Scale: 5" / 100'
Measured Depth Log

Well Name	Postle IC 09-299HN		
Location	SWNW Section 11, T3N, R68W		
State	COLORADO	**County**	WELD
Country	USA	**Rig Number**	PRECISION 460
API Number	05-123-46041-0000	**AFE #**	18DC0010
Geographic Region	DJ BASIN	**Field**	WATTENBERG

Ground Elevation	4977'	**K.B. Elevation**	4997'
Logged Interval	6000' MD **To** 18533' MD	**Total Depth**	18533'
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

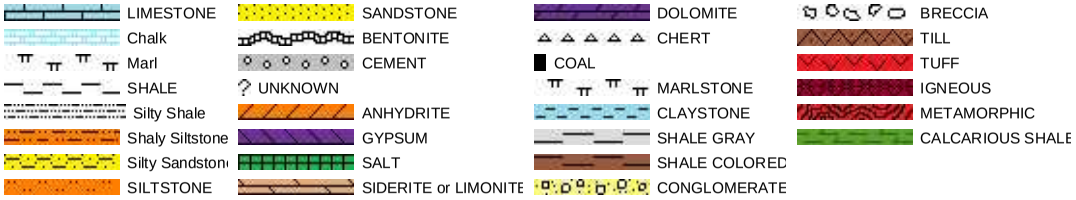
Address 67 W. Floyd Ave. Ste 105
Englewood, CO 80110
(970) 260-5408

Other

Mudlog Start: 03/06/2018

Mudlog End: 03/08/2018

Rock Types



Accessories

Fossils

- ALGAE
- AMPHIPORA
- BELEMNITE
- BIOCLASTIC
- BRACHOIPOD
- BRYOZOA
- CEPHALOPOD
- CORAL
- CRINOID
- ECHINOID
- FISH
- FORAMINIFERA
- FOSSIL
- GASTROPOD
- OOLITE
- OSTRACOD
- PELECYPOD
- PELLET
- PISOLITE
- PLANT REMAINS
- PLANT SPORES
- SCAPHOPOD
- STROMATOPOROID

Minerals

- ANHYDRITIC
- ARGILLACEOUS
- ARGILLITE GRAIN
- BENTONITE
- BITUMENOUS SUBSTANCE
- BRECCIA FRAGMENTS
- CALCAREOUS
- CARBONACEOUS FLAKES
- CHTDK
- 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

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

Oil Show

- ORGANIC
- PINPOINT
- DEAD
- VUGGY
- EVEN
- QUESTIONABLE
- SPOTTED STAINING

Porosity

- EARTHY
- FENESTRAL
- FRACTURE
- INTERCRYSTALLINE
- INTEROOLITIC
- MOLDIC

Engineering

- BIT
- CASING
- CONNECTION (LEFT)
- CONNECTION (RIGHT)
- CONNECTION GAS
- CORE - LOST
- CORE - RECOVERED
- DST INTERVAL
- FAULT

Other Symbols

FORMATION TOP

GAS SHOW

MN DEPTH

NORMAL FAULT

OIL SHOW

OVERTURNED STRATA

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

SLIDE

SURVEY

TRIP GAS

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

Rounding

A ANGULAR

R ROUNDED

a SUBANG

r SUBRND

Textures

BS BOUNDSTONE

C CHALKY

CX CRYPTOXLN

E EARTHY

FX FINELYXLN

GS GRAINSTONE

L LITHOGRAPHIC

MX MICROXLN

MS MUDSTONE

PS PACKSTONE

WS WACKESTONE

Sorting

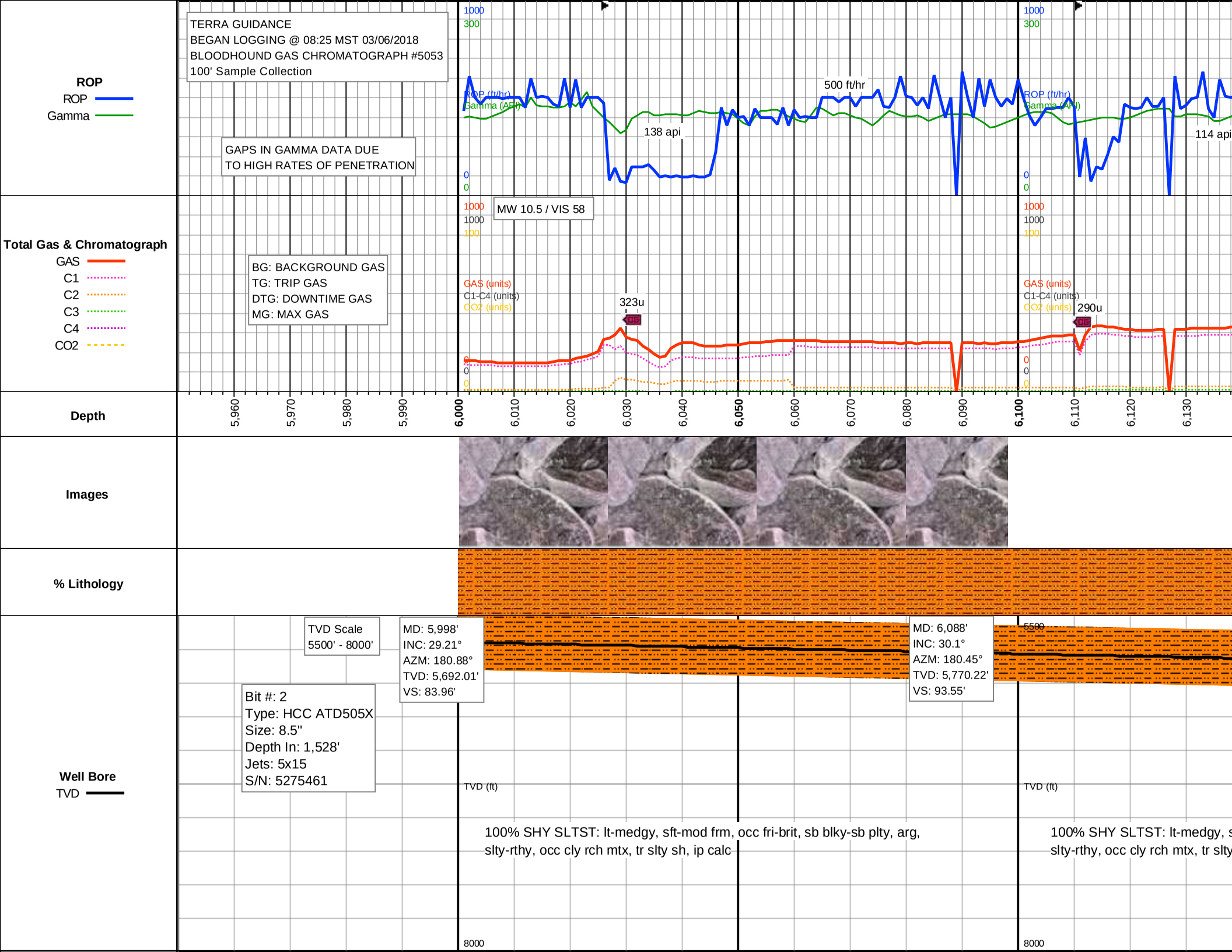
M MODERATE

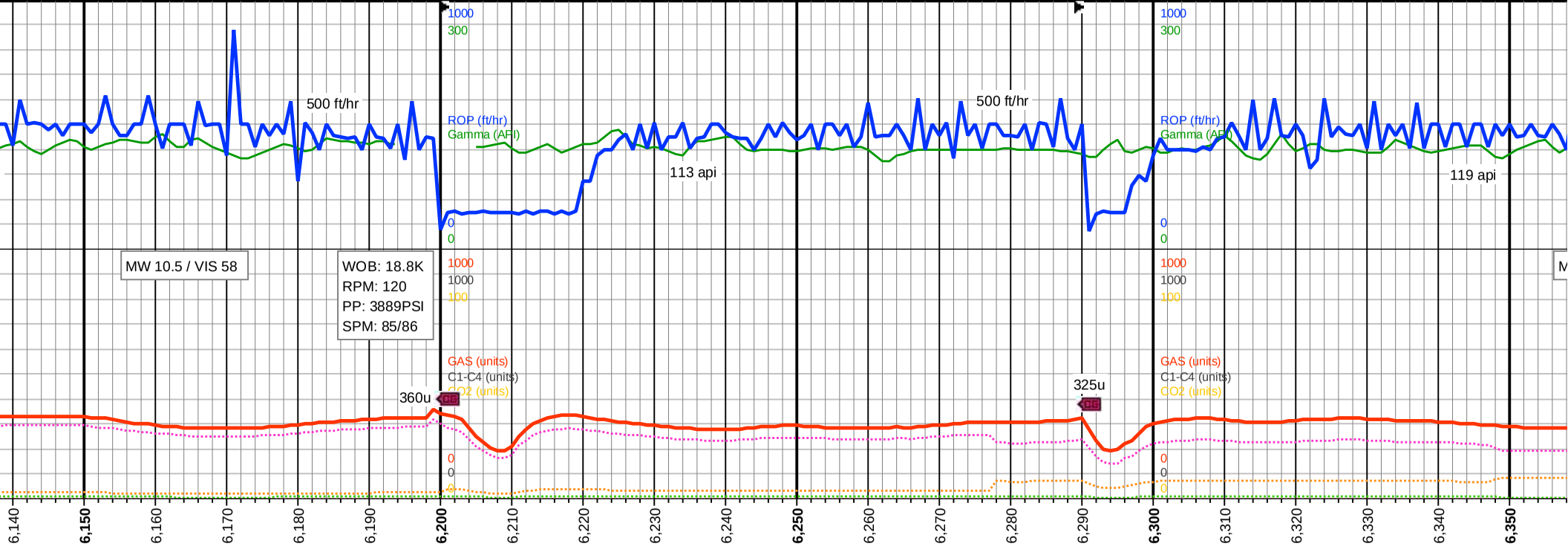
P POOR

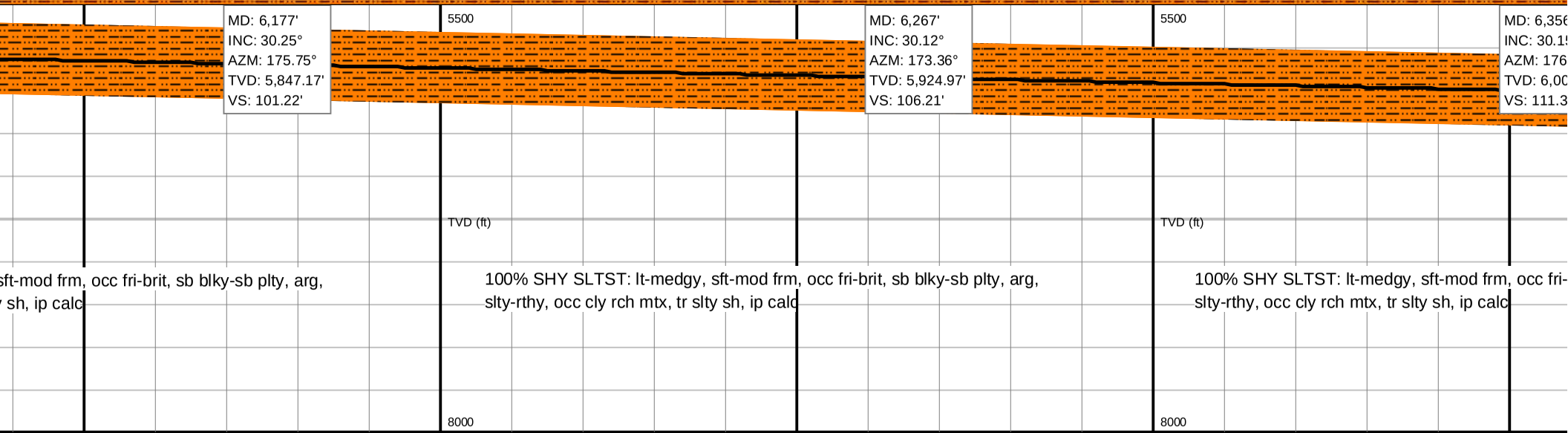
W WELL

CALCARIUOS SHALE

CALCARIOUS SHALE


ROP
ROP
Gamma
TERRA GUIDANCE
BEGAN LOGGING @ 08:25 MST 03/06/2018
BLOODHOUND GAS CHROMATOGRAPH #5053
100' Sample Collection
GAPS IN GAMMA DATA DUE
TO HIGH RATES OF PENETRATION
1000
300
ROP (ft/hr)
Gamma (API)
0
0
138 api
500 ft/hr
114 api
Total Gas & Chromatograph
GAS
C1
C2
C3
C4
CO2
BG: BACKGROUND GAS
TG: TRIP GAS
DTG: DOWNTIME GAS
MG: MAX GAS
MW 10.5 / VIS 58
1000
1000
100
GAS (units)
C1-C4 (units)
CO2 (units)
323u
290u
Depth
5,960
5,970
5,980
5,990
6,000
6,010
6,020
6,030
6,040
6,050
6,060
6,070
6,080
6,090
6,100
6,110
6,120
6,130
Images
% Lithology
Well Bore
TVD
TVD Scale
5500' - 8000'
MD: 5,998'
INC: 29.21°
AZM: 180.88°
TVD: 5,692.01'
VS: 83.96'
MD: 6,088'
INC: 30.1°
AZM: 180.45°
TVD: 5,770.22'
VS: 93.55'
5500
Bit #: 2
Type: HCC ATD505X
Size: 8.5"
Depth In: 1,528'
Jets: 5x15
S/N: 5275461
TVD (ft)
8000
100% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc
100% SHY SLTST: lt-medgy, s
slty-rthy, occ cly rch mtx, tr slty

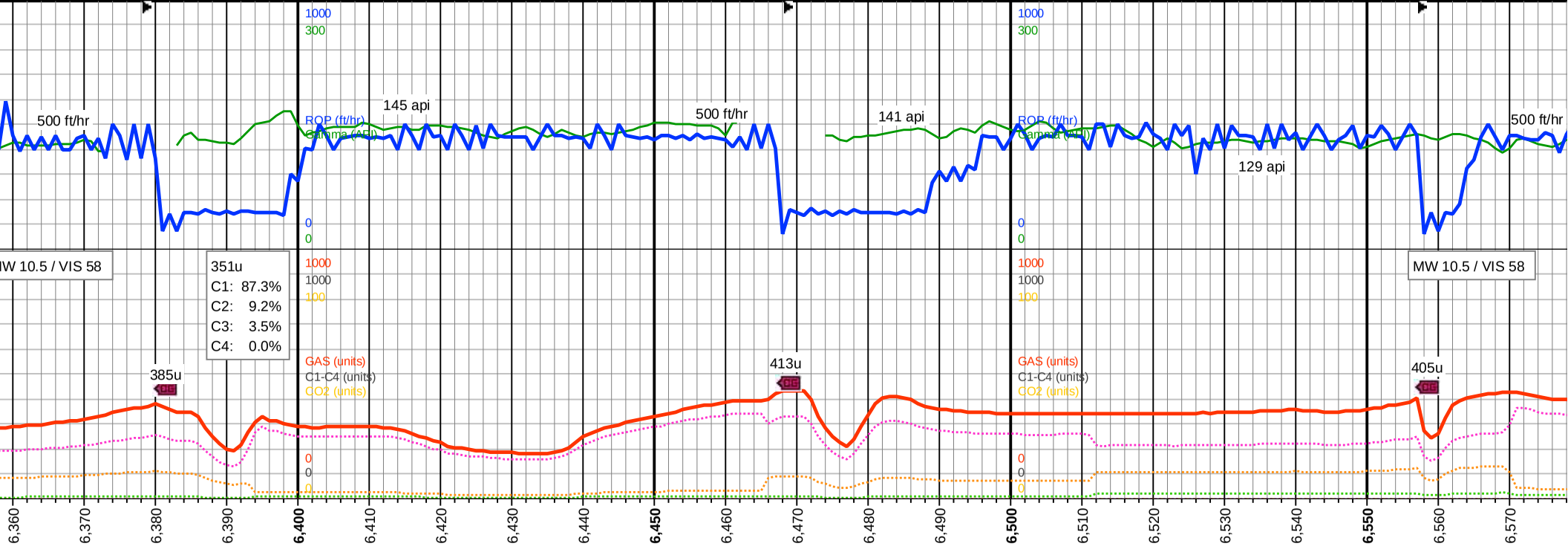


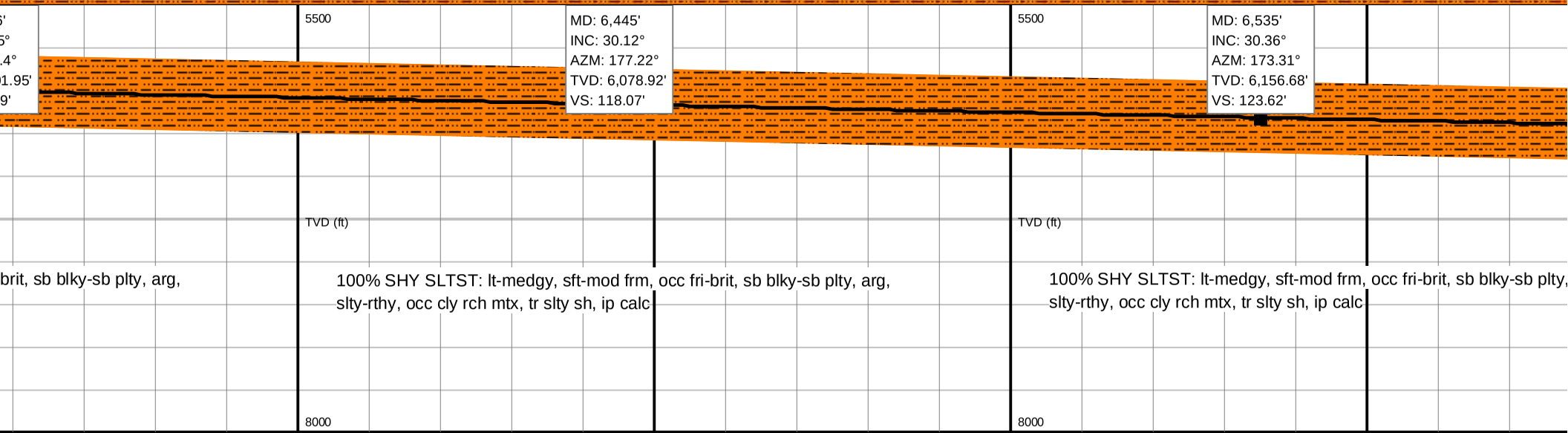


sft-mod frm, occ fri-brit, sb blky-sb plty, arg,
y sh, ip calc

100% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg,
slty-rthy, occ cly rch mtx, tr slty sh, ip calc

100% SHY SLTST: lt-medgy, sft-mod frm, occ fri-
slty-rthy, occ cly rch mtx, tr slty sh, ip calc

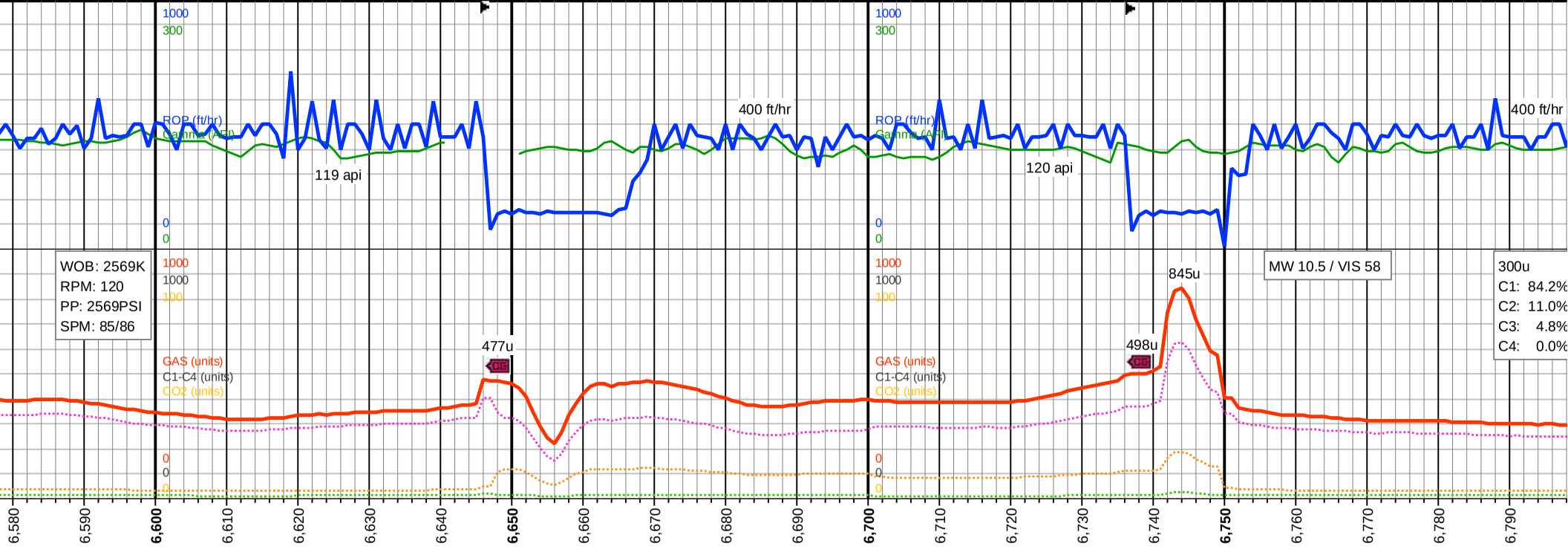


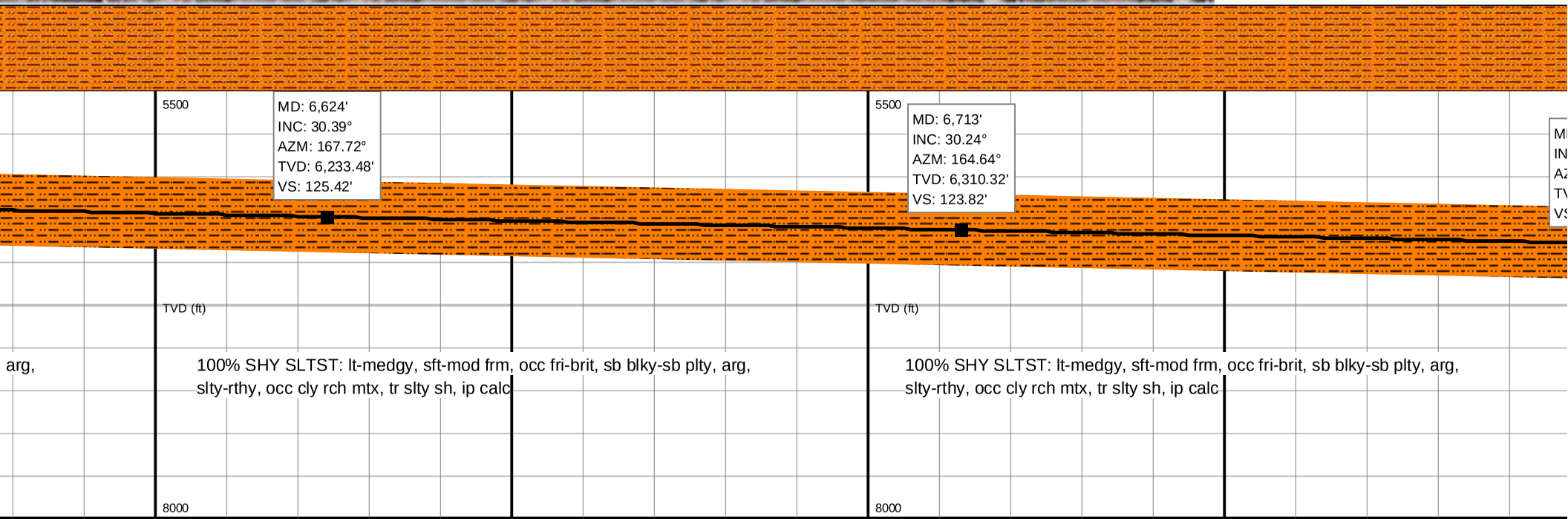


brit, sb blky-sb plty, arg,

100% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc

100% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, slty-rthy, occ cly rch mtx, tr slty sh, ip calc

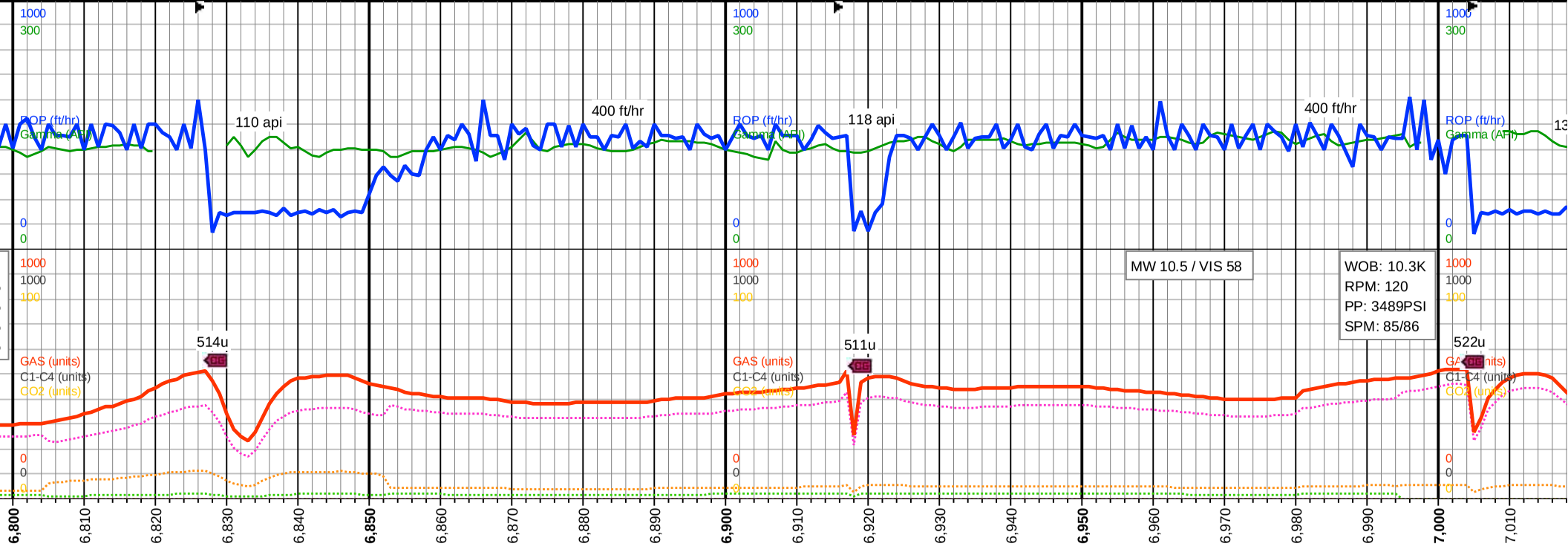


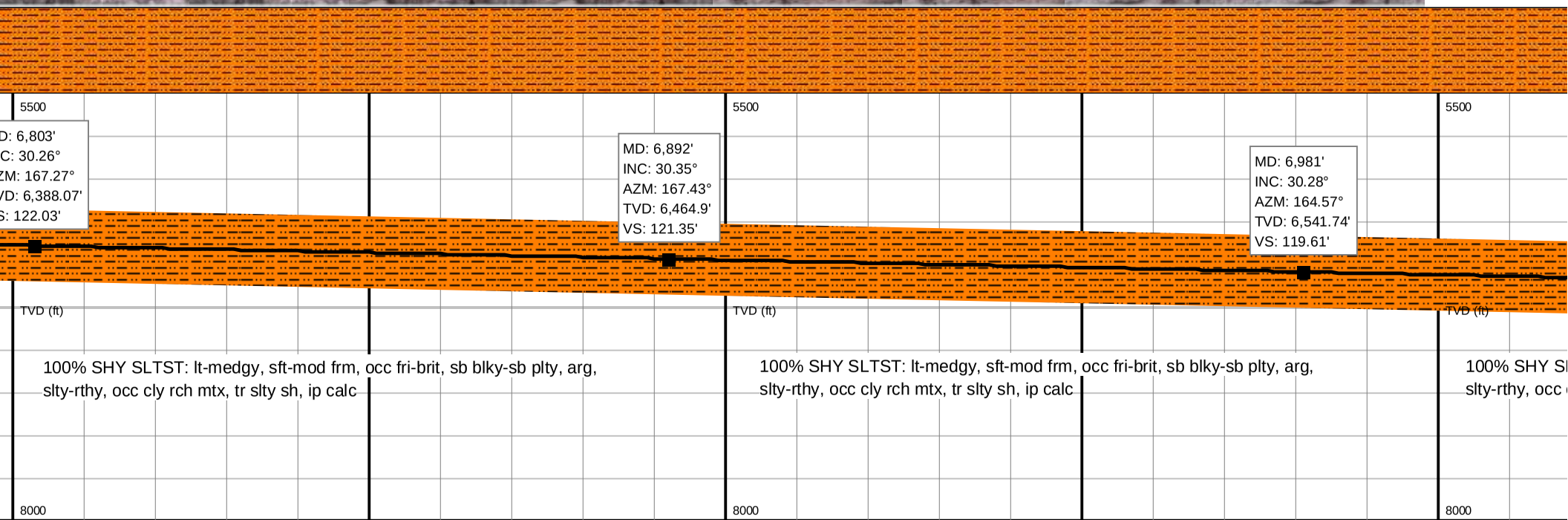


arg,

100% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc

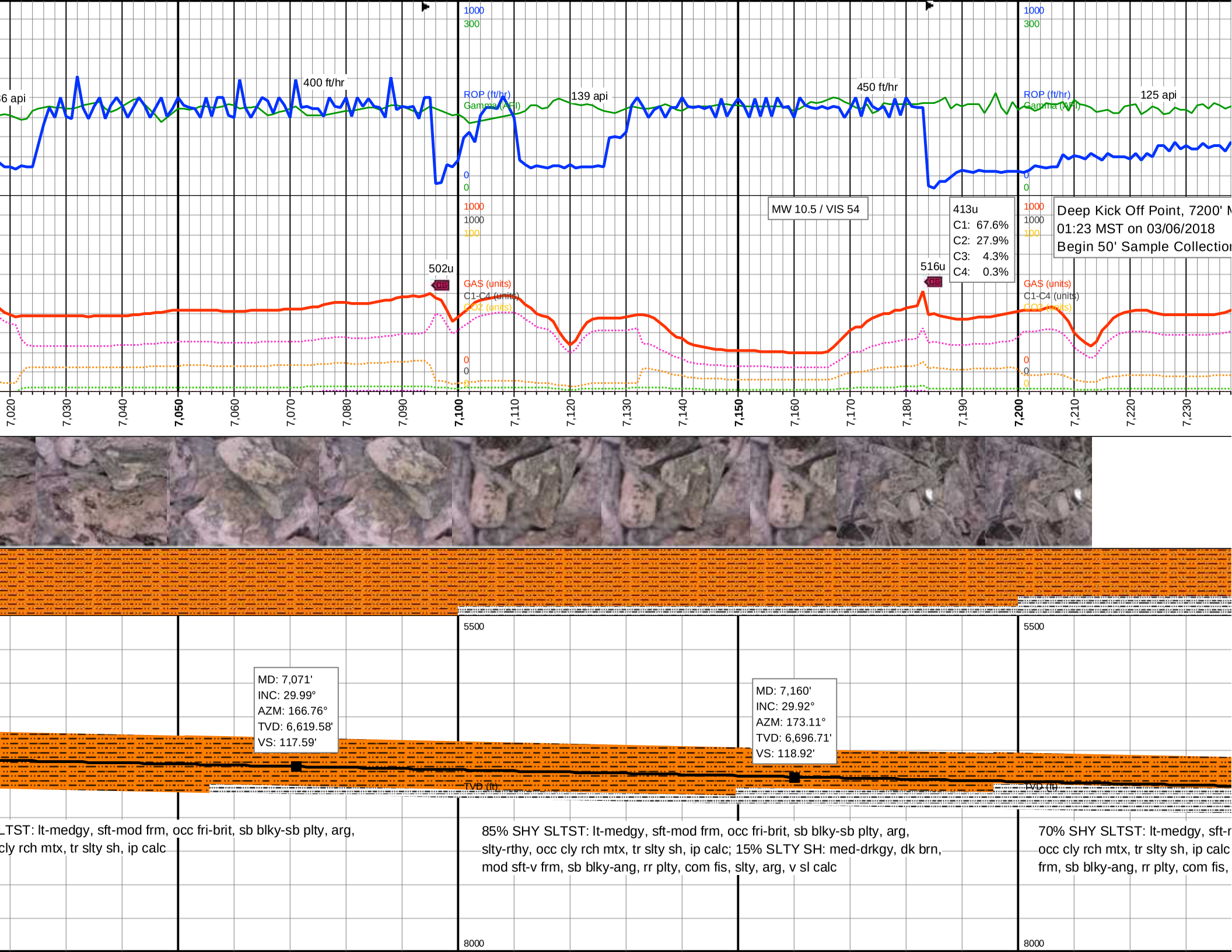
100% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc





100% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc

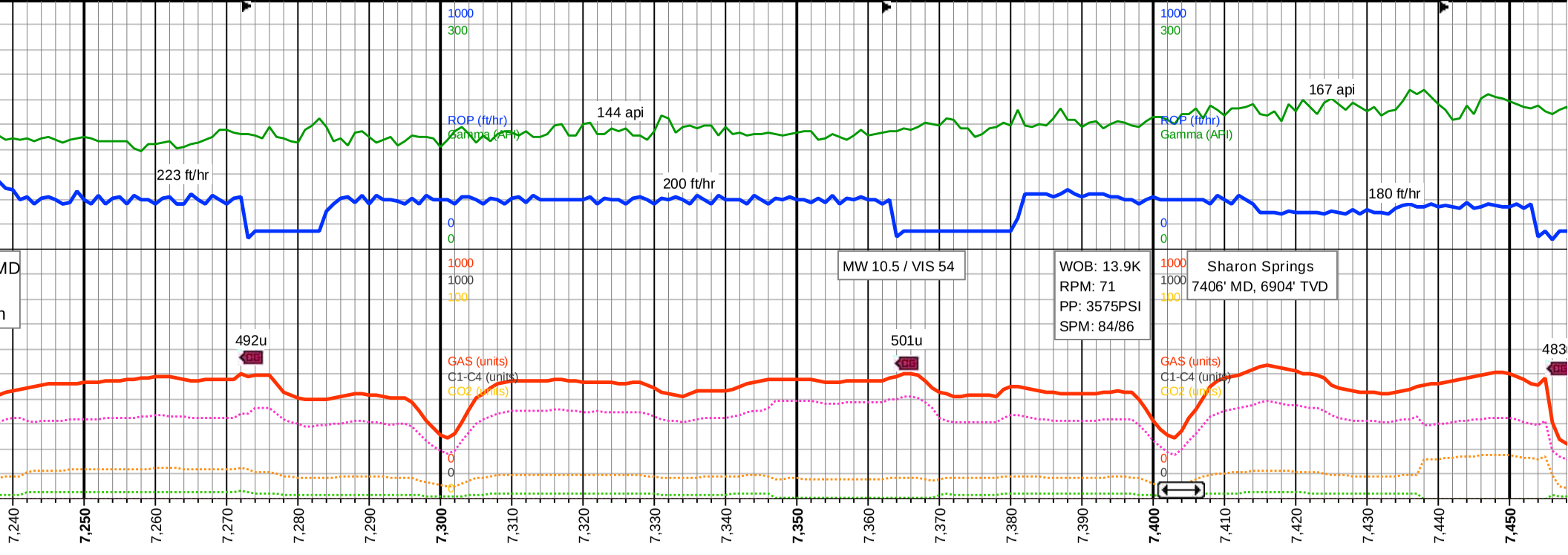
100% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc

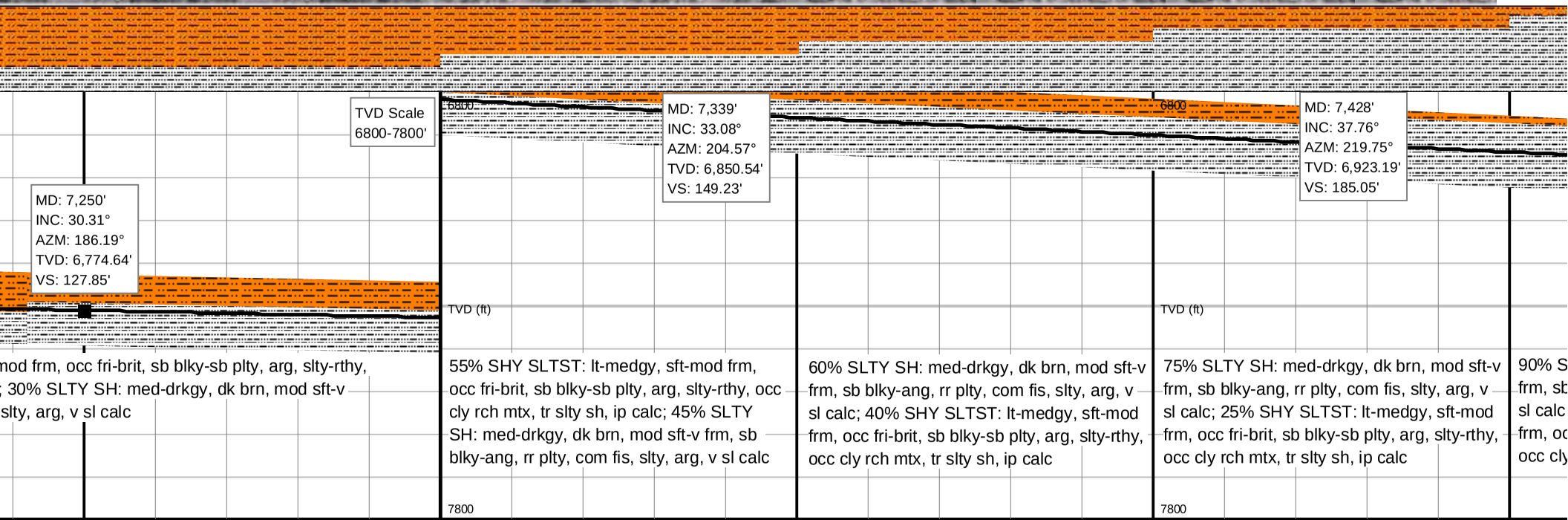


LTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, cly rch mtx, tr slty sh, ip calc

85% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc; 15% SLTY SH: med-drkgy, dk brn, mod sft-v frm, sb blky-ang, rr plty, com fis, slty, arg, v sl calc

70% SHY SLTST: lt-medgy, sft-r occ cly rch mtx, tr slty sh, ip calc frm, sb blky-ang, rr plty, com fis,





