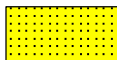


LOG created using Lplot VH Version 3.0, July 29, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC
WELL: ROHN STATE LD04-65HN
LOCATION: SEC 4 T9N R58W
COUNTY: WELD
STATE: COLORADO
SPOT: 1863' FNL, 480' FEL
ELEVATION: 4703' GL; 4727' KB
FIELD: WILDCAT
SPUD DATE: 07/24/2013
TD DATE: 07/25/2013
DATES LOGGED: 07/25/2013
DEPTHS LOGGED: 1200' - 4966' MD
LOGGERS: LAURA KELLOGG; RYAN NICHOLAS
DRILLING FLUID: LSND
DRILLING RIG: H&P 273
API: 05-123-37445
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



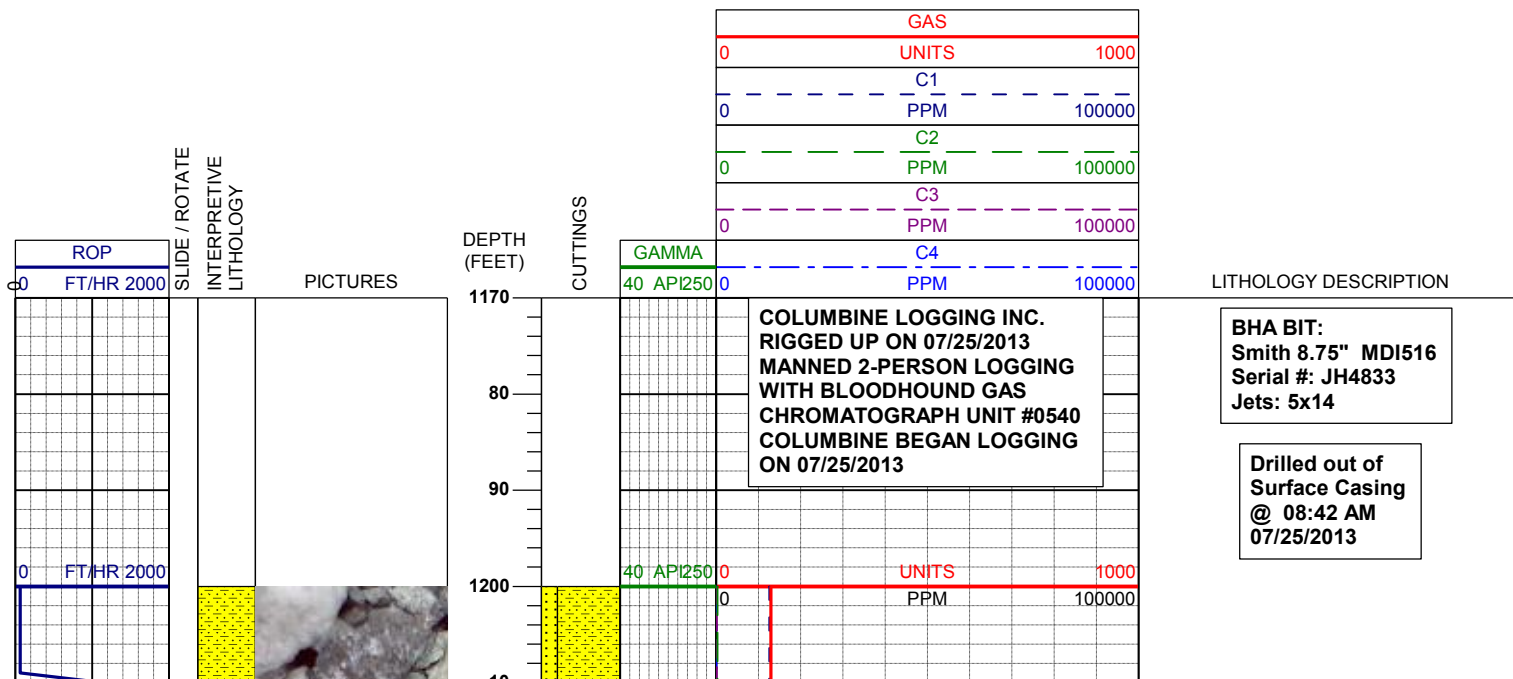
Connection

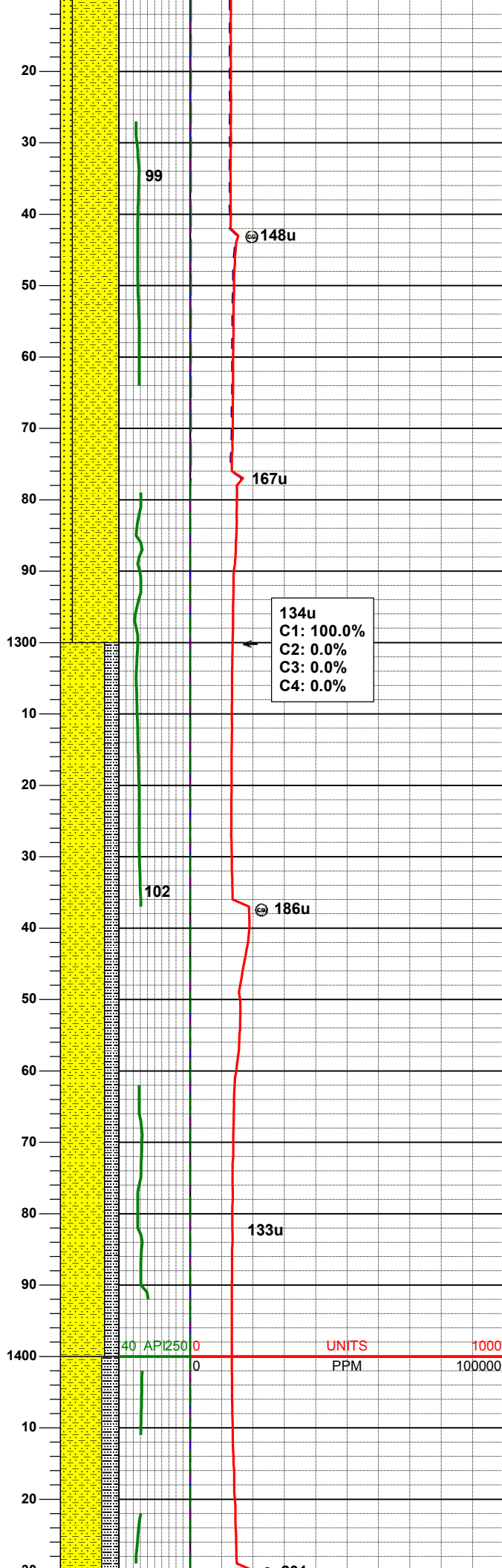
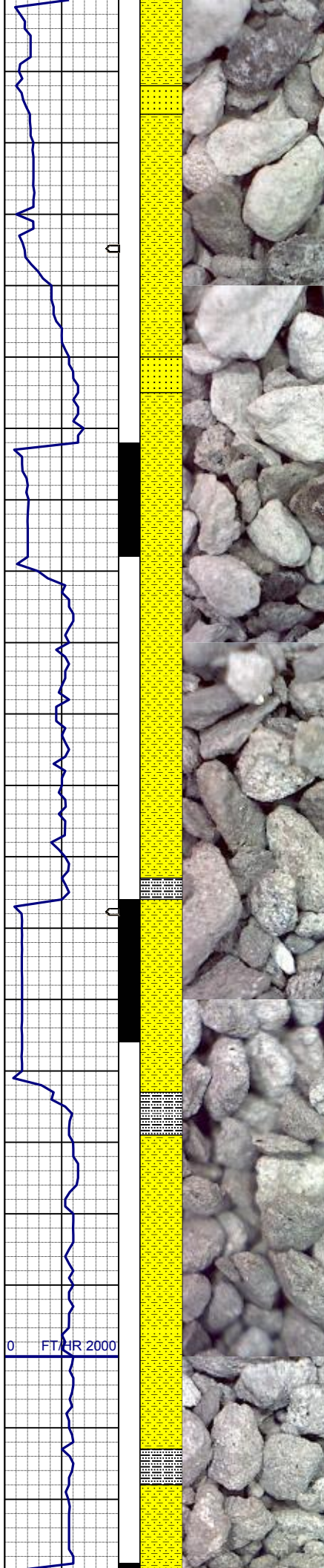


Connection Gas



Arrow





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

MD 1281'
INC 1.0°
AZM 271.9°
TVD 1280.95'

