



Scale: 5" / 100'
Measured Depth Log

Well Name Wahlert AC23-68-1HN

Location NENE S23 T7N R63W

State COLORADO

County WELD

Country USA

Rig Number ENSIGN #121

API Number 05-123-37161

Region DJ BASIN

Field WATTENBERG

Spud Date 8/31/2013

Surface Coordinates 392' FNL, 280' FEL

Bottom Hole Coordinates 990' FNL, 535' FWL

Ground Elevation 4787'

K.B. Elevation 4800'

Logged Interval 1000'

Formation NIOBRARA A CHALK

Type of Drilling Fluid H2O, LSND

Operator

Company Noble Energy Inc

Geologist

Name RYAN SULLIVAN

Company COLUMBINE LOGGING INC.

Rock Types

? UNKNOWN

ANHYDRITE

GYPSUM

SALT

SIDERITE or LIMONITE

LIMESTONE

DOLOMITE

CHERT

COAL

MARLSTONE

CLAYSTONE

SHALE

SHALE GRAY

SHALE COLORED

SILTSTONE

SANDSTONE

CONGLOMERATE

BRECCIA

TILL

BENTONITE

TUFF

IGNEOUS

METAMORPHIC

Silty Shale

Accessories

Fossils

ALGAE
 AMPHIPORA
 BELEMNITE
 BIOCLASTIC
 BRACHIOPOD
 BRYOZOA
 CEPHALOPOD
 CORAL
 CRINOID
 ECHINOID
 FISH
 FORAMINIFERA

F FOSSIL

GASTROPOD
 OOLITE
 OSTRACOD
 PELECYPOD
 PELLET
 PISOLITE
 PLANT REMAINS
 PLANT SPORES
 SCAPHOPOD
 STROMATOPOROID

Minerals

ANHYDRITIC

— ARGILLACEOUS

ARGILLITE GRAIN
 BENTONITE
 BITUMENOUS SUBSTANCE
 BRECCIA FRAGMENTS
 CALCAREOUS
 CARBONACEOUS FLAKES
 CHTDK
 CHTLT
 COAL - THIN BEDS
 DOLOMITIC
 FELDSPAR
 FERRUGINOUS PELLET
 FERRUGINOUS

✓ GLAUCONITE

GYPSIFEROUS
 HEAVY MINERAL
 KAOLIN
 MARLSTONE
 MINERAL CRYSTALS
 NODULES
 PHOSPHATE PELLETS
 PYRITE
 SALT CAST
 SANDY
 SILICEOUS
 SILTY
 TUFFACEOUS

Stringer

ANHYDRITE STRINGER
 BENTONITE STRINGER
 COAL STRINGER
 DOLOMITE STRINGER
 GYPSUM STRINGER
 LIMESTONE STRINGER
 MARLSTONE (CALC) STRG
 MARLSTONE (DOL) STRG
 SANDSTONE STRINGER
 SHALE STRINGER
 SILTSTONE STRINGER

Other Symbols

Oil Show

DEAD
 EVEN
 QUESTIONABLE
 SPOTTED STAINING

Porosity

E EARTHY
 F FENESTRAL
 F FRACTURE
 X INTERCRYSTALLINE
 Ø INTEROOLITIC

MOLDIC

O ORGANIC
 P PINPOINT
 V VUGGY

Engineering

BIT
 CONNECTION (LEFT)
 CONNECTION (RIGHT)
 CONNECTION GAS
 CORE - LOST
 CORE - RECOVERED
 DST INTERVAL

FAULT

FORMATION TOP
 GAS SHOW
 MN DEPTH
 NORMAL FAULT
 OIL SHOW
 OVERTURNED STRATA
 REVERSE FAULT
 SIDEWALL CORE (LEFT)
 SIDEWALL CORE (RIGHT)
 SLIDE
 SURVEY
 TRIP GAS

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

Rounding

A ANGULAR
 R ROUNDED
 B SUBANG
 r SUBRND

Textures

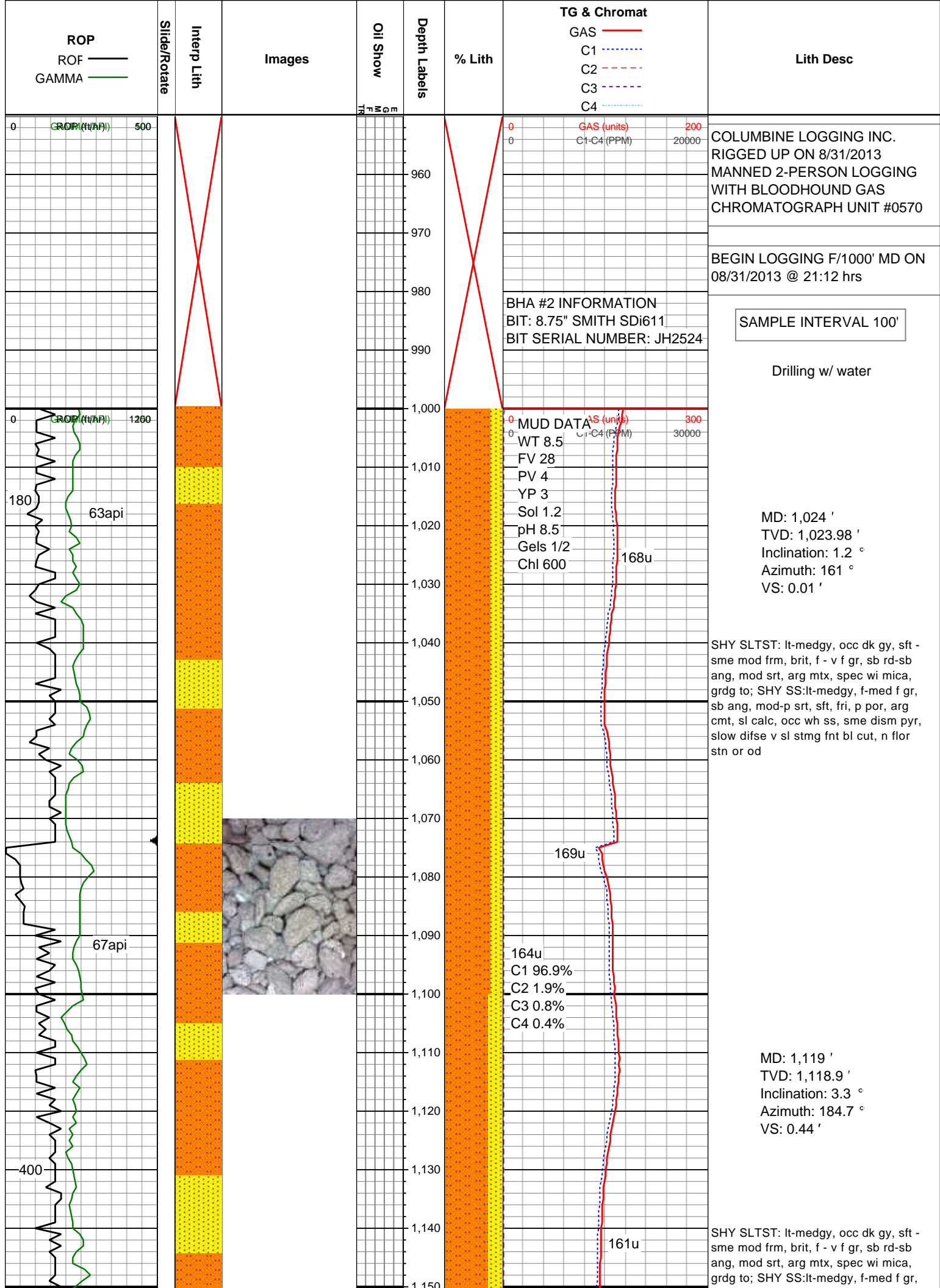
BS BOUNDSTONE
 C CHALKY
 CX CRYPTOXLN

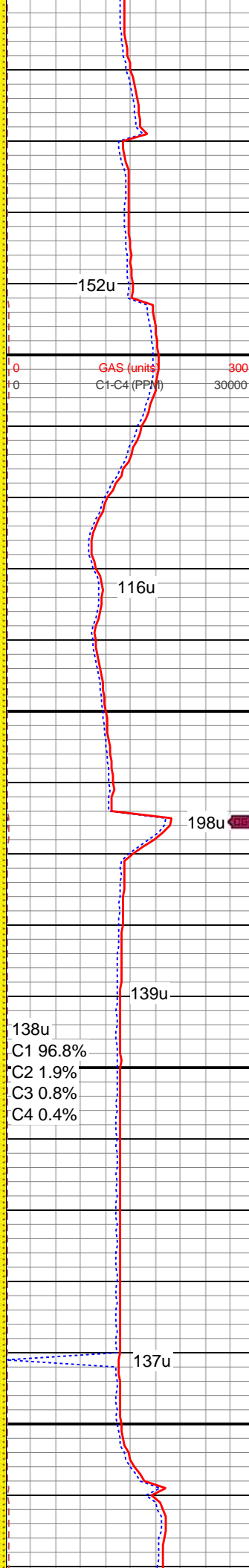
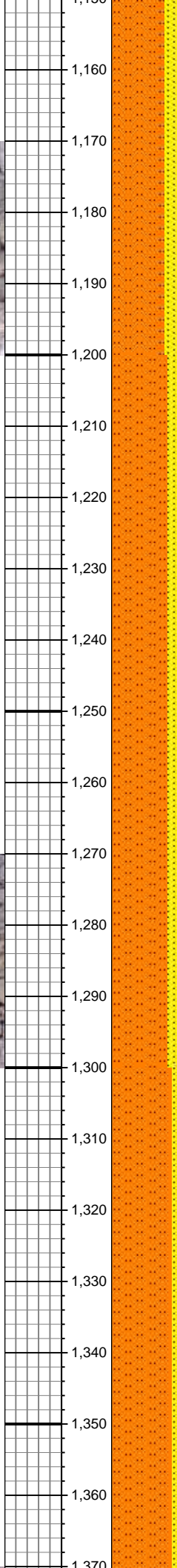
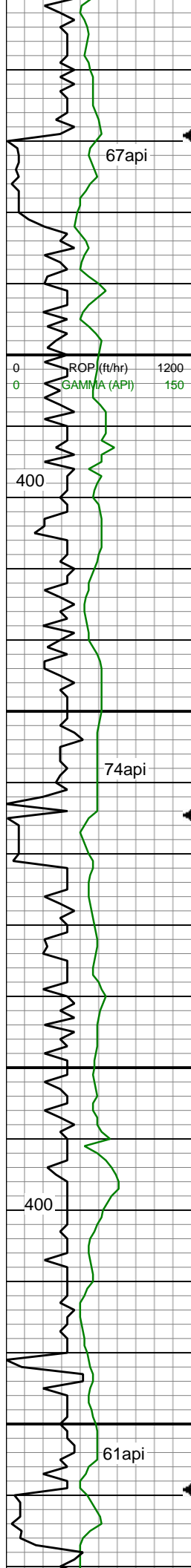
E EARTHY

