



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

Well Name: Razor Federal 12F-1307A
Well Id: 05-123-38724-00
Location: SENW 12-T10N-R57W
License Number: 05-123-38724-00
Spud Date: 7/18/2015
Surface Coordinates: Lat.: 40.854456 Long.: -103.817564

Region: Redtail Field
Drilling Completed: 7/26/2015

Bottom Hole
Coordinates:
Ground Elevation (ft): 4937
Logged Interval (ft): 5247 To: 13830
Formation: Pierre, Sharon Springs, Niobrara A
Type of Drilling Fluid: Water Based Mud

K.B. Elevation (ft): 4958
Total Depth (ft): 13830

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: Lauren Roddy, Eli DenBesten, Todd Nakata
Company: Acme Geologic Consulting
Address: 108 Berry Street
Little Rock, AR 72205

Drilling Company

Unit Drilling Company
Rig 409

Gas Detection

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

Comments

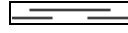
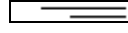

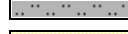
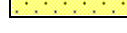
Lithologies and tops at drilled depths, not corrected to elogs. Where the well bore gas is 100% methane, the C1 line is moved to 85% for graphical purposes only.




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

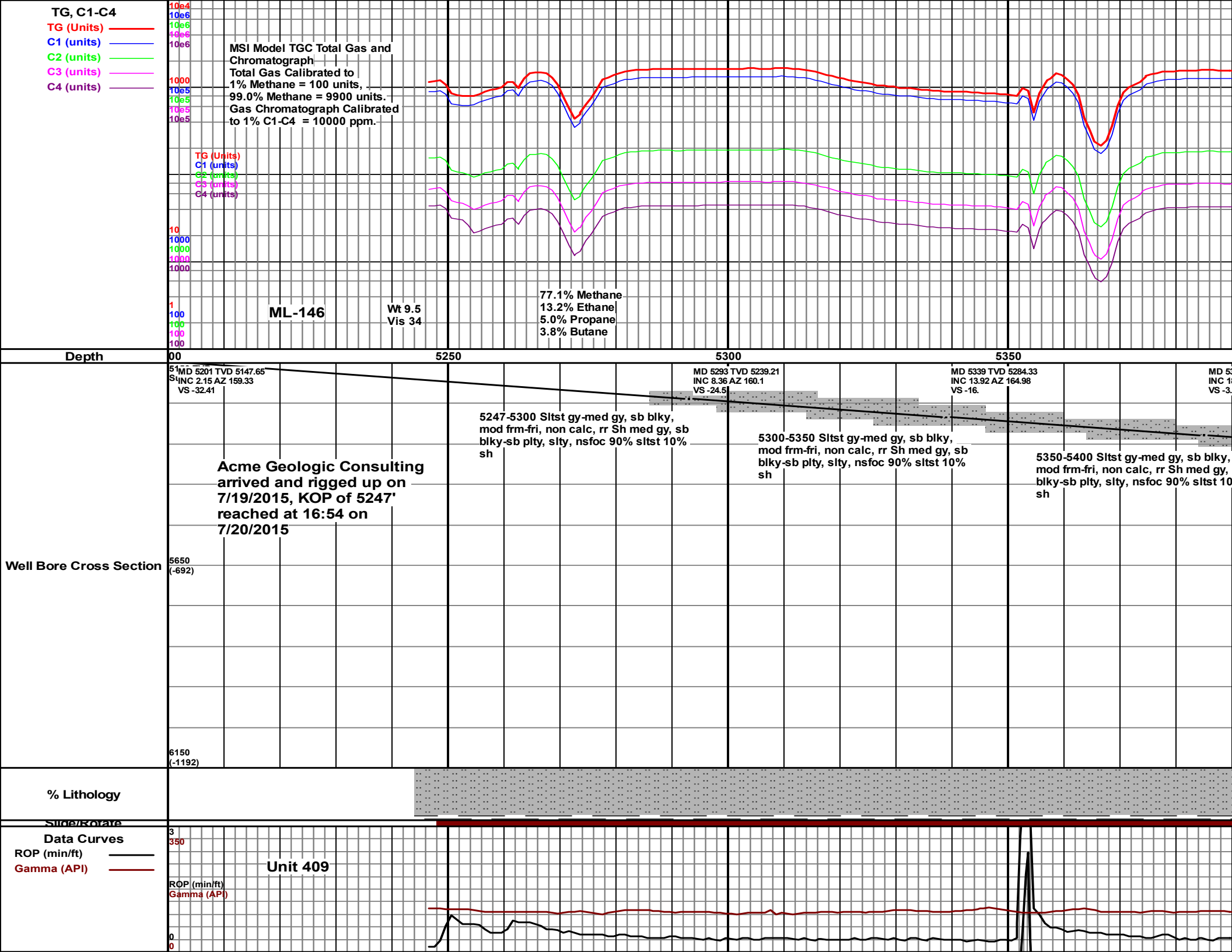
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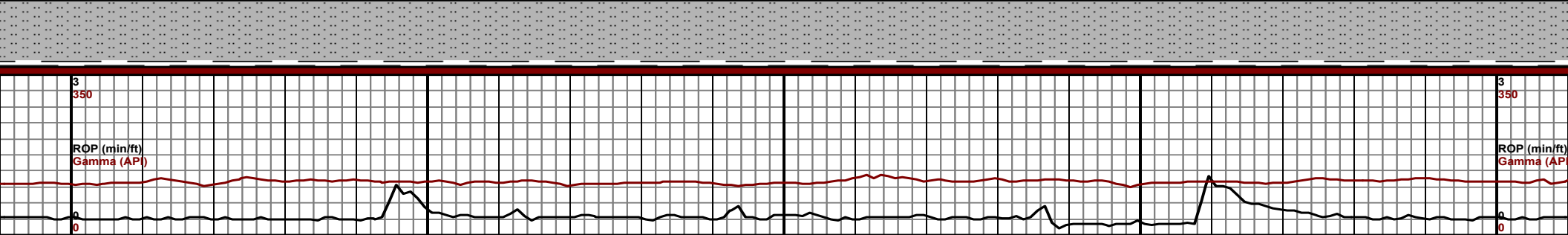
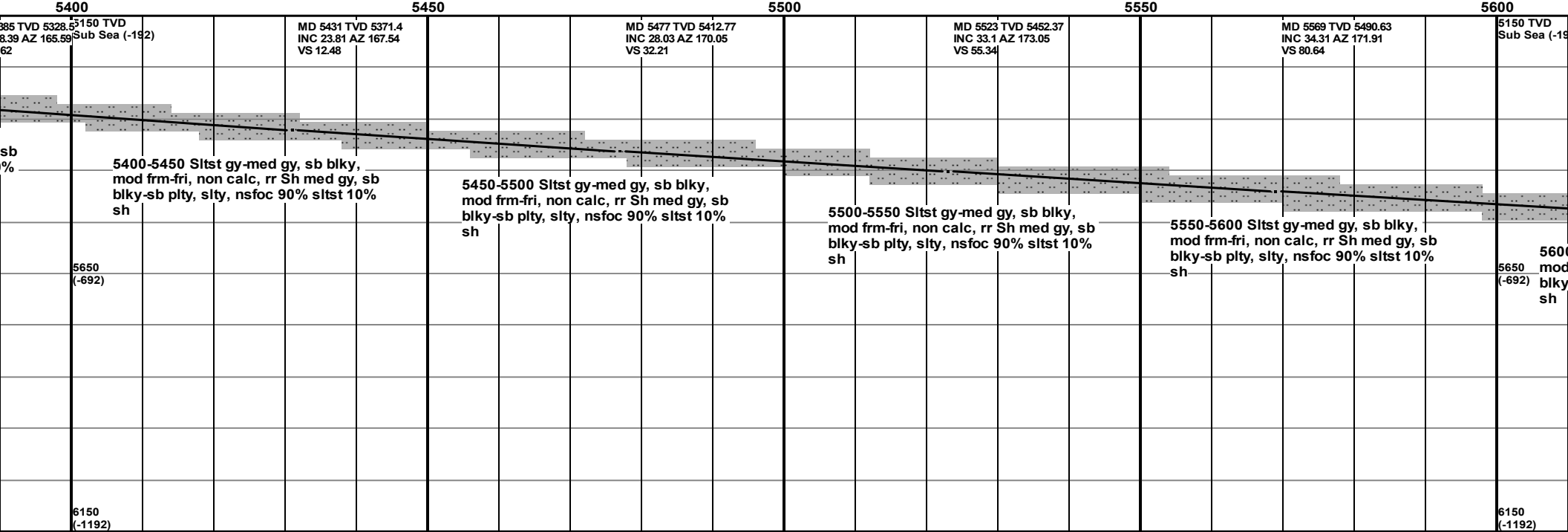
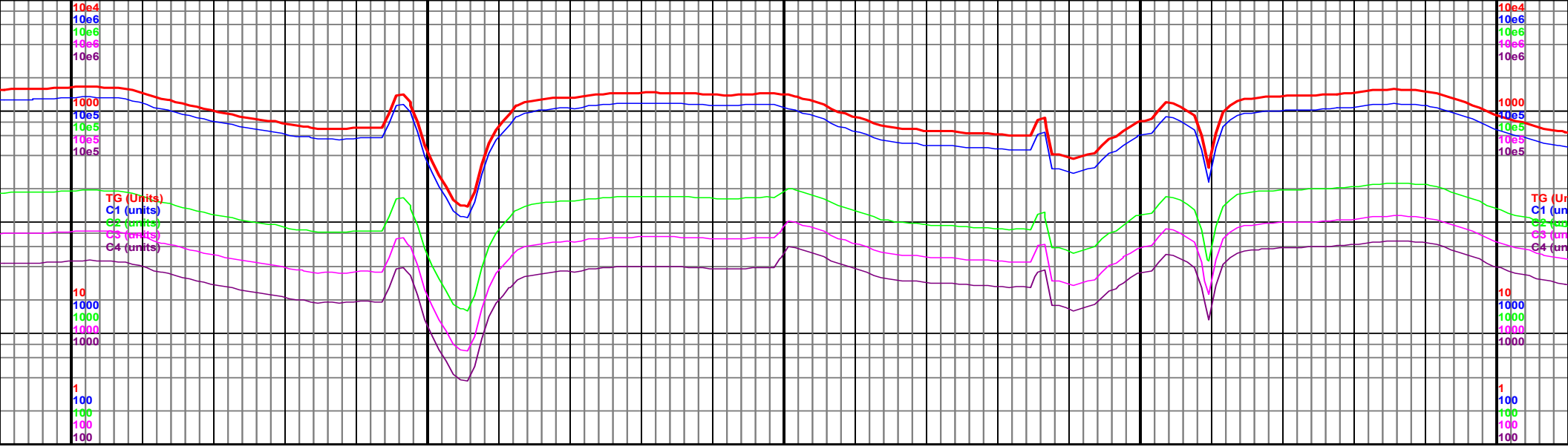


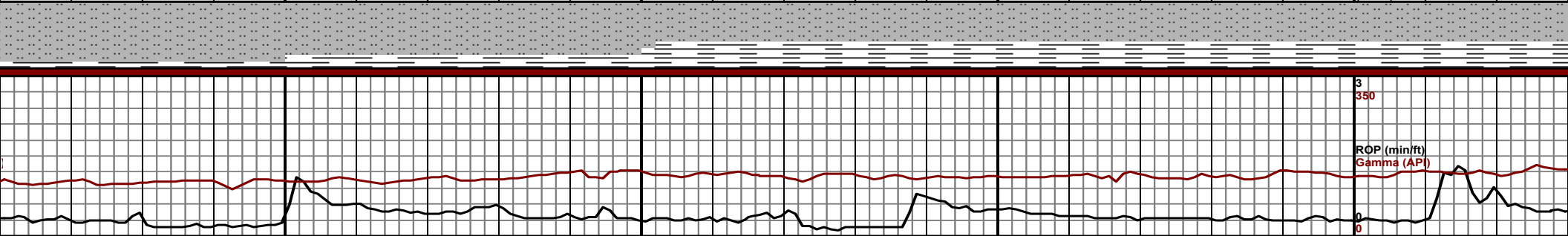
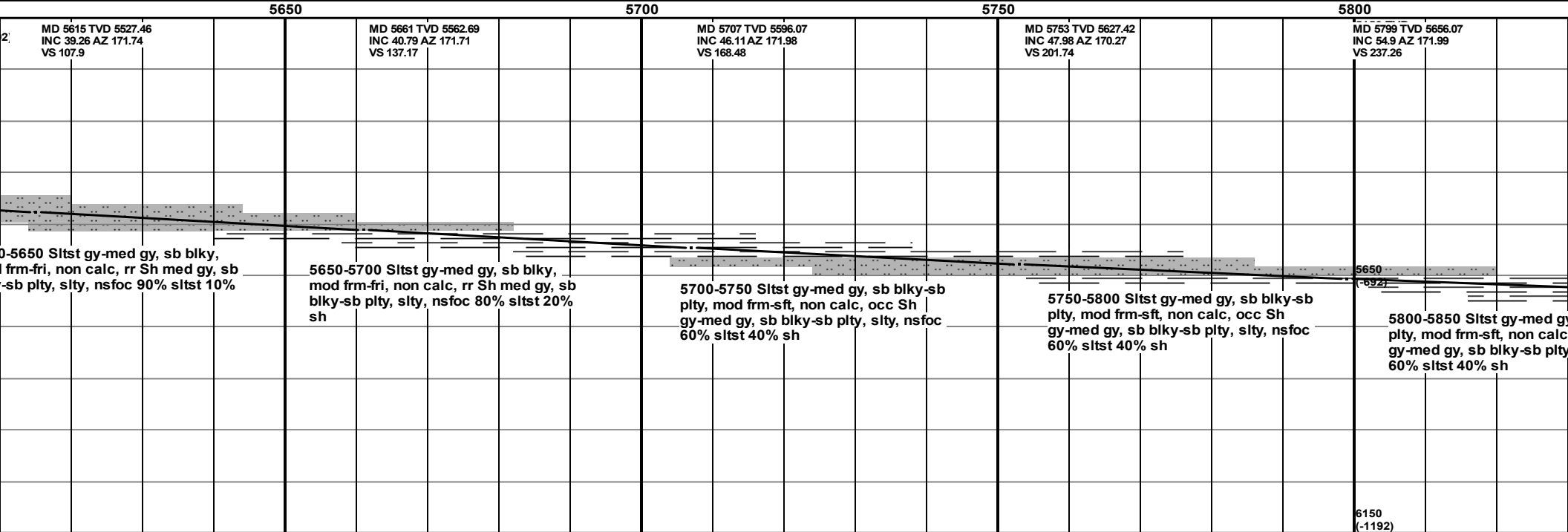
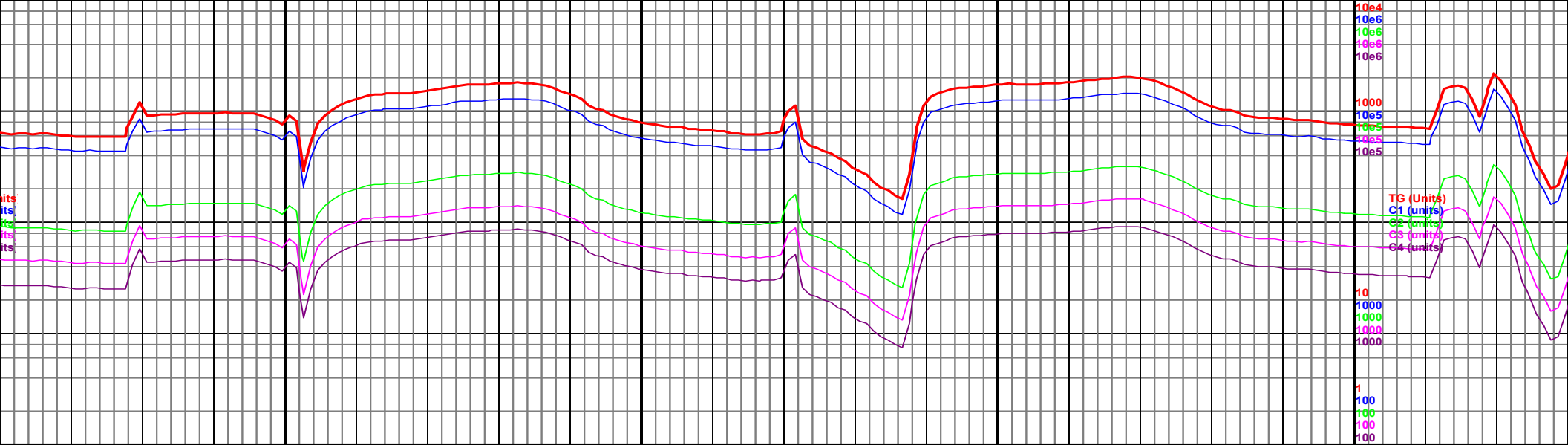
Rft

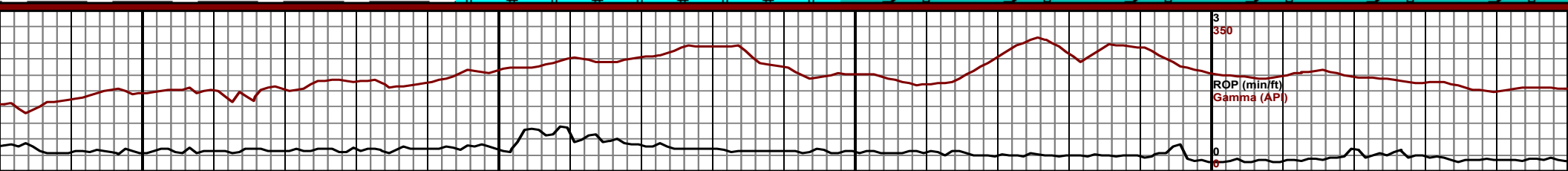
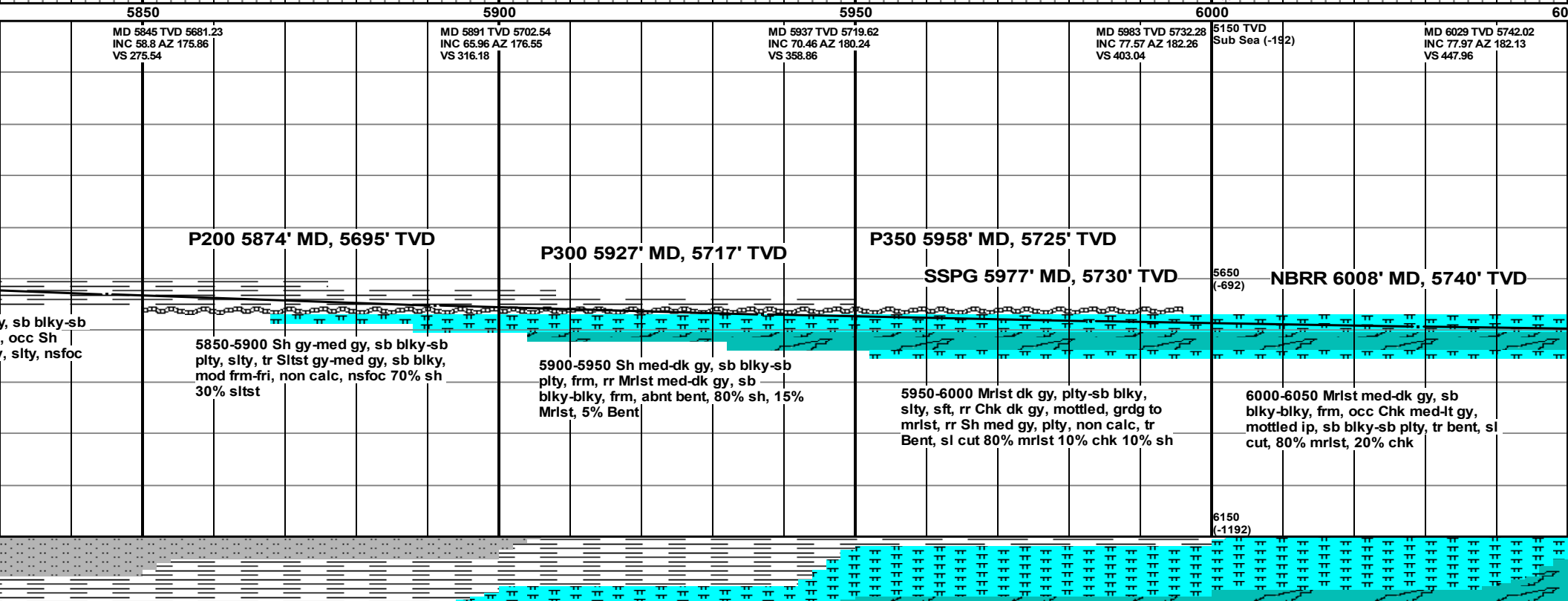
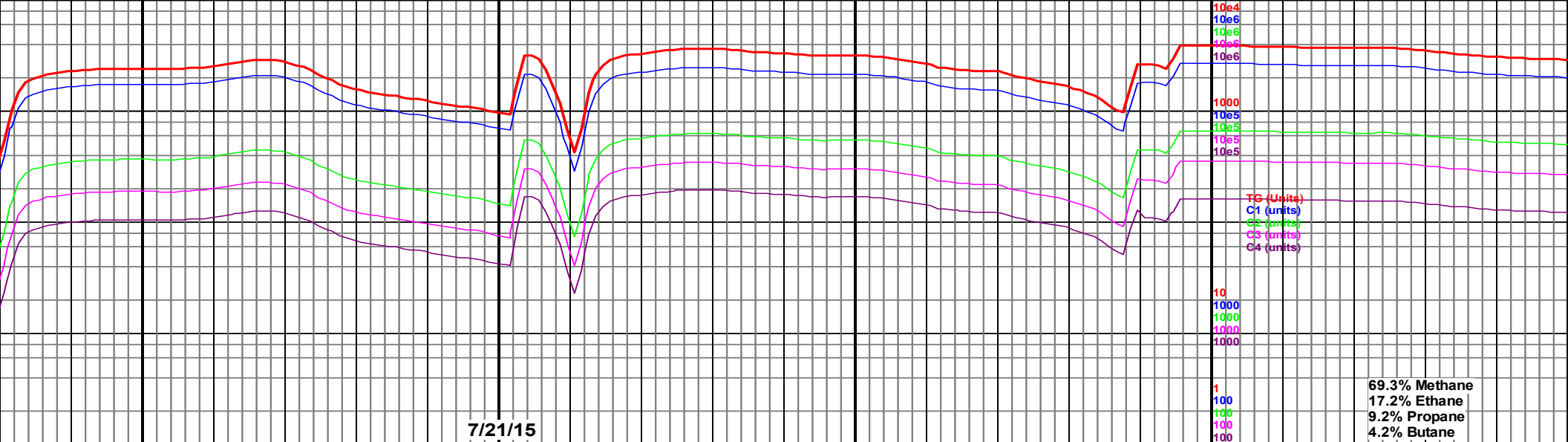


