



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

Well Name: Horsetail 08D-1703
Well Id: 05-123-41021-00
Location: NWNW 08-T10N-R57W
License Number: 05-123-41021-00
Spud Date: 4/30/2015
Surface Coordinates: Lat.: 40.859761 Long.: -103.783389

Region: Redtail Field
Drilling Completed: 5/11/2015

Bottom Hole
Coordinates:
Ground Elevation (ft): 4976
Logged Interval (ft): 5311 To: 5839
Formation: Pierre, Sharon Springs, Niobrara
Type of Drilling Fluid: Water Based Mud

K.B. Elevation (ft): 4955
Total Depth (ft): 15875

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: Craig Dreiling, Kyle Newman
Company: Acme Geologic Consulting
Address: 108 Berry Street
Little Rock, AR 72205

Drilling Company

Unit Drilling Company
Rig 406

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

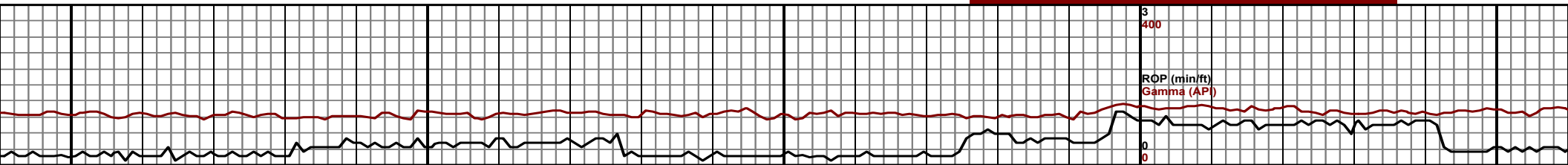
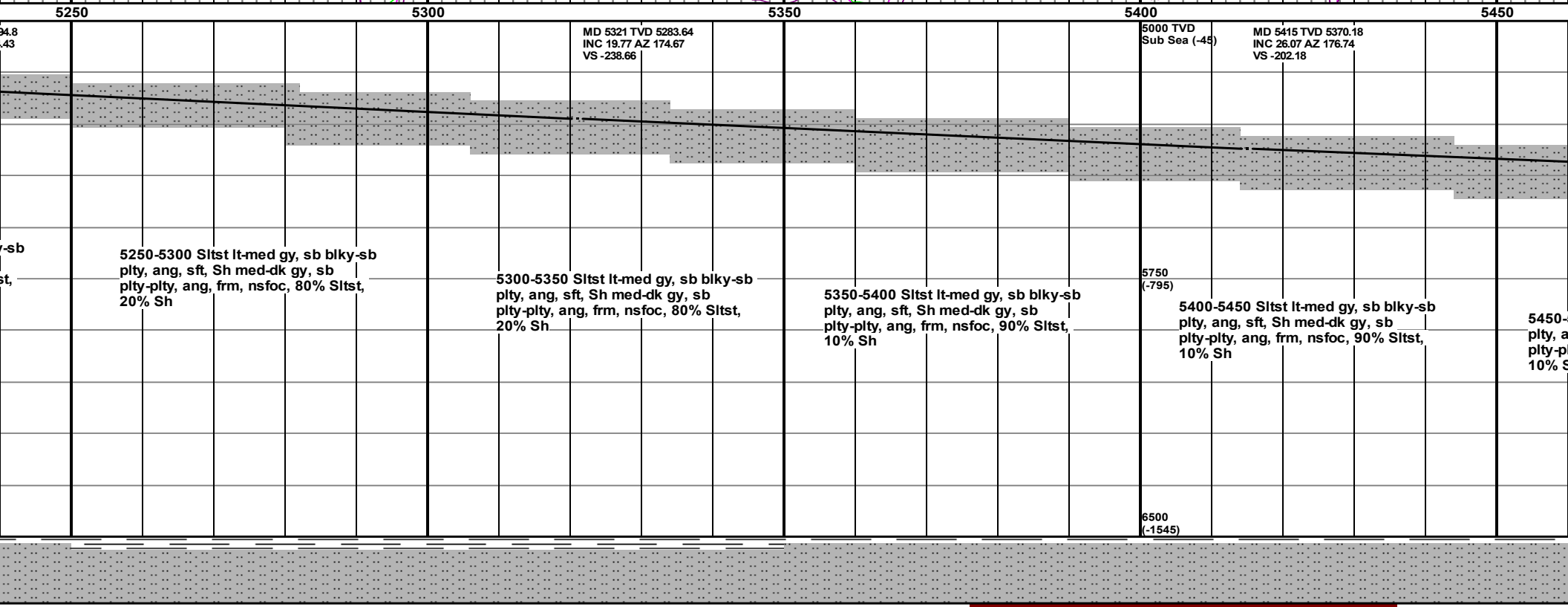
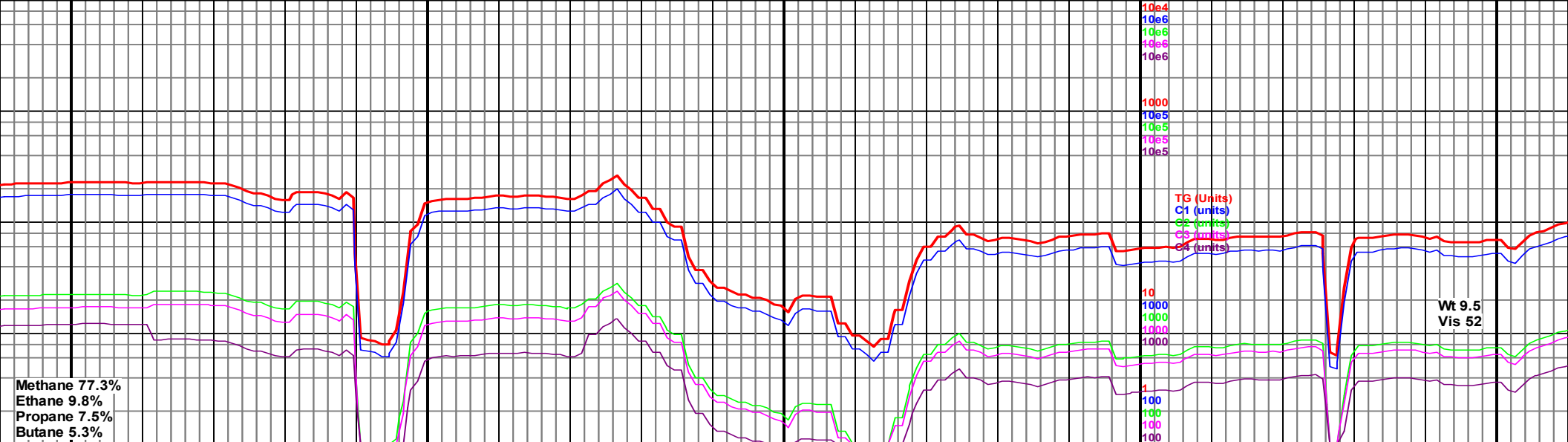
ROUNDING
 Rounded
 Subrnd
 Subang
 Angular

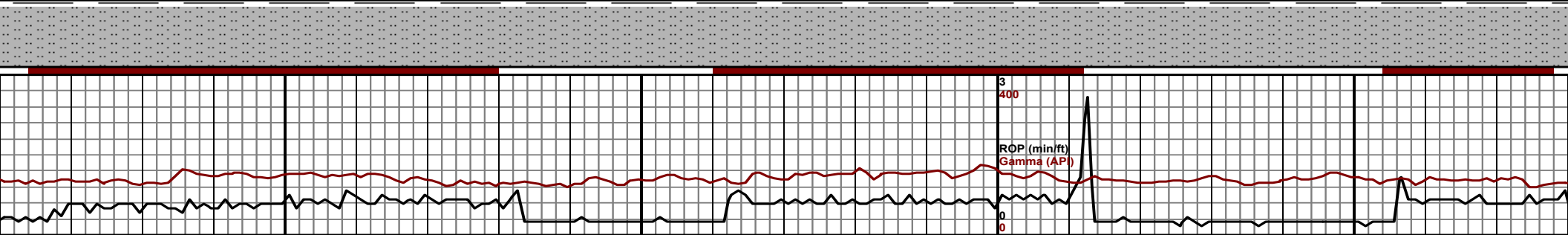
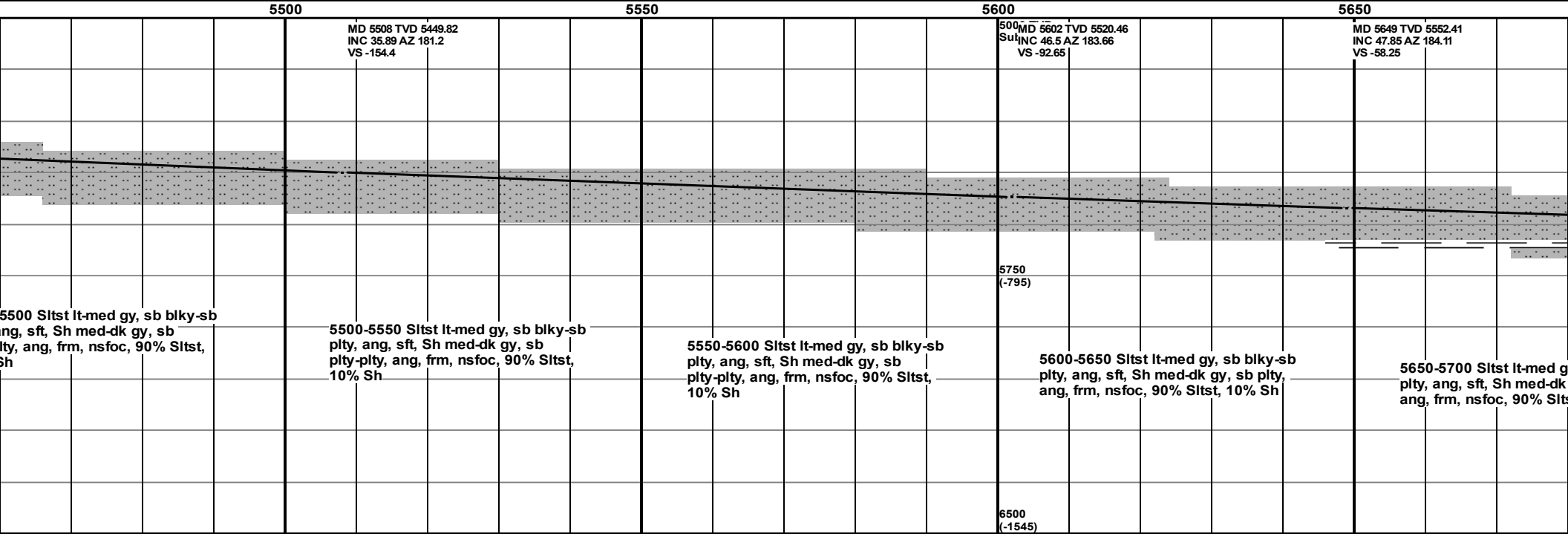
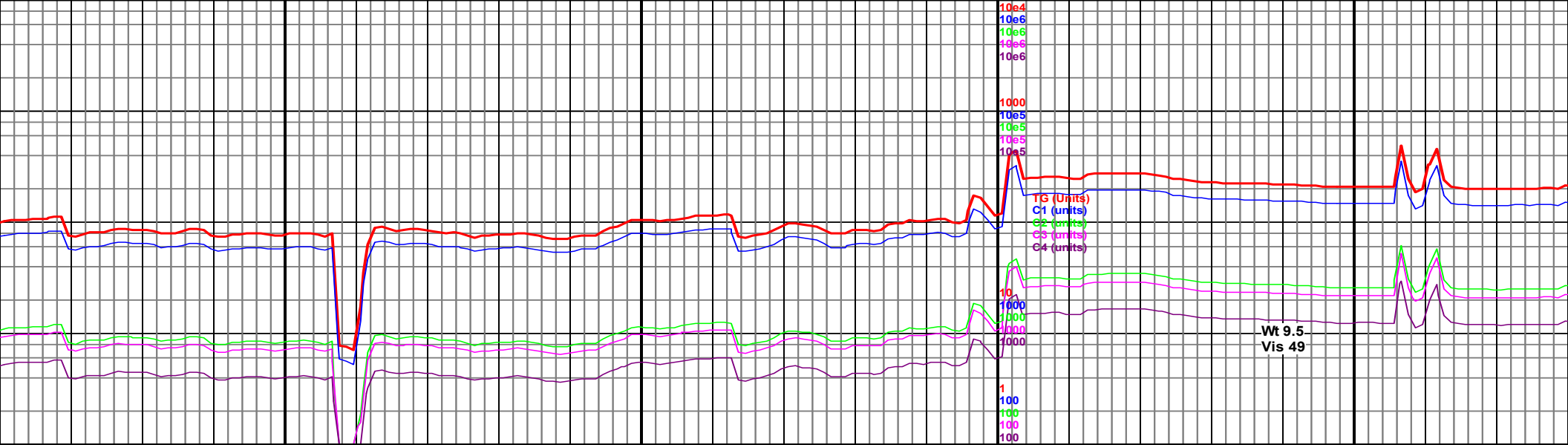
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 Even

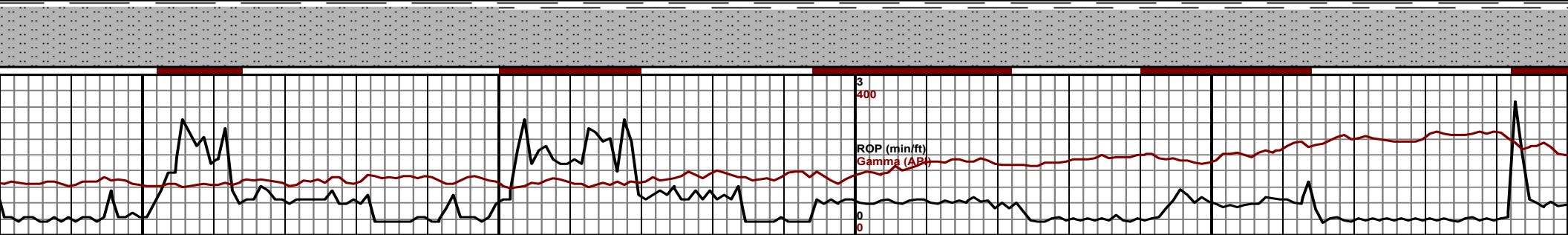
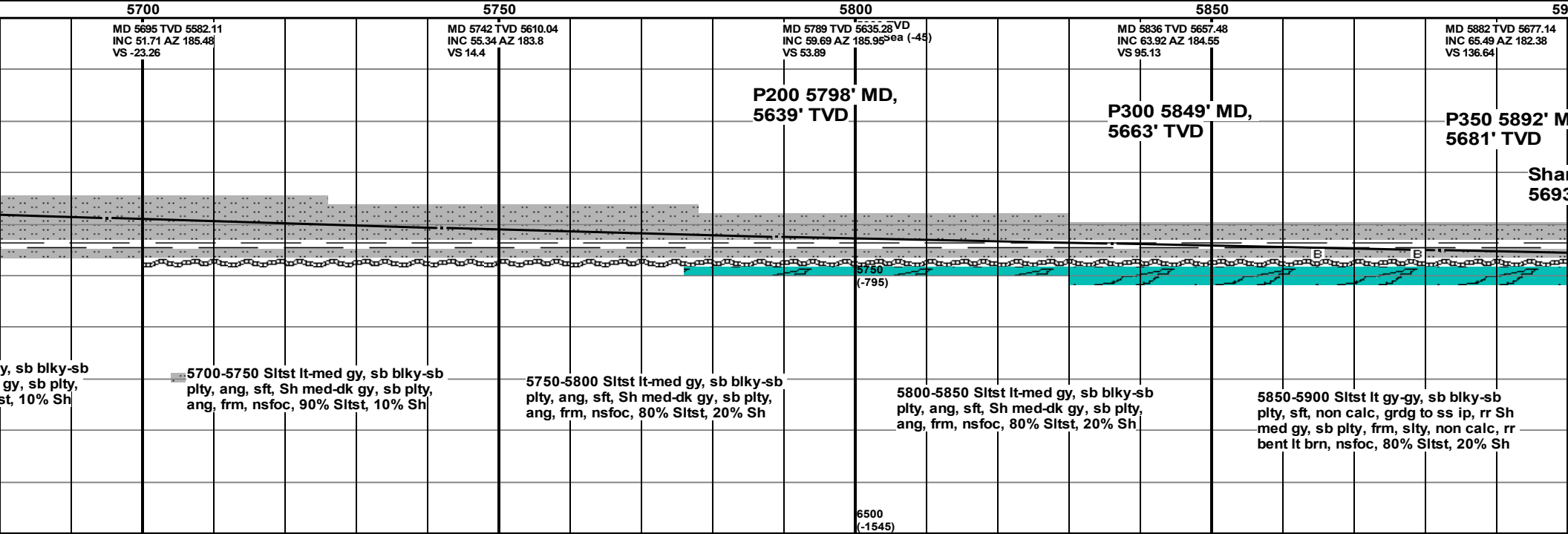
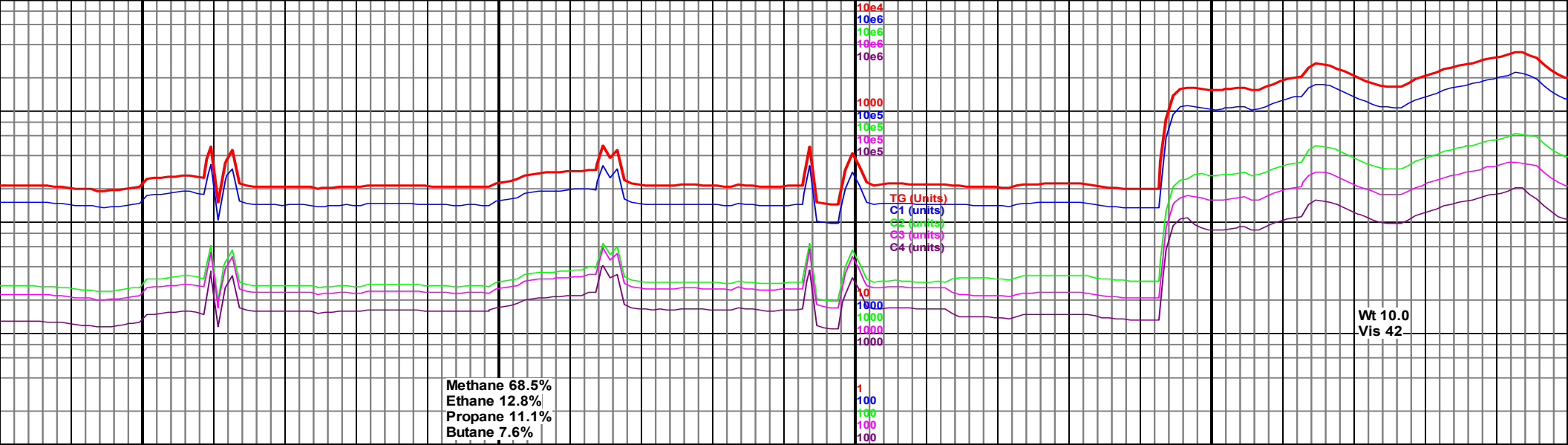
 Spotted
 Ques
 Dead

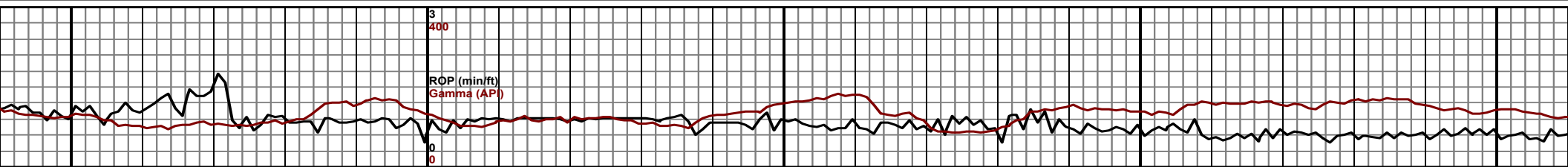
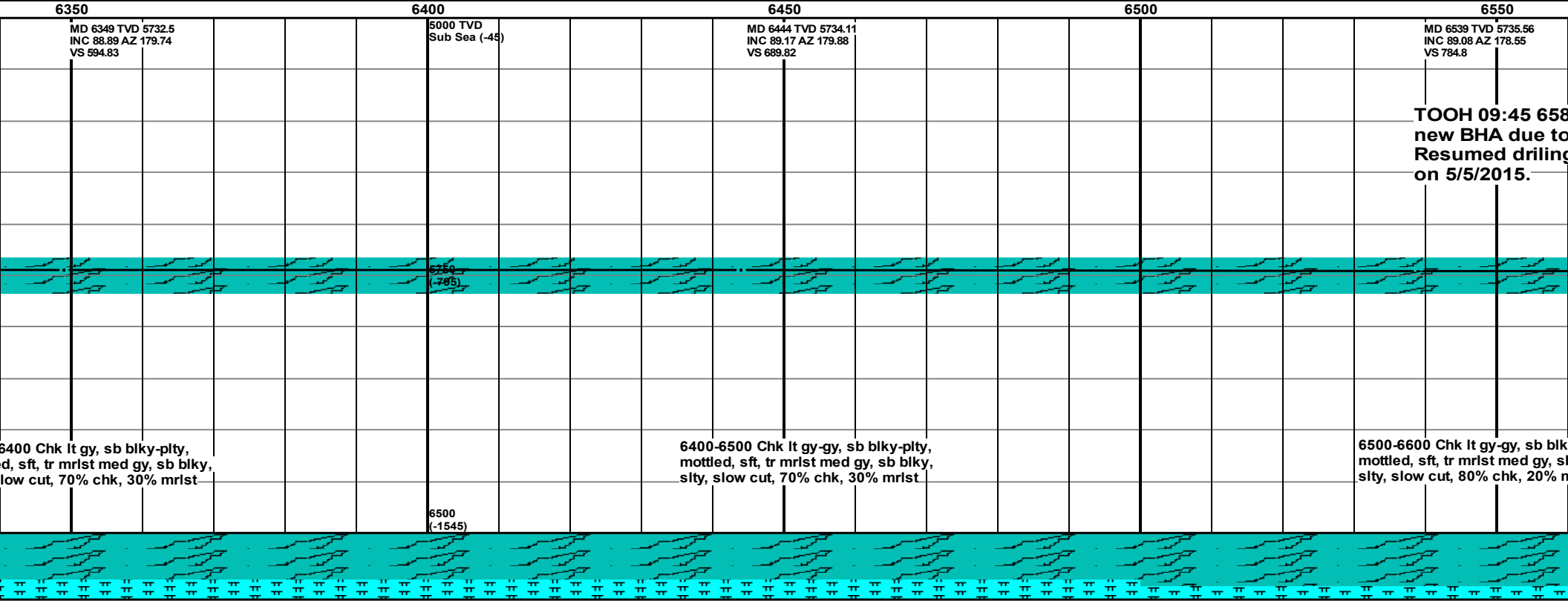
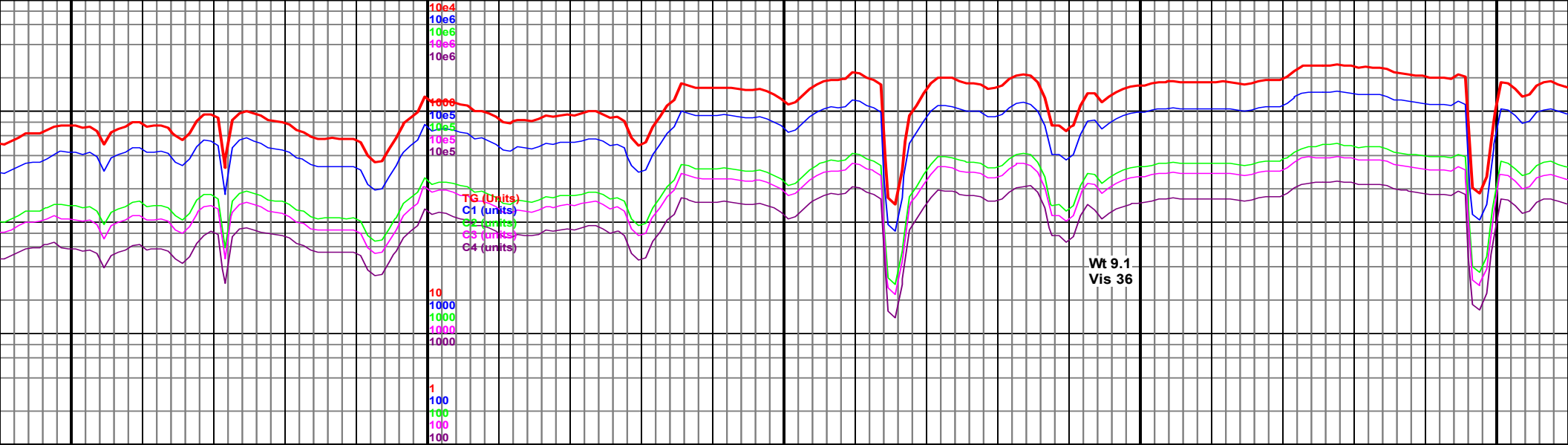
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 Core
 Dst

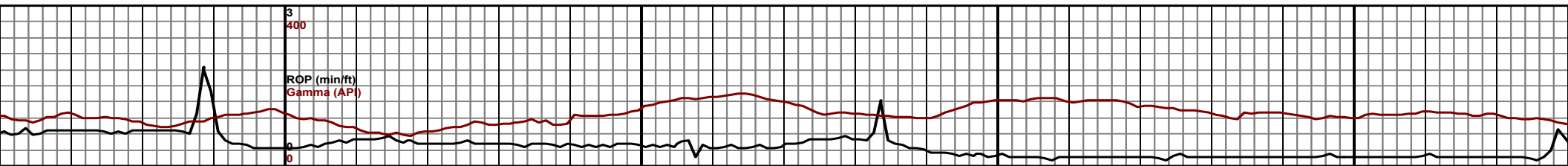
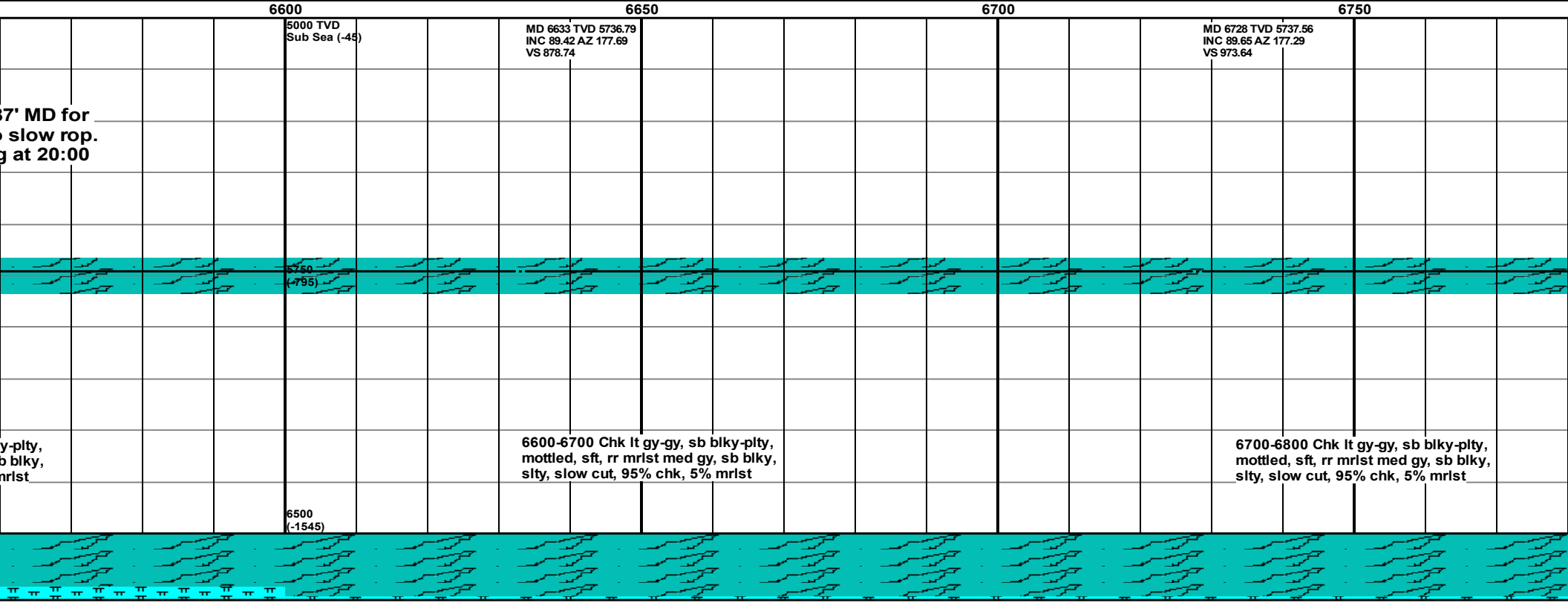
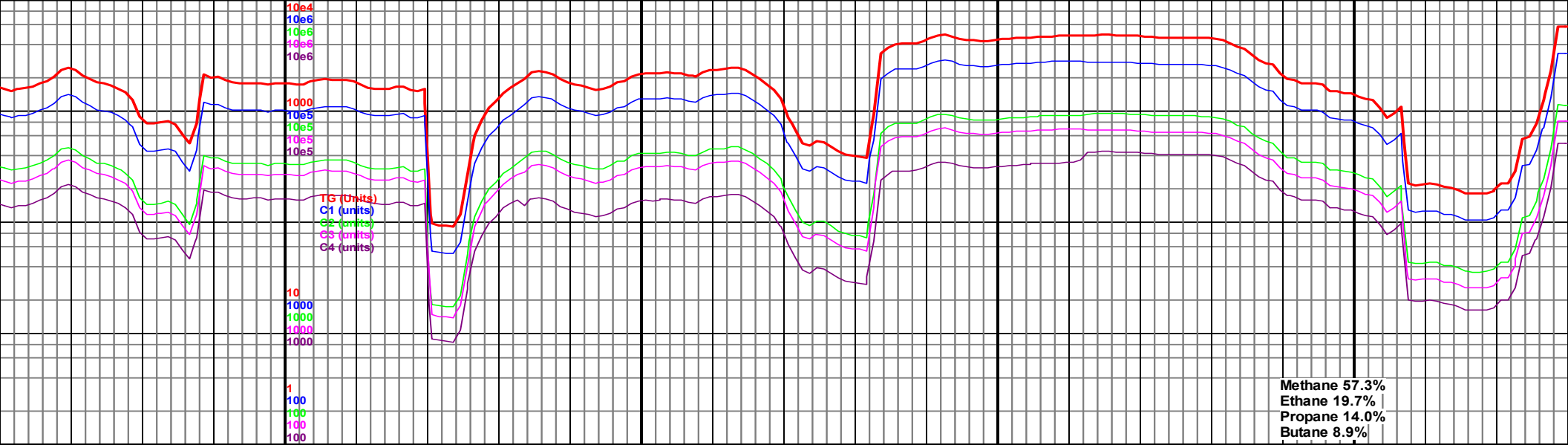
EVENT
 Rft
 Sidewall

