



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

**Well Name:** RAZOR 26K-2308B  
**Location:** NESW 26-T10N-R58W Weld County, Colorado  
**License Number:** 05-123-37879  
**Spud Date:** 01/26/2014  
**Surface Coordinates:** Lat.: 40.808886 Long.: -103.834406

**Region:** Redtail Field  
**Drilling Completed:** 02/03/2014

**Bottom Hole Coordinates:** Lat.: 40.831222 Long.: -103.833283

**Ground Elevation (ft):** 4737.5'  
**Logged Interval (ft):** 5100' **To:** 13402'  
**Formation:** Pierre, Sharon Springs, Niobrara  
**Type of Drilling Fluid:** Water Based Mud

**K.B. Elevation (ft):** 4759.5'  
**Total Depth (ft):** 13402'

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:** Luke Schwantes and Craig Dreiling  
**Company:** Acme Geologic Consulting  
**Address:** 108 Berry Street  
Little Rock, AR 72205

## Drilling Company

Frontier  
Rig #26


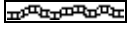
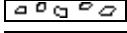
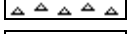
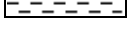
## Gas Detection






Mudlogging Systems, Inc., M Logger, Model TGC, Total Gas and Chromatograph, #603




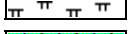

## Comments

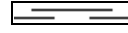
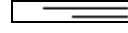

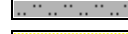
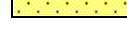
Lithologies and tops at drilled depths, not corrected to elogs. Where the well bore gas is 100% methane, the C1 line is moved to 85% for graphical purposes only.




## ROCK TYPES

 Anhy  
 Bent  
 Brec  
 Cht  
 Clyst
















 Coal  
 Congl  
 Dol  
 Gyp  
 Igne












 Lmst  
 Meta  
 Cyan mrlst  
 Mrlst  
 Salt
















 Shale  
 Shcol  
 Shgy  
 Sltst  
 Ss







 Till  
 Cyan chk  
 Chalk

## ACCESSORIES

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












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








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





 Ostra  
 Pelec  
 Pellet  
 Pisolite  
 Plant  
 Strom











**STRINGER**  
 Anhy  
 Arg  
 Bent  
 Coal  
 Dol  
 Gyp  
 Ls  
 Mrst

 Sltstrg  
 Ssstrg

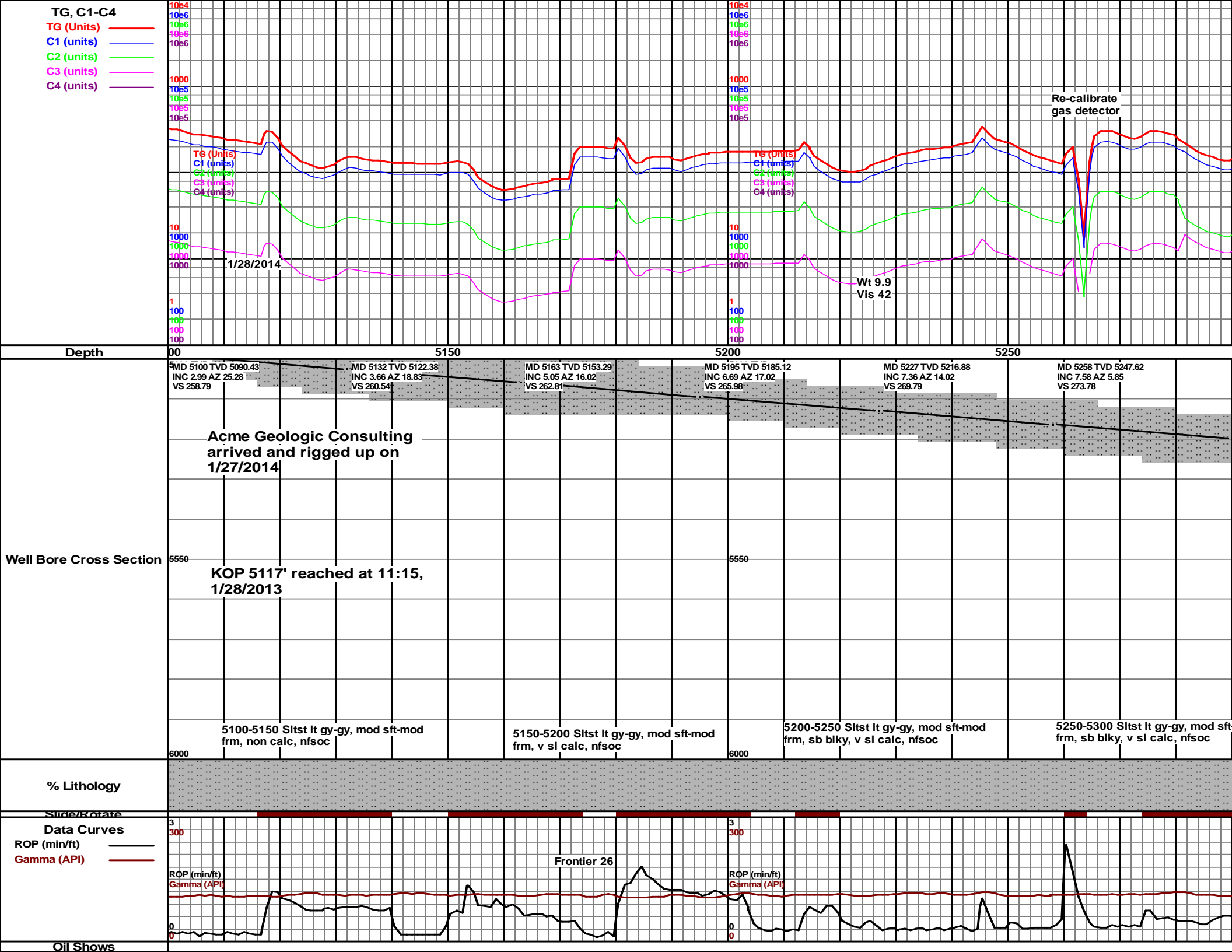
**TEXTURE**  
 Boundst  
 Chalky  
 Cryxln  
 Earthy  
 Finexln  
 Grainst  
 Lithogr  
 Microxln  
 Mudst  
 Packst  
 Wackest

**POROSITY**  
 Earthy  
 Fenest  
 Fracture  
 Inter  
 Moldic  
 Organic  
 Pinpoint

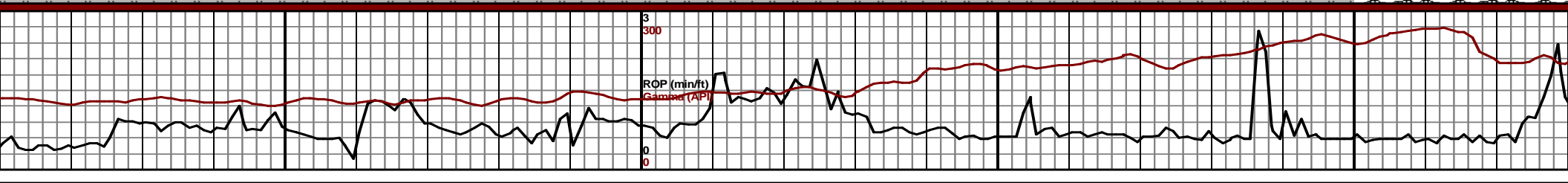
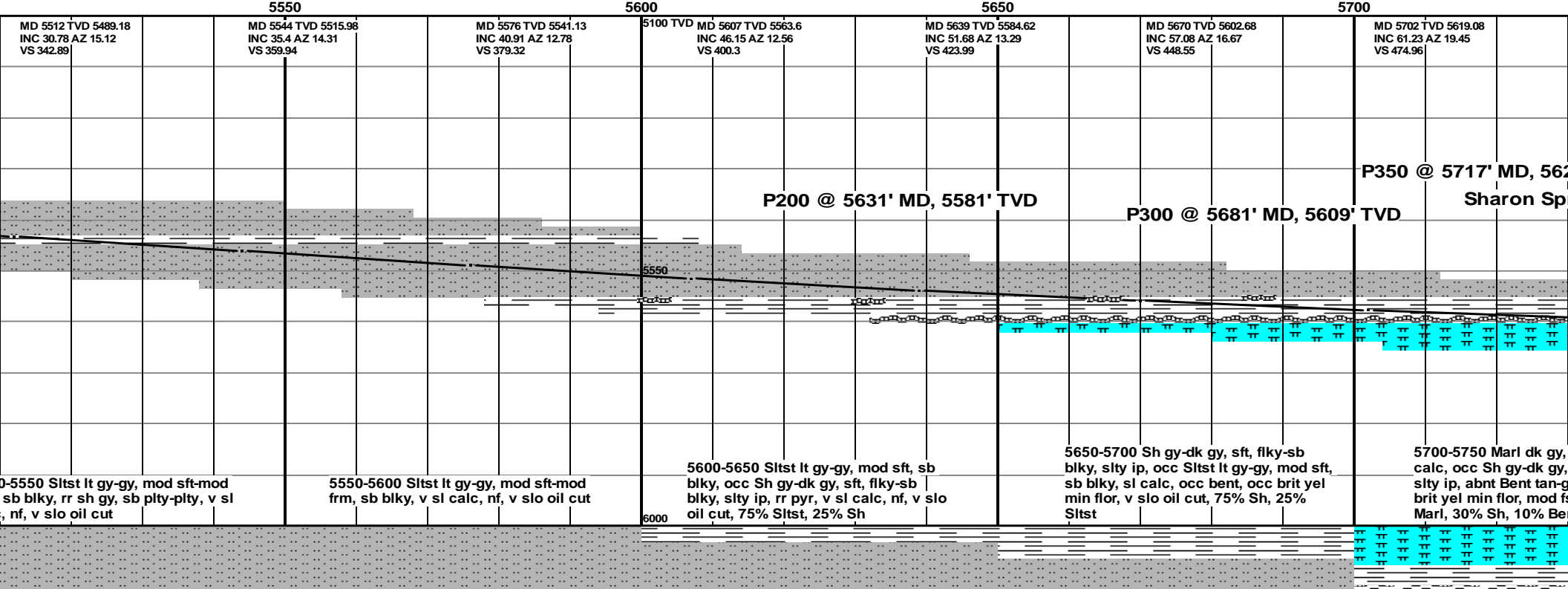
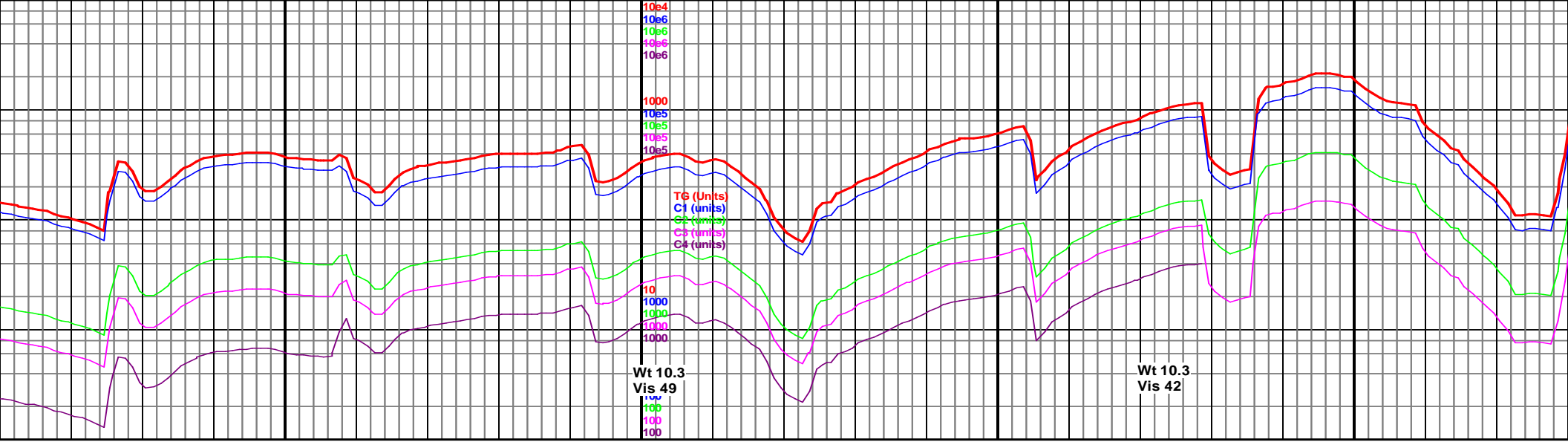
 Vuggy  
  
**SORTING**  
 Well  
 Moderate  
 Poor

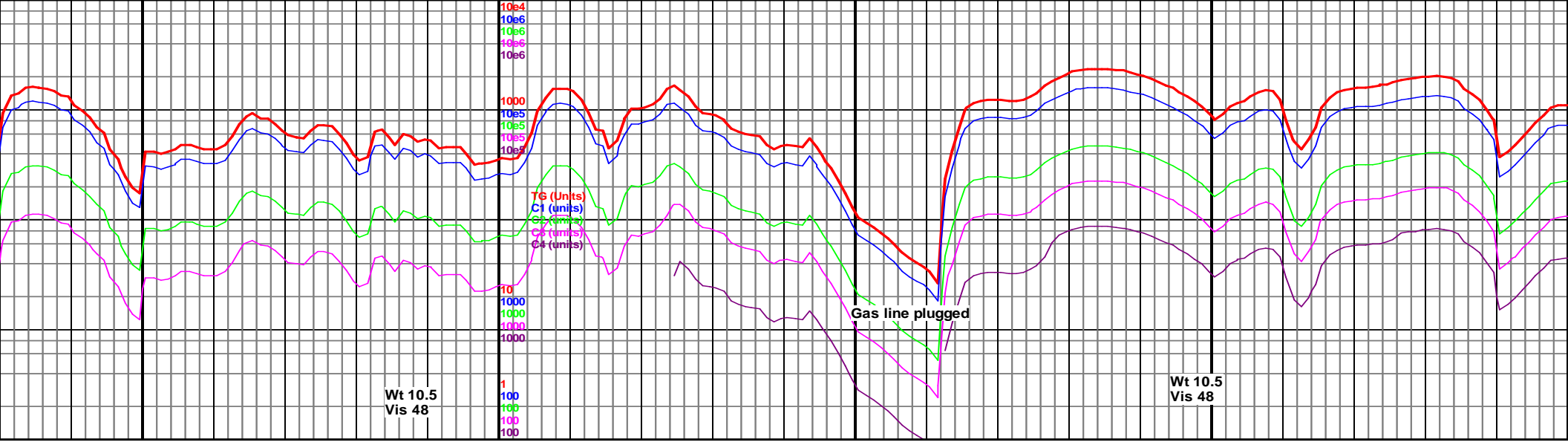
**OTHER SYMBOLS**  
  
**ROUNDING**  
 Rounded  
 Subrnd  
 Subang  
 Angular  
  
**OIL SHOW**  
 Even  
  
 Spotted  
 Ques  
 Dead  
  
**INTERVAL**  
 Core  
 Dst

**EVENT**  
 Rft  
 Sidewall

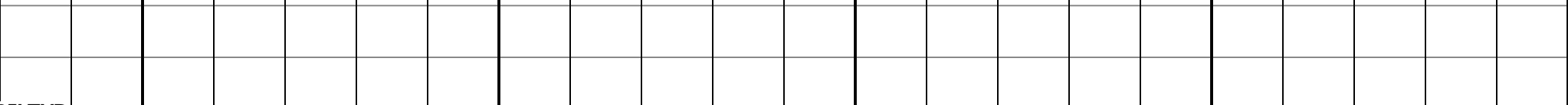




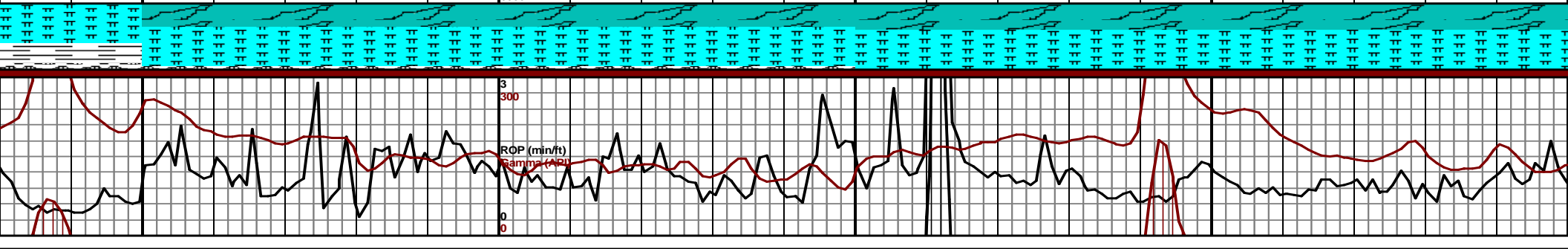
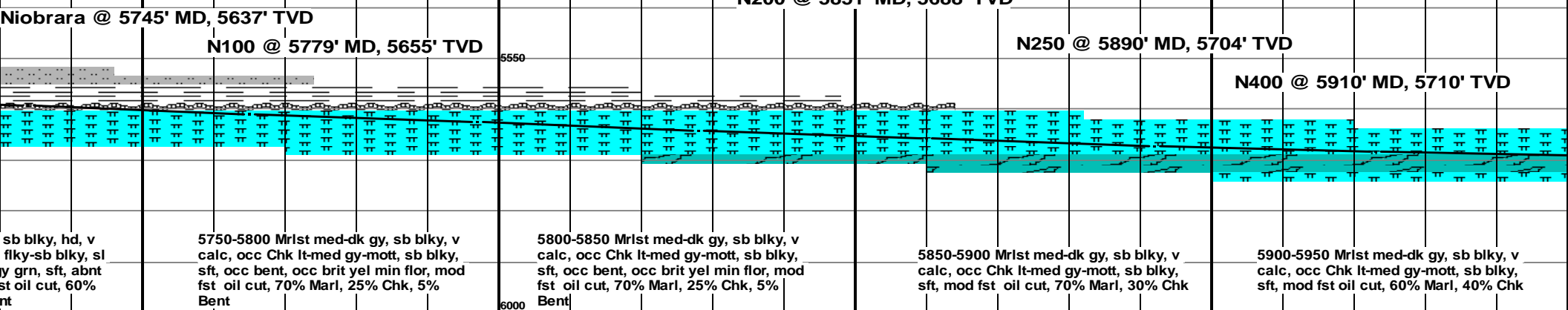


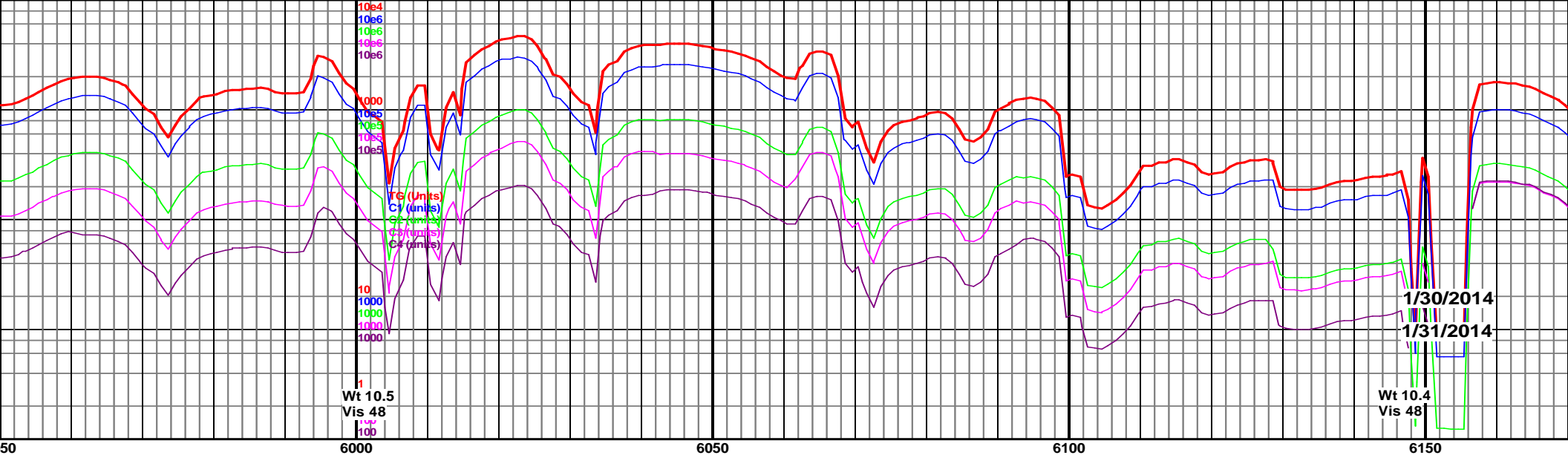


MD 5734 TVD 5634.03 INC 63.07 AZ 20.02 VS 501.93	MD 5765 TVD 5648.09 INC 62.99 AZ 21.77 VS 528.1	MD 5797 TVD 5663.19 INC 60.7 AZ 19.62 VS 554.85	MD 5828 TVD 5678.14 INC 61.63 AZ 16.54 VS 580.97	MD 5860 TVD 5692.45 INC 65.25 AZ 16.23 VS 608.71	MD 5892 TVD 5704.7 INC 69.72 AZ 15.14 VS 637.45	MD 5923 TVD 5714.12 INC 74.87 AZ 15.38 VS 666.2
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25' TVD  
rings @ 5734' MD, 5633' TVD  
Niobrara @ 5745' MD, 5637' TVD  
N100 @ 5779' MD, 5655' TVD  
N200 @ 5851' MD, 5688' TVD  
N250 @ 5890' MD, 5704' TVD  
N400 @ 5910' MD, 5710' TVD





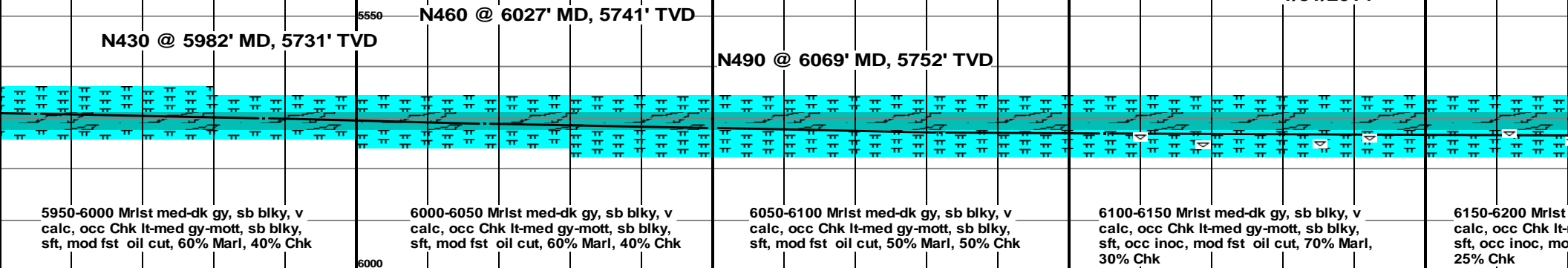
MD 5955 TVD 5722.58 INC 74.51 AZ 10.98 VS 696.49	MD 5987 TVD 5731.14 TVD INC 74.44 AZ 13.59 VS 726.85	MD 6018 TVD 5740.04 INC 72.2 AZ 13.4 VS 755.96	MD 6050 TVD 5748.71 INC 76.34 AZ 12.5 VS 786.22	MD 6082 TVD 5754.87 INC 81.48 AZ 12.04 VS 817.12	MD 6105 TVD 5757.76 INC 84.08 AZ 11.78 VS 839.61
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N430 @ 5982' MD, 5731' TVD

