



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

Well Name: RAZOR 26K-2306B
Location: NESW 26-T10N-R58W Weld County, Colorado
License Number: 05-123-37878
Spud Date: 1/11/2014
Surface Coordinates: Lat.: 40.808886 Long.: -103.834644
Region: Redtail Field
Drilling Completed: 1/XX/2014
Bottom Hole Coordinates: Lat.: 40.831222 Long.: -103.835669
Ground Elevation (ft): 4737.5' **K.B. Elevation (ft):** 4759.5'
Logged Interval (ft): 5100' **To:** XXXXX' **Total Depth (ft):** XXXXX'
Formation: Pierre, Sharon Springs, Niobrara
Type of Drilling Fluid: Water Based Mud

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: Luke Schwantes and Mark Denler
Company: Acme Geologic Consulting
Address: 108 Berry Street
Little Rock, AR 72205

Drilling Company

Frontier
Rig #26


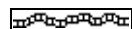
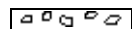
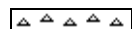
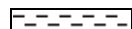

Gas Detection







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

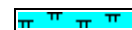
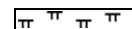
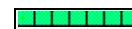



Comments






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 mrilst
 Mrilst
 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

OTHER SYMBOLS




POROSITY

	Earthy
	Fenest
	Fracture
	Inter
	Moldic
	Organic
	Pinpoint
	Vuggy

SORTING



	Well
	Moderate
	Poor

ROUNDING



	Rounded
	Subrnd
	Subang

 Angular

OIL SHOW

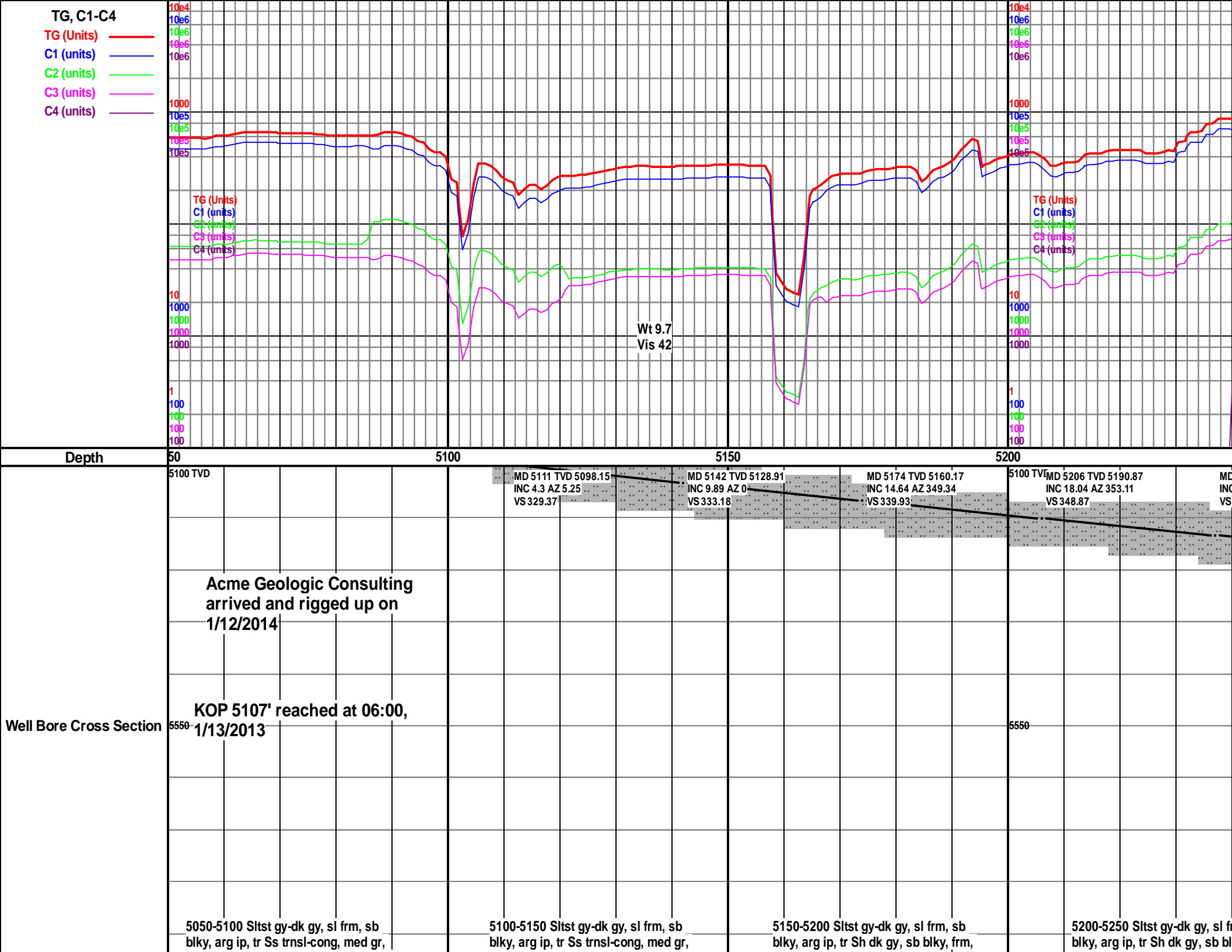
	Even
	Spotted
	Ques
	Dead

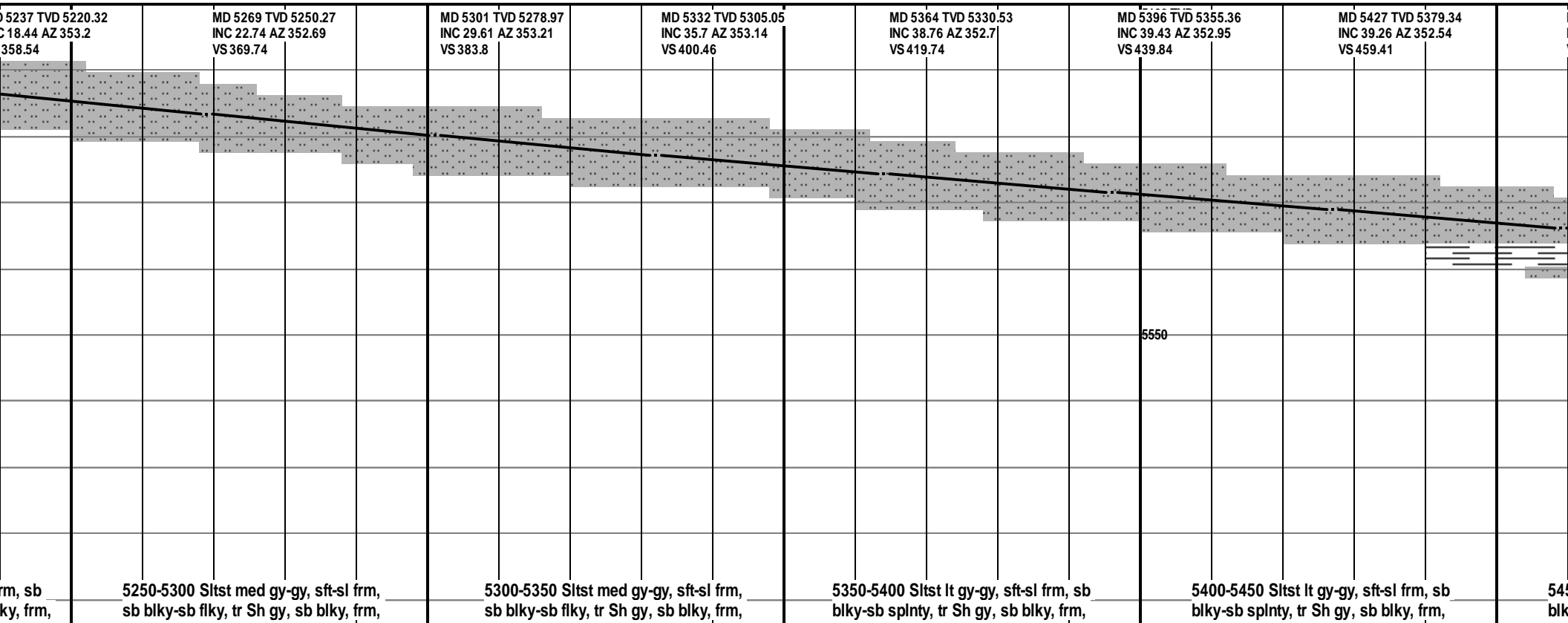
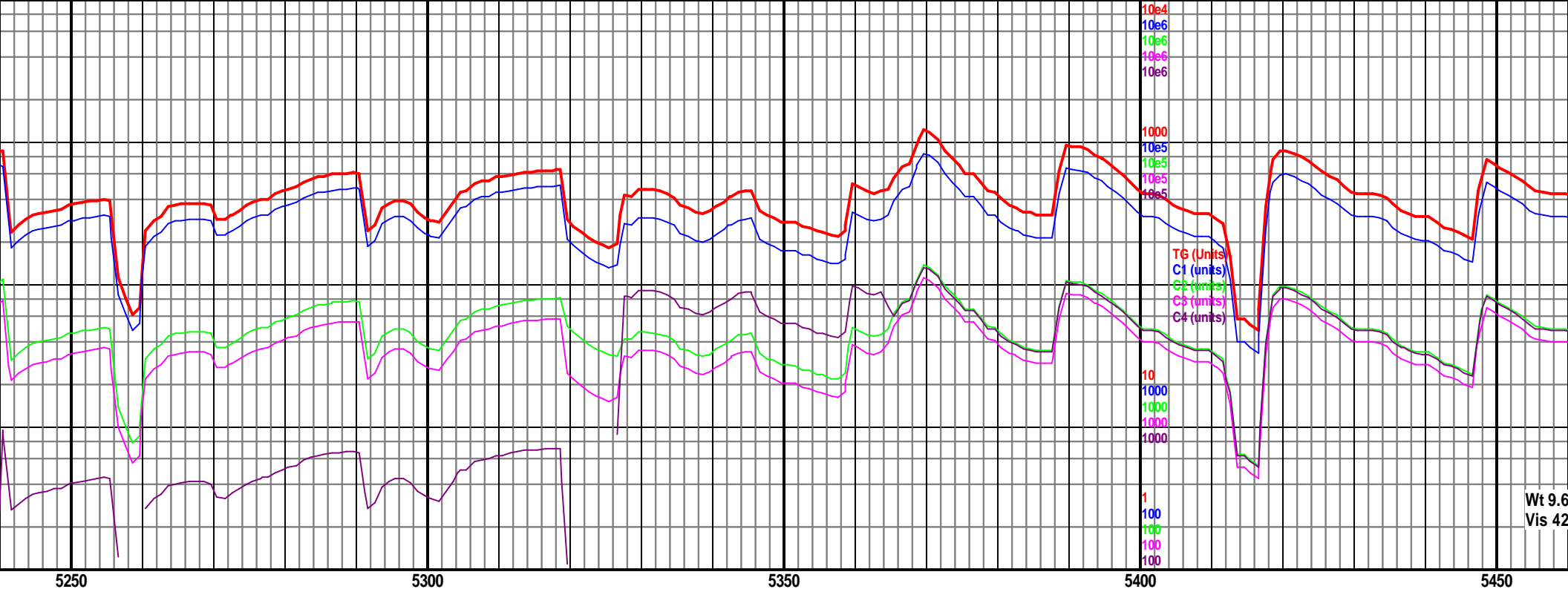
INTERVAL

