



Scale: 5" / 100'
Measured Depth Log

Well Name HENRICKSON 34N-18HZ

Location SEC 7 T3N R66W

State COLORADO

County WELD

Country UNITED STATES OF AMERICA

Rig Number ENSIGN 145

API Number 05-123-37675-00

AFE # 2084547

Region DJ BASIN

Field WATTENBERG

Spud Date 9/20/2013

Drilling Completed 9/26/2013

Surface Coordinates 1766' FSL, 814' FWL

Bottom Hole Coordinates 460' FSL, 330' FWL

Ground Elevation 4794'

K.B. Elevation 4808'

Logged Interval 6500'

To 13507'

Total Depth 7007'

Formation SUSSEX, SHARON SPRINGS, NIOBRARA A, NIOBRARA B

Type of Drilling Fluid FW LSND

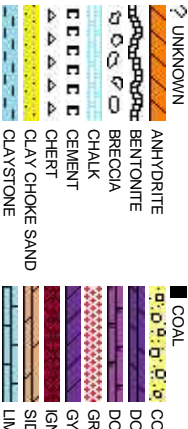
Company Anadarko

Address 1099 18th St. Suite 1800
Denver, CO. 80202

Name Zack Heider, Jake Stuart

Company Anadarko Petroleum Corp
Address 1099 18th St. Suite 1800
Denver, CO. 80202

