

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name TREBOR B11-68-1HN

Location SEC11 T5N R64W

State CO

County WELD

Country USA

Rig Number H&P 330

API Number 05-123-37165

AFE # 139198

Region DENVER-JULESBURG BASIN

Field WATTENBERG

Spud Date 7/26/2013

Surface Coordinates 270 FNL 673 FWL Lat/Long: 40.42034/-104.52462

Bottom Hole Coordinates 1120' FNL, 565' FEL Lat/Long: 40.41807/-104.51013

Ground Elevation 4606'

K.B. Elevation 4636'

Logged Interval 2500' **To** 5814'

Total Depth 10552

Formation PIERRE, PARKMAN, SUSSEX, SHANNON, TEEPEE BUTTES

Type of Drilling Fluid LSND

Operator

Company Noble Energy Inc

Geologist

Name Teresa Malesardi

Company Noble Energy Inc

Other

WELL-SITE GEOLOGISTS

RYAN SHILLING
MICHAEL ROOKS
MARK WEIDERSPON

LOG CONTINUES ON FILE:
TREBOR B11-68-1HN HORIZONTAL.mpd

Rock Types

 SANDSTONE

 SHALY SANDSTONE

 SHALY SILTSTONE

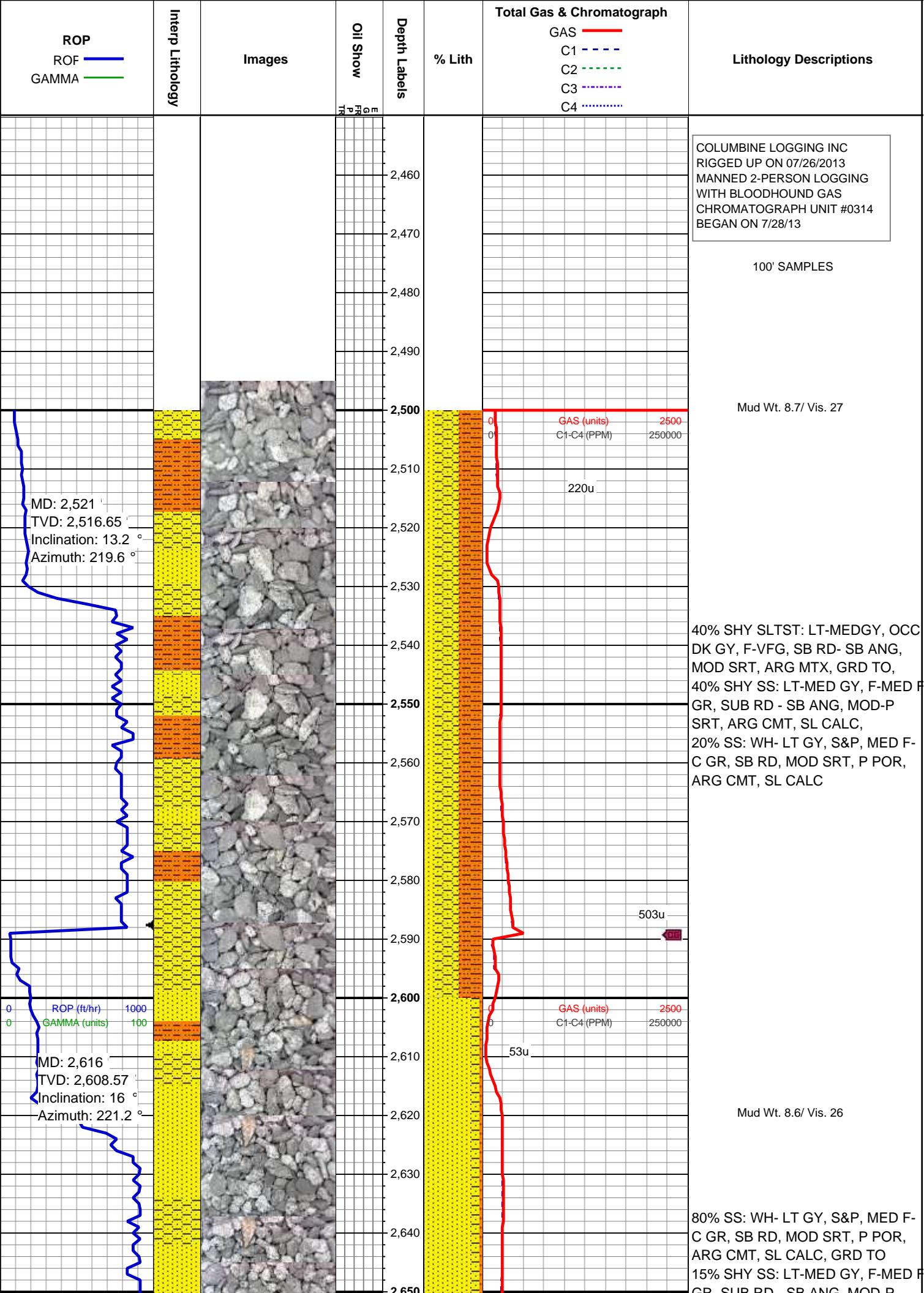
Other Symbols

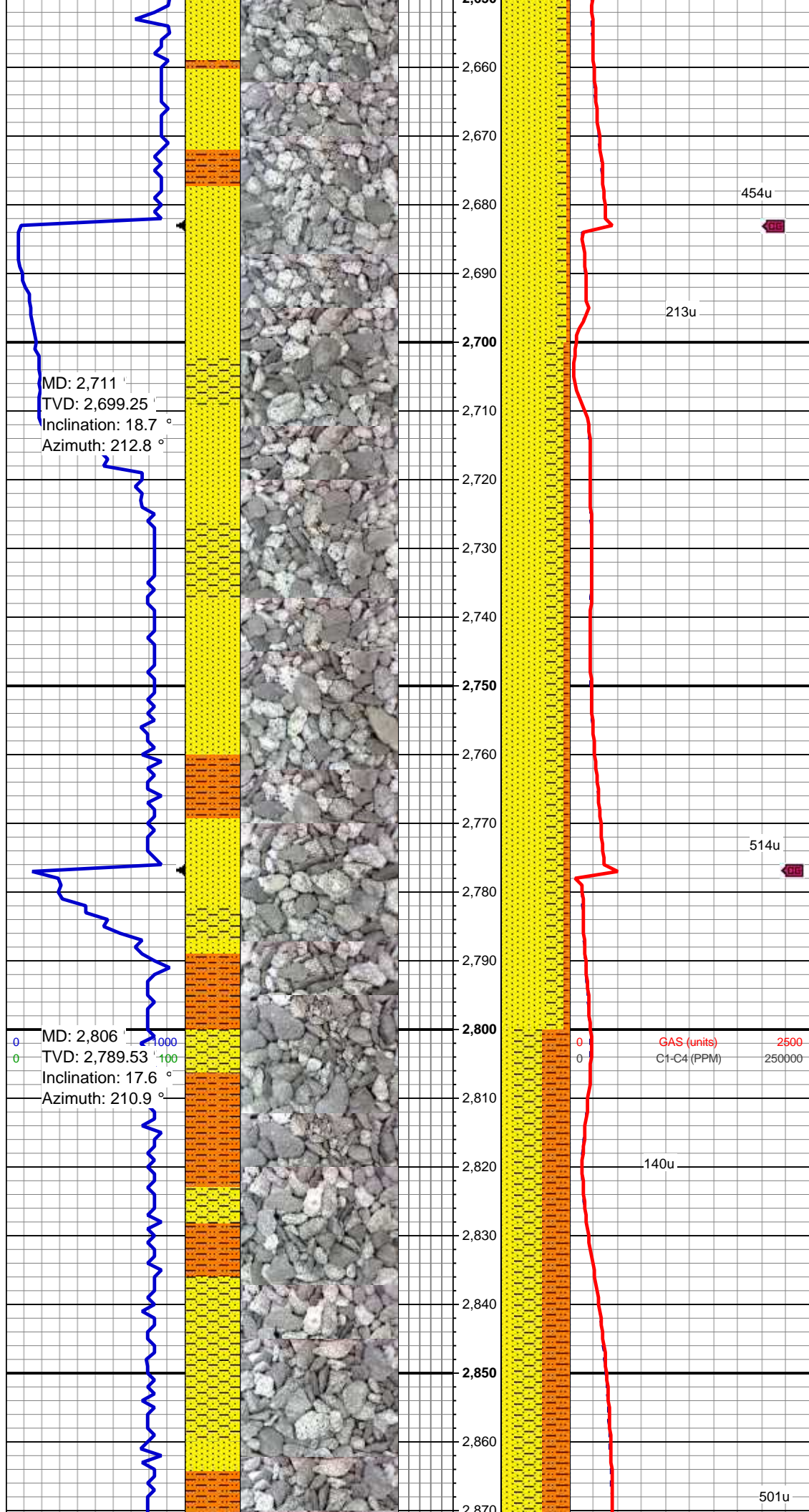
Engineering

 CONNECTION (LEFT)

