



Scale: 5" / 100'  
Measured Depth Log

**Well Name** B-Farm LD 18-036HN

**Location** SECTION 7-T1S-R67W

**State** COLORADO

**Country** USA

**API Number** 05 001 10092 0000

**Geographic Region** DJ BASIN

**Spud Date** 12/30/2017

**County** ADAMS

**Rig Number** PRECISION 460

**AFE #** 18DC0004

**Field** WATTENBERG

**Drilling Completed** 1/23/2018

**Ground Elevation** 5124.6'

**K.B. Elevation** 5144.6'

**Logged Interval** 6000' MD To 13889' MD

**Total Depth** 13889' MD

**Formation** NIOBRARA C CHALK

**Type of Drilling Fluid** OIL BASED MUD

## Operator

**Company** Great Western Oil and Gas

**Address** 1801 Broadway, Ste 500  
Denver, CO 80202



## Geologist

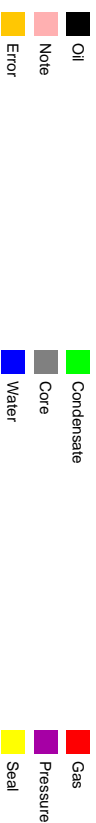
**Name** Joey Luce, Tim Bright and Gabriel Rubio

**Company** Terra Guidance

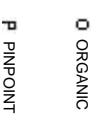
**Address** 1298 O Road  
Loma CO 81524  
(970) 260-5408



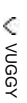
## Color Coding



## Oil Show



DEAD



EVEN

QUESTIONABLE

SPOTTED STAINING



## Engineering



CASING



CONNECTION (LEFT)



CONNECTION (RIGHT)

FENESTRAL



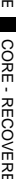
CONNECTION G

FRACTURE



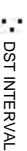
CORE - LOST

INTERCRYSTALLINE



CORE - RECOVERED

INTEROOLITIC



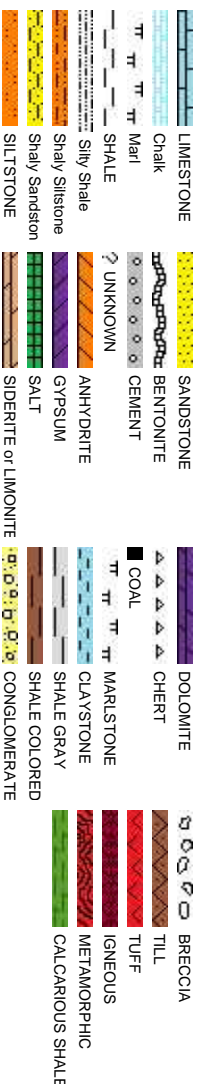
DST INTERVAL

MOLDIC



FAULT

## Rock Types



## Porosity

E EARTHY

FENESTRAL

FRACTURE

INTERCRYSTALLINE

INTEROOLITIC

MOLDIC

F FOSSIL

GASTROPOD

ALGAE

AMPHIPORA

BELEMNITE

BIOCLASTIC

BRACHIOPOD

BRYOZOA

CEPHALOPOD

CORAL

CRINOID

ECHINOID

FISH

FORAMINIFERA

## 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

## Accessories

ARGILLACEOUS

ARGILLITE GRAIN

B BENTONITE

BITUMENOUS SUBSTANCE

BRECCIA FRAGMENTS

CLCARCEOUS

CARBONACEOUS FLAKES

CHITDK

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

Other Symbols

 FORMATION TOP

L LITHOGRAPHIC

Rounding

 GAS SHOW

MX MICROXLN

 MN DEPTH


A ANGULAR

MS MUDSTONE

 NORMAL FAULT

R ROUNDED

PS PACKSTONE

 OIL SHOW

B SUBANG

WS WACKSTONE

 OVERTURNED STRATA

S SUBRND

Sorting

 REVERSE FAULT

Textures

 SIDEWALL CORE (LEFT)


M MODERATE

 SIDEWALL CORE (RIGHT) BS BOUNDSTONE P POOR

 SLIDE

C CHALKY

W WELL


 SURVEY

CX CRYPTOXLN


CALCARIUOS SHALE

 TRIP GAS

E EARTHY

 WIRELINE TESTED - LEFT FX FINELYXLN

CALCARIOUS SHALE

 WIRELINE TESTED - RT BS GRAINSTONE

TERRA GUIDANCE  
BEGAN LOGGING @ 15:24 MST 01/21/2018  
BLOODHOUND GAS CHROMATOGRAPH #5741  
100' Sample Collection

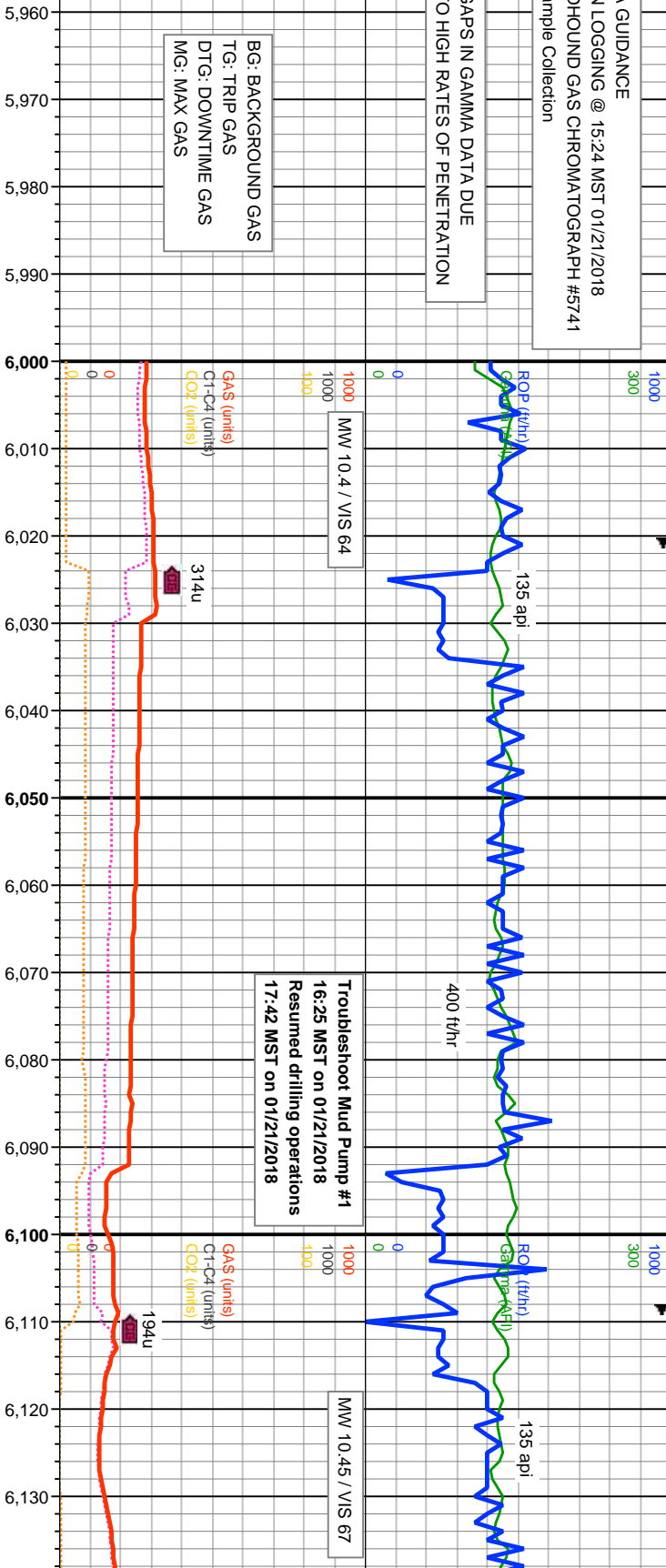
ROP  
ROP  
Gamma

GAPS IN GAMMA DATA DUE  
TO HIGH RATES OF PENETRATION

Total Gas & Chromatograph

GAS  
C1  
C2  
C3  
C4  
CO2

Depth



Images



% Lithology

Well Bore  
TVD

TVD Scale  
5700' - 9000'

MD: 5,997'  
INC: 29.96°  
AZM: 61.72°  
TVD: 5,711.82'  
VS: -75.11'

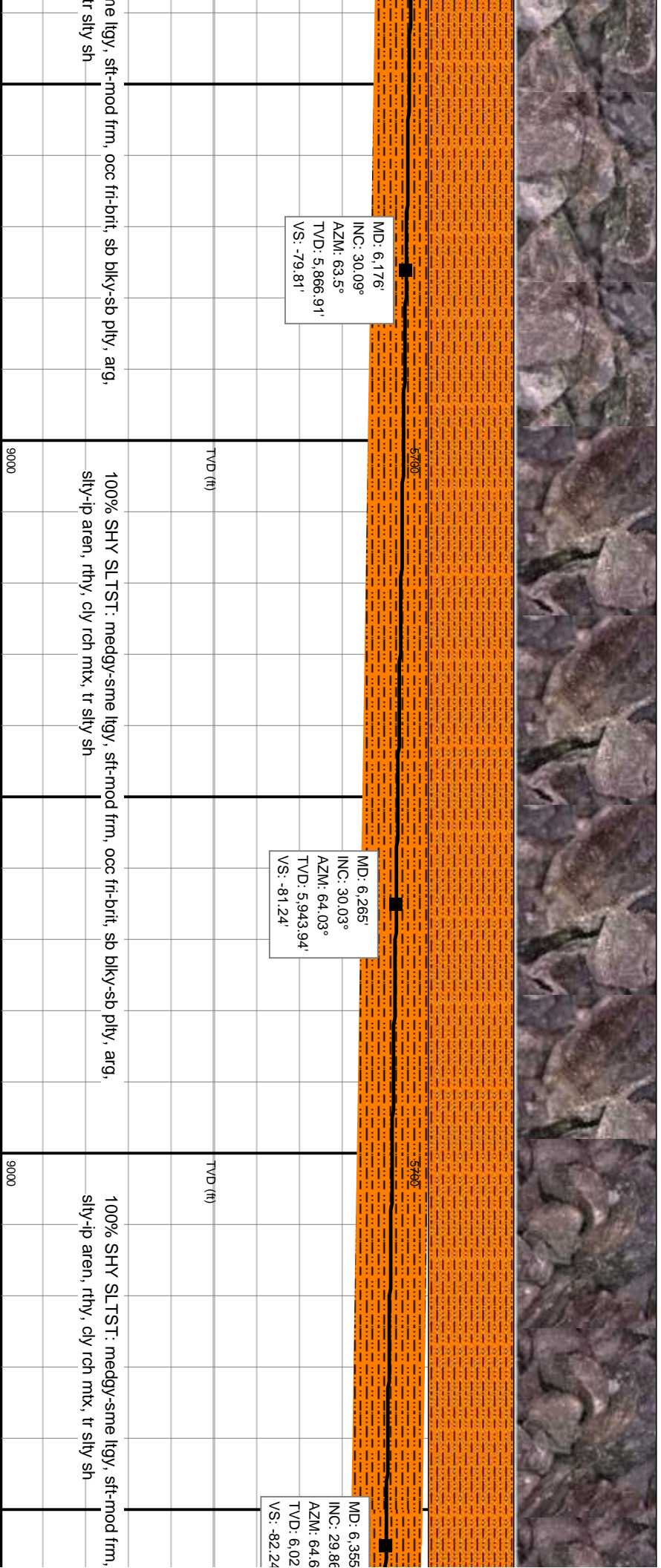
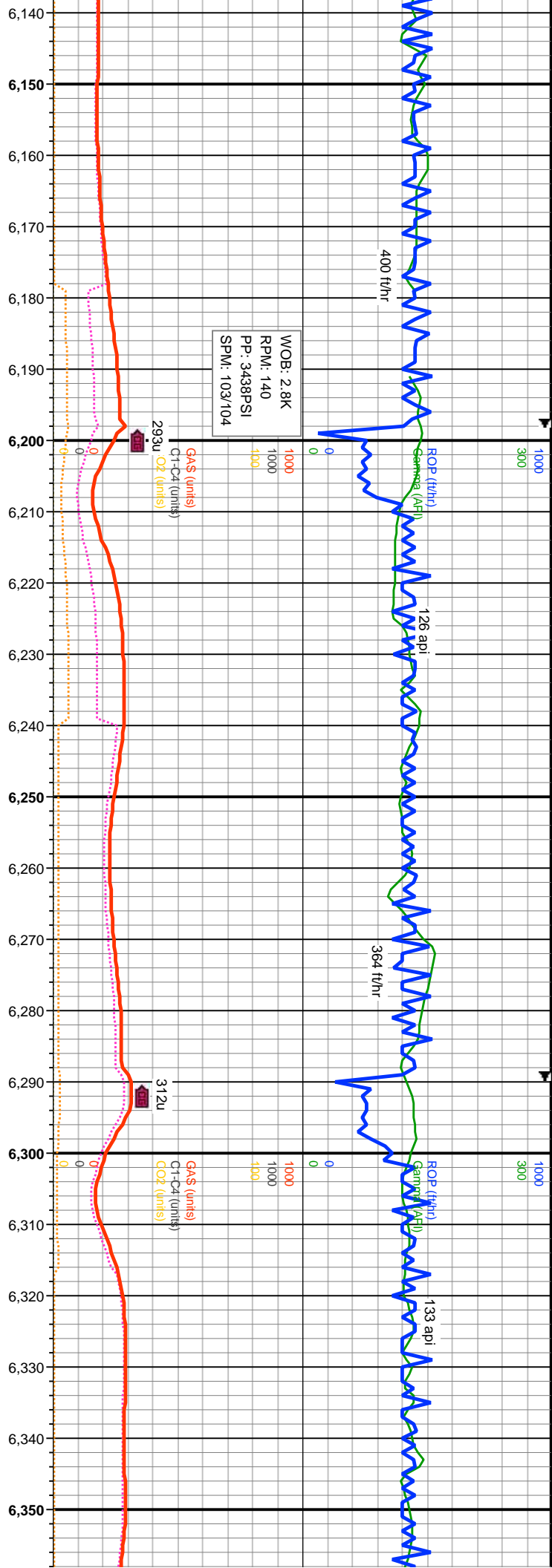
Bit #: 2  
Type: HCC ATD505X  
Size: 8.5"  
Depth In: 1,721'  
Jets: 5x15  
S/N: 52731327

TVD (ft)

100% SHY SLTST: medgy-sme lty, sft-mod frm, occ fri-brit, sb blkly-sb plty, arg,  
silty-ip aren, rthy, cly rch mtx, tr silty sh

TVD (ft)

100% SHY SLTST: medgy-sme lty, sft-mod frm, occ fri-brit, sb blkly-sb plty, arg,  
silty-ip aren, rthy, cly rch mtx, tr silty sh

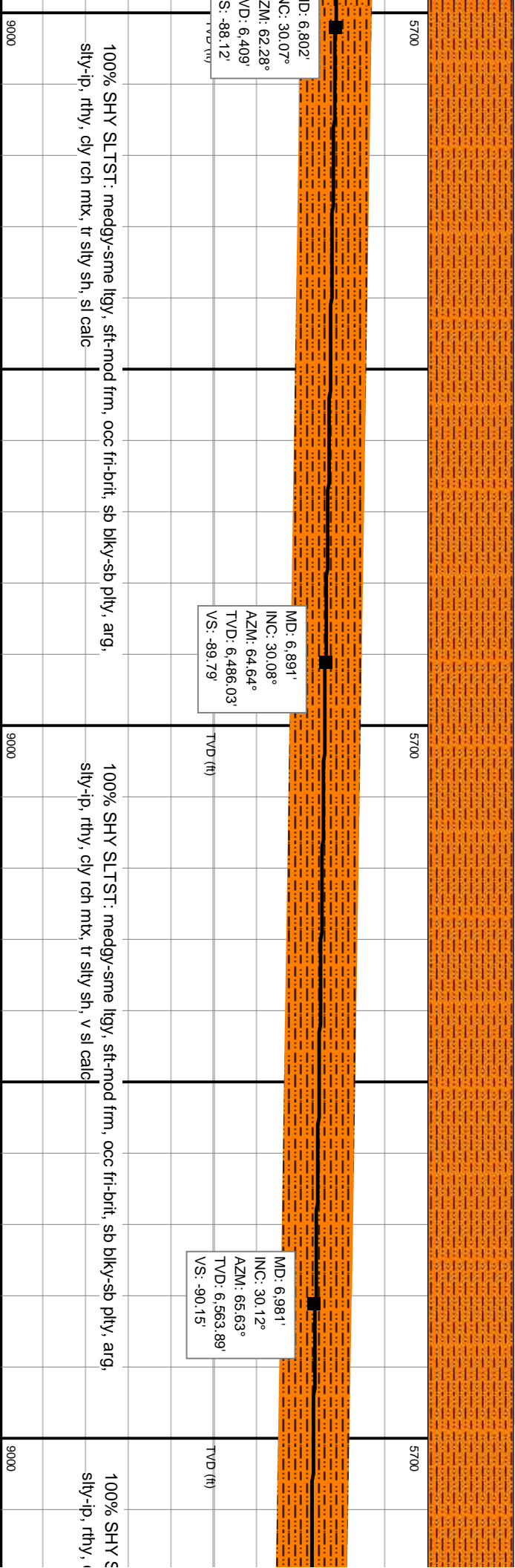
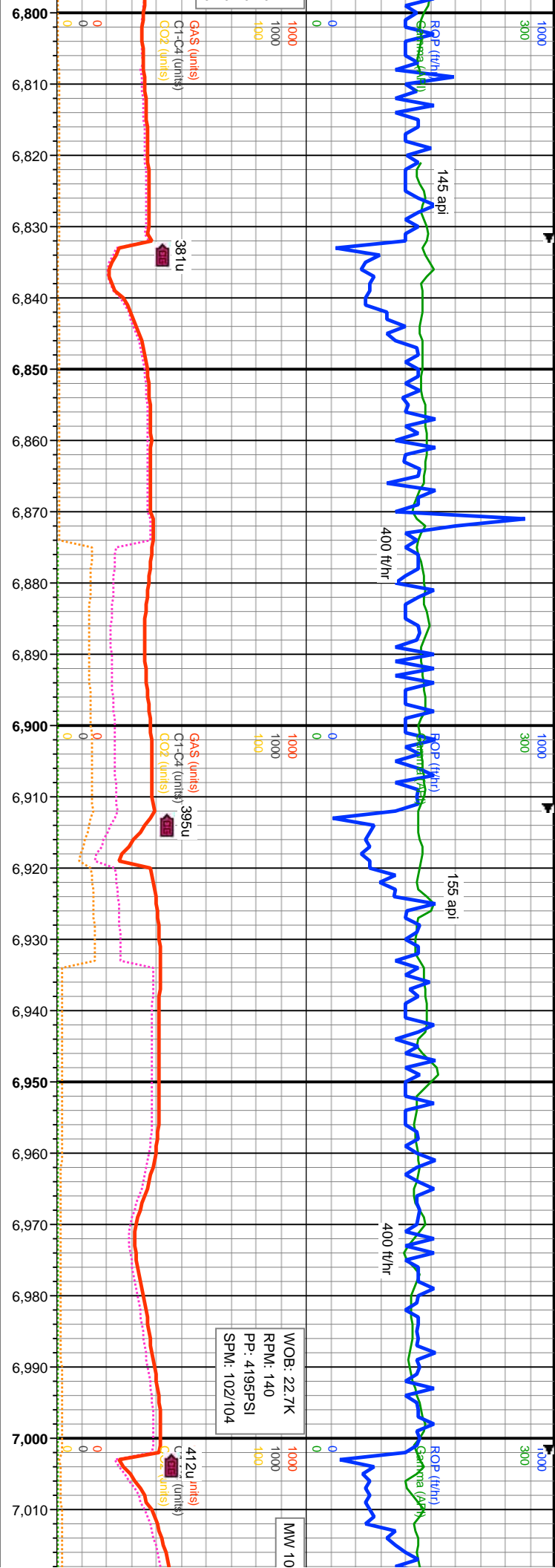