Lead Wellsite Geologist
Second Wellsite Geologist



Operator

Geologist

oration

Other

Lacey Little

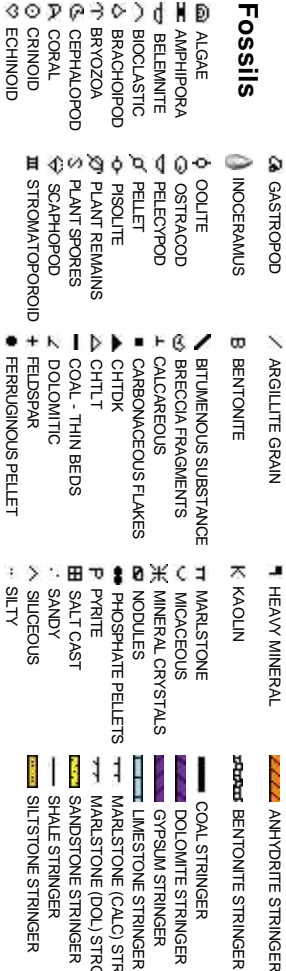
Whitney Jacks

Rock Types



Accessories

Fossils



Minerals



Stringer

Other Symbols

Oil Show



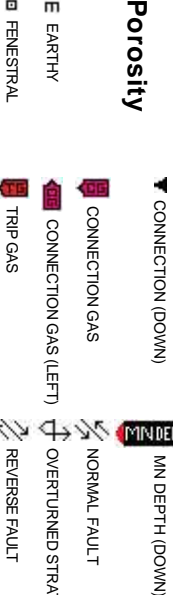
Engineering



Rounding

MS MUDSTONE

Porosity

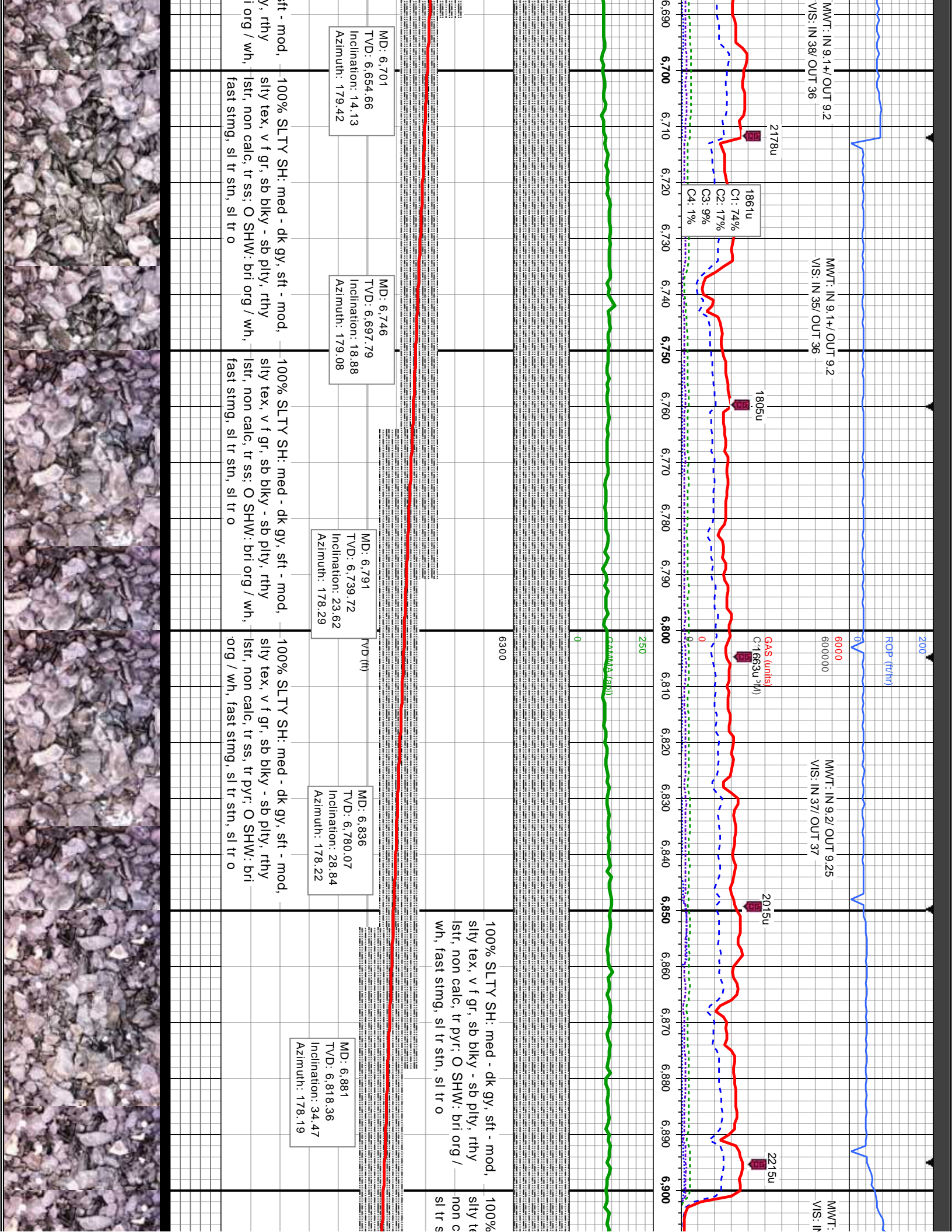


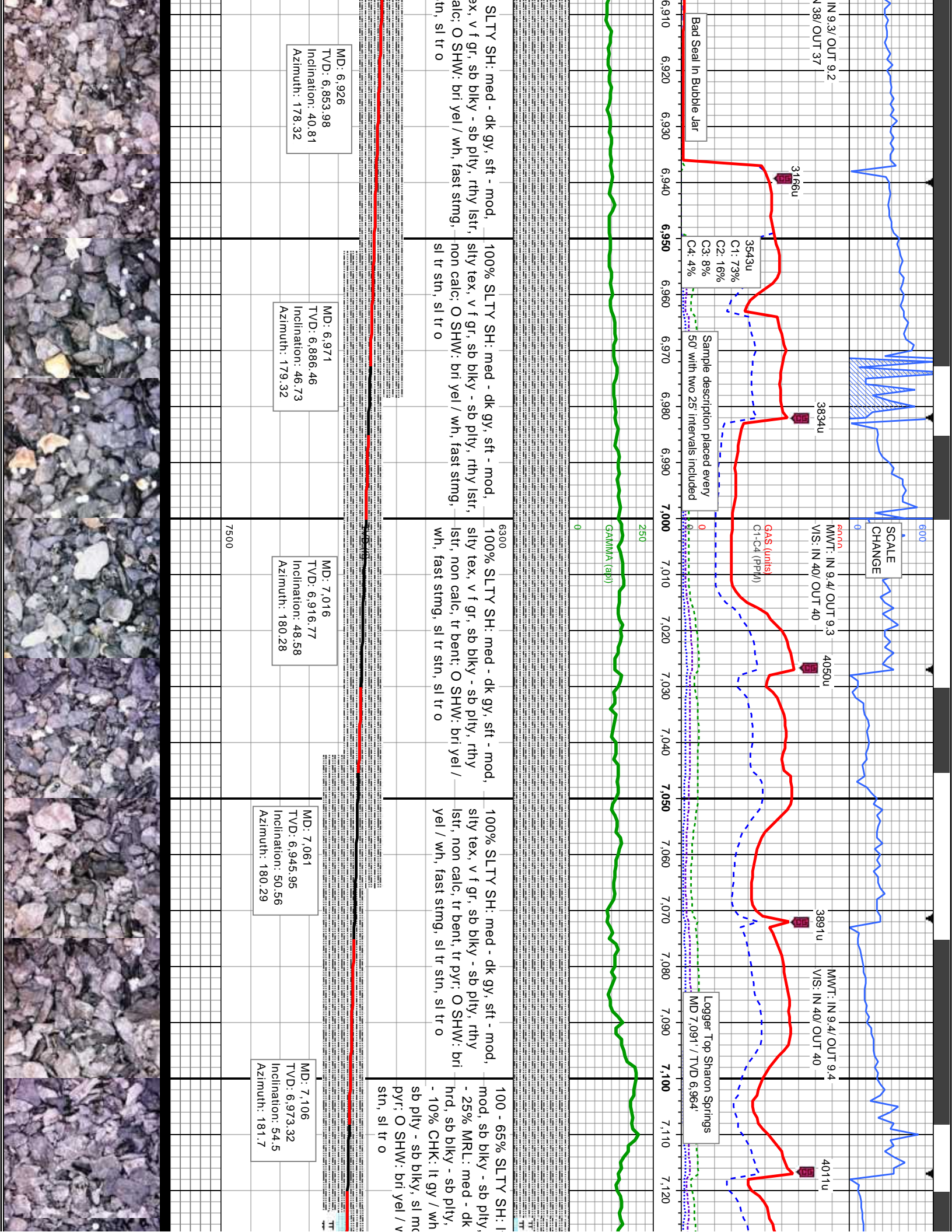
Sorting

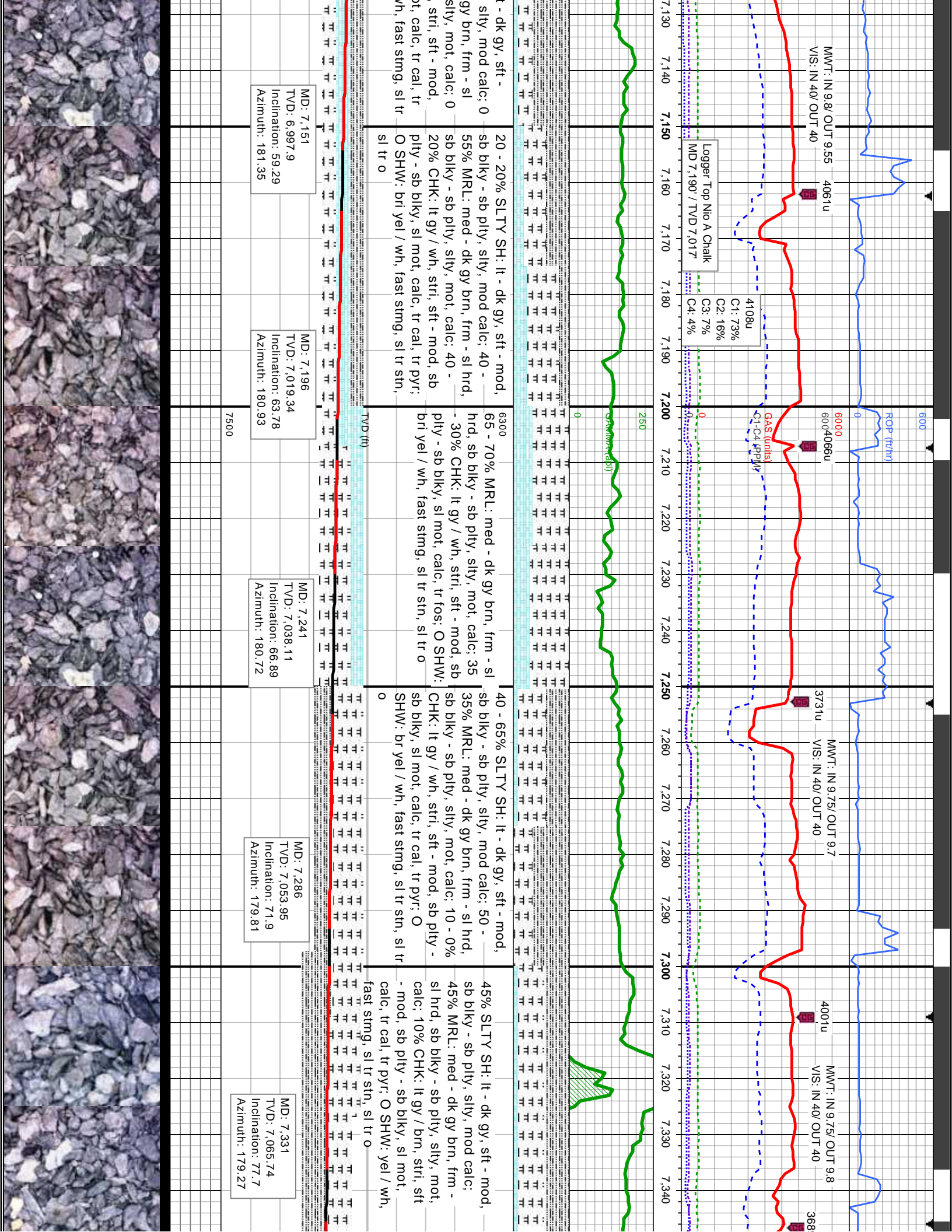
Textures



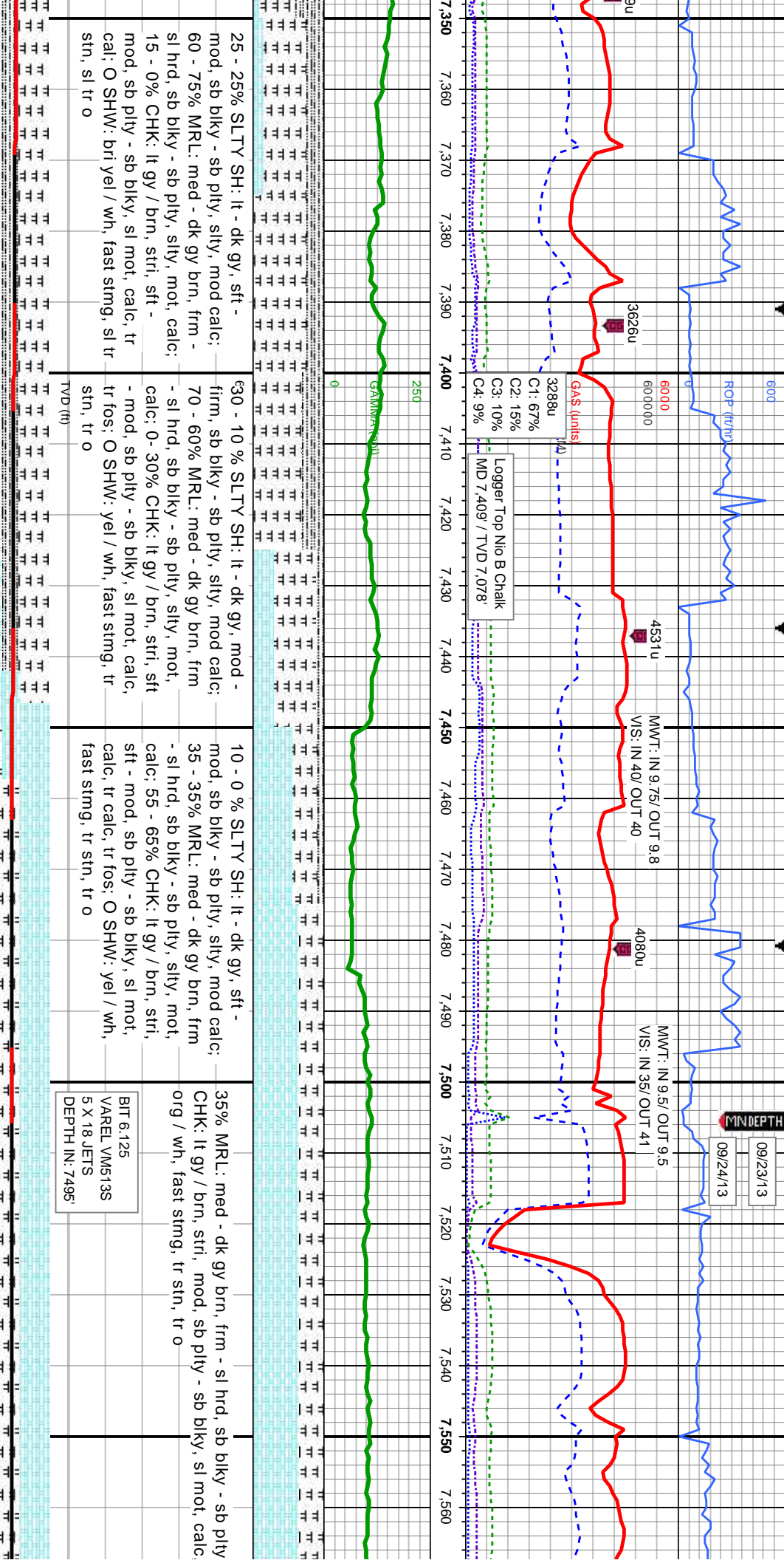
Slide/Rotate	
ROP	ROP
Total Gas & Chromatograph GAS ——— C1 ——— C2 ——— C3 ——— C4 ———	
Depth Labels	Oil Shows Every 100' MWIT: IN 9.0+ OUT 9.0+ VIS: IN 33/ OUT 33 MWIT: IN 9.1/ OUT 9.2 VIS: IN 39/ OUT 35 MWIT: IN 9.1/ OUT 9.1 VIS: IN 37/ OUT 36 103u C1: 72% C2: 18% C3: 9% C4: 0% 68u Trouble Shoot MWD 2234u 1484u 2089u 09/22/13 MINDEPTH (m)
Curves	GAMMA ——— 25d 0 GAMMA (API)
% Lith	6300
Well Bore	MD: 6,521 TVD: 6,476.79 Inclination: 1.7 Azimuth: 182.36 MD: 6,566 TVD: 6,521.66 Inclination: 6.75 Azimuth: 174.9 MD: 6,611 TVD: 6,566.26 Inclination: 8.42 Azimuth: 175.65 MD: 6,656 TVD: 6,610.67 Inclination: 10.13 Azimuth: 177.04 COLUMBINE LOGGING 09/21/2013 MANNED 2-PERSON LOGGING WITH BLOODHOUND GAS CHROMATOGRAPH UNIT #0598 BIT 8.75 SMITH SD1611 3 x 16 & 3 x 18 JETS DEPTH IN: 1033
Oil Show	100% SLTY SH: med - dk gy, sft - mod, silty tex, v f gr, sb blkly - sb plty, rthy lstr, non calc, tr ss; O SHW: bri org / wh, fast stmg, sl tr stn, sl tr o 100% SLTY SH: med - dk gy, sft - mod, silty tex, v f gr, sb blkly - sb plty, rthy lstr, non calc, tr ss; O SHW: bri org / wh, fast stmg, sl tr stn, sl tr o 100% SLTY SH: med - dk gy, sft - mod, silty tex, v f gr, sb blkly - sb plty, rthy lstr, non calc, tr ss; O SHW: bri org / wh, fast stmg, sl tr stn, sl tr o 100% SLTY SH: med - dk gy, sft - mod, silty tex, v f gr, sb blkly - sb plty, rthy lstr, non calc, tr ss; O SHW: bri org / wh, fast stmg, sl tr stn, sl tr o
Images	







09/23/13
09/24/13
MINDEPTH



25 - 25% SLTY SH: lt - dk gy, sft - mod, sb blkly - sb pily, slty, mod calc; 60 - 75% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb pily, slty, mot, calc; 15 - 0% CHK: lt gy / brn, stri, sft - mod, sb pily - sb blkly, sl mot, calc, tr cal; O SHW: bri yel / wh, fast stmg, sl tr stn, sl tr o

30 - 10% SLTY SH: lt - dk gy, mod - firm, sb blkly - sb pily, slty, mod calc; 70 - 60% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb pily, slty, mot, calc; 0 - 30% CHK: lt gy / brn, stri, sft - mod, sb pily - sb blkly, sl mot, calc, tr fos; O SHW: yel / wh, fast stmg, tr stn, tr o

10 - 0% SLTY SH: lt - dk gy, sft - mod, sb blkly - sb pily, slty, mod calc; 35 - 35% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb pily, slty, mot, calc; 55 - 65% CHK: lt gy / brn, stri, sft - mod, sb pily - sb blkly, sl mot, calc, tr cal; tr fos; O SHW: yel / wh, fast stmg, tr stn, tr o

35% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb pily
CHK: lt gy / brn, stri, mod, sb pily - sb blkly, sl mot, calc, org / wh, fast stmg, tr stn, tr o
BIT 6.125
VAREL VM613S
5 X 18 JETS
DEPTH IN: 7495'

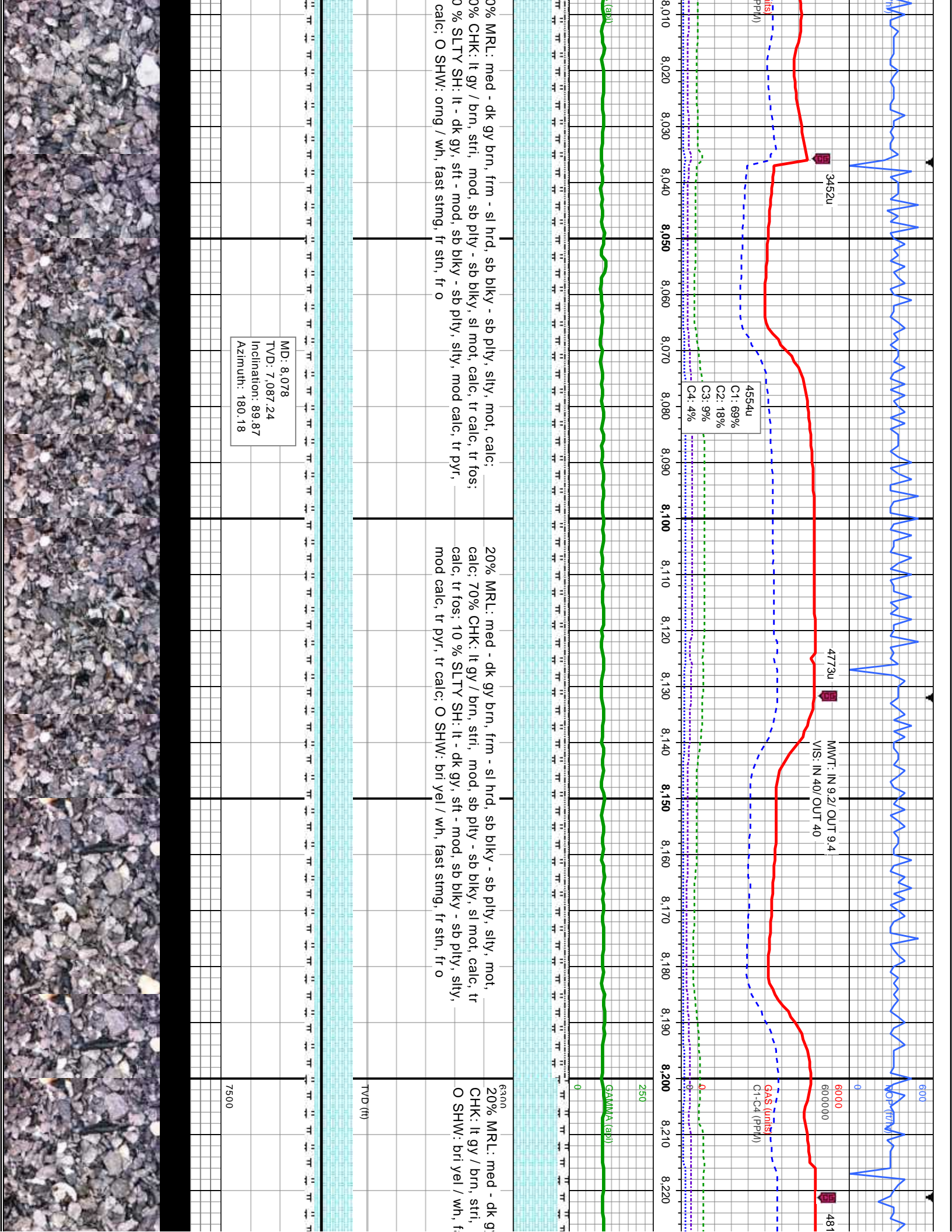
MD: 7.376
TVD: 7.073.96
Inclination: 81.25
Azimuth: 180.62

