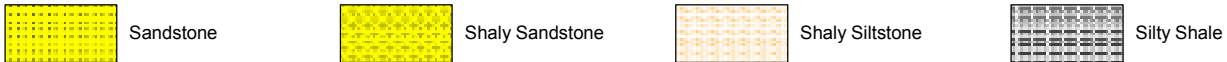


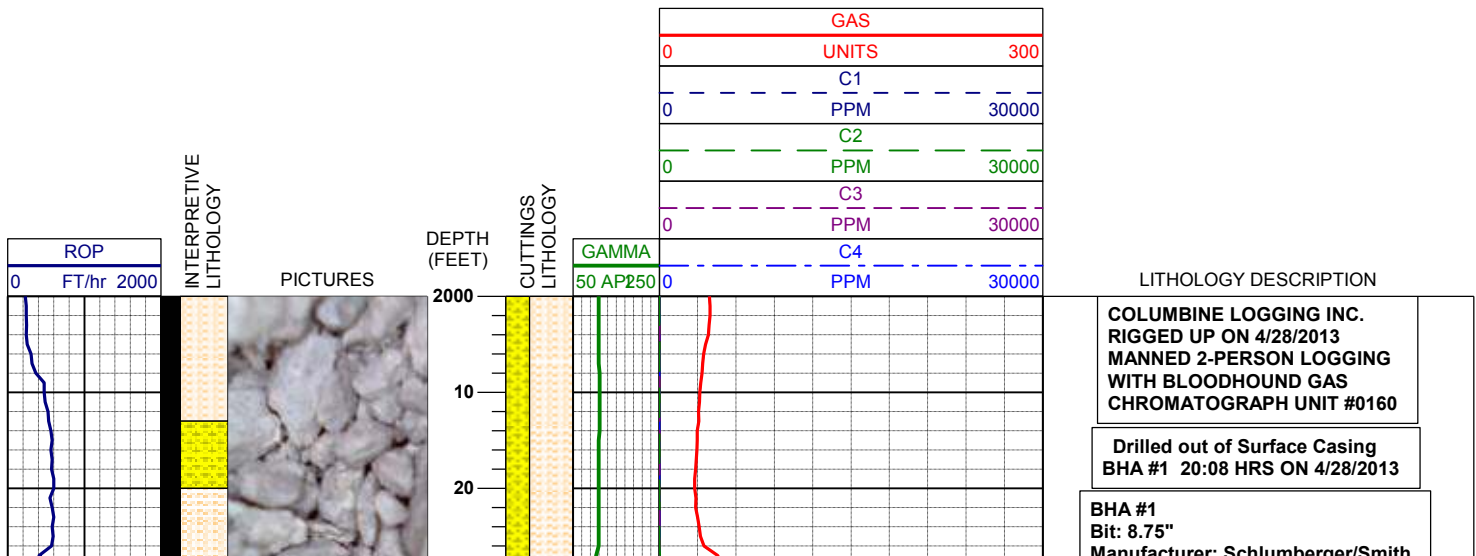
LOG created using LPLOT VH Version 3.0, May 04, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC.
WELL: Timbro LC13-75-1HN
LOCATION: SEC 24, T9N, R59W
COUNTY: WELD
STATE: COLORADO
SPOT: 280' FNL, 1912' FEL
ELEVATION: 4857' GL, 4881' KB
FIELD: WILDCAT
SPUD DATE: 4/27/13
TD DATE: 5/3/2013
DATES LOGGED: 4/28/13 - 5/4/13
DEPTHS LOGGED: 2000' - 10390'
LOGGERS: John T. Ready, Elizabeth M. van Diepen
DRILLING FLUID: WATER, MUD, POLY
DRILLING RIG: H&P 322
API: 05-123-36683
LOG TYPE: VERTICAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.

LITHOLOGIES



ENGINEERING SYMBOLS



Model: MDi516
 Serial Number: JG4833
 Nozzles: 5x14
 Motor: 6.750"
 Manufacturer: Sperry Drilling
 Serial Number: 675-490
 Bend: 1.50

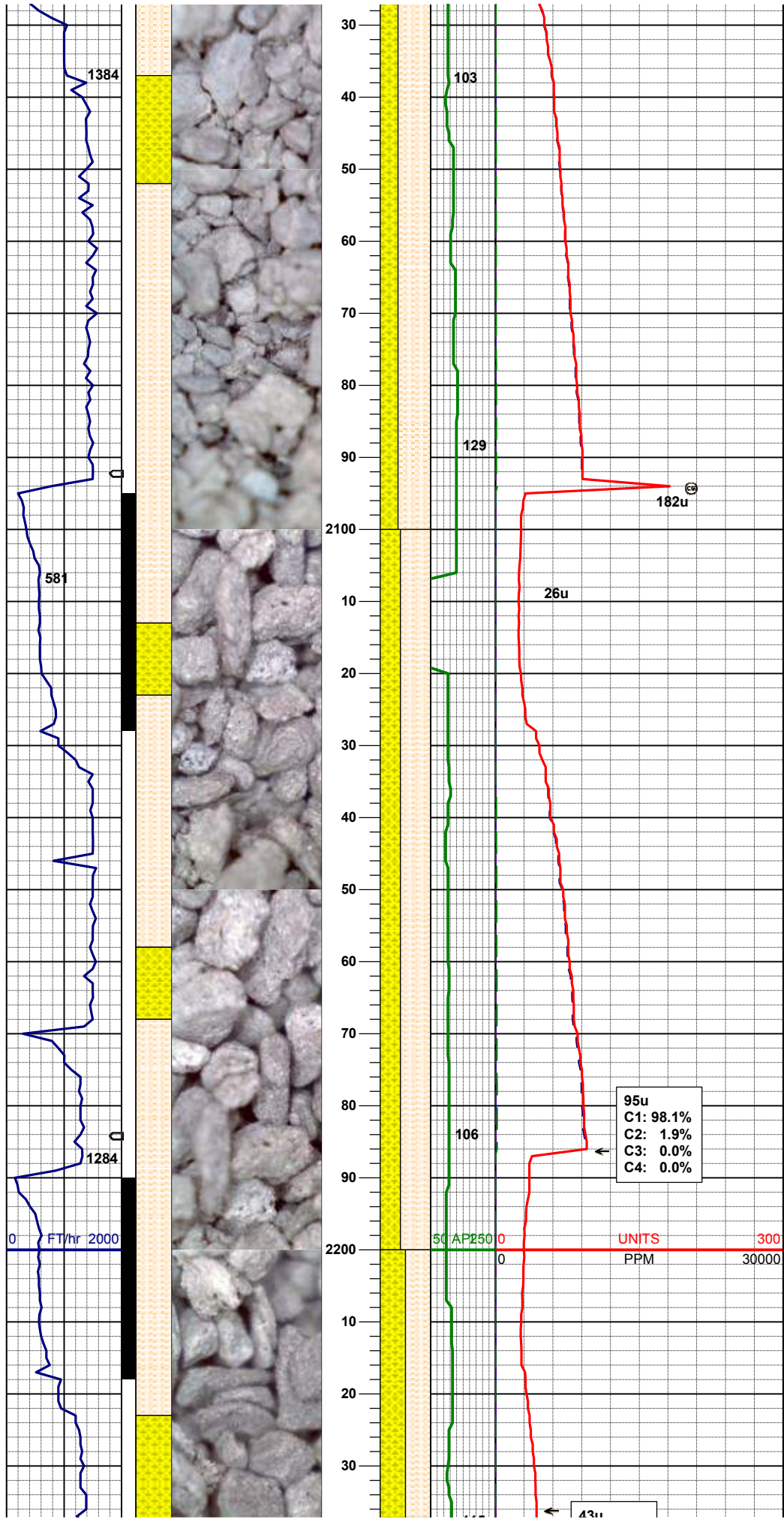
MD 2036'
 INC 8.34
 AZM 296.53

65% SHYSLTST: mgy-occ dkgy, ltgy ip, sbbkly
 -blky, mod frm-frm, cly rich, grty tex ip, mod-occ
 v slty, sl calc, grdg ip to sltst
 35% SHYSS: ltgy, mot gy/wh, w srt, vfgr, slt ip,
 sbrd, m-w cmt, sil & brit ip, consol, dns, mod-
 abnt cly, sl-tr calc, spckld blk w/dissemin carb
 mat

MD 2131'
 INC 10.71
 AZM 299.35

60% SHYSLTST: mgy-occ dkgy, ltgy ip, sbbkly
 -blky, mod frm-frm, cly rich, grty tex ip, mod-occ
 v slty, sl calc, grdg ip to sltst
 40% SHYSS: ltgy, mot gy/wh, w srt, vfgr, slt ip,
 sbrd, m-w cmt, sil & brit ip, consol, dns, mod-
 abnt cly, sl-tr calc, spckld blk w/dissemin carb
 mat