N460 @ 6027' MD, 5741' TVD

N490 @ 6069' MD, 5752' TVD

Intermediate casing TD 6152' MD reached at 19:45 on 1/29/2014, resumed drilling at 01:45 on 1/31/2014



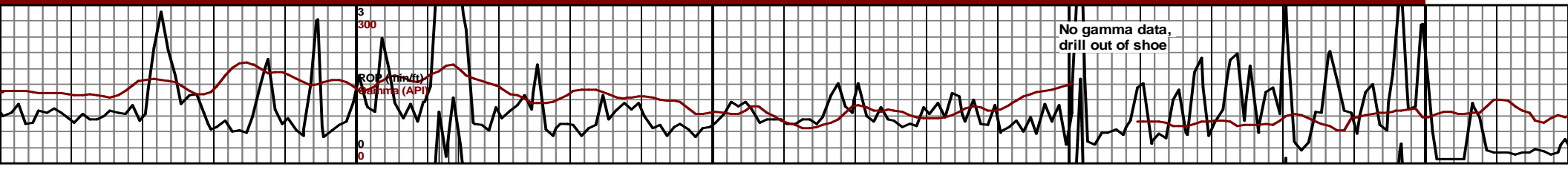
5950-6000 Mrlst med-dk gy, sb blk, v calc, occ Chk lt-med gy-mott, sb blk, sft, mod fst oil cut, 60% Marl, 40% Chk

6000-6050 Mrlst med-dk gy, sb blk, v calc, occ Chk lt-med gy-mott, sb blk, sft, mod fst oil cut, 60% Marl, 40% Chk

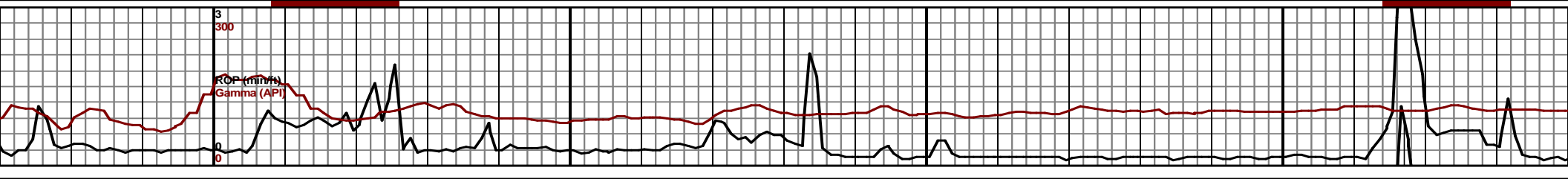
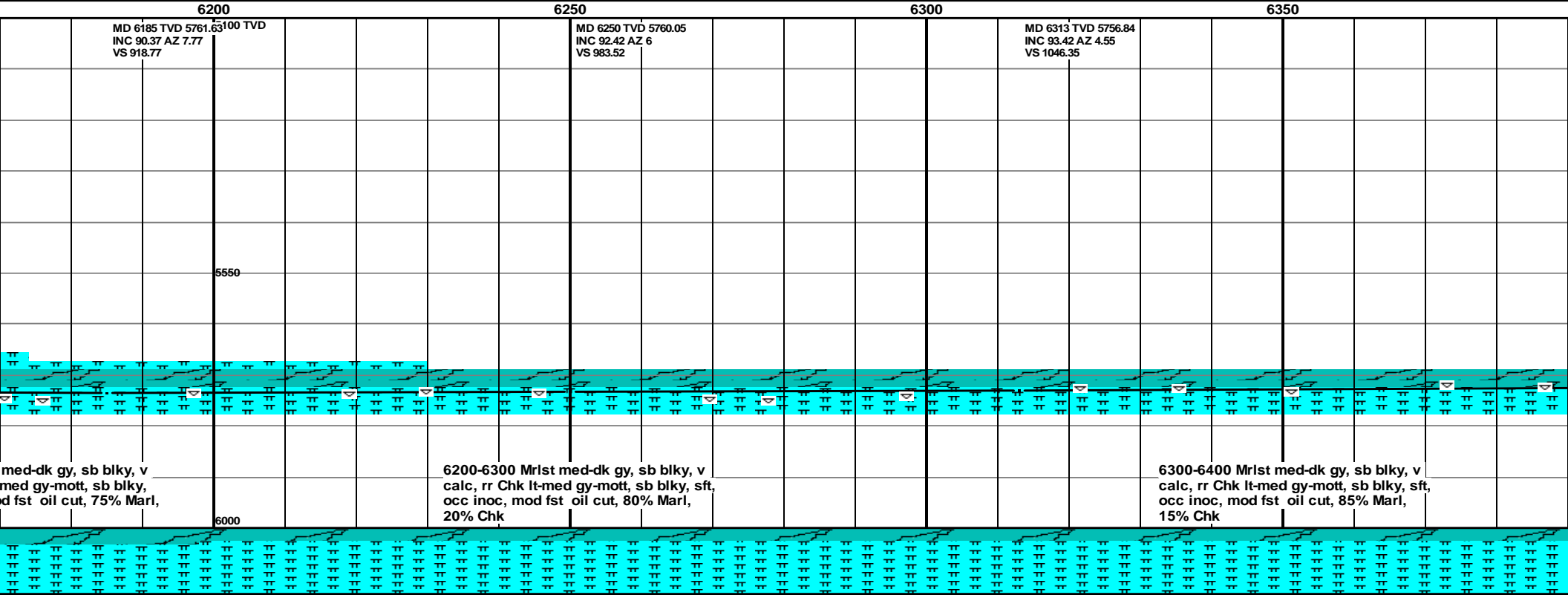
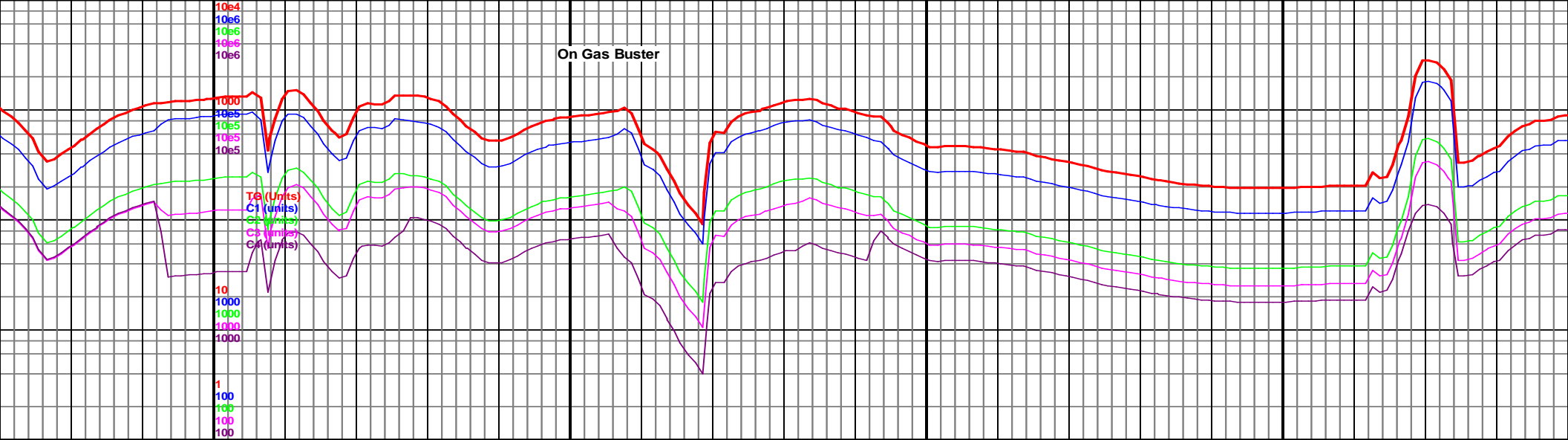
6050-6100 Mrlst med-dk gy, sb blk, v calc, occ Chk lt-med gy-mott, sb blk, sft, mod fst oil cut, 50% Marl, 50% Chk

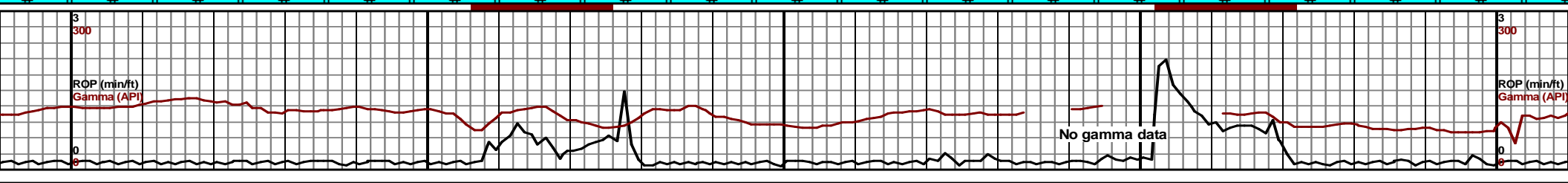
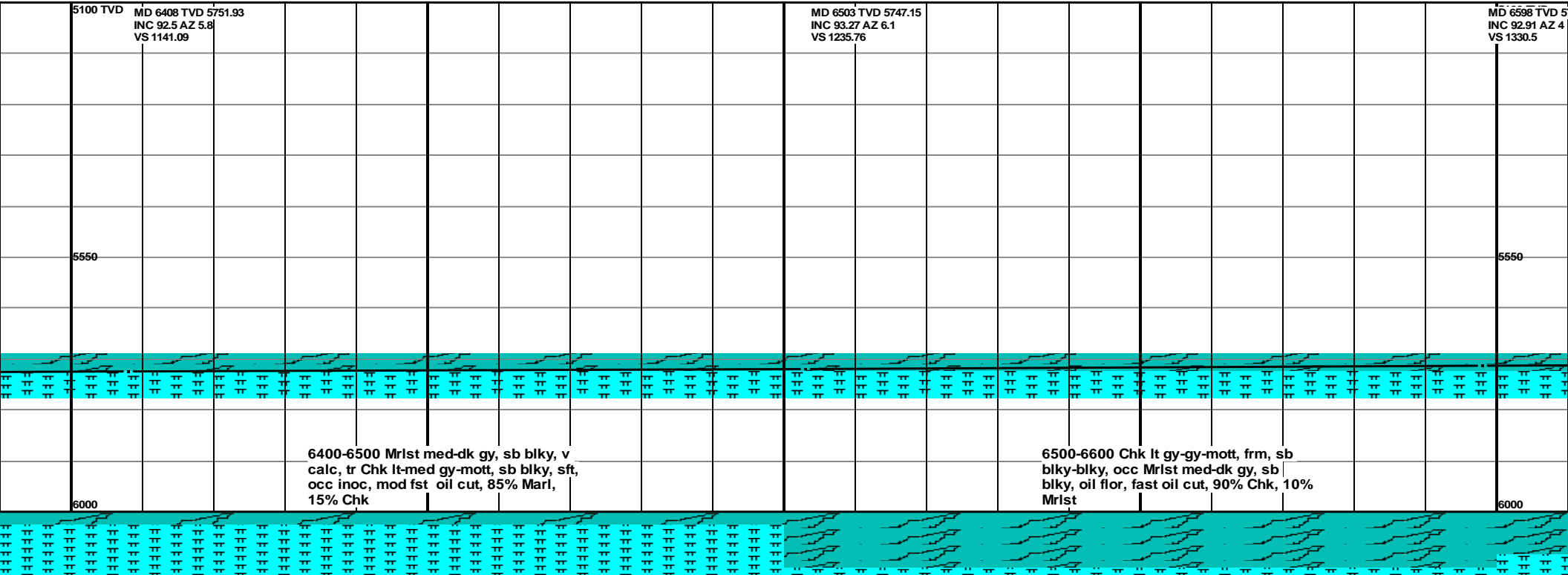
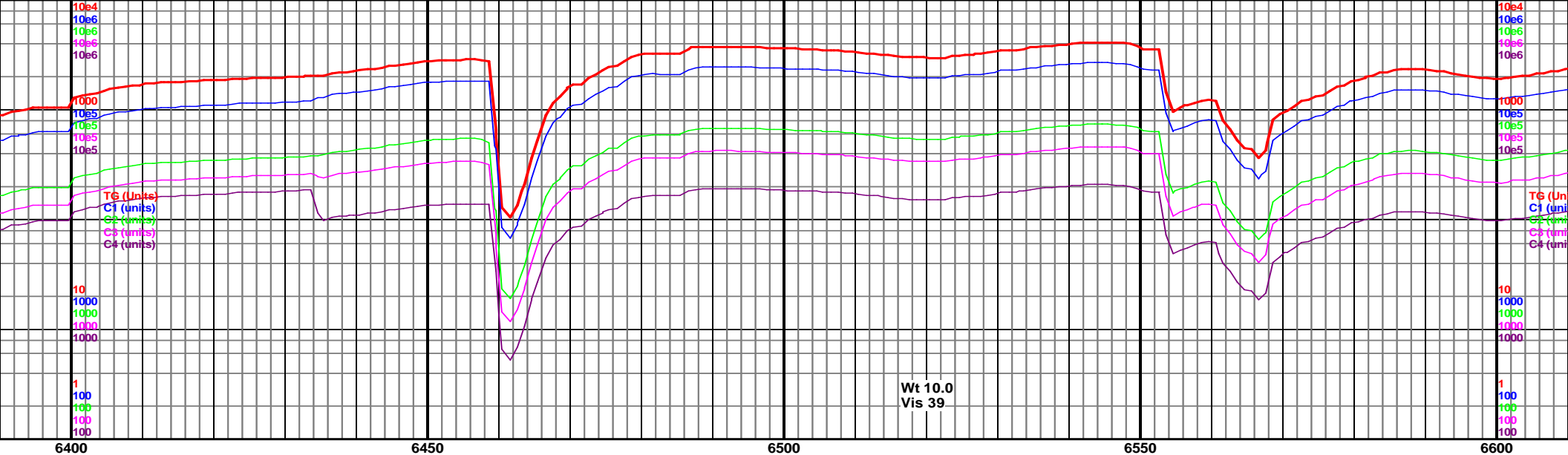
6100-6150 Mrlst med-dk gy, sb blk, v calc, occ Chk lt-med gy-mott, sb blk, sft, occ inoc, mod fst oil cut, 70% Marl, 30% Chk

6150-6200 Mrlst calc, occ Chk lt-med gy-mott, sb blk, sft, occ inoc, mod fst oil cut, 25% Chk

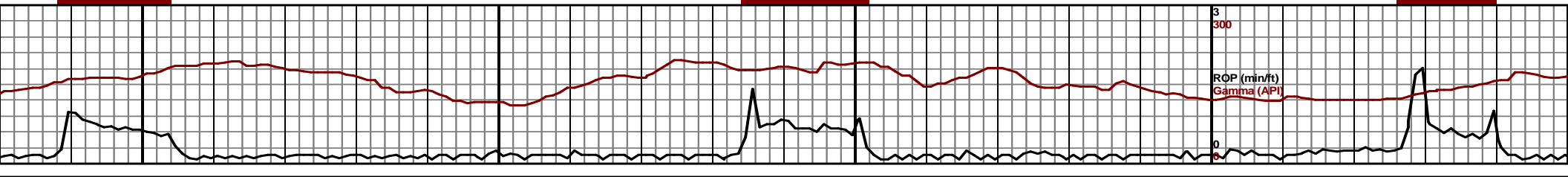
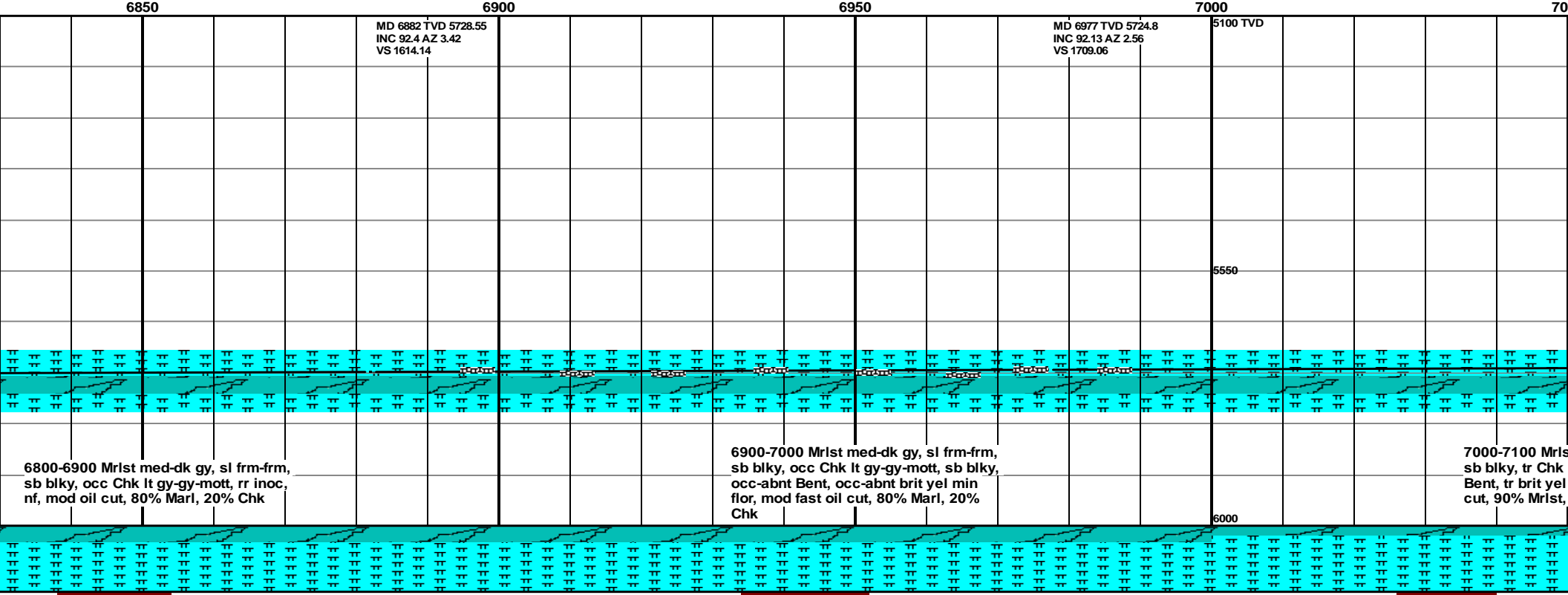
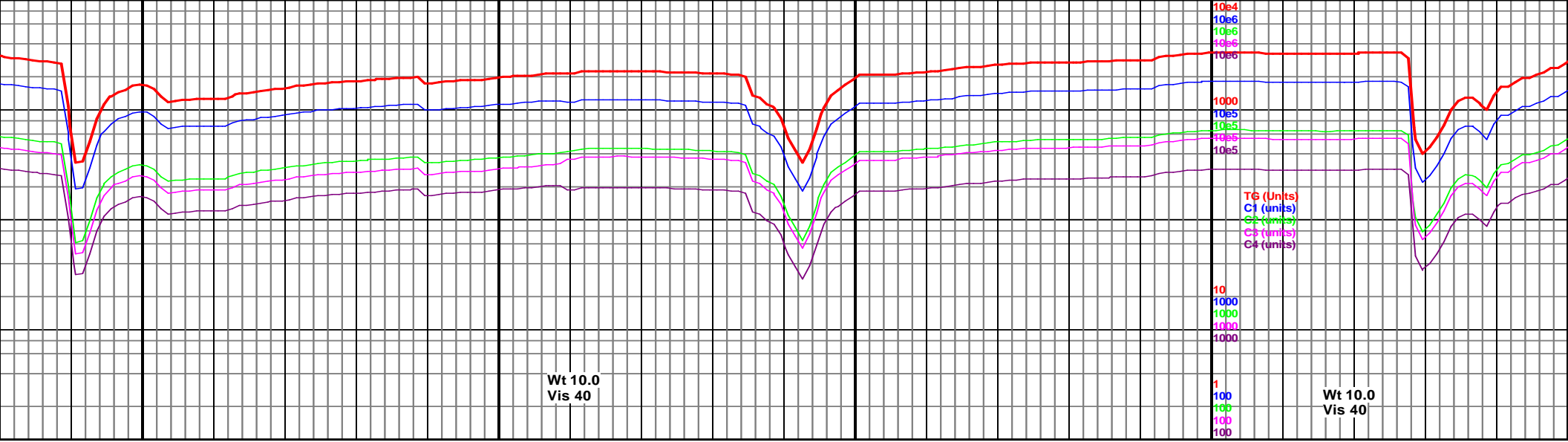