MD: 7.422
TVD: 7.079.78
Inclination: 84.2
Azimuth: 180.79

MD: 7.446
TVD: 7.081.64
Inclination: 86.94
Azimuth: 180.42

MD: 7.505
TVD: 7.083.12
Inclination: 90.18
Azimuth: 180.42





09/25/13

MINDEPTH

600
ROP (ft)

4832u

4816u

4823u

4806u

C1: 76%

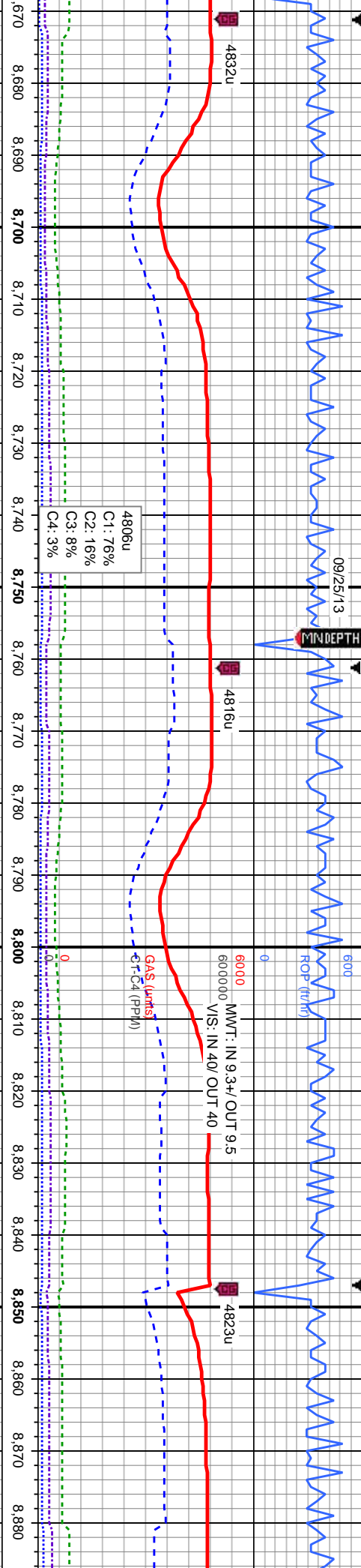
C2: 16%

C3: 8%

C4: 3%

6000
MW: IN 9.3+ OUT 9.5
VIS: IN 40/ OUT 40

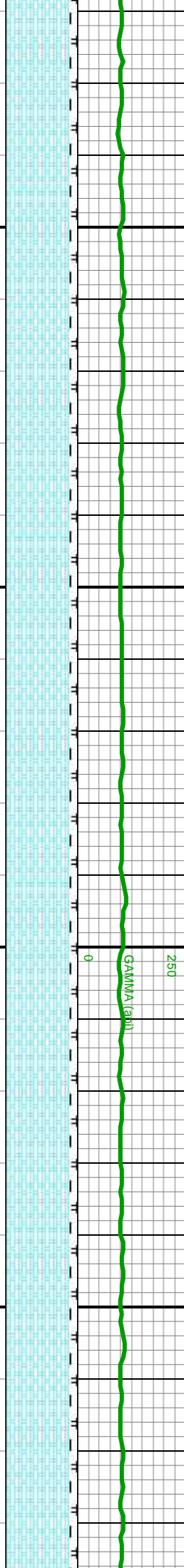
GAS (umts)
G-C4 (PPH)



25d

GAMMA (api)

0

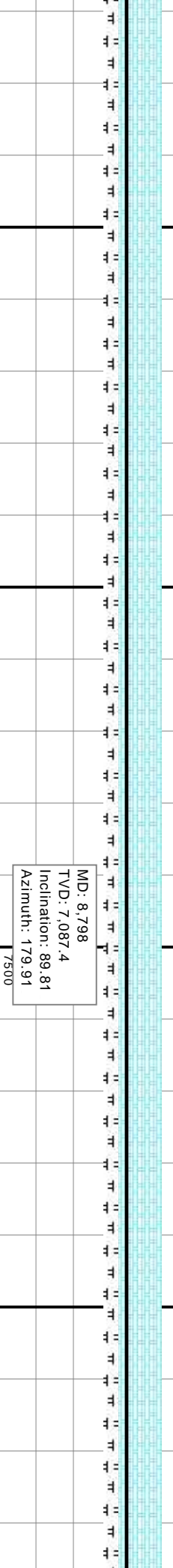


stly, mot, calc; 90%
c, tr calc, abnt fos, tr sh;

10% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb plty, stly, mot, calc; 90%
CHK: lt gy / brn, stri, mod, sb plty - sb blkly, sl mot, calc, tr calc, mod fos, tr sh;
O SHW: omg yel / wh, fast sting, fr sin, fr o

6300
10% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb plty, stly, mot, c
90% CHK: lt gy / brn, stri, mod, sb plty - sb blkly, sl mot, calc, tr calc,
mod fos, tr sh; O SHW: bri yel / wh, fast sting, fr sin, fr o

TVD (ft)



