

LOG created using L PLOT VH Version 3.0, March 28, 2012, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY, INC
WELL: DYER USX AB35-67-1HN
LOCATION: SEC34 7N 64W
COUNTY: WELD
STATE: COLORADO
SPOT: 352 FNL 296 FEL
ELEVATION: GL 4871'; KB 4895'
FIELD: WATTENBERG
SPUD DATE: 3-19-12
TD DATE: 3-27-12
DATES LOGGED: 3-20-12 to 3-27-12
DEPTHS LOGGED: 1000' - 11,707'
LOGGERS: BRAD WILSON, JAKOB PAMMER
DRILLING FLUID: WATER, WATER BASED MUD, POLY
DRILLING RIG: HP 323
API: 05-123-34772-00
LOG TYPE: VERTICAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS:

LITHOLOGIES



Sandstone



Shaly Sandstone



Shaly Siltstone



Silty Shale

ENGINEERING SYMBOLS



Connection



Arrow



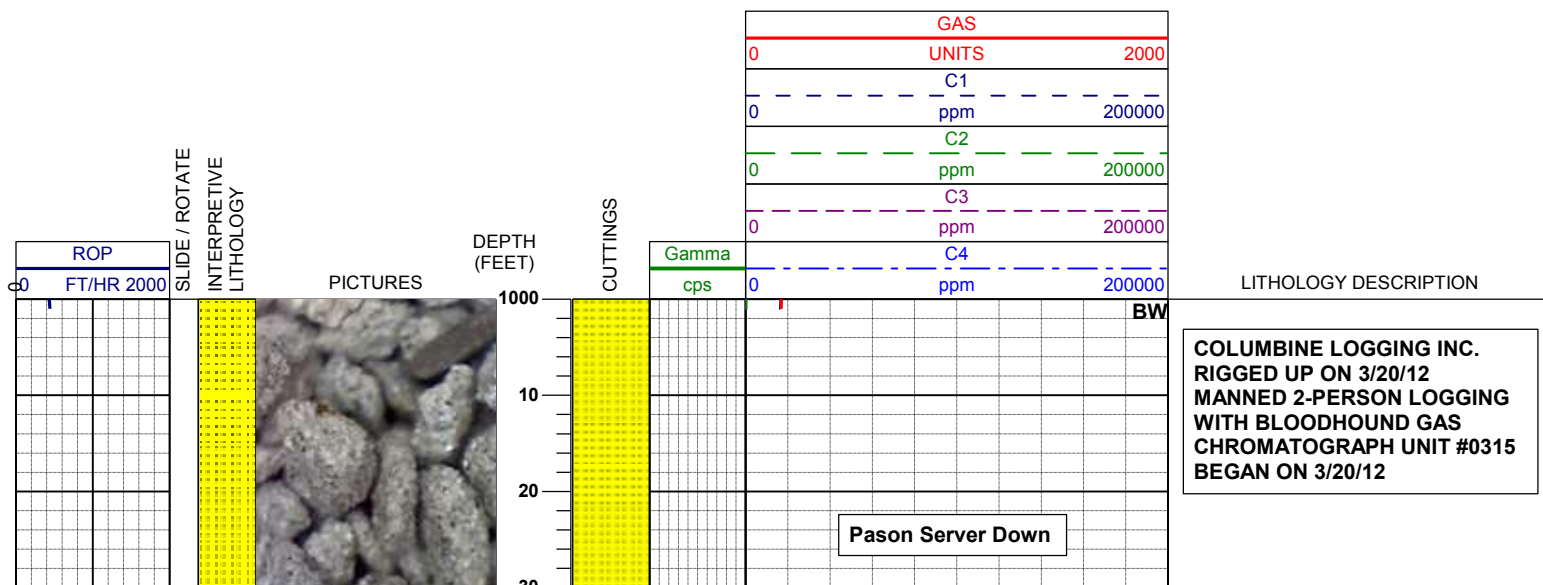
Midnight Depth

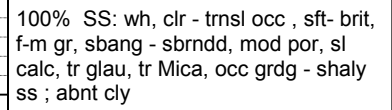


Questionable



Arrow



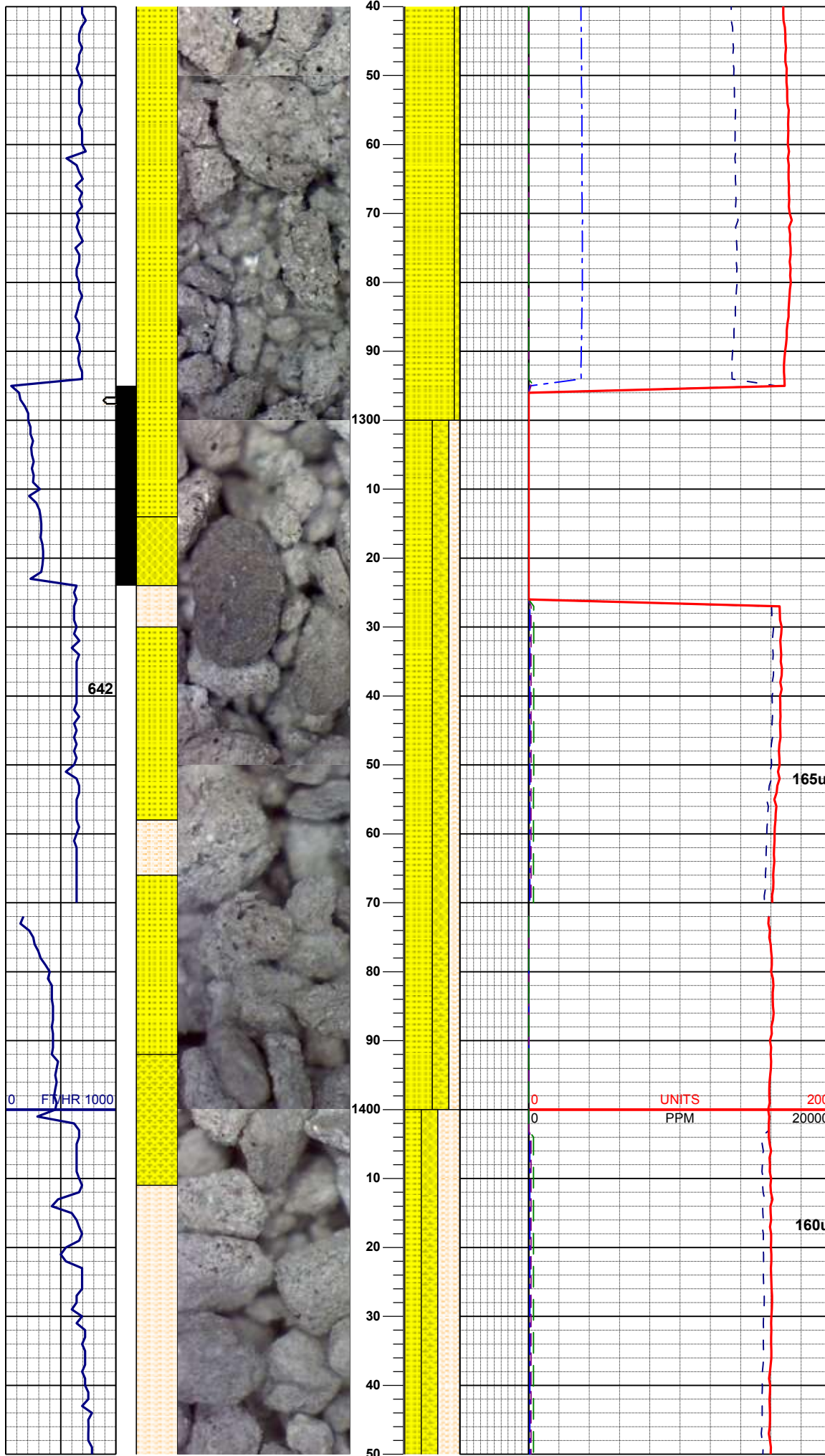


100% SS: wh, clr - trnsl occ , sft- brit,
f-m gr, sbang - sbrndd, mod por, sl
calc, tr glau, tr Mica, occ grdg - shaly
ss ; abnt cly

MD 1155'
INC 1.1
AZM 117
TVD 1154.91

MUD WT 8.6+ VIS 28

MD 1250'



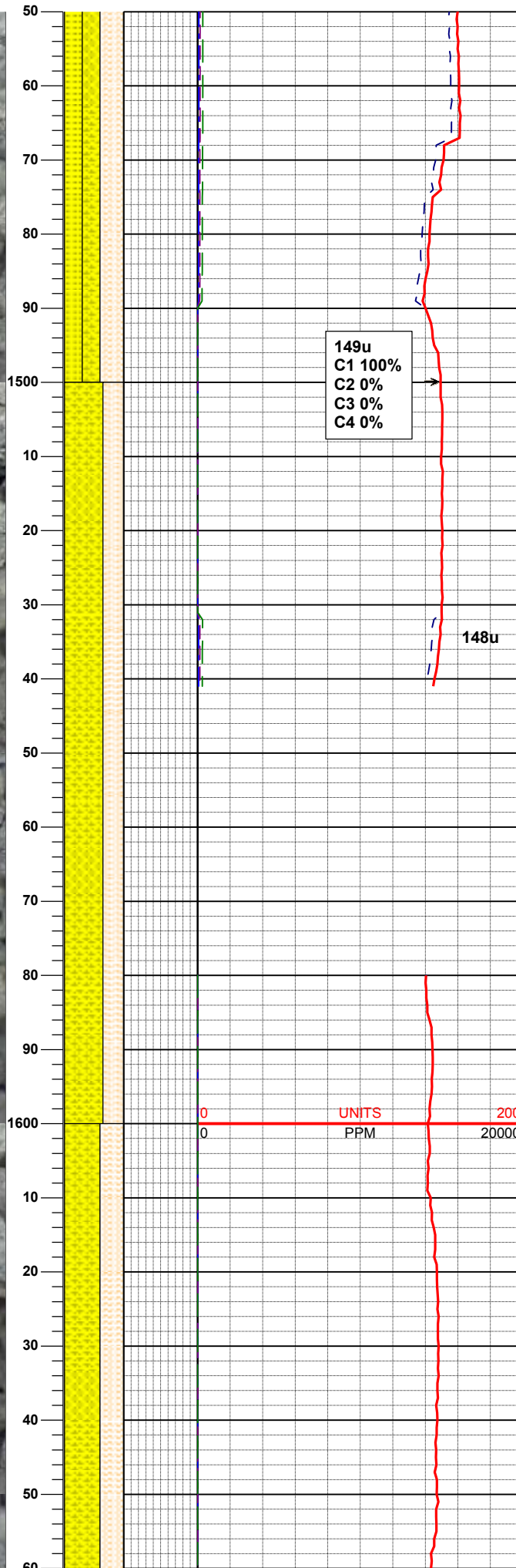
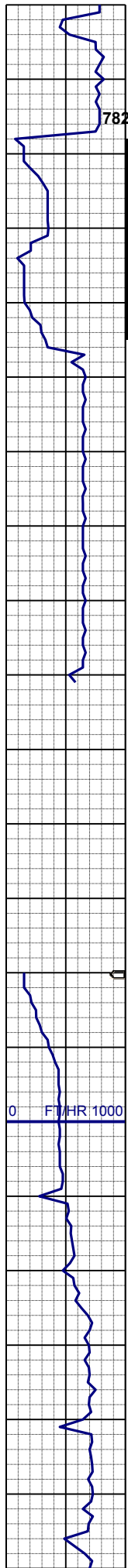
INC 3.1
AZM 168.5
TVD 1249.85

90% SS: wh, clr - trnsl occ s&p - lt
gy, sft- brit, f-m gr, sbang - sbrnndd,
mod por, sl calc, tr glau, tr Mica, occ
grdg - shaly ss
10% SHYSS: clr- fros wh, occ lt gy,
s&p, vf- f gr, sbang - sbrnndd, mod - w
srt, fri - brit, occ lit frag; abnt cly

MD 1345'
INC 4.9
AZM 179.8
TVD 1344.62

50% SS: wh, clr - trnsl occ s&p - lt
gy, sft- brit, f-m gr, sbang - sbrnndd,
mod por, sl calc, tr glau, tr Mica
30% SHYSS: clr- fros wh, occ lt gy,
s&p, vf- f gr, sbang - sbrnndd, mod - w
srt, fri - brit, occ lit frag
20% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbblky, arg-slty, occ lit
frag; cly

40% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbblky, arg-slty, occ lit frag
30% SS: wh. clr - trnsl occ s&p - lt