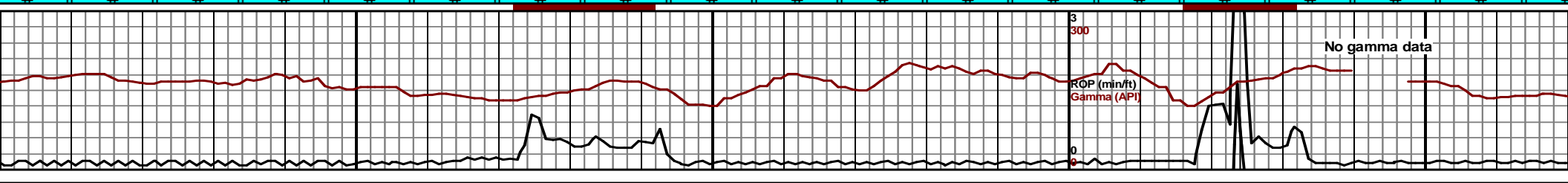
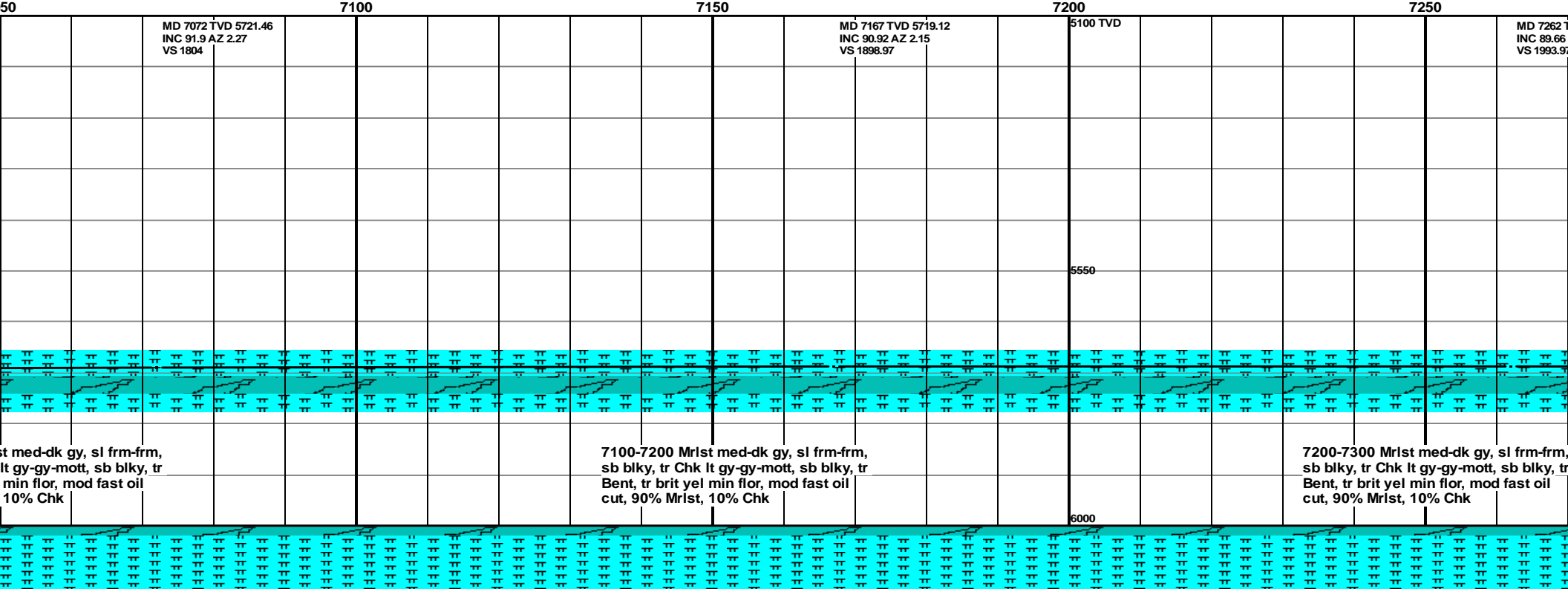
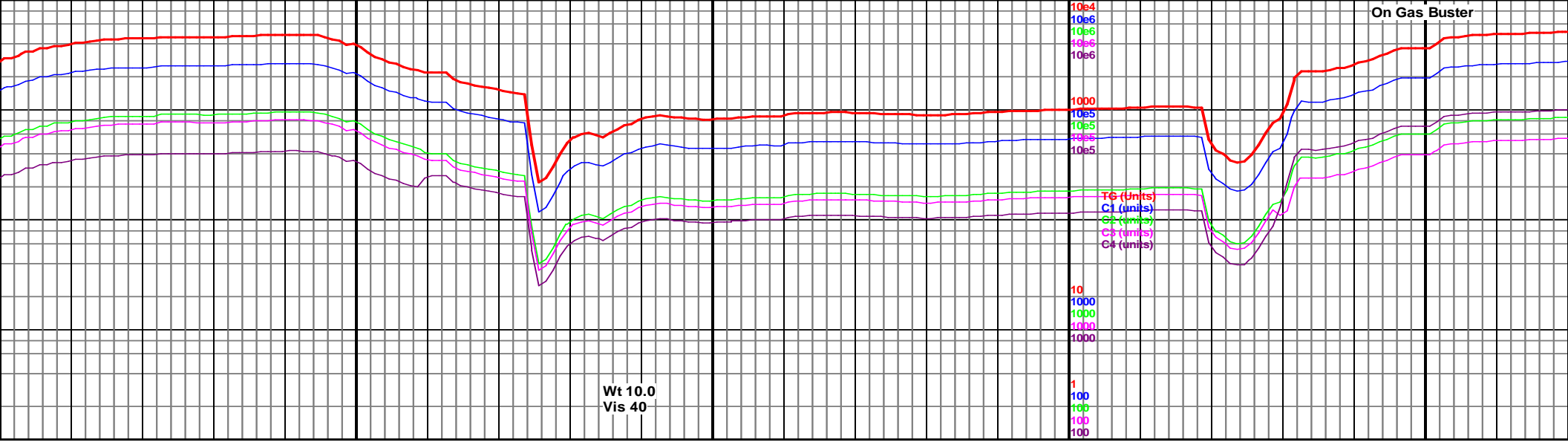


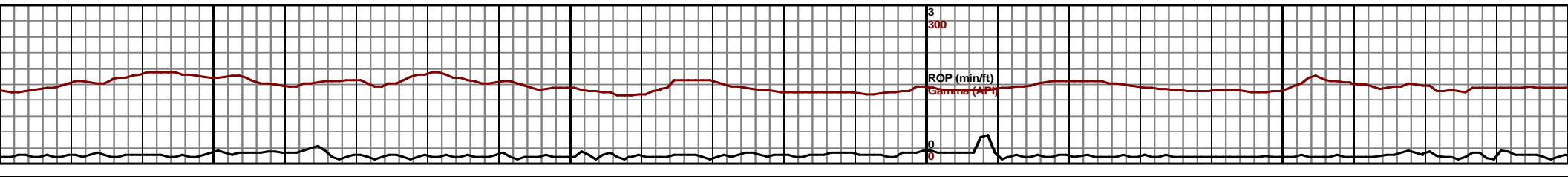
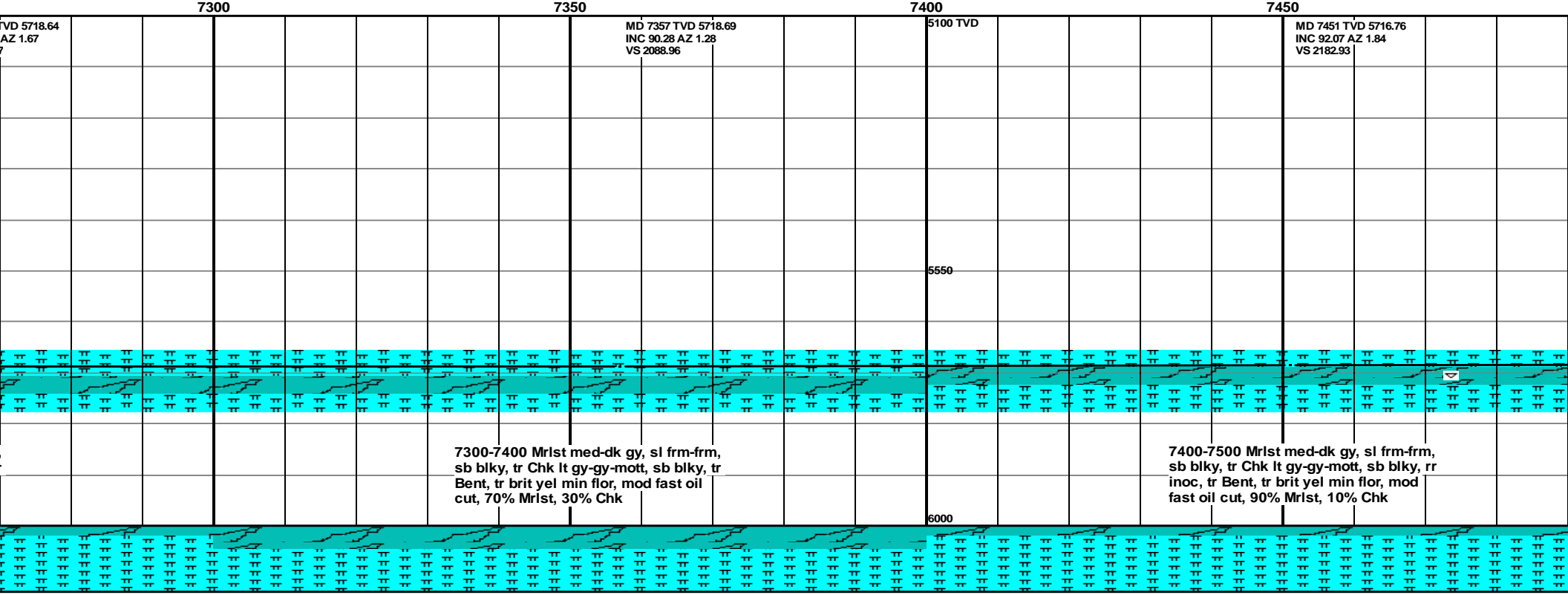
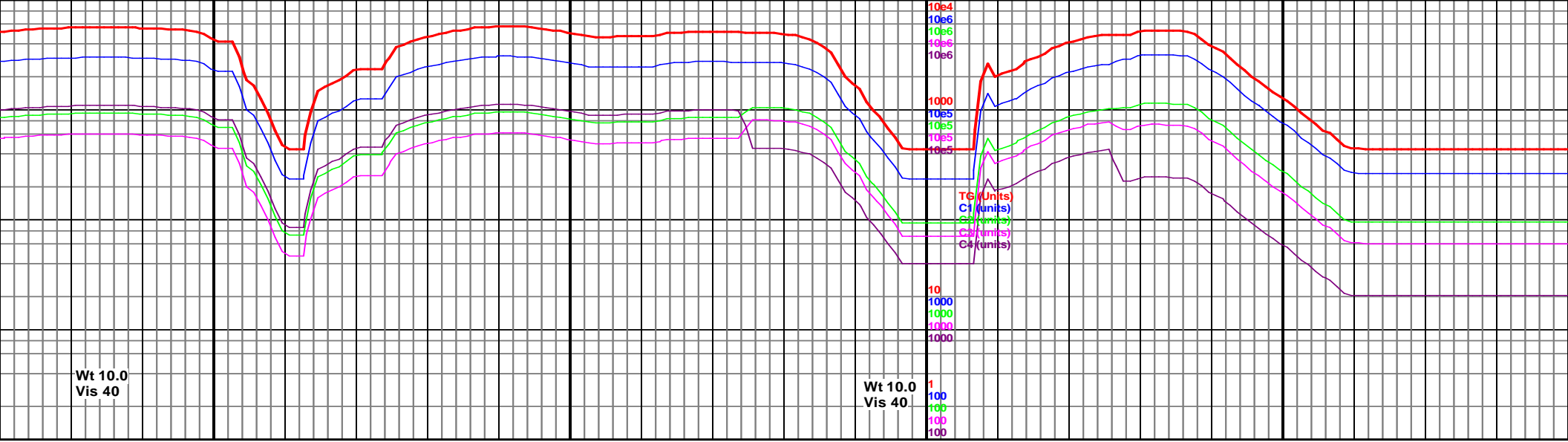


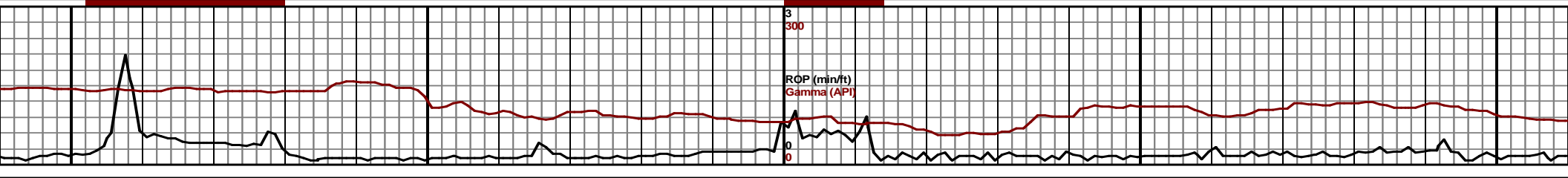
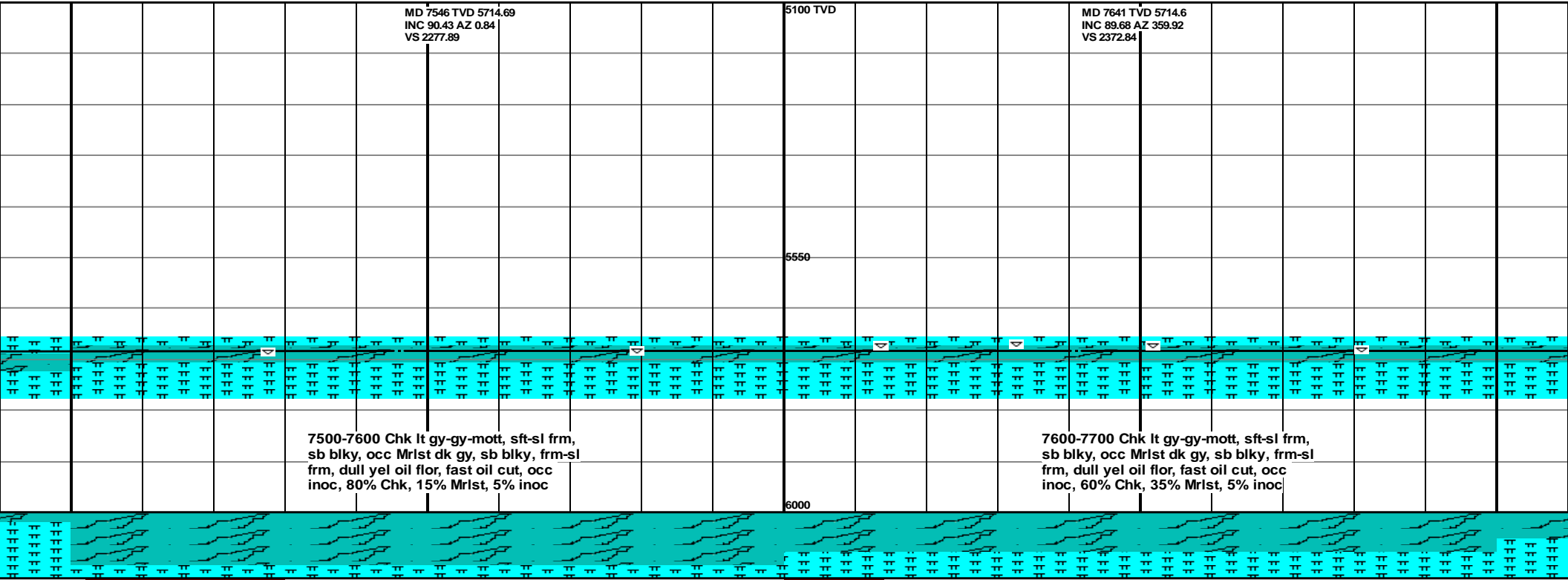
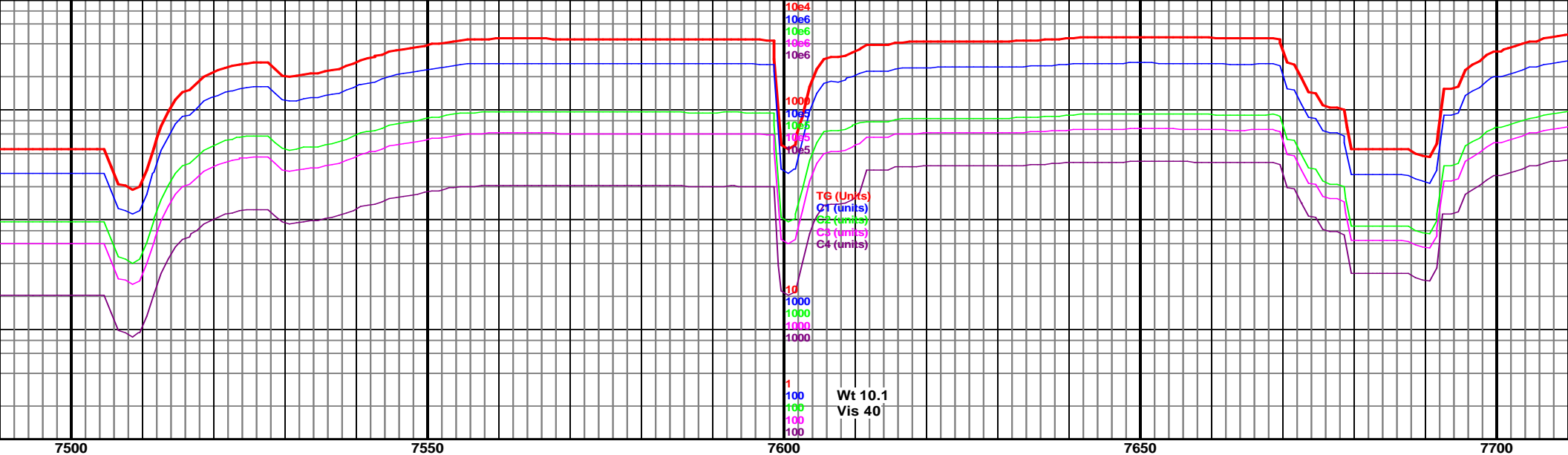


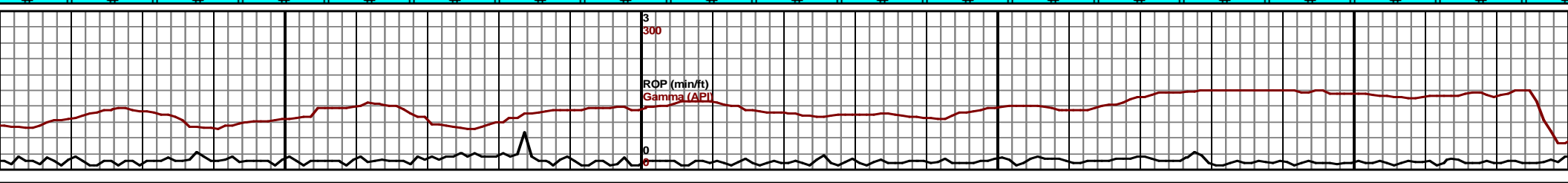
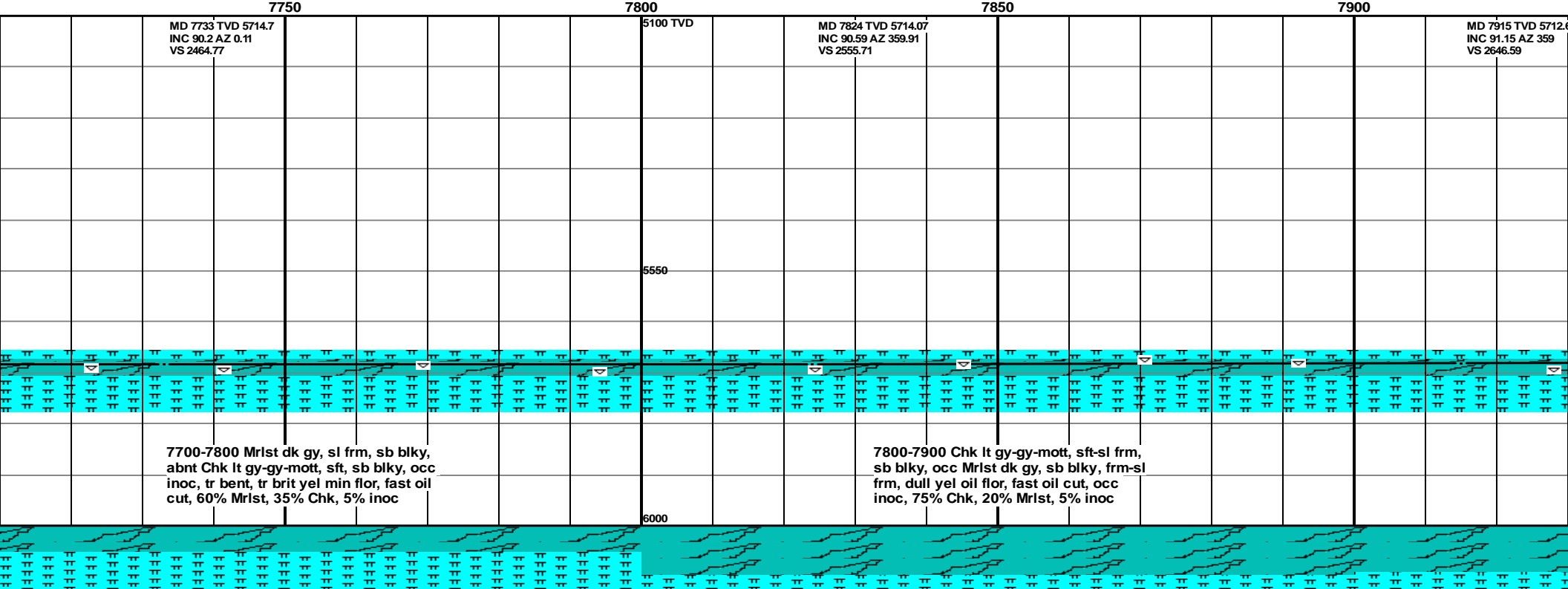
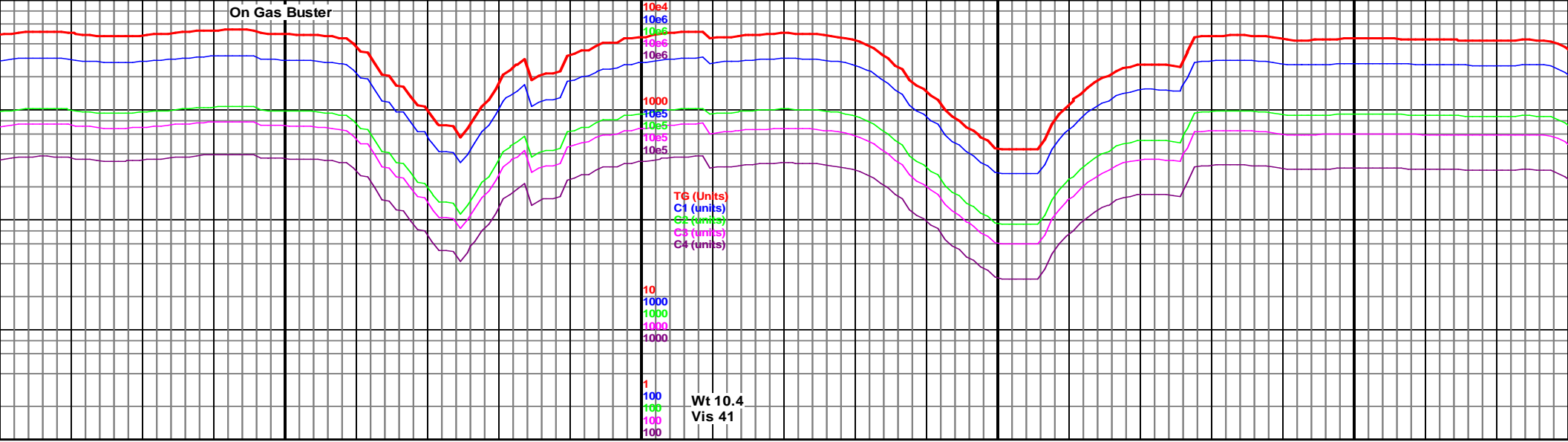