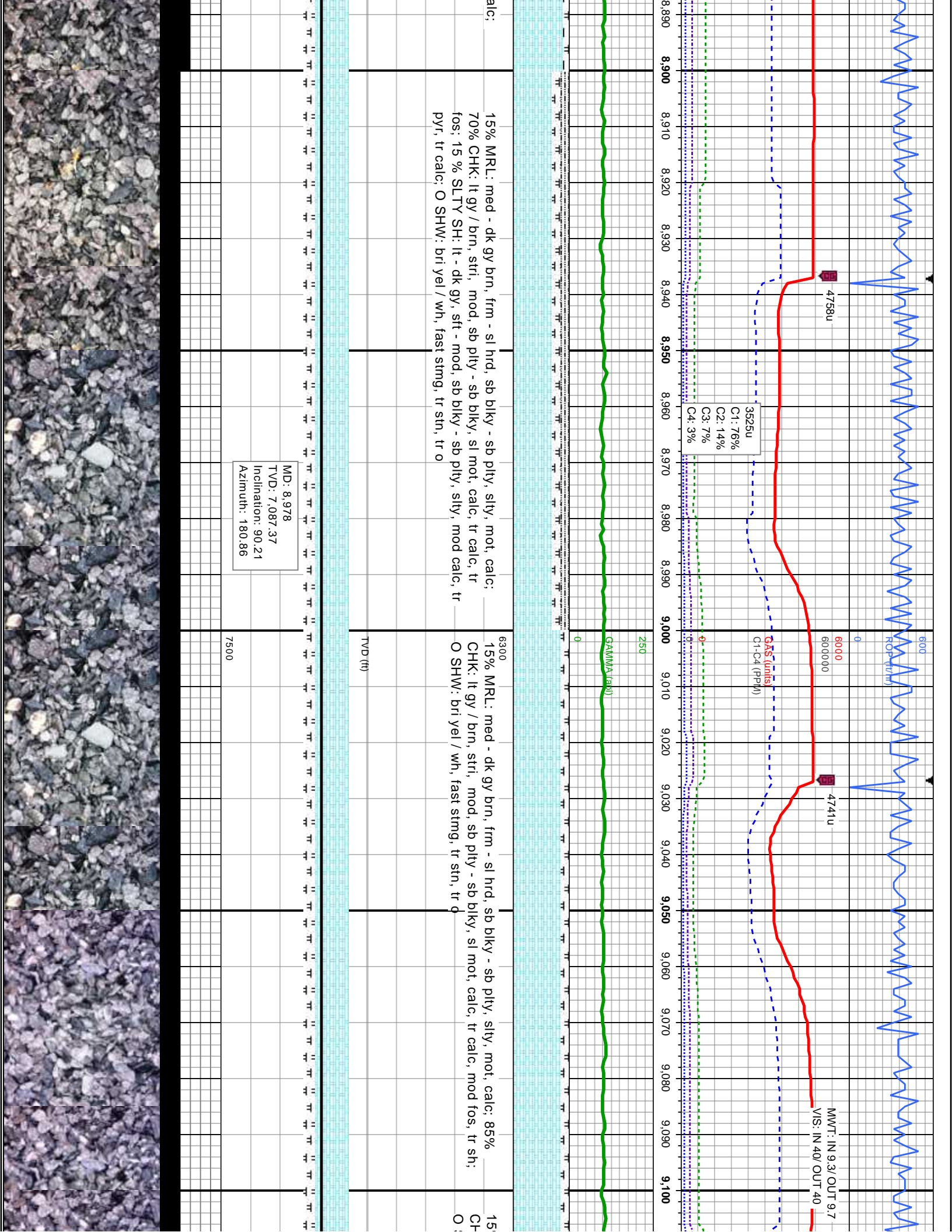
MD: 8,798

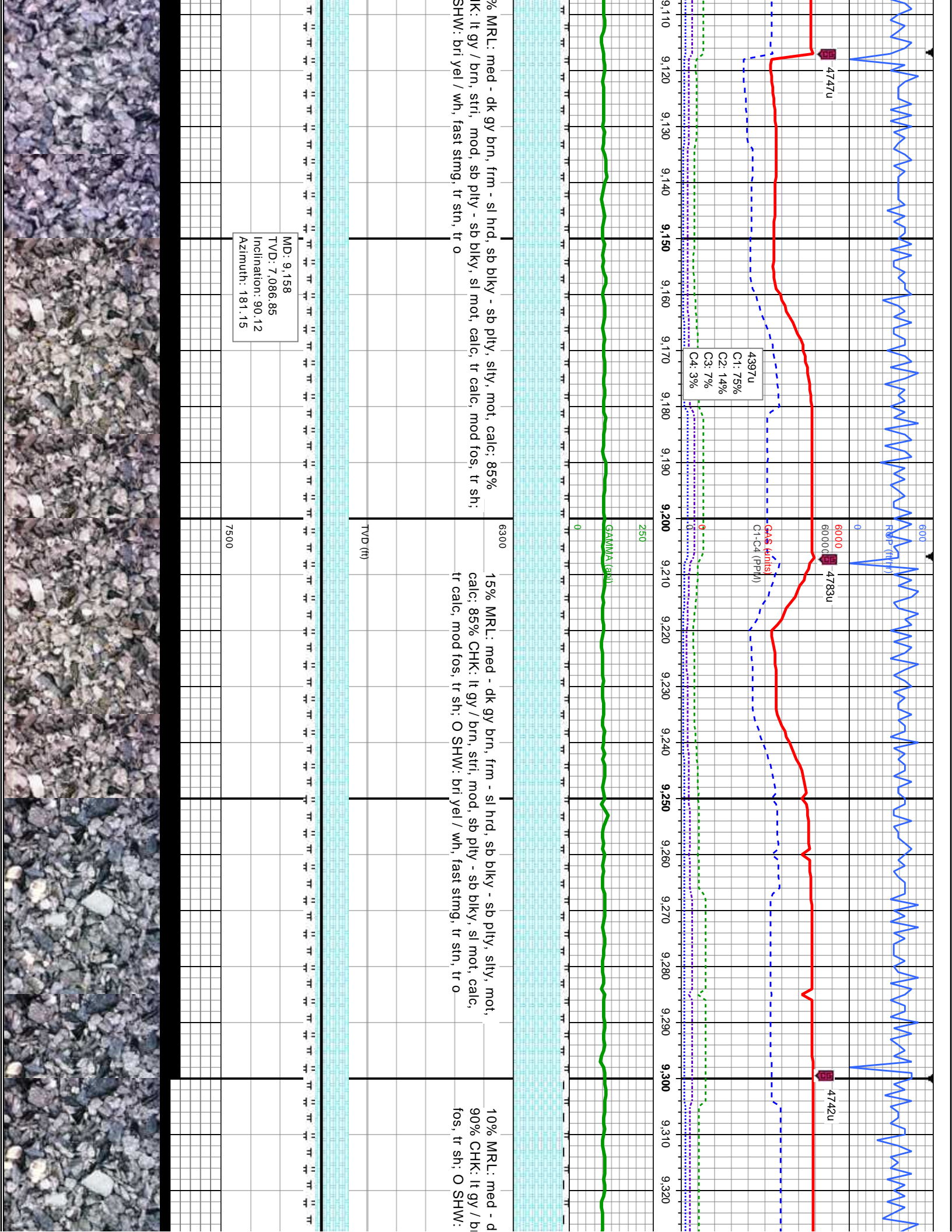
TVD: 7,087.4

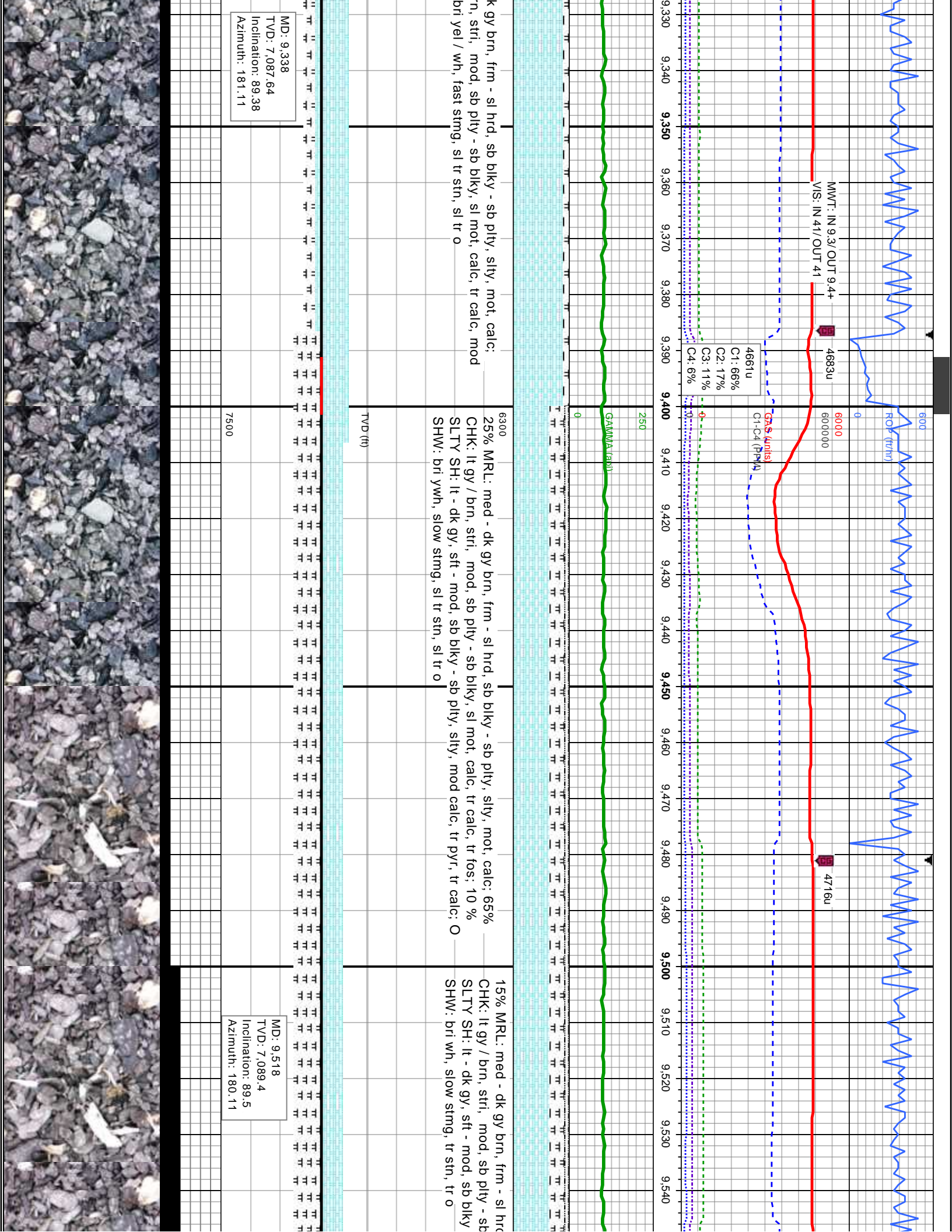
Inclination: 89.81

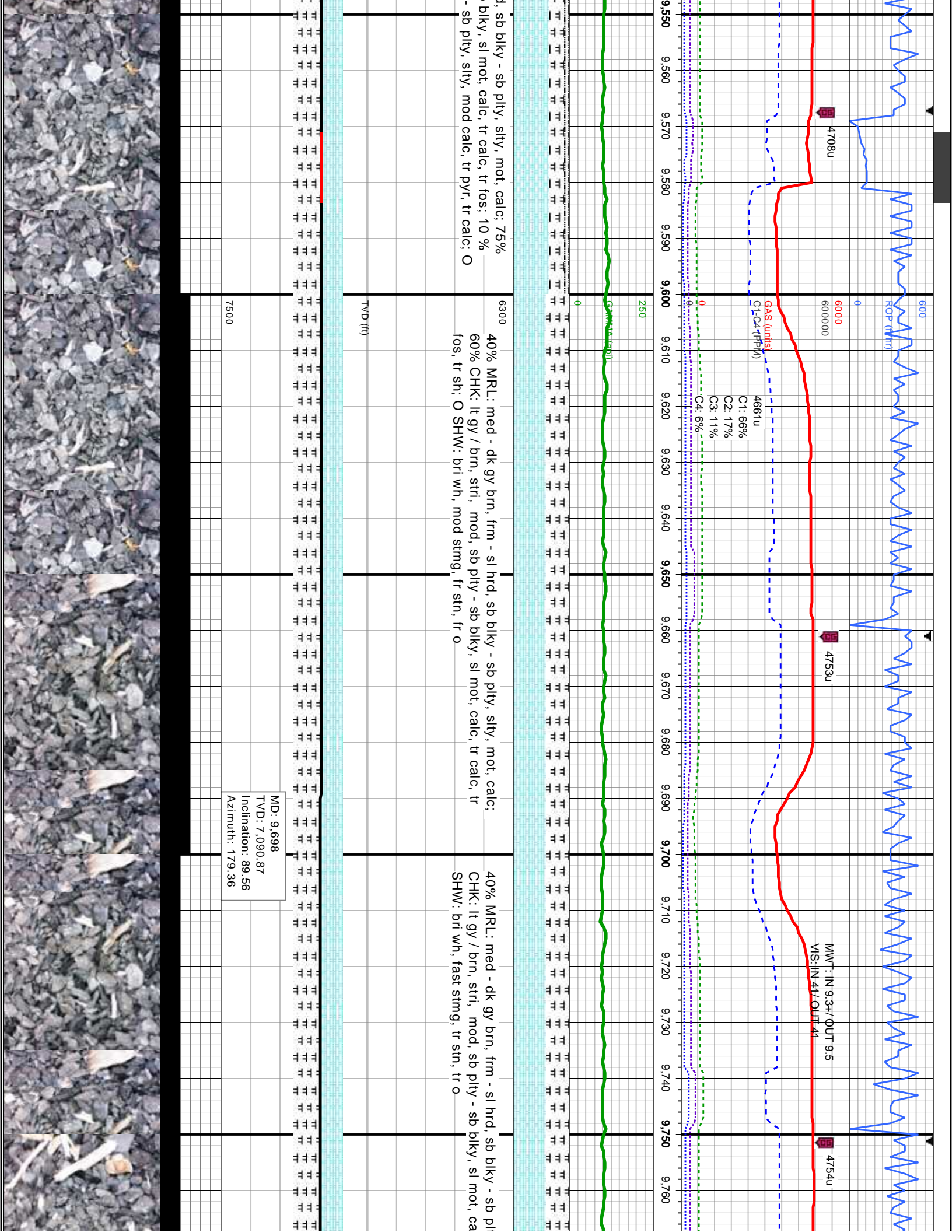
Azimuth: 179.91

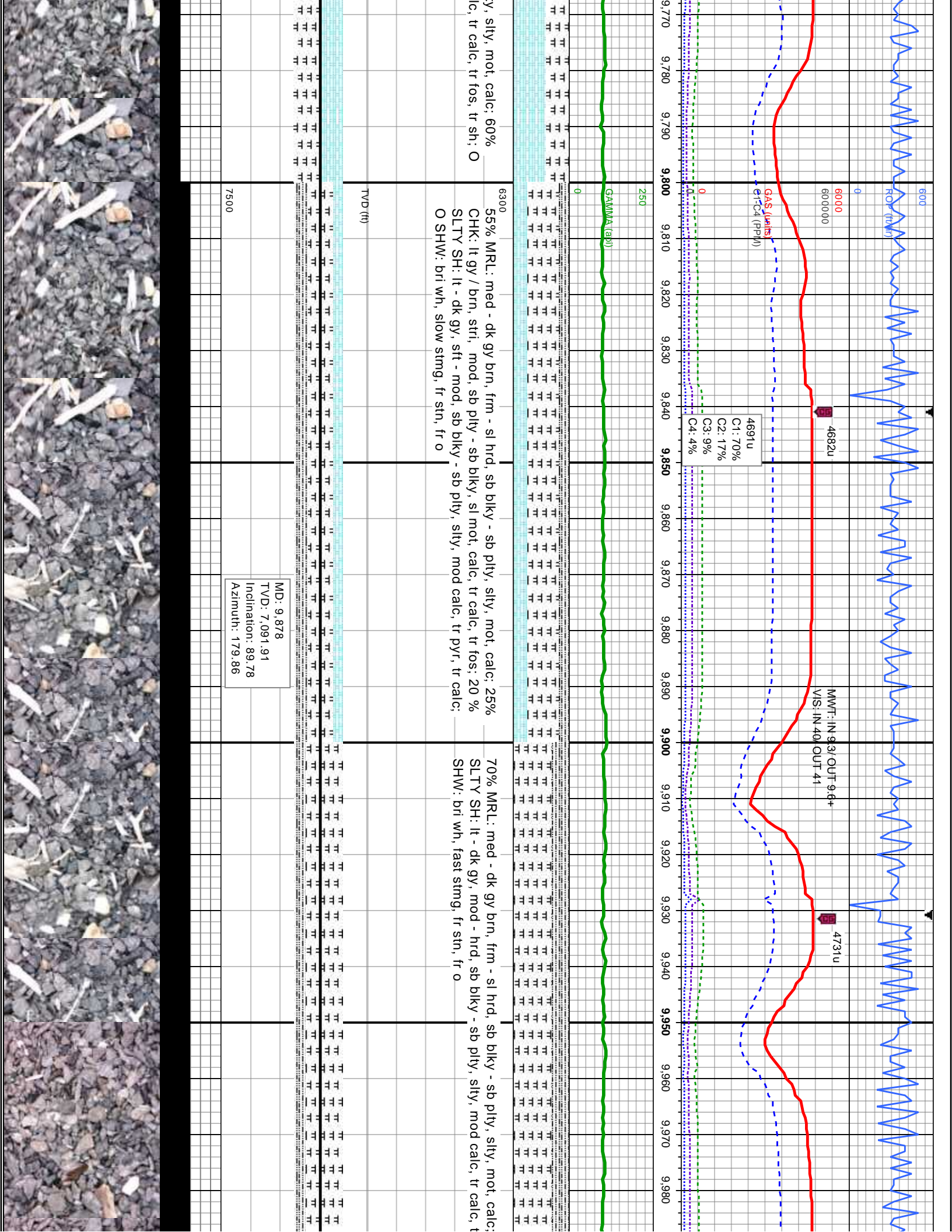


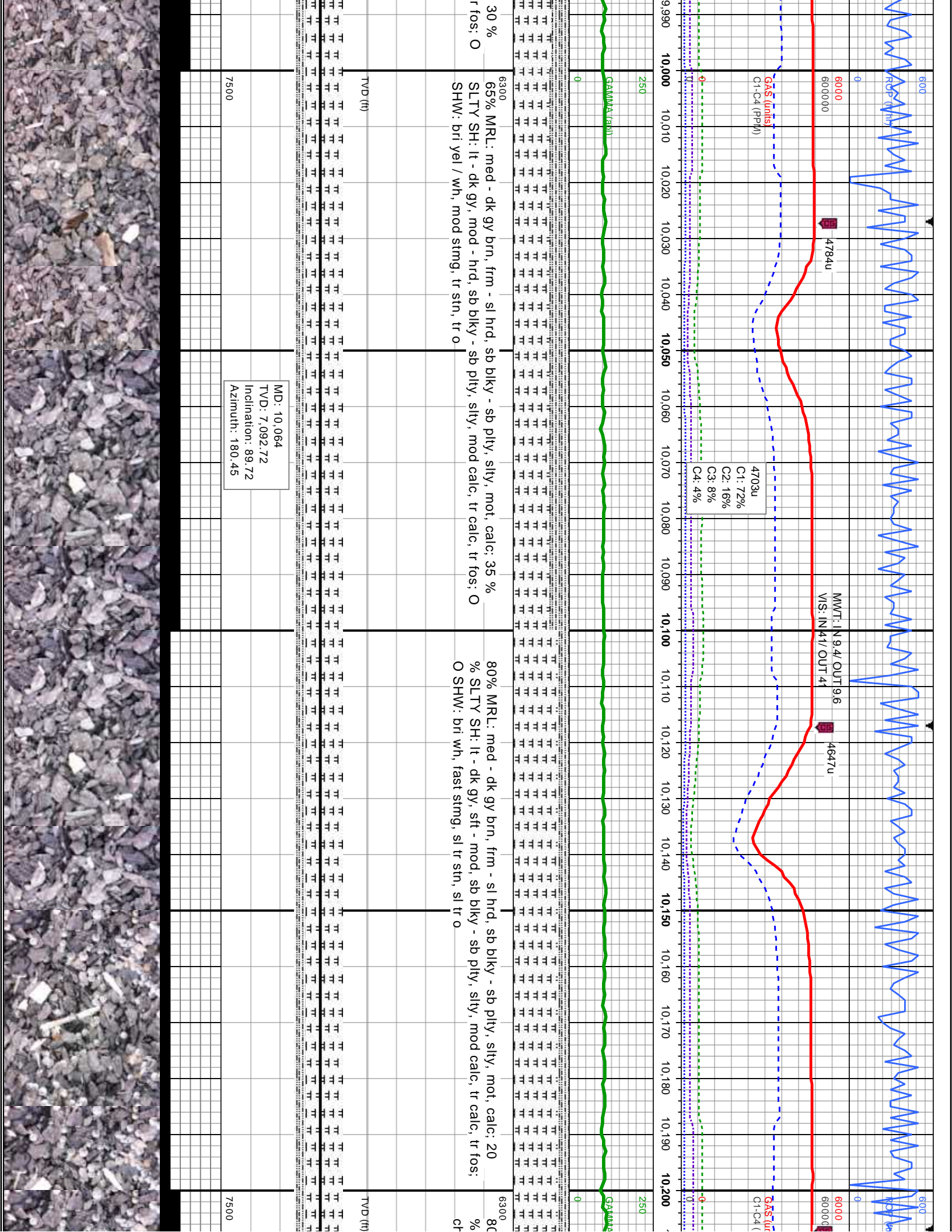


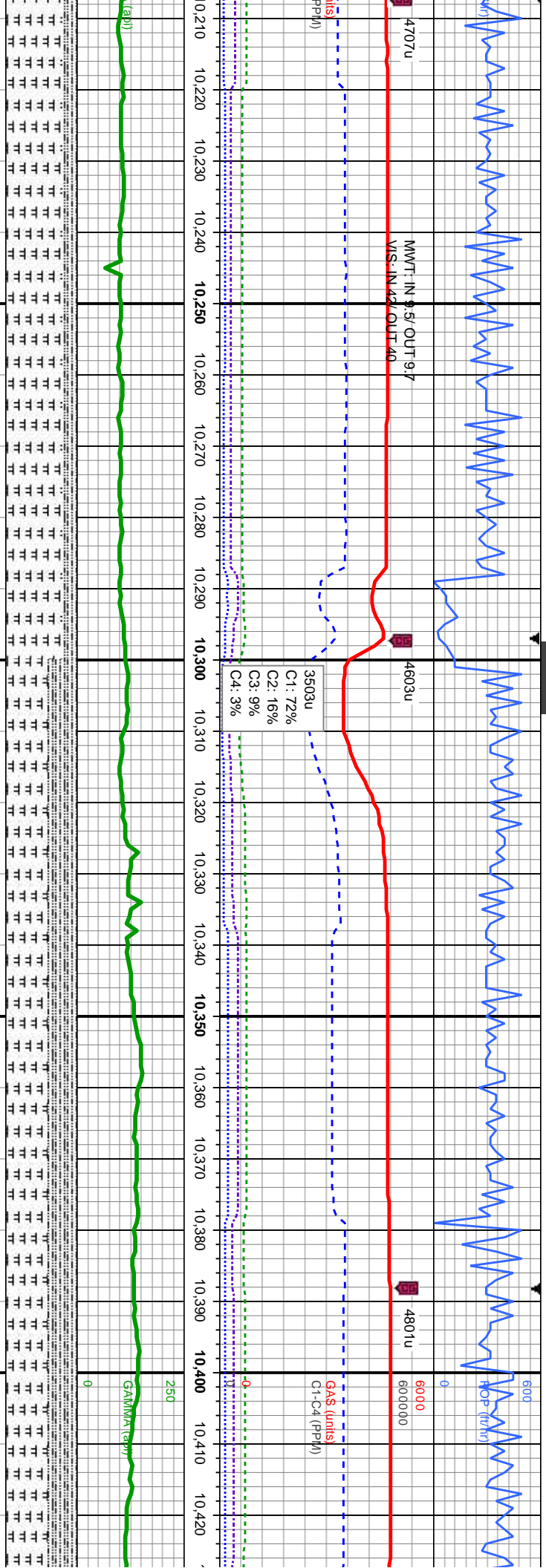