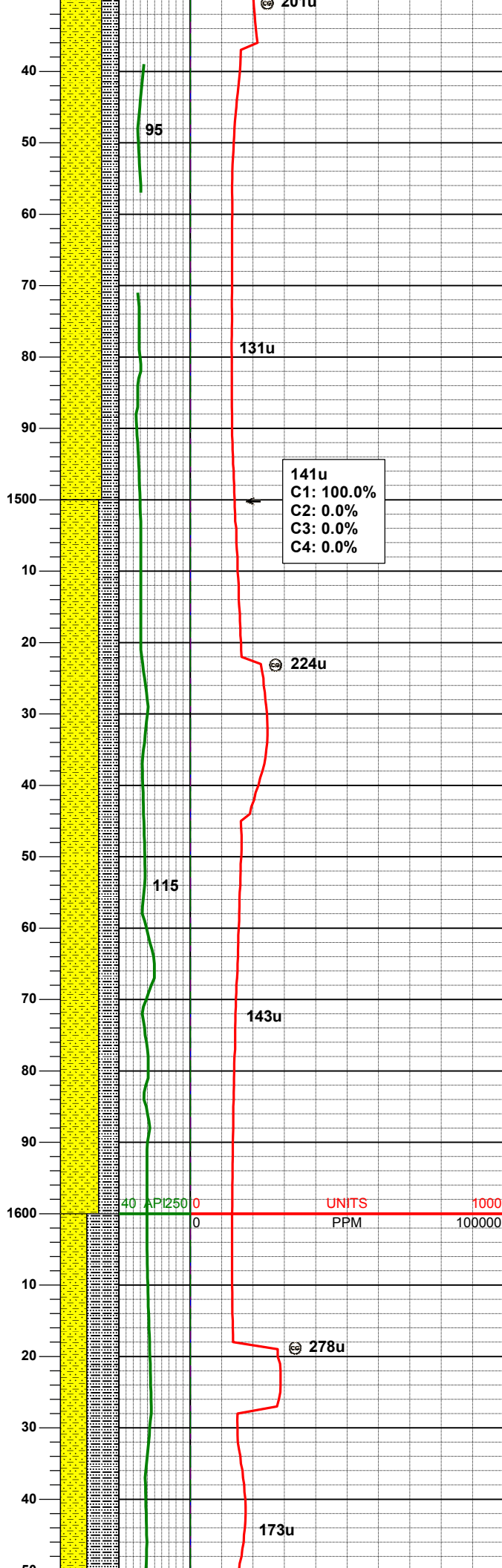
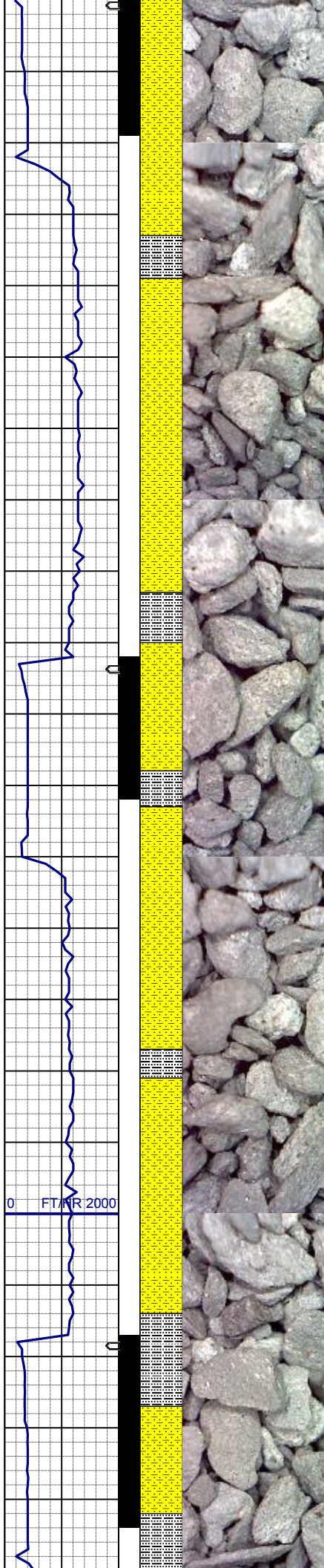
134u
C1: 100.0%
C2: 0.0%
C3: 0.0%
C4: 0.0%

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

MD 1374'
INC 2.5°
AZM 204.6°
TVD 1373.91'

0 FT/HR 2000

40 API 250 0 UNITS 1000
0 PPM 100000



WT IN 8.50/ OUT 8.50
VIS IN 26/ OUT 26

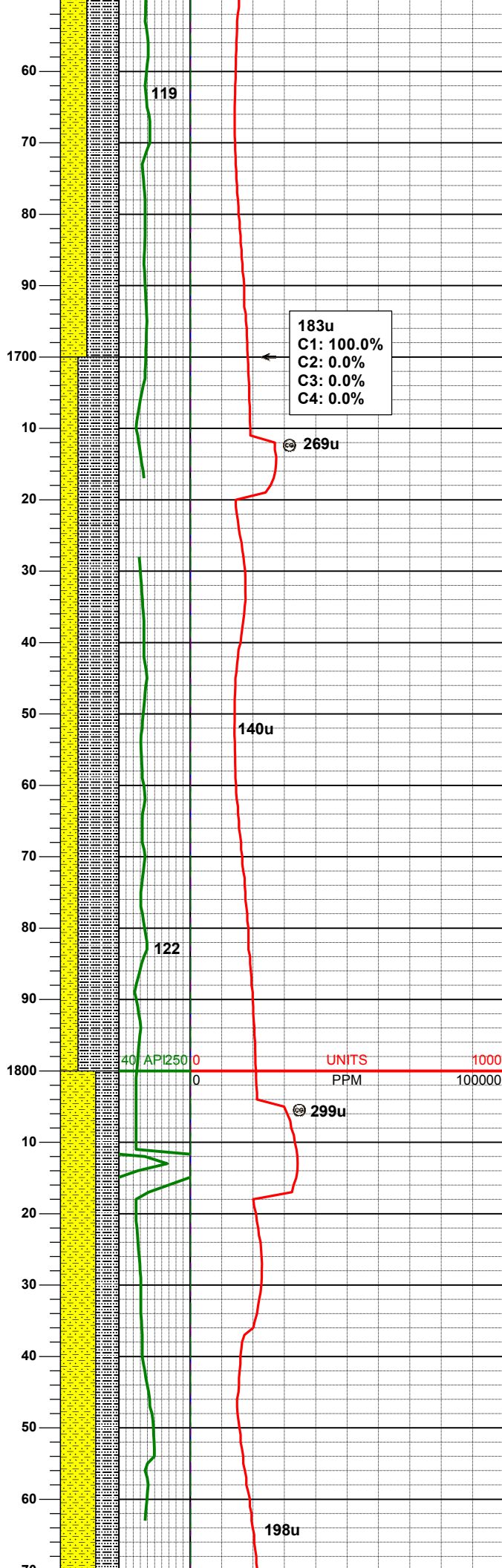
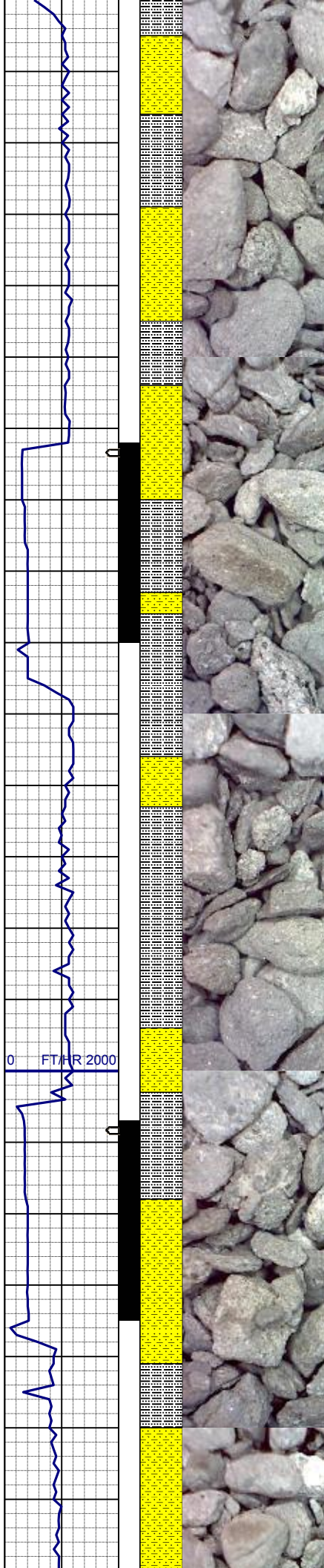
SHYSS: ltgy-gy, s&p ip, sbang, v fri, vfgr, psrt, wrndd, abnt cly, arg cmt, sl calc
SLTYSH: ltgy-gy, sbblky-sbply, sft, gt-sdy tex, arg cmt

MD	1467'
INC	4.3°
AZM	188.1°
TVD	1466.74'

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

MD	1562'
INC	5.6°
AZM	177.9°
TVD	1561.39'