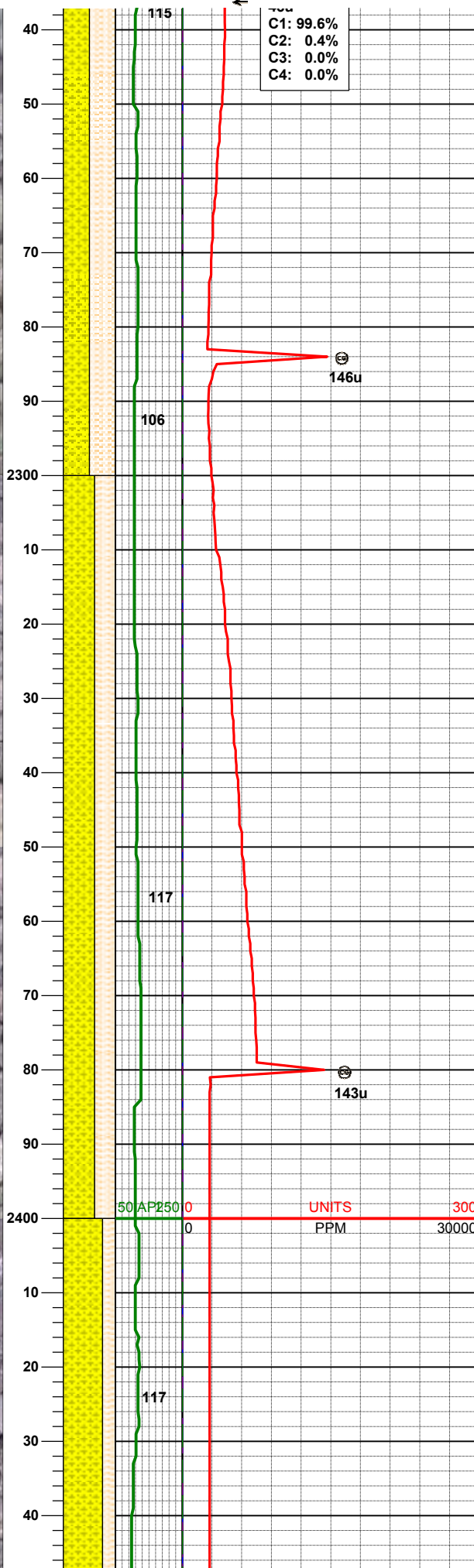
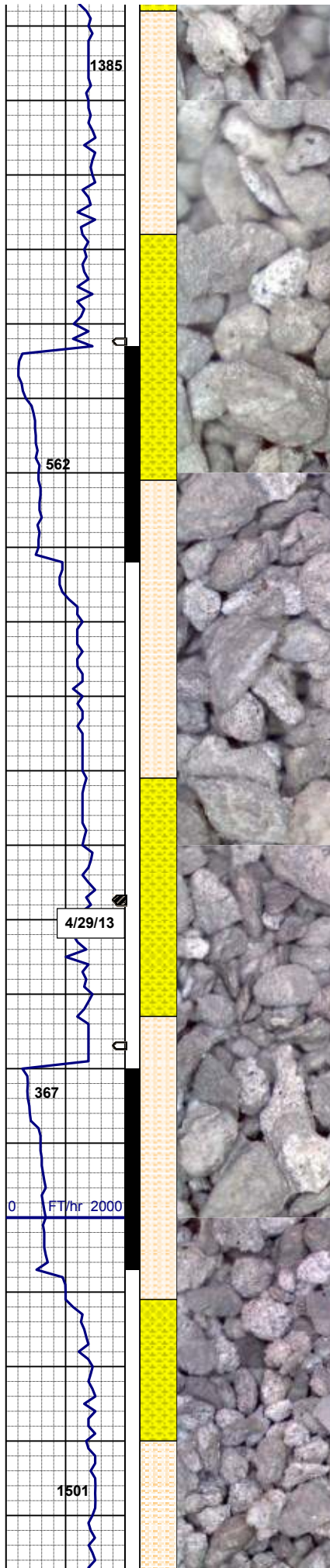
MD 2226'
 INC 12.68
 AZM 299.35



95u
 C1: 98.1%
 C2: 1.9%
 C3: 0.0%
 C4: 0.0%

UNITS 300
 PPM 30000

43u



C1: 99.6%
 C2: 0.4%
 C3: 0.0%
 C4: 0.0%

50% SHYSLTST: mgy-occ dkgy, ltgy ip, sbbkly
 -bkly, mod frm-frm, cly rich, grty tex ip, mod-occ
 v slty, sl calc, grdg ip to sltst
 50% SHYSS: ltgy, mot gy/wh, w srt, vfgr, slt ip,
 sbrd, m-w cmt, sil & brit ip, consol, dns, mod-
 abnt cly, sl-tr calc, spckld blk w/dissemin carb
 mat

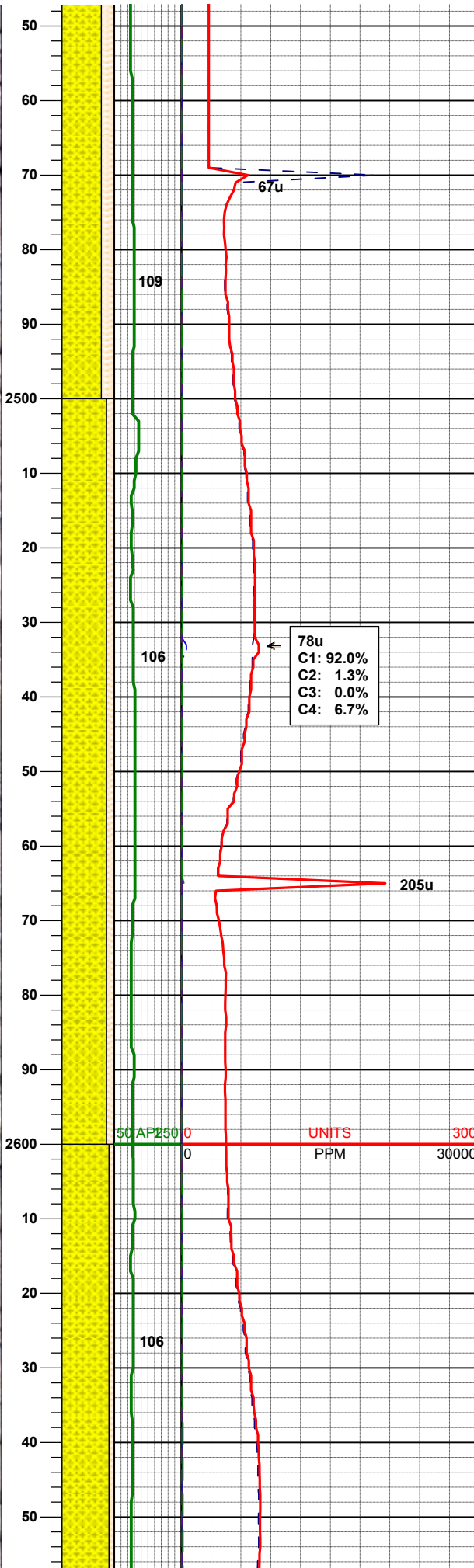
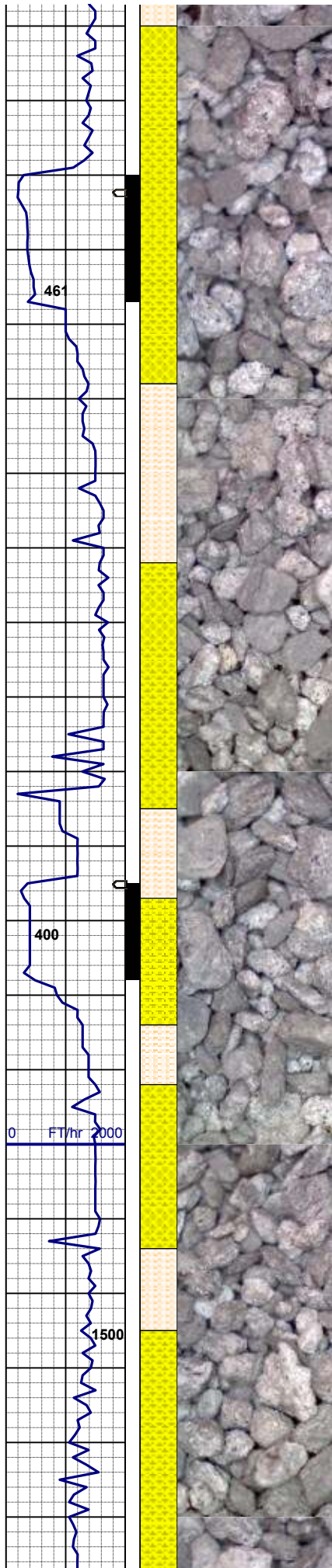
MD 2320'
INC 13.49
AZM 298.20

60% SHYSS: ltgy, mot gy/wh, w srt, vfgr, slt ip,
 sbrd, m-w cmt, sil & brit ip, consol, dns, mod-
 abnt cly, sl-tr calc, spckld blk w/dissemin carb
 mat
 40% SHYSLTST: mgy-occ dkgy, ltgy ip, sbbkly
 -bkly, mod frm-frm, cly rich, grty tex ip, mod-occ
 v slty, sl calc, grdg ip to sltst

WT 8.6/VIS 29

MD 2415'
INC 15.32
AZM 2565.7

75% SHYSS: ltgy, mot gy/wh, w srt, vfgr, slt ip,
 sbrd, m-w cmt, sil & brit ip, consol, dns, mod-



abnt cly, sl-tr calc, spckld blk w/disse carb mat
 25% SHYSLTST: mgy-occ dkgy, ltgy ip, sbbkly
 -blky, mod frm-frm, cly rich, grty tex ip, mod-occ
 v slty, sl calc, grdg ip to sltst

MD 2510'
 INC 15.20
 AZM 304.78

85% SHYSS: ltgy, mot gy/wh, w srt, vfgr, slt ip, sbrd, m-w cmt, sil & brit ip, consol, dns, mod-abnt cly, sl-tr calc, spckld blk w/disse carb mat
 15% SHYSLTST: mgy-occ dkgy, ltgy ip, sbbkly
 -blky, mod frm-frm, cly rich, grty tex ip, mod-occ
 v slty, sl calc, grdg ip to sltst