SLTY SH: It - dk gy, mod - hrd, sb blkly - sb pfty, slty, mod calc, tr calc, tr
k, tr fos, O SHW: bri wh, fast slmg, tr stn, tr o

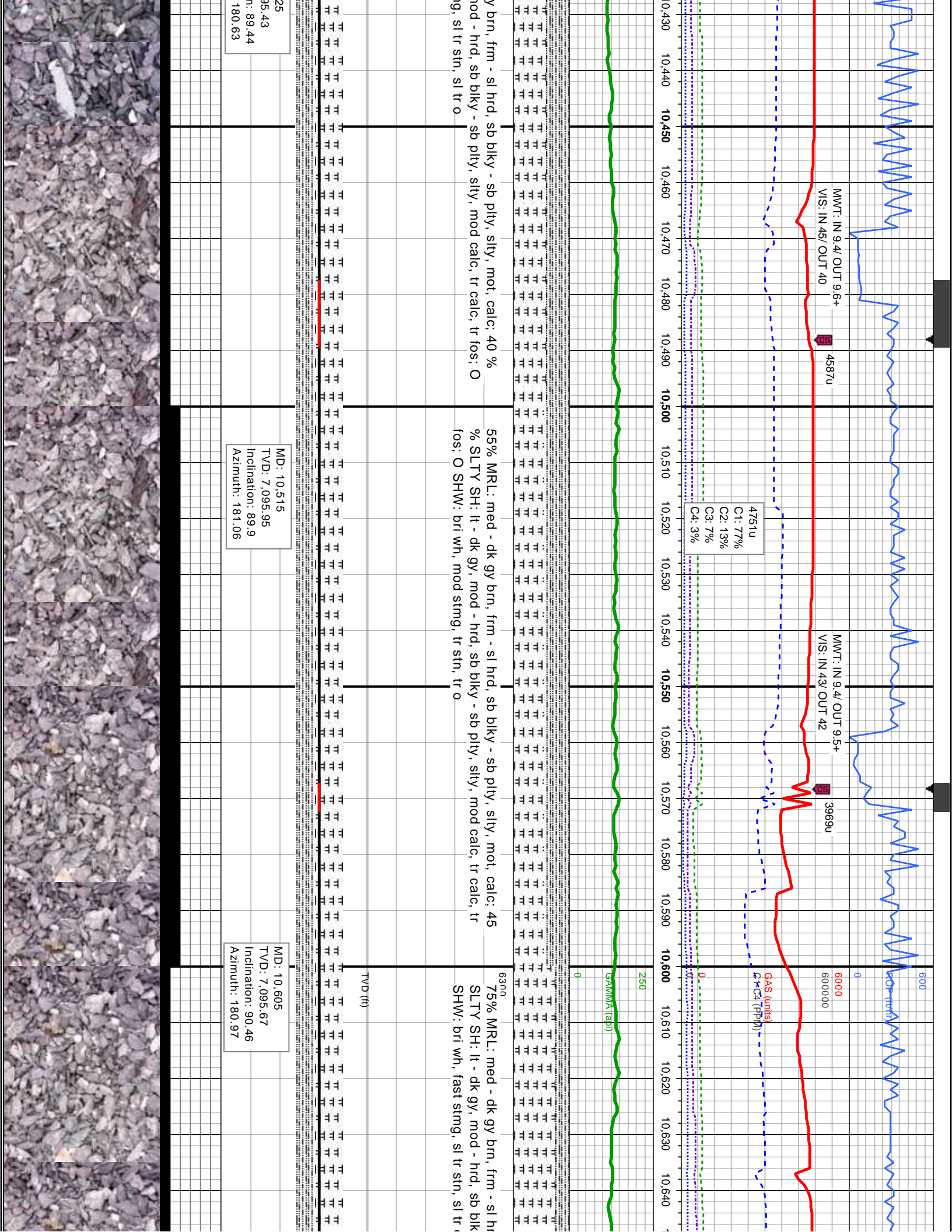
60% MR: med - dk gy brn, frm - sl hrd, sb bkly - sb pily, slty, mot, calc; 40 %
SLTY SH: lt - dk gy, mod - hrd, sb bkly - sb pily, slty, mod calc, tr calc, tr fos, O
SHW: bri wh, mod stmg, sl tr sln, sl tr o

