

LOG created using LPLOT VH Version 3.0, May 14, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC
WELL: SHABLE USX PC AB11-62-1HNL
LOCATION: SEC11 T7N R64W
COUNTY: WELD
STATE: COLORADO
SPOT: 698' FSL, 250' FWL
ELEVATION: 4818'GL, 4834'KB
FIELD: WATTENBERG
SPUD DATE: 5/1/13
TD DATE: 5/14/13
DATES LOGGED: 5/3/13 - 5/14/13
DEPTHS LOGGED: 800' - 16406'
GEOLOGISTS: GARY MYERS, TED STOCKWELL
DRILLING FLUID: LSND
DRILLING RIG: PRECISION 828
API: 05-123-36701
LOG TYPE: VERTICAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING, INC.

LOG CONTINUES ON FILE: Shable USX PC AB11-62-1HNL Horiz.lplot

LITHOLOGIES



Sandstone



Shale



Shaly Sandstone



Shaly Siltstone



Silty Shale

MODIFIERS



Sandstone Stringers

ENGINEERING SYMBOLS



Connection



Connection Gas



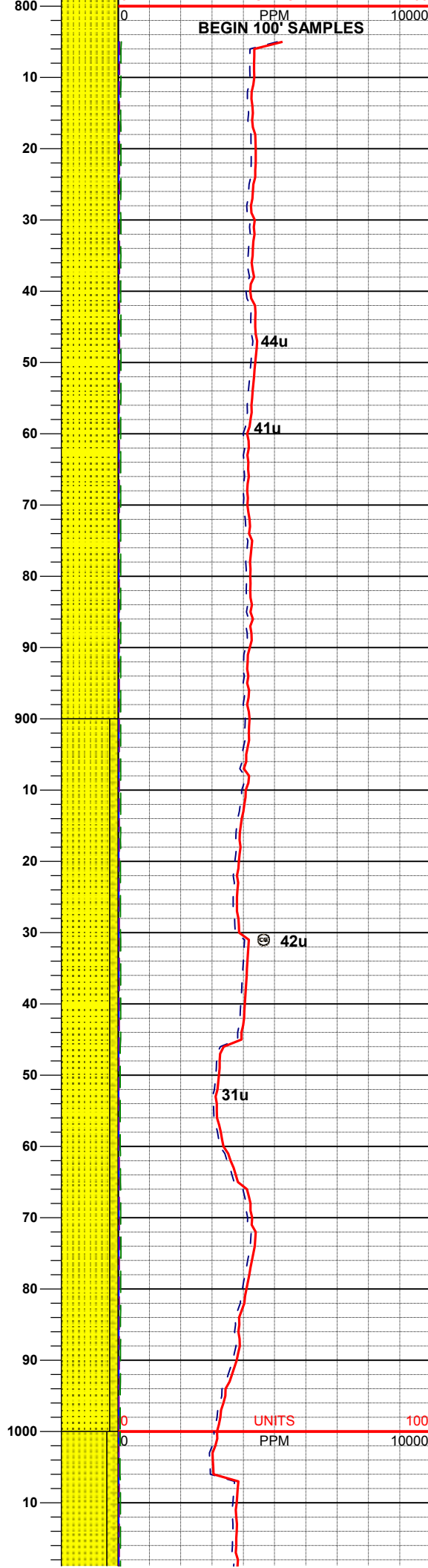
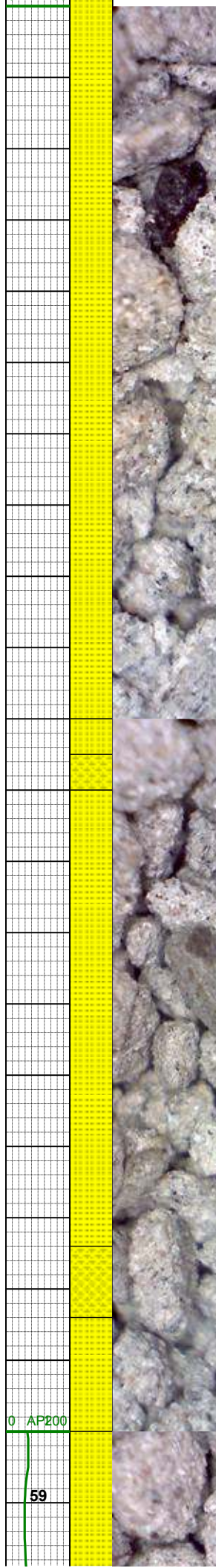
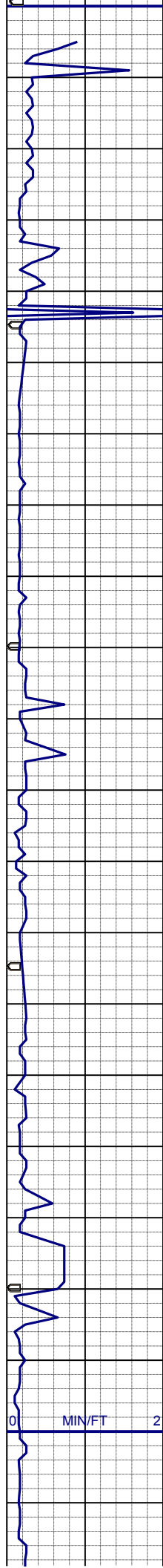
Midnight Depth

| ROP | | ROTATE/SLIDE | GAMMA | INTERPRETIVE LITHOLOGY | PICTURE |
|---------------|--------|--------------|---------|------------------------|---------|
| 0 | MIN/FT | 2 | 0 AP200 | | |
| BIT #2 | | | | | |
| SMITH | | | | | |
| SDI611, 8.75" | | | | | |
| SER# JG8000 | | | | | |
| IN @ MD 783' | | | | | |

| GAS | | |
|-----|-------|-------|
| 0 | UNITS | 100 |
| C1 | | |
| 0 | PPM | 10000 |
| C2 | | |
| 0 | PPM | 10000 |
| C3 | | |
| 0 | PPM | 10000 |
| C4 | | |
| 0 | PPM | 10000 |

LITHOLOGY DESCRIPTION

COLUMBINE LOGGING, INC.
RIGGED UP AND READY
ON 5/2/13
MANNED 2-PERSON LOGGING
WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #0331



BEGAN DRILLING OUT OF
SHOE @ 1804 HRS 5/3/13

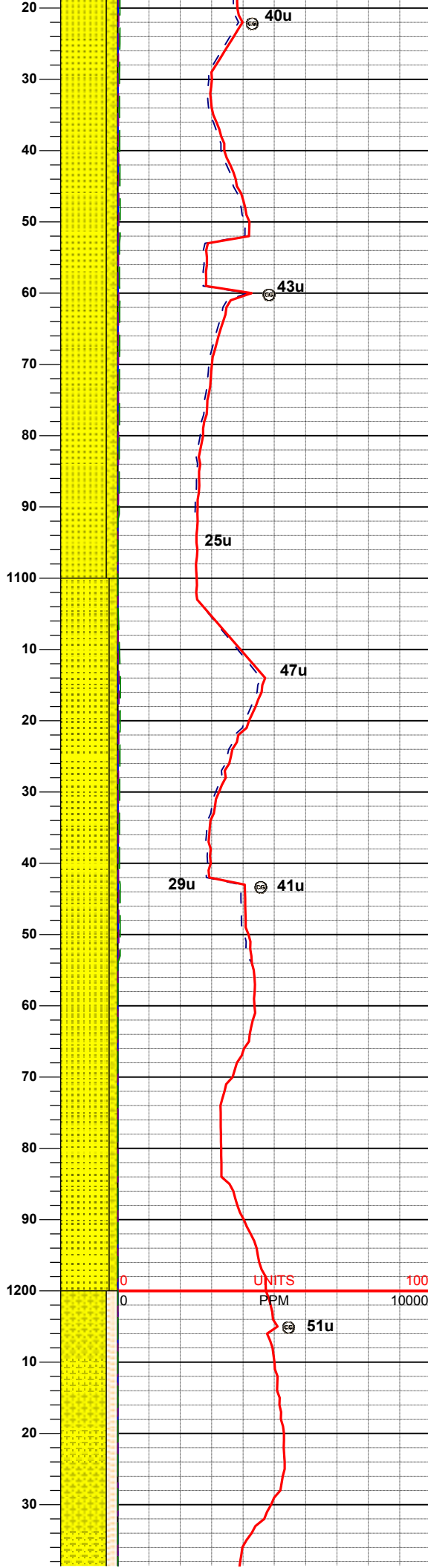
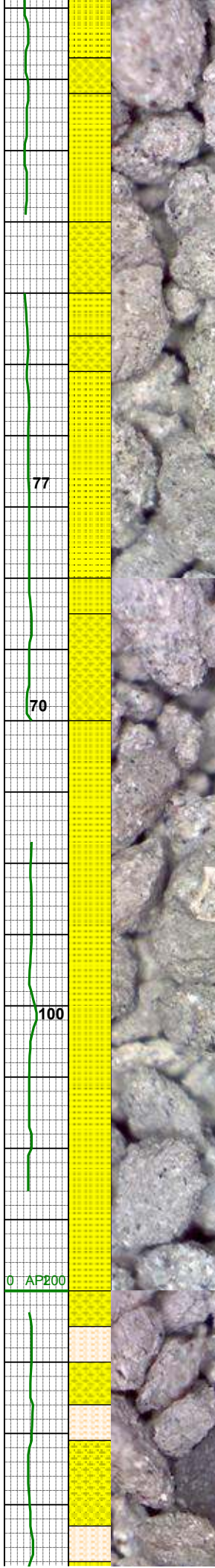
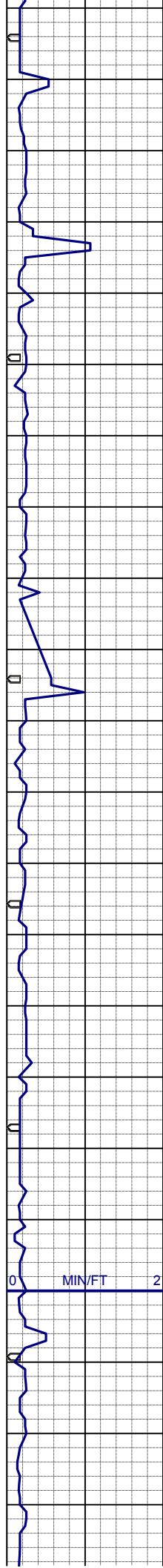
MD 838'
INC 0.3°
AZI 190.9°
TVD 838.0'

SS: wh-gy-clr, firm-hd, m-fgr, blky-
sbbiky, mod srt, sil mtx- slarg mtx,
non calc, tr glauc, slmica

MD 928'
INC 0.6°
AZI 170.8°
TVD 928.0'

SS: wh-gy-clr, firm-hd, m-fgr, blky-
sbbiky, mod srt, sil mtx- slarg mtx,
non calc, tr glauc, slmica, tr pyr
SHYSS: ltgy-dkgy, occ clr gr, sft-firm,
sbbiky-sbply, mod-wsrt, arg mtx, non
calc, tr glauc, sl mica

MD 1018'
INC 0.4°
AZI 192.3°



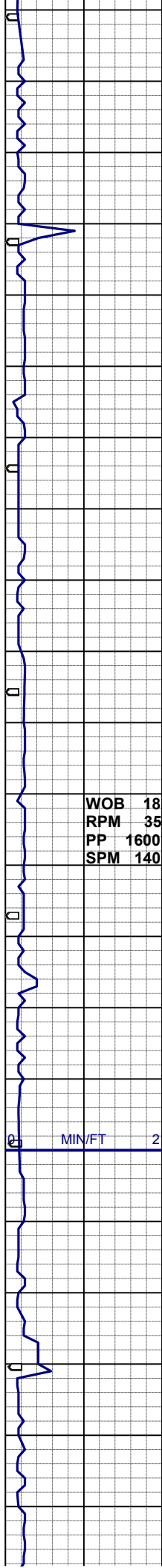
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SHYSS: ltgy-dkgy, occ clr gr, sft-firm, sbbiky-sbply, mod-wsrt, arg mtx, non calc, tr glauc, sl mica

WT 8.6 / VIS 30

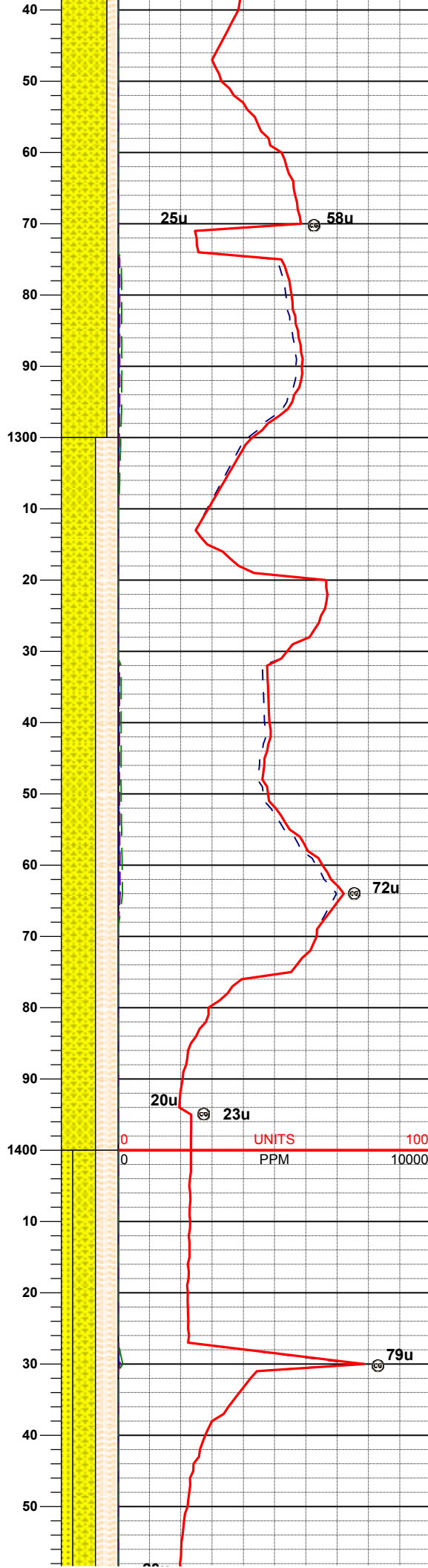
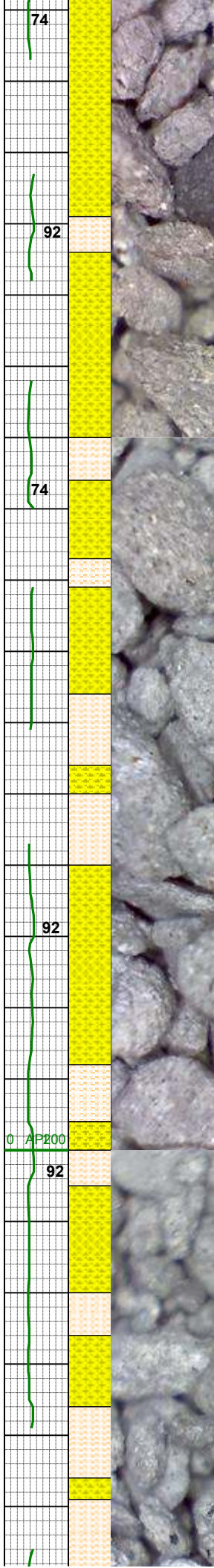
MD 1126'
INC 0.2°
AZI 145.3°
TVD 1126.0'

SS: wh-gy-clr, firm-hd, m-fgr,blky-sbbiky, mod srt, sil mtx- slarg mtx, non calc, tr glauc, slmica, tr pyr
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, sbbiky-sbply, mod-wsrt, arg mtx, non calc, tr glauc, sl mica

MD 1221'
INC 0.2°
AZI 257.5°
TVD 1221.0'