FX FINELYXLN
 GS GRAINSTONE
 L LITHOGRAPHIC
 MX MICROXLN
 MS MUDSTONE
 PS PACKSTONE
 WS WACKESTONE

Sorting

M MODERATE
 P POOR
 W WELL





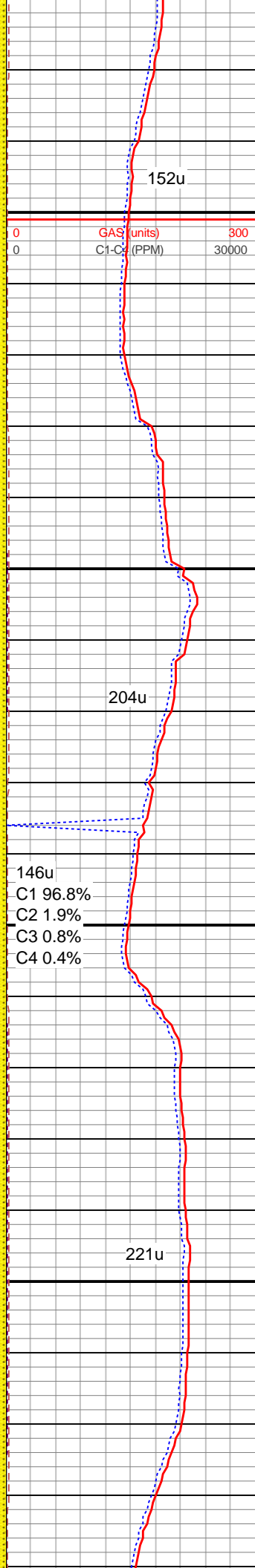
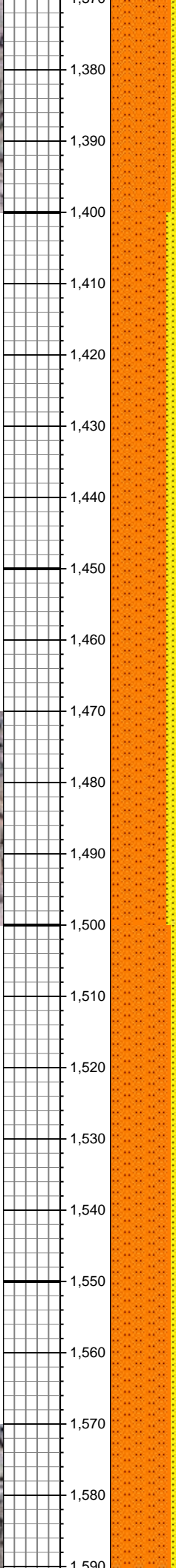
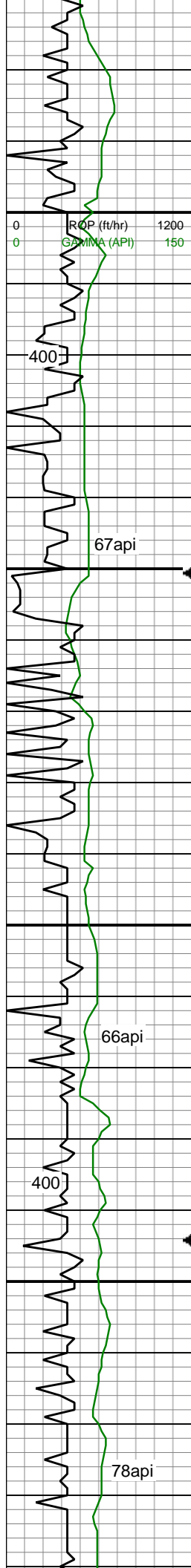
sb ang, mod-p srt, sft, fri, p por, arg
cmt, sl calc, occ wh ss, sme dism pyr,
slow difse v sl stmg fnt bl cut, n flor
stn or od

MD: 1,214 '
TVD: 1,213.67 '
Inclination: 4.7 °
Azimuth: 174.1 °
VS: 1.22 '

SHY SLTST: lt-medgy, occ dk gy, sft -
sme mod frm, brit, f - v f gr, sb rd-sb
ang, mod srt, arg mtz, spec wi mica,
grdg to; SHY SS:lt-medgy, f-med f gr,
sb ang, mod-p srt, sft, fri, p por, arg
cmt, sl calc, occ wh ss, sme dism pyr,
slow difse v sl stmg fnt bl cut, n flor
stn or od

MD: 1,308 '
TVD: 1,307.23 '
Inclination: 6.3 °
Azimuth: 166.8 °
VS: 0.94 '

SHY SLTST: lt-medgy, occ dk gy, sft -
sme mod frm, brit, f - v f gr, sb rd-sb
ang, mod srt, arg mtz, spec wi mica,
grdg to; SHY SS:lt-medgy, f-med f gr,
sb ang, mod-p srt, sft, fri, p por, arg
cmt, sl calc, occ wh ss, sme dism pyr,
slow difse v sl stmg fnt bl cut, n flor
stn or od



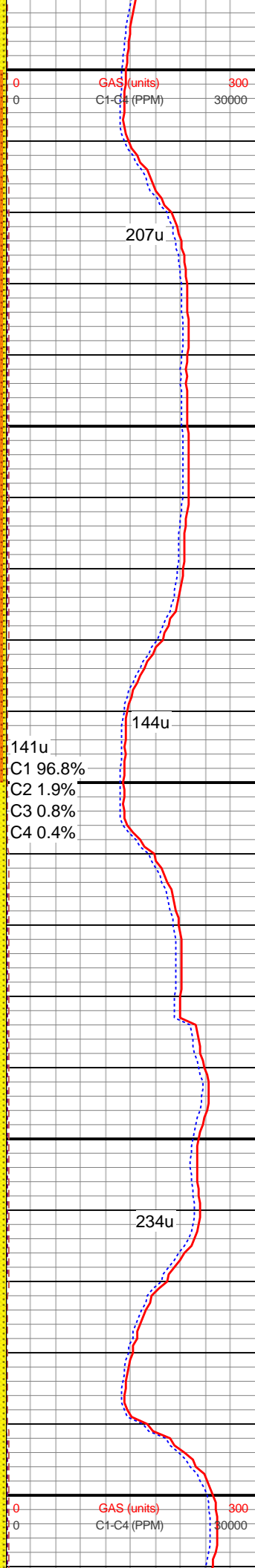
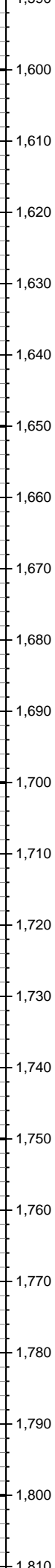
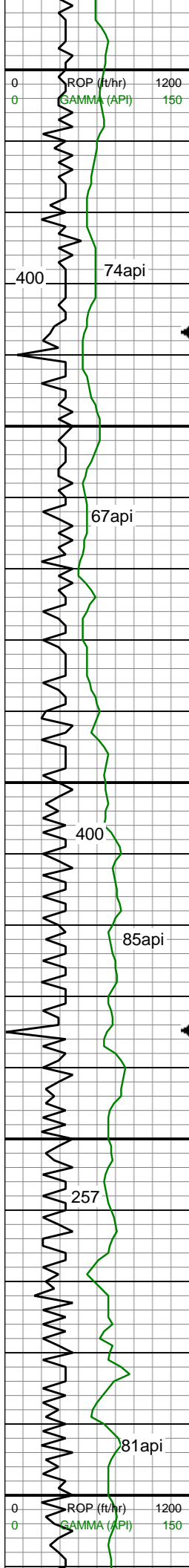
MD: 1,400 '
TVD: 1,398.51 '
Inclination: 8.1 °
Azimuth: 169.4 °
VS: 0.25 '

SHY SLTST: lt-medgy, occ dk gy, sft - sme mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, grdg to; SHY SS:lt-medgy, f-med f gr, sb ang, mod-p srt, sft, fri, p por, arg cmt, sl calc, occ wh ss, sme dism pyr, slow difse v sl stmg fnt bl cut, n flor stn or od

MD: 1,494 '
TVD: 1,491.46 '
Inclination: 9 °
Azimuth: 165.7 °
VS: -0.79 '

SHY SLTST: lt-medgy, occ dk gy, sft - sme mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, grdg to; SHY SS:lt-medgy, f-med f gr, sb ang, mod-p srt, sft, fri, p por, arg cmt, sl calc, occ wh ss, sme dism pyr, slow difse v sl stmg fnt bl cut, n flor stn or od

MD: 1,588 '
TVD: 1,584.38 '
Inclination: 8.4 °
Azimuth: 164.1 °



VS: -2.47'

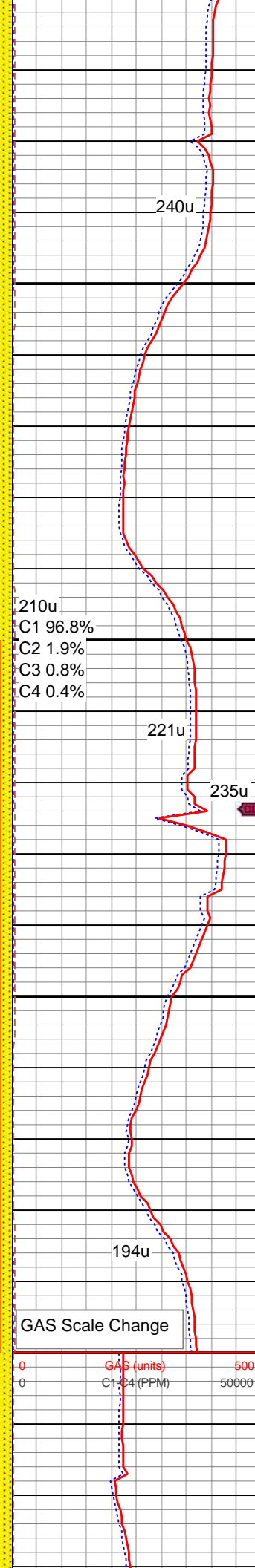
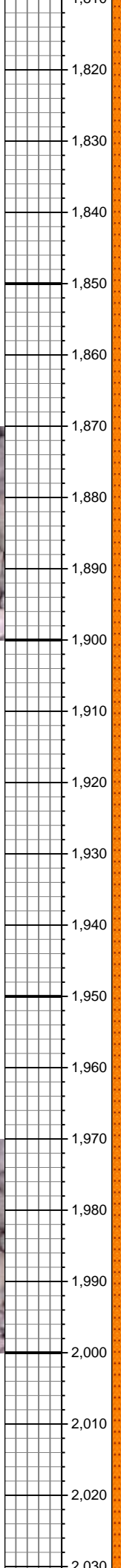
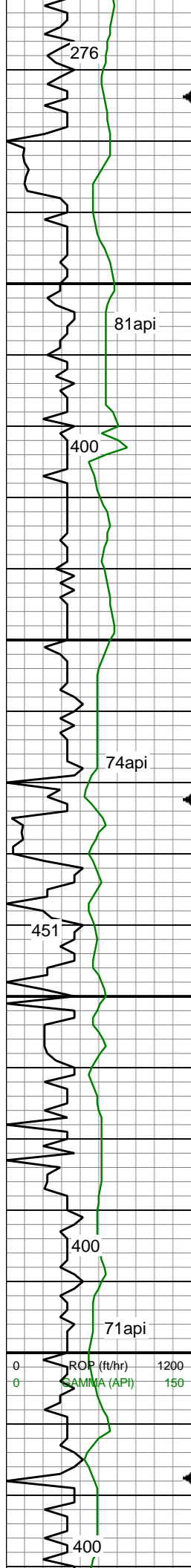
WT IN 8.5/26 OUT
VIS IN 8.5/26 OUT

SHY SLTST: lt-medgy, occ dk gy, sft -
sme mod frm, brit, f - v f gr, sb rd-sb
ang, mod srt, arg mtx, spec wi mica,
grdg to; SHY SS:lt-medgy, f-med f gr,
sb ang, mod-p srt, sft, fri, p por, arg
cmt, sl calc, occ wh ss, sme dism pyr,
slow difse v sl stmg fnt bl cut, n flor
stn or od

MD: 1,683 '
TVD: 1,678.4 '
Inclination: 8.1 °
Azimuth: 160.6 °
VS: -4.67'

SHY SLTST: lt-medgy, occ dk gy, sft -
sme mod frm, brit, f - v f gr, sb rd-sb
ang, mod srt, arg mtx, spec wi mica,
grdg to; SHY SS:lt-medgy, f-med f gr,
sb ang, mod-p srt, sft, fri, p por, arg
cmt, sl calc, occ wh ss, sme dism pyr,
slow difse v sl stmg fnt bl cut, n flor
stn or od

MD: 1,778 '
TVD: 1,772.53 '
Inclination: 7.4 °
Azimuth: 154.1 °
VS: -7.81'