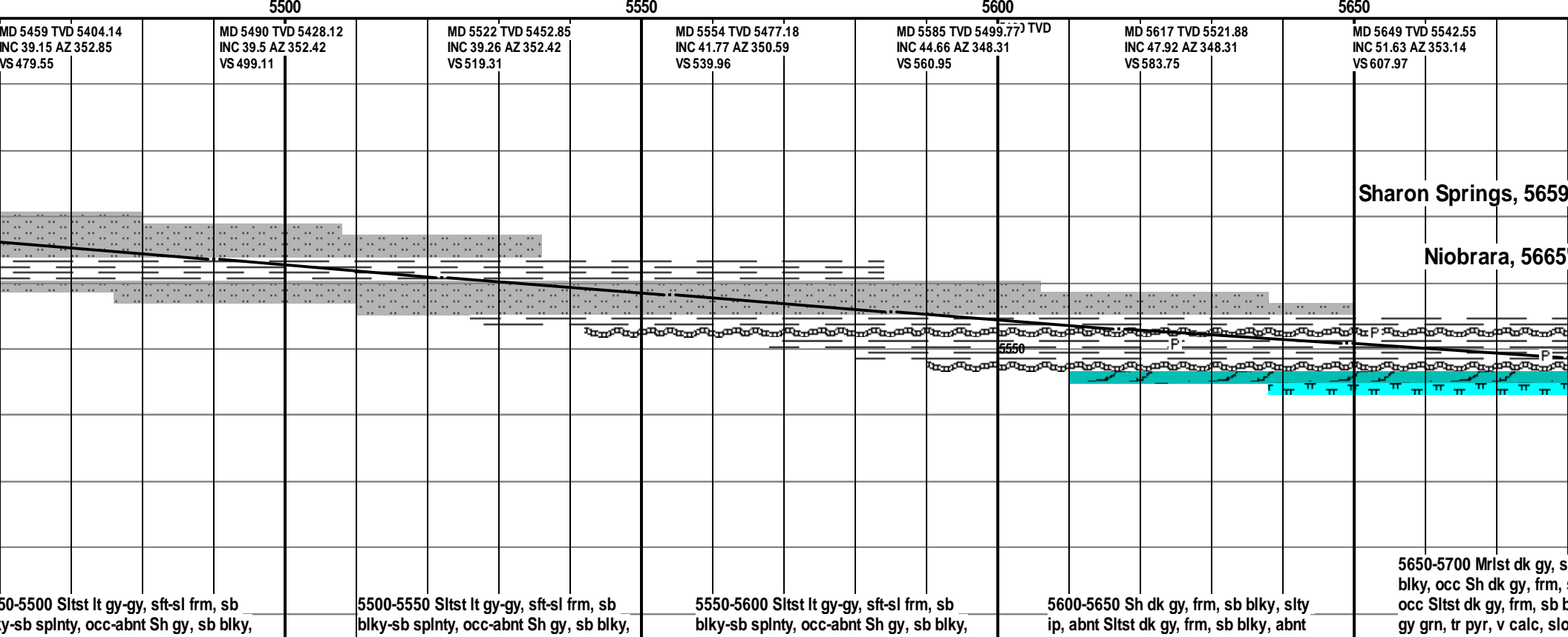
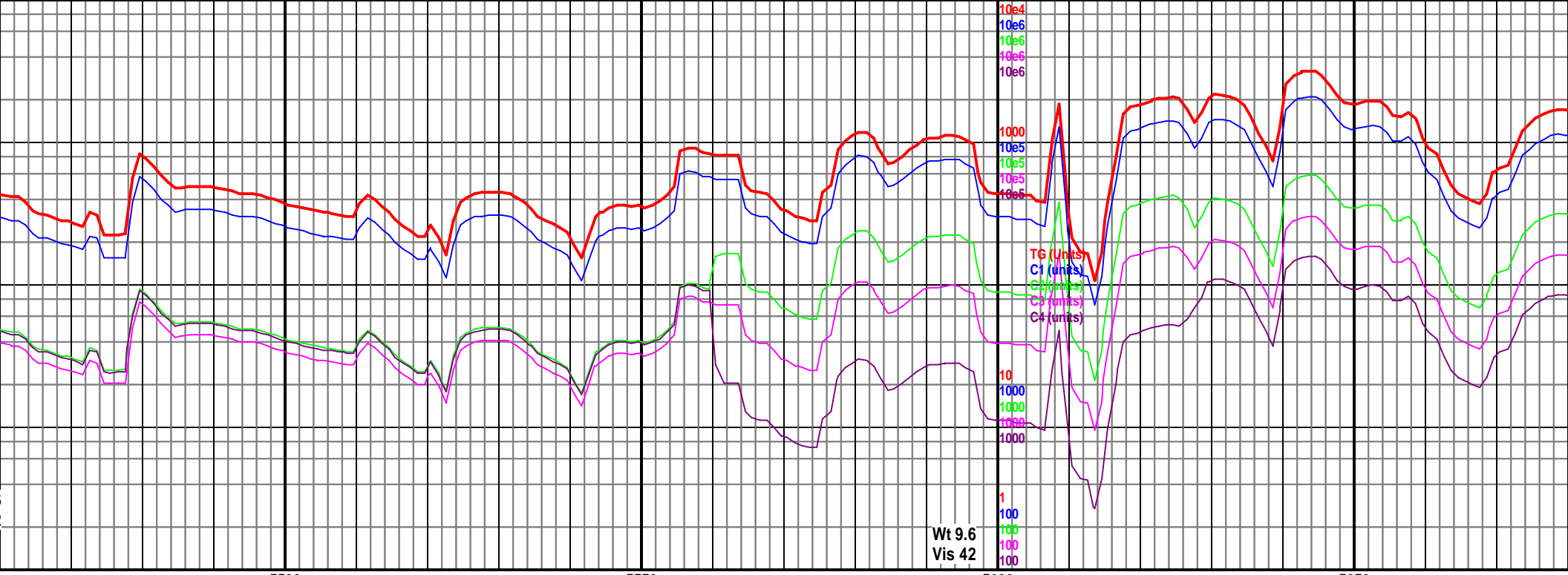
	Core
	Dst

