

LOG created using LPLOT VH Version 3.0, January 08, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY, INC
WELL: PTASNIK FEDERAL LC19-74HN
LOCATION: SEC 19, T9N, R59W
COUNTY: WELD
STATE: COLORADO
SPOT: 270' FNL, 2317' FEL
ELEVATION: GE 5005', KB 5029'
FIELD: WILDCAT
SPUD DATE: 01/01/2013
TD DATE: 01/08/2013
DATES LOGGED: 01/03/13 - 01/08/13
DEPTHS LOGGED: 800' - 10590' MD
LOGGERS: MIKE KERSCHEN, JAKOB PAMMER
DRILLING FLUID: WATER, MUD, POLY
DRILLING RIG: H&P 322
API: 05-123-33475
LOG TYPE: VERTICAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.

LITHOLOGIES



Sandstone



Shaly Sandstone



Shaly Siltstone



Siltstone



Silty Shale

ENGINEERING SYMBOLS



Connection



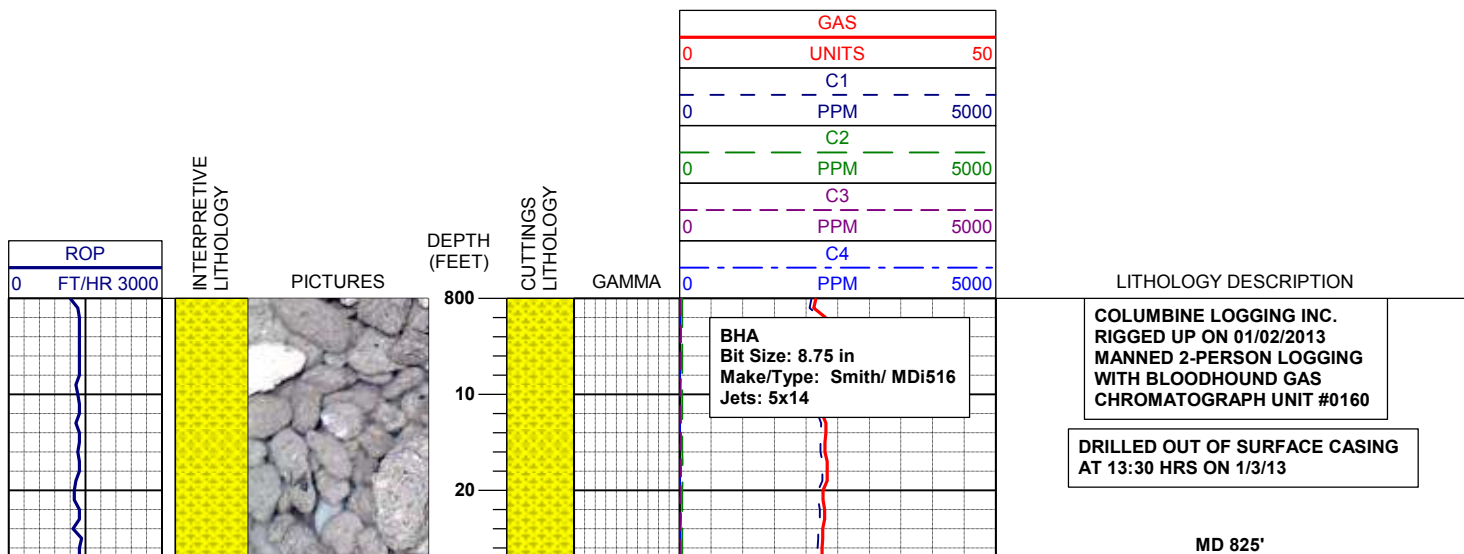
Arrow



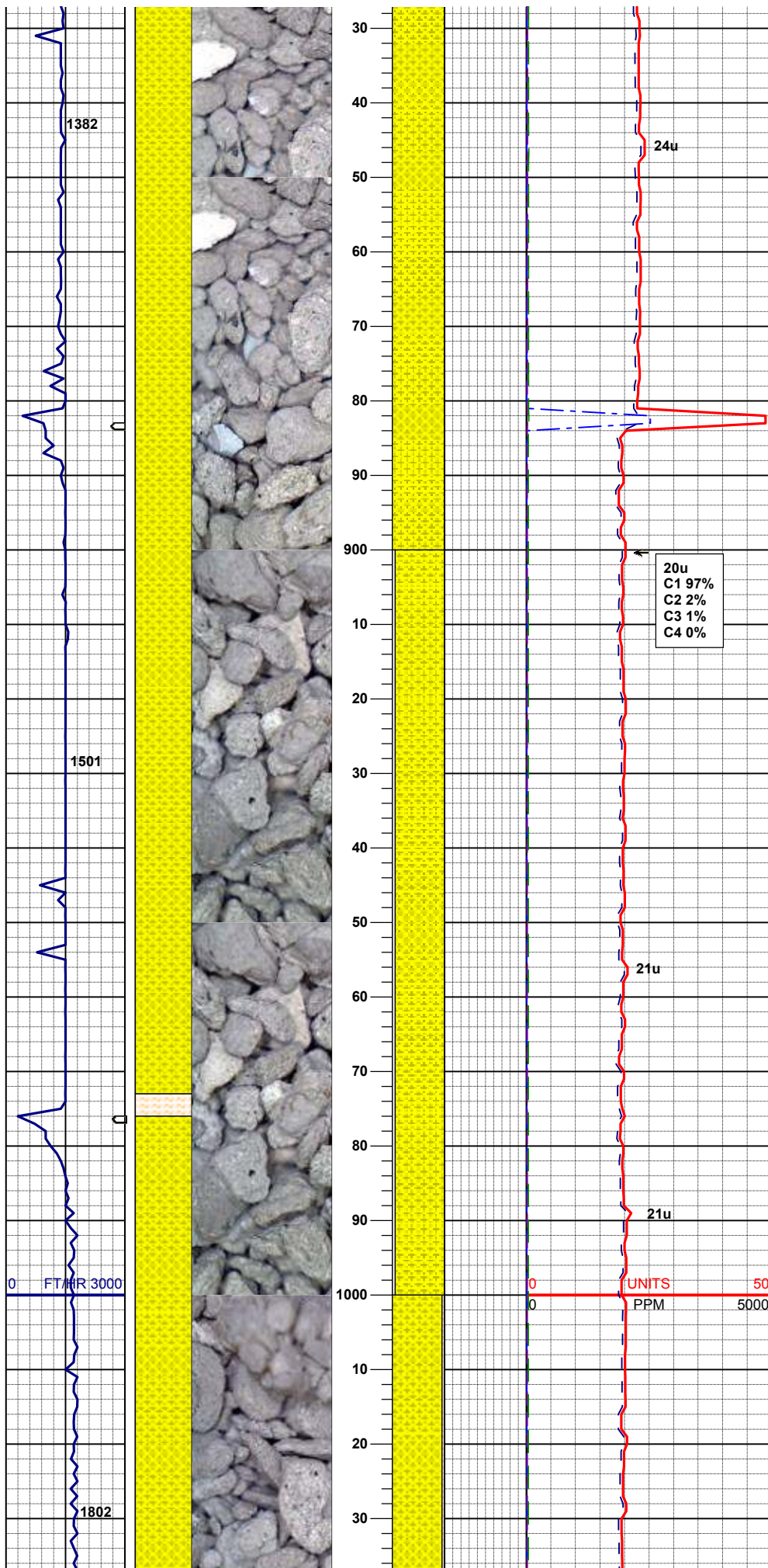
Midnight Depth



Arrow

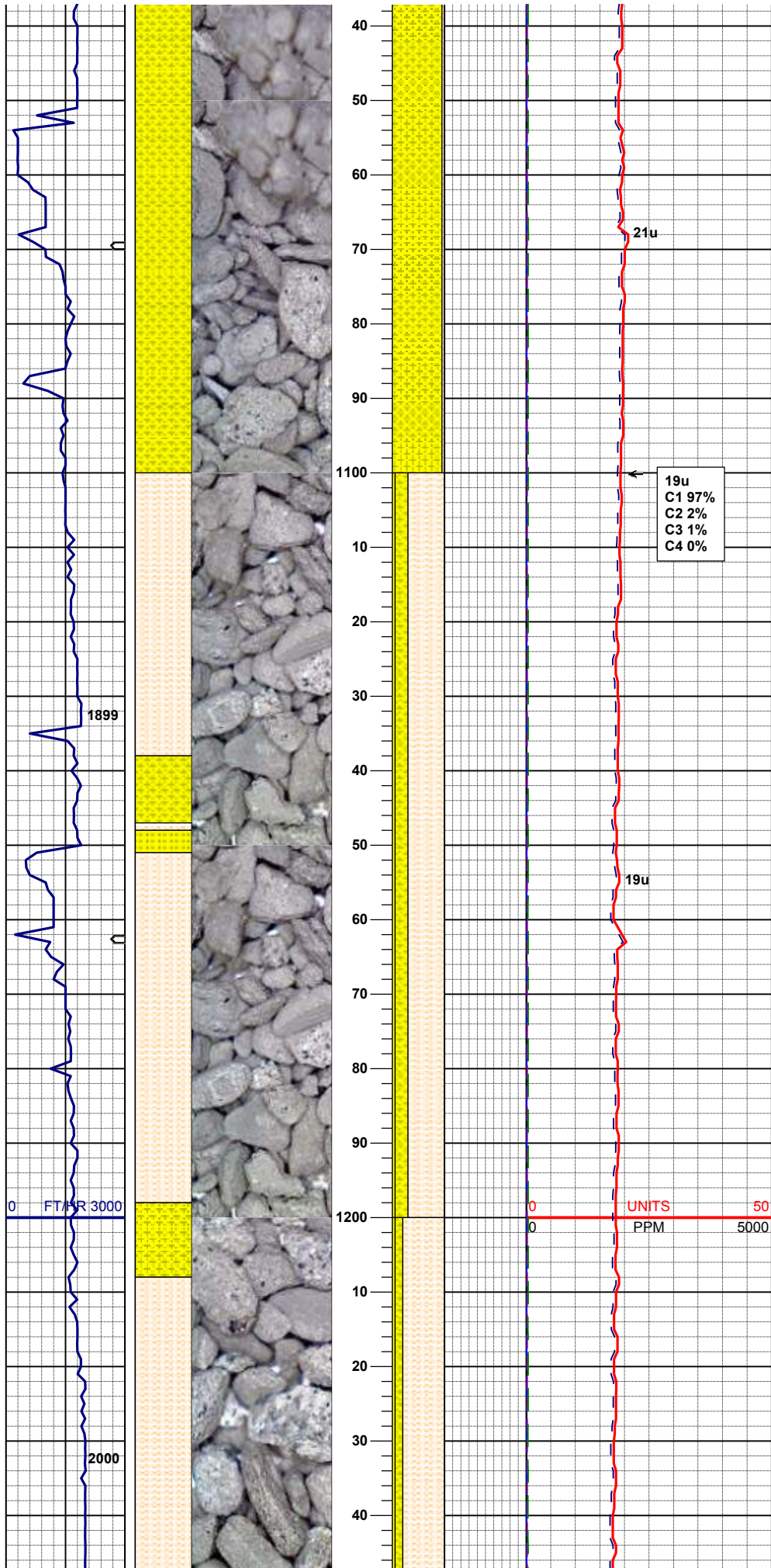


INC 1.27
AZM 198.29



100% SHYSS: ltgy-wh, s&p, vf-fgr, sbrd, mod
srt, firm-sft, arg cmt, phlog, rr biot