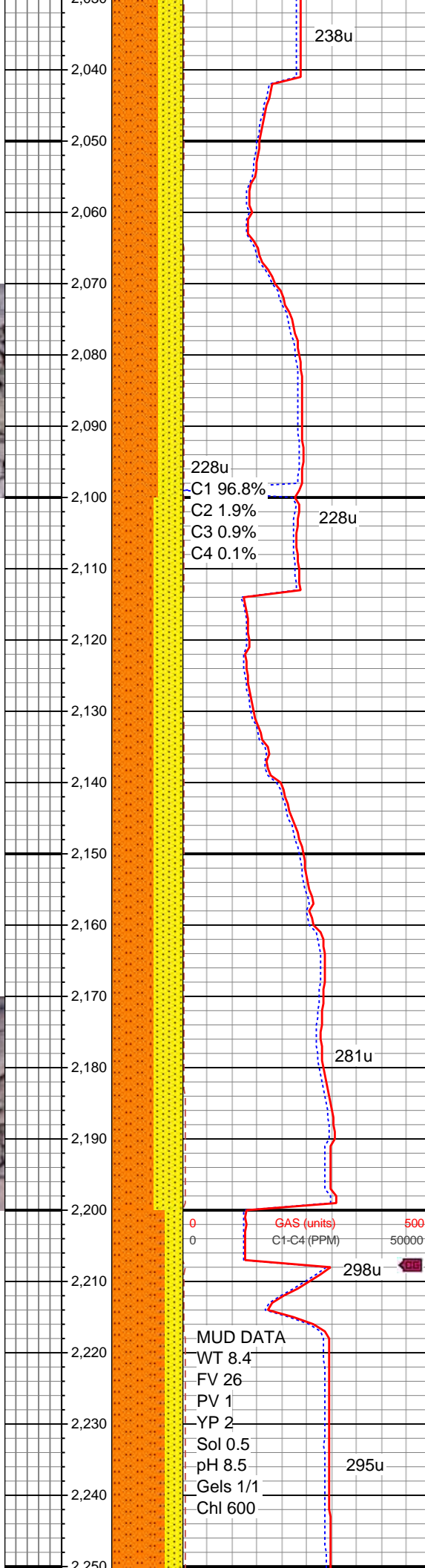
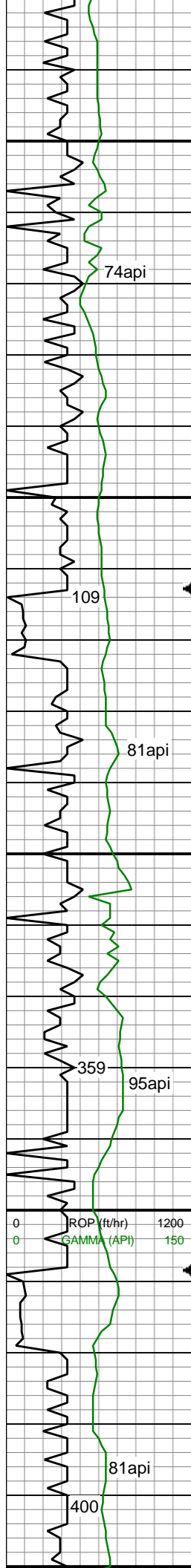
SHY SLTST: lt-medgy, occ dk gy, sft - sme mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, grdg to; SHY SS:lt-medgy, f-med f gr, sb ang, mod-p srt, sft, fri, p por, arg cmt, sl calc, occ wh ss, sme dism pyr, slow difse v sl stmg fnt bl cut, n flor stn or od

MD: 1,872 '
TVD: 1,865.65 '
Inclination: 8.3 °
Azimuth: 157.8 °
VS: -11.27 '

SHY SLTST: lt-medgy, occ dk gy, sft - sme mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, grdg to; SHY SS:lt-medgy, f-med f gr, sb ang, mod-p srt, sft, fri, p por, arg cmt, sl calc, occ wh ss, sme dism pyr, slow difse v sl stmg fnt bl cut, n flor stn or od

MD: 1,967 '
TVD: 1,959.63 '
Inclination: 8.5 °
Azimuth: 156.9 °
VS: -14.71 '

WT IN 8.4/26 OUT
VIS IN 8.5/26 OUT



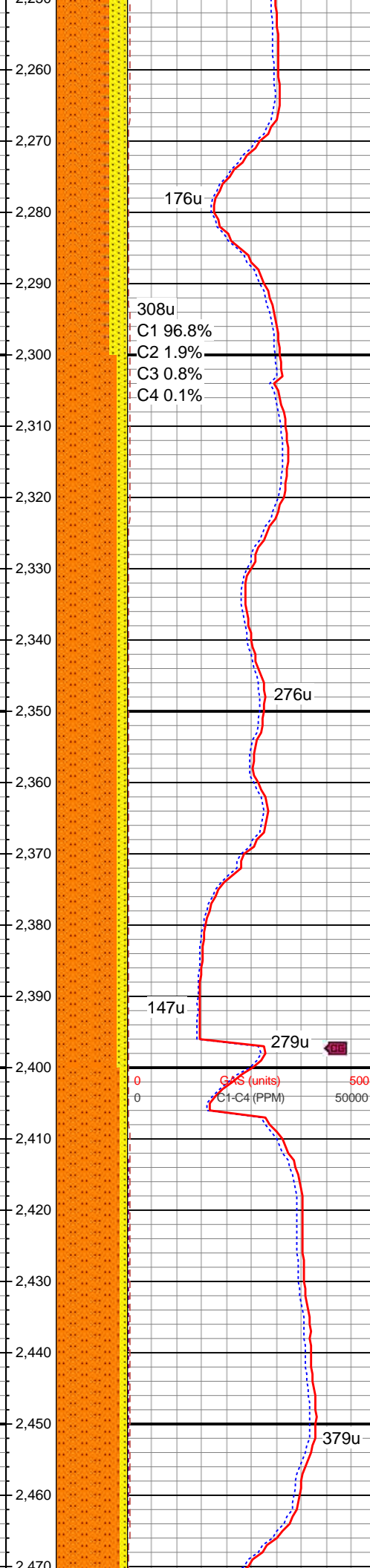
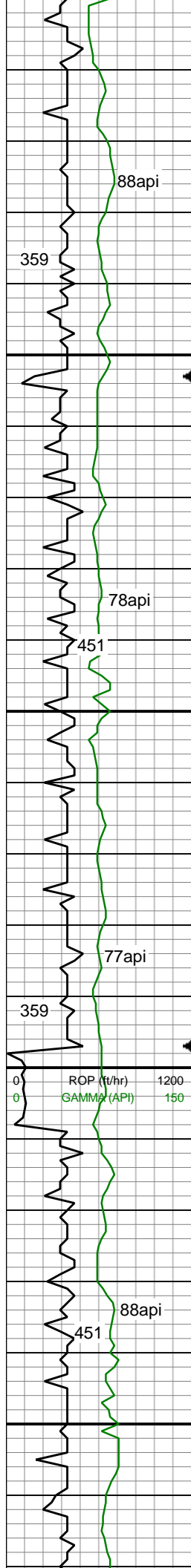
SHY SLTST: lt-medgy, occ dk gy, sft - sme mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, grdg to; SHY SS:lt-medgy, f-med f gr, sb ang, mod-p srt, sft, fri, p por, arg cmt, sl calc, occ wh ss, sme dism pyr, slow difse v sl stmg fnt bl cut, n flor stn or od

MD: 2,062 '
TVD: 2,053.66 '
Inclination: 7.9 °
Azimuth: 153.7 °
VS: -18.52 '

SHY SLTST: lt-medgy, occ dk gy, sft - sme mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, grdg to; SHY SS:lt-medgy, f-med f gr, sb ang, mod-p srt, sft, fri, p por, arg cmt, sl calc, occ wh ss, sme dism pyr, slow difse v sl stmg fnt bl cut, n flor stn or od

MD: 2,157 '
TVD: 2,147.76 '
Inclination: 7.9 °
Azimuth: 153.7 °
VS: -22.56 '

SHY SLTST: lt-medgy, occ dk gy, v sft, fri, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, grdg to; SHY SS:lt-medgy, f-med f gr, sme c, sb ang,



mod-p srt, sft, fri, p por, arg cmt, sl
calc; slow difse fnt bl gy cut, n flor stn
or od

MD: 2,252 '
TVD: 2,241.41 '
Inclination: 9.4 °
Azimuth: 161 °
VS: -144.52 '

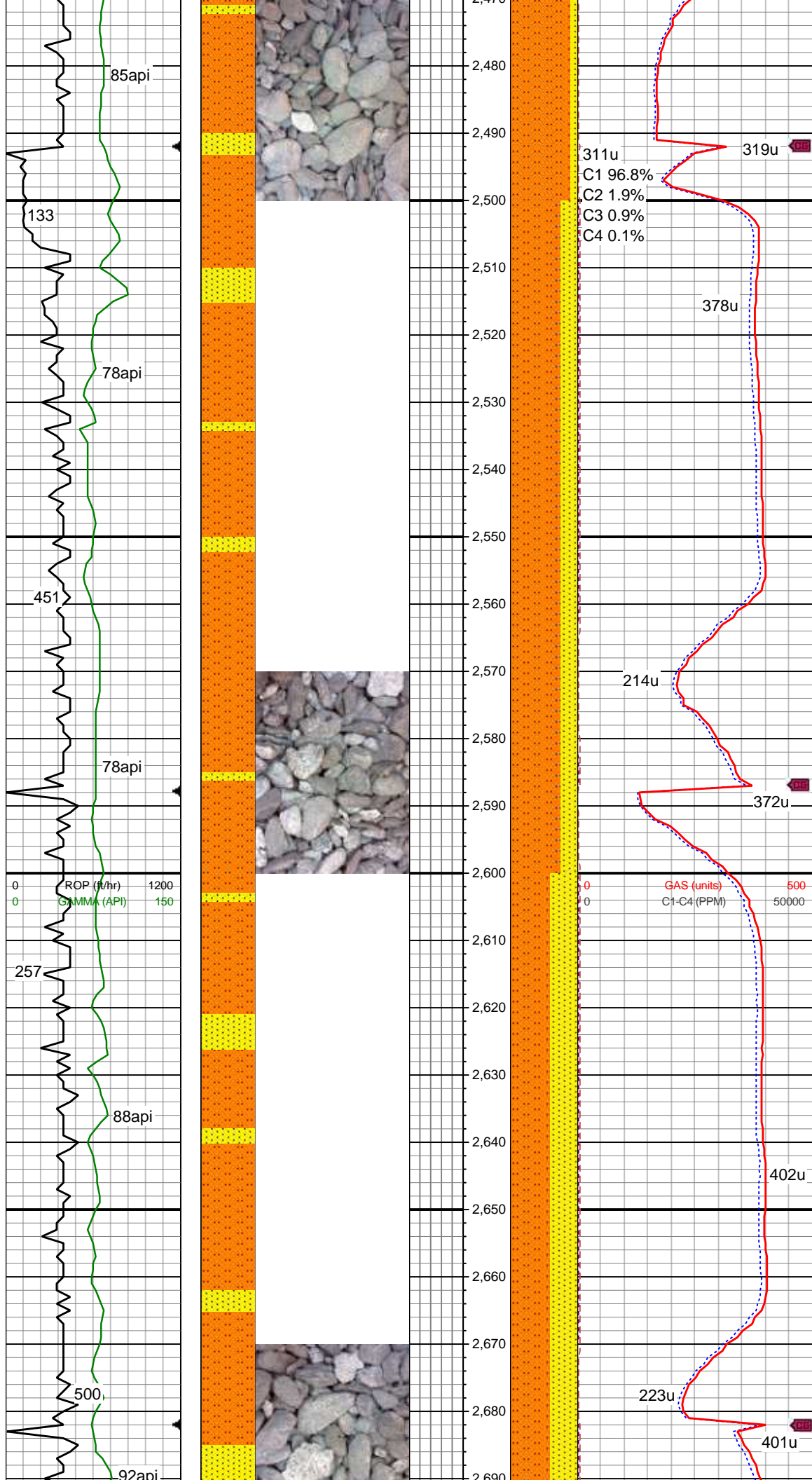
MD: 2,347 '
TVD: 2,335.16 '
Inclination: 9.2 °
Azimuth: 155.5 °
VS: -158.77 '

SHY SLTST: lt-medgy, occ dk gy, v sft,
fri, f - v f gr, sb rd-sb ang, mod srt, arg
mtx, spec wi mica, grdg to; SHY
SS:lt-medgy, f-med f gr, sme c, sb ang,
mod-p srt, sft, fri, p por, arg cmt, sl
calc; slow difse fnt bl gy cut, n flor stn
or od

WT IN 8.4/26 OUT
VIS IN 8.5/26 OUT

SHY SLTST: lt-medgy, occ dk gy, v sft,
fri, f - v f gr, sb rd-sb ang, mod srt, arg
mtx, spec wi mica, grdg to; SHY
SS:lt-medgy, f-med f gr, sme c, sb ang,
mod-p srt, sft, fri, p por, arg cmt, sl
calc; slow difse fnt bl gy cut, n flor stn
or od

