

# COLUMBINE LOGGING

Scale: 5" / 100'  
Measured Depth Log

**Well Name** No Worries PC G14-64-1HN

**Location** SWSW SEC 14 T4N R65W

**State** COLORADO

**County** WELD

**Country** UNITED STATES

**Rig Number** H&P 273

**API Number** 05-123-36329

**Region** DJ BASIN

**Field** WATTENBERG

**Spud Date** 1/20/2014

**Drilling Completed** 1/21/2014

**Surface Coordinates** 1269' FSL; 276' FWL

**Bottom Hole Coordinates** 1500' FSL; 535' FEL

**Ground Elevation** 4695'

**K.B. Elevation** 4844'

**Logged Interval** 655' To 6070'

**Total Depth** 6070'

**Formation** NIOBRARA

**Type of Drilling Fluid** LSND

## Operator

**Company** NOBLE ENERGY INC.

**Address** 1625 Broadway Suite 2200  
Denver, CO 80202

## Geologist

**Name** SARAH COMPTON

**Company** NOBLE ENERGY INC.

**Address** 1625 Broadway Suite 2200  
Denver, CO 80202

## Other

## Rock Types

UNKNOWN	CEMENT	IGNEOUS	SHALE GRAY
CHALK	CHERT	LIMESTONE	SHALY SILTSTONE
MARLSTONE	CLAY CHOKE SAND	SIDERITE or LIMONITE	SILTSTONE
SANDSTONE	CLAYSTONE	METAMORPHIC	TILL
SHALY SANDSTONE	COAL	NO SAMPLE	TUFF
SILTY SHALE	CONGLOMERATE	SALT	WELDED TUFF
ANHYDRITE	DOLOMITE	SALT- PEPPER SAND	
BENTONITE	GRANITE	SHALE	
BRECCIA	GYPSUM	SHALE COLORED	

## Accessories

### Fossils

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

### Fossils

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

### Minerals

### Minerals

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

### Minerals

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

### Minerals

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

### Stringer

## Other Symbols

### Oil Show

DEAD
EVEN
QUESTIONABLE
SPOTTED STAINING

### Porosity

EARTHY
FENESTRAL
FRACTURE
INTERCRYSTALLINE
INTEROOLITIC

### Oil Show

MOLDIC
ORGANIC
PINPOINT
VUGGY

### Engineering

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

### Other Symbols

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

### Other Symbols

WIRELINE TESTED - LEFT
WIRELINE TESTED - RT

### Rounding

ANGULAR
ROUNDED
SUBANG
SUBRND

### Textures

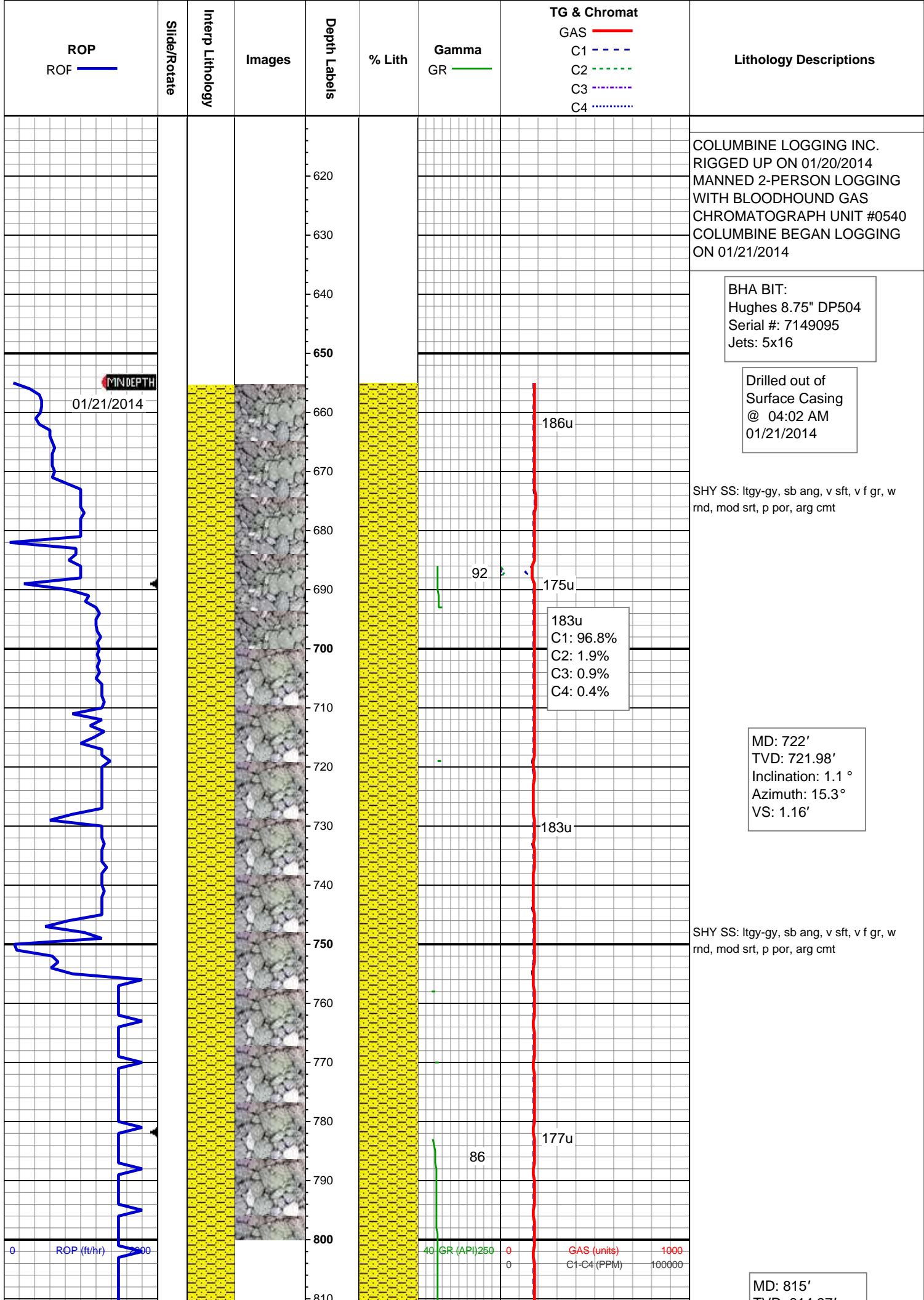
BOUNDSTONE
CHALKY
CRYPTOXLN

### Other Symbols

EARTHY
FINELYXLN
GRAINSTONE
LITHOGRAPHIC
MICROXLN
MUDSTONE
PACKSTONE
WACKESTONE

### Sorting

MODERATE
POOR
WELL



01/21/2014

MINDEPTH

186u

92

175u

183u  
C1: 96.8%  
C2: 1.9%  
C3: 0.9%  
C4: 0.4%

183u

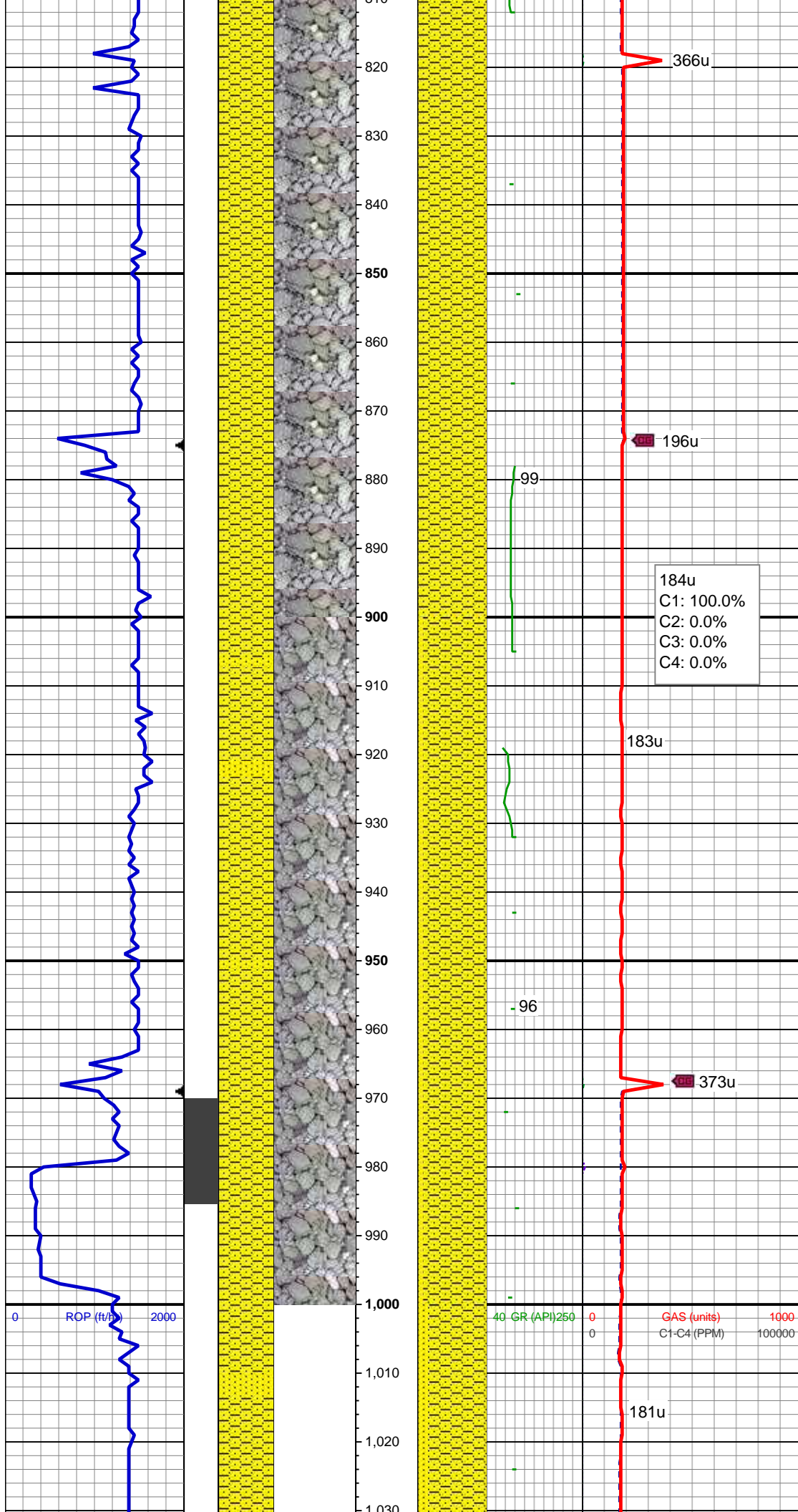
177u

86

0 ROP (ft/hr) 1000

40 GR (API) 250

0 GAS (units) 1000  
0 C1-C4 (PPM) 100000



TVD: 814.97'  
Inclination: 0.9 °  
Azimuth: 11.9 °  
VS: 1.65'

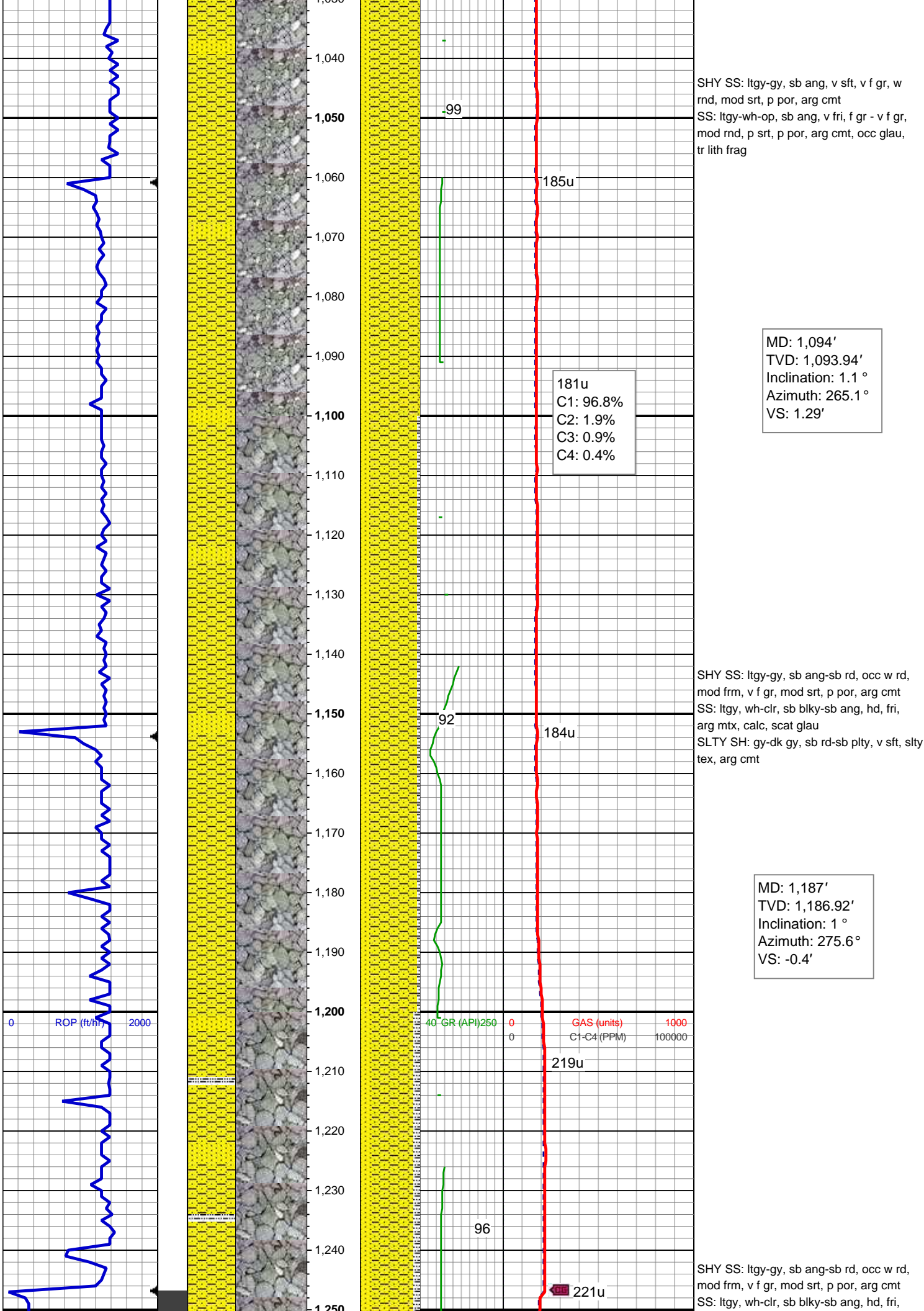
SHY SS: ltgy-gy, sb ang, v sft, v f gr, w  
rnd, mod srt, p por, arg cmt