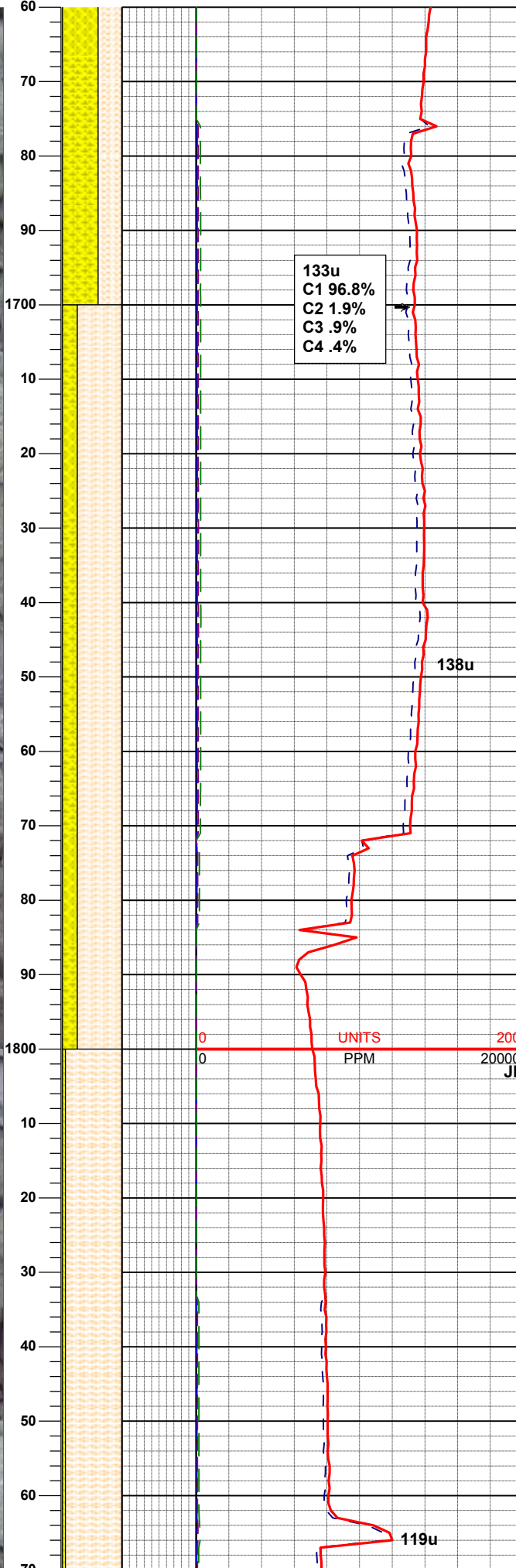
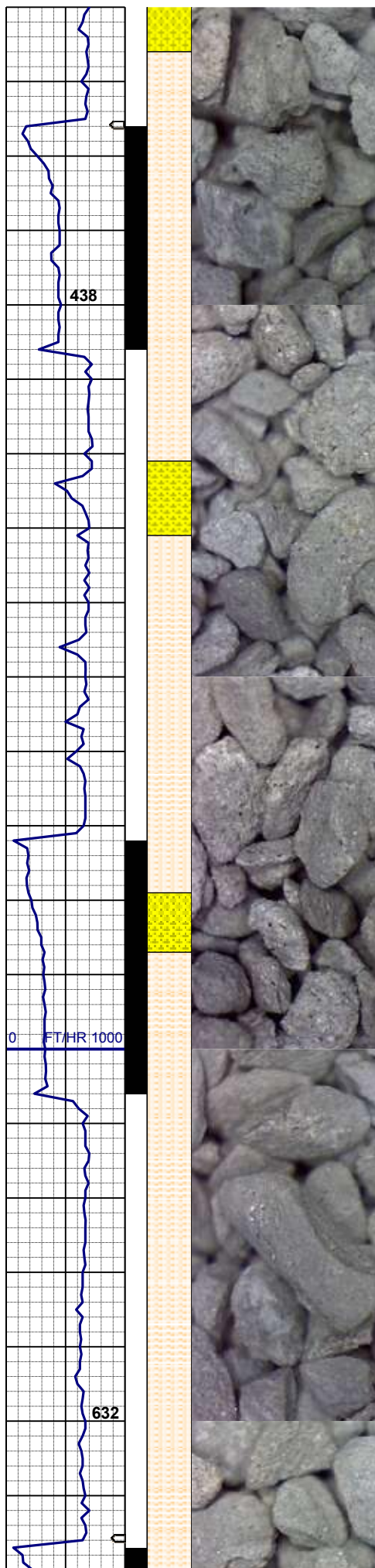


gy , sft- brit, f-m gr, sbang - sbrndd,
mod por, sl calc, tr glau, tr Mica
30% SHYSS: clr- fros wh, occ lt gy,
s&p, vf- f gr, sbang - sbrndd, mod - w
srt, fri - brit, occ lit frag ; decr cly

65% SHYSS: clr- fros wh, occ lt gy,
s&p, vf- f gr, sbang - sbrndd, mod - w
srt, fri - brit, occ lit frag, tr glau
35% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-slt, occ lit frag

MD 1629'
INC 11.3
AZM 171.7
TVD 1625.62

60% SHYSS: clr- fros wh, occ lt gy,
s&p, vf- f gr, sbang - sbrndd, mod - w
srt, fri - brit, occ lit frag, tr glau
40% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-slt, occ lit frag



133u
C1 96.8%
C2 1.9%
C3 .9%
C4 .4%

MD 1724'
INC 12.8
AZM 175.7
TVD 1718.52

60% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-slt
40% SHYSS: clr- fros wh, occ lt gy,
s&p, vf- f gr, sbang - sbrnnd, mod - w
srt, fri - brit, occ lit frag, tr glau

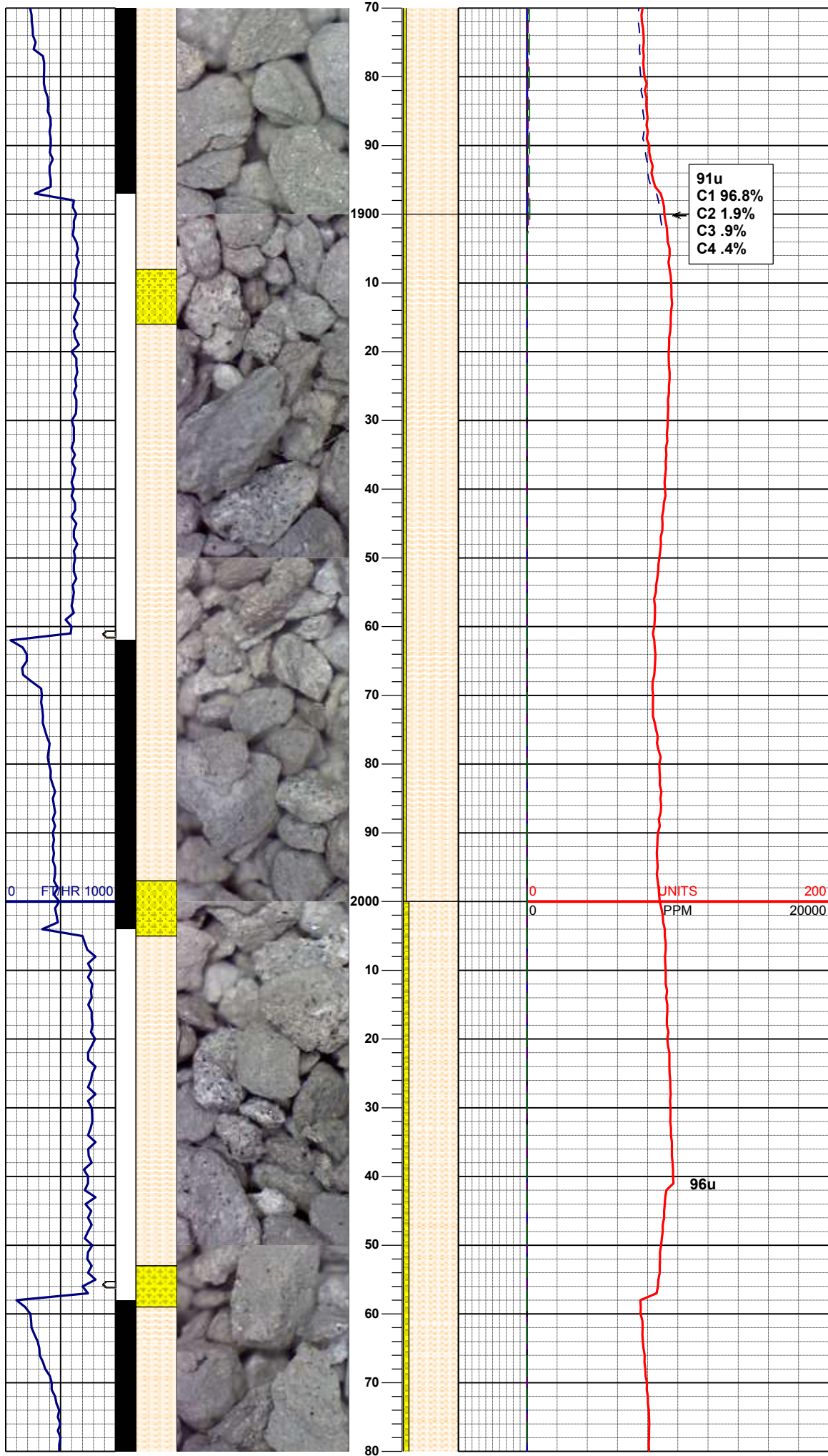
138u

0 200
UNITS
PPM
JP

MD 1819'
INC 14.5
AZM 174.1
TVD 1810.84

95% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-slt
5% SHYSS: clr- fros wh, occ lt gy,
s&p, vf- f gr, sbang - sbrnnd, mod - w
srt, fri - brit, occ lit frag, tr glau

119u

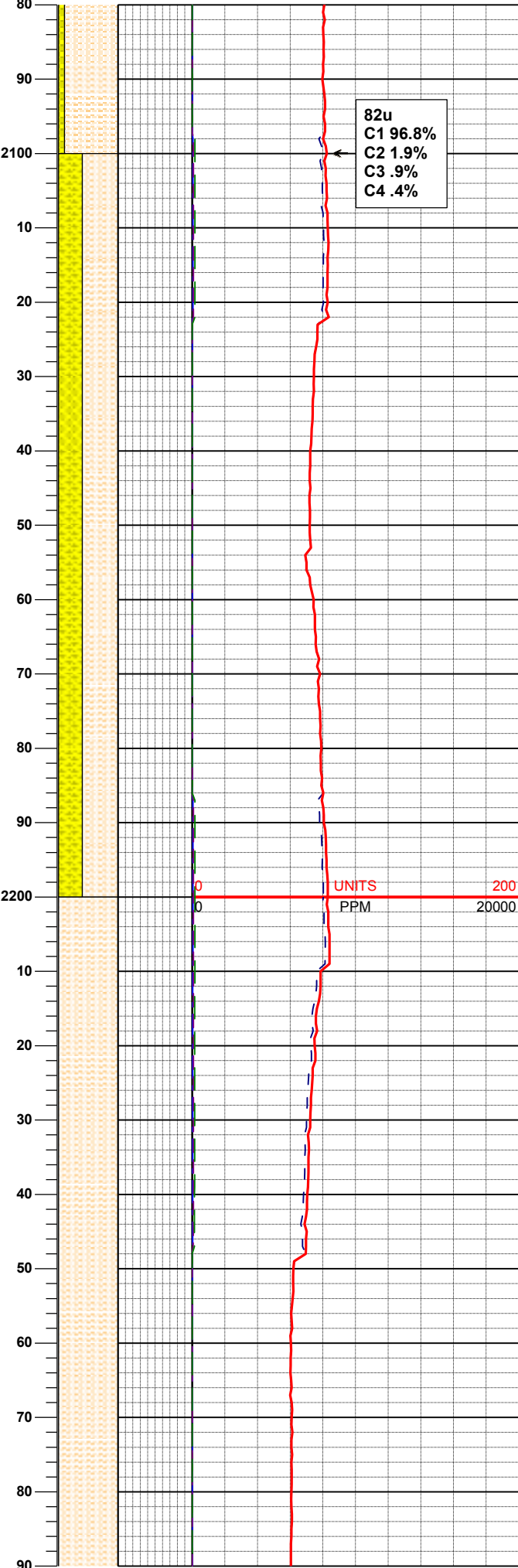
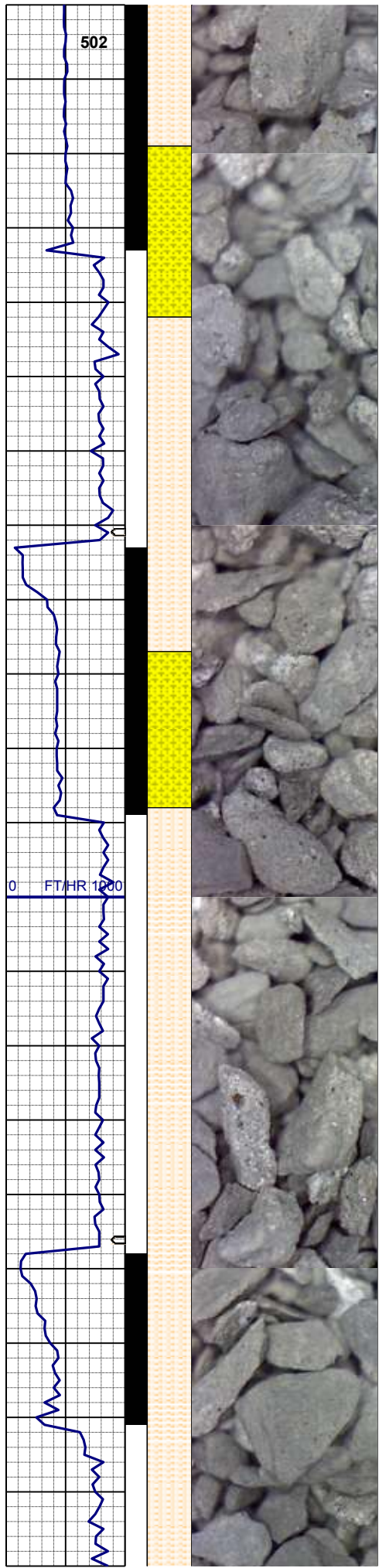


MD 1914'
INC 15.5
AZM 166.4
TVD 1902.61

95% SHLY SLTST: lt - m gy occ dk gy, sft - fri, sbbiky, arg-sity
5% SHYSS: clr- fros wh, occ lt gy, s&p, vf- f gr, sbang - sbrnnd, mod - w srt, fri - brit, occ lit frag, tr glau