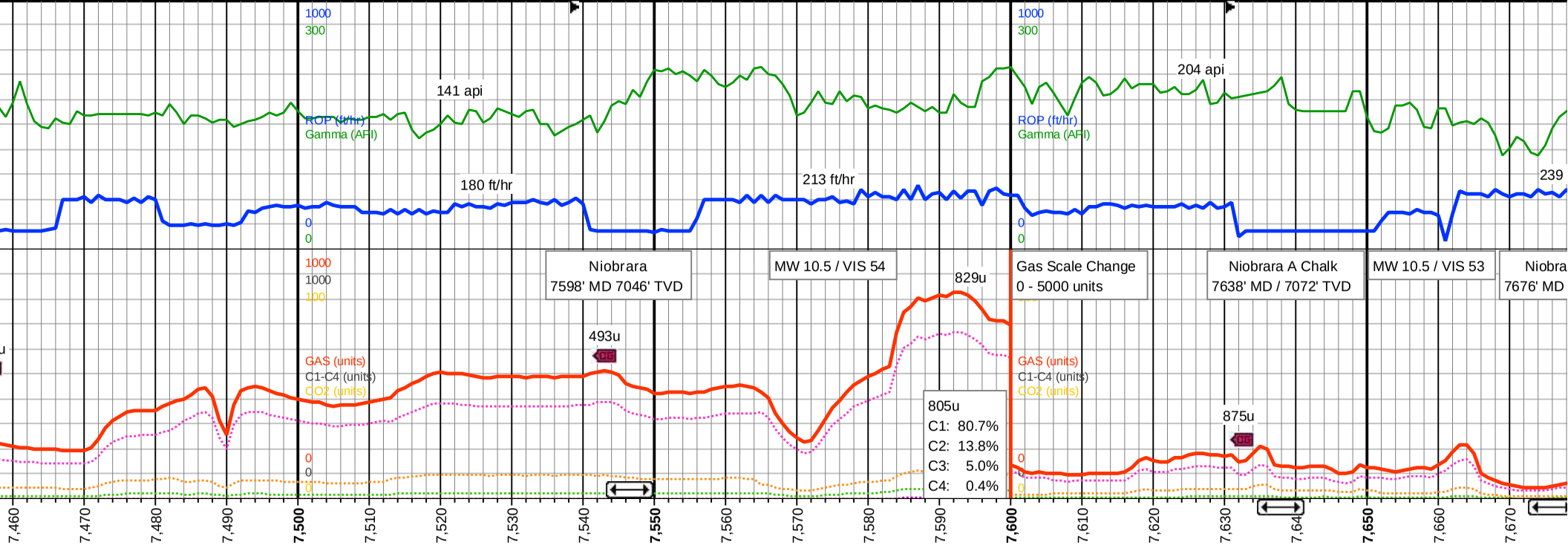
mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, ; 30% SLTY SH: med-drkgy, dk brn, mod sft-v slty, arg, v sl calc

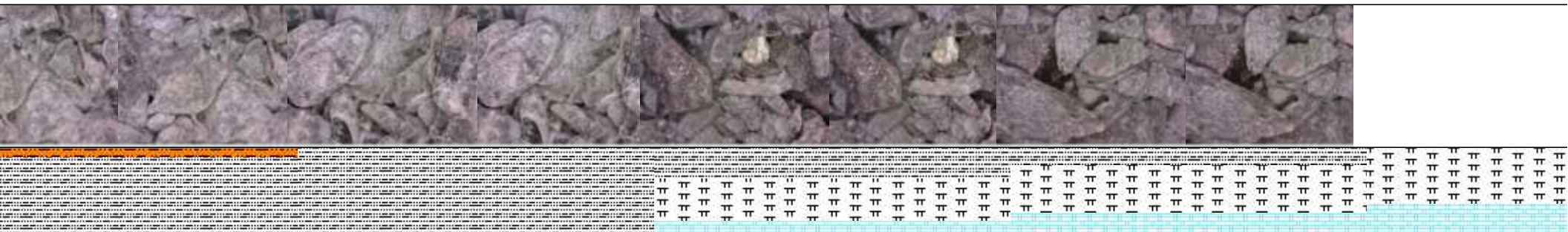
55% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc; 45% SLTY SH: med-drkgy, dk brn, mod sft-v frm, sb blky-ang, rr plty, com fis, slty, arg, v sl calc

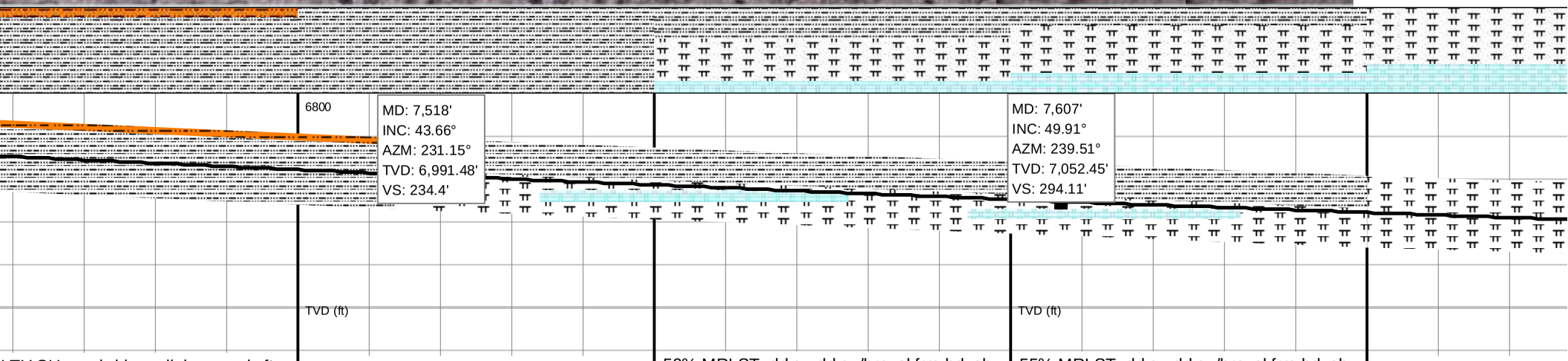
60% SLTY SH: med-drkgy, dk brn, mod sft-v frm, sb blky-ang, rr plty, com fis, slty, arg, v sl calc; 40% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc

75% SLTY SH: med-drkgy, dk brn, mod sft-v frm, sb blky-ang, rr plty, com fis, slty, arg, v sl calc; 25% SHY SLTST: lt-medgy, sft-mod frm, occ fri-brit, sb blky-sb plty, arg, slty-rthy, occ cly rch mtx, tr slty sh, ip calc

90% S frm, sb sl calc frm, oc occ cly







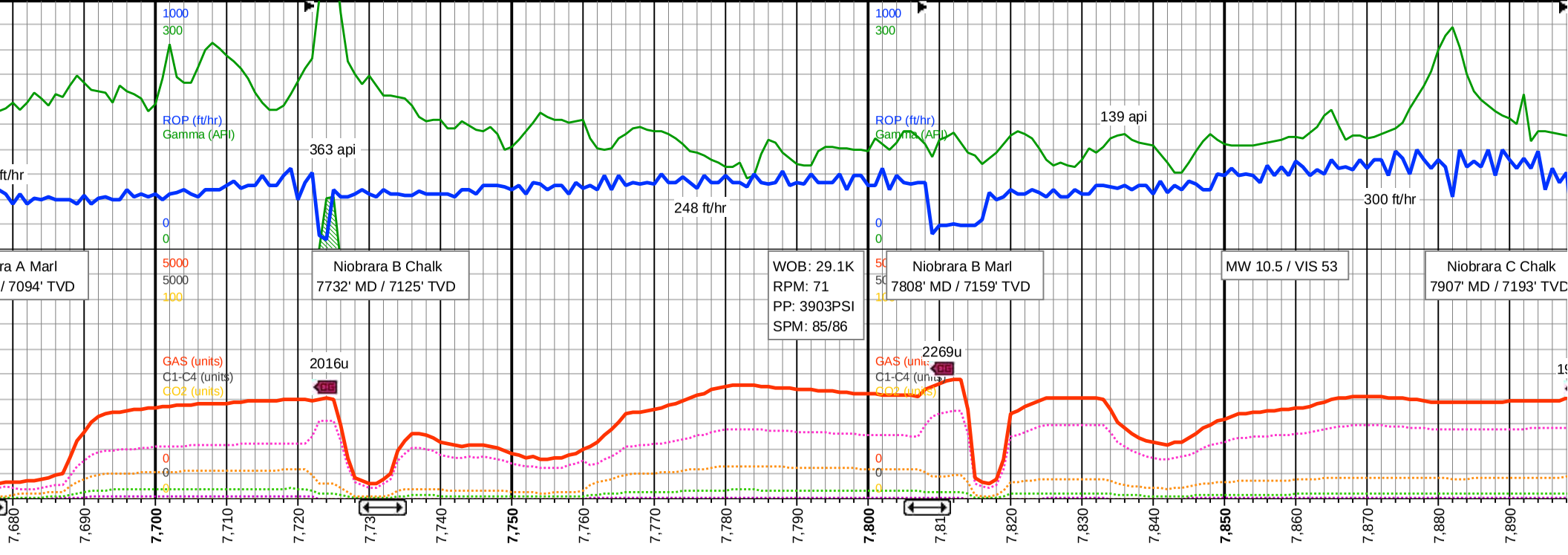
LTY SH: med-drkgy, dk brn, mod sft-v
blky-ang, rr plty, com fis, slty, arg, v
; 10% SHY SLTST: lt-medgy, sft-mod
cc fri-brit, sb blky-sb plty, arg, slty-rthy,
rch mtx, tr slty sh, ip calc

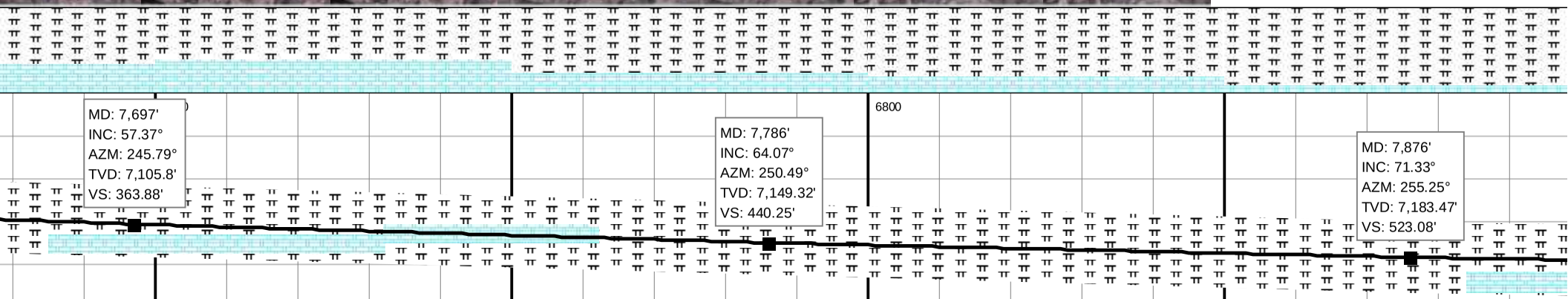
100% SLTY SH: med-drkgy, dk brn, mod sft-v frm, sb blky-ang, rr plty, com fis, slty, arg, v sl calc

50% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc ; 35% SLTY SH: med-drkgy, dk brn, mod sft-v frm, sb blky-ang, rr plty, com fis, slty, arg, v sl calc; 15% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; occ bent

55% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 25% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 20% SLTY SH: med-drkgy, dk brn, mod sft-v frm, sb blky-ang, rr plty, com fis, slty, arg, v sl calc; tr bent

65% MRLST: drkgy-drkgy
blky-ang, ip amor, rthy, sl
CHK: medgy-gy/brn, occ
mrl, mod sft-frm, sb blky,
tr bent





/brn, sl frm-hd, sb
ty, v arg, calc; 35%
ltr gy, com intbd wi
rthy-sb wxy, v calc;

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

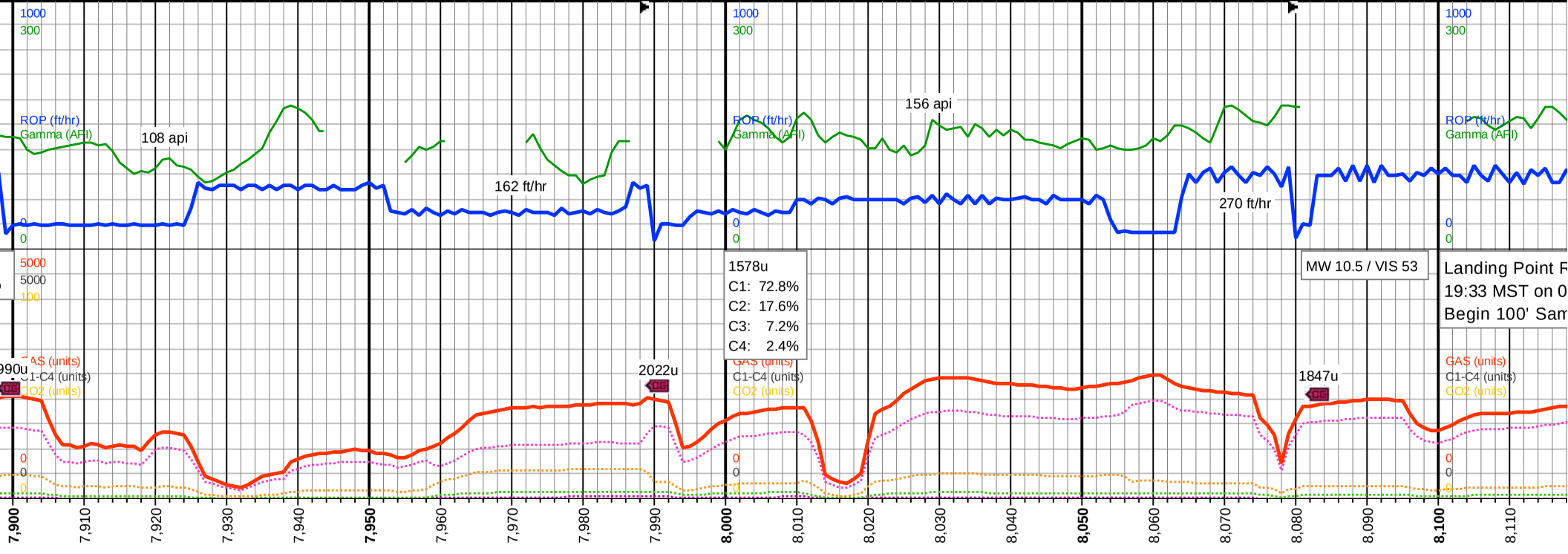
7800

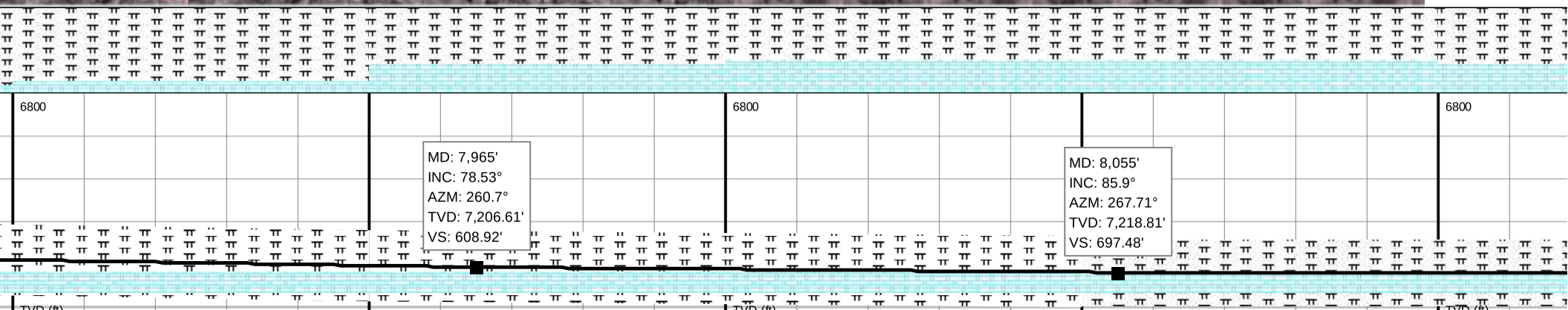
75% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 25% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

80% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 20% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

7800

90% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 10% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent





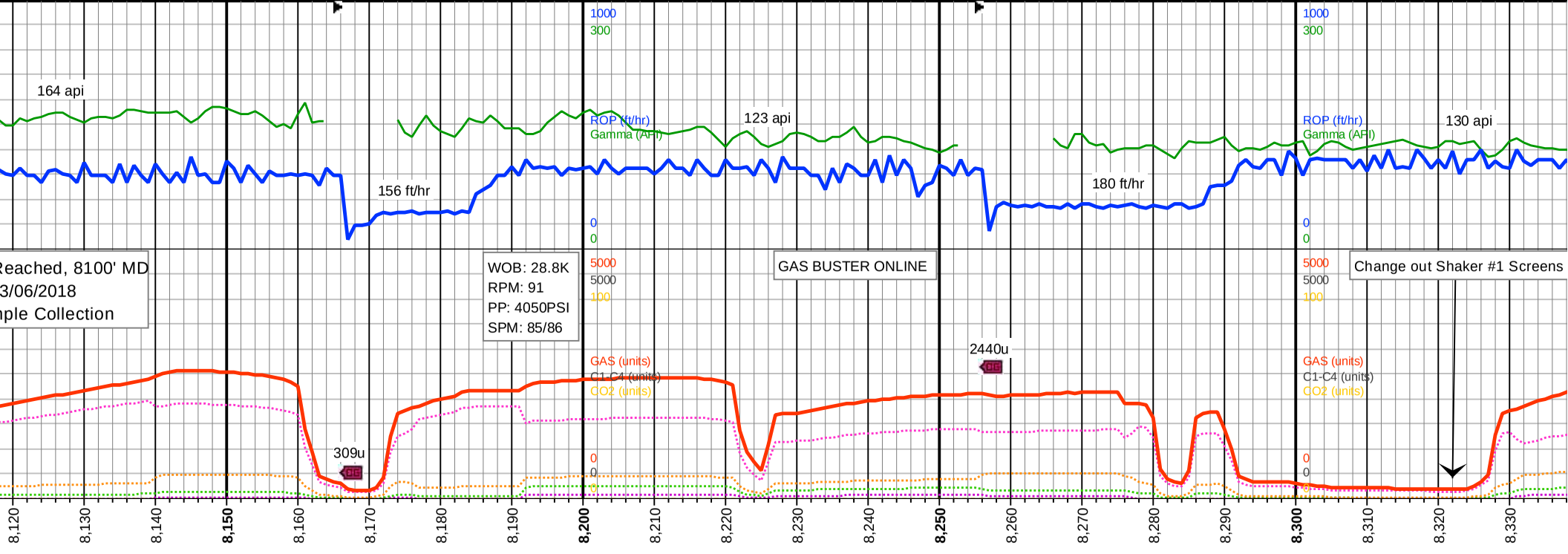
85% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 15% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

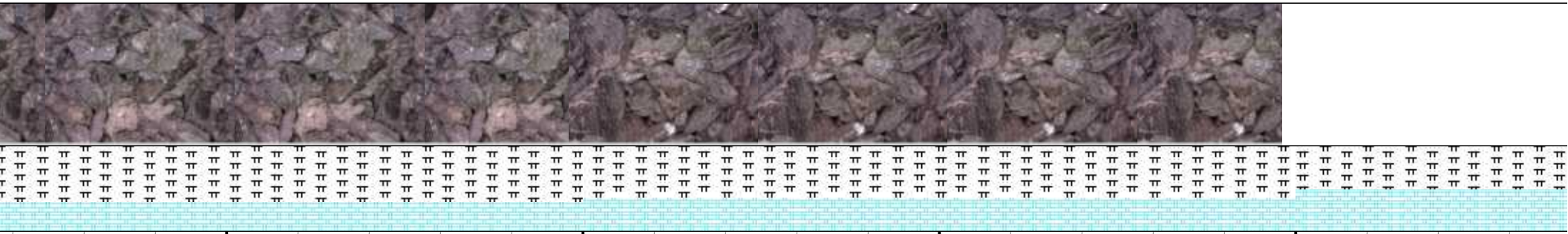
65% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 35% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

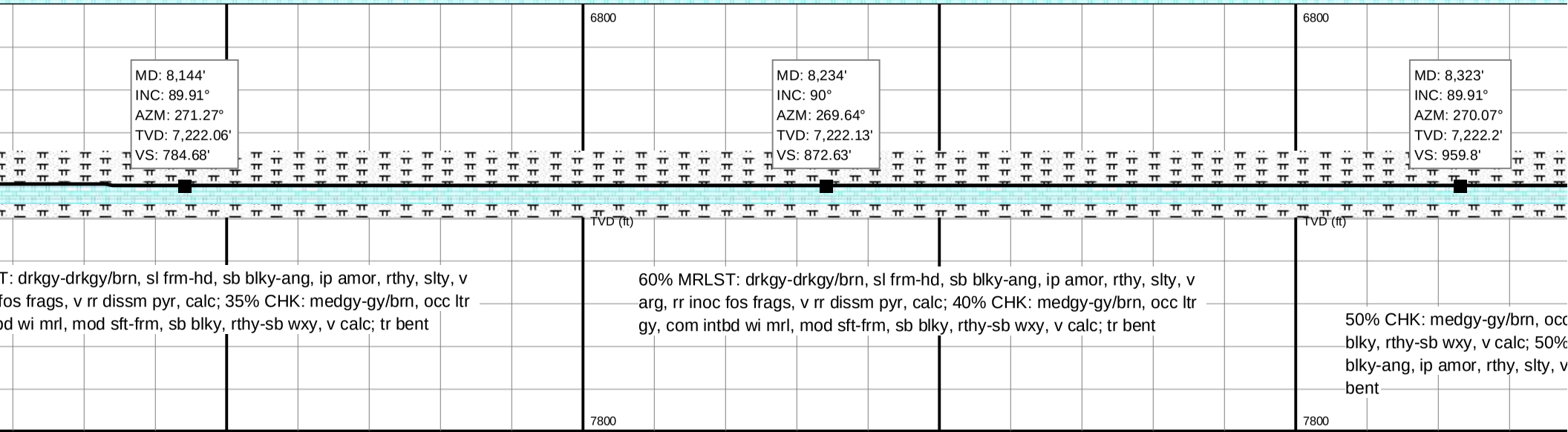
60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, rr inoc fos frags, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, rr inoc fos frags, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

65% MRLST
arg, rr inoc
gy, com intb



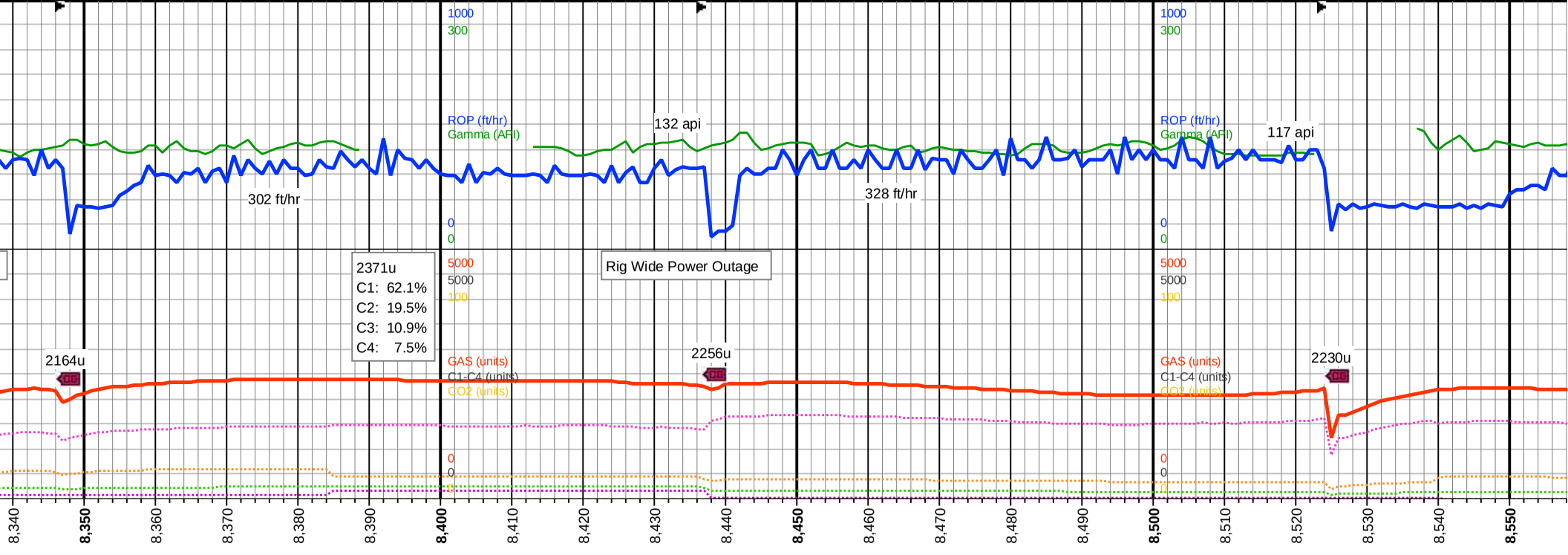


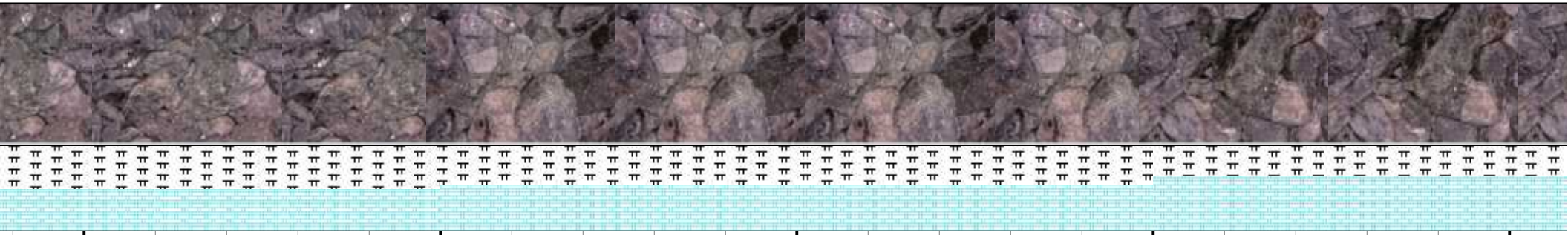


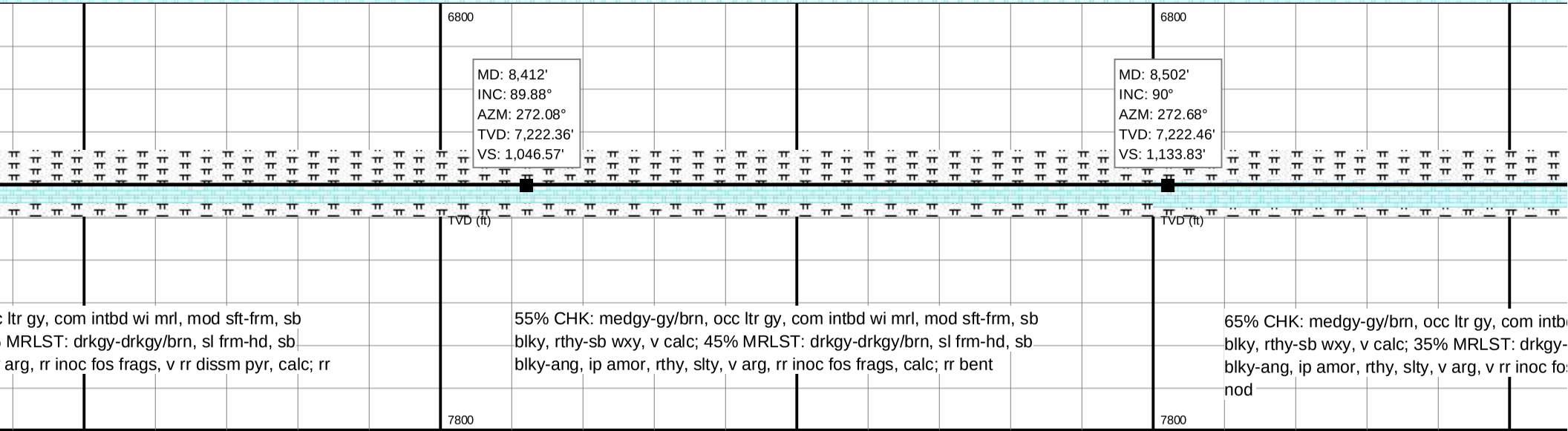
T: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v fos frags, v rr dissm pyr, calc; 35% CHK: medgy-gy/brn, occ ltr bd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, rr inoc fos frags, v rr dissm pyr, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

50% CHK: medgy-gy/brn, occ blky, rthy-sb wxy, v calc; 50% blky-ang, ip amor, rthy, slty, v bent



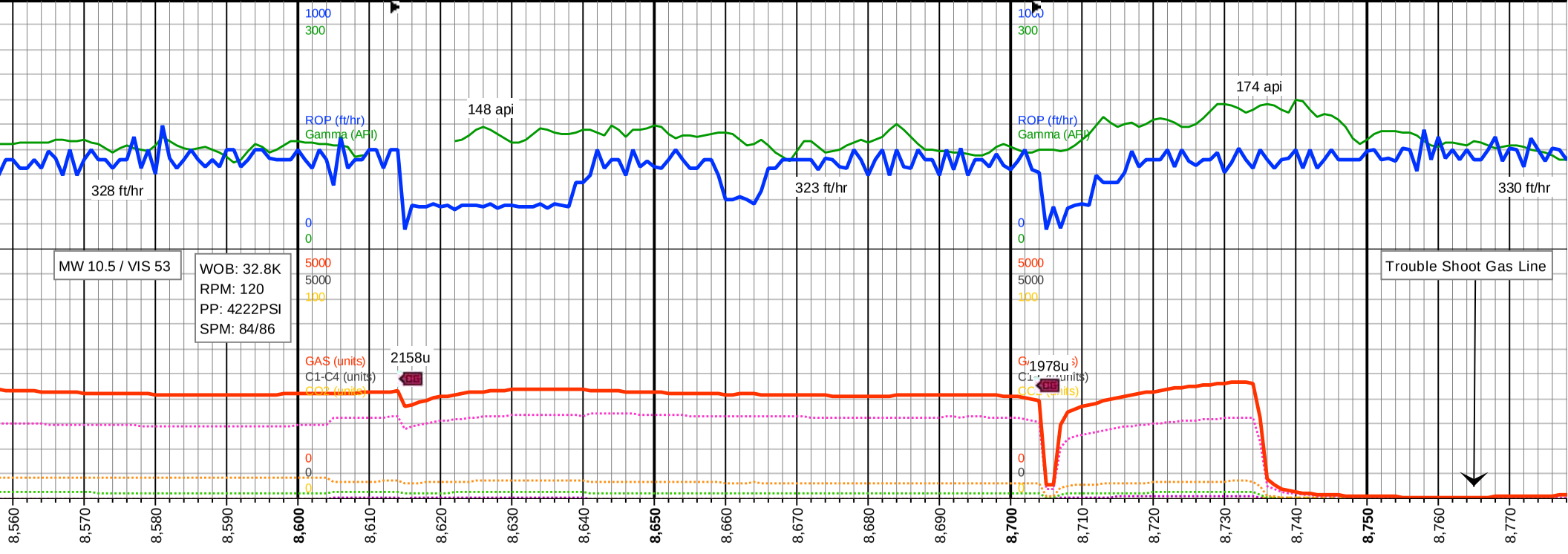


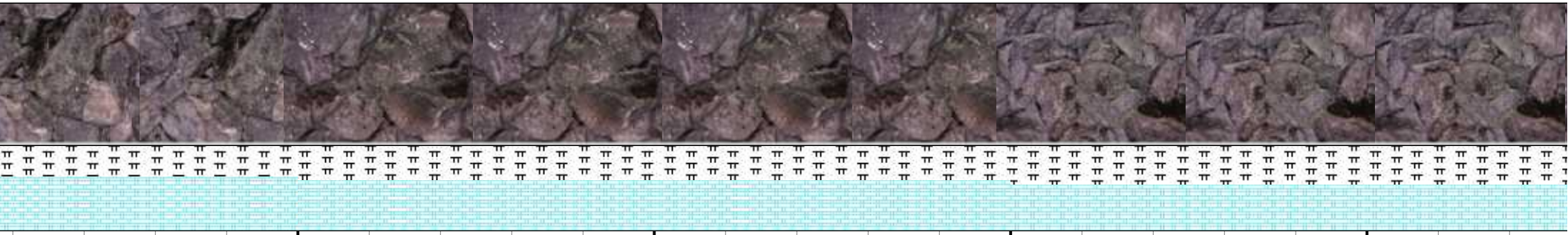


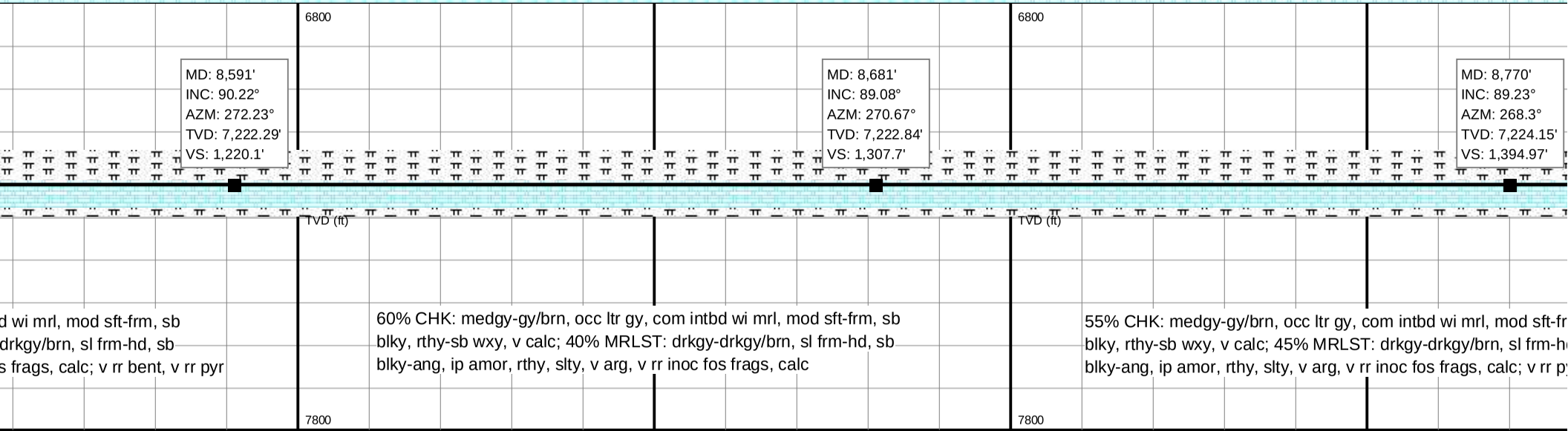
c ltr gy, com intbd wi mrl, mod sft-frm, sb
MRLST: drkgy-drkgy/brn, sl frm-hd, sb
arg, rr inoc fos frags, v rr dissm pyr, calc; rr

55% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb
blky, rthy-sb wxy, v calc; 45% MRLST: drkgy-drkgy/brn, sl frm-hd, sb
blky-ang, ip amor, rthy, slty, v arg, rr inoc fos frags, calc; rr bent

65% CHK: medgy-gy/brn, occ ltr gy, com intbd
blky, rthy-sb wxy, v calc; 35% MRLST: drkgy-
blky-ang, ip amor, rthy, slty, v arg, v rr inoc fos
nod



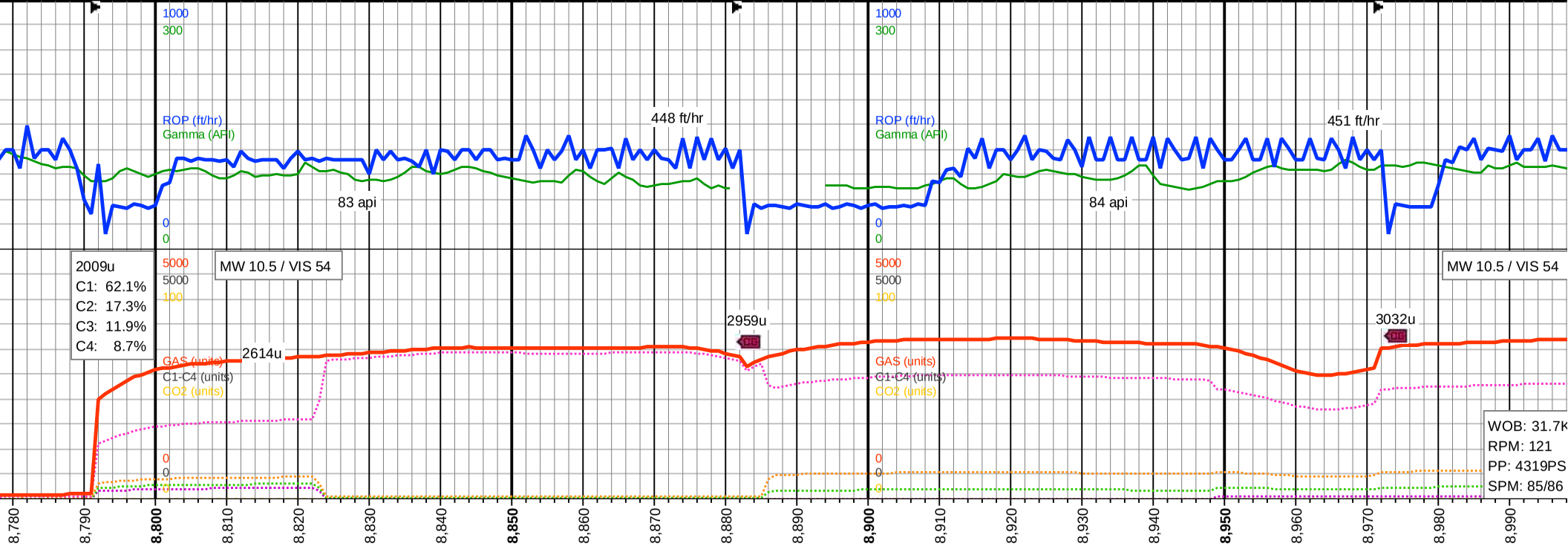


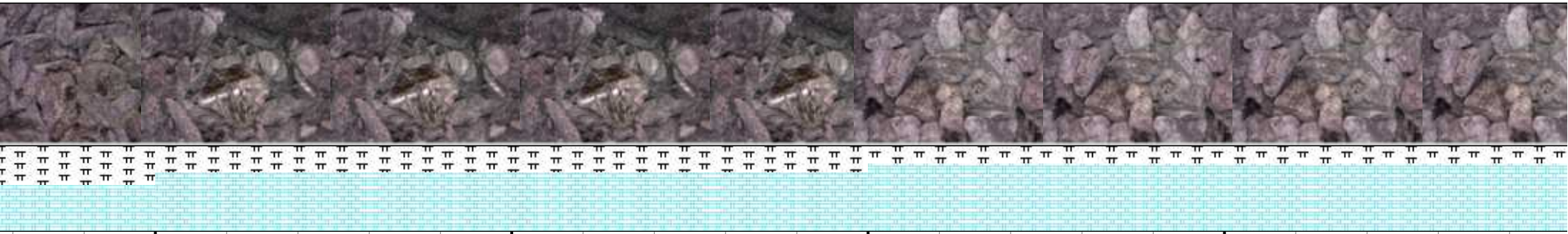


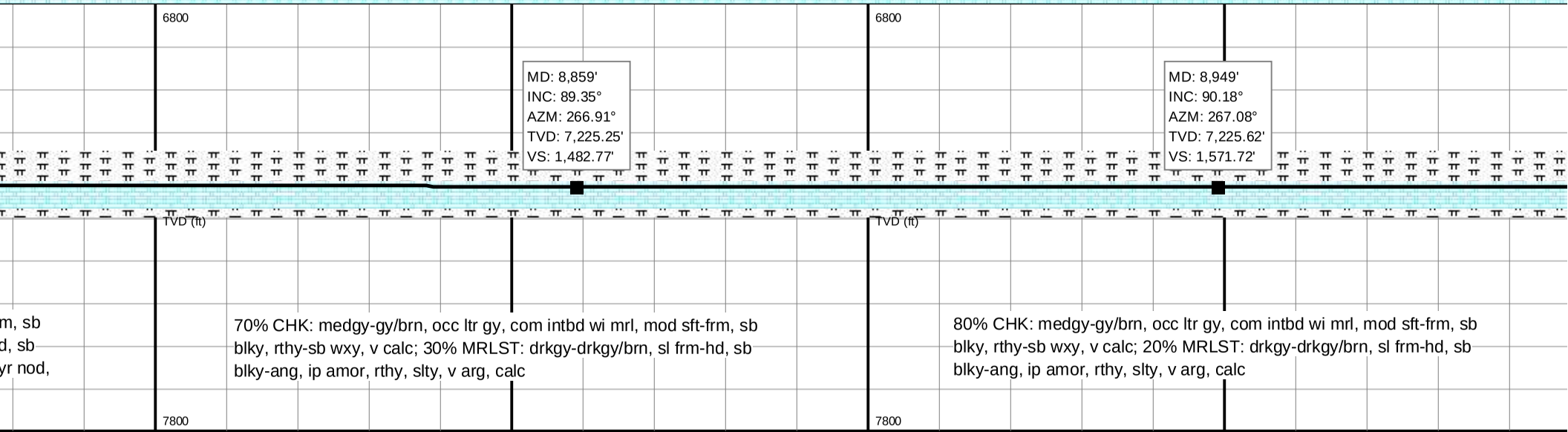
d wi mrl, mod sft-frm, sb
drkgy/brn, sl frm-hd, sb
s frags, calc; v rr bent, v rr pyr

60% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 40% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, v rr inoc fos frags, calc

55% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-fr
blky, rthy-sb wxy, v calc; 45% MRLST: drkgy-drkgy/brn, sl frm-h
blky-ang, ip amor, rthy, slty, v arg, v rr inoc fos frags, calc; v rr p



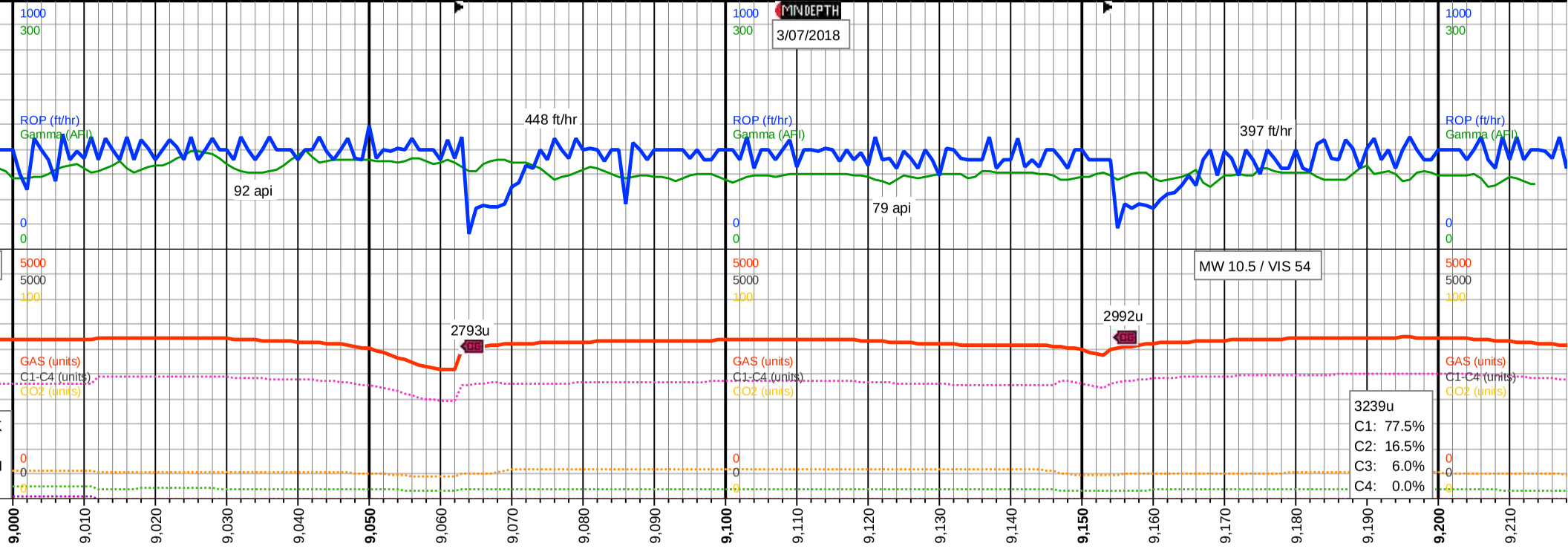


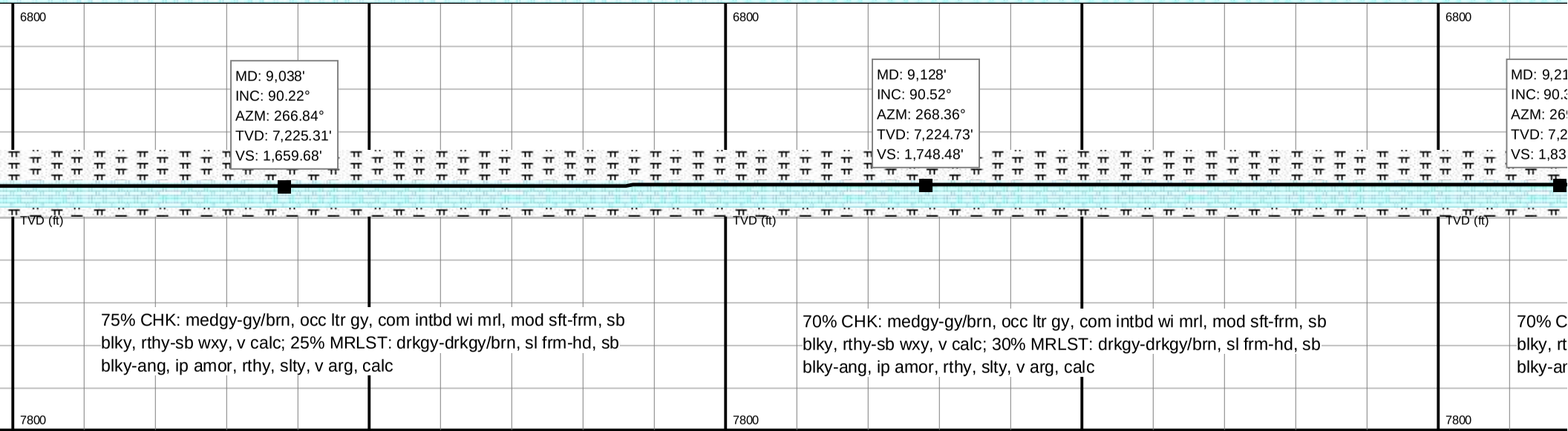


m, sb
d, sb
yr nod,

70% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 30% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

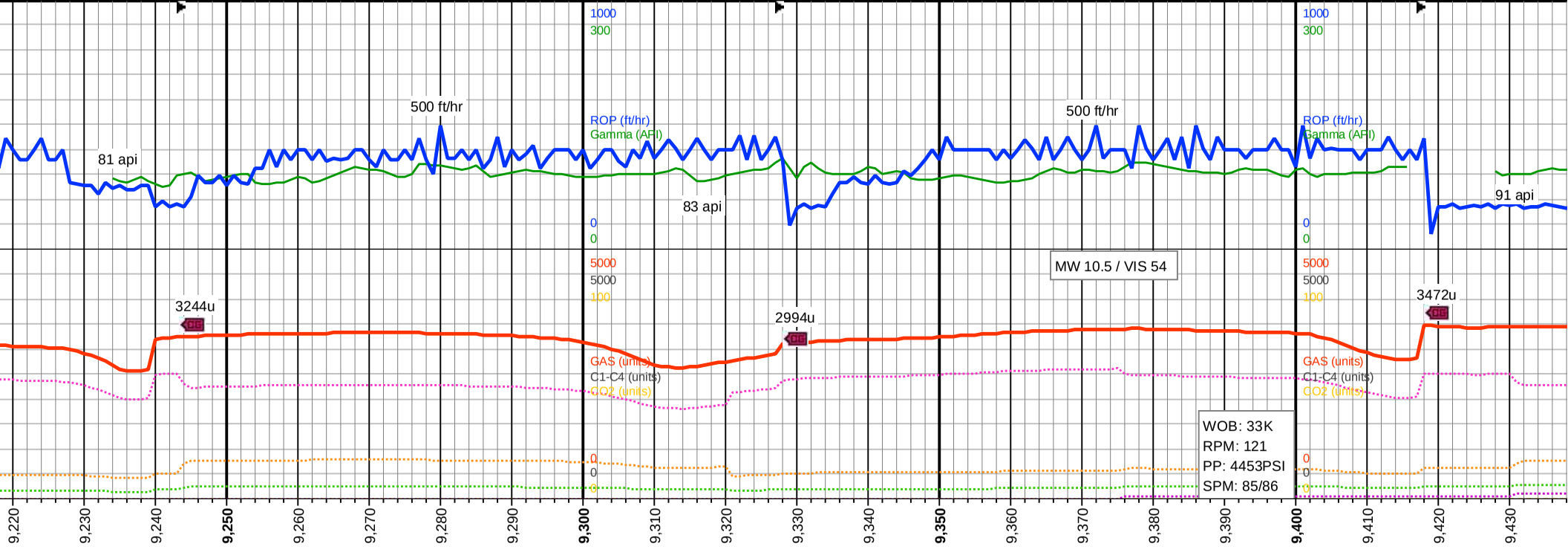
80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

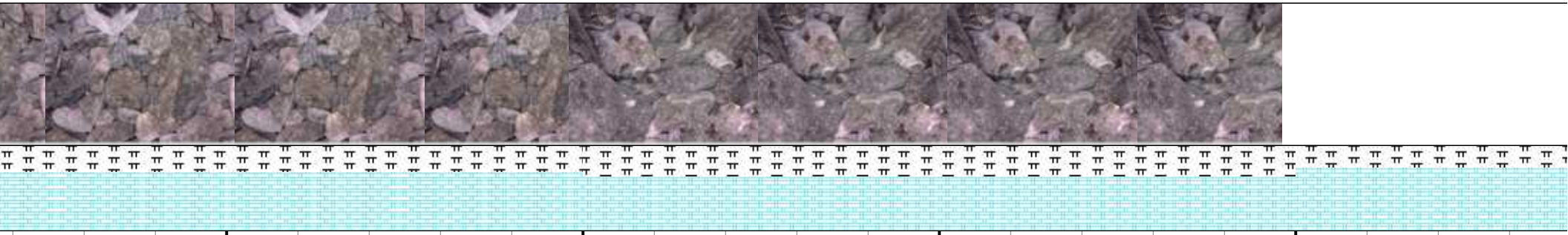


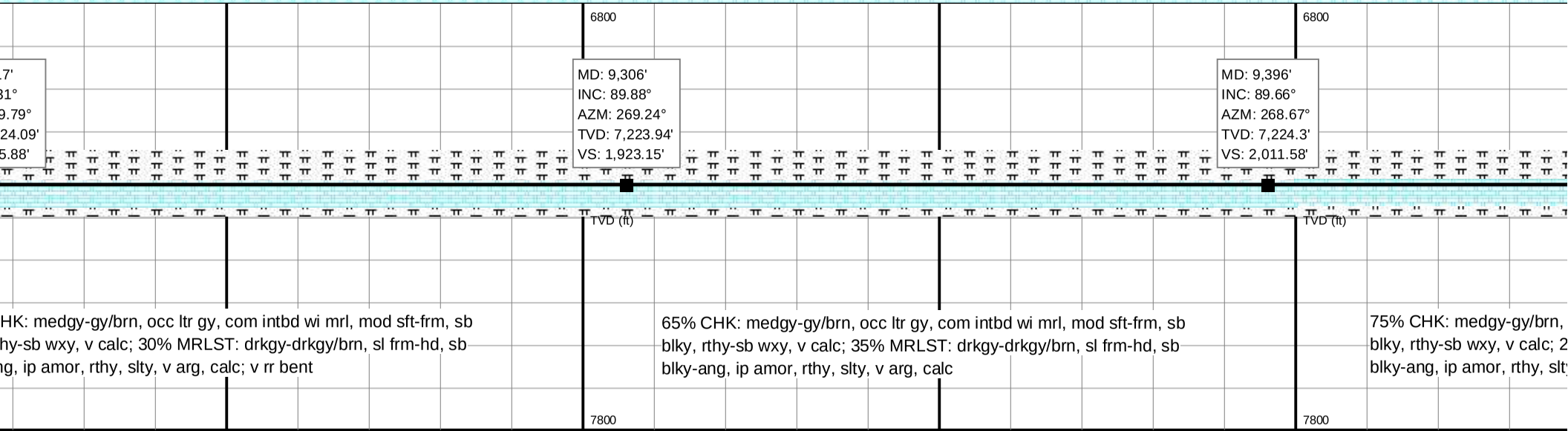


75% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 25% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

70% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 30% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc



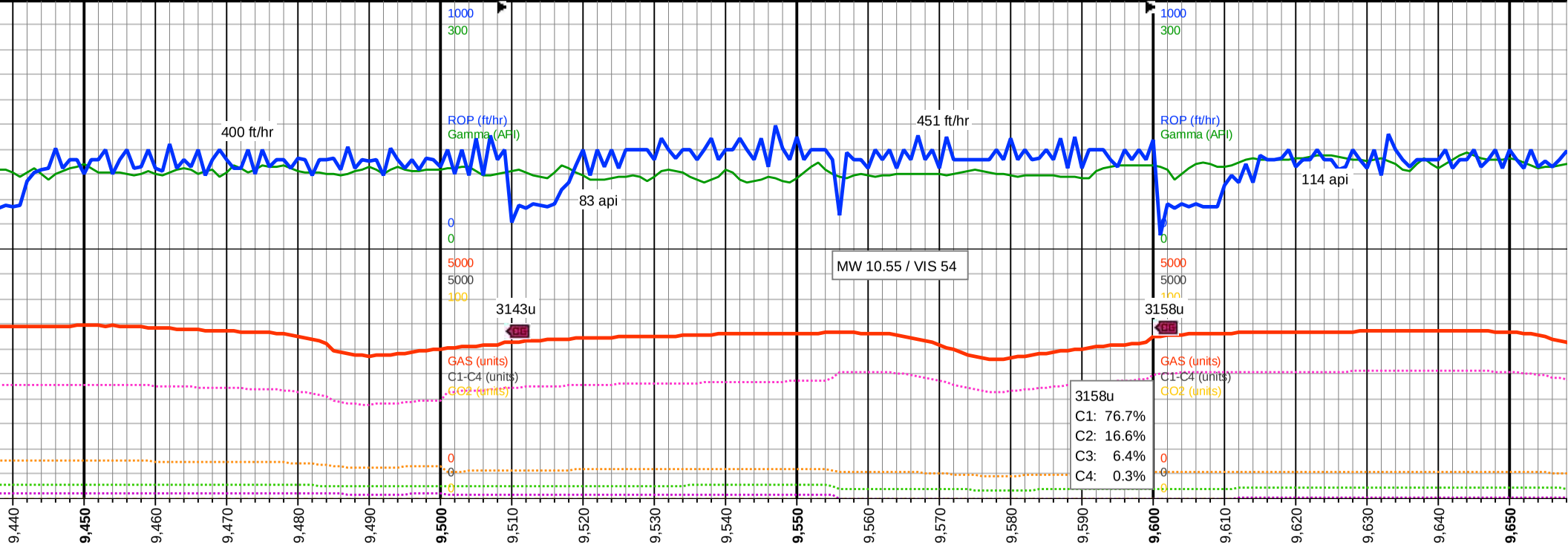


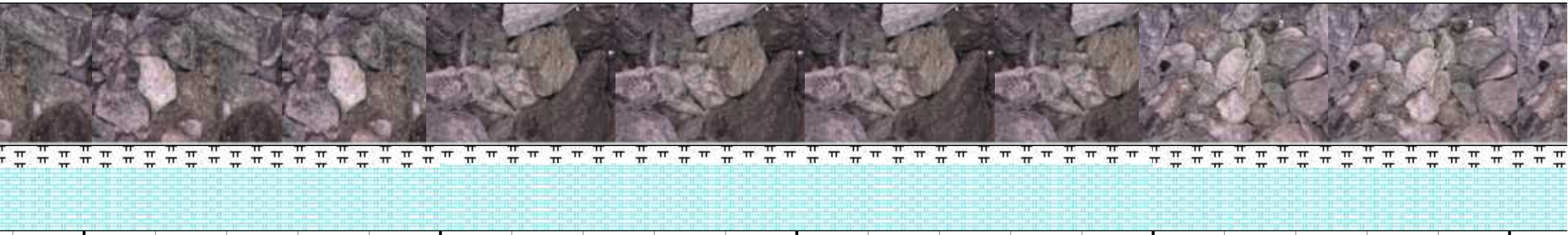


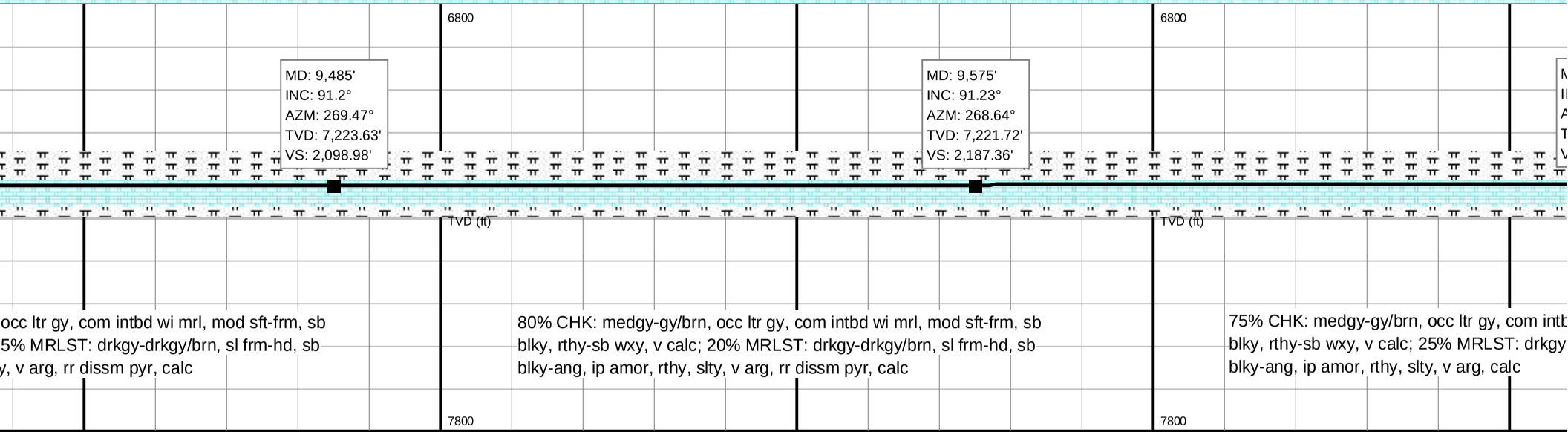
HK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb
hy-sb wxy, v calc; 30% MRLST: drkgy-drkgy/brn, sl frm-hd, sb
g, ip amor, rthy, slty, v arg, calc; v rr bent

65% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb
blky, rthy-sb wxy, v calc; 35% MRLST: drkgy-drkgy/brn, sl frm-hd, sb
blky-ang, ip amor, rthy, slty, v arg, calc

75% CHK: medgy-gy/brn,
blky, rthy-sb wxy, v calc; 2
blky-ang, ip amor, rthy, slt



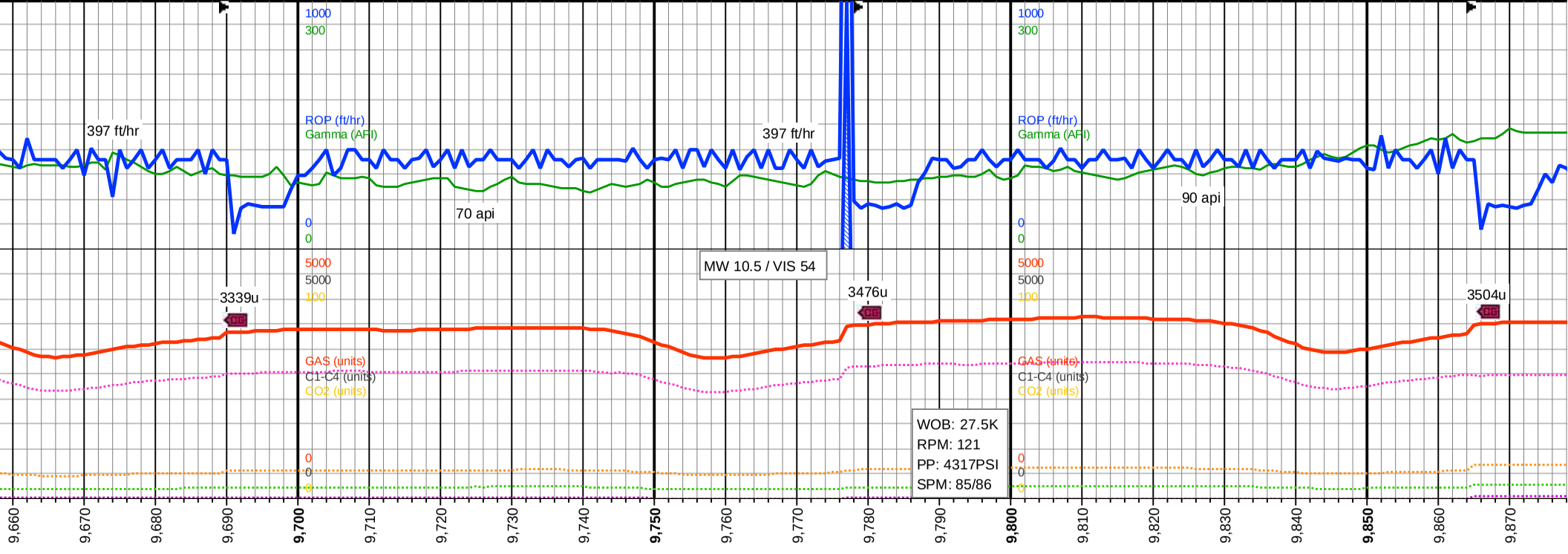


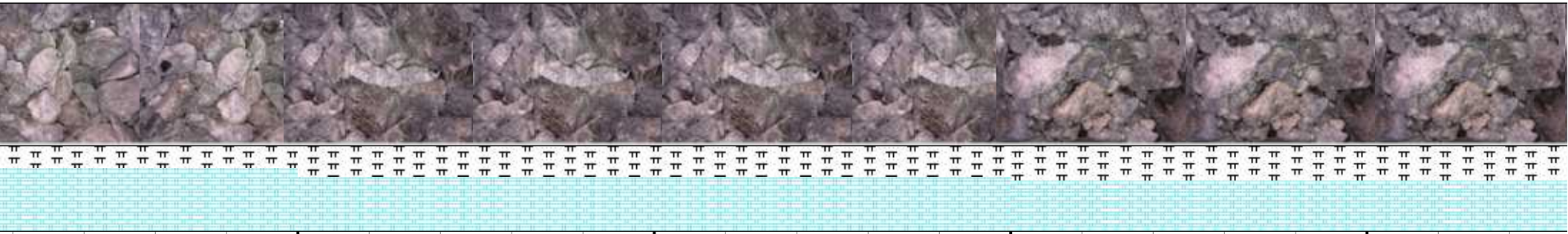


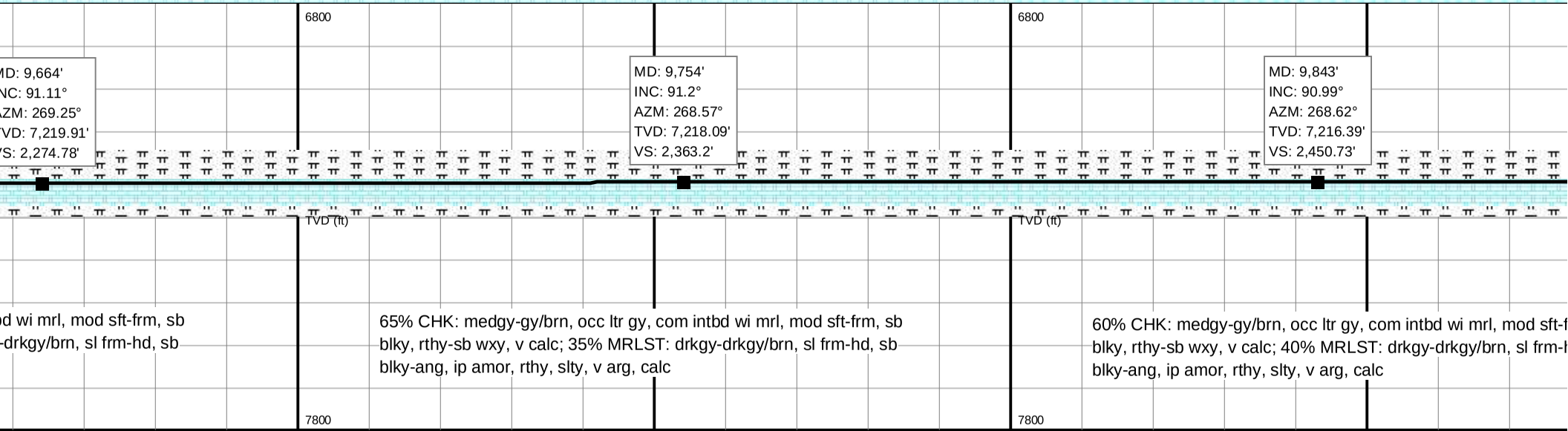
occ ltr gy, com intbd wi mrl, mod sft-frm, sb
5% MRLST: drkgy-drkgy/brn, sl frm-hd, sb
y, v arg, rr dissm pyr, calc

80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb
blky, rthy-sb wxy, v calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb
blky-ang, ip amor, rthy, slty, v arg, rr dissm pyr, calc

75% CHK: medgy-gy/brn, occ ltr gy, com intb
blky, rthy-sb wxy, v calc; 25% MRLST: drkgy
blky-ang, ip amor, rthy, slty, v arg, calc



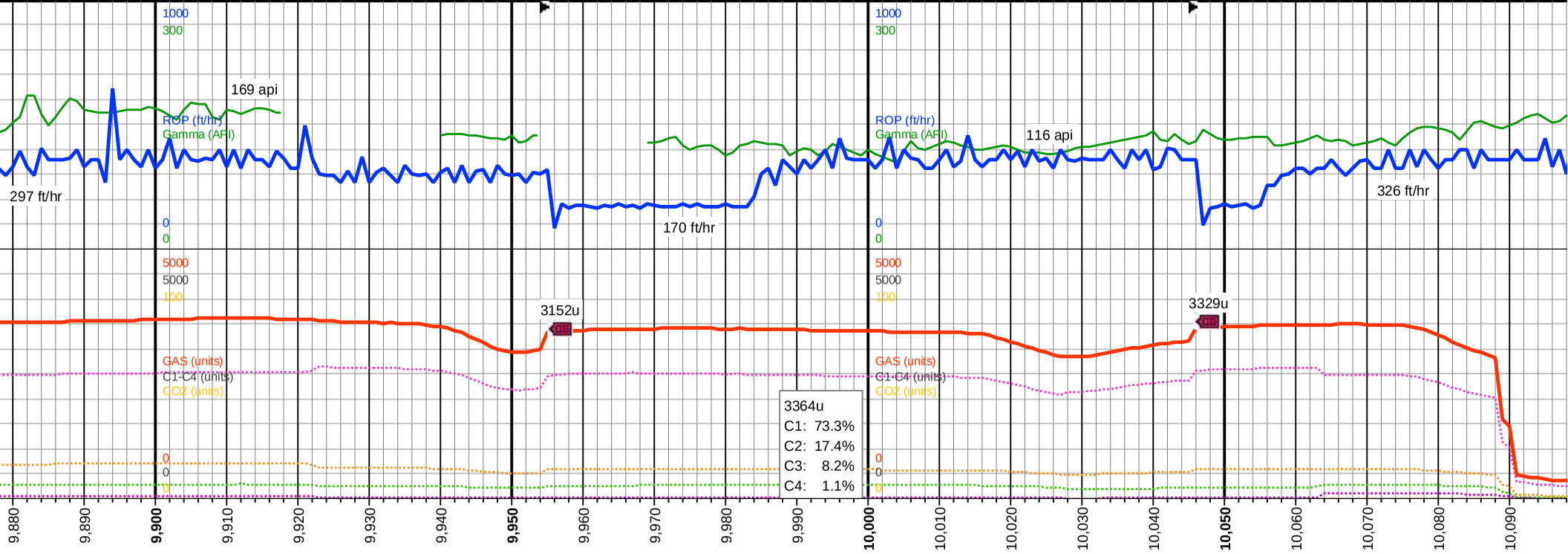


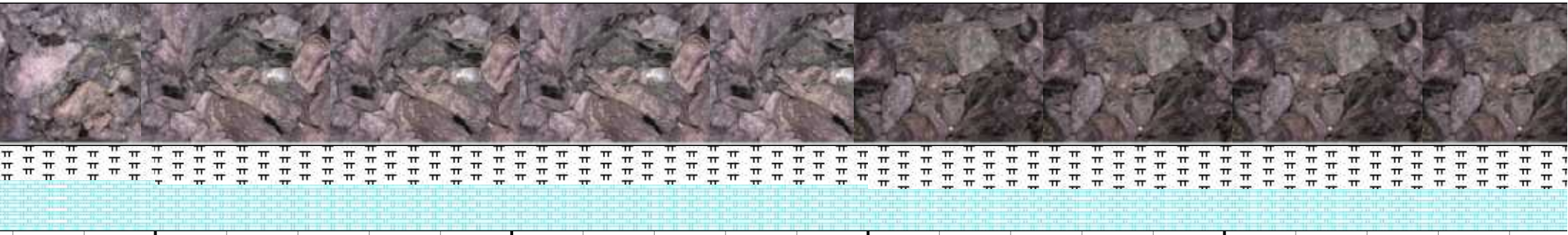


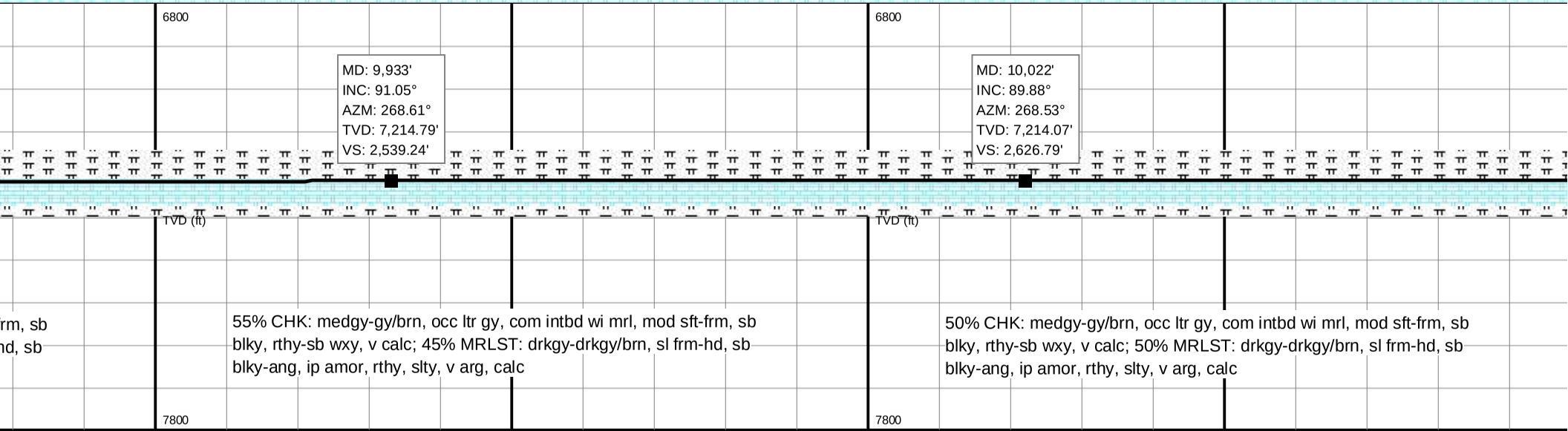
d wi mrl, mod sft-frm, sb
-drkgy/brn, sl frm-hd, sb

65% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 35% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

60% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-f blky, rthy-sb wxy, v calc; 40% MRLST: drkgy-drkgy/brn, sl frm-h blky-ang, ip amor, rthy, slty, v arg, calc



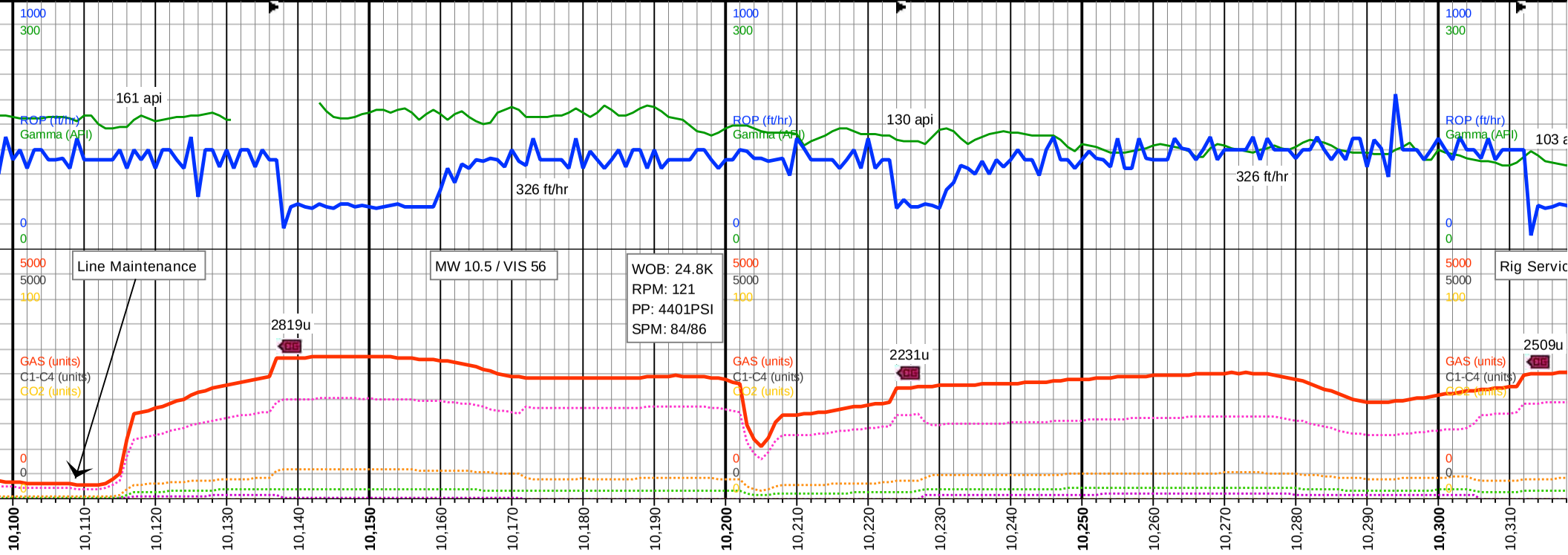


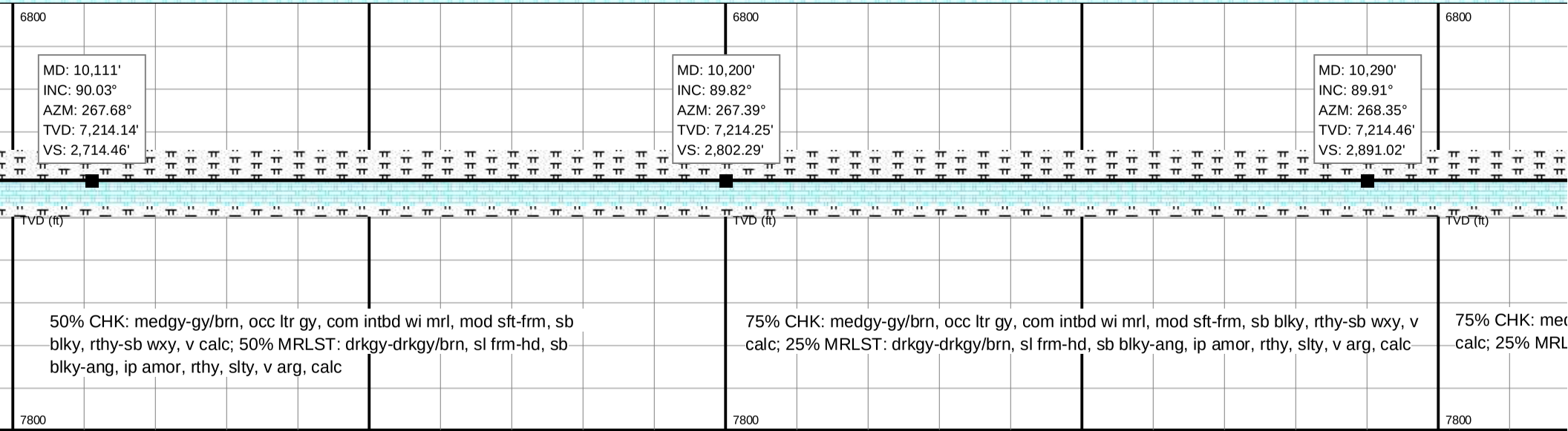


rm, sb
nd, sb

55% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 45% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

50% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 50% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