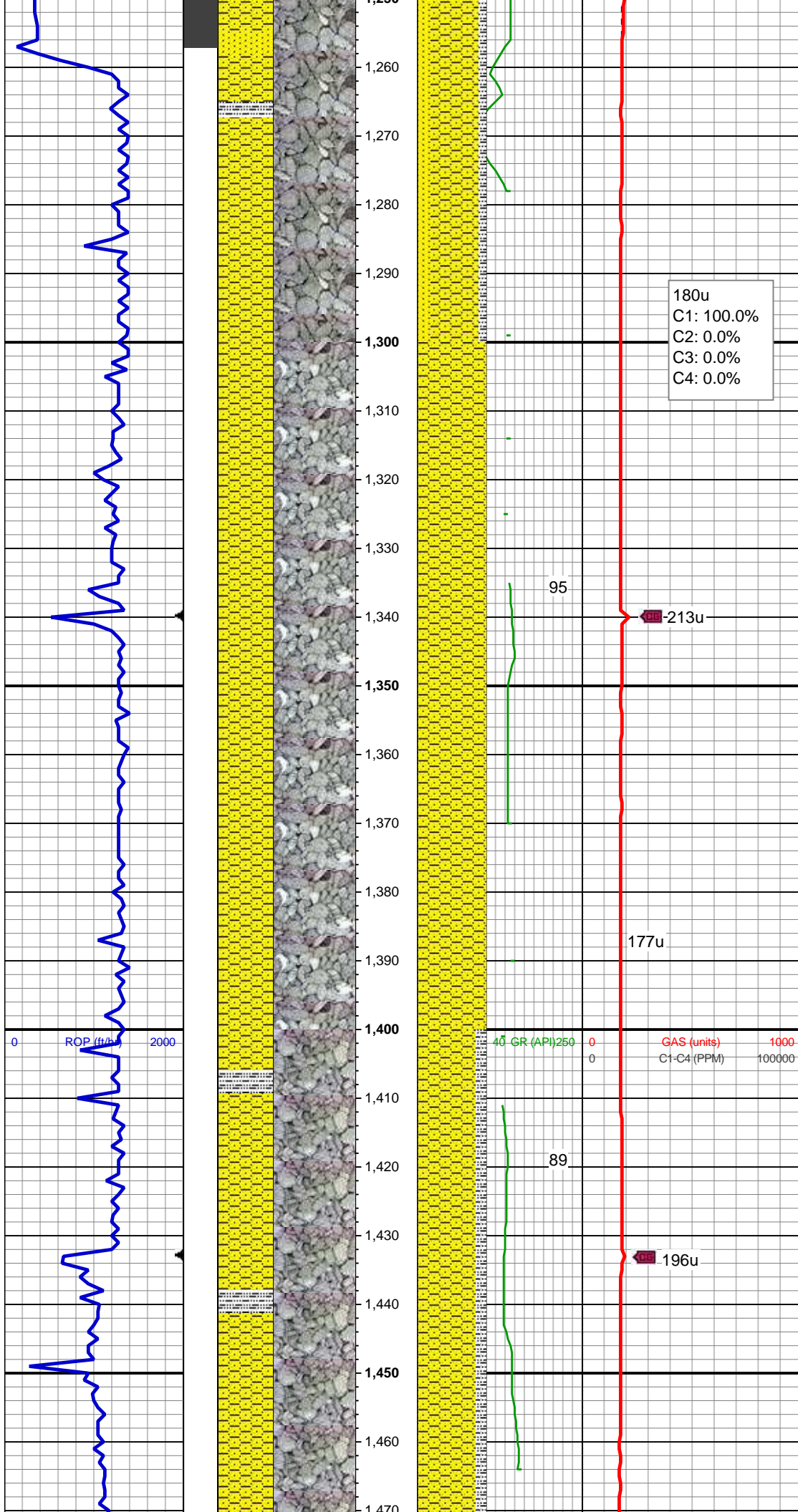
MD: 910'  
TVD: 909.95'  
Inclination: 1.1 °  
Azimuth: 35.8 °  
VS: 2.43'

SHY SS: ltgy-gy, sb ang, v sft, v f gr, w  
rnd, mod srt, p por, arg cmt  
SS: ltgy-wh-op, sb ang, v fri, f gr - v f gr,  
mod rnd, p srt, p por, arg cmt, occ glau,  
tr lith frag

MD: 1,001'  
TVD: 1,000.95'  
Inclination: 0.5 °  
Azimuth: 267.3 °  
VS: 2.59'







arg mtx, calc, scat glau  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt

MD: 1,280'  
TVD: 1,279.92'  
Inclination: 0.3 °  
Azimuth: 120.9 °  
VS: -1'

180u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt

MD: 1,373'  
TVD: 1,372.92'  
Inclination: 0.7 °  
Azimuth: 134.3 °  
VS: -0.42'

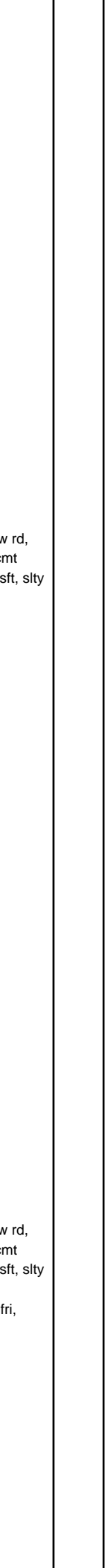
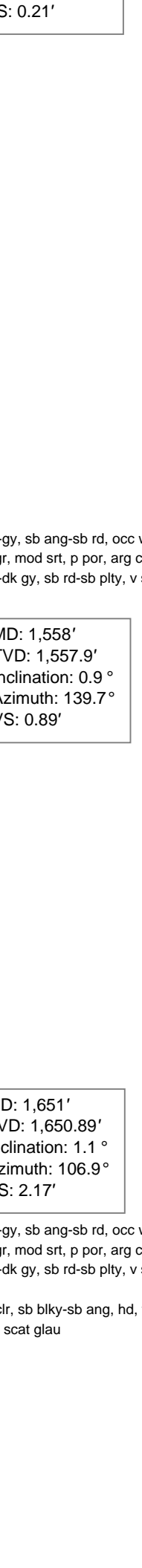
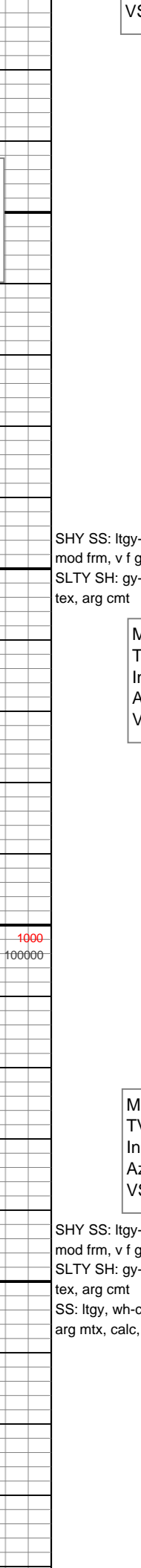
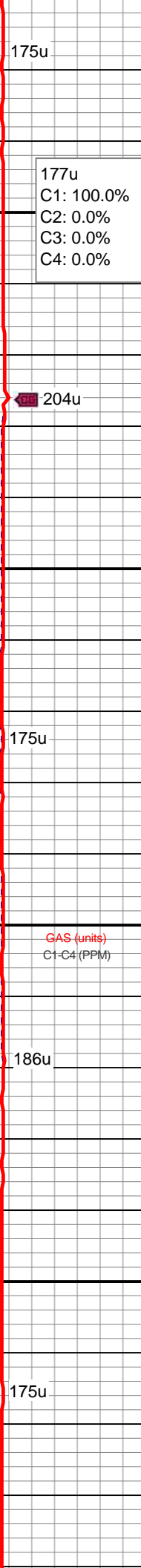
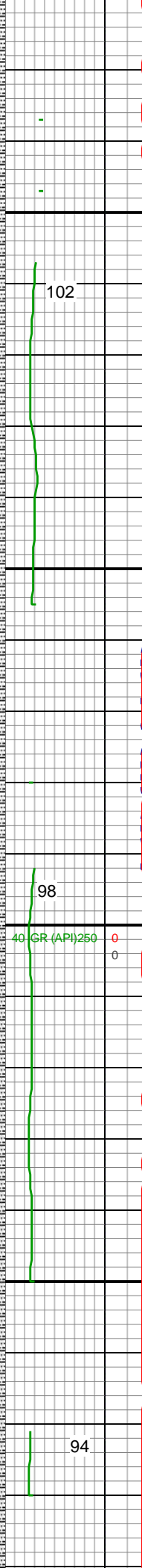
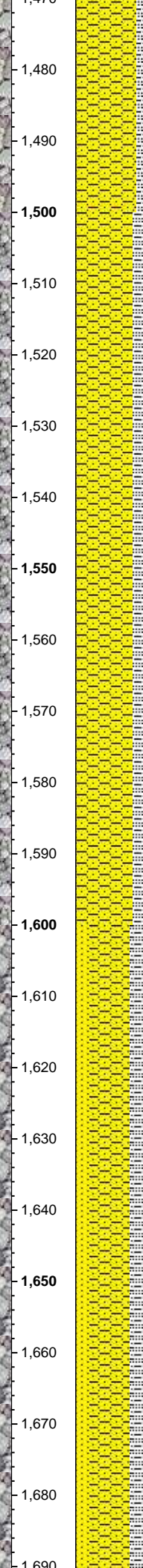
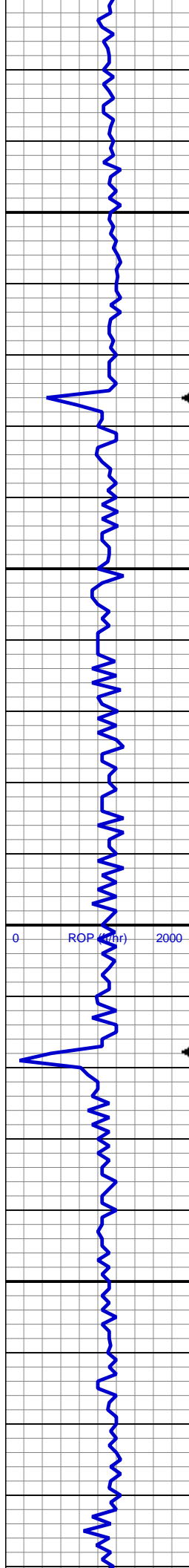
0 ROP (ft/h) 2000

45 GR (API) 250 0 GAS (units) 1000  
C1-C4 (PPM) 100000

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt

MD: 1,466'  
TVD: 1,465.91'  
Inclination: 0.4 °  
Azimuth: 124.6 °





VS: 0.21'

175u

177u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%

102

204u

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt

MD: 1,558'  
TVD: 1,557.9'  
Inclination: 0.9 °  
Azimuth: 139.7 °  
VS: 0.89'

175u

98

0 ROP (in) 2000

40 GR (API) 250

0

GAS (units)

1000

C1-C4 (PPM)

100000

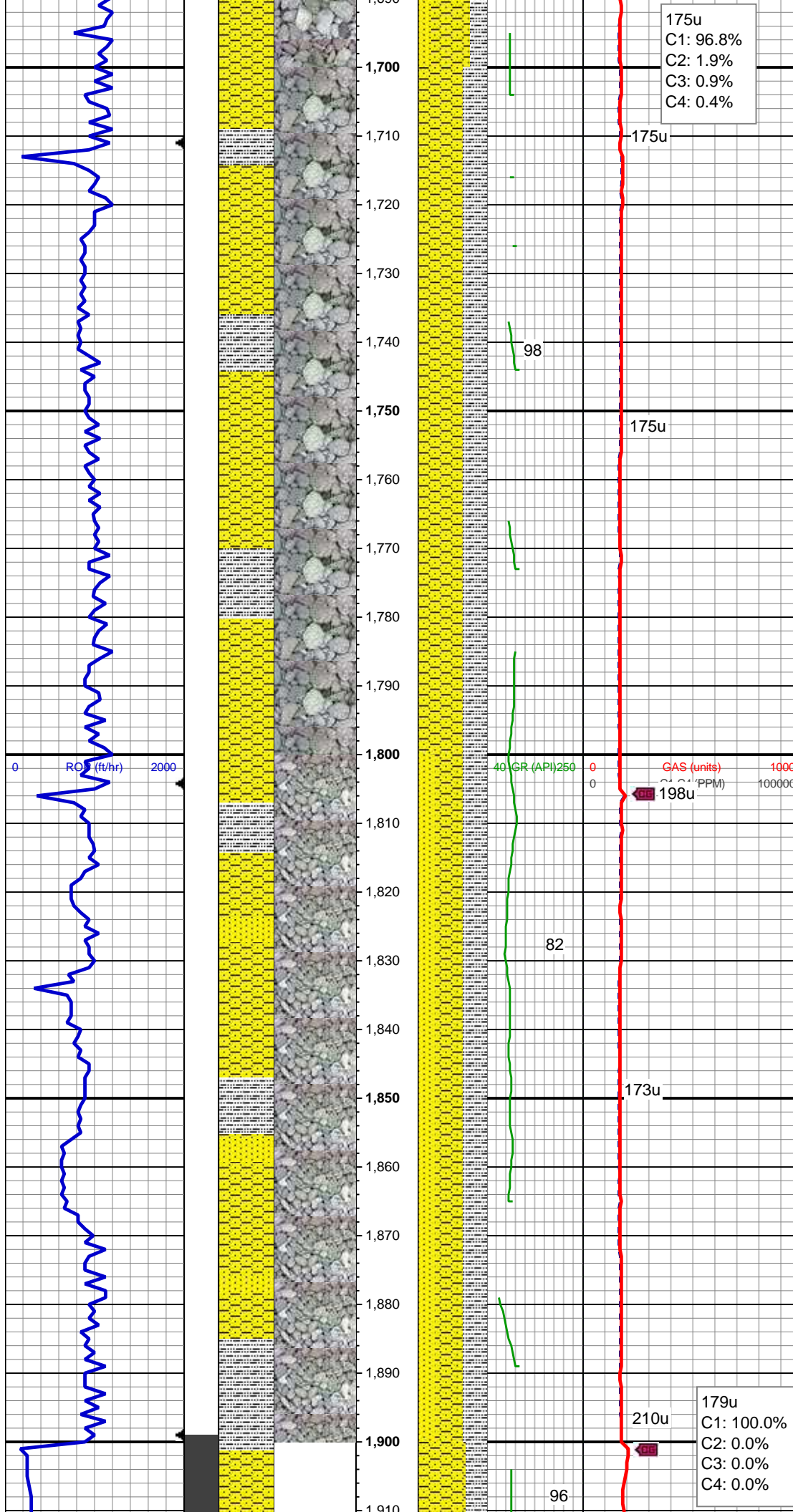
186u

MD: 1,651'  
TVD: 1,650.89'  
Inclination: 1.1 °  
Azimuth: 106.9 °  
VS: 2.17'

