

LOG created using LPLOT VH Version 3.0, March 17, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC.
WELL: LUCCI STATE B01-69HNL
LOCATION: SEC. 1 T5N R64W
COUNTY: WELD
STATE: COLORADO
SPOT: 376' FNL 649' FWL
ELEVATION: 4,617' GL 4,641' KB
FIELD: WATTENBERG
SPUD DATE: 3/14/2013
TD DATE: 03/16/2013 (VERTICAL)
DATES LOGGED: 3/15/2013 - 03/16/2013 (VERTICAL)
DEPTHS LOGGED: 2,000' - 5,915' (VERTICAL)
LOGGERS: CHRIS COOK; MARK COLE
DRILLING FLUID: LSND
DRILLING RIG: H&P 315
API: 05-123-36533
LOG TYPE: VERTICAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: SEE CORRESPONDING HORIZONTAL LOG: LUCCI STATE B01-69HNL HORZ.
 LAT/LON 40.43464/-104.50550
 Wellsite Geological Services Provided by Columbine Logging Inc.

LITHOLOGIES



Sandstone



Shaly Sandstone



Shaly Siltstone



Silty Shale

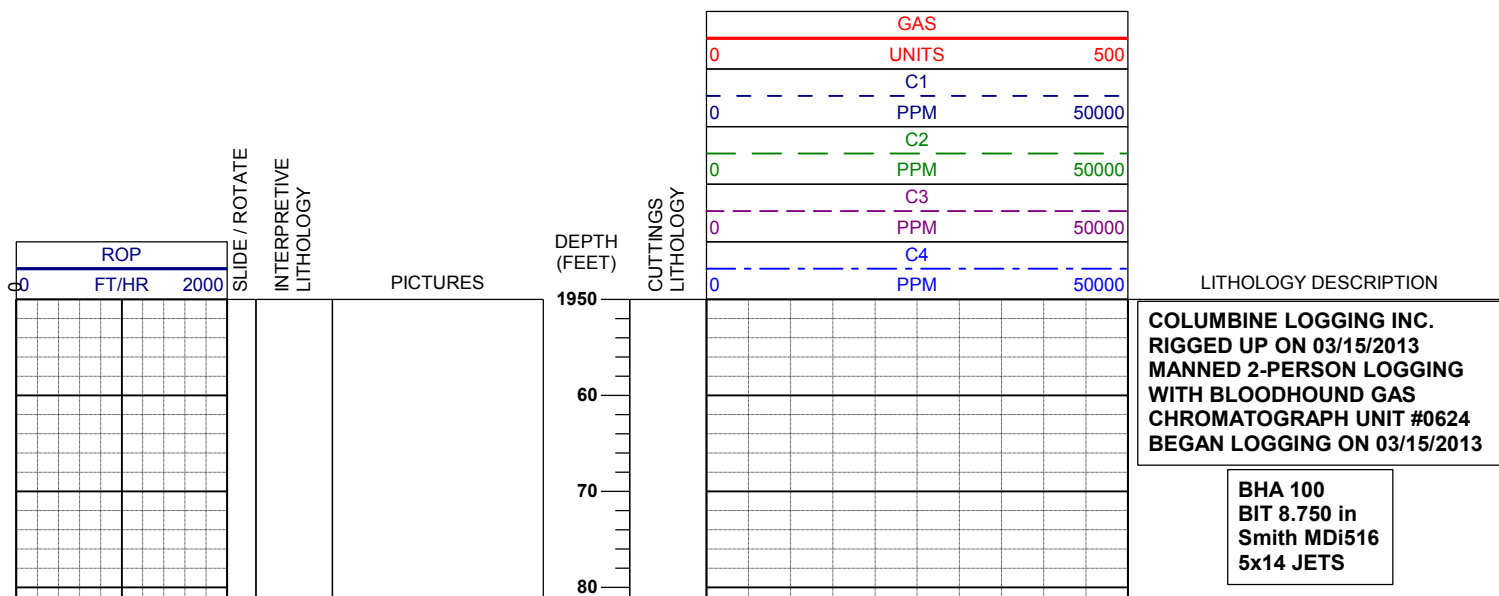
ENGINEERING SYMBOLS

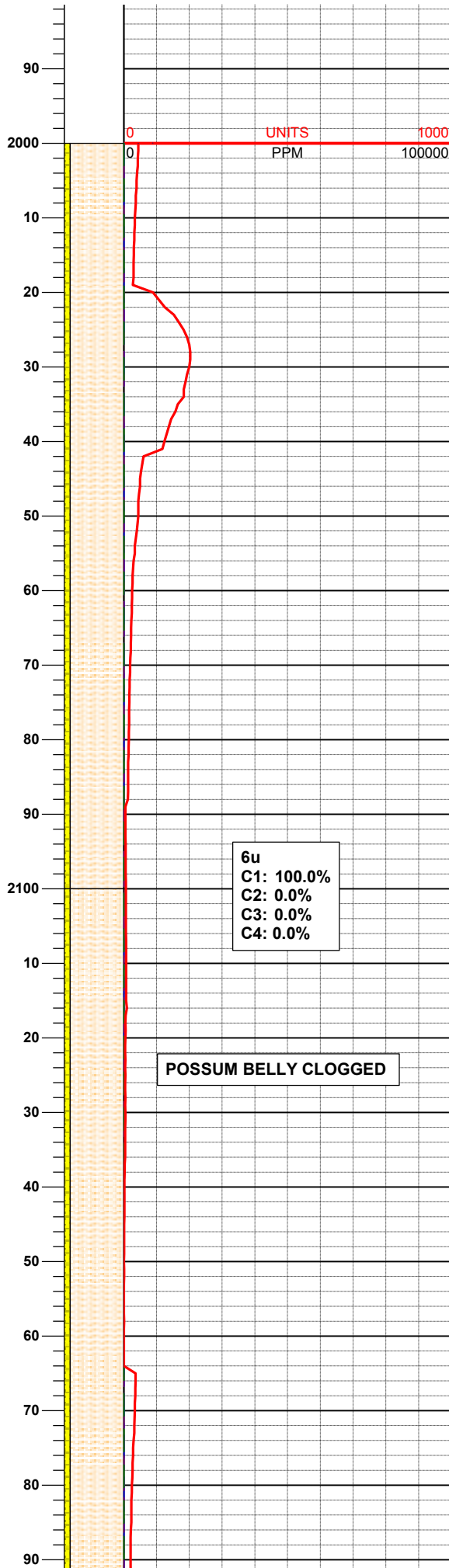
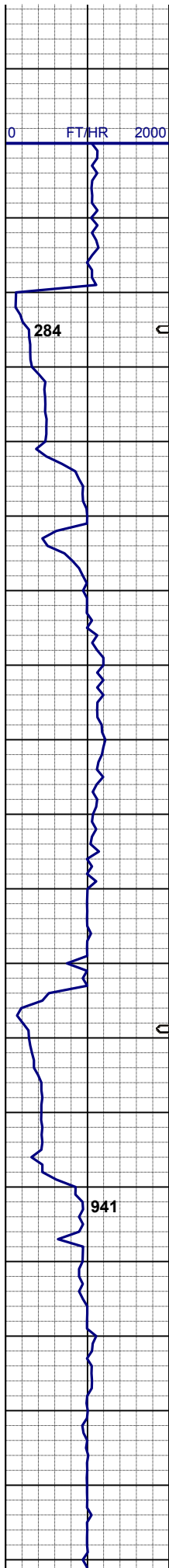


Connection



Connection Gas





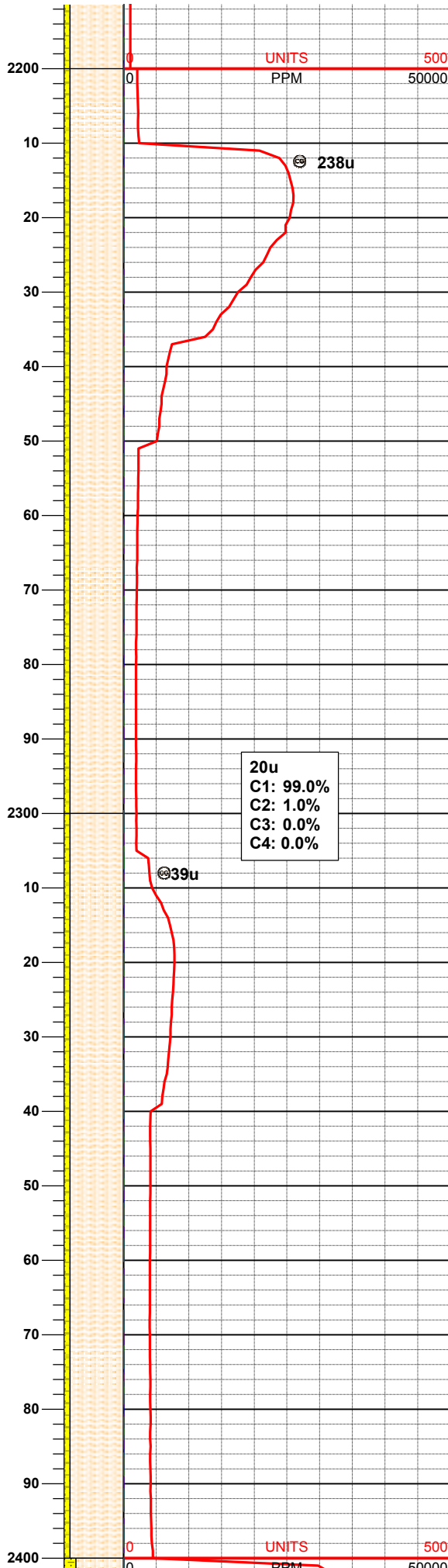
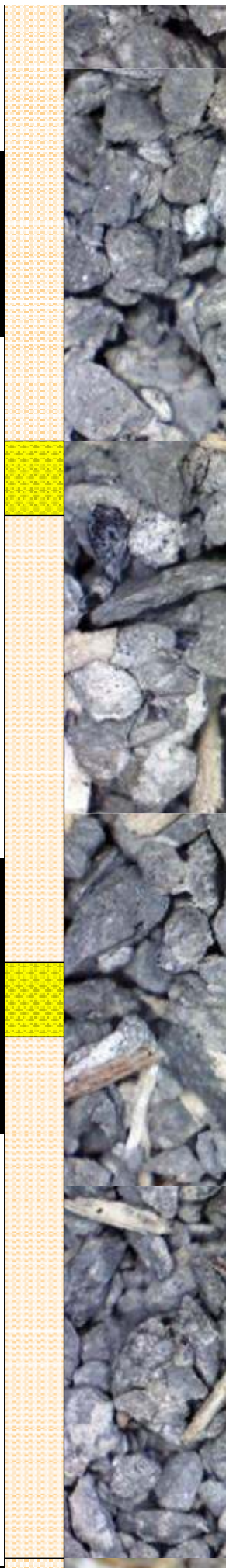
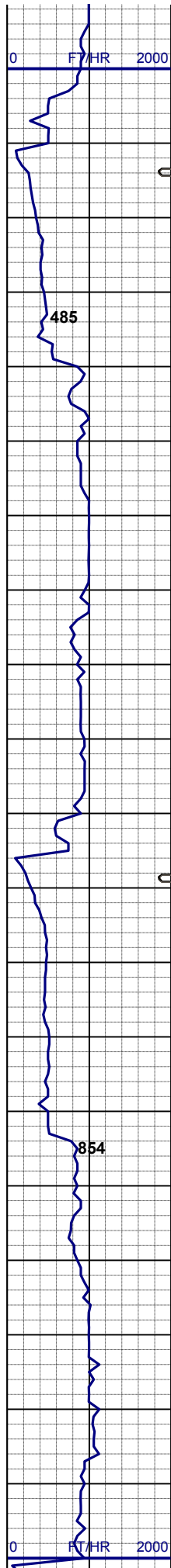
03/15/2013
Mud Wt: 8.60
FVis: 28
PVis: 3
YP: 4
GELS: 2/3/4
API Filt: N/A
CAKE: 1/0
pH: 9.2
Cl: 1,700
Ca: 40

