

LOG created using L PLOT VH Version 3.0, September 29, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

**OPERATOR:** NOBLE ENERGY INC  
**WELL:** ROHN STATE LD09-69HN  
**LOCATION:** SESE SEC 4 T9N R58W  
**COUNTY:** WELD  
**STATE:** COLORADO  
**SPOT:** 661' FSL; 480' FEL  
**ELEVATION:** 4712' GL; 4736' KB  
**FIELD:** WILDCAT  
**SPUD DATE:** 09/22/2013  
**TD DATE:** 09/24/2013  
**DATES LOGGED:** 09/23/2013 - 09/24/2013  
**DEPTHS LOGGED:** 1200' - 5039' MD  
**LOGGERS:** LAURA KELLOGG; CONOR PESICKA  
**DRILLING FLUID:** LSND  
**DRILLING RIG:** H&P 273  
**API:** 05-123-37472  
**LOG TYPE:** VERTICAL  
**SCALE:** 1:240 (5 inches per 100 feet)  
**REMARKS:** WELLSITE GEOLOGICAL SERVICES  
 PROVIDED BY COLUMBINE LOGGING INC.

### LITHOLOGIES



Sandstone



Shaly Sandstone



Silty Shale

### ENGINEERING SYMBOLS



Connection



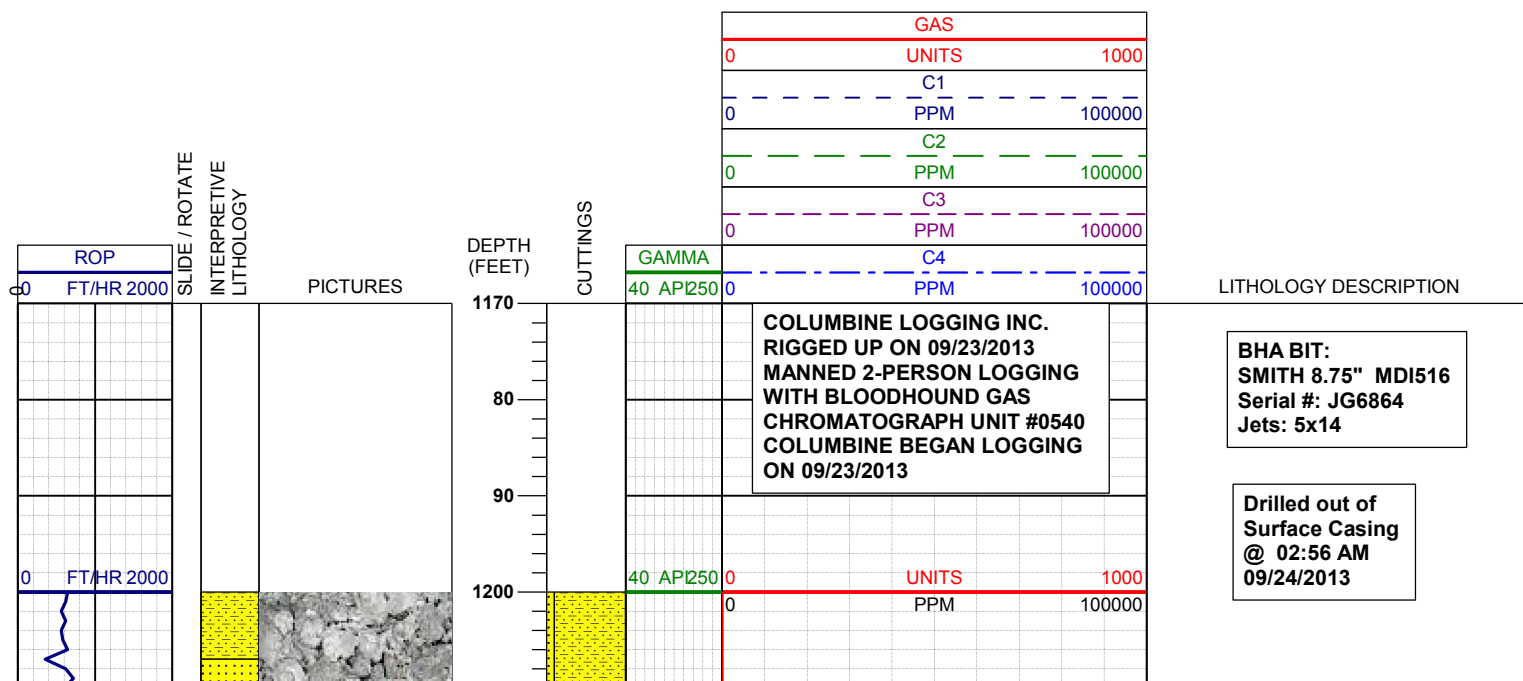
Connection Gas



Arrow

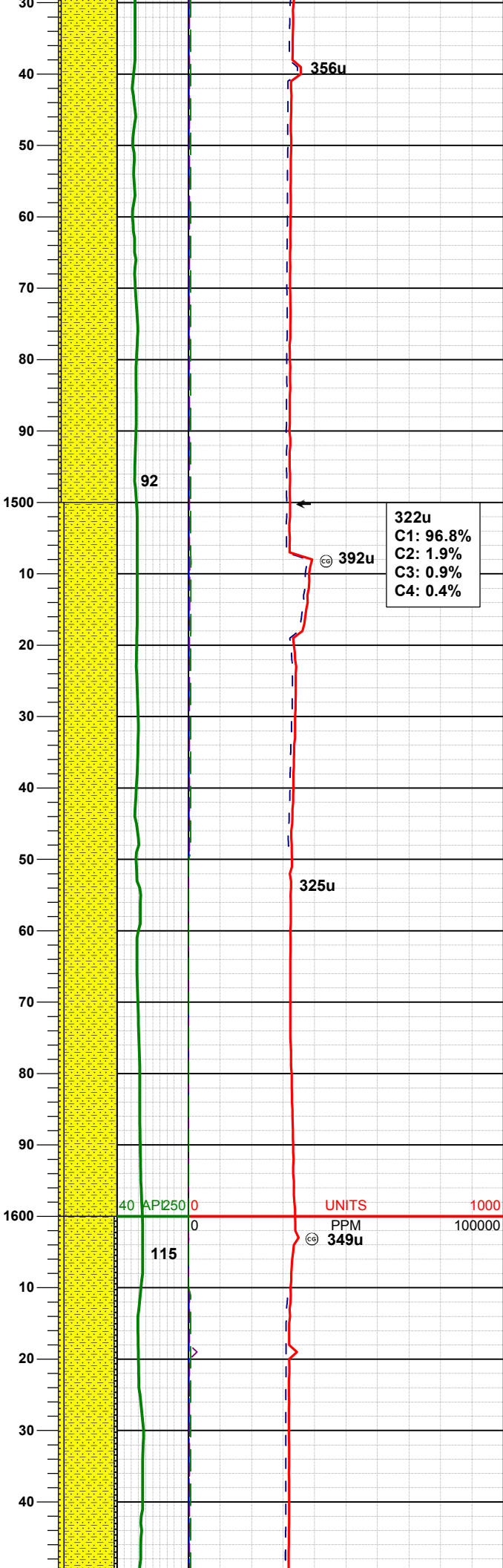
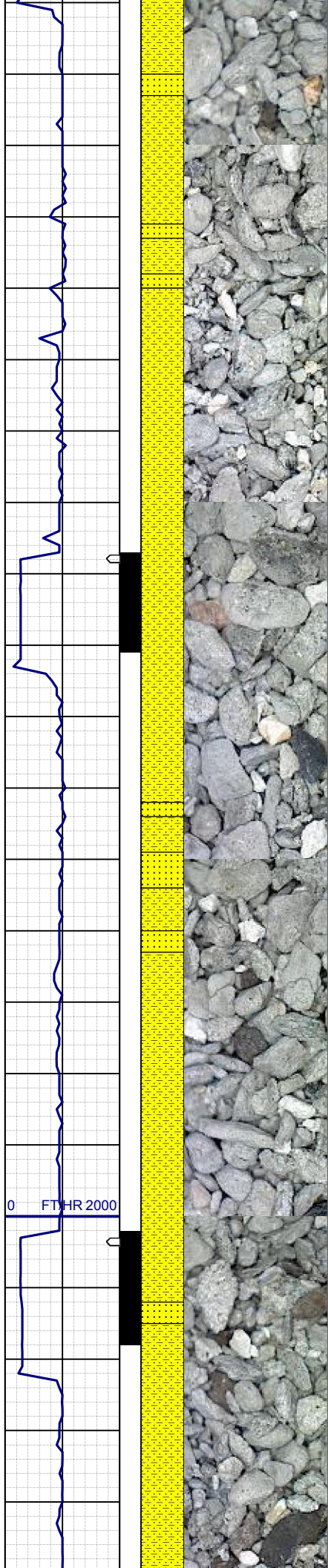


Midnight Depth









SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpstr, wrnnd, arg cmt, tr lit frag, tr glau

MD	1452'
INC	2.9°
AZM	165.8°
TVD	1451.89'