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt  
SS: ltgy, wh-clr, sb blkgy-sb ang, hd, fri,  
arg mtx, calc, scat glau

175u

94



MD: 1,744'  
TVD: 1,743.88'  
Inclination: 0.8 °  
Azimuth: 89.6°  
VS: 3.65'

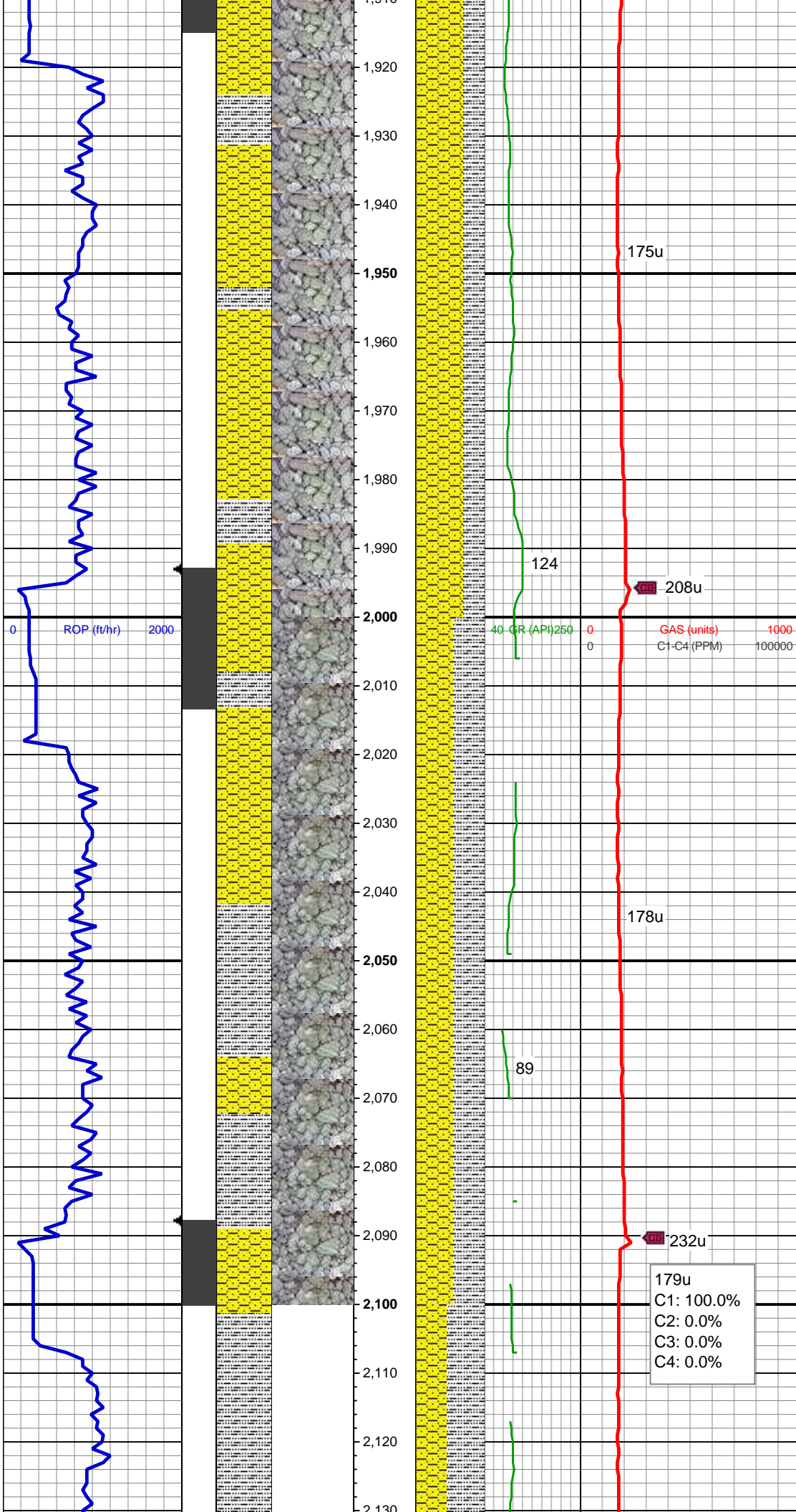
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt

MD: 1,839'  
TVD: 1,838.87'  
Inclination: 1.1 °  
Azimuth: 93.5°  
VS: 5.22'

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt  
SS: ltgy, wh-clr, sb blkgy-sb ang, hd, fri,  
arg mtx, calc, scat glau

WT IN 8.40/ OUT 8.40  
VIS IN 26/ OUT 26





MD: 1,933'  
TVD: 1,932.86'  
Inclination: 0.8 °  
Azimuth: 10.7 °  
VS: 6.27'

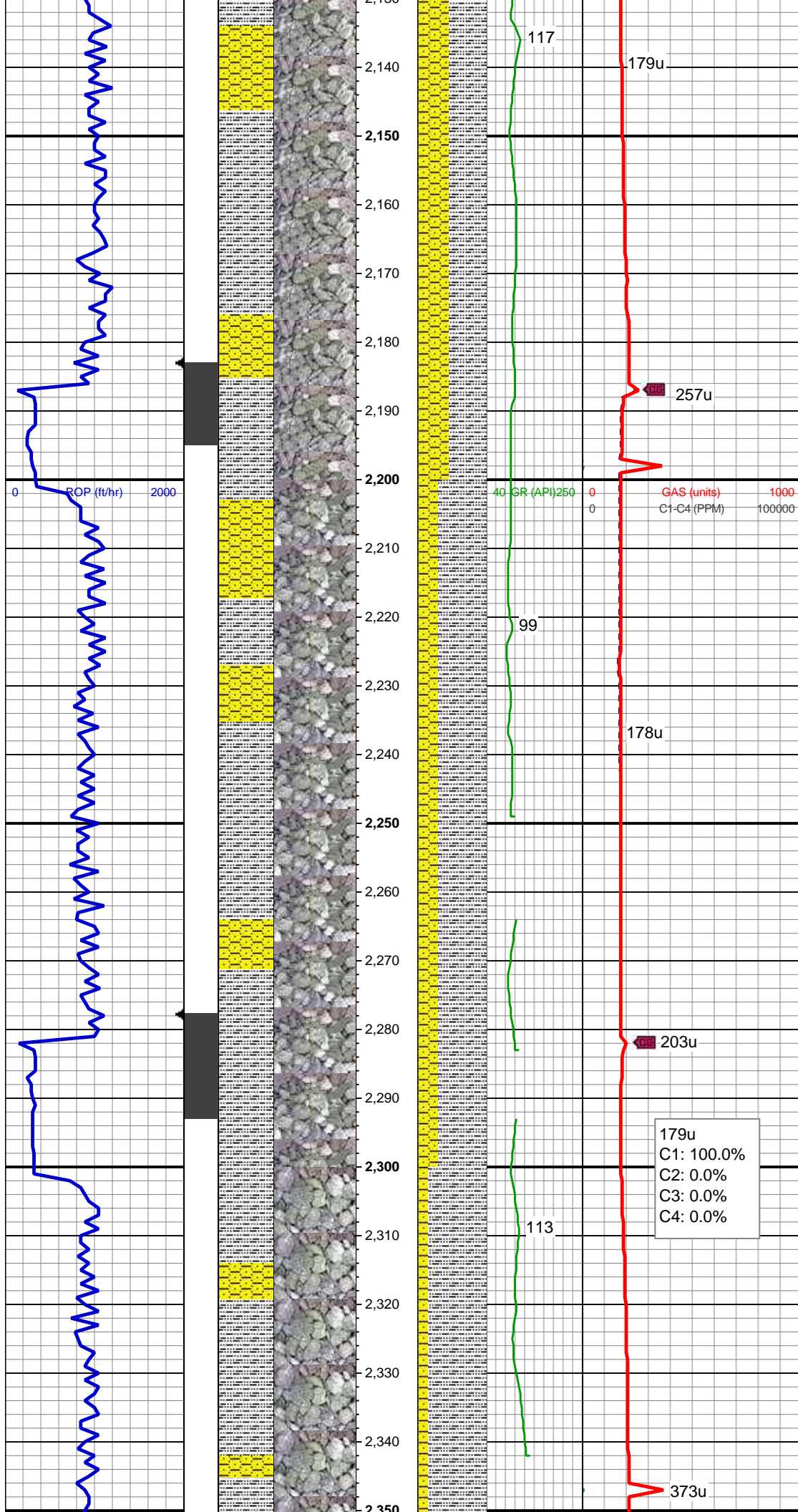
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt

MD: 2,028'  
TVD: 2,027.81'  
Inclination: 2.6 °  
Azimuth: 338.9 °  
VS: 5.79'

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt

179u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%

MD: 2,123'  
TVD: 2,122.64'  
Inclination: 4.2 °  
Azimuth: 324.5 °  
VS: 3.32'



SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt

MD: 2,218'  
TVD: 2,217.4'  
Inclination: 4 °  
Azimuth: 305.1 °  
VS: -1.1'

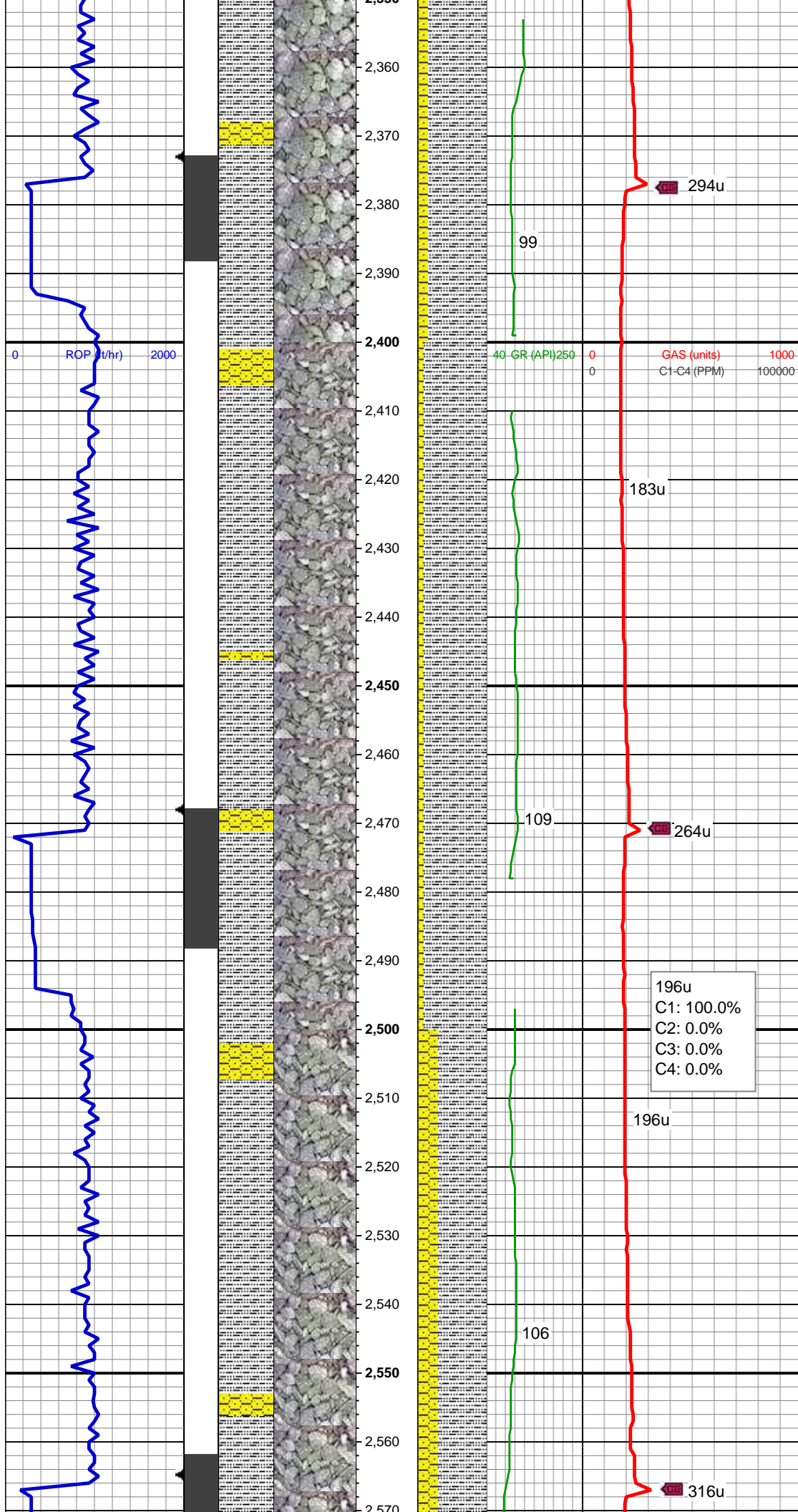
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt

179u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%

MD: 2,313'  
TVD: 2,312.08'  
Inclination: 5.5 °  
Azimuth: 305.1 °  
VS: -7.23'

SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt





SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt

MD: 2,408'  
TVD: 2,406.58'  
Inclination: 6.2 °  
Azimuth: 309 °  
VS: -14.55'