WOB 18
RPM 35
PP 1600
SPM 140



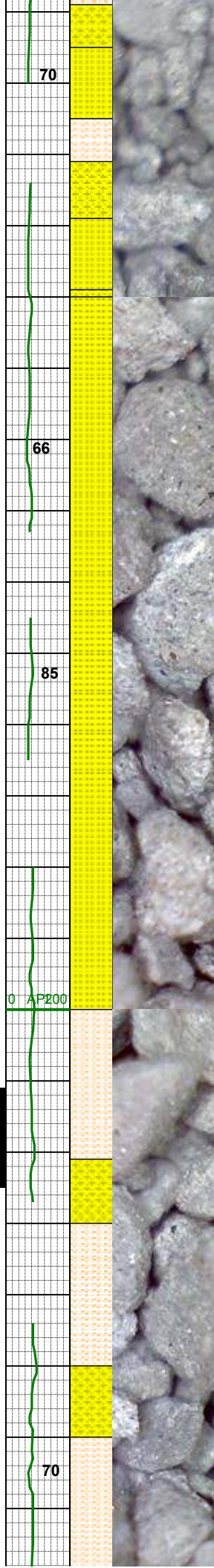
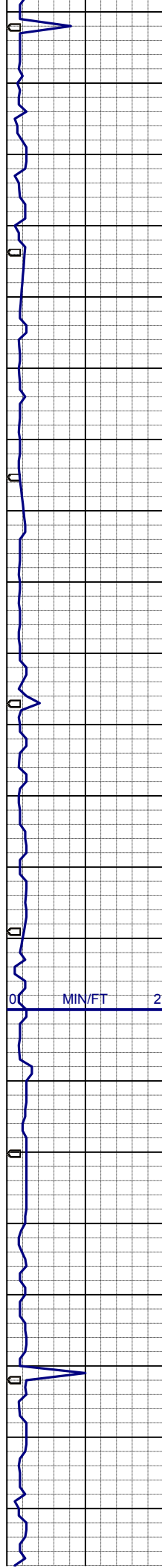
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbbiky-sbpty, mod-wsrt, arg mtx, non calc, tr glauc, sl mica
SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbbiky-sbpty, modsrt, arg mtx, noncalc

MD 1316'
INC 0.3°
AZI 133.4°
TVD 1316.0'

SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbbiky-sbpty, modsrt, arg mtx, noncalc
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbbiky-sbpty, mod-wsrt, arg mtx, non calc, tr glauc, sl mica

MD 1411'
INC 0.4°
AZI 329.2°
TVD 1411.0'

SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbbiky-sbpty, modsrt, arg mtx, noncalc
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbbiky-sbpty, mod-wsrt, arg mtx, non calc, tr glauc, sl mica
SS: wh-gy-clr, firm-hd, m-fgr, blk-sbbiky, mod srt, sil mtx- slarg mtx,



non calc, tr glauc, slmica, tr pyr

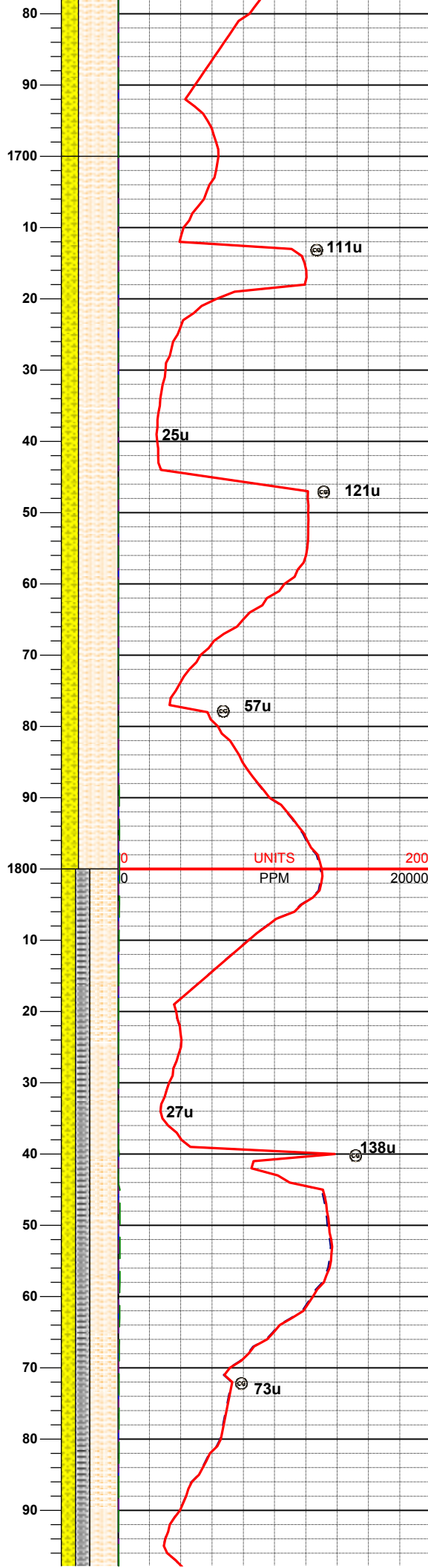
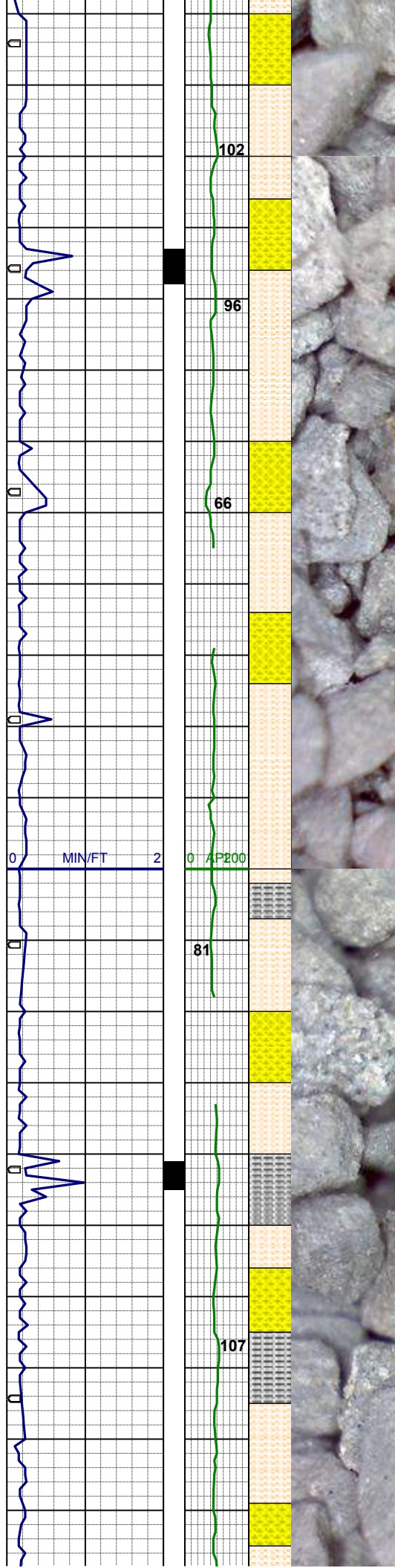
MD 1506'
INC 0.4°
AZI 6.1°
TVD 1506.0'

SS: wh-gy-clr, firm-hd, m-fgr,blky-sbbiky, mod srt, sil mtx- slarg mtx, non calc, tr glauc, slmica, tr pyr
SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbbiky-sbplty, modsrt, arg mtx, noncalc
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbbiky-sbplty, mod-wsrt, arg mtx, non calc, tr glauc, sl mica

MD 1601'
INC 0.4°
AZI 24.7°
TVD 1601.0'

WT 8.6 / VIS 31

SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbbiky-sbplty, modsrt, arg mtx, noncalc, grdg-sltys
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbbiky-sbplty, mod-wsrt, arg mtx, non calc, tr glauc, sl mica



MD 1696'
INC 1.2°
AZI 189.6°
TVD 1696.0'

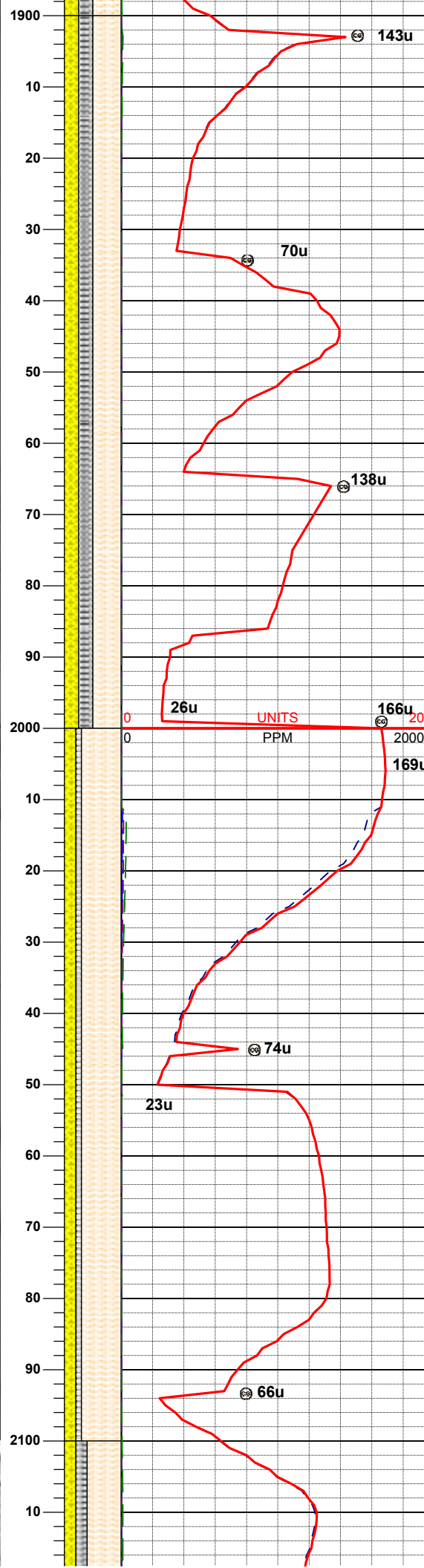
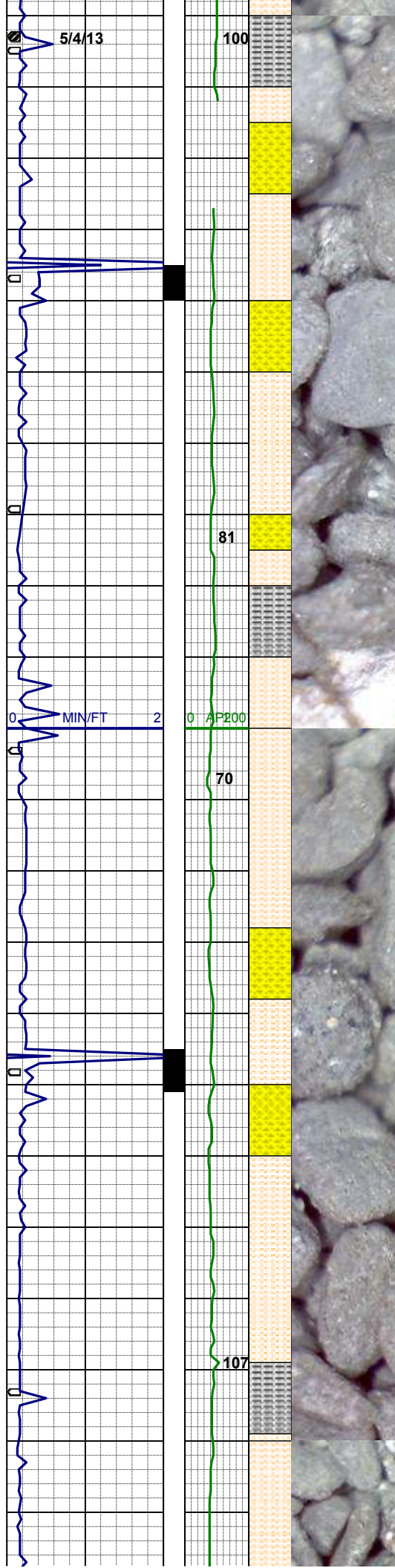
SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbblky-sbply, modsrt, arg mtx, noncalc, grdg-sltys
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbblky-sbply, mod-wsrt, arg mtx, non calc, tr glauc, sl mica

MD 1790'
INC 1.7°
AZI 166.8°
TVD 1790.0'

SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbblky-sbply, modsrt, arg mtx, slcalc, grdg-sltys
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbblky-sbply, mod-wsrt, arg mtx, non calc, tr glauc, sl mica
SLTYSH: mgy-dkgy, sft-firm, f-vfgr, sbply-pty, wsrt, sl calc

MD 1885'
INC 2.5°
AZI 162.4°
TVD 1884.9'

WT 8.45 / VIS 30

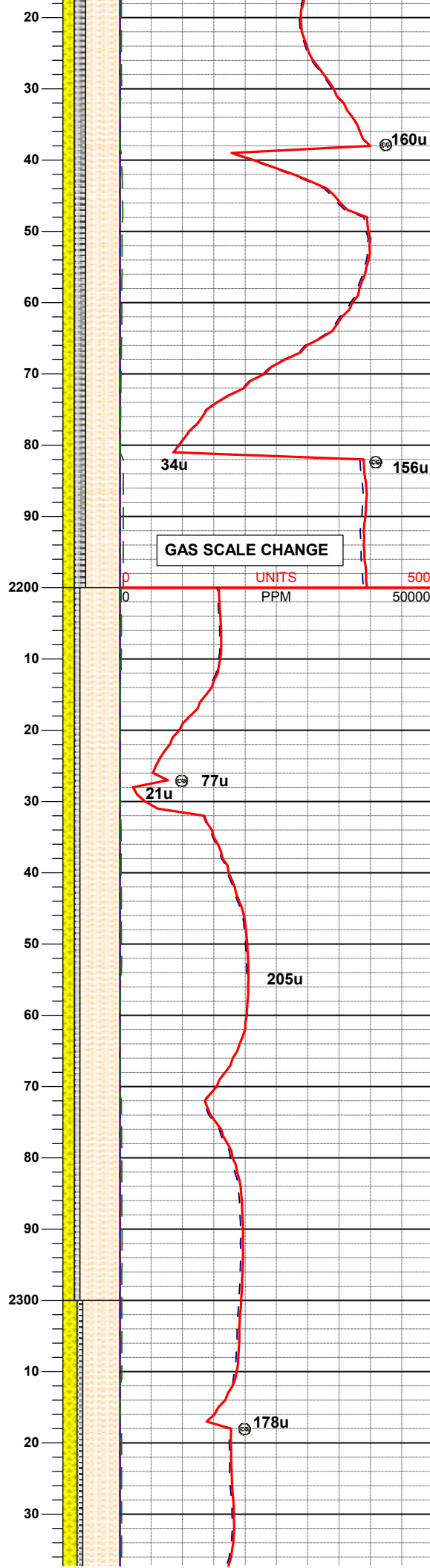
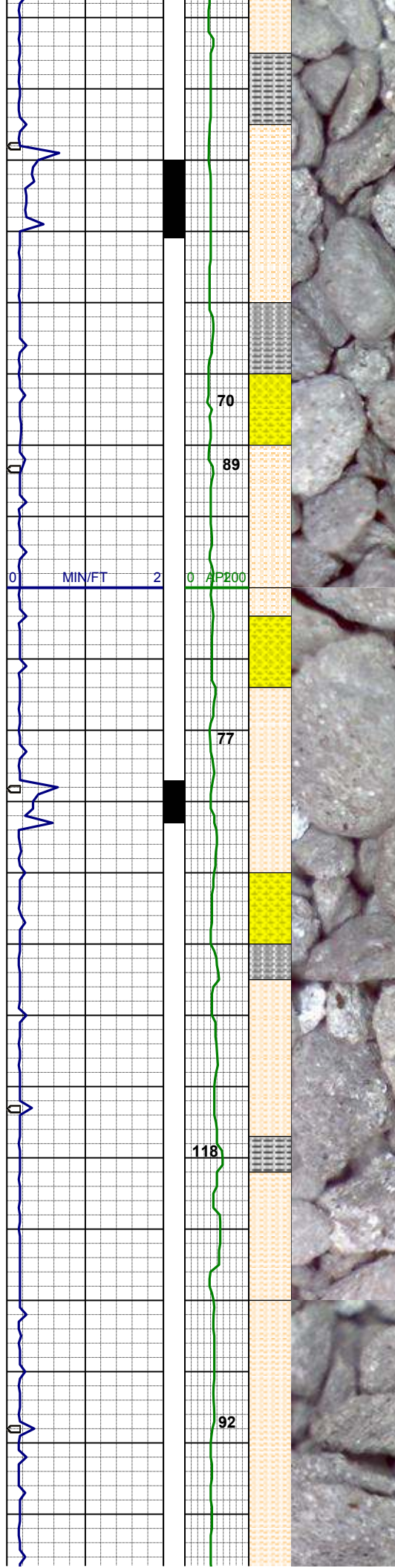


SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbblky-sbply, modsr, arg mtx, slcalc, grdg-sltys
 SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbblky-sbply, mod-wsrt, arg mtx, non calc, tr glauc, sl mica
 SLTYSH: mgy-dkgy, sft-firm, f-vfgr, sbply-pty, wsrt, sl calc

MD 1997'
 INC 3.3°
 AZI 173.3°
 TVD 1996.7'

SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbblky-sbply, modsr, arg mtx, slcalc, grdg-sltys
 SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbblky-sbply, mod-wsrt, arg mtx, non calc, tr glauc, sl mica
 SLTYSH: mgy-dkgy, sft-firm, f-vfgr, sbply-pty, wsrt, sl calc

MD 2087'
 INC 4.0°
 AZI 186.3°
 TVD 2086.6'



SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbblky-sbply, modsrt, arg mtx, slcalc, grdg-sltys
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbblky-sbply, mod-wsrt, arg mtx, non calc, tr glauc, sl mica
SLTYSH: mgy-dkgy, sft-firm, f-vfgr, sbply-pty, wsrt, sl calc

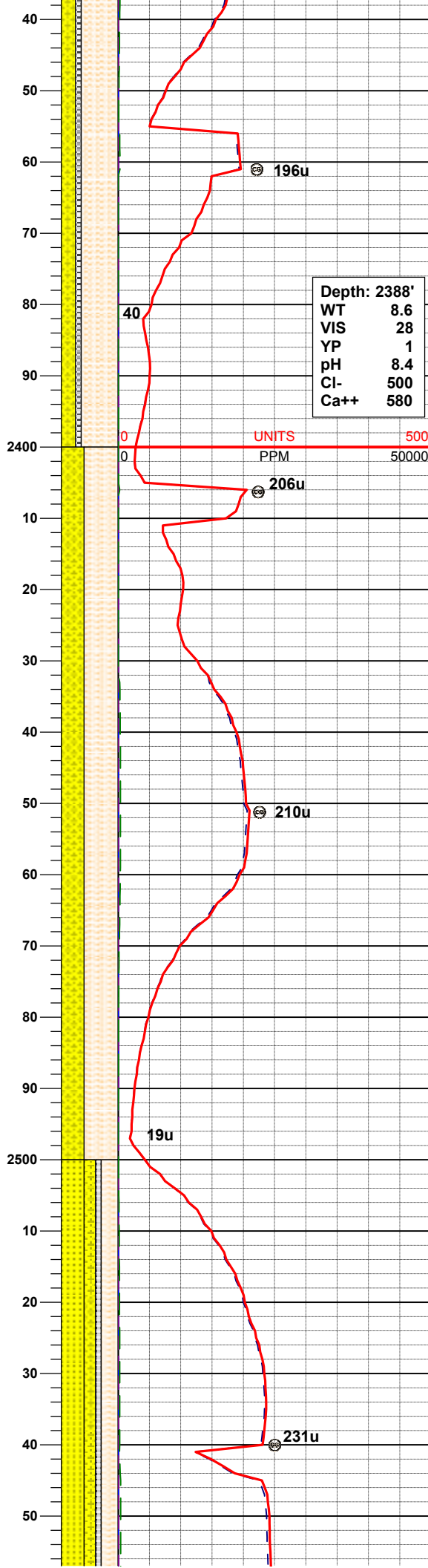
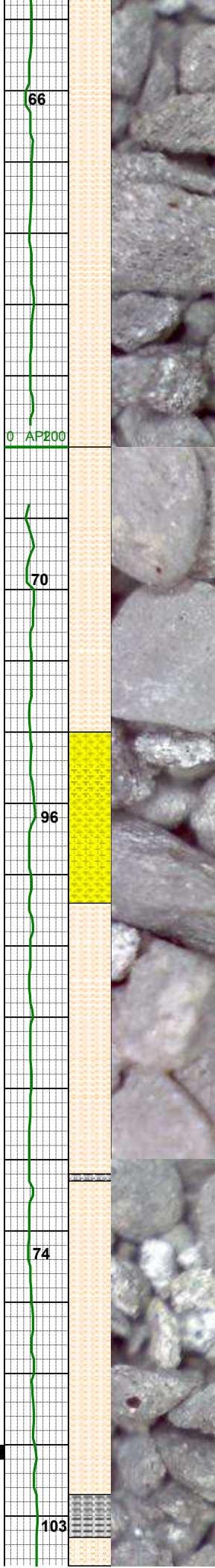
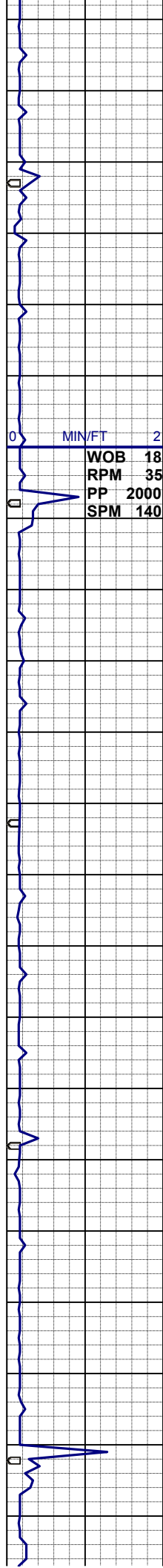
MD 2177'
INC 5.7°
AZI 188.6°
TVD 2176.2'

WT 8.5 / VIS 32

SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbblky-sbply, modsrt, arg mtx, slcalc, grdg-sltys
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbblky-sbply, mod-wsrt, arg mtx, non calc, tr glauc, sl mica
SLTYSH: mgy-dkgy, sft-firm, f-vfgr, sbply-pty, wsrt, sl calc

MD 2266'
INC 6.2°
AZI 183.1°
TVD 2264.8'

SHYSLTST: lt-dkgy, sft-firm, f-vfgr, sbblky-sbply, modsrt, arg mtx, slcalc, grdg-sltys
SHYSS: ltgy-dkgy, occ clr gr, sft-firm, m-fgr, sbblky-sbply, mod-wsrt, arg



SHYSS: lt-mgy, occ clr, sft-firm, m-fgr, sbblky-sbplty, mod-wsrt, arg mtz, non calc, tr glauc, sl mica
SLTYSH: mgy-dkgy, sft-firm, f-vfgr, sbplty-plty, wsrt, sl calc

MD 2356'
INC 6.1°
AZI 177.9°
TVD 2354.2'

Depth: 2388'
WT 8.6
VIS 28
YP 1
pH 8.4
Cl- 500
Ca++ 580

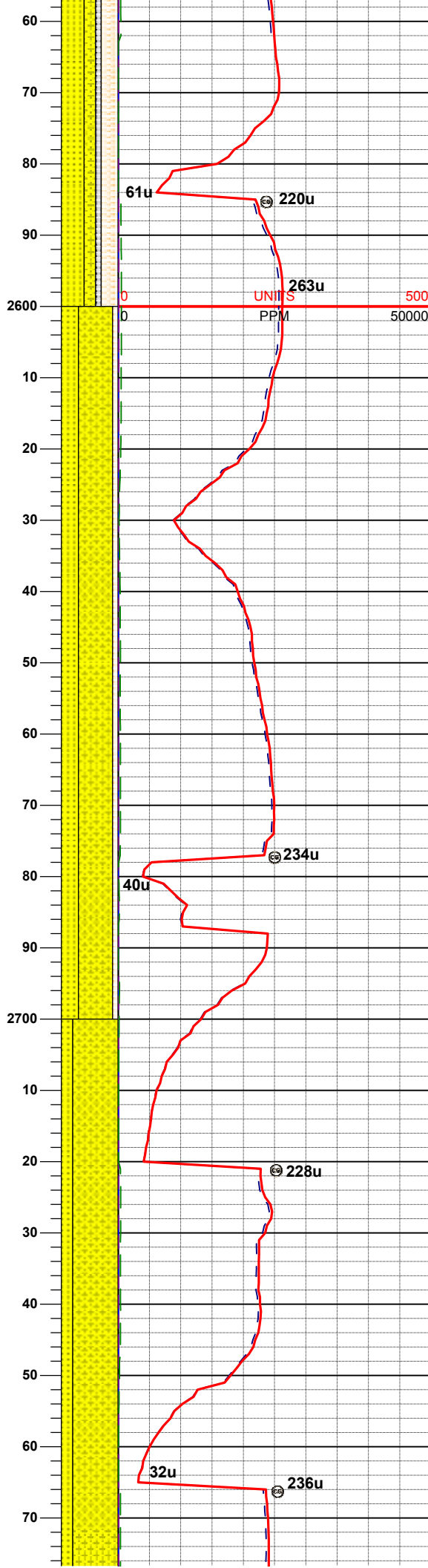
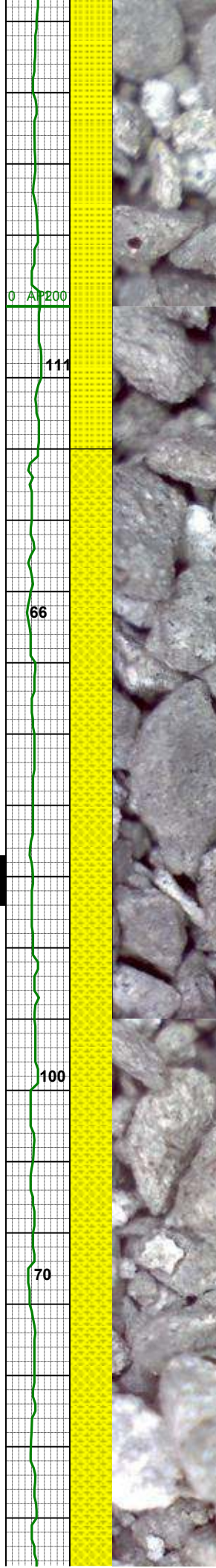
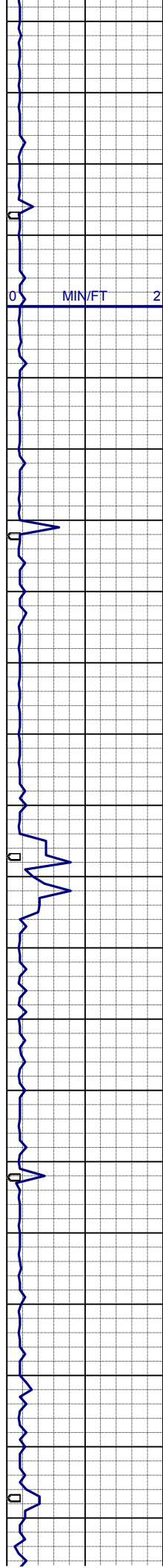
MD 2446'
INC 6.2°
AZI 186.1°
TVD 2443.7'

SHYSLTST: lt-mgy, sft-slfirm, pred sbblky-sbplty, modsrt, arg mtz, slcalc, sdy ip, grdg-shyss

MD 2536'
INC 6.0°
AZI 178.6°
TVD 2533.2'

SS- SHYSS: wh- mgy, trnsi-op, occ clr, sft-firm, m-fgr grdg- vfgr, sbblky-sbplty, mod rndd, psrt, arg-sil mtz, non -sl calc, sl mica

SHYSLTST: lt- mgy, sft- sl firm, sbblky-sbplty, modsrt, arg mtz, slcalc,



grdg-sltys

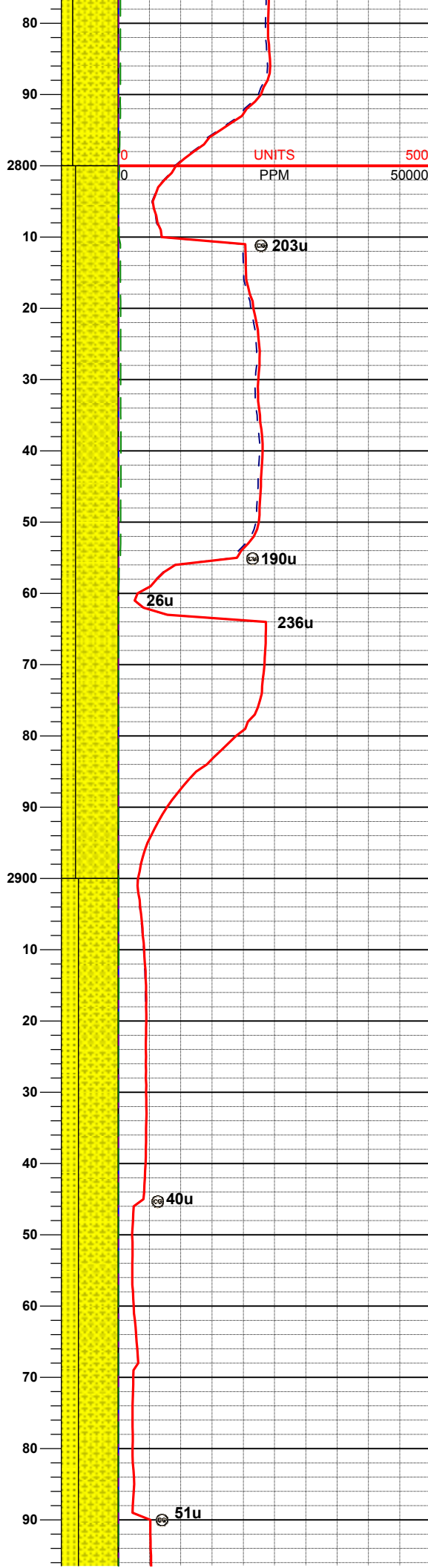
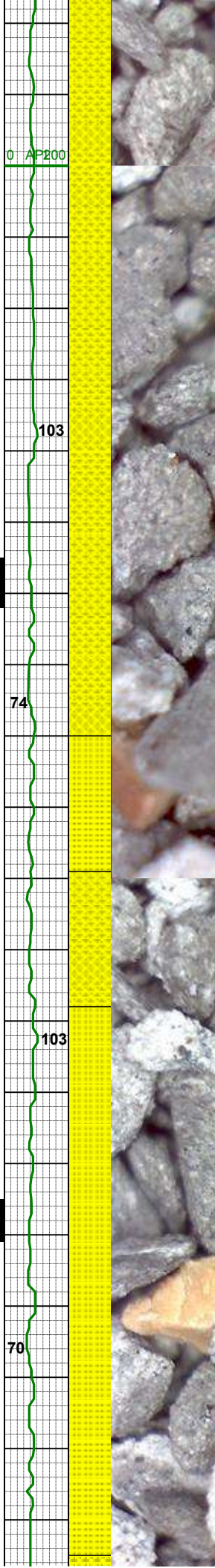
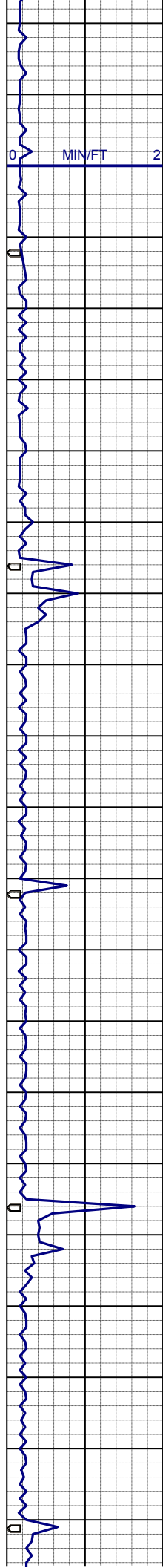
MD 2626'
INC 6.1°
AZI 176.8°
TVD 2622.7'