MD: 2,442 '
TVD: 2,428.9 '
Inclination: 9.5 °
Azimuth: 155.5 °



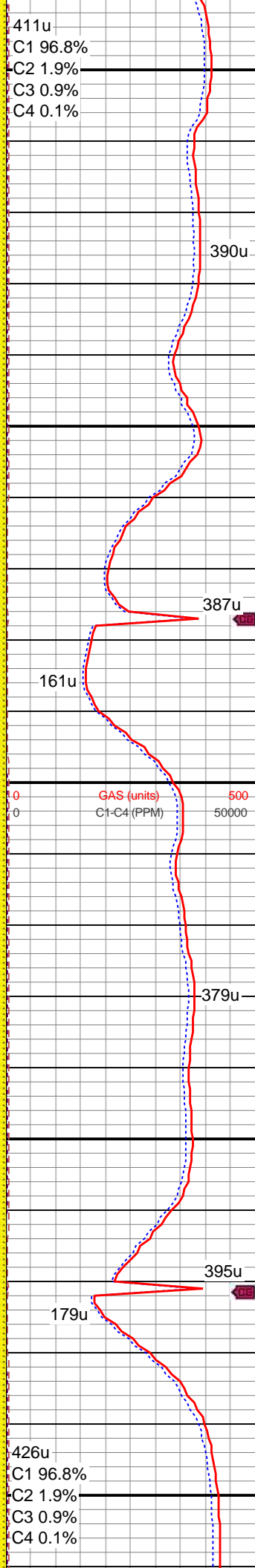
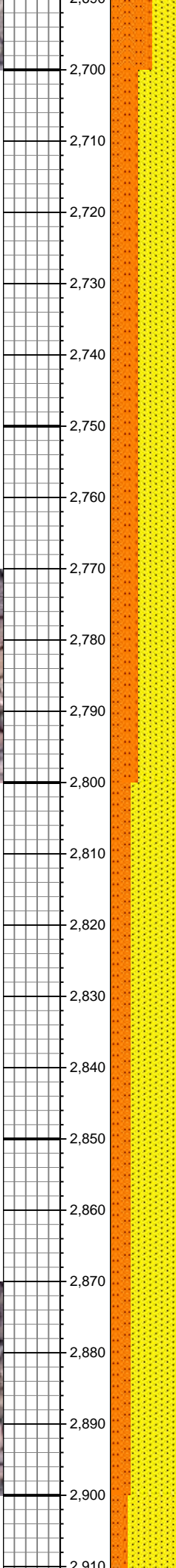
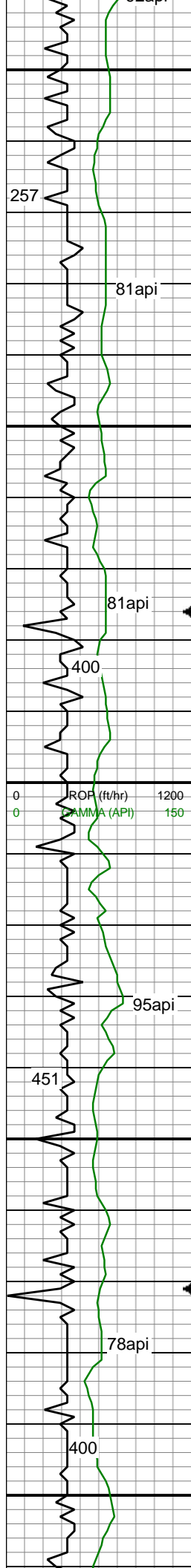
Azimuth: 155.5
VS: -172.82'

MD: 2,537'
TVD: 2,522.5'
Inclination: 10.2°
Azimuth: 159.5°
VS: -187.83'

SHY SLTST: lt-medgy, occ dk gy, sft, fri,
f - v f gr, sb rd-sb ang, mod srt, arg
mtx, spec wi mica, grdg to; SHY
SS:lt-medgy, f-med f gr, sme wh c, sb
ang, mod-p srt, sft - smwt frm, fri - brit,
p por, arg cmt, sl calc; slow difse fnt bl
gy cut, n flor stn or od

MD: 2,631'
TVD: 2,615.02'
Inclination: 10.2°
Azimuth: 156.7°
VS: -203.27'

SHY SLTST: lt-medgy, occ dk gy, smwt
frm, smwt fri - brit, f - v f gr, sb rd-sb
ang, mod srt, arg mtx, spec wi mica,
grdg to; SHY SS:lt-medgy, f - sme mf
gr, sme wh ss, sb ang, mod-p srt,smwt
frm, brit, p por, arg cmt, tr mica and
glau, sl calc; slow difse fnt bl gy cut, n
flor stn or od



MD: 2,726 '
TVD: 2,708.54 '
Inclination: 10 °
Azimuth: 153.7 °
VS: -218.39 '

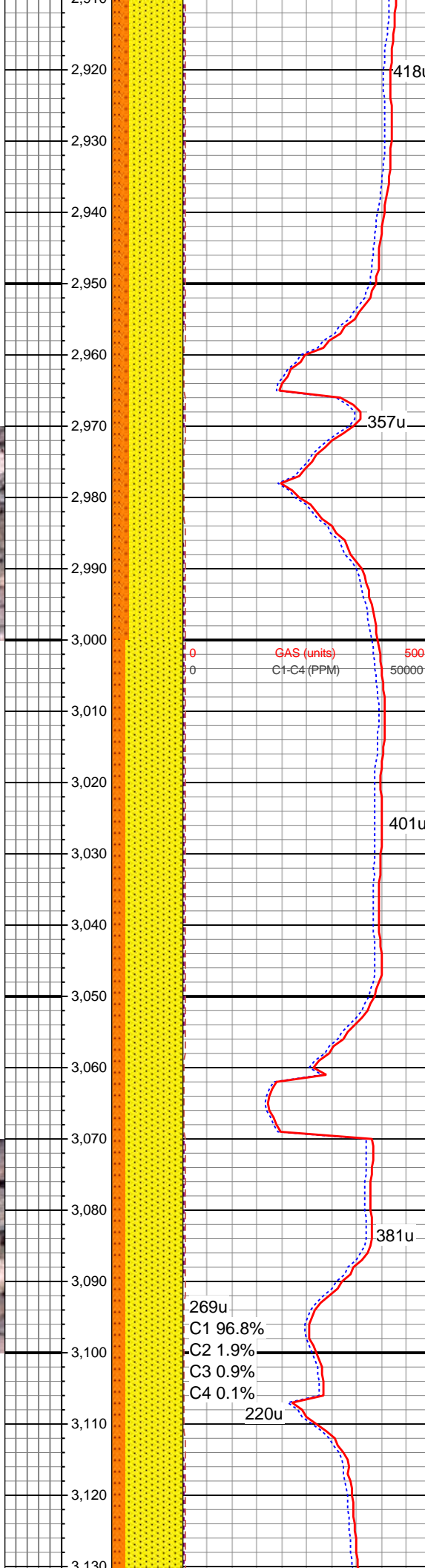
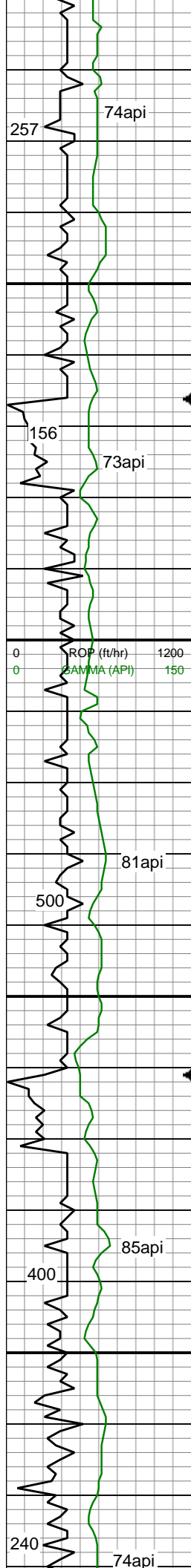
SHY SS:lt-medgy, f - sme mf gr, sme wh ss, sb ang, mod-p srt, smwt frm, brit, p por, arg cmt, tr mica and glau, sl calc grdg to; SHY SLTST: lt-medgy, occ dk gy, smwt frm, smwt fri - brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, slow difse fnt bl gy cut, n flor stn or od

MD: 2,821 '
TVD: 2,802.13 '
Inclination: 9.8 °
Azimuth: 151.1 °
VS: -232.86 '

SHY SS:lt-medgy, f - sme mf gr, com med gr wh ss, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc grdg to; SHY SLTST: lt-medgy, occ dk gy, smwt frm, smwt fri - brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, slow difse fnt bl gy cut, n flor stn or od

WT IN 8.4/26 OUT
VIS IN 8.4/26 OUT

MD: 2,912 '



MD: 2,916 '
TVD: 2,895.8 '
Inclination: 9.4 °
Azimuth: 149.2 °
VS: -246.6 '

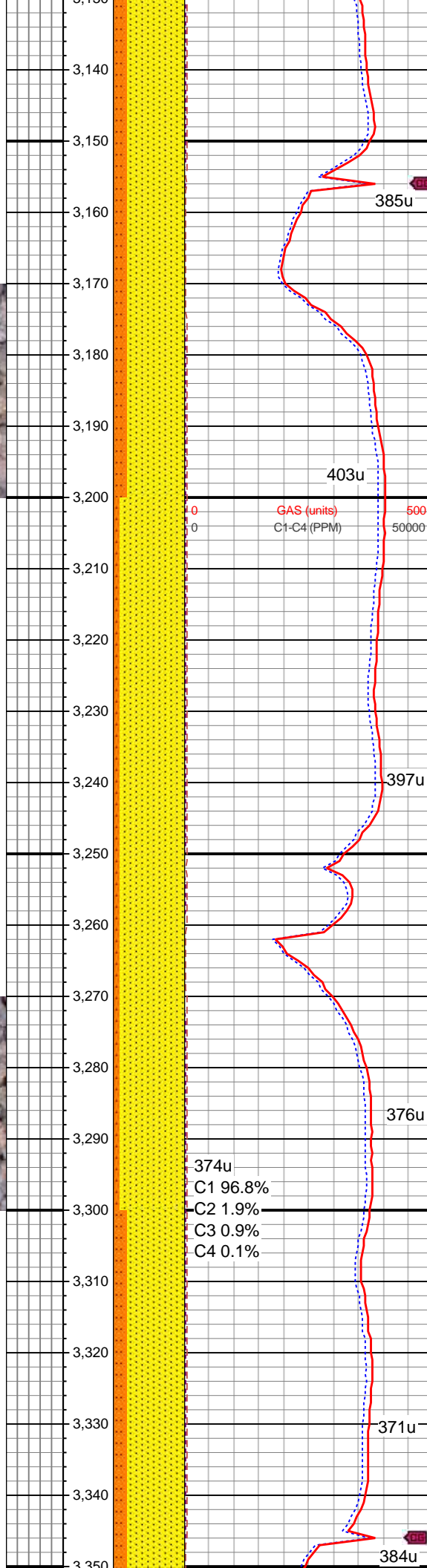
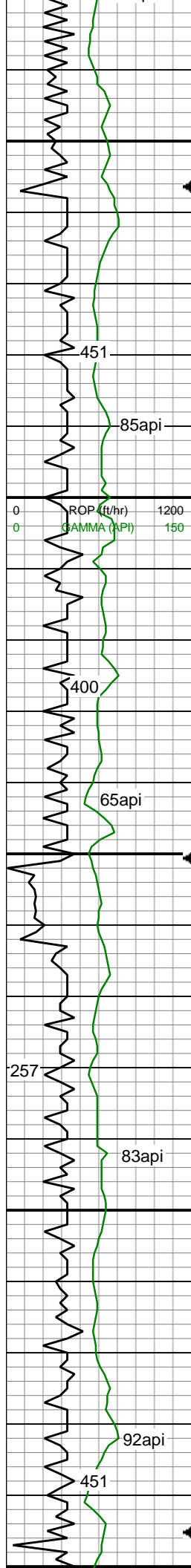
SHY SS:lt-medgy, f - sme mf gr, abnt med - c gr wh ss, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc grd to; SHY SLTST: lt-medgy, occ dk gy, smwt frm, smwt fri - brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, occ dul orng flor, slow difse fnt bl gy cut, n stn or od