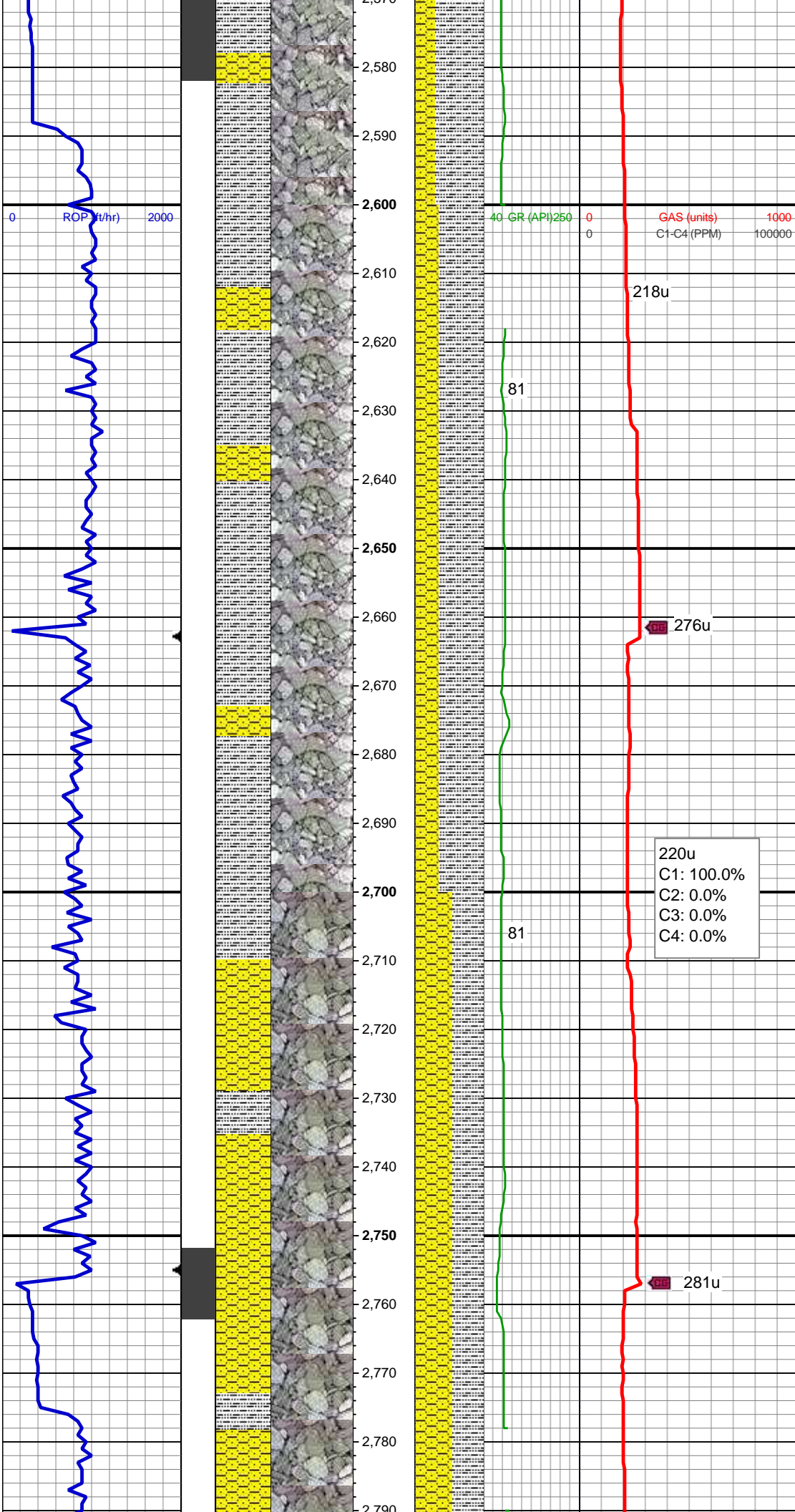
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt, occ lith frag

WT IN 8.40/ OUT 8.40  
VIS IN 26/ OUT 26

MD: 2,502'  
TVD: 2,499.91'  
Inclination: 7.5 °  
Azimuth: 306 °  
VS: -23'

SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt, occ lith frag





MD: 2,597'  
TVD: 2,593.91'  
Inclination: 9.1 °  
Azimuth: 309 °  
VS: -33.3'

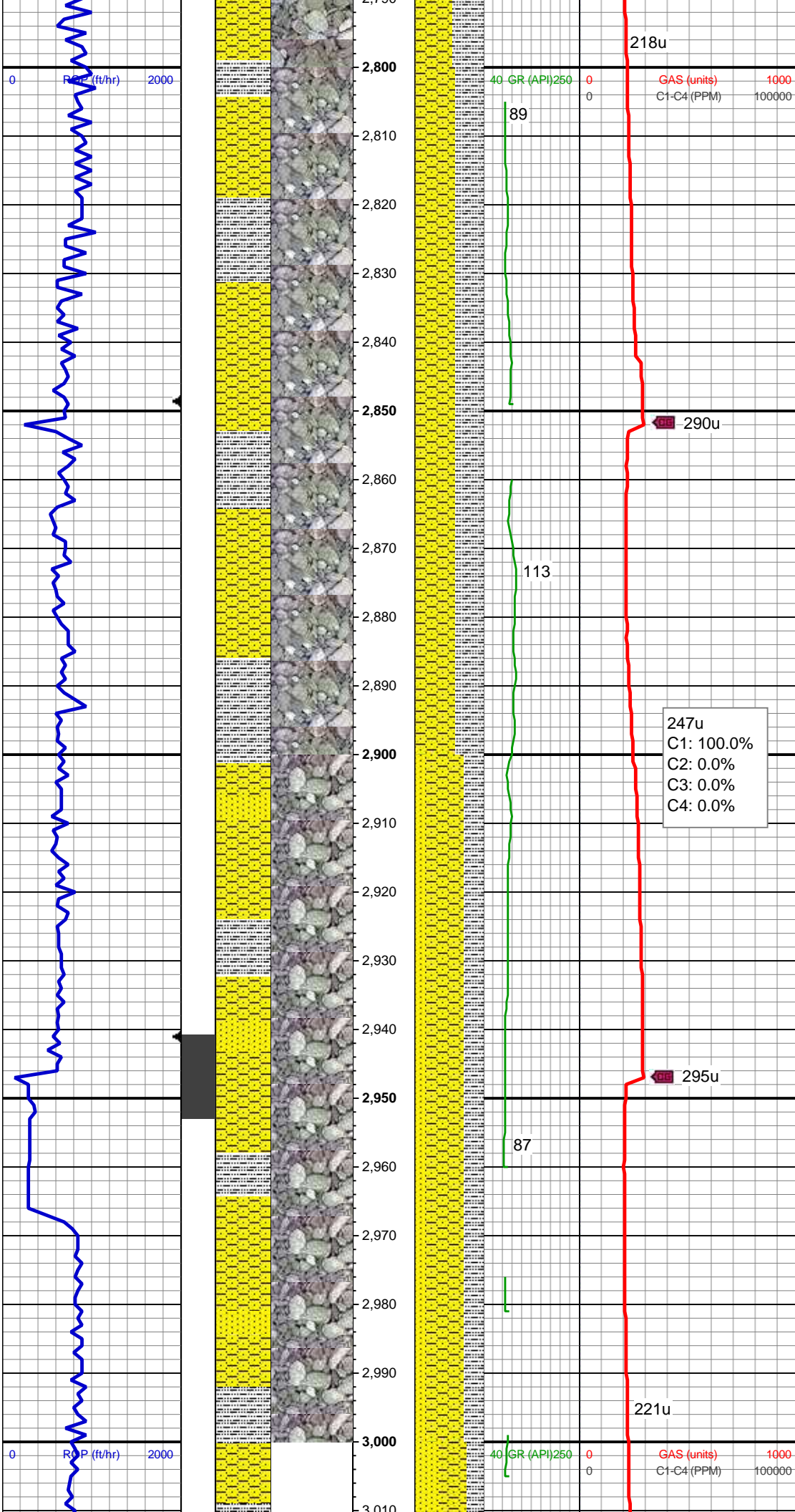
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt

MD: 2,692'  
TVD: 2,687.67'  
Inclination: 9.4 °  
Azimuth: 308.1 °  
VS: -44.6'

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt

MD: 2,787'  
TVD: 2,781.27'  
Inclination: 10.3 °  
Azimuth: 312.5 °

Azimuth: 312.3  
VS: -56.27'



SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt

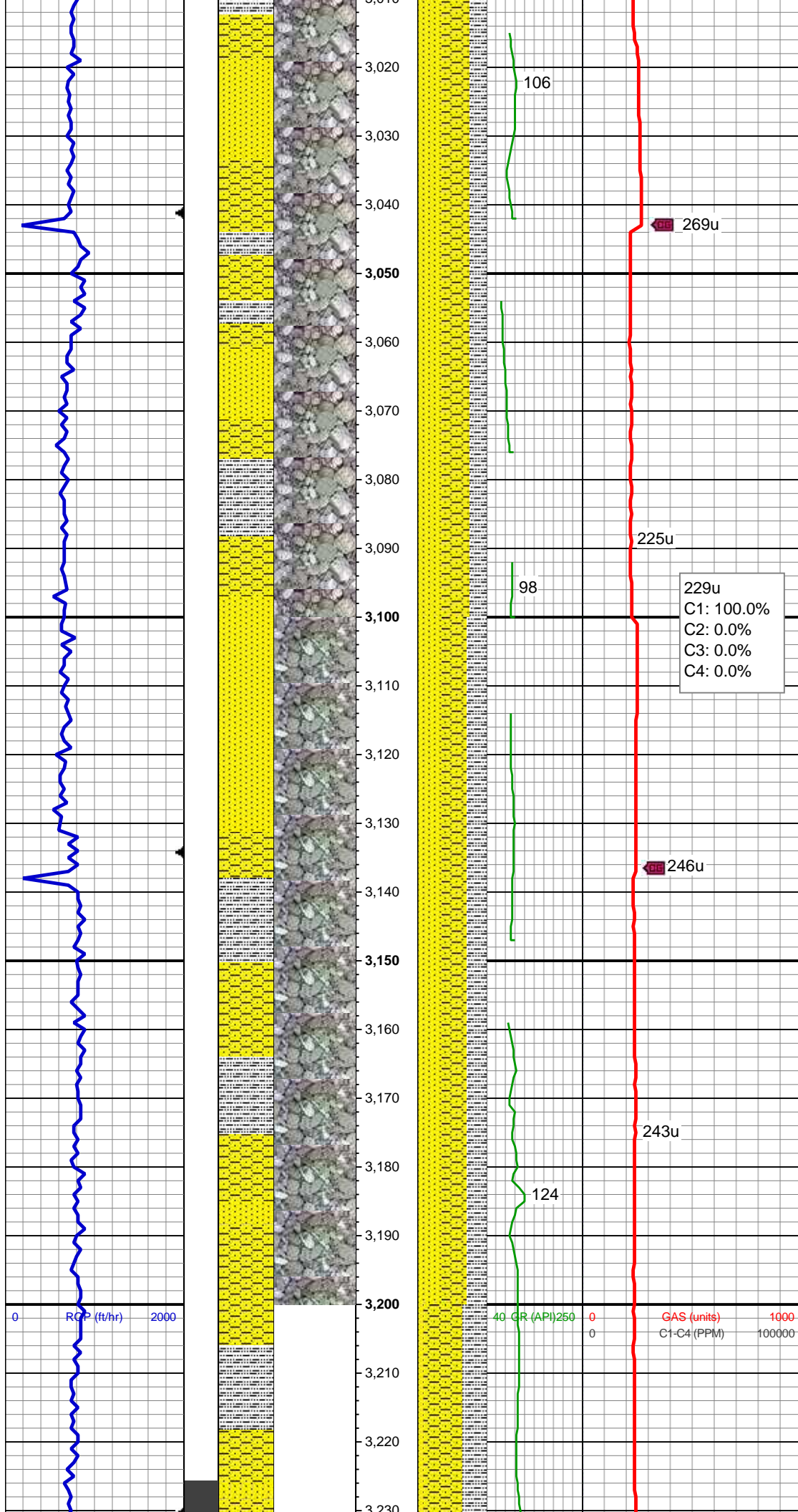
MD: 2,881'  
TVD: 2,873.9'  
Inclination: 9.3 °  
Azimuth: 313 °  
VS: -67.3'

247u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt  
SS: ltgy, wh-clr, sb blkgy-sb ang, hd, fri,  
arg mtx, calc, scat glau

MD: 2,977'  
TVD: 2,968.59'  
Inclination: 9.7 °  
Azimuth: 319.6 °  
VS: -77.45'





SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt, abnt lith frag  
SS: ltgy, wh-clr, sb blkgy-sb ang, hd, fri, arg mtx, calc, abnt glau  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty tex, arg cmt

MD: 3,071'  
TVD: 3,061.38'  
Inclination: 8.7 °  
Azimuth: 319.7 °  
VS: -86.43'

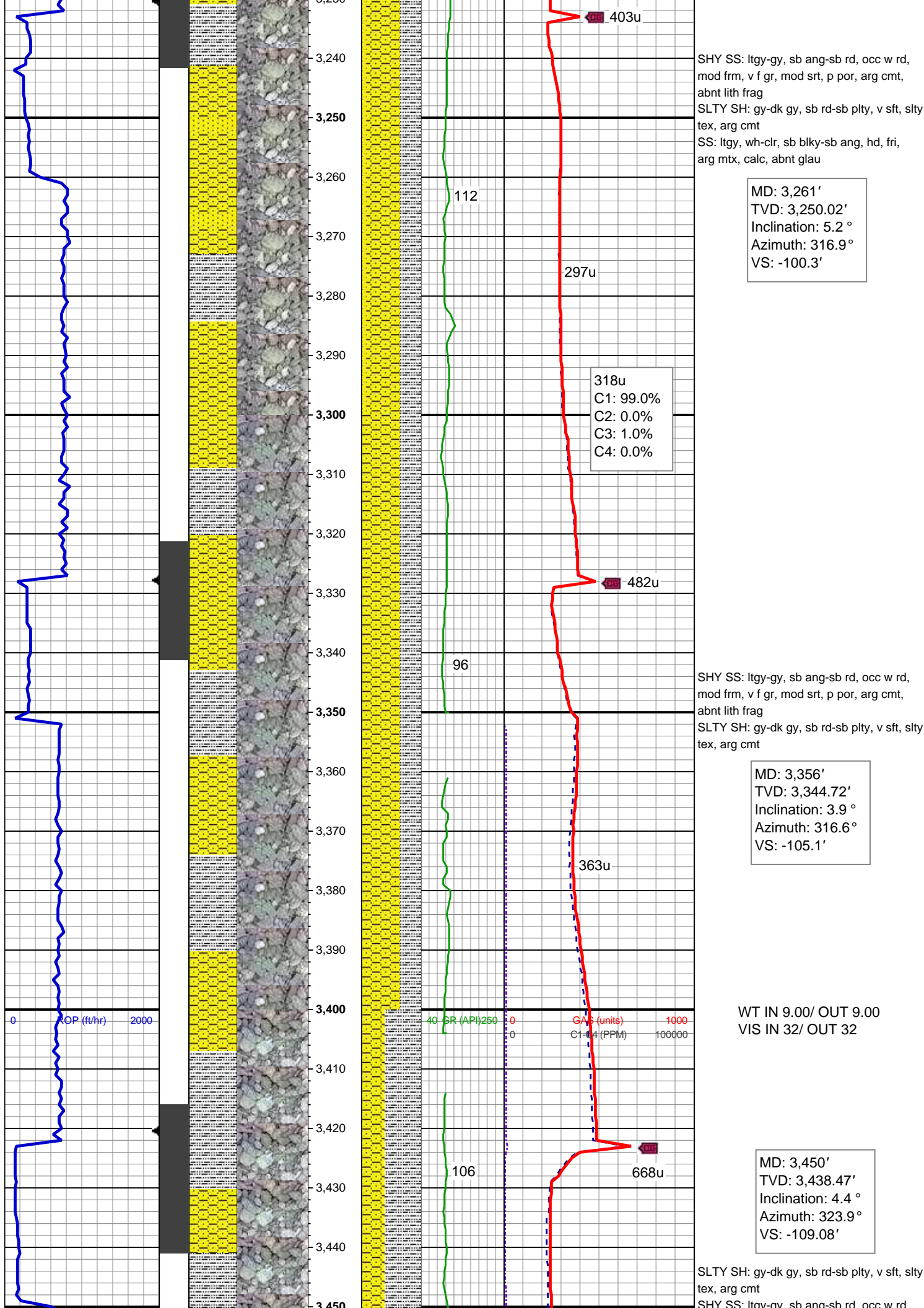
229u  
C1: 100.0%  
C2: 0.0%  
C3: 0.0%  
C4: 0.0%

