



Scale: 5" / 100'
Measured Depth Log

Well Name SHOOK 3-10-2NAH_LATERAL

Location SECTION 3, T1S, R67W

State COLORADO

County ADAMS

Country USA

Rig Number ENSIGN 145

API Number 0500109972

AFE # 1700014

Geographic Region DJ BASIN

Field WATTENBERG

Spud Date 4/18/2017

Drilling Completed 7/21/2017

Surface Coordinates Section 3, 2058' FSL x 2124' FEL
39.99222, -104.8737

Bottom Hole Coordinates Section 10, 386' FSL x 988' FEL
39.973391, -104.870686

Ground Elevation 5098'

K.B. Elevation 5111'

Logged Interval 7100' To 13661'

Total Depth 6561'

Formation PIERRE SHALE to NIOBRARA A CHALK

Type of Drilling Fluid OBM - OIL BASED MUD

Operator

Company PetroShare Corporation

Address 7200 S Alton Way
Englewood, CO 80112



Geologist

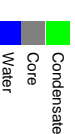
Name JOEY LUCE, SAGE BETTS

Company Terra Guidance

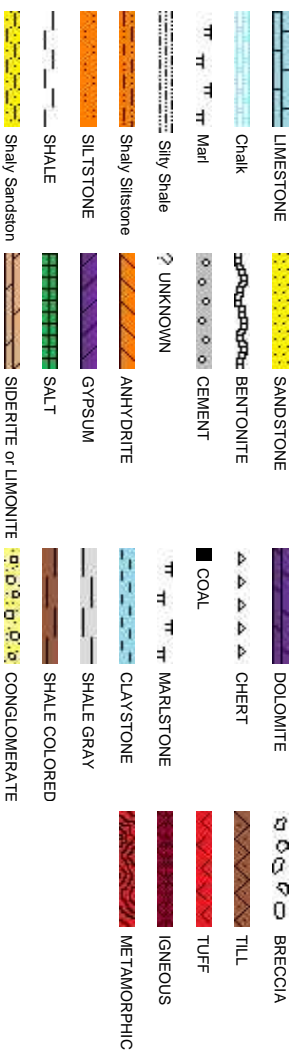
Address 1298 O Road
Loma CO 81524
(970) 260-5408



Zone Color Coding

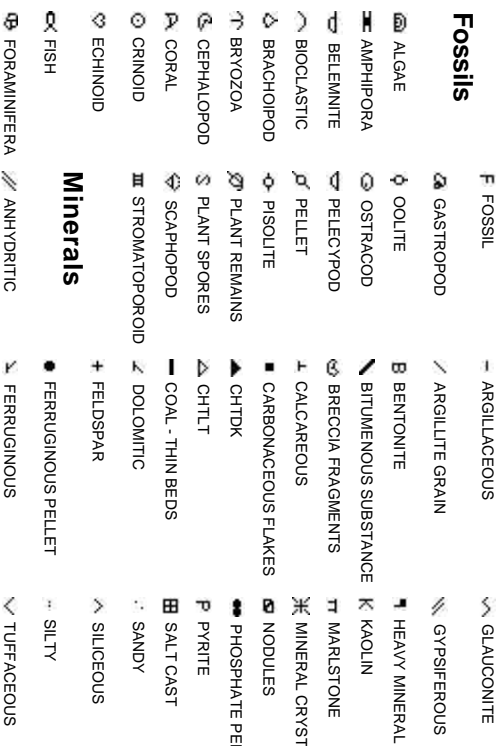


Rock Types

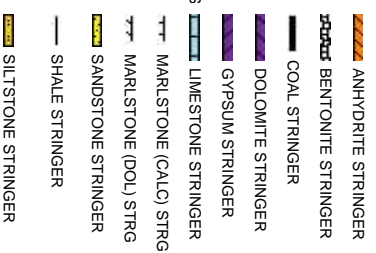


Accessories

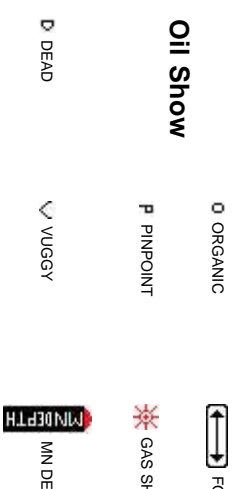
Fossils



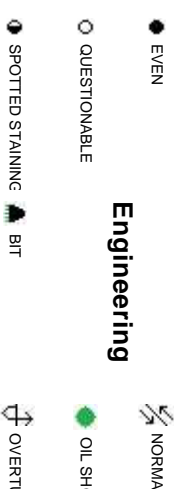
Stringer



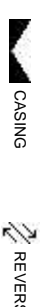
Other



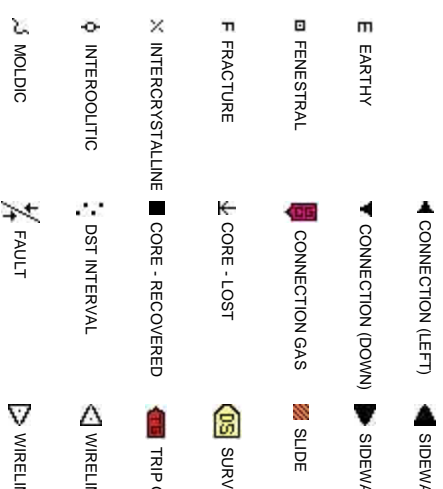
Oil Show



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

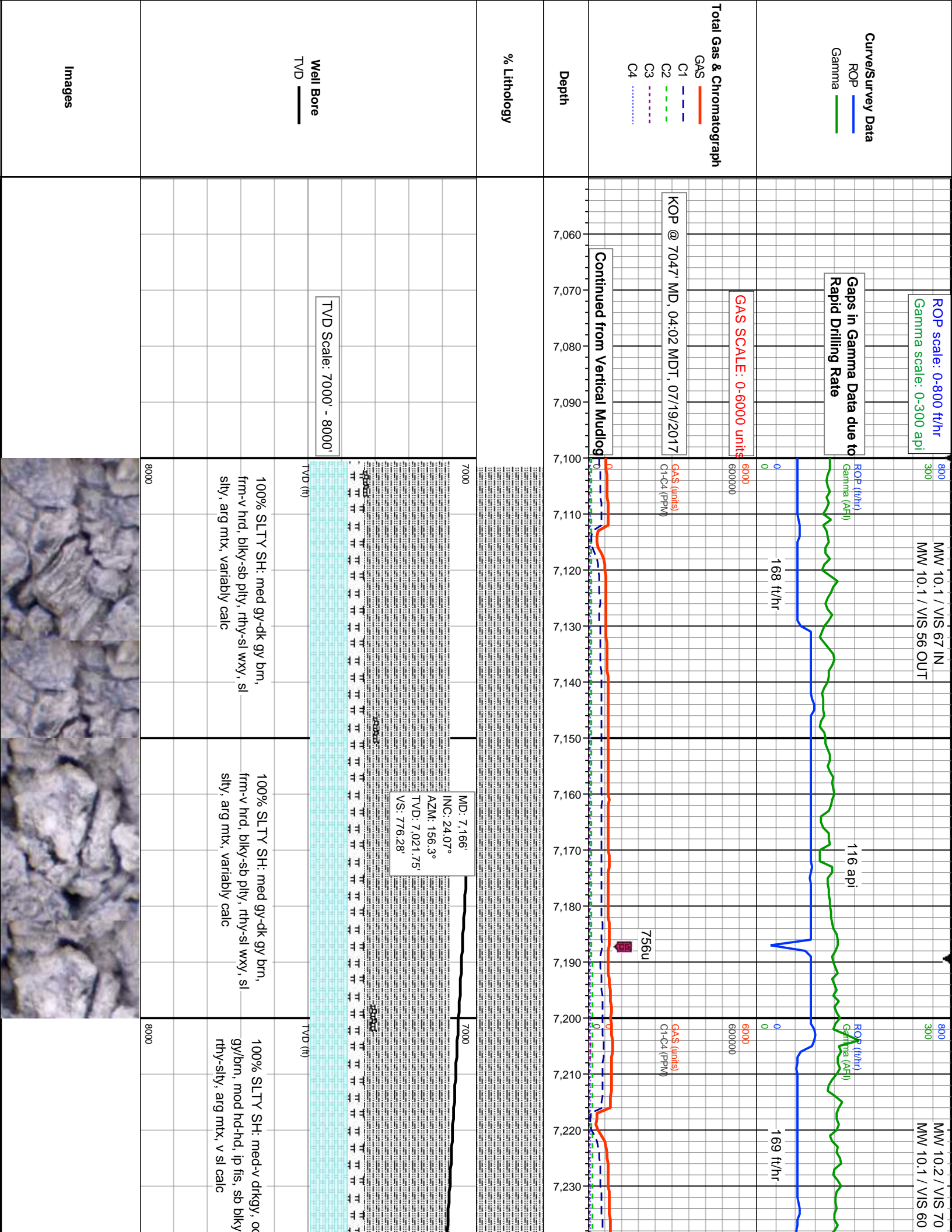
EY CX CRYPTOXLN

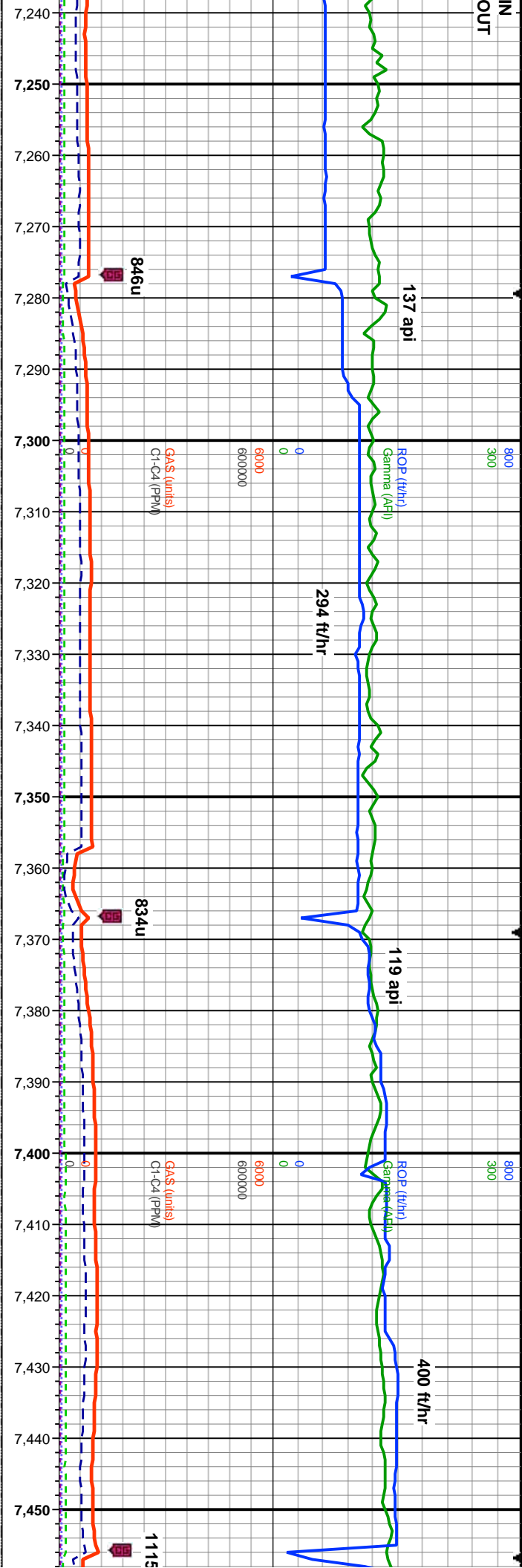
EGAS E EARTHY

NE TESTED - LEFT FX FINELYXLN

NE TESTED - RT GS GRAINSTONE

ConnectionGas(Vert)

