



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

Well Name: Horsetail 08B-1711
Well Id: 05-123-41452-00
Location: Sec 8-T10N-R57W
License Number: 05-123-41452-00
Spud Date: 7/2/2016
Surface Coordinates: Lat.: 40.859783 Long.: -103.773206

Region: Redtail Field
Drilling Completed: 7/6/2016

Bottom Hole Coordinates:

Ground Elevation (ft): 4890
Logged Interval (ft): 5003 To: 15804
Formation: Niobrara A
Type of Drilling Fluid: Water Based Mud

K.B. Elevation (ft): 4911
Total Depth (ft): 15804

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: Brian Reddick and Todd Nakata
Company: Acme Geologic Consulting
Address: 108 Berry Street
Little Rock, AR 72205

Drilling Company

Unit Drilling Company
Rig 409

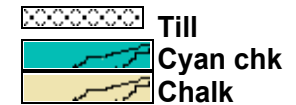
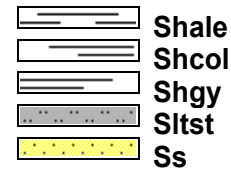
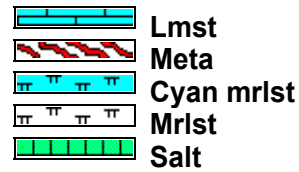
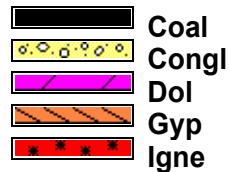
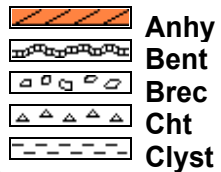
Gas Detection

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

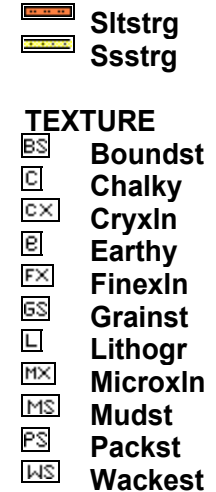
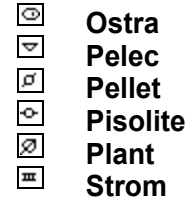
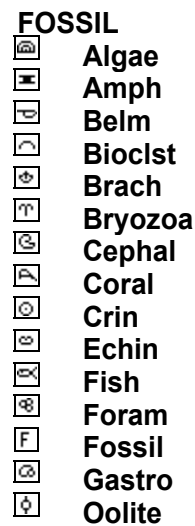
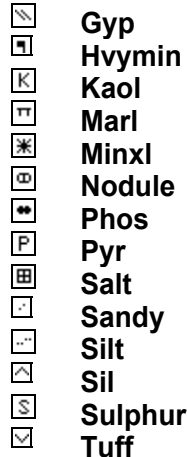
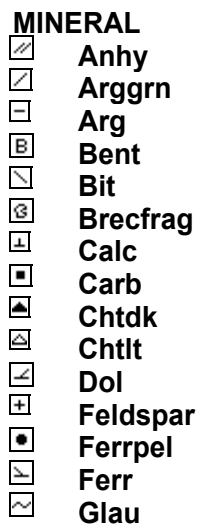
Comments








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





ACCESSORIES








POROSITY
 Earthy
 Fenest
 Fracture
 Inter
 Moldic
 Organic
 Pinpoint




 Vuggy



SORTING
 Well
 Moderate
 Poor

OTHER SYMBOLS

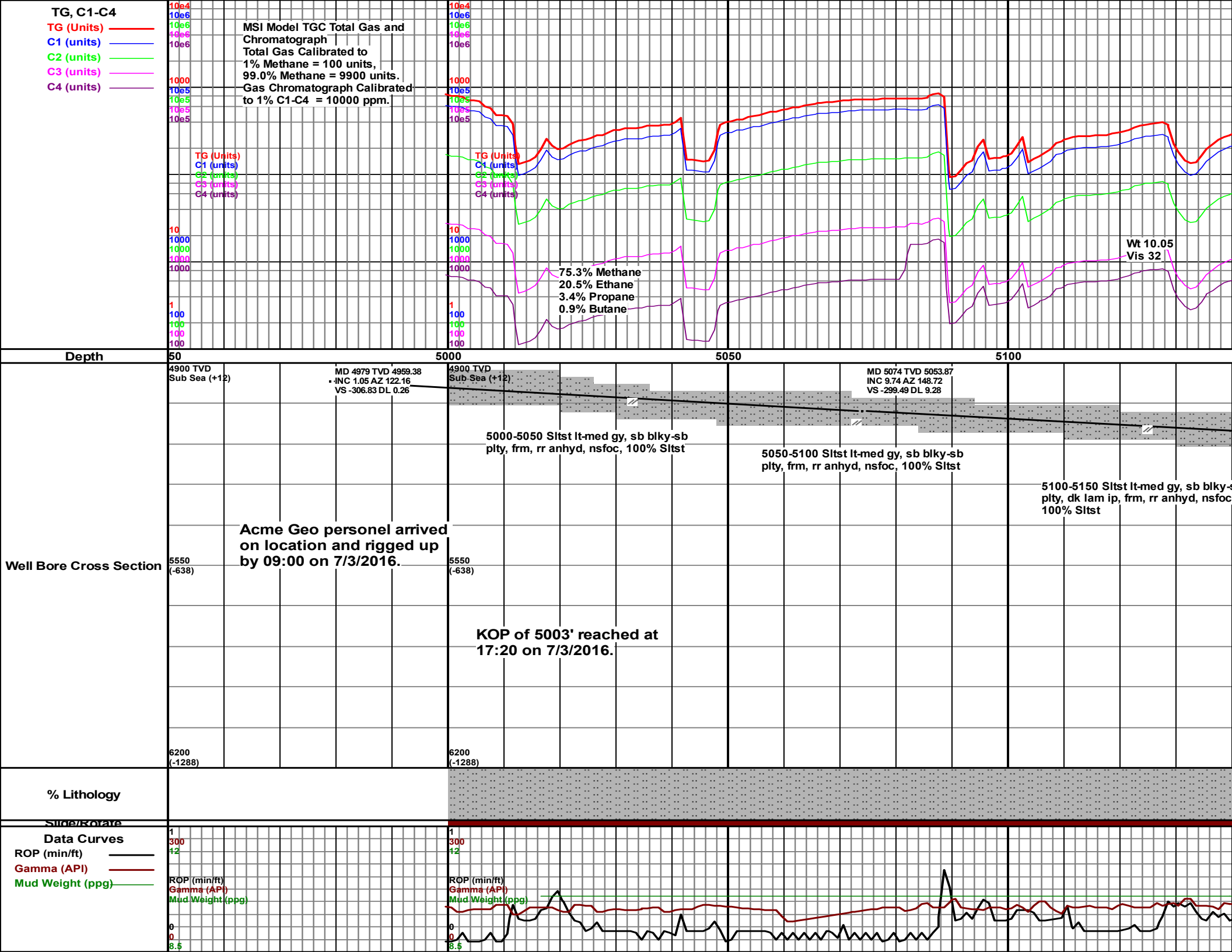
ROUNDING
 Rounded
 Subrnd
 Subang
 Angular

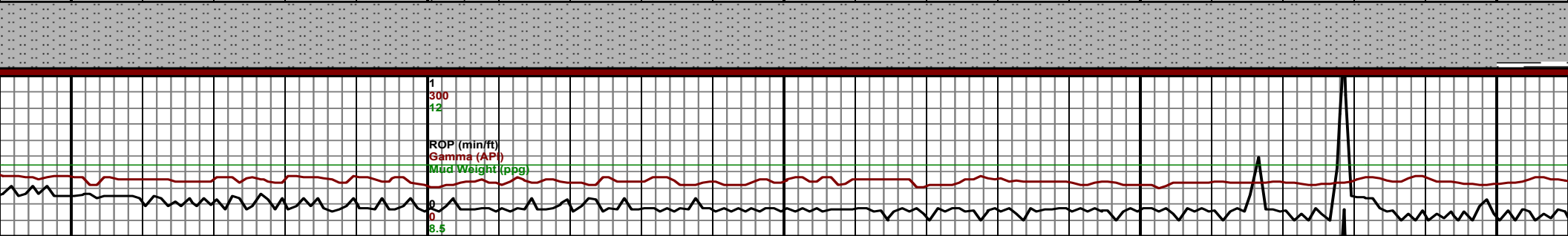
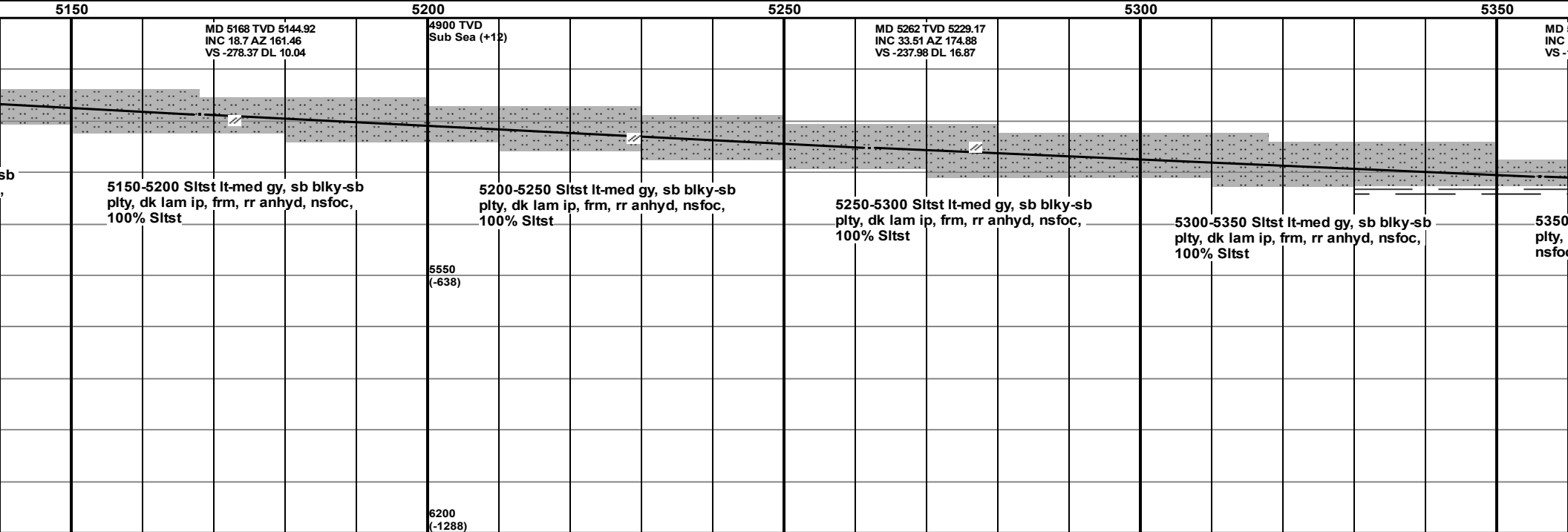
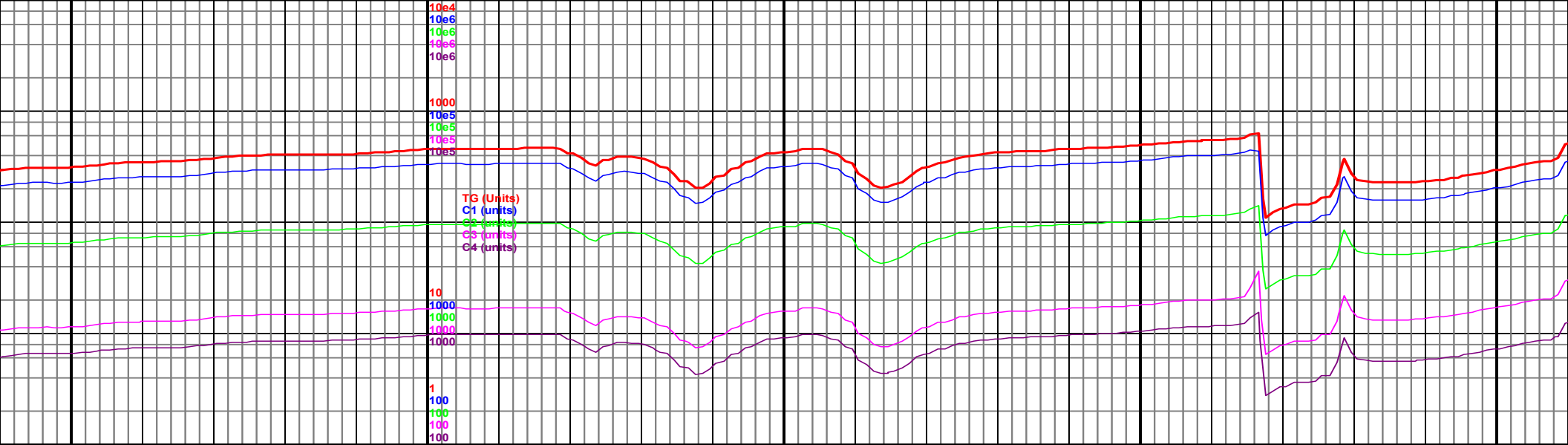
OIL SHOW
 Even

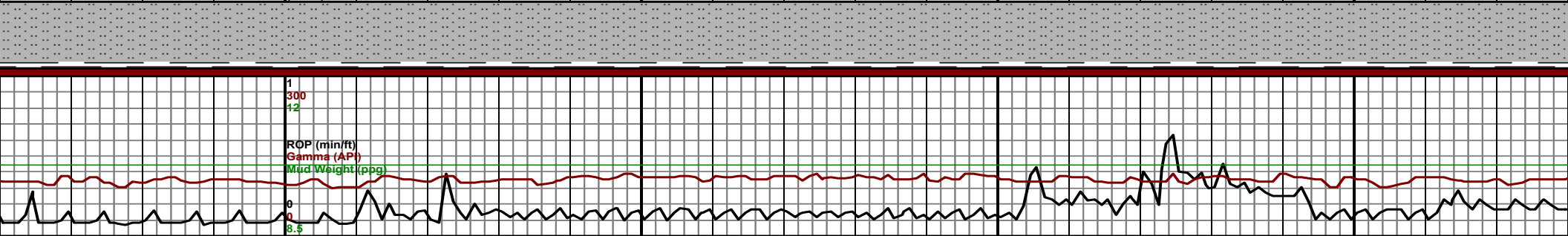
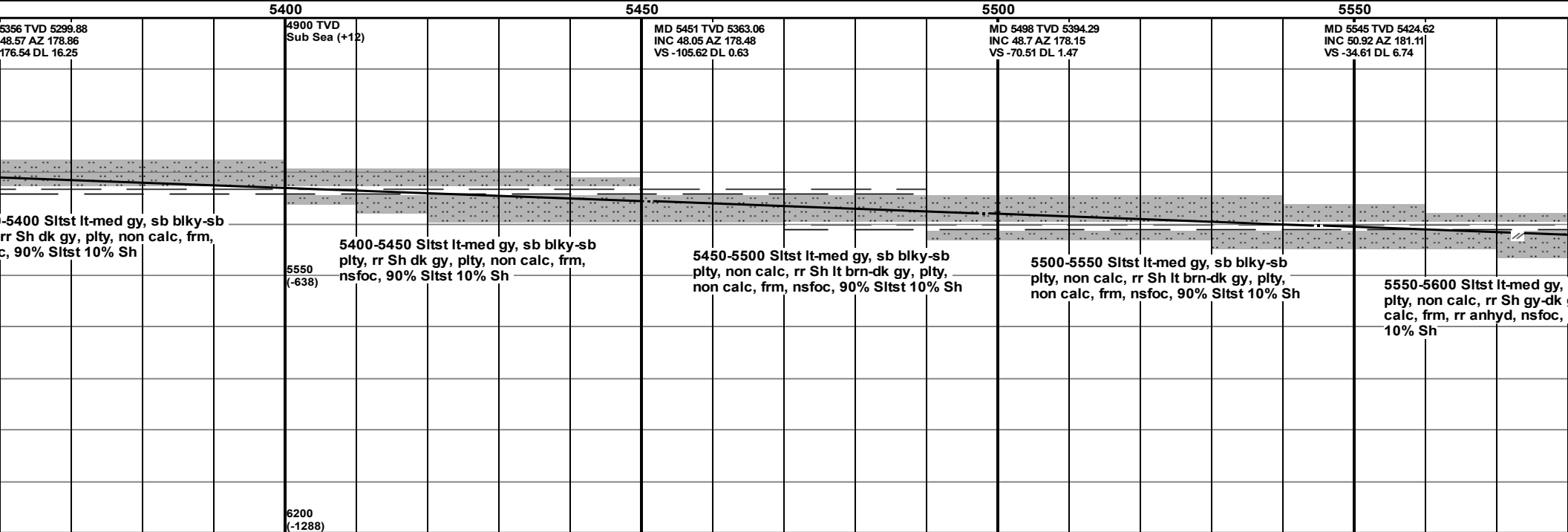
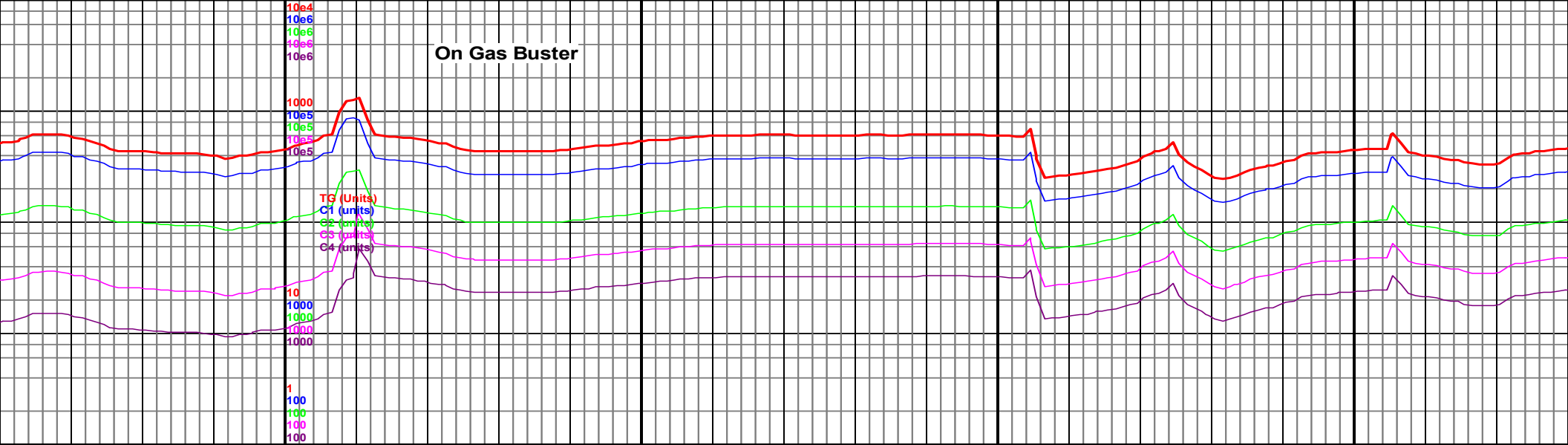
 Spotted
 Ques
 Dead