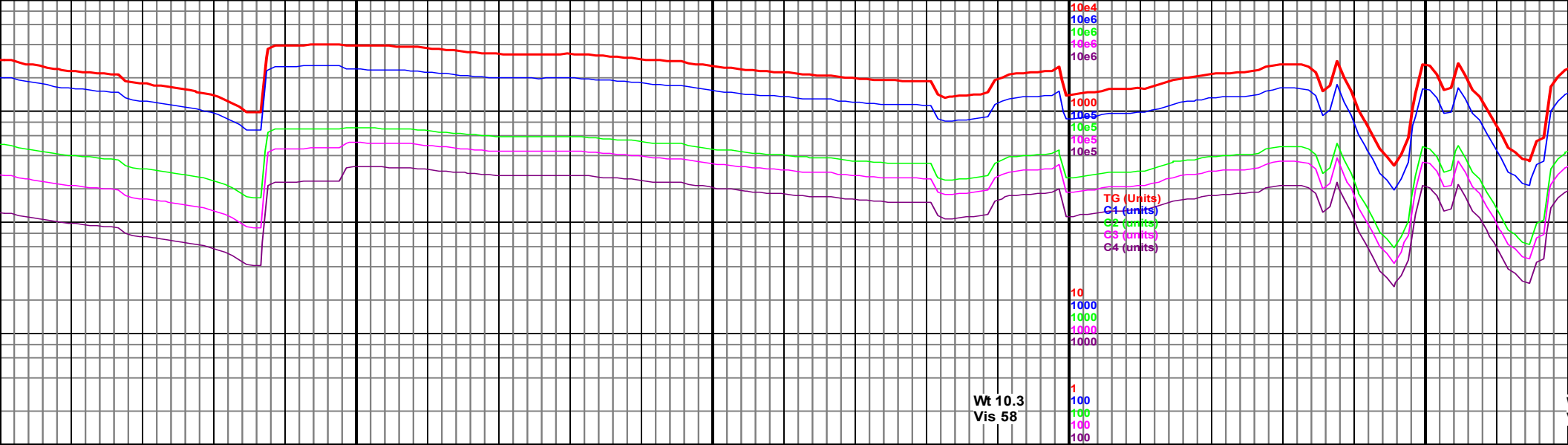
Sidewall



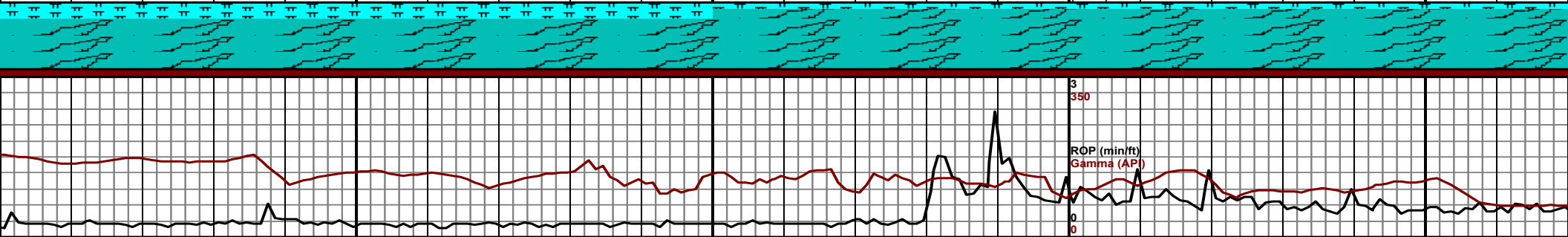


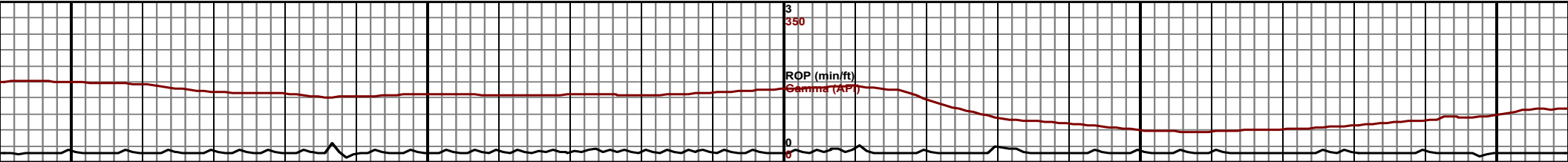
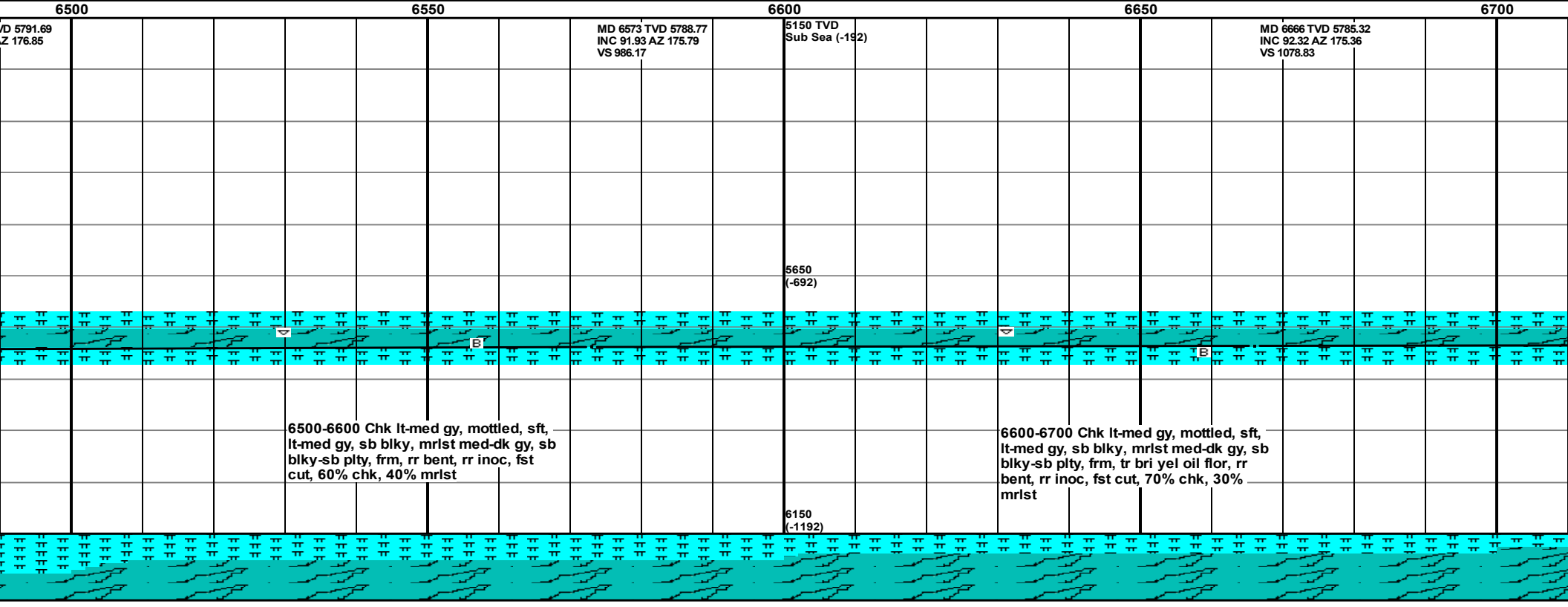
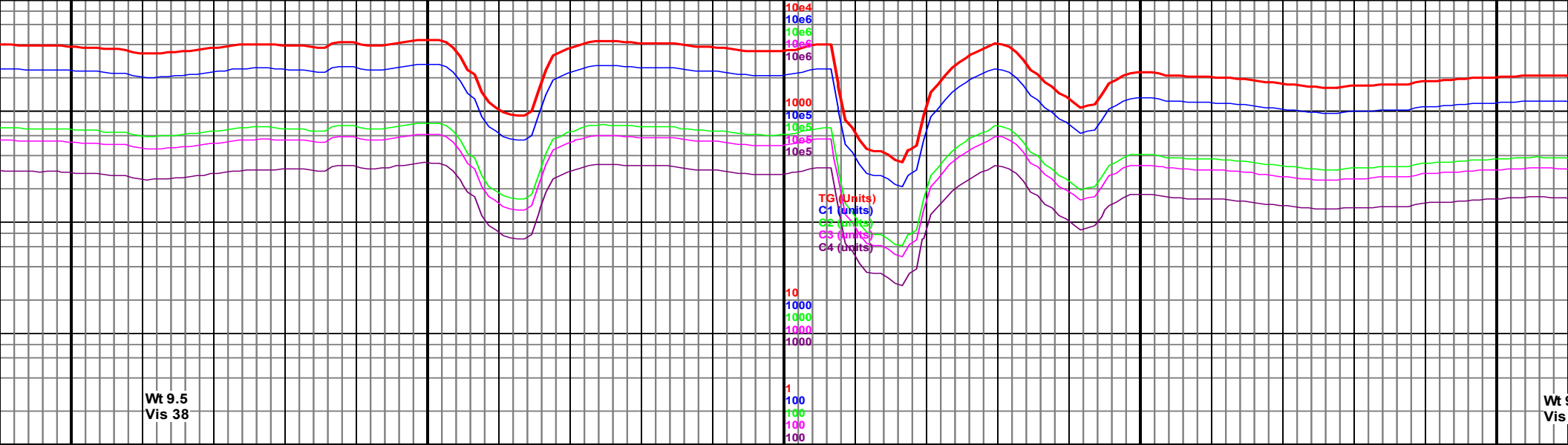


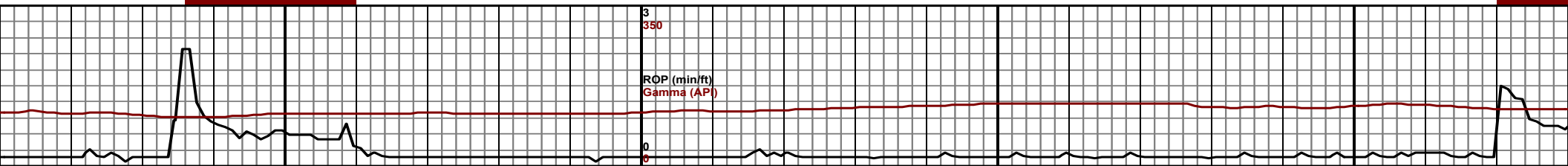
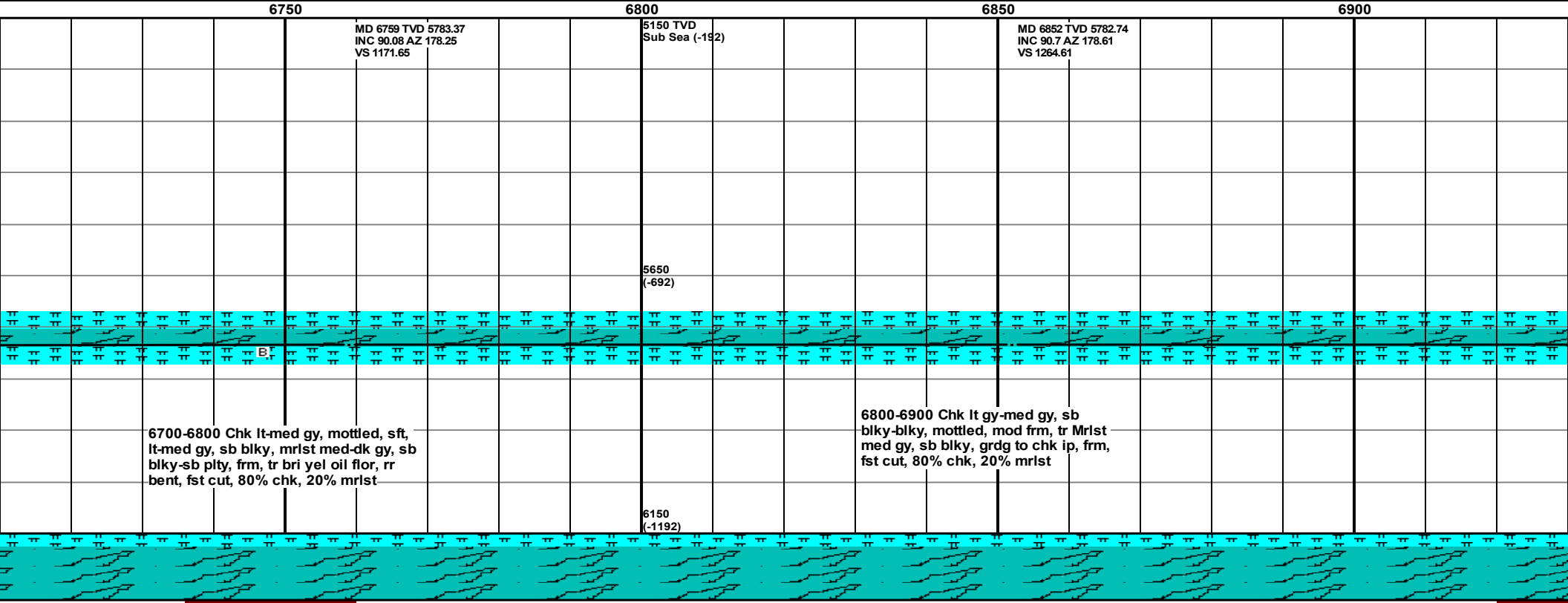
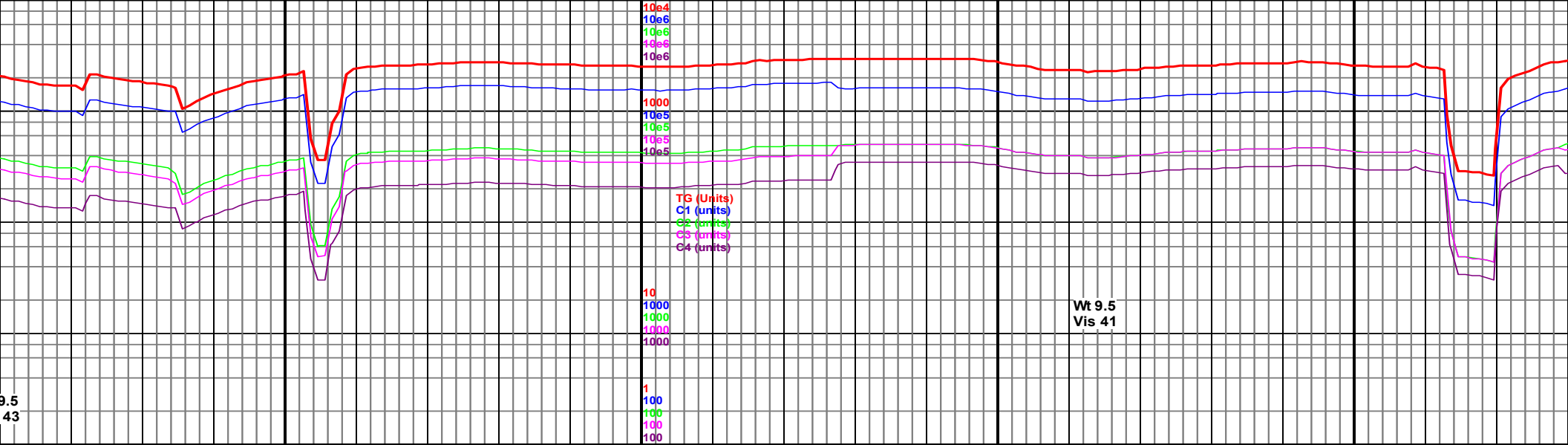


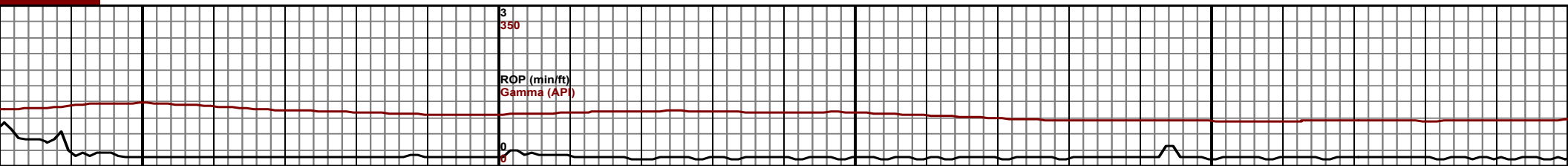
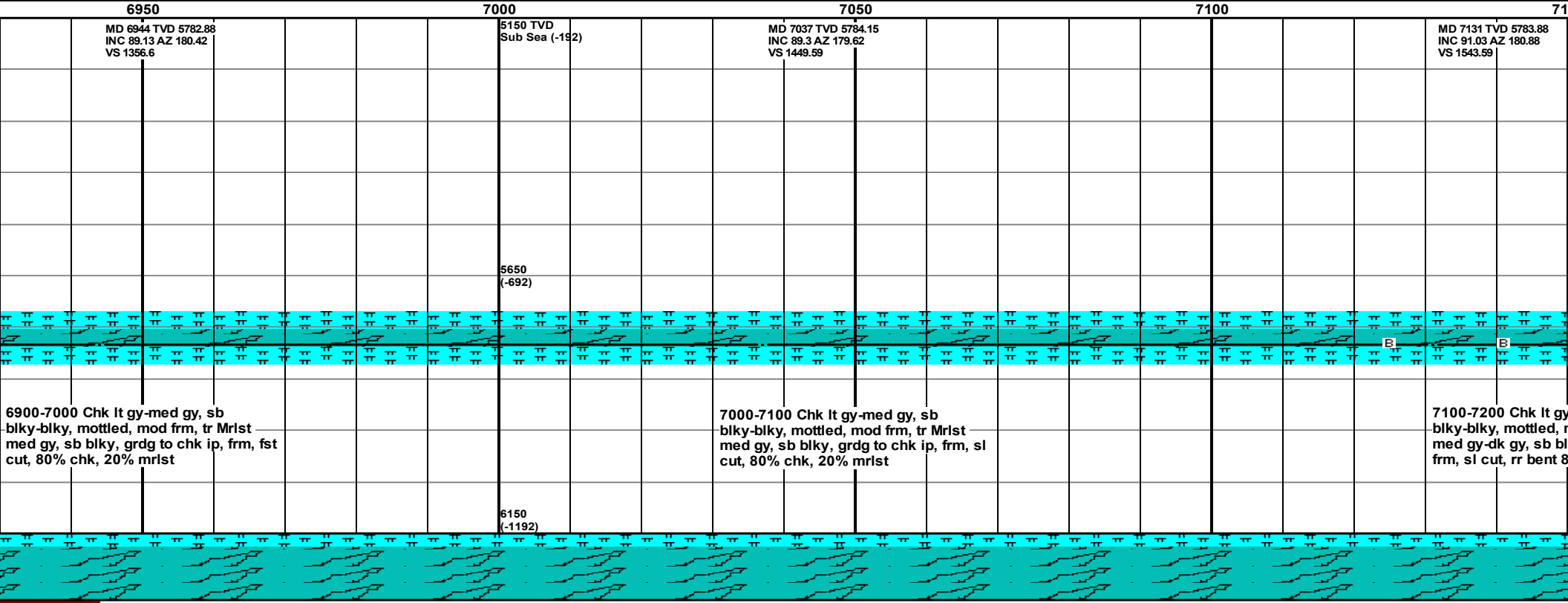
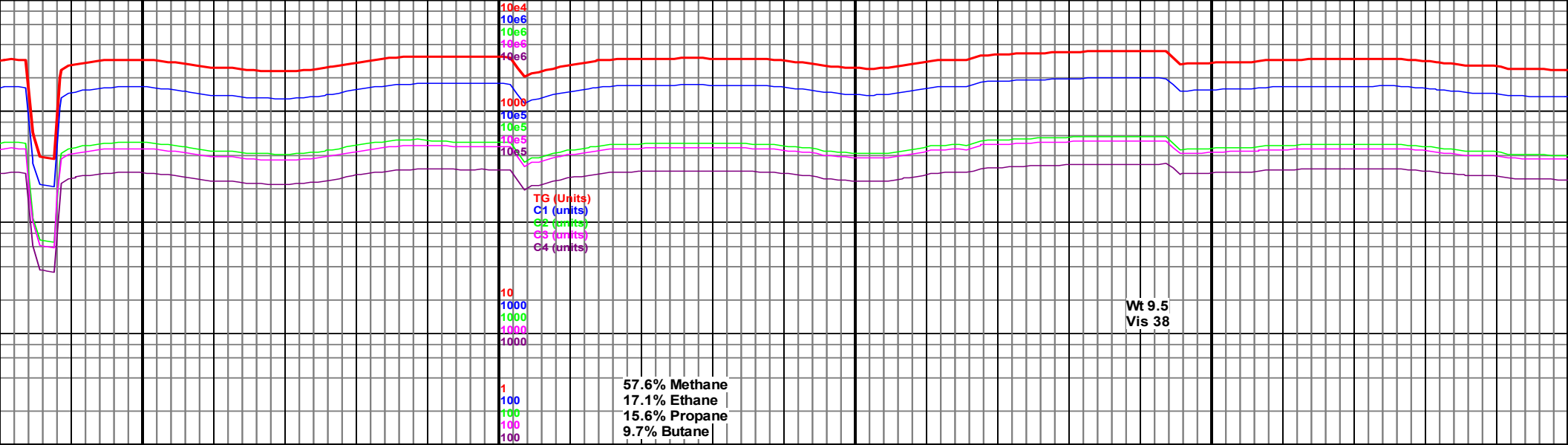


