



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

Well Name: Razor Federal 30K-1908
Well Id: 05-123-40212-00
Location: NESW 30-T10N-R58W
License Number: 05-123-40212-00
Spud Date: 6/12/2015
Surface Coordinates: Lat.: 40.808419 Long.: -103.910053

Region: Redtail Field
Drilling Completed: 6/19/2015

Bottom Hole
Coordinates:
Ground Elevation (ft): 4828
Logged Interval (ft): 5298 To: 13905
Formation: Pierre, Sharon Springs, Niobrara
Type of Drilling Fluid: Water Based Mud

K.B. Elevation (ft): 4849
Total Depth (ft): 13905

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


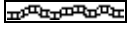
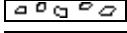
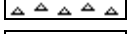
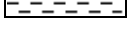
Gas Detection






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

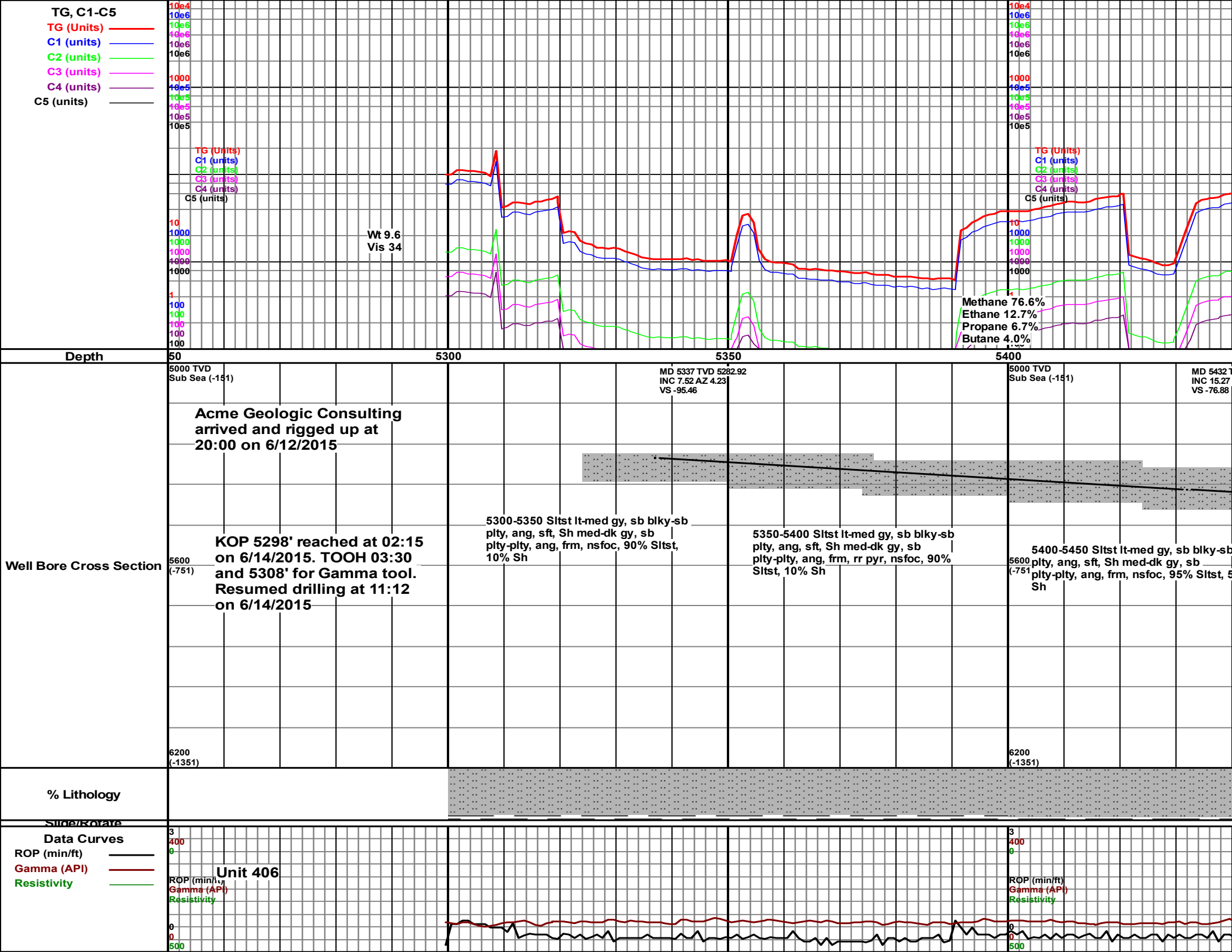
OTHER SYMBOLS
ROUNDING
 Rounded
 Subrnd
 Subang
 Angular

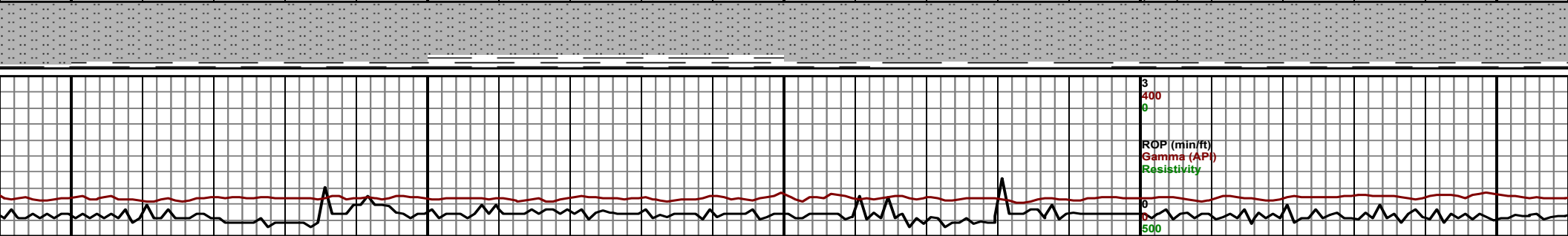
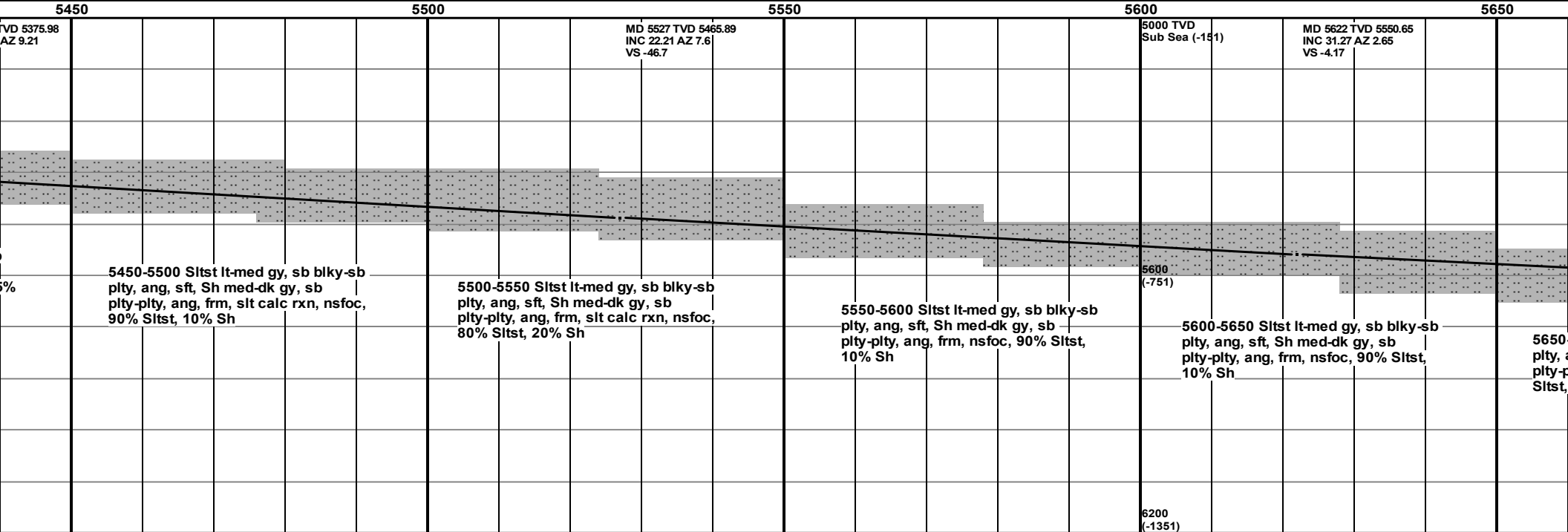
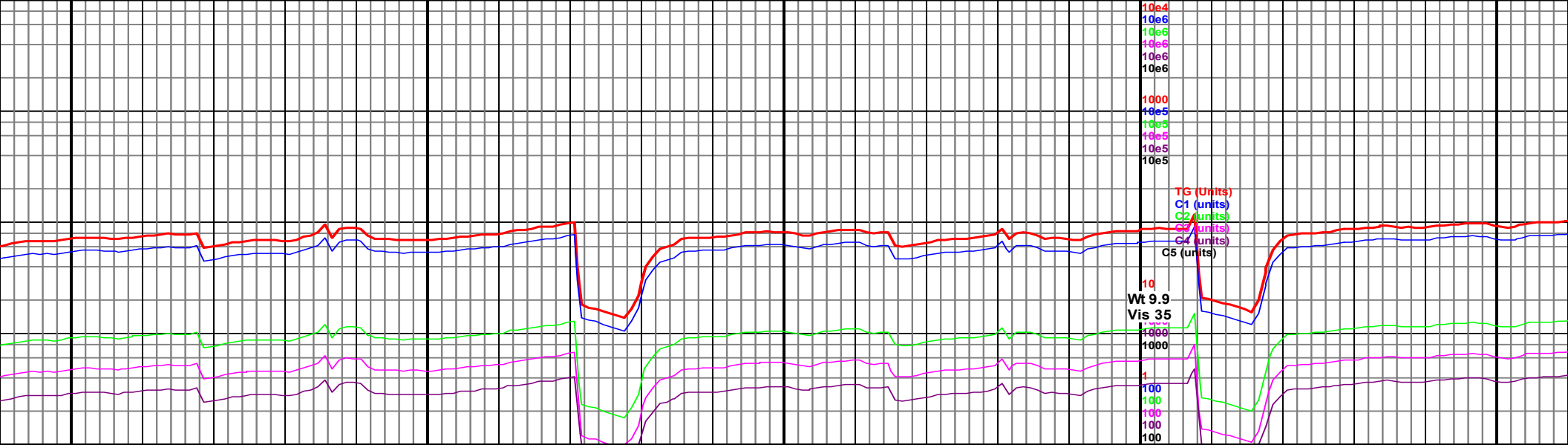
OIL SHOW
 Even

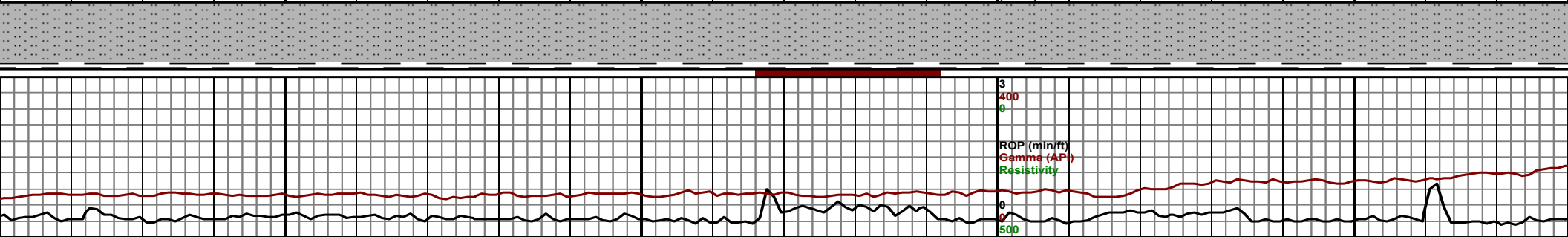
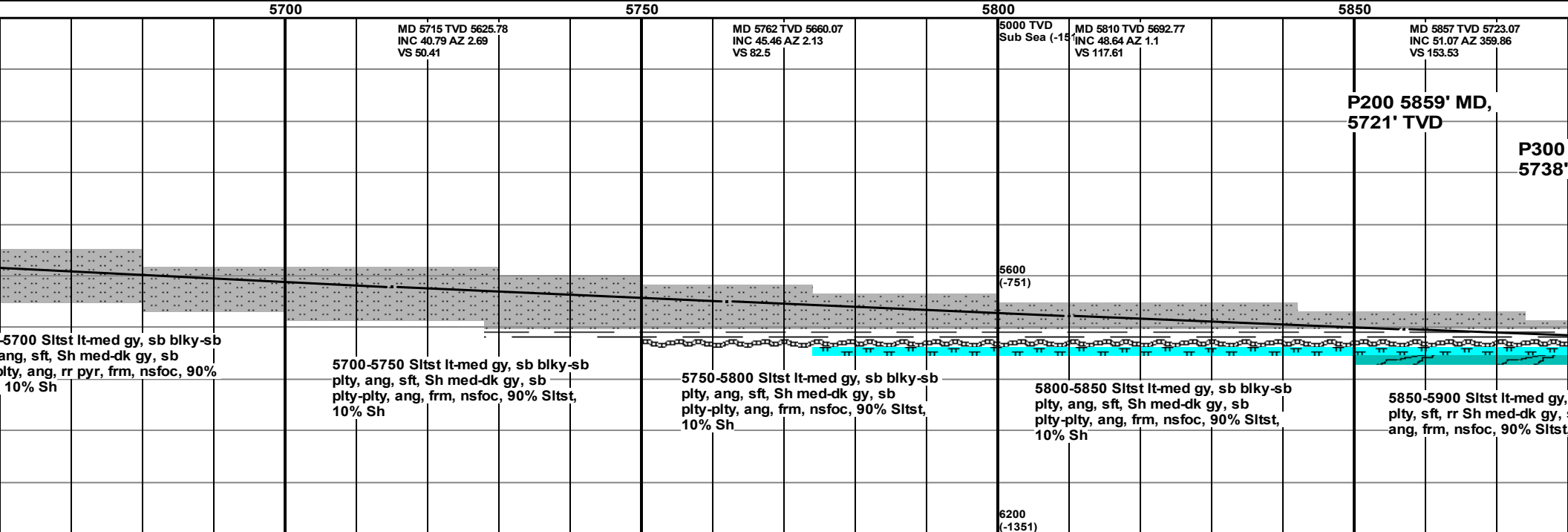
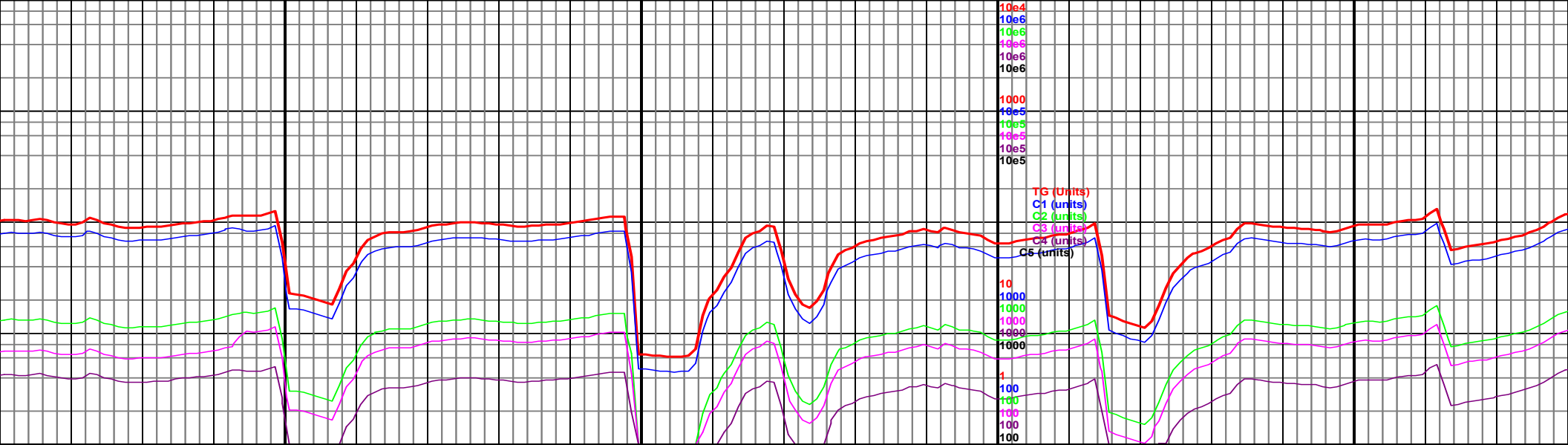
 Spotted
 Ques
 Dead

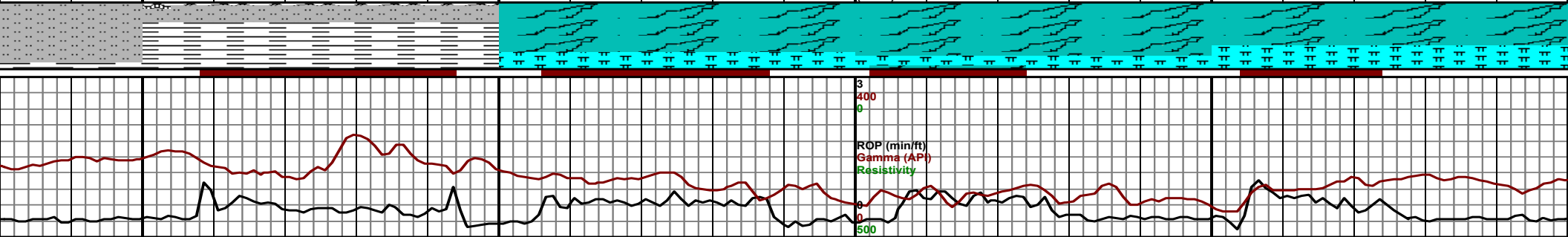
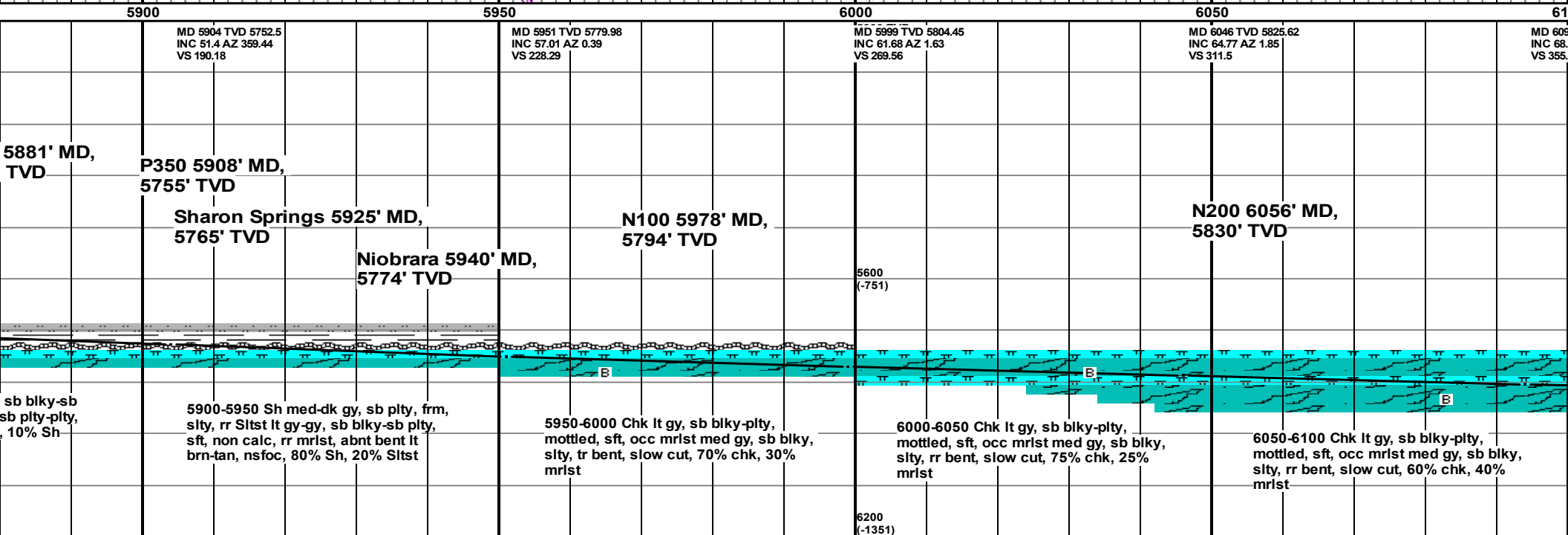
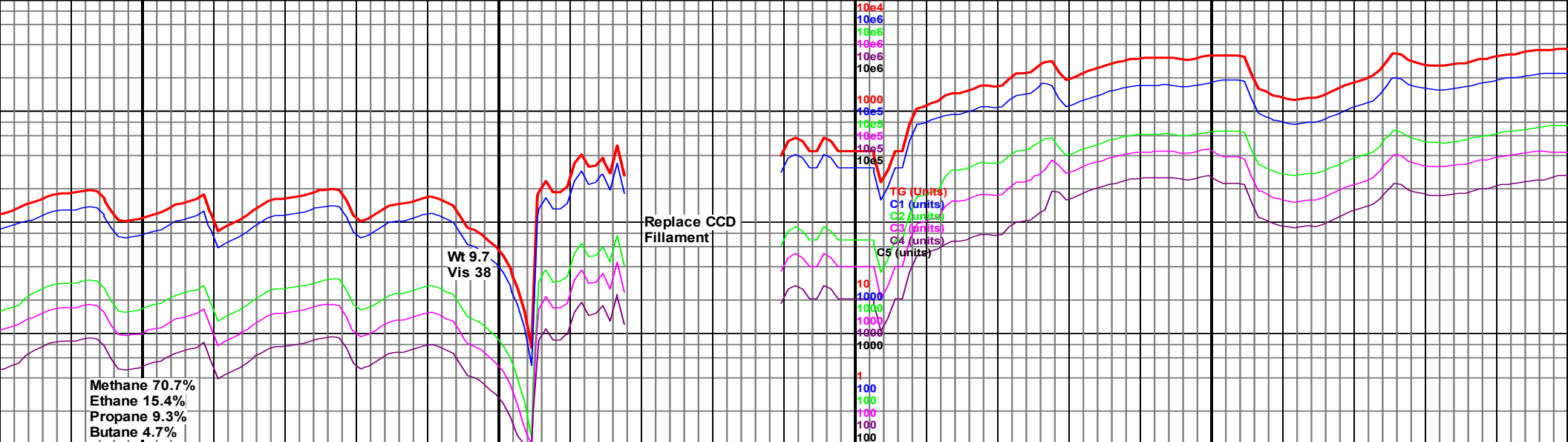
INTERVAL
 Core
 Dst