MD 2009'
INC 16.4
AZM 170.6
TVD 1993.95

90% SHLY SLTST: lt - m gy occ dk gy, sft - fri, sbbiky, arg-sity
10% SHYSS: clr- fros wh, occ lt gy, s&p, vf- f gr, sbang - sbrnnd, mod - w srt, fri - brit, occ lit frag, tr glau



82u
C1 96.8%
C2 1.9%
C3 .9%
C4 .4%

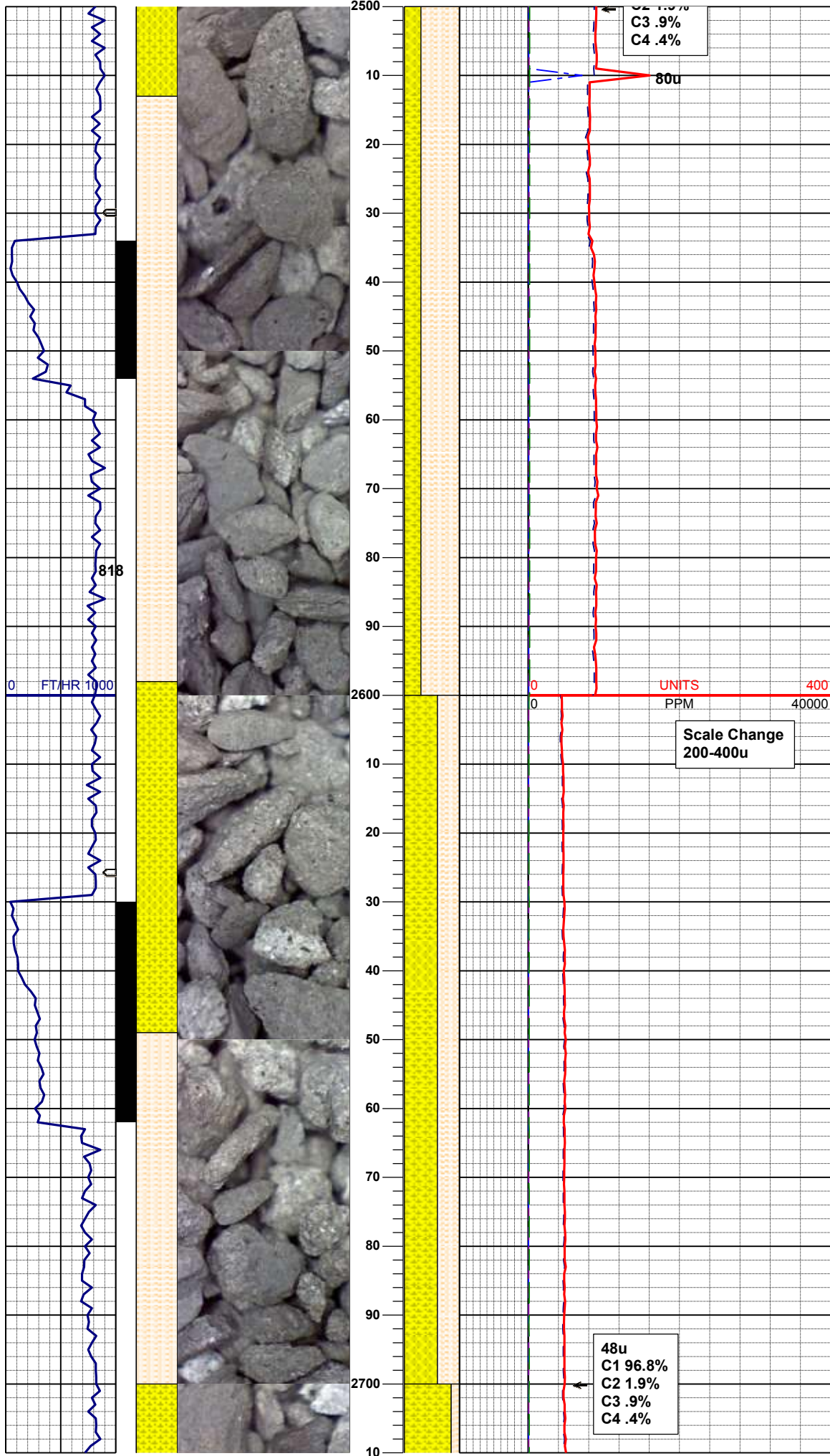
MD 2104'
INC 18.8
AZM 171.5
TVD 2084.5

60% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-sity
40% SHYSS: clr- fros wh, occ lt gy,
s&p, vf- f gr, sbang - sbmdd, mod - w
srt, 'fri - brit, occ lit frag, tr glau

MD 2199'
INC 19.8
AZM 170.6
TVD 2174.16

100% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-sity, scat shyss

MD 2294'



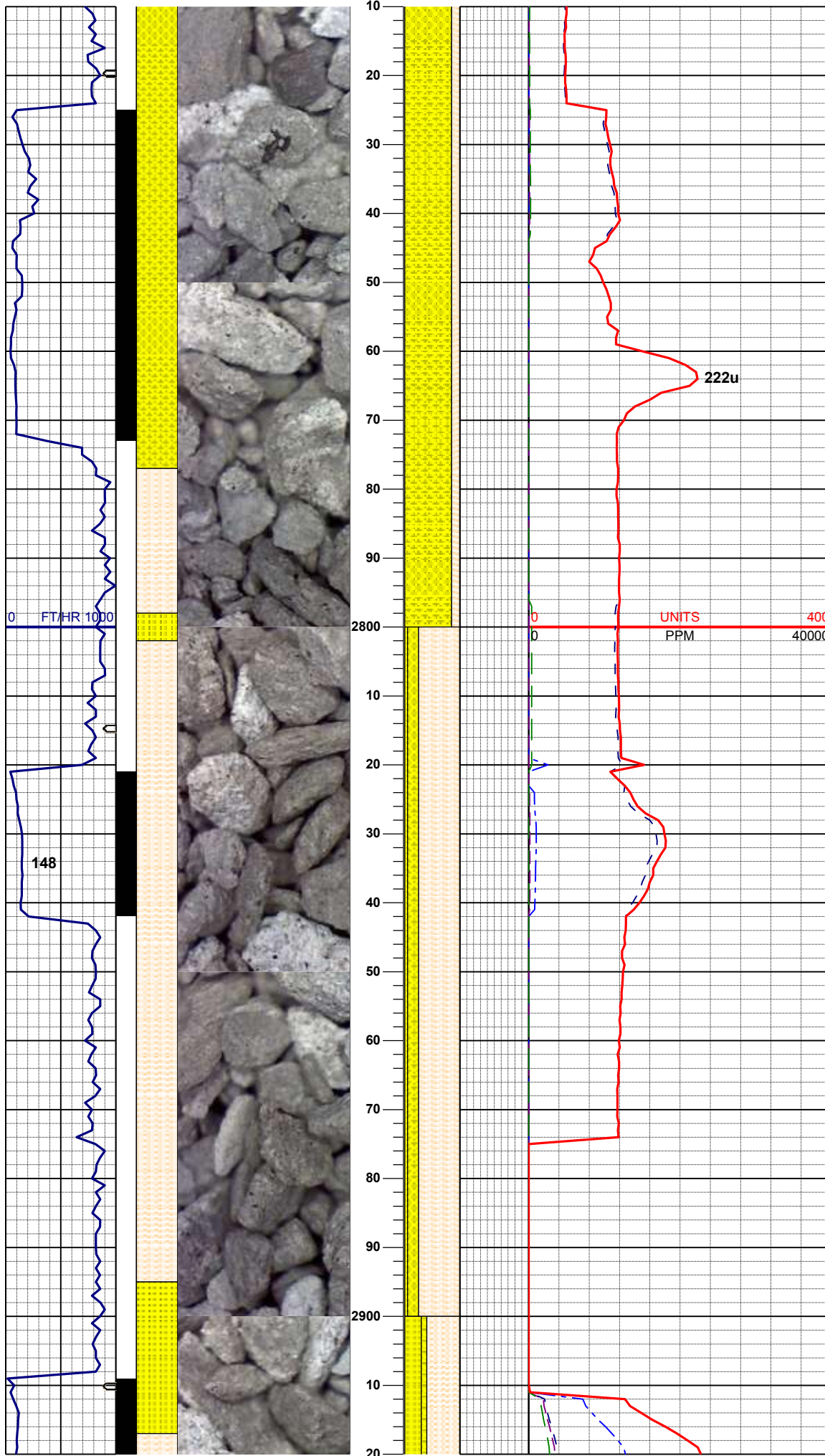
70% SHLY SLTST: lt - m gy occ dk gy, sft - fri, sbbiky, arg-sity
30% SHYSS: clr- fros wh, occ lt gy, s&p, vf- f gr, sbang - sbrnidd, mod - w srt, fri - brit, occ lit frag, tr glau

MD 2578'
INC 18.4
AZM 176.2
TVD 2532.02

MUD WT 8.9 VIS 30

MD 2673'
INC 17.9
AZM 174.8
TVD 2622.30

60% SHYSS: clr- fros wh, occ lt gy, s&p, vf- f gr, sbang - sbrnidd, mod - w srt, fri - brit, tr glau
40% SHLY SLTST: lt - m gy occ dk gy, sft - fri, sbbiky, arg-sity



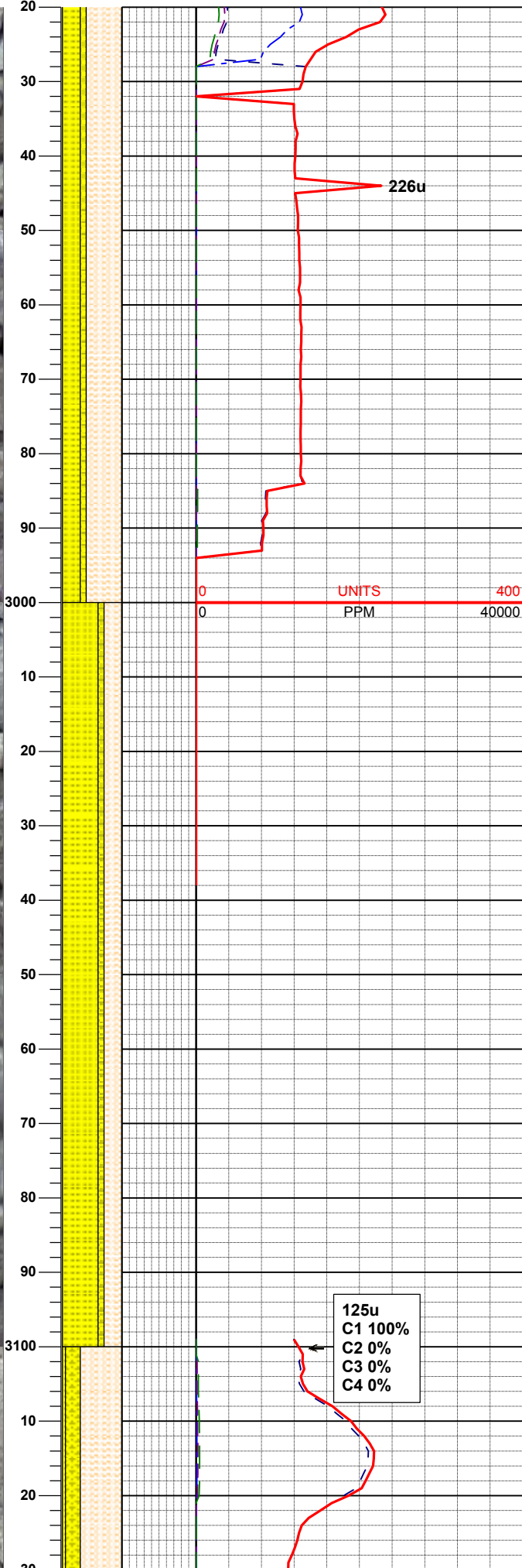
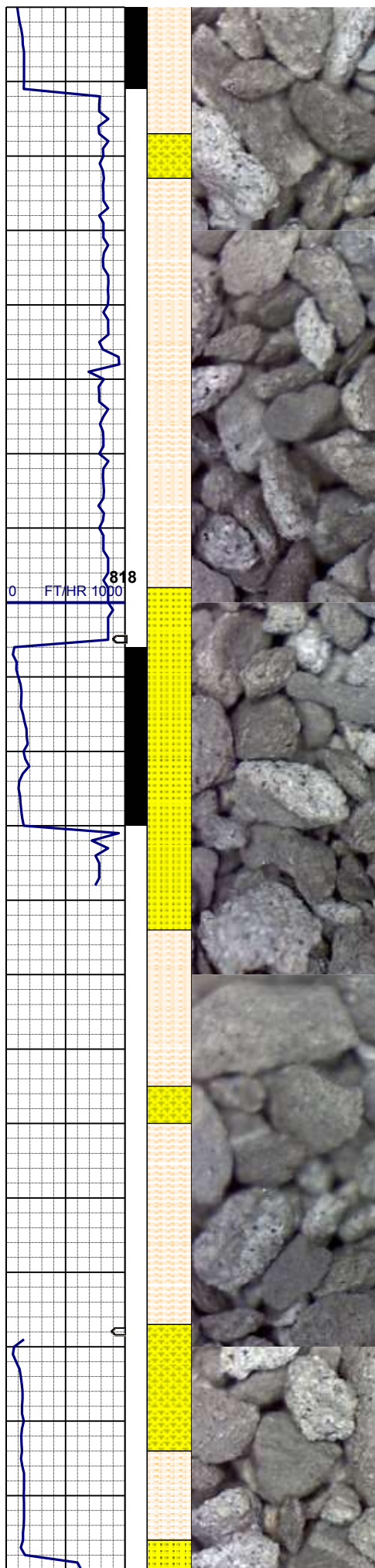
85% SHYSS: clr- fros wh, occ lt gy,
s&p, vf- f gr, sbang - sbrndd, mod - w
srt, fri - brit, tr glau
15% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbky, arg-sltly