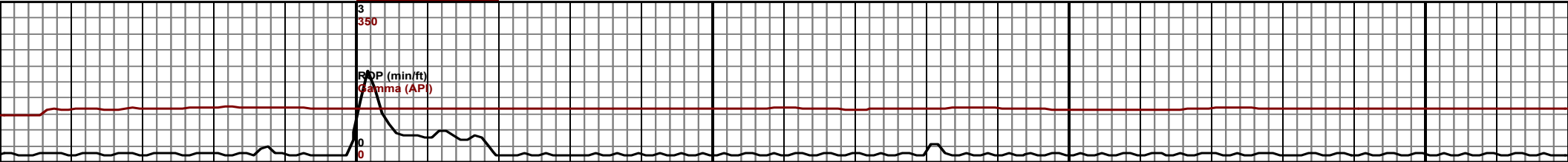
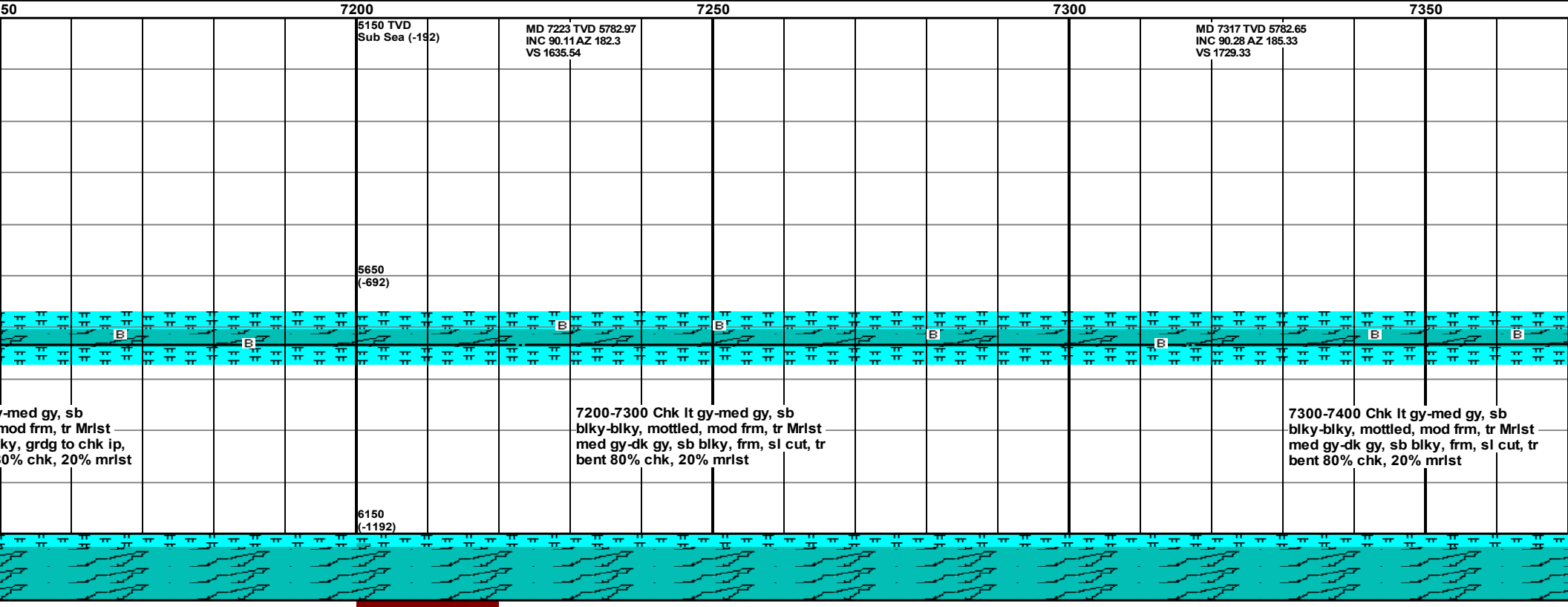
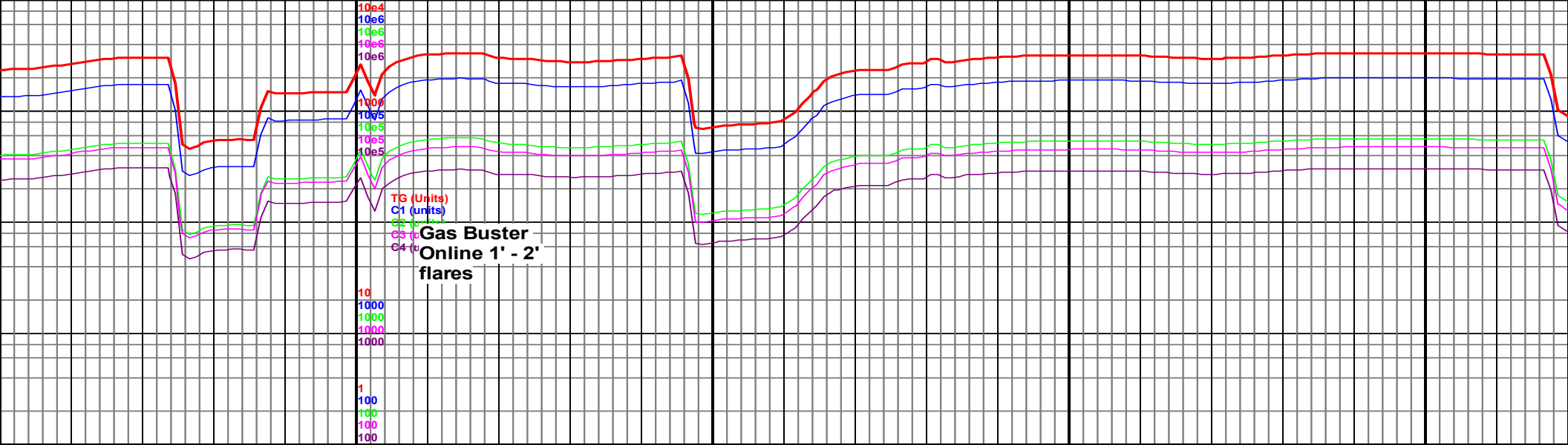
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MD 6075 TVD 5751.74 INC 77.65 AZ 182.14 VS 492.89	MD 6122 TVD 5761.97 INC 77.19 AZ 181.36 VS 538.74	MD 6168 TVD 5772.54 INC 76.24 AZ 180.69 VS 583.5	5150 TVD Sub Sea (-192) MD 6215 TVD 5782.24 INC 79.94 AZ 178.68 VS 629.48	MD 6239 TVD 5785.6 INC 83.97 AZ 177.88 VS 653.23
N100 6090' MD, 5782' TVD				
6050-6100 Chk med gy-gy, blkly-sb plty, sft-med frm, mottled, tr Mrlst dk gy, plty-sb blkly, slty, sft, tr bent, sl cut 70% chk 30% mrlst	6100-6150 Chk med gy-gy, blkly-sb plty, sft-med frm, mottled, tr Mrlst dk gy, plty-sb blkly, slty, sft, tr bent, sl cut 70% chk 30% mrls	6150-6200 Chk lt-med gy, mottled, sft, sb blkly, mrlst med gy, sb blkly-sb plty, frm, rr bent, abnt yel-orng flr, sl cut, 90% chk, 10% mrlst	6200-6250 Chk lt-med gy, mottled, sft, sb blkly, mrlst med gy, sb blkly-sb plty, frm, rr bent, abnt yel-orng flr, sl cut, 90% chk, 10% mrlst	6250-6300 Chk sb blkly, mrlst med gy, sb blkly-sb plty, frm, rr bent, abnt yel-orng flr, sl cut, 90% chk, 10% mrlst

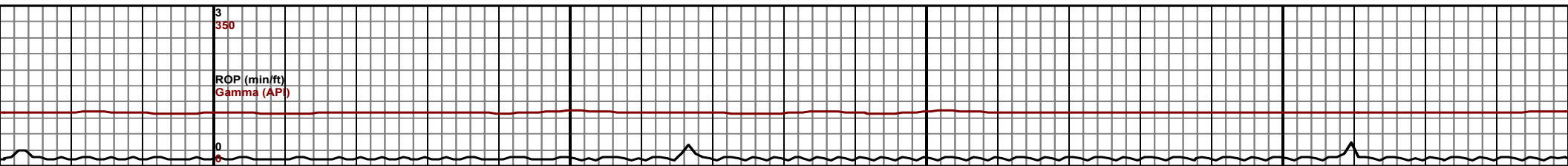
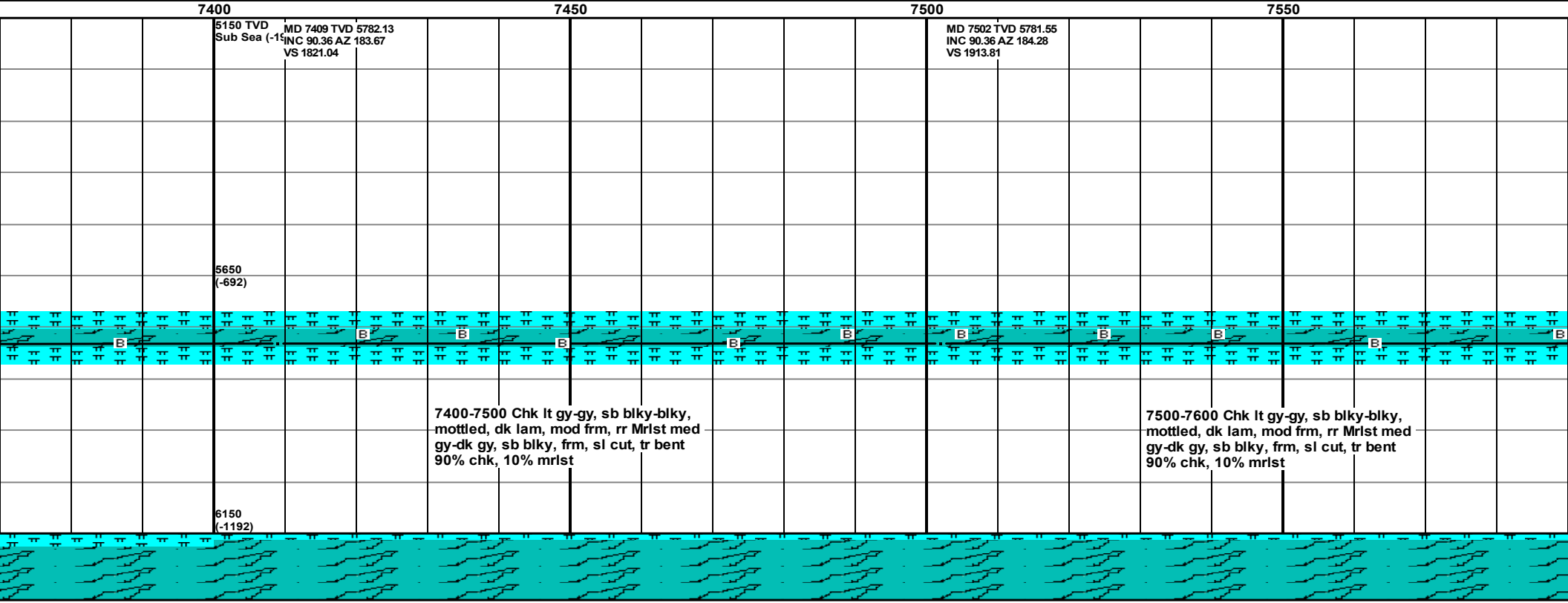
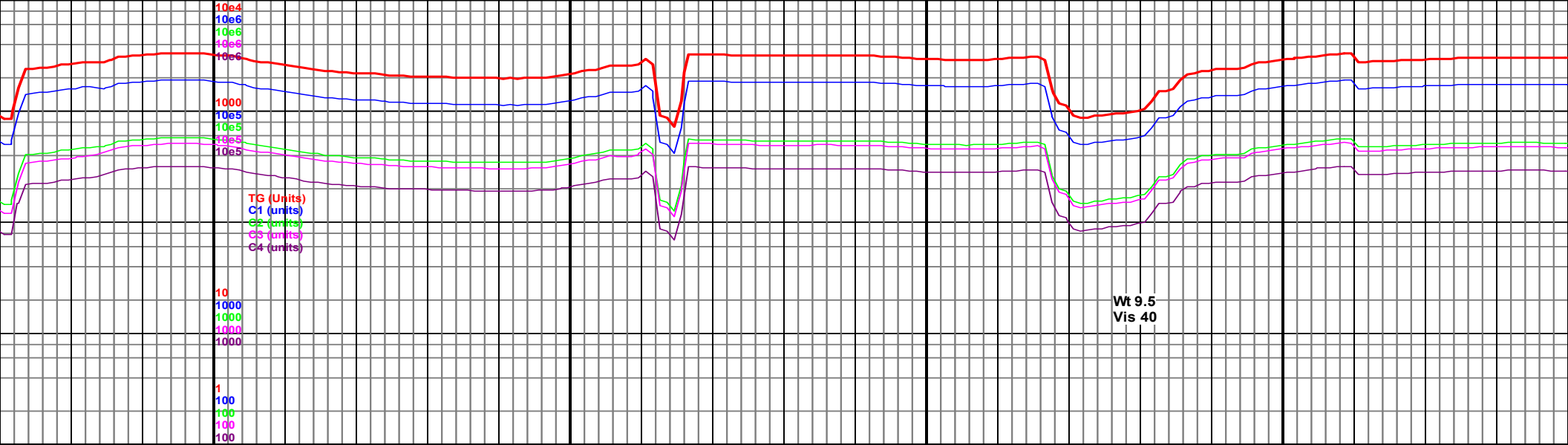


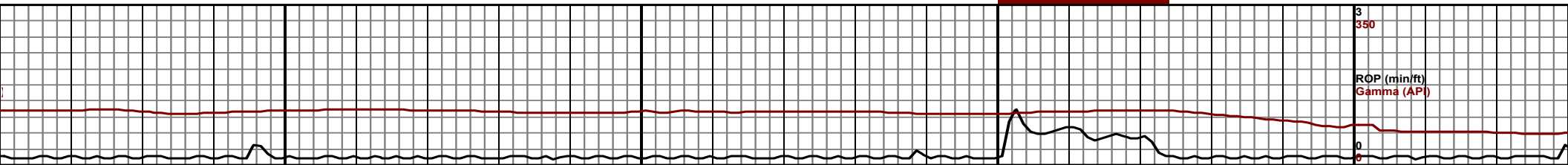
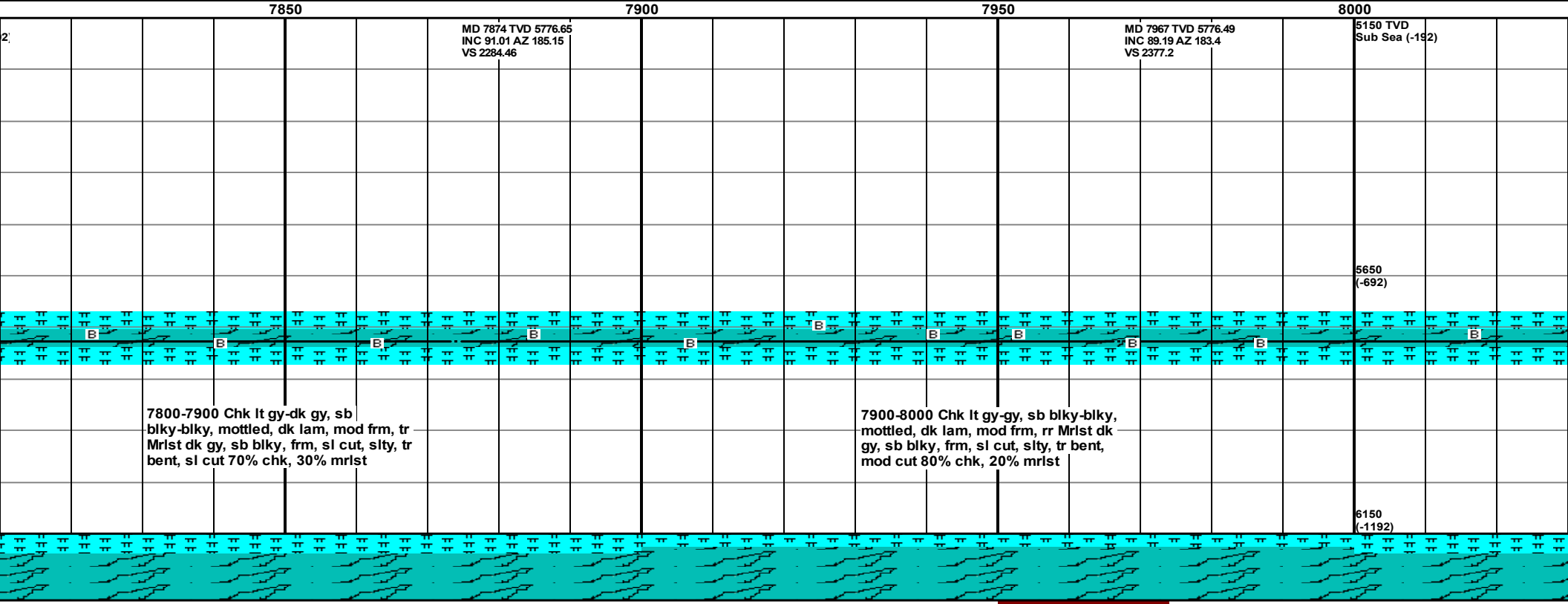
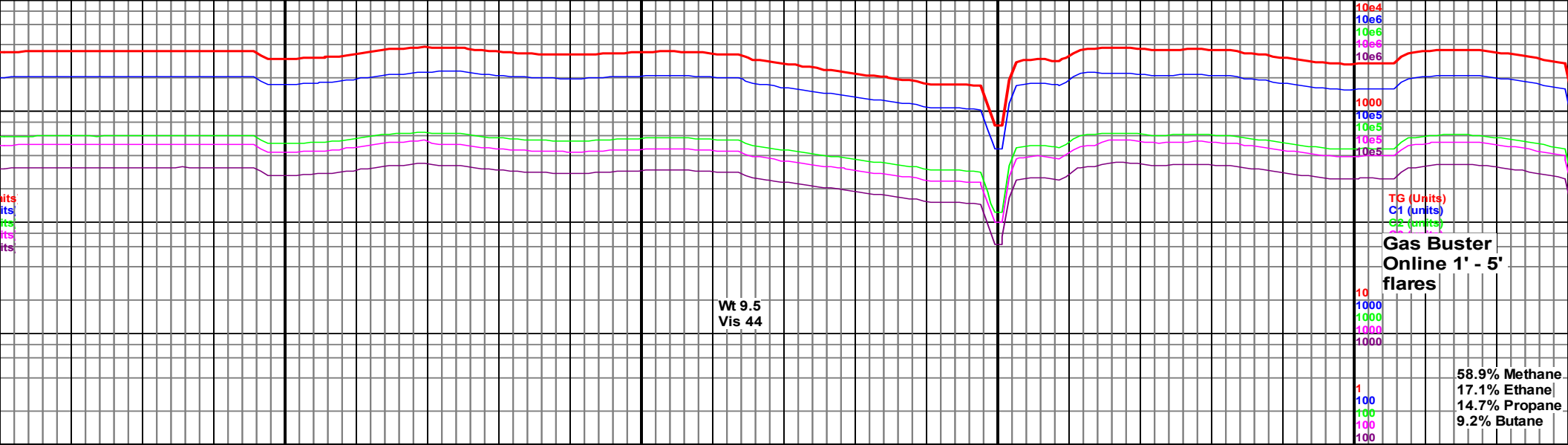


