



Scale: 5" / 100'  
Measured Depth Log

Well Name FINAL\_SHOOK 3-10-2NBH\_HORIZ

Location NWSE SECTION 3 T1S R67W

State COLORADO

County ADAMS

Country USA

Rig Number ENSIGN 145

API Number 05-001-09971

AFE # 1700008

Geographic Region DJ BASIN

Field WATTENBERG

Spud Date 4/12/2017

Drilling Completed 6/20/2017

Surface Coordinates NWSE SECTION 3, T1S, R67W  
2058' FSL x 2214' FEL

Bottom Hole Coordinates SEC 10, T1S, R67W  
359' FSL x 1943' FWL

Ground Elevation 5098'

K.B. Elevation 5111'

Logged Interval 8300' To 12853'

Total Depth 4553'

Formation NIOBRARA B CHALK

Type of Drilling Fluid OIL BASED MUD

## Operator

Company PetroShare Corporation

Address 7200 S Alton Way  
Englewood, CO 80112



## Geologist

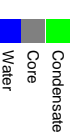
Name WEDGE HOWLAND, SAGE BETTS

Company Terra Guidance

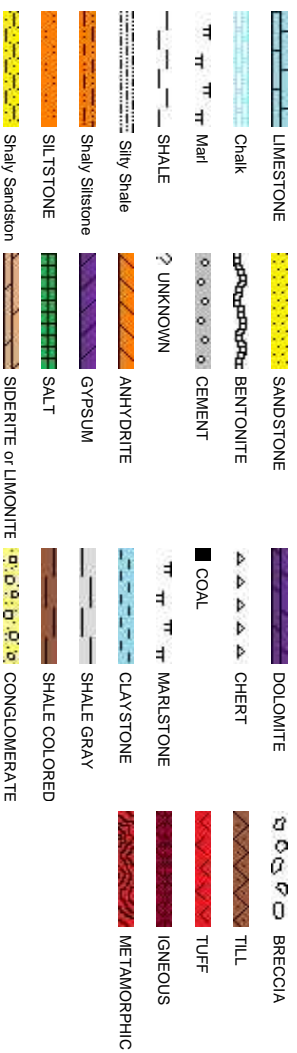
Address 1298 O Road  
Loma CO 81524  
(970) 260-5408



## Zone Color Coding

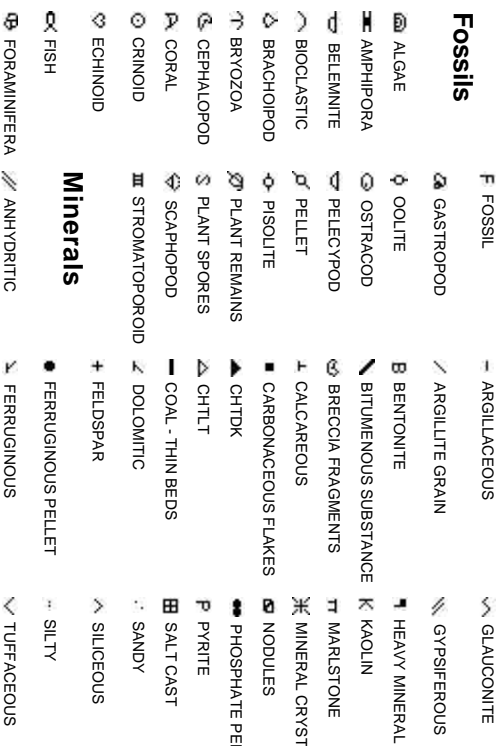


## Rock Types

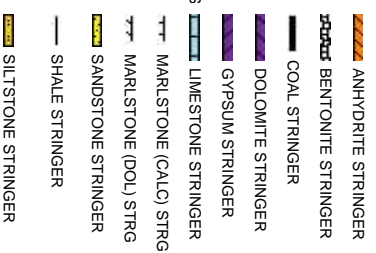


## Accessories

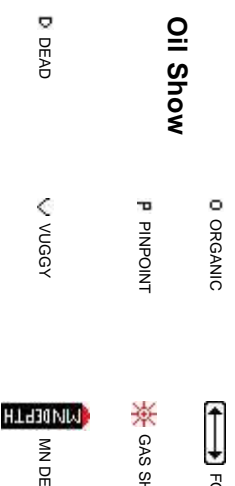
## Fossils



**Stringer**



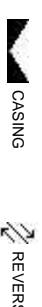
## Other



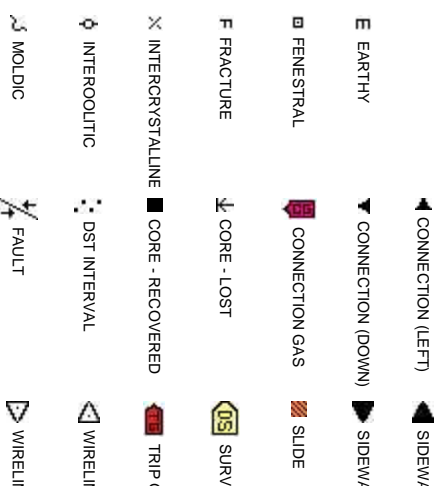
## Oil Show



## Engineering



## Porosity



# er Symbols

FORMATION TOP L LITHOGRAPHIC

## Rounding

HOW MX MICROXLN

PTH A ANGULAR MS MUDSTONE

L FAULT R ROUNDED PS PACKSTONE

OW B SUBANG WS WACKESTONE

JURNED STRATA T SUBRND

## Sorting

SE FAULT

## Textures

ALL CORE (LEFT) M MODERATE

ALL CORE (RIGHT) BS BOUNDSTONE P POOR

C CHALKY W WELL

EY CX CRYPTOXLN

EGAS E EARTHY

NE TESTED - LEFT FX FINELYXLN

NE TESTED - RT ES GRANSTONE

## ConnectionGas(Vert)

Curve/Survey Data  
ROP  
Gamma

ROP SCALE: 0-600 ft/hr  
GAMMA SCALE: 0-300 api  
Gaps in Gamma Data due to Rapid Drilling Rate

Total Gas & Chromatograph  
GAS  
C1  
C2  
C3  
C4

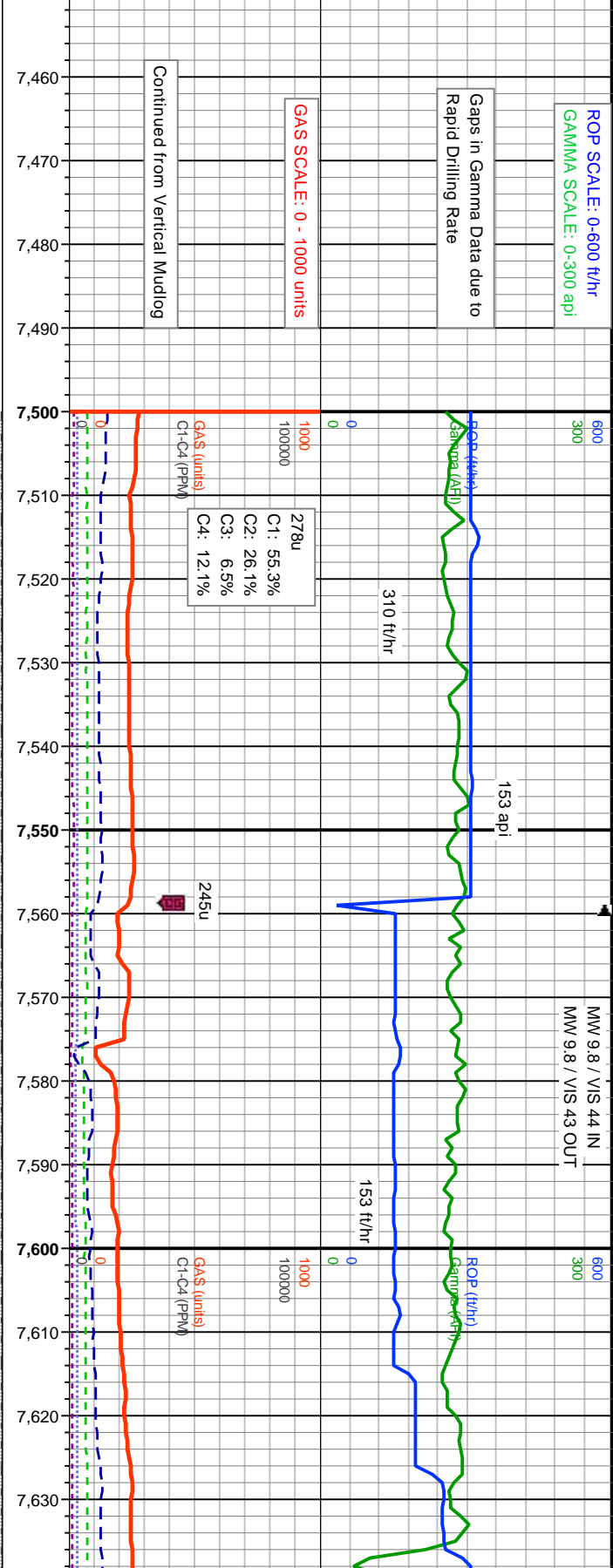
GAS SCALE: 0 - 1000 units  
Continued from Vertical Mudlog

Depth

% Lithology

Well Bore  
TVD

Images



TVD SCALE: 7100-8300'

7100

7100

MD: 7.535'  
INC: 20.84°  
AZM: 189.45°  
TVD: 7.137.49'  
VS: 2.025.92'

KOP Reached 7558' MD  
Begin 50' Sample Collection

MD: 7.628'  
INC: 28.42°  
AZM: 185.96°  
TVD: 7.221.98'  
VS: 2.064.61'

TVD (ft)

TVD (ft)

100% SLTY SH: med lt gy-dk gy, vfg,  
sft-fm, sb blk-y-sb ang, mod srt, silty txt, v  
arg mtx, sl calc

100% SLTY SH: med lt gy-dk gy, vfg,  
sft-fm, sb blk-y-sb ang, mod srt, silty txt, v  
arg mtx, sl calc

