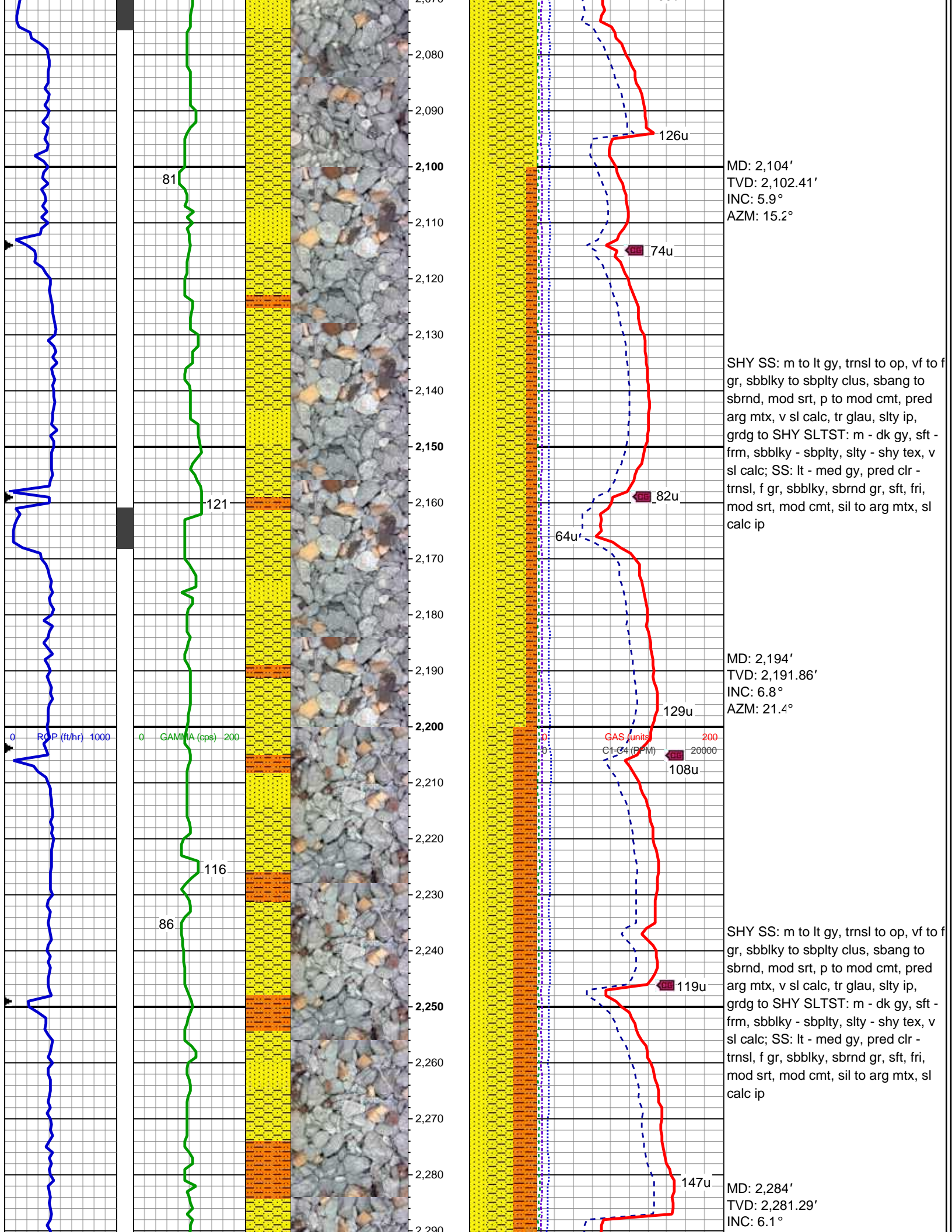


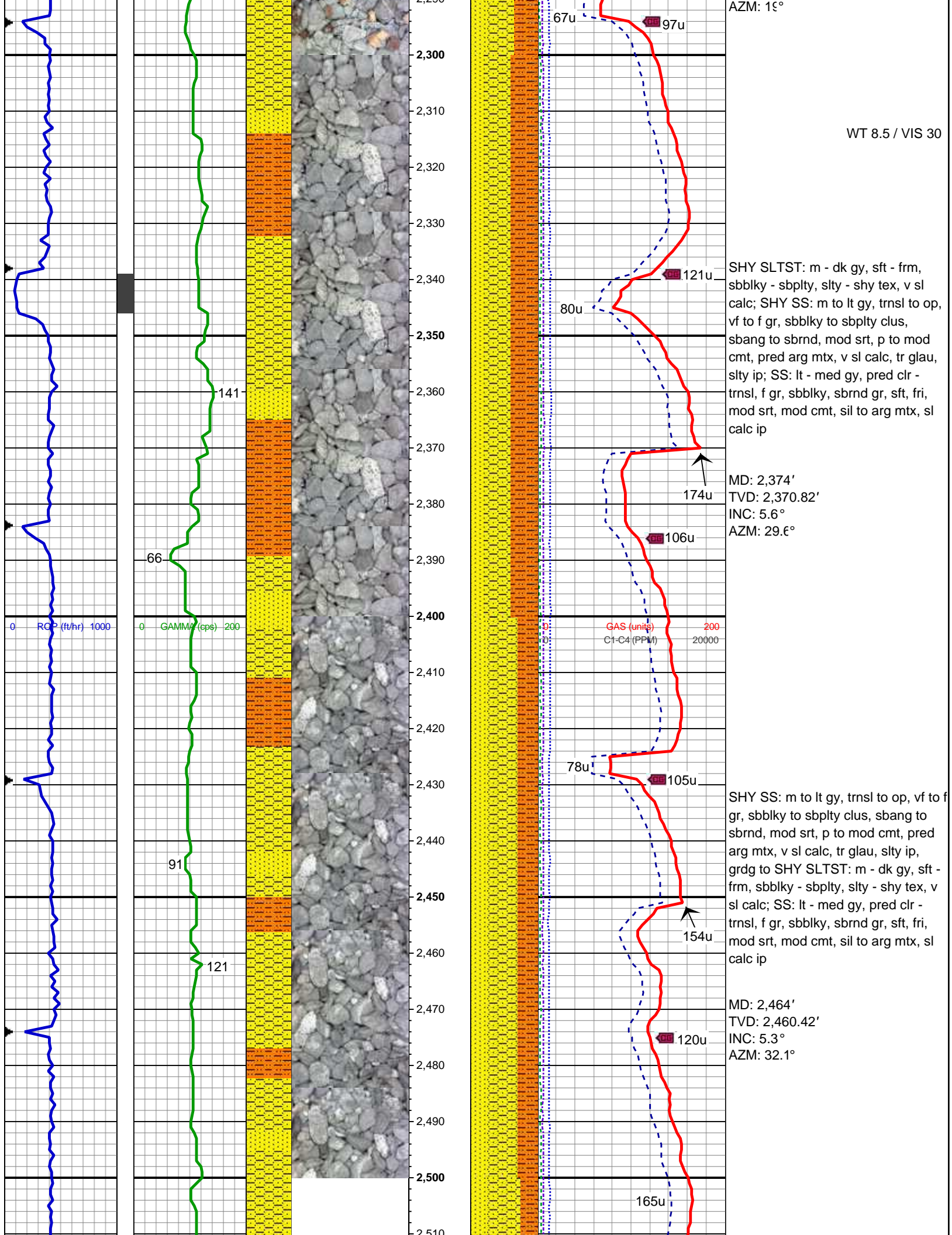


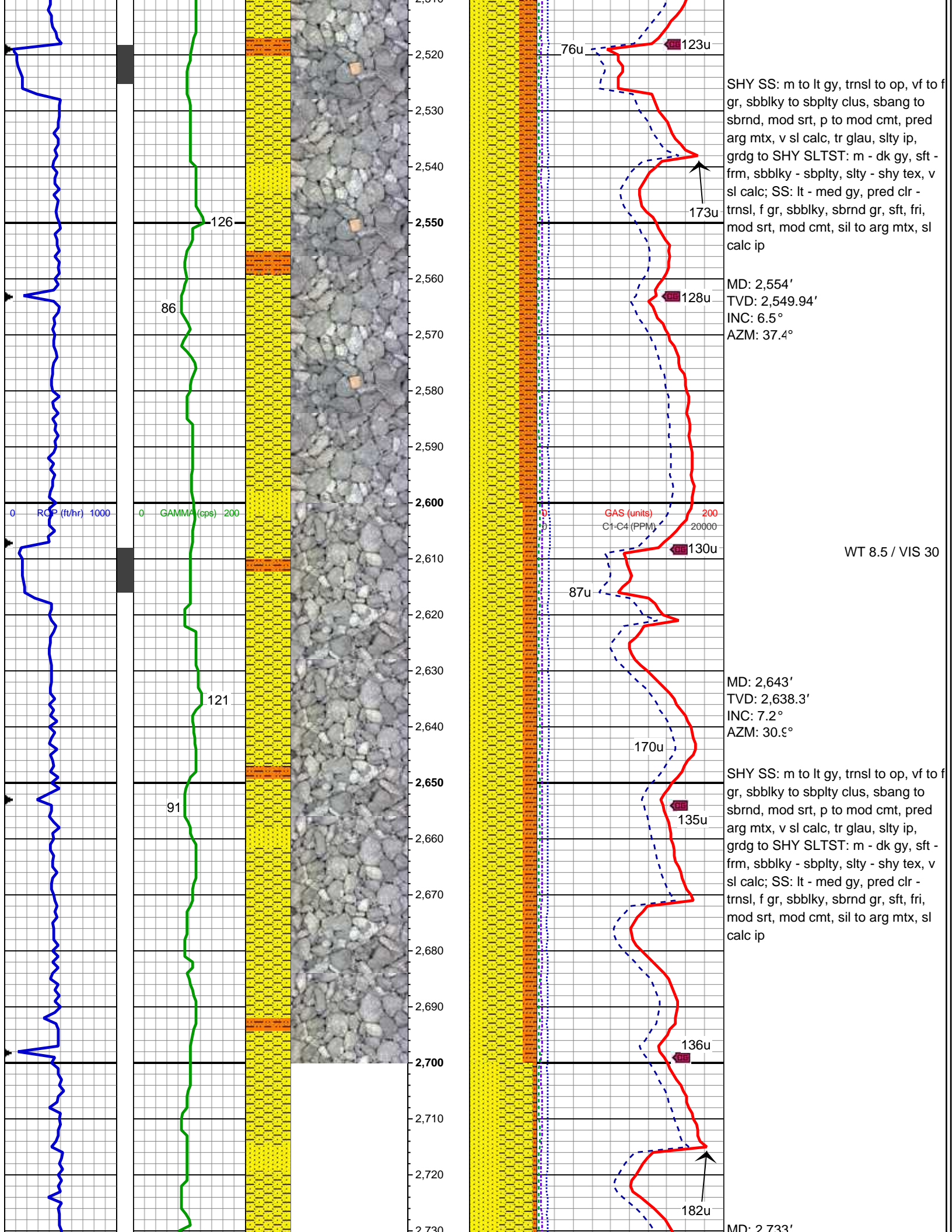