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



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

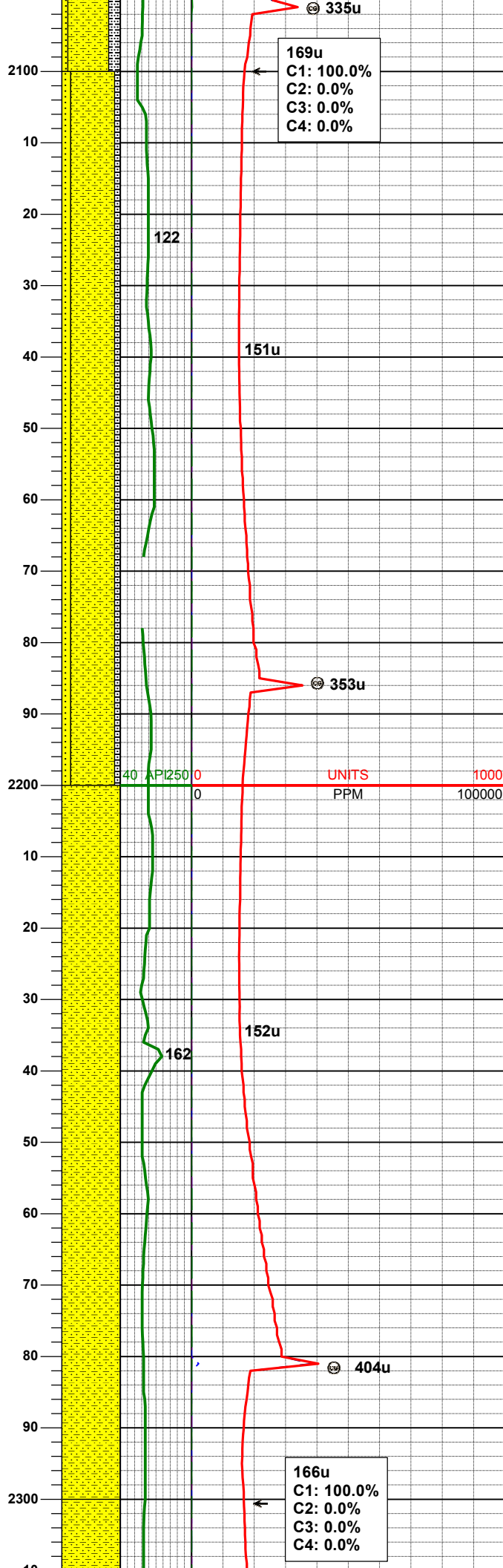
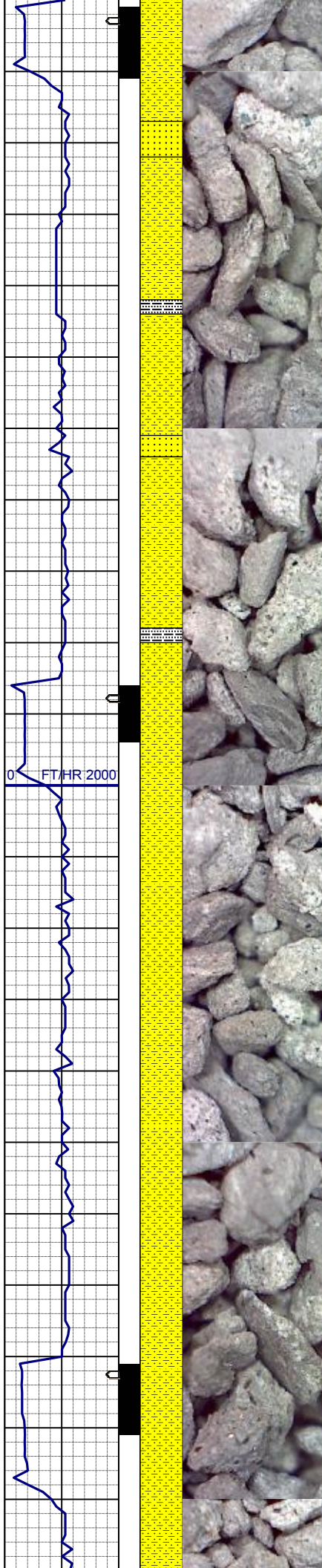
MD 1657'
INC 7.6°
AZM 169.8°
TVD 1655.76'

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

MD 1752'
INC 9.3°
AZM 170.3°
TVD 1749.72'

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

MD 1847'
INC 11.0°
AZM 163.6°
TVD 1843.23'



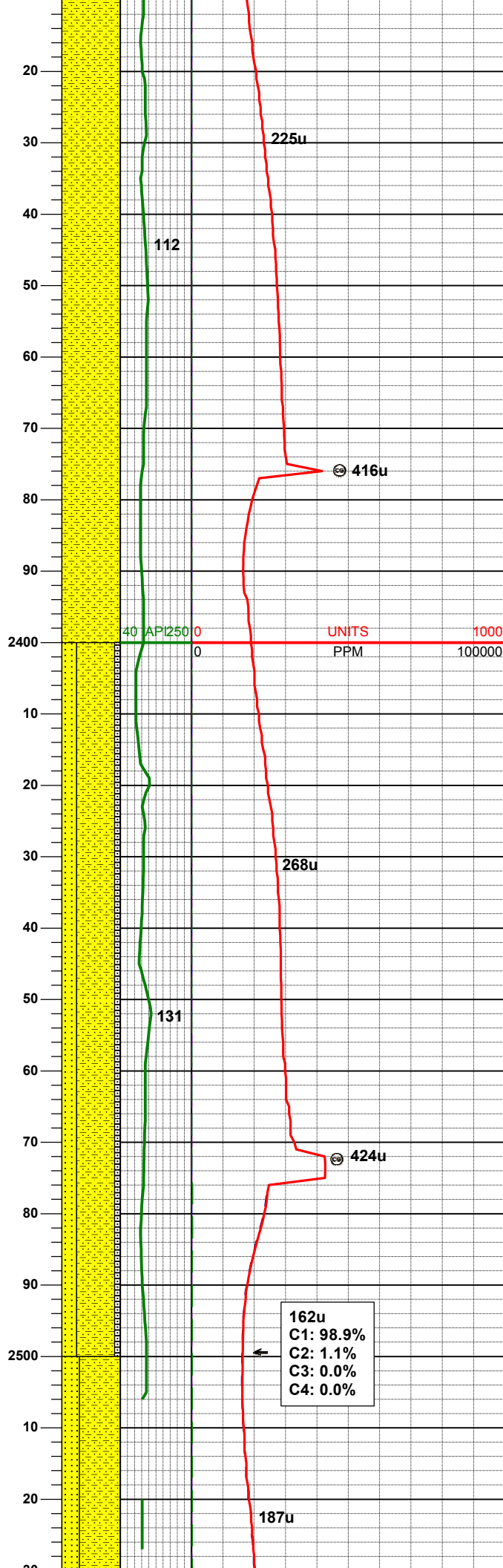
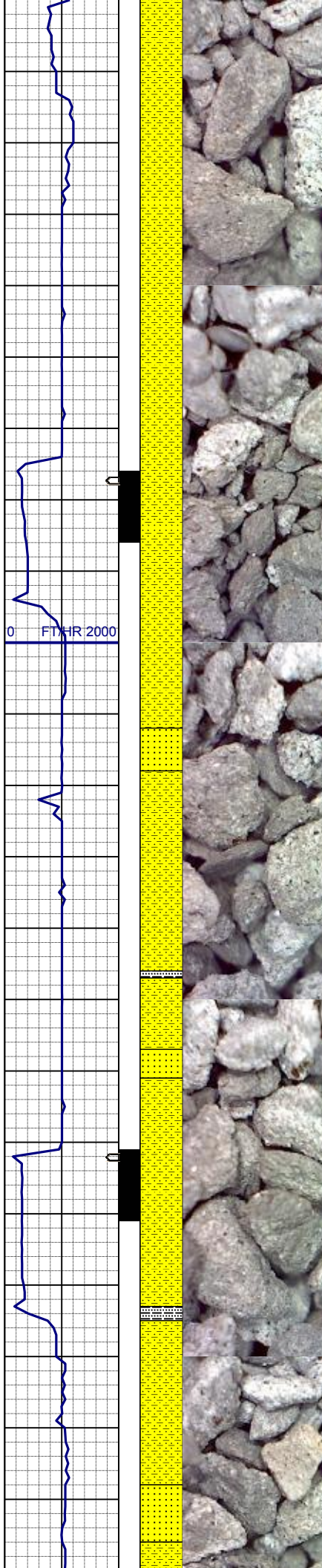
MD 2131'
INC 12.5°
AZM 167.7°
TVD 2120.83'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,
vfgr, psrt, wrndd, abnt cly, arg cmt, sl
calc
SS: ltgy-gy-trnsl, sbang-ang, fgr, psrt,
wrndd, arg cmt, tr lit frag
SLTYSH: ltgy-gy, sbbly-sbply, sft, gt
-sdy tex, arg cmt

MD 2226'
INC 11.6°
AZM 162.2°
TVD 2213.74'

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

WT IN 8.70/ OUT 8.70
VIS IN 26/ OUT 26



MD 2321'
INC 11.8°
AZM 166.1°
TVD 2306.76'