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

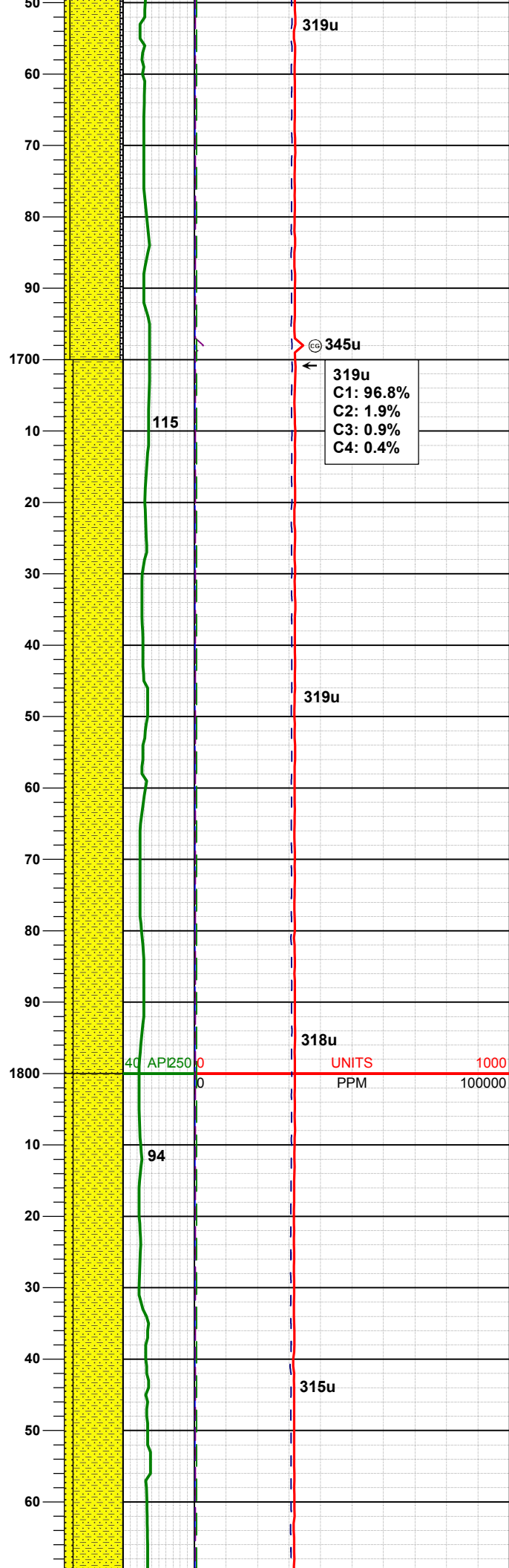
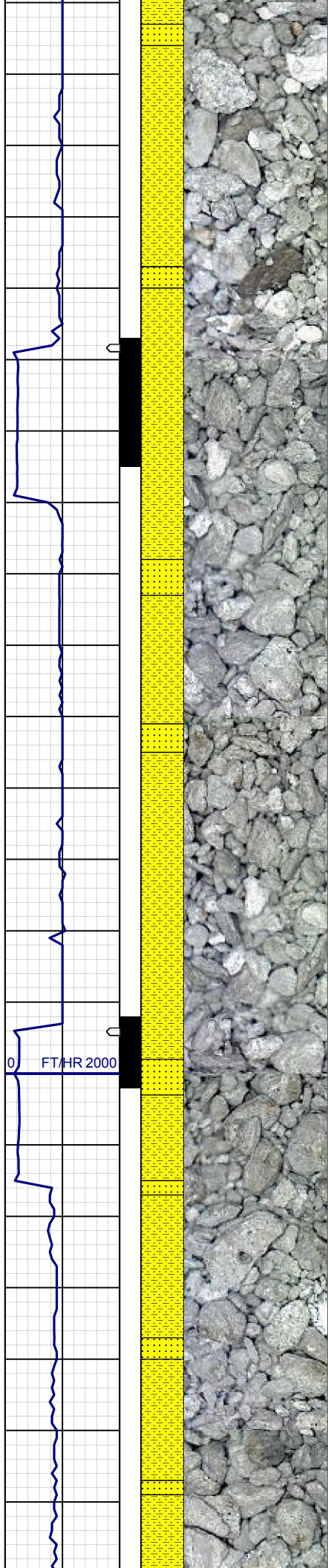
322u
C1: 96.8%
C2: 1.9%
C3: 0.9%
C4: 0.4%

MD	1547'
INC	4.0°
AZM	155.6°
TVD	1546.72'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpstr, wrnnd, arg cmt, tr lit frag, occ  
glau

MD	1642'
INC	3.5°
AZM	169.1°
TVD	1641.52'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt



SS: ltgy-gy-trnsl, sbang-ang, fgr, vpsrt, wrnnd, arg cmt, tr lit frag, occ glau  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt -sdy tex, arg cmt

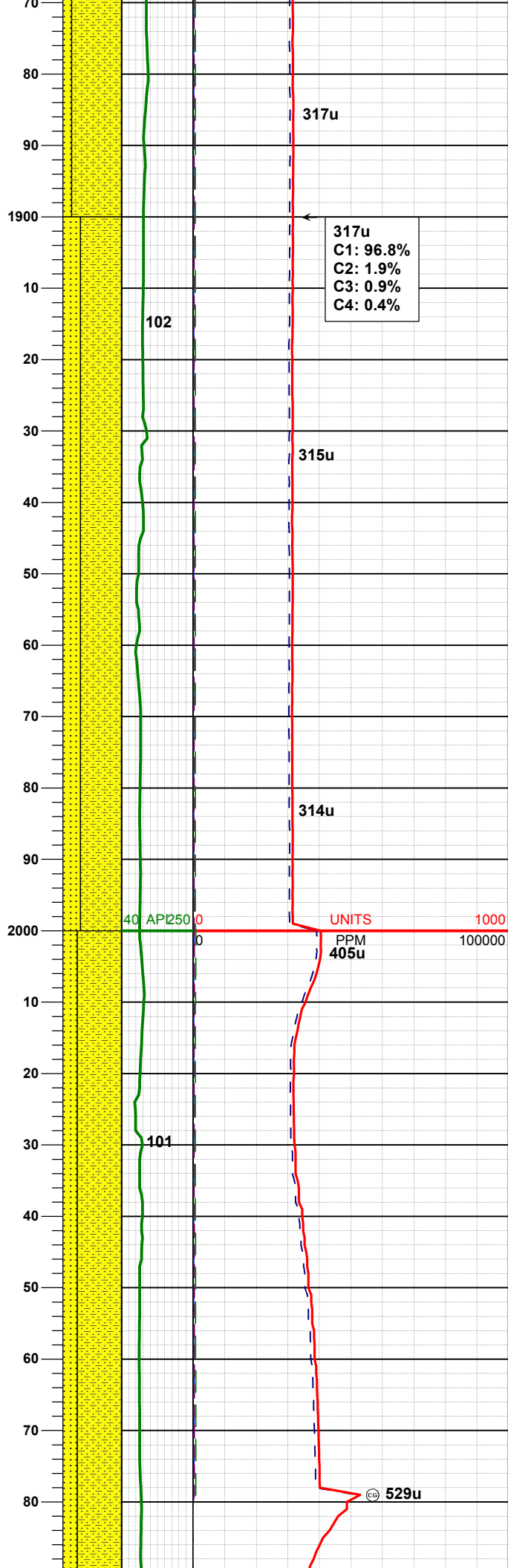
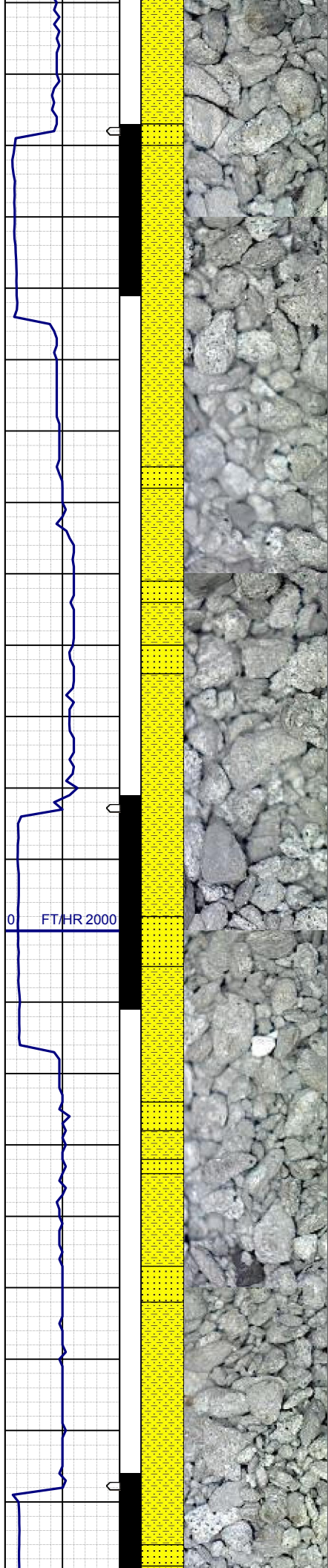
MD 1737'  
INC 5.1°  
AZM 174.4°  
TVD 1736.25'

SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr, vpsrt, wrnnd, arg cmt, tr lit frag, occ glau

MD 1832'  
INC 6.9°  
AZM 174.4°  
TVD 1830.72'

SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr, vpsrt, wrnnd, arg cmt, occ lit frag, tr glau





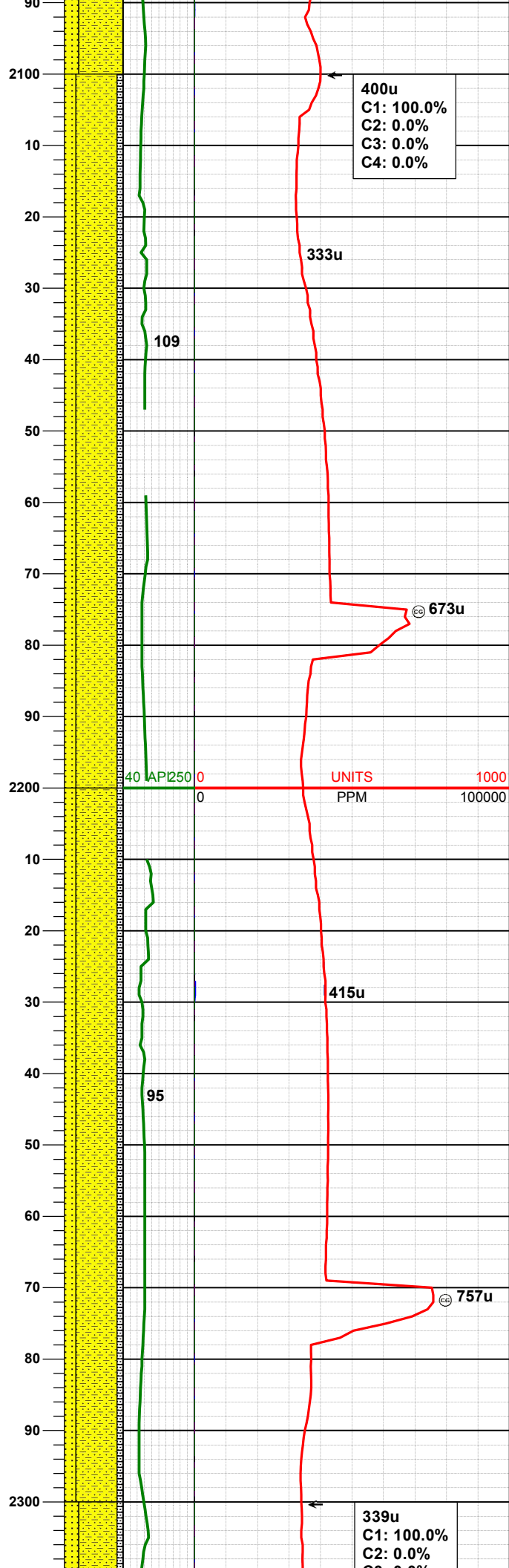
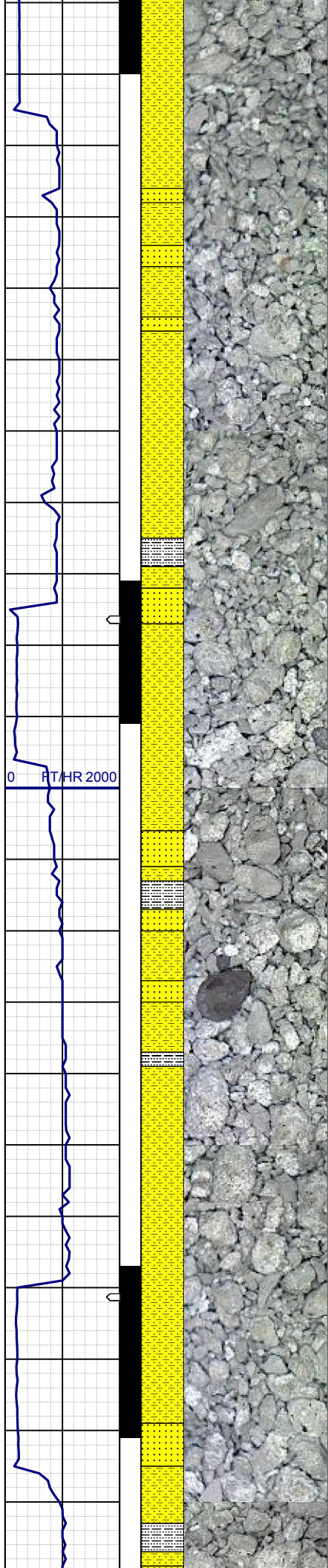
MD 1926'  
INC 8.6°  
AZM 171.0°  
TVD 1923.86'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfr, psrt, wrdd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrdd, arg cmt, abnt lit frag,  
abnt glau