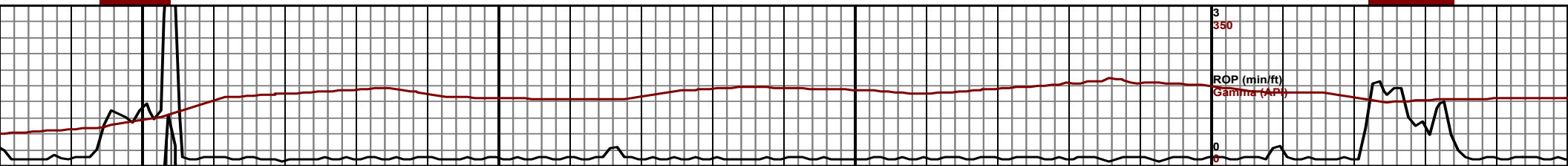
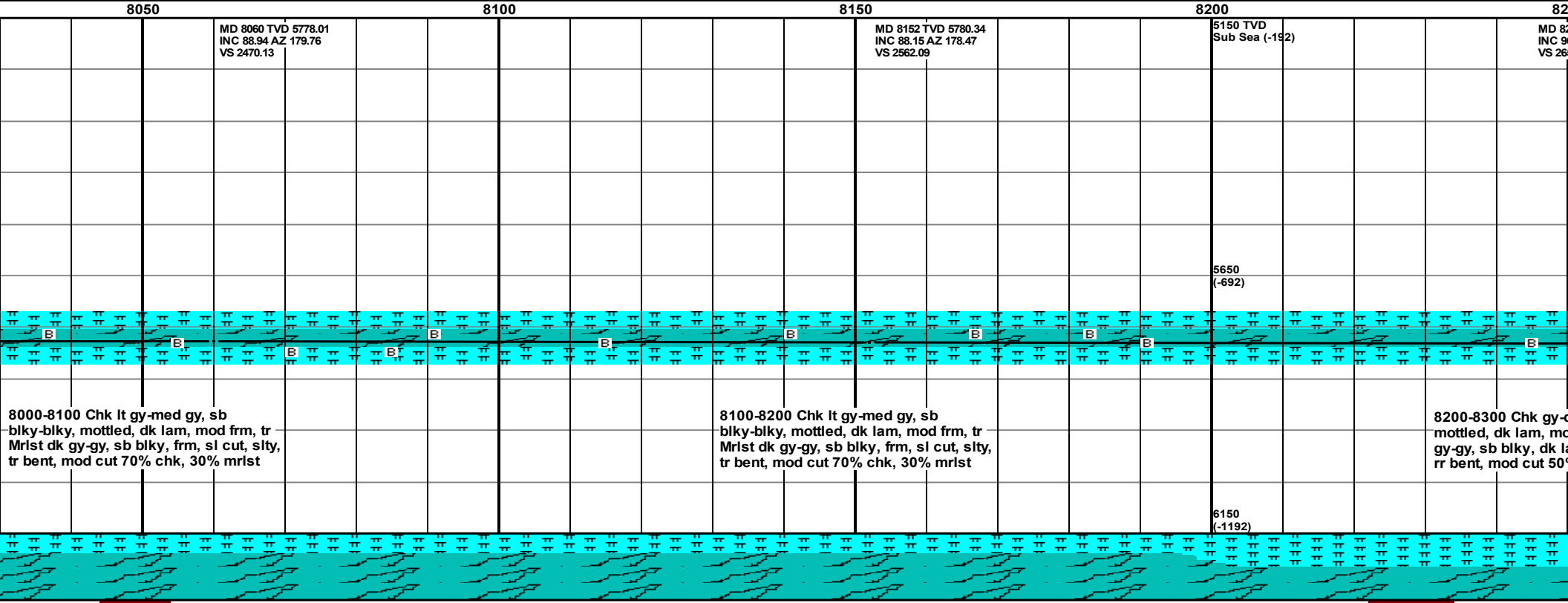
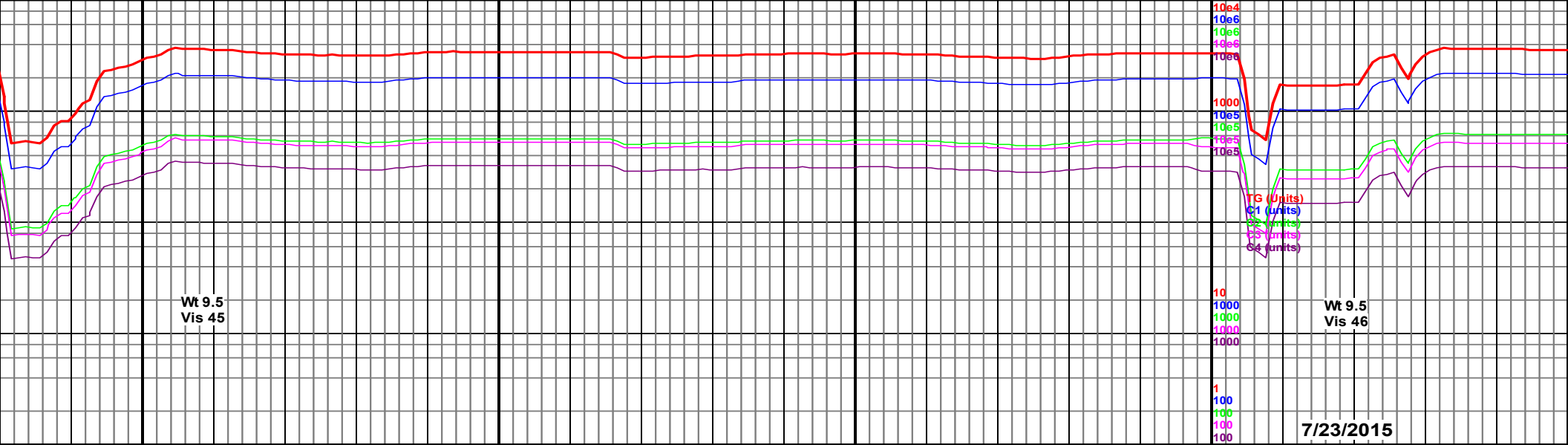


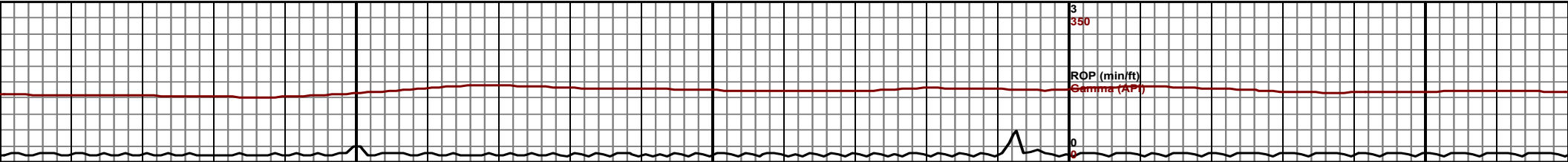
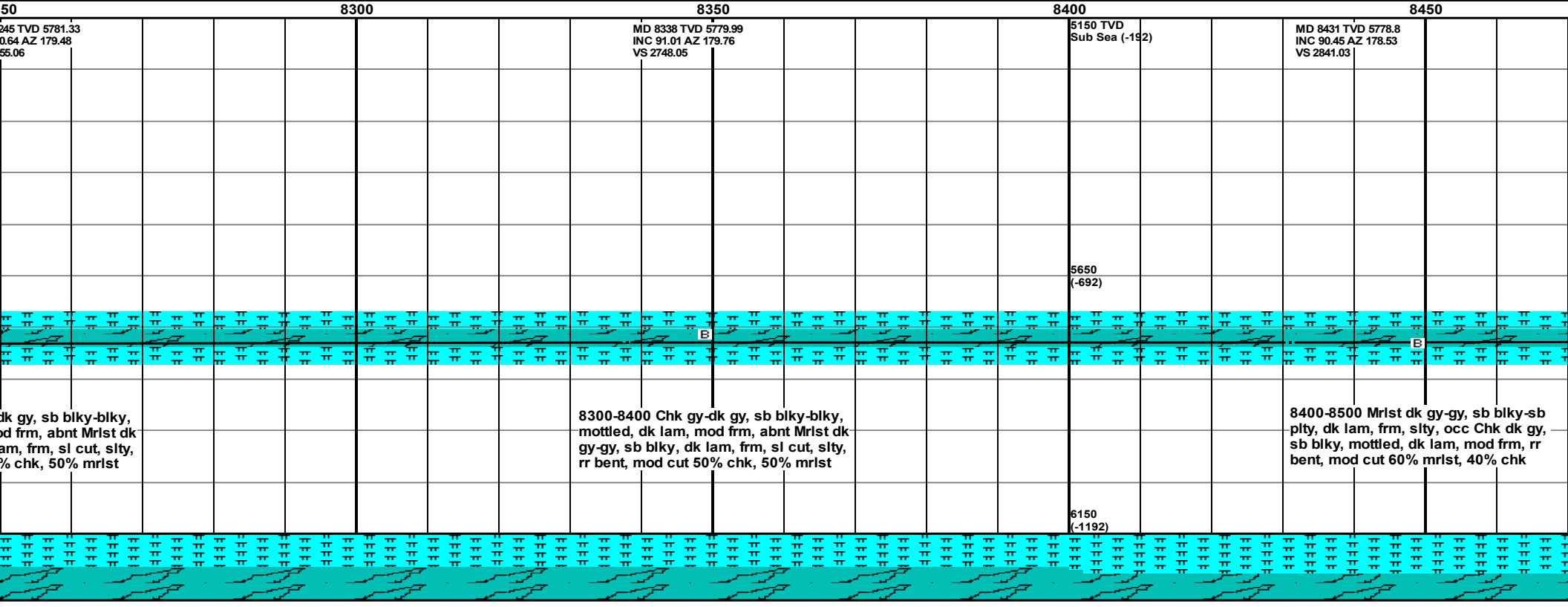
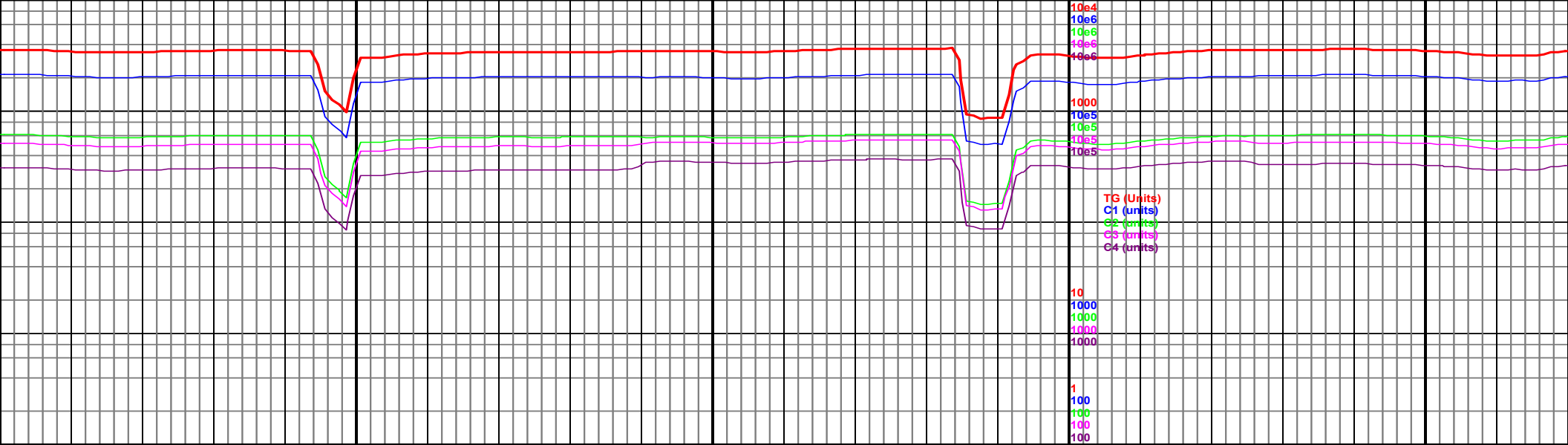


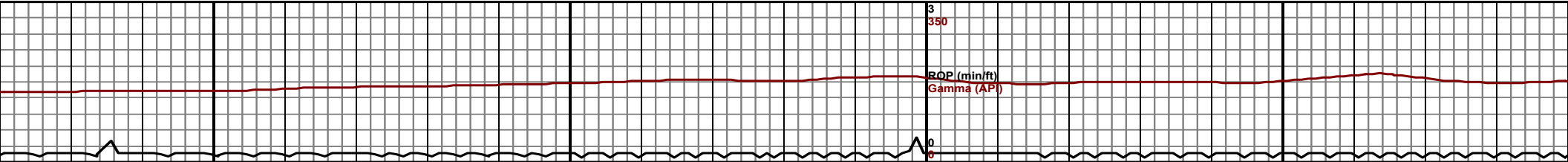
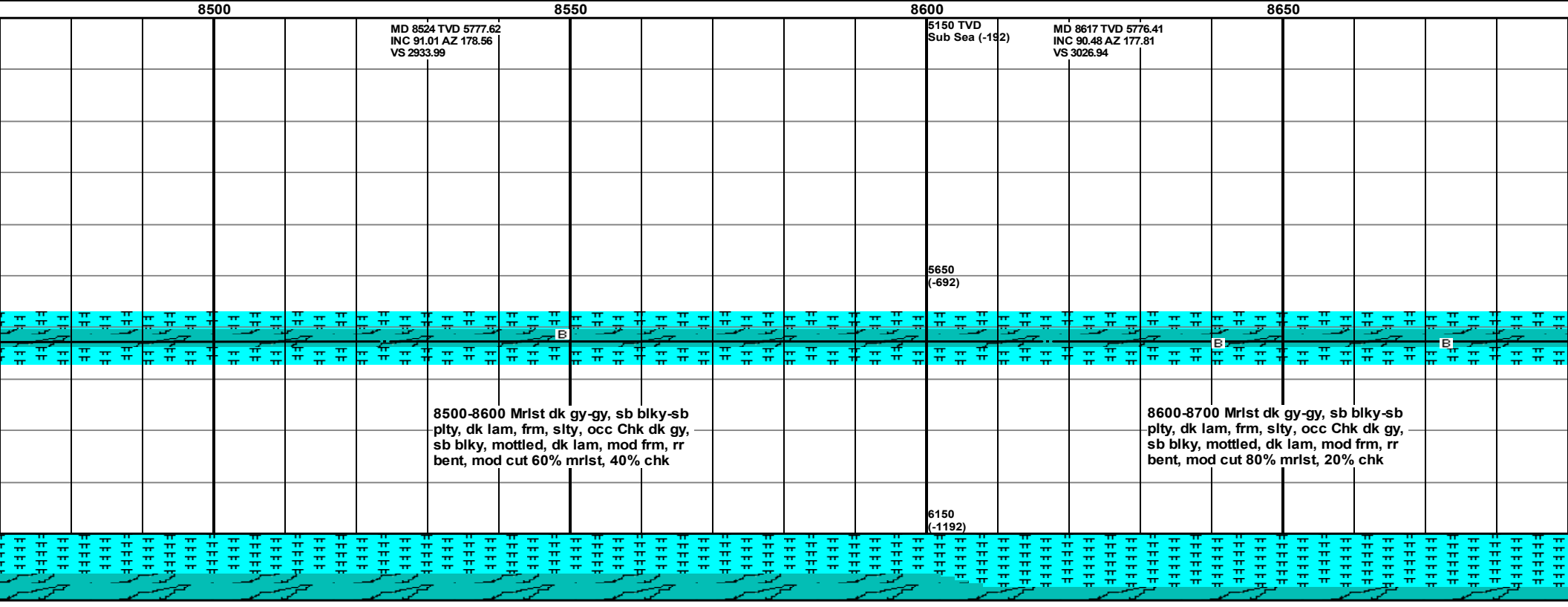
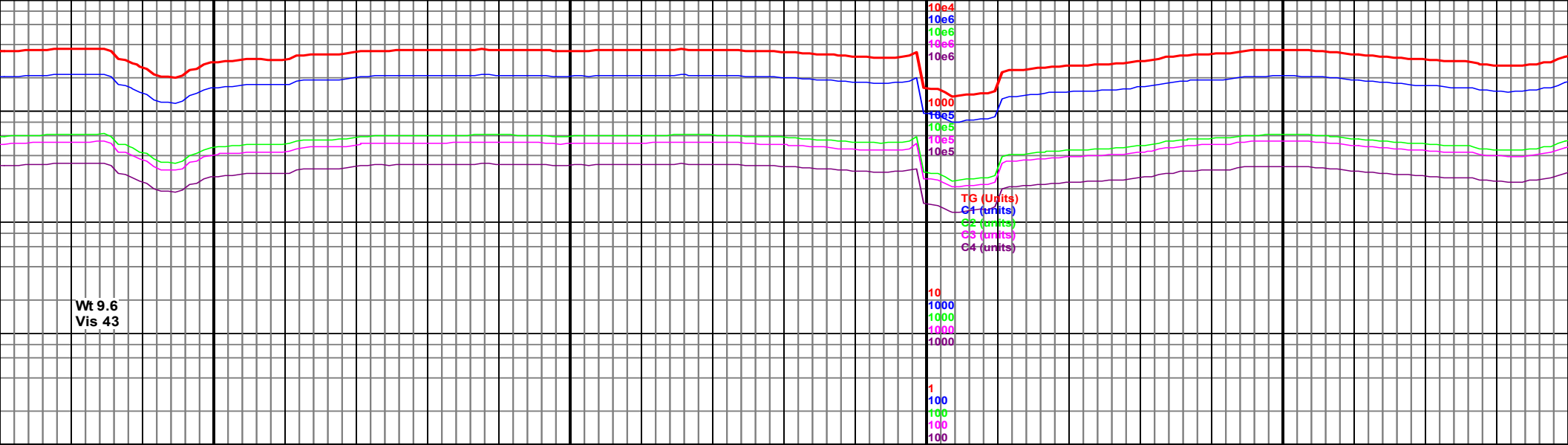