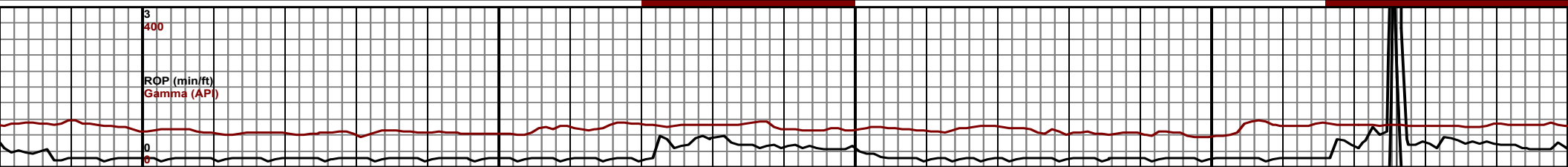
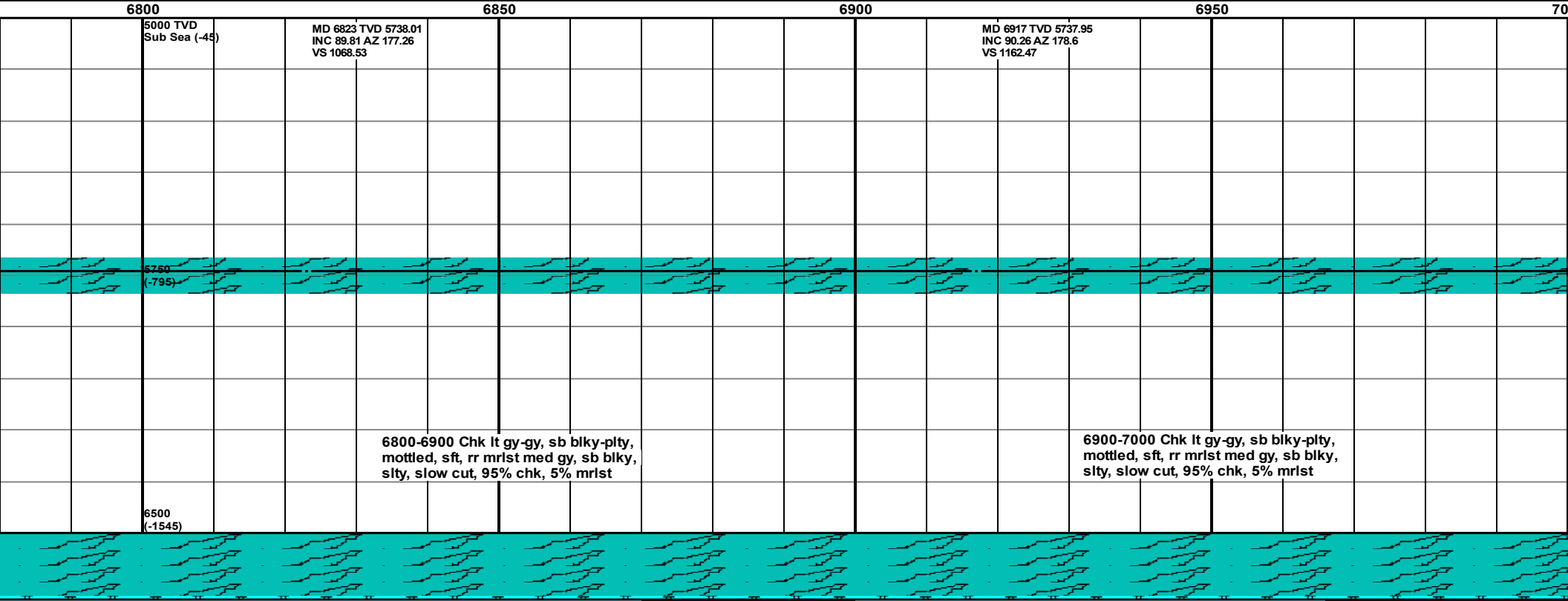
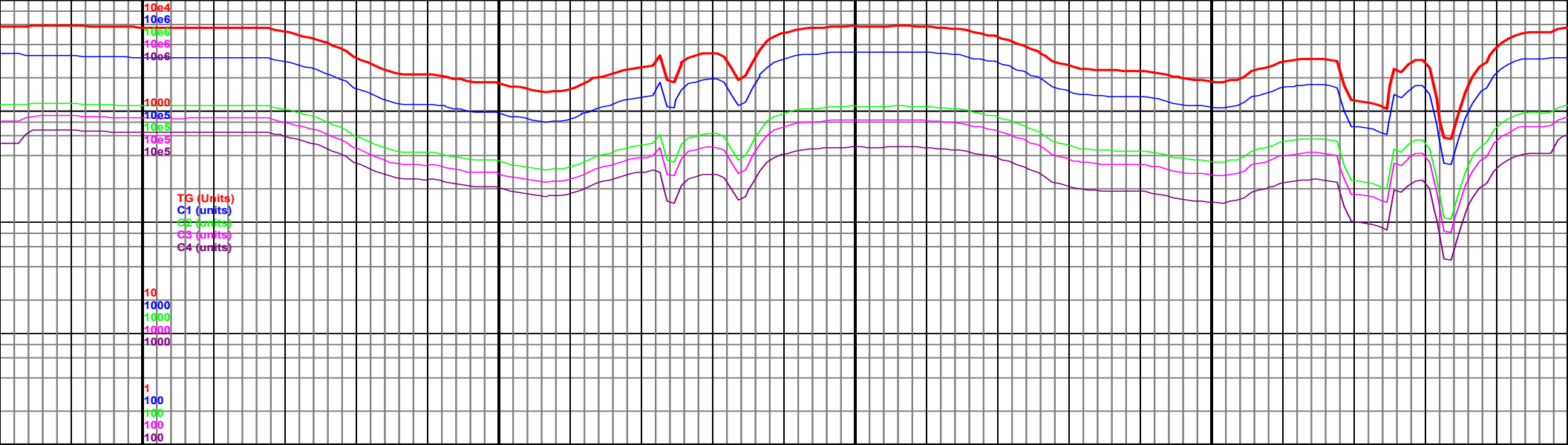


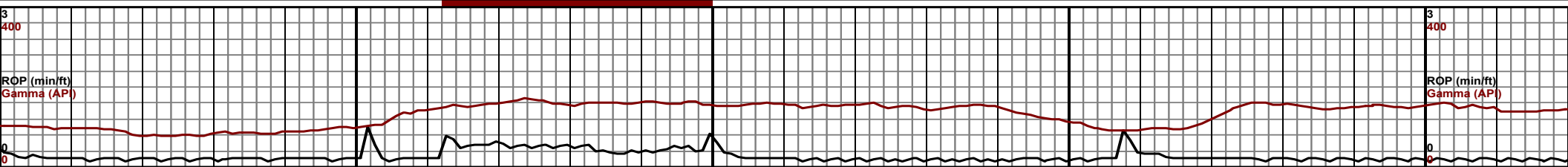
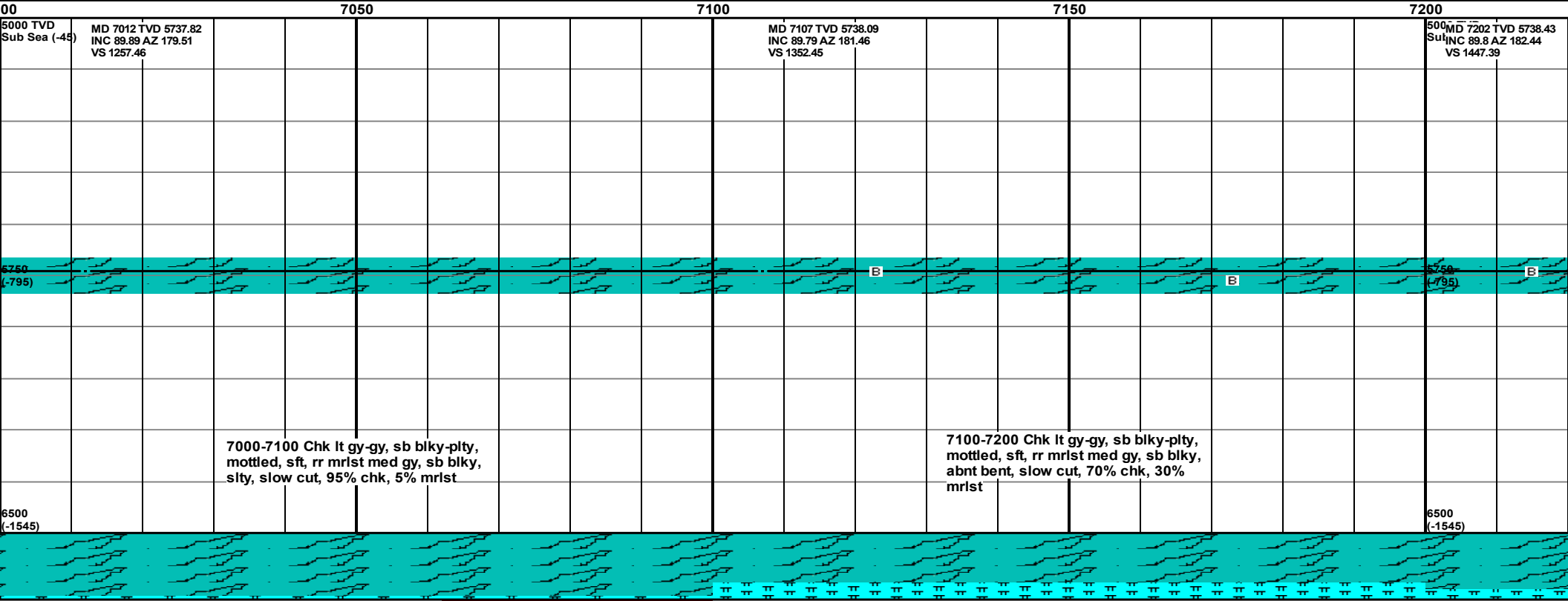
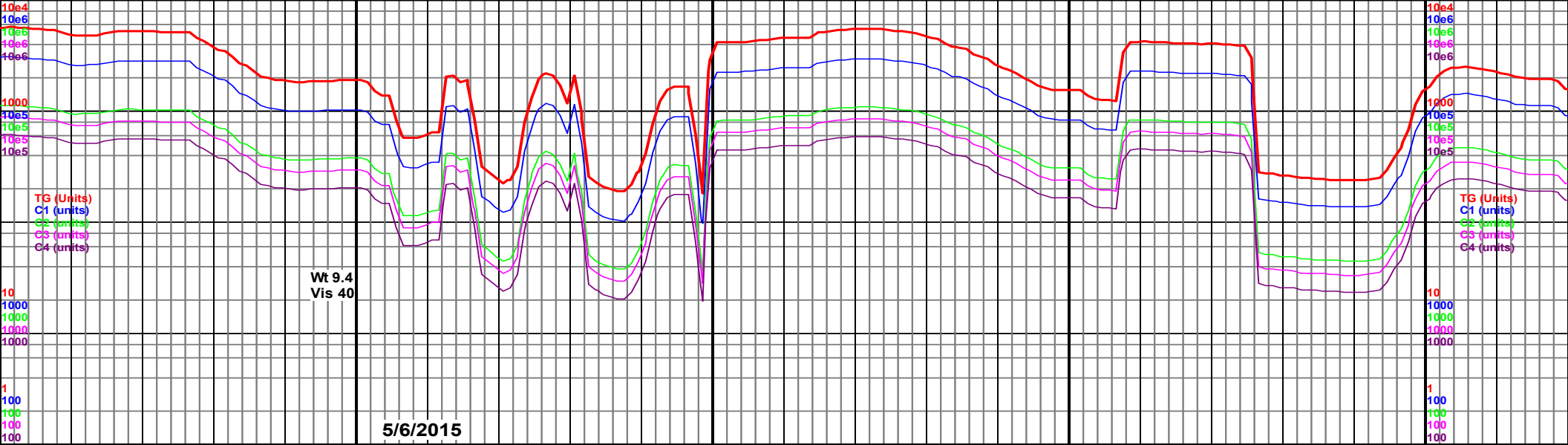


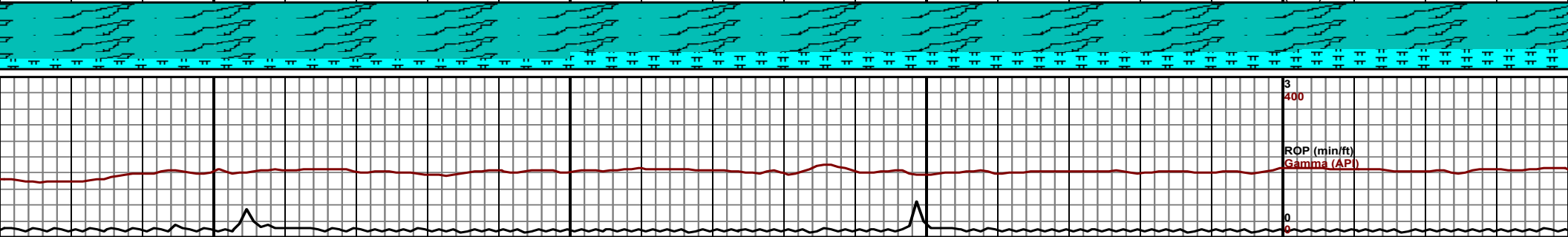
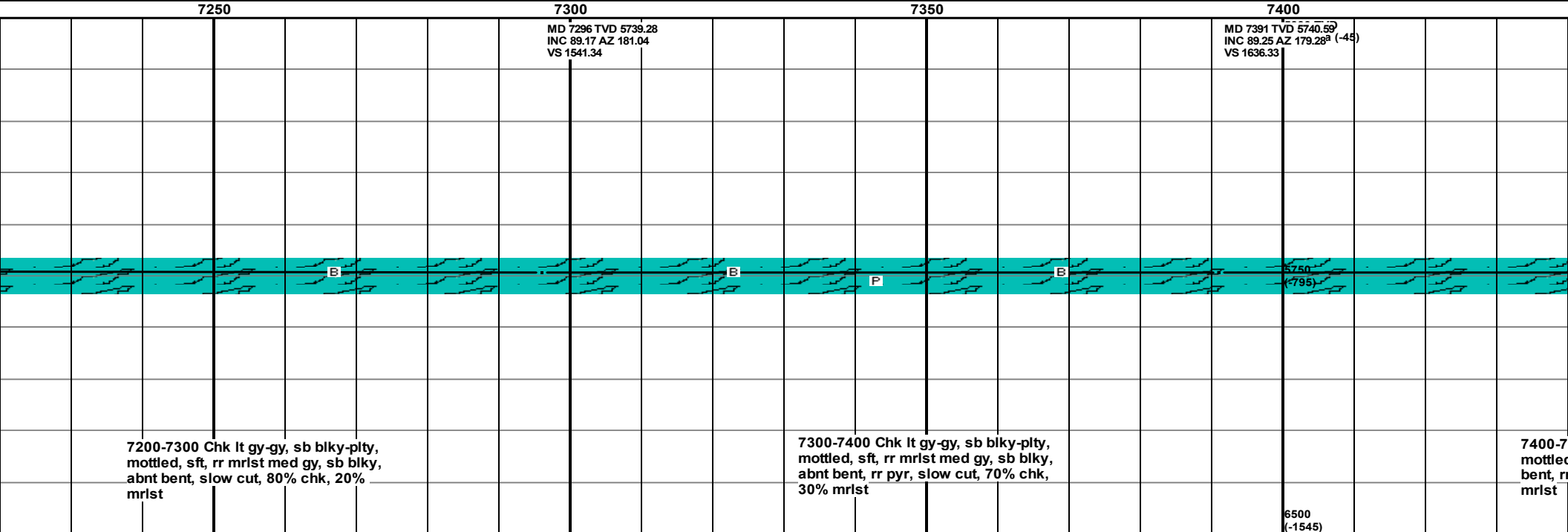
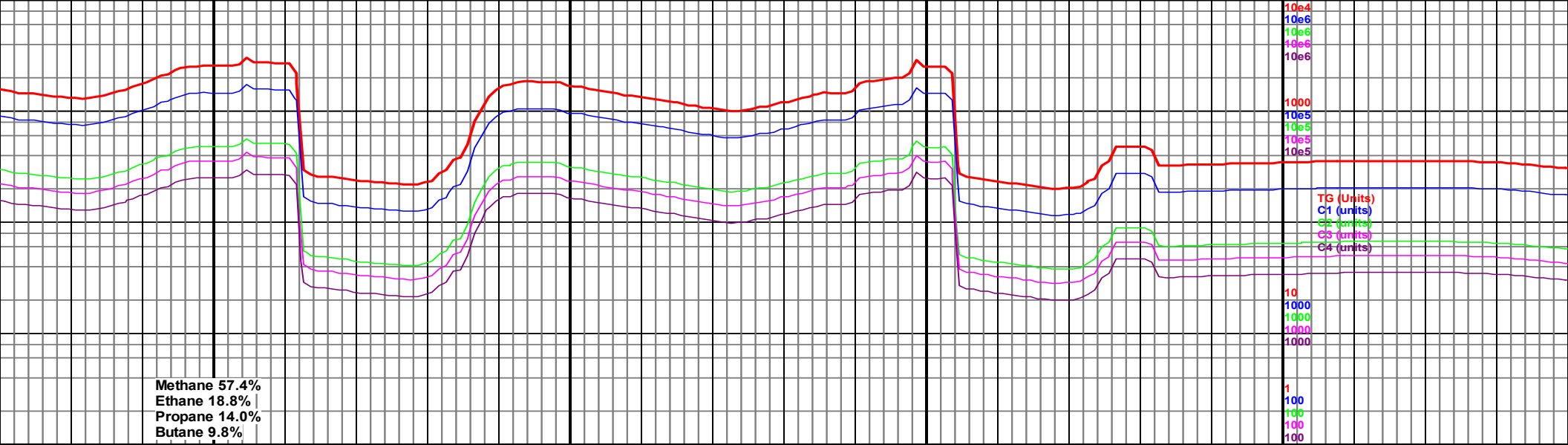


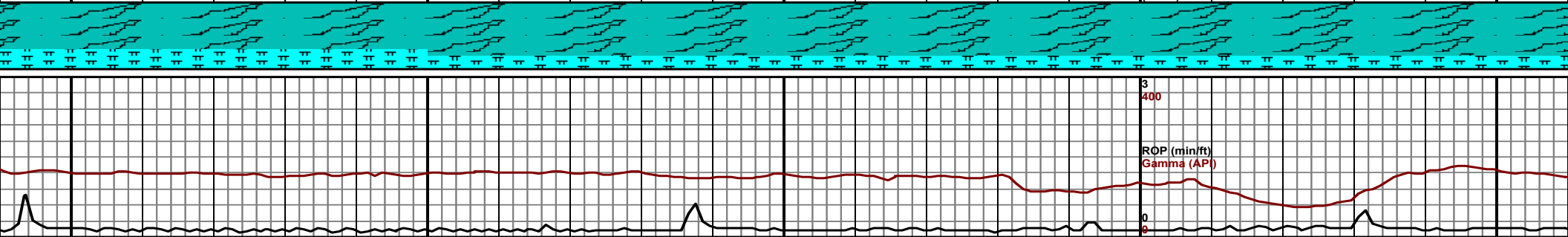
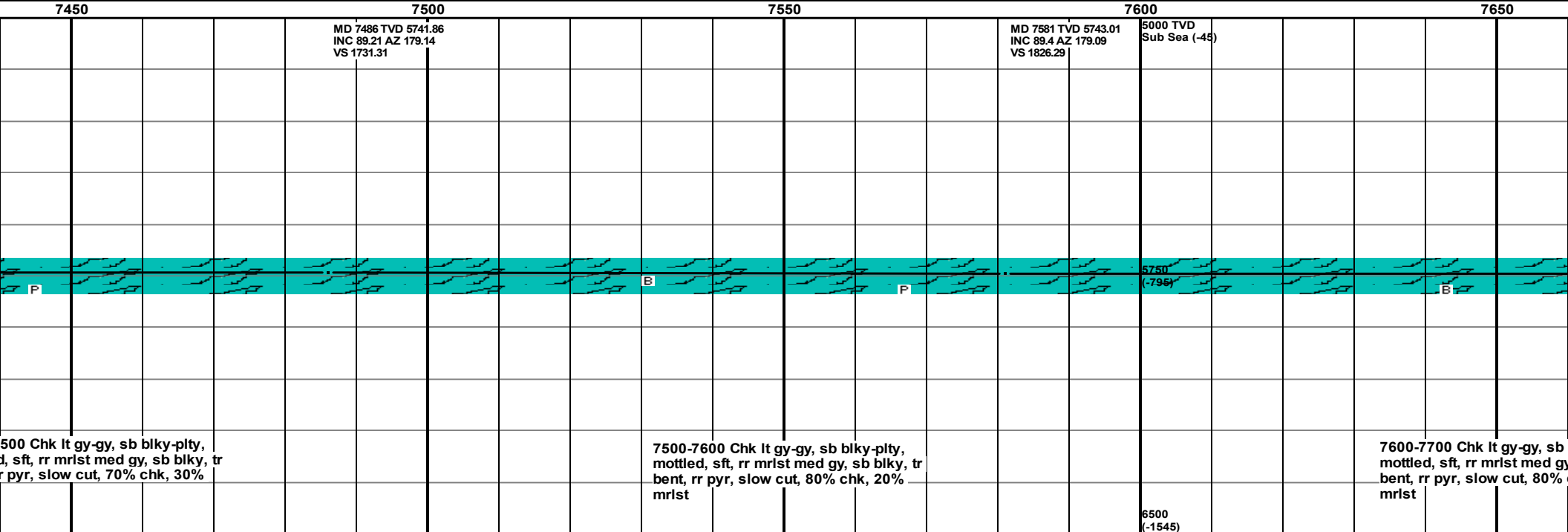
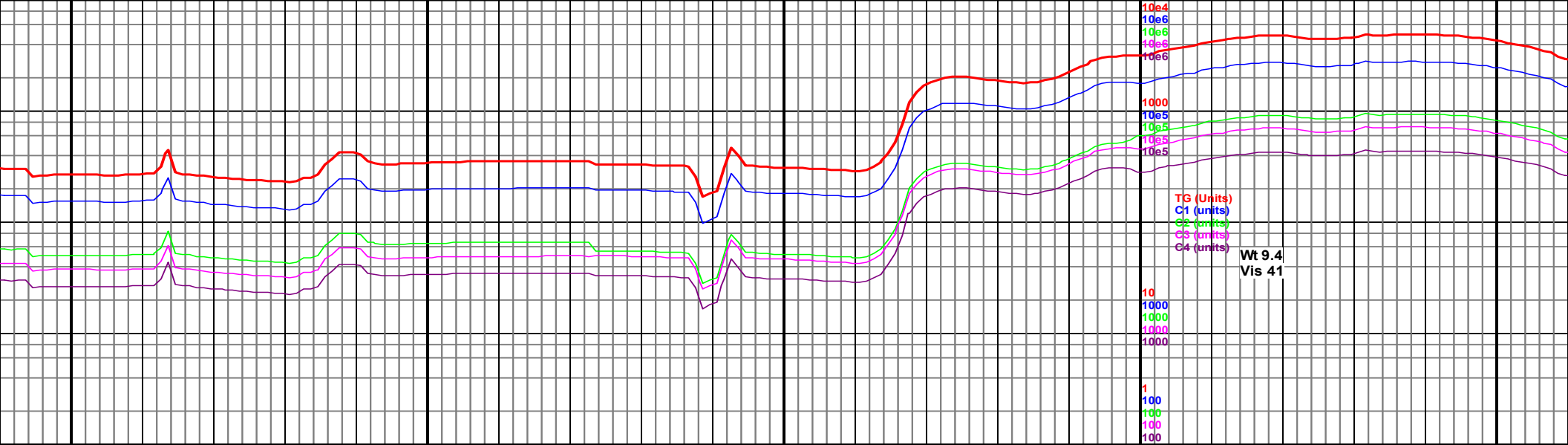


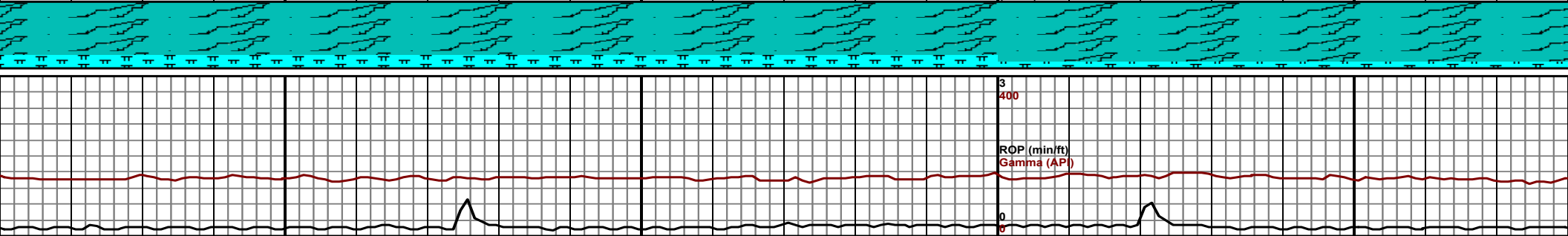
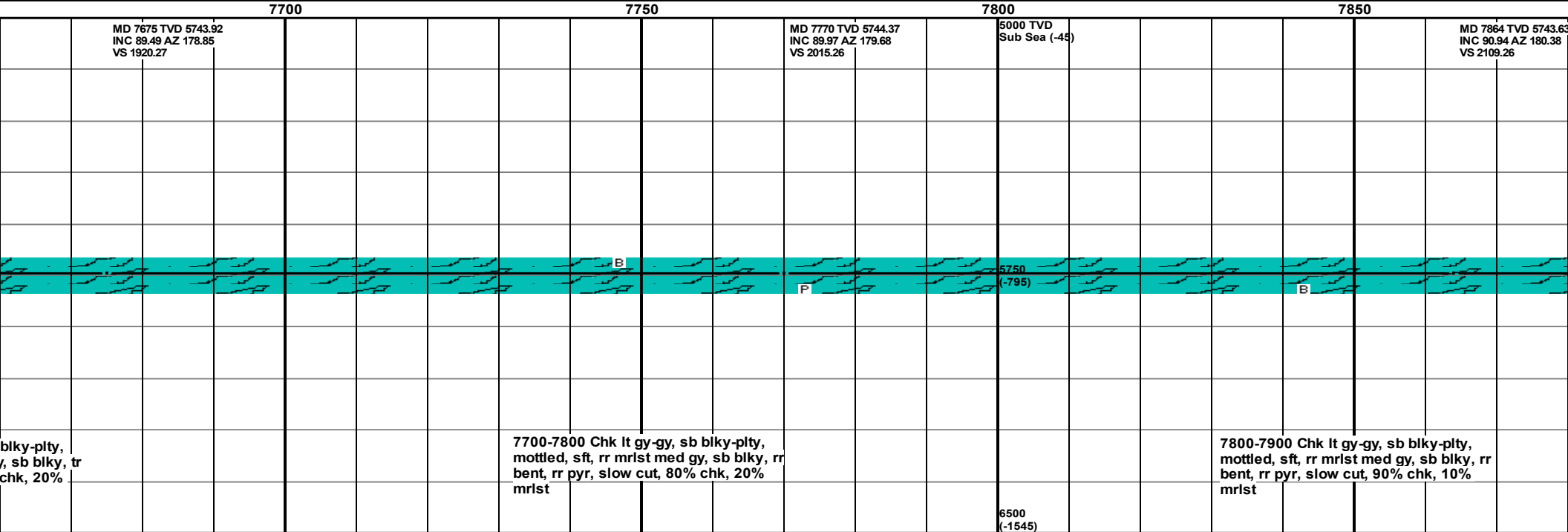
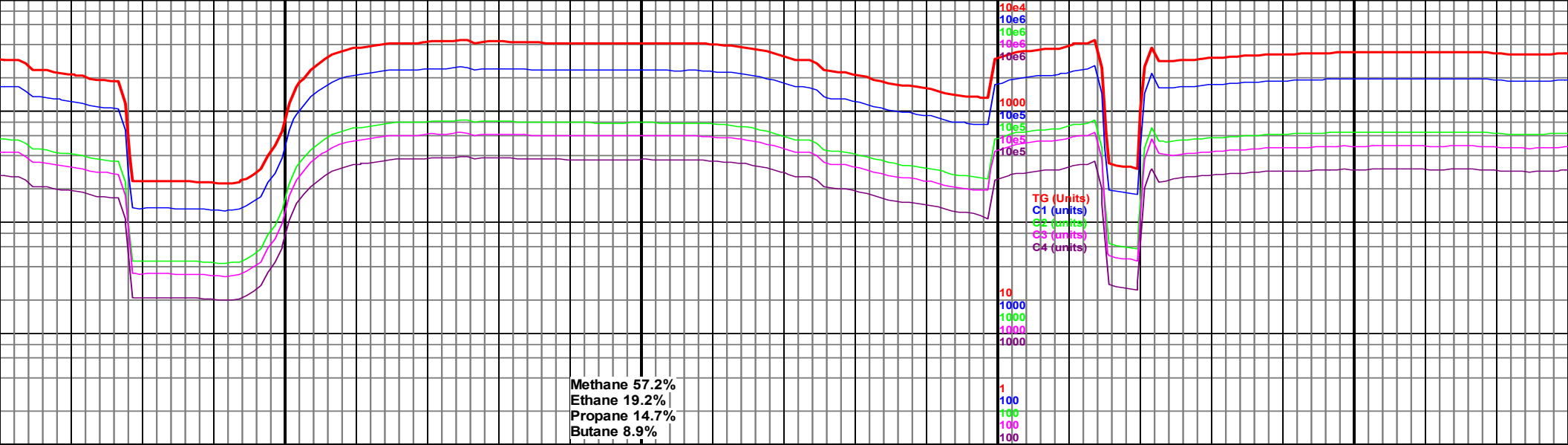


