



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

Well Name: Horsetail 30F-1943
Well Id:
Location: SENW 30-T10N-R57W, Weld County, Colorado
License Number: 05-123-38739-00
Spud Date: 9/30/2014
Surface Coordinates: Lat. 40.810683, Long. -103.796464

Region: Horsetail
Drilling Completed: 10/09/2014

Bottom Hole Coordinates: Lat. 40.831331, Long. -103.797689
Ground Elevation (ft): 4780
Logged Interval (ft): 5050 To: 13702
Formation: Pierre, Sharon Springs, Niobrara
Type of Drilling Fluid: Water Based Mud

K.B. Elevation (ft): 4797
Total Depth (ft): 13702

Printed by WellSight Log Manager 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: Kyle Newman, Brian Reddick, Mitch Schneider
Company: Acme Geologic Consulting
Address: 108 Berry Street
Little Rock, AR 72205

Drilling Company

Xtreme 18


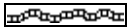
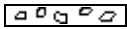

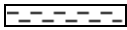
Gas Detection






Mudlogging Systems, Inc., M Logger, Model TGC, Total Gas and Chromatograph, #544





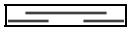
Comments

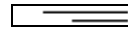
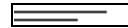



Lithologies and tops at drilled depths, not corrected to elogs. Where the well bore gas is 100% methane, the C1 line is moved to 85% for graphical purposes only.

ROCK TYPES

 Anhy
 Bent
 Brec
 Cht
 Clyst
















 Coal
 Congl
 Dol
 Gyp
 Igne


 Lmst
 Meta
 Cyan mrlst
 Salt
 Shale
















 Shcol
 Shgy
 Sltst
 Ss
 Till







 Cyan chk

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

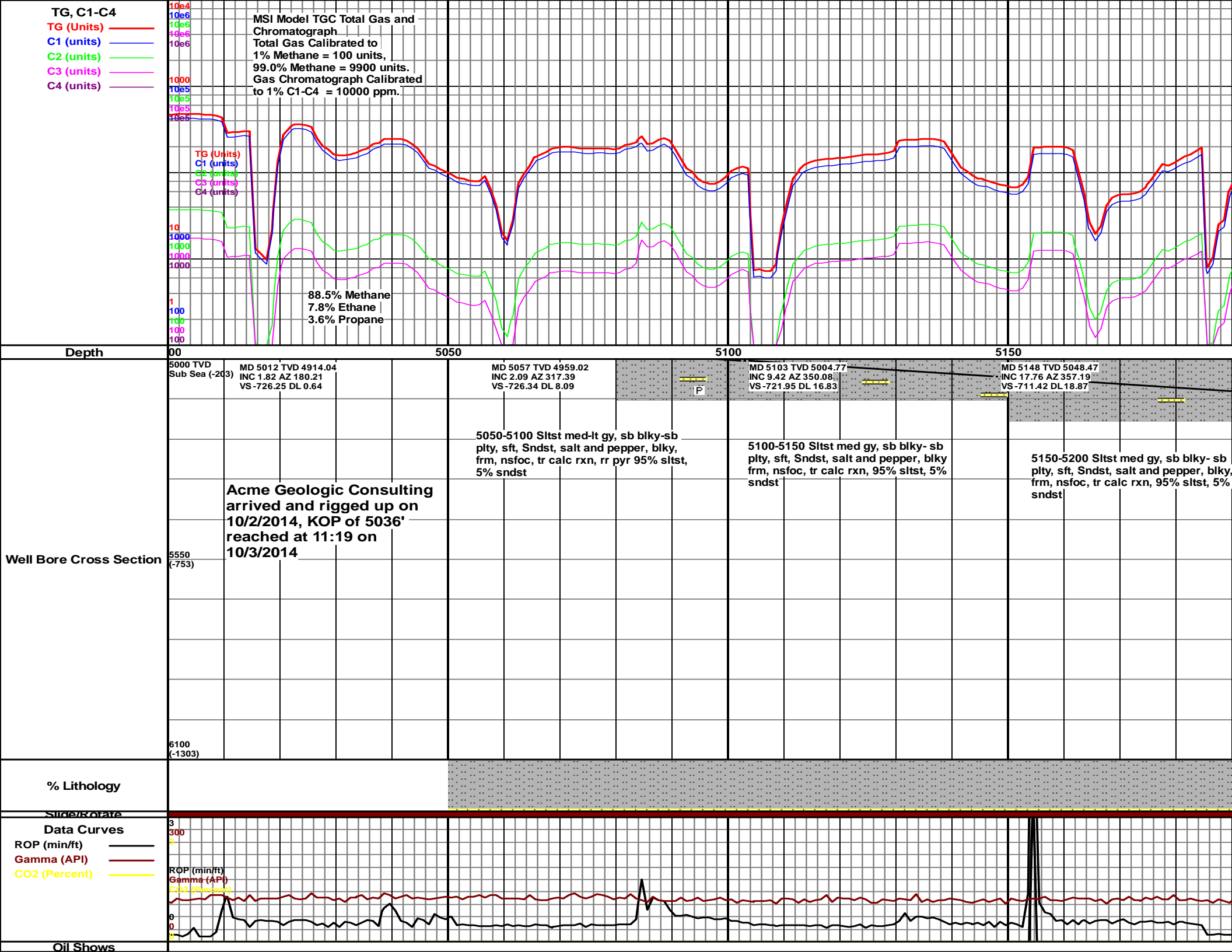
ROUNDING
[R] Rounded
[r] Subrnd
[a] Subang
[A] Angular

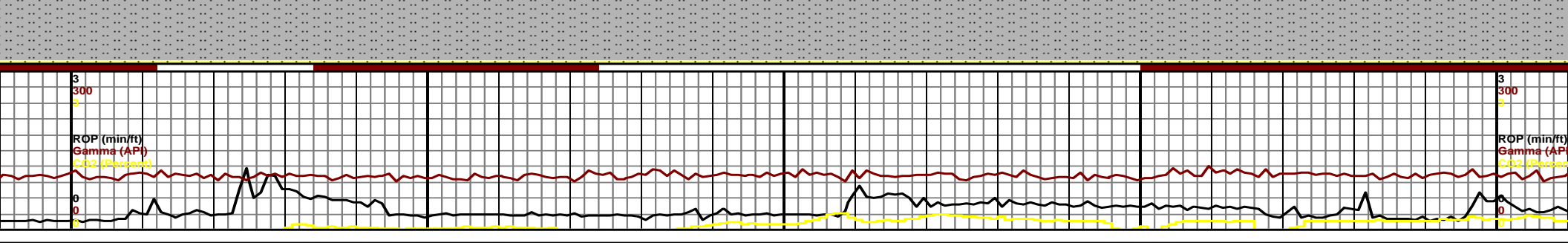
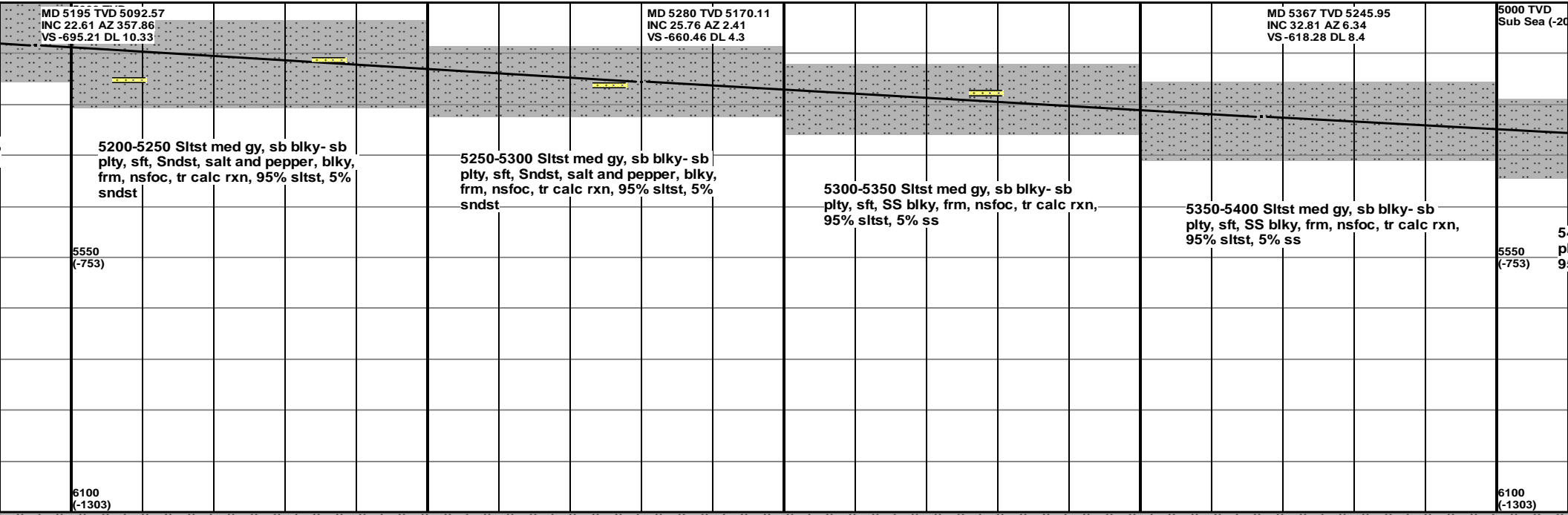
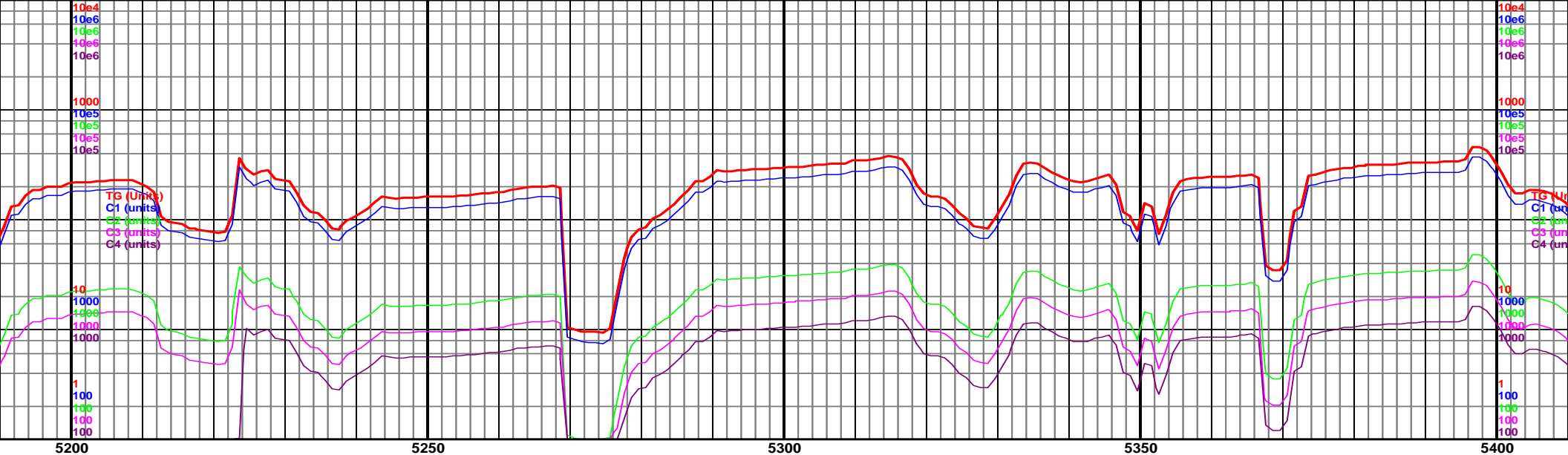
OIL SHOW
[●] Even

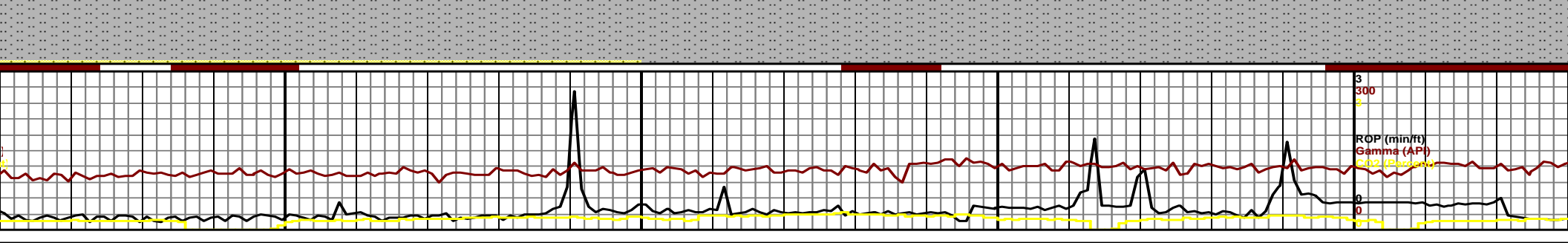
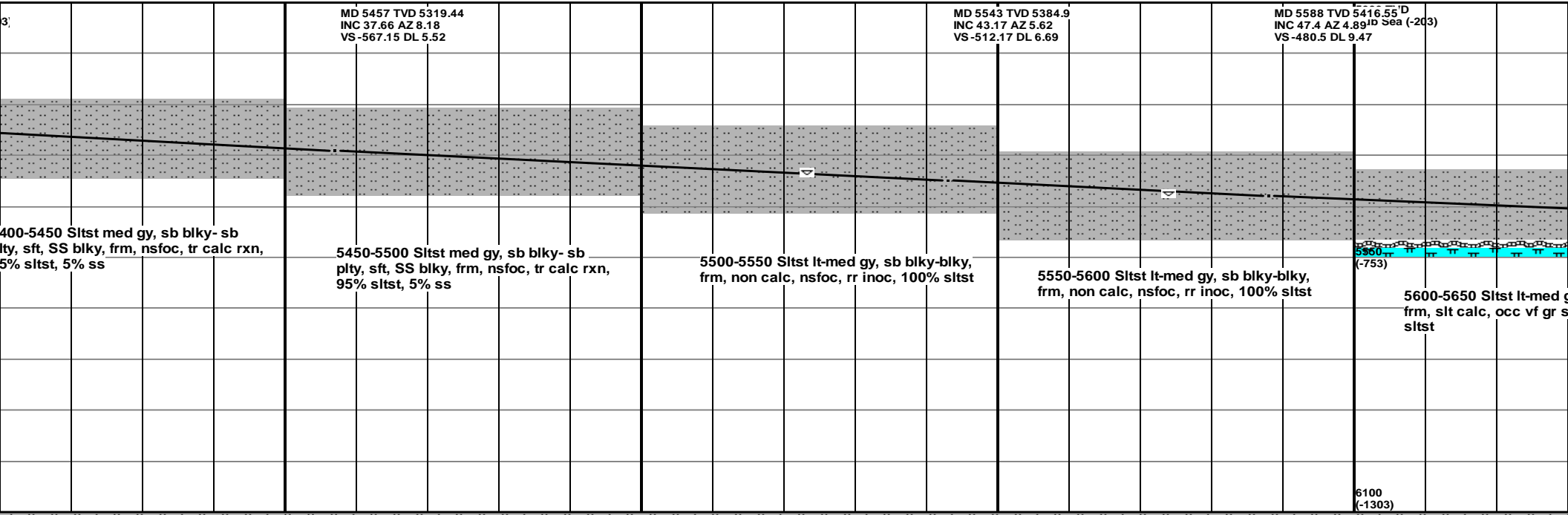
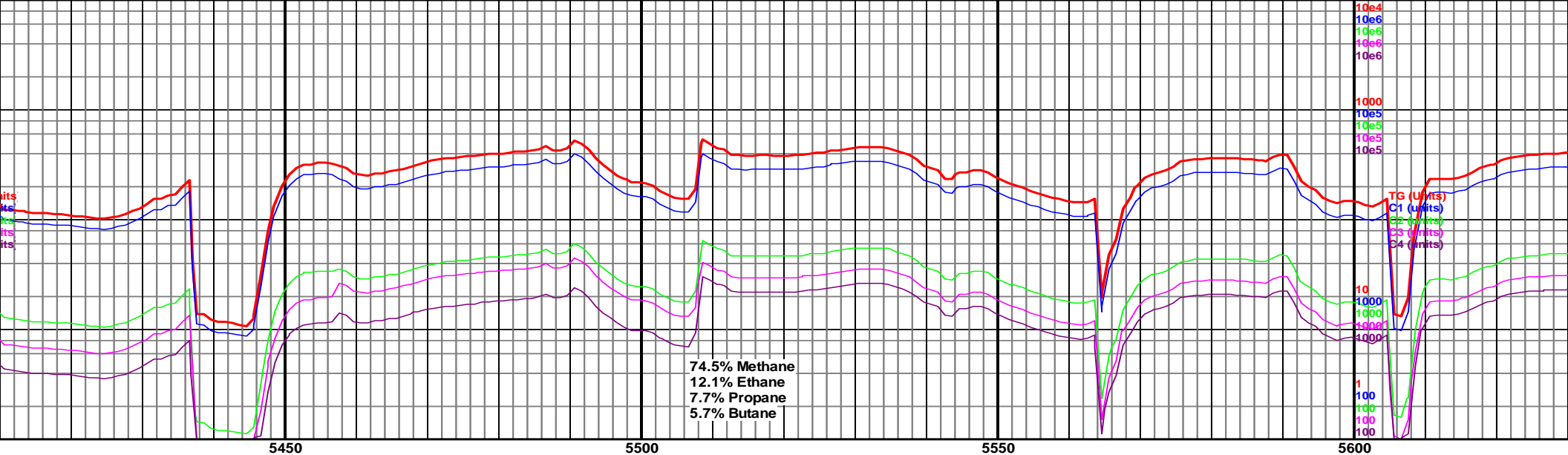
[●] Spotted
[○] Ques
[D] Dead

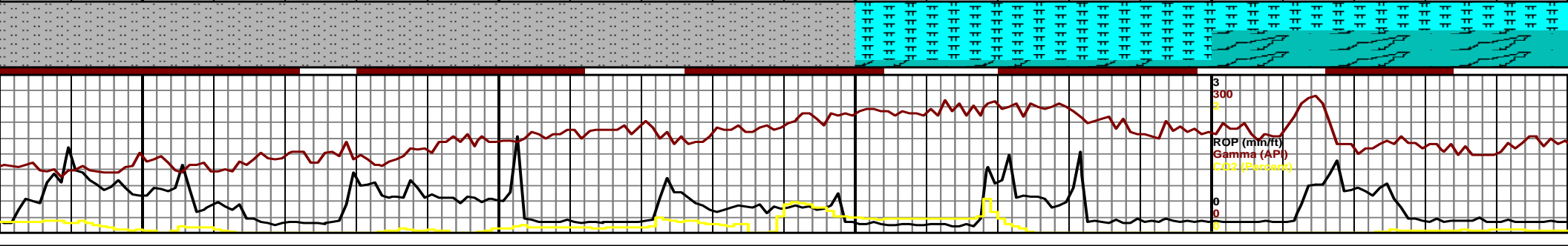
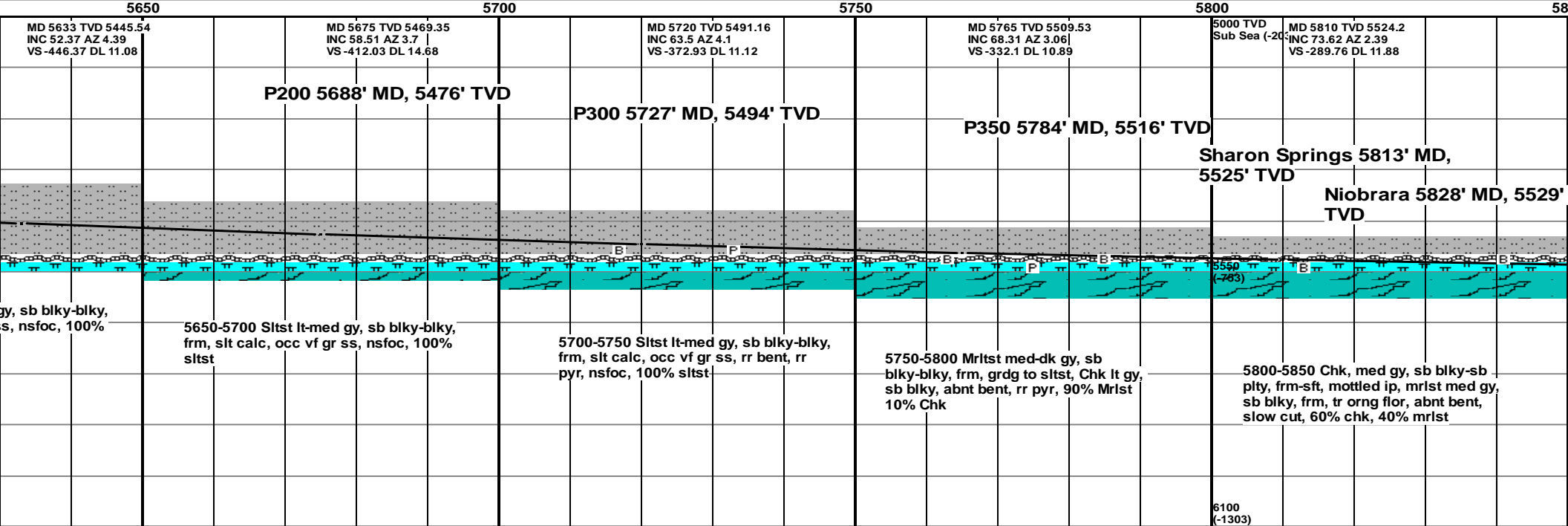
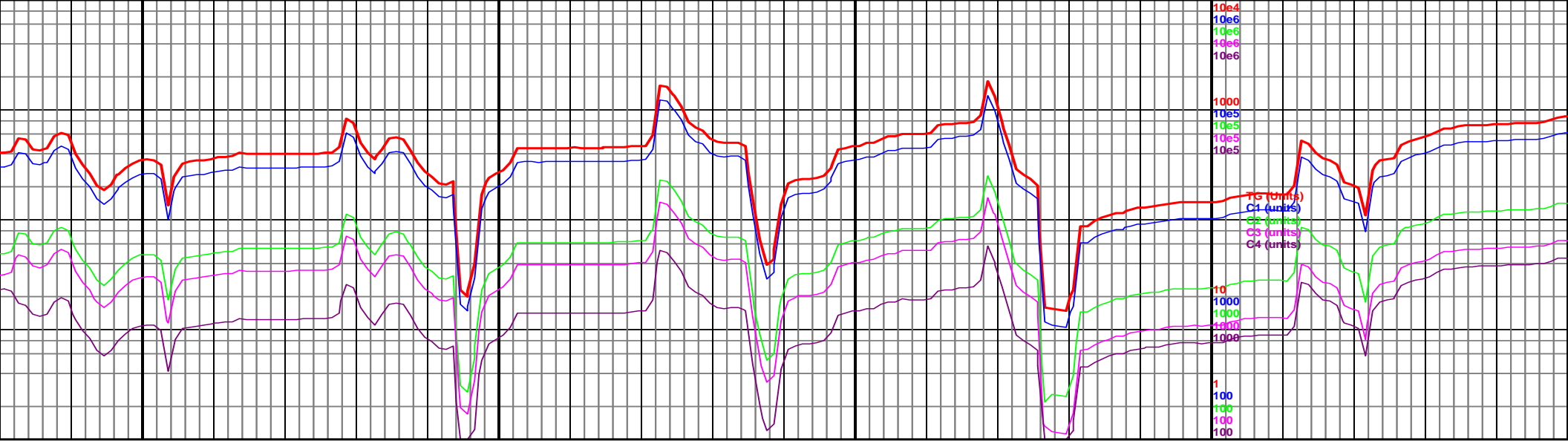
INTERVAL
[■] Core
[◻] Dst