SD 2,060'
INC 4.69°
AZM 1.20°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang, abnt cly mnrl

SD 2,156'
INC 5.65°
AZM 3.49°

SHYSLTST: ltgy - mgy, vfgr, hd,



sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang, abnt cly mnrl

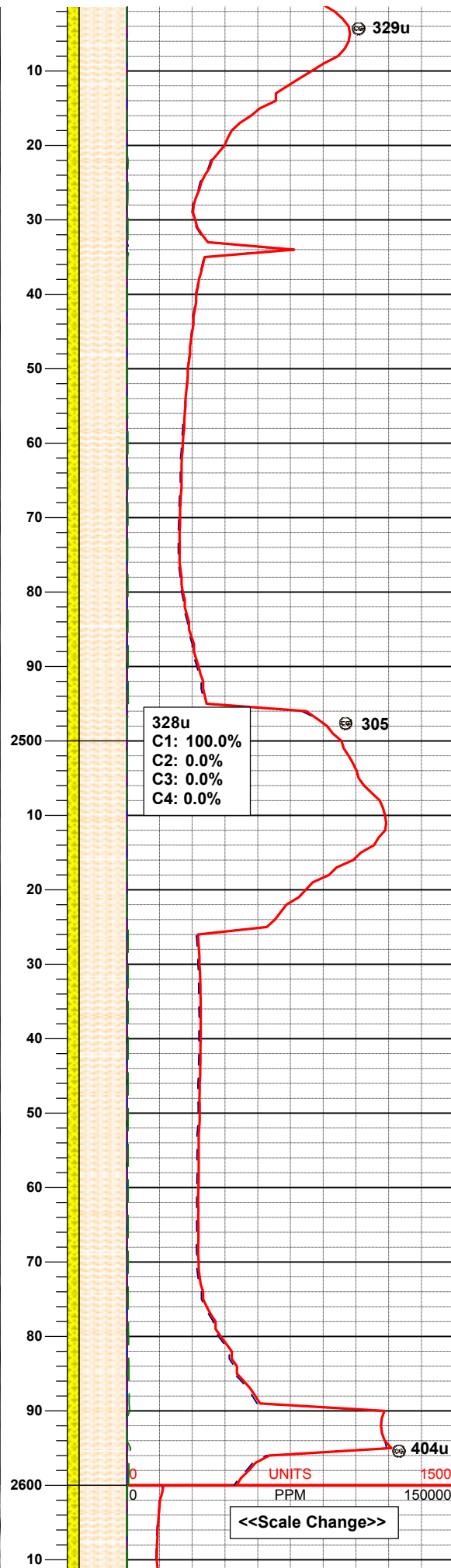
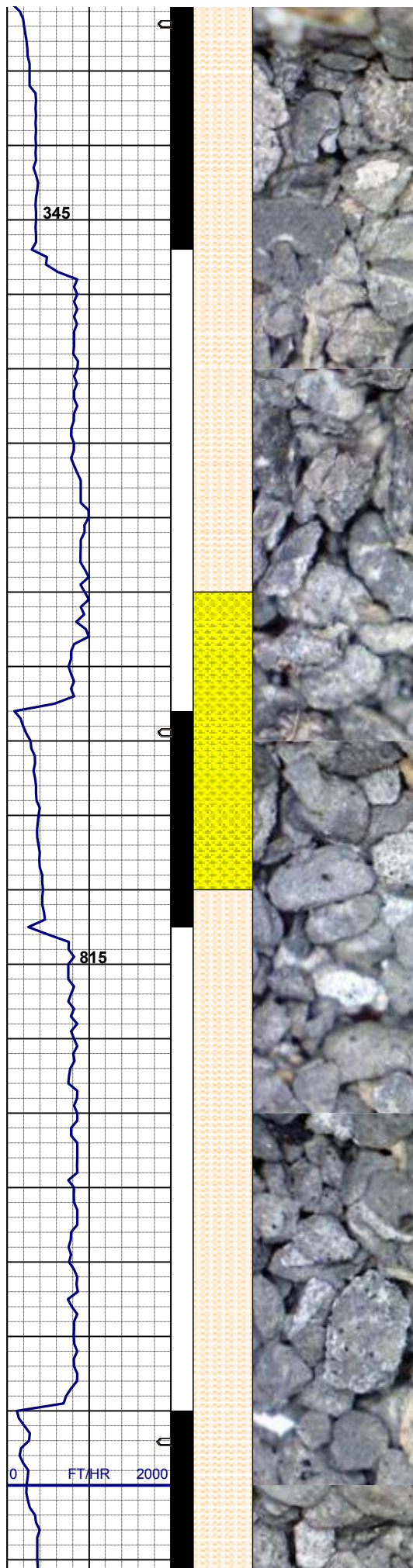
MUD WT 8.15/8.15
VIS 28/28 IN/OUT

SD 2,251'
INC 6.70°
AZM 4.73°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang, abnt cly mnrl

SD 2,346'
INC 8.29°
AZM 0.11°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang, abnt cly mnrl

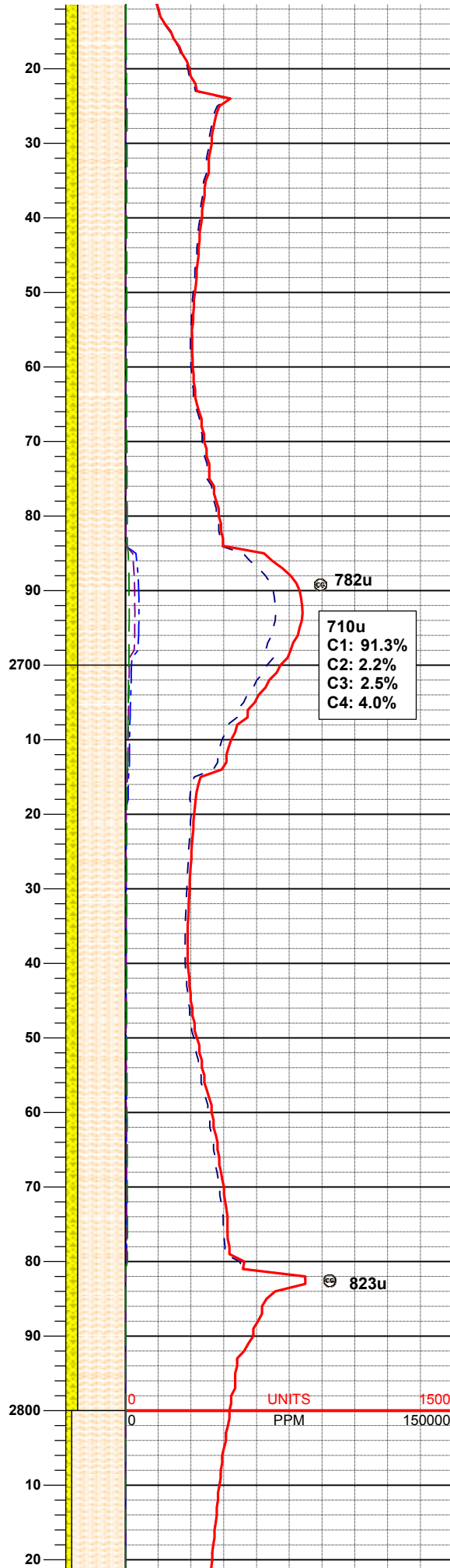
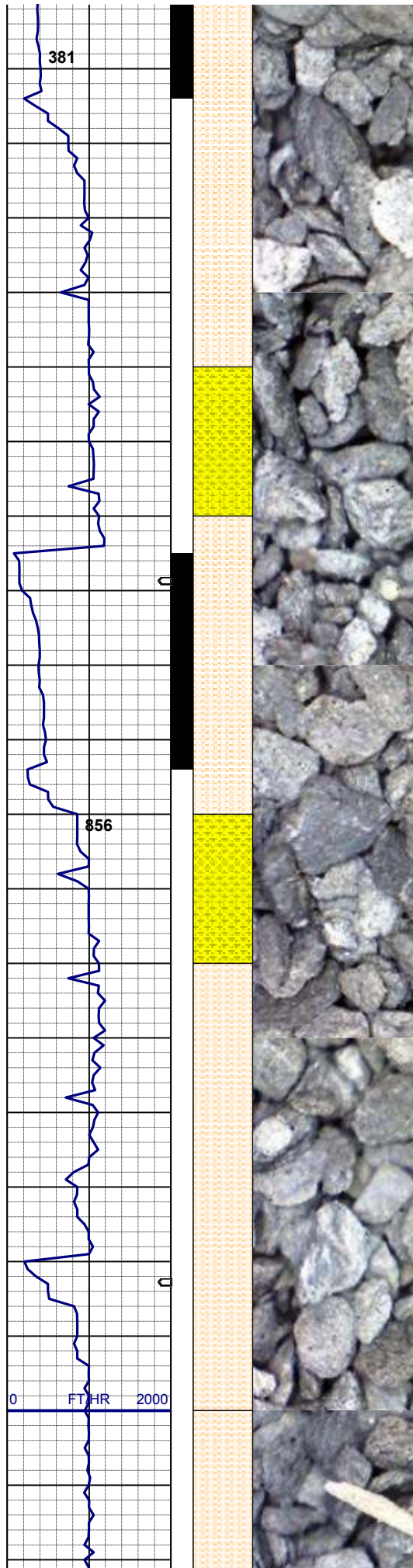


