



**Scale 1:240 (5"=100') Imperial
Measured Depth Log**

Well Name: Razor 11F-0205A
Well Id:
Location: SENW 11-T10N-R58W
License Number: 05-123-38703-00
Spud Date: 2/18/2015
Surface Coordinates: 40.854011, -103.835472

Region: Redtail Field
Drilling Completed: 2/26/2015

Bottom Hole 600 FNL, 1815 FWL
Coordinates:
Ground Elevation (ft): 4988
Logged Interval (ft): 5563 **To:** 13662
Formation: Pierre, Sharon Springs, Niobrara A, Niobrara B, Niobrara C
Type of Drilling Fluid: Water Based Mud

K.B. Elevation (ft): 5010
Total Depth (ft): 13662

Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Whiting Oil & Gas Corp.
Address: 1700 Broadway Suite 2300
Denver, CO 80290

GEOLOGIST

Name: Todd Nakata, Craig Dreling
Company: Acme Geologic Consulting
Address: 108 Berry Street
Little Rock, AR 72205

Drilling Company

Frontier Drilling
Rig #26


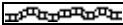
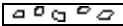


Gas Detection






Mudlogging Systems, Inc., M Logger, Model TGC, Total Gas and Chromatograph, #128




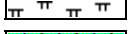

Comments

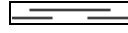
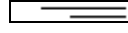

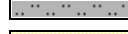
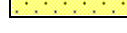
Lithologies and tops at drilled depths, not corrected to elogs. Where the well bore gas is 100% methane, the C1 line is moved to 85% for graphical purposes only.




ROCK TYPES

 Anhy
 Bent
 Brec
 Cht
 Clyst
















 Coal
 Congl
 Dol
 Gyp
 Igne









 Lmst
 Meta
 Cyan mrlst
 Mrlst
 Salt
















 Shale
 Shcol
 Shgy
 Sltst
 Ss







 Till
 Cyan chk
 Chalk

ACCESSORIES

MINERAL
 Anhy
 Arggrn
 Arg
 Bent
 Bit
 Brecfrag
 Calc
 Carb
 Chtdk
 Chtlt
 Dol
 Feldspar
 Ferrpel
 Ferr
 Glau












 Gyp
 Hvymin
 Kaol
 Marl
 Minxl
 Nodule
 Phos
 Pyr
 Salt
 Sandy
 Silt
 Sil
 Sulphur
 Tuff








FOSSIL
 Algae
 Amph
 Belm
 Bioclst
 Brach
 Bryozoa
 Cephal
 Coral
 Crin
 Echin
 Fish
 Foram
 Fossil
 Gastro
 Oolite


 Ostra
 Pelec
 Pellet
 Pisolite
 Plant
 Strom




STRINGER
 Anhy
 Arg
 Bent
 Coal
 Dol
 Gyp
 Ls
 Mrst

 Sltstrg
 Ssstrg





TEXTURE
 Boundst
 Chalky
 Cryxln
 Earthy
 Finexln
 Grainst
 Lithogr
 Microxln
 Mudst
 Packst
 Wackest


POROSITY
 Earthy
 Fenest
 Fracture
 Inter
 Moldic
 Organic
 Pinpoint




 Vuggy



SORTING
 Well
 Moderate
 Poor

OTHER SYMBOLS

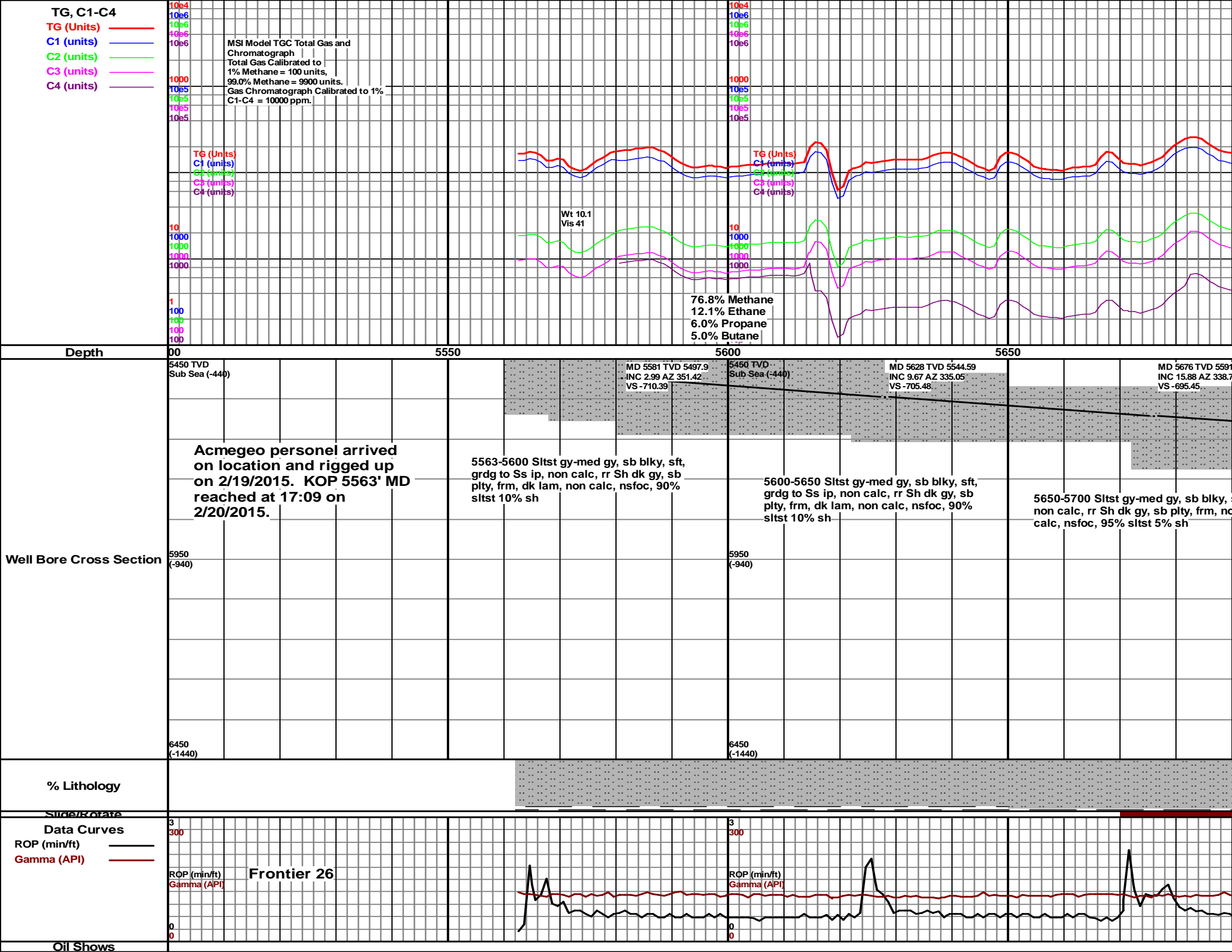
ROUNDING
 Rounded
 Subrnd
 Subang
 Angular

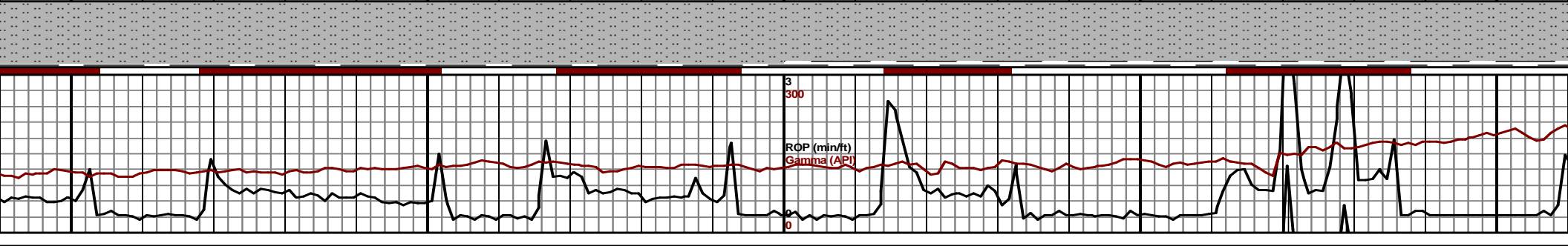
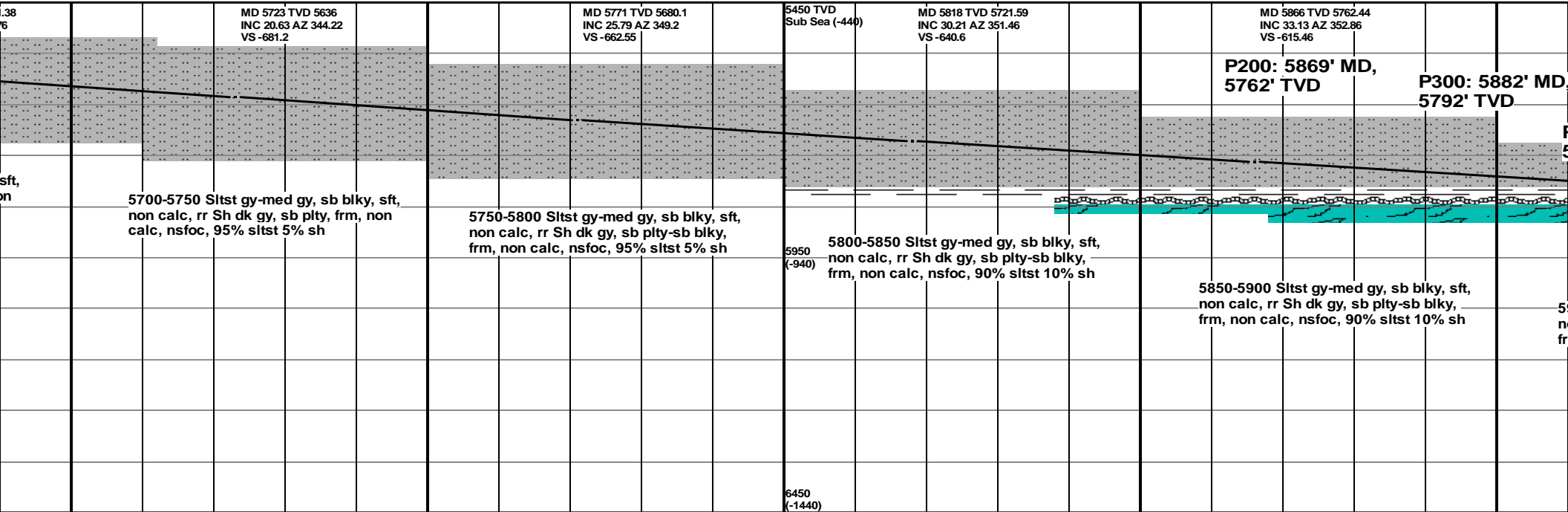
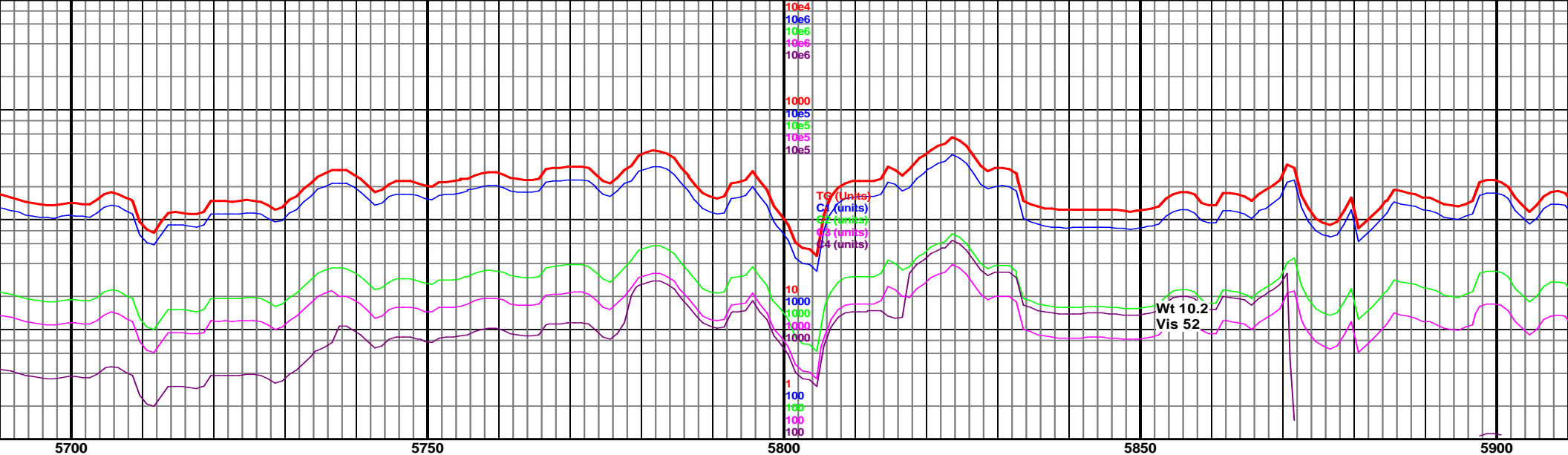
OIL SHOW
 Even

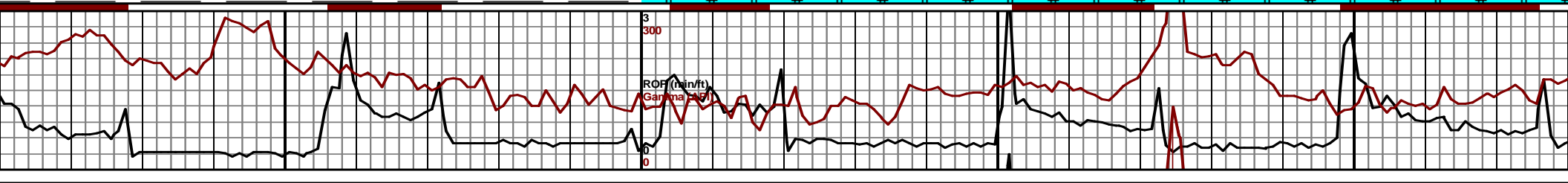
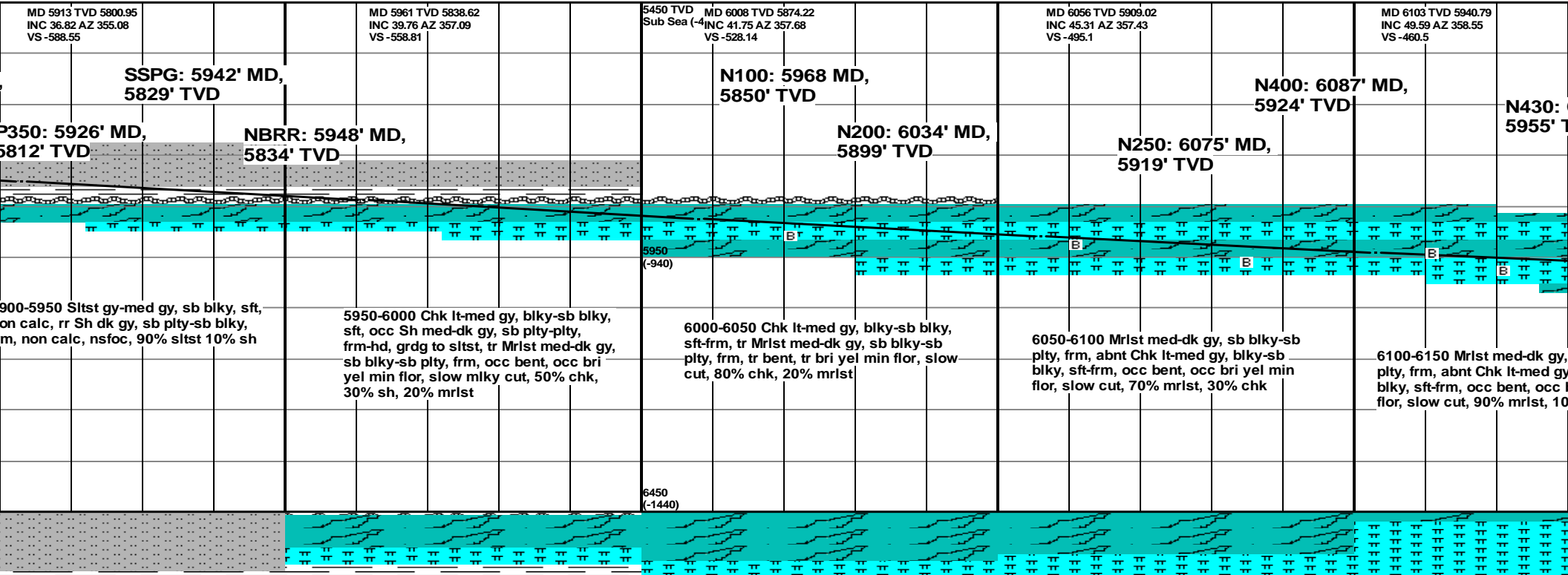
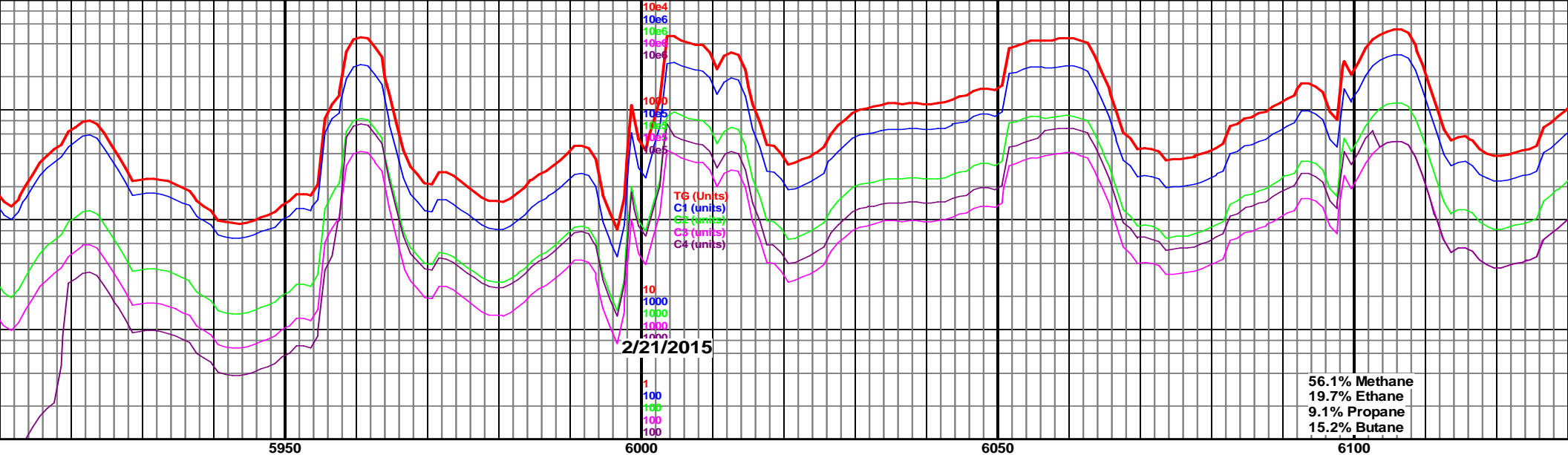
 Spotted
 Ques
 Dead

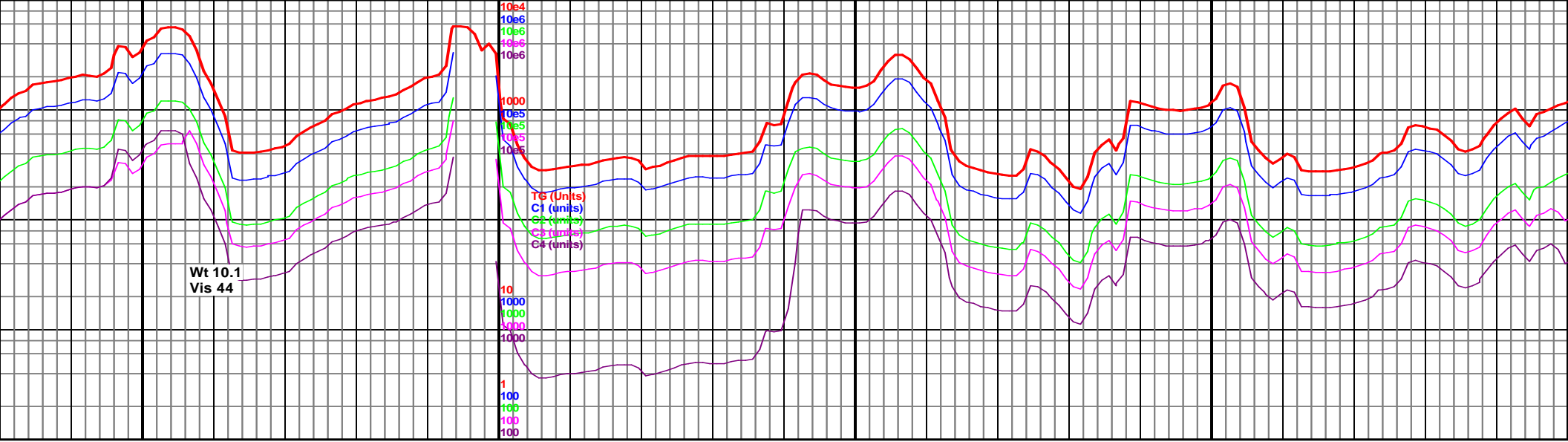
INTERVAL
 Core
 Dst

EVENT
 Rft
 Sidewall









MD 6151 TVD 5970.34 INC 54.4 AZ 359.4 VS -455.51	MD 6198 TVD 5996.46 INC 58.06 AZ 359.59 VS -416.45	MD 6246 TVD 6020.09 INC 62.93 AZ 359.62 VS -374.68	MD 6293 TVD 6039.66 INC 67.85 AZ 0.94 VS -331.97	MD 6341 TVD 6055.11 INC 70.6 AZ 0.94 VS -287.1
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6130' MD, TVD

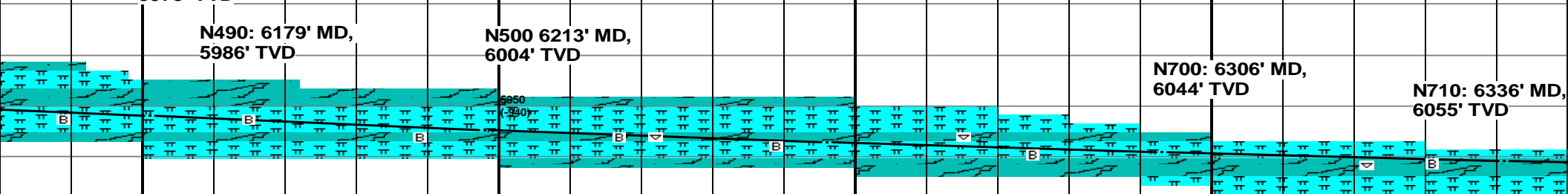
N460: 6158' MD, 5973' TVD

N490: 6179' MD, 5986' TVD

N500 6213' MD, 6004' TVD

N700: 6306' MD, 6044' TVD

N710: 6336' MD, 6055' TVD



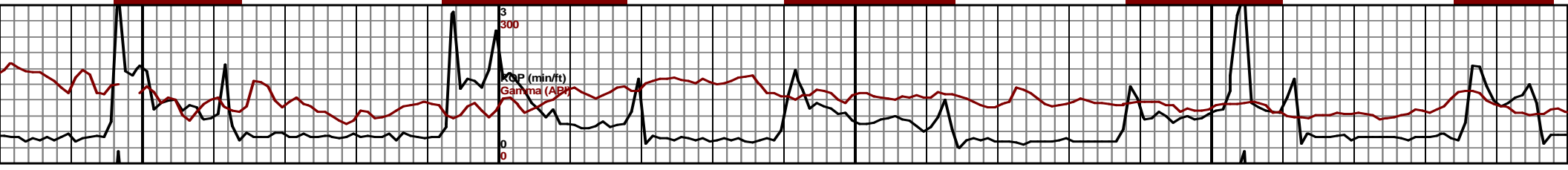
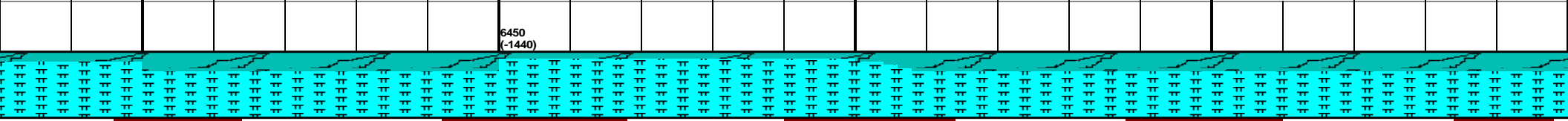
sb blk-y-sb
r, blk-y-sb
ori yel min
% chk

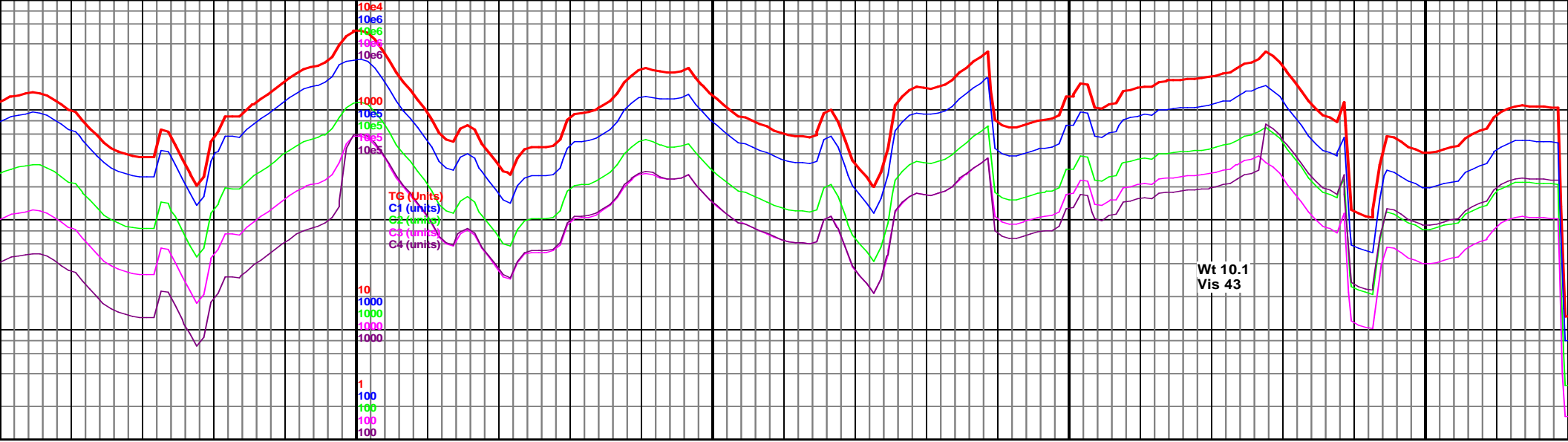
6150-6200 Mrlst med-dk gy, sb blk-y-sb
pty, frm, abnt Chk lt-med gy, blk-y-sb
blk-y, sft-frm, occ bent, occ bri yel min
flor, slow cut, 70% mrlst, 30% chk