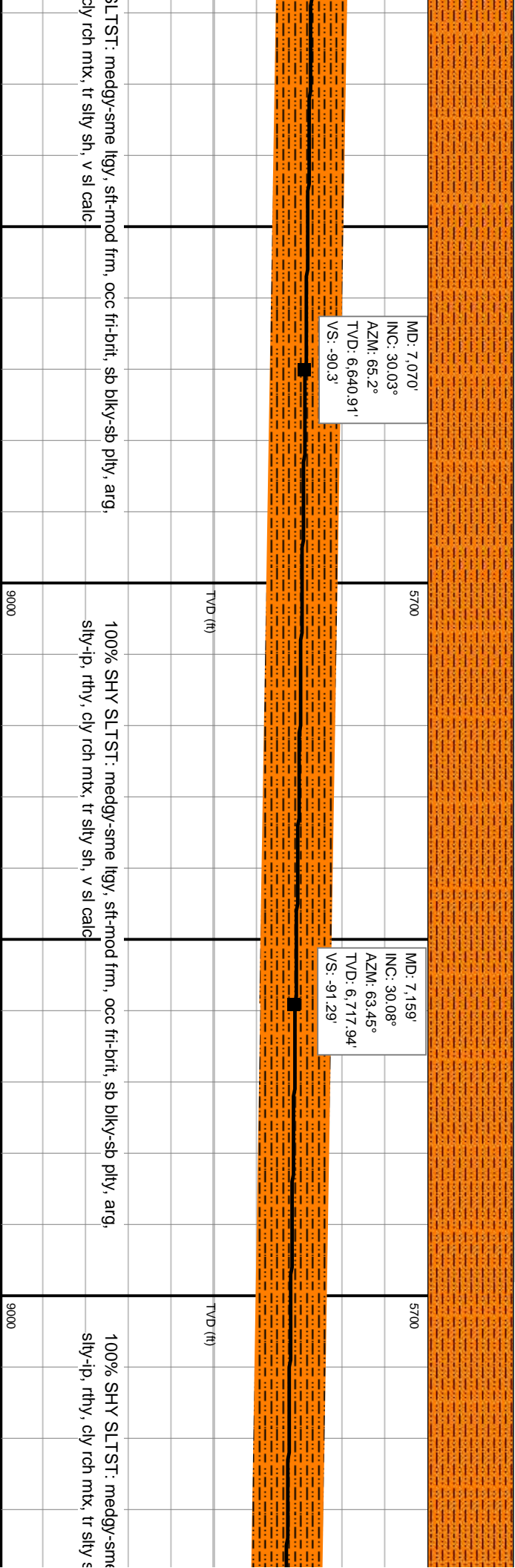
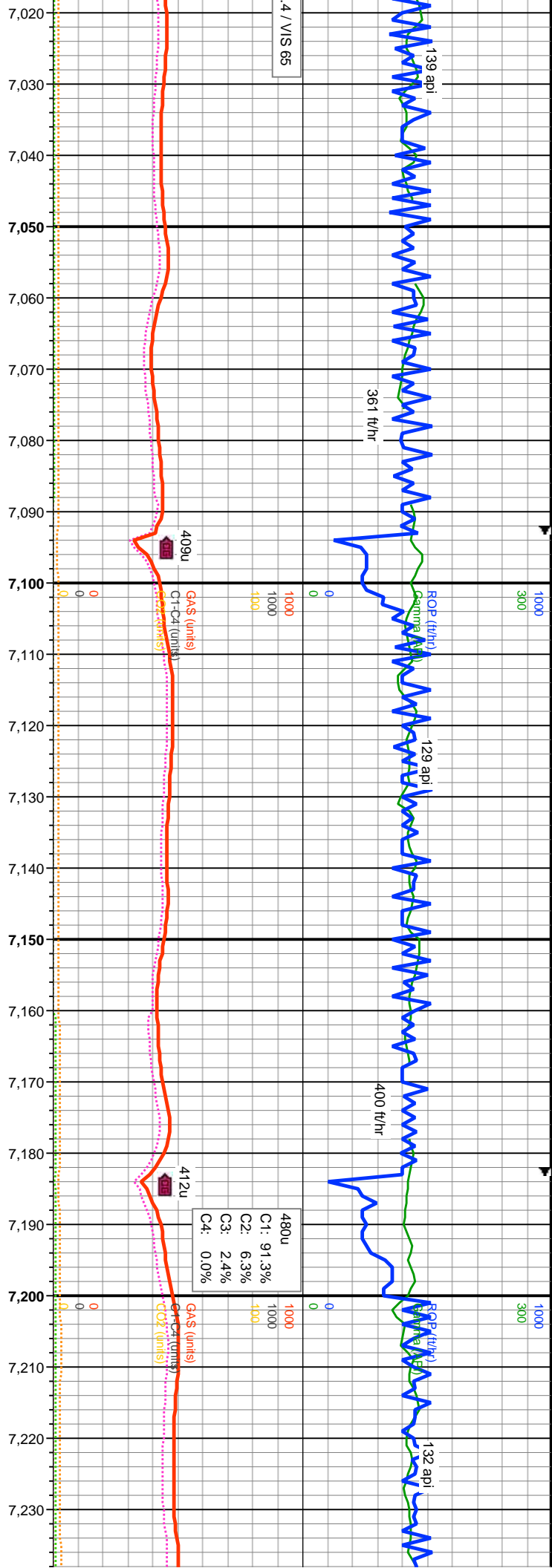


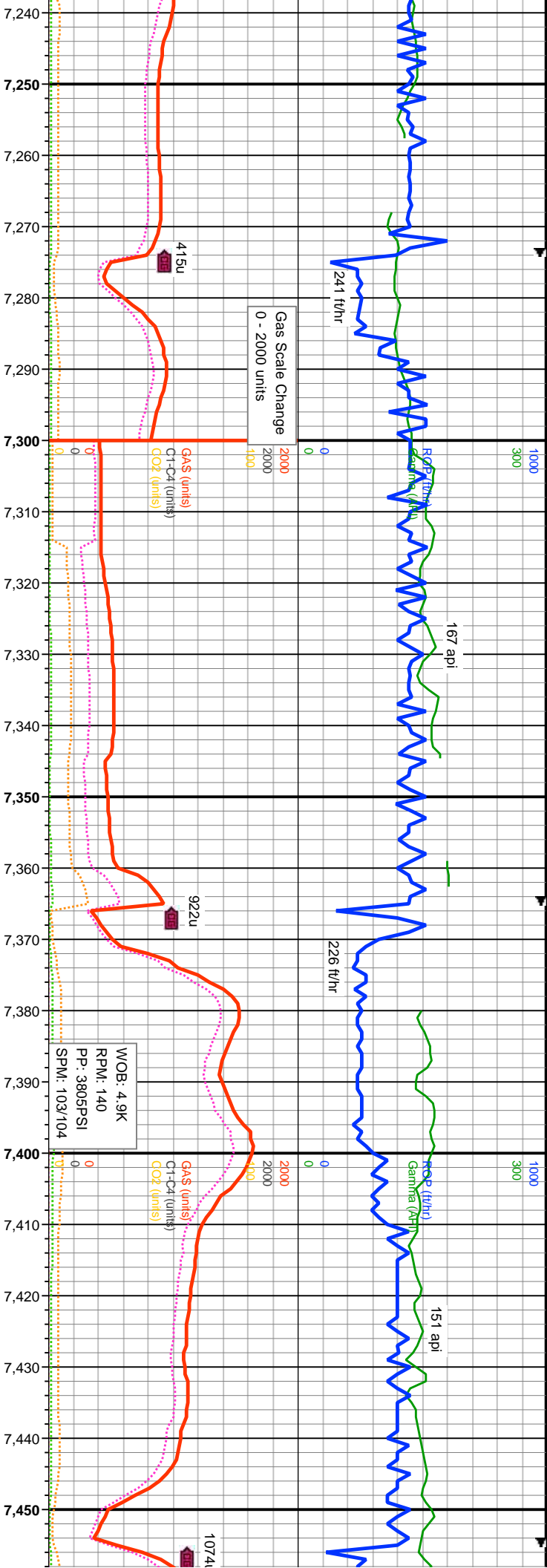










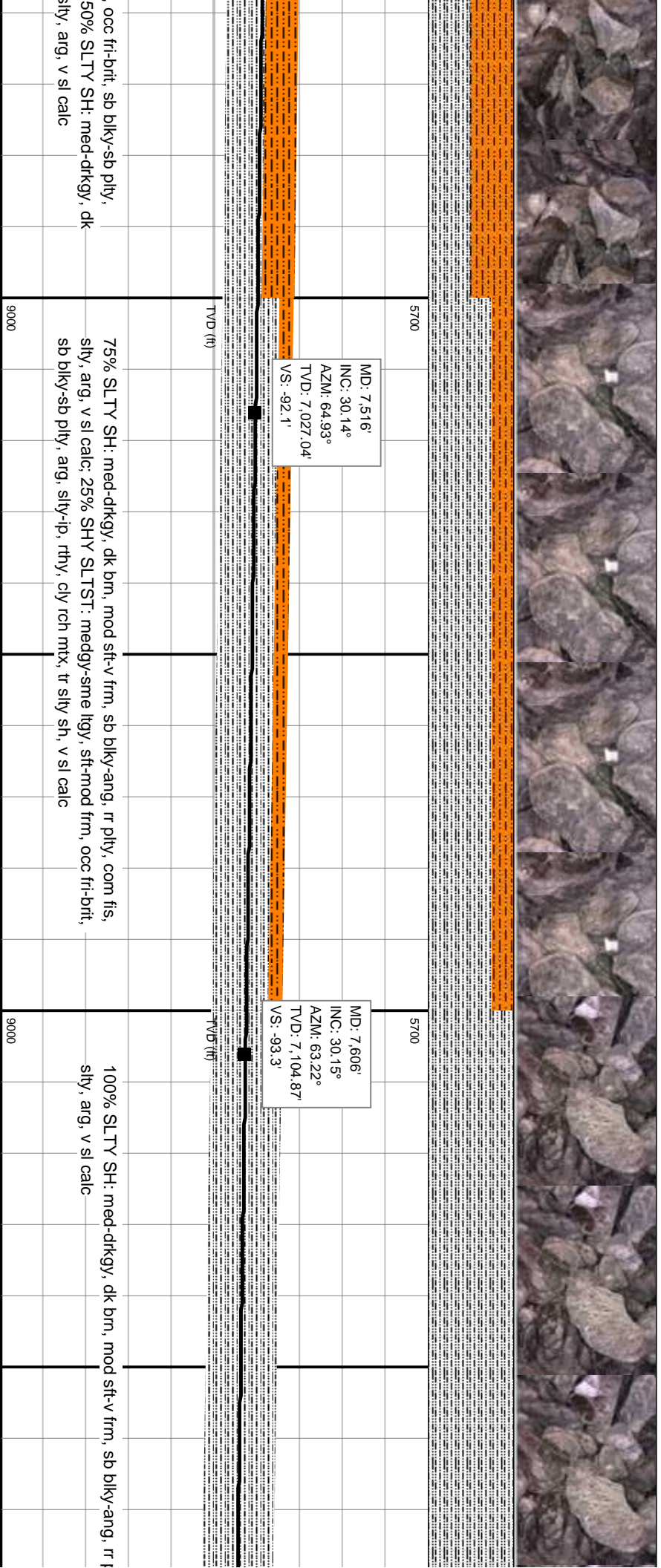
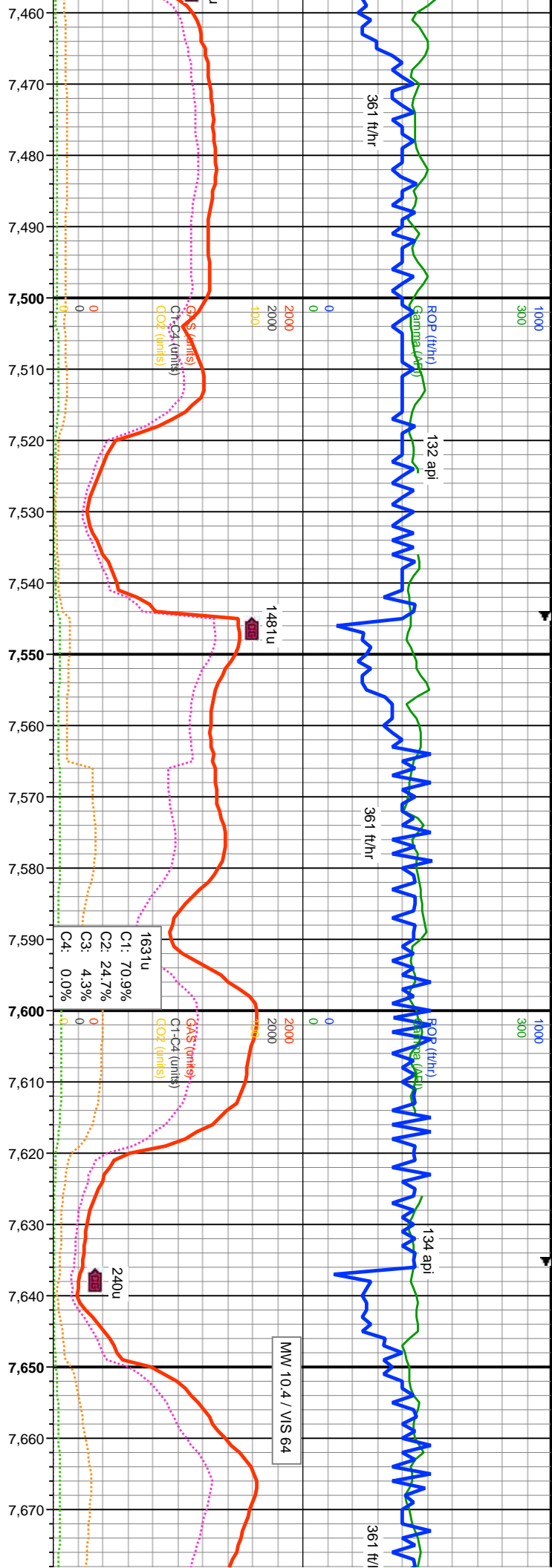


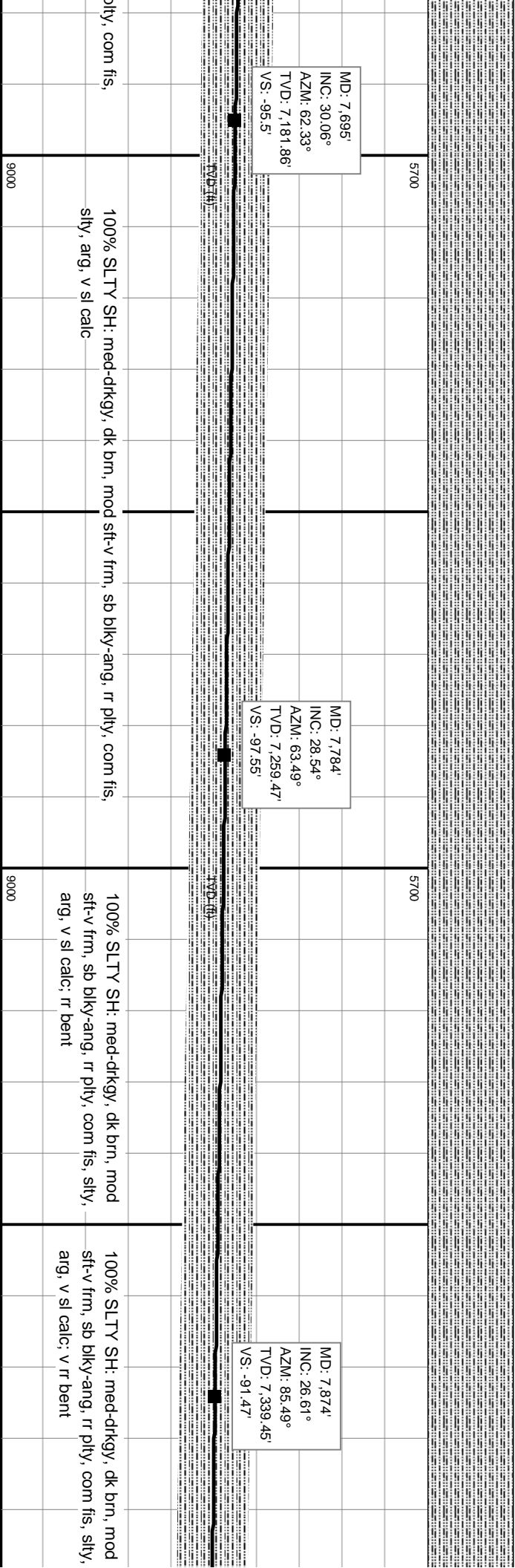
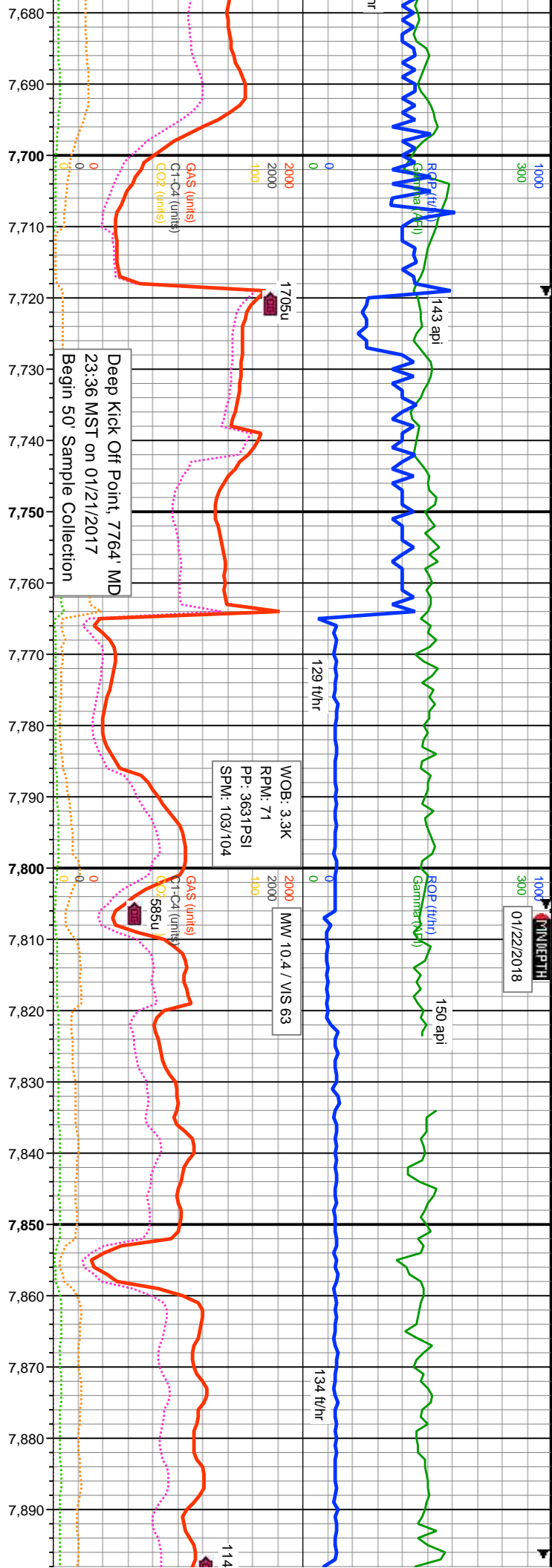
the itgy, sft-mod frm, occ fri-brit, sb blk-y-sb plty, arg,

75% SHY SLIST: medgy-sme ltgy, sft-mod frm, occ fr-brt, sb bkly-sb ply, arg, sfty-ip, rthy, cly rch mx, tr sfty sh, v sl calc; 25% SLTY SH: med-dtkgy, dk brn, mod sft-v frm, sb bkly-ang, rr ply, com fis, sfty, arg, v sl calc

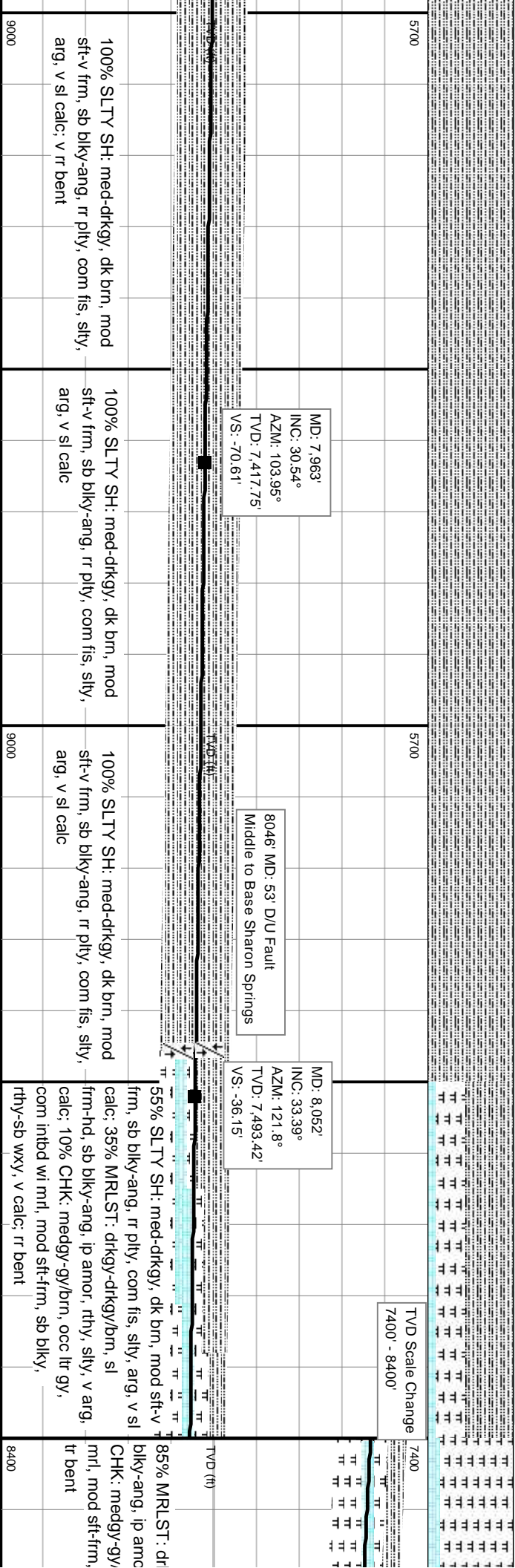
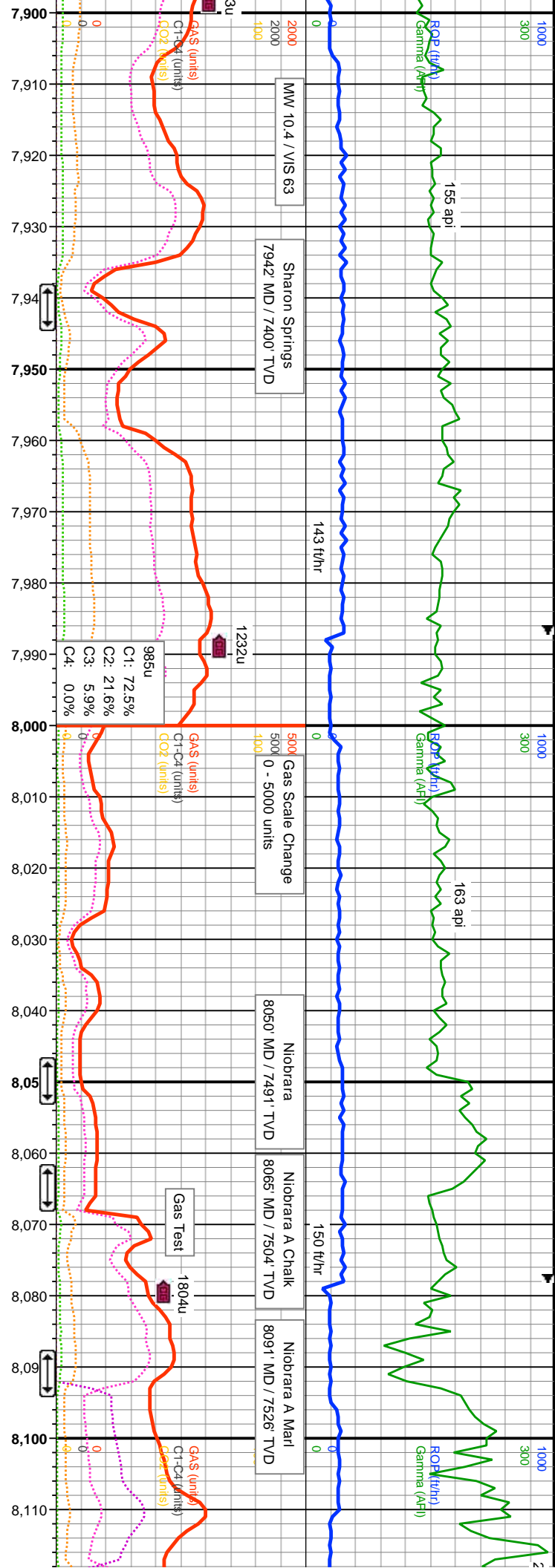
50% SHY SLTST: meagy-sme ltgy, sft-mod frm  
arg, slty-ip, rthy, cly rch mtx, tr slty sh, v sl calc;  
brn, mod sft-v frm, sb blk-ang, rr plty, com fis, s





