

LOG created using LPLOT VH Version 3.0, October 25, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

**OPERATOR:** NOBLE ENERGY INC  
**WELL:** ROHN STATE LD09-66HN  
**LOCATION:** SENE SEC 9 T9N R58W  
**COUNTY:** WELD  
**STATE:** COLORADO  
**SPOT:** 1725' FNL; 480' FEL  
**ELEVATION:** 4728' GL; 4752' KB  
**FIELD:** WILDCAT  
**SPUD DATE:** 10/20/2013  
**TD DATE:** 10/21/2013  
**DATES LOGGED:** 10/20/2013 - 10/21/2013  
**DEPTHS LOGGED:** 1256' - 4981' MD  
**LOGGERS:** LAURA KELLOGG; CONOR PESICKA  
**DRILLING FLUID:** LSND  
**DRILLING RIG:** H&P 273  
**API:** 05-123-37539  
**LOG TYPE:** VERTICAL  
**SCALE:** 1:240 (5 inches per 100 feet)  
**REMARKS:** WELLSITE GEOLOGIC SERVICES  
 PROVIDED BY COLUMBINE LOGGING INC.

### LITHOLOGIES



Sandstone



Shaly Sandstone



Silty Shale

### ENGINEERING SYMBOLS



Connection



Connection Gas



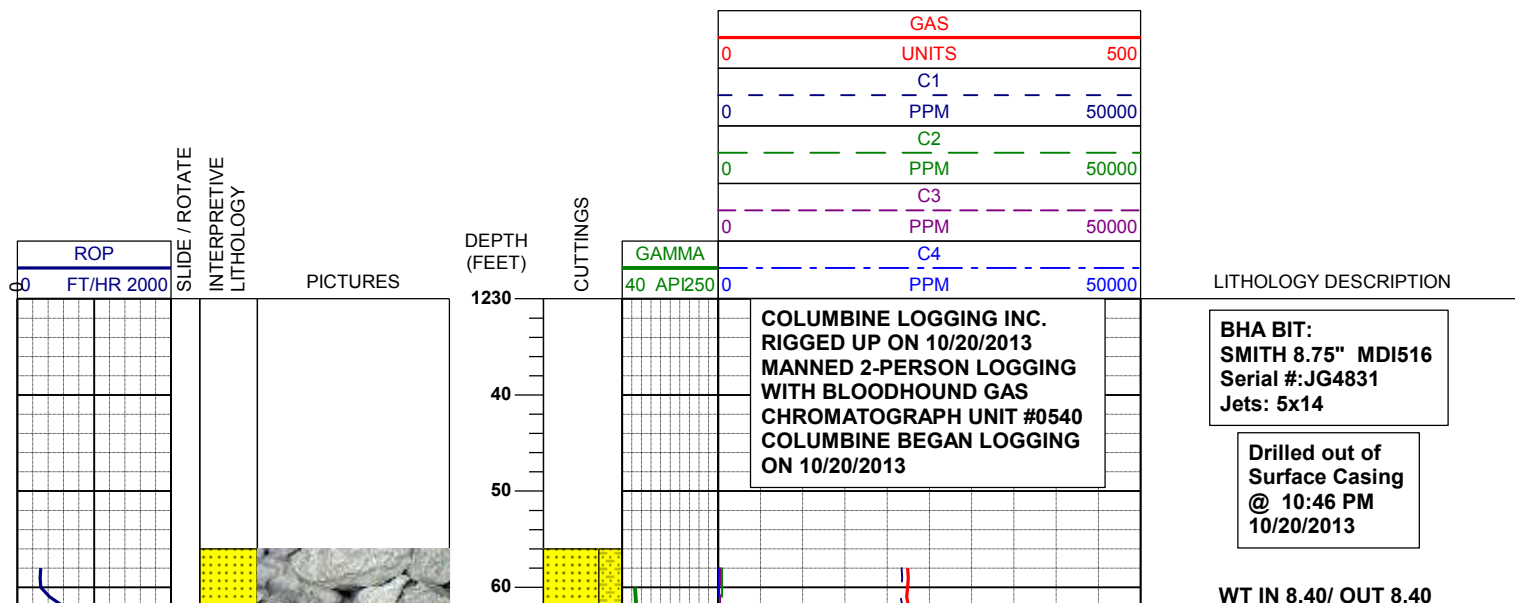
Arrow



Midnight Depth



Arrow



VIS IN 26/ OUT 26

SS: ltgy-trnsl, sbang-ang, v fri, fgr,  
psrt, prnrd, arg cmt, abnt glau  
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, smwtrnrd, abnt cly, arg cmt

MD	1282'
INC	1.4°
AZM	20.4°
TVD	1281.97'

221u  
C1: 96.8%  
C2: 1.9%  
C3: 0.9%  
C4: 0.4%

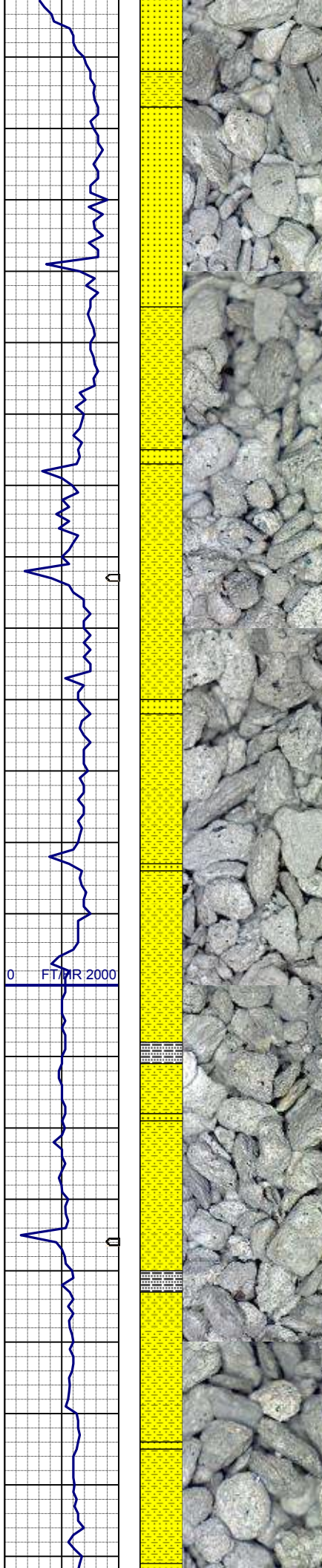
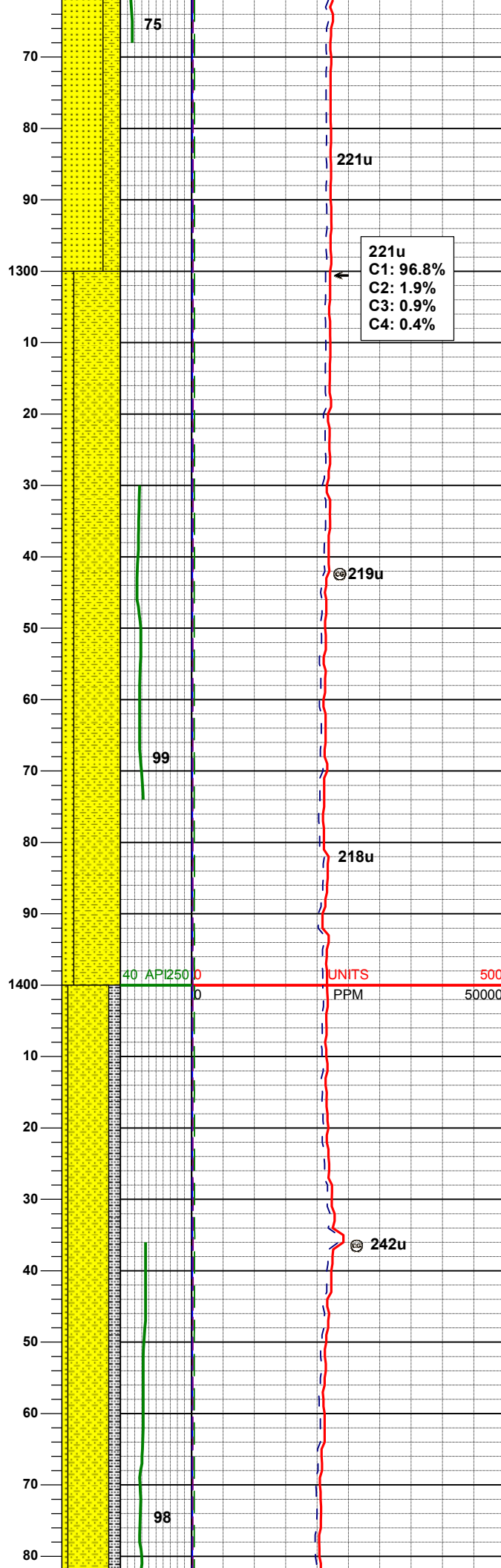
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, modsrt, wrnrd, abnt cly, arg cmt,  
sme glau  
SS: ltgy-rr trnsl, sbang-ang, v fri, fgr,  
psrt, prnrd, arg cmt, abnt glau, tr lt  
color lit frag

MD	1375'
INC	0.9°
AZM	31.6°
TVD	1374.95'