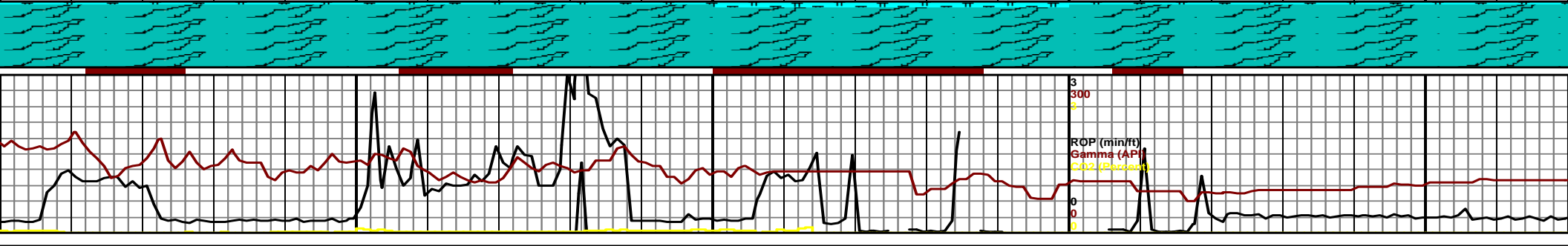
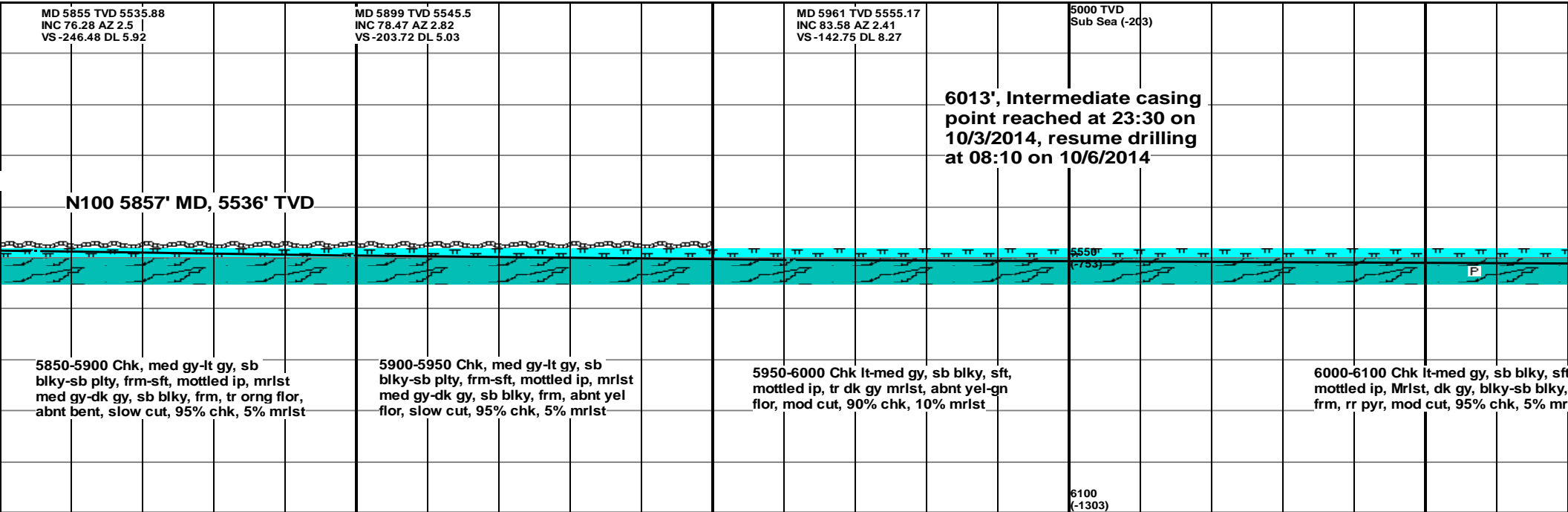
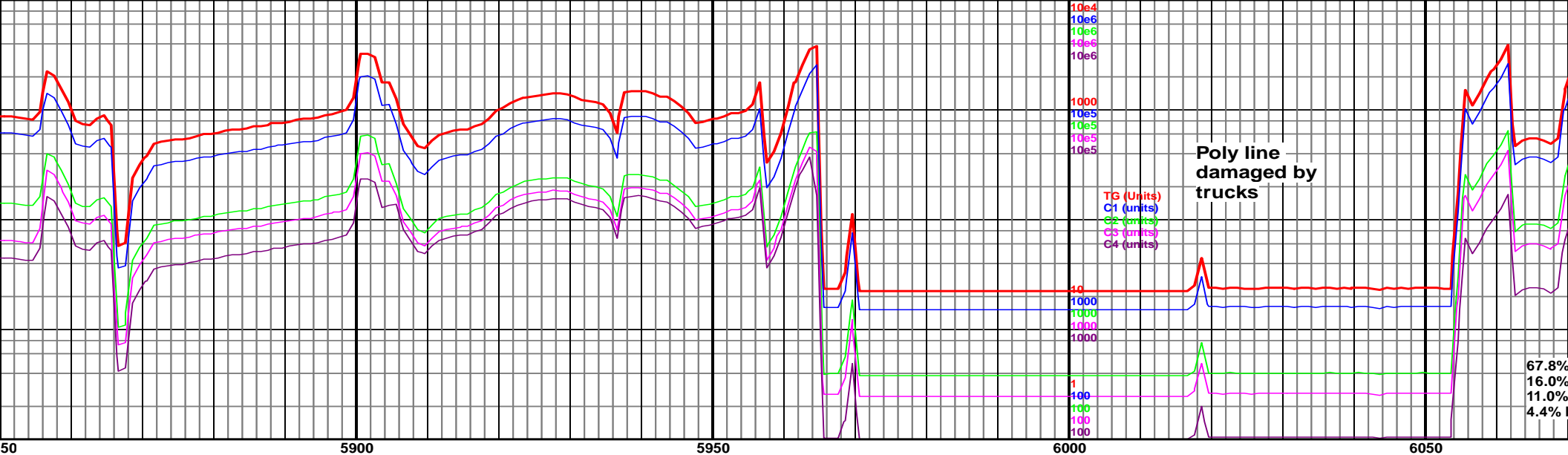
EVENT
[▽] Rft
[▶] Sidewall

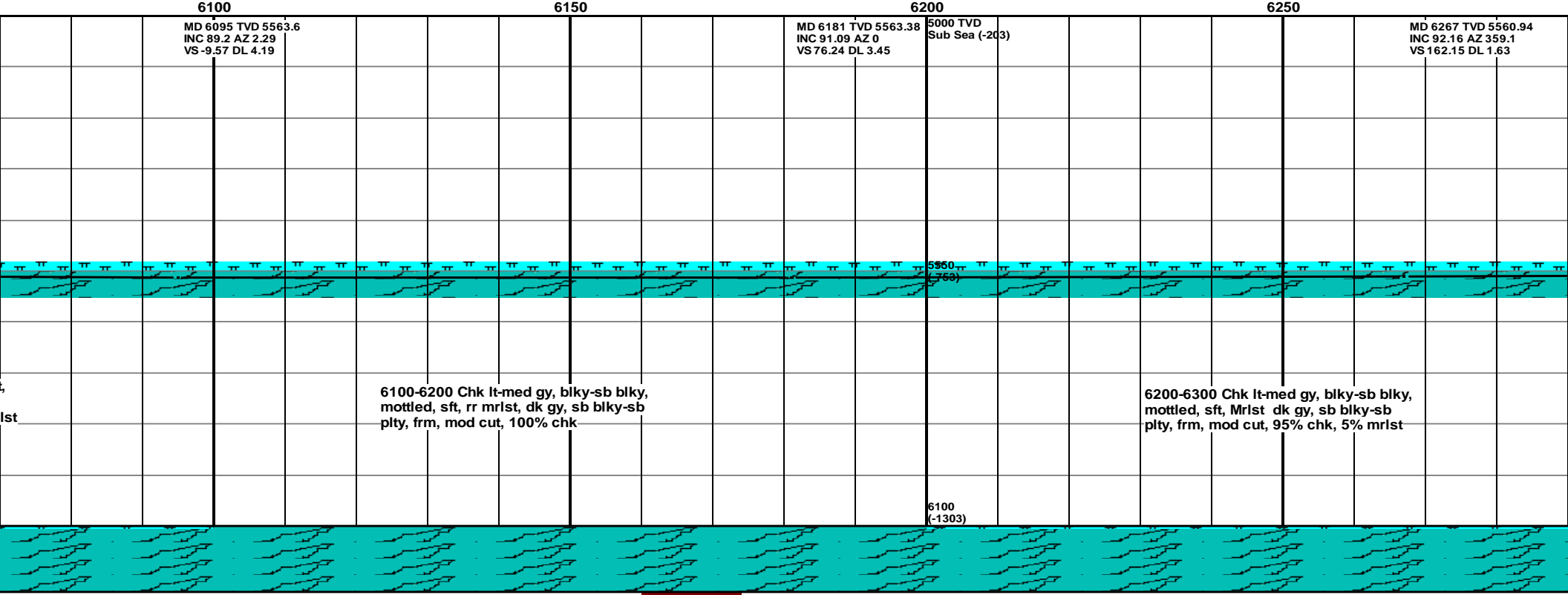
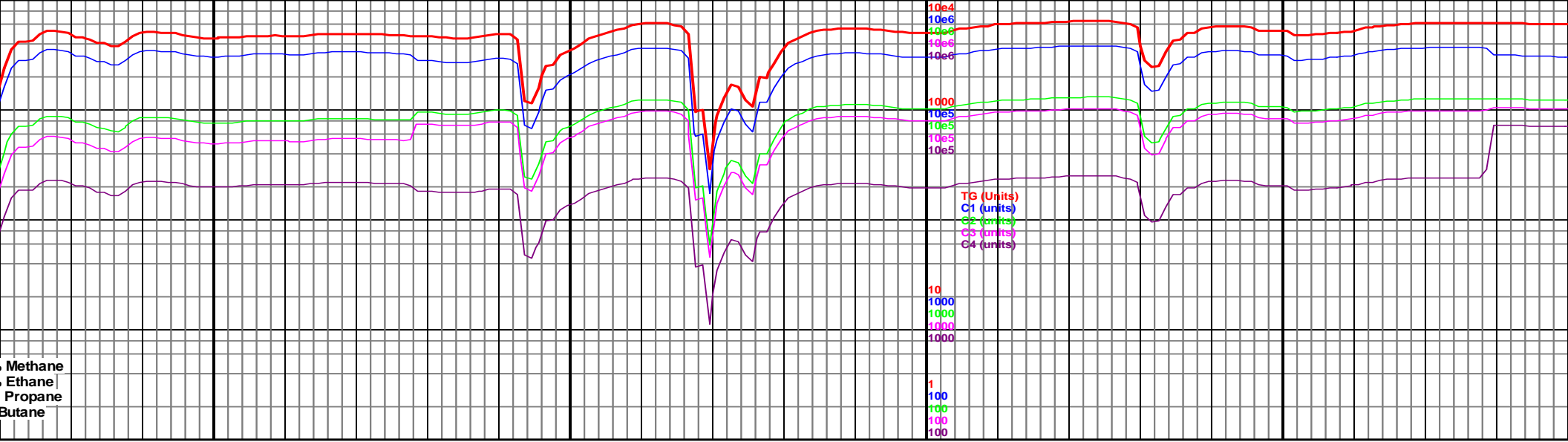


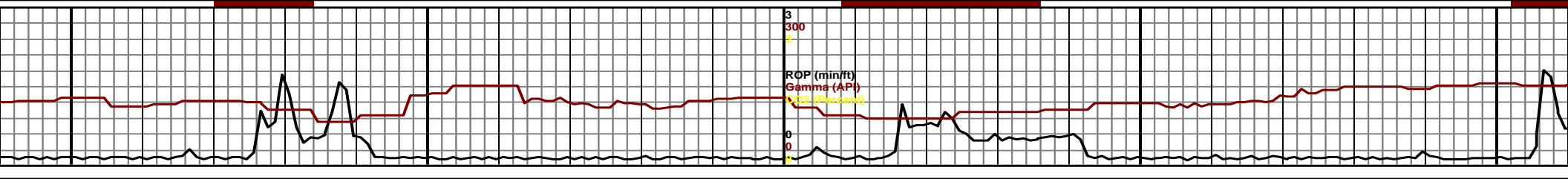
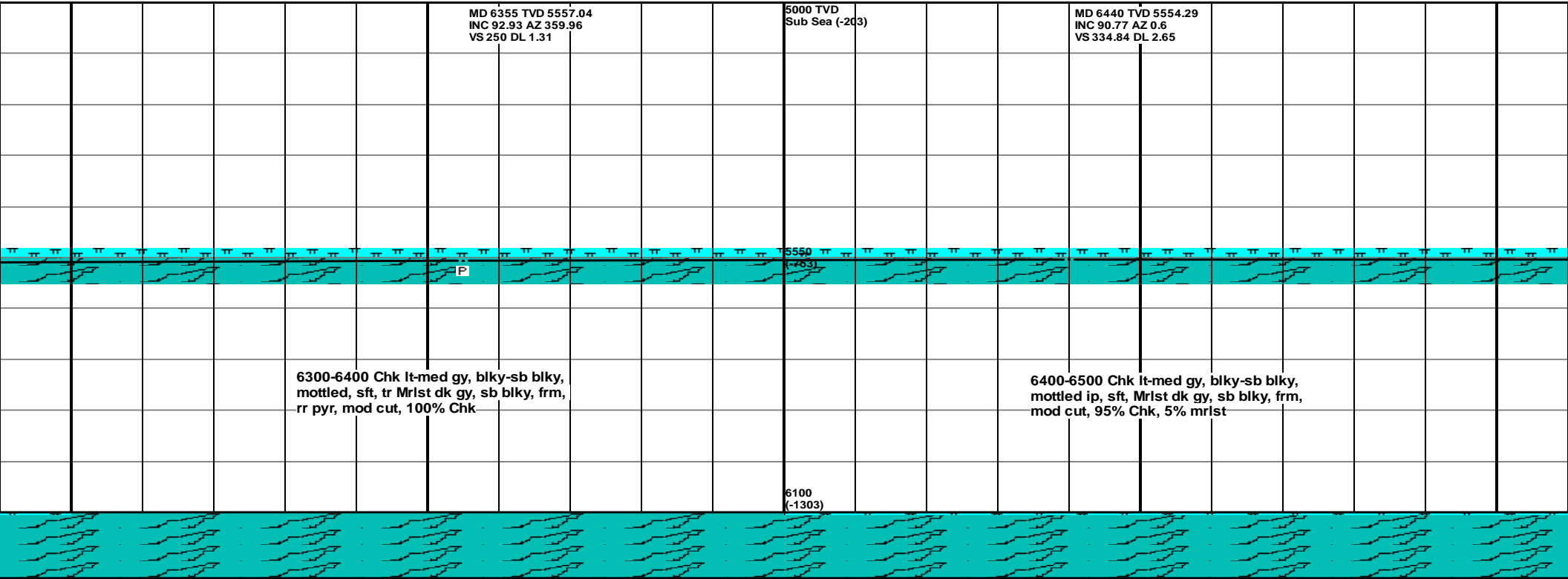
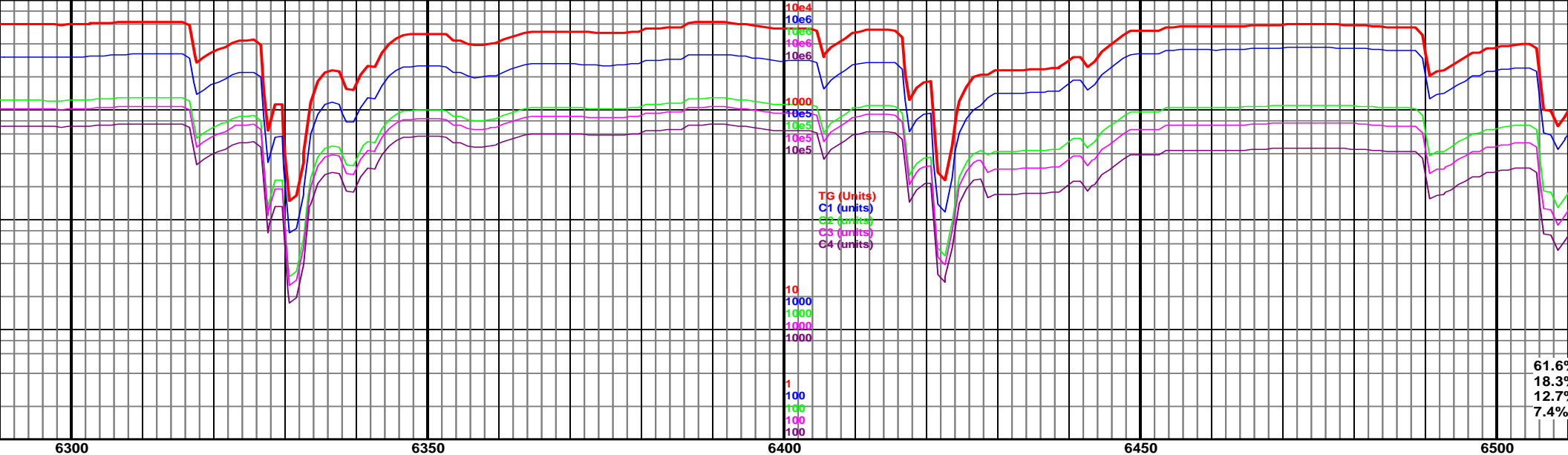


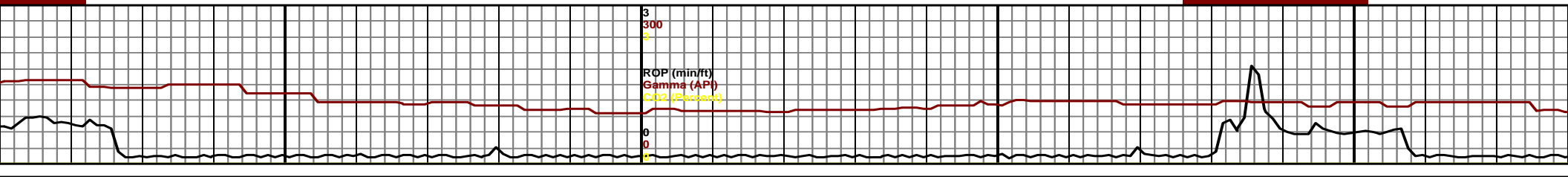
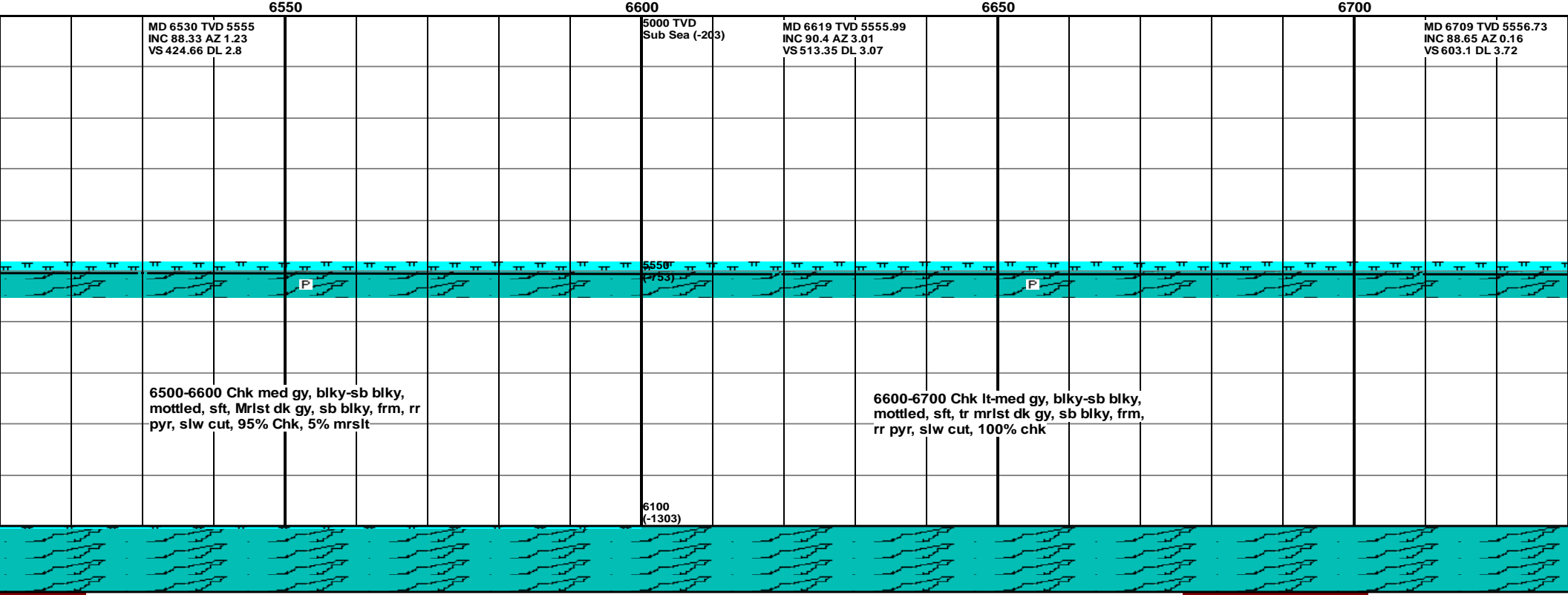
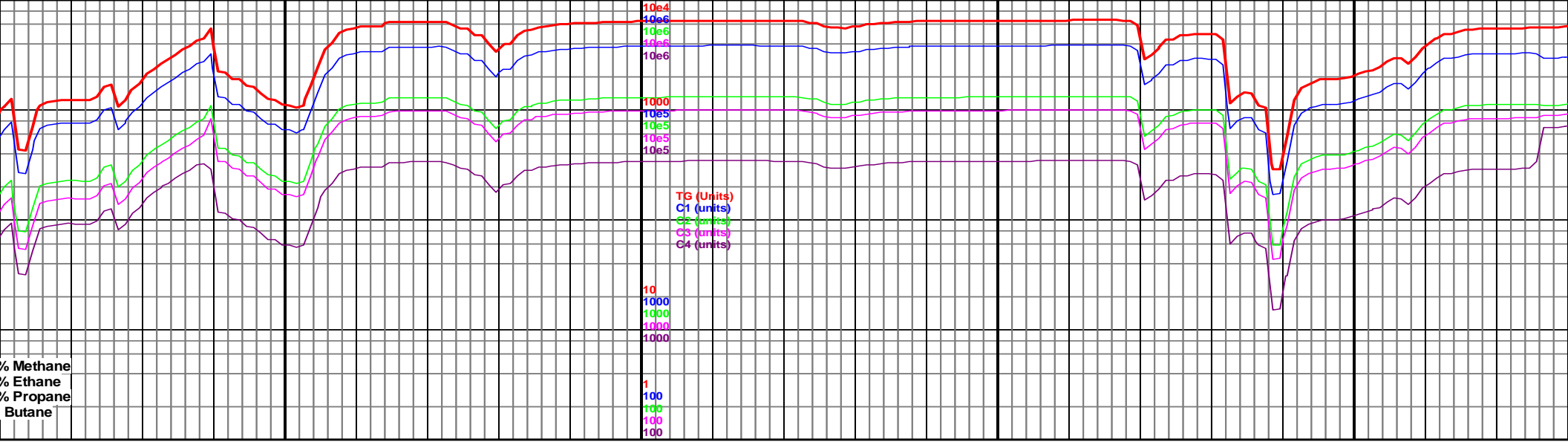


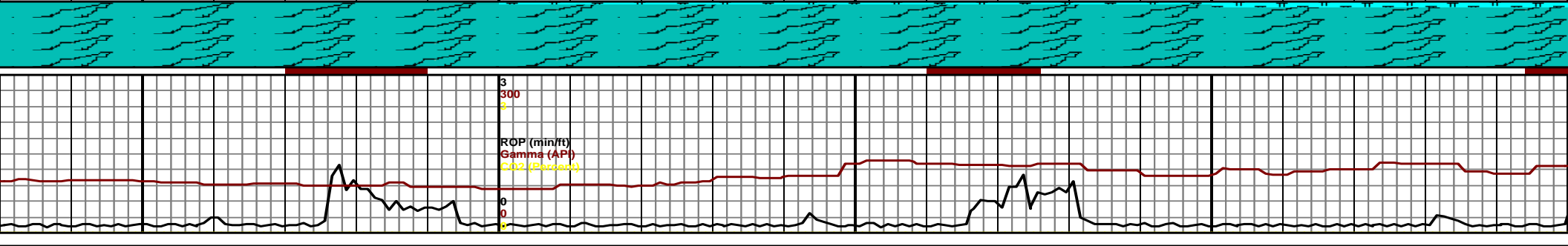
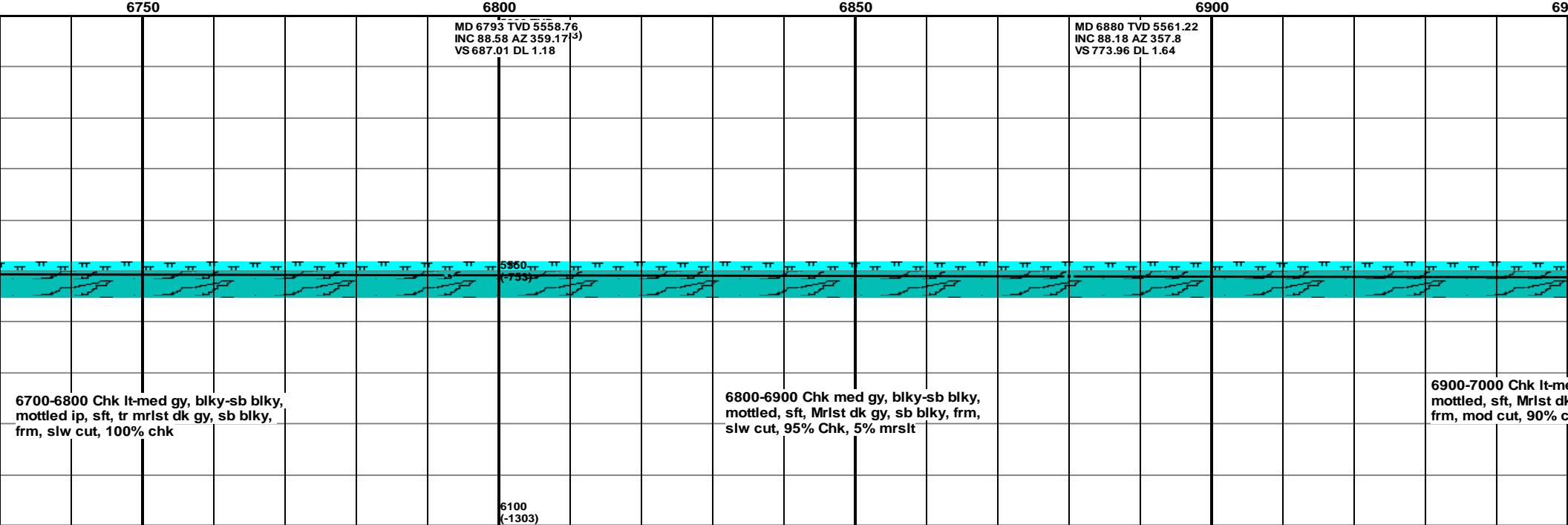
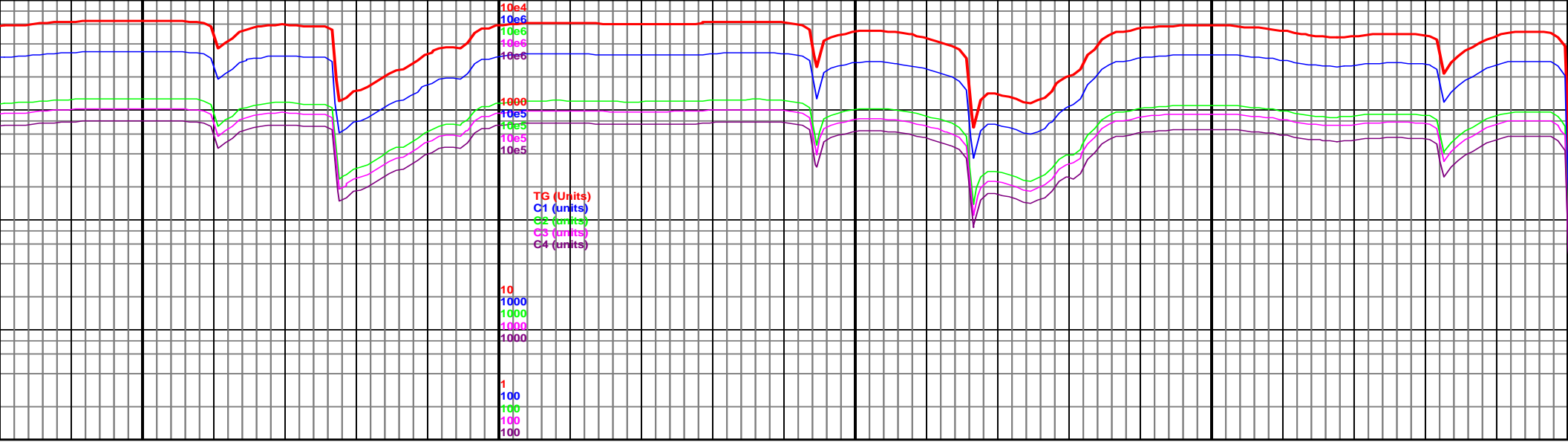