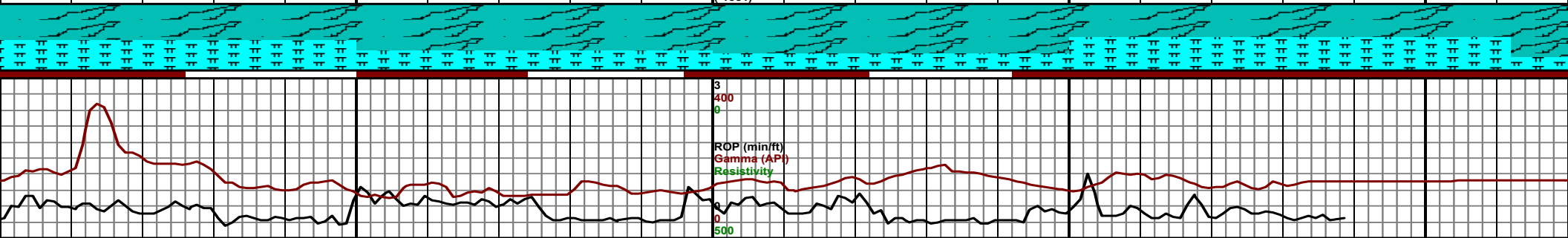
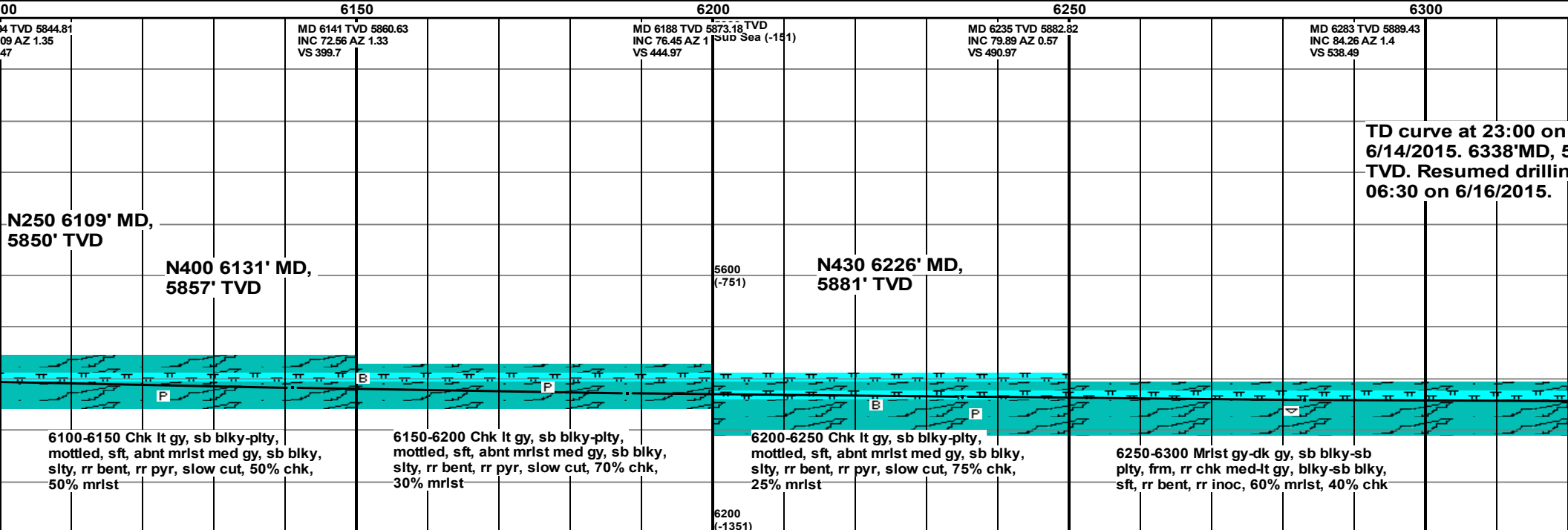
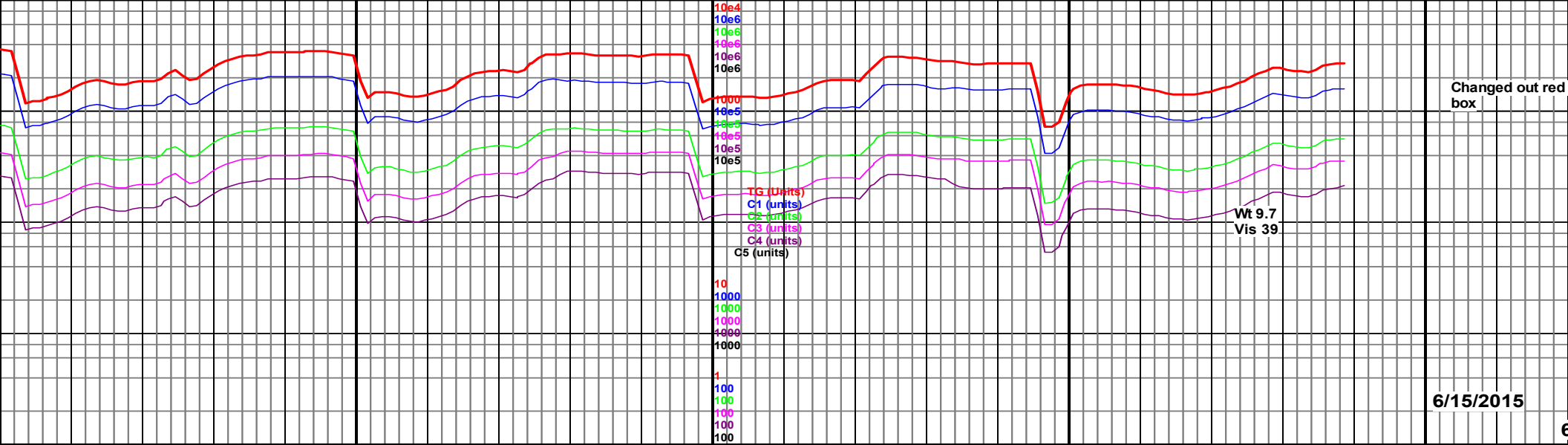
EVENT
 Rft
 Sidewall

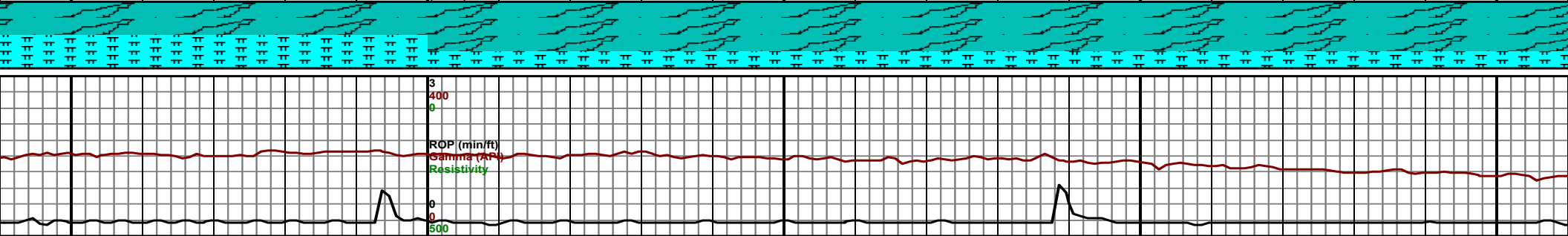
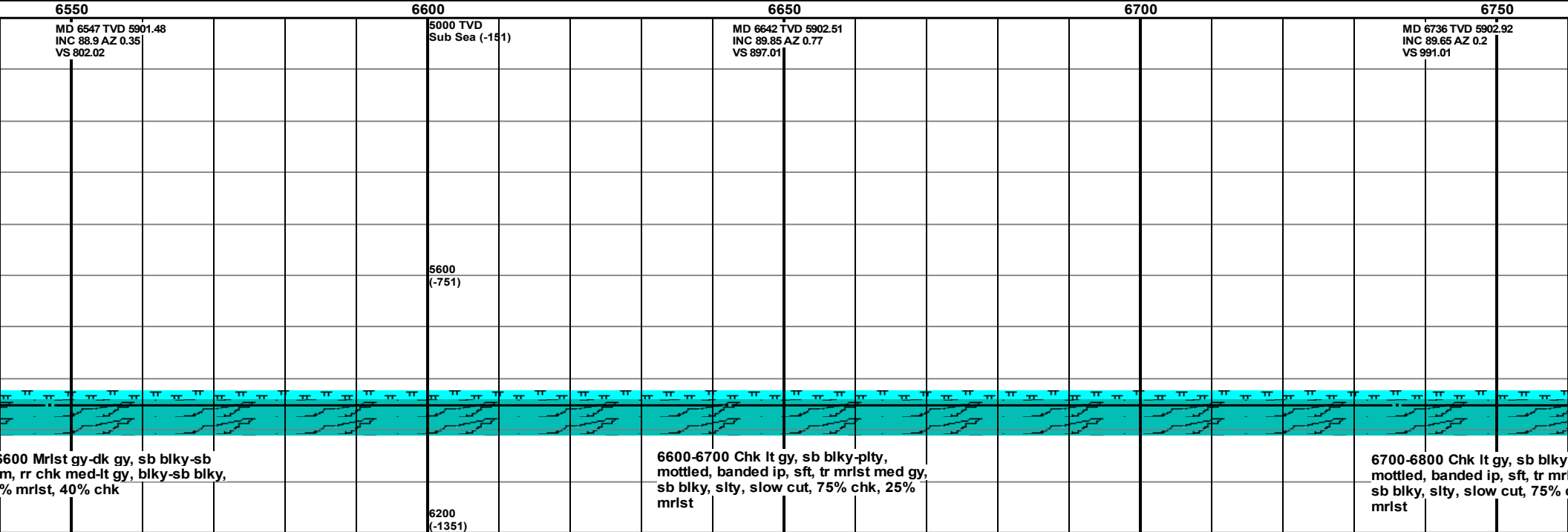
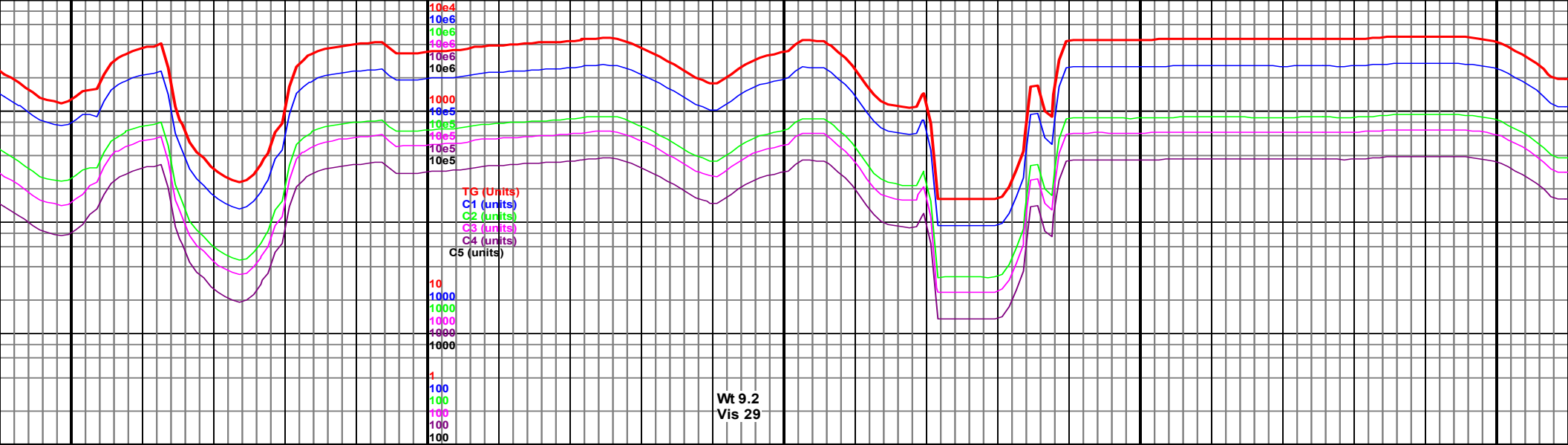


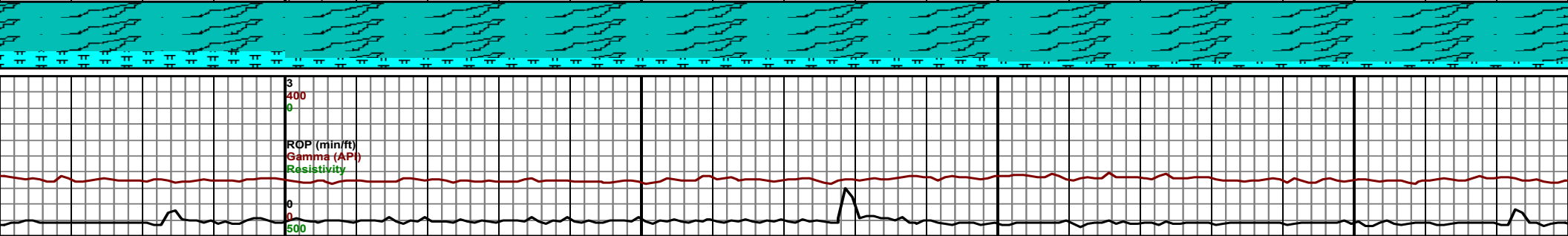
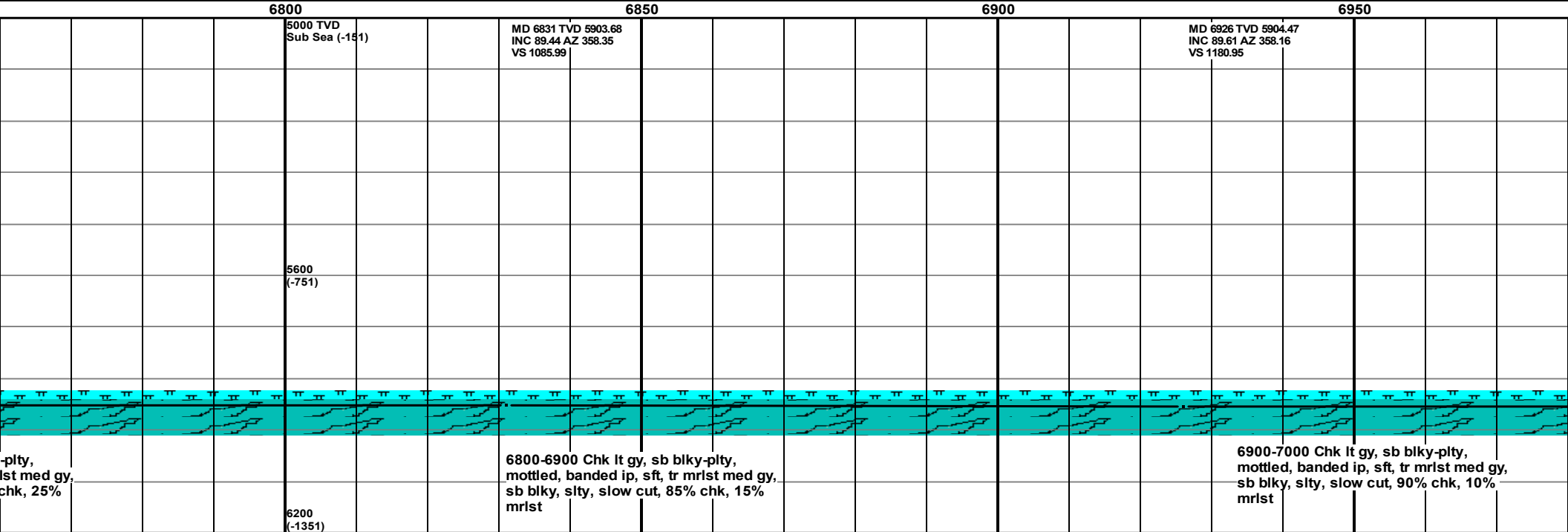
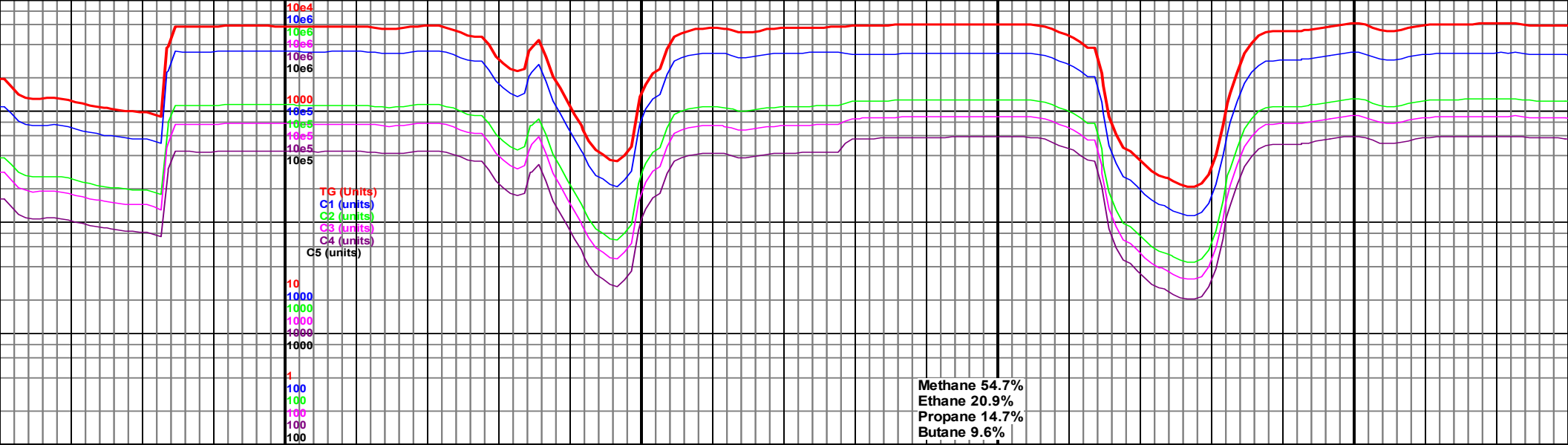