 CONNECTION GAS

 MN DEPTH MN DEPTH



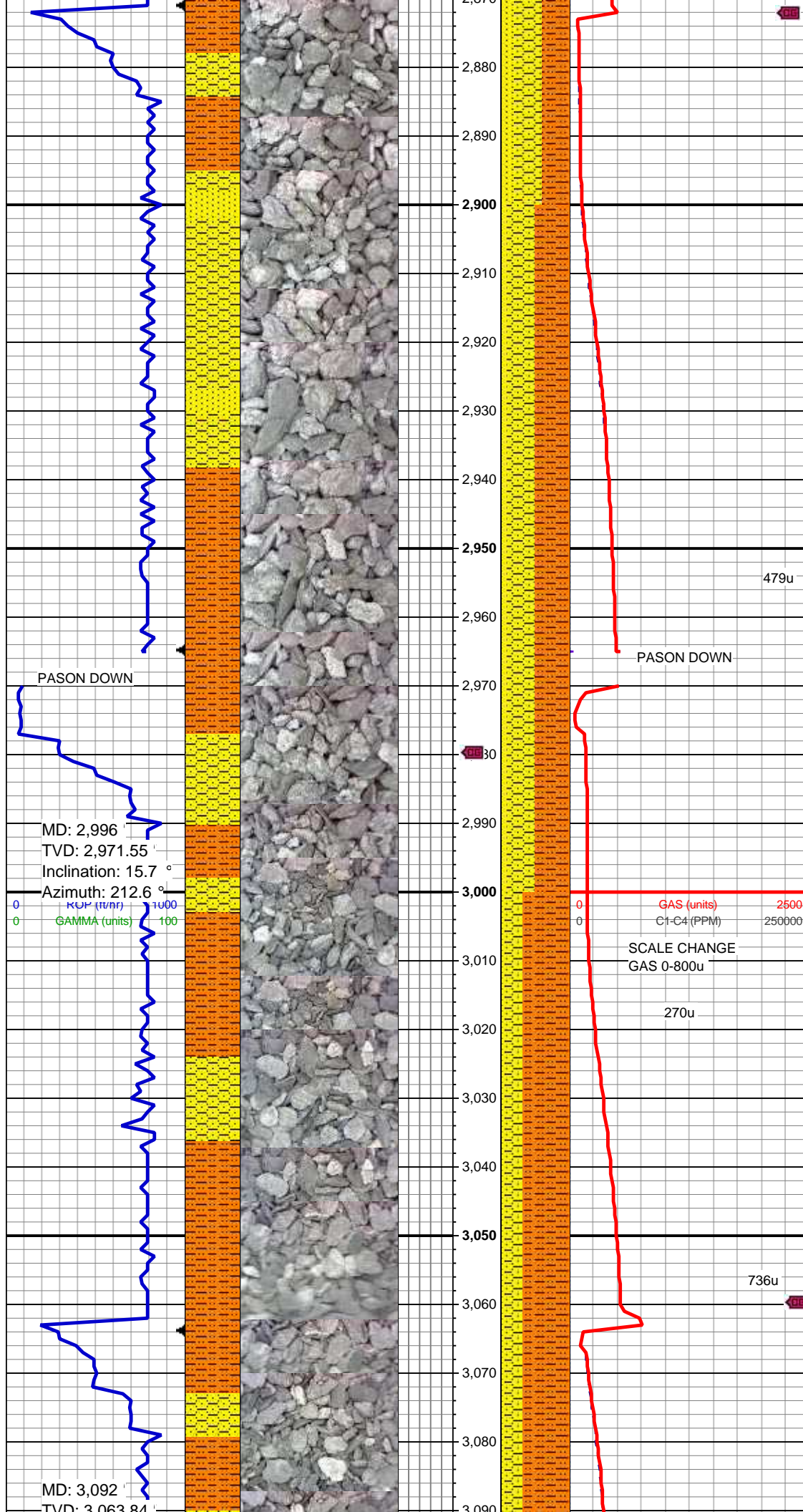


GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,
5% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG MTX

65% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC, GRD TO
25% SHY SS: LT-MED GY, F-MED P
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,
10% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG MTX

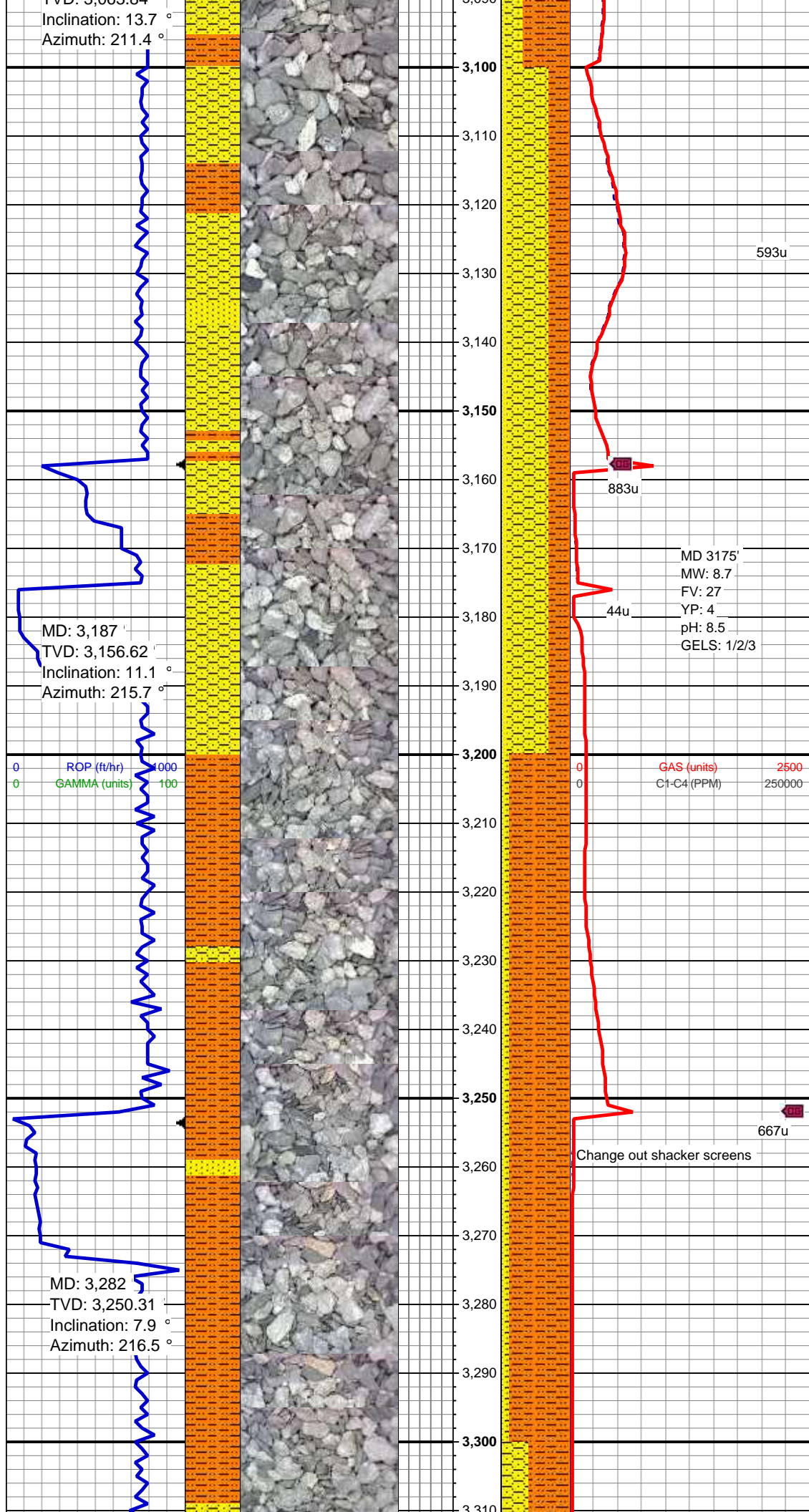
Mud Wt. 8.7/ Vis. 27

40% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG MTX, GRD TO,
40% SHY SS: LT-MED GY, F-MED P
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,
20% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC