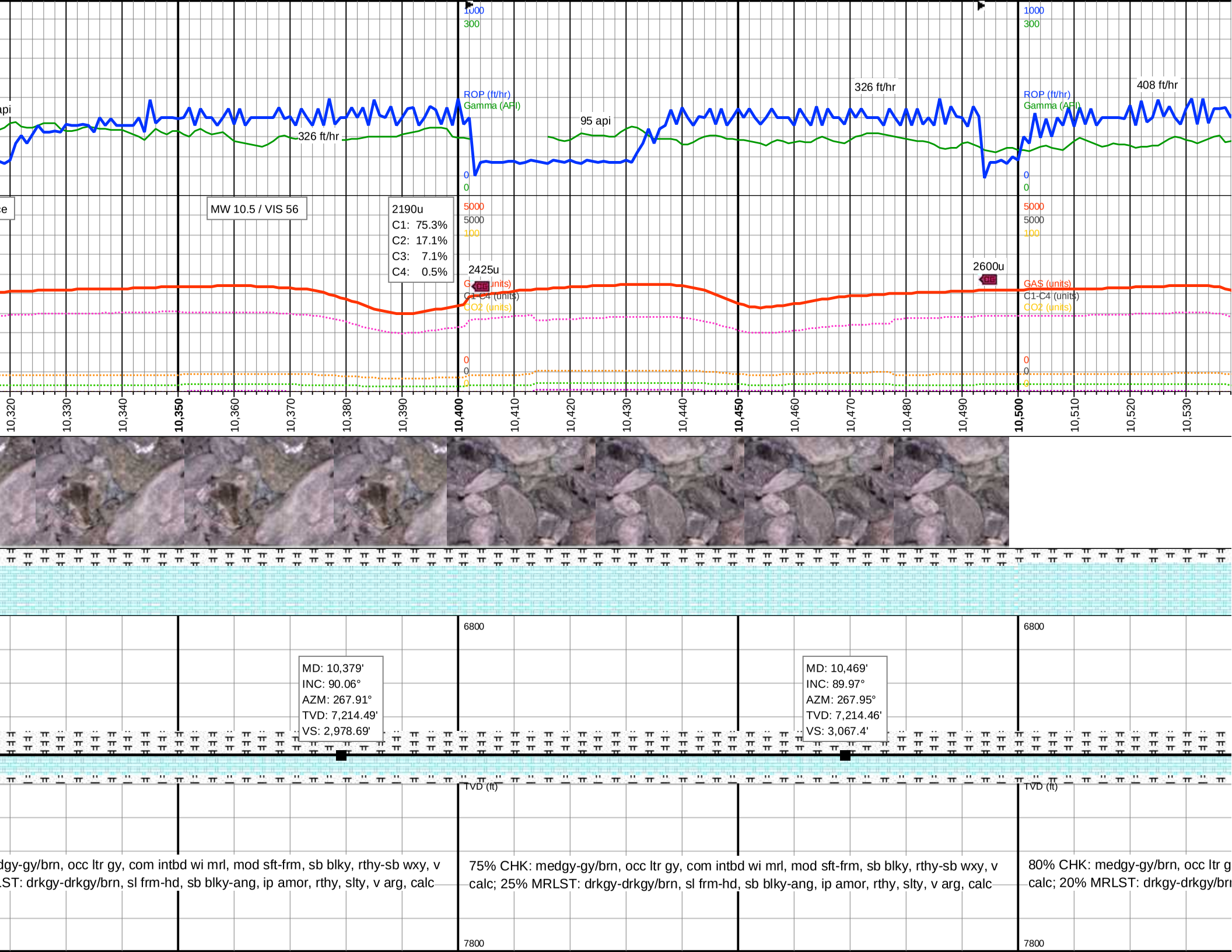


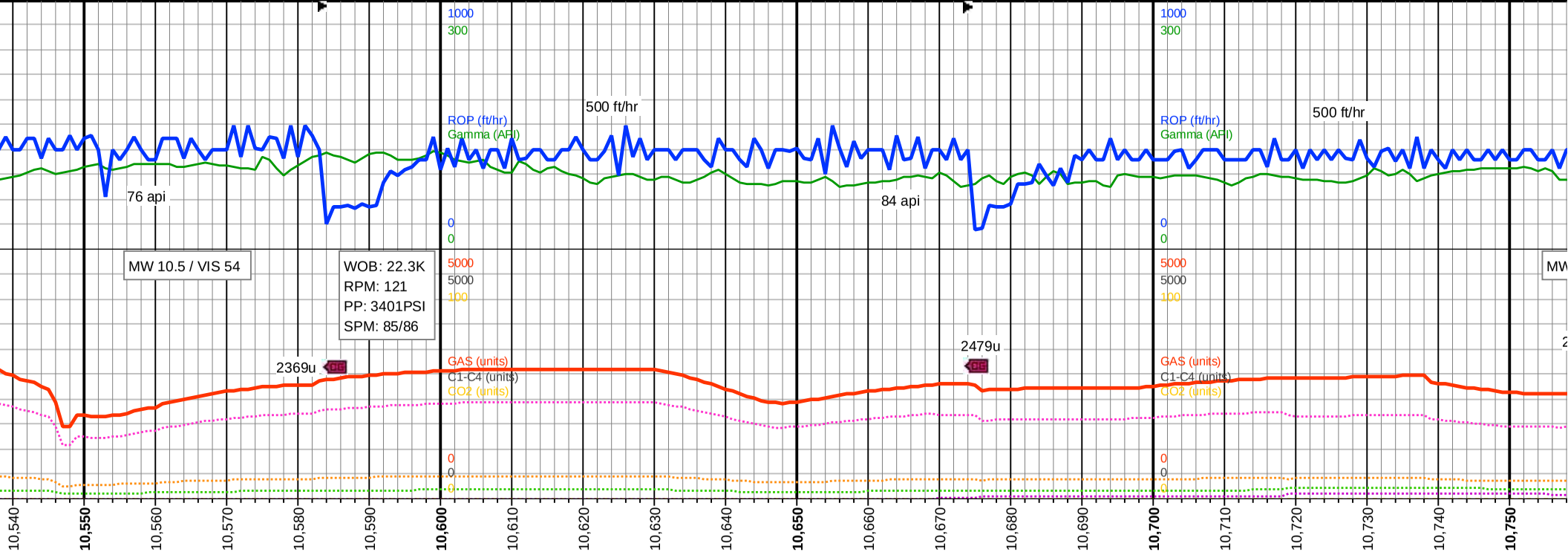


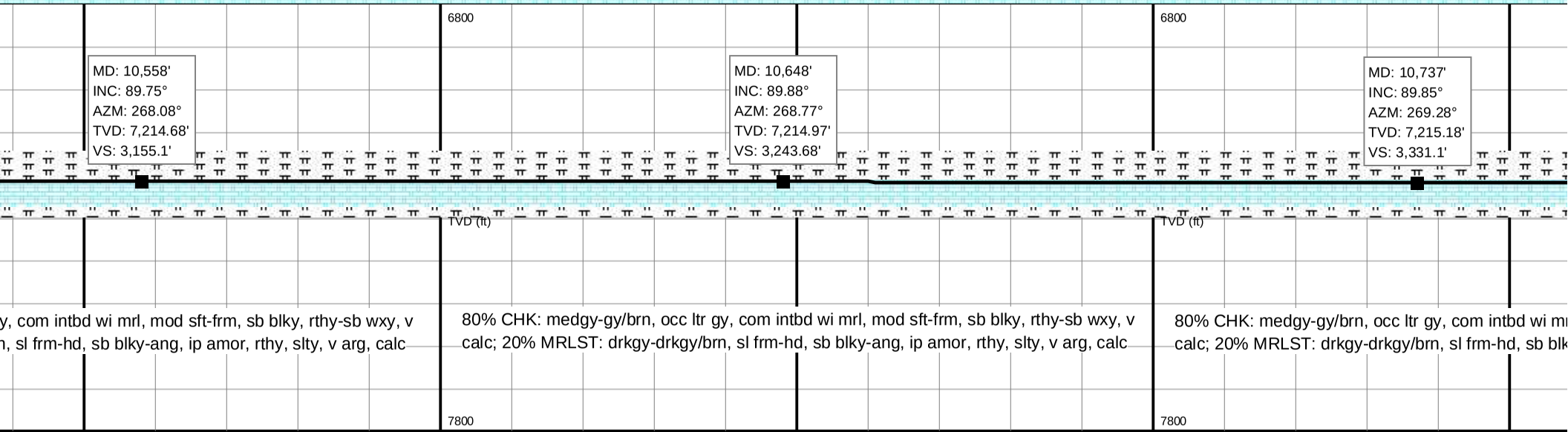
50% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 50% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

75% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 25% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

75% CHK: med
calc; 25% MRL


1000
300
ROP (ft/hr)
Gamma (API)
326 ft/hr
95 api
326 ft/hr
408 ft/hr
MW 10.5 / VIS 56
2190u
C1: 75.3%
C2: 17.1%
C3: 7.1%
C4: 0.5%
2425u
2600u
5000
100
GAS (units)
C1-C4 (units)
CO2 (units)
10,320
10,330
10,340
10,350
10,360
10,370
10,380
10,390
10,400
10,410
10,420
10,430
10,440
10,450
10,460
10,470
10,480
10,490
10,500
10,510
10,520
10,530
MD: 10,379'
INC: 90.06°
AZM: 267.91°
TVD: 7,214.49'
VS: 2,978.69'
MD: 10,469'
INC: 89.97°
AZM: 267.95°
TVD: 7,214.46'
VS: 3,067.4'
6800
TVD (ft)
7800
dgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v
LST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc
75% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v
calc; 25% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc
80% CHK: medgy-gy/brn, occ ltr g
calc; 20% MRLST: drkgy-drkgy/br

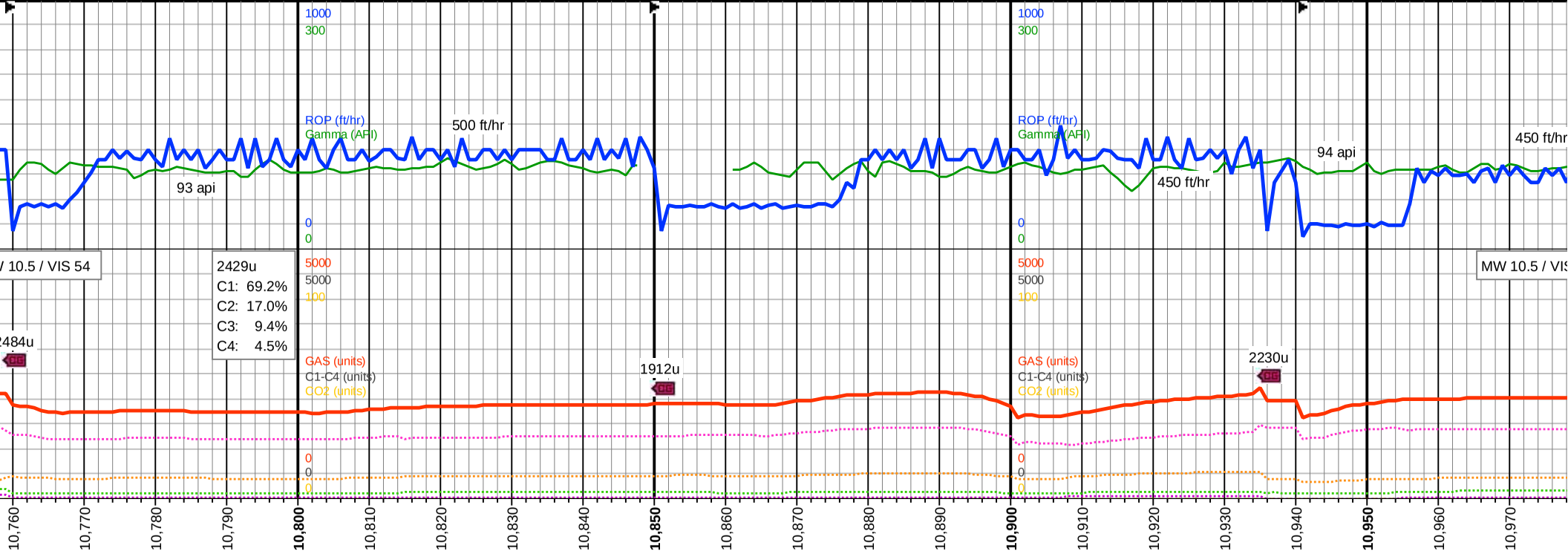


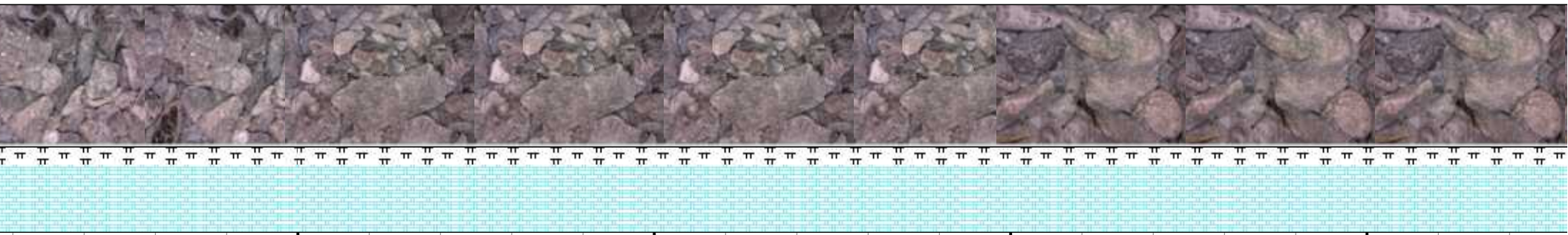


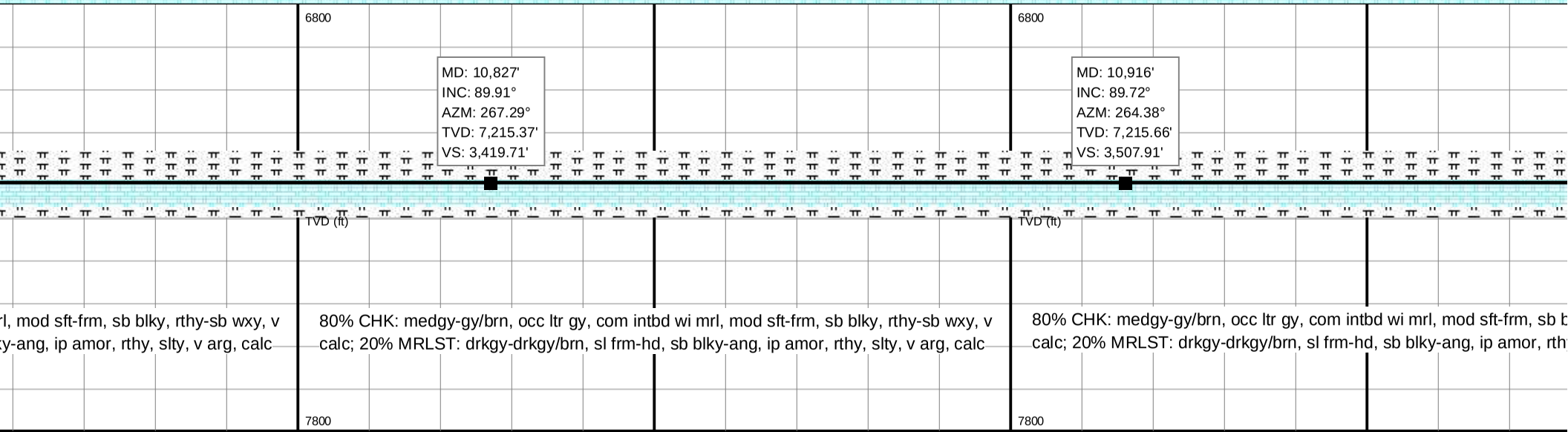
y, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v
n, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v
calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mr
calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blk



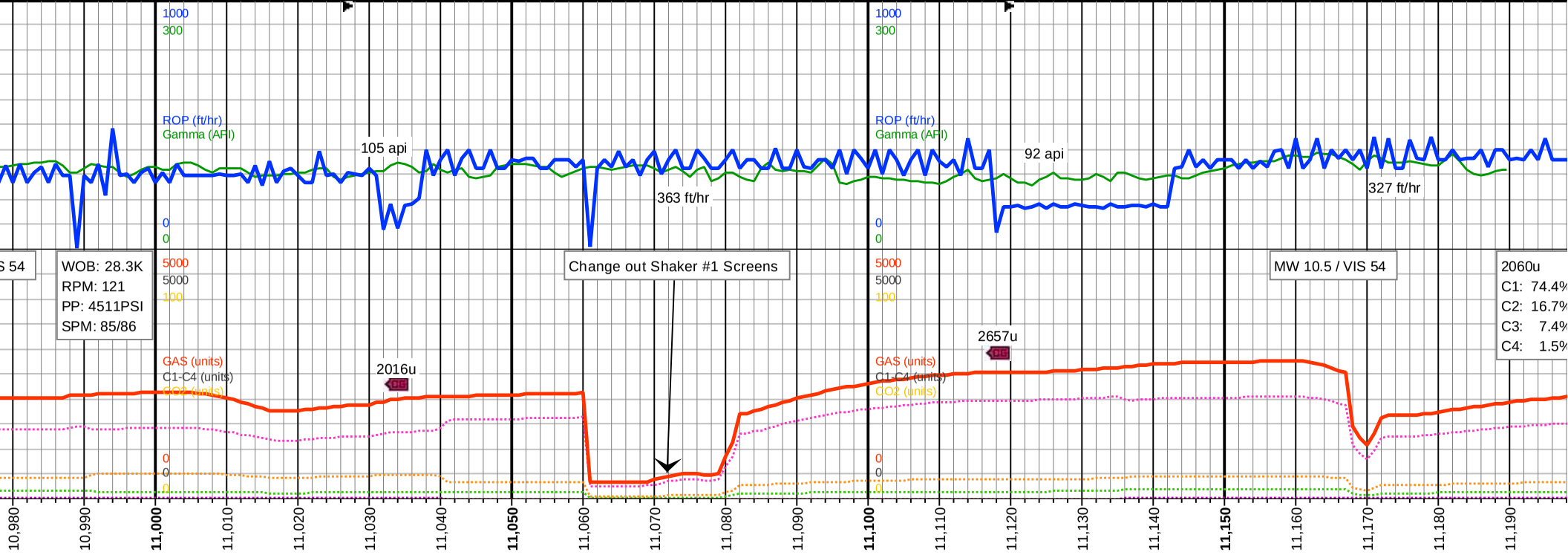


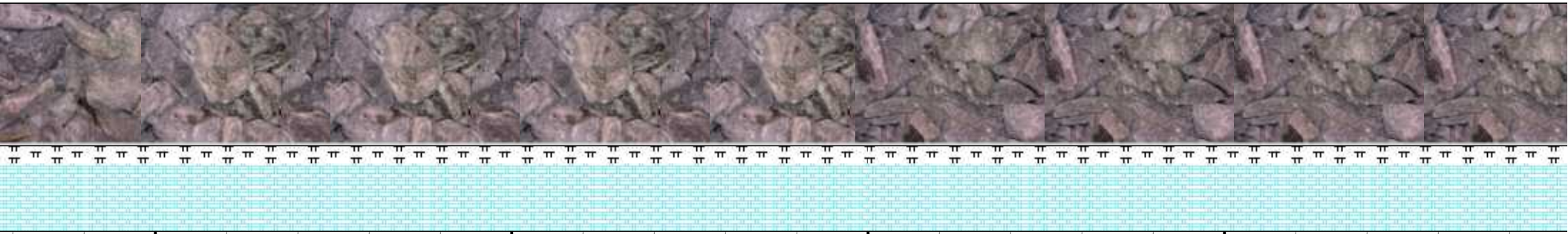


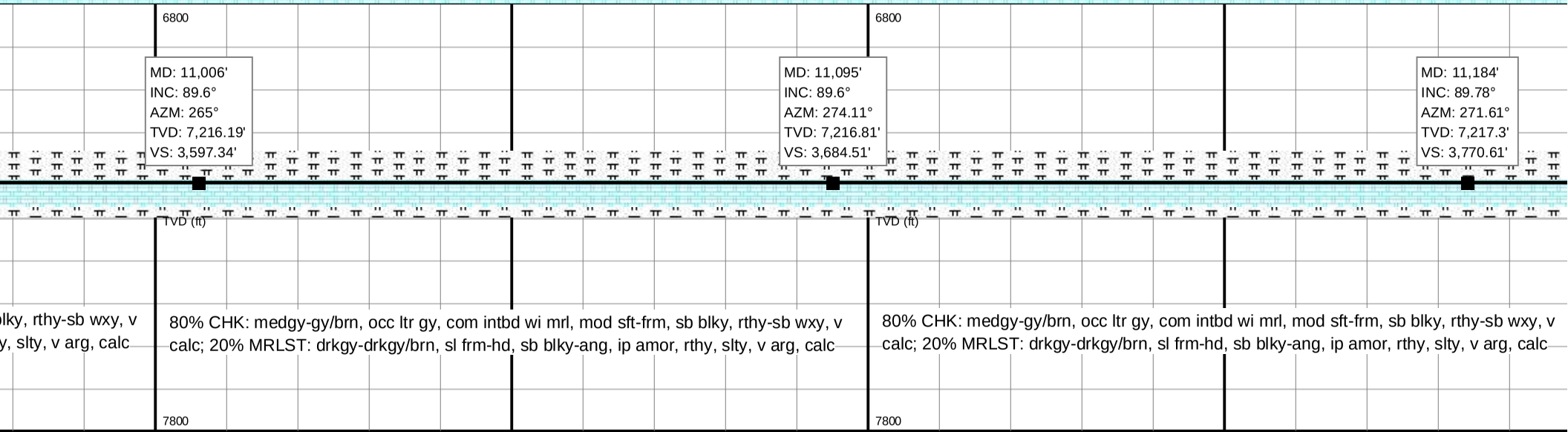
rl, mod sft-frm, sb blky, rthy-sb wxy, v
y-ang, ip amor, rthy, slty, v arg, calc

80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb b
calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rth



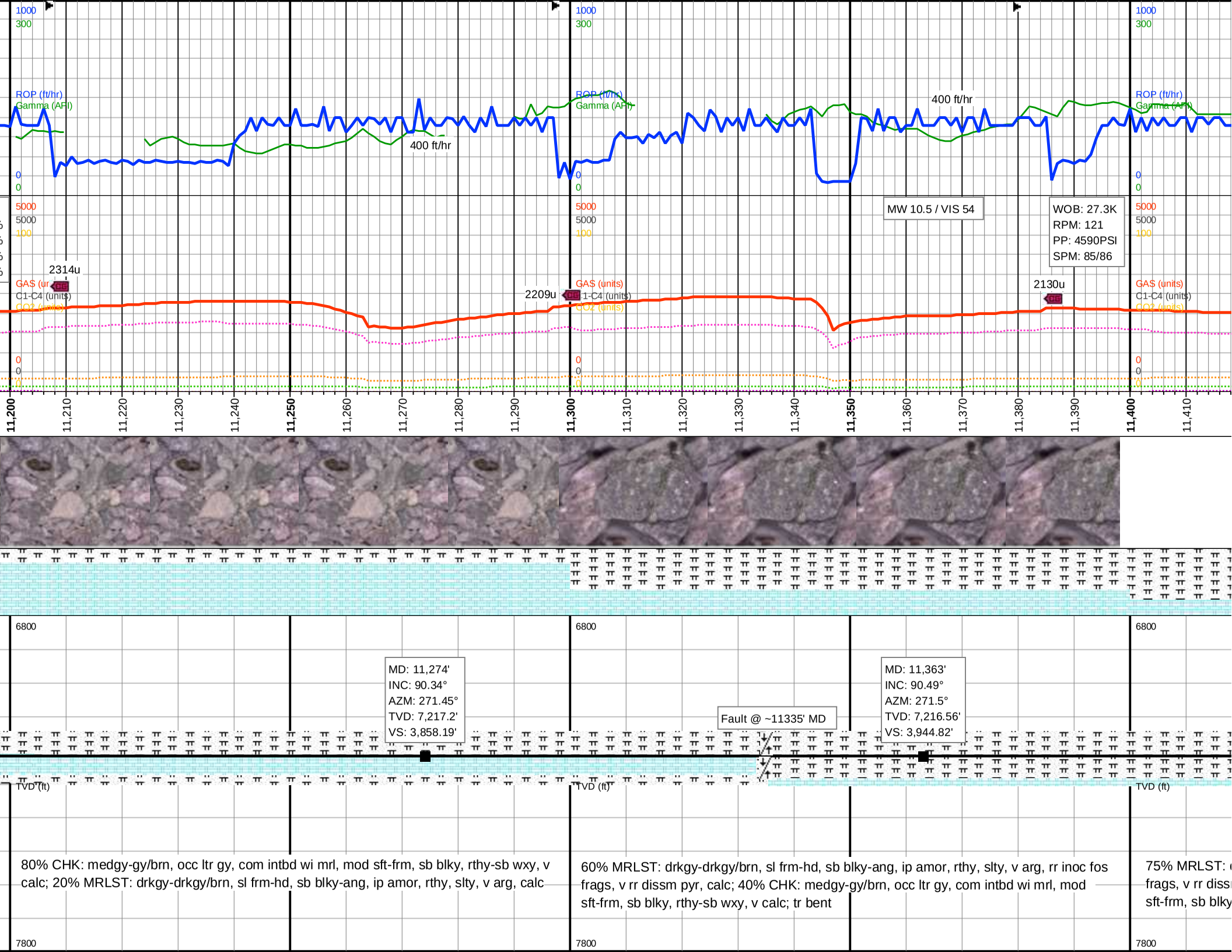


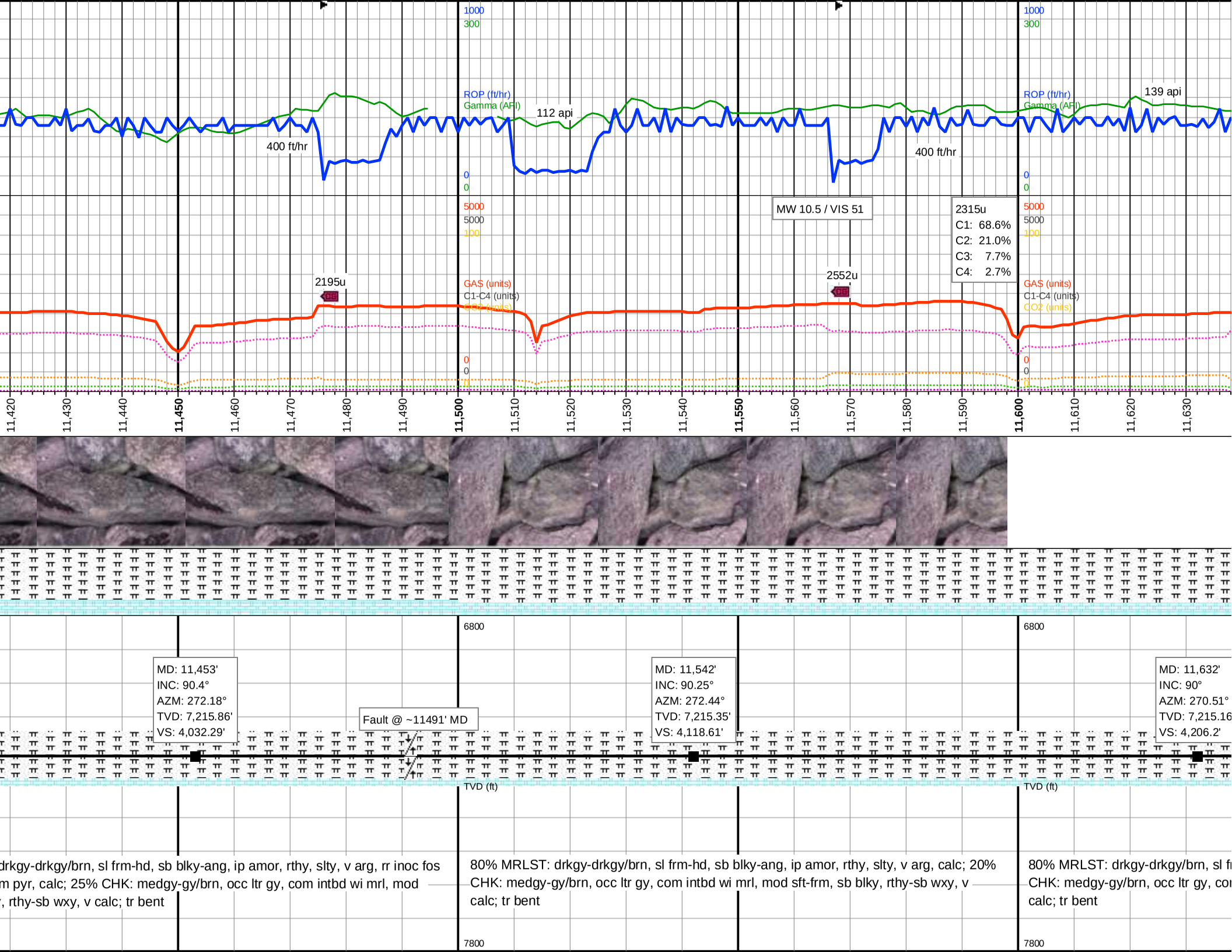


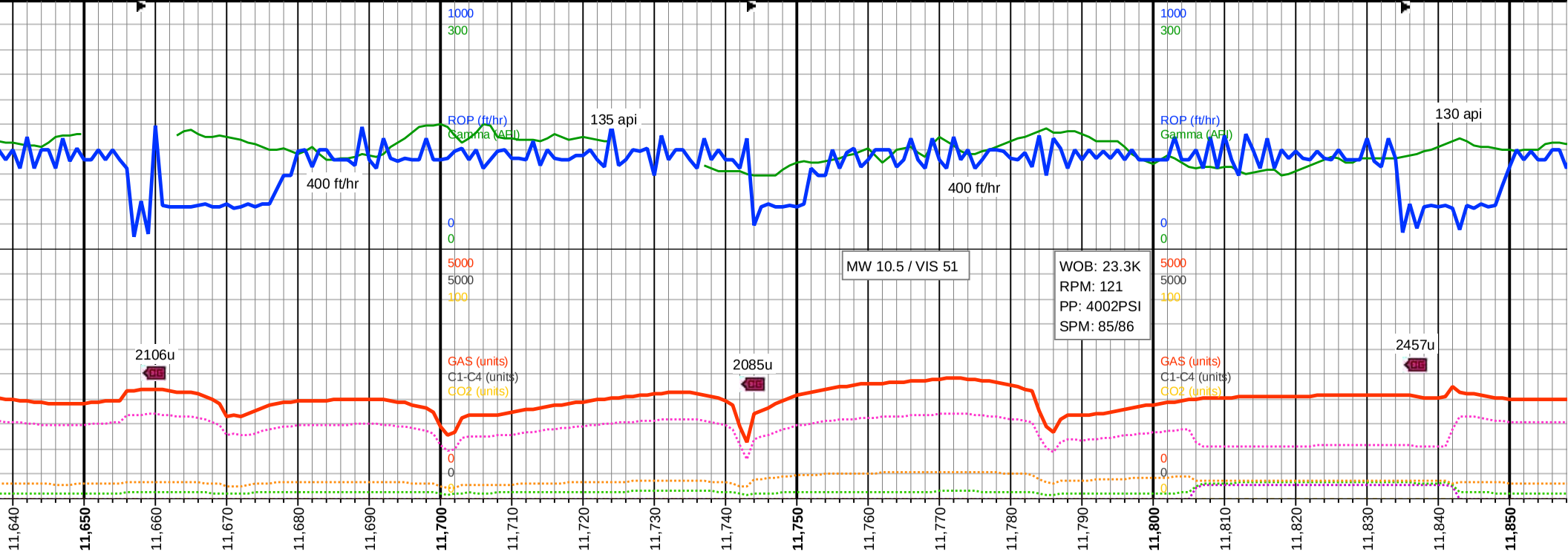
lky, rthy-sb wxy, v y, slty, v arg, calc

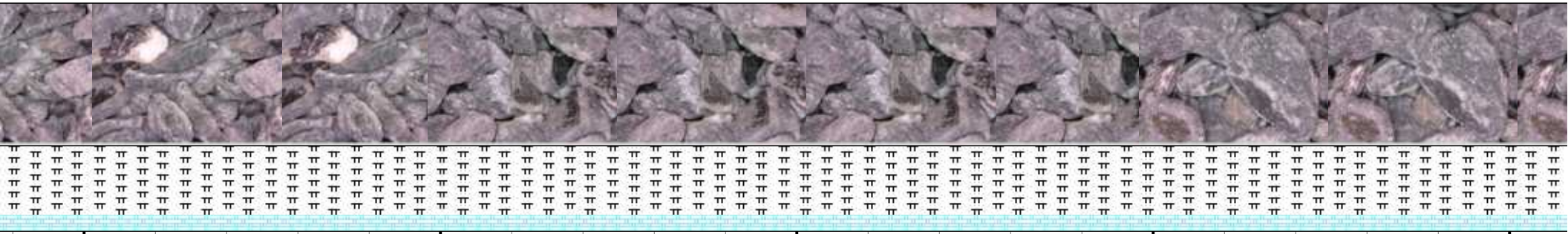
80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

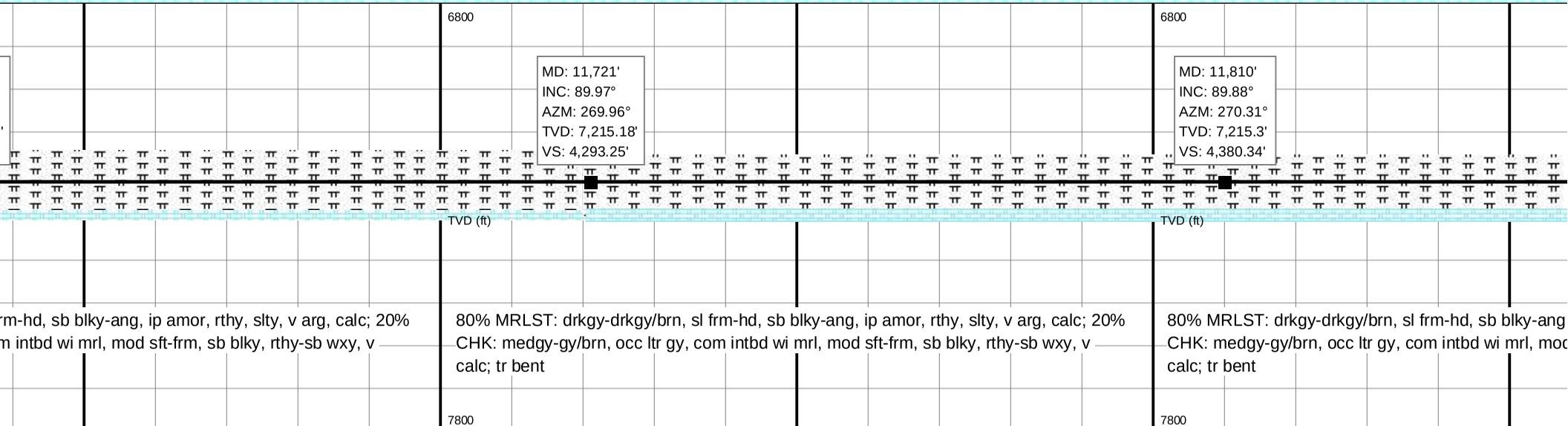
80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc


ROP (ft/hr)
Gamma (API)
400 ft/hr
400 ft/hr
MW 10.5 / VIS 54
WOB: 27.3K
RPM: 121
PP: 4590PSI
SPM: 85/86
2314u
2209u
2130u
GAS (units)
C1-C4 (units)
CO2 (units)
11,200
11,210
11,220
11,230
11,240
11,250
11,260
11,270
11,280
11,290
11,300
11,310
11,320
11,330
11,340
11,350
11,360
11,370
11,380
11,390
11,400
11,410
MD: 11,274'
INC: 90.34°
AZM: 271.45°
TVD: 7,217.2'
VS: 3,858.19'
Fault @ ~11335' MD
MD: 11,363'
INC: 90.49°
AZM: 271.5°
TVD: 7,216.56'
VS: 3,944.82'
TVD (ft)
6800
7800
80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc
60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, rr inoc fos frags, v rr dissm pyr, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent
75% MRLST:
frags, v rr diss
sft-frm, sb blky


1000
300
ROP (ft/hr)
Gamma (API)
400 ft/hr
112 api
0
0
5000
5000
100
GA$ (units)
C1-C4 (units)
CO2 (units)
2195u
0
0
MW 10.5 / VIS 51
2315u
C1: 68.6%
C2: 21.0%
C3: 7.7%
C4: 2.7%
2552u
1000
300
ROP (ft/hr)
Gamma (API)
139 api
400 ft/hr
0
0
5000
5000
100
GA$ (units)
C1-C4 (units)
CO2 (units)
0
0
11,420
11,430
11,440
11,450
11,460
11,470
11,480
11,490
11,500
11,510
11,520
11,530
11,540
11,550
11,560
11,570
11,580
11,590
11,600
11,610
11,620
11,630
6800
MD: 11,453'
INC: 90.4°
AZM: 272.18°
TVD: 7,215.86'
VS: 4,032.29'
Fault @ ~11491' MD
MD: 11,542'
INC: 90.25°
AZM: 272.44°
TVD: 7,215.35'
VS: 4,118.61'
6800
MD: 11,632'
INC: 90°
AZM: 270.51°
TVD: 7,215.16
VS: 4,206.2'
TVD (ft)
TVD (ft)
drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, rr inoc fos
m pyr, calc; 25% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod
, rthy-sb wxy, v calc; tr bent
80% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 20%
CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v
calc; tr bent
80% MRLST: drkgy-drkgy/brn, sl f
CHK: medgy-gy/brn, occ ltr gy, co
calc; tr bent
7800
7800







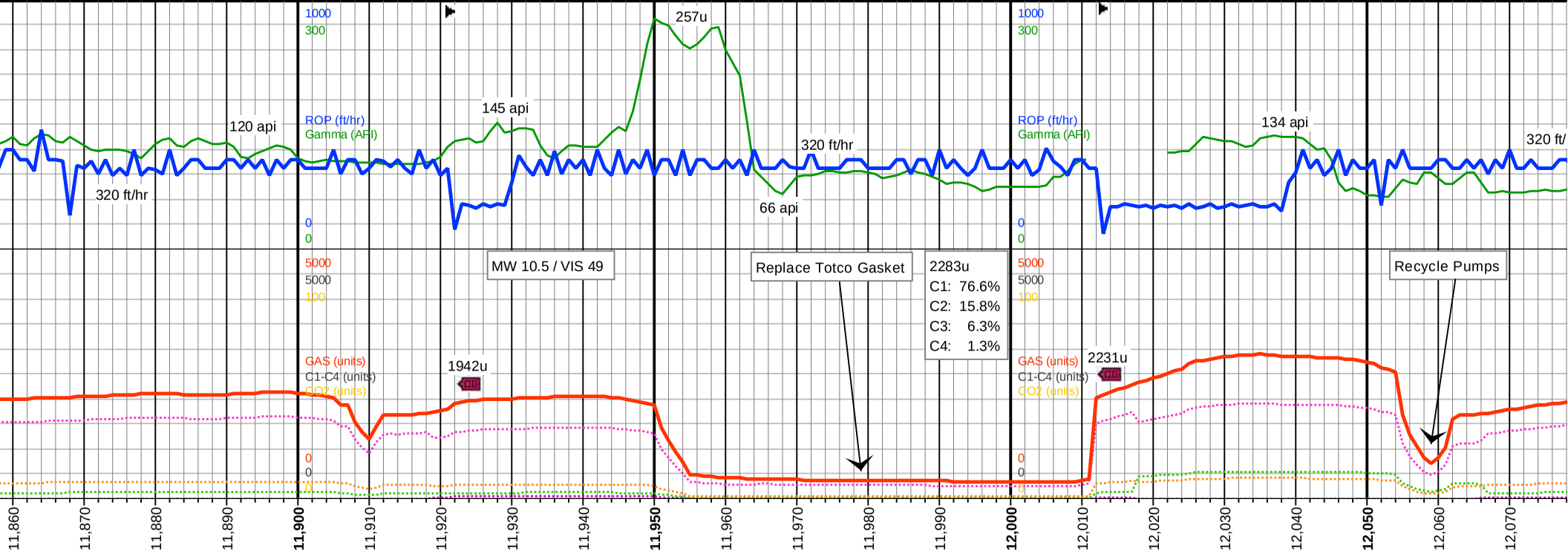
rm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 20%
m intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v

