



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

Well Name: Razor 12F-0108B  
Well Id: 05-123-38717-00  
Location: SENW 12-T10N-R58W  
License Number: 05-123-38717-00  
Spud Date: 7/29/2015  
Surface Coordinates: Lat.: 40.854661 Long.: -103.817564

Region: Redtail Field  
Drilling Completed: 8/5/2015

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 4940  
Logged Interval (ft): 5440 To: 13515  
Formation: Pierre, Sharon Springs, Niobrara B  
Type of Drilling Fluid: Water Based Mud

K.B. Elevation (ft): 4961  
Total Depth (ft): 13515

Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

#### OPERATOR

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

#### GEOLOGIST

Name: Eli Denbesten and 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

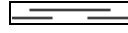
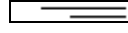

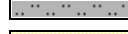
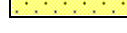
Lithologies and tops at drilled depths, not corrected to elogs. Where the well bore gas is 100% methane, the C1 line is moved to 85% for graphical purposes only.




## 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

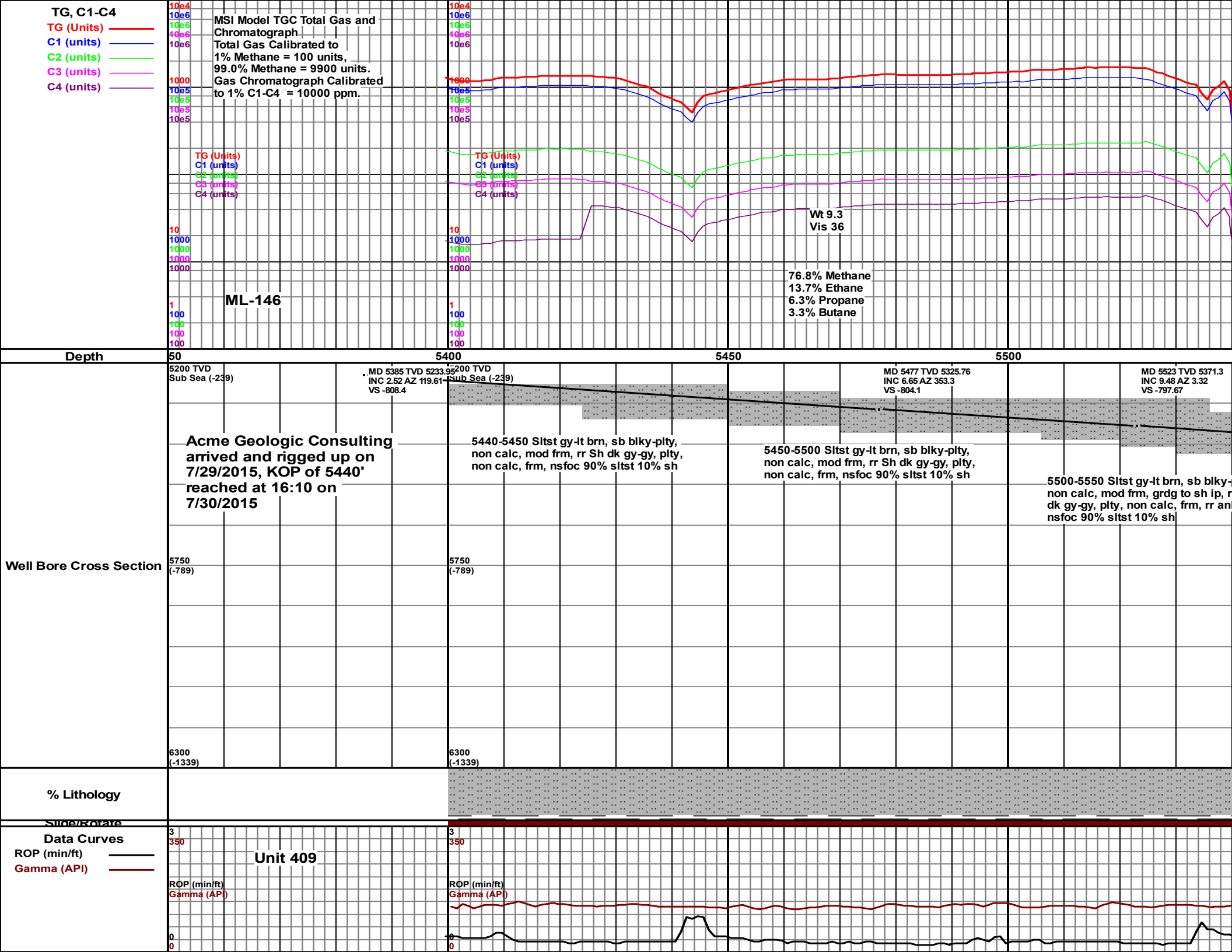
**TEXTURE**  
 Boundst  
 Chalky  
 Cryxln  
 Earthy  
 Finexln  
 Grainst  
 Lithogr  
 Microxln  
 Mudst  
 Packst  
 Wackest

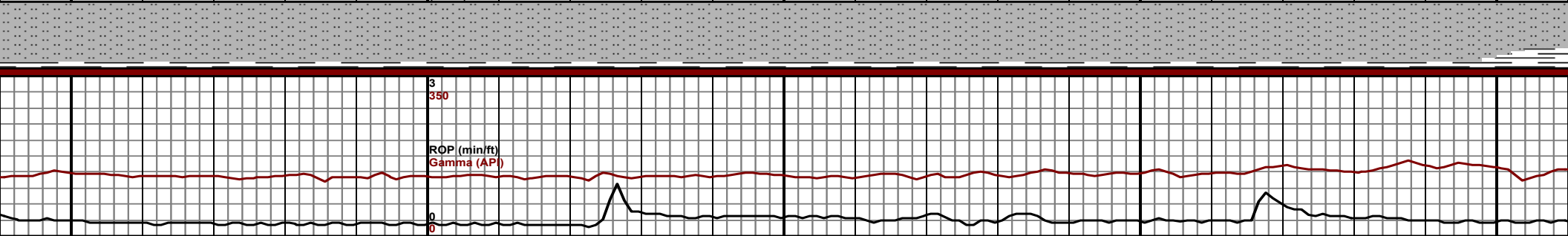
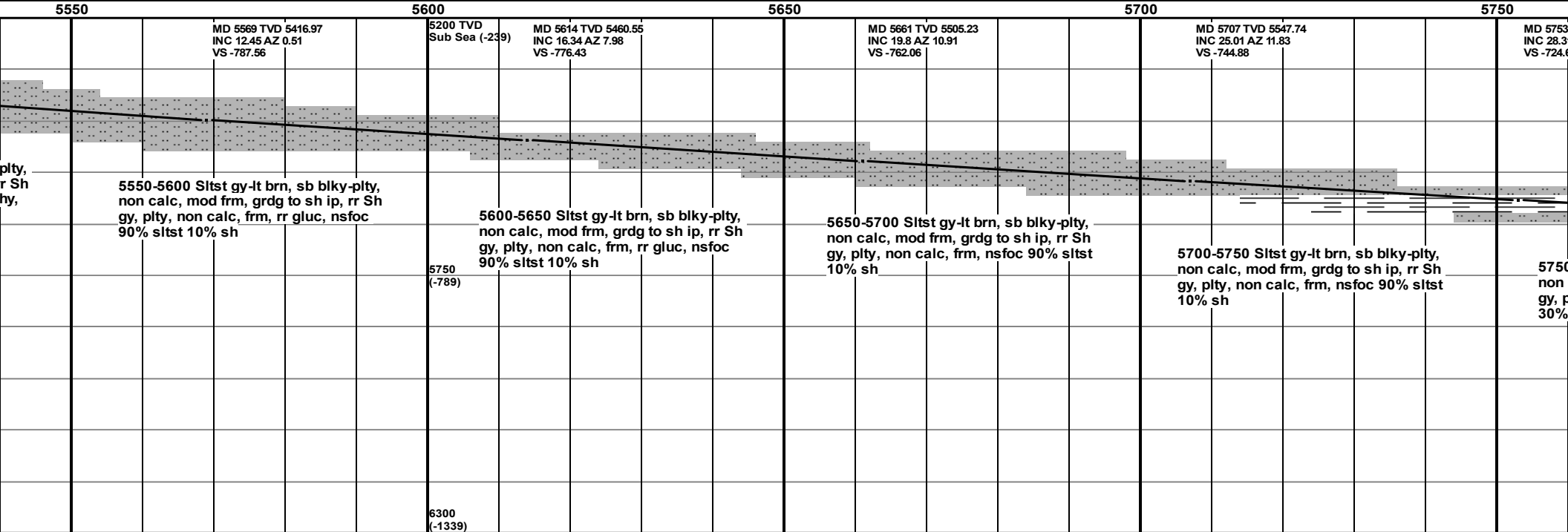
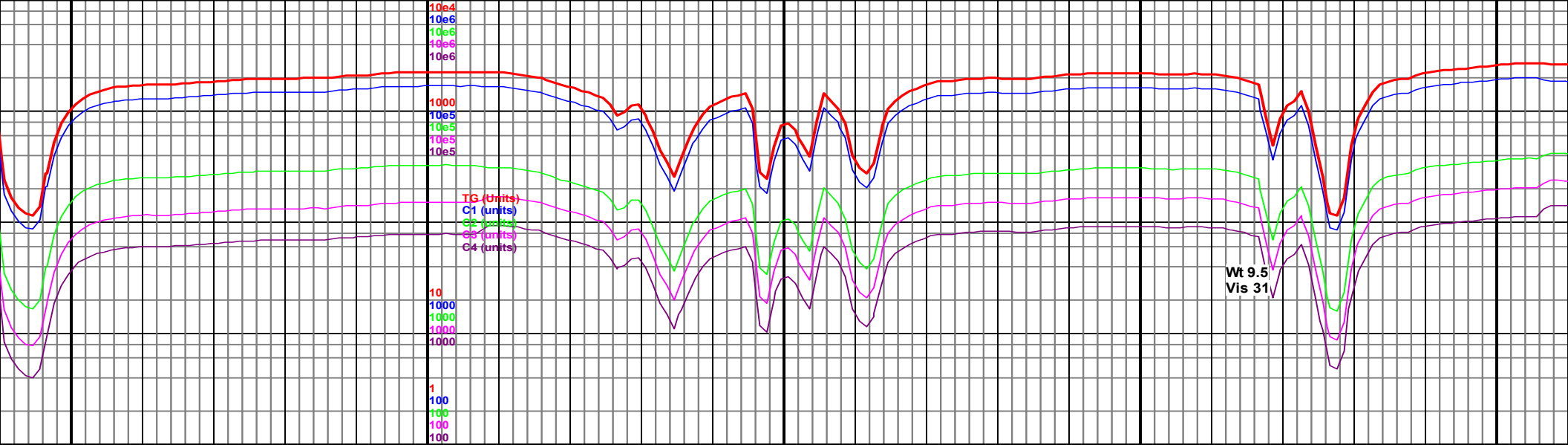
**POROSITY**  
[E] Earthy  
[B] Fenest  
[F] Fracture  
[X] Inter  
[Z] Moldic  
[O] Organic  
[P] Pinpoint

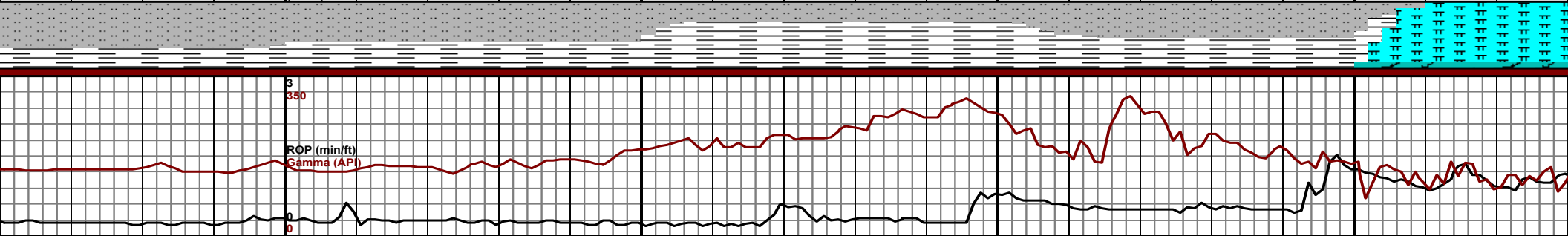
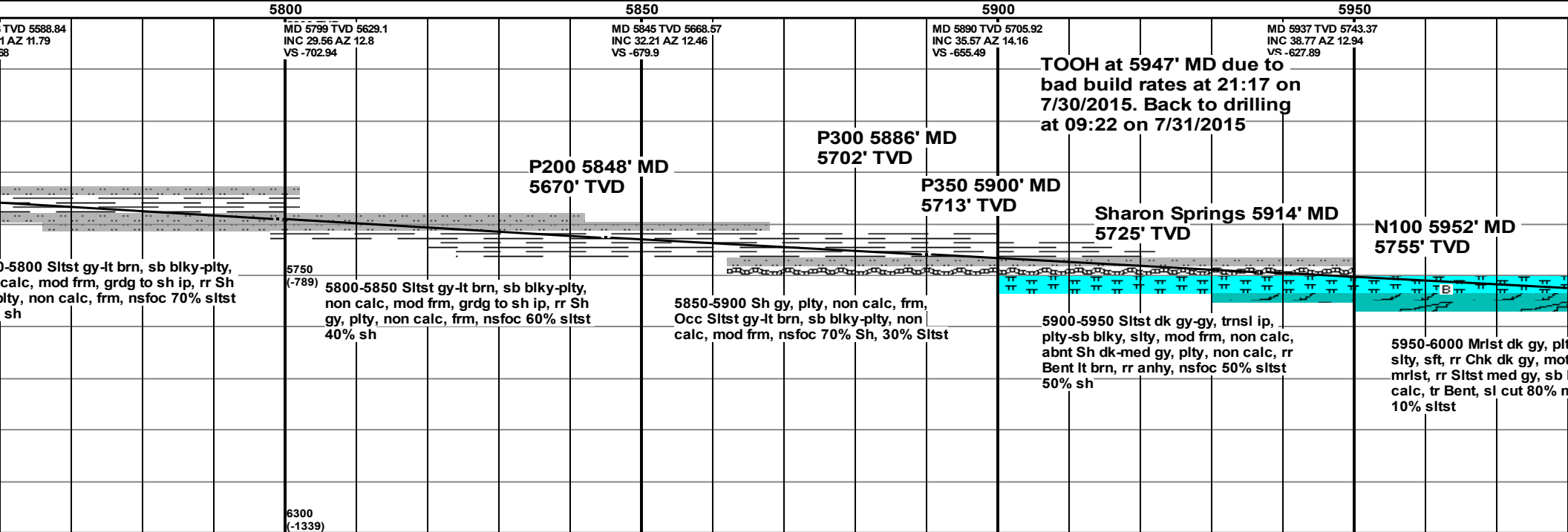
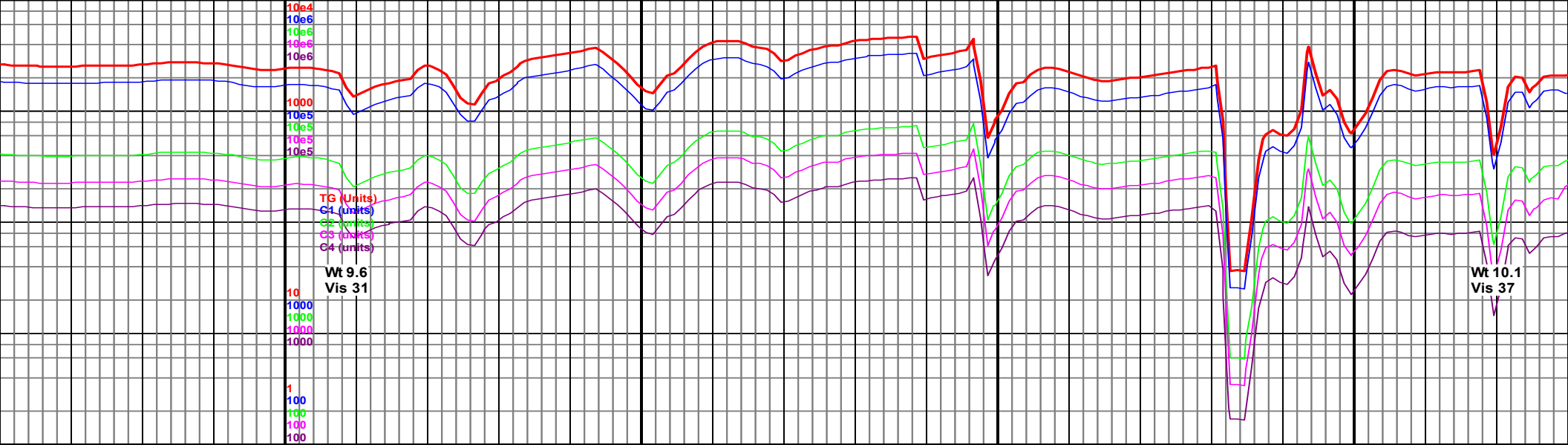
[V] Vuggy  
  
**SORTING**  
[W] Well  
[M] Moderate  
[P] Poor

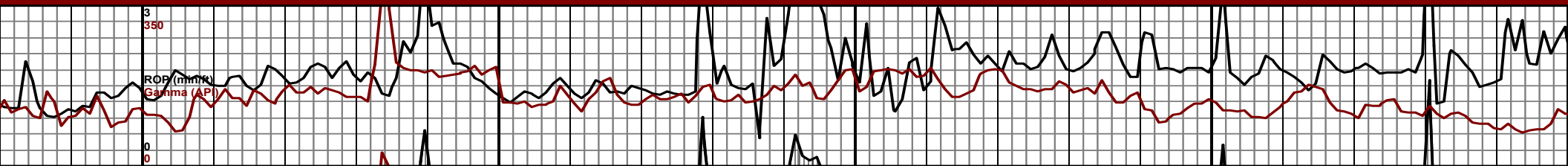
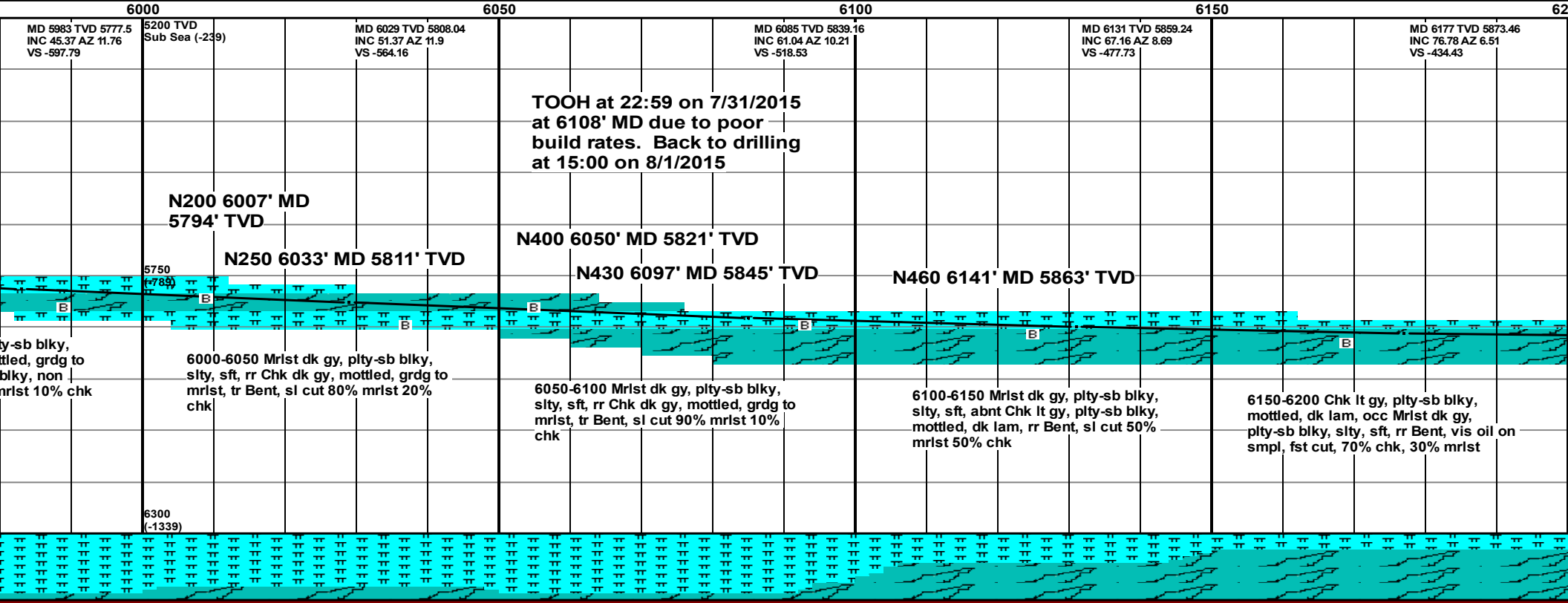
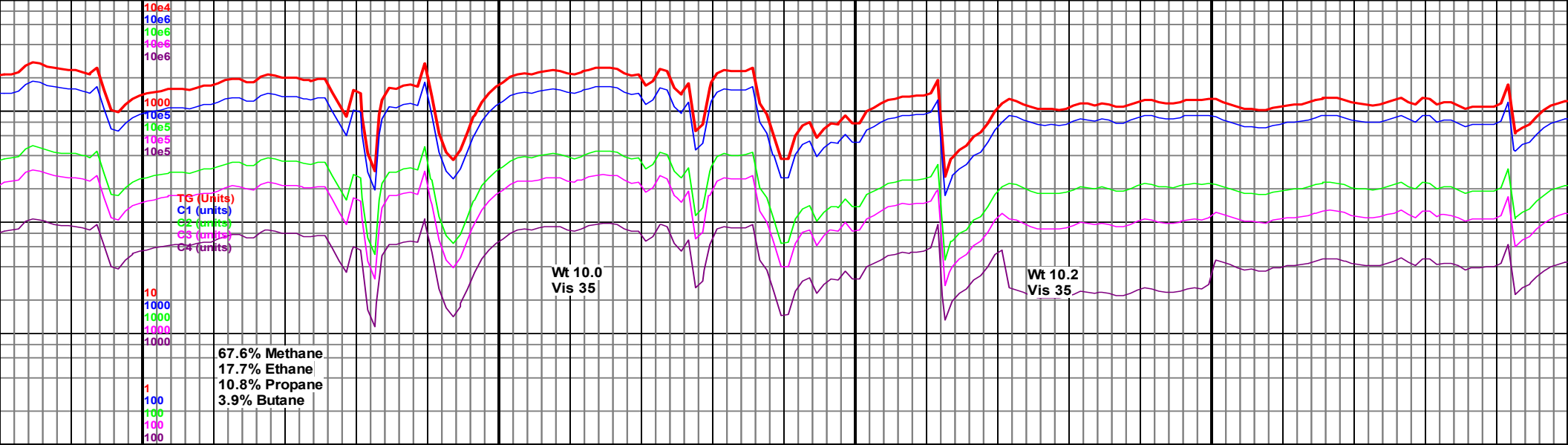
**OTHER SYMBOLS**  
  