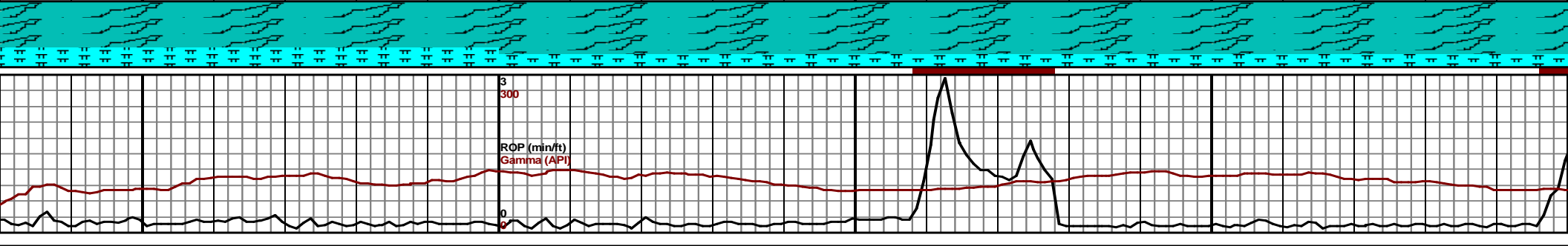
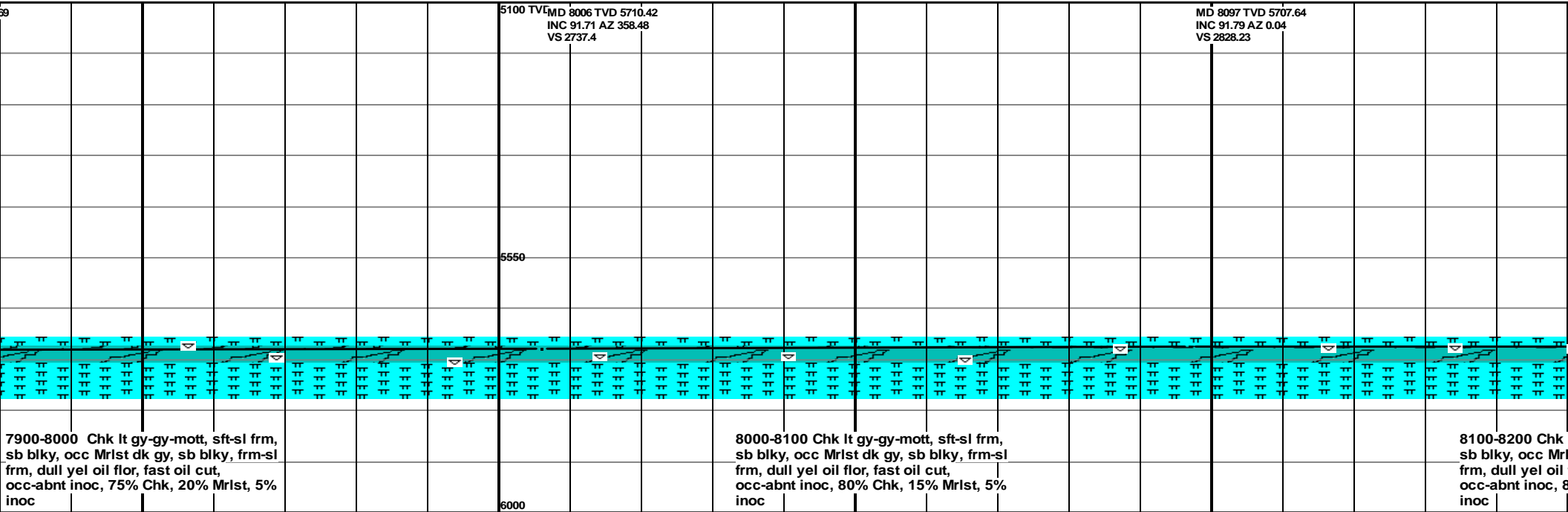
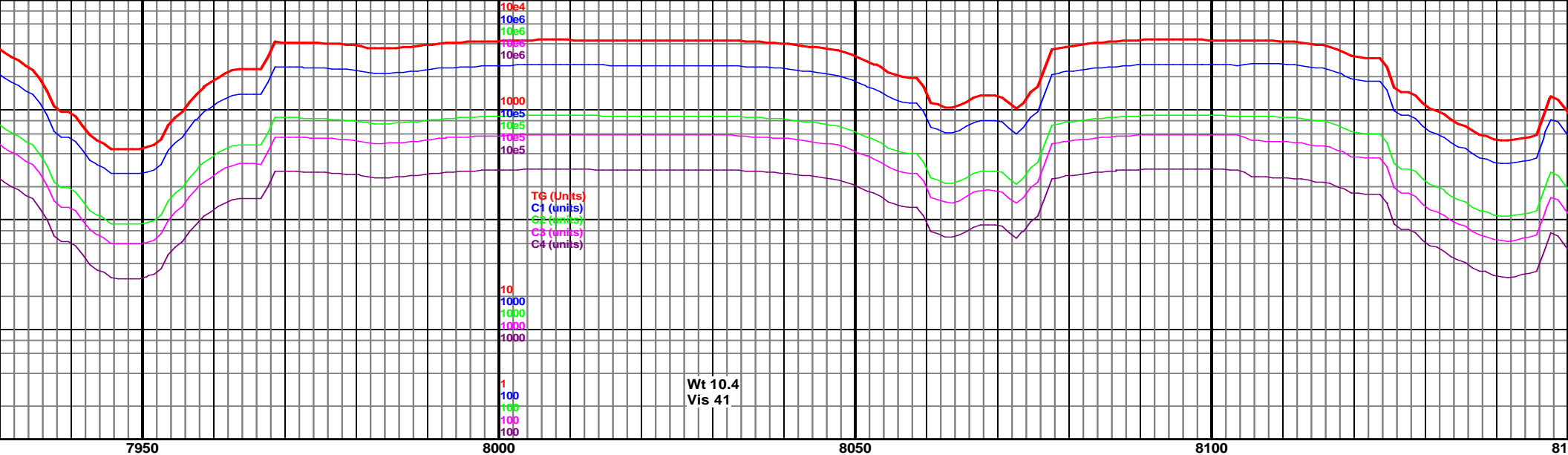


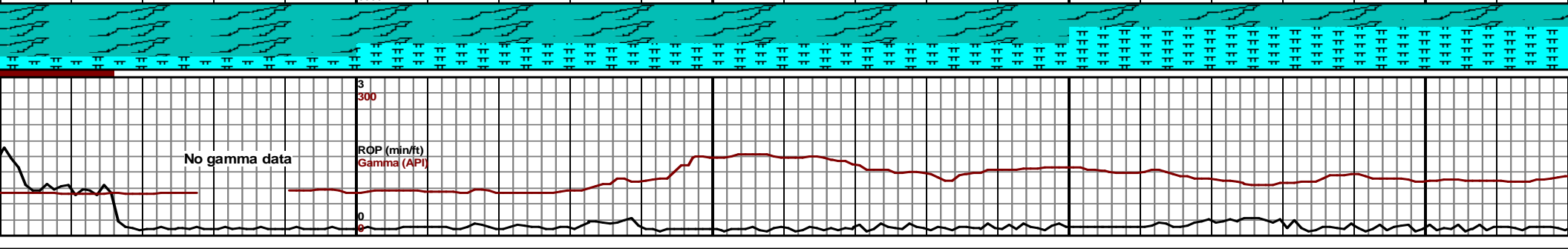
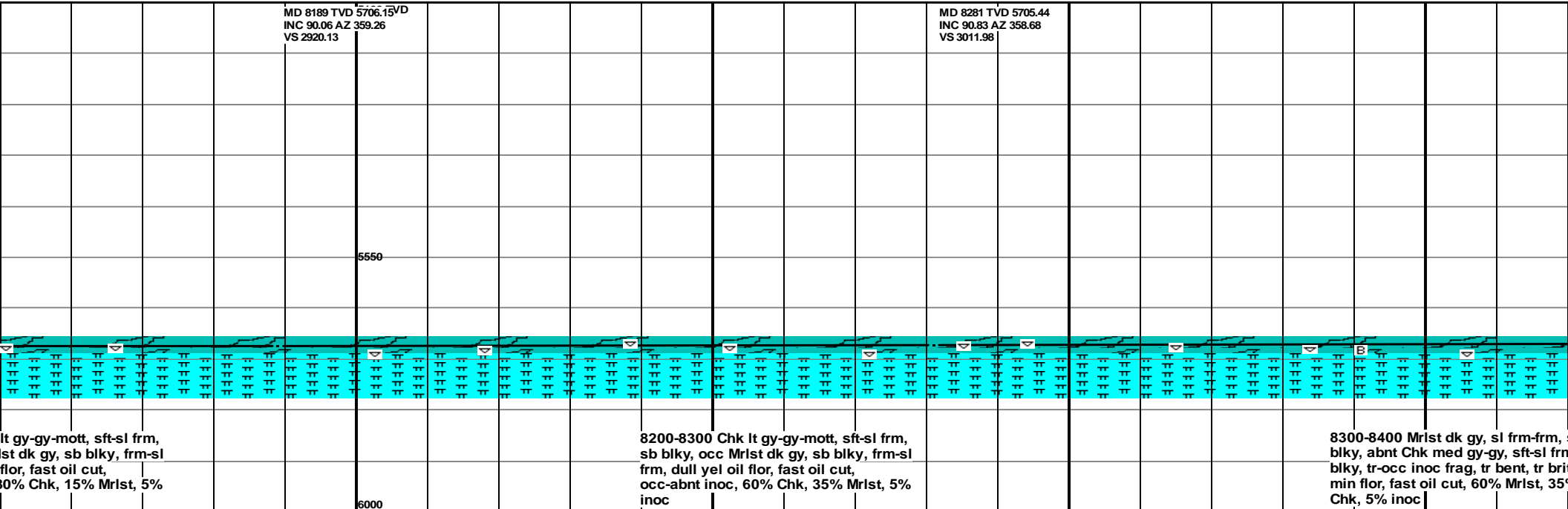
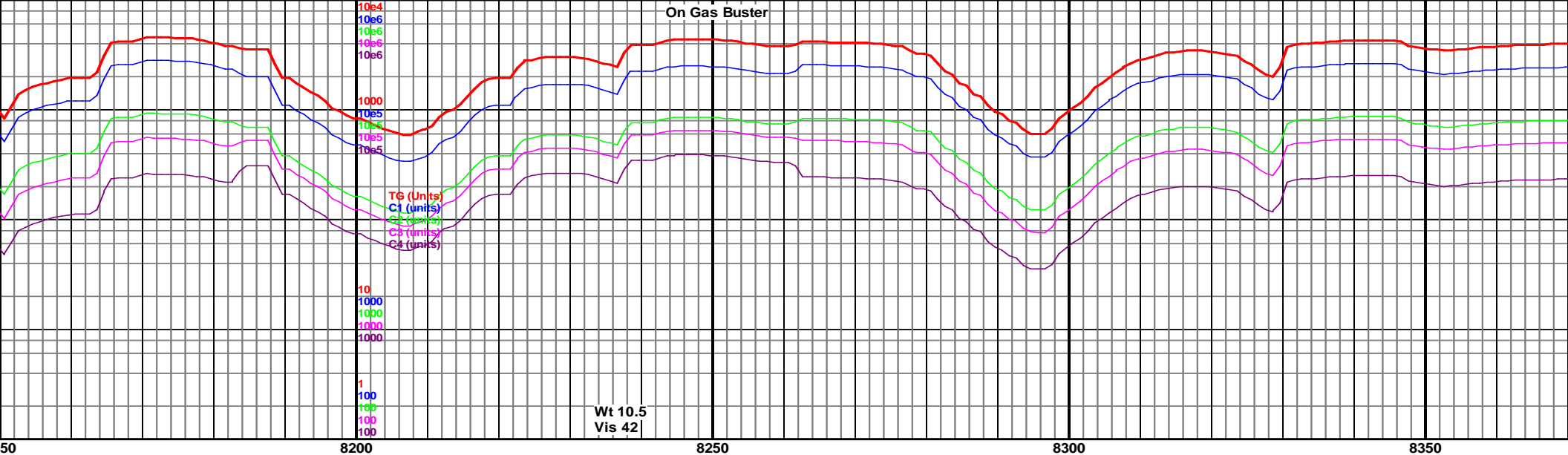


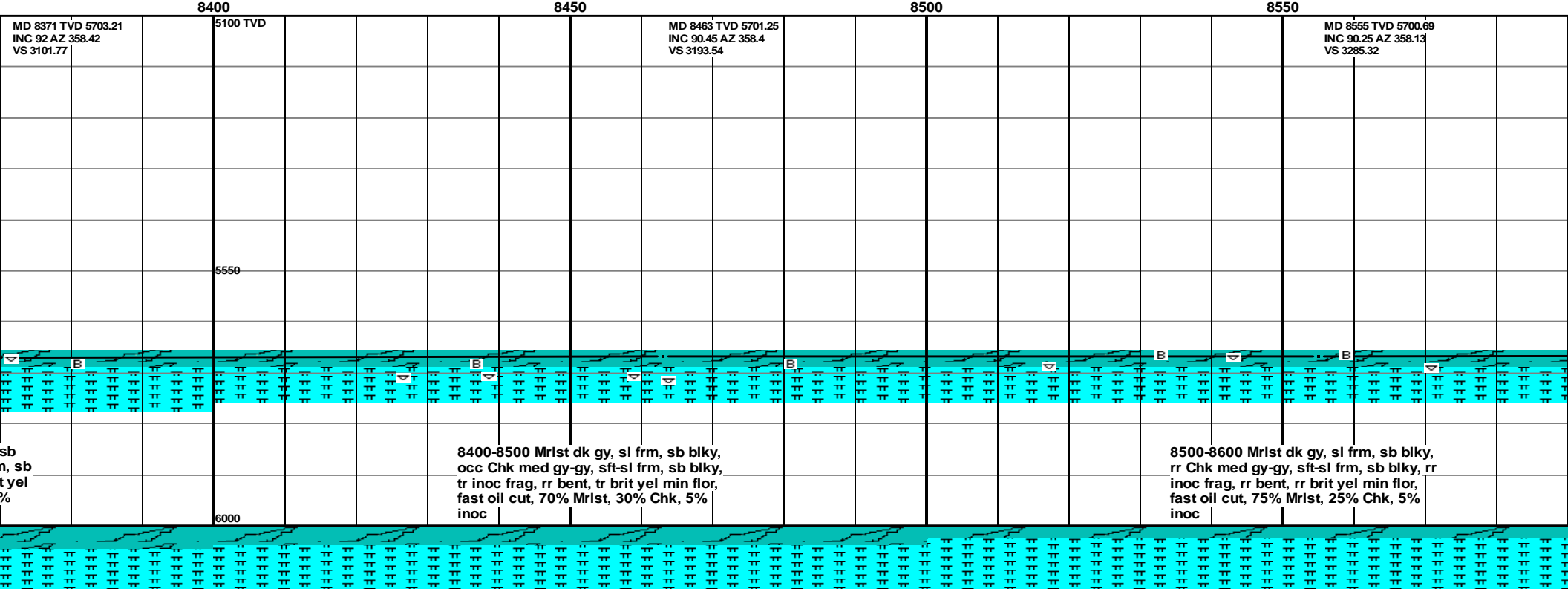
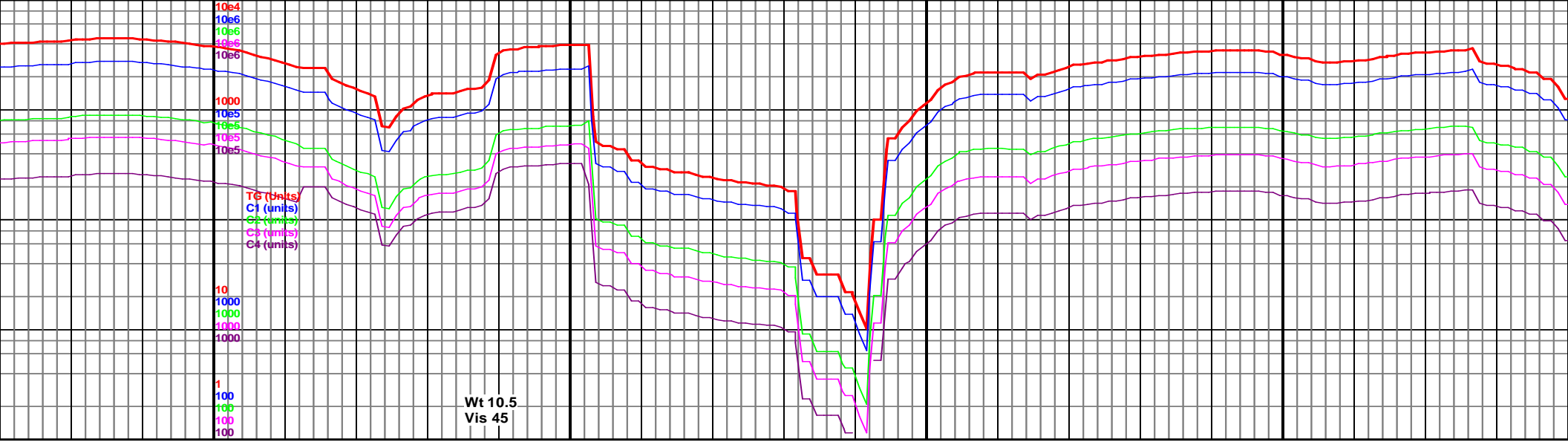


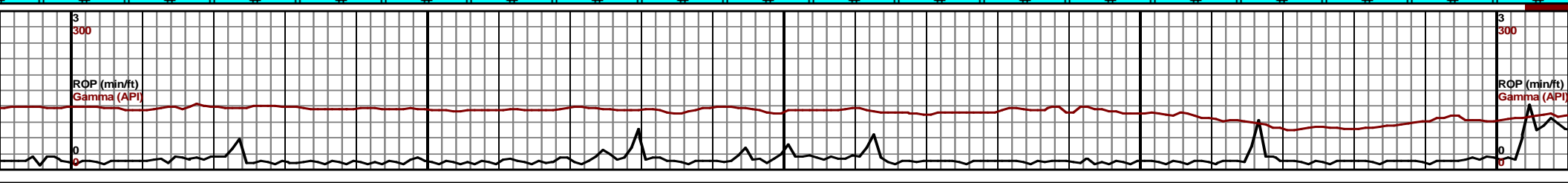
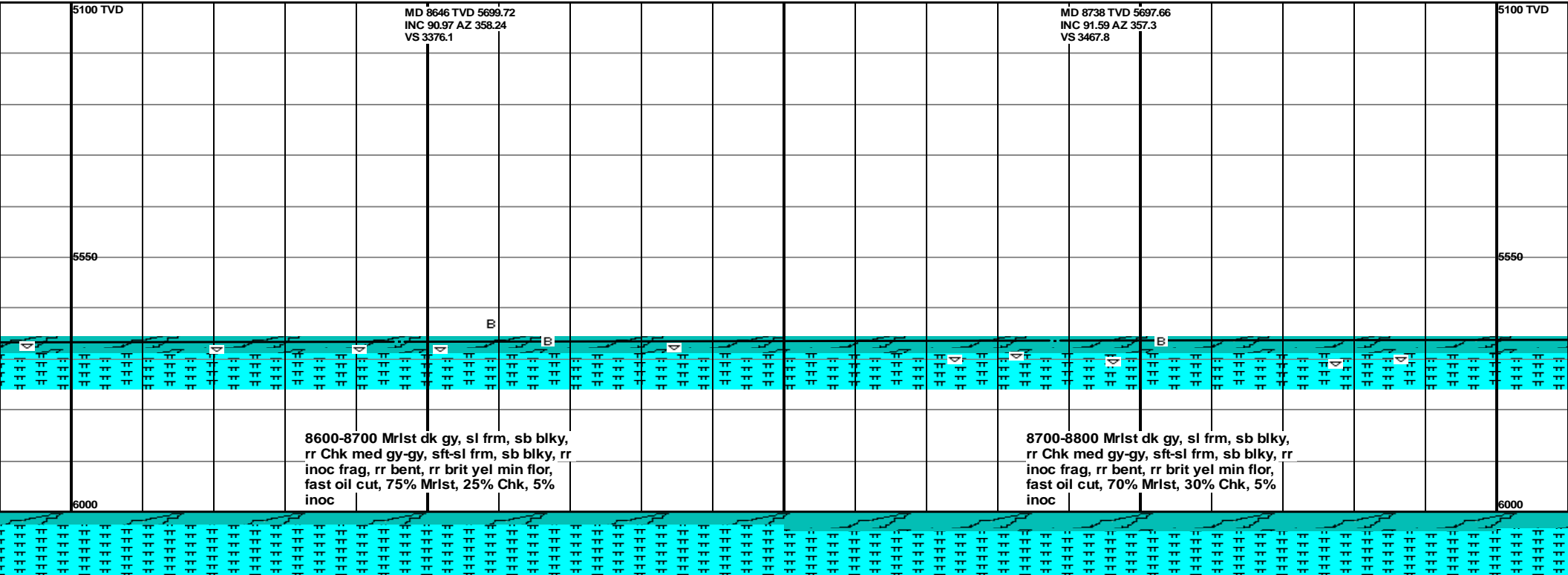
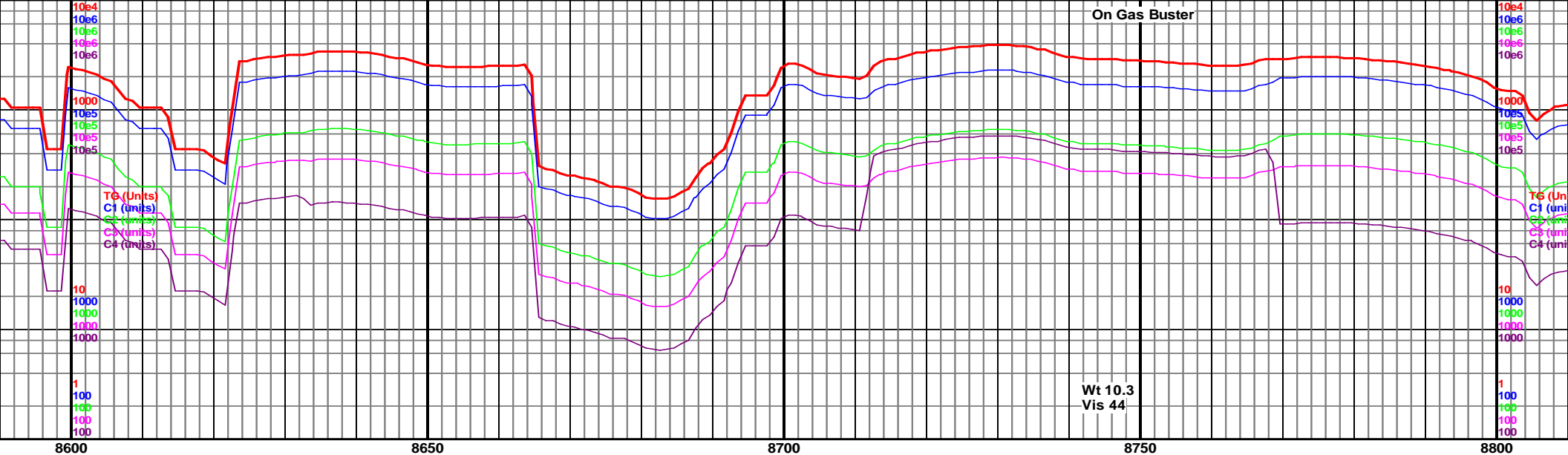