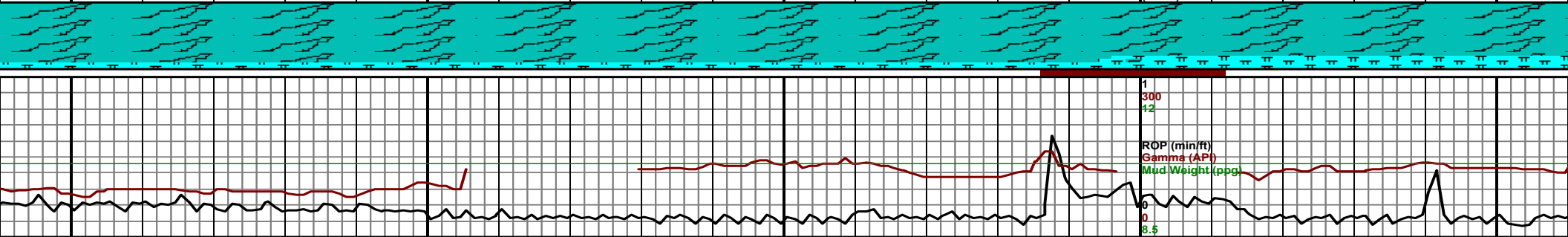
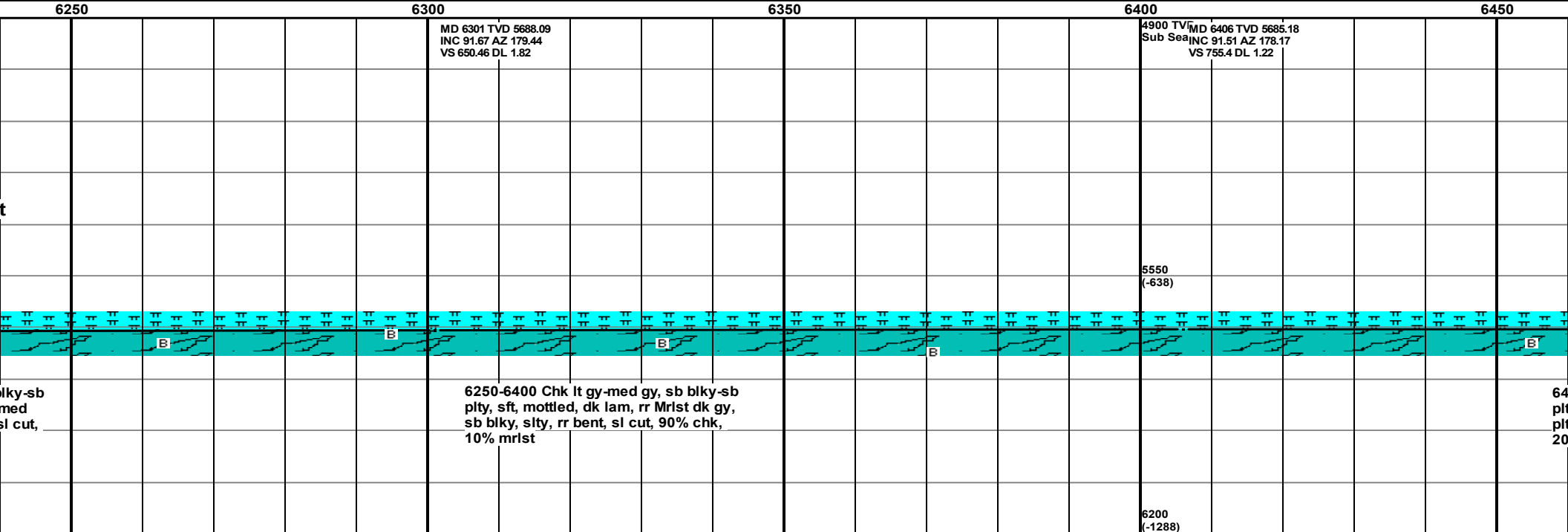
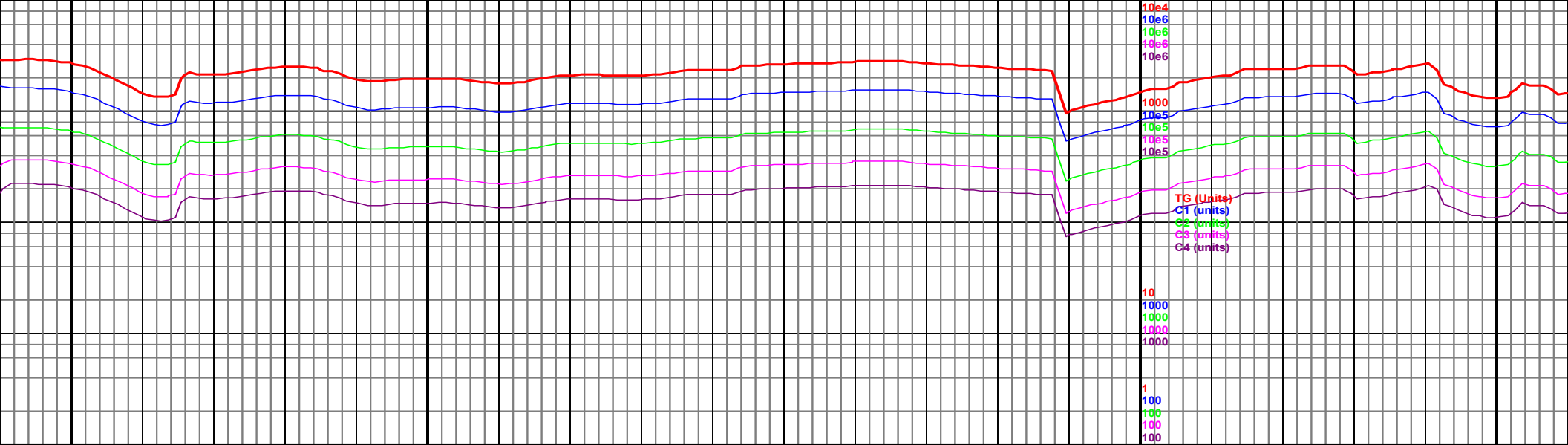
INTERVAL
 Core
 Dst

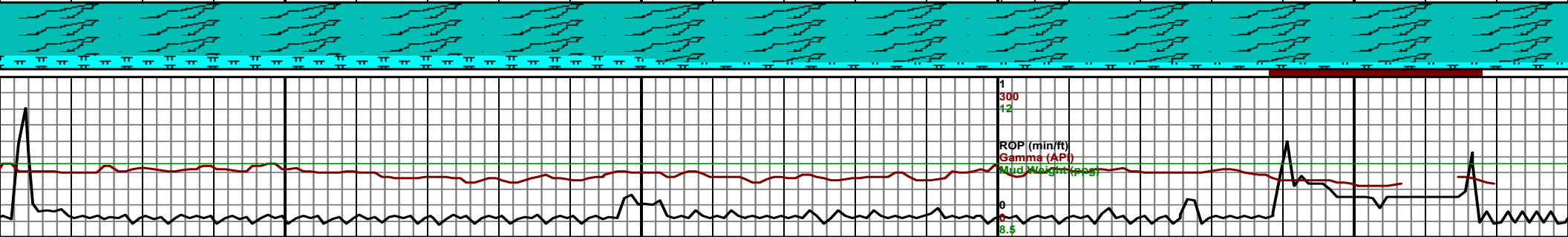
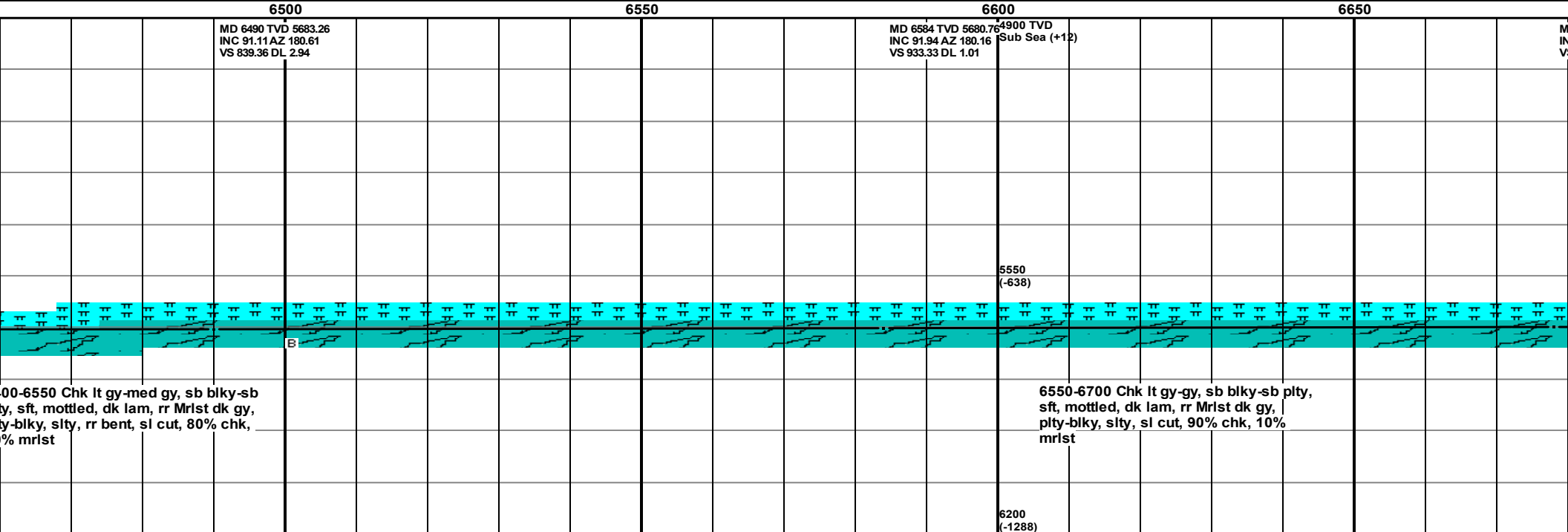
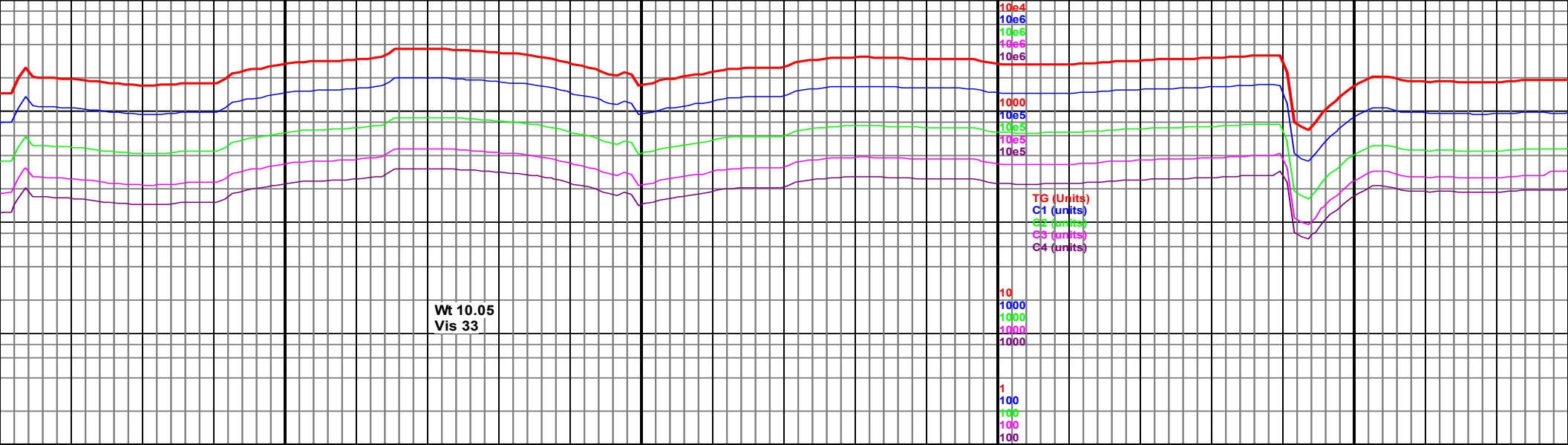
EVENT
 Rft
 Sidewall

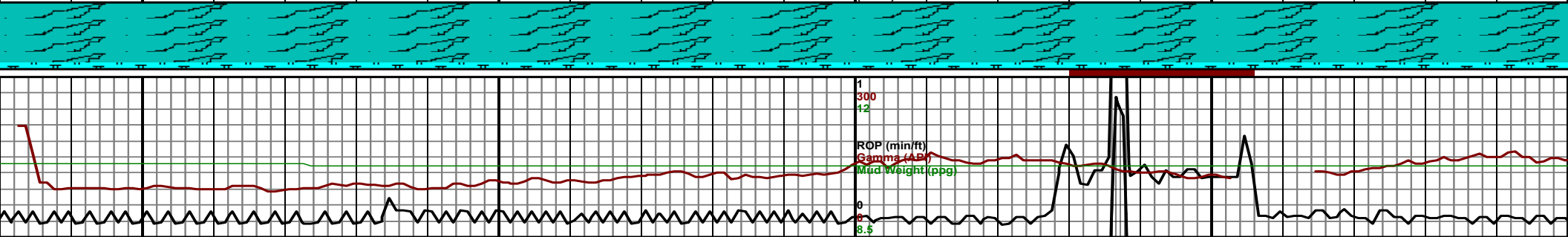
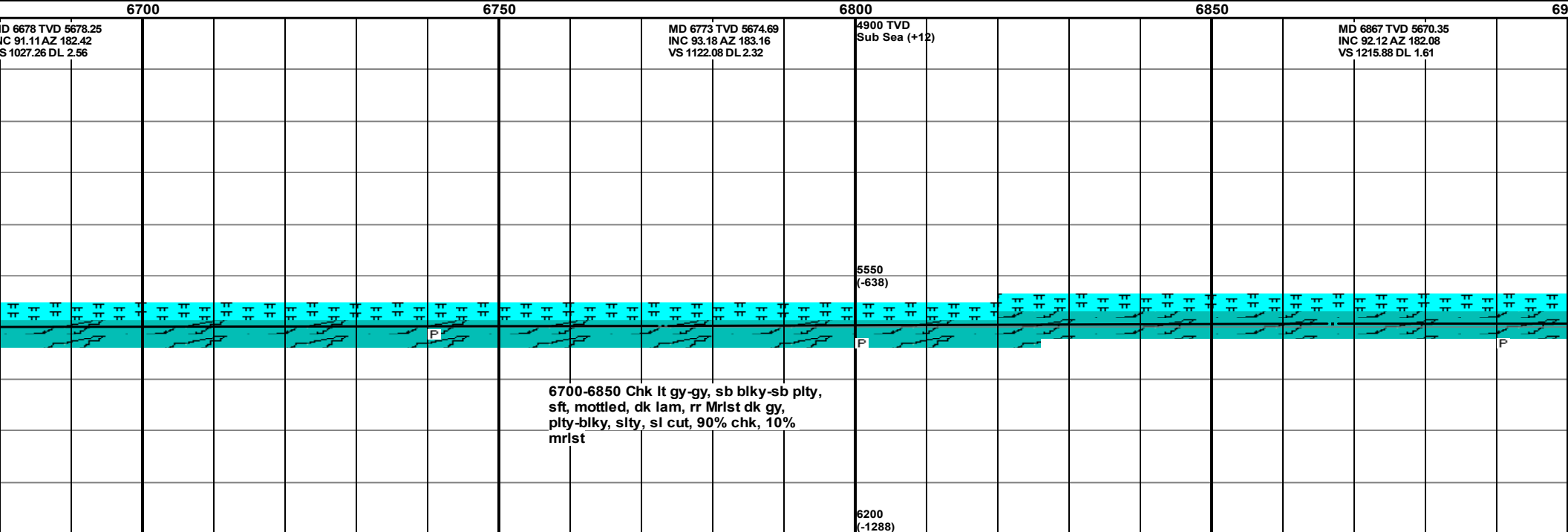
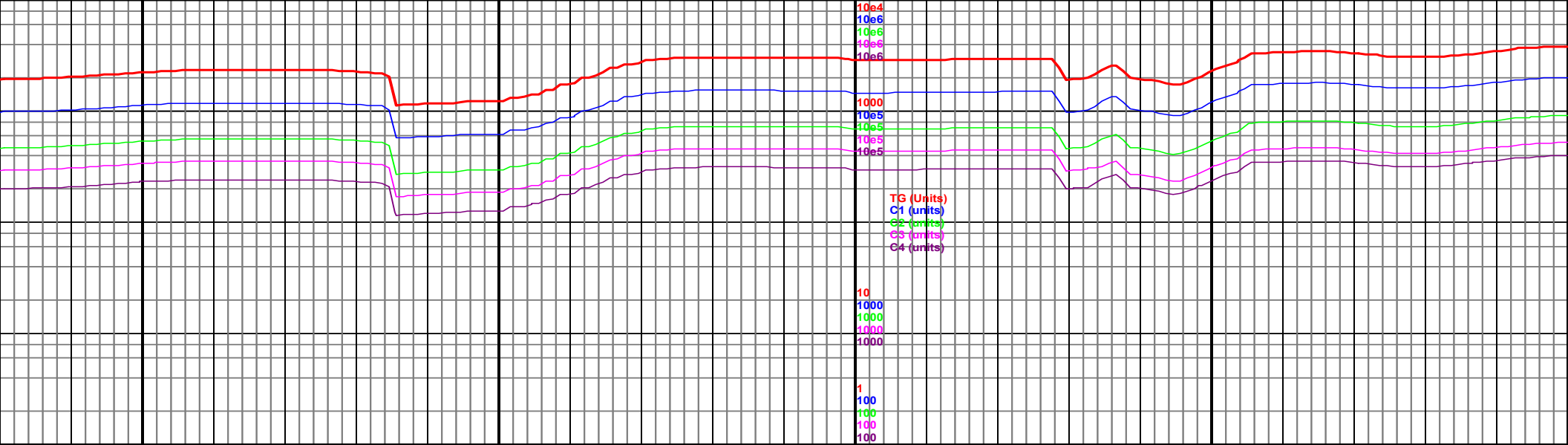