MD 2021'  
INC 11.3°  
AZM 170.3°  
TVD 2017.42'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfr, psrt, wrdd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrdd, arg cmt, abnt lit frag,  
abnt glau





MD 2116'  
INC 12.9°  
AZM 170.0°  
TVD 2110.42'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrnnd, arg cmt, tr lit frag, occ  
glau  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

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

MD 2211'  
INC 13.4°  
AZM 167.0°  
TVD 2202.82'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrnnd, arg cmt, tr lit frag, occ  
glau  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

MD 2306'  
INC 14.7°  
AZM 170.0°  
TVD 2294.98'

400u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%

333u

109

673u

40 API 250

UNITS

1000

PPM

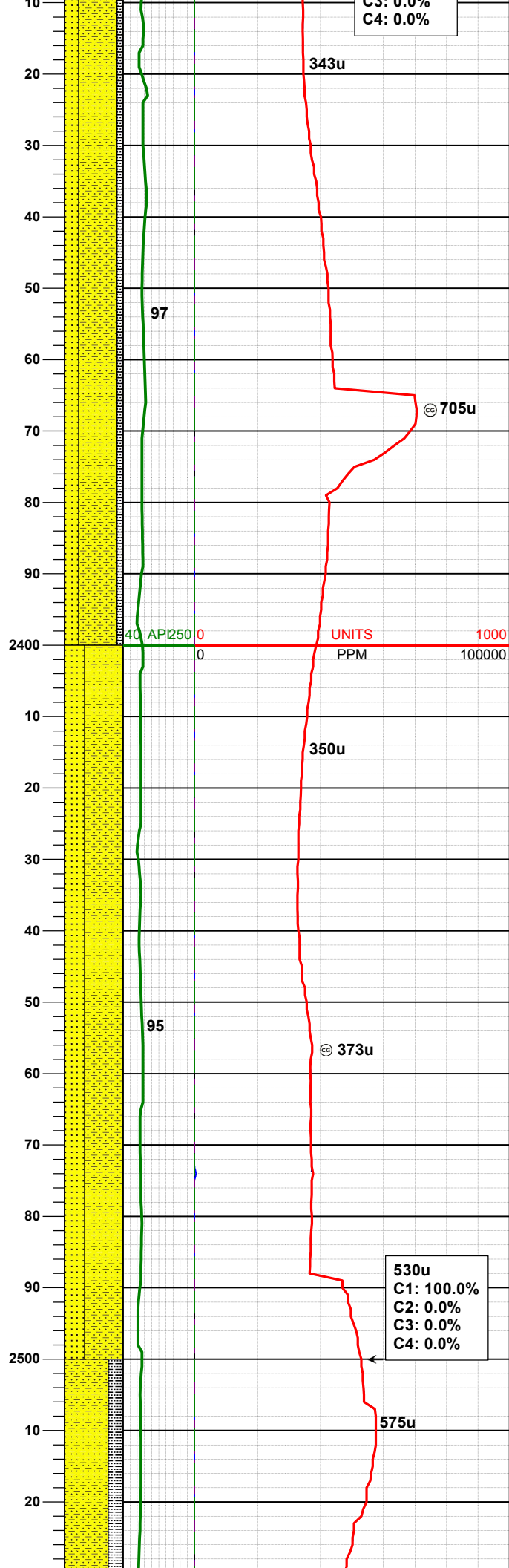
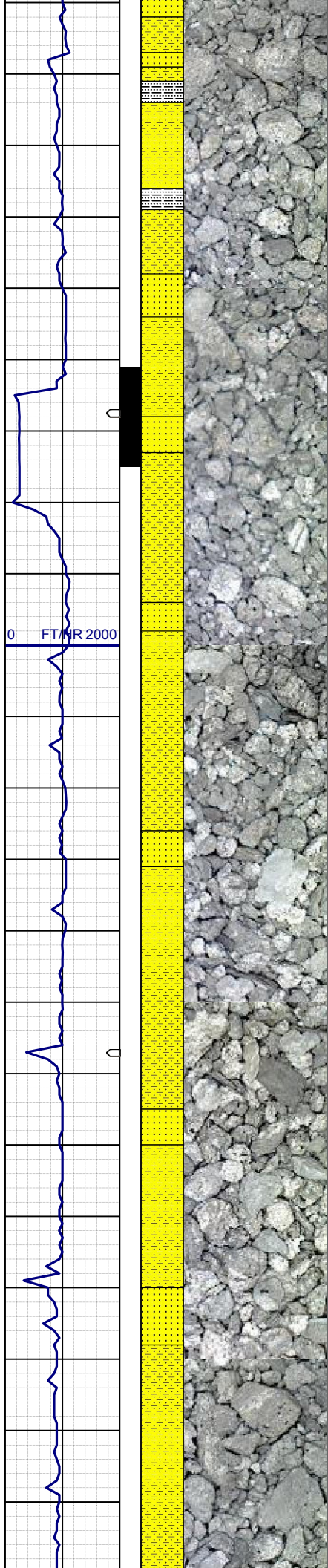
100000

415u

95

757u

339u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%



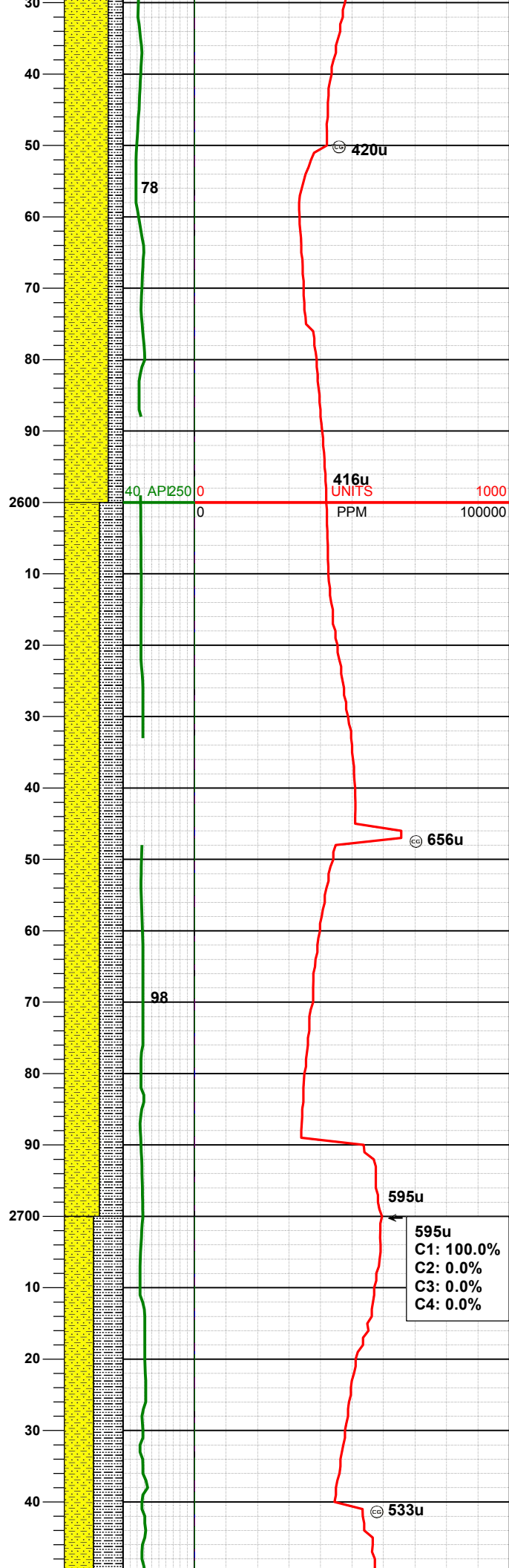
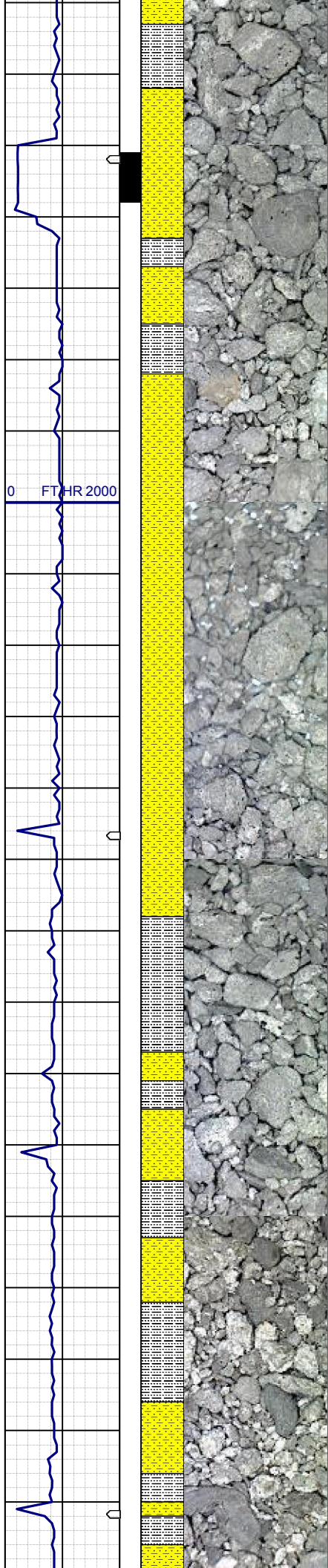
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrnnd, arg cmt, tr lit frag, occ  
glau  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

