

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name No Worries PC G14-64-1HN

Location SWSW SEC 14 T4N R65W

State COLORADO

Country UNITED STATES

API Number 05-123-36329

Region DJ BASIN

Spud Date 1/20/2014

Surface Coordinates 1269' FSL; 276' FWL

Bottom Hole Coordinates 1500' FSL; 535' FEL

County WELD

Rig Number H&P 273

Field WATTENBERG

Drilling Completed 1/26/2014

Ground Elevation 4695'

K.B. Elevation 4844'

Logged Interval 6070' To 11209'

Total Depth 11209'

Formation NIOBRARA

Type of Drilling Fluid LSND

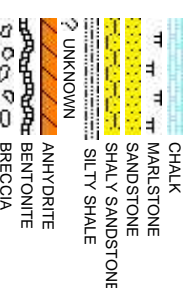
Company NOBLE ENERGY

Address 1625 Broadway
Denver, CO 80202

Name SARAH COMP

Company NOBLE ENERGY
Address 1625 Broadway
Denver, CO 80202

Wellsite Geologist #1: LA
Wellsite Geologist #2: JA
Wellsite Geological Service



Operator

BY INC.

Suite 2200
202

Geologist

TON

BY INC.

Suite 2200
202

Other

URA KELLOGG
KOB PAMMIER

ces Provided By Columbine Logging Inc.

Rock Types

CEMENT

CHERT

CLAY CHOKE SAND

CLAYSTONE

CONGLOMERATE

DOLomite

GRANITE

GYPsUM

IGNEOUS

SIDERITE or LIMONITE

LIMESTONE

METAMORPHIC

NO SAMPLE

SALT

SALT-PEPPER SAND

SHALE

SHALE COLORED

SHALE GRAY

SHALY SILTSTONE

SILTSTONE

TILL

TUFF

WELDED TUFF

Accessories

F Fossil

GASTROPOD

OOLITE

OSTRACOD

BELEMITE

PELECYPOD

BIOLASTIC

PELLET

BRACHOPOD

PISOLITE

BRYOZOA

PLANT REMAINS

CEPHALOPOD

PLANT SPORES

CORAL

SCAPHOPOD

CRINOID

STROMATOPOROID

ECHINOID

ARGILLACEOUS

ARGILLITE GRAIN

BENTONITE

BITUMENOUS SUBSTANCE

BRECCIA FRAGMENTS

CALCAREOUS

CARBONACEOUS FLAKES

CHTDK

CHTLT

COAL - THIN BEDS

CRINOID

DOLOMITIC

FELDSPAR

GLAUCONITE

GYPsIFEROUS

HEAVY MINERAL

INOCERAMUS

KAOLIN

MARLSTONE

MINERAL CRYSTALS

NODULES

PHOSPHATE PELLETS

PYRITE

SALT CAST

SANDY

TUFFACEOUS

ANHYDRITE STRINGER

BENTONITE STRINGER

COAL STRINGER

DOLomite STRINGER

GYPsUM STRINGER

LIMESTONE STRINGER

MARLSTONE (CALC) STRG

MARLSTONE (DOL) STRG

SANDSTONE STRINGER

FERRUGINOUS PELLET

SILICEOUS

FERRUGINOUS

SILT

SILTSTONE STRINGER

Other Symbols

MOLDIC

ORGANIC

DEAD

PINPOINT

EVEN

ENGINEERING

ENGINEERING

BIT

CONNECTION (LEFT)

CONNECTION (RIGHT)