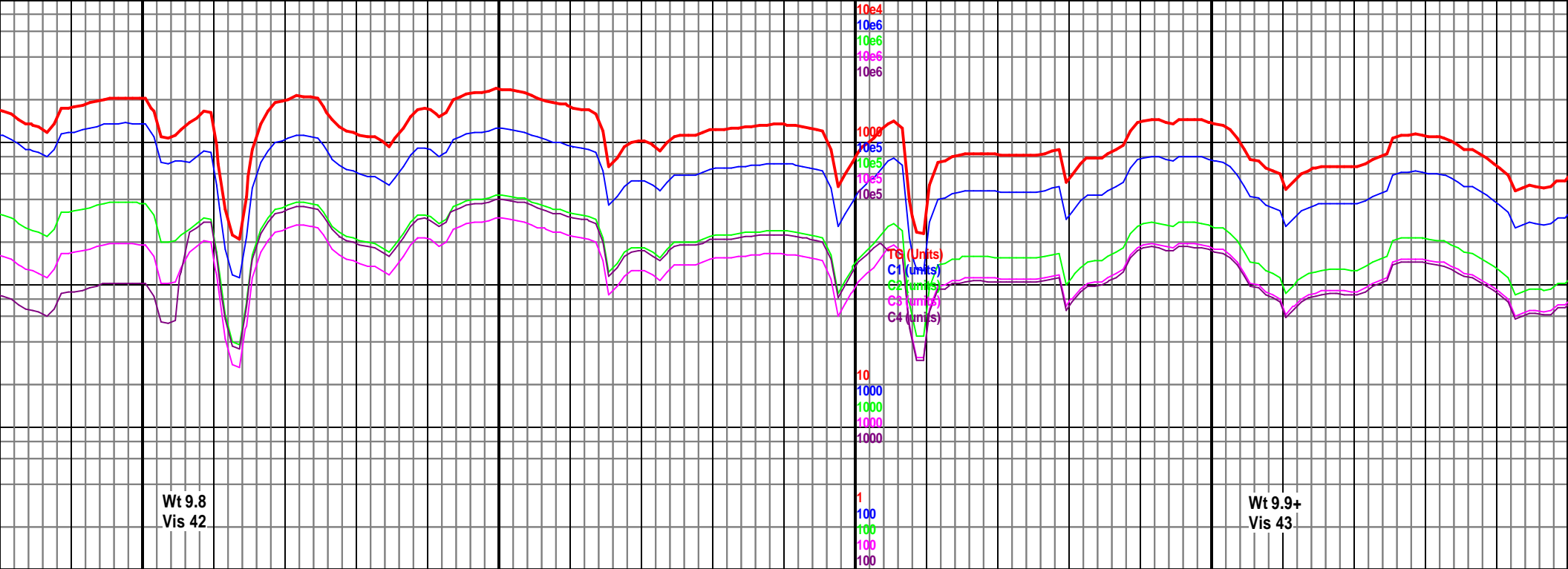
EVENT

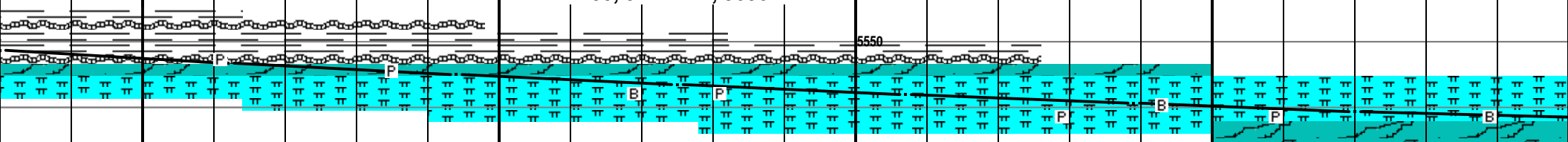
	Rft