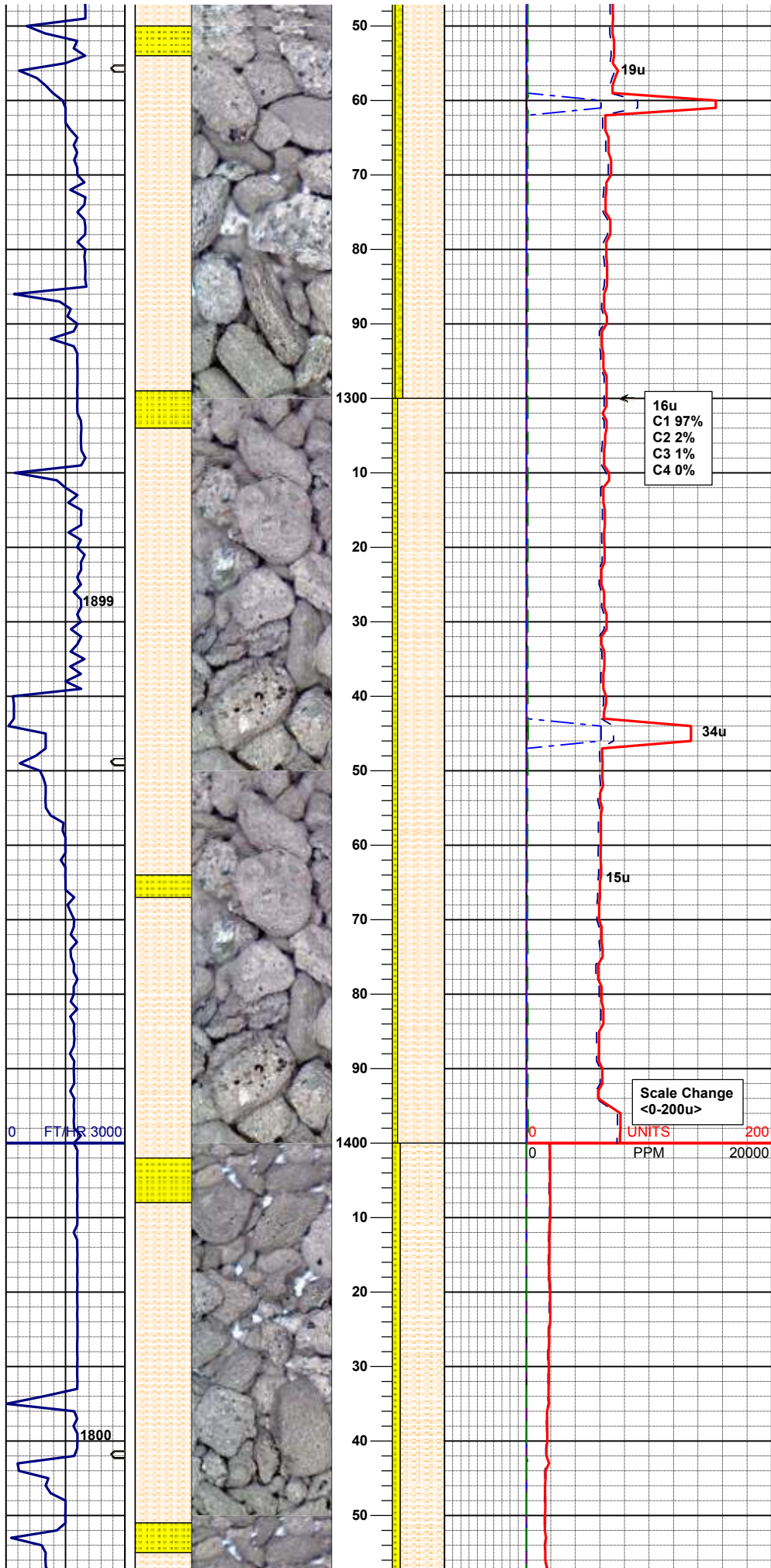
95% SHYSS: ltgy-wh, s&p, vf-fgr, sbrd, mod srt,
firm-sft, arg cmt, phlog, rr biot 5% SLTST: ltgy,
sft- fri, sbbly, aren-sity tex, v sl calc



100% SHYSS: ltgy-wh, s&p, vf-fgr, sbrd, mod
srt, firm-sft, arg cmt, phlog, rr biot 5% SLTST:
ltgy, sft- fri, sbblky, aren-silty tex, v sl calc

70% SHYSLTST: ltgy, fgr, sbrd-sbplty, sft 25%
SHYSS: lt-mgy, sbplty-sbblky, sft, tr glau 5%
SS: ltgy-clr, cgr, sbblky-blky, sft, tr glau, calc

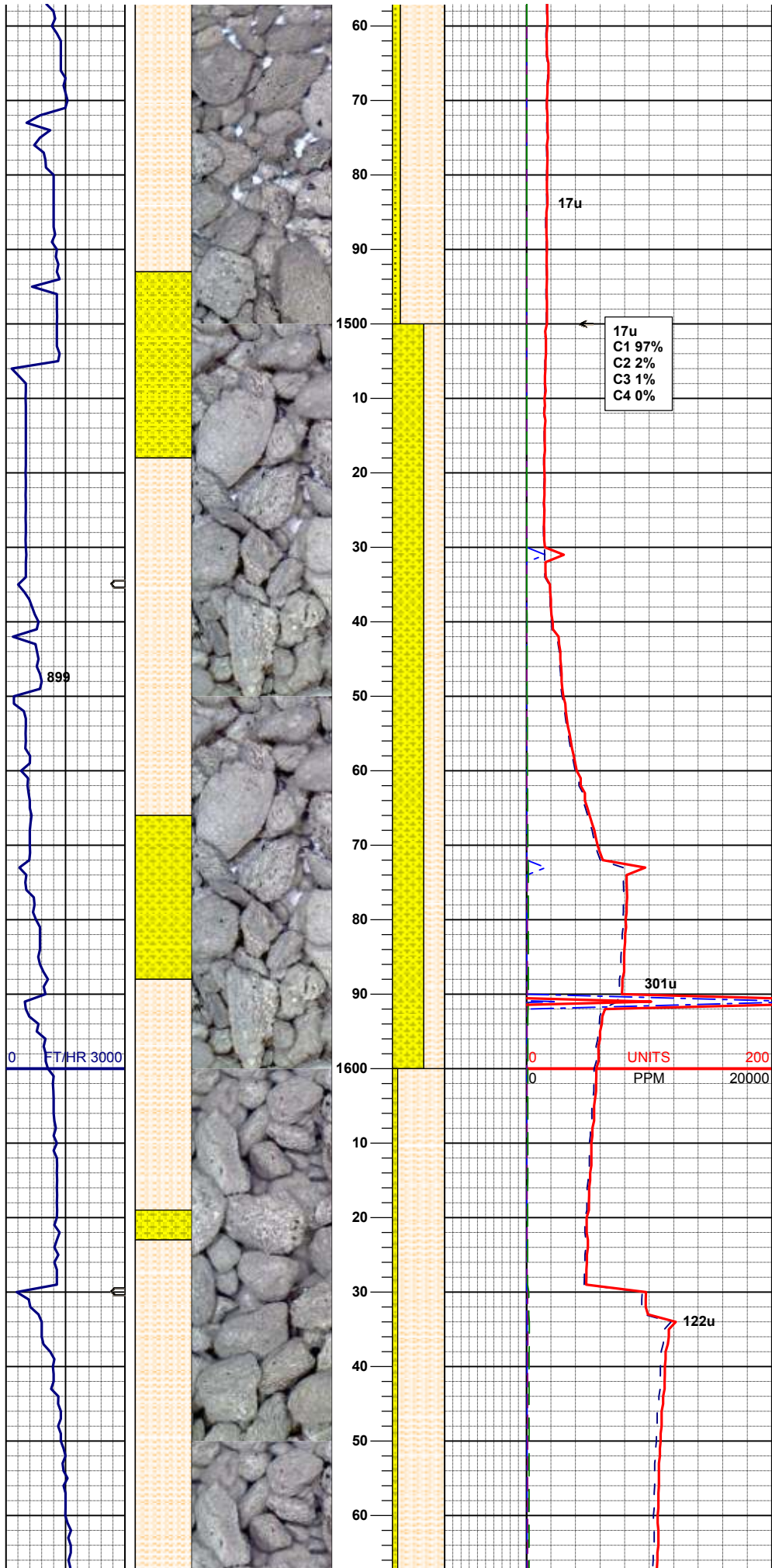
80% SHYSLTST: ltgy, fgr, sbrd-sbplty, sft 15%
SHYSS: lt-mgy, sbplty-sbblky, sft, tr glau 5%
SS: ltgy-clr, cgr, sbblky-blky, sft, tr glau, calc



90% SHYSLTST: ltgy, fgr, sbrd-sbply, sft 10%
SS: ltgy-clr, cgr, sblky-blky, sft, tr glau, tr pyr, calc

MD 1383'
INC 0.93
AZM 143.0

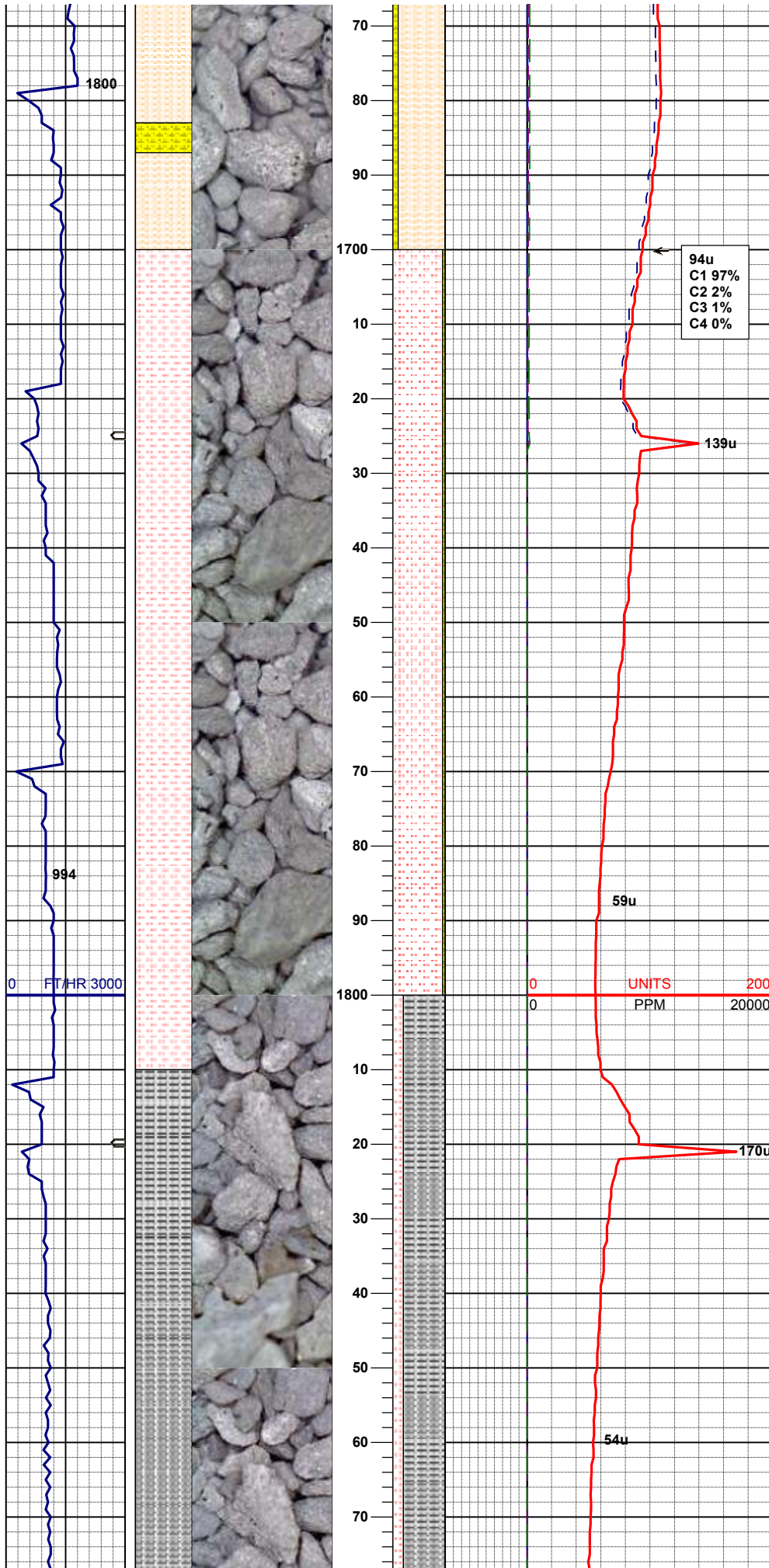
85% SHYSLTST: ltgy, fgr, sbrd-sbply, sft 15%
SS: ltgy-clr, cgr, sblky-blky, sft, tr glau, calc



60% SHYSS: lt-mgy, cgr, sbblky-blky, sft, tr glau, 40% SHYSLTST: lt-mgy, fgr, sbrd-sbply, sft, sl calc