CONNECTION GAS

OVERTURNED STRATA

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

TEXTURES

TEXTURES

BOUNDSTONE

CHALKY

CRYPTOXLN

SORTING

SORTING

MODERATE

POOR

WELL

Fault

FAULT

FORMATION TOP

GAS SHOW

MINDEPTH

MIN DEPTH

WIRELINE TESTED - LEFT

E EARTHY

WIRELINE TESTED - RT

FINELYXLN

GRAINSTONE

L LITHOGRAPHIC

ANGULAR

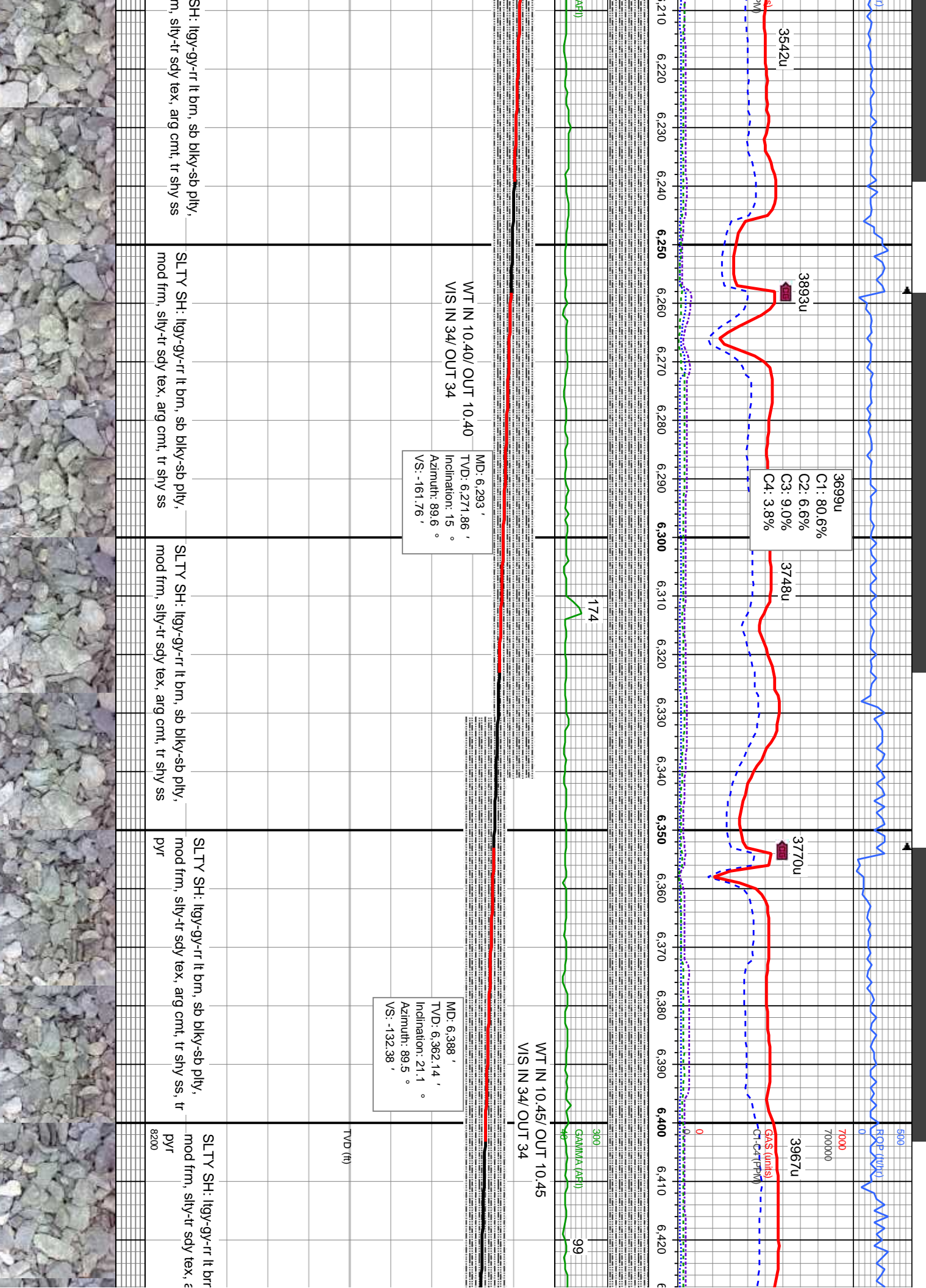
ROUNDED

SUBANG

SUBANG

PACKSTONE

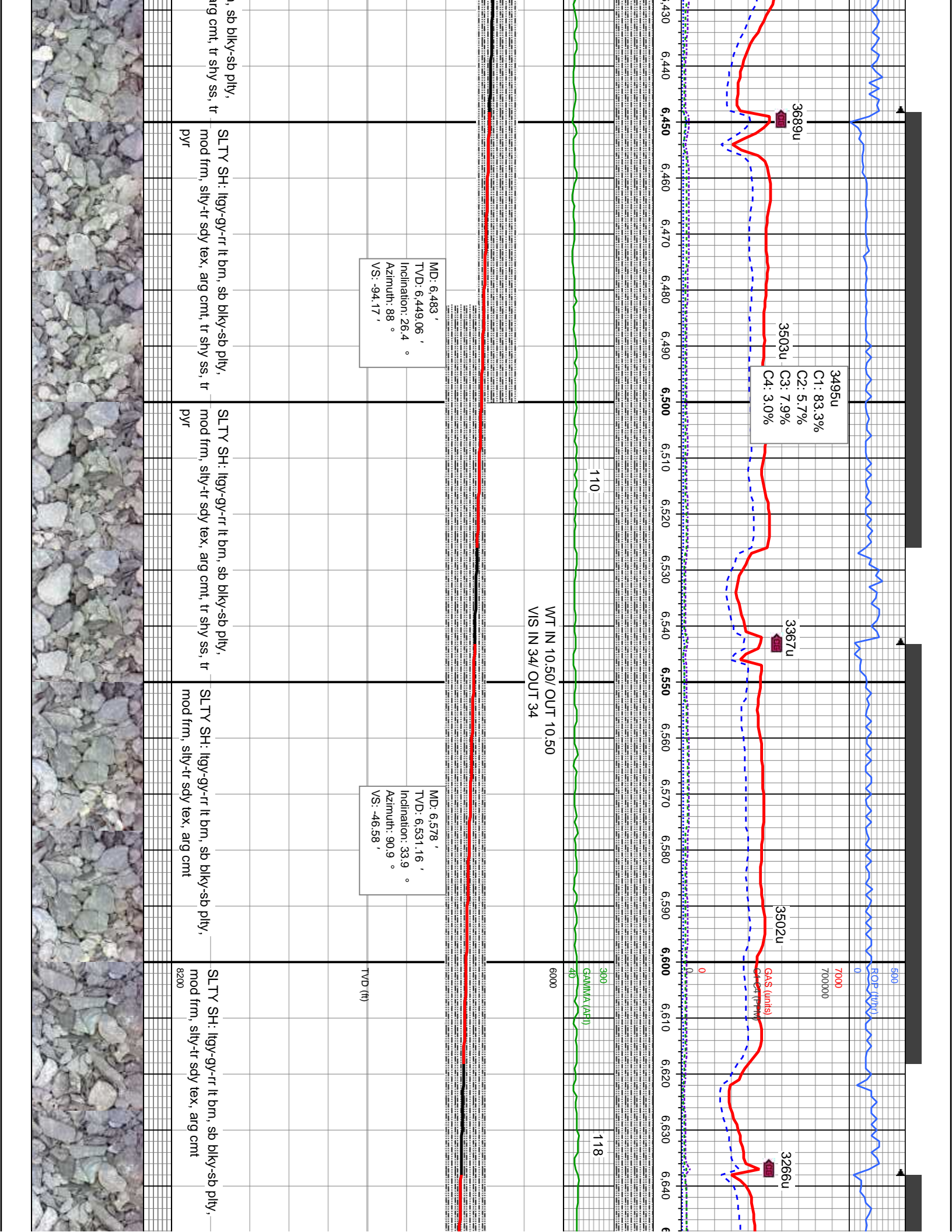
WACKSTONE

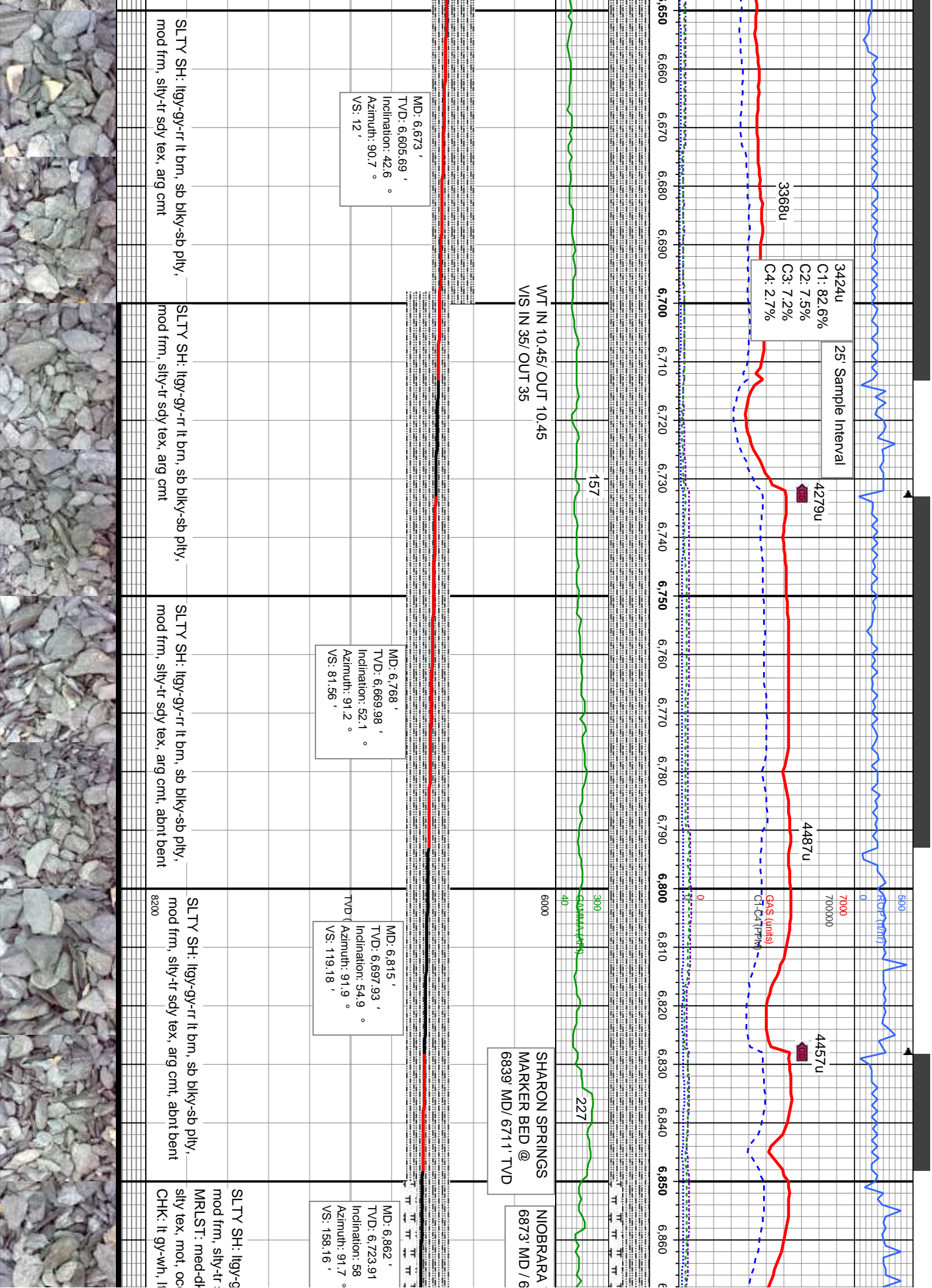


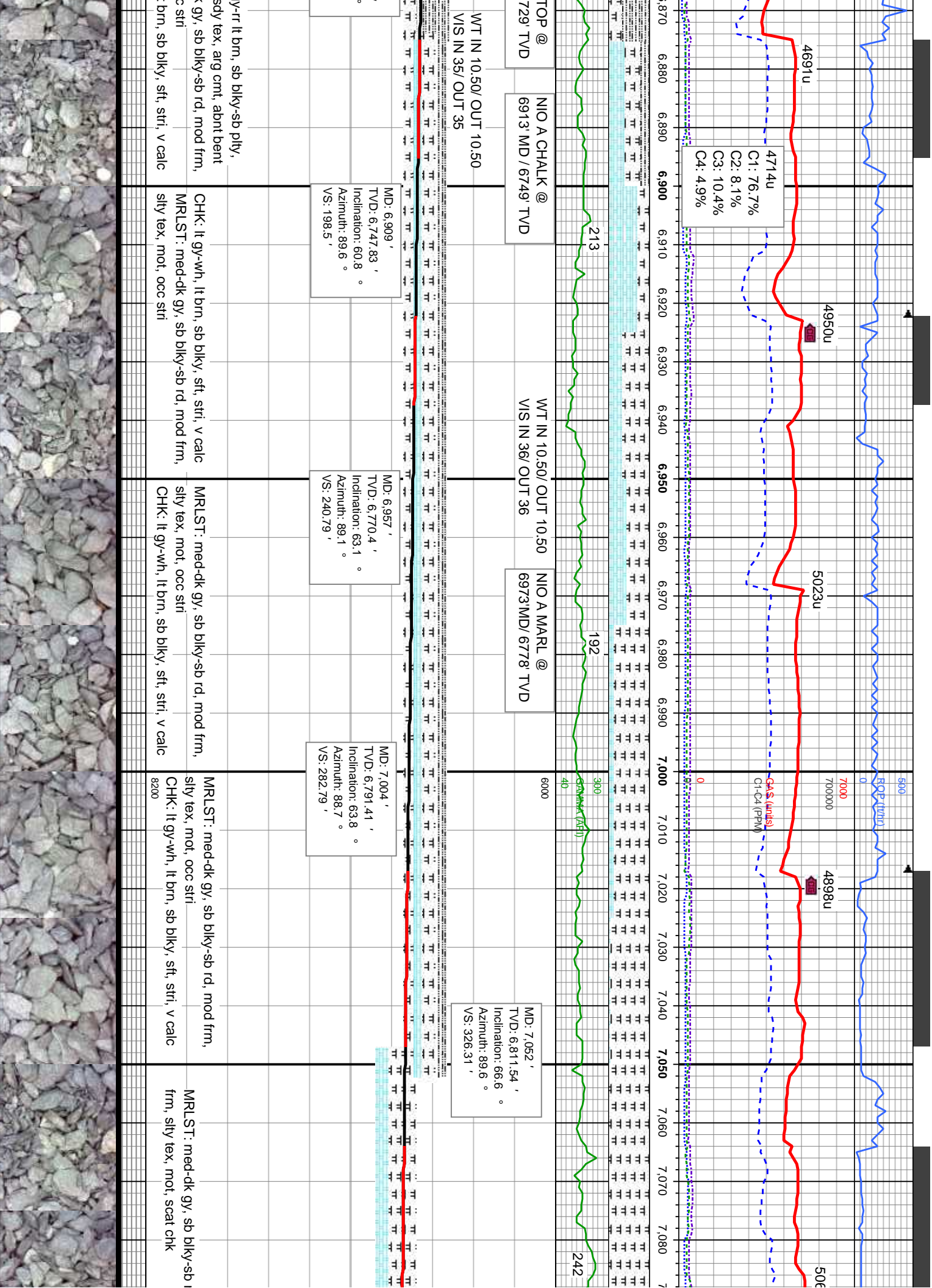
MD: 6,293 '
TVD: 6,271.86 '
Inclination: 15 °
Azimuth: 89.6 °
VS: -161.76 '

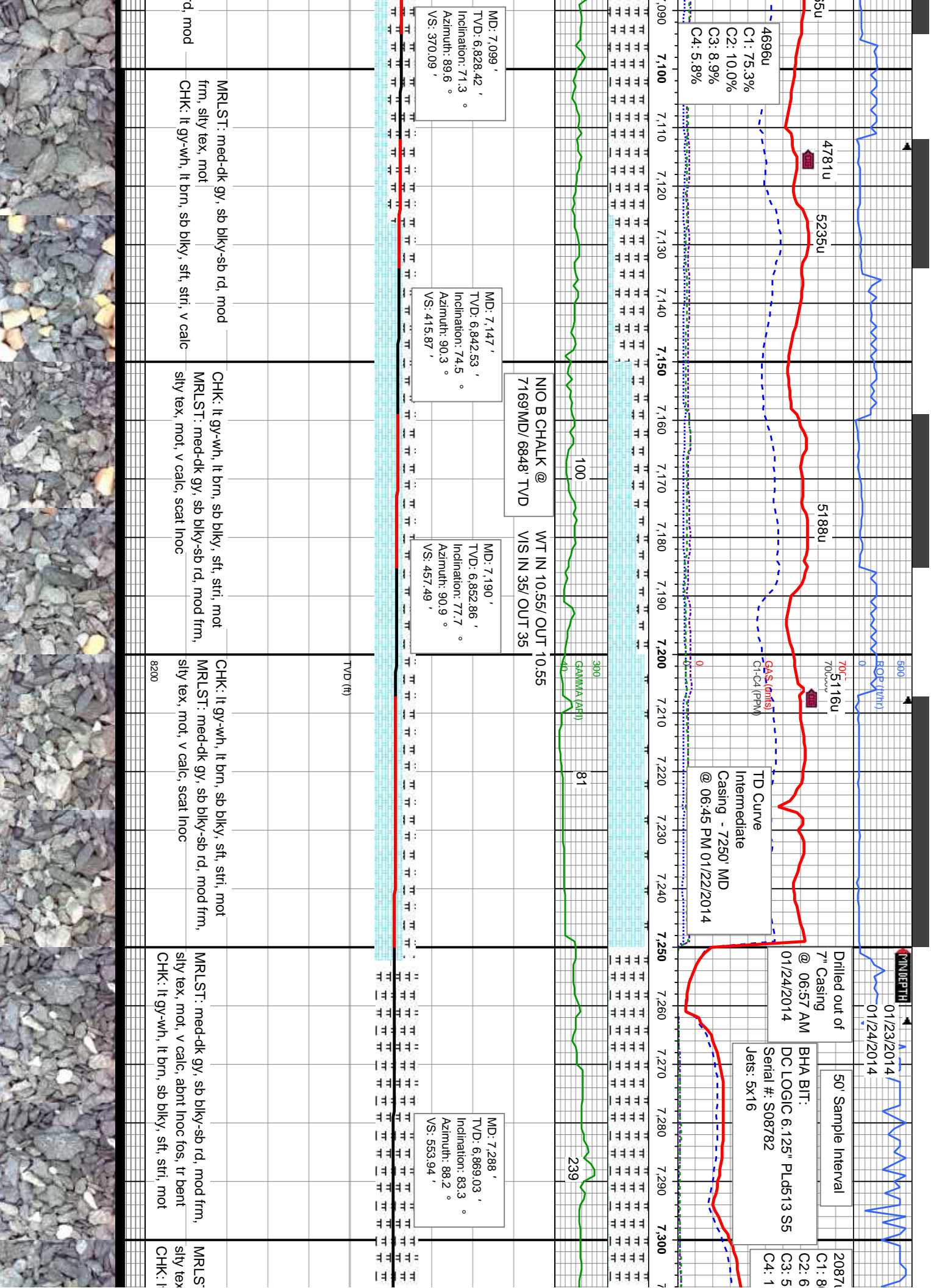
MD: 6,388 '
TVD: 6,362.14 '
Inclination: 21.1 °
Azimuth: 89.5 °
VS: -132.38 '