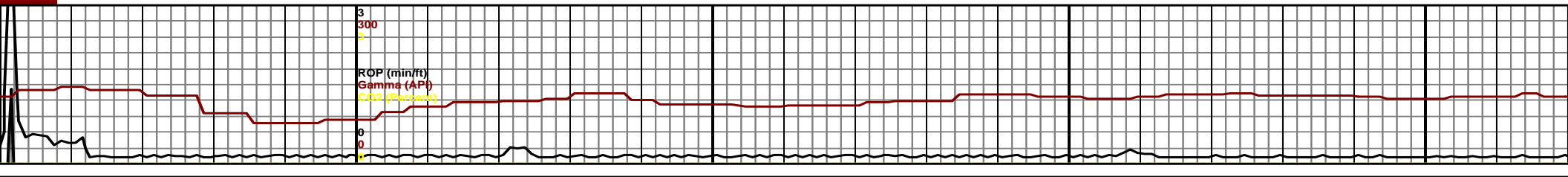
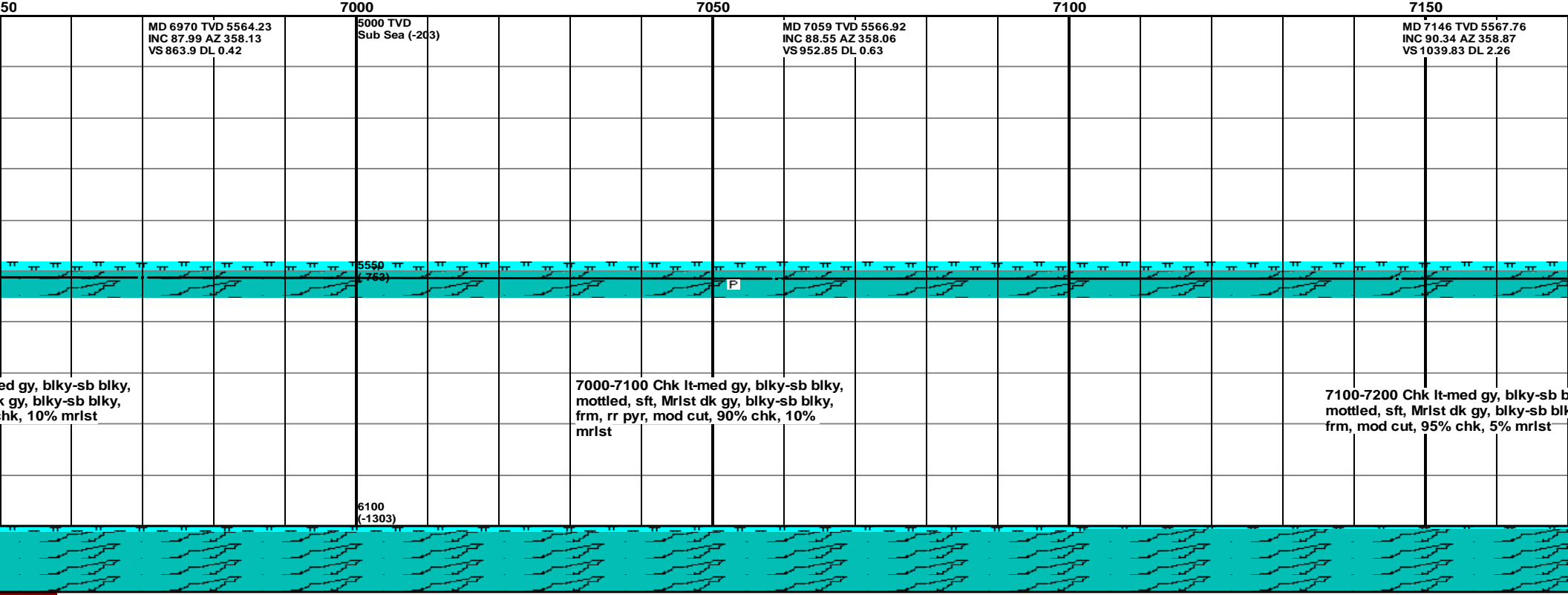
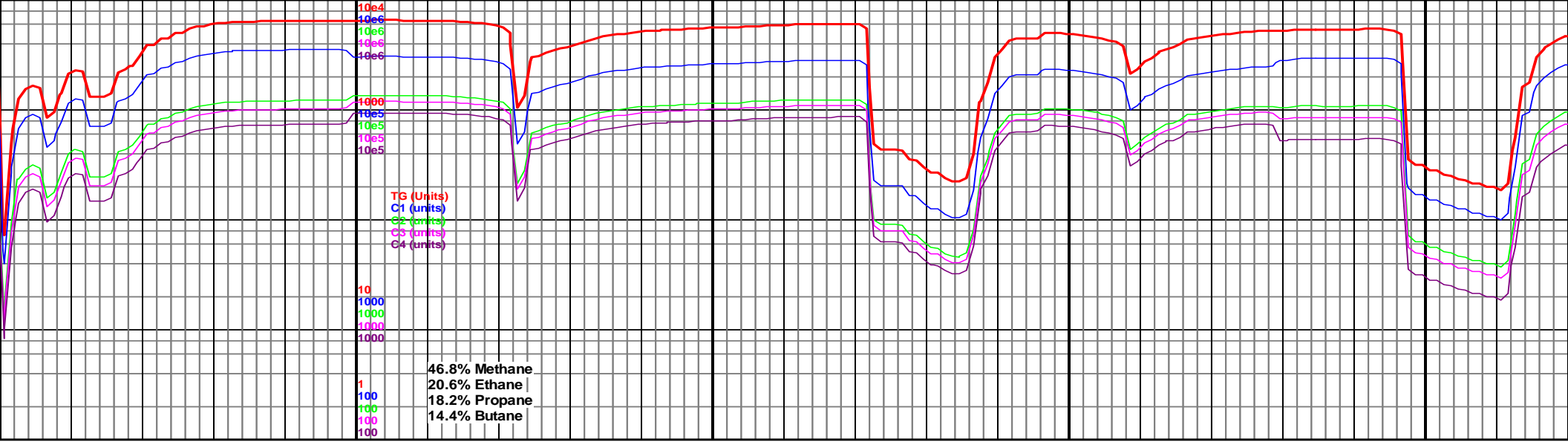


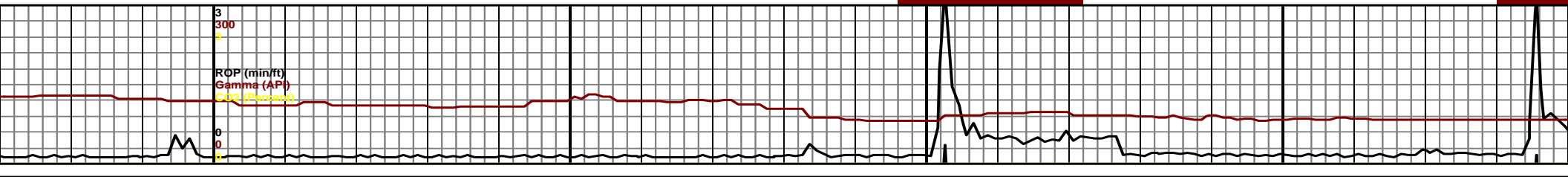
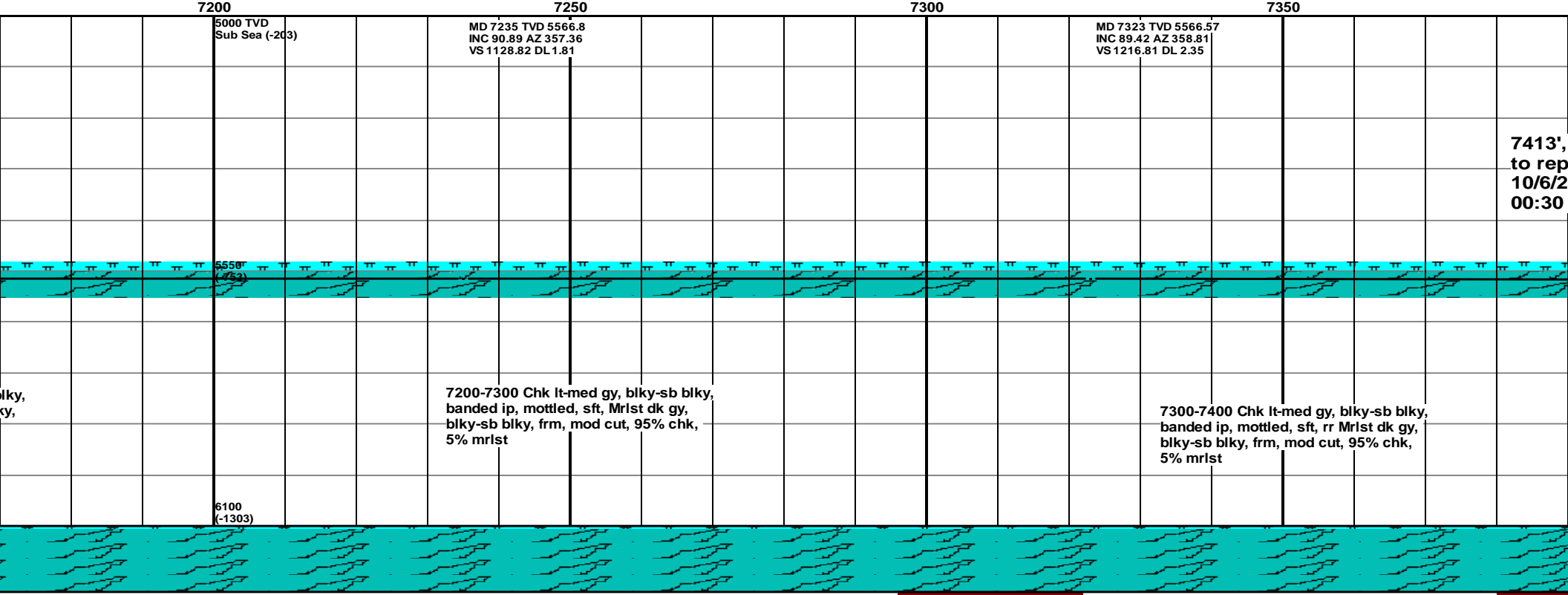
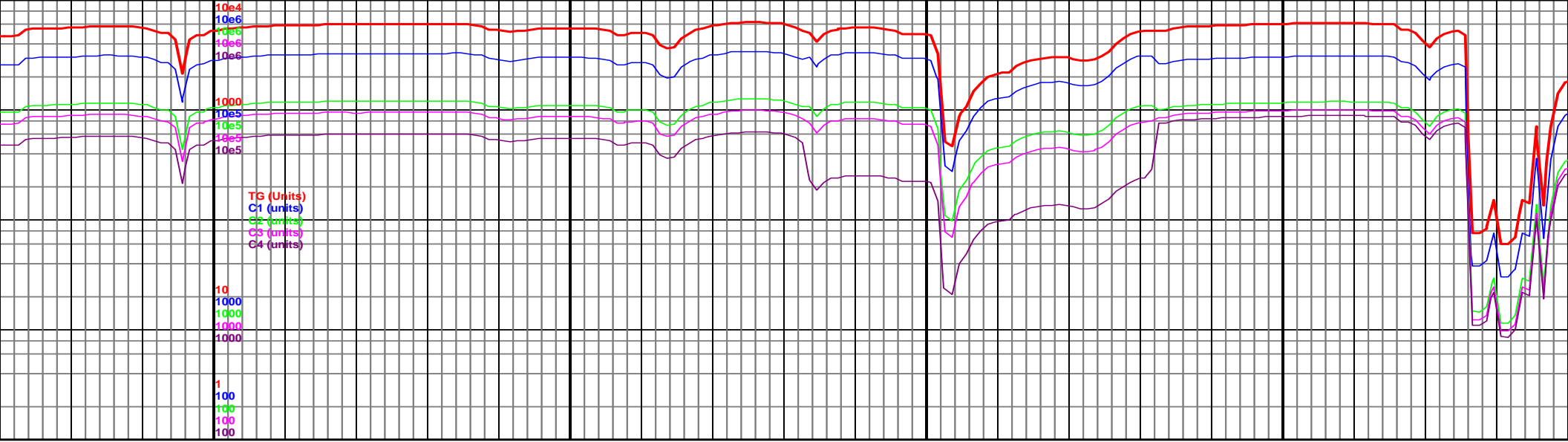


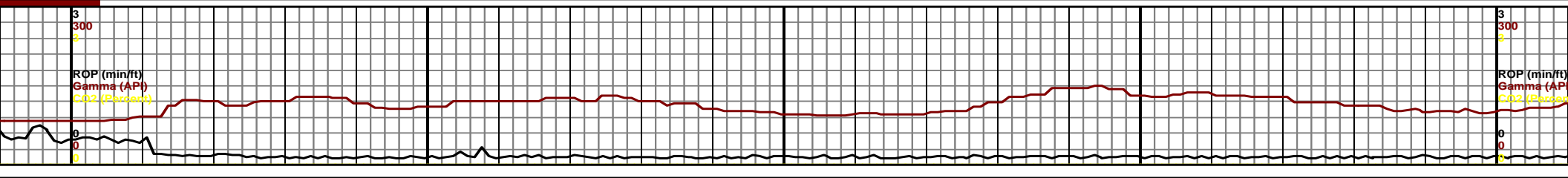
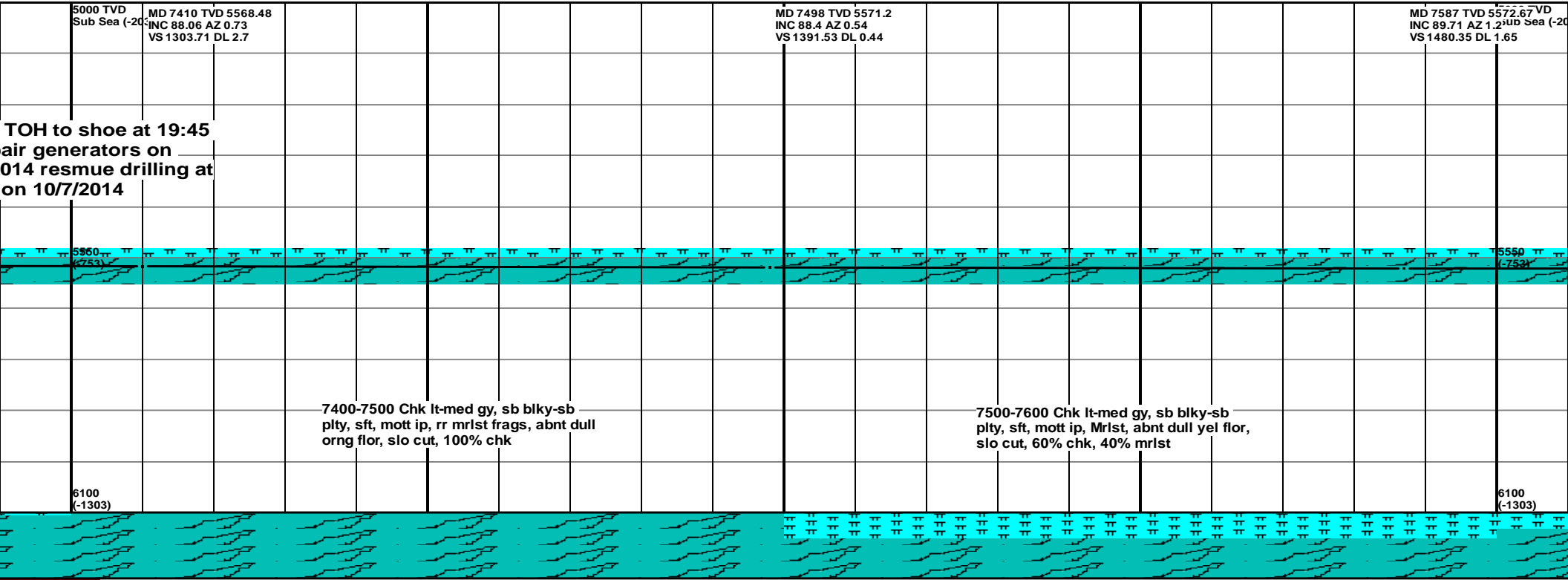
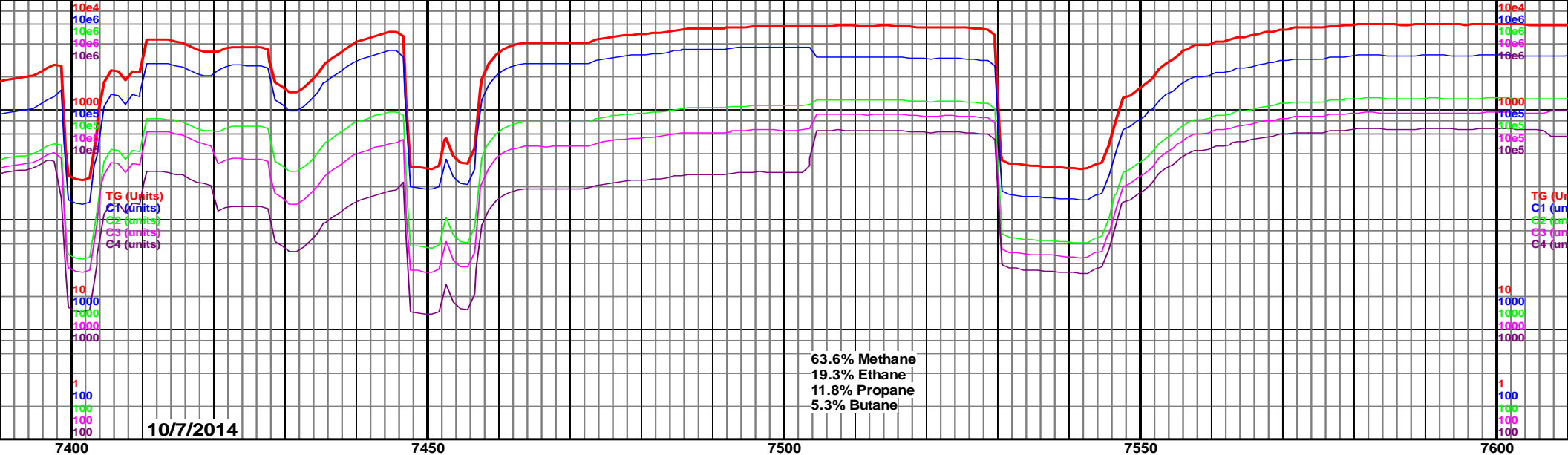


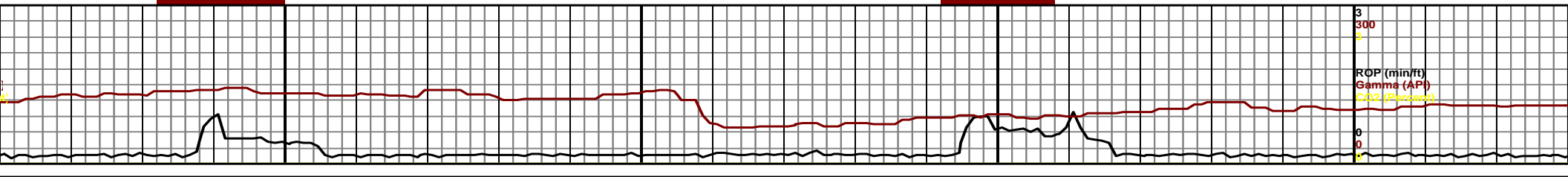
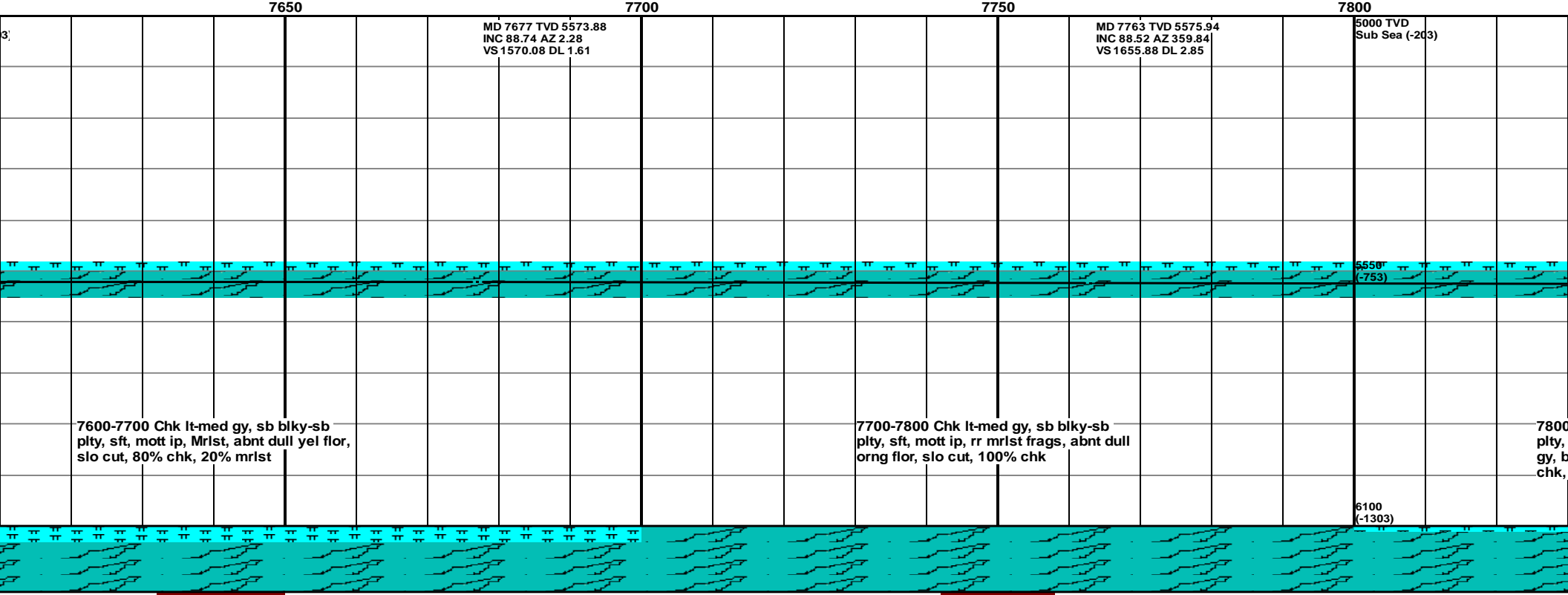
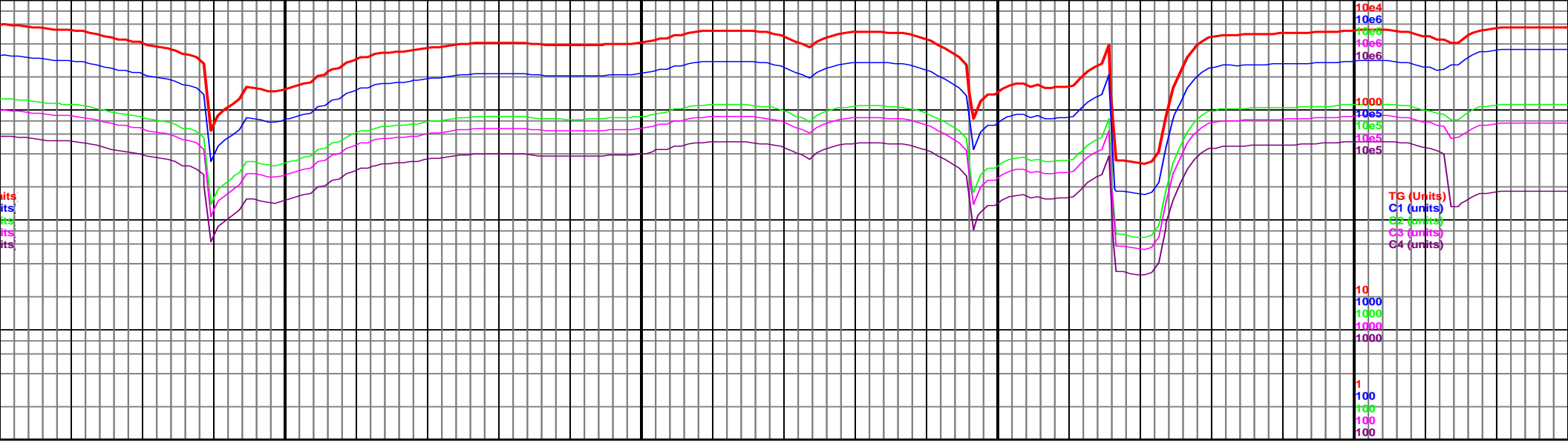