**ROUNDING**  
[R] Rounded  
[r] Subrnd  
[a] Subang  
[A] Angular  
  
**OIL SHOW**  
[●] Even  
  
[●] Spotted  
[○] Ques  
[D] Dead  
  
**INTERVAL**  
[■] Core  
[◼] Dst

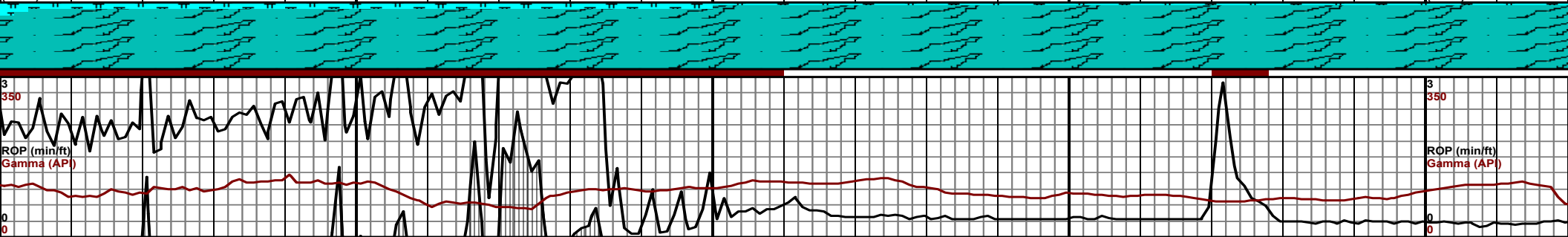
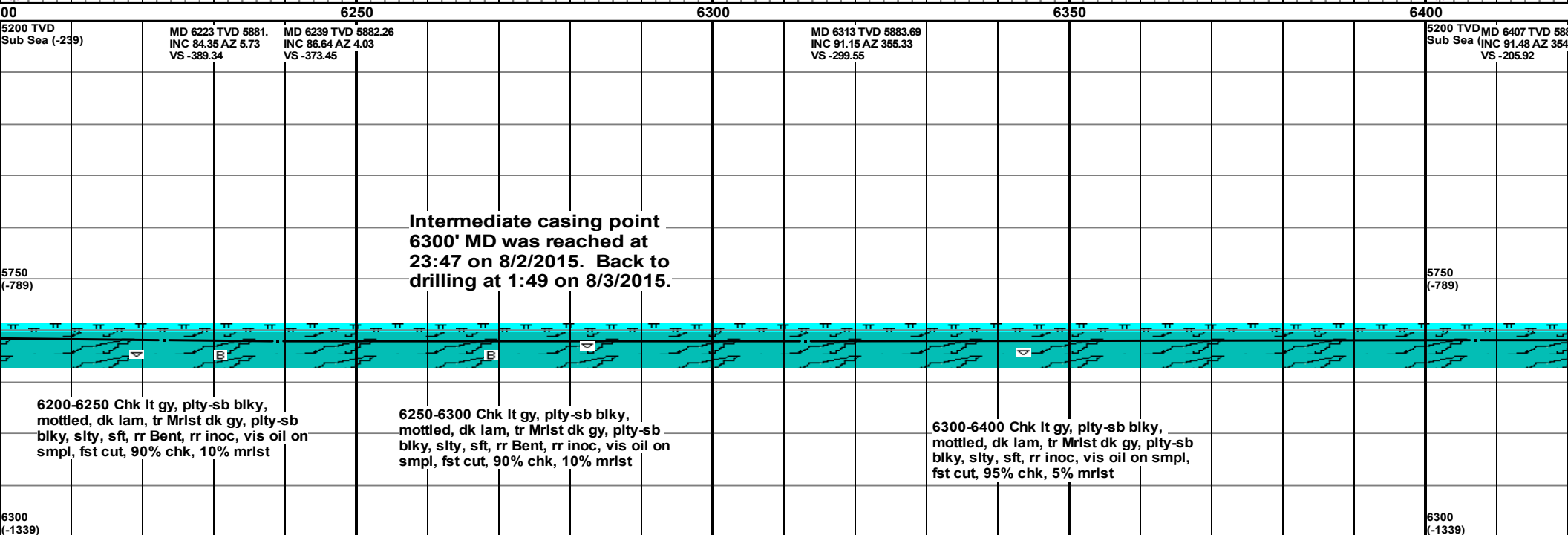
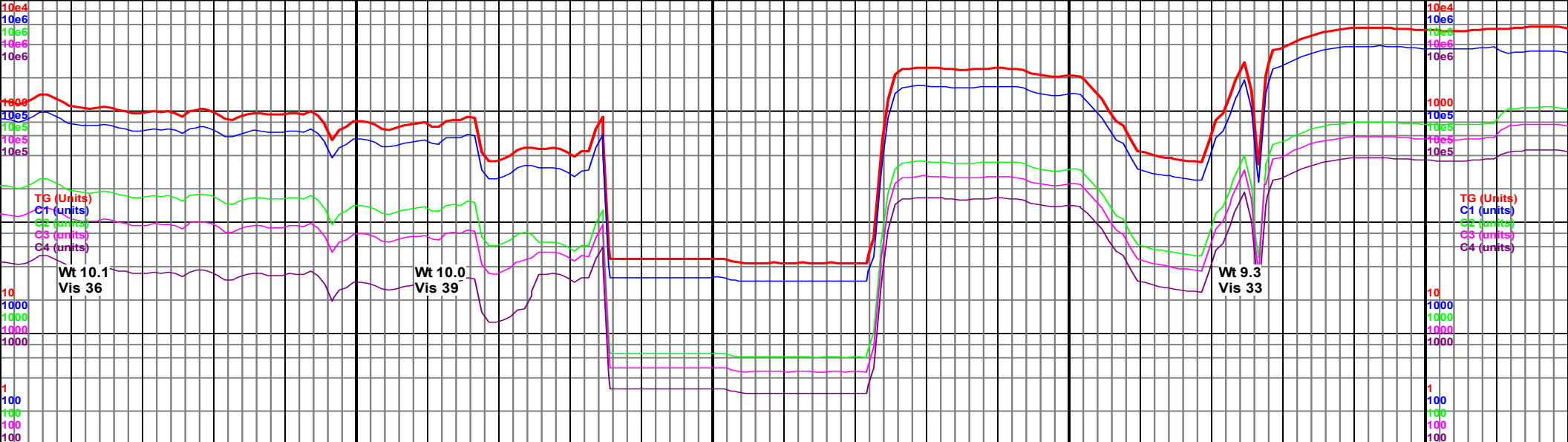
**EVENT**  
[▽] Rft  
[▶] Sidewall



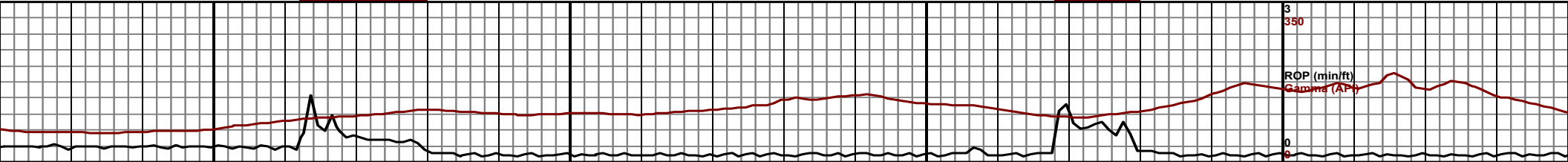
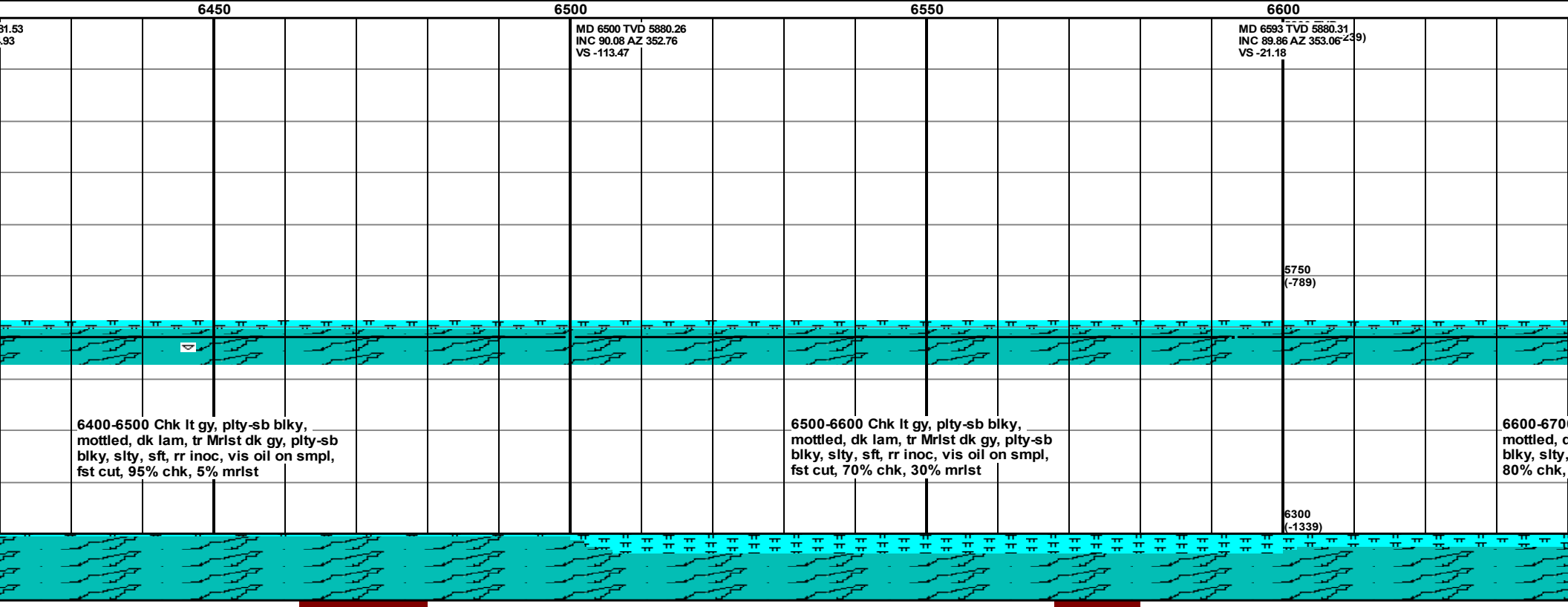
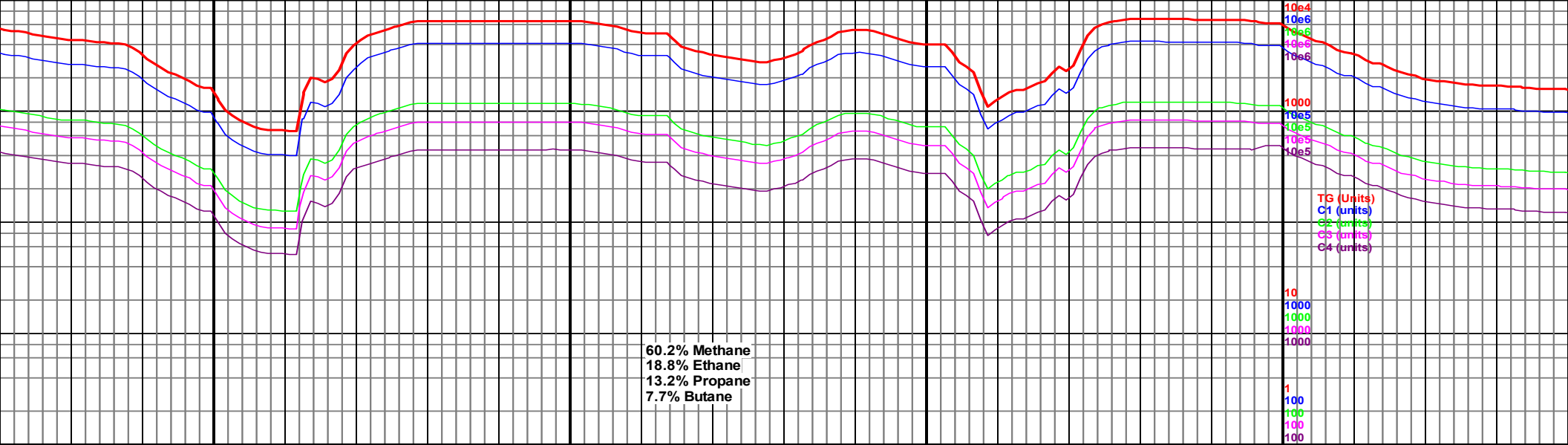


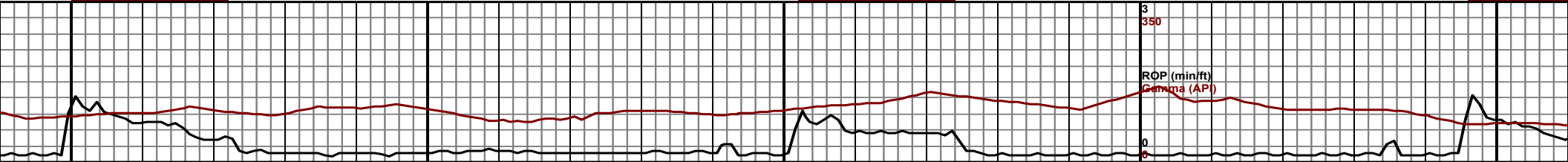
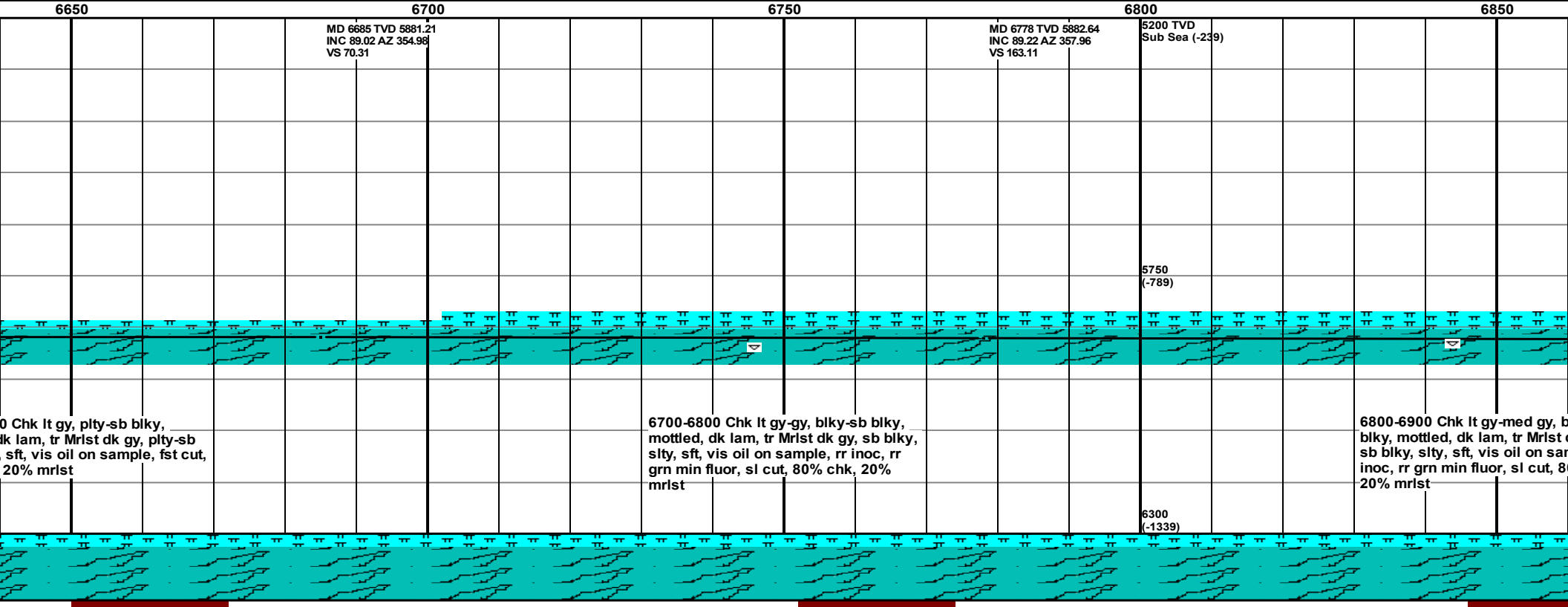
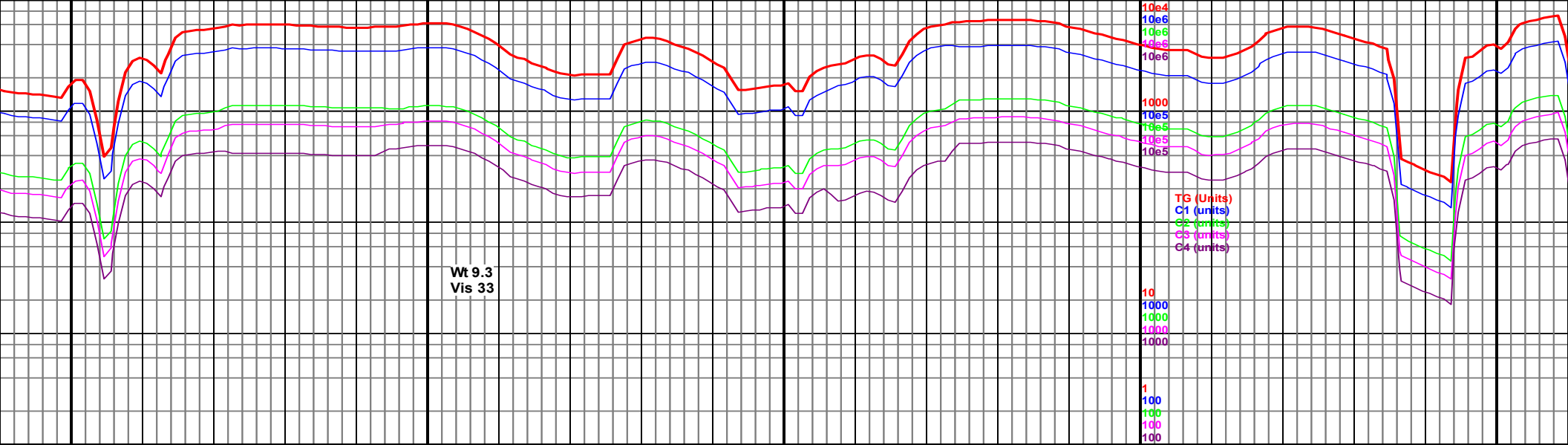