MD 2401'  
INC 15.3°  
AZM 170.0°  
TVD 2386.74'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrnnd, arg cmt, tr lit frag, occ  
glau

MD 2496'  
INC 15.7°  
AZM 169.3°  
TVD 2478.28'





SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnrd, abnt cly, arg cmt  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

MD 2590'  
INC 14.6°  
AZM 169.3°  
TVD 2569.01'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnrd, abnt cly, arg cmt  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

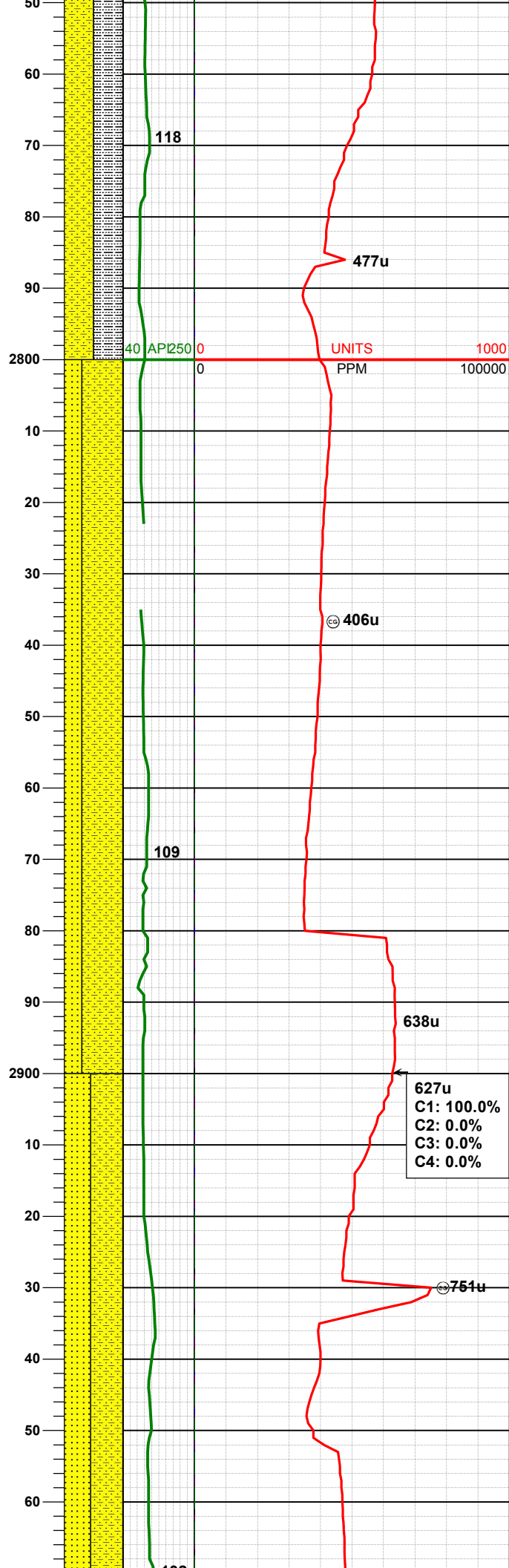
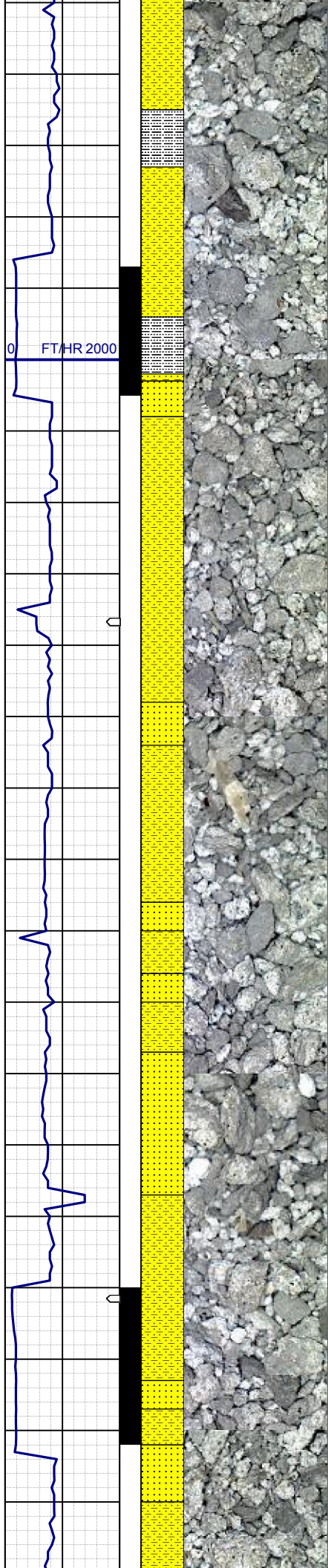
WT IN 8.40/ OUT 8.40  
VIS IN 27/ OUT 27

MD 2685'  
INC 14.1°  
AZM 169.8°  
TVD 2661.05'

595u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnrd, abnt cly, arg cmt





SLTYSH: ltgy-gy, sbblky-sbply, sft, gt  
-sdy tex, arg cmt

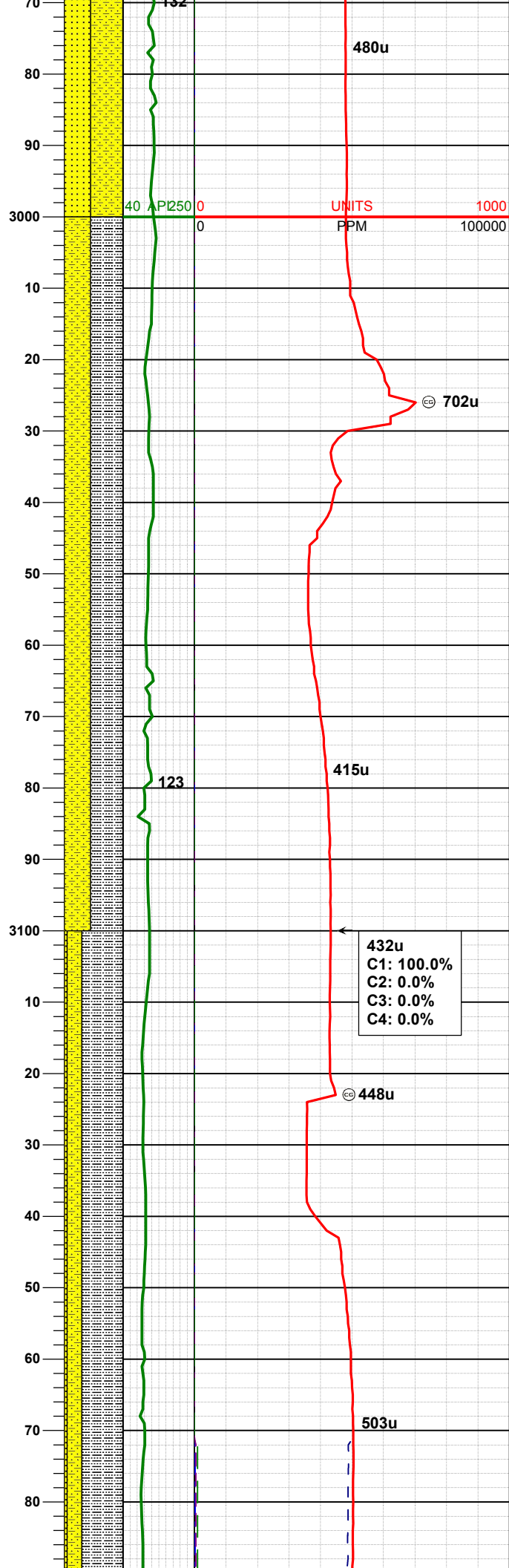
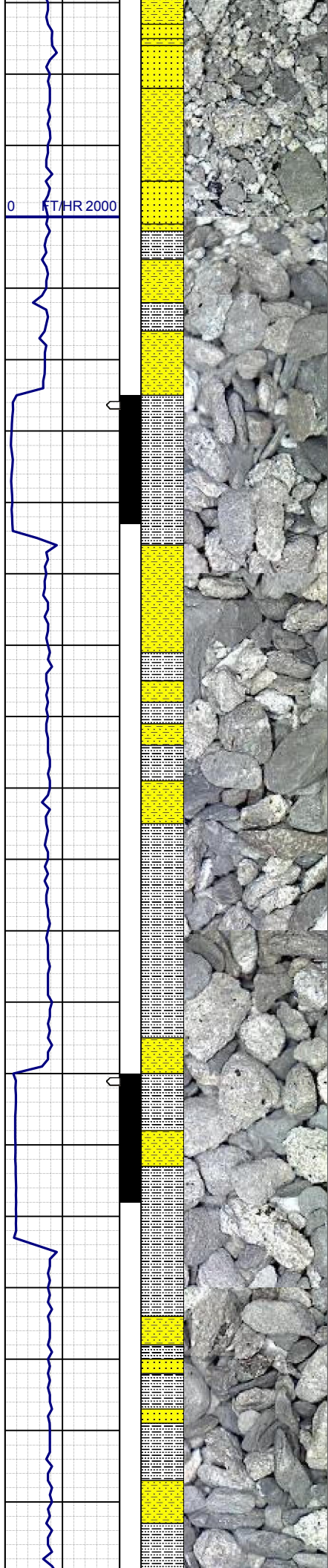
MD 2780'  
INC 13.5°  
AZM 168.2°  
TVD 2753.31'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfr, psrt, wrdd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrdd, arg cmt, tr lit frag, occ  
glau

MD 2875'  
INC 13.1°  
AZM 168.1°  
TVD 2845.76'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfr, psrt, wrdd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrdd, arg cmt, tr lit frag, occ  
glau

MD 2970'  
INC 13.5°  
AZM 168.2°  
TVD 2945.76'



INC 12.3°  
AZM 166.5°  
TVD 2938.40'

SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt  
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfr, psrt, wrnnd, abnt cly, arg cmt