SD 2,441'
INC 9.09°
AZM 357.91°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang, abnt cly mnrl

SD 2,536'
INC 9.77°
AZM 359.59°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang, abnt cly mnrl



SD 2,630'
TVD 2,623.84'
INC 9.93°
AZM 357.39°

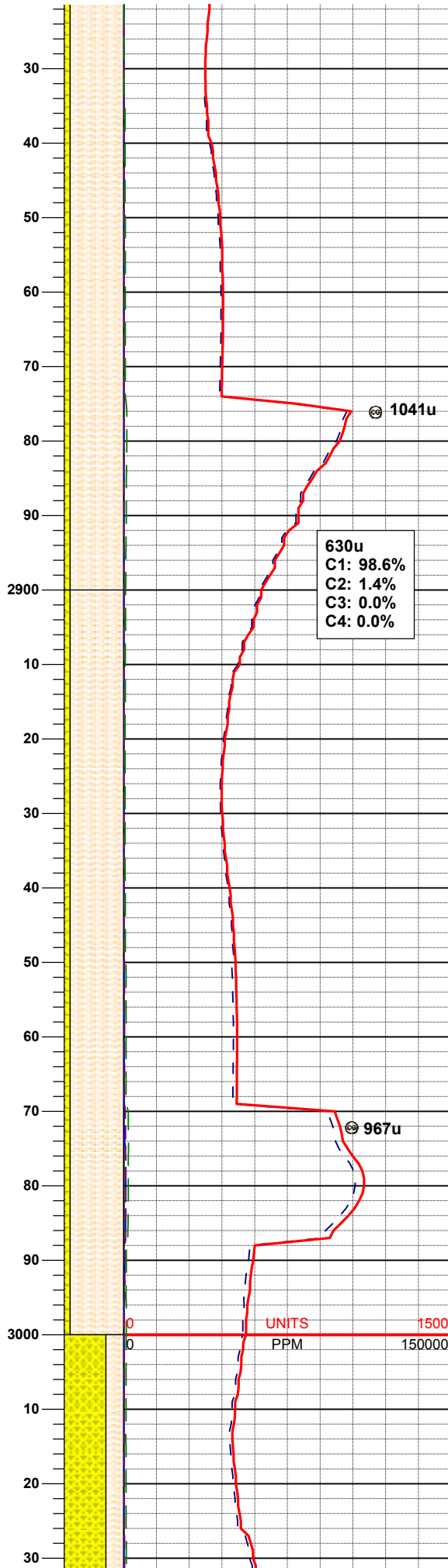
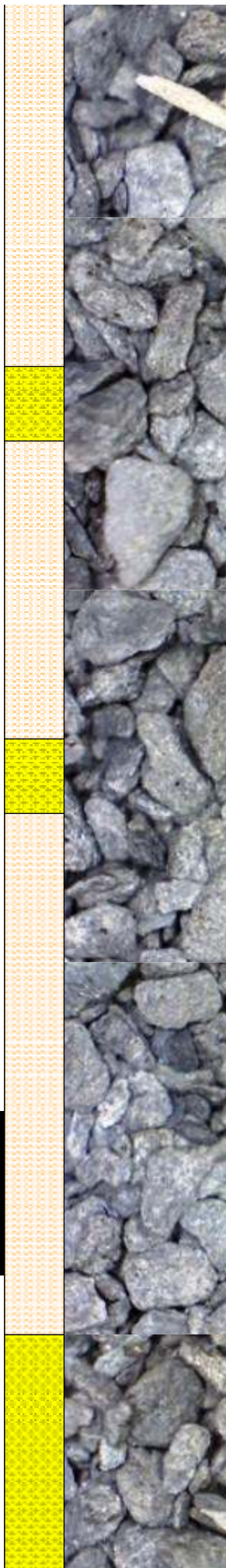
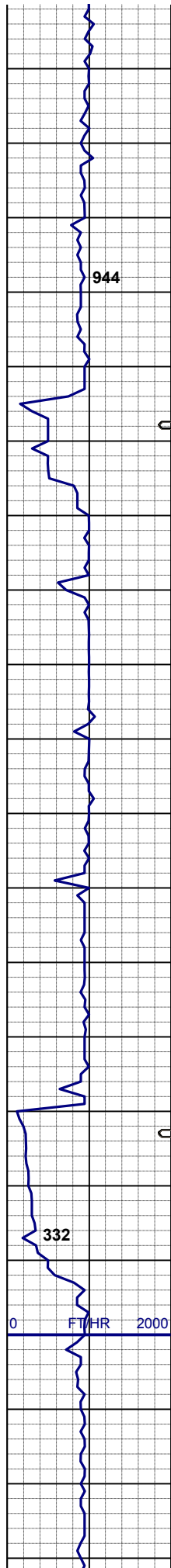
MUD WT 8.65/8.65
VIS 28/28 IN/OUT

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang

SD 2,725'
TVD 2,717.18'
INC 11.50°
AZM 358.71°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang

SD 2,820'



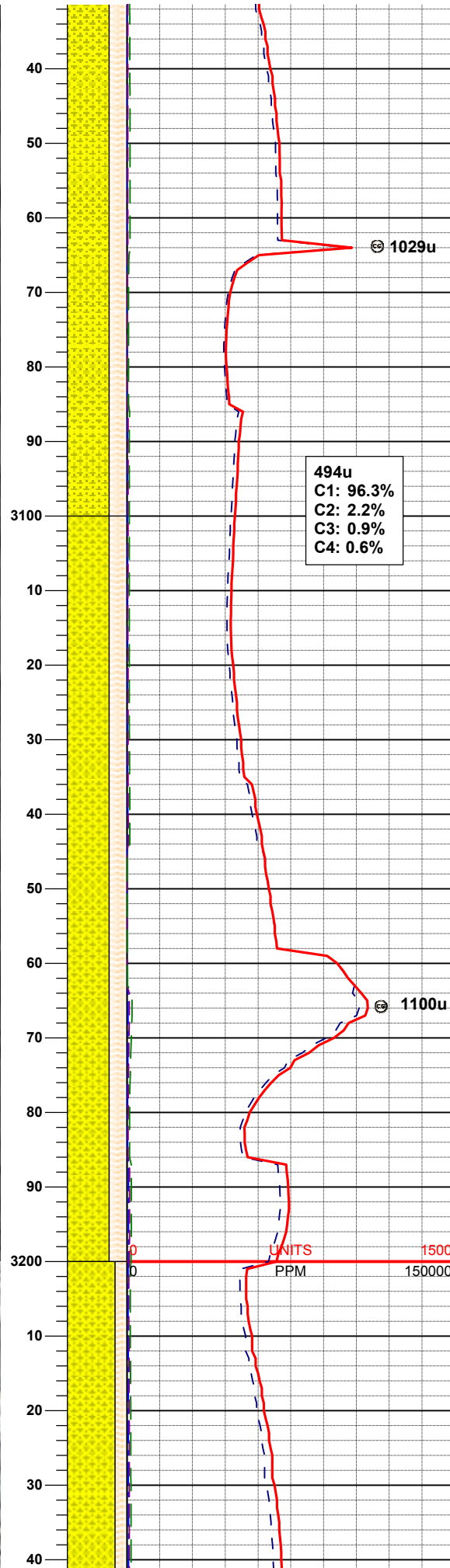
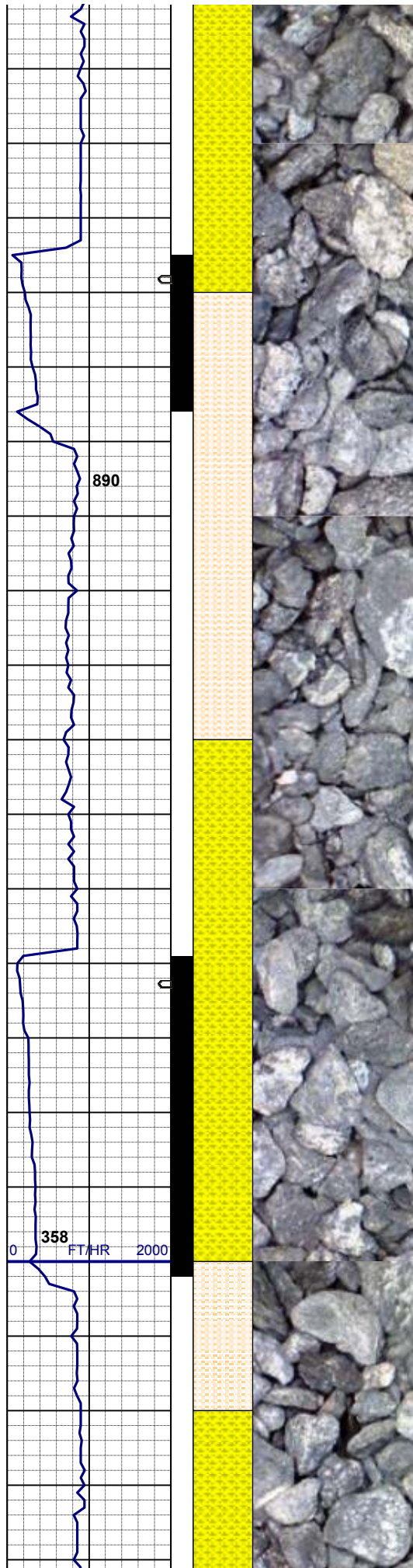
SD 2,920'
TVD 2,810.26'
INC 11.58°
AZM 359.78°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang

SD 2,915'
TVD 2,903.57'
INC 10.00°
AZM 359.57°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang