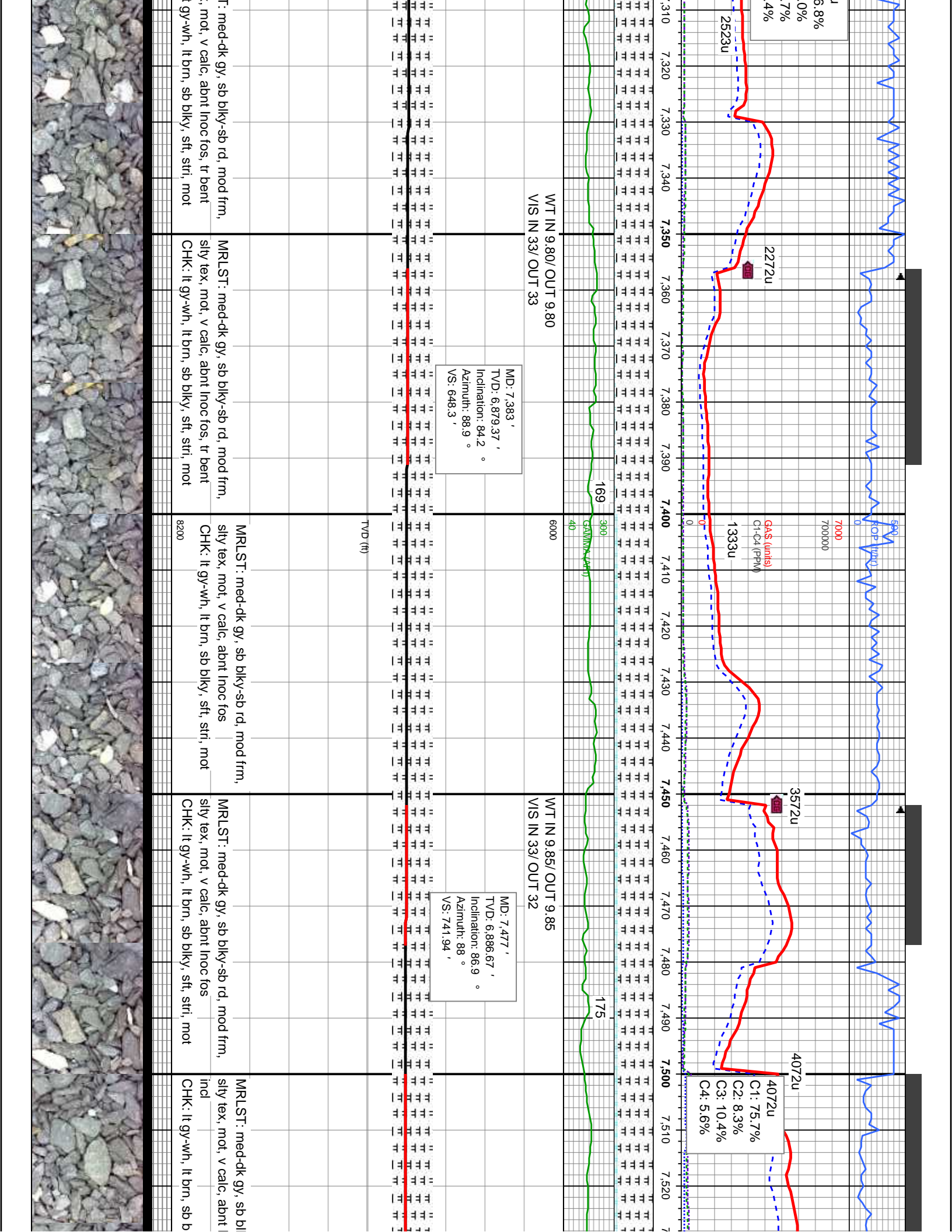
TVD (ft)