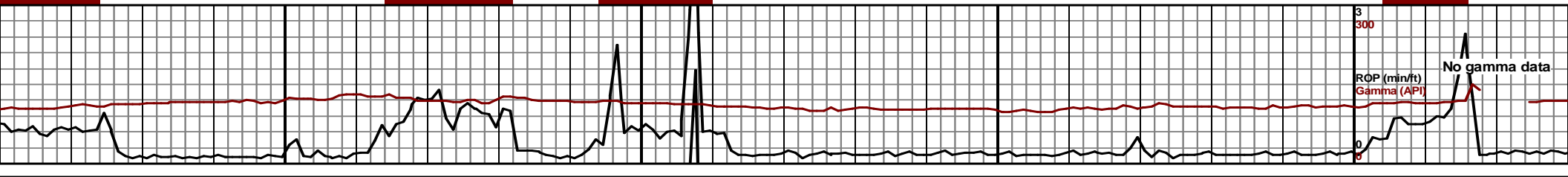
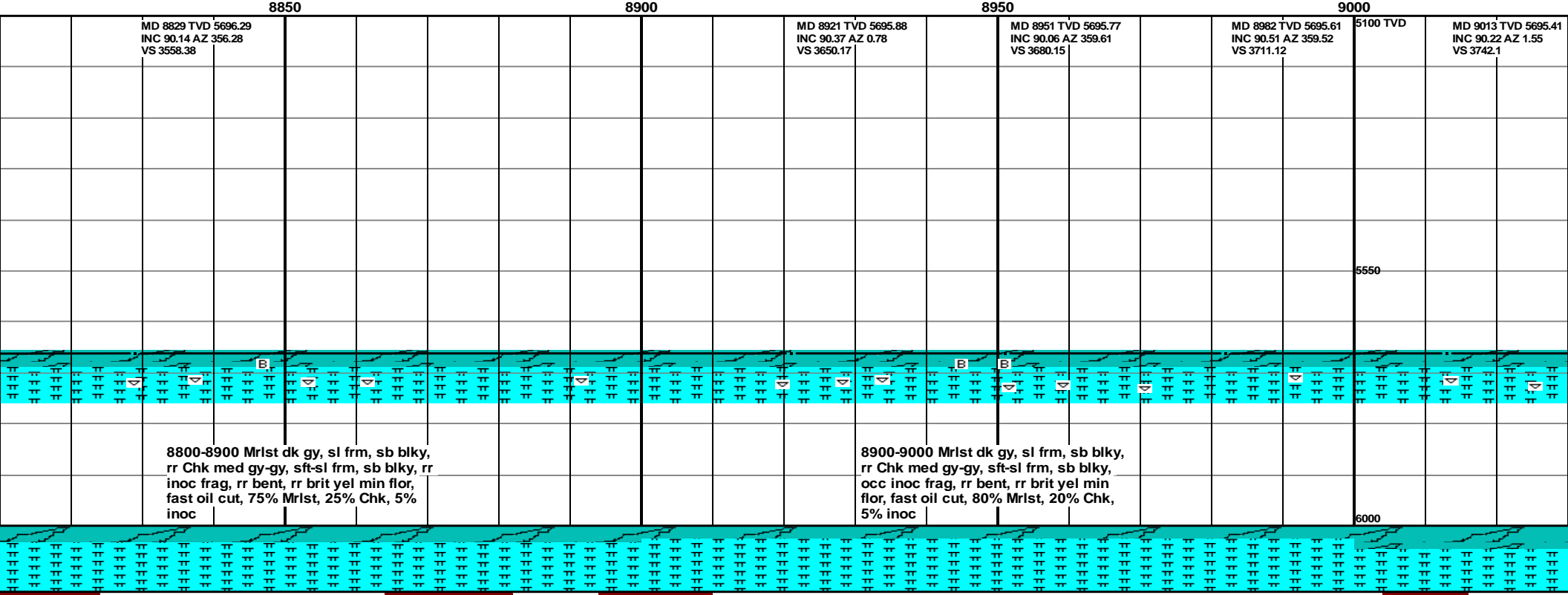
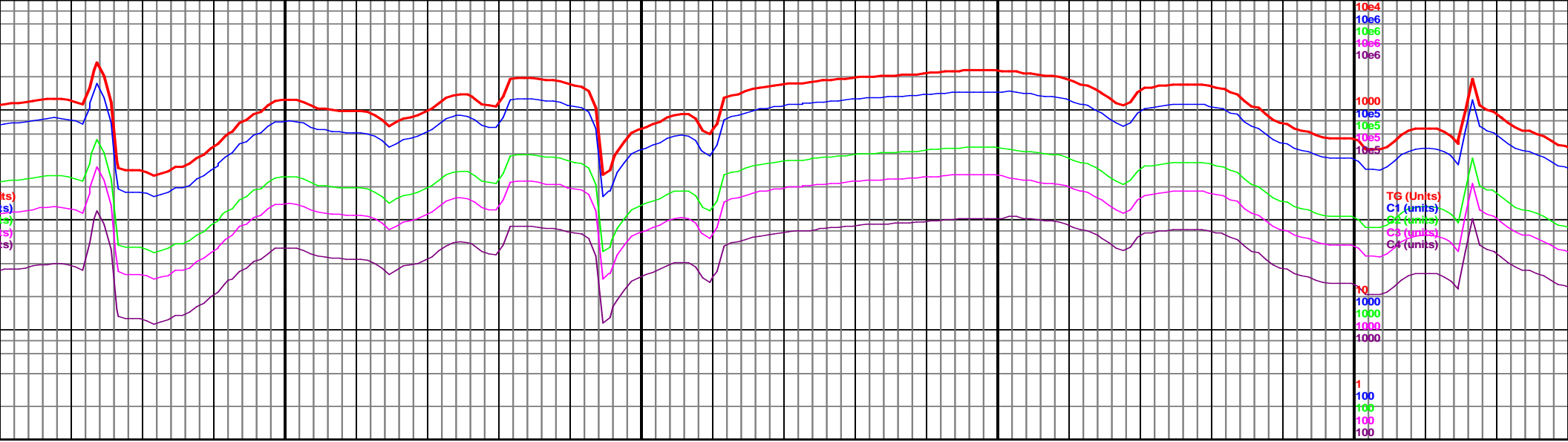


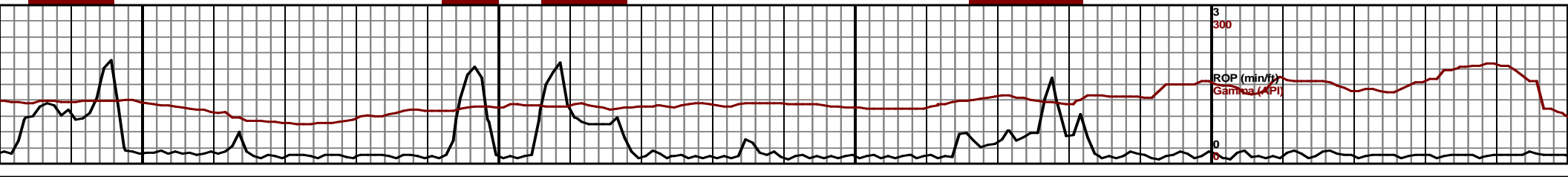
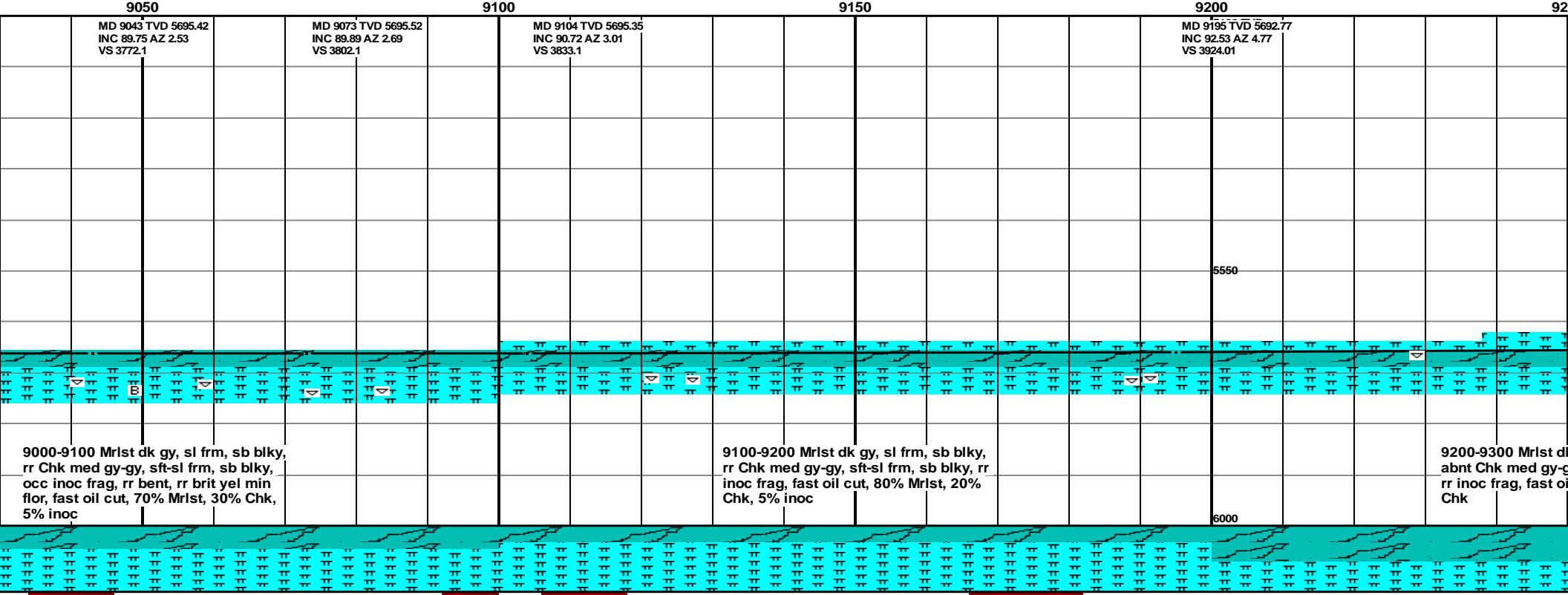
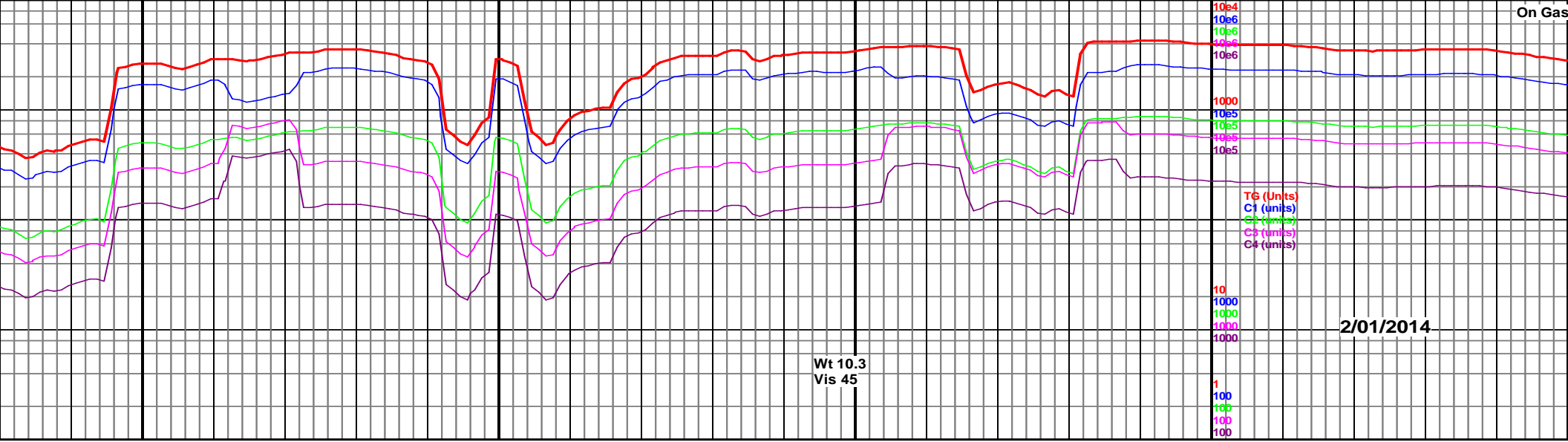




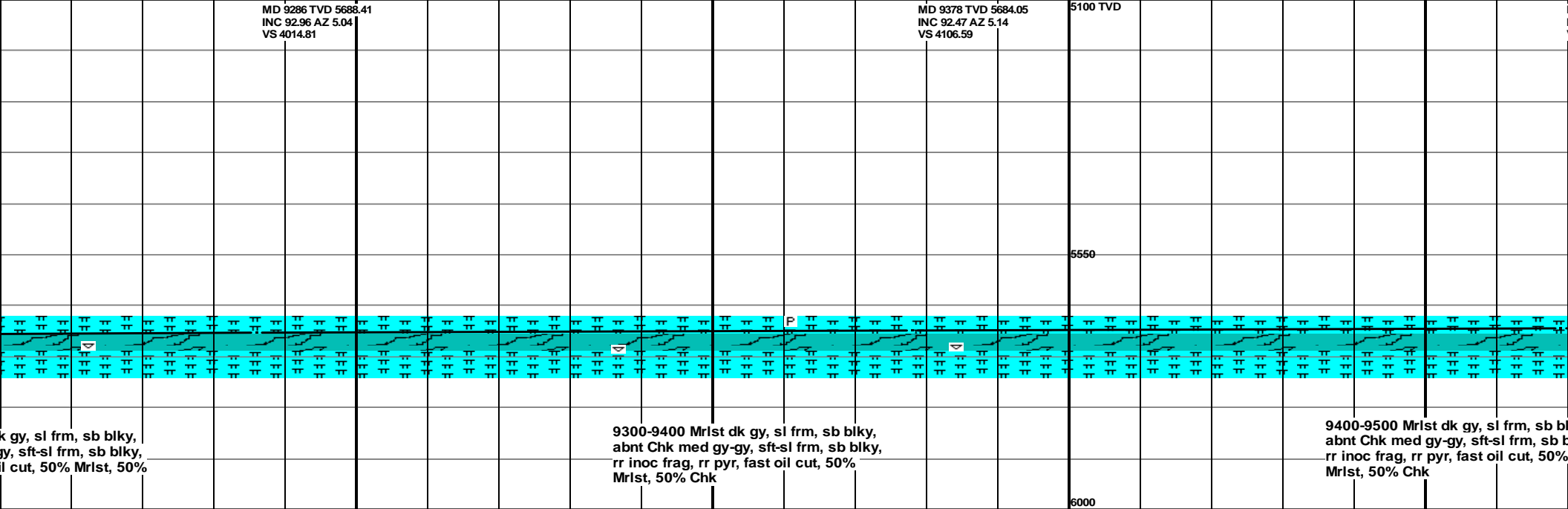




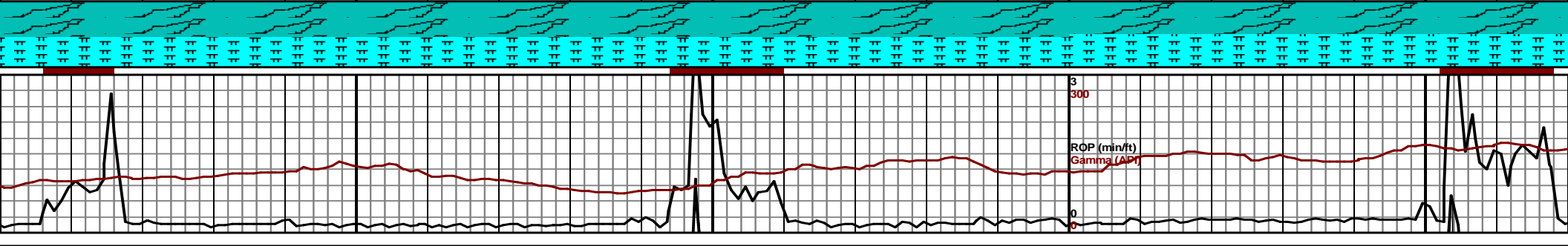




50	9300	9350	9400	9450
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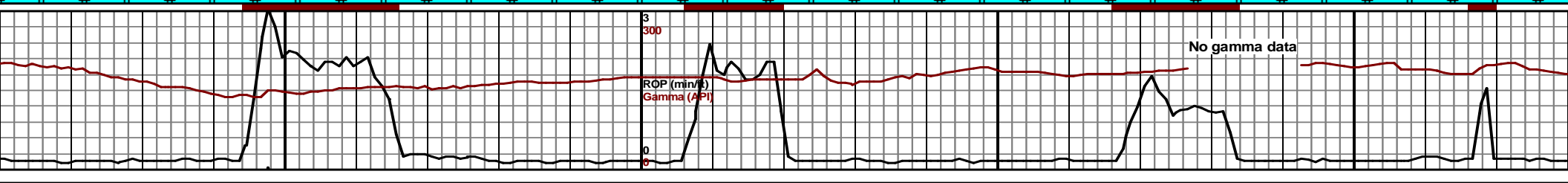
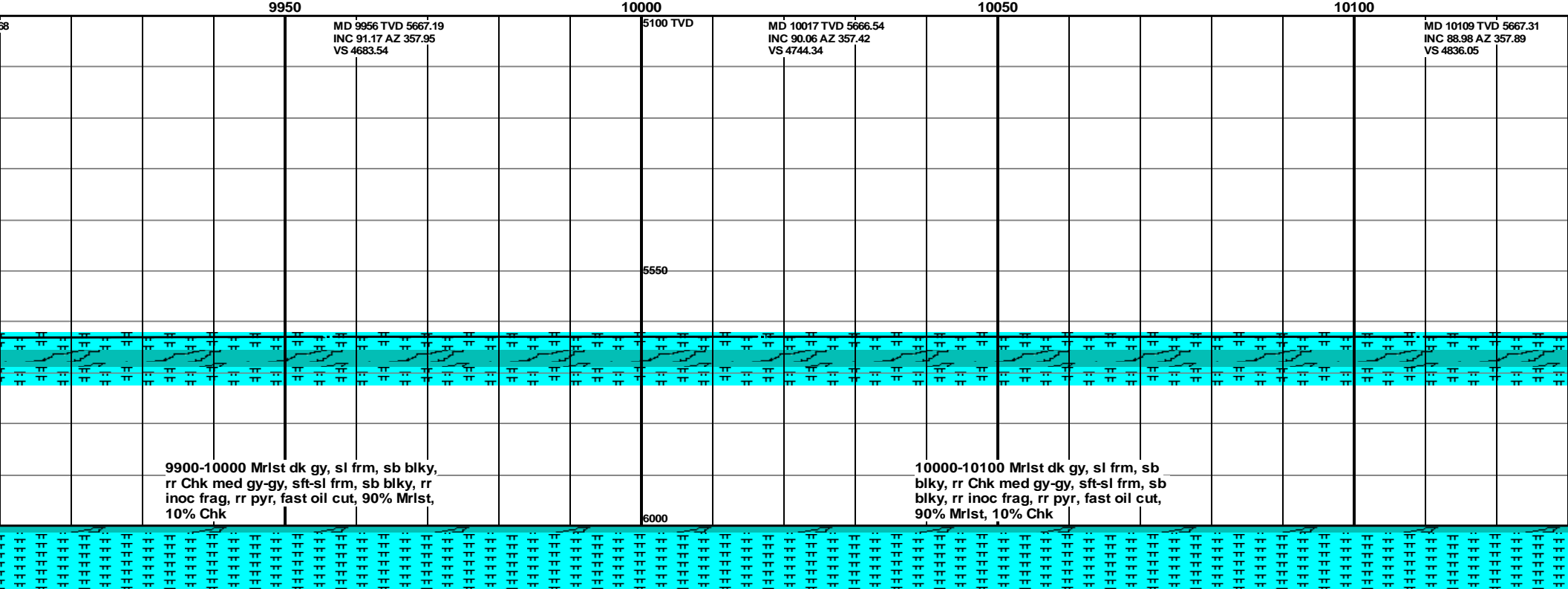
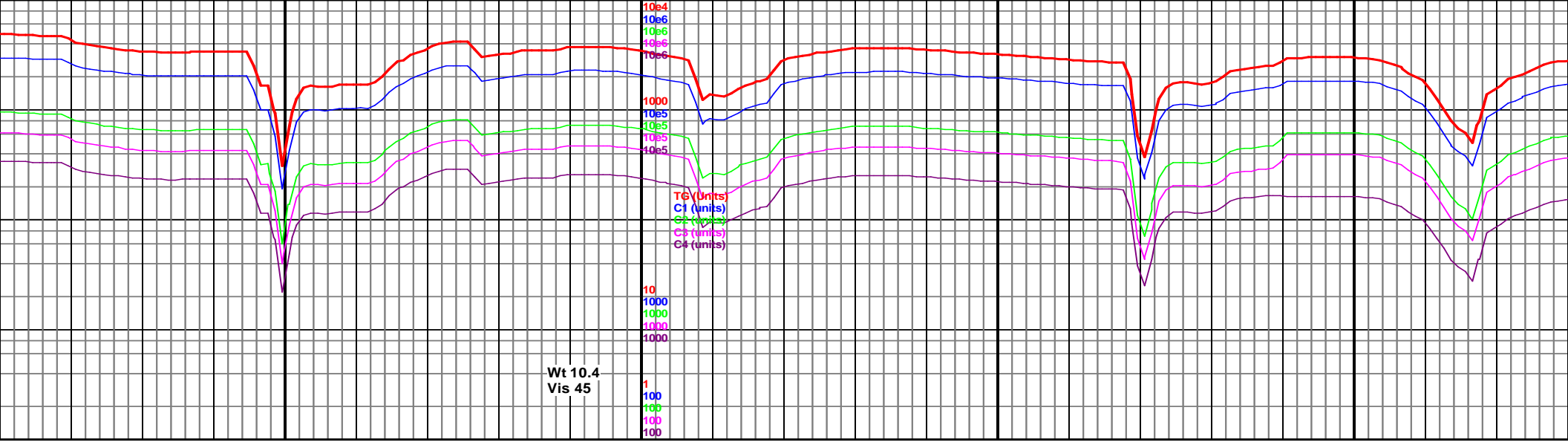
9400-9500 Mrlst dk gy, sl frm, sb bl  
abnt Chk med gy-gy, sft-sl frm, sb b  
rr inoc frag, rr pyr, fast oil cut, 50%  
Mrlst, 50% Chk