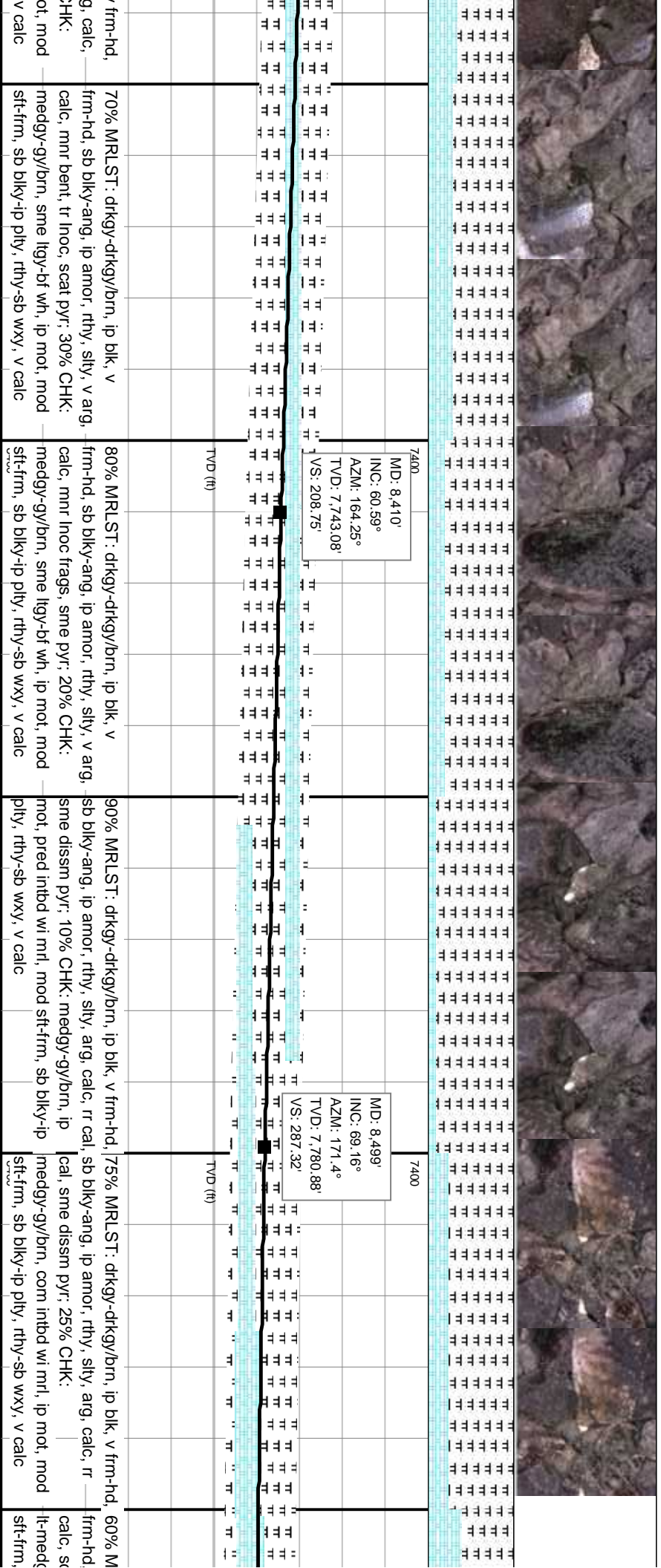
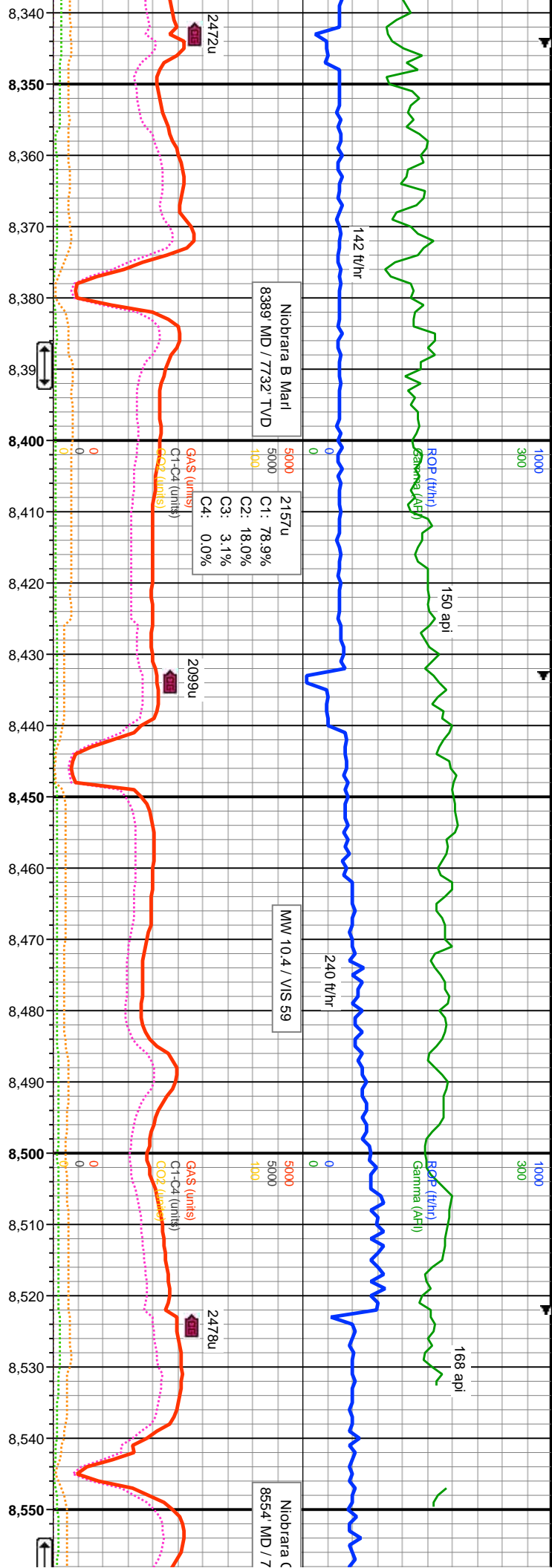


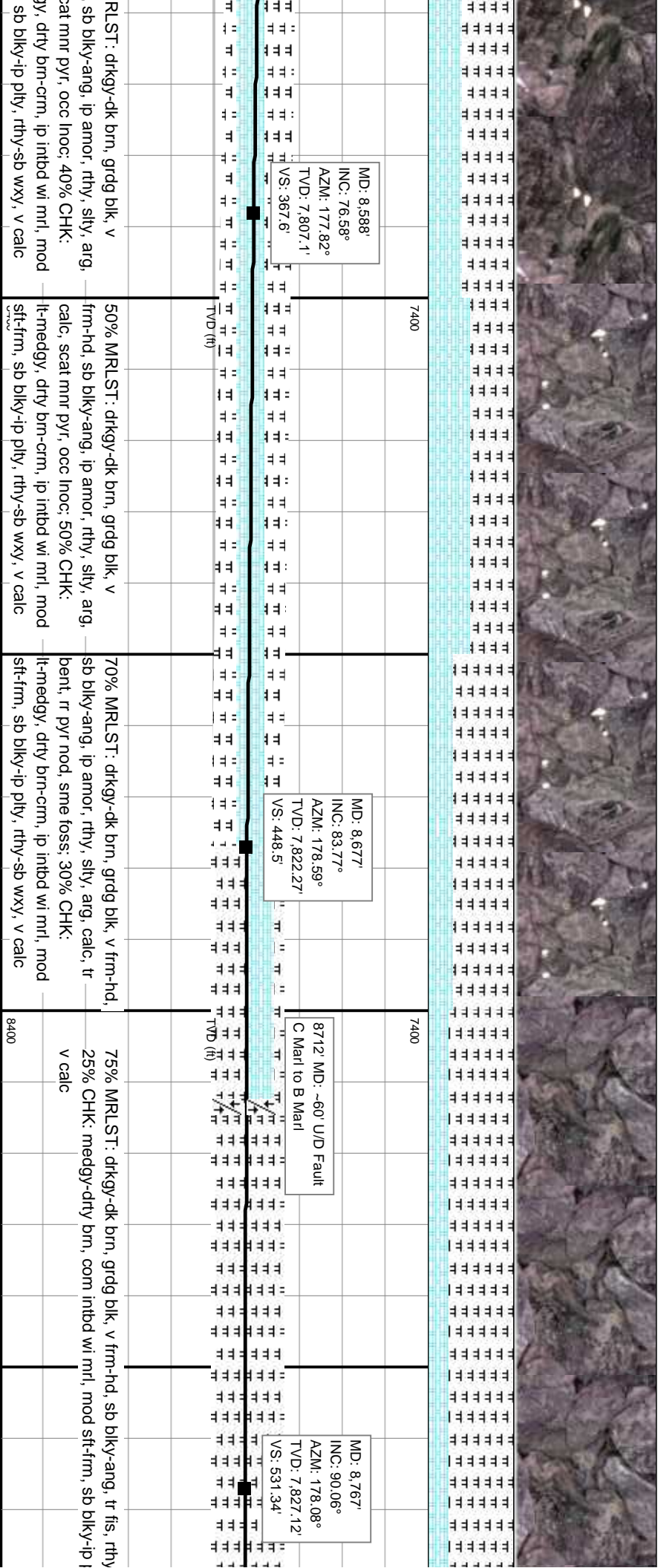
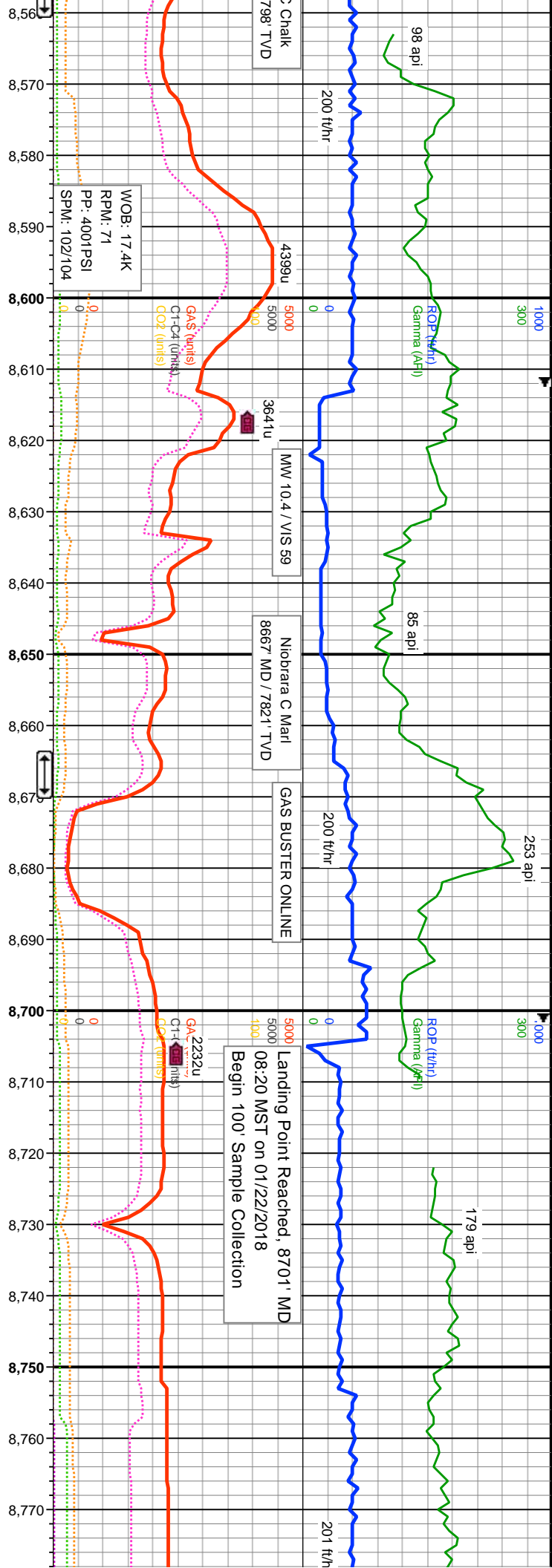




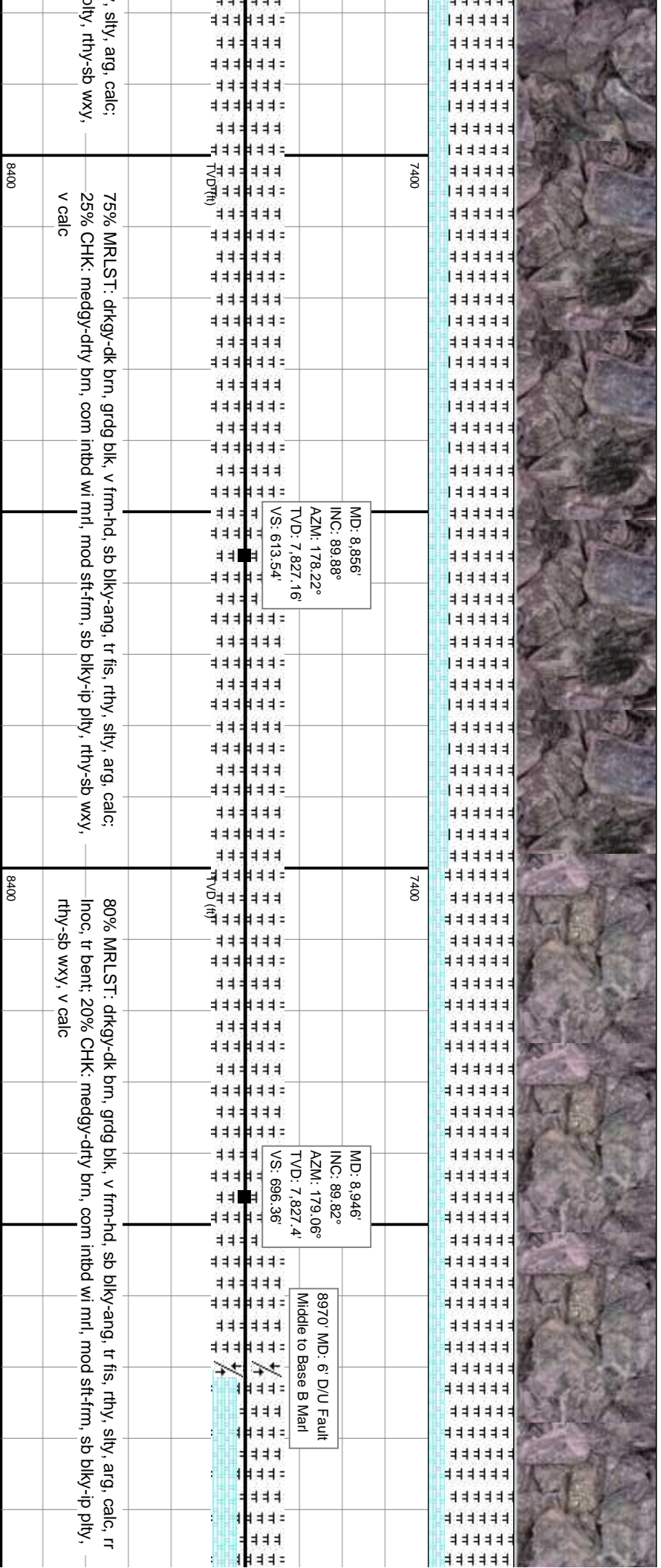
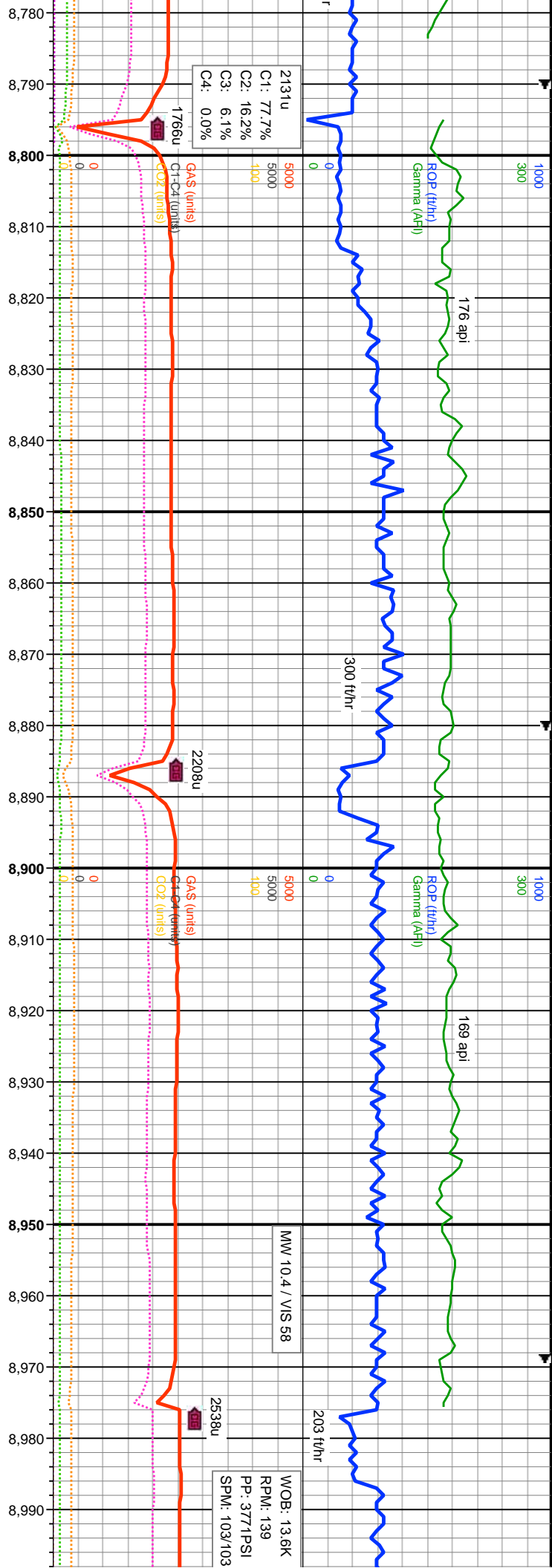






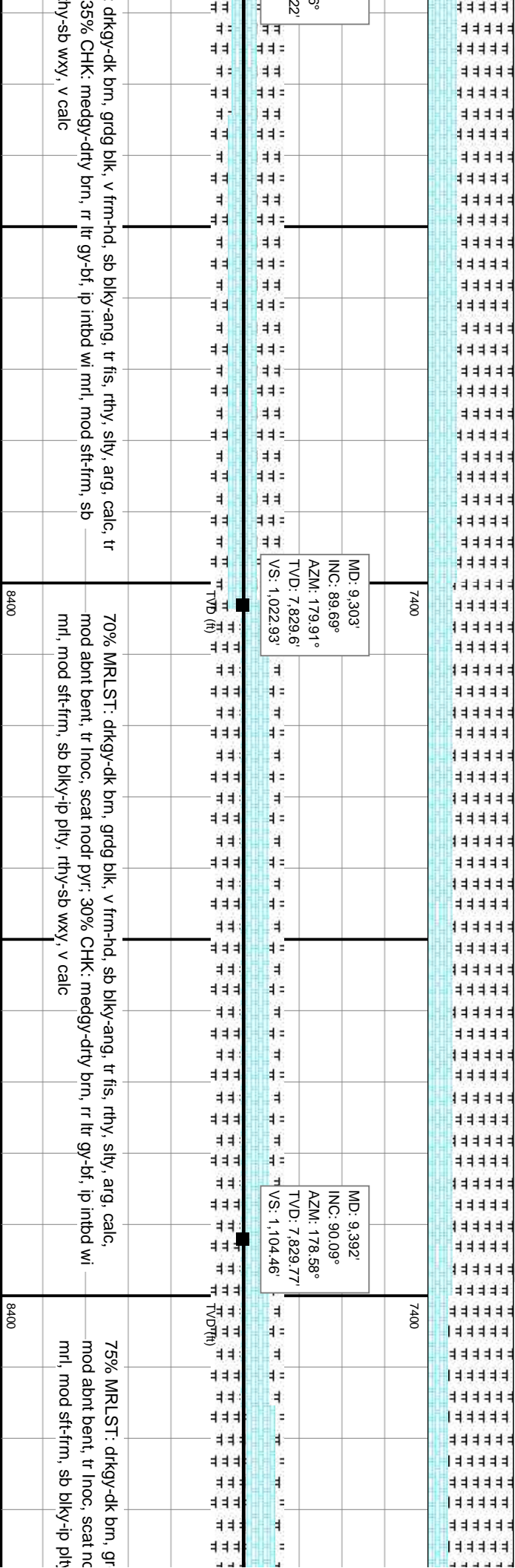
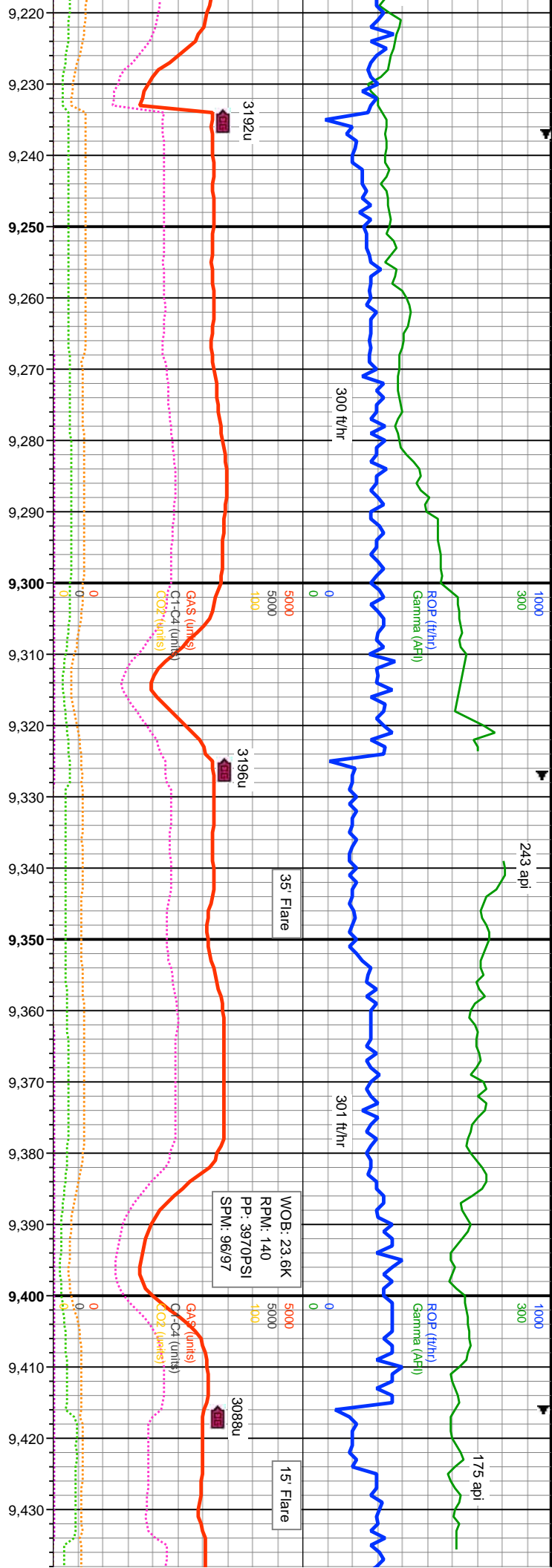