	Sidewall

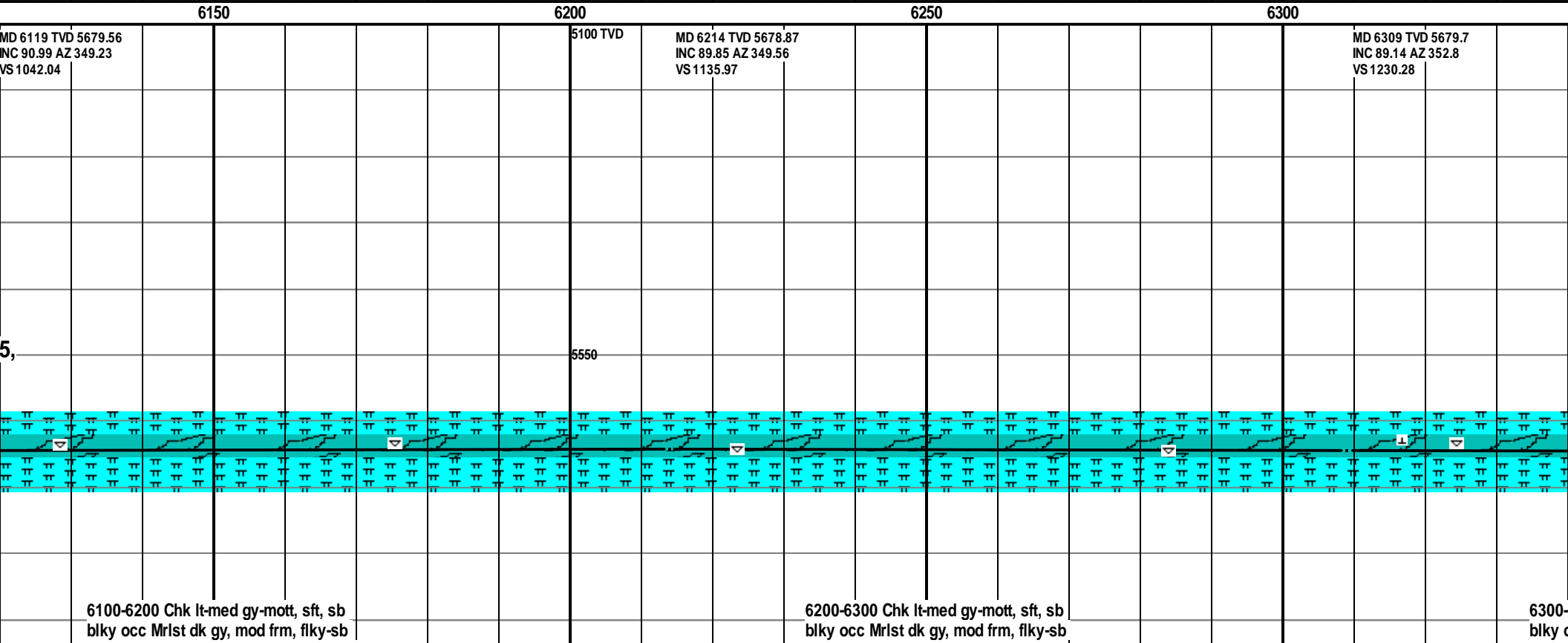
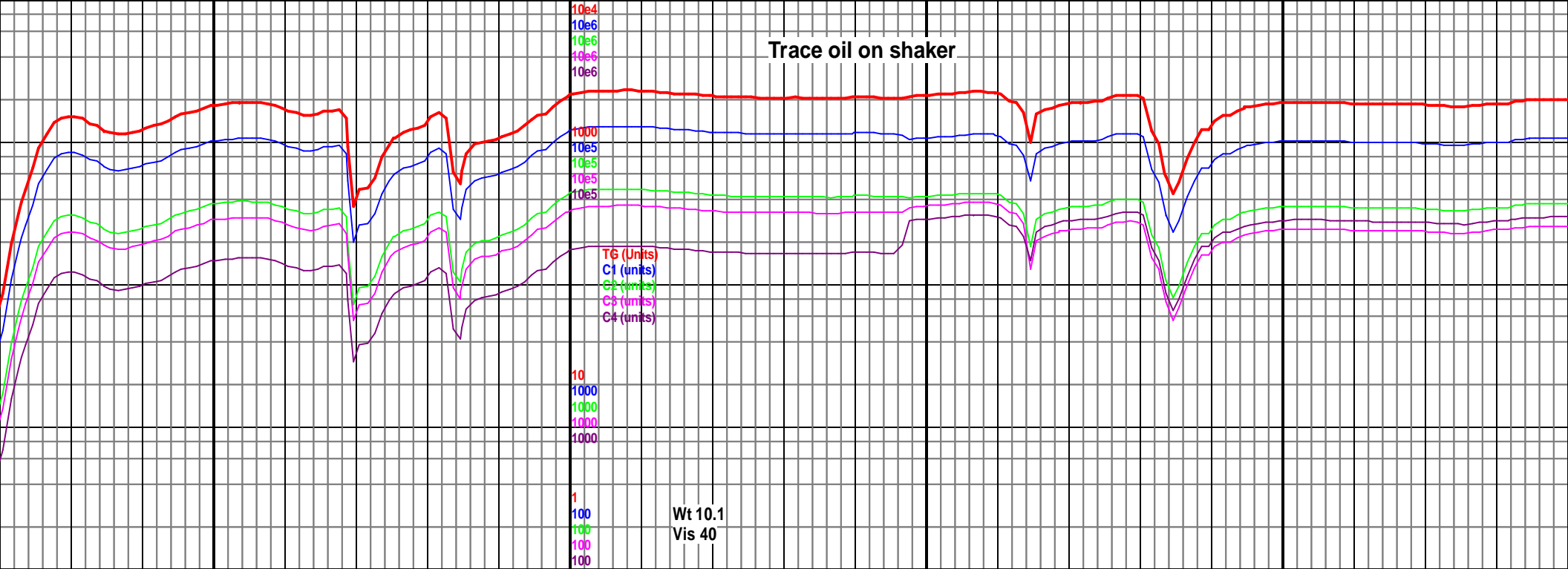