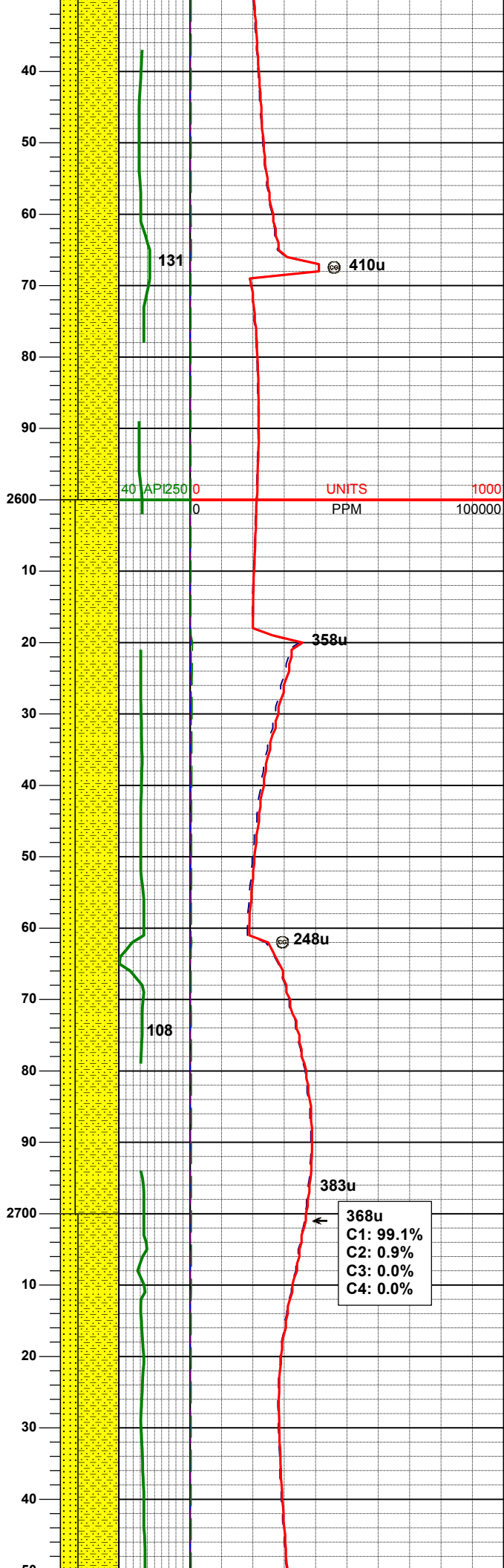
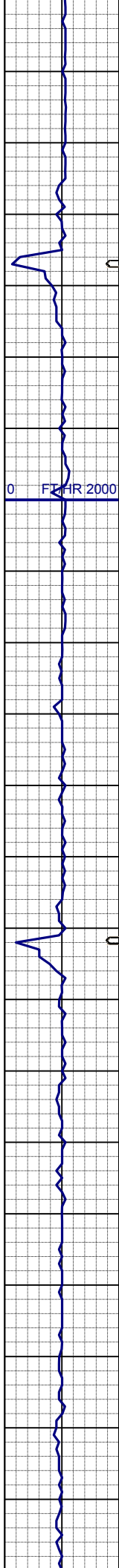
SHYSS: ltgy-gy, s&p ip, sbang, v fri,
vfgr, psrt, wrndd, abnt cly, arg cmt, sl
calc

MD 2416'
INC 12.0°
AZM 170.7°
TVD 2399.73'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,
vfgr, psrt, wrndd, abnt cly, arg cmt, sl
calc
SS: ltgy-gy-trnsl, sbang-ang, fgr, psrt,
wrndd, arg cmt, tr lit frag
SLTYSH: ltgy-gy, sbblky-sbply, sft, gt
-sdy tex, arg cmt

MD 2511'
INC 13.2°
AZM 169.8°
TVD 2492.44'

162u
C1: 98.9%
C2: 1.1%
C3: 0.0%
C4: 0.0%



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

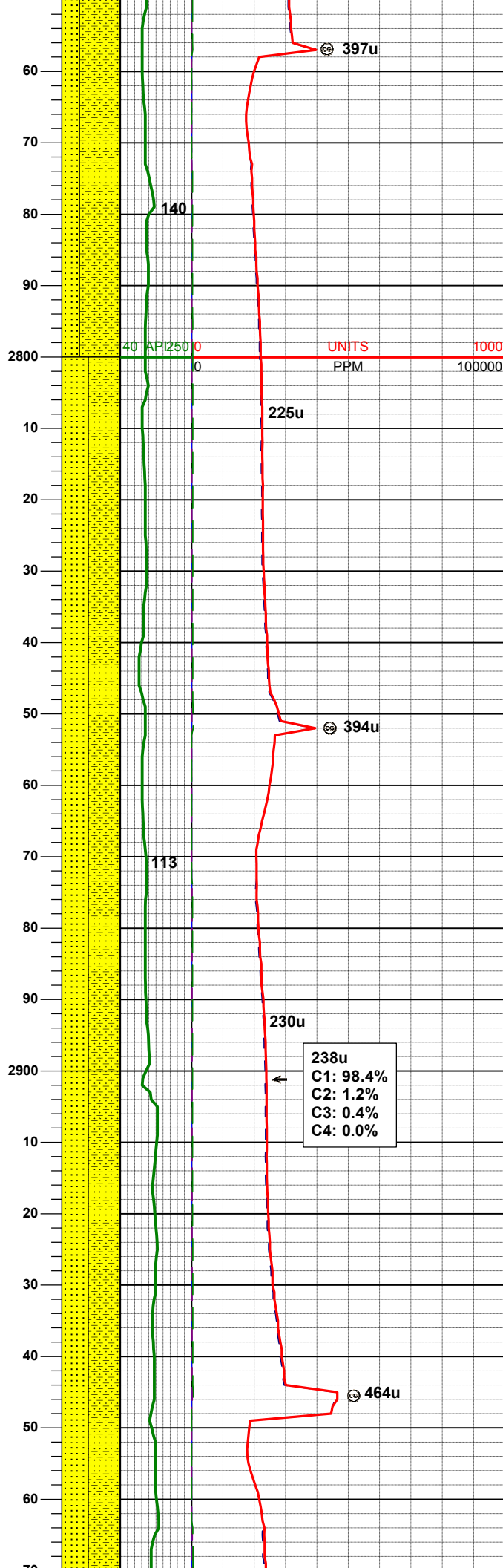
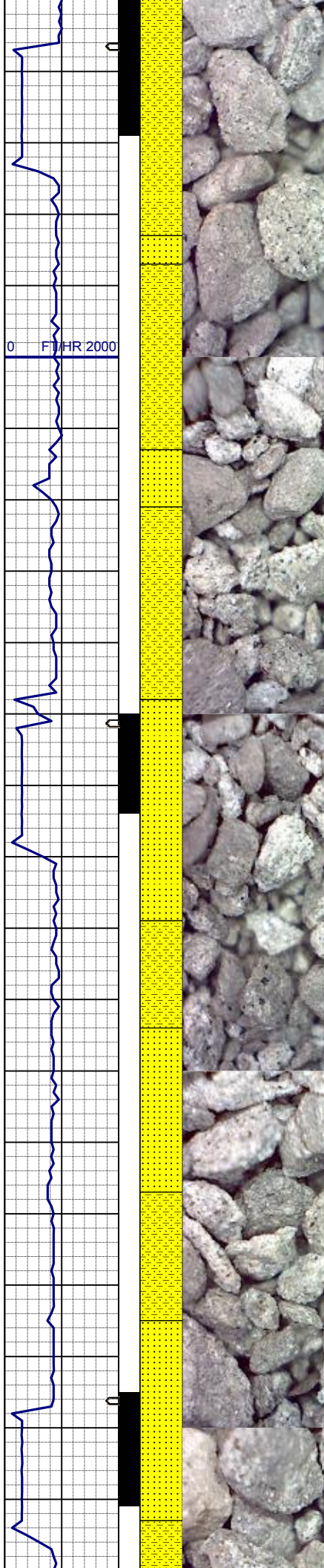
MD	2605'
INC	13.2°
AZM	169.1°
TVD	2583.95'

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

MD	2700'
INC	12.5°
AZM	167.1°
TVD	2676.57'