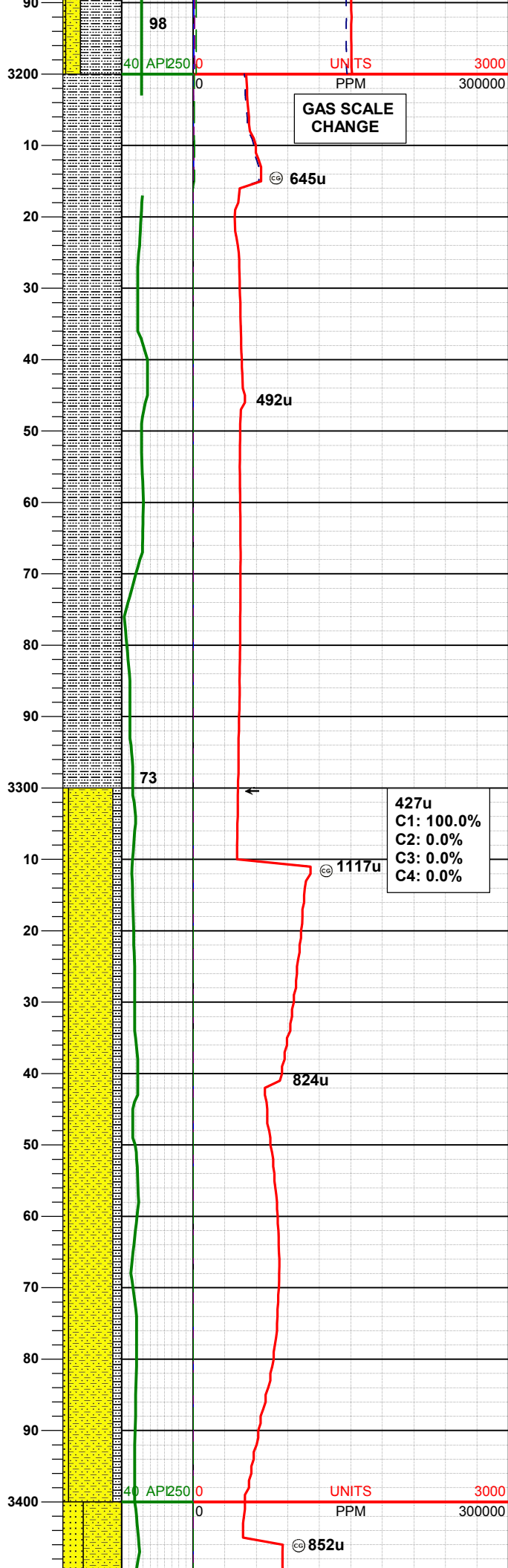
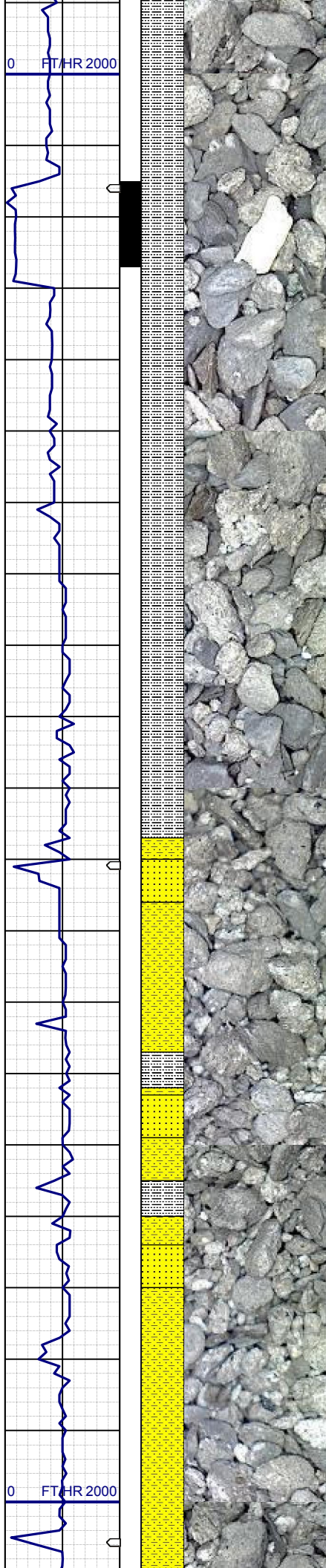
MD 3065'  
INC 12.0°  
AZM 165.9°  
TVD 3031.23'

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

SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt  
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrnnd, arg cmt, occ lit frag, occ  
glau

MD 3160'  
INC 13.8°  
AZM 164.9°  
TVD 3123.83'





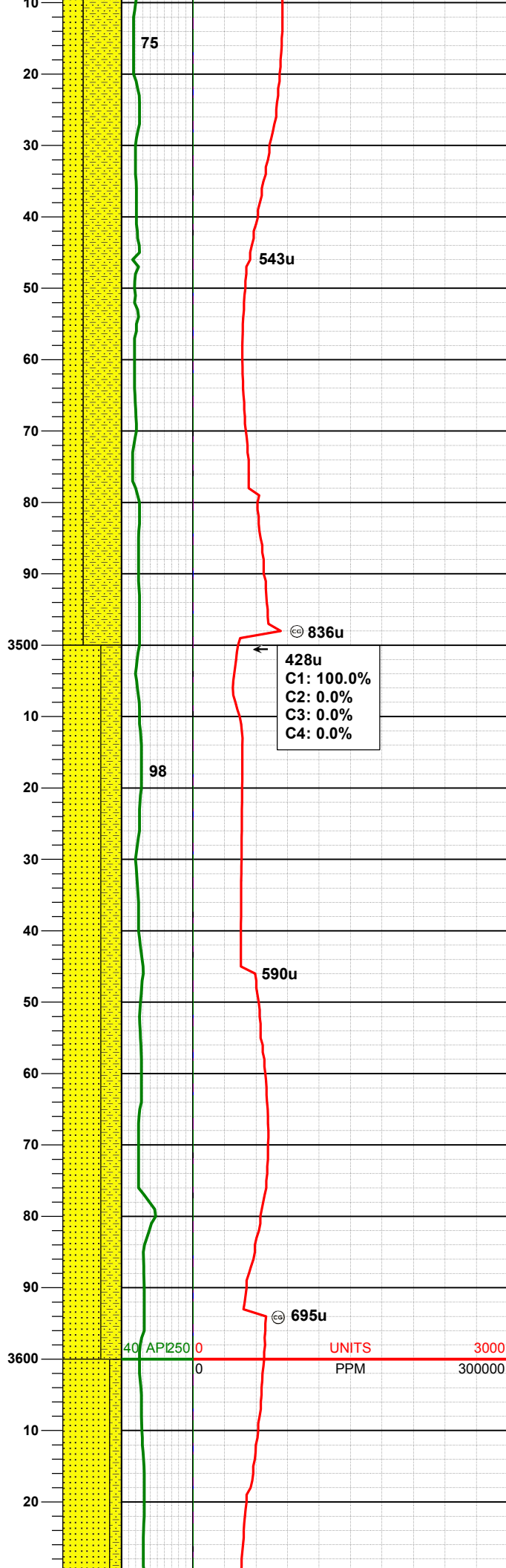
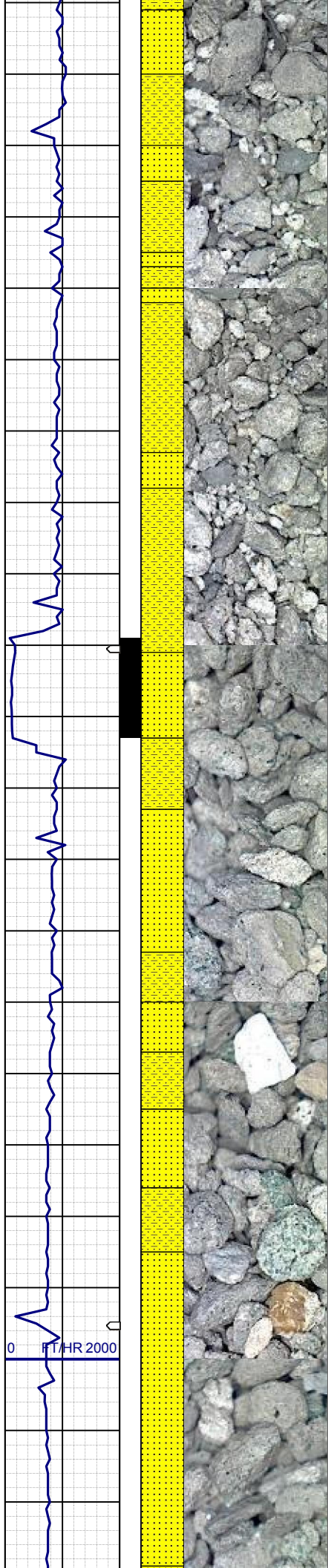
WT IN 8.40/ OUT 8.40  
VIS IN 26/ OUT 26

SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

MD 3254'  
INC 14.9°  
AZM 167.7°  
TVD 3214.90'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfr, psrt, wrdd, abnt cly, arg cmt  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrdd, arg cmt, occ lit frag, occ  
glau





MD	3444'
INC	16.0°
AZM	168.1°
TVD	3398.14'