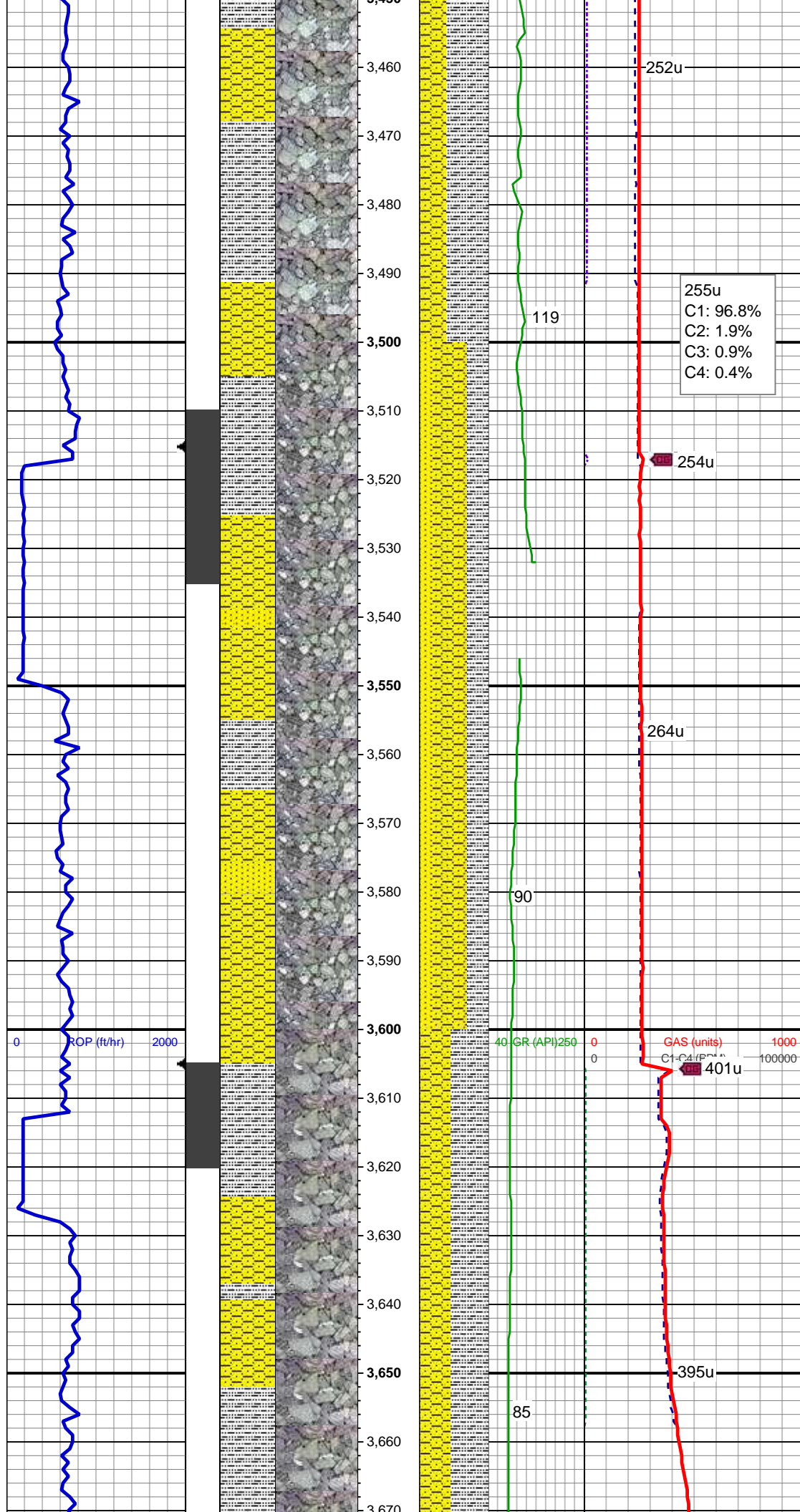
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt, abnt lith frag  
SS: ltgy, wh-clr, sb blkgy-sb ang, hd, fri, arg mtx, calc, abnt glau  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty tex, arg cmt

MD: 3,166'  
TVD: 3,155.53'  
Inclination: 6.6 °  
Azimuth: 317.4 °  
VS: -94.14'

WT IN 8.70/ OUT 8.70  
VIS IN 28/ OUT 28







SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt,  
abnt lith frag

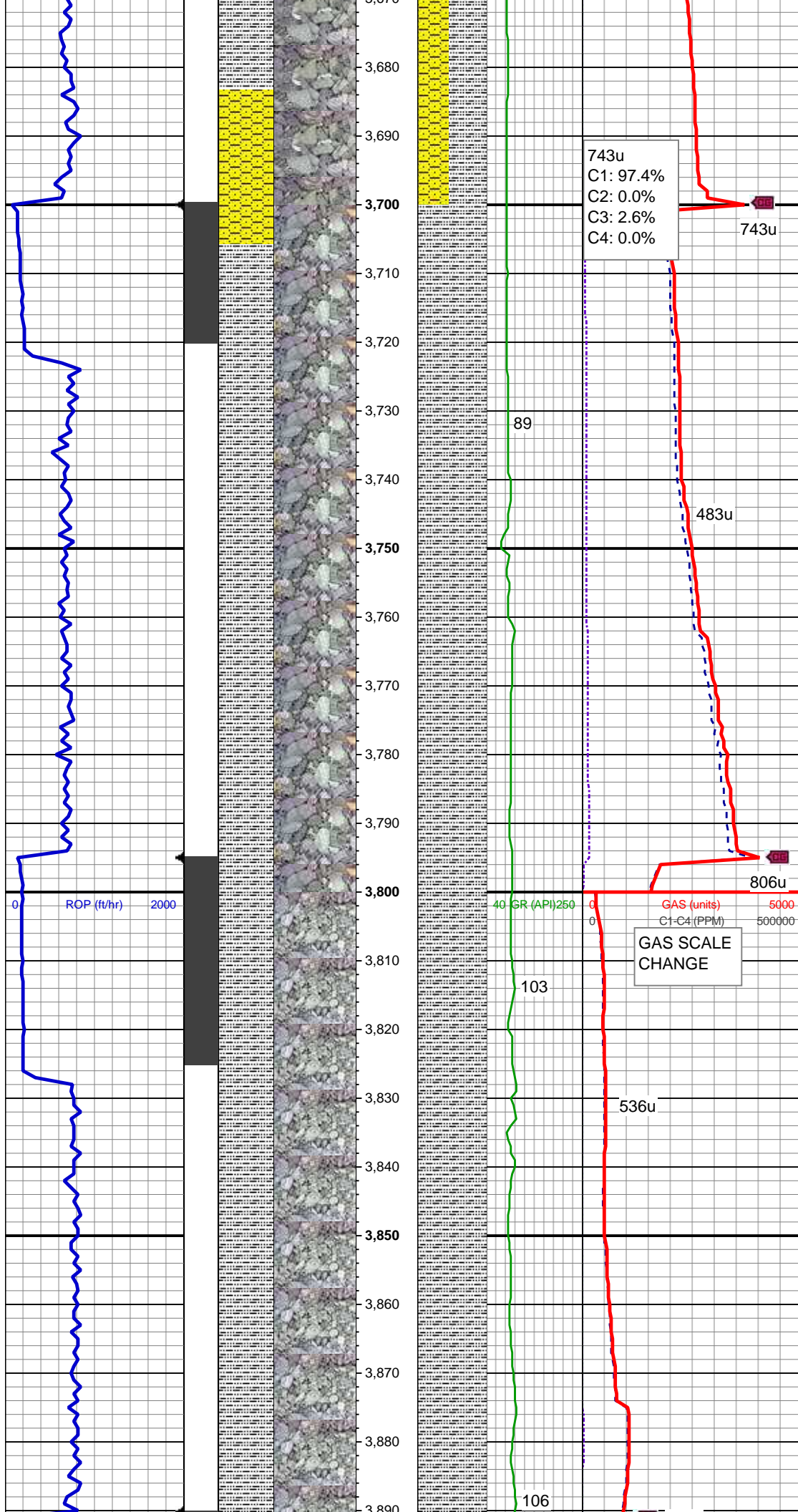
MD: 3,545'  
TVD: 3,533.08'  
Inclination: 6 °  
Azimuth: 324.8 °  
VS: -113.62'

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt,  
abnt lith frag  
SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt  
SS: ltgy, wh-clr, sb blkgy-sb ang, hd, fri,  
arg mtx, calc, abnt glau

MD: 3,640'  
TVD: 3,627.56'  
Inclination: 6 °  
Azimuth: 324.8 °  
VS: -118.81'

SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt,  
abnt lith frag





WT IN 9.20/ OUT 9.20  
VIS IN 31/ OUT 31

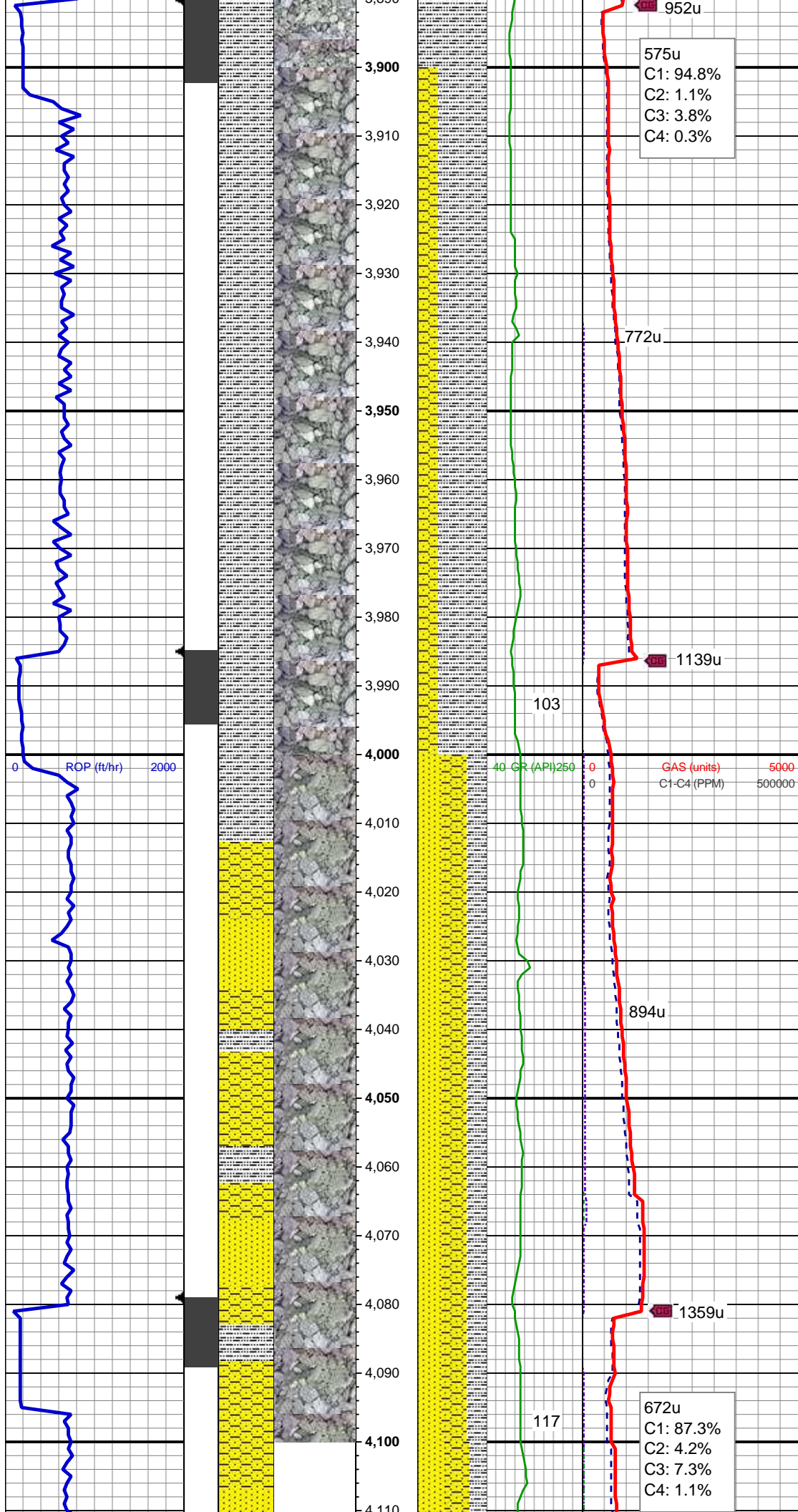
SLTY SH: gy-dk gy, sb rd-sb plty, v  
sft, slty tex, arg cmt

WT IN 9.30/ OUT 9.30  
VIS IN 32/ OUT 32

MD: 3,830'  
TVD: 3,815.98'  
Inclination: 8.7 °  
Azimuth: 328.3 °  
VS: -130.75'

SLTY SH: gy-dk gy, sb rd-sb plty, v  
sft, slty tex, arg cmt





575u  
C1: 94.8%  
C2: 1.1%  
C3: 3.8%  
C4: 0.3%

MD: 3,925'  
TVD: 3,909.77'  
Inclination: 9.6 °  
Azimuth: 322.4 °  
VS: -138.55'

SLTY SH: gy-dk gy, sb rd-sb plty, v sft, slty  
tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt,  
abnt lith frag