6200-6250 Mrlst med-dk gy, sb blk-y-sb
pty, frm, abnt Chk lt-med gy, blk-y-sb
blk-y, sft-frm, occ bent, occ bri yel min
flor, occ inoc, slow cut, 90% mrlst, 10%
chk

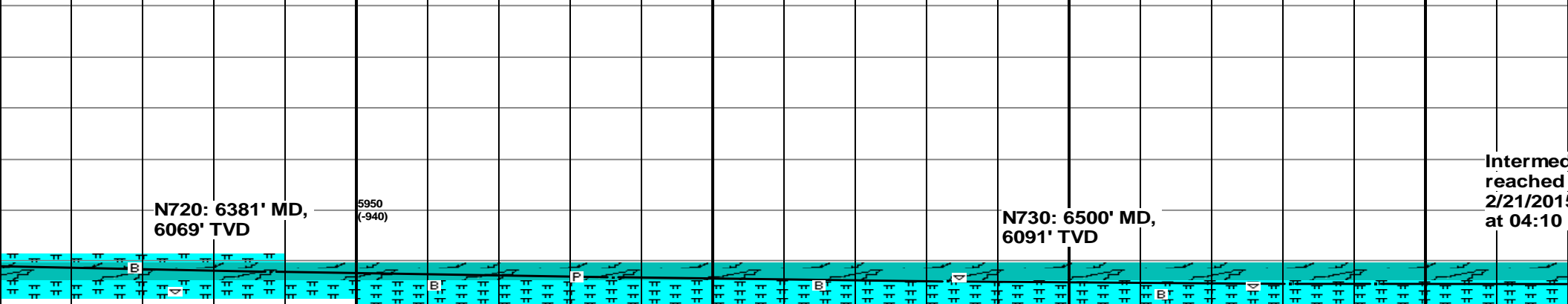
6250-6300 Mrlst med gy-gy, sb blk-y-sb
pty, frm, tr Chk med gy, blk-y-sb blk-y,
sft-frm, grdg to mrlst, tr bent, occ inoc,
slow cut, 70% mrlst, 30% chk

6300-6350 Mrlst med gy-dk gy, sb
blk-y-sb pty, frm, tr Chk med gy,
blk-y-sb blk-y, sft-frm, grdg to mrlst, tr
bent, occ inoc, slow cut, 70% mrlst,
30% chk





MD 6056 TVD 6056.69 INC 1.23	MD 6388 TVD 6070.6 INC 74.94 AZ 0.37 VS -242.23	MD 6436 TVD 6081.58 INC 78.62 AZ 0.42 VS -195.51	MD 6483 TVD 6089.08 INC 83.02 AZ 359.31 VS -149.12	MD 6531 TVD 6094.09 INC 86.52 AZ 358 VS -69.38	MD 6543 TVD 6094.09 INC 87.33 AZ 357.96 VS -57.41
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N720: 6381' MD,
6069' TVD

6350-6400 Mrlst med gy-dk gy, sb
blky-sb plty, frm, grdg to chk, occ Chk
gy-med gy, blky-sb blky, sft-frm,
mottled, rr bent, rr inoc, slow cut, 60%
mrlst, 40% chk

6400-6450 Mrlst med gy-dk gy, sb
blky-sb plty, frm, grdg to chk ip, occ
Chk gy-lt gy, blky-sb blky, sft-frm, slty,
mottled, rr bent, rr pyr, slow cut, 60%
mrlst, 40% chk

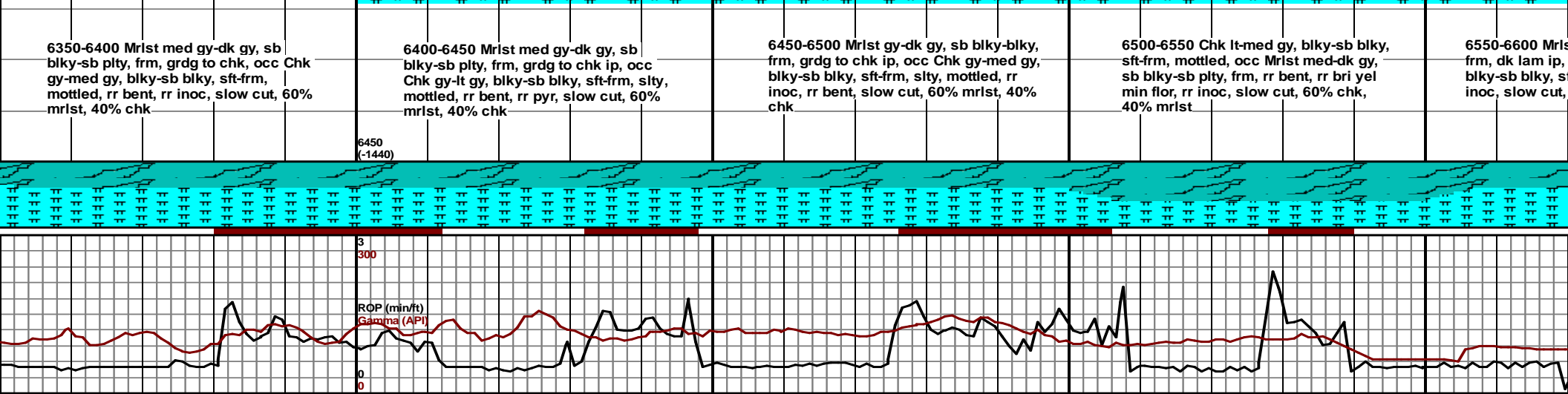
6450-6500 Mrlst gy-dk gy, sb blky-blky,
frm, grdg to chk ip, occ Chk gy-med gy,
blky-sb blky, sft-frm, slty, mottled, rr
inoc, rr bent, slow cut, 60% mrlst, 40%
chk

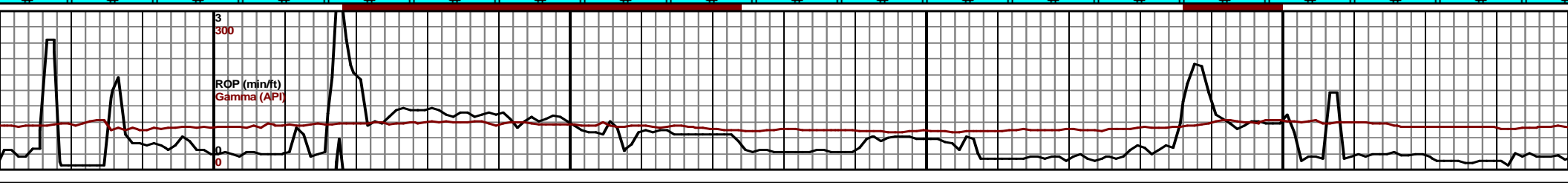
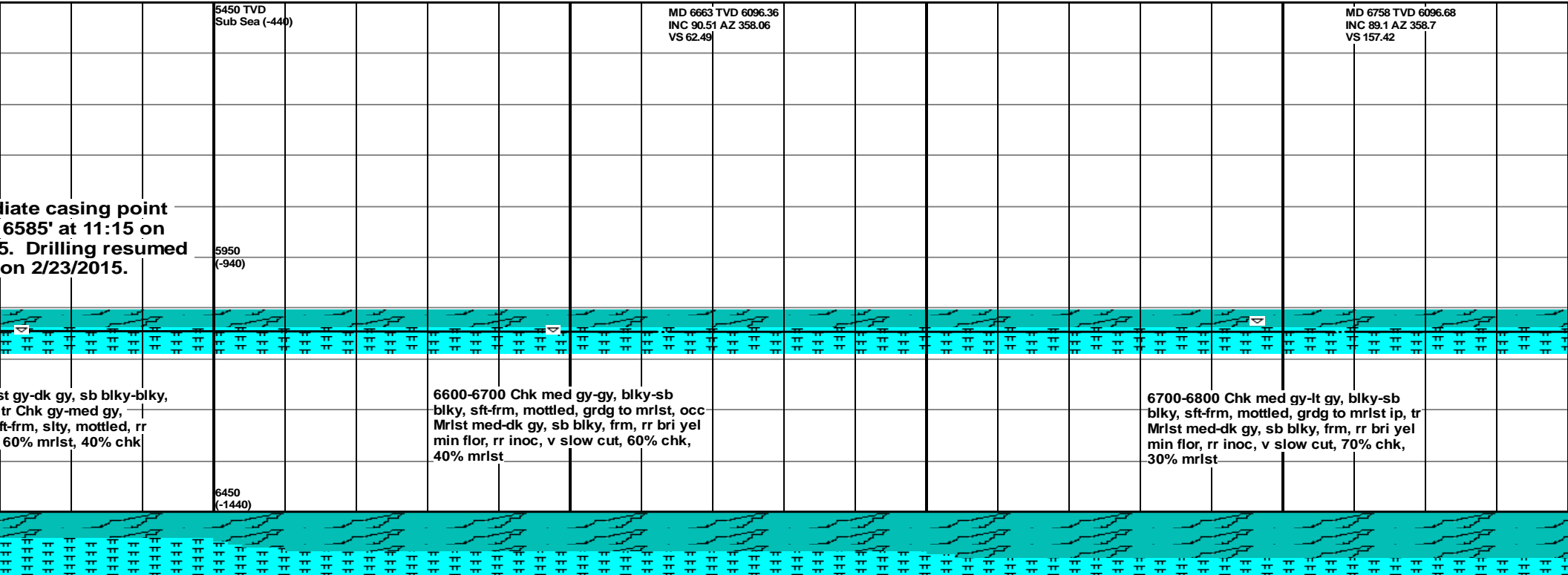
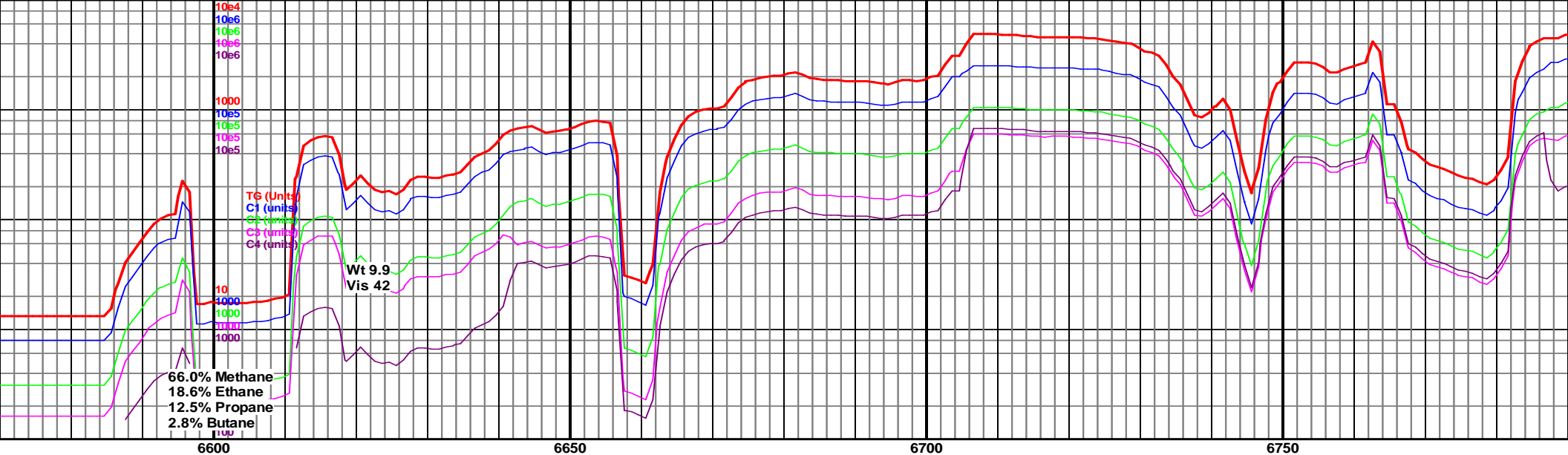
N730: 6500' MD,
6091' TVD

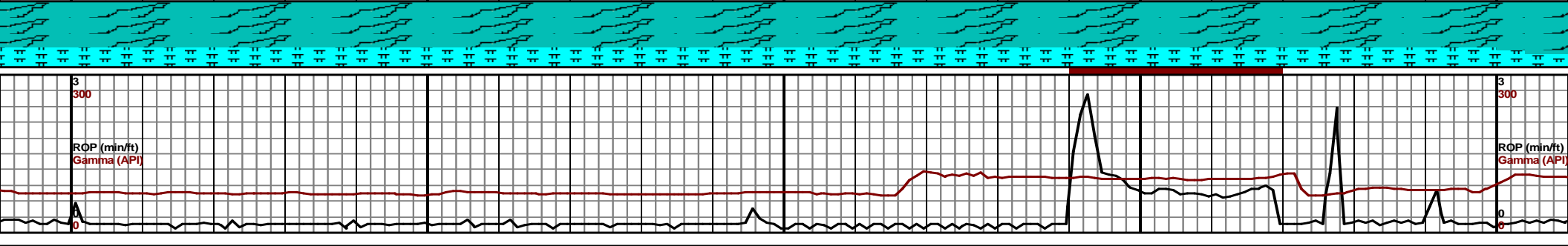
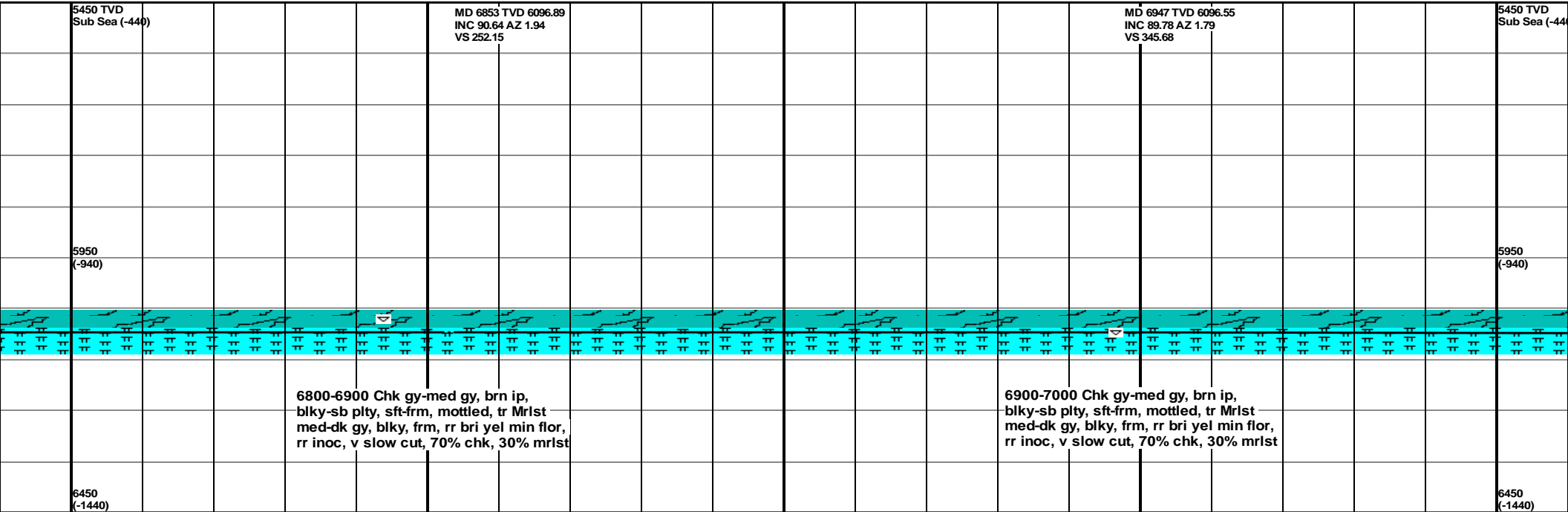
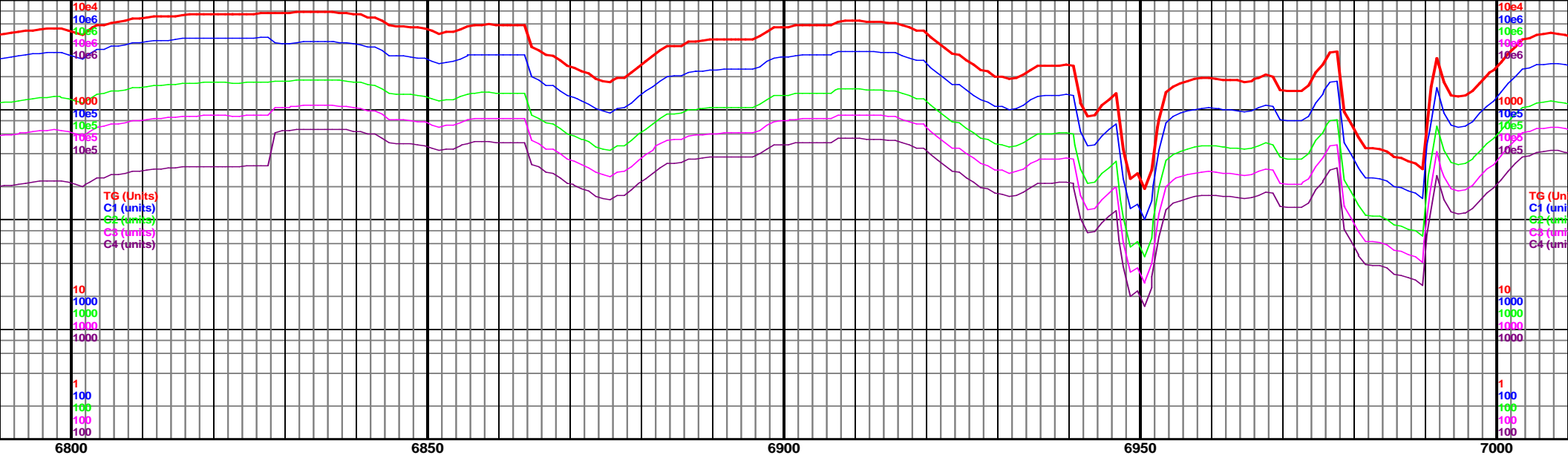
6500-6550 Chk lt-med gy, blky-sb blky,
sft-frm, mottled, occ Mrlst med-dk gy,
sb blky-sb plty, frm, rr bent, rr bri yel
min flor, rr inoc, slow cut, 60% chk,
40% mrlst

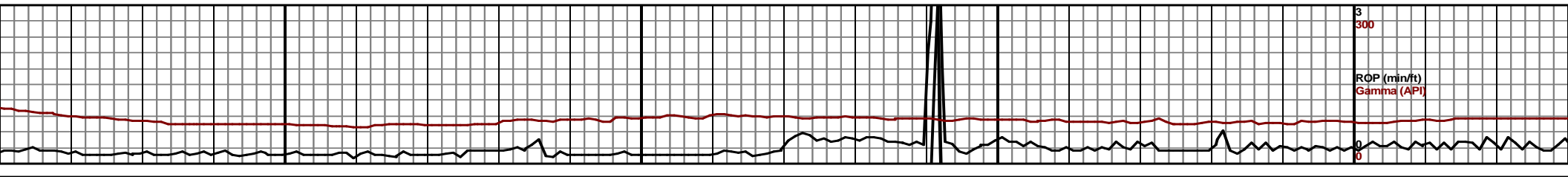
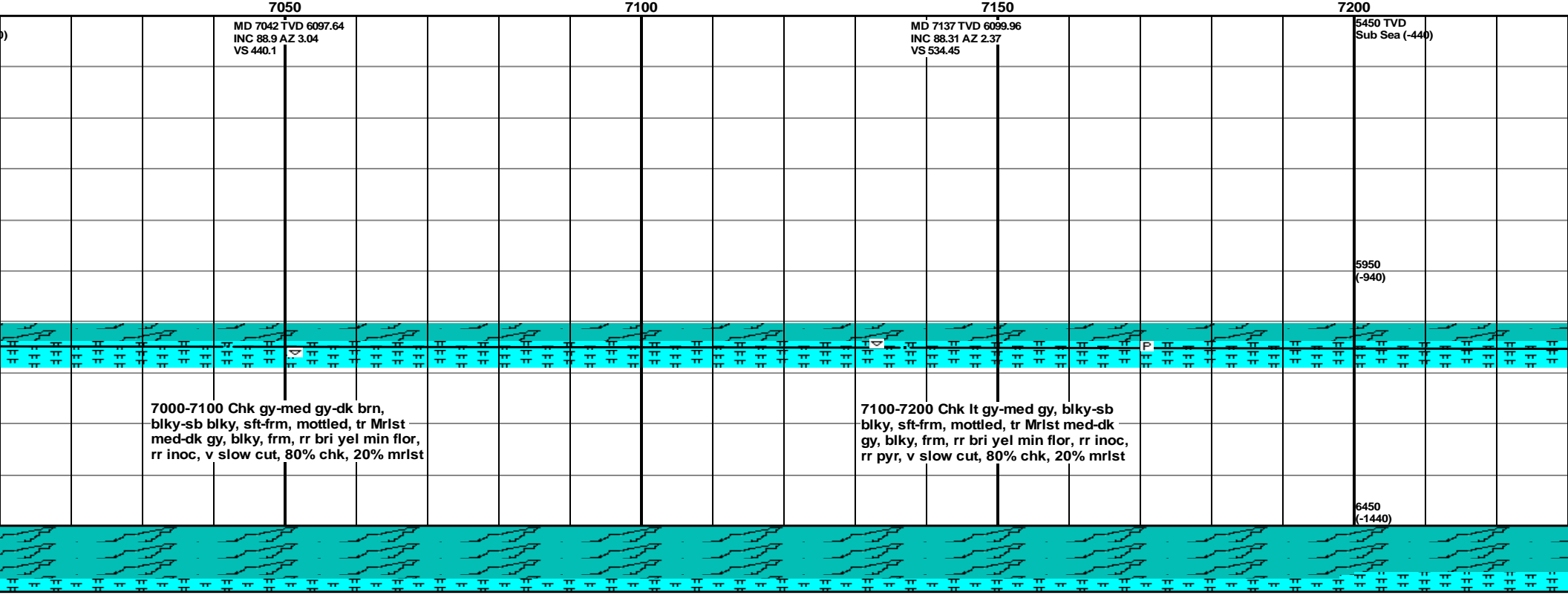
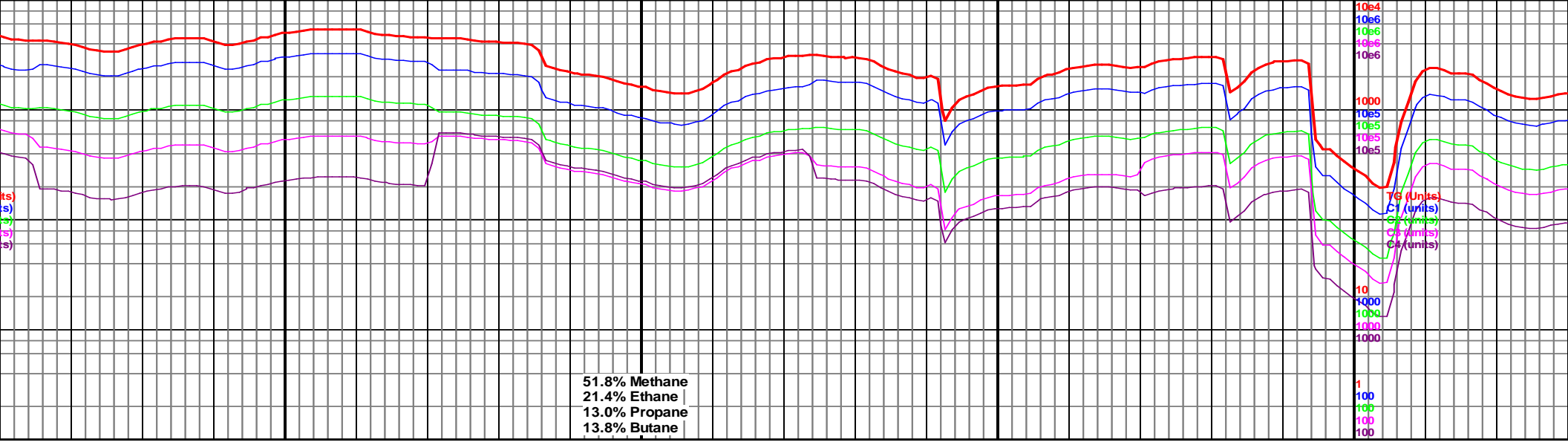
6550-6600 Mrlst
frm, dk lam ip,
blky-sb blky, s
inoc, slow cut,