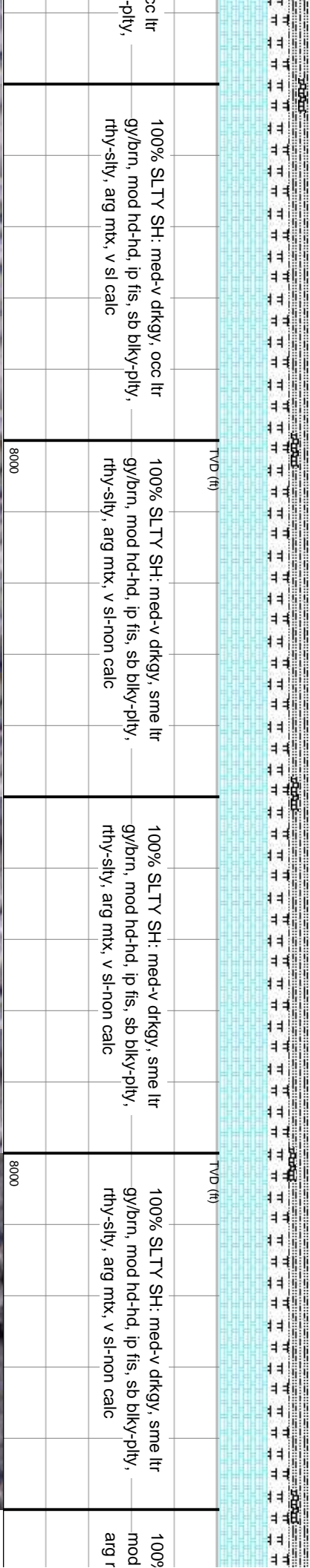


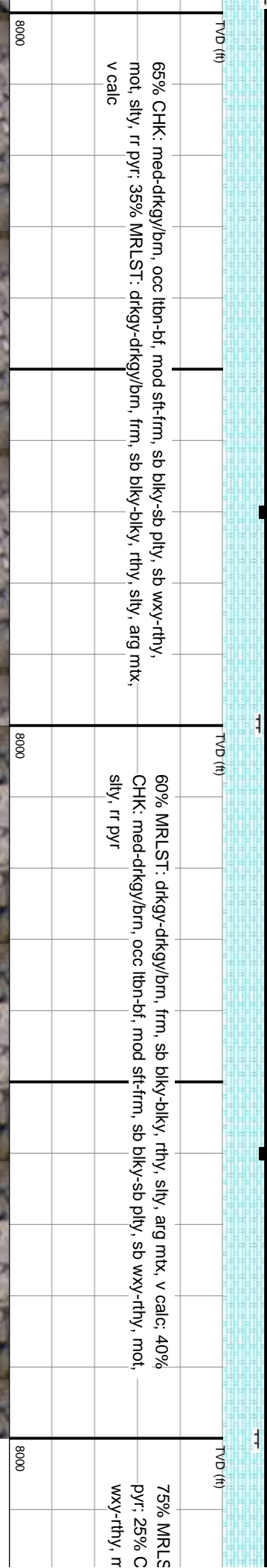
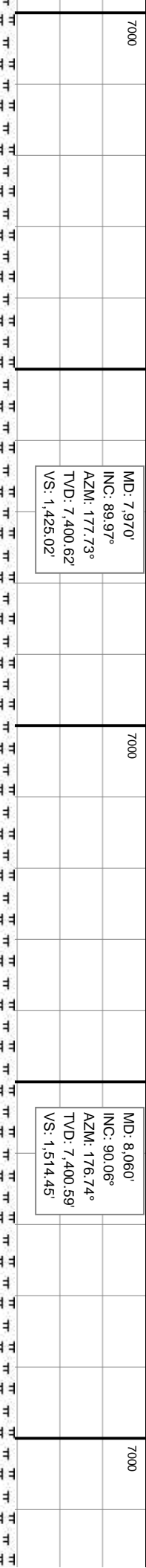
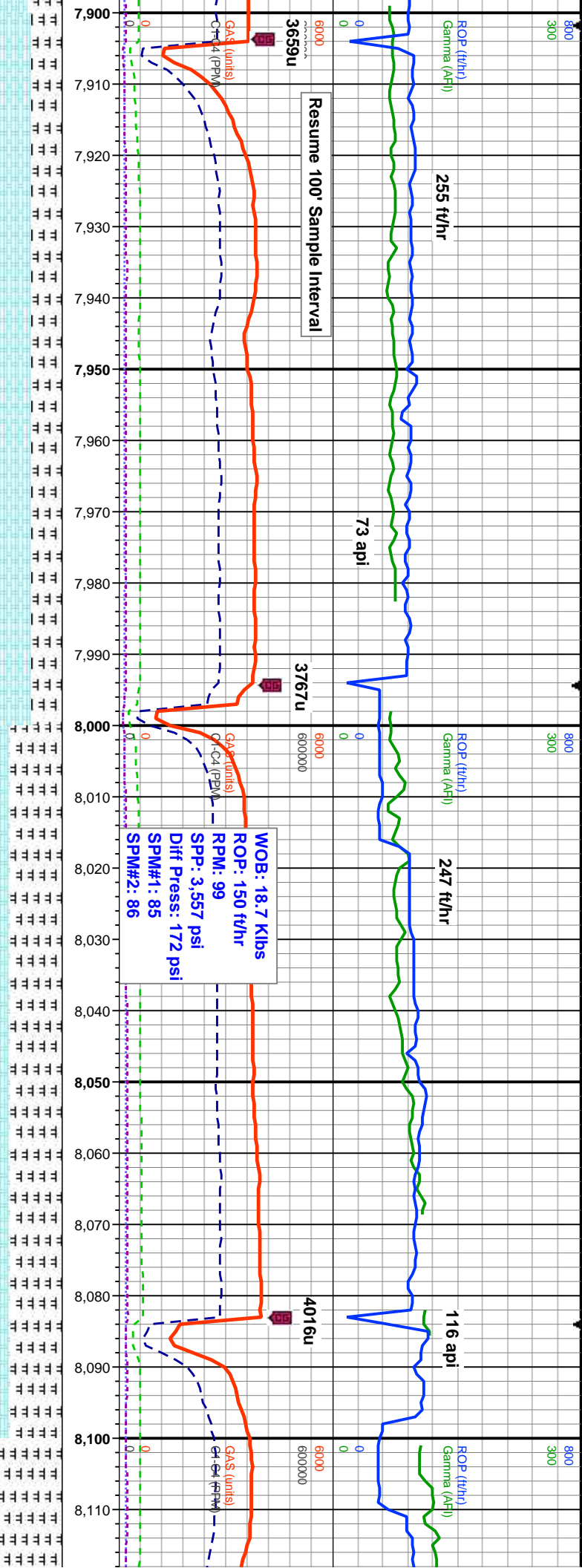


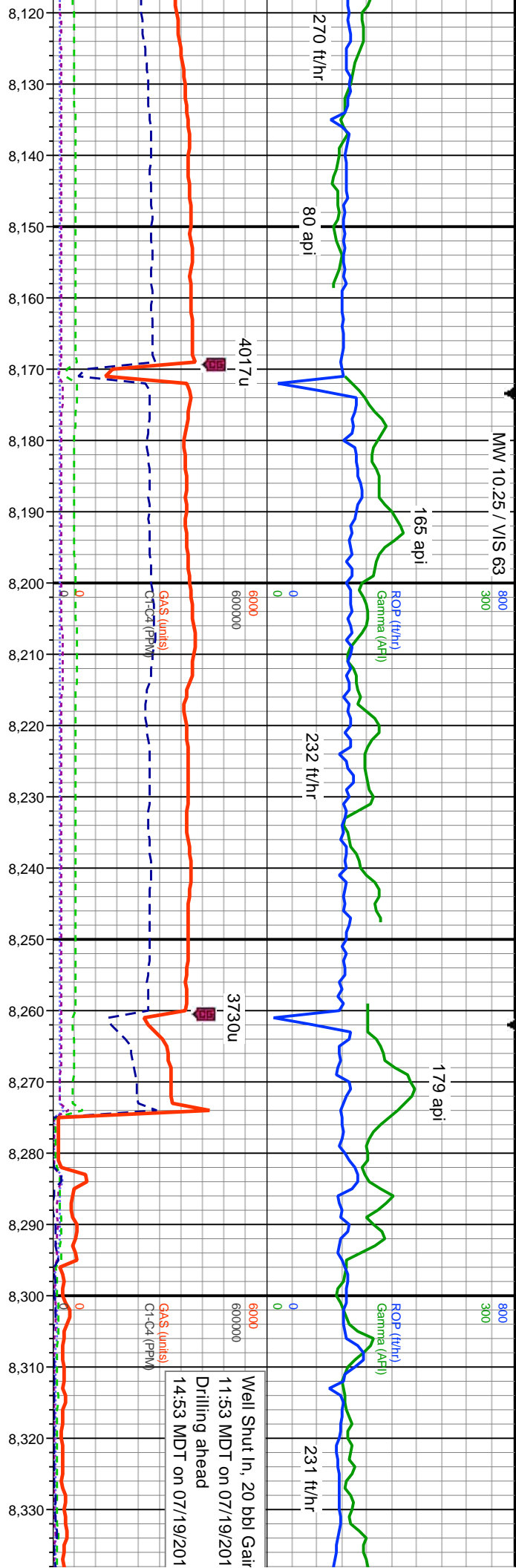
MD: 7.255'
INC: 32.03°
AZM: 165.06°
TVD: 7,100.27'
VS: 817.42'

MD: 7.344'
INC: 40.89°
AZM: 167.69°
TVD: 7,171.78'
VS: 870.1'

MD: 7.433'
INC: 50.23°
AZM: 168.5°
TVD: 7,234.02'
VS: 933.51'







MD: 8,150'
INC: 90.37°
AZM: 177.01°
TVD: 7,400.26'
VS: 1,603.94'

MD: 8,239'
INC: 90.34°
AZM: 178.48°
TVD: 7,399.7'
VS: 1,692.28'

~3-5 U/D Fault:
A chalk to Nio A Transition Zone

MD: 8,328'
INC: 90.37°
AZM: 180.86°
TVD: 7,399.15'
VS: 1,780.2'

TT: dkgy-dkgy/bm, frm, sb blk-bkly, rthy, silty, arg mtx, v calc, occ scat
HK: med-dkgy/bm, occ lbn-df, mod st-frm, sb blk-sb plty, sb
ot, silty

No Sample due to Low Pump Rates

90% MRLST: dkgy-dkgy/bm
10% CHK: dk bm, occ mot gy/
silty-arg

MW 10.2 / VIS 55 IN
MW 10.2 / VIS 63 OUT

181 api

164 api

MW 10.55 / VIS 52 IN
MW 10.45 / VIS 58 OUT

196 api

248 ft/hr

250 ft/hr

Ratty Gas due to Fluctuation in Gas Buster Pressure

3404u

3738u

3535u
C1: 58.8%
C2: 20.5%
C3: 10.9%
C4: 9.7%

Gas (units)
C1-C4 (PPM)

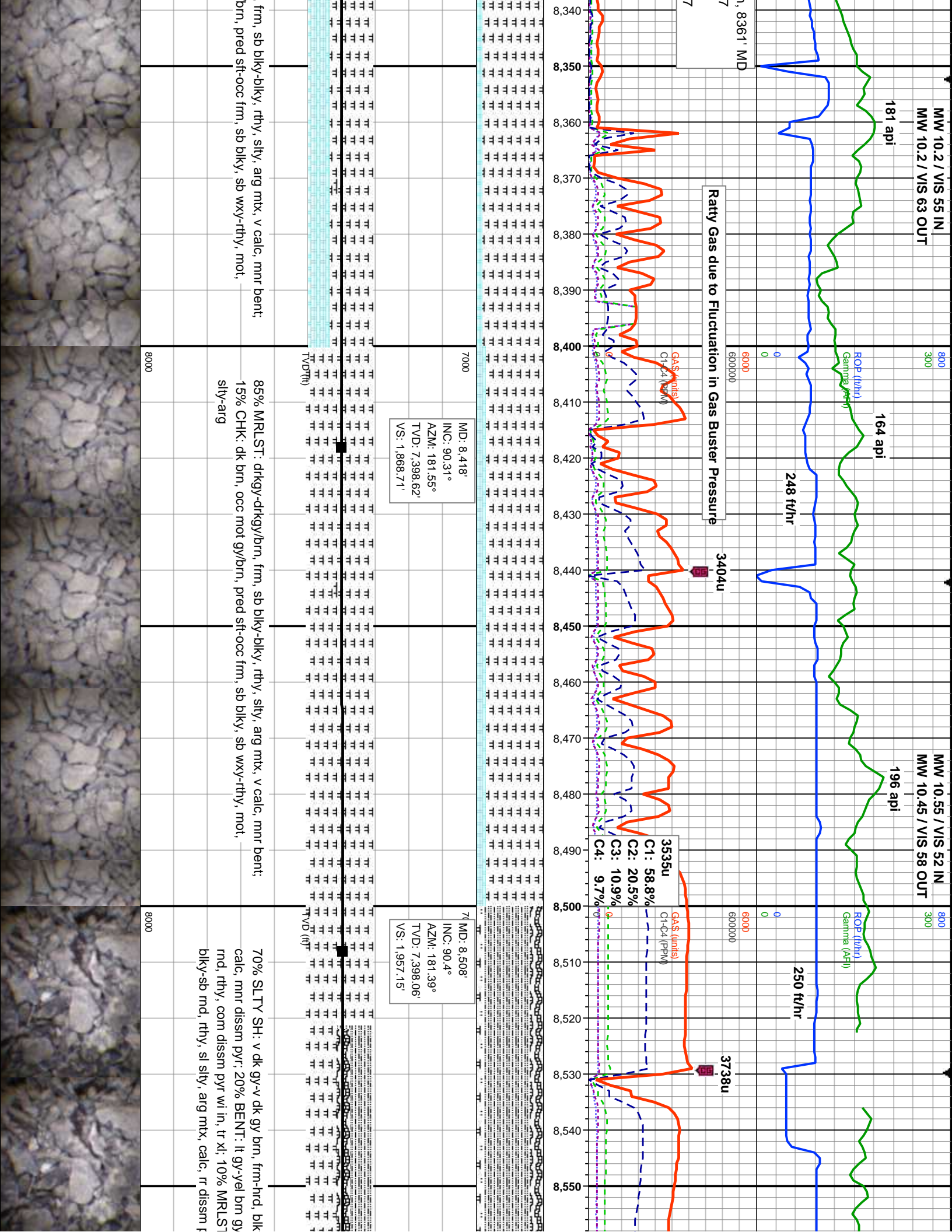
Gas (units)
C1-C4 (PPM)