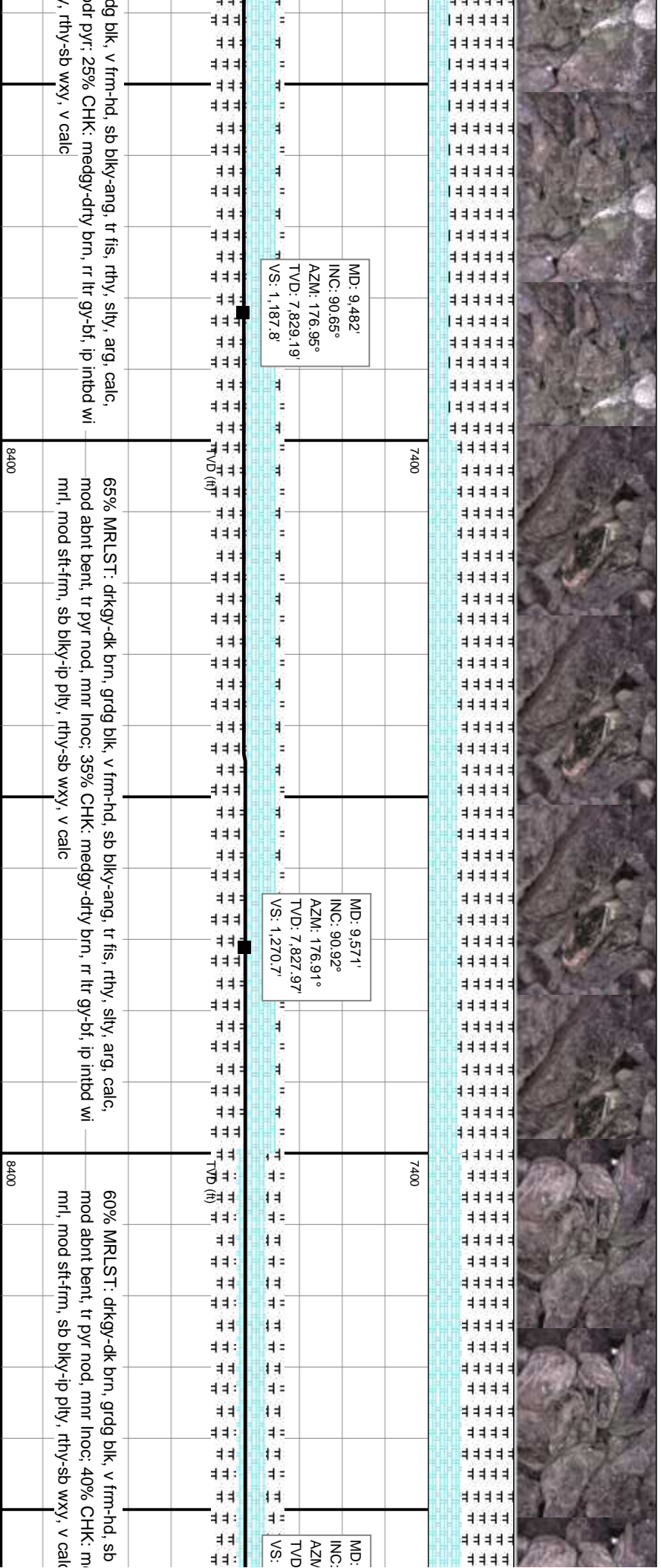
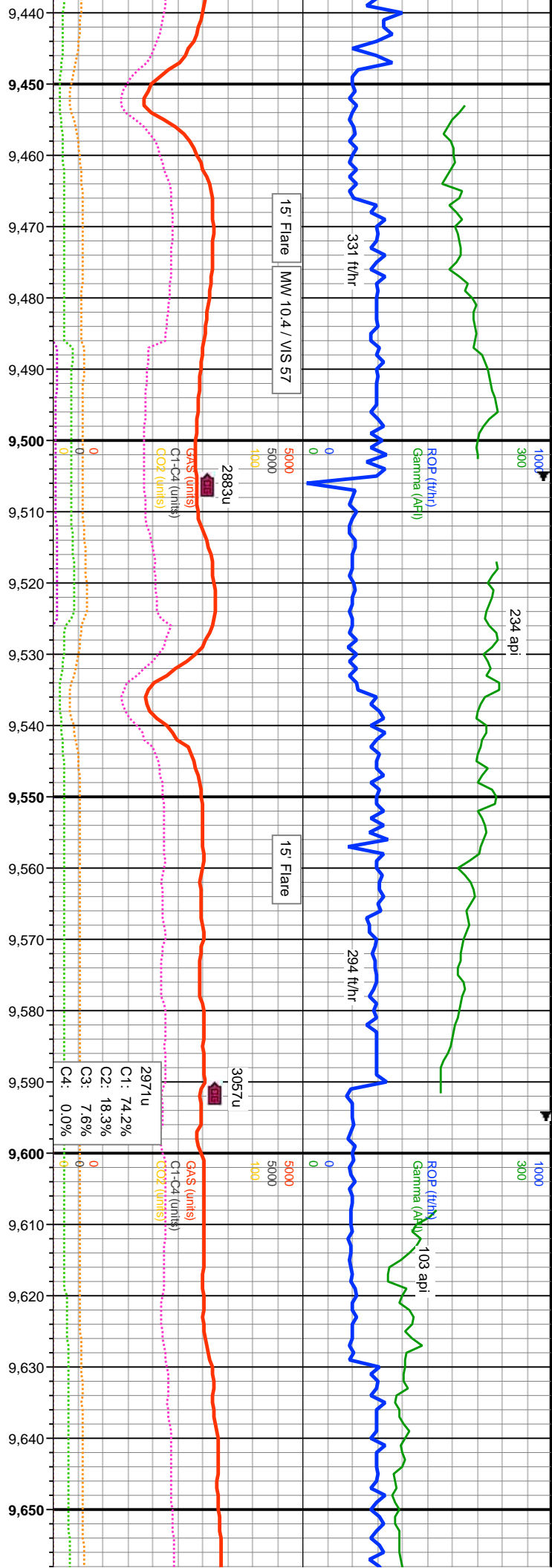




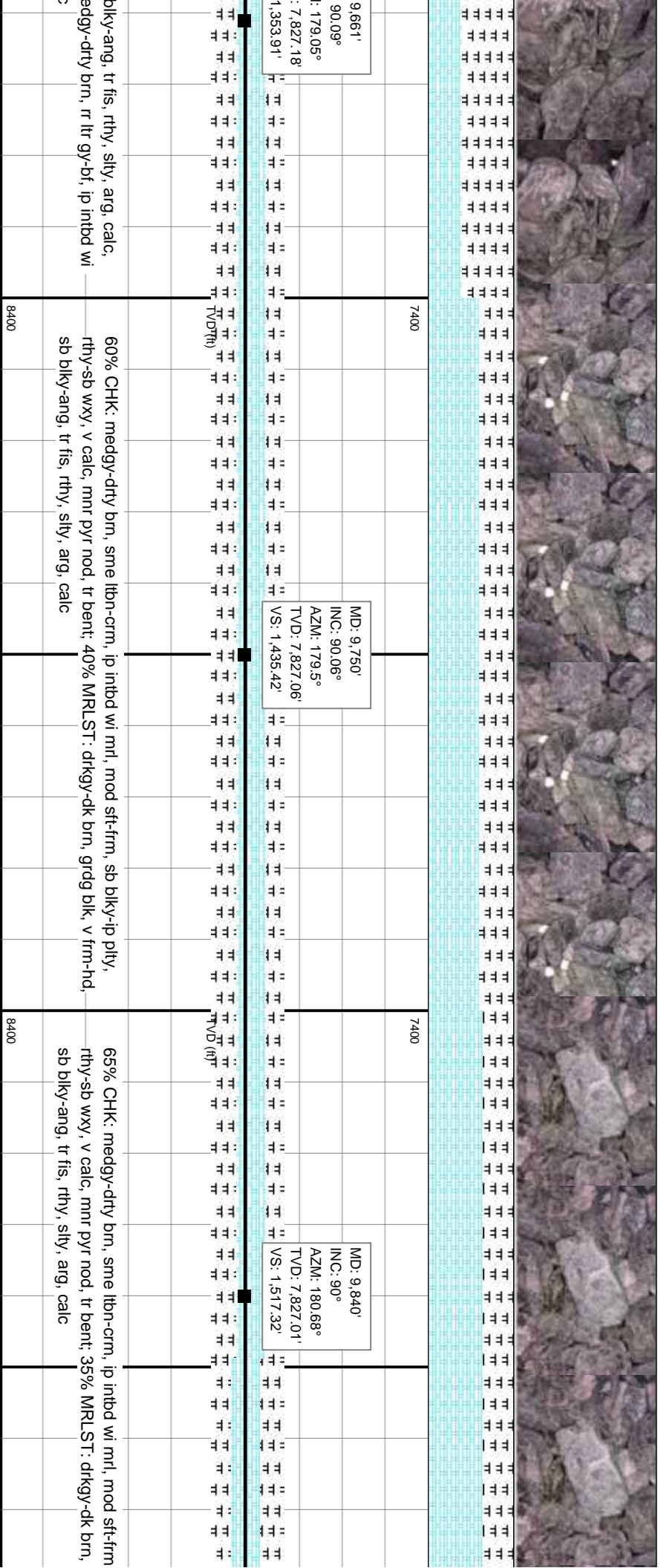
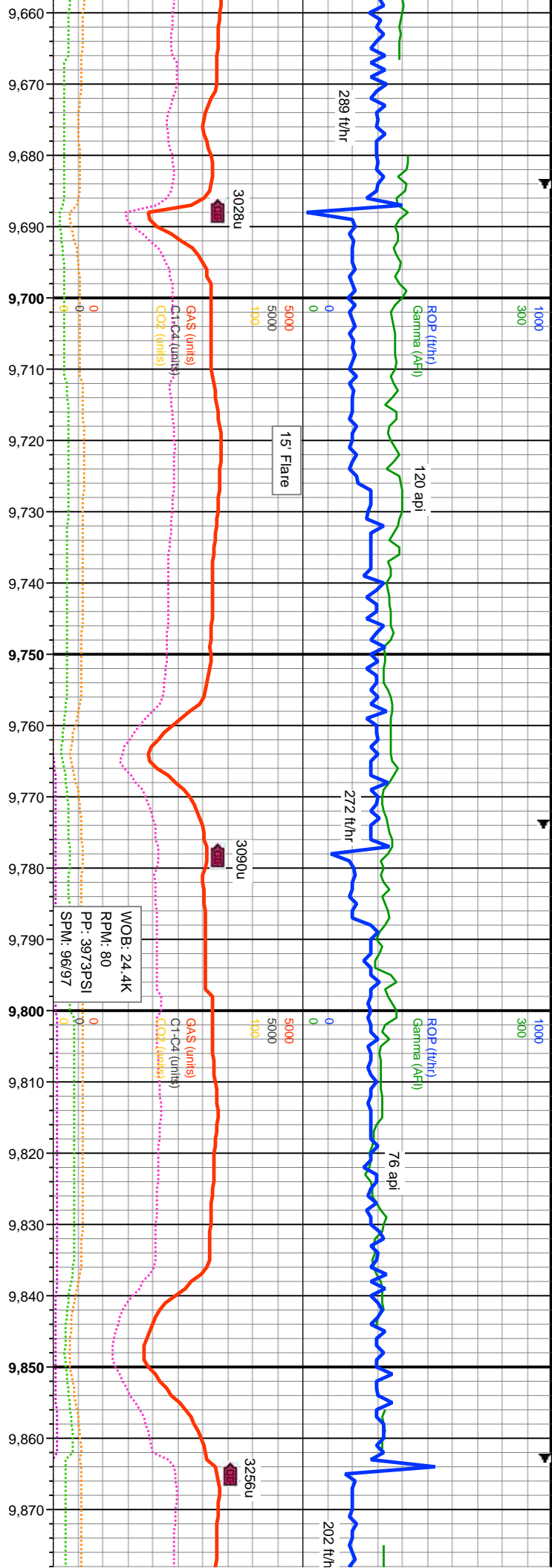
35% CHK: medgy-dry brn, rr ltr gy-bf, ip intbd wi mrl, mod sft-frm, sb mrl, mod sft-frm, sb blk-ly-ip pily, rthy-sb wxy, v calc

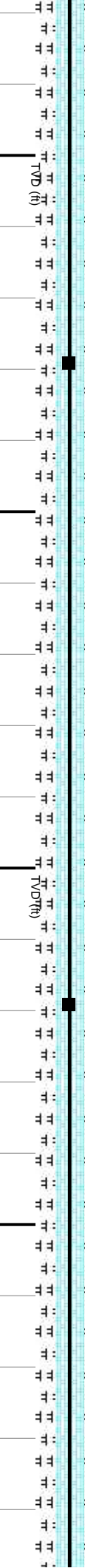
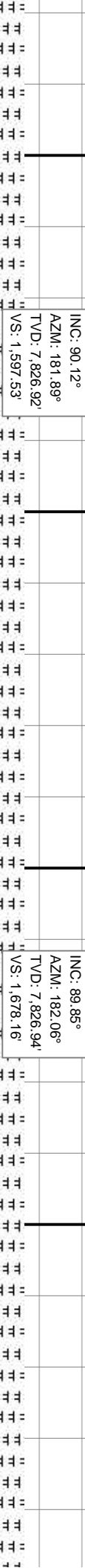
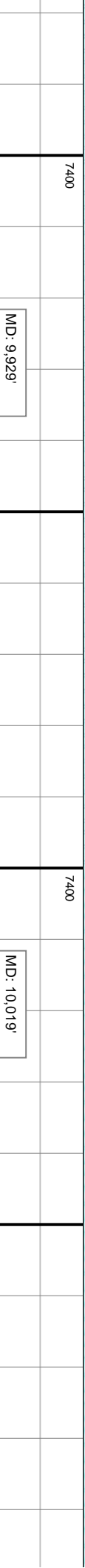
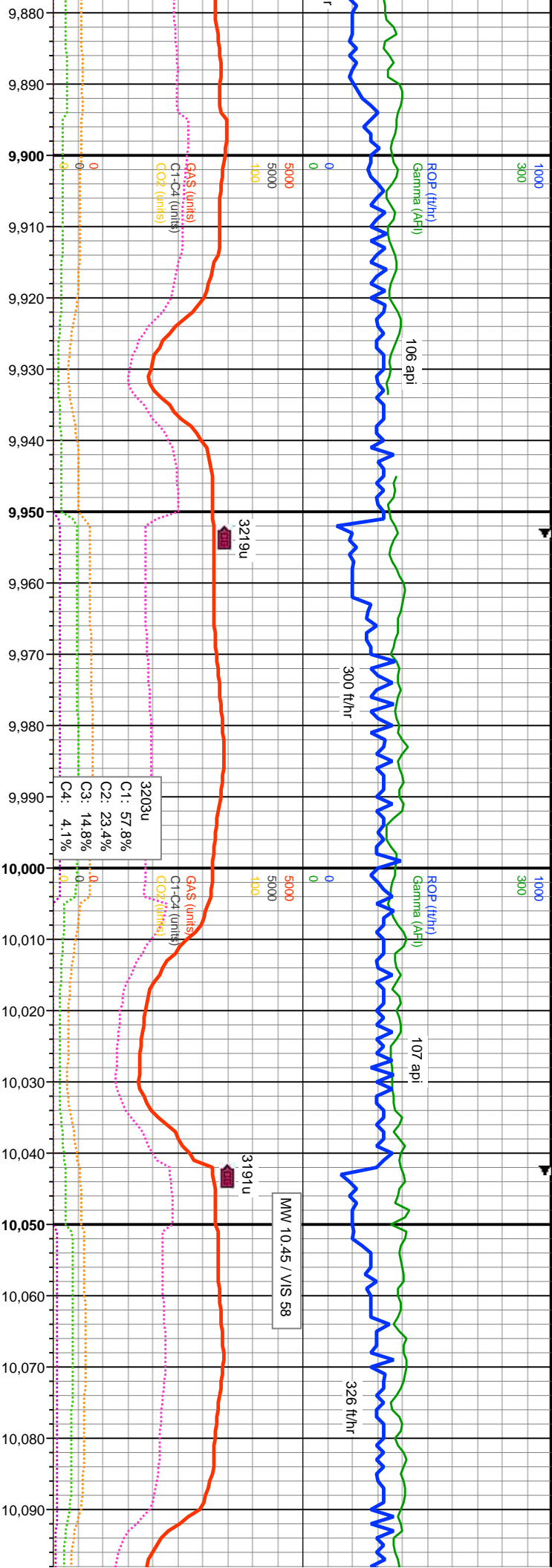
70% MRLST: drkgy-dk brn, grdg blk, v frm-hd, sb blk-ly-ang, tr fis, rthy, slty, arg, calc, mod abnt bent, tr lnoc, scat nodr pyr, 30% CHK: medgy-dry brn, rr ltr gy-bf, ip intbd wi mrl, mod sft-frm, sb blk-ly-ip pily, rthy-sb wxy, v calc

75% MRLST: drkgy-dk brn, gr dg blk, v frm-hd, sb blk-ly-ang, tr fis, rthy, slty, arg, calc, mod abnt bent, tr lnoc, scat nodr pyr, 30% CHK: medgy-dry brn, rr ltr gy-bf, ip intbd wi mrl, mod sft-frm, sb blk-ly-ip pily, rthy-sb wxy, v calc









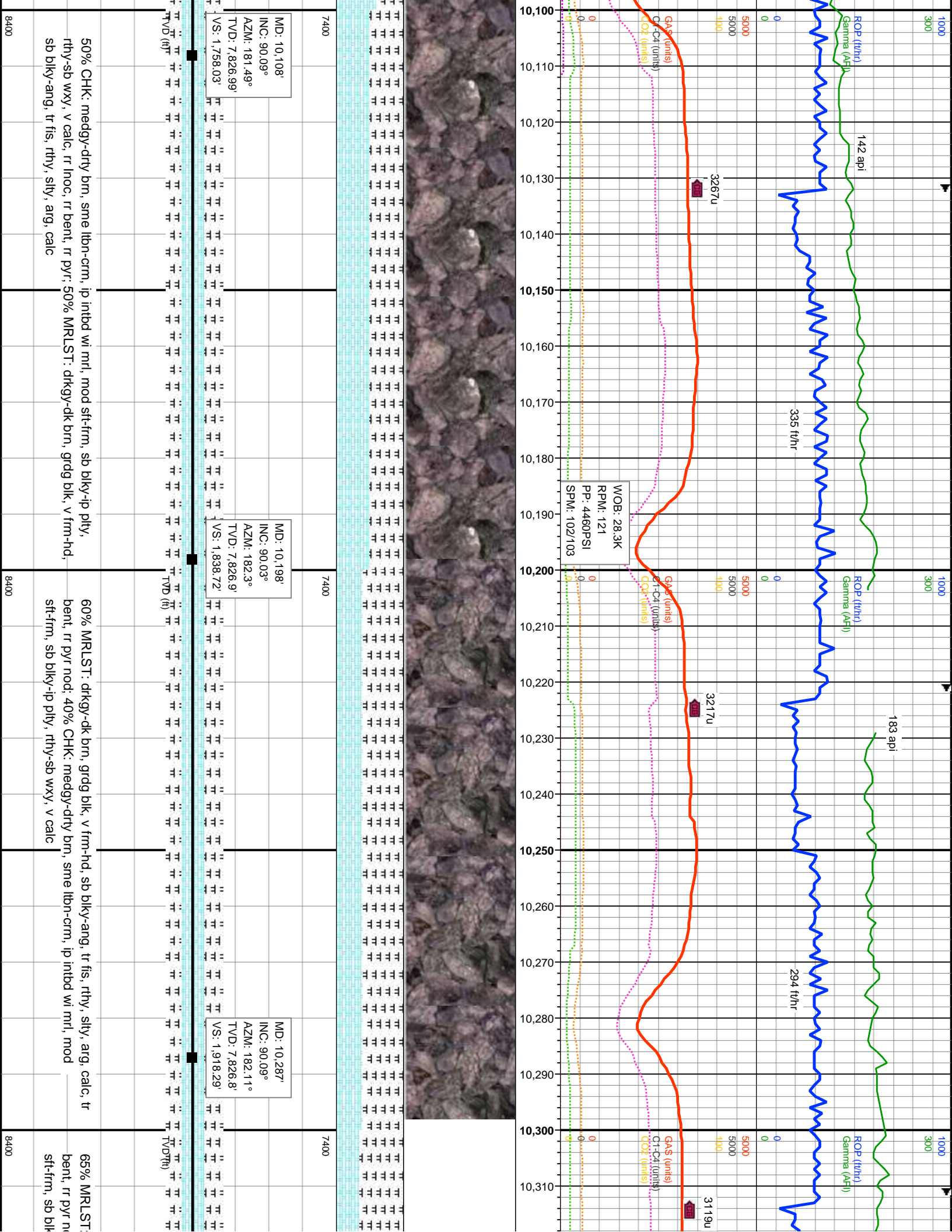
MD: 9.929'  
INC: 90.12°  
AZM: 181.89°  
TVD: 7.826.92'  
VS: 1.597.53