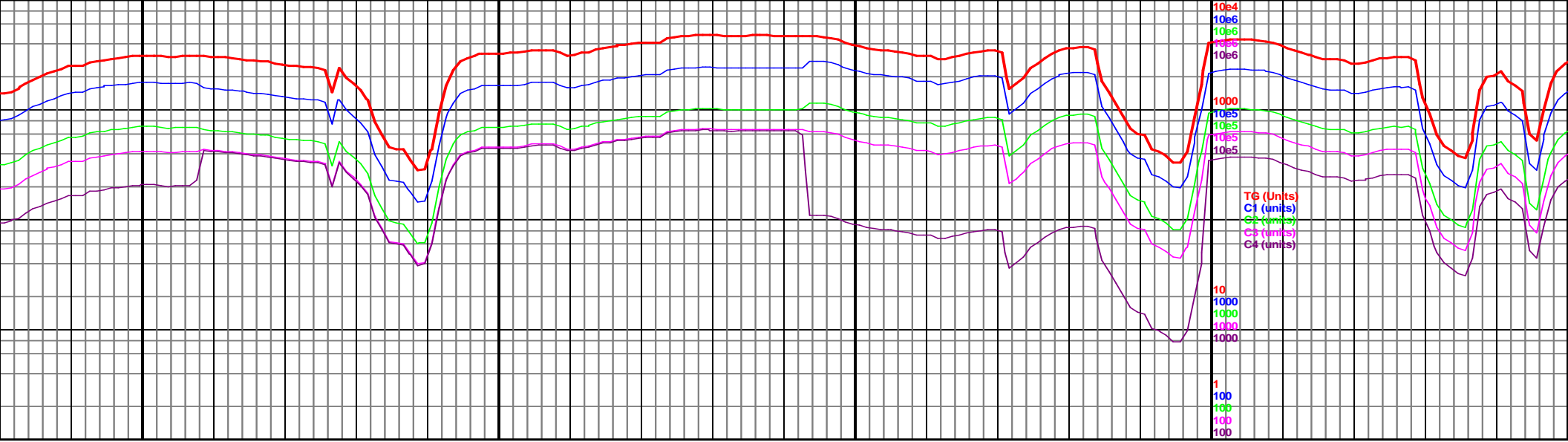
Intermed
reached
2/21/201
at 04:10



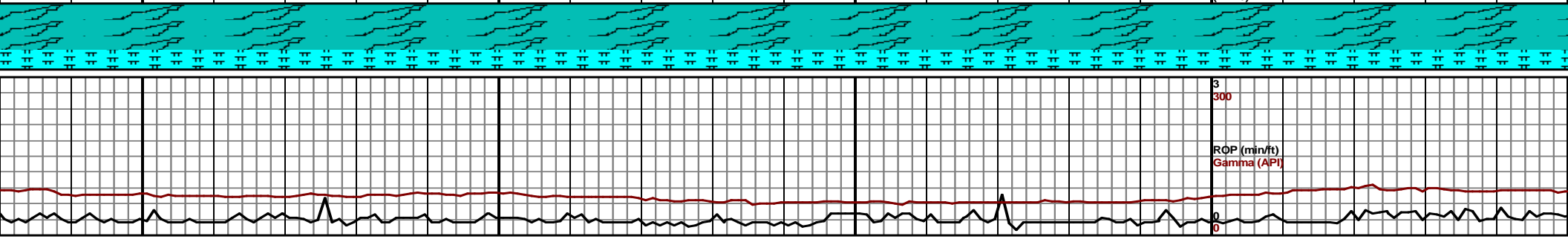


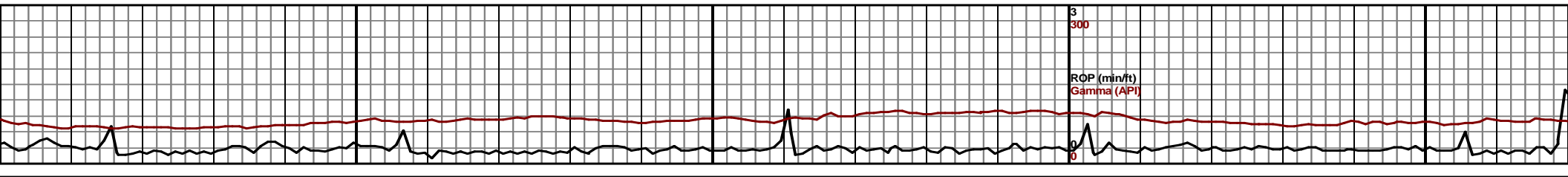
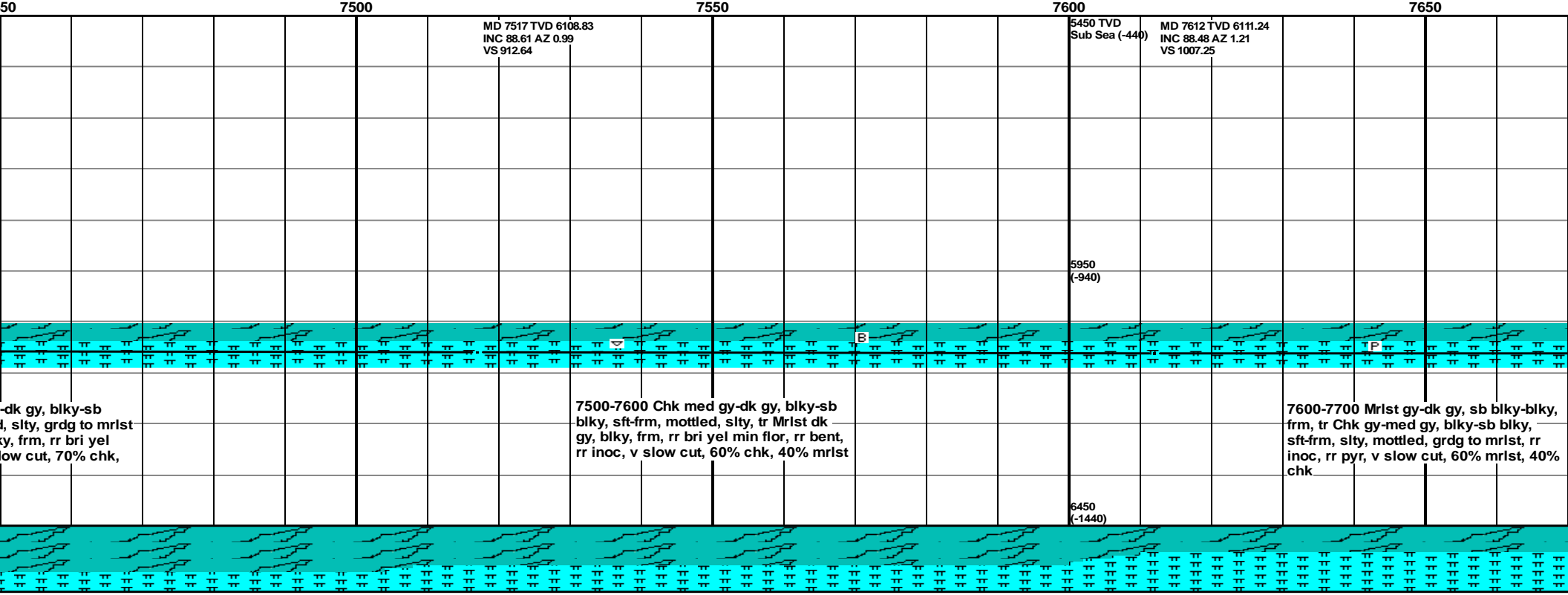
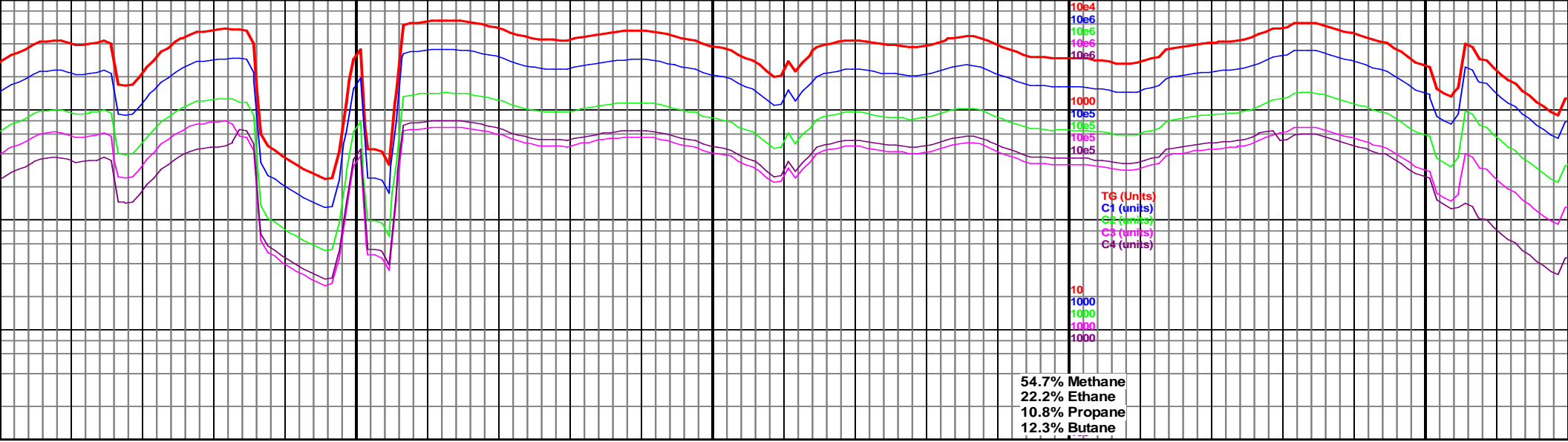


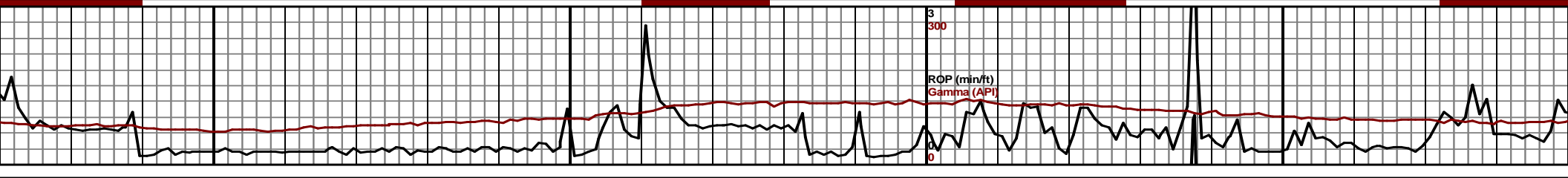
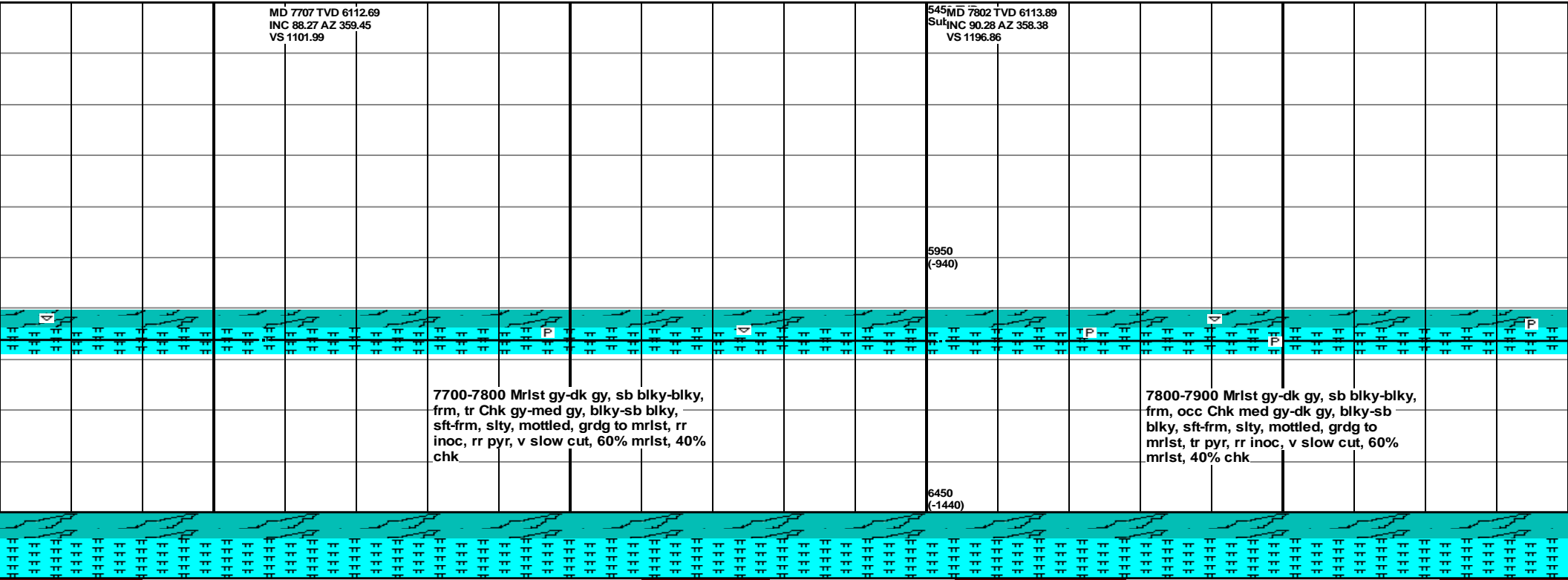
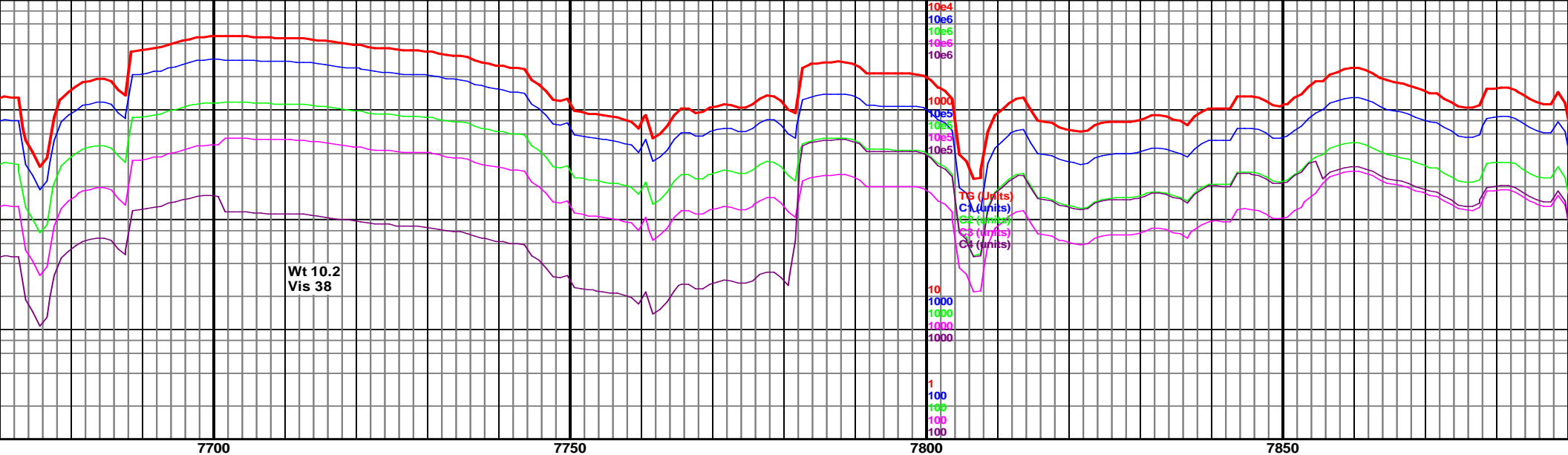


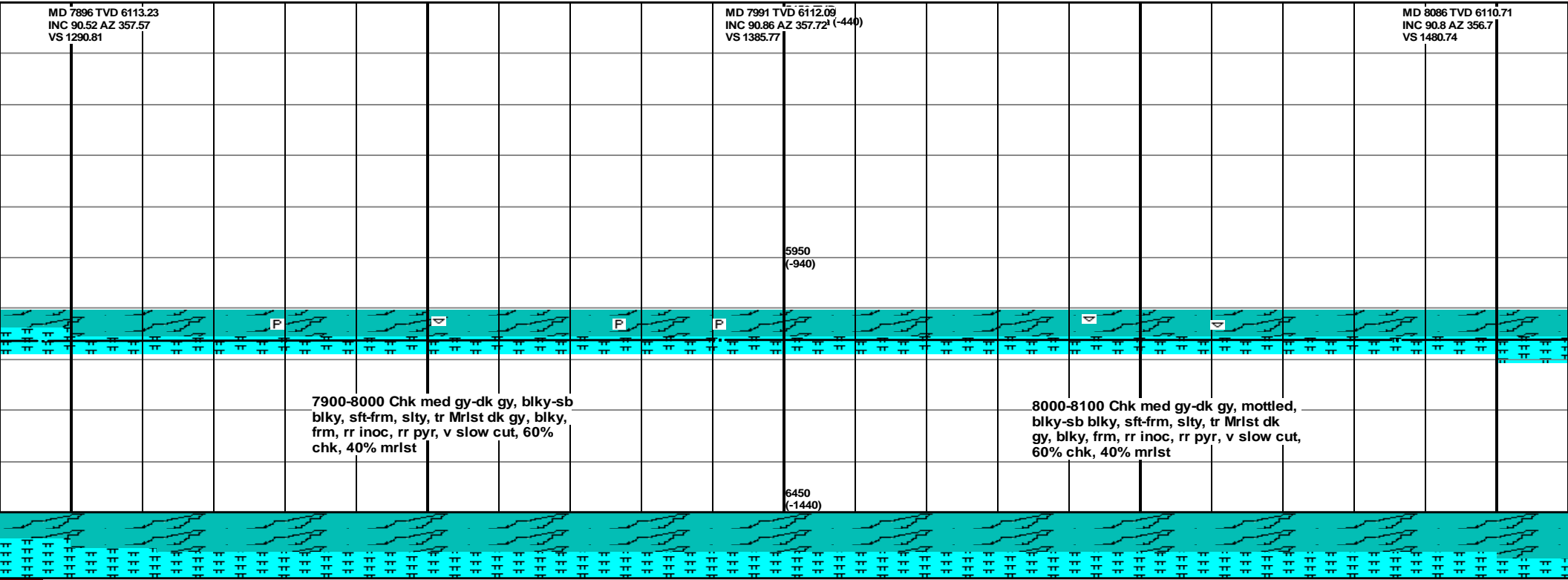


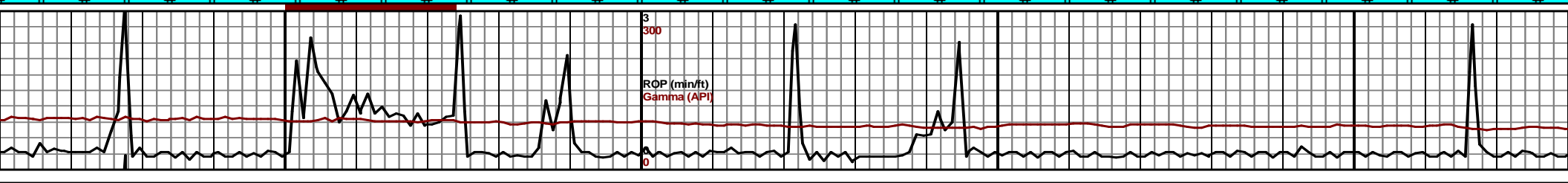
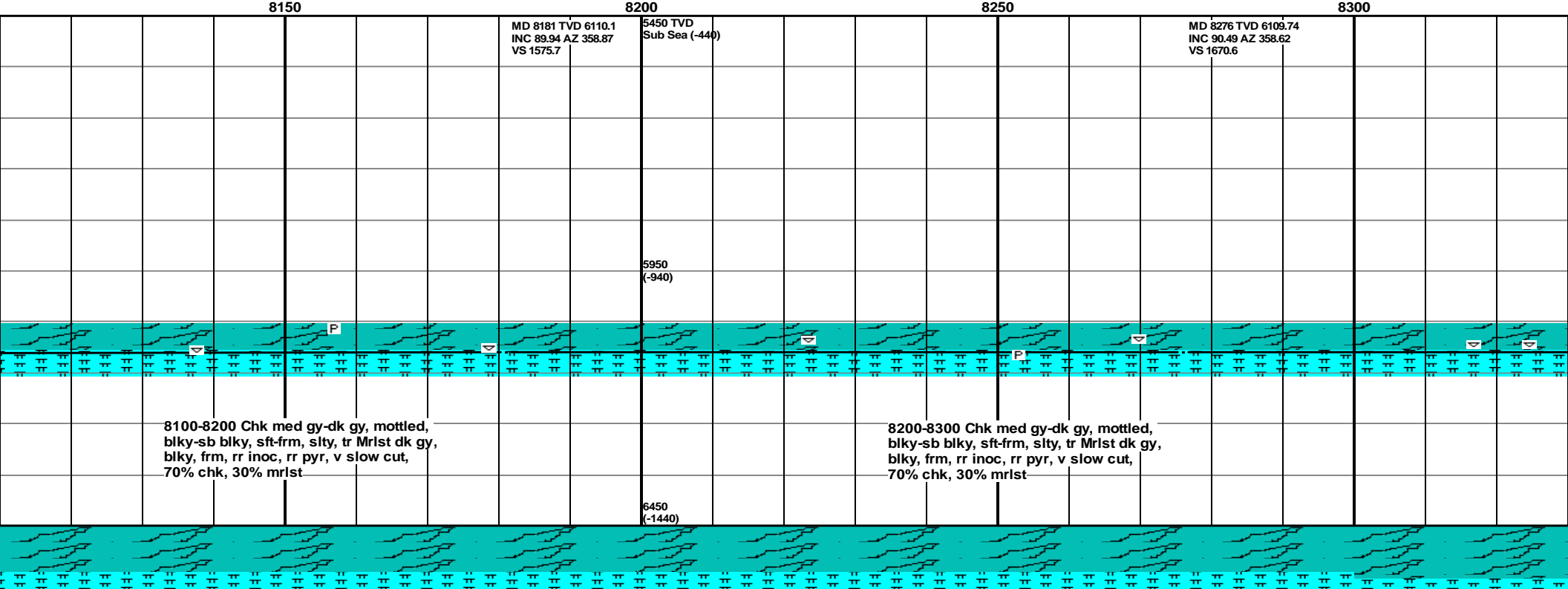
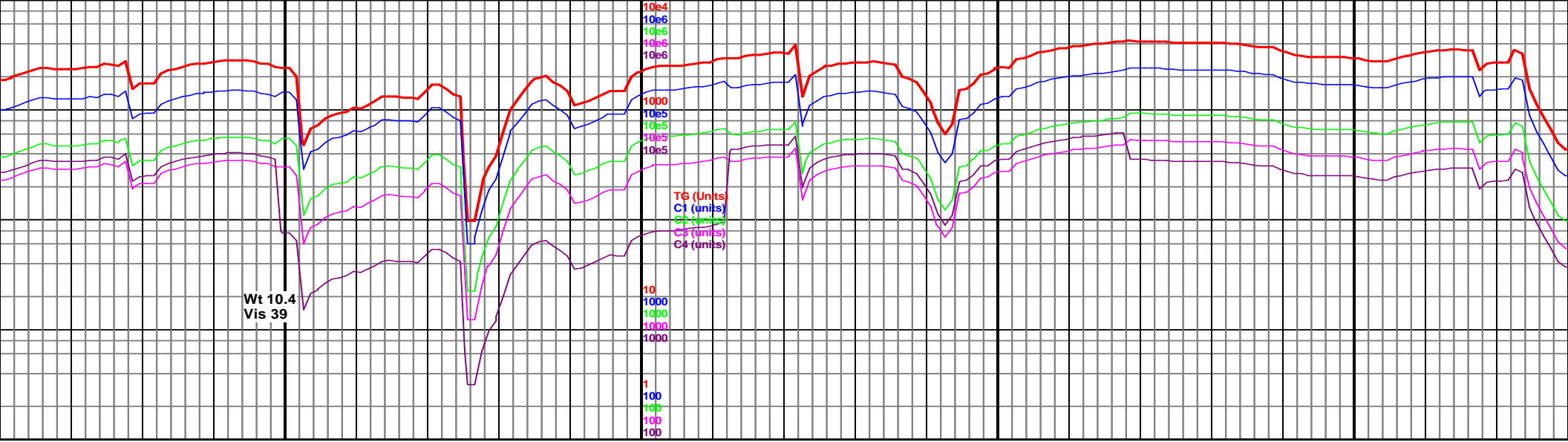
MD 7233 TVD 6102.48 INC 88.68 AZ 1.87 VS 629.9	

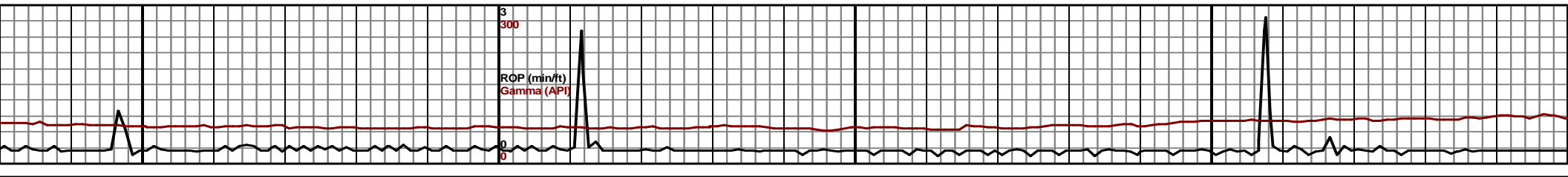
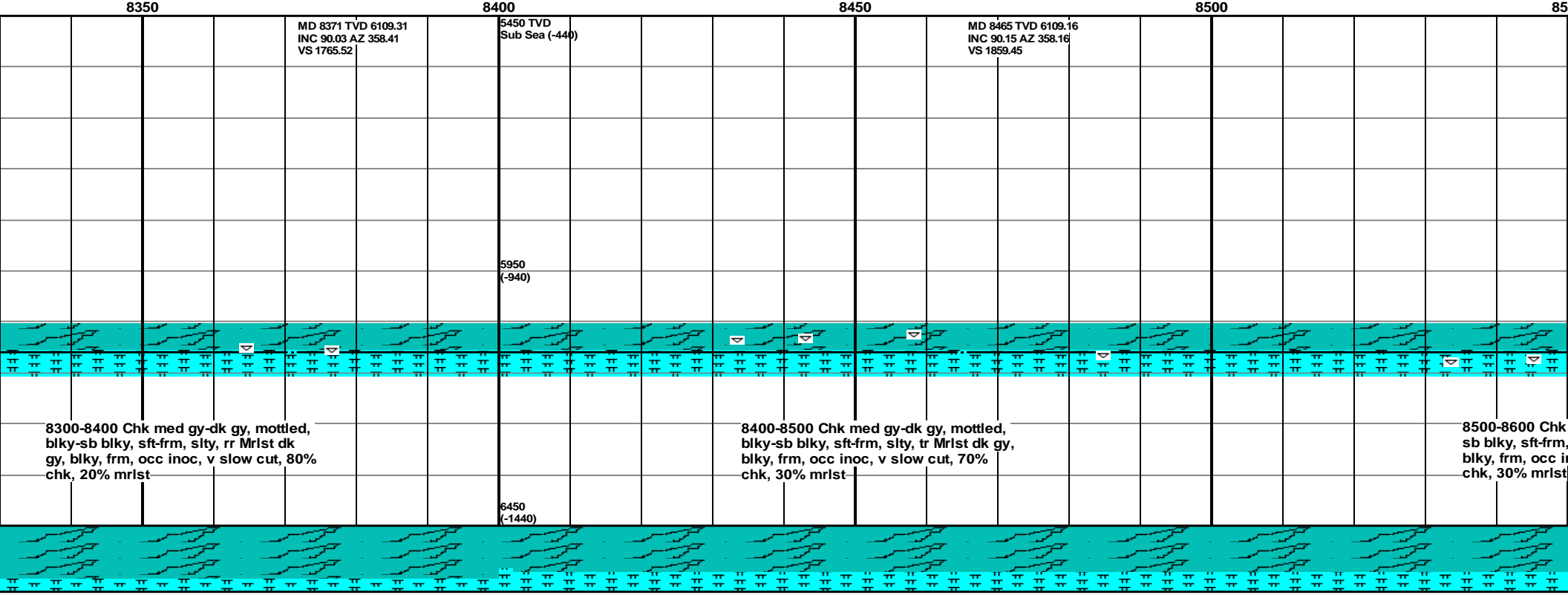
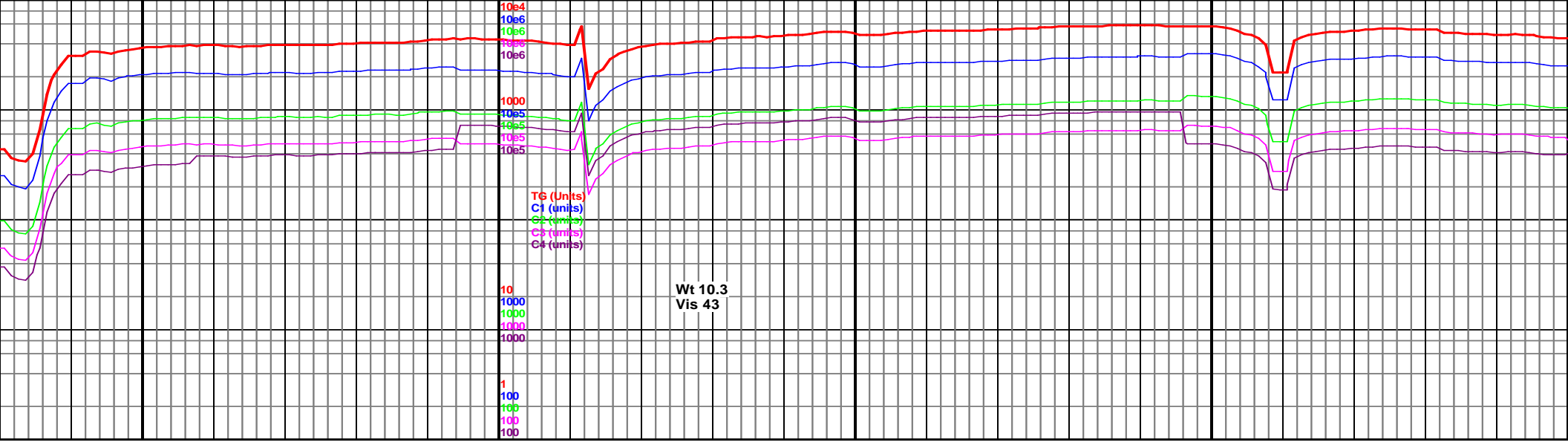