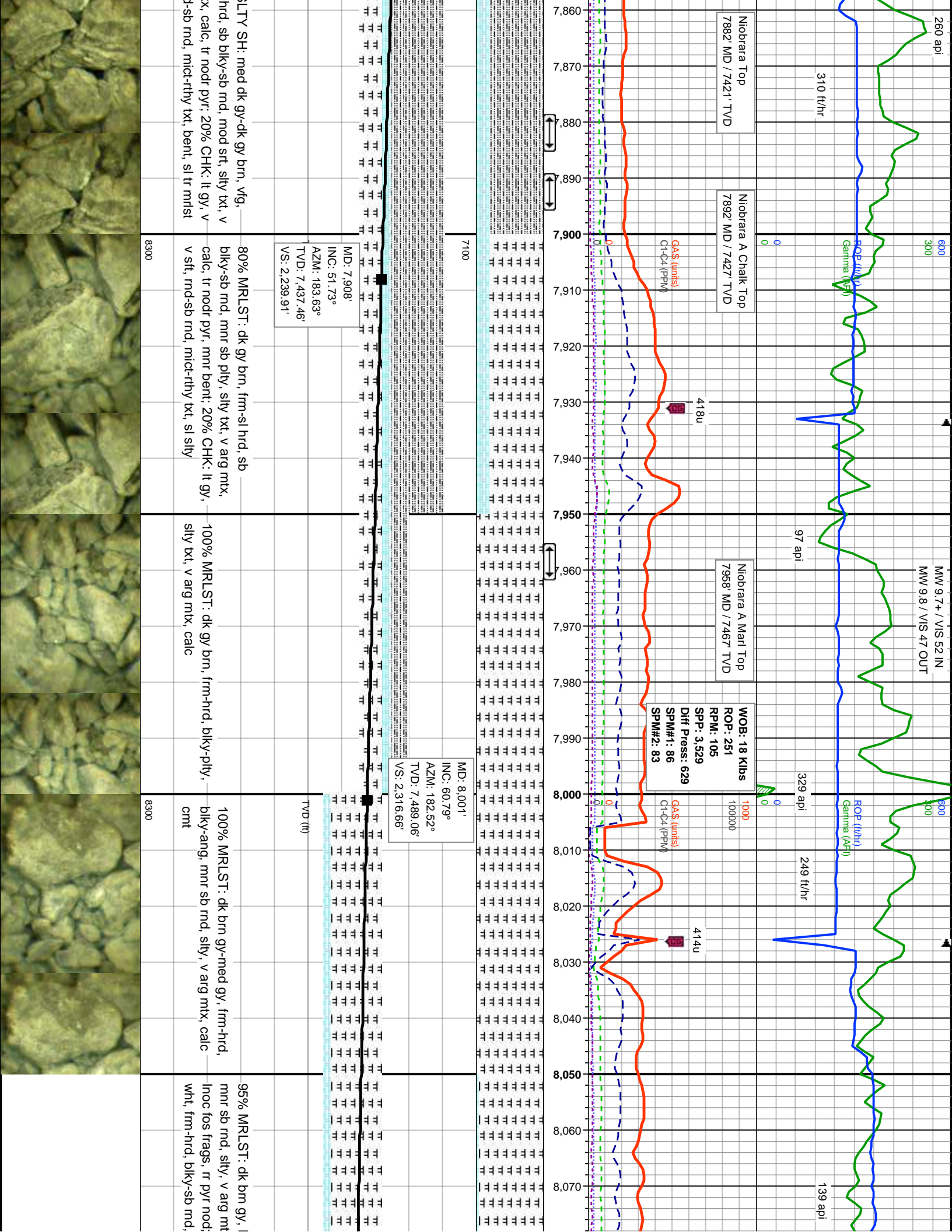
100% SLTY SH: med lt gy-dk gy, vfg,  
sft-fm, sb blk-y-sb ang, mod srt, silty  
arg mtx, sl calc

8300

8300

















MD: 8,560'  
INC: 89.08°  
AZM: 175.36°  
TVD: 7,590.77'  
VS: 2,862.52'

MD: 8,650'  
INC: 89.08°  
AZM: 175.45°  
TVD: 7,592.22'  
VS: 2,939.78'

MD:  
INC:  
AZM:  
TVD:  
VS:

RLST: dk brn gy, hrd, sb blk-ang, mntr pty, mntr sb rnd, silty, v arg  
calc cnt; 20% CHK: lt gy-bri wht, frm-hrd, blk-ry-sb rnd, rthy-sl xl, stri,  
v calc

60% MRLST: dk brn gy, hrd, sb blk-ang, mntr pty, mntr sb rnd, silty, v arg  
mx, calc cnt; 40% CHK: lt gy-bri wht, frm-hrd, blk-ry-sb rnd, rthy-sl xl, stri,  
inbdc, v calc

100% MRLST: dk gybrn-t  
sb rnd, silty, v arg mx, cal

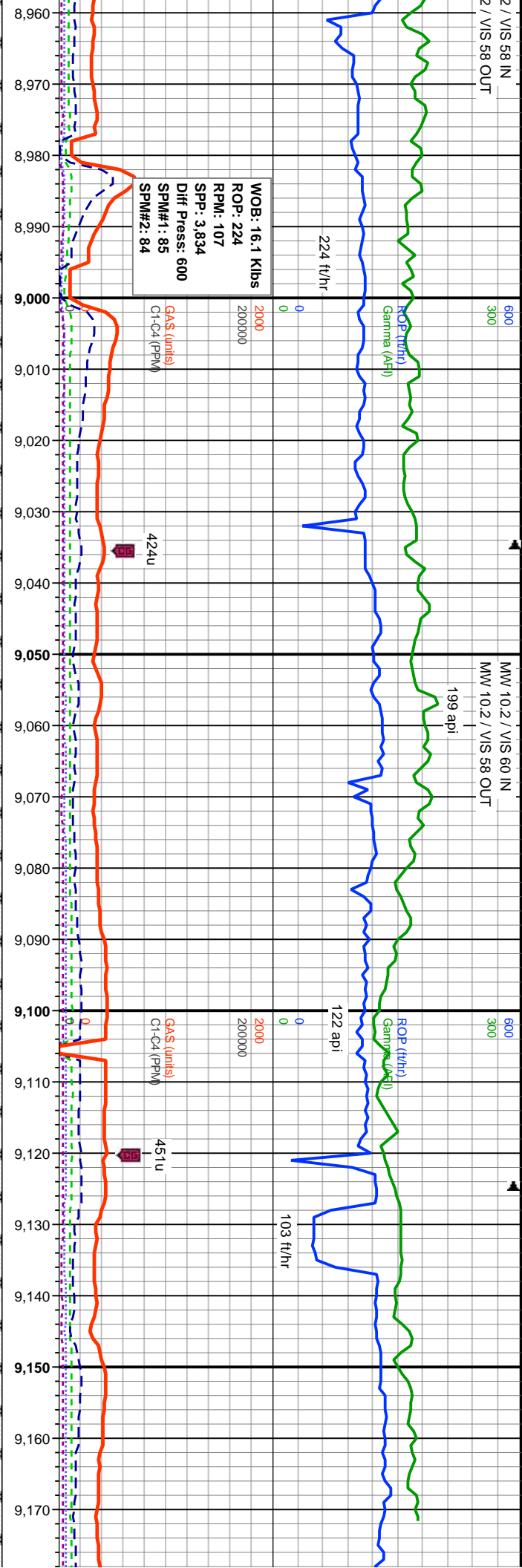






2 / VIS 58 IN  
2 / VIS 58 OUT

MW 10.2 / VIS 60 IN  
MW 10.2 / VIS 58 OUT

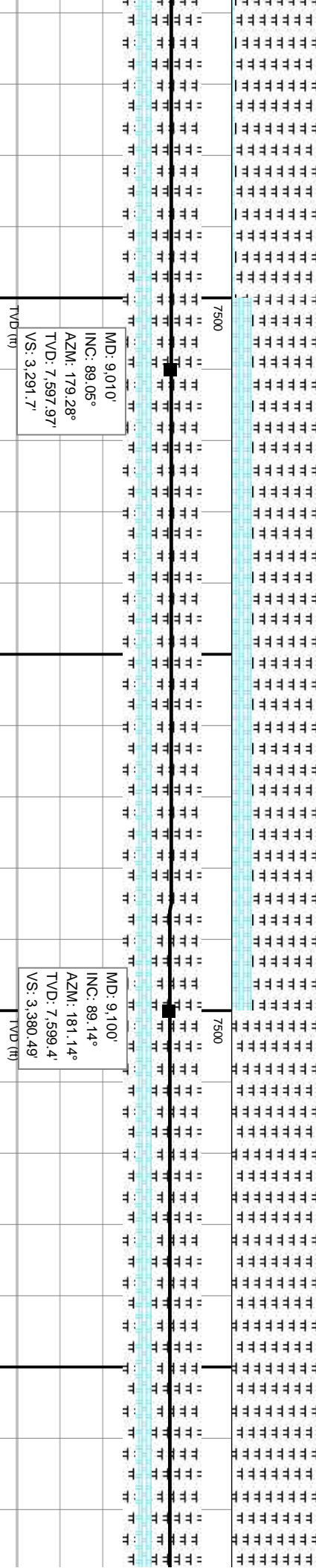


WOB: 16.1 Klbs  
ROP: 224  
RPM: 107  
SPP: 3.834  
Diff Press: 600  
SPM#1: 85  
SPM#2: 84

GAs (units)  
C1-C4 (PPM)

424u

451u



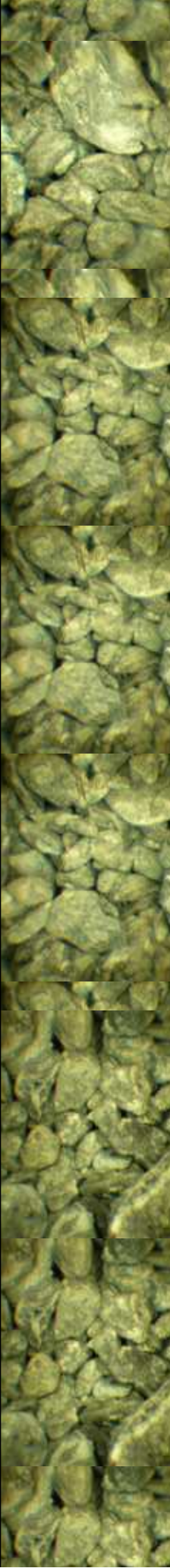
MD: 9,010'  
INC: 89.05°  
AZM: 179.28°  
TVD: 7,597.97'  
VS: 3,291.7'

MD: 9,100'  
INC: 89.14°  
AZM: 181.14°  
TVD: 7,599.4'  
VS: 3,380.49'