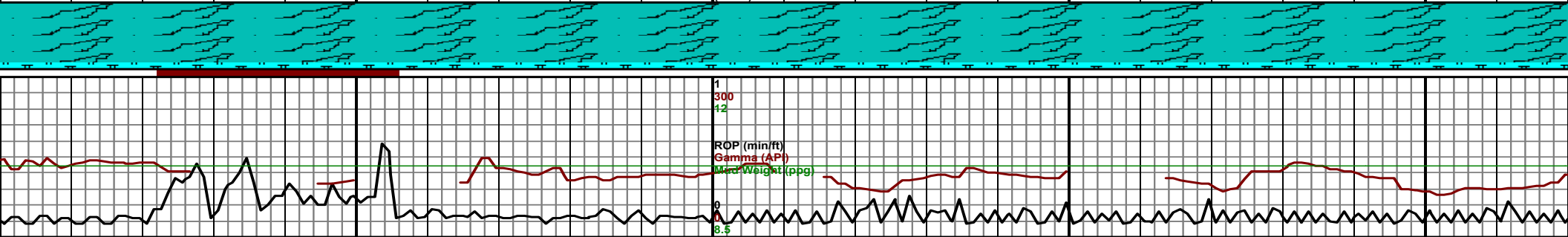
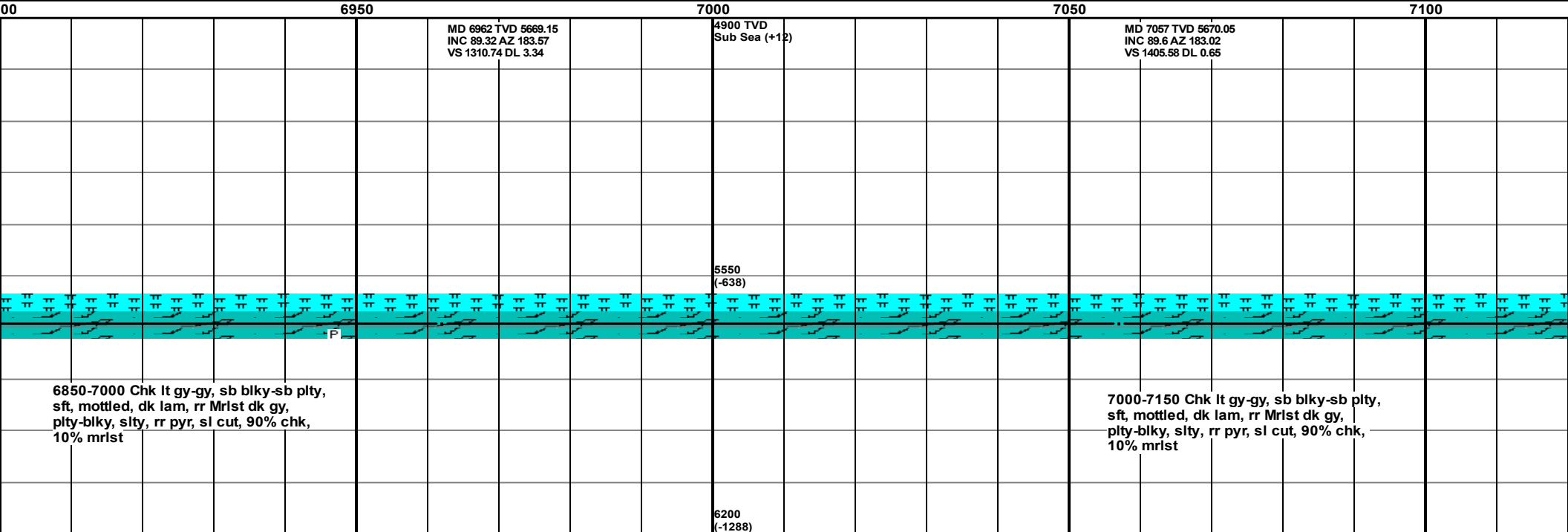
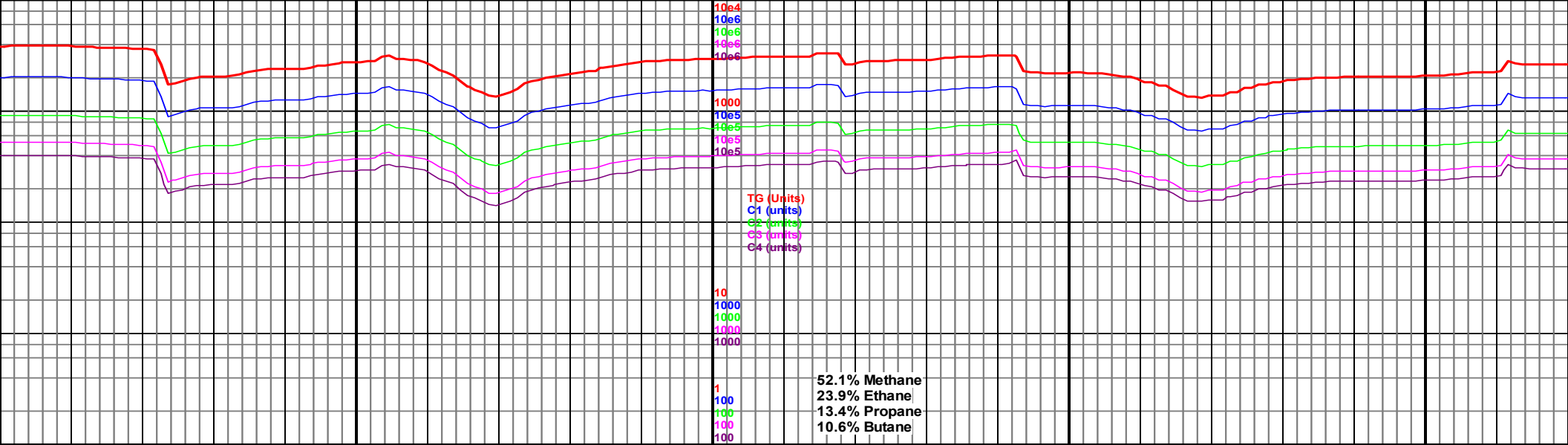


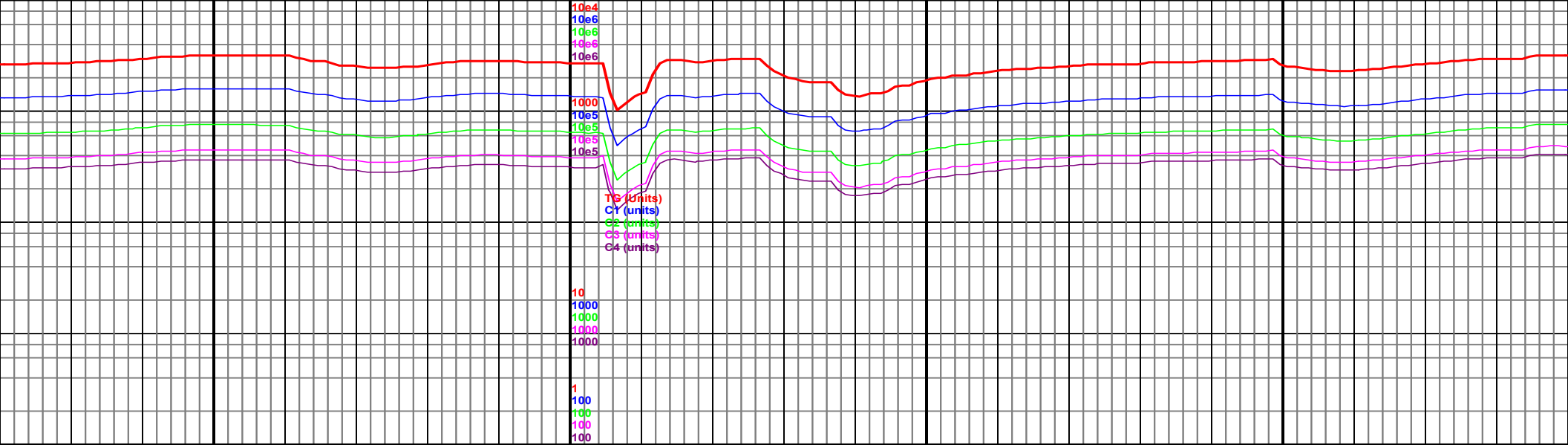












7150

MD 7151 TVD 5670.21
INC 90.21 AZ 182.26
VS 1499.48 DL 1.04

7200

4900 TVD
Sub Sea (+12)

7250

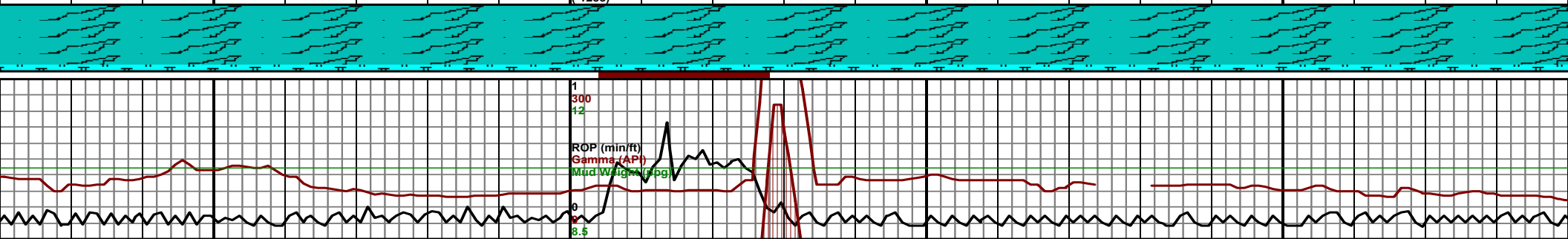
MD 7245 TVD 5669.12
INC 91.11 AZ 179.97
VS 1593.45 DL 2.61

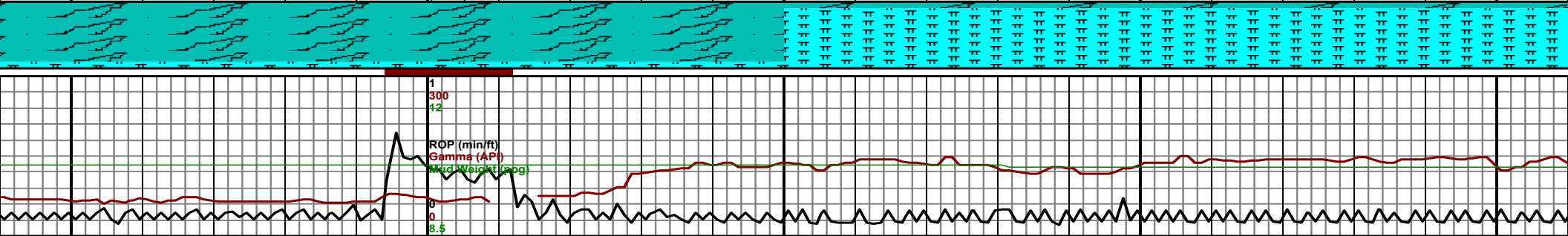
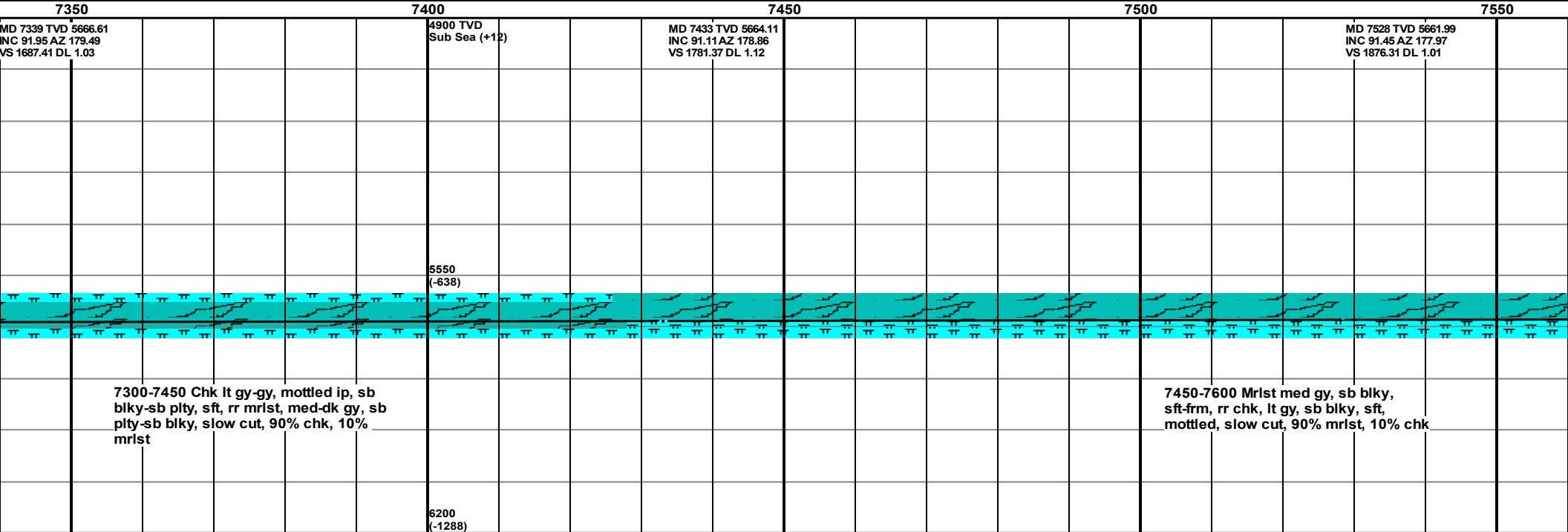
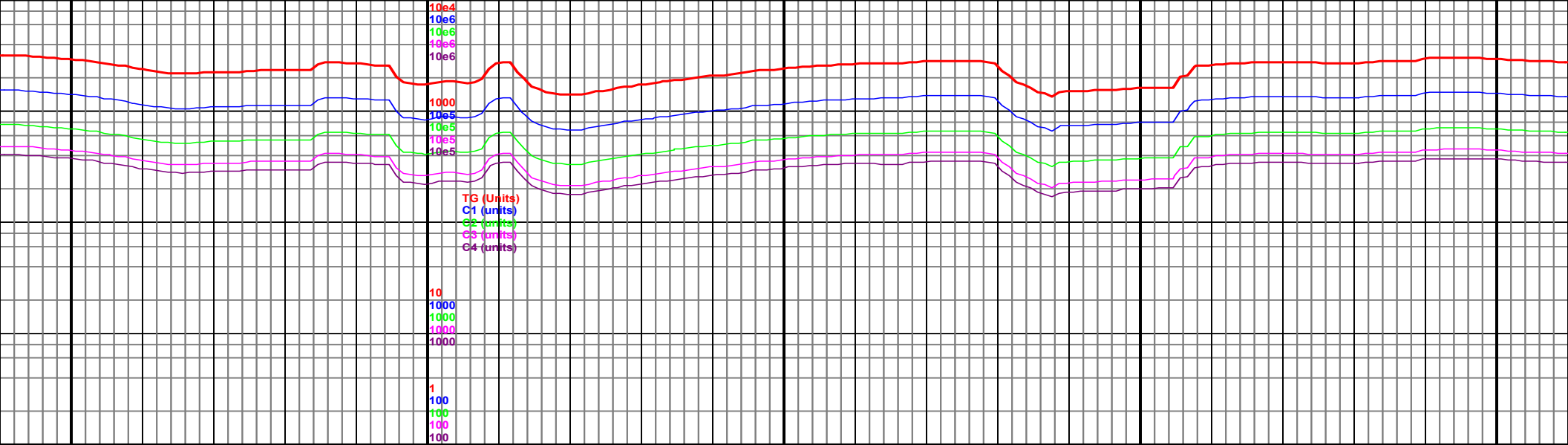
7300