WT 8.5 / VIS 32

SS- SHYSS: wh- mgy, trnsi-op, occ
clr, sft-firm, m-fgr grdg- vfgr, sbbiky-
sbpty, mod rndd, psrt, arg-sil mtx, non
-sl calc, sl mica
SHYSLTST: lt- mgy, sft- sl firm,
sbbiky-sbpty, modsrt, arg mtx, slcalc,
grdg-sltys

MD 2716'
INC 6.5°
AZI 178.6°
TVD 2712.2'

SS- SHYSS: wh- mgy, trnsi-op, occ
clr, sft-firm, m-fgr grdg- vfgr, sbbiky-
sbpty, mod rndd, psrt, arg-sil mtx, non
-sl calc, sl mica



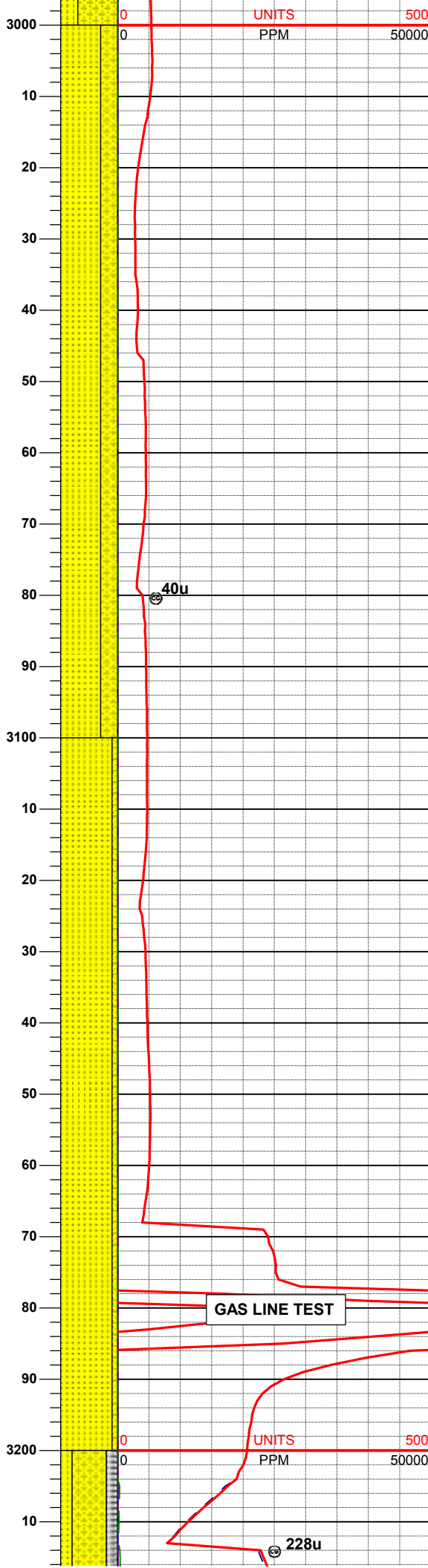
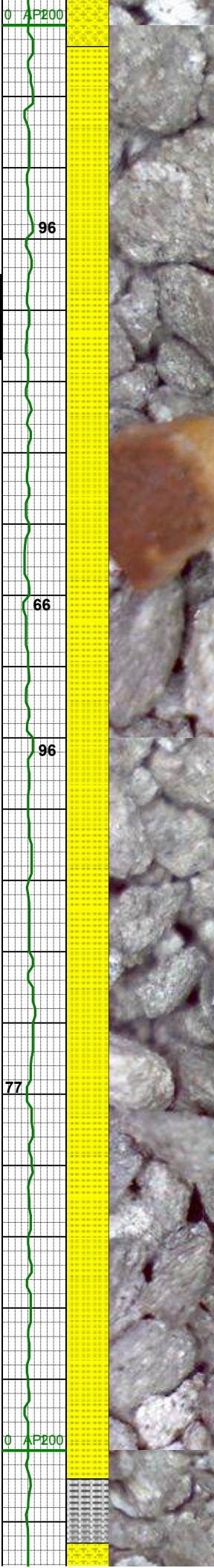
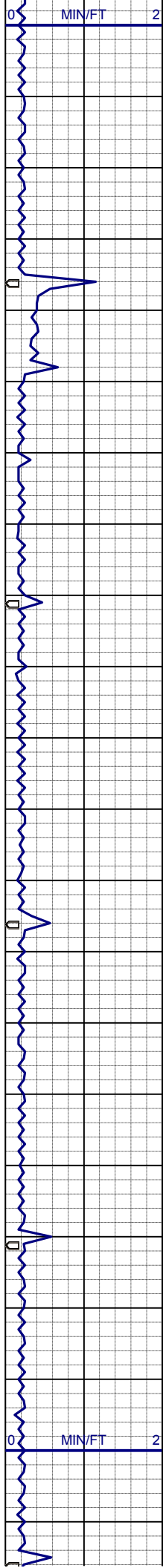
MD 2806'
INC 6.2°
AZI 172.0°
TVD 2801.6'

SHYSS: lt- mgy, trnsi-op, vf- fgr,
sbbiky- sbply, mod srt, sft- m firm,
arg mtx, mod cmt, sl calc, slty, grdg-
shysltst
SS: wh-ltgy, clr-trnsi, f-mgr, sbbiky,
wsrt, brit, arg-sil mtx, p cmt, sl calc

MD 2895'
INC 6.2°
AZI 171.0°
TVD 2890.1'

SHYSS: lt- mgy, trnsi-op, vf- fgr,
sbbiky- sbply, mod srt, sft- m firm,
arg mtx, mod cmt, sl calc, slty, grdg-
shysltst
SS: wh-ltgy, clr-trnsi, f-mgr, sbbiky,
wsrt, brit, arg-sil mtx, p cmt, sl calc

MD 2985'
INC 5.2°
AZI 174.7°
TVD 2979.7'



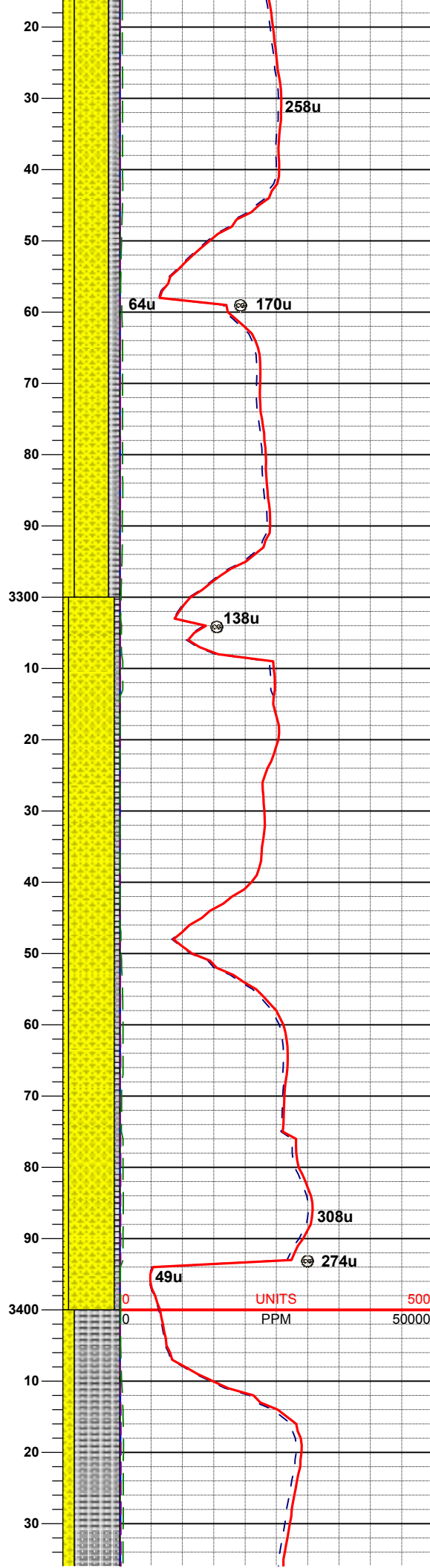
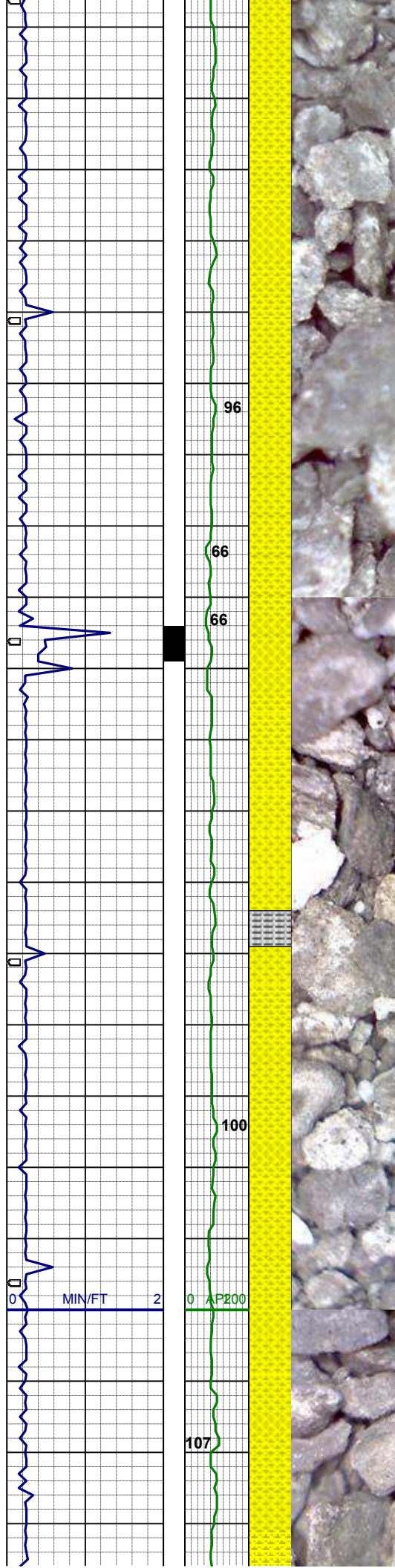
SS: wh-ltgy, clr-trnsl, f-mgr, sbblky, wsrt, brit, arg-sil mtx, p cmt, sl calc
SHYSS: lt- mgy, trnsl-op, vf- fgr, sbblky- sbplty, mod srt, sft- m firm, arg mtx, mod cmt, sl calc, slty, grdg- sltysh

MD 3075'
INC 6.3°
AZI 193.5°
TVD 3069.2'

WT 8.5 / VIS 29

SS: wh-ltgy, clr-trnsl, f-mgr, sbblky, wsrt, brit, arg-sil mtx, p cmt, sl calc
SHYSS: lt- mgy, trnsl-op, vf- fgr, sbblky- sbplty, mod srt, sft- m firm, arg mtx, mod cmt, sl calc, slty, grdg- sltysh

MD 3165'
INC 6.0°
AZI 190.2°
TVD 3158.7'



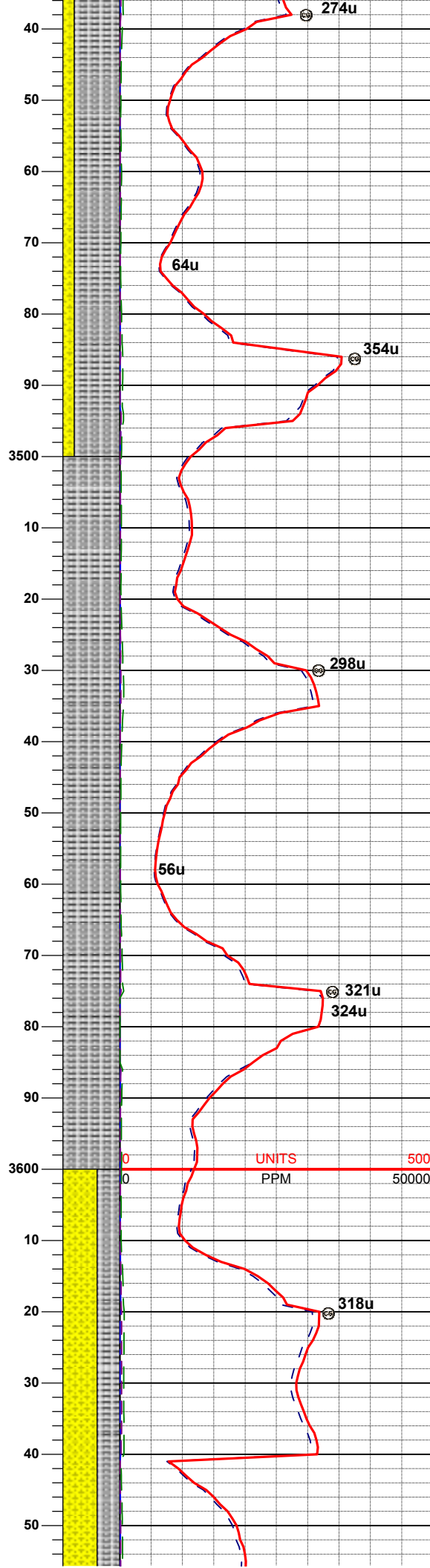
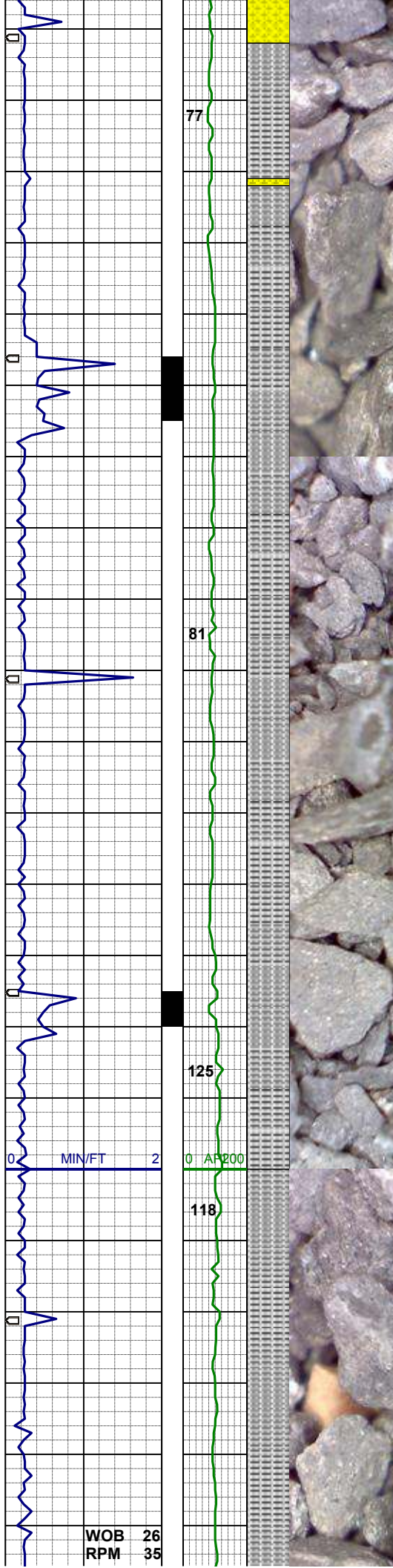
MD 3255'
INC 5.8°
AZI 185.1°
TVD 3248.2'