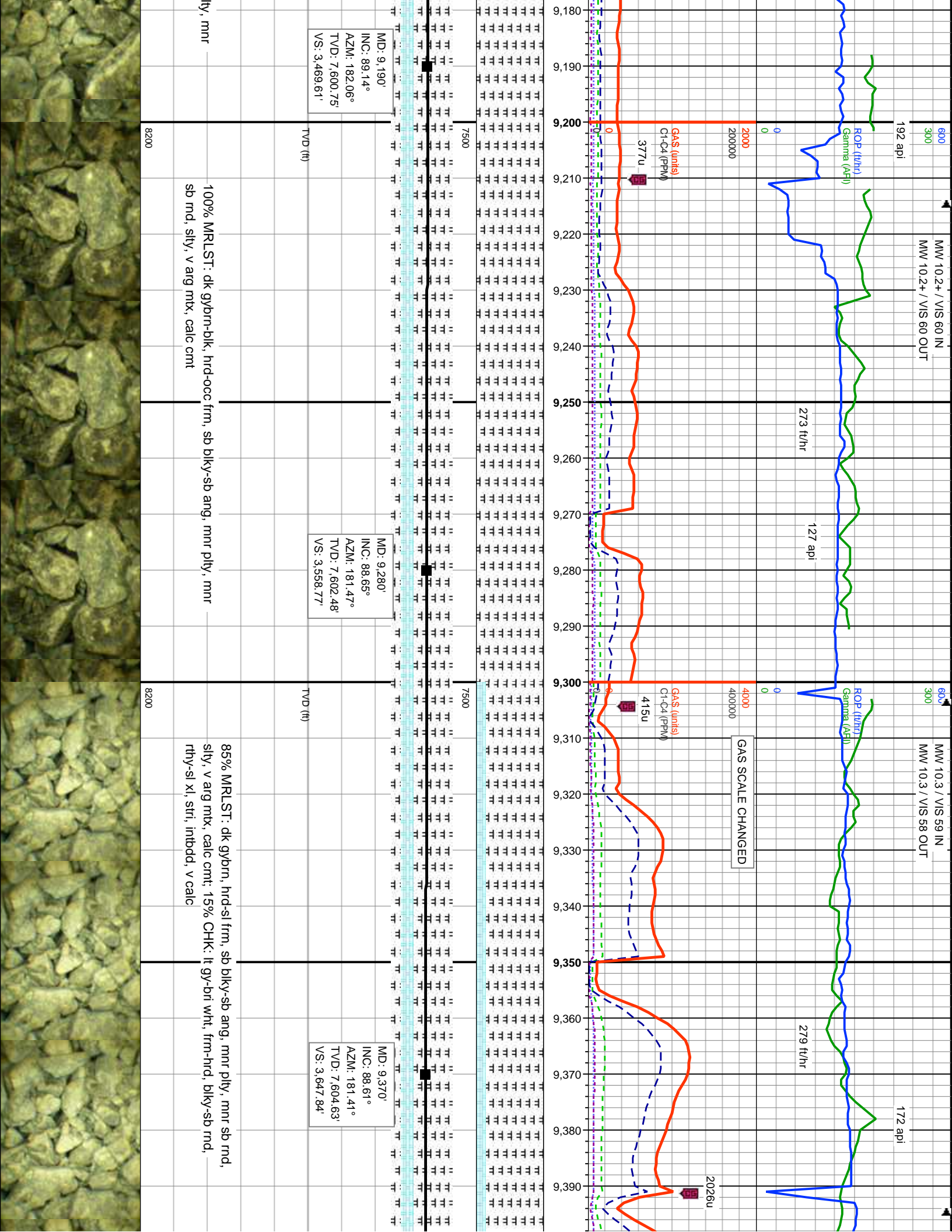
ang, mnr pty, mnr sb md,  
at, frm-hrd, blk-sb md, rthy-sl

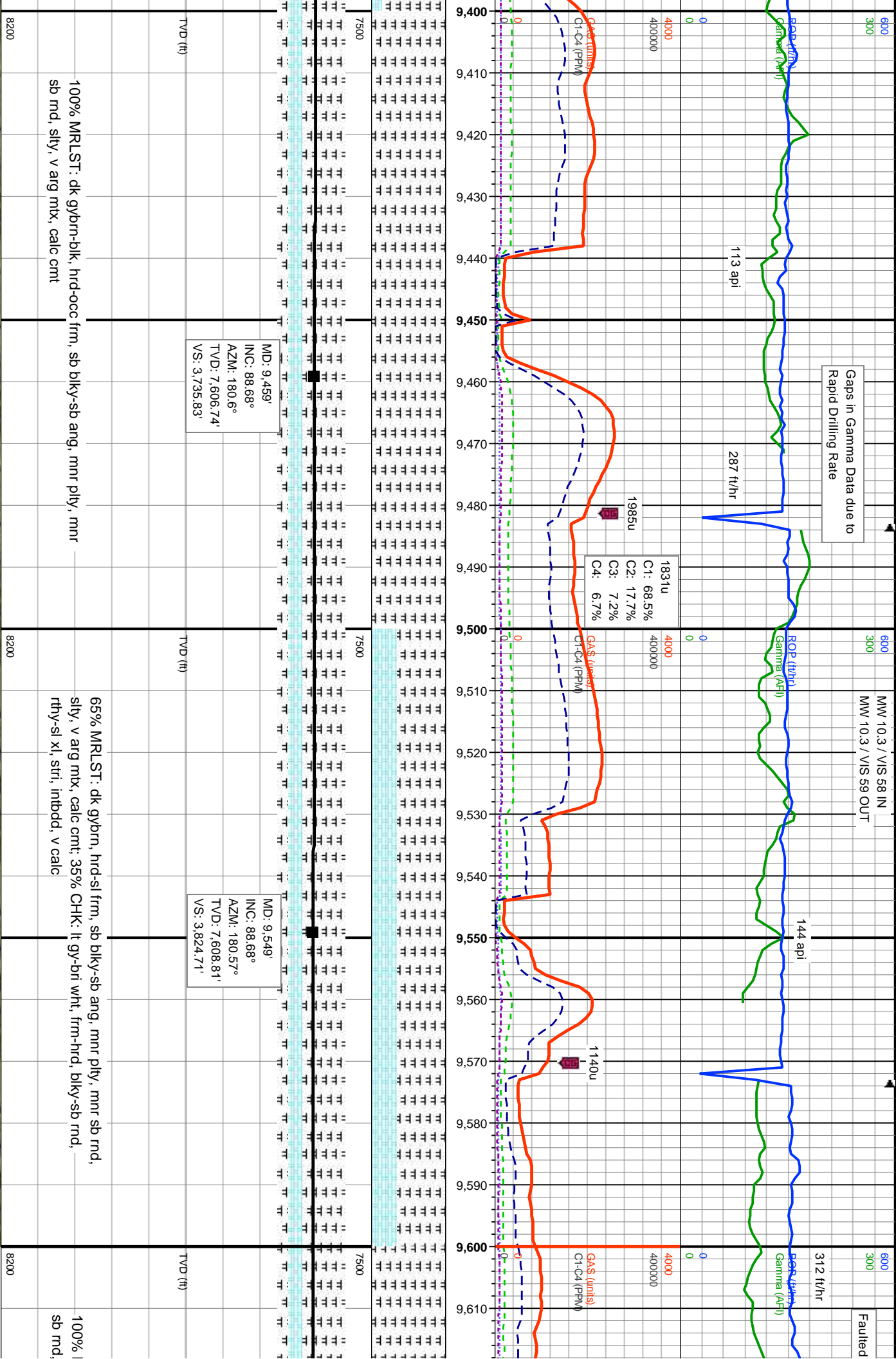
75% MRLST: dk gybrn, hrd-sl frm, sb blk-sb ang, mnr pty, mnr sb md,  
sily, v arg mt, calc cmt, 25% CHK: lt gy-brn wht, frm-hrd, blk-sb md,  
rthy-sl xl, str, intbdd, v calc

100% MRLST: dk gybrn-blk, hrd-occ frm, sb blk-sb ang, mnr p  
sb md, sily, v arg mt, calc cmt

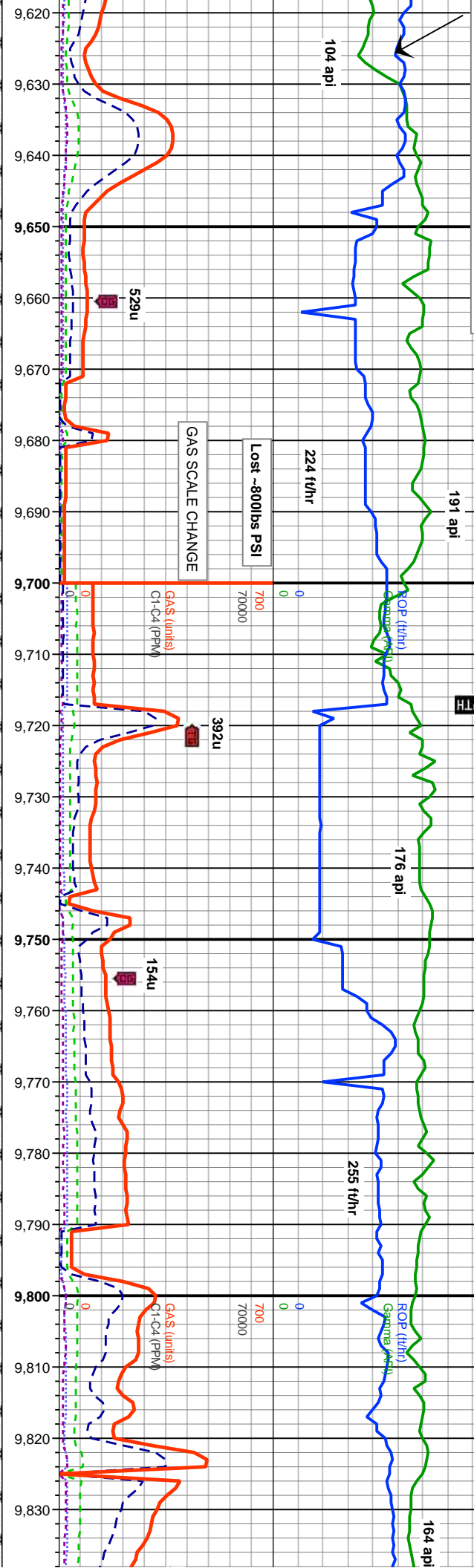












MD: 9,638'  
INC: 88.68°  
AZM: 179.99°  
TVD: 7,610.86'  
VS: 3,912.52'

MD: 9,728'  
INC: 89.08°  
AZM: 179.28°  
TVD: 7,612.62'  
VS: 4,001.16'