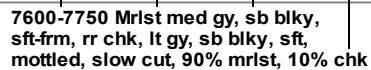
5550
(-638)

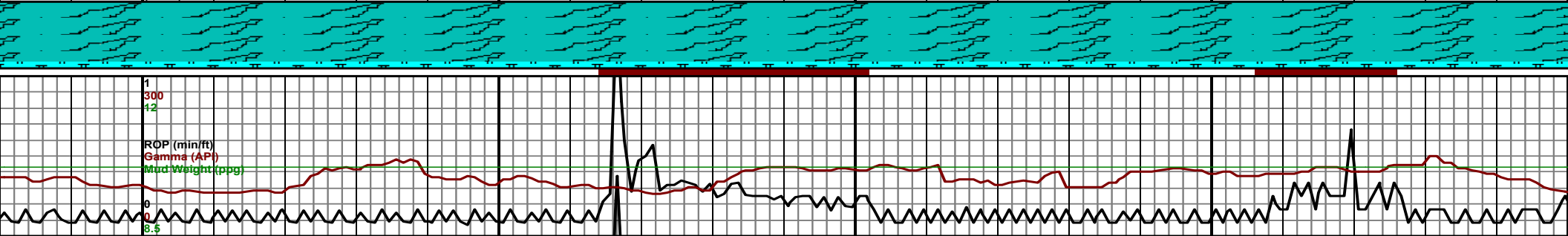
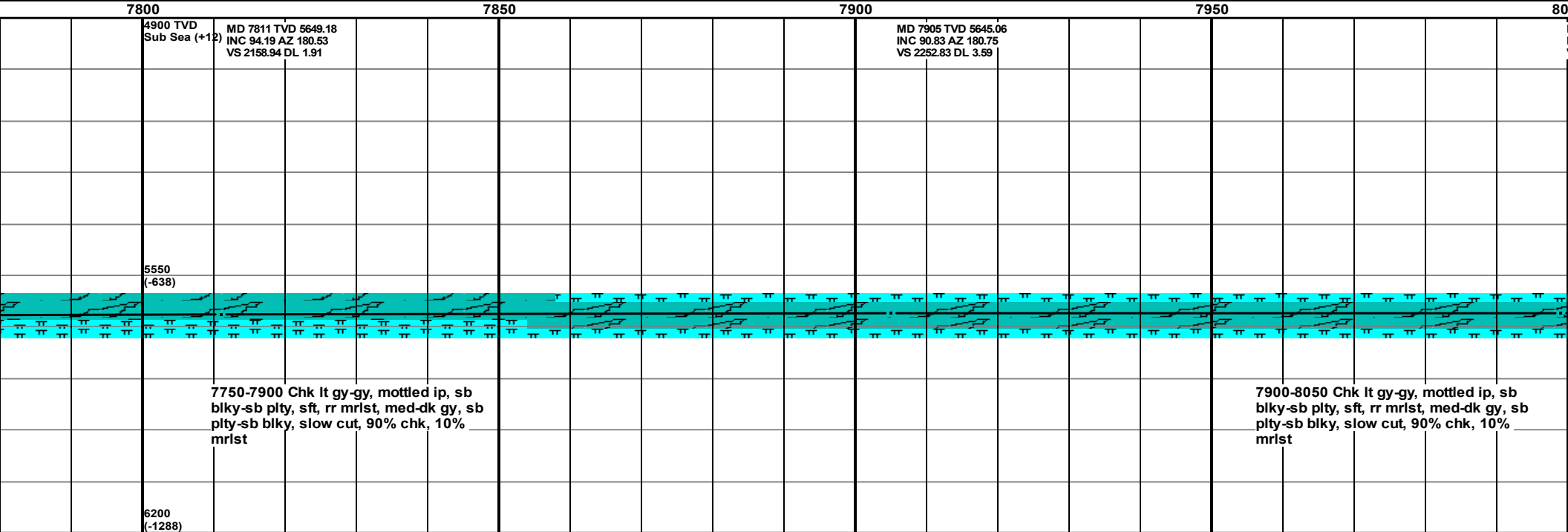
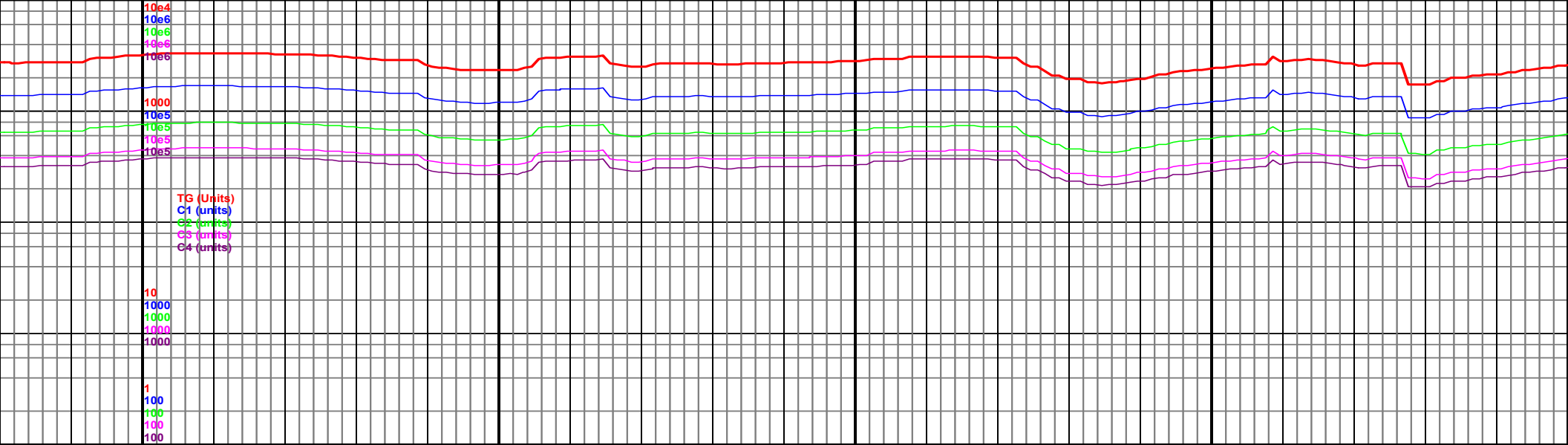
7150-7300 Chk lt gy-gy, sb blkly-sb plty,
sft, mottled, dk lam, rr Mrlst dk gy,
plty-blky, slty, rr pyr, sl cut, 90% chk,
10% mrilst

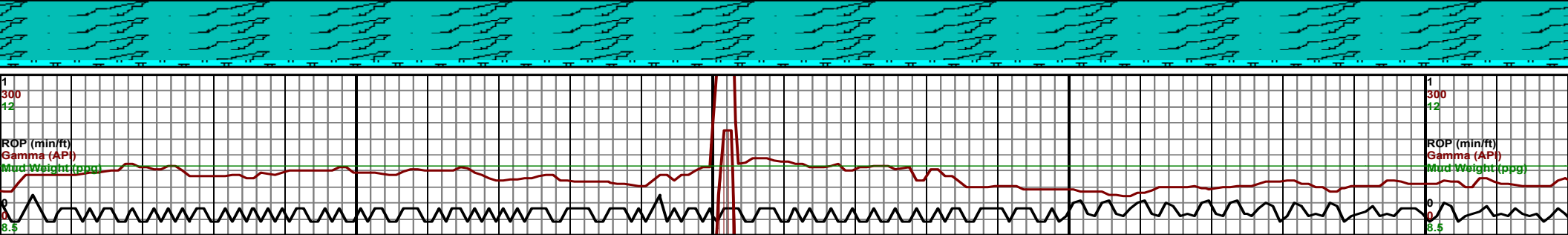
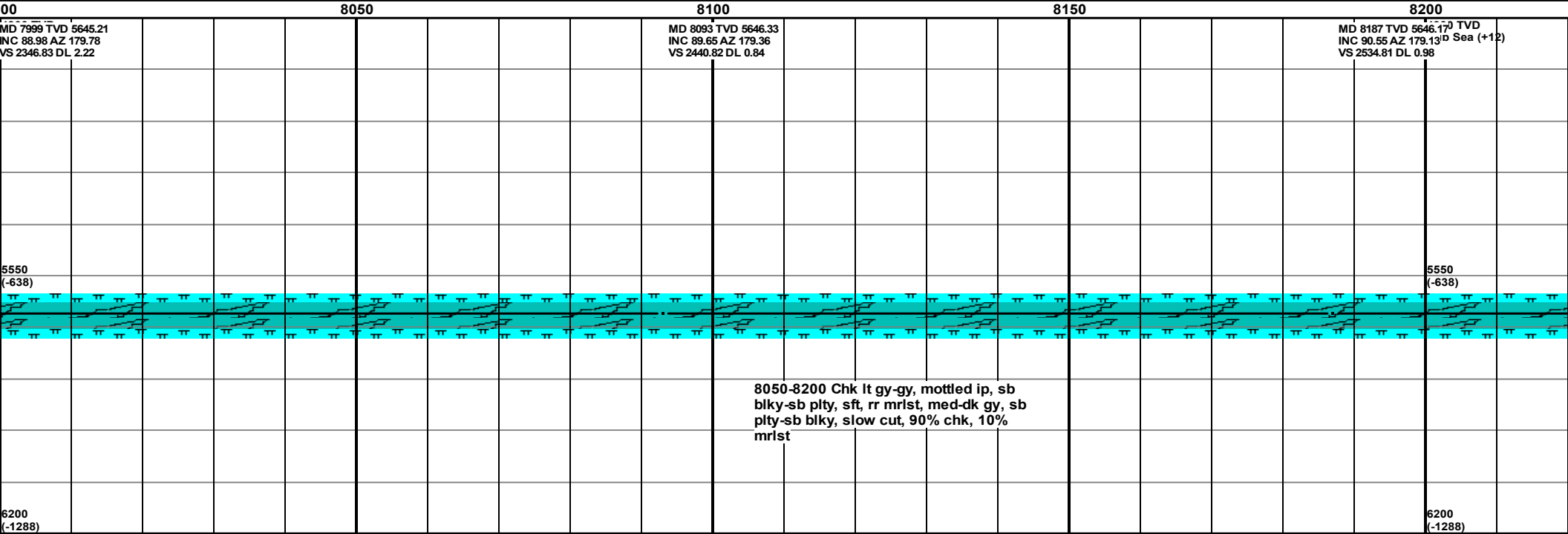
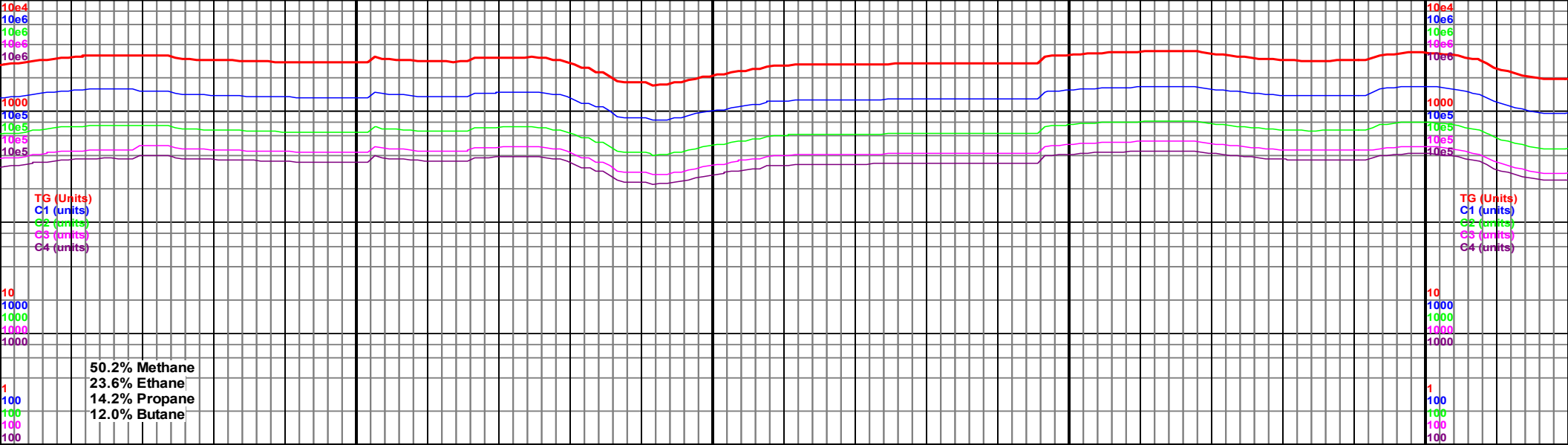
6200
(-1288)

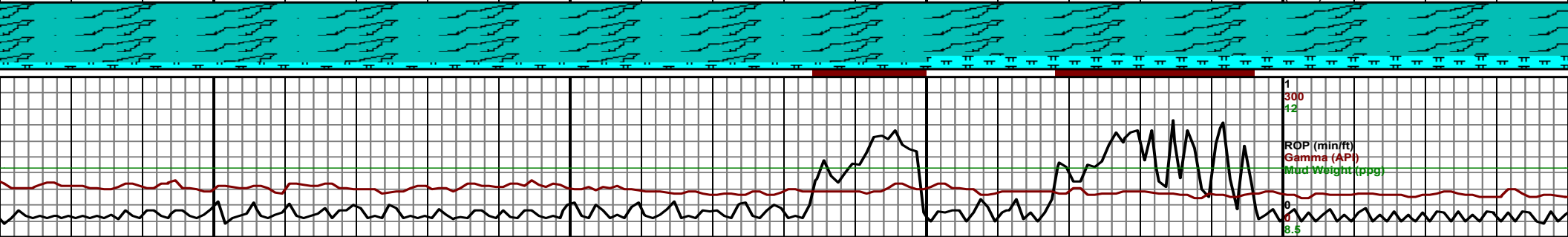
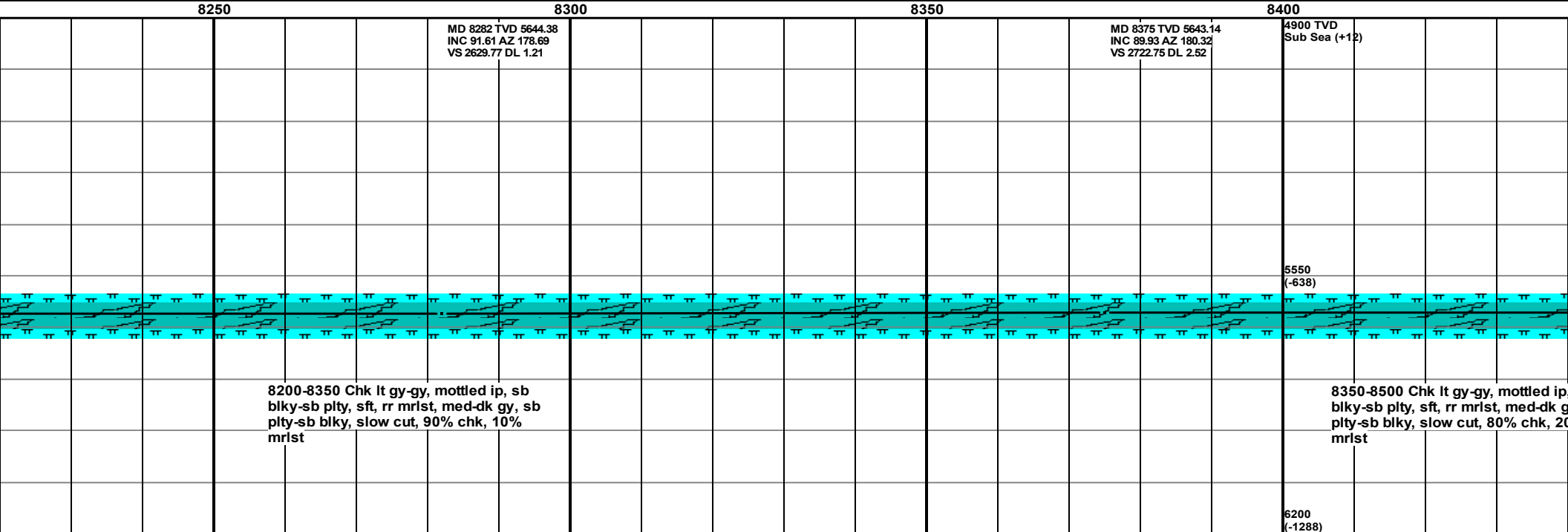
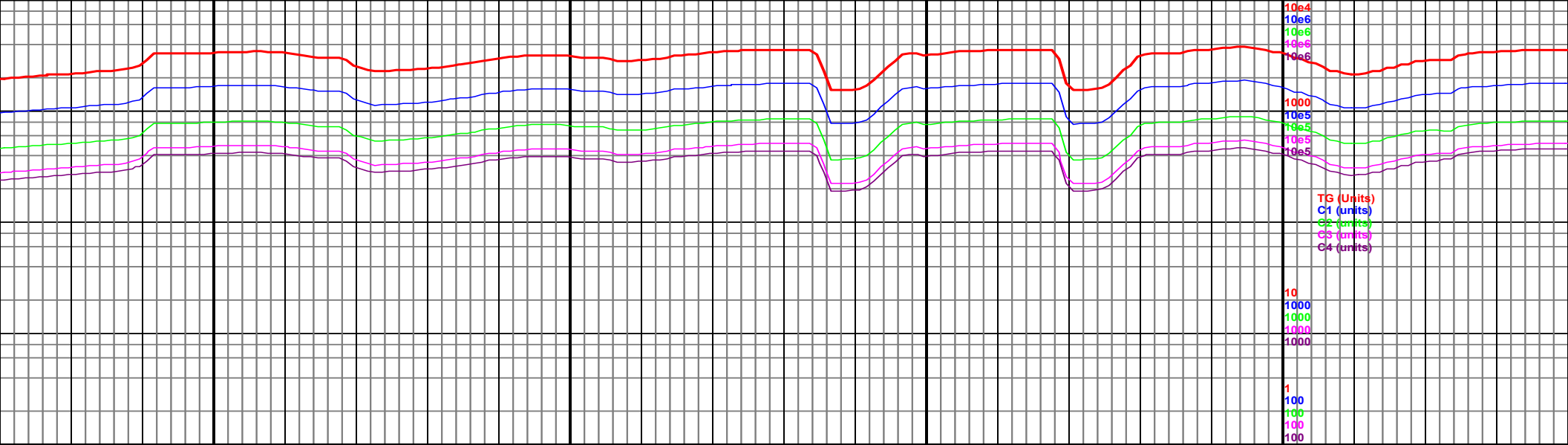