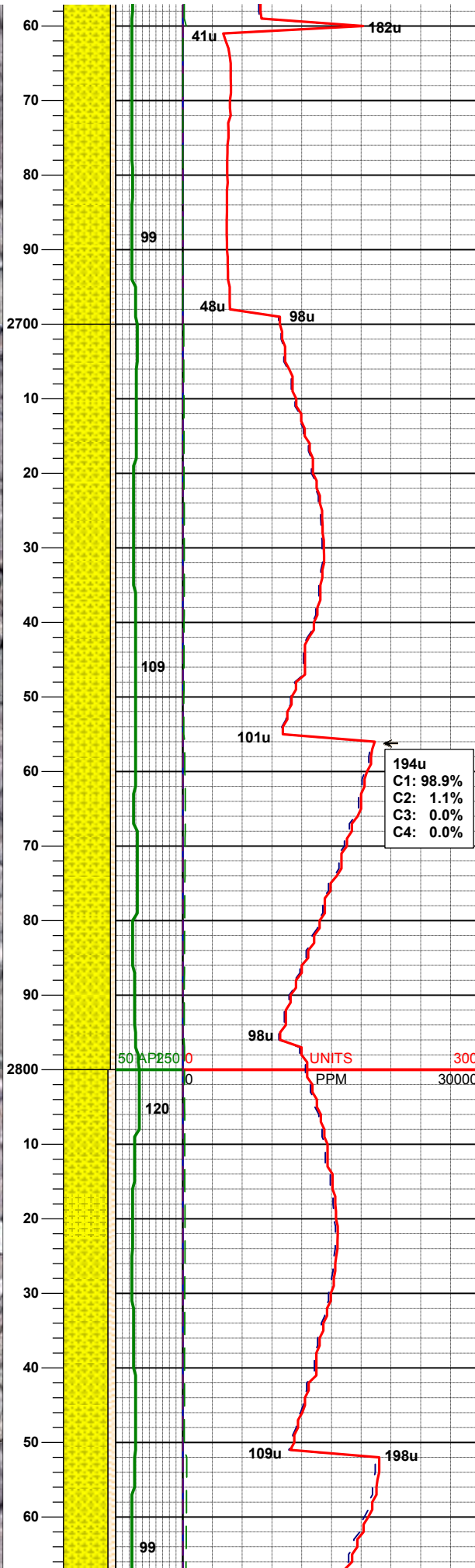
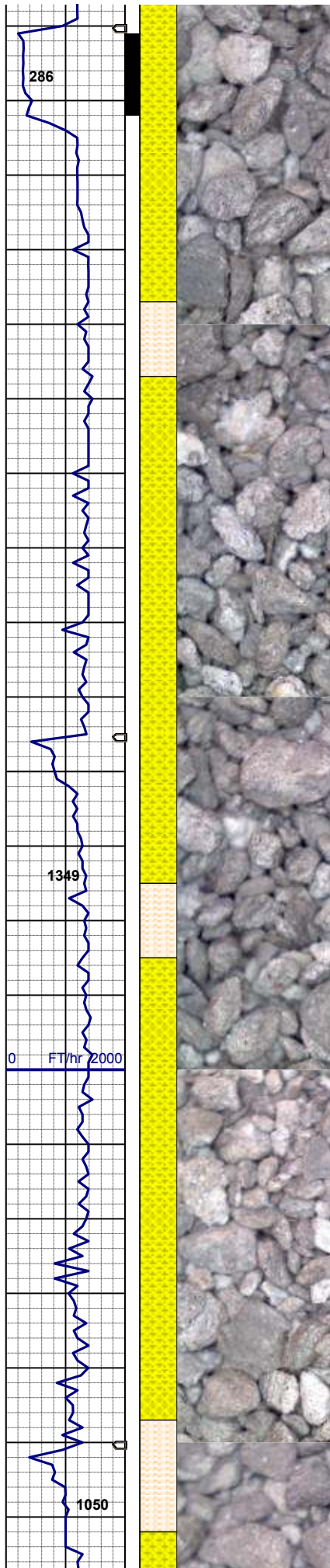
78u
 C1: 92.0%
 C2: 1.3%
 C3: 0.0%
 C4: 6.7%

205u

50 AP 2500 0 UNITS 300
 0 PPM 30000

MD 2605'
 INC 16.04
 AZM 301.75

90% SHYSS: ltgy-gy, mot ltgy/mky-opq wh ip, w srt, fgr, sbang, sbrd ip, dns, brit, w-v w cmt, abnt-mod amt cly filg & free, mnr s&p ip, qtz/spar, incr liths, occ carb mat, sl tr calc
 10% SHYSLTST: gy, gybrn, blky-sbbkly, mod frm-frm, tr v frm, mod amt cly mtx, v slty-occ sdy, arg ip, sl calc



WT 8.5/VIS28

MD 2700'
 INC 15.69
 AZM 305.53

90% SHYSS: ltgy-gy, mot ltgy/mky-opq wh ip, w srt, fgr, sbang, sbrd ip, dns, brit, w-v w cmt, abnt-mod amt cly filg & free, mnr s&p ip, qtz/spar, incr liths, occ carb mat, sl tr calc
 10% SHYSLTST: gy, gybrn, blkly-sbbkly, mod frm-frm, tr v frm, mod amt cly mtx, v slty-occ sdy, arg ip, sl calc

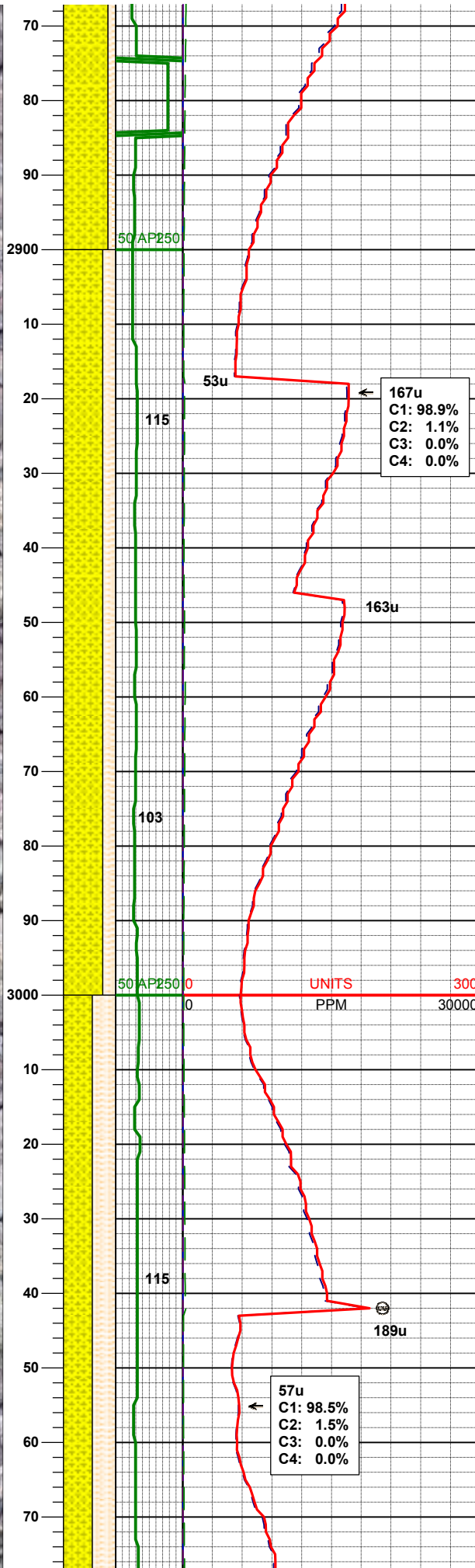
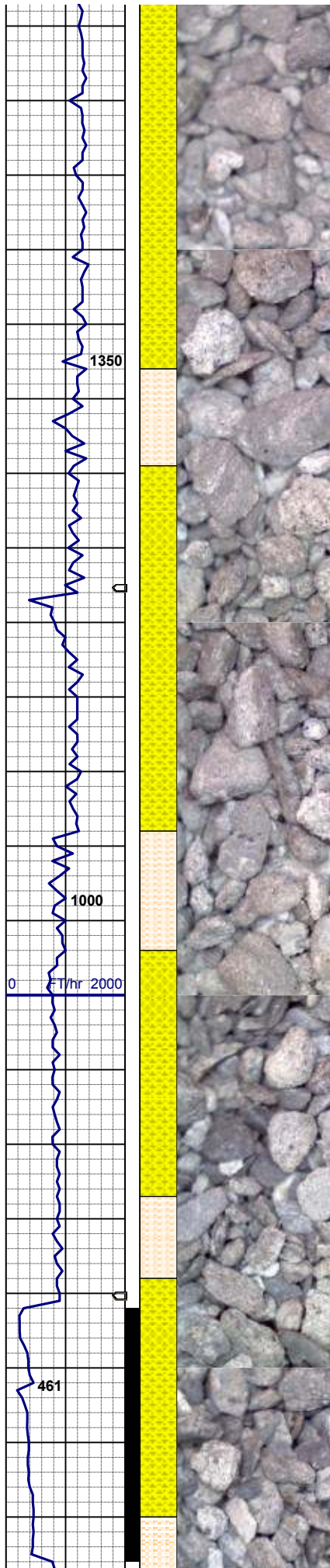
194u
 C1: 98.9%
 C2: 1.1%
 C3: 0.0%
 C4: 0.0%

MD 2795'
 INC 15.20
 AZM 305.51

85% SHYSS: ltgy-gy, mot ltgy/mky-opq wh ip, w srt, fgr, sbang, sbrd ip, dns, brit, w-v w cmt, abnt-mod amt cly filg & free, mnr s&p ip, qtz/spar, incr liths, occ carb mat, sl tr calc
 15% SHYSLTST: gy, gybrn, blkly-sbbkly, mod frm-frm, tr v frm, mod amt cly mtx, v slty-occ sdy, arg ip, sl calc

UNITS
 PPM

300
 30000



MD 2890'
 INC 14.43
 AZM 304.43

167u
 C1: 98.9%
 C2: 1.1%
 C3: 0.0%
 C4: 0.0%

75% SHYSS: ltgy-gy, mot ltgy/mky-opq wh ip, w srt, fgr, sbang, sbrd ip, dns, brit, w-v w cmt, abnt-mod amt cly filg & free, mnr s&p ip, qtz/spar, incr liths, occ carb mat, sl tr calc 25% SHYSLTST: gy, gybrn, blkys-sbbkly, mod frm-frm, tr v frm, mod amt cly mtx, v slty-occ sdy, arg ip, sl calc