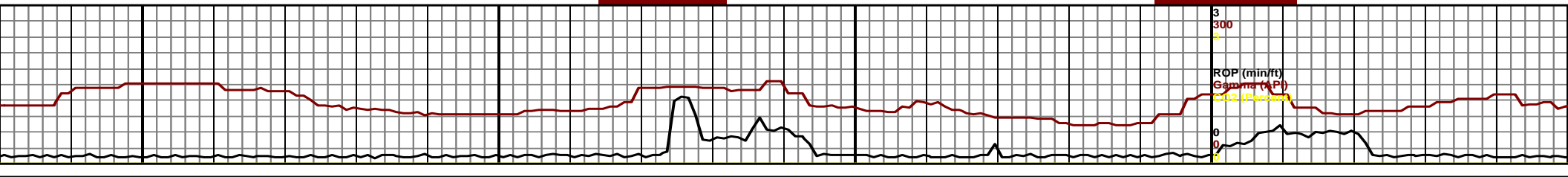
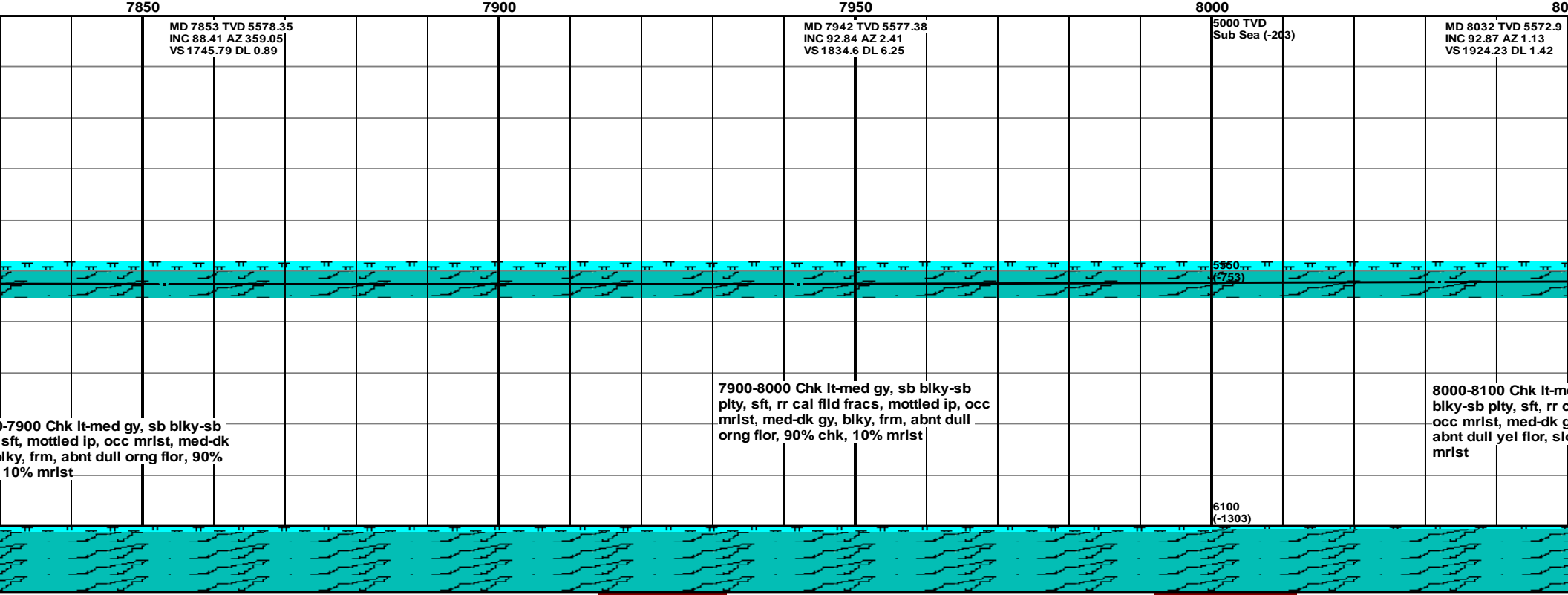
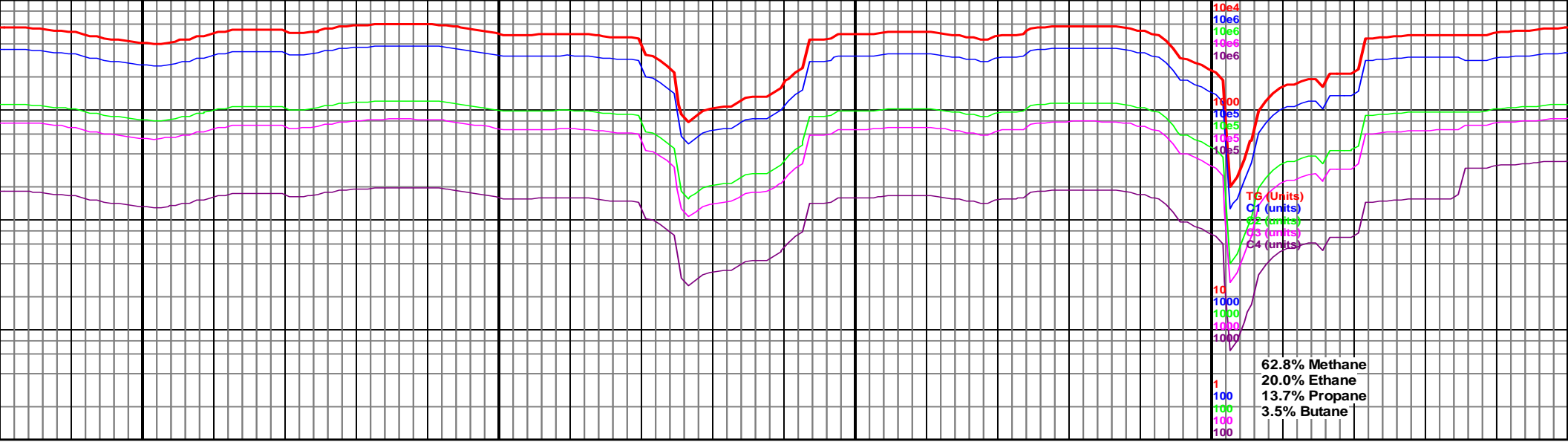


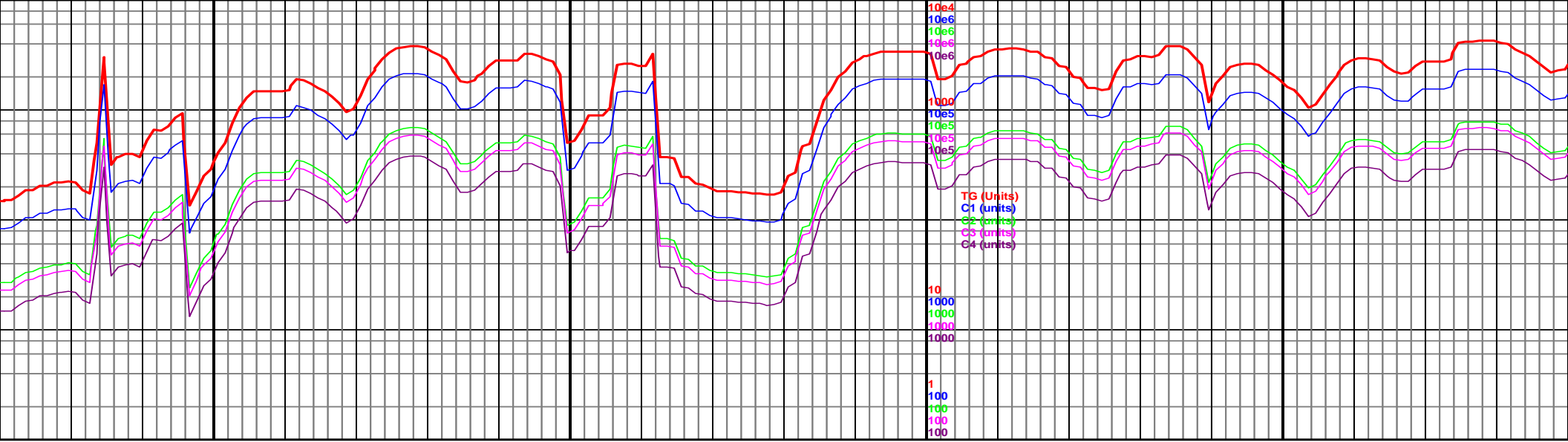












8300

8350

8400

8450

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INC 87.22 AZ 359.67
VS 2189.55 DL 2.91

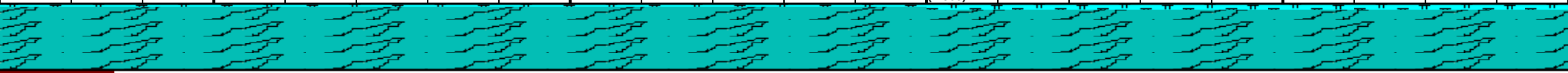
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INC 87.62 AZ 359.77 Sea (-203)
VS 2277.39 DL 0.47

MD 8475 TVD 5574.84 TVD
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VS 2366.27 DL 1.2

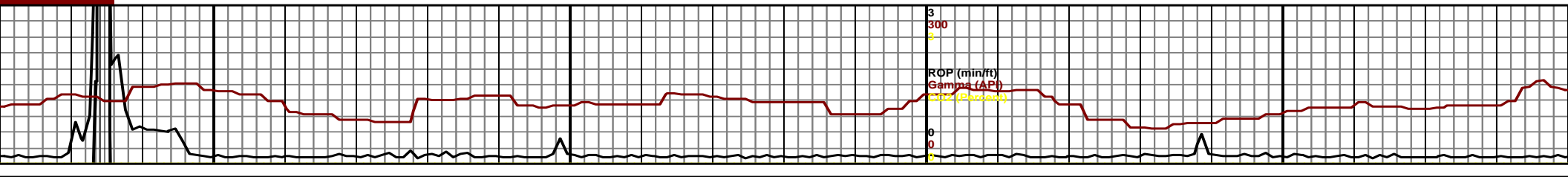


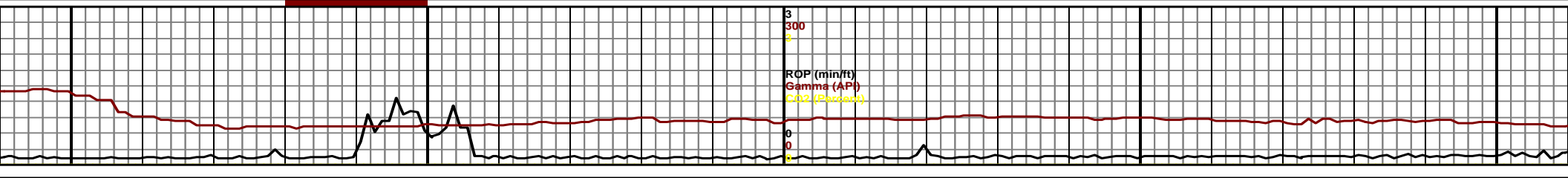
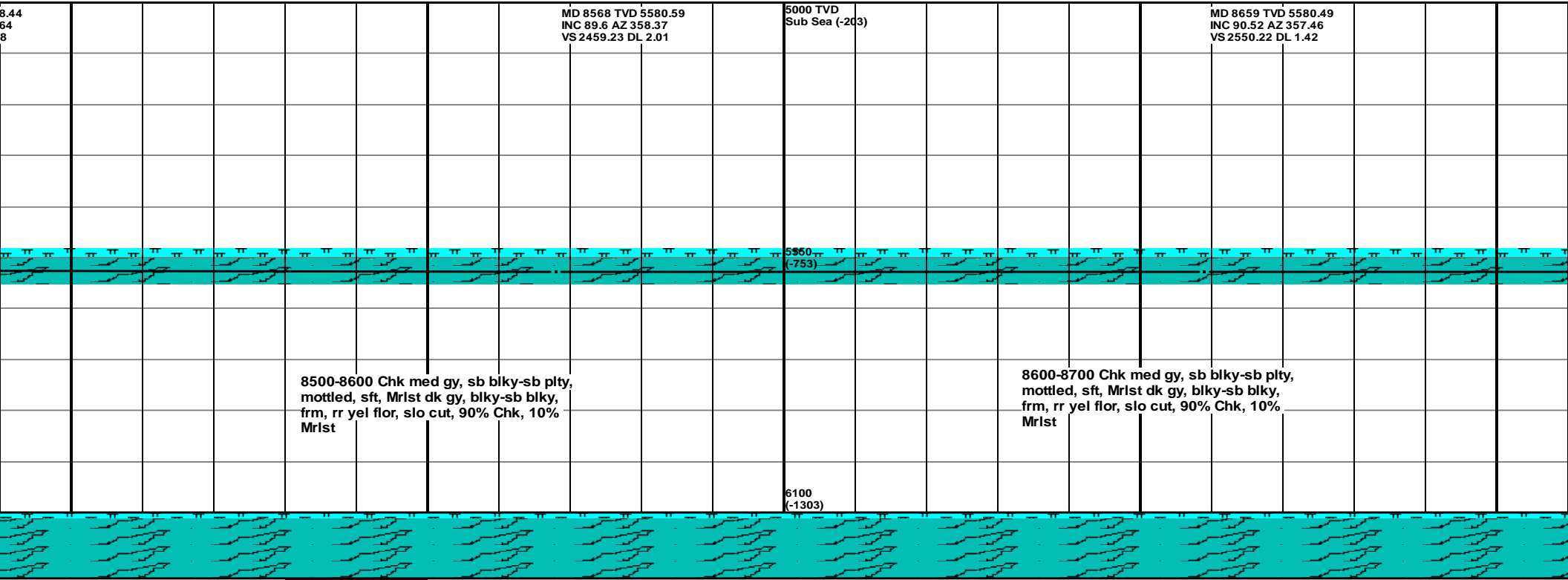
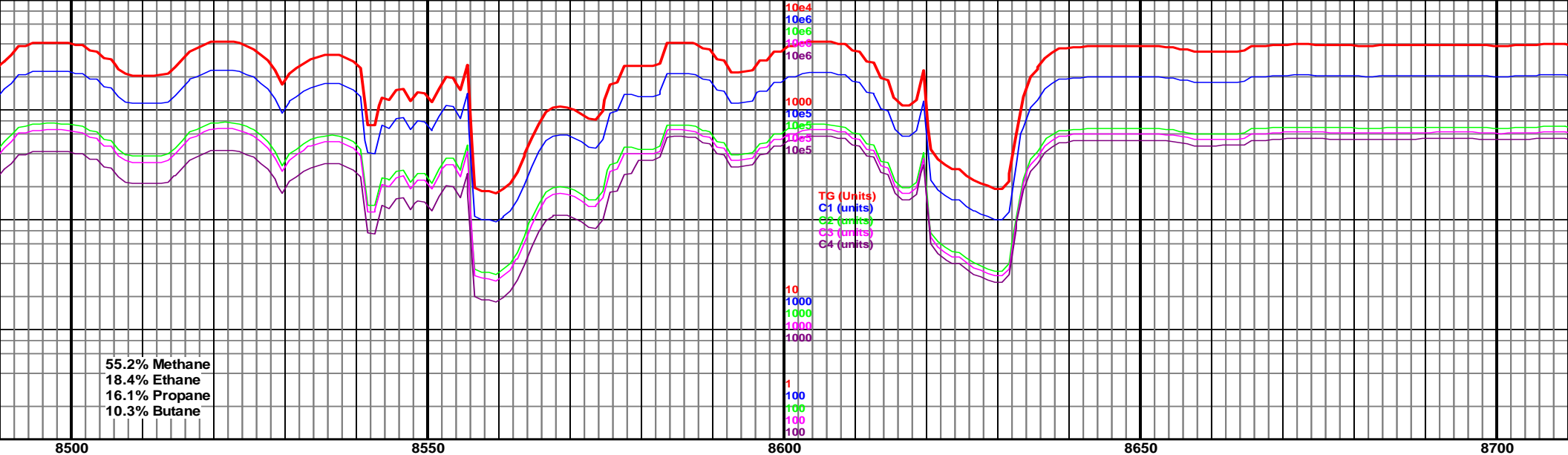
8300-8400 Chk lt-med gy, sb blkly-sb
plty, mottled, sft, Mrlst dk gy, blkly-sb
blkly, frm, rr dull yel flor, slo cut, 95%
Chk, 5% Mrlst

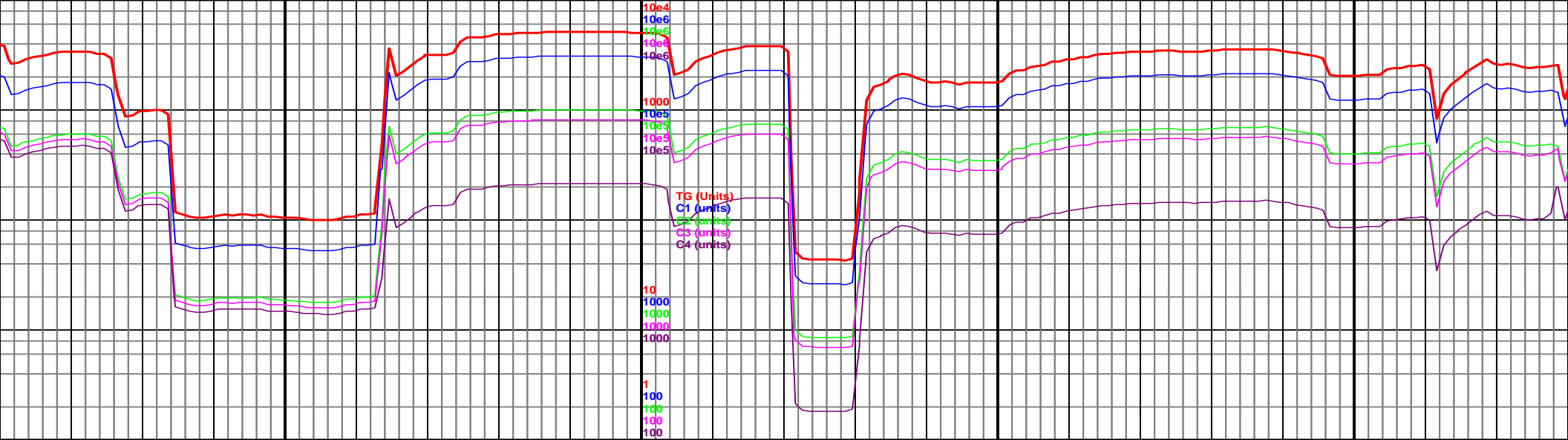
8400-8500 Chk med gy, sb blkly-sb plty,
mottled, sft, Mrlst dk gy, blkly-sb blkly,
frm, rr dull yel flor, slo cut, 90% Chk,
10% Mrlst



6100
(-1303)







8750

8800

8850

8900

MD 8752 TVD 5580.57
INC 89.38 AZ 358.28
VS 2643.21 DL 1.51

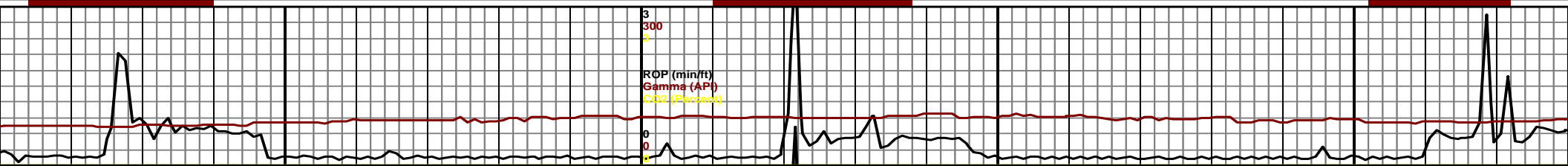
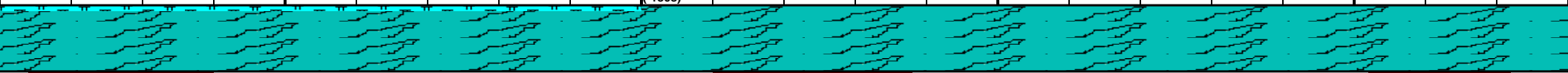
5000 TVD
Sub Sea (-203)

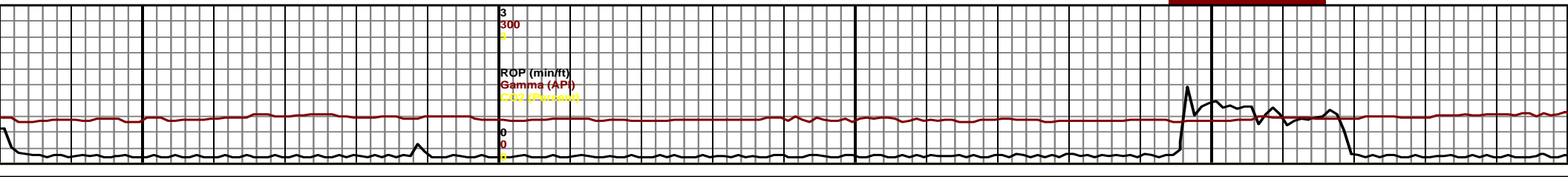
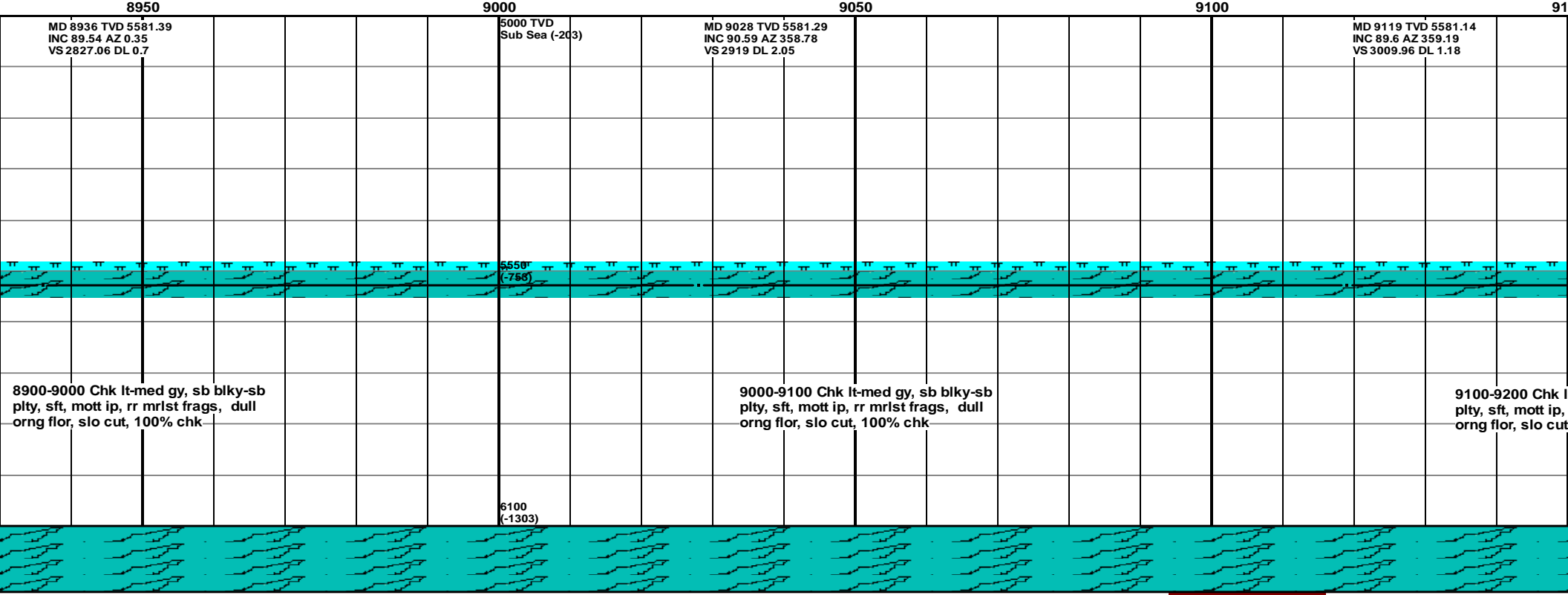
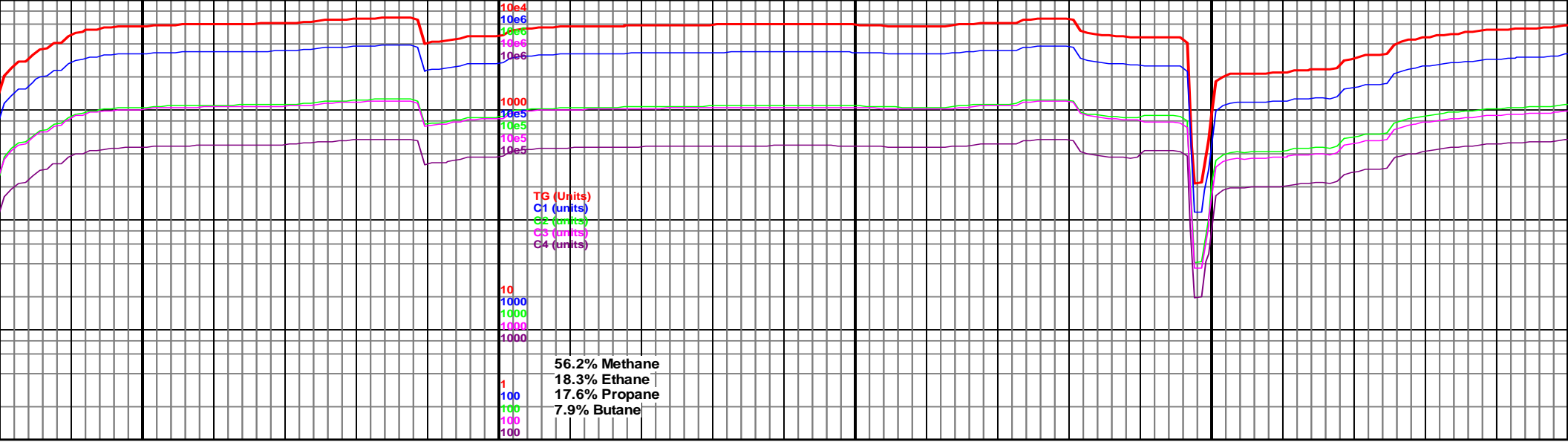
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INC 90.03 AZ 359.93
VS 2735.17 DL 1.93