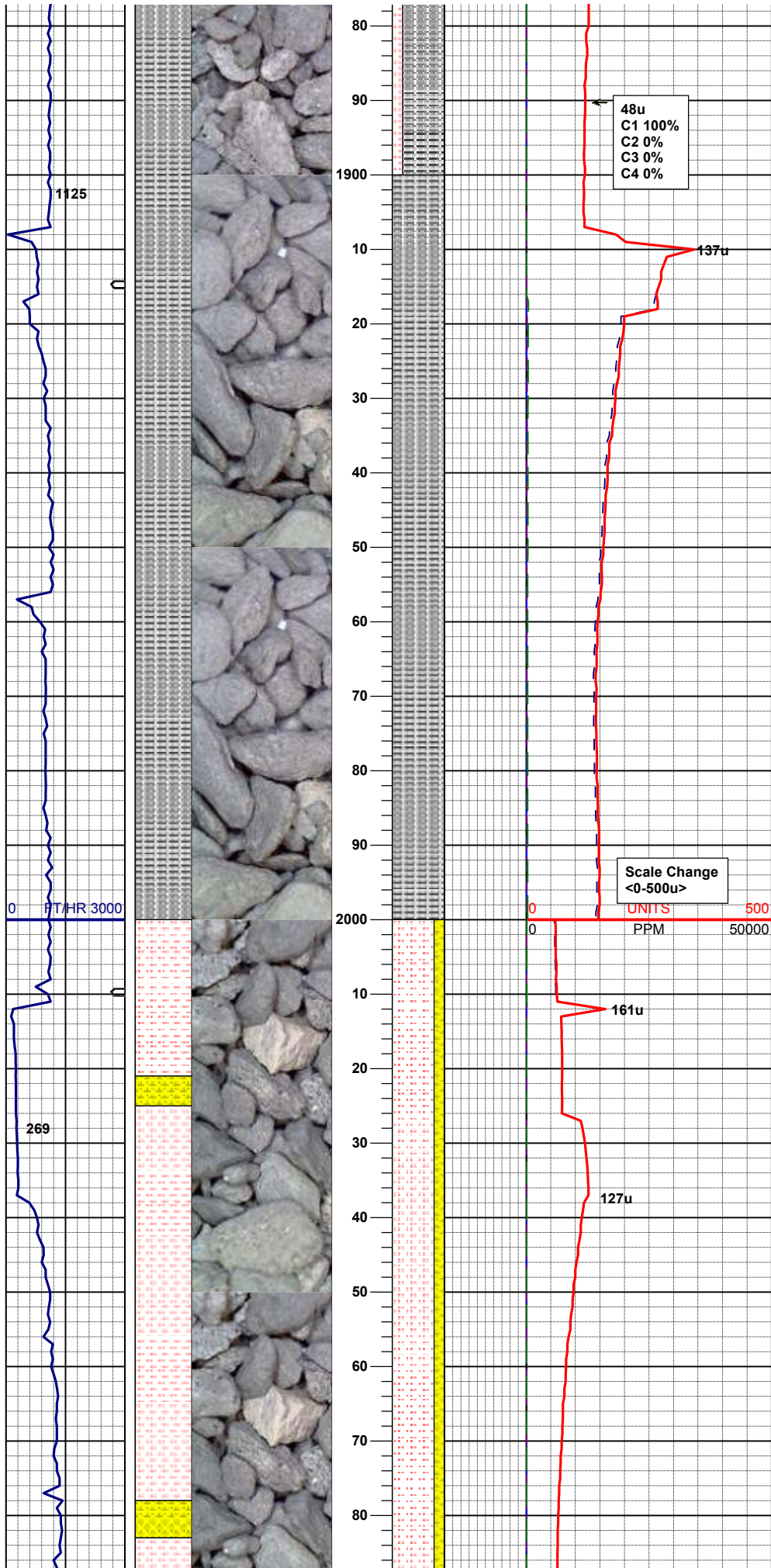
MUD WT 8.50 VIS 28

90% SHYSLTST: lt-mgy, fgr, sbrd-sbply, sft 10% SHYSS: lt-mgy, cgr, sbblky-blky, sft, sl calc



95% SLTST: lt-mgy, vfgr, sbrd-sbplty, vsft 5%
 SHYSS: lt-mgy, mgr, sbbiky-blky, sft, calc

80% SLTYSH: lm-dkgy, vfgr, sbrd-rd, vsft 20%
 SLTST: lt-mgy, f-mgr, sbrd-rd, vsft, tr shyss, vcalc

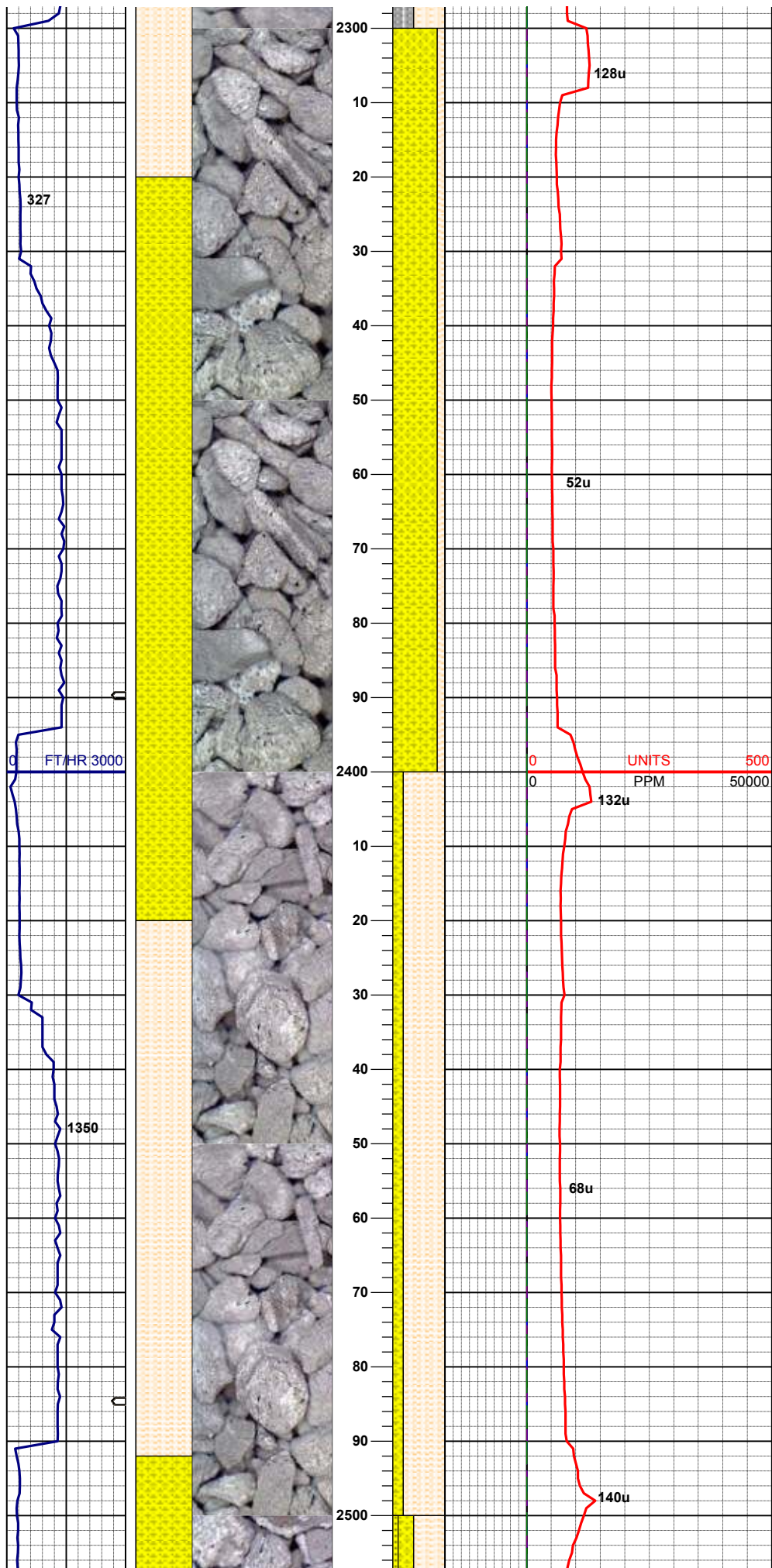


100% SLTYSH: m-dkgy, vfgr, sbrd-rd, occ
sbplty, vsft, occ pyr, calc

MD 1951'
INC 0.73
AZM 140.8

80% SLTST: vlt-ltgy, vfgr, sbrd-rd, vsft 20%
SHYSS: lt-mgy, mgr, sbrd-sbblky, hd, calc

MD 2046'
INC 2.07
AZM 91.59



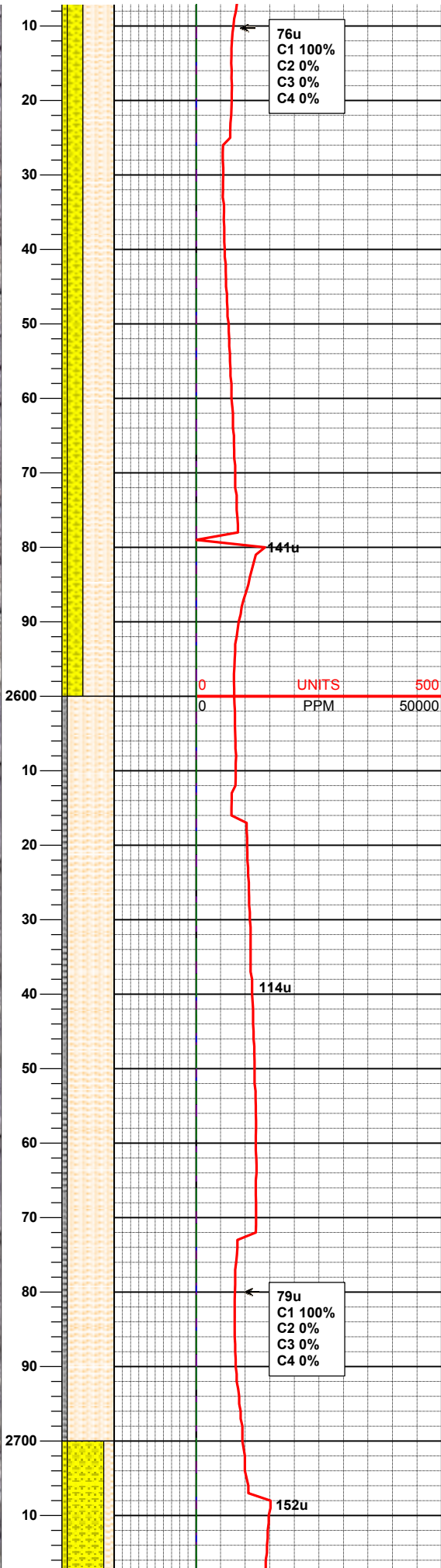
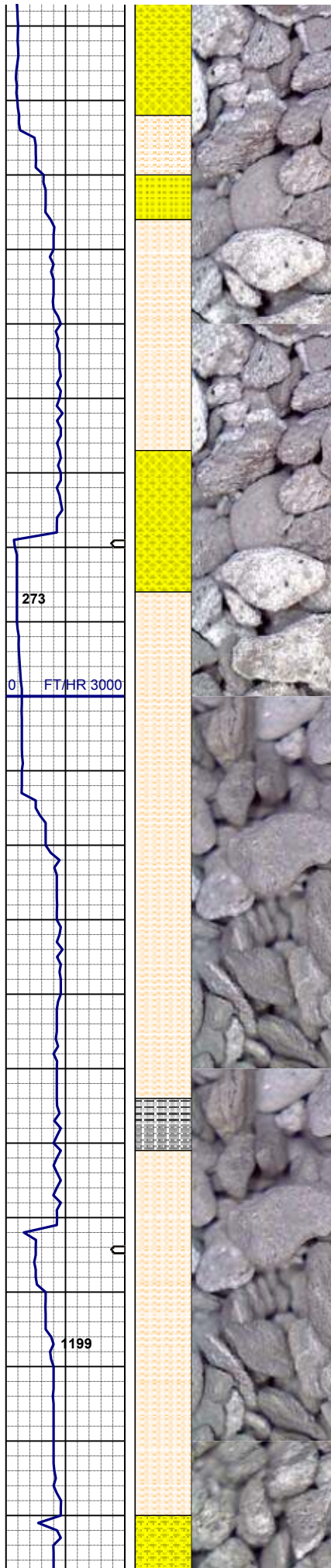
85% SHYSS: lt-mgy, mgr, sbrd-sbblky, mod sft
15% SHYSLTST: ltgy, fgr, sbrd-rd, vsft, calc