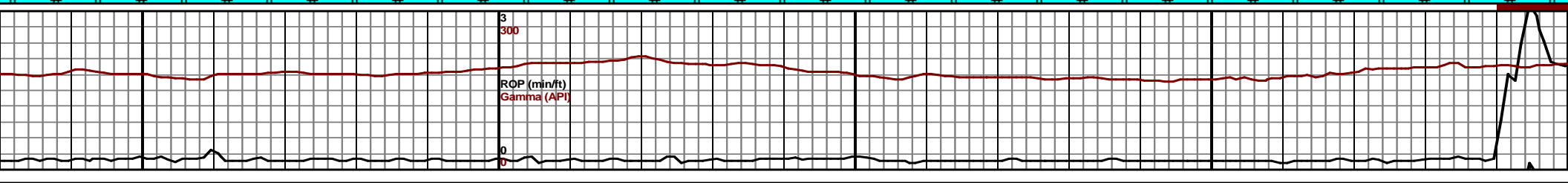
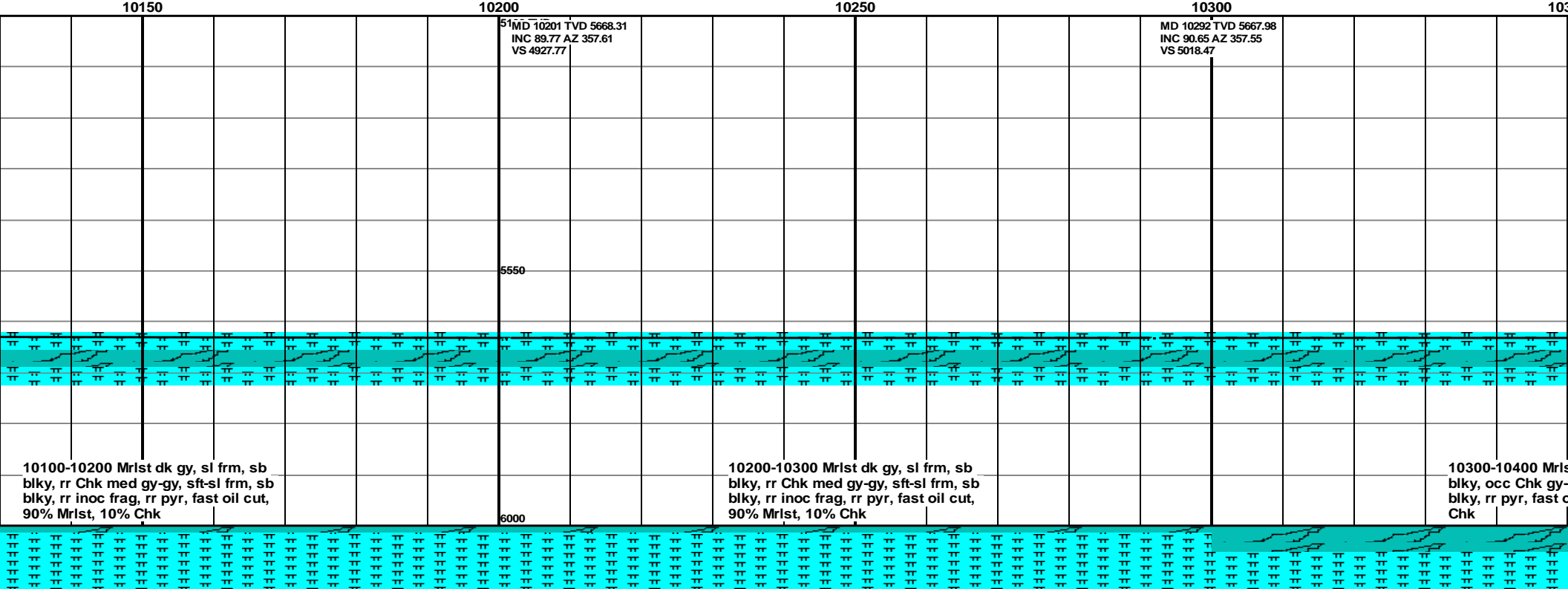
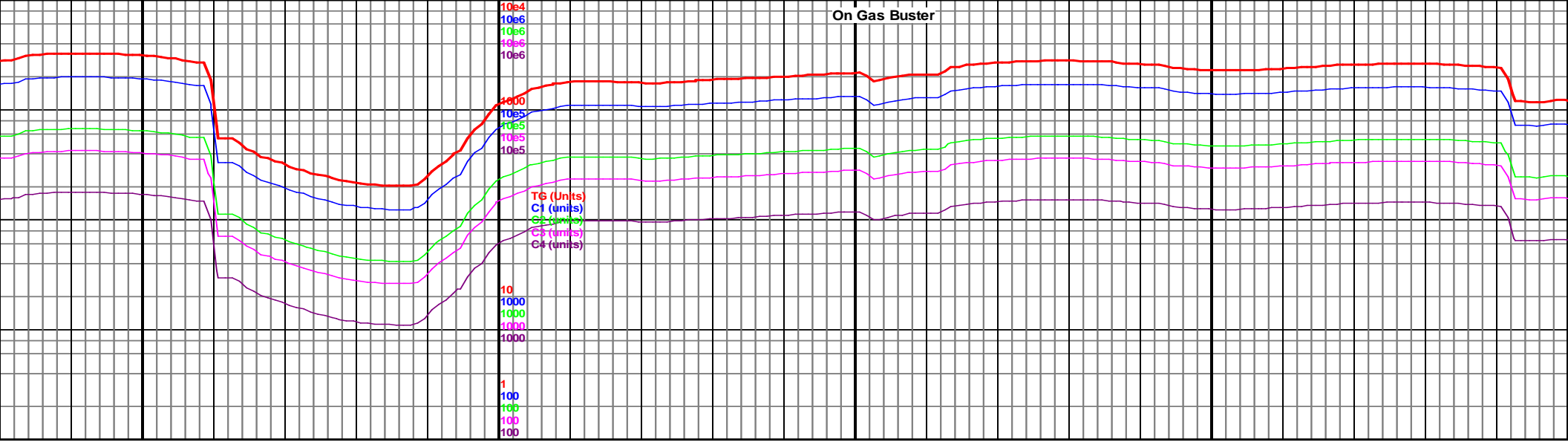


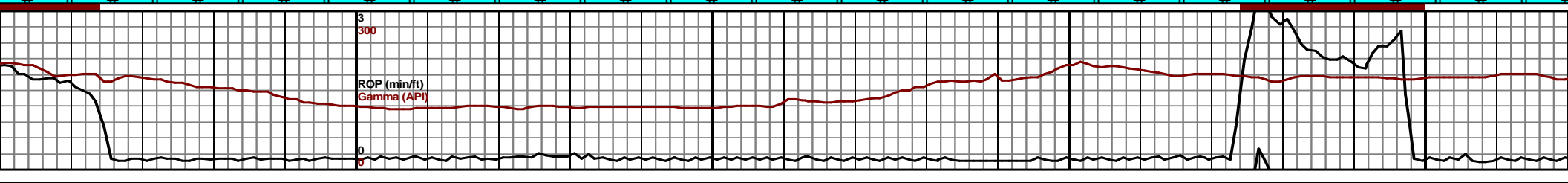
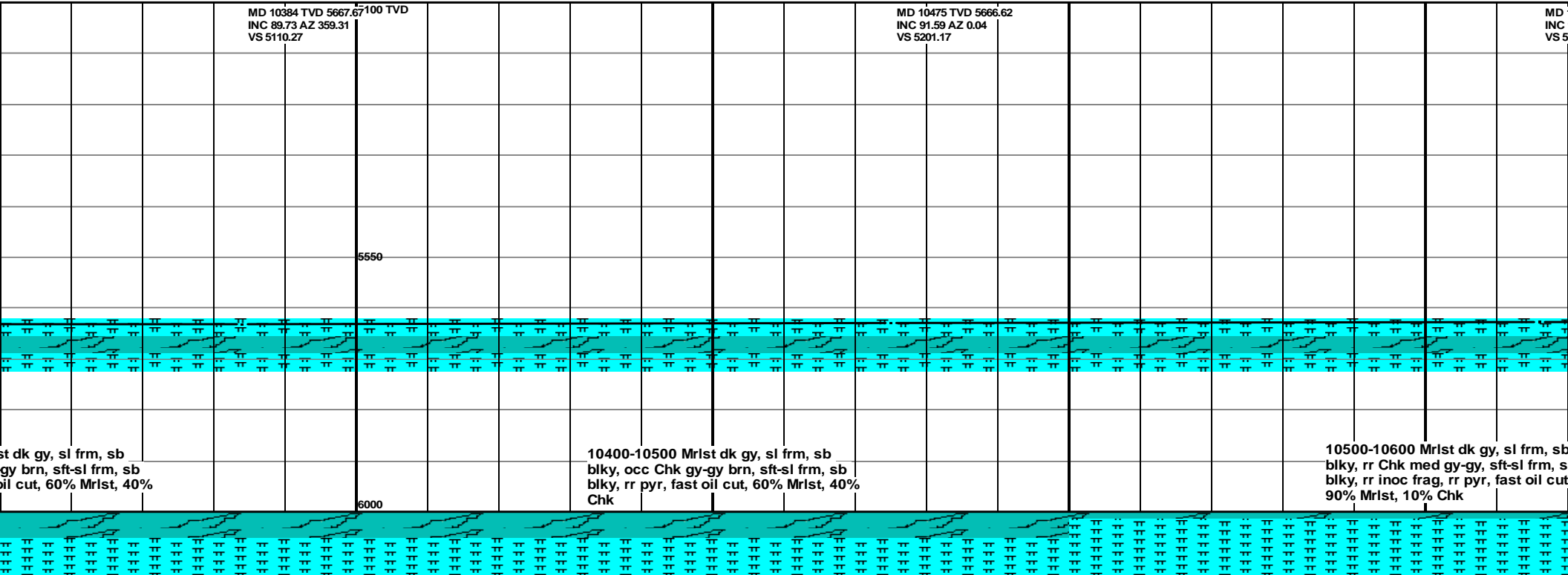
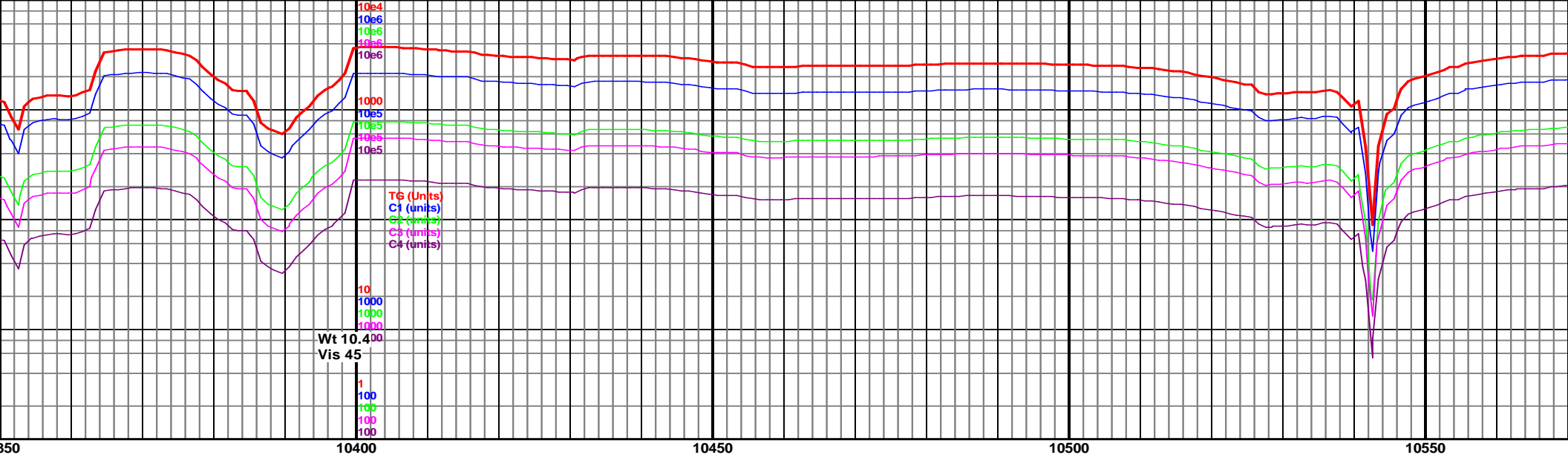


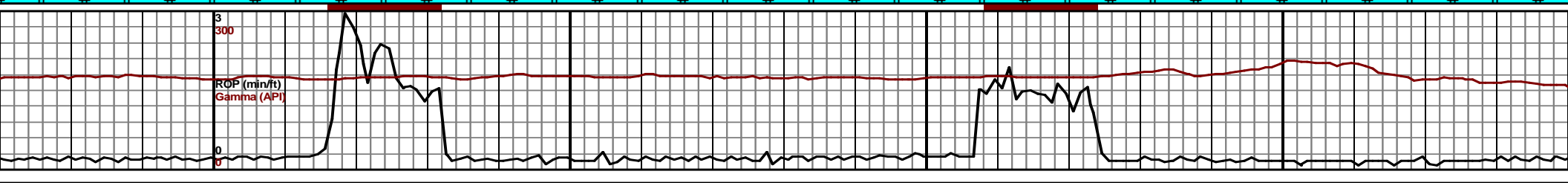
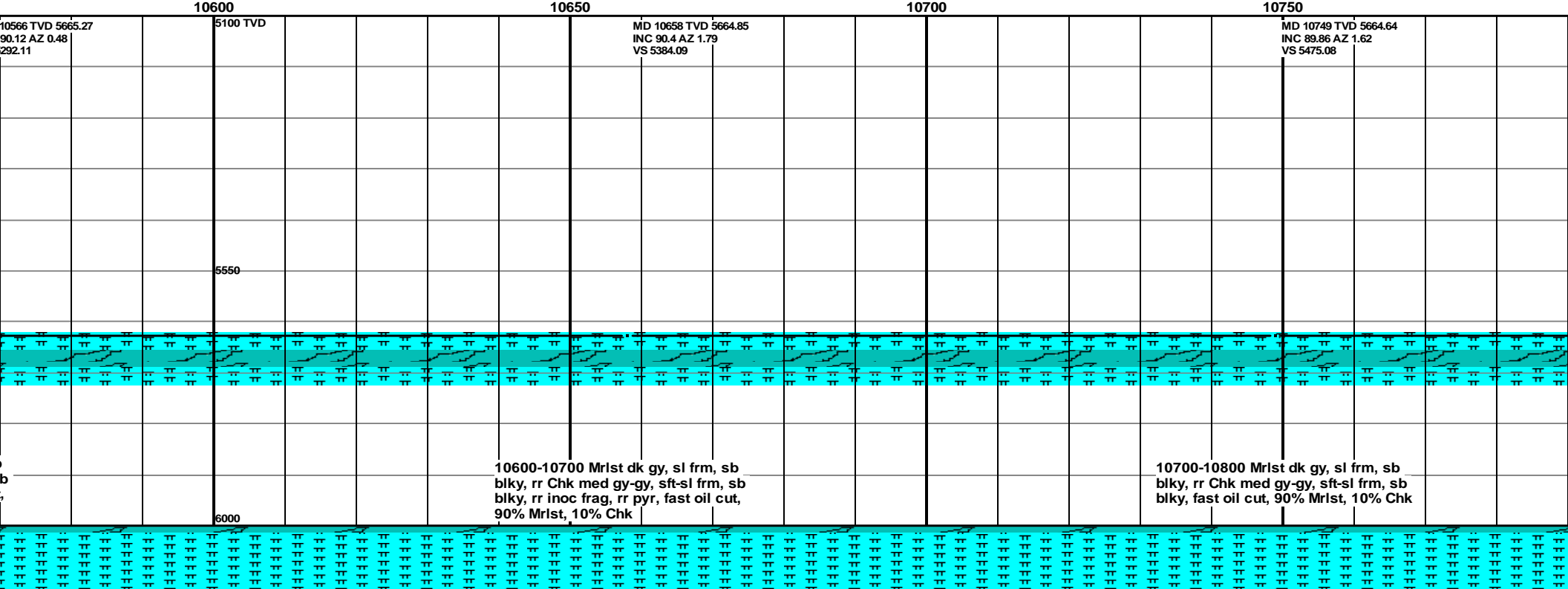
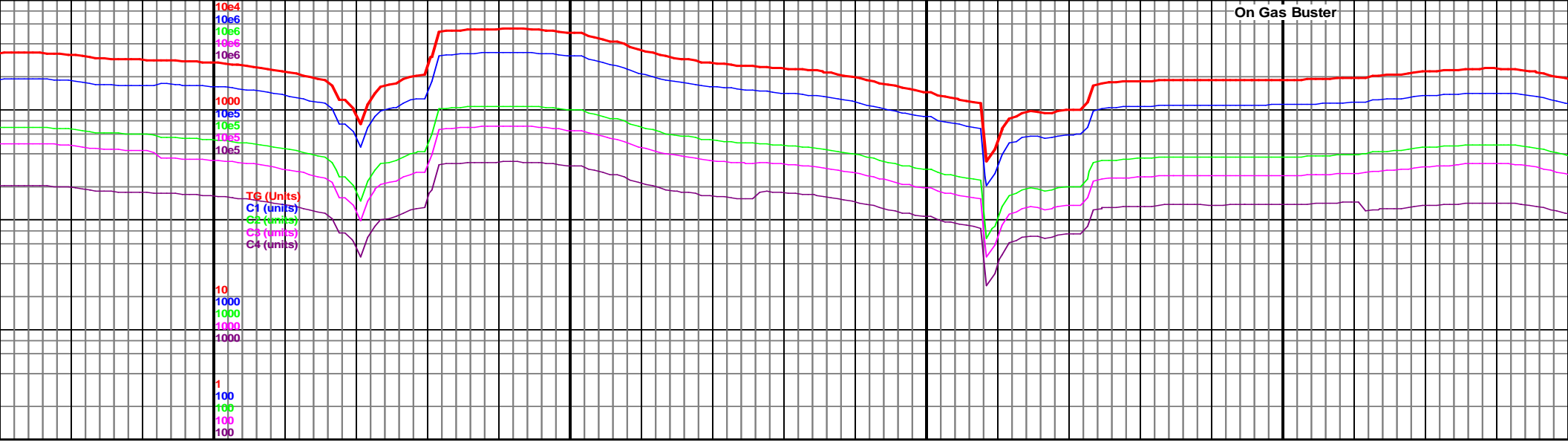




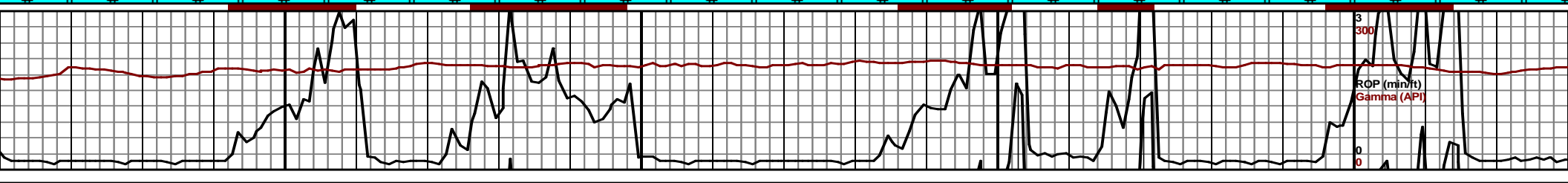
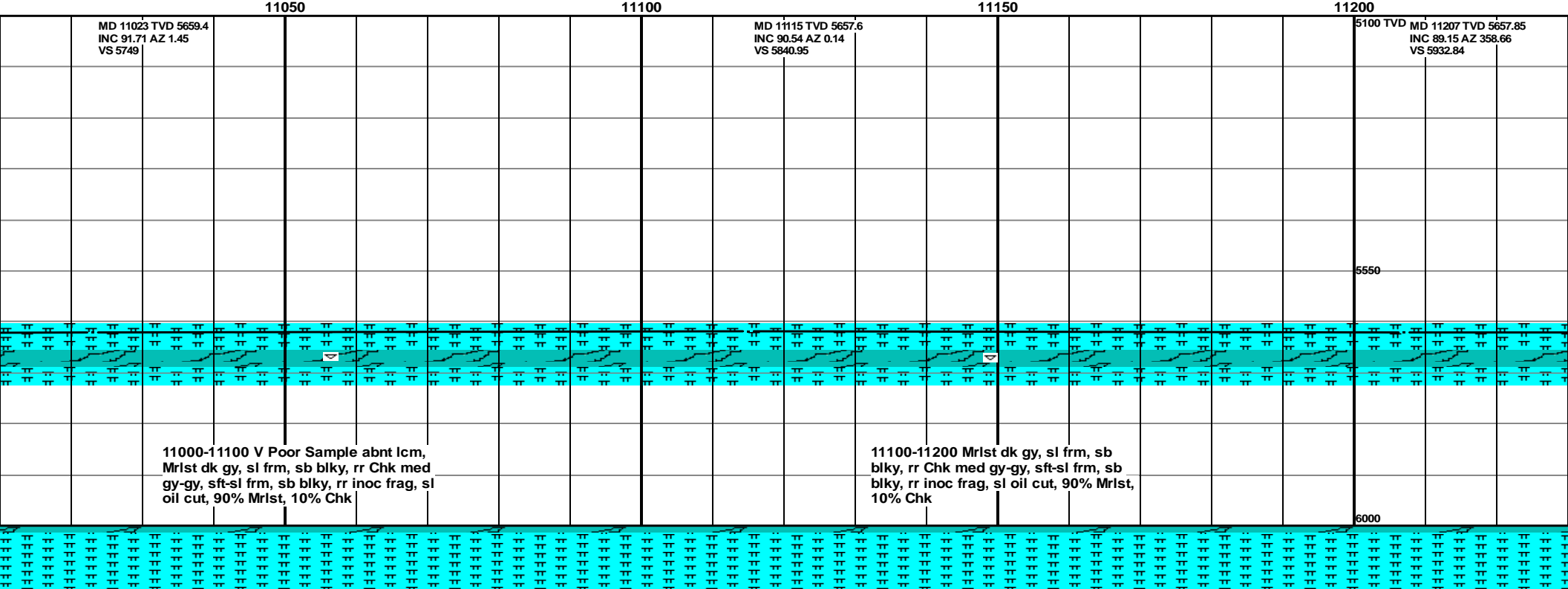
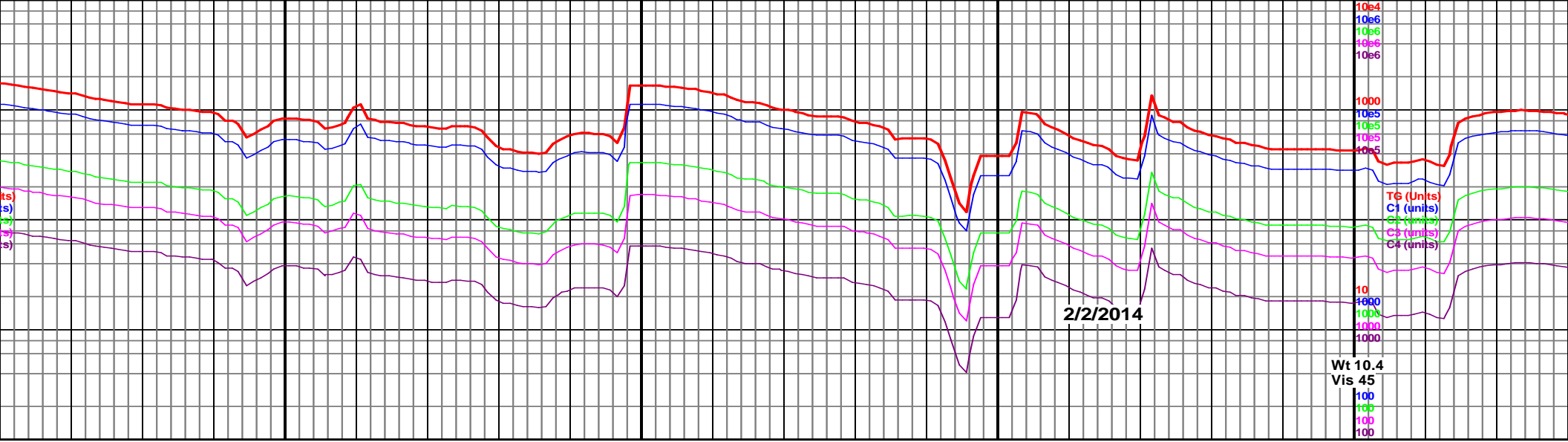