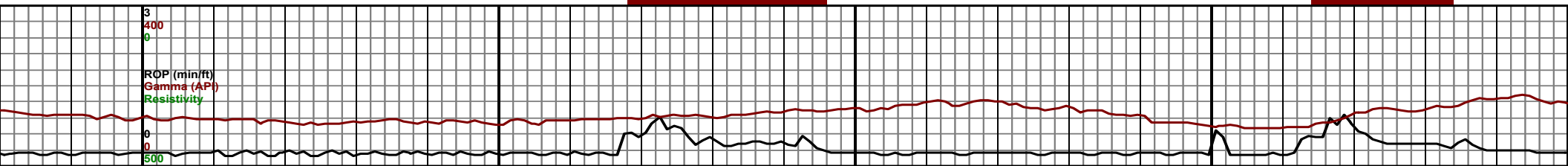
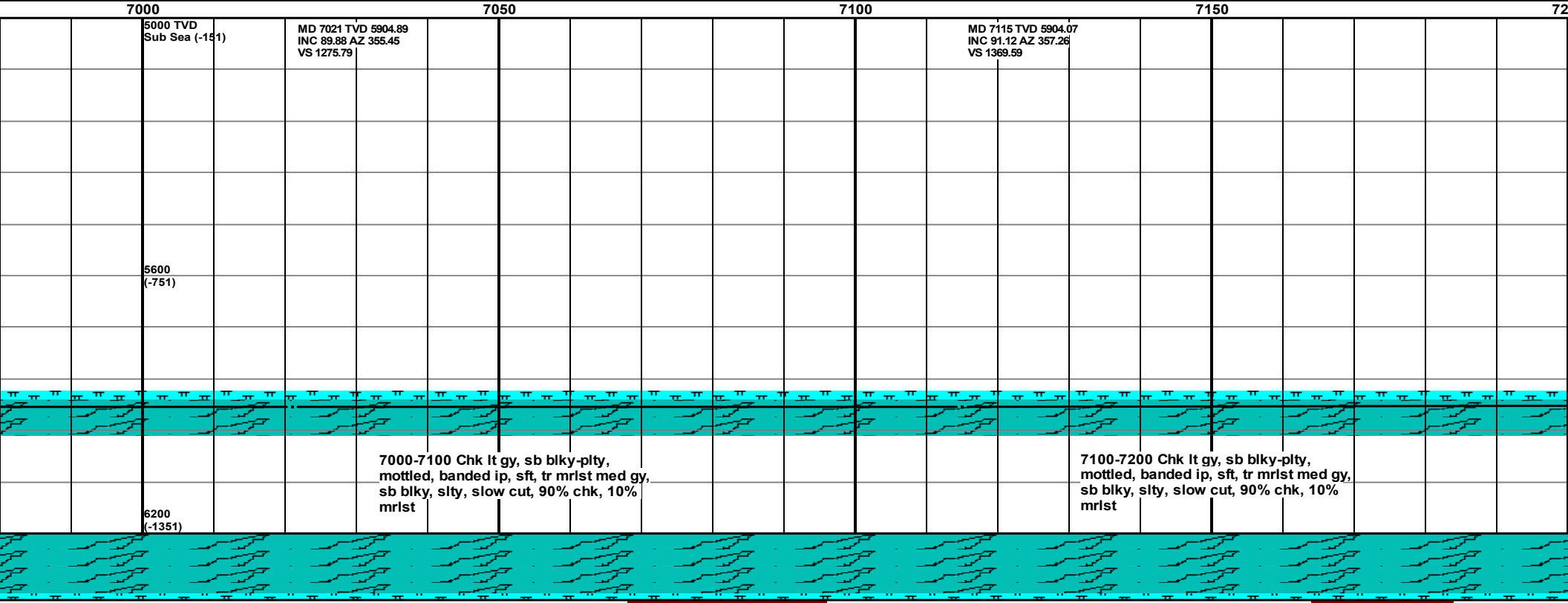
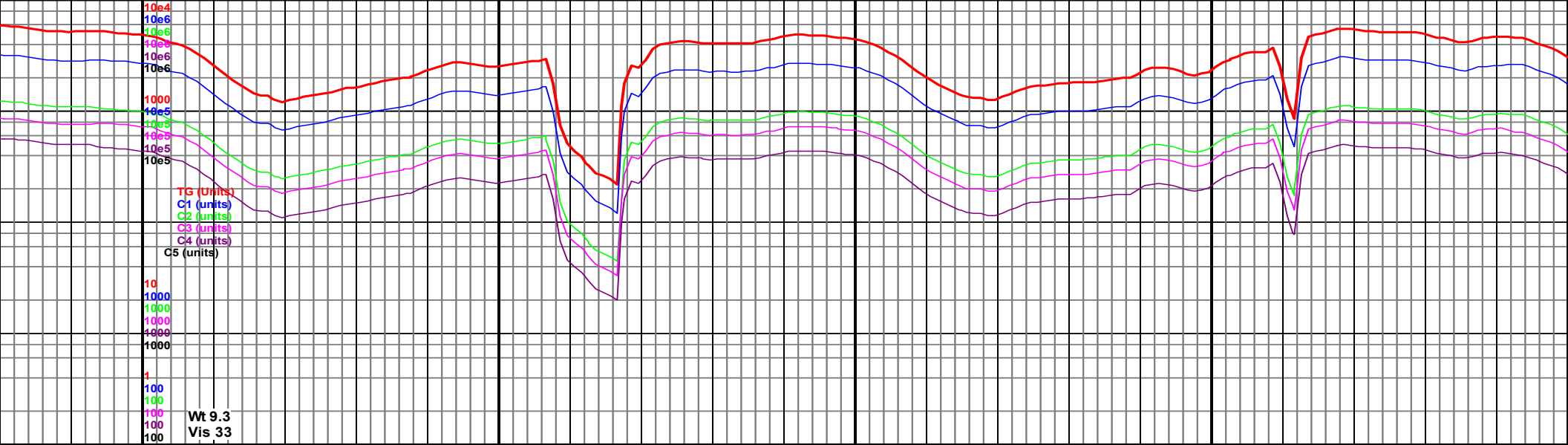


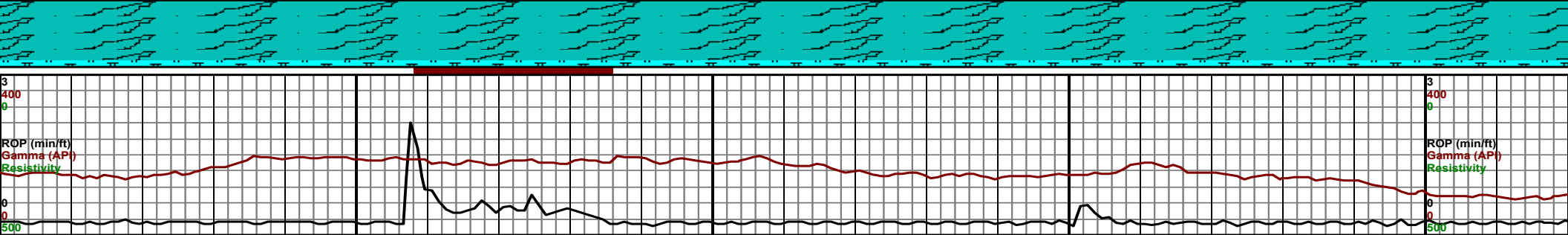
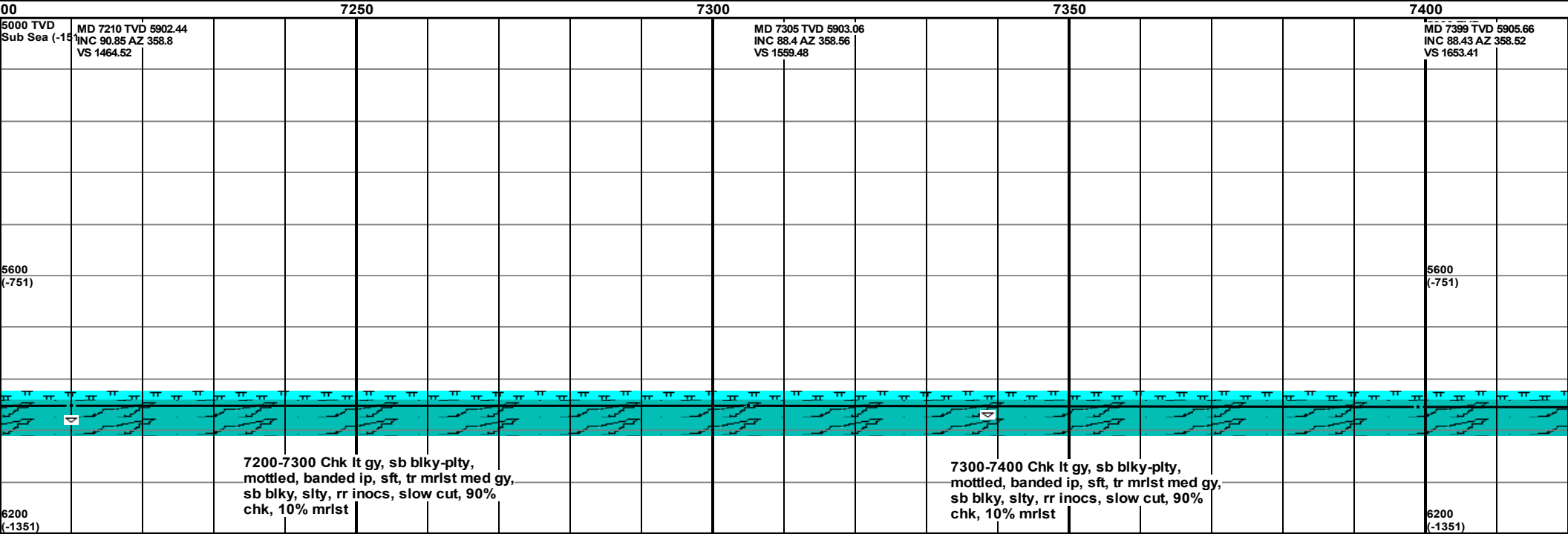
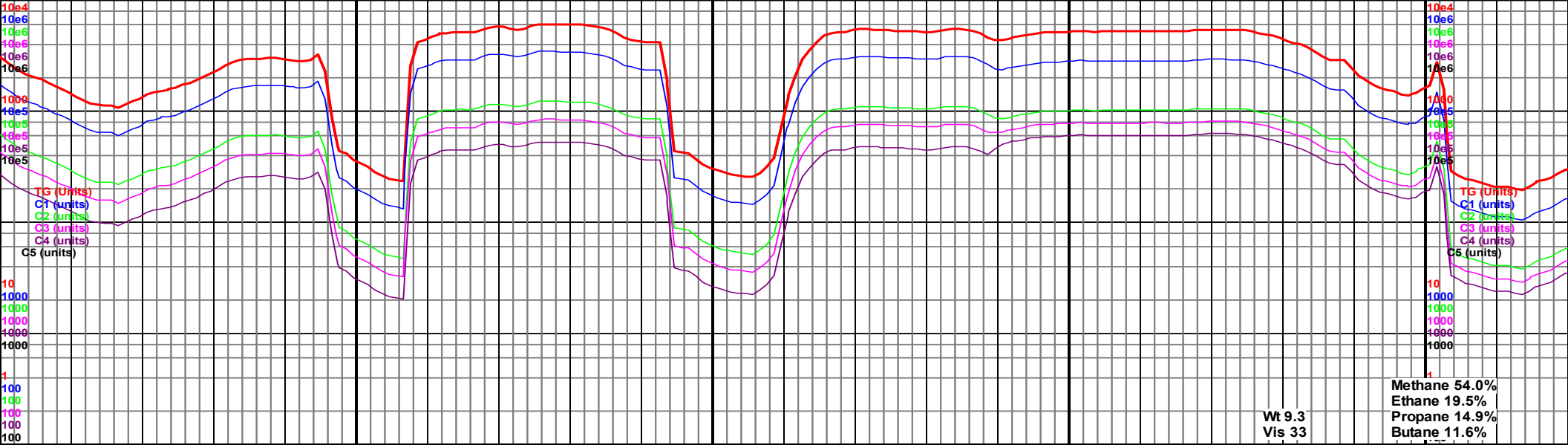


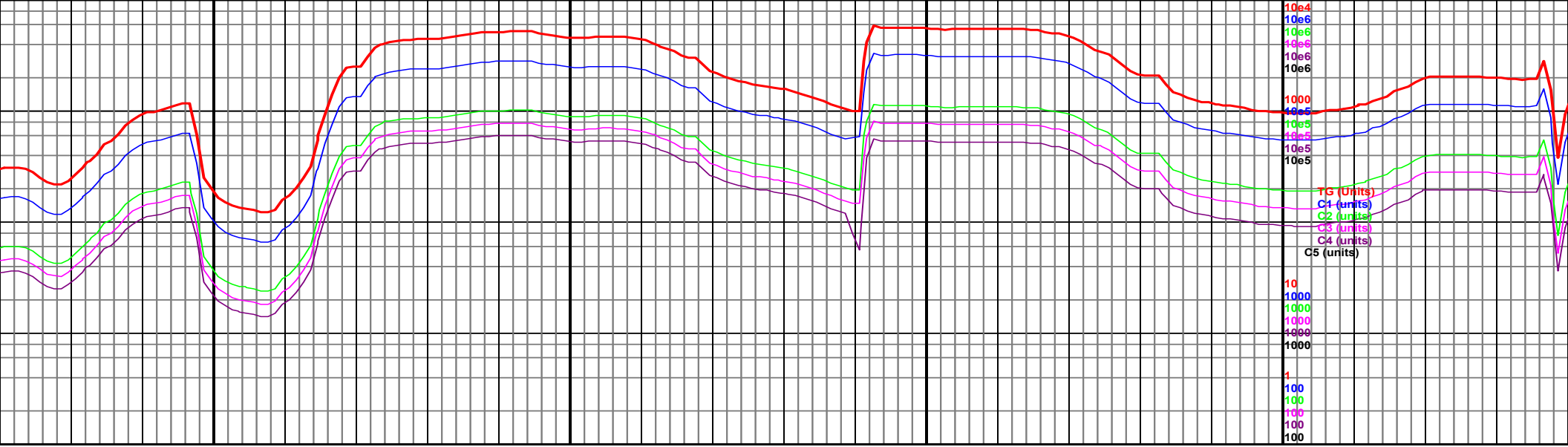












7450

7500

7550

7600

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INC 88.65 AZ 358.94
VS 1748.36

MD 7589 TVD 5909.97
INC 89.07 AZ 357.64
VS 1843.3

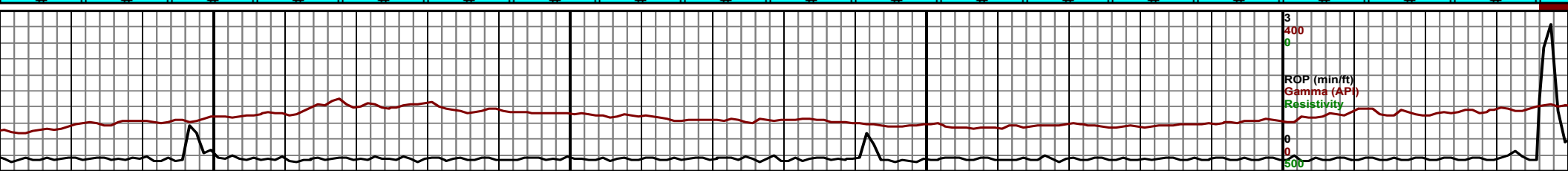
5600
(-751)

7400-7500 Chk lt gy, sb blkly-pty,
mottled, banded ip, sft, tr mrlst med gy,
sb blkly, slty, slow cut, 90% chk, 10%
mrlst

7500-7600 Chk lt gy, sb blkly-pty,
mottled, banded ip, sft, tr mrlst med gy,
sb blkly, slty, slow cut, 80% chk, 20%
mrlst

6200
(-1351)