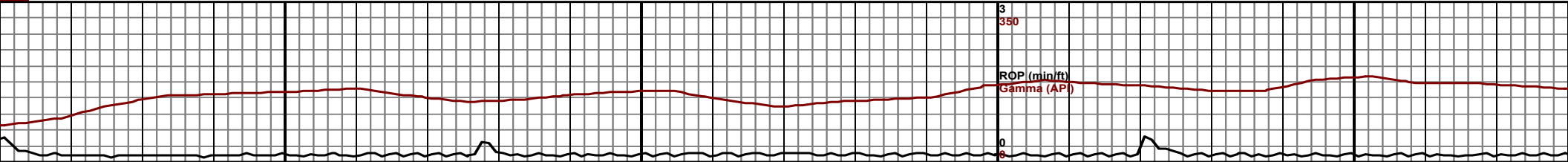
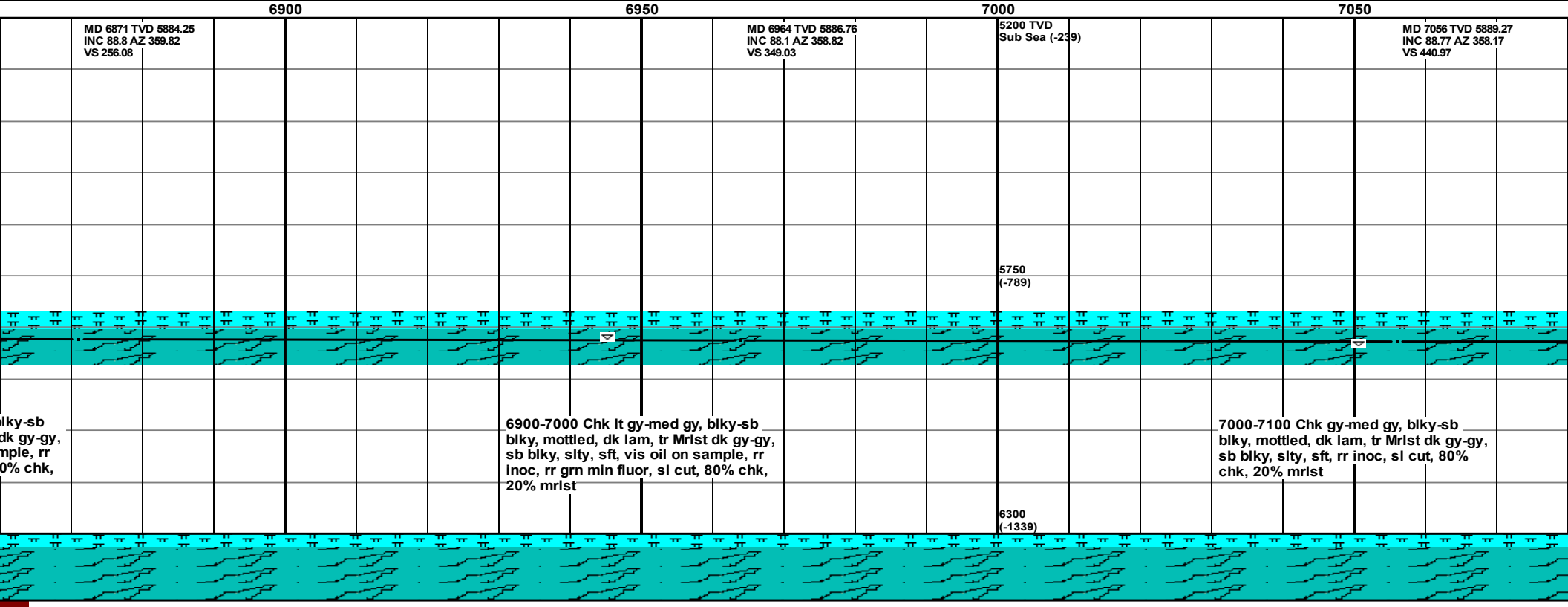
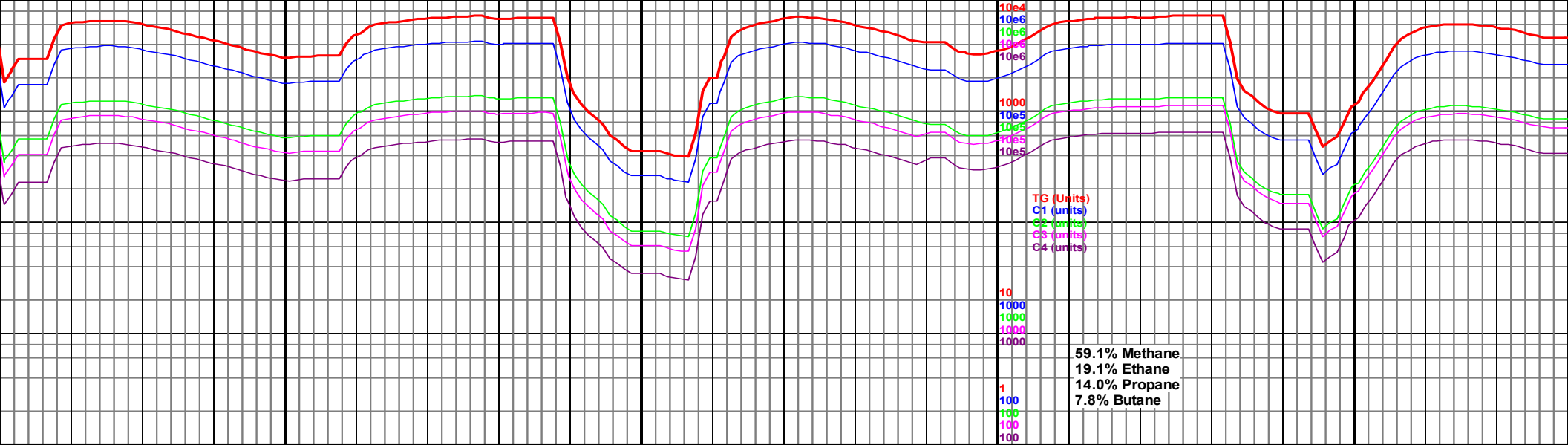


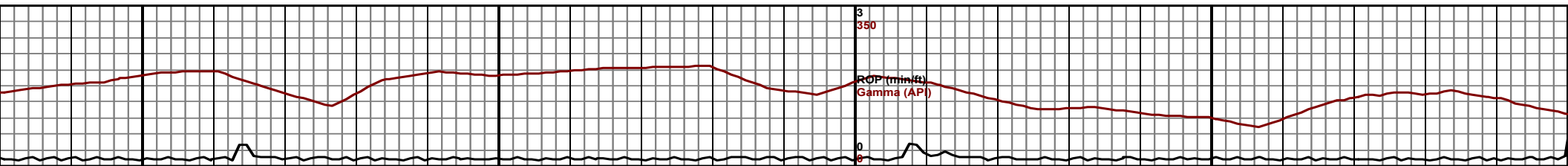
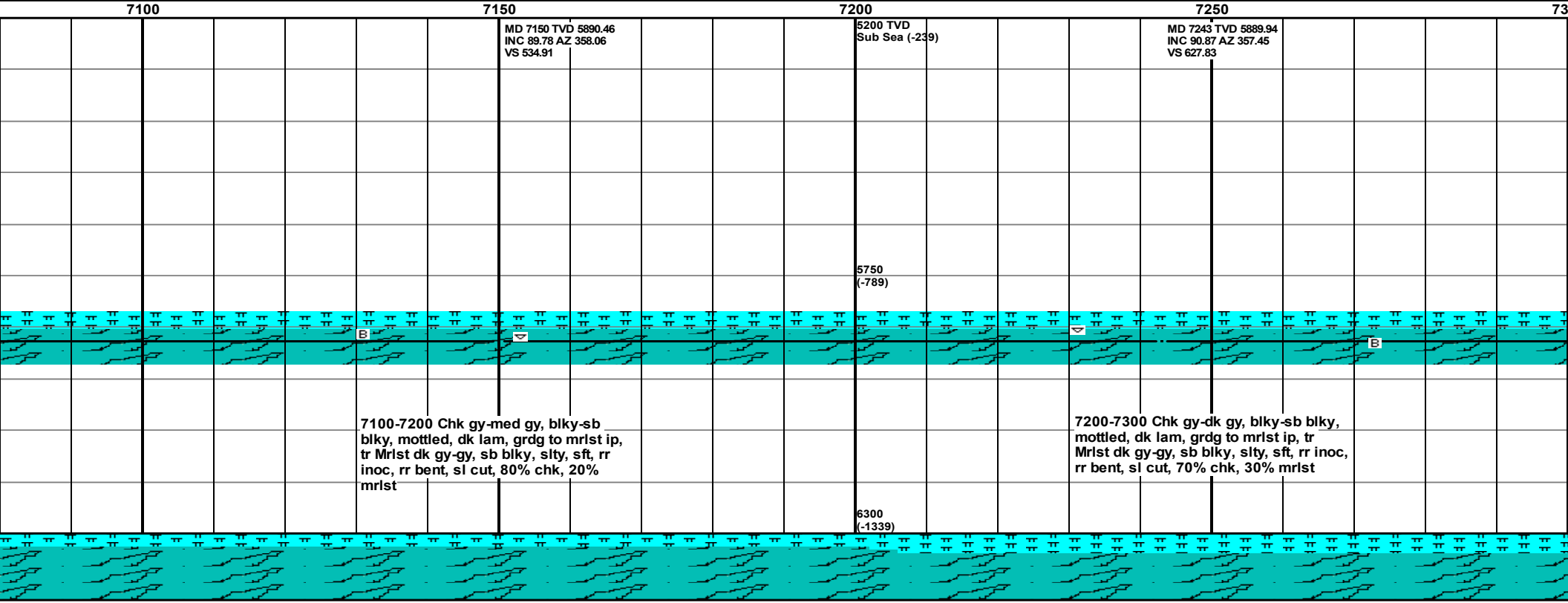
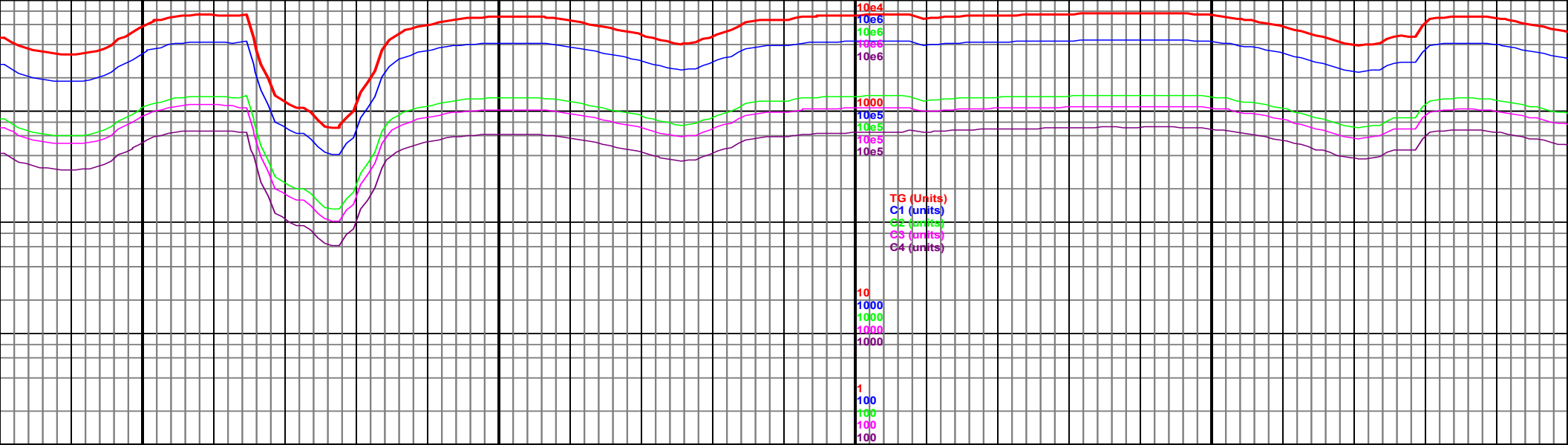


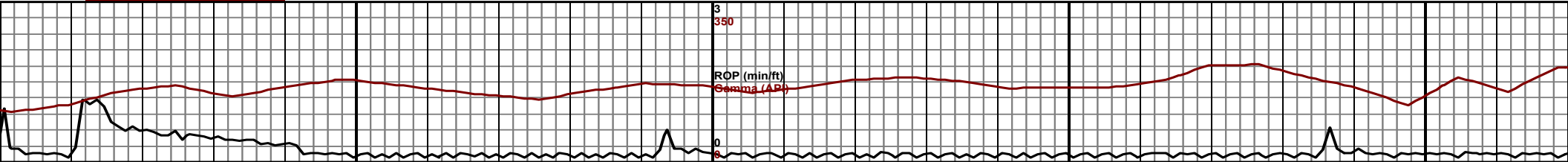
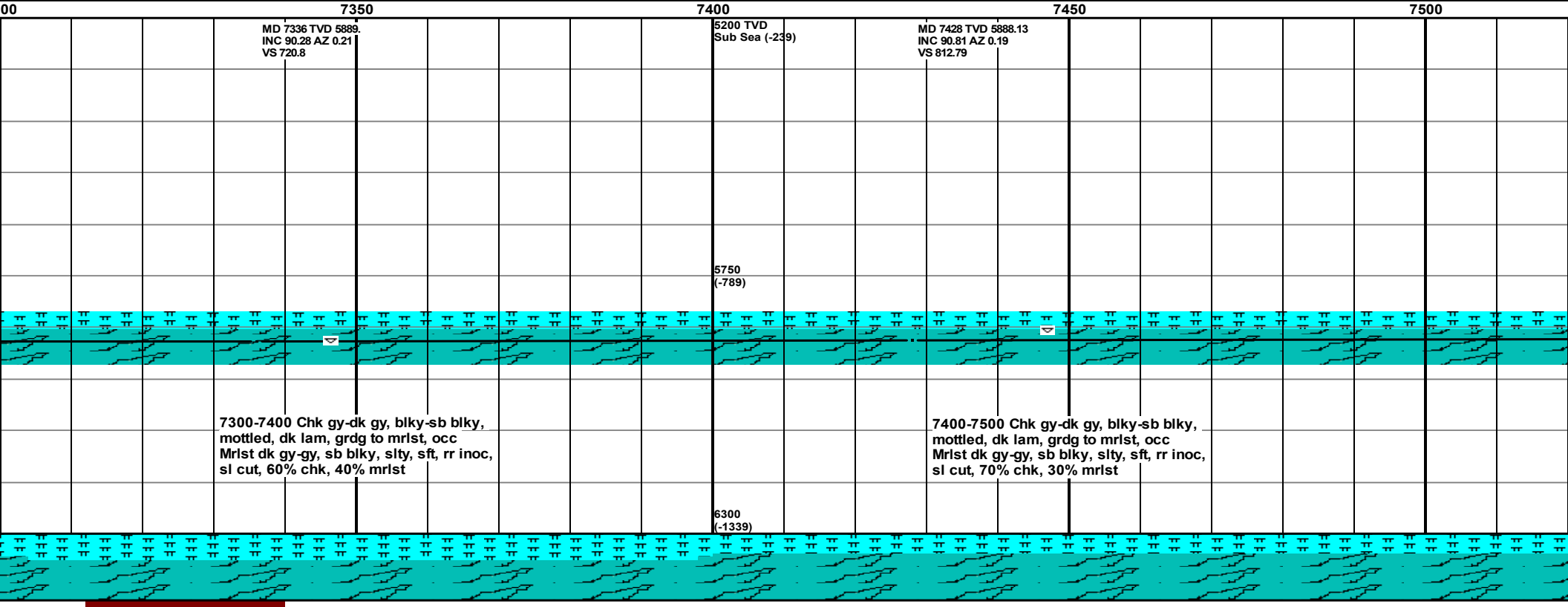
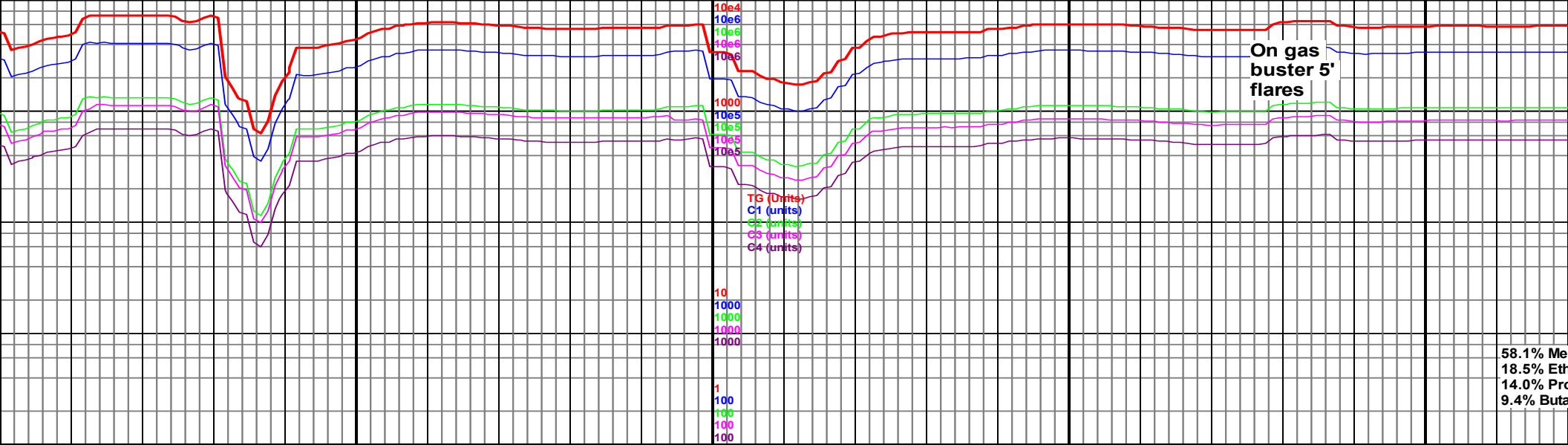


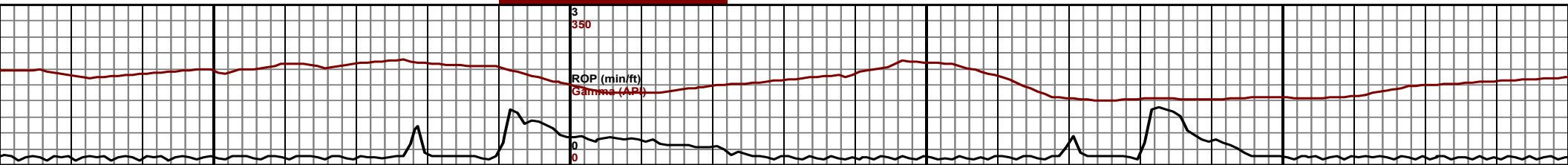
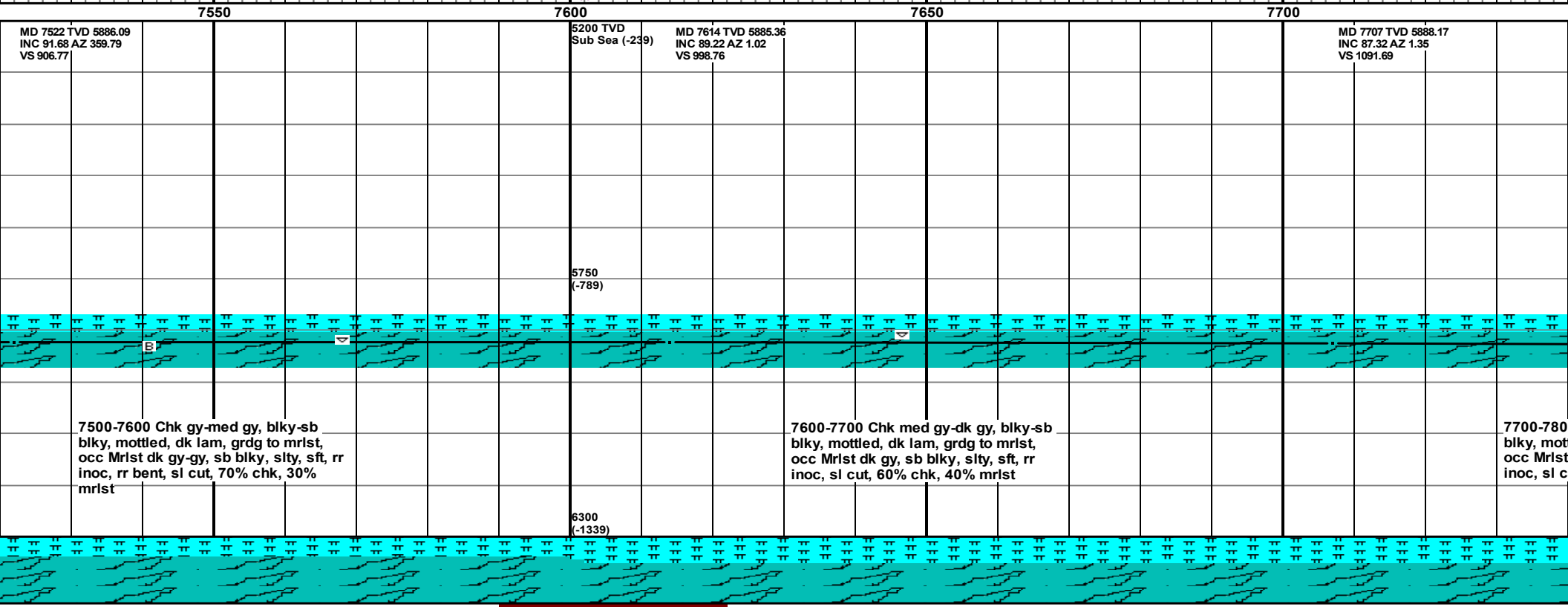
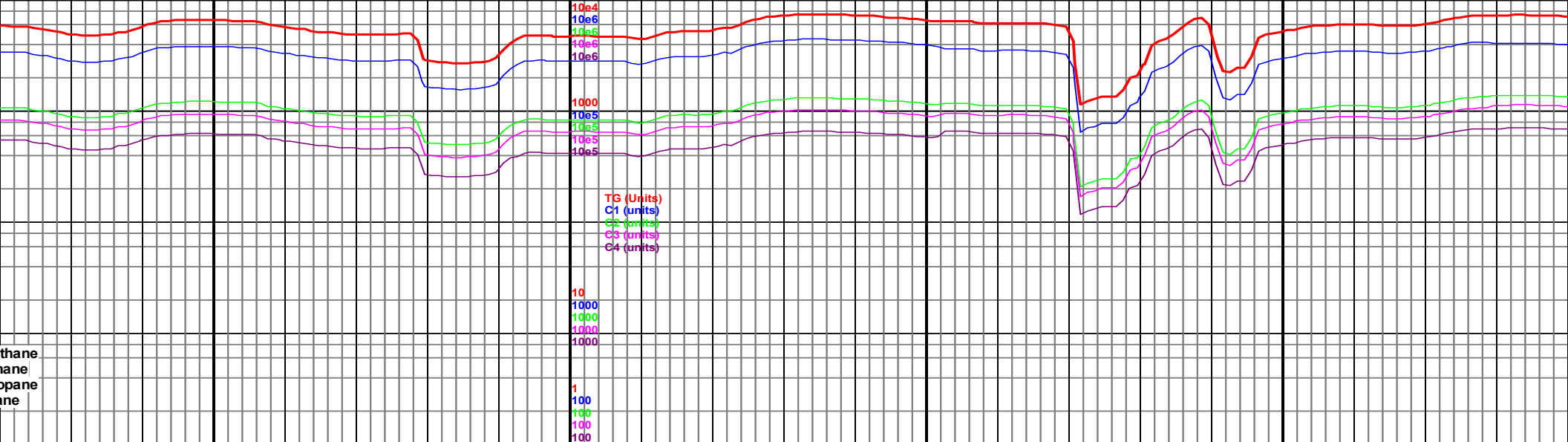