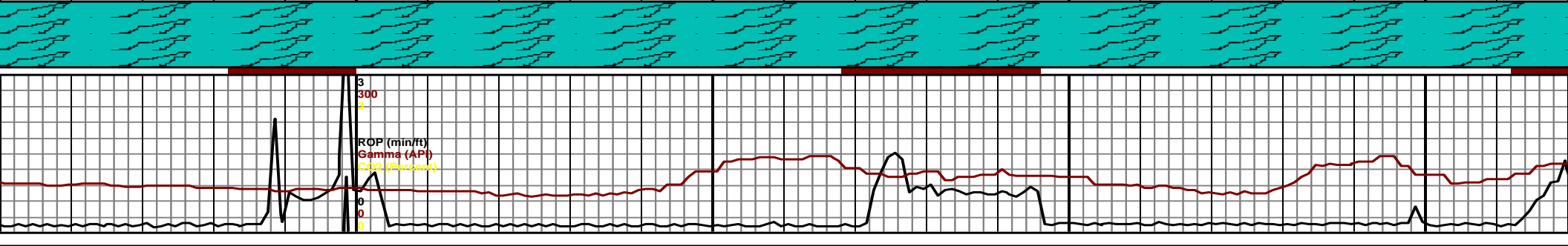
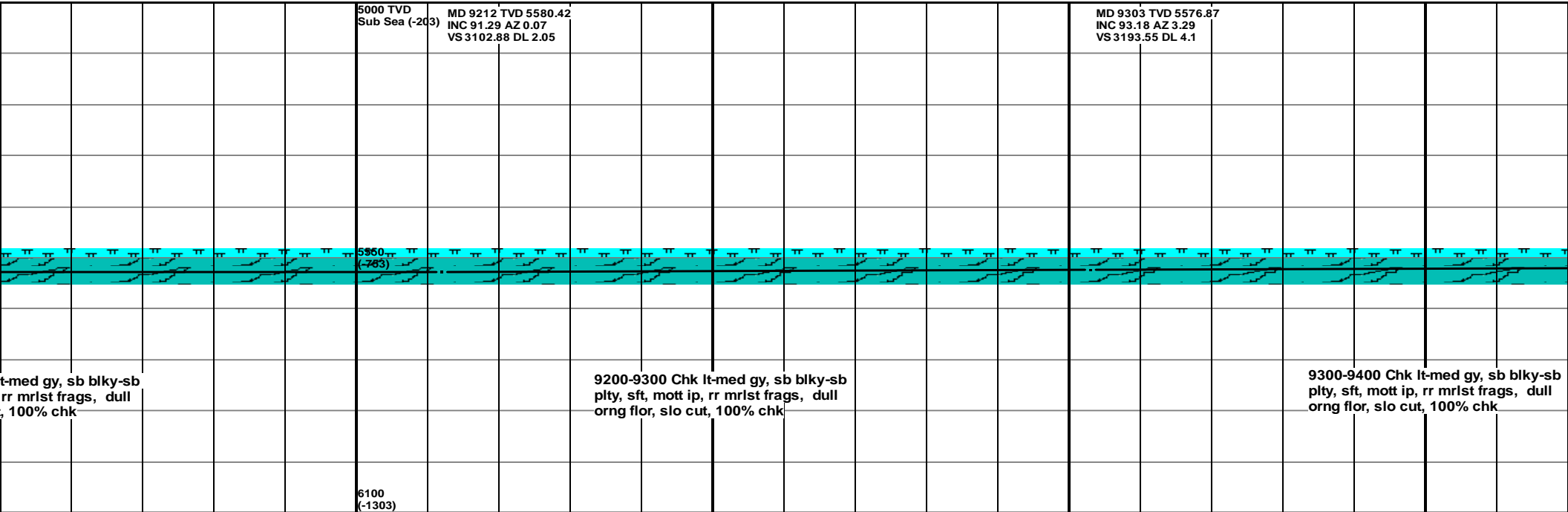
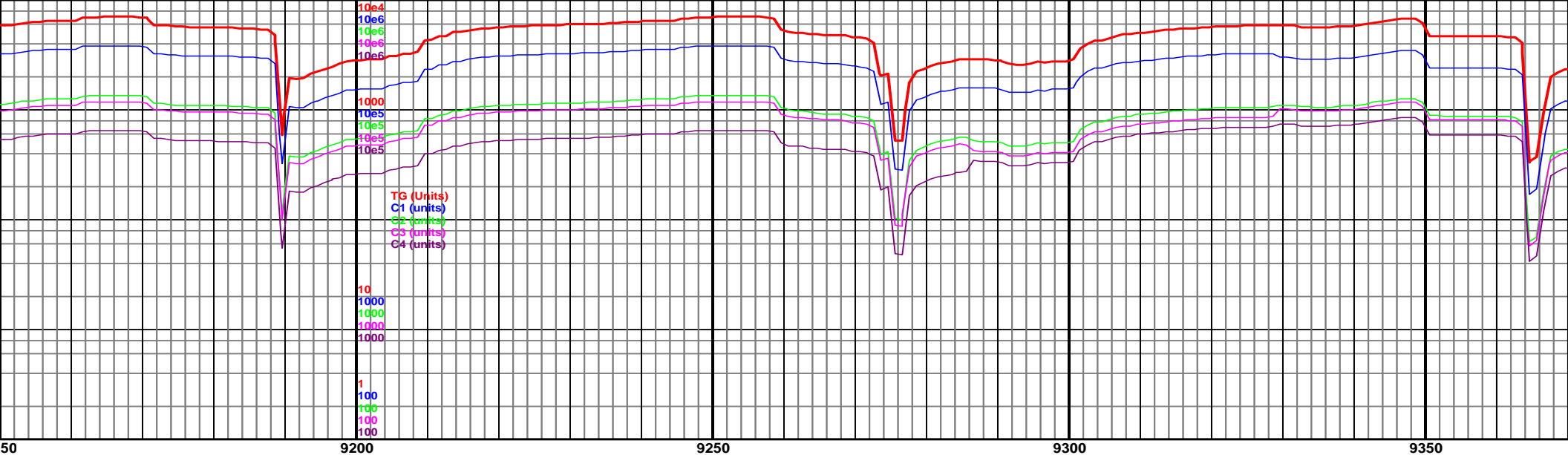
8700-8800 Chk med gy, sb blk-y-sb plty,
mottled, sft, Mrst dk gy, blk-y-sb blk-y,
frm, rr yel flr, slo cut, 90% Chk, 10%
Mrst

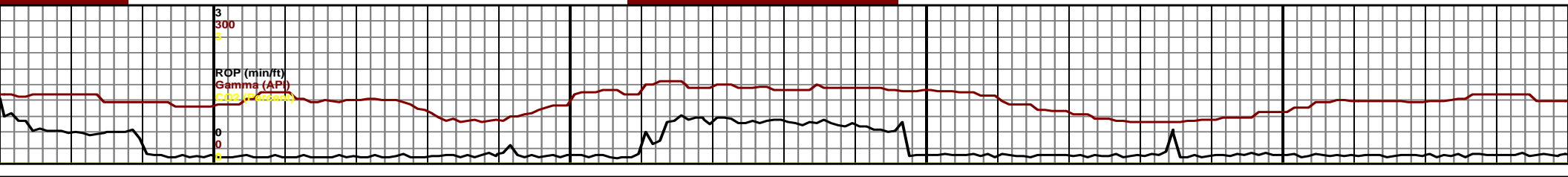
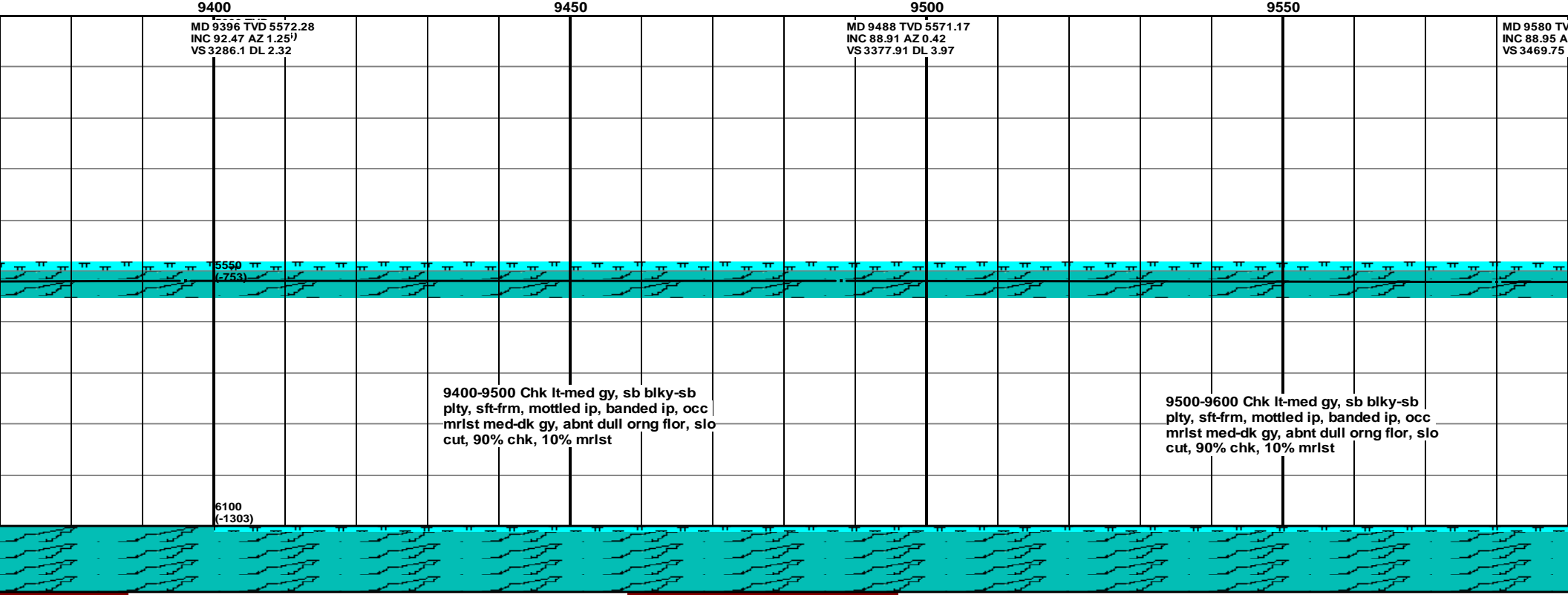
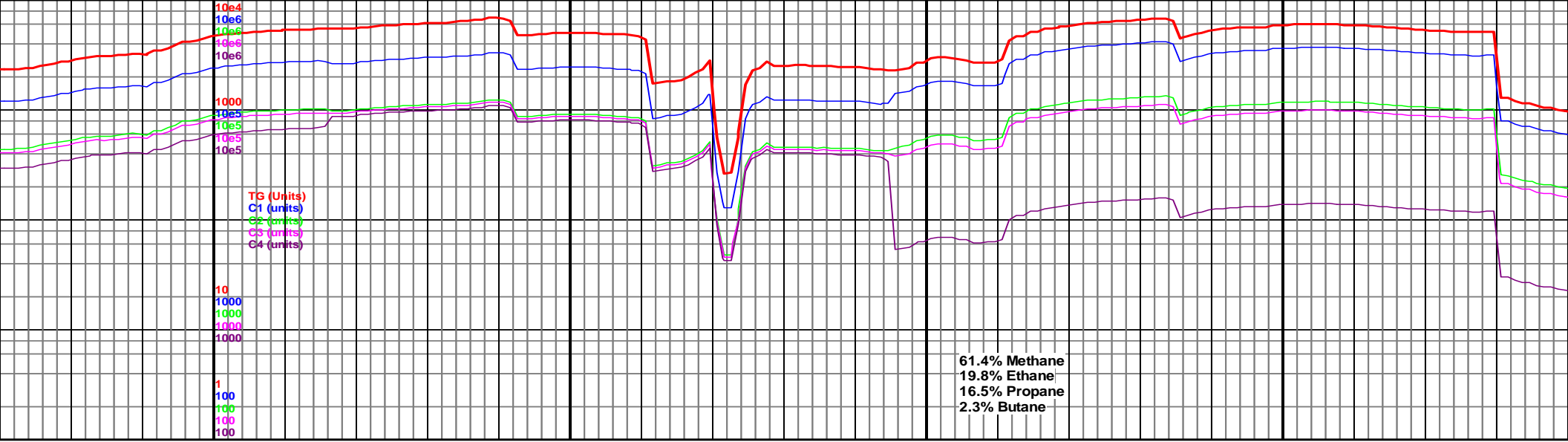
8800-8900 Chk lt-med gy, sb blk-y-sb
plty, sft, mott ip, rr mrst frags, dull
orng flr, slo cut, 100% chk.

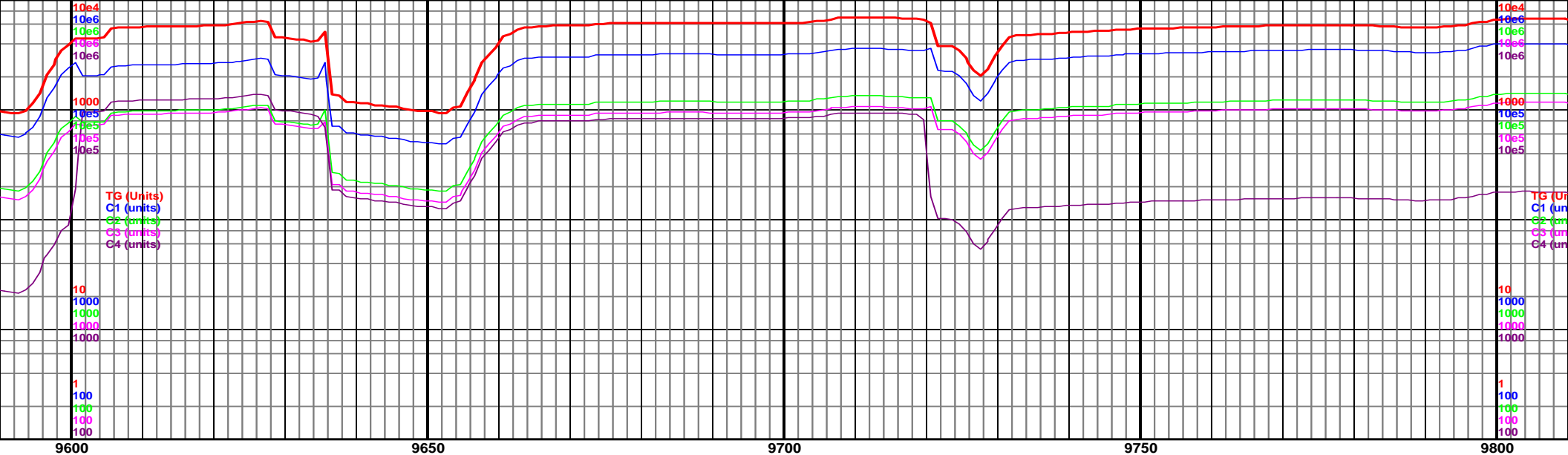
6100
(-1303)



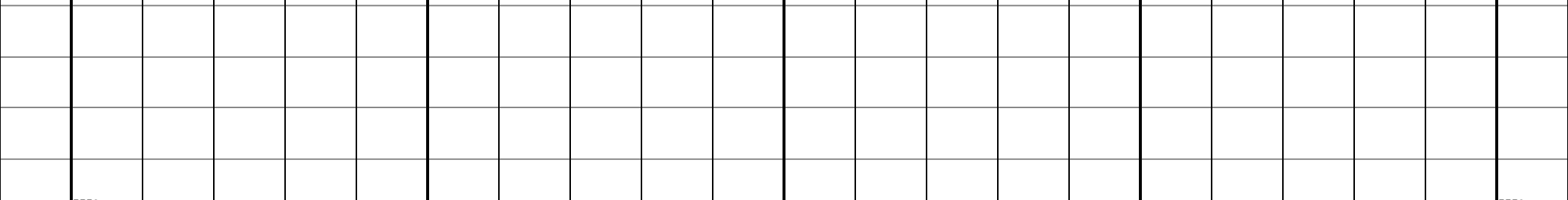






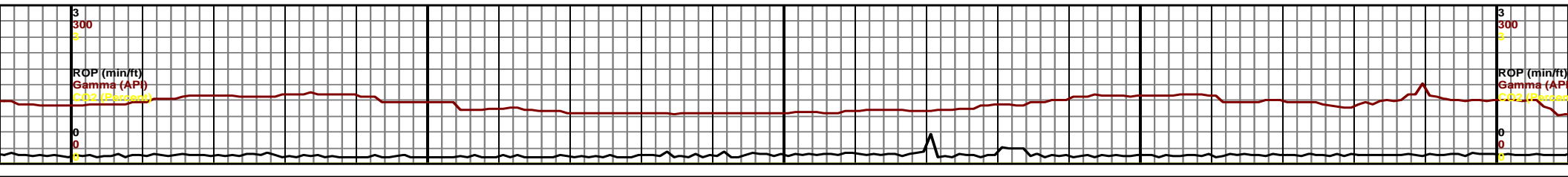
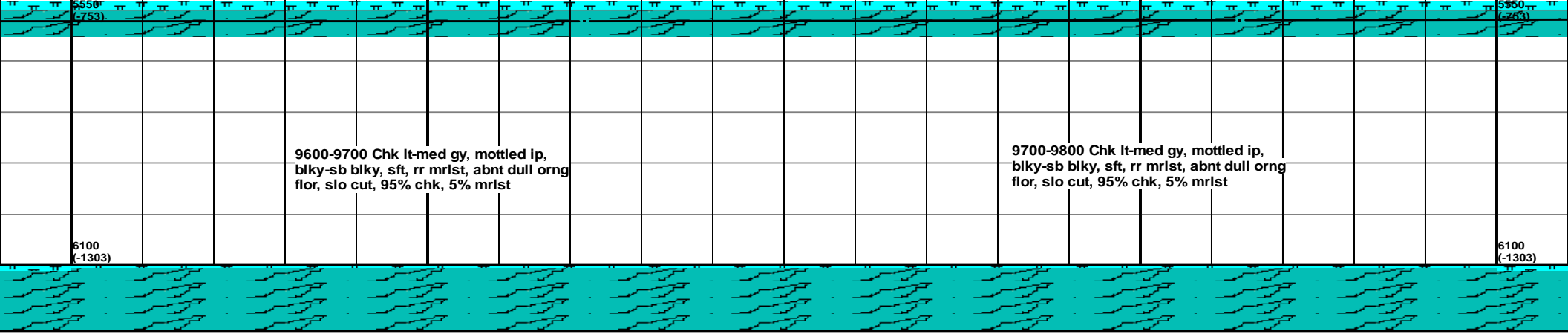


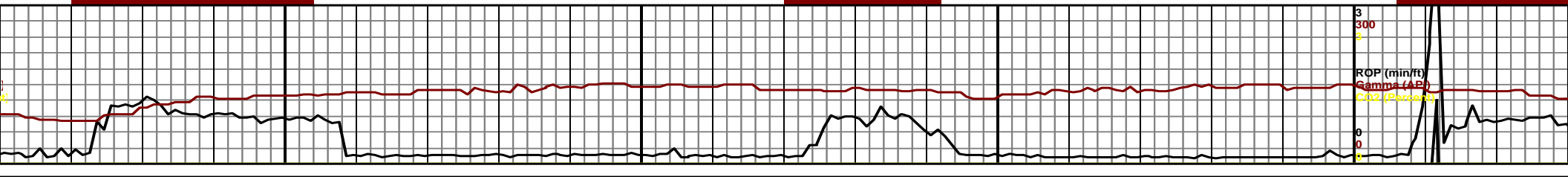
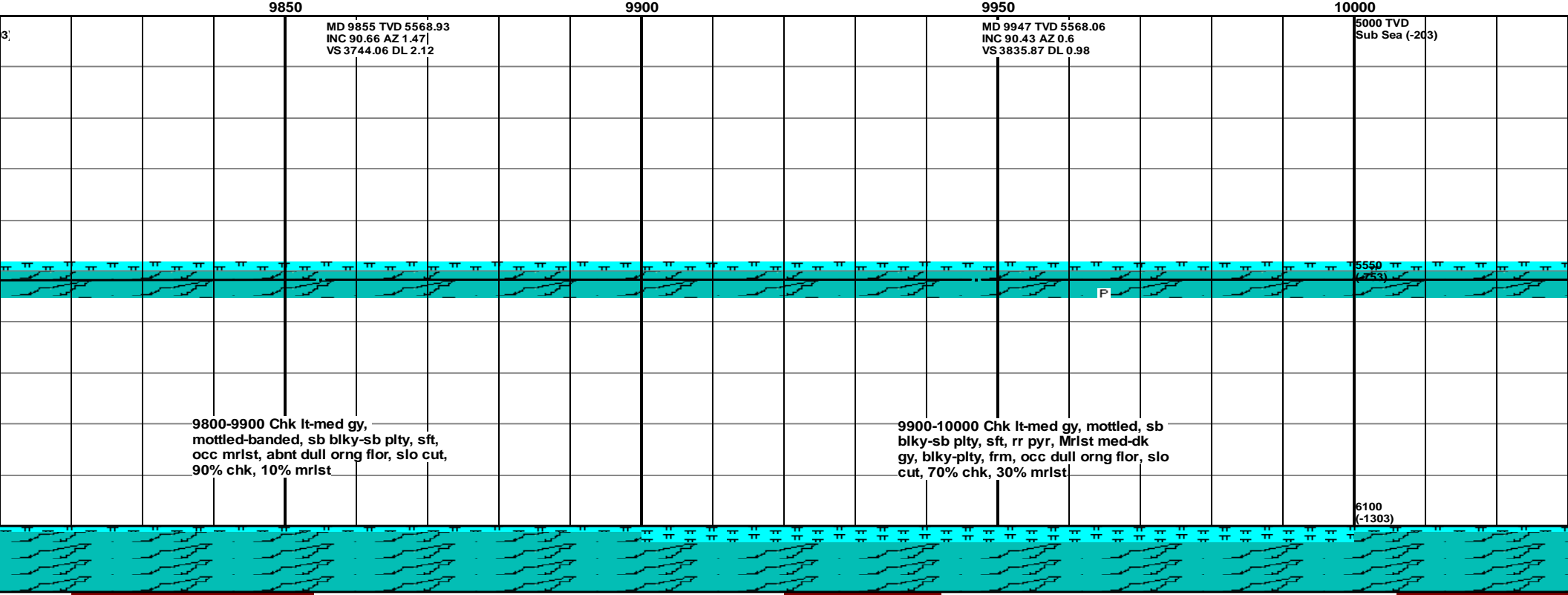
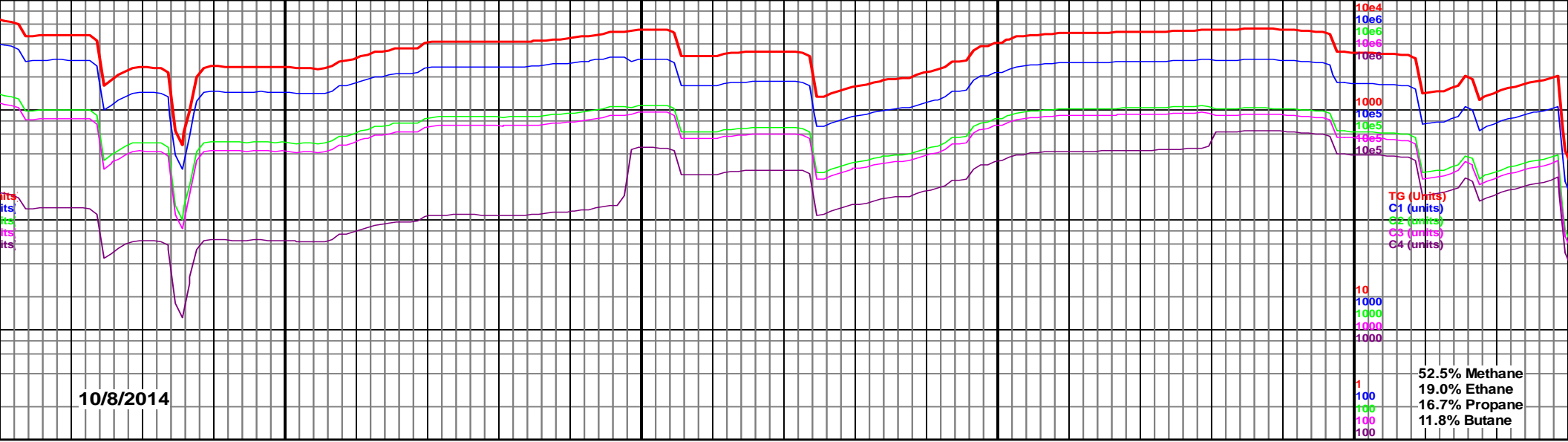
MD 5572.89 Z 0.9 DL 0.52	5000 TVD Sub Sea (-203)	MD 9672 TVD 5573.66 INC 90.09 AZ 1.04 VS 3561.57 DL 1.25	MD 9764 TVD 5571.51 INC 92.59 AZ 1.46 VS 3653.33 DL 2.76	5000 TVD Sub Sea (-203)
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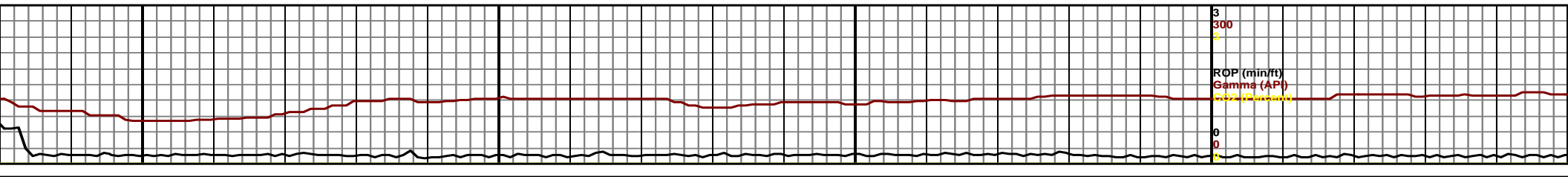
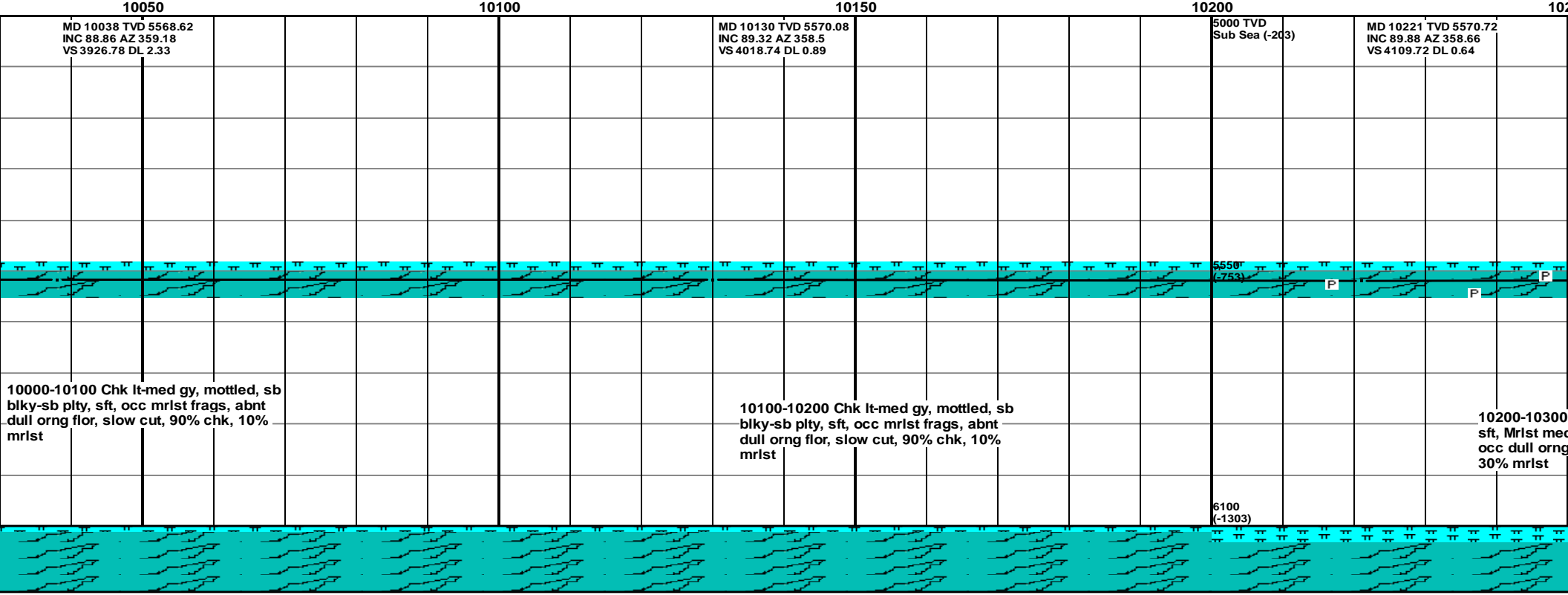
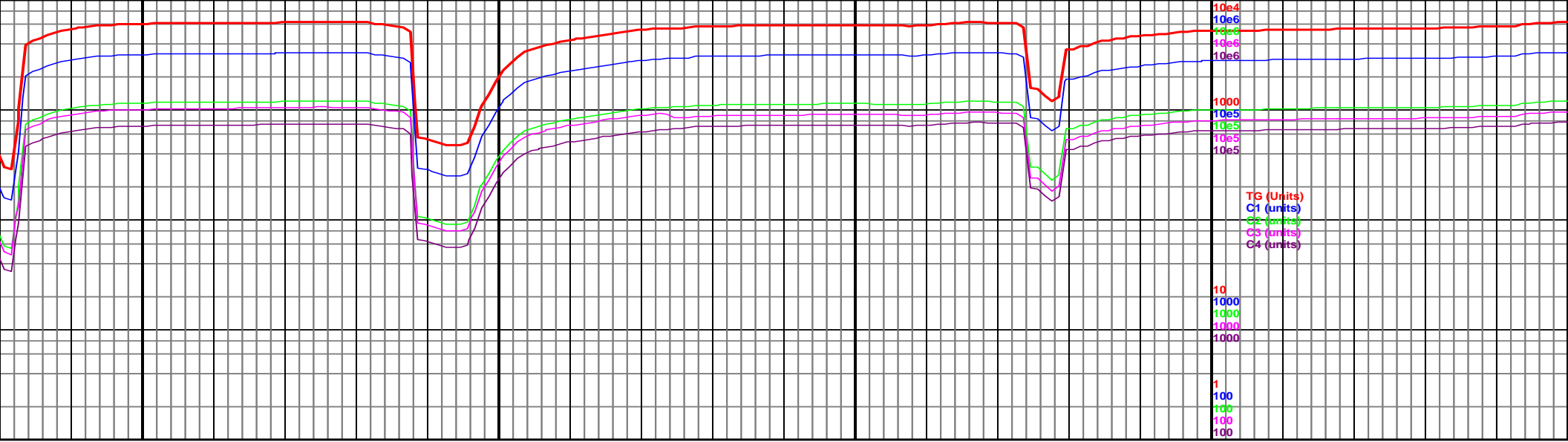