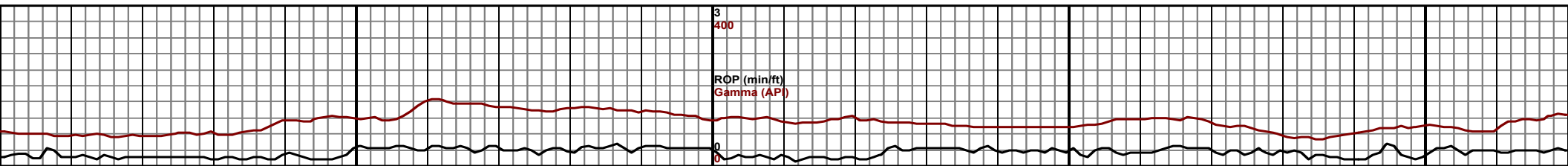
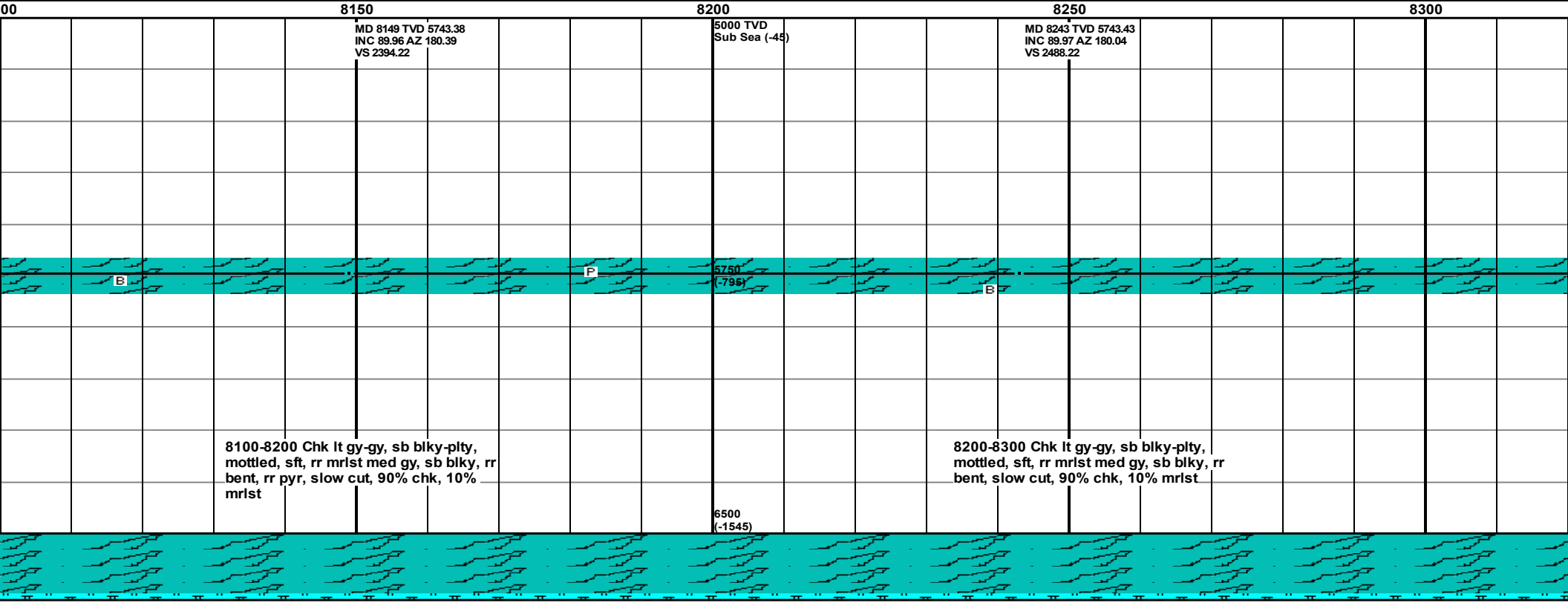
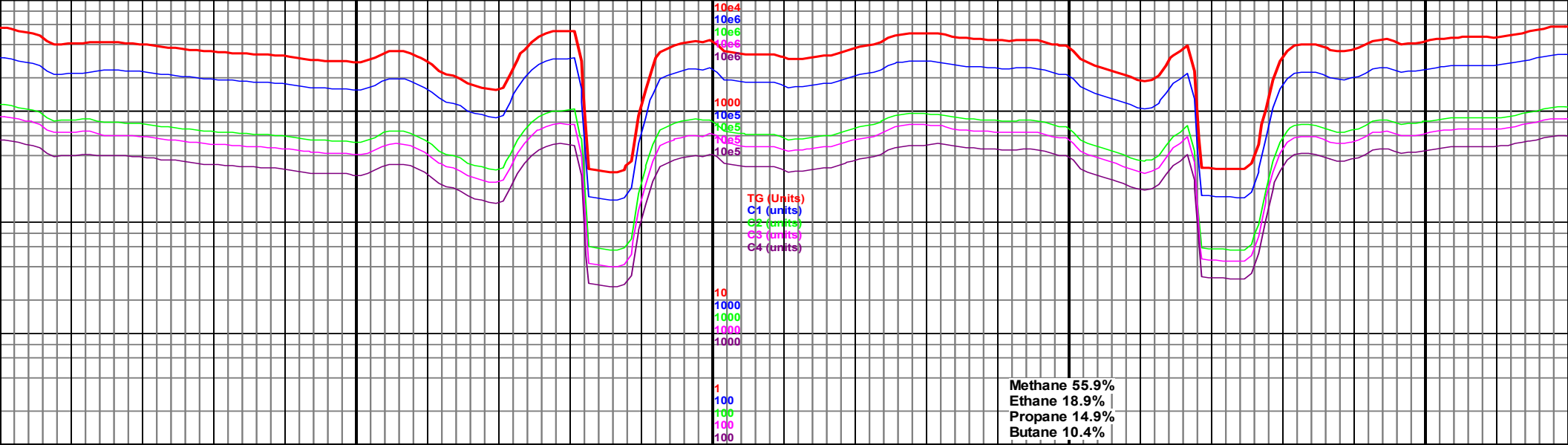


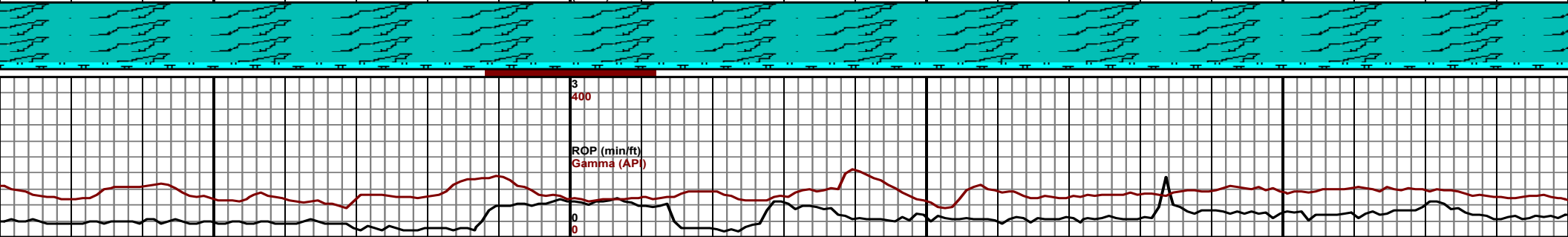
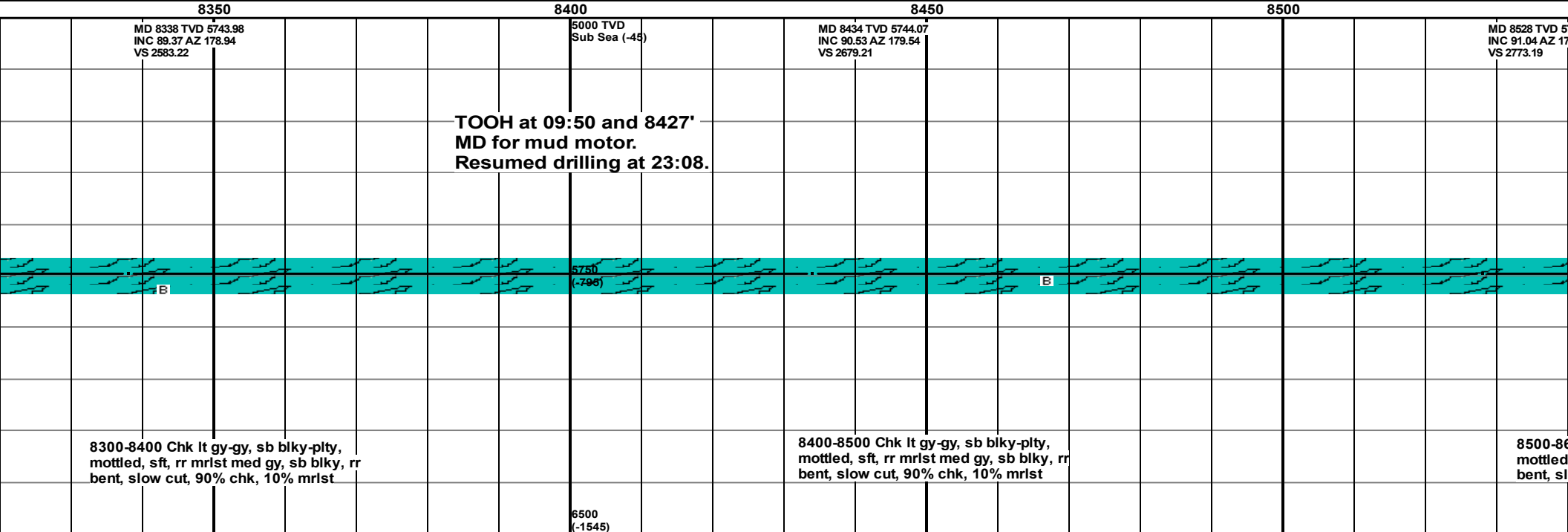
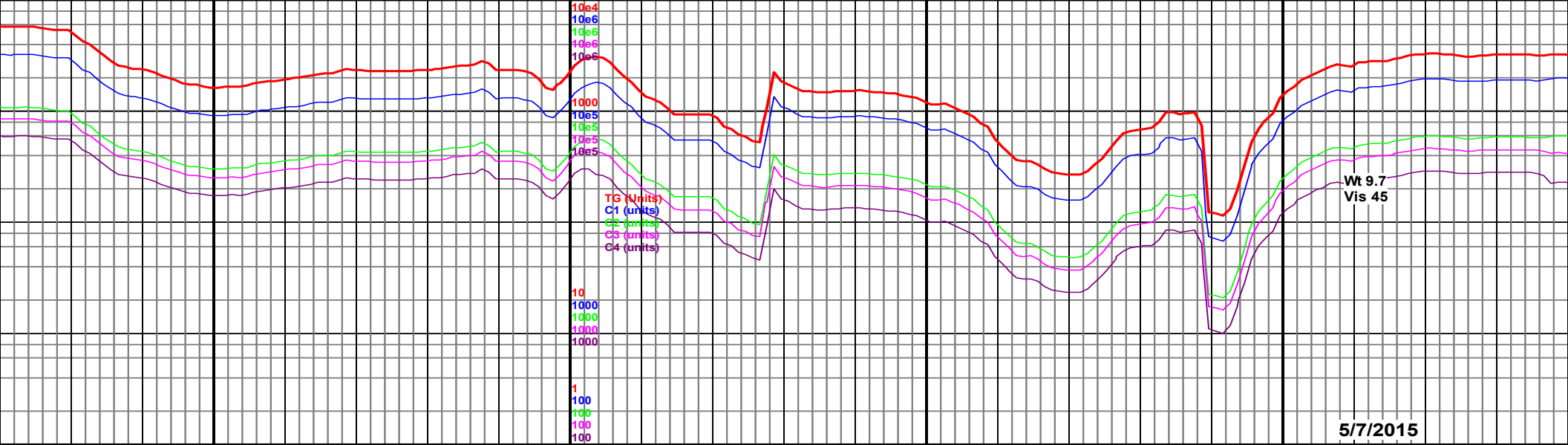


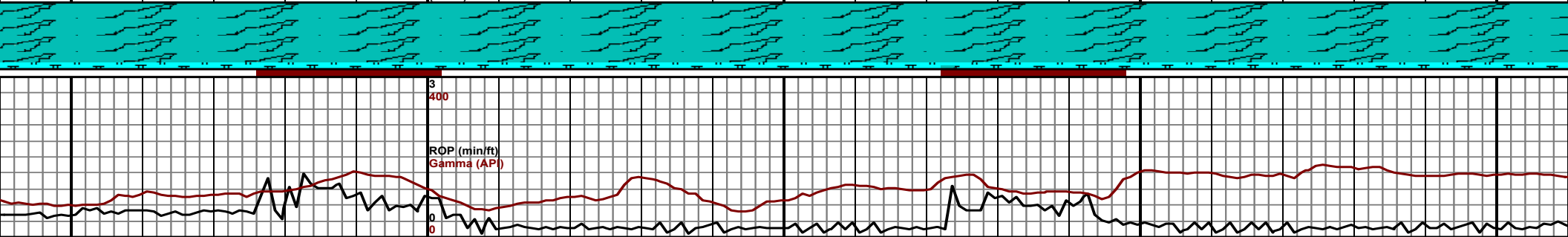
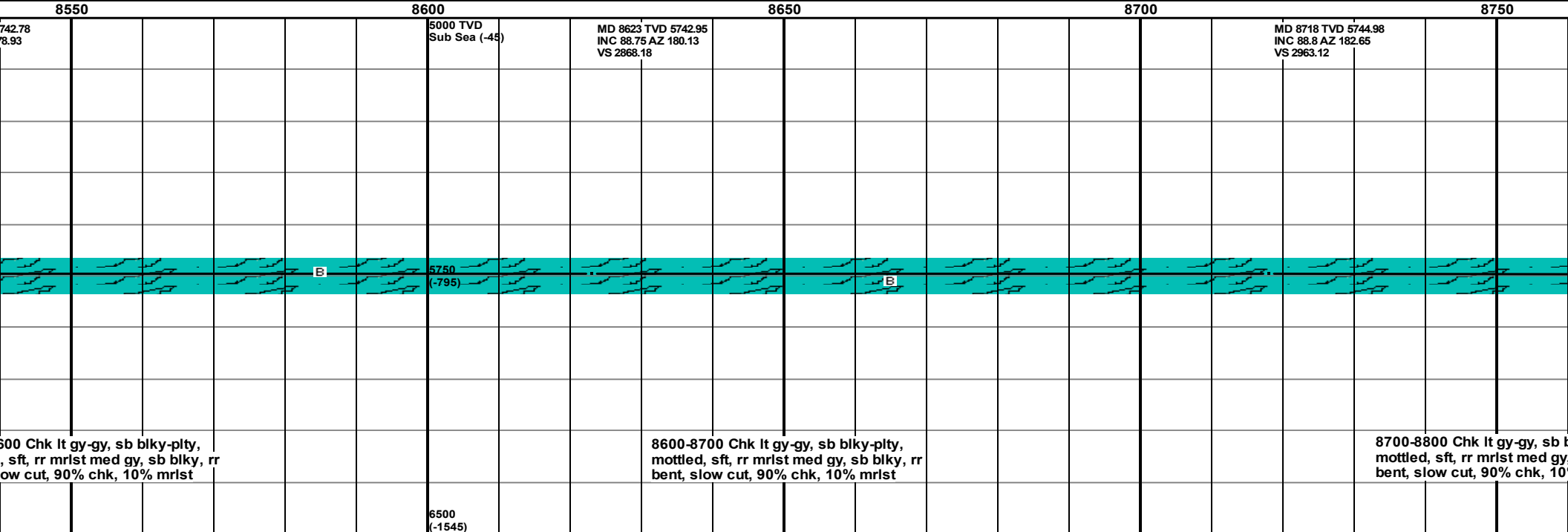
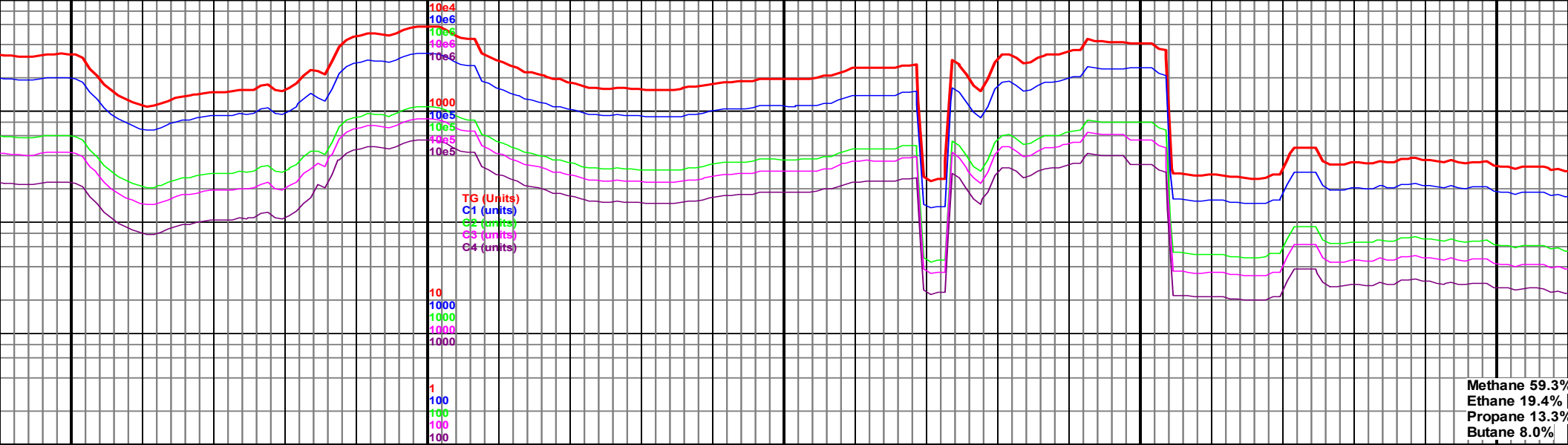


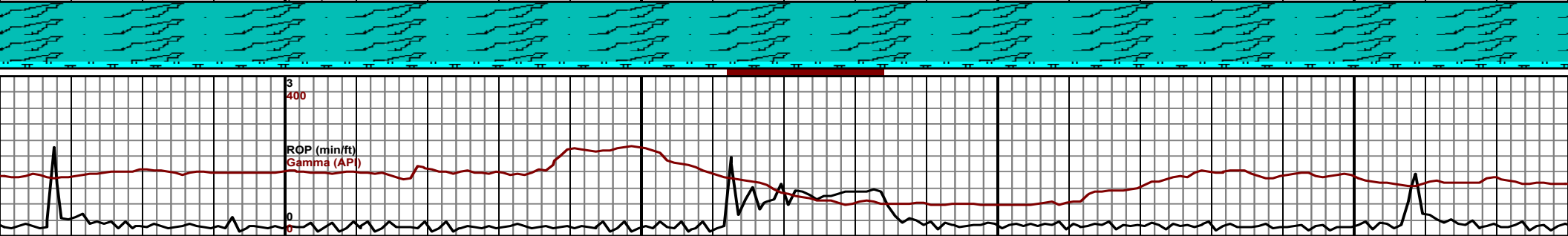
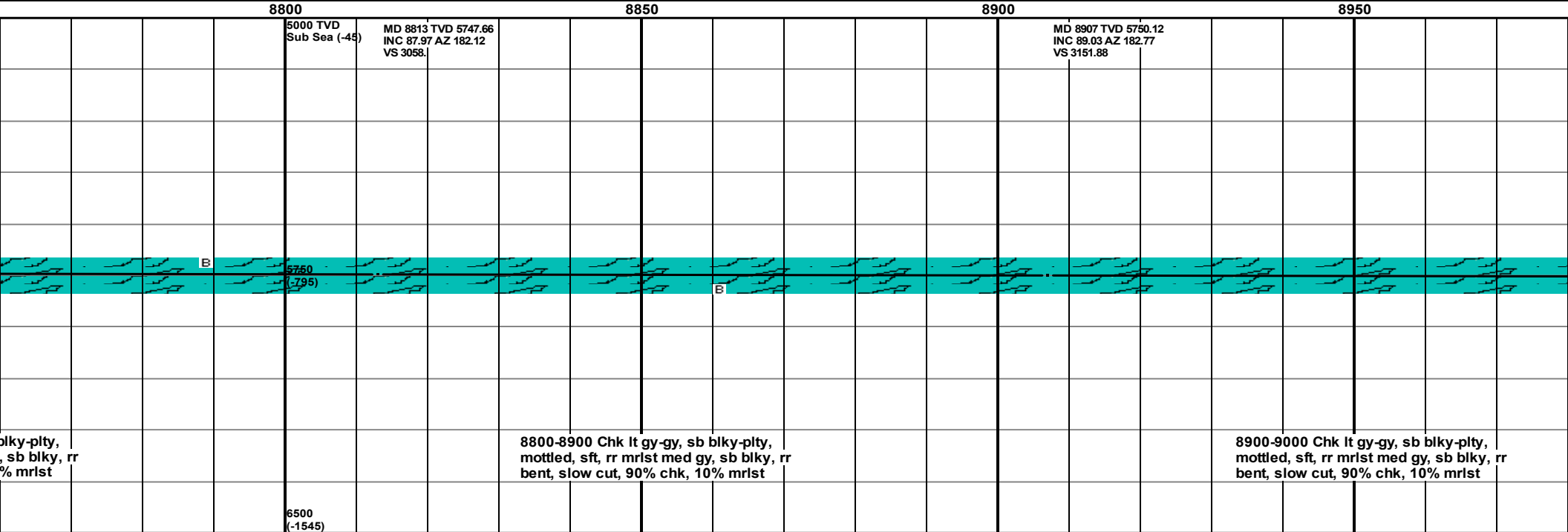
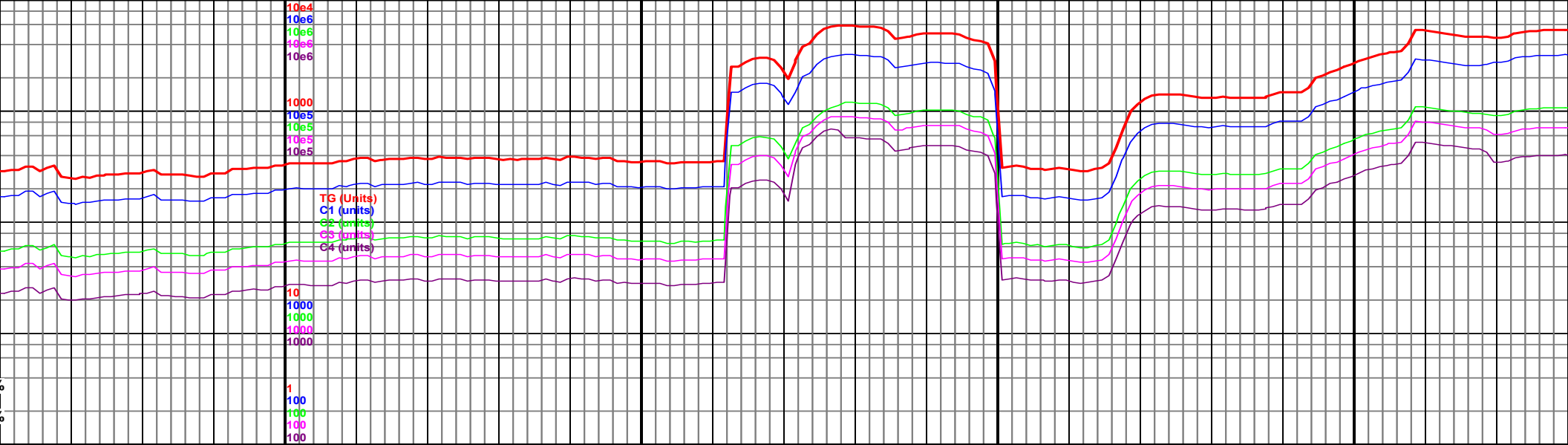