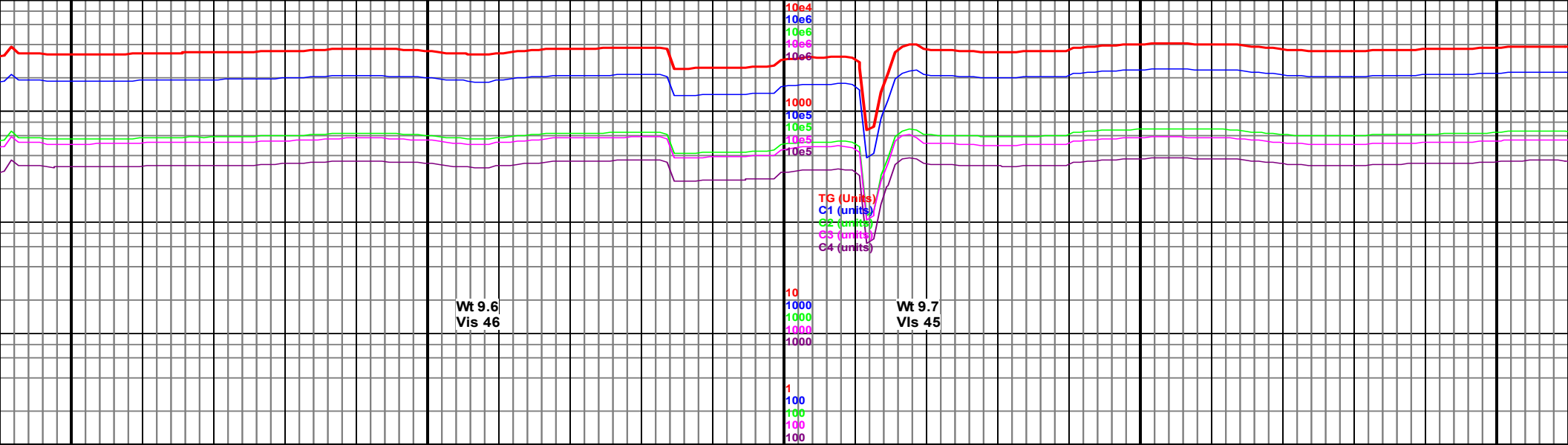












Wt 9.6
Vis 46

Wt 9.7
Vis 45

8700

8750

8800

8850

8900

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INC 88.83 AZ 176.47
VS 3118.81

MD 8801 TVD 5776.6
INC 91.62 AZ 177.92
VS 3210.69

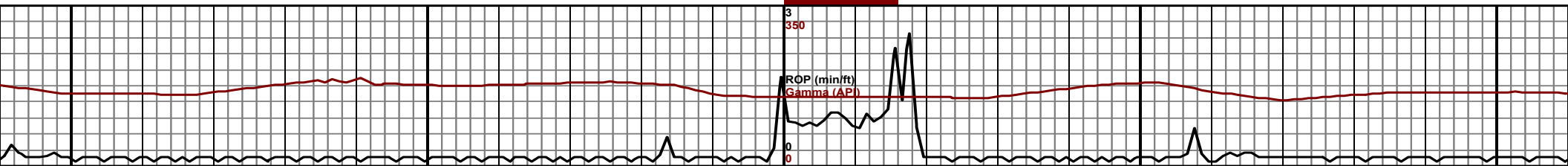
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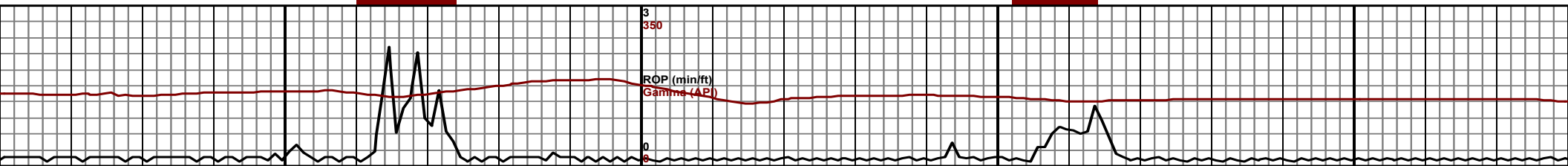
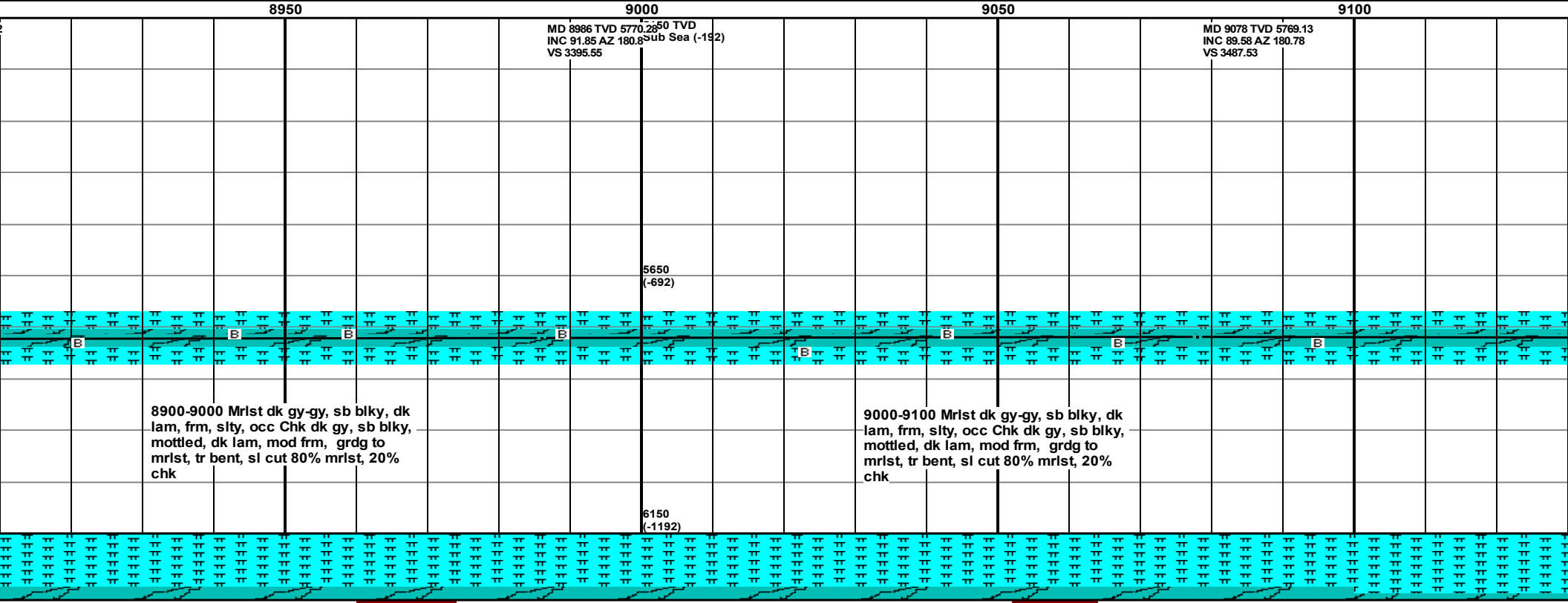
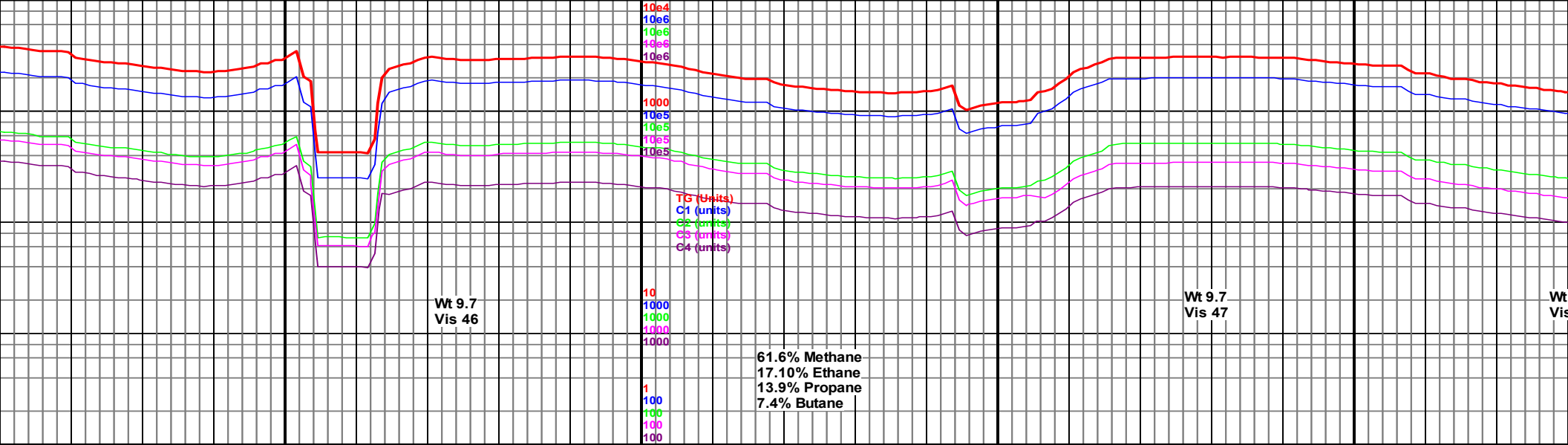


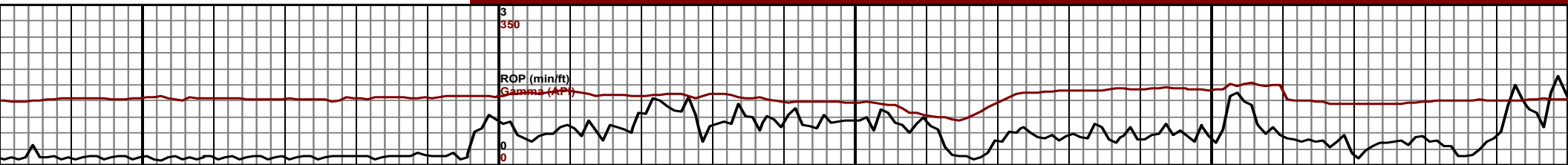
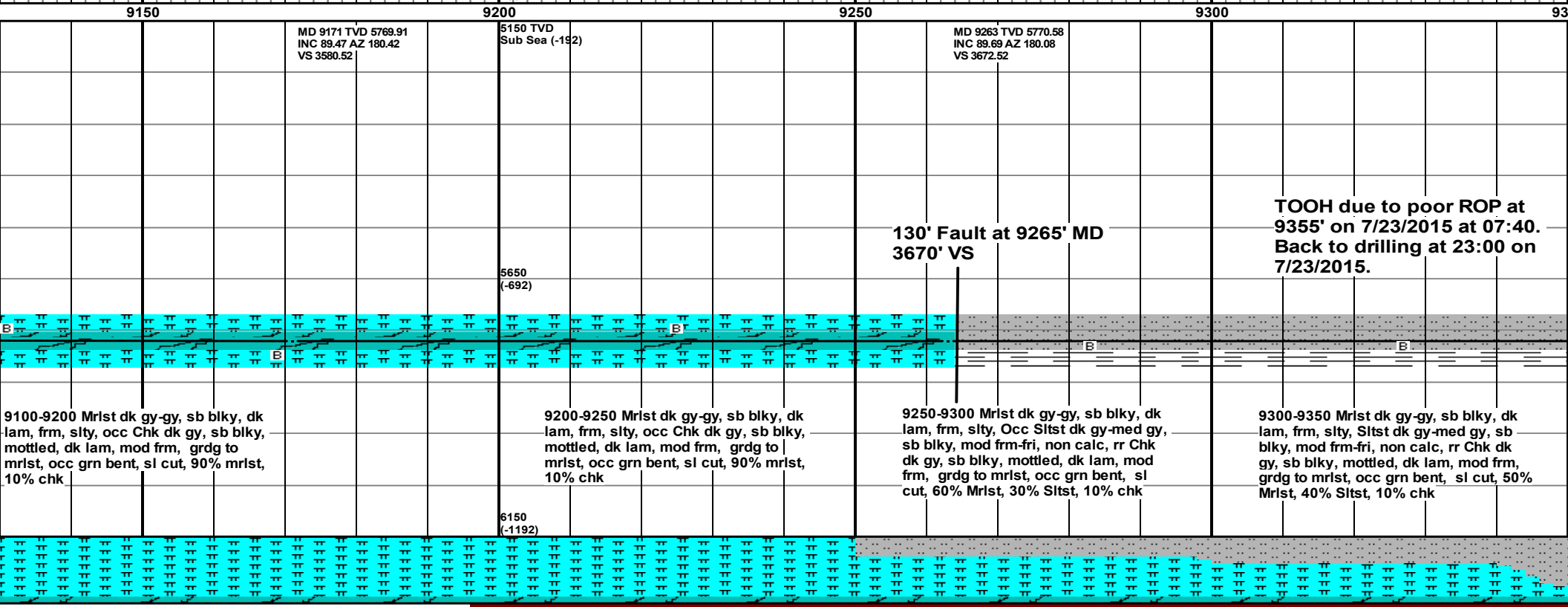
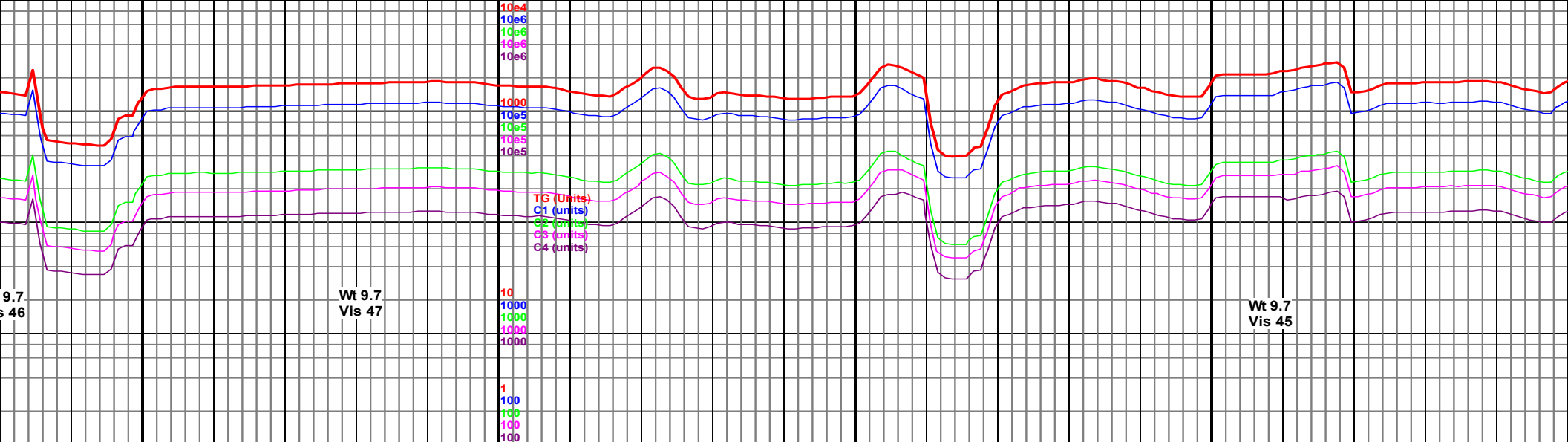
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plty, dk lam, frm, slty, occ Chk dk gy,
sb blkly, mottled, dk lam, mod frm, rr
bent, mod cut 80% mrlist, 20% chk

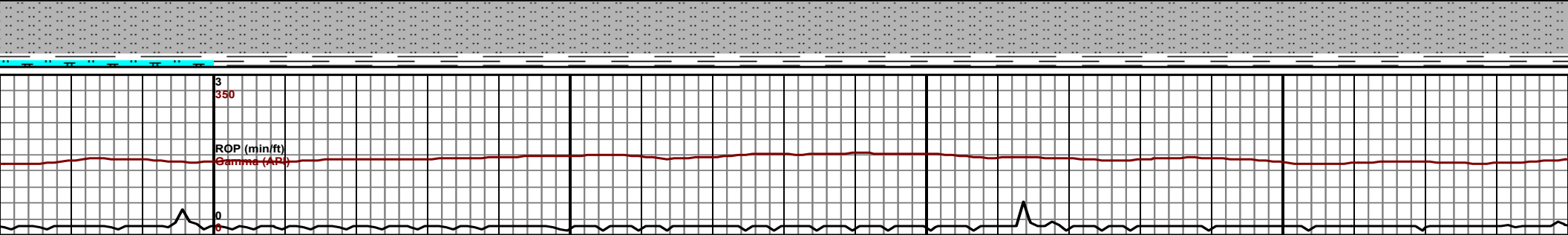
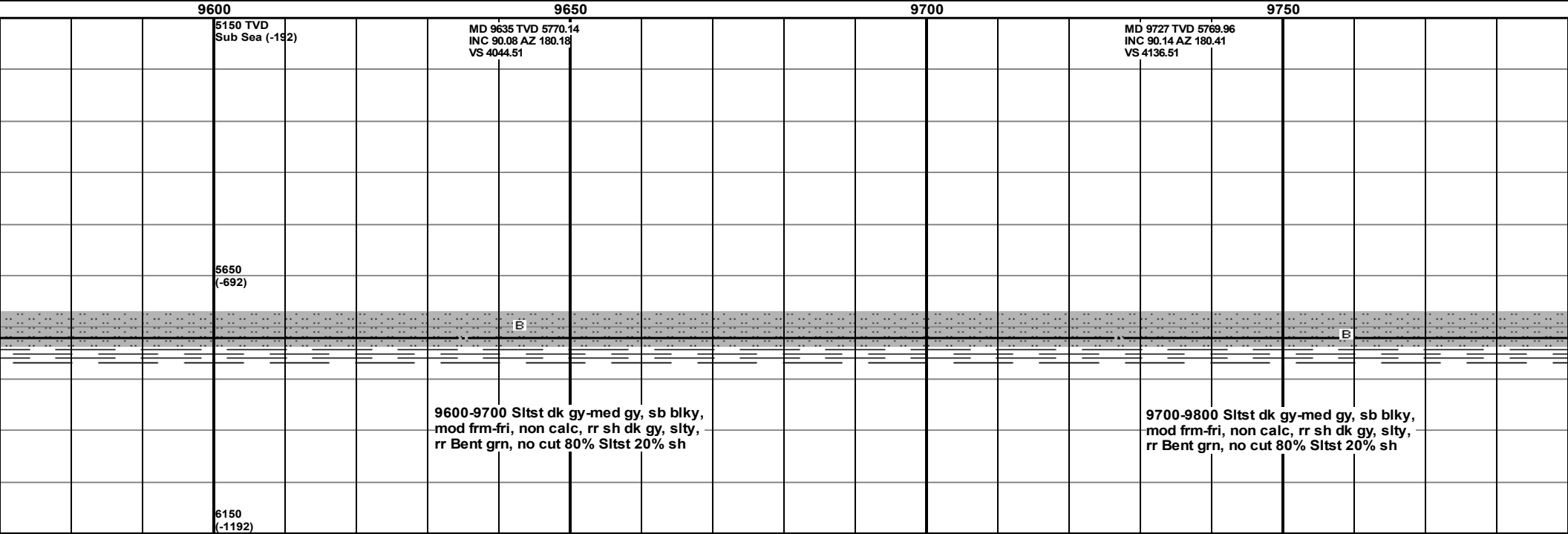
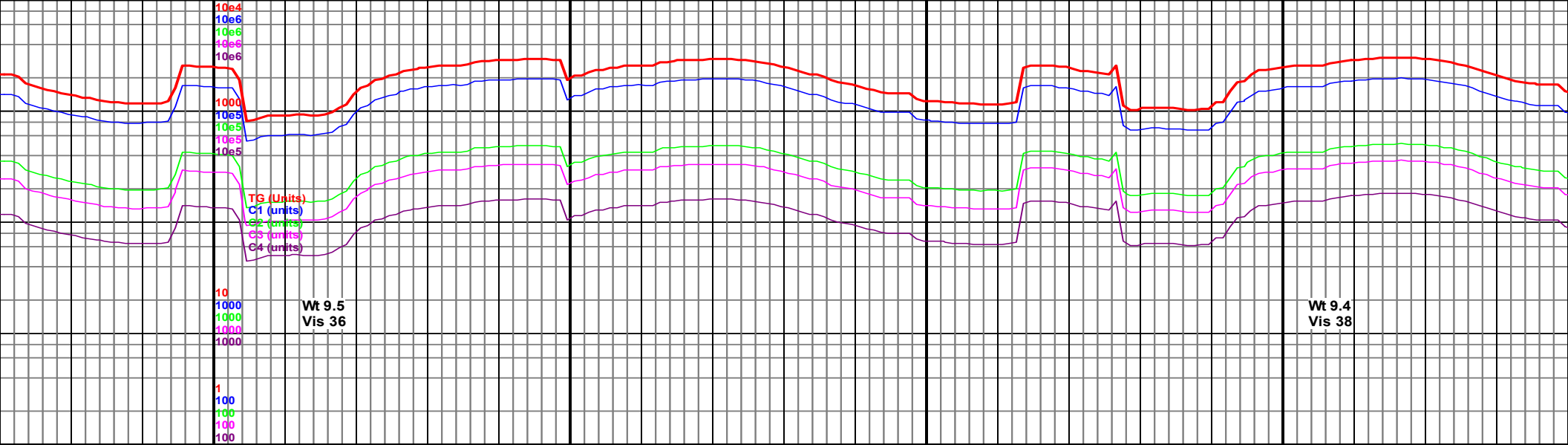
8800-8900 Mrlst dk gy-gy, sb blkly, dk
lam, frm, slty, occ Chk dk gy, sb blkly,
mottled, dk lam, mod frm, grdg to
mrlist, tr bent, sl cut 80% mrlist, 20%
chk