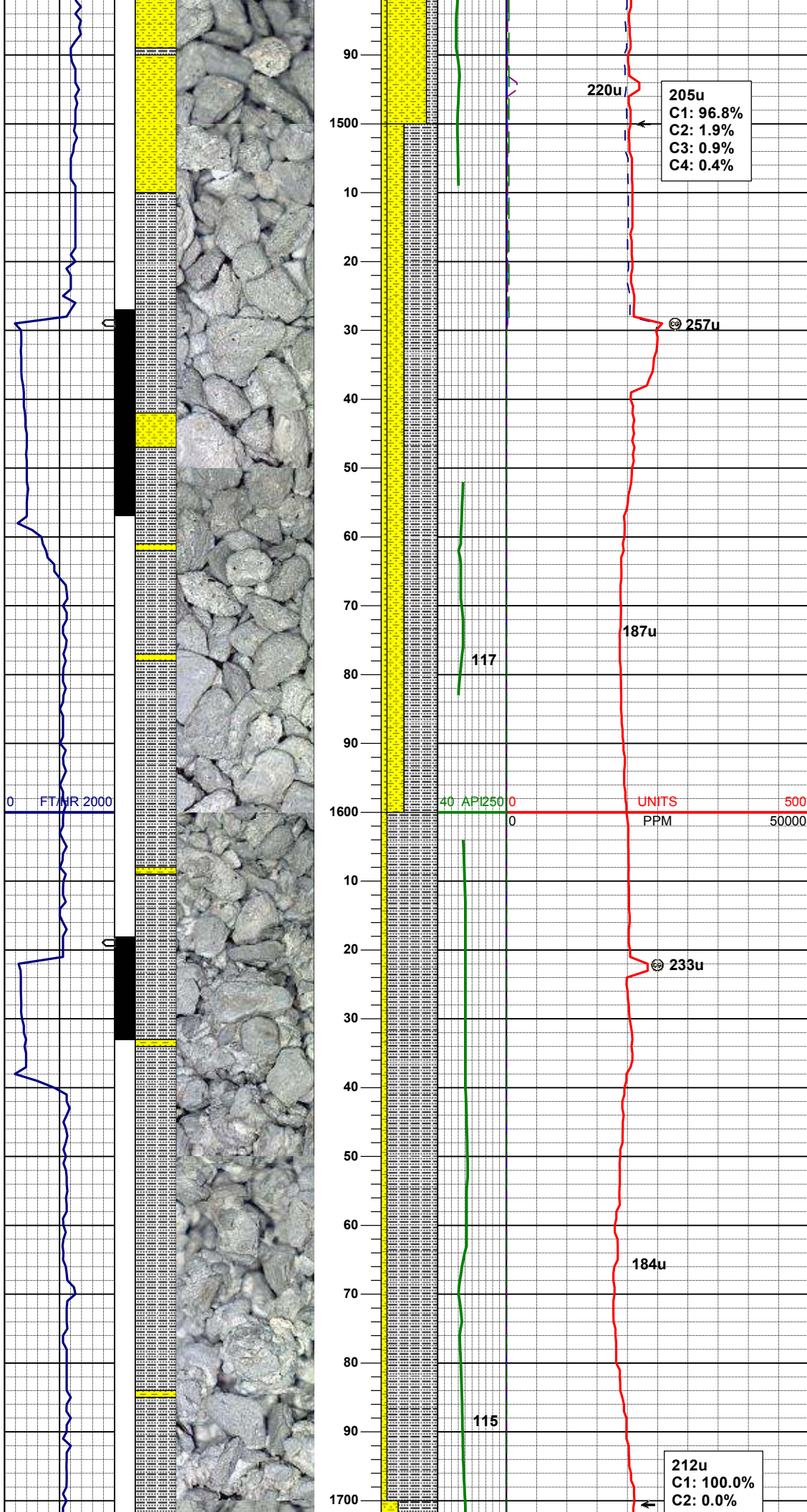
WT IN 8.40/ OUT 8.40  
VIS IN 27/ OUT 27

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, modsrt, wrnrd, abnt cly, arg cmt,  
sme glau  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt  
SS: ltgy-rr trnsl, sbang-ang, v fri, fgr,  
psrt, prnrd, arg cmt, abnt glau, tr lt  
color lit frag

MD	1467'
INC	0.8°
AZM	18.3°
TVD	1466.94'





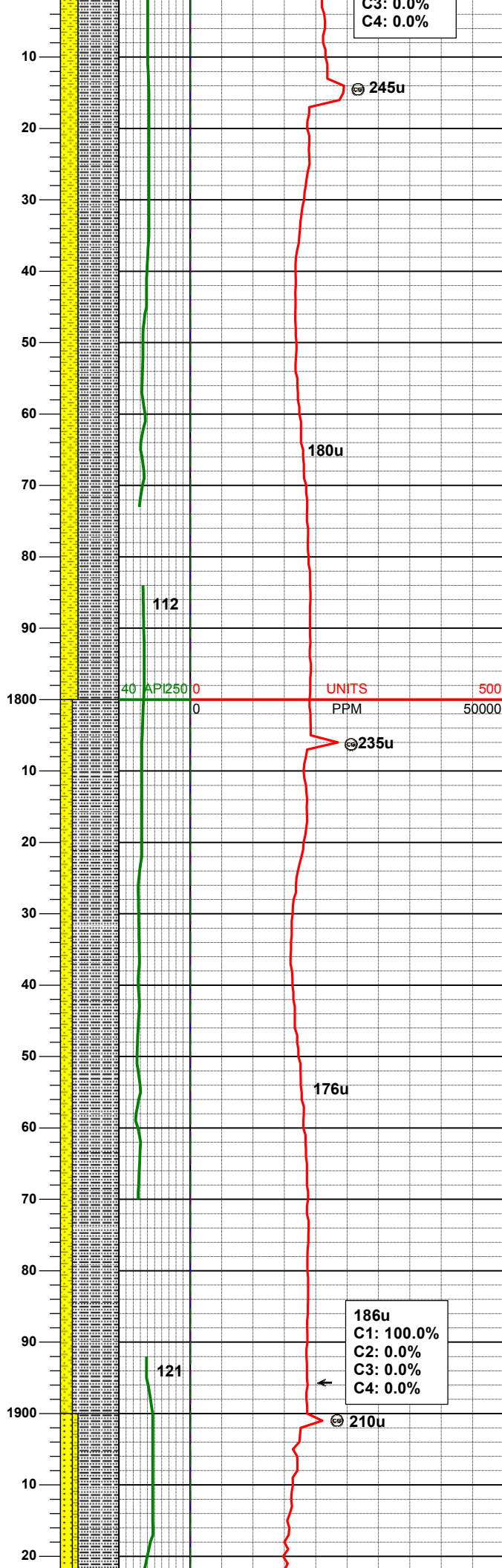
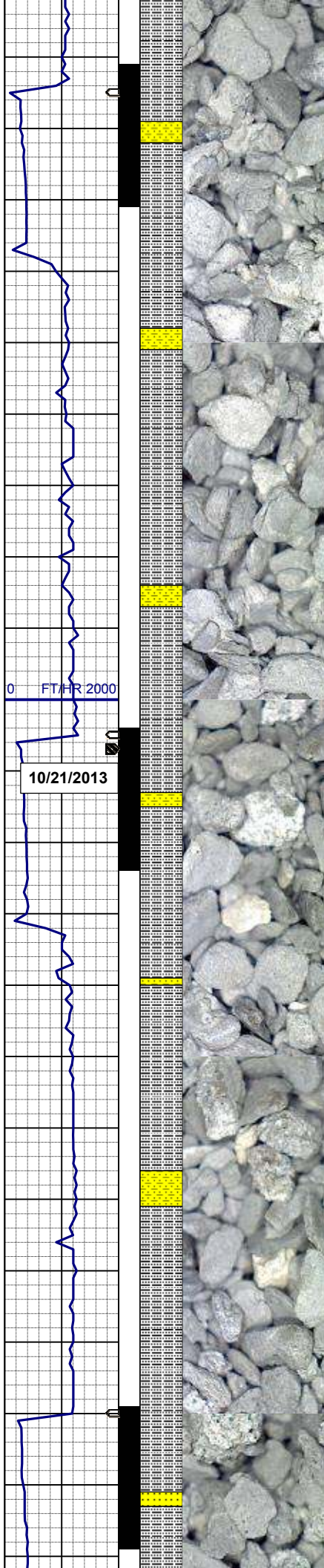


SLTYSH: ltgy-gy, sbbiky-sbply, sft, gt  
-sdy tex, arg cmt  
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, modsrt, wrnnd, abnt cly, arg cmt,  
tr glau  
SS: ltgy-rr trnsl, sbang-ang, v fri, fgr,  
psrt, smwtrnnd, arg cmt, sme glau, tr  
lt color lit frag

MD	1558'
INC	2.3°
AZM	141.5°
TVD	1557.92'

MD	1651'
INC	3.1°
AZM	157.0°
TVD	1650.82'

SLTYSH: ltgy-gy, sbbiky-sbply, sft, gt  
-sdy tex, arg cmt  
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, modsrt, wrnnd, abnt cly, arg cmt,  
grdg to ss



MD 1744'  
INC 4.5°  
AZM 163.6°  
TVD 1743.61'