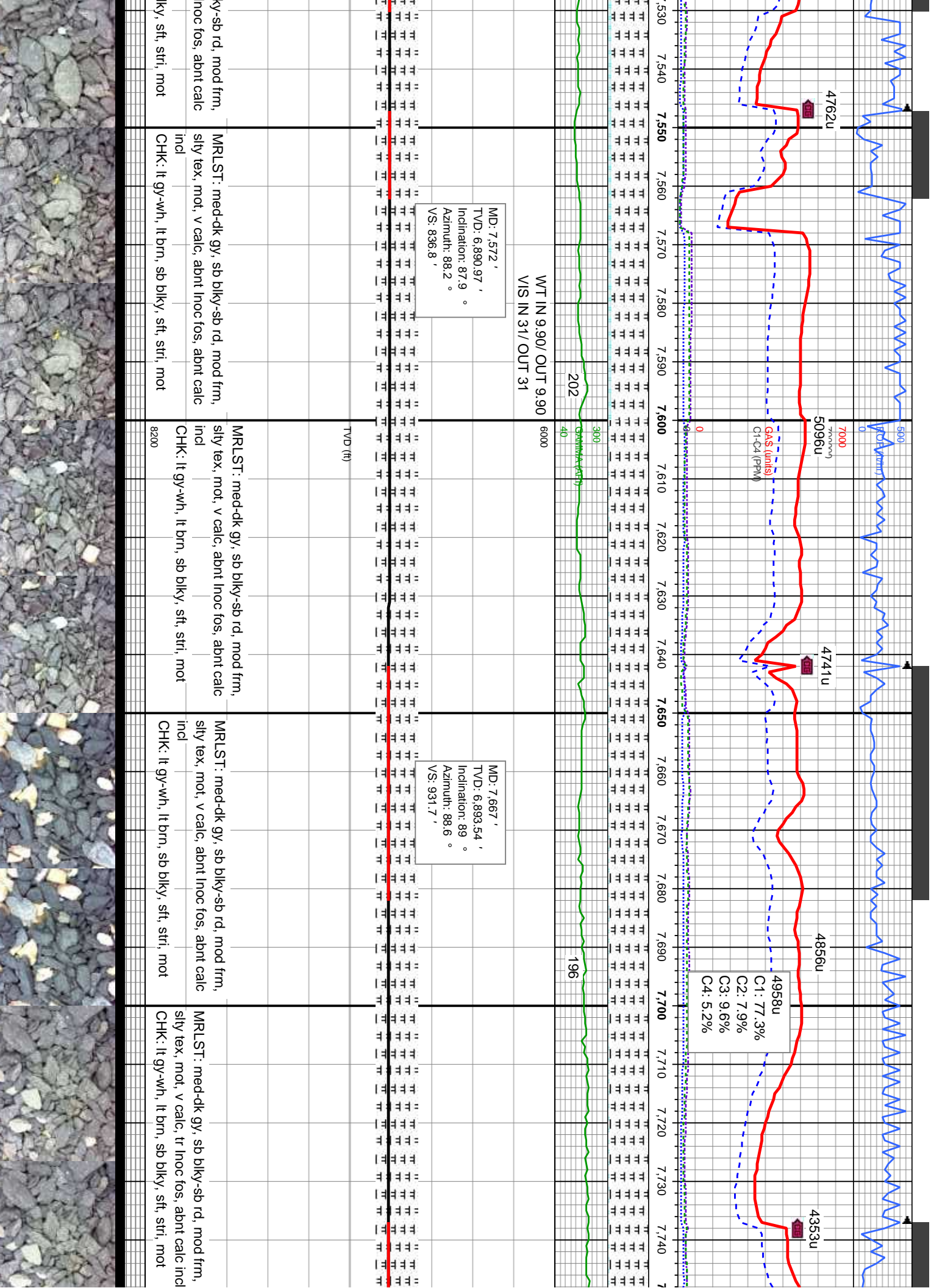


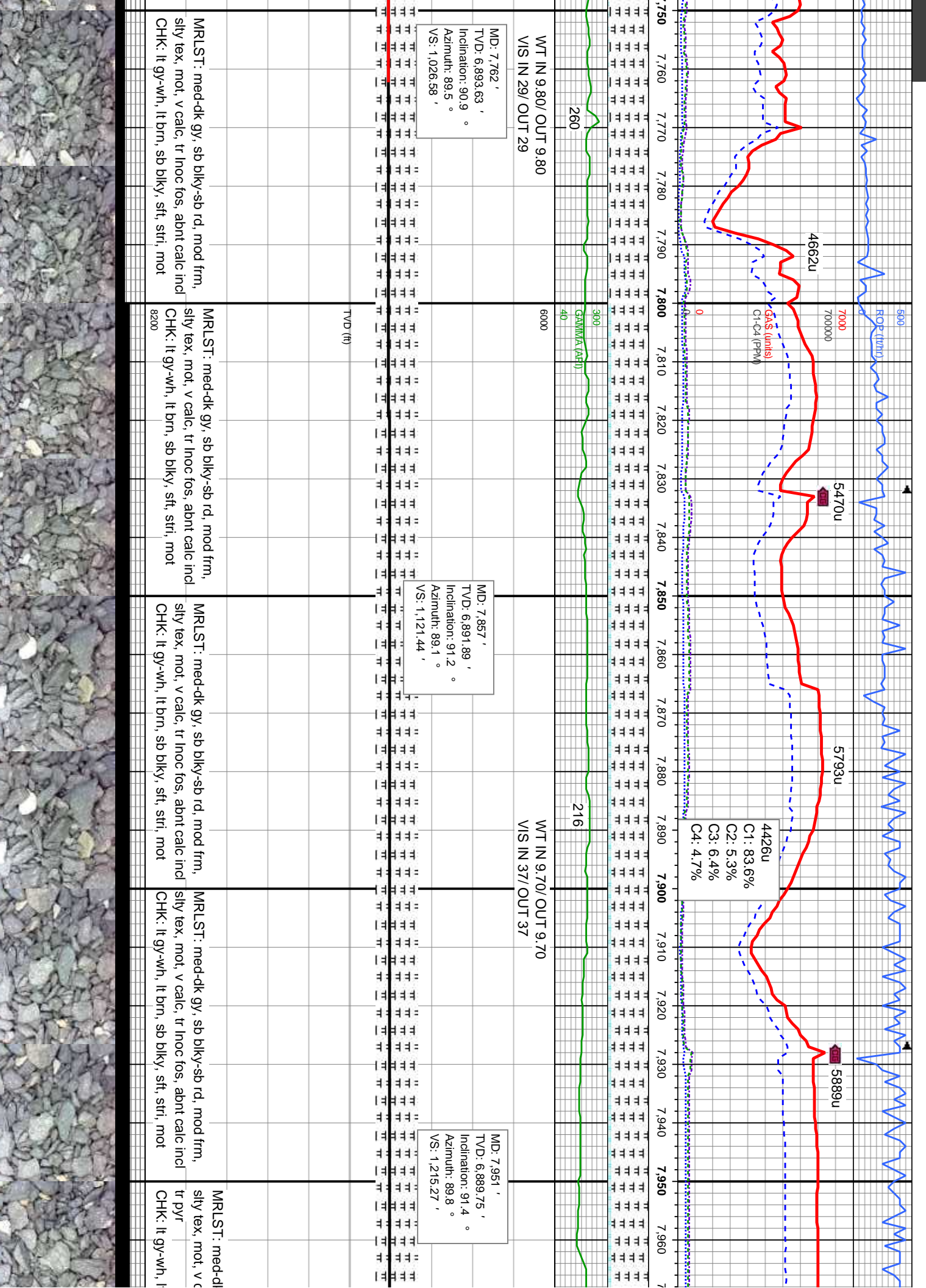


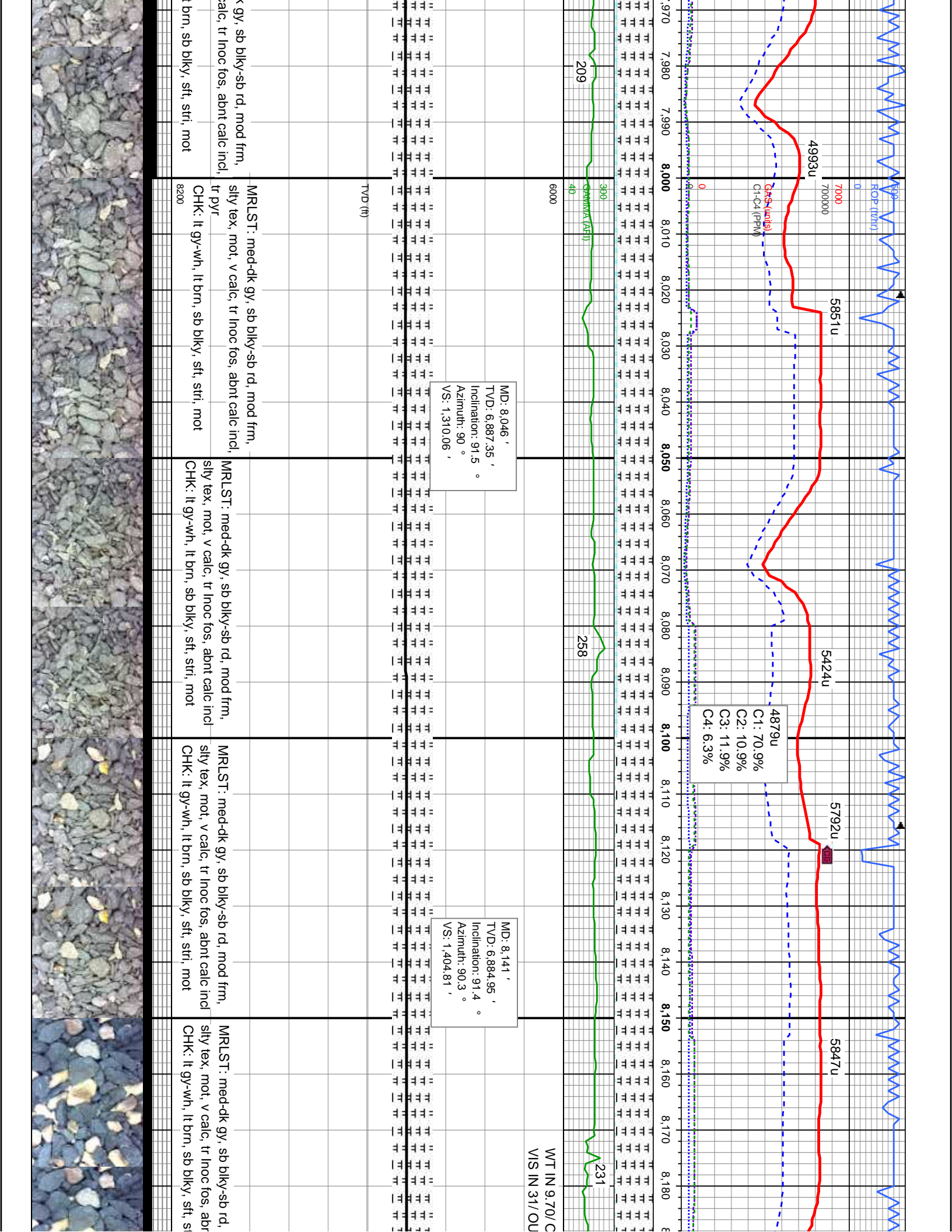


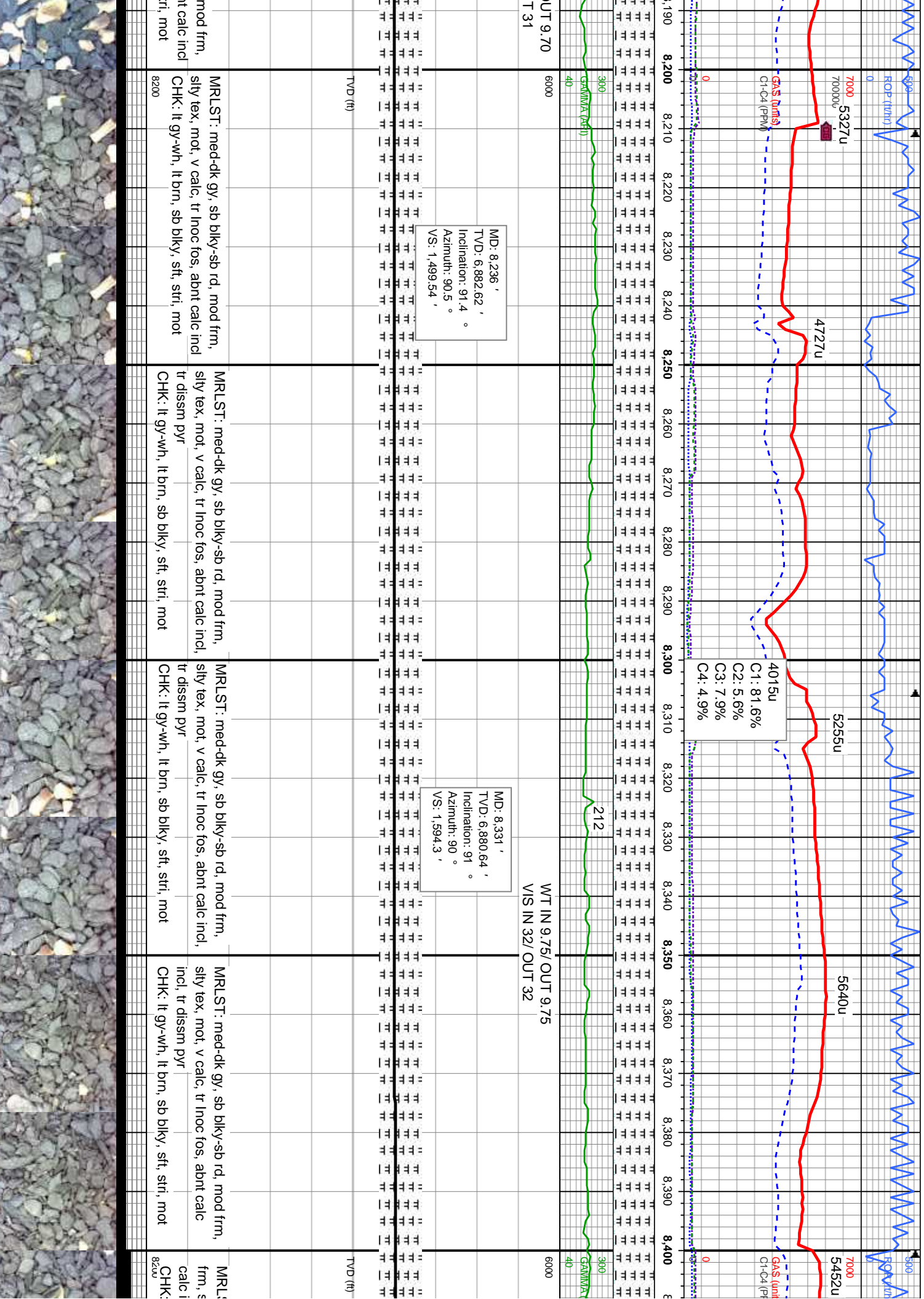