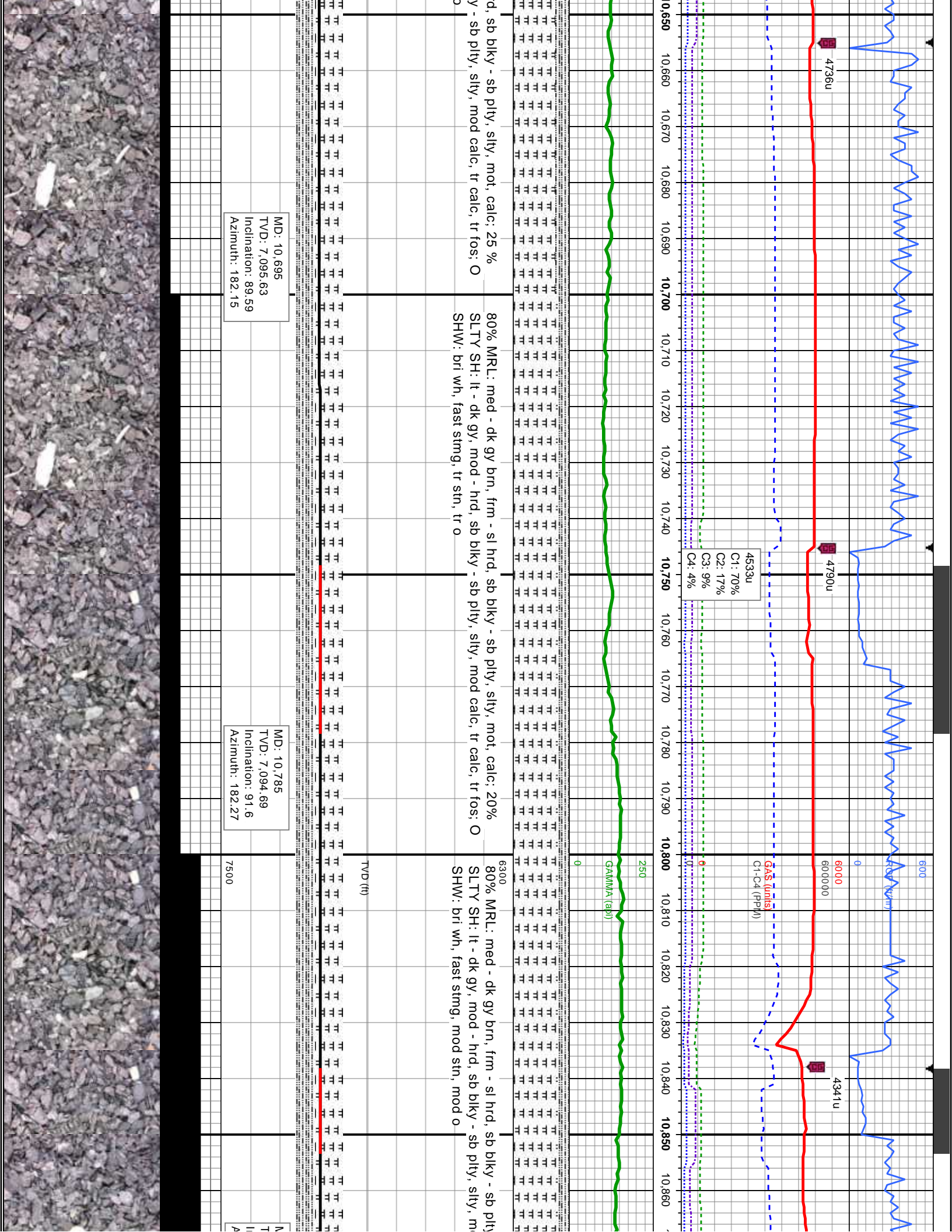
60% MRL: med - dk g
SLTY SH: lt - dk gy, n
SHW: bri wh, mod str

MD: 10,244
TVD: 7,093.85
Inclination: 89.56
Azimuth: 179.87

MD: 10,4	
TVD: 7,09	
Inclinatio	
Azimuth:	







4736u

4790u

4341u

4633u

C1: 70%
C2: 17%
C3: 9%
C4: 4%

GAS (units)
C1-C4 (PPM)

25d

GAMMA (api)

0

6300

80% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb plty, slty, mot, calc: 20%
SLTY SH: lt - dk gy, mod - hrd, sb blkly - sb plty, slty, mod calc, tr fos: O
SHW: bri wh, fast stmg, tr stn, tr o

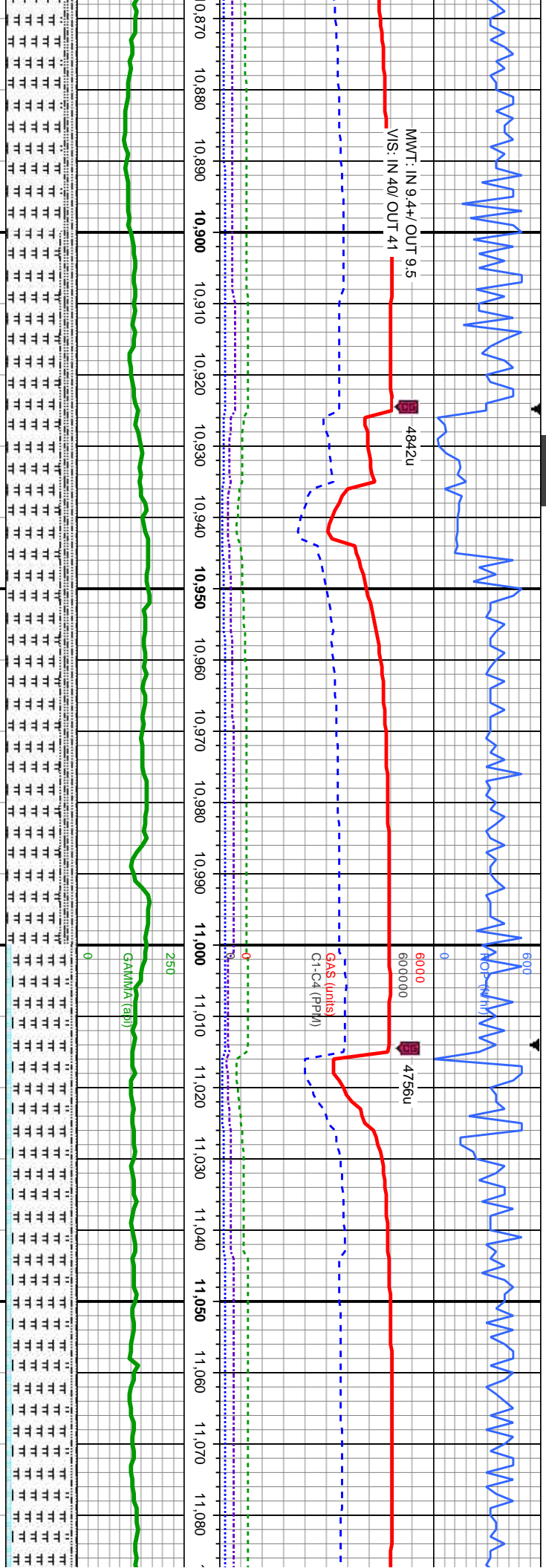
MD: 10,695
TVD: 7,095.63
Inclination: 89.59
Azimuth: 182.15

MD: 10,785
TVD: 7,094.69
Inclination: 91.6
Azimuth: 182.27

7500

TVD (ft)

N
T
I
A



10,870 10,880 10,890 10,900 10,910 10,920 10,930 10,940 10,950 10,960 10,970 10,980 10,990 11,000 11,010 11,020 11,030 11,040 11,050 11,060 11,070 11,080

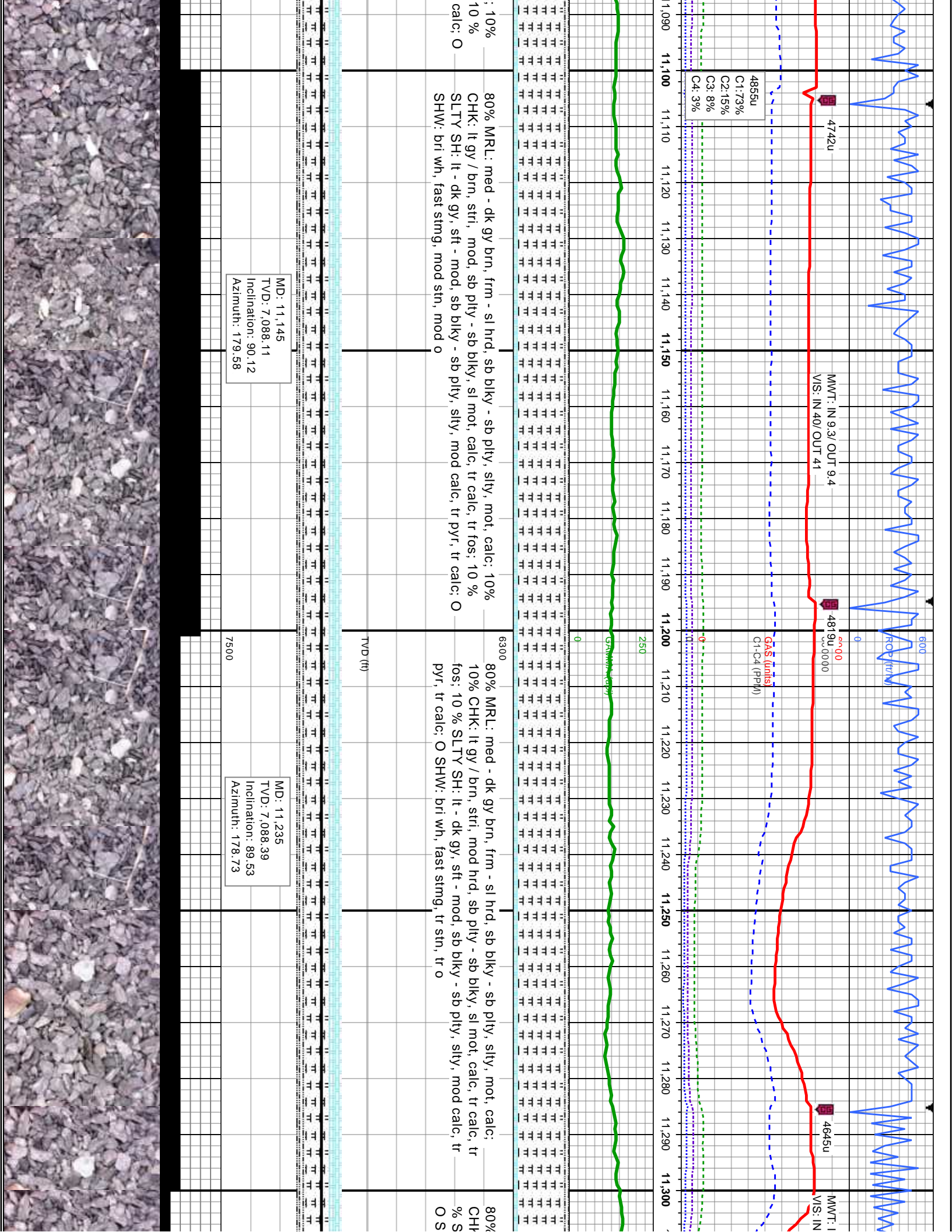
75% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb plty, slty, mot, calc: 25%
SLTY SH: lt - dk gy, mod - hrd, sb blkly - sb plty, slty, mod calc, tr calc, tr fos; O
SHW: bri wh, slow stmg, tr str, tr o