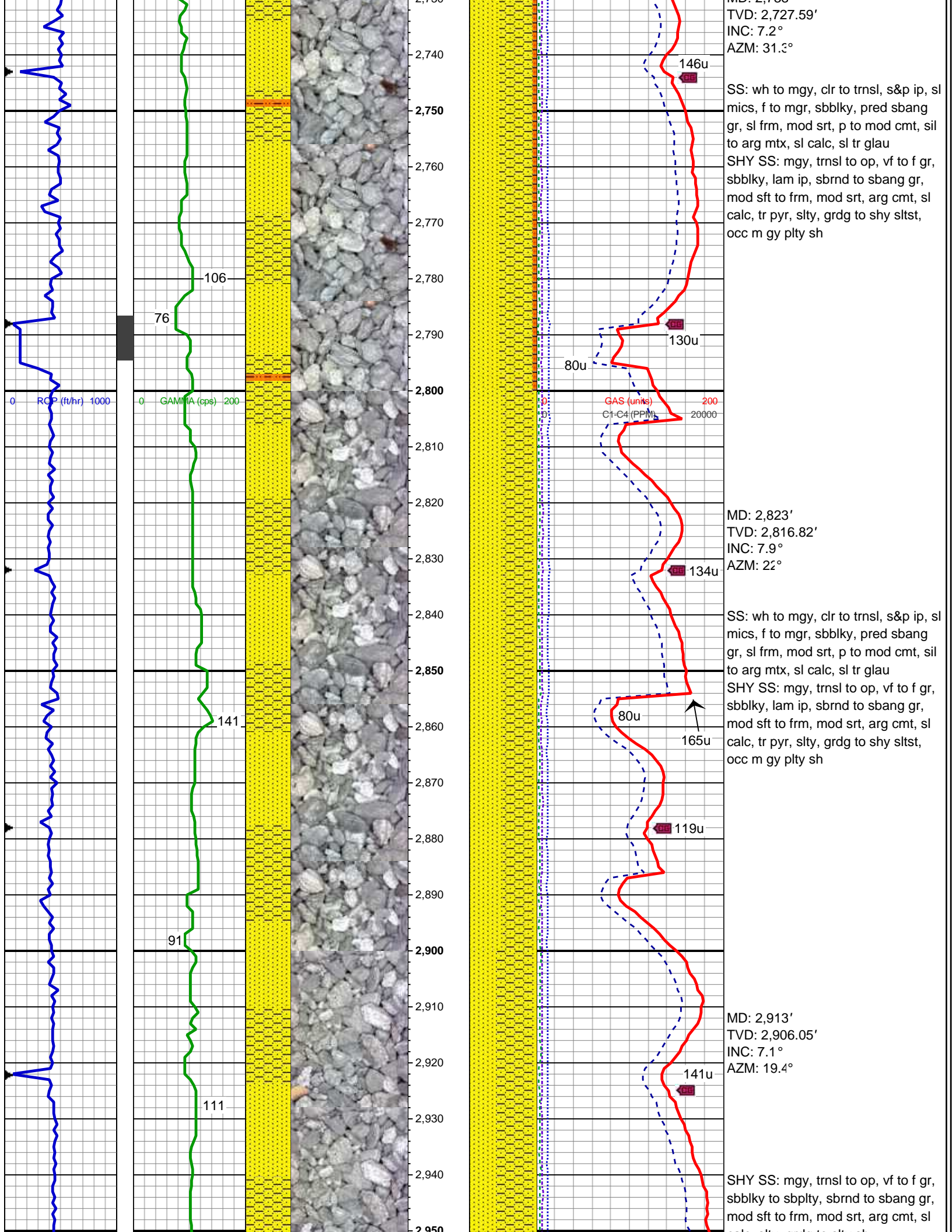


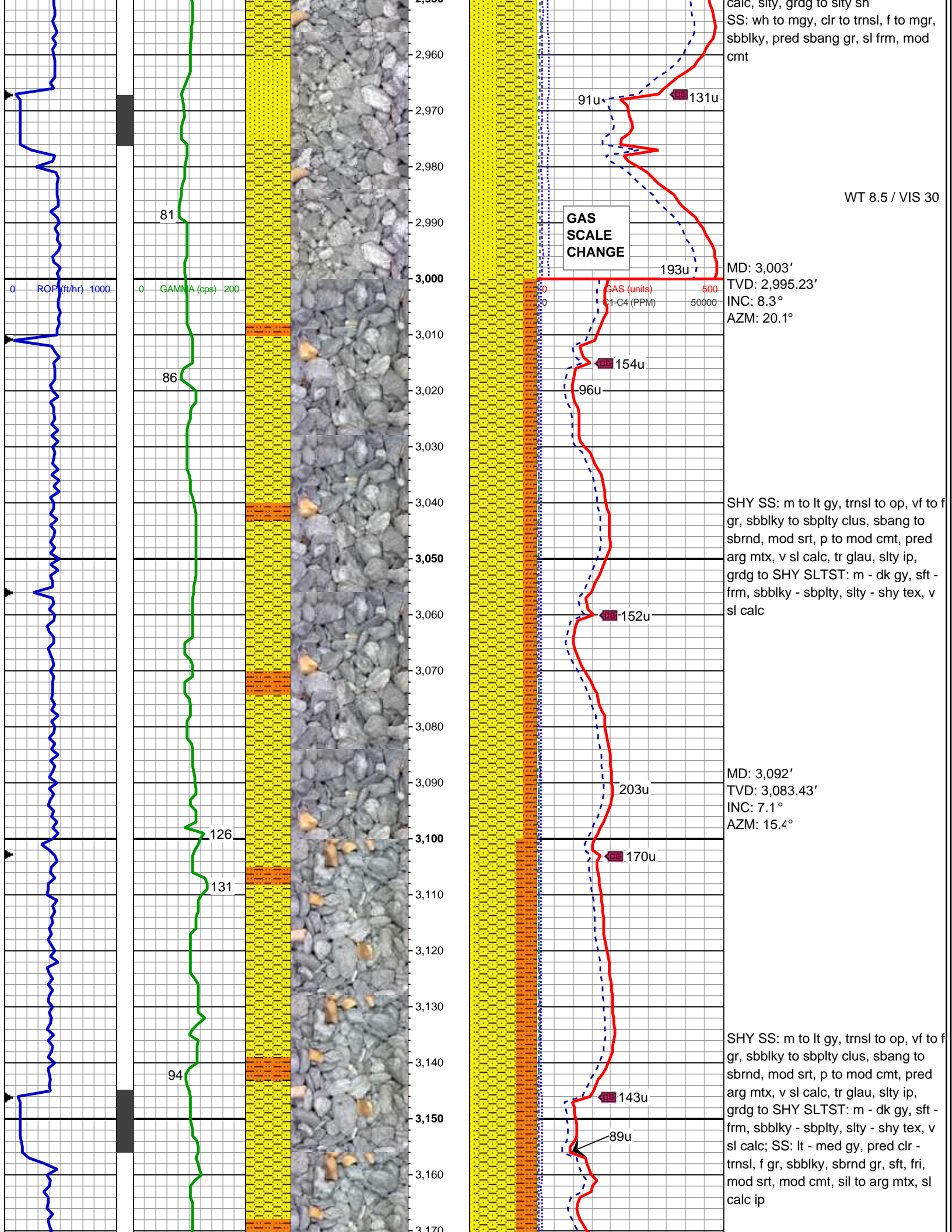


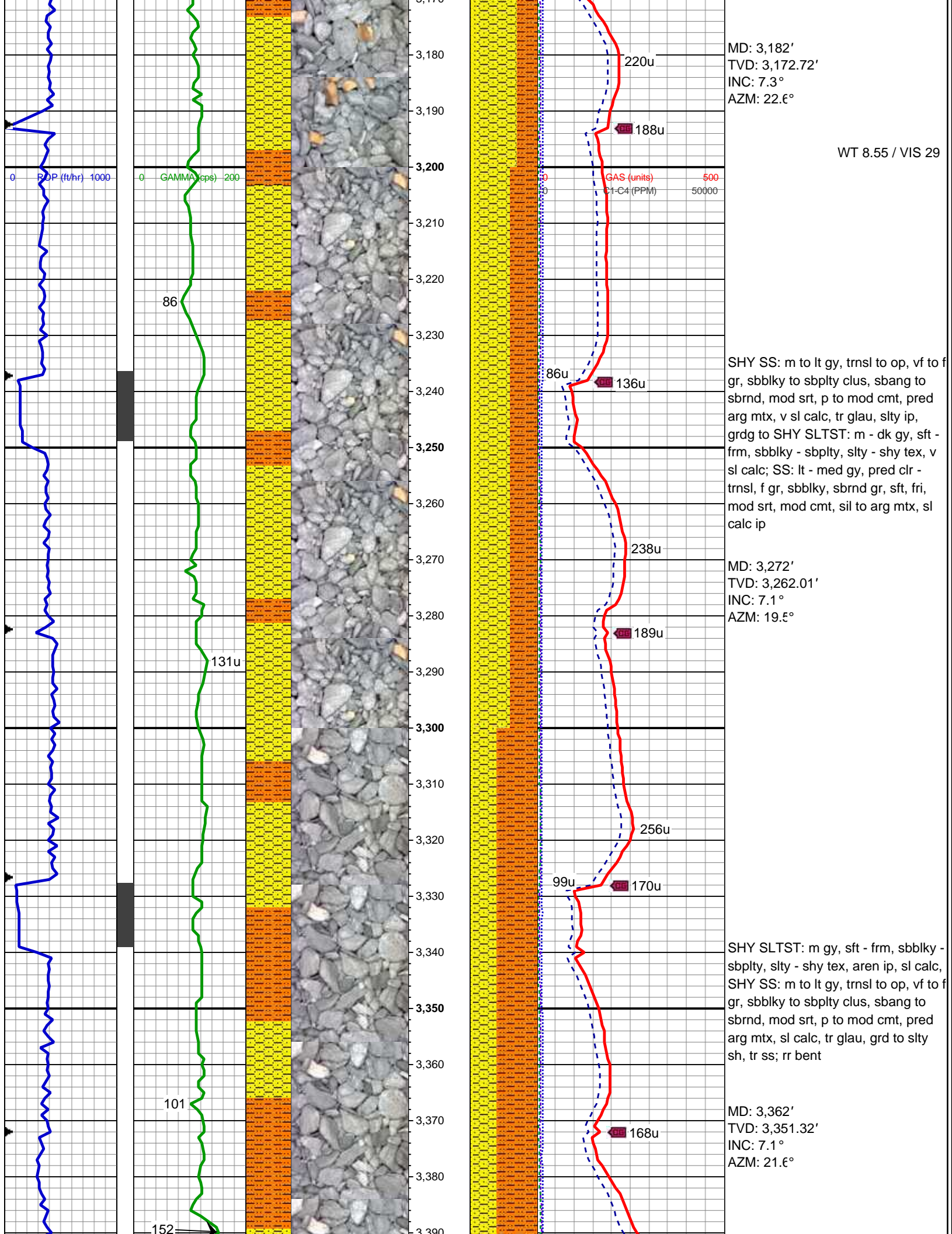