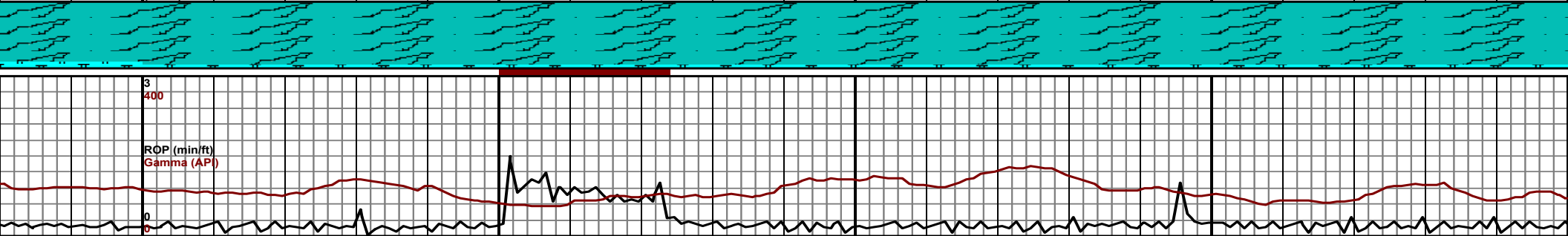
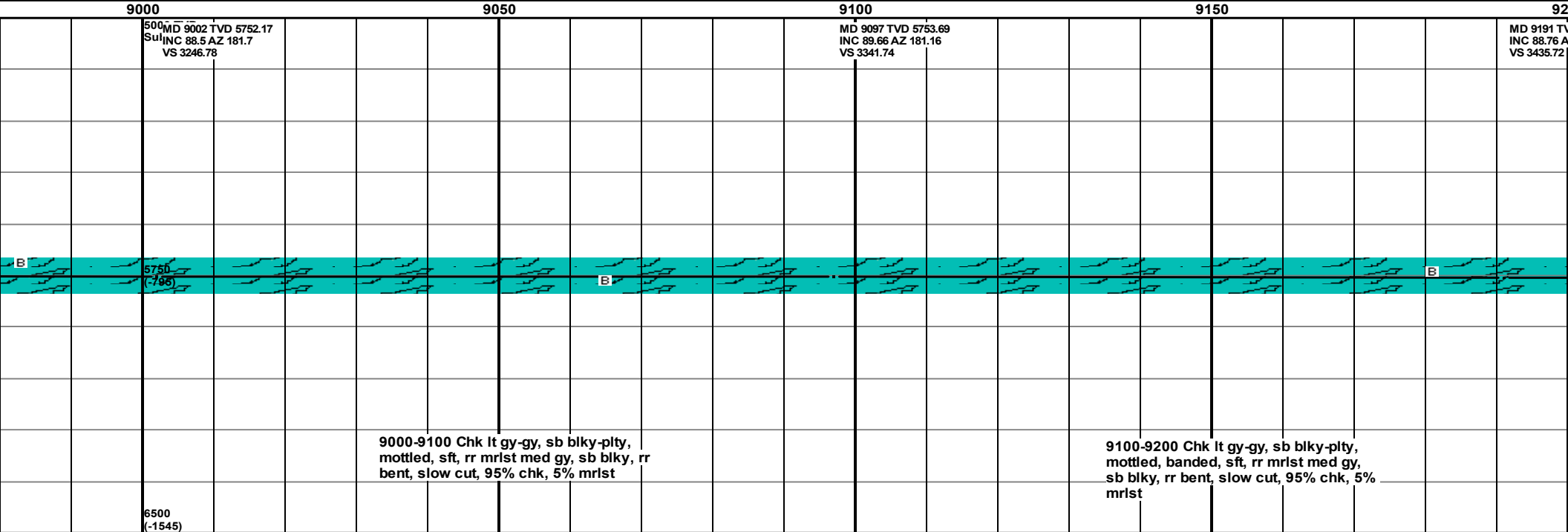
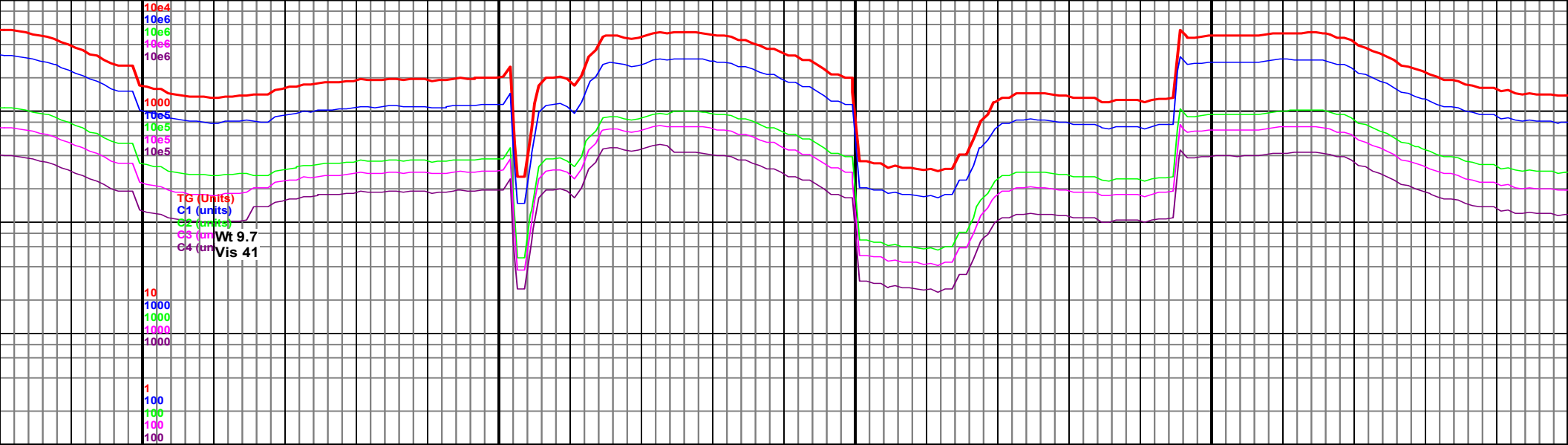


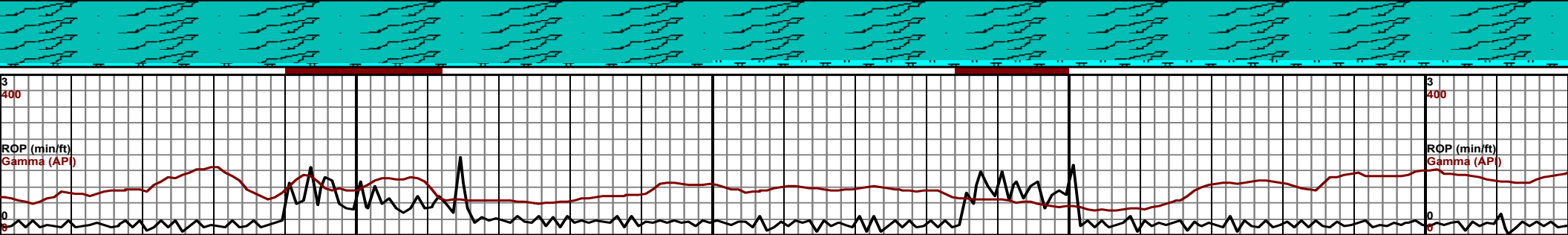
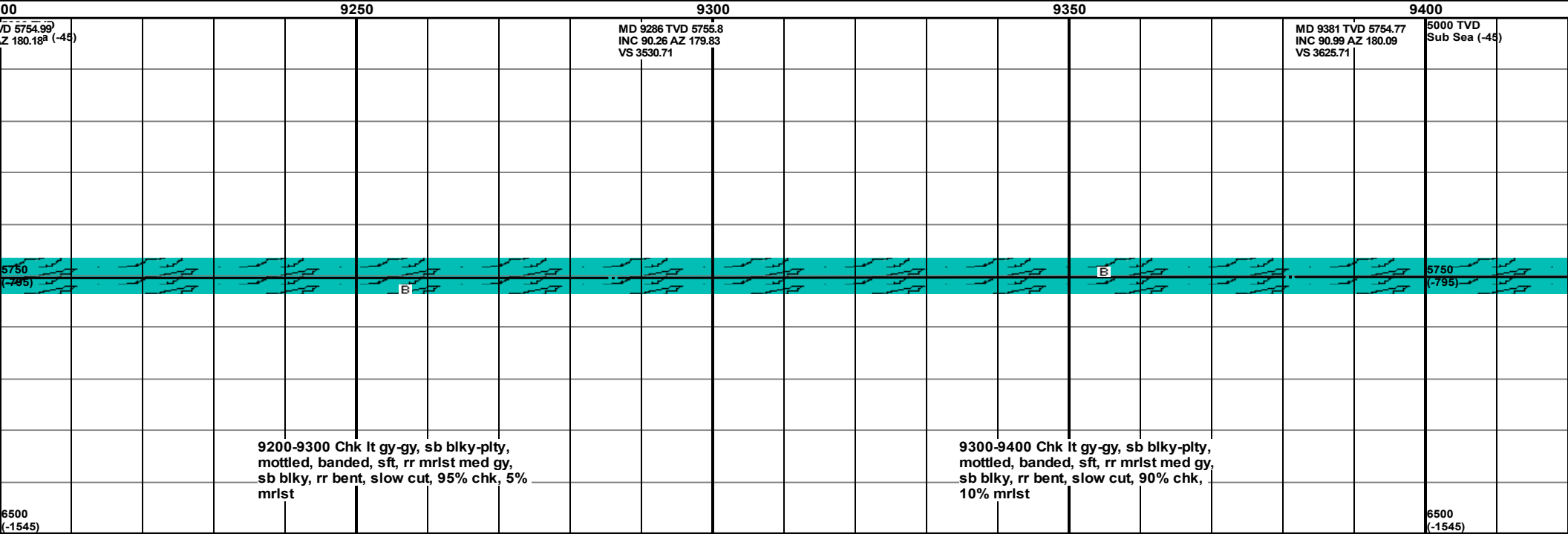
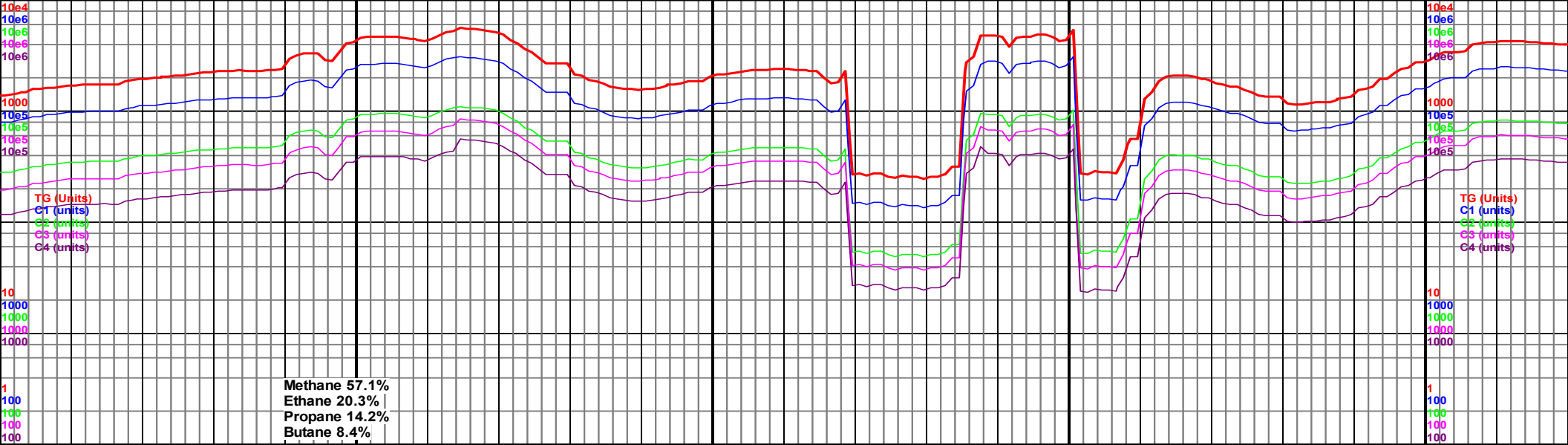


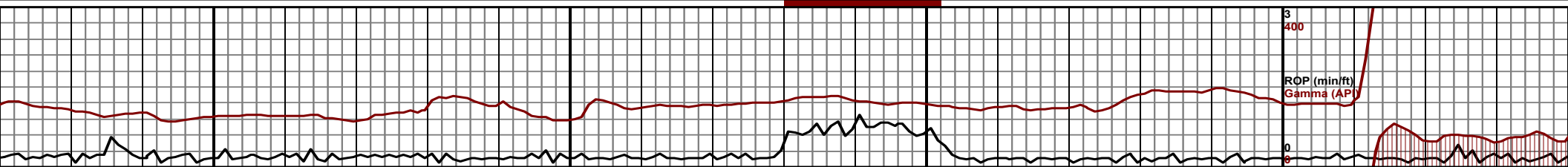
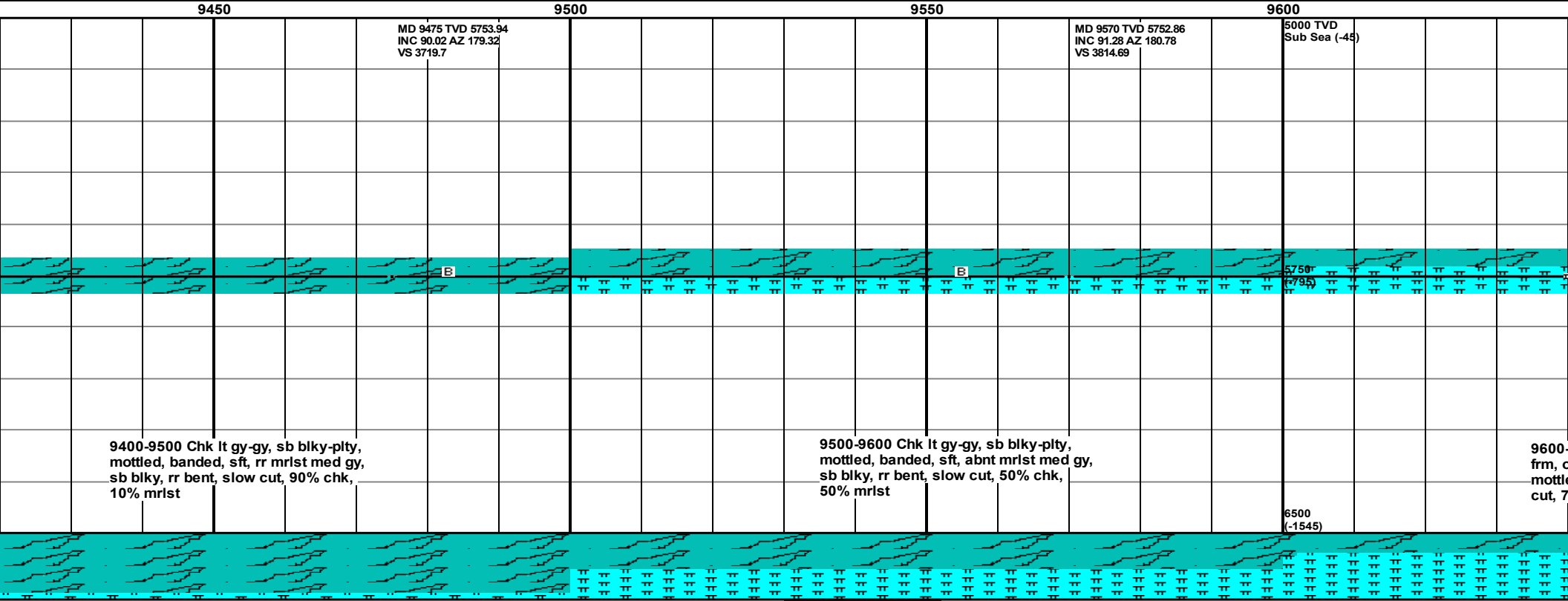
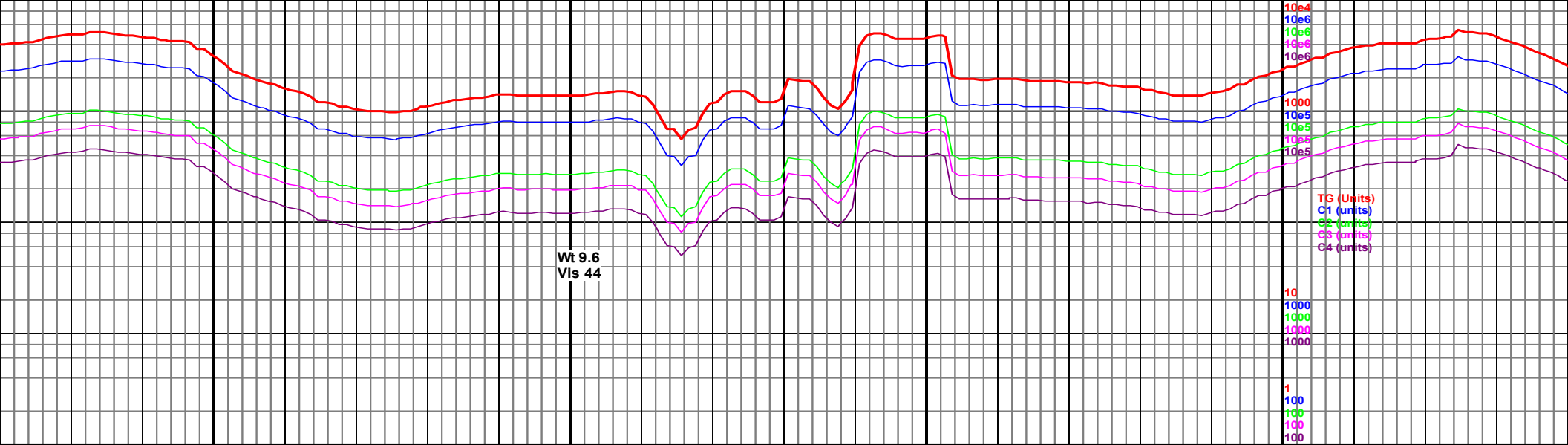


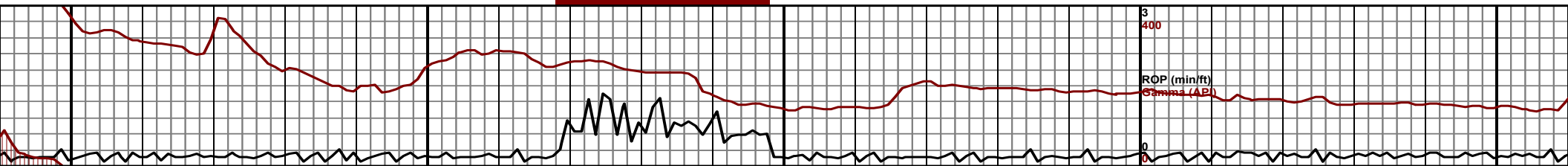
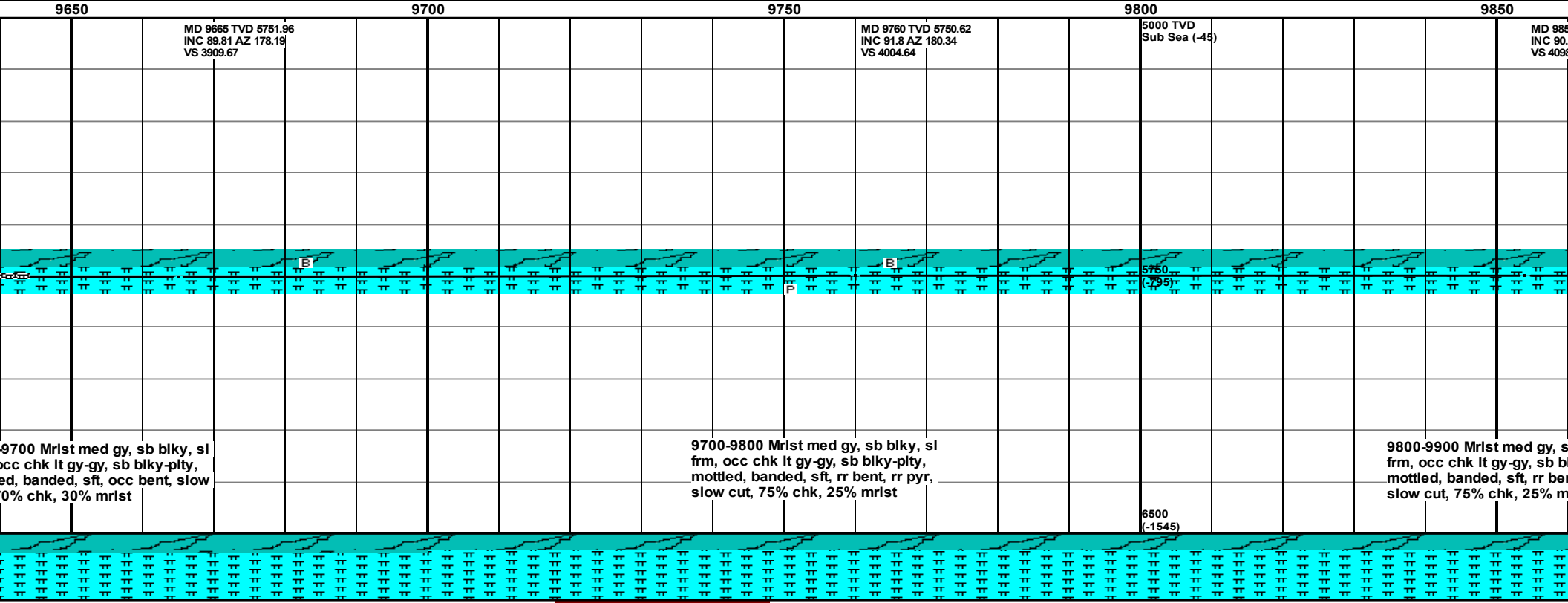
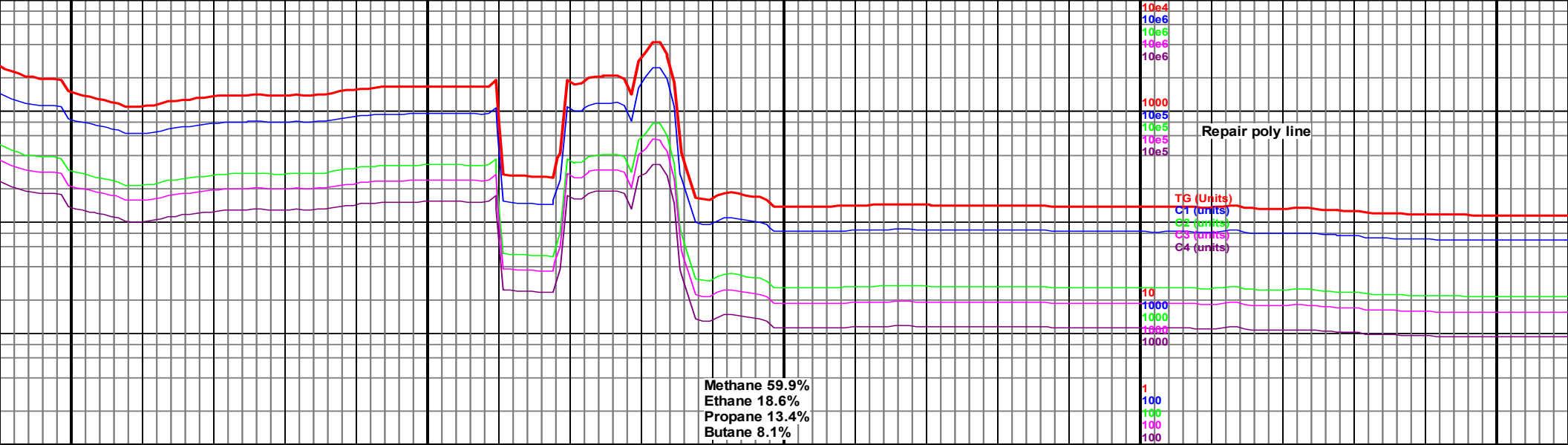


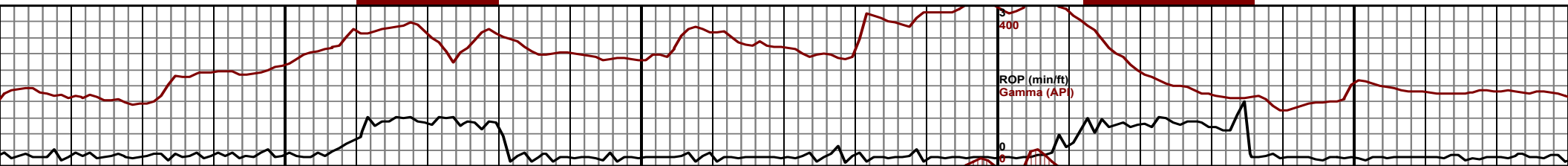
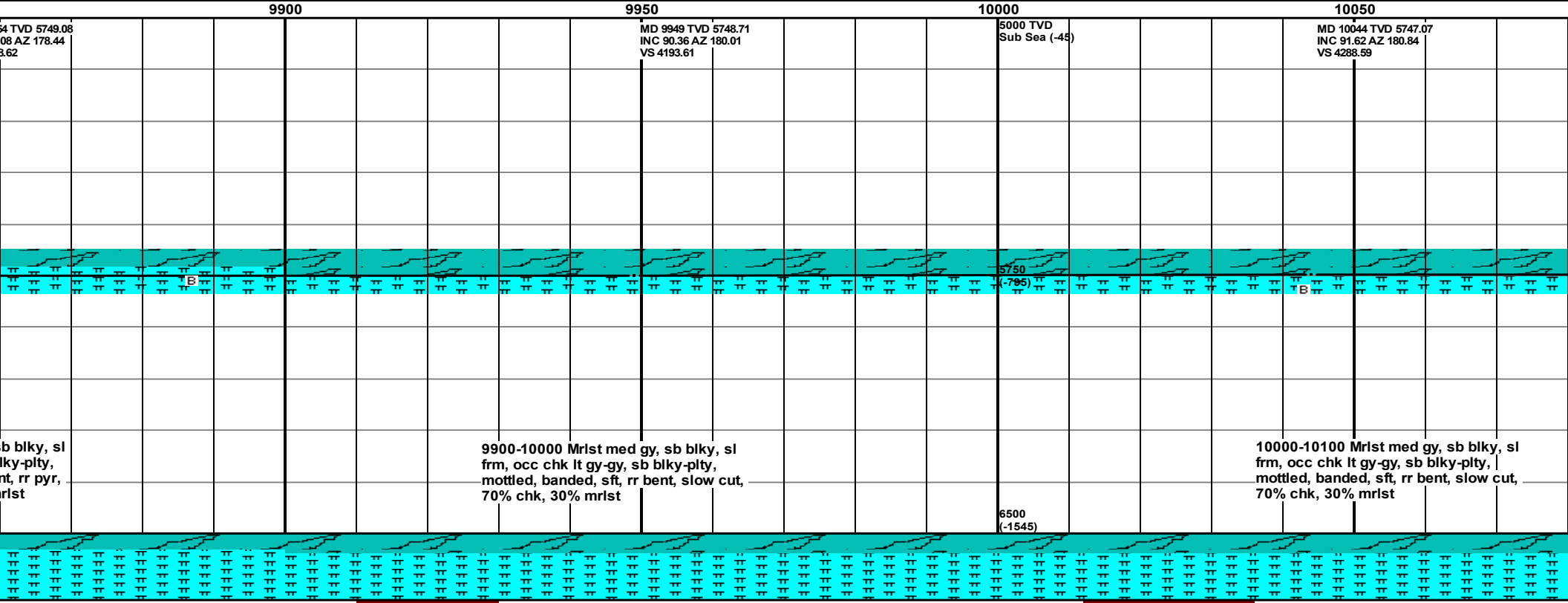
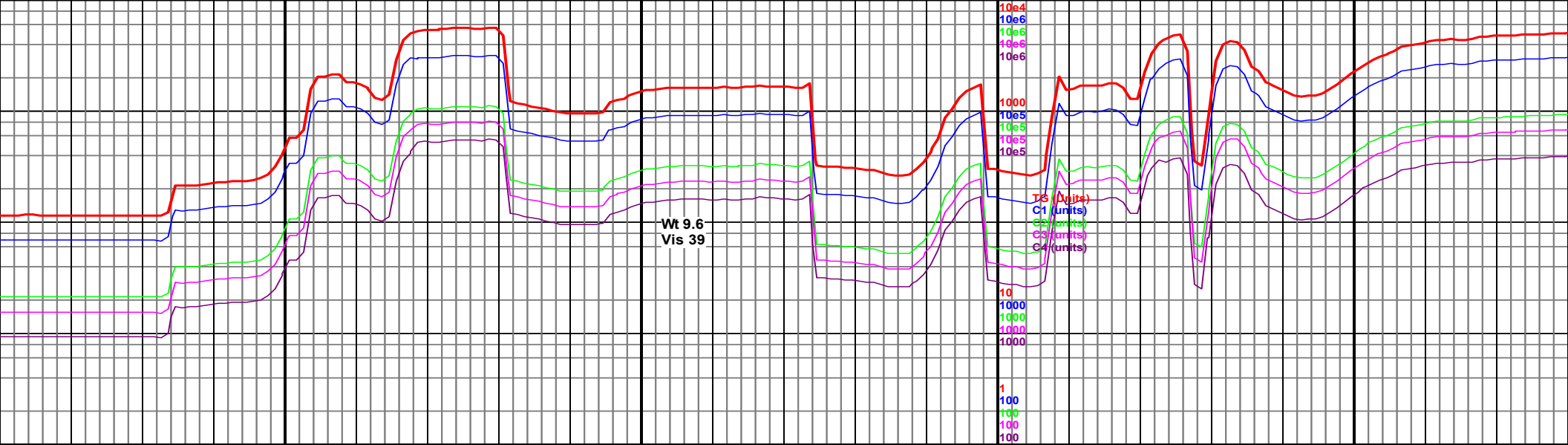