7600-7700
mottled,
sb blkly,
chk, 5%



3

400

0

0

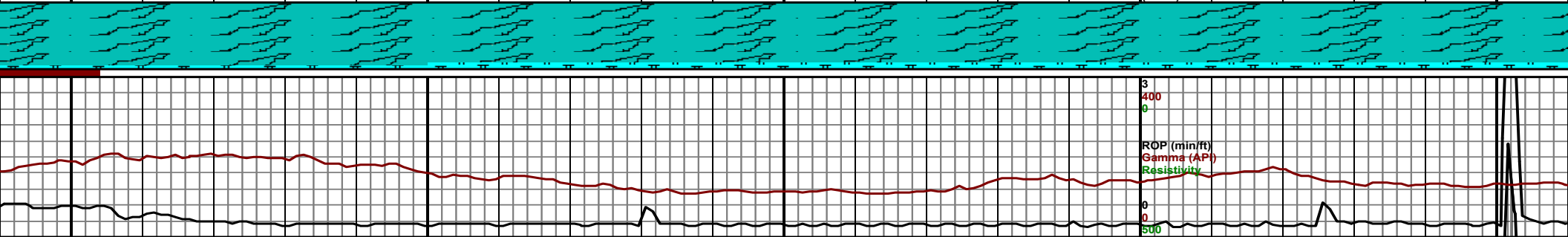
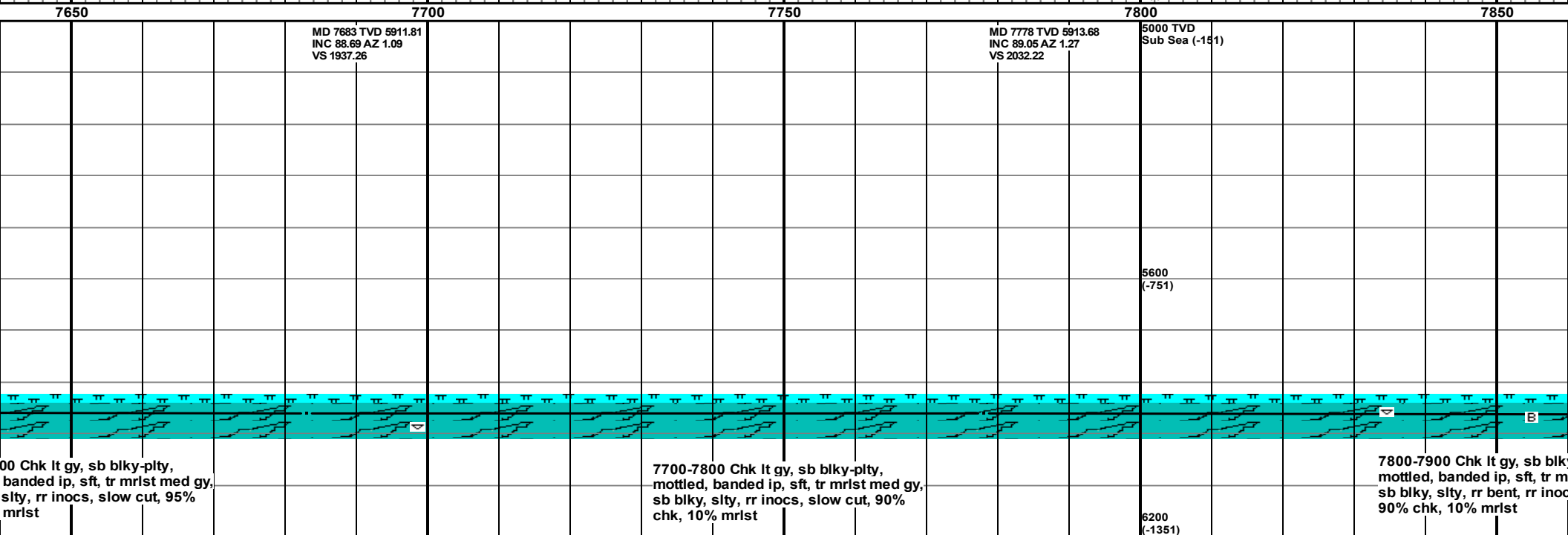
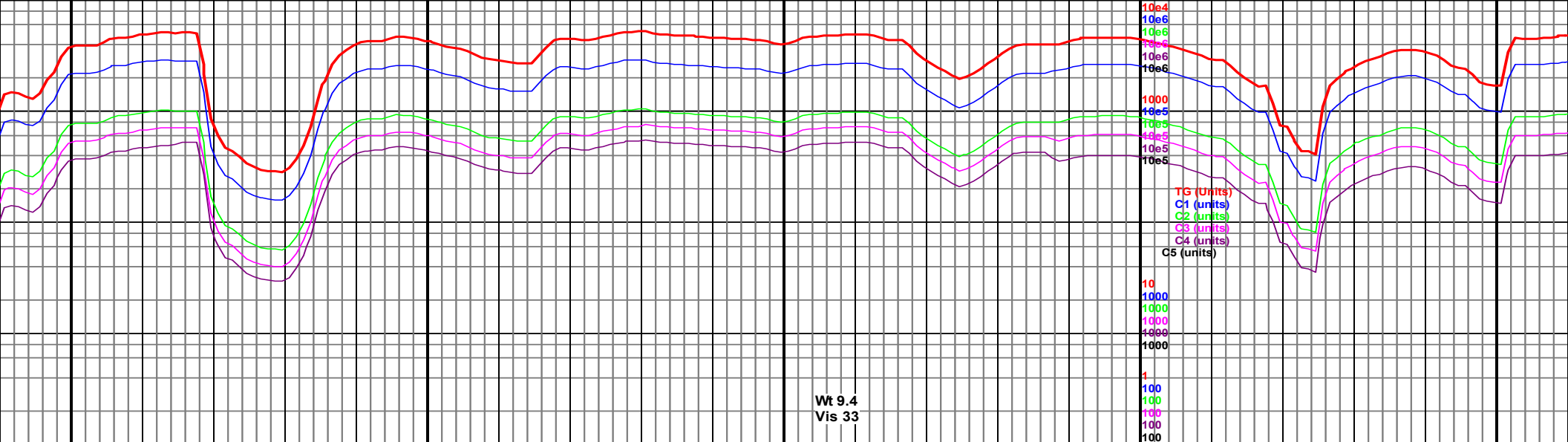
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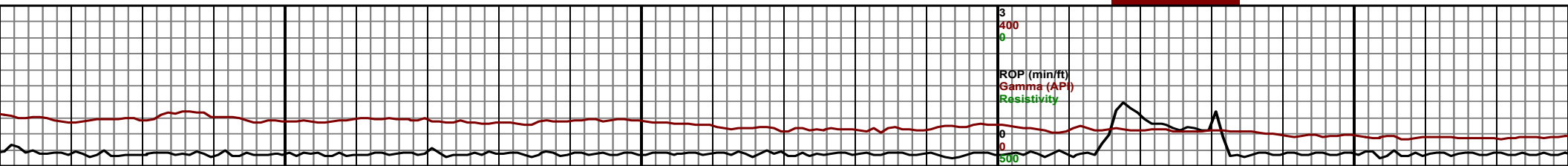
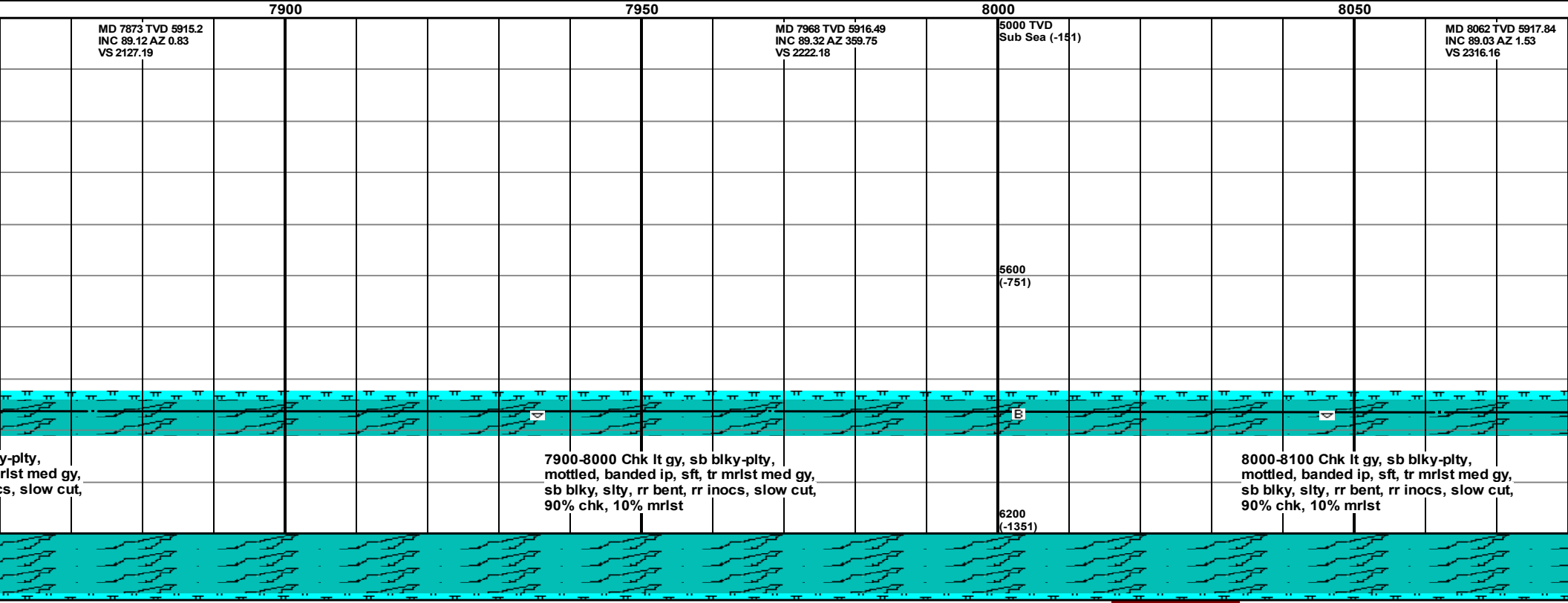
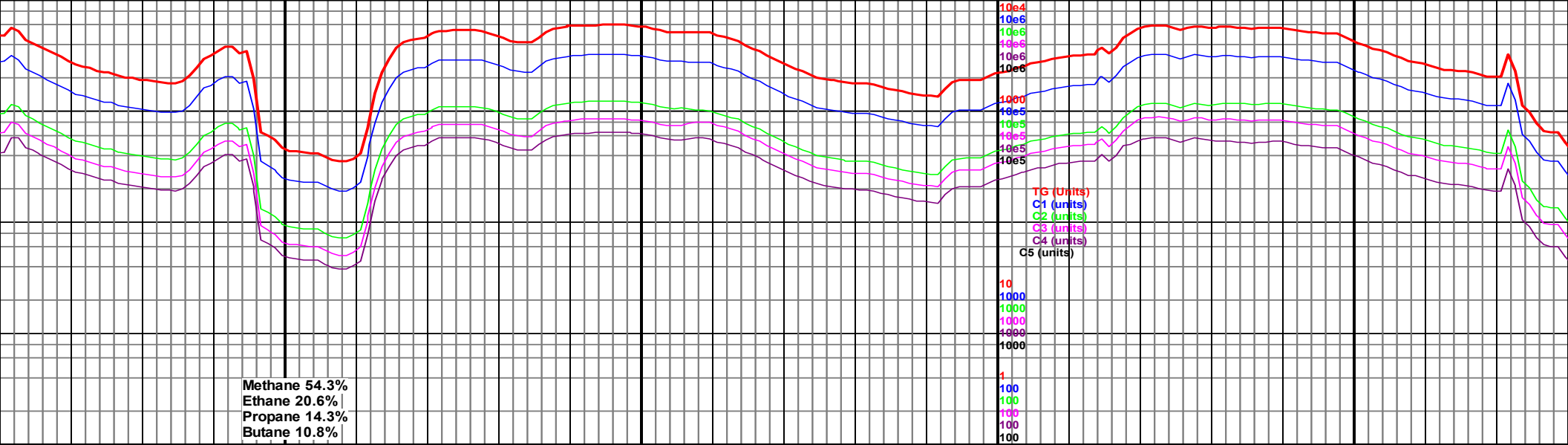
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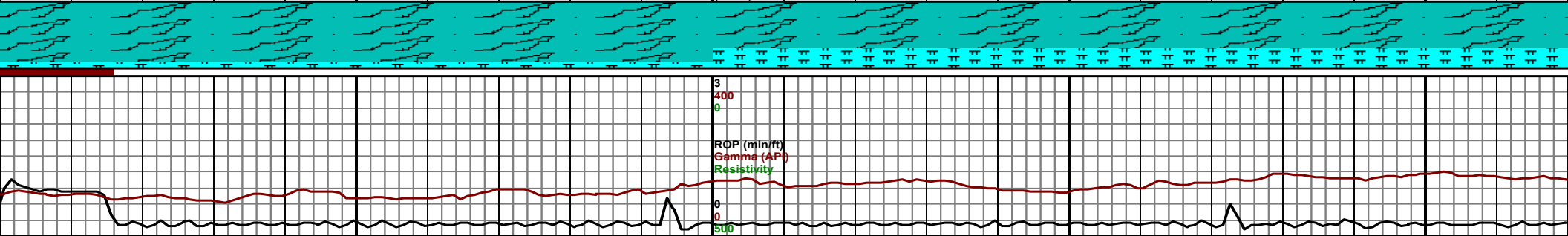
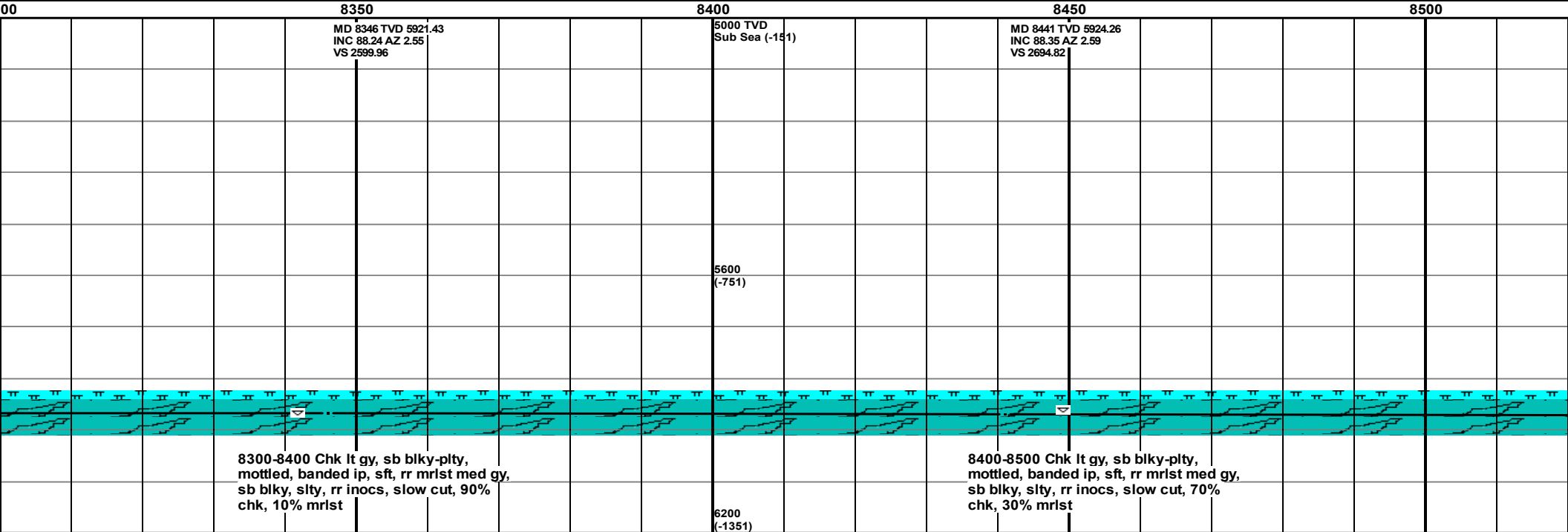
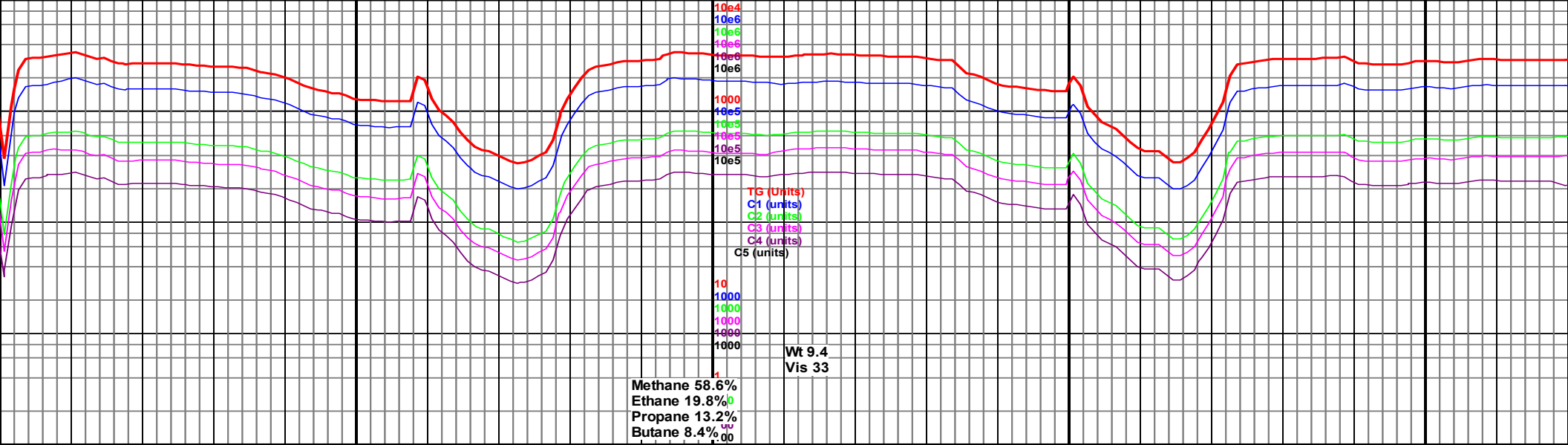
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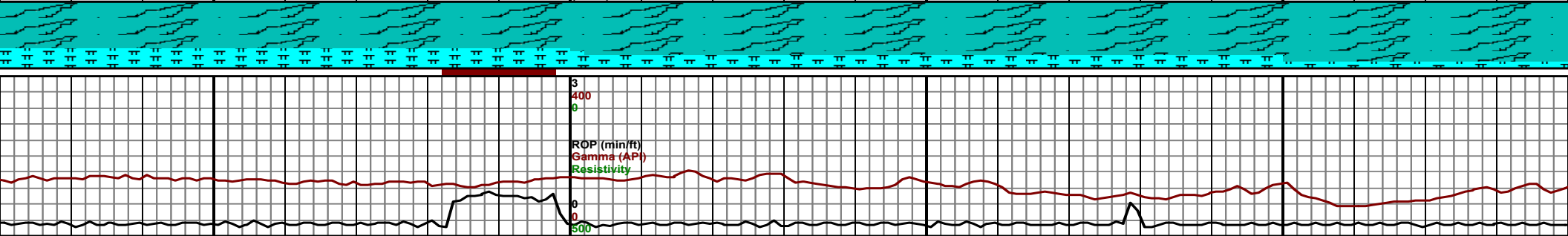
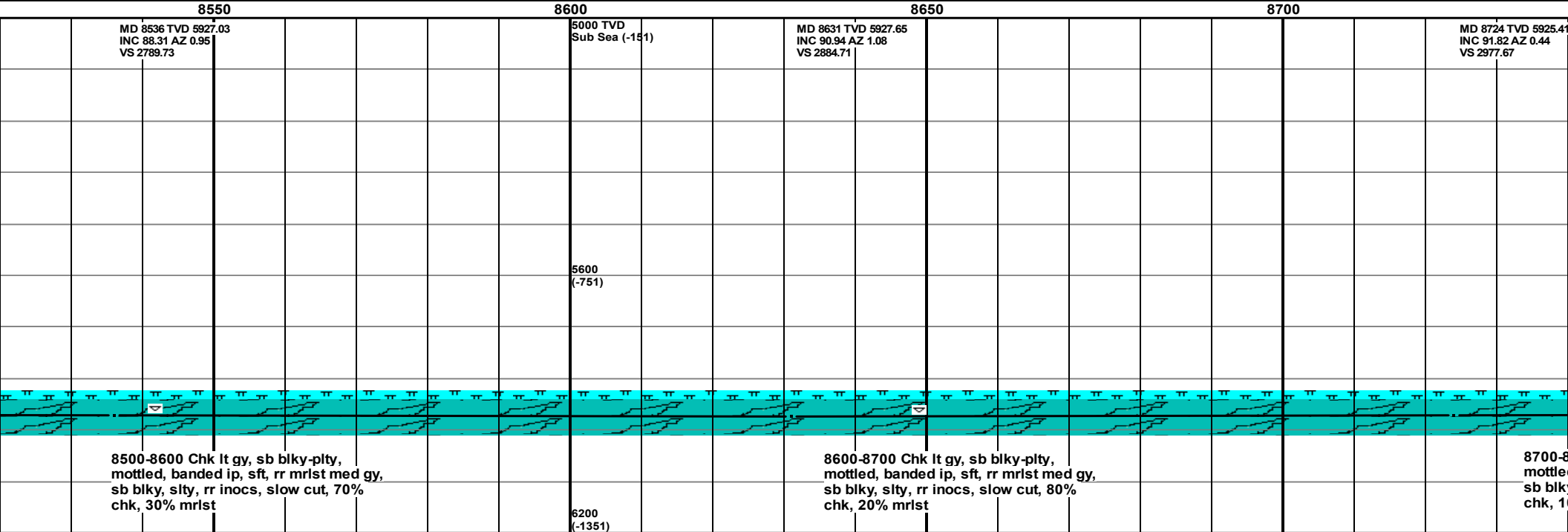
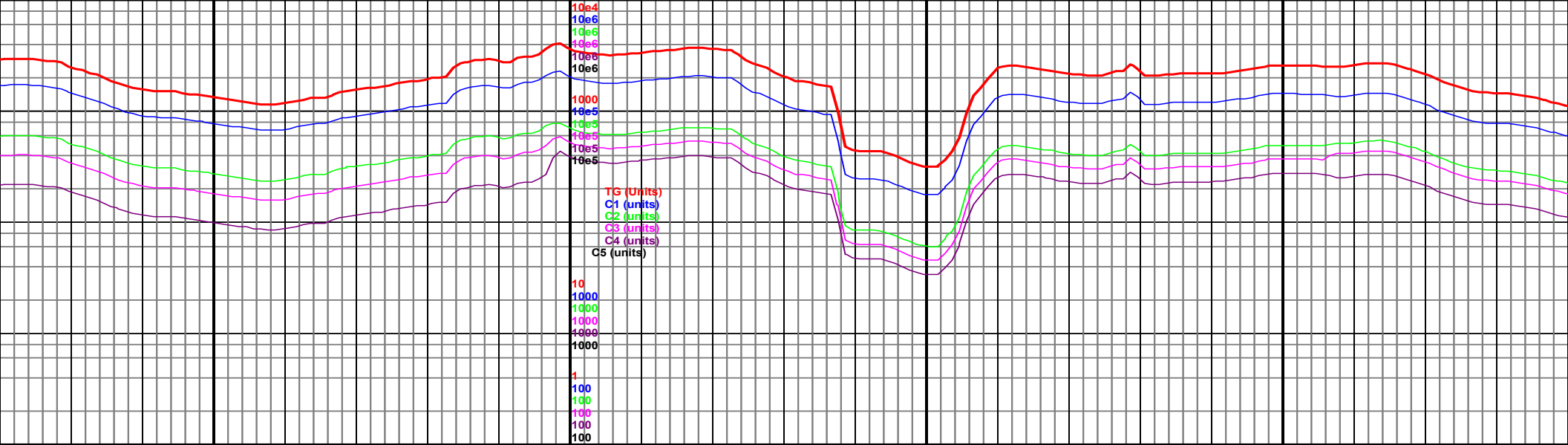
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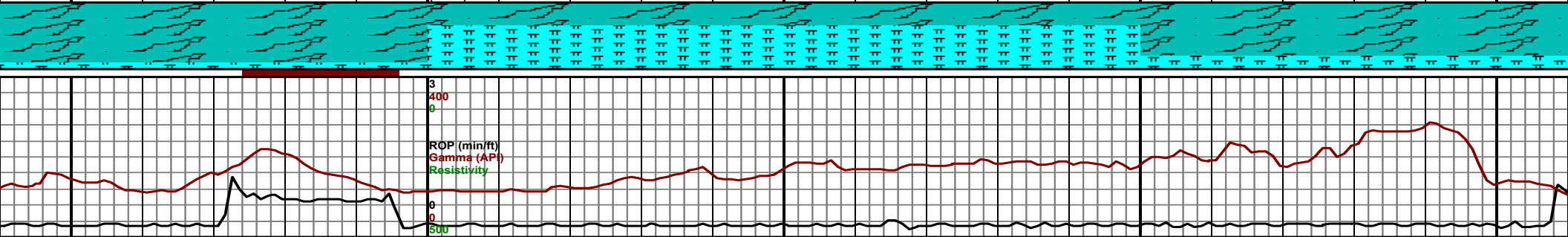
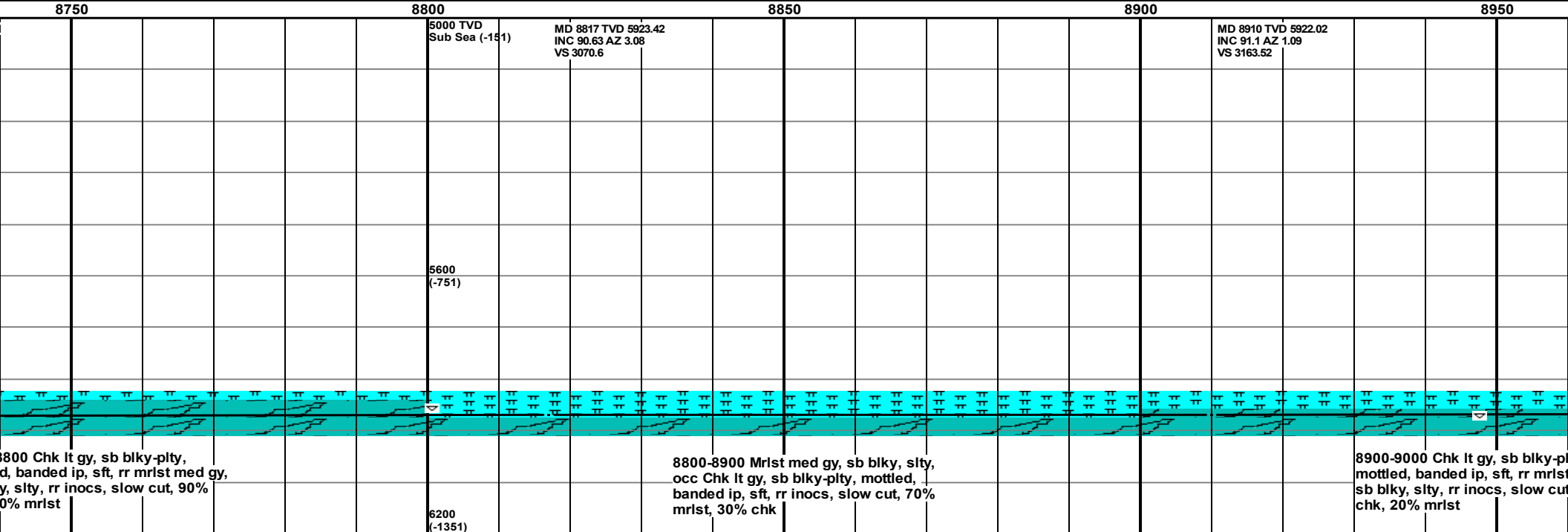
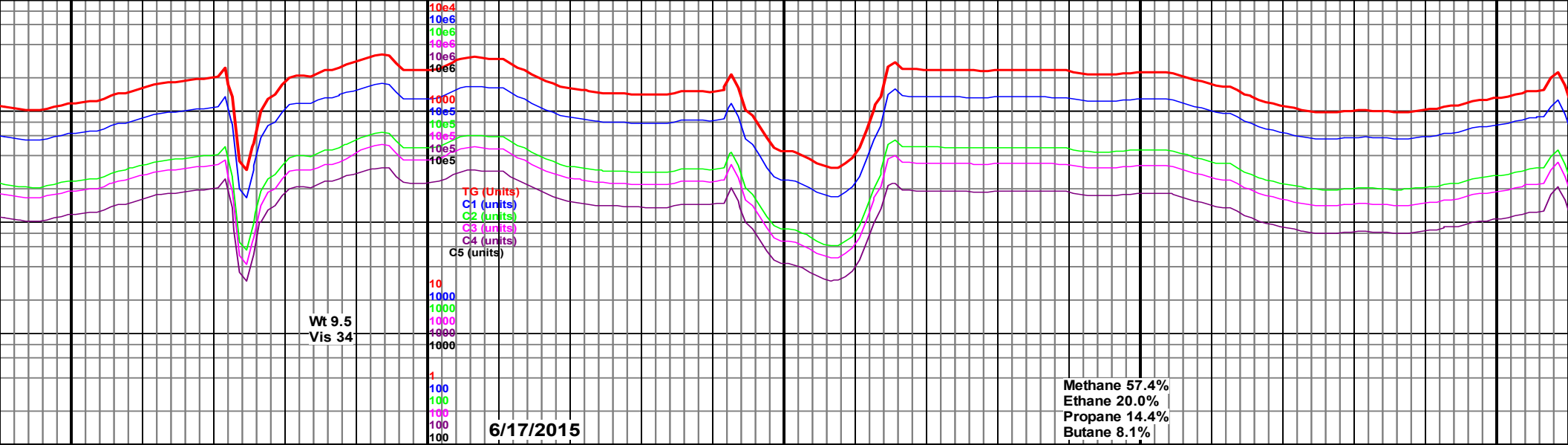
ROP (min/ft)
Gamma (API)
Resistivity