MD: 9,818'  
INC: 89.69°  
AZM: 178.4°  
TVD: 7,613.59'  
VS: 4,089.58'

**TOOH - 9717' MD for TOOLS**  
**6/19/2017 @ 11:09 MDT**  
**Resumed Drilling on 6/20/2017 @ 2:18 AM MDT**

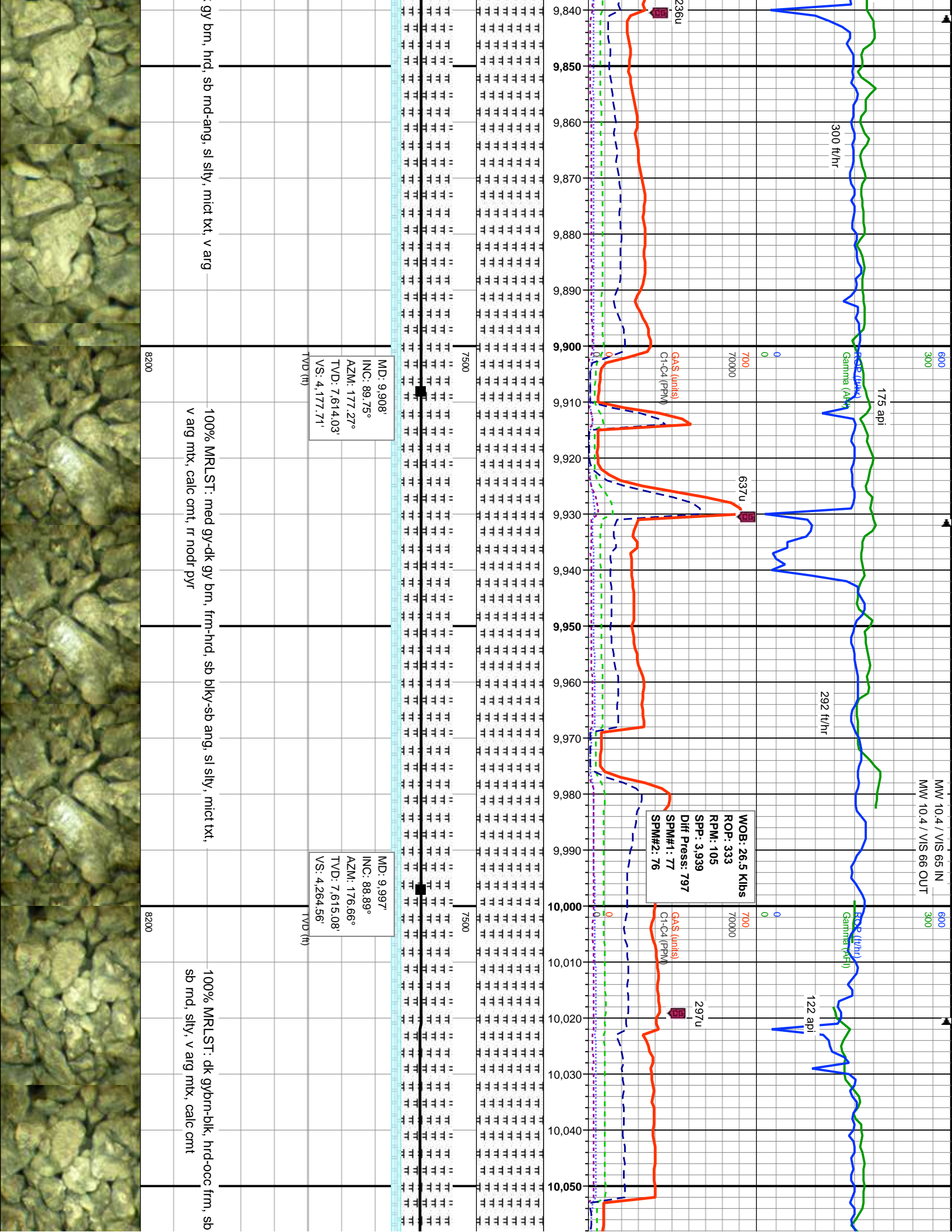
MRLST: dk gybrn-blk, hrd-occ frm, sb blk-y-sb ang, mnr pfty, mnr slty, v arg mtx, calc cnt

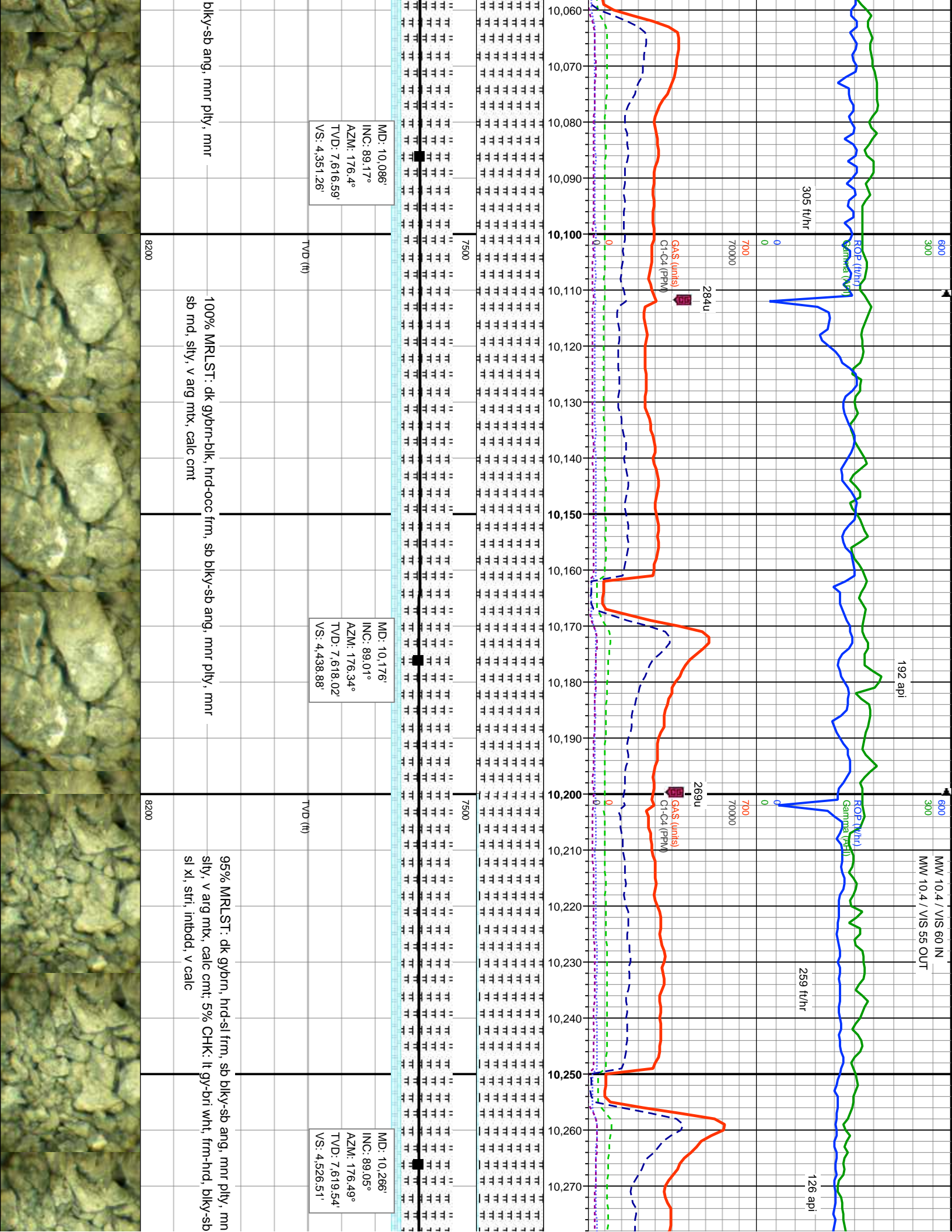
100% MRLST: dk gy brn-med gy, frm-hrd, sb md-ang, slty, mict txt, v arg mtx, calc cnt, rr nodr pyr wi cal xls