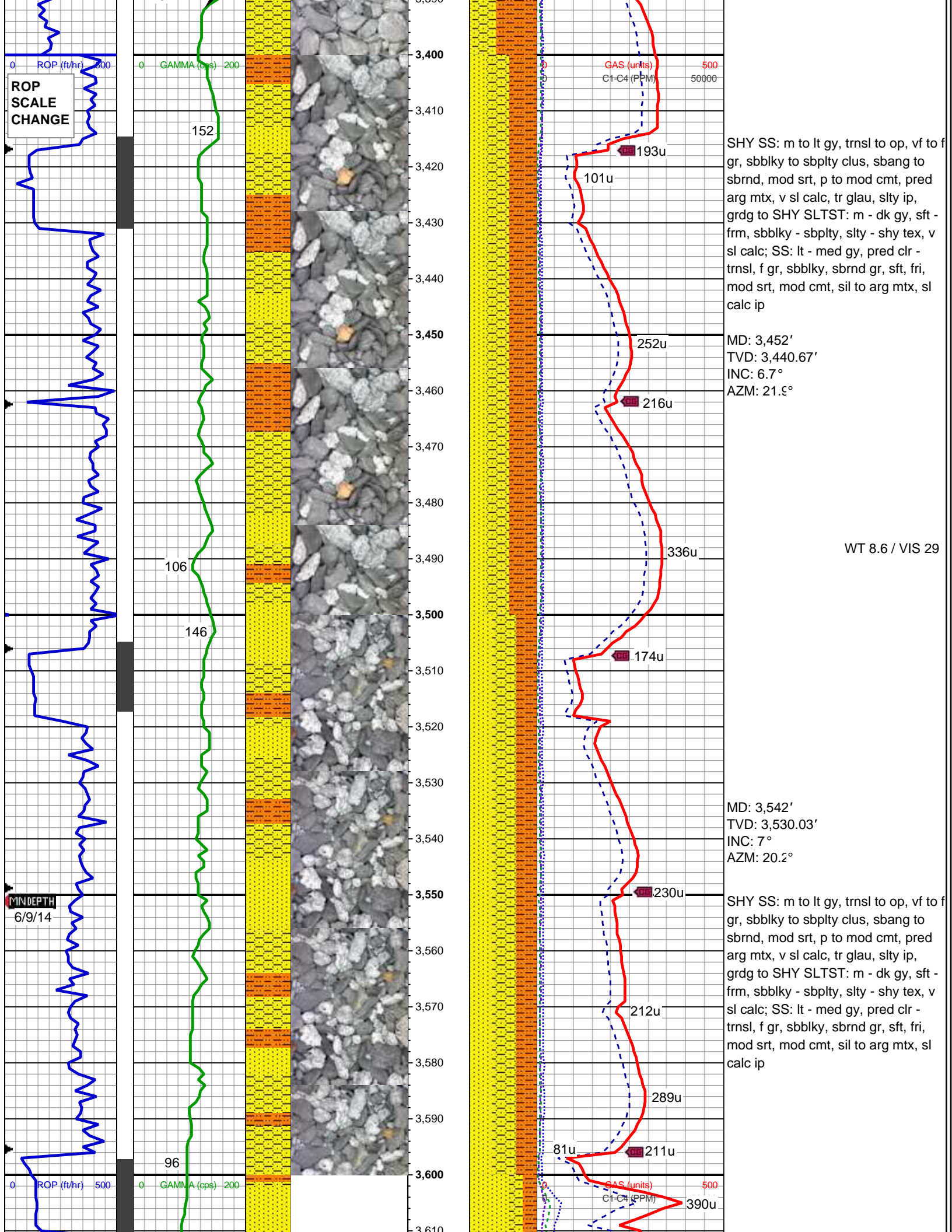


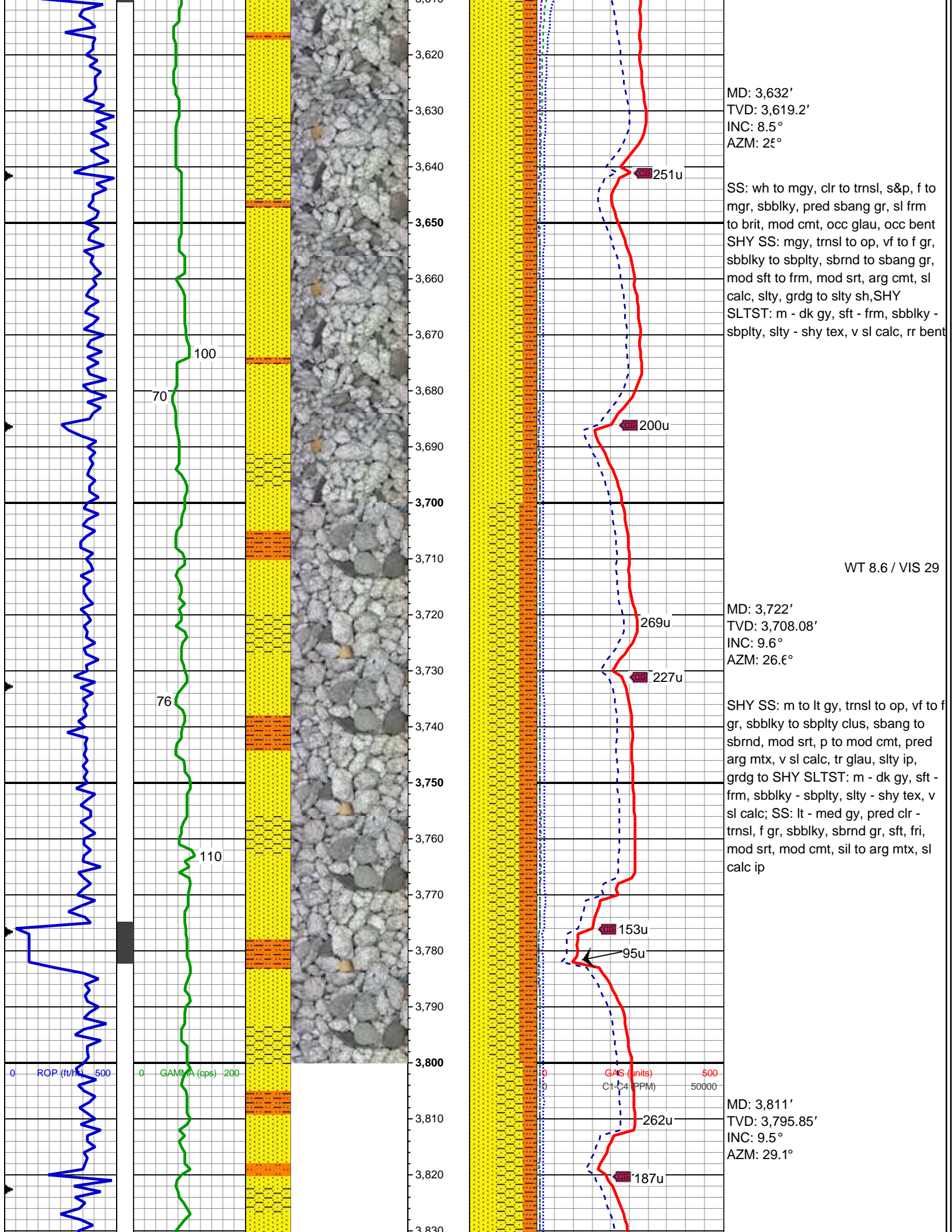


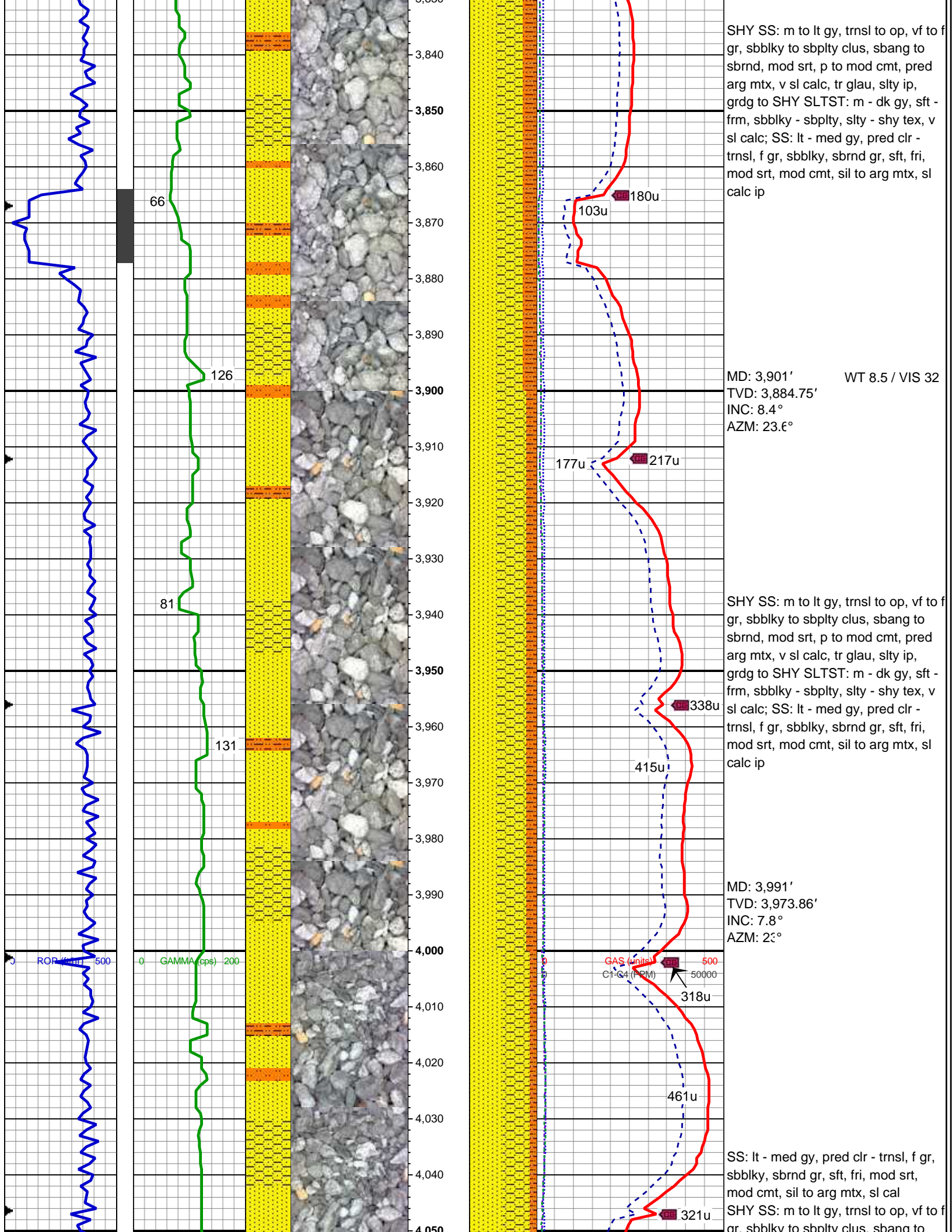


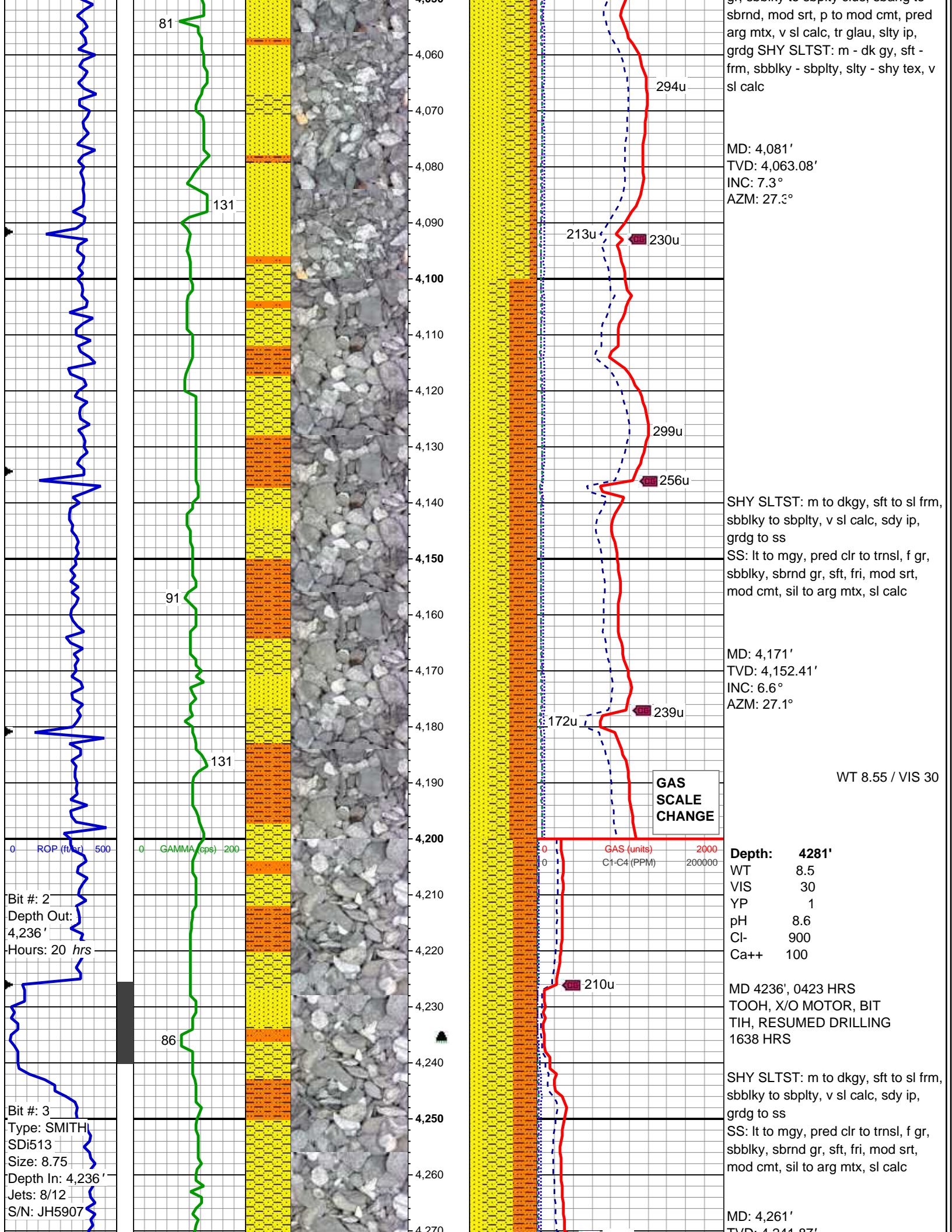