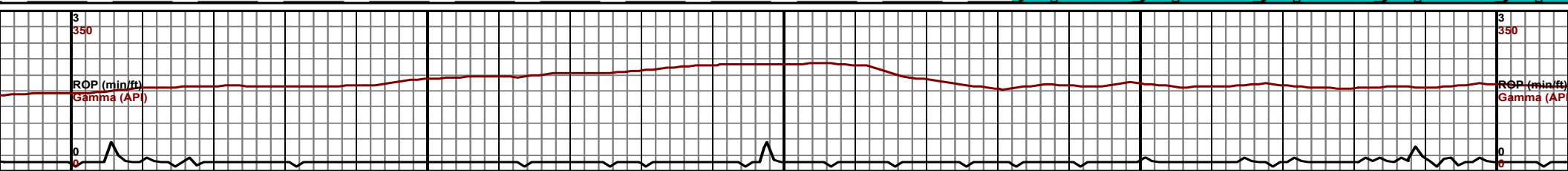
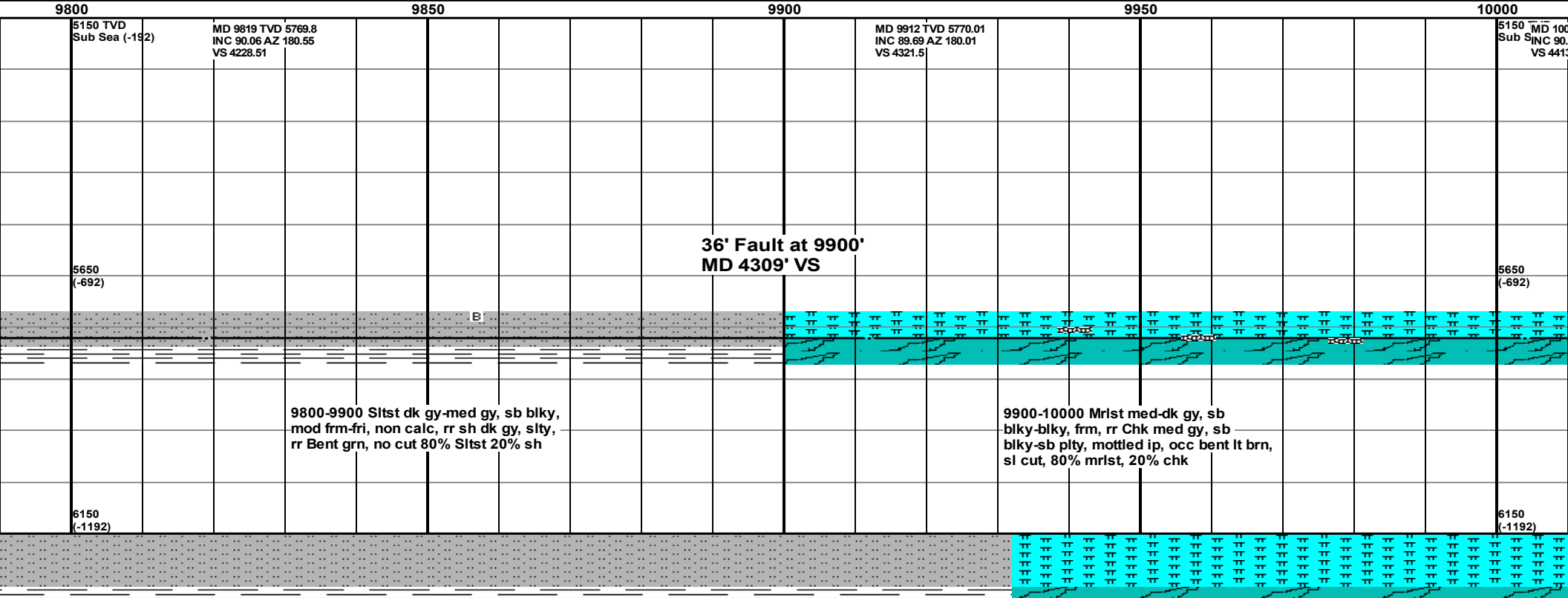
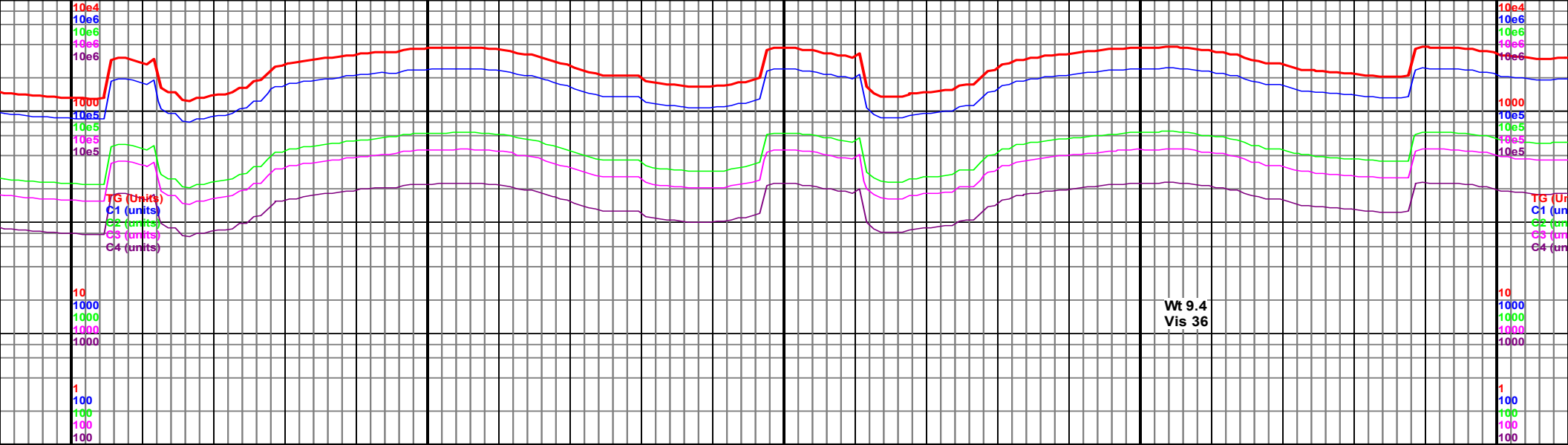
6150
(-1192)

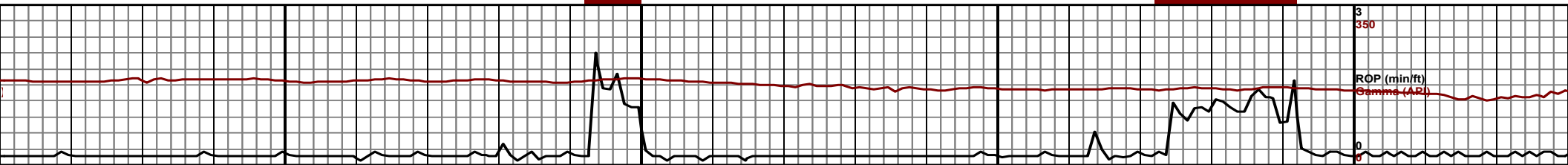
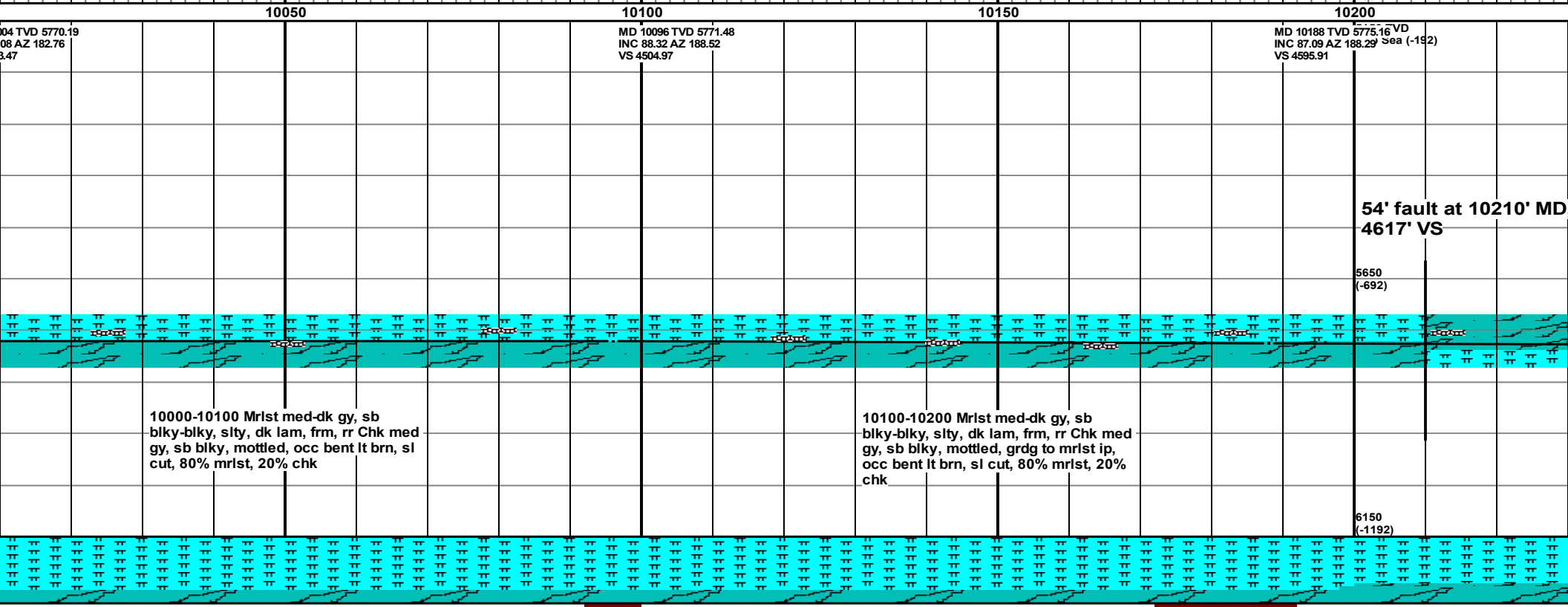
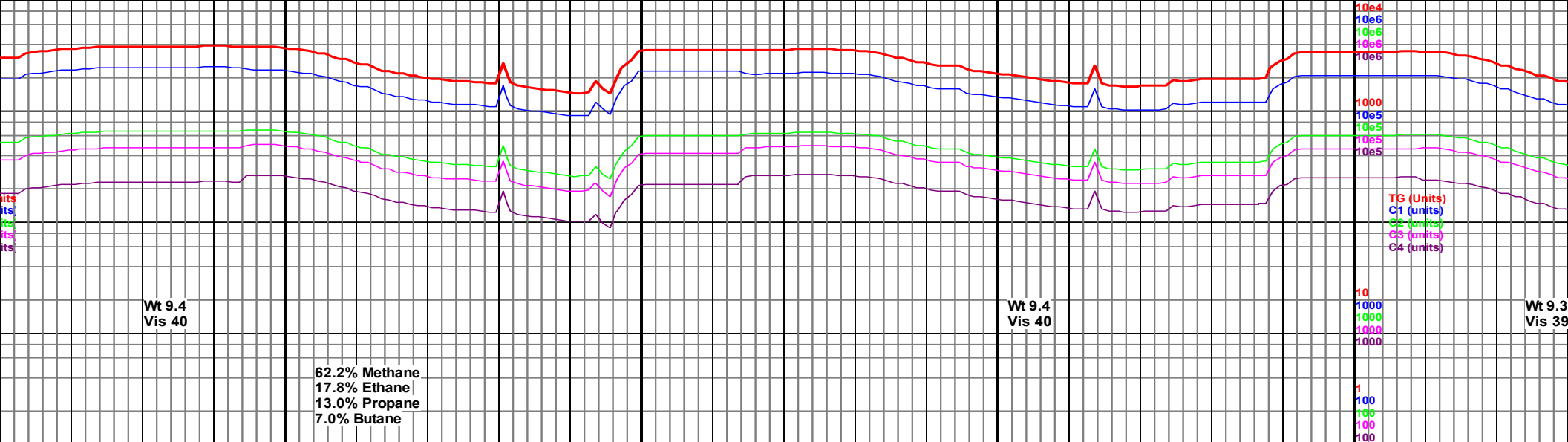


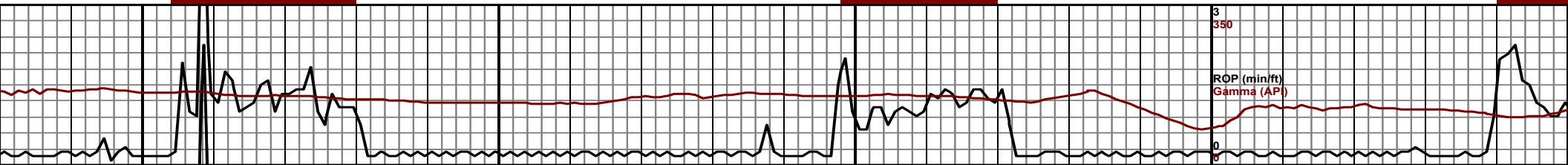
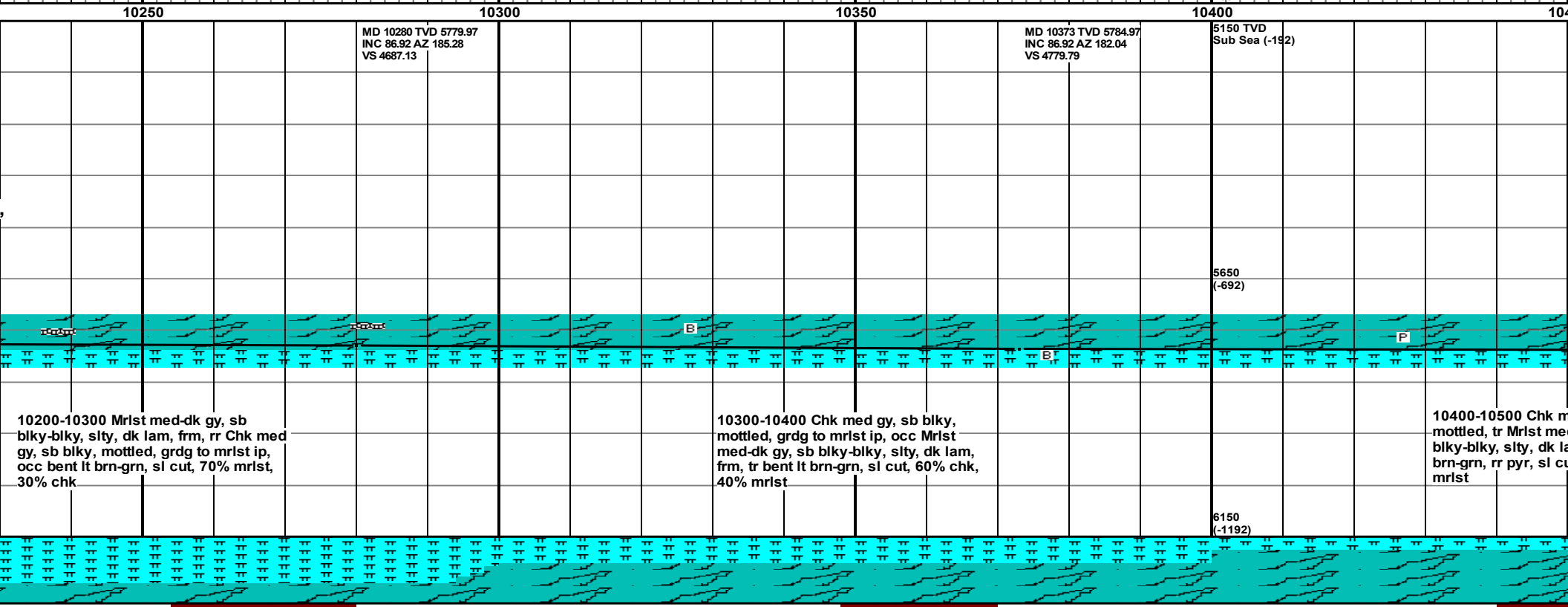
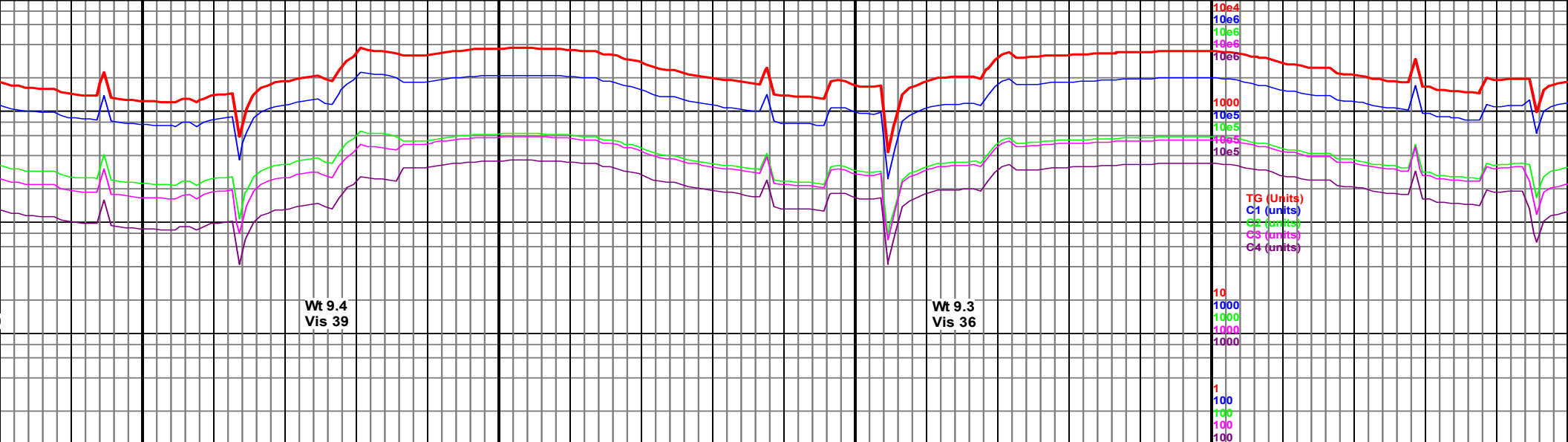


