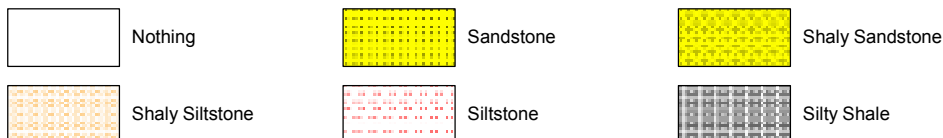


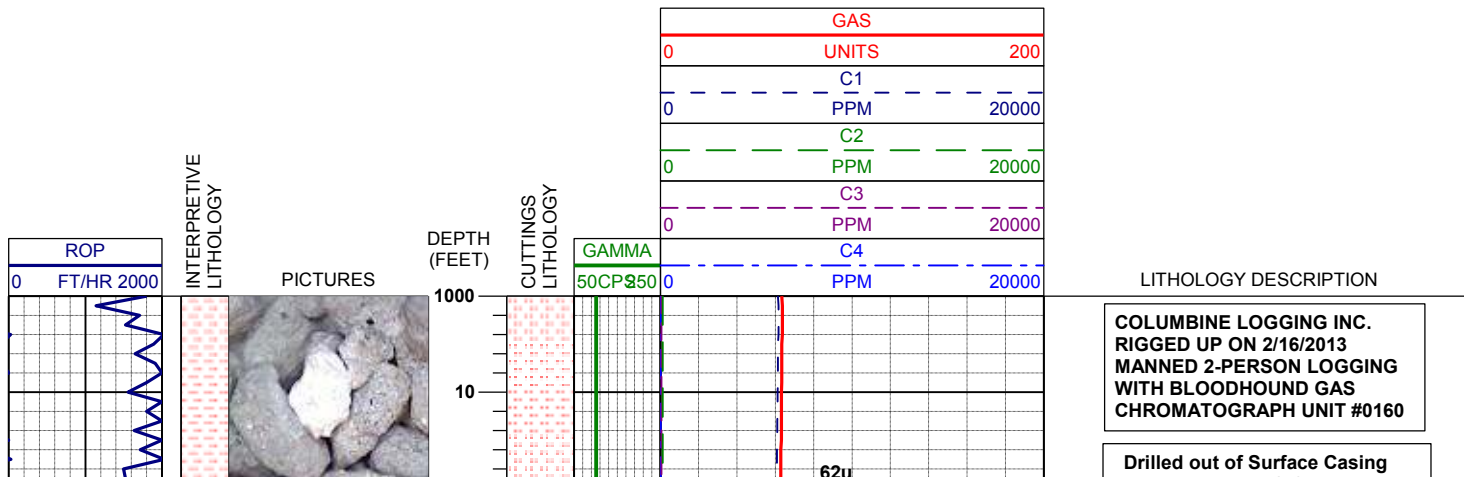
LOG created using LPLLOT VH Version 3.0, February 22, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC.
WELL: KEOTA PC LB26-62HN
LOCATION: SEC 27, T9N, R60W
COUNTY: WELD
STATE: COLORADO
SPOT: 1282' FSL, 350' FEL
ELEVATION: GE: 4,949', KB: 4,973'
FIELD: WILDCAT
SPUD DATE: 02/15/2013
TD DATE: 02/22/2013
DATES LOGGED: 02/16/2013 - 02/22/2013
DEPTHS LOGGED: 1,000' - 10740'
LOGGERS: BRAD WILSON, JOHN T. READY
DRILLING FLUID: WATER, MUD, POLY
DRILLING RIG: H&P 322
API: 05-123-36549
LOG TYPE: VERTICAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.

LITHOLOGIES

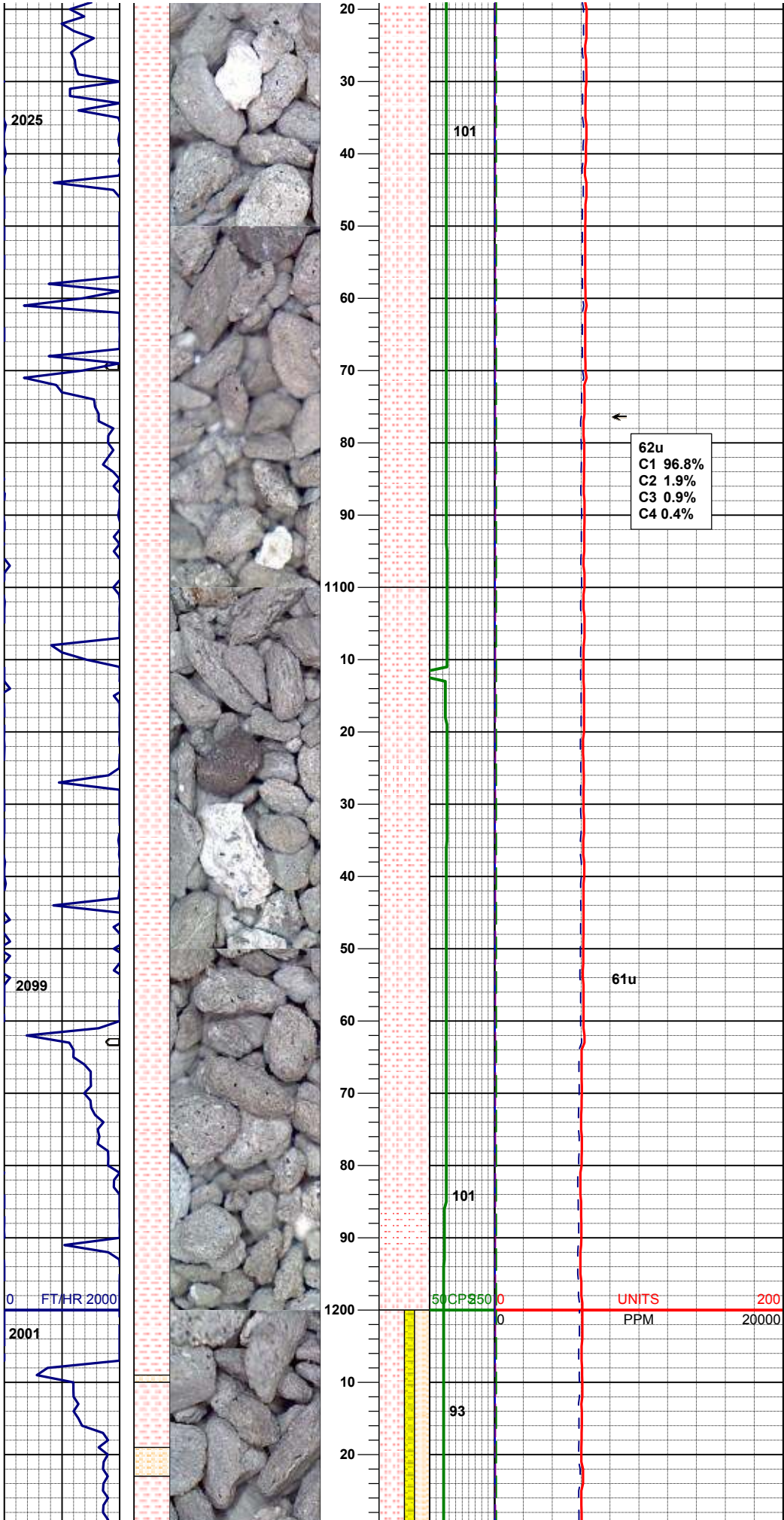


ENGINEERING SYMBOLS



BHA #1
Bit: 8.75"
Manufacturer: Schlumberger/Smith
Model: MDi516
Serial Number: JG5894
Nozzles: 5x14

Motor: 6.470"
Manufacturer: Wenzel
Serial Number: 650-10-141
Bend: 1.50

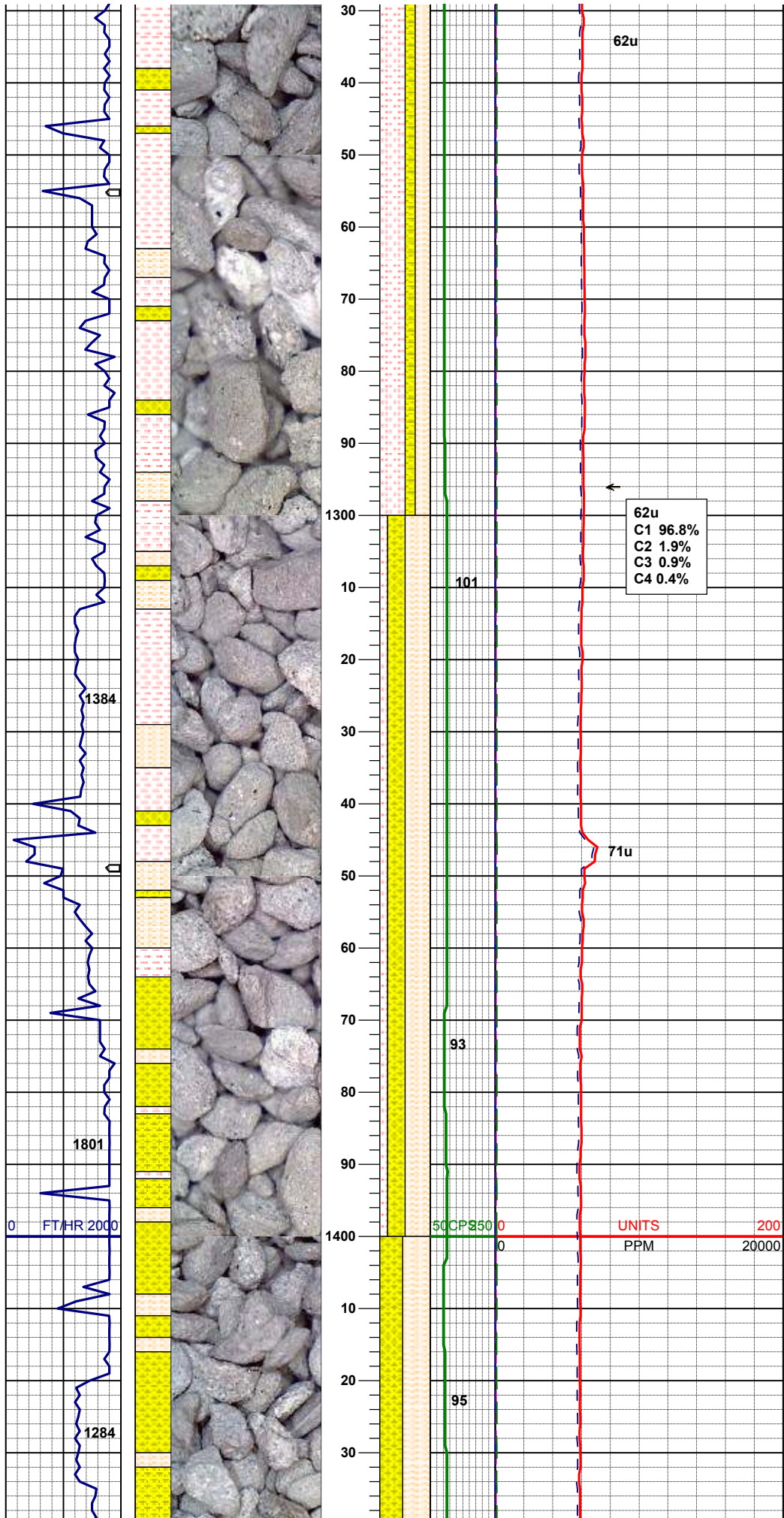


100% SLTST: ltgy, sft- fri, sbblky- sl sbplty,
aren- slty tex, tr biot rr glau incl, abnt dk gy cly

MUD WT 8.4 VIS 28

MD 1105'
INC .26
AZM 289.59

100% SLTST: ltgy, sft- fri, sbblky- sl sbplty,
aren- slty tex, tr biot rr glau incl sl grdg - shaly
ss ; abnt dk gy cly