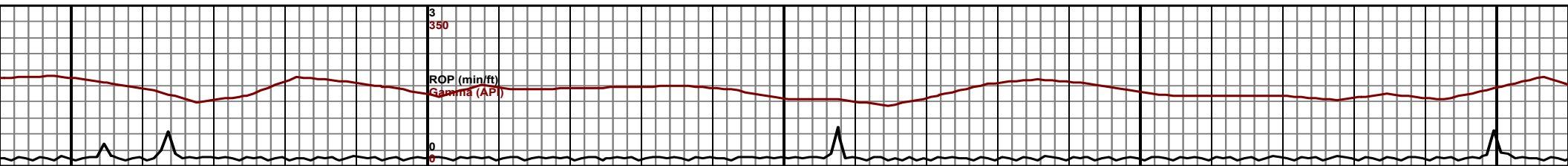
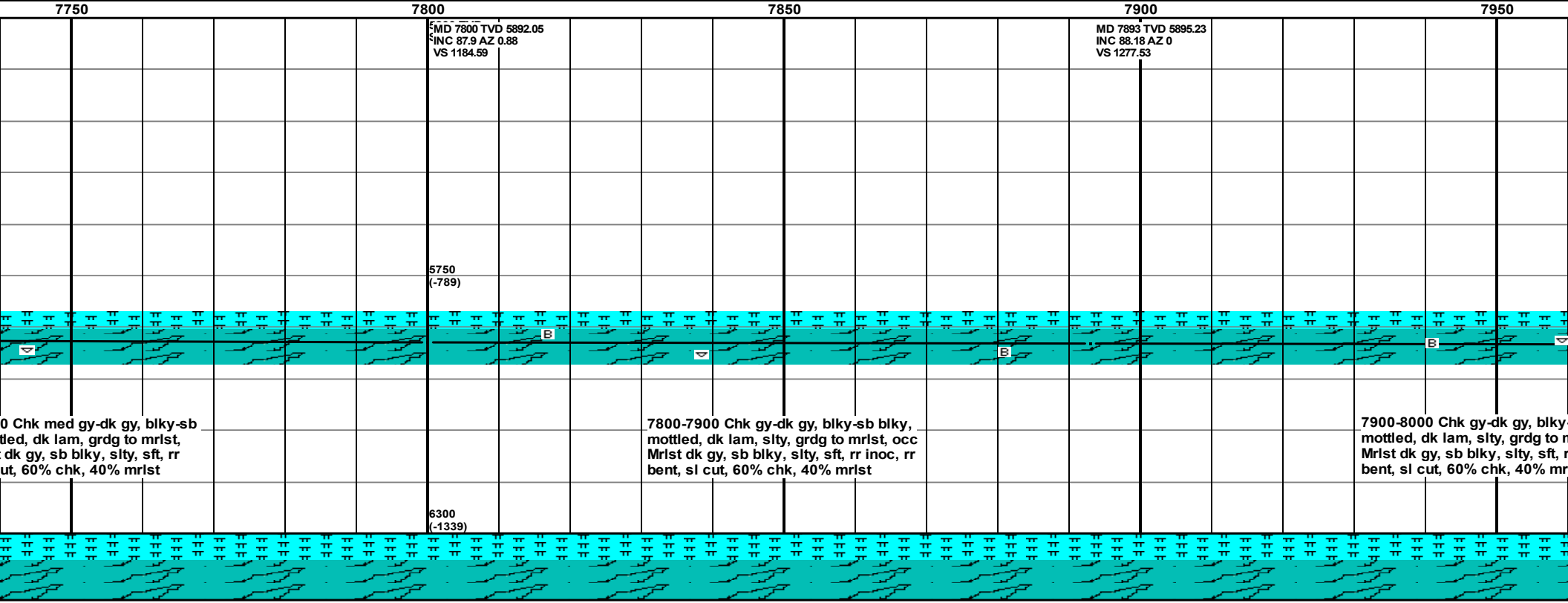
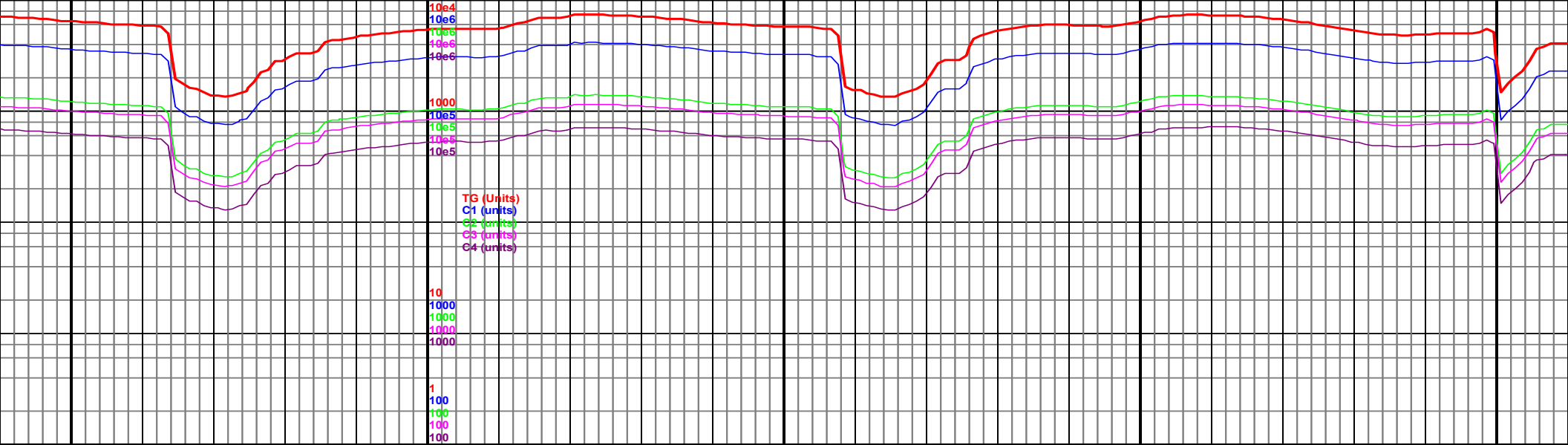


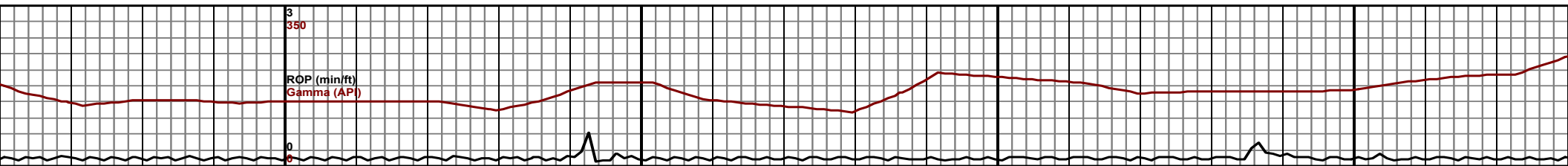
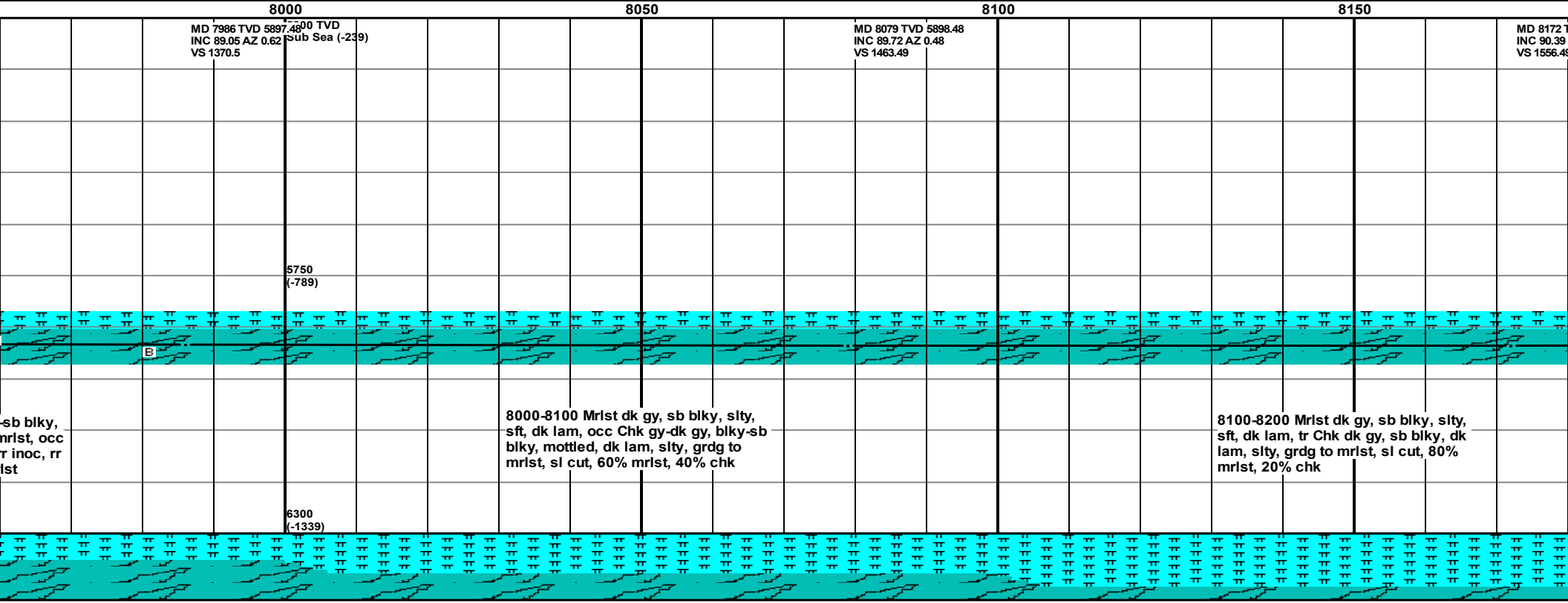
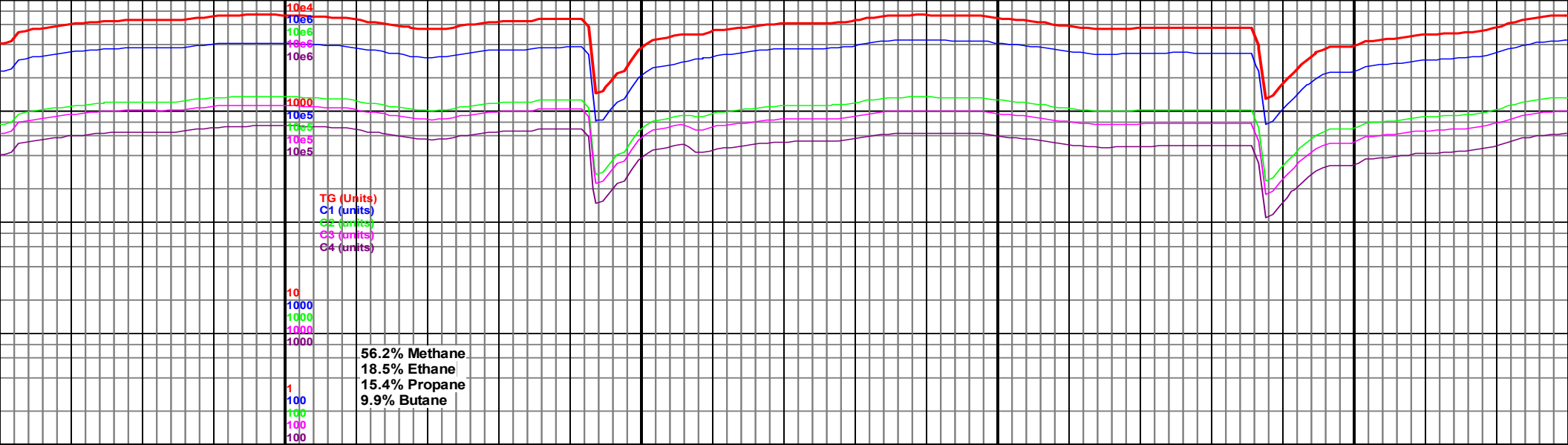




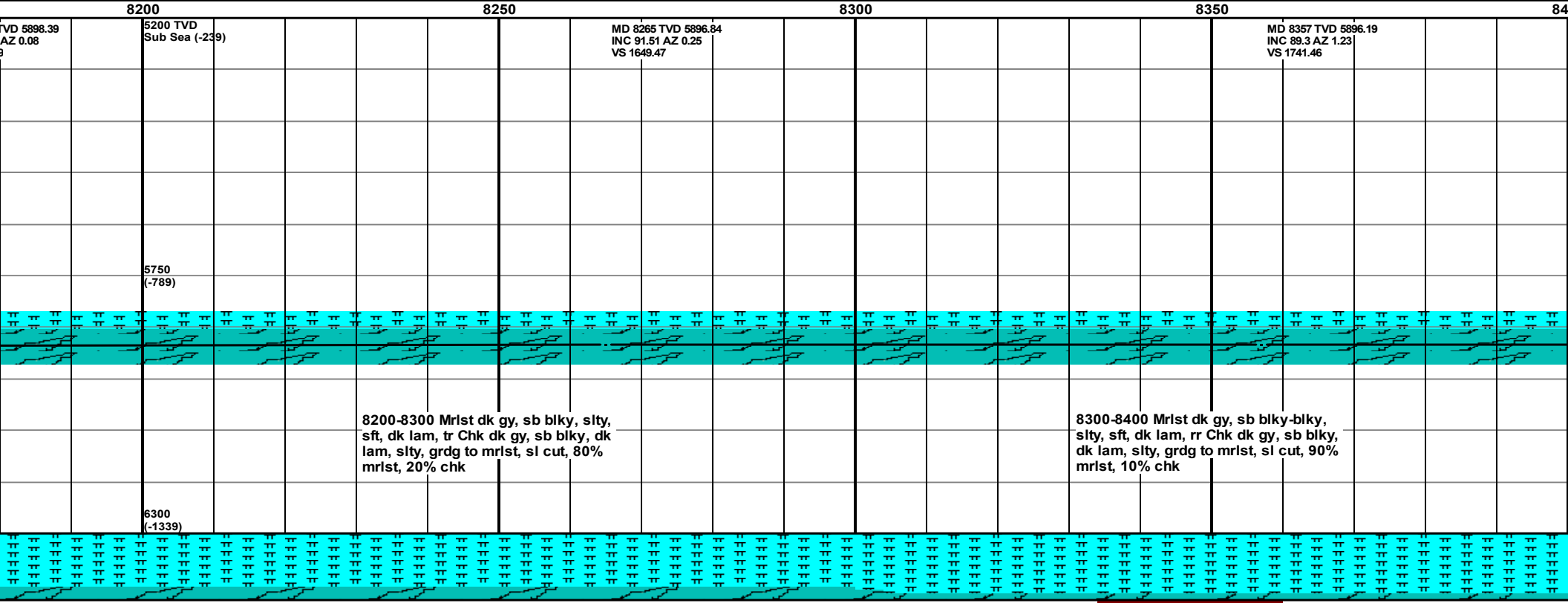
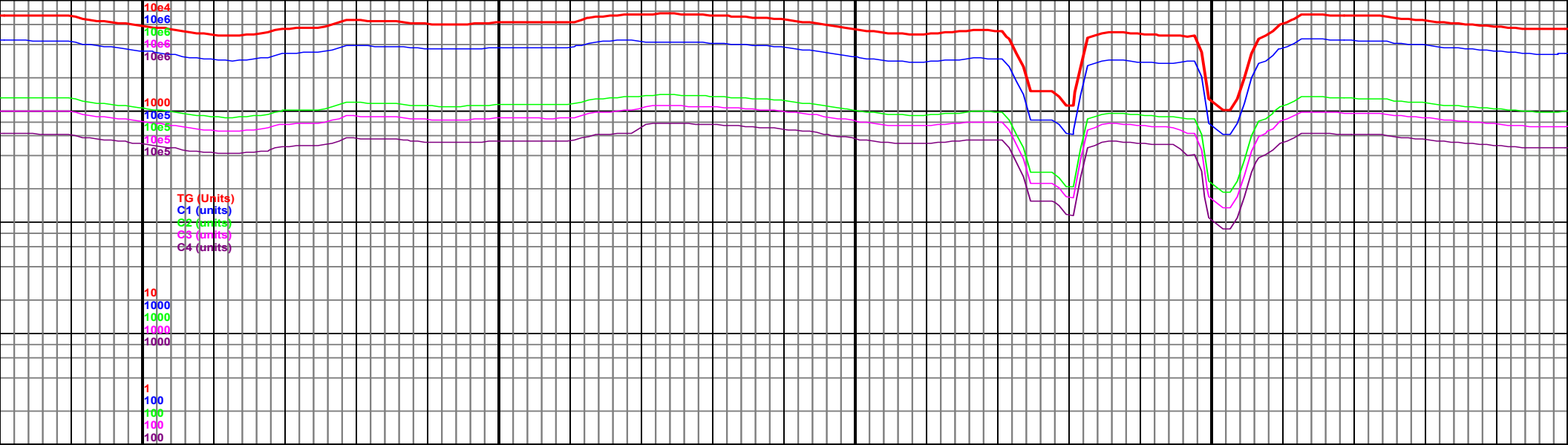


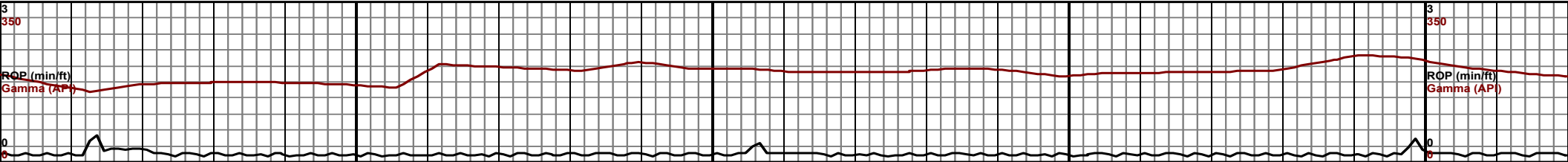
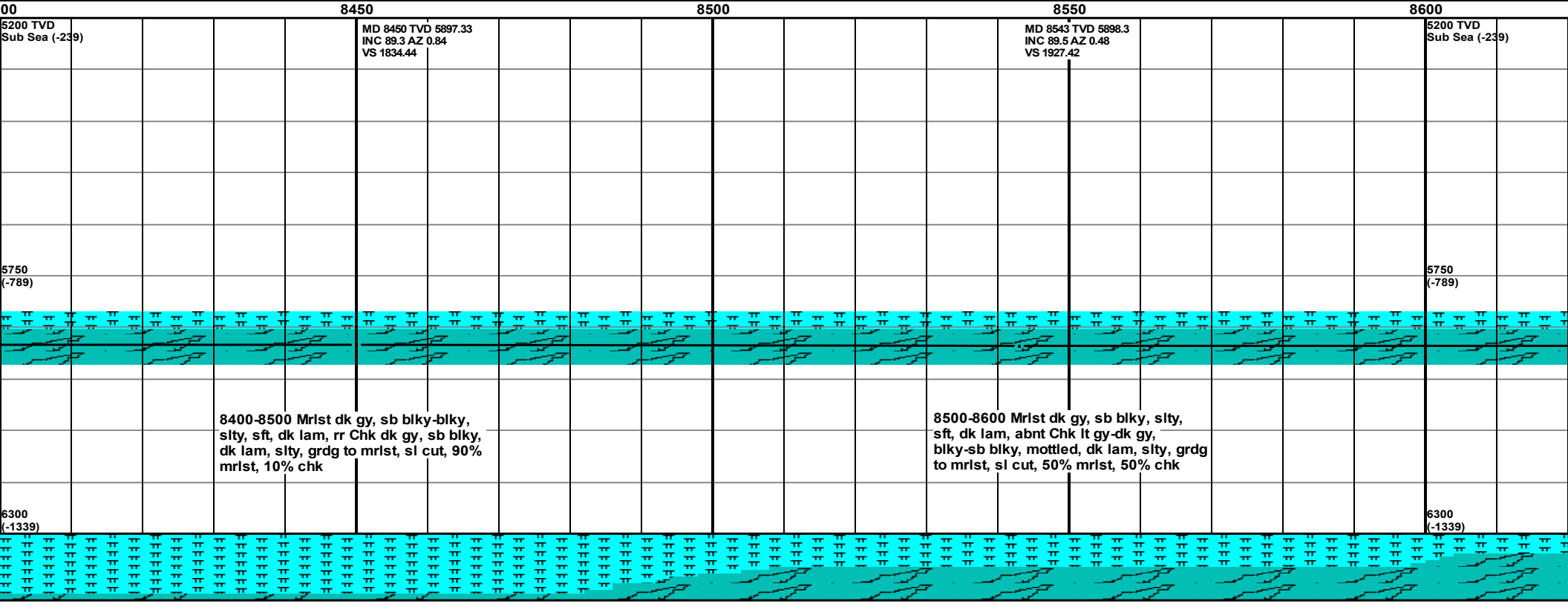
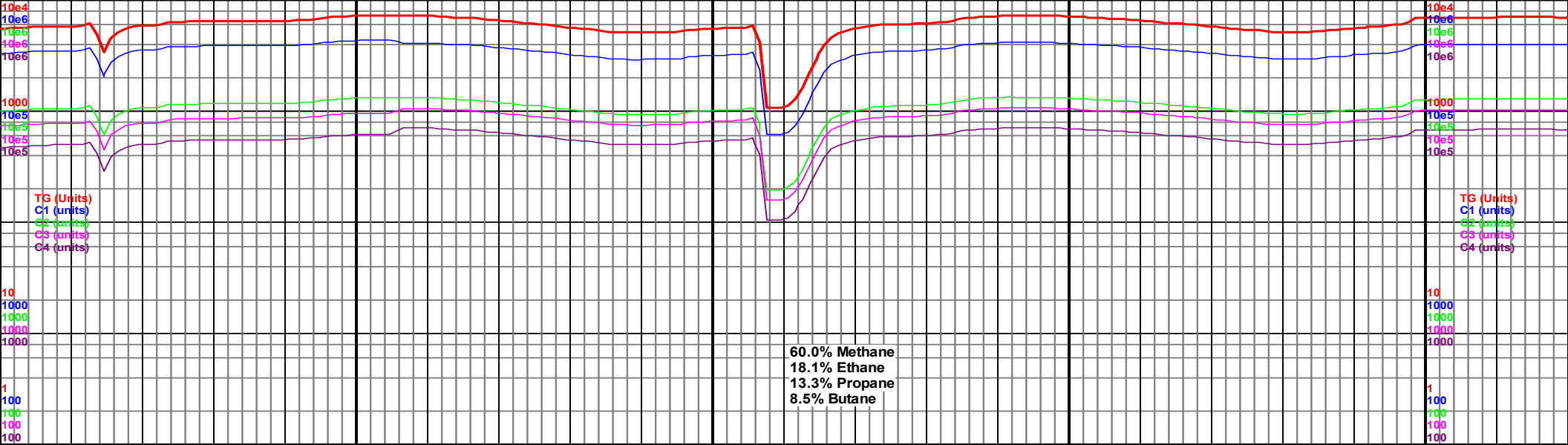