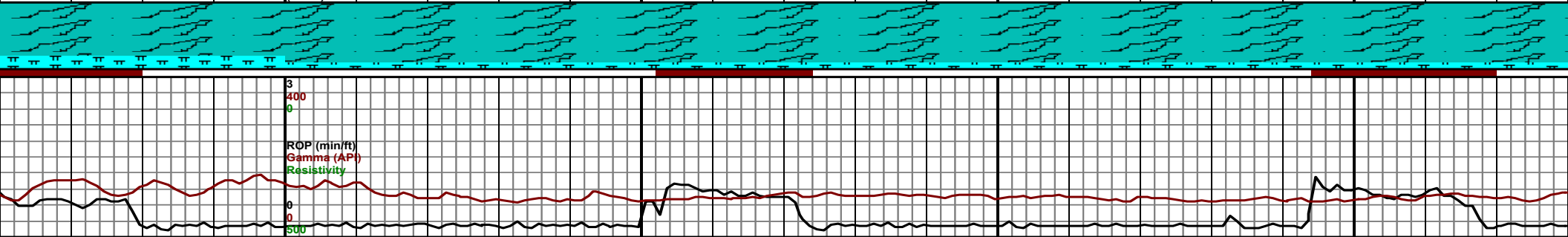
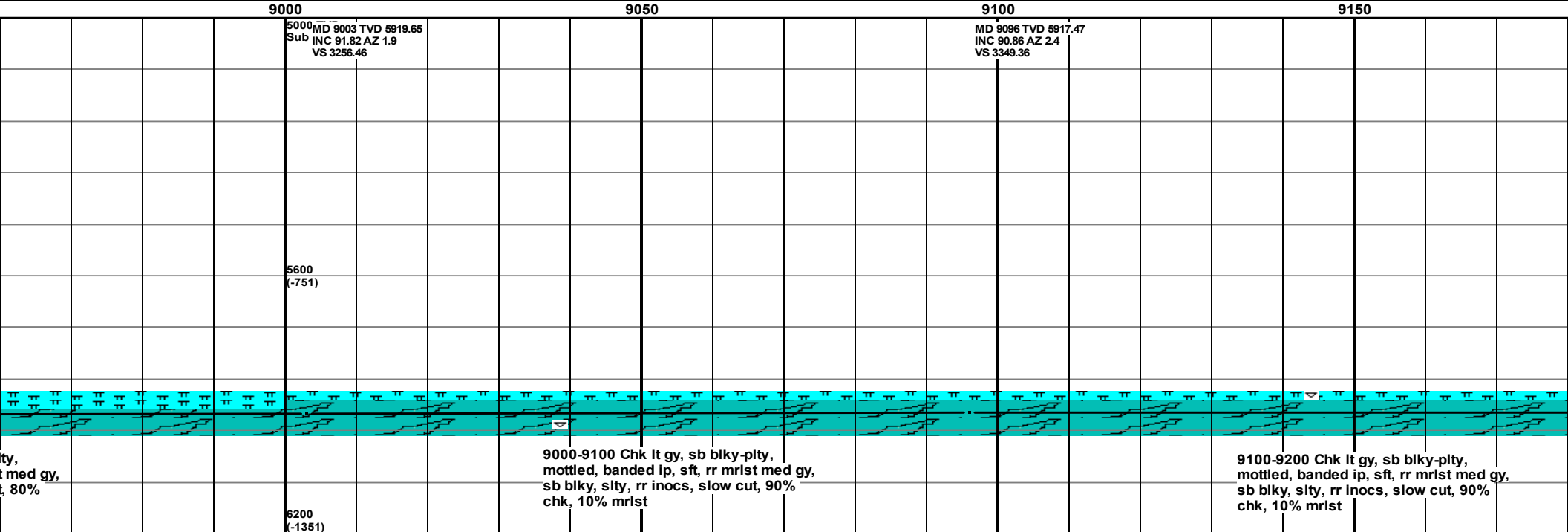
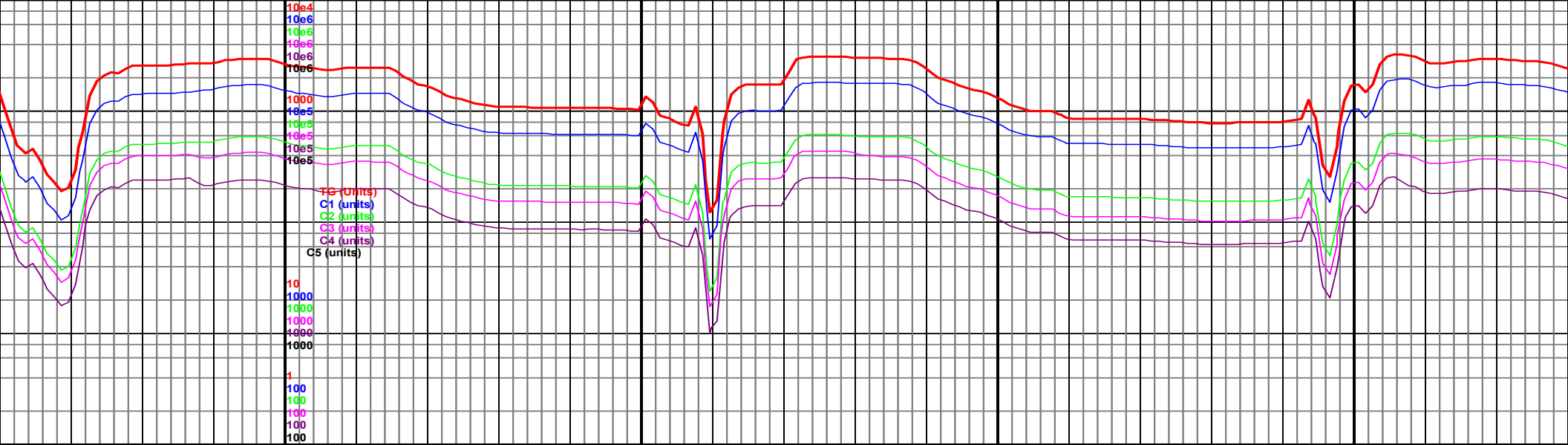


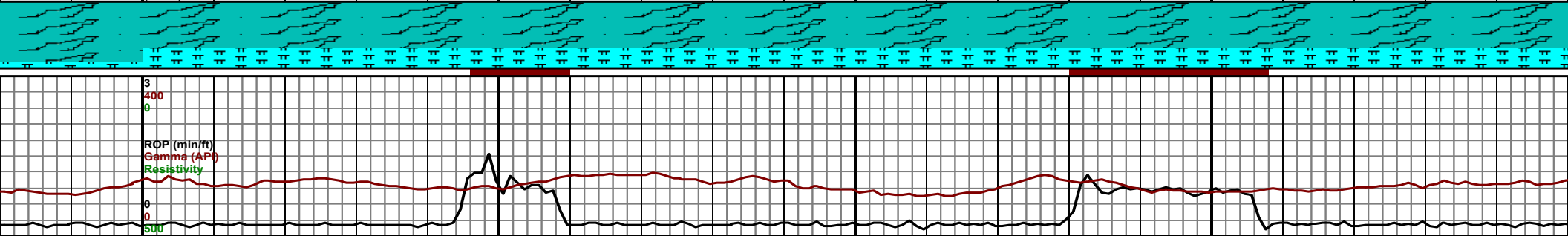
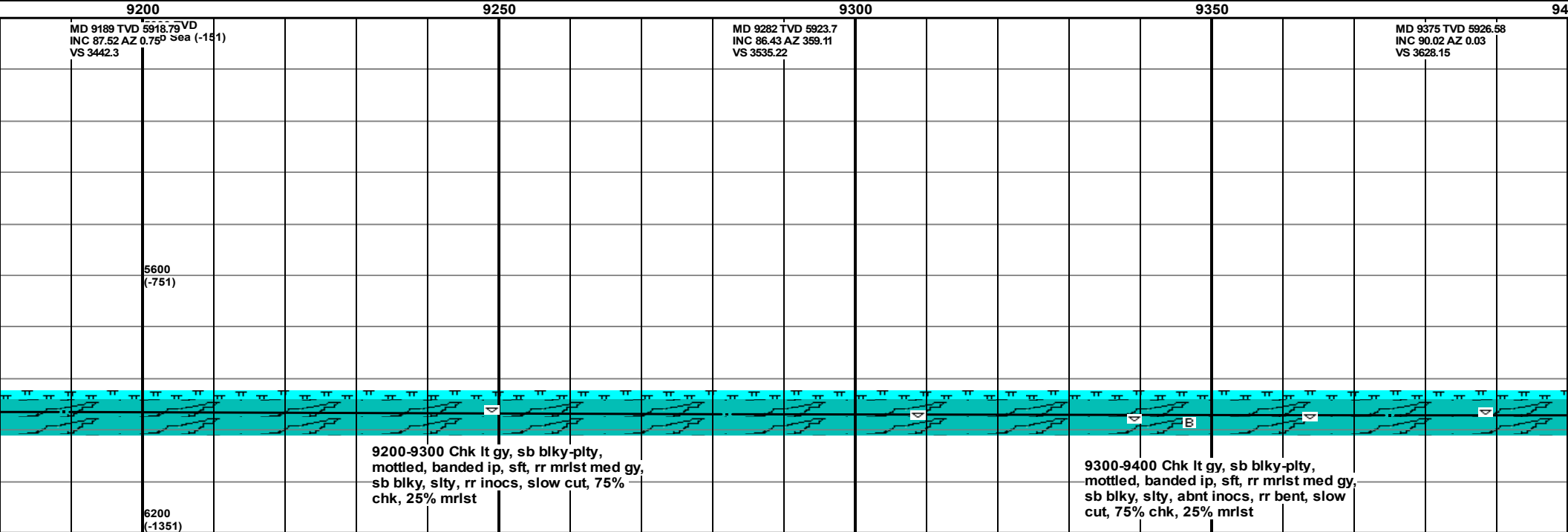
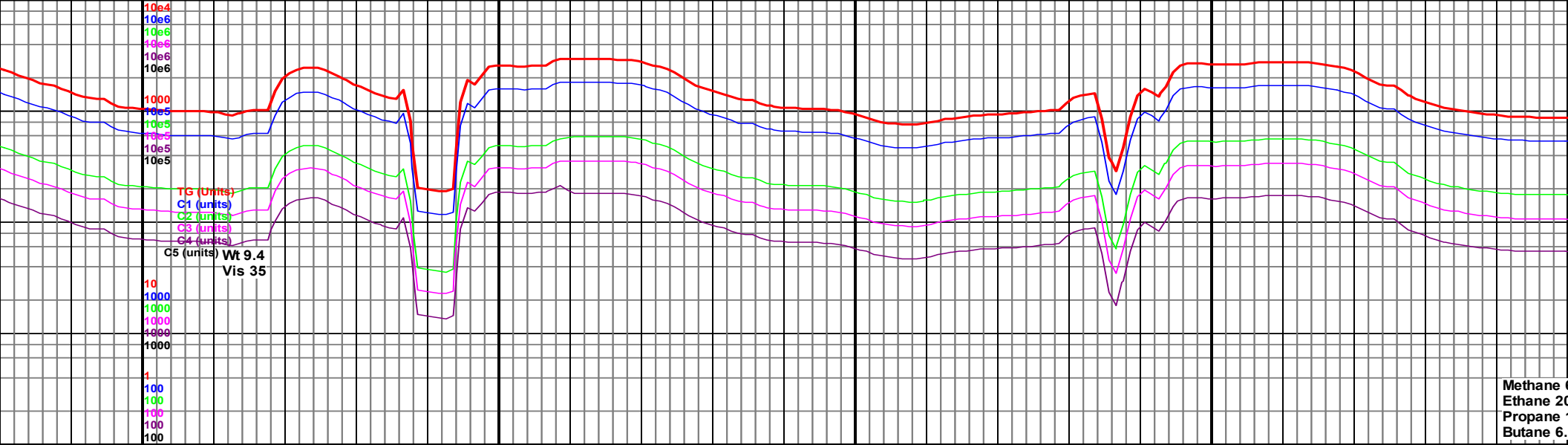


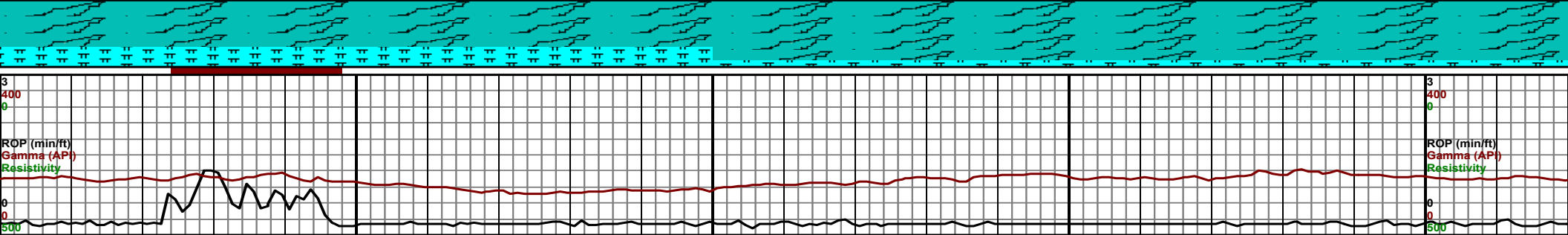
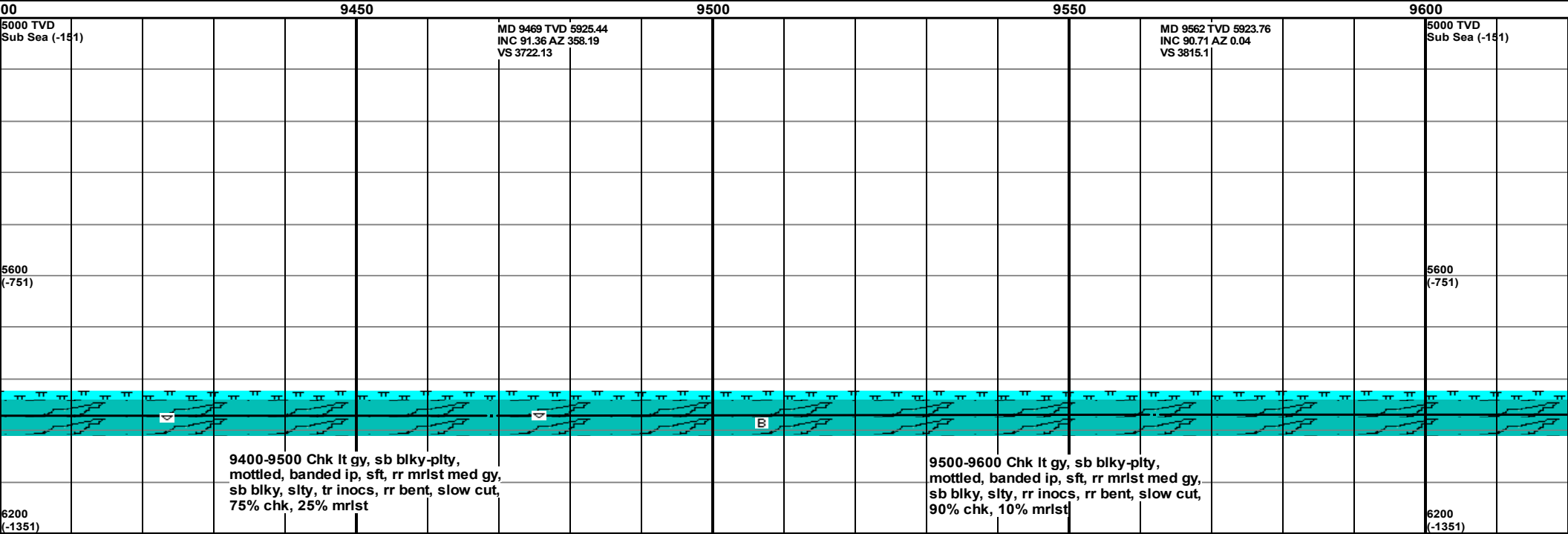
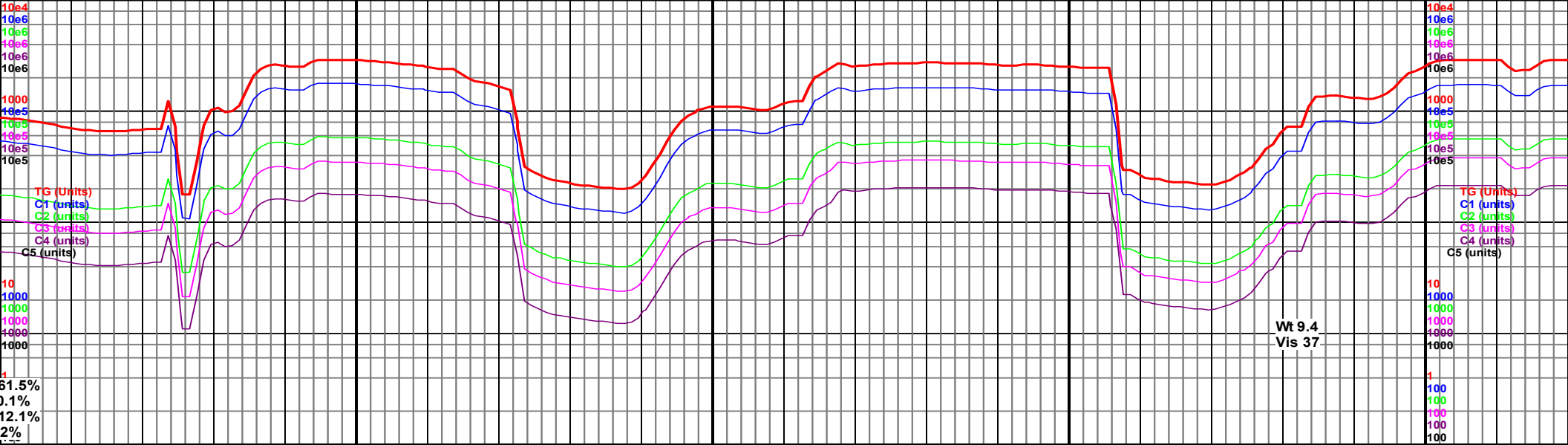