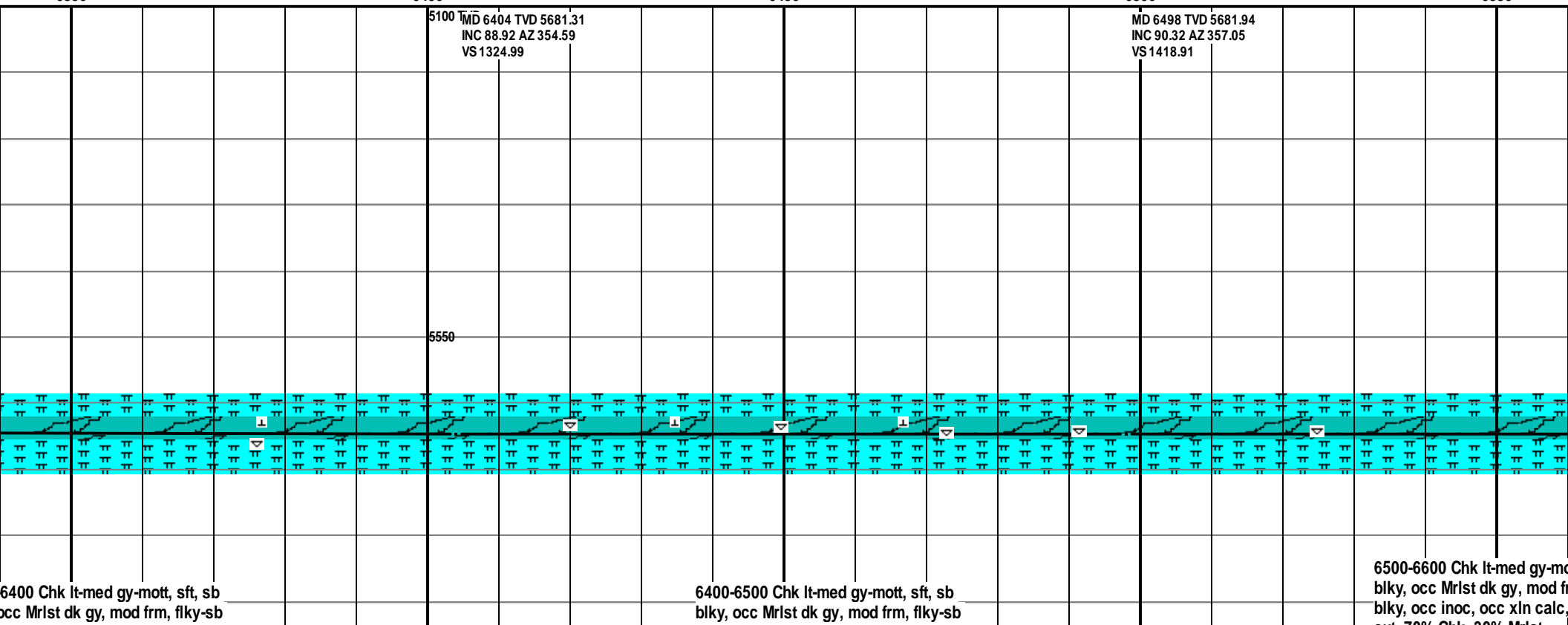
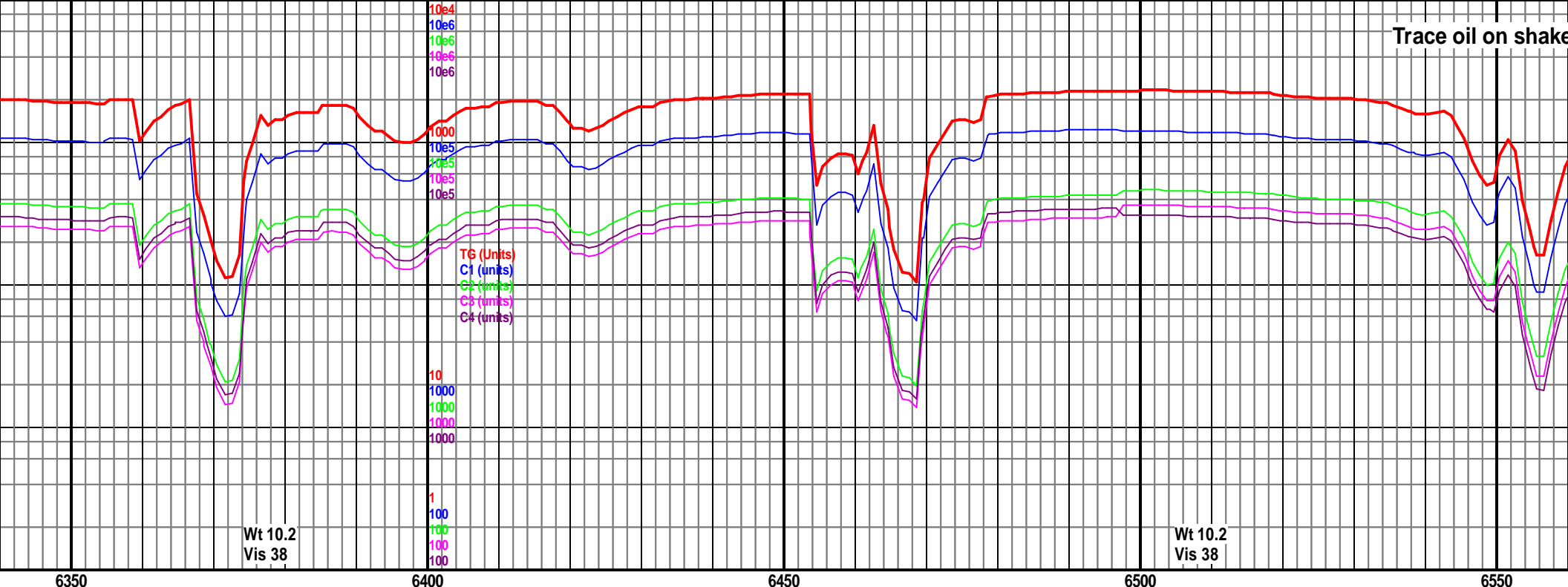