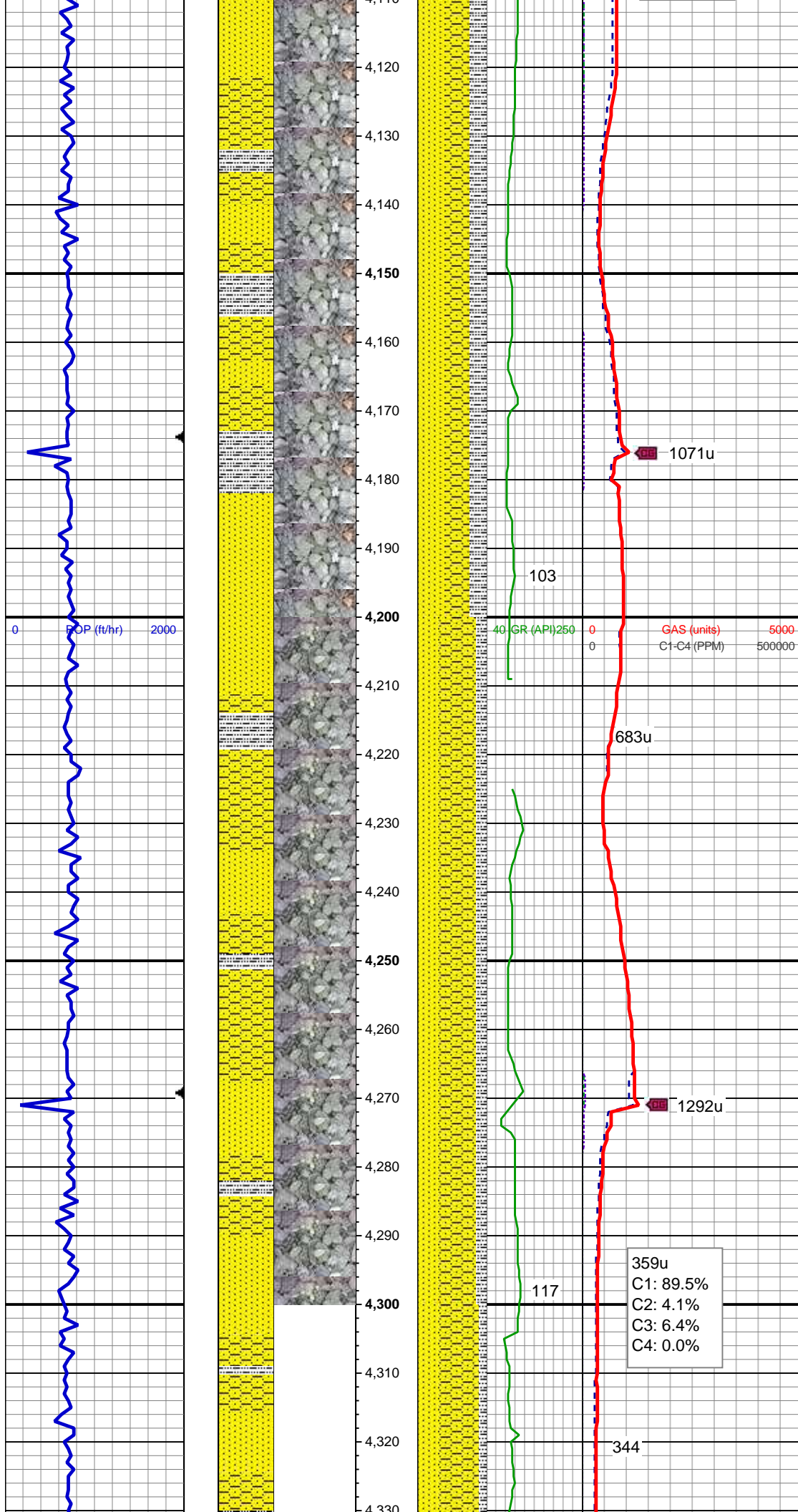
MD: 4,019'  
TVD: 4,002.84'  
Inclination: 9.1 °  
Azimuth: 325.7 °  
VS: -144.21'

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt, tr  
glauc  
SS: lt gy, wh-clr, sb blkgy-sb ang, hd, fri,  
arg mtx, calc, scat glau, calc  
SLTY SH: med gy-dk gy, sb rd-sb plty,  
frm, slty tex, arg cmt

WT IN 9.40/ OUT 9.40  
VIS IN 33/ OUT 33

MD: 4,114'  
TVD: 4,002.77'

672u  
C1: 87.3%  
C2: 4.2%  
C3: 7.3%  
C4: 1.1%



TVD: 4,096.77'  
Inclination: 8.1 °  
Azimuth: 320.4 °  
VS: -151.96'

SS: lt gy, wh-clr, sb blk-y-sb ang, hd, fri,  
arg mtx, calc, scat glau, calc  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt, tr  
glauc  
SLTY SH: med gy-dk gy, sb rd-sb plty,  
frm, slty tex, arg cmt

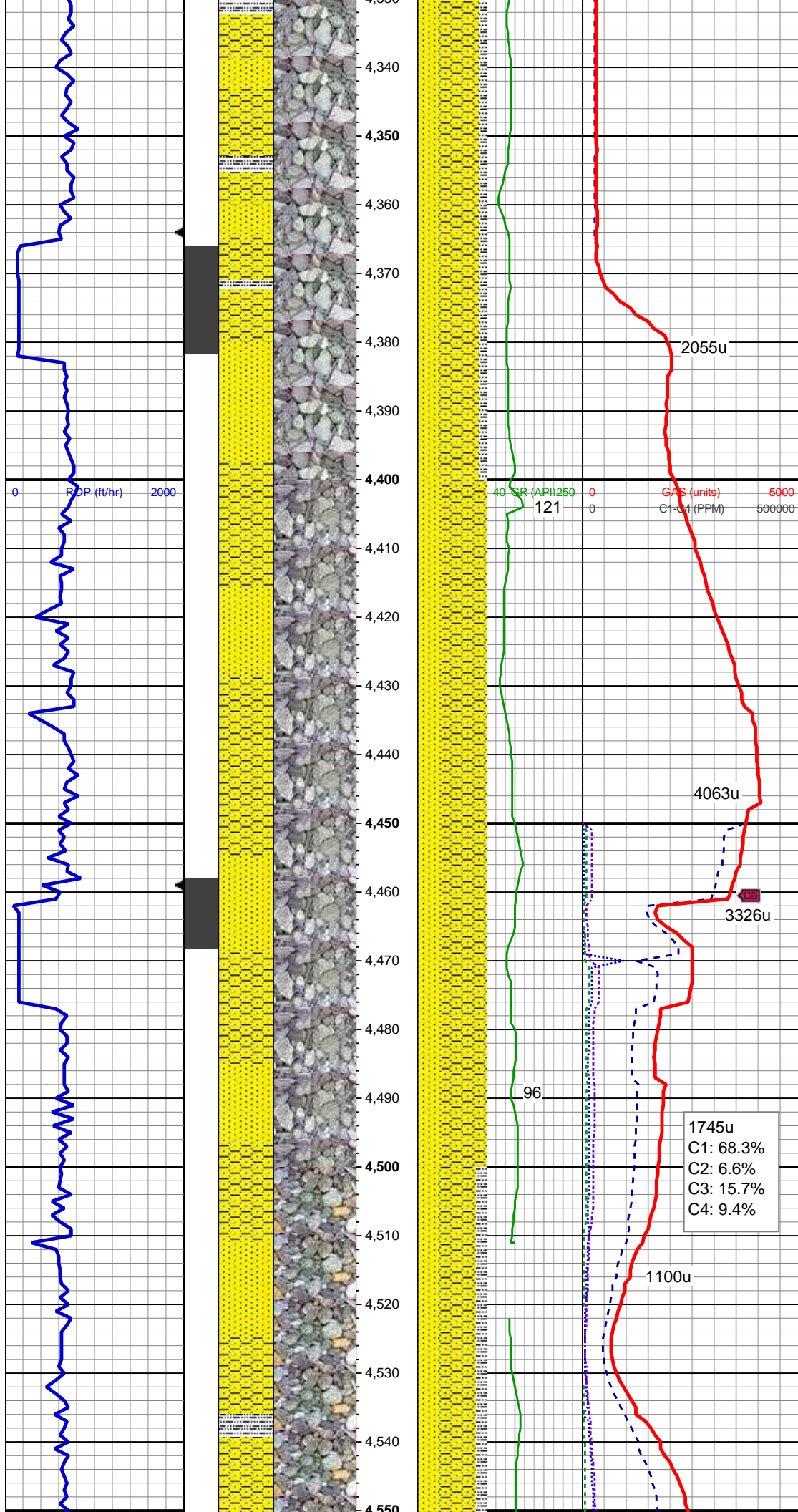
MD: 4,209'  
TVD: 4,191'  
Inclination: 6.6 °  
Azimuth: 310.2 °  
VS: -159.82'

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt, tr  
glauc  
SS: lt gy, wh-clr, sb blk-y-sb ang, hd, fri,  
arg mtx, calc, scat glau, calc  
SLTY SH: med gy-dk gy, sb rd-sb plty,  
frm, slty tex, arg cmt

MD: 4,304'  
TVD: 4,285.5'  
Inclination: 5.1 °  
Azimuth: 298.6 °  
VS: -167.32'

359u  
C1: 89.5%  
C2: 4.1%  
C3: 6.4%  
C4: 0.0%





SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt, tr glauc, abnt lith frag  
SS: lt gy, wh-clr, sb blkgy-sb ang, hd, fri, arg mtx, calc, scat glau, calc  
SLTY SH: med gy-dk gy, sb rd-sb plty, frm, slty tex, arg cmt

MD: 4,398'  
TVD: 4,379.21'  
Inclination: 4 °  
Azimuth: 315.9 °  
VS: -172.98'

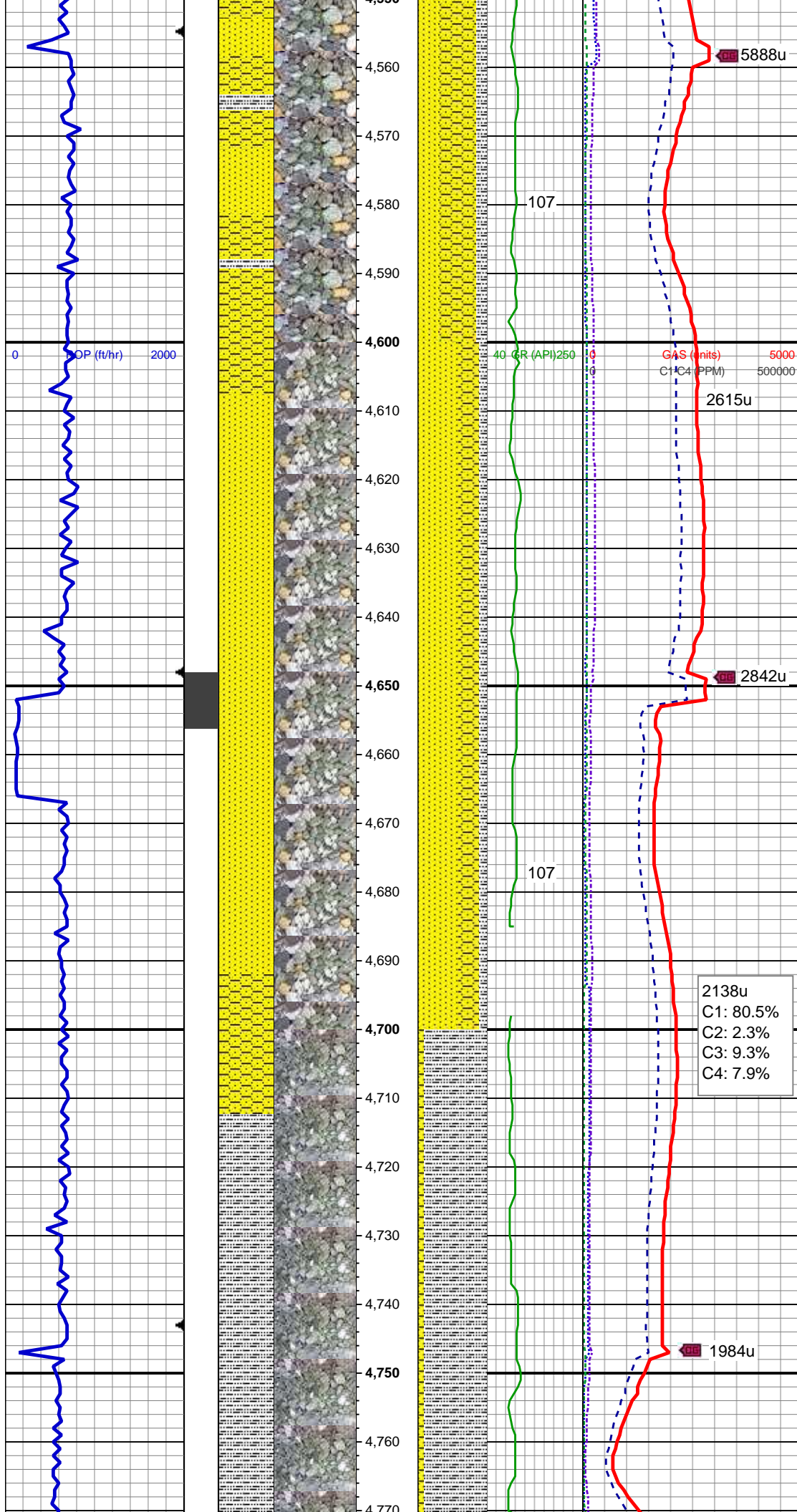
WT IN 9.40/ OUT 9.40  
VIS IN 34/ OUT 34

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt, tr glauc, abnt lith frag  
SS: lt gy, wh-clr, sb blkgy-sb ang, hd, fri, arg mtx, calc, scat glau, calc

MD: 4,493'  
TVD: 4,474'  
Inclination: 3.5 °  
Azimuth: 319.6 °  
VS: -176.86'

SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt, tr glauc, abnt lith frag  
SS: lt gy, wh-clr, sb blkgy-sb ang, hd, fri