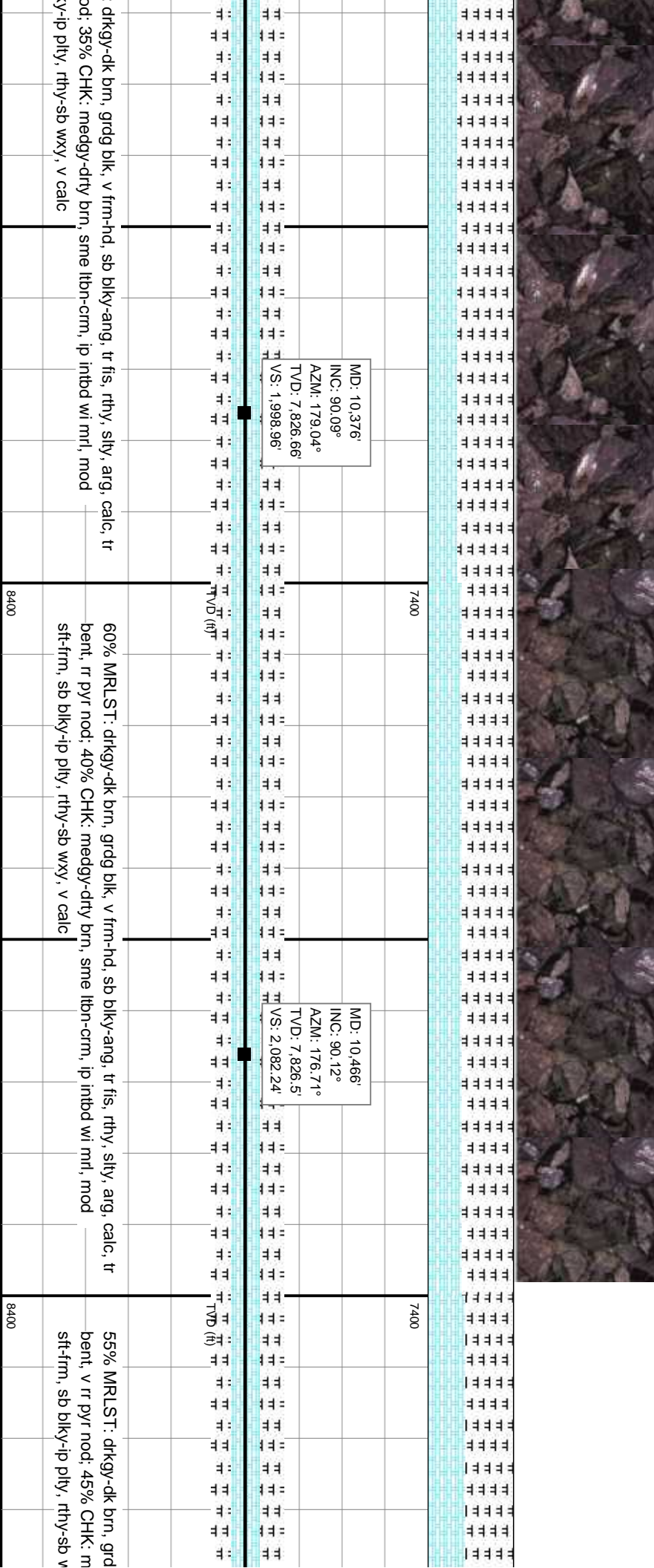
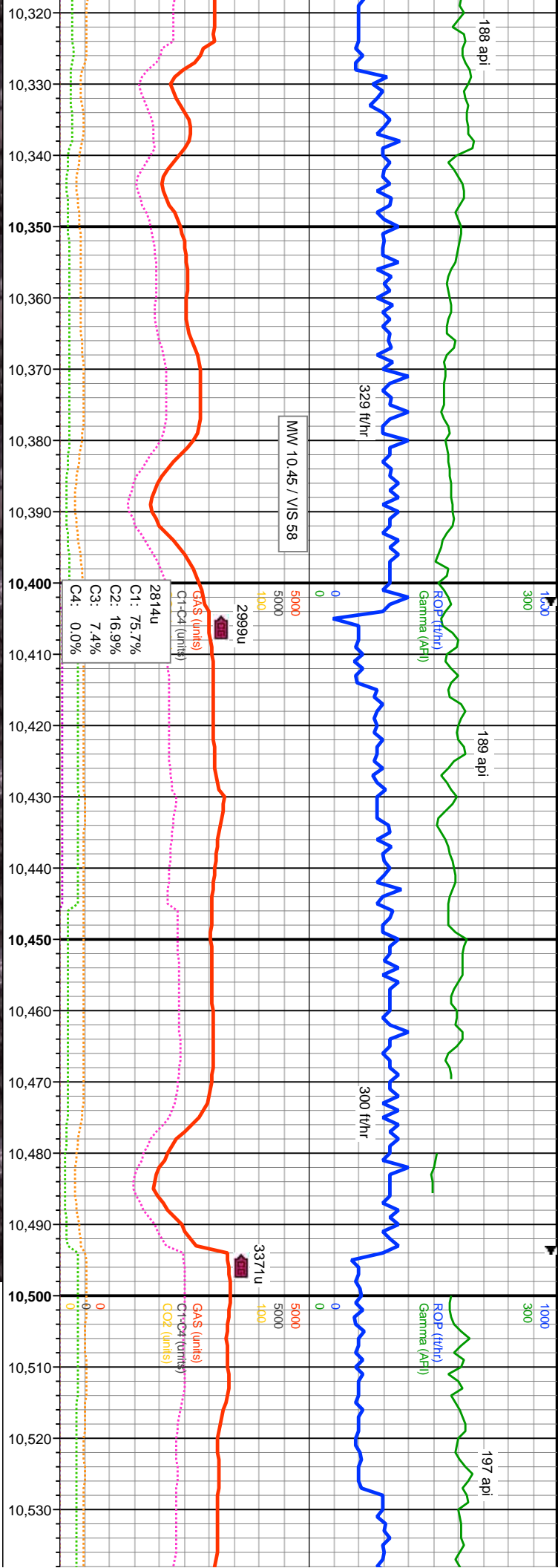
MD: 10.019'  
INC: 89.85°  
AZM: 182.06°  
TVD: 7.826.94'  
VS: 1.678.16

65% CHK: medgy-dfry brn, sme lbn-crm, ip intbd wi mrl, mod sft-frm, sb blk-y-ip pty,  
rthy-sb wxy, v calc, mnt lno, rr bent, rr pyr, 35% MRLST: drkgy-dk brn, grdg blk, v  
frm-hd, sb blk-y-ang, tr fis, rthy, slty, arg, calc

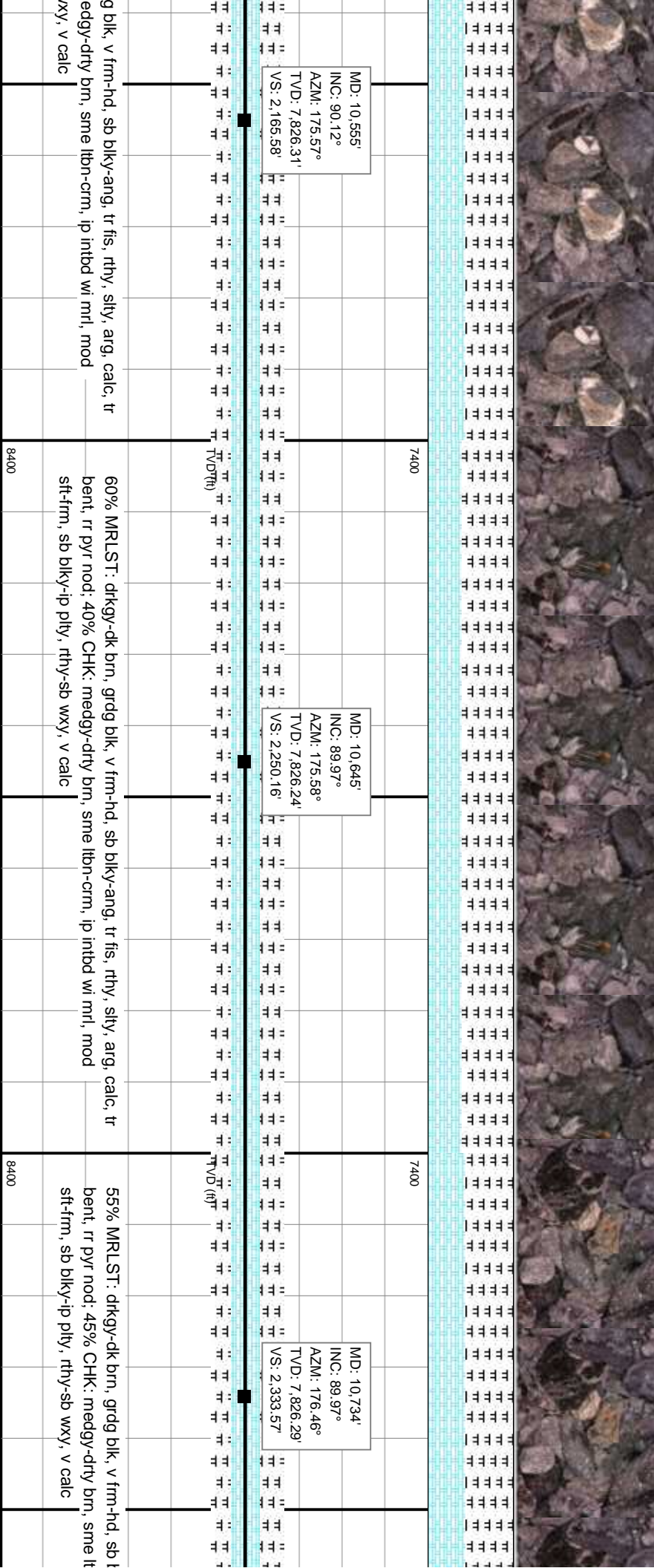
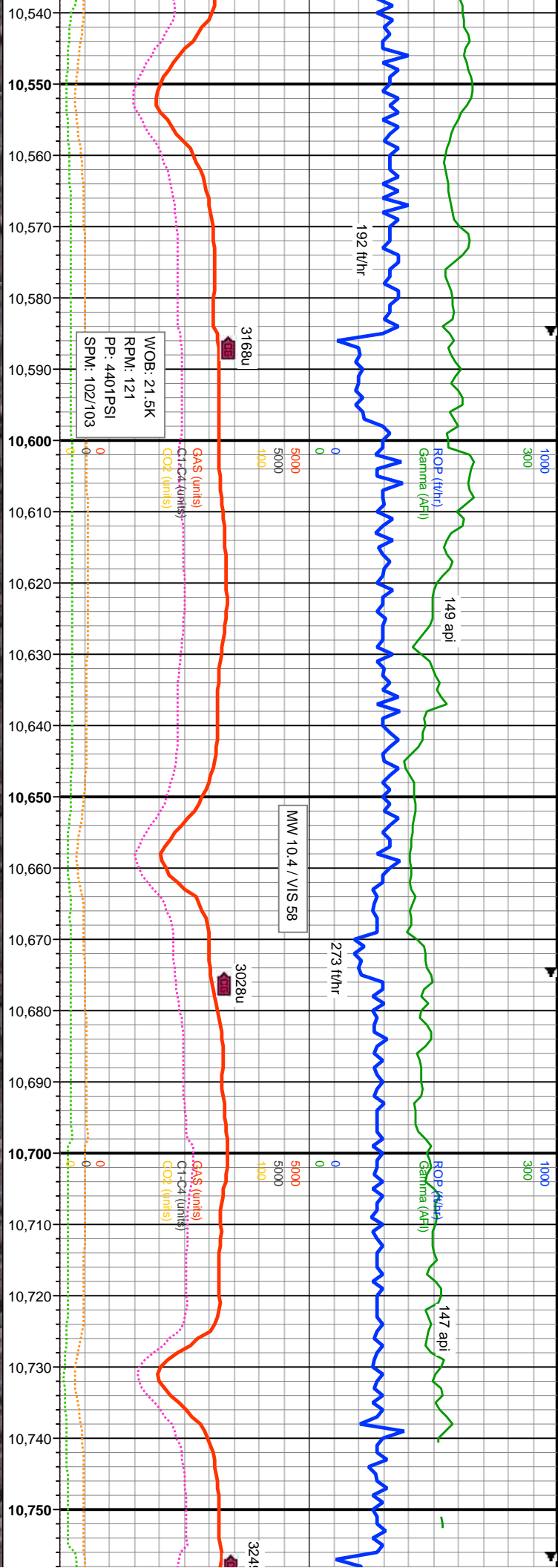
60% CHK: medgy-dfry brn, sme lbn-crm, ip intbd wi mrl, mod sft-frm, sb blk-y-ip pty,  
rthy-sb wxy, v calc, mnt lno, rr bent, rr pyr, 40% MRLST: drkgy-dk brn, grdg blk, v  
frm-hd, sb blk-y-ang, tr fis, rthy, slty, arg, calc

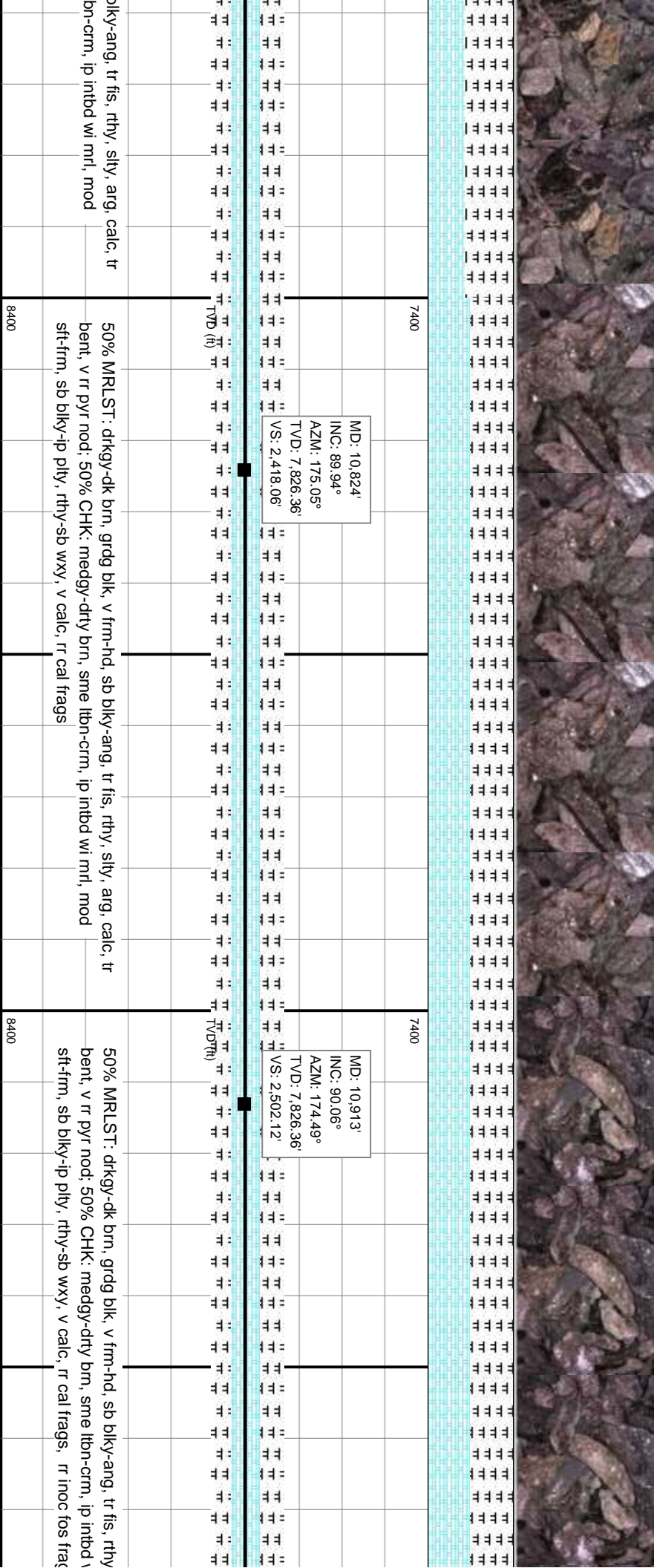
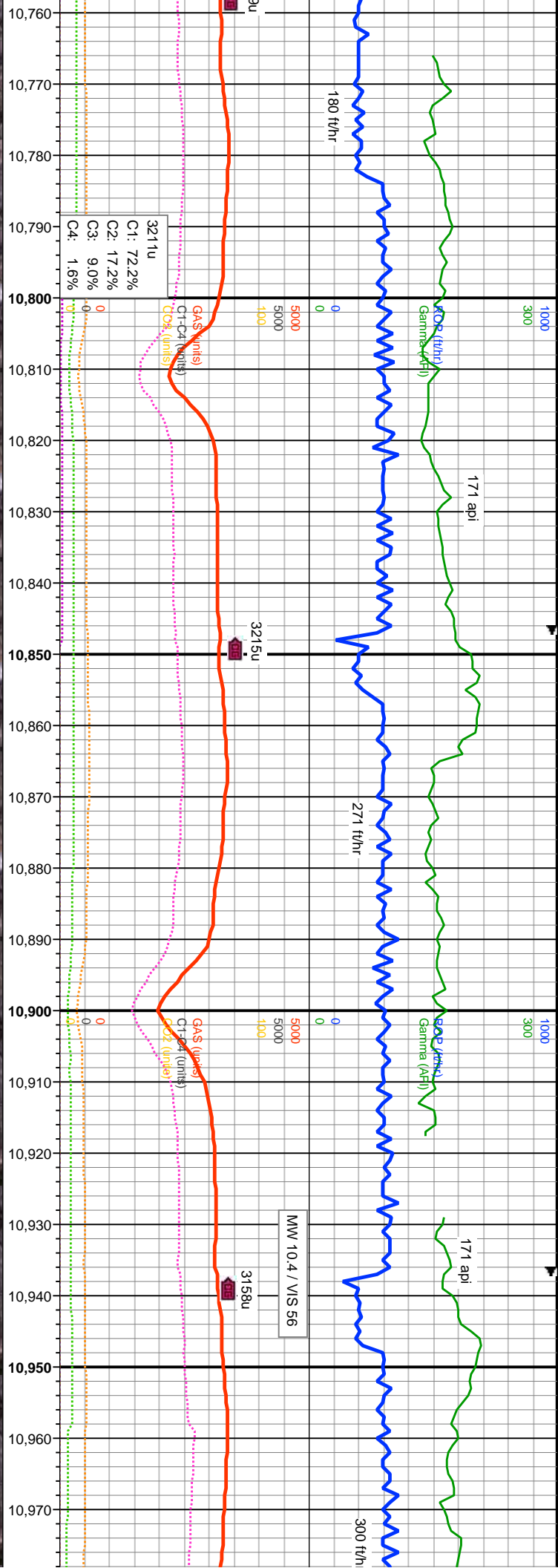