MD 2331'
INC 8.78
AZM 61.11

MUD WT 8.50 VIS 27

MD 2426'
INC 11.56
AZM 60.45

80% SHYSLTST: ltgy, fgr, sbrd-rd, vsft 20%
SHYSS: lt-mgy, mgr, sbrd-sbblky, mod sft, calc

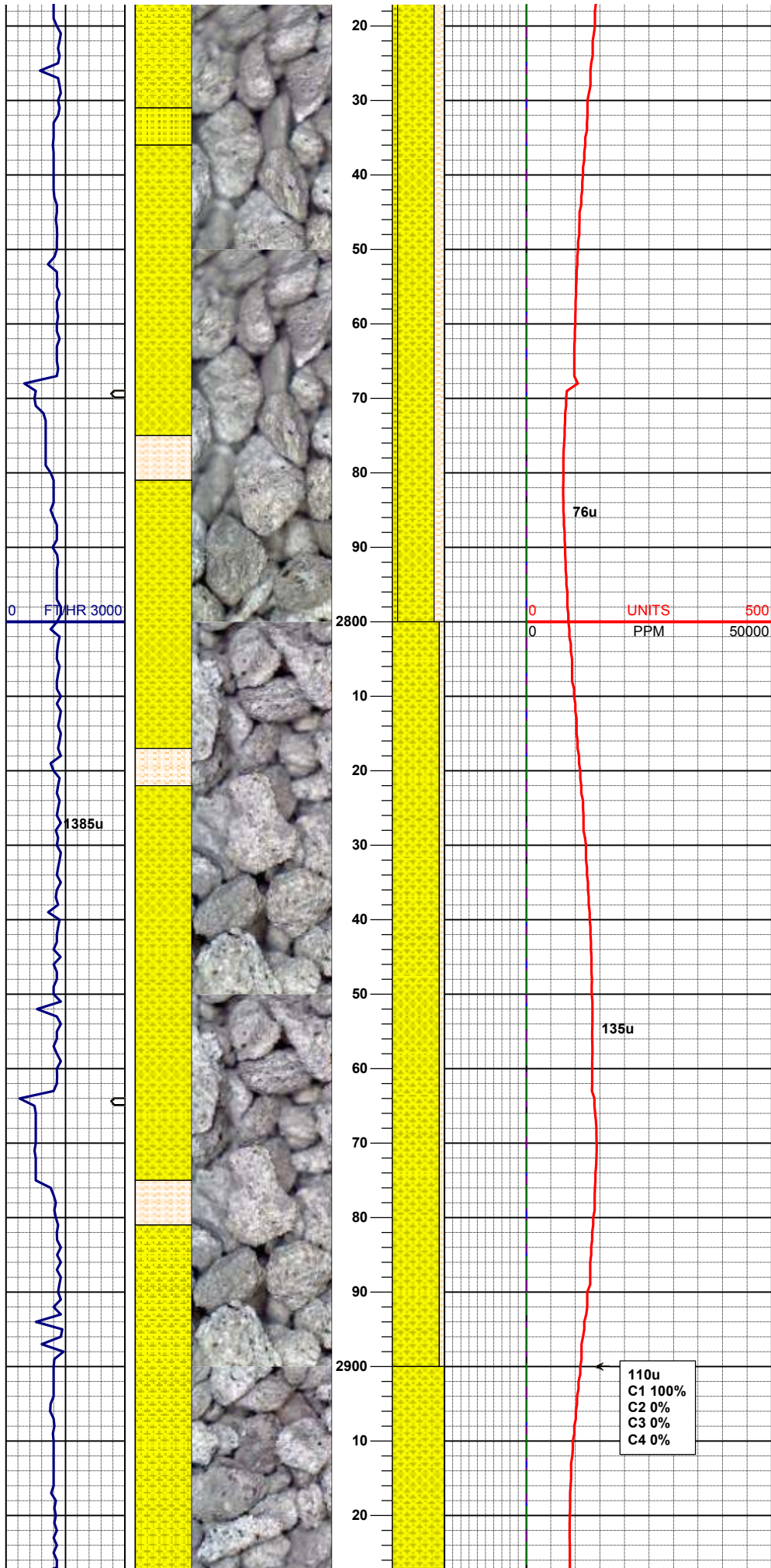


MD 2521'
INC 12.94
AZM 60.78

60% SHYSLTST: ltgy, fgr, sbrd-rd, vsft 30%
SHYSS: lt-mgy, mgr, sbrd-sbblky, mod sft, 10%
SS: wh-clr, cgr, sbrd-sbblky, firm, fri, calc

MD 2616'
INC 14.98
AZM 58.16

90% SHYSLTST: ltgy, vfgr, sbrd-rd, vsft
10% SLTYSH: m-dkgy, vfgr, sbrd, sbply, vsft,
calc



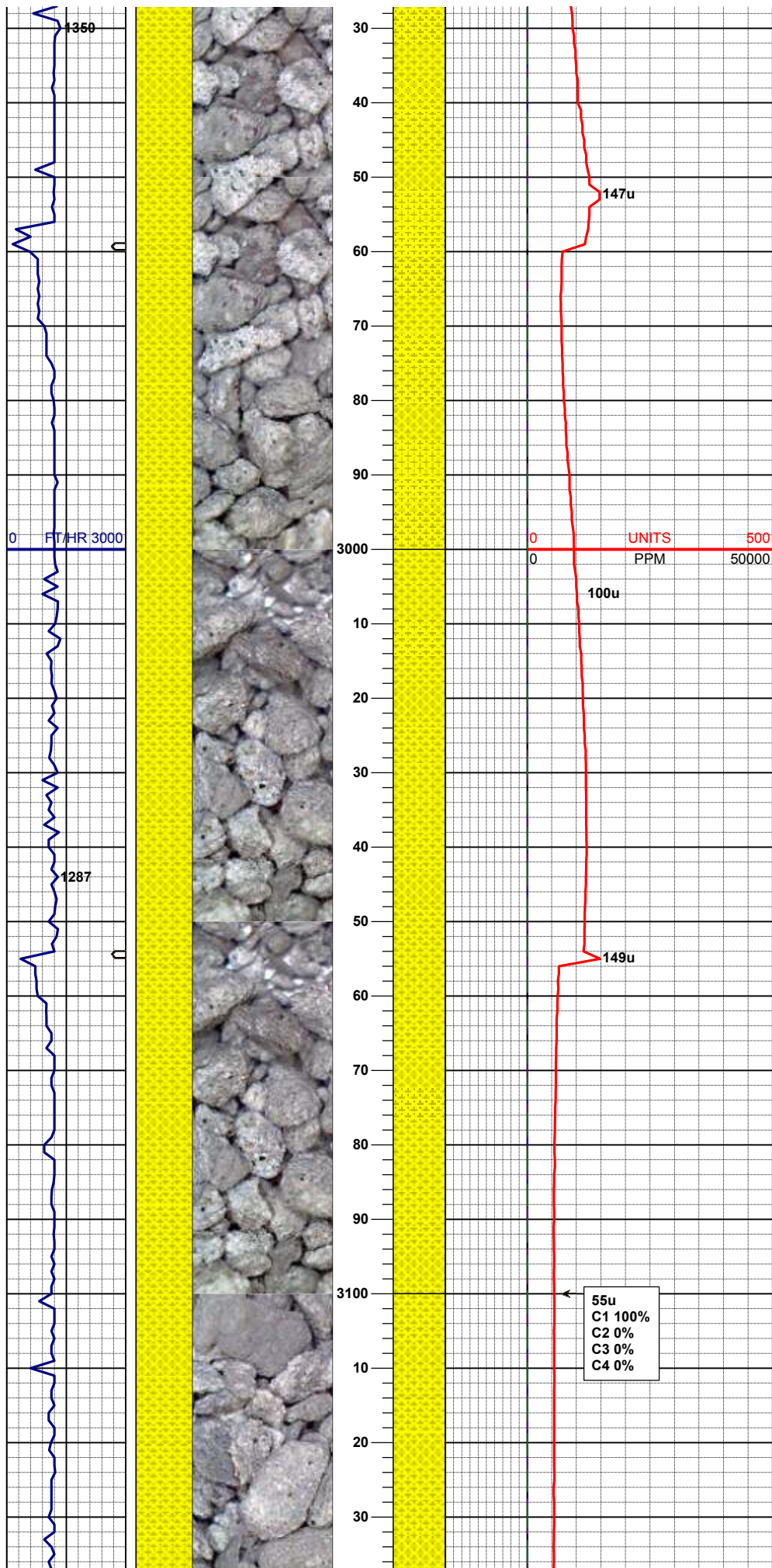
70% SHYSS: lt-mgy, mgr, sbrd-sbblky, mod sft
20% SHYSLTST: ltgy, fgr, sbrd-rd, vsft 10% SS:
wh-clr, cgr, sbrd-sbblky, tr glau, mod firm, fri,
calc

MD 2806'
INC 14.28
AZM 55.16

90% SHYSS: lt-mgy, occ wh, f-mgr, sbrd-
sbblky, firm 10% SHYSLTST: ltgy, fgr, sbrd-rd,
vsft, v calc

110u
C1 100%
C2 0%
C3 0%
C4 0%

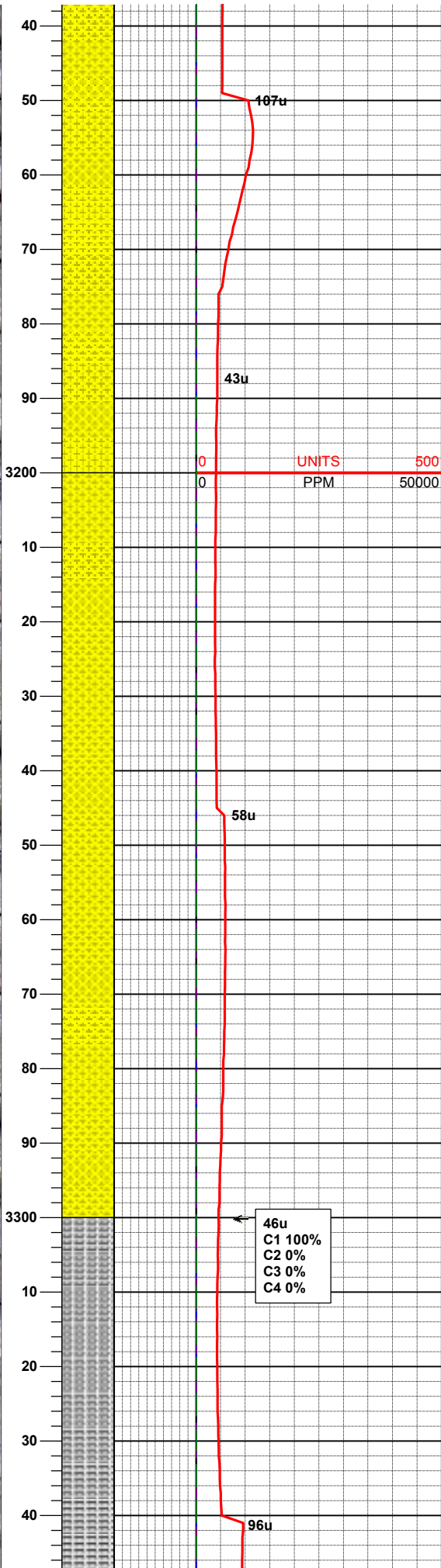
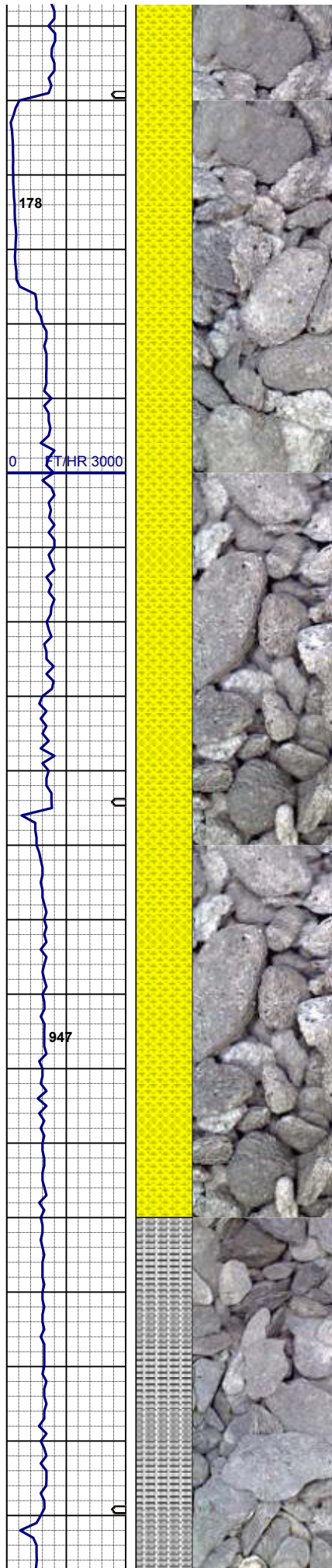
100% SHYSS: lt-mgy, occ wh, f-mgr, sbrd-
sbblky, firm, tr glau, v calc