WT IN 8.80/ OUT 8.80
VIS IN 26/ OUT 26

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



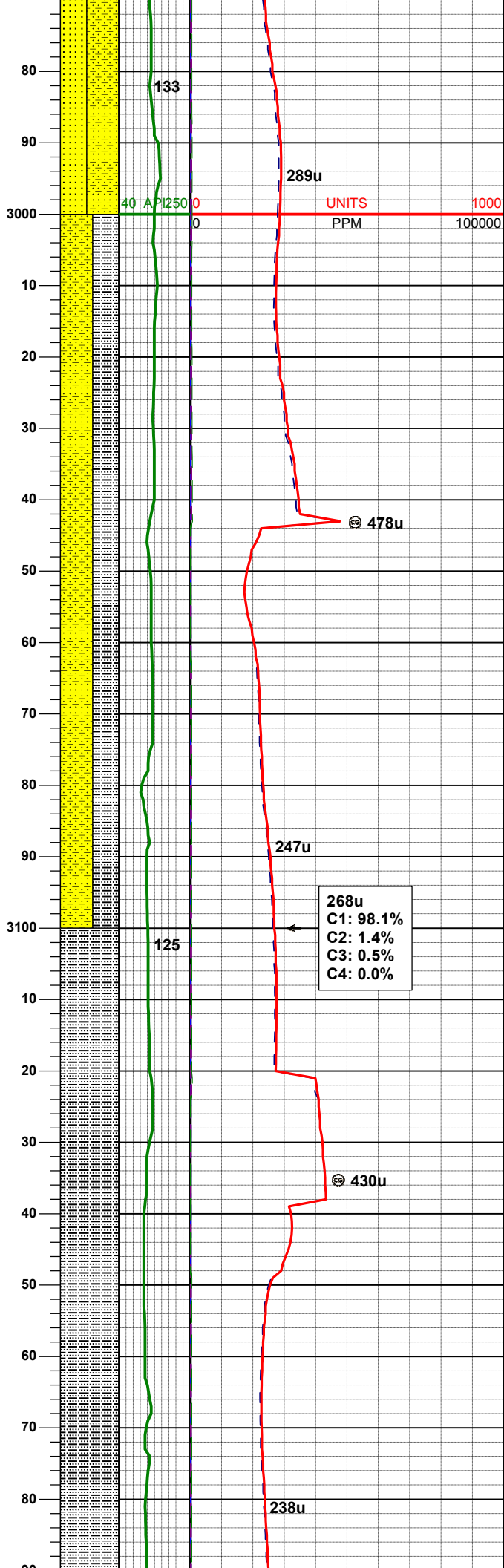
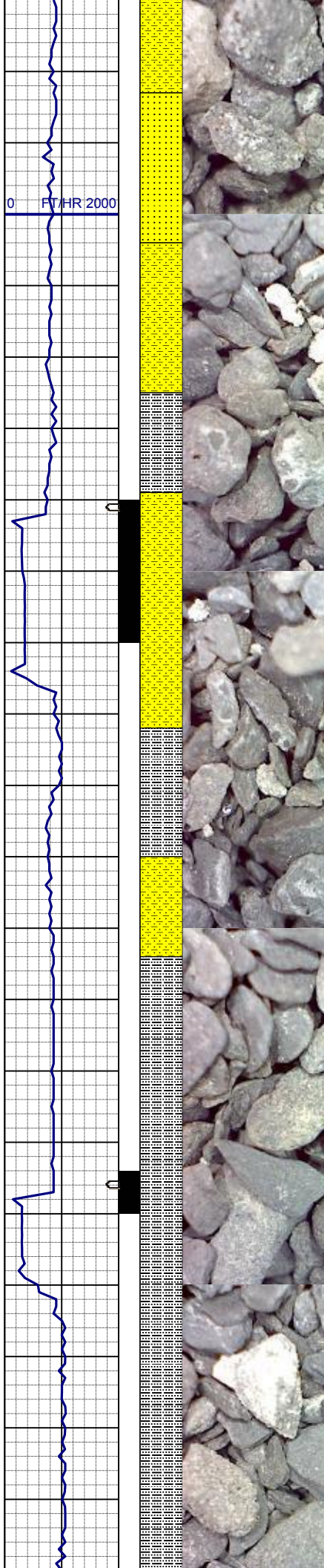
SS: ltgy-gy-trnsl, sbang-ang, fgr, psrt, wrnnd, arg cmt, tr lit frag

MD 2795'
INC 12.5°
AZM 167.0°
TVD 2769.32'

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

MD 2890'
INC 11.4°
AZM 165.9°
TVD 2862.26'

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



MD 2985'
INC 10.3°
AZM 167.0°
TVD 2955.56'

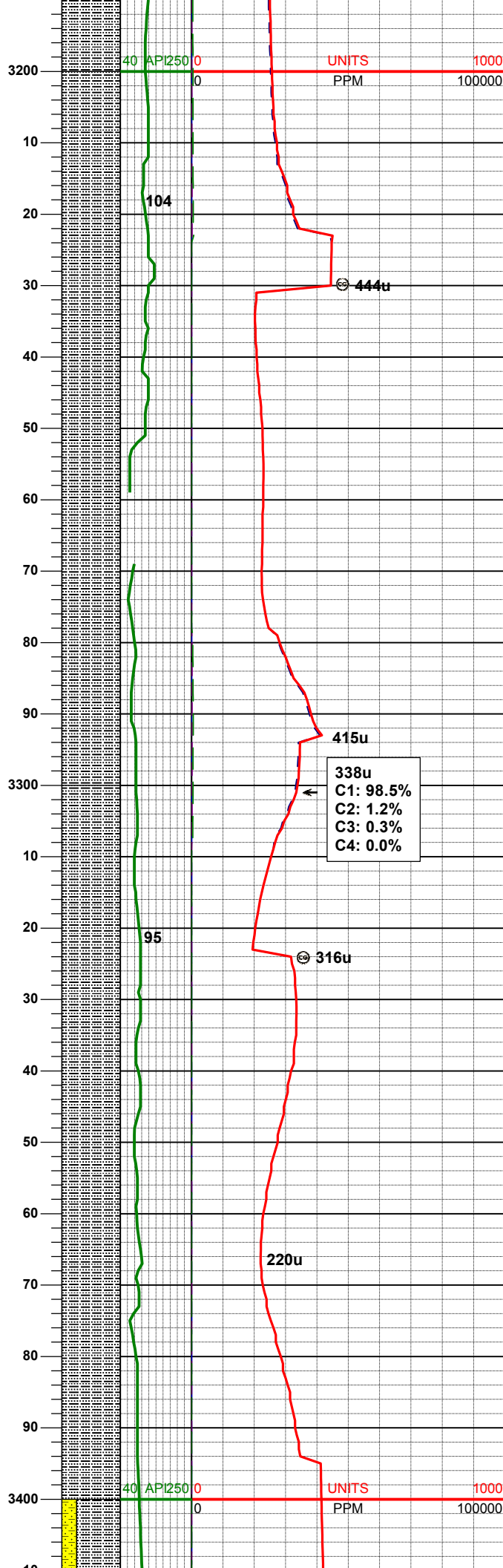
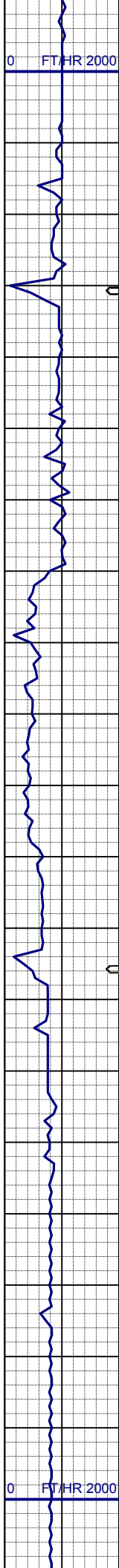
SHYSS: ltgy-gy, s&p ip, sbang, v fri,
vfgr, psrt, wrndd, abnt cly, arg cmt, sl
calc
SLTYSH: ltgy-gy, sbblky-sbplty, sft, gt
-sdy tex, arg cmt

MD 3080'
INC 10.6°
AZM 170.7°
TVD 3048.99'

WT IN 8.90/ OUT 8.90
VIS IN 26/ OUT 26

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

MD 3174'
INC 11.7°
AZM 171.2°
TVD 3141.21'