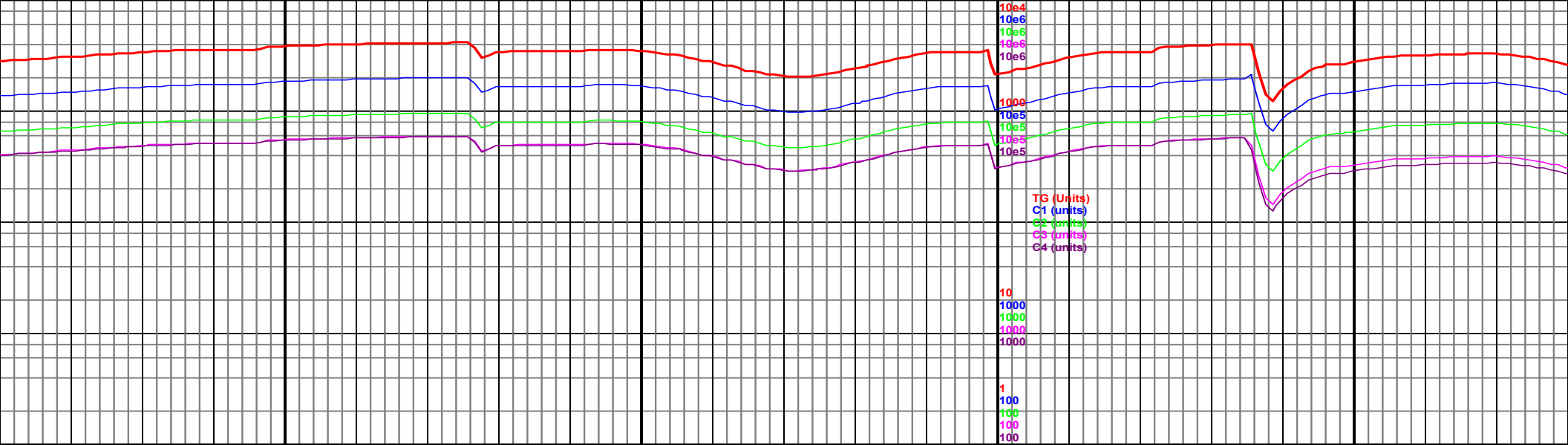












ID 8658 TVD 5641.64
INC 90.49 AZ 180.88
S 3005.72 DL 1.69

8700

8750

MD 8753 TVD 5639.58
INC 92. AZ 182.01
VS 3100.67 DL 1.99

8800

4900 TVD
Sub Sea (+12)

8850

MD 8847 TVD 5638.6
INC 89.2 AZ 178.05
VS 3194.63 DL 5.16

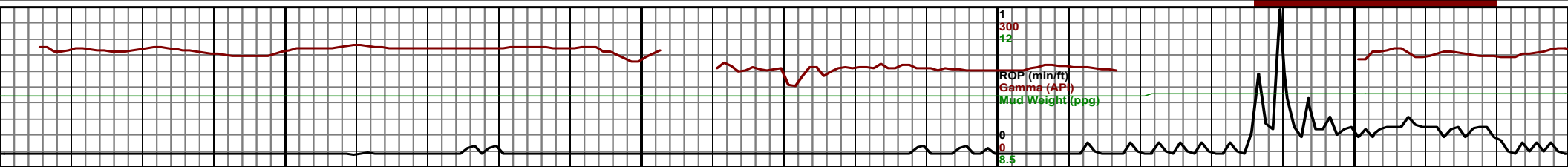
66' MD, 19' from Sharon
springs to P300

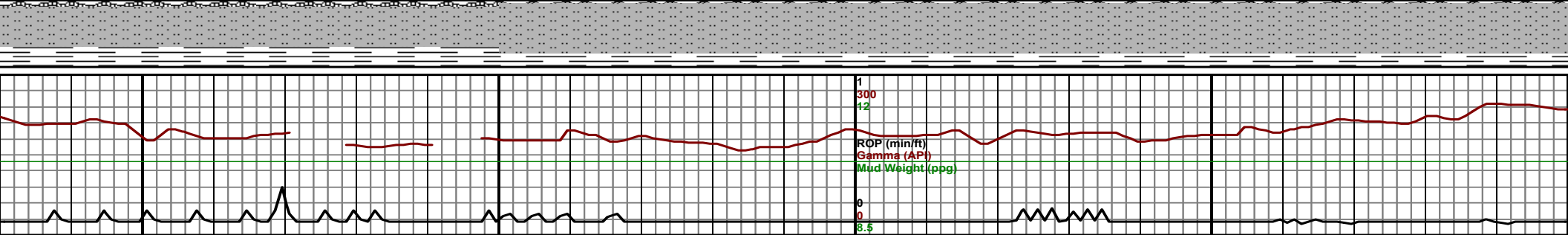
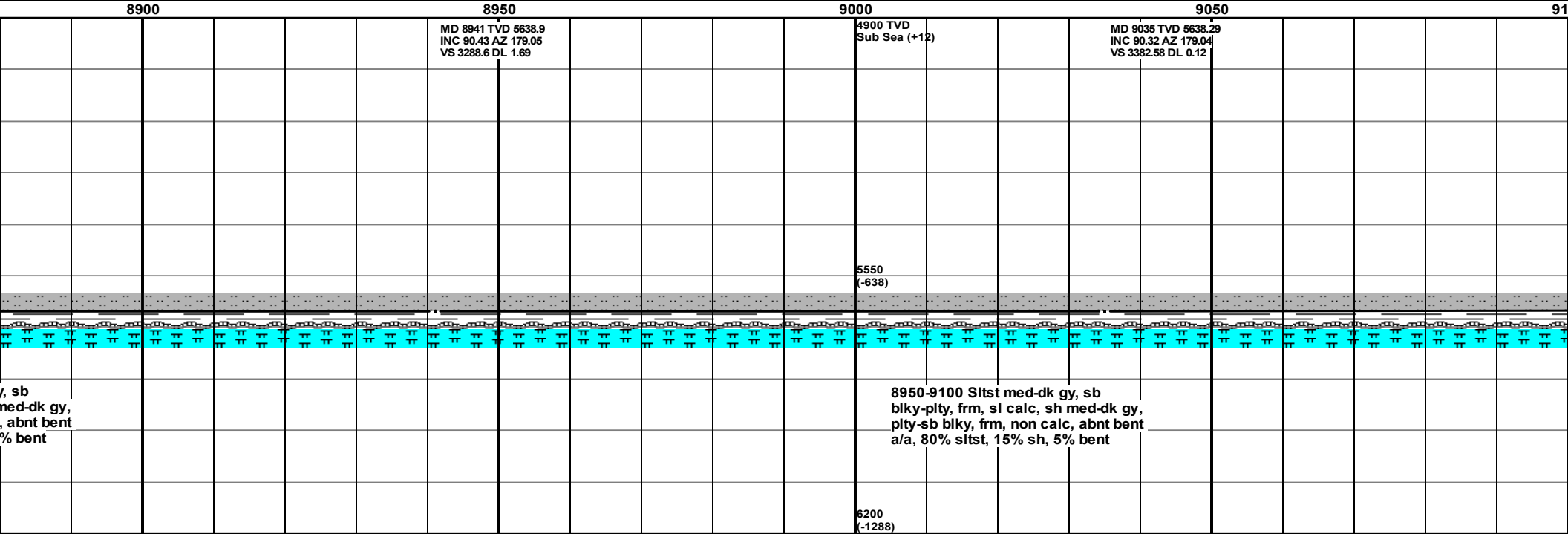
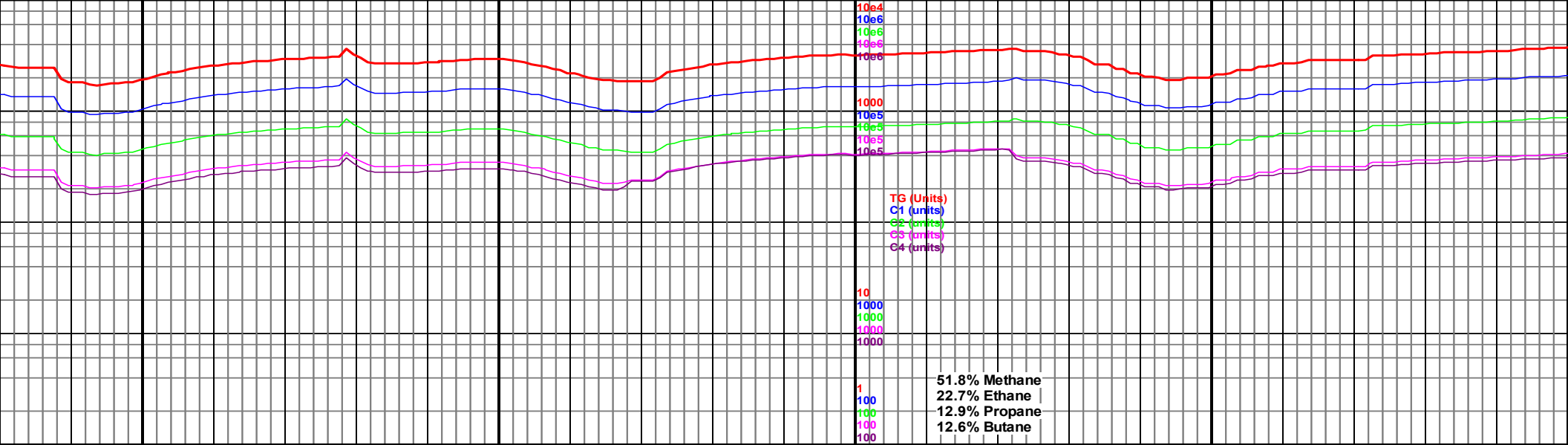
8650-8800 Mrst med-dk gy, sb
blky-plty, frm, abnt bent orng, sb
blky-plty, sft, occ dis pyr, bri yel flor,
60% mrst, 40% bent

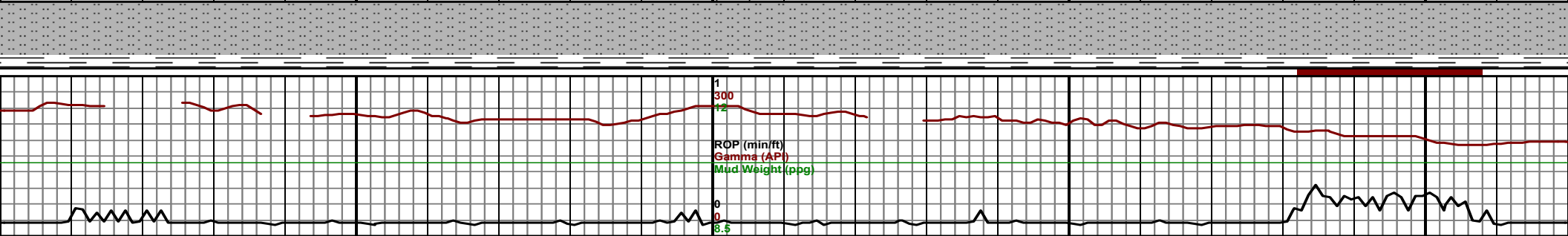
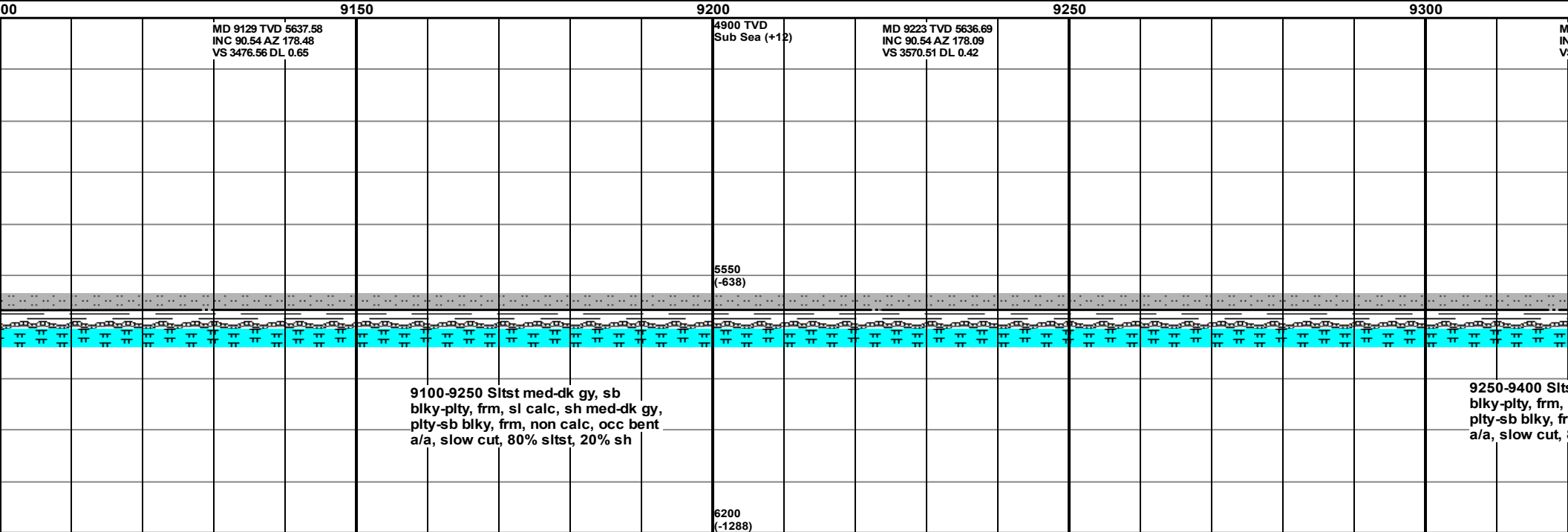
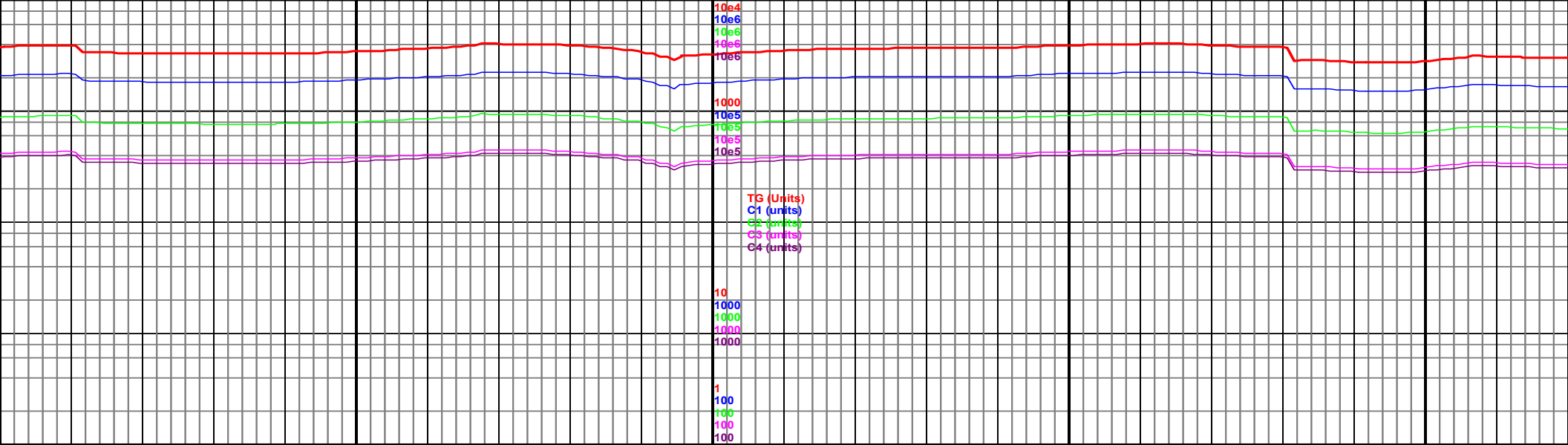
8800-8950 Slstst med-dk gy
blky-plty, frm, sl calc, sh n
plty-sb blky, frm, non calc.
a/a, 60% slstst, 30% sh, 10%