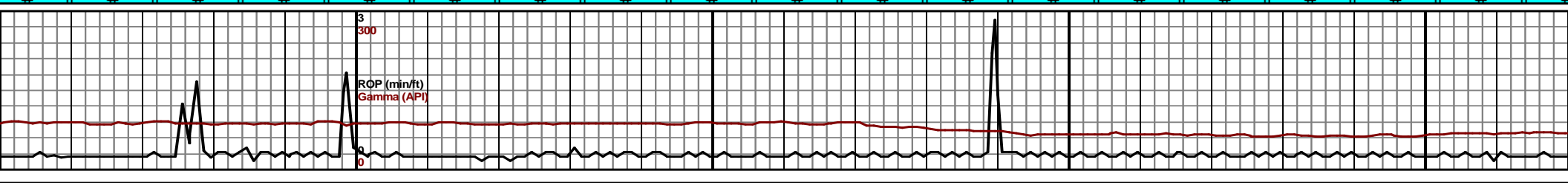
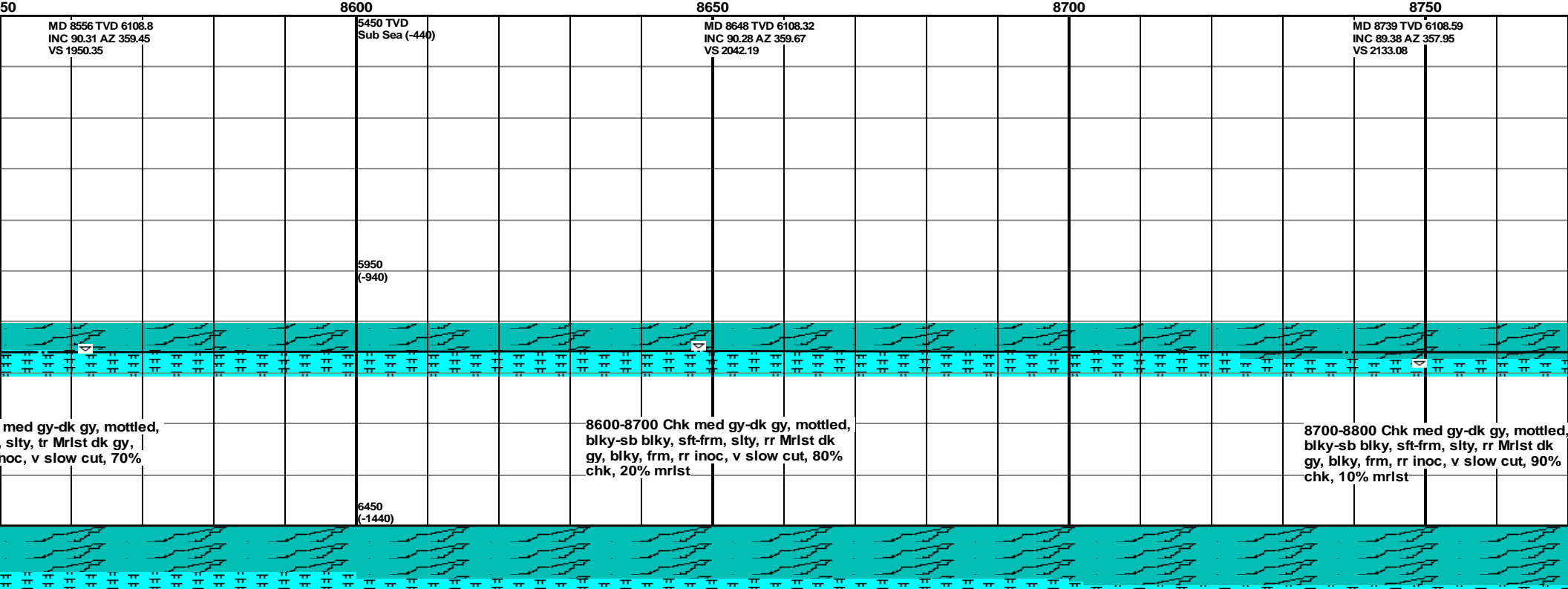
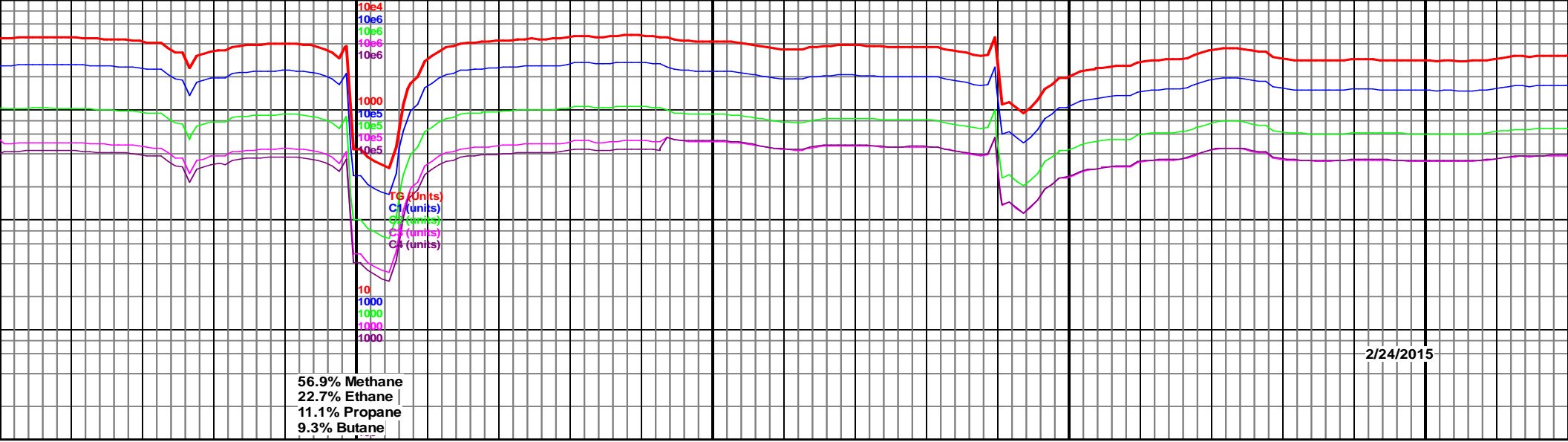


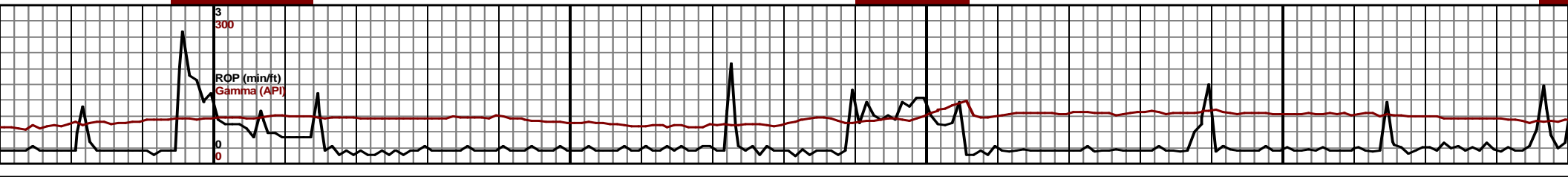
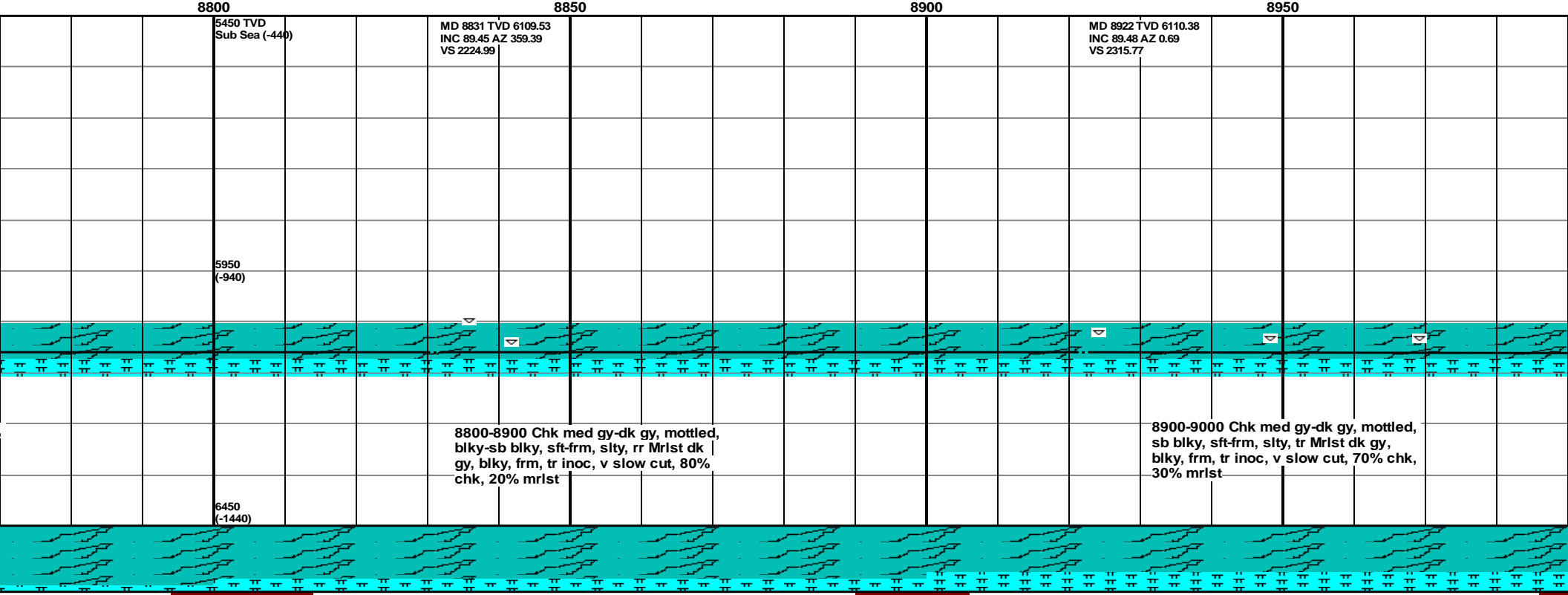
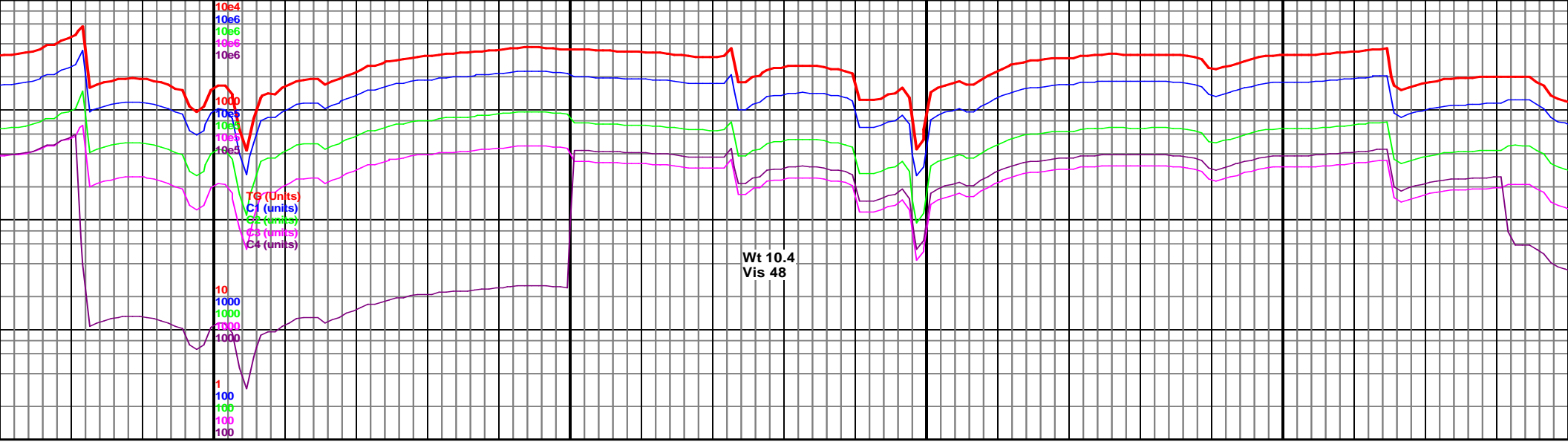


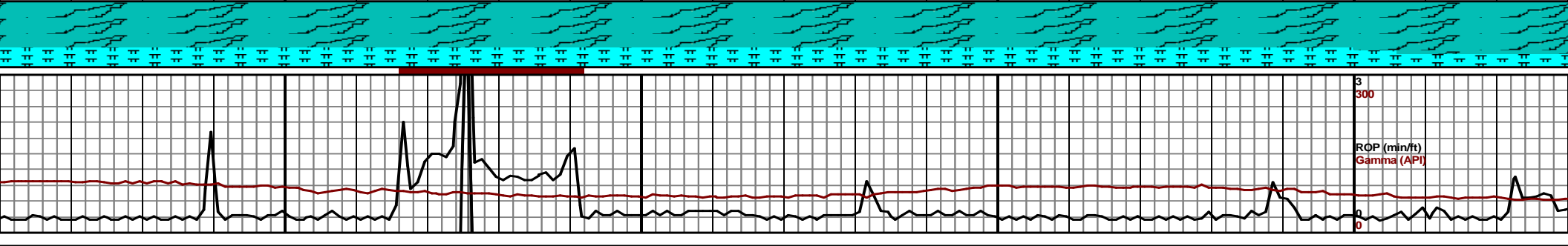
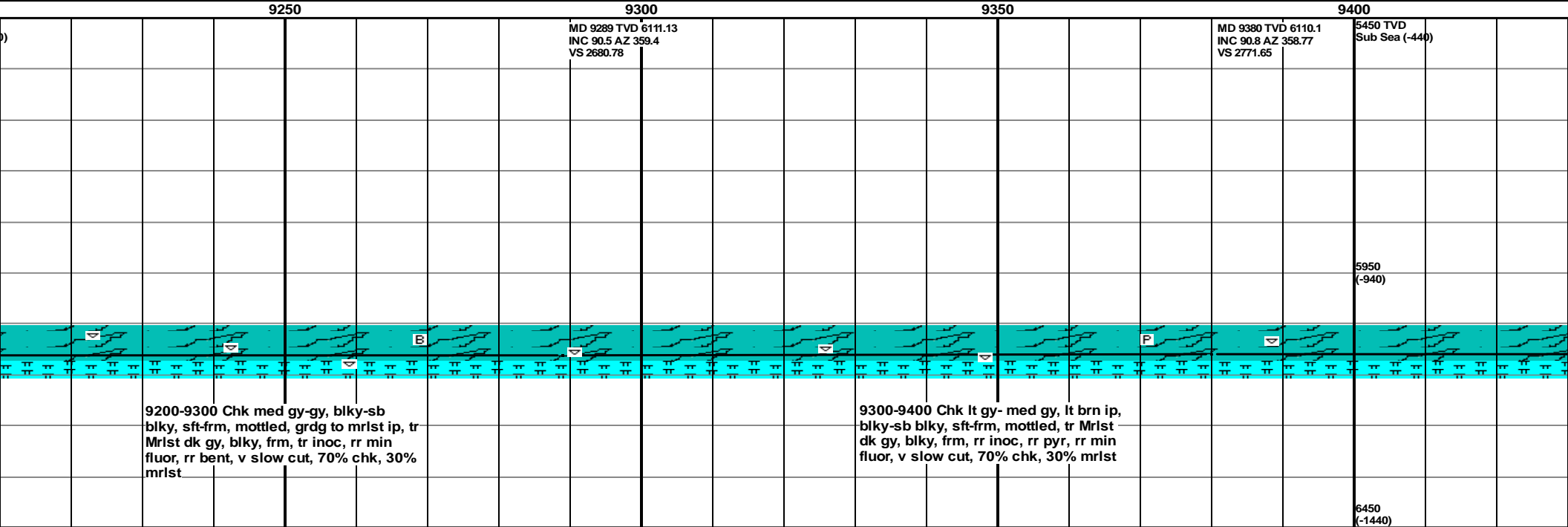
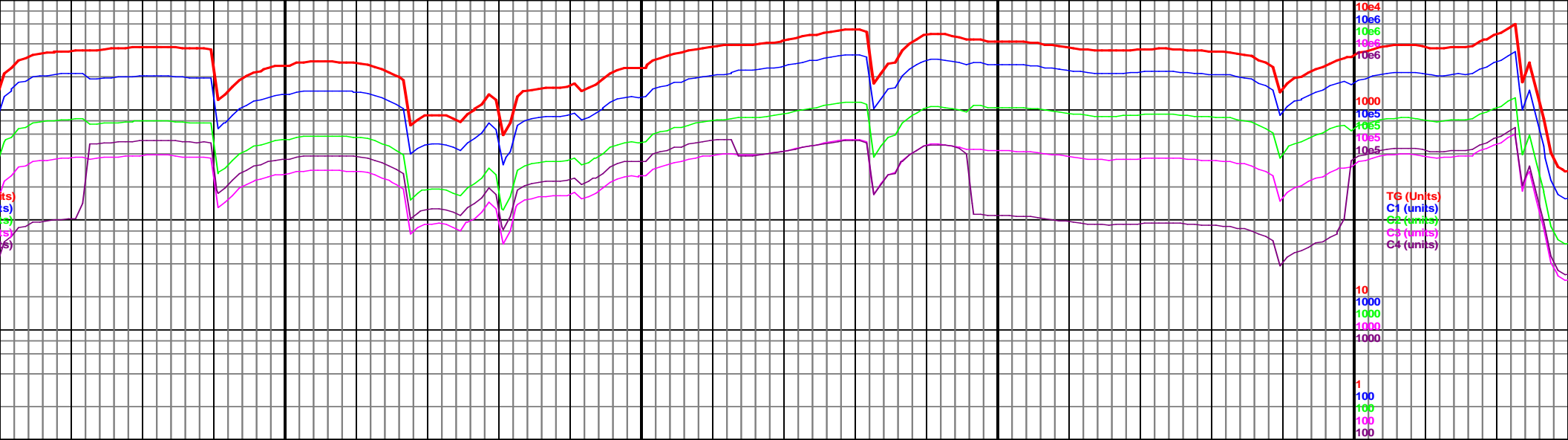


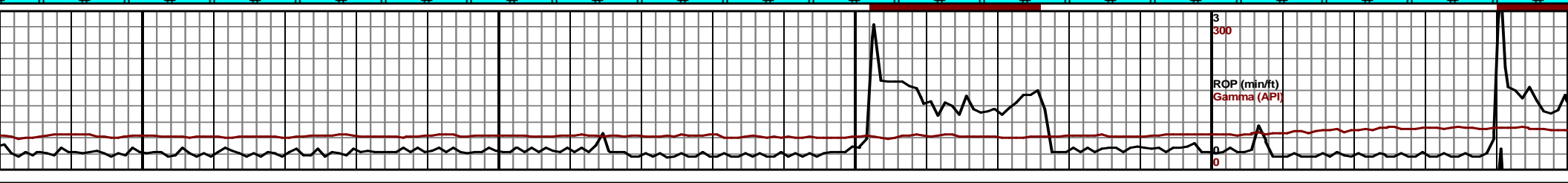
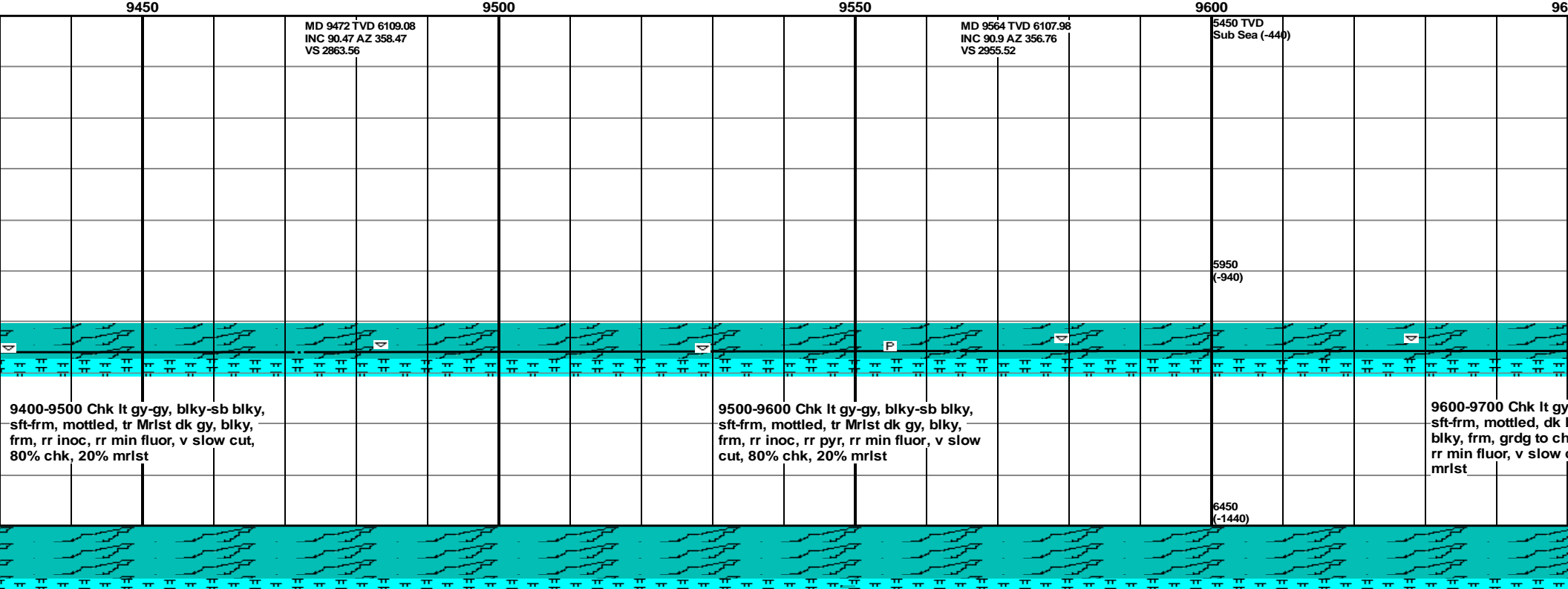
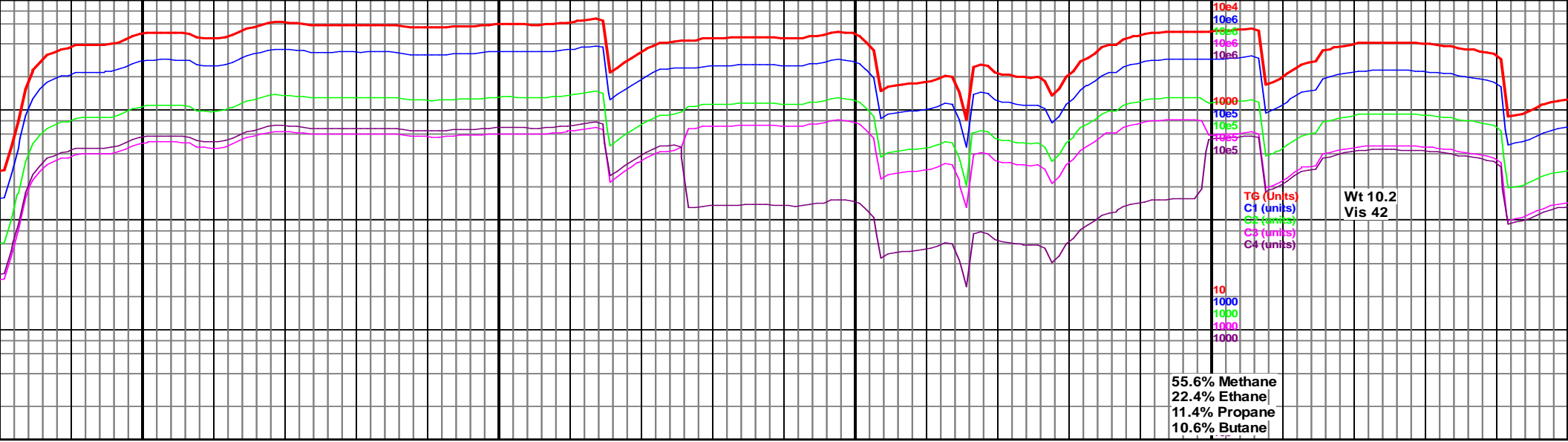