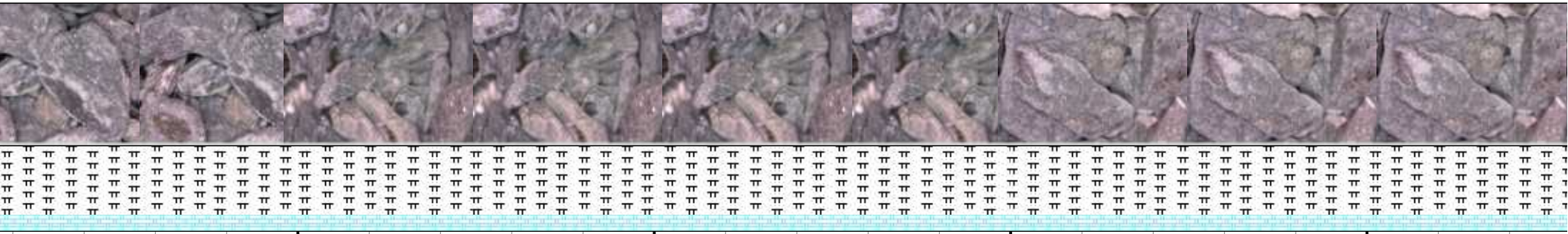
80% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 20%
CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v
calc; tr bent

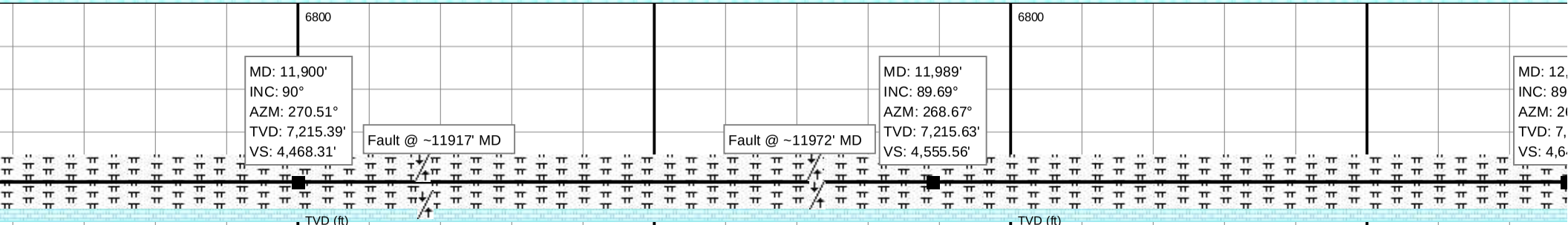
7800

80% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang
CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod
calc; tr bent

7800







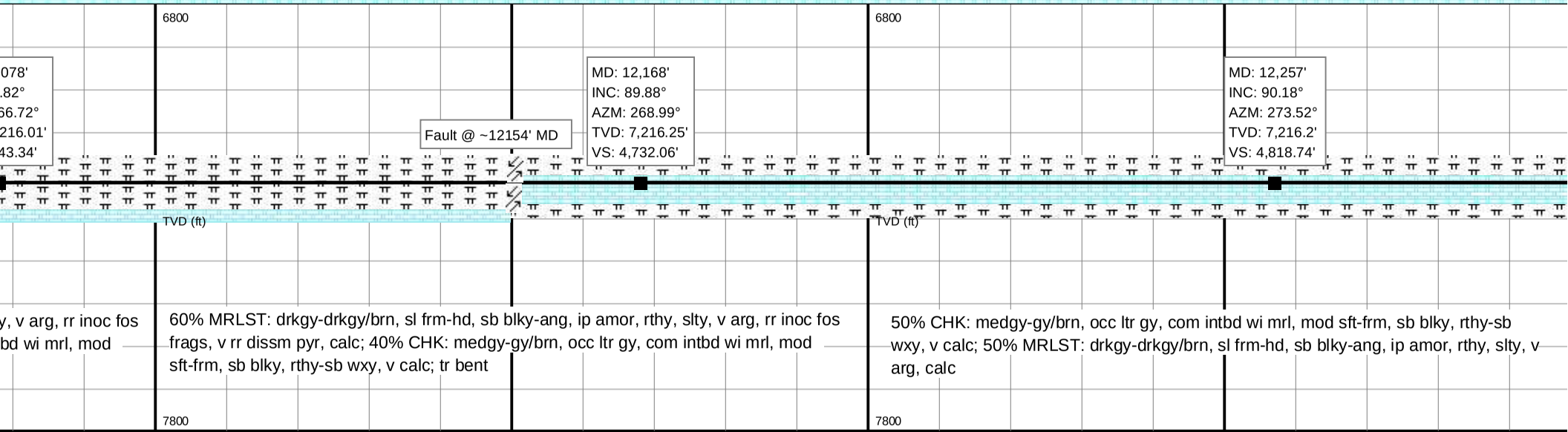
, ip amor, rthy, slty, v arg, calc; 20%
d sft-frm, sb blky, rthy-sb wxy, v

80% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 20% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

7800

80% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty
frags, v rr dissm pyr, calc; 20% CHK: medgy-gy/brn, occ ltr gy, com int
sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

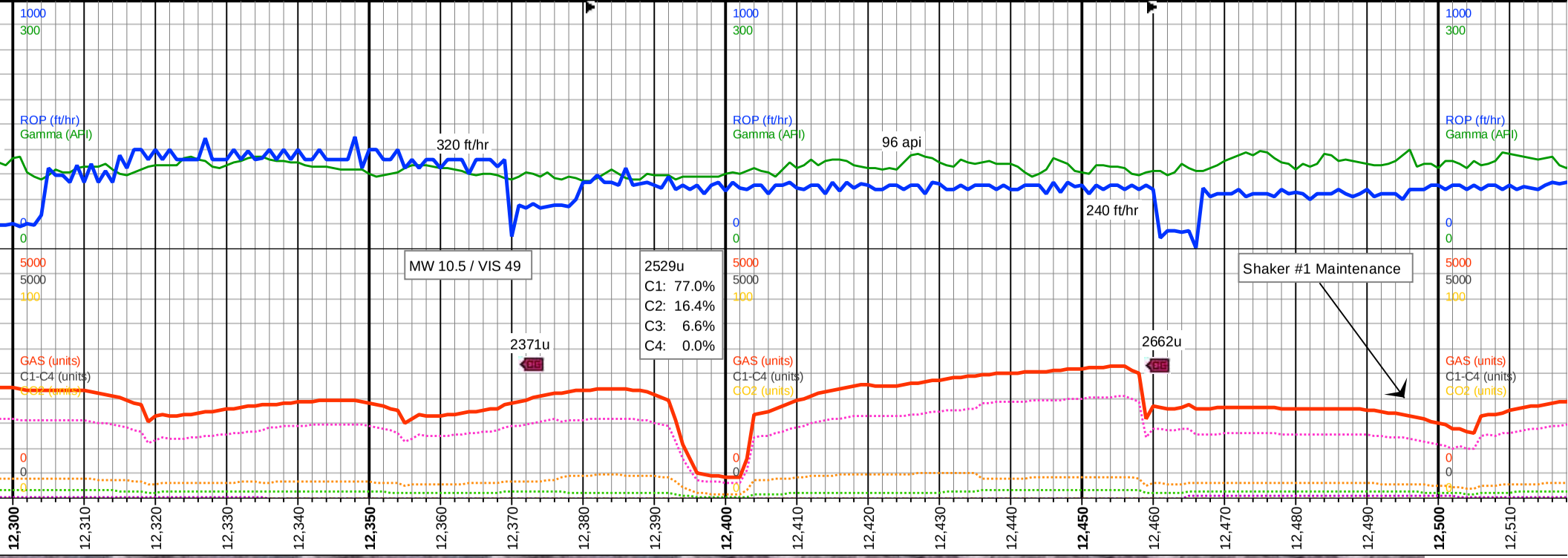
7800

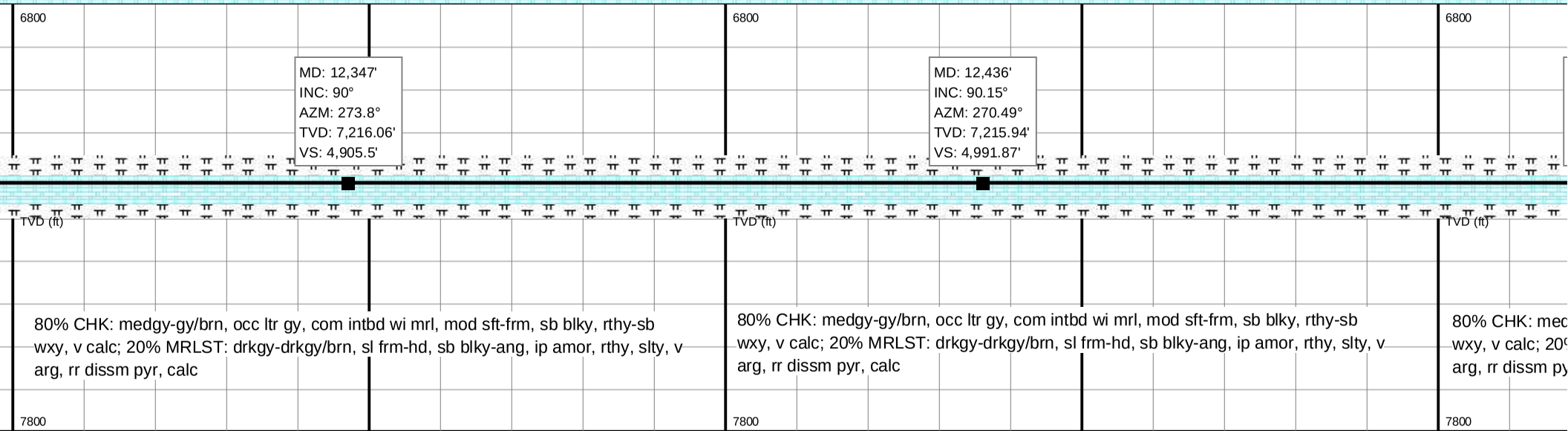


y, v arg, rr inoc fos
bd wi mrl, mod

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, rr inoc fos frags, v rr dissm pyr, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

50% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 50% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc

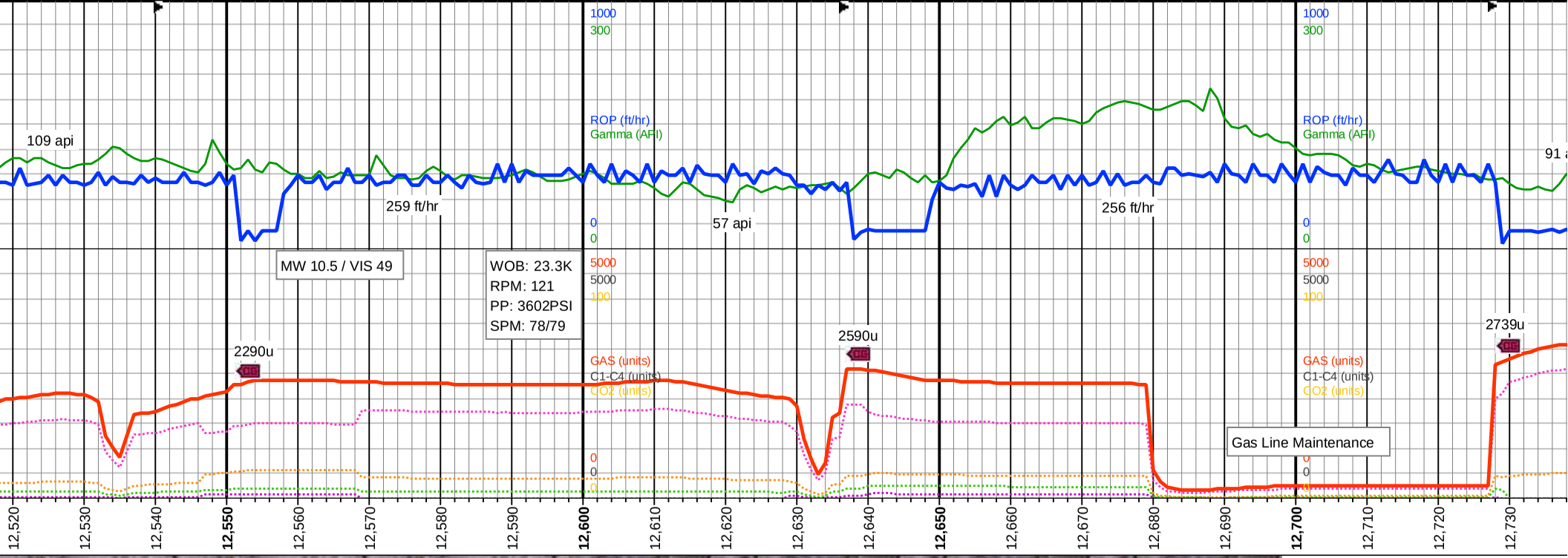


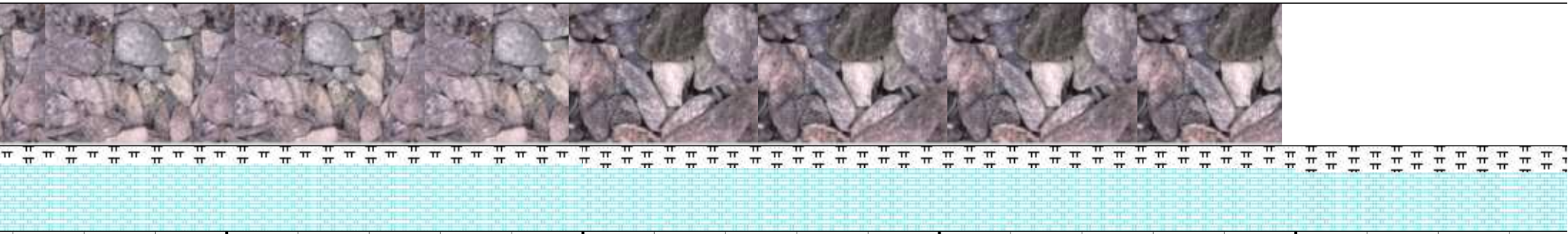


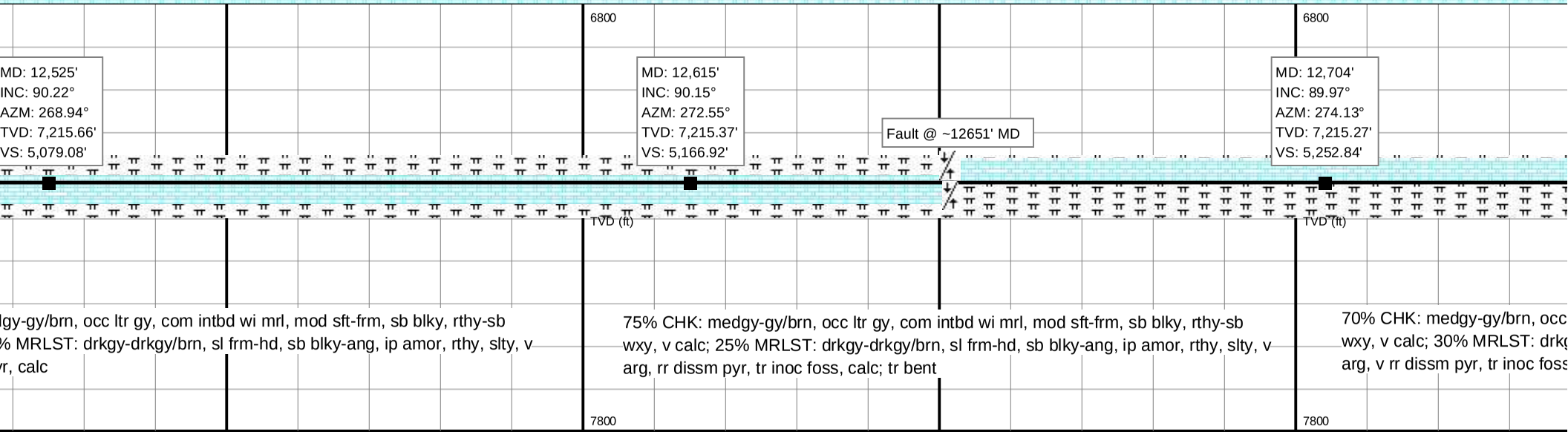
80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, rr dissm pyr, calc

80% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 20% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, rr dissm pyr, calc

80% CHK: med
wxy, v calc; 20
arg, rr dissm py



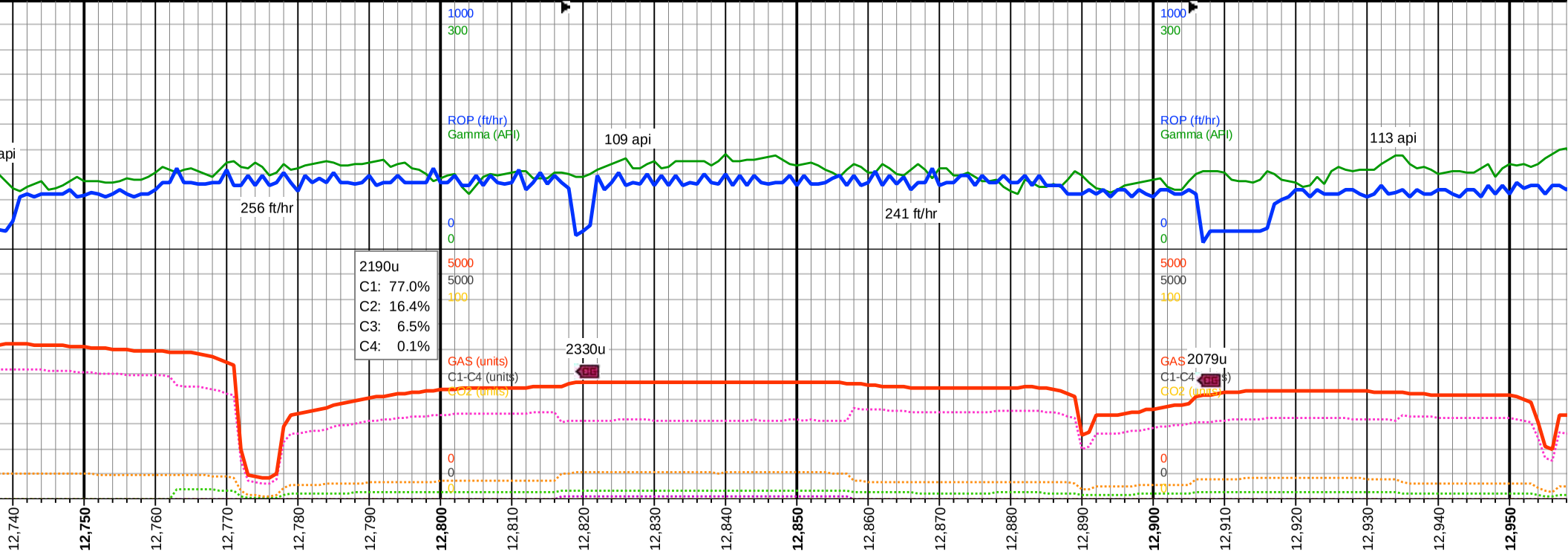


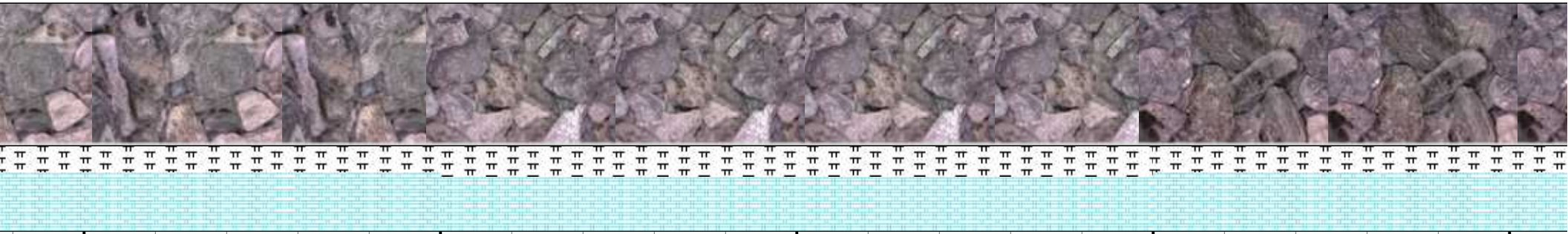


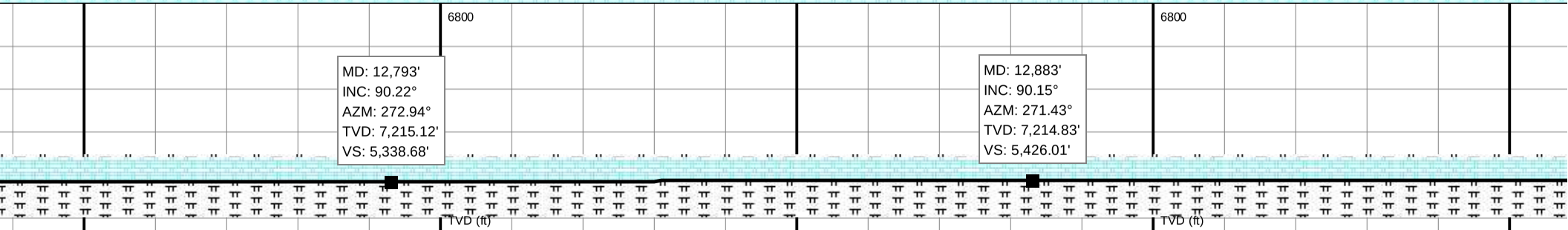
lgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v
r, calc

75% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 25% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, rr dissm pyr, tr inoc foss, calc; tr bent

70% CHK: medgy-gy/brn, occ
wxy, v calc; 30% MRLST: drkg
arg, v rr dissm pyr, tr inoc foss



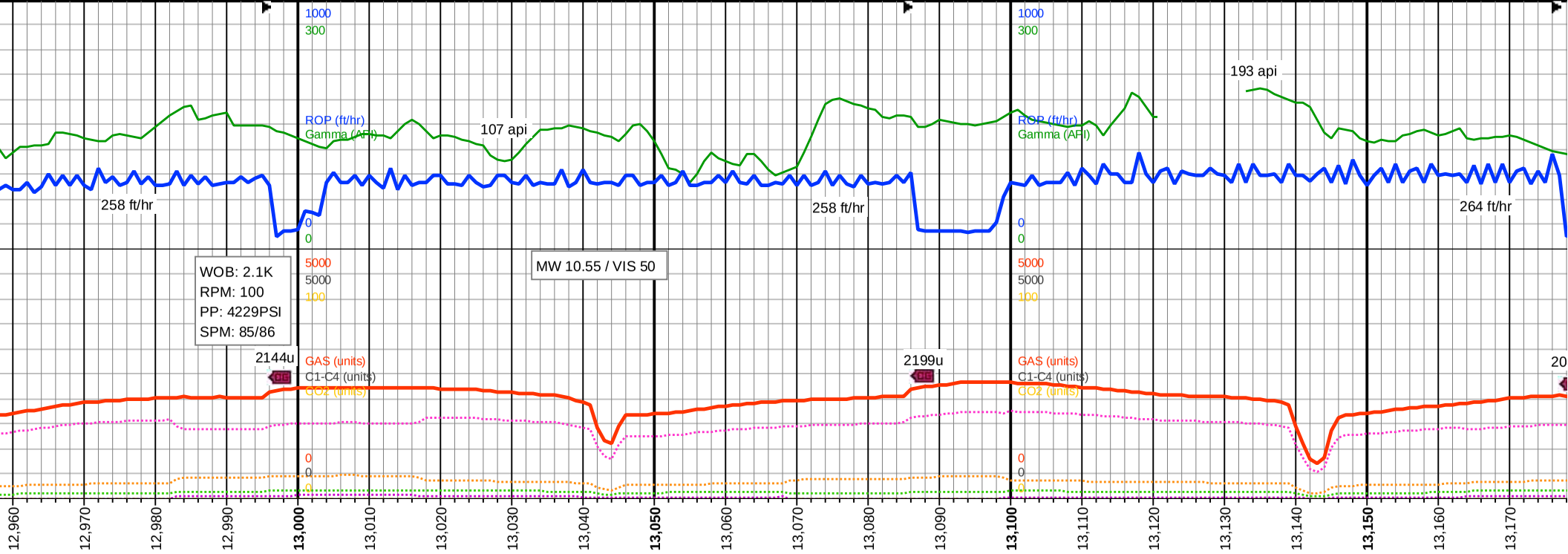


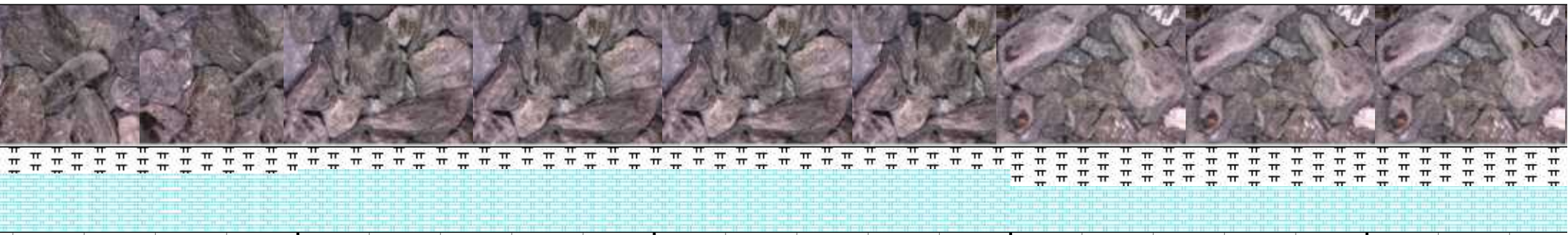


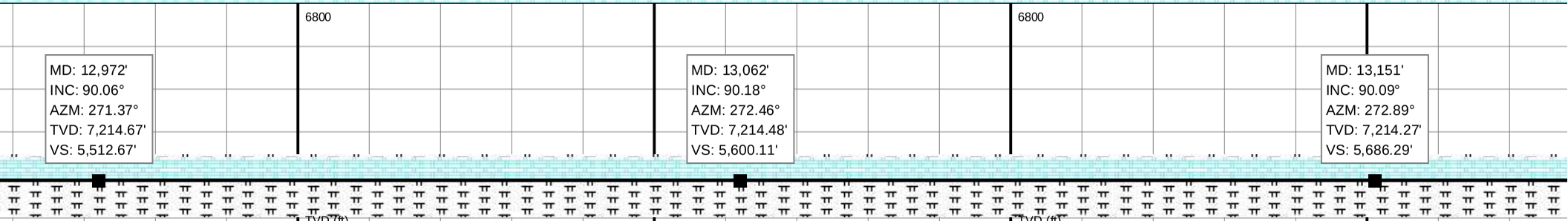
ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
gy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v
s, calc; rr bent

65% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; 35% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v
arg, v rr dissm pyr, tr inoc foss, calc

70% CHK: medgy-gy/brn, occ ltr gy, com intbd wi
wxy, v calc; 30% MRLST: drkgy-drkgy/brn, sl frm-
arg, v rr dissm pyr, tr inoc foss, calc; v rr bent



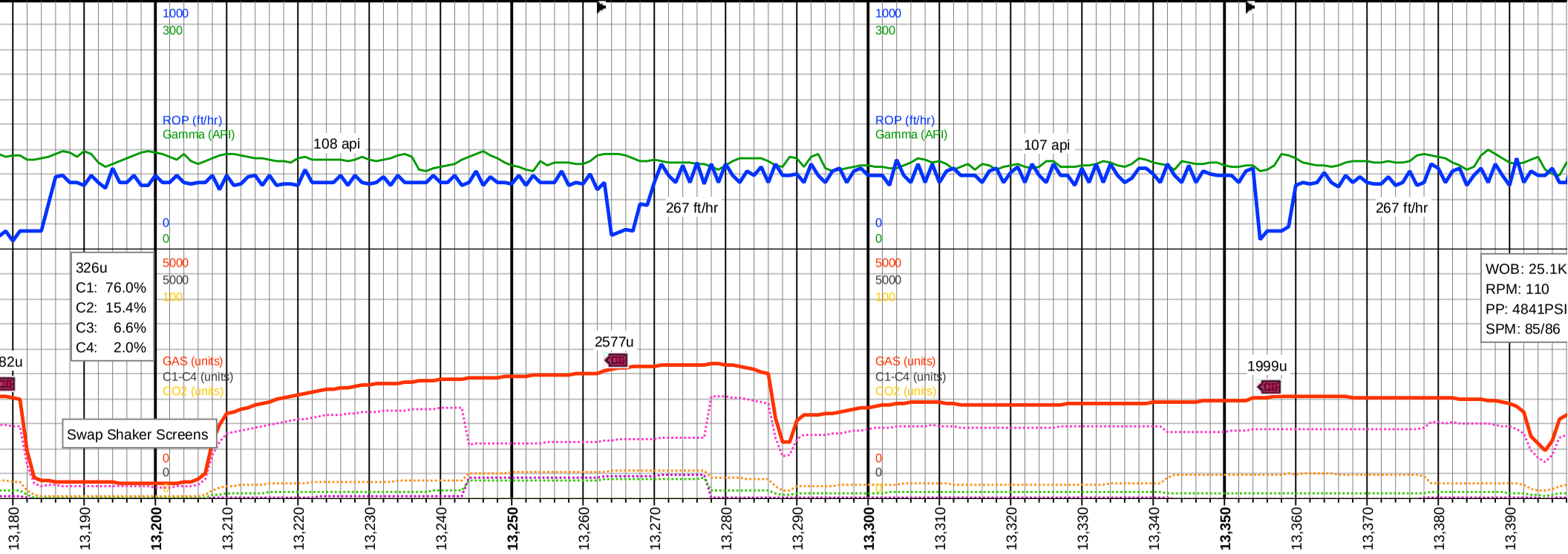


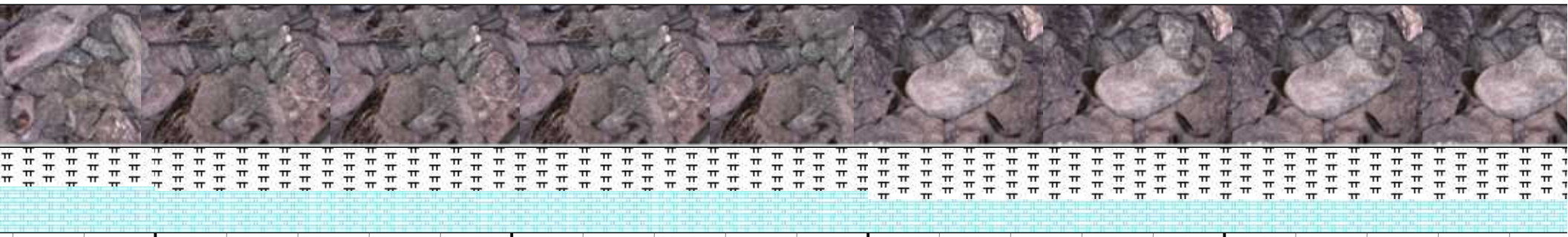


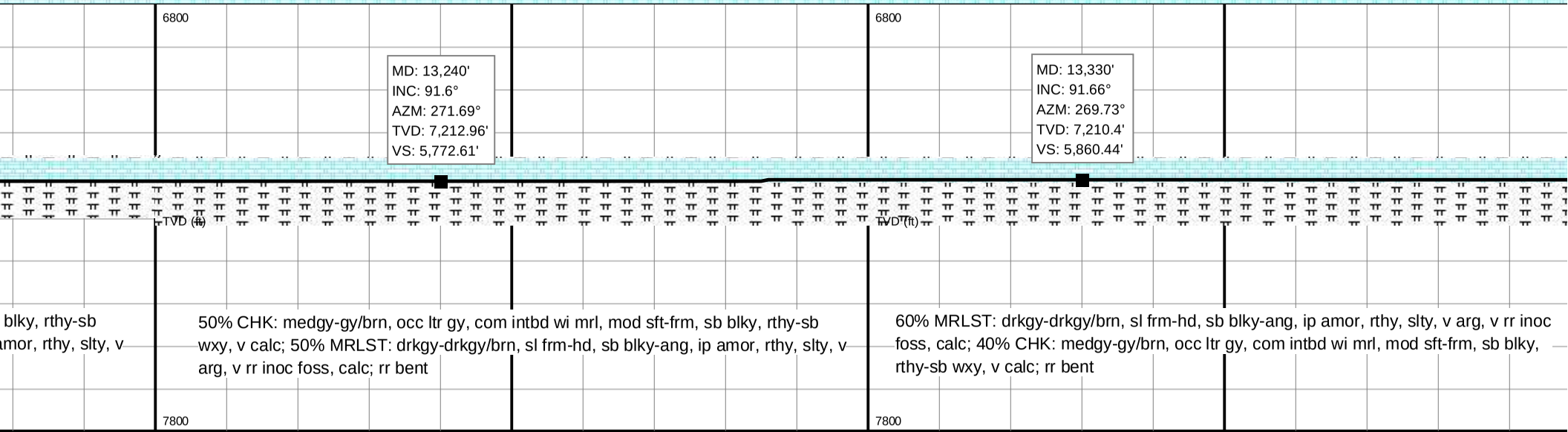
mrl, mod sft-frm, sb blky, rthy-sb
-hd, sb blky-ang, ip amor, rthy, slty, v

75% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 25% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, v rr dissm pyr, tr inoc foss, calc; v rr bent

55% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb wxy, v calc; 45% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip a arg, v rr inoc foss, calc; rr bent



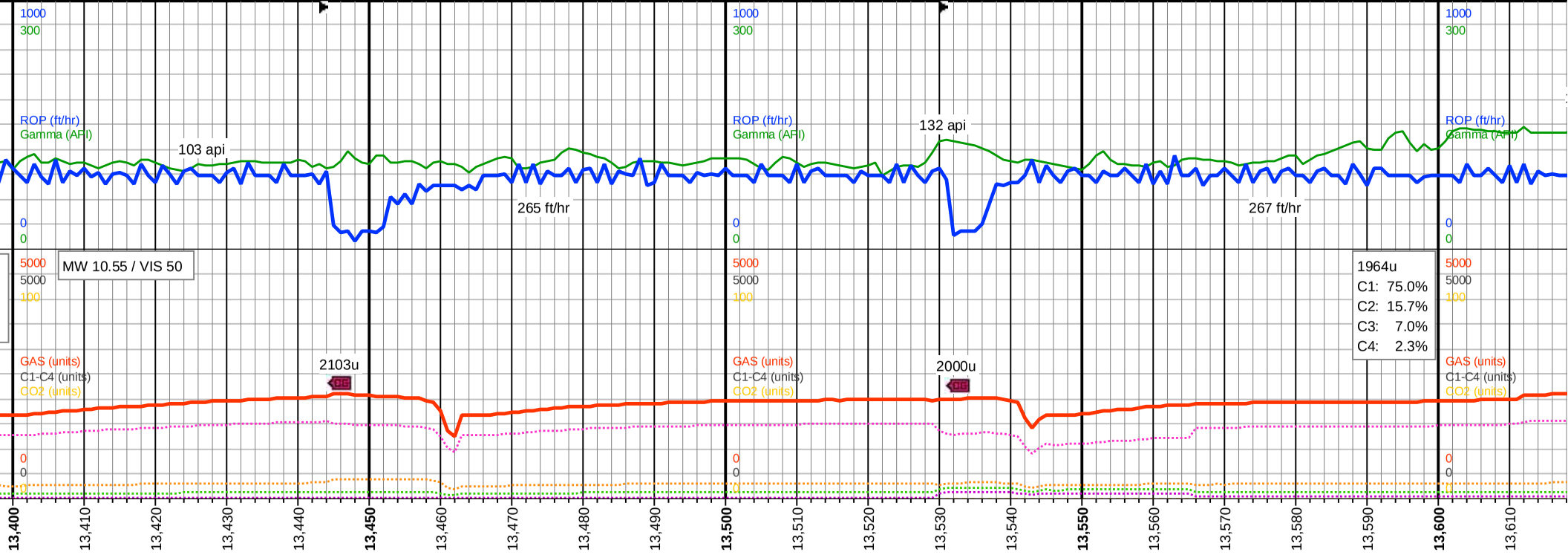


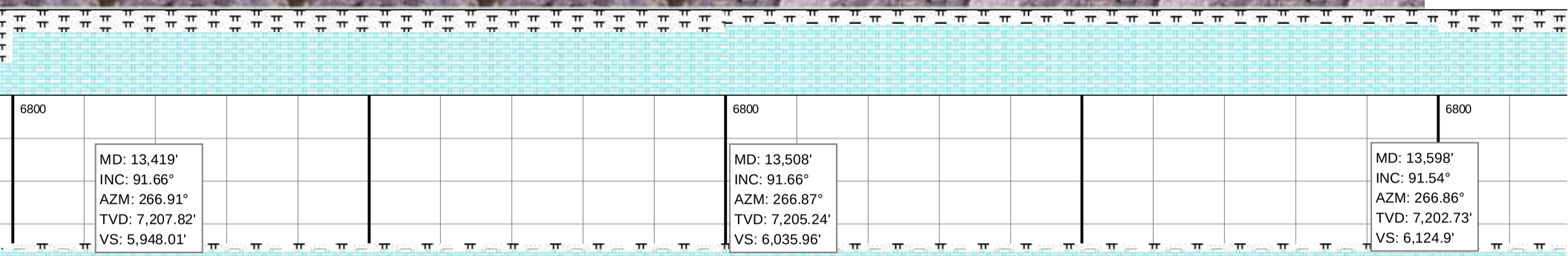


blky, rthy-sb
amor, rthy, slty, v

50% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 50% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, v rr inoc foss, calc; rr bent

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, v rr inoc foss, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; rr bent