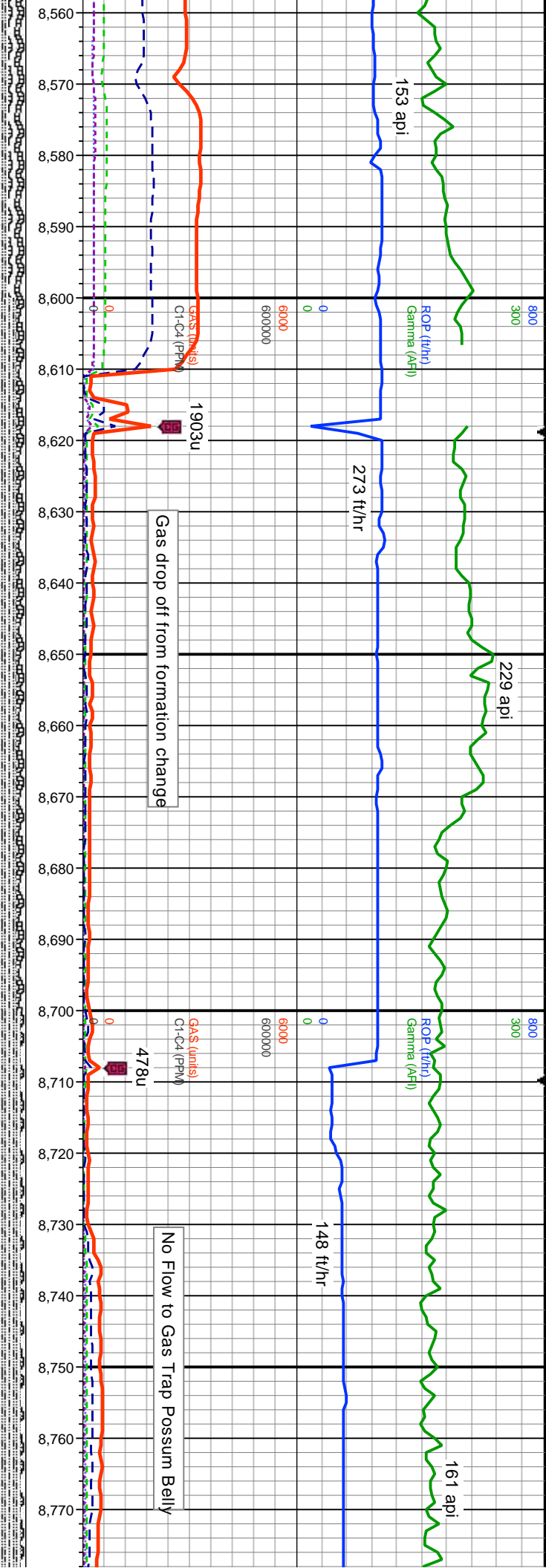
MD: 8.418'
INC: 90.31°
AZM: 181.55°
TVD: 7.398.62'
VS: 1.868.71'

MD: 8.508'
INC: 90.4°
AZM: 181.39°
TVD: 7.398.06'
VS: 1.957.15'

85% MRLST: drky-drky/brn, frm, sb blk-y-blky, rthy, slty, arg mtx, v calc, mnr bent;
15% CHK: dk brn, occ mot gy/brn, pred sft-occ frm, sb blk-y, sb wxy-rthy, mot, slty-arg

70% SLTY SH: v dk gy-v dk gy brn, frm-hrd, blk calc, mnr dissn pyr; 20% BENT: lt gy-yel brn gy mnd, rthy, com dissn pyr wi in, tr xl; 10% MRLST blk-y-sb mnd, rthy, sl slty, arg mtx, calc, r dissn f





MD: 8,598'
INC: 89.57°
AZM: 181.13°
TVD: 7,398.08'
VS: 2,045.65'

MD: 8,688'
INC: 89.66°
AZM: 181.13°
TVD: 7,398.69'
VS: 2,134.18'

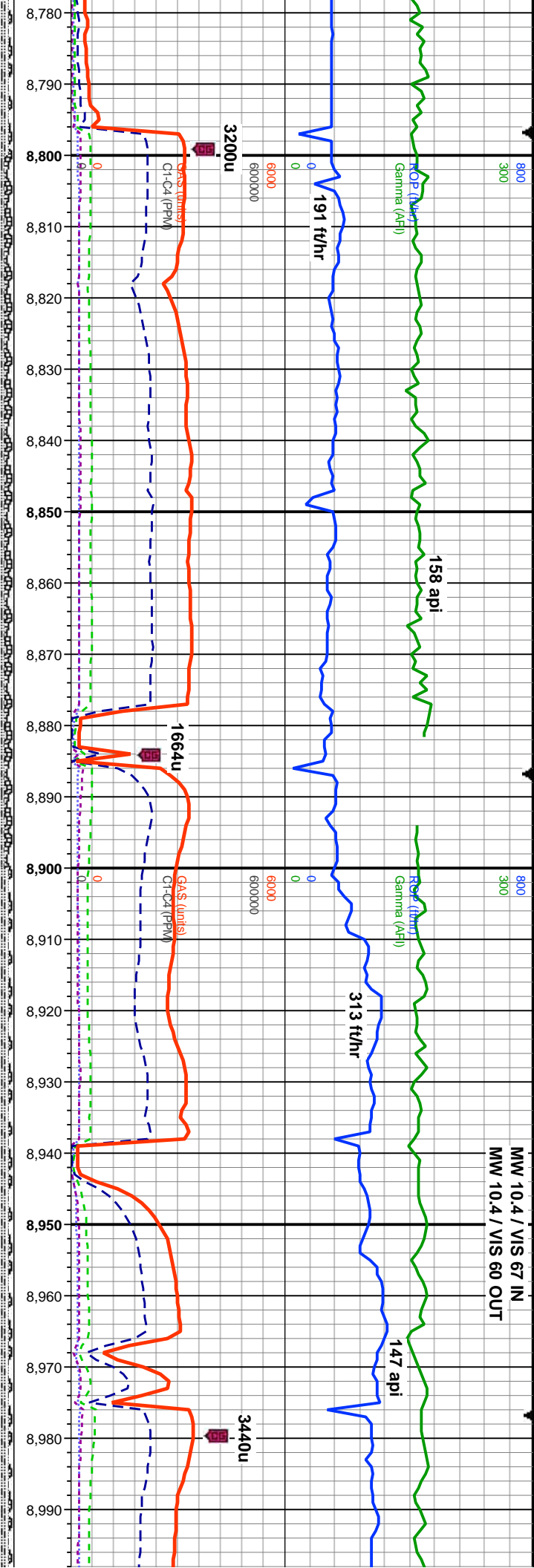
MD: 8,7
INC: 89
AZM: 181
TVD: 7,398
VS: 2,2

~12-15' U/D Fault
Nio Transition to Sharon Springs Base



v-sb plty, rthy, sl silty, arg mtx, sl
mtx, mod calc, mnr dissim pyr, 10% BENT: lt gy-vcl brn gy, mnr brn yel xln, sft-frm,
disim pyr, rr lse pyr nod, bri lt yel flr

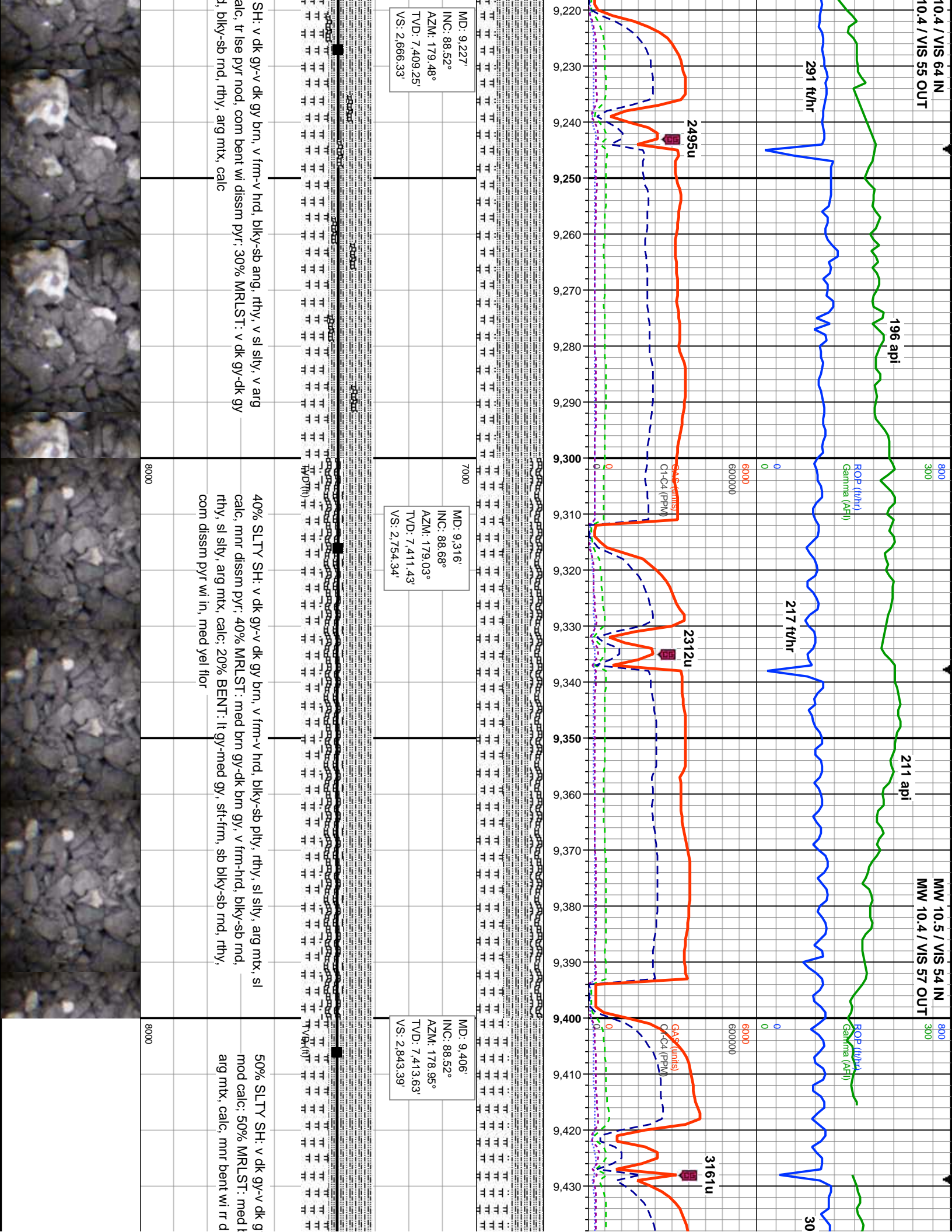
90% SLTY SH: v dk gy-v dk gy brn, v frm-hrd, blk-y-sb ang, rr flss, rthy, sl silty, v arg
95% SLTY SH: v dk gy-v dk gy brn, frm-hrd, mnr sft, blk-y-sb ang, r
mtx, incrg calc, mnr dissim pyr, 5% BENT: lt gy-v lt gy, v sft, sb blk-y
disim pyr, rr lse pyr nod, bri ong flr

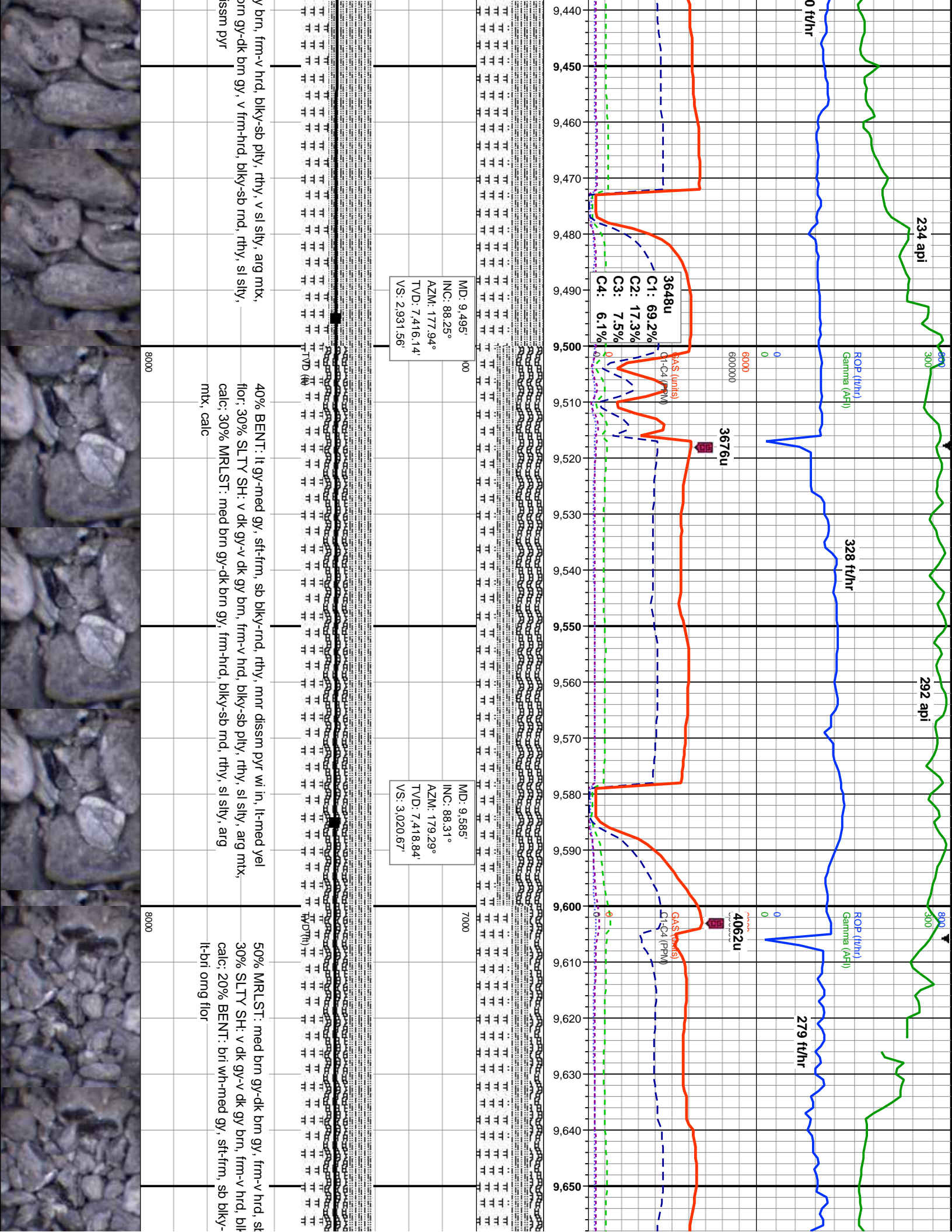


77°	7000	MD: 8.867' INC: 89.02° AZM: 179.89° TVD: 7.400.4' VS: 2.310.69'
57°		
30.14°		
399.29'		
21.86'		