SHYSS: lt- mgy, trnsi-op, vf- fgr,
sbbiky- sbply, mod srt, sft- m firm,
arg mtx, mod cmt, sl calc, slty, grdg-
sltysh
SS: wh-ltgy, clr-trnsi, f-mgr, sbbiky,
wsrt, brit, arg-sil mtx, p cmt, sl calc

MD 3345'
INC 6.1°
AZI 182.2°
TVD 3337.7'

SHYSS: lt- mgy, trnsi-op, vf- fgr,
sbbiky- sbply, mod srt, sft- m firm,
arg mtx, mod cmt, sl calc, slty, grdg-
sltysh
SS: wh-ltgy, clr-trnsi, f-mgr, sbbiky,
wsrt, brit, arg-sil mtx, p cmt, sl calc

MD 3435'
INC 5.1°



AZI 175.0°
TVD 3427.3'

SLTYSH: m- dkgy, pred sbplty, firm,
gt tex, sl calc, sdy ip, grdg- shyss

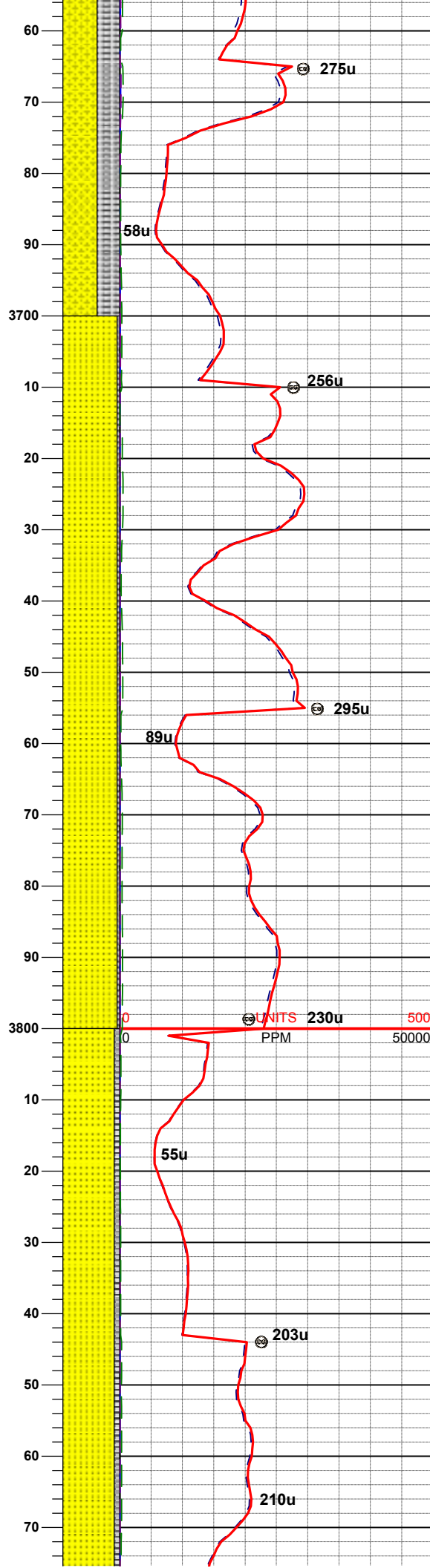
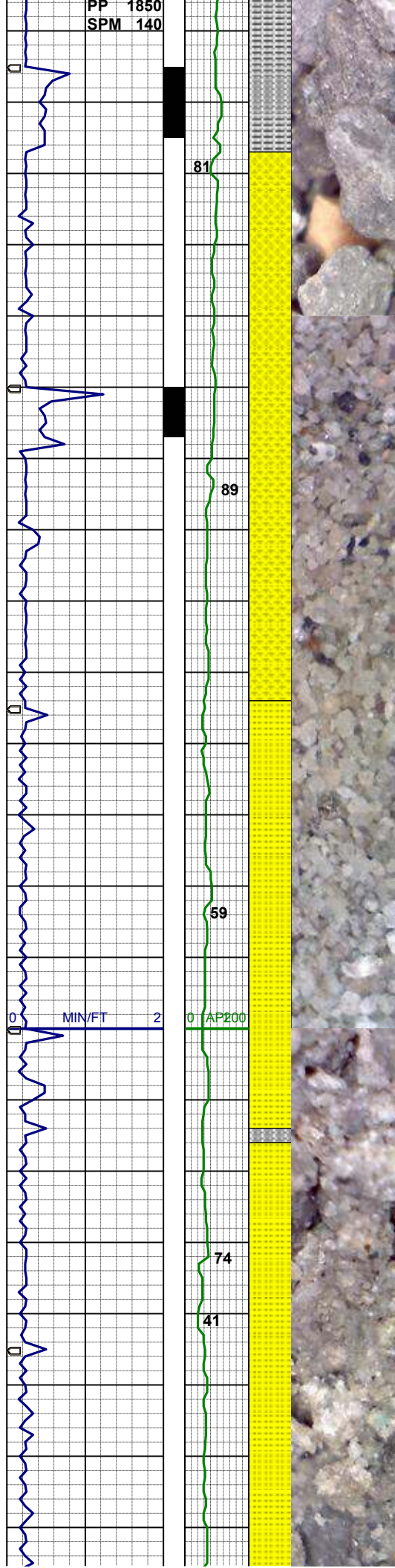
WT 8.6 / VIS 31

MD 3524'
INC 6.0°
AZI 172.8°
TVD 3515.9'

SLTYSH: m- dkgy, pred sbplty, firm,
gt tex, sl calc, sdy ip, grdg- shyss

MD 3614'
INC 5.8°
AZI 170.6°
TVD 3605.4'

SHYSS: lt- mgy, trnsi-op, vf- fgr, occ
mgr, sbbiky- sbplty, p- mod srt, sft- m
firm, arg mtb, sil mtb ip, mod cmt, sl
calc, slty, grdg- sltysh



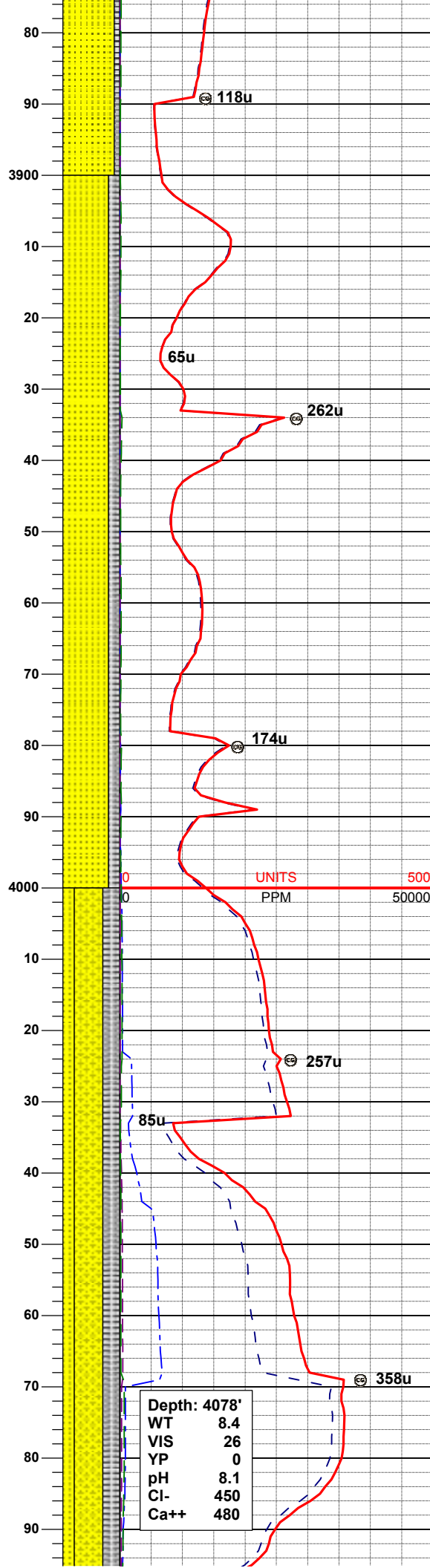
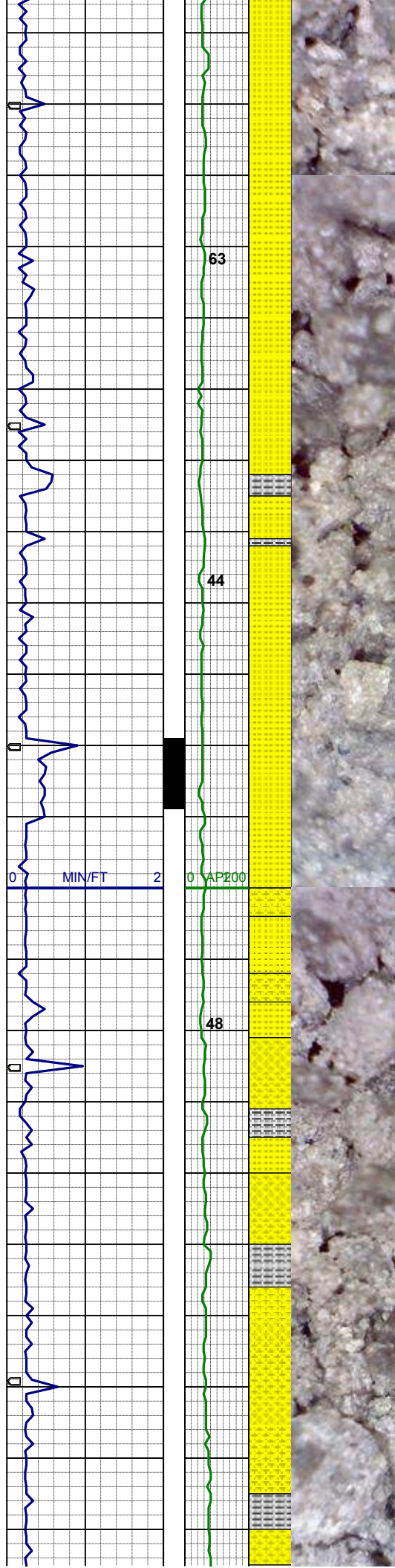
MD 3704'
INC 6.2°
AZI 177.7°
TVD 3694.9'

WT 8.5 / VIS 29

SS: wh-ltgy, clr-trnsl, f-mgr, pred lse
qtz gr, wsrt, brit, sil mtx, p cmt, sl calc,
tr glau
SLTYSH: m- dkgy, pred sbplty, firm,
gt tex, sl calc, grdg- shyss

MD 3794'
INC 6.4°
AZI 188.0°
TVD 3784.4'

SS: wh-ltgy, clr-trnsl, f-mgr, pred lse
qtz gr, wsrt, brit, sil mtx, p cmt, sl calc,
tr glau
SLTYSH: m- dkgy, pred sbplty, firm,
gt tex, sl calc, grdg- shyss



MD 3884'
INC 6.6°
AZI 191.7°
TVD 3873.8'

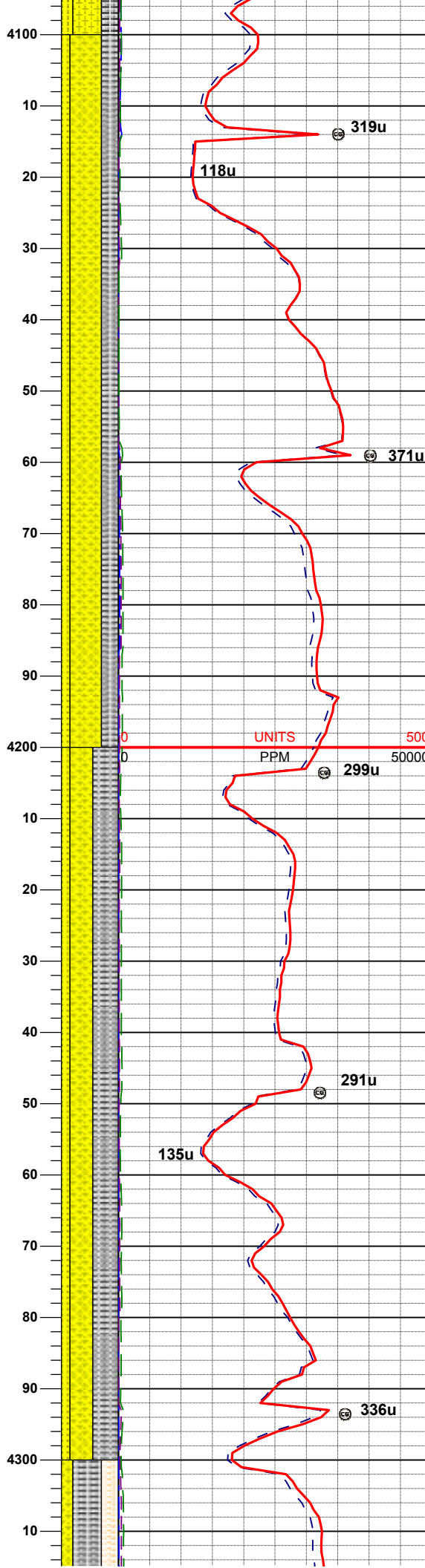
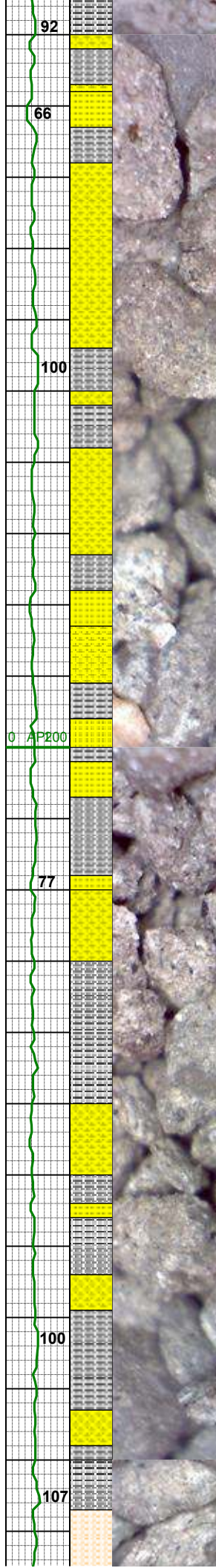
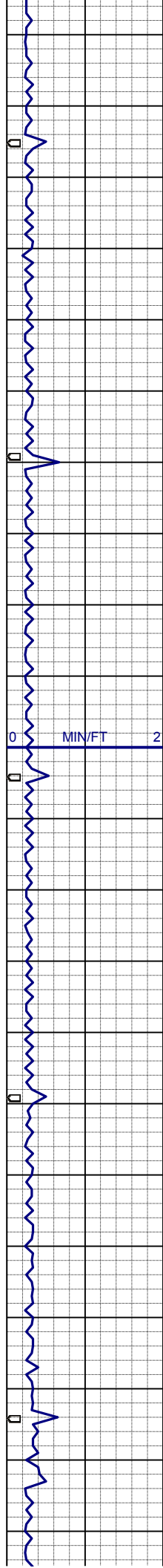
SS: wh-ltgy, clr-trnsl, f-mgr, pred lse
qtz gr, wsrt, brit, sil mtx, p cmt, sl calc,
tr glau
SLTYSH: m- dkgy, pred sbplty, firm,
gt tex, sl calc, grdg- shyss

MD 3974'
INC 6.2°
AZI 191.6°
TVD 3963.2'

SS: wh-ltgy, clr-trnsl, f-mgr, pred lse
qtz gr, wsrt, brit, sil mtx, p cmt, sl calc
SLTYSH: m- dkgy, pred sbplty, firm,
gt tex, sl calc
SHYSS: lt- mgy, trnsl-op, vf- fgr, occ
mgr, sbbiky- sbplty, mod srt, sft- m
firm, arg mtx, mod cmt, sl calc, slty