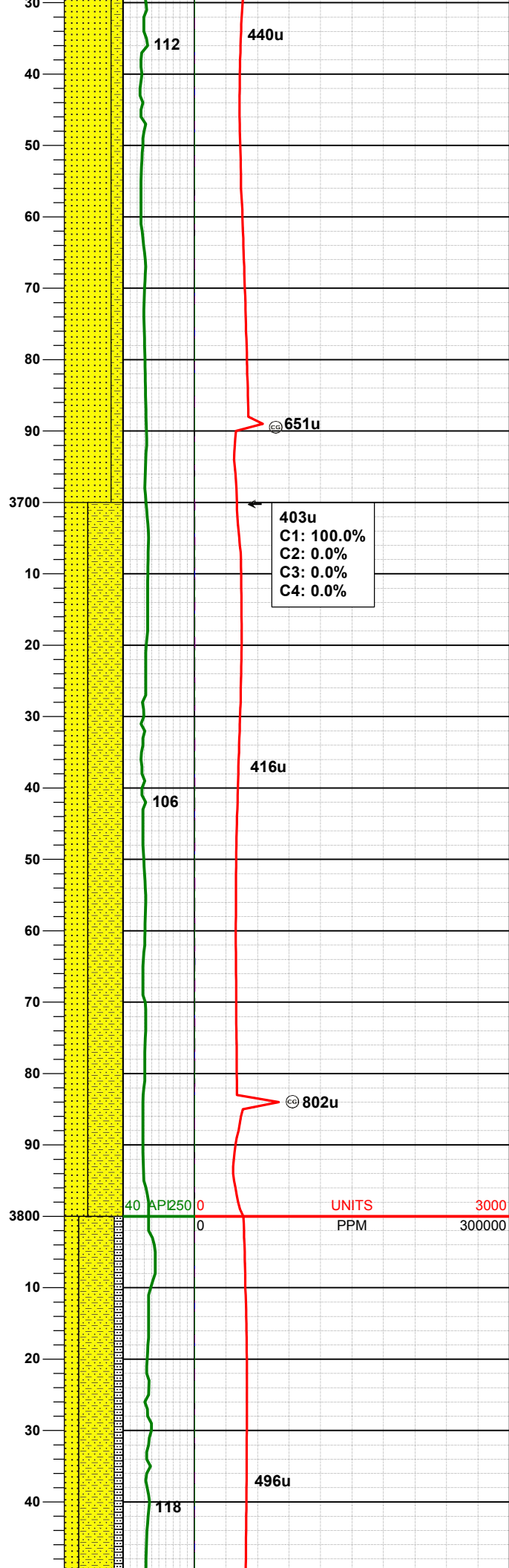
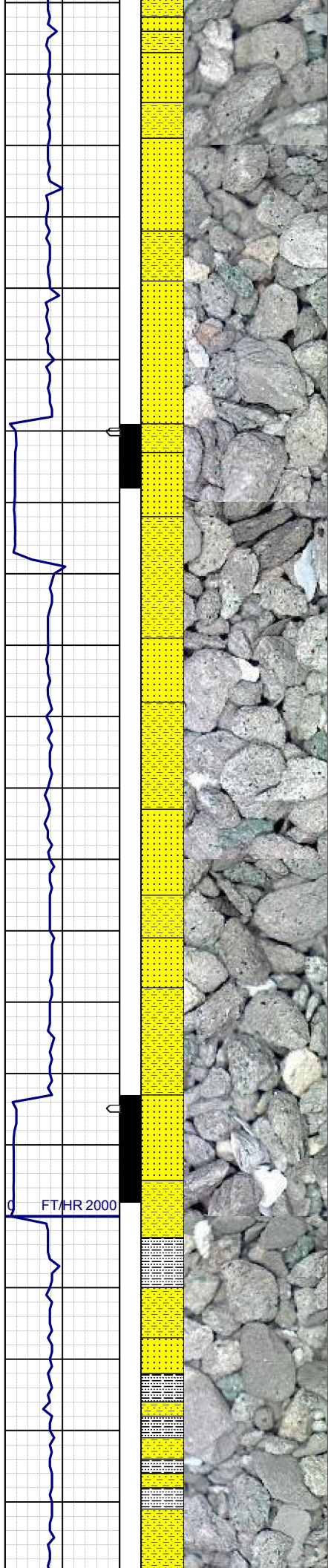
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfr, psrt, wrdd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrdd, arg cmt, abnt lit frag,  
abnt glau

MD	3539'
INC	15.2°
AZM	165.4°
TVD	3489.64'

SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrdd, arg cmt, abnt lit frag,  
abnt glau  
SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfr, psrt, wrdd, abnt cly, arg cmt

WT IN 8.40/ OUT 8.40  
VIS IN 26/ OUT 26

MD	3634'
INC	14.0°



AZM 165.2°  
TVD 3581.57'

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

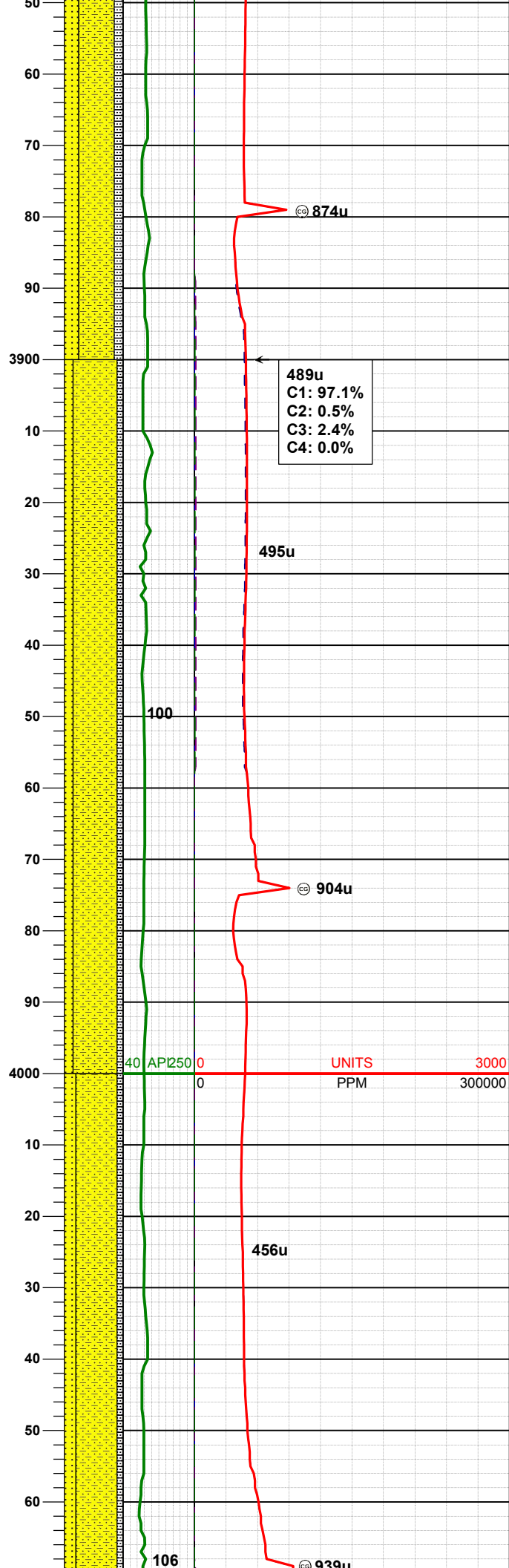
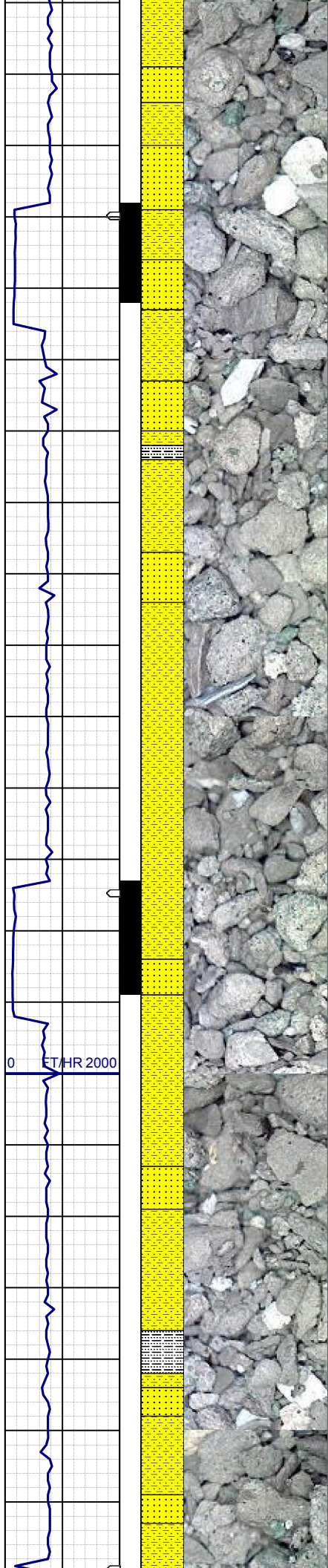
MD 3728'  
INC 13.8°  
AZM 167.9°  
TVD 3672.82'

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

MD 3823'  
INC 13.9°  
AZM 168.4°  
TVD 3765.06'

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





port, wind, arg cmt, s&p ip, sbang, v fri, vgr, psrt, wrdd, abnt cly, arg cmt  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

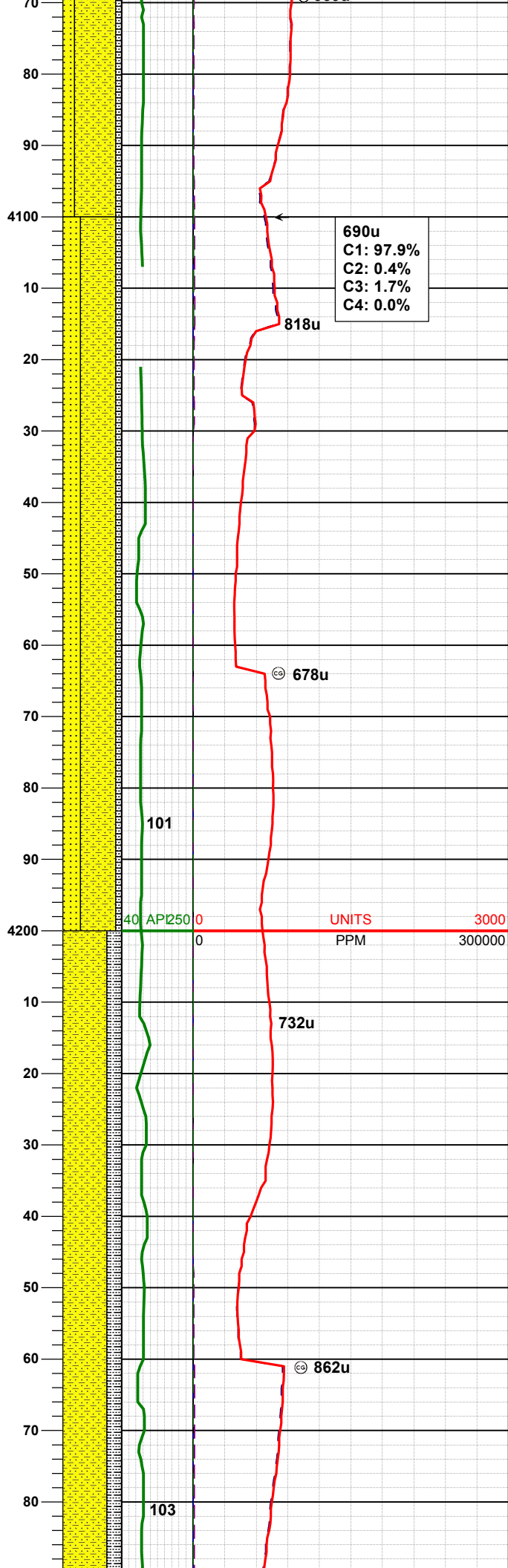
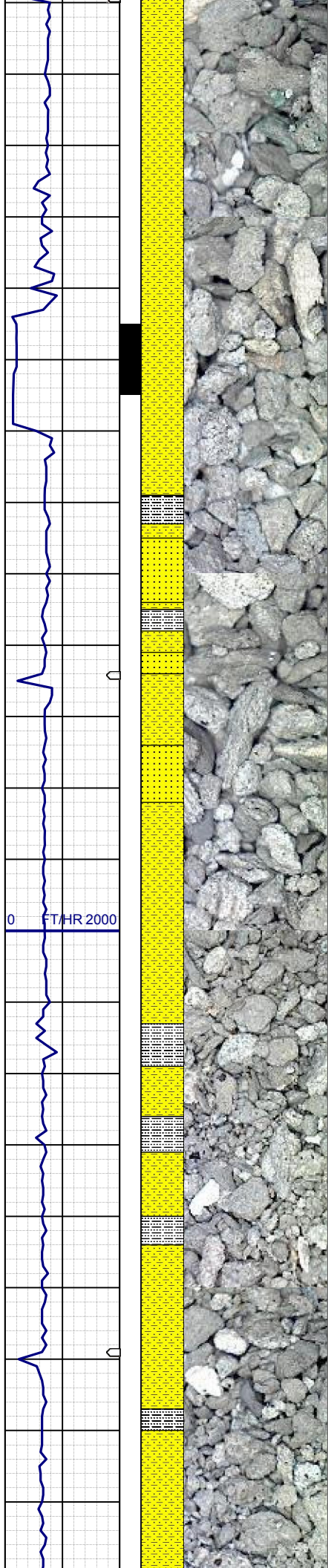
MD 3918'  
INC 14.0°  
AZM 169.3°  
TVD 3857.26'