100% MRLST: med gy-dk mtx, calc cnt, rr nodr pyr

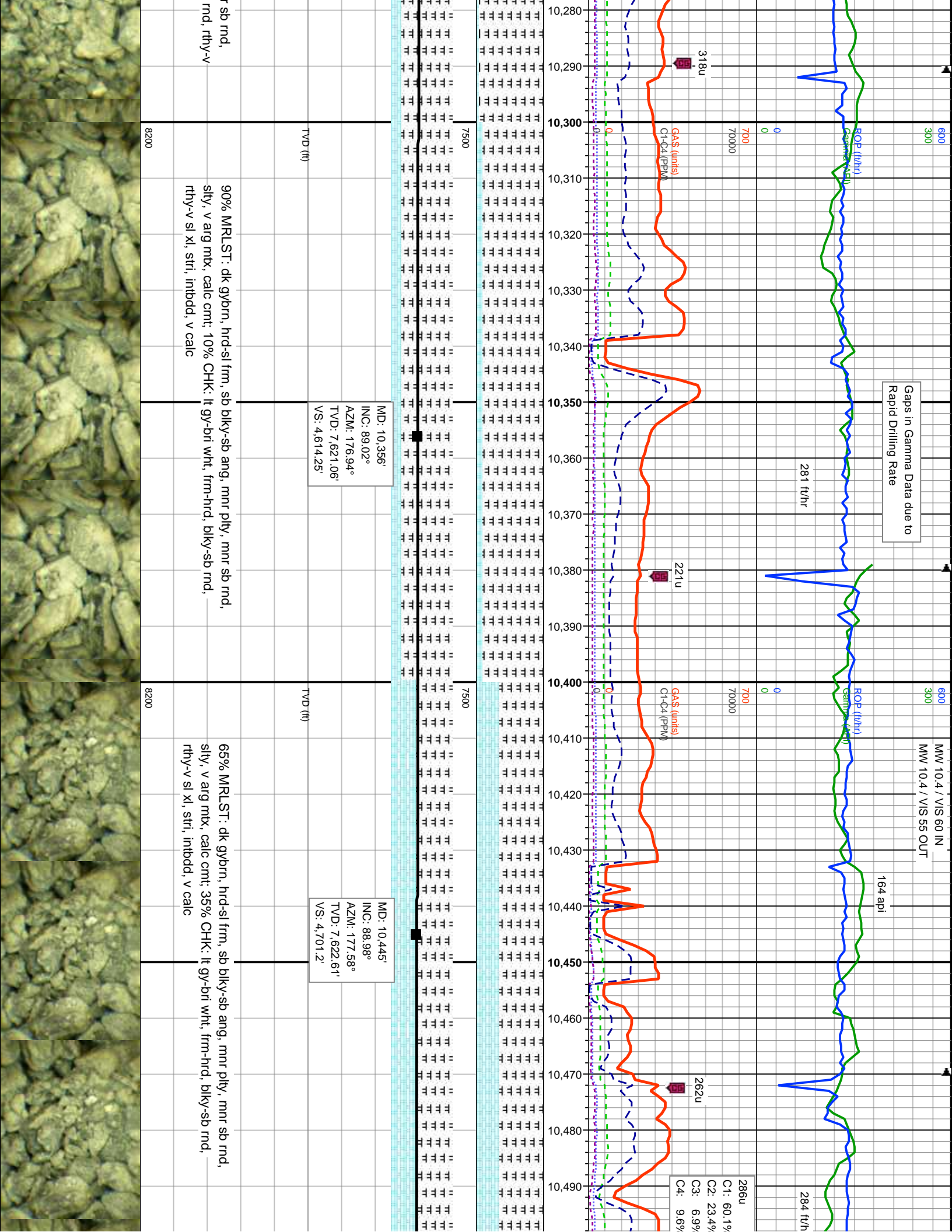














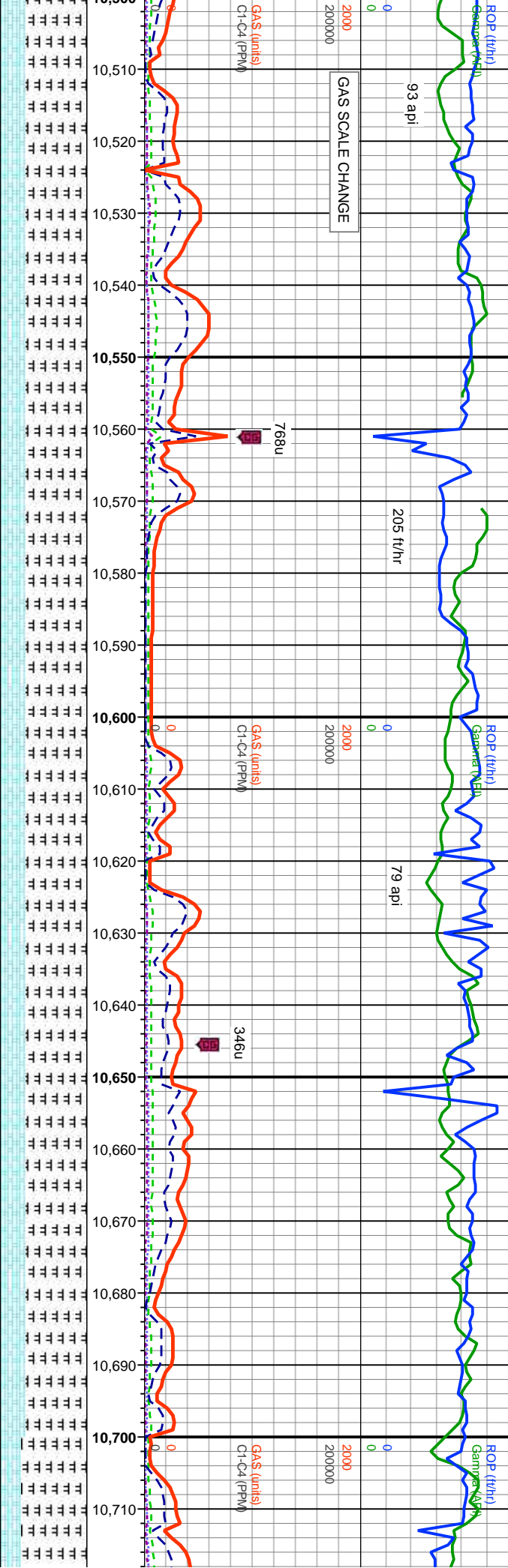
600

MW 10.4 / VIS 62 IN

300

MW 10.4 / VIS 57 OUT

Niobrara B Chalk - In Zone - ~10500' MD



MD: 10,535'  
INC: 88.92°  
AZM: 177.57°  
TVD: 7,624.26'  
VS: 4,789.22'

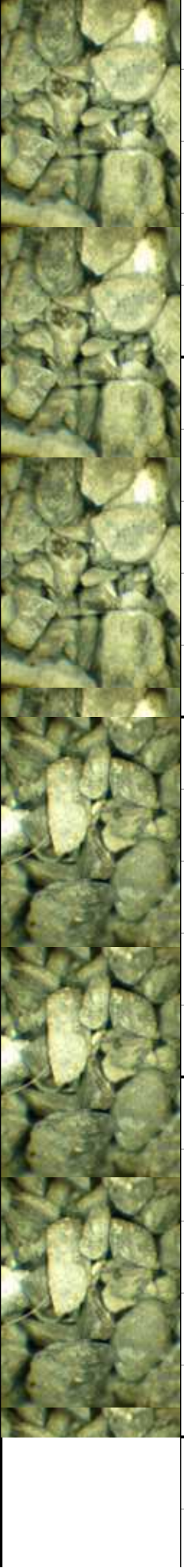
MD: 10,625'  
INC: 88.8°  
AZM: 177.81°  
TVD: 7,626.05'  
VS: 4,877.28'

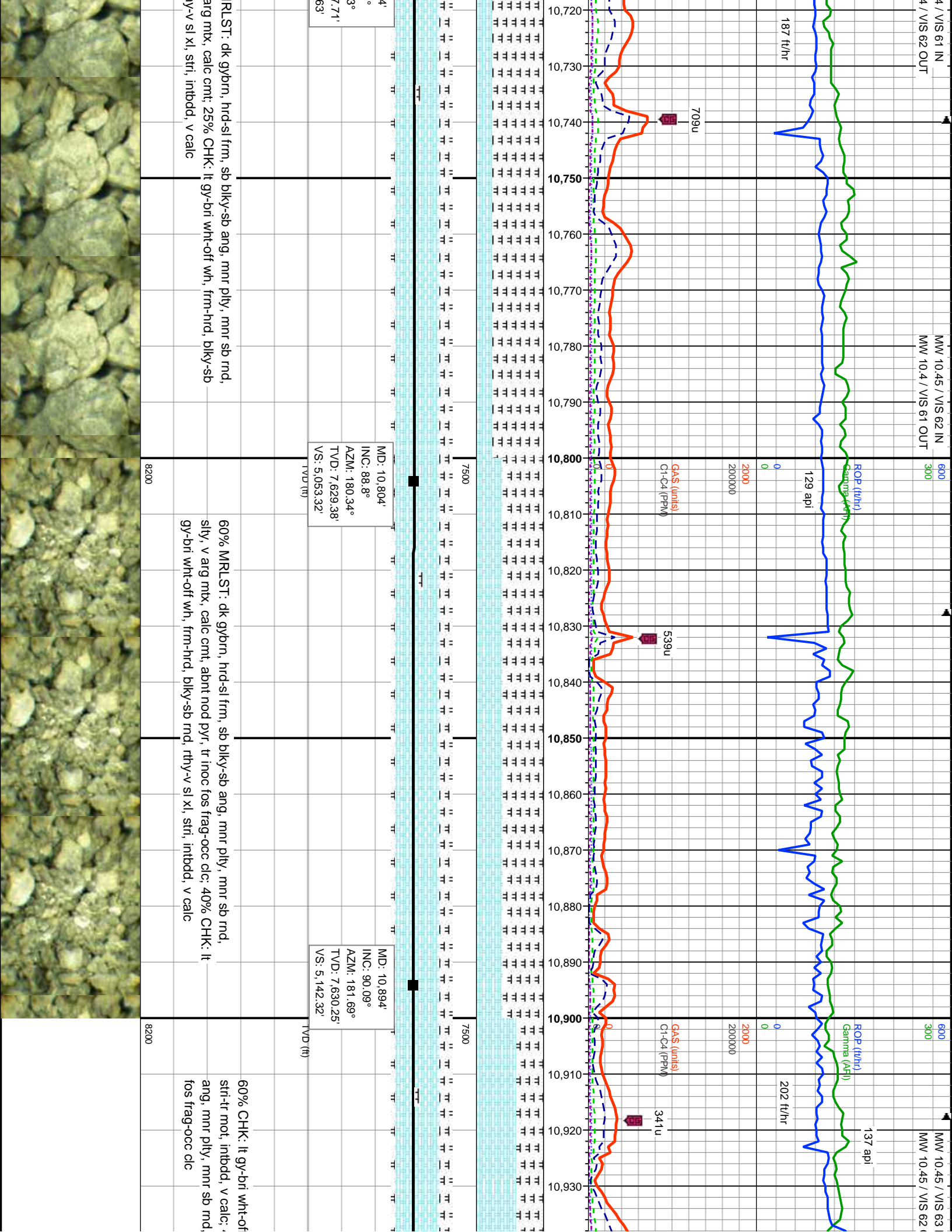
MD: 10,71'  
INC: 89.07°  
AZM: 179°  
TVD: 7,62'  
VS: 4,964'

70% MRLST: dk gybrn, hrd-sl frm, sb blk-y-sb ang, mntr ply, mntr sb rnd, slty, v aig mtx, calc cmt, 30% CHK: lt gy-brn wht, frm-hrd, blk-y-sb rnd, rthy-v sl xl, stri, inbddd, v calc