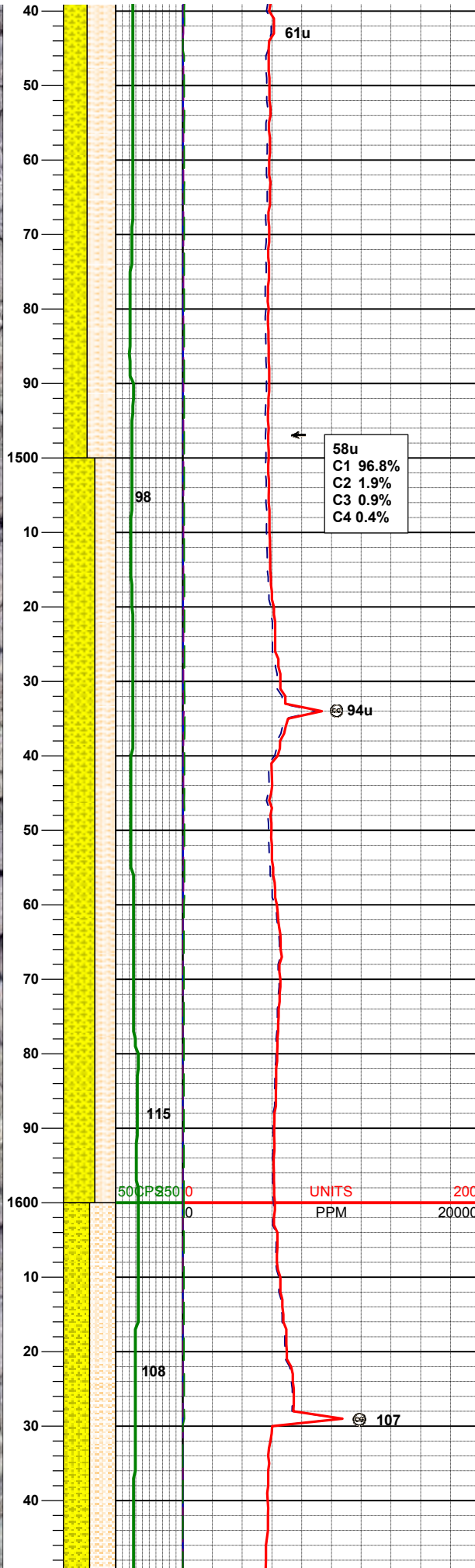
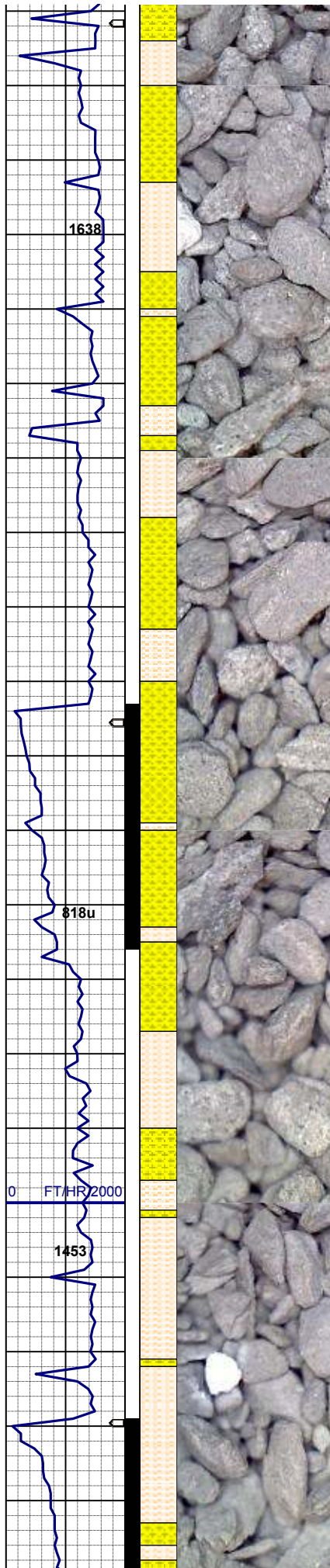


50% SLTST: ltgy, sft- fri, sbbiky- sl sbplty, aren
- slty tex, tr biot rr glau incl ; decr dk gy cly
30% SHALY SLTST: ltgy, sft- fri, sbbiky- sl
sbplty, aren- slty tex, tr biot incl
20% SHYSS: ltgy- tr s&p, vf-fgr, sbrd - sbang,
mod srt, firm- fri, p por, arg cmt, rr biot, rr glau,
sme dk gy cly

50% SHALY SLTST: ltgy, sft- fri, sbbiky- sl
sbplty, aren- slty tex, tr biot incl
35% SHYSS: ltgy- tr s&p, vf-fgr, sbrd - sbang,
mod srt, firm- fri, p por, arg cmt, rr biot, rr glau,
sme dk gy cly
15% SLTST: ltgy, sft- fri, sbbiky- sl sbplty, aren
- slty tex, tr biot rr glau incl ; decr dk gy cly

MD 1384'
INC .28
AZM 319.03

UNITS
PPM



55% SHALY SLTST: ltgy, sft- fri, sbbly- sl
sbbly, aren- slty tex, tr biot incl
45% SHYSS: ltgy- tr s&p, vf-fgr, sbrd - sbang,
mod srt, firm- fri, p por, arg cmt, rr biot, rr glau,
sme dk gy cly

MD 1477'
INC .43
AZM 319.04

MUD WT 8.4 VIS 27

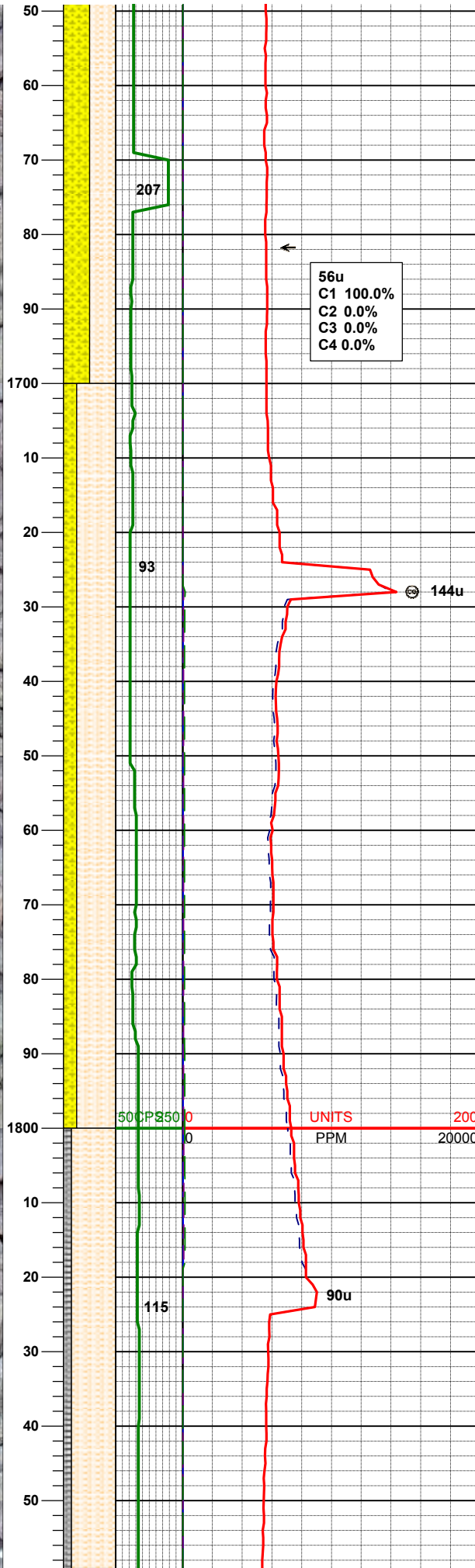
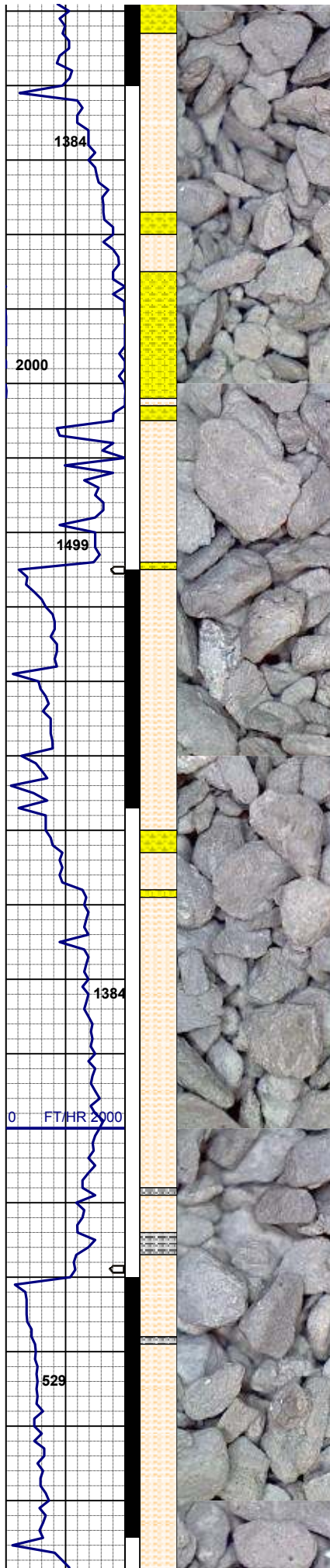
58u
C1 96.8%
C2 1.9%
C3 0.9%
C4 0.4%

60% SHYSS: ltgy- tr s&p, vf-fgr, sbrd - sbang,
mod srt, firm- fri, p por, arg cmt, rr biot, rr glau,
sme dk gy cly
40% SHALY SLTST: ltgy, sft- fri, sbbly- sl
sbbly, aren- slty tex, tr biot incl

MD 1572'
INC 2.29
AZM 174.44

UNITS
PPM

50% SHYSS: ltgy- tr s&p, vf-fgr, sbrd - sbang,
mod srt, firm- fri, p por, arg cmt, rr biot, rr glau,
sme dk gy cly
50% SHALY SLTST: ltgy occ dk gy, sft- fri,



sbblky- sl sbplty, aren- slty tex, tr biot incl

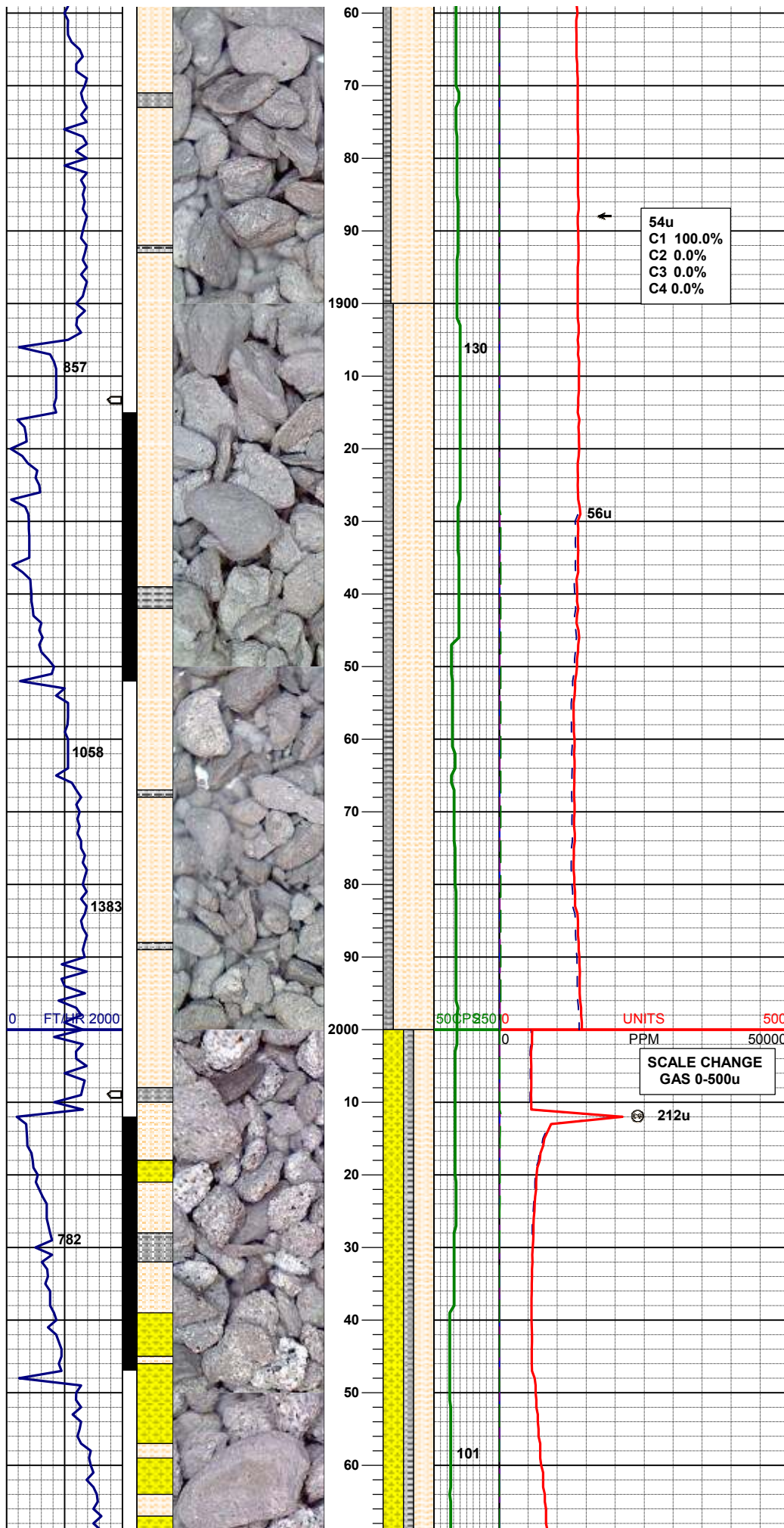
75% SHALY SLTST: ltgy occ dk gy, sft- fri incr
firm, sbblky- sl sbplty, aren- slty tex, tr biot incl
25% SHYSS: ltgy- tr s&p, vf-fgr, sbrd - sbang,
mod srt, firm- fri, p por, arg cmt, rr biot, rr glau,
sme dk gy cly