MD 2768'
INC 19.8
AZM 170.8
TVD 2712.20

MUD WT 8.9 VIS 29

75% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbky, arg-sltly, occ lit frag
20% SHYSS: clr- fros wh,, s&p, vf- f
gr, sbang - sbrndd, mod - w srt, fri -
brit
5% SS: wh, clr - trnsi occ s&p - lt gy ,
sft - brit, f-m gr, sbang - sbrndd, mod
por, sl calc, tr glau

MD 2863'
INC 19.5
AZM 172.2
TVD 2801.67



60% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-slty, occ lit frag
30% SS: wh, clr - trns occ s&p - lt
gy, sft- brit, f-m gr, sbang - sbrnnd,
mod por, sl calc, tr glau
10% SHYSS: clr- fros wh., s&p, vf- f
gr, sbang - sbrnnd, mod - w srt, fri -
brit

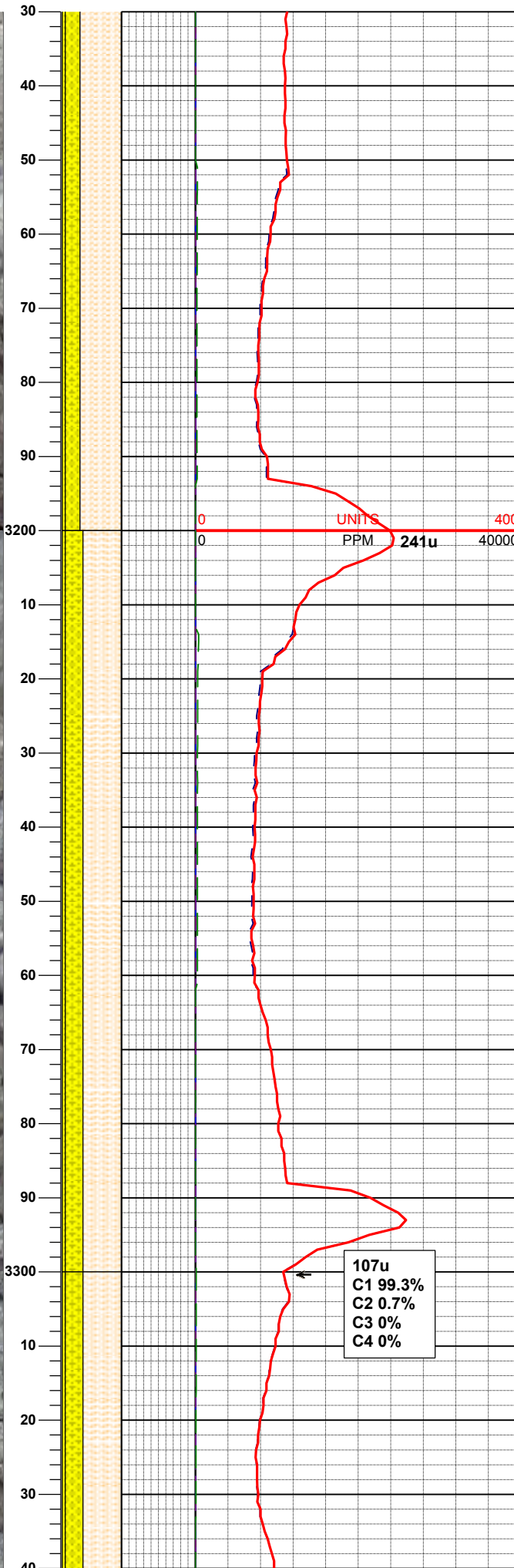
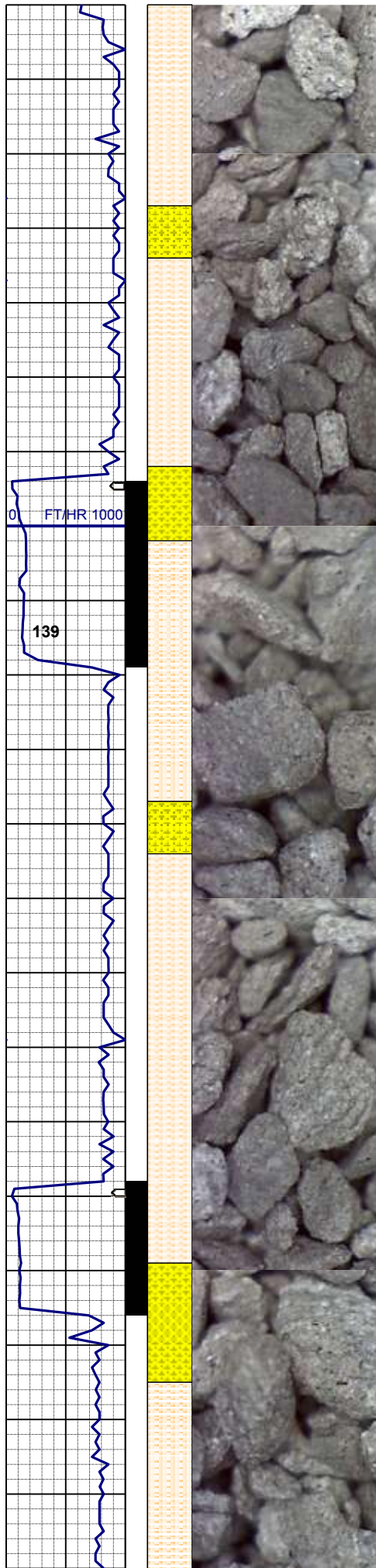
MD 2958'
INC 19.4
AZM 169.9
TVD 2891.25

60% SS: wh, clr - trns occ s&p - lt
gy, sft- brit, f-m gr, sbang - sbrnnd,
mod por, sl calc, tr glau
30% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-slty, occ lit frag
10% SHYSS: clr- fros wh., s&p, vf- f
gr, sbang - sbrnnd, mod - w srt, fri -
brit

MD 3053'
INC 19.0
AZM 172.4
TVD 2980.97

125u
C1 100%
C2 0%
C3 0%
C4 0%

70% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-slty, occ lit frag
25% SHYSS: clr- fros wh., s&p, vf- f



20% SHLYSS: wh, clr - trnsf occ s&p - lt gy ,
gr, sbang - sbrndd, mod - w srt, fri -
brit
5% SS: wh, clr - trnsf occ s&p - lt gy ,
sft- brit, f-m gr, sbang - sbrndd, mod
por, sl calc, tr glau

MD 3148'
INC 19.6
AZM 173.4
TVD 3070.63

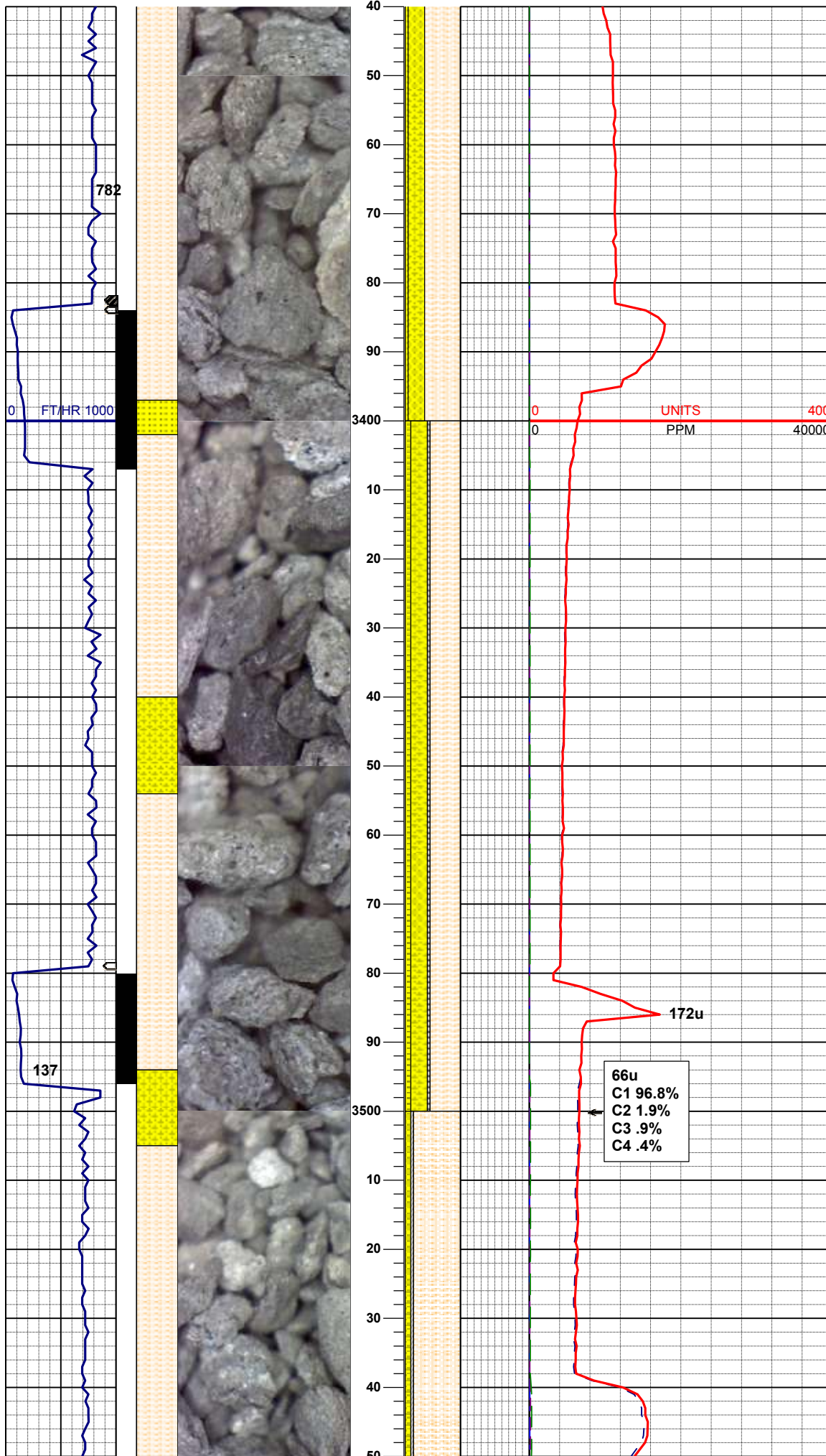
MUD WT 8.95 VIS 29

MD 3243'
INC 20.2
AZM 174.5
TVD 3159.96

65% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-sltly, occ lit frag
30% SHYSS: clr- fros wh,, s&p, vf- f
gr, sbang - sbrndd, mod - w srt, fri -
brit
5% SS: wh, clr - trnsf occ s&p - lt gy ,
sft- brit, f-m gr, sbang - sbrndd, mod
por, sl calc, tr glau

107u
C1 99.3%
C2 0.7%
C3 0%
C4 0%

MD 3337'

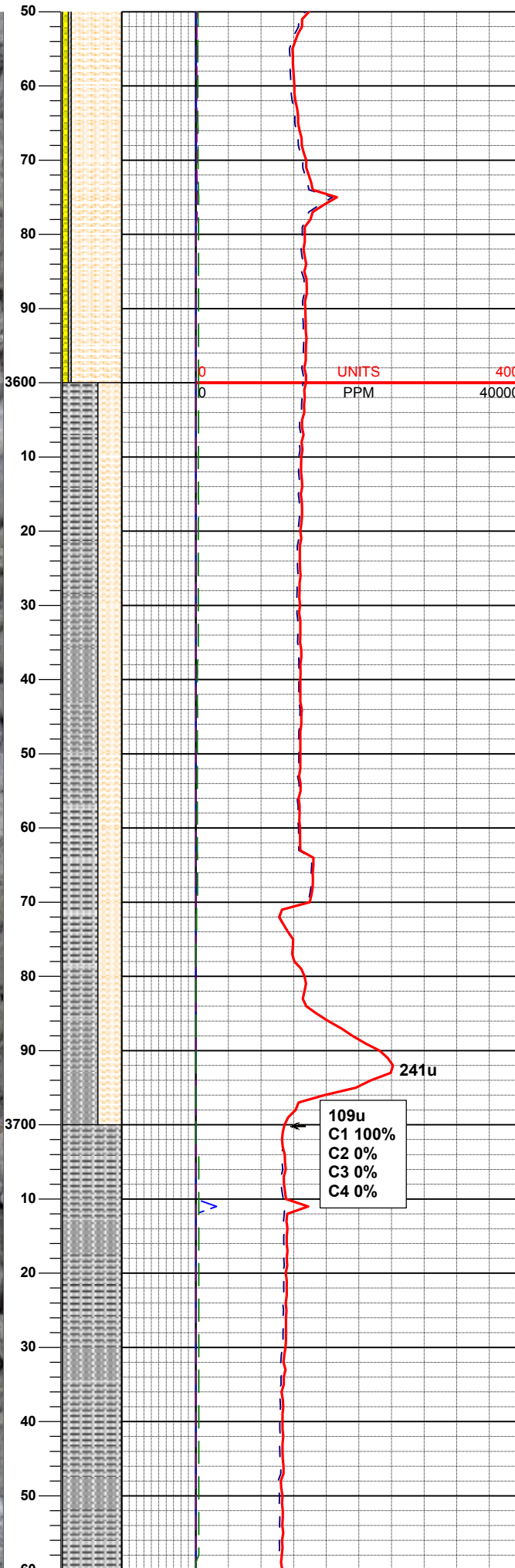
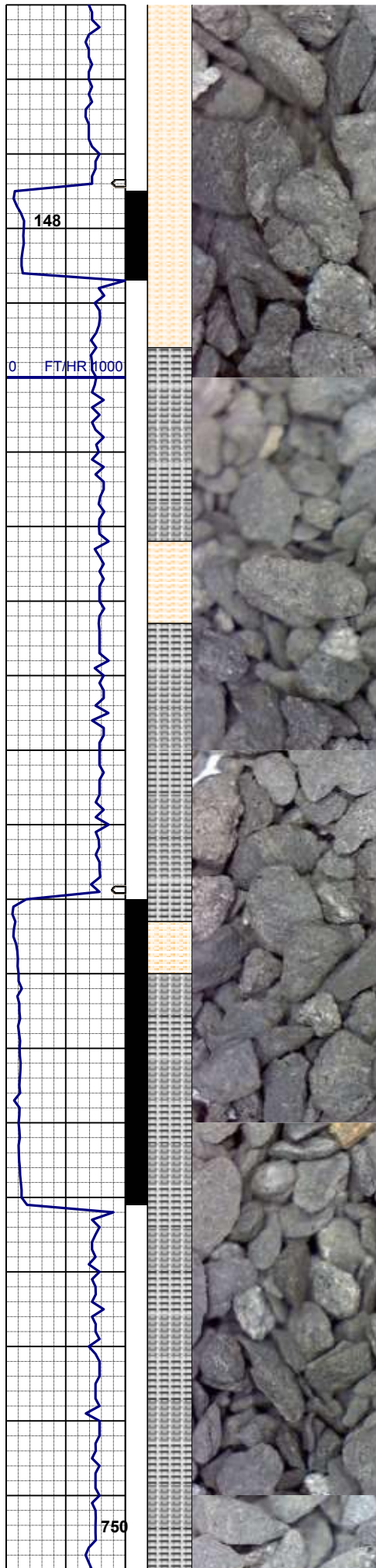