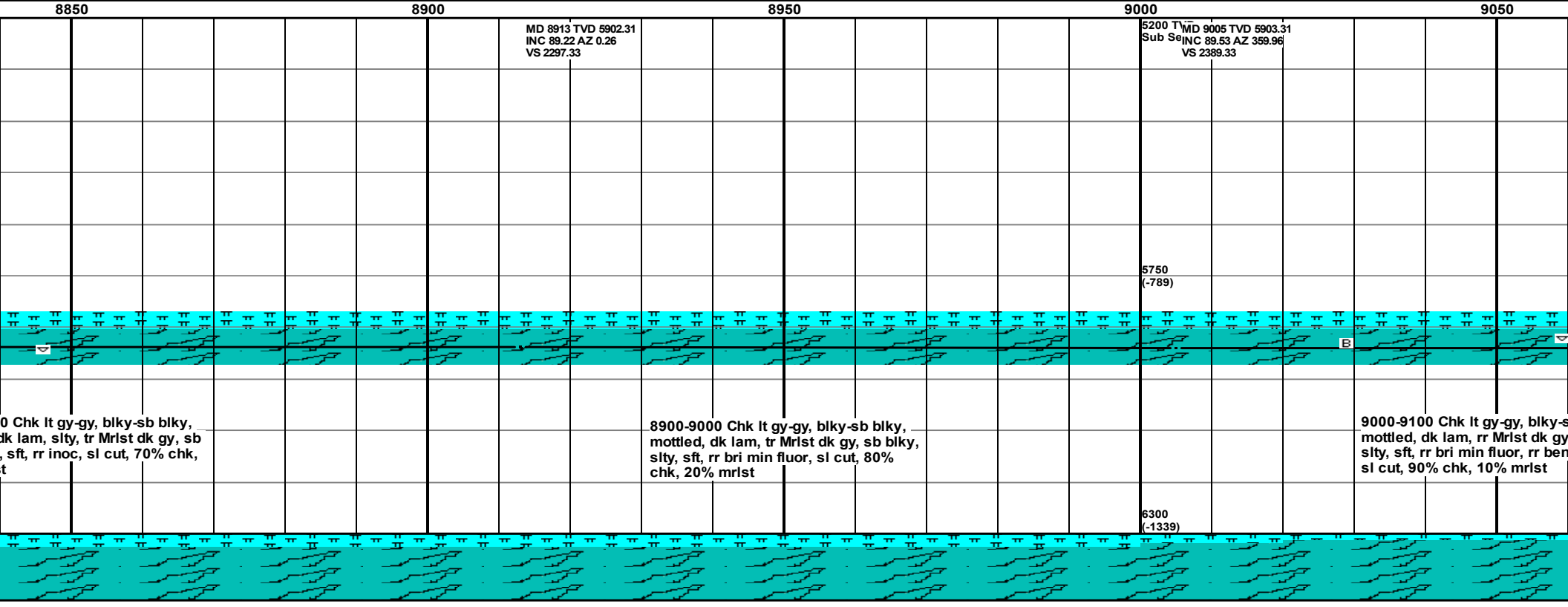
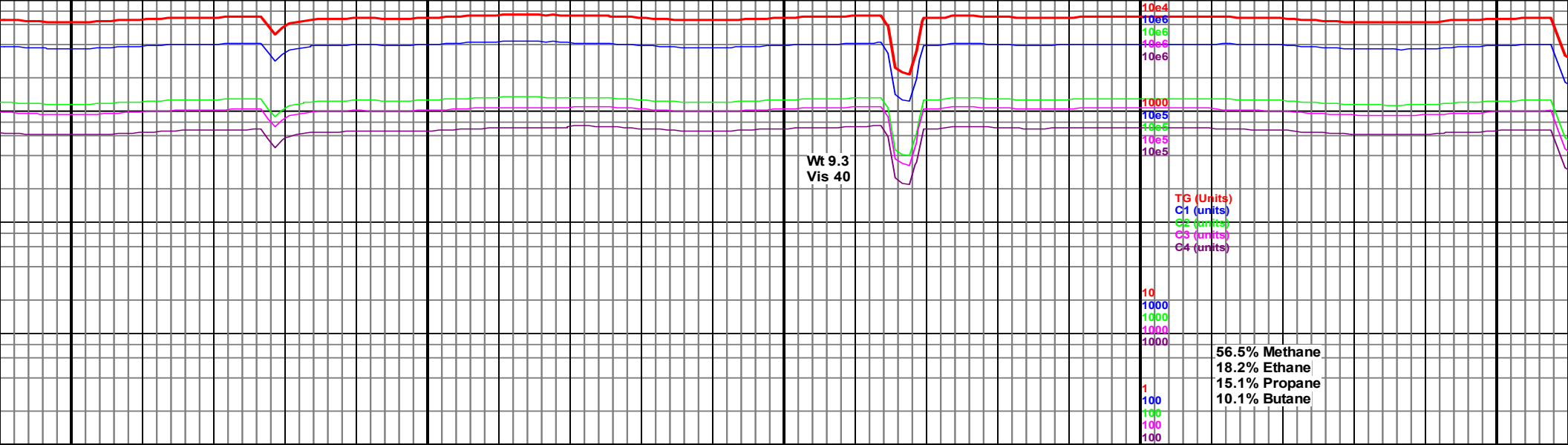


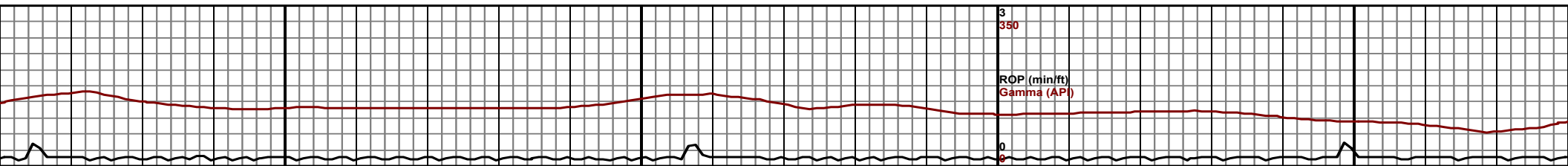
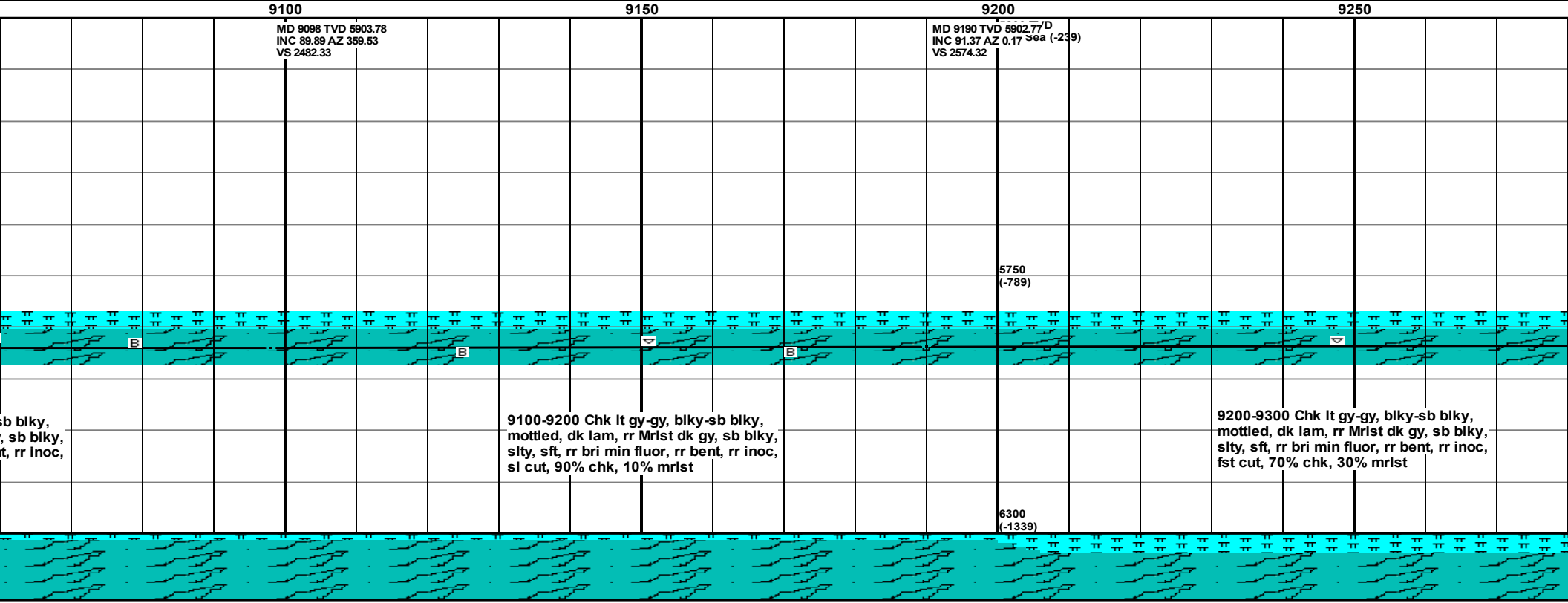
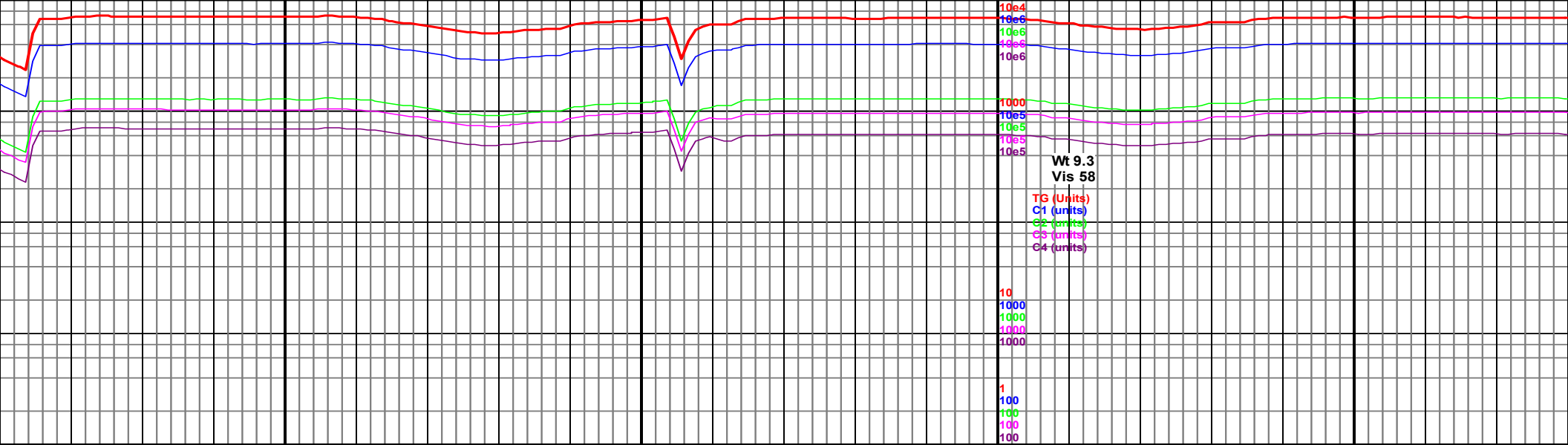




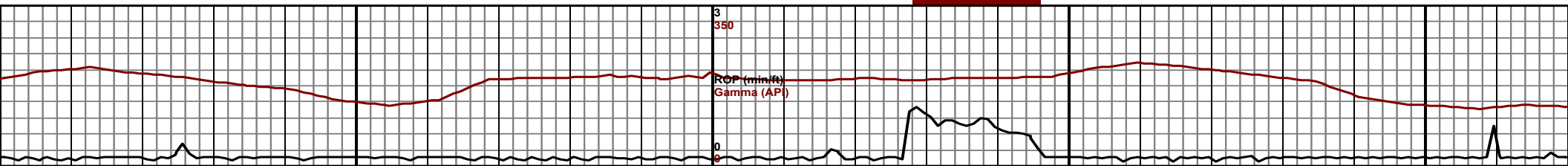
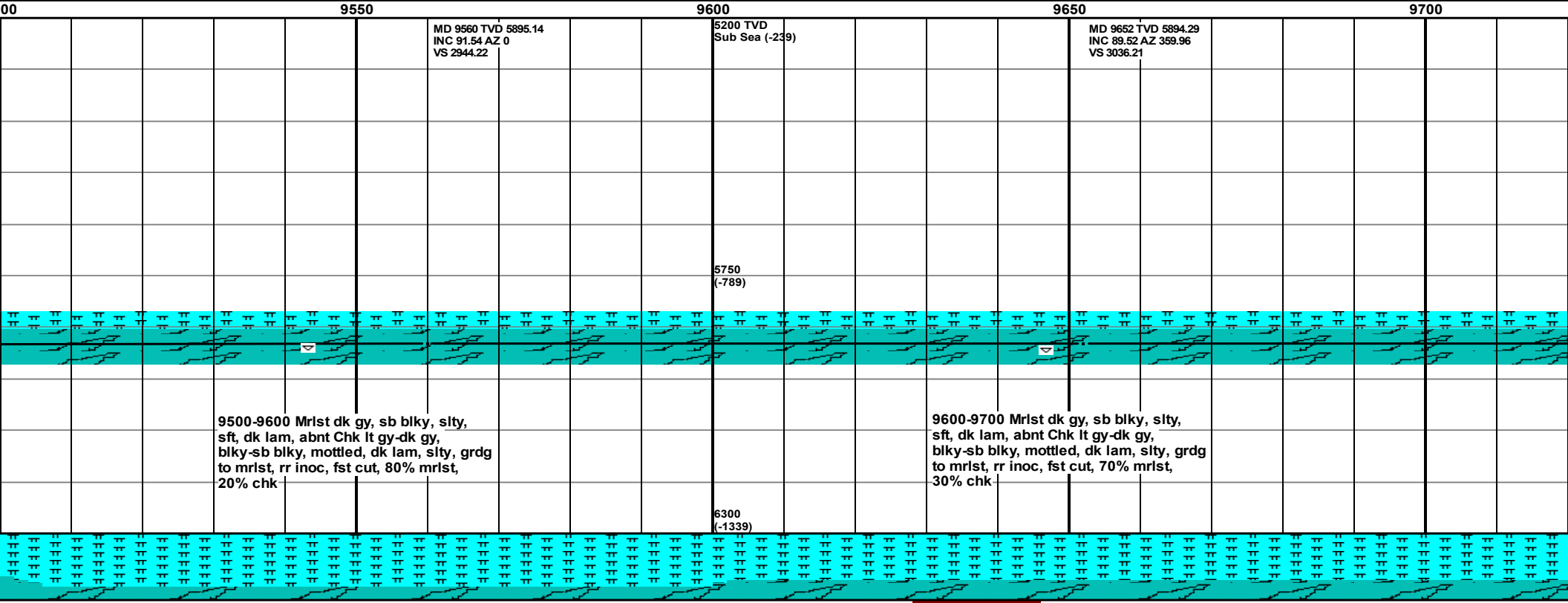
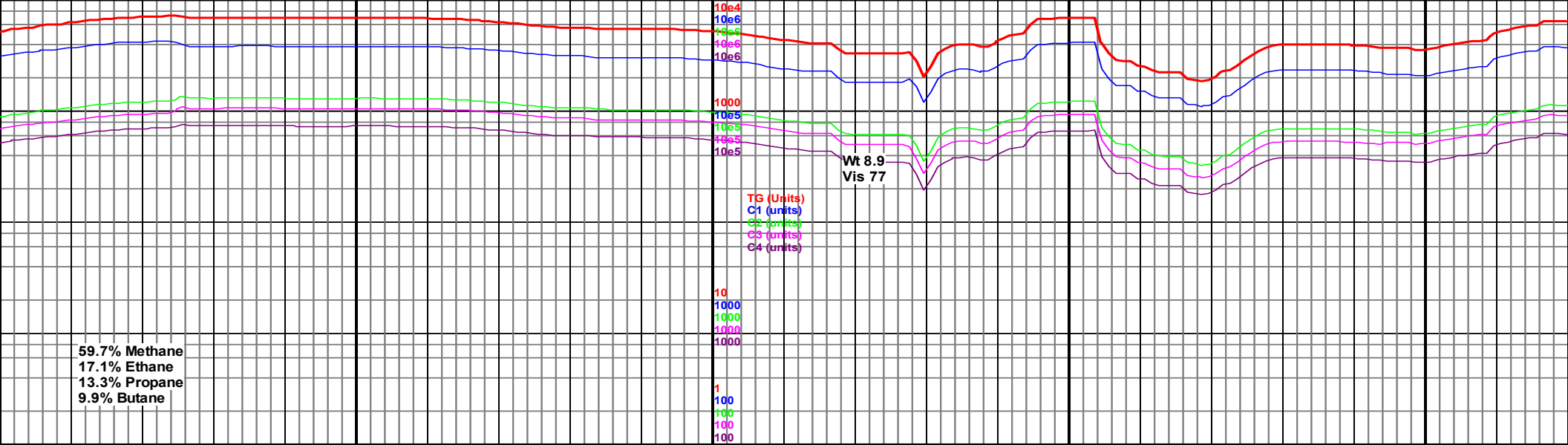


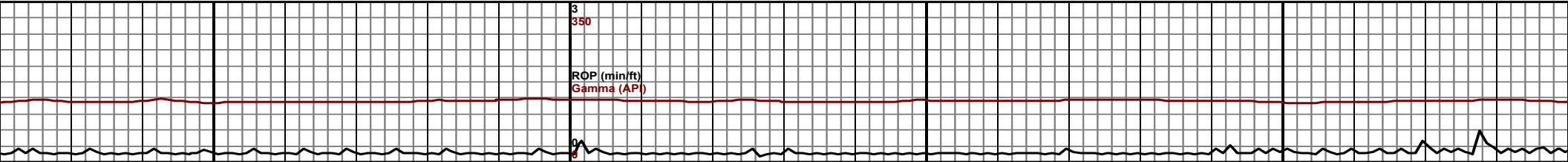
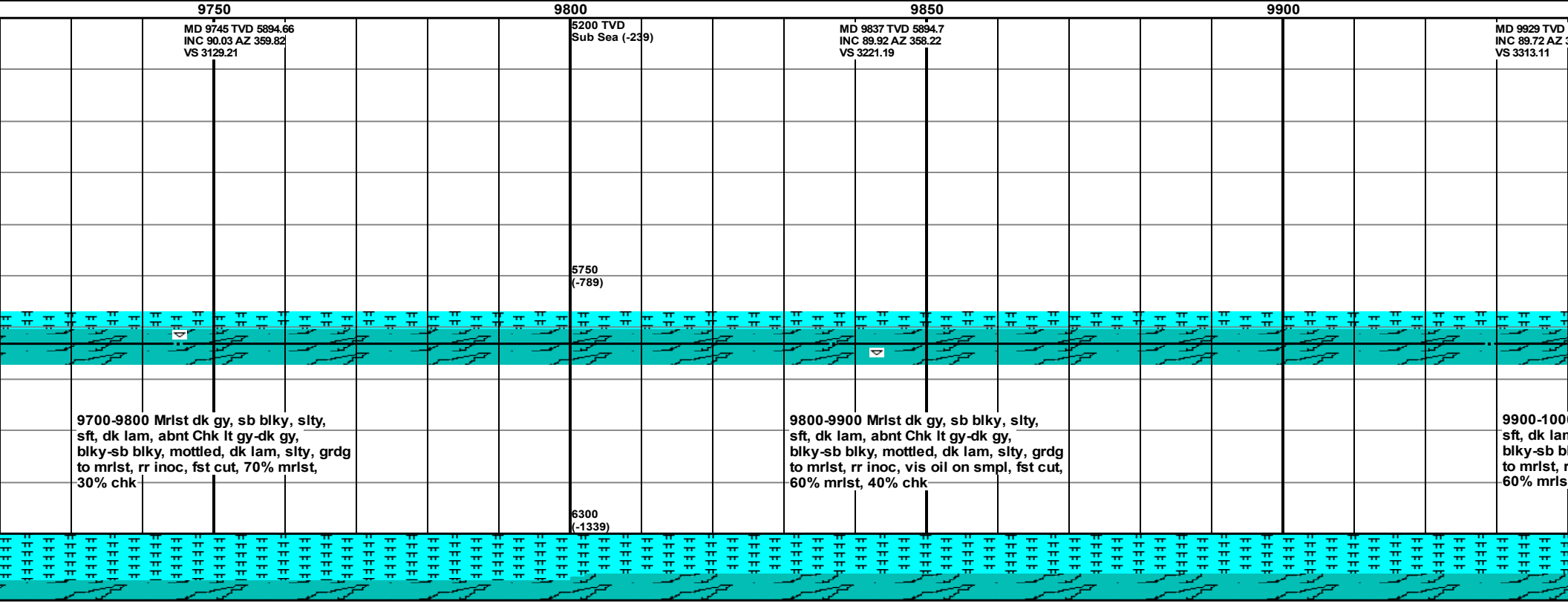
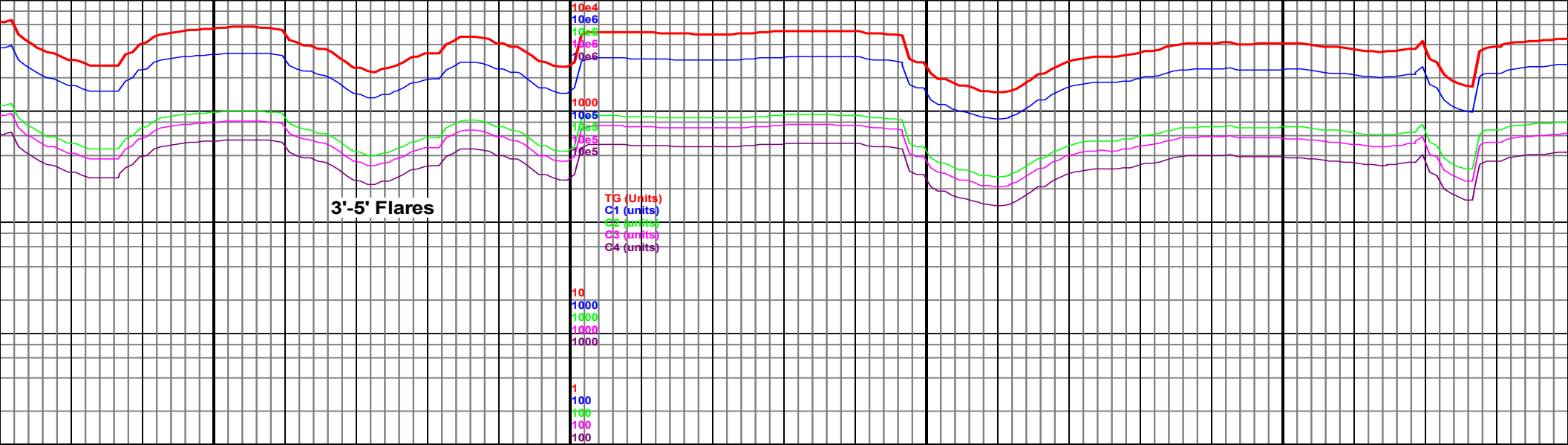