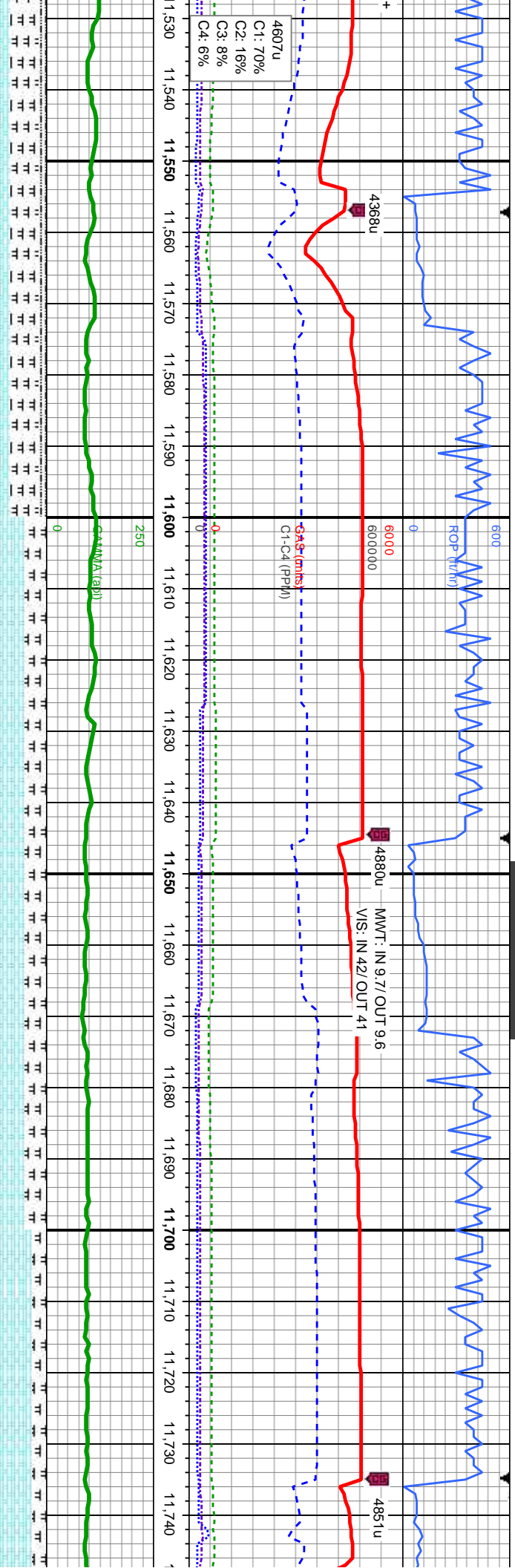
6300
80% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb plty, slty, mot, calc
CHK: lt gy / brn, stri, mod, sb plty - sb blkly, sl mot, calc, tr calc, tr fos;
SLTY SH: lt - dk gy, sft - mod, sb blkly - sb plty, slty, mod calc, tr pyr, tr
SHW: bri wh, fast stmg, tr str, tr o

TVD (ft)

MD: 10.875 VD: 7.092.49 Inclination: 91.21 Azimuth: 180.46	MD: 10.965 TVD: 7.090.64 Inclination: 91.14 Azimuth: 179.79	MD: 11.055 TVD: 7.088.98 Inclination: 90.98 Azimuth: 179.32
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630% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb ply, slty, mot, calc; 50%
70% CHK: lt gy / brn, stri, mod hrd, sb blkly, sl mot, calc, tr calc, tr fos; 10
fos, tr shd, sb ply - sb blkly, sl mot, calc, tr calc, tr fos, tr sh; O SHW: bri wh,
mod sting, sl tr stn, sl tr o

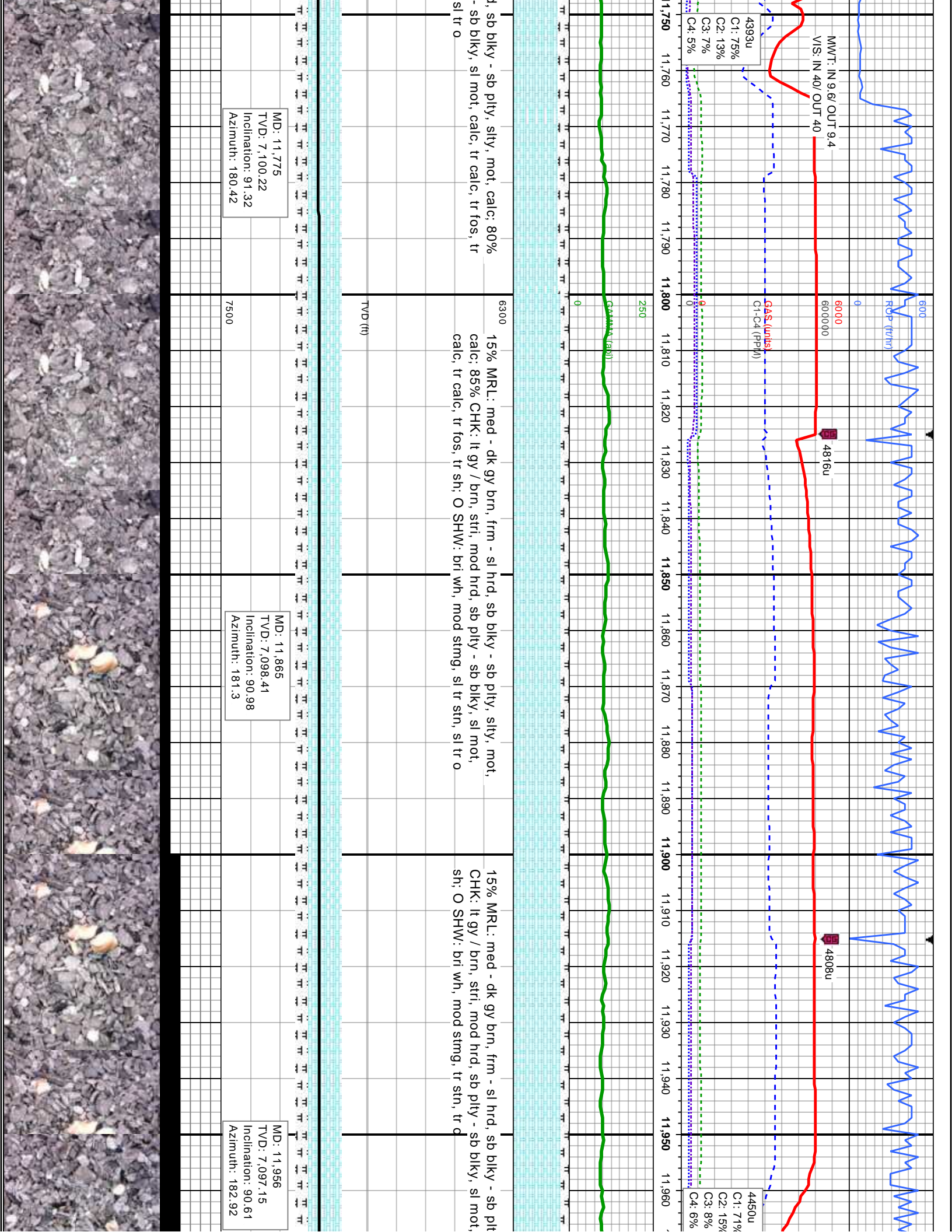
630% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb ply, slty, mot, calc;
70% CHK: lt gy / brn, stri, mod hrd, sb blkly, sl mot, calc, tr calc, tr fos; 10
fos, tr shd, sb ply - sb blkly, sl mot, calc, tr calc, tr fos, tr sh; O SHW: bri wh,
mod sting, sl tr stn, sl tr o

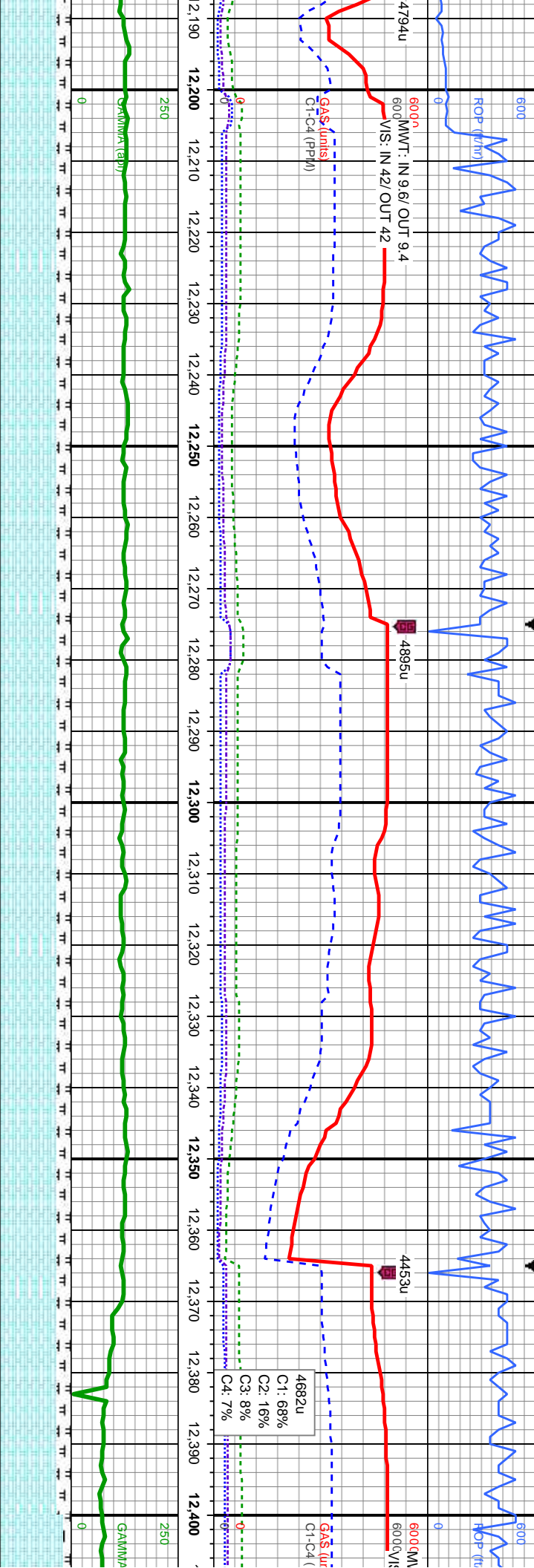
20% MRL: med - dk gy brn, frm - sl hrd
CHK: lt gy / brn, stri, mod hrd, sb ply
sh; O SHW: bri wh, fast sting, sl tr stn,

MD: 11,595
TVD: 7,098.71
Inclination: 88.08
Azimuth: 178.61

MD: 11,685
TVD: 7,100.74
Inclination: 89.34
Azimuth: 179.19







6300
20% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb plty, slty, mot, calc; 80%
CHK: lt gy / brn, stri, mod hrd, sb plty - sb blkly, sl mot, calc, tr fos, tr sh;
O SHW: bri wh, fast stmg, tr str, tr o