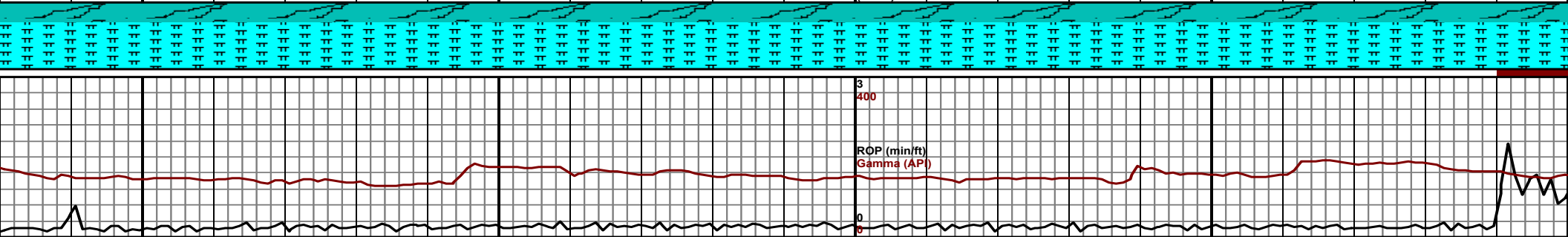
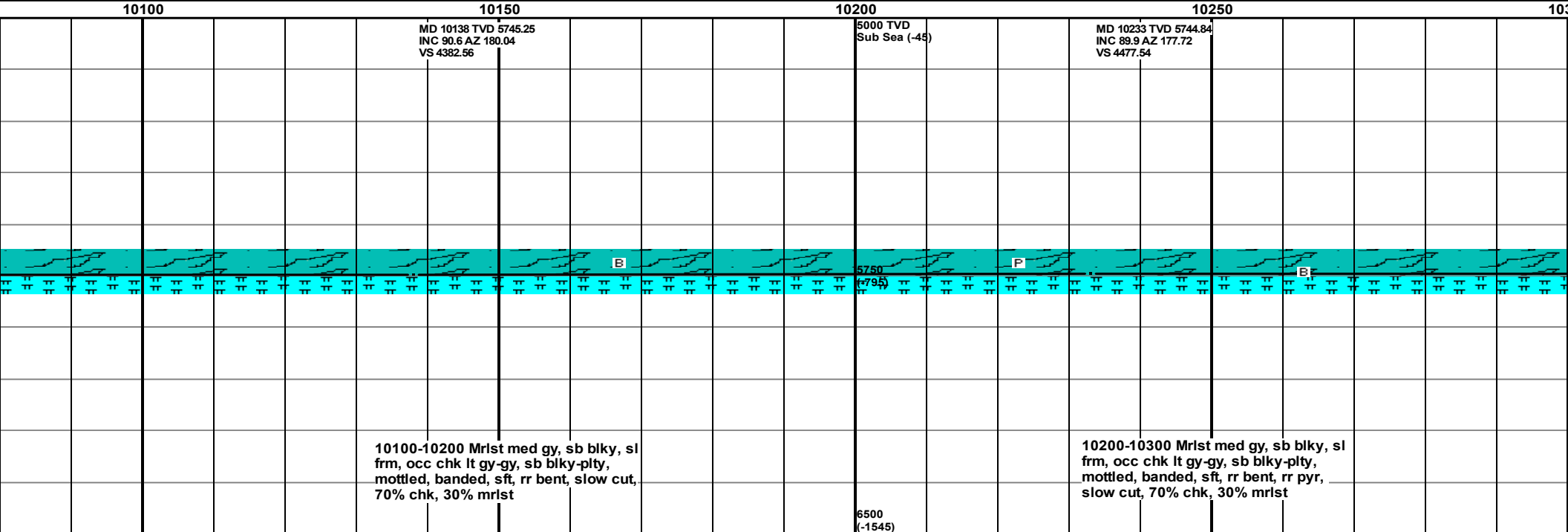
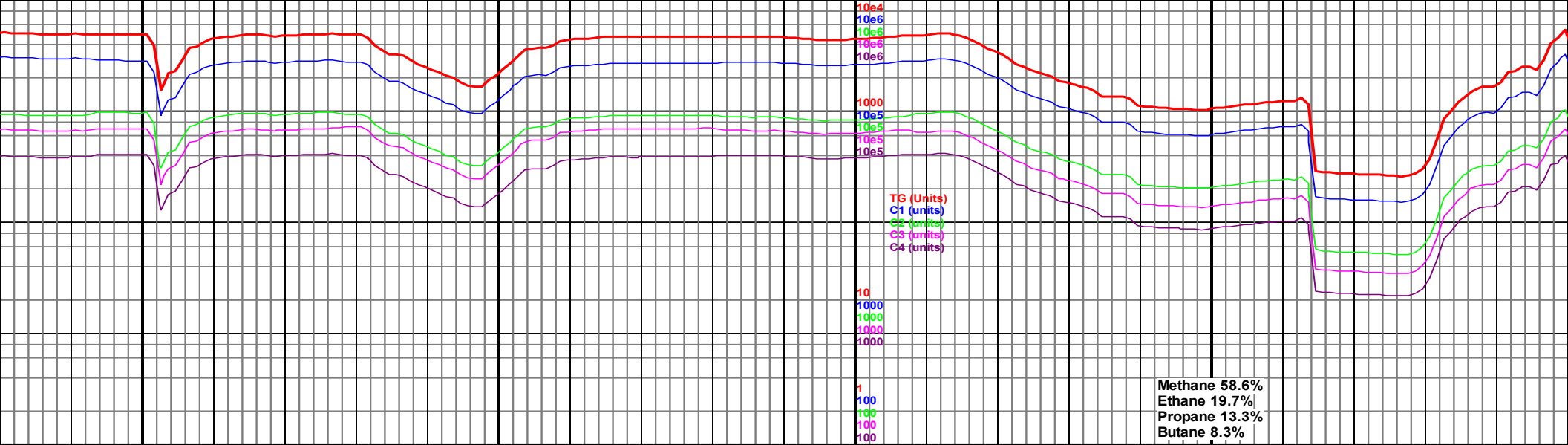


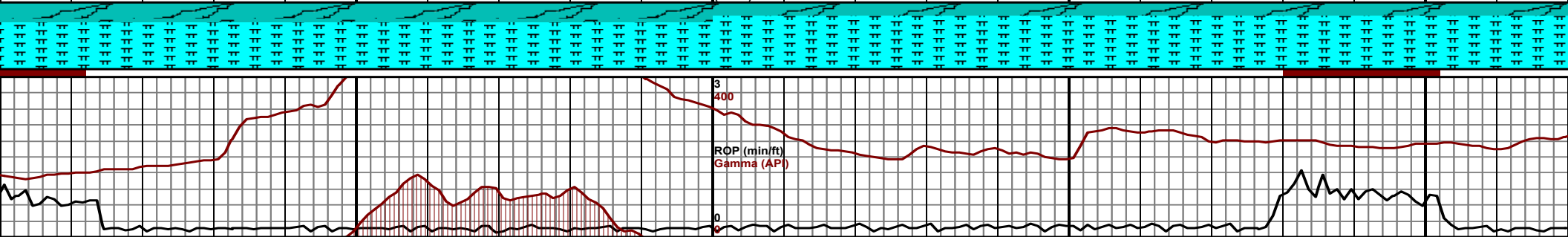
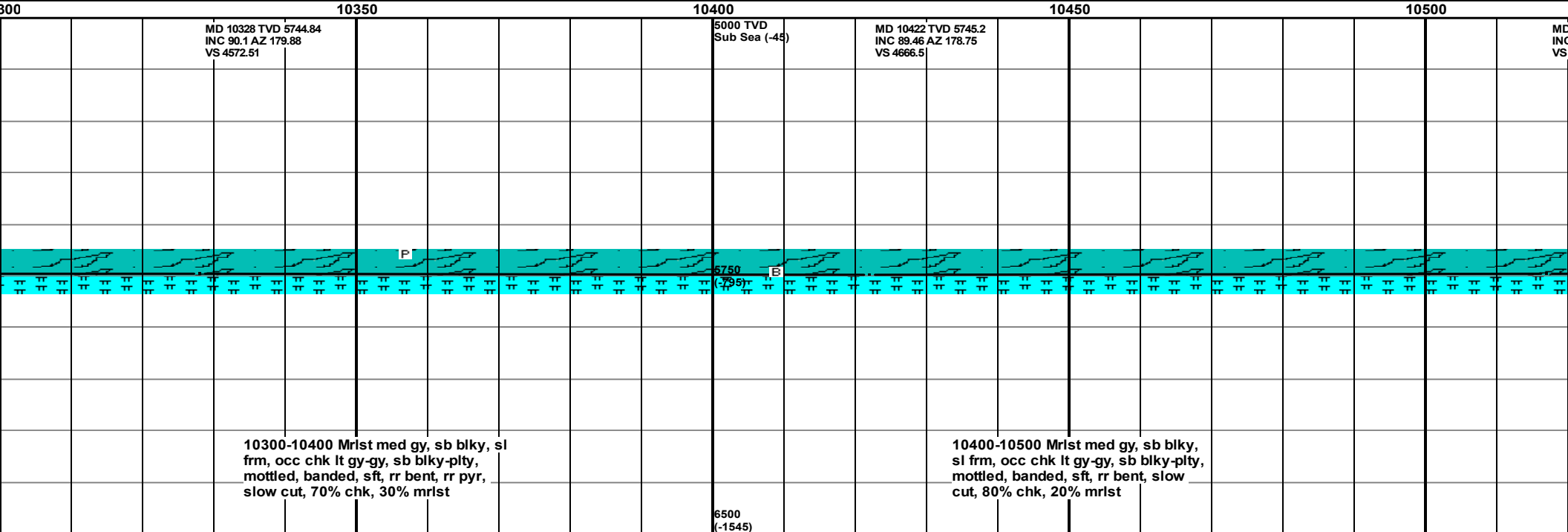
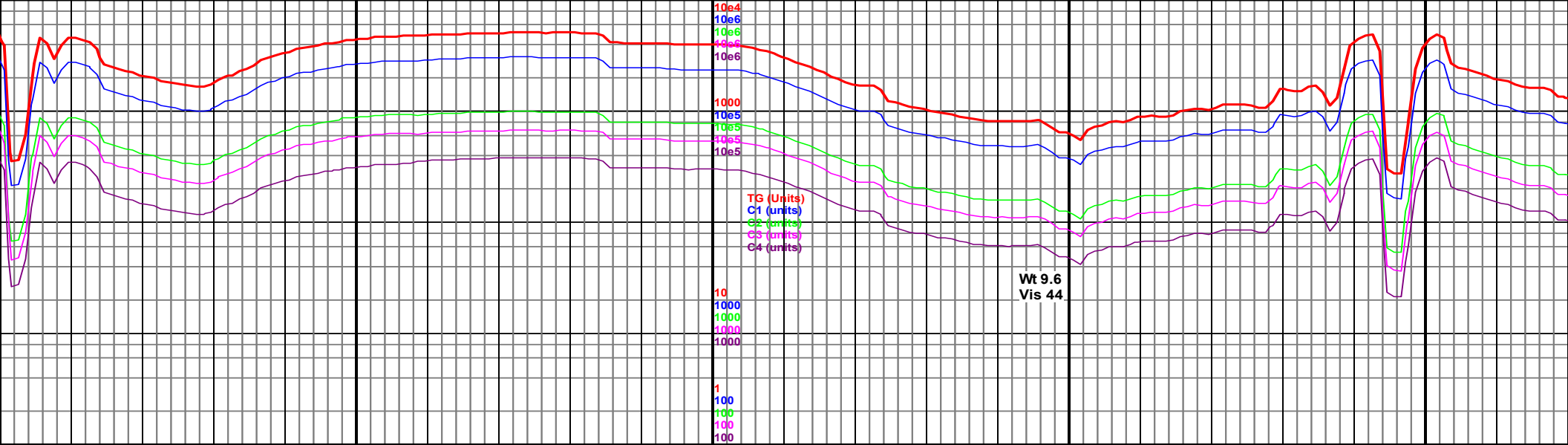


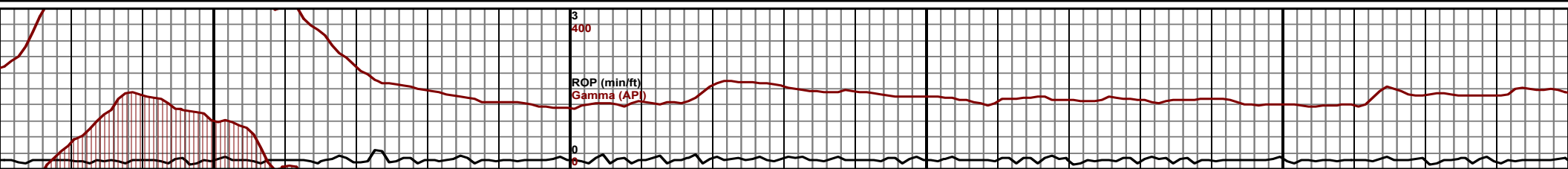
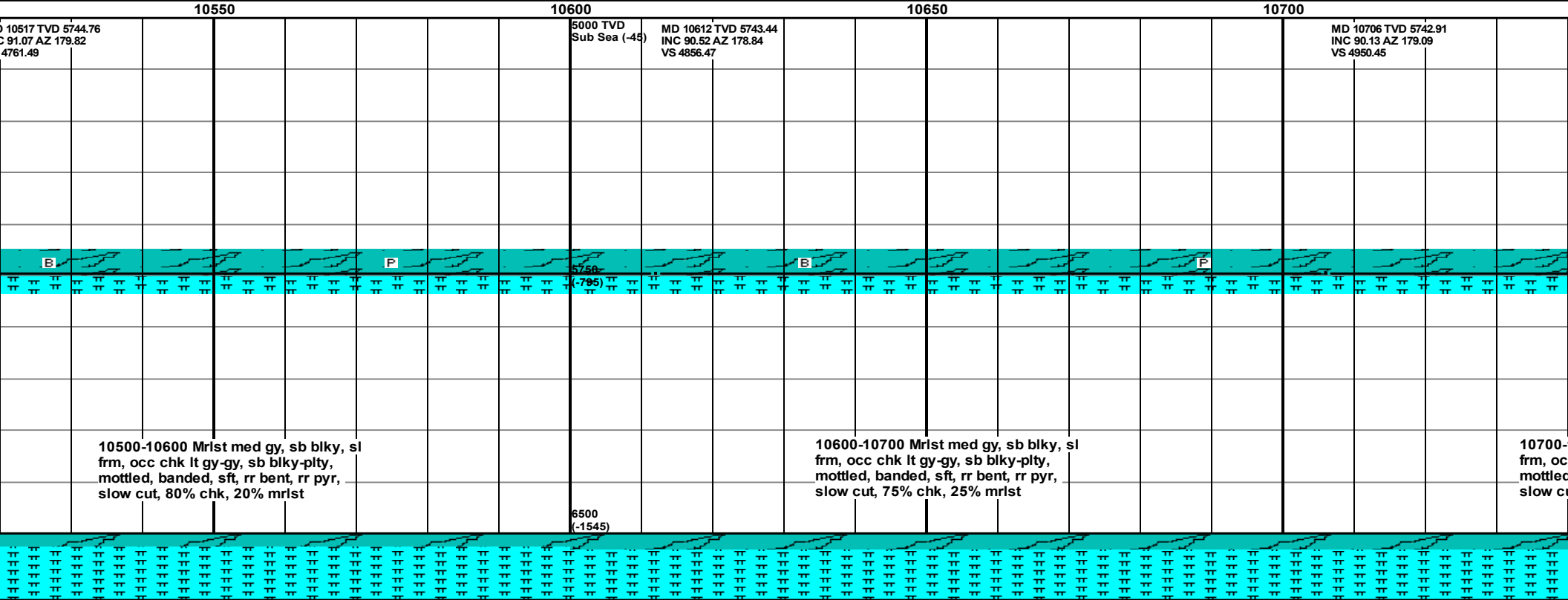
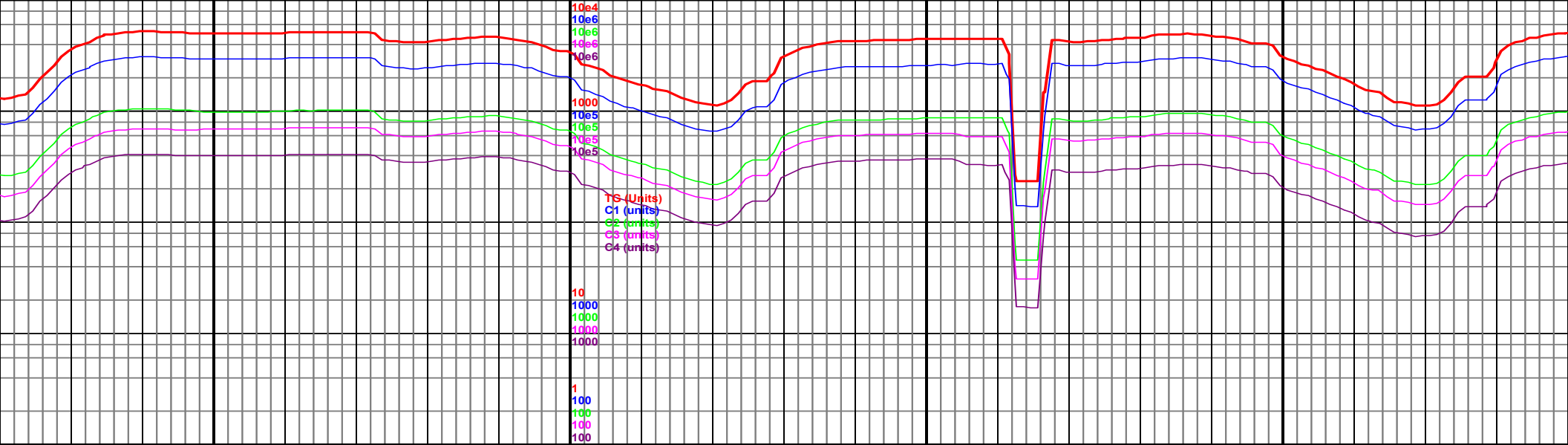


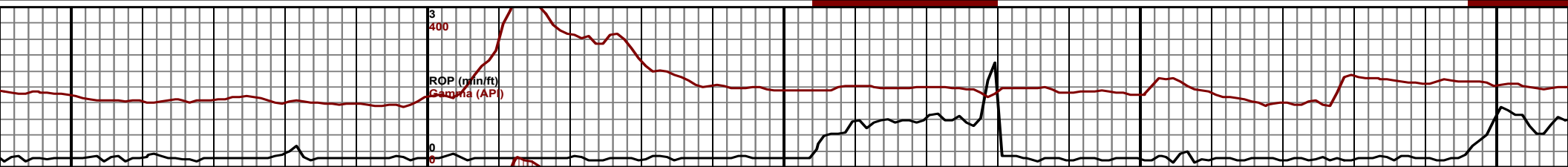
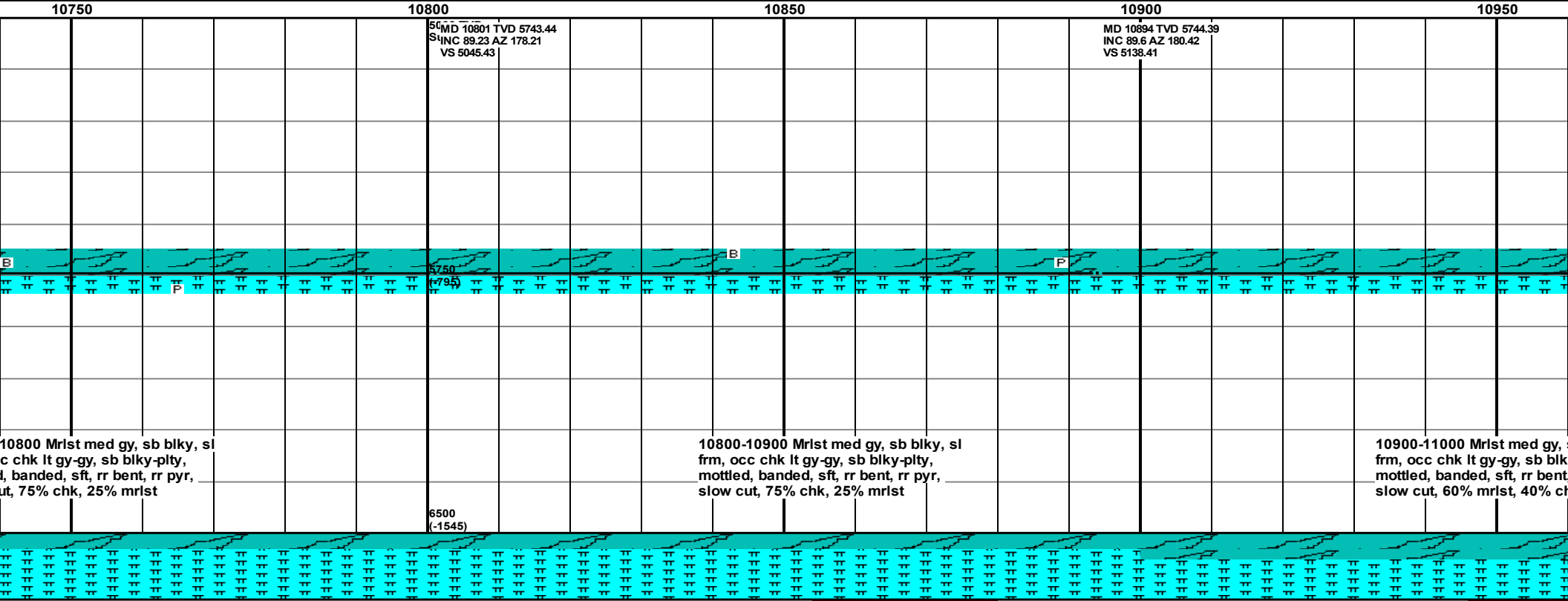
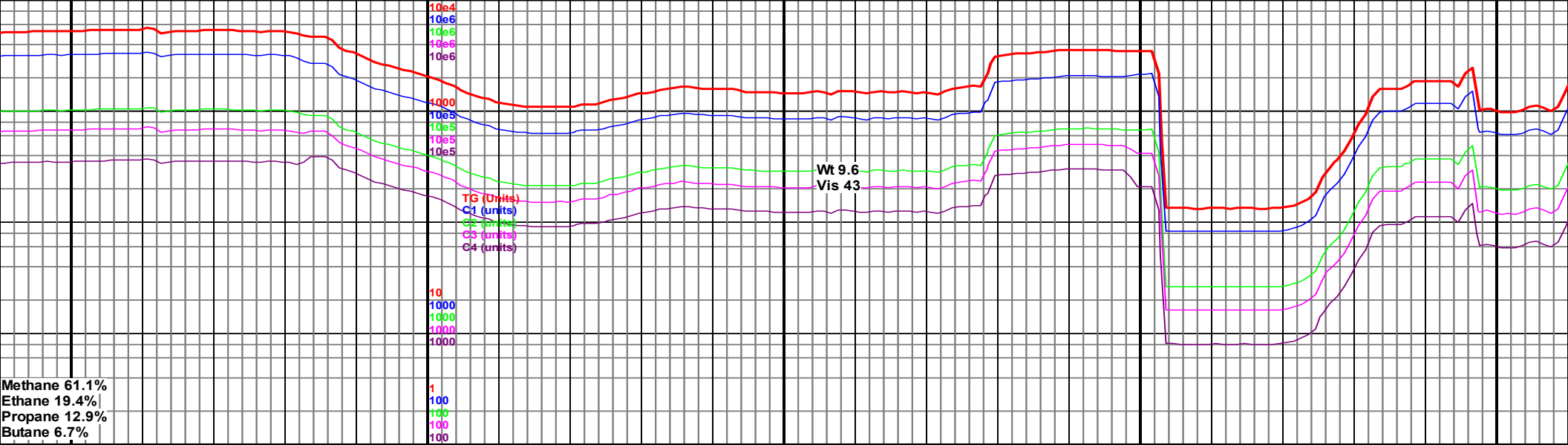


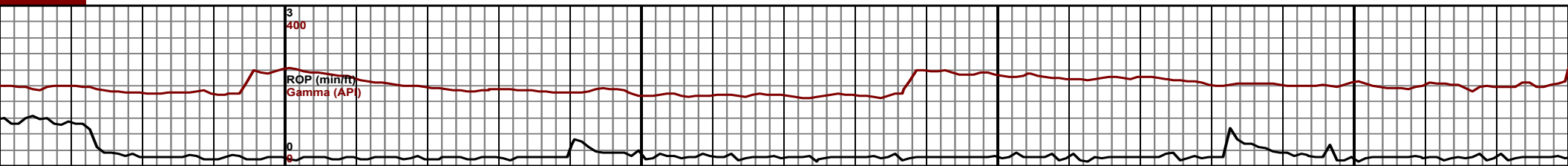
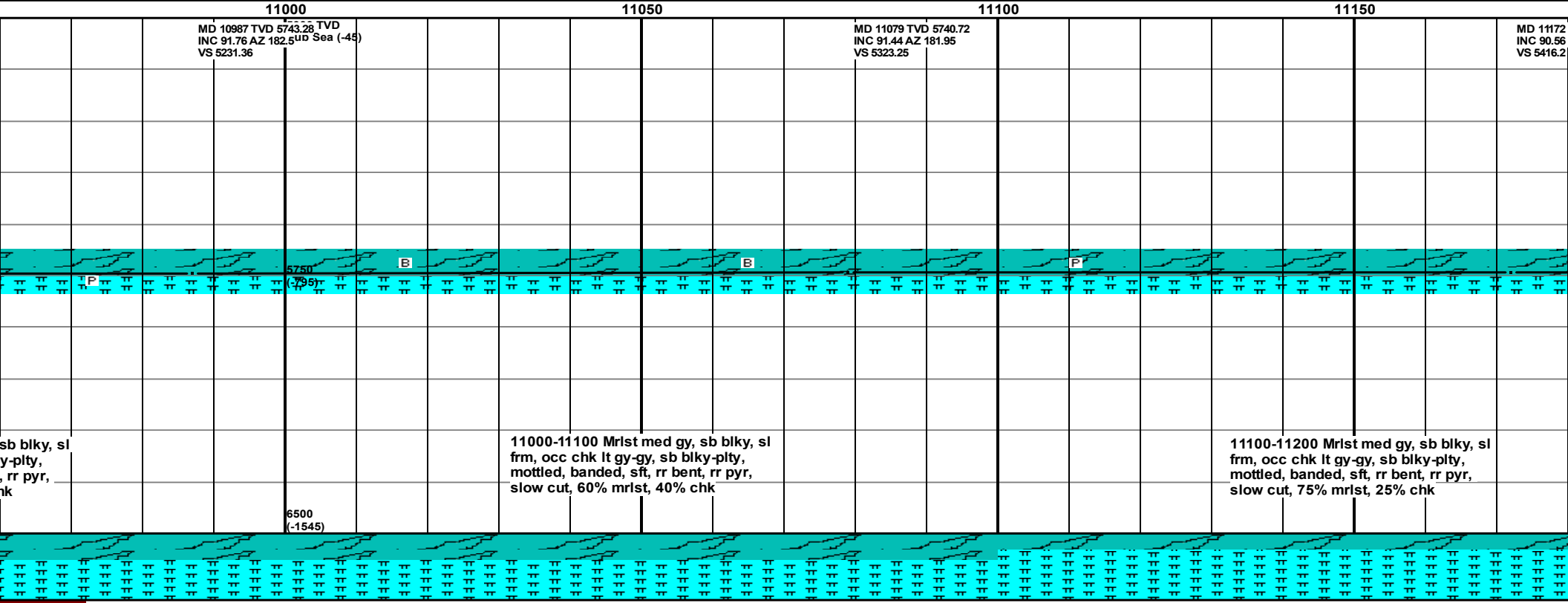
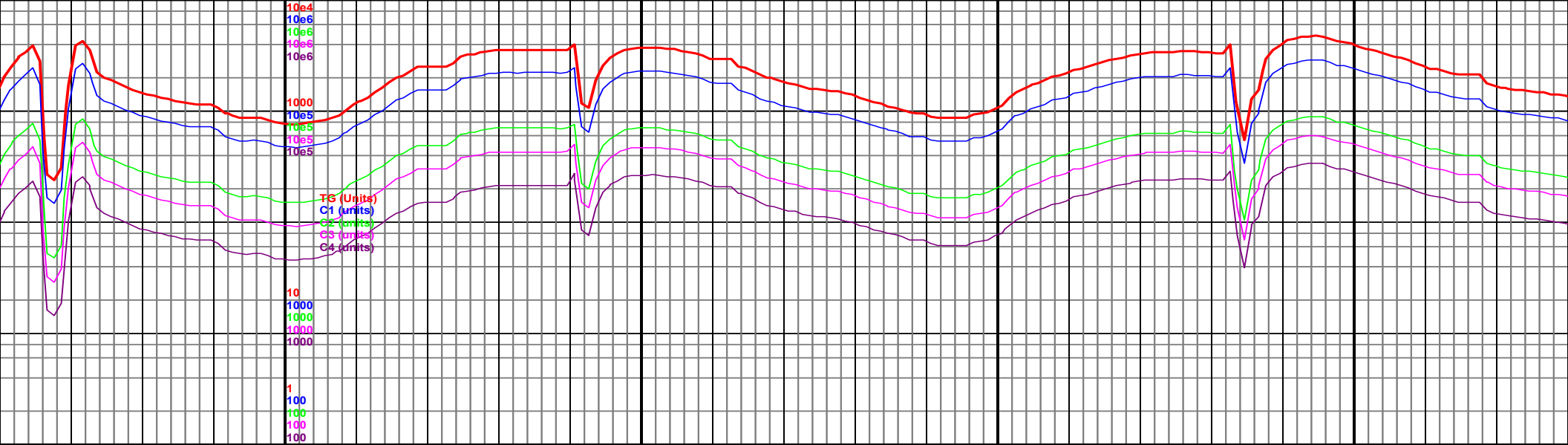