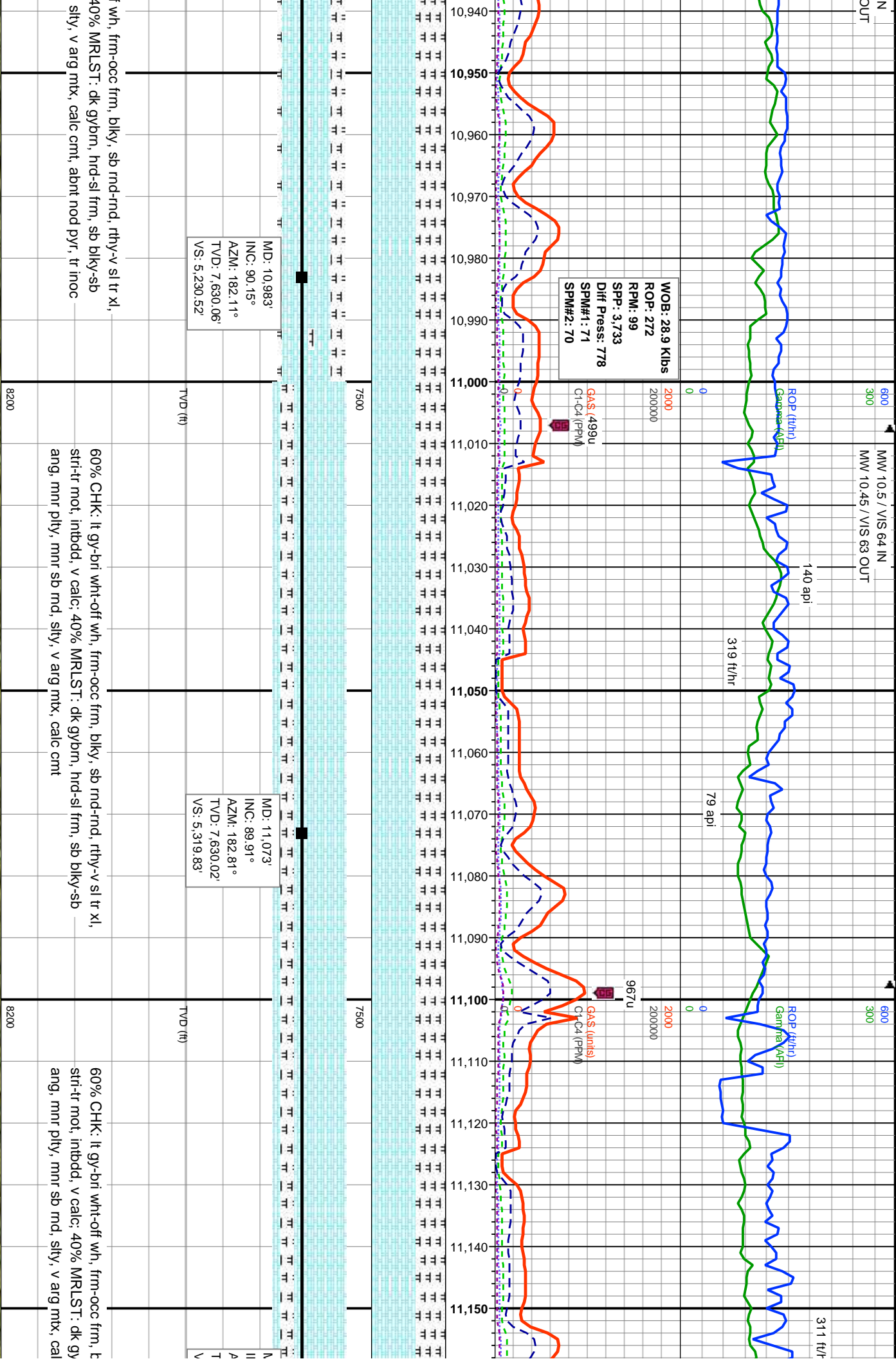
70% MRLST: dk gybrn, hrd-sl frm, sb blk-y-sb ang, mntr ply, mntr sb rnd, slty, v aig mtx, calc cmt, 30% CHK: lt gy-brn wht-off wh, frm-hrd, blk-y-sb rnd, rthy-v sl xl, stri, inbddd, v calc

75% MRLST: dk gybrn, hrd-sl frm, sb blk-y-sb ang, mntr ply, mntr sb rnd, slty, v aig mtx, calc cmt, 30% CHK: lt gy-brn wht-off wh, frm-hrd, blk-y-sb rnd, rthy-v sl xl, stri, inbddd, v calc

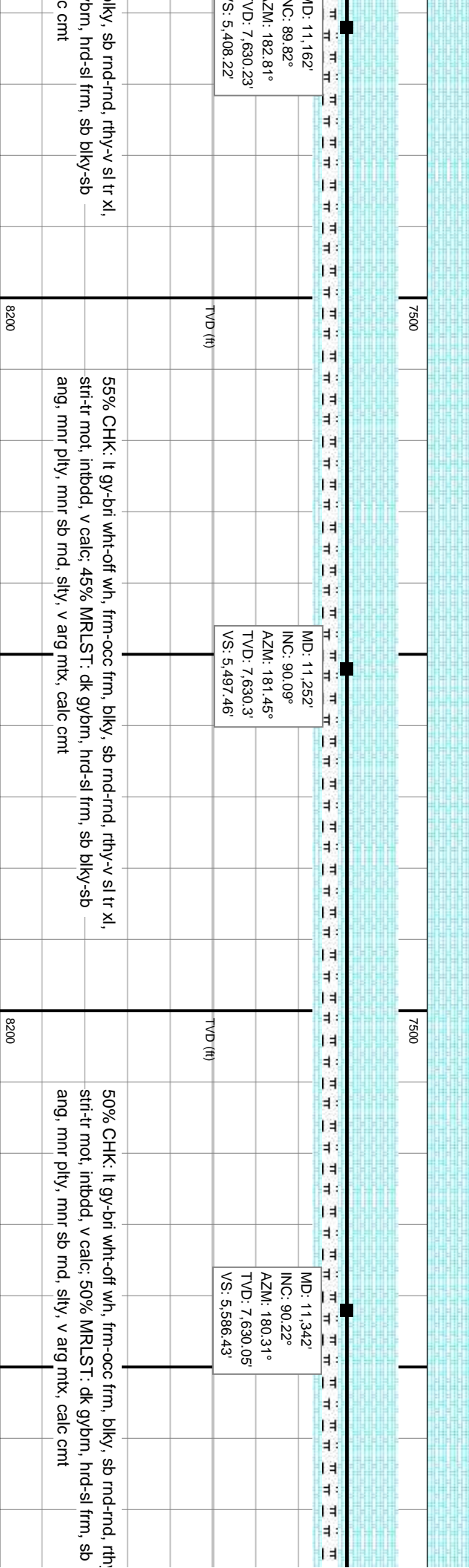
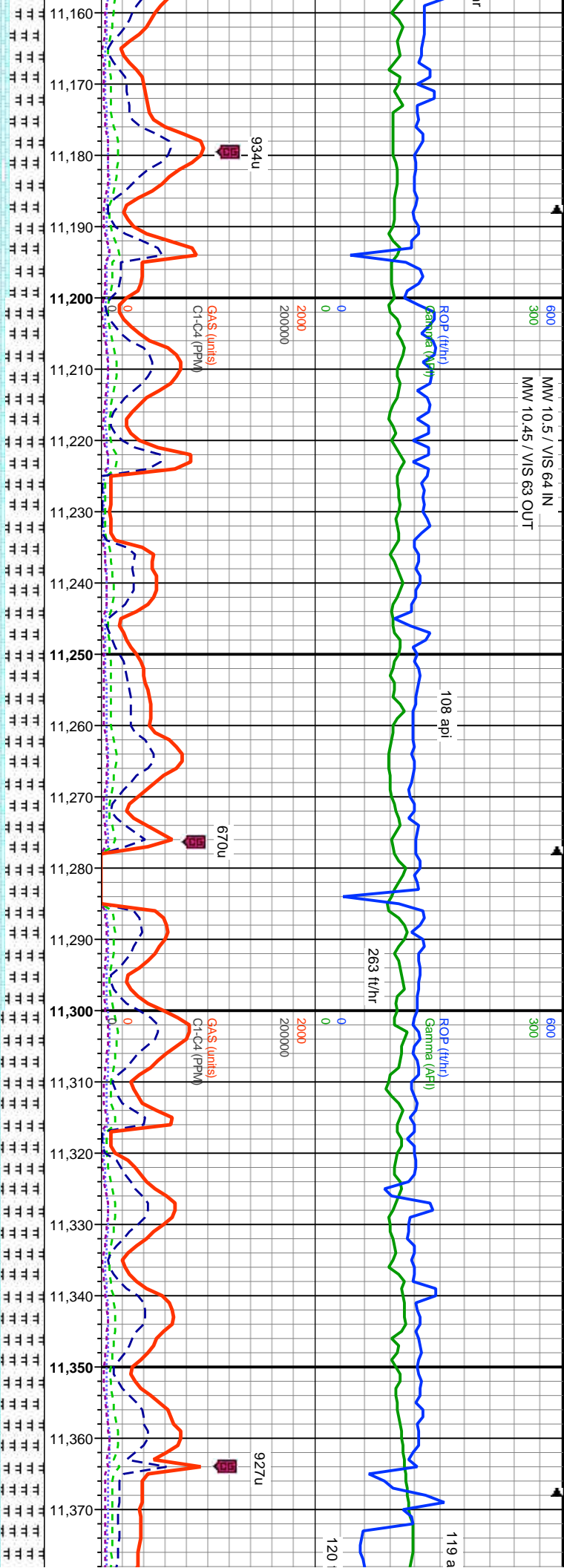