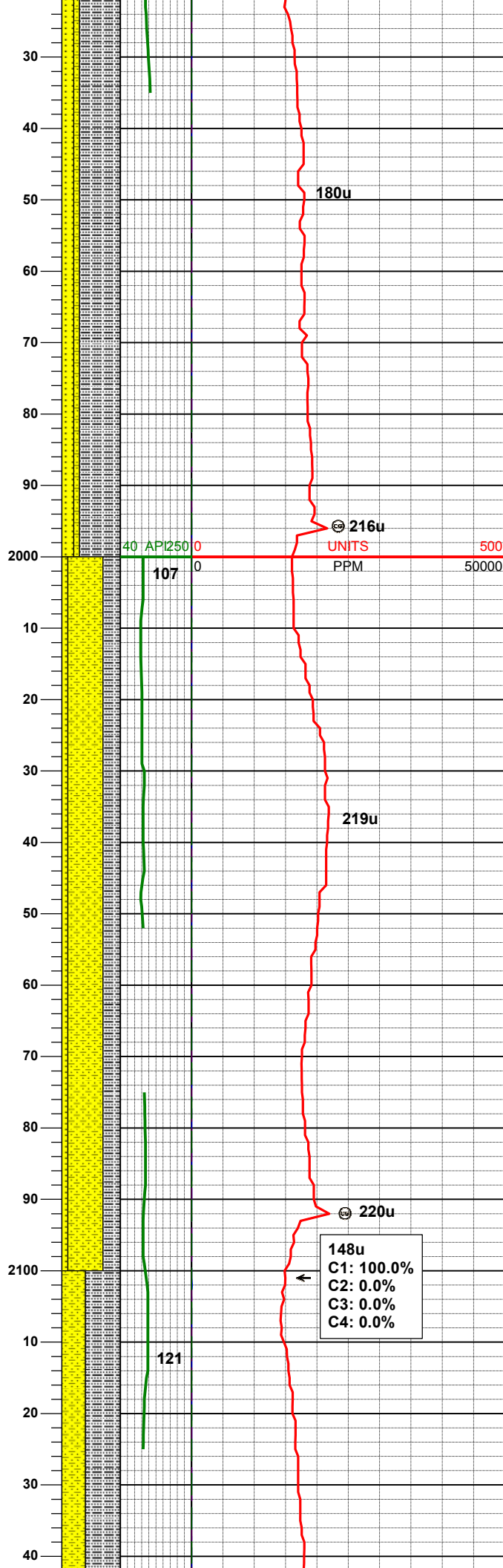
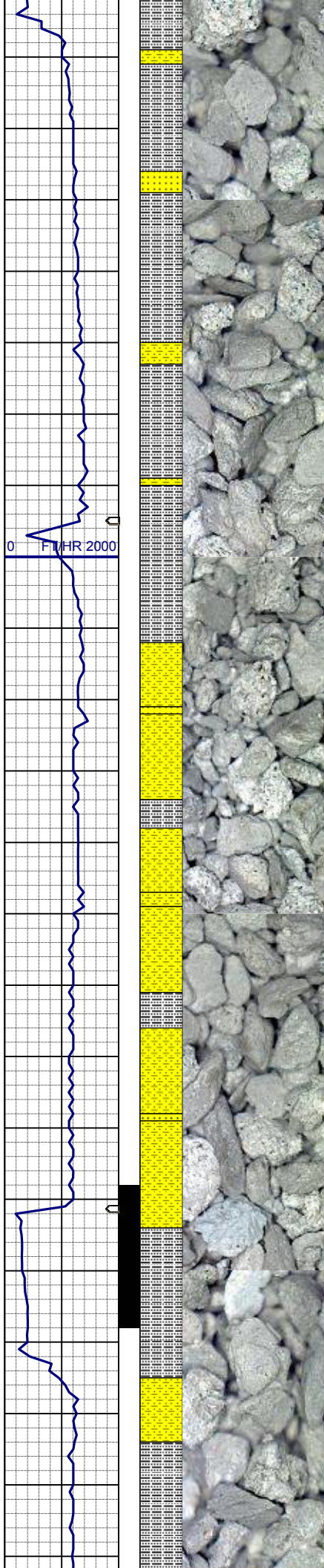
SLTYSH: ltgy-gy, sbbly-sbply, sft, gt  
-sdy tex, arg cmt  
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, modsrt, wrnnd, abnt cly, arg cmt,  
grdg to ss

WT IN 8.40/ OUT 8.40  
VIS IN 27/ OUT 27

MD 1839'  
INC 6.1°  
AZM 177.5°  
TVD 1838.21'

SLTYSH: ltgy-gy, sbbly-sbply, sft, gt  
-sly tex, arg cmt  
SHYSS: ltgy-gy, rr wh, s&p ip, sbang,  
v fri, vfgr, wsrt, wrnnd, abnt cly, arg  
cmt, grdg to ss





MD 1933'  
INC 7.6°  
AZM 170.5°  
TVD 1931.53'

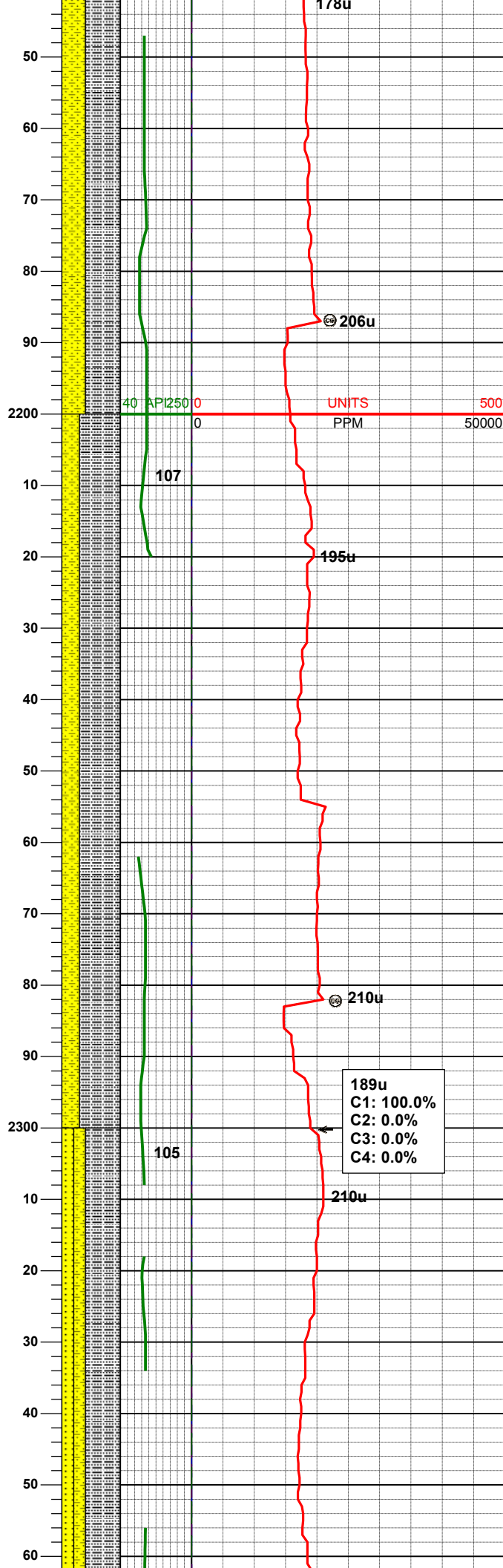
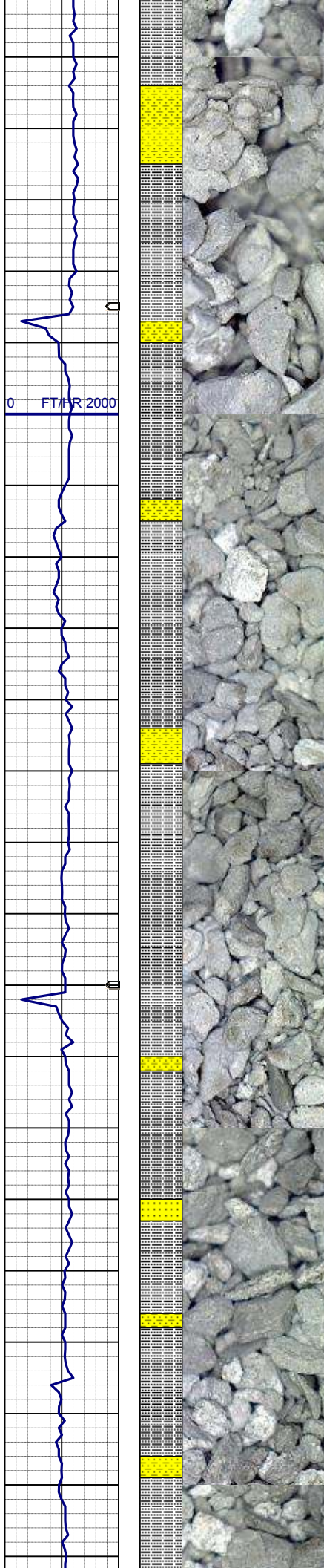
SLTYSH: ltgy-gy, sbblky-sbply, sft, gt  
-sly tex, arg cmt  
SS: ltgy-wh-trnsl, sbang-ang, v fri, fgr,  
modsr, wrnnd, p por, arg cmt, tr glau  
SHYSS: ltgy-gy, rr wh, s&p ip, sbang,  
v fri, vfgr, wrst, wrnnd, abnt cly, arg  
cmt, grdg to ss

MD 2028'  
INC 7.6°  
AZM 169.4°  
TVD 2025.70'

SHYSS: ltgy-gy, rr wh, s&p ip, sbang,  
v fri, vfgr, wrst, wrnnd, sme cly, arg  
cmt  
SLTYSH: ltgy-gy, sbblky-sbply, sft, gt  
-sdy tex, arg cmt  
SS: ltgy-wh-trnsl, sbang-ang, v fri, fgr,  
modsr, wrnnd, p por, arg cmt, tr glau

MD 2123'  
INC 8.0°  
AZM 155.6°  
TVD 2119.83'