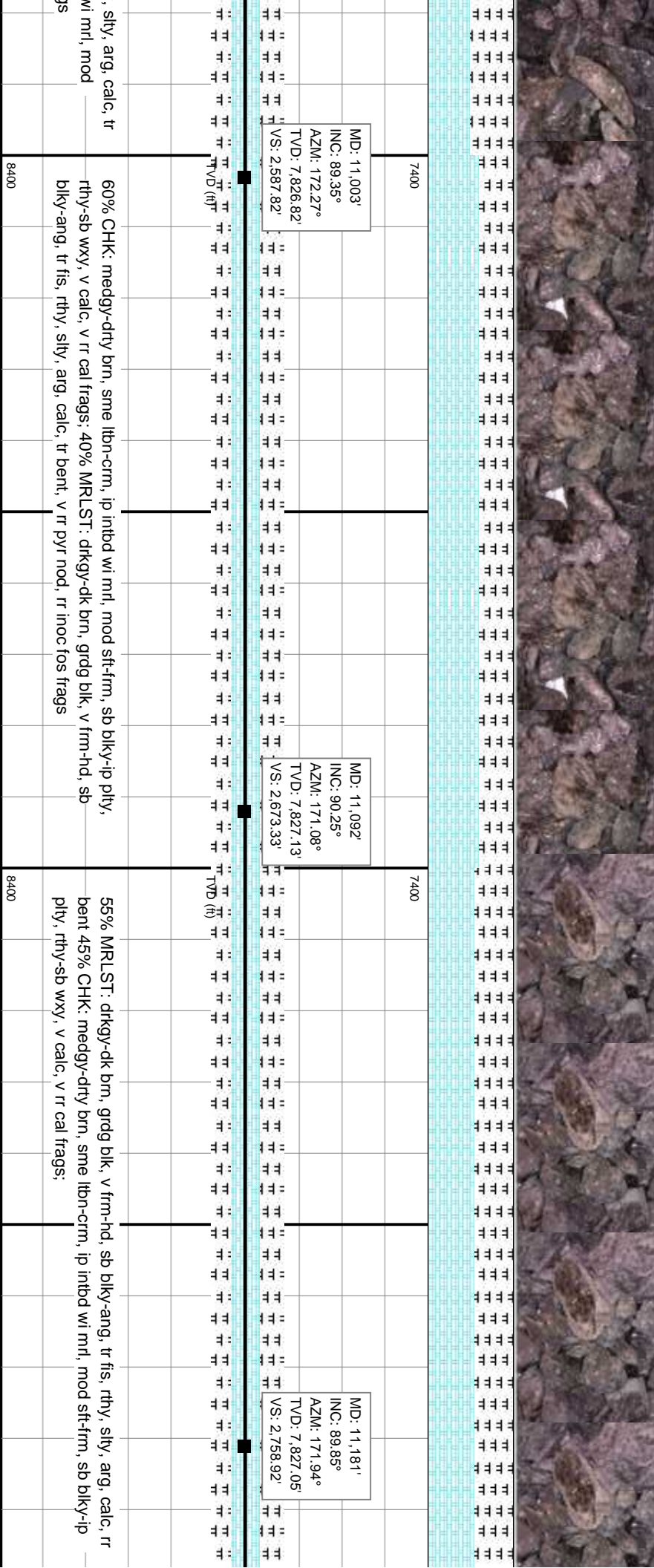
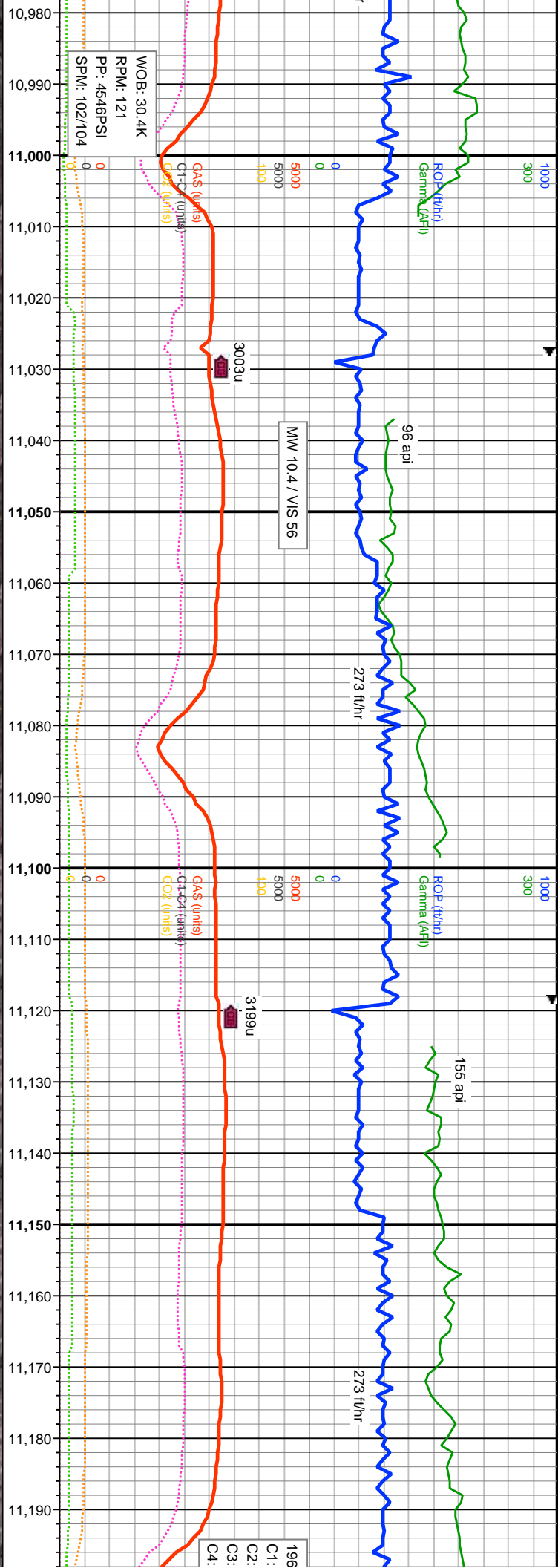




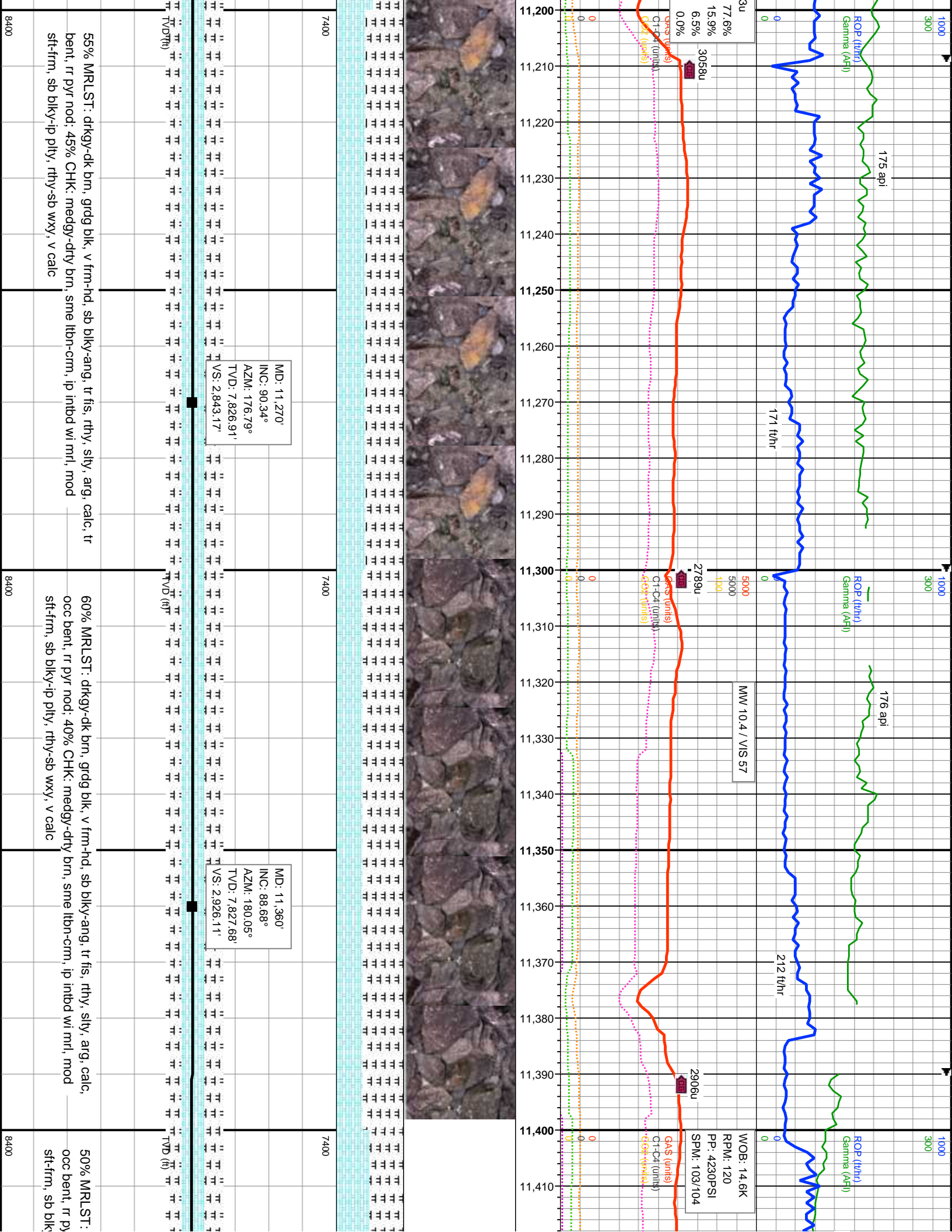


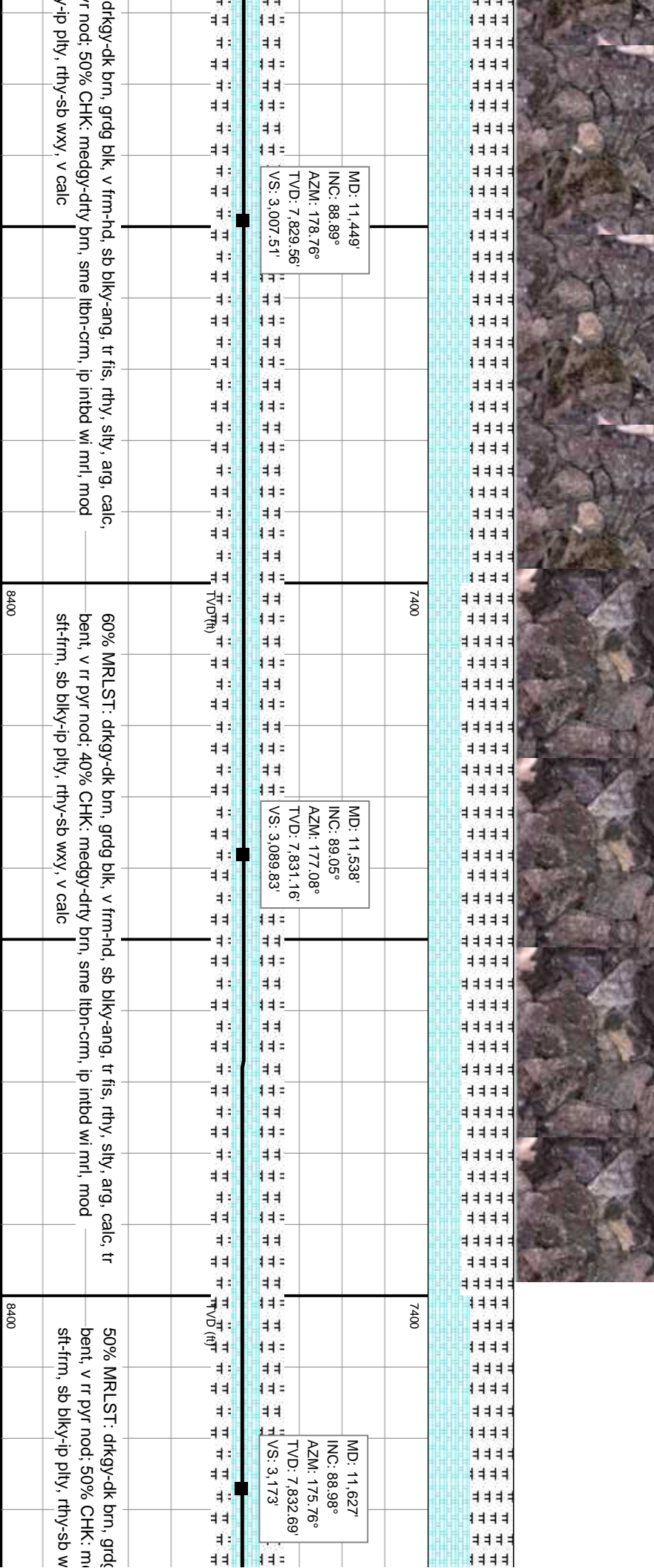
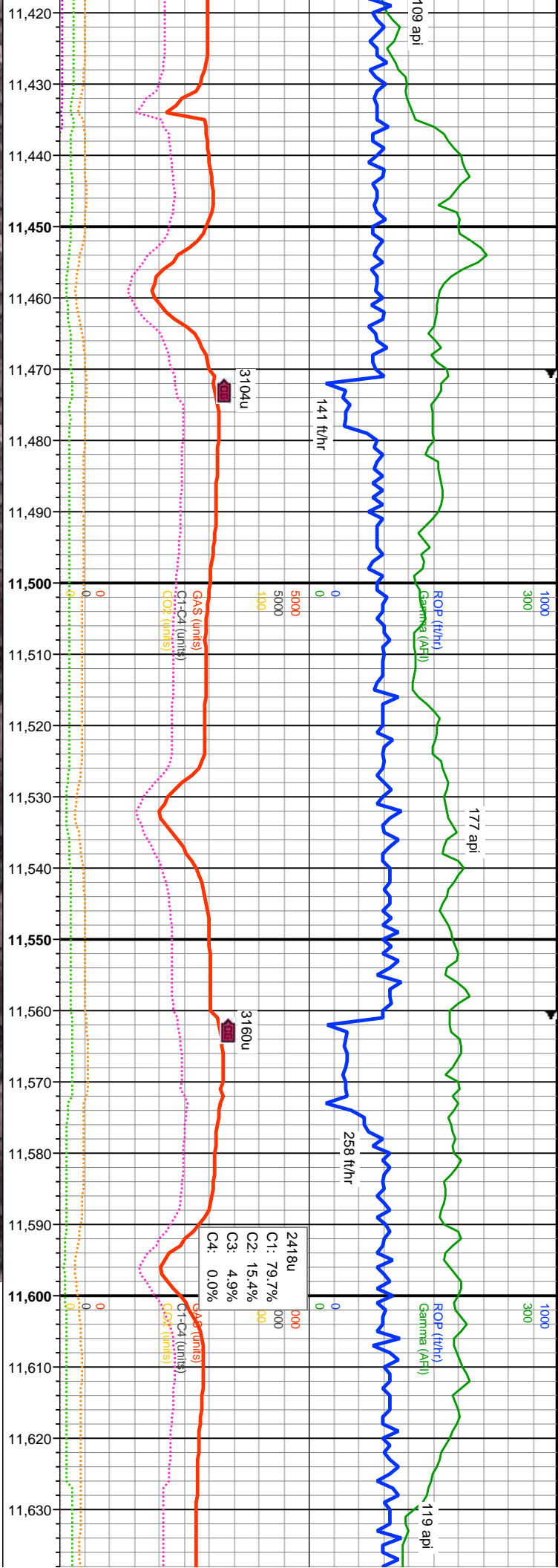




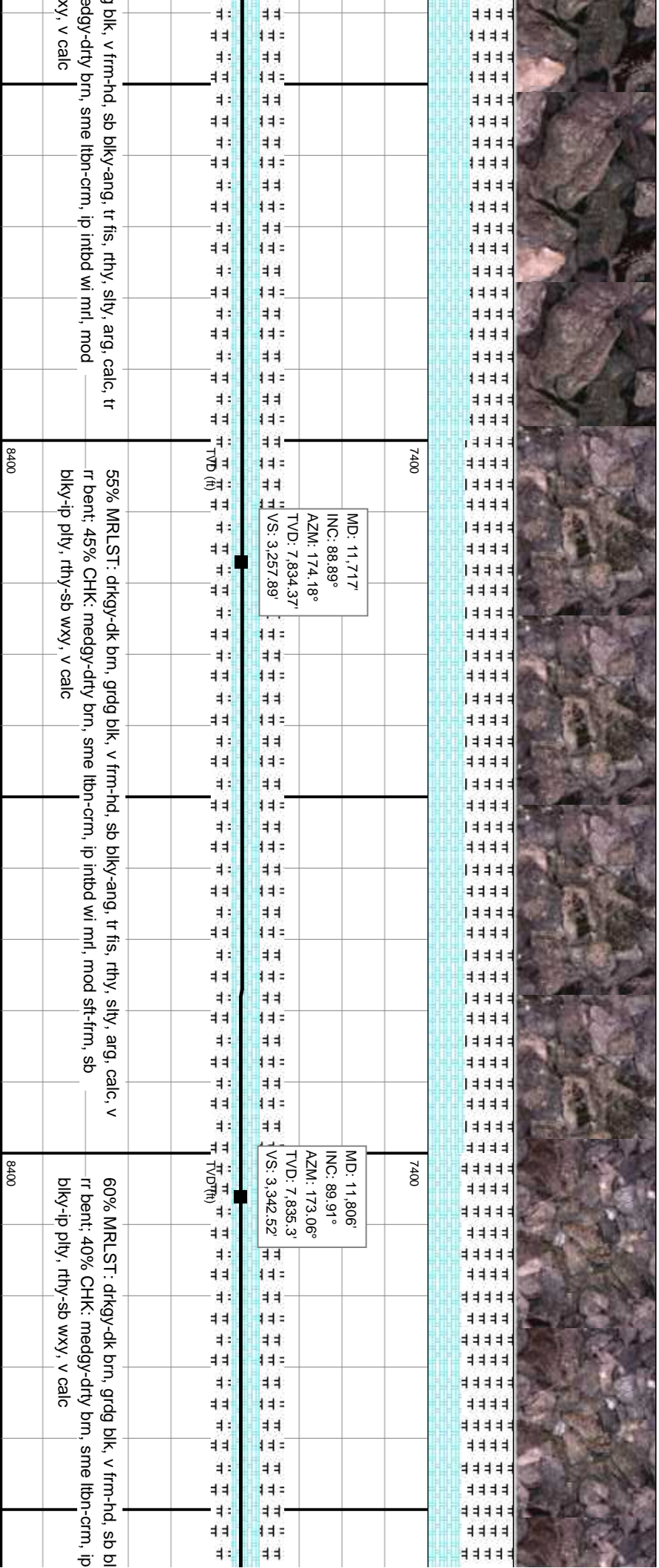
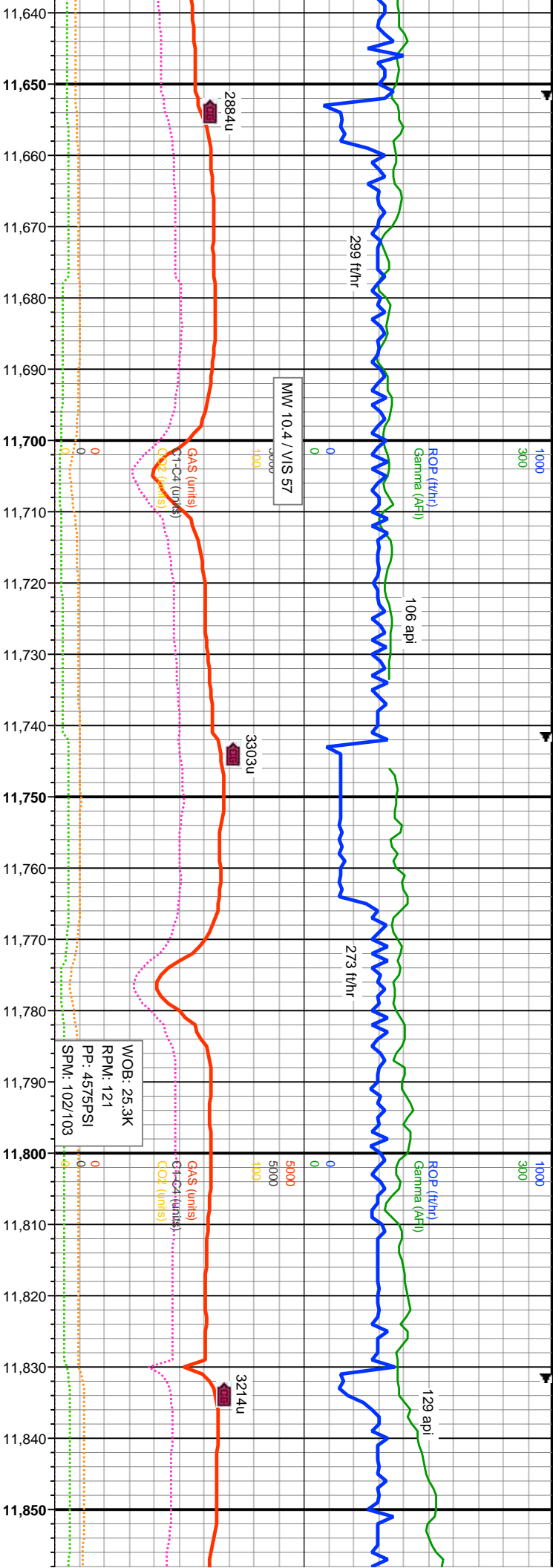