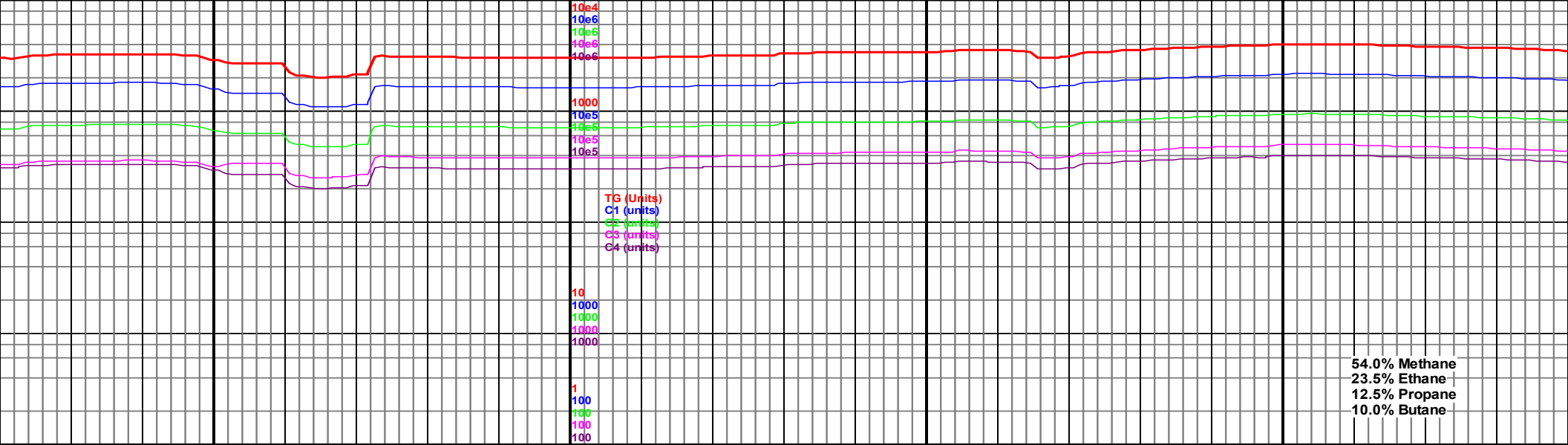
5550
(-638)

6200
(-1288)









ID 9318 TVD 5636.95
INC 89.14 AZ 179.34
S 3665.48 DL 1.98

9350

9400

4900 TVD
Sub Sea (+12)

MD 9412 TVD 5637.91
INC 89.7 AZ 179.27
VS 3759.47 DL 0.6

9450

9500

MD 9506 TVD 5637.61
INC 90.66 AZ 179.54
VS 3853.47 DL 1.06

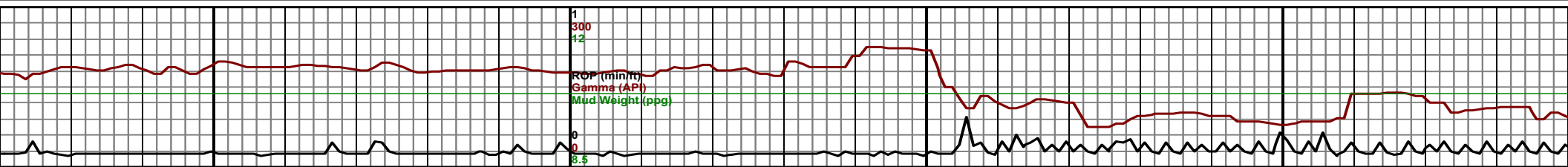
st med-dk gy, sb
sl calc, sh med-dk gy,
m, non calc, occ bent
80% sltst, 20% sh

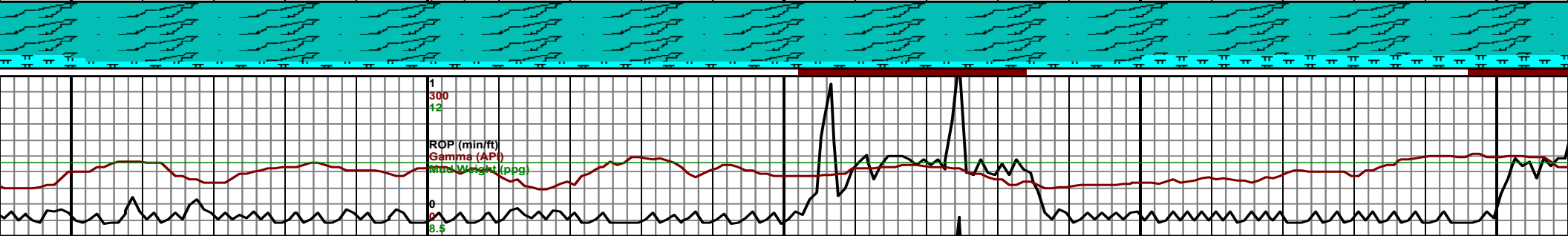
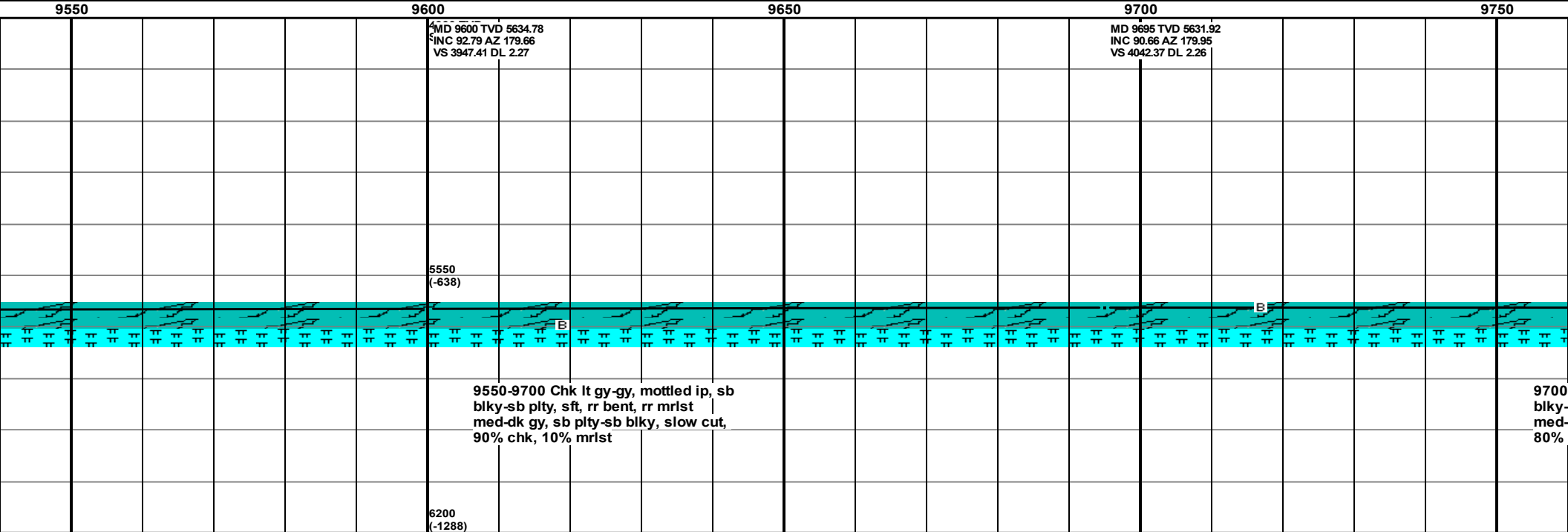
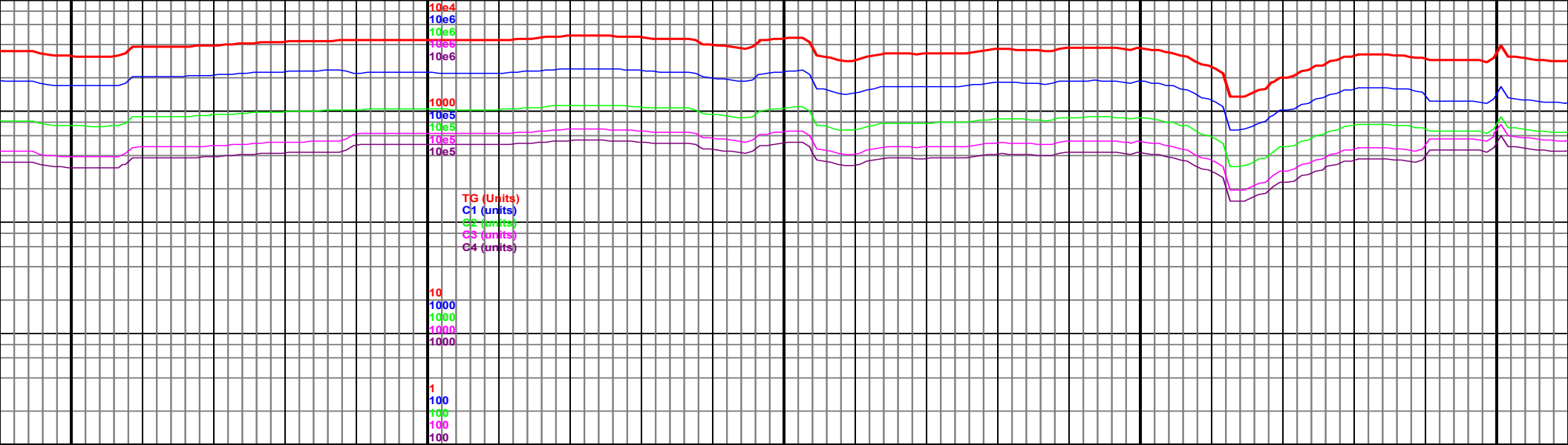
9455' MD, 33' from P350 to
N100

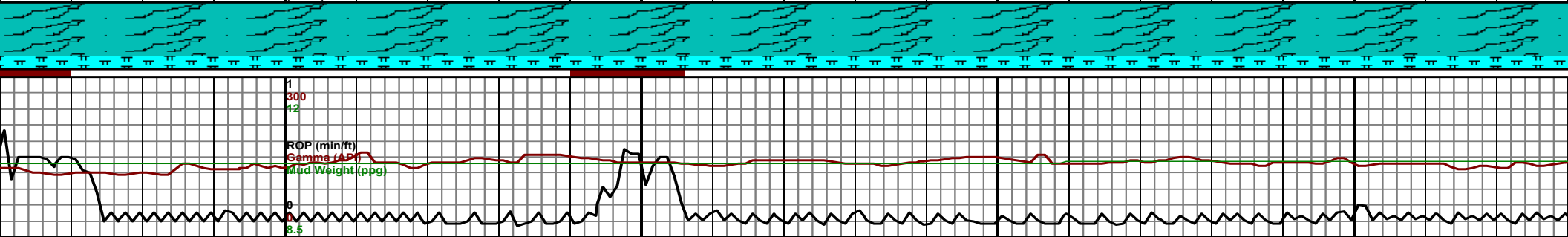
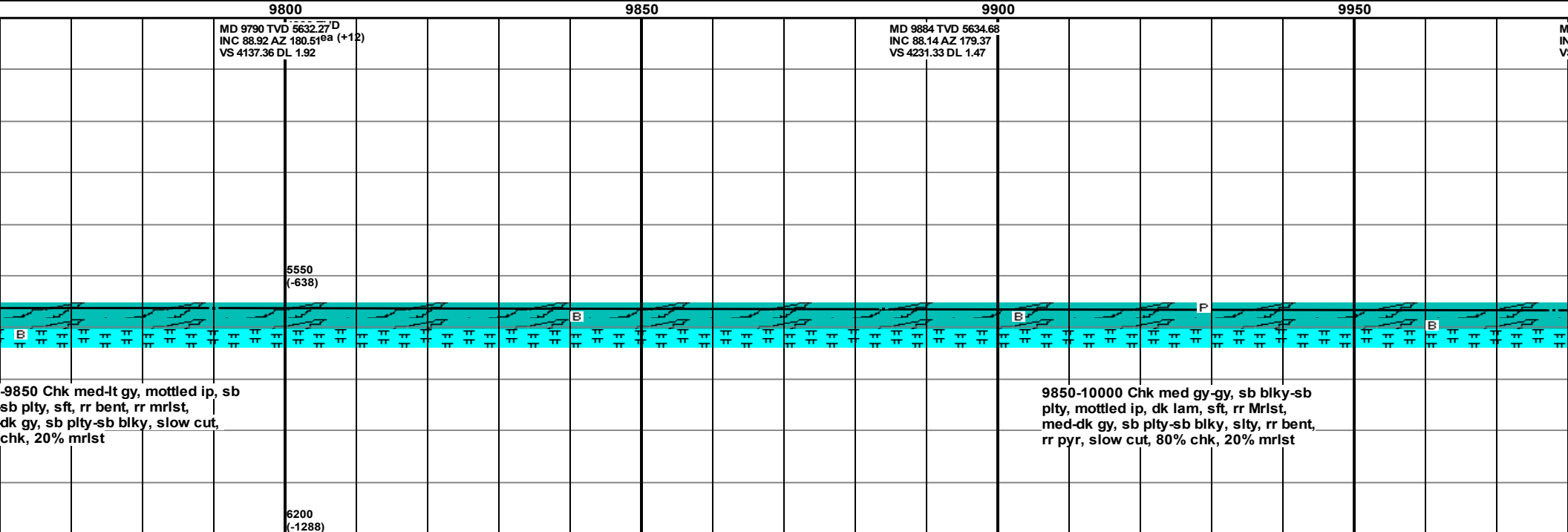
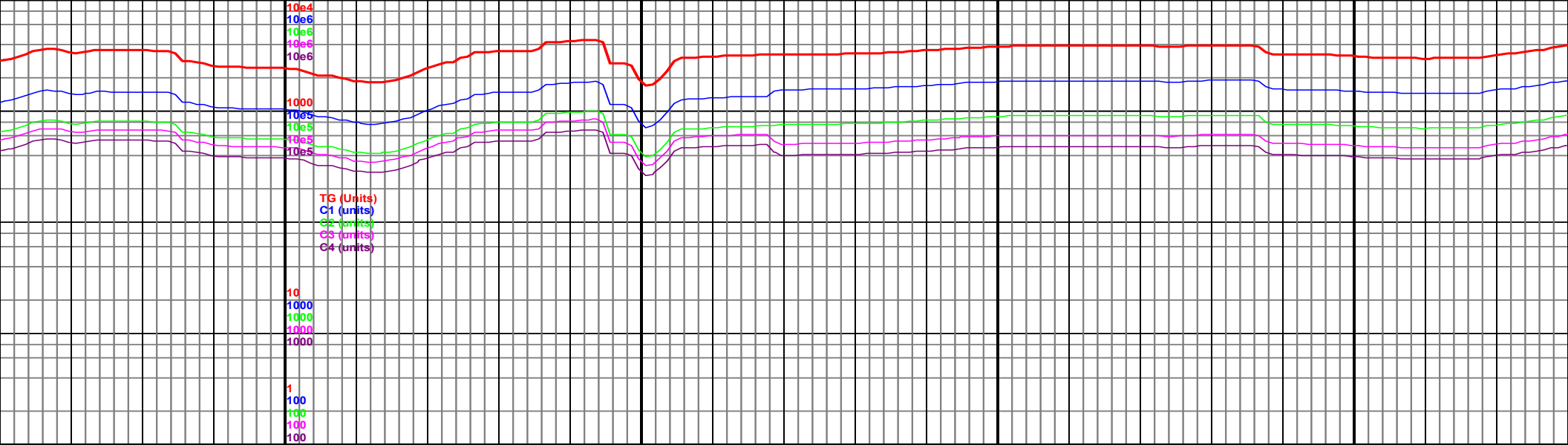
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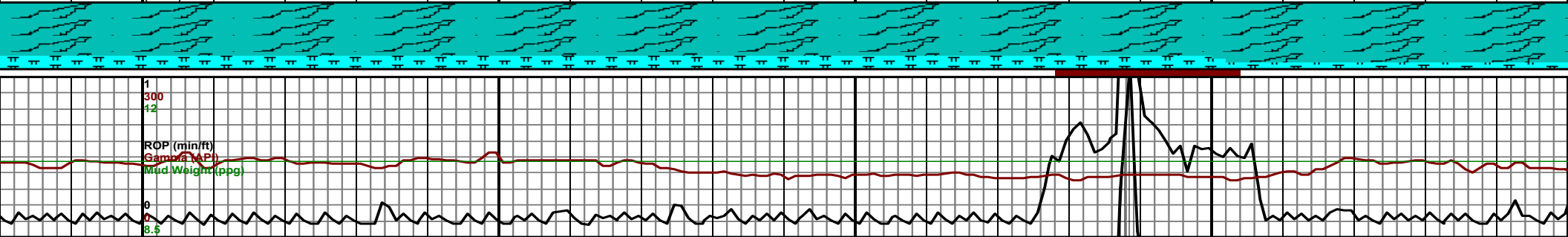
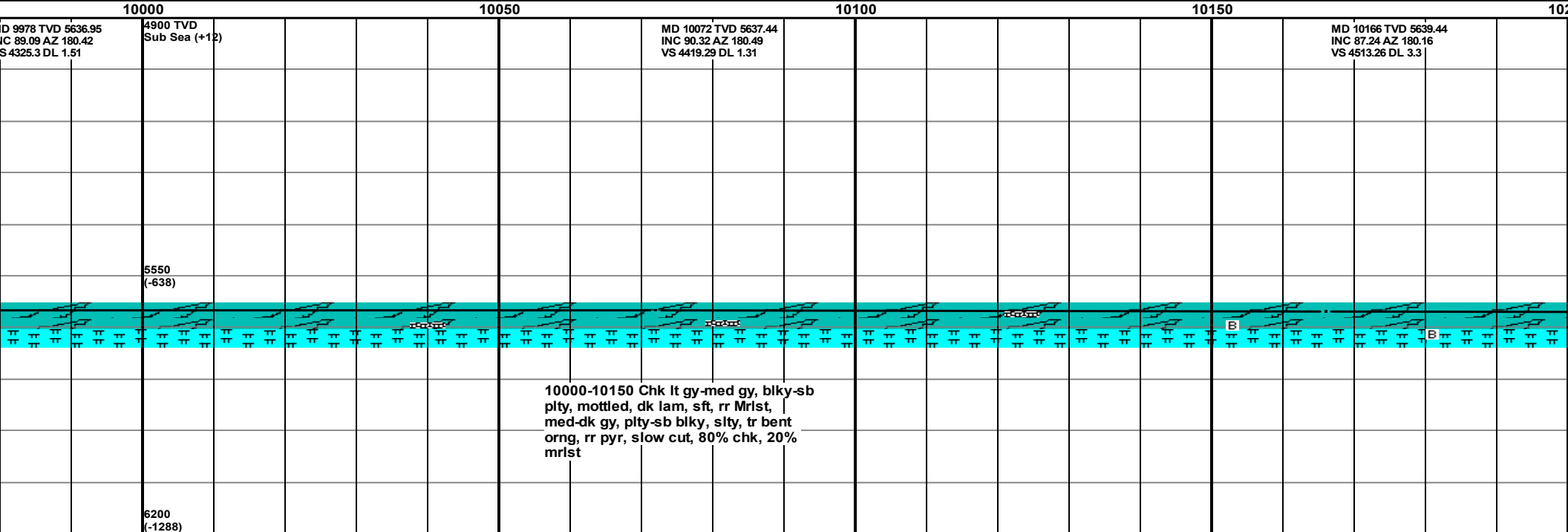
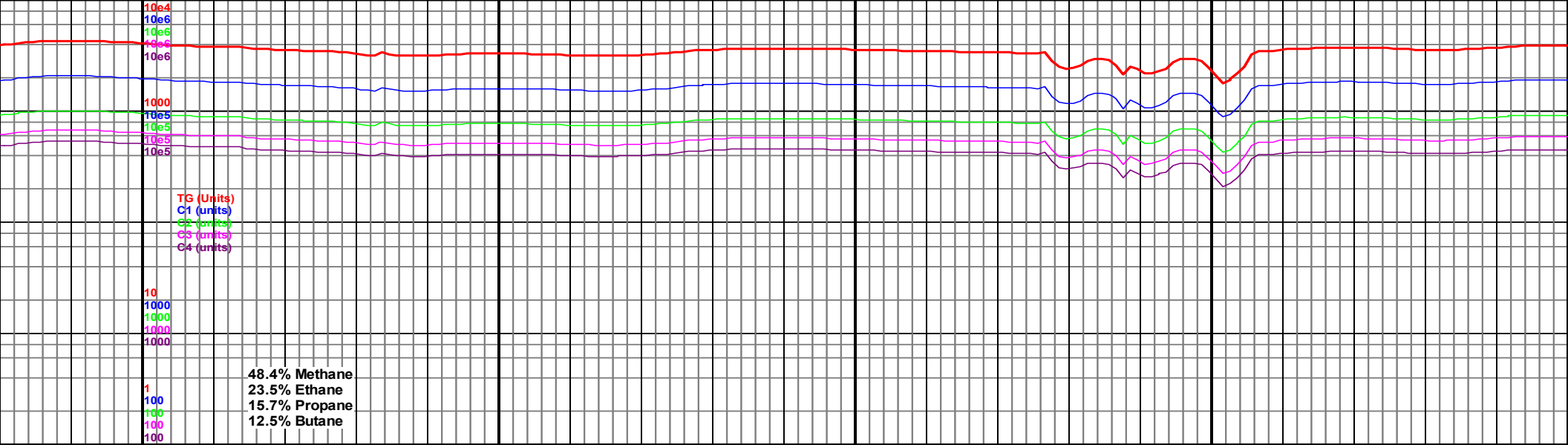
9400-9550 Chk lt-med gy, sb blk-y-sb
pty, sft, mottled ip, tr orng bent, abnt
mrst med-dk gy, sb blk-y-pty, frm, slow
cut, 80% chk, 20% mrst