MD 1762'
INC 0.19
AZM 189.77

85% SHALY SLTST: ltgy occ dk gy, sft- fri incr
firm, sbblky- sl sbplty, aren- slty tex, tr biot incl
15% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbplty, rthy sl slty tex, hom

MD 1856'

INC 5.75
AZM 169.06

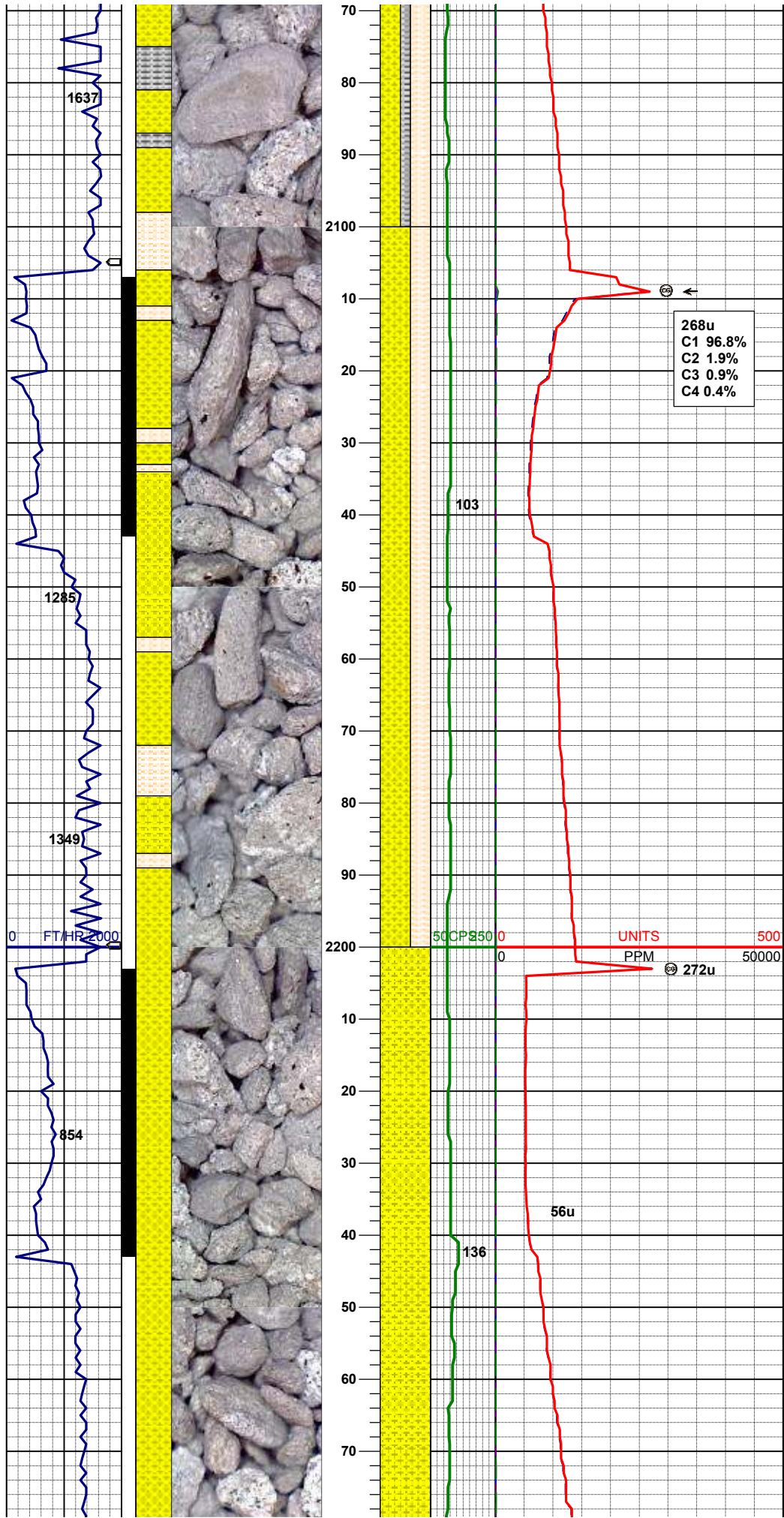


85% SHALY SLTST: ltgy occ dk gy, sft- fri incr
firm, sbblky- sl sbplty, aren- slty tex
15% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbplty, rthy sl slty tex, sl hom

MD 1951'
INC 7.56
AZM 156.52

MD 2047'
INC 10.52
AZM 152.66

40% SHYSS: ltgy, vf-fgr, sbprd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot, grdg - slstst
40% SHALY SLTST: ltgy, sft- firm, sbblky- sl sbply, aren- slty tex, tr biot incl
20% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft , sbblky - sbply, rthy sl slty tex

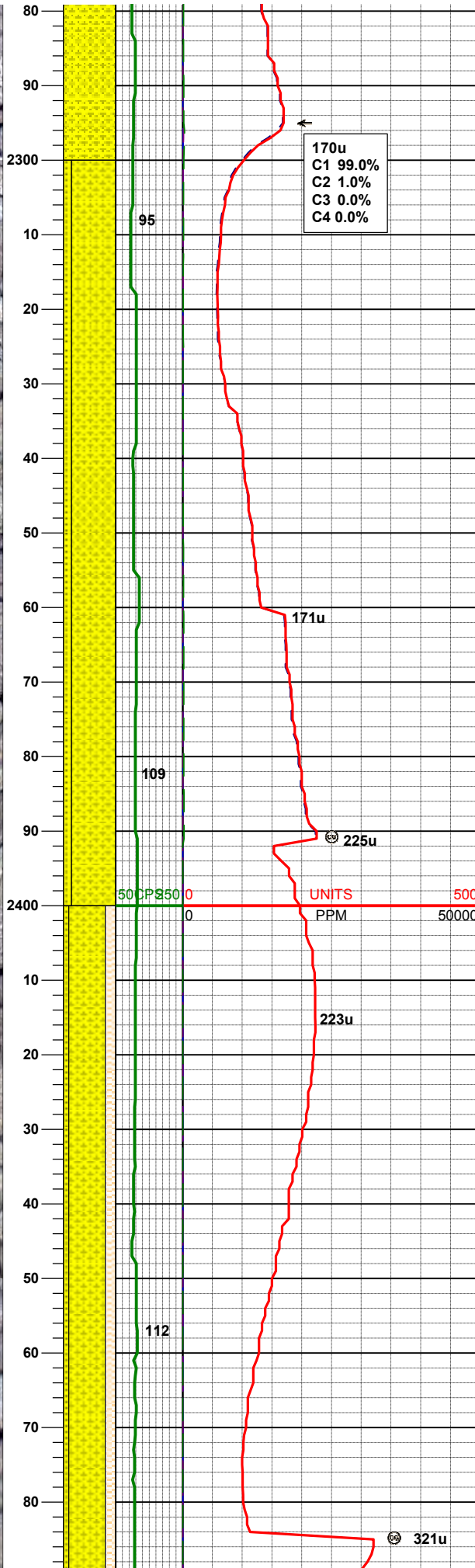
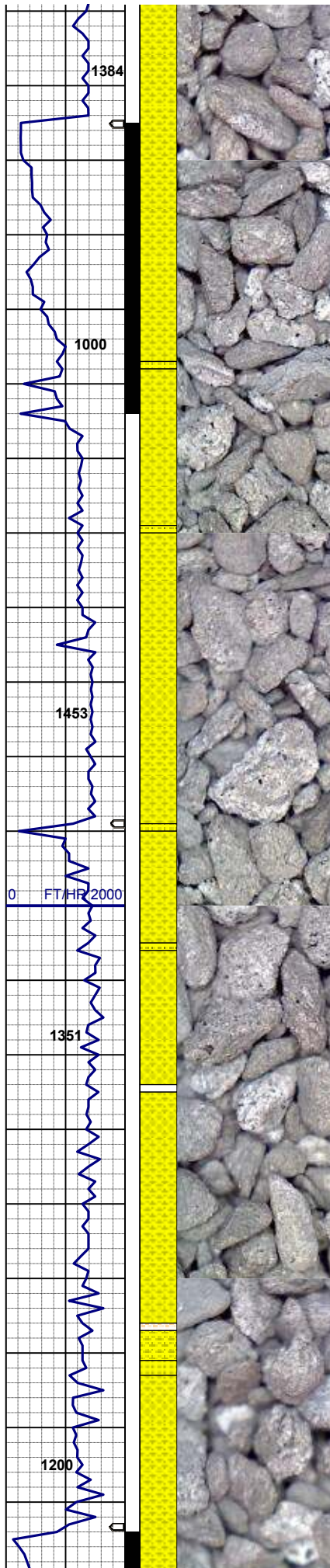


MD 2141'
INC 10.97
AZM 142.63

60% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot, grdg - sltst
40% SHALY SLTST: ltgy, sft- firm, sbblky- sl sbply, aren- slty tex, tr biot incl

MD 2237'
INC 12.35
AZM 138.66

100% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot, sl grdg - ss ; tr shaly sltst



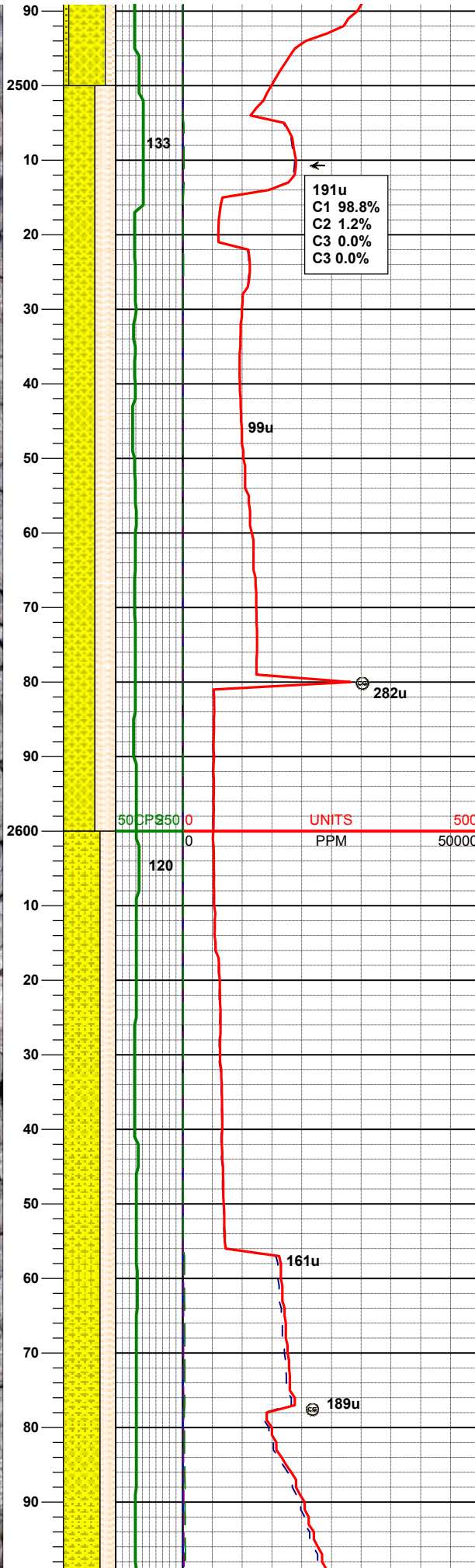
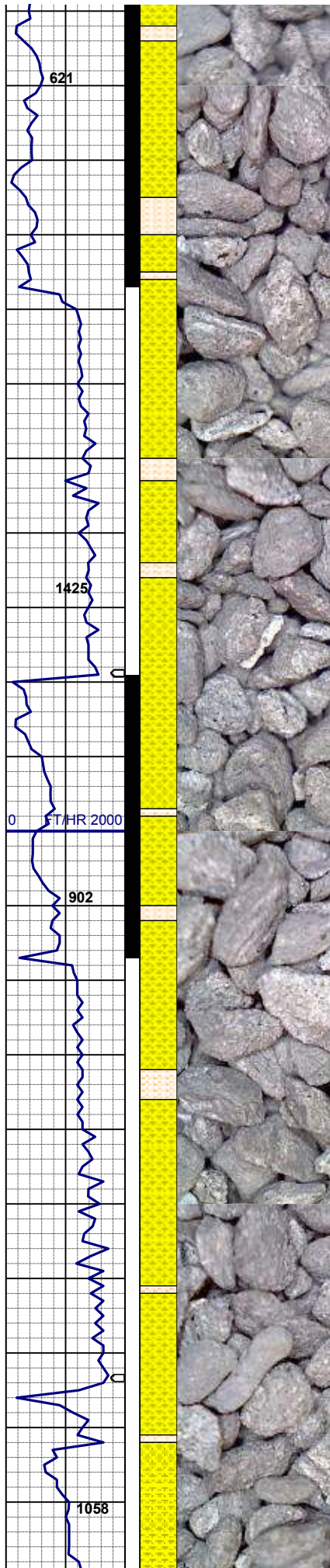
MUD WT 8.4 VIS 28