148u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%



SLTYSH: ltgy-gy, rr dkgy, sbblky-sbply, sft, gt-sdy tex, arg cmt  
SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, wsrt, wrnnd, sme cly, arg cmt, tr dk lit frag

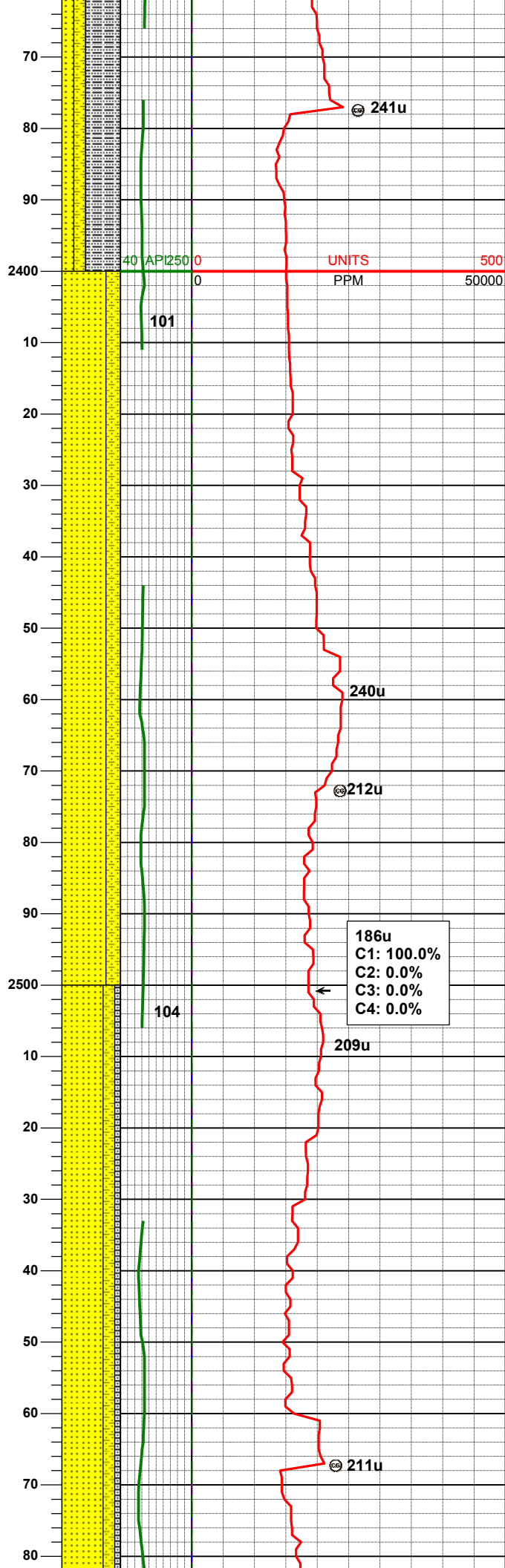
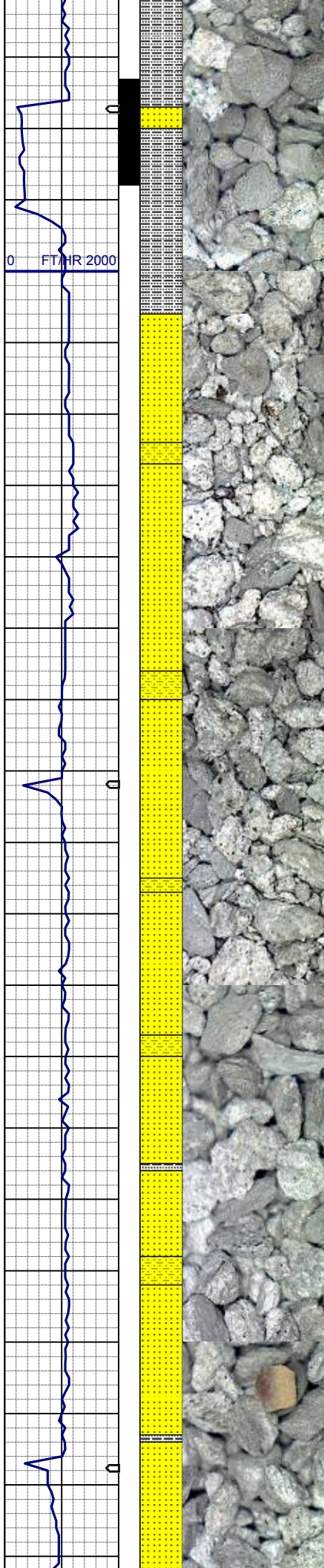
MD	2218'
INC	7.5°
AZM	153.3°
TVD	2213.96'

SLTYSH: ltgy-gy, sbblky-sbply, sft, gt-sdy tex, arg cmt  
SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, wsrt, wrnnd, sme cly, arg cmt, tr dk lit frag

MD	2313'
INC	6.8°
AZM	154.5°
TVD	2308.22'

SLTYSH: ltgy-gy, sbblky-sbply, sft, gt-sdy tex, arg cmt  
SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, wsrt, wrnnd, sme cly, arg cmt, tr dk lit frag  
SS: wh-trnsl-ltgy, sbang-ang, v fri, fgr, wsrt, wrnnd, arg cmt, sme glau, abnt dk lit frag





MD 2408'  
INC 7.7°  
AZM 152.2°  
TVD 2402.46'

SS: wh-trnsl-ltgy, sbang-ang, v fri, fgr, modsr, wrn, arg cmt, tr glau, abnt dk lit frag  
SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, wrs, wrn, sme cly, arg cmt, tr dk lit frag, grd to ss

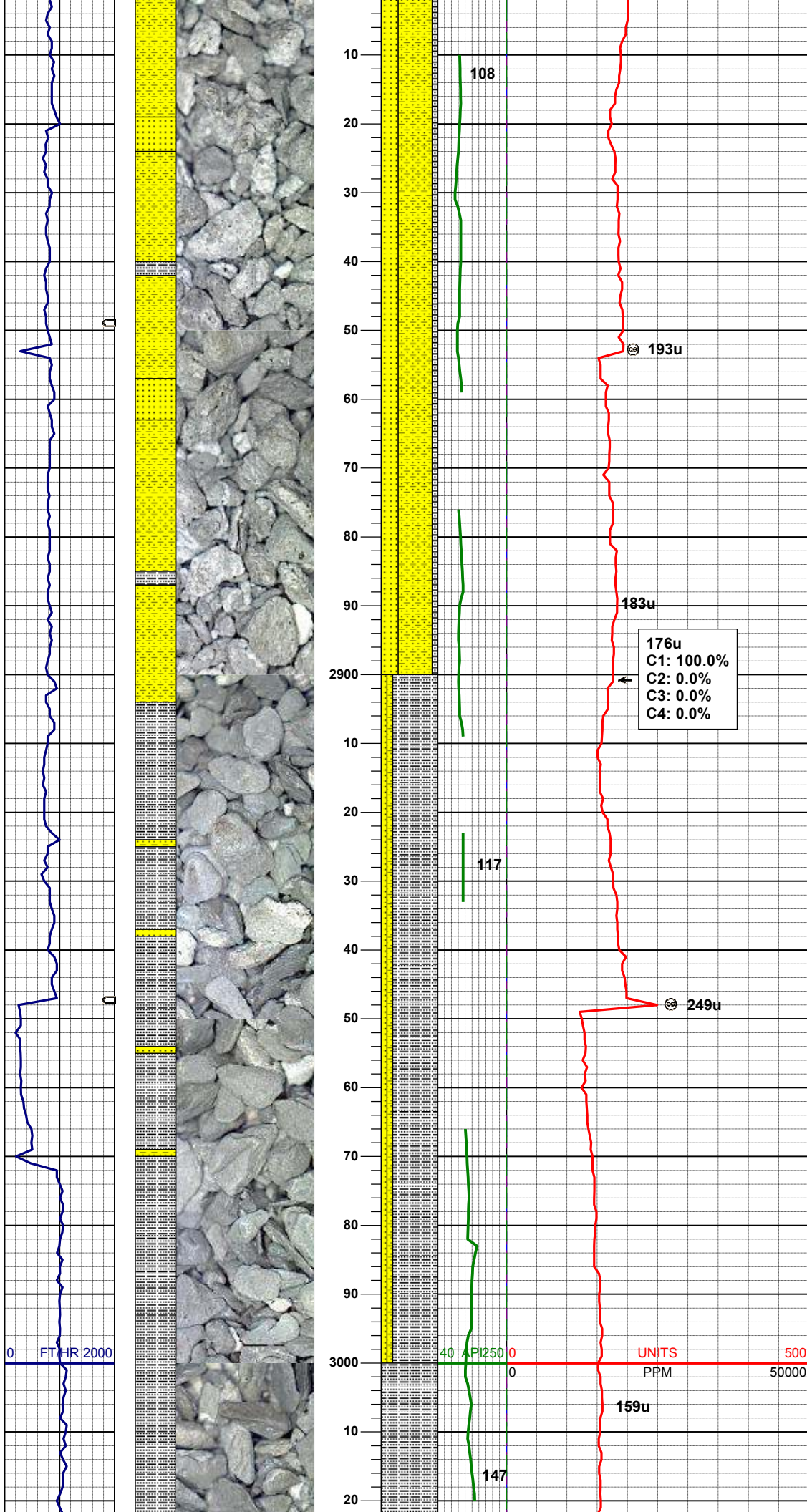
WT IN 8.40/ OUT 8.40  
VIS IN 27/ OUT 27

MD 2503'  
INC 7.5°  
AZM 151.2°  
TVD 2496.63'