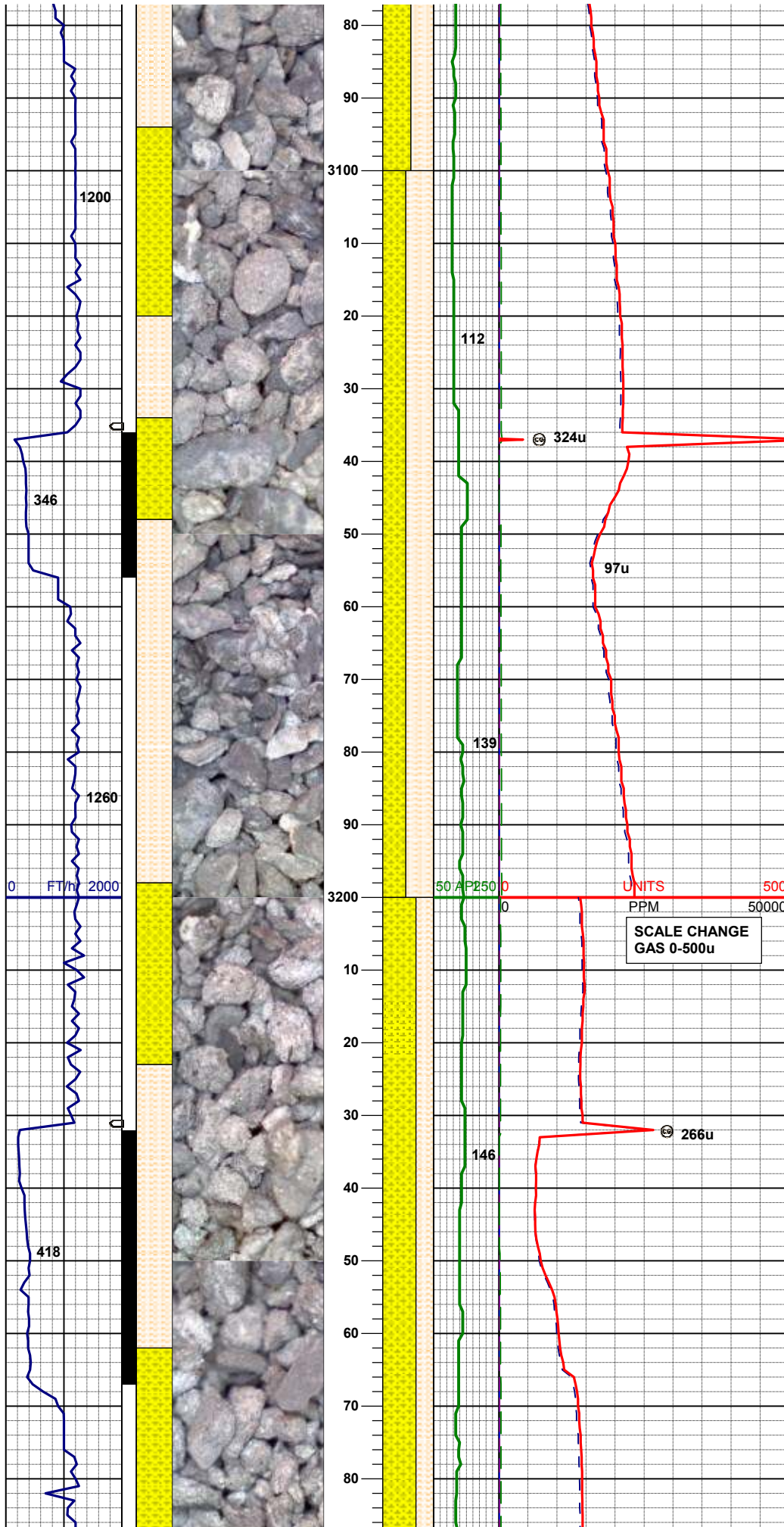
MD 2985'
 INC 13.21
 AZM 303.36

WT 8.6/VIS 28

57u
 C1: 98.5%
 C2: 1.5%
 C3: 0.0%
 C4: 0.0%

55% SHYSS: ltgy-gy, mot ltgy/mky-opq wh ip, w srt, fgr, sbang, sbrd ip, dns, brit, w-v w cmt, abnt-mod amt cly filg & free, mnr s&p ip, qtz/spar, incr liths, occ carb mat, sl tr calc 45% SHYSLTST: gy, gybrn, blkys-sbbkly, mod frm-frm, tr v frm, mod amt cly mtx, v slty-occ sdy, arg ip, sl calc

MD 3080'
INC 14.32
AZM 301.73

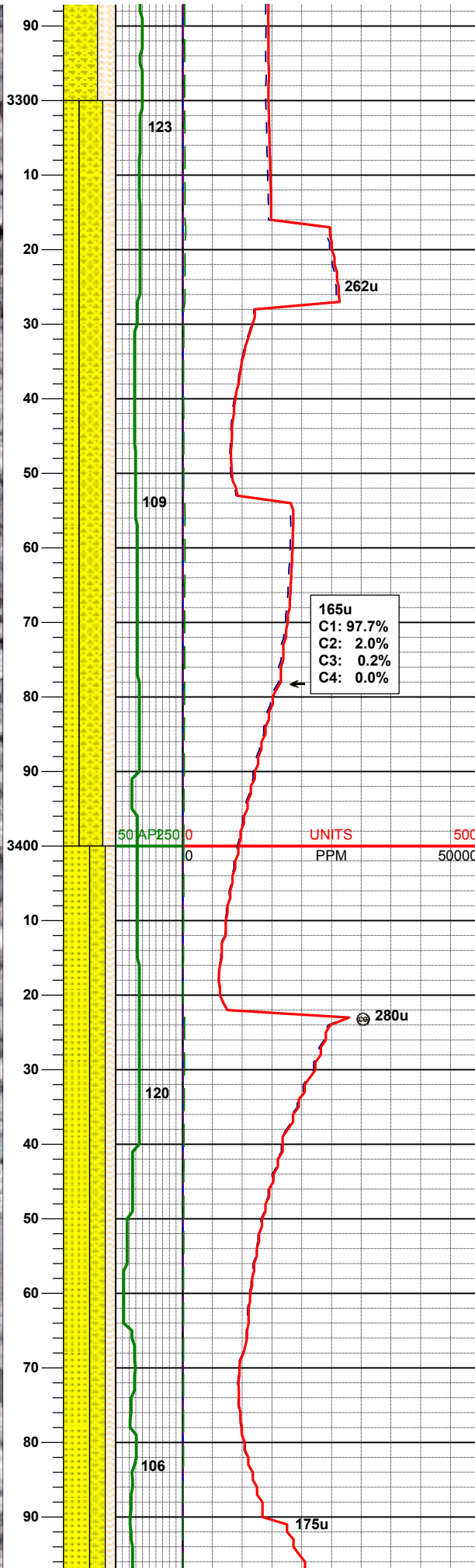
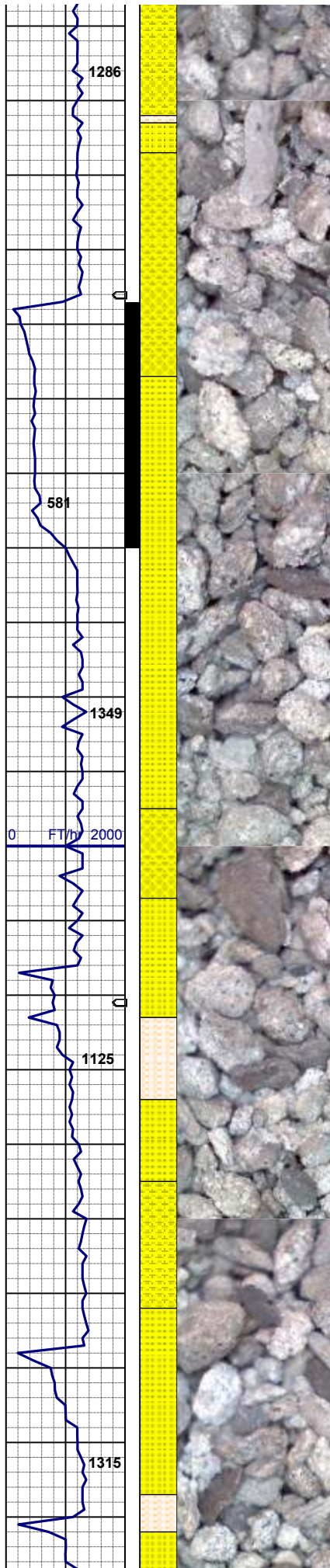


55% SHYSLTST: gy, gybrn, blkly-sbbkly, mod frm-frm, tr v frm, mod amt cly mtx, v slty-occ sdy, arg ip, sl calc
45% SHYSS: ltgy-gy, mot ltgy/mky-opq wh ip, w srt, fgr, sbang, sbrd ip, dns, brit, w-v w cmt, abnt-mod amt cly filg & free, mnr s&p ip, qtz/spar, incr liths, occ carb mat, sl tr calc

MD 3176'
INC 13.36
AZM 300.76

65% SHYSS: ltgy-gy, mot ltgy/mky-opq wh ip, w srt, fgr, sbang, sbrd ip, dns, brit, w-v w cmt, abnt-mod amt cly filg & free, mnr s&p ip, qtz/spar, incr liths, occ carb mat, sl calc
35% SHYSLTST: gy, gybrn, blkly-sbbkly, mod frm-frm, tr v frm, mod, amt cly mtx, v slty-occ sdy, arg ip, sl calc; tr ss