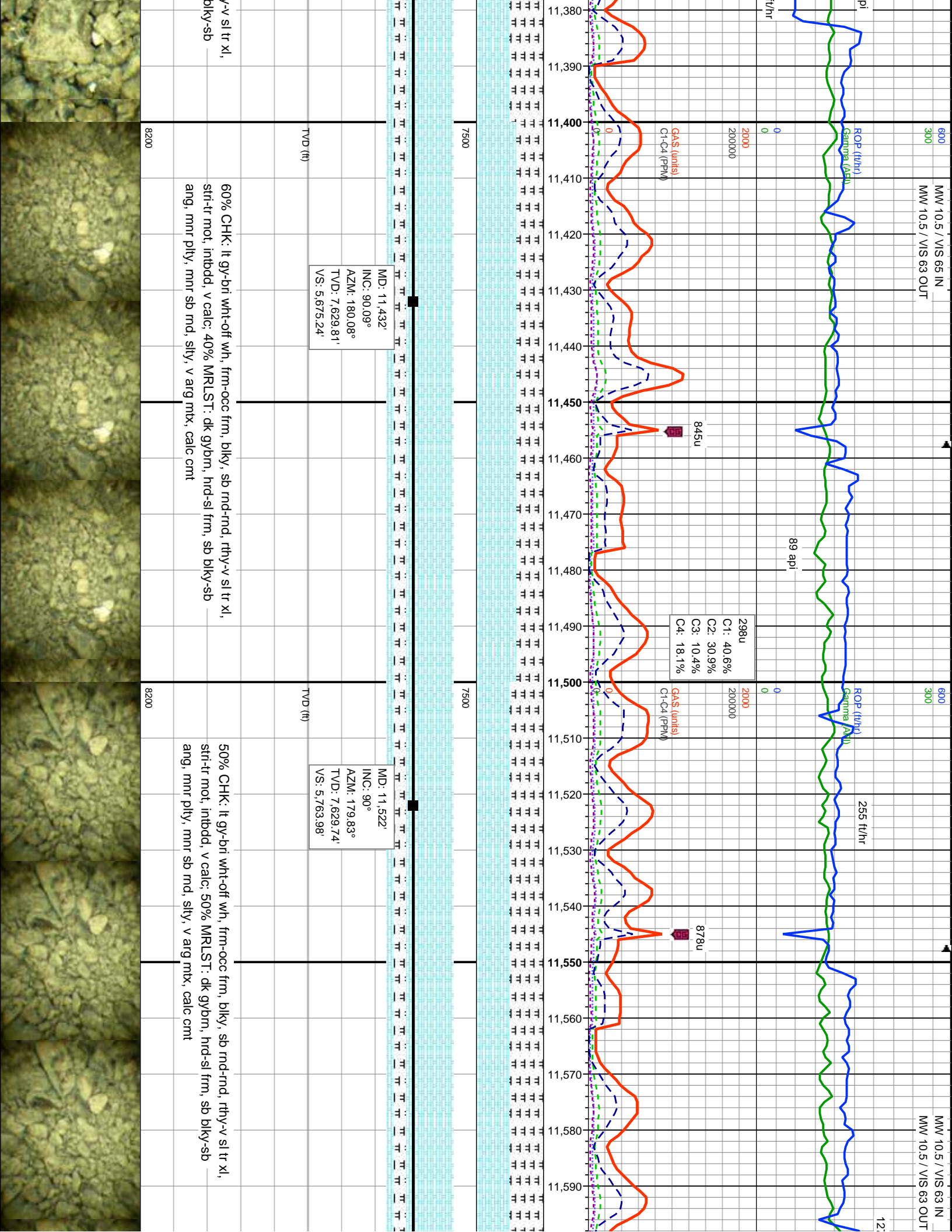




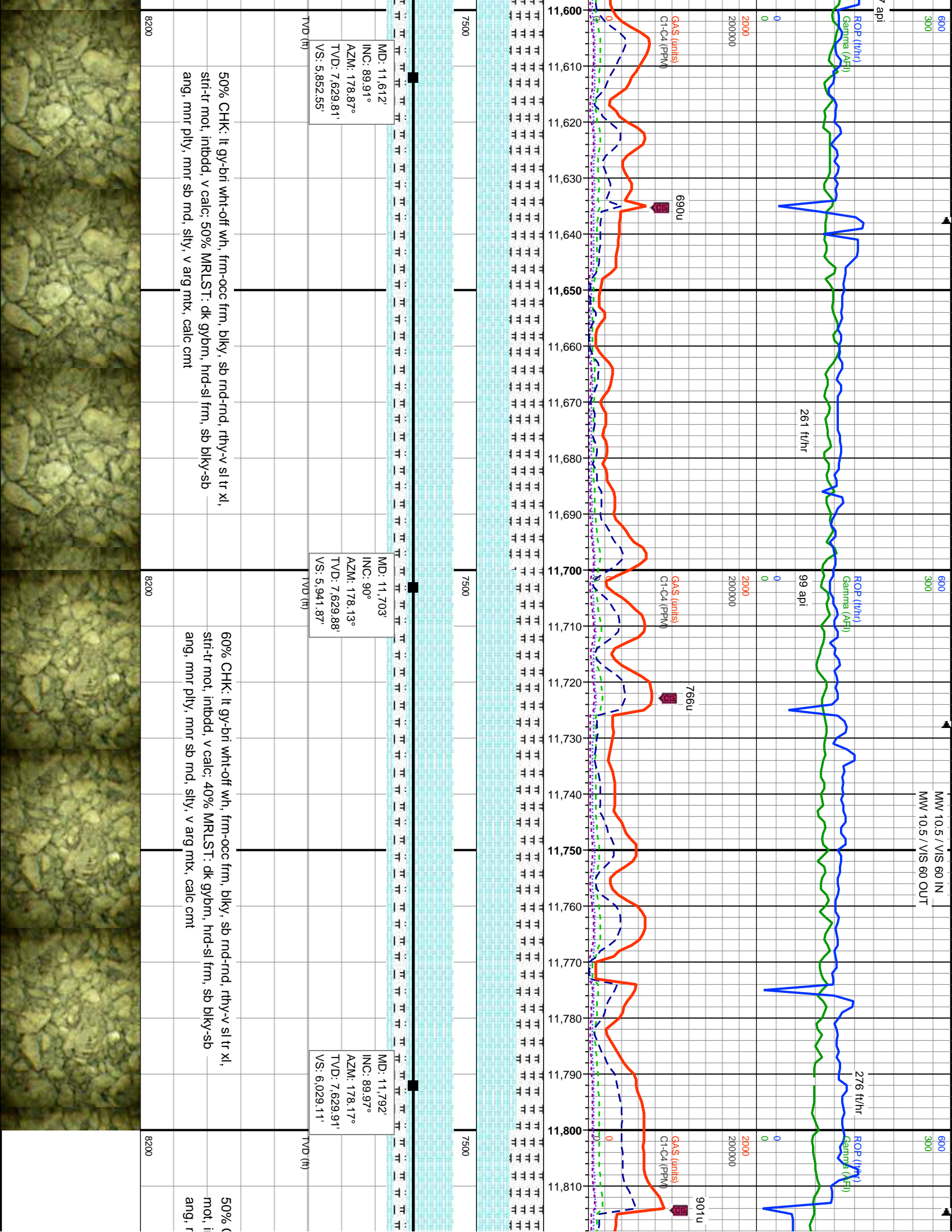






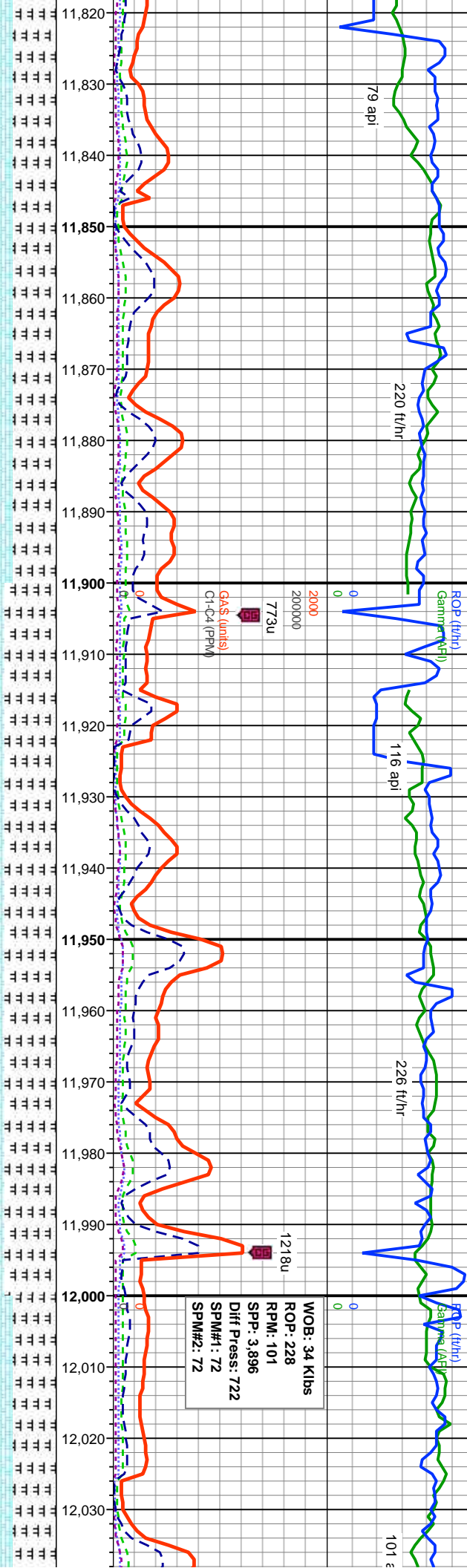






MW 10.5 / VIS 60 IN  
MW 10.5 / VIS 60 OUT

Gaps in Gamma Data due to  
Rapid Drilling Rate



MD: 11,882'  
INC: 89.69°  
AZM: 177.93°  
TVD: 7,630.17'  
VS: 6.117.3'

TVD (ft)

MD: 11,972'  
INC: 89.57°  
AZM: 177.9°  
TVD: 7,630.75'  
VS: 6.205.45'

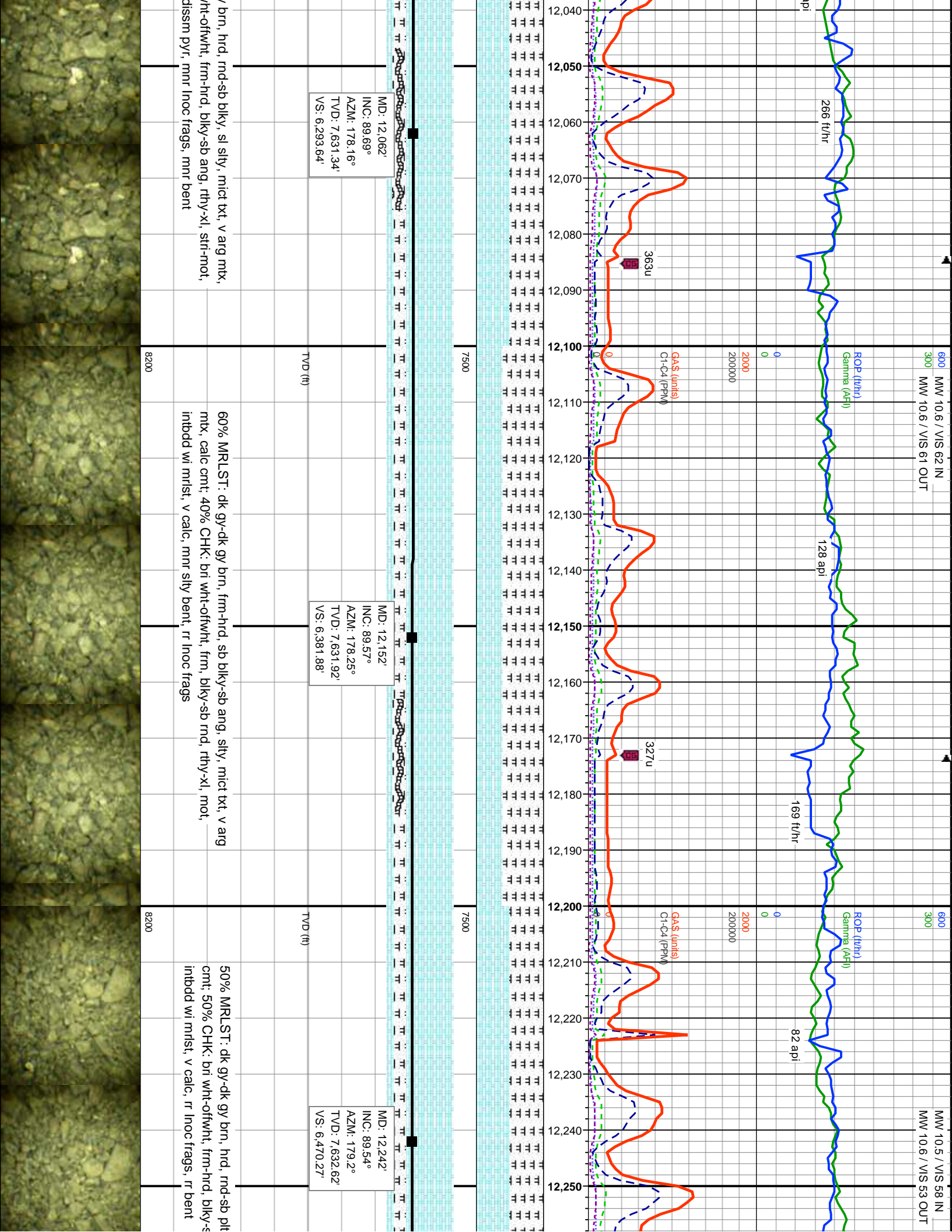
TVD (ft)