100% SHYSS: lt-mgy, occ wh, f-mgr, sbrd-sbblky, firm, tr glau, v calc

MD 3091'
INC 14.43
AZM 51.59

100% SHYSS: lt-mgy, occ wh, f-mgr, sbrd-sbblky, firm, v calc

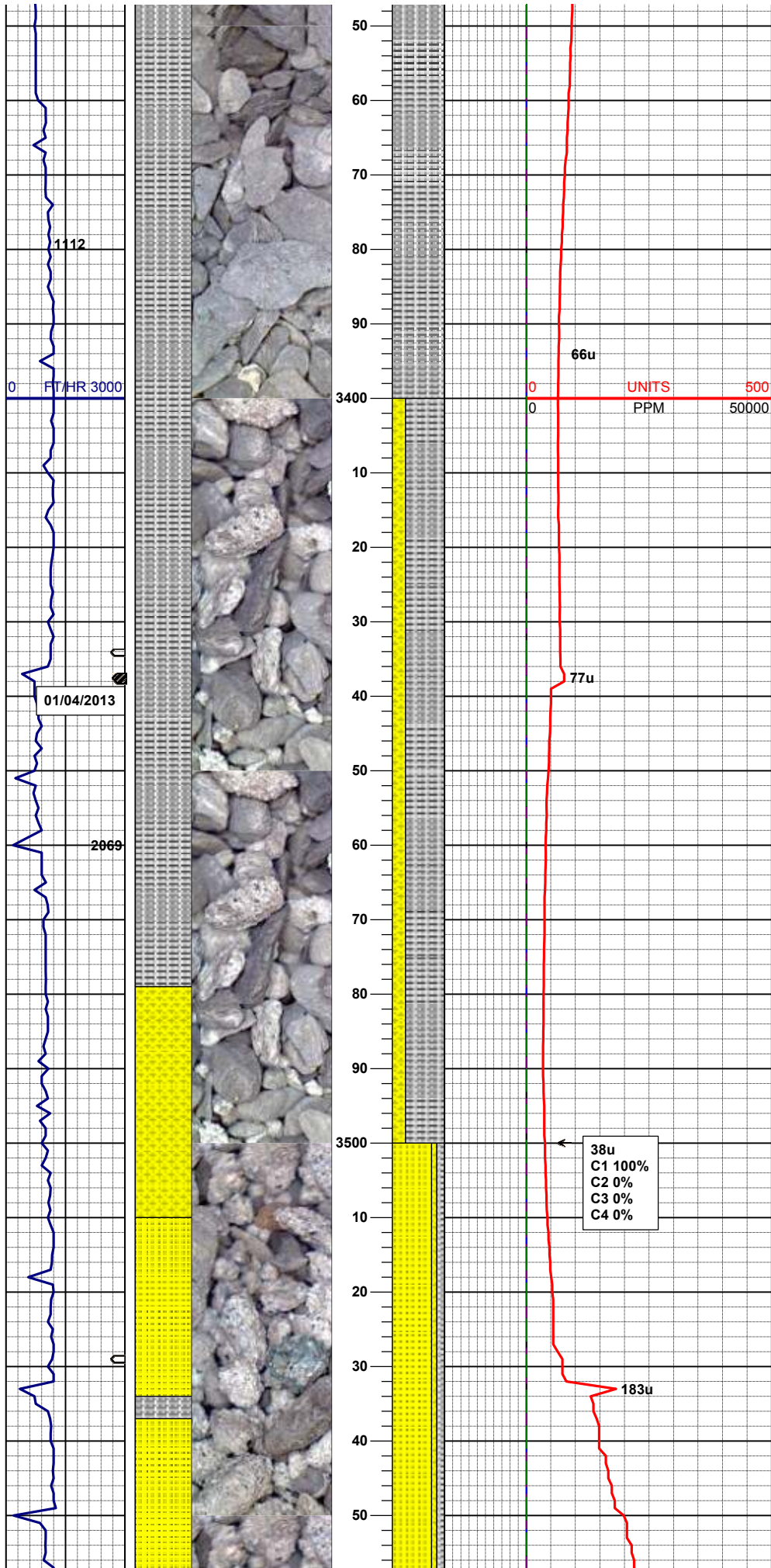


MUD WT 8.60 VIS 28

100% SHYSS: lt-mgy, occ wh, f-mgr, sbrd-sbbiky, firm, v calc

MD 3281'
INC 12.46
AZM 55.41

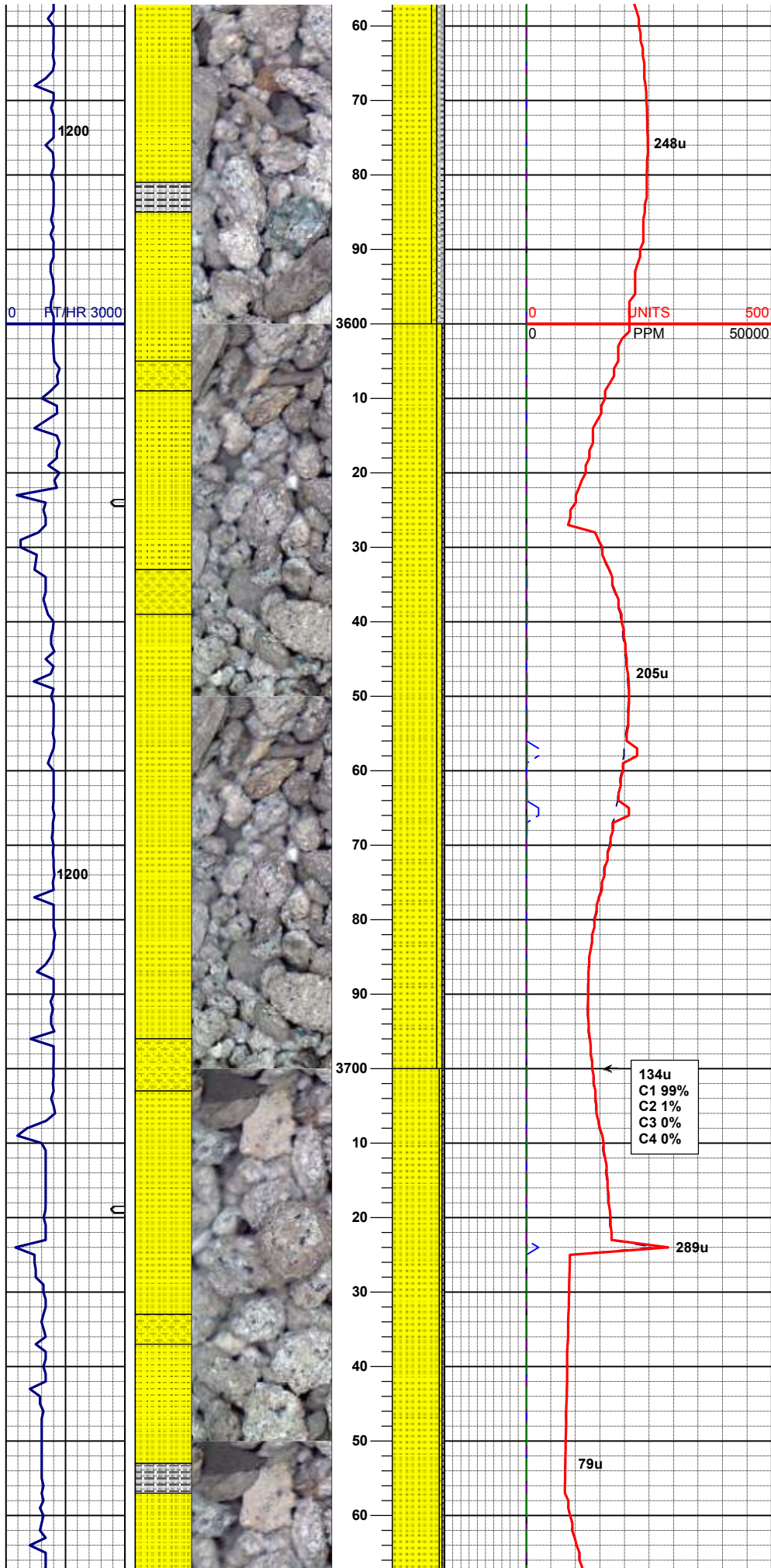
100% SLTYSH: m-dkgy, v fgr, sbply-pty, sft, sl calc



75% SLTYSH: m-dkgy, v fgr, sbplty-plty, sft
25% SHYSS: lt-mgy, cgr, sbrd-sbblky, mod firm,
fri, tr glau, sl calc

MD 3471'
INC 8.63
AZM 50.82

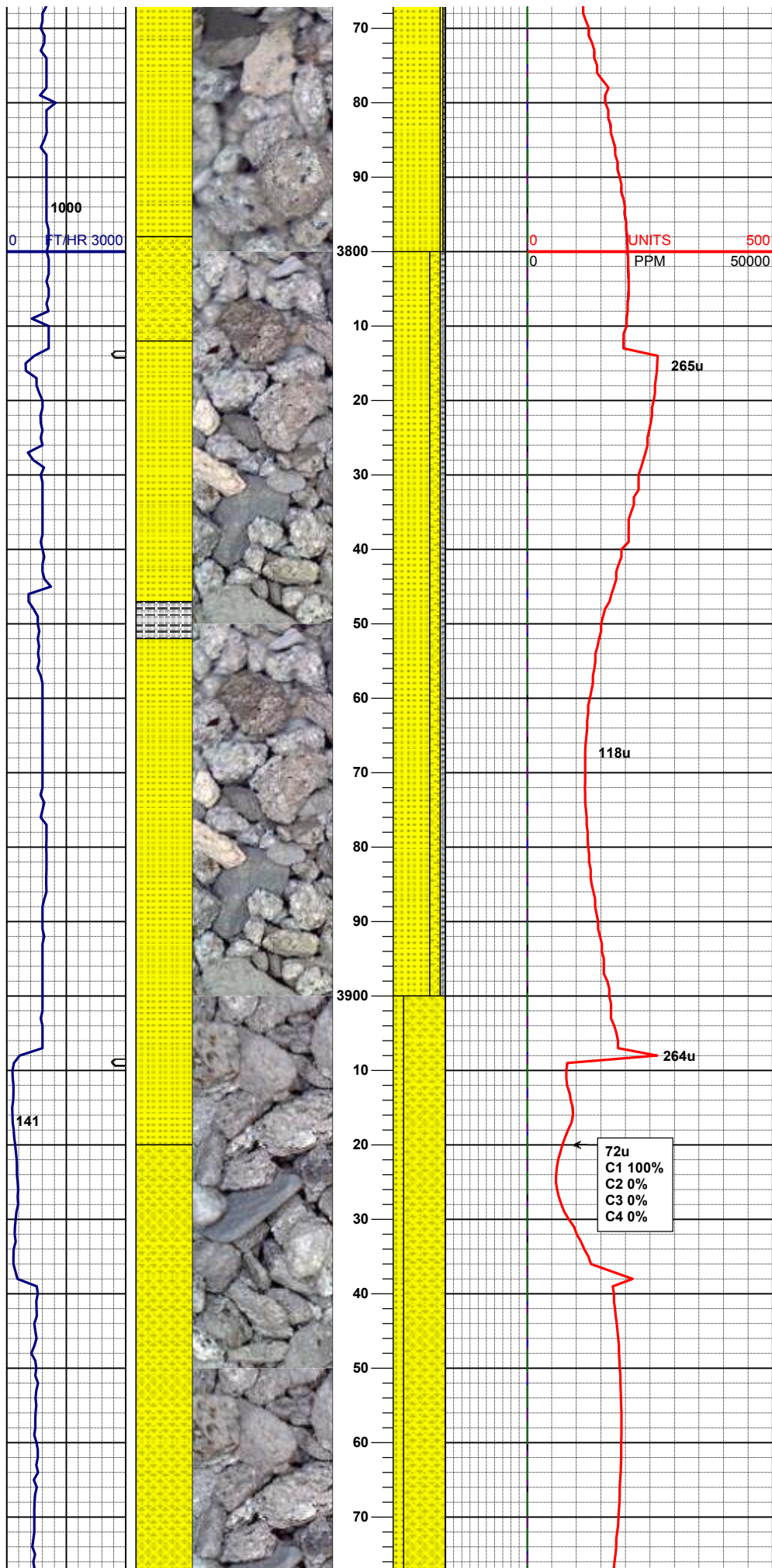
75% SS: wh-clr, cgr, sbrd-sbblky, sft, fri 15%:
SLTYSH: m-dkgy, v fgr, sbplty-plty, sft 10%
SHYSS: lt-mgy, cgr, sbrd-sbblky, mod firm, fri,
sl calc