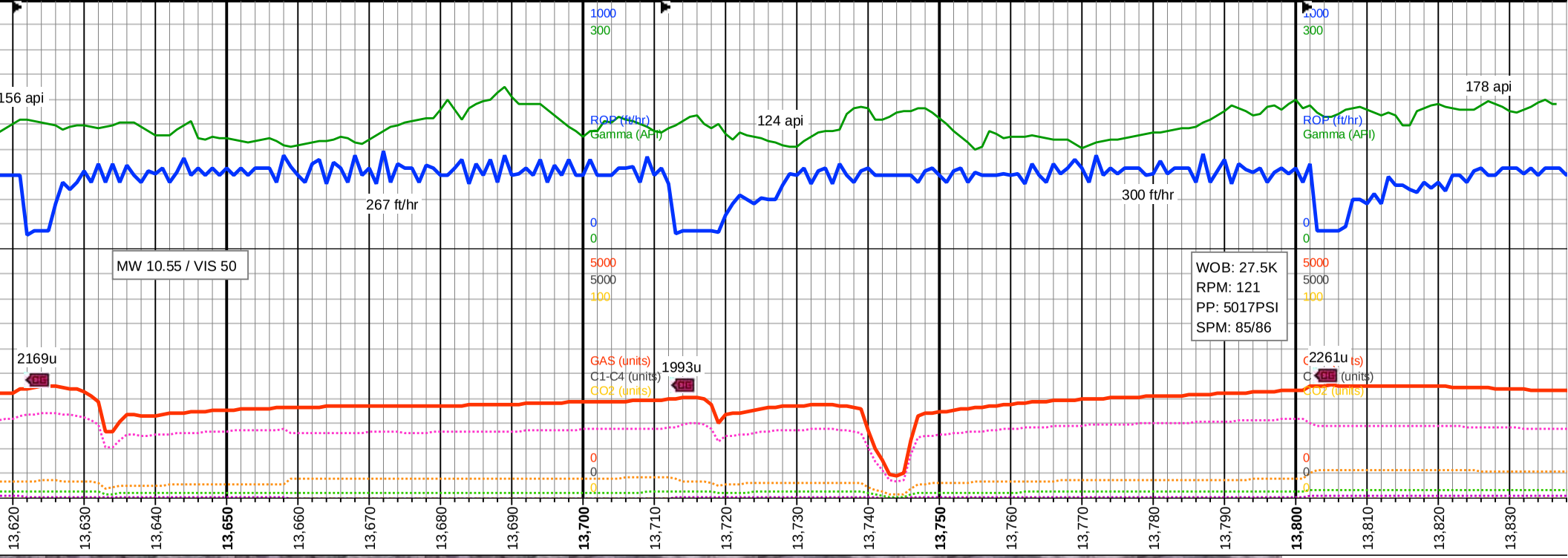


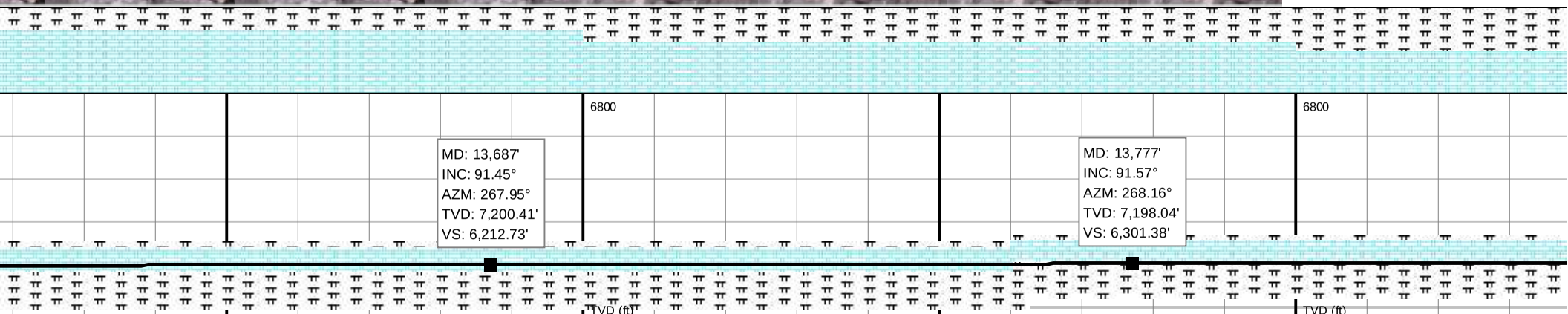


75% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 25% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, v rr inoc foss, calc

85% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, rr dissm pyr, v calc; 15% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, v rr inoc foss, calc

75% CHK: me
wxy, v rr diss
amor, rthy, slt

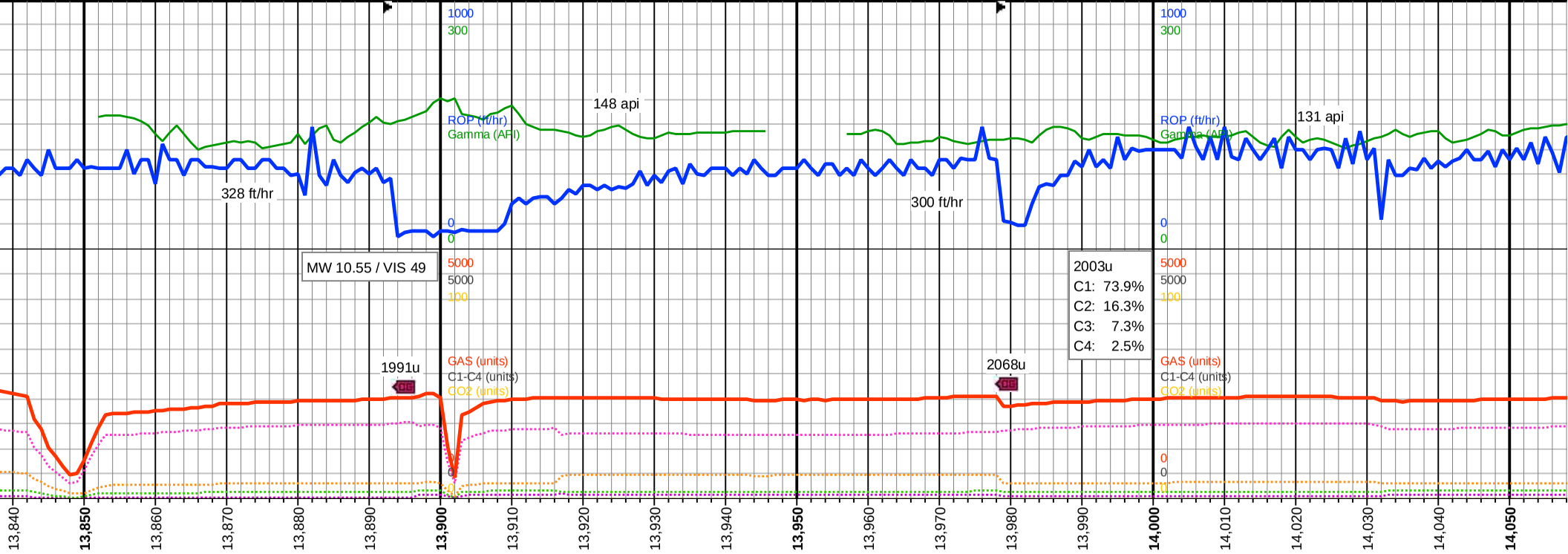


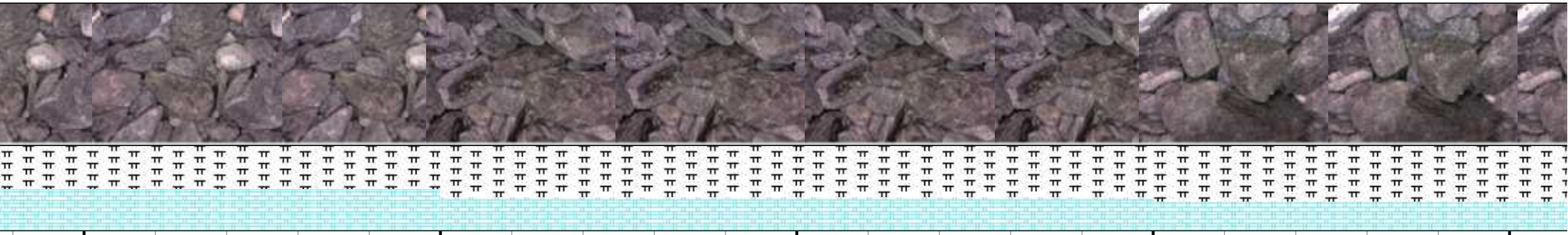


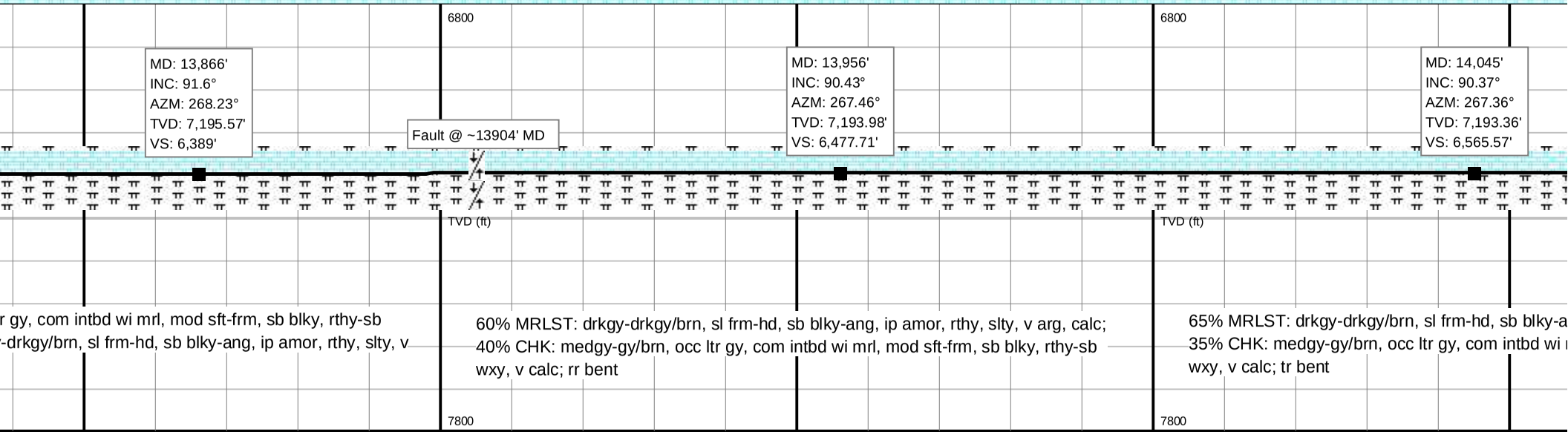
edgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
m pyr, v calc; 25% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip
y, v arg, v rr inoc foss, calc

60% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; 40% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v
arg, calc

50% CHK: medgy-gy/brn, occ lt
wxy, v calc; 50% MRLST: drkgy
arg, calc







r gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; rr bent

65% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-a
35% CHK: medgy-gy/brn, occ ltr gy, com intbd wi
wxy, v calc; tr bent

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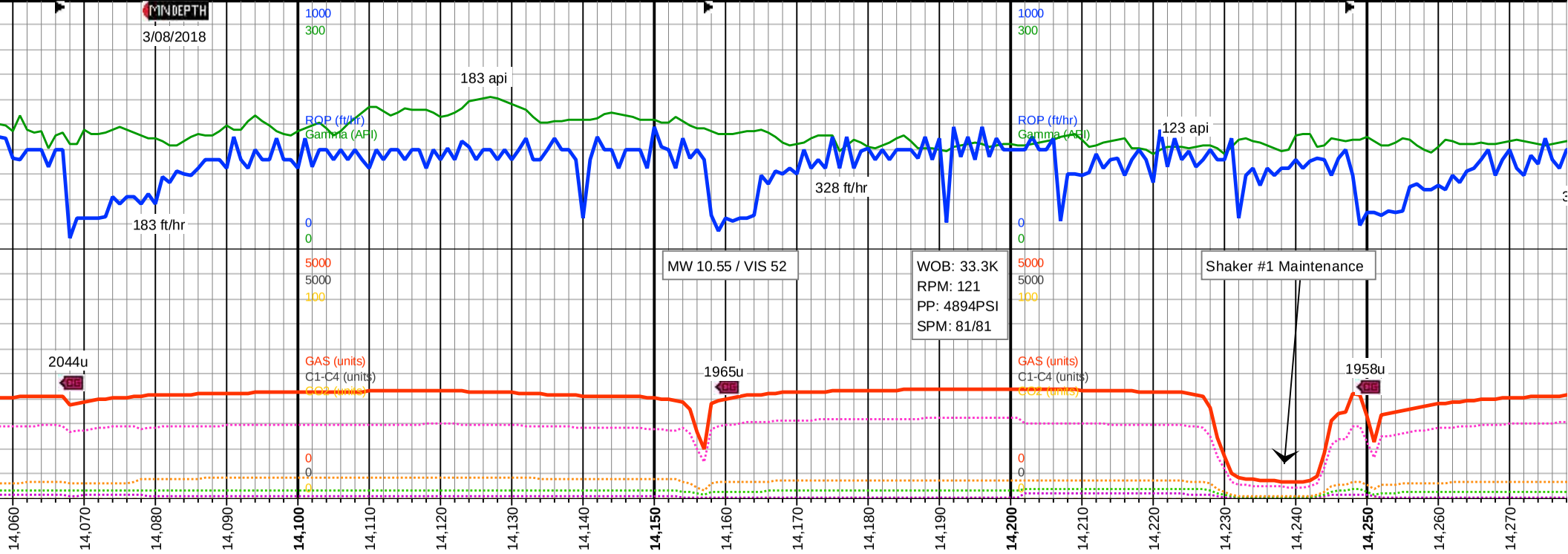
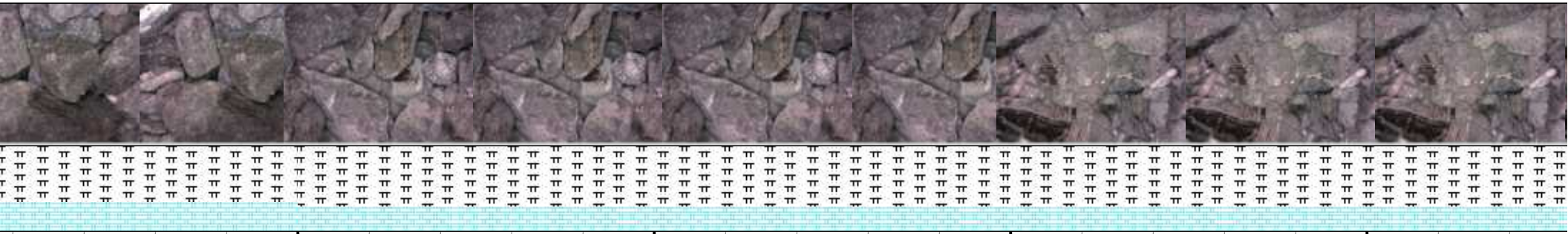
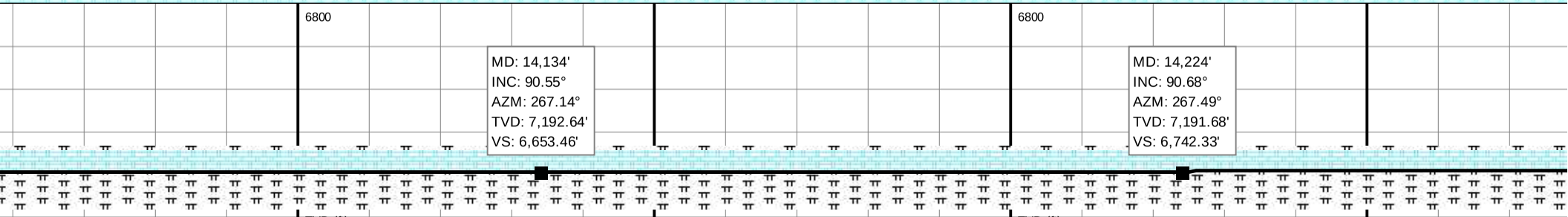


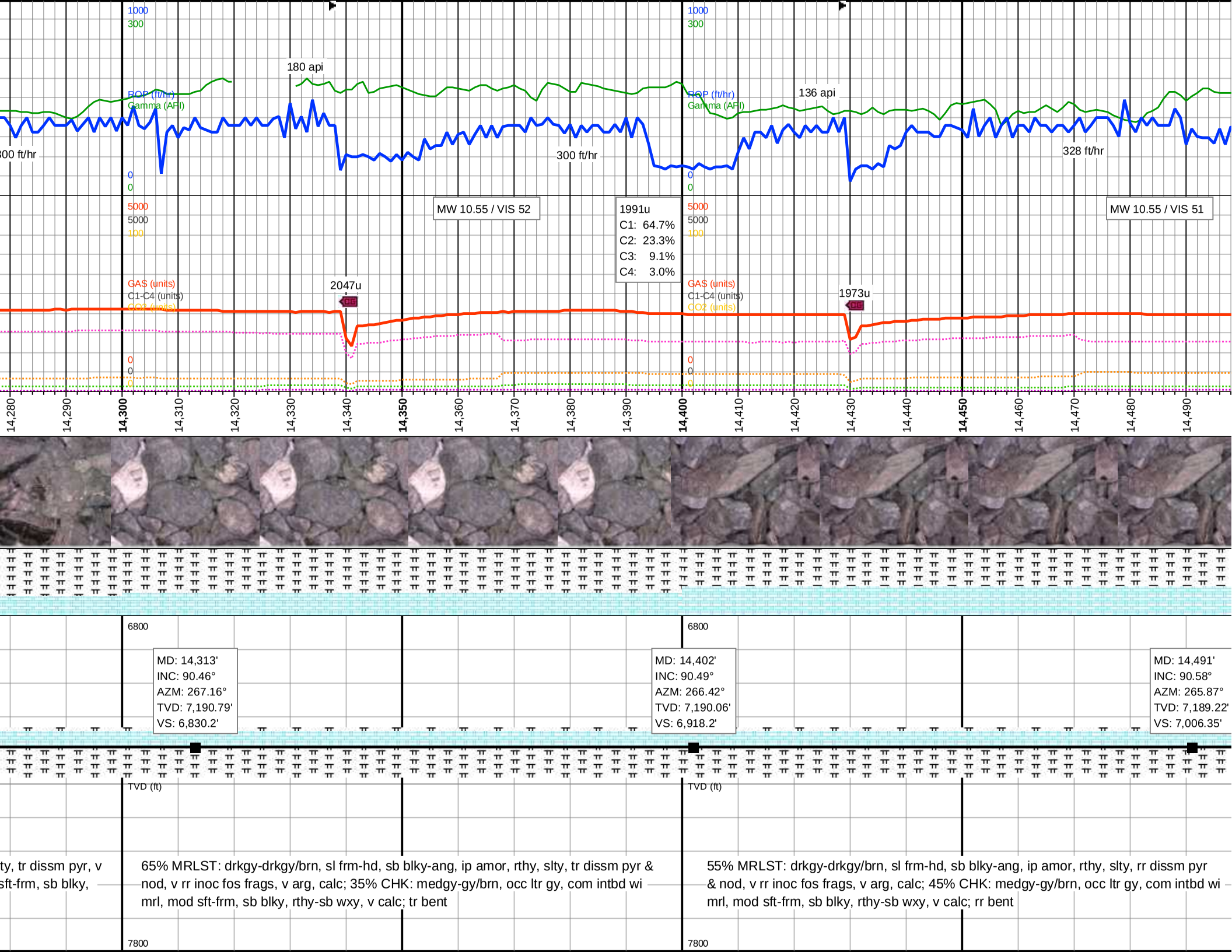




ng, ip amor, rthy, slty, v arg, calc;
mrl, mod sft-frm, sb blky, rthy-sb

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, tr dissm pyr, v arg, calc; 30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; rr bent

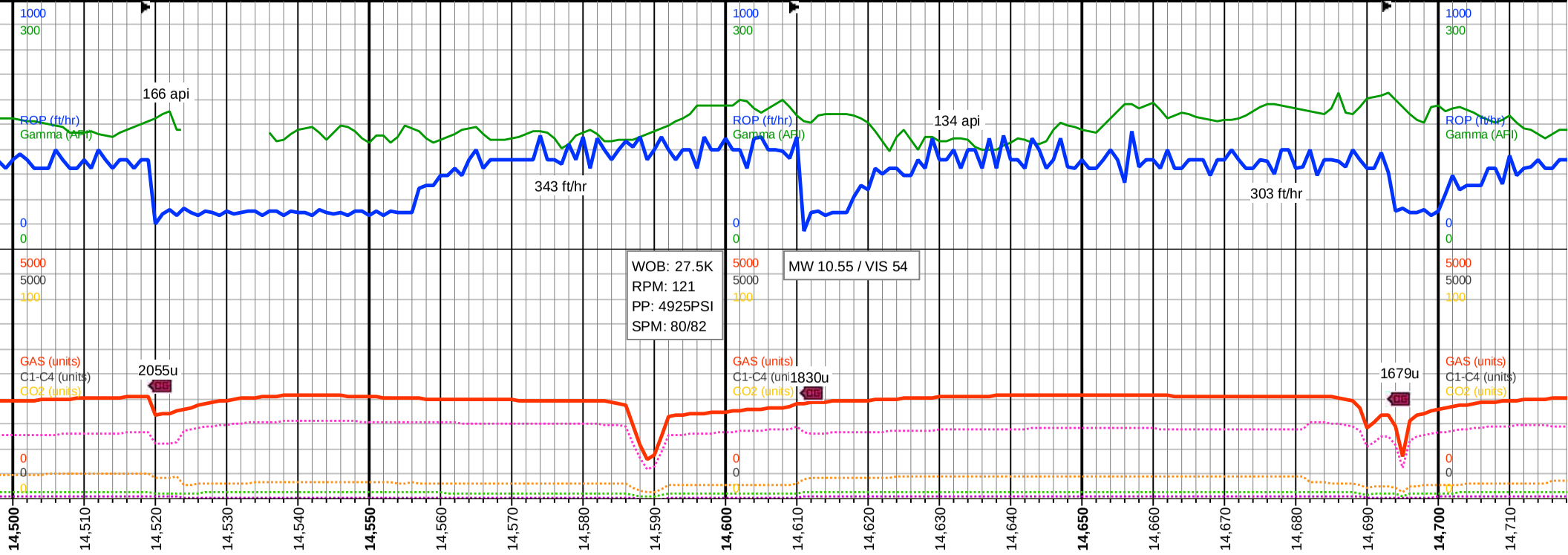
70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, sl
arg, calc; 30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod
rthy-sb wxy, v calc; rr bent

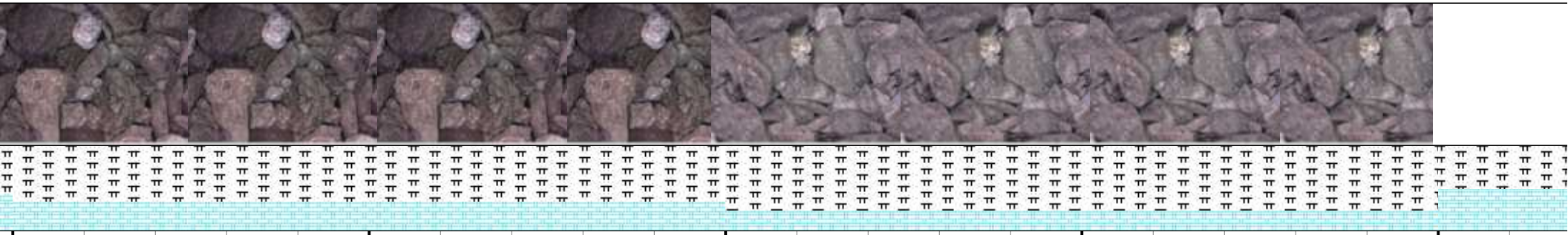


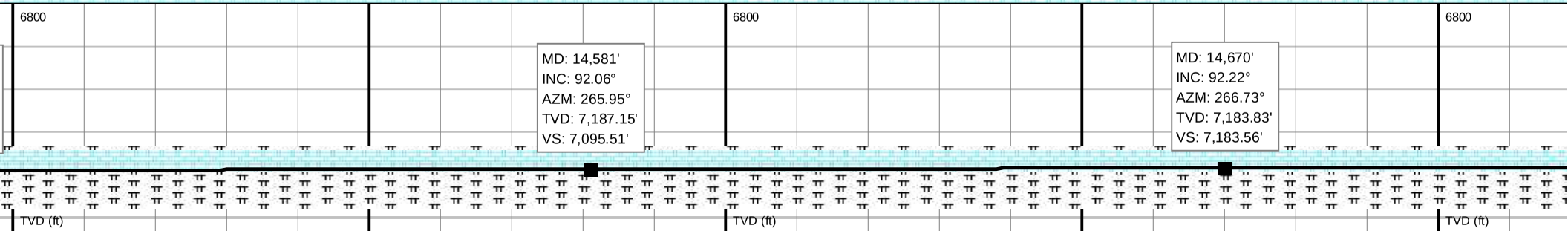
ty, tr dissm pyr, v sft-frm, sb blky,

65% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, tr dissm pyr & nod, v rr inoc fos frags, v arg, calc; 35% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

55% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, rr dissm pyr & nod, v rr inoc fos frags, v arg, calc; 45% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; rr bent







65% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v rr dissm pyr & nod, v rr inoc fos frags, v arg, calc; 35% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; v rr bent

75% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 25% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc

50% MRLST:
50% CHK: m
wxy, v calc; r

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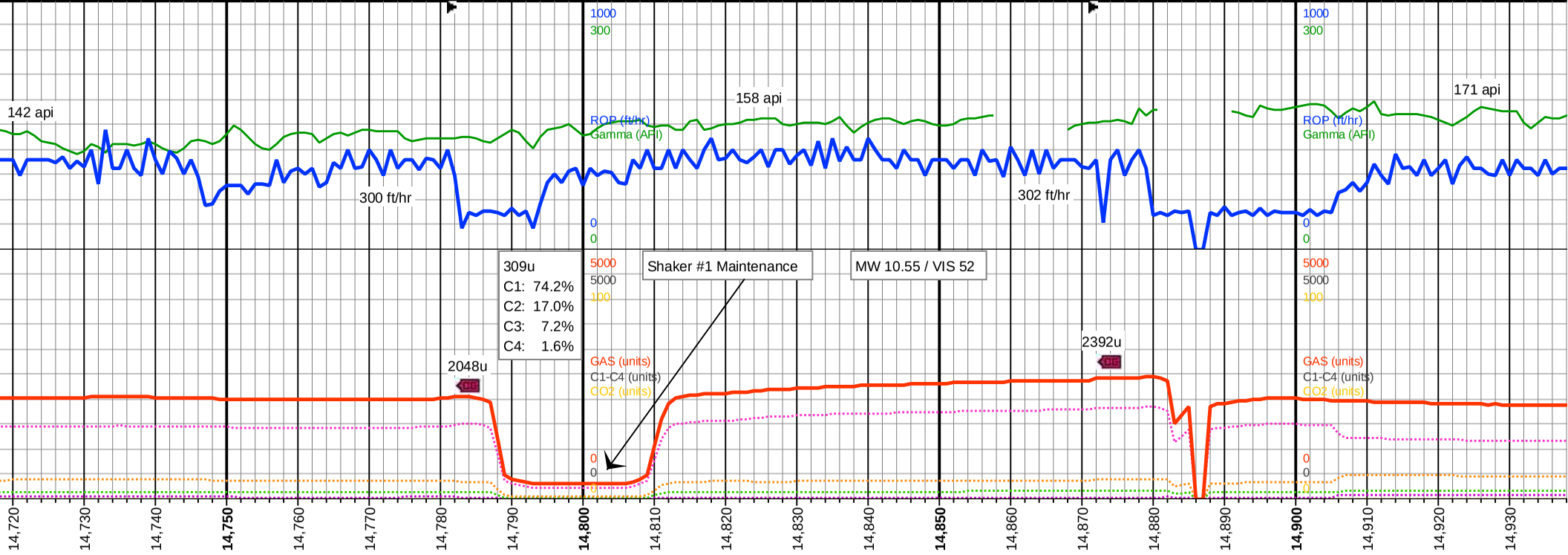

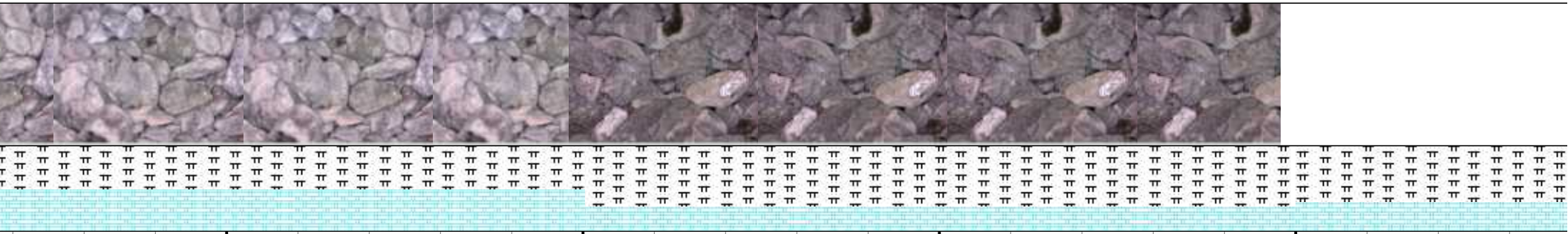

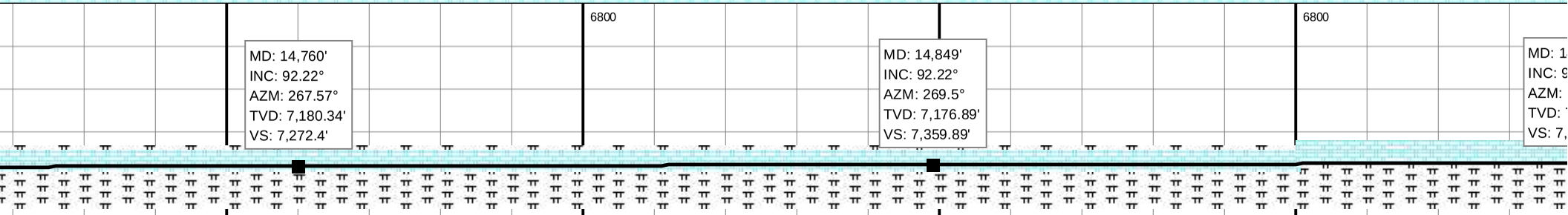

drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
edgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
r bent

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; tr bent

65% MRLST: drkgy-drkgy/brn, s
35% CHK: medgy-gy/brn, occ ltr
wxy, v calc; rr bent

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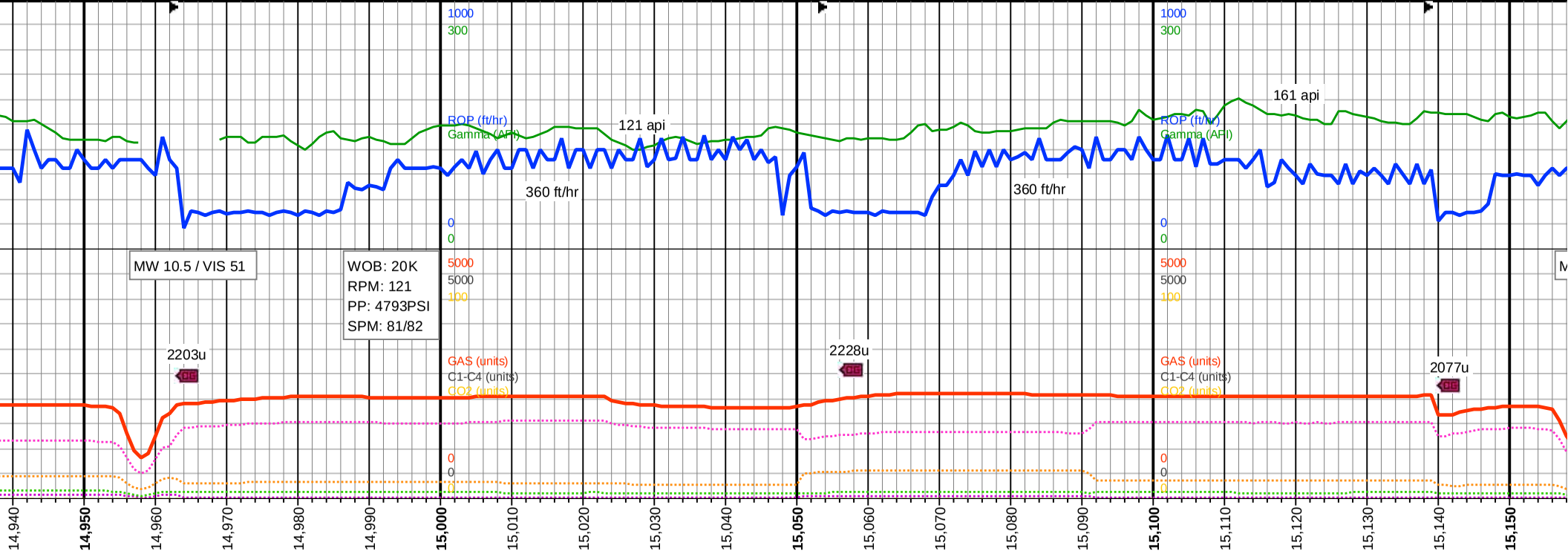

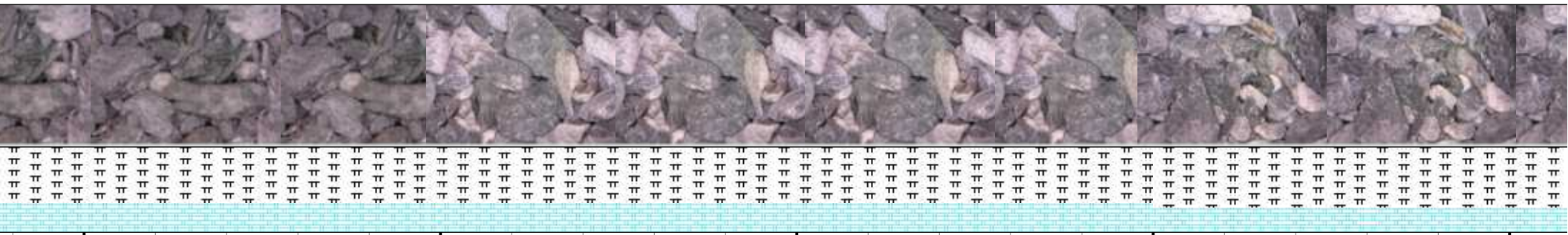

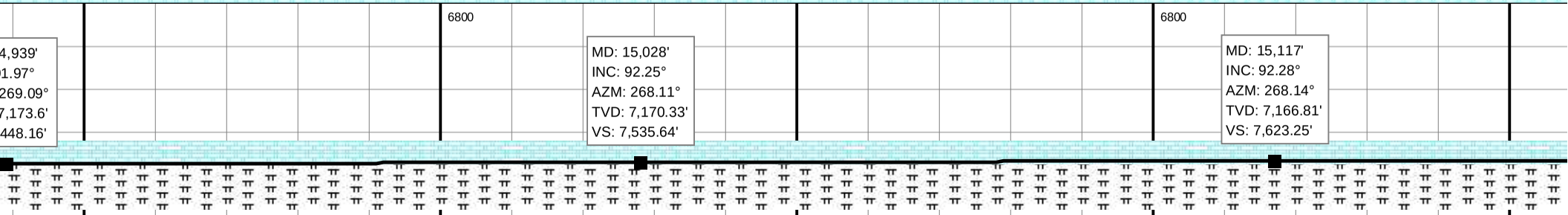

l frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
r gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb

65% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
35% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; rr bent

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70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-an
30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi m
wxy, v calc; tr bent

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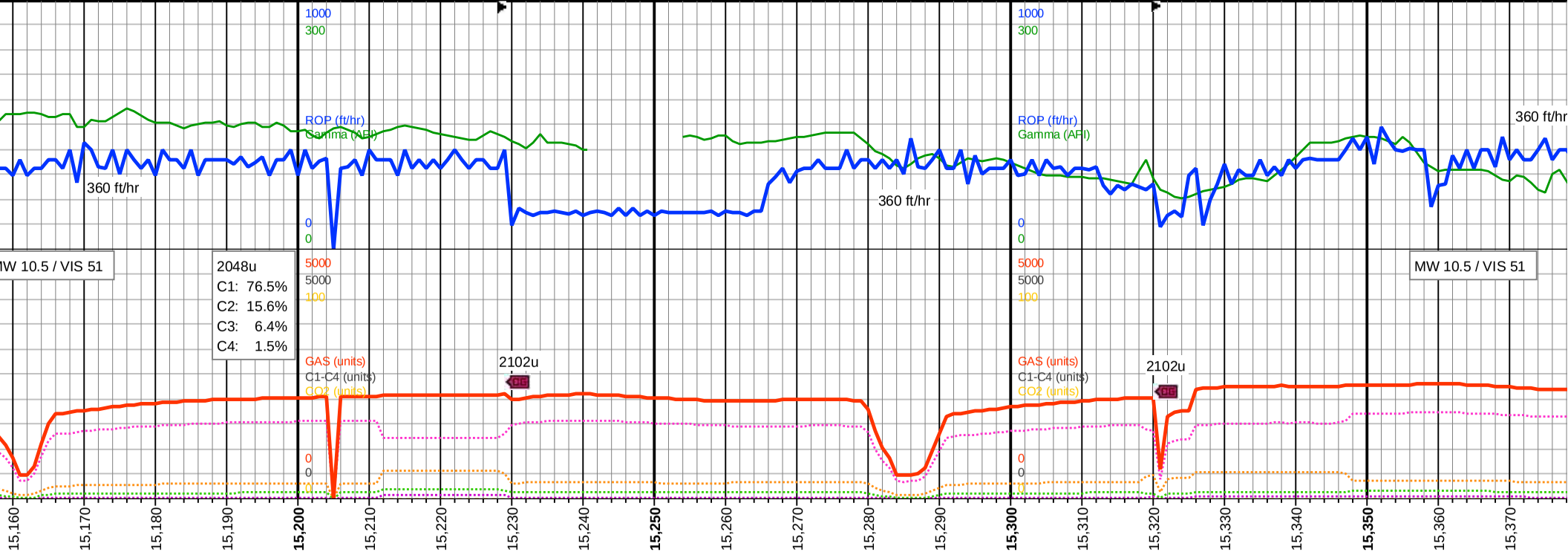
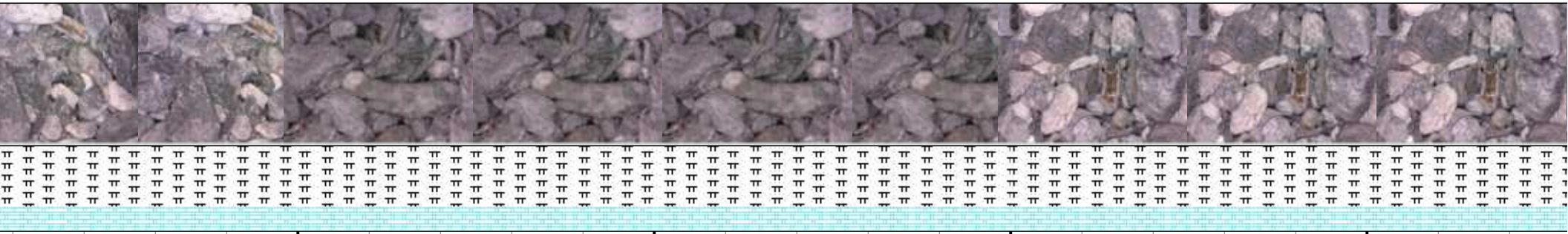
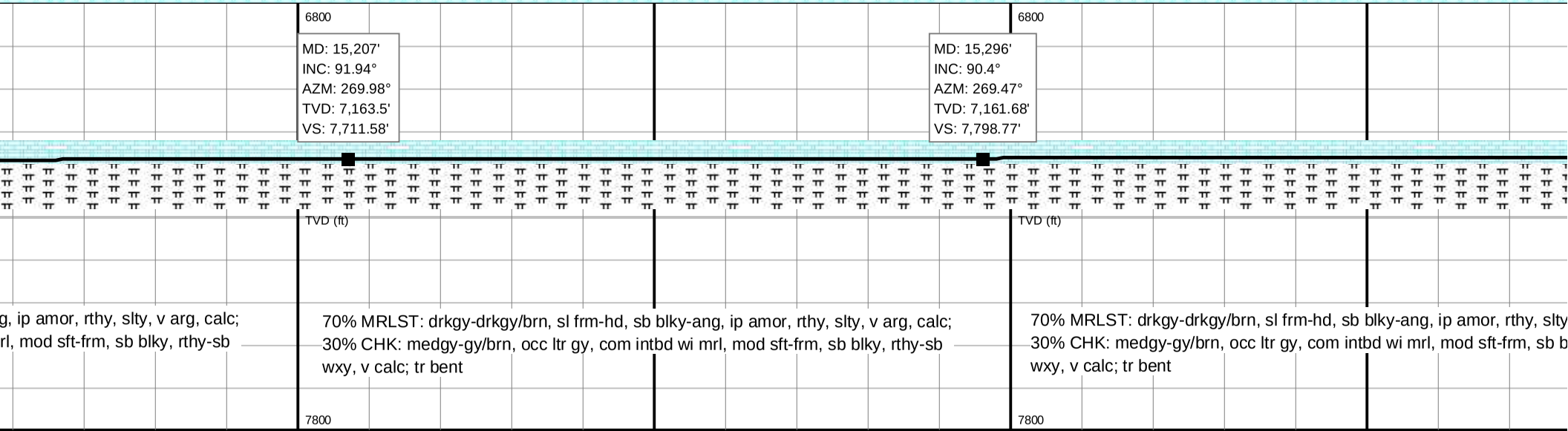