SS: wh-trnsl-ltgy, sbang-ang, v fri, fgr, modsr, wrn, arg cmt, tr glau, abnt dk lit frag  
SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, wrs, wrn, sme cly, arg cmt, tr dk lit frag, grd to ss  
SLTYSH: gy-dkgy, sbblky-sbply, sft, gt-sly tex, arg cmt





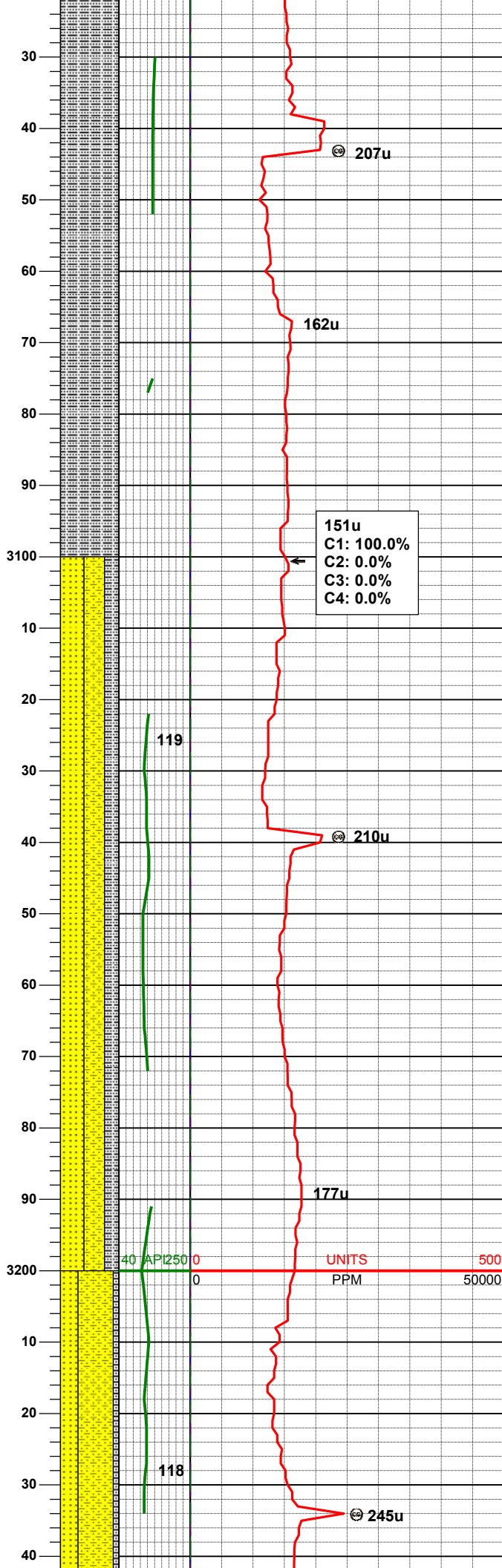
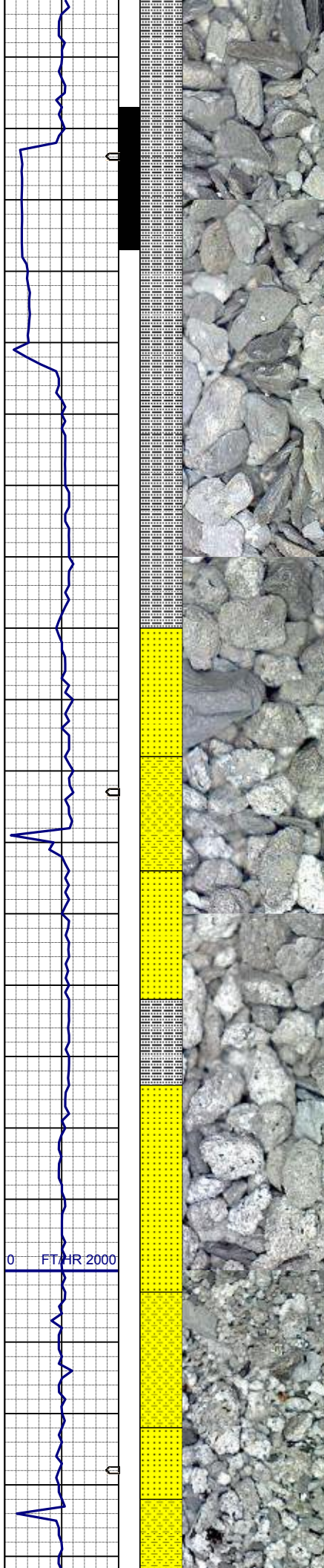


SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, wsrt, wrnnd, sme cly, arg cmt, tr dk lit frag, len ss  
SS: wh-trnsl-ltgy, sbang-ang, v fri, fgr, modsrt, wrnnd, p por, arg cmt, shy ip, tr glau, tr dk lit frag  
SLTYSH: gy-dkgy, sbblky-sbplty, sft, gt-sdy tex, arg cmt

MD	2882'
INC	5.6°
AZM	148.7°
TVD	2872.87'

SLTYSH: gy-dkgy, sbblky-sbplty, tr fis, sft, gt-sly tex, arg cmt  
SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, wsrt, wrnnd, sme cly, arg cmt, tr dk lit frag, len ss  
SS: wh-trnsl-ltgy, sbang-ang, v fri, fgr, modsrt, wrnnd, p por, arg cmt, shy ip, tr glau, tr dk lit frag

MD	2977'
INC	6.1°
AZM	143.1°
TVD	2967.38'



SLTYSH: gy-dkgy, sbblky-sbply, tr  
fis, sft, gt-sity tex, arg cmt

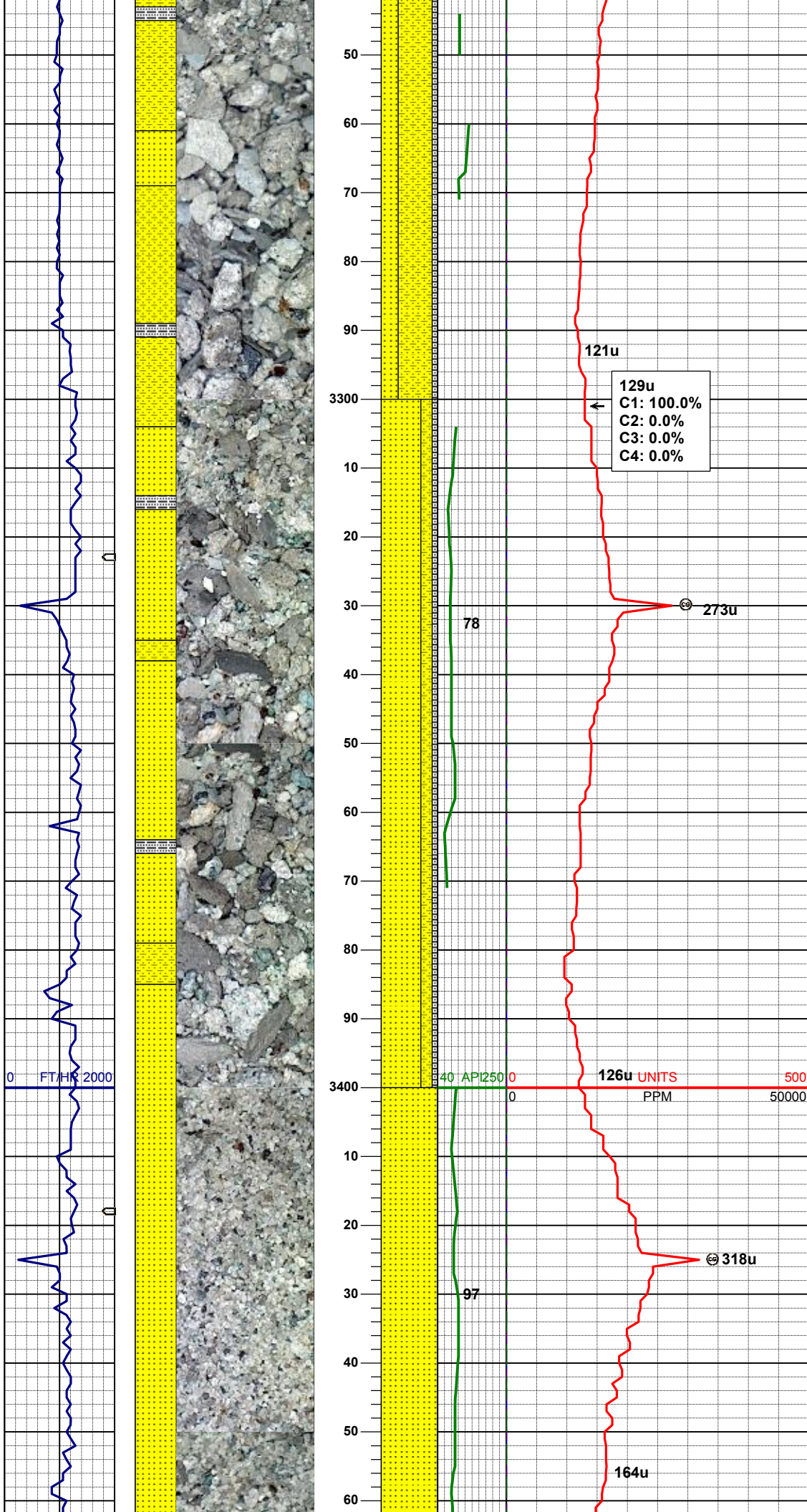
MD	3072'
INC	6.2°
AZM	155.7°
TVD	3061.84'