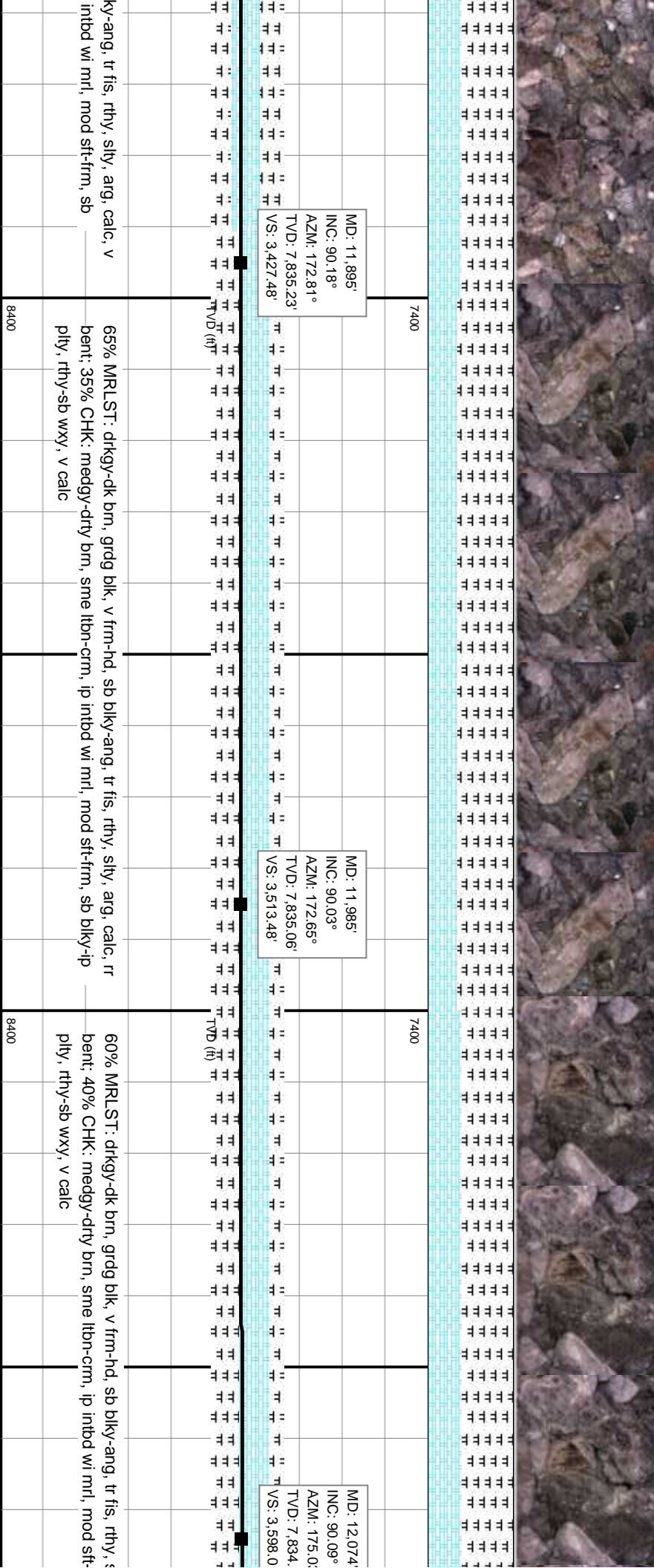
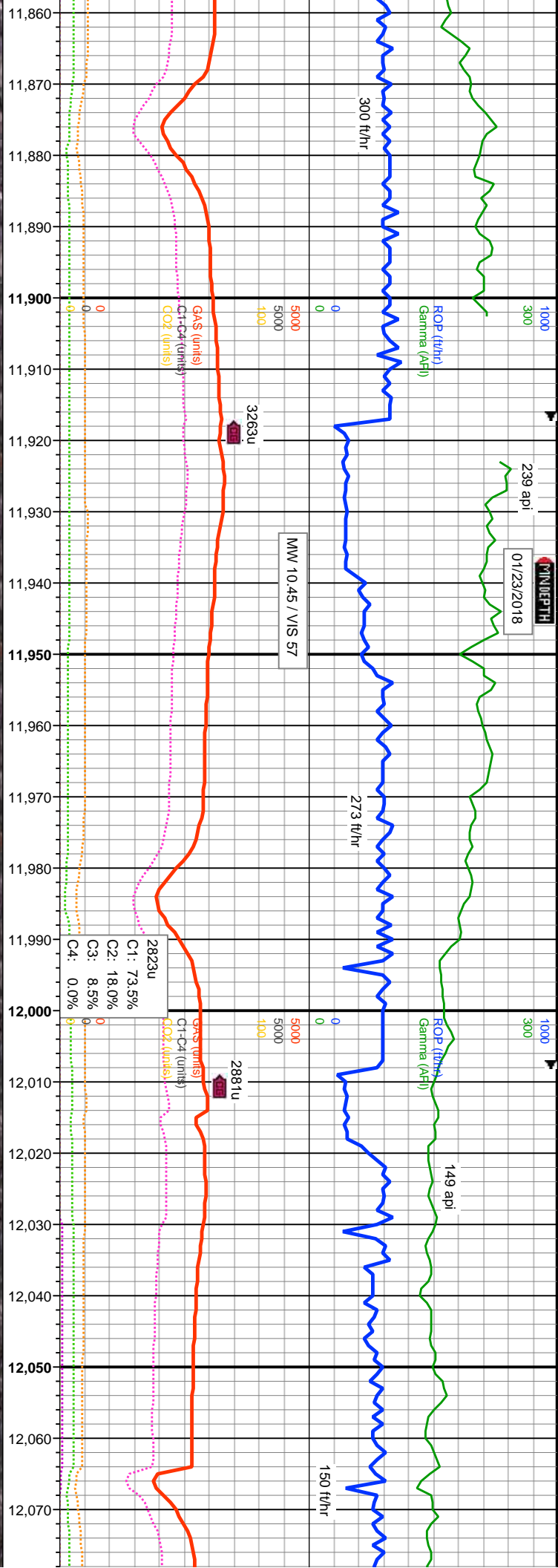


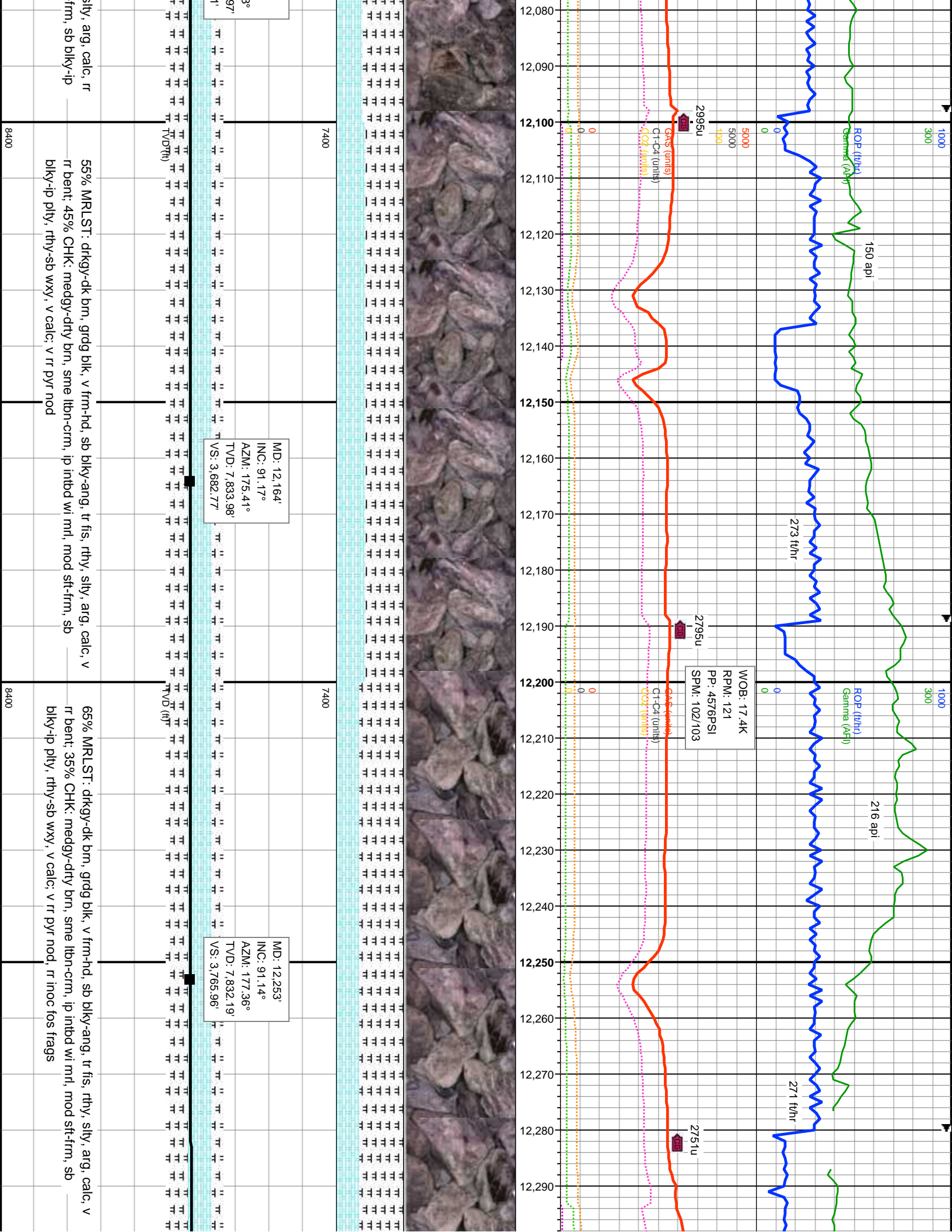




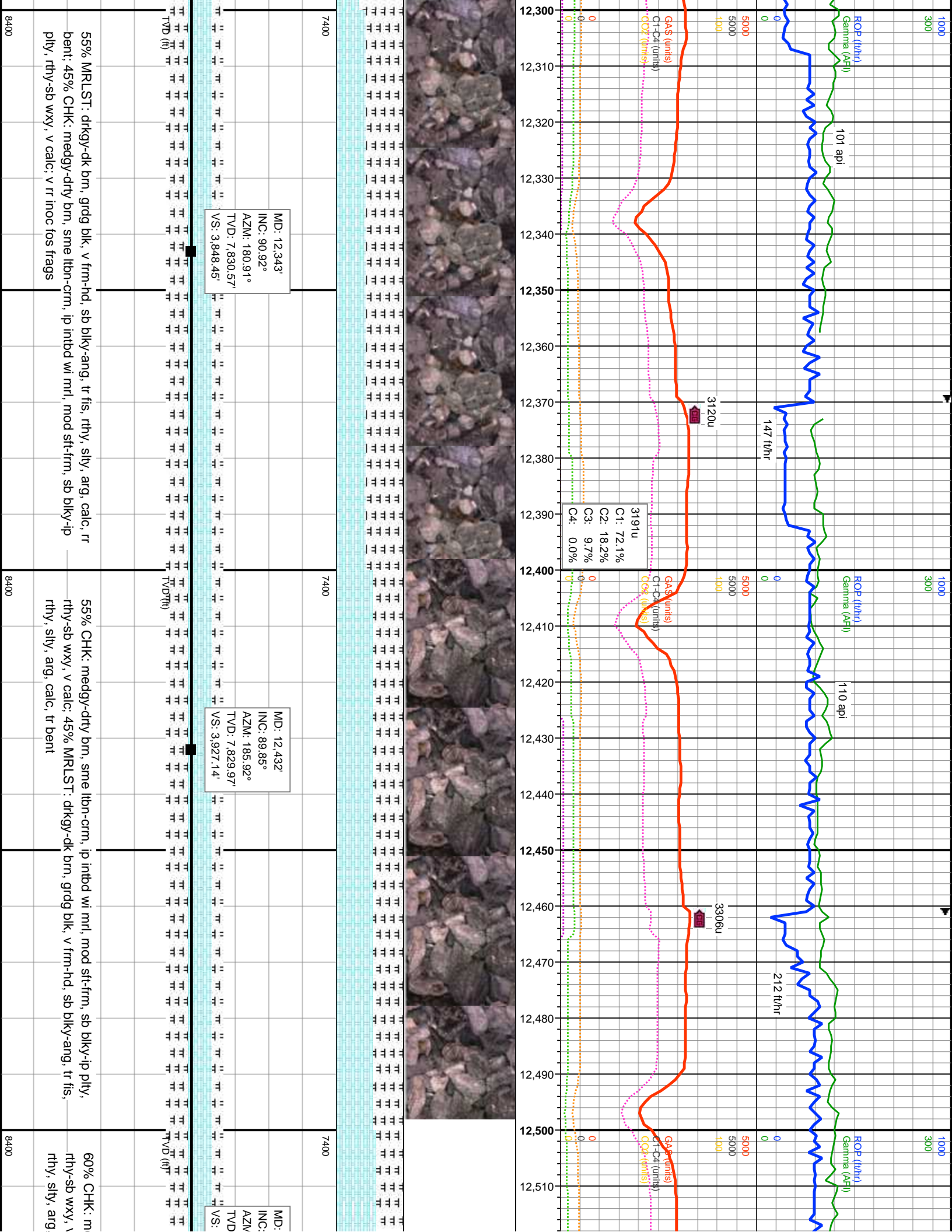




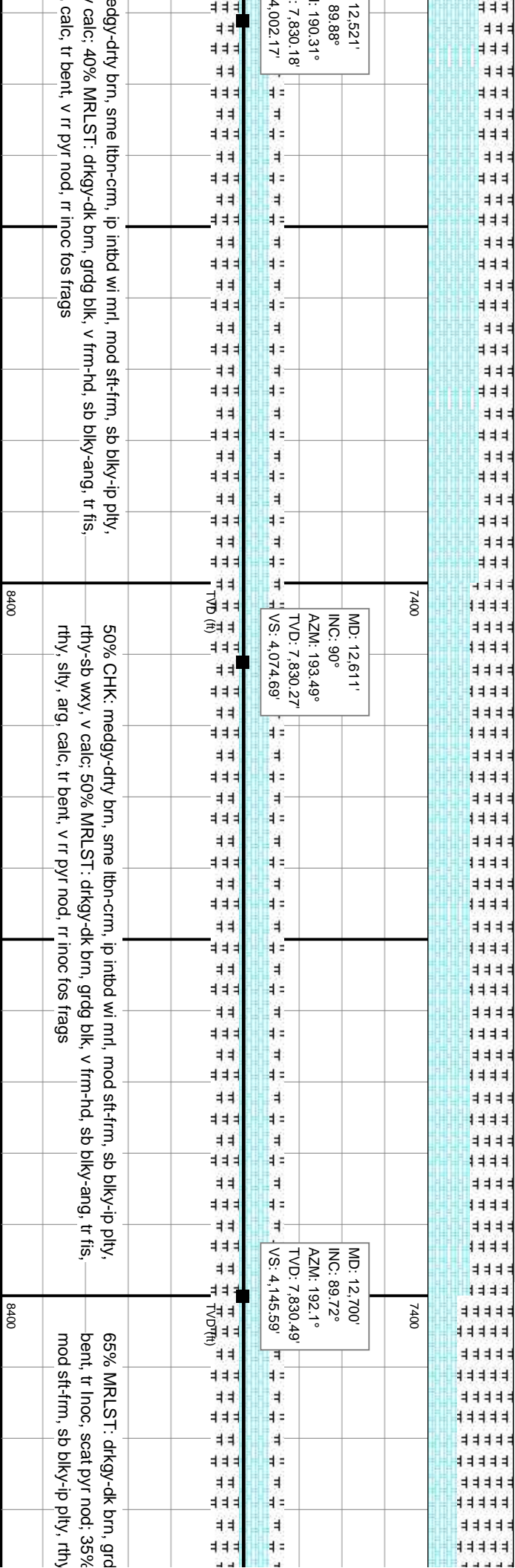
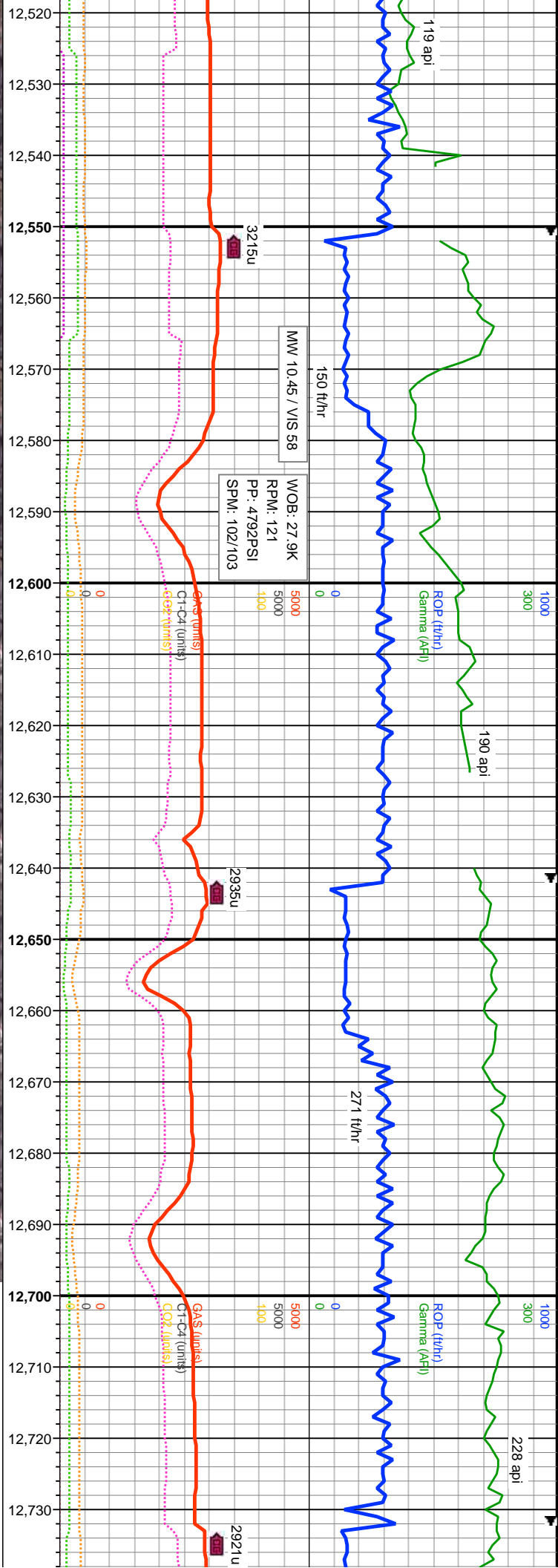


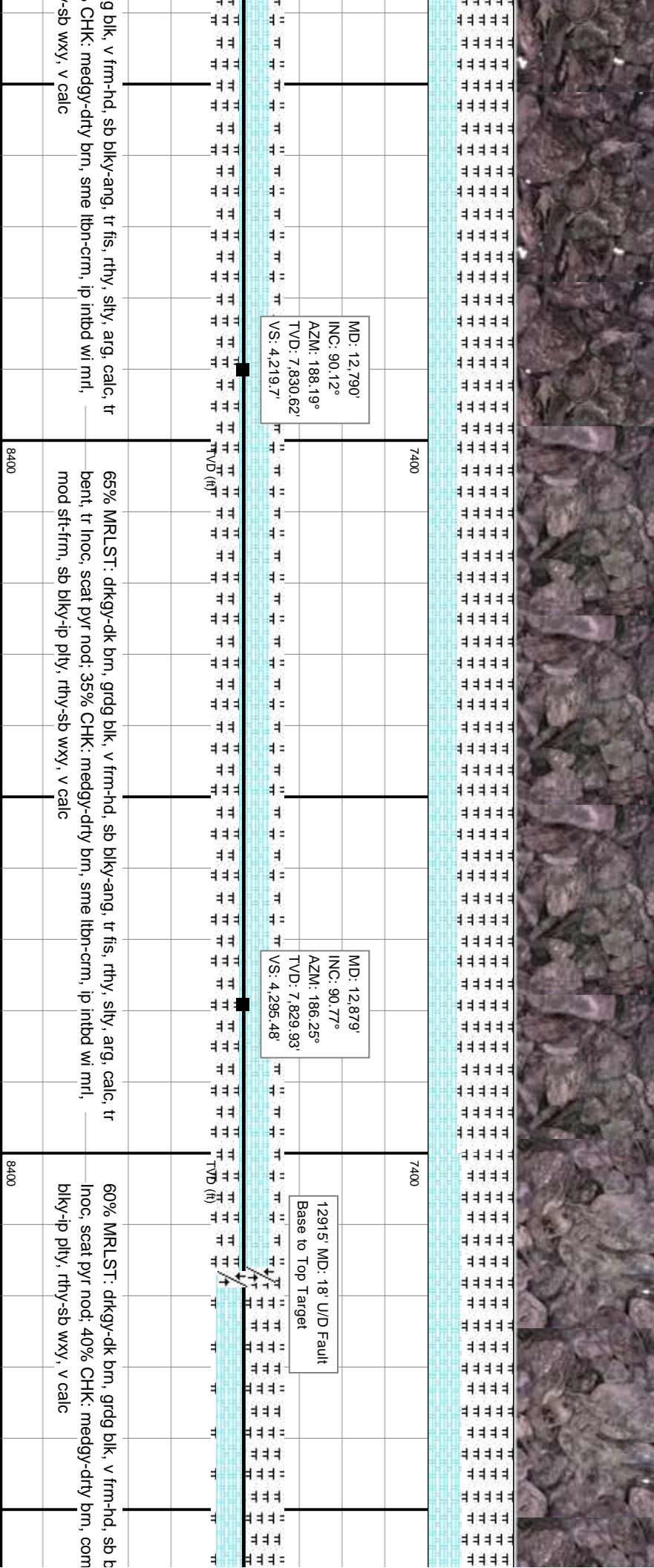
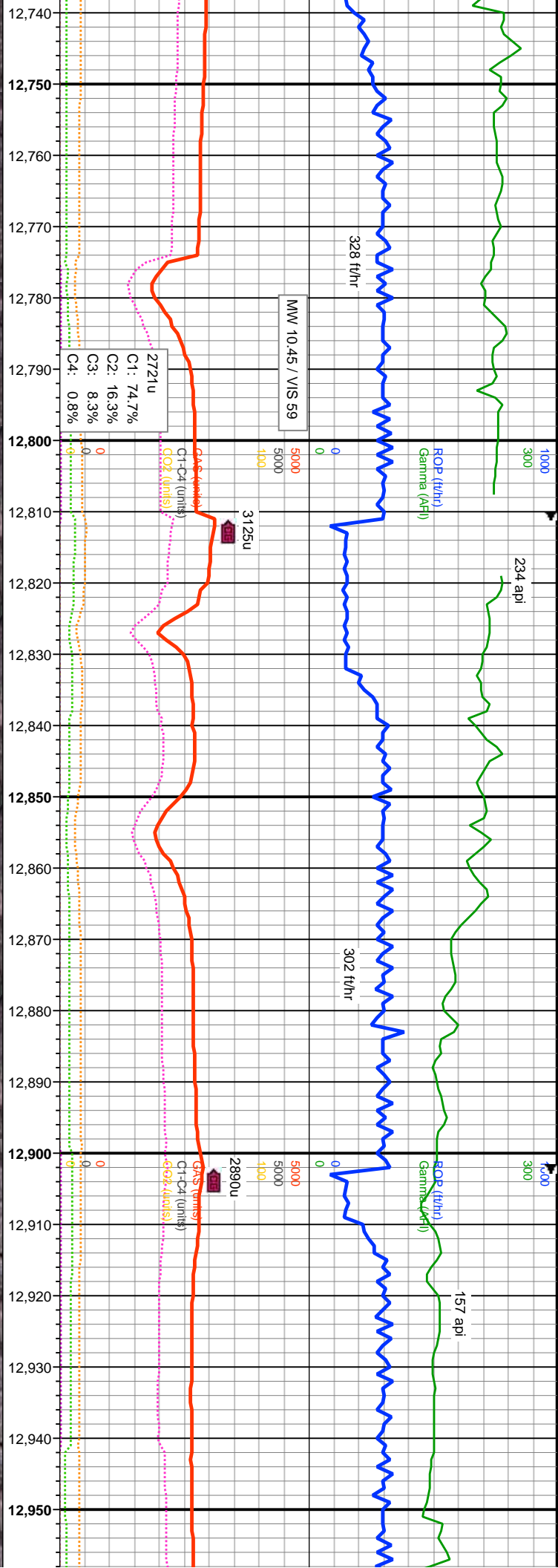