SHYSS: ltgy-gy, s&p ip, sbang, v fri, vgr, psrt, wrdd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr, vpsrt, wrdd, arg cmt, abnt lit frag, abnt glau  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

MD 4013'  
INC 14.5°  
AZM 168.1°  
TVD 3949.33'

SHYSS: ltgy-gy, s&p ip, sbang, v fri, vgr, psrt, wrdd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr, vpsrt, wrdd, arg cmt, abnt lit frag, abnt glau  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt





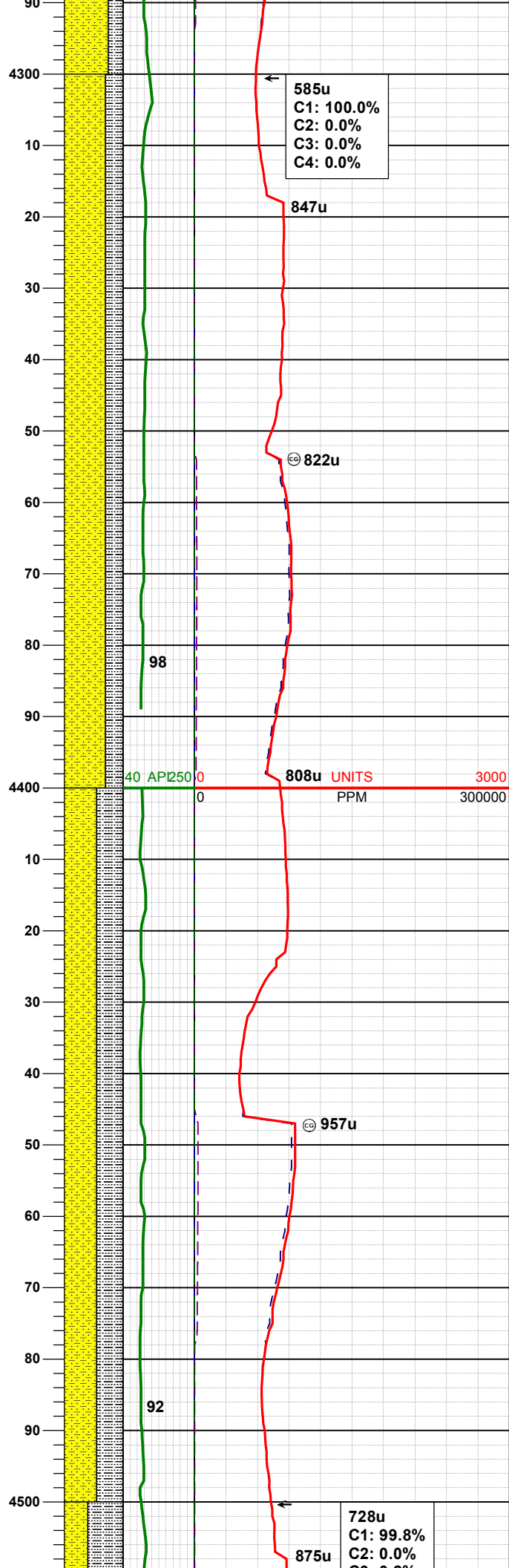
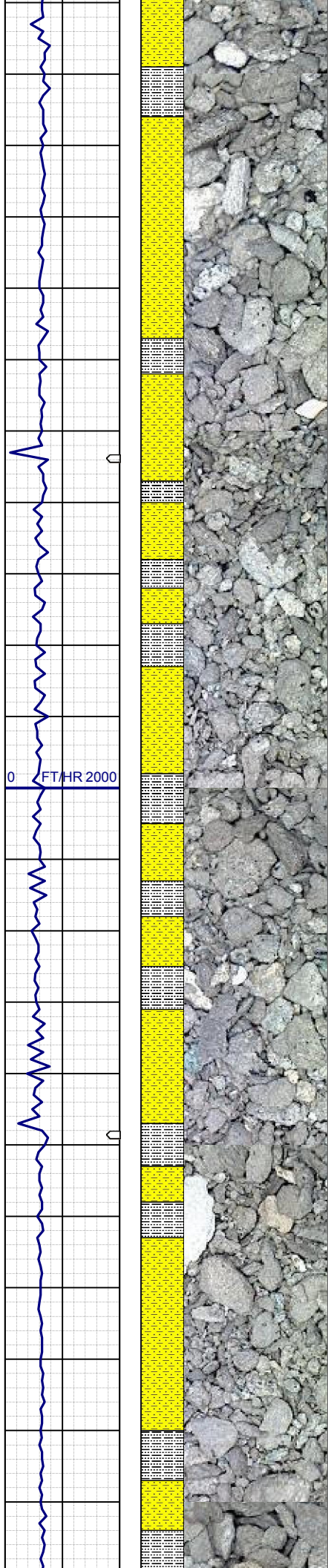
MD 4108'  
INC 13.5°  
AZM 165.4°  
TVD 4041.51'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SS: ltgy-gy-trnsl, sbang-ang, fgr,  
vpsrt, wrnnd, arg cmt, abnt lit frag,  
abnt glau  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

MD 4203'  
INC 13.3°  
AZM 163.8°  
TVD 4133.93'

WT IN 8.70/ OUT 8.70  
VIS IN 30/ OUT 30

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt



MD 4297'  
INC 11.0°  
AZM 164.0°  
TVD 4225.81'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

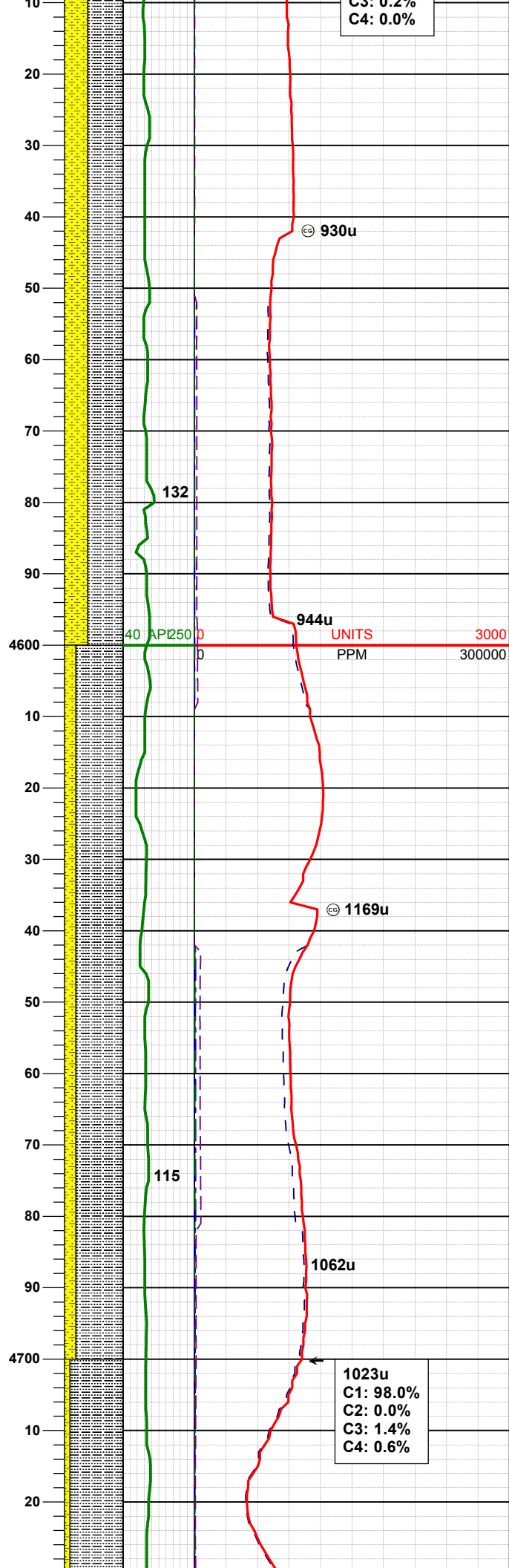
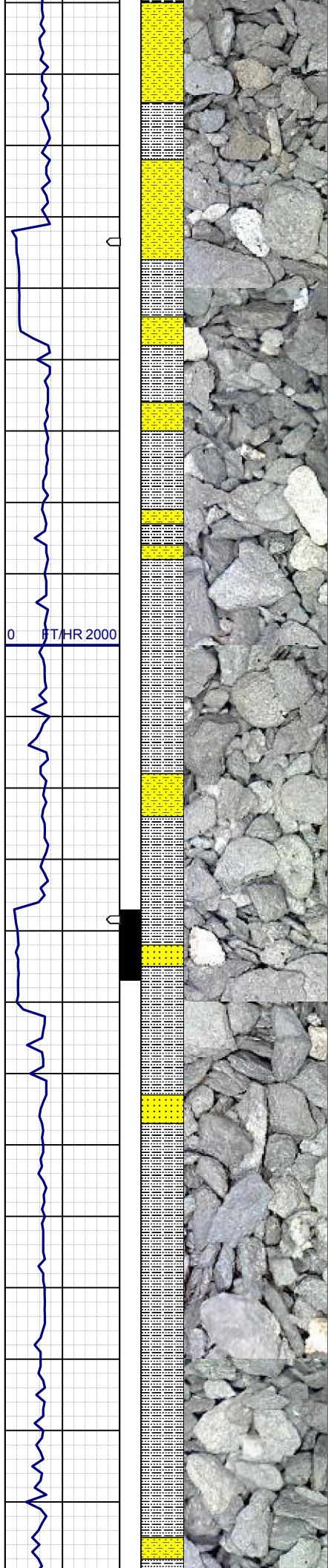
MD 4392'  
INC 9.5°  
AZM 166.3°  
TVD 4319.30'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-sdy tex, arg cmt