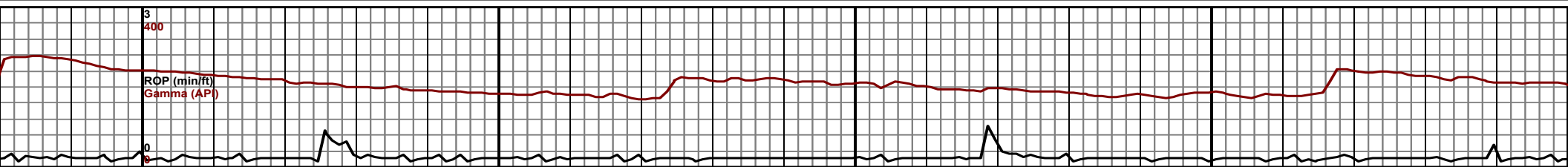
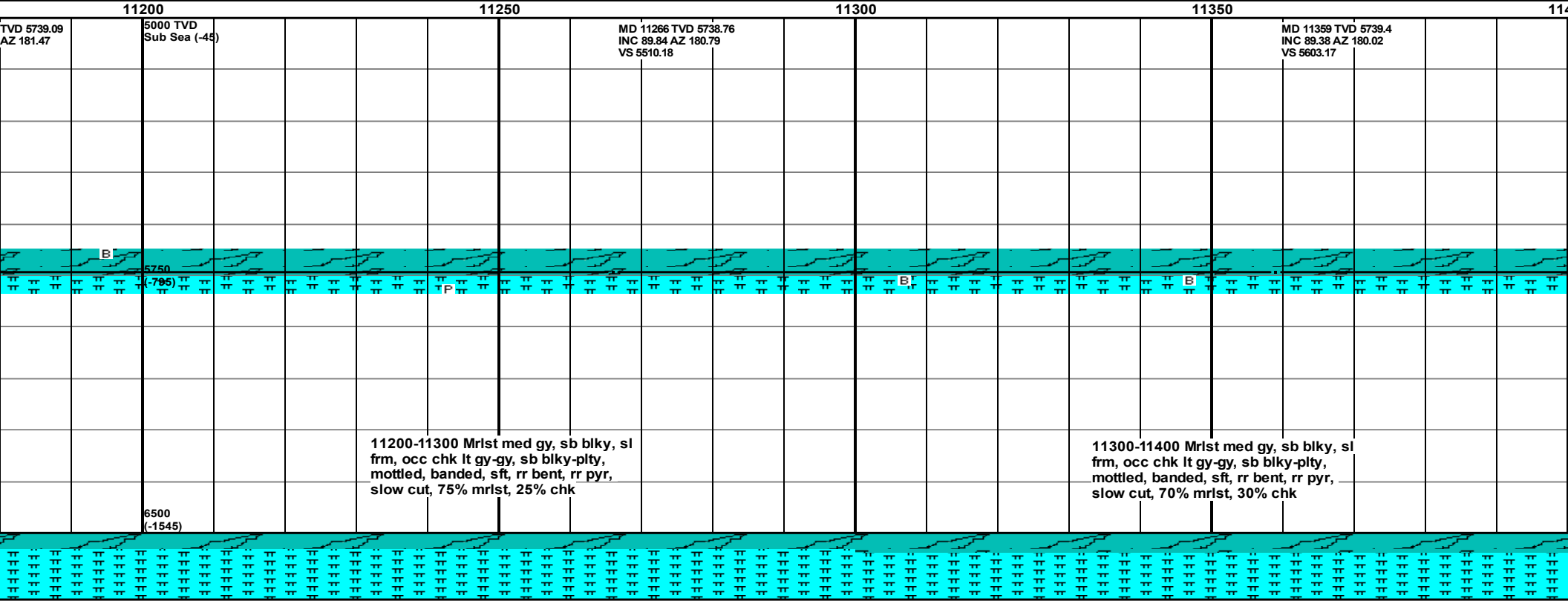
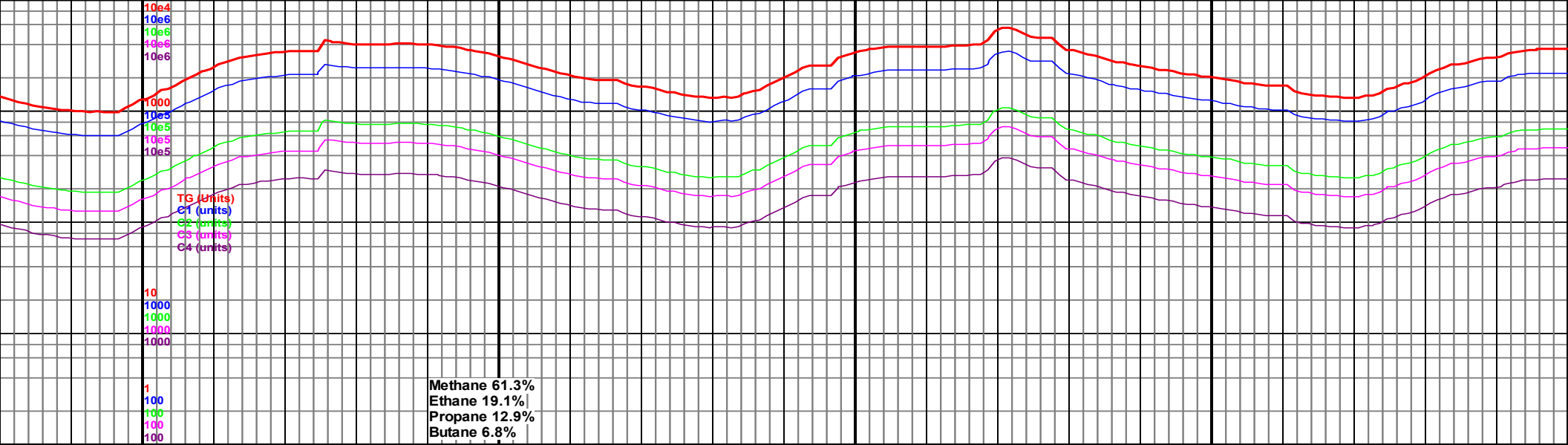


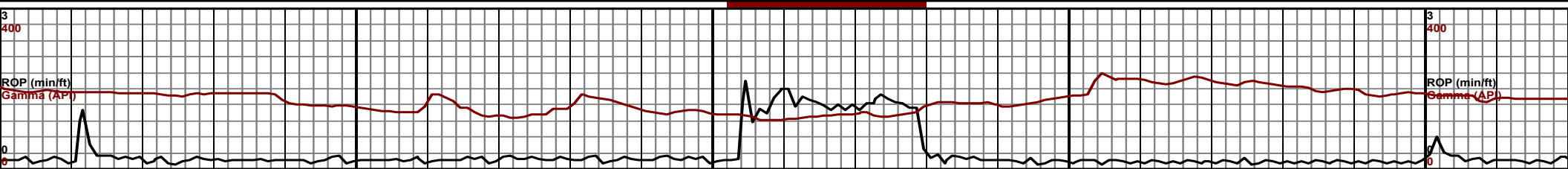
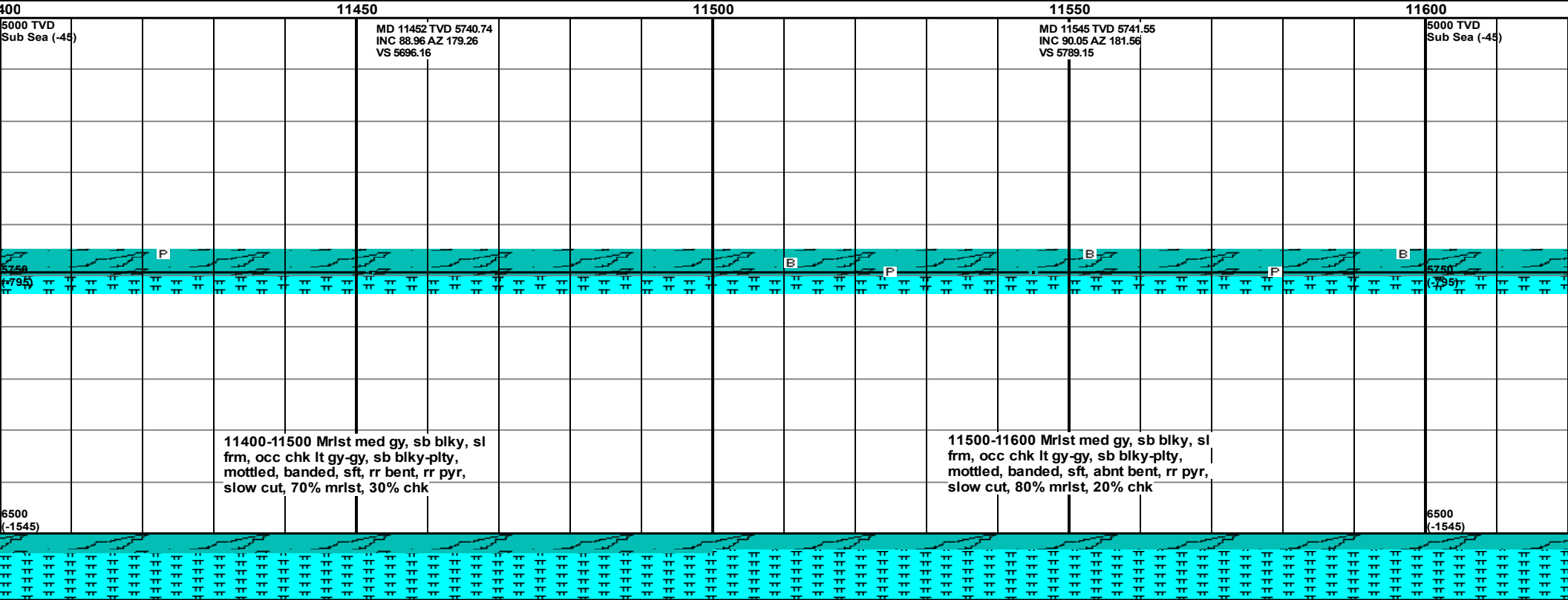
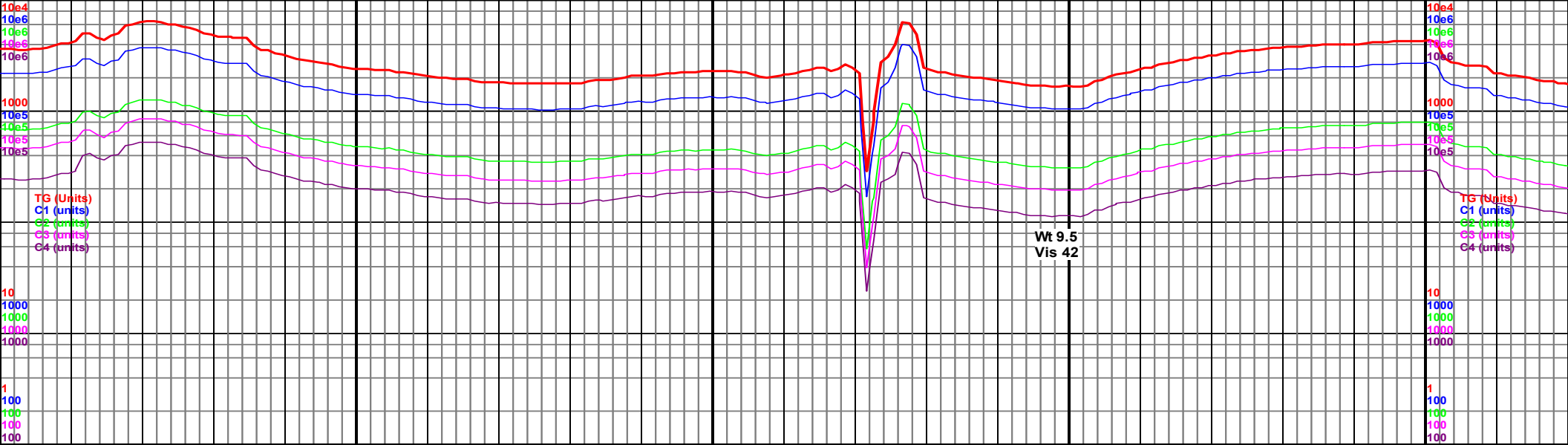


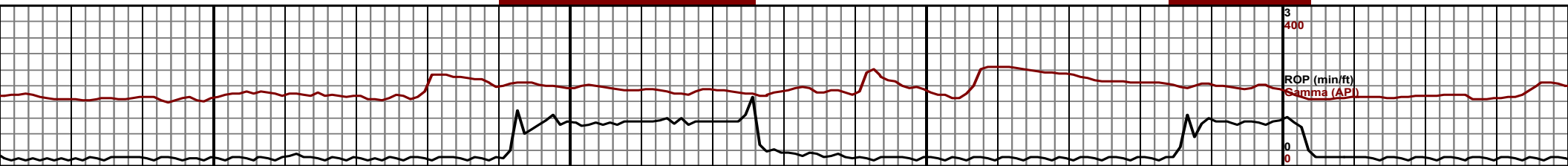
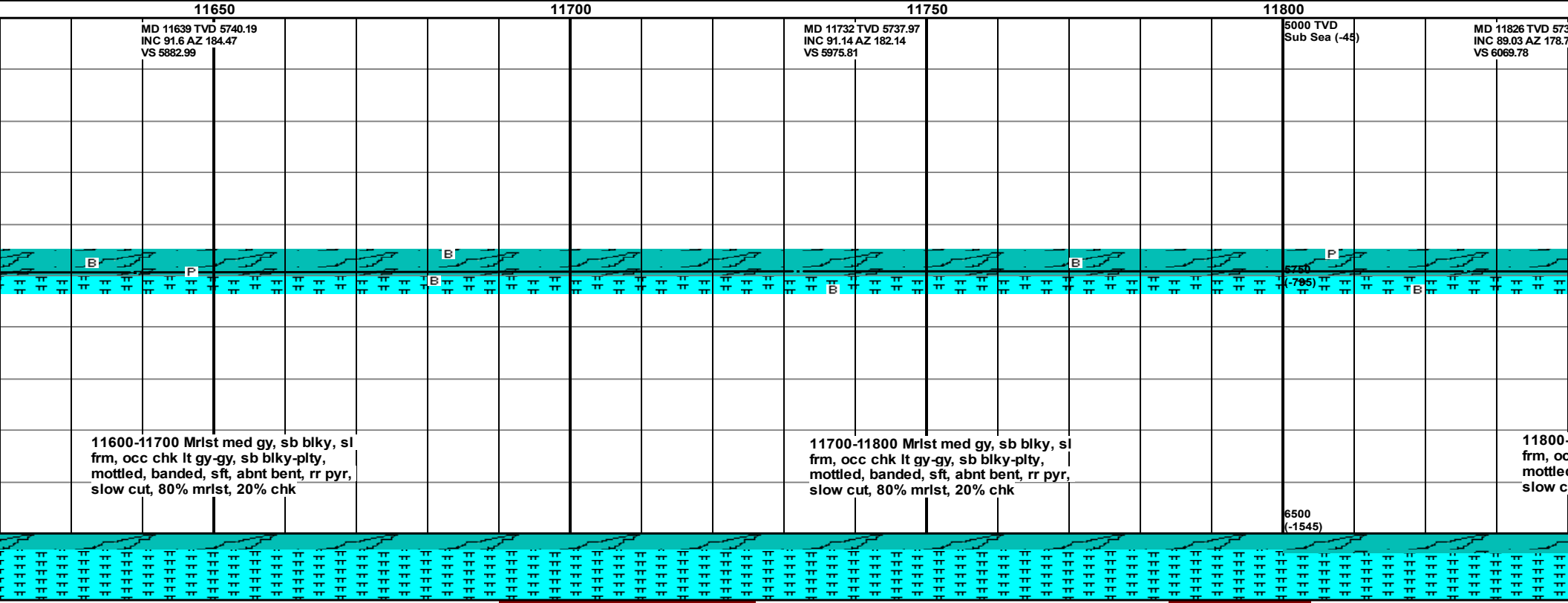
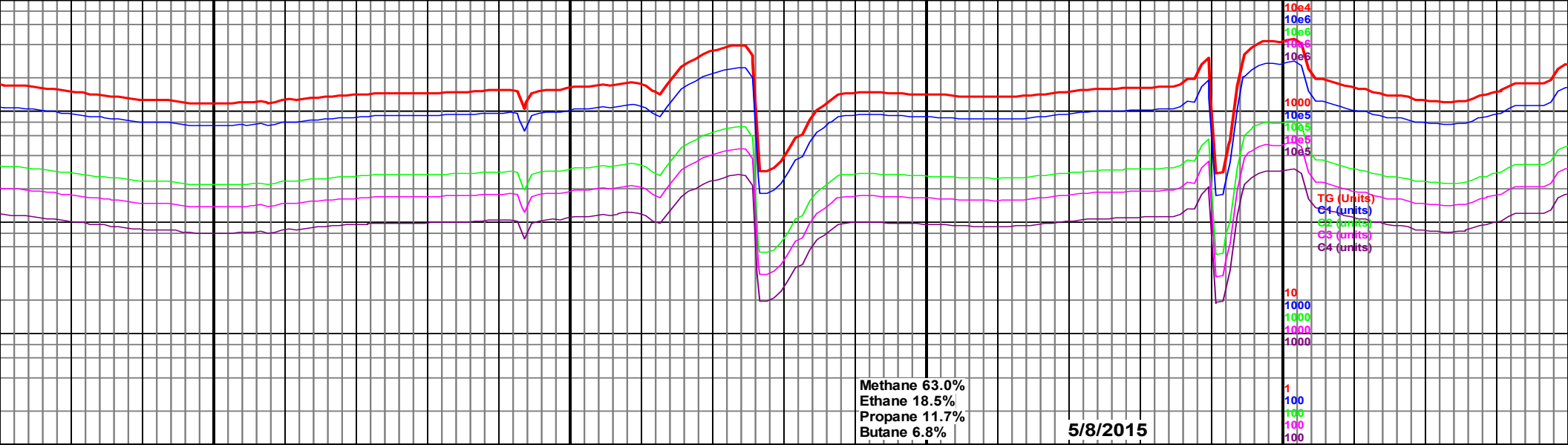


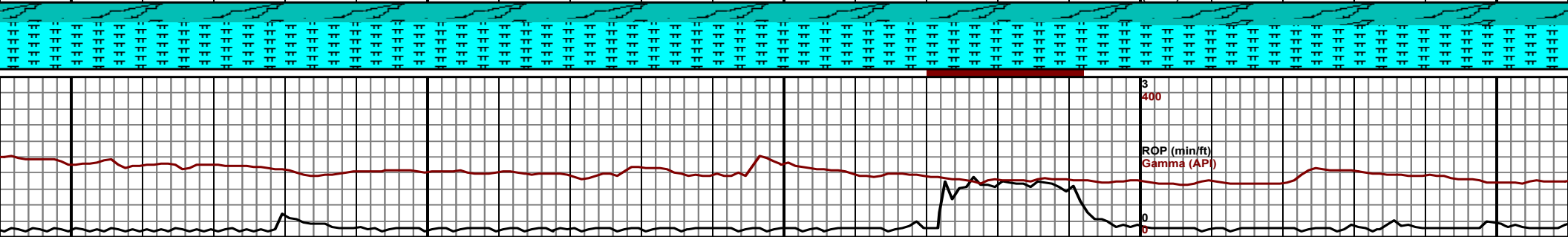
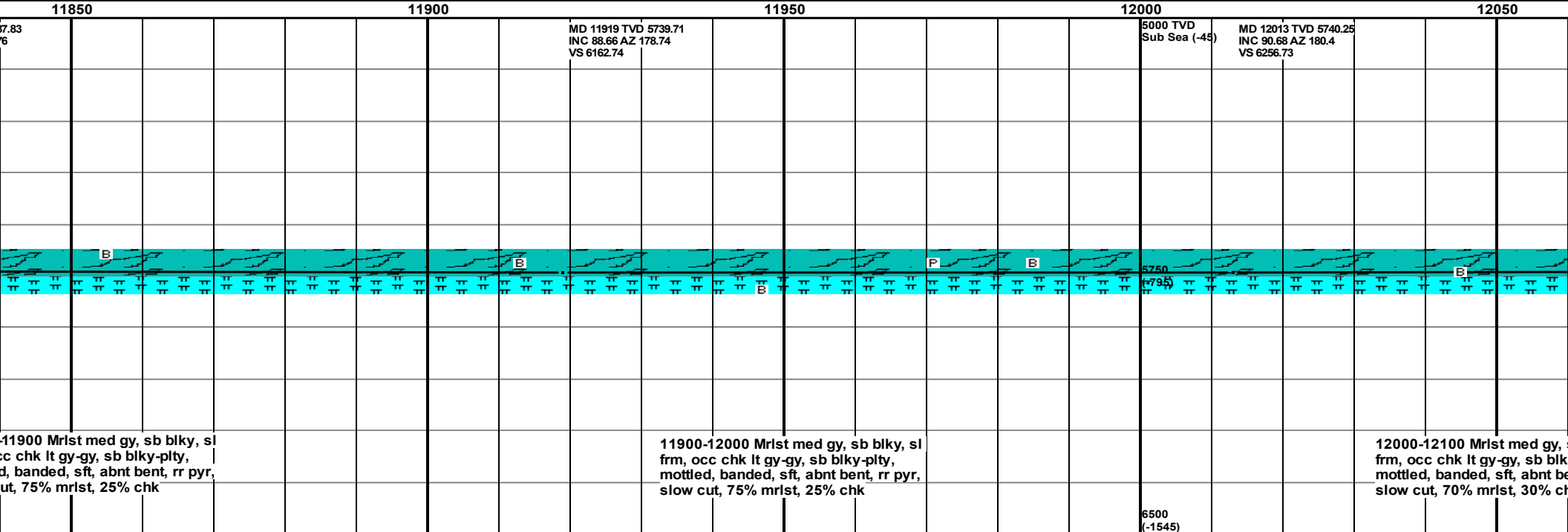
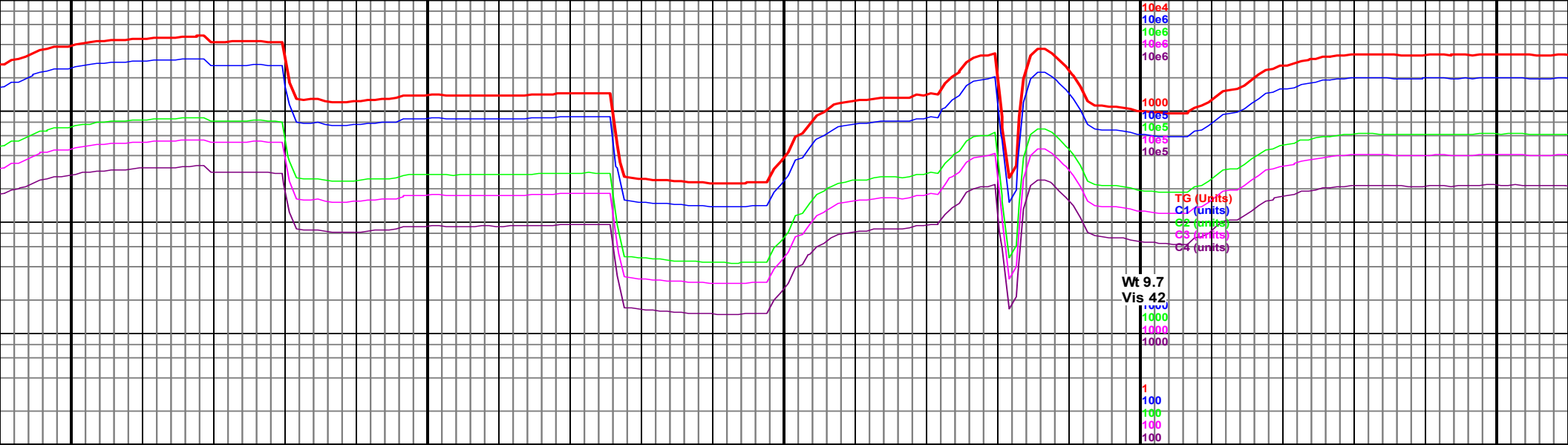


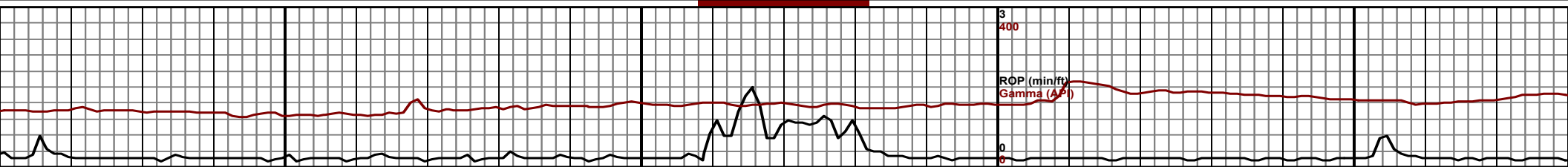
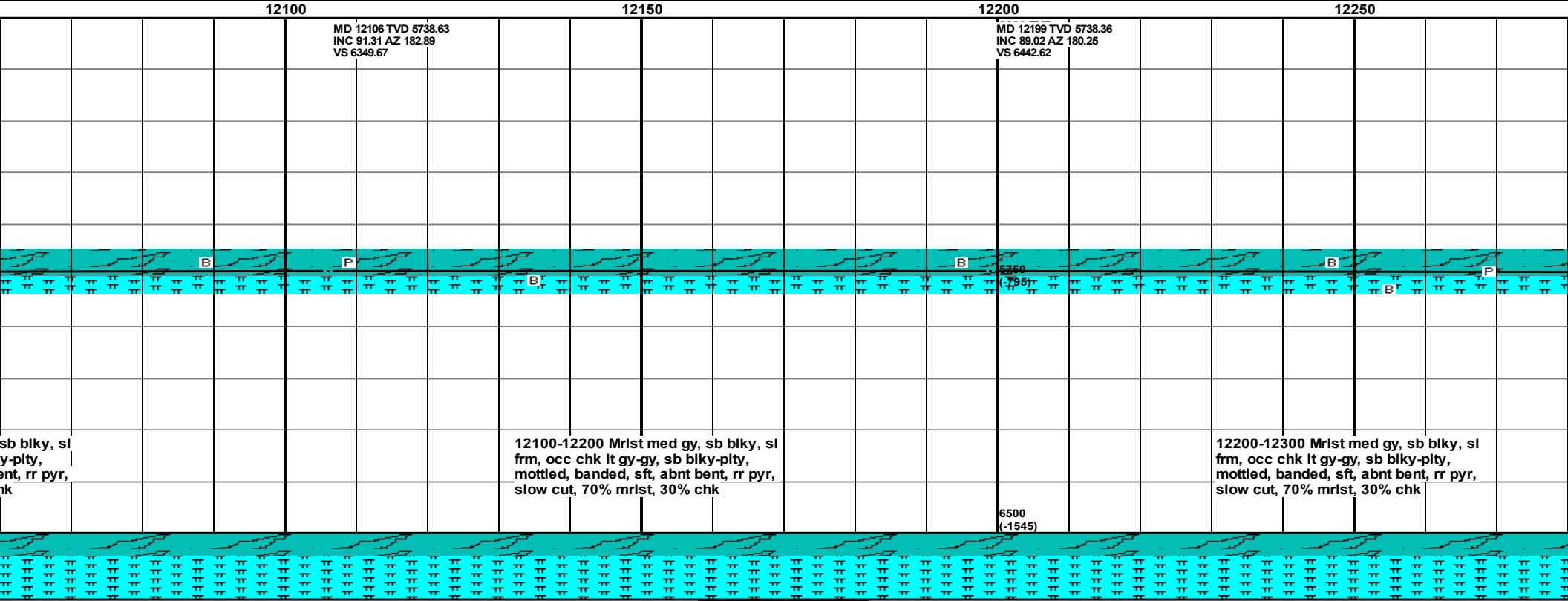
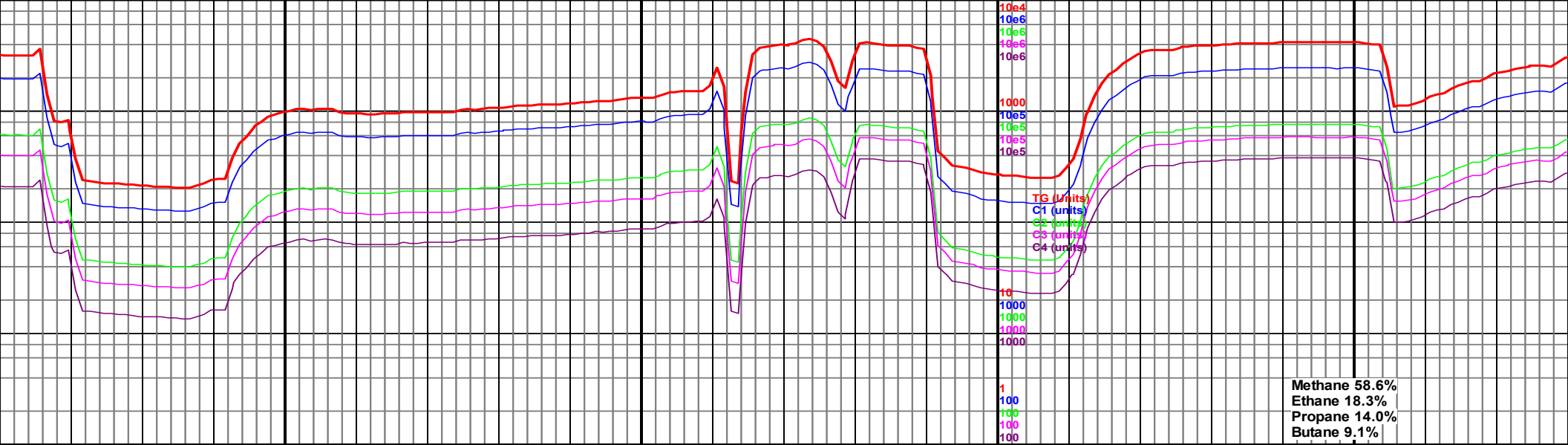