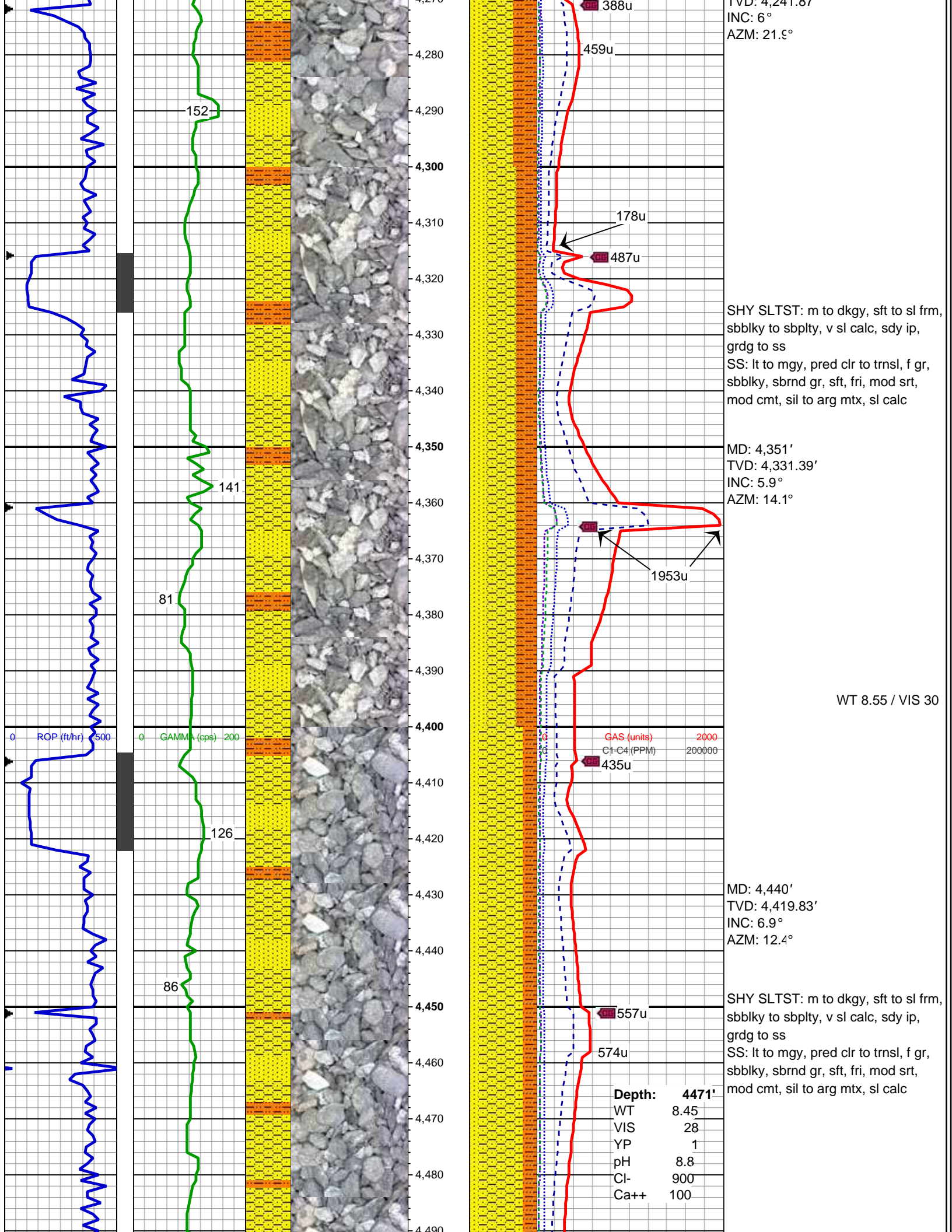


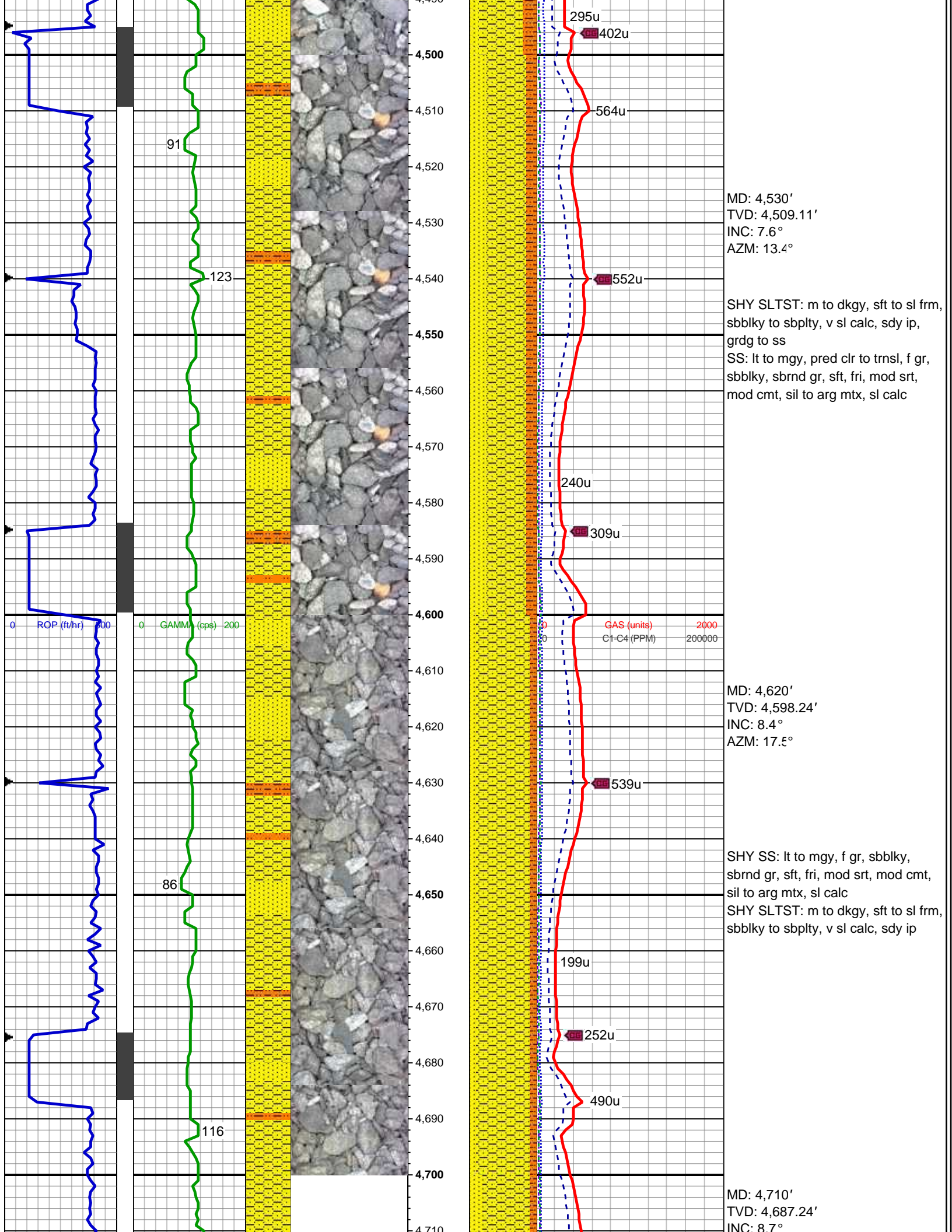


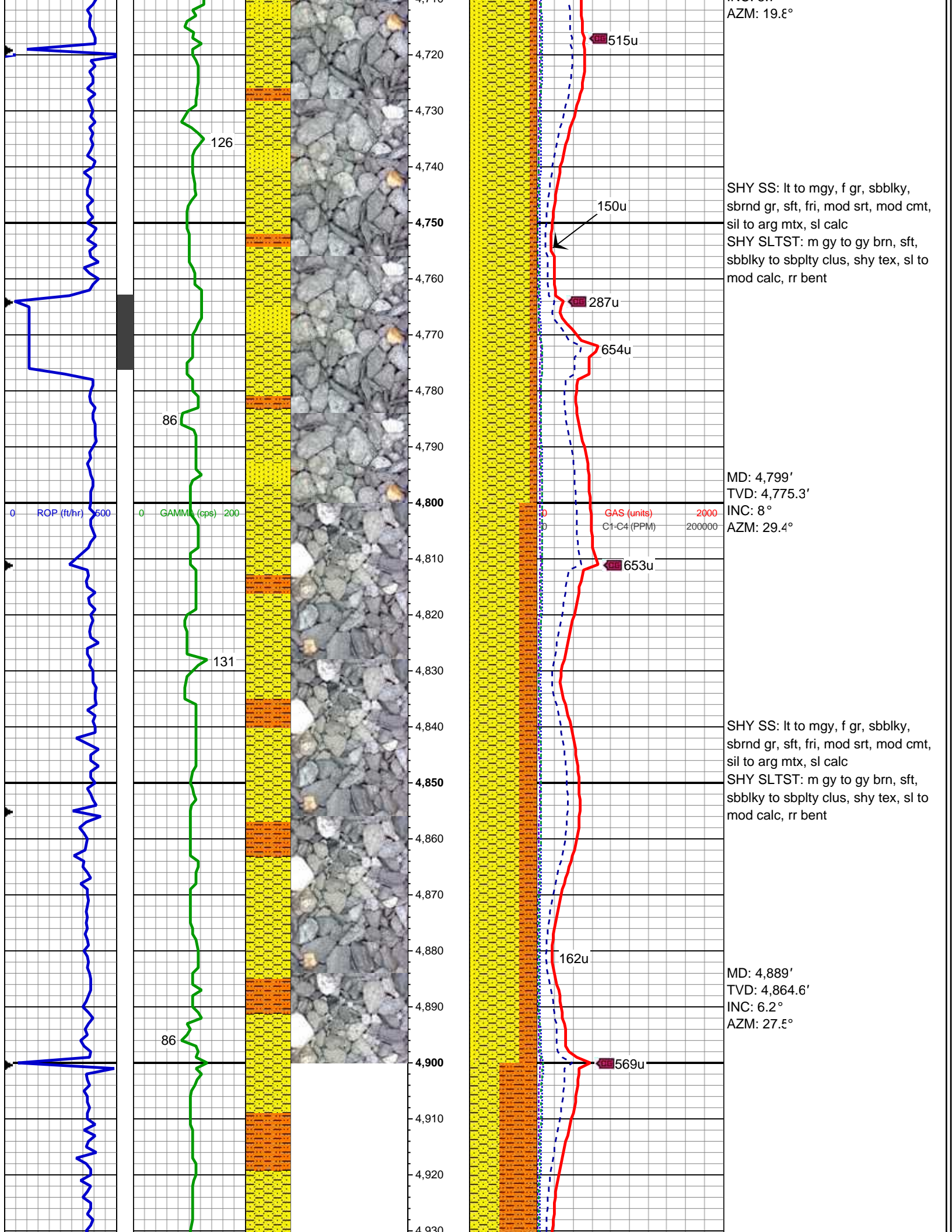