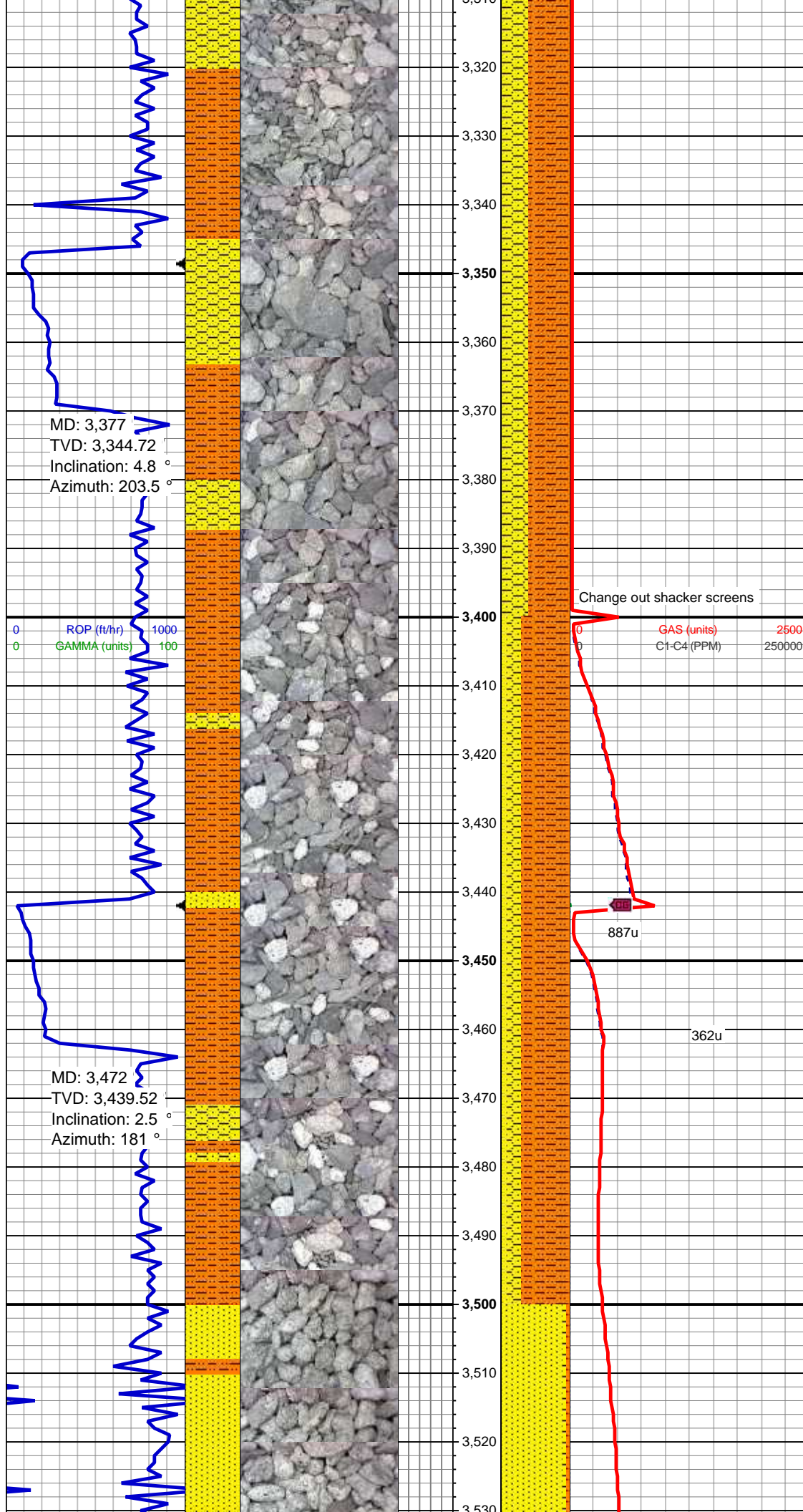
50% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG MTX, GRD TO,
40% SHY SS: LT-MED GY, F-MED P
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,
10% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC

70% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG MTX, GRD TO,
25% SHY SS: LT-MED GY, F-MED P
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,
5% SS: WH- LT GY, S&P, MED F- C
GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC



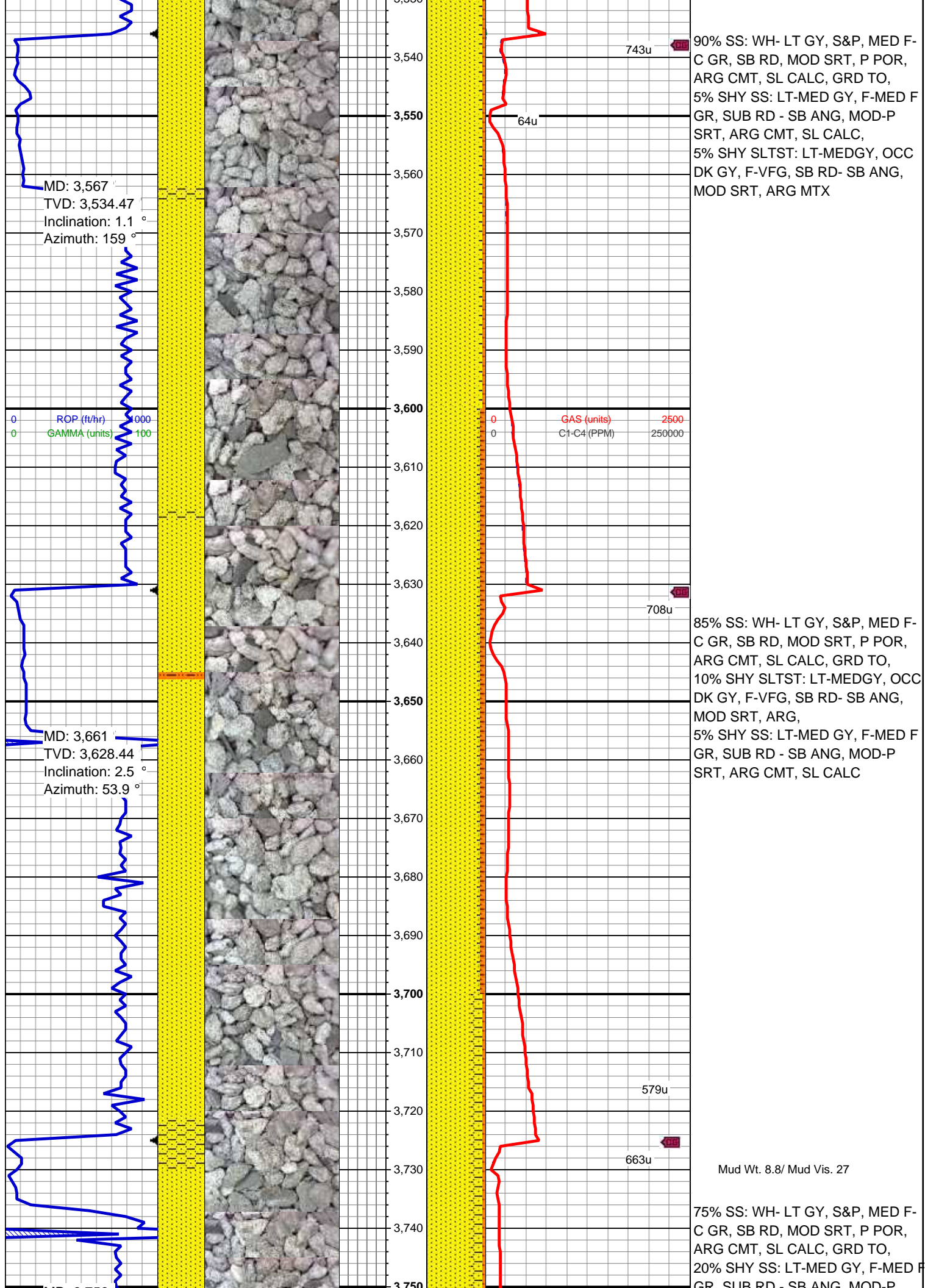
60% SHY SS: LT-MED GY, F-MED F GR, SUB RD - SB ANG, MOD-P SRT, ARG CMT, SL CALC, GRD TO 30% SHY SLTST: LT-MEDGY, OCC DK GY, F-VFG, SB RD- SB ANG, MOD SRT, ARG MTX, 10% SS: WH- LT GY, S&P, MED F- C GR, SB RD, MOD SRT, P POR, ARG CMT, SL CALC