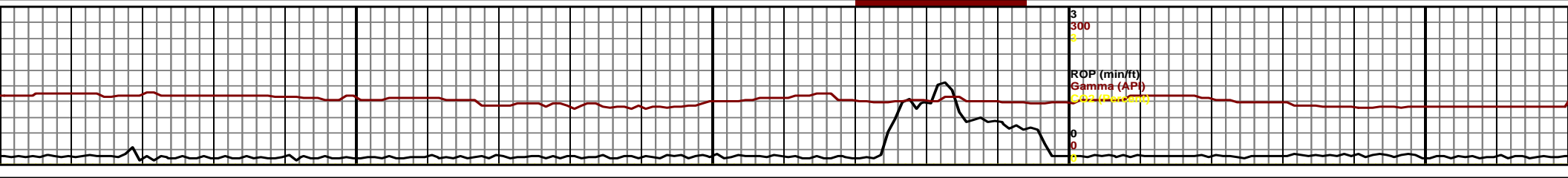
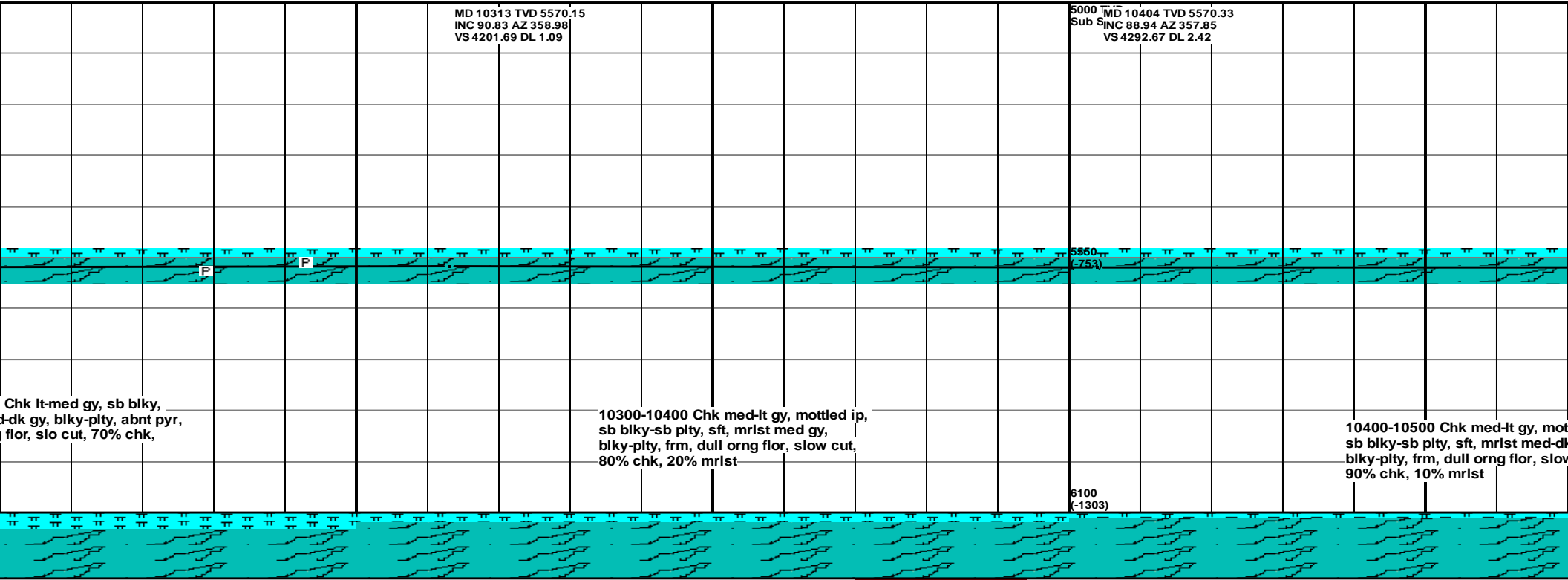
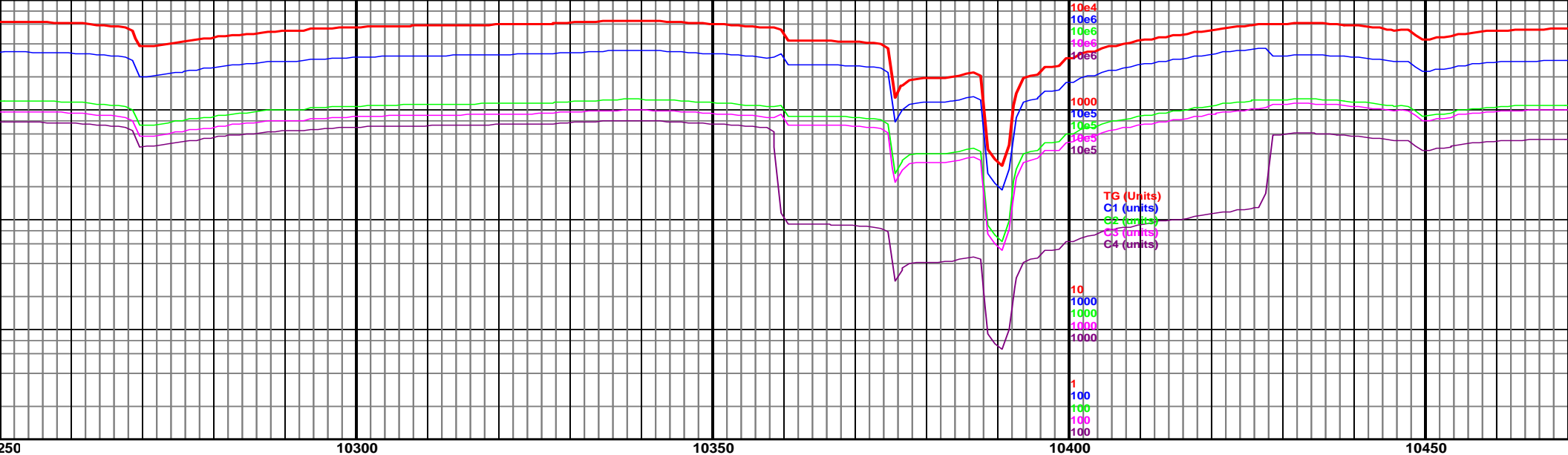
9600-9700 Chk lt-med gy, mottled ip,
blky-sb blky, sft, rr mrlst, abnt dull orng
flor, slo cut, 95% chk, 5% mrlst

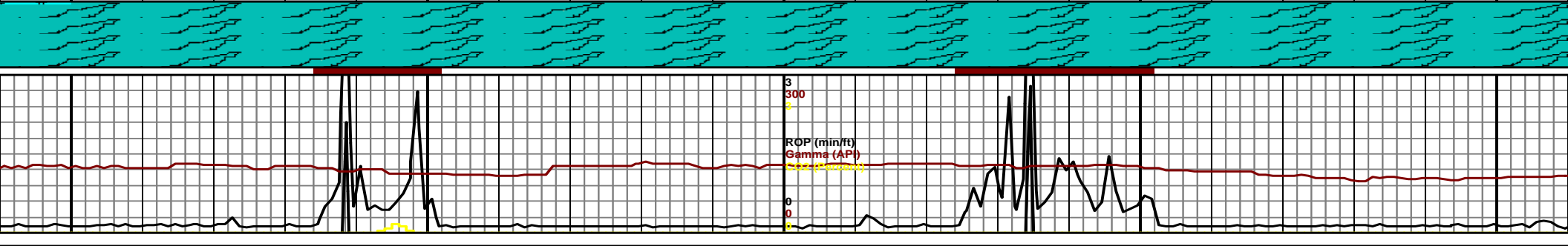
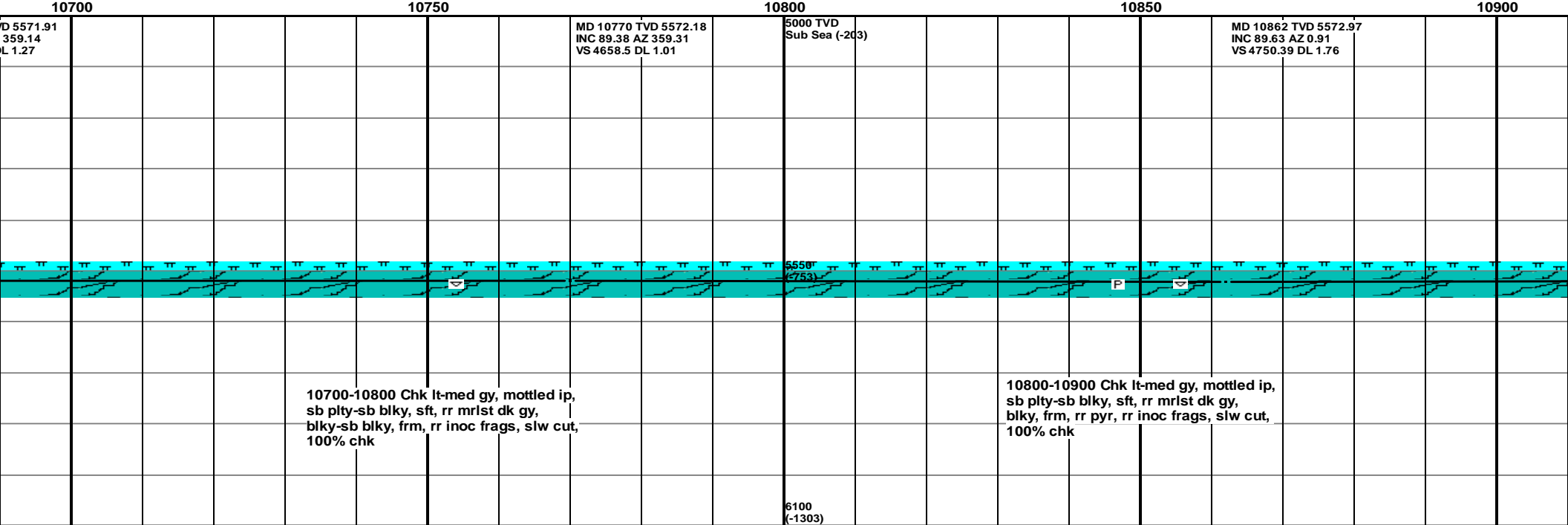
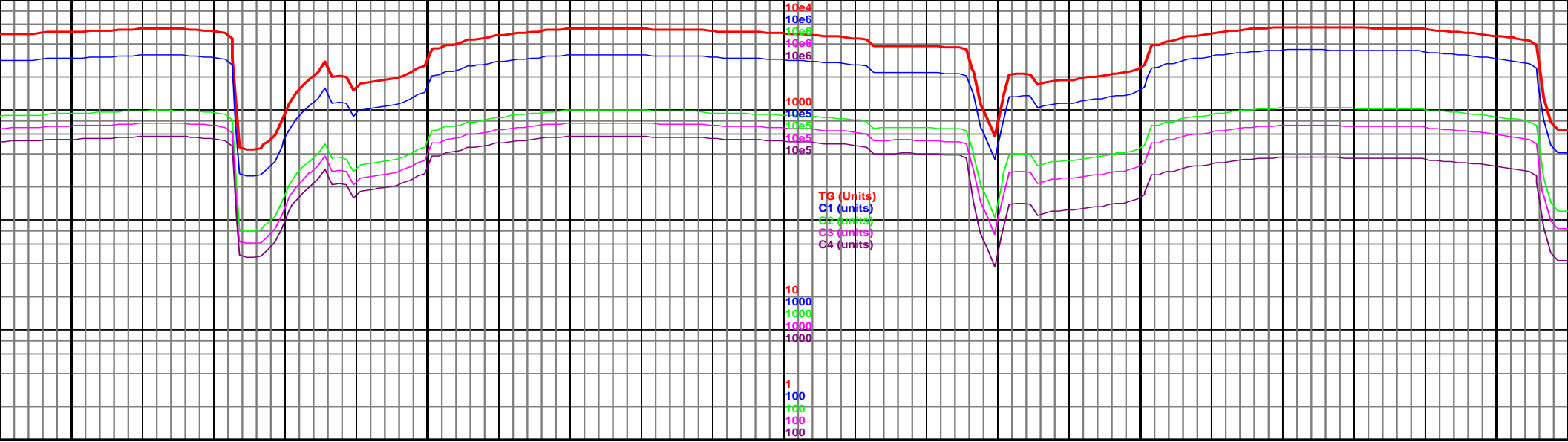
9700-9800 Chk lt-med gy, mottled ip,
blky-sb blky, sft, rr mrlst, abnt dull orng
flor, slo cut, 95% chk, 5% mrlst

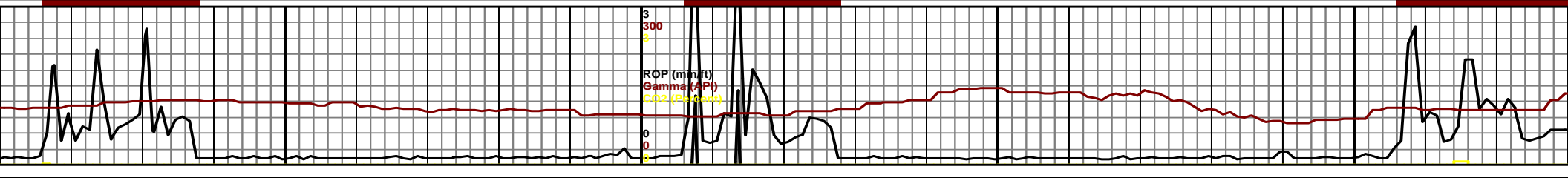
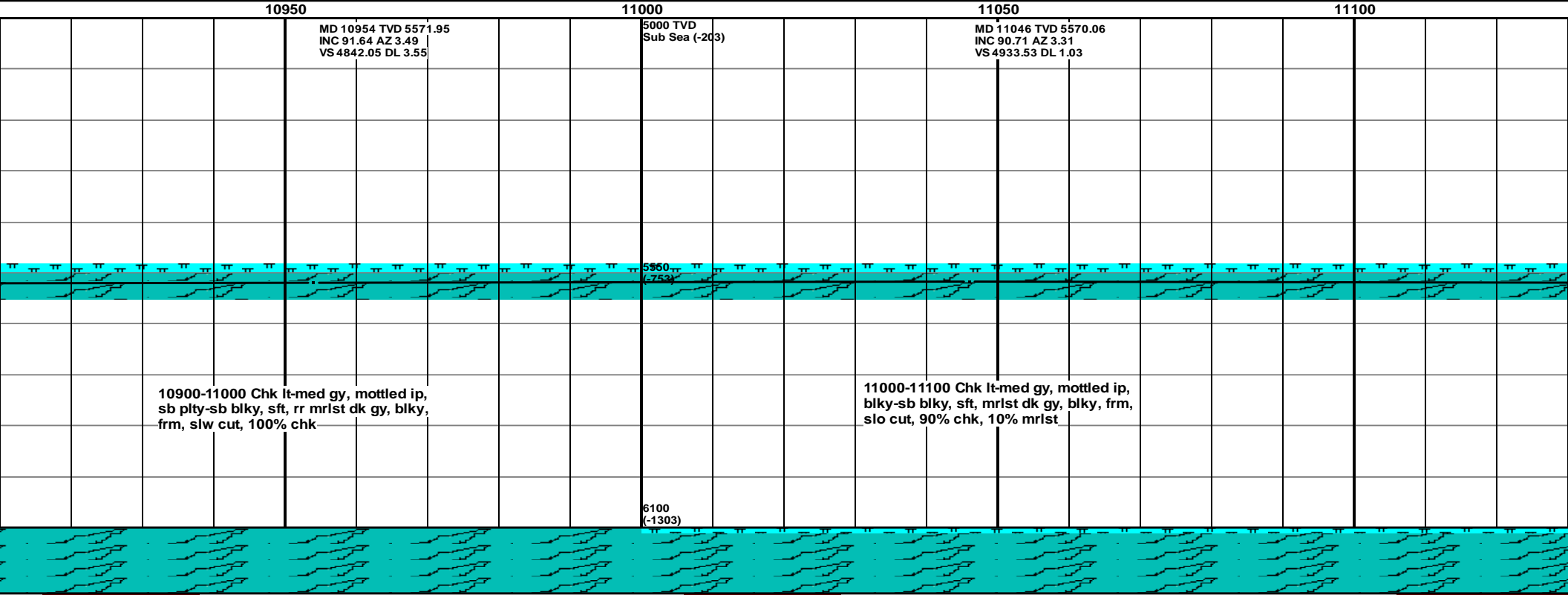
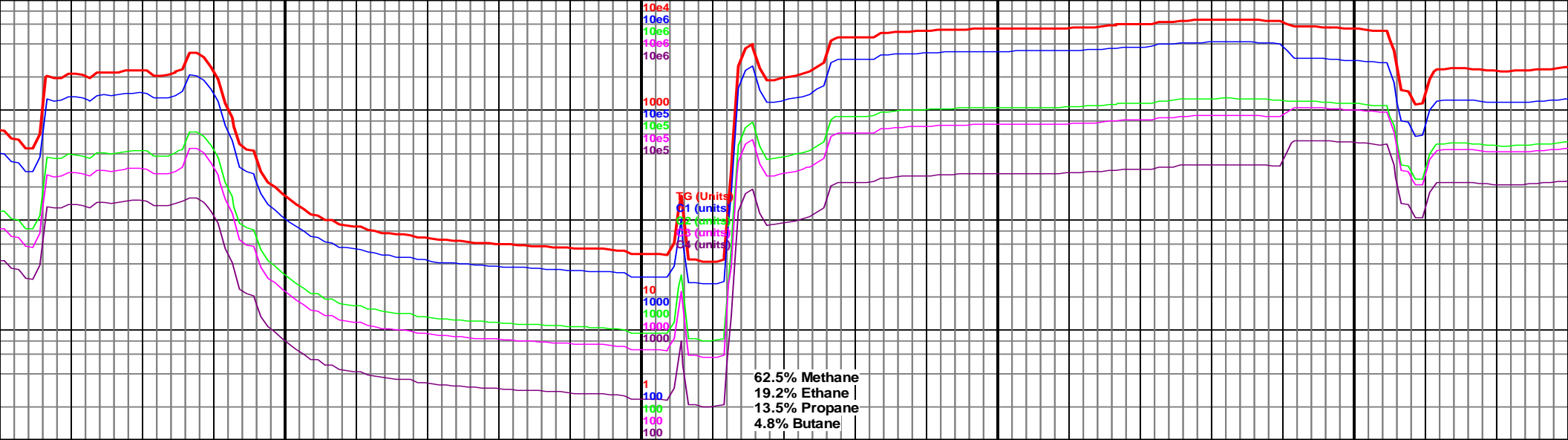


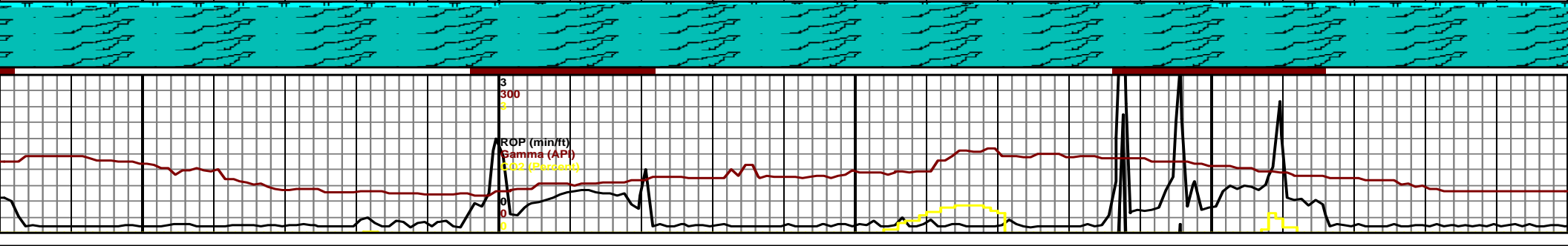
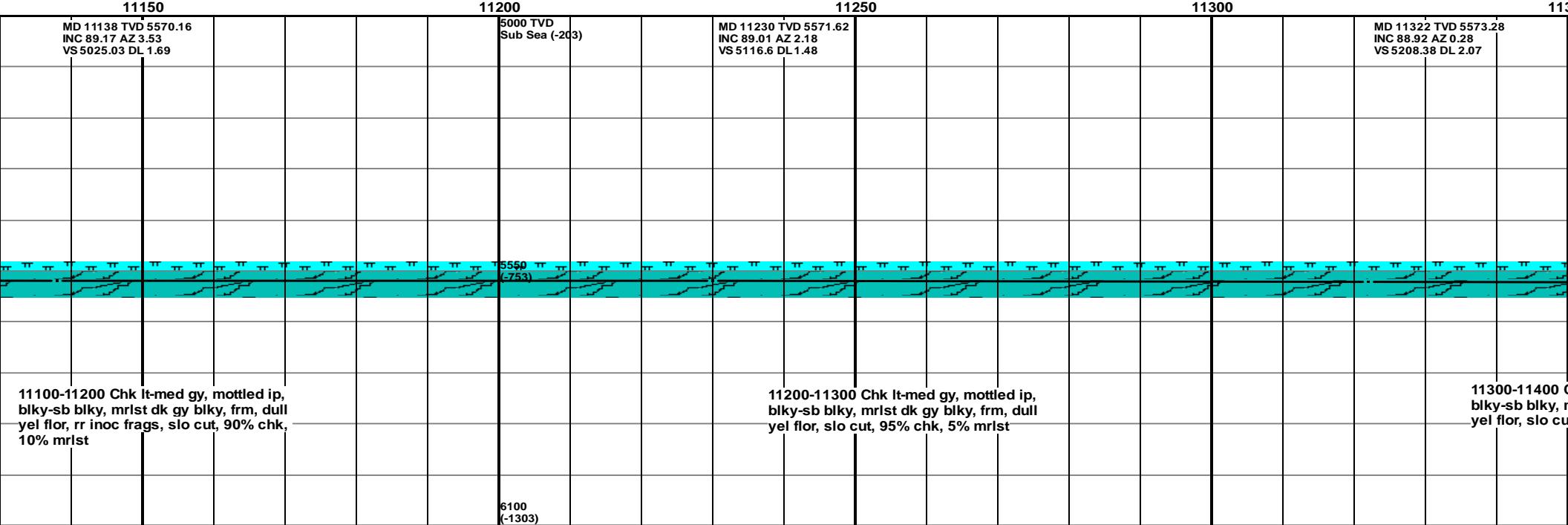
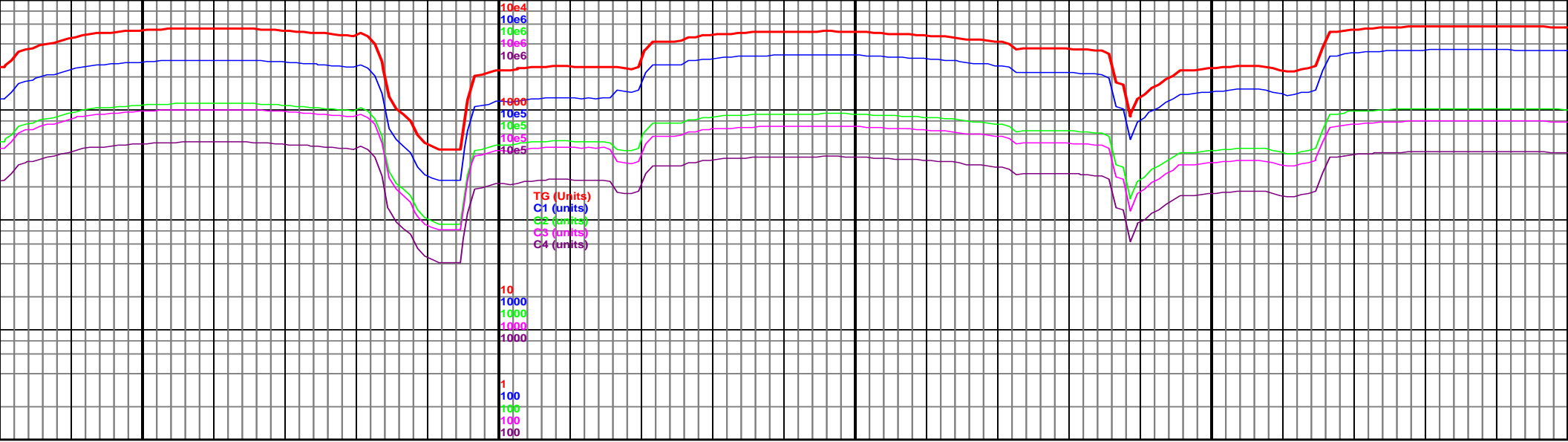