INC 19.6
AZM 171.5
TVD 3248.34

55% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-slt, occ lit frag
30% SHYSS: clr- fros wh,, s&p, vf- f
gr, sbang - sbrnnd, mod - w srt, fri -
brit
10% SS: wh, clr - trnsI occ s&p - lt
gy , sft- brit, f-m gr, sbang - sbrnnd,
mod por, sl calc, tr glau
5% SLTY SH: lt - m gy sme dkgy - gy
brn, sbply - sbbiky, sl hom, arg, sft -
firm, rthy-gt mt, slty
55% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbiky, arg-slt, occ lit frag
30% SHYSS: clr- fros wh,, s&p, vf- f
gr, sbang - sbrnnd, mod - w srt, fri -
brit
10% SS: wh, clr - trnsI occ s&p - lt
gy , sft- brit, f-m gr, sbang - sbrnnd,
mod por, sl calc, tr glau
5% SLTY SH: lt - m gy sme dkgy - gy
brn, sbply - sbbiky, sl hom, arg, sft -
firm, rthy-gt mt, slty

MD 3432'
INC 20.0
AZM 174.0
TVD 3337.73

MD 3527'
INC 20.0
AZM 173.3
TVD 3427.00



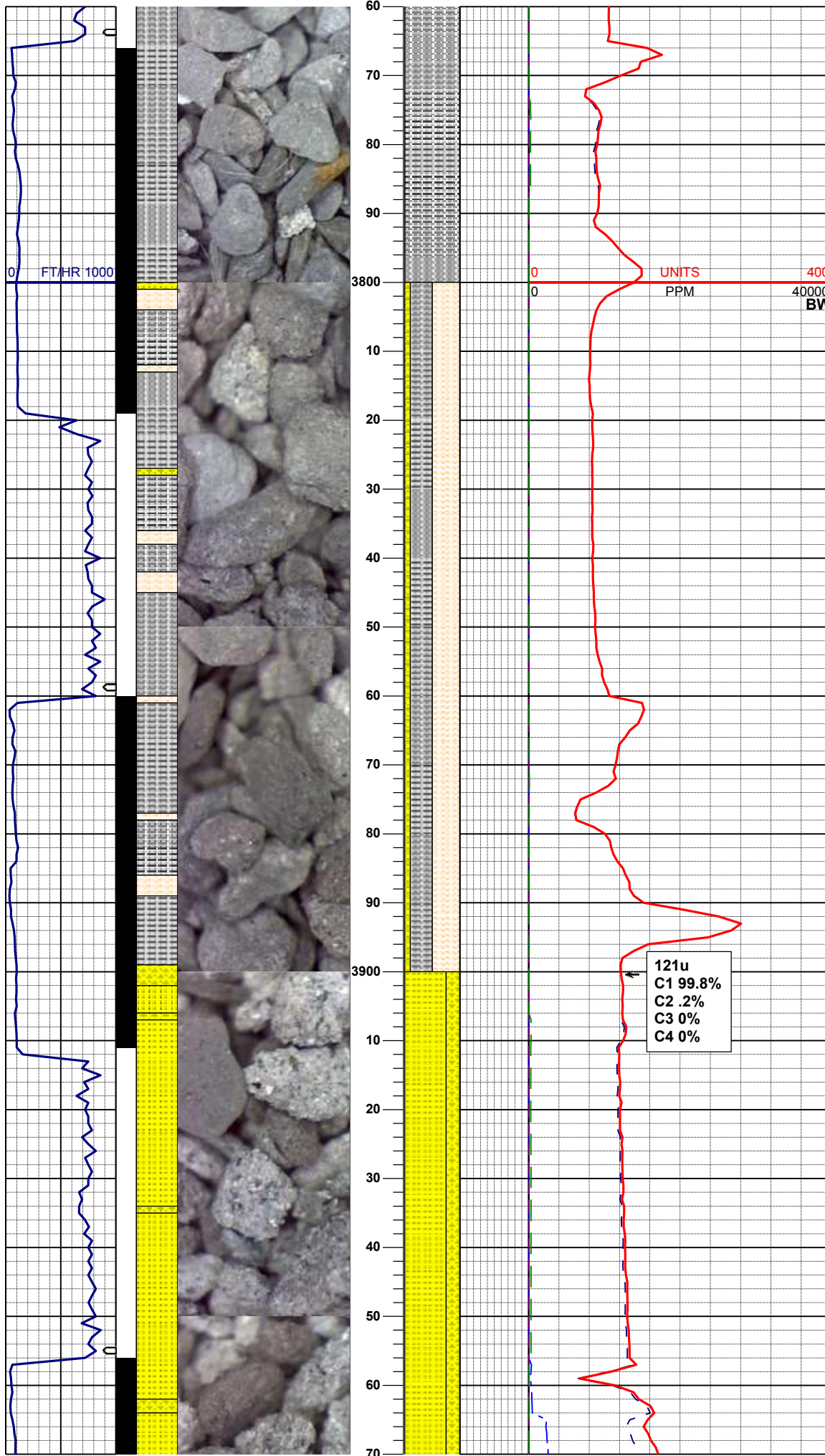
85% SHLY SLTST: lt - m gy occ dk gy, sft - fri, sbbkly, arg-slty, occ lit frag
10% SHYSS: clr-fros wh., s&p, vf- f gr, sbang - sbrnnd, mod - w srt, fri - brit
5% SLTY SH: lt - m gy sme dkgy - gy brn, sbply - sbbkly, sl hom, arg, sft - firm, rthy-gt mtz, slty, scat ss

MUD WT 8.9 VIS 28

MD 3622'
INC 17.3
AZM 172.0
TVD 3517.00

60% SLTY SH: lt - m gy sme dkgy - gy brn, sbply - sbbkly, sl hom, arg, sft - firm, rthy-gt mtz, slty
40% SHLY SLTST: lt - m gy occ dk gy, sft - fri, sbbkly, arg-slty, occ lit frag

MD 3717'
INC 16.7
AZM 169.7
TVD 3607.85



100% SLTY SH: lt - m gy sme dkg -
gy brn, sbply - sbbly, sl hom, arg, sft
- firm, rthy-gt mtx, slty, scat ss

MD 3812'
INC 17.8
AZM 168.2
TVD 3698.58

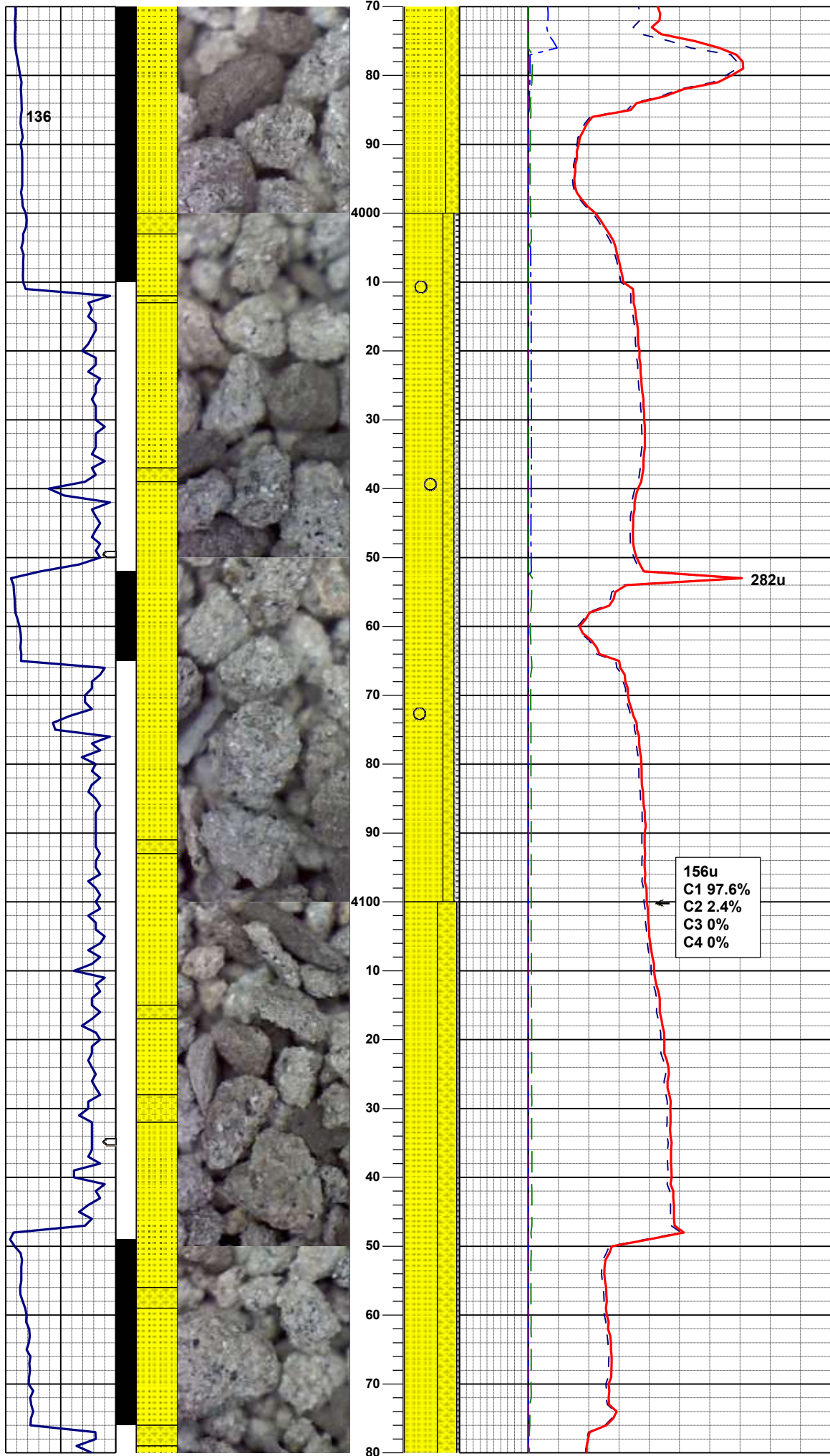
50% SHLY SLTST: lt - m gy occ dk
gy, sft - fri, sbbly, arg-slty, occ wh lith
frag
40% SLTY SH: lt - m gy sme dkg -
gy brn, sbply - sbbly, sl hom, arg, sft
- firm, rthy-gt mtx, slty
10% SHALY SS: lt gy - wh, tr s&p, f
gr, mdd - sbrndd, slty

MUD WT 8.9 VIS 29

121u
C1 99.8%
C2 .2%
C3 0%
C4 0%

MD 3908'
INC 18.4
AZM 168.0
TVD 3789.83

75% SS:clr - trnsd wh, brit- m sft, m gr,
sbang - sbrndd, mod por, sl calc, tr
glau
25% SHALY SS: lt gy - wh, tr s&p, f
gr, mdd - sbrndd, slty