85% SS: wh-clr, cgr, sbrd-sbblky, sft, fri, scat
glau 10% SHYSS: lt-mgy, cgr, sbrd-sbblky, mod
firm, fri 5%: SLTYSH: m-dkgy, v fgr, sbplty-plty,
sft, sl calc

MD 3661'
INC 10.23
AZM 54.16

90% SS: wh-clr, cgr, sbrd-sbblky, sft, fri, scat
glau 5% SHYSS: lt-mgy, cgr, sbrd-sbblky, mod
firm, fri 5%: SLTYSH: m-dkgy, v fgr, sbplty-plty,
sft, sl calc

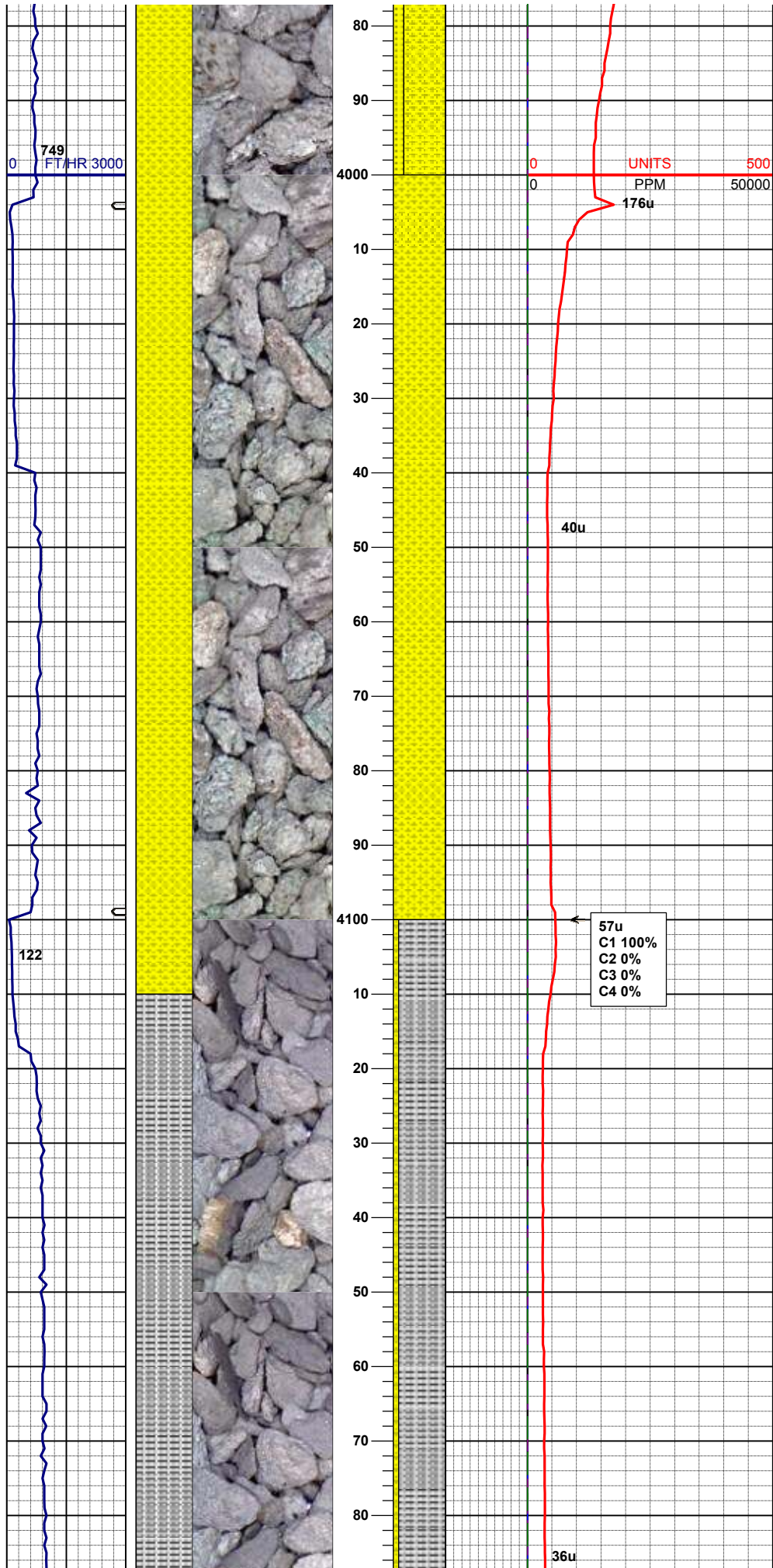


70% SS: wh-clr, cgr, sbrd-sbblky, sft, fri, scat glau 20% SHYSS: lt-mgy, cgr, sbrd-sbblky, mod firm, fri 10%: SLTYSH: m-dkgy, v fgr, sbplty-plty, sft, sl calc

MD 3850'
INC 11.60
AZM 52.61

80% SHYSS: lt-mgy, cgr, sbrd-sbblky, mod sft 20% SS: wh-clr, cgr, sbrd-sbblky, sft, fri, tr glau

MD 3946'
INC 9.90
AZM 57.08



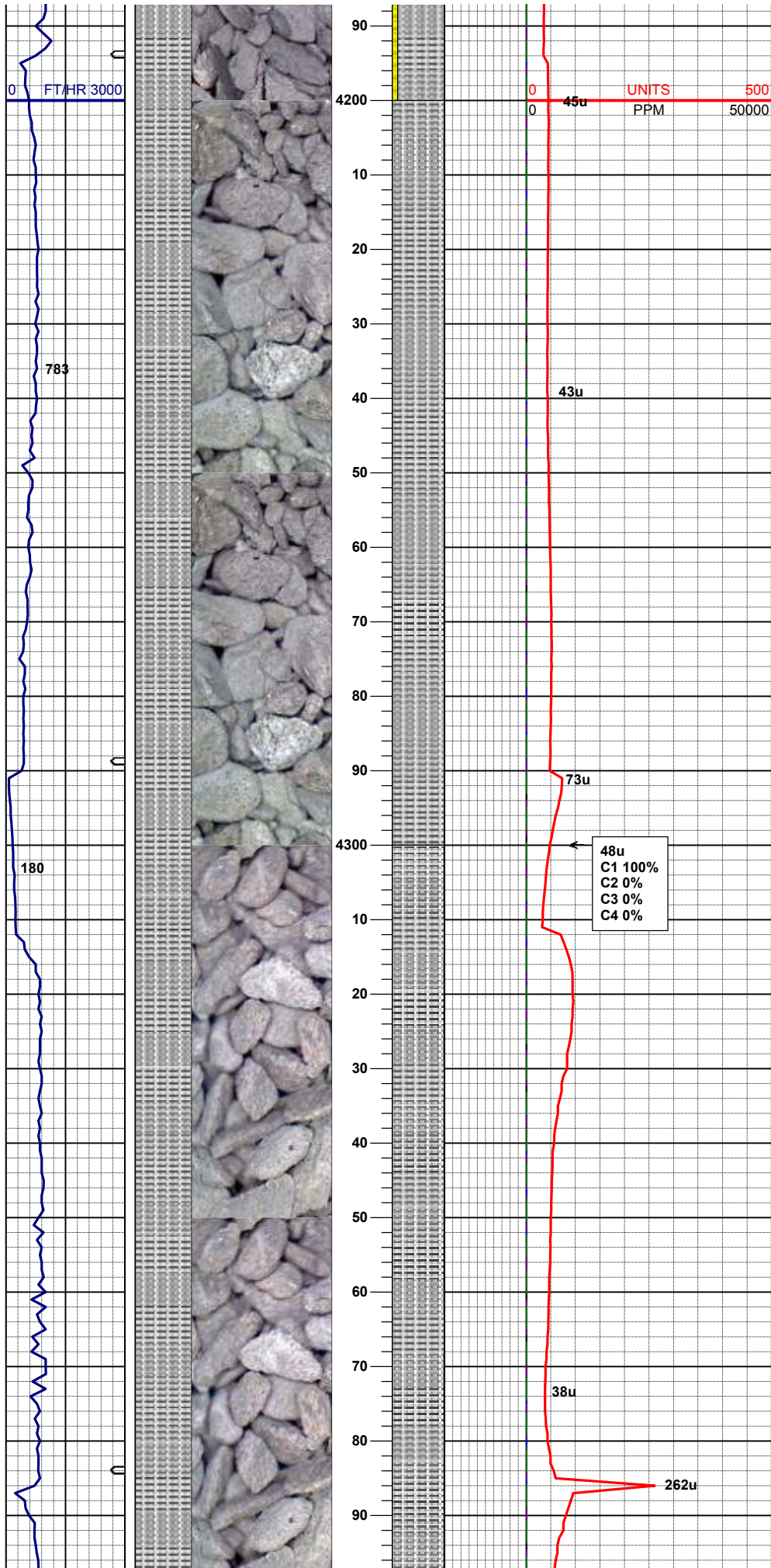
100% SHYSS: lt-mgy, cgr, sbrd-sbblky, mod sft-firm, abnt glau, sl calc