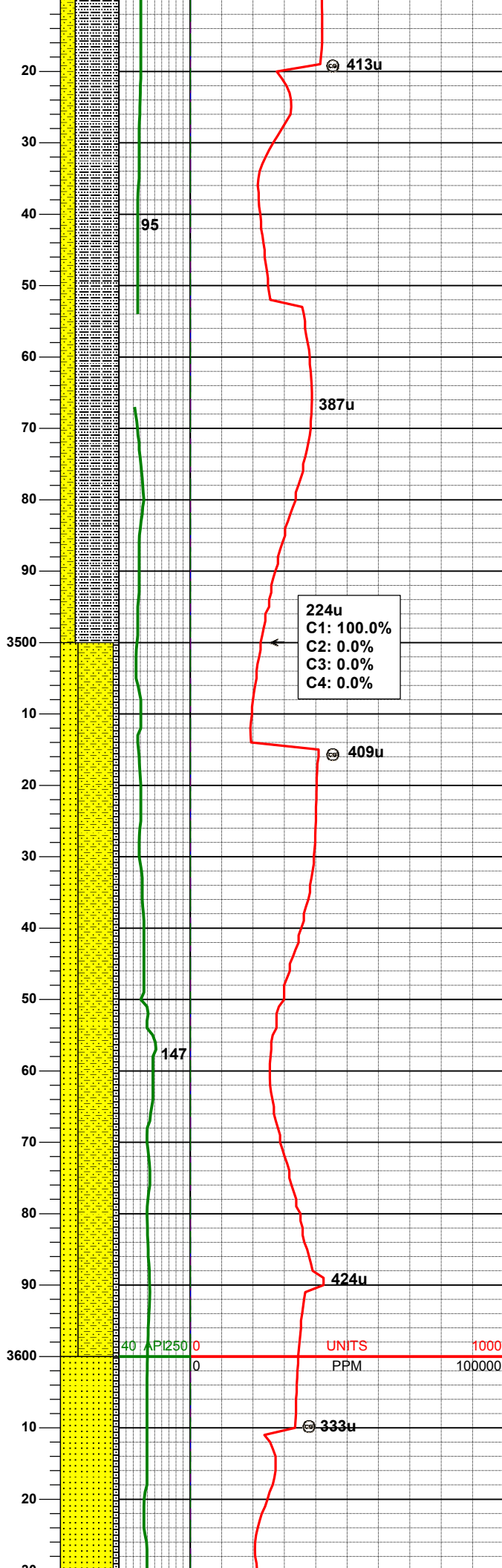
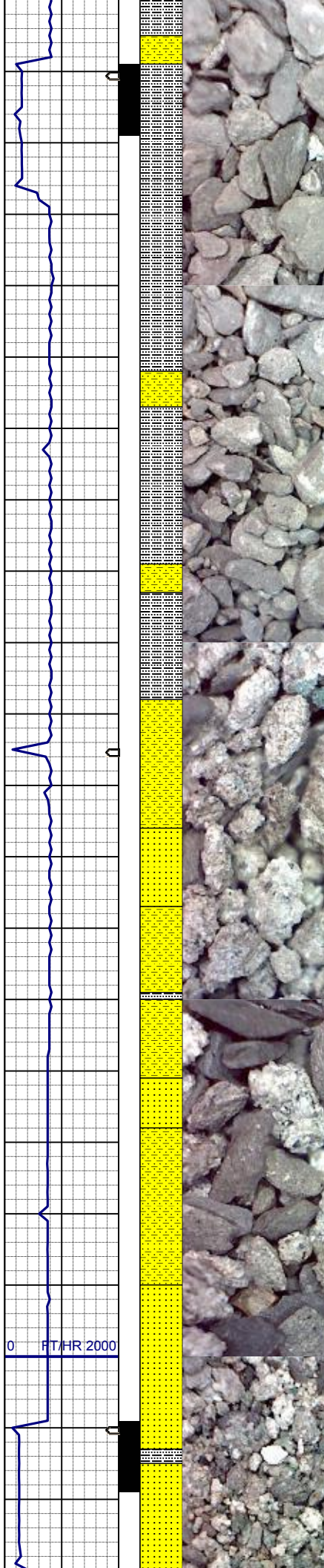
SLTYSH: Itgy-gy, sbblky-sbplty, sft, gt
-sdy tex, arg cmt

MD 3269'
INC 12.0°
AZM 171.2°
TVD 3234.19'

338u
C1: 98.5%
C2: 1.2%
C3: 0.3%
C4: 0.0%

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

MD 3364'
INC 12.6°
AZM 172.2°
TVD 3327.00'



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

MD	3459'
INC	13.8°
AZM	170.3°
TVD	3419.49'

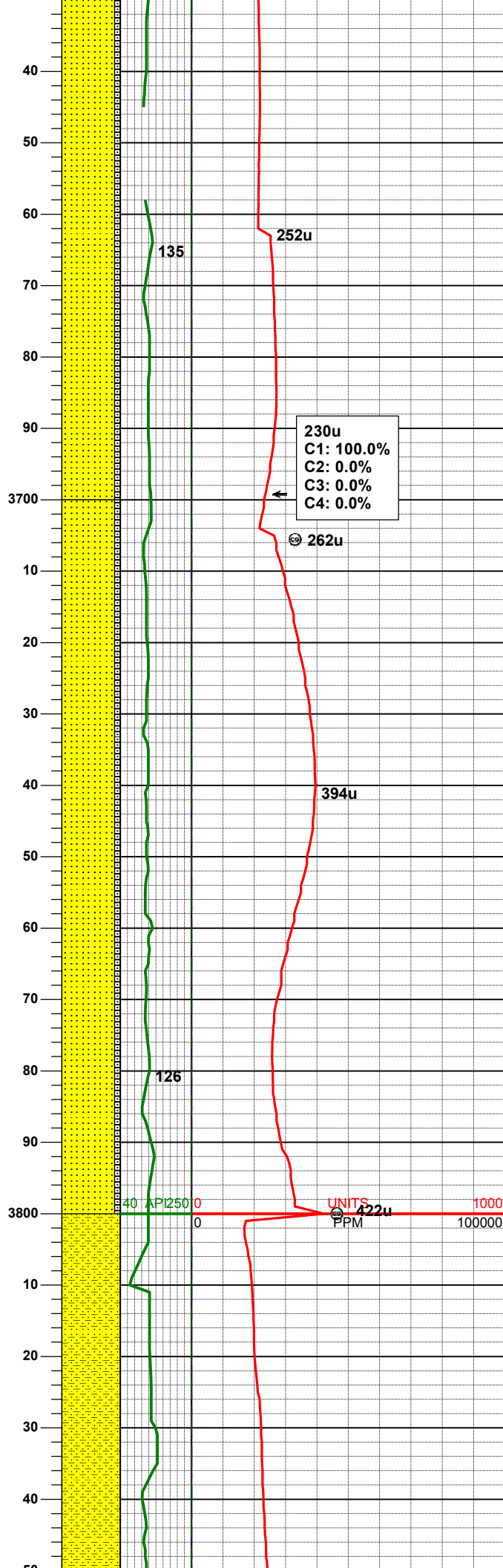
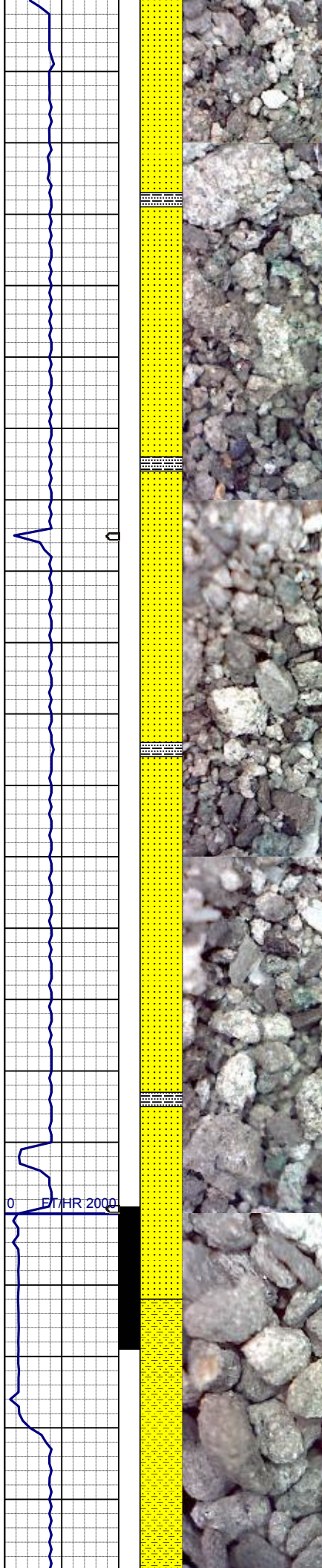
224u
C1: 100.0%
C2: 0.0%
C3: 0.0%
C4: 0.0%

SHYSS: ltgy-gy, s&p ip, sbang, v fri,
vfgr, psrt, wrndd, abnt cly, arg cmt, sl
calc
SS: ltgy-gy-trnsl, sbang-ang, fgr, psrt,
wrndd, arg cmt, tr lit frag, occ glau
SLTYSH: ltgy-gy, sbbiky-sbply, sft, gt
-sdy tex, arg cmt

MD	3554'
INC	14.7°
AZM	170.1°
TVD	3511.57'

0 FT/HR 2000

40 API 250 0 UNITS 1000
0 PPM 100000



MD 3649'
INC 13.4°
AZM 164.2°
TVD 3603.73'