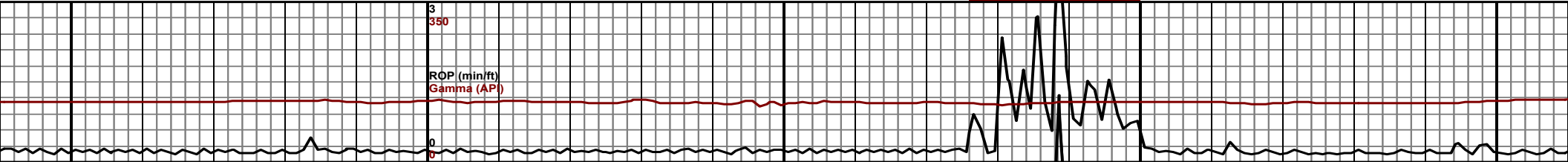
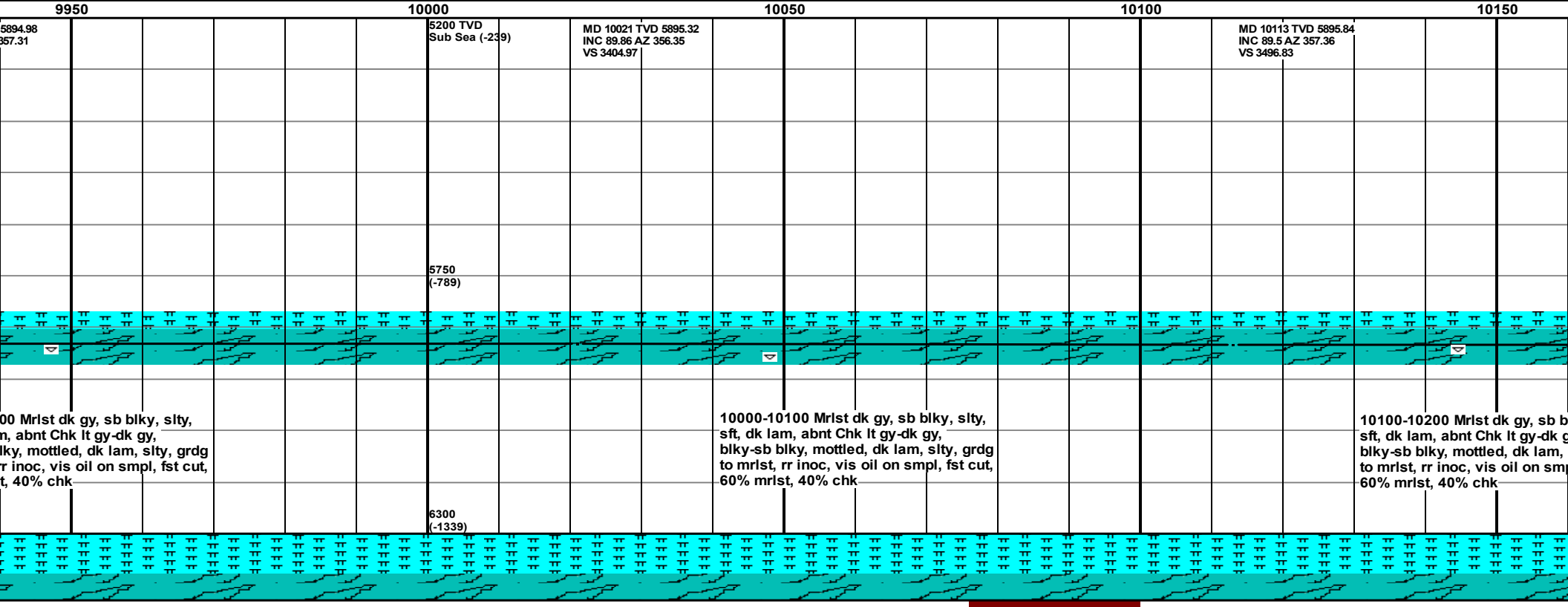
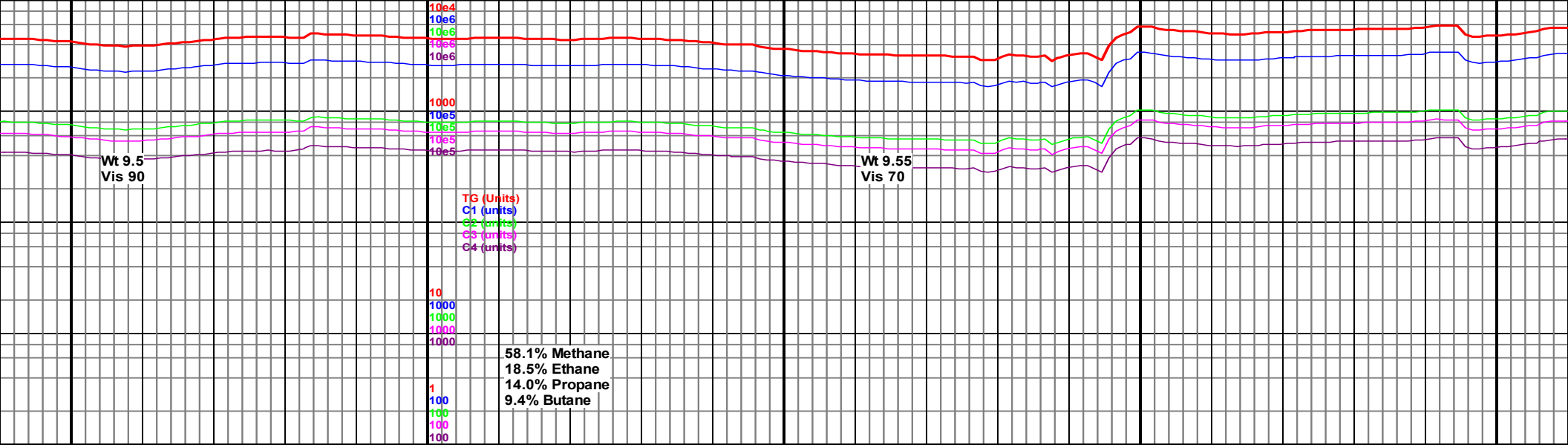


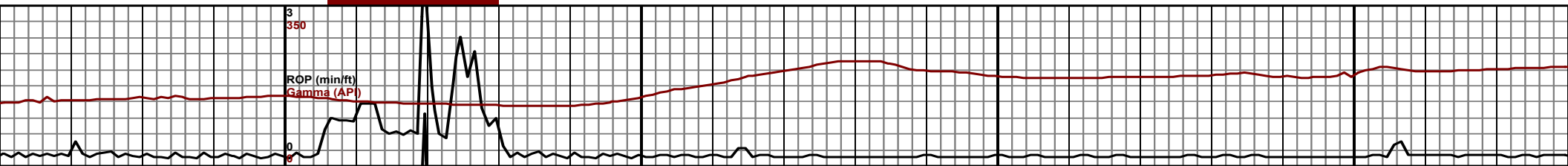
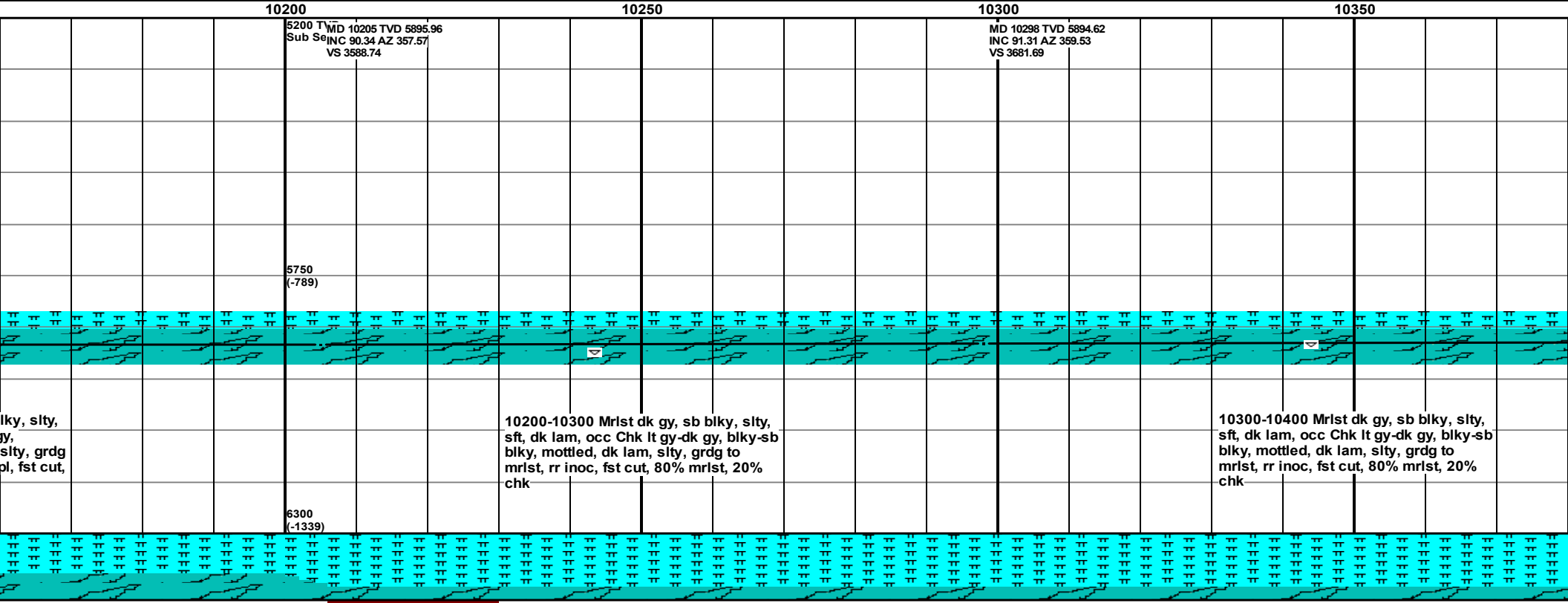
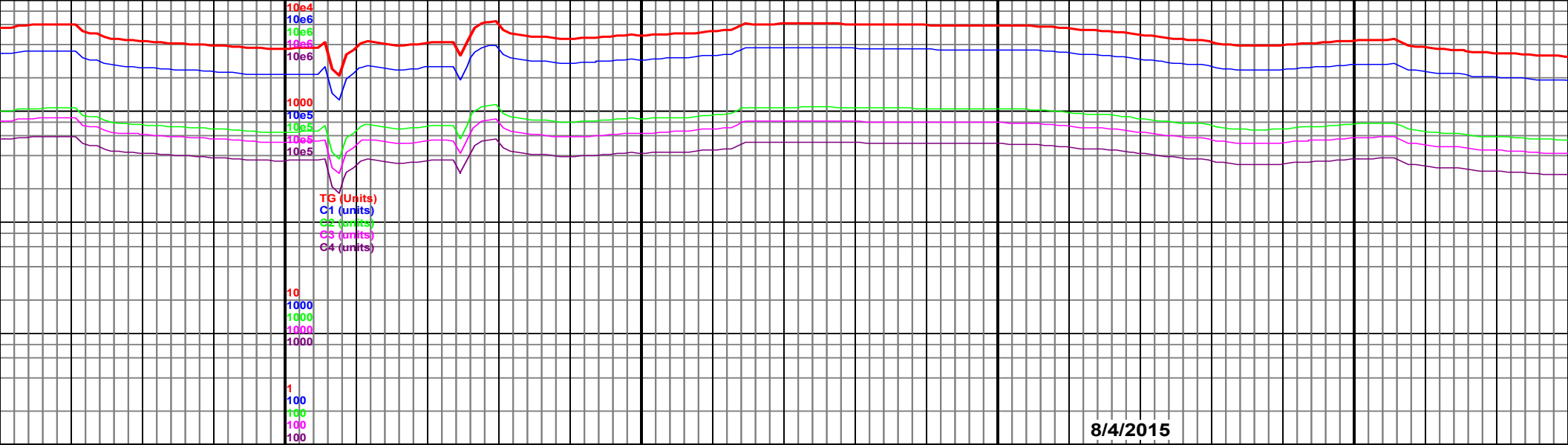


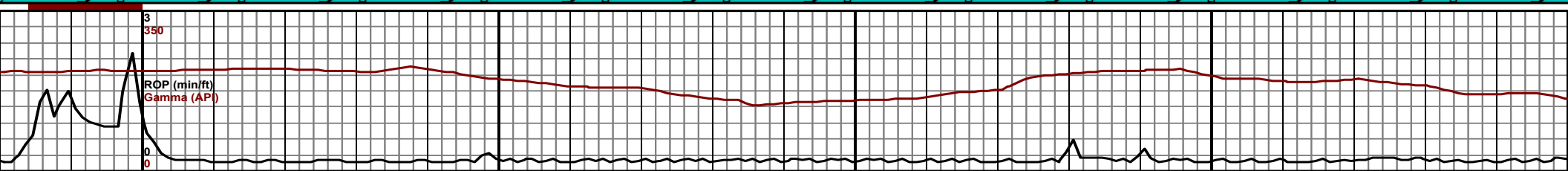
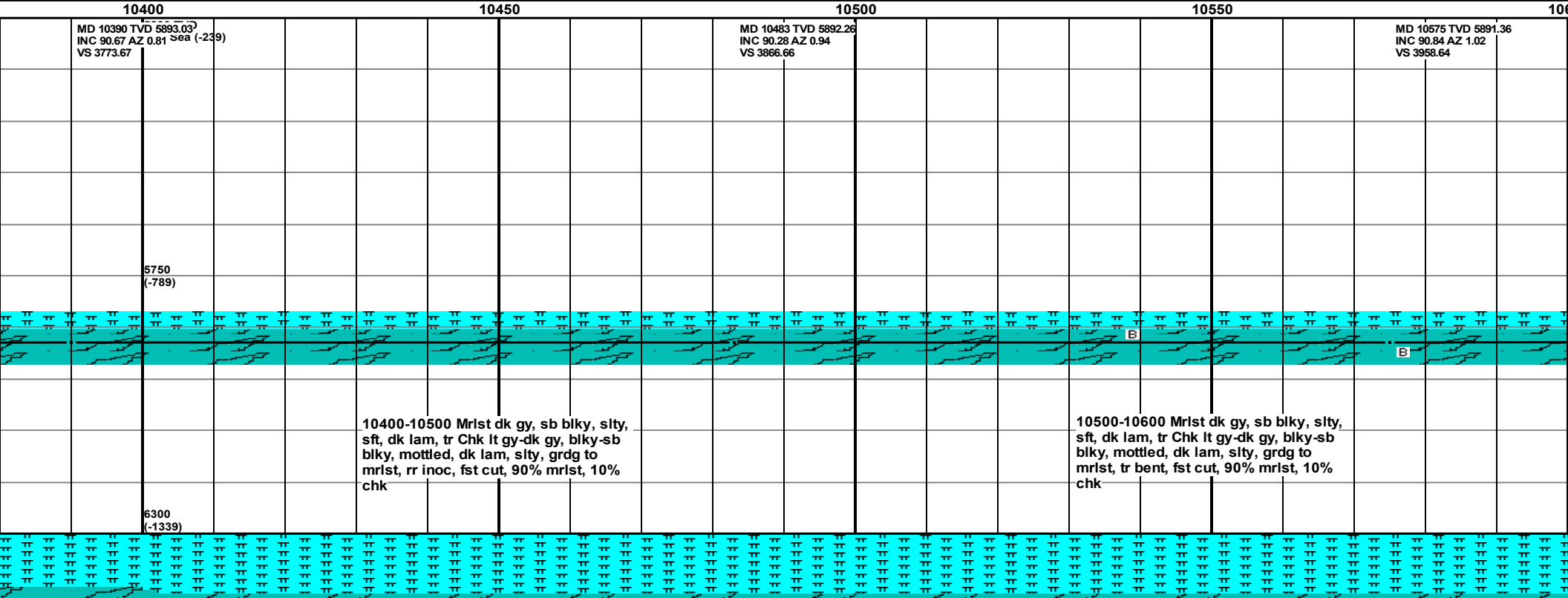
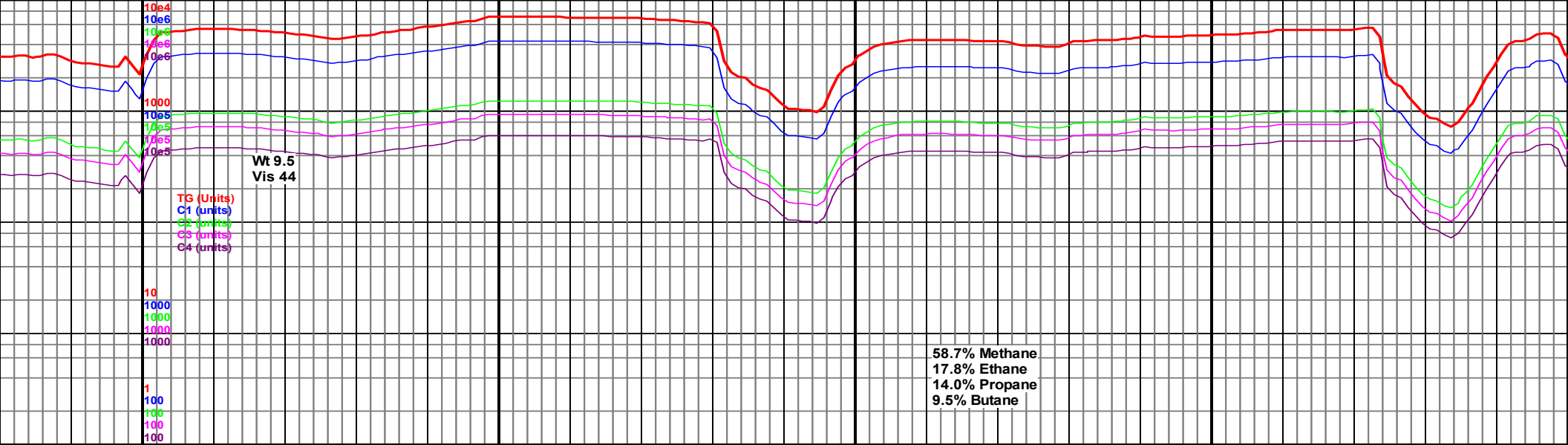