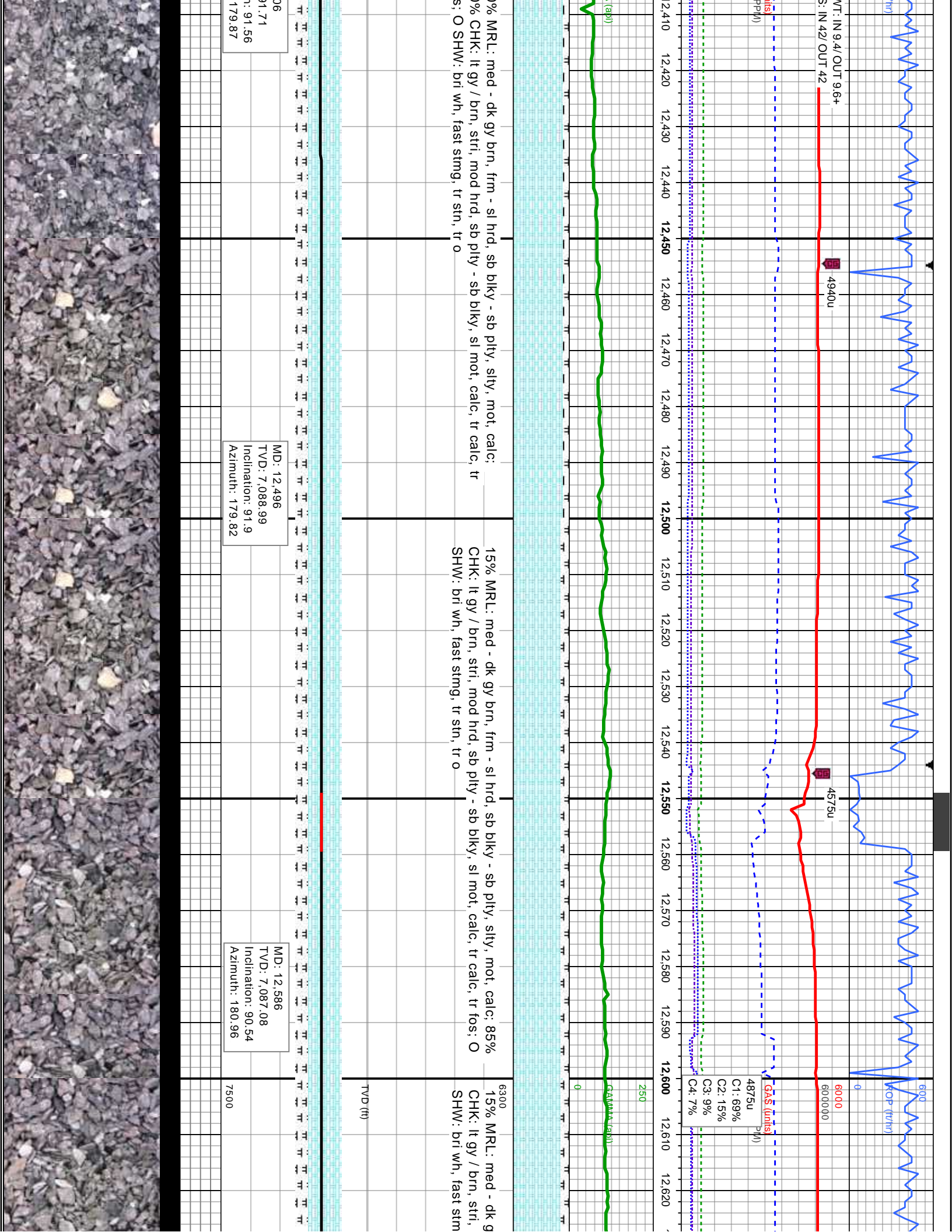
6300
20% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb plty, slty, mot, calc;
80% CHK: lt gy / brn, stri, mod hrd, sb plty - sb blkly, sl mot, calc, tr calc, tr
fos, tr sh; O SHW: bri wh, fast stmg, tr str, tr o

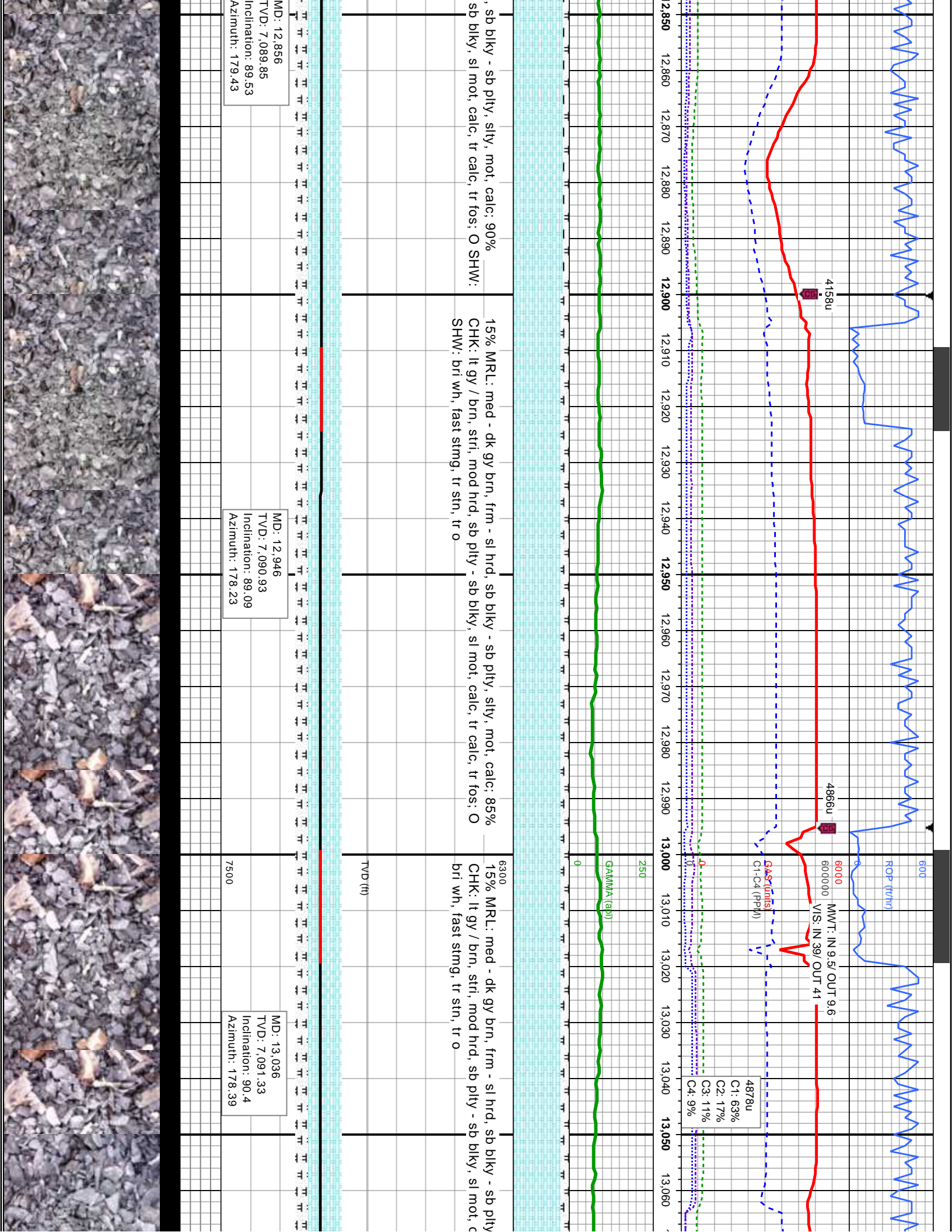
MD: 12,226
TVD: 7,096.75
Inclination: 91.42
Azimuth: 180.04

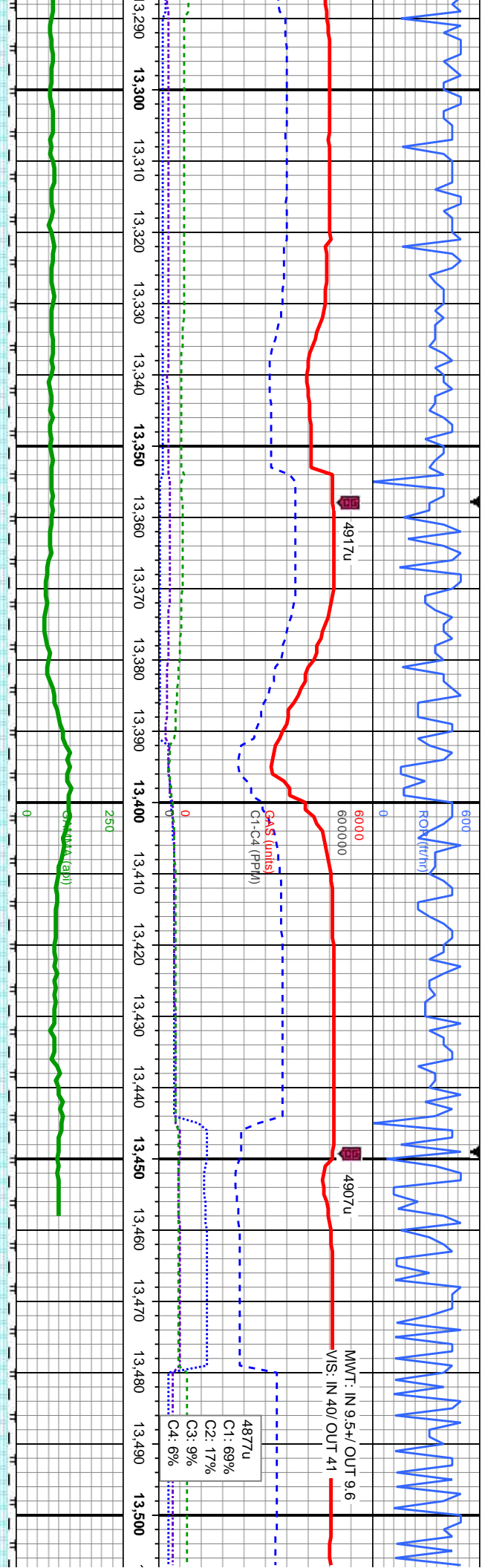
MD: 12,316
TVD: 7,094.28
Inclination: 91.72
Azimuth: 179.52

MD: 12,410
TVD: 7,095.00
Inclination: 91.72
Azimuth: 179.52









10% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb plty, slty, mot, calc; 90% CHK: lt gy / brn, stri, mod hrd, sb plty - sb blkly, sl mot, calc, tr calc, tr fos; O SHW: bri wh, mod stmg, sl tr stn, sl tr o

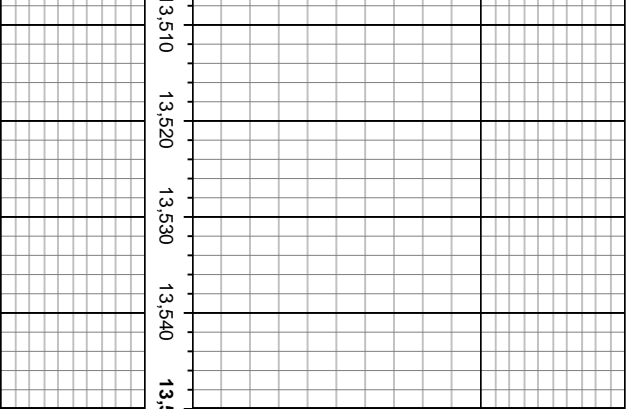
6300
10% MRL: med - dk gy brn, frm - sl hrd, sb blkly - sb plty, slty, mot, calc; 90% CHK: lt gy / brn, stri, mod hrd, sb plty - sb blkly, sl mot, calc, tr calc, tr fos; O SHW: bri wh, fast stmg, sl tr stn, sl tr o

TVD (ft)

MD: 13,454
TVD: 7,090.12
Inclination: 89.69
Azimuth: 183.45

MD: 13,454
TVD: 7,090.12
Inclination: 89.69
Azimuth: 183.45





Thank you for using
Columbine Logging, Inc.

TD @ 13,507' MD
on 09/26/2013 @ 9:24 MST

507
90.43
on: 89.69
: 183.45