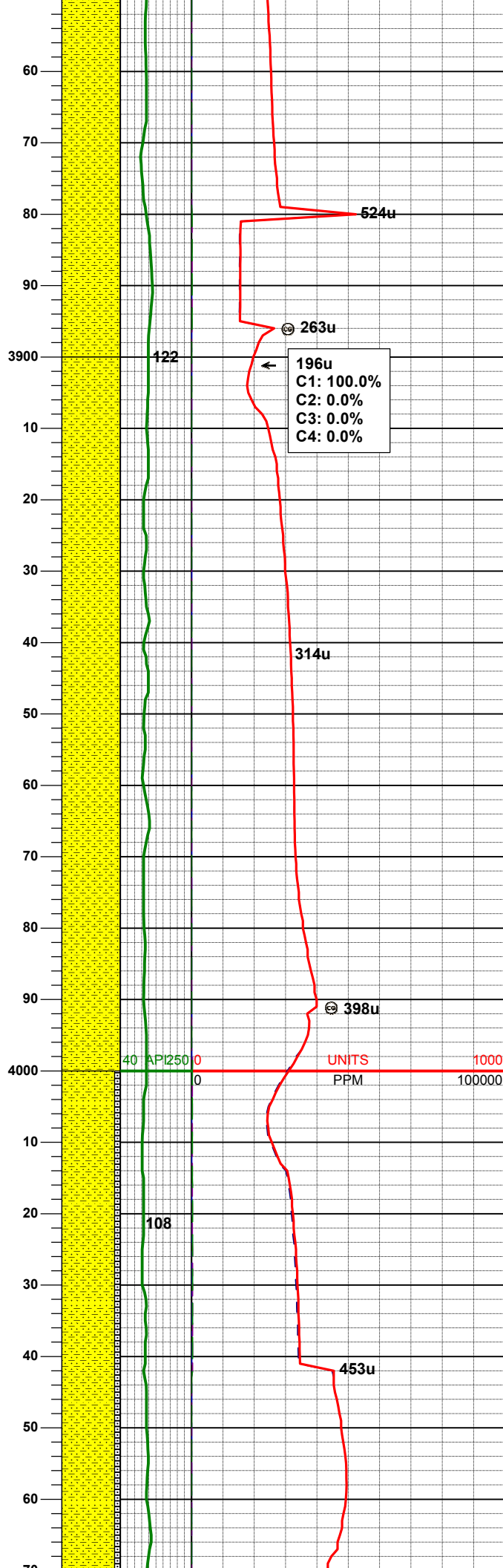
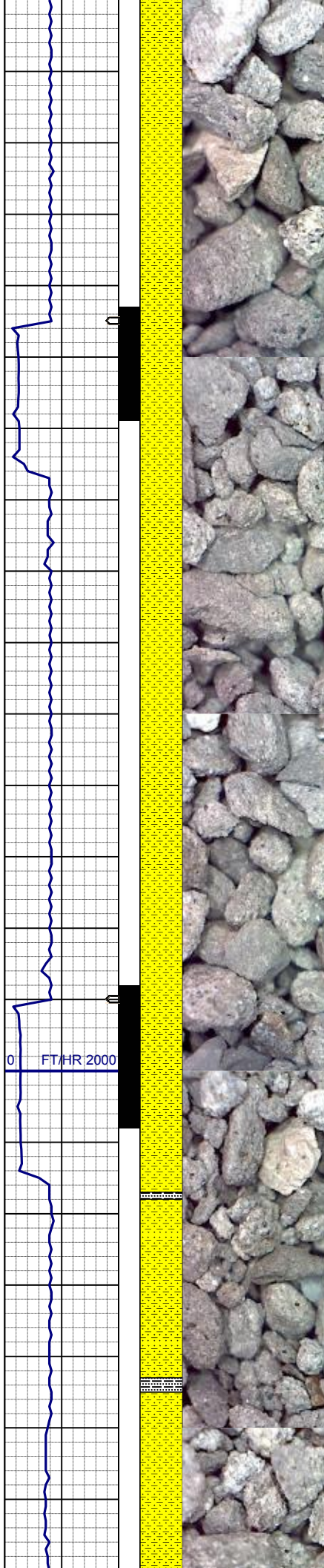
SS: ltgy-gy-trnsl, sbang-ang, fgr, psrt,
wrndd, arg cmt, tr lit frag, occ glau
SLTYSH: ltgy-gy, sbbiky-sbply, sft, gt
-sdy tex, arg cmt

MD 3744'
INC 10.4°
AZM 162.0°
TVD 3696.68'

SS: ltgy-gy-trnsl, sbang-ang, fgr, psrt,
wrndd, arg cmt, tr lit frag, occ glau
SLTYSH: ltgy-gy, sbbiky-sbply, sft, gt
-sdy tex, arg cmt

MD 3838'
INC 9.8°
AZM 162.9°
TVD 3789.22'

SHYSS: ltgy-gy, s&p ip, sbang, v fri,
ufar, post-wrdd, chatchy argmt, sl



vigr, psrt, windd, abnt cly, arg cmt, sl
calc

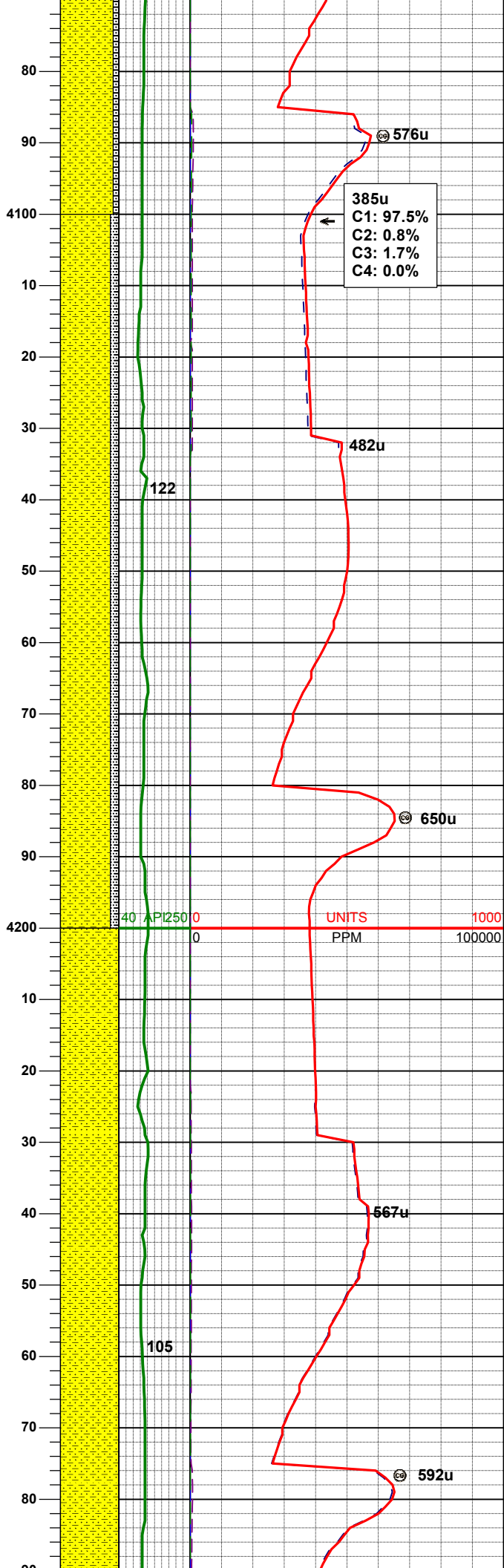
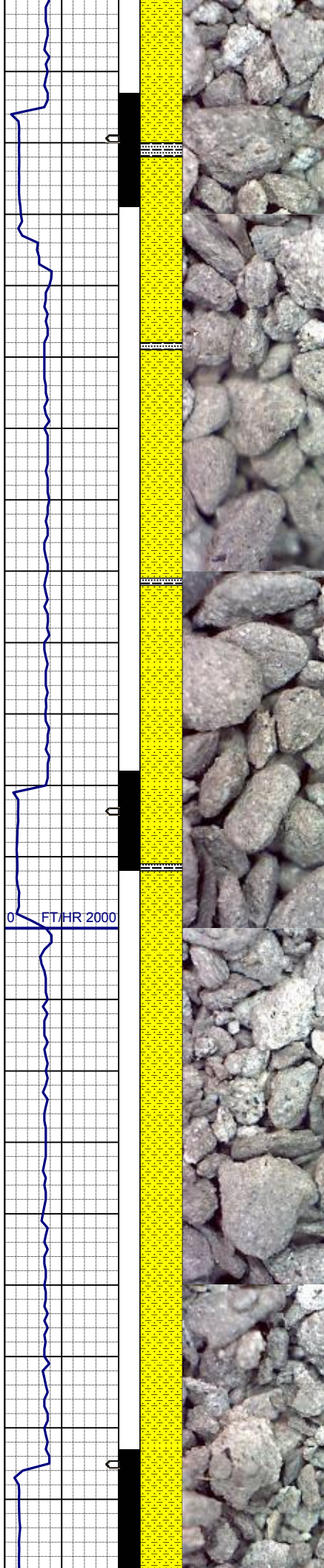
SHYSS: ltgy-gy, s&p ip, sbang, v fri,
vfgr, psrt, wrndd, abnt cly, arg cmt, sl
calc

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

MD 3933'
INC 9.6°
AZM 167.5°
TVD 3882.86'

WT IN 9.00/ OUT 9.00
VIS IN 26/ OUT 26

MD 4028'
INC 10.4°
AZM 166.6°
TVD 3976.42'