SD 3,010'
TVD 2,997.09'
INC 10.25°
AZM 0.95°

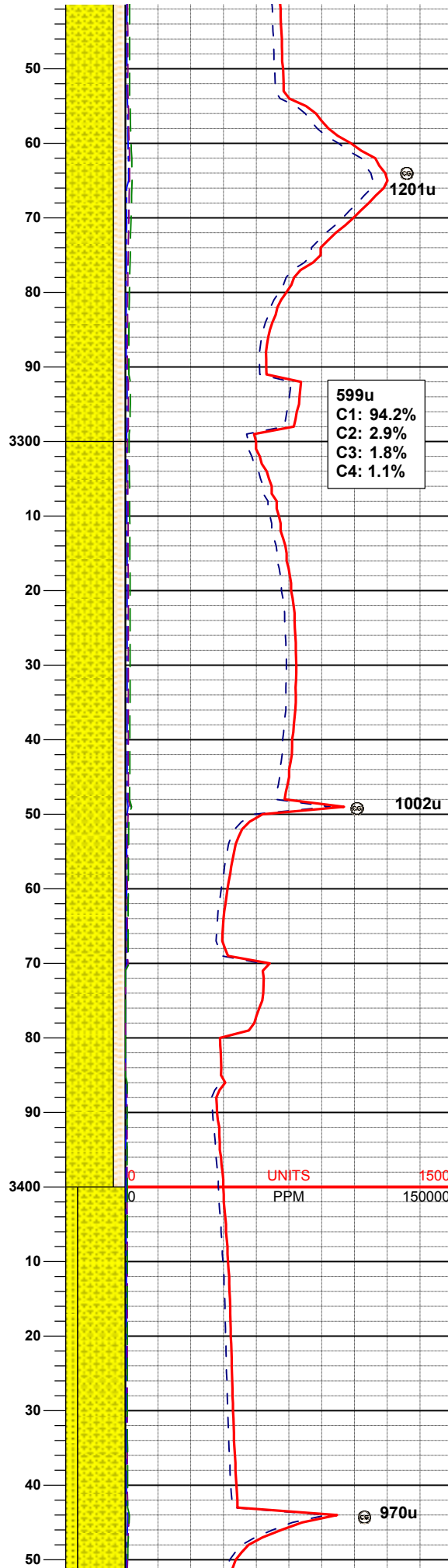
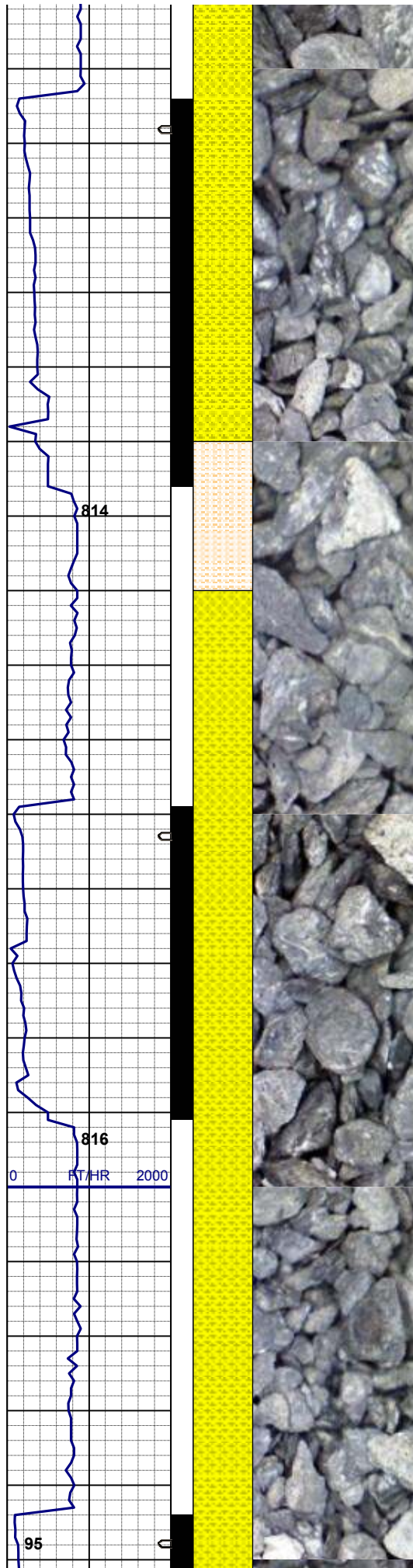


SHYSLTST: ltgy - mgy, vfgr, hd, sbply - sbrd, slty-gt tex, SHYSS: wh, lt gy, vfgr, hd brit, sbply-sbang

SD 3,105'
TVD 3,090.71'
INC 9.34°
AZM 1.74°

SHYSLTST: ltgy - mgy, vfgr, hd, sbply - sbrd, slty-gt tex, SHYSS: wh, lt gy, vfgr, hd brit, sbply-sbang

SD 3,200'
TVD 3,184.47'
INC 9.22°
AZM 5.00°



SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang

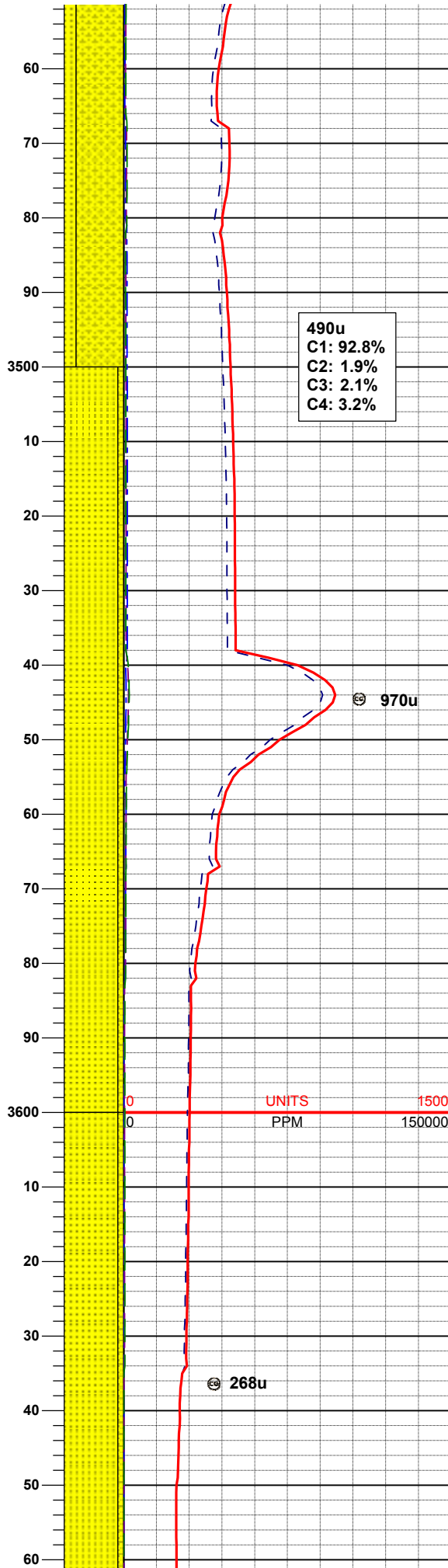
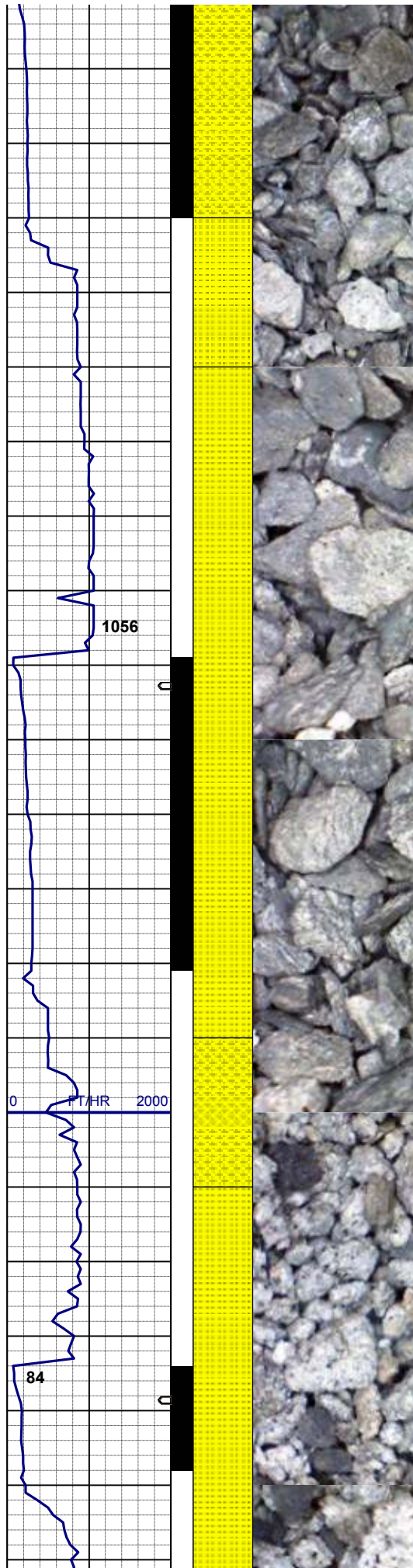
SD 3,295'
TVD 3,278.31'
INC 8.72°
AZM 358.02°

SD 3,390'
TVD 3,372.15'
INC 9.21°
AZM 355.86°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang

UNITS
PPM

MUD WT 8.60/8.60
VIS 28/28 IN/OUT



Parkman SS
@ 3480' MD; 3461' TVD

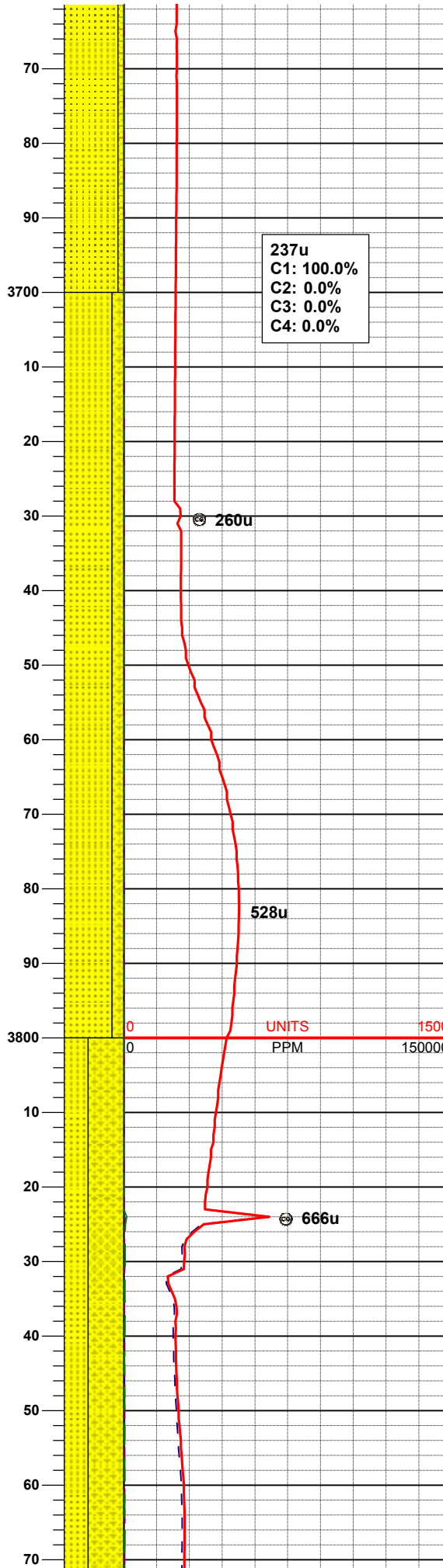
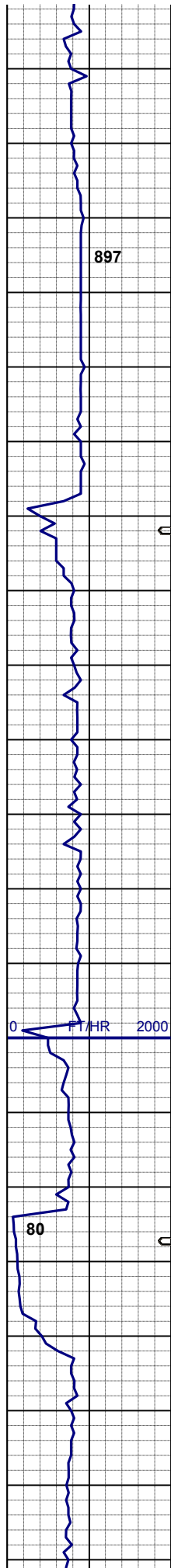
SD 3,485'
TVD 3,466.00'
INC 8.58°
AZM 359.92°