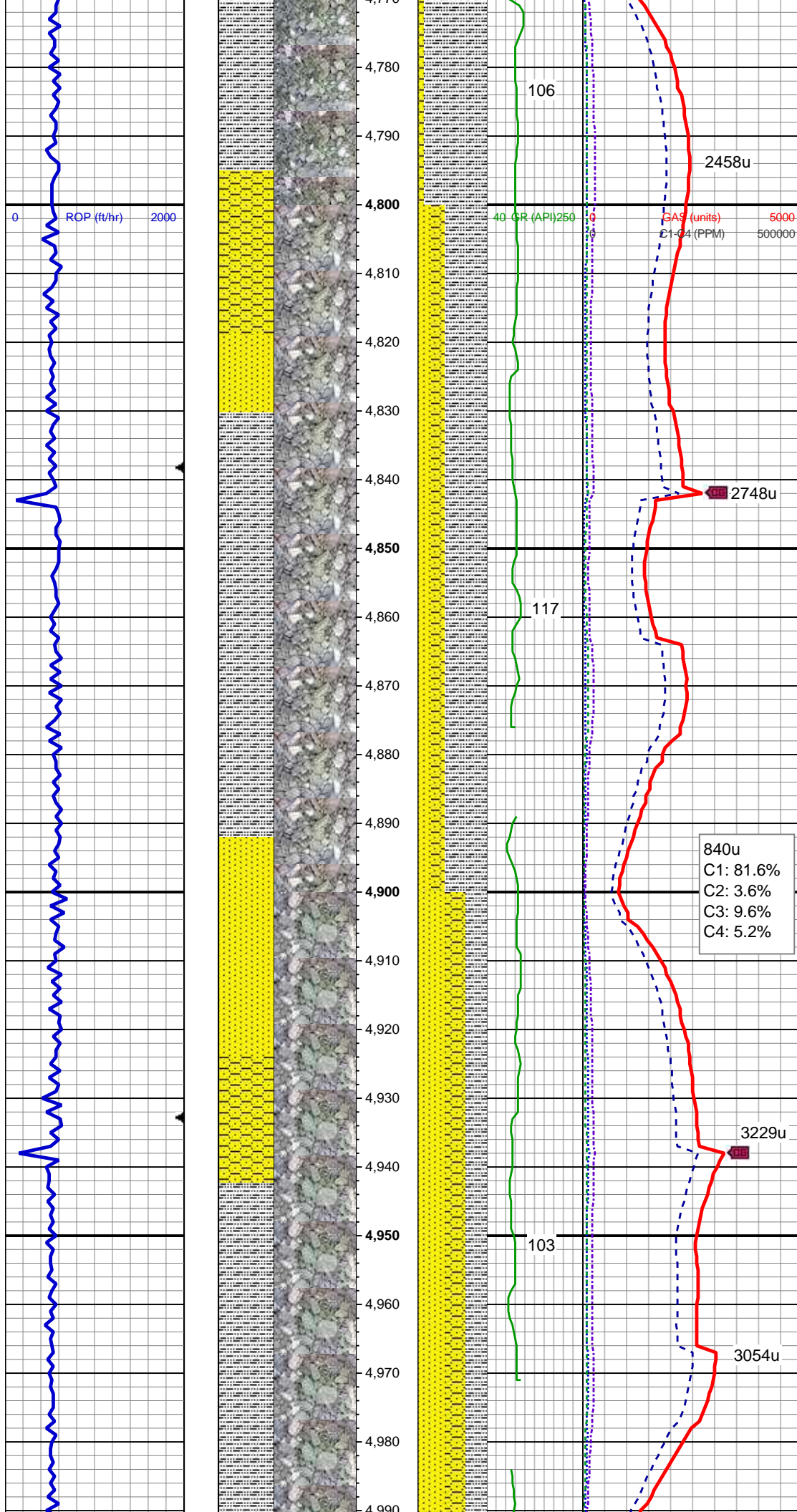
SS: lt gy, wh-clr, sb blk-y-sb ang, hd, fri,  
arg mtx, calc, scat glau, calc  
SLTY SH: med gy-dk gy, sb rd-sb plty,  
frm, slty tex, arg cmt

MD: 4,588'  
TVD: 4,568.87'  
Inclination: 2.6 °  
Azimuth: 318.5 °  
VS: -179.92'

SS: lt gy, wh-clr, sb blk-y-sb ang, hd, fri,  
arg mtx, calc, scat glau, calc  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt, tr  
glauc, abnt lith frag  
SLTY SH: med gy-dk gy, sb rd-sb plty,  
frm, slty tex, arg cmt

MD: 4,683'  
TVD: 4,663.8'  
Inclination: 1.8 °  
Azimuth: 355.9 °  
VS: -181.25'

SLTY SH: med gy-dk gy, sb rd-sb plty,  
frm, c gr, slty tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt



MD: 4,778'  
TVD: 4,758.77'  
Inclination: 1 °  
Azimuth: 359.5 °  
VS: -181.21'

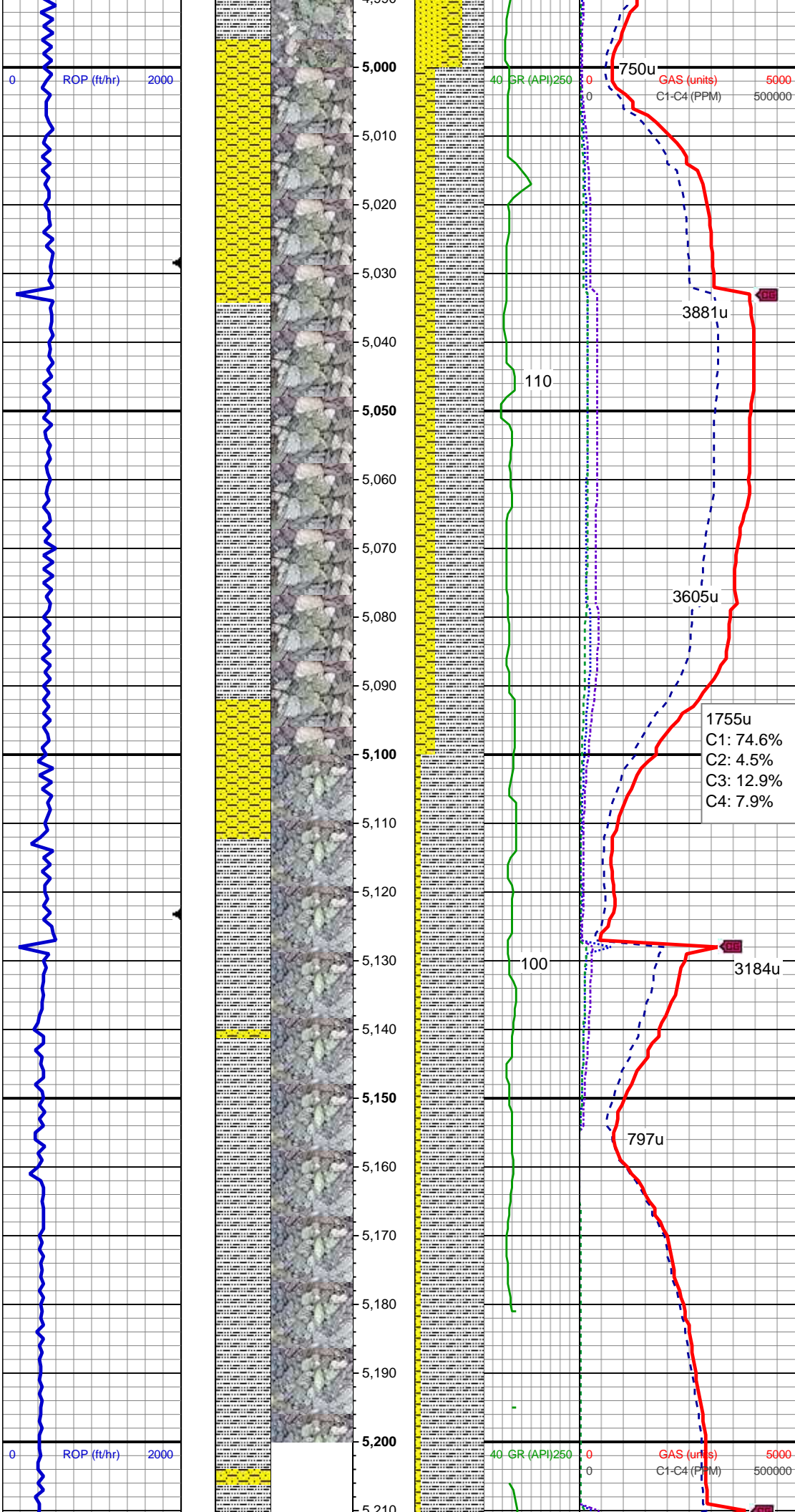
SLTY SH: med gy-dk gy, sb rd-sb plty, frm, slty tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt, tr glauc, abnt lith frag  
SS: lt gy, wh-clr, sb blkgy-sb ang, hd, fri, arg mtx, calc, scat glau, calc

MD: 4,873'  
TVD: 4,853.76'  
Inclination: 0.8 °  
Azimuth: 329.7 °  
VS: -181.46'

SS: lt gy, wh-clr, sb blkgy-sb ang, hd, fri, arg mtx, calc, scat glau, calc  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt, tr glauc, abnt lith frag  
SLTY SH: med gy-dk gy, sb rd-sb plty, frm, slty tex, arg cmt

MD: 4,968'  
TVD: 4,948.76'  
Inclination: 0.5 °  
Azimuth: 353.7 °  
VS: -181.78'





WT IN 9.70/ OUT 9.70  
VIS IN 34/ OUT 34

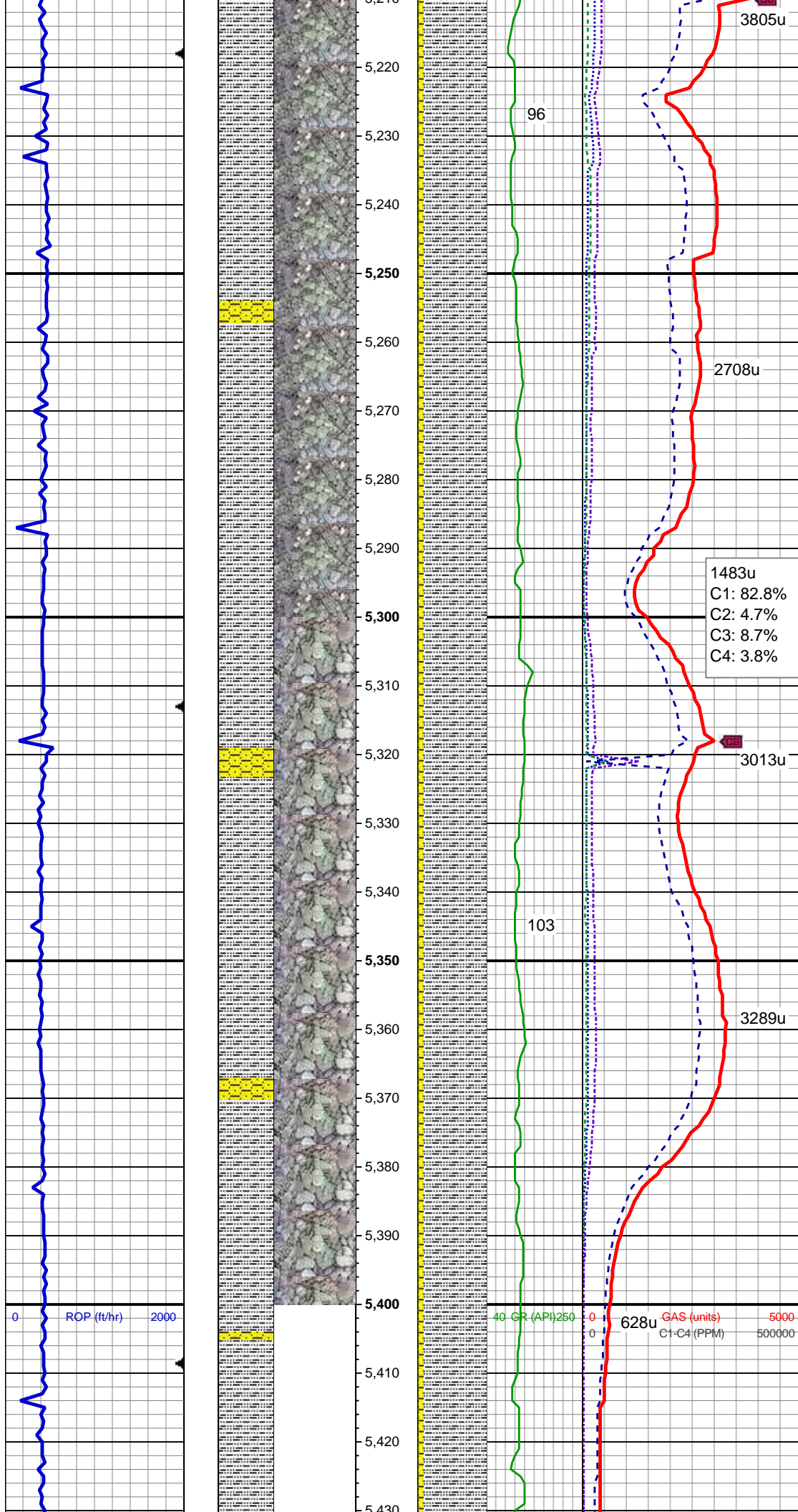
SLTY SH: med gy-dk gy, sb blk-y-sb plty,  
frm, c gr, slty tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt

MD: 5,063'  
TVD: 5,043.75'  
Inclination: 0.6 °  
Azimuth: 17.7 °  
VS: -181.62'

1755u  
C1: 74.6%  
C2: 4.5%  
C3: 12.9%  
C4: 7.9%

SLTY SH: med gy-dk gy, sb blk-y-sb plty,  
frm, c gr, slty tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt

MD: 5,157'  
TVD: 5,137.75'  
Inclination: 0.3 °  
Azimuth: 315.7 °  
VS: -181.6'



SLTY SH: med gy-dk gy, sb blkly-sb plty, frm, c gr, slty tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt