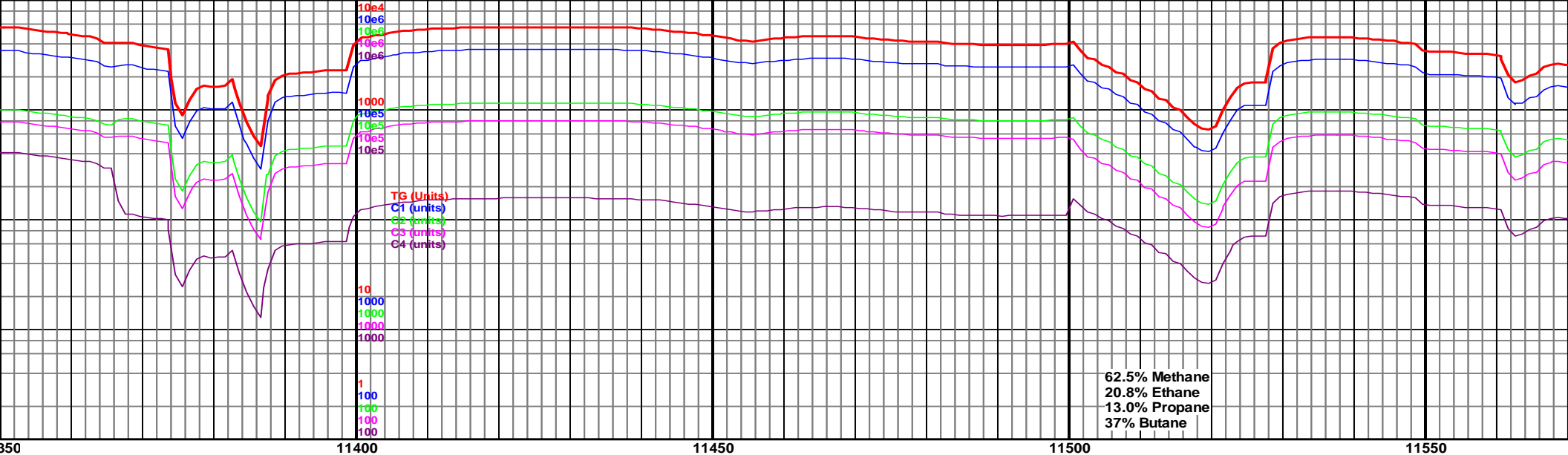








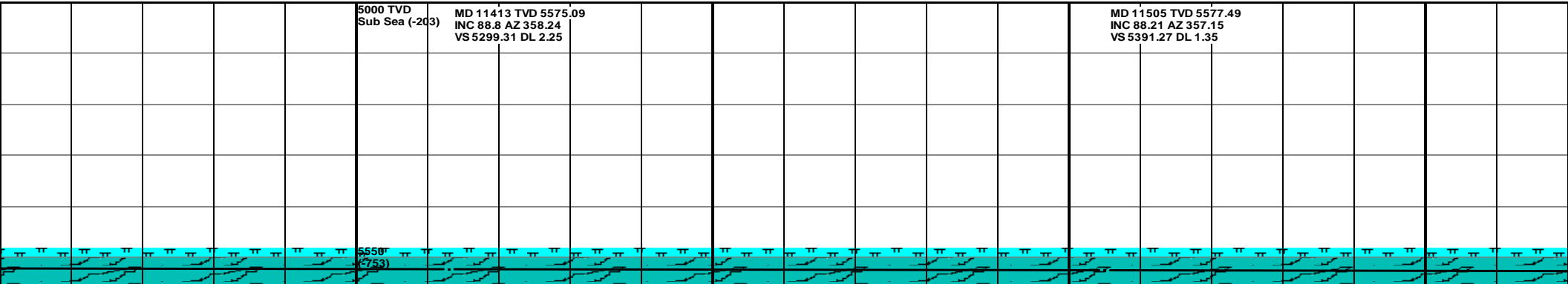




62.5% Methane
20.8% Ethane
13.0% Propane
37% Butane

5000 TVD Sub Sea (-203)	MD 11413 TVD 5575.09 INC 88.8 AZ 358.24 VS 5299.31 DL 2.25
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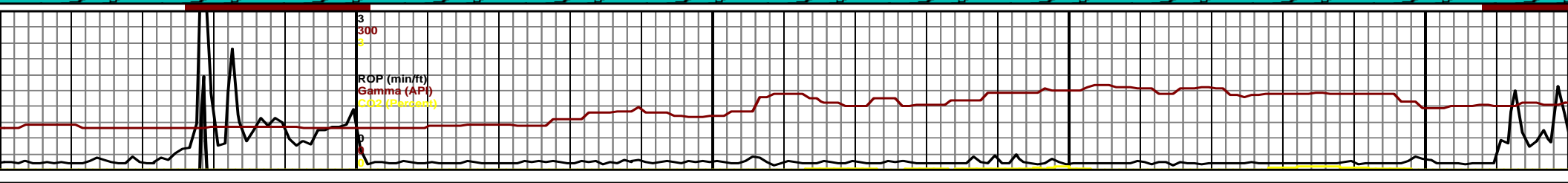
MD 11505 TVD 5577.49
INC 88.21 AZ 357.15
VS 5391.27 DL 1.35

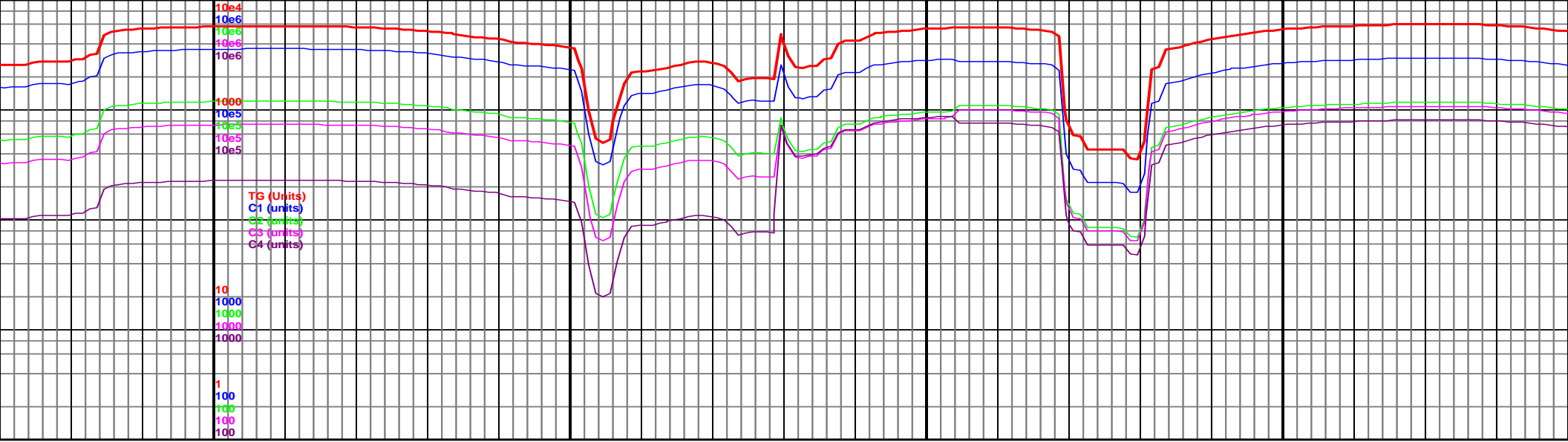


Chk lt-med gy, mottled ip,
mrlst dk gy blk, frm, dull
t, 90% chk, 10% mrlst

11400-11500 Chk lt-med gy, mottled ip, blk-y-sb blk-y, mrlst dk gy blk-y, frm, rr bent, dull yel flor, slo cut, 90% chk, 10% mrlst

11500-11600 Chk lt-med gy, mottled ip, blky-sb blky, mrlst dk gy blky, frm, dull yel flor, slo cut, 95% chk, 5% mrlst

6100
(-1303)



11600

11650

11700

11750

MD 11597 TVD 5579.9
INC 88.8 AZ 357.8
VS 5483.24 DL 0.95

MD 11689 TVD 5580.09
INC 90.96 AZ 359.42
VS 5575.21 DL 2.93

MD 11781
INC 91.11
VS 5667.15

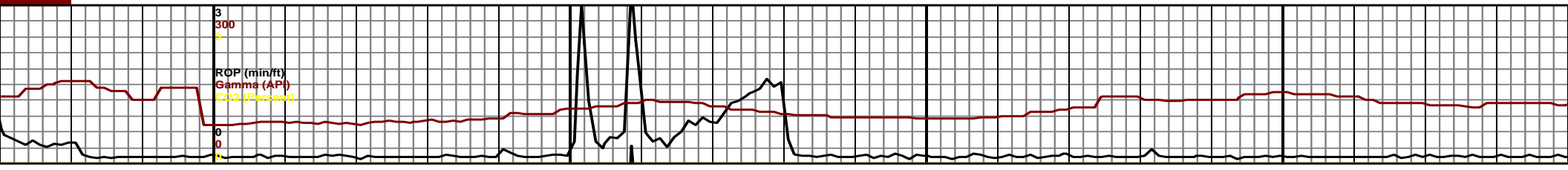


5860
(-753)

11600-11700 Chk lt-med gy, mottled ip,
blky-sb blky, mrlst dk gy blky, frm, dull
yel flor, slo cut, 95% chk, 5% mrlst

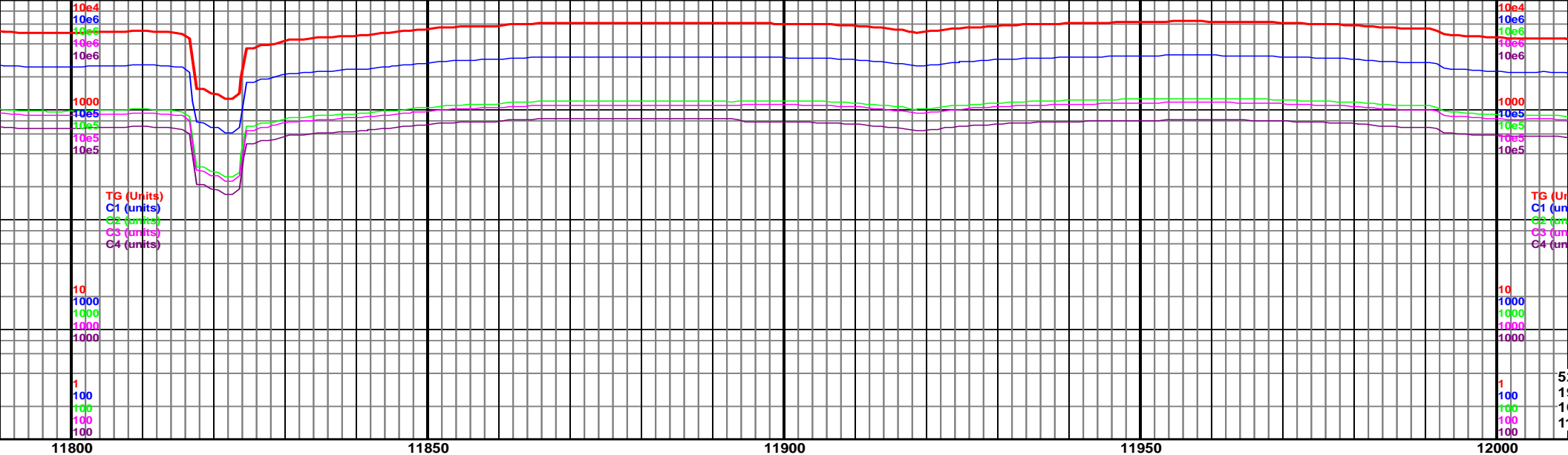
11700-11800 Chk lt-med gy, mottled ip,
blky-sb blky, mrlst dk gy blky, frm, dull
yel flor, slo cut, 95% chk, 5% mrlst

6100
(-1303)

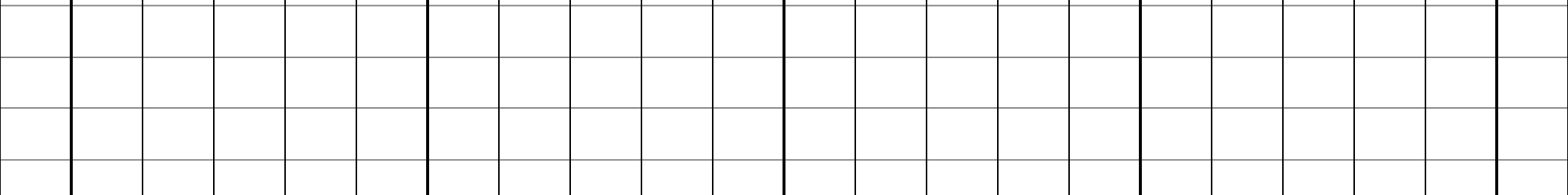


3
300
2
1
0
0

ROP (min/ft)
Gamma (API)
C02 (Pascals)

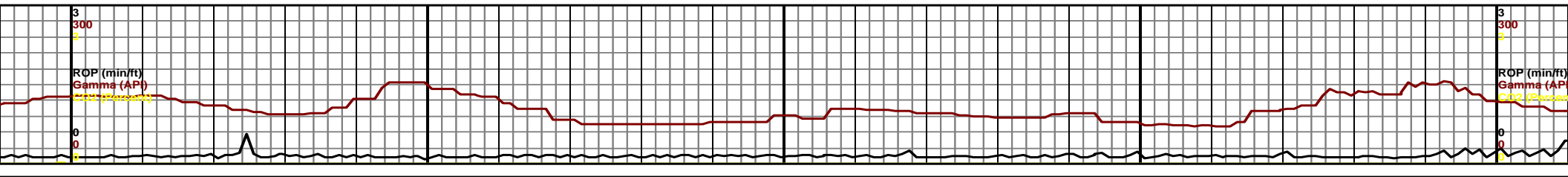
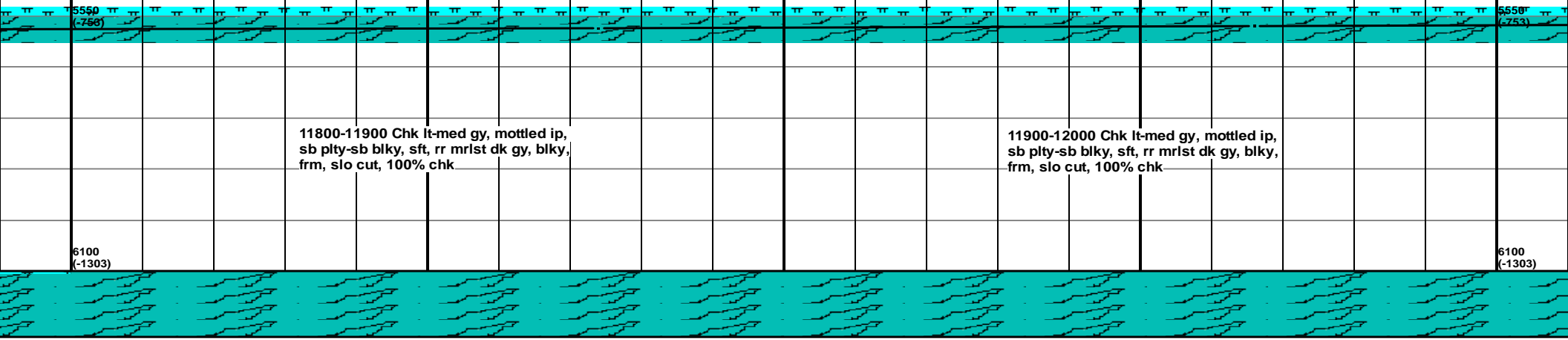


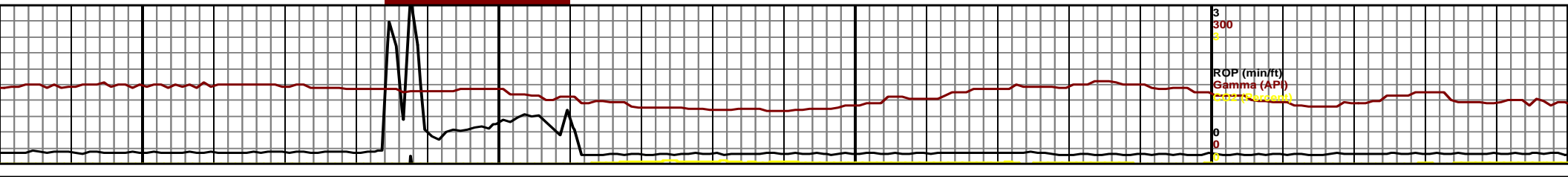
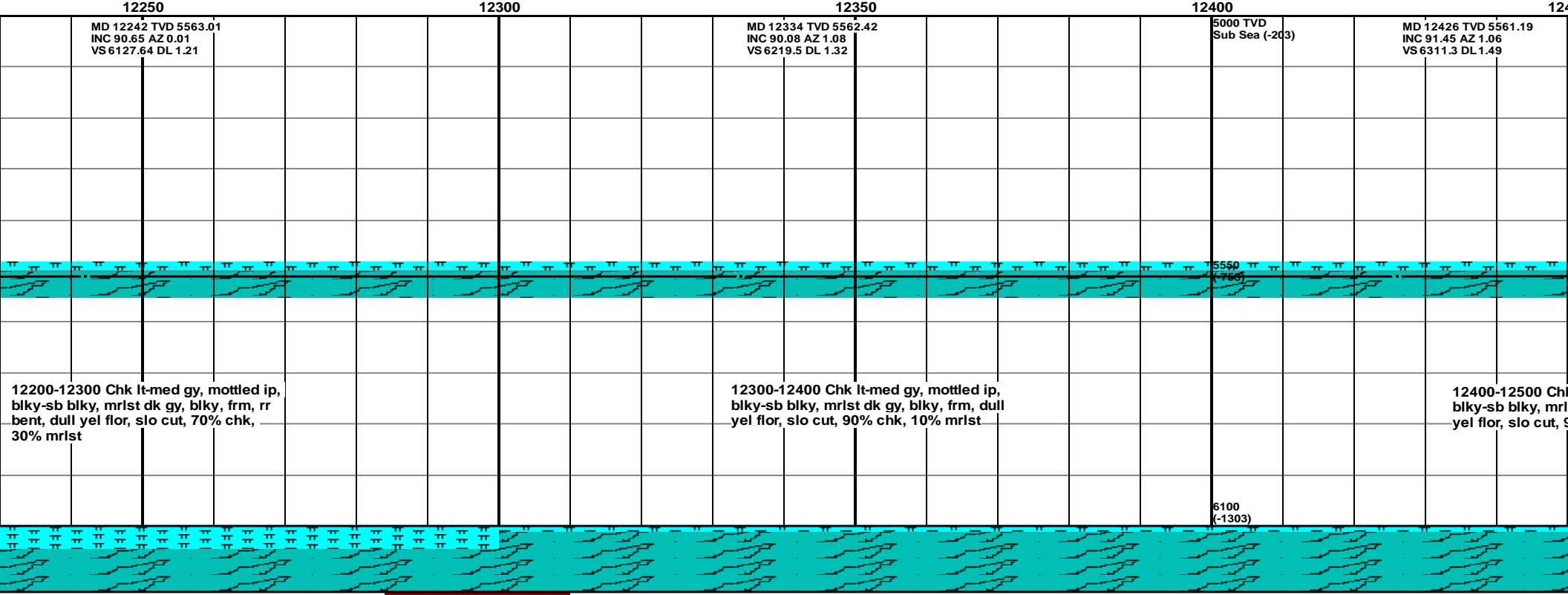
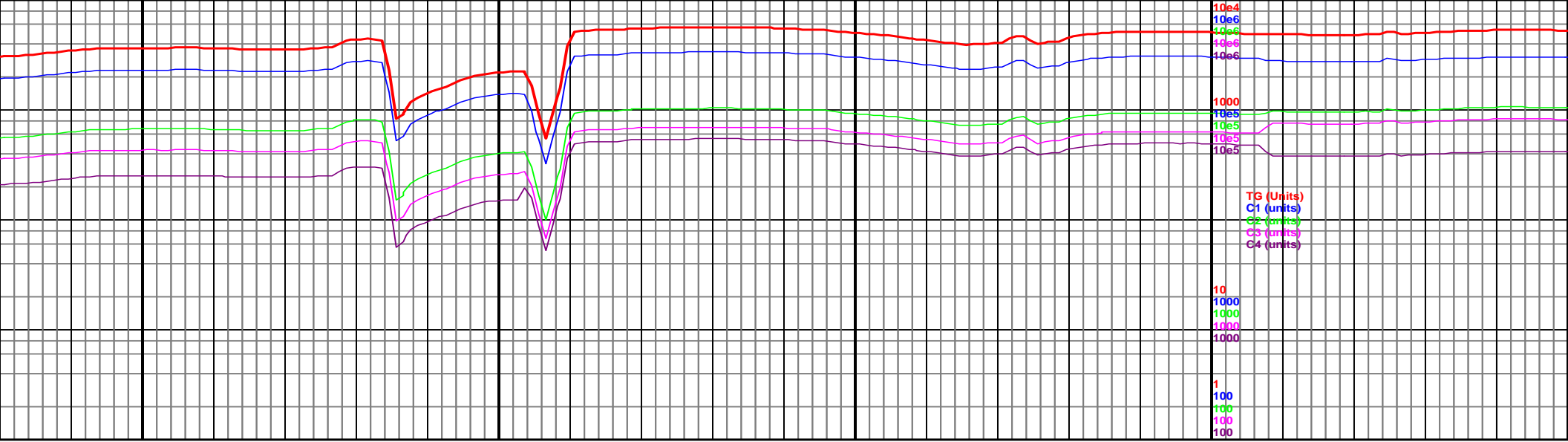
TVD 5578.43 AZ 359.13 5 DL 0.35	5000 TVD Sub Sea (-203)	MD 11874 TVD 5576.23 INC 91.6 AZ 358.81 VS 5760.09 DL 0.63	MD 11966 TVD 5572.21 INC 93.4 AZ 358.38 VS 5851.98 DL 2.01	5000 TVD Sub Sea (-203)
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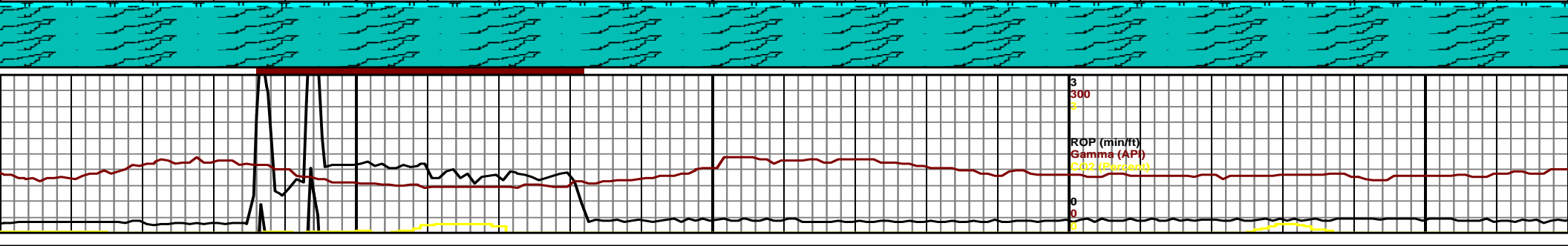
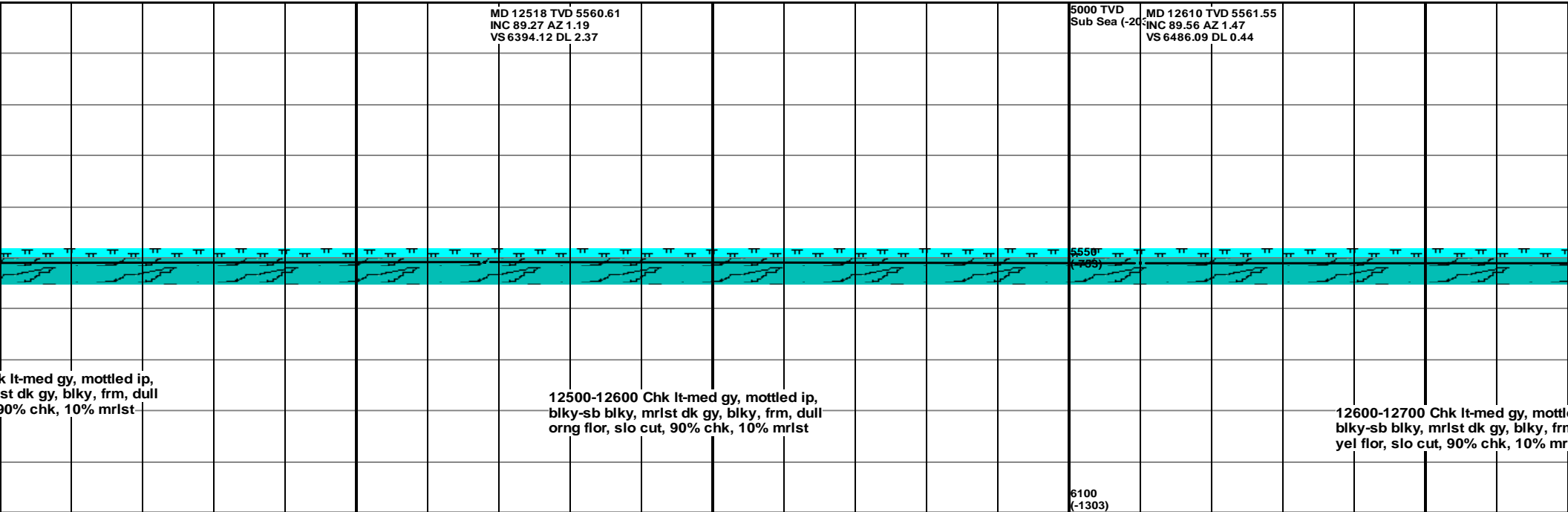
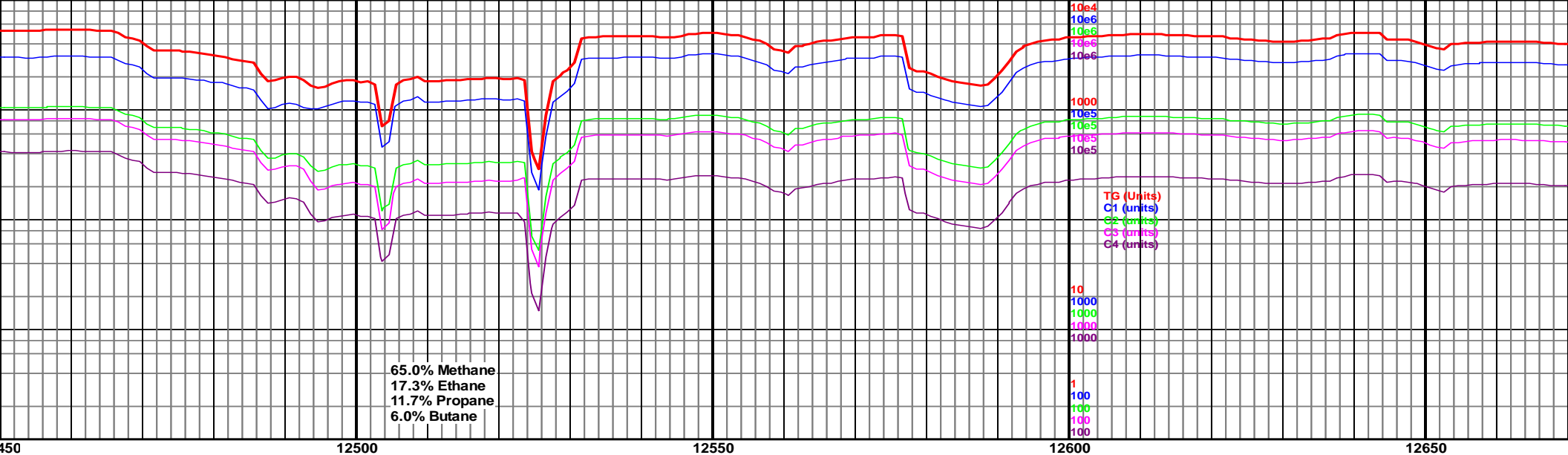