MD 2331'
INC 15.01
AZM 128.90

85% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot, sl grdg - ss
15% SS: wh-op occ lt gy, s&p, fgr, sbrd-sbang, mod w srt, firm, brit

MD 2426'
INC 13.62
AZM 127.07

70% SHALY SLTST: ltgy, sft- fri, sblky- sl
sbply, aren- slty tex
20% SHYSS: ltgy tr wh - s&p, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot, grdg - sltst
10% SS: wh-op occ lt gy, s&p, fgr, sbrd-sbang, mod w srt, firm, brit

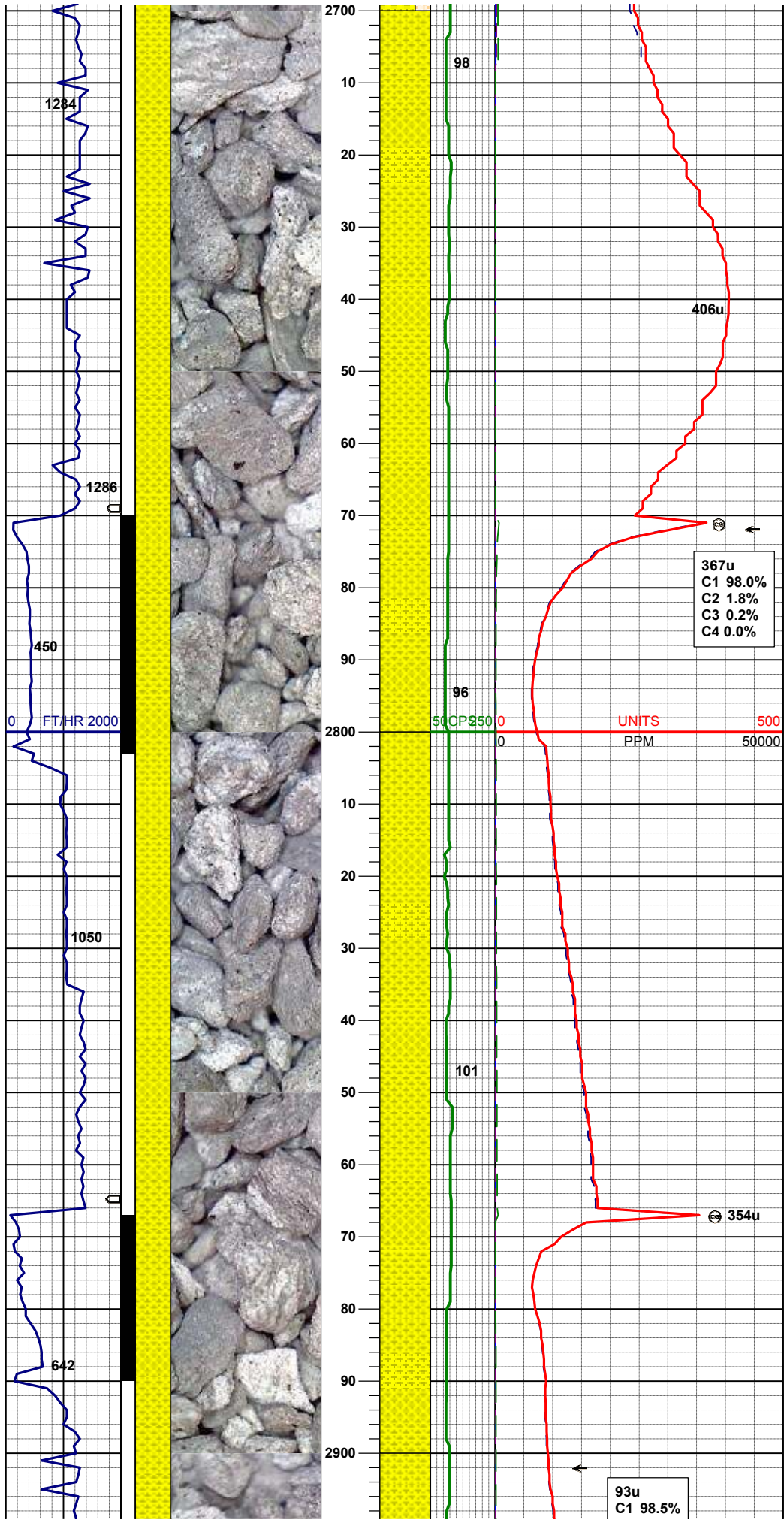


MD 2521'
INC 15.15
AZM 124.36

60% SHALY SLTST: ltgy, sft- fri, sbbly- sl
sbply, aren- slty tex
40% SHYSS: ltgy tr wh - s&p, vf-fgr, sbrd -
sbang, mod srt, firm- fri, v por, arg cmt, tr biot,
grdg - sltst

MD 2616'
INC 16.62
AZM 116.8

70% SHALY SLTST: ltgy, sft- fri, sbbly- sl
sbply, aren- slty tex, tr biot incl
30% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt, tr biot, grdg - sltst



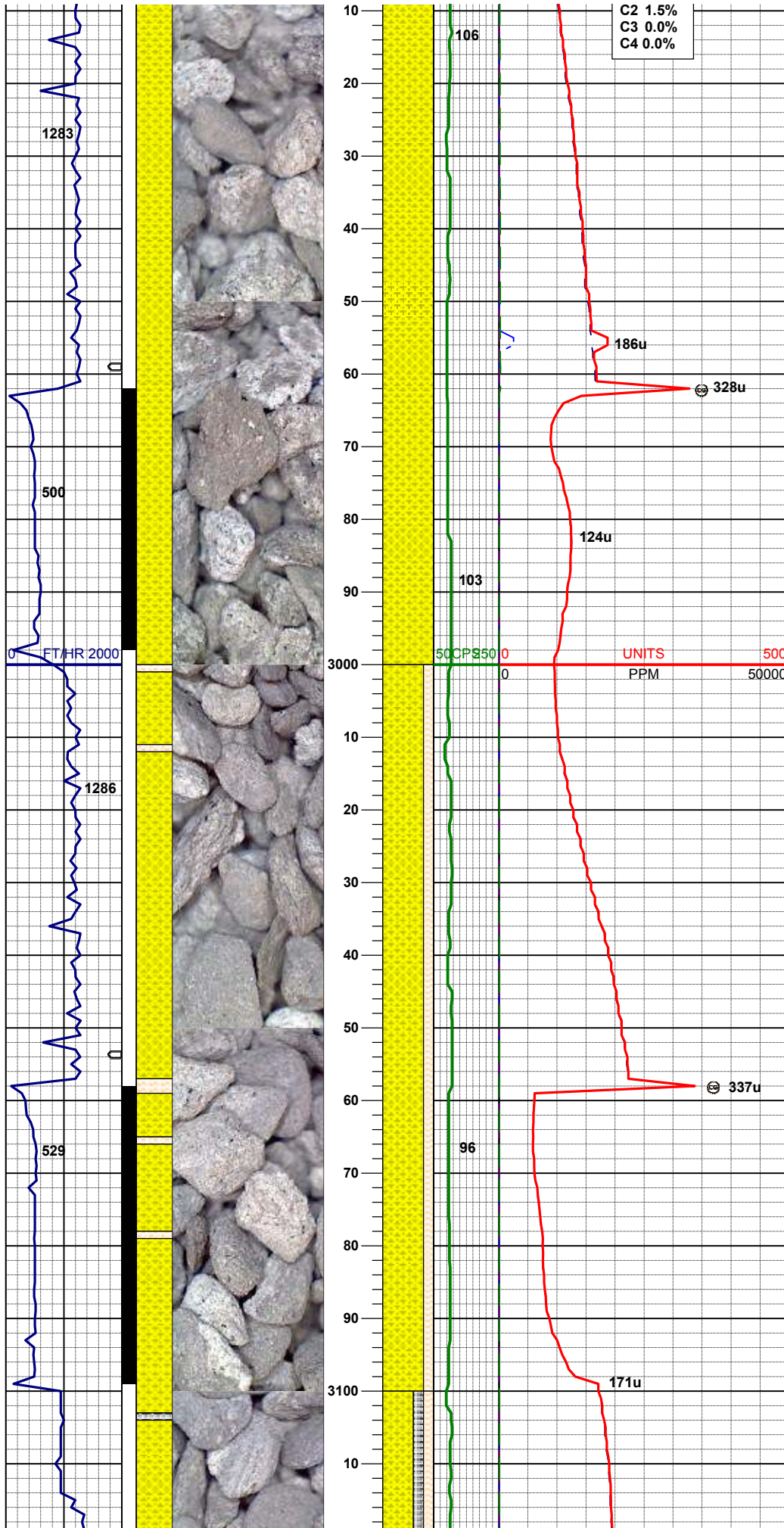
MD 2711'
INC 15.35
AZM 116.11

100% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod
srt, firm- fri, v por, arg cmt, tr biot, sl grdg - ss ;
tr shaly sltst

MD 2806'
INC 17.29
AZM 119.44

100% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod
srt, firm- fri, v por, arg cmt, tr biot, sl grdg - ss ;
tr shaly sltst

MD 2901'
INC 17.25
AZM 119.69



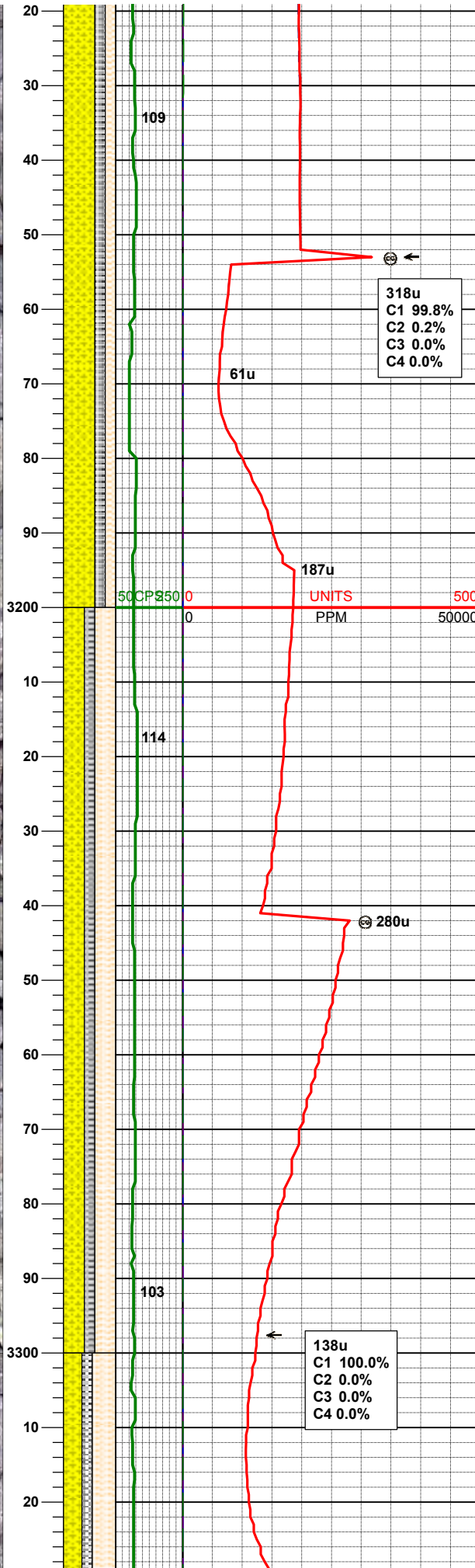
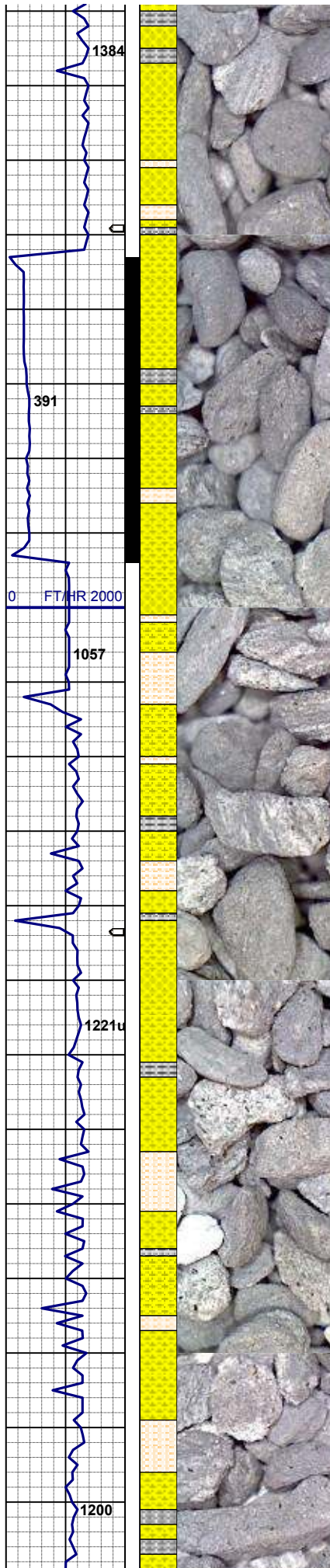
100% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot, sl grd - ss ; tr shaly sltst