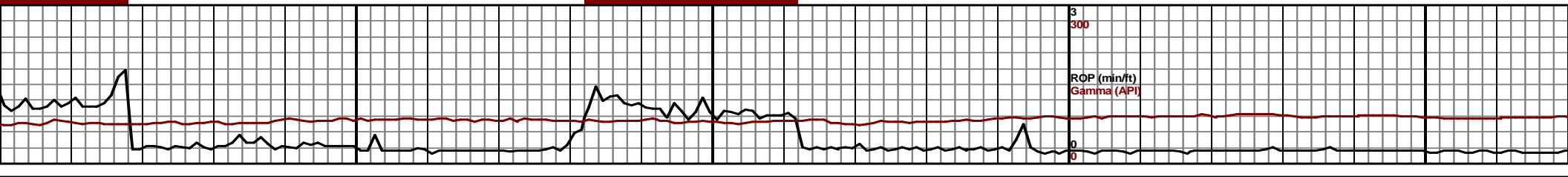
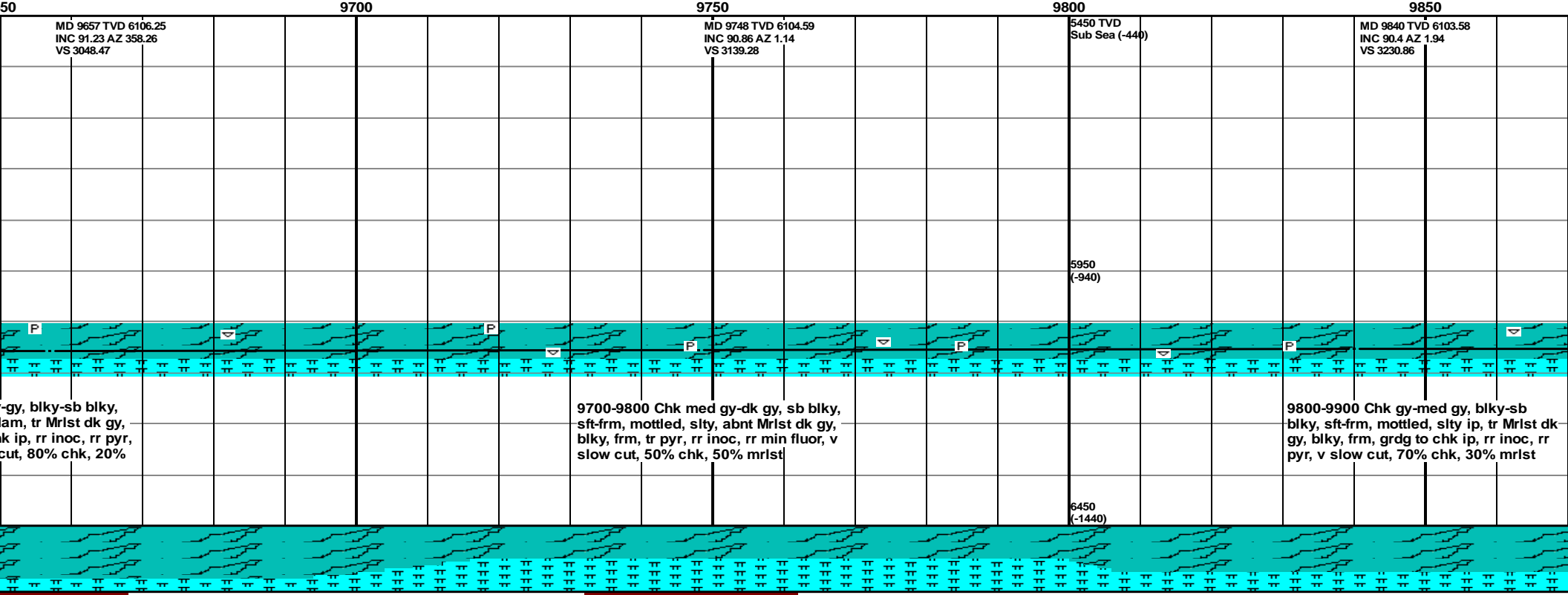
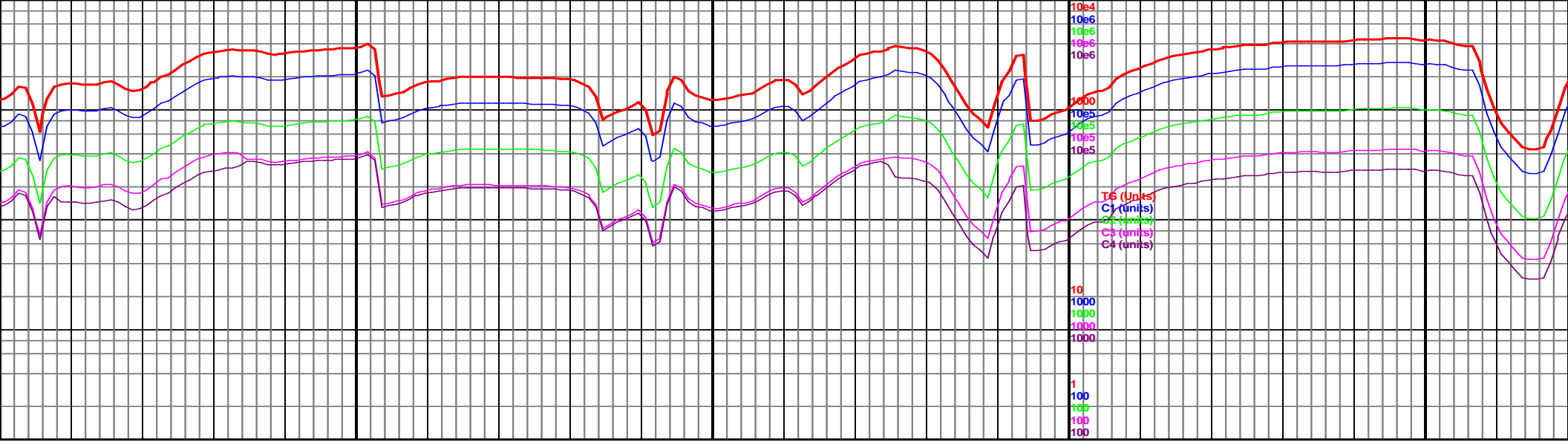


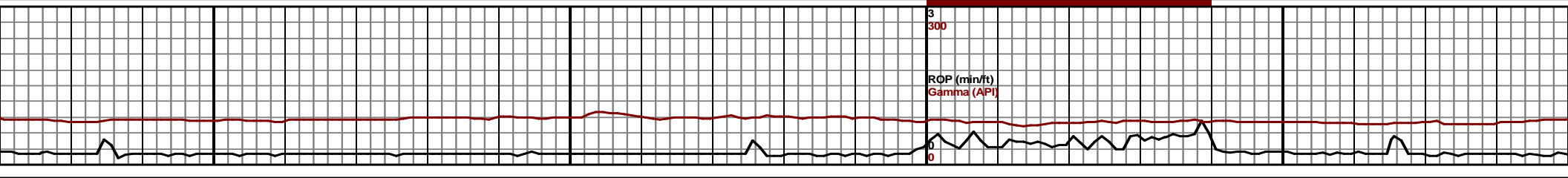
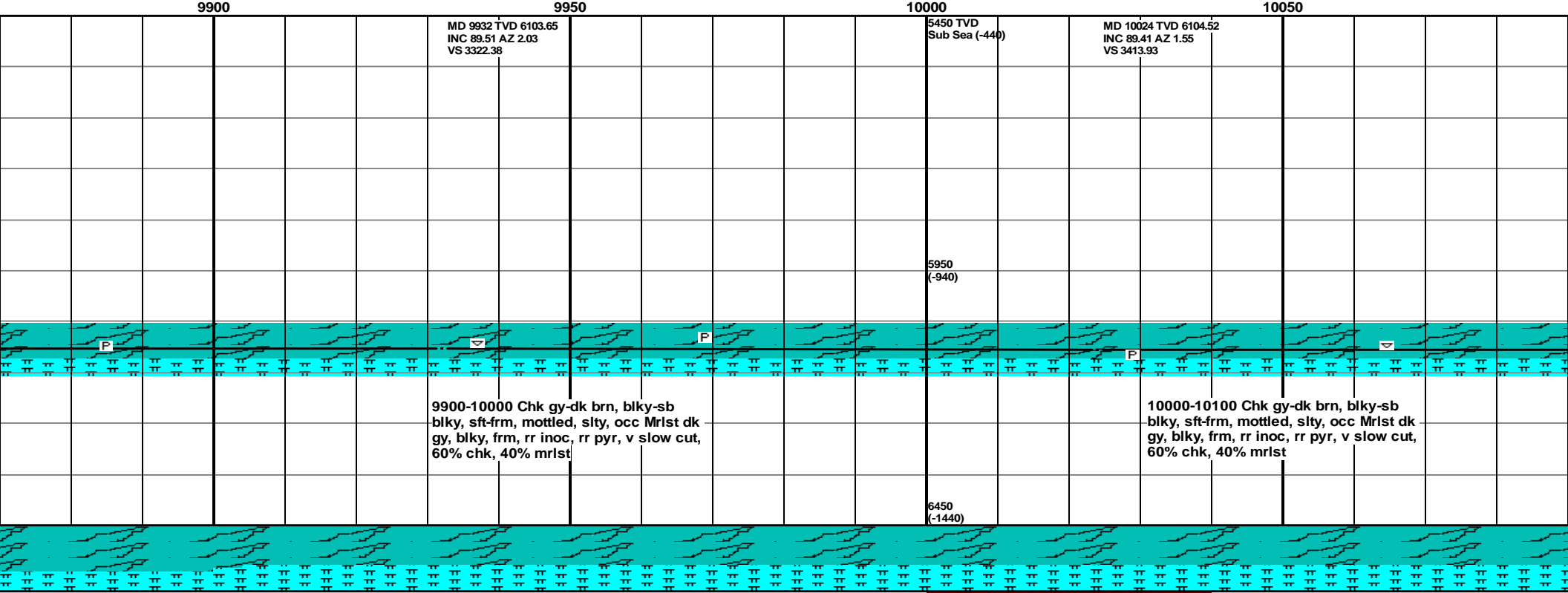
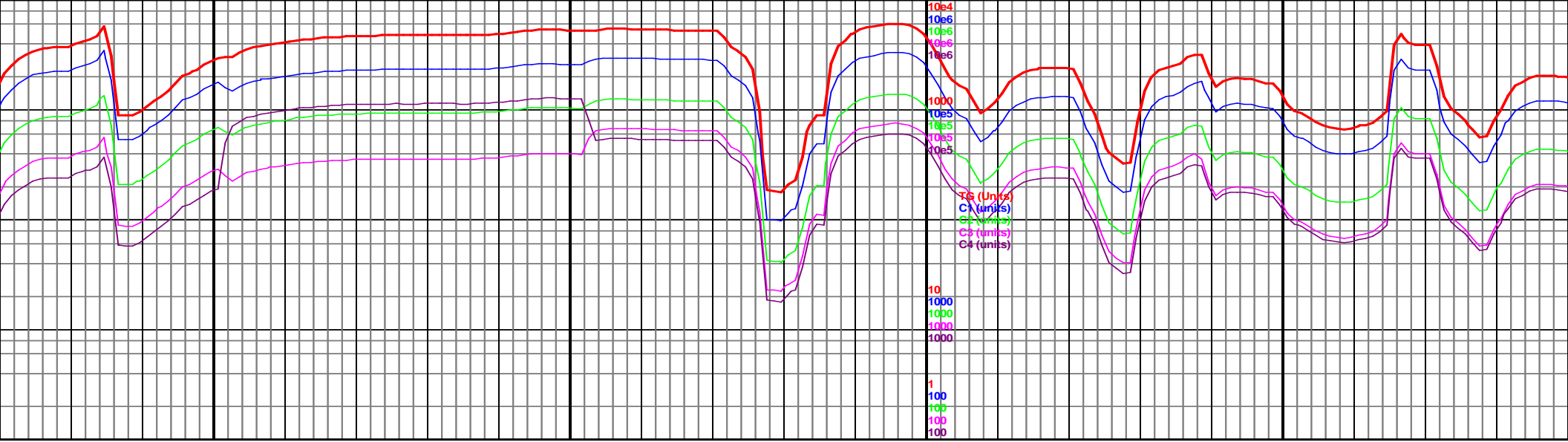


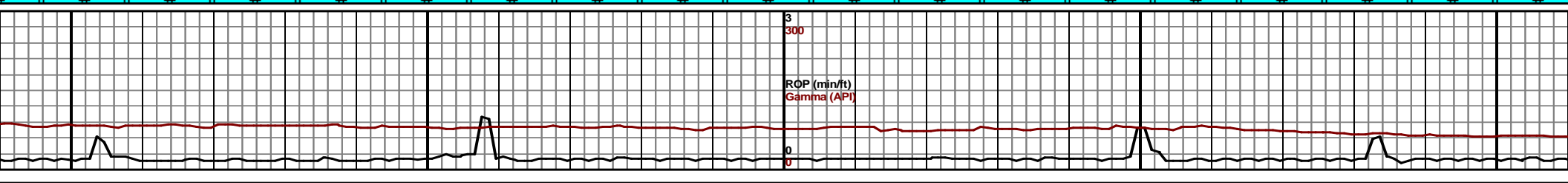
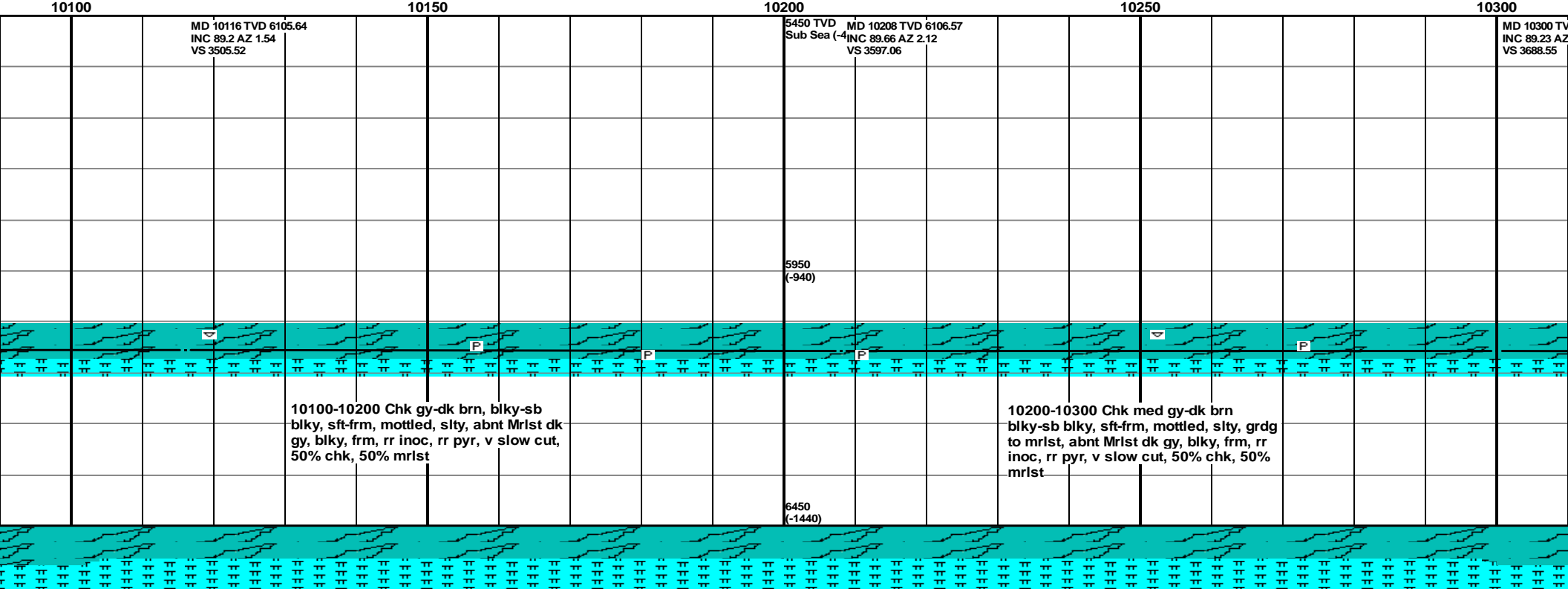
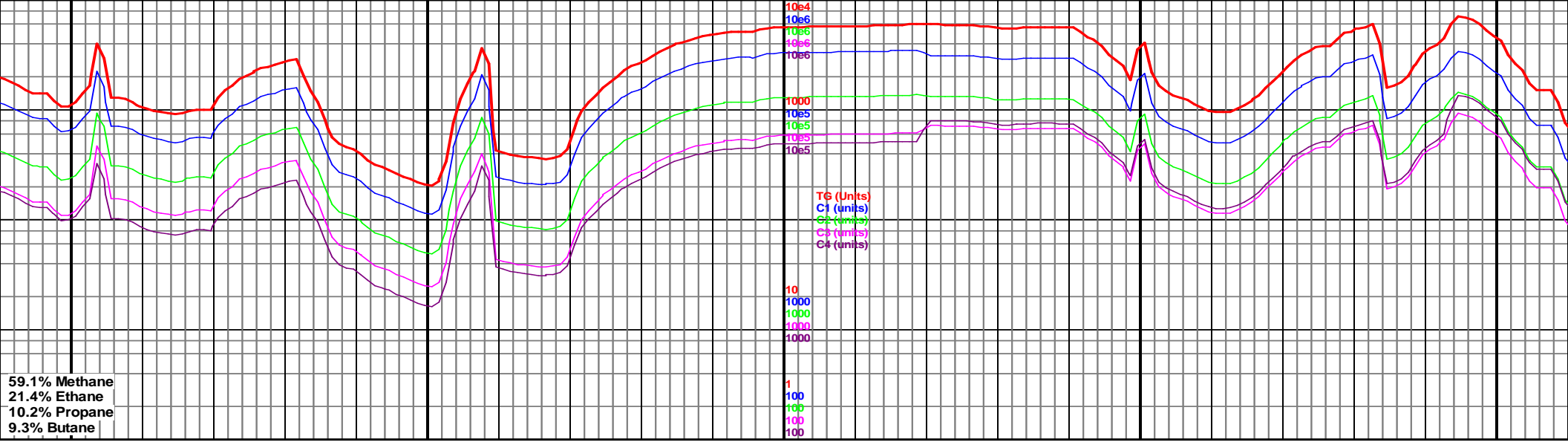


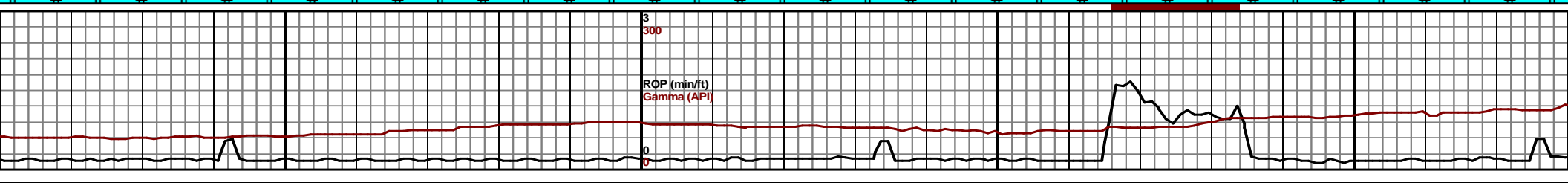
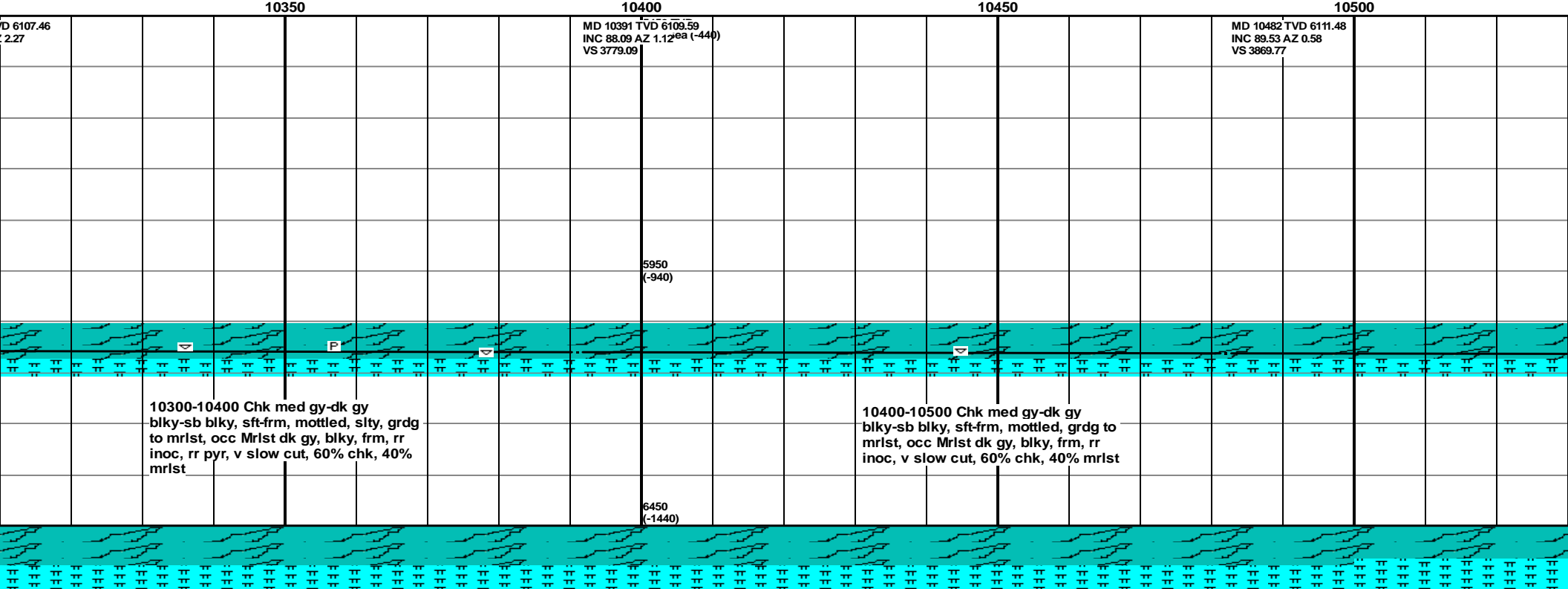
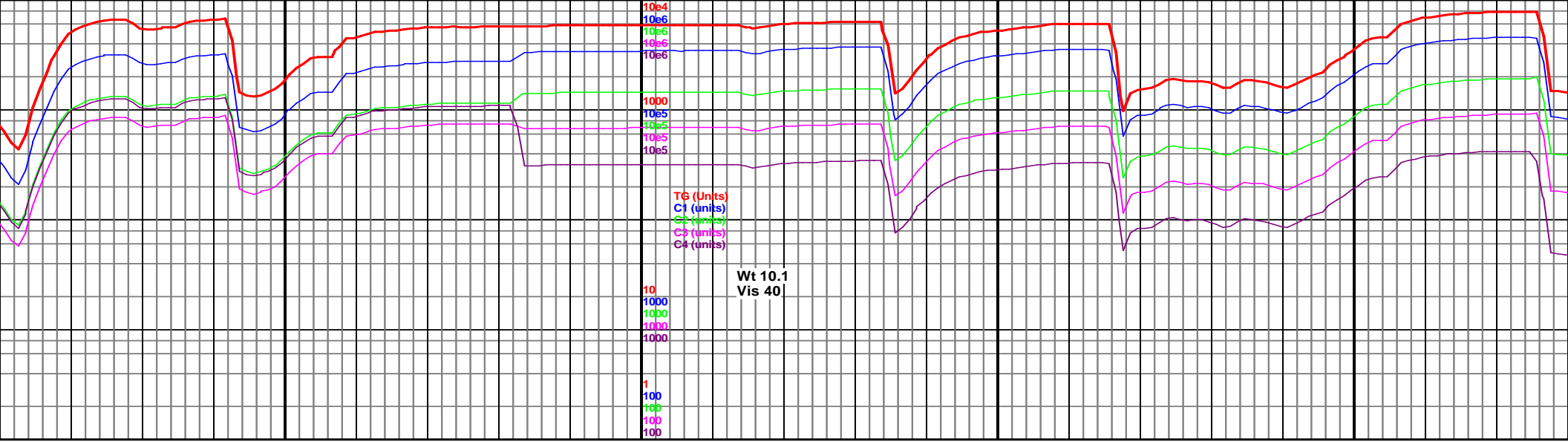


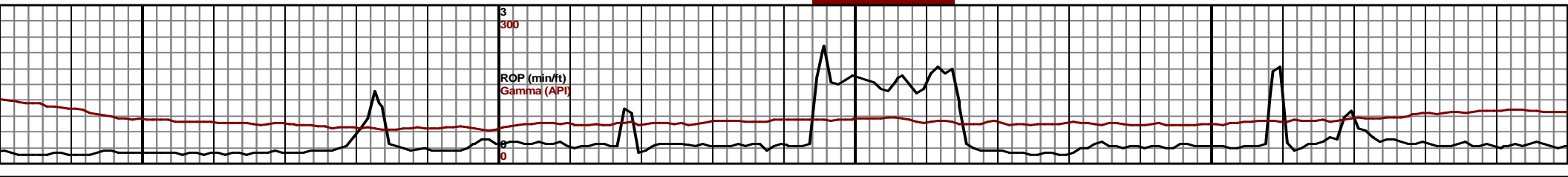
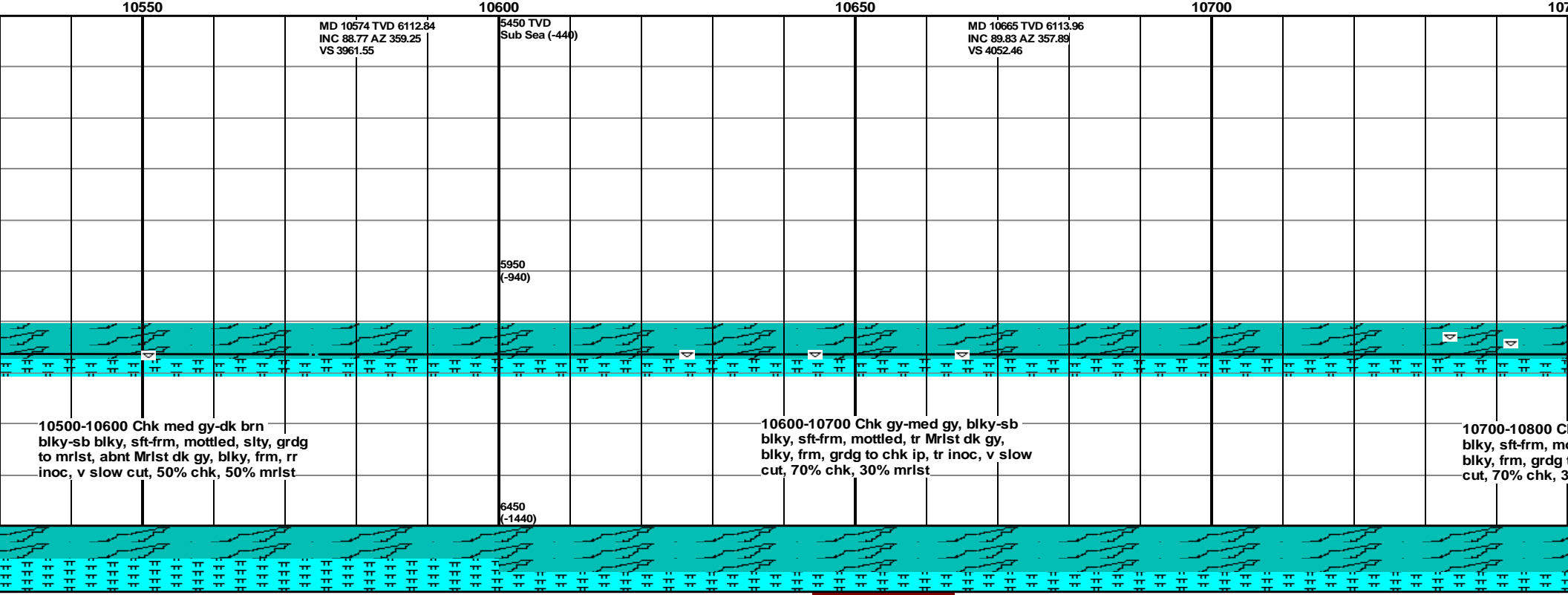
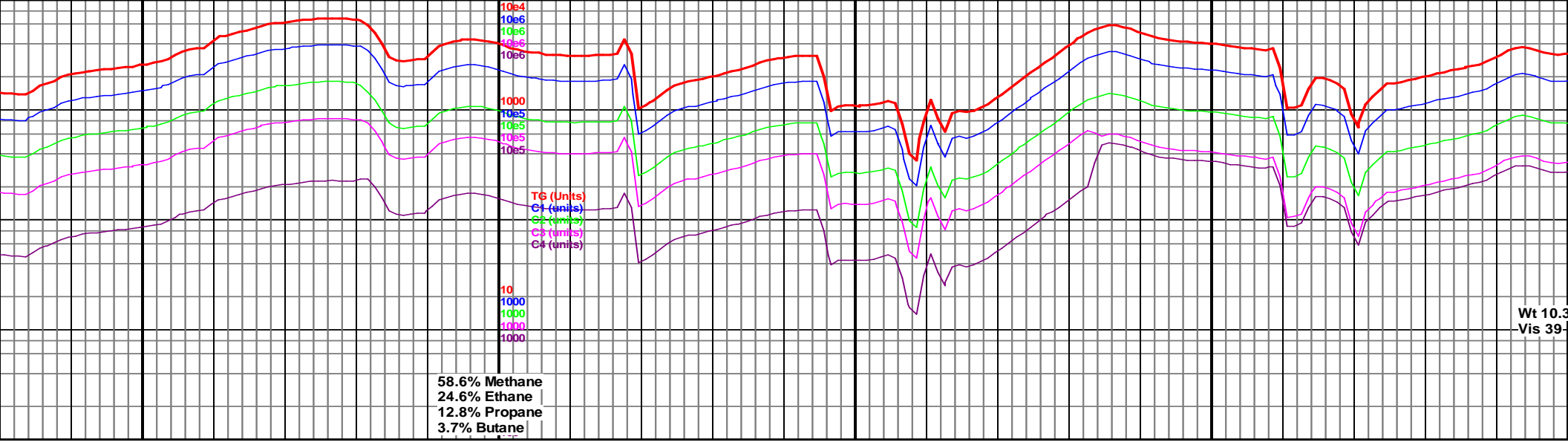