MD 3271'
INC 14.42
AZM 303.31



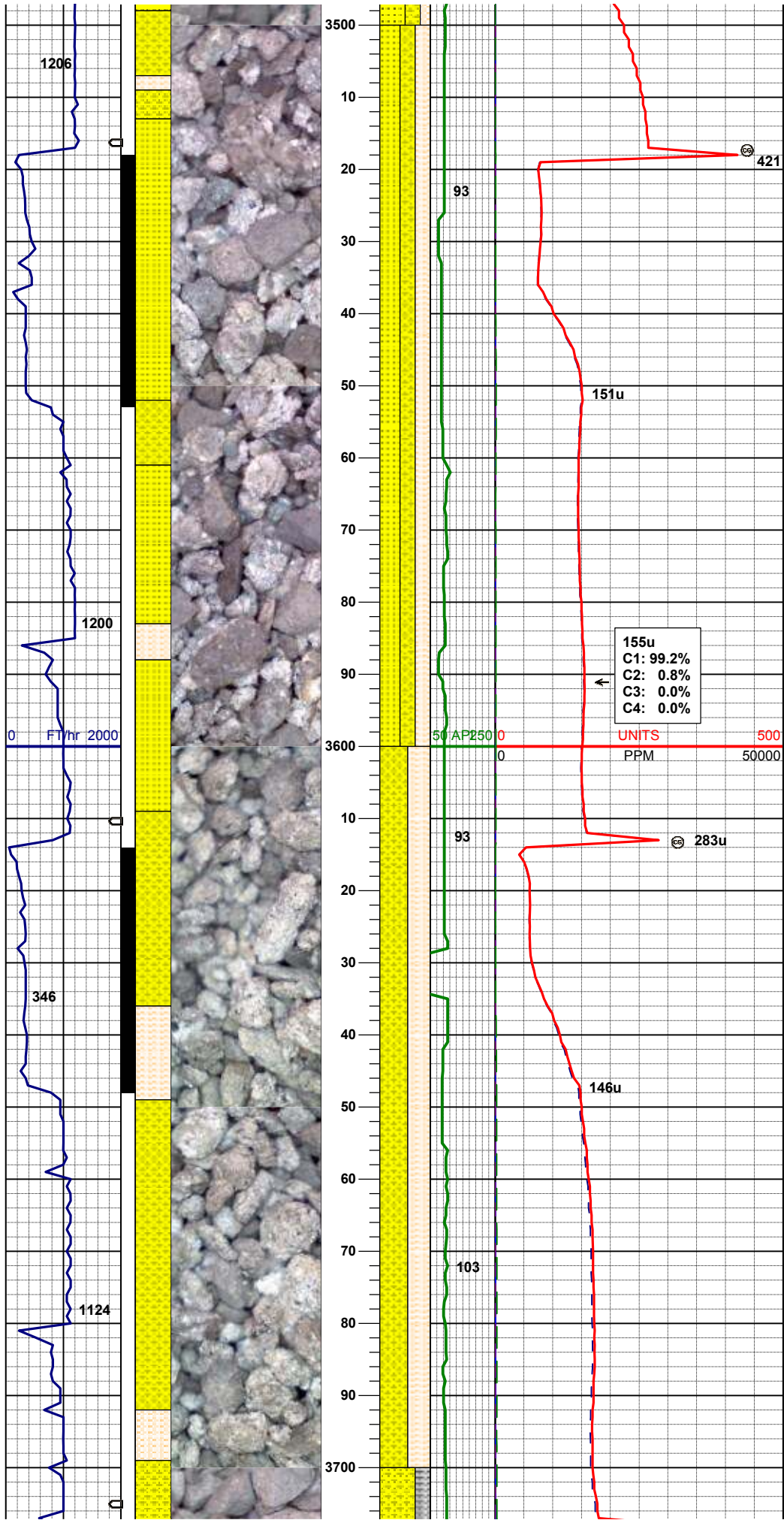
45% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd, w-v w cmt, consol, abnt cly mtx/cmt, sme glau, mod-abnt mica, sl calc
 30% SS: opq crm-sl mky wh, rr fros wh, w srt, vf -tr lfgr, sbang-tr ang, rr sbrd, consol, m-rr p cmt, tr w cmt, mnr amt cly mtx, mod cln ip, n calc, rr blk incls, tt
 25% SHYSLTST: dkgy, sl gyblk, sbply-pty, chky-cly tex, grty-slty ip, mod amt mica, mod-sl calc, rr grdg to slty sh

MD 3366'
INC 16.18
AZM 302.89

165u
 C1: 97.7%
 C2: 2.0%
 C3: 0.2%
 C4: 0.0%

50% SS: opq crm-sl mky wh, rr fros wh, w srt, vf -tr lfgr, sbang-tr ang, rr sbrd, consol, m-rr p cmt, tr w cmt, mnr amt cly mtx, mod cln ip, n calc, rr blk incls, tt
 30% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd, w-v w cmt, consol, abnt cly mtx/cmt, sme glau, mod-abnt mica, sl calc
 20% SHYSLTST: dkgy, sl gyblk, sbply-pty, chky-cly tex, grty-slty ip, mod amt mica, mod-sl calc, rr grdg to slty sh

MD 3461'
INC 16.41
AZM 301.25



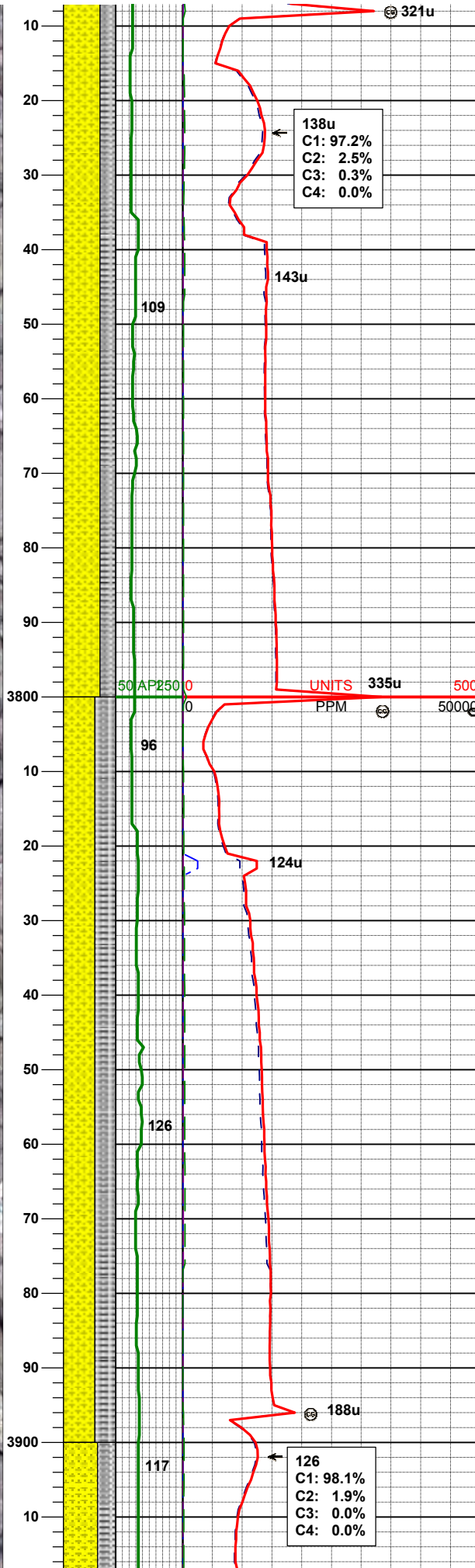
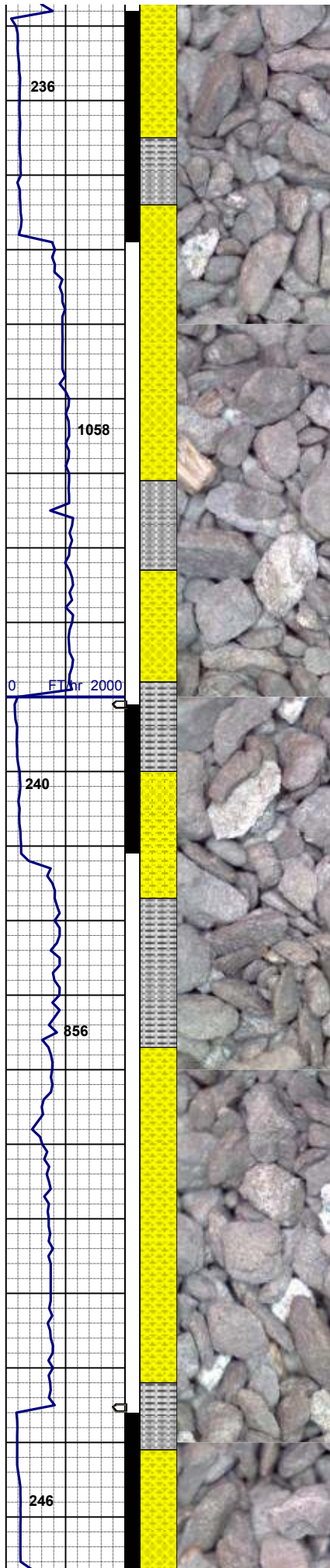
50% SS: opq crm-sl mky wh, rr fros wh, w srt, vf
 -tr lfgr, sbang-tr ang, rr sbrd, consol, tr w cmt,
 mnr amt cly mtx, non calc, rr blk inclc
 30% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
 w-v w cmt, consol, abnt cly mtx/cmt, glauc ip,
 mod-abnt mica, sl calc
 20% SHYSLTST: dkgy, sl gyblk, sbply-pty,
 chky-cly tex, grty-slty ip, mod amt mica, mod-sl
 calc, rr grdg to slty sh

MD 3555'
INC 14.03
AZM 301.62

155u
 C1: 99.2%
 C2: 0.8%
 C3: 0.0%
 C4: 0.0%

MD 3650'
INC 11.61
AZM 301.44

55% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
 w-v w cmt, consol, abnt cly mtx/cmt, glauc ip,
 mod-abnt mica, sl calc
 45% SHYSLTST: dkgy, sl gyblk, sbply-pty,
 chky-cly tex, grty-slty ip, mod amt mica, mod-sl
 calc, rr grdg to slty sh