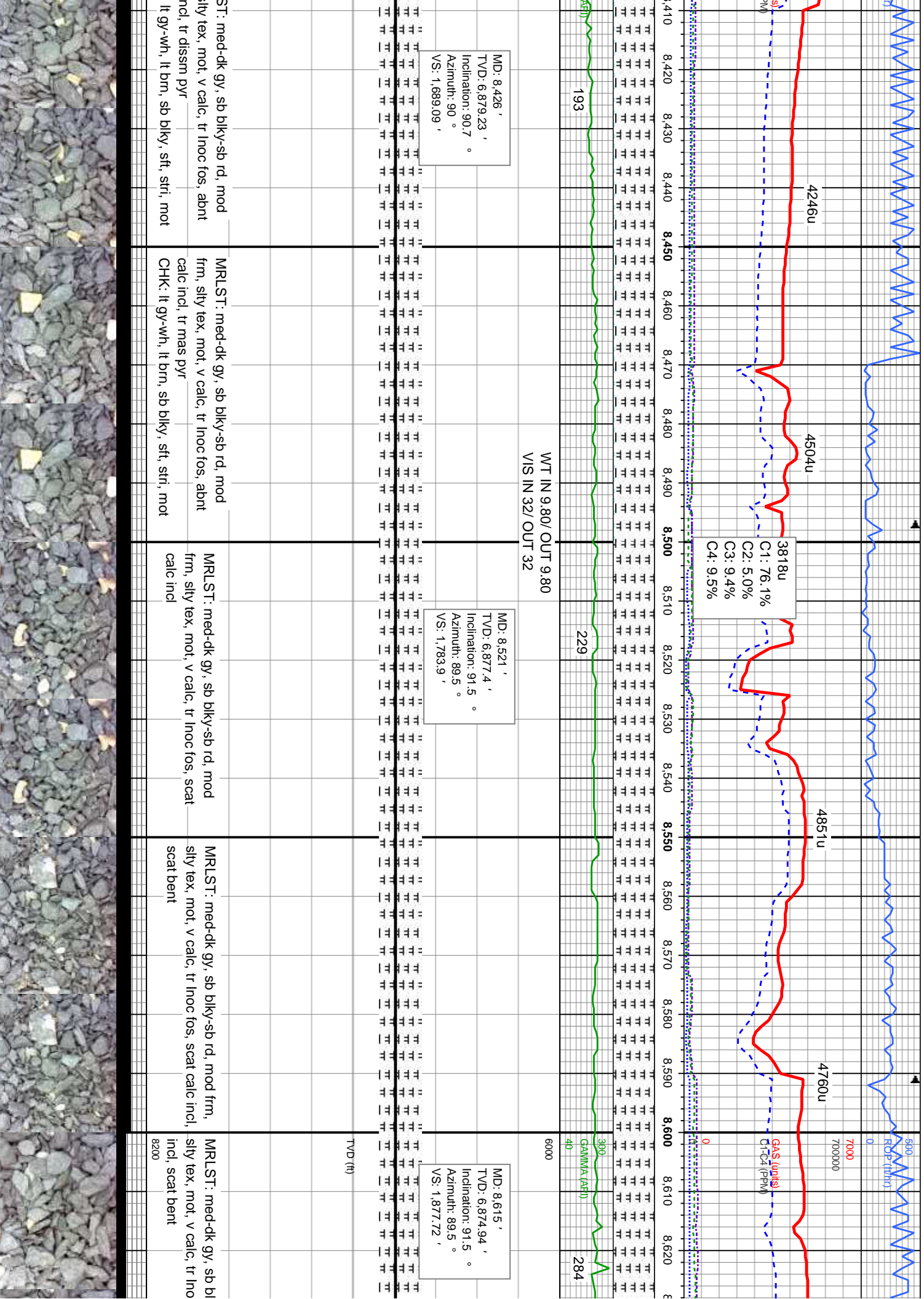


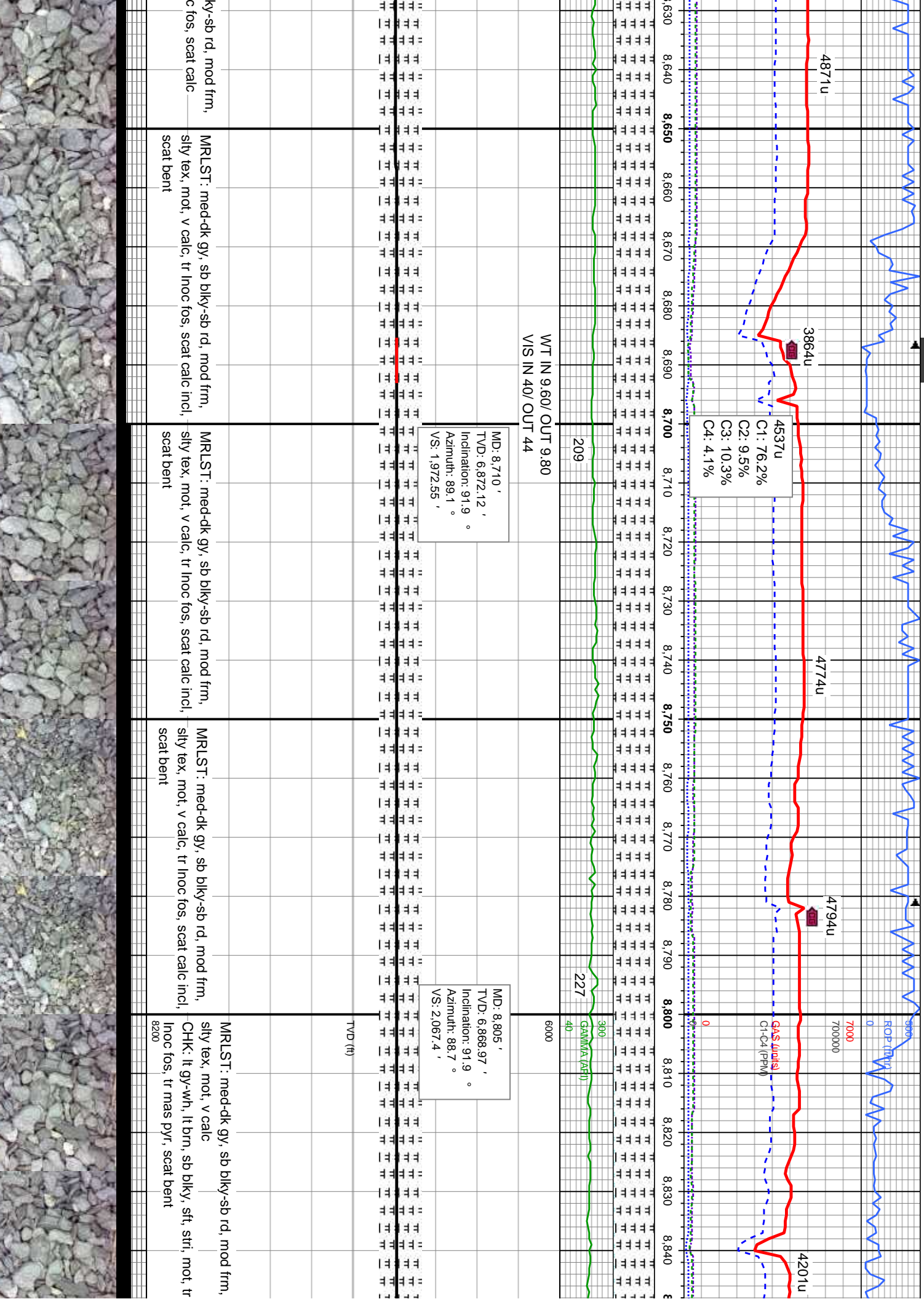


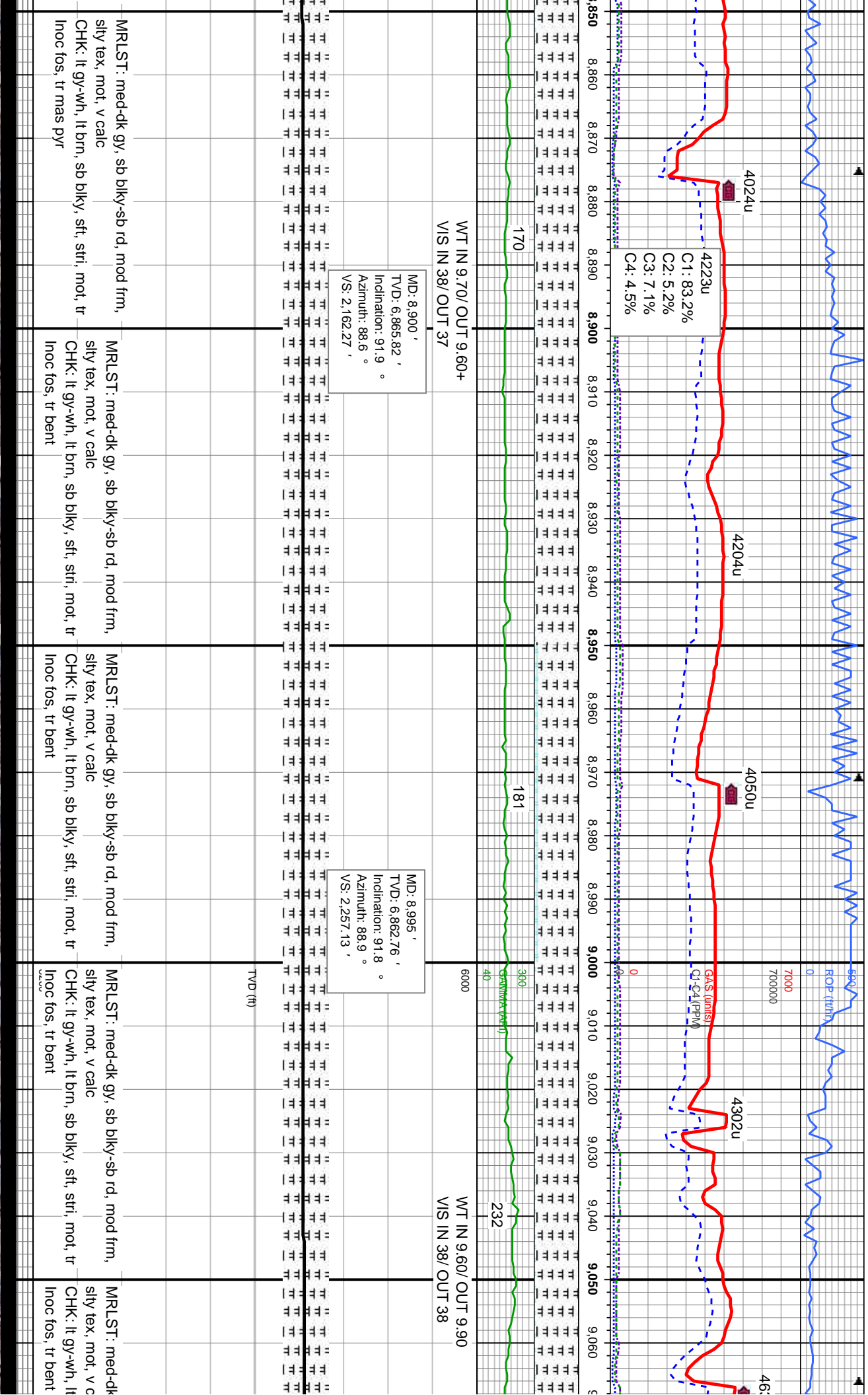
MD: 8,236 '
TVD: 6,882.62 '
Inclination: 91.4 °
Azimuth: 90.5 °
VS: 1,499.54 '