MD 2996'
INC 17.83
AZM 128.45

80% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot, sl grd - shaly sltst
20% SHALY SLTST: ltgy, sft- fri, sbblky- sl sbplty, aren- slty tex

MD 3091'
INC 18.9
AZM 136.6

MUD WT 8.45 VIS 28

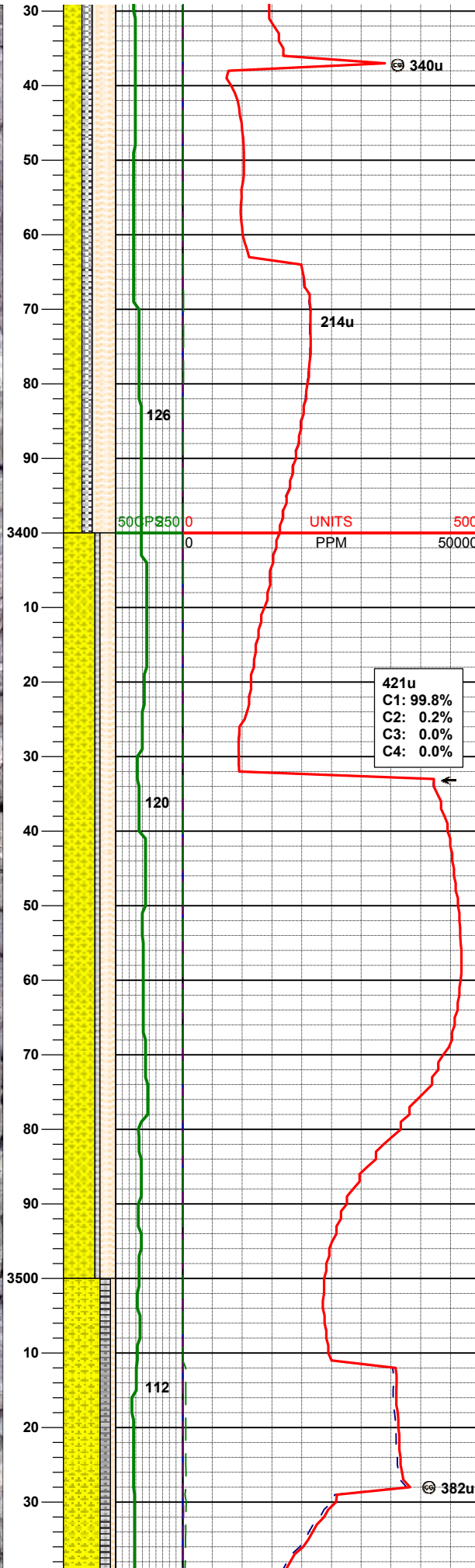
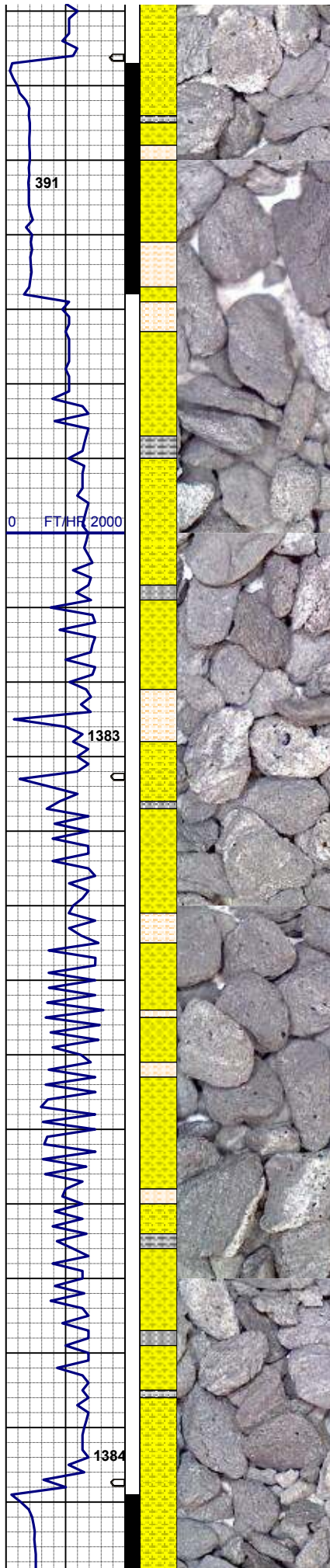


60% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot, sl grdg - shaly sltst
20% SHALY SLTST: ltgy, sft- fri, sbblky- sl sbplty, aren- slty tex
20% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft , sbblky - sbplty, rthy sl slty tex

MD 3186'
INC 17.39
AZM 146.84

40% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot
40% SHALY SLTST: ltgy, sft- fri, sbblky- sl sbplty, aren- slty tex
20% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft , sbblky - sbplty, rthy sl slty tex

MD 3280'
INC 15.22
AZM 146.69



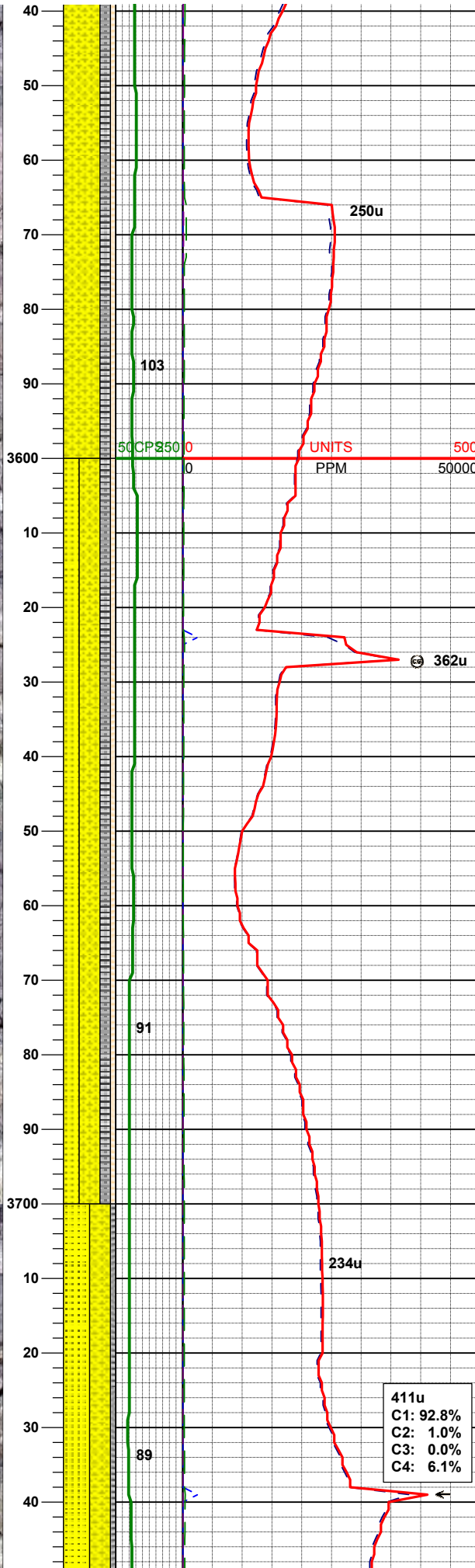
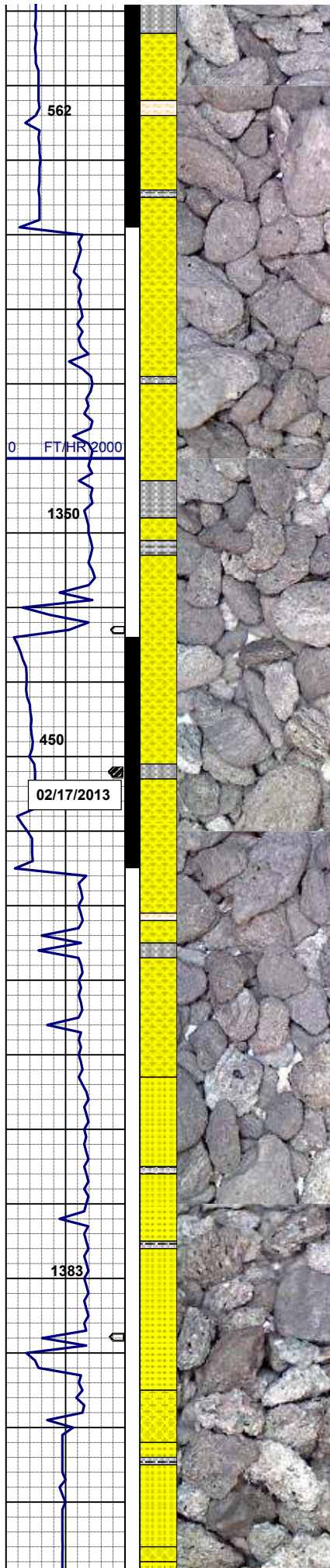
45% SHALY SLTST: ltgy occ m gy, sft- firm
sbbiky- sl sbply, aren- slty tex
35% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt, tr biot
20% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbbiky - sbply, rthy sl slty tex

MD 3375'
INC 14.95
AZM 156.41

421u
C1: 99.8%
C2: 0.2%
C3: 0.0%
C4: 0.0%

60% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt, tr biot
30% SHALY SLTST: ltgy occ m gy, sft- firm
sbbiky- sl sbply, aren- slty tex
10% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbbiky - sbply, rthy sl slty tex