90% SLTY SH: v dk gy-v dk gy brn, v frm-hrd, blk-y-ply, rthy, v sl slty, v arg mtx, v sl calc, mnr dissim pyr, 10% BENT: lt gy-med gy, v sft, sb blk-y-w rnd, rthy, abnt dissim pyr, rr lse pyr nod, bri omg-yel flor	8000
95% SLTY SH: v dk gy-v dk gy brn, v frm-hrd, blk-y-sb ang-flss, rthy, v sl slty, v arg mtx, v sl to non-calc, 5% BENT: v lt gy-lt gy, v sft, sb blk-y-rnd, rthy, abnt dissim pyr, rr lse pyr nod, lt lse cal xls, bri lt yel-oring flor	8000







800 MW 10.5 / VIS 57 IN
300 MW 10.5 / VIS 54 OUT

182 api

ROP (ft/hr)
Gamma (API)

150 api

ROP (ft/hr)
Gamma (API)

272 ft/hr

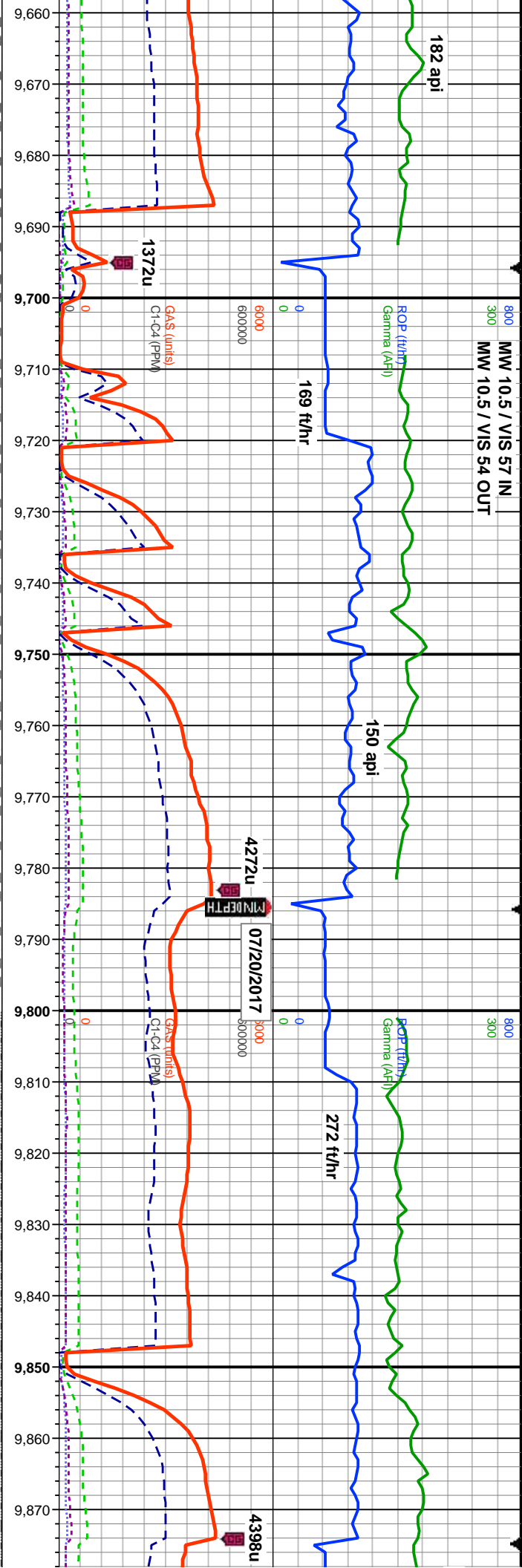
169 ft/hr

4272u
07/20/2017
MINDEPTH

4398u

GAS (units)
C1-C4 (PPM)

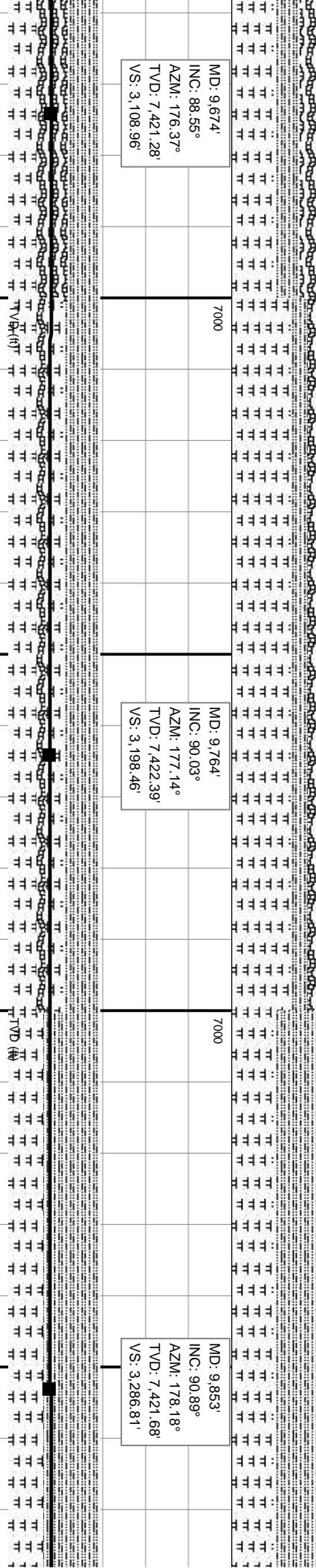
GAS (units)
C1-C4 (PPM)



MD: 9.674'
INC: 88.55°
AZM: 176.37°
TVD: 7.421.28'
VS: 3.108.96'

MD: 9.764'
INC: 90.03°
AZM: 177.14°
TVD: 7.422.39'
VS: 3.198.46'

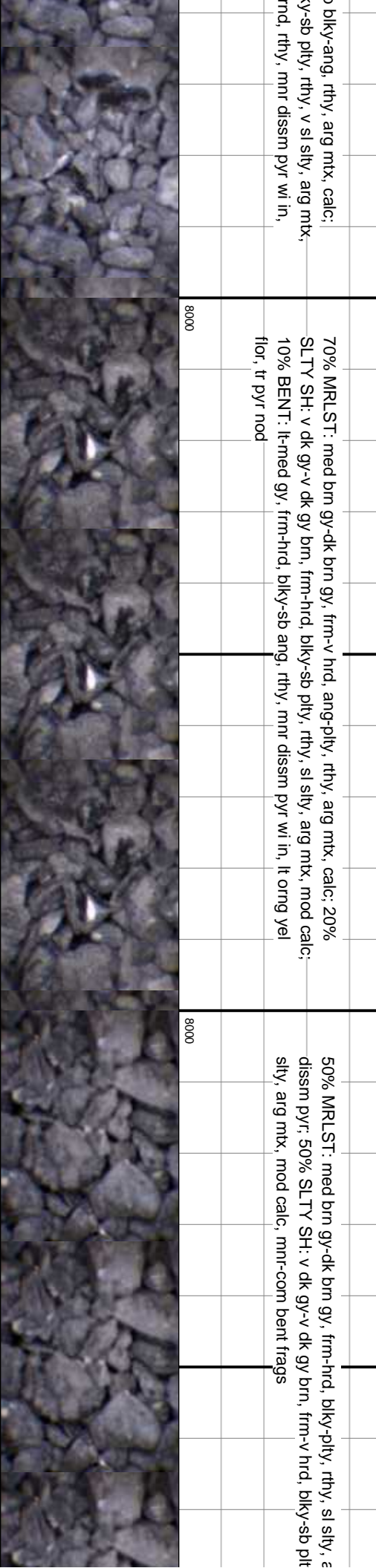
MD: 9.853'
INC: 90.89°
AZM: 178.18°
TVD: 7.421.68'
VS: 3.286.81'

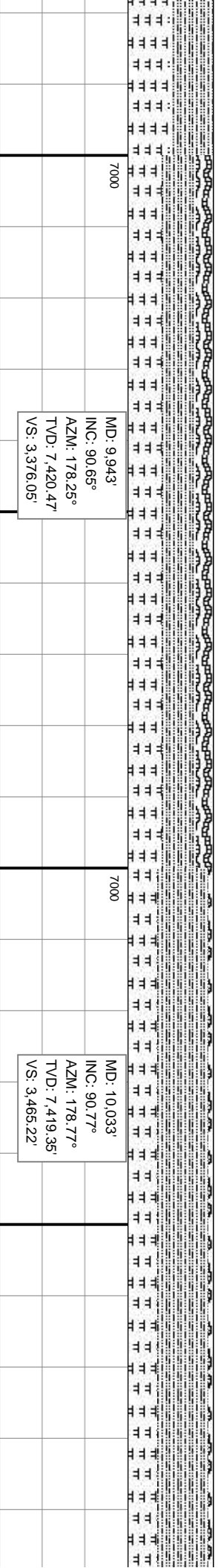


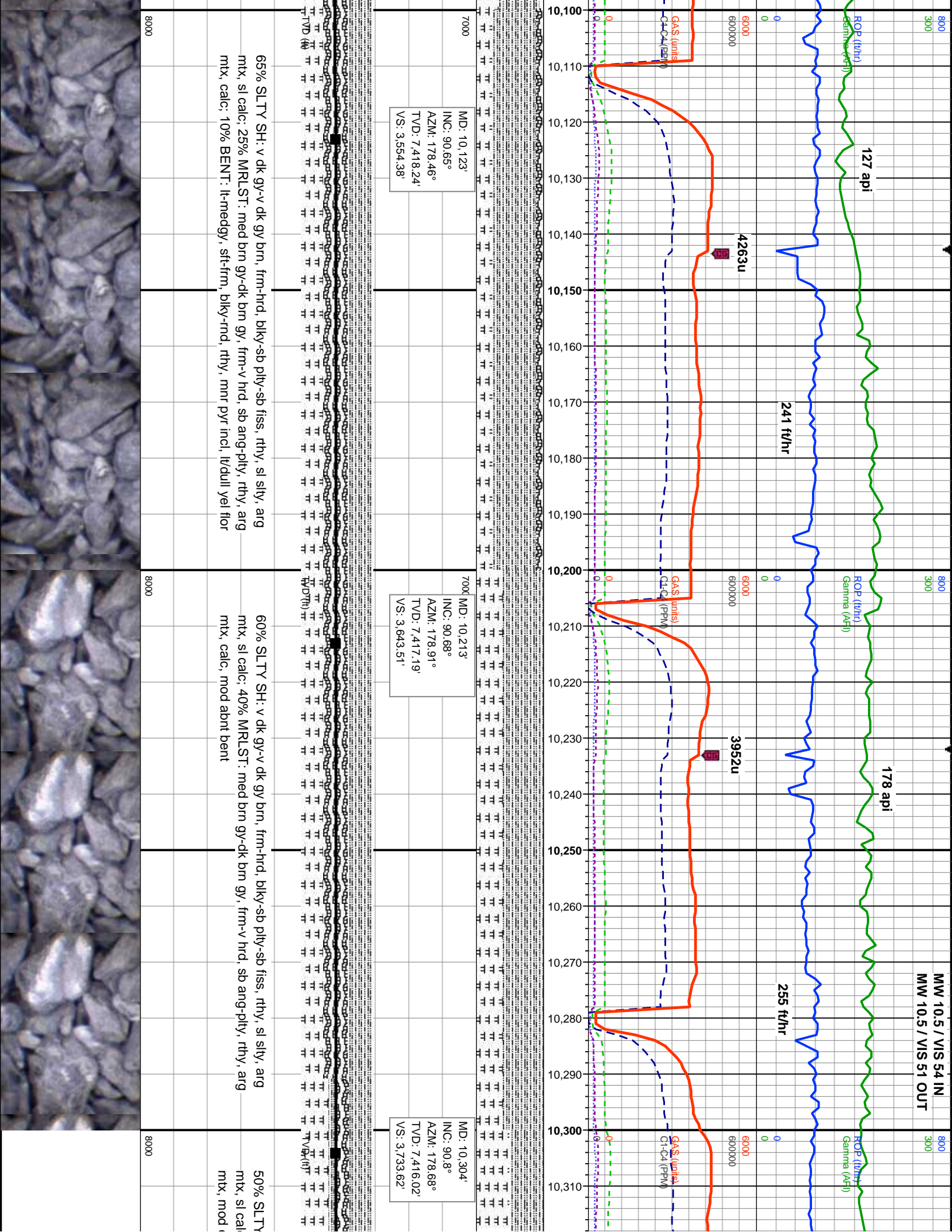
b bkly-ang, rthy, arg mtx, calc:
b bkly-y-sb ply, rthy, v sl slty, arg mtx,
rthy, mnr dissn pyr wi in,