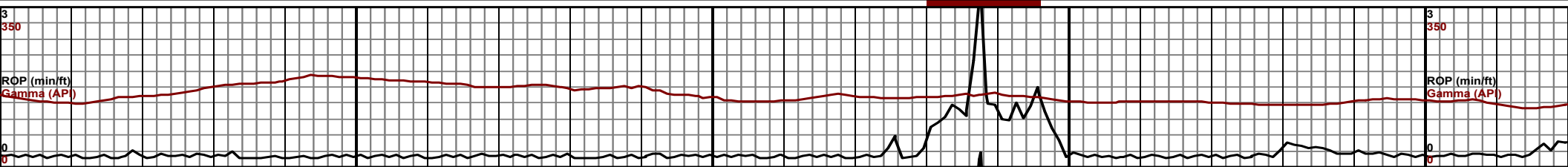
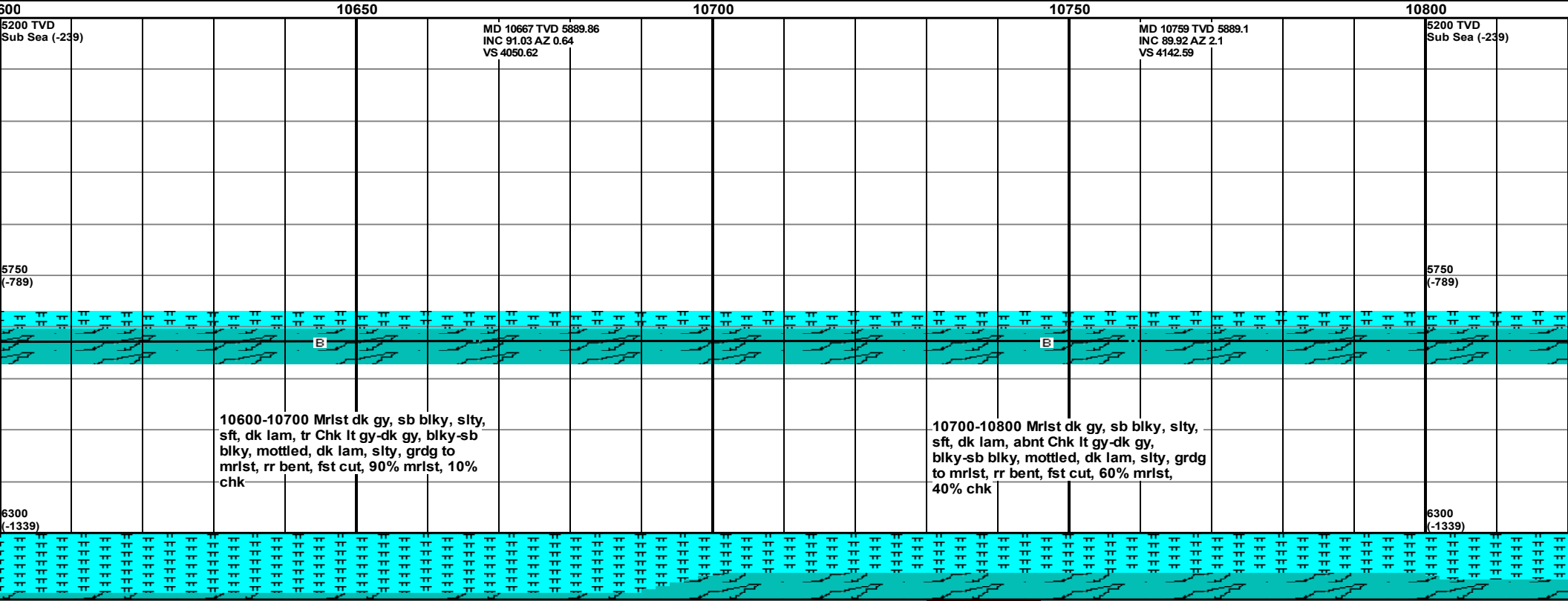
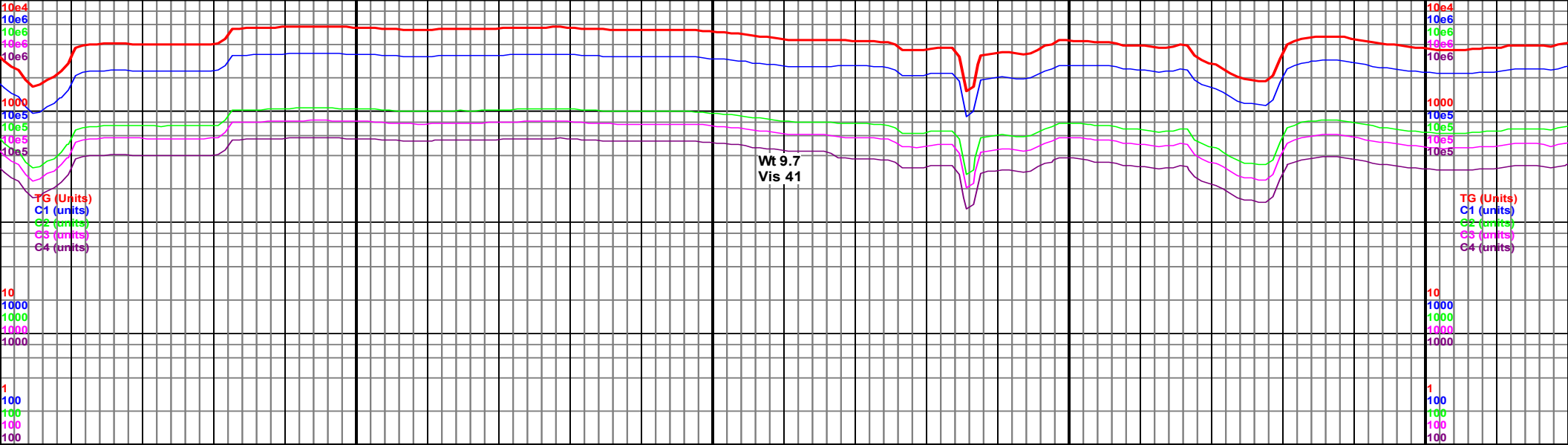


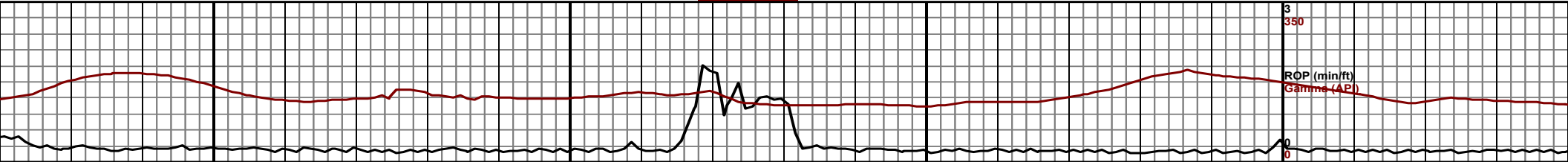
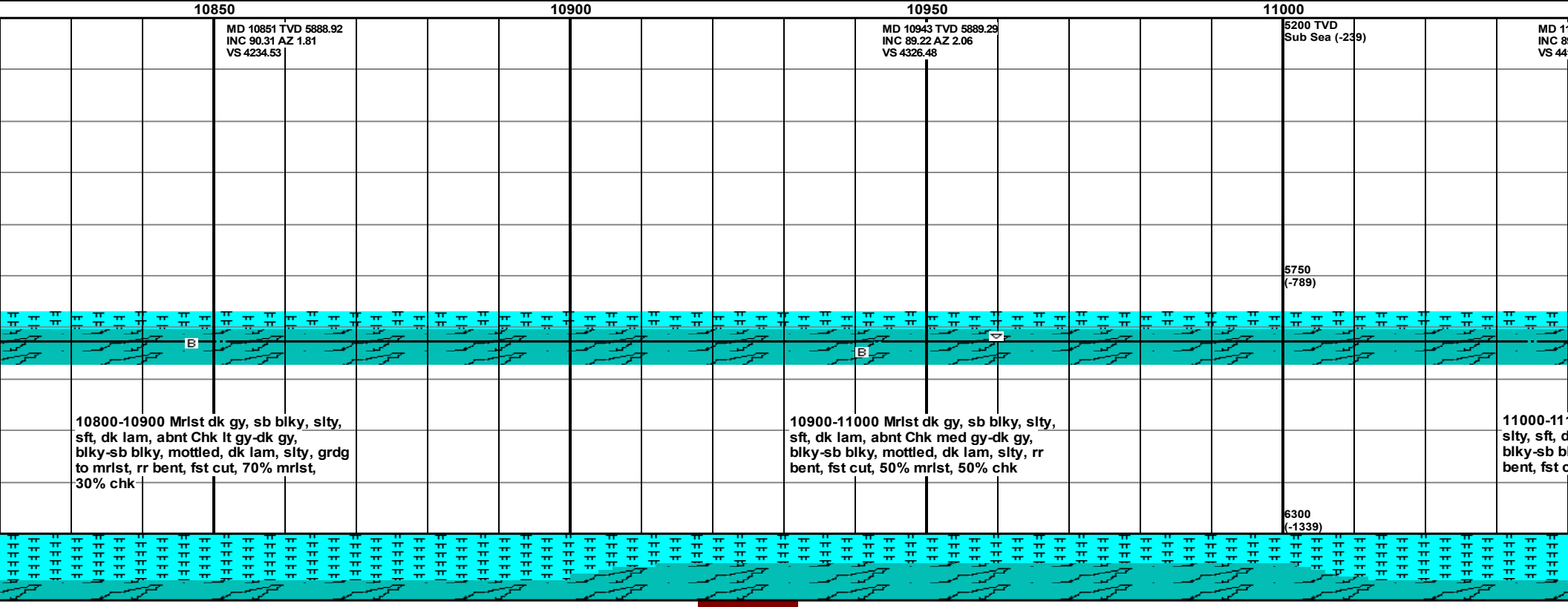
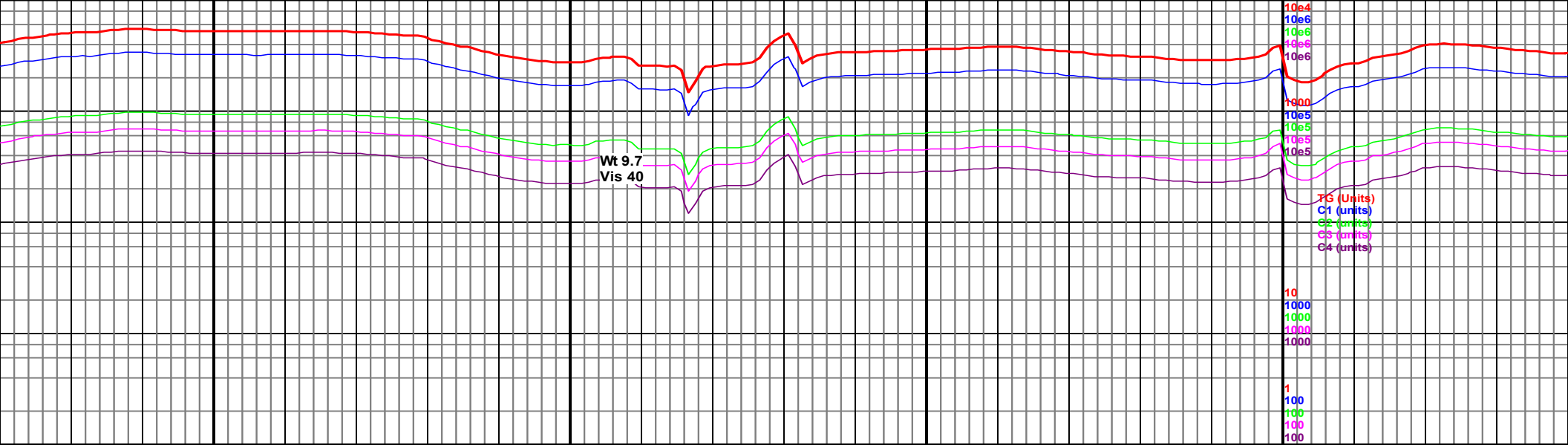




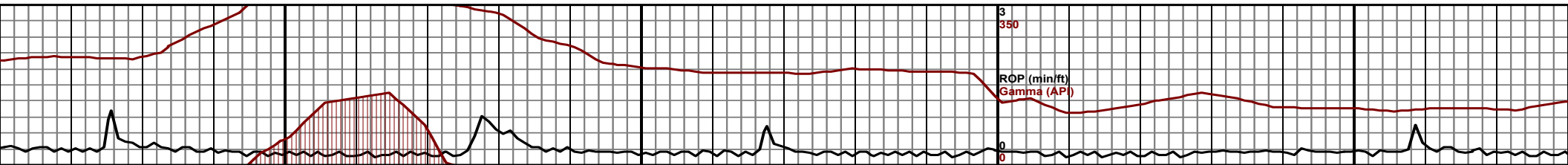
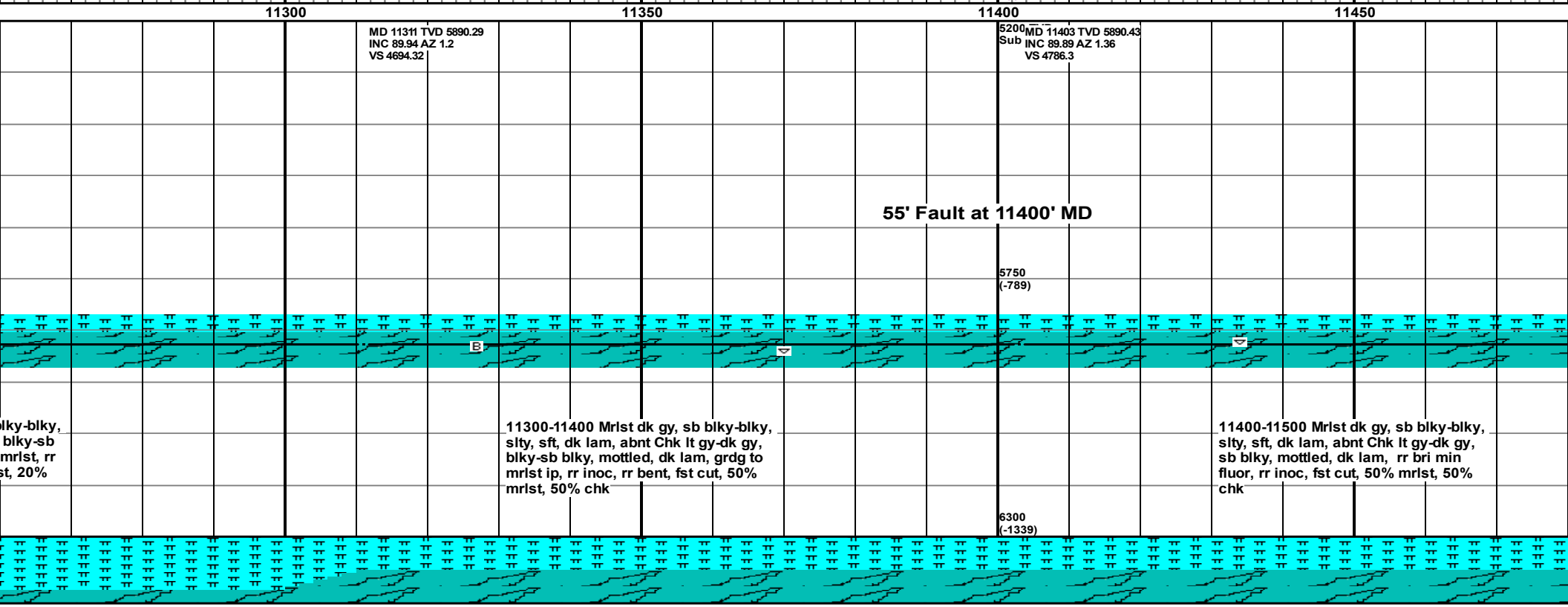
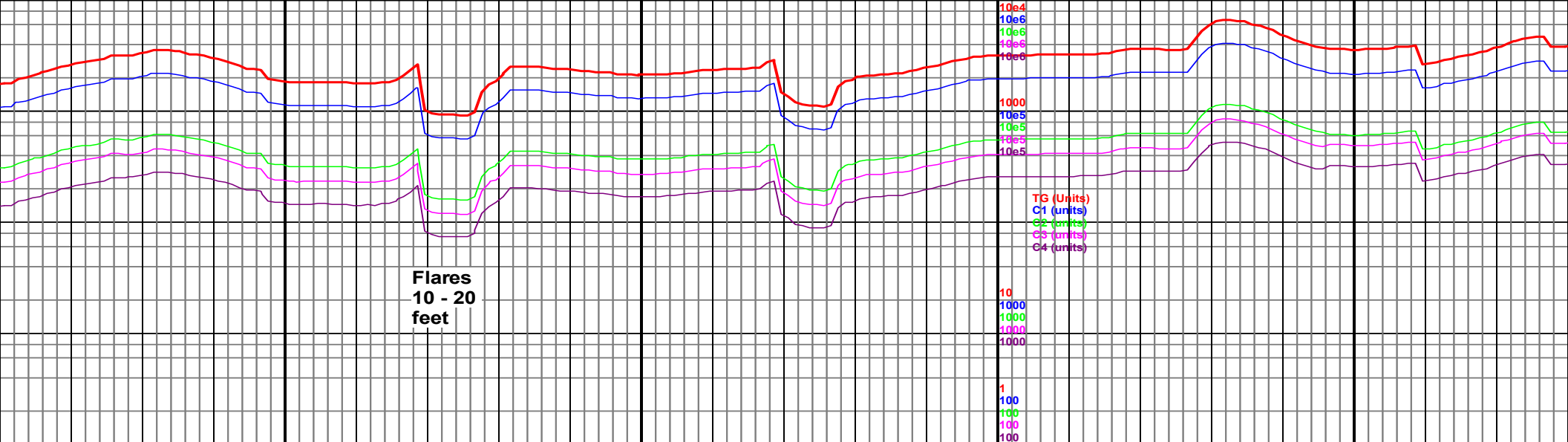






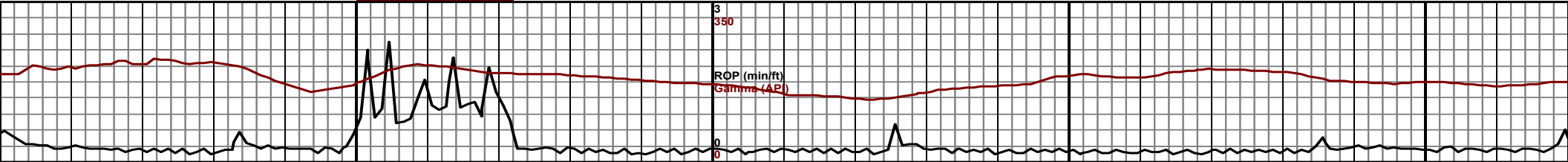
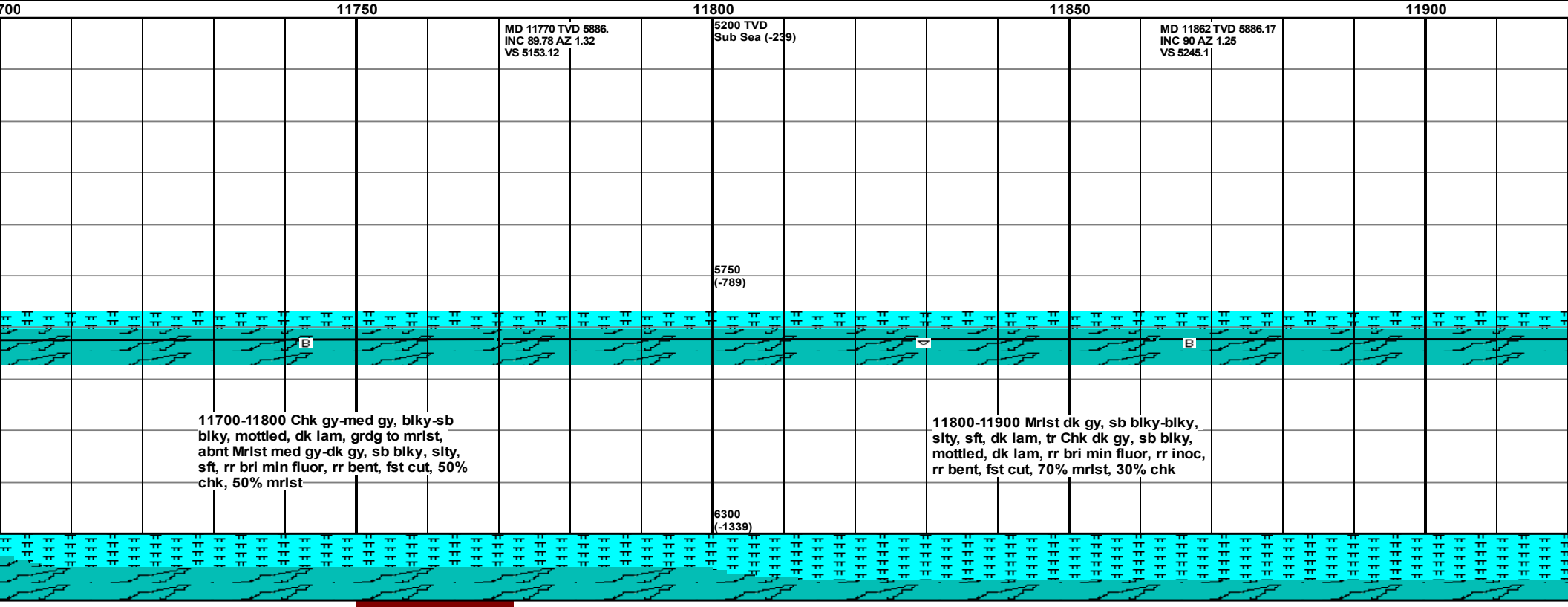
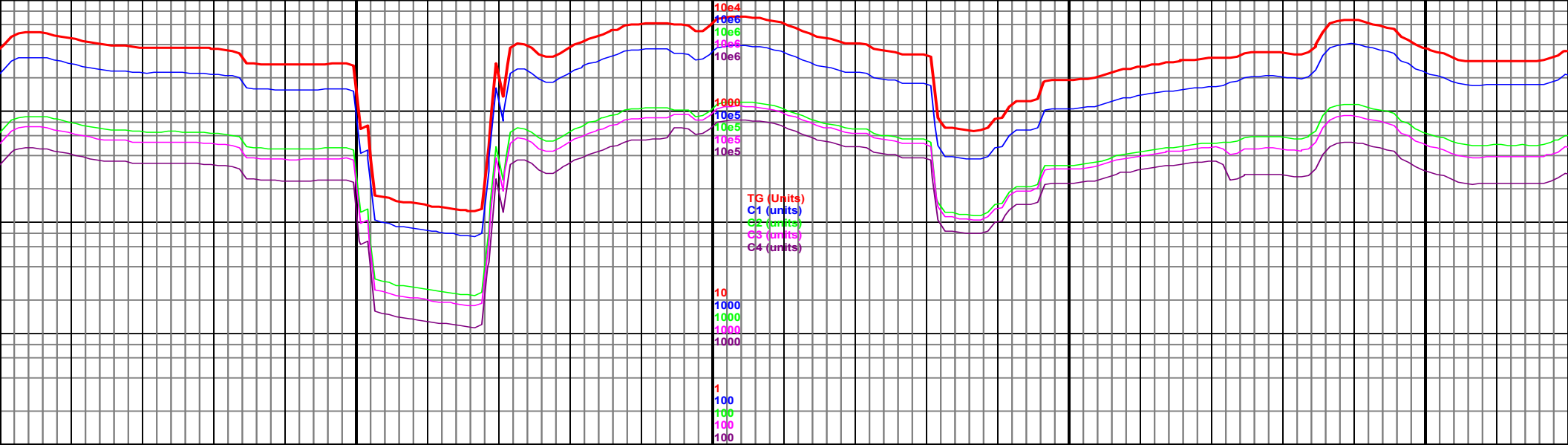