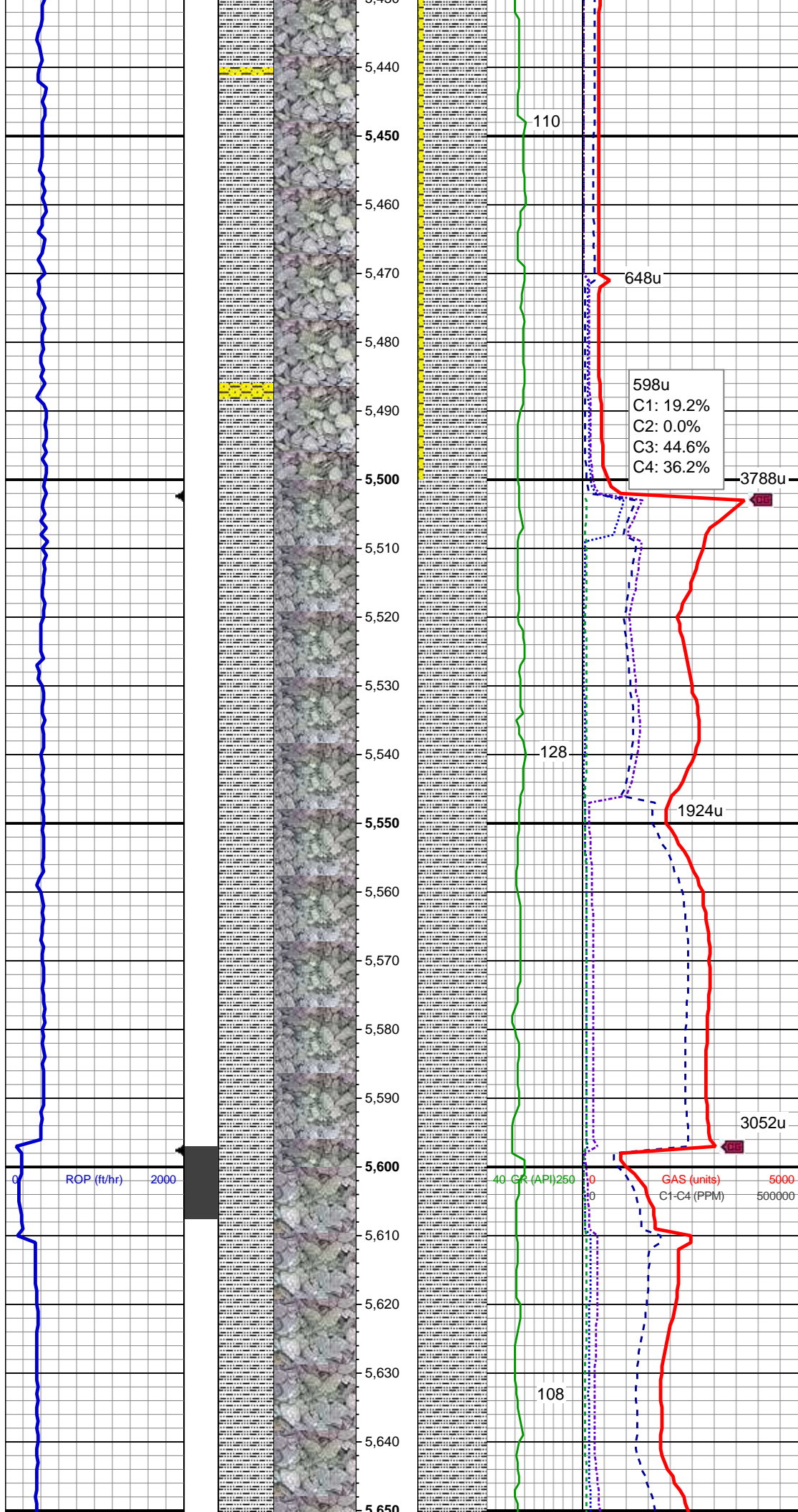
MD: 5,252'  
TVD: 5,232.75'  
Inclination: 0.5 °  
Azimuth: 322.9 °  
VS: -181.99'

1483u  
C1: 82.8%  
C2: 4.7%  
C3: 8.7%  
C4: 3.8%

MD: 5,347'  
TVD: 5,327.75'  
Inclination: 0.2 °  
Azimuth: 248.4 °  
VS: -182.37'

SLTY SH: med gy-dk gy, sb blkly-sb plty, frm, c gr, slty tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd, mod frm, v f gr, mod srt, p por, arg cmt





MD: 5,442'  
TVD: 5,422.74'  
Inclination: 0.2 °  
Azimuth: 81.5 °  
VS: -182.37'

SLTY SH: med gy-dk gy, sb blkly-sb plty,  
frm, f gr, slty tex, arg cmt  
SHY SS: ltgy-gy, sb ang-sb rd, occ w rd,  
mod frm, v f gr, mod srt, p por, arg cmt

598u  
C1: 19.2%  
C2: 0.0%  
C3: 44.6%  
C4: 36.2%

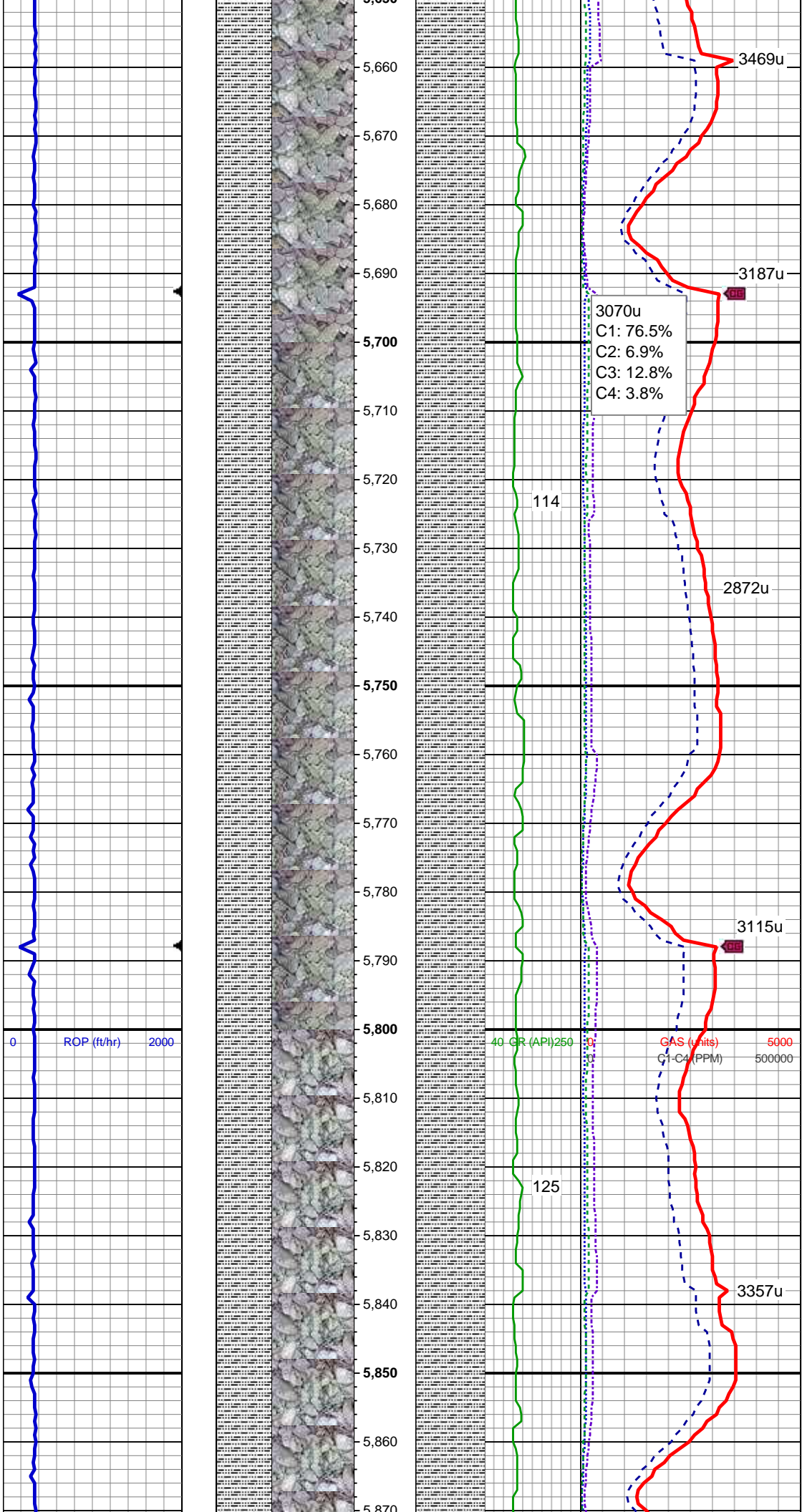
MD: 5,537'  
TVD: 5,517.74'  
Inclination: 1.1 °  
Azimuth: 146.1 °  
VS: -181.74'

SLTY SH: med gy-dk gy, sb blkly-sb plty,  
frm, f gr, slty tex, arg cmt, rr inoc, tr pyr

MD: 5,632'  
TVD: 5,612.73'  
Inclination: 0.5 °  
Azimuth: 315.5 °  
VS: -181.55'

SLTY SH: med gy-dk gy, sb blkly-sb plty,

frm, f gr, slty tex, arg cmt, sl calc



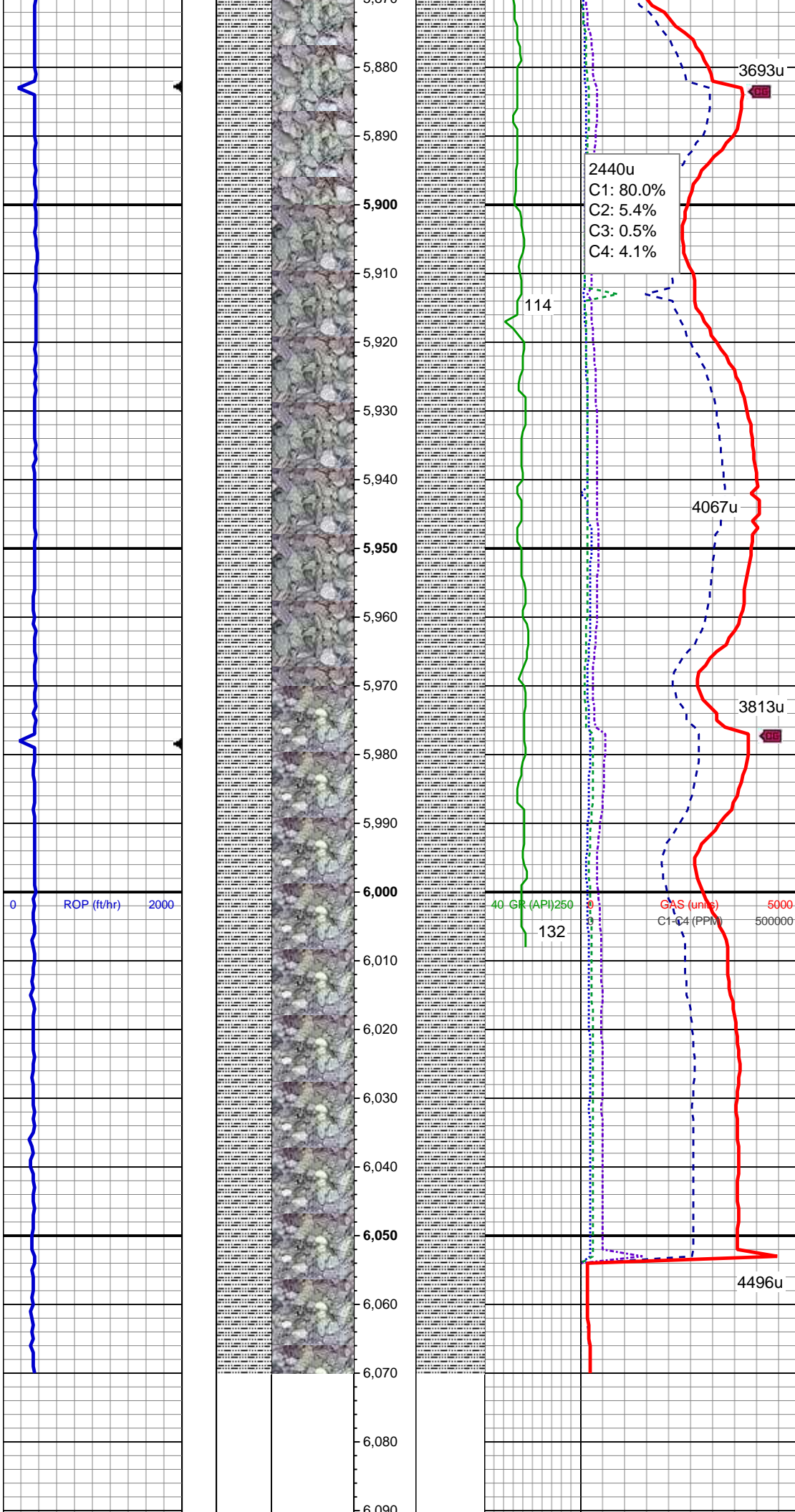
MD: 5,726'  
TVD: 5,706.73'  
Inclination: 0.7 °  
Azimuth: 320.3 °  
VS: -182.16'

SLTY SH: med gy-dk gy, sb blk-y-sb plty,  
frm, f gr, slty tex, arg cmt, sl calc

MD: 5,821'  
TVD: 5,801.72'  
Inclination: 1 °  
Azimuth: 344.2 °  
VS: -182.67'

SLTY SH: med gy-dk gy, sb blk-y-sb plty,  
frm, f gr, slty tex, arg cmt, sl calc





MD: 5,916'  
TVD: 5,896.71'  
Inclination: 0.8 °  
Azimuth: 353.1 °  
VS: -182.89'

WT IN 9.95/ OUT 9.95  
VIS IN 35/ OUT 35

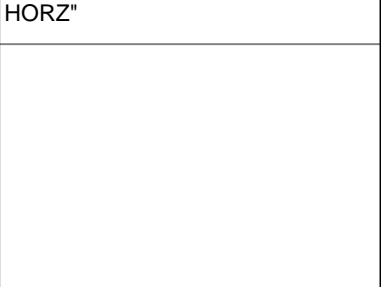
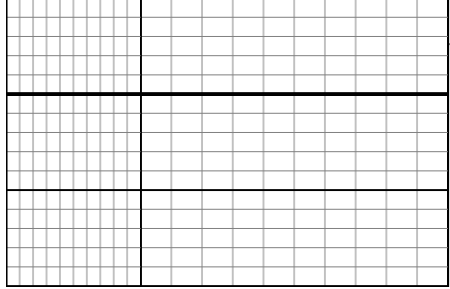
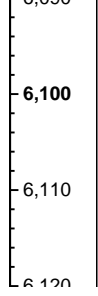
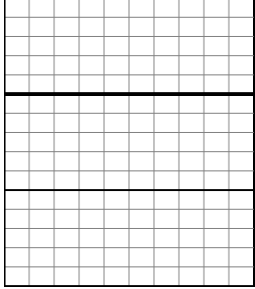
SLTY SH: med gy-dk gy, sb blkgy-sb plty,  
frm, f gr, slty tex, arg cmt, sl calc

MD: 6,011'  
TVD: 5,991.7'  
Inclination: 0.3 °  
Azimuth: 277.9 °  
VS: -183.17'

SLTY SH: med gy-dk gy, sb blkgy-sb plty,  
frm, f gr, slty tex, arg cmt, sl calc

TD @ 6070' MD  
01/21/2014 @ 8:24 PM

LOG CONTINUES ON MPOINT  
"NO WORRIES PC G14-64-1HN



HORZ"