CHK: bri wht-off wh, frm-occ hrd, blkly, sb rnd-rnd, rthy-tr xl, str-tr  
intbodd, v calc, 50% MRLST: dk gy- dk gybrn, hrd-sl frm, sb blkly-sb  
mntr sb md, silty, v arg mtx, calc cnt

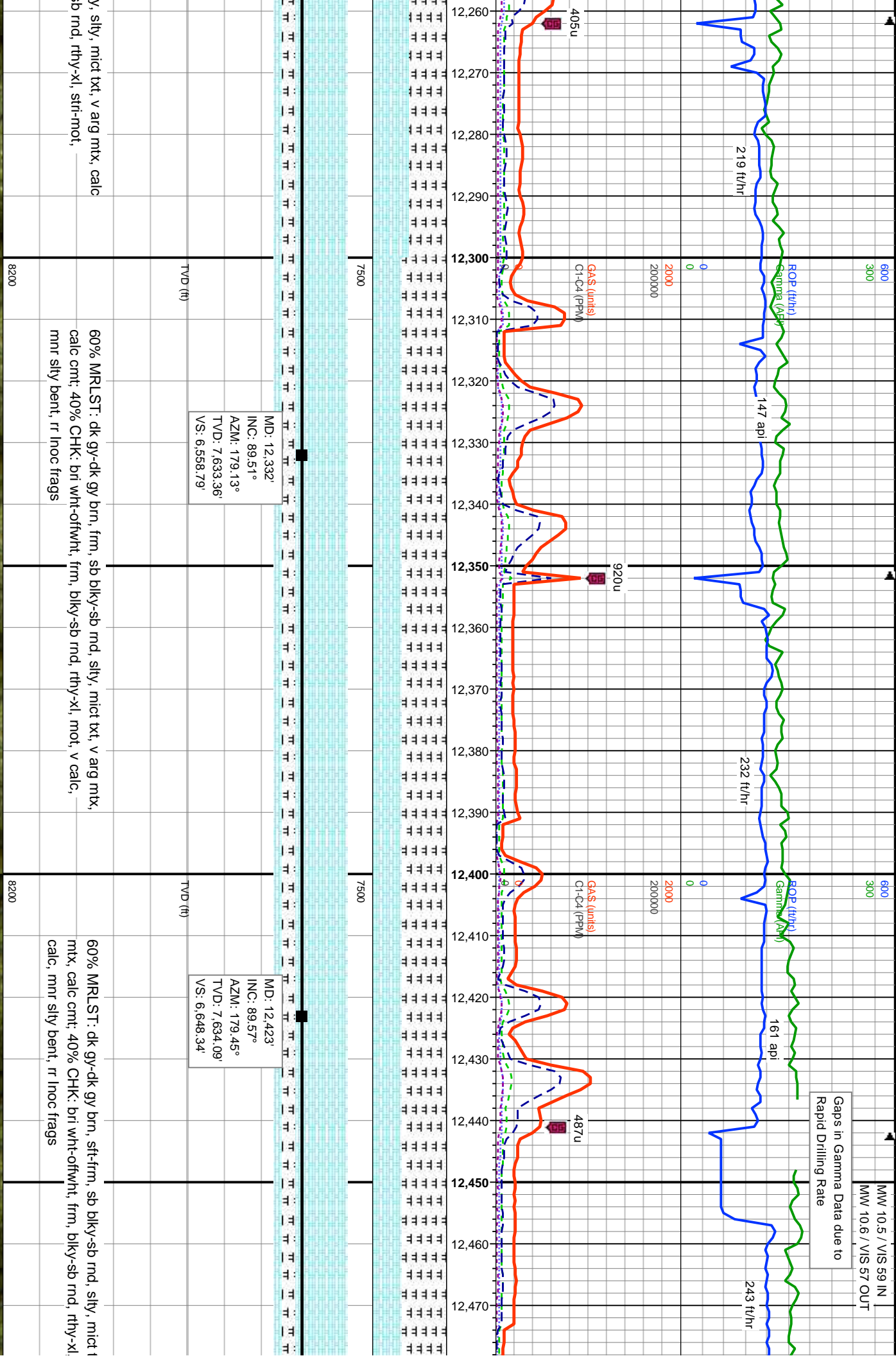
60% MRLST: dk gy-dk gy brn, frm-hrd, sb rnd-sb ang, silty, mict txt, v arg  
mtx, calc cnt; 40% CHK: bri wht-off wh, frm, blkly-sb rnd, rthy-xl, str-tr  
mot, intbodd wi mrlst & inoc frags, v calc, tr dissim pyr

50% MRLST: dk gy-dk gy  
calc cnt; 50% CHK: bri w  
intbodd wi mrlst, v calc, tr



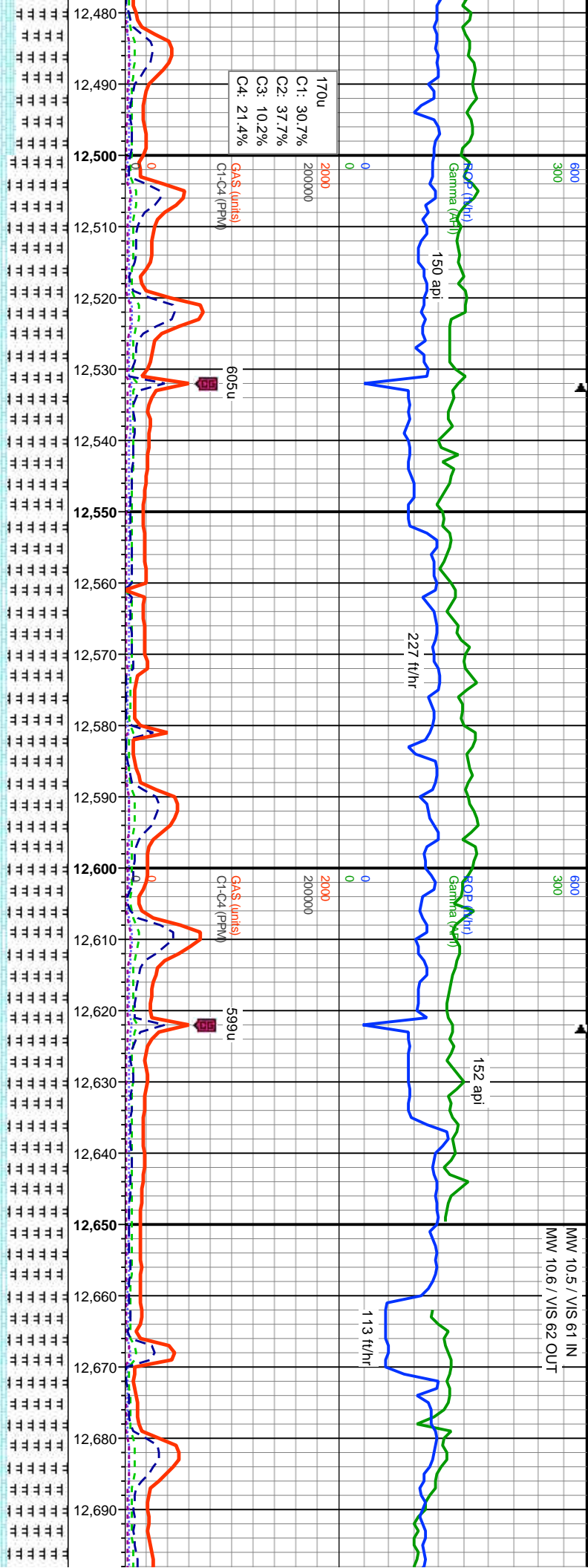


Gaps in Gamma Data due to  
Rapid Drilling Rate





MW 10.5 / VIS 61 IN  
MW 10.6 / VIS 62 OUT



MD: 12,512'  
INC: 91.29°  
AZM: 178.07°  
TVD: 7,633.42'  
VS: 6,735.75'  
TVD (ft)

MD: 12,602'  
INC: 91.23°  
AZM: 177.22°  
TVD: 7,631.44'  
VS: 6,823.8'  
TVD (ft)

MD: 12,692'  
INC: 92.28°  
AZM: 177.05°  
TVD: 7,628.6'  
VS: 6,911.65'

70% MRLST: dk gy-dk gy brn, sft-sl frm, sb blk-yl rmd, slty, mict txt, v arg  
mtx, calc cmt; 30% CHK: bri wht-offwht, sl frm, blk-yl rmd, rthy-xl, mot, v  
calc, com slty bent, rr inoc frags, rr pyr nod

70% MRLST: dk gy-dk gy brn, sft-sl frm, sb rmd-rnd, slty, mict txt, v arg  
mtx, calc cmt; 30% CHK: bri wht-offwht, sft-sl frm, blk-yl rmd, rthy-xl,  
mot, v calc, mmr slty bent, rr inoc frags, rr pyr nod