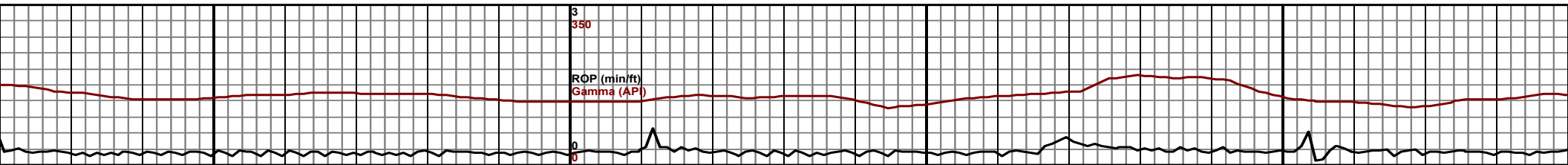
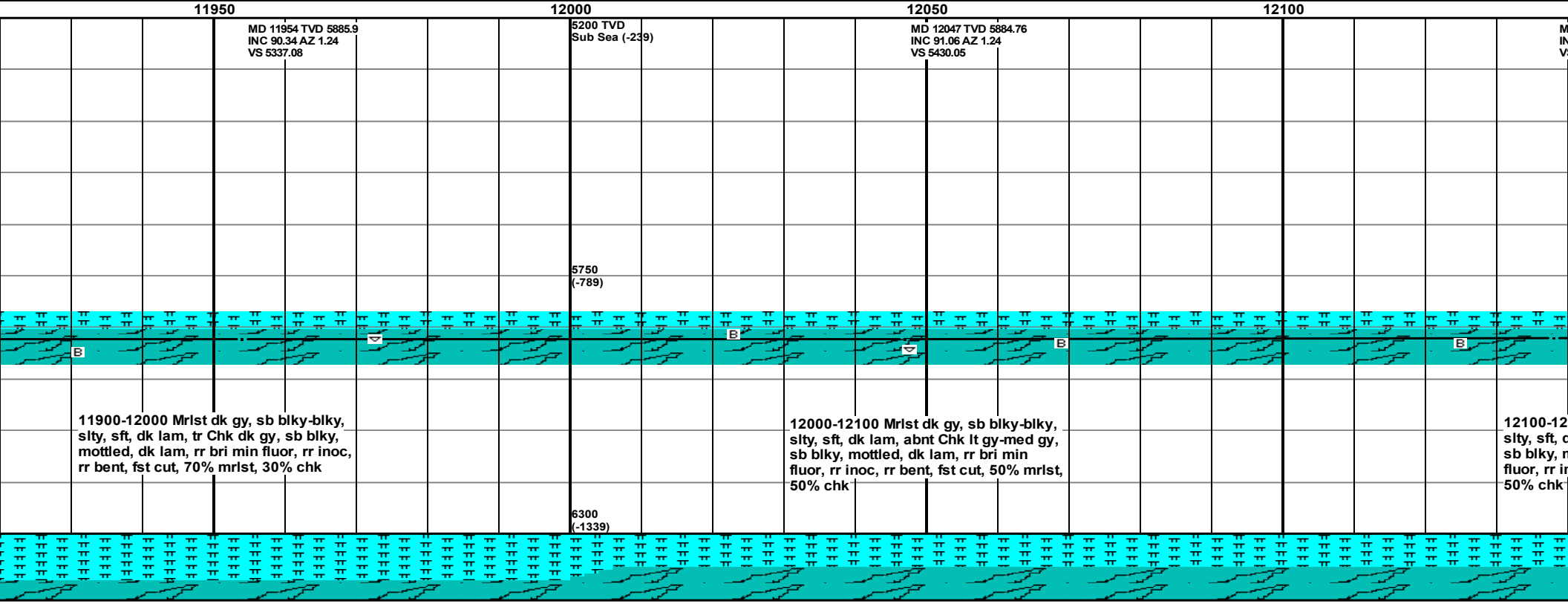
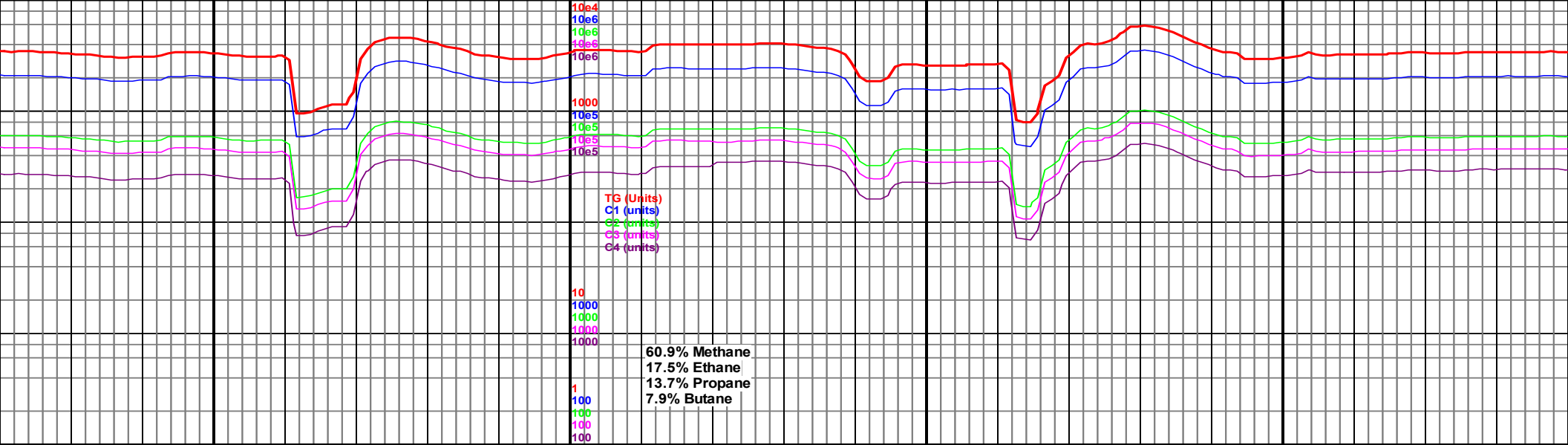


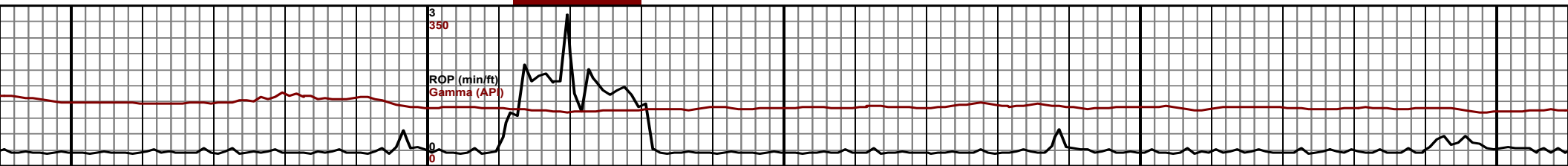
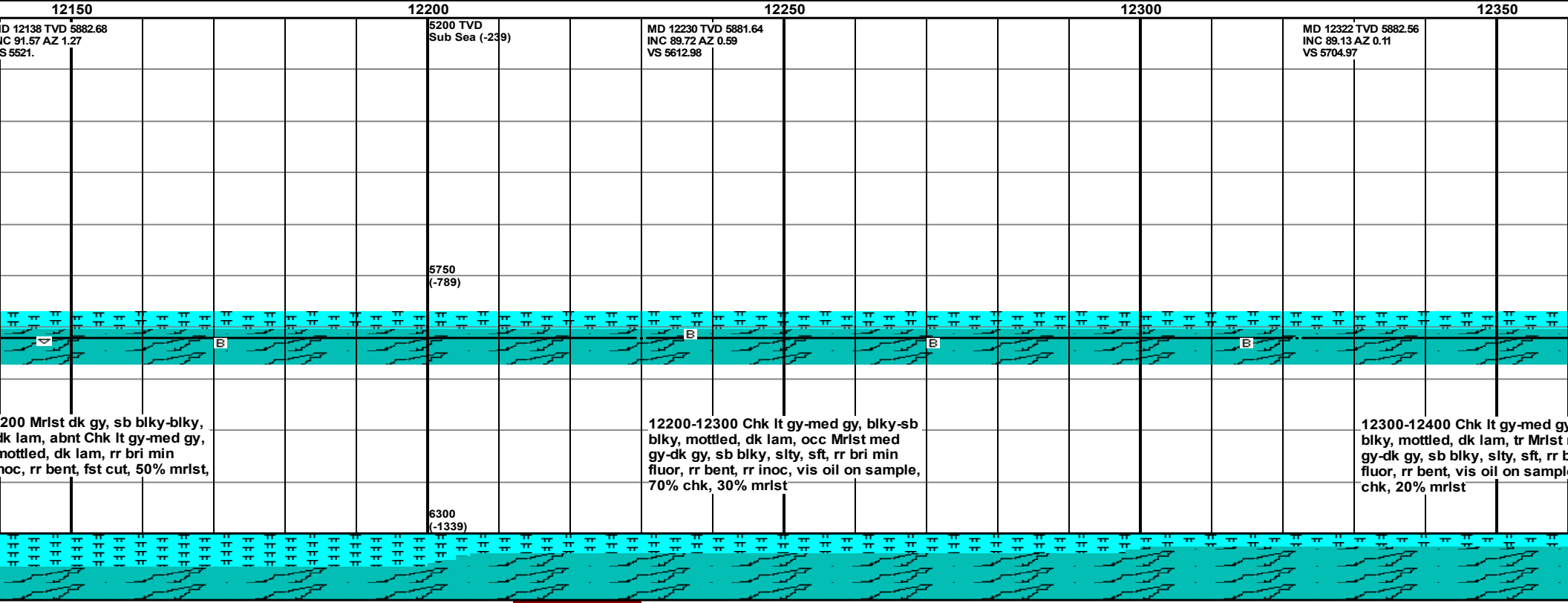
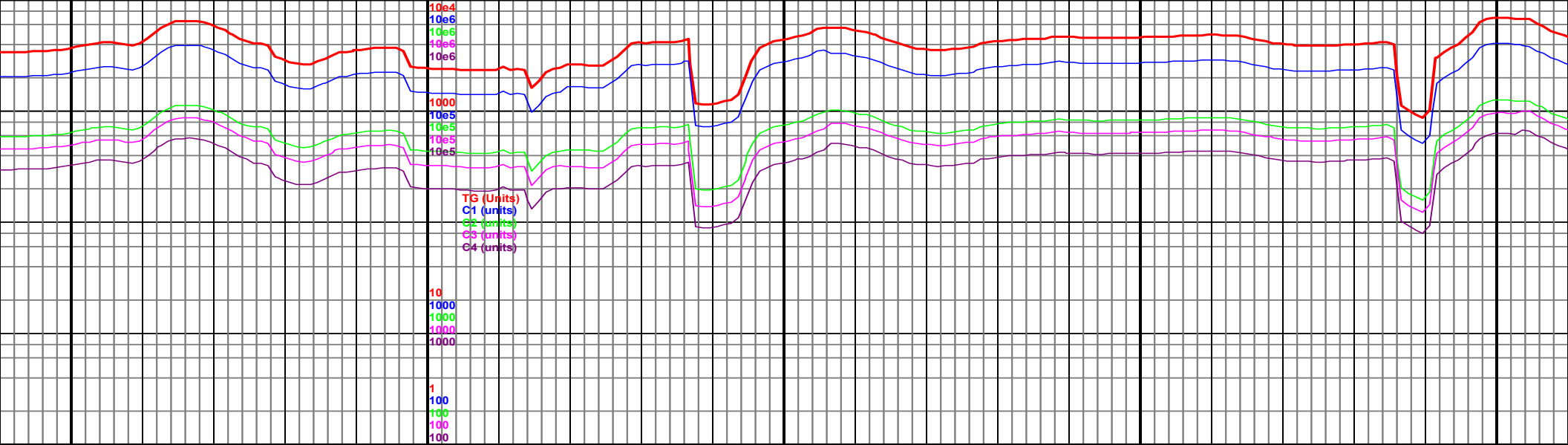


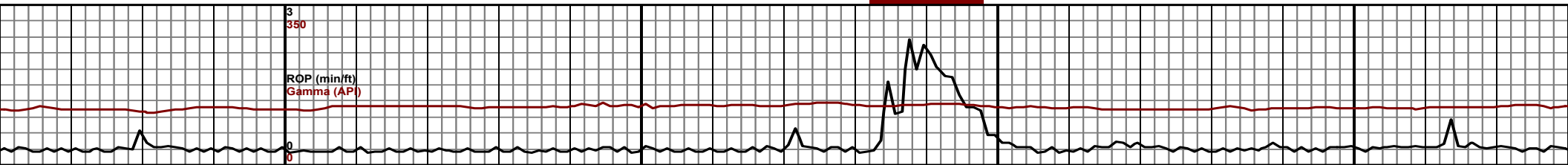
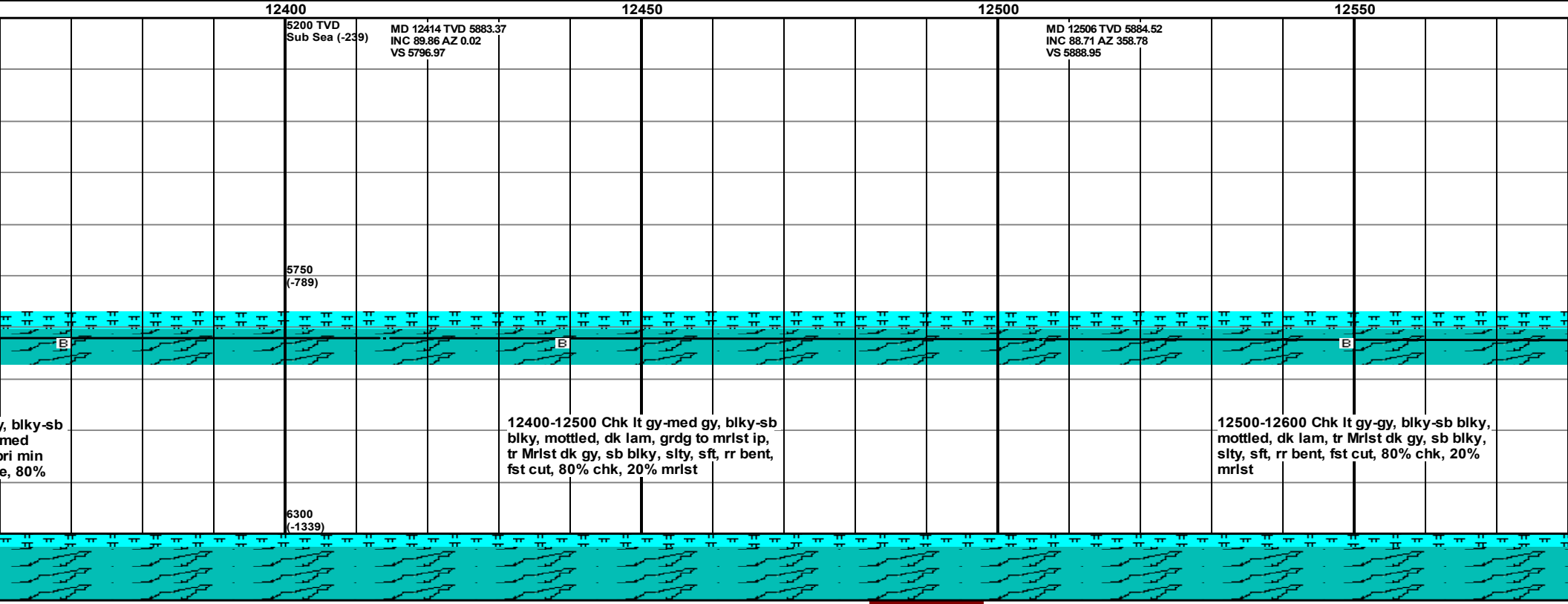
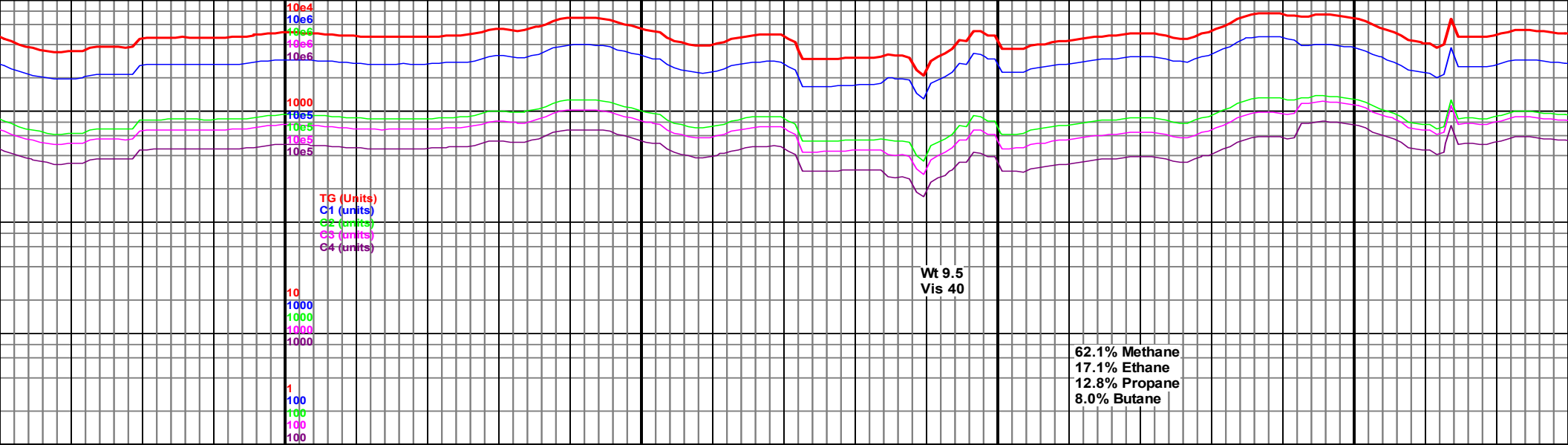


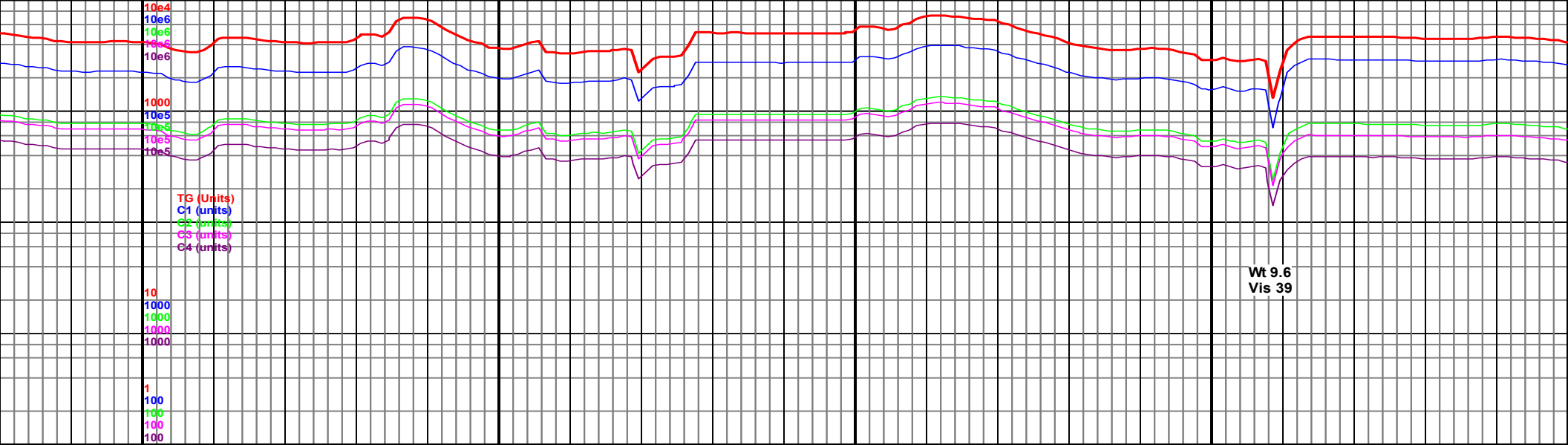












12600 12650 12700 12750 12800

MD 12598 TVD 5886.37  
INC 88.99 AZ 358.65  
VS 5980.91

MD 12690 TVD 5887.2  
INC 89.97 AZ 358.91  
VS 6072.88

MD 12782 TVD 5887.77  
INC 89.33 AZ 359.88  
VS 6164.88

5750  
(-789)

12600-12700 Chk lt gy-gy, blk-sb blk,  
mottled, dk lam, tr Mrlst dk gy, sb blk,  
slty, sft, rr bent, fst cut, 80% chk, 20%  
mrlst

12700-12800 Chk lt gy-gy, blk-sb blk,  
mottled, dk lam, tr Mrlst dk gy, sb blk,  
slty, sft, rr bent, fst cut, 70% chk, 30%  
mrlst

6300  
(-1339)

3  
350  
ROP (min/ft)  
Gamma (API)