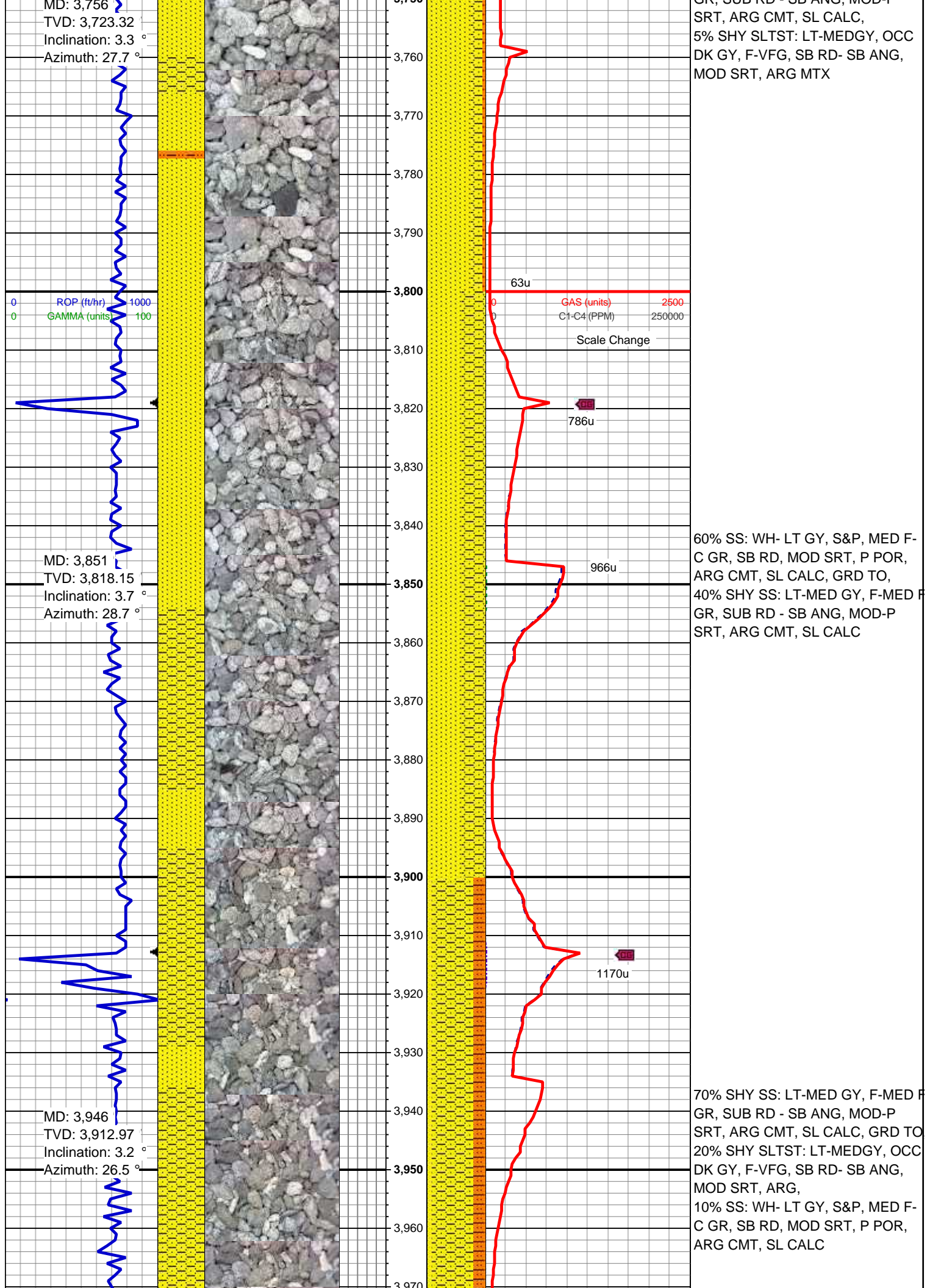
90% SHY SLTST: LT-MEDGY, OCC DK GY, F-VFG, SB RD- SB ANG, MOD SRT, ARG MTX, GRD TO, 5% SHY SS: LT-MED GY, F-MED F GR, SUB RD - SB ANG, MOD-P SRT, ARG CMT, SL CALC, 5% SS: WH- LT GY, S&P, MED F- C GR, SB RD, MOD SRT, P POR, ARG CMT, SL CALC

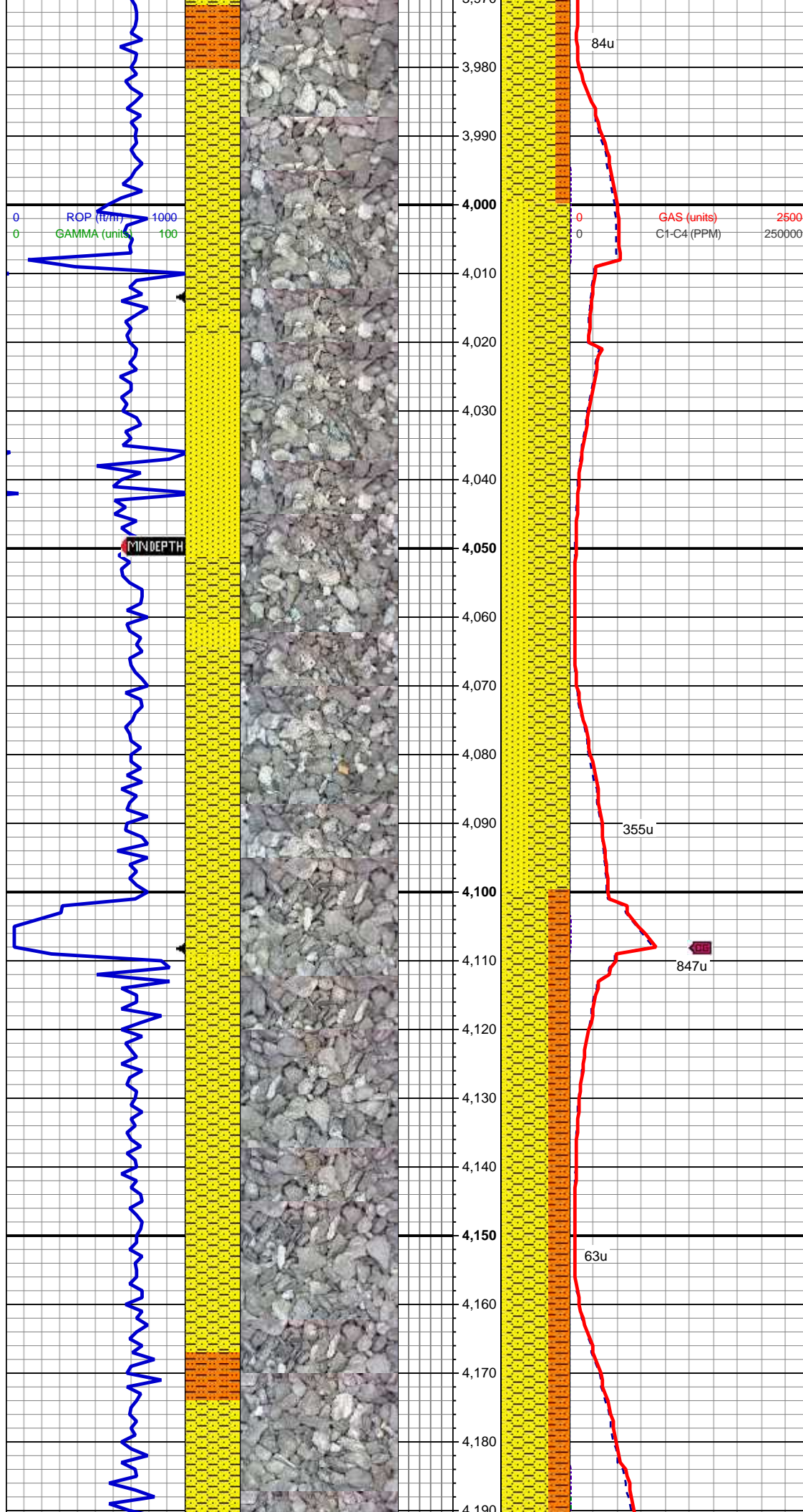


60% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG MTX, GRD TO,
40% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,

70% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG MTX, GRD TO,
20% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,
10% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC



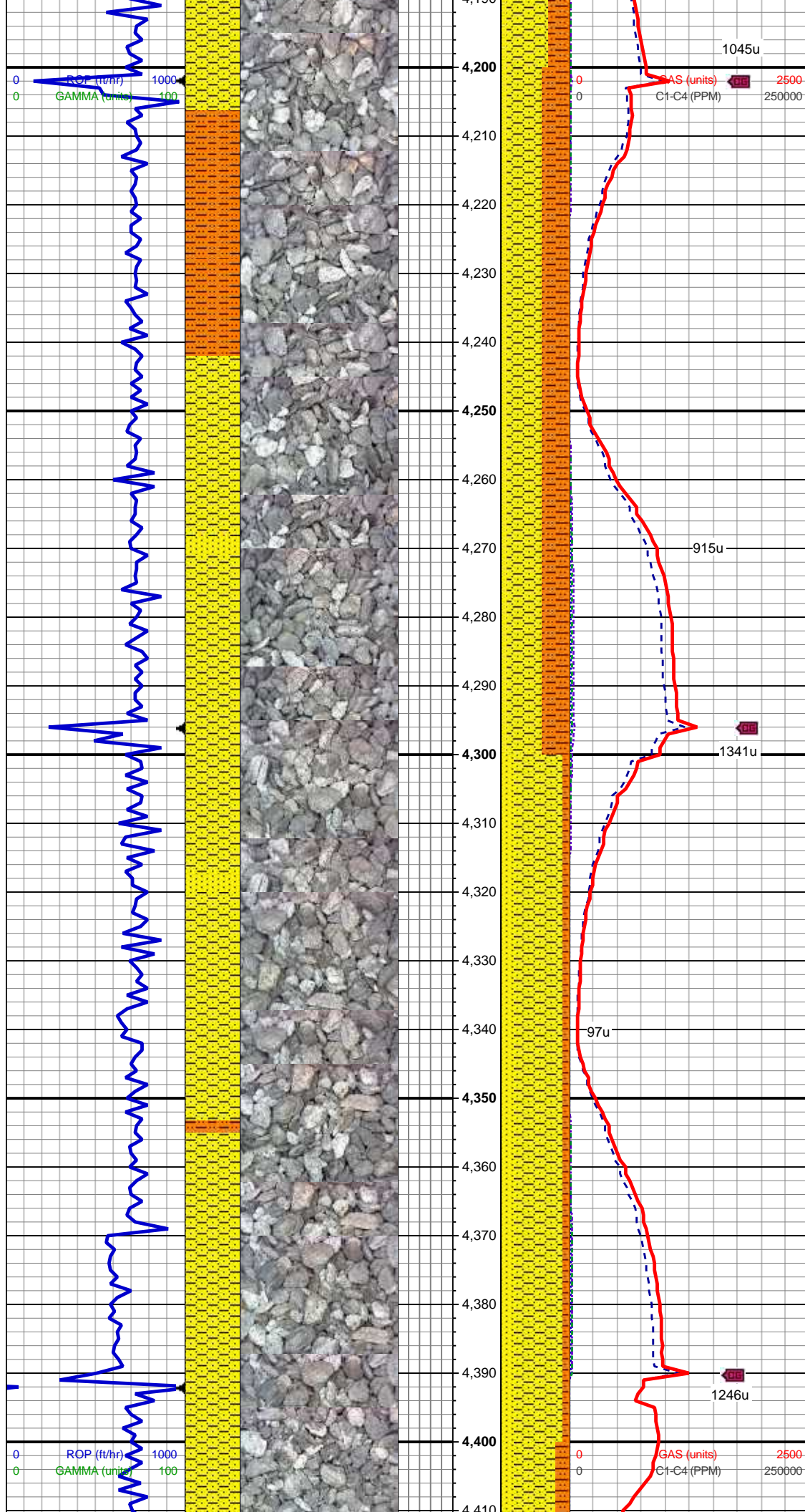




60% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC, GRD TO
40% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC

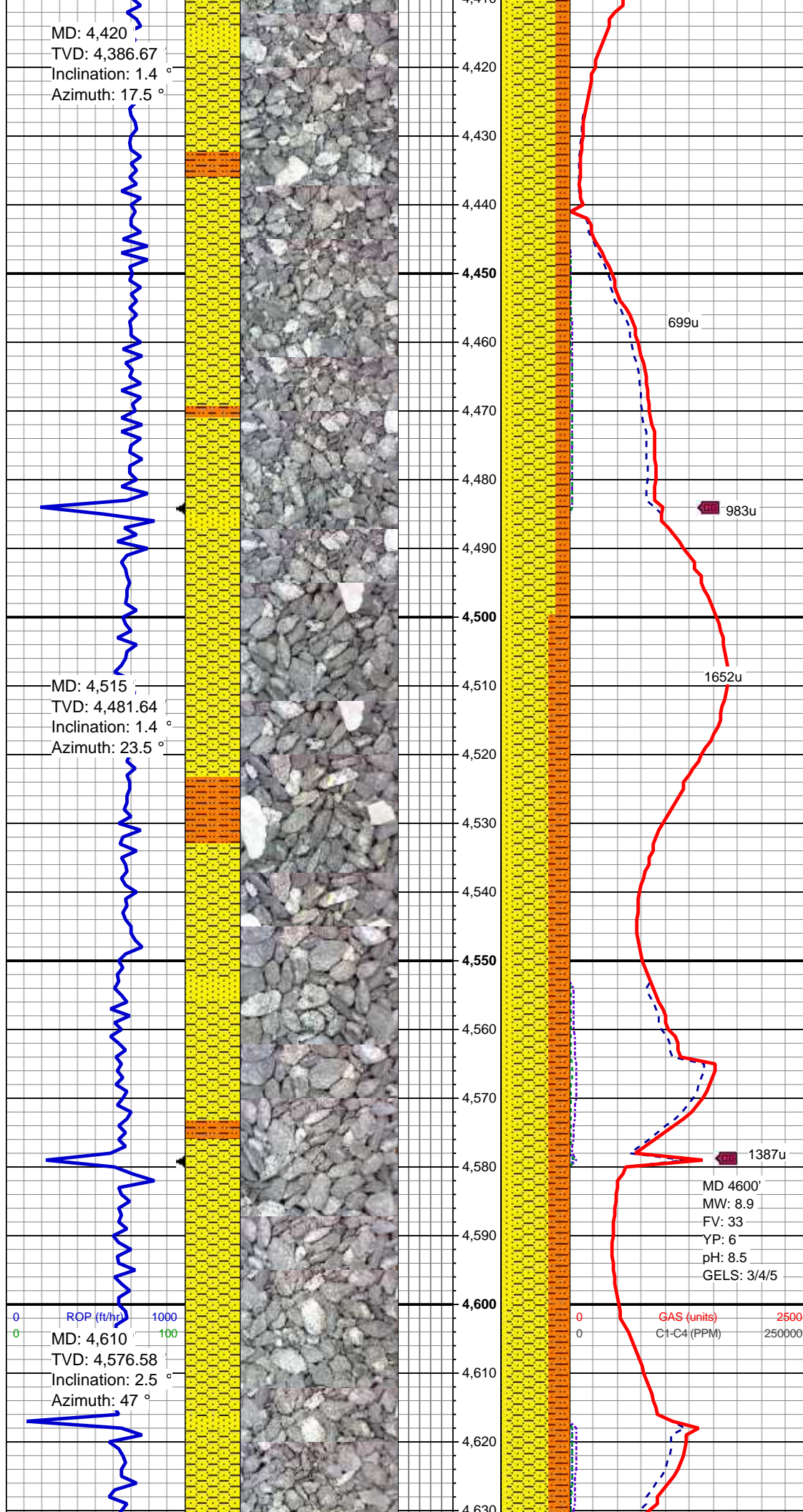
Mud Wt. 8.9/ Mud Vis. 34

60% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC, GRD TO
30% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG,
10% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC