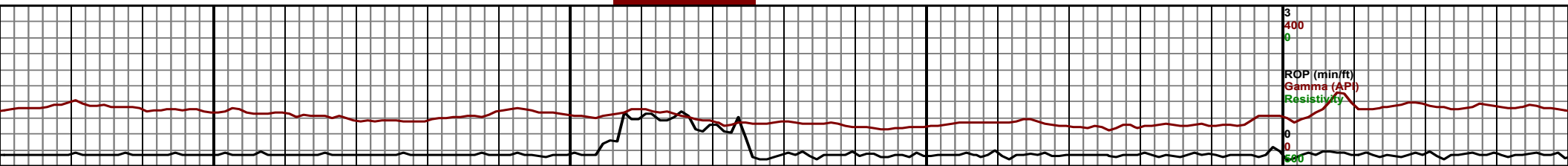
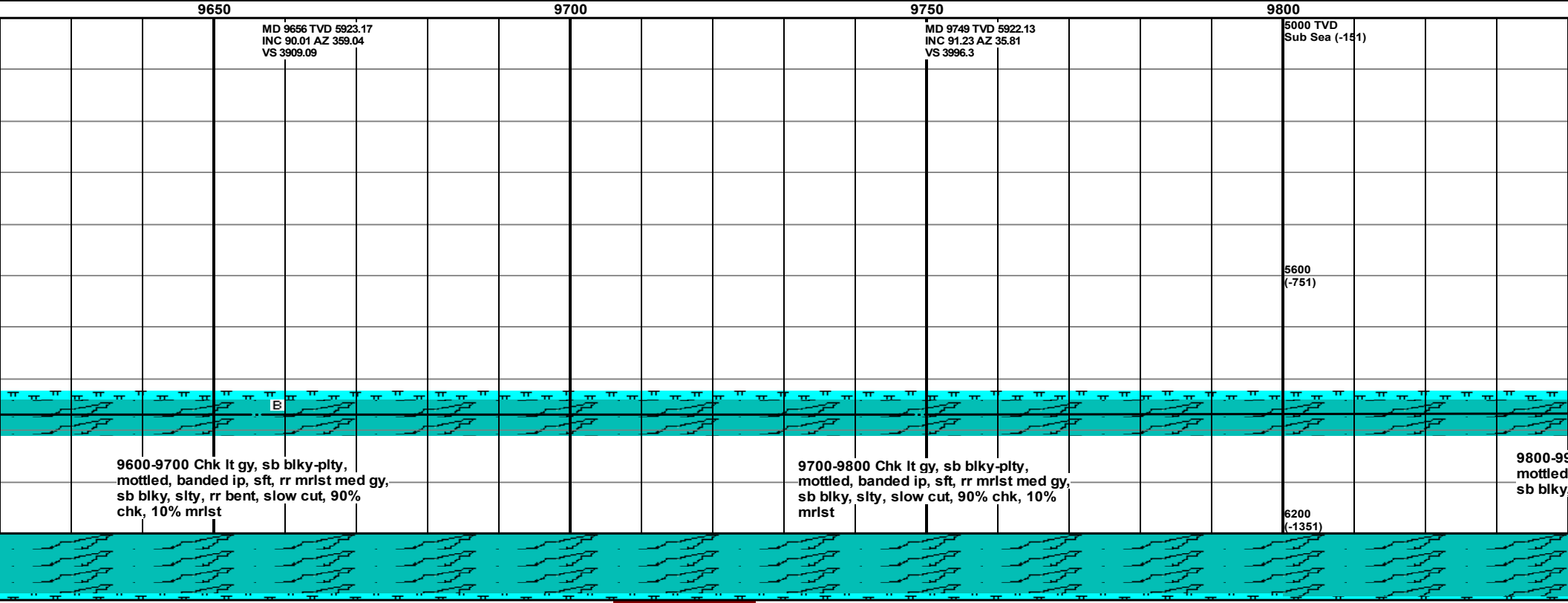
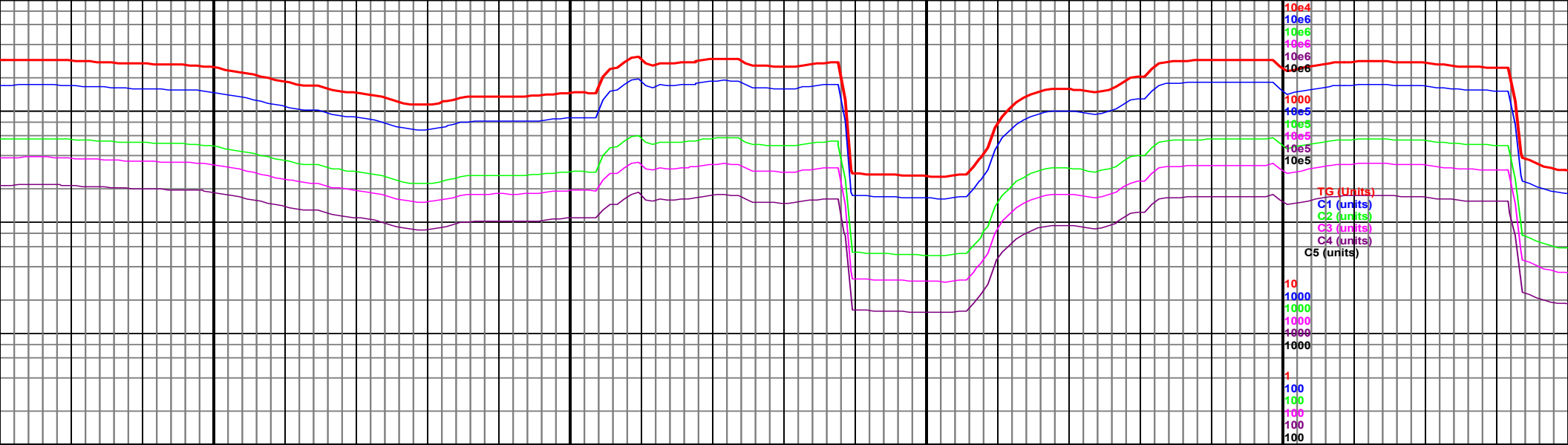


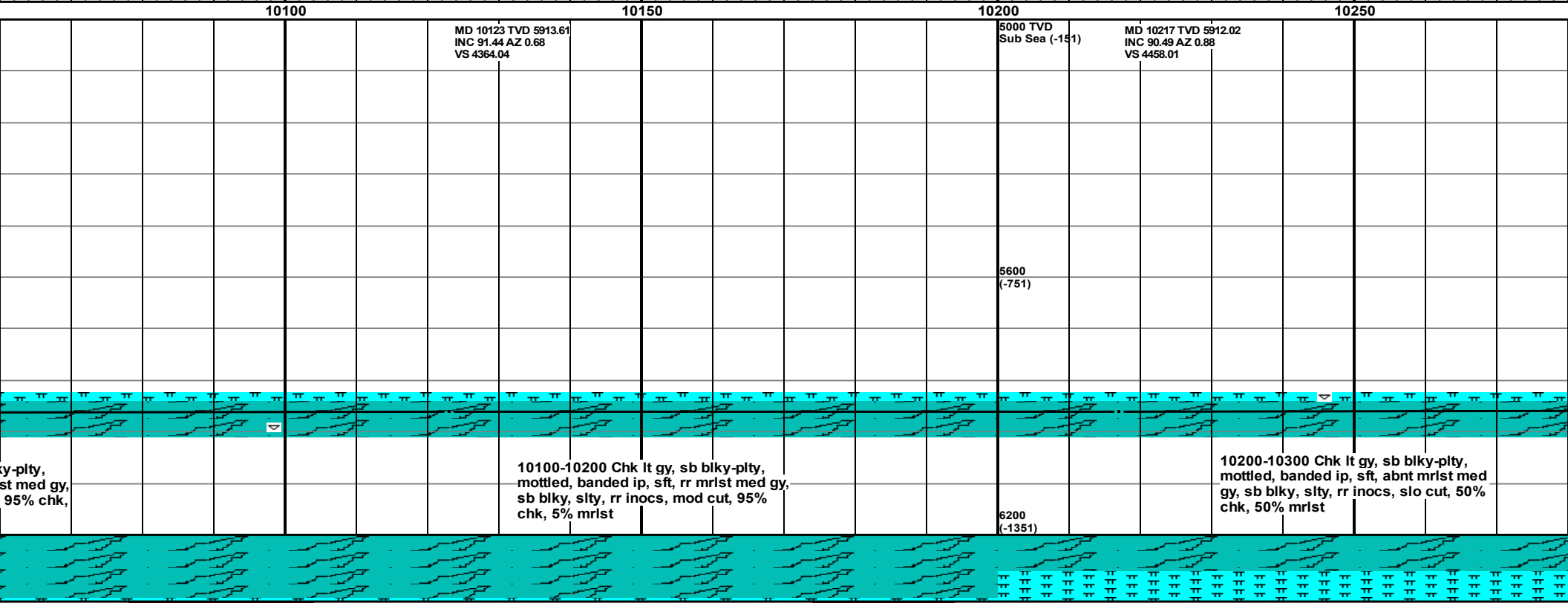


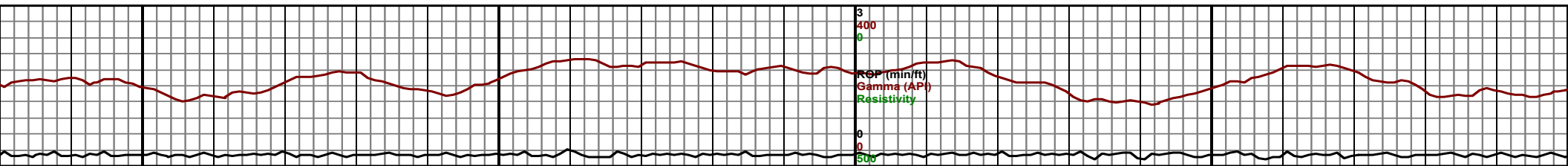
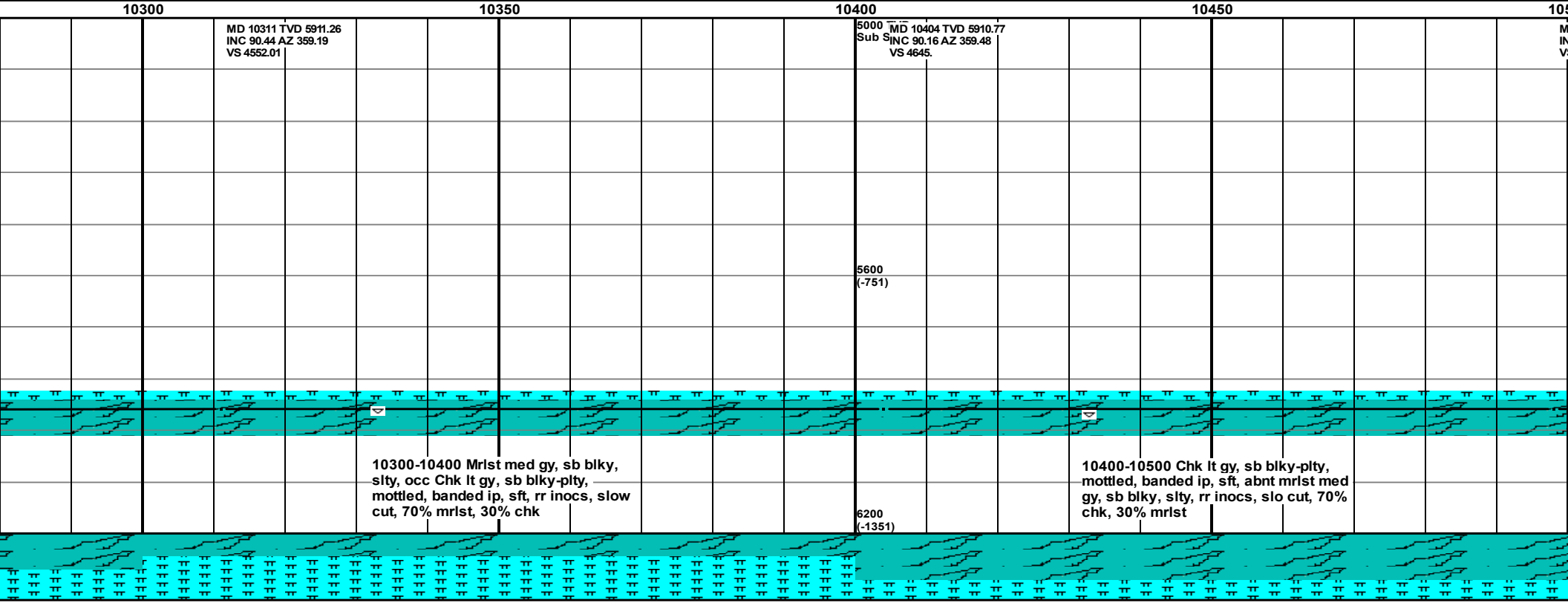
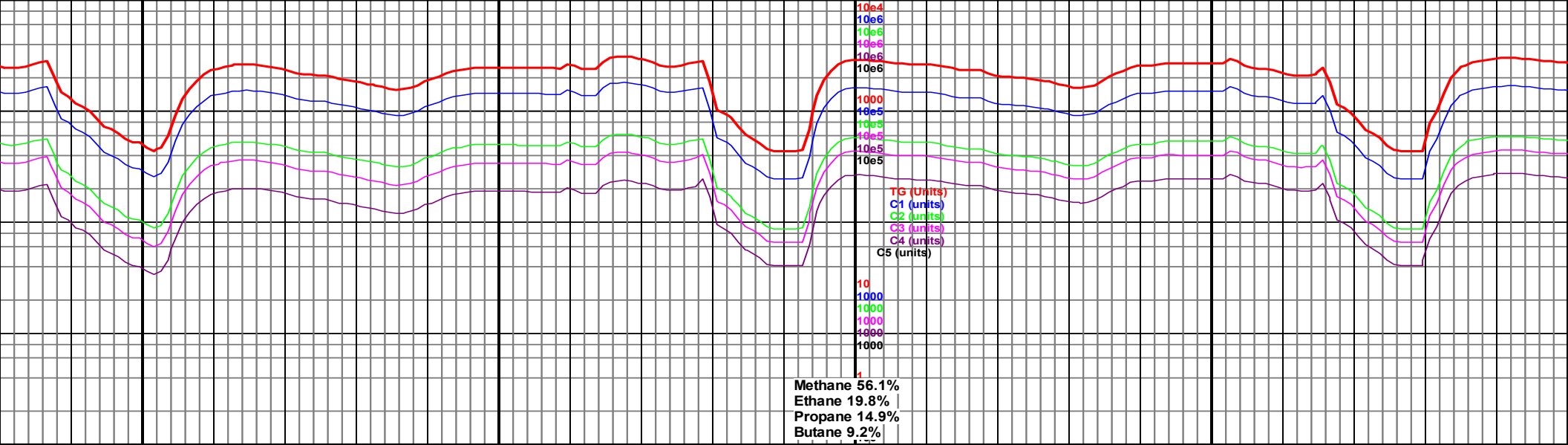


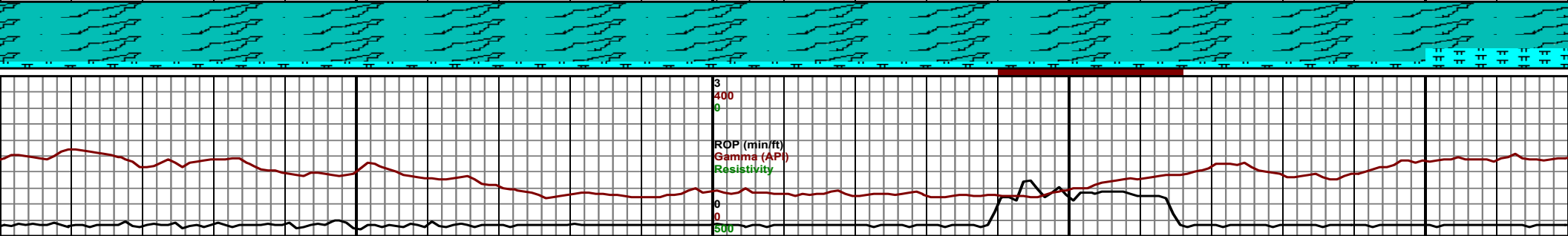
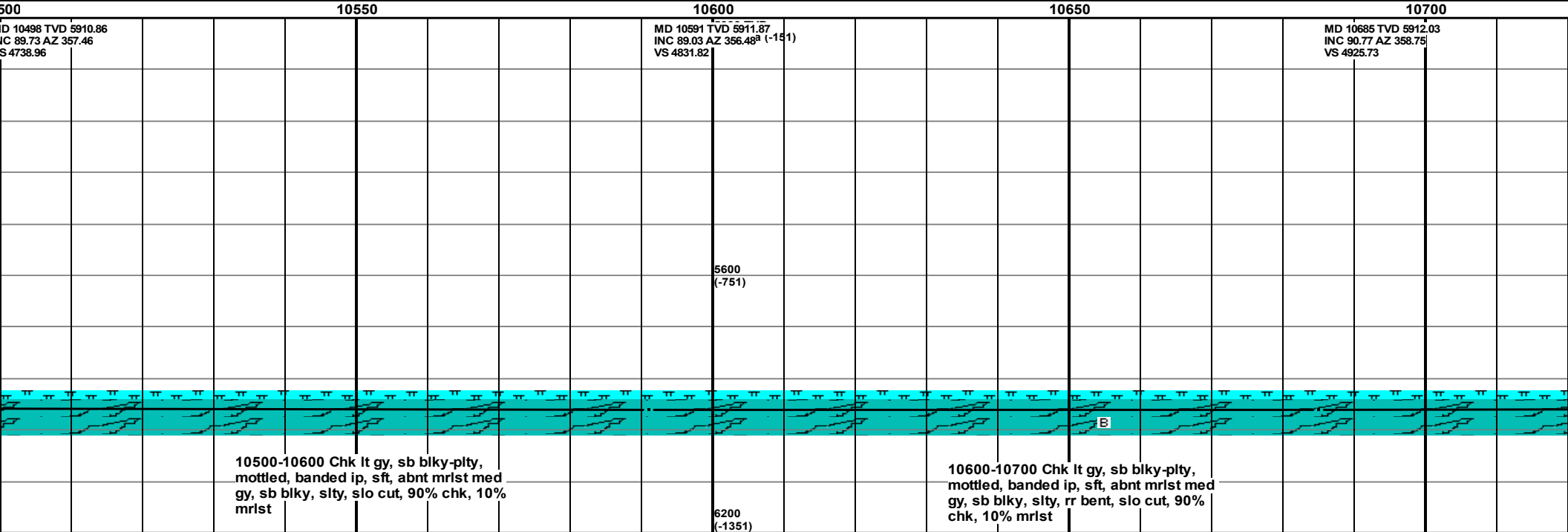
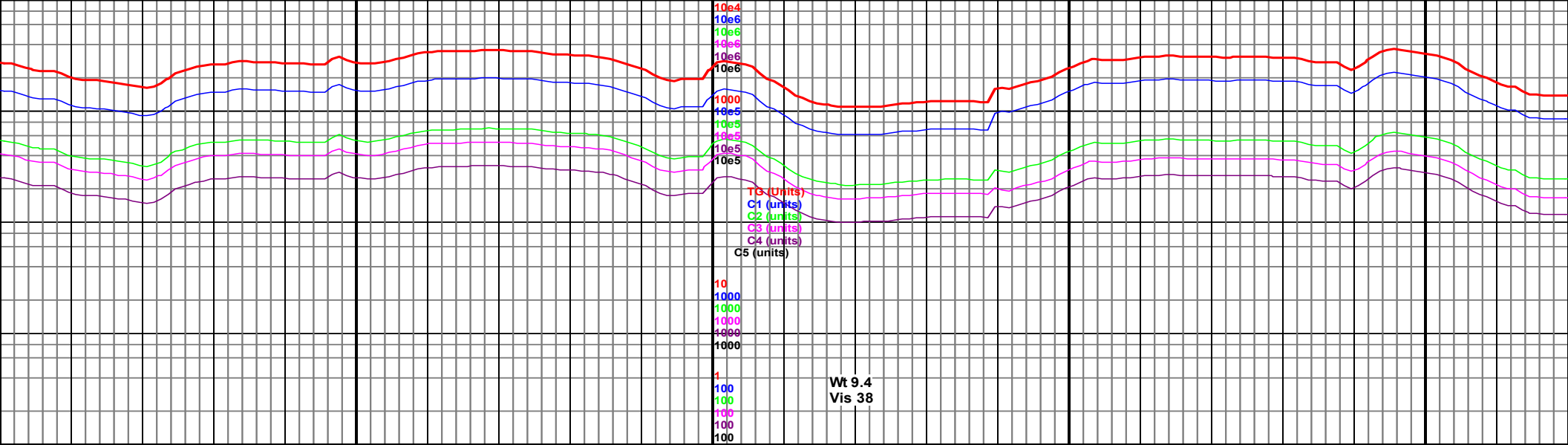