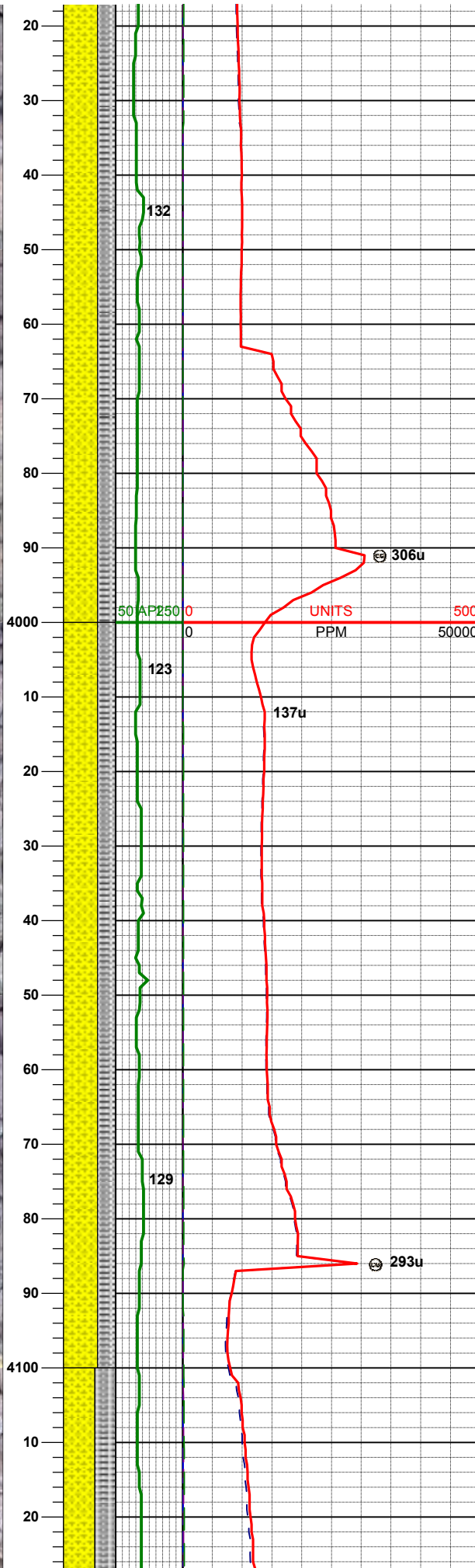
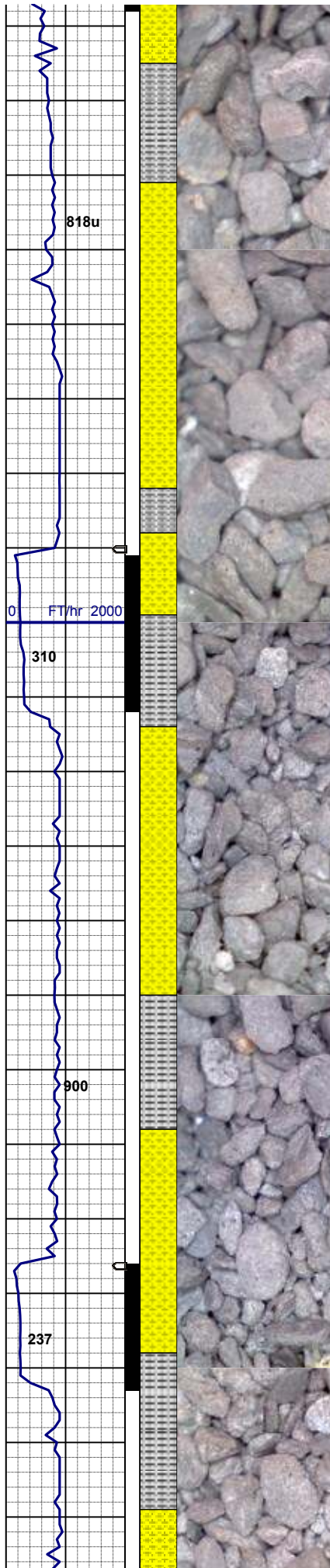
WT 8.8/VIS 29

MD 3746'
INC 8.71
AZM 304.40

55% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd, w-v w cmt, consol, abnt cly mtb/cmt, sme glau, mod-abnt mica, sl calc
20% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft, sbbiky - sbppty, rthy sl slty tex, non clac

MD 3840'
INC 6.55
AZM 304.94

60% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd, w-v w cmt, consol, abnt cly mtb/cmt, sme glau, mod-abnt mica, sl calc
40% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft, sbbiky - sbppty, rthy sl slty tex, non clac



MD 3935'
INC 4.23
AZM 292.98

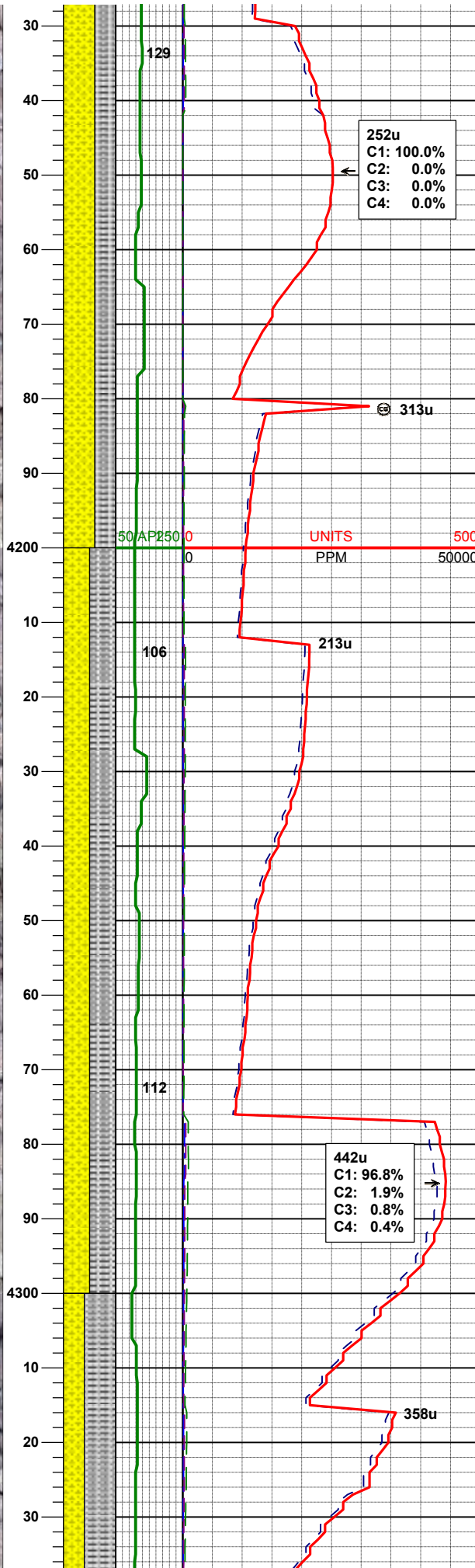
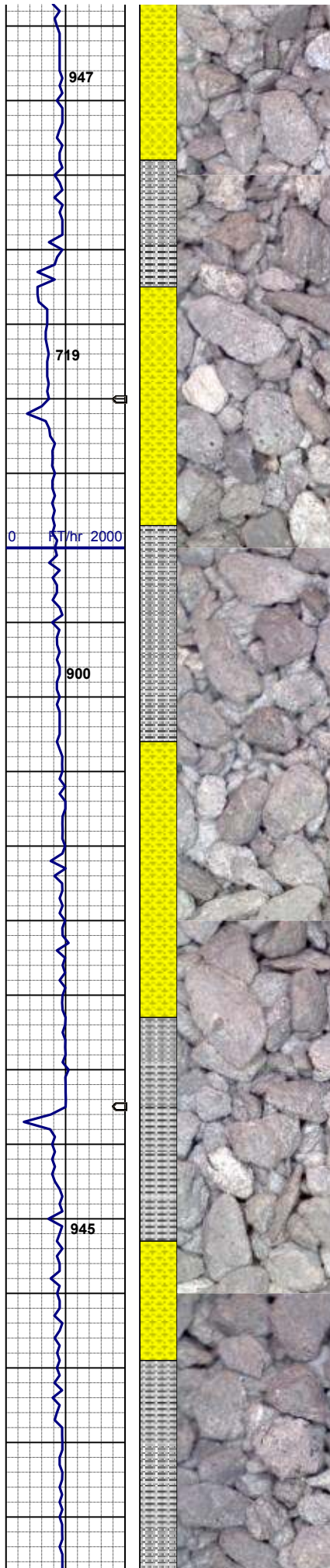
65% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
w-v w cmt, consol, abnt cly mtx/cmt, sme glau,
mod-abnt mica, sl calc
35% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft, sbbkly - sbply, rthy sl slty tex, non clac

WT 8.8+VIS 30

MD 4030'
INC 2.08
AZM 304.67

65% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
w-v w cmt, consol, abnt cly mtx/cmt, sme glau,
mod-abnt mica, sl calc, n vis por
35% SILTY SH: m gy-mgybrn occ v dk gy, firm -
sft, sbbkly - sbply, rthy sl slty tex, non clac