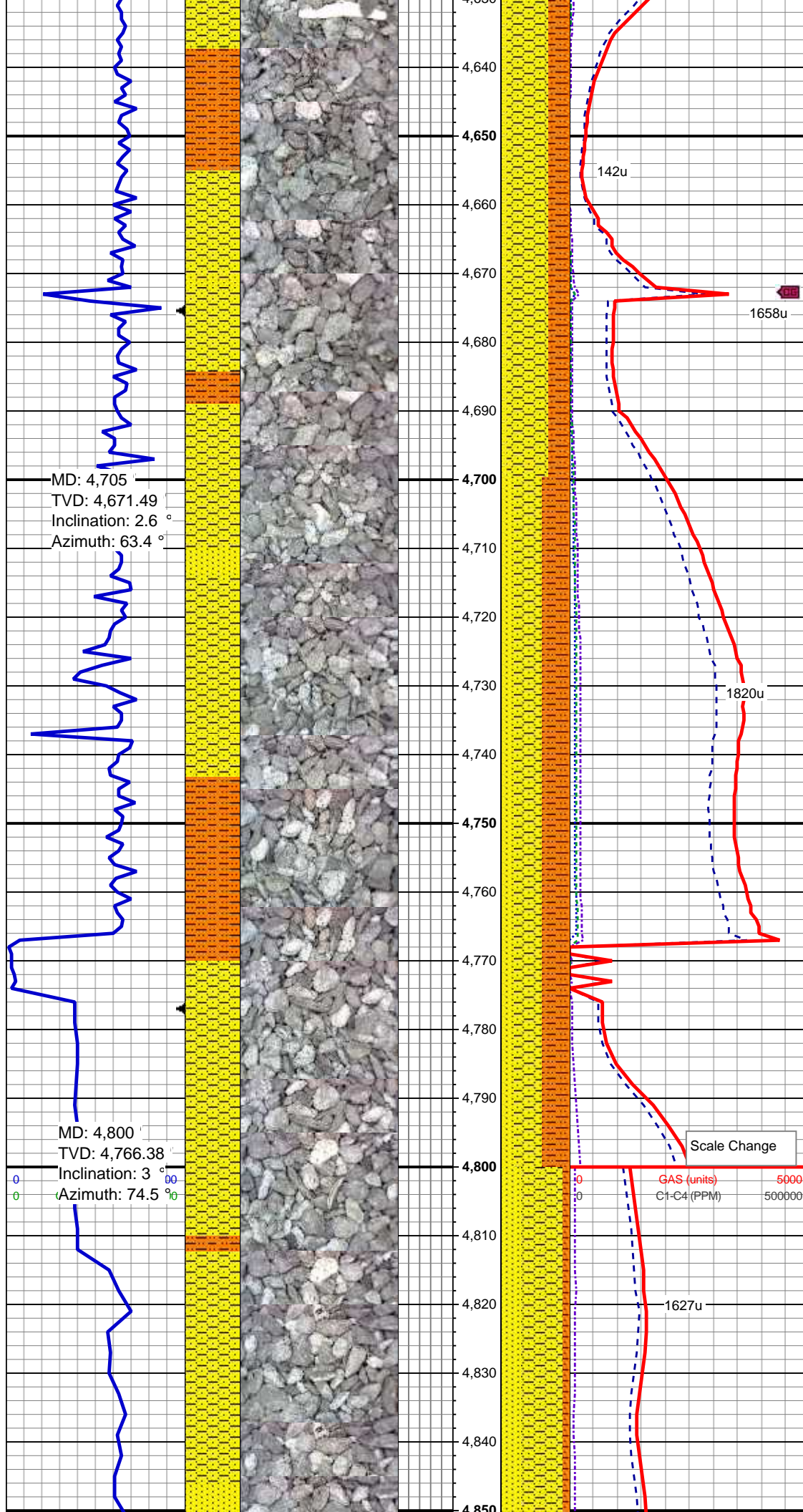
50% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC, GRD TO
40% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG,
10% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC

70% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC, GRD TO
20% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC,
10% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG



60% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC, GRD TO
20% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC,
20% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG

50% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC, GRD TO
30% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG,
20% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC

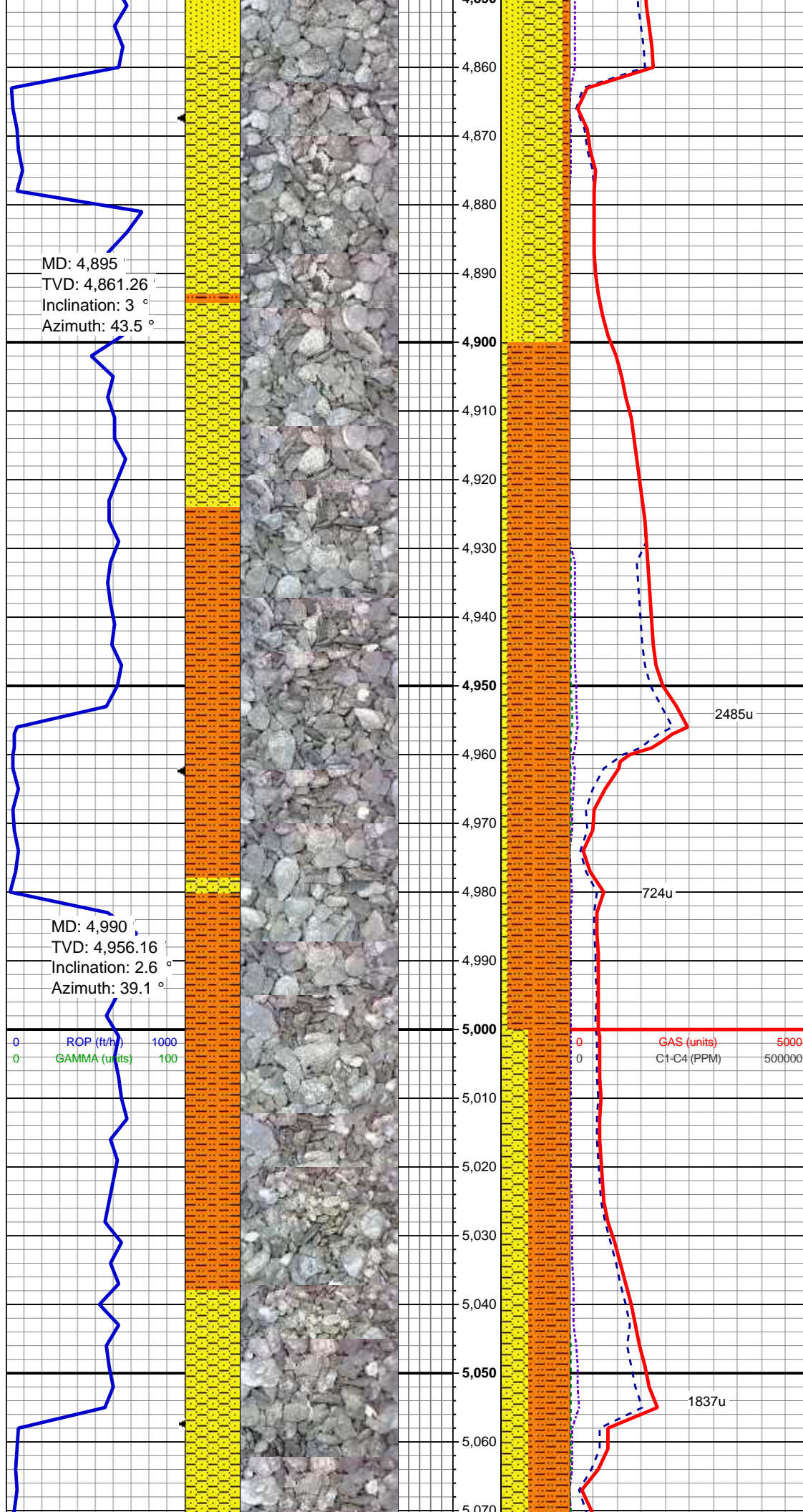


60% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC, GRD TO
30% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG,
10% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC

40% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC, GRD TO
40% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG,
20% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,
ARG CMT, SL CALC

60% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,
30% SS: WH- LT GY, S&P, MED F-
C GR, SB RD, MOD SRT, P POR,