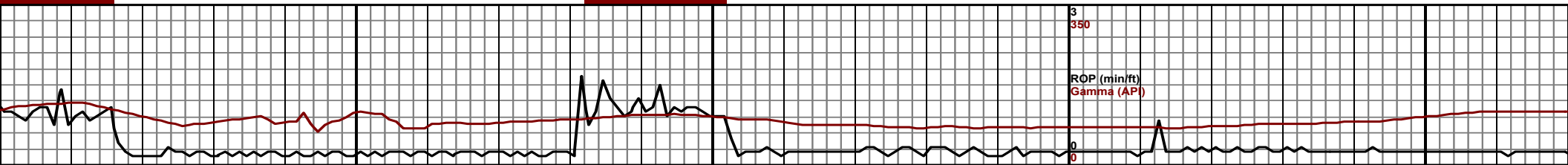
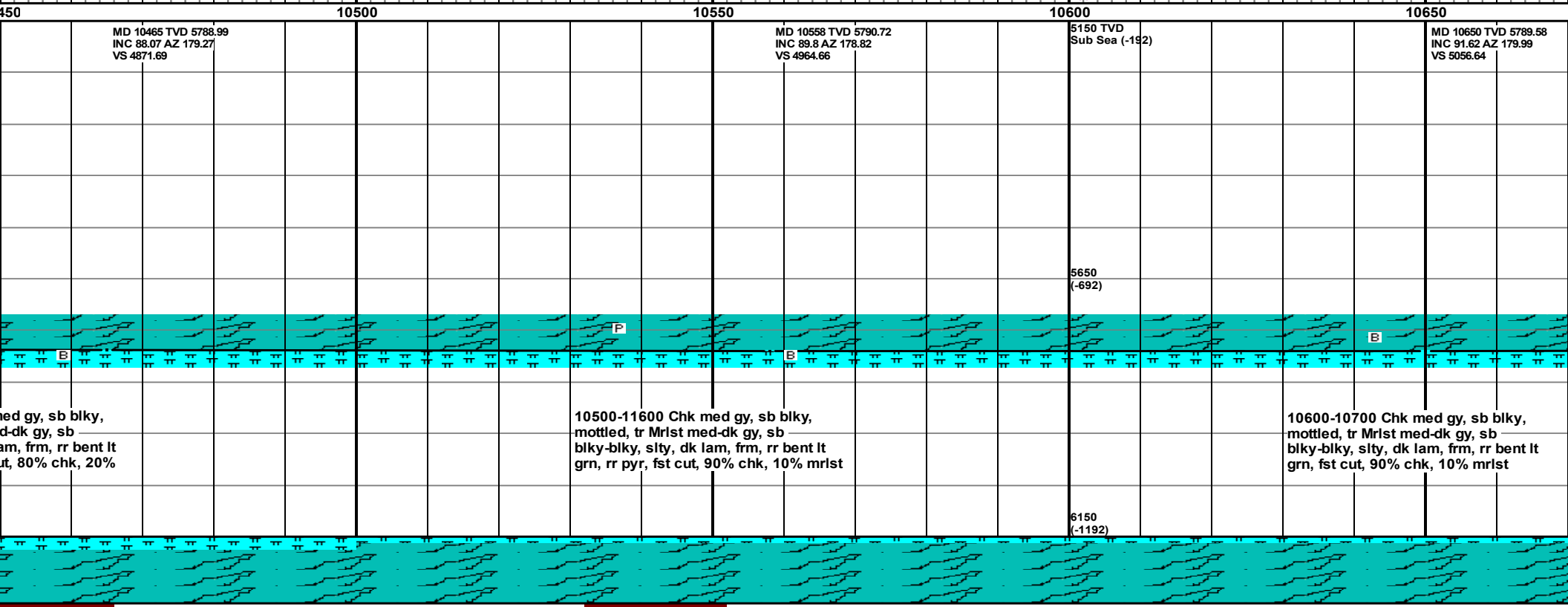
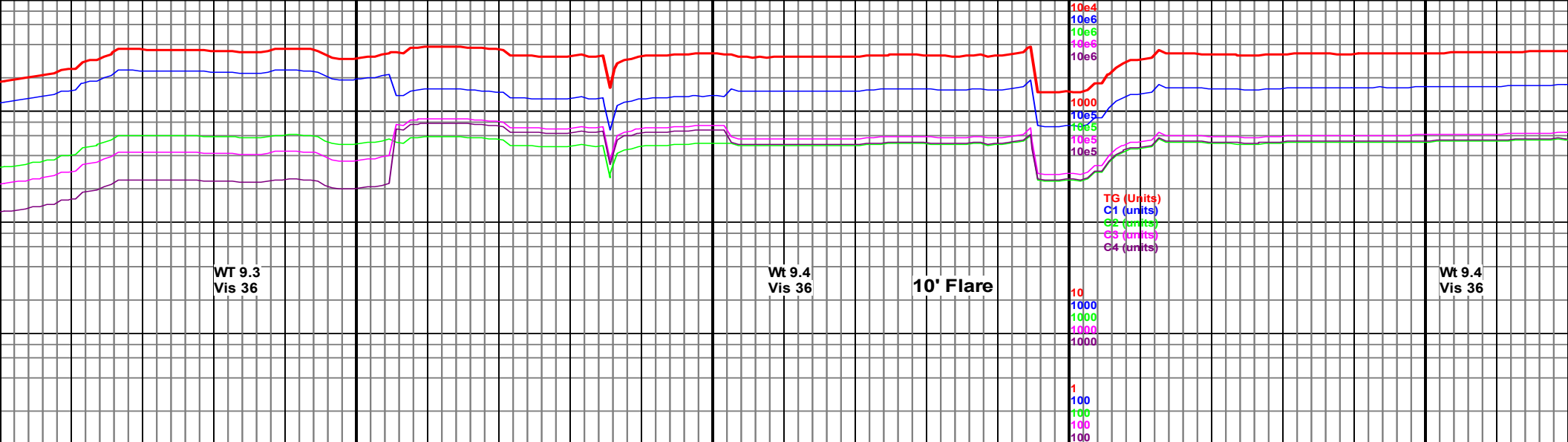


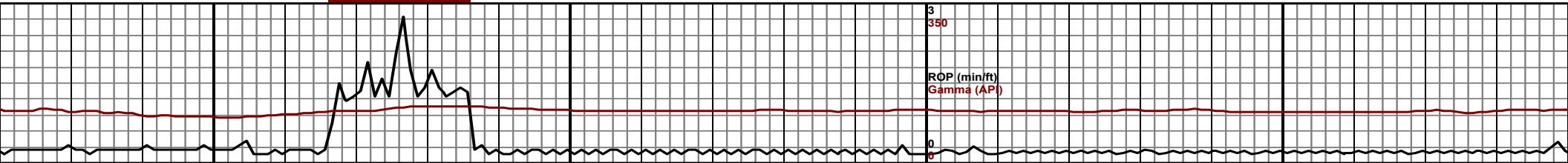
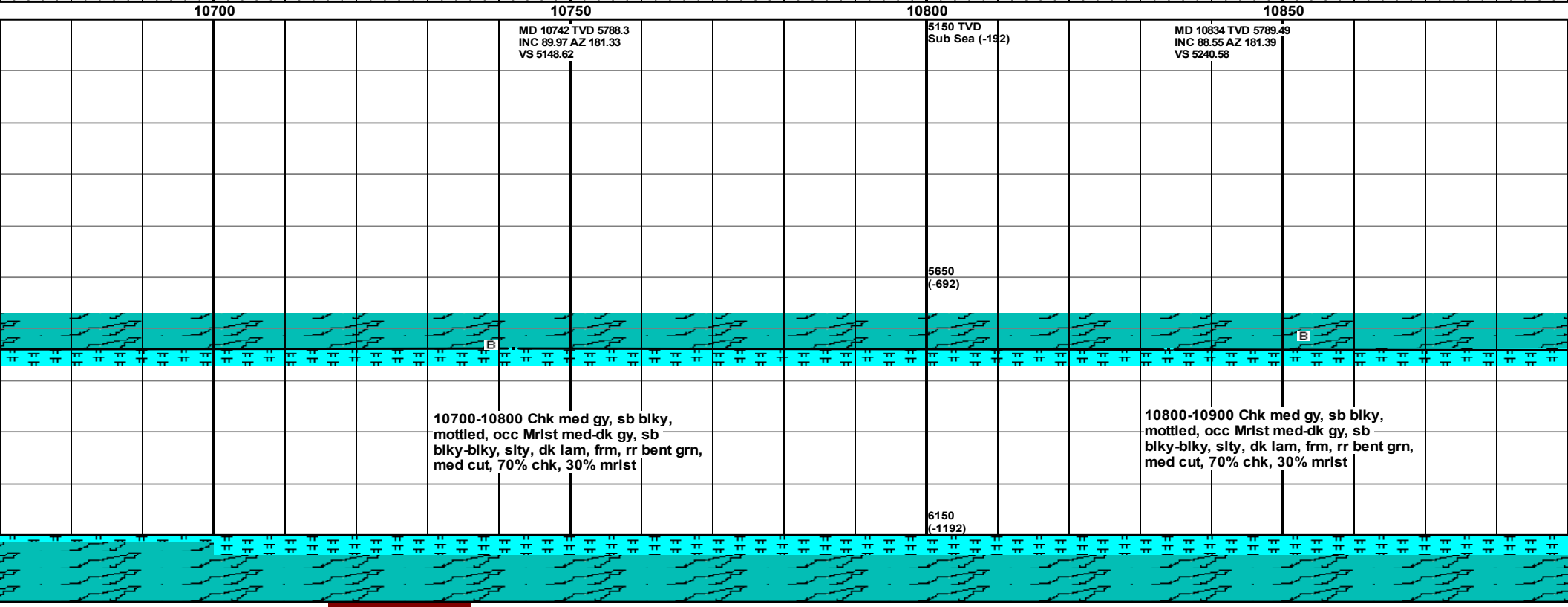
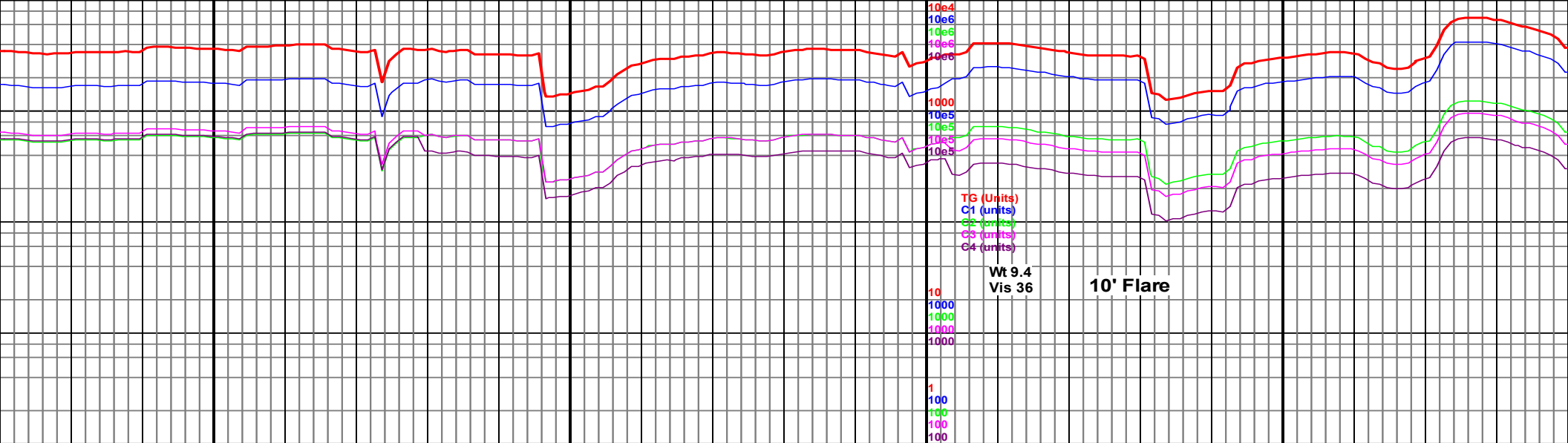


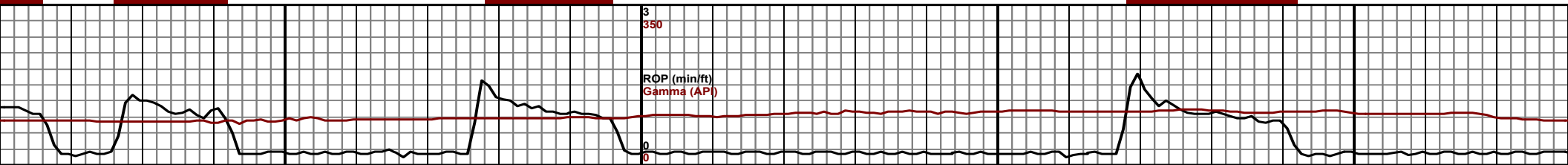
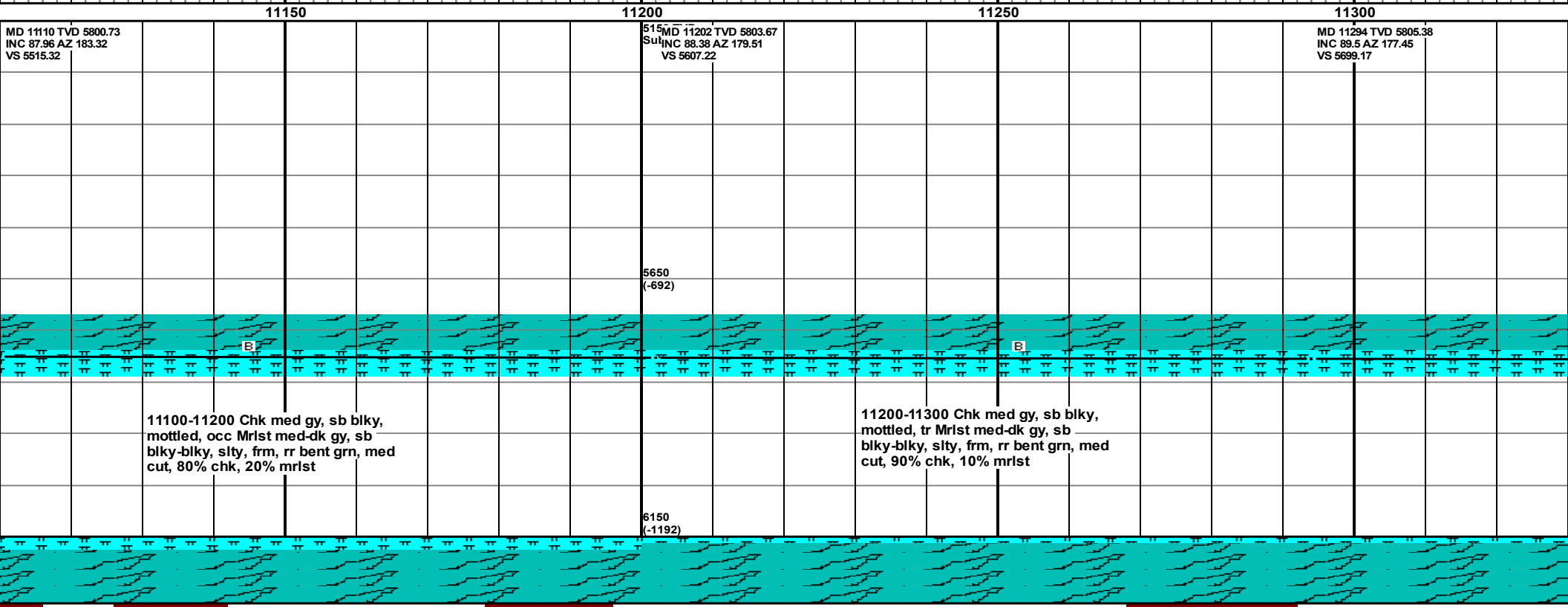
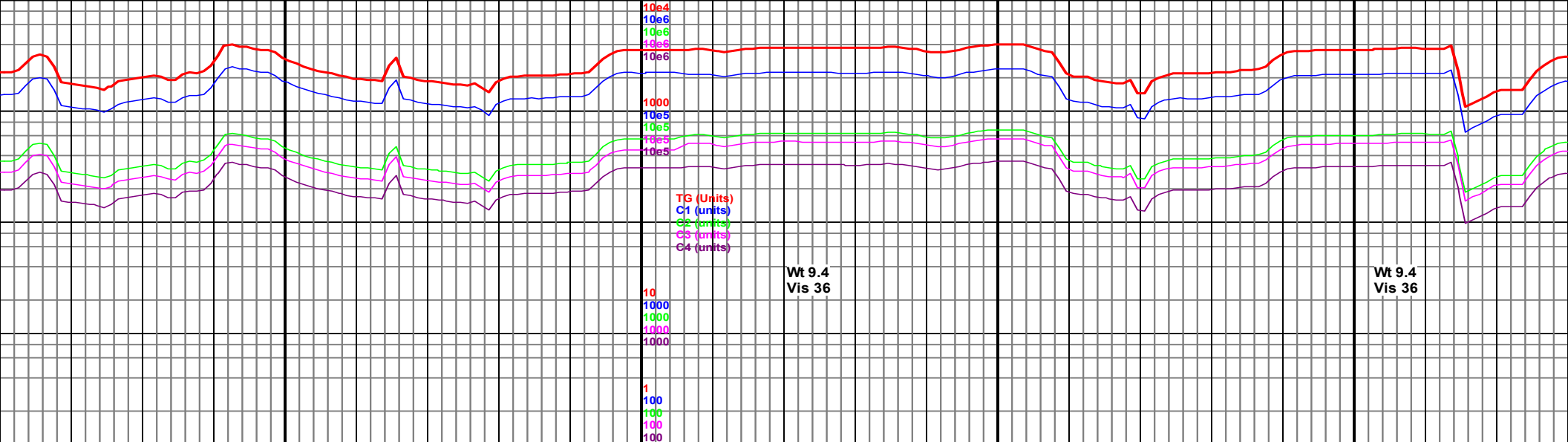


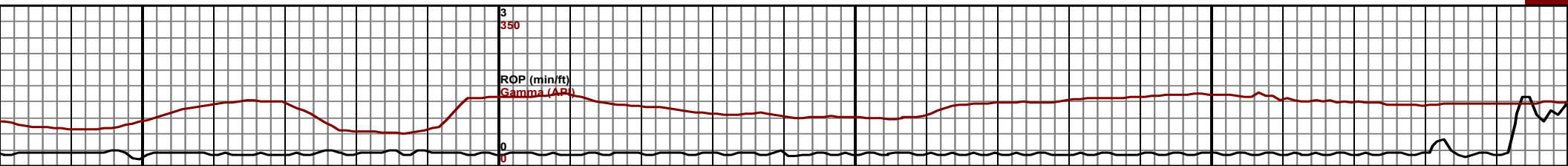
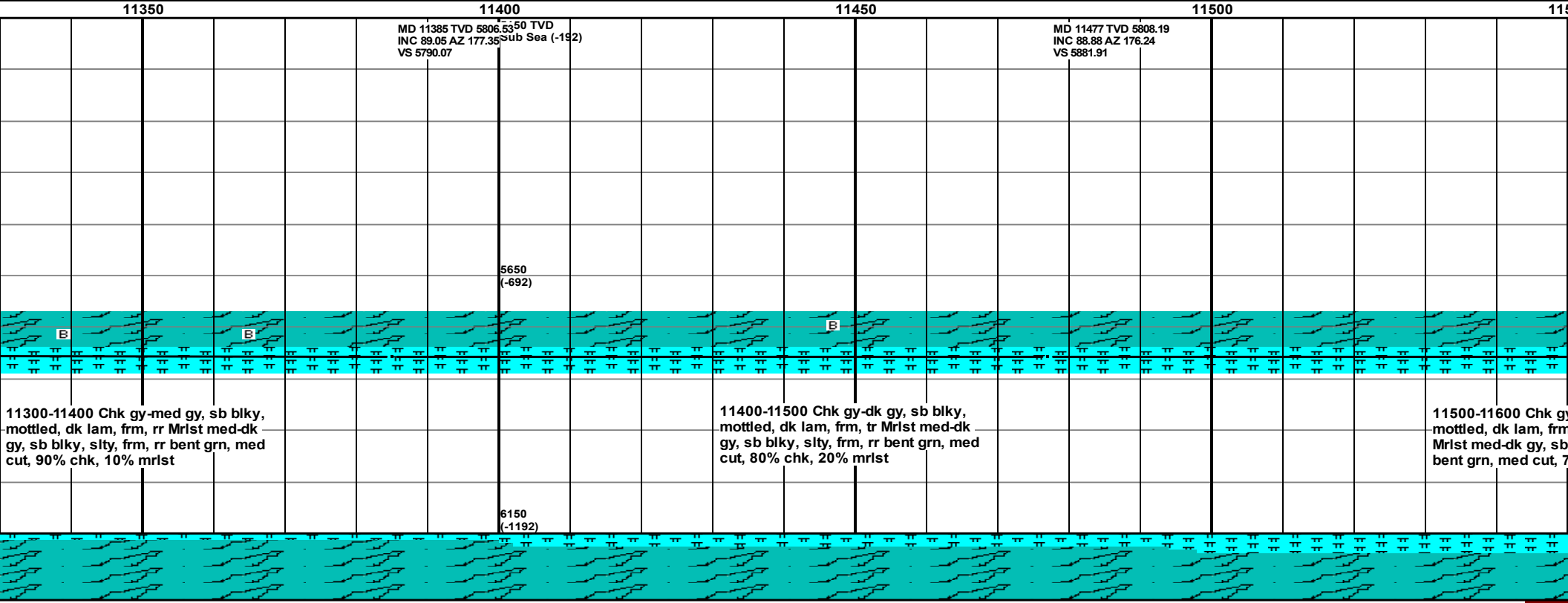
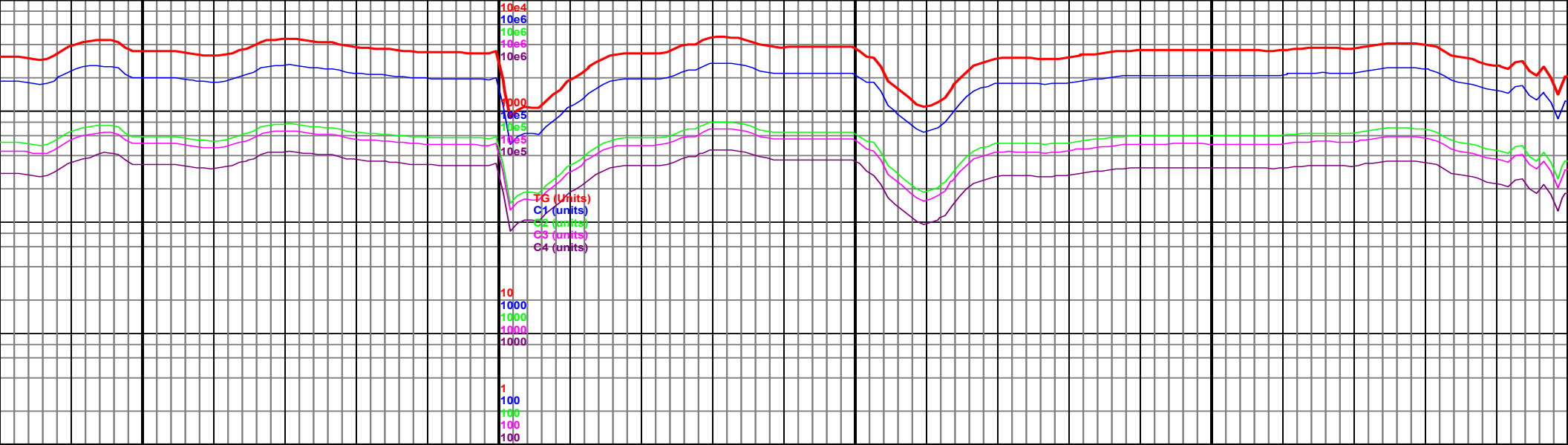