SHYSLTST: ltgy - mgy, vfgr, hd,
sbply - sbrd, slty-gt tex,
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang

03/15/2013
Mud Wt: 8.60
FVis: 29
PVis: 4
YP: 4
GELS: 2/3/4
API Filt: N/A
CAKE: 1/0
pH: 10.0
Cl: 1,700
Ca: 80

SD 3,579'
TVD 3,558.73'
INC 10.25°
AZM 2.80°

SS: wh, clr - trnsl, s&p, dk gn xl glau, f
-vfgr, hd v brit clus, p consol, v calc
cmt
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang



SD 3,674'
TVD 3,652.01'
INC 11.60°
AZM 2.79°

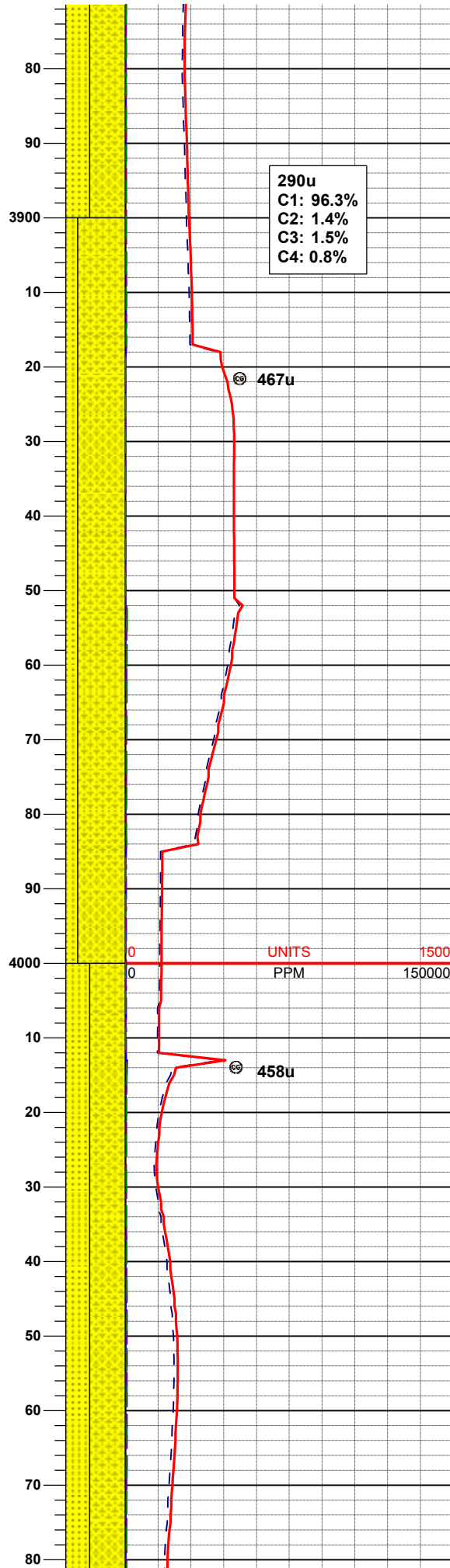
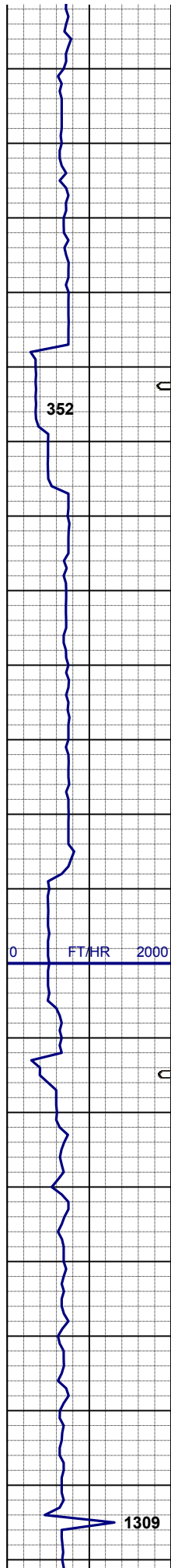
SS: wh, clr - trnsl, s&p, dk gn xl glau, f
-vfgr, hd v brit clus, p consol, v calc
cmt
SHYSS: wh, lt gy, vfgr, hd brit, sbply-
sbang

SD 3,769'
TVD 3,744.92'
INC 12.46°
AZM 2.35°

SS: wh, clr - trnsl, s&p, dk gn xl glau, f
-vfgr, hd v brit clus, p consol, v calc
cmt
SHYSS: wh - lt gy, vfgr, hd brit, sbply
-sbang

MUD WT 8.60/8.60
VIS 28/28 IN/OUT

SD 3,864'
TVD 3,837.76'
INC 12.07°
AZM 3.27°

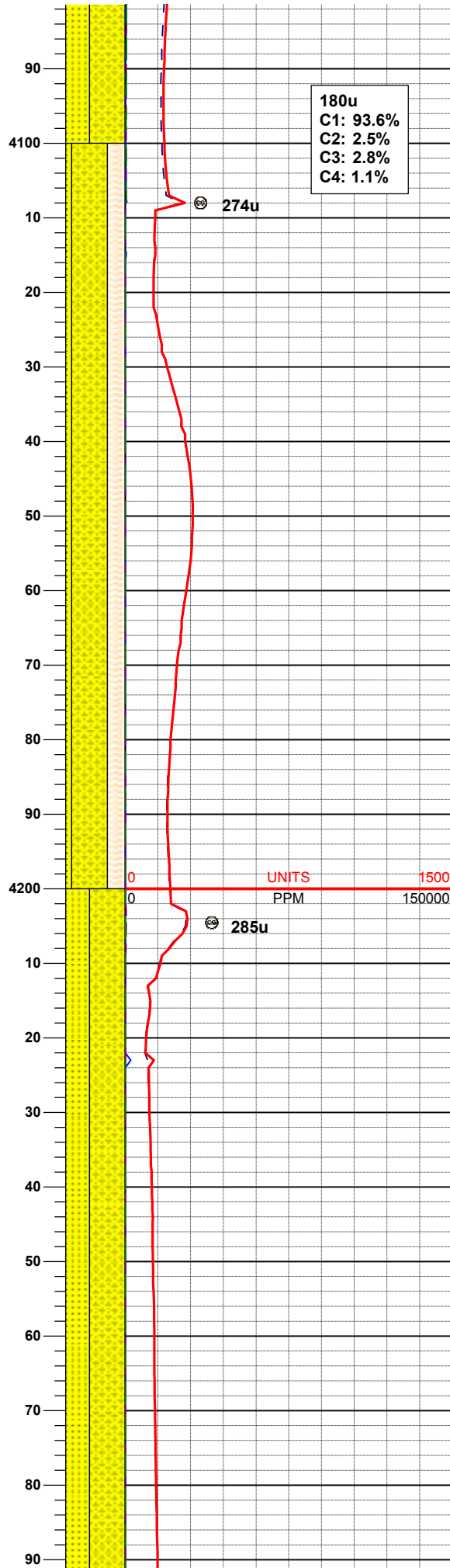
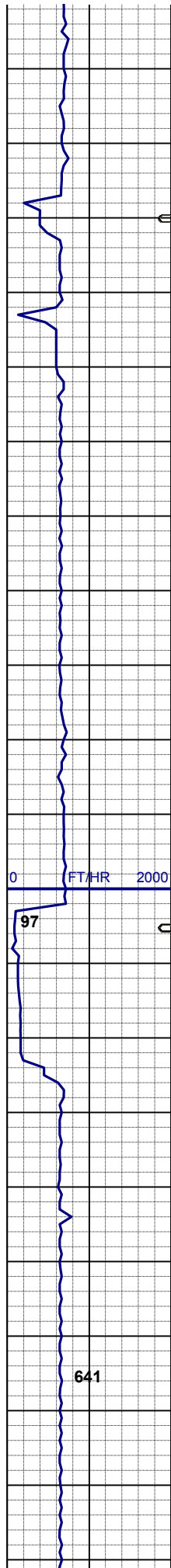


SHYSS: wh - lt gy, vfgr, hd brit, sbplty
-sbang
SS: wh, clr - trnsl, s&p, sme lt gy, dk
gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt

SD 3,959'
TVD 3,930.95'
INC 10.28°
AZM 1.76°

SHYSS: wh - lt gy, vfgr, hd brit, sbplty
-sbang
SS: wh, clr - trnsl, s&p, sme lt gy, dk
gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt