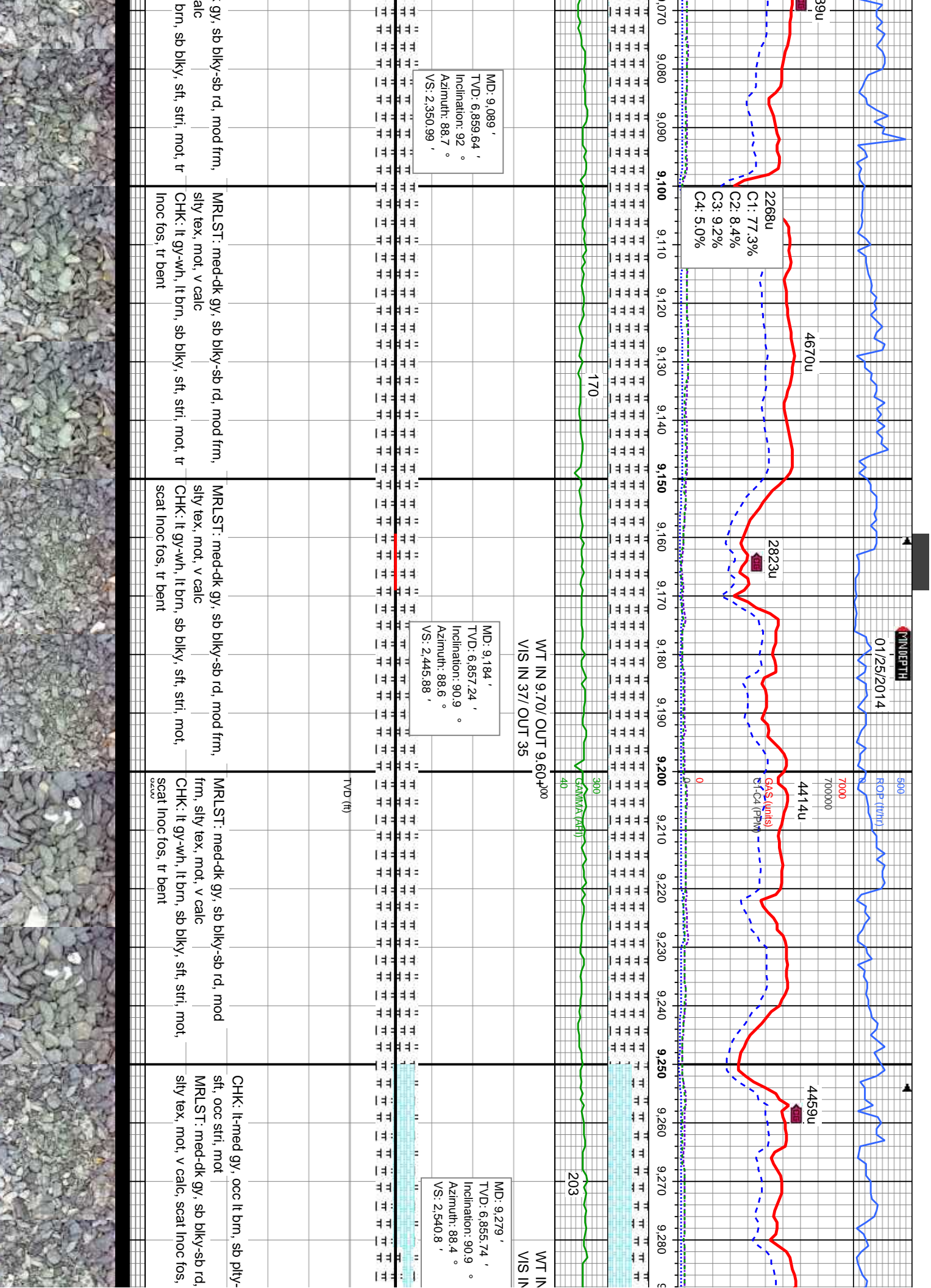
MD: 8,331 '
TVD: 6,880.64 '
Inclination: 91 °
Azimuth: 90 °
VS: 1,594.3 '

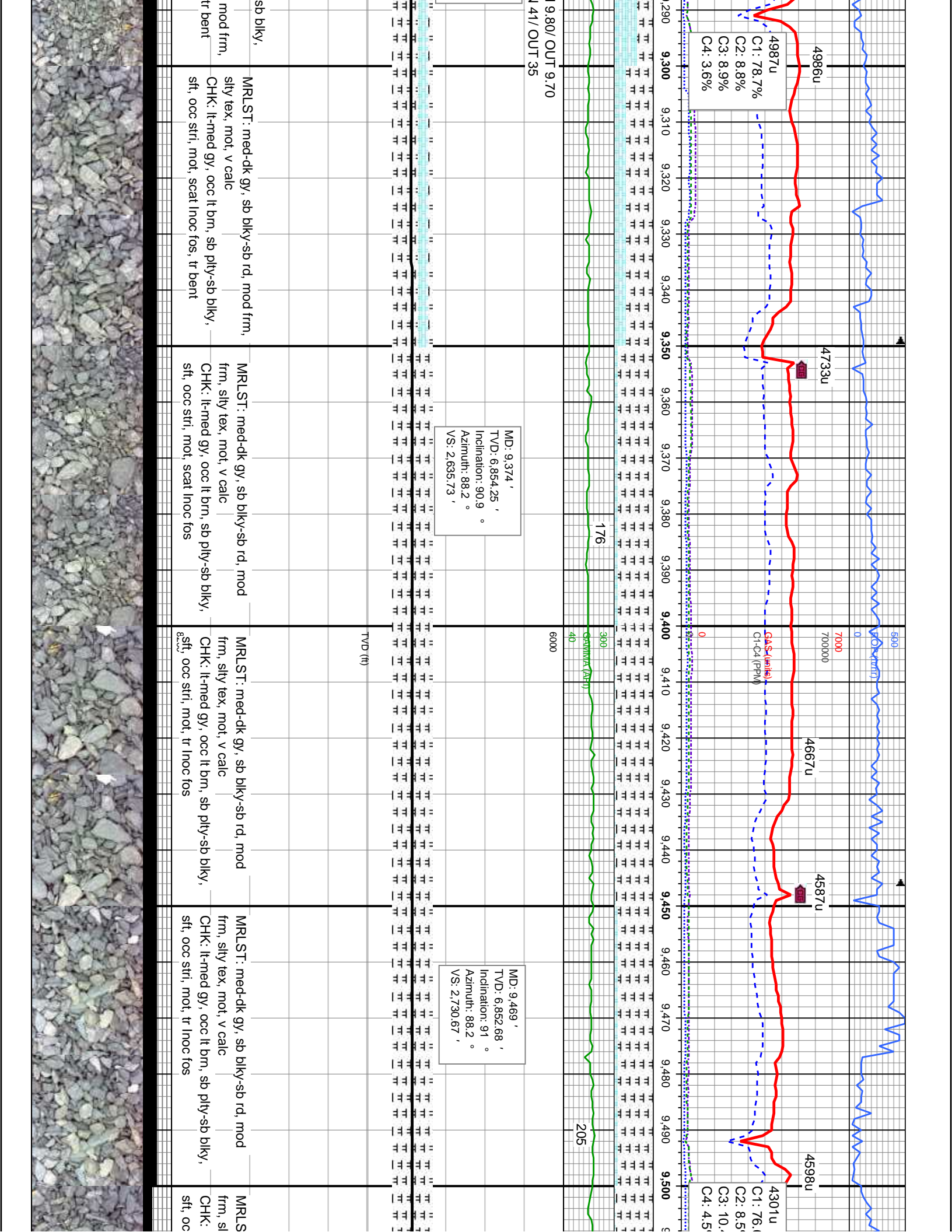
4015u
C1: 81.6%
C2: 5.6%
C3: 7.9%
C4: 4.9%