Mud Wt. 8.9/ Mud Vis. 30

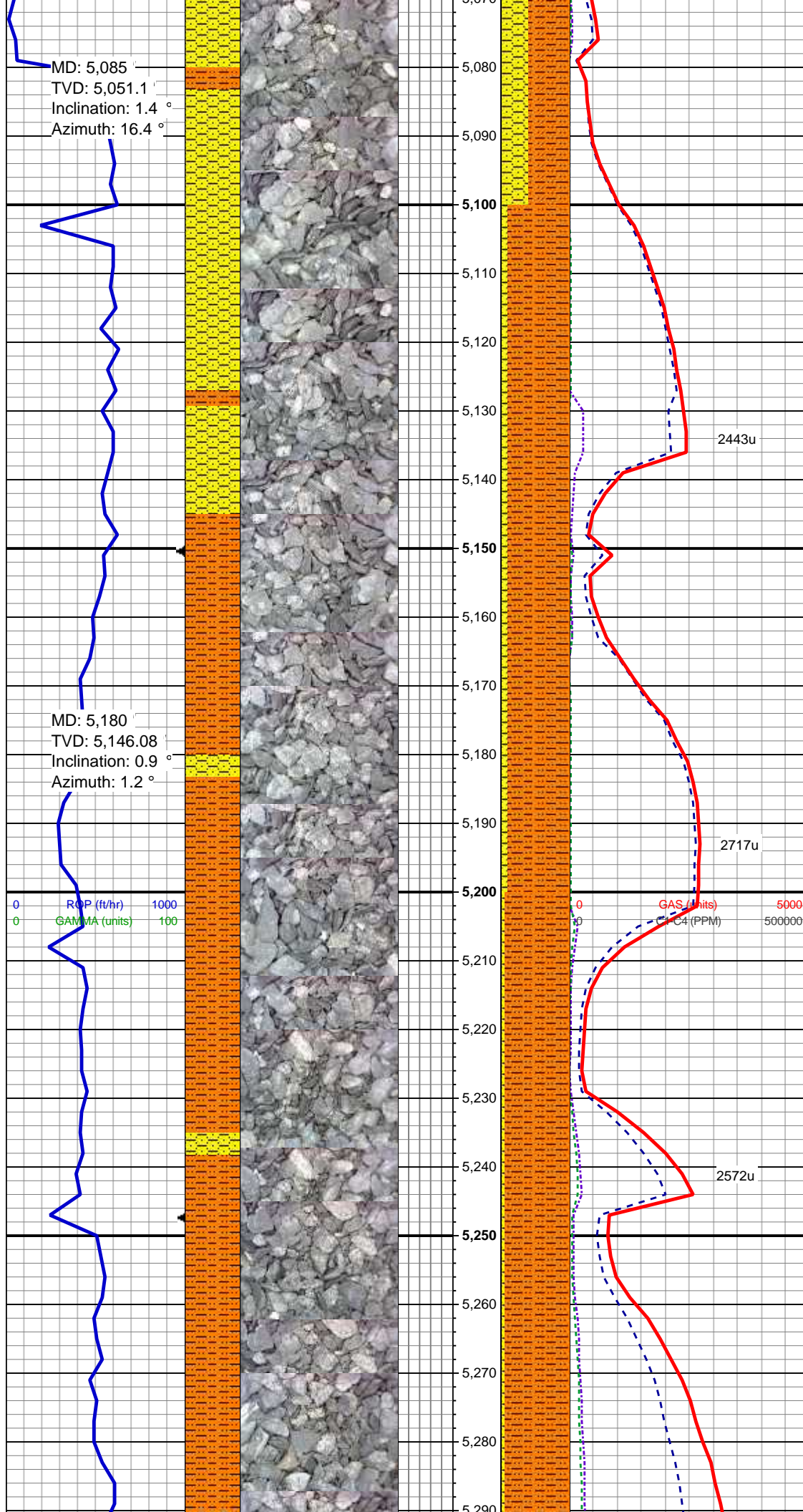


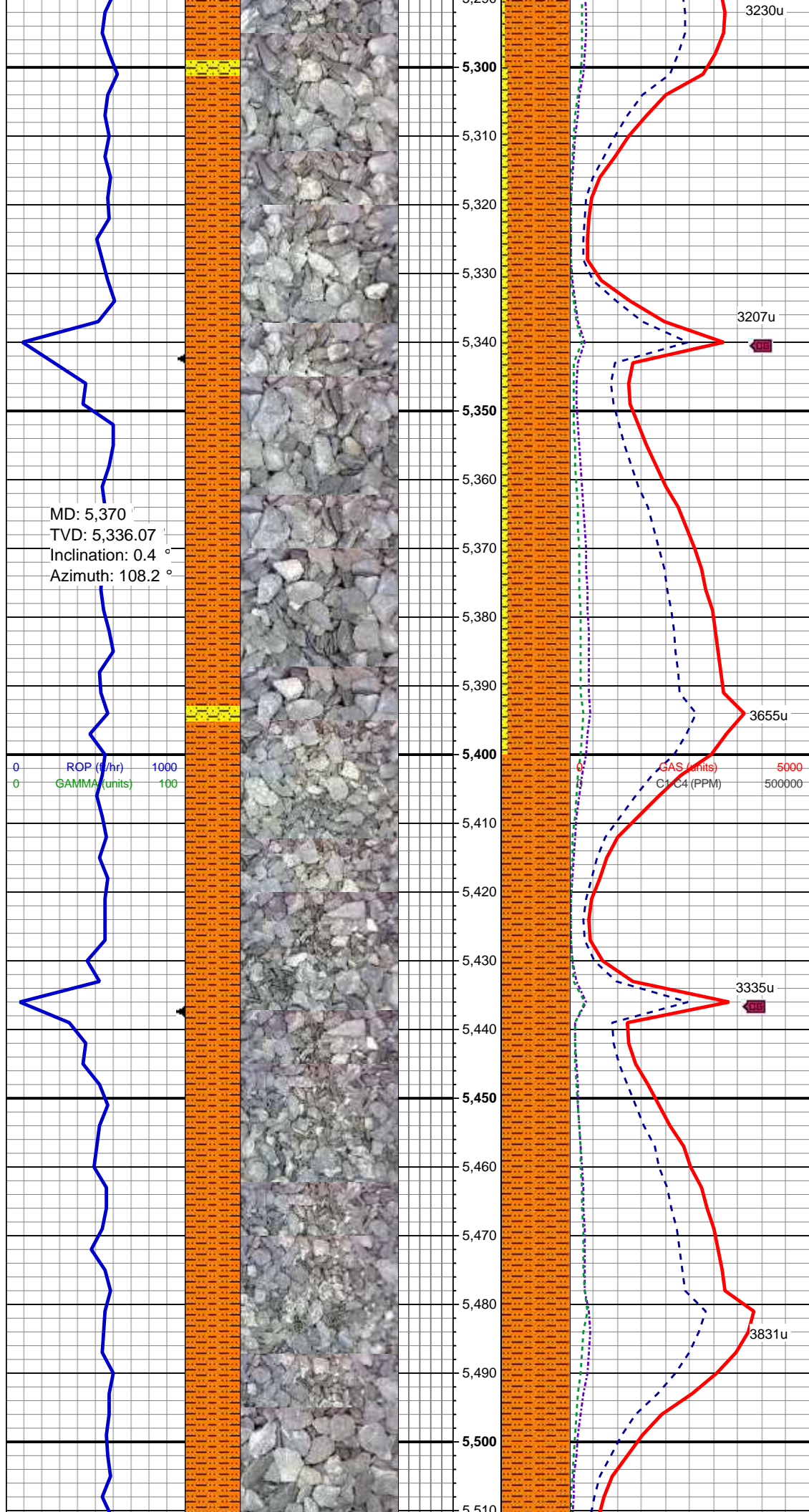
ARG CMT, SL CALC
10% SHY SLTST: LT-MEDGY, OCC
DK GY, F-VFG, SB RD- SB ANG,
MOD SRT, ARG,
TR INOC

90% SHY SLTST: DK GY, F-VFG,
SB RD- SB ANG, MOD SRT, ARG,
10% SHY SS: LT-MED GY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,

60% SHY SLTST: M-DKGY, F-VFG,
SB RD- SB ANG, MOD SRT, ARG,
40% SHY SS: MEDGY, F-MED F
GR, SUB RD - SB ANG, MOD-P
SRT, ARG CMT, SL CALC,