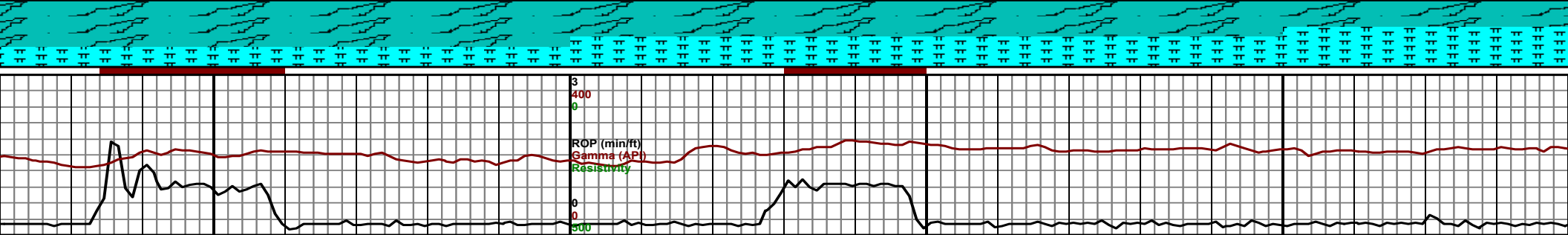
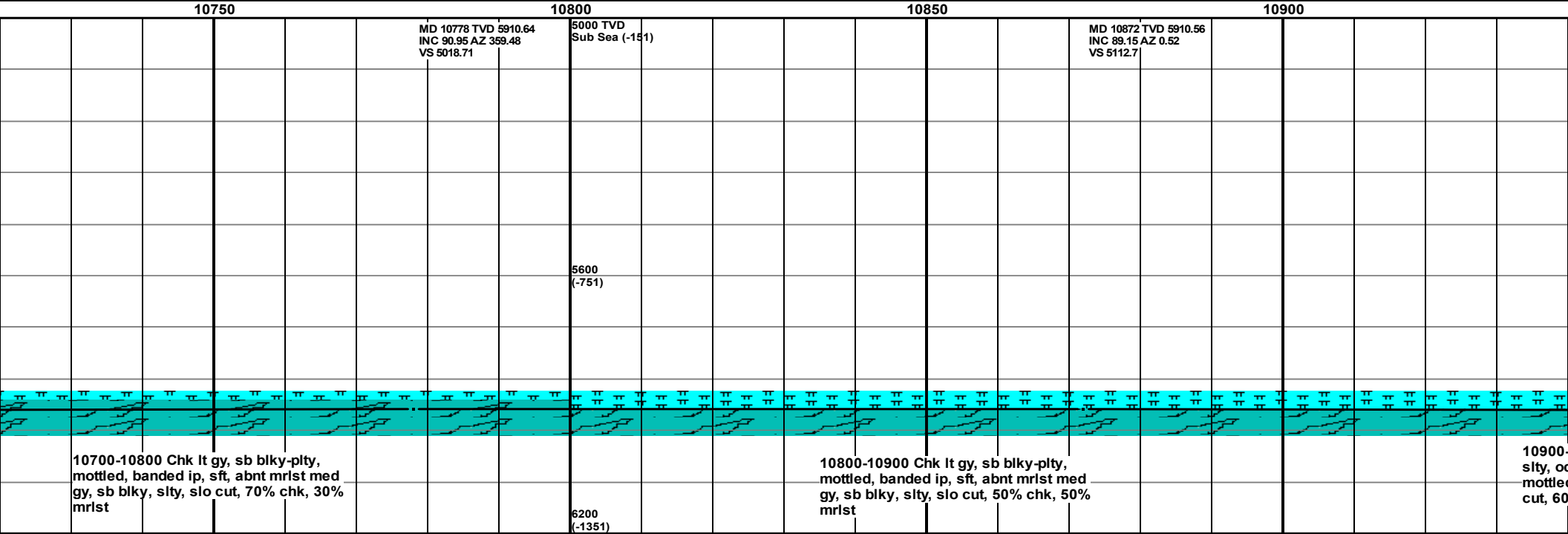
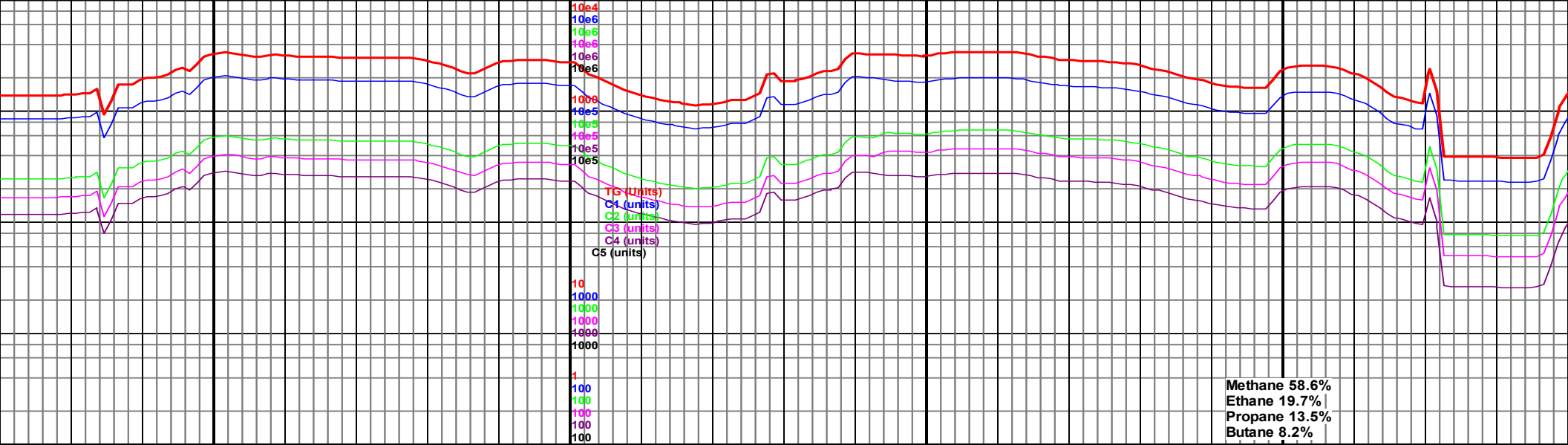


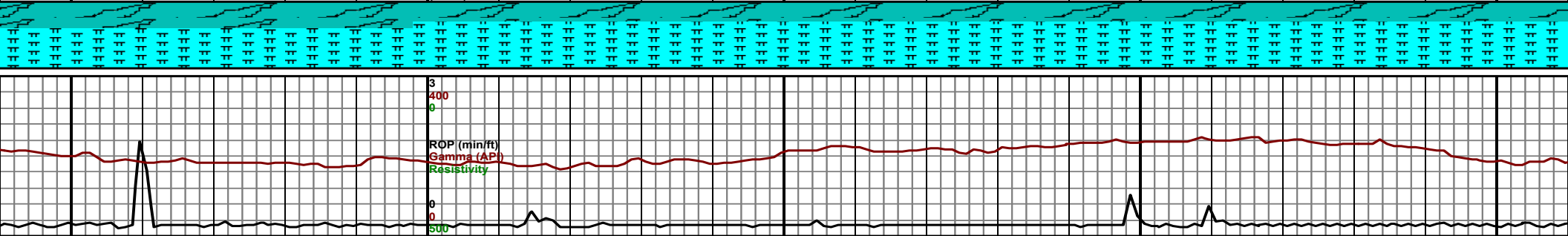
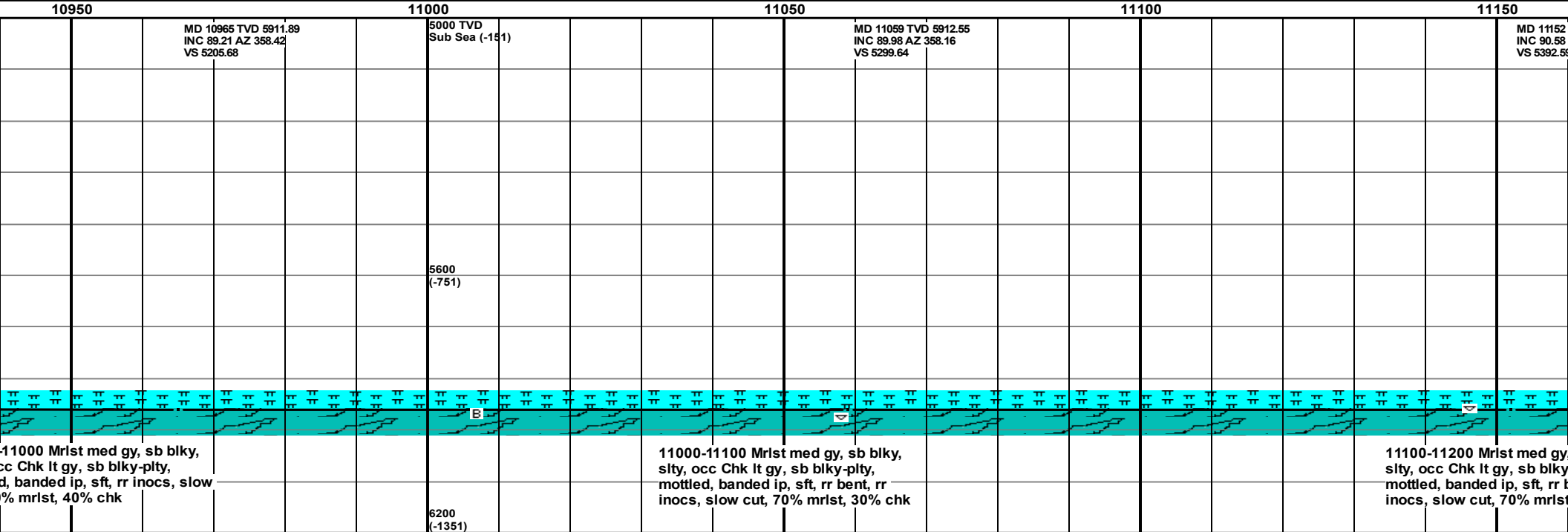
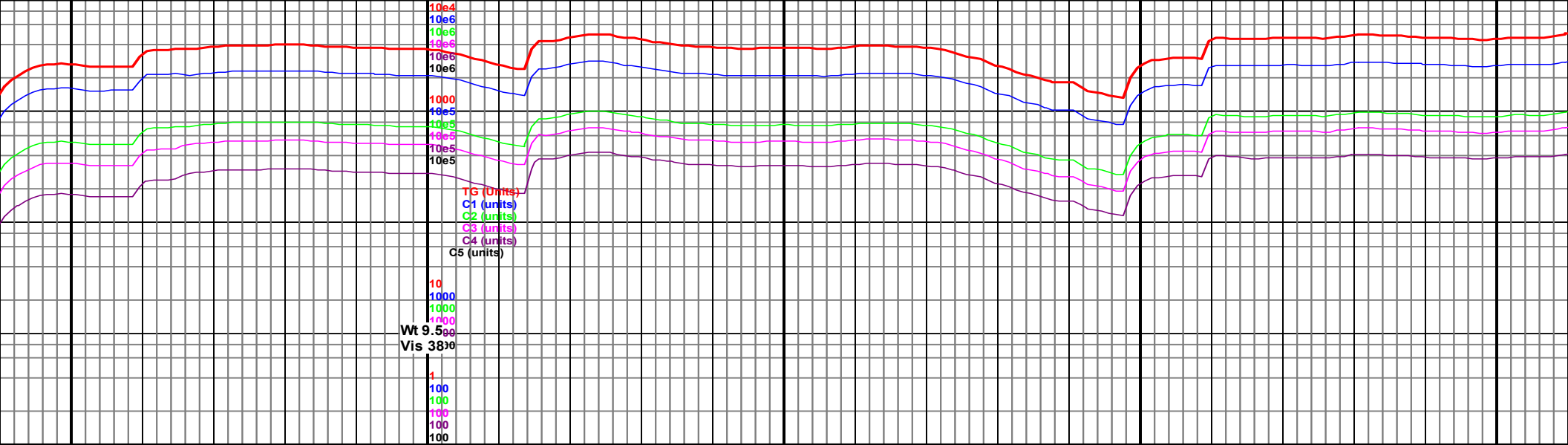


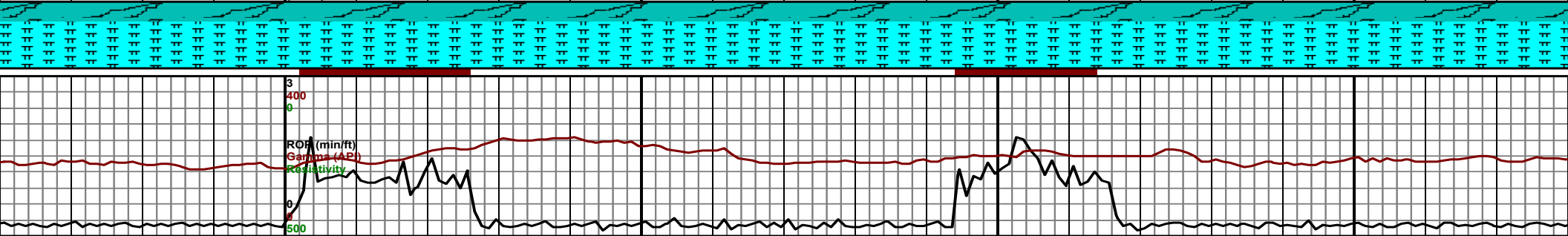
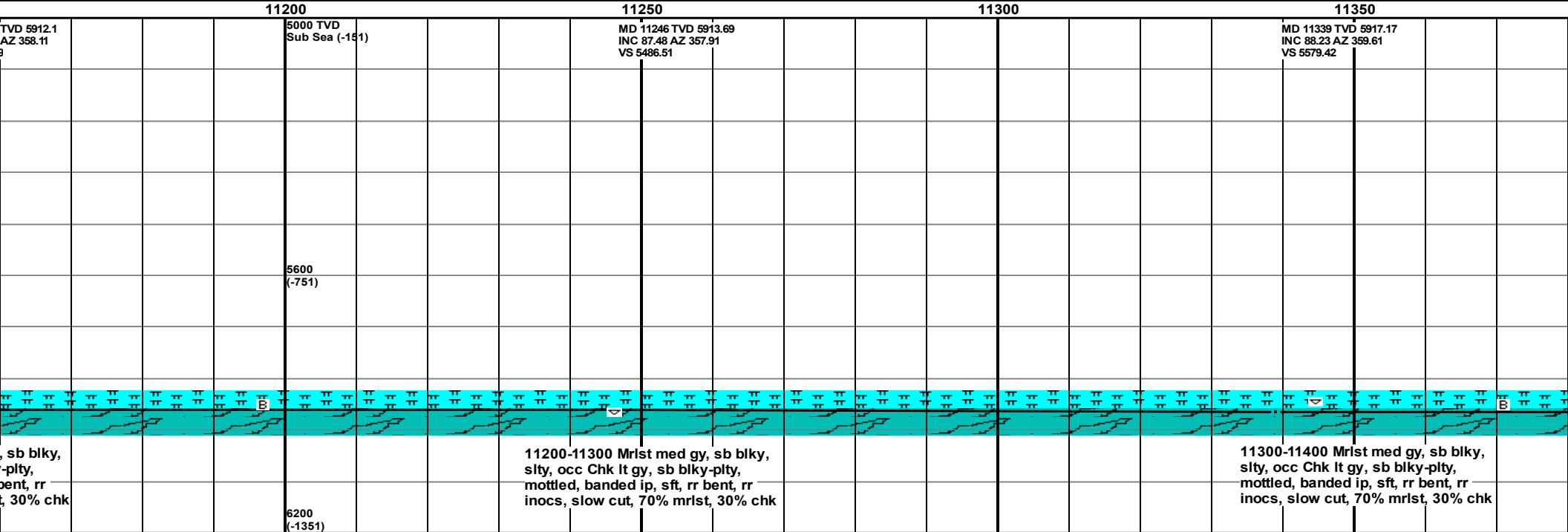
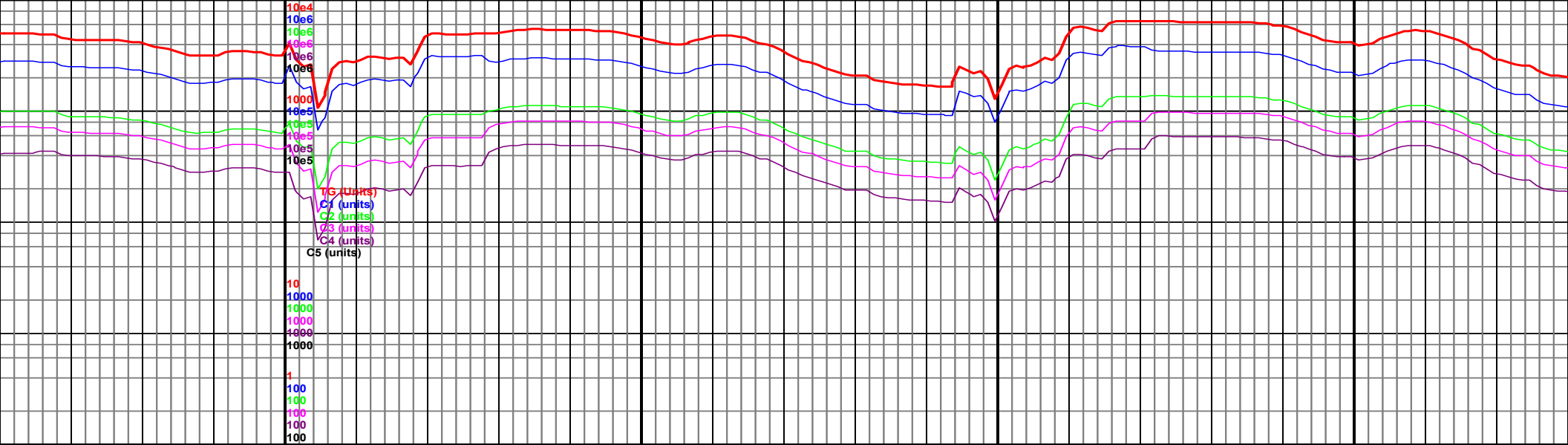