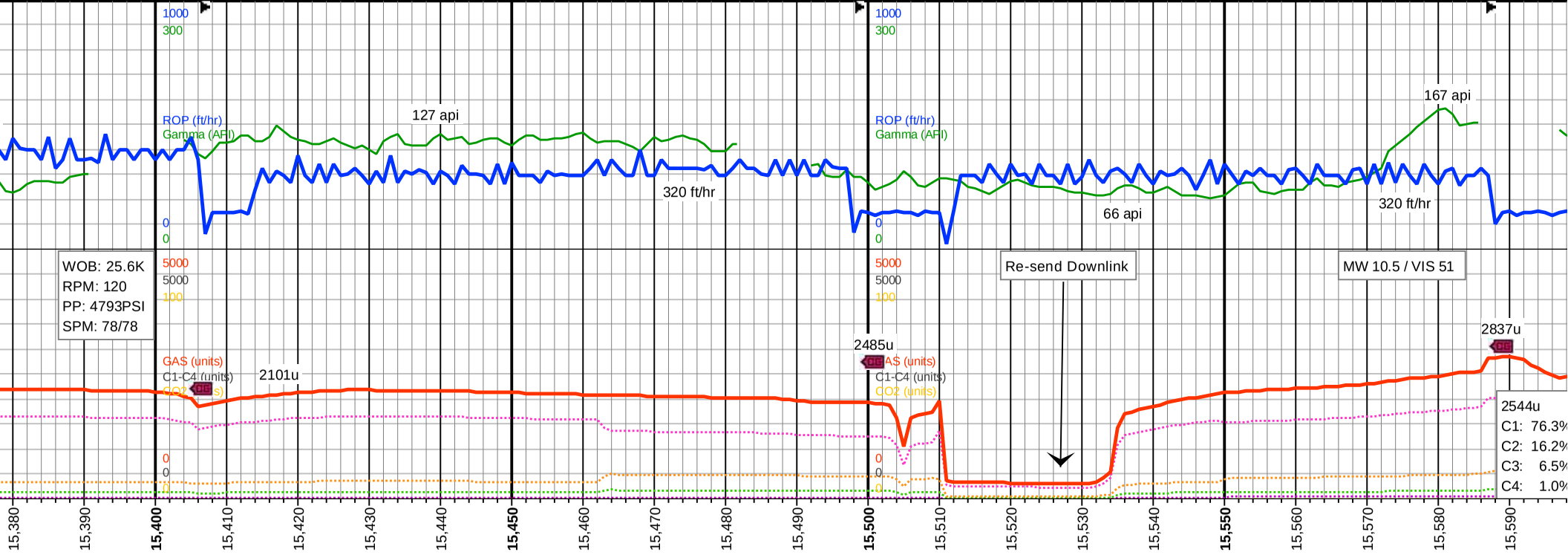


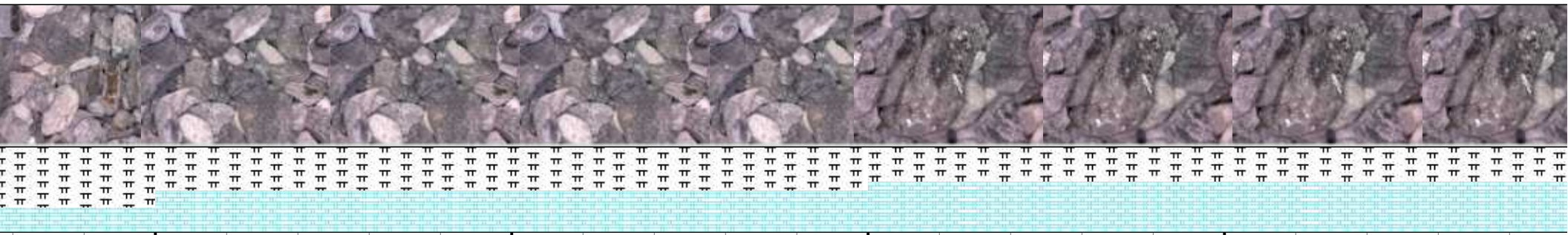


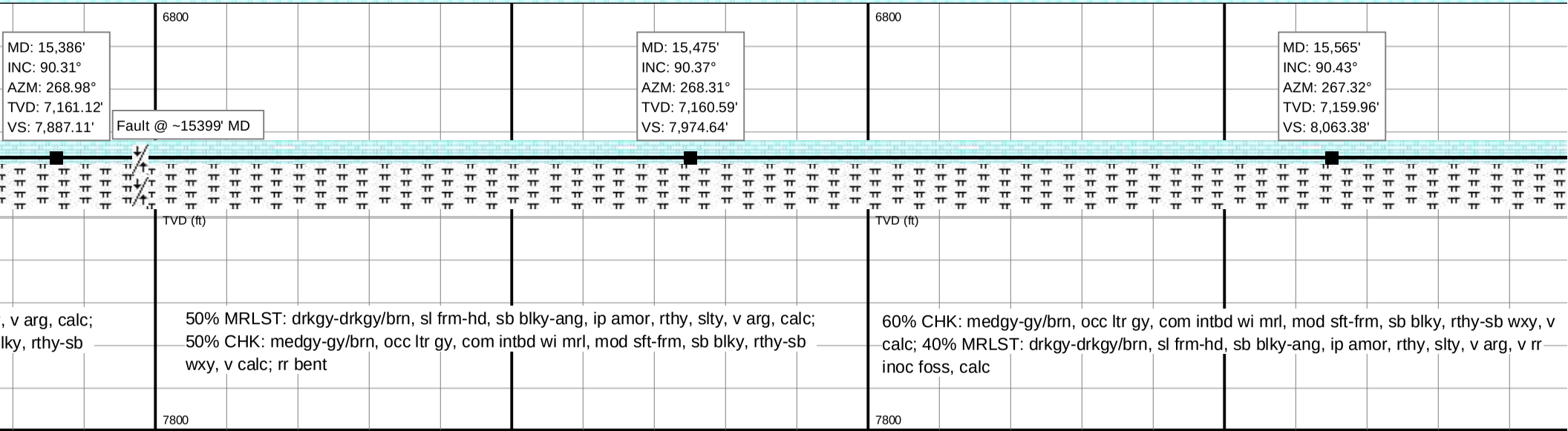
g, ip amor, rthy, slty, v arg, calc;
rl, mod sft-frm, sb blky, rthy-sb

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; tr bent

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty
30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb b
wxy, v calc; tr bent



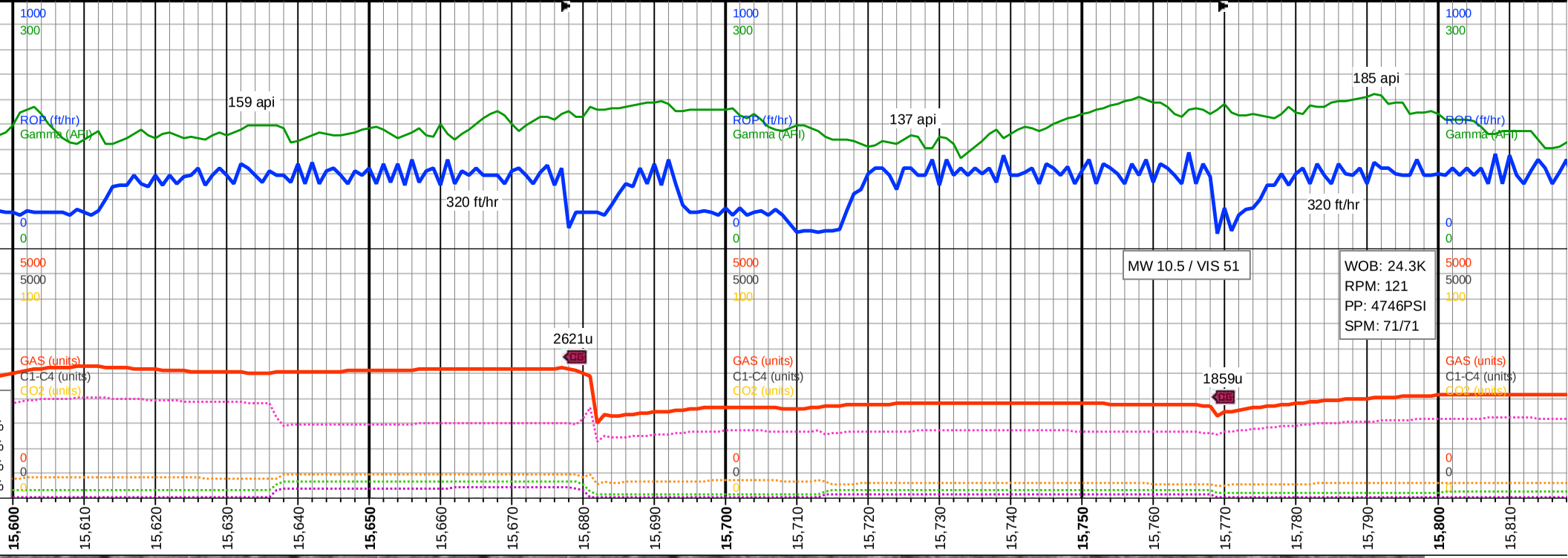


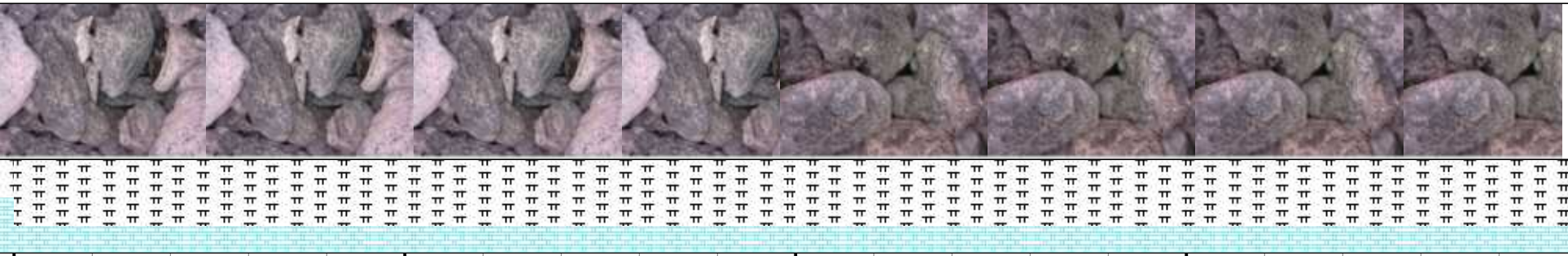


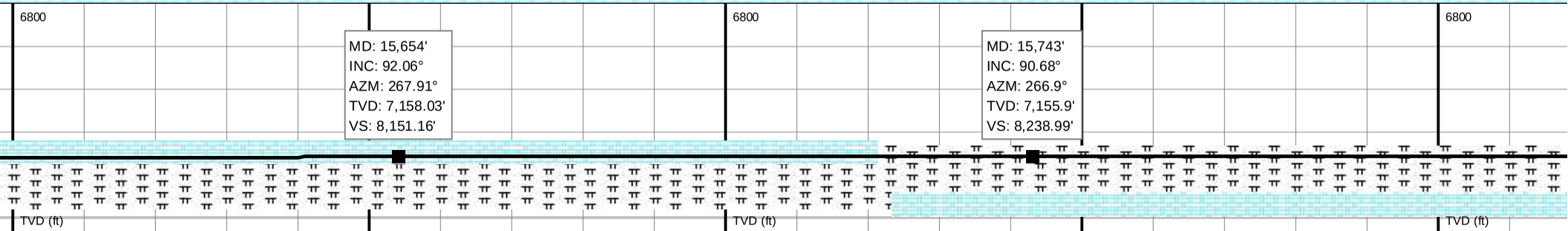
, v arg, calc;
lky, rthy-sb

50% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 50% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; rr bent

60% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 40% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, v rr inoc foss, calc



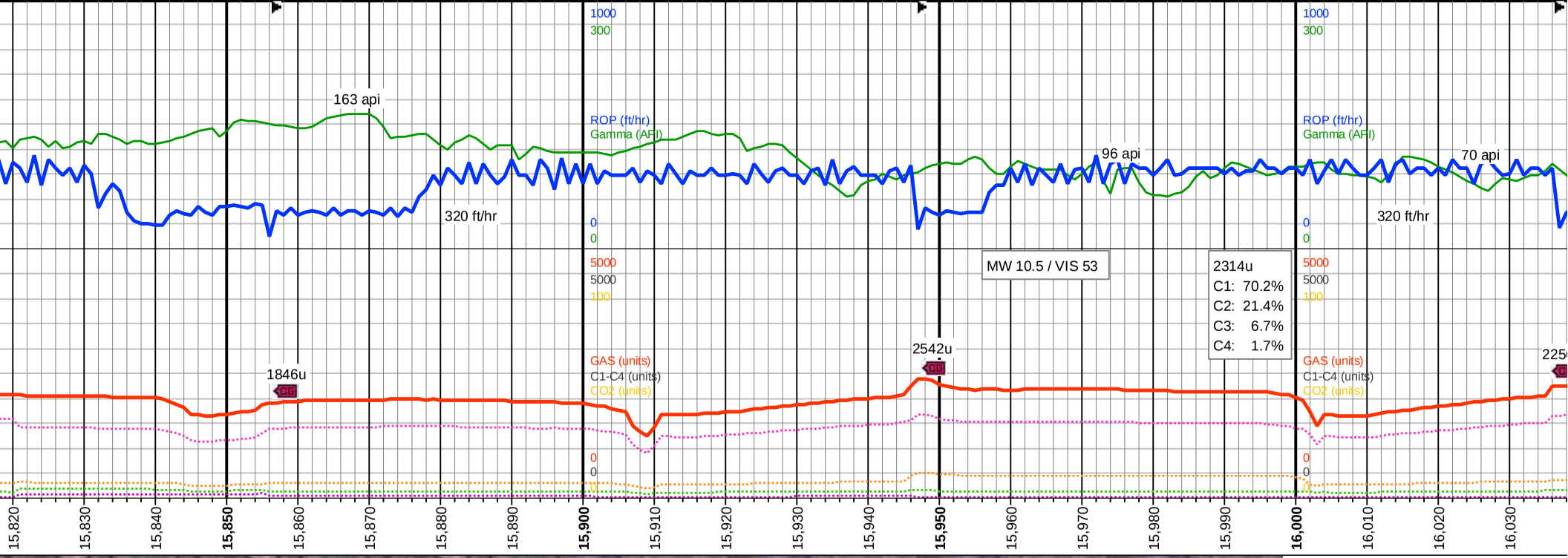


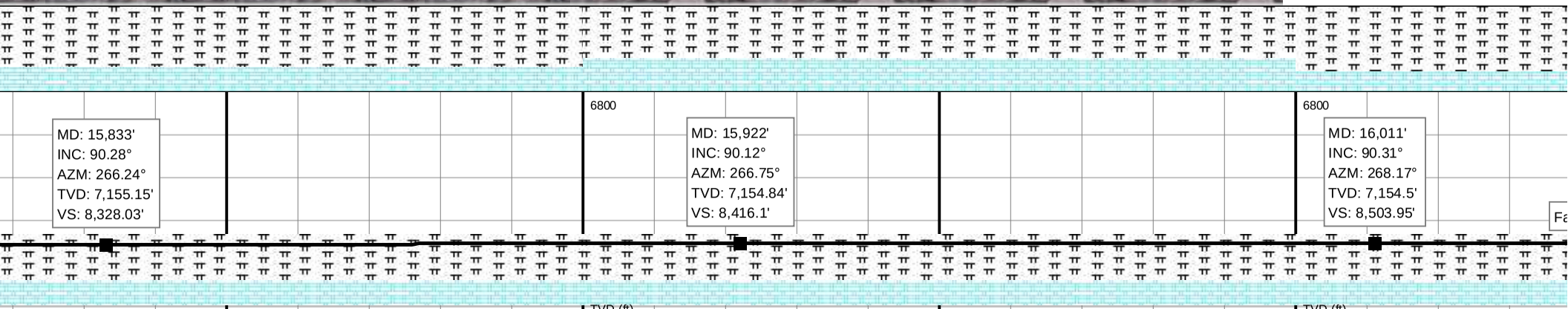


70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc; 30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

70% MRLST:
30% CHK: me
wxy, v calc; tr

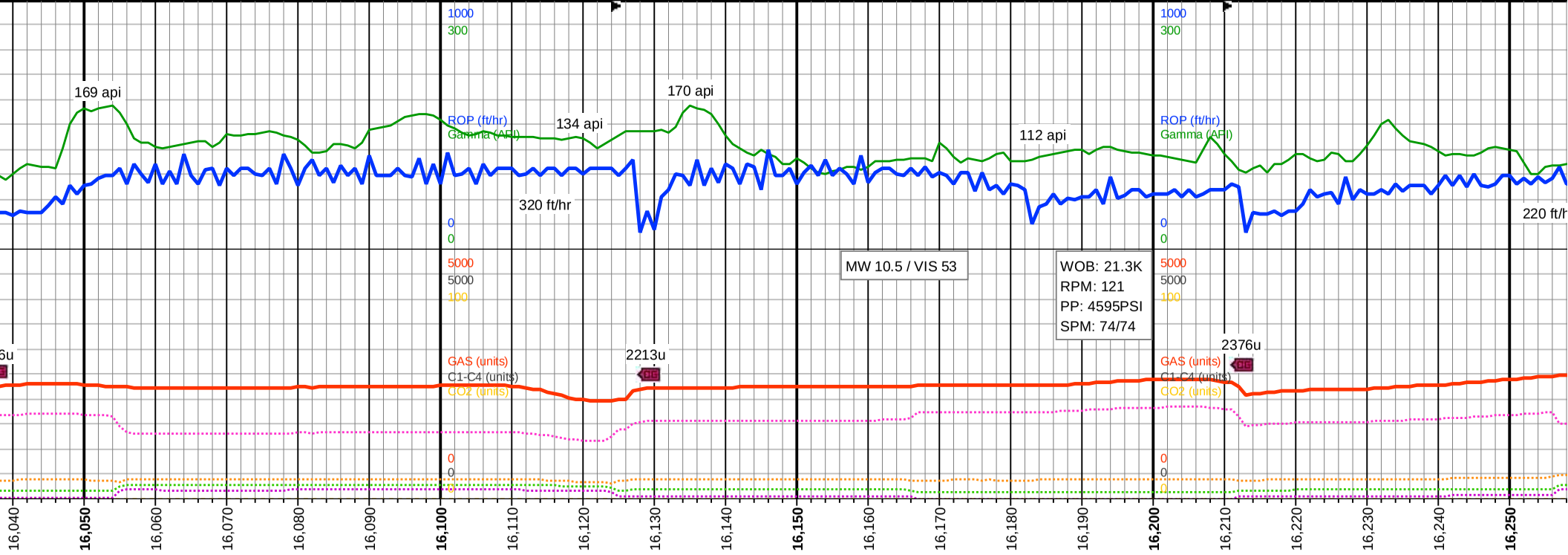


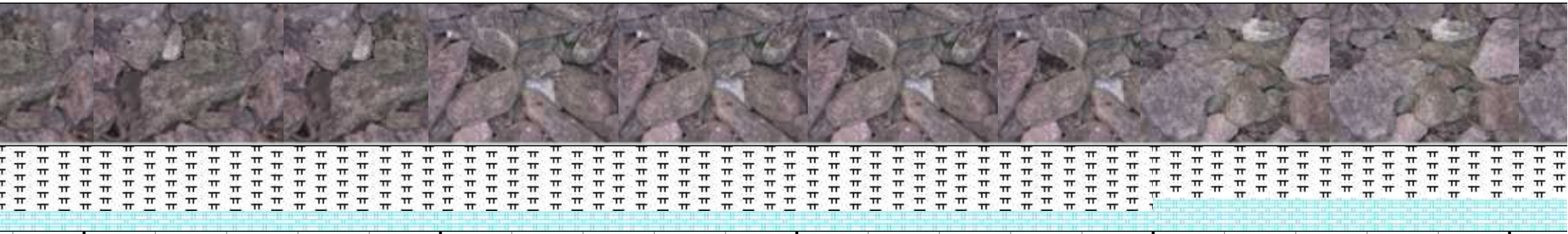


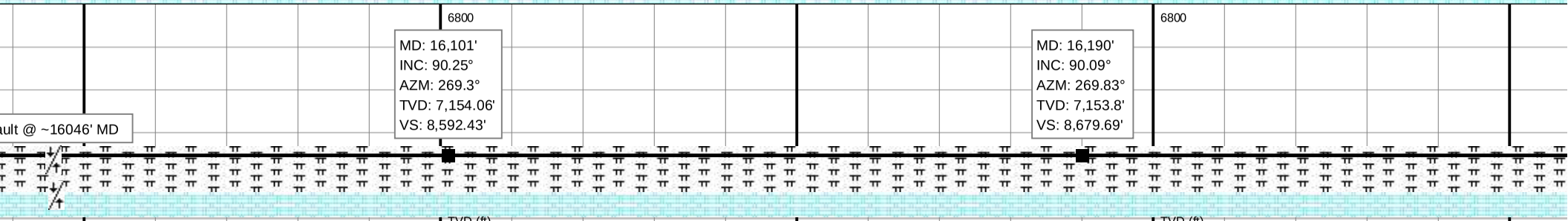
drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
edgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
bent

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; tr bent

75% MRLST: drkgy-drkgy/brn, sl f
25% CHK: medgy-gy/brn, occ ltr g
wxy, v calc; tr bent



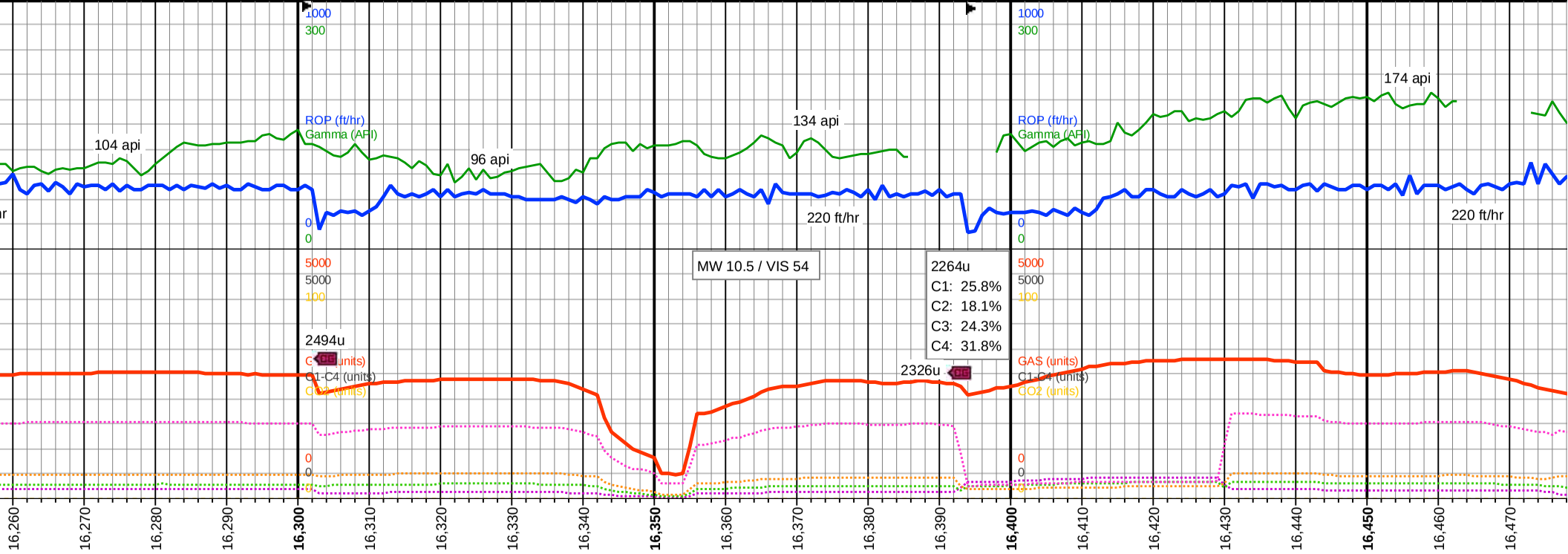


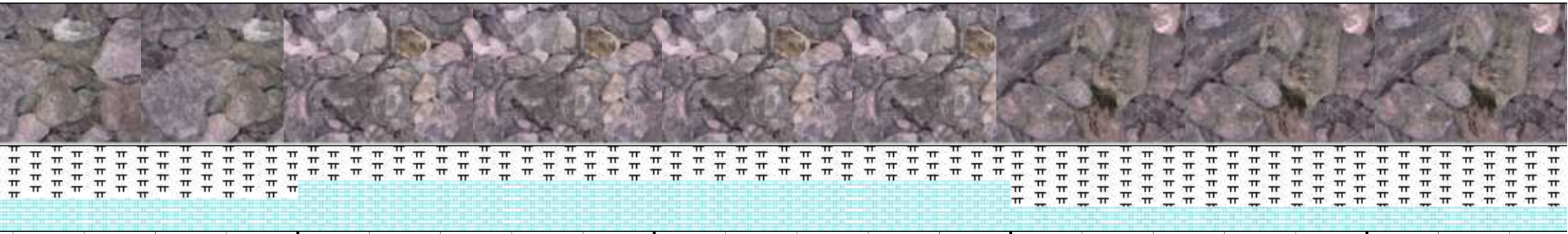


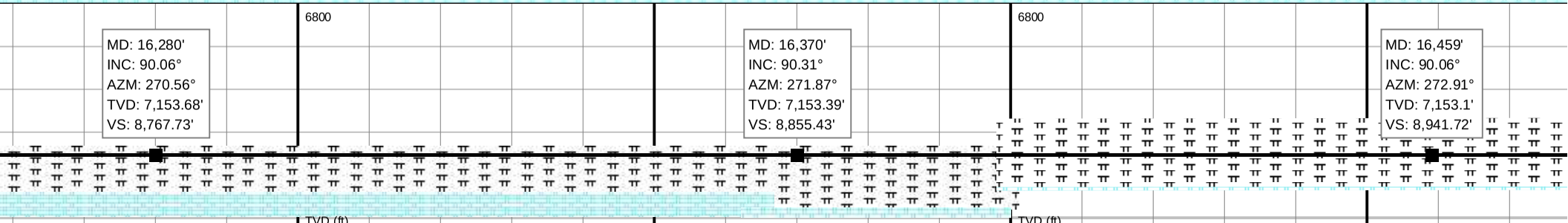
rm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
y, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb

75% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
25% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; tr bent

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ar
40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi m
wxy, v calc; tr bent







ng, ip amor, rthy, slty, v arg, calc;
nrl, mod sft-frm, sb blky, rthy-sb

60% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 40% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, v rr inoc foss, calc

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slt
30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb
wxy, v calc; tr bent

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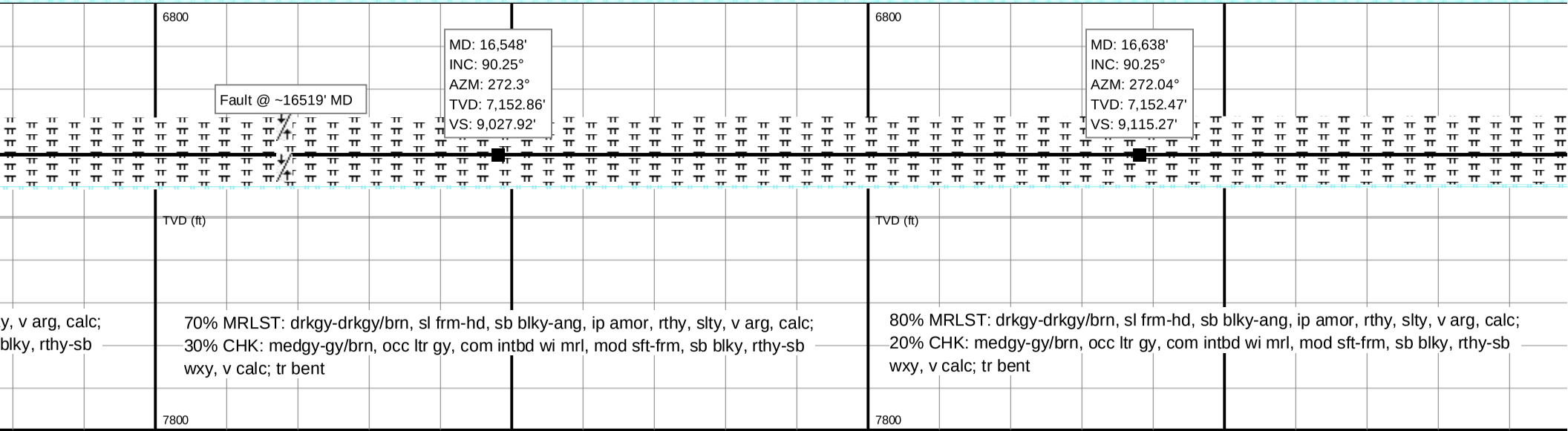
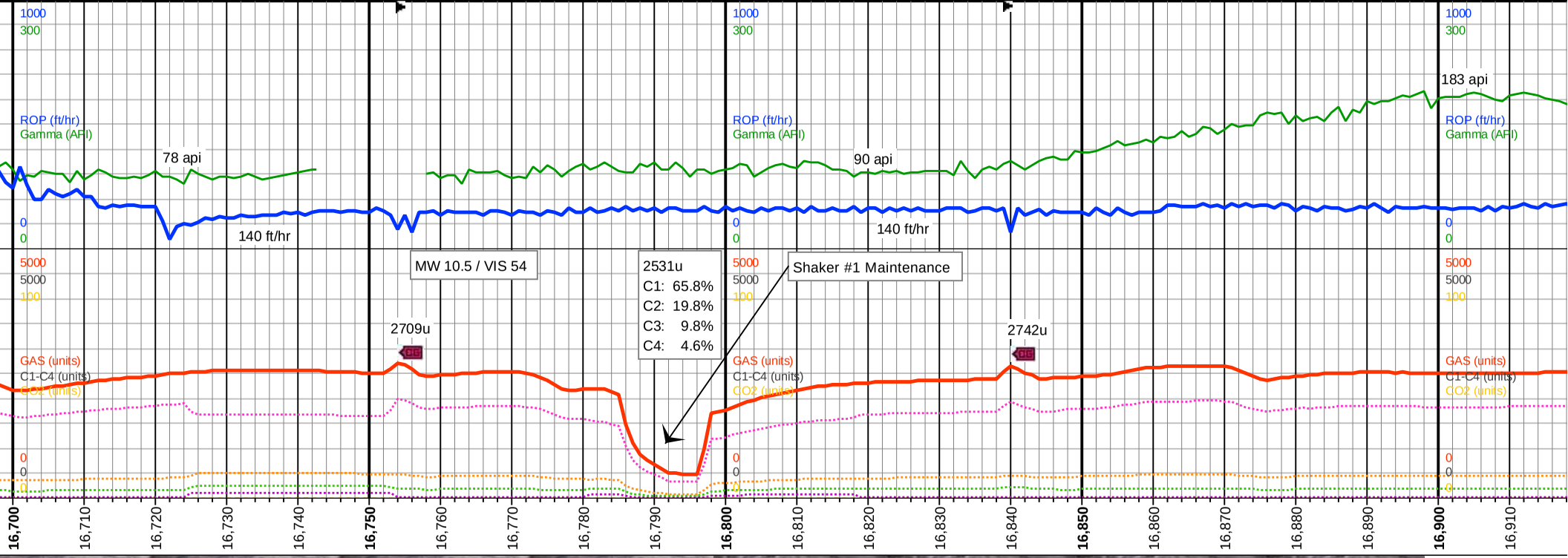
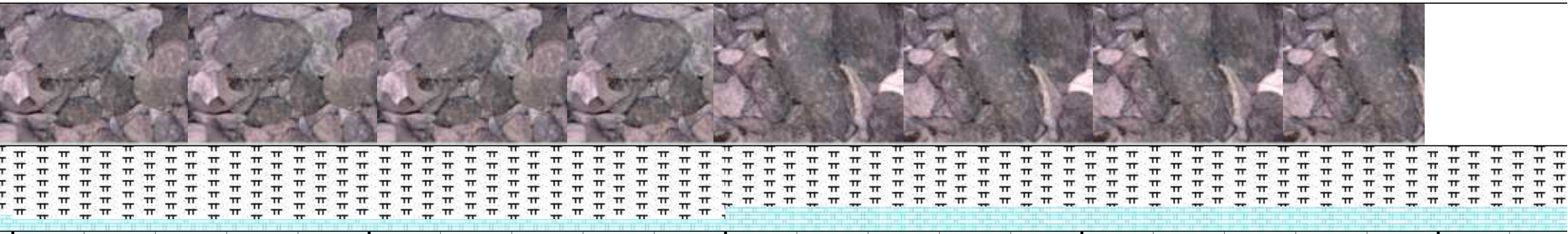


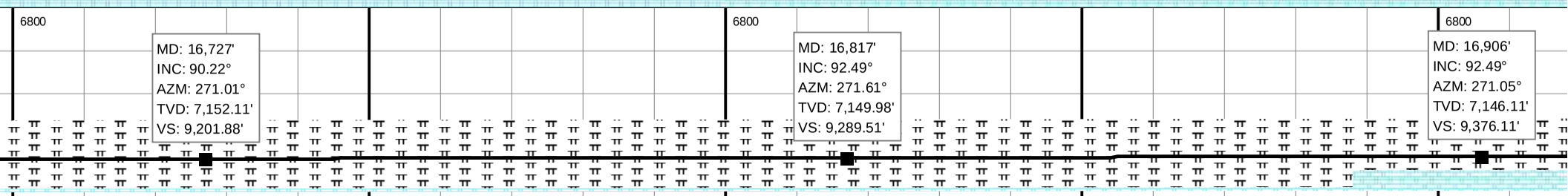
y, v arg, calc;
blky, rthy-sb

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; tr bent

80% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
20% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; tr bent







85% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
15% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

70% MRLST:
30% CHK: me
wxy, v calc; tr

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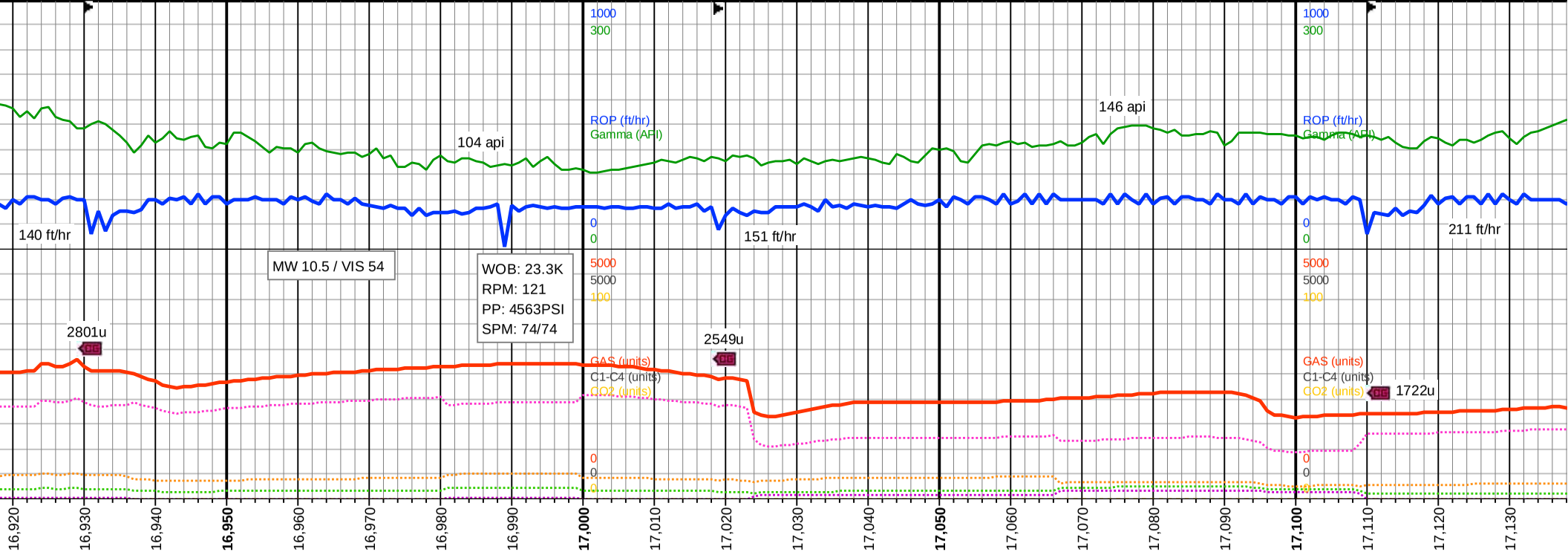
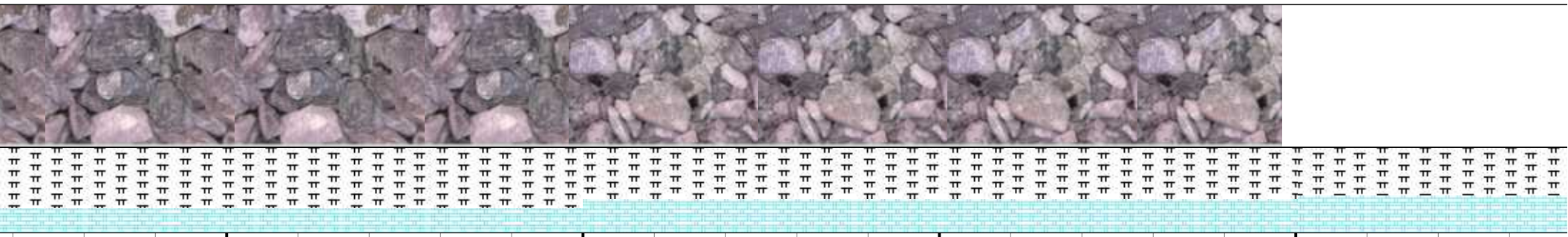
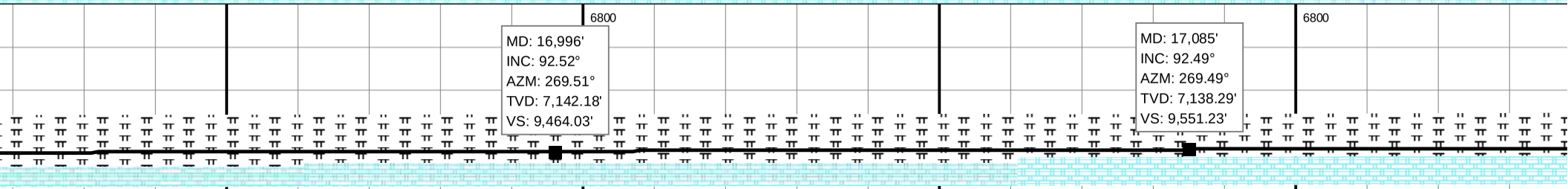