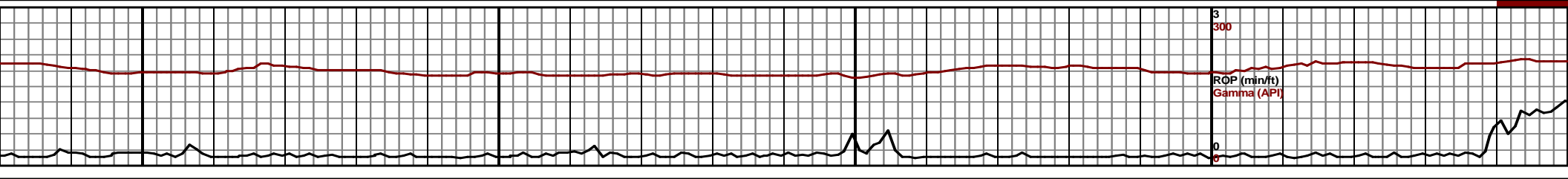
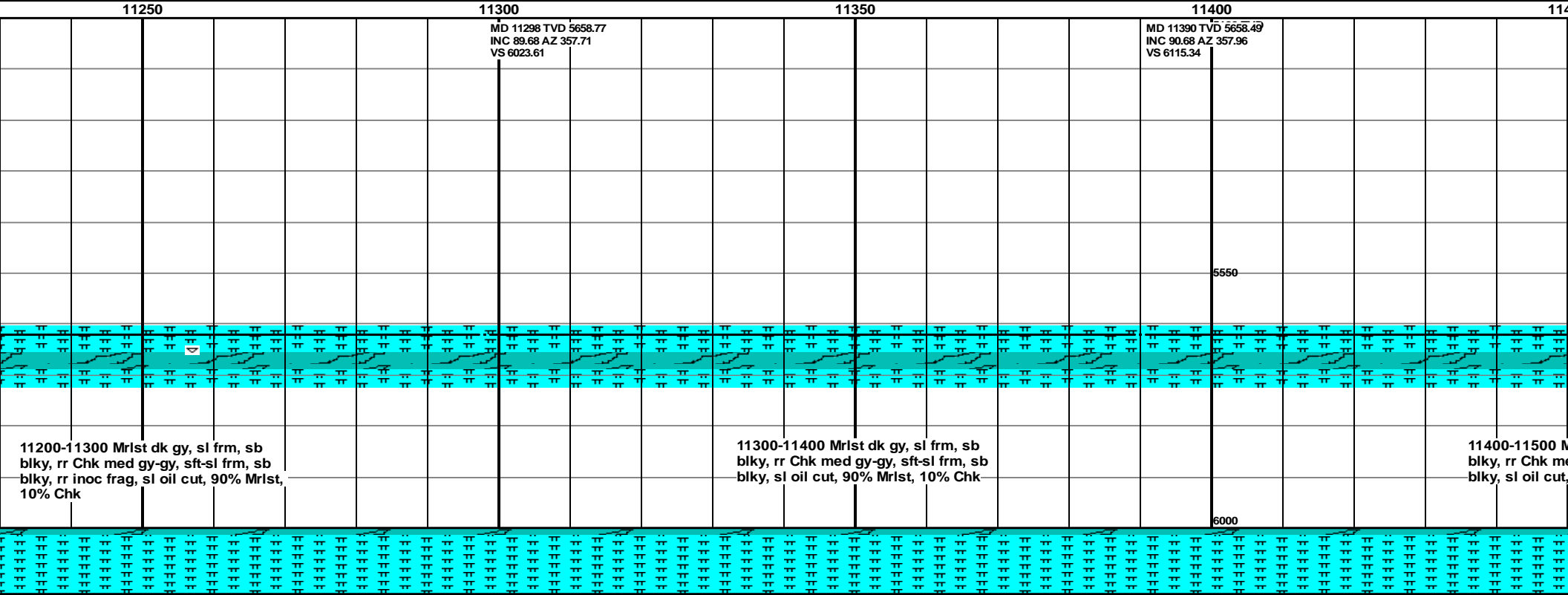
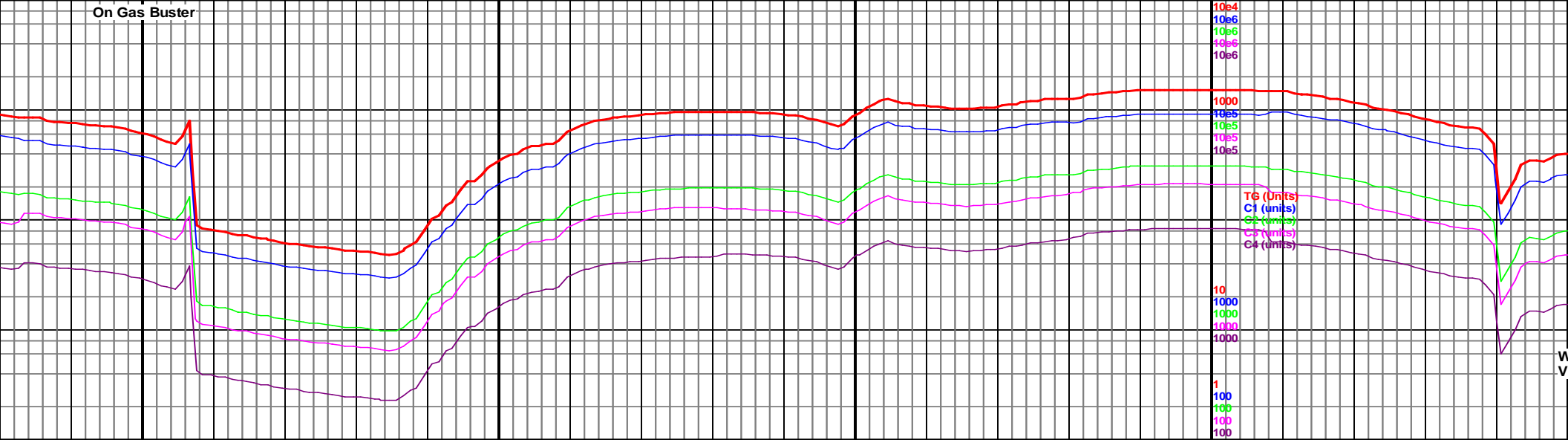




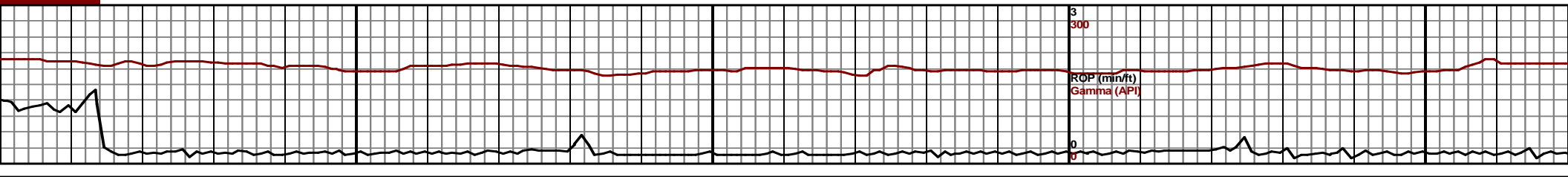
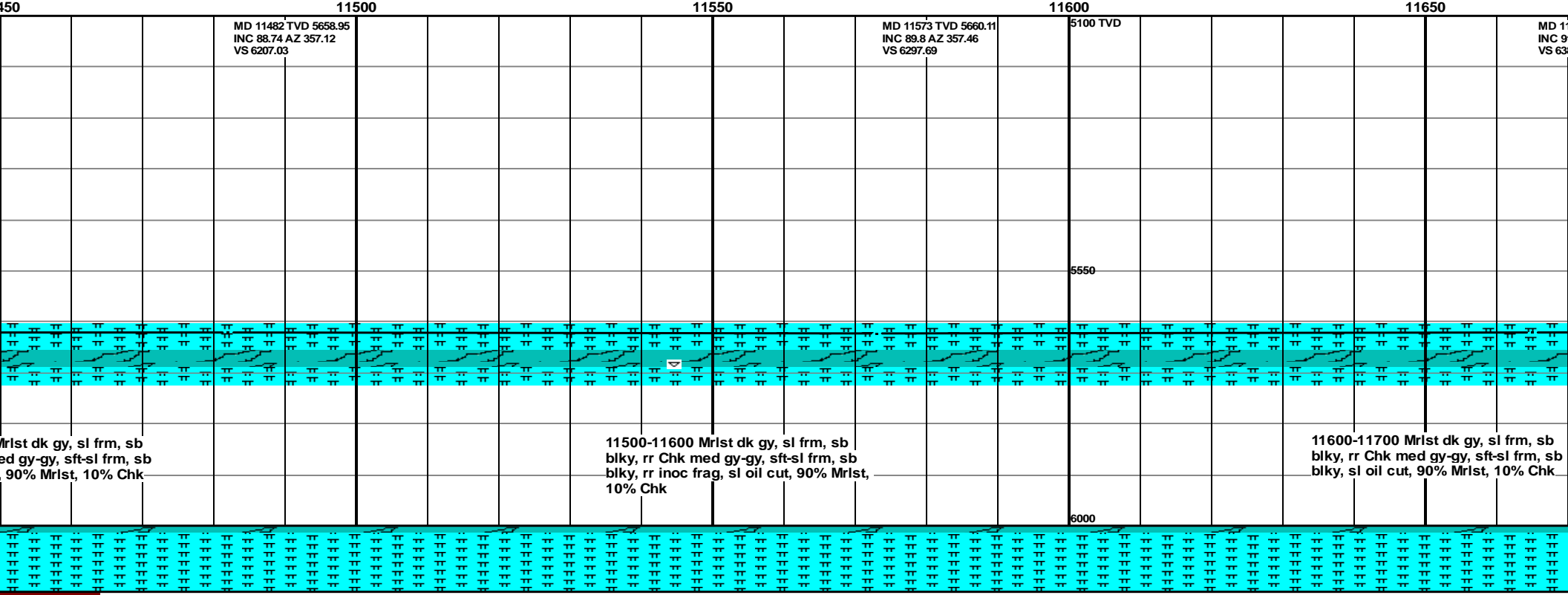
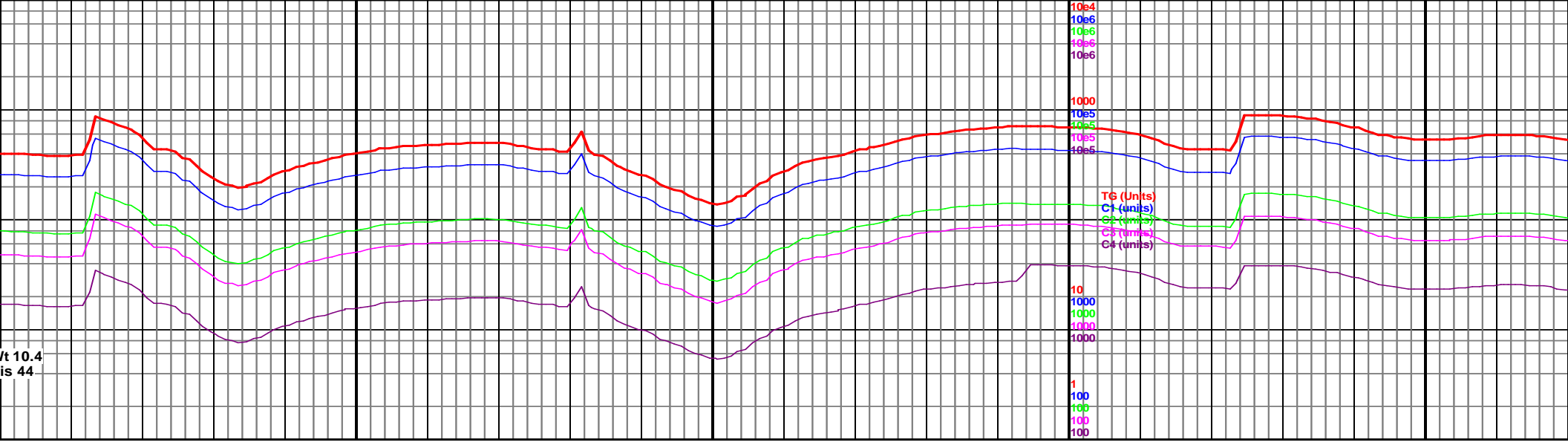


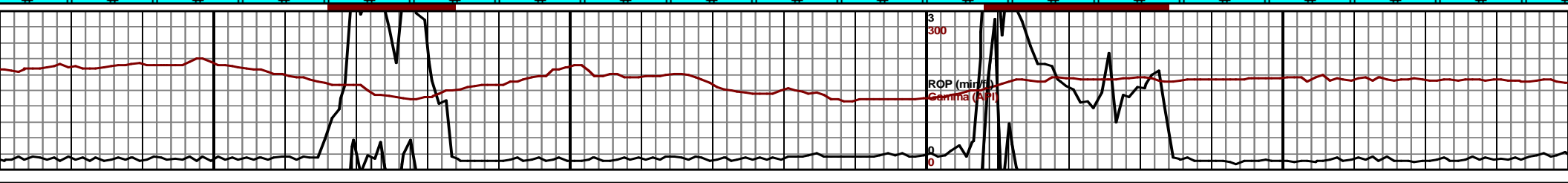
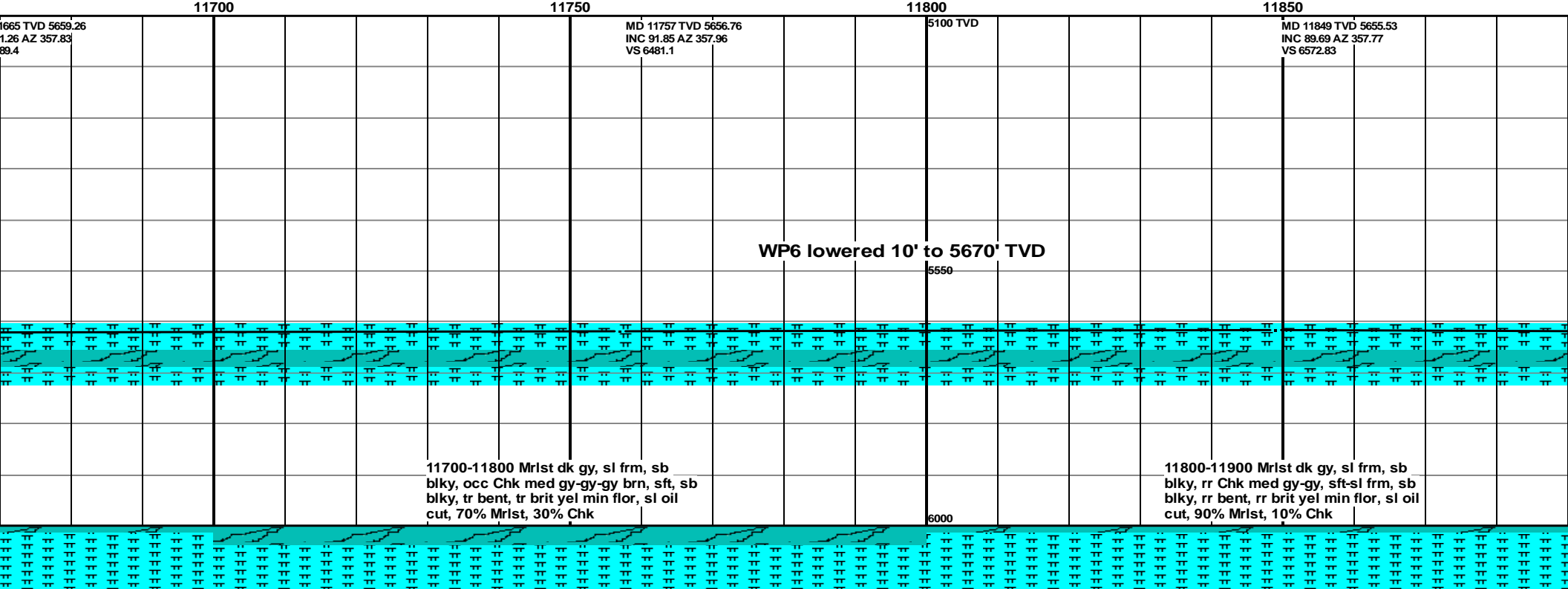
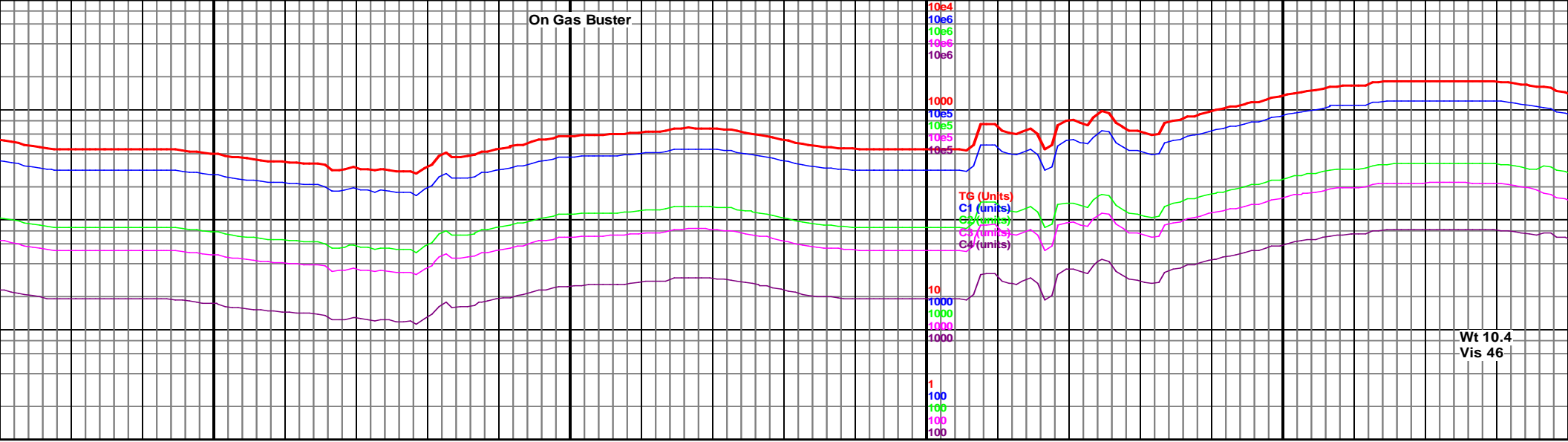


On Gas Buster

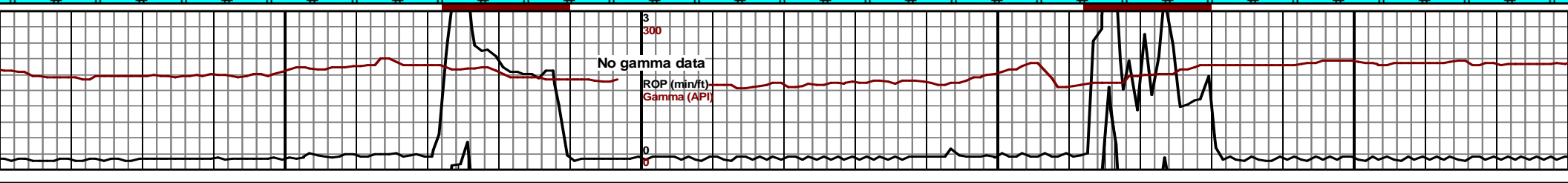
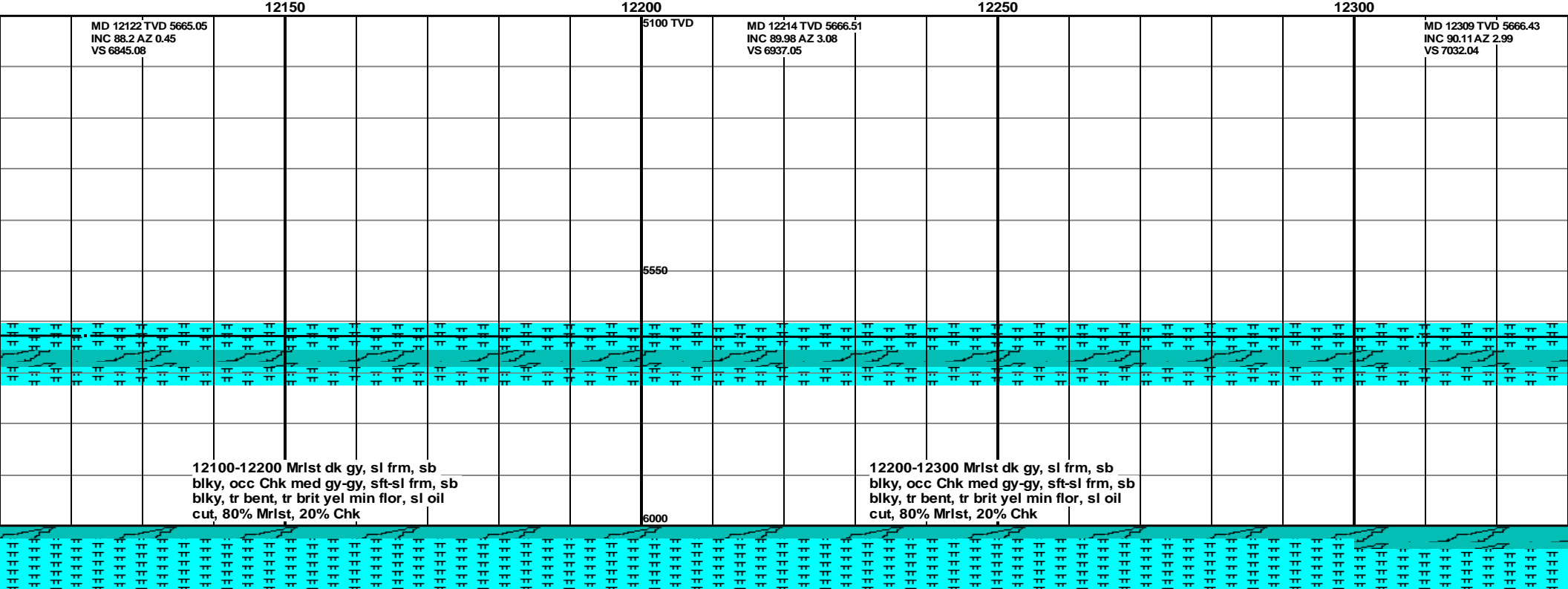
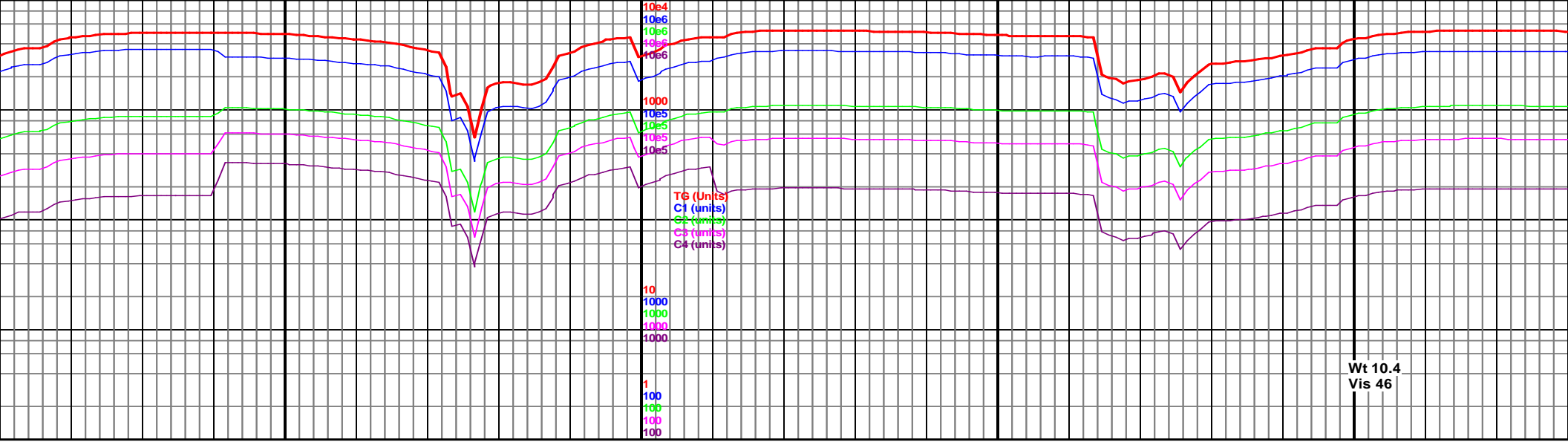