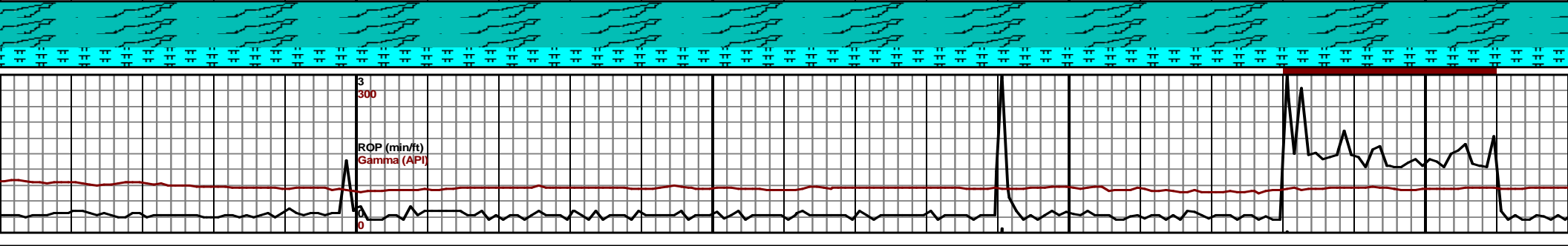
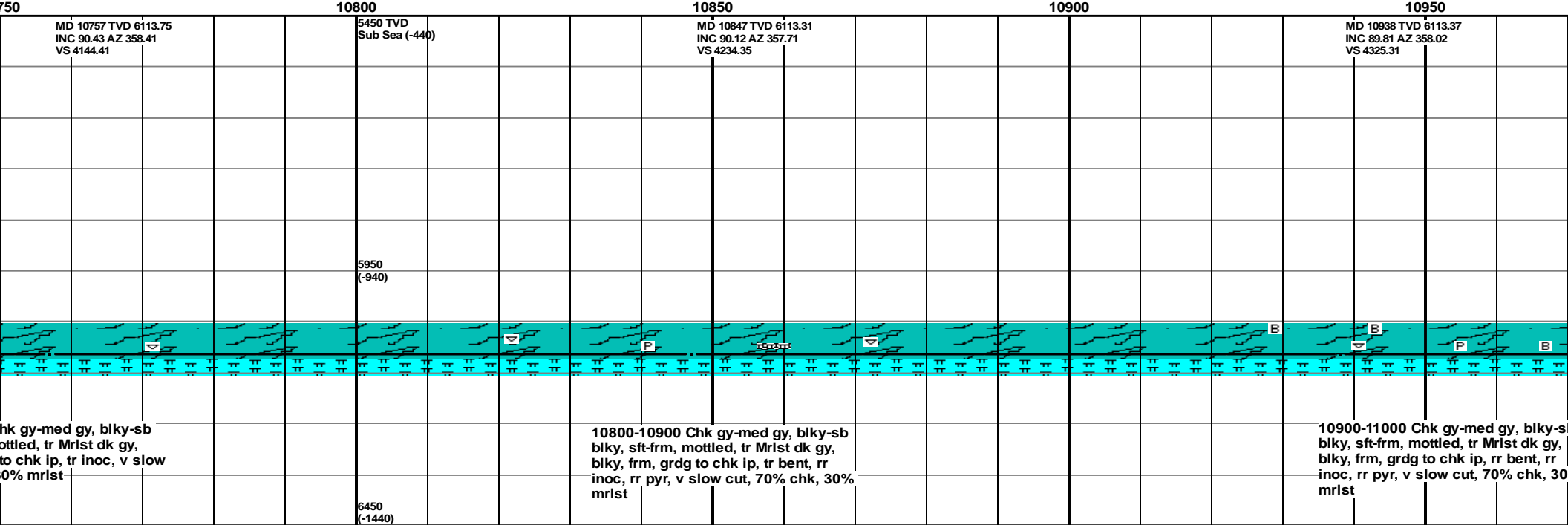
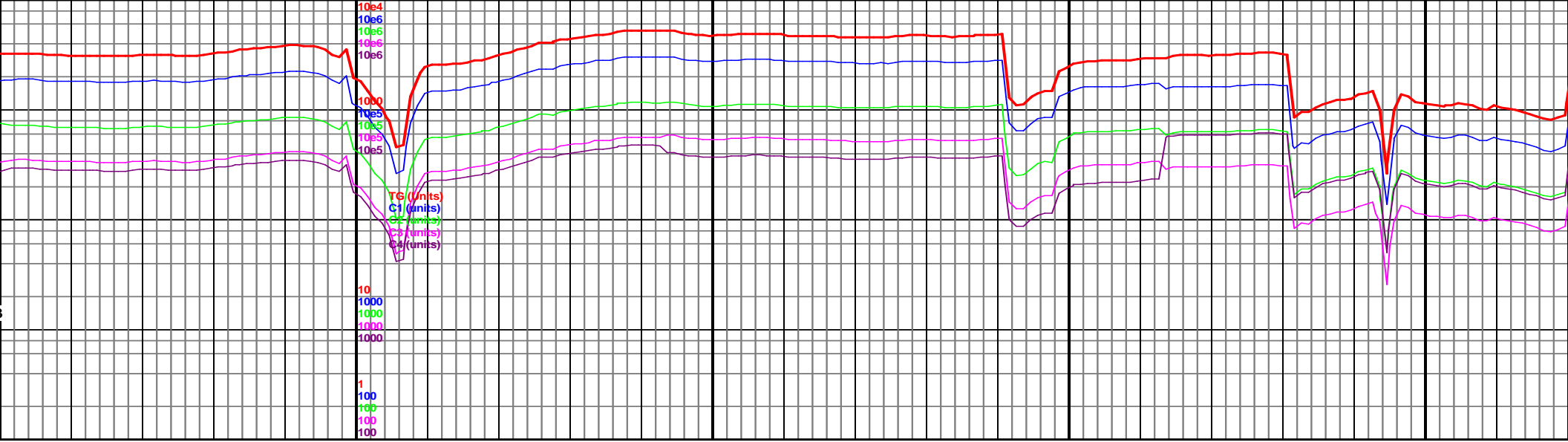


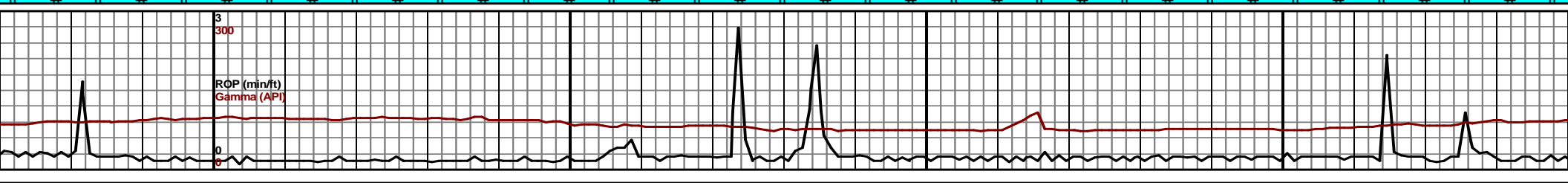
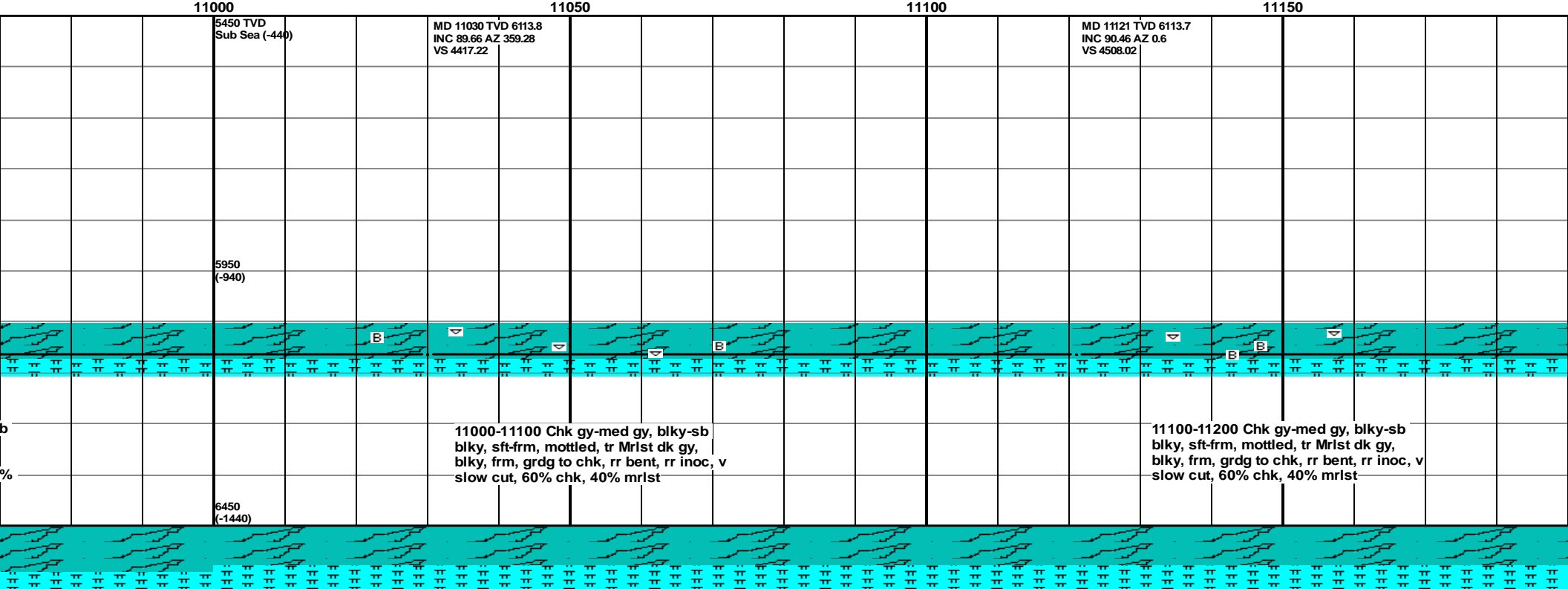
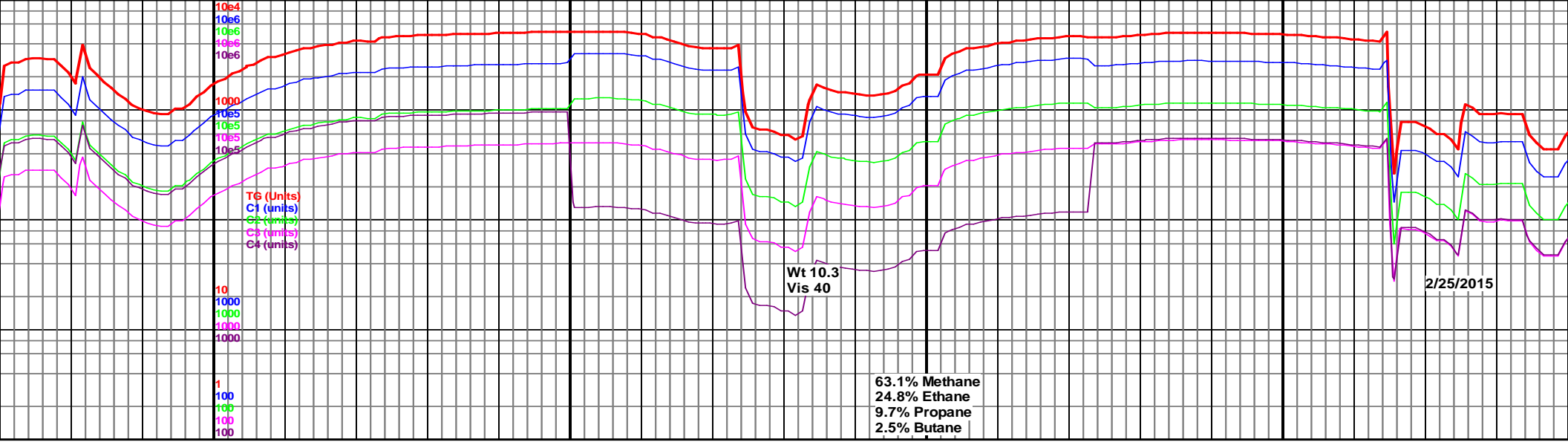


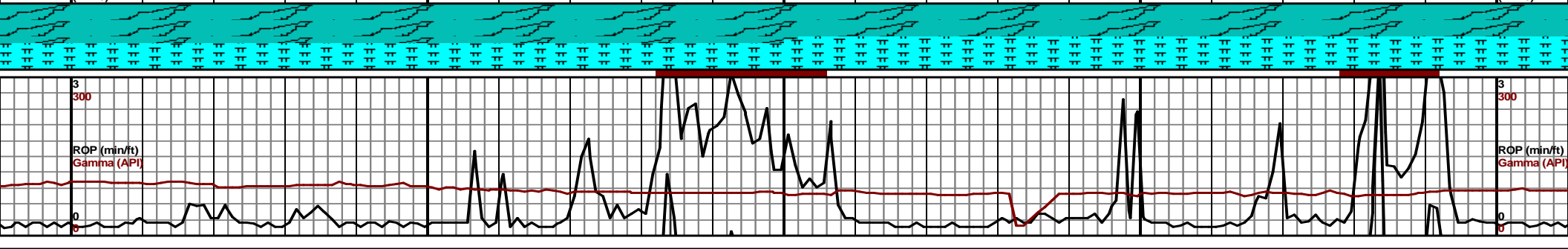
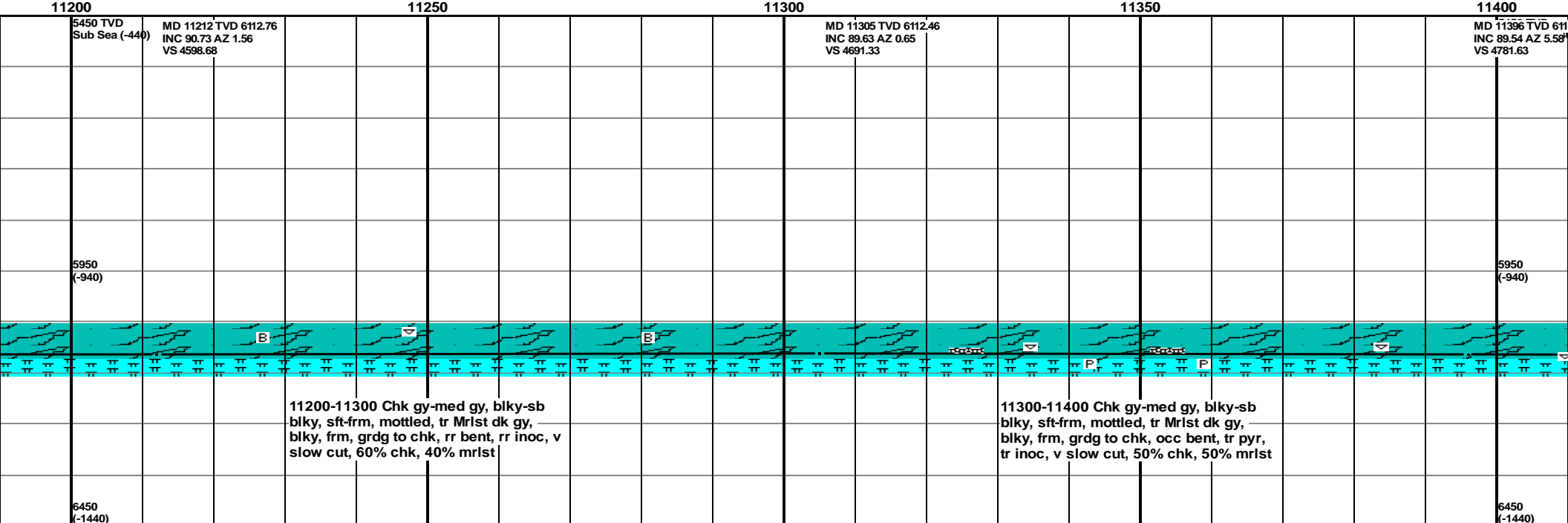
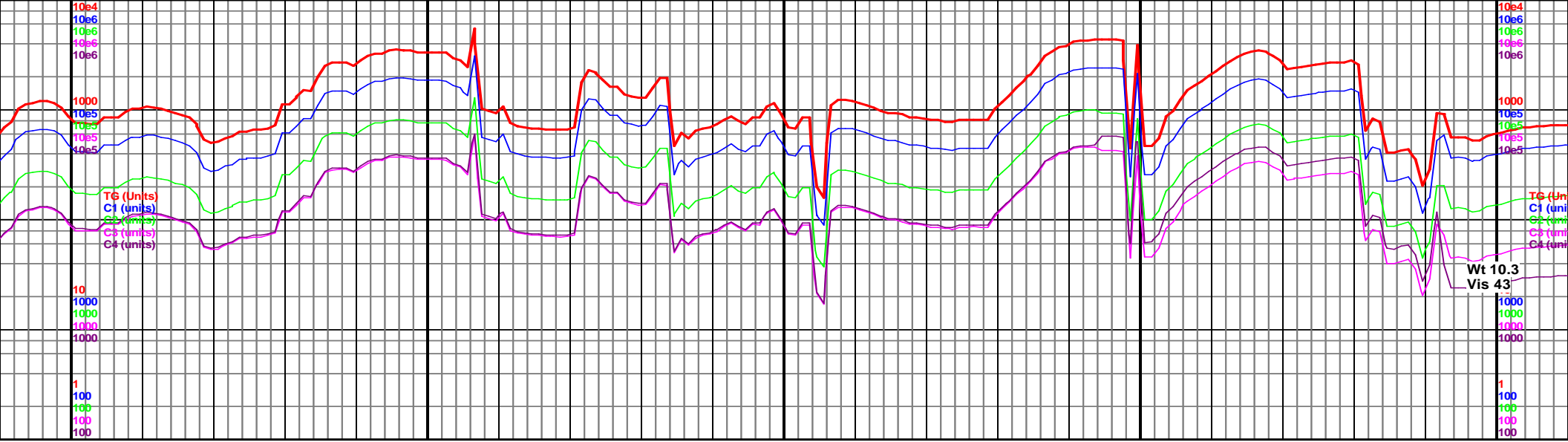