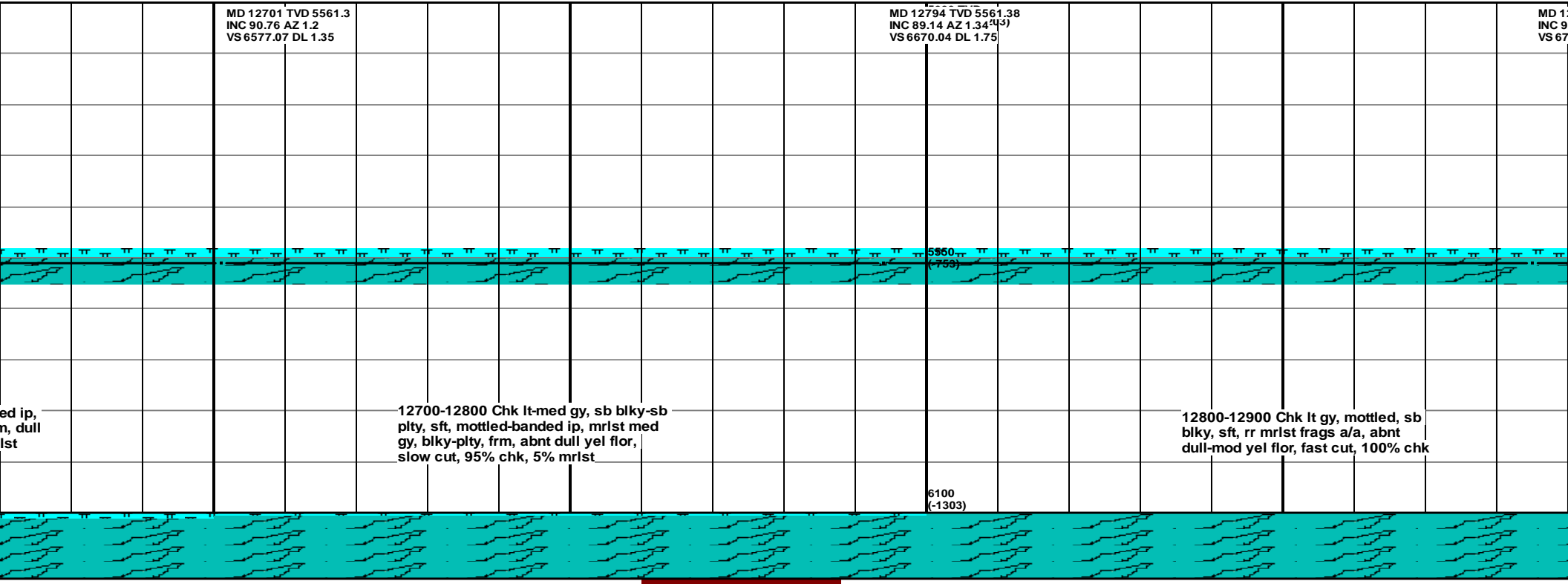
11800-11900 Chk lt-med gy, mottled ip,
sb plty-sb blk, sft, rr mlst dk gy, blk,
frm, slo cut, 100% chk

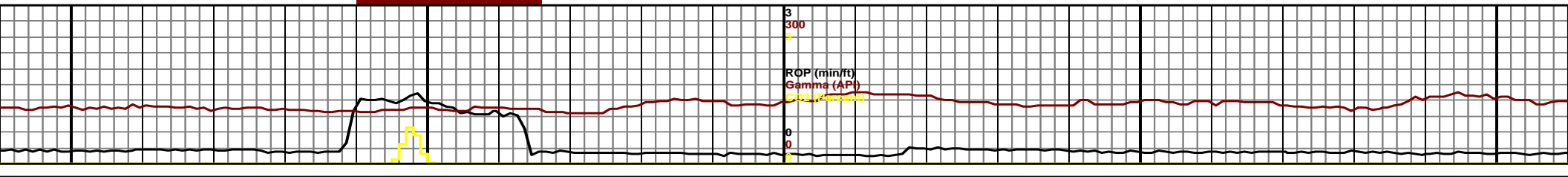
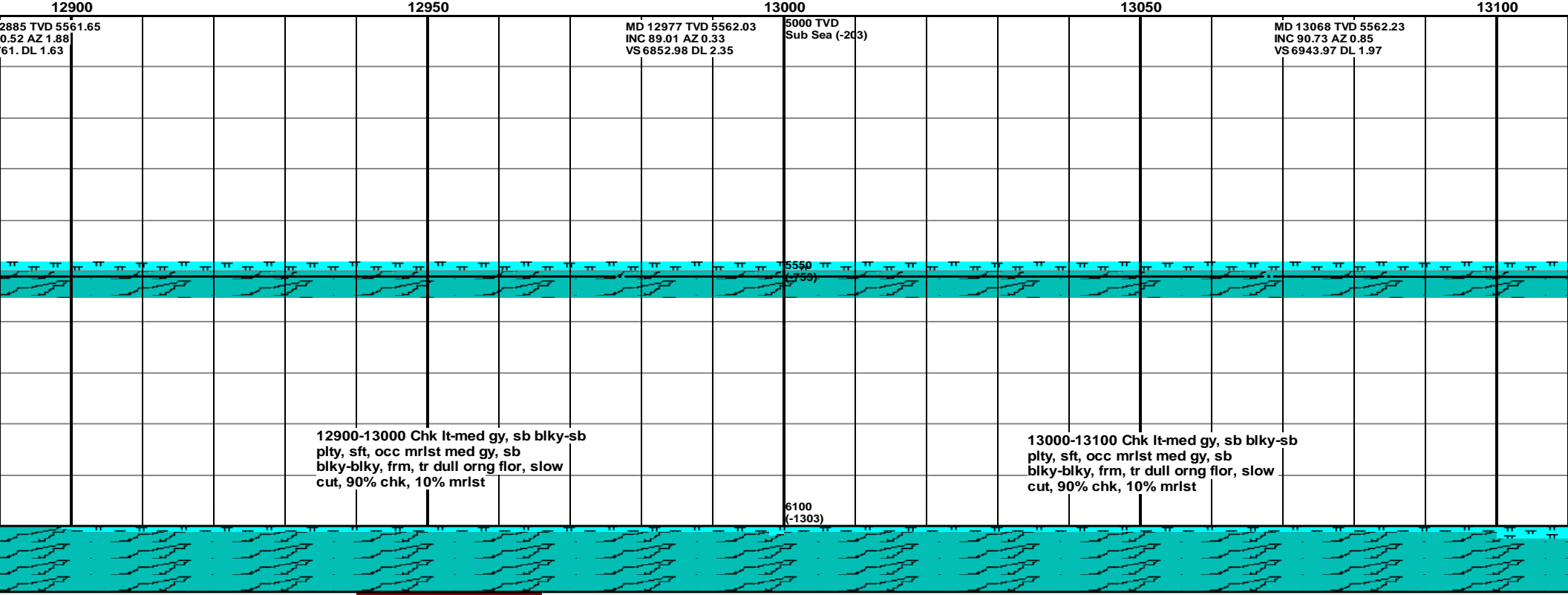
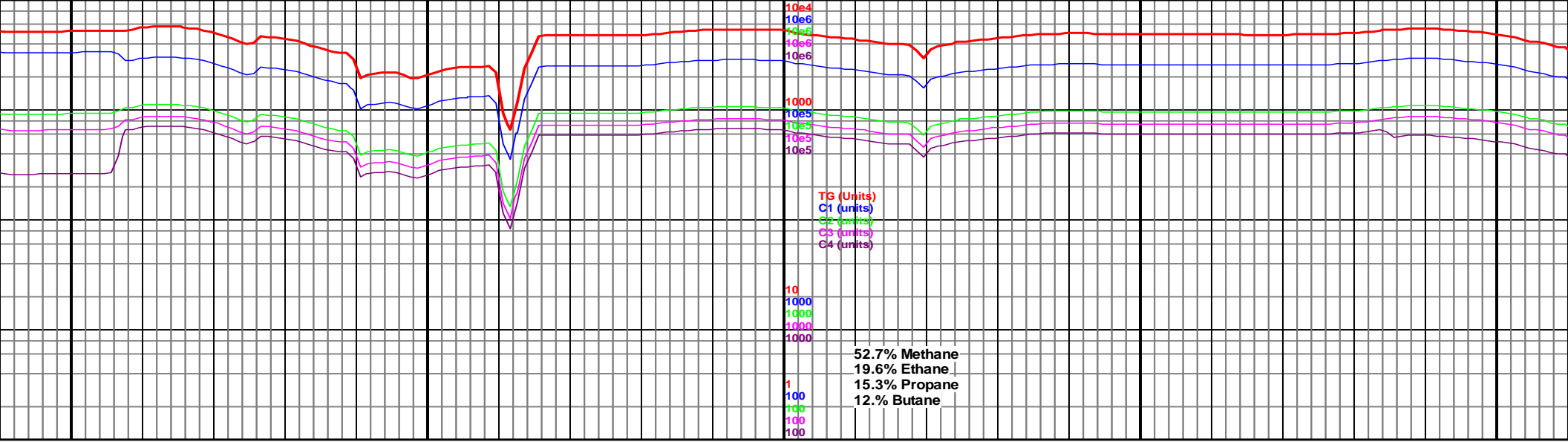
11900-12000 Chk lt-med gy, mottled ip,
sb plty-sb blk, sft, rr mlst dk gy, blk,
frm, slo cut, 100% chk

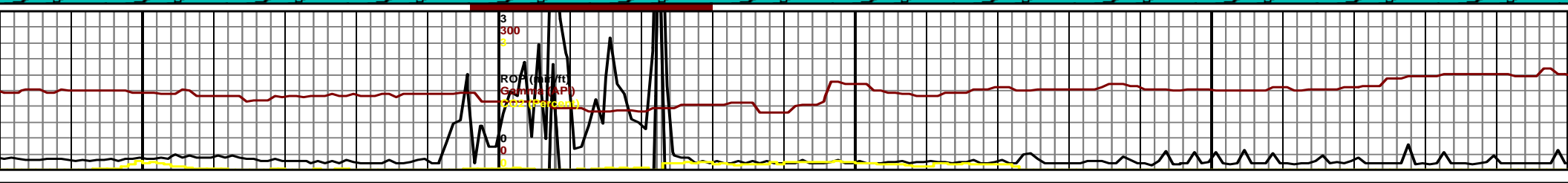
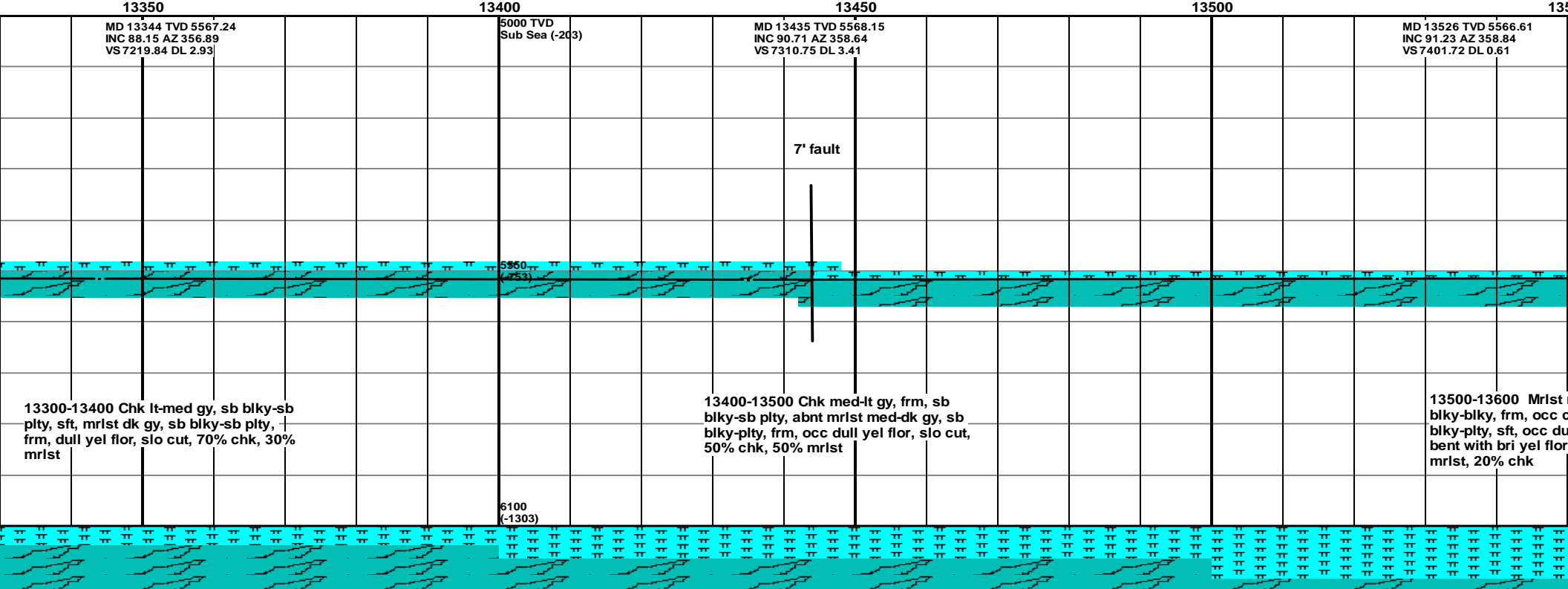
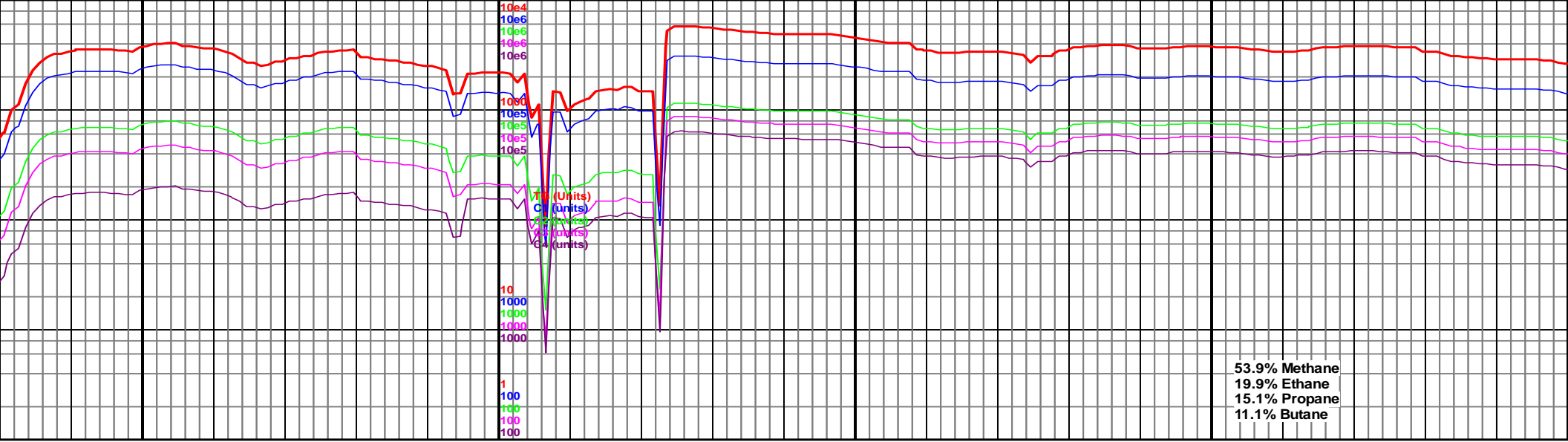


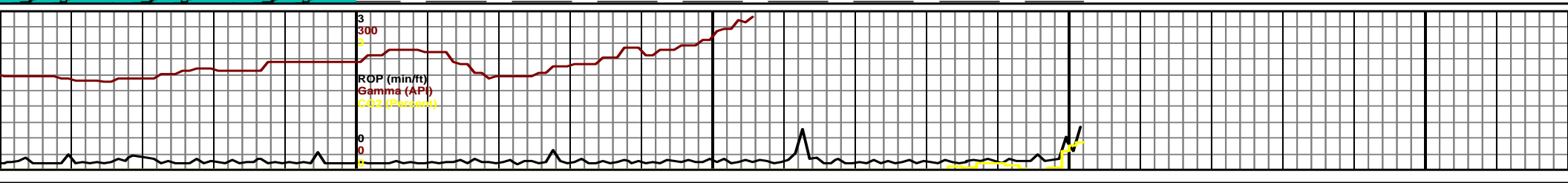
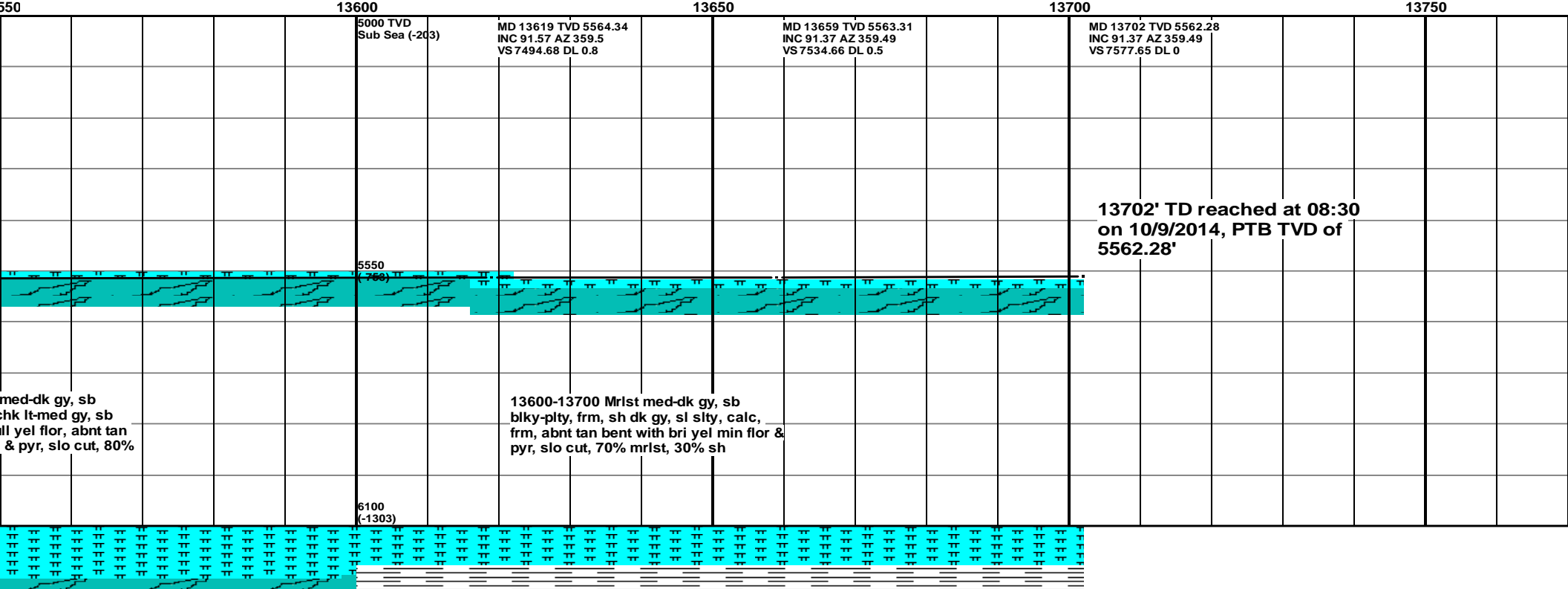
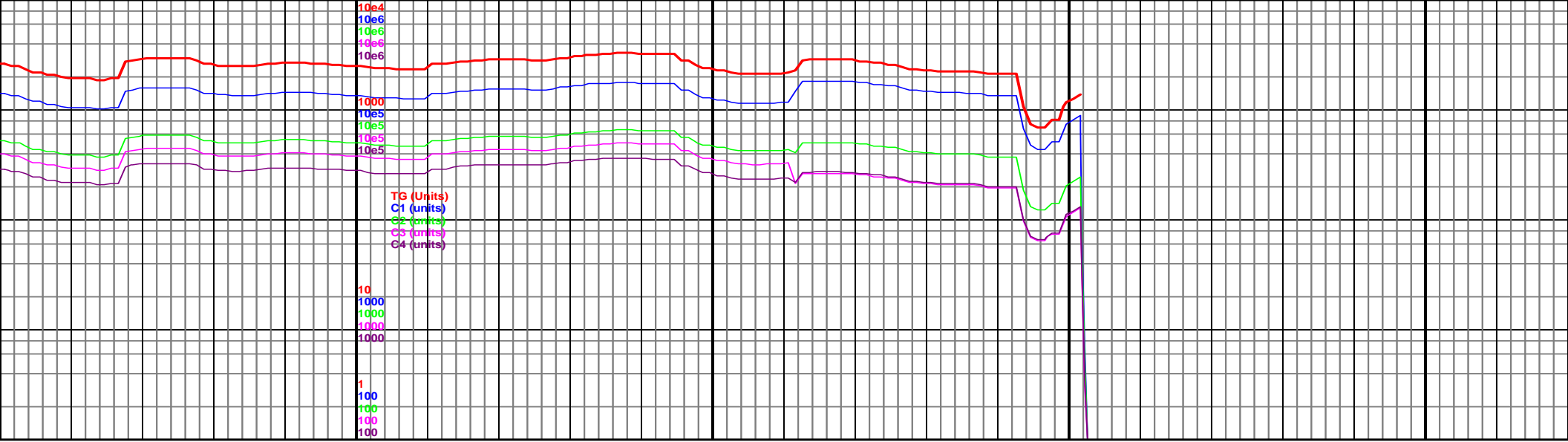


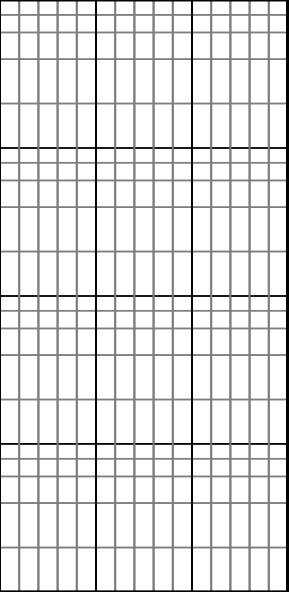












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