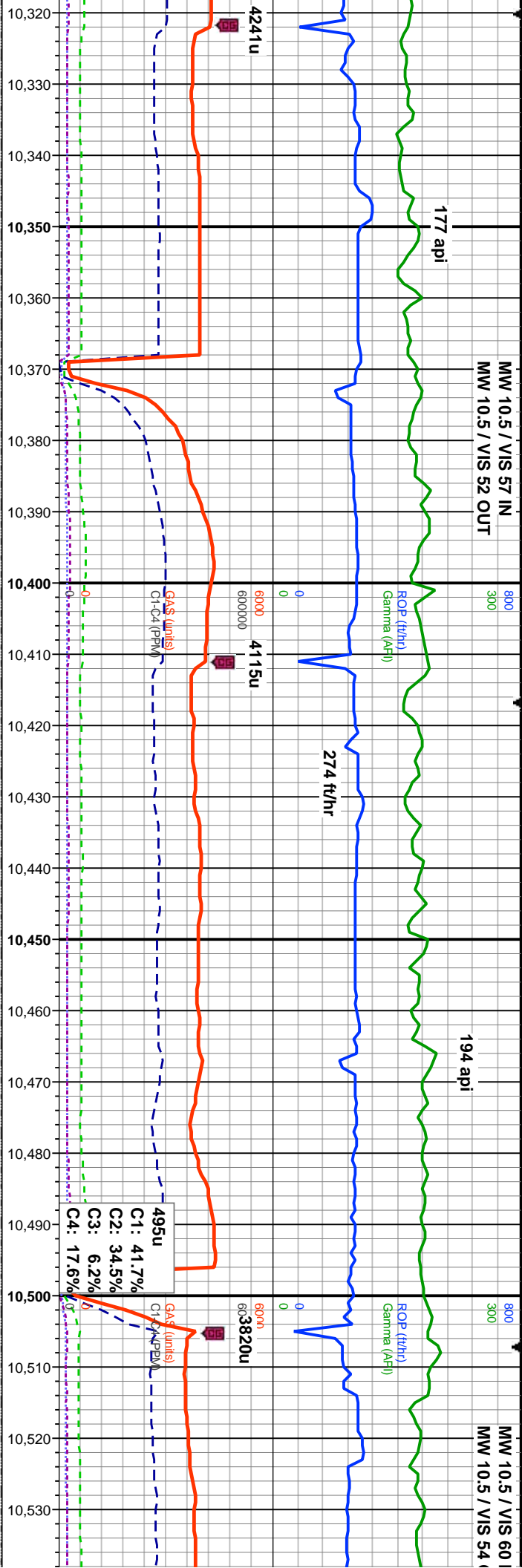
70% MRLST: med bn gy-dk bn gy, frm-v hrd, ang-pty, rthy, arg mtx, calc: 20%
SLTY SH: v dk gy-v dk gy bm, frm-hrd, bkly-sb ply, rthy, sl slty, arg mtx, mod calc:
10% BENT: lt-med gy, frm-hrd, bkly-sb ang, rthy, mnr dissn pyr wi in, lt orng yel
flor, tr pyr nod

50% MRLST: med bn gy-dk bn gy, frm-hrd, bkly-pty, rthy, sl slty, e
dissm pyr. 50% SLTY SH: v dk gy-v dk gy bm, frm-v hrd, bkly-sb ply
slty, arg mtx, mod calc, mnr-com bent frags









MD: 10.394'
INC: 90.55°
AZM: 179.47°
TVD: 7.414.96'
VS: 3.822.67'

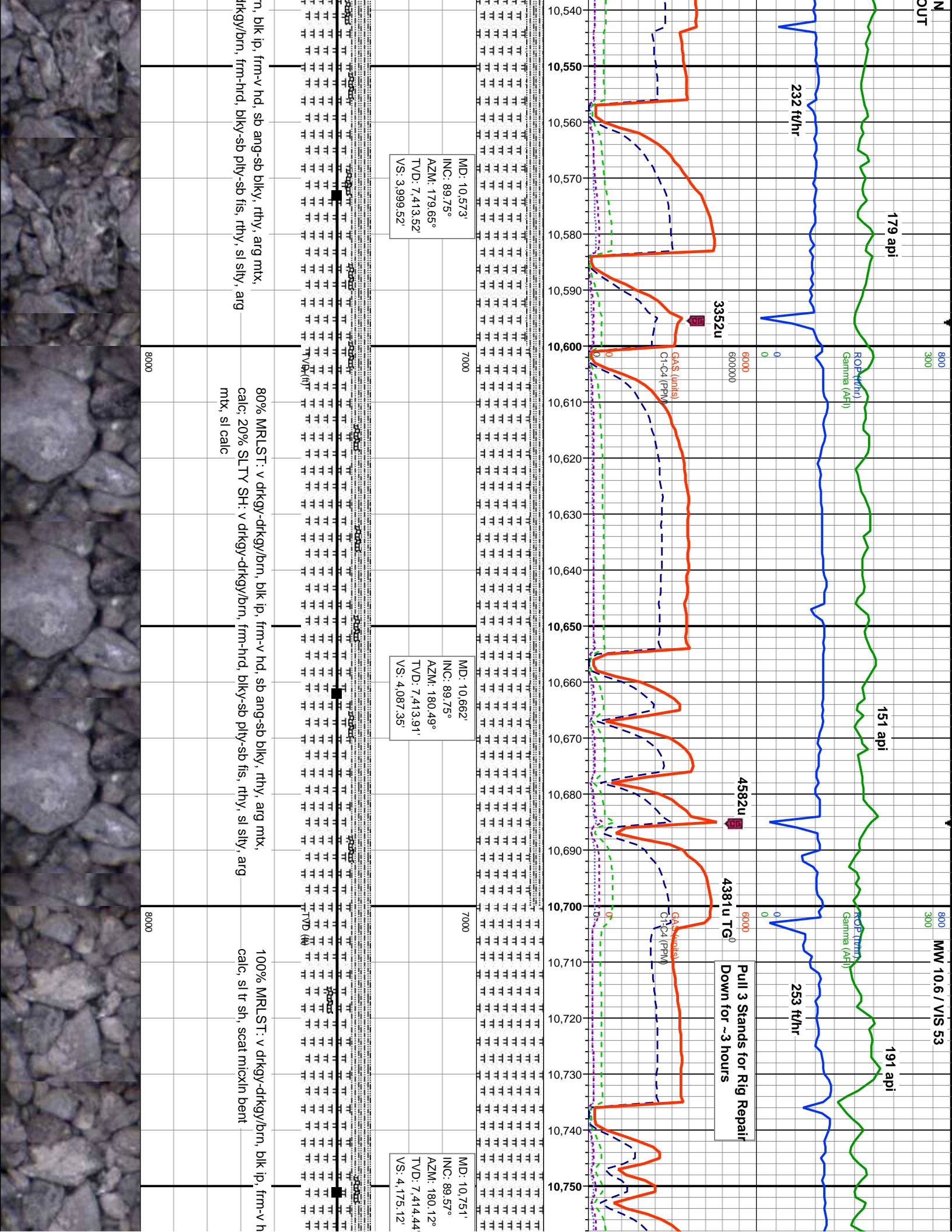
MD: 10.483'
INC: 90.77°
AZM: 179.76°
TVD: 7.413.93'
VS: 3.910.61'

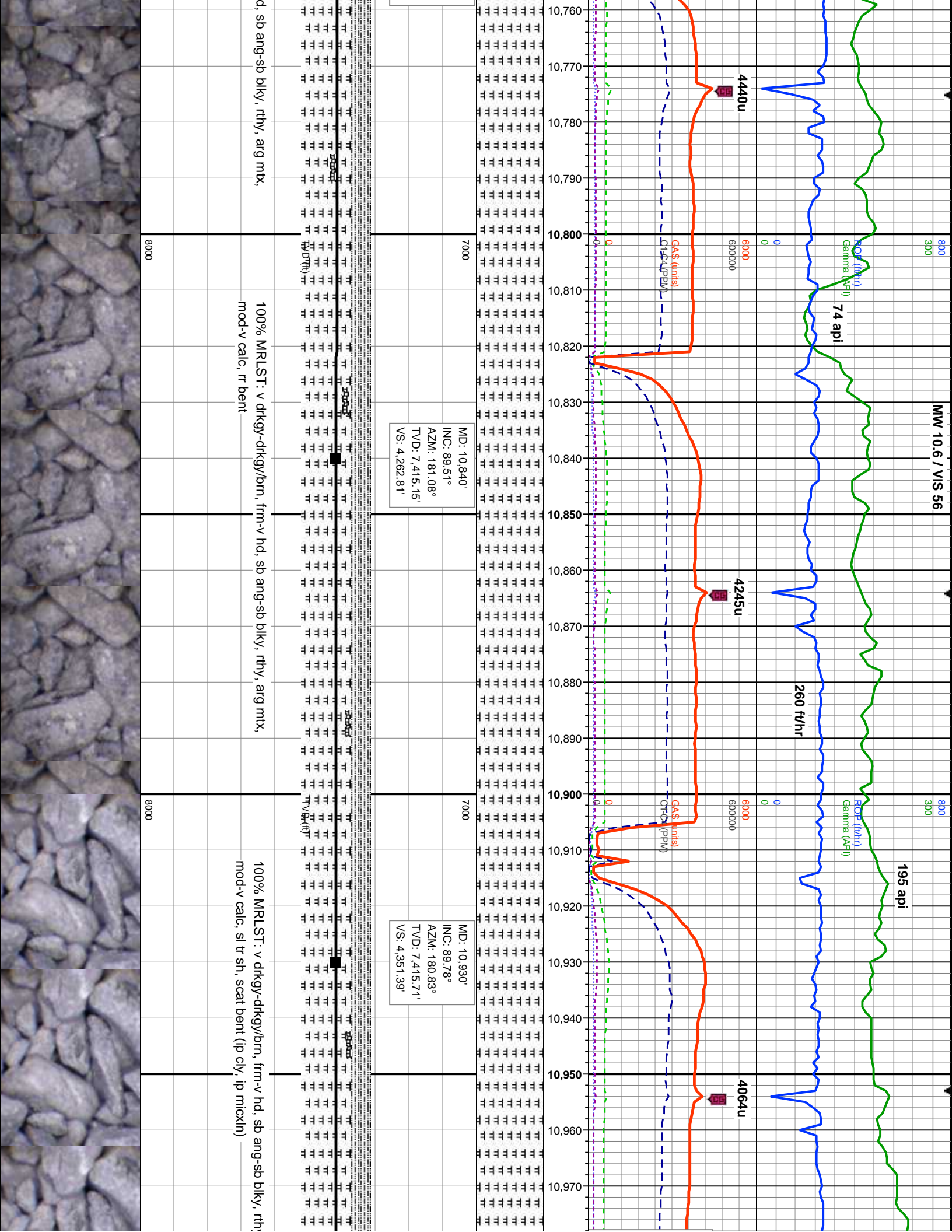
SH: v dk gy-v dk gy brn, frm-hrd, blk-y-sb pty-sb fiss, rthy, sl silty, arg
c: 50% MRLST: med brn gy-dk brn gy, frm-v hrd, sb ang-pty, rthy, arg
calc, mod abnt bent