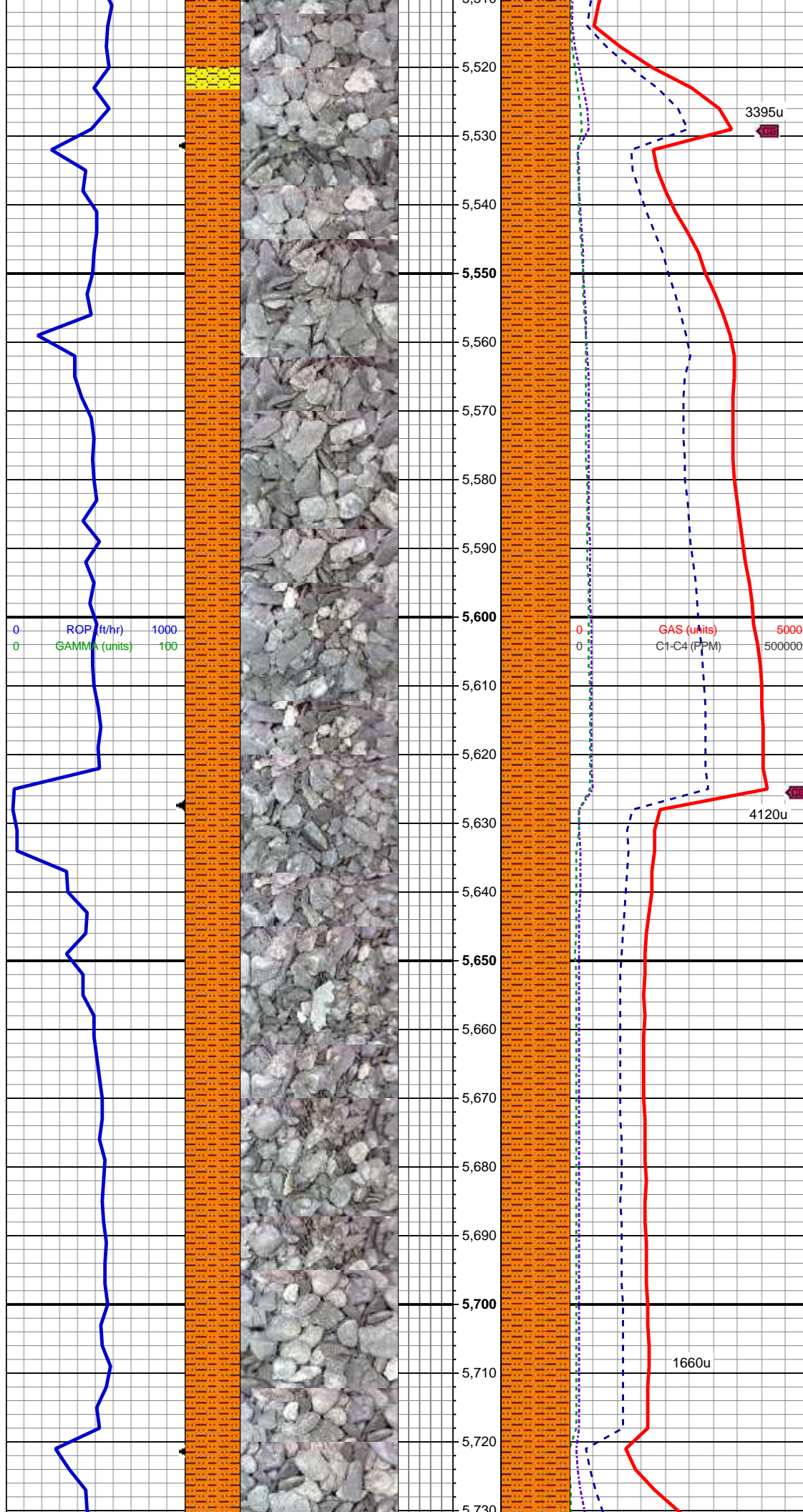
Mud Wt. 9.2/ Mud Vis. 28





90% SHY SLTST: DK GY, F-VFG,
SB RD- SB ANG, MOD SRT, ARG,
10% SHY SS: DK GY,TR WH,
F-MED F GR, SUB RD - SB ANG,
MOD-P SRT, ARG CMT, SL CALC,

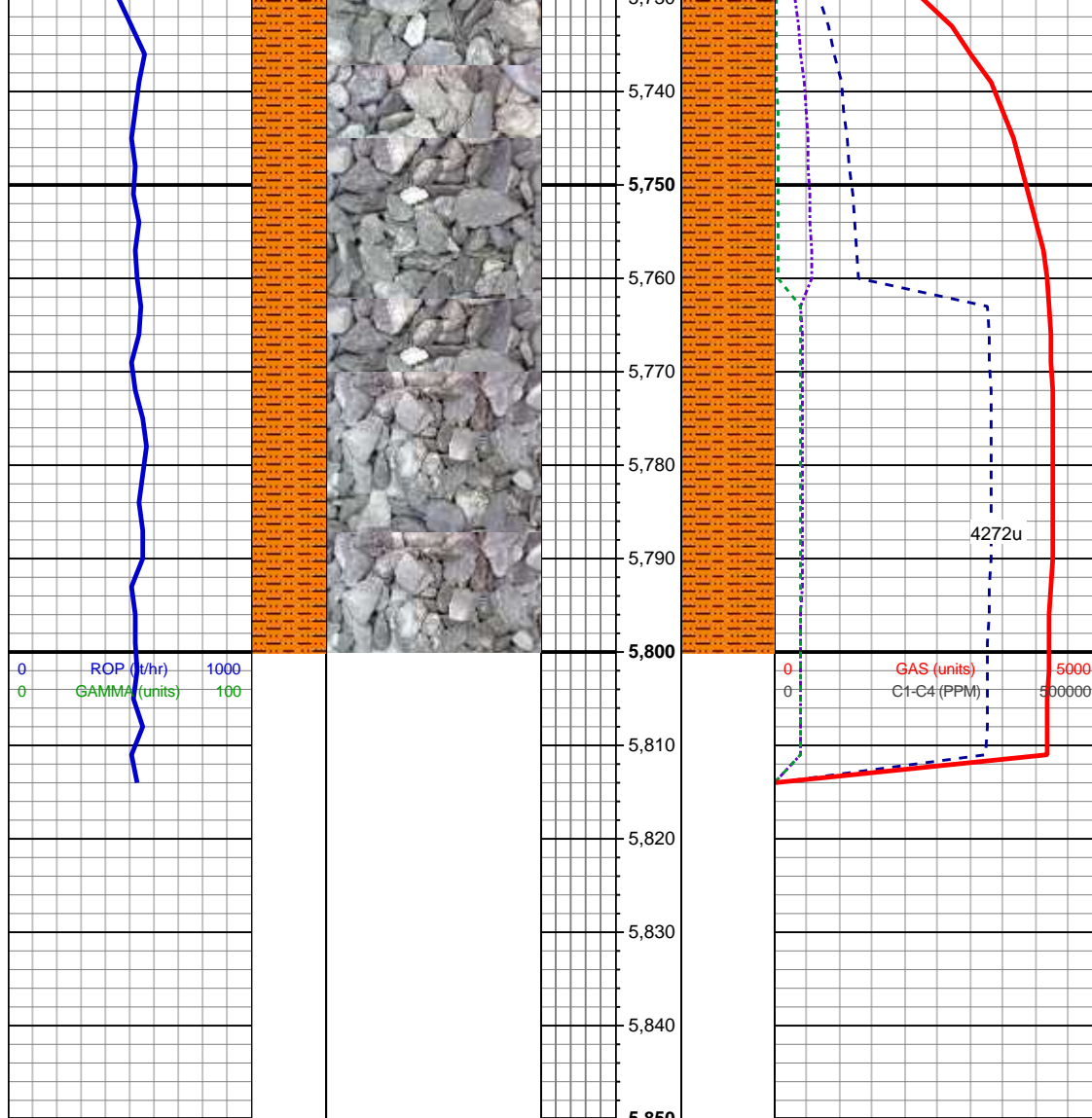
100% SHY SLTST: M-DK GY, VF-V
VFG, SB RD- SB ANG, MOD SRT,
ARG,



Mud Wt. 9.5/ Mud Vis. 31

100% SHY SLTST: M-DK GY, VF-V VFG, SB RD- SB ANG, MOD SRT, ARG,

100% SHY SLTST: DK GY, VF-V VFG, SB RD- SB ANG, MOD SRT, ARG,



100% SHY SLTST: DK GY, VF-V
VFG, SB RD- SB ANG, MOD SRT,
ARG

TD VERTICAL @ 5814' MD
07/29/2013 08:58 MST

LOG CONTINUES ON FILE:
TREBOR B11-68-1HN
HORIZONTAL.mplot

THANK YOU FOR USING
COLUMBINE LOGGING INC.