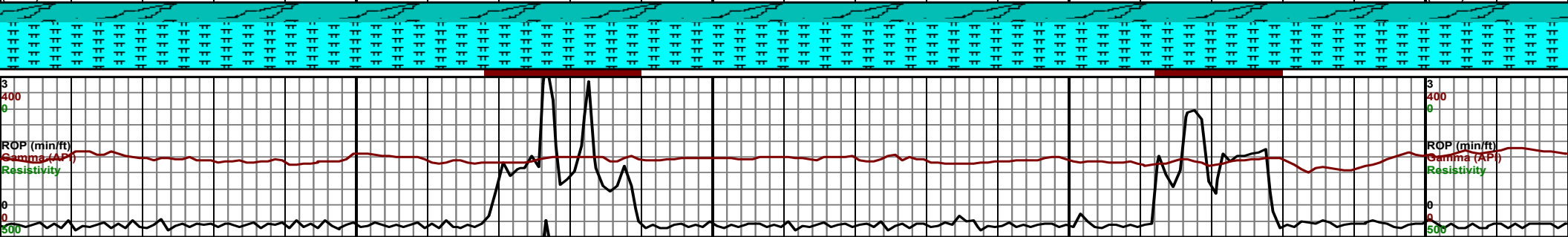
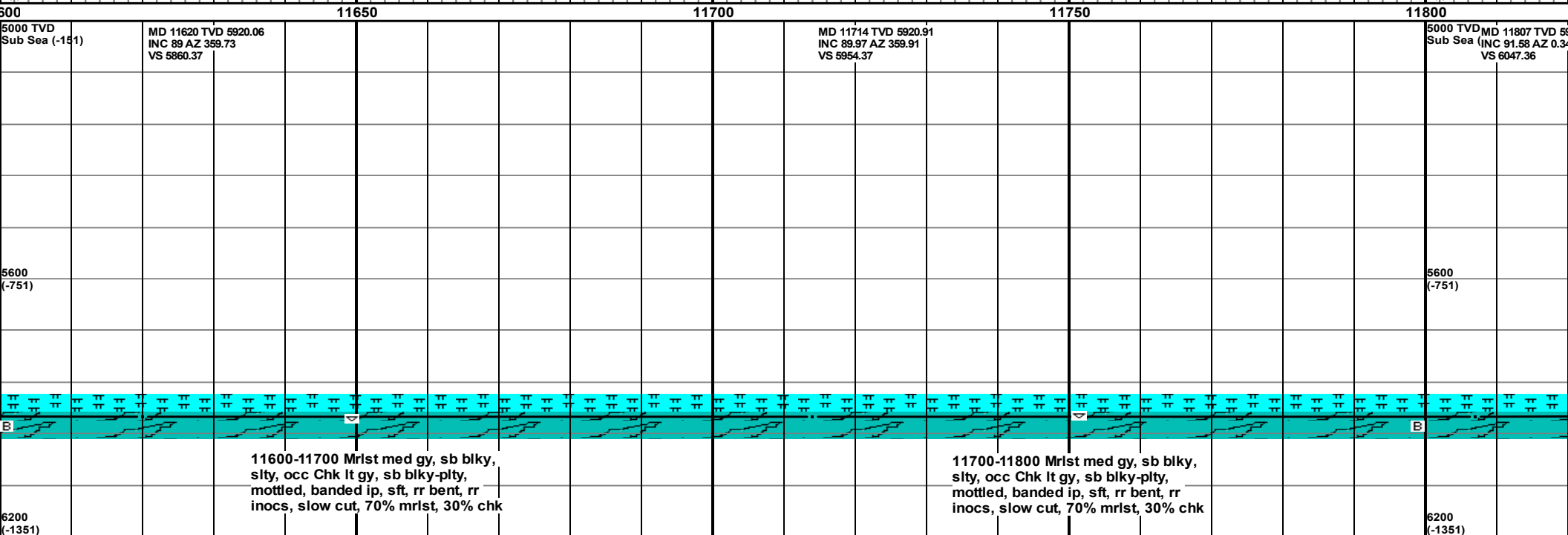
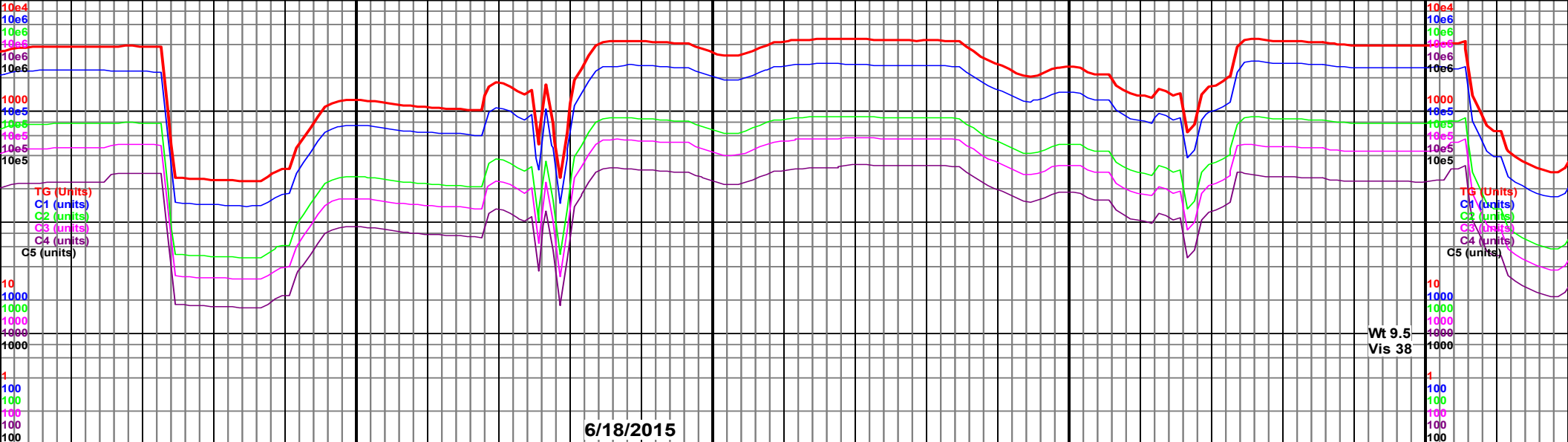


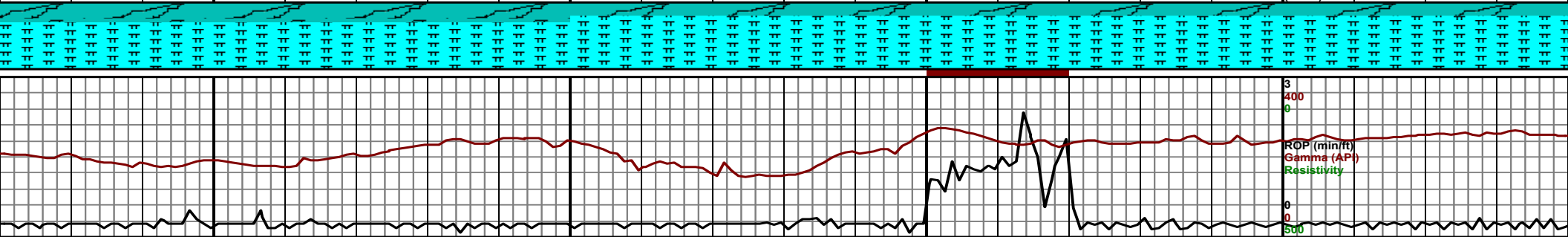
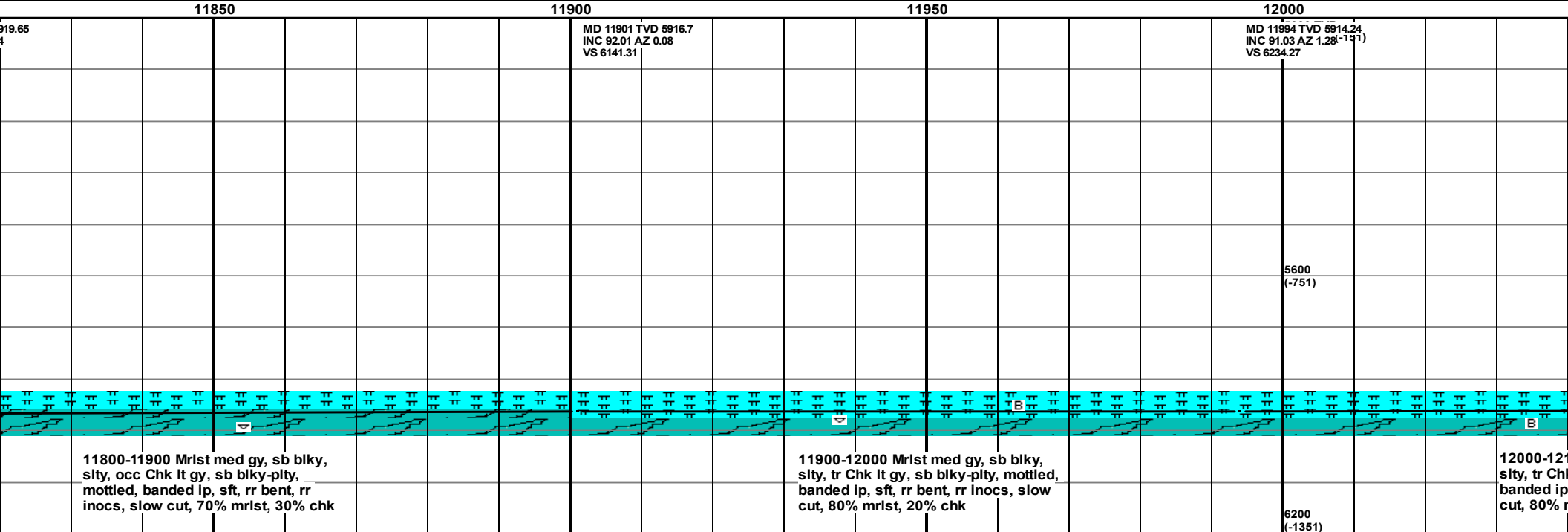
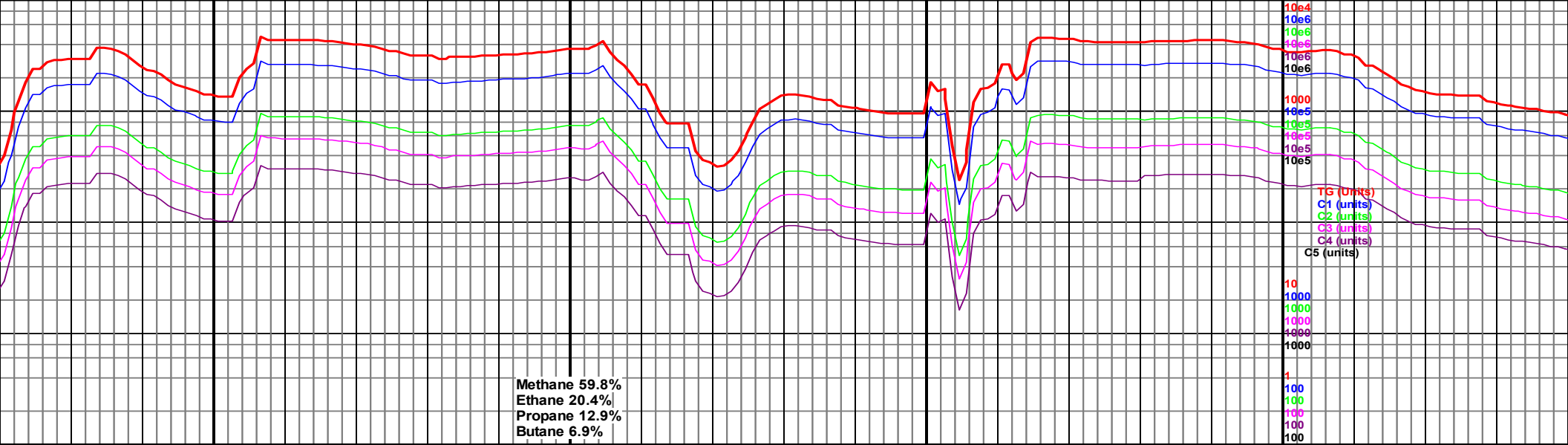


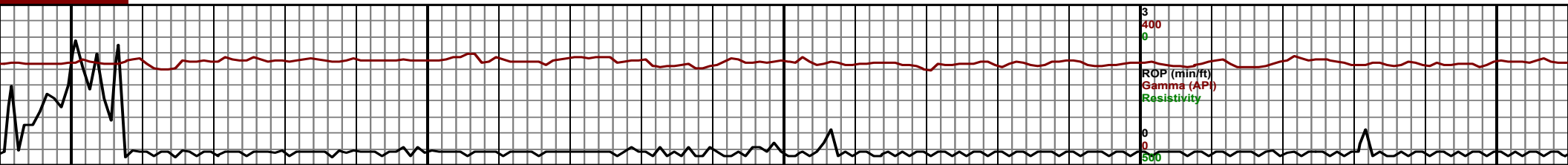
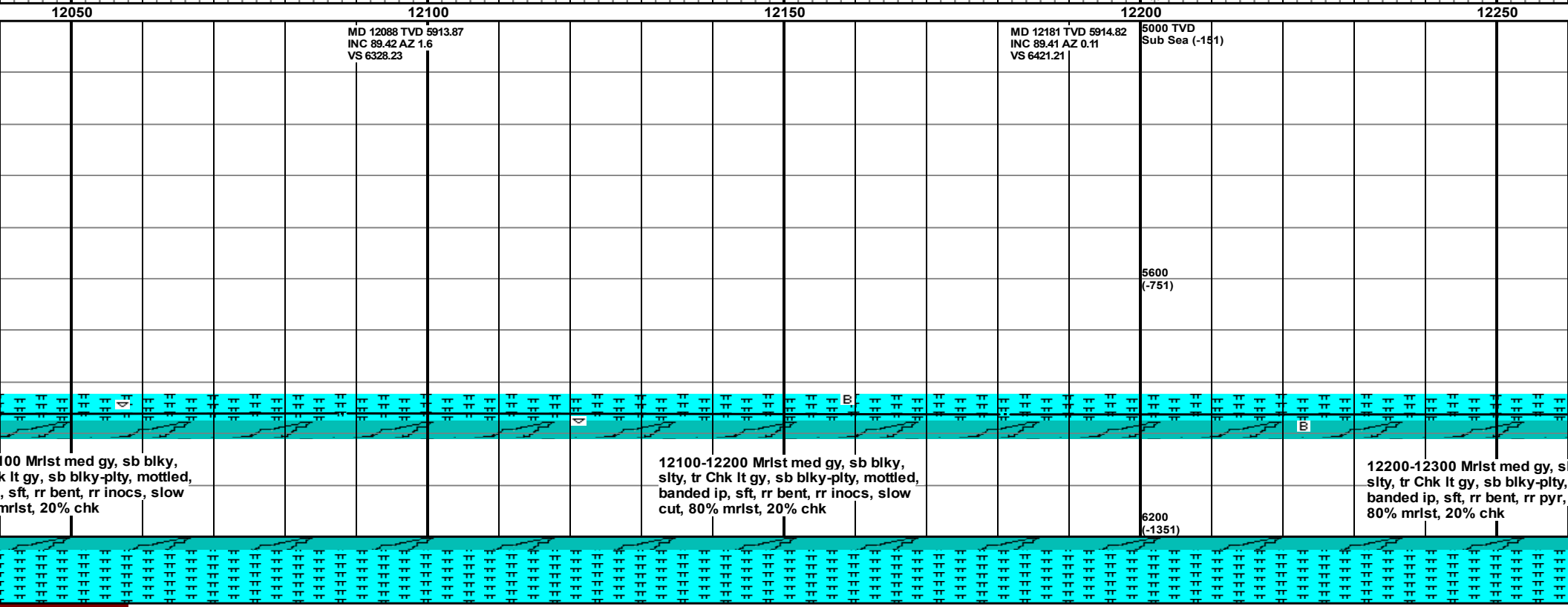
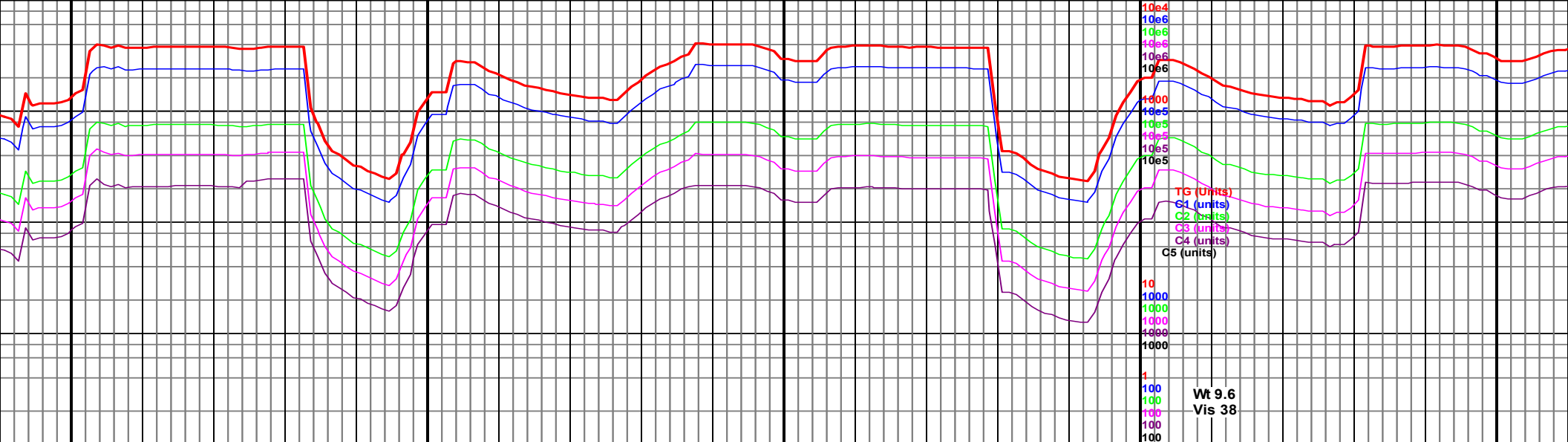


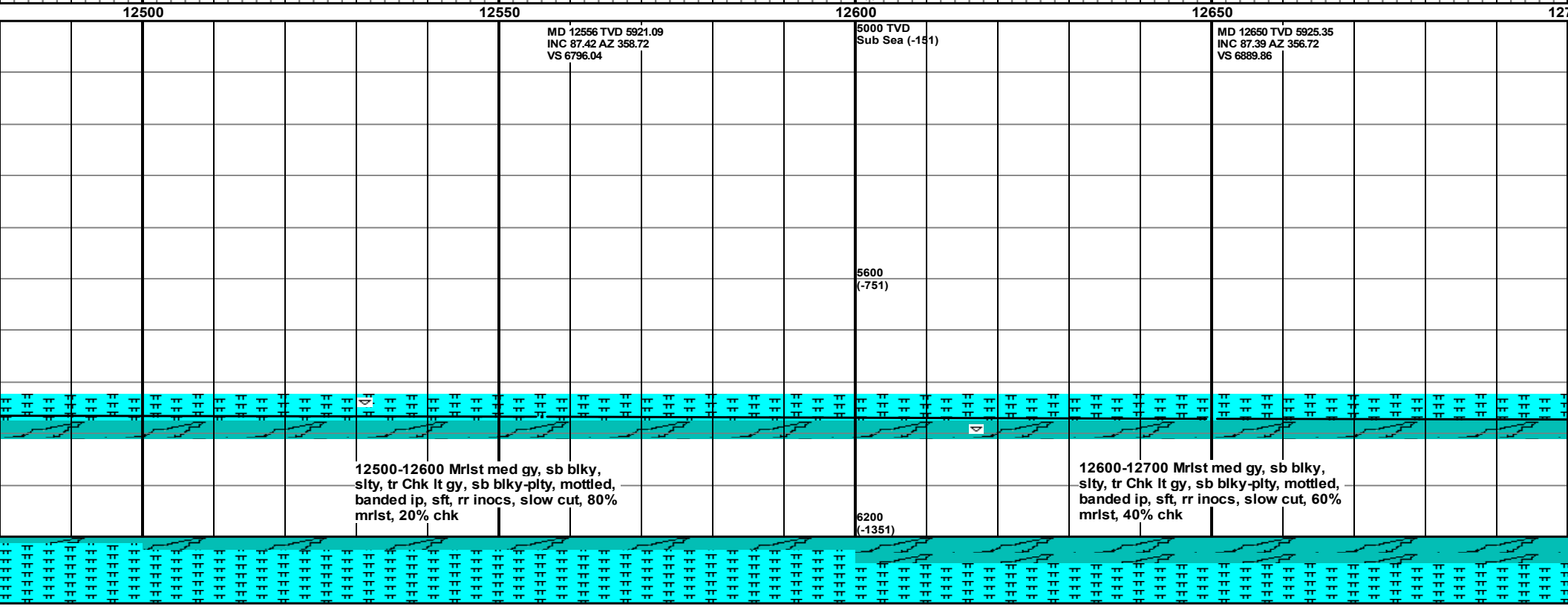
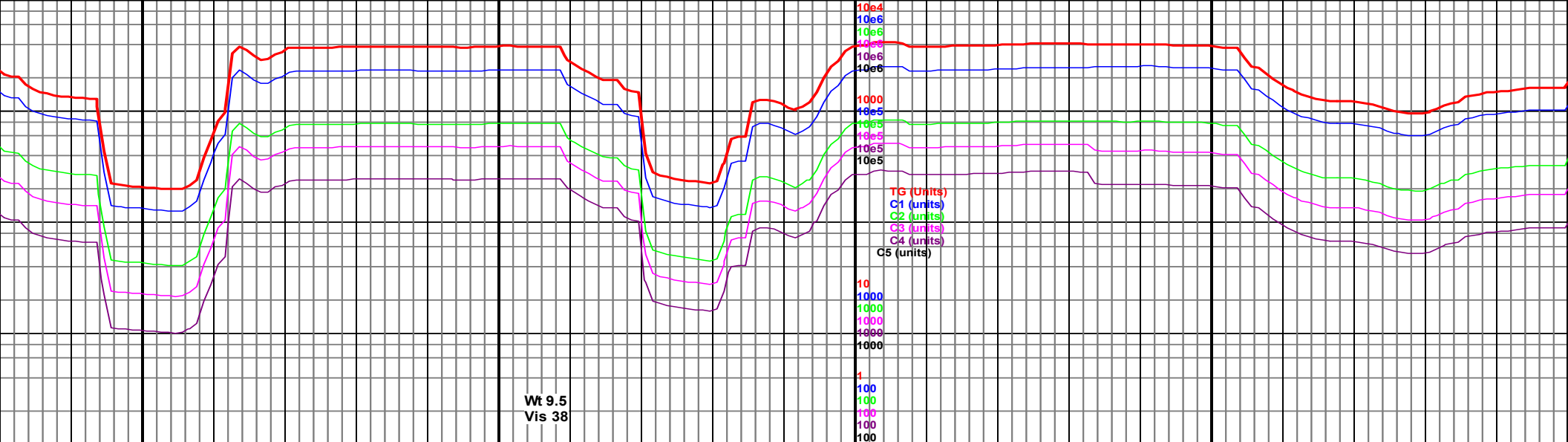












12500-12600 Mrlst med gy, sb blkly, slty, tr Chk lt gy, sb blkly-pty, mottled, banded ip, sft, rr inocs, slow cut, 80% mrlst, 20% chk

12600-12700 Mrlst med gy, sb blkly, slty, tr Chk lt gy, sb blkly-pty, mottled, banded ip, sft, rr inocs, slow cut, 60% mrlst, 40% chk