MD 3470'
INC 12.02
AZM 153.57

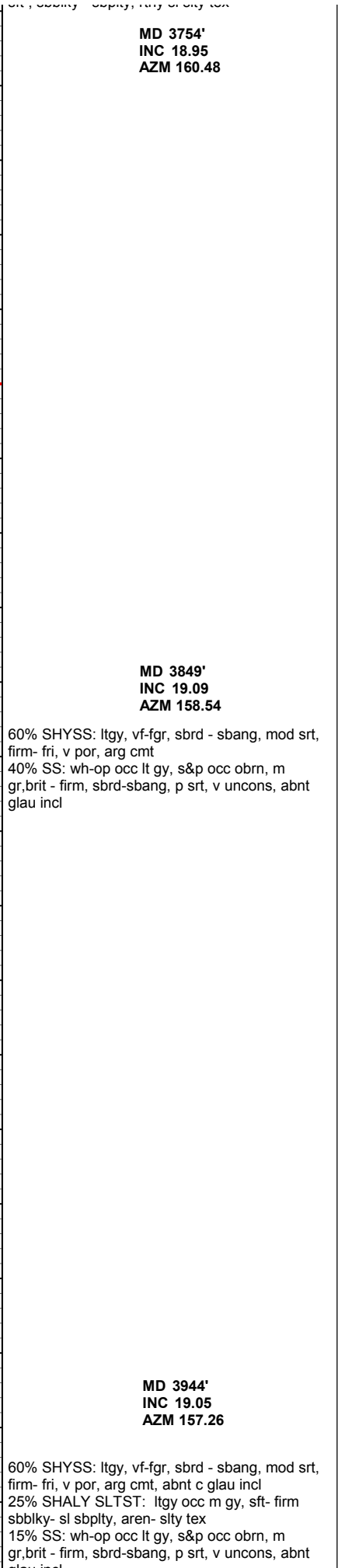
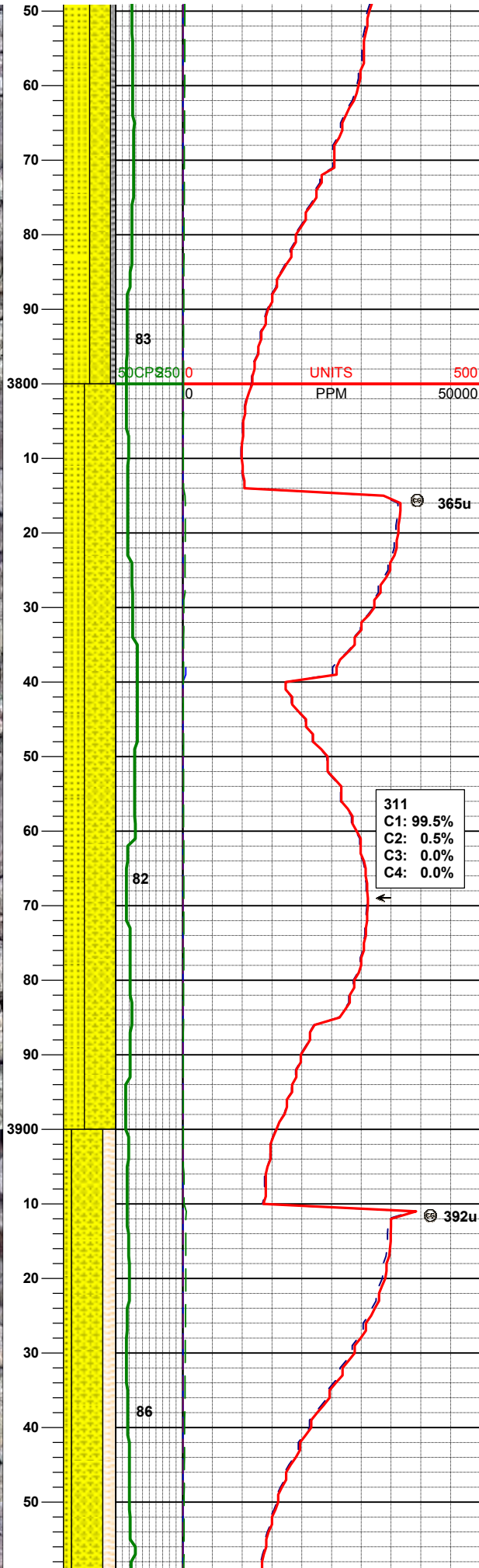
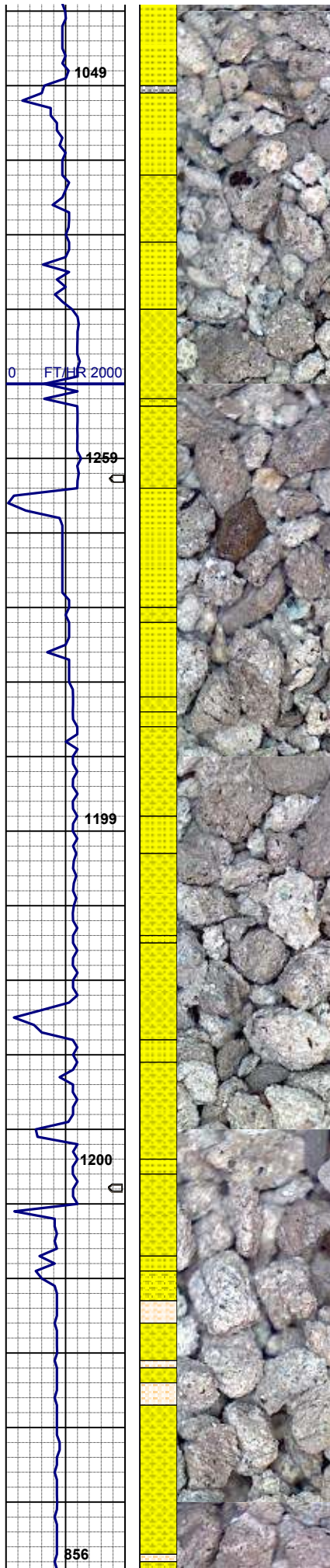


70% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot
20% SHALY SLTST: ltgy occ m gy, sft- firm sbblky- sl sbply, aren- slty tex
10% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft , sbblky - sbply, rthy sl slty tex

MD 3565'
INC 14.44
AZM 160.79

40% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot
30% SS: wh-op occ lt gy, s&p occ obrn, m gr,brit - firm, sbrd-sbang, p srt, v uncons
20% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft , sbblky - sbply, rthy sl slty tex
10% SHALY SLTST: ltgy occ m gy, sft- firm sbblky- sl sbply, aren- slty tex

50% SS: wh-op occ lt gy, s&p occ obrn, m gr,brit - firm, sbrd-sbang, p srt, v uncons, occ glau
40% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, tr biot
10% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft shhkv - shnlty rthy sl slty tex



MD 3754'
INC 18.95
AZM 160.48

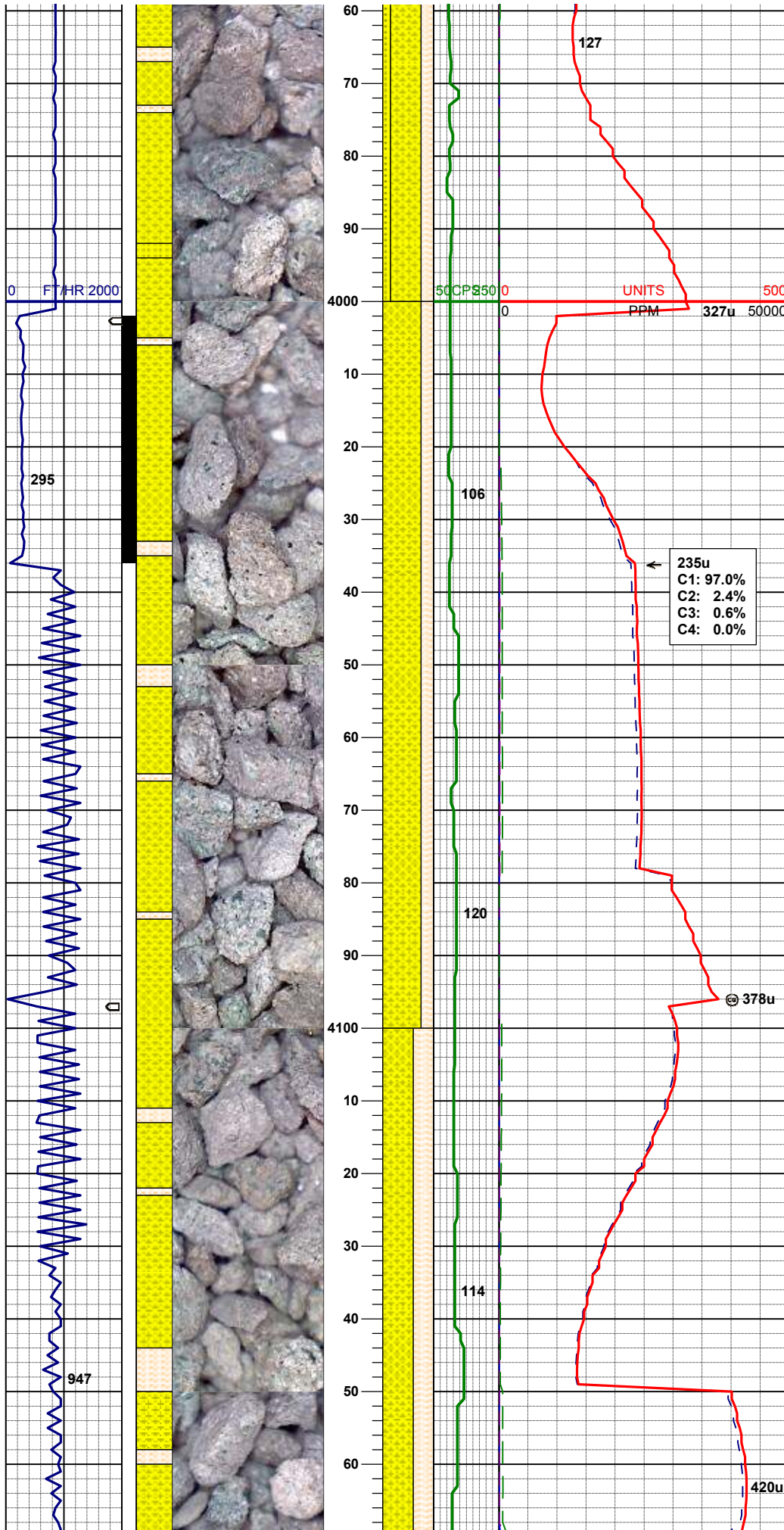
MD 3849'
INC 19.09
AZM 158.54

60% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt
40% SS: wh-op occ lt gy, s&p occ obrn, m
gr,brit - firm, sbrd-sbang, p srt, v uncon, abnt
glau incl

311
C1: 99.5%
C2: 0.5%
C3: 0.0%
C4: 0.0%

MD 3944'
INC 19.05
AZM 157.26

60% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt, abnt c glau incl
25% SHALY SLTST: ltgy occ m gy, sft- firm
sbbly- sl sbply, aren- slty tex
15% SS: wh-op occ lt gy, s&p occ obrn, m
gr,brit - firm, sbrd-sbang, p srt, v uncon, abnt
glau incl



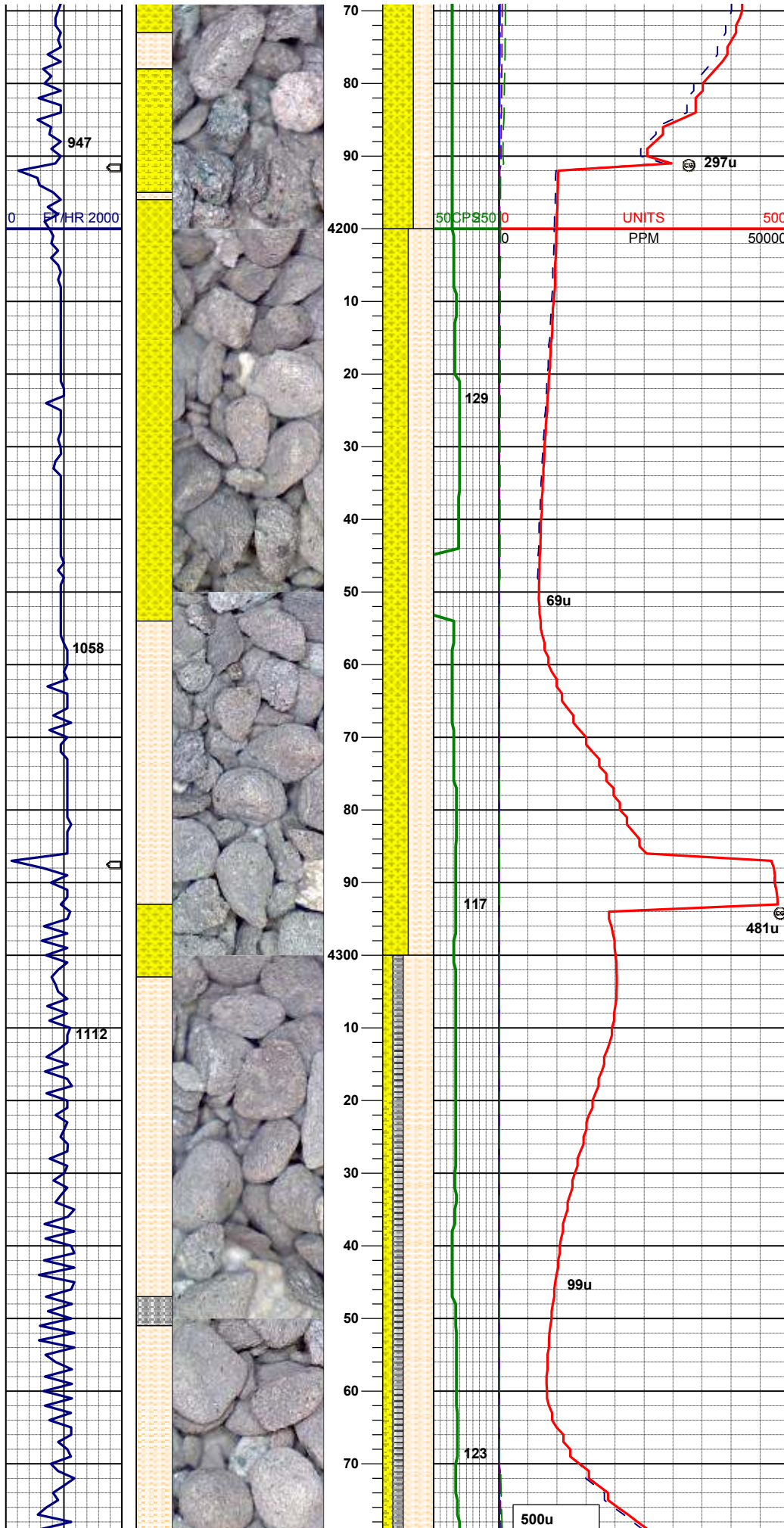
MD 4039'
INC 18.36
AZM 166.31

75% SHYSS: ltgy, vf-fgr, sbdr - sbang, mod srt,
firm- fri, v por, arg cmt, abnt c glau incl
25% SHALY SLTST: mgy occ m gybrn, sft-
firm - hd, sblky- sl sbply, aren- slty tex

MUD WT 8.5 VIS 27

MD 4134'
INC 16.18
AZM 167.06

75% SHYSS: ltgy, vf-fgr, sbdr - sbang, mod srt,
firm- fri, v por, arg cmt, abnt c glau incl
25% SHALY SLTST: mgy occ m gybrn, sft-
firm - hd, sblky- sl sbply, aren- slty tex