MD 4003'
INC 21.5
AZM 172.2
TVD 3879.12

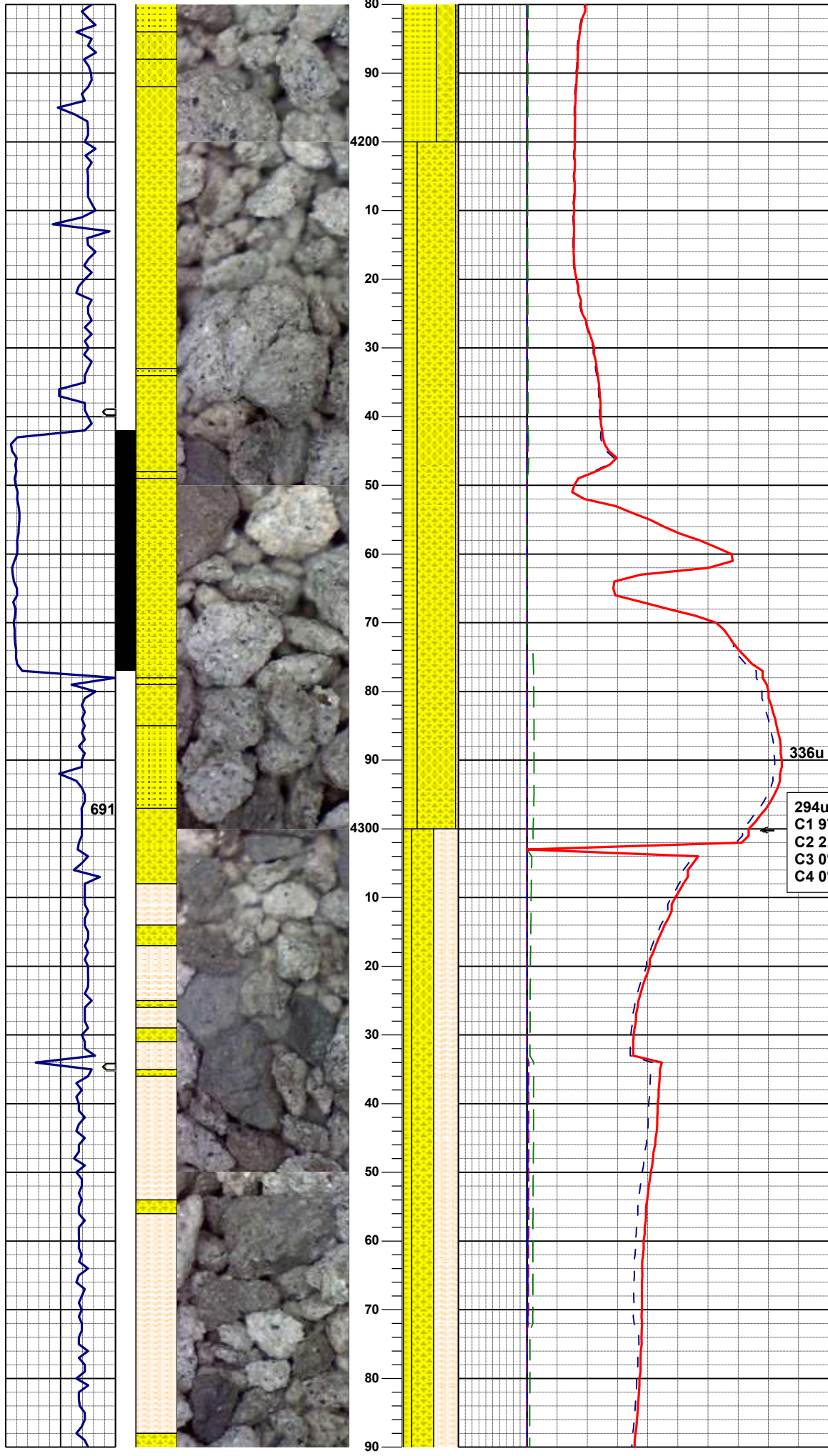
MUD WT 8.9 VIS 28

70% SS:clr - trns l wh, brit- m sft, m gr,
sbang - sbrn d d, mod por, sl calc, tr
glau, tr o stn ss, tr dk yel o flor
20% SHALY SS: lt gy - wh, tr s&p, f
gr, rndd - sbrn d d, slty
10% SLTY SH: lt - m gy sme dkgy -
gy brn, sbply - sbblky, sl hom, arg, sft
- firm, rthy-gt mt x, slty

MD 4098'
INC 22.6
AZM 178.2
TVD 3967.18'

MUD WT 8.8 VIS 28

60% SS:clr - trns l wh, brit- m sft, m gr,
sbang - sbrn d d, mod por, sl calc, tr
glau, tr o stn ss, tr dk yel o flor
35% SHALY SS: lt gy - wh, tr s&p, f
gr, rndd - sbrn d d, slty
5% SLTY SH: lt - m gy sme dkgy - gy
brn, sbply - sbblky, sl hom, arg, sft
- firm, rthy-gt mt x, slty



MD 4193'
INC 21.3
AZM 176.9
TVD 4055.30'

70% SHALY SS: lt gy - wh, tr s&p, f
gr, rndd - sbrnnd, slty
25% SS: lt gy, wh, clr - trns, hd- brit, f
-m gr, sbang - sbrnnd, mod por, sl
calc, tr glau
5% SHLY SLTST: lt - m gy, sft - fri,
sbbkly, arg-slty

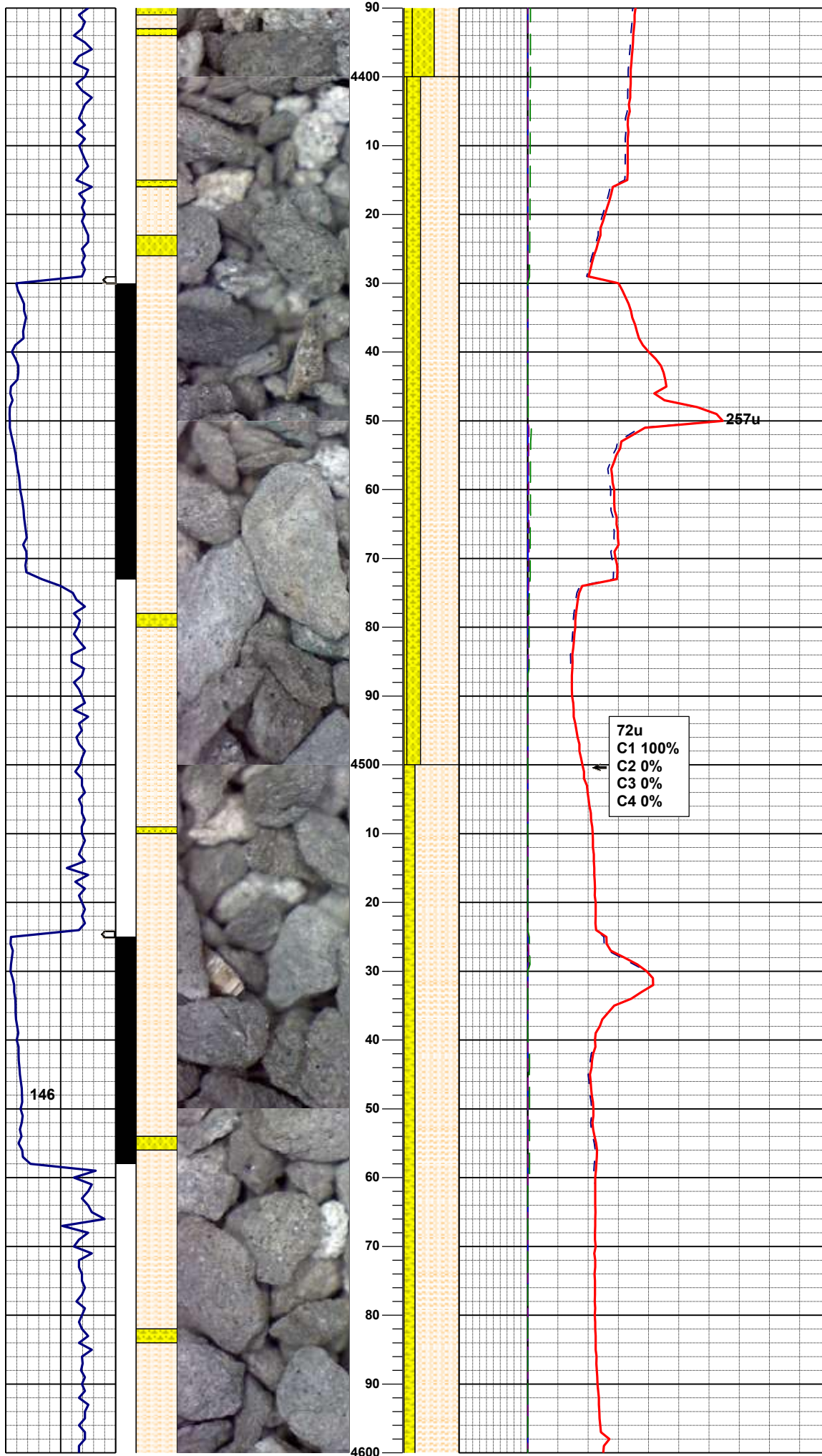
MD 4288'
INC 19.8
AZM 175.5
TVD 4144.25'

336u
294u
C1 97.2%
C2 2.8%
C3 0%
C4 0%

45% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbbkly, arg-slty
40% SHALY SS: lt gy - wh, tr s&p, f
gr, rndd - sbrnnd, slty
15% SS: lt gy, wh, clr - trns, hd- brit, f
-m gr, sbang - sbrnnd, mod por, sl
calc, tr glau

MD 4383'
INC 18.4
AZM 176.8
TVD 4234.02'

MUD WT 8.9 VIS 29

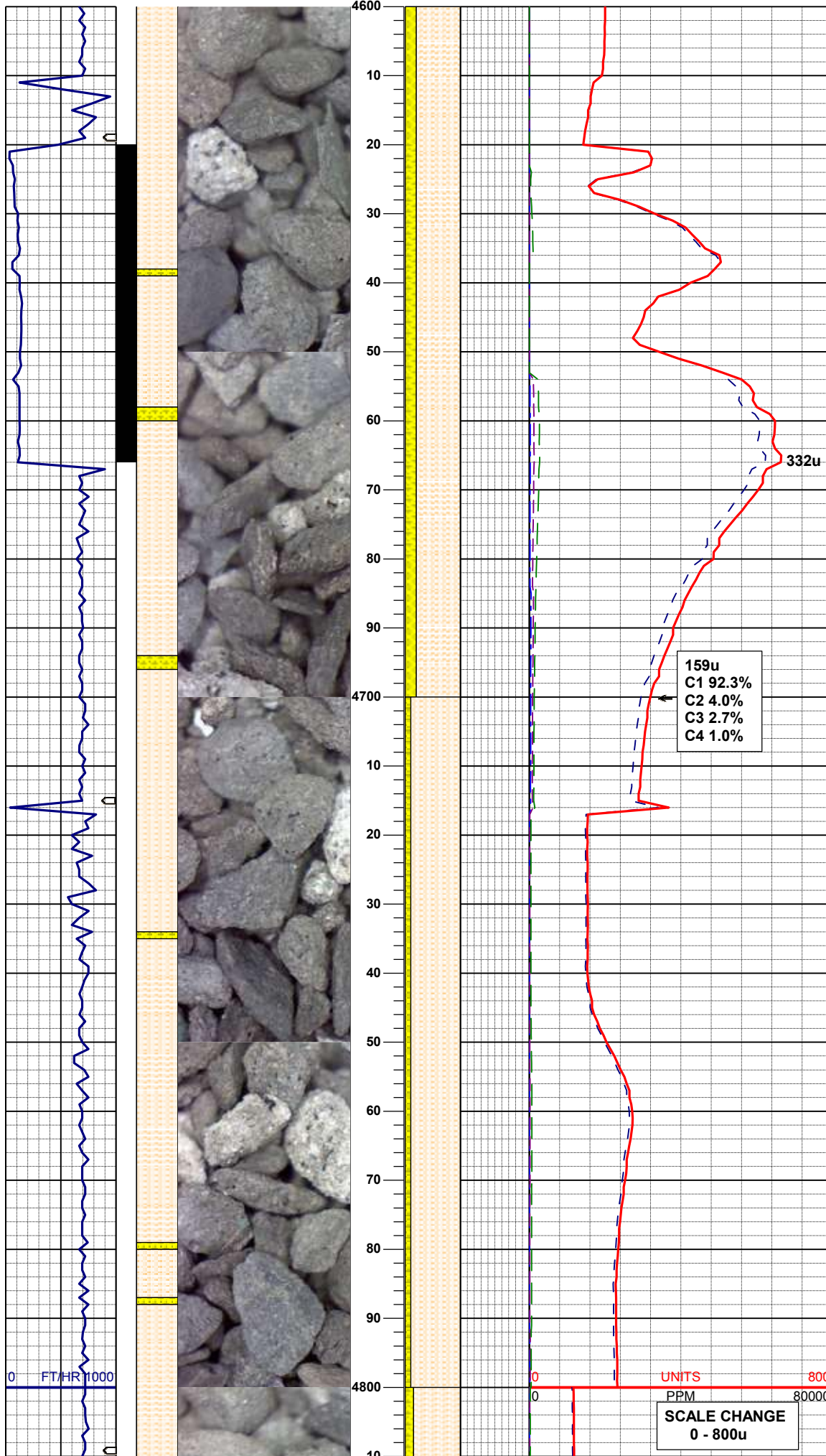


70% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbblky, arg-slty
25% SHALY SS: lt gy - wh, tr s&p, f
gr, rndd - sbrndd, slty
5% SS: lt gy, wh, clr - trnsi, hd- brit, f-
m gr, sbang - sbrndd, mod por, sl
calc, tr glau

MD 4478'
INC 18.7
AZM 174.1
TVD 4324.08'

80% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbblky, arg-slty
20% SHALY SS: lt gy - wh, tr s&p, f
gr, rndd - sbrndd, slty ; occ ss bdd ss

MD 4573'
INC 18.3
AZM 172.6
TVD 4414.17'