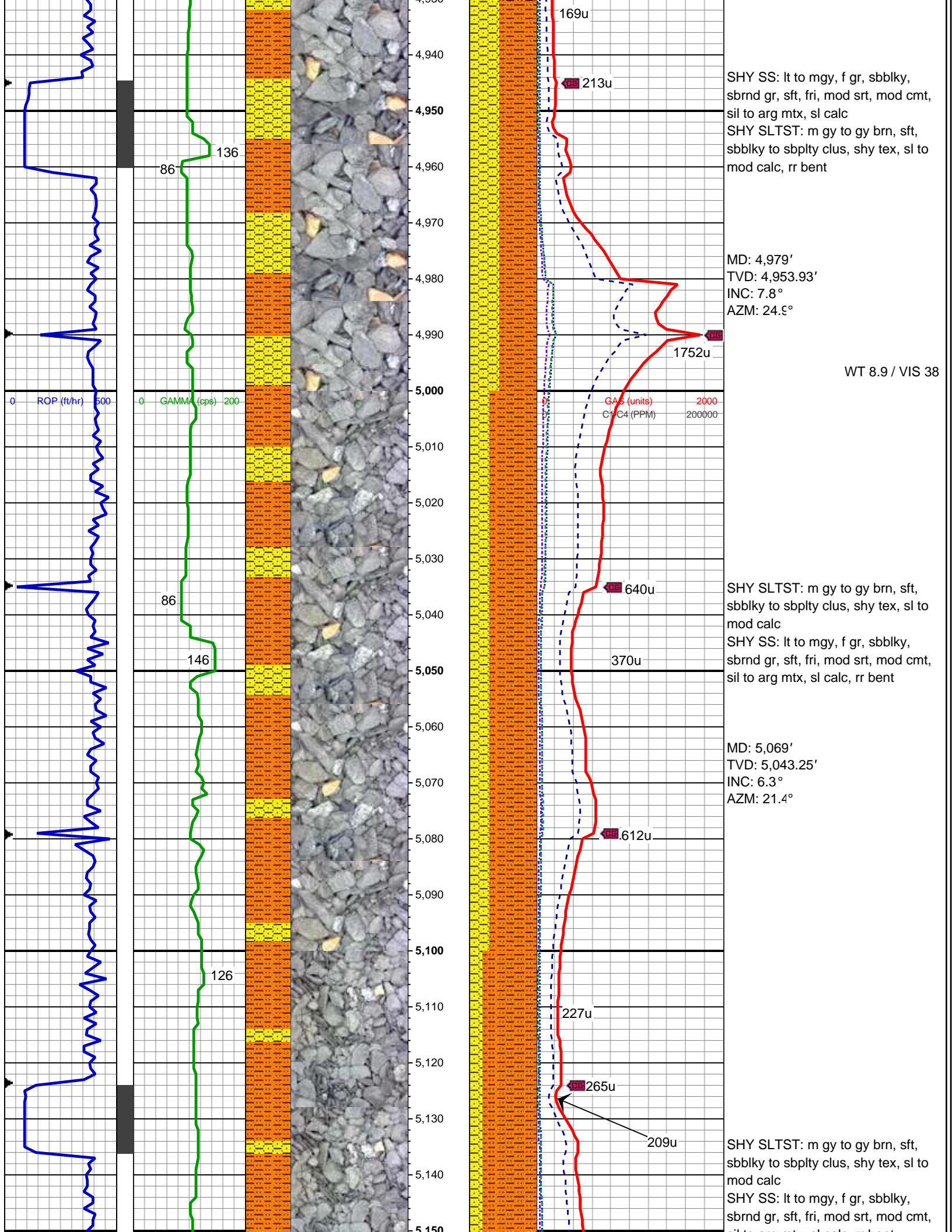


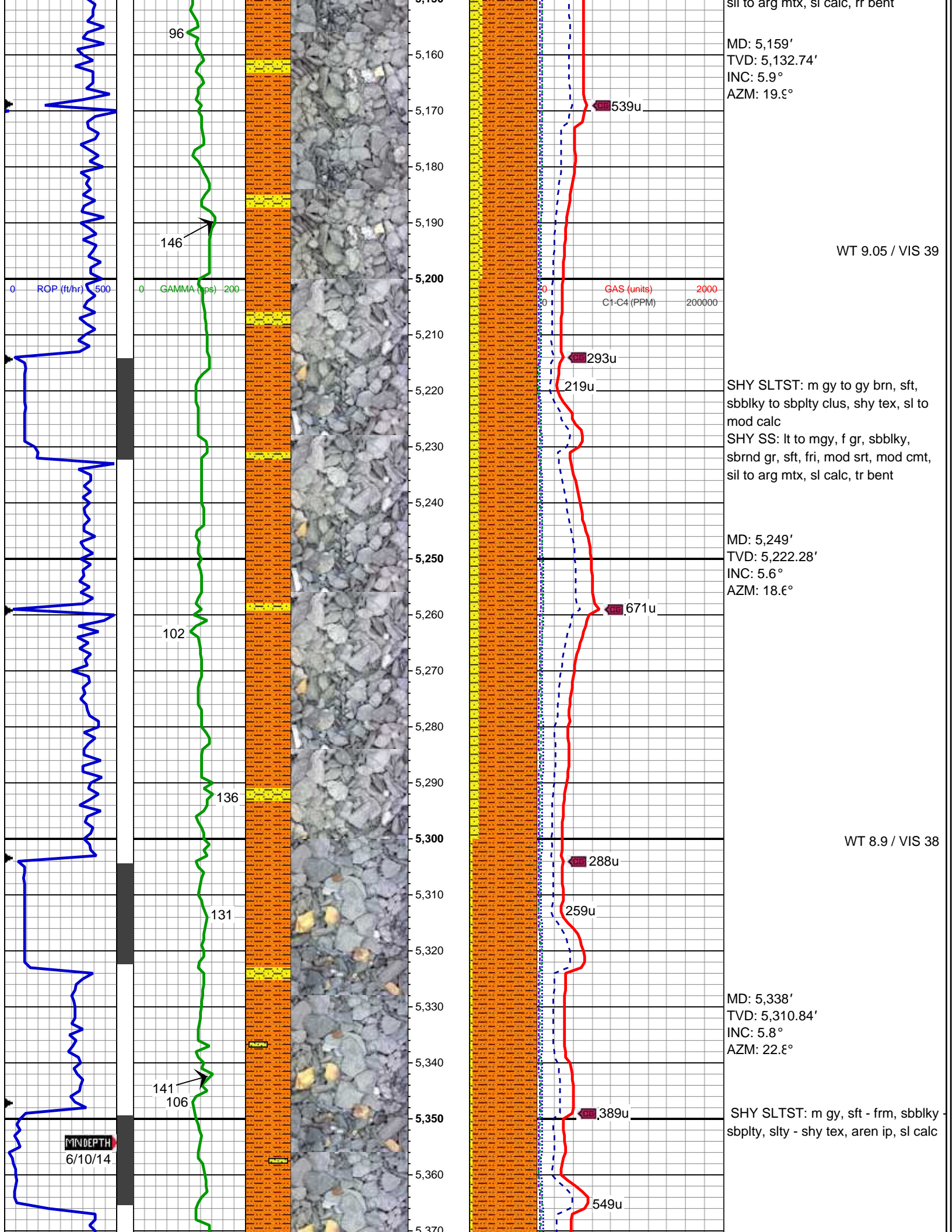


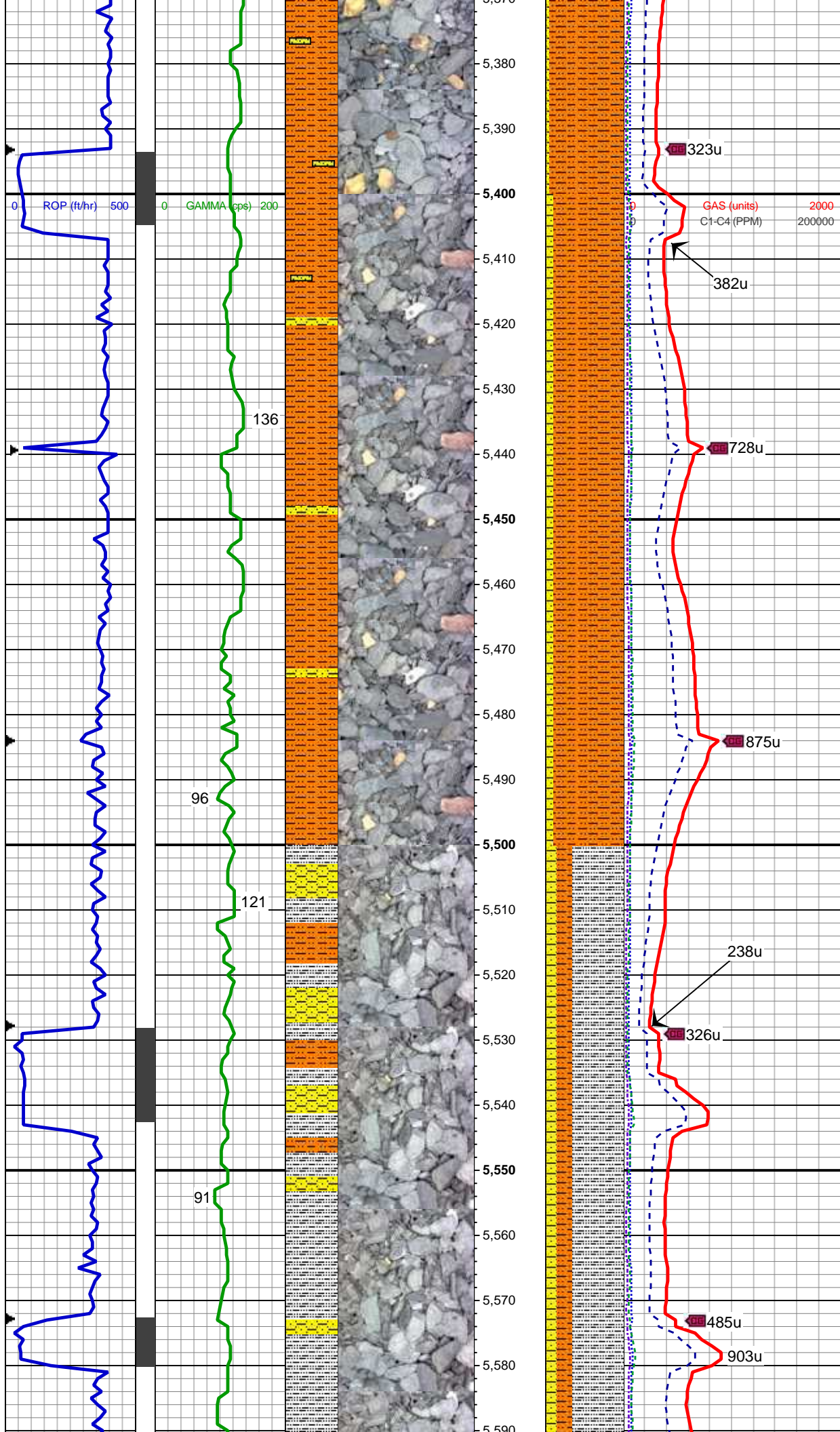