SD 4,054'
TVD 4,024.55'
INC 9.39°
AZM 359.15°



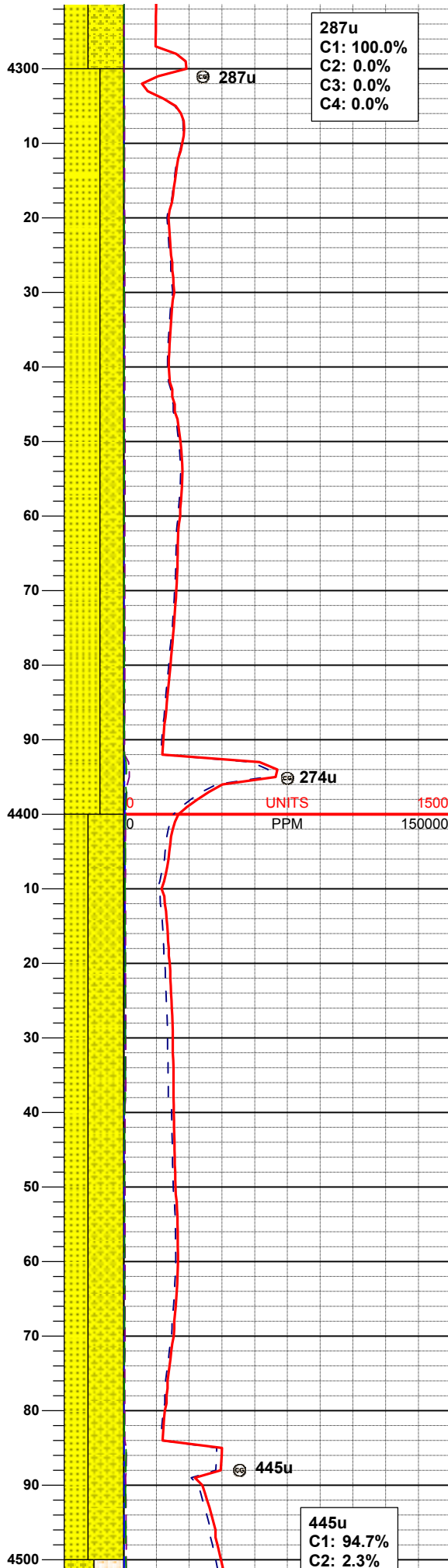
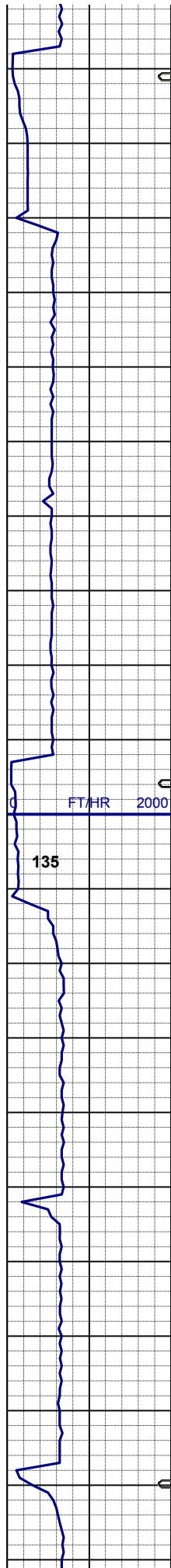
SHYSS: wh - lt gy, vfgr, hd brit, sbply
-sbang
SS: wh, clr - trnsl, s&p, sme lt gy, dk
gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt

SD 4,149'
TVD 4,118.44'
INC 8.13°
AZM 355.89°

SHYSS: wh - lt gy, vfgr, hd brit, sbply
-sbang
SHYSLTST: ltgy - ltgybrn, vfgr, mod
hd - hd, gt tex, sbply-sbang, calc cmt
SS: wh, clr - trnsl, s&p, sme lt gy, dk
gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt

SD 4,244'
TVD 4,212.46'
INC 8.39°
AZM 356.97°

SHYSS: wh - lt gy, vfgr, hd brit, sbply
-sbang
SS: wh, clr - trnsl, s&p, sme lt gy, dk



gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt

287u
C1: 100.0%
C2: 0.0%
C3: 0.0%
C4: 0.0%

SD 4,339'
TVD 4,306.45'
INC 8.35°
AZM 352.07°

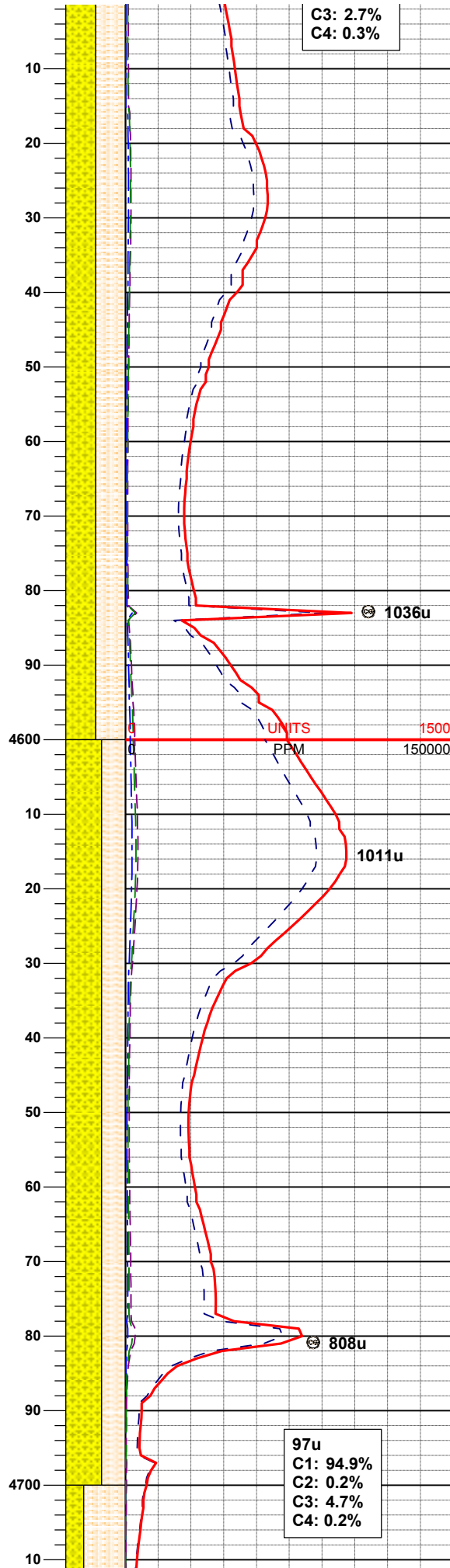
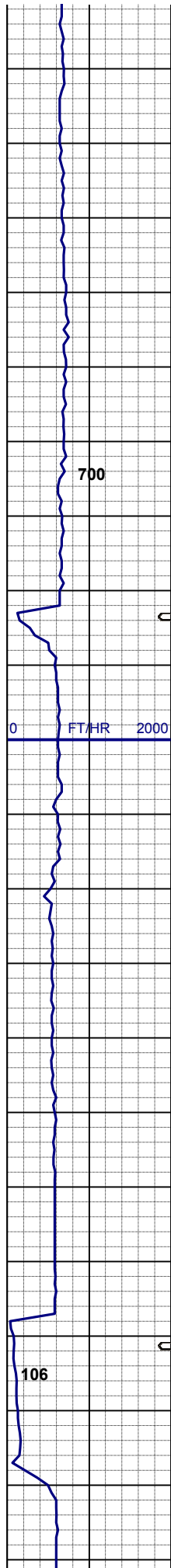
Sussex SS
@ 4355' MD; 4322' TVD

SS: wh, clr - trnsl, s&p, sme lt gy, dk
gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt
SHYSS: wh - lt gy, vfgr, hd brit, sbply
-sbang

SD 4,434'
TVD 4,400.45'
INC 8.24°
AZM 352.22°

SHYSS: wh - lt gy, vfgr, hd brit, sbply
-sbang
SS: wh, clr - trnsl, s&p, sme lt gy, dk
gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt

445u
C1: 94.7%
C2: 2.3%



SD 4,529'
TVD 4,494.59'
INC 7.19°
AZM 352.59°

SHYSS: wh - lt gy, vfgr, hd brit, sbply
-sbang
SHYSLTST: lt-mgy, vfgr, mod hd - hd,
gt tex, sbply-sbang, calc cmt

SD 4,623'
TVD 4,587.93'
INC 6.40°
AZM 347.53°

SHYSS: wh - lt gy, vfgr, hd brit, sbply
-sbang
SHYSLTST: lt-mgy, vfgr, mod hd - hd,
gt tex, sbply-sbang, calc cmt

C3: 2.7%
C4: 0.3%

97u

C1: 94.9%
C2: 0.2%
C3: 4.7%
C4: 0.2%

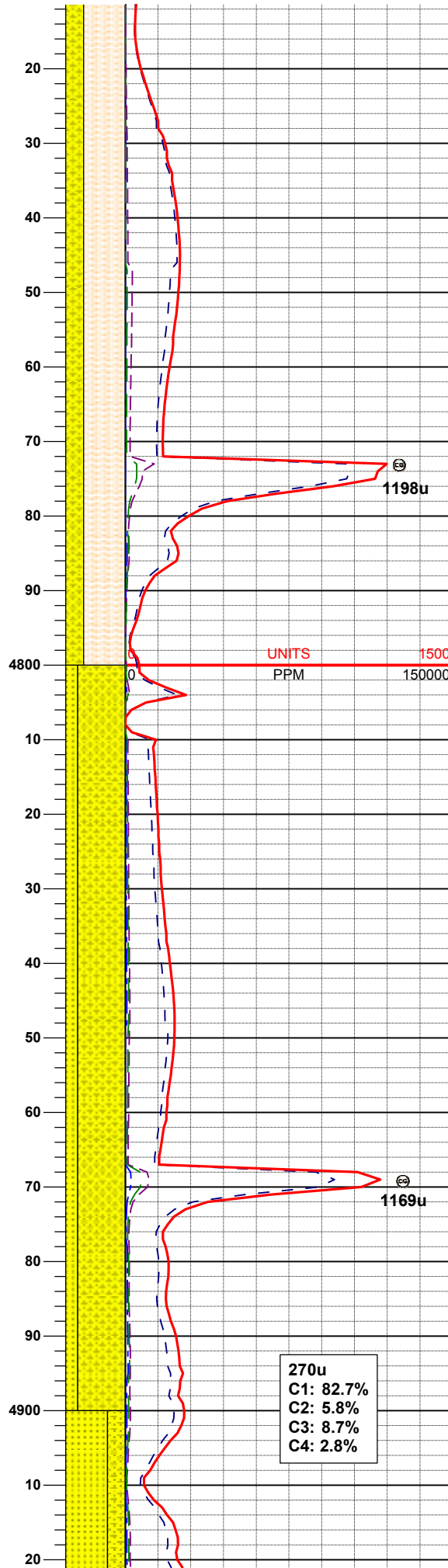
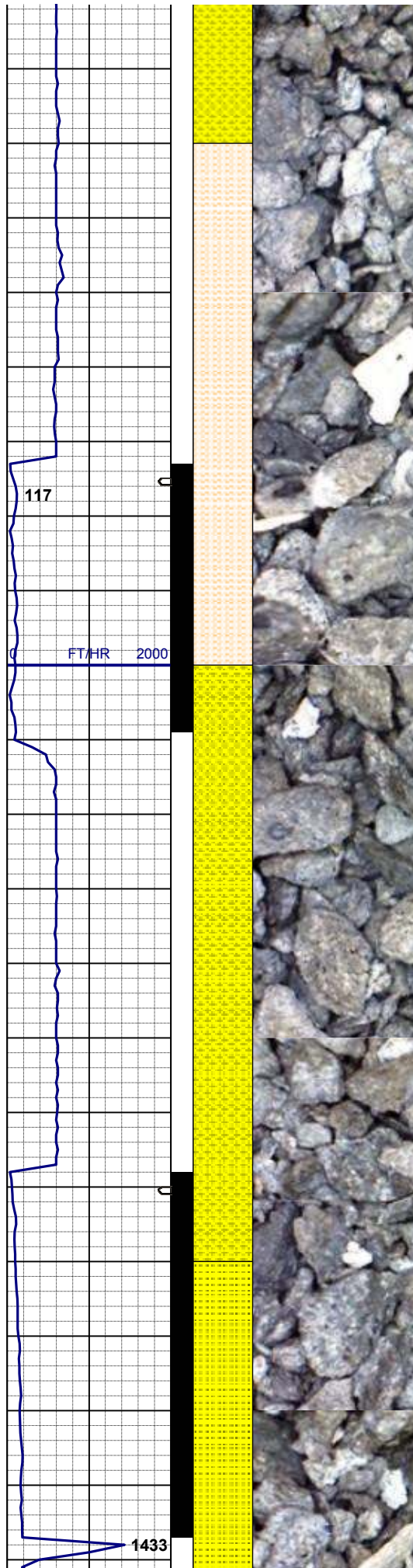
808u