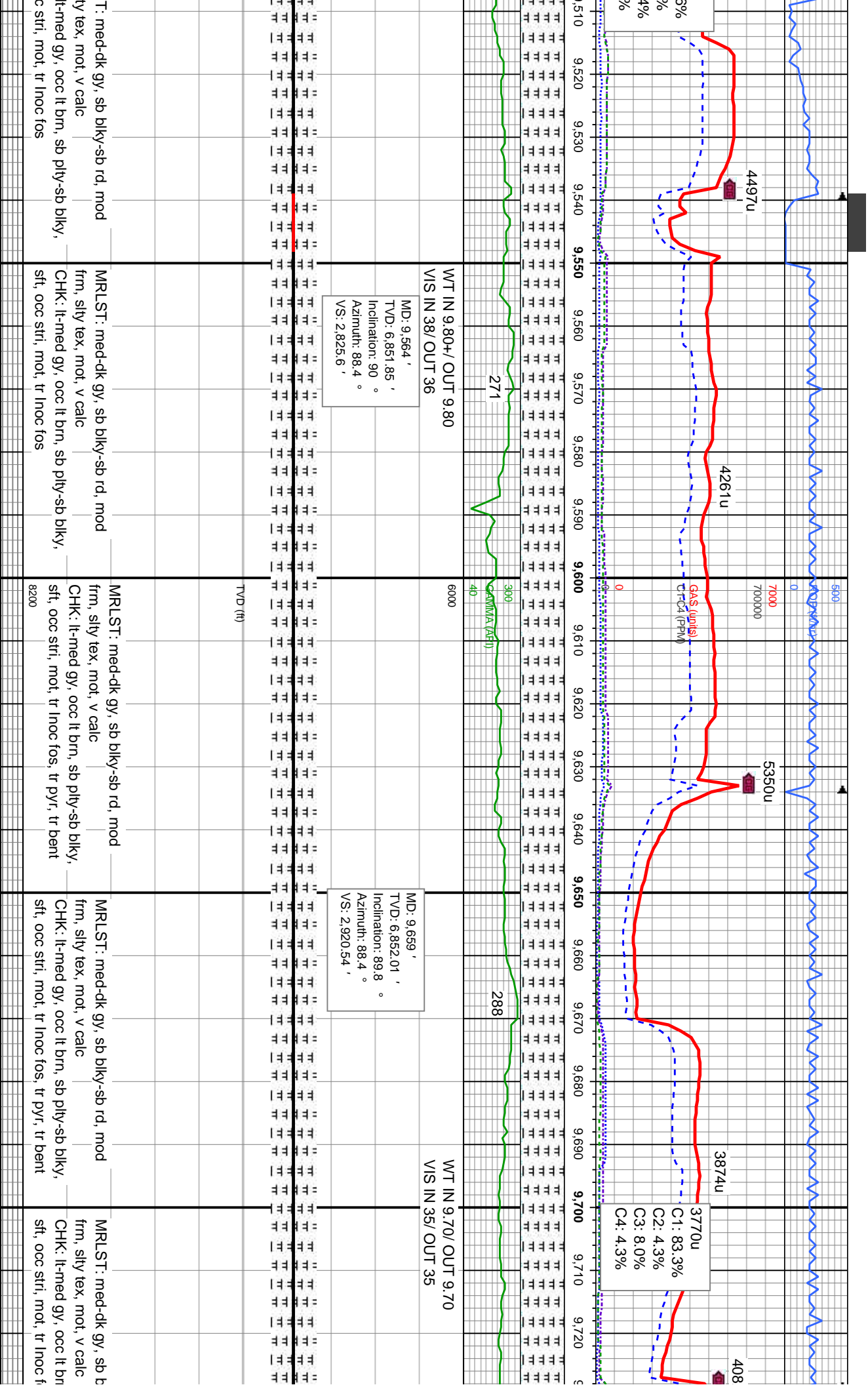


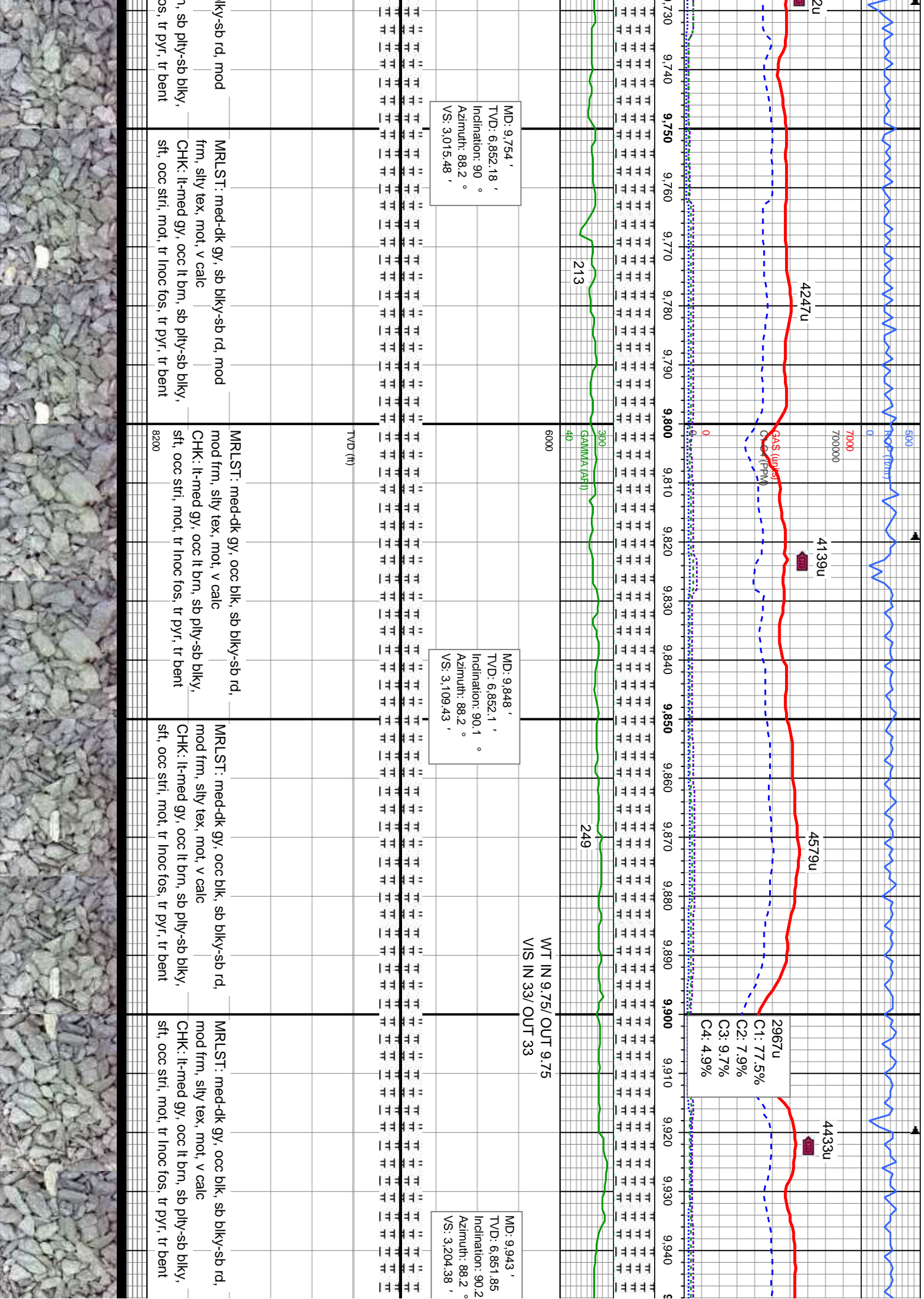


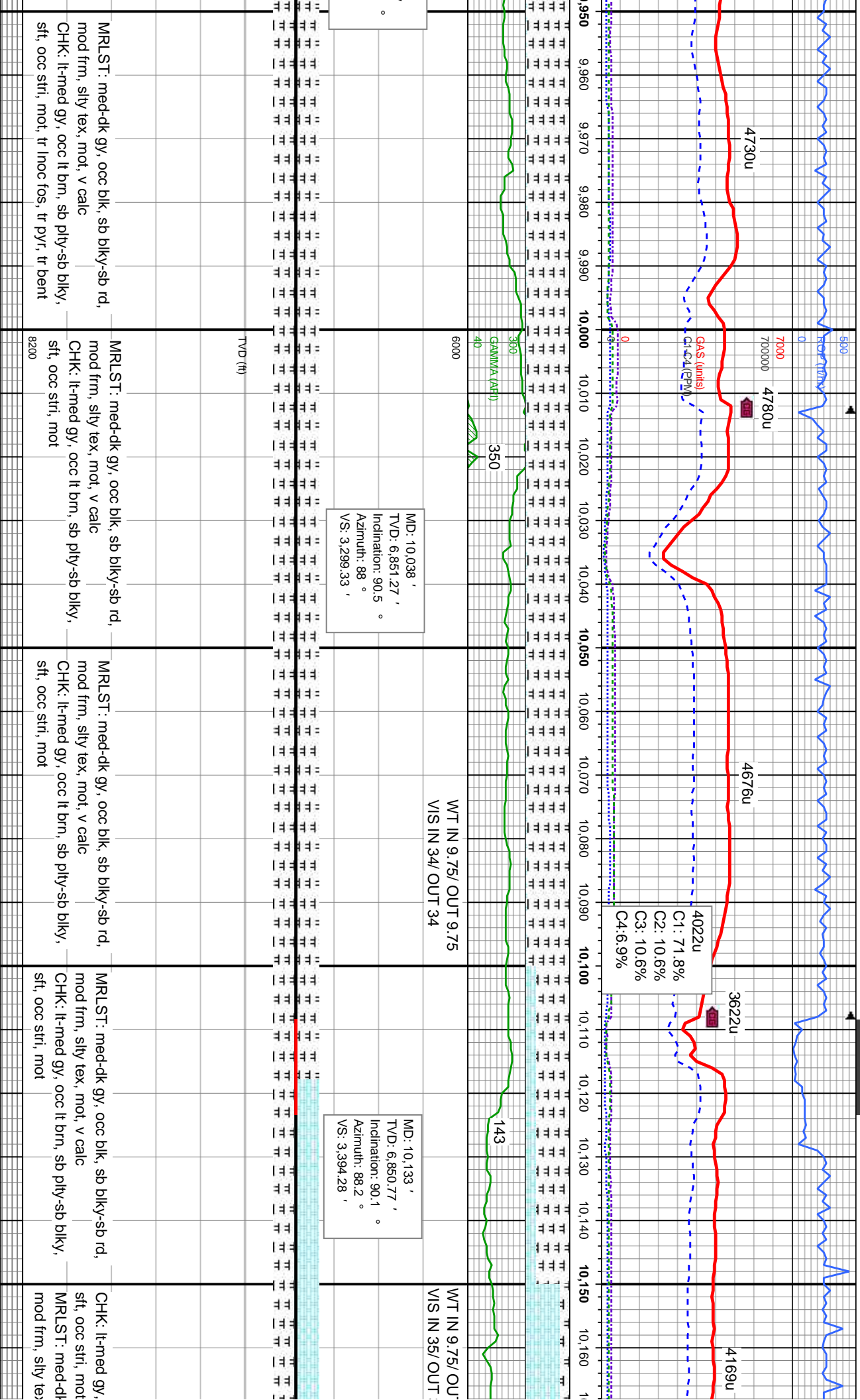


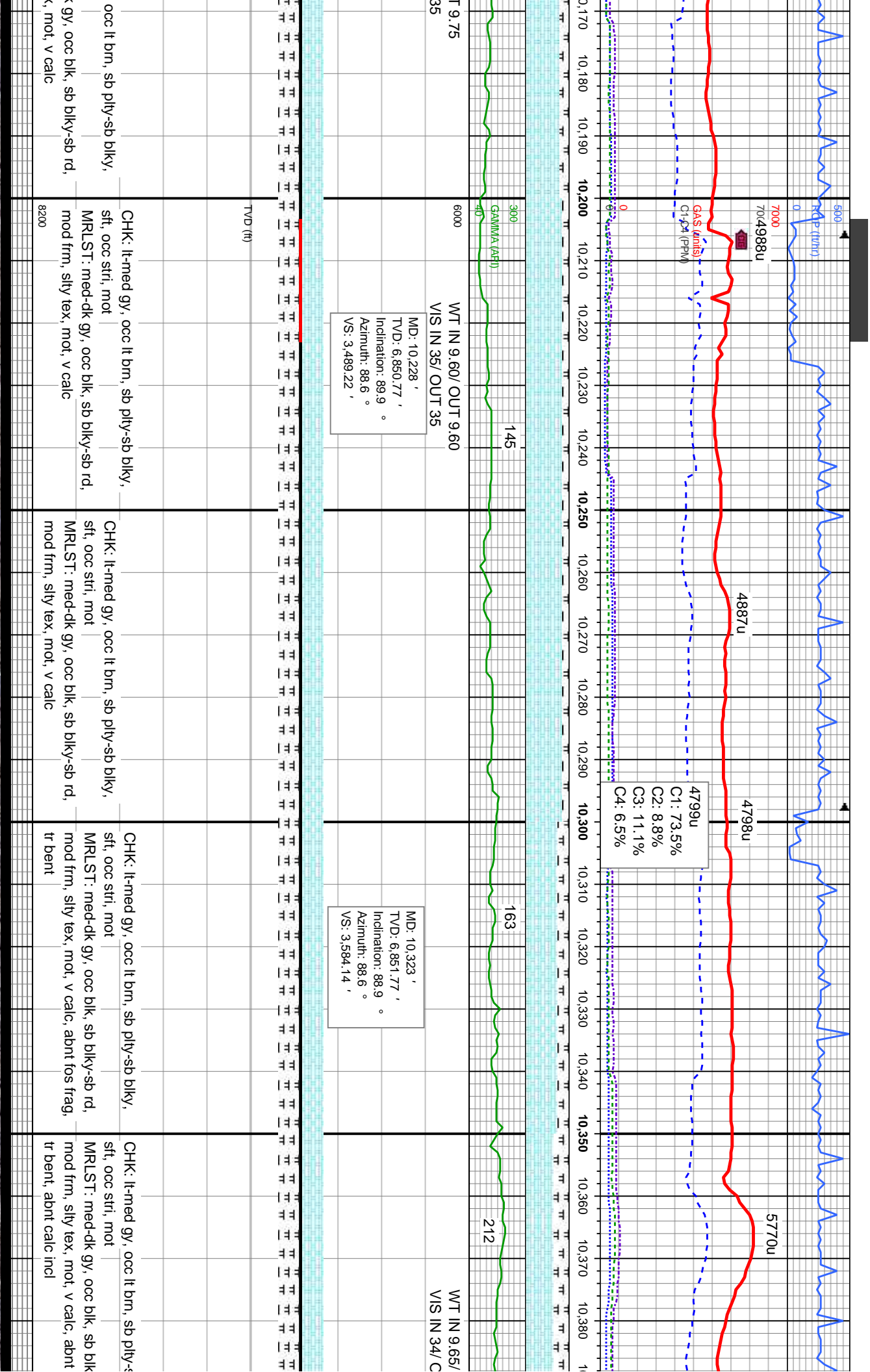


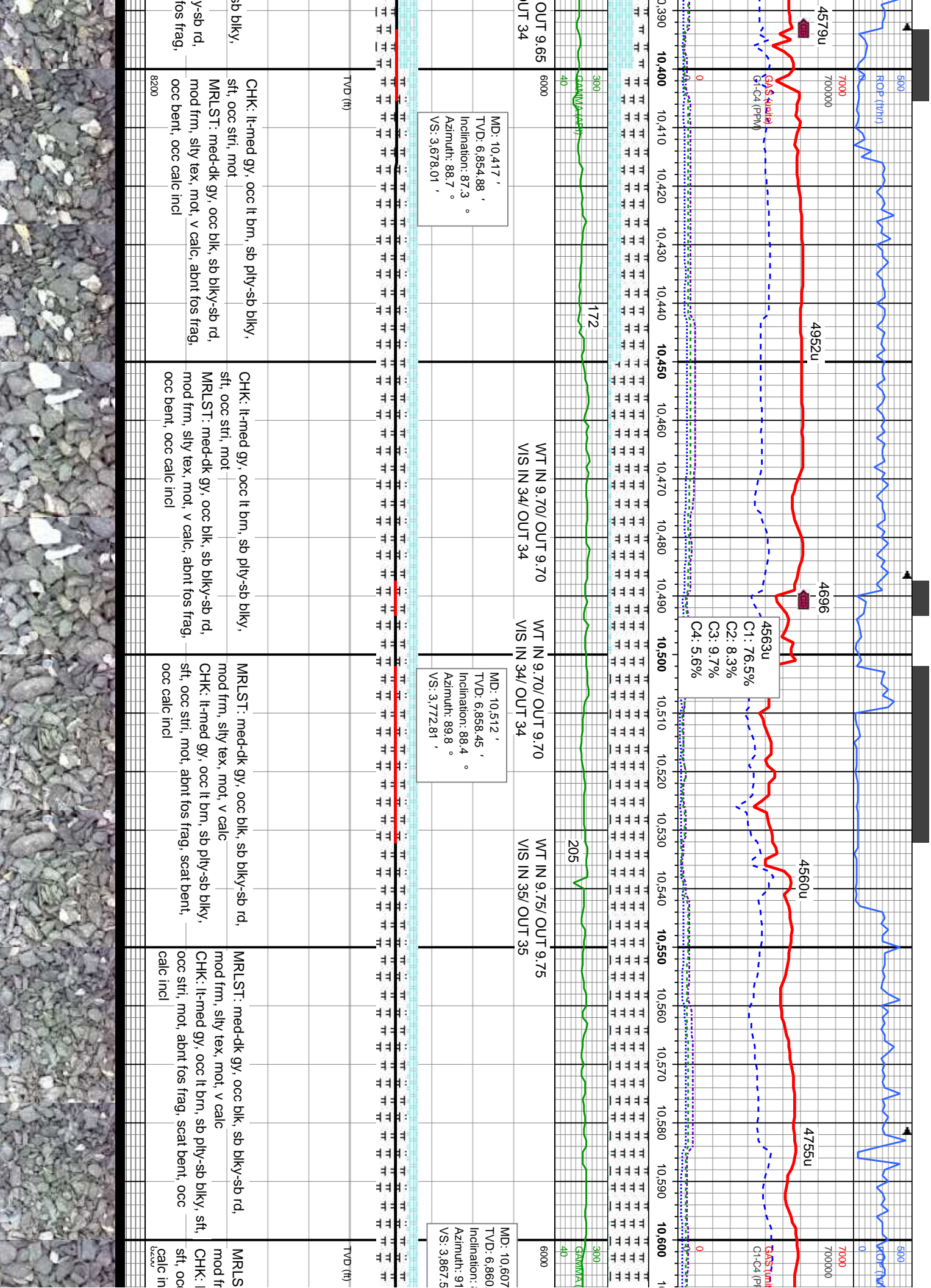


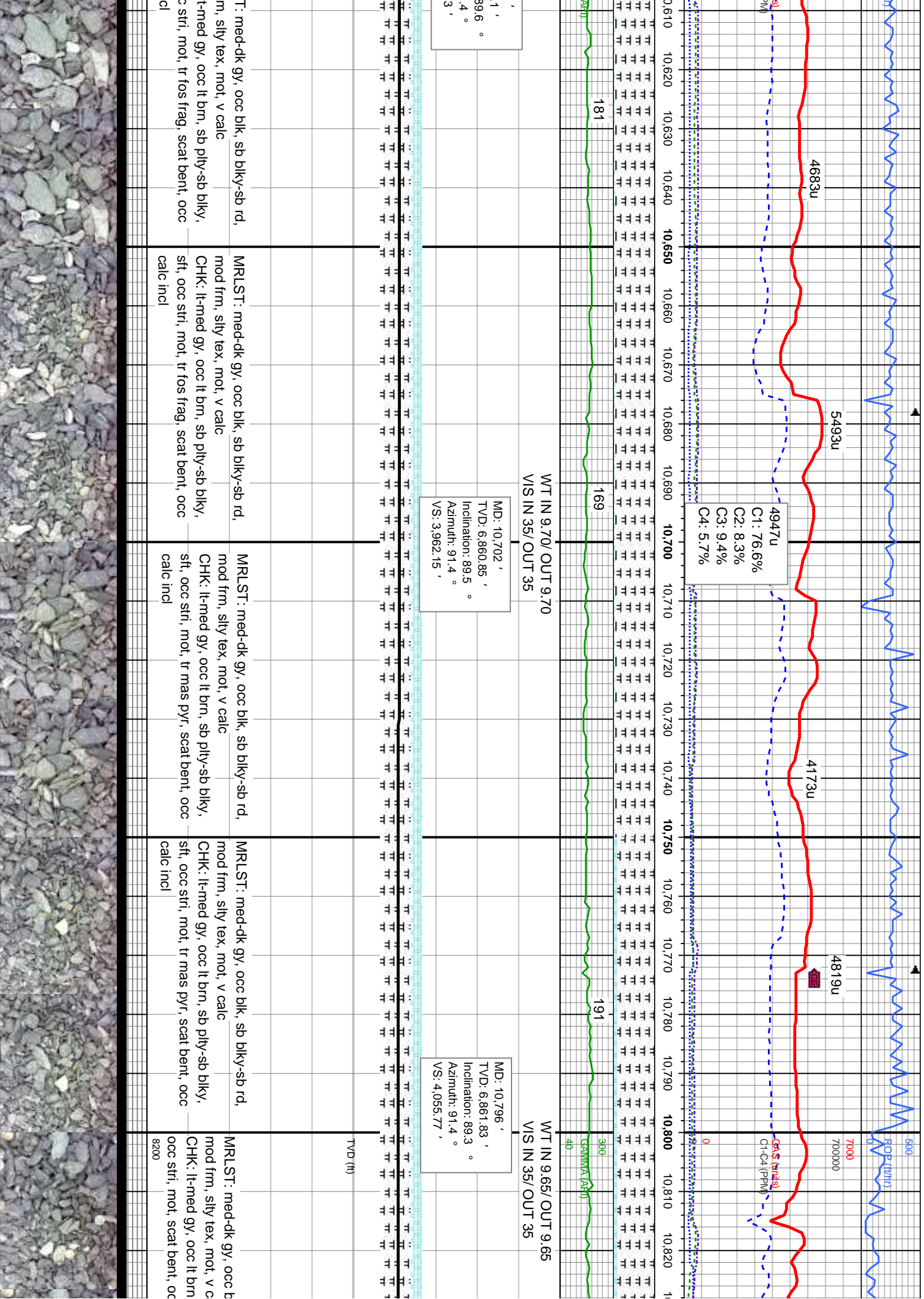












TOOH TO REP
MUD MOTOR

ROP (ft/hr)
7000
7000000

GA\$ (units)
C1-C4 (PPM)

3860u
C1: 74.6%
C2: 10.0%
C3: 10.8%
C4: 4.6%

MD: 10.891 '
TVD: 6.862.66 '
Inclination: 89.7 °
Azimuth: 91 °
VS: 4,150.42 '

MD: 10.986 '
TVD: 6.863.08 '
Inclination: 89.8 °
Azimuth: 91 °
VS: 4,245.1 '

WT IN 9.60/ OUT 9.70
VIS IN 37/ OUT 38

TVD (ft)

alk, sb blkly-sb rd, mod frm, silty tex, mot, v calc
CHK: lt-med gy, occ lt brn, sb ply-sb blkly, sft, occ stri, mot, scat bent, occ calc incl

MRLST: med-dk gy, occ blk, sb blkly-sb rd, mod frm, silty tex, mot, v calc
CHK: lt-med gy, occ lt brn, sb ply-sb blkly, sft, occ stri, mot, scat bent, occ calc incl

MRLST: med-dk gy, occ blk, sb blkly-sb rd, mod frm, silty tex, mot, v calc
CHK: lt-med gy, occ lt brn, sb ply-sb blkly, sft, occ stri, mot, tr fos, tr mas pyr, scat bent, occ calc incl

MRLST: med-dk gy, occ blk, sb blkly-sb rd, mod frm, silty tex, mot, v calc
CHK: lt-med gy, occ lt brn, sb ply-sb blkly, sft, occ stri, mot, abnt fos, tr pyr, occ calc incl