MD 4064'
INC 6.6°
AZI 185.6°
TVD 4052.7'

Depth: 4078'
WT 8.4
VIS 26
YP 0
pH 8.1
Cl- 450
Ca++ 480



WT 8.5 / VIS 27

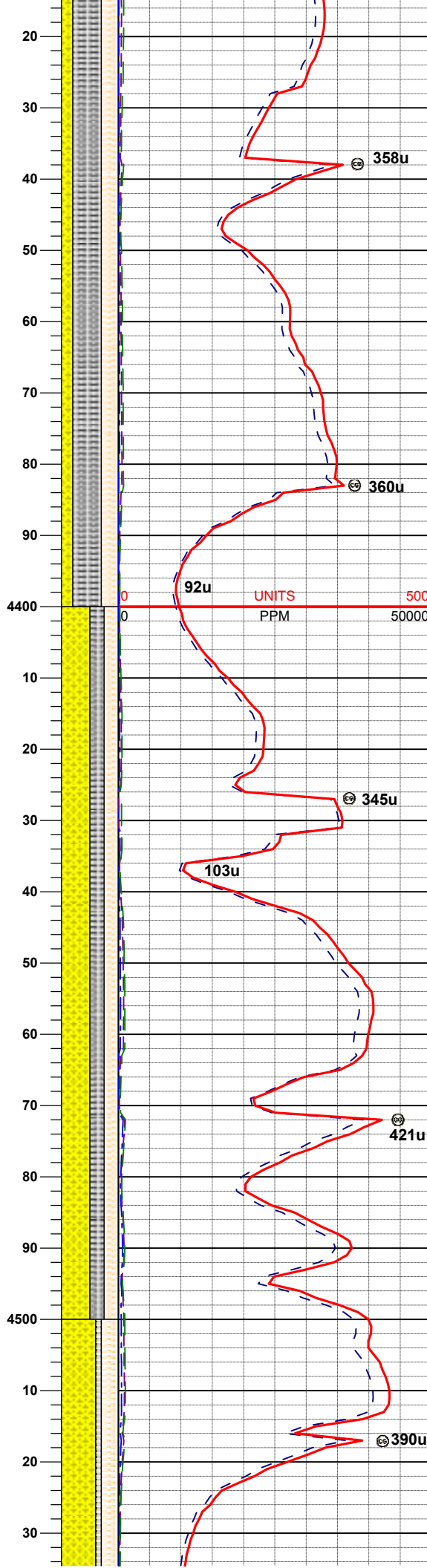
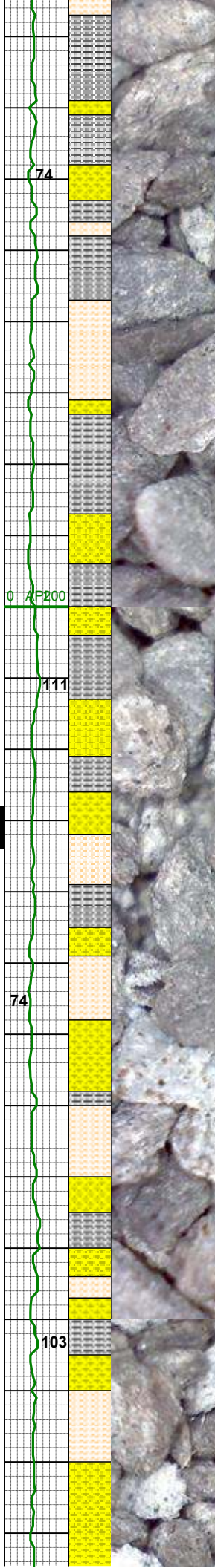
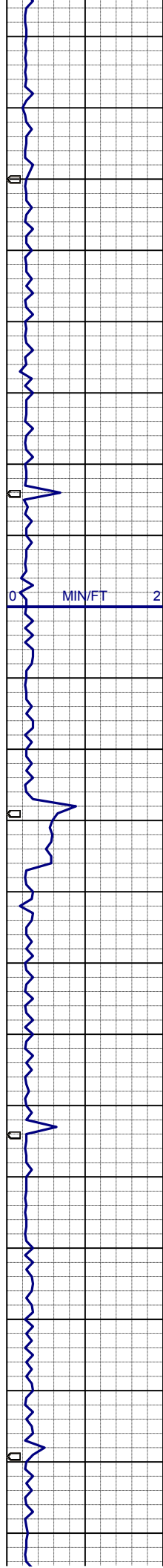
MD 4153'
INC 6.6°
AZI 184.4°
TVD 4141.1'

SS: wh-ltgy, clr-trnsl, f-mgr, pred lse
qtz gr, wsrt, brit, sil mtx, p cmt, sl calc
SLTYSH: m- dkgy, pred sbply, firm,
gt tex, sl calc
SHYSS: lt- mgy, trnsl-op, vf- fgr, occ
mgr, sbblky- sbply, mod srt, sft- m
firm, arg mtx, mod cmt, sl calc, slty

MD 4243'
INC 6.2°
AZI 184.4°
TVD 4230.5'

SS: wh-ltgy, clr-trnsl, f-mgr, pred lse
qtz gr, wsrt, brit, sil mtx, p cmt, sl calc
SLTYSH: m- dkgy, pred sbply, firm,
gt tex, sl calc
SHYSS: lt- mgy, trnsl-op, vf- fgr, occ
mgr, sbblky- sbply, mod srt, sft- m
firm, arg mtx, mod cmt, sl calc, slty

WT 8.4 / VIS 26



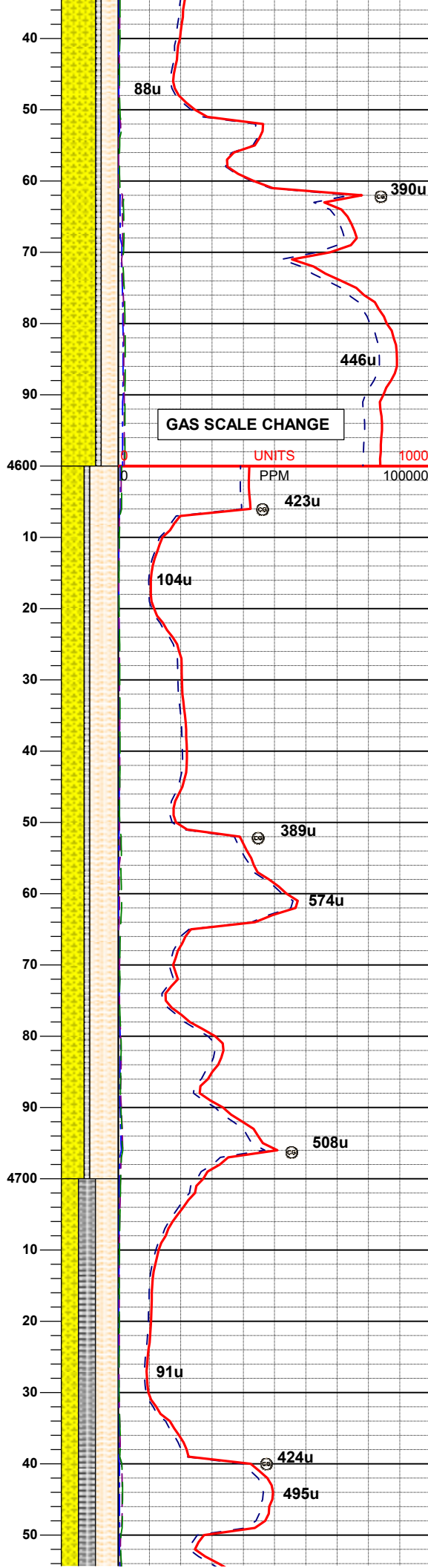
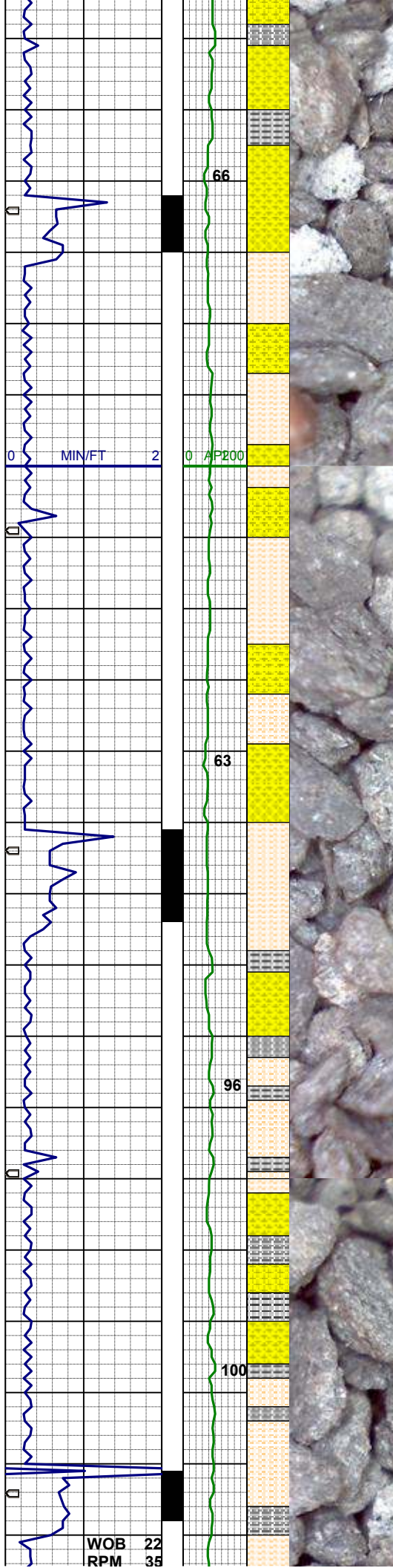
MD 4333'
INC 6.1°
AZI 184.2°
TVD 4320.0'

SLTYSH: m- dkgy, pred sbplty, firm, gt tex, sl calc
SHYSLST: lt-modgy, sbplty-sbblky, sft -firm, gt txt, sdy ip, sl calc
SHYSS: lt- mgy, trnsi-op, vf- fgr, occ mgr, sbblky- sbplty, mod srt, sft- m firm, arg mtz, mod cmt, sl calc, slty

MD 4423'
INC 5.5°
AZI 181.5°
TVD 4409.5'

SHYSS: lt- mgy, trnsi-op, vf- fgr, occ mgr, sbblky- sbplty, mod srt, sft- m firm, arg mtz, mod cmt, sl calc, slty, tr fos frag
SLTYSH: m- dkgy, pred sbplty, firm, gt tex, sl calc
SHYSLST: lt-modgy, sbplty-sbblky, sft -firm, gt txt, sdy ip, sl calc

MD 4513'
INC 6.2°
AZI 185.2°
TVD 4499.1'



SHYSS: lt- mgy, trnsl-op, vf- fgr, occ mgr, sbblky- sbplty, mod srt, sft- m firm, arg mtx, mod cmt, sl calc, slty, tr fos fragm grdg-ss, tr ss
SLTYSH: m- dkgy, pred sbplty, firm, gt tex, sl calc
SHYSLST: lt-modgy, sbplty-sbblky, sft -firm, gt txt, sdy ip, sl calc

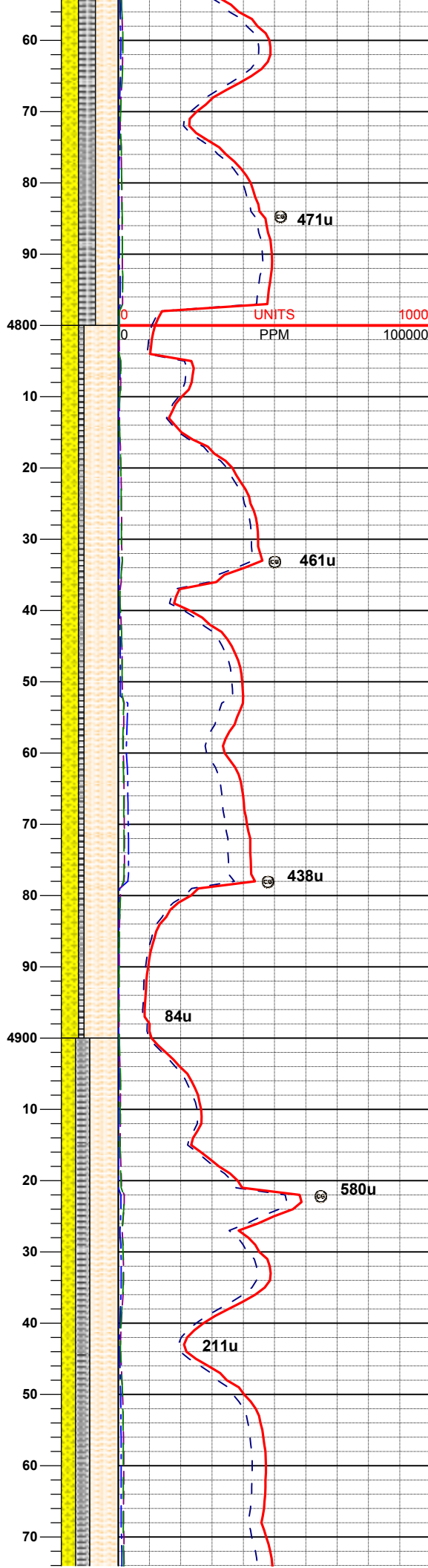
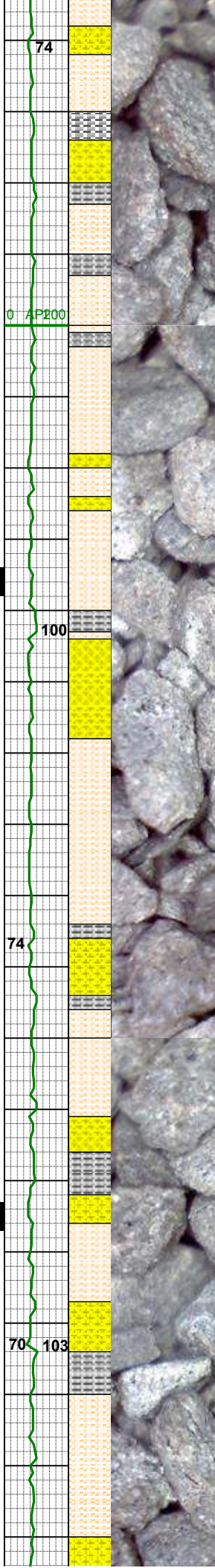
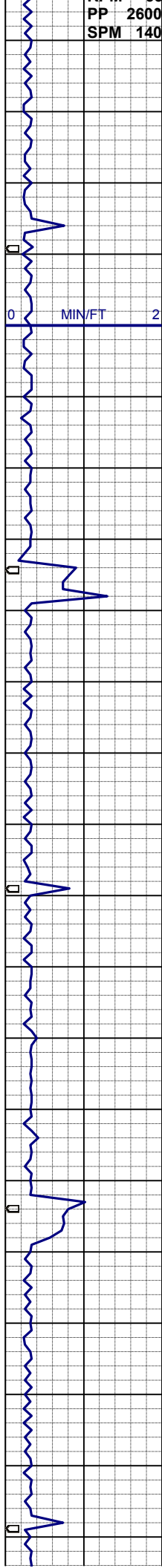
WT 8.4 / VIS 29

MD 4602'
INC 6.1°
AZI 188.7°
TVD 4587.6'

SHYSLST: lt-modgy, sbplty-sbblky, sft -firm, gt txt, sdy ip, sl calc
SHYSS: lt- mgy, trnsl-op, vf- fgr, occ mgr, sbblky- sbplty, mod srt, sft- m firm, arg mtx, mod cmt, sl calc, slty, tr fos fragm grdg-ss, tr ss
SLTYSH: m- dkgy, pred sbplty, firm, gt tex, sl calc

MD 4692'
INC 6.5°
AZI 183.1°
TVD 4677.0'