MD 4125'
INC 0.68
AZM 345.48



252u
 C1: 100.0%
 C2: 0.0%
 C3: 0.0%
 C4: 0.0%

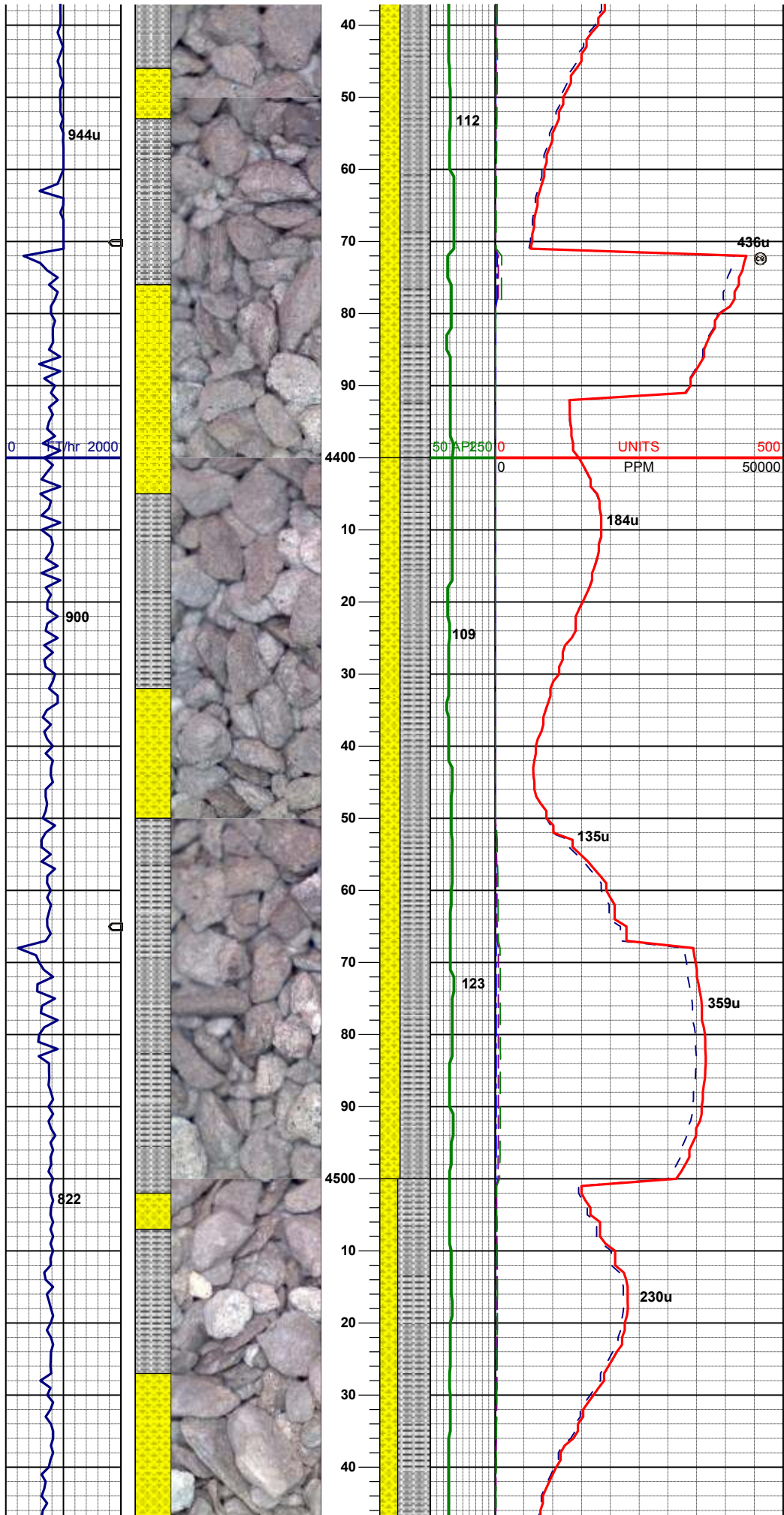
65% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd, w-v w cmt, consol, mtX/cmt, sme glau, sl calc, n vis por
 35% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft, sbbiky - sbply, rthy sl sily tex, non clac

MD 4220'
 INC 0.93
 AZM 337.71

50% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd, w-v w cmt, consol, mtX/cmt, sme glau, sl calc, n vis por
 50% SILTY SH: m gy-mgybrn occ v dk gy, firm - sft, sbbiky - sbply, rthy sl sily tex, non clac

442u
 C1: 96.8%
 C2: 1.9%
 C3: 0.8%
 C4: 0.4%

MD 4315'
 INC 0.72
 AZM 345.87



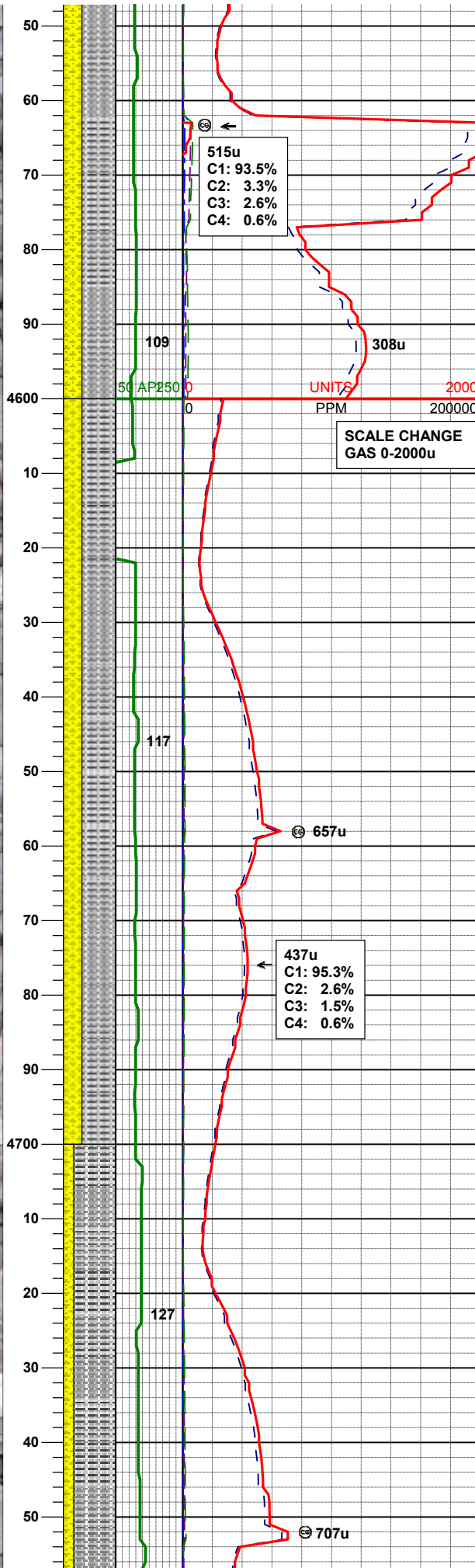
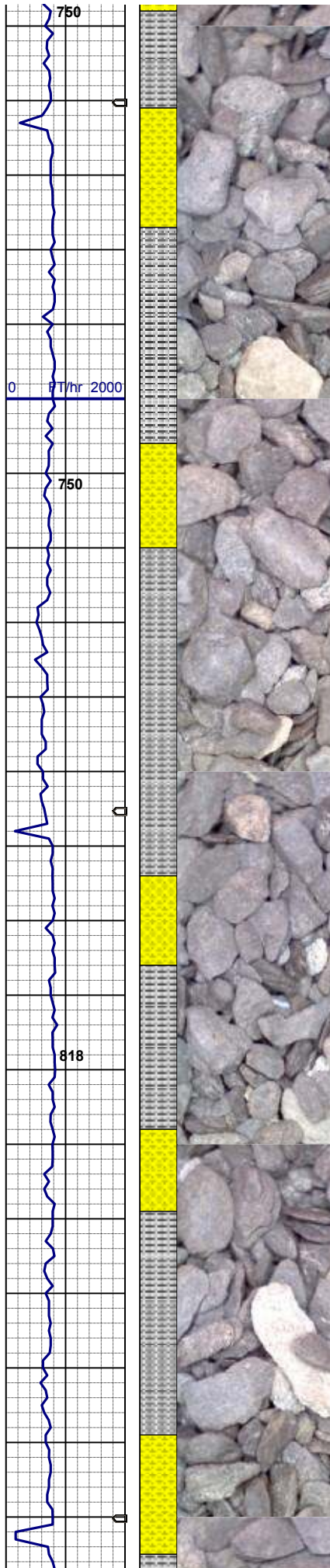
60% SILTY SH: m gy-mgybrn occ v dk gy, firm -
 sft , sbblky - sbplty, rthy sl slty tex, non clac
 40% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
 w-v w cmt, consol, mtX/cmt, glau, ip sl calc, n
 vis por

MD 4410'
 INC 0.34
 AZM 19.05

60% SILTY SH: m gy-mgybrn occ v dk gy, firm -
 sft , sbblky - sbplty, rthy sl slty tex, non clac
 40% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
 w-v w cmt, consol, mtX/cmt, sme glau, sl calc

MD 4505'
 INC 0.25
 AZM 182.75

65% SILTY SH: m gy-mgybrn occ v dk gy, firm -



sft , sbbly - sbply, rthy sl slty tex, non clac
 35% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
 w-v w cmt, consol, mt/cmt, rr glau, sl calc

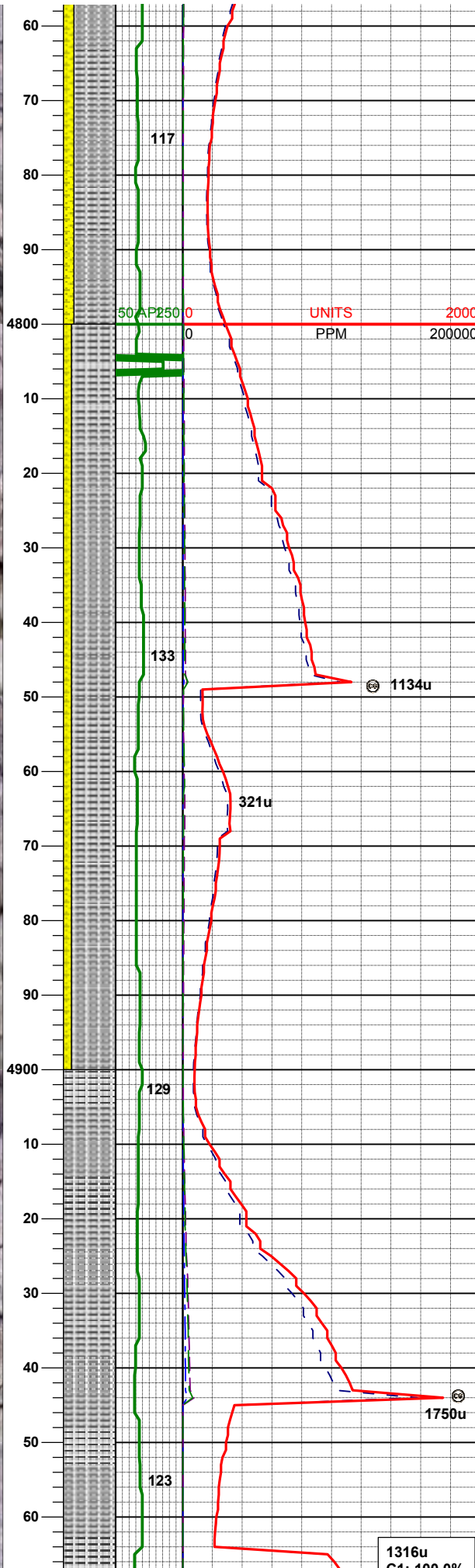
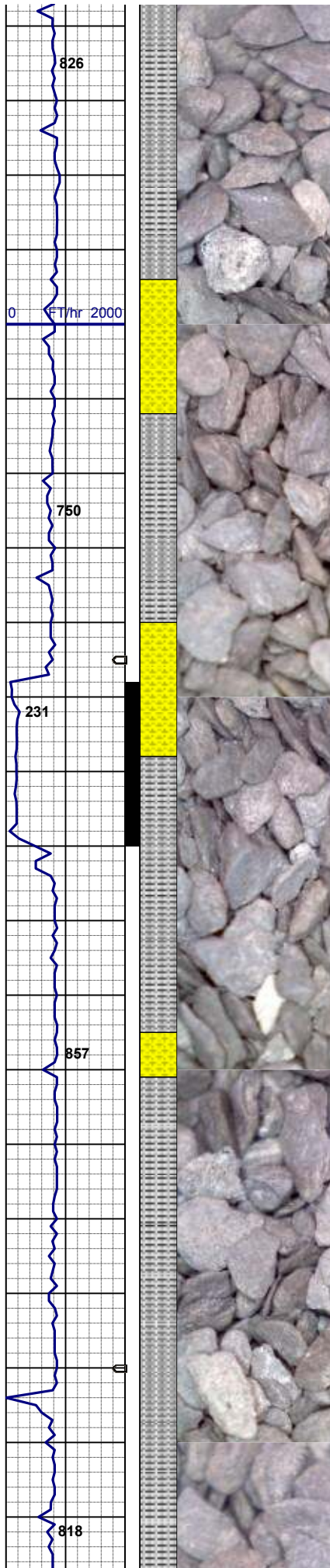
MD 4600'
 INC 0.22
 AZM 136.17