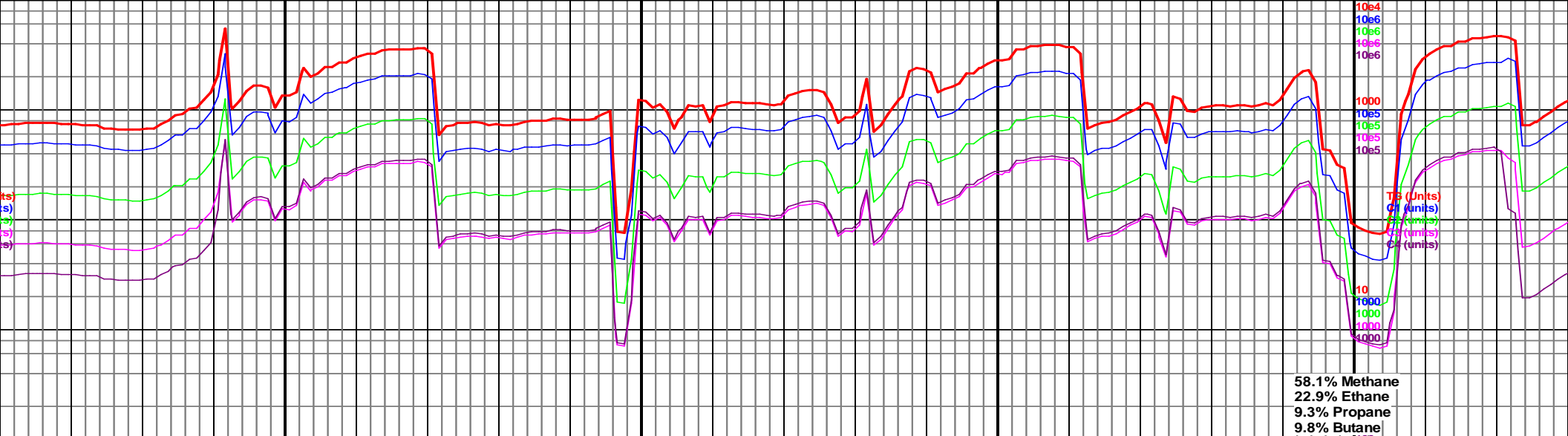




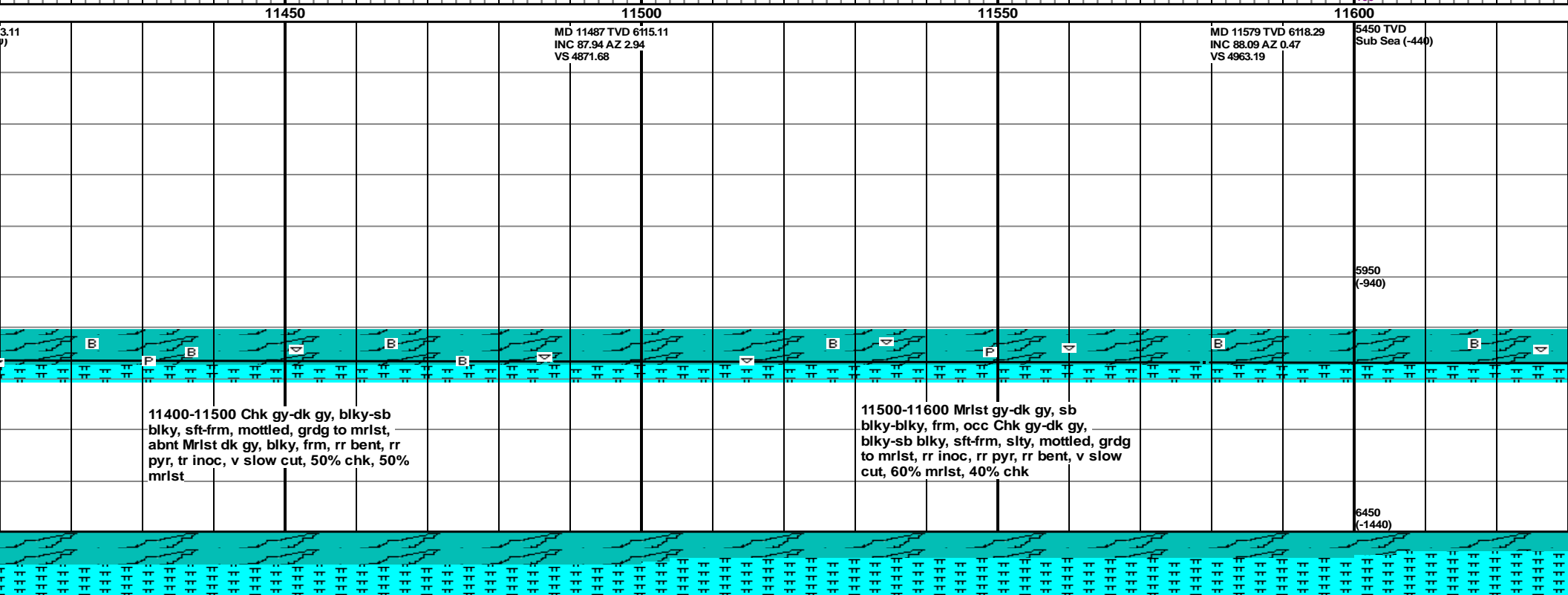






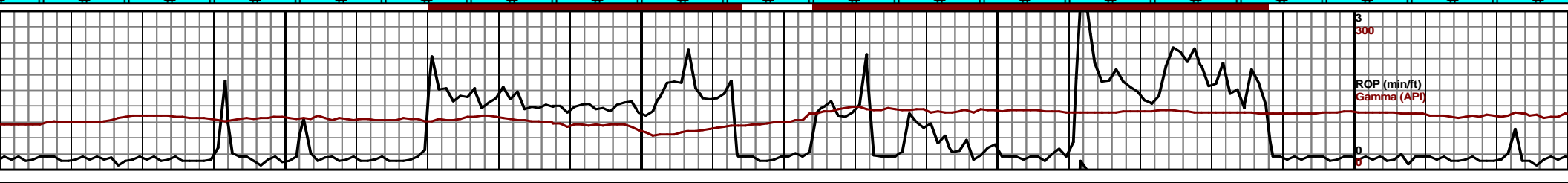


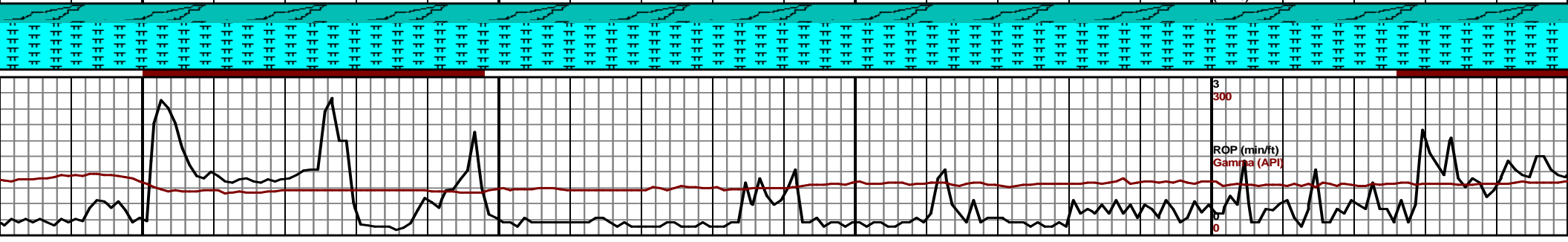
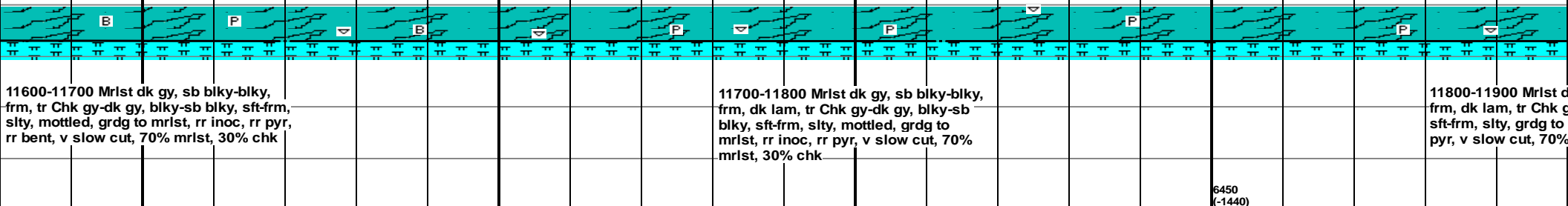
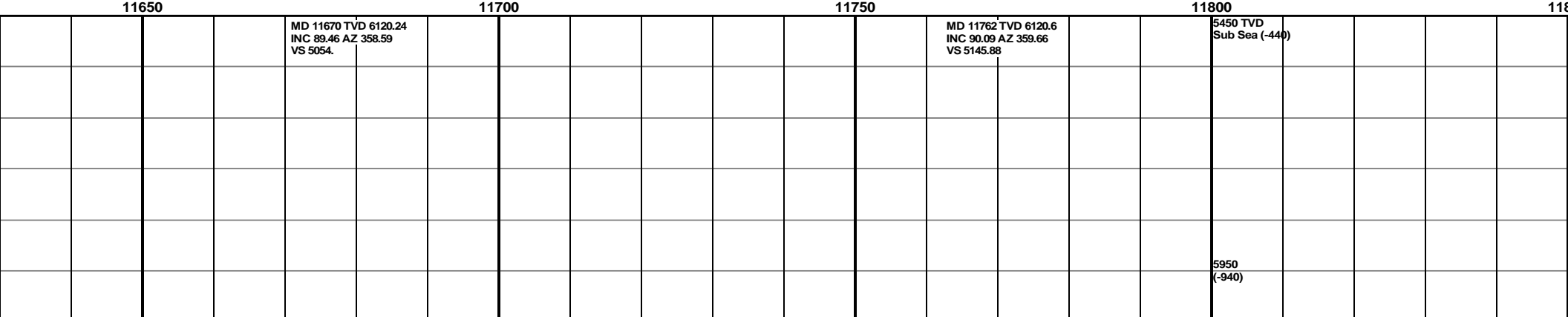
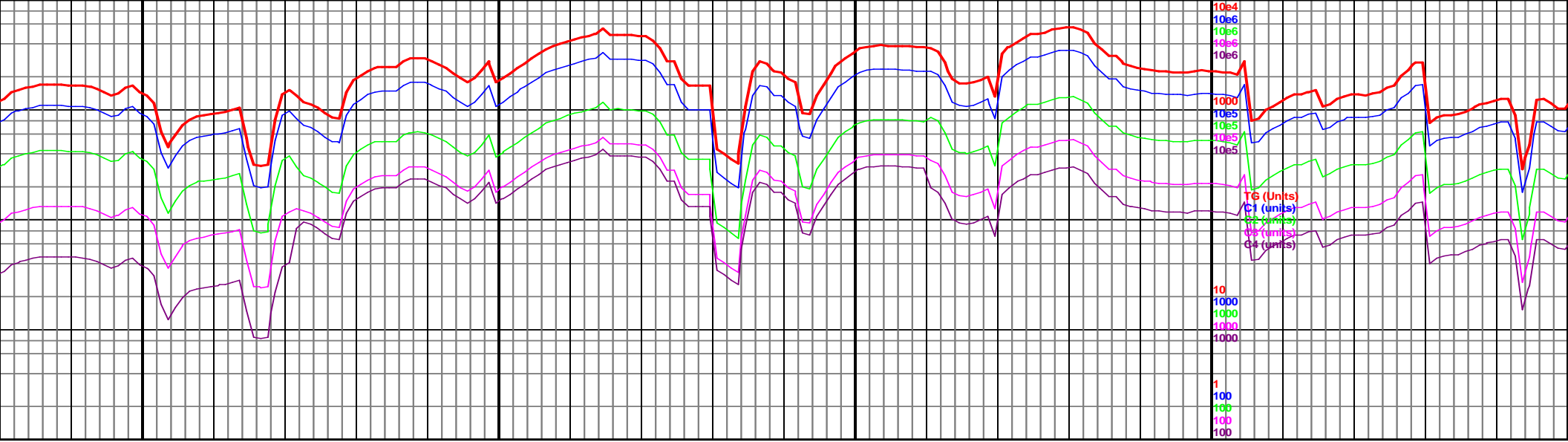
58.1% Methane
22.9% Ethane
9.3% Propane
9.8% Butane

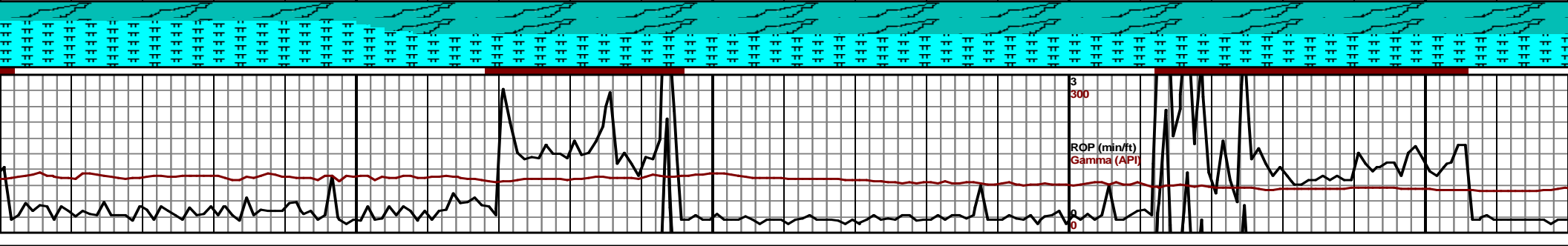
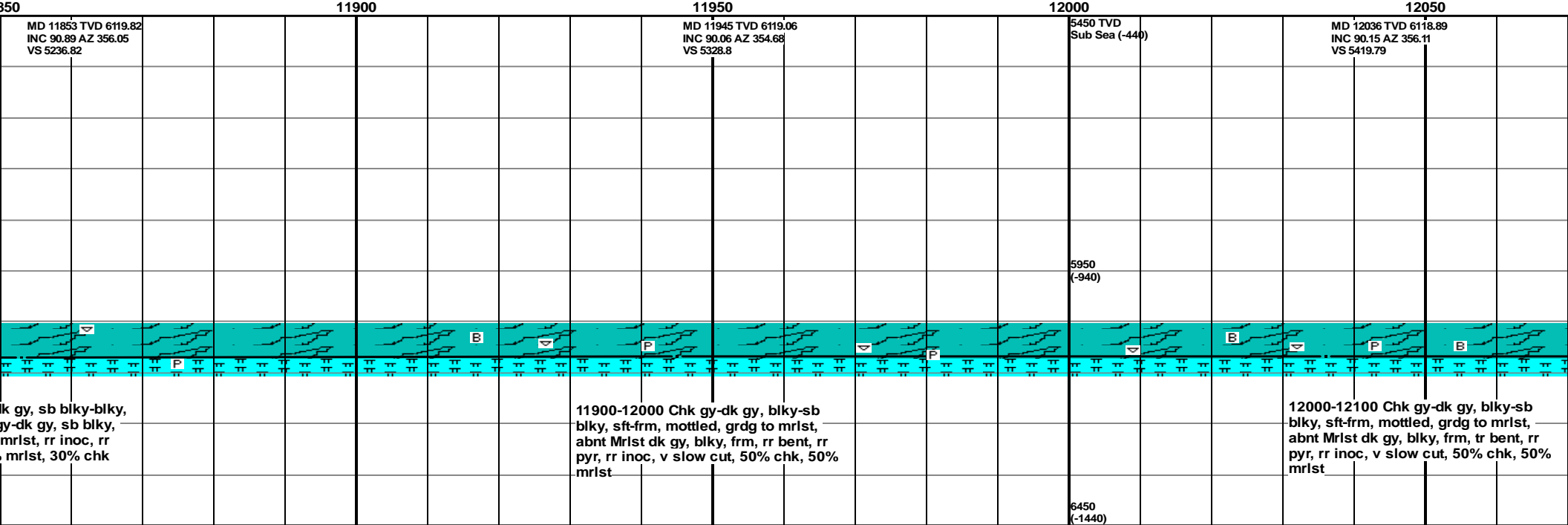
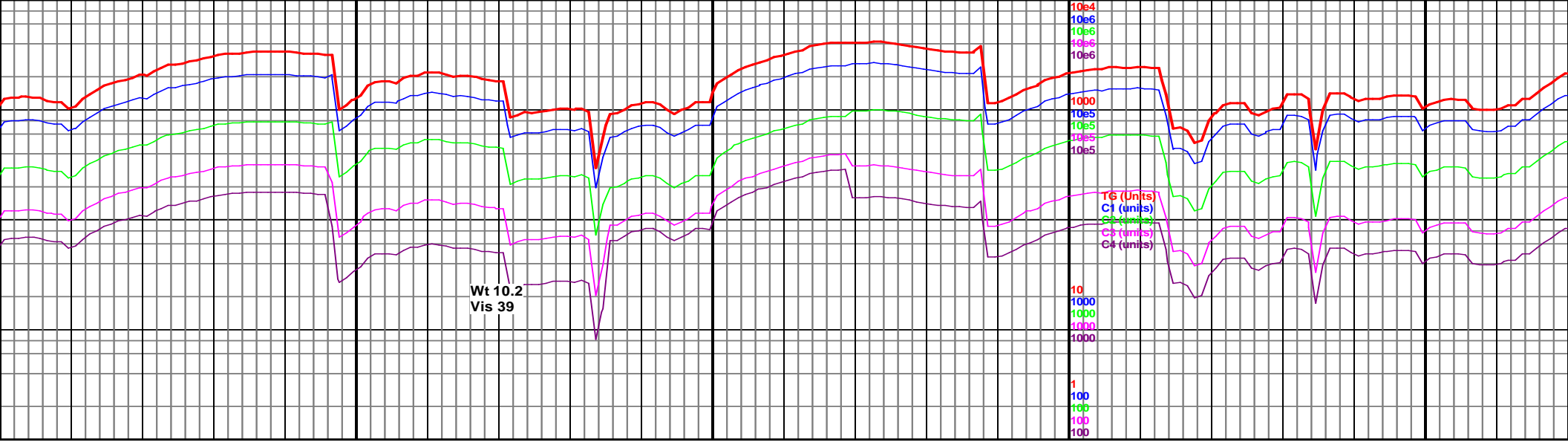


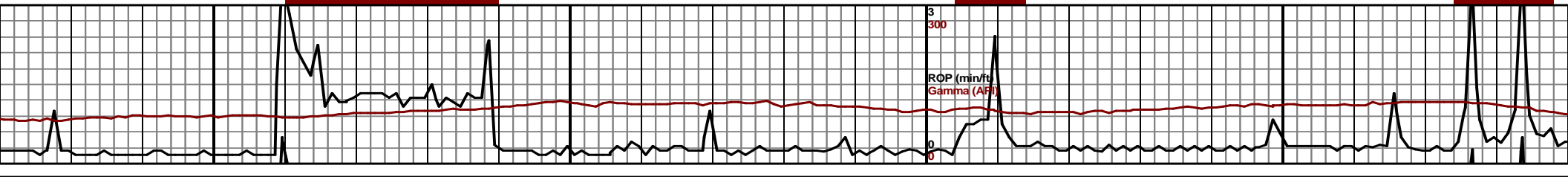
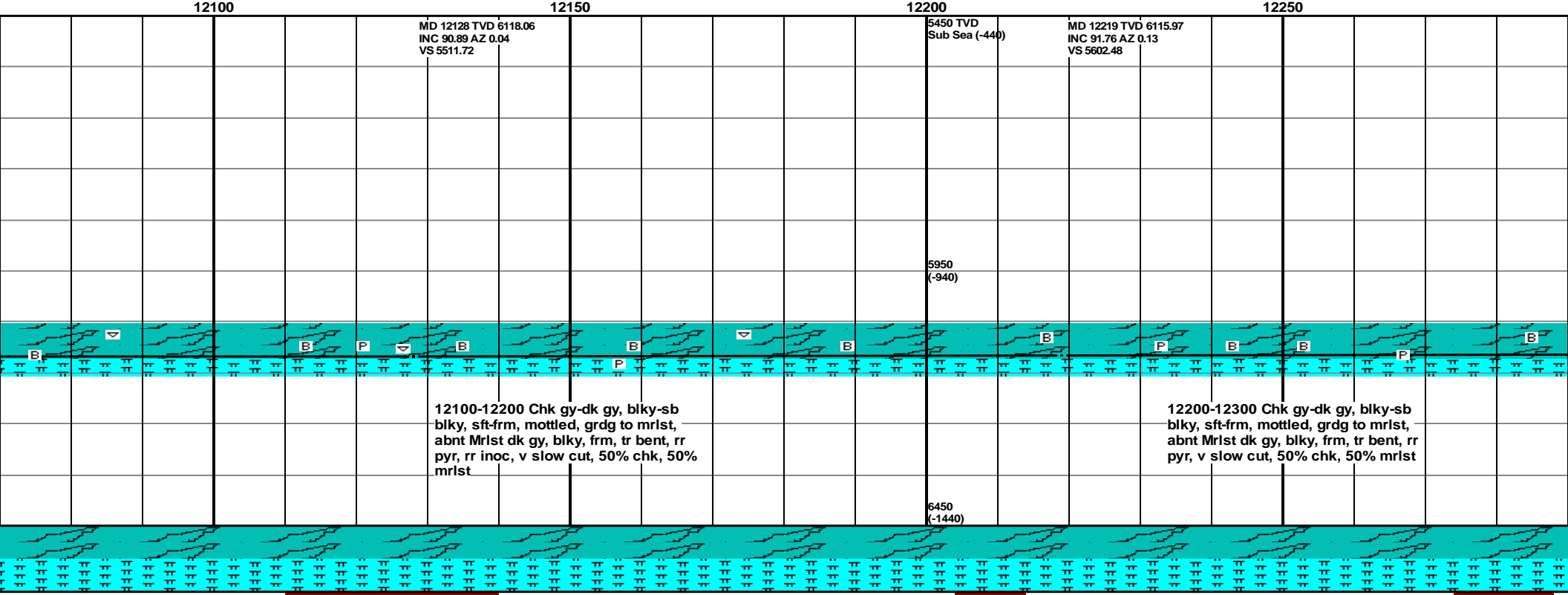
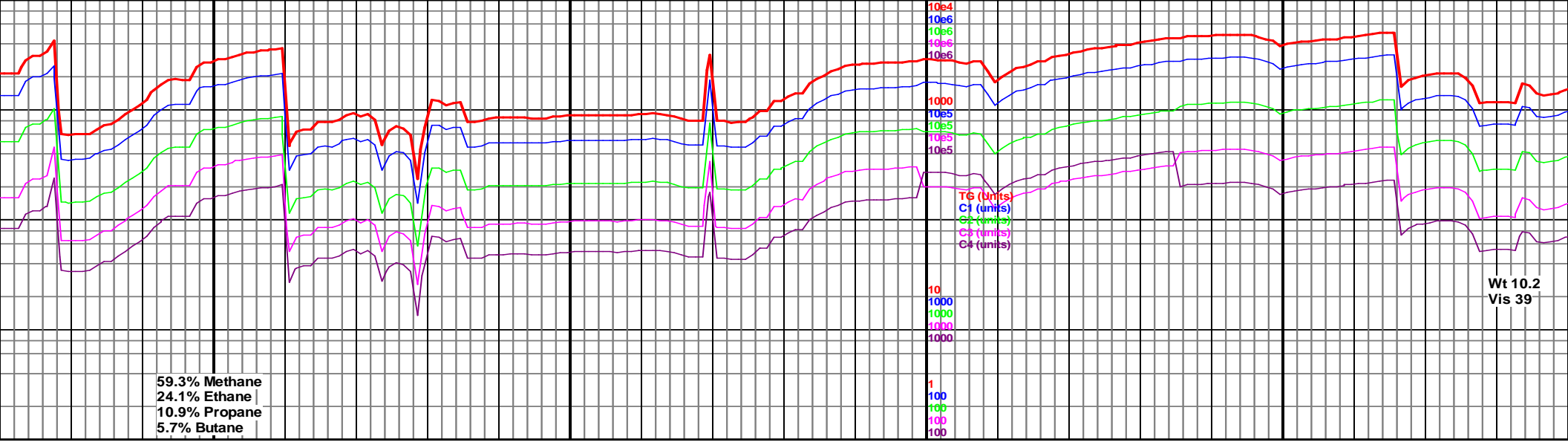
11400-11500 Chk gy-dk gy, blk-sb
blk-y, sft frm, mottled, grdg to mrlst,
abnt Mrlst dk gy, blk-y, frm, rr bent, rr
pyr, tr inoc, v slow cut, 50% chk, 50%
mrlst

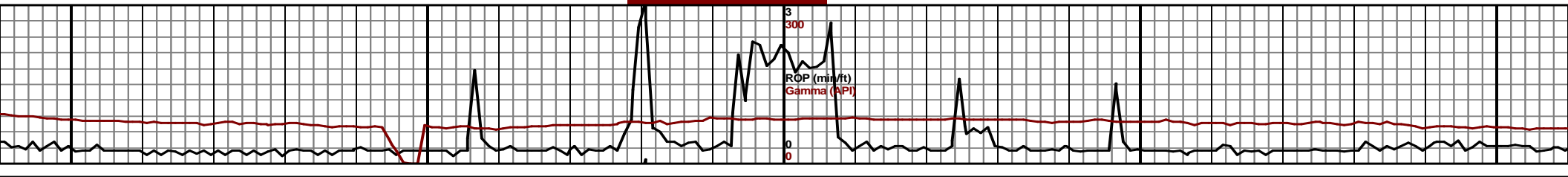
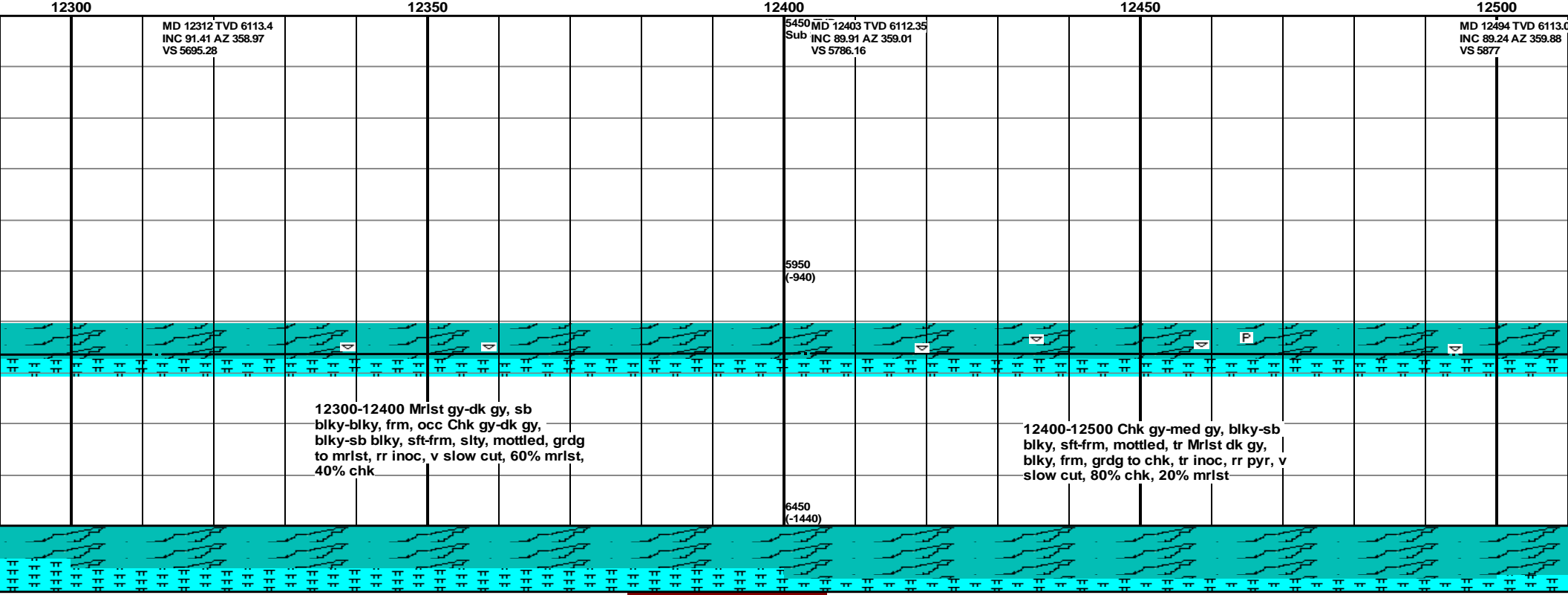
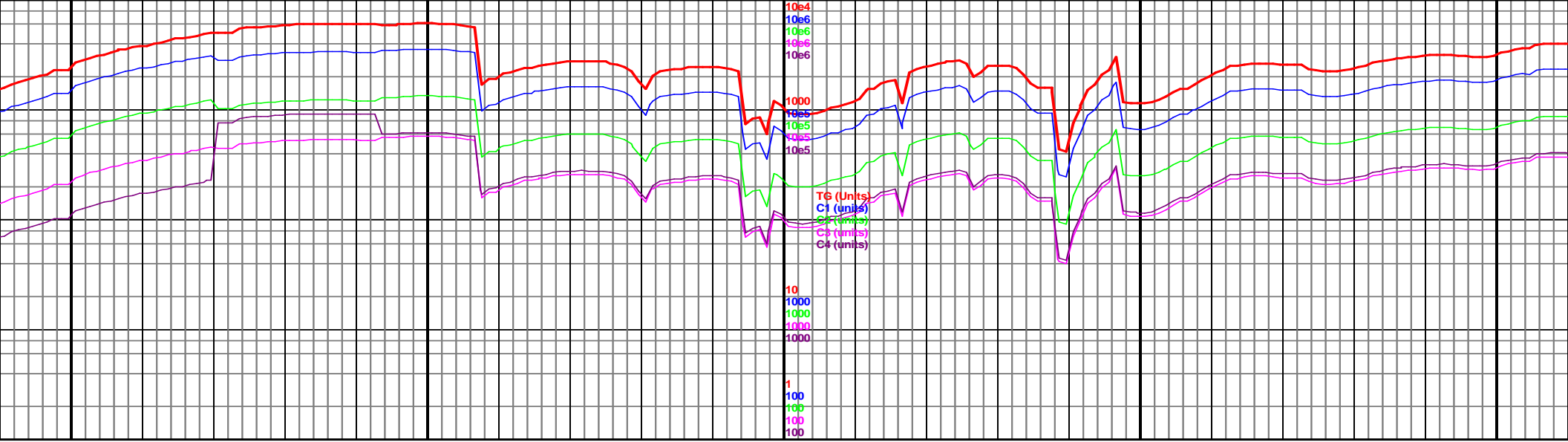
11500-11600 Mrlst gy-dk gy, sb
blk-y-blky, frm, occ Chk gy-dk gy,
blk-y-sb blk-y, sft frm, slty, mottled, grdg
to mrlst, rr inoc, rr pyr, rr bent, v slow
cut, 60% mrlst, 40% chk