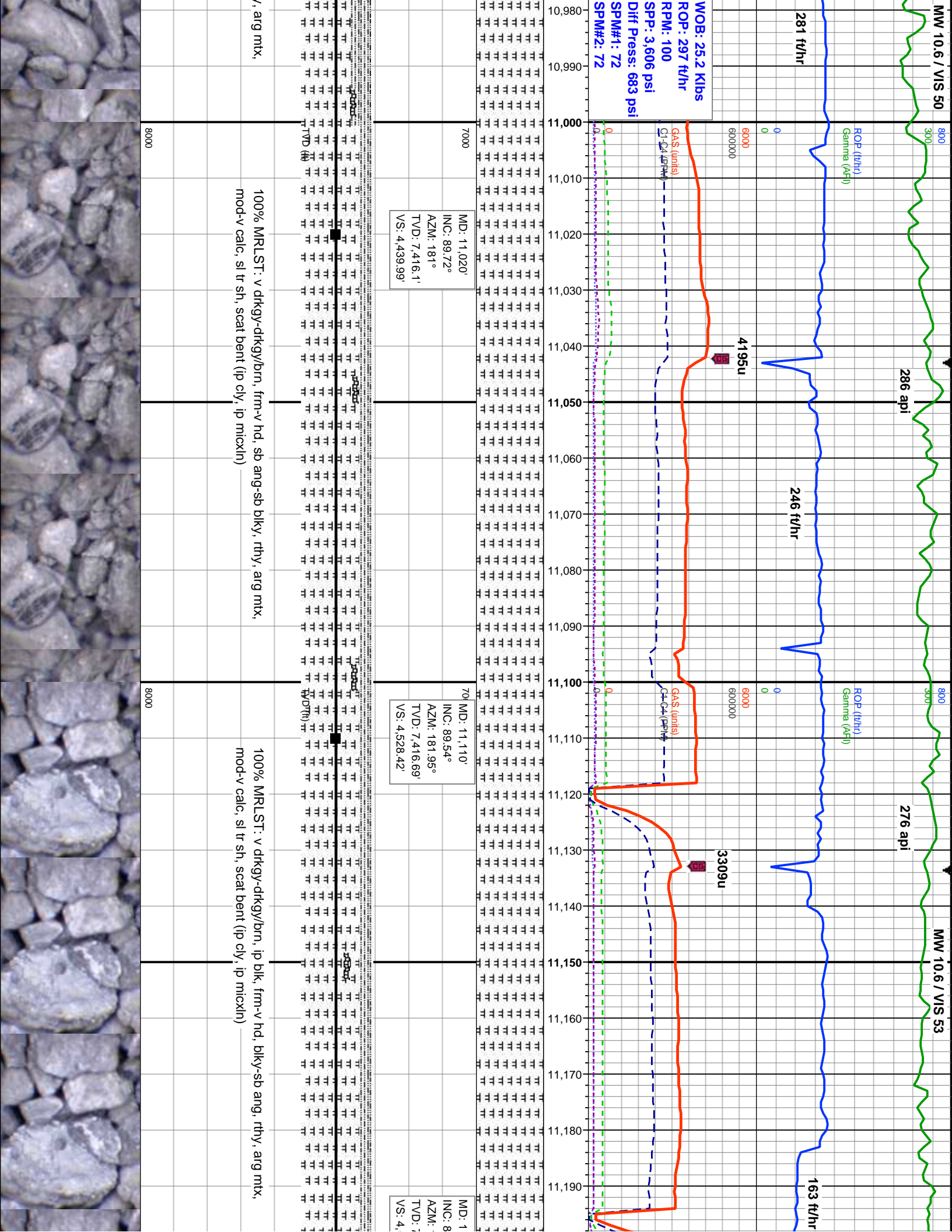
55% SLTY SH: v dk gy-v dk gy brn, frm-hrd, blk-y-sb pty-sb fiss, rthy, sl silty, arg
mtx, sl calc: 45% MRLST: med brn gy-dk brn gy, frm-v hrd, sb ang-pty, rthy, arg
mtx, mod calc, mod abnt bent

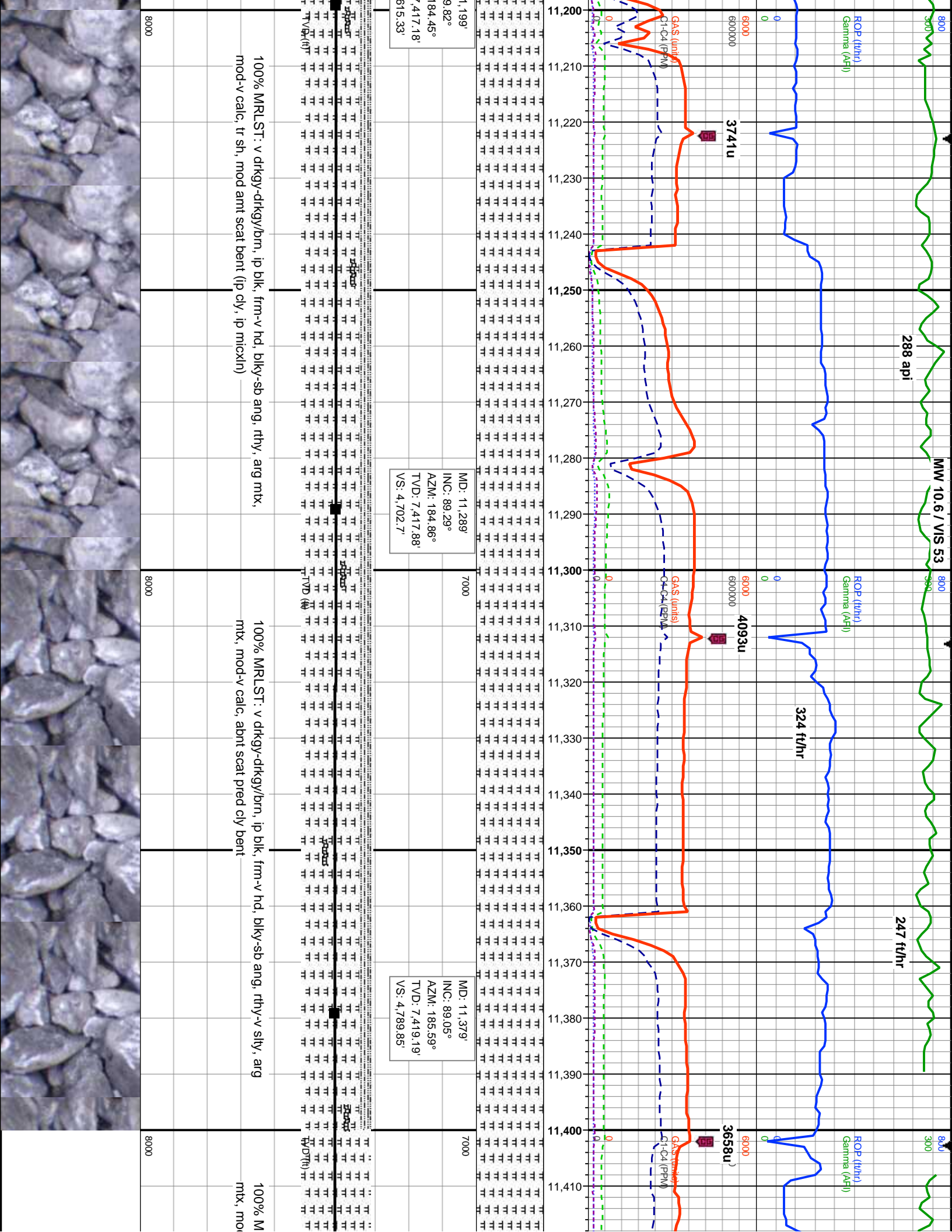
75% MRLST: v drkgy-drkgy/bl
calc: 25% SLTY SH: v drkgy-c
mtx, sl calc