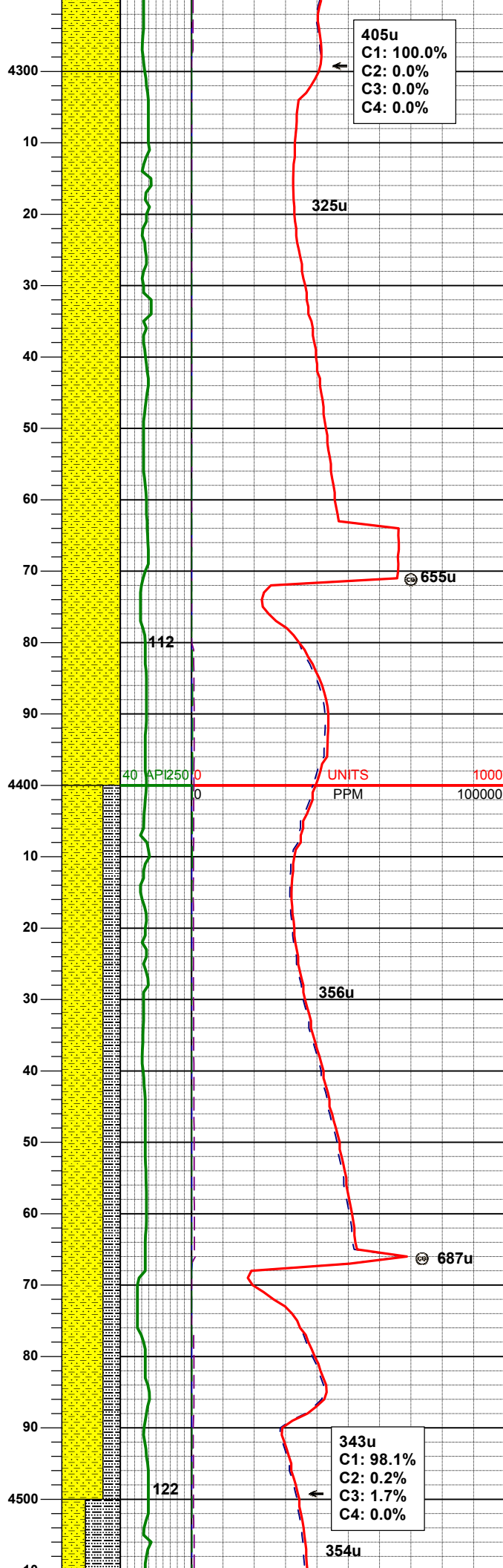
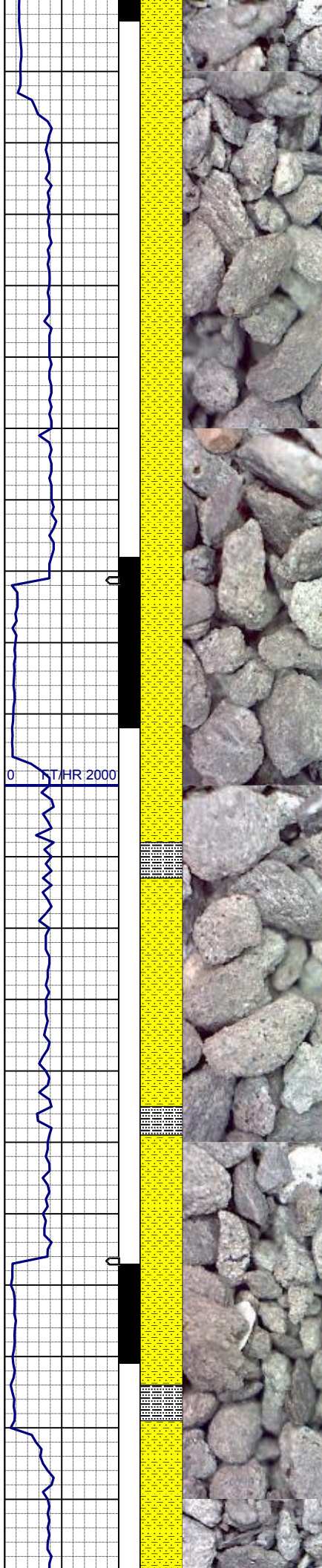


MD 4123'
INC 10.6°
AZM 169.8°
TVD 4069.83'

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

MD 4218'
INC 9.8°
AZM 172.9°
TVD 4163.33'

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



405u
C1: 100.0%
C2: 0.0%
C3: 0.0%
C4: 0.0%

MD 4313'
INC 8.2°
AZM 167.7°
TVD 4257.16'

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

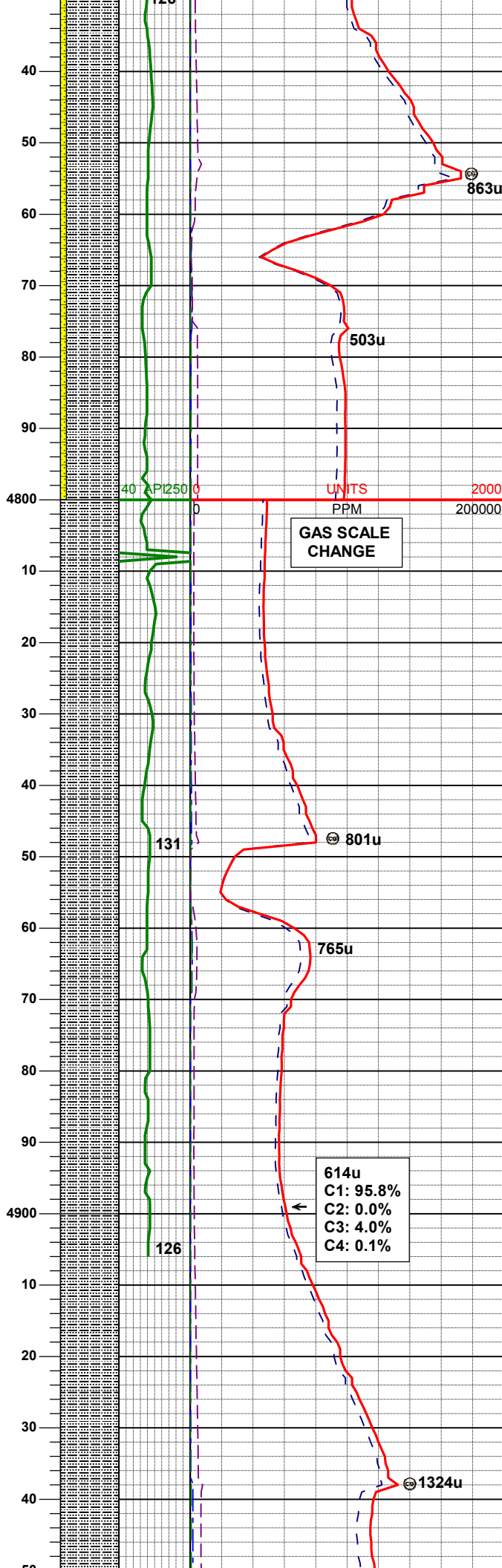
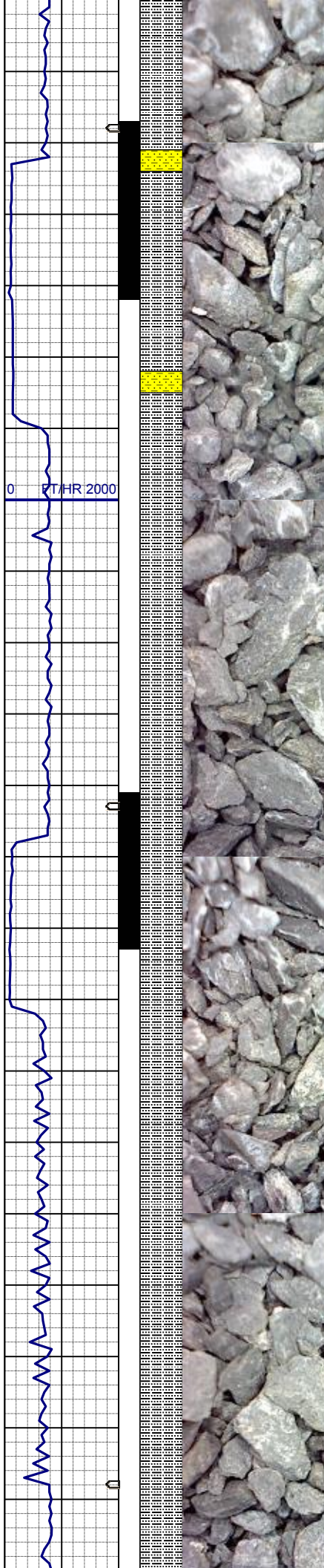
WT IN 9.20/ OUT 9.20
VIS IN 30/ OUT 30

MD 4407'
INC 8.3°
AZM 169.6°
TVD 4350.19'

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

343u
C1: 98.1%
C2: 0.2%
C3: 1.7%
C4: 0.0%

MD 4502'
INC 7.4°
AZM 184.5°
TVD 4444.30'



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

MD 4786'
INC 7.7°
AZM 163.6°
TVD 4725.94'

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

WT IN 9.30/ OUT 9.30
VIS IN 35/ OUT 35

MD 4881'
INC 7.6°
AZM 163.8°
TVD 4820.09'

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