1011u

1036u

UNITS
PPM

1500
150000



SD 4,718'
TVD 4,682.40'
INC 5.70°
AZM 347.23°

SHYSLTST: pred mgy, sme ltgy, vfgr,
mod hd - hd, gt tex, sbply-sbang, calc
cmt
SHYSS: wh - lt gy, vfgr, hd brit, sbply
-sbang

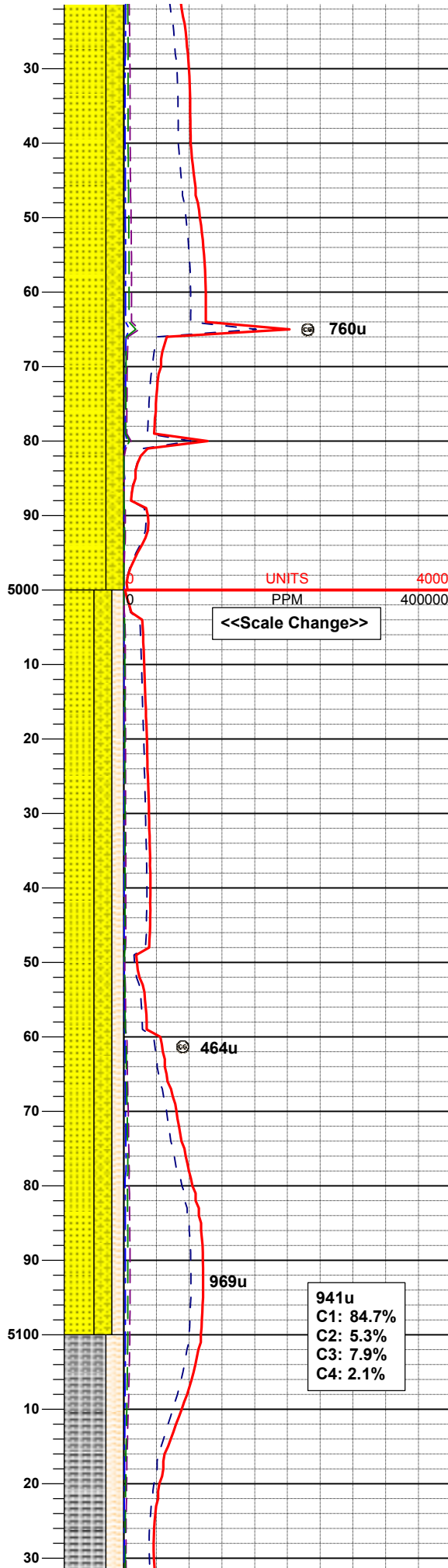
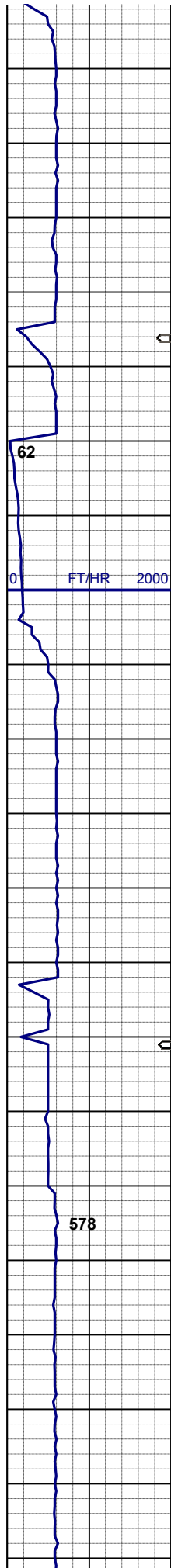
SD 4,813'
TVD 4,777.02'
INC 4.58°
AZM 353.82°

MUD WT 8.60/8.60
VIS 29/29 IN/OUT

SHYSS: lt gy, vfgr, hd brit, sbply-
sbang
SS: wh, clr - trnsl, s&p, sme lt gy, dk
gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt

Shannon SS
@ 4900' MD; 4864' TVD

SD 4,908'
TVD 4,871.86'
INC 1.87°
AZM 14.45°

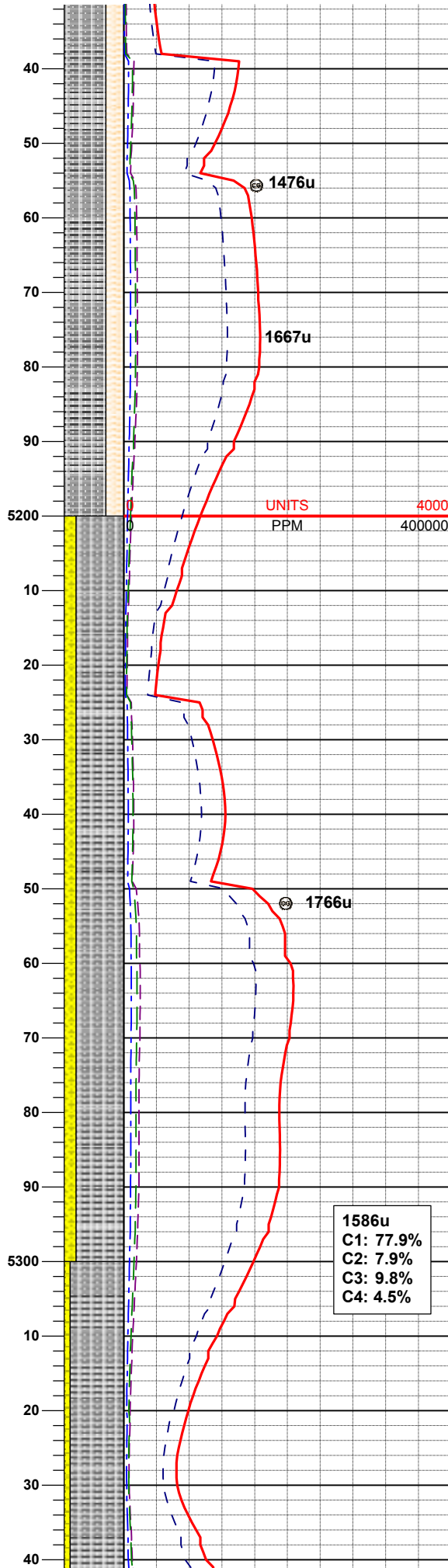
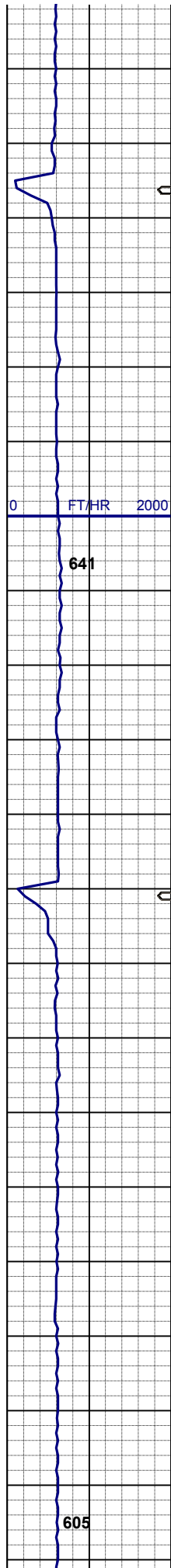


SS: wh, clr - trnsl, s&p, sme lt gy, dk
gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt
SHYSS: wh - lt gy, vfgr, hd brit, sbplty
-sbang

SD 5,003'
TVD 4,966.84'
INC 0.86°
AZM 54.86°

SD 5,098'
TVD 5,061.83'
INC 0.63°
AZM 68.58°

SS: wh, clr - trnsl, s&p, sme lt gy, dk
gn xl glau, f-vfgr, hd v brit clus, p
consol, v calc cmt, grdg -
SHYSS: wh - lt gy, vfgr, hd brit, sbplty
-sbang
SHYSLTST: ltgy - ltgybrn, vfgr, mod
hd - hd, gt tex, sbplty-sbang, calc cmt