MD 4041'
INC 6.63
AZM 44.61

MUD WT 8.85 VIS 28

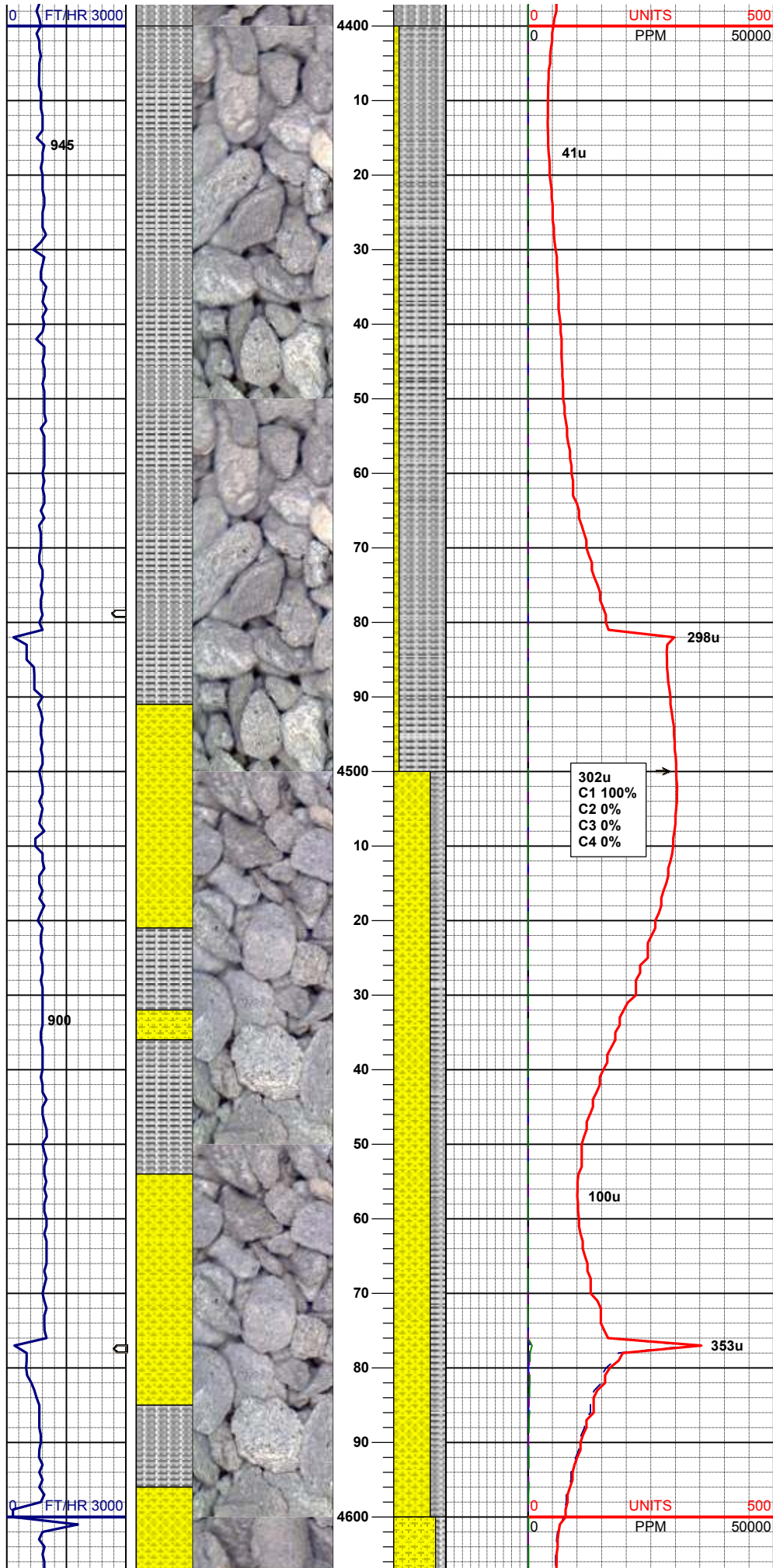
MD 4135'
INC 4.41
AZM 42.89

90% SLTYSH: m-dkgy, v fgr, sbrd-sbblky, v sft
10% SHYSS: lt-mgy, cgr, sbrd-sbblky, mod sft-firm, abnt glau, sl calc, tr Inoc



100% SLTYSH: m-dkgy, fgr, sbrd-sbblky, v sft, sl calc, tr Inoc

100% SLTYSH: m-dkgy, occ blk, fgr, sbrd-sbplty, v sft, v sl calc

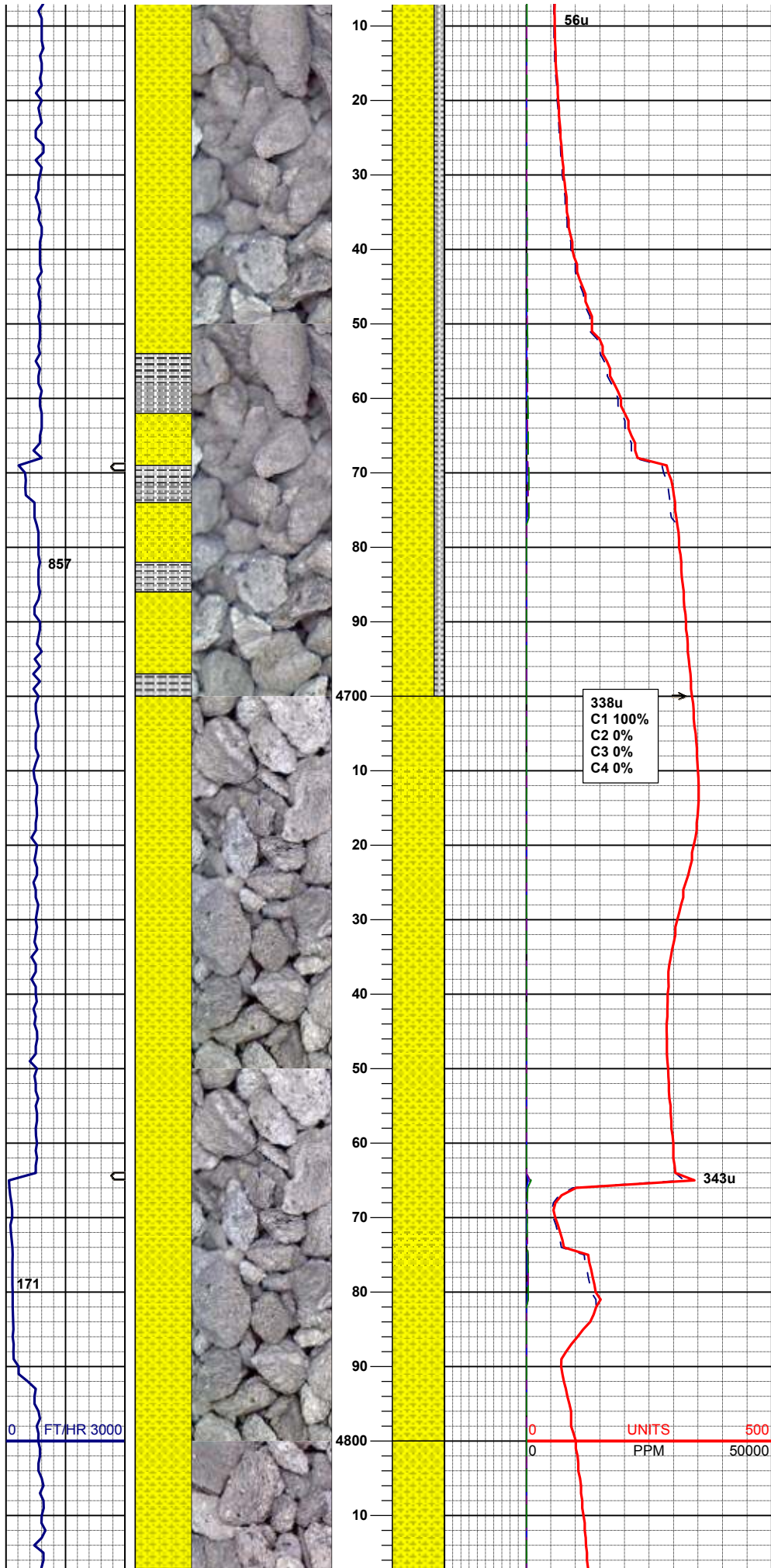


MUD WT 8.95 VIS 28

90% SLTYSH: m-dkgy, v fgr, sbrd-sbbkly, v sft
10% SHYSS: lt-mgy, vf-fgr, sbang-sbrd, f srt,
mod sft-firm, glau, sl calc, occ carb flk

MD 4515'
INC 1.17
AZM 104.32

70% SHYSS: lt-mgy, vf-fgr, sbang-sbrd, f srt,
mod sft-firm, glau, sl calc, occ carb flk 30%
SLTYSH: lt-mgy, sft-firm, sbply-sbbkly, slty, v sl
calc

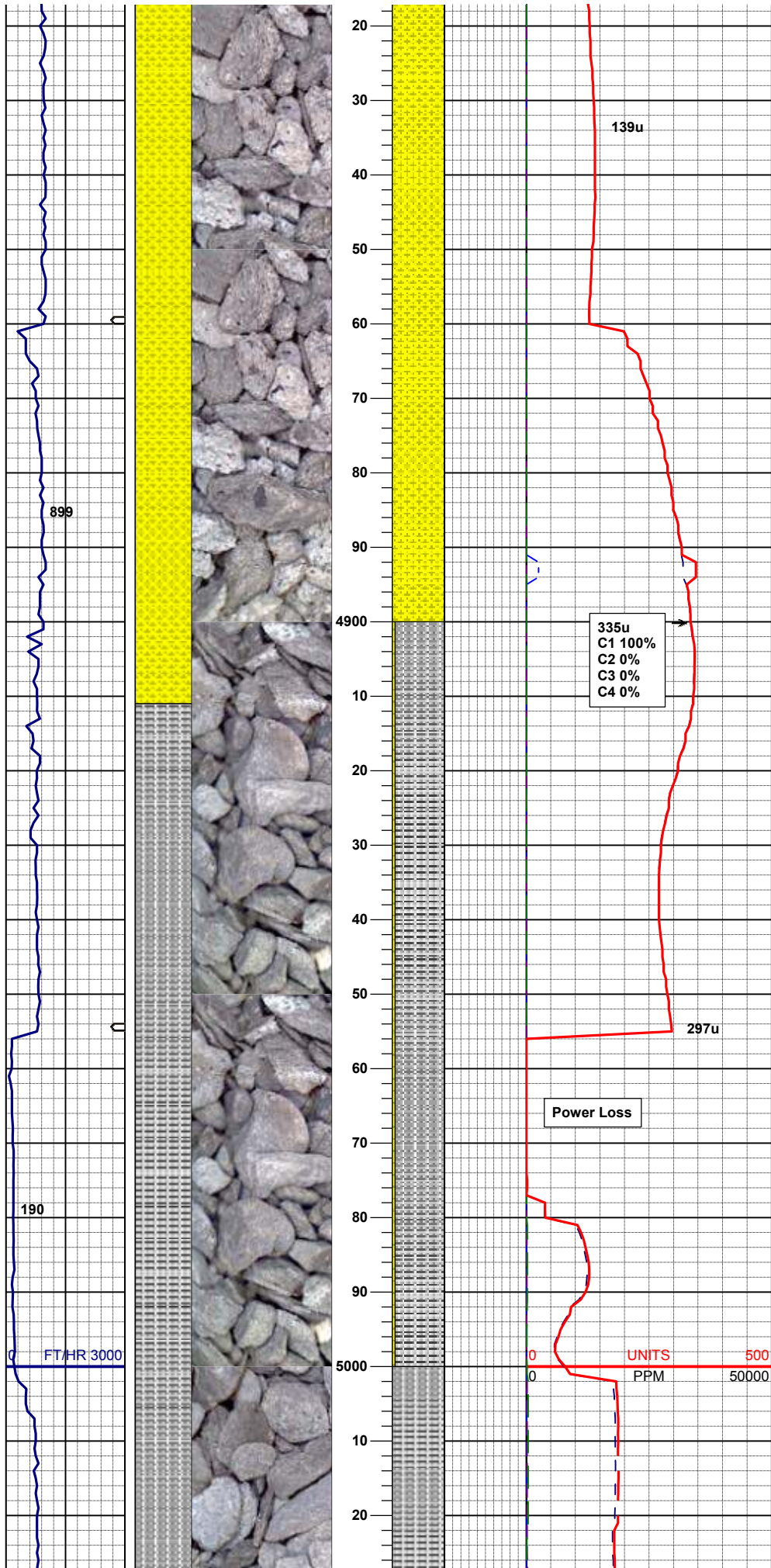


80% SHYSS: lt-mgy, vf-fgr, sbang-sbrd, f srt, mod sft-firm, glau, sl calc, occ carb flk 20%
SLTYSH: lt-mgy, sft-firm, sbply-sbblky, slty, v sl calc

MD 4706'
INC 1.97
AZM 40.78

MUD WT 8.95 VIS 29

100% SHYSS: lt-mgy, s&p, vf-fgr, sbang-sbrd, f srt, mod sft-firm, occ phlog, mod calc, tr sltysh