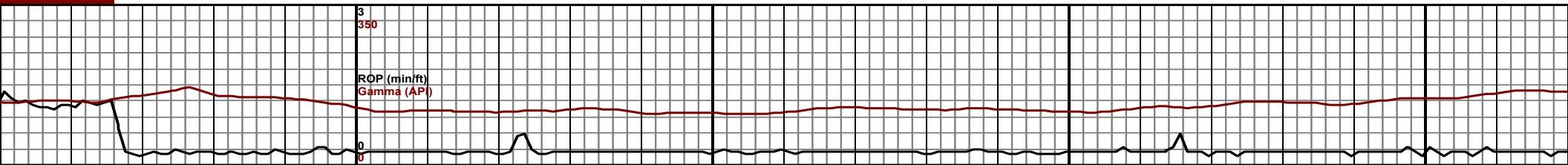
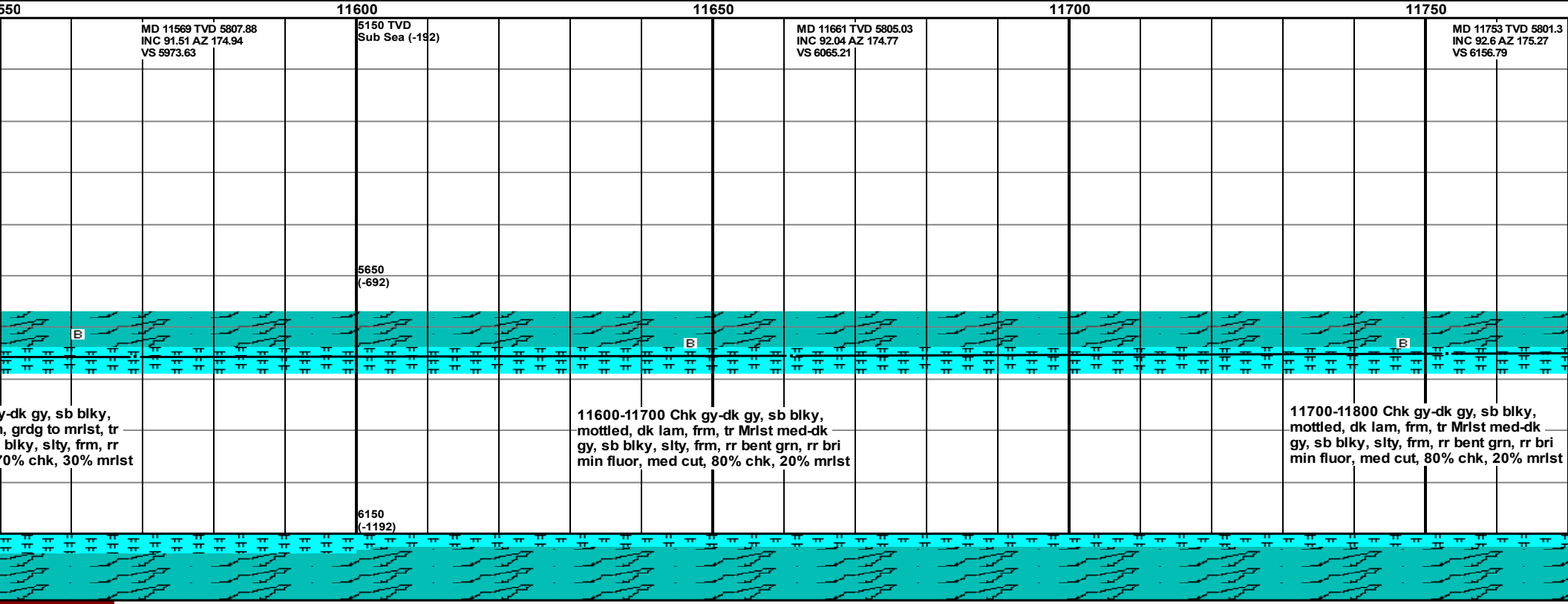
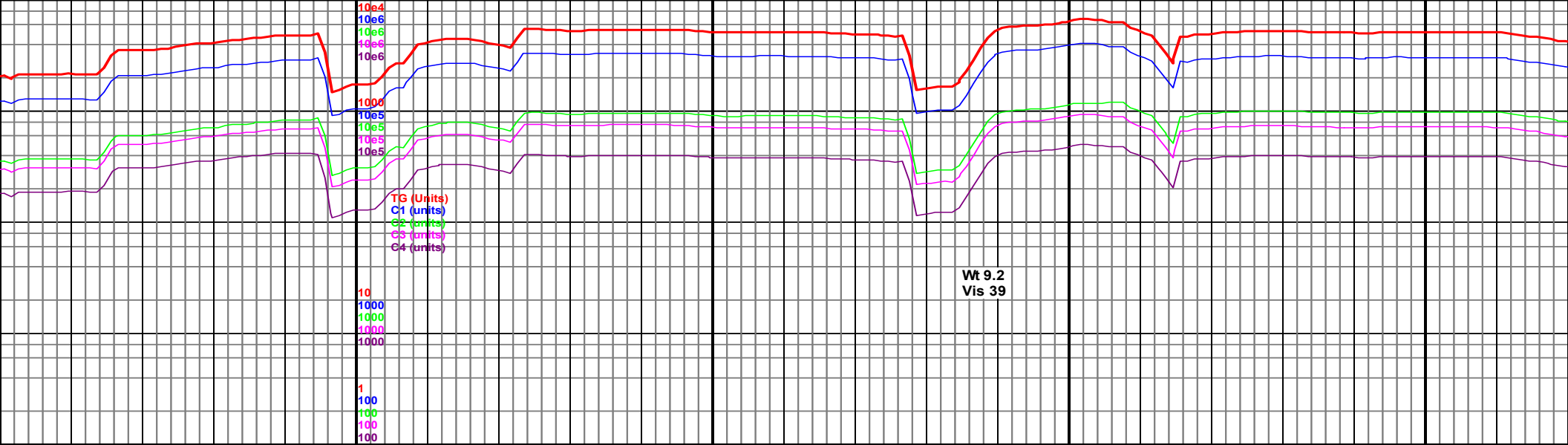


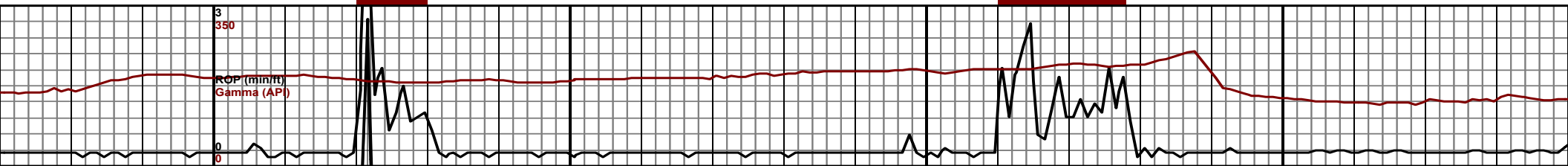
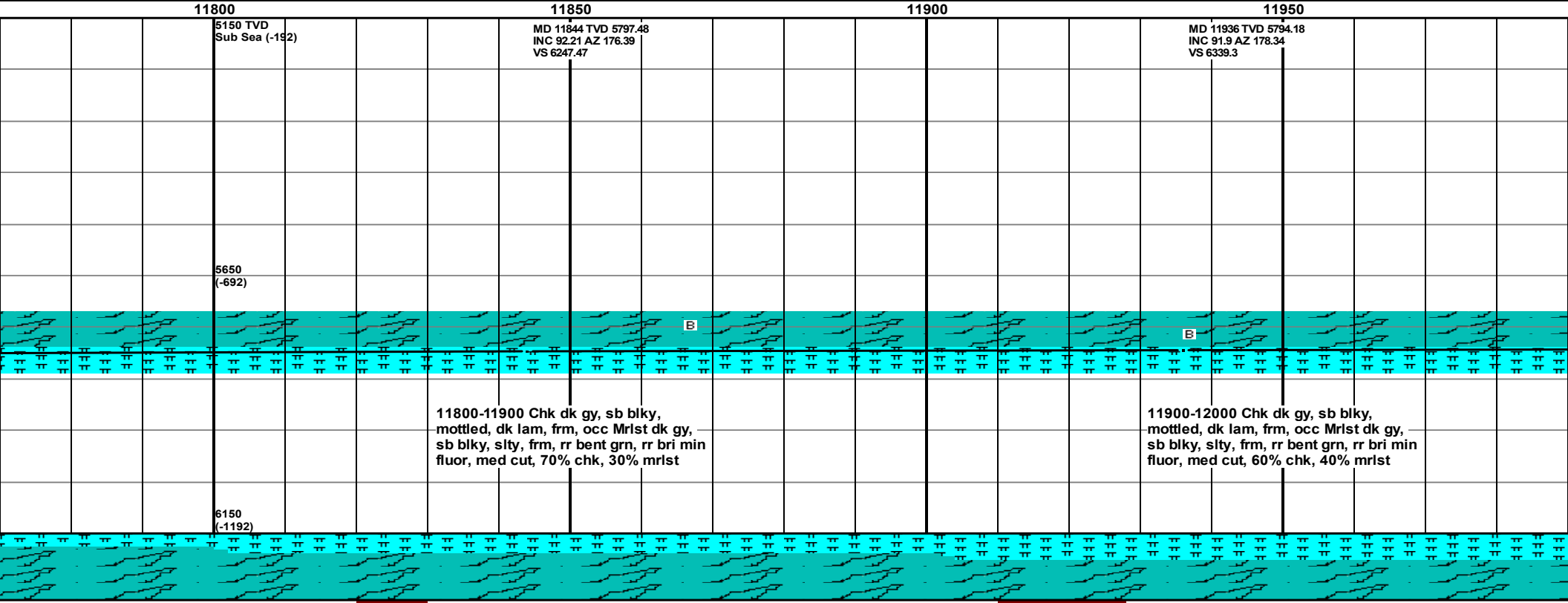
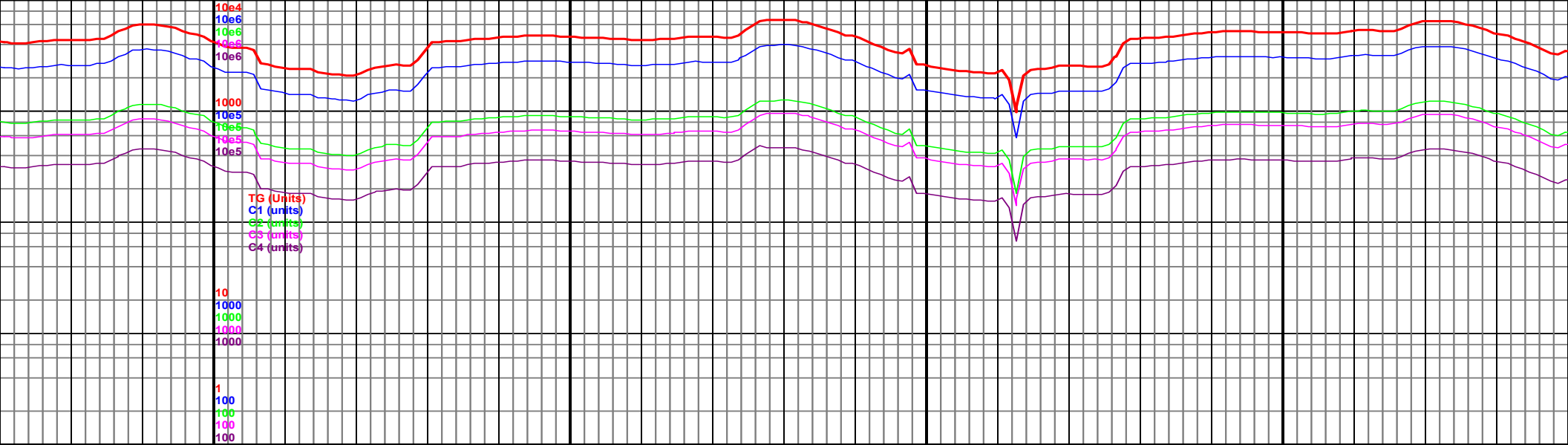


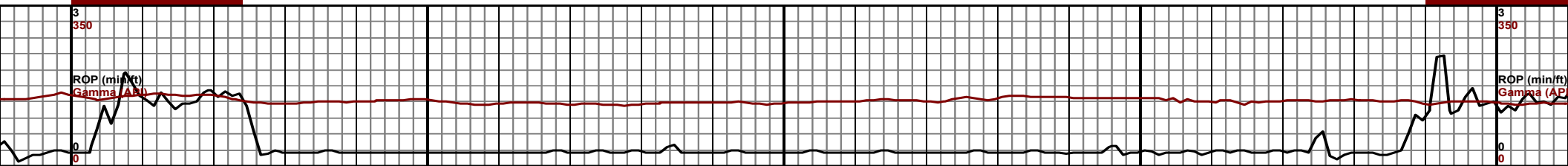
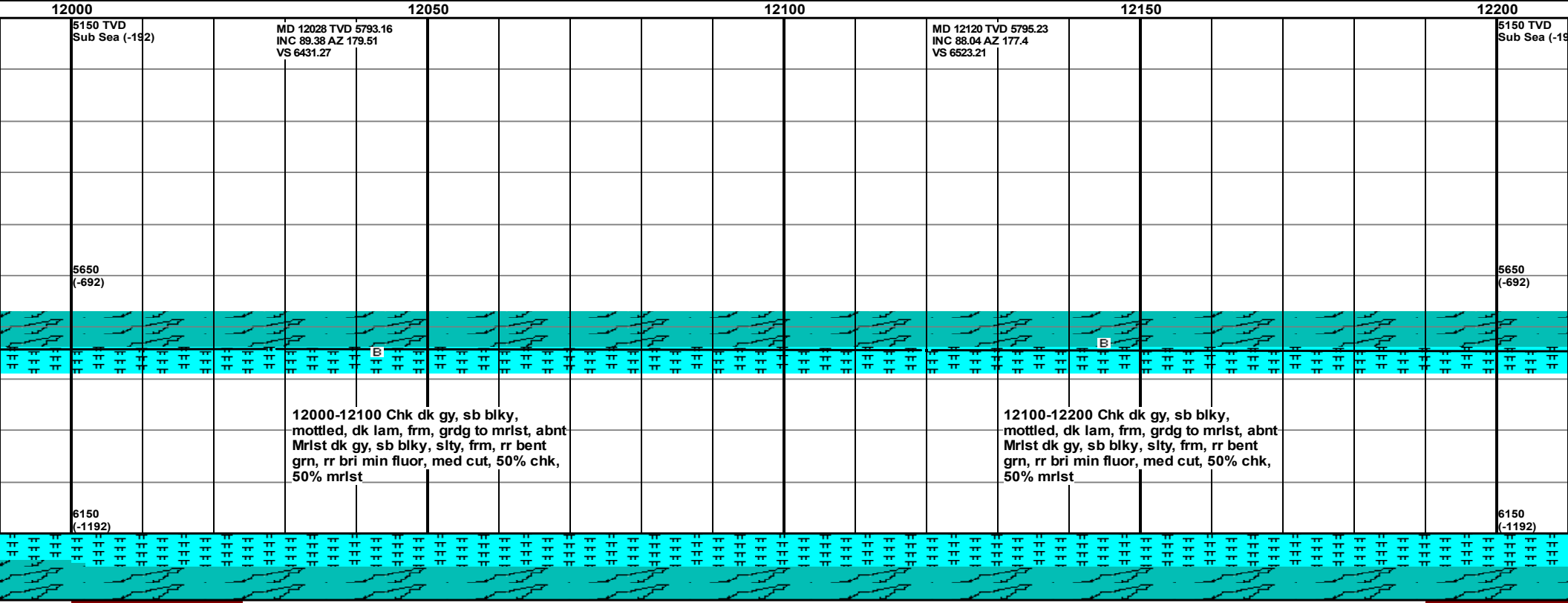
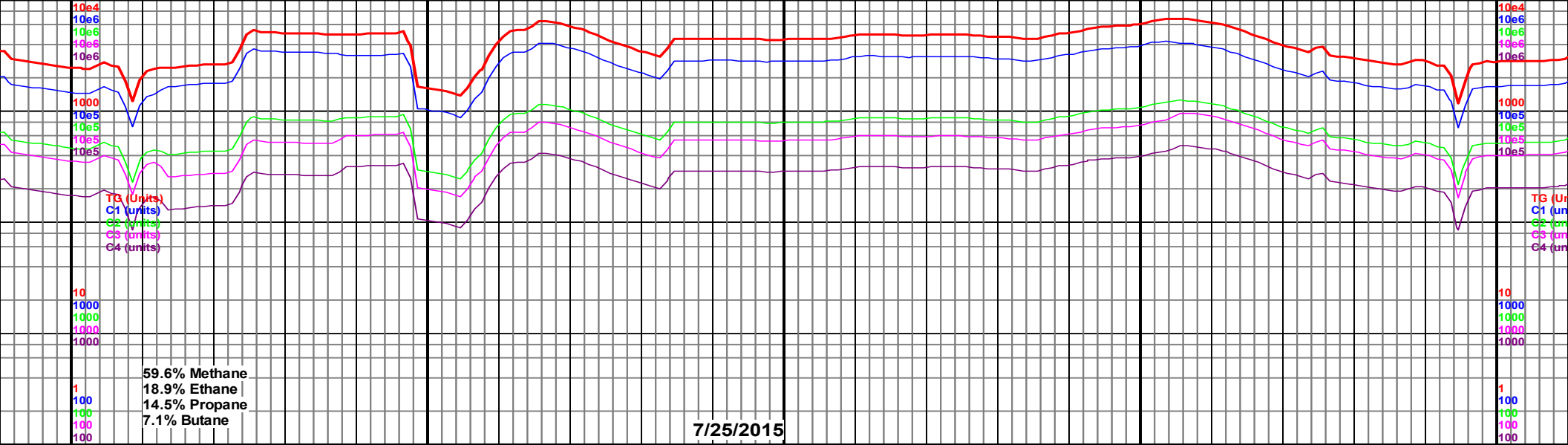


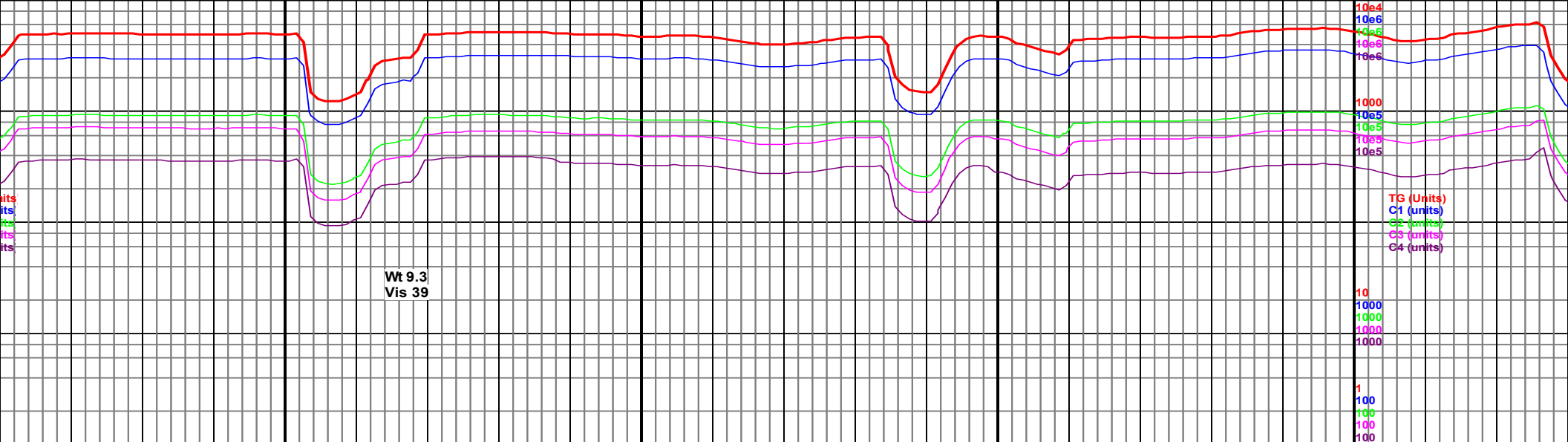












Wt 9.3
Vis 39