SHYSLST: lt-modgy, sbplty-sbblky, sft -firm, gt txt, sdy ip, sl calc
SHYSS: lt- mgy, trnsl-op, vf- fgr, occ mgr, sbblky- sbplty, mod srt, sft- m firm, arg mtx, mod cmt, sl calc, slty, tr fos fraam arda-ss. tr ss



SLTYSH: m- dkgy, pred sbply, firm,
gt tex, sl calc

MD 4782'
INC 6.3°
AZI 171.0°
TVD 4766.5'

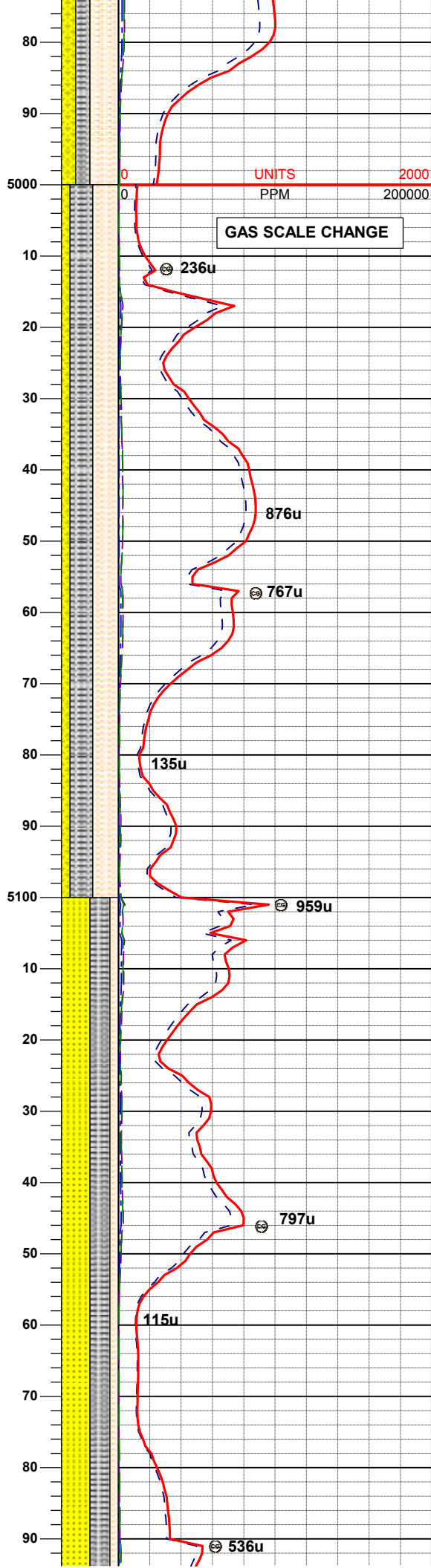
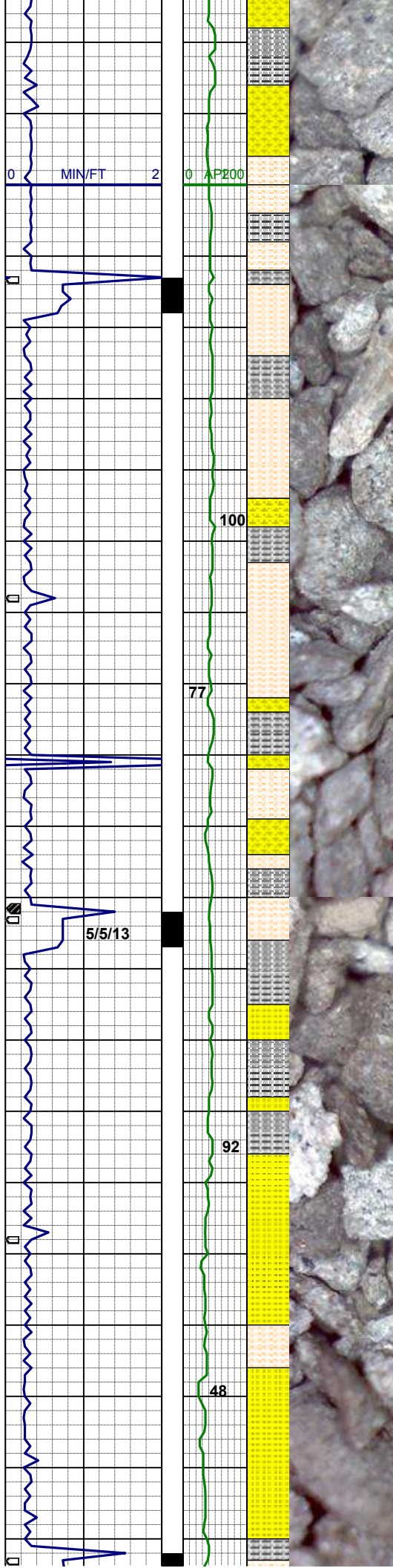
WT 8.4 / VIS 29

SHYSLST: lt-modgy, sbply-sbblky, sft
-firm, gt txt, sdy ip, sl calc
SHYSS: lt- mgy, trns-op, vf- fgr, occ
mgr, sbblky- sbply, mod srt, sft- m
firm, arg mtx, mod cmt, sl calc, slty, tr
fos fragm grdg-ss, tr ss
SLTYSH: m- dkgy, pred sbply, firm,
gt tex, sl calc

MD 4872'
INC 5.1°
AZI 168.5°
TVD 4856.0'

SHYSLST: lt-modgy, sbply-sbblky, sft
-firm, gt txt, sdy ip, sl calc
SHYSS: lt- mgy, trns-op, vf- fgr, occ
mgr, sbblky- sbply, mod srt, sft- m
firm, arg mtx, mod cmt, sl calc, slty, tr
fos fragm grdg-ss, tr ss
SLTYSH: m- dkgy, pred sbply, firm,
gt tex, sl calc

MD 4962'
INC 3.9°
AZI 169.1°
TVD 4945.7'

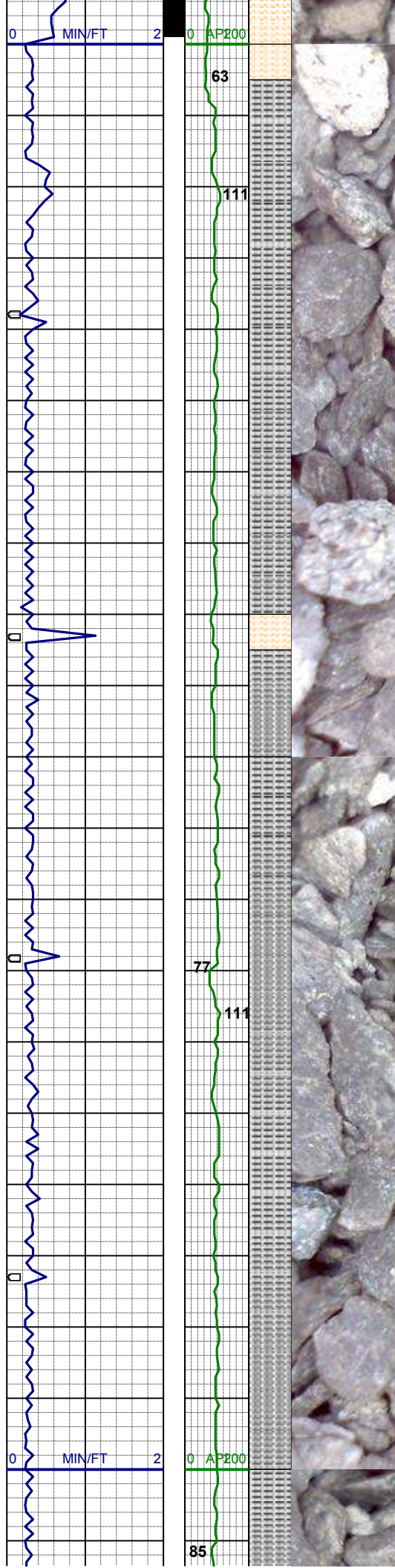


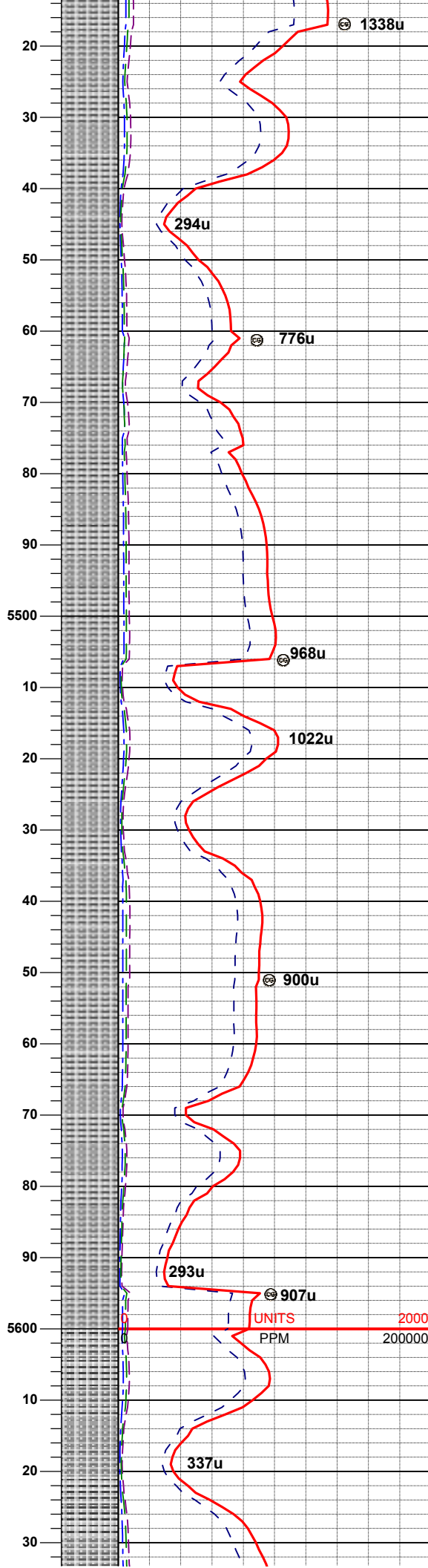
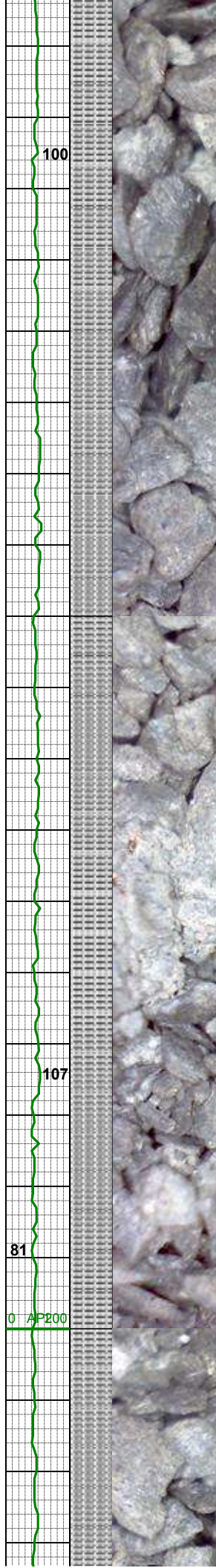
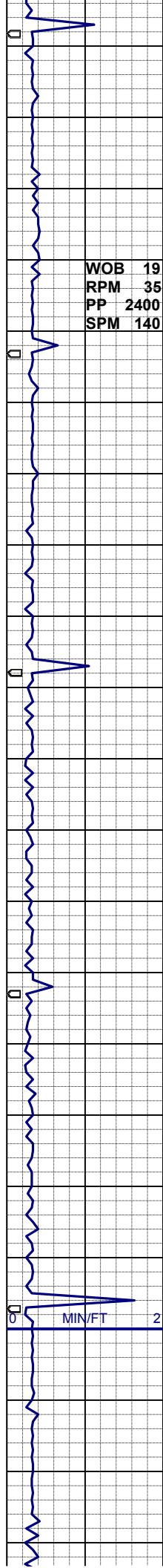
SHYSLST: lt-modgy, sbply-sbblky, sft
-firm, gt txt, sdy ip, sl calc
SHYSS: lt- mgy, trnsi-op, vf- fgr, occ
mgr, sbblky- sbply, mod srt, sft- m
firm, arg mtx, mod cmt, sl calc, slty, tr
fos fragm grd-gss, tr ss
SLTYSH: m- dkgy, pred sbply, firm,
gt tex, sl calc

MD 5052'
INC 2.8°
AZI 172.2°
TVD 5035.6'

MD 5142'
INC 1.8°
AZI 166.6°
TVD 5125.5'

SS: wh-ltgy, trnsi-op, fgr, occ mgr,
blky-sbblky, mod srt, sft- m firm, occ
arg mtx, mod cmt, sl calc, tr fos, tr
shyss
SHYSLST: lt-modgy, sbply-sbblky, sft
-firm, gt txt, sdy ip, sl calc
SLTYSH: m- dkgy, pred sbply, firm,
gt tex, sl calc





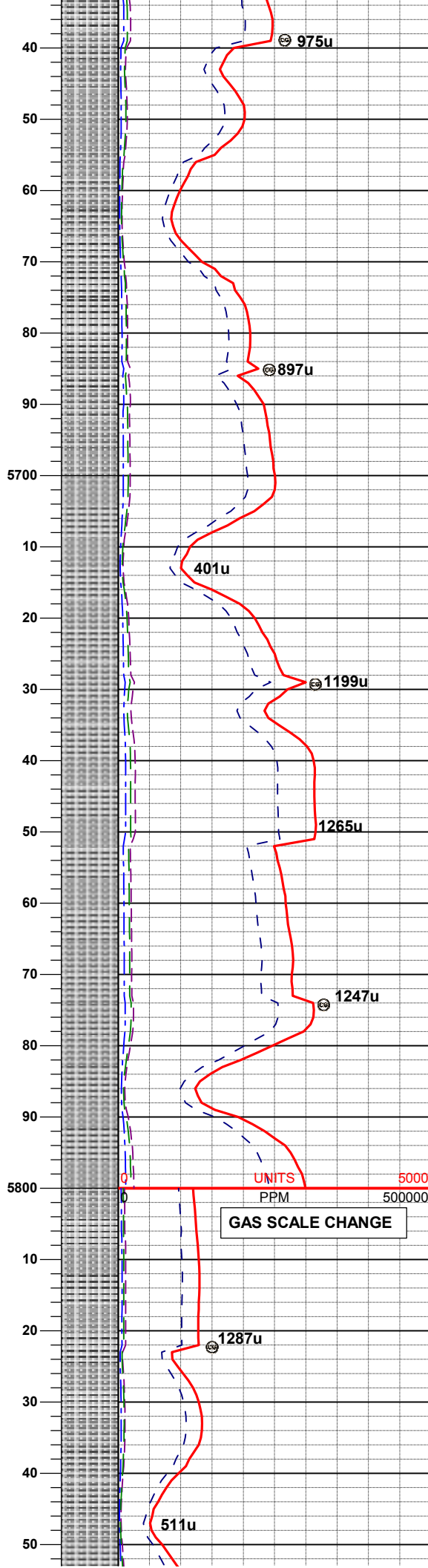
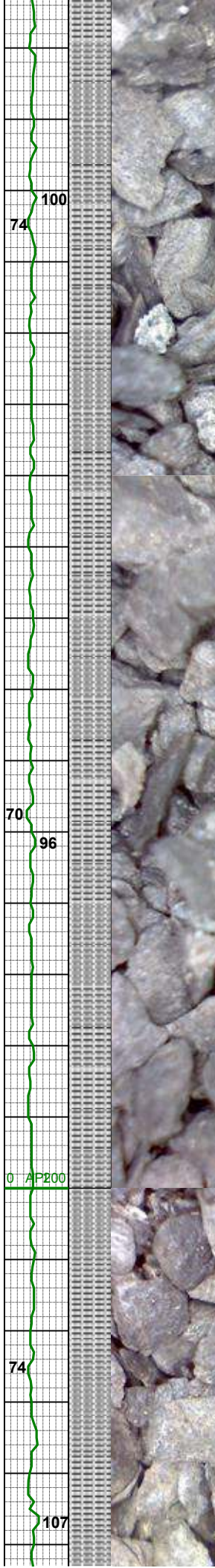
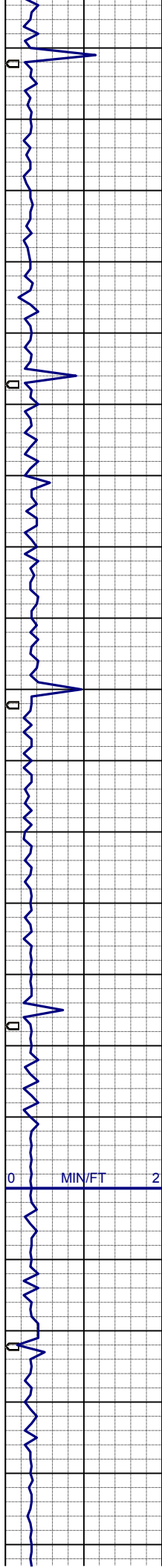
SLTYSH: m- dkgy, occ ltgy, sbply-
ply, firm, fis, gt tex, sl calc, tr fos frag,
sdy ip, grdg- shyss