MD: 3,011 '
TVD: 2,989.42 '
Inclination: 10.2 °
Azimuth: 157.4 °
VS: -261.03 '

SS: wh - lt gy, f - med gr, sme gy f gr shy ss, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc grd to; SHY SLTST: lt-medgy, occ dk gy, smwt frm, smwt fri - brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, occ dul orng flor, slow difse fnt bl gy cut, n stn or od

MD: 3,106 '
TVD: 3,082.87 '
Inclination: 10.5 °
Azimuth: 162.5 °
VS: -277.06 '

269u
C1 96.8%
C2 1.9%
C3 0.9%
C4 0.1%



SS: wh - lt gy, f - med gr, sme gy f gr
shy ss, sb ang, mod-p srt, mod frm,
brit, p por, arg cmt, tr mica and glau, sl
calc grd to; SHY SLTST: lt-medgy, occ
dk gy, smwt frm, smwt fri - brit, f - v f
gr, sb rd-sb ang, mod srt, arg mtx,
spec wi mica, occ dul orng flor, slow
difse fnt bl gy cut, n stn or od

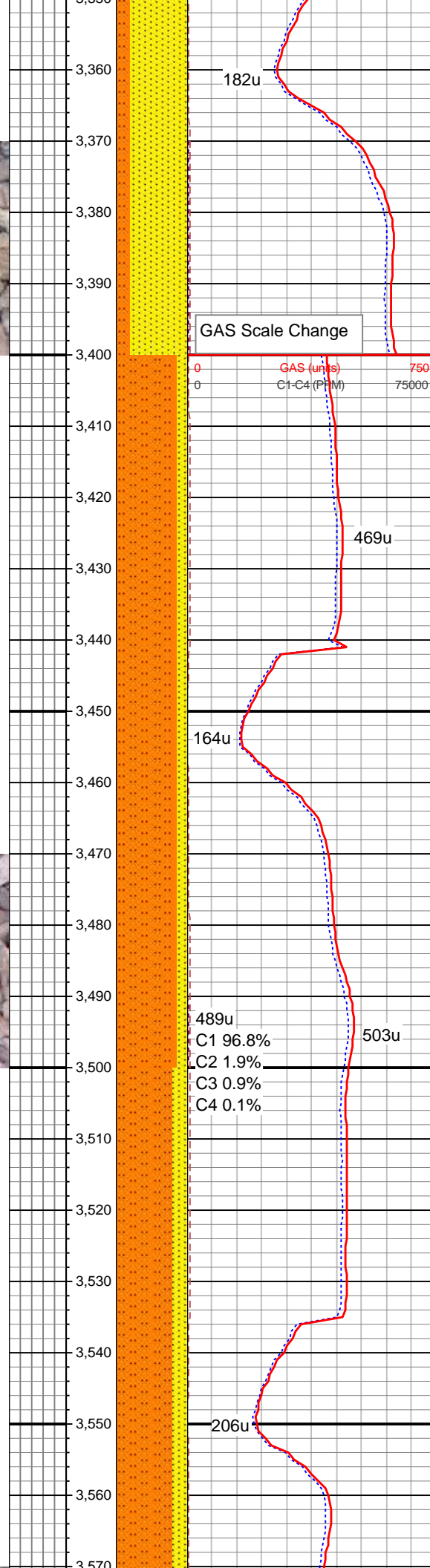
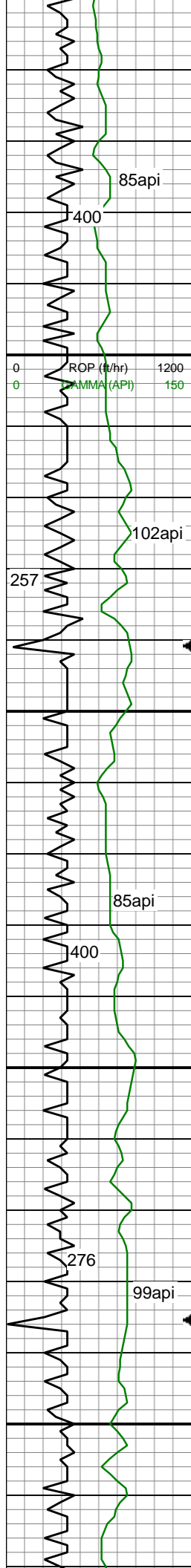
MD: 3,200 '
TVD: 3,175.36 '
Inclination: 10.1 °
Azimuth: 160.2 °
VS: -292.98 '

SHY SS: lt - med gy, f - med gr, sme
wh med gr ss, sb ang, mod-p srt, mod
frm, brit, p por, arg cmt, tr mica and
glau, sl calc grd to; SHY SLTST:
lt-medgy, occ dk gy, smwt frm, smwt
fri - brit, f - v f gr, sb rd-sb ang, mod
srt, arg mtx, spec wi mica, n cut flor
stn or od

MD: 3,295 '
TVD: 3,268.9 '
Inclination: 10 °
Azimuth: 166.4 °
VS: -308.83 '

WT IN 8.3/26 OUT
VIS IN 8.5/26 OUT

SHY SS: lt - med gy, f - med gr, sme
wh med gr ss, sb ang, mod-p srt, mod
frm, brit, p por, arg cmt, tr mica and
glau, sl calc grd to; SHY SLTST:
lt-medgy, occ dk gy, smwt frm, smwt
fri - brit, f - v f gr, sb rd-sb ang, mod
srt, arg mtx, spec wi mica, n cut flor
stn or od



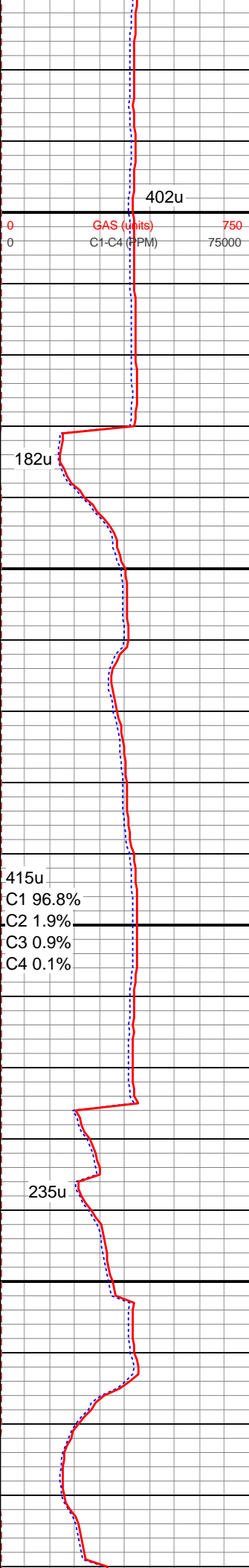
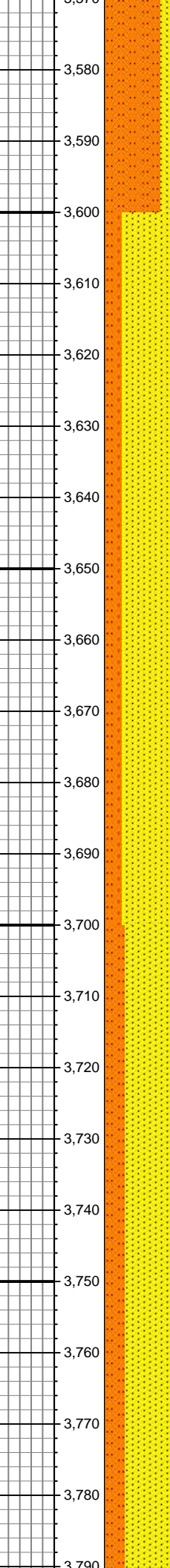
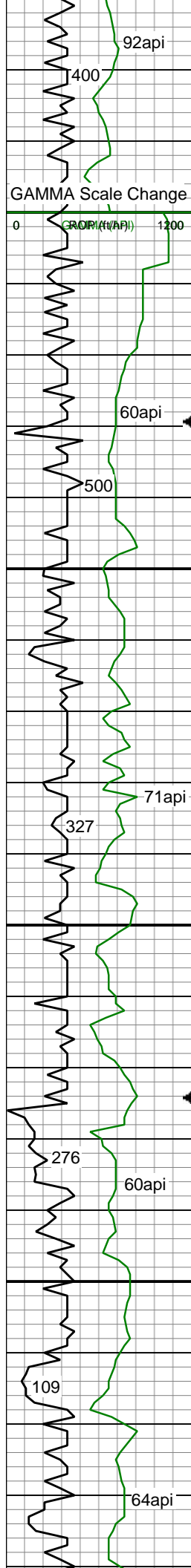
lt-medgy, occ dk gy, shwt frm, shwt
fri - brit, f - v f gr, sb rd-sb ang, mod
srt, arg mtx, spec wi mica, n cut flor
stn or od

MD: 3,390 '
TVD: 3,362.49 '
Inclination: 9.8 °
Azimuth: 162.9 °
VS: -324.58 '

SHY SLTST: lt-medgy, occ dk gy, mod
frm, brit, f - v f gr, sb rd-sb ang, mod
srt, arg mtx, spec wi mica, sme dism
pyr, grdg to; SHY SS: lt - med gy, f -
med gr, sme wh med gr ss, sb ang,
mod-p srt, mod frm, brit, p por, arg cmt,
tr mica and glau, sl calc, n cut flor stn
or od

MD: 3,485 '
TVD: 3,456.2 '
Inclination: 9.1 °
Azimuth: 159.5 °
VS: -339.34 '

SHY SLTST: lt-medgy, occ dk gy, mod
frm, brit, f - v f gr, sb rd-sb ang, mod
srt, arg mtx, spec wi mica, sme dism
pyr, grdg to; SHY SS: lt - med gy, f -
med gr, sme wh med gr ss, sb ang,
mod-p srt, mod frm, brit, p por, arg cmt,
tr mica and glau, sl calc, n cut flor stn
or od



MD: 3,579 '
TVD: 3,549.06 '
Inclination: 8.8 °
Azimuth: 157.3 °
VS: -352.94 '

Logger Top Parkman @
3590' MD / 3560' TVD

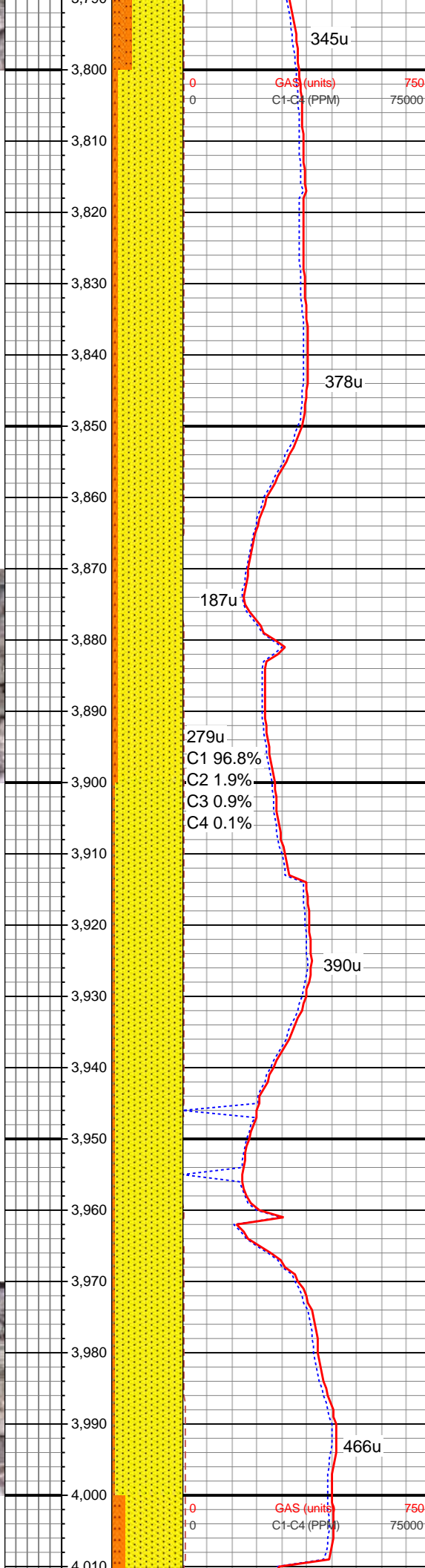
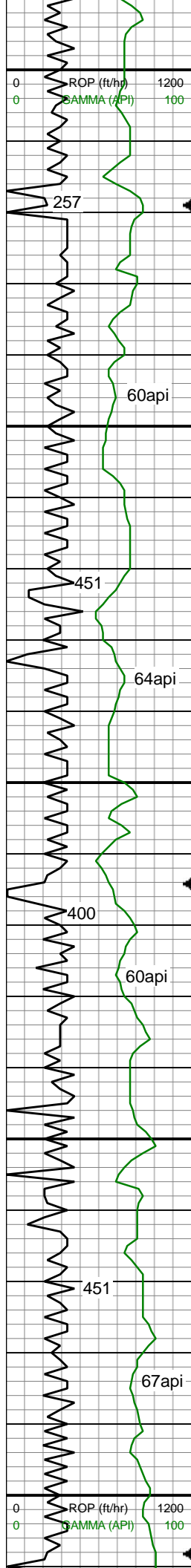
SHY SS: lt - med gy, f - med gr, sme
wh med gr ss, sb ang, mod-p srt, mod
frm, brit, p por, arg cmt, tr mica and
glau, sl calc, grdg to; SHY SLTST:
lt-medgy, occ dk gy, mod frm, brit, f - v
f gr, sb rd-sb ang, mod srt, arg mtx,
spec wi mica, tr dism pyr, sl calc, n
cut flor stn or od