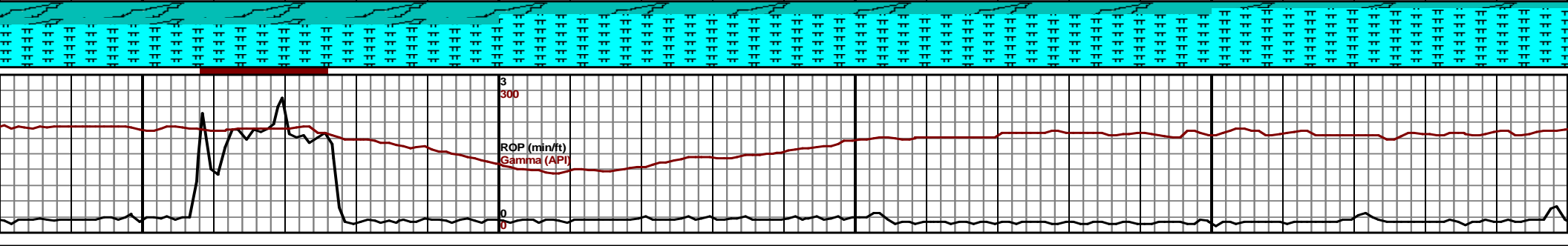
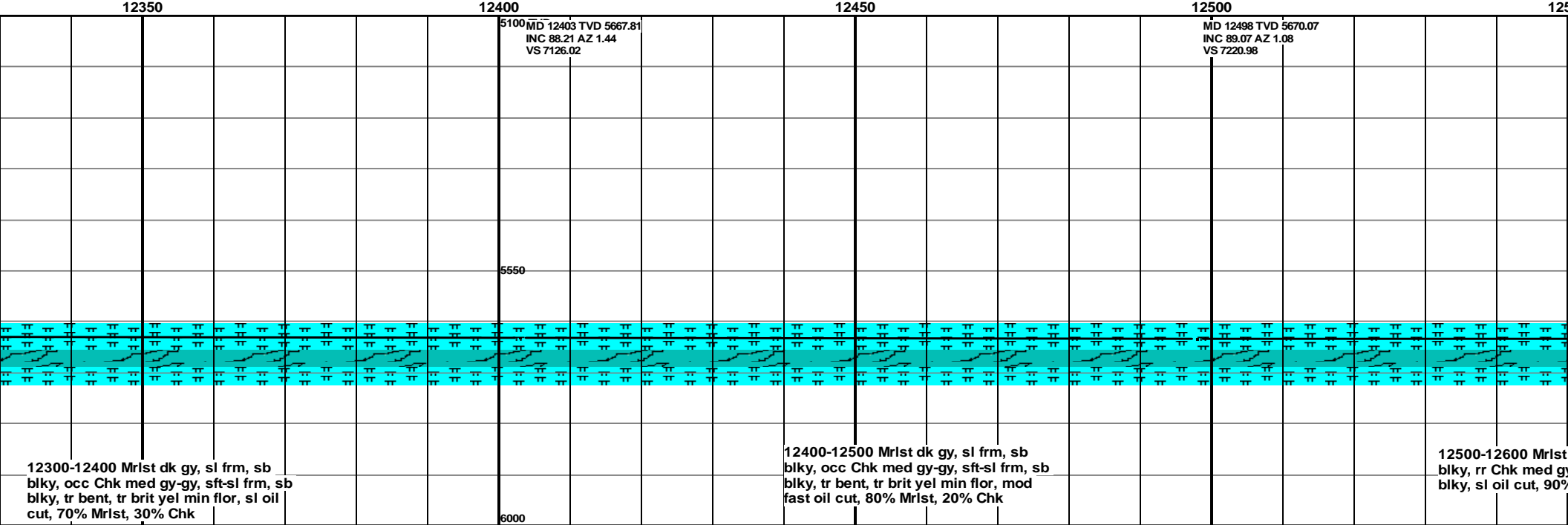
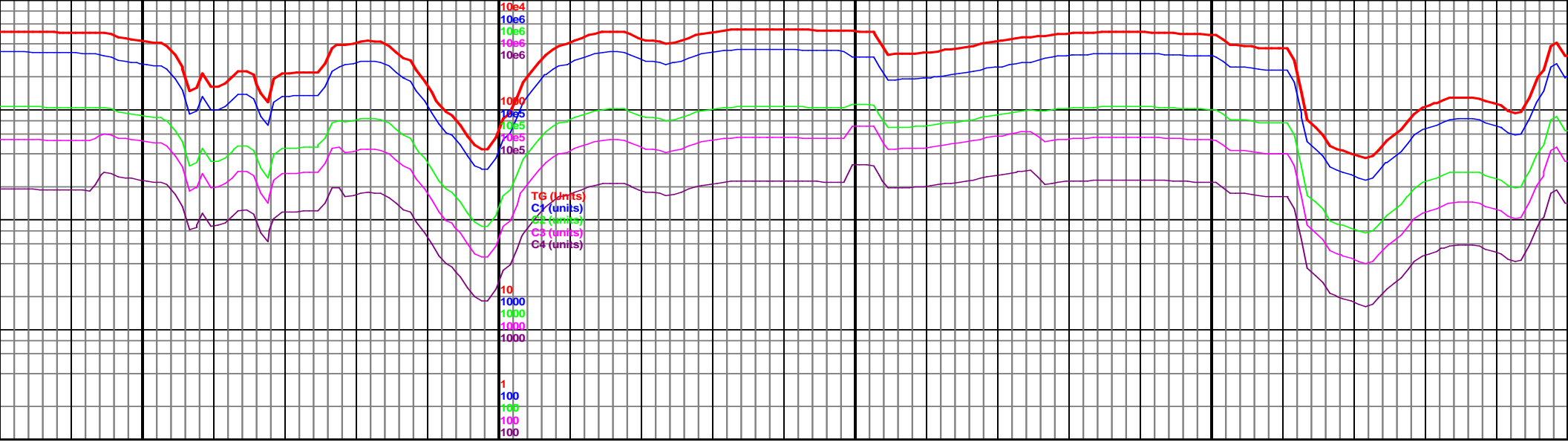




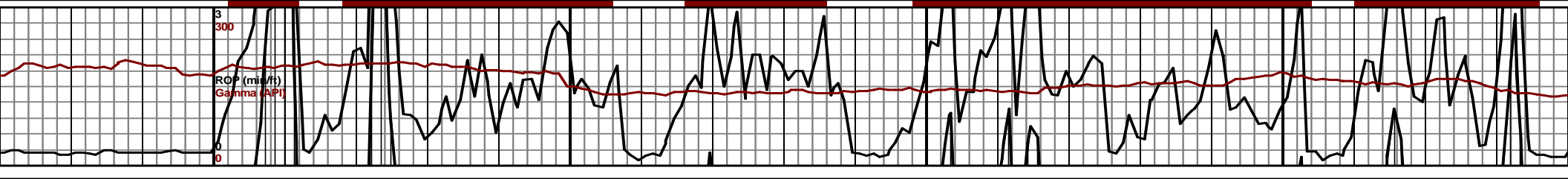
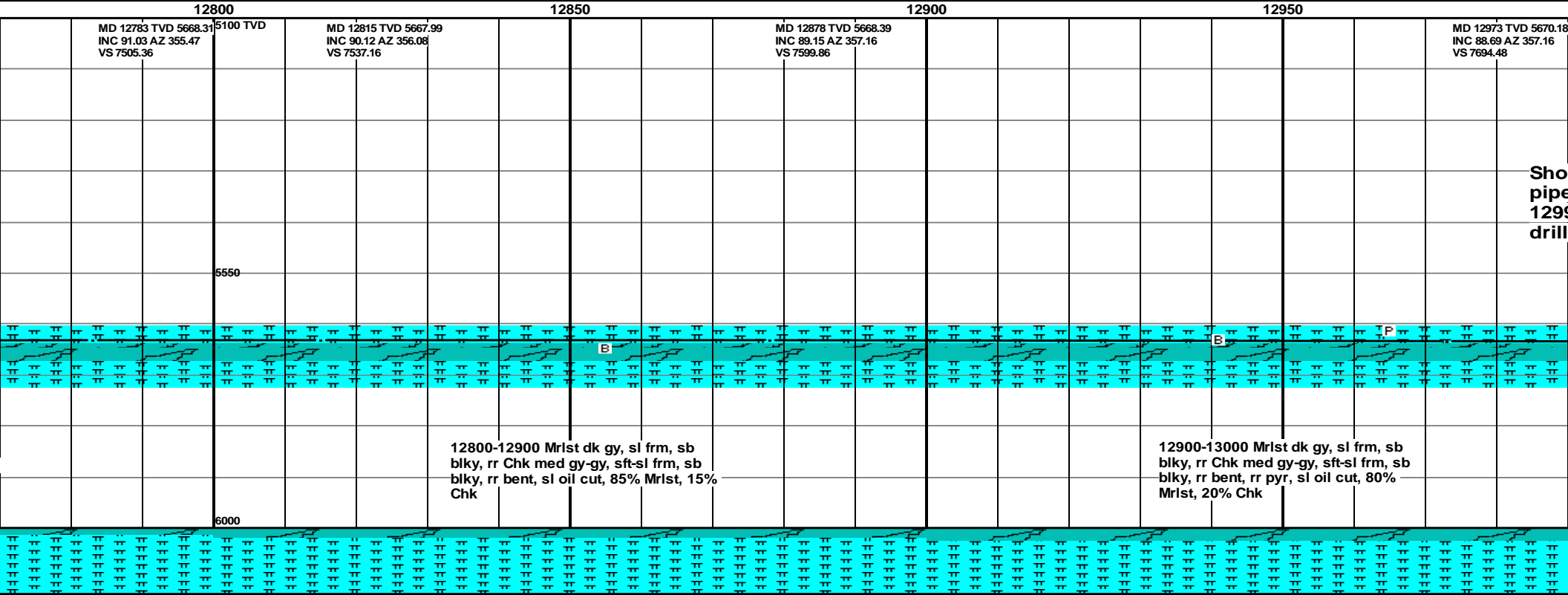
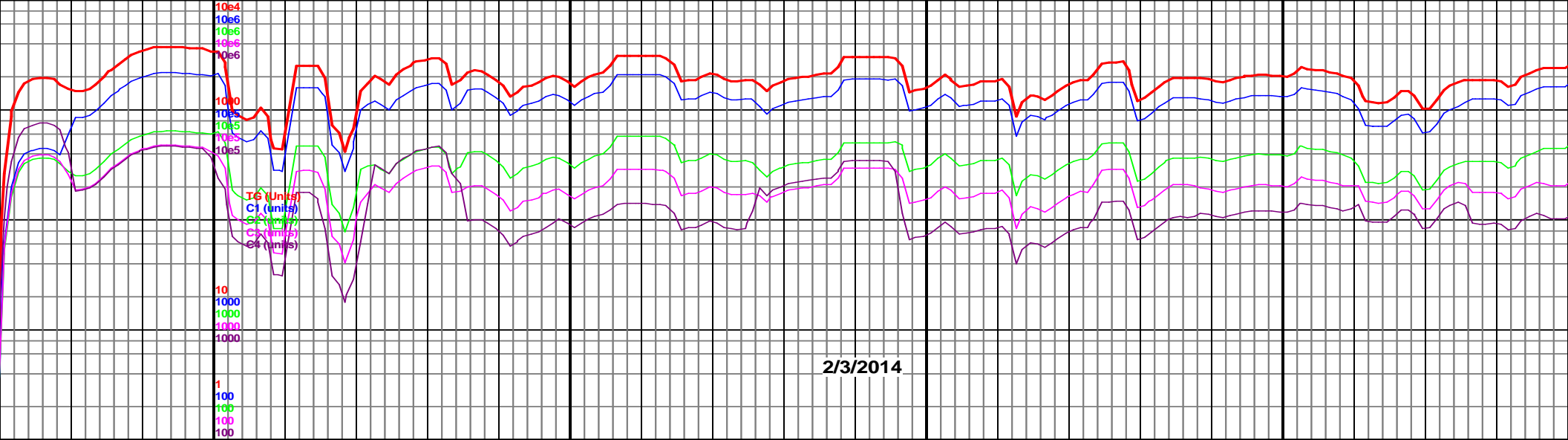


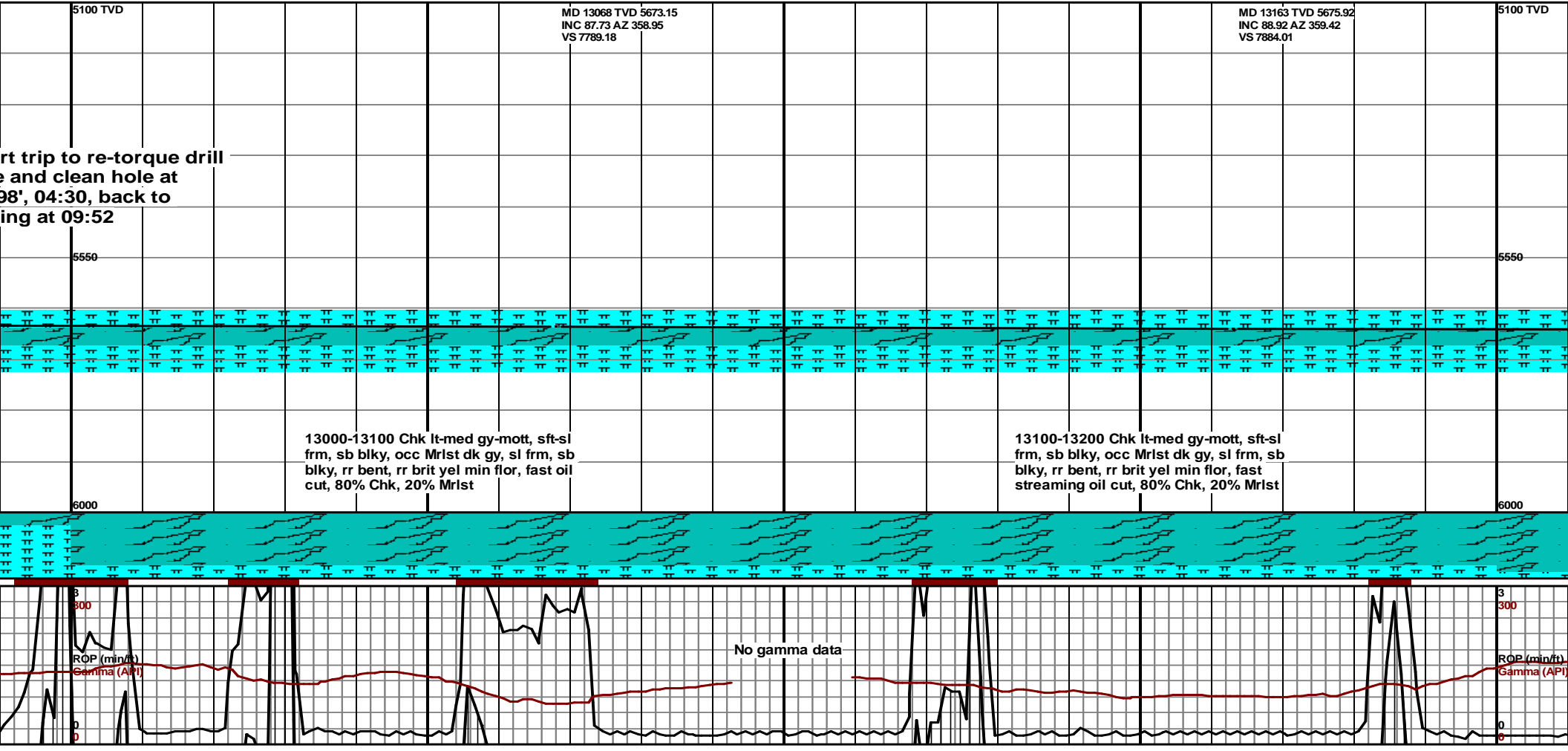
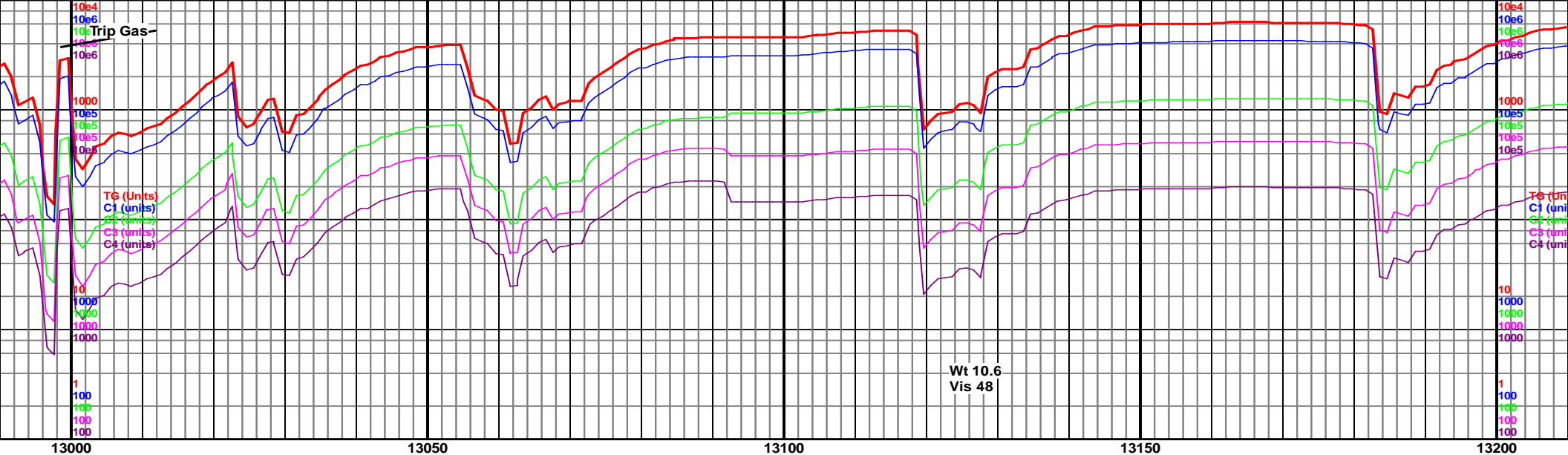




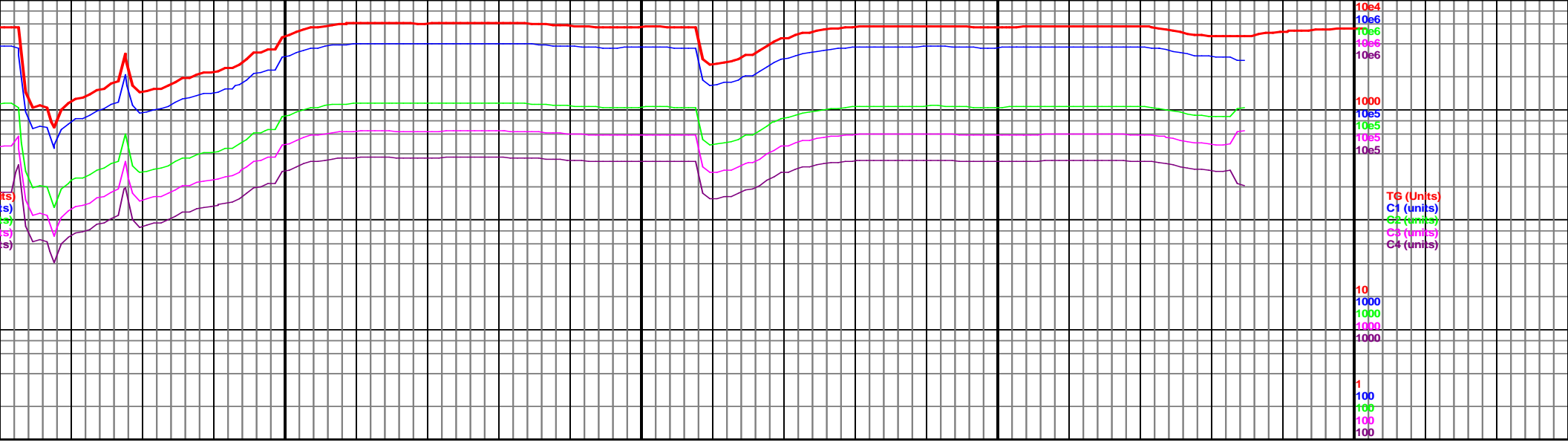












13250

13300

13350

13400

MD 13258 TVD 5677.74  
INC 88.89 AZ 359.56  
VS 7978.88

MD 13353 TVD 5677.97  
INC 90.83 AZ 359.89  
VS 8073.79

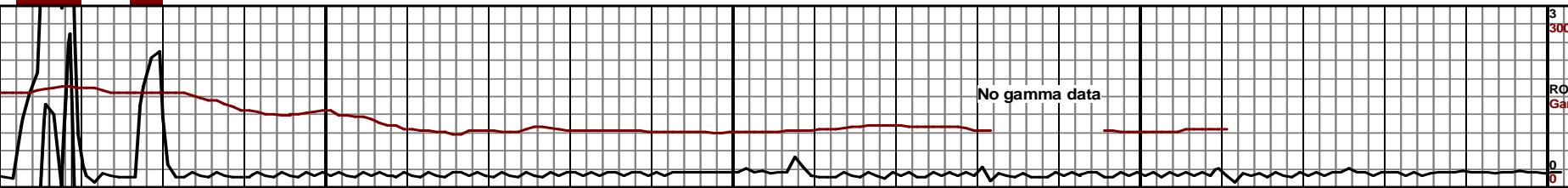
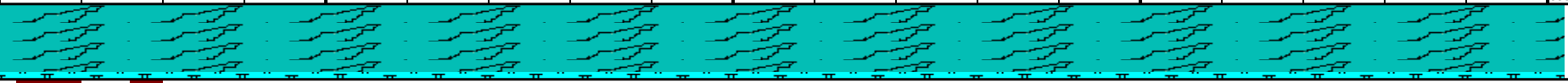
MD 13402 TVD 5677.26  
INC 90.83 AZ 359.89  
VS 8122.75

TD @ 13402', 5677.26'  
TVD projected at the  
bit, 17:05, 02/03/14

Trace oil on shaker

13200-13300 Chk lt-med gy-mott, sft-sl  
frm, sb blk, occ Mrlst dk gy, sl frm, sb  
blk, rr inoc, rr bent, rr brit yel min flor,  
fast streaming oil cut, 890% Chk, 10%  
Mrlst

13300-13402 Chk lt-med gy-mott, sft-sl  
frm, sb blk, occ Mrlst dk gy, sl frm, sb  
blk, rr inoc, rr bent, rr brit yel min flor,  
fast streaming oil cut, 890% Chk, 10%  
Mrlst



No gamma data

ROP (min/ft)  
Gamma (API)