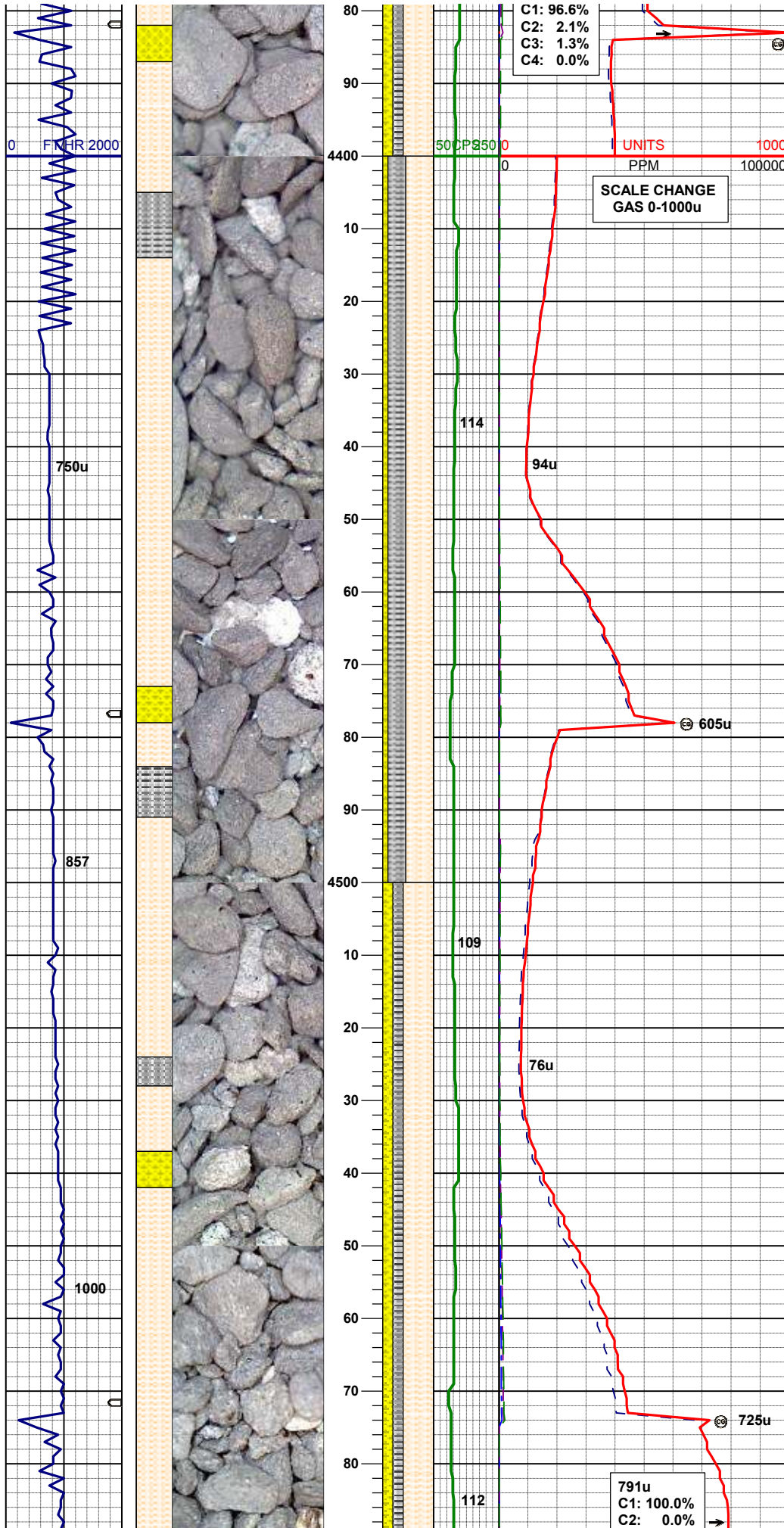


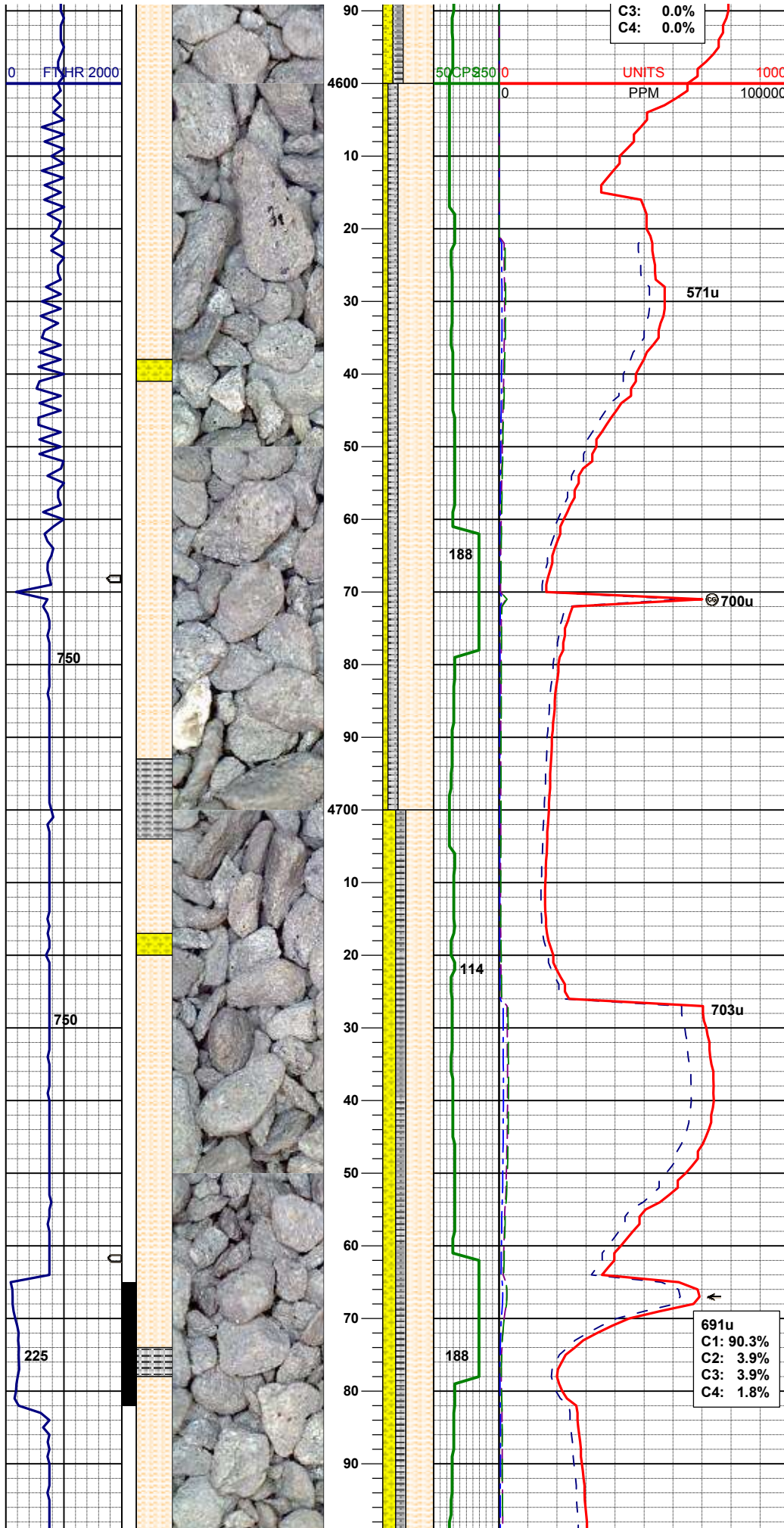
MD 4229'
INC 14.75
AZM 164.92

50% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, abnt c glau incl
50% SHALY SLTST: mgy occ m gybrn, sft- firm - hd, sbbkly- sl sbply, aren- slty tex

MD 4324'
INC 13.01
AZM 163.24

60% SHALY SLTST: mgy occ m gybrn, sft- firm - hd, sbbkly- sl sbply, aren- slty tex
20%SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt, firm- fri, v por, arg cmt, occ c glau incl
20% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft , sbbkly - sbply, rthy sl slty tex, hom