MD: 3,674 '
TVD: 3,642.93 '
Inclination: 8.9 °
Azimuth: 156.2 °
VS: -366.37 '

WT IN 8.4/26 OUT
VIS IN 8.5/26 OUT

SHY SS: lt - med gy, f - med gr, sb ang,
mod-p srt, mod frm, brit, p por, arg cmt,
tr mica and glau, sl calc, grdg to; SHY
SLTST: lt-medgy, occ dk gy, mod frm,
brit, f - v f gr, sb rd-sb ang, mod srt,
arg mtx, spec wi mica, tr dism pyr, occ
wh med gr ss, sl calc, n cut flor stn or
od

MD: 3,769 '
TVD: 3,736.96 '
Inclination: 7.4 °
Azimuth: 160.2 °
VS: -378.85 '



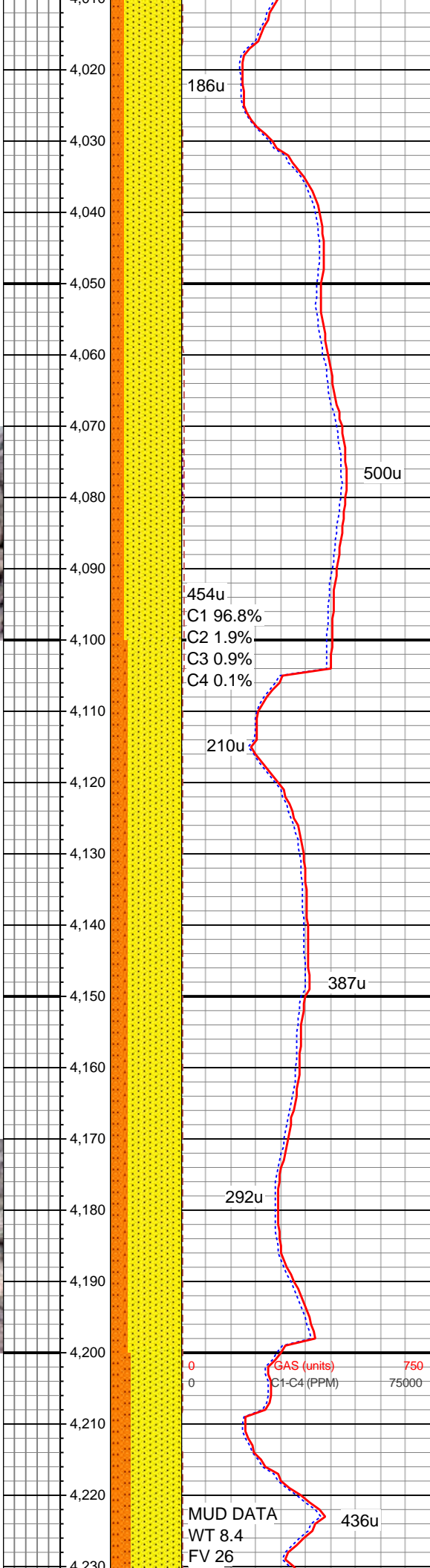
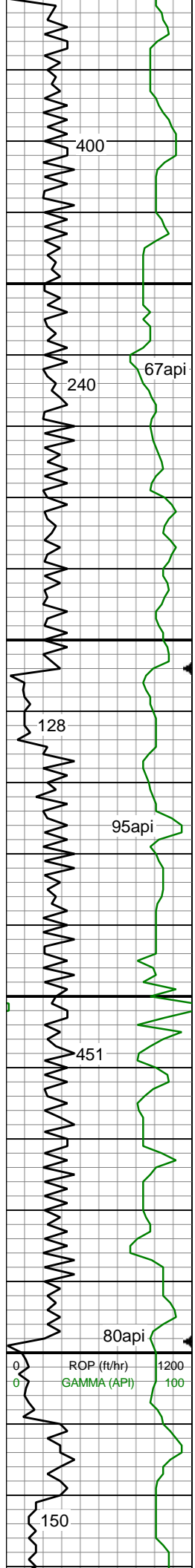
SS: wh - lt gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, tr dul orgn mnrl flor, sl calc, n cut stn or od

MD: 3,864 '
TVD: 3,831.18 '
Inclination: 7.3 °
Azimuth: 159.5 °
VS: -390.26 '

SS: wh - lt gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; occ shy sltst, tr dul orgn mnrl flor, n cut stn or od

MD: 3,958 '
TVD: 3,924.39 '
Inclination: 7.6 °
Azimuth: 159 °
VS: -401.65 '

WT IN 8.3/26 OUT
VIS IN 8.5/26 OUT



SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

MD: 4,053 '
TVD: 4,018.57 '
Inclination: 7.5 °
Azimuth: 158.8 °
VS: -95.55 '

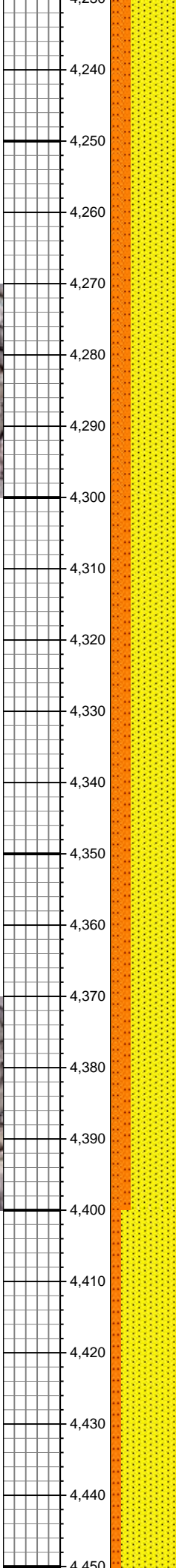
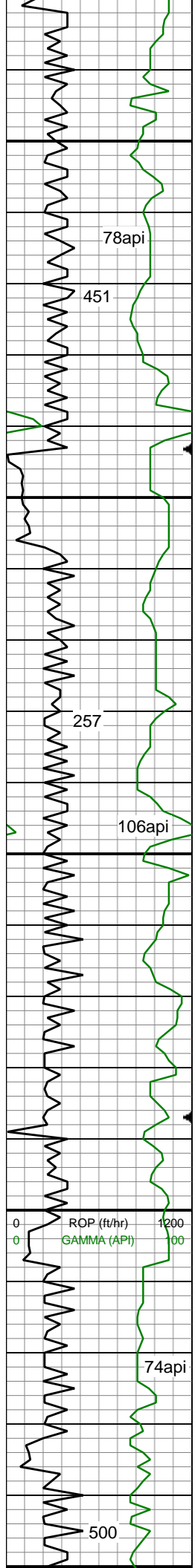
SHY SS: lt - med gy, mod-p srt, mod frm, tr mica and glau, sl c SLTST: lt-medgy, oc brit, f - v f gr, sb rd-s arg mtx, spec wi mic wh med gr ss, sl calc, n cut flor stn or od

MD: 4,148 '
TVD: 4,112.7 '
Inclination: 8 °
Azimuth: 167.6 °
VS: -97.41 '

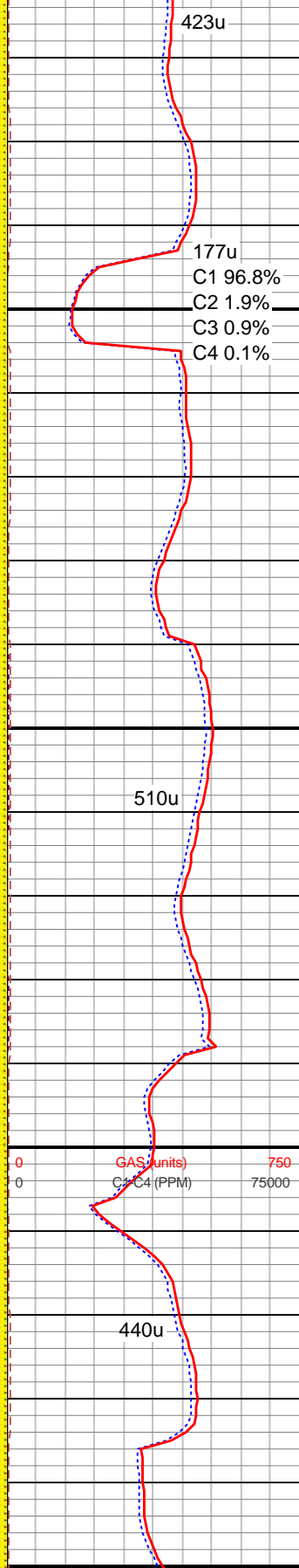
WT IN 8.3/26 OUT
VIS IN 8.5/26 OUT

MUD DATA
WT 8.4
FV 26

MD: 4,243 '
TVD: 4,206.72 '
Inclination: 8.5 °



PV 1
YP 2
Sol 0.5
pH 8.5
Gels 1/1
Chl 600



Azimuth: 171.1 °
VS: -97.95 '

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

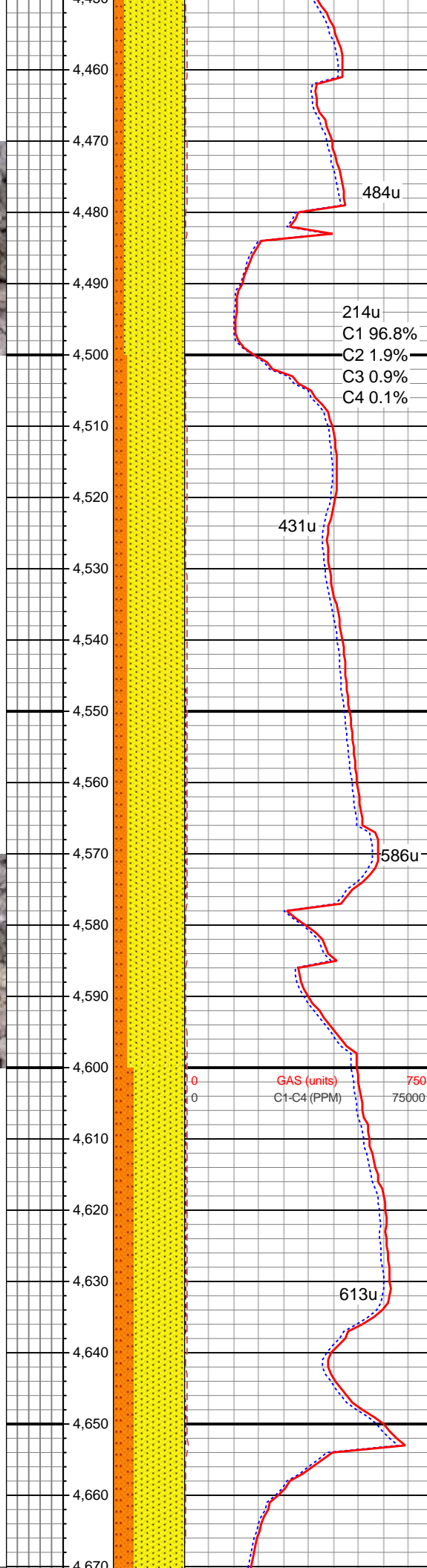
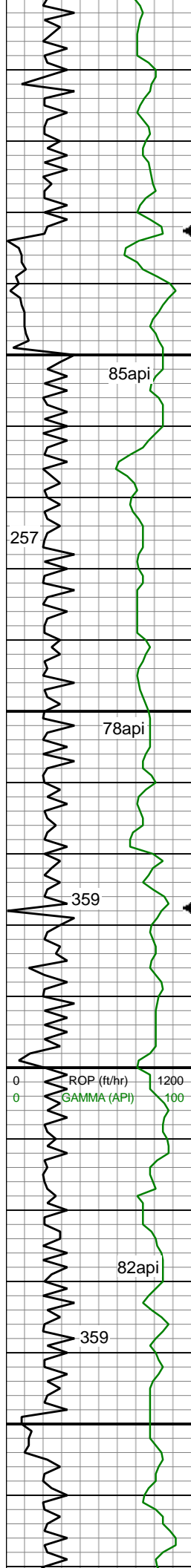
MD: 4,337 '
TVD: 4,299.65 '
Inclination: 8.8 °
Azimuth: 172.6 °
VS: -97.91 '