MD 4487'  
INC 7.0°  
AZM 175.6°  
TVD 4413.31'

WT IN 8.70/ OUT 8.70  
VIS IN 40/ OUT 40





C3: 0.2%  
C4: 0.0%

SHYSS: ltgy-gy, s&p ip, sbang, v fri,  
vfgr, psrt, wrnnd, abnt cly, arg cmt  
SLTYSH: ltgy-gy, sbblky-sbply, sft, gt  
-sdy tex, arg cmt

MD 4582'  
INC 5.0°  
AZM 172.1°  
TVD 4507.79'

0 FT/HR 2000

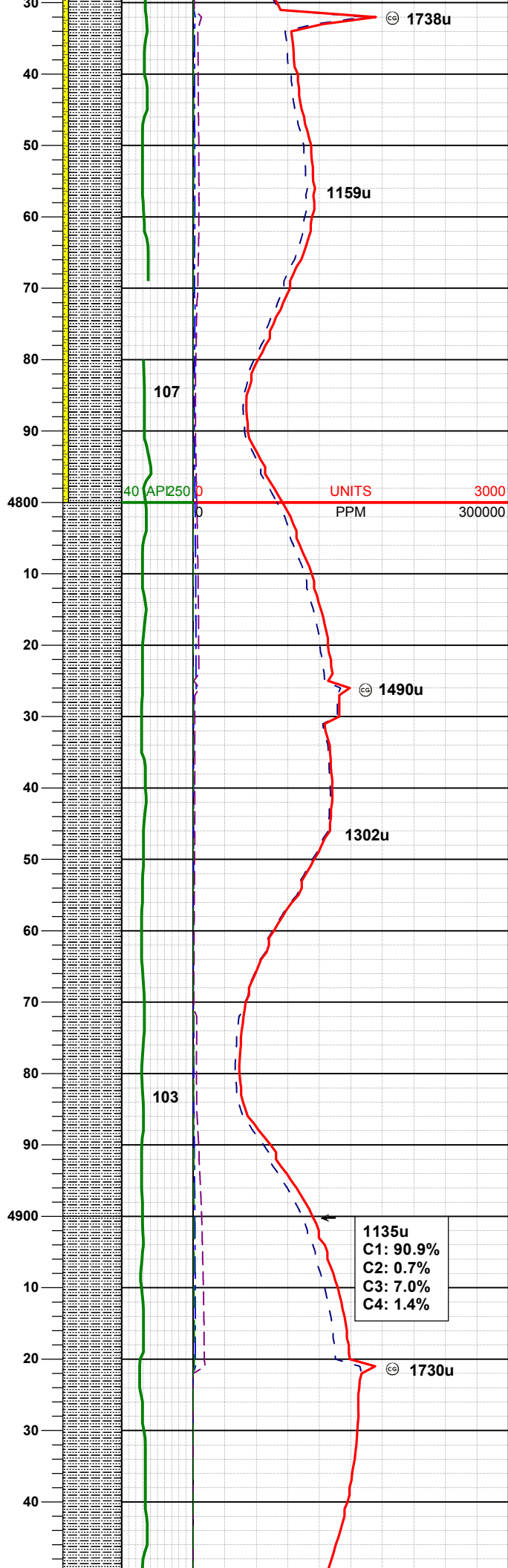
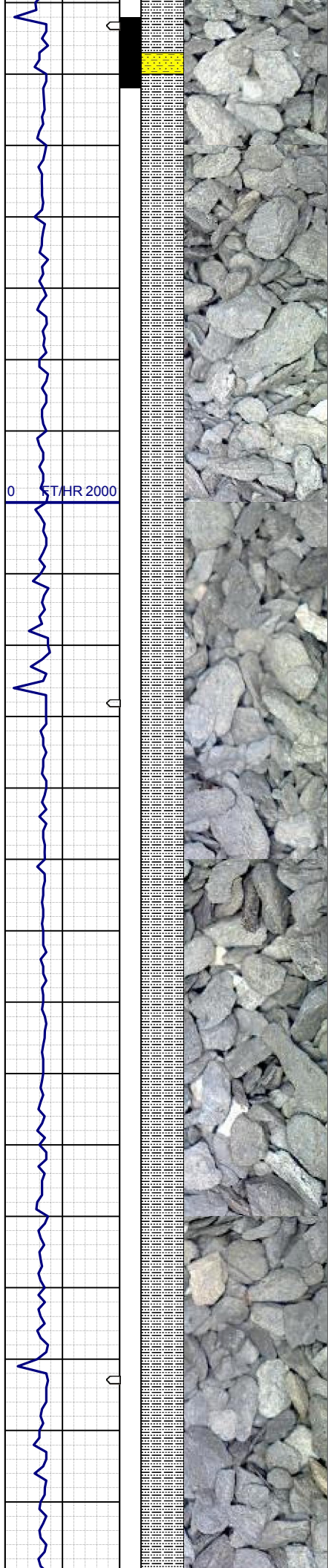
4600 40 API250 0 0 944u UNITS 3000  
PPM 300000

SHYSS: ltgy-ltbrn-gy, s&p ip, sbang, v  
fri, vfgr, smwtwsrt, wrnnd, abnt cly,  
arg cmt  
SLTYSH: ltgy-gy, sbblky-sbply, sft, gt  
-sdy tex, arg cmt, tr pyr

MD 4677'  
INC 3.8°  
AZM 171.0°  
TVD 4602.50'

4700 1023u  
C1: 98.0%  
C2: 0.0%  
C3: 1.4%  
C4: 0.6%

WT IN 9.20/ OUT 9.20  
VIS IN 36/ OUT 36



SHYSS: ltgy-ltbrn-gy, s&p ip, sbang, v  
fri, vfgr, smwtwsrt, wrnnd, abnt cly,  
arg cmt  
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-rr sdy tex, arg cmt

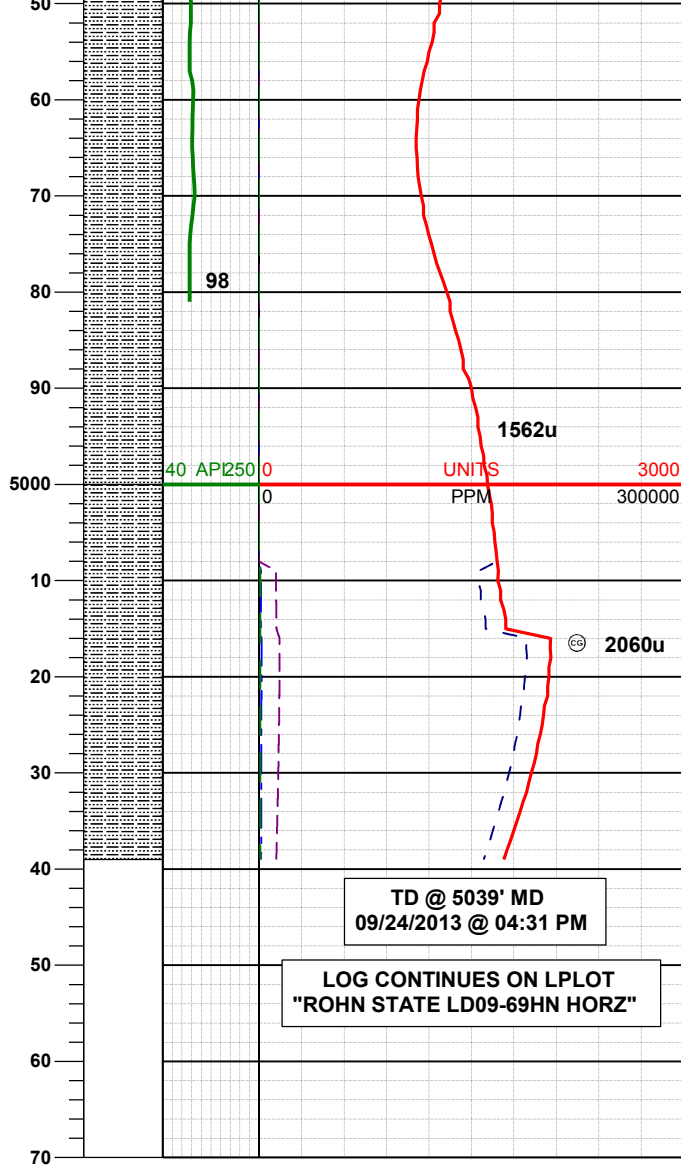
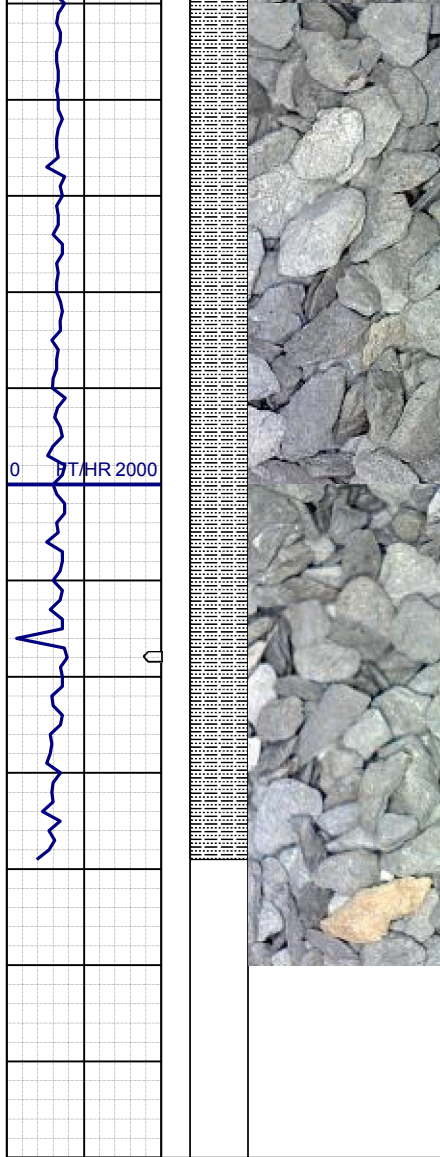
MD 4772'  
INC 2.4°  
AZM 181.8°  
TVD 4697.36'

SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-rr sdy tex, arg cmt

MD 4867'  
INC 1.5°  
AZM 204.4°  
TVD 4792.31'

SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt





MD 4961'  
INC 0.9°  
AZM 206.9°  
TVD 4886.29'

SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt  
-slty tex, arg cmt

TD @ 5039' MD  
09/24/2013 @ 04:31 PM

LOG CONTINUES ON L PLOT  
"ROHN STATE LD09-69HN HORZ"