MD: 5,428'
TVD: 5,400.3'
INC: 6.8°
AZM: 27.7°

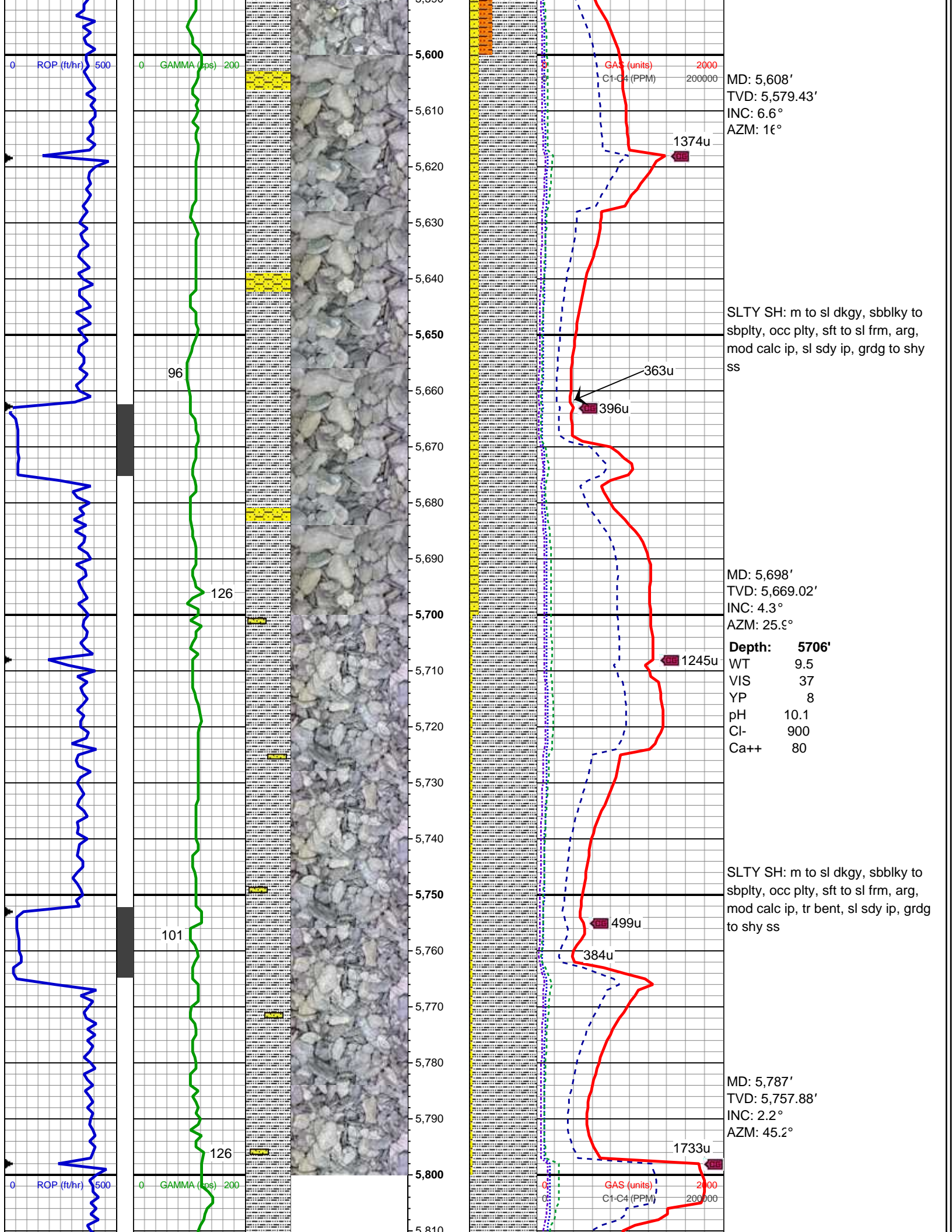
SHY SLTST: m gy to gy brn, sft,
sbbly to sbply clus, shy tex, sl to
mod calc
SHY SS: lt to mgy, f gr, sbbly,
sbrnd gr, sft, fri, mod srt, mod cmt,
sil to arg mtx, sl calc, rr bent