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

Logger's Top Sussex
@ 4418' MD / 4379' TVD

MD: 4,432 '
TVD: 4,393.59 '
Inclination: 8.3 °
Azimuth: 173.1 °
VS: -97.63 '

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm,



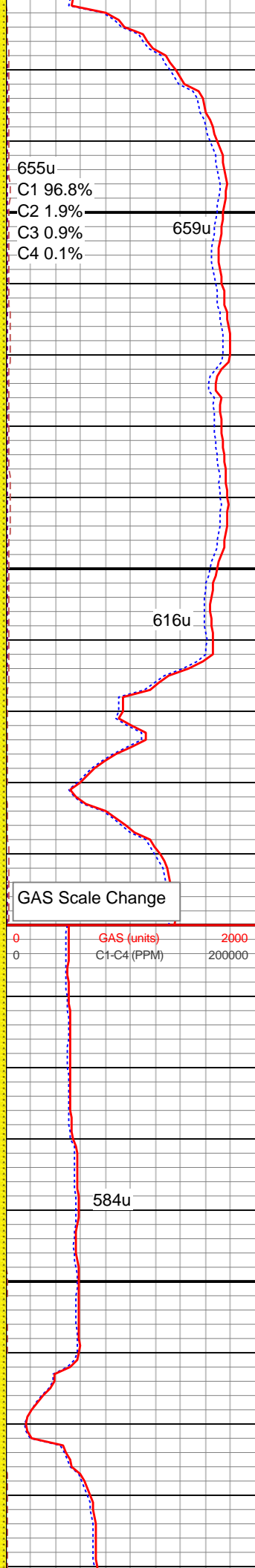
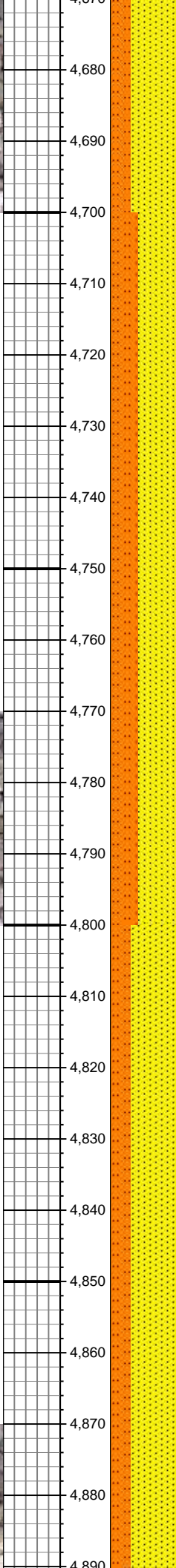
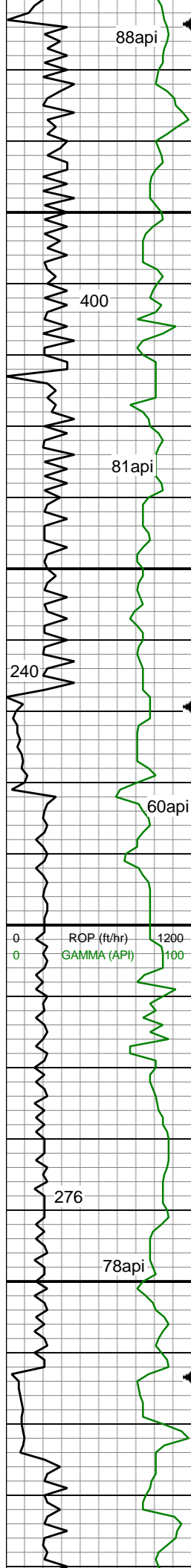
brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

MD: 4,527 '
TVD: 4,487.41 '
Inclination: 9.8 °
Azimuth: 169 °
VS: -97.84 '

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

MD: 4,622 '
TVD: 4,581.15 '
Inclination: 8.9 °
Azimuth: 166.2 °
VS: -98.93 '

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od



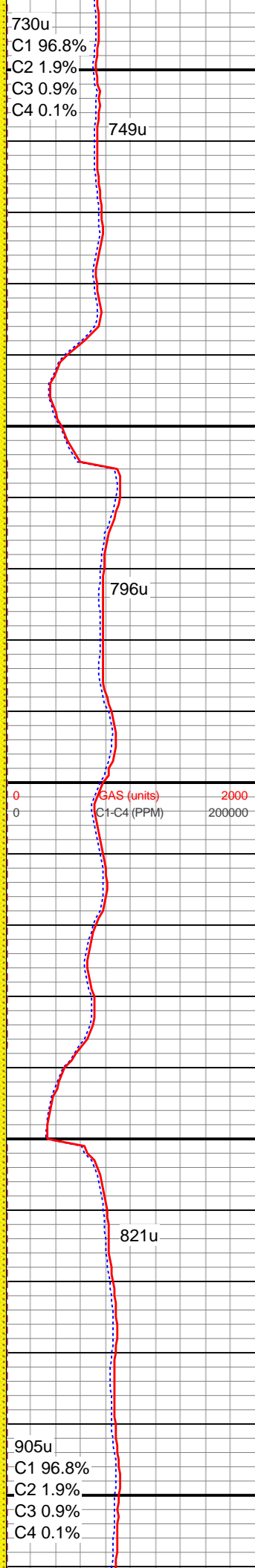
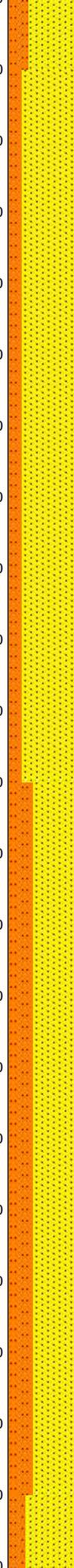
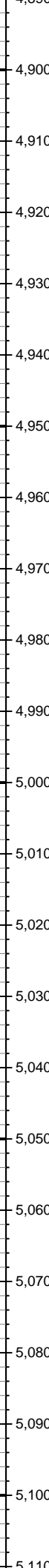
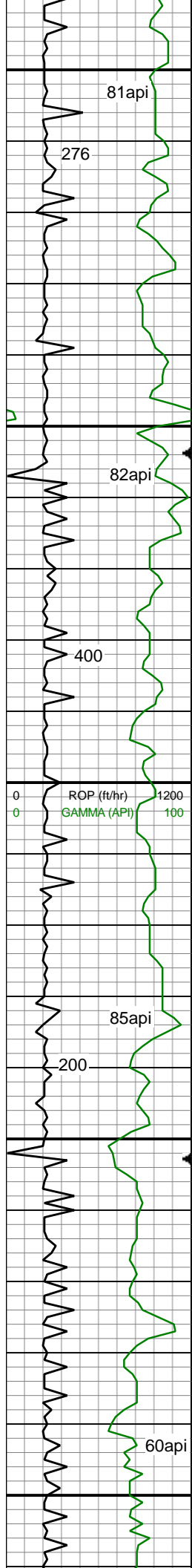
WT IN 8.4/26 OUT
VIS IN 8.4/26 OUT

MD: 4,717 '
TVD: 4,675.13 '
Inclination: 7.9 °
Azimuth: 164.5 °
VS: -100.45 '

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

MD: 4,811 '
TVD: 4,768.23 '
Inclination: 7.9 °
Azimuth: 164.1 °
VS: -102.12 '

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od



MD: 4,906 '
TVD: 4,862.19 '
Inclination: 9.1 °
Azimuth: 162.9 °
VS: -104.13 '

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

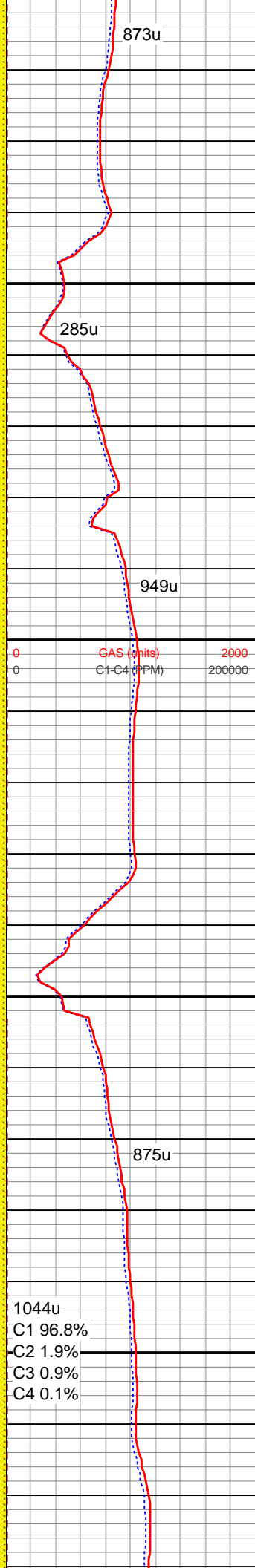
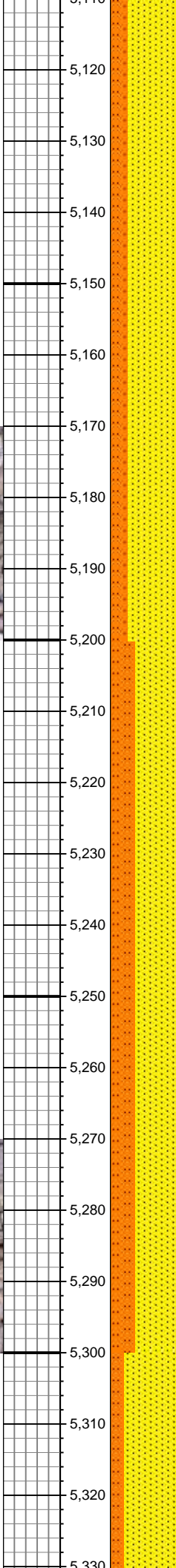
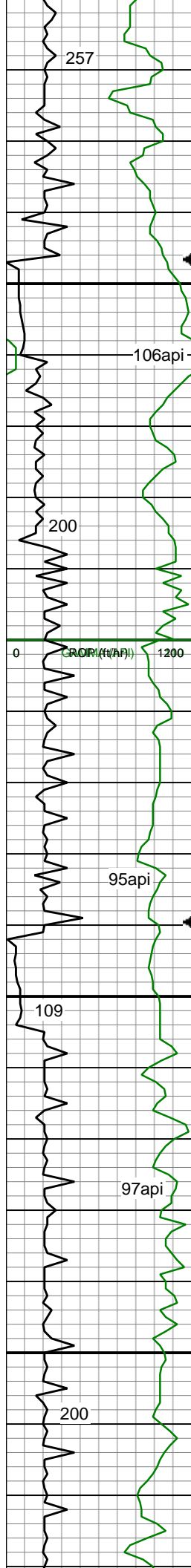
MD: 5,001 '
TVD: 4,956.08 '
Inclination: 8.4 °
Azimuth: 160.1 °
VS: -106.67 '