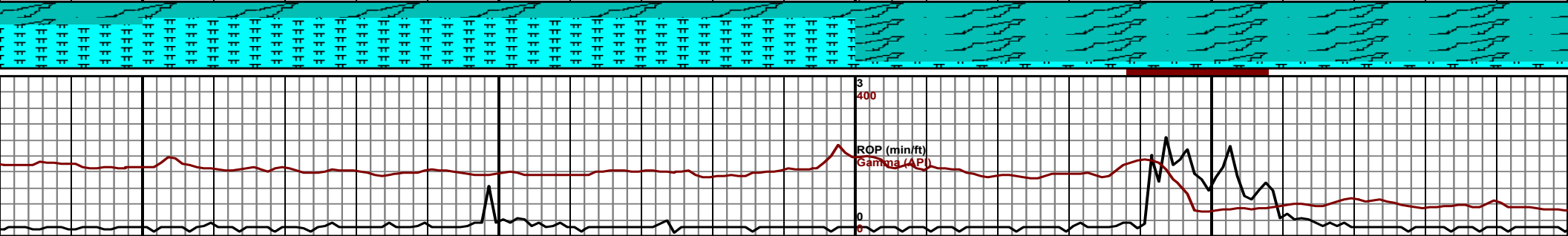
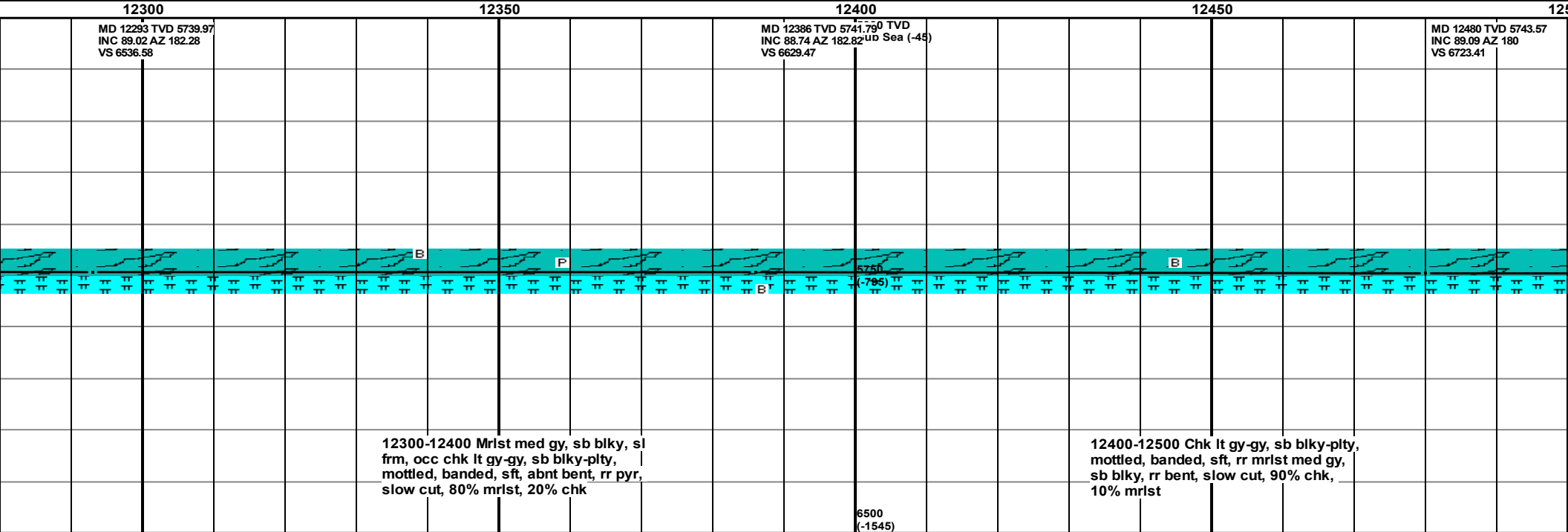
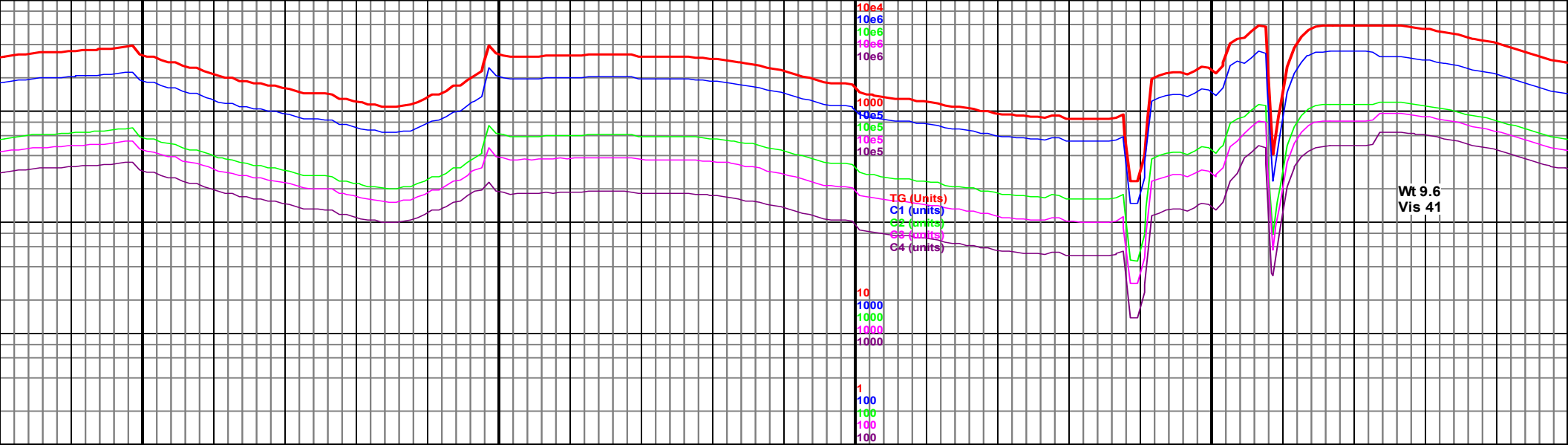


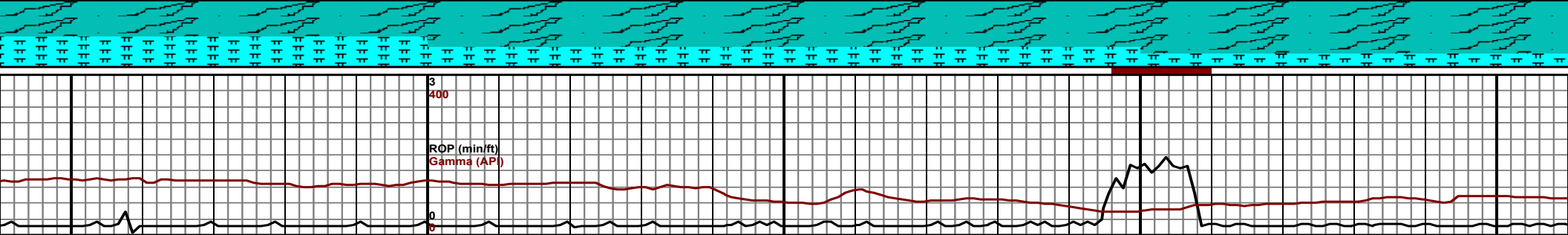
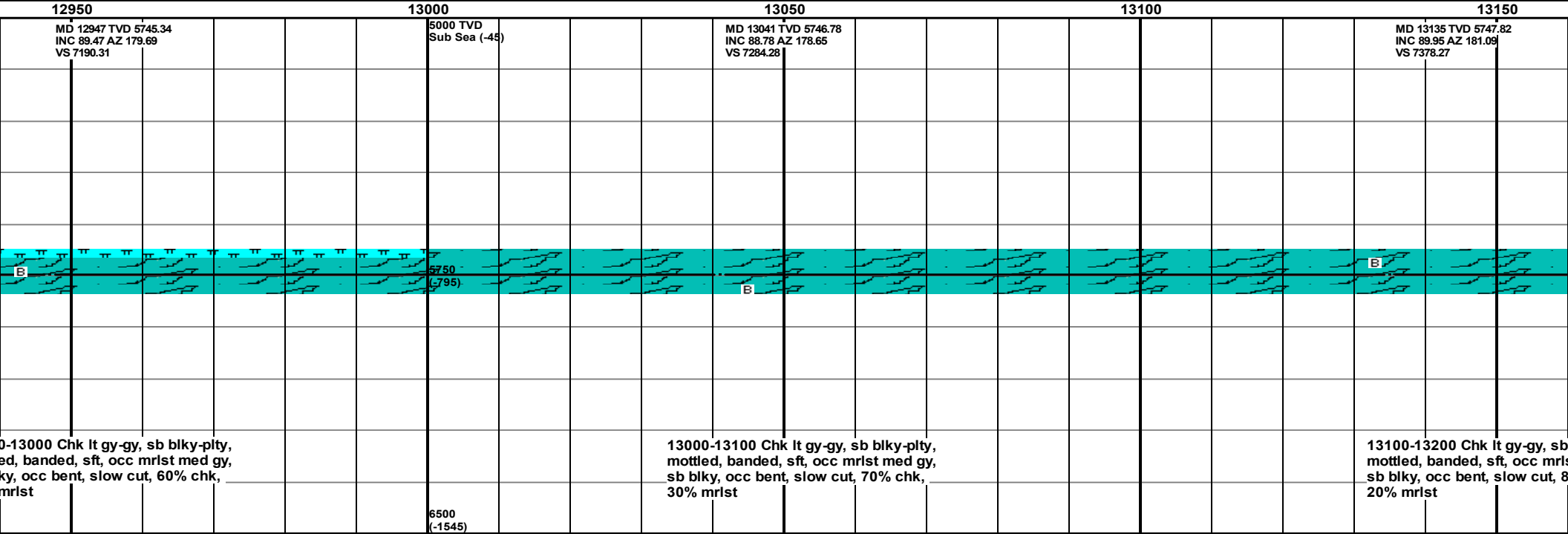
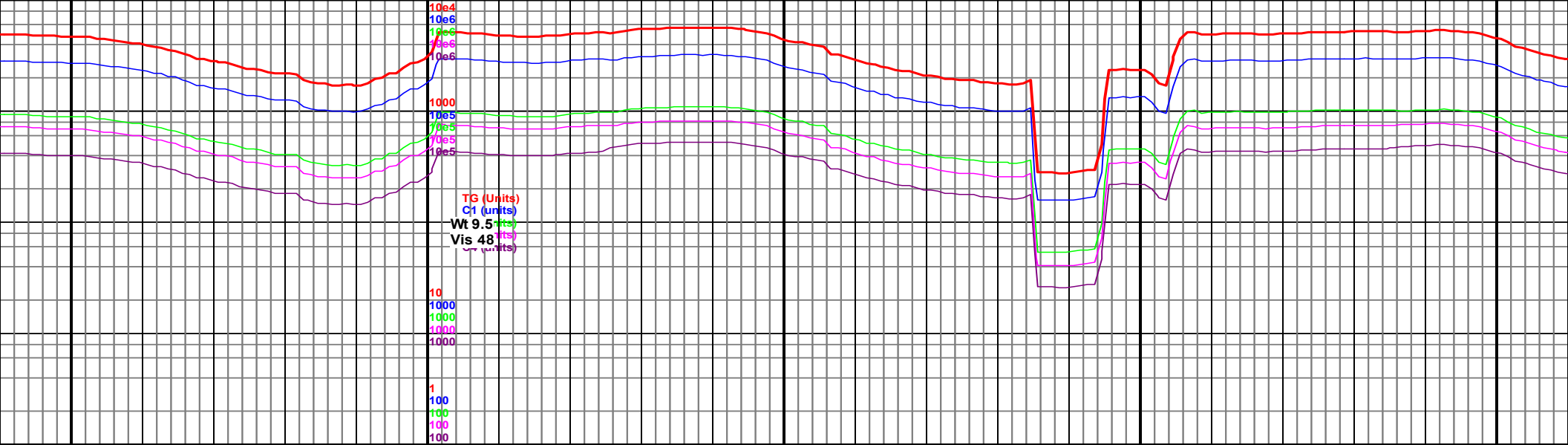


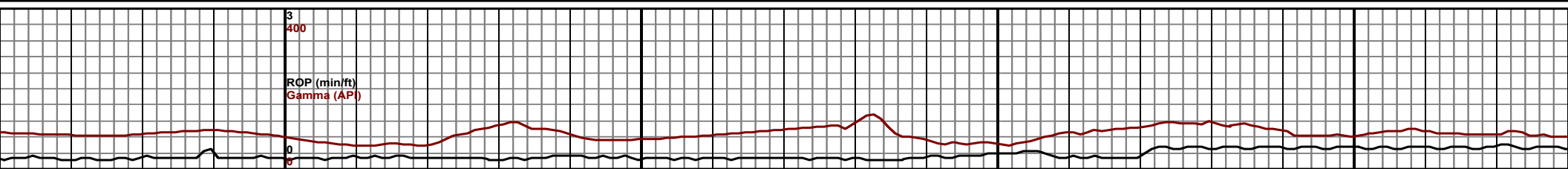
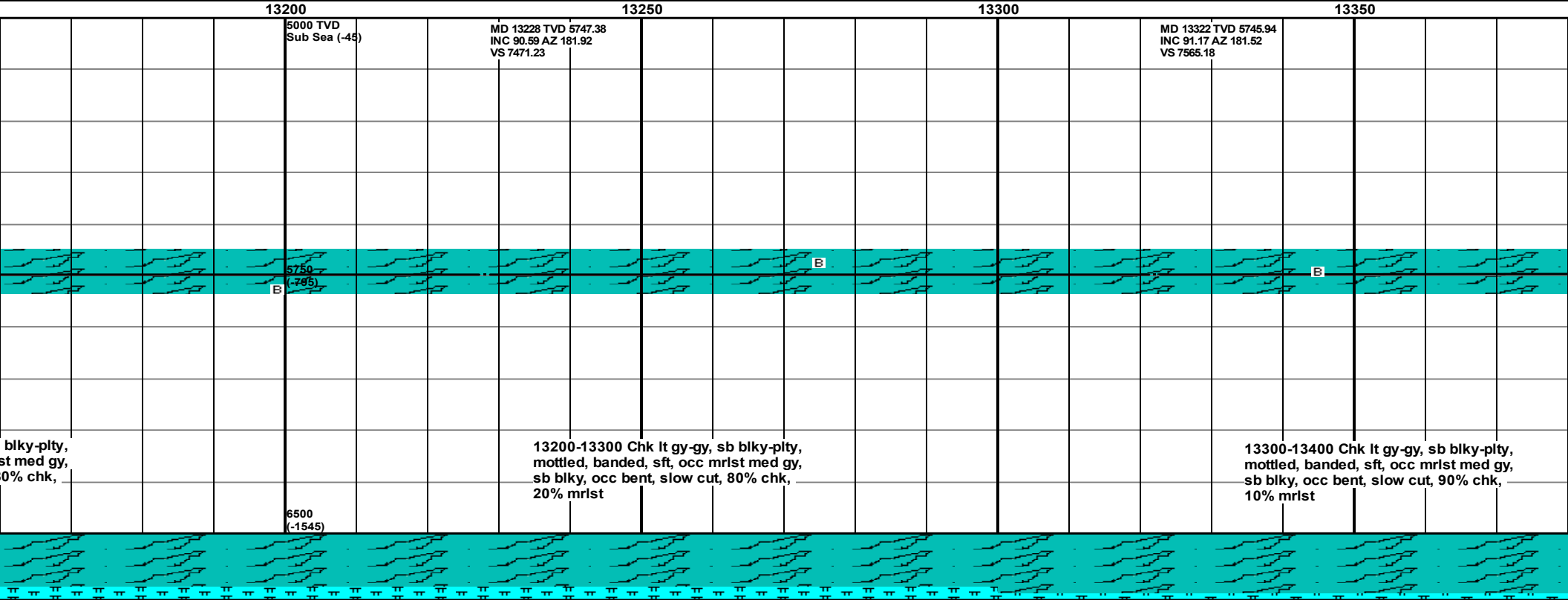
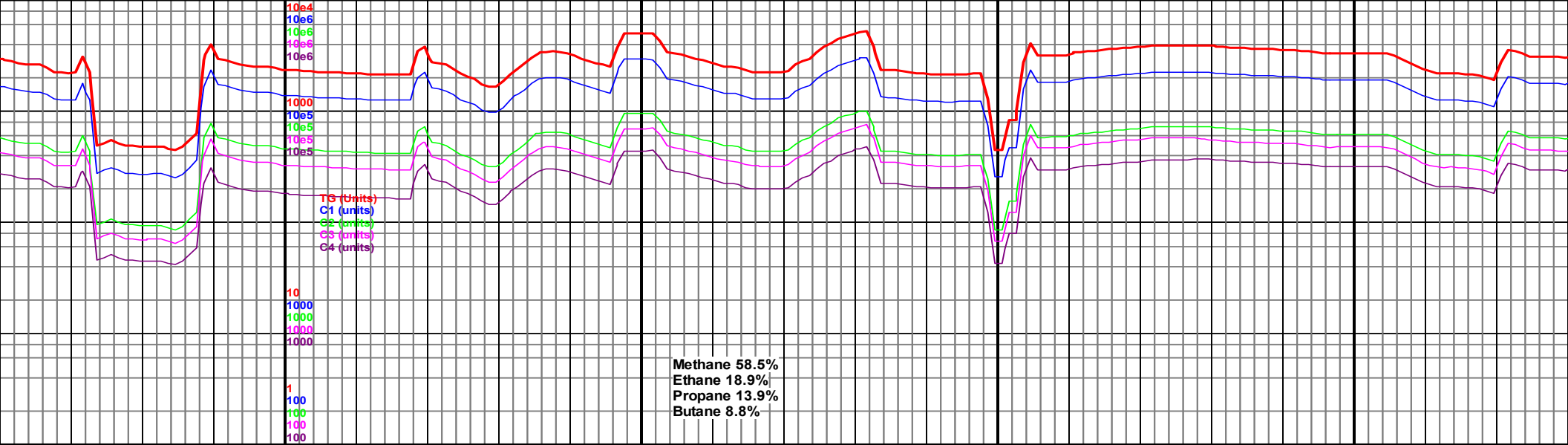


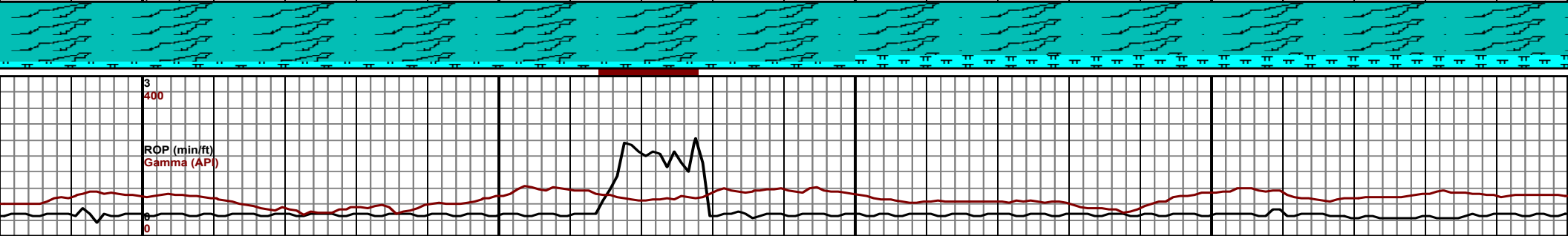
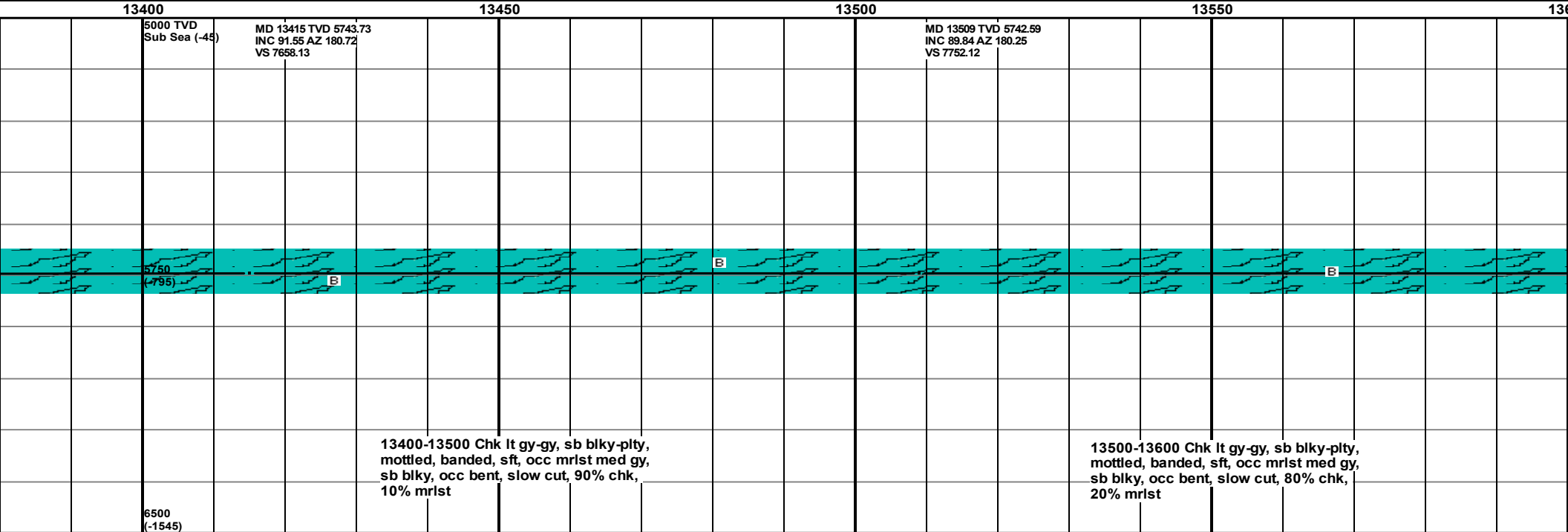
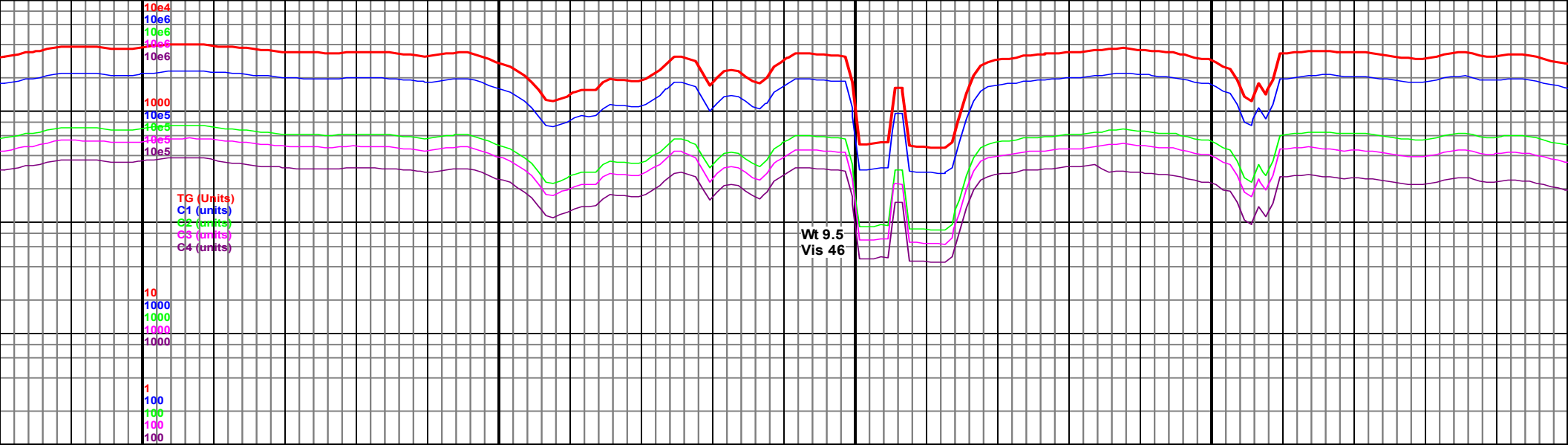


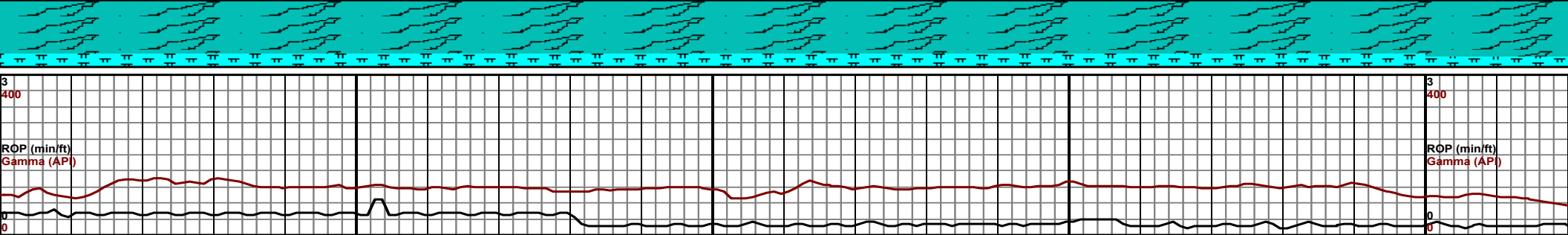
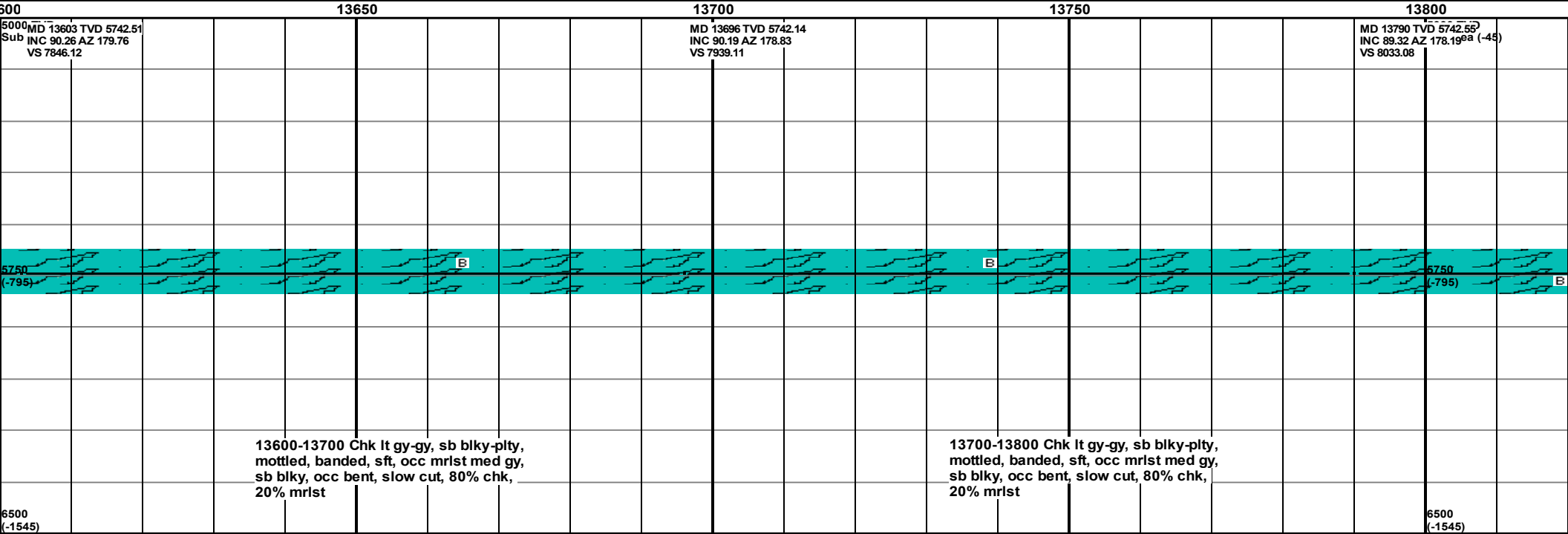
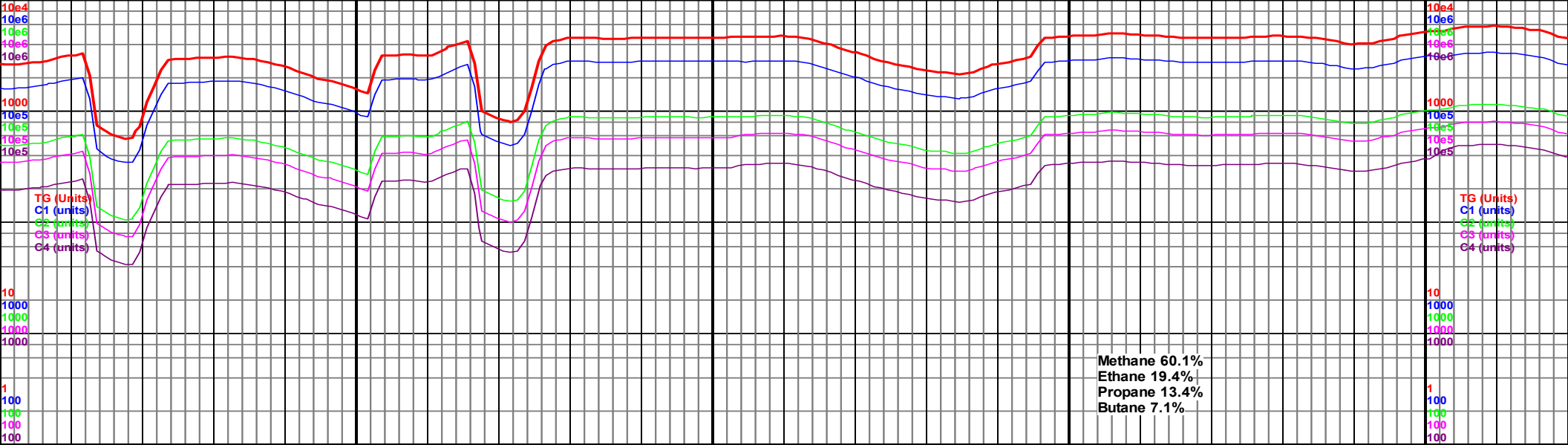


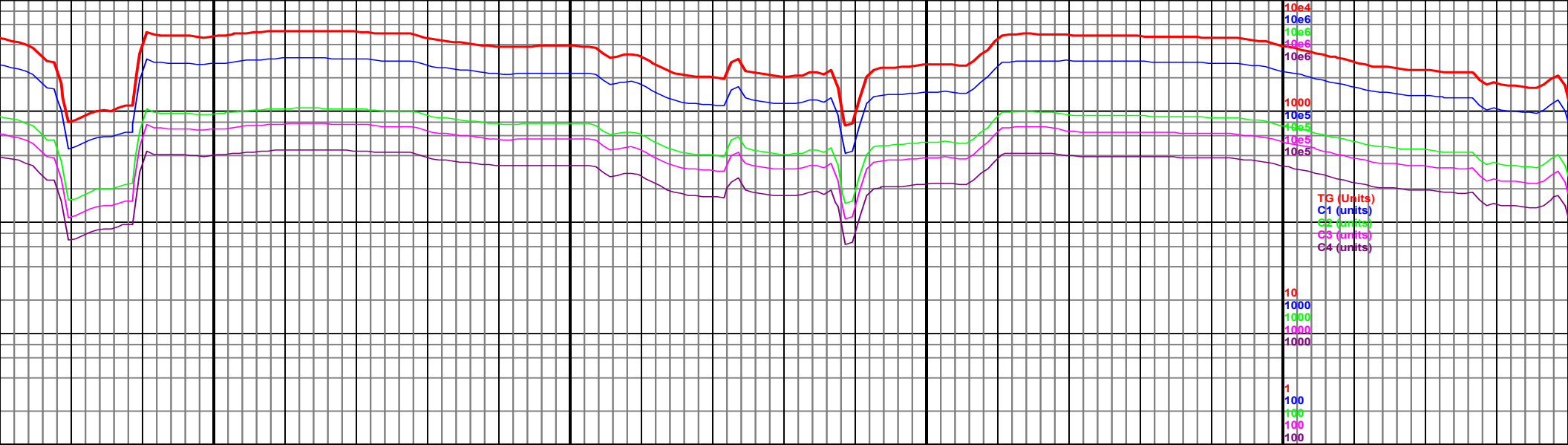












13850

13900

13950

14000

MD 13884 TVD 5744.2
INC 88.66 AZ 177.67
VS 8127.