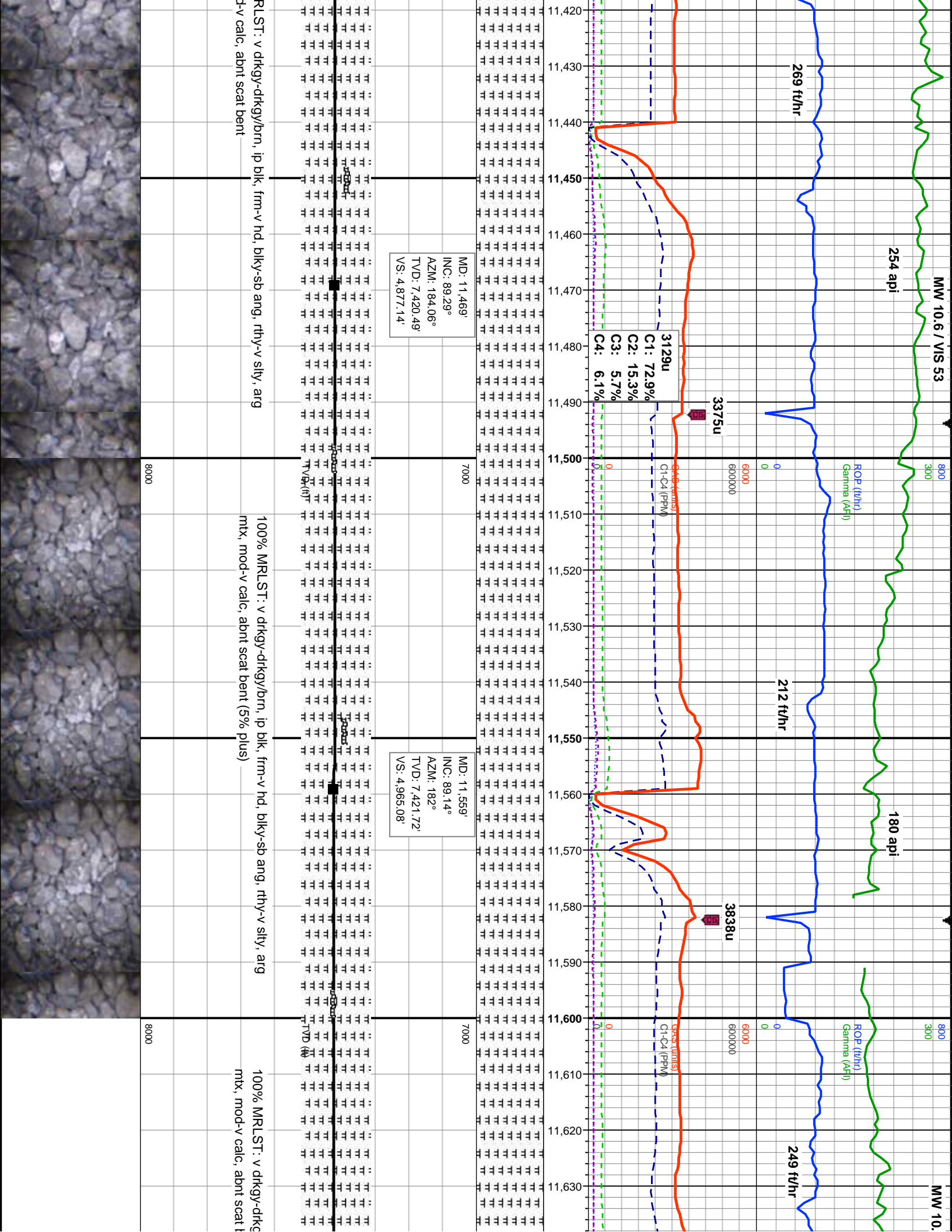


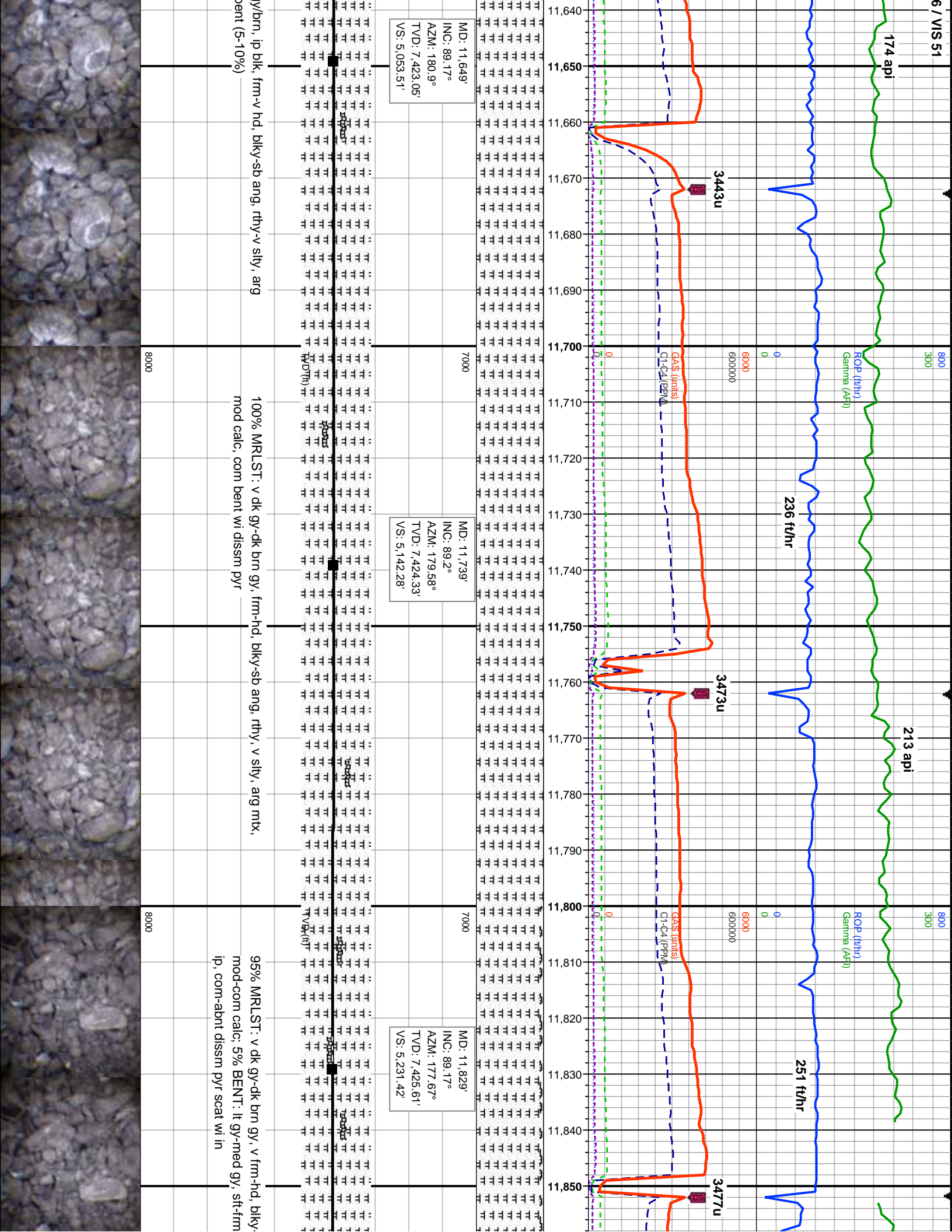


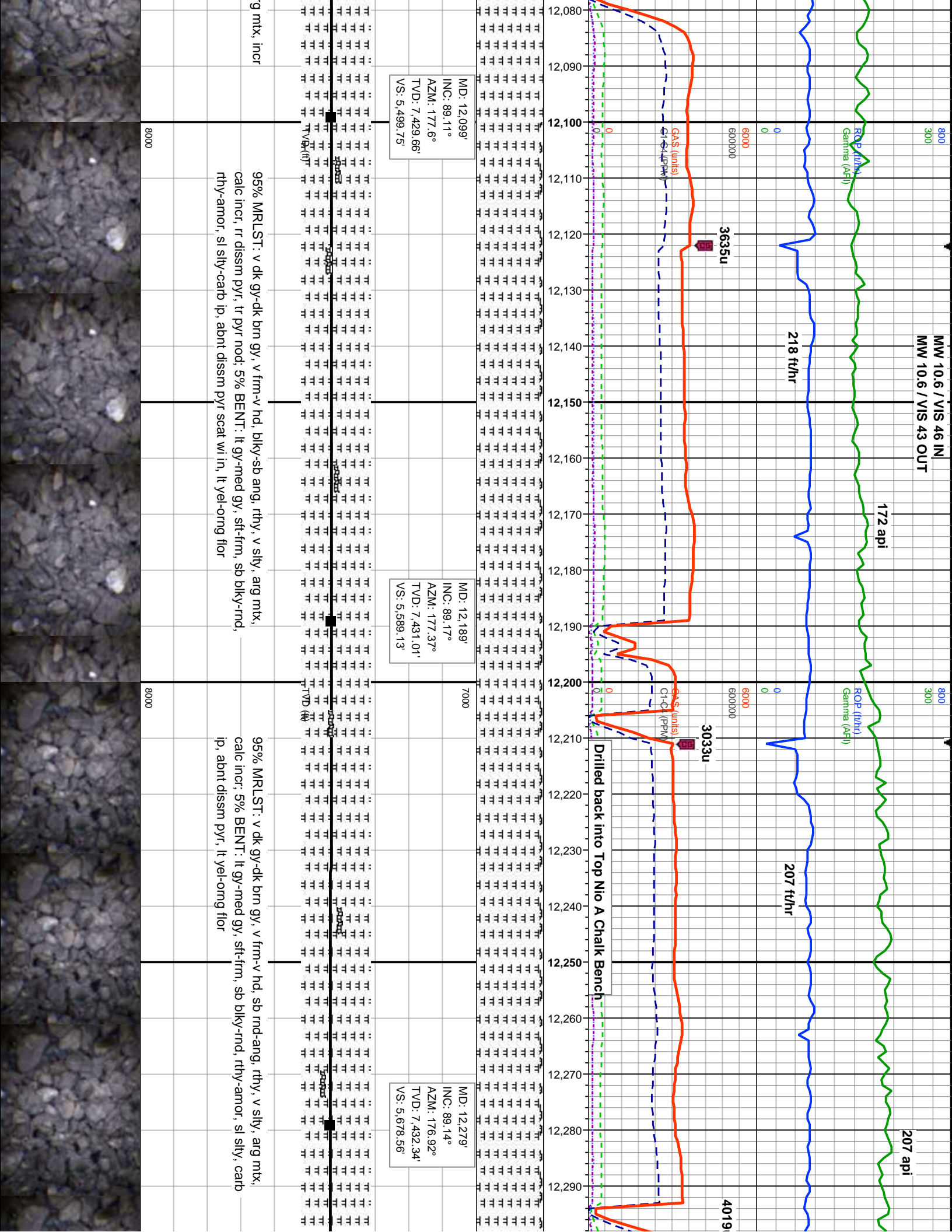




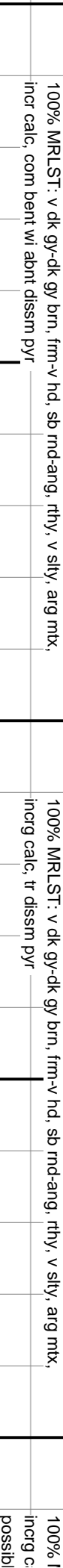
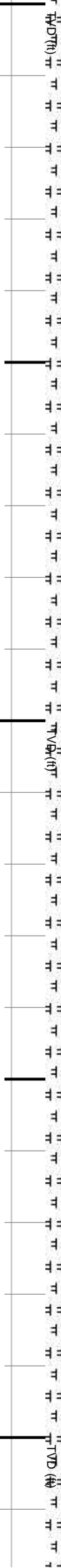
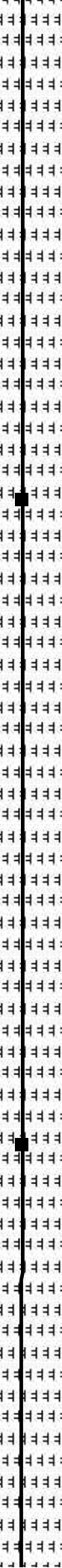
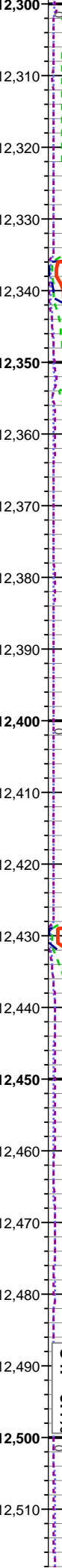
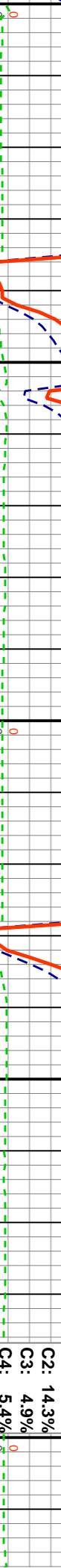
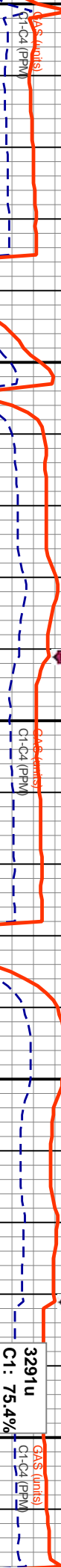
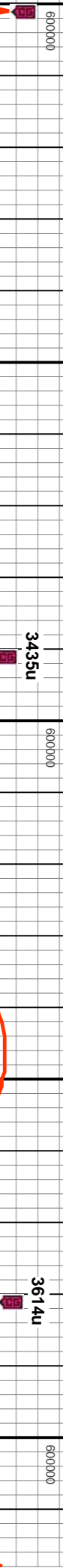
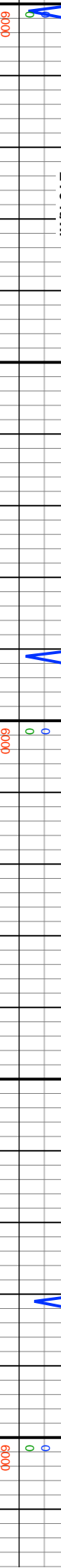
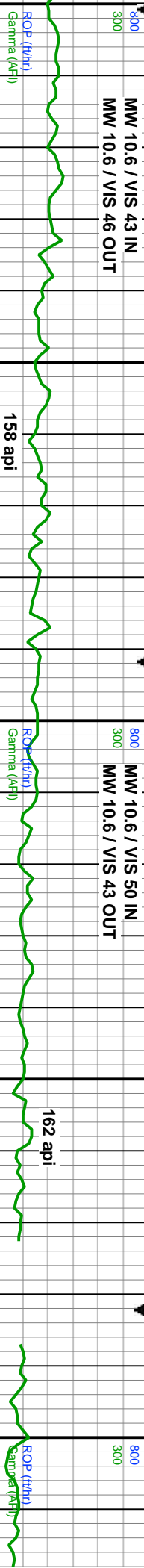








MW 10.6 / VIS 43 IN
MW 10.6 / VIS 46 OUT



MD: 12.369
INC: 89.29°
AZM: 177.33°
TVD: 7.433.57'
VS: 5.768

MD: 12.459
INC: 89.23°
AZM: 176.97°
TVD: 7.434.74'
VS: 5.857.44

3291u
C1: 75.4%
C2: 14.3%
C3: 4.9%
C4: 5.4%

100% MRLST: v dk gy-dk gy brn, frm-v hd, sb rnd-ang, rthy, v silty, arg mtx,
incr calc. com bent wi abnt dissn pyr

100% MRLST: v dk gy-dk gy brn, frm-v hd, sb rnd-ang, rthy, v silty, arg mtx,
incr calc. tr dissn pyr

100% l
incr c
possibl

MW 10.7 / VIS 46 IN
MW 10.6 / VIS 47 OUT

154 api

132 api

ft/hr

232 ft/hr

211 ft/hr

3709u

3514u

ROP (ft/hr)
Gamma (API)

ROP (ft/hr)
Gamma (API)

GAS (units)
CL-C4 (PPM)

GAS (units)
CL-C4 (PPM)

MD: 12,549'
INC: 89.14°
AZM: 177.54°
TVD: 7,436.02'
VS: 5.946.85'

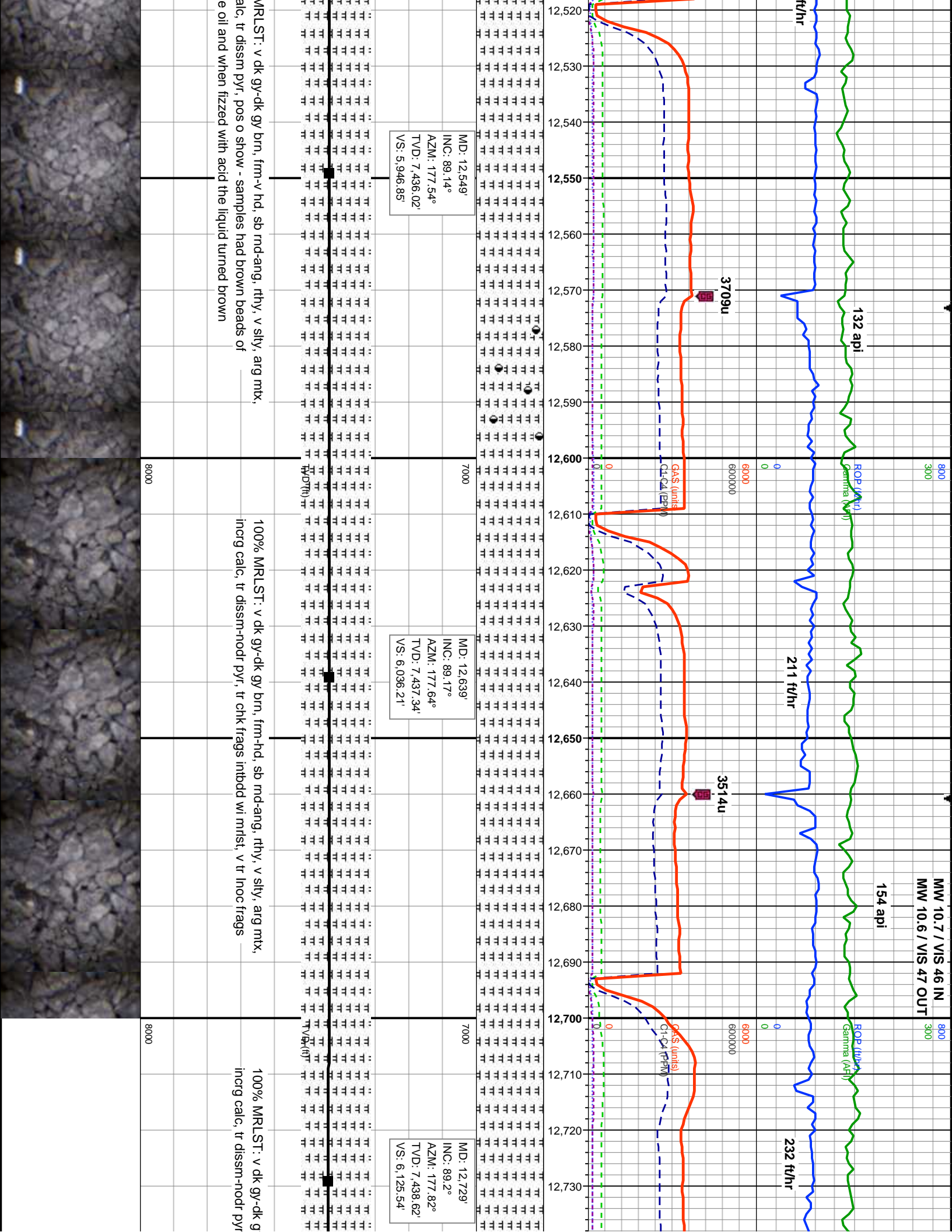
MD: 12,639'
INC: 89.17°
AZM: 177.64°
TVD: 7,437.34'
VS: 6.036.21'

MD: 12,729'
INC: 89.2°
AZM: 177.82°
TVD: 7,438.62'
VS: 6.125.54'