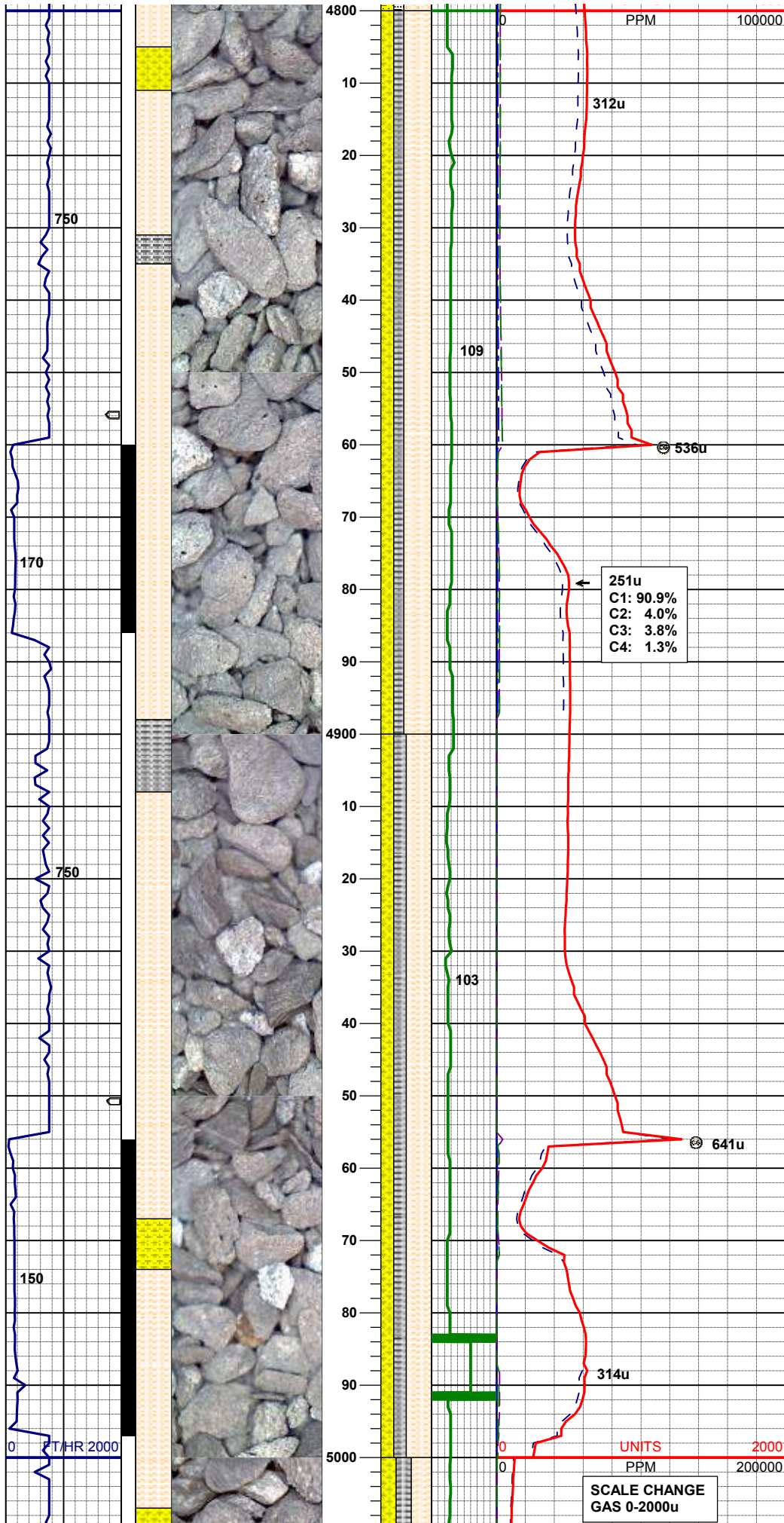




MD 4609'
INC 9.37
AZM 165.54

MD 4704'
INC 7.99
AZM 163.7

MD 4799'
INC 6.25



AZM 176.66

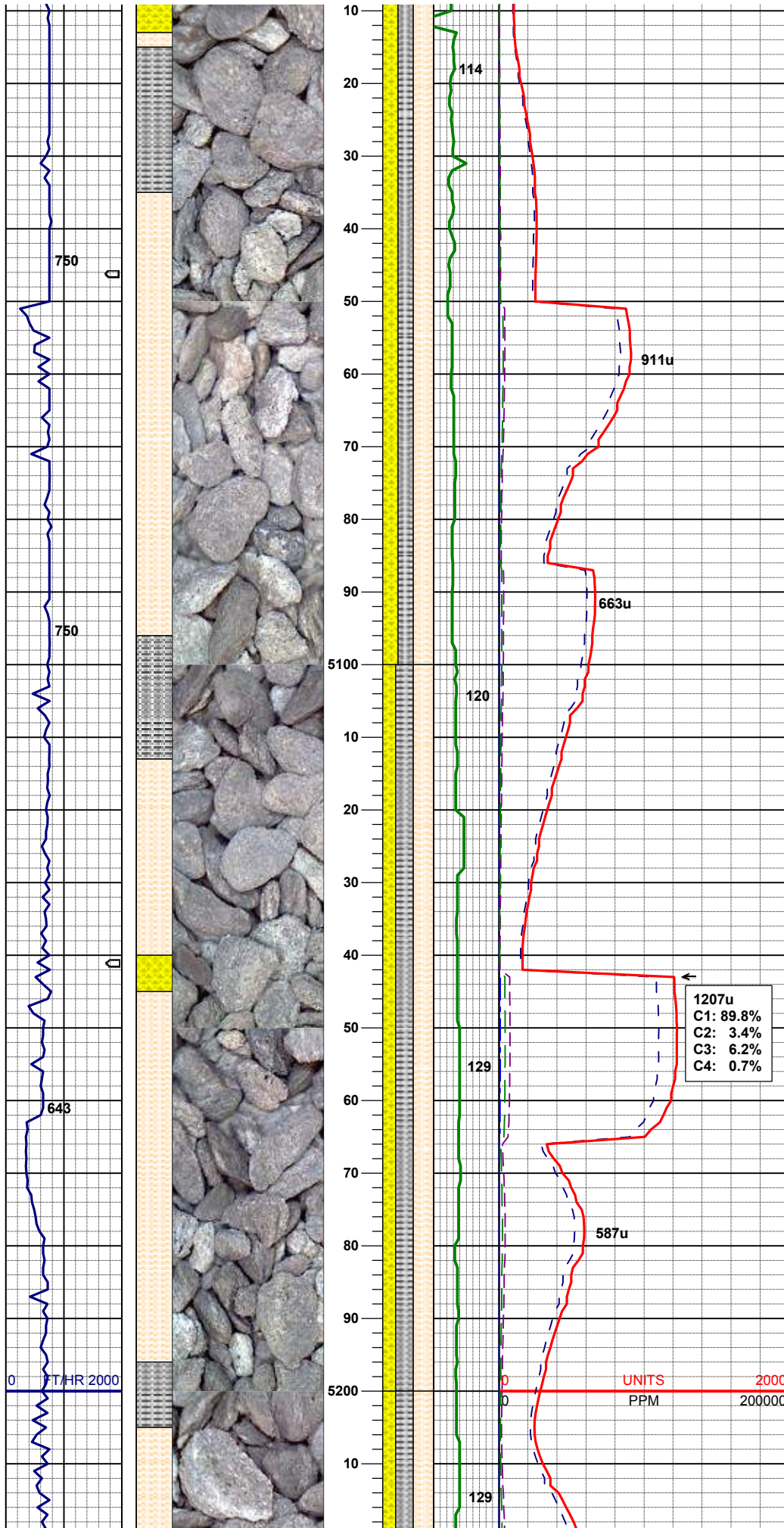
55% SHALY SLTST: lt-mgy, sft- firm, sbblky- sl
sbplty, aren- slty tex
25% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt
20% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbplty, rthy sl slty tex, hom

MD 4894'
INC 3.96
AZM 166.28

55% SHALY SLTST: lt-mgy, sft- firm, sbblky- sl
sbplty, aren- slty tex
25% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt
25% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbplty, rthy sl slty tex, hom

MD 4989'
INC 0.89
AZM 193

SCALE CHANGE
GAS 0-2000u



40% SHALY SLTST: lt-mgy, sft- firm, sbblky- sl
sbply, aren- slty tex
30% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt
30% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbply, rthy sl slty tex, hom

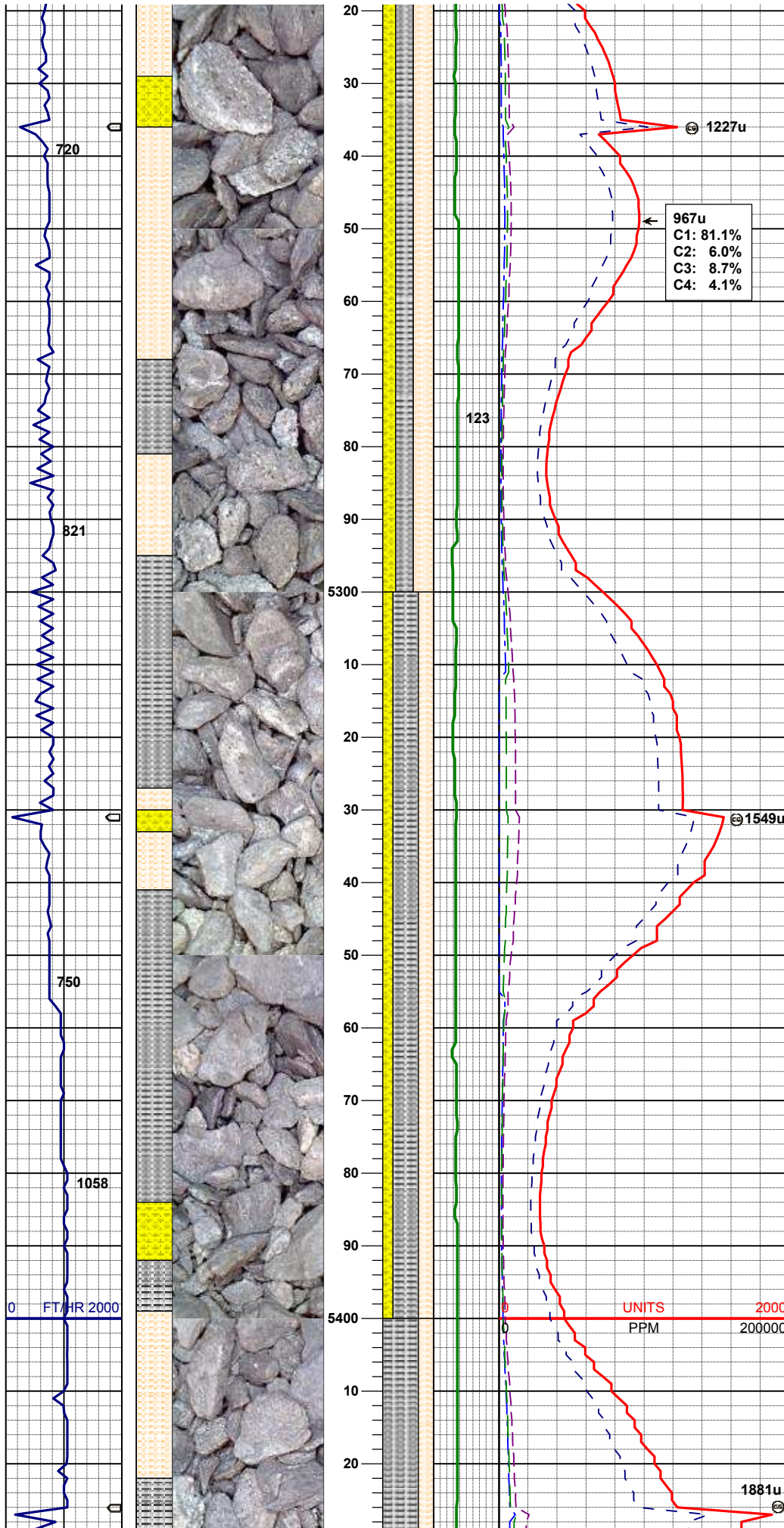
MD 5084'
INC 0.39
AZM 242.69

40% SHALY SLTST: lt-mgy, sft- firm, sbblky- sl
sbply, aren- slty tex
35% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbply, rthy sl slty tex, hom
25% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt

MD 5179'
INC 0.53
AZM 269.49

1207u
C1: 89.8%
C2: 3.4%
C3: 6.2%
C4: 0.7%

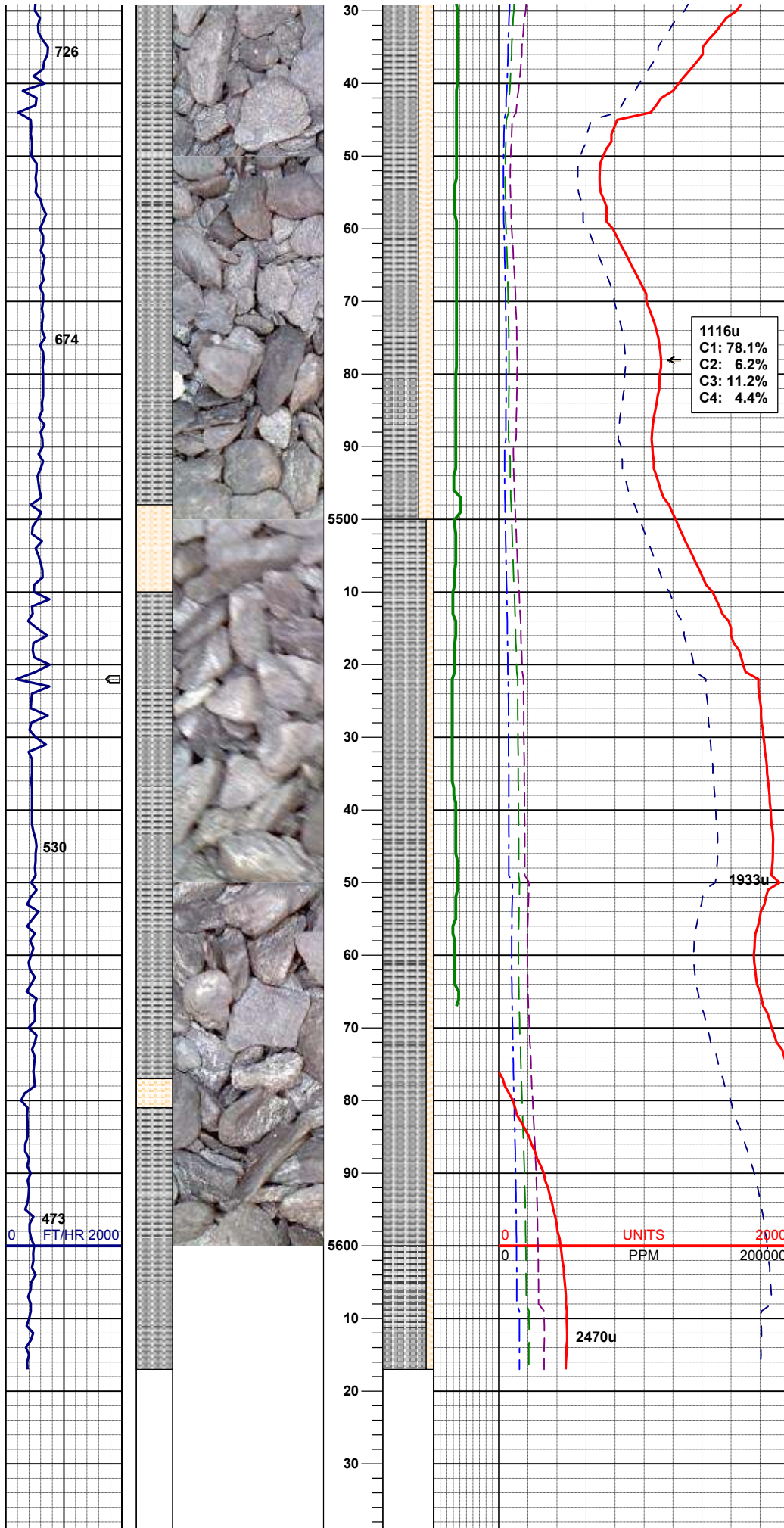
UNITS 2000
PPM 200000



40% SHALY SLTST: lt-mgy, sft- firm, sbblky- sl
sbplty, aren- slty tex
35% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbplty, rthy sl slty tex, hom
25% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt

MD 5369'
INC 0.24
AZM 1.44

50% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbplty, rthy sl slty tex, hom
30% SHALY SLTST: lt-mgy, sft- firm, sbblky- sl
sbplty, aren- slty tex
20% SHYSS: ltgy, vf-fgr, sbrd - sbang, mod srt,
firm- fri, v por, arg cmt



70% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbplty, rthy sl slty tex, hom
30% SHALY SLTST: lt-mgy, sft- firm, sbblky- sl
sbplty, aren- slty tex

1116u
C1: 78.1%
C2: 6.2%
C3: 11.2%
C4: 4.4%

85% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft , sbblky - sbplty, rthy sl slty tex, hom
15% SHALY SLTST: lt-mgy, sft- firm, sbblky- sl
sbplty, aren- slty tex

MD 5559'
INC 0.95
AZM 94.58

TOOH @ 5617' MD For Tools
05:58 HRS 02/17/2013

Log Continues on
Keota LB26-62HN HORZ.Lplot

Thank you for choosing
Columbine Logging INC.