MD 13977 TVD 5746.19
INC 88.89 AZ 180.24
VS 8219.96

5000 TVD
Sub Sea (-45)

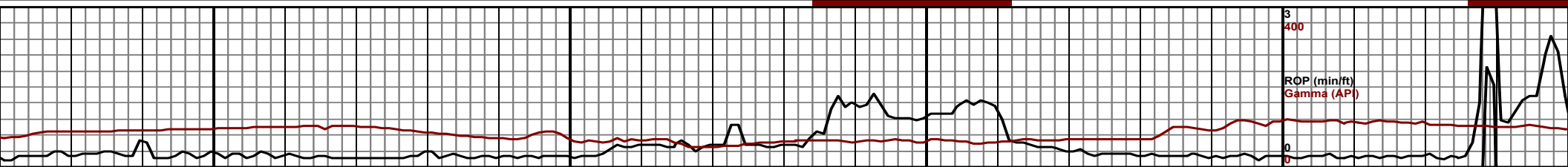
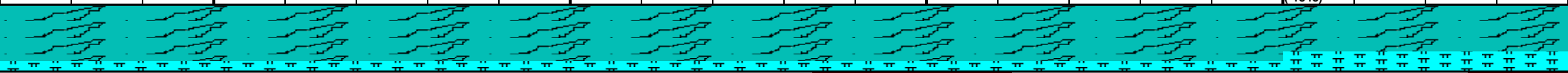


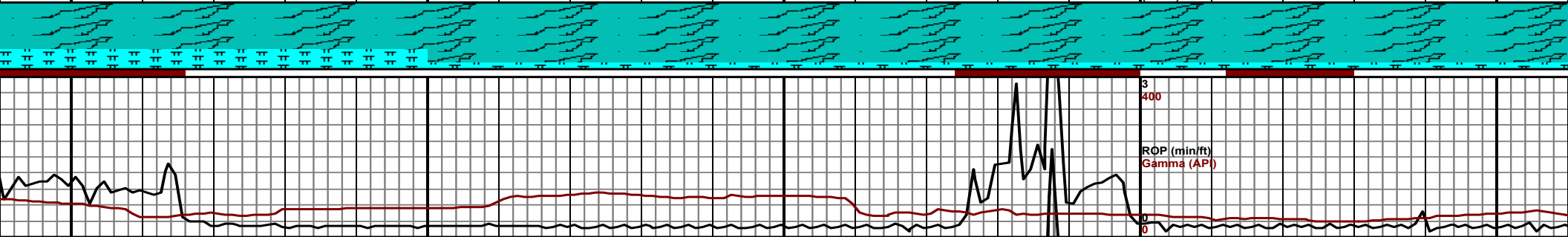
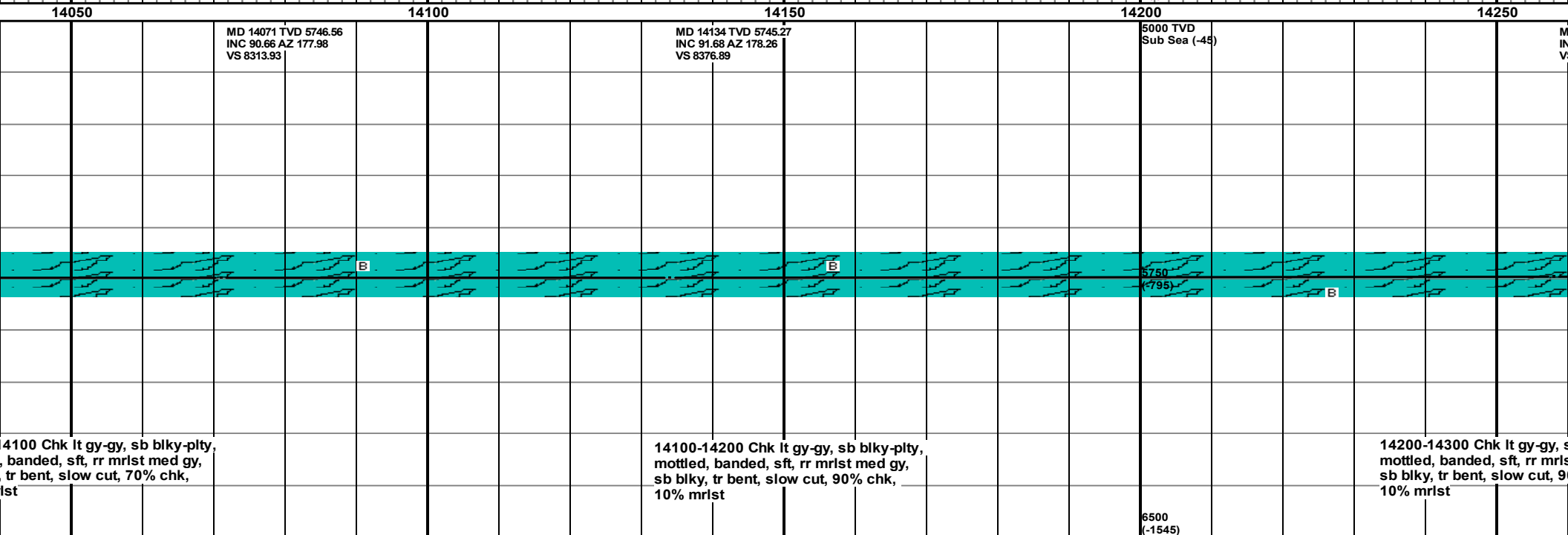
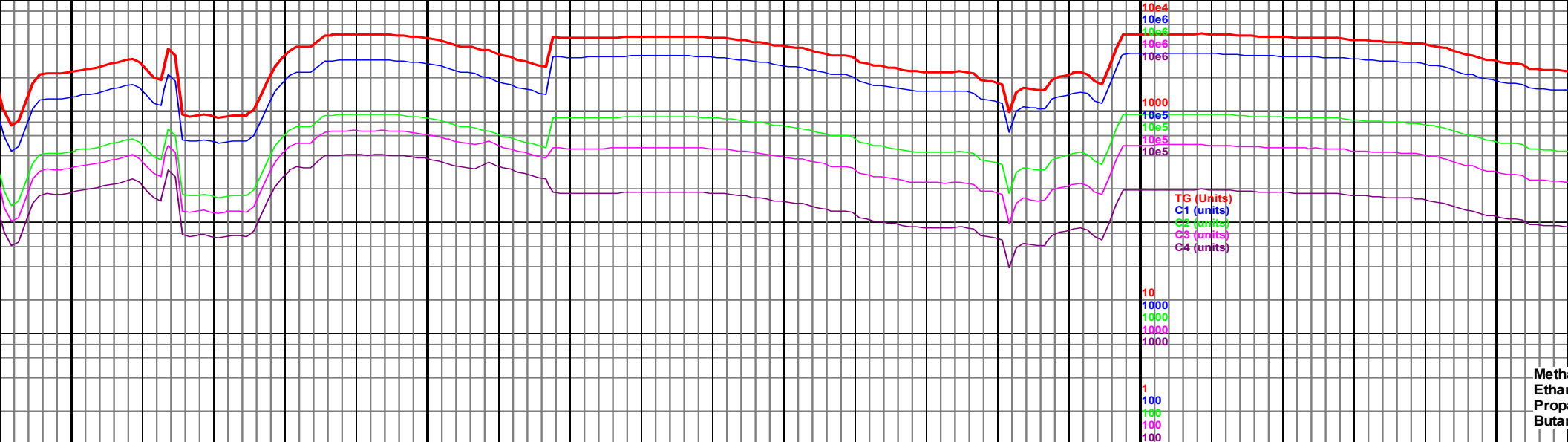
13800-13900 Chk lt gy-gy, sb blkly-plty,
mottled, banded, sft, rr mlrst med gy,
sb blkly, occ bent, slow cut, 90% chk,
10% mlrst

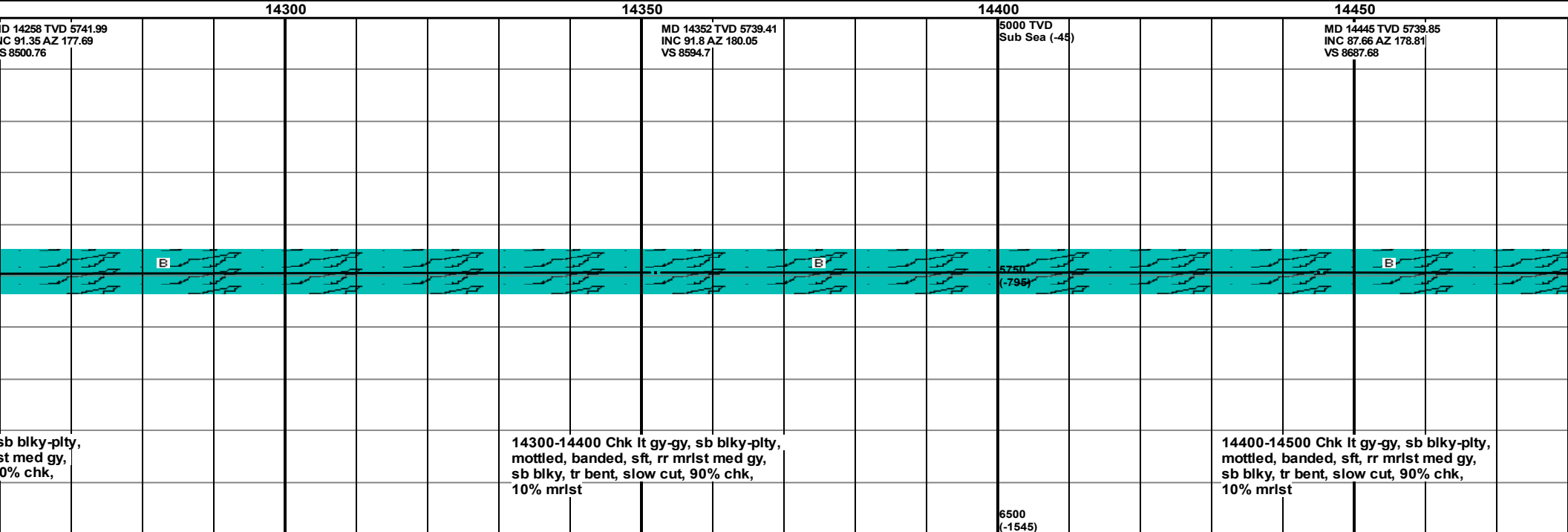
13900-14000 Chk lt gy-gy, sb blkly-plty,
mottled, banded, sft, rr mlrst med gy,
sb blkly, occ bent, slow cut, 90% chk,
10% mlrst

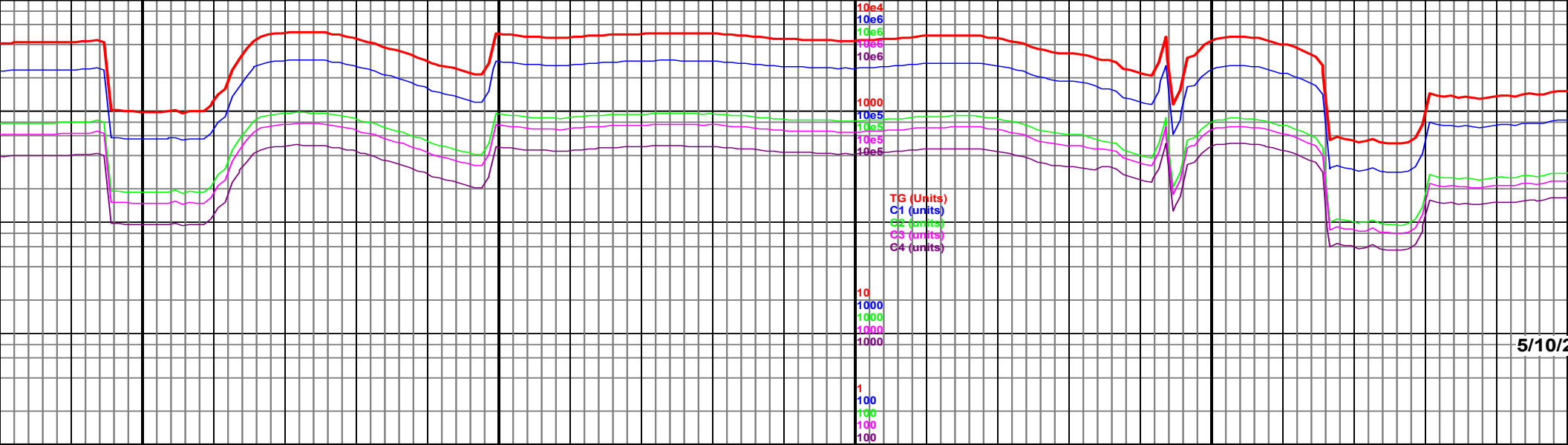
14000-1
mottled,
sb blkly,
30% mr

6500
(-1545)









5/10/2

14500

14550

14600

14650

14700

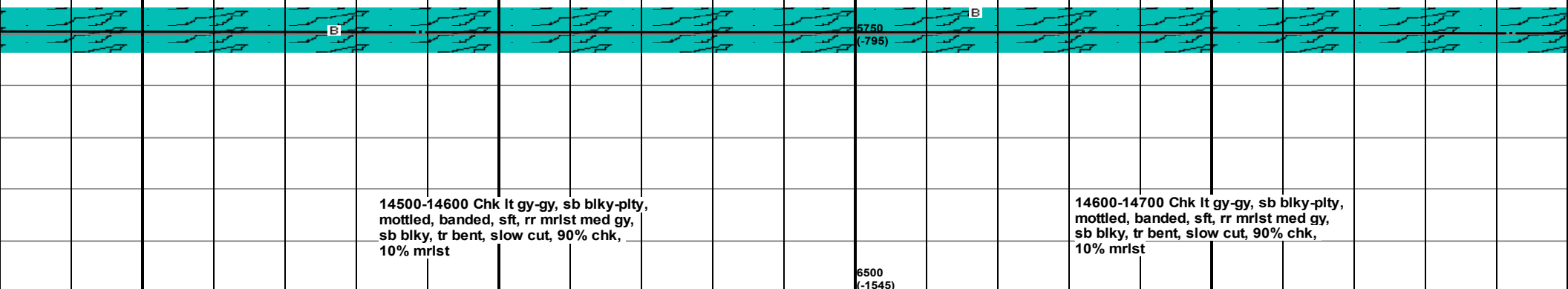
MD 14539 TVD 5742.65
INC 88.93 AZ 178.3
VS 8781.6

5000 TVD
Sub Sea (-45)

MD 14632 TVD 5744.7
INC 88.54 AZ 178.37
VS 8874.54

MD 14692
INC 88.09
VS 8934.4

TOOH at 06:
for Gamma t
drilling at 11
5/10/2015



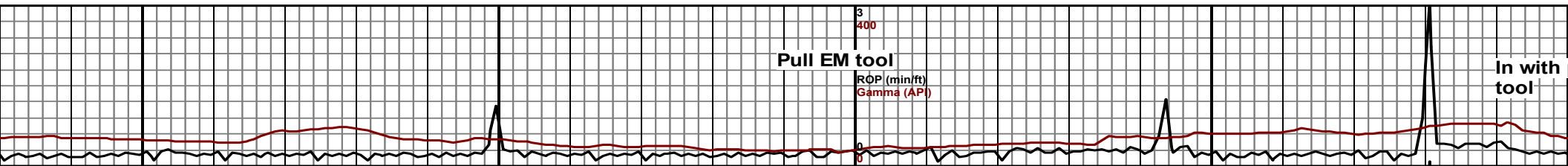
14500-14600 Chk lt gy-gy, sb blkly-plty,
mottled, banded, sft, rr mrlst med gy,
sb blkly, tr bent, slow cut, 90% chk,
10% mrlst

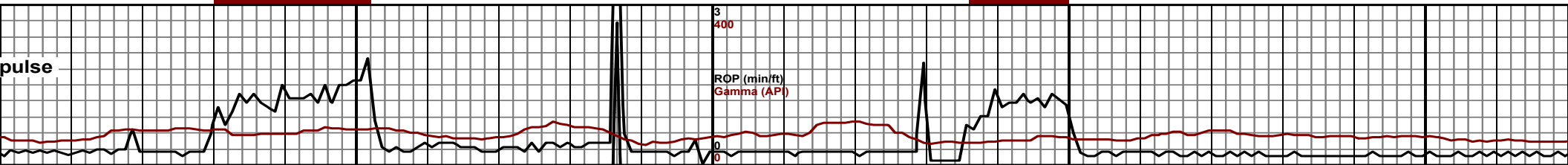
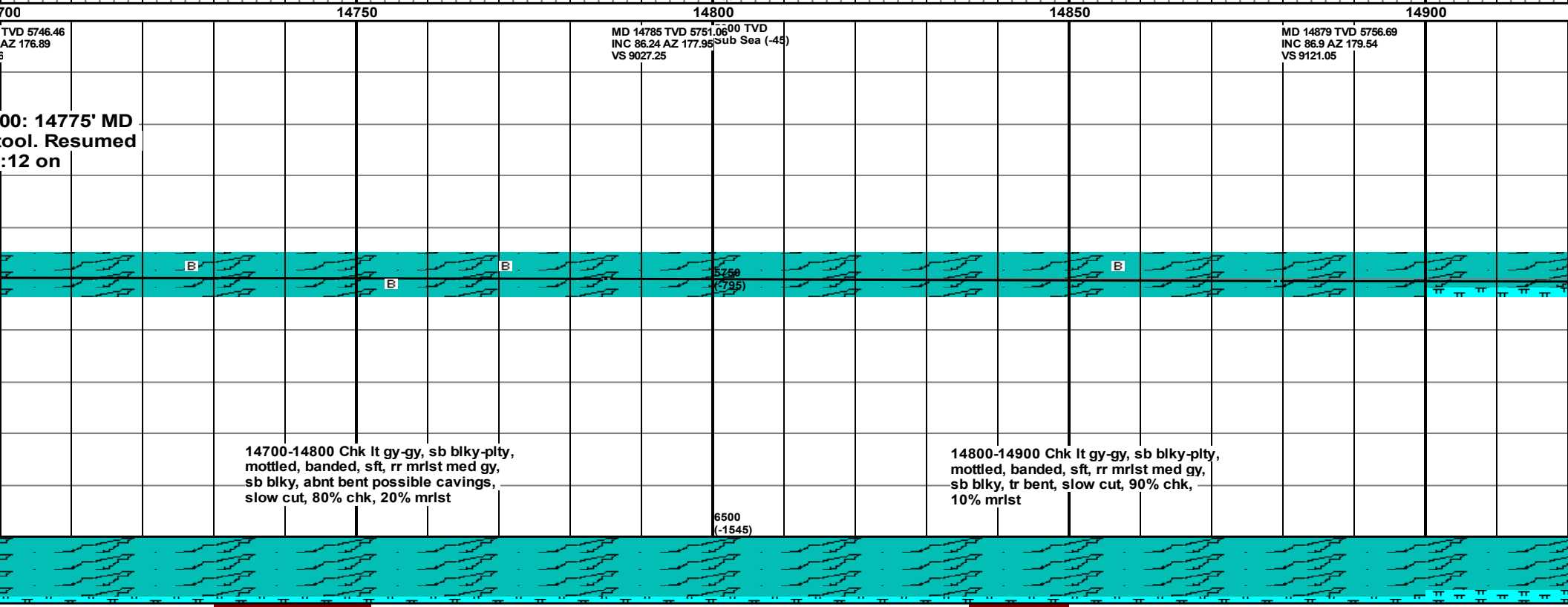
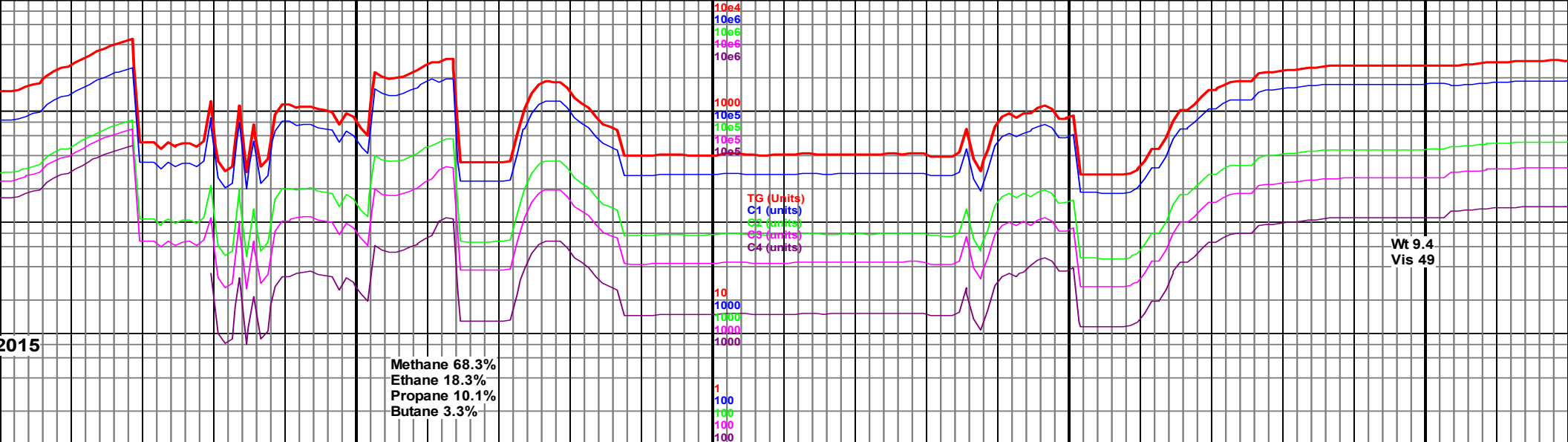
14600-14700 Chk lt gy-gy, sb blkly-plty,
mottled, banded, sft, rr mrlst med gy,
sb blkly, tr bent, slow cut, 90% chk,
10% mrlst

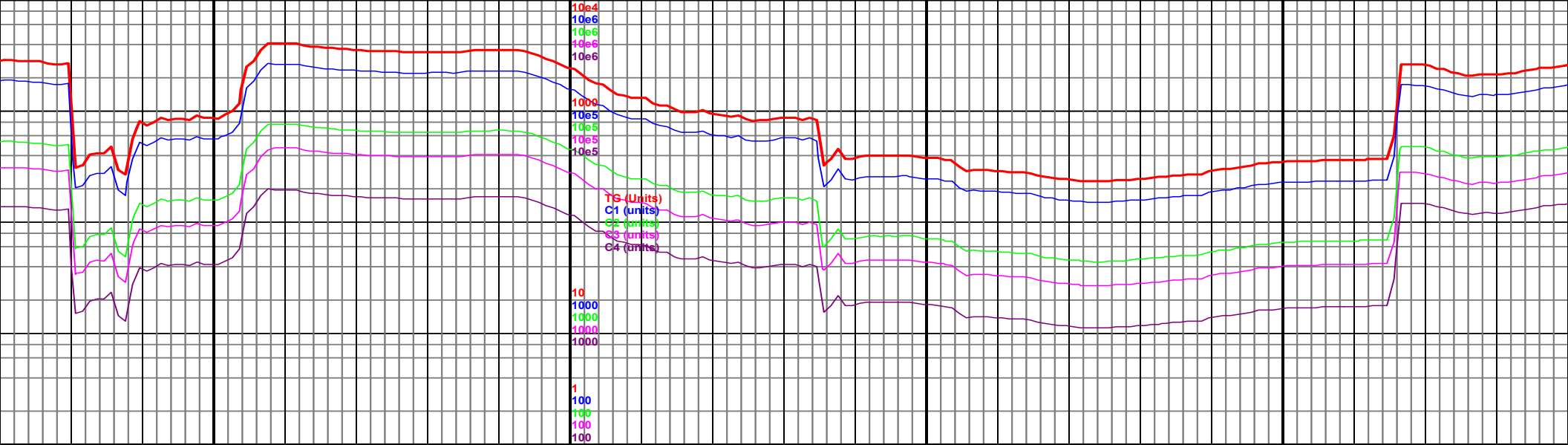
Pull EM tool

ROP (min/ft)
Gamma (API)

In with
tool







14950

15000

15050

15100

MD 14972 TVD 5760.42
INC 88.5 AZ 181
VS 9213.97

5000 TVD
Sub Sea (-45)

MD 15066 TVD 5759.9
INC 92.13 AZ 182.99
VS 9307.89

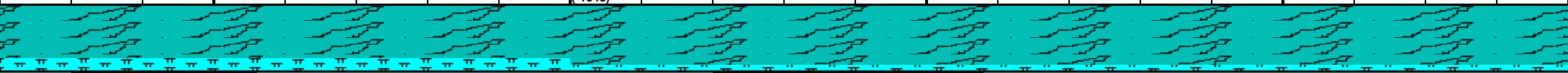


14900-15000 Chk lt gy-gy, sb blkly-plty,
mottled, banded, sft, rr mrlst med gy,
sb blkly, tr bent, slow cut, 80% chk,
20% mrlst

15000-15100 Chk lt gy-gy, sb blkly-plty,
mottled, banded, sft, rr mrlst med gy,
sb blkly, tr bent, slow cut, 90% chk,
10% mrlst

15100-15200 Chk lt gy-gy, sb blkly-plty,
mottled, banded, sft, rr mrlst med gy,
sb blkly, tr bent, slow cut, 90% chk,
10% mrlst

6500
(-1545)



3
400

ROP (min/ft)
Gamma (API)