MRLST: v dk gy-dk gy brn, frm-v hd, sb md-ang, rthy, v silty, arg mnx,
alc, tr dissn pyr, pos o show - samples had brown beads of
e oil and when fizzed with acid the liquid turned brown

100% MRLST: v dk gy-dk gy brn, frm-hd, sb md-ang, rthy, v silty, arg mnx,
incrg calc, tr dissn-nodr pyr, tr chk frags intbdd wi mlst, v tr lnc frags

100% MRLST: v dk gy-dk g
incrg calc, tr dissn-nodr pyr



MW 10.7 / VIS 48 IN
MW 10.7 / VIS 43 OUT

153 api

153 api

ROP (ft/hr)
Gamma (API)

ROP (ft/hr)
Gamma (API)

242 ft/hr

197 ft/hr

3594u

3712u

MINDEPTH
07/21/2017

3265u

GAS (units)
C1-C4 (PPM)

GAS (units)
C1-C4 (PPM)

7000

MD: 12,819'
INC: 89.26°
AZM: 178.89°
TVD: 7,439.83'
VS: 6,214.74'

MD: 12,909'
INC: 89.29°
AZM: 178.62°
TVD: 7,440.97'
VS: 6,303.87'



gy brn, frm-hd, md-ang-sb pily, rthy, v silty, arg mtx,
, v tr chk frags intbdd wi mlst

100% MRLST: v dk gy-dk gy brn, frm-v hd, md-sb blkky, rthy, v silty, arg mtx,
calc, tr chk frags

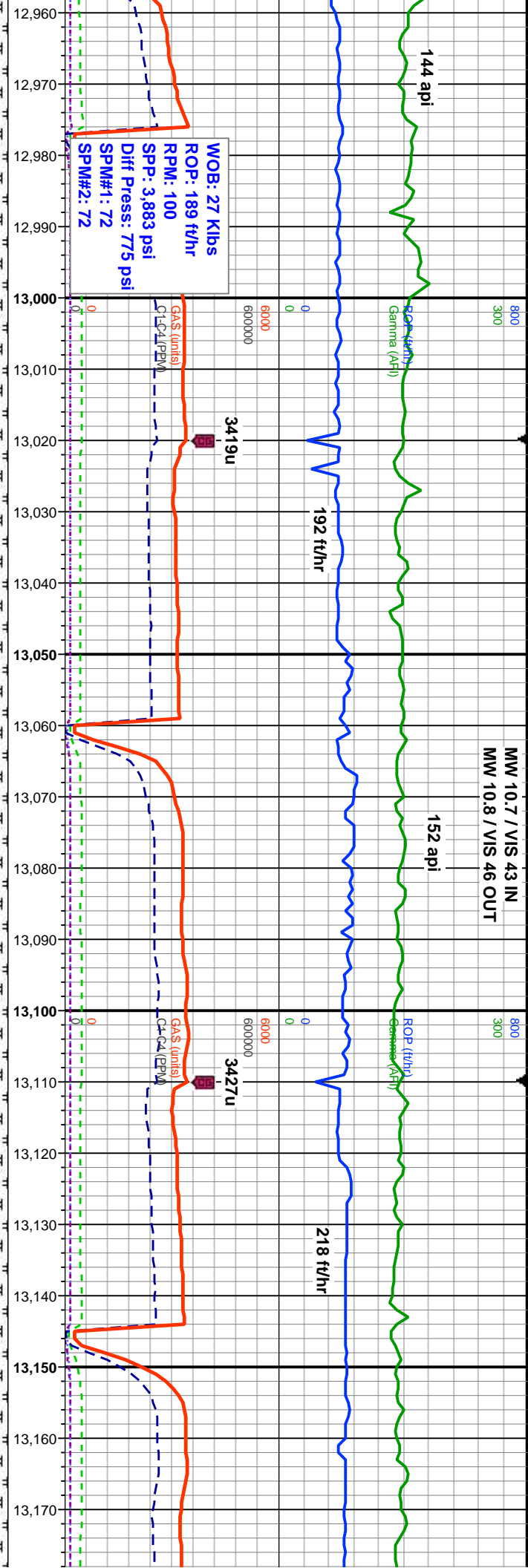
100% MRLST: v dk gy-dk gy brn, frm-v hd, r
calc, tr chk frags, tr dissim pyr

8000

8000



MW 10.7 / VIS 43 IN
MW 10.8 / VIS 46 OUT



MD: 12.999'
INC: 89.17°
AZM: 179.21°
TVD: 7,442.18'
VS: 6,392.95'

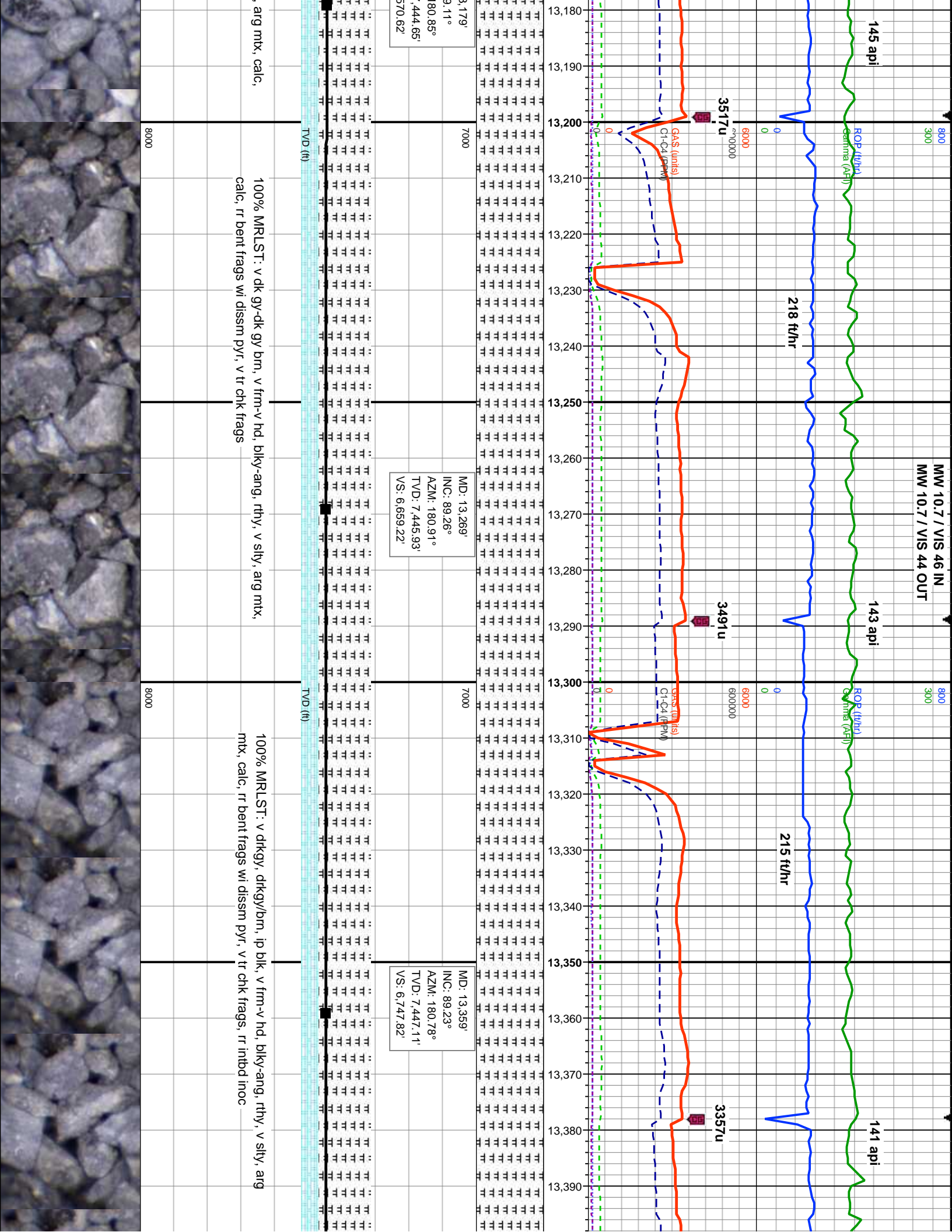
MD: 13.089'
INC: 89.29°
AZM: 179.9°
TVD: 7,443.39'
VS: 6,481.89'

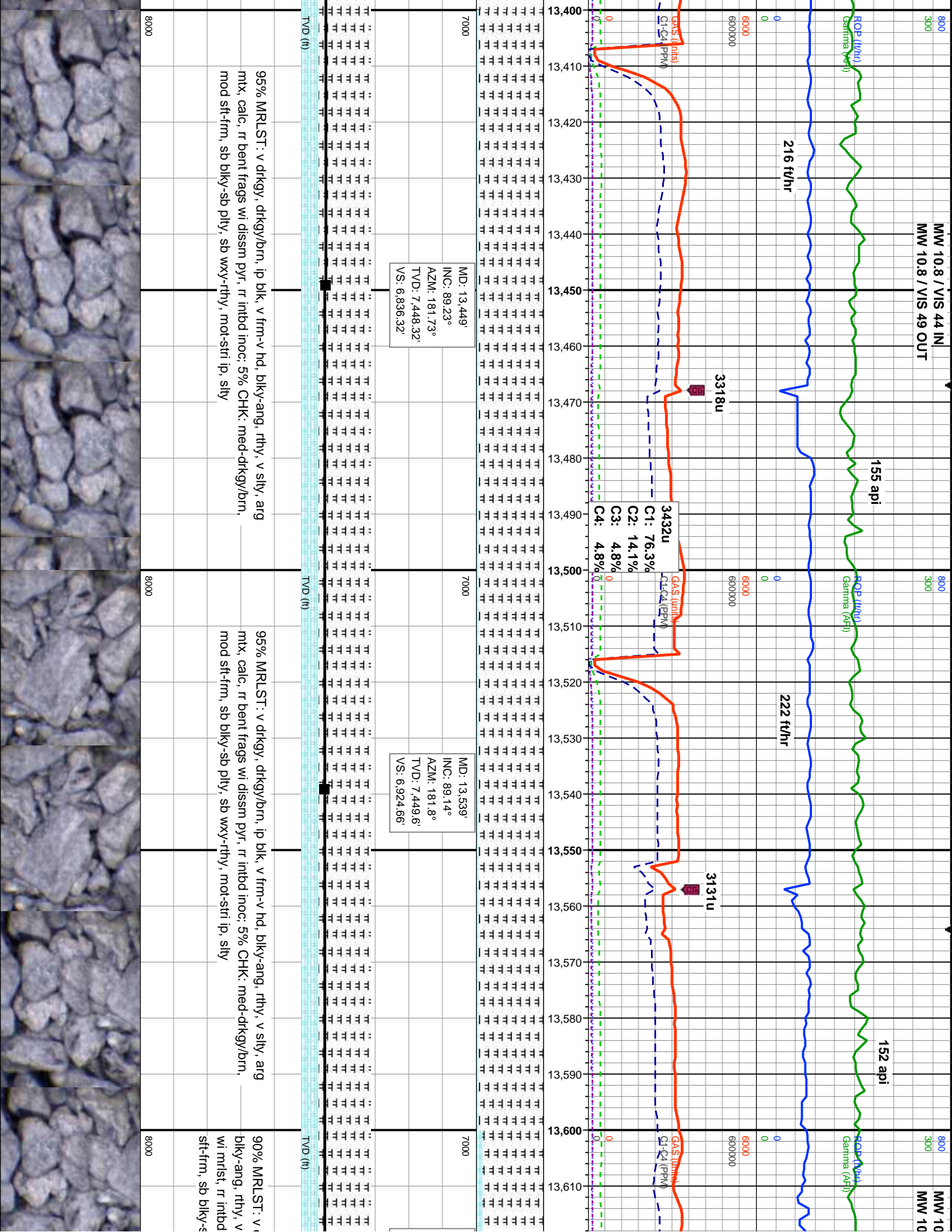
MD: 13.170'
INC: 89.29°
AZM: 179.9°
TVD: 7,443.39'
VS: 6,481.89'

100% MRLST: v dk gy-dk gy brn, frm-v hd, md-sb ang, rthy, v silty, arg mtx, calc, v tr nodr pyr

100% MRLST: v dk gy-dk gy brn, frm-v hd, blk-ang, rthy, v silty, mntr blk bent frags wi dissn pyr, tr chk frags







800	300
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ROP (ft/hr)
Gamma (AFI)

Thank you for using Terra Guidance, LLC.

 TD Reached, 13,661' MD, 05:17 MDT, 07/21/2017 |

179 ft/hr

3822u

13,620
13,630
13,640
13,650
13,660
13,670
13,680
13,690
13,700
13,710
13,720
13,730
13,740
13,750

MD: 13,629'
INC: 89.1°
AZM: 182.18°
TV D: 7,450.98'
VS: 7,012.93'

MD: 13,661'
INC: 89.11°
AZM: 182.18°
TVD: 7,451.47'
VS: 7,044.3'

Projection to Bit:

A photograph of a document page. On the left side, there is a vertical line of text, possibly a page number or a header, which is partially obscured by a dark vertical bar. The rest of the page is filled with a grid of small, illegible characters, likely a table or a list of data.

TVD (ft)

drkgy, drkgy/bm, ip blk, v frm-v hd,
sily, arg mix, calc, scat bent-sme intbd
inoc: 10% CHK: med-drkgy/bm, mod
pb ply, sb wxy-rthy, mot-stri ip, sily

8000