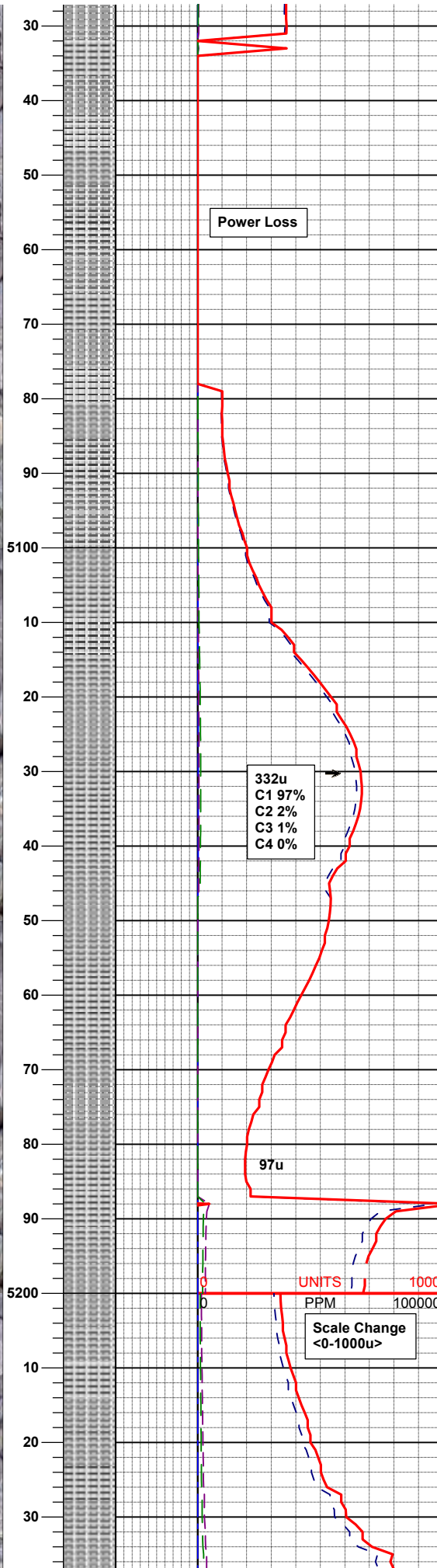
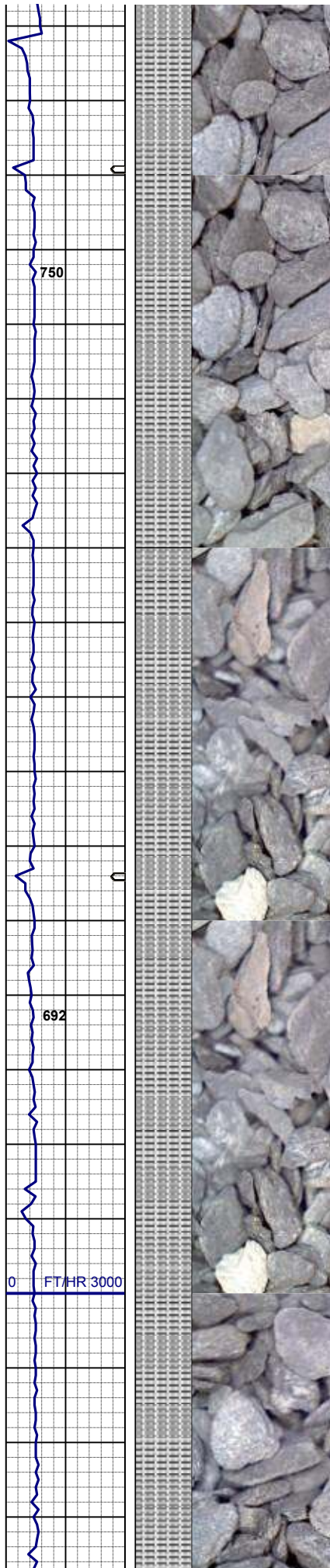


100% SHYSS: lt-mgy, s&p, vf-fgr, sbang-sbrd, f
srt, mod sft-firm, occ phlog, mod calc, occ grdg-
ss, tr sltysh

MD 4896'
INC 1.02
AZM 41.0
MUD WT 9.00 VIS 29

90% SLTYSH: lt-mgy, v fgr, sbrd-sbbiky, mod
sft-firm 10% SHYSS: lt-mgy, vf-fgr, sbang-sbrd,
f srt, mod sft-firm, glau, sl calc, occ carb flk

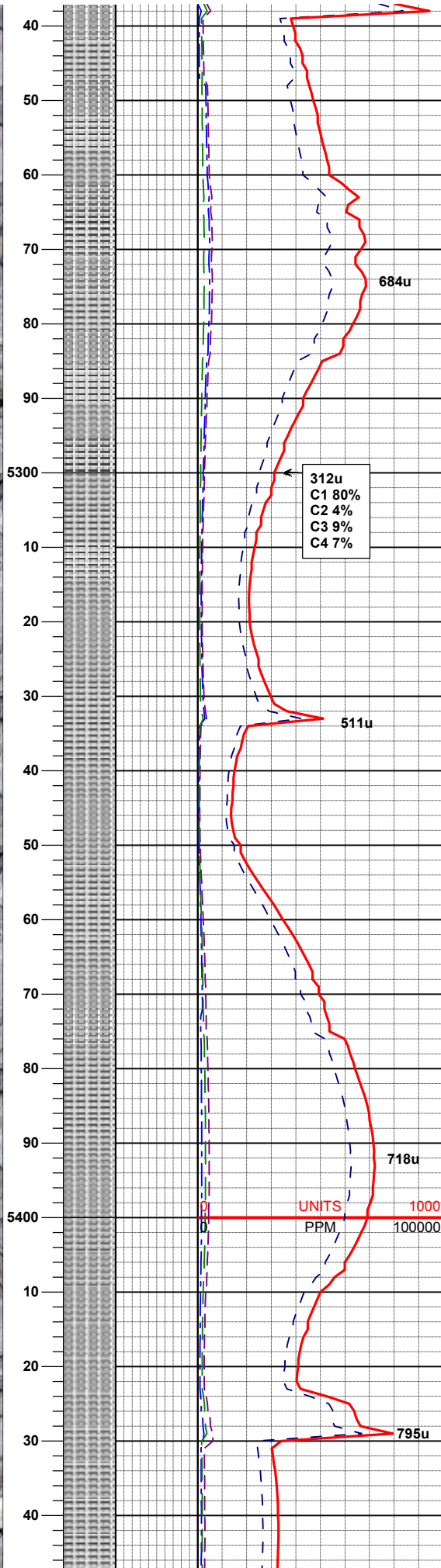
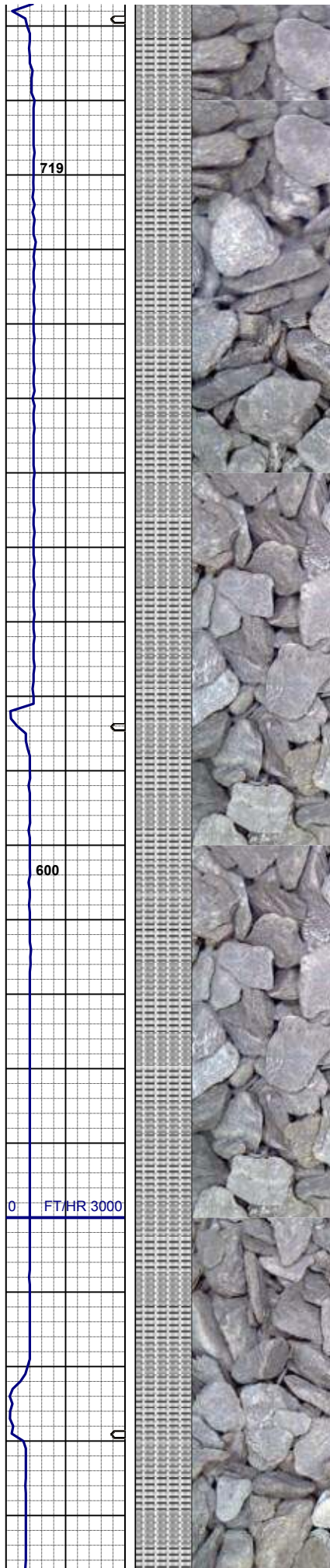
MD 4991'
INC 1.76
AZM 242.37



100% SLTYSH: lt-mgy, mod sft-firm, sbply-sbblky, slty tex, tr pyr, v sl calc

100% SLTYSH: lt-mgy, mod sft-firm, sbply-sbblky, slty tex, v sl calc, tr pyr, rr ls

MD 5181'
INC 0.18
AZM 255.06



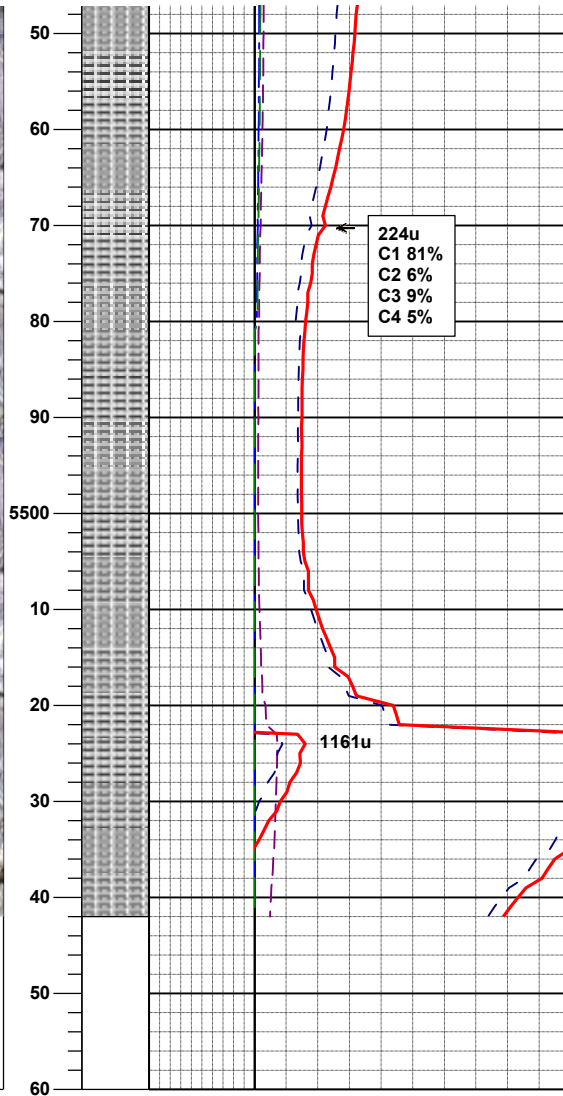
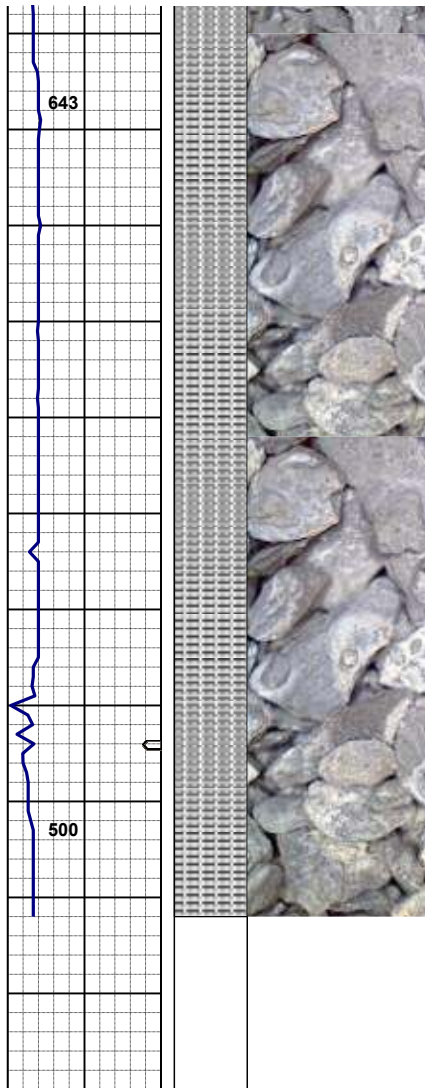
100% SLTYSH: lt-mgy, mod sft-firm, sbply-sbblky, slty tex, v sl calc, tr pyr, rr ls

100% SLTYSH: lt-mgy, mod sft-firm, sbply-sbblky, slty tex, v sl calc, tr pyr

MD 5371'
INC 1.09
AZM 37.19

UNITS
PPM

1000
100000



100% SLTYSH: lt-mgy, mod sft-firm, sbply-
sbbly, slty tex, v sl calc, tr pyr

MD 5485'
INC 0.42
AZM 18.57

WELL @ KOP 5,542' MD
01/04/2013

LOG CONTINUES ON PTASNIK
FEDERAL LG19-74HN HORIZONTAL