65% SILTY SH: m gy-mgybrn occ v dk gy, firm -
 sft , sbbly - sbply, rthy sl slty tex, non clac
 35% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
 w-v w cmt, consol, mt/cmt, rr glau, sl calc

MD 4695'
 INC 1.18
 AZM 137.01

WT 9.0+/VIS 30

80% SILTY SH: m gy-mgybrn occ v dk gy, firm -
 sft , sbbly - sbply, rthy sl slty tex, non clac
 20% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
 w-v w cmt, consol, mt/cmt, sl calc



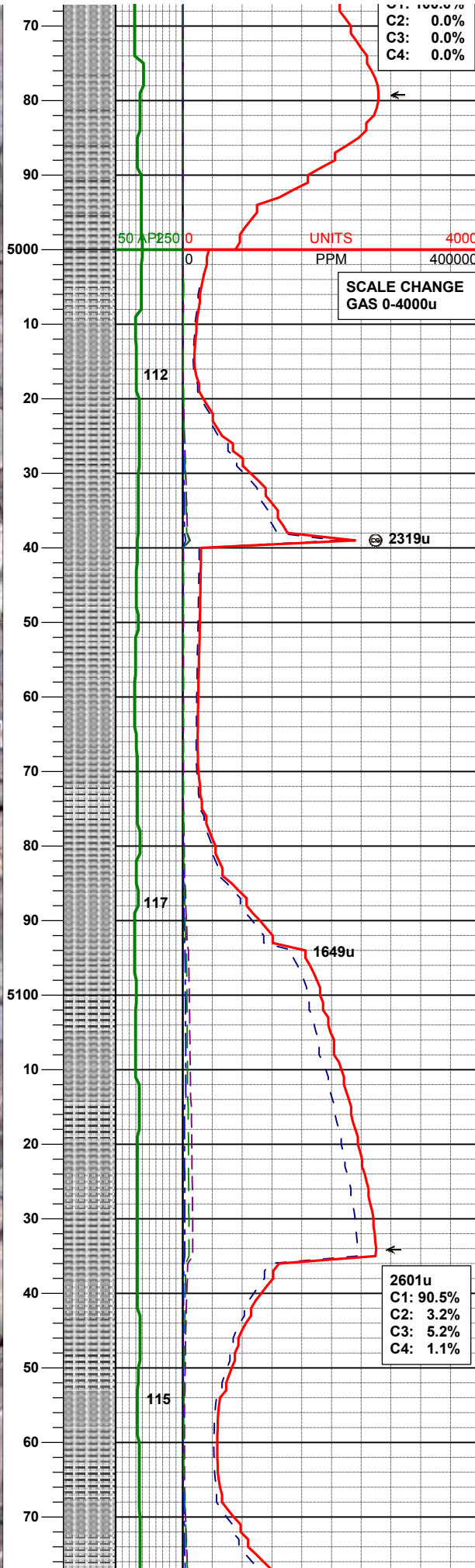
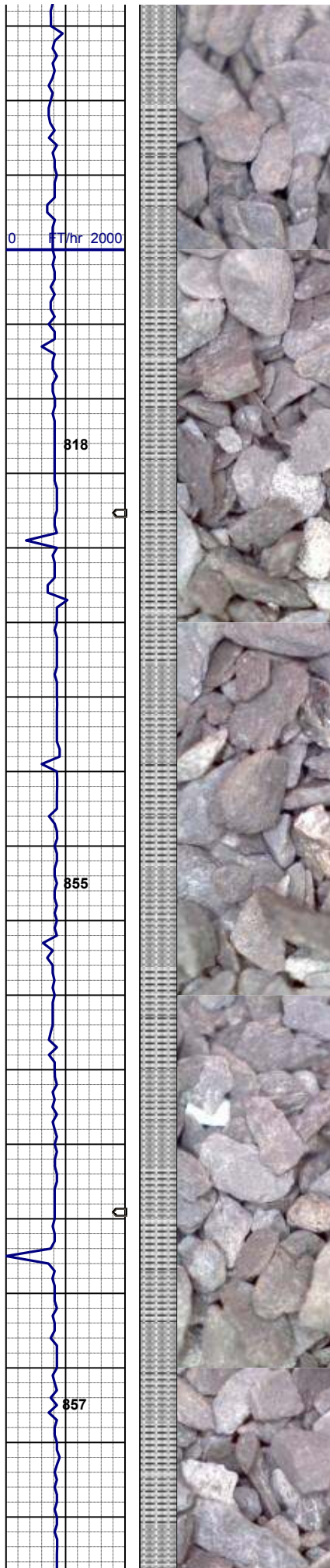
MD 4790'
 INC 1.74
 AZM 133.31

85% SILTY SH: m gy-mgybrn occ v dk gy, firm -
 sft , sbbiky - sbply, rthy sl slty tex, non clac
 15% SHYSS: ltgy, mot gy/wh, w srt, vfgr, sbrd,
 w-v w cmt, consol, mt/cmt, sl calc ; v rr pyr

MD 4885'
 INC 2.17
 AZM 170.02

WT 9.1/VIS 30

100% SILTY SH: m gy-mgybrn occ v dk gy, firm
 -sft , sbbiky - sbply, rthy sl slty tex, non clac

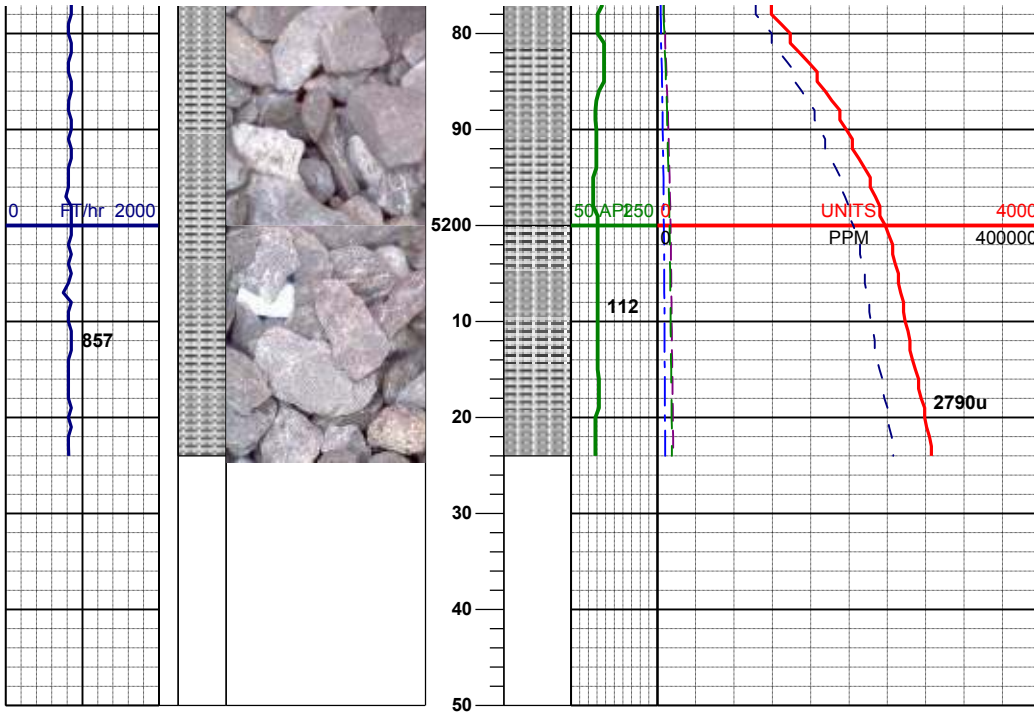


MD 4980'
 INC 2.04
 AZM 157.55

100% SILTY SH: m gy-mgybrn occ v dk gy, firm
 -sft, sbblky - sbplty, rthy sl slty tex, non clac

MD 5074'
 INC 1.51
 AZM 150.13

100% SILTY SH: m gy-mgybrn occ v dk gy, firm
 -sft, sbblky - sbplty, rthy sl slty tex, non clac



TOOH @ 5224' MD For Tools
08:27 HRS 04/29/2013

Log Continues on
Timbro LC13-75-1HN(HORZ).Lplot

Thank you for choosing
Columbine Logging Inc.