SS: trns-ltgy-gy, sbang-ang, v fri, fgr,  
wsrt, wrnnd, por, arg cmt, shy ip, tr  
glau, sme dk lit frag  
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, wsrt, wrnnd, sme cly, arg cmt, tr  
dk lit frag  
SLTYSH: gy-dkgy, sbblky-sbply, tr  
fis, sft, gt-sity tex, arg cmt

MD	3167'
INC	6.2°
AZM	152.7°
TVD	3156.28'

SHYSS: ltgy-gy-brn, s&p ip, sbang, v





SS: trnsI-ltgy-gy, sbang-ang, v fri, mgr, modsr, wrndd, arg cmt, tr dk lit frag  
SS: trnsI-ltgy-gy, sbang-ang, v fri, mgr, modsr, wrndd, p por, arg cmt, shy ip, tr glau, sme dk lit frag  
SLTYSH: gy-dkgy, sbblky-sbply, tr fis, sft, gt-sdy tex, arg cmt

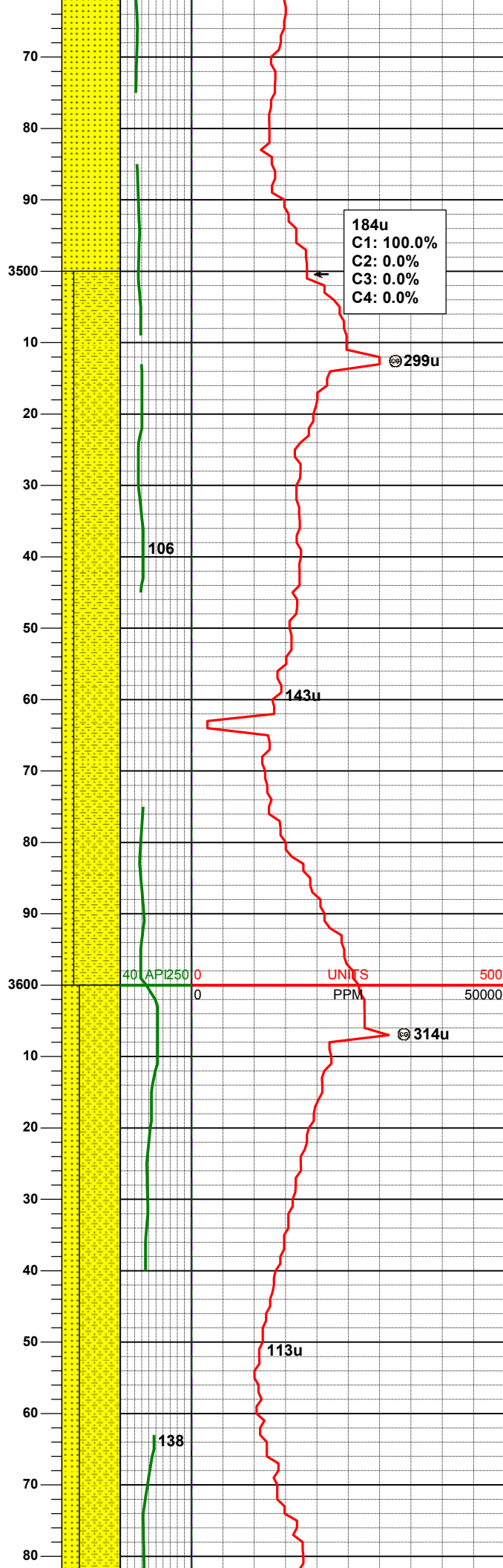
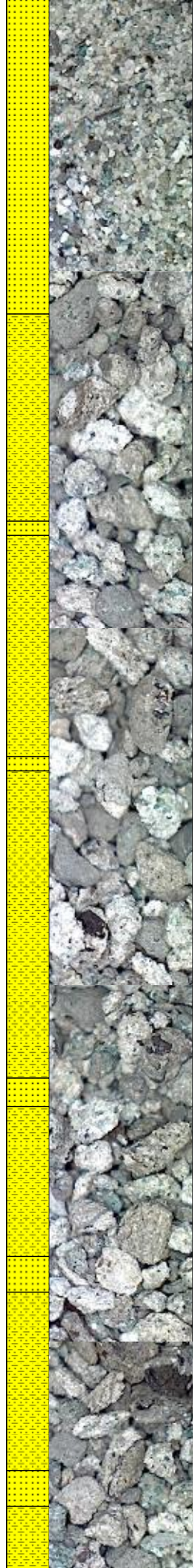
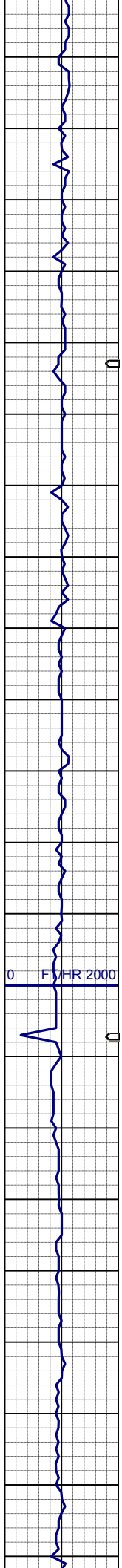
MD	3262'
INC	6.2°
AZM	150.5°
TVD	3250.73'

SS: trnsI-ltgy, sbang-ang, v fri, mgr, psrt, wrndd, uncons, p por, arg cmt, abnt glau, sme dk lit frag  
SHYSS: ltgy-gy-brn, s&p ip, sbang, v fri, vfgr, modsr, wrndd, arg cmt  
SLTYSH: gy-dkgy, sbblky-sbply, tr fis, sft, gt-sly tex, arg cmt

MD	3356'
INC	6.7°
AZM	146.1°
TVD	3344.13'

MD	3451'
INC	7.0°
AZM	146.9°
TVD	3438.45'

SS: trnsI-ltgy, sbang-ang, v fri, mgr, psrt, wrndd, uncons, p por, arg cmt, abnt glau, sme dk lit frag



WT IN 8.50/ OUT 8.50  
VIS IN 27/ OUT 27

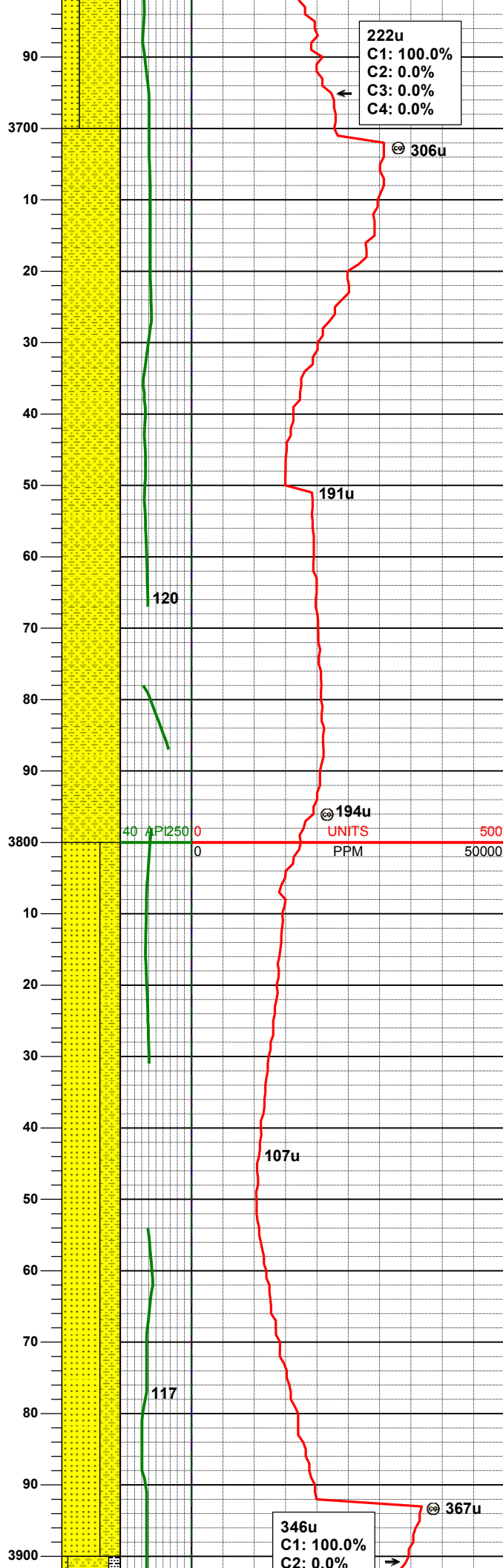
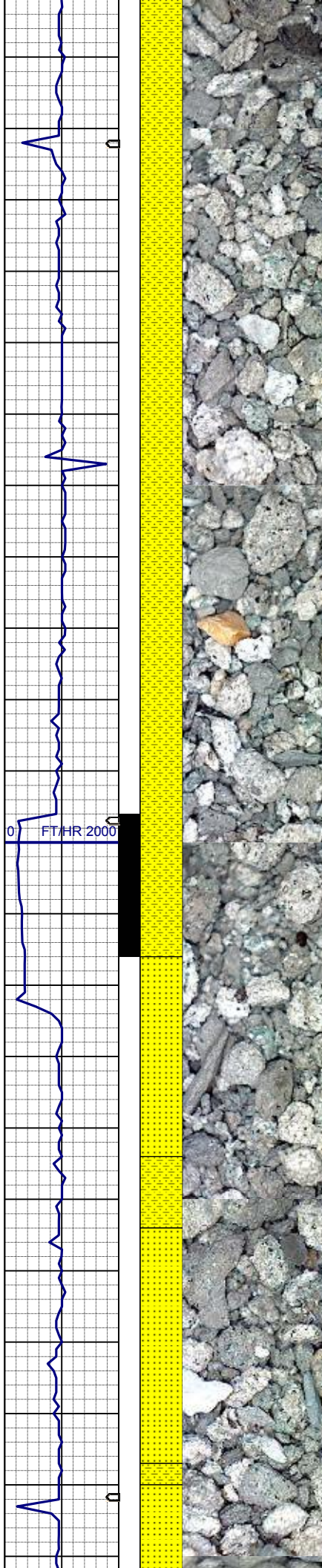
MD	3546'
INC	7.6°
AZM	146.1°
TVD	3532.68'

SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrnnd, arg cmt  
SS: trns-ltgy, sbang-ang, v fri, mgr,  
psrt, wrnnd, uncon, p por, arg cmt,  
occ glau, sme dk lit frag

MD	3641'
INC	7.3°
AZM	145.2°
TVD	3626.88'

SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrnnd, arg cmt  
SS: trns-ltgy, sbang-ang, v fri, mgr,  
psrt, wrnnd, uncon, p por, arg cmt,  
occ glau, sme dk lit frag





222u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%

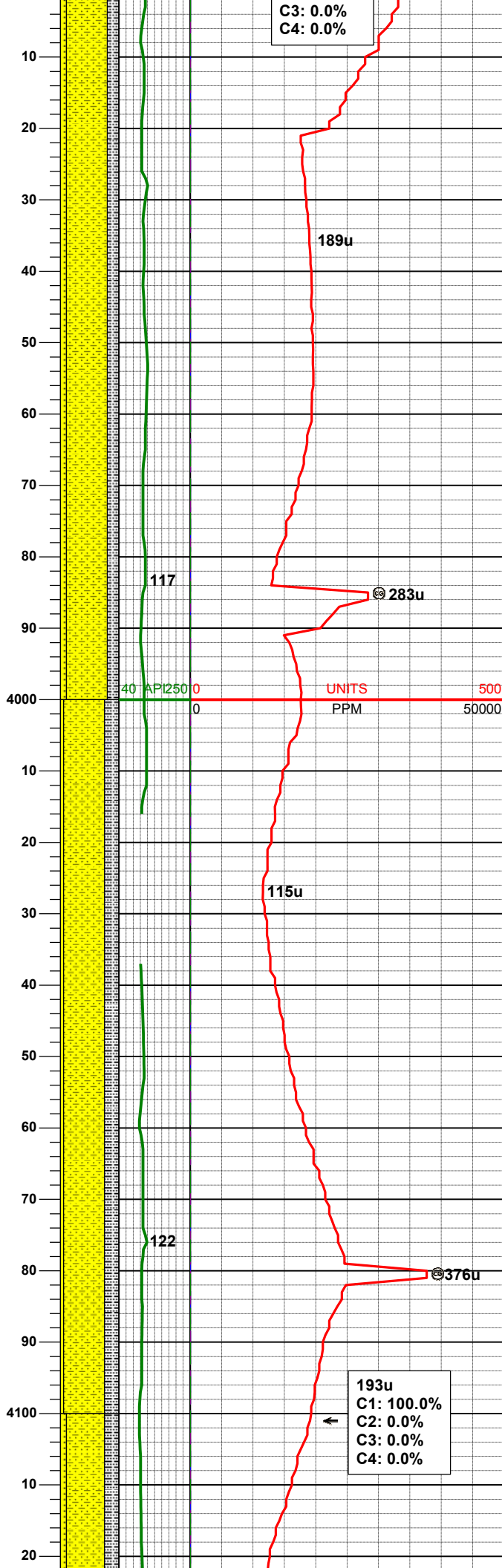
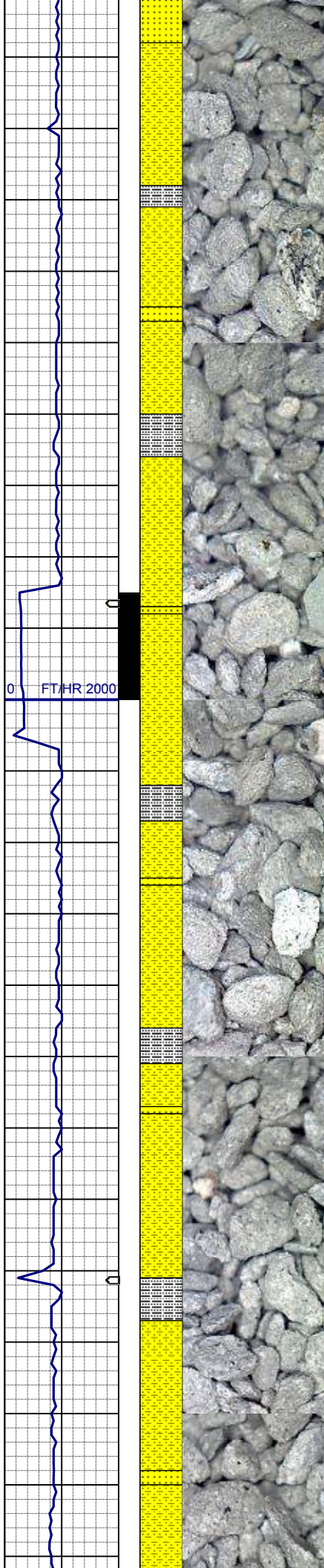
MD 3735'  
INC 6.3°  
AZM 150.1°  
TVD 3720.22'

SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrndd, arg cmt, abnt  
glau

MD 3830'  
INC 6.2°  
AZM 139.9°  
TVD 3814.66'

SS: trns-ltgy, sbang-ang, v fri, mgr,  
psrt, wrndd, uncon, p por, arg cmt,  
abnt glau, sme dk lit frag  
SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrndd, arg cmt

346u  
C1: 100.0%  
C2: 0.0%



MD 3925'  
INC 5.5°  
AZM 141.0°  
TVD 3909.16'

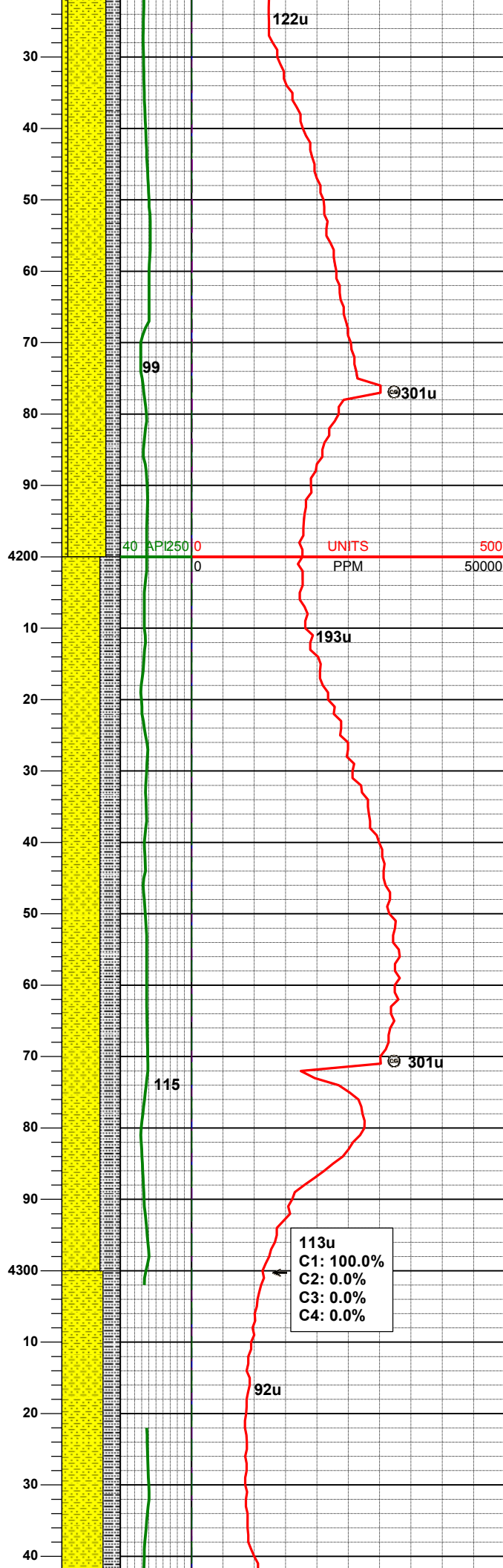
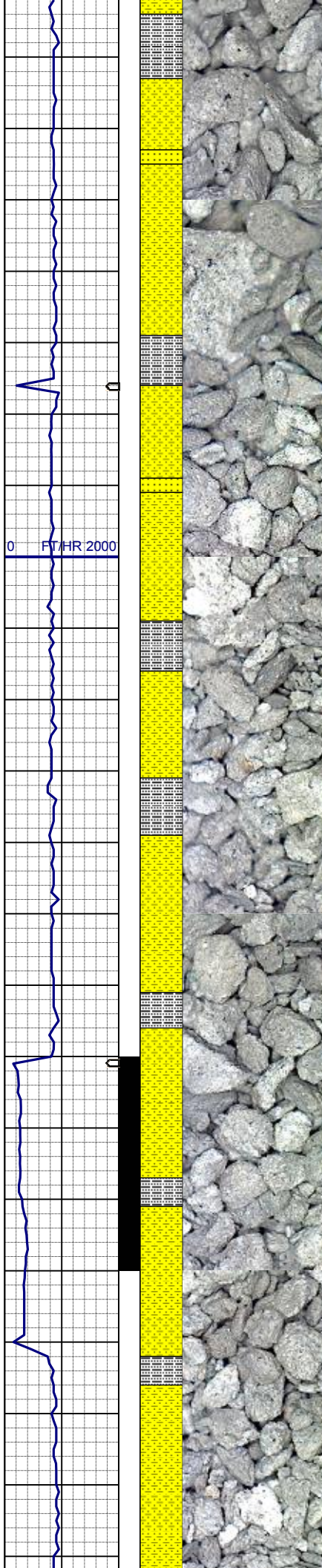
SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrndd, arg cmt  
SLTYSH: gy-dkgy, sbblky-sbplty, tr  
fis, sft, gt-silty tex, arg cmt  
SS: trnsi-ltgy, sbang-ang, v fri, mgr,  
psrt, wrndd, uncon, p por, arg cmt,  
abnt glau, sme dk lit frag