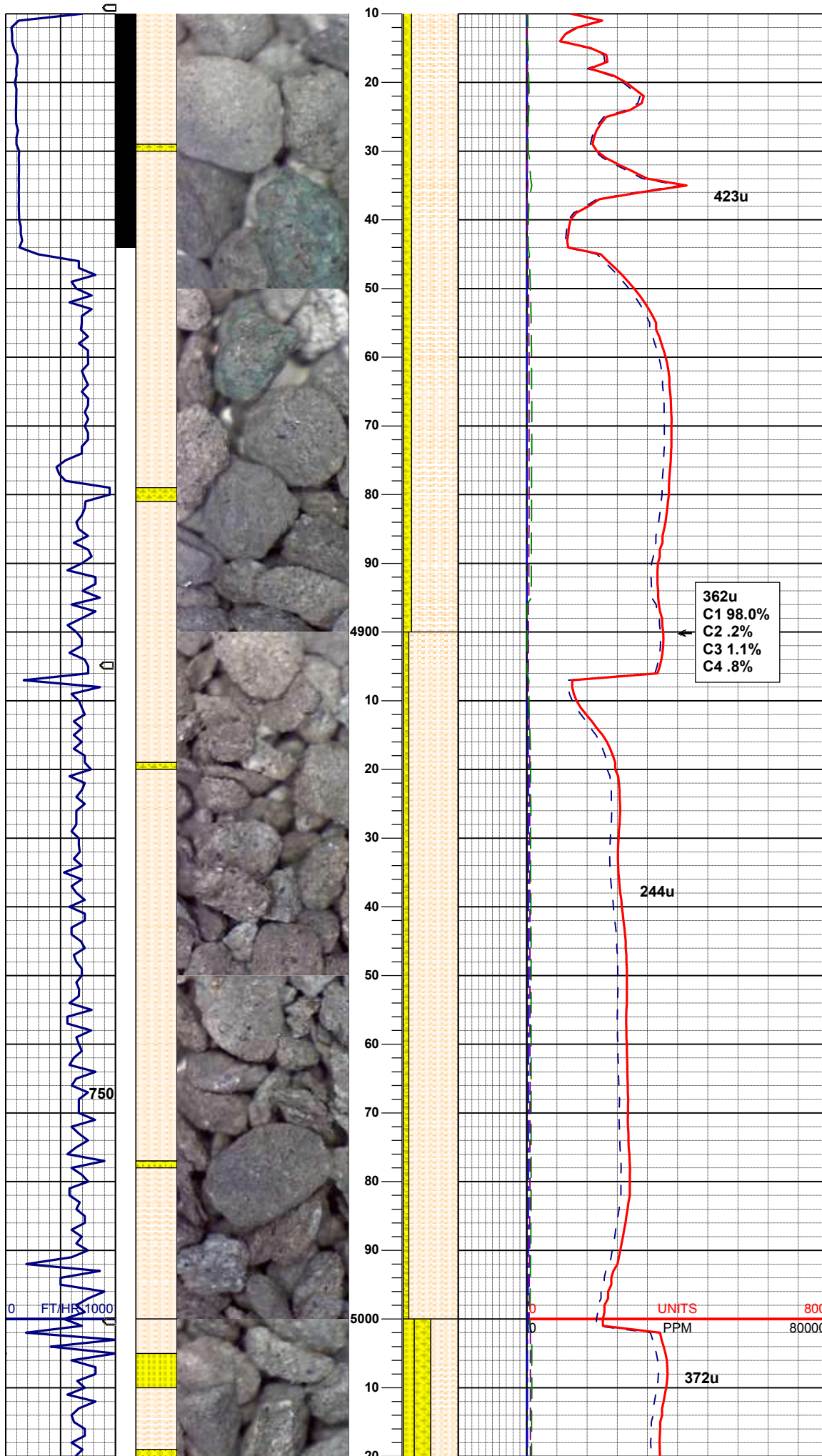


80% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbbly, arg-sly
20% SHALY SS: lt gy - wh, tr s&p, f
gr, rndd - sbrndd, slty ; occ ss bdd ss

MD 4668'
INC 19.2
AZM 172.9
TVD 4504.13'

MD 4763'
INC 15.1
AZM 172.2
TVD 4594.89'

90% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbbly, arg-sly
10% SHALY SS: lt gy - wh, tr s&p, f
gr, rndd - sbrndd, slty ; occ ss bdd ss,
tr calcite



MD 4858'
INC 15.3
AZM 173.1
TVD 4686.56'

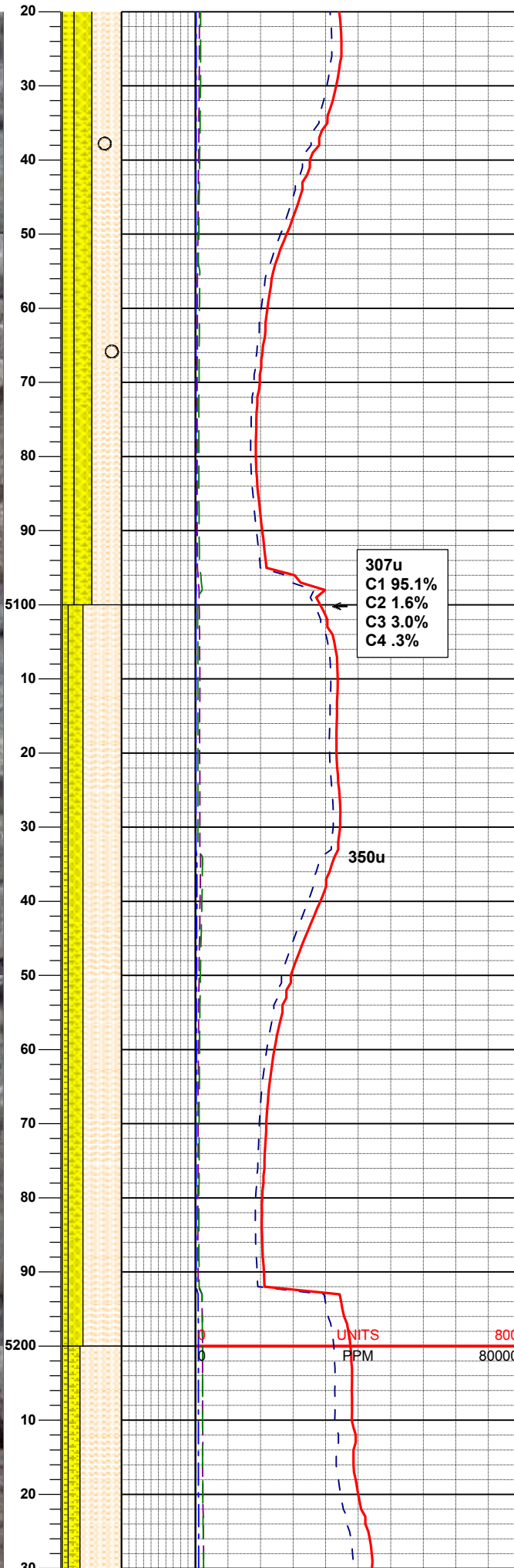
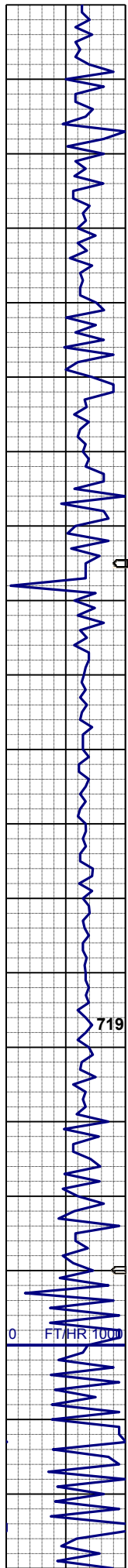
85% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbblky, arg-slty
15% SHALY SS: lt gy - wh, tr s&p, f
gr, mdd - sbrnnd, slty ; tr ss bdd ss

362u
C1 98.0%
C2 .2%
C3 1.1%
C4 .8%

90% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbblky, arg-slty
10% SHALY SS: lt gy - wh, tr s&p, f
gr, mdd - sbrnnd, slty , mod por

MD 4953'
INC 13.9
AZM 175.7
TVD 4778.5'

UNITS
PPM



50% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbblky, arg v slty; grdg -
shaly ss
30% SHALY SS: m - lg gy, f gr, sb
rddd - sb ang, slty
20% SS: wh, clr - trns l occ lt gy, hd-
brit, f-m gr, sbang - sbrddd, mod por,
sl calc, tr glau, tr o stn

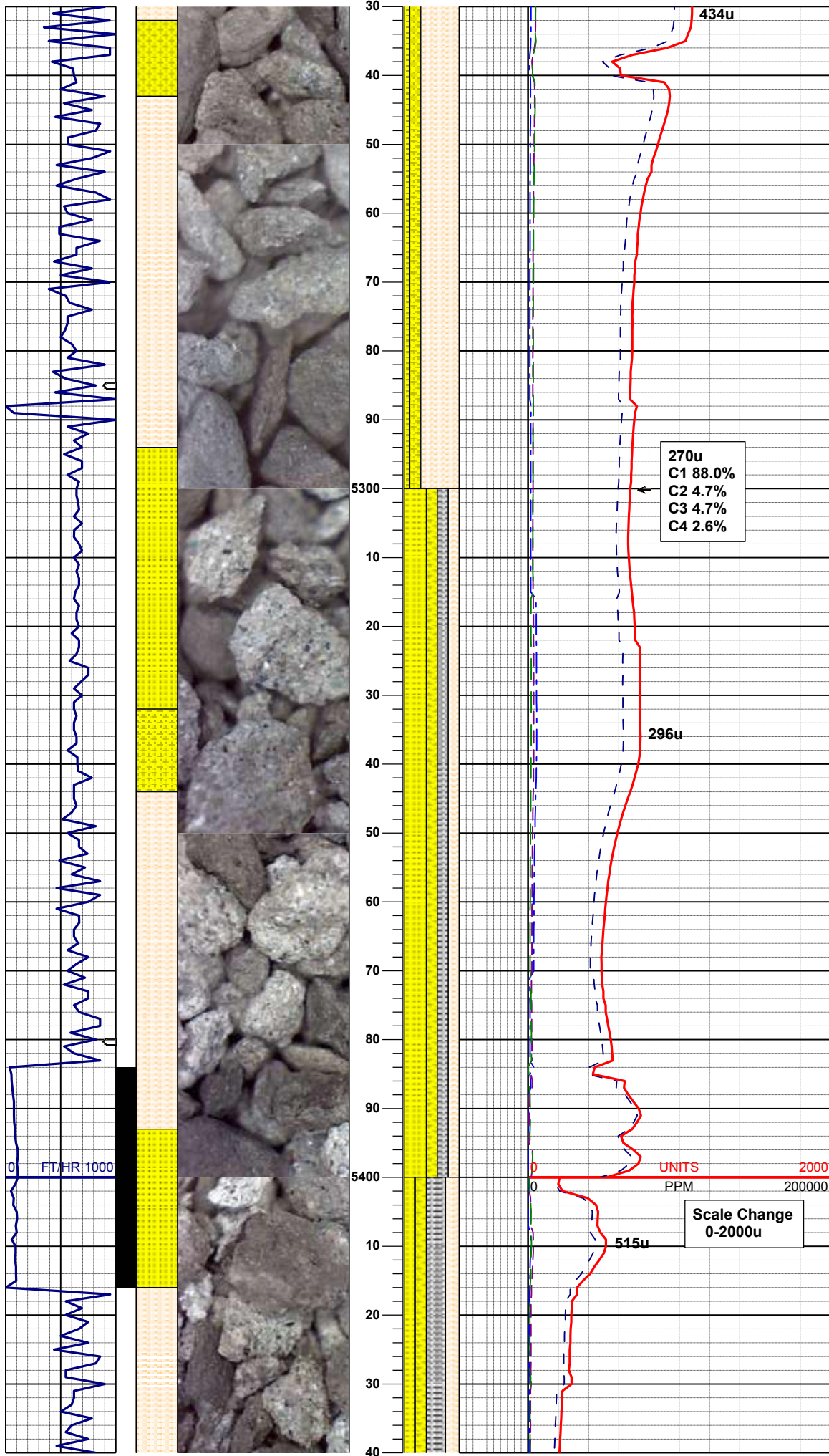
MD 5048'
INC 12.3
AZM 180.3
TVD 4871.02'

MUD WT 8.9 VIS 28

MD 5143'
INC 10.3
AZM 176.9
TVD 4964.18'

65% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbblky, arg v slty; grdg -
shaly ss, tr glau
25% SHALY SS: m - lg gy, f gr, sb
rddd - sb ang, slty
15% SS: wh, clr - trns l occ lt gy, hd-
brit, f-m gr, sbang - sbrddd, mod por,
sl calc, tr glau

MD 5238'



INC 8.2
AZM 167.6
TVD 5057.94'

70% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbblky, arg v slty; grdg -
shaly ss, tr glau
20% SHALY SS: m - lg gy, f gr, sb
rndd - sb ang, slty
10% SS: wh, clr - trns occ lt gy, hd-
brit, f-m gr, sbang - sbrnnd, mod por,
sl calc, tr glau