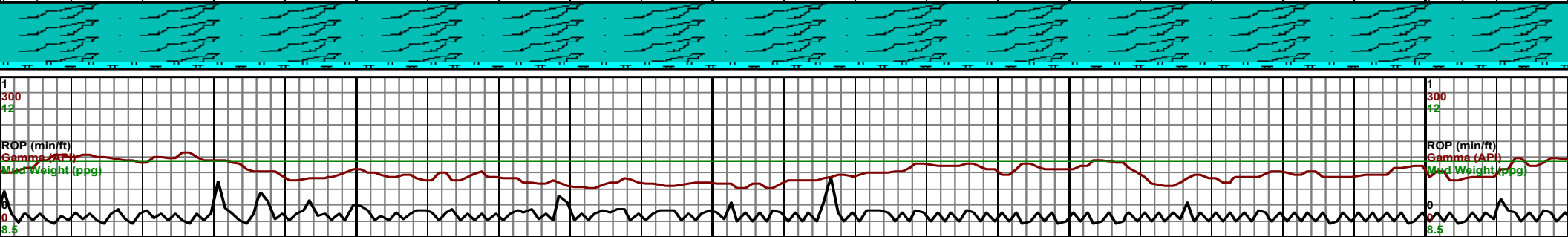
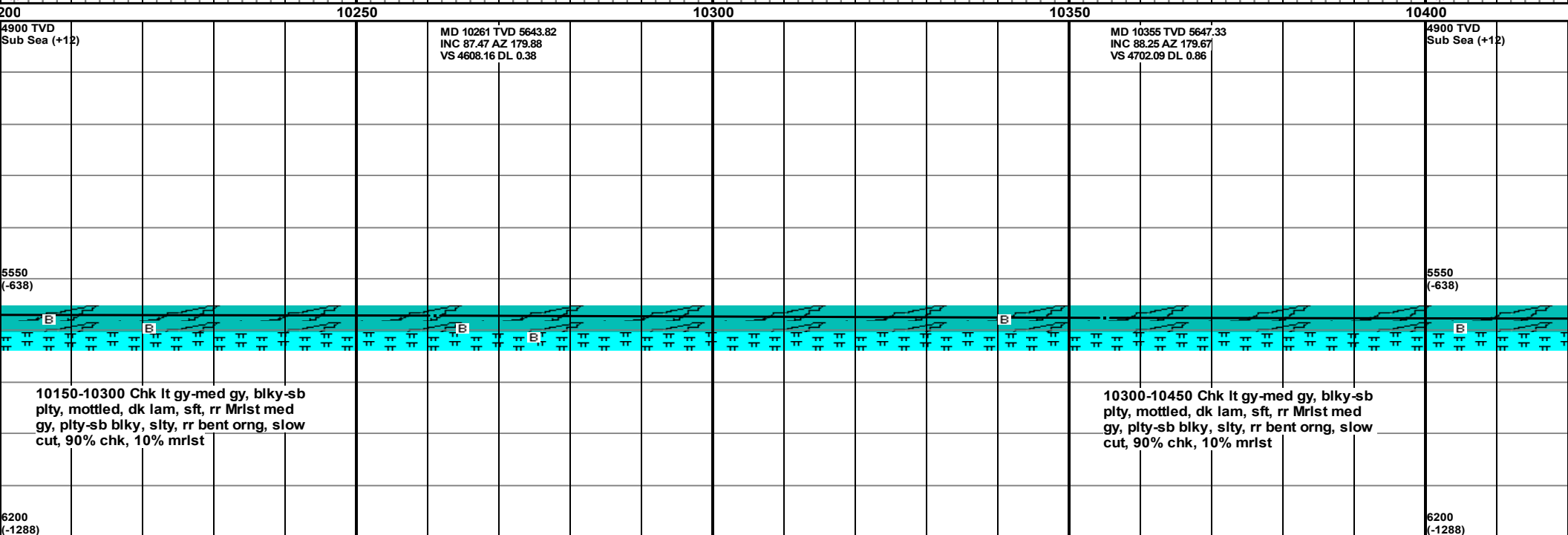
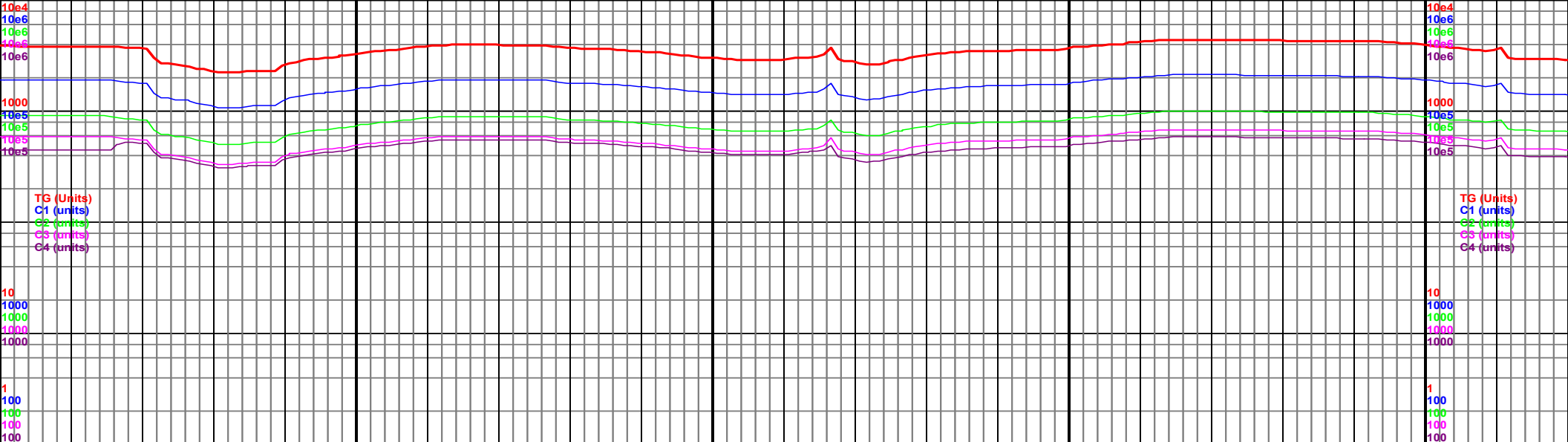
6200
(-1288)

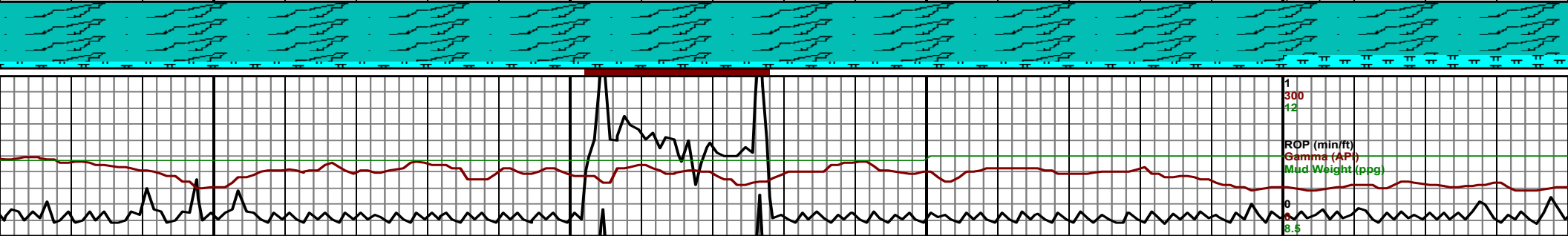
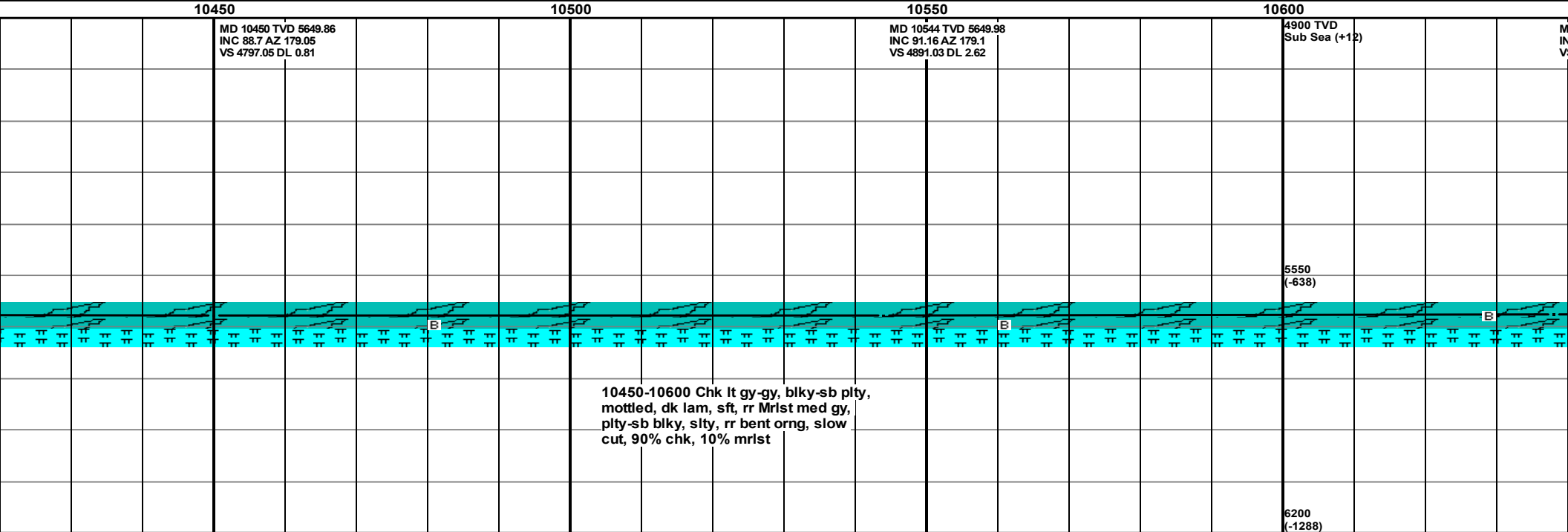
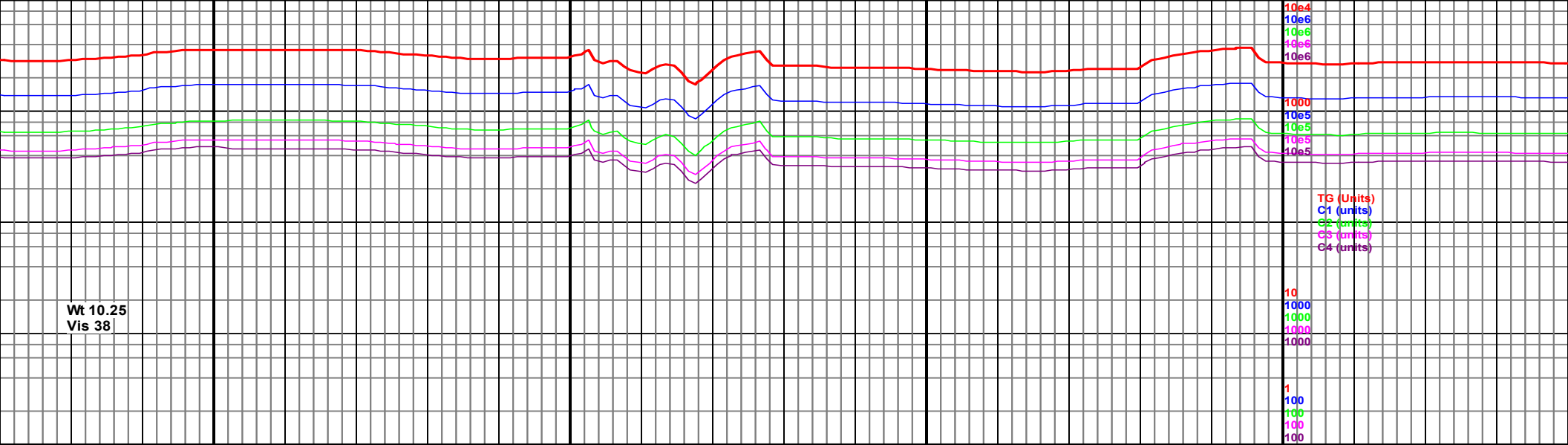