WT 8.5 / VIS 36

MD 5501'
INC 0.4°
AZI 136.9°
TVD 5484.5'

SLTYSH: m- dkgy, occ ltgy, occ gybrn
- tan, sbply-ply, firm, fis, gt tex, sl
calc, tan frag mod calc, sdy ip, grdg-
shyss

MD 5591'
INC 0.4°
AZI 163.4°
TVD 5574.5'



WT 8.5 / VIS 37

SLTYSH: m- dkgy, occ ltgy, sbplty-
plty, firm, fis, gt tex, sl calc, sdy ip, tr
pyr, grdg- shyss

MD 5681'
INC 0.6°
AZI 206.5°
TVD 5664.5'

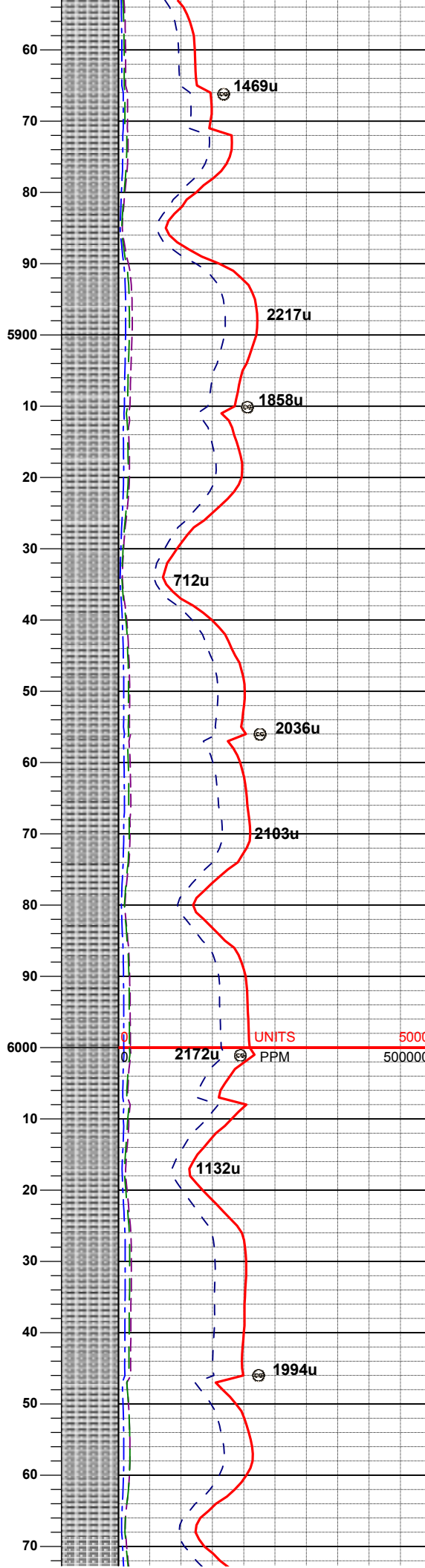
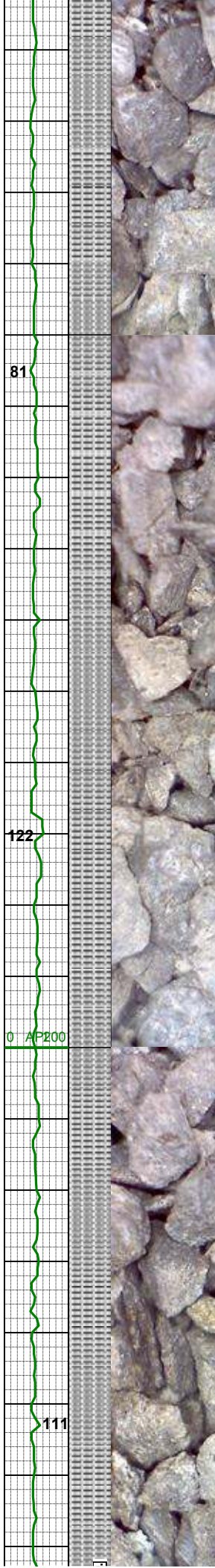
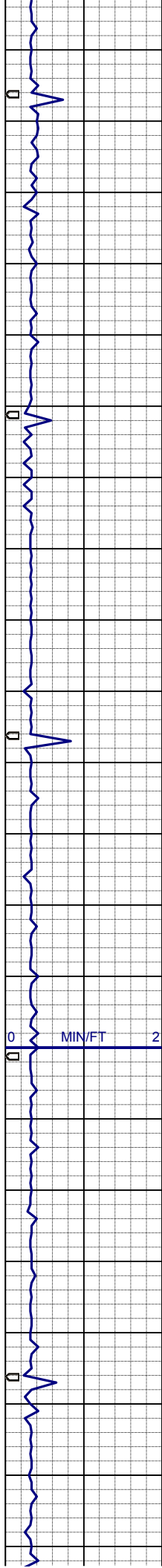
SLTYSH: m- dkgy, occ ltgy, sbplty-
plty, firm, fis, gt tex, sl calc, sdy ip, tr
pyr, grdg- shyss

WT 8.8 / VIS 36

MD 5771'
INC 0.4°
AZI 198.9°
TVD 5754.5'

UNITS 5000
PPM 500000
GAS SCALE CHANGE

SLTYSH: m- dkgy, occ ltgy, sbplty-
plty, firm, fis, gt tex, sl calc, sdy ip,
grdg- shyss



grdg- shyss

MD 5860'
INC 0.6°
AZI 235.7°
TVD 5843.5'

WT 9.0 / VIS 35

MD 5950'
INC 0.6°
AZI 220.2°
TVD 5933.5'

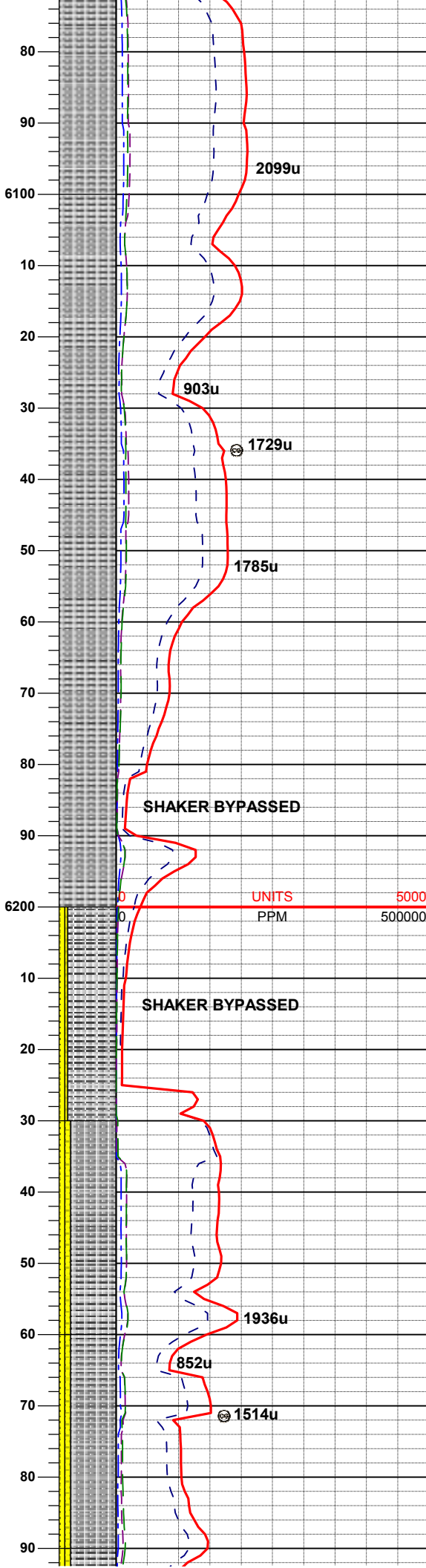
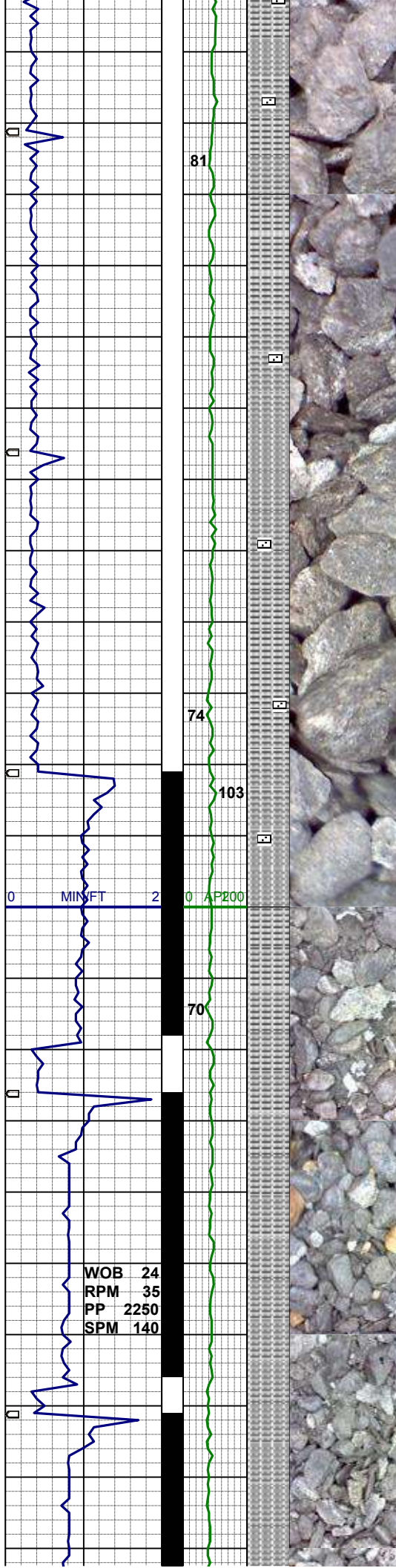
SLTYSH: m- dkgy, occ ltgy, occ gybrn
sbplty-plty, firm, fis, gt tex, sl calc, sdy
ip, grdg- shyss

UNITS 5000
PPM 500000

WT 9.25 / VIS 36

MD 6040'
INC 1.1°
AZI 239.9°
TVD 6023.4'

SLTYSH: m- dkgy, occ ltgy, occ gybrn
sbplty-plty, firm, fis, gt tex, sl calc, sdy
ip, grdg- shyss, sme wh clr- trnsI mgr
ss w/ tr glau



MD 6130'
INC 0.8°
AZI 220.7°
TVD 6113.4'

SLTYSH: m- dkgy, occ ltgy, occ gybrn
sbplty-pty, firm, fis, gt tex, sl calc, sdy
ip, grdg- shyss, 1- 2% wh clr- trnsl
mgr ss w/ tr glau

WT 9.6 / VIS 35

SHAKER BYPASSED

SHAKER BYPASSED

UNITS 5000
PPM 500000

SLTYSH: m- dkgy, occ ltgy, occ gybrn
sbplty-pty, firm, fis, gt tex, sl calc, sdy
ip, grdg- shyss
SS: wh-mgy, trnsl-op, occ clr, f-mgr,
blky-sbblky, sme sbplty, mod srt, m
firm, arg-sil mtz, mod cmt, sl calc, rr
glau

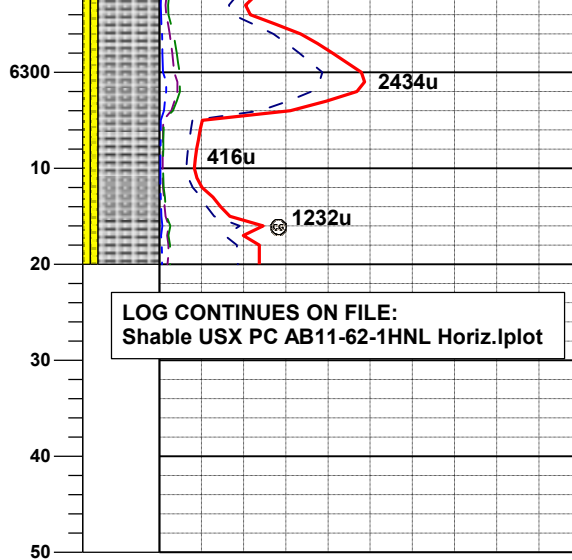
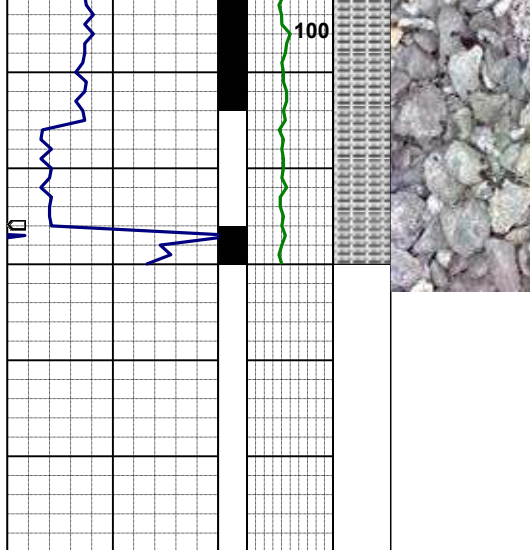
MD 6220'
INC 3.9°
AZI 98.2°
TVD 6203.4'

SLTYSH: m- dkgy, occ ltgy, occ gybrn
sbplty-pty, firm, fis, gt tex, sl calc, sdy
ip, grdg- shyss
SS: wh-mgy, trnsl-op, occ clr, f-mgr,
blky-sbblky, sme sbplty, mod srt, m
firm, arg-sil mtz, mod cmt, sl calc, rr
glau

MD 6265'
INC 8.3°
AZI 88.9°
TVD 6248.1'

SLTYSH: lt- mgy, sbplty-pty, firm, fis,
gt tex, sl calc, sdy ip, grdg- shyss
SS: pred mgy, trnsl-op, rr clr, f-mgr,
blky-sbblky, sme sbplty, mod srt, m
firm, arg-sil mtz, mod cmt, sl calc, occ
mica flk

WOB 24
RPM 35
PP 2250
SPM 140



SLTYSH: lt- mgy, sbplty-plty, firm, fis,
gt tex, sl calc, sdy ip, grdg- shyss
SS: pred mgy, trnsi-op, rr clr, f-mgr,
blky-sbblky, sme sbplty, mod srt, m
firm, arg-sil mtx, mod cmt, sl calc, occ
mica flk

MD 6310'
INC 12.1°
AZI 91.4°
TVD 6292.4'

THANK YOU FOR CHOOSING
COLUMBINE LOGGING, INC.