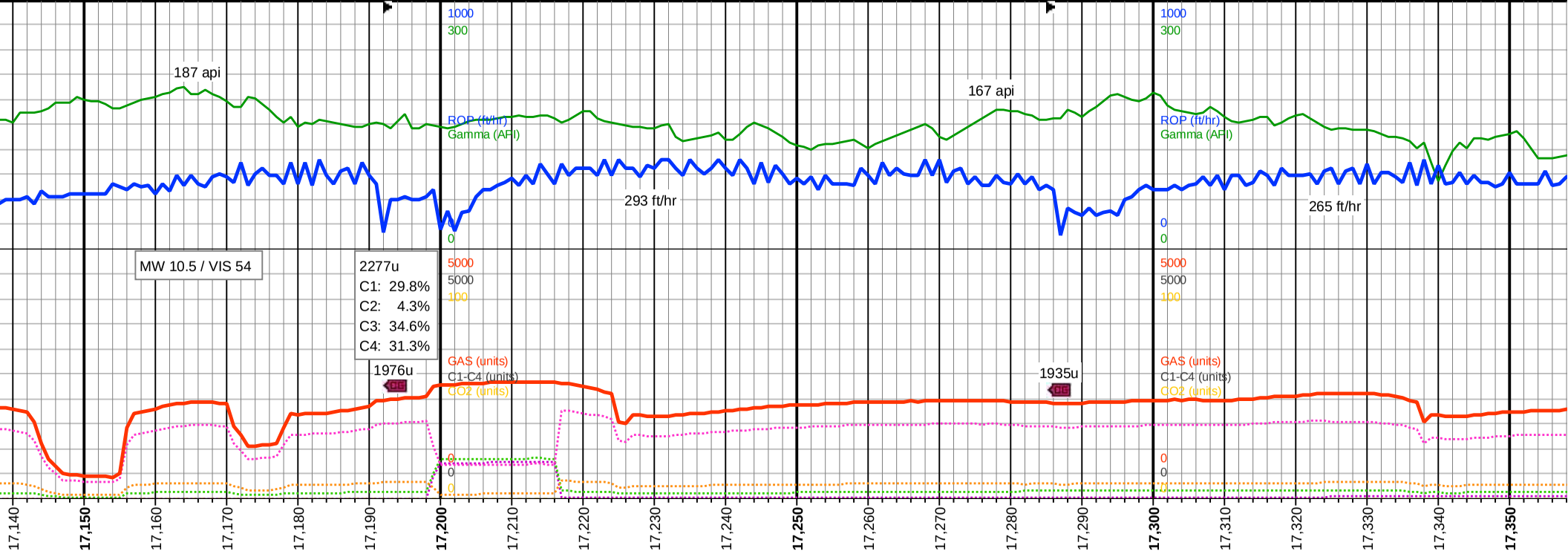


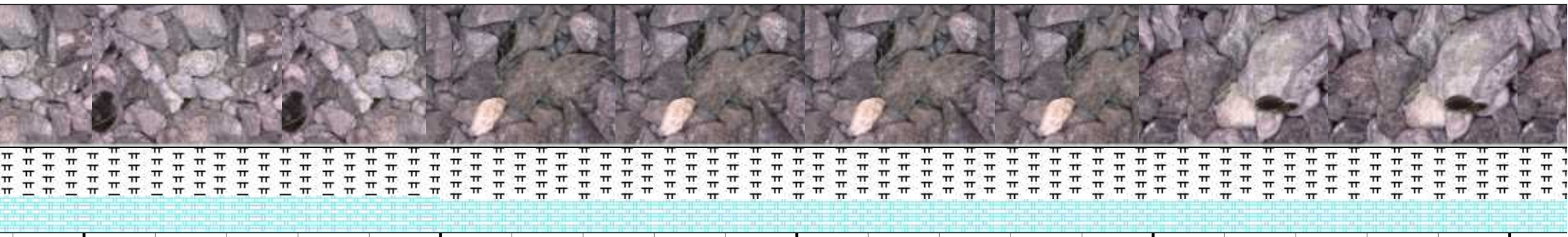


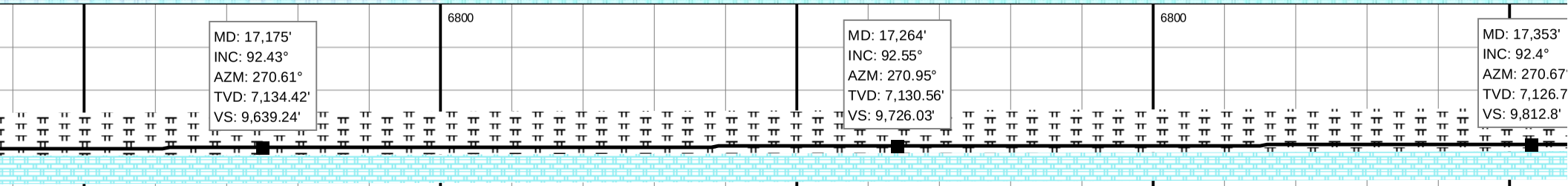
drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
edgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
bent

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; tr bent

55% MRLST: drkgy-drkgy/brn,
45% CHK: medgy-gy/brn, occ l
wxy, v calc; tr bent







sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
tr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v arg, calc;
40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
wxy, v calc; tr bent

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-a
40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi
wxy, v calc; tr bent

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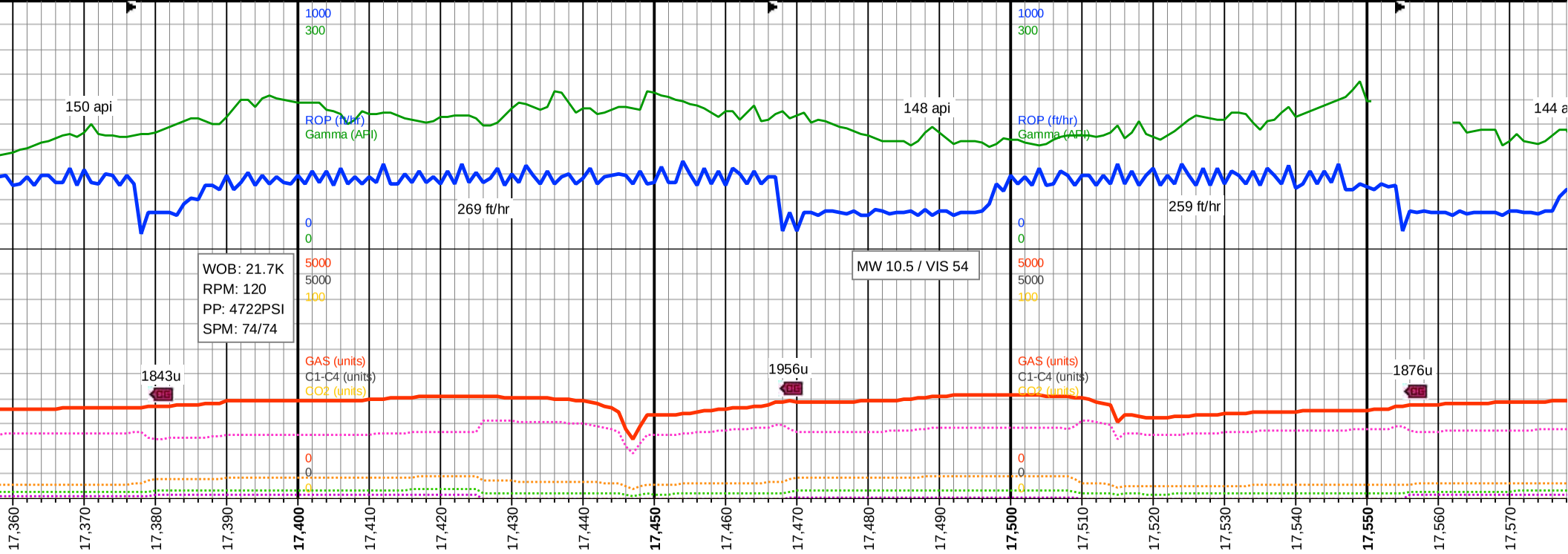
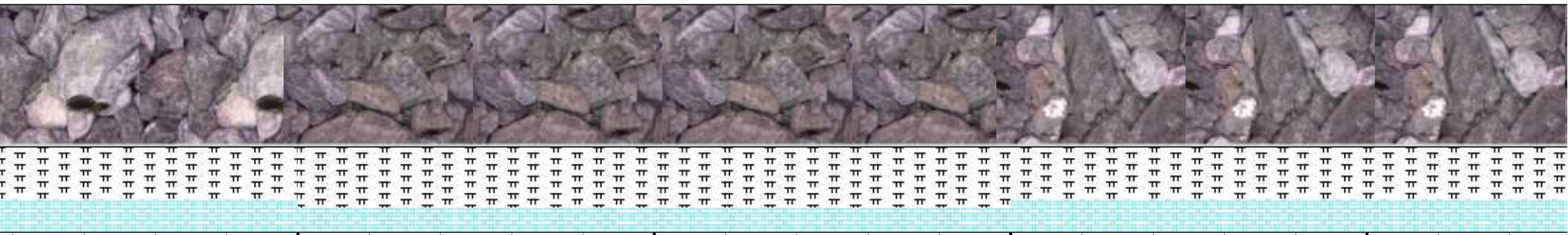
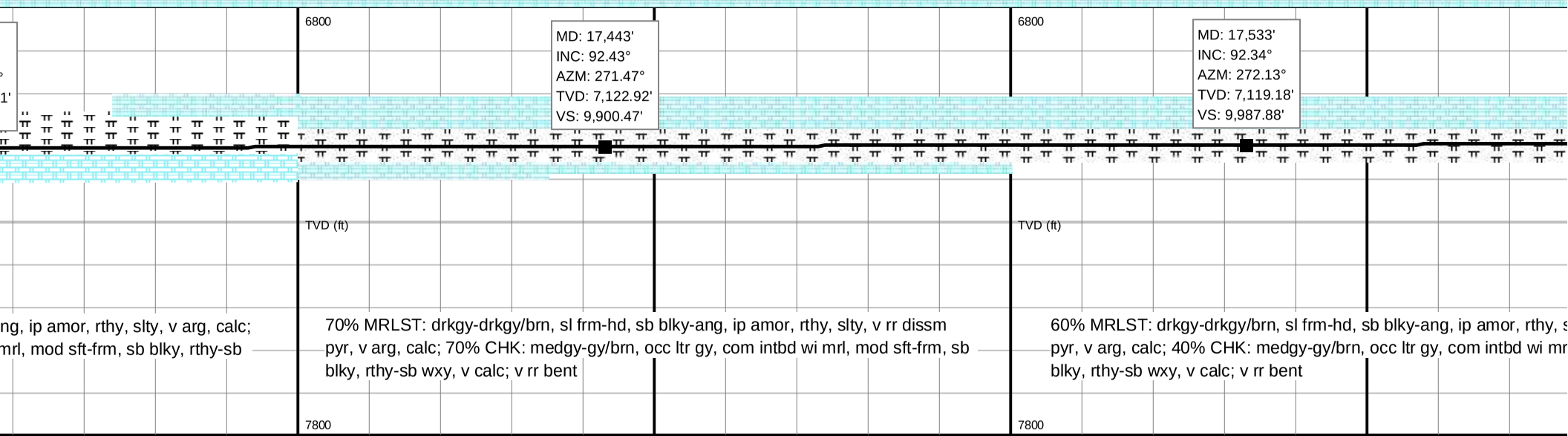


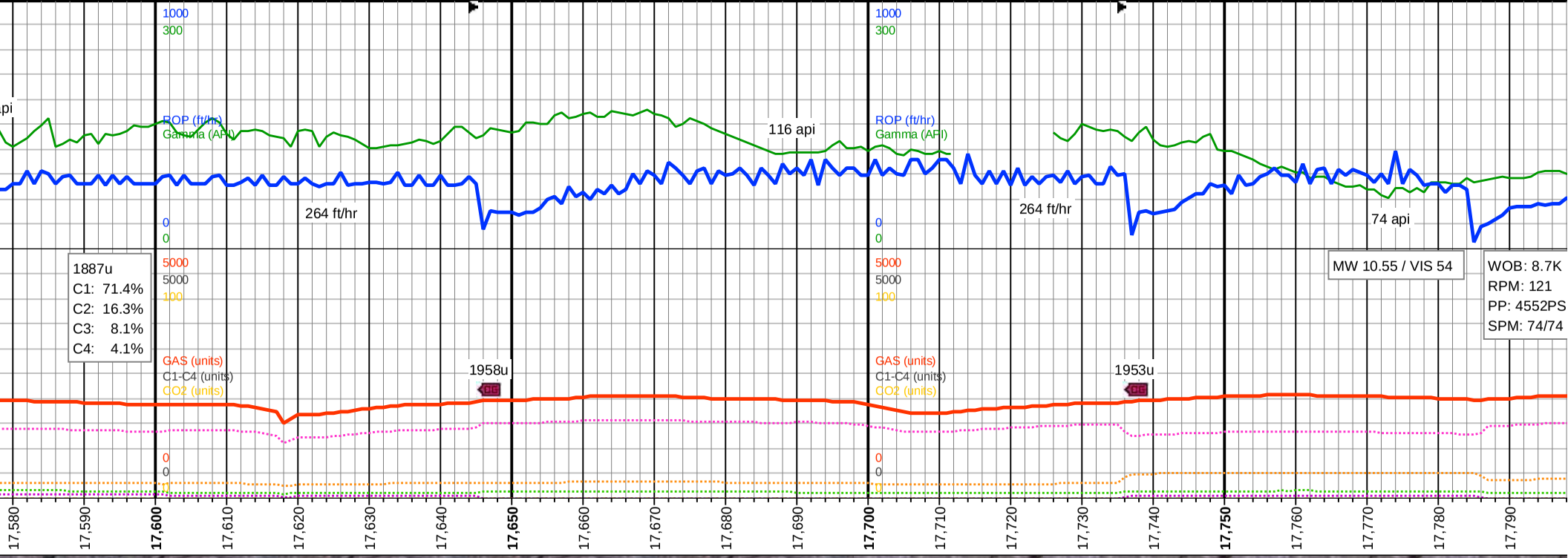


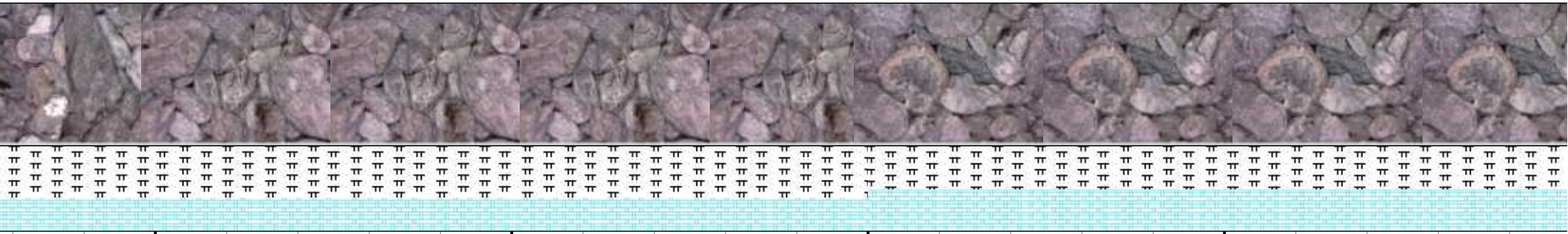


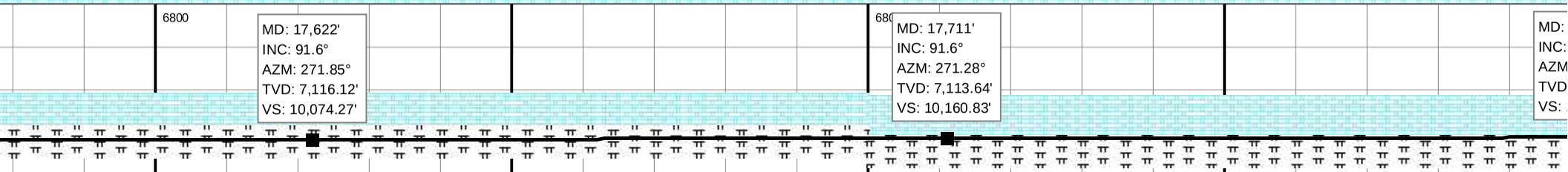
ng, ip amor, rthy, slty, v arg, calc;
mrl, mod sft-frm, sb blky, rthy-sb

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v rr dissm pyr, v arg, calc; 70% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; v rr bent

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, s pyr, v arg, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mr blky, rthy-sb wxy, v calc; v rr bent







slty, v rr dissm
l, mod sft-frm, sb

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, rr dissm pyr, v rr inoc fos frags, v arg, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

50% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, rr dissm pyr, v rr inoc fos frags, v arg, calc; 50% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

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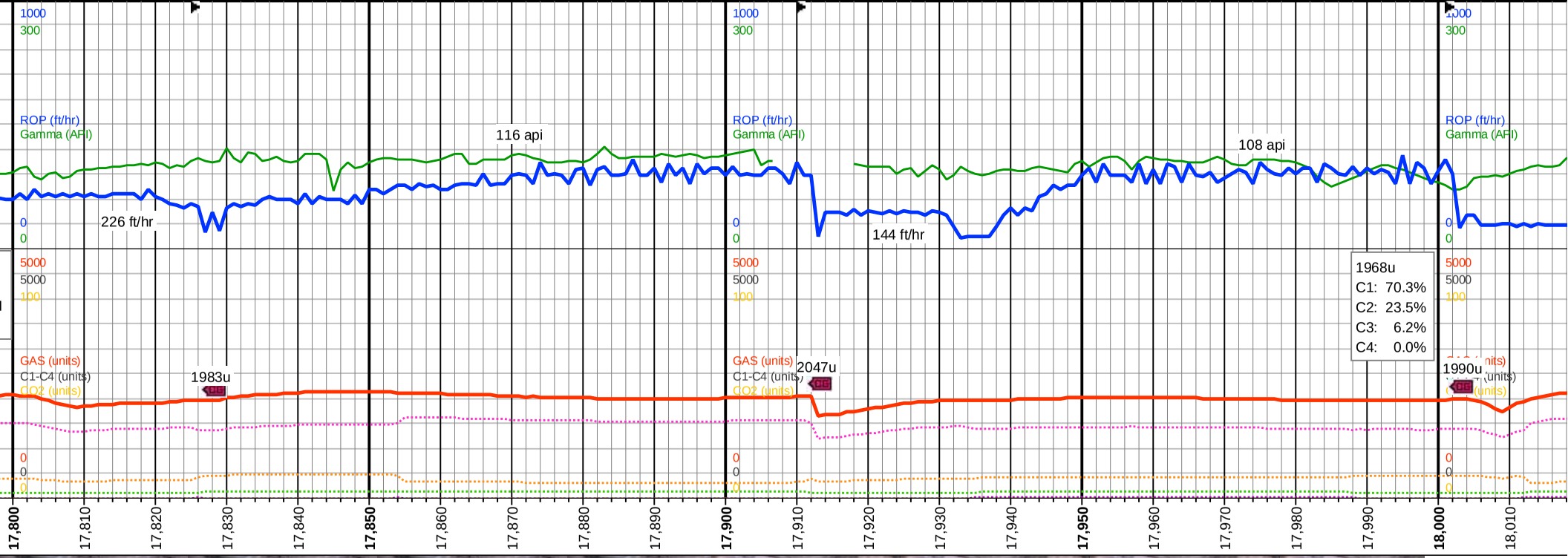


17,801'
91.29°
: 269.52°
: 7,111.37'
10,248.77'

MD: 17,890'
INC: 91.51°
AZM: 267.54°
TVD: 7,109.19'
VS: 10,336.31'

MD: 17,979'
INC: 91.45°
AZM: 265.8°
TVD: 7,106.9'
VS: 10,424.31'

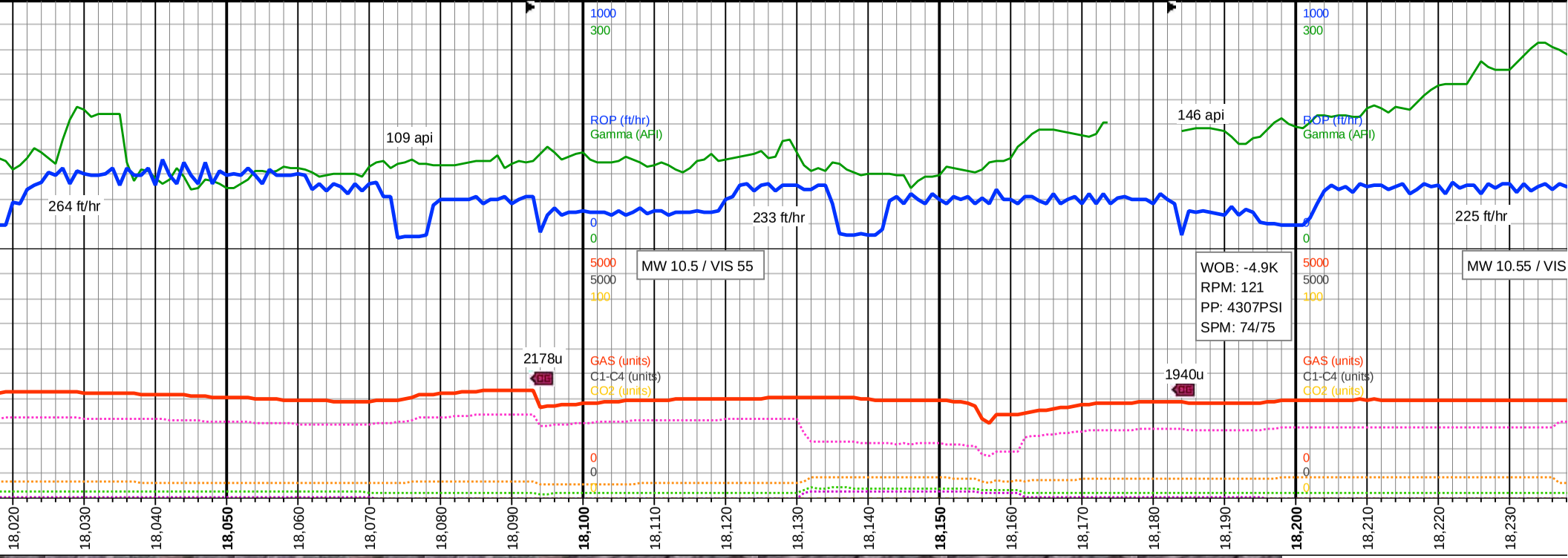
6800

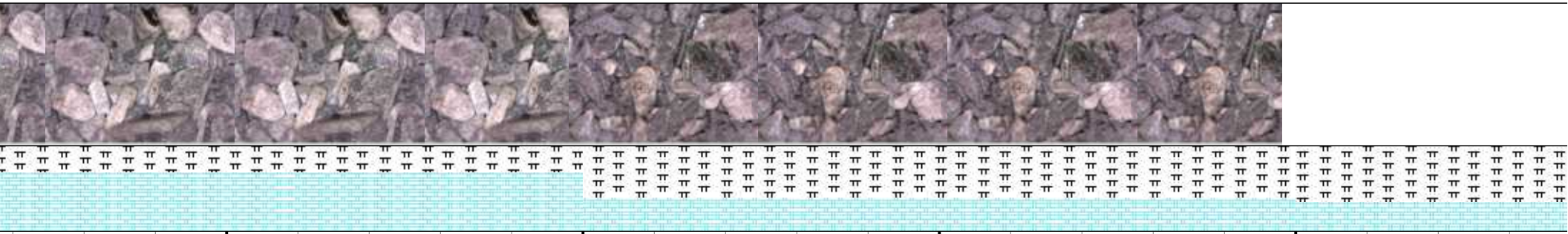
TVD (ft)

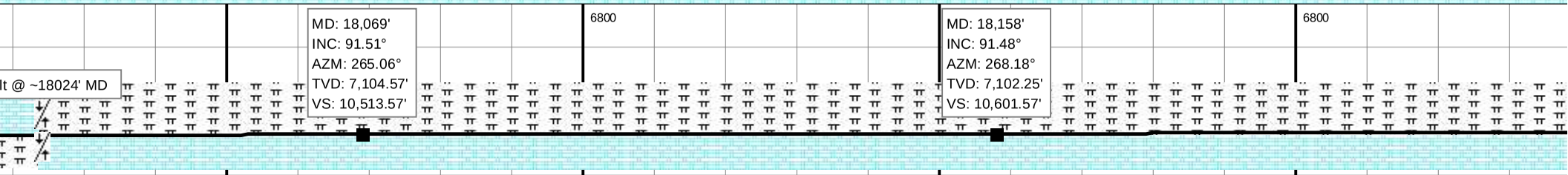
7800

50% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, rr dissm pyr, v rr inoc fos frags, v arg, calc; 50% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; tr bent

60% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; 40% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v rr dissm pyr, v rr inoc fos frags, v arg, calc; tr bent





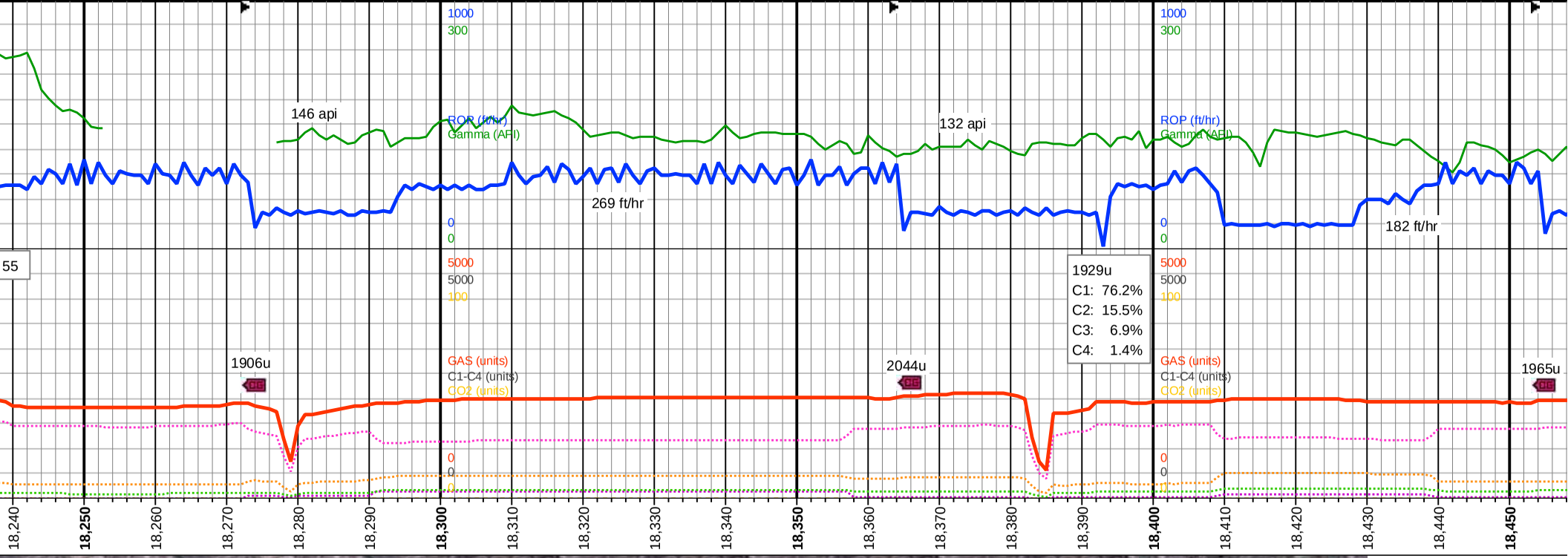


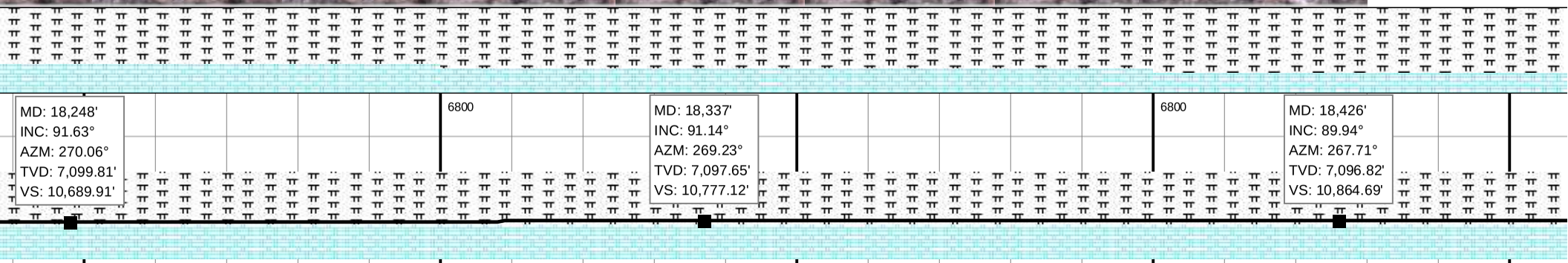
edgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb
30% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v
v rr inoc fos frags, v arg, calc; tr bent

60% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v rr inoc fos frags, v arg, calc; 40% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; rr bent

65% MRLST: drkgy-drkgy/brn, s
frags, v rr pyr nod, v arg, calc; 3
mod sft-frm, sb blky, rthy-sb wxy

7800
7800



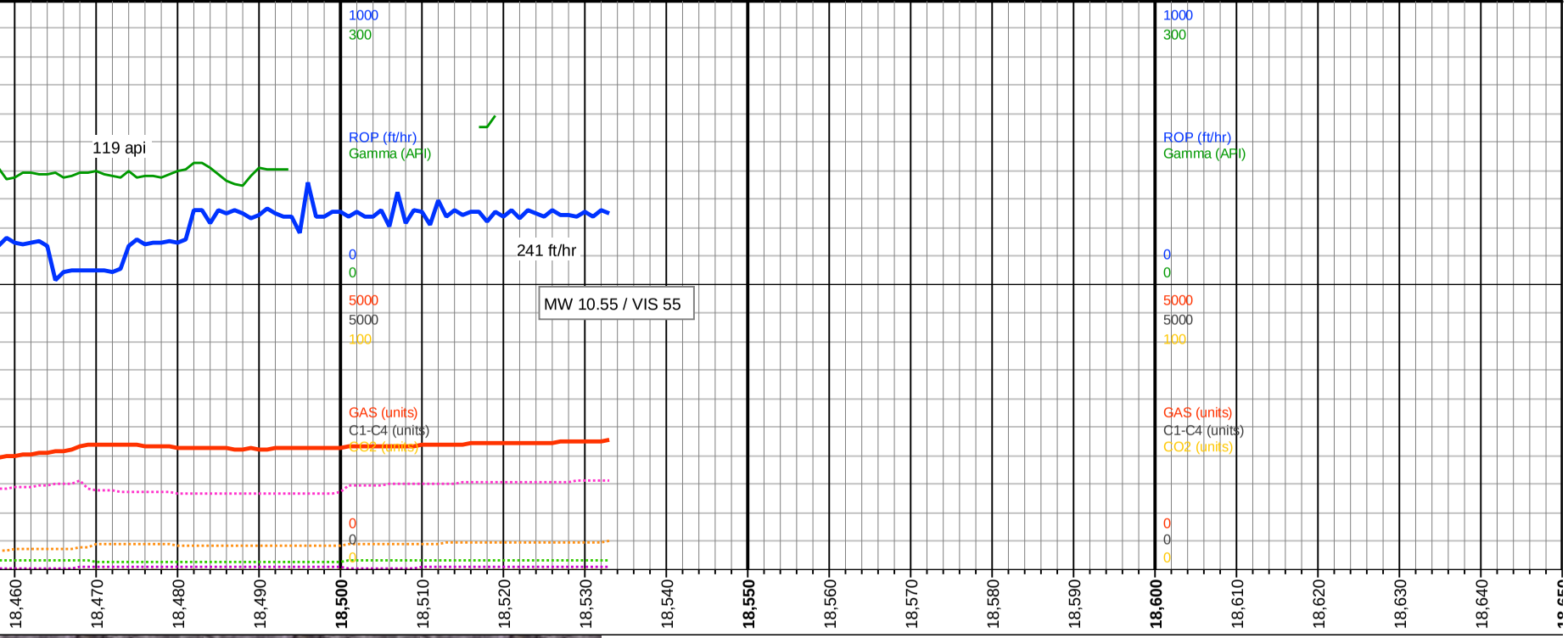


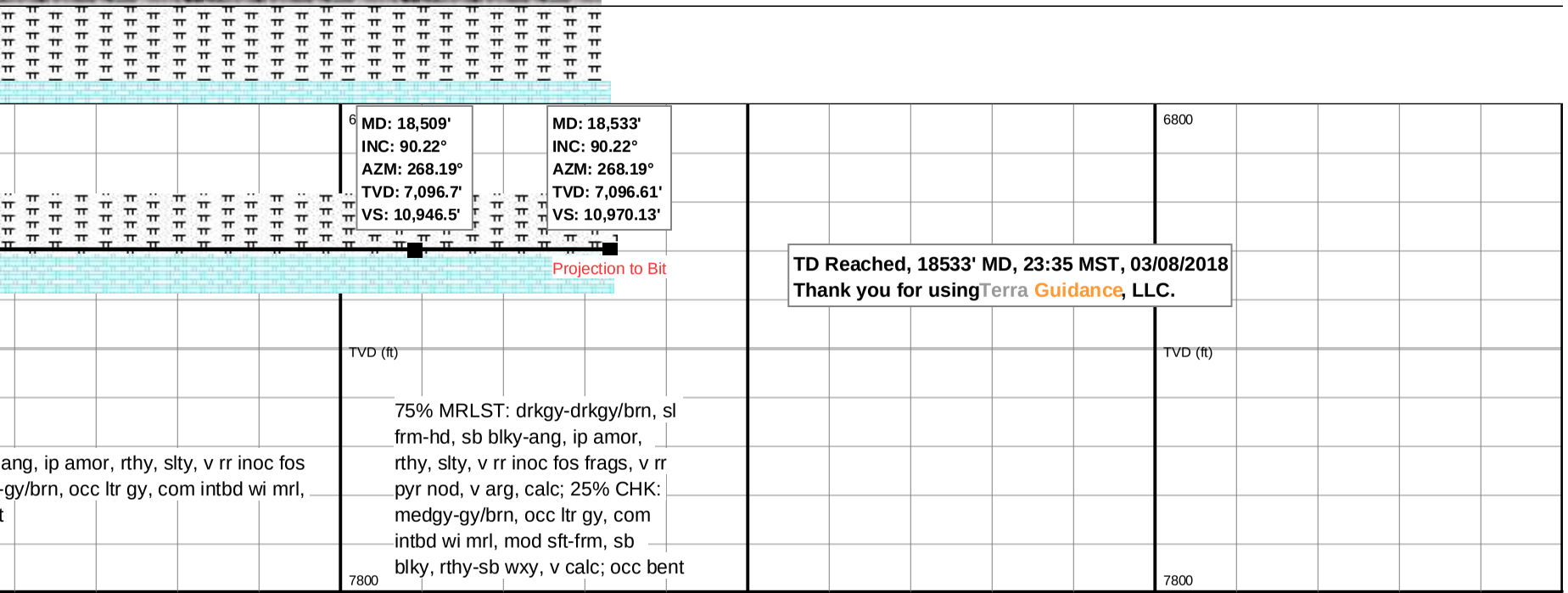
sl frm-hd, sb blky-ang, ip amor, rthy, slty, v rr inoc fos
5% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl,
y, v calc; occ bent

70% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-ang, ip amor, rthy, slty, v rr inoc fos frags, v rr pyr nod, v arg, calc; 30% CHK: medgy-gy/brn, occ ltr gy, com intbd wi mrl, mod sft-frm, sb blky, rthy-sb wxy, v calc; occ bent

75% MRLST: drkgy-drkgy/brn, sl frm-hd, sb blky-
frags, v rr pyr nod, v arg, calc; 25% CHK: medgy-
mod sft-frm, sb blky, rthy-sb wxy, v calc; occ bent

7800
7800


1000
300
ROP (ft/hr)
Gamma (API)
119 api
241 ft/hr
0
0
MW 10.55 / VIS 55
5000
5000
100
GAS (units)
C1-C4 (units)
CO2 (units)
0
0
0
18,460
18,470
18,480
18,490
18,500
18,510
18,520
18,530
18,540
18,550
18,560
18,570
18,580
18,590
18,600
18,610
18,620
18,630
18,640


MD: 18,509'
INC: 90.22°
AZM: 268.19°
TVD: 7,096.7'
VS: 10,946.5'
MD: 18,533'
INC: 90.22°
AZM: 268.19°
TVD: 7,096.61'
VS: 10,970.13'
Projection to Bit
6800
TD Reached, 18533' MD, 23:35 MST, 03/08/2018
Thank you for usingTerra Guidance, LLC.
TVD (ft)
TVD (ft)
ang, ip amor, rthy, slty, v rr inoc fos
-gy/brn, occ ltr gy, com intbd wi mrl,
t
75% MRLST: drkgy-drkgy/brn, sl
frm-hd, sb blky-ang, ip amor,
rthy, slty, v rr inoc fos frags, v rr
pyr nod, v arg, calc; 25% CHK:
medgy-gy/brn, occ ltr gy, com
intbd wi mrl, mod sft-frm, sb
blky, rthy-sb wxy, v calc; occ bent
7800
7800