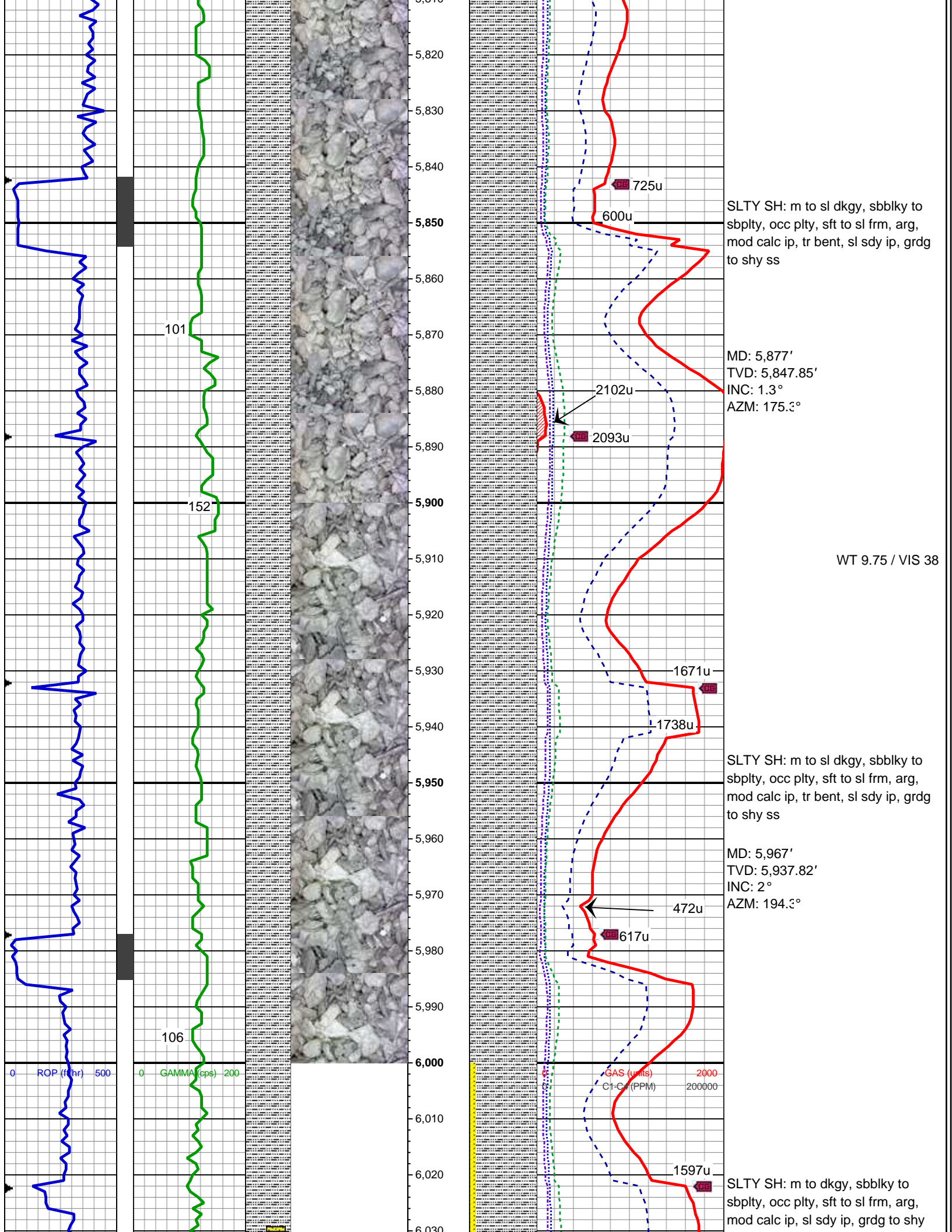
WT 9.2 / VIS 39

MD: 5,518'
TVD: 5,489.86'
INC: 4.5°
AZM: 17.3°

SLTY SH: med to sl dk gy, sb blkly to
sb ply, occ ply, sft to sl frm, arg,
mod calc ip, sdy ip, grdg to shy sltst
SHY SLTST: m gy, sft, sbbly to
sbply, sl calc, grdg to shy ss

WT 9.35 / VIS 38





5,810
5,820
5,830
5,840
5,850
5,860
5,870
5,880
5,890
5,900
5,910
5,920
5,930
5,940
5,950
5,960
5,970
5,980
5,990
6,000
6,010
6,020
6,030

101

152

106

SLTY SH: m to sl dkgy, sbbly to sbply, occ pty, sft to sl frm, arg, mod calc ip, tr bent, sl sdy ip, grdg to shy ss

MD: 5,877'
TVD: 5,847.85'
INC: 1.3°
AZM: 175.3°

WT 9.75 / VIS 38

SLTY SH: m to sl dkgy, sbbly to sbply, occ pty, sft to sl frm, arg, mod calc ip, tr bent, sl sdy ip, grdg to shy ss

MD: 5,967'
TVD: 5,937.82'
INC: 2°
AZM: 194.3°

SLTY SH: m to dkgy, sbbly to sbply, occ pty, sft to sl frm, arg, mod calc ip, sl sdy ip, grdg to shy

725u

600u

2102u

2093u

1671u

1738u

472u

617u

1597u

2000

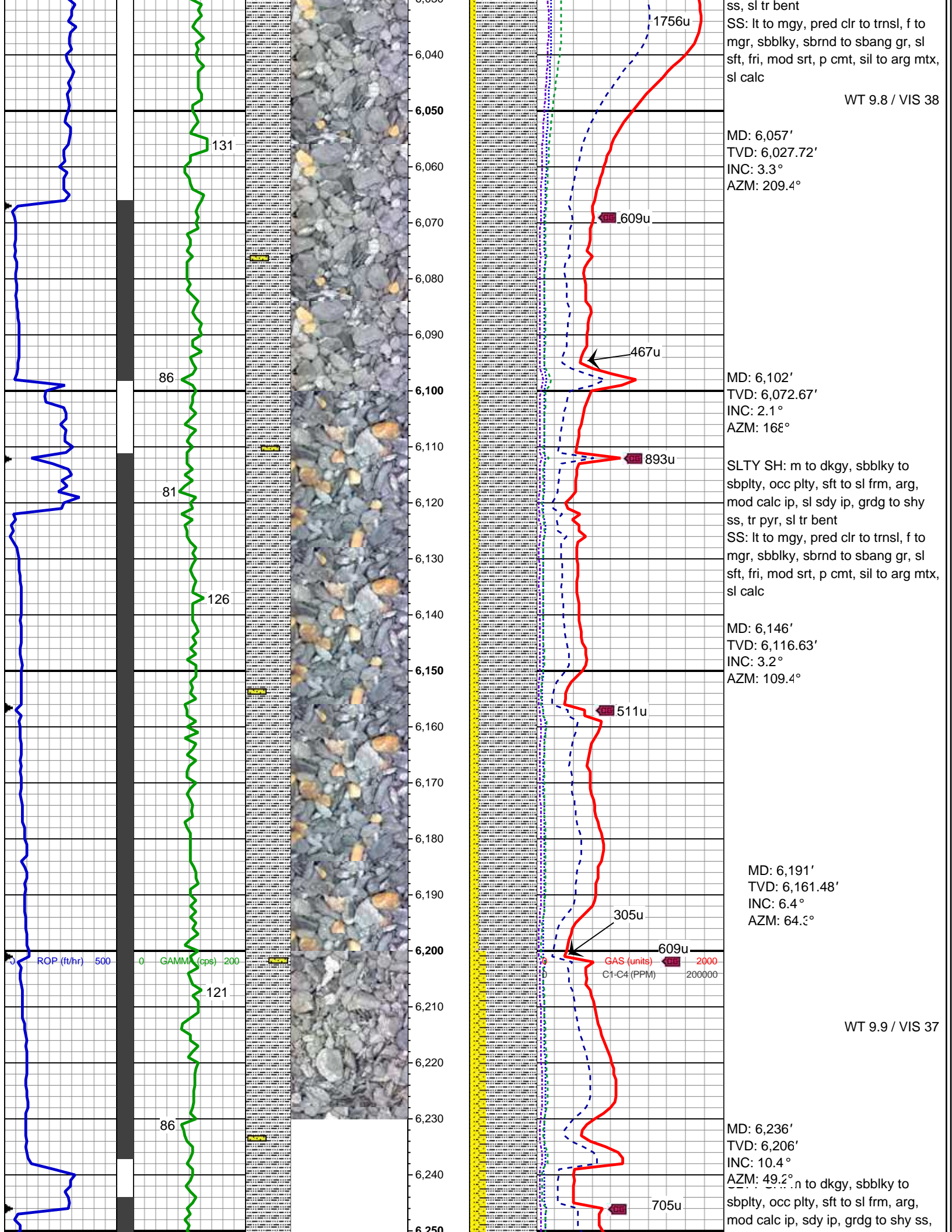
C1-C4 (PPM)

ROP (ft/hr)

GAMMA (cps)

GAS (u/mms)

C1-C4 (PPM)



ss, sl tr bent
SS: lt to mgy, pred clr to trnsl, f to mgr, sbblky, sbrnd to sbang gr, sl sft, fri, mod srt, p cmt, sil to arg mtx, sl calc

WT 9.8 / VIS 38

MD: 6,057'
TVD: 6,027.72'
INC: 3.3°
AZM: 209.4°

MD: 6,102'
TVD: 6,072.67'
INC: 2.1°
AZM: 168°

SLTY SH: m to dkgy, sbblky to sbplty, occ plty, sft to sl frm, arg, mod calc ip, sl sdy ip, grdg to shy ss, tr pyr, sl tr bent
SS: lt to mgy, pred clr to trnsl, f to mgr, sbblky, sbrnd to sbang gr, sl sft, fri, mod srt, p cmt, sil to arg mtx, sl calc

MD: 6,146'
TVD: 6,116.63'
INC: 3.2°
AZM: 109.4°

MD: 6,191'
TVD: 6,161.48'
INC: 6.4°
AZM: 64.3°

WT 9.9 / VIS 37

MD: 6,236'
TVD: 6,206'
INC: 10.4°
AZM: 49.2°

SS: lt to mgy, pred clr to trnsl, f to mgr, sbblky, sbrnd to sbang gr, sl sft, fri, mod srt, p cmt, sil to arg mtx, sl calc
SLTY SH: m to dkgy, sbblky to sbplty, occ plty, sft to sl frm, arg, mod calc ip, sdy ip, grdg to shy ss,