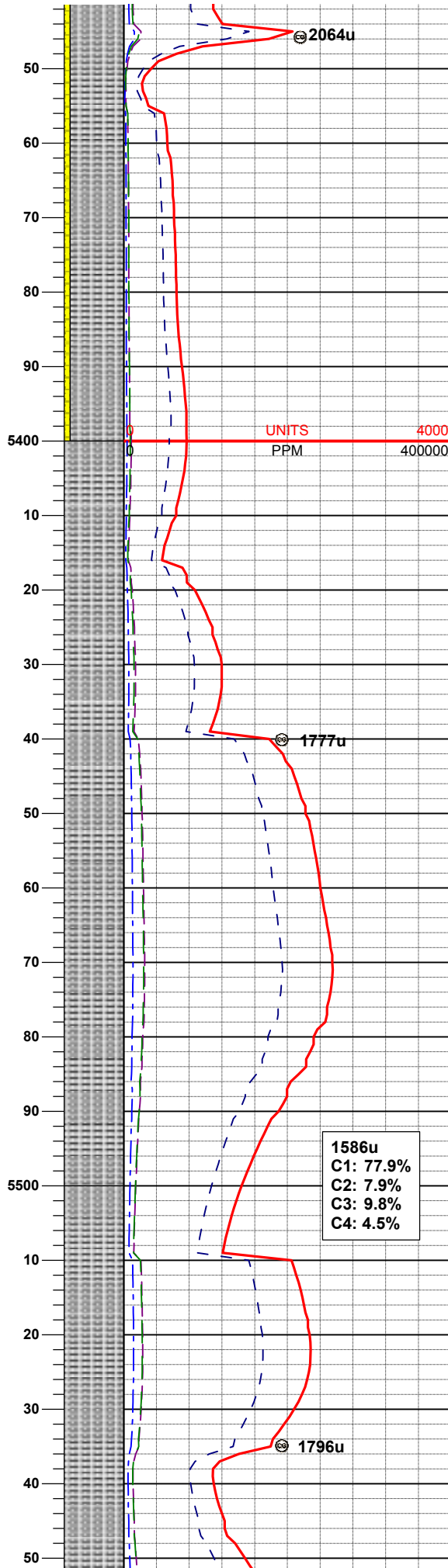
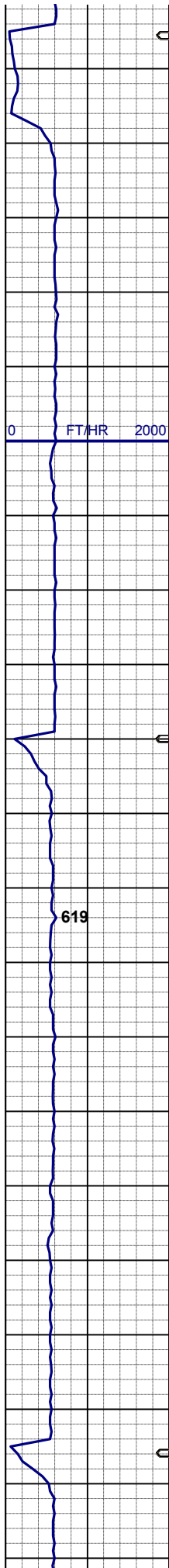
SD 5,193'
TVD 5,156.82'
INC 1.09°
AZM 53.35°

SLTYSH: mgy-dkgy, mod hd-hd, slty-
gt tex, sbply-pty, v sl calc
SHYSLTST: ltgy - ltgybrn, vfgr, mod
hd - hd, gt tex, sbply-sbang, calc cmt

SD 5,288'
TVD 5,251.80'
INC 1.33°
AZM 57.59°

SLTYSH: mgy-dkgy, mod hd-hd, slty-
gt tex, sbply-pty, v sl calc
SHYSS: lt gy, vfgr, hd brit, sbply-
sbang, sl calc mtx

MUD WT 8.65/8.60
VIS 31/30 IN/OUT

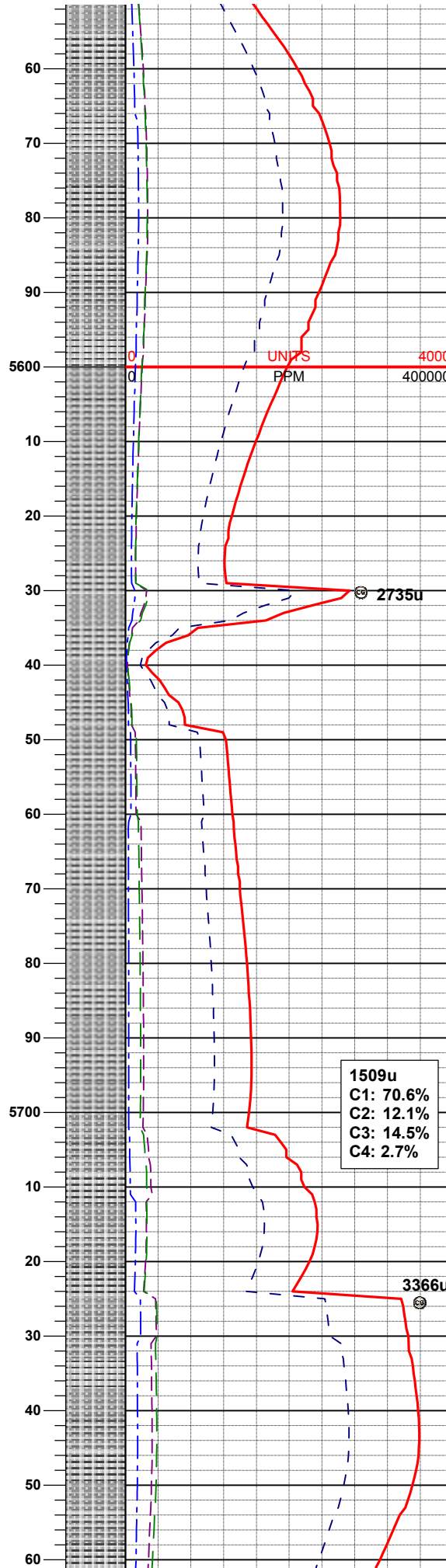
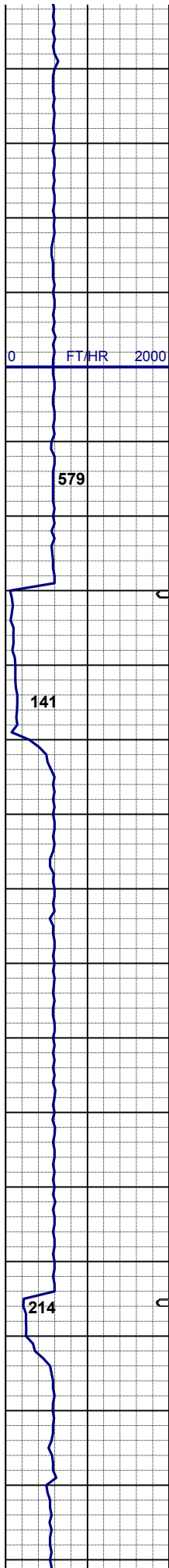


SD 5,383'
TVD 5,346.78'
INC 0.85°
AZM 50.54°

SLTYSH: mgy-dkgy, mod hd-hd, slty-gt tex, sbply-plty, v sl calc
SHYSS: lt gy, vfgr, hd brit, sbply-sbang, sl calc mtx

SD 5,478'
TVD 5,441.76'
INC 1.30°
AZM 64.98°

SLTYSH: lt-mgybrn, mod hd-hd, slty-gt tex, sbply-plty, v sl calc, tr ss, tr bent



SD 5,573'
TVD 5,536.74'
INC 1.48°
AZM 42.36°

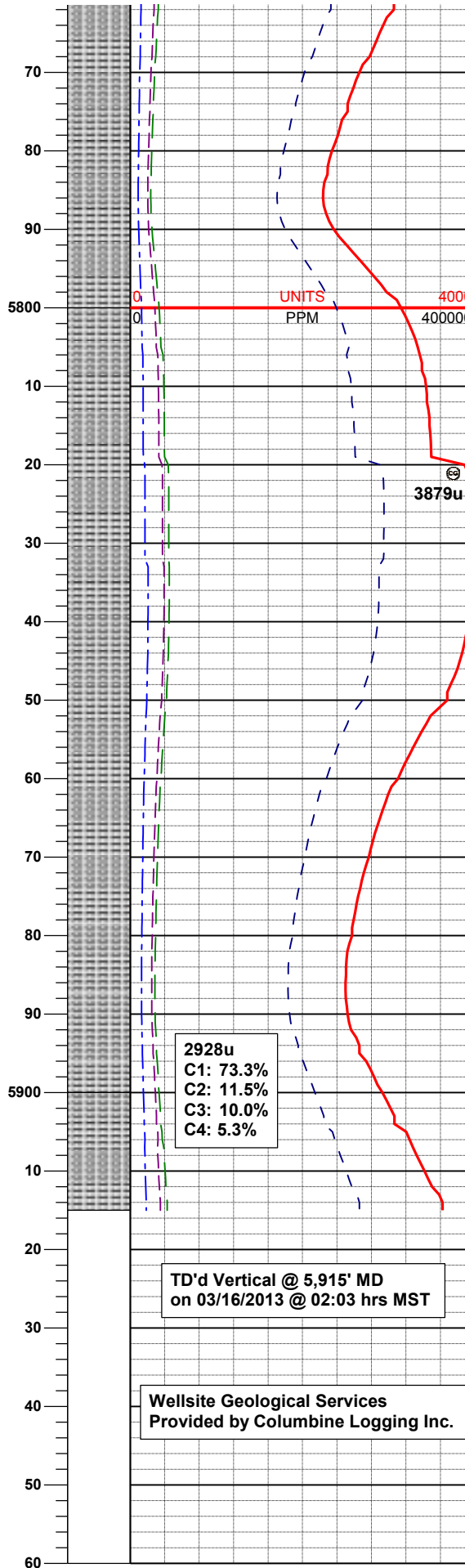
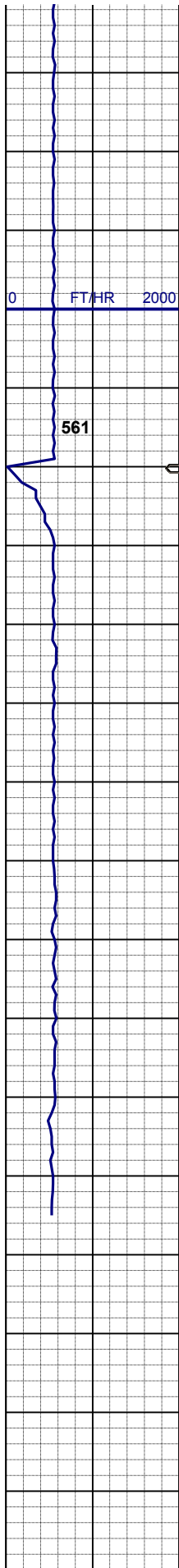
SLTYSH: lt-mgybrn, mod hd-hd, slty-gt tex, sbply-pty, v sl calc, tr ss, tr bent

MUD WT 8.75/8.80
VIS 32/31 IN/OUT

SD 5,668'
TVD 5,631.71'
INC 1.39°
AZM 59.35°

SLTYSH: lt-mgybrn, mod hd-hd, slty-gt tex, sbply-pty, v sl calc, tr ss, tr bent

SD 5,763'
TVD 5,726.68'
INC 1.39°
AZM 59.35°



INC 1.29°
AZM 39.23°

SLTYSH: lt-mgybrn, mod hd-hd, slty-
gt tex, sbply-pty, v sl calc, tr ss, tr
bent

MUD WT 8.90/9.00
VIS 33/34 IN/OUT

SD 5,858'
TVD 5,821.66'
INC 0.96°
AZM 44.38°

SLTYSH: lt-mgybrn, mod hd-hd, slty-
gt tex, sbply-pty, v sl calc, tr ss, tr
bent

SLTYSH: lt-mgybrn, mod hd-hd, slty-
gt tex, sbply-pty, v sl calc, tr ss, tr
bent

LOG CONTINUES ON
HORIZONTAL L PLOT LOG
LUCCI STATE
B01-69HNL HORZ