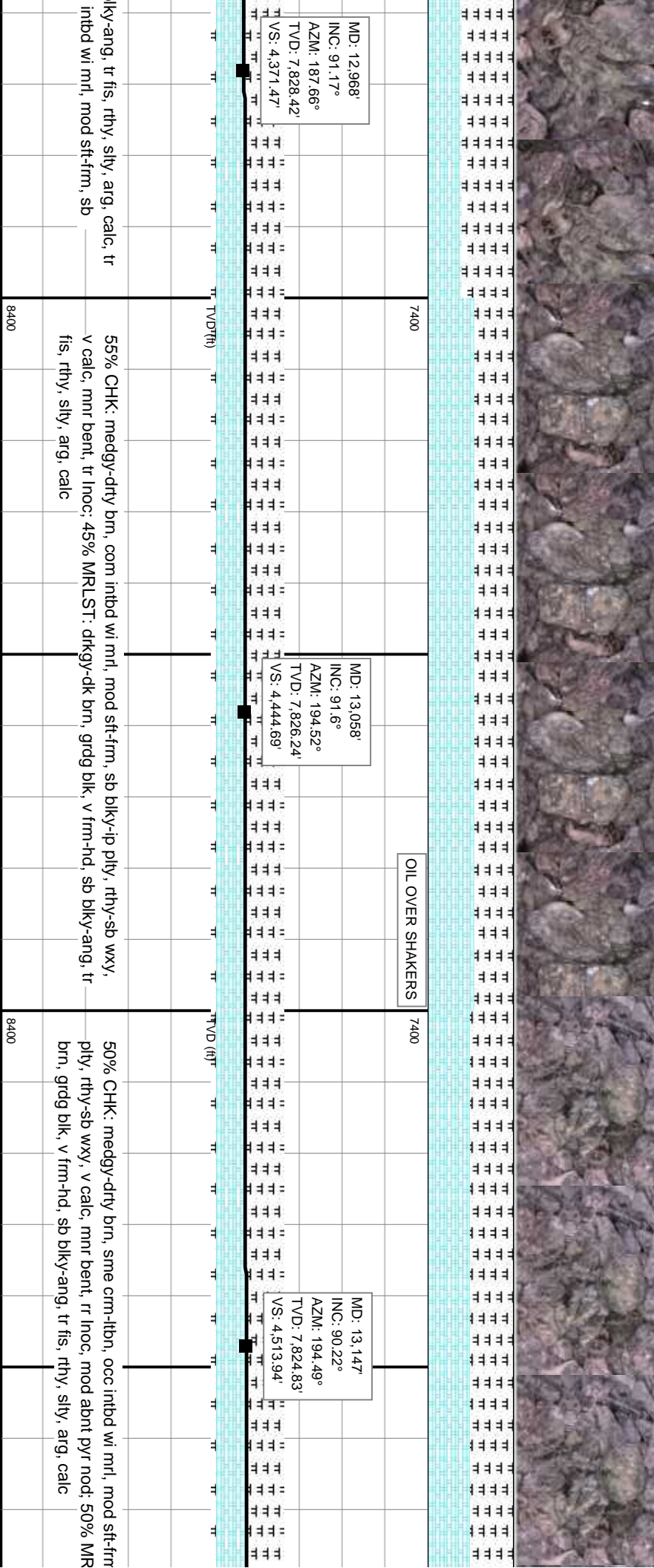
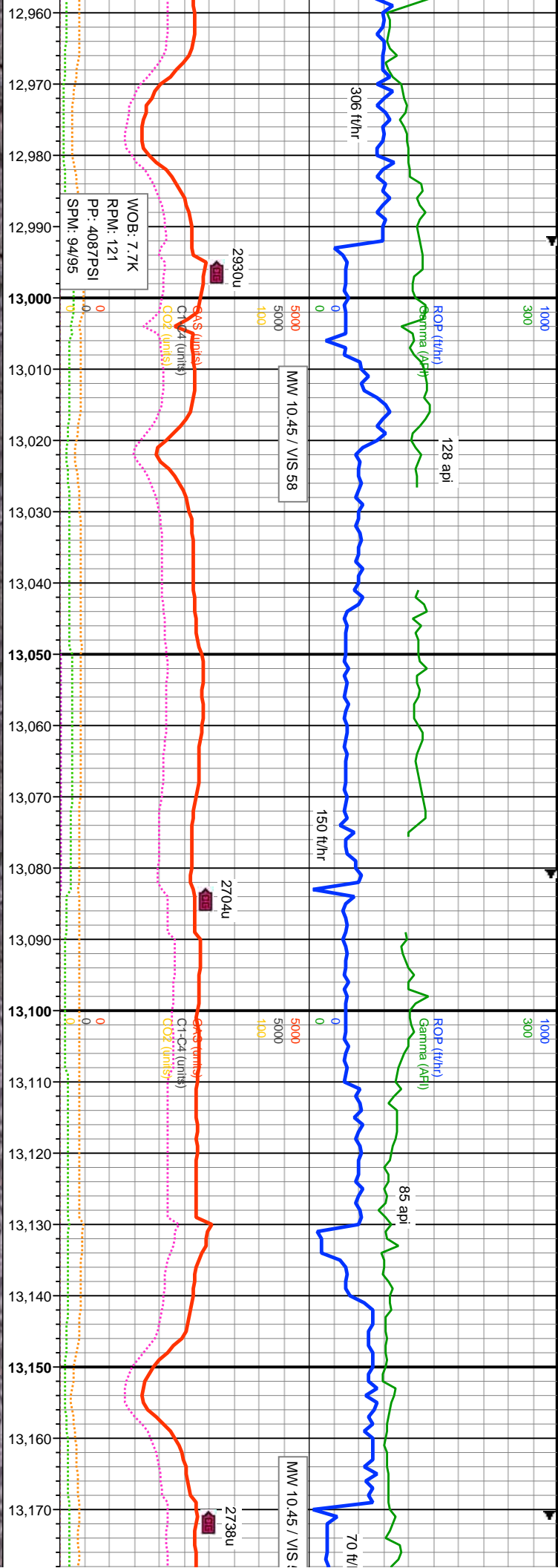


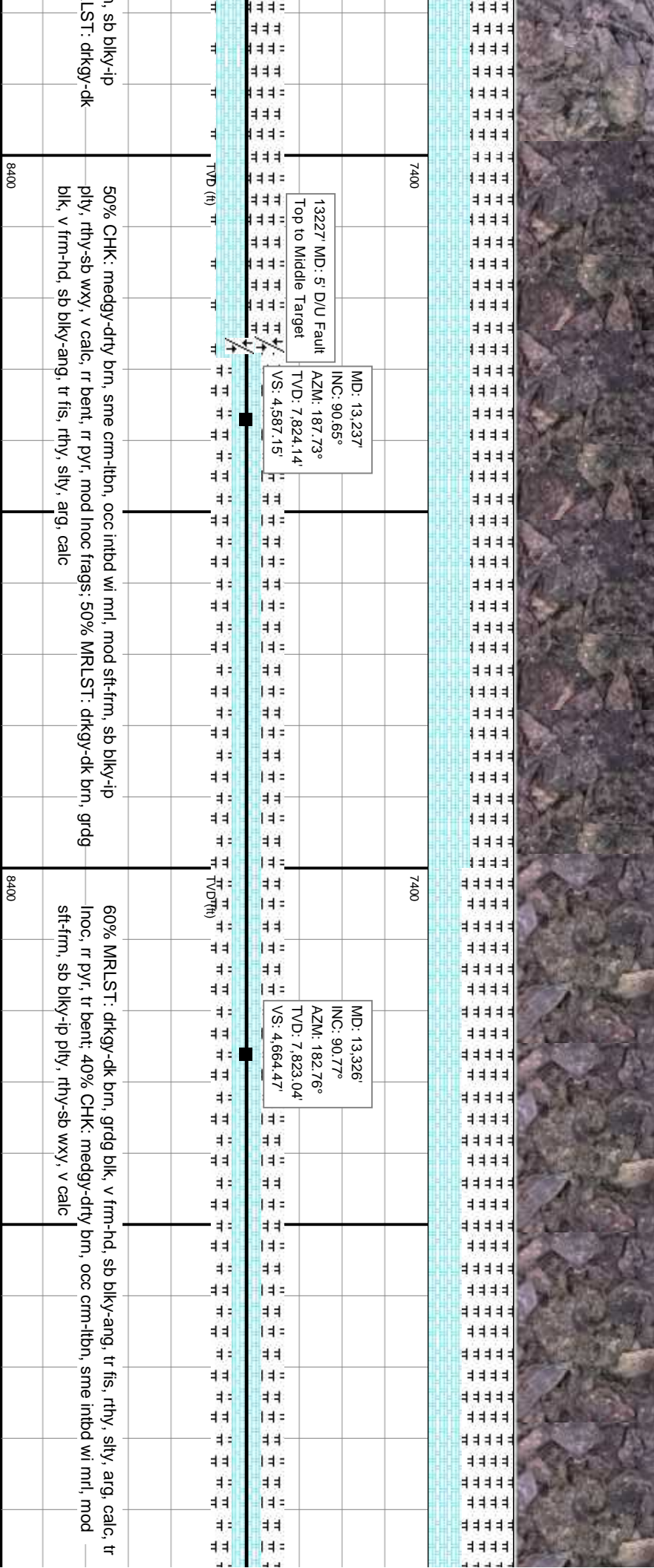
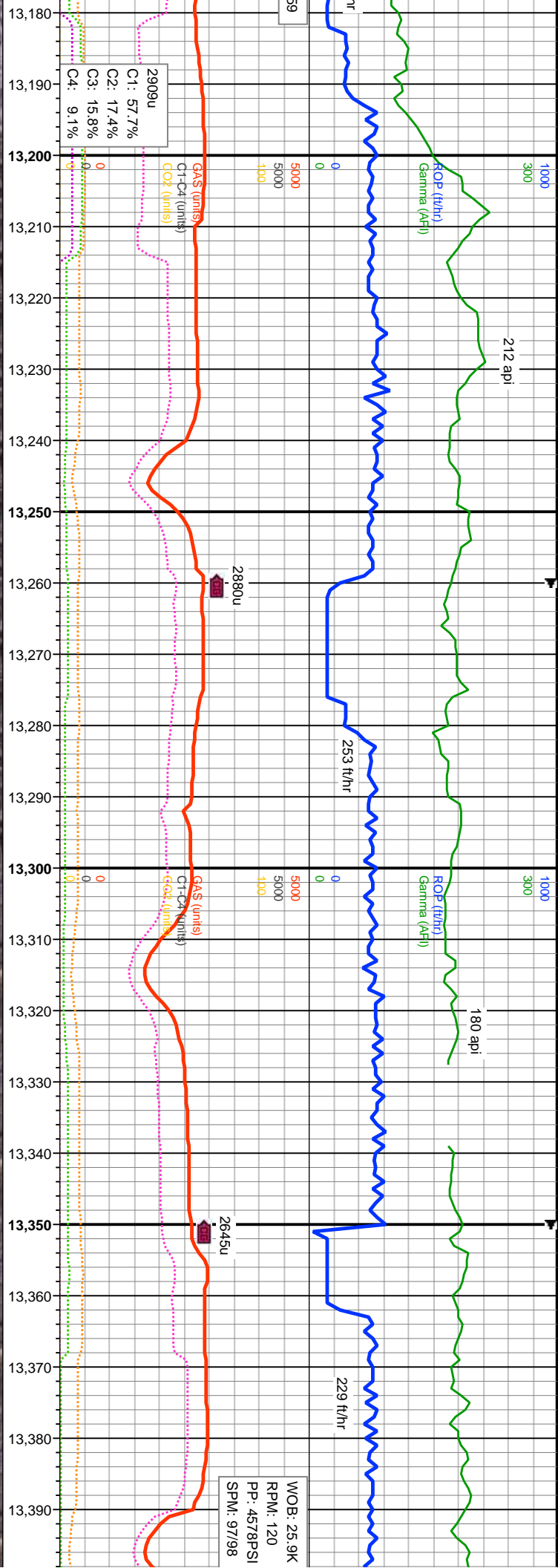




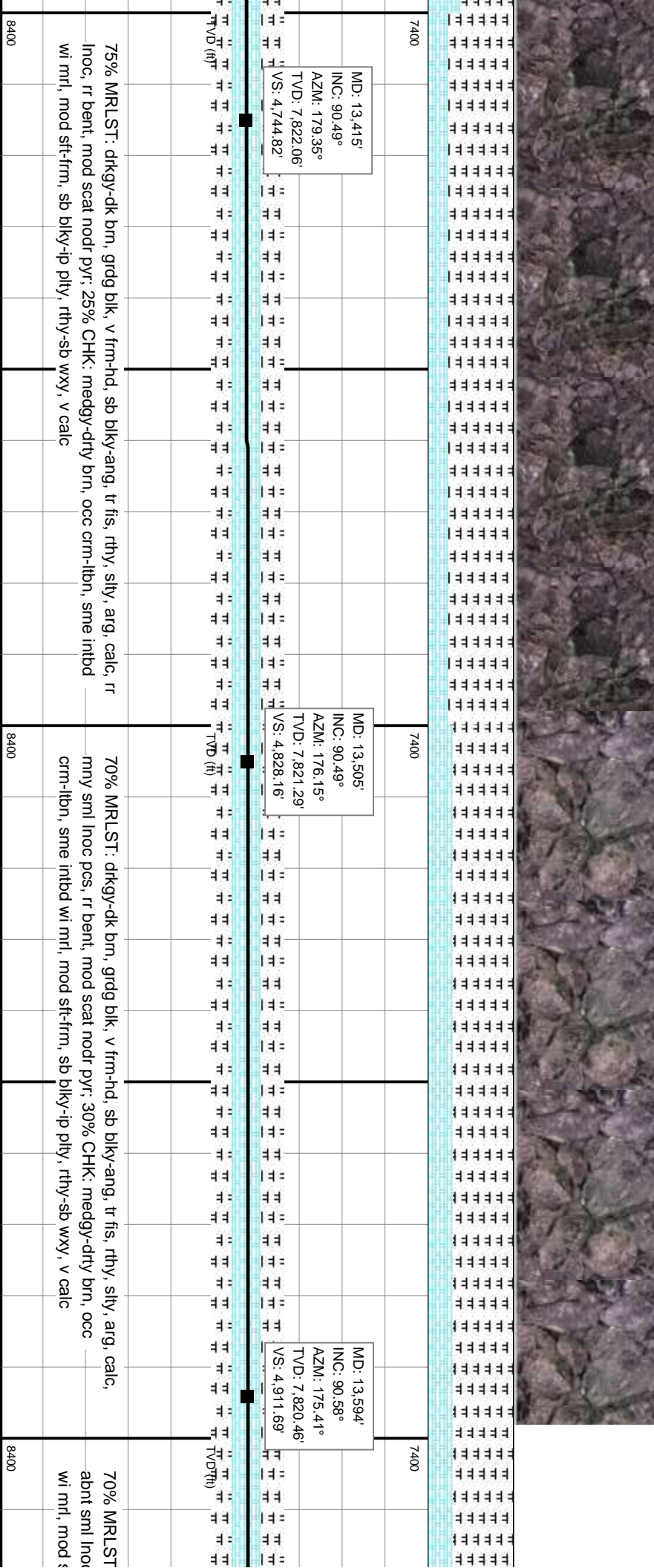
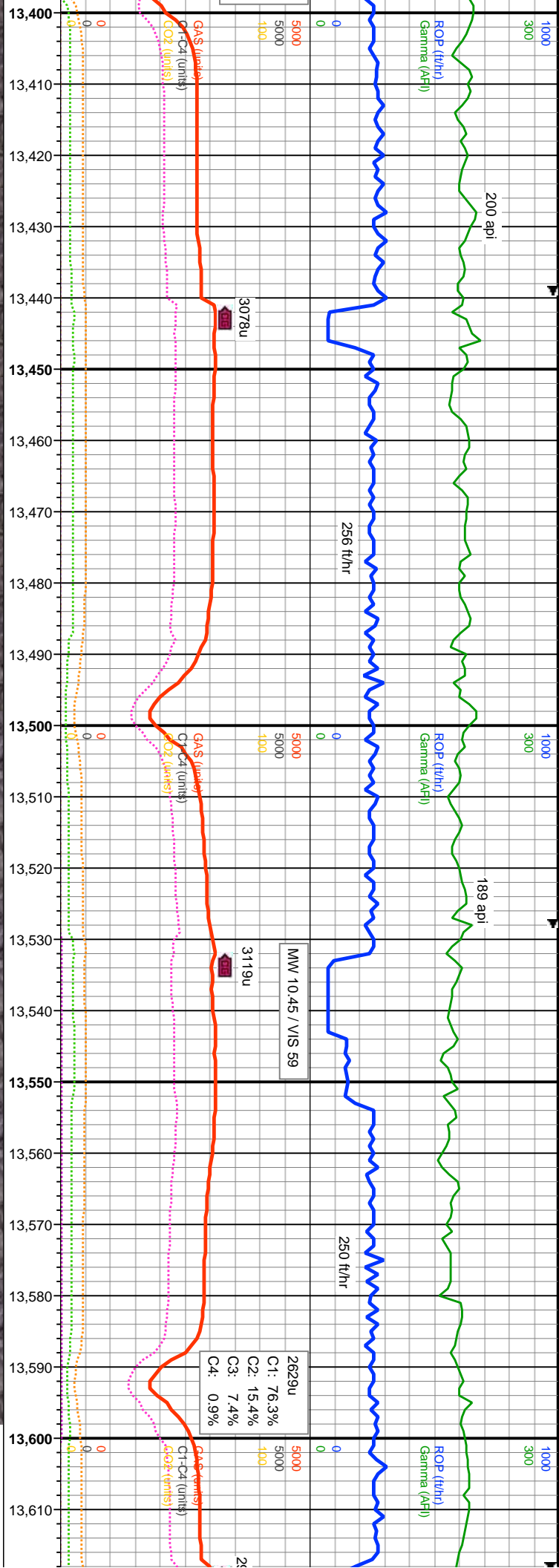






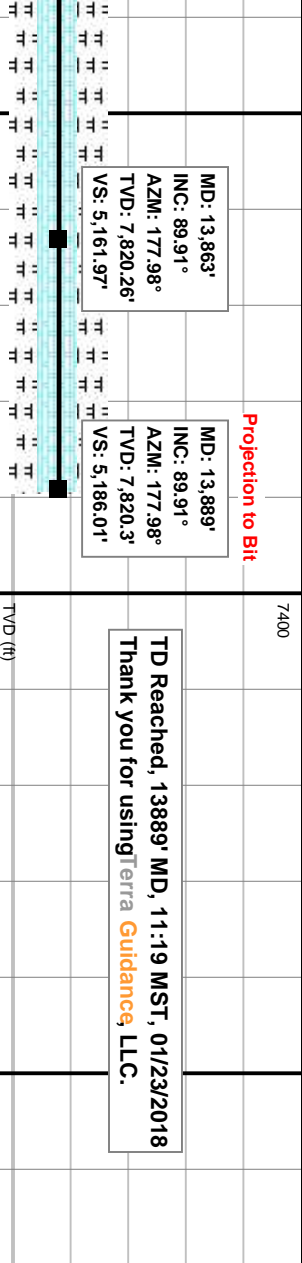
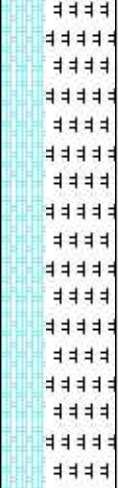
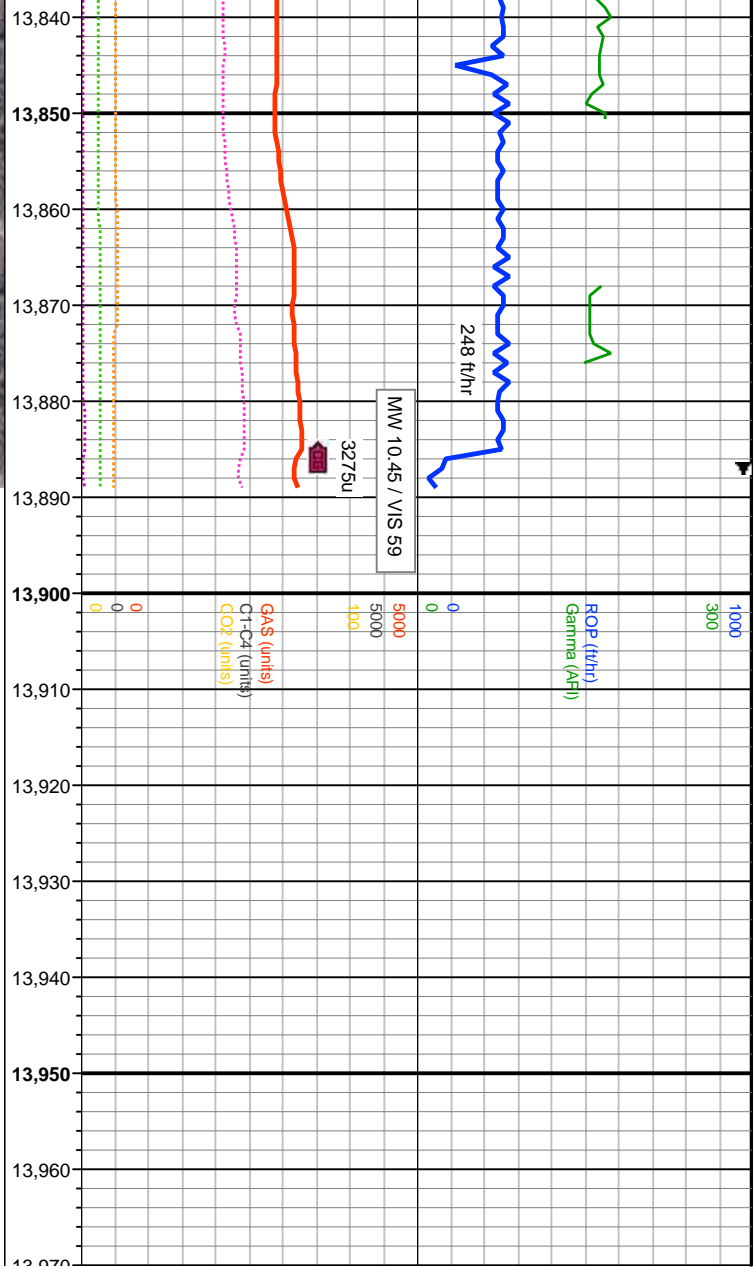












lk, v frm-hd, sb blk-y-ang, tr fis, rthy, silty, arg, calc, tr  
lk: medgy-dirty brn, lp mot gy/brn, sme intbd w/ mrl,  
wxy, v calc