MD 4020'  
INC 6.1°  
AZM 143.3°  
TVD 4003.68'

SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrndd, arg cmt  
SLTYSH: gy-dkgy, sbblky-sbplty, tr  
fis, sft, gt-silty tex, arg cmt  
SS: trnsi-ltgy, sbang-ang, v fri, mgr,  
psrt, wrndd, uncon, p por, arg cmt,  
abnt glau, sme dk lit frag

MD 4115'  
INC 5.4°  
AZM 143.3°  
TVD 4098.20'





SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrndd, arg cmt  
SLTYSH: gy-dkgy, sbblky-sbply, tr  
fis, sft, gt-silty tex, arg cmt  
SS: trns-ltgy, sbang-ang, v fri, mgr,  
psrt, wrndd, uncon, p por, arg cmt,  
abnt glau, sme dk lit frag

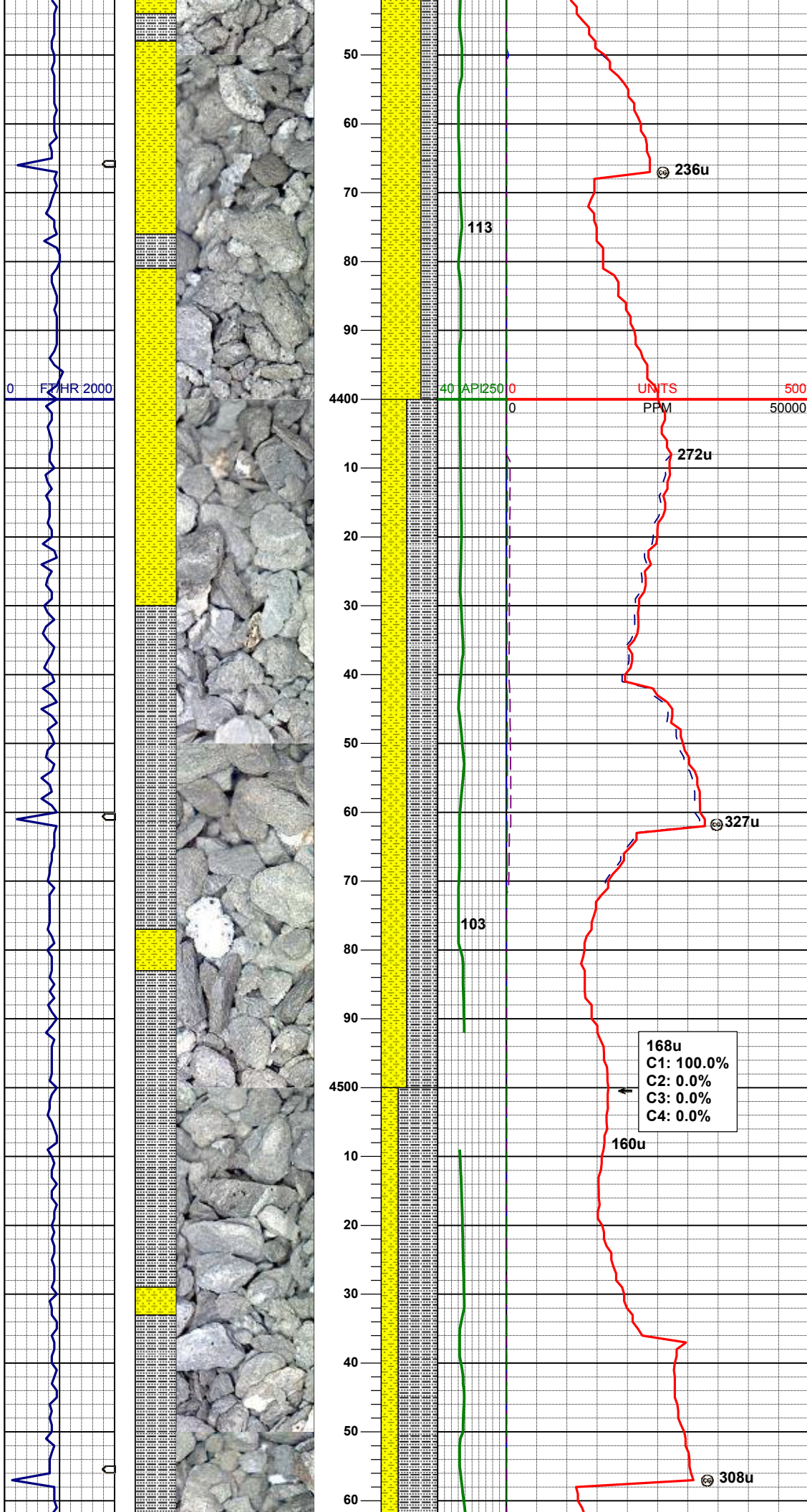
WT IN 9.10/ OUT 9.10  
VIS IN 36/ OUT 36

MD	4210'
INC	4.0°
AZM	139.4°
TVD	4192.88'

SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrndd, arg cmt  
SLTYSH: gy-dkgy, sbblky-sbply, tr  
fis, sft, gt-silty tex, arg cmt

MD	4304'
INC	1.1°
AZM	147.5°
TVD	4286.77'

113u
C1: 100.0%
C2: 0.0%
C3: 0.0%
C4: 0.0%



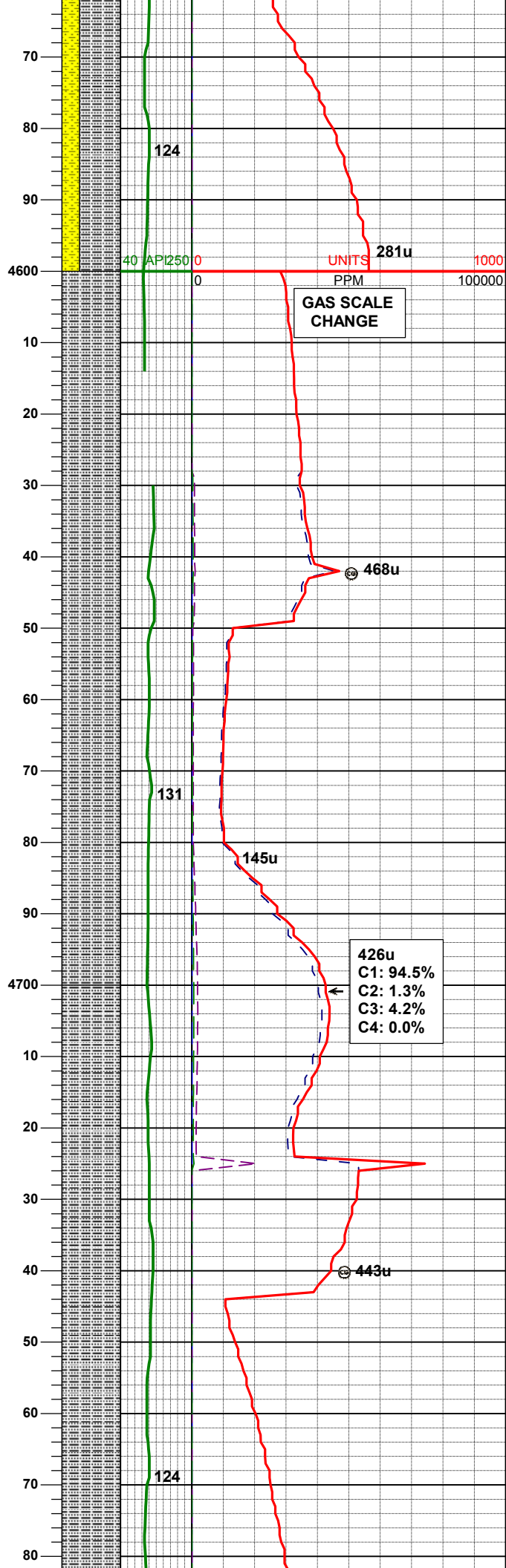
SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrndd, arg cmt  
SLTYSH: gy-dkgy, sbblky-sbply, tr  
fis, sft, gt-slty tex, arg cmt

SLTYSH: gy-dkgy, sbblky-sbply, tr  
fis, sft, gt-slty tex, arg cmt  
SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrndd, arg cmt

MD	4494'
INC	0.9°
AZM	14.9°
TVD	4476.76'

SLTYSH: gy-dkgy, sbblky-sbply, tr  
fis, sft, gt-slty tex, arg cmt, occ dism  
pyr  
SHYSS: ltgy-gy-brn, s&p ip, sbang, v  
fri, vfgr, modsrt, wrndd, arg cmt





MD	4684'
INC	0.7°
AZM	43.9°
TVD	4666.74'

SLTYSH: gy-dkgy, sbblky-sbplty, tr  
fis, sft, gt-slty tex, arg cmt, occ dism  
pyr