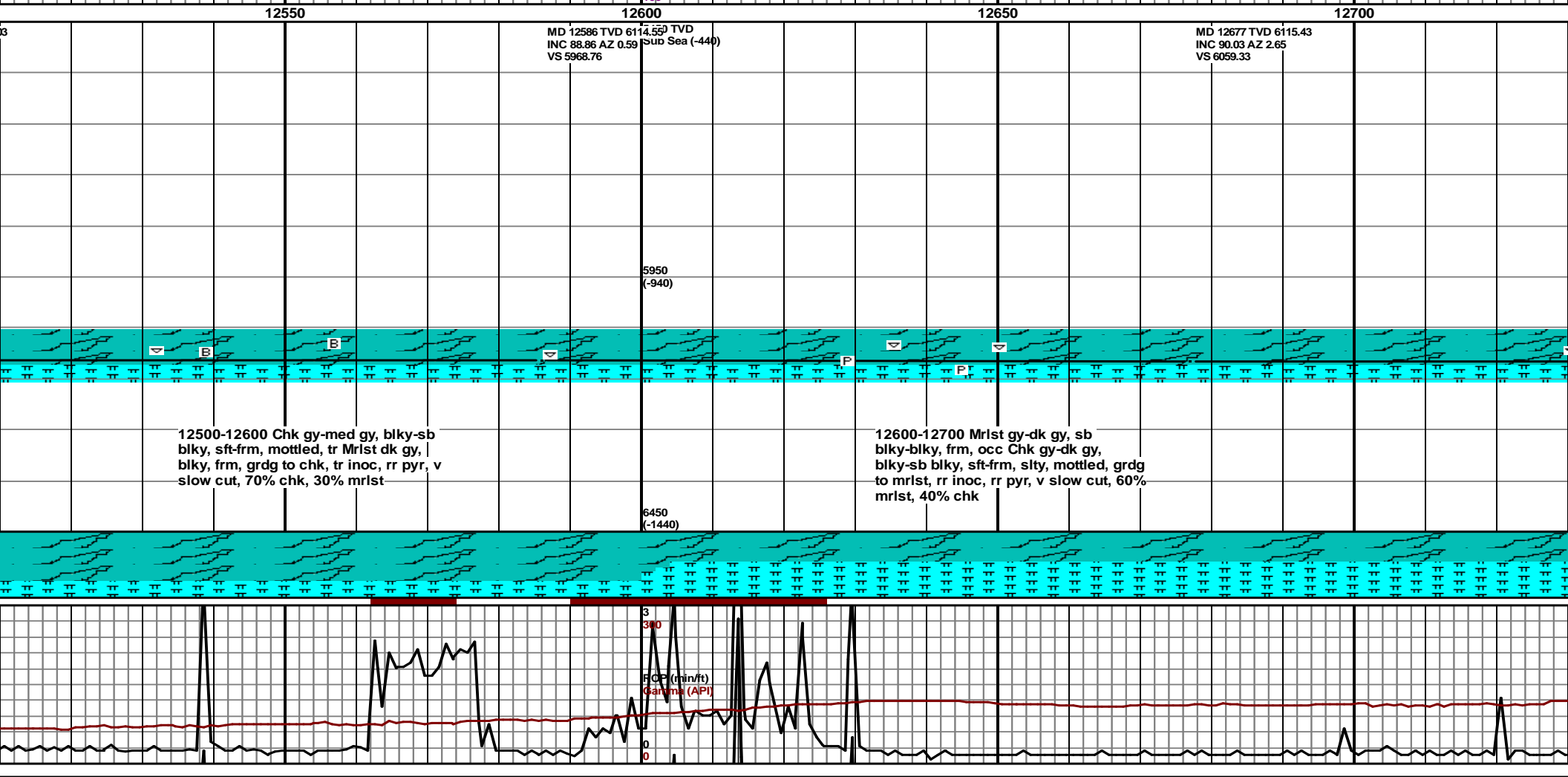


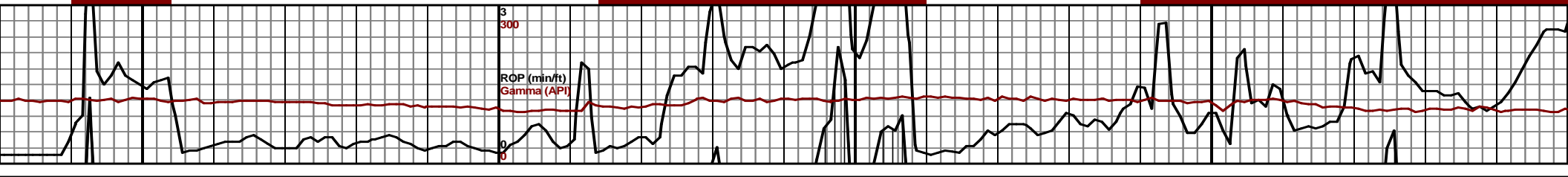
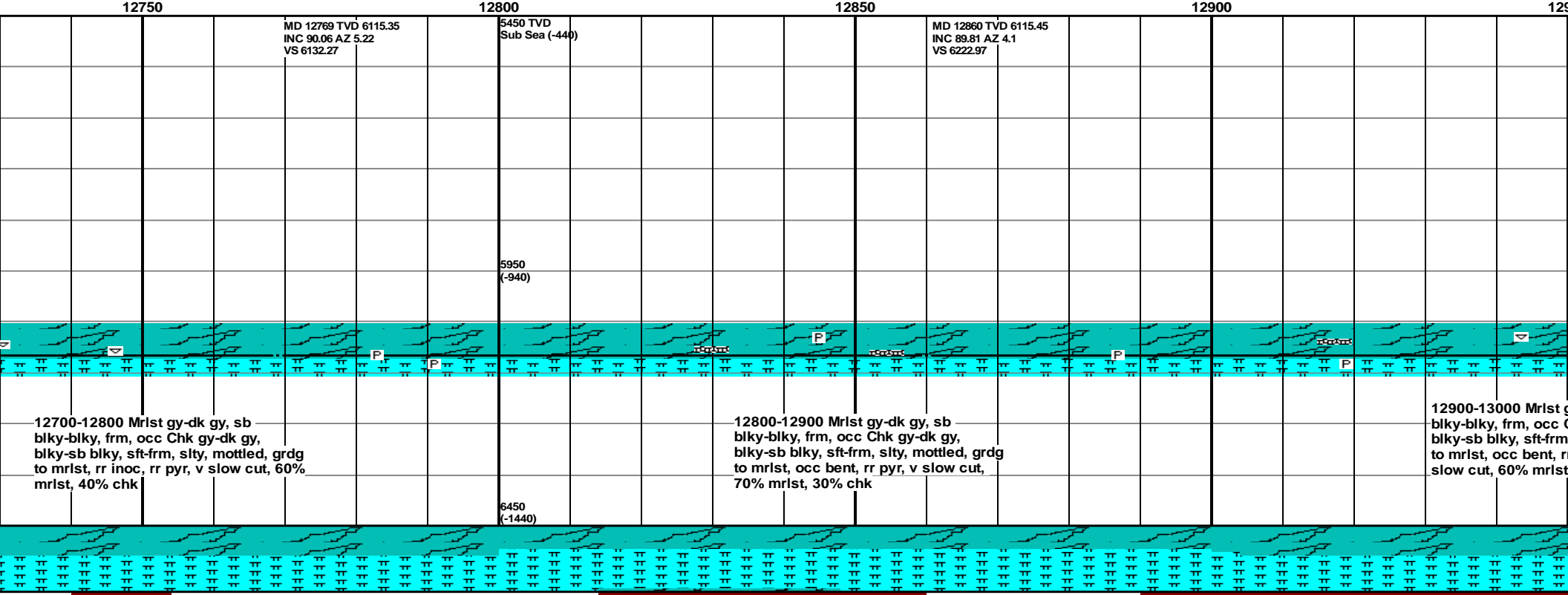
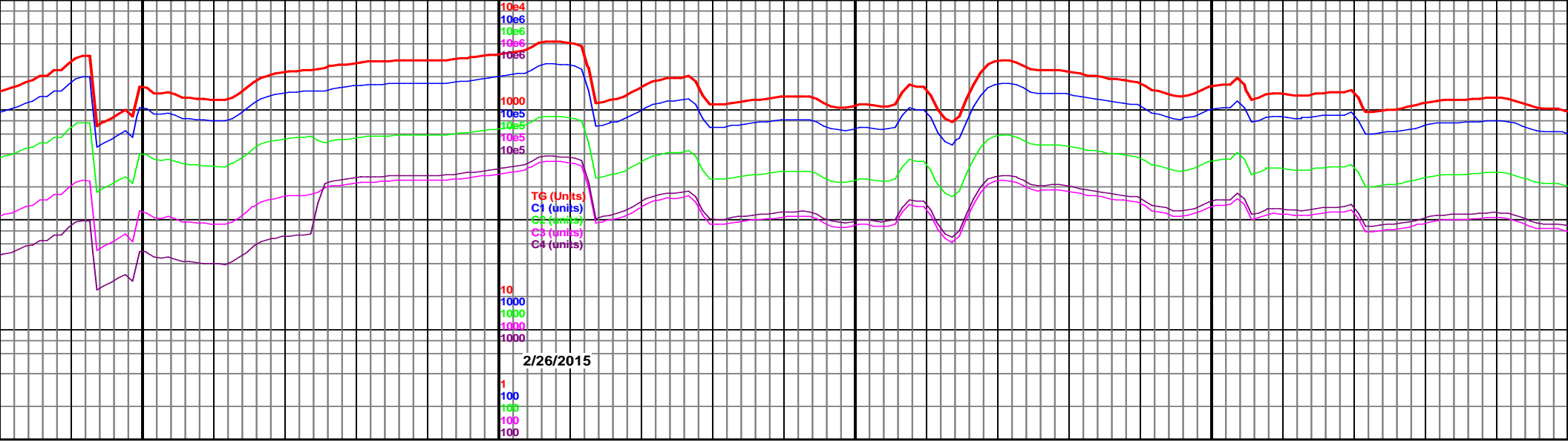


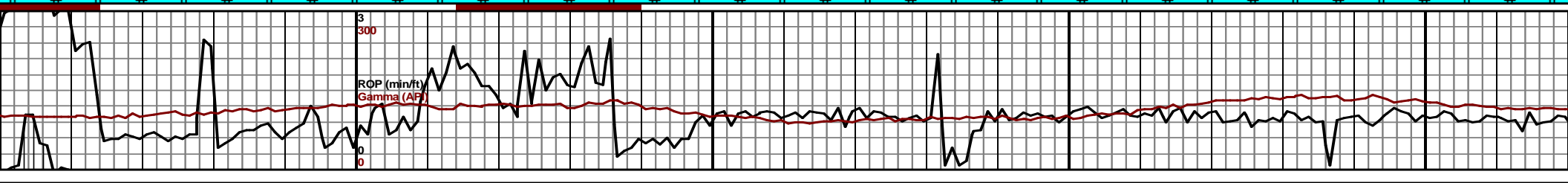
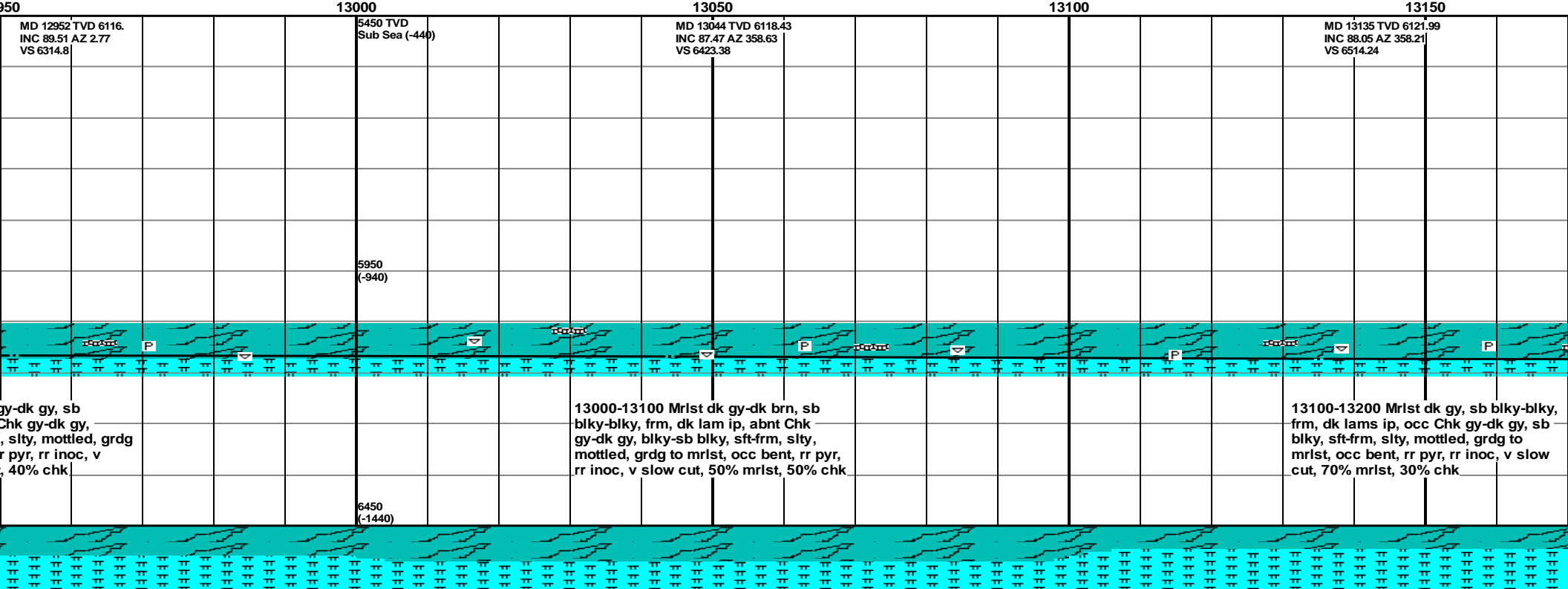
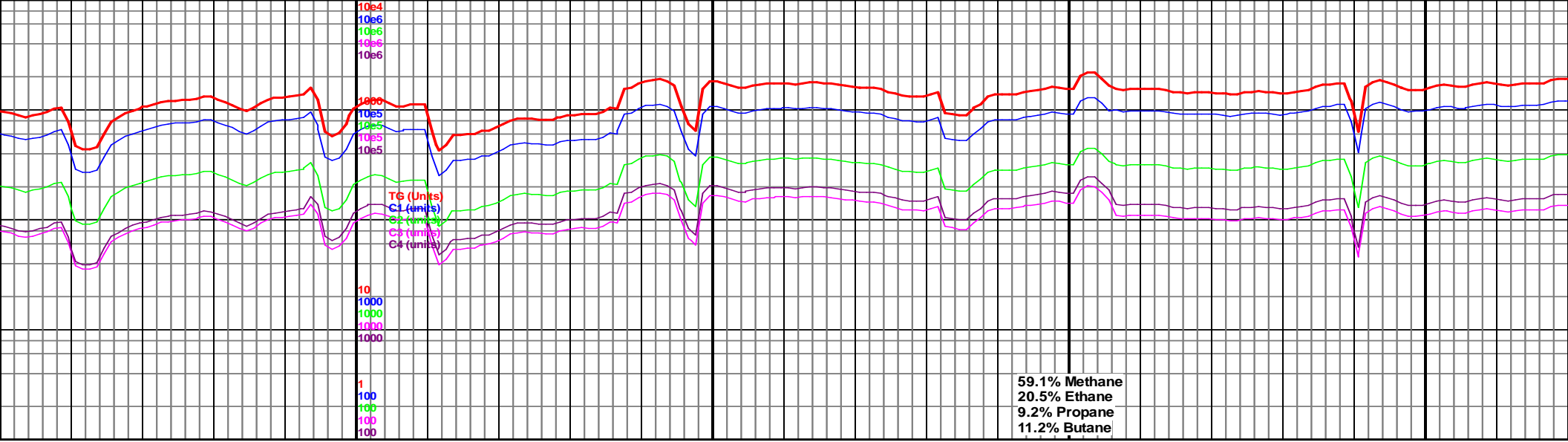


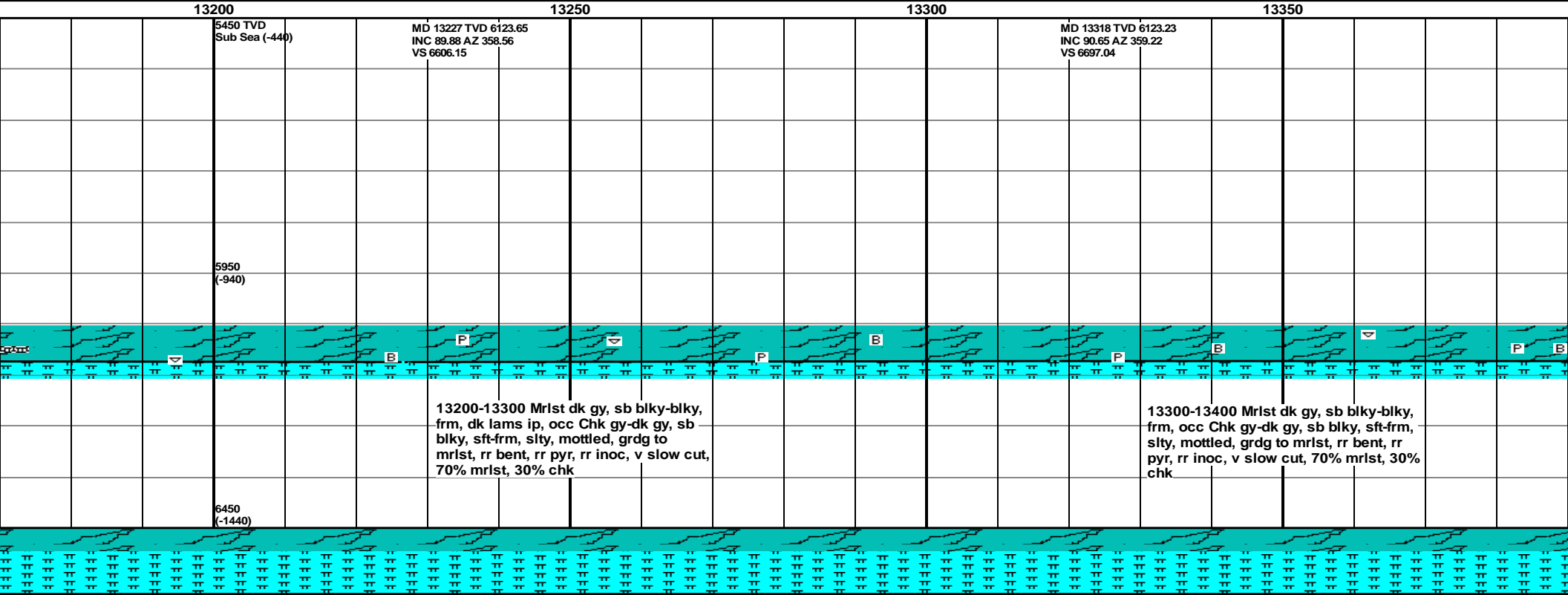
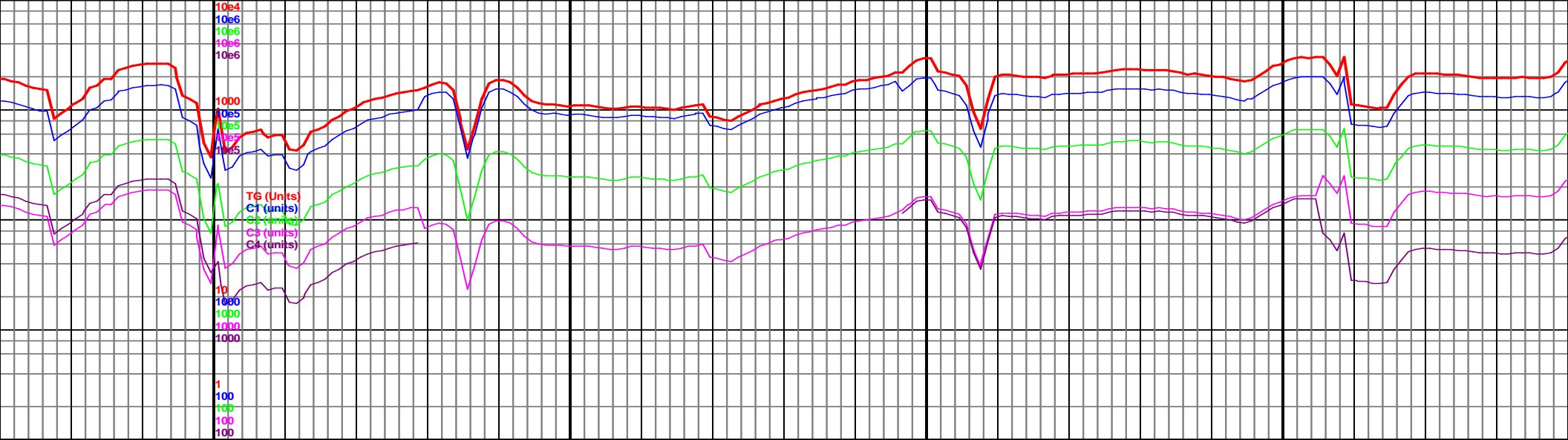






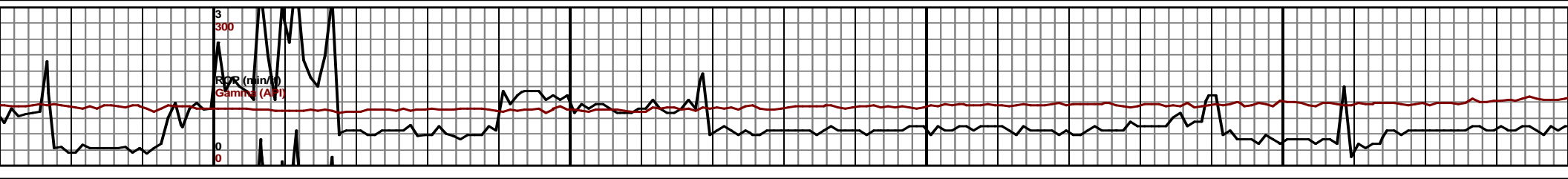


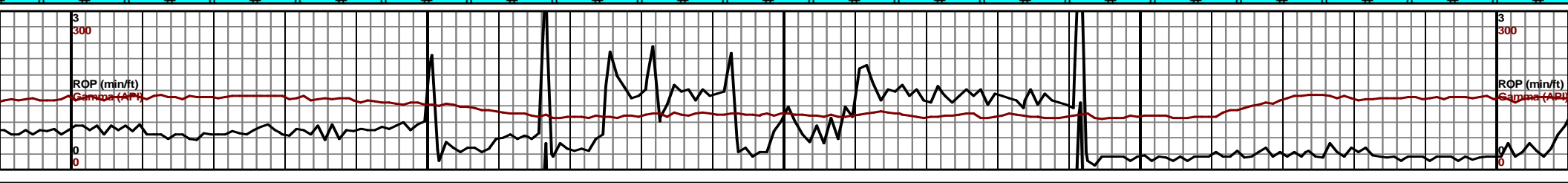
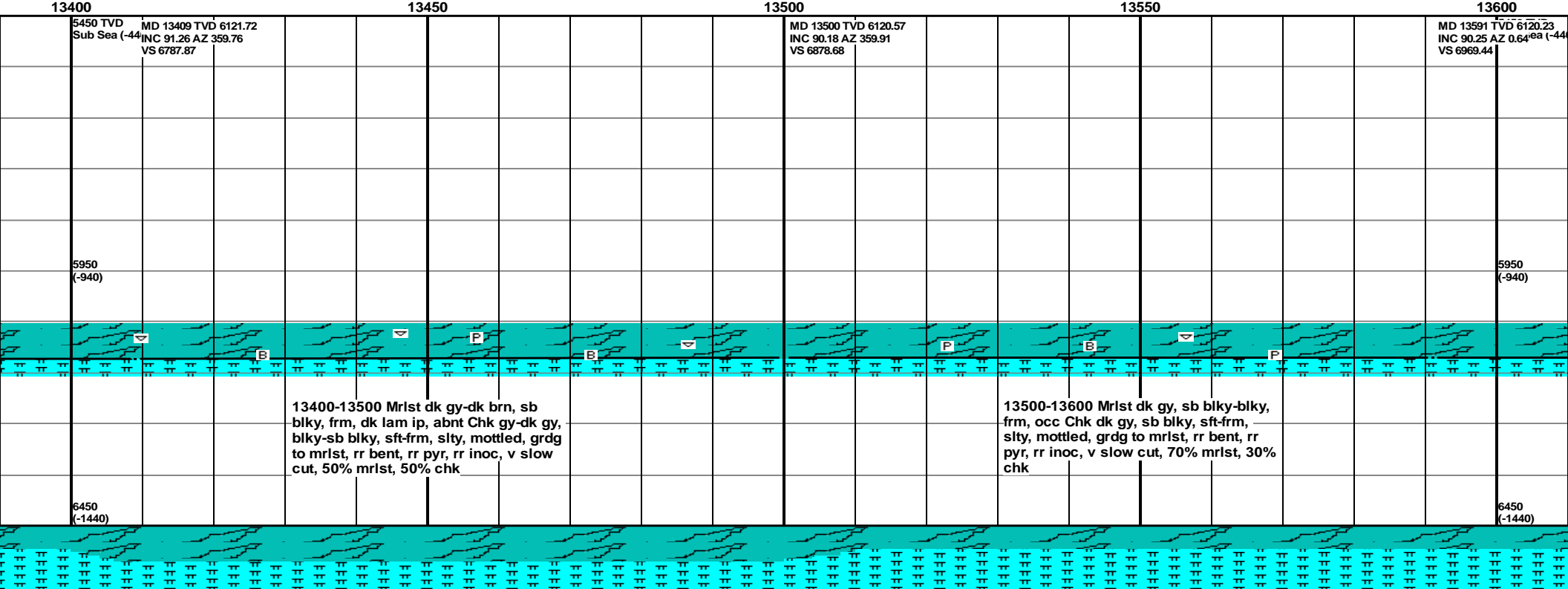
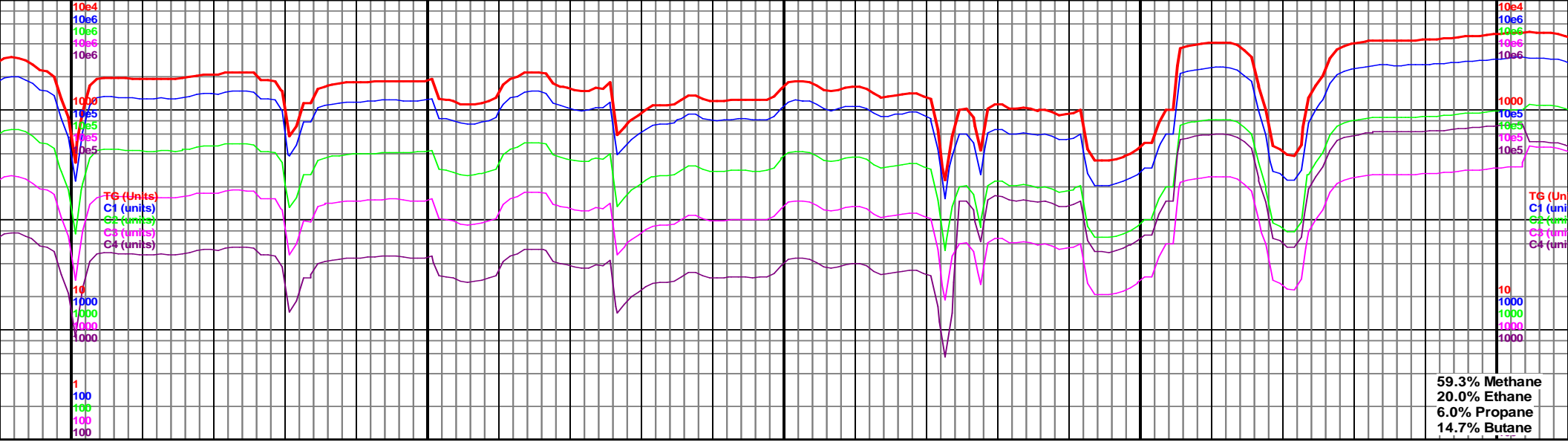


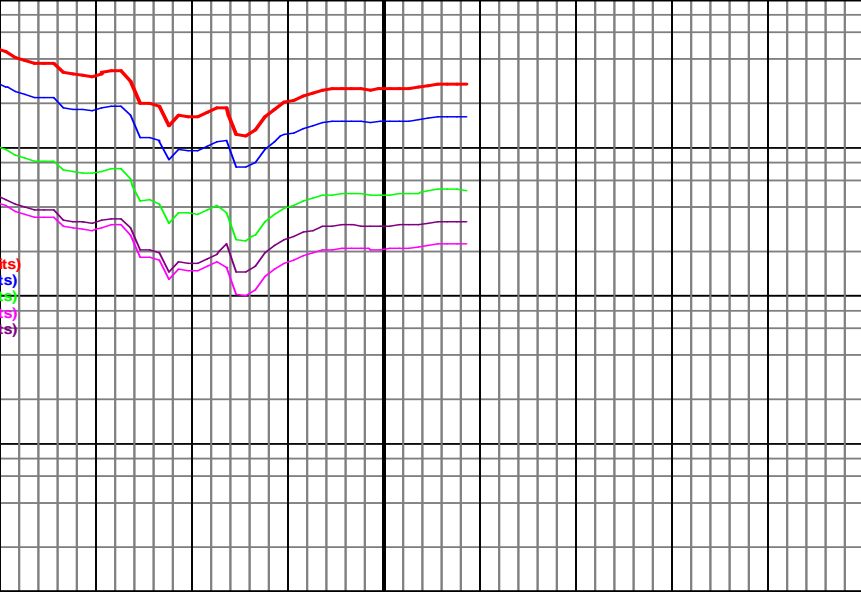


13200-13300 Mrlst dk gy, sb blkly-blky, frm, dk lams ip, occ Chk gy-dk gy, sb blkly, sft-frm, slty, mottled, grdg to mrlst, rr bent, rr pyr, rr inoc, v slow cut, 70% mrlst, 30% chk

13300-13400 Mrlst dk gy, sb blkly-blky, frm, occ Chk gy-dk gy, sb blkly, sft-frm, slty, mottled, grdg to mrlst, rr bent, rr pyr, rr inoc, v slow cut, 70% mrlst, 30% chk







13650

13

MD 13618 TVD 6120.13 INC 90.18 AZ 0.94 VS 6996.35				MD 13662 TVD 6119.99 INC 90.18 AZ 0.94 VS 7040.2			
Total Depth reached 12662' at 17:40 on 2/26/2015.							
13600-13662 Mrlst dk gy, sb blkyl-blky, frm, occ Chk dk gy, sb blkyl, sft-frm, slty, mottled, grdg to mrlst, rr bent, rr pyr, rr inoc, v slow cut, 70% mrlst, 30% chk							