270u
C1 88.0%
C2 4.7%
C3 4.7%
C4 2.6%

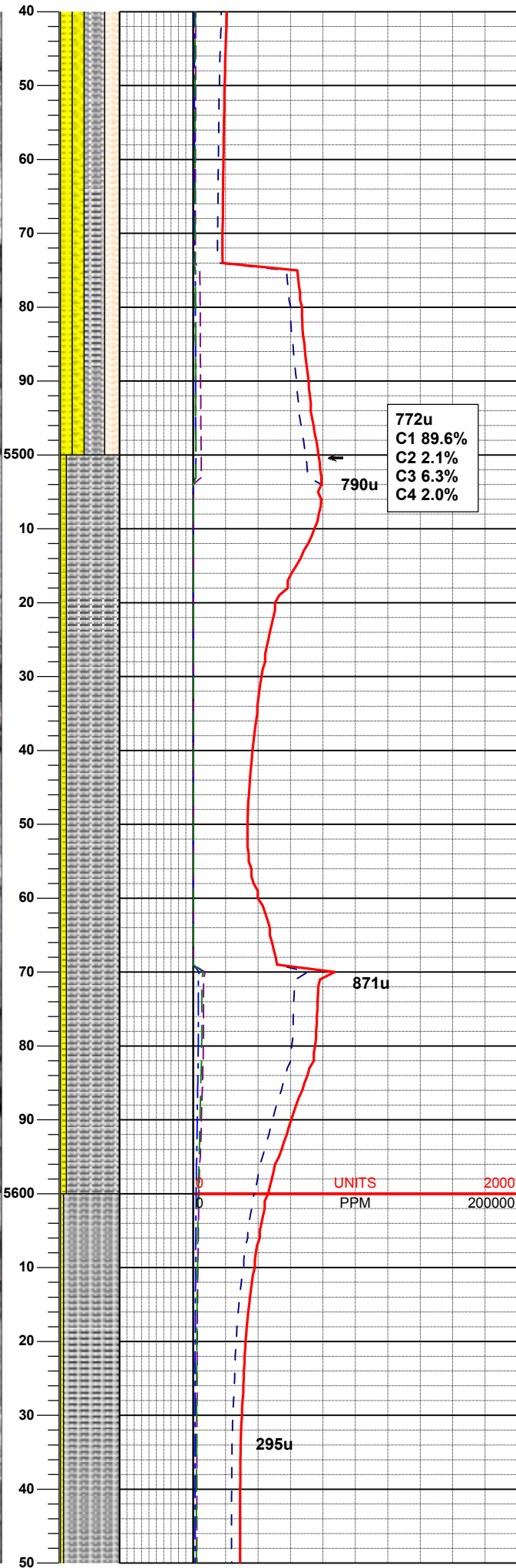
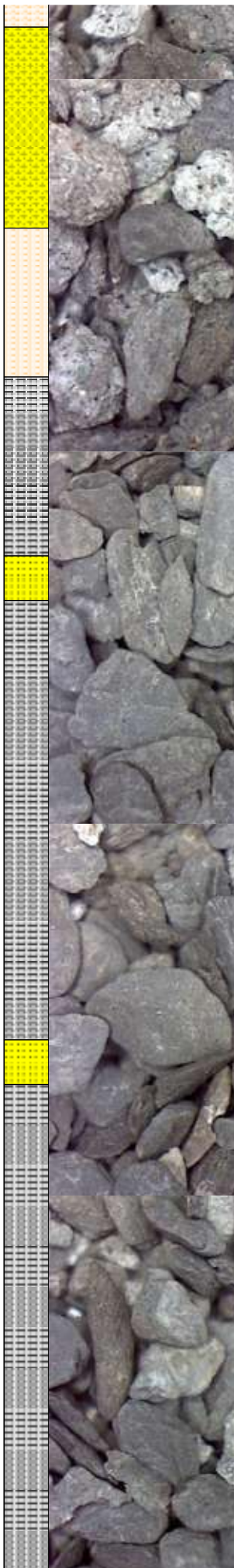
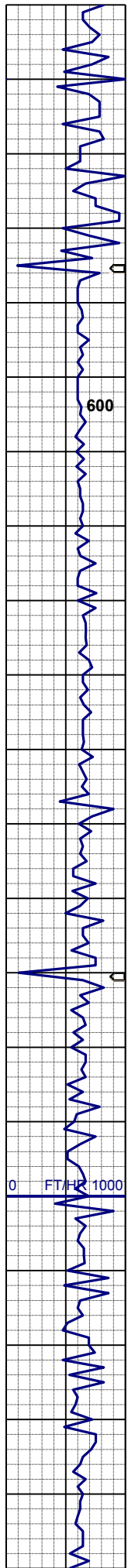
MD 5334'
INC 5.5
AZM 167.4
TVD 5153.25'

40% SS: wh, clr - trns occ lt gy, hd-
brit, f-m gr, sbang - sbrnnd, mod por,
sl calc, tr glau
20% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbblky, arg v slty; grdg -
shaly ss, tr glau
20% SHALY SS: m - lg gy, f gr, sb
rndd - sb ang, slty
20% SLTY SH: lt - m gy sme dkgy -
gy brn, sbply - sbblky occ plyt, sl
hom, arg, sft - firm, rthy-gt mtx, slty

UNITS
PPM
Scale Change
0-2000u

MD 5429'
INC 6.7
AZM 167.8
TVD 5247.71'

35% SLTY SH: lt - m gy sme dkgy -
gy brn, sbply - sbblky occ plyt, sl
hom, arg, sft - firm, rthy-gt mtx, slty



25% SHLY SLTST: m gy occ lt - dk gy
sl sft - firm, sbbkly, arg v slty; grdg -
shaly ss, tr glau
20% SS: wh, clr - trnsI occ lt gy, hd-
brit, f-m gr, sbang - sbrndd, mod por,
sl calc, tr glau
20% SHALY SS: m - lg gy, f gr, sb
rndd - sb ang, slty

772u
C1 89.6%
C2 2.1%
C3 6.3%
C4 2.0%

790u

MD 5524'
INC 4.6
AZM 165.7
TVD 5342.24'

90% SLTY SH: lt - m gy sme dkgy -
gy brn, sbply - sbbkly occ plyt, sl
hom, arg, sft - firm, rthy-gt mtX, slty;
occ gy sh, tr pyr
10% SS: wh, clr - trnsI occ lt gy, hd-
brit, f-m gr, sbang - sbrndd, mod por,
sl calc, tr glau

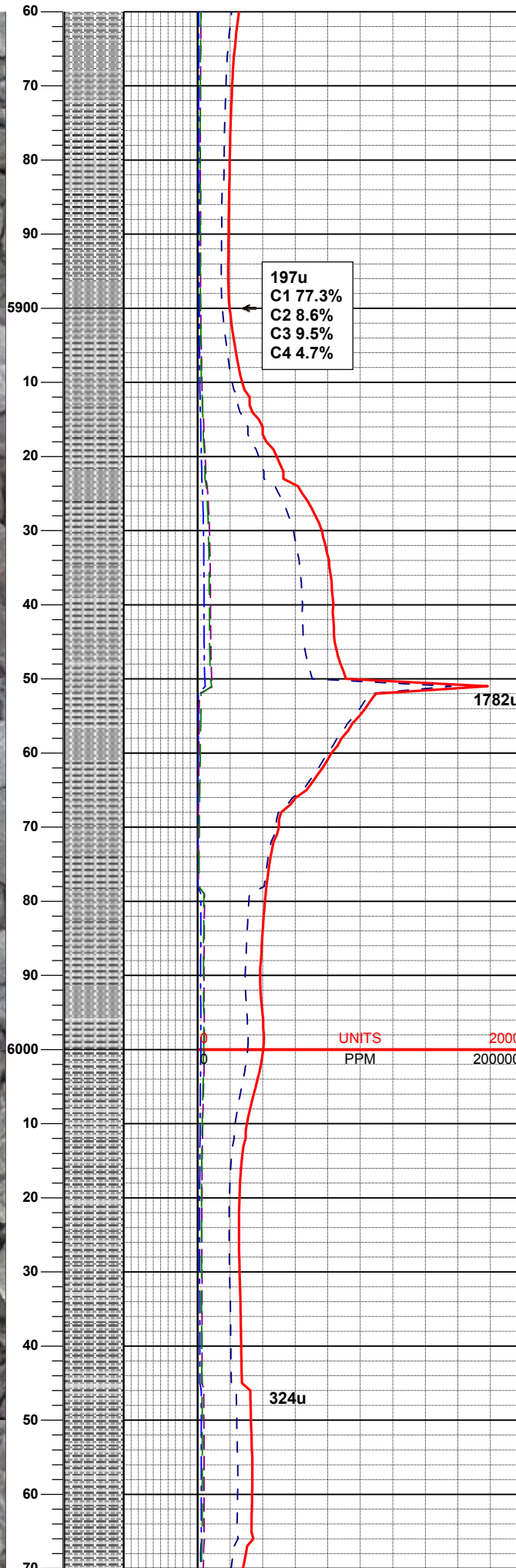
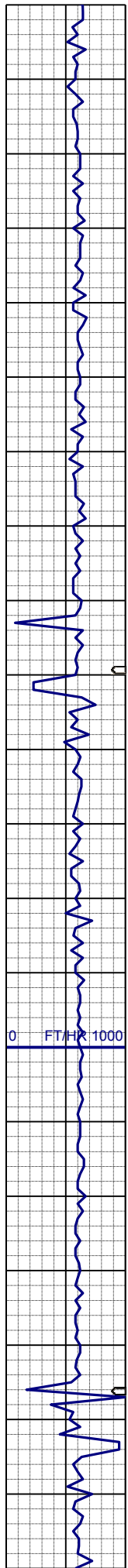
871u

UNITS
PPM
2000
200000

MD 5619'
INC 3.2
AZM 165.7
TVD 5437.02'

295u

95% SLTY SH: lt - m gy sme dkgy -
gy brn, sbply - sbbkly occ plyt, sl
hom, arg, sft - firm, rthy-gt mtX, slty;
occ gy sh, tr pyr
5% SS: wh, clr - trnsI occ lt gy, hd-
brit, f-m gr, sbang - sbrndd, mod por

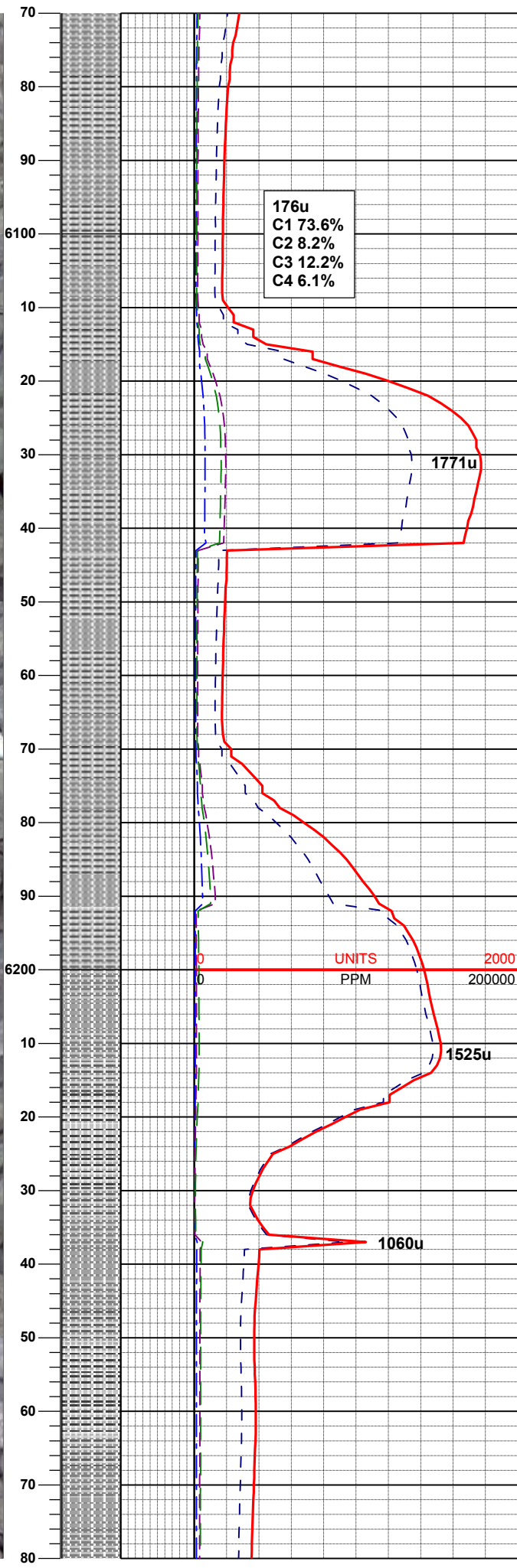
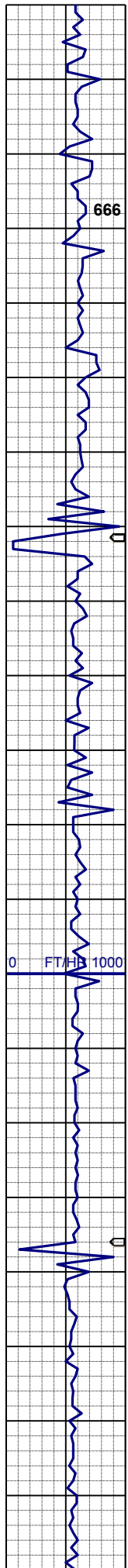


MD 5903'
INC 1.8
AZM 160.9
TVD 5720.72'

100% SLTY SH: m-lt gy occ dkgy - gy
brn, sbply - sbblky occ pty, sl hom,
arg, sl hd - firm, rthy-gt mtx, slty

MD 5999'
INC 0.6
AZM 1121.1
TVD 5816.7'

100% SLTY SH: m-lt gy occ dkgy - gy
brn, sbply - sbblky occ pty, sl hom,
arg, sl hd - firm, rthy-gt mtx, slty



MD 6094'
INC 0.8
AZM 66.4
TVD 5911.7'

MUD WT 9.0 VIS 30

100% SLTY SH: m-lt gy occ dkgy - gy
brn, sbply - sbblky occ pty, sl hom,
arg, sft - firm, rthy-gt mtx, slty, scat ss

MD 6189'
INC 0.7
AZM 36.7
TVD 6006.69'

100% SLTY SH: m-lt gy occ dkgy - gy
brn, sbply - sbblky occ pty, sl hom,
arg, sft - firm, rthy-gt mtx, slty, scat ss

MD 6284'