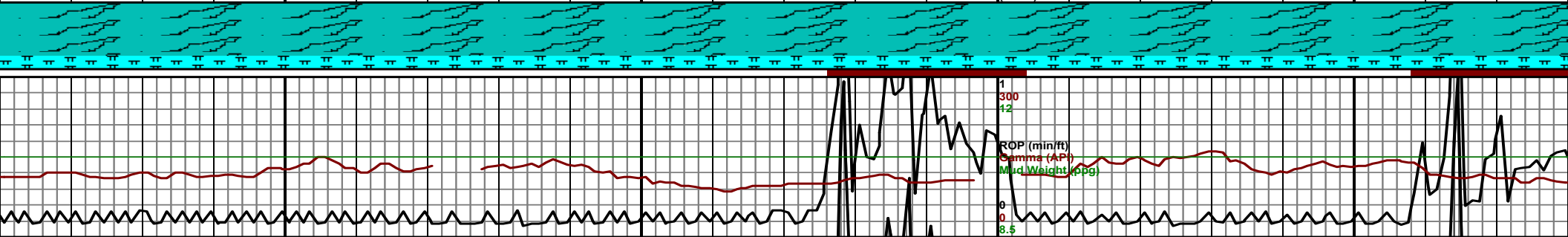
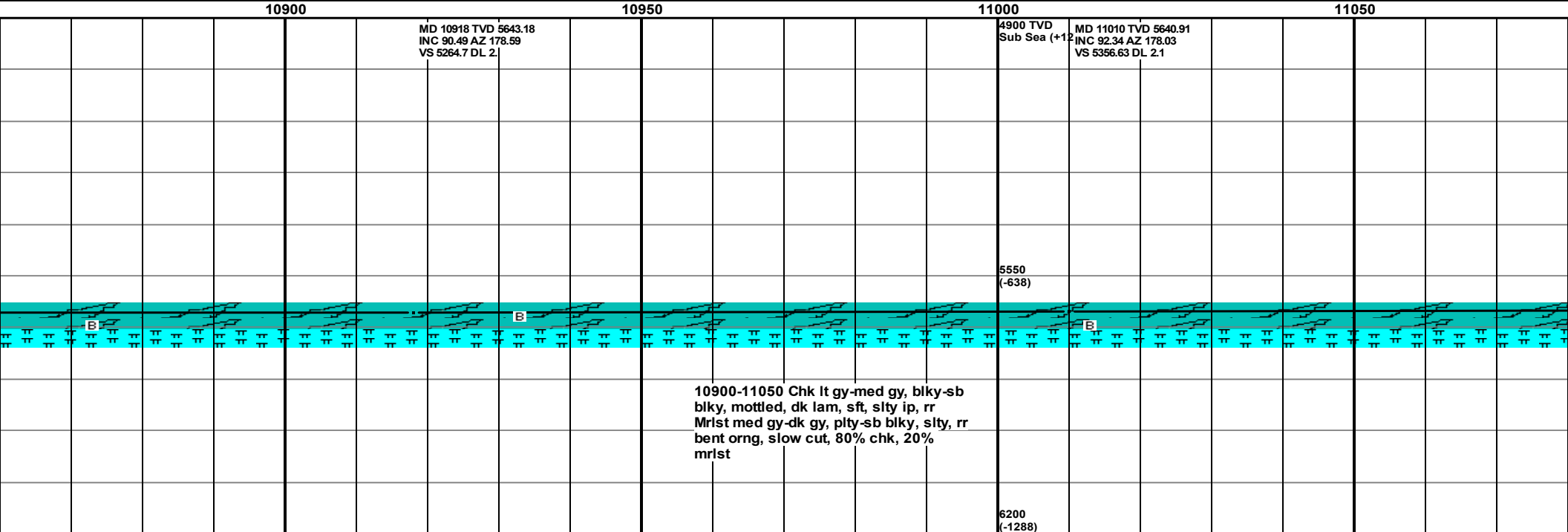
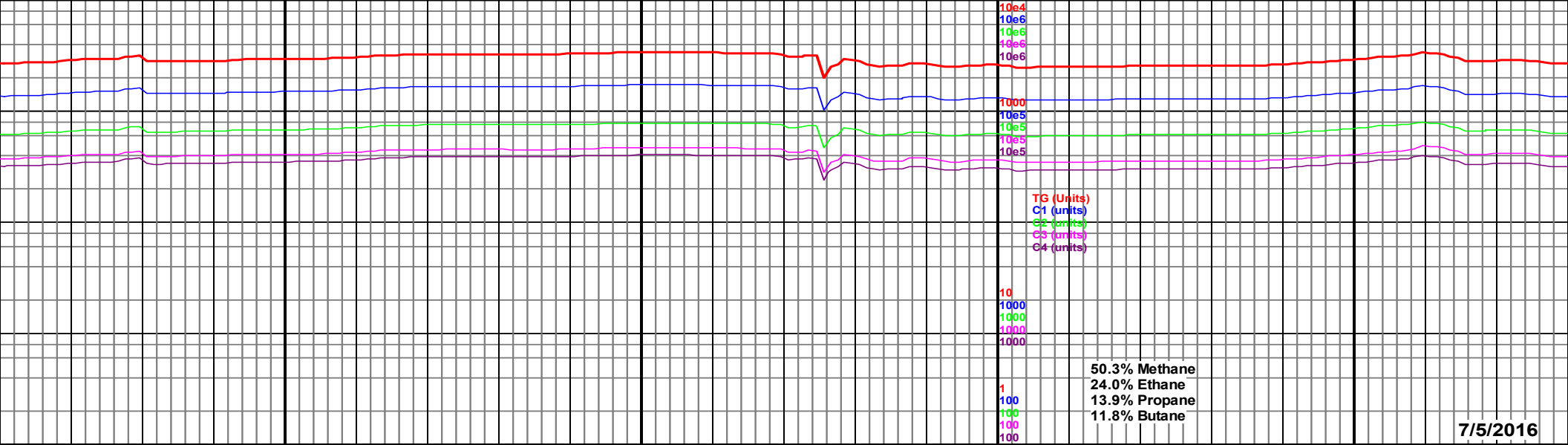


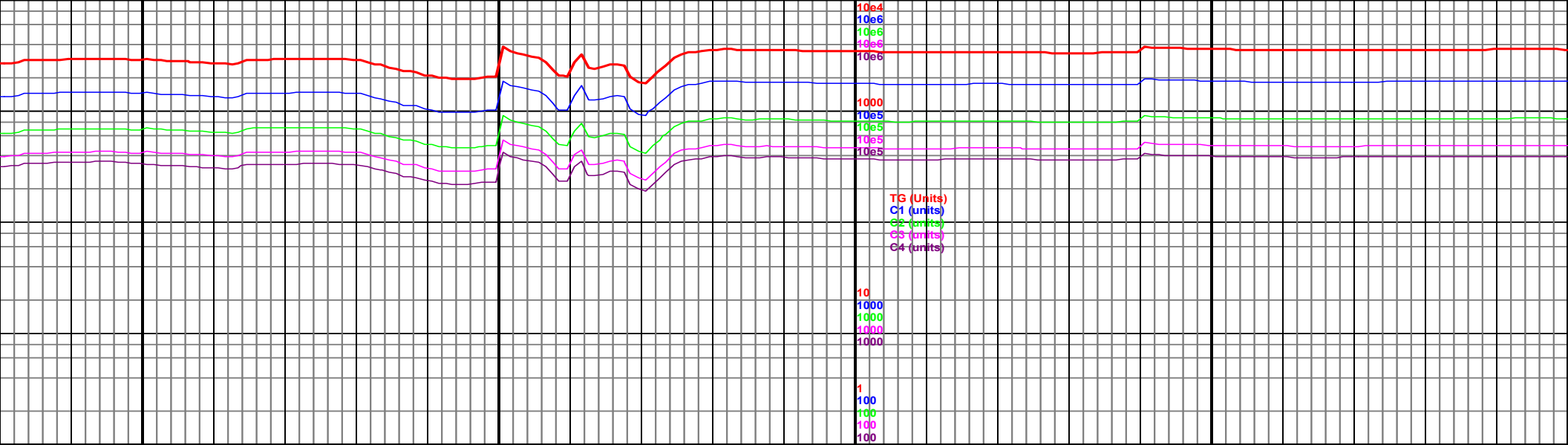












11100

11150

11200

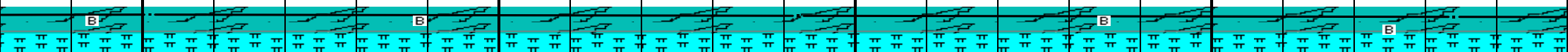
11250

11300

MD 11101 TVD 5637.95
INC 91.39 AZ 180.68
VS 5447.57 DL 3.09

MD 11192 TVD 5638.41
INC 88.03 AZ 182.2° (+12)
VS 5538.52 DL 4.05

MD 11284 TVD 5641.4
INC 88.14 AZ 182.03
VS 5630.41 DL 0.22

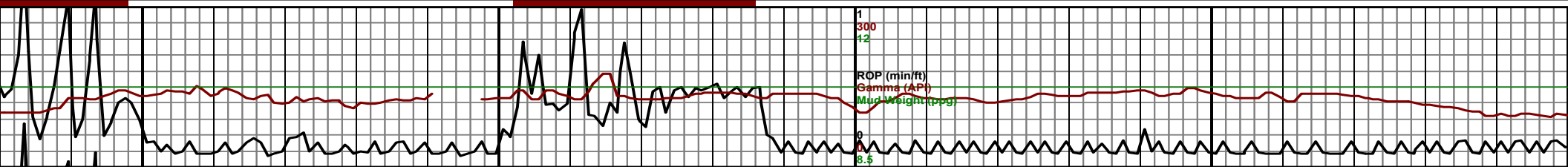


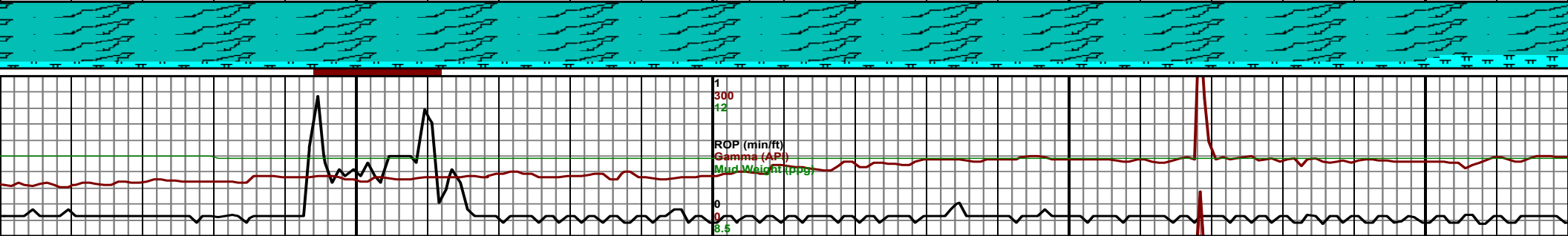
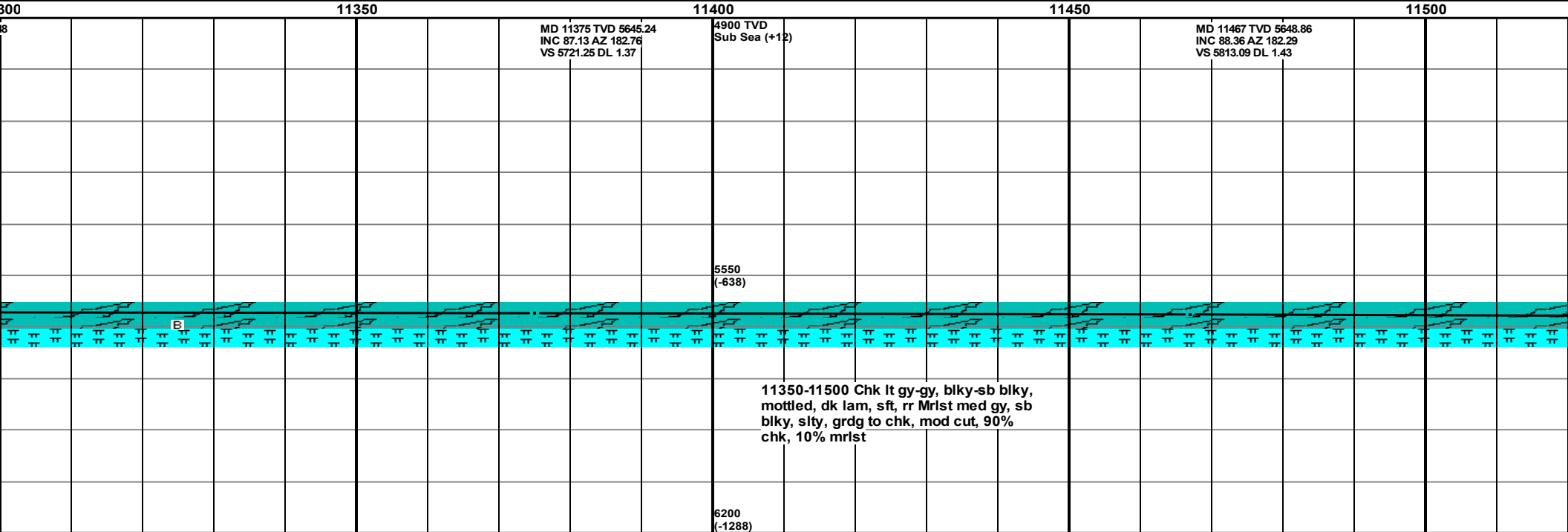
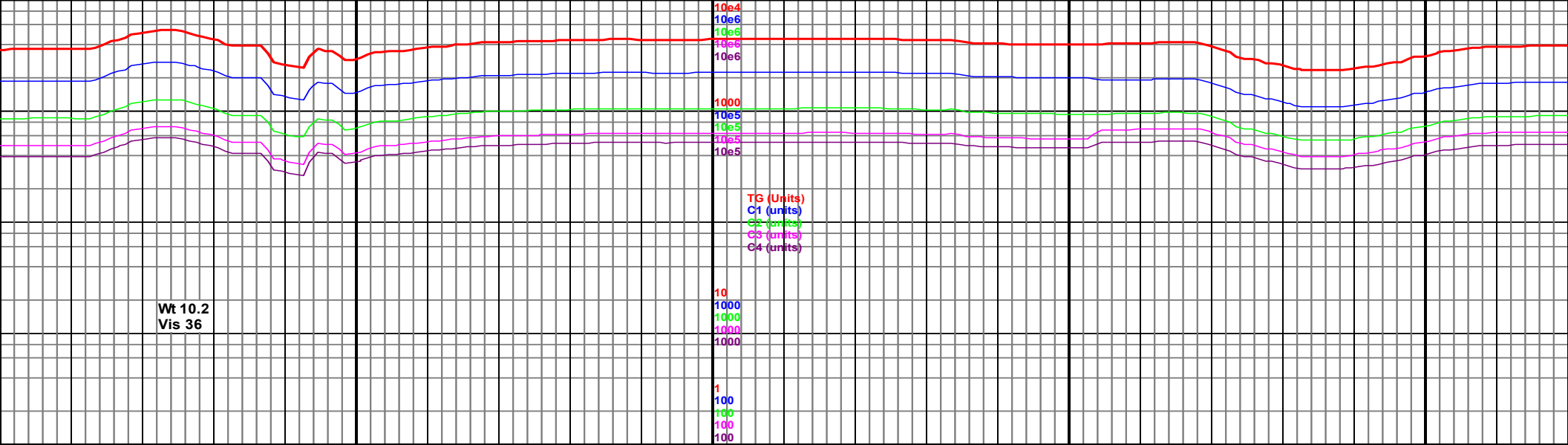
11050-11200 Chk lt gy-med gy, blkly-sb
blkly, mottled, dk lam, sft, slty ip, rr
Mrlst med gy-dk gy, plty-sb blkly, slty,
grdg to chk, rr bent orng, slow cut, 80%
chk, 20% mrlst

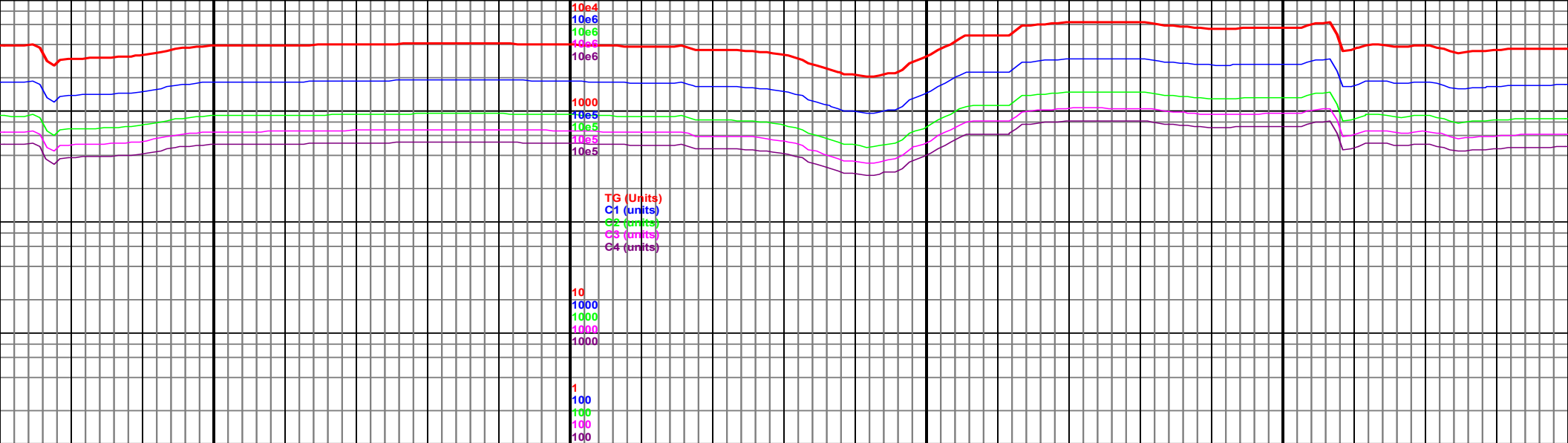
11200-11350 Chk lt gy-gy, blkly-sb blkly,
mottled, dk lam, sft, rr Mrlst med gy,
plty-sb blkly, slty, grdg to chk, rr bent
orng, mod cut, 90% chk, 10% mrlst

5550
(-638)

6200
(-1288)







11550

MD 11558 TVD 5652.8
INC 86.68 AZ 181.46
VS 5903.95 DL 2.06

11600

4900 TVD
Sub Sea (+12)

11650

MD 11650 TVD 5657.76
INC 87.13 AZ 180.53
VS 5995.8 DL 1.12

11700

5550
(-638)

P

B

B

11500-11650 Chk lt gy-med gy, blk-y-sb
blk-y, mottled, dk lam, sft, rr Mrlst med
gy, sb blk-y, slty, grdg to chk, rr pyr,
mod cut, 80% chk, 20% mrlst

11650-11800 Chk lt gy-med gy, blk-y-sb
blk-y, mottled, dk lam, sft, rr Mrlst med
gy, sb blk-y, slty, grdg to chk, rr pyr,
mod cut, 80% chk, 20% mrlst

6200
(-1288)