Logger Top Shannonn @
5024' MD / 4979' TVD

WT IN 8.5/26 OUT
VIS IN 8.5/26 OUT

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

MD: 5,096 '
TVD: 5,050.1 '
Inclination: 8.1 °
Azimuth: 159 °
VS: -109.54 '



SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

MD: 5,190 '
TVD: 5,143.38 '
Inclination: 6.1 °
Azimuth: 163.4 °
VS: -111.72 '

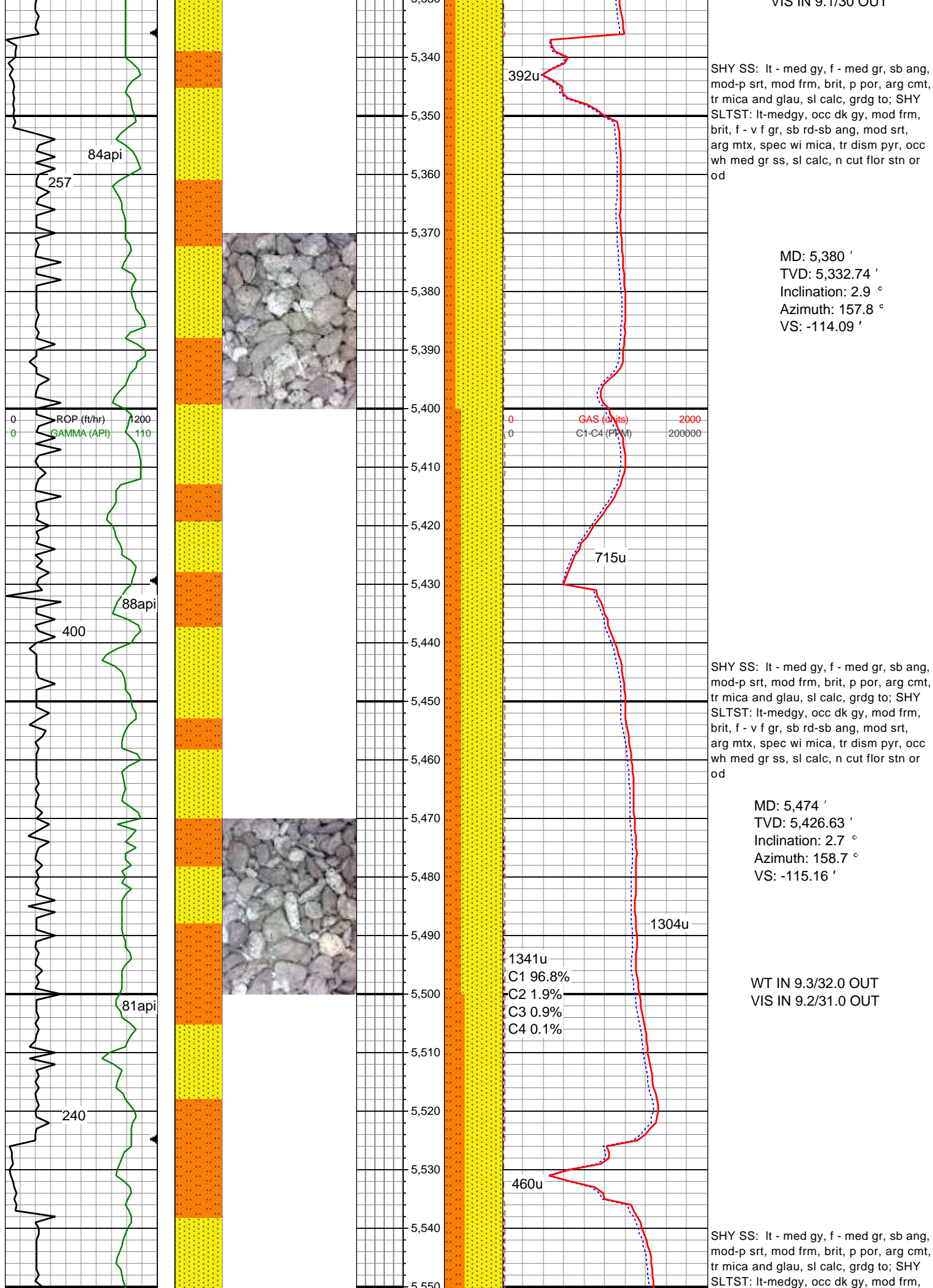
WT IN 9.0/29 OUT
VIS IN 8.9/28 OUT

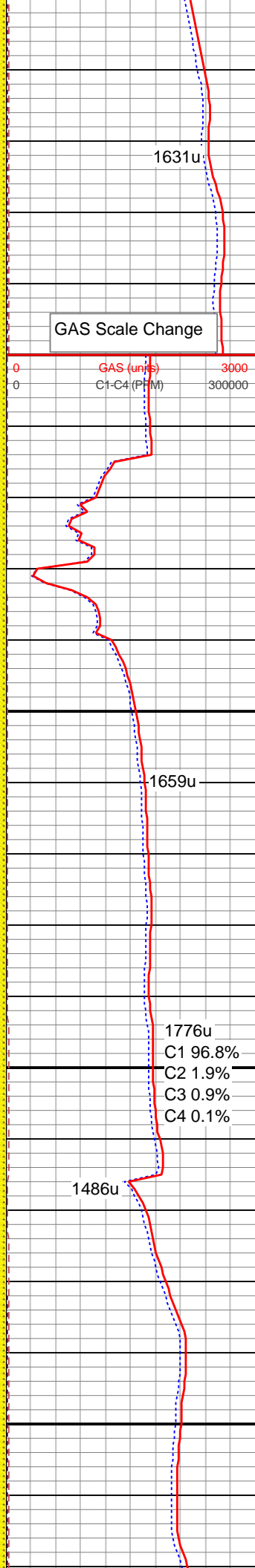
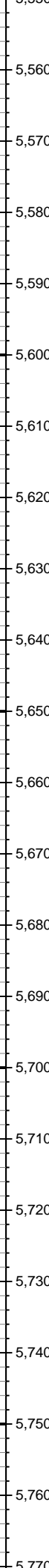
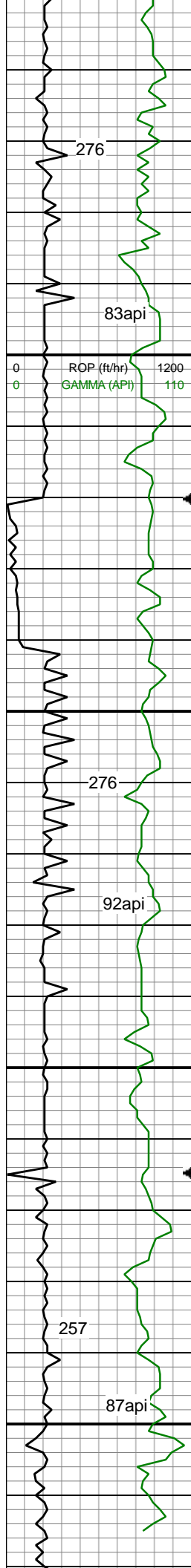
SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

MD: 5,285 '
TVD: 5,237.95 '
Inclination: 4.7 °
Azimuth: 163.8 °
VS: -112.98 '

1044u
C1 96.8%
C2 1.9%
C3 0.9%
C4 0.1%

WT IN 9.2/30.0 OUT
VIS IN 9.1/30 OUT





brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flr stn or od

MD: 5,569 '
TVD: 5,521.55 '
Inclination: 1.9 °
Azimuth: 151.8 °
VS: -116.2 '

WT IN 9.5/32.0 OUT
VIS IN 9.3/31.0 OUT

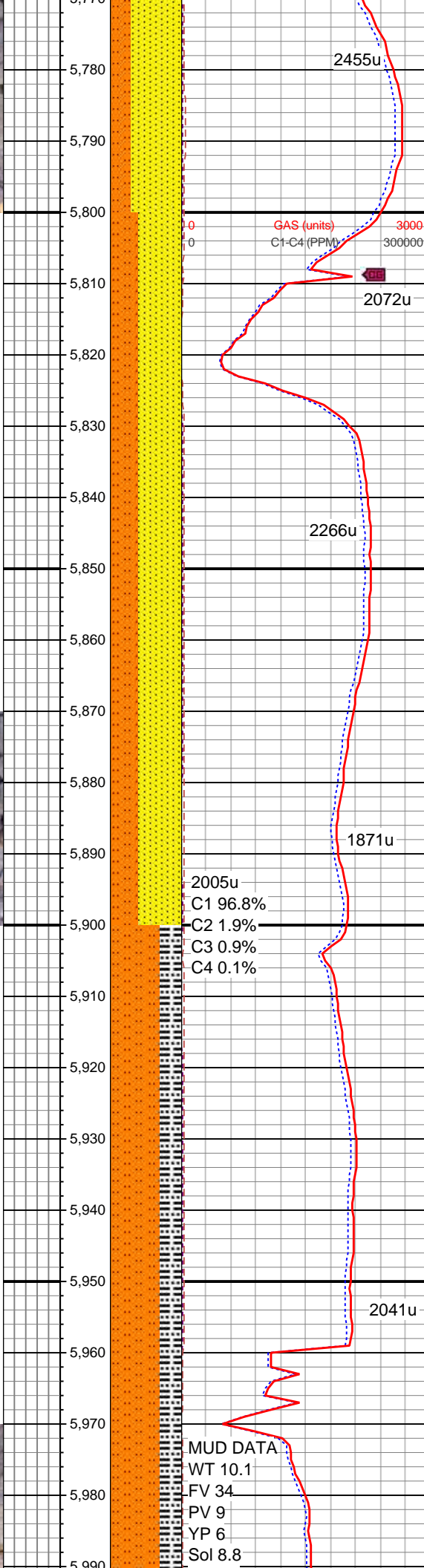
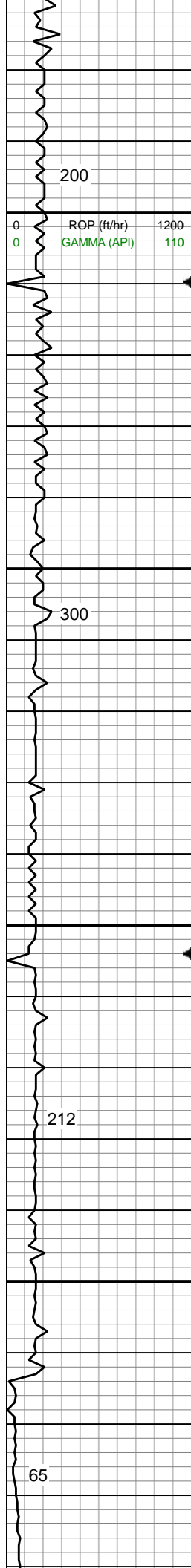
SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flr stn or od

MD: 5,664 '
TVD: 5,616.52 '
Inclination: 0.9 °
Azimuth: 163.6 °
VS: -116.84 '

WT IN 9.9/31.0 OUT
VIS IN 9.9/32.0 OUT

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flr stn or od

MD: 5,750 '



MD: 5,759
TVD: 5,711.51 '
Inclination: 0.9 °
Azimuth: 157.4 °
VS: -117.13 '

SHY SS: lt - med gy, f - med gr, sb ang, mod-p srt, mod frm, brit, p por, arg cmt, tr mica and glau, sl calc, grdg to; SHY SLTST: lt-medgy, occ dk gy, mod frm, brit, f - v f gr, sb rd-sb ang, mod srt, arg mtx, spec wi mica, tr dism pyr, occ wh med gr ss, sl calc, n cut flor stn or od

WT IN 10.10/31.0 OUT
VIS IN 10.10/32.0 OUT

Logger Top Teepee Buttes @
5915' MD / 5867' TVD

SHY SLTST: lt-medgy, occ dk gy, frm, brit, f - v f gr, sb rd-sb ang - sb plty, mod srt, arg mtx, spec wi carb flk, grdg to; SLTY SH: lt-medgy, frm, sb blk - sb plty, rthy - sl gritty tex, smwt slty, sme dism pyr thru, mod difse sl stmg mod bl cut, n flor stn or od

Begin Building Curve @ 5970' MD