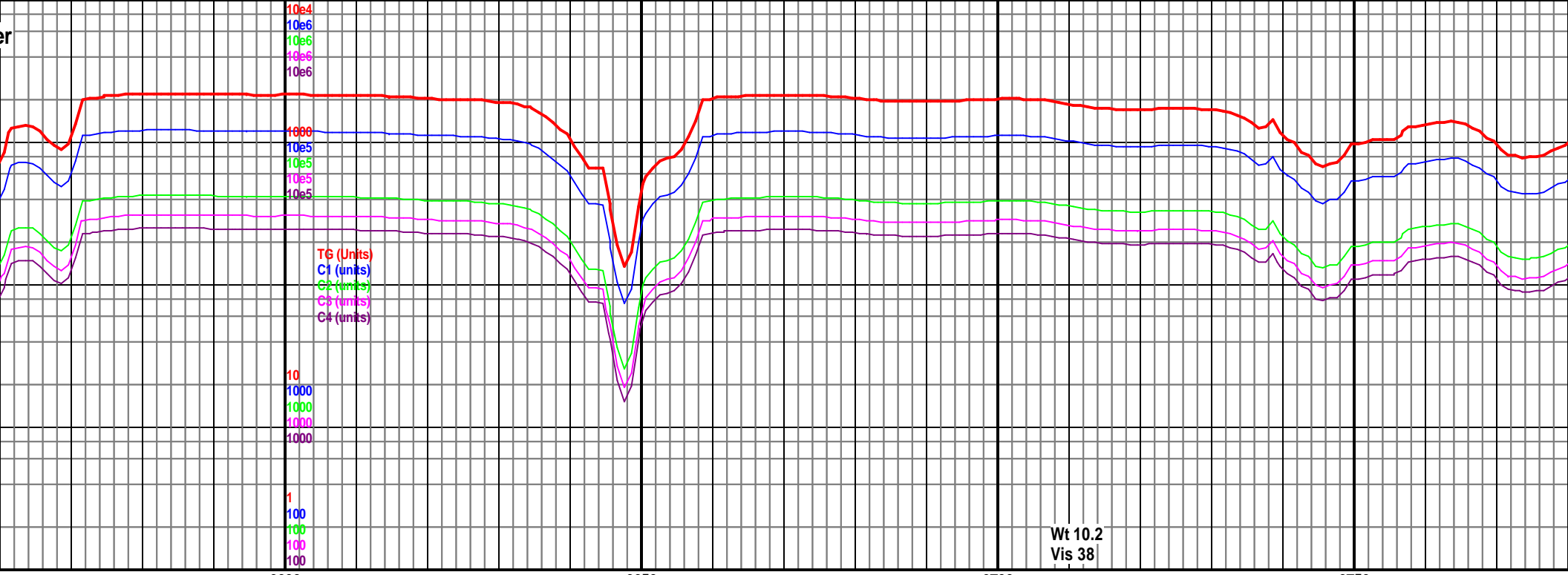




5700		5750		5800		5850		5900					
MD 5680 TVD 5561.16 INC 54.55 AZ 351.83 VS 632.64		MD 5712 TVD 5578.76 INC 58.72 AZ 350.24 VS 659.16		MD 5744 TVD 5594.49 INC 62.36 AZ 349.32 VS 686.73		MD 5775 TVD 5608.49 INC 63.96 AZ 348.98 VS 714.06		5100 TVD MD 5807 TVD 5621.99 INC 66.15 AZ 348.28 VS 742.68		MD 5839 TVD 5634.03 INC 69.62 AZ 347.71 VS 771.87		MD 5870 TVD 5644.08 INC 72.56 AZ 348.7 VS 800.77	
' MD, 5548' TVD													
' MD, 5552' TVD													
N100, 5696' MD, 5570' TVD				N200, 5772' MD, 5606' TVD									
													
ft-sl frm, sb		5700-5750 Chk lt-med gy-mott, sft-sl		5750-5800 Mrlst dk gy, mod frm, flky-sb		5800-5850 Mrlst dk gy, mod frm, flky-sb		5850-5900 Mrlst dk gy, mod frm, flky-sb		5900-5950 Mrlst dk gy, mod frm, flky-sb		5950-6000 Mrlst dk gy, mod frm, flky-sb	
sb blk, slty ip,		frm, sb blk, abnt Mrlst dk gy, sl		blk, occ Chk lt-med gy-mott, sft, sb		blk, occ Chk lt-med gy-mott, sft, sb		blk, occ Chk lt-med gy-mott, sft, sb		blk, rr bent, rr pyr, slo oil cut, 60%		blk, rr bent, rr pyr, slo oil cut, 60%	
blk, occ Bent		frm-frm, sb blk, occ Bent, tr pyr,		blk, rr bent, rr pyr, slo oil cut, 80%		blk, rr bent, rr pyr, slo oil cut, 80%		blk, rr bent, rr pyr, slo oil cut, 80%		blk, rr bent, rr pyr, slo oil cut, 60%		blk, rr bent, rr pyr, slo oil cut, 60%	
w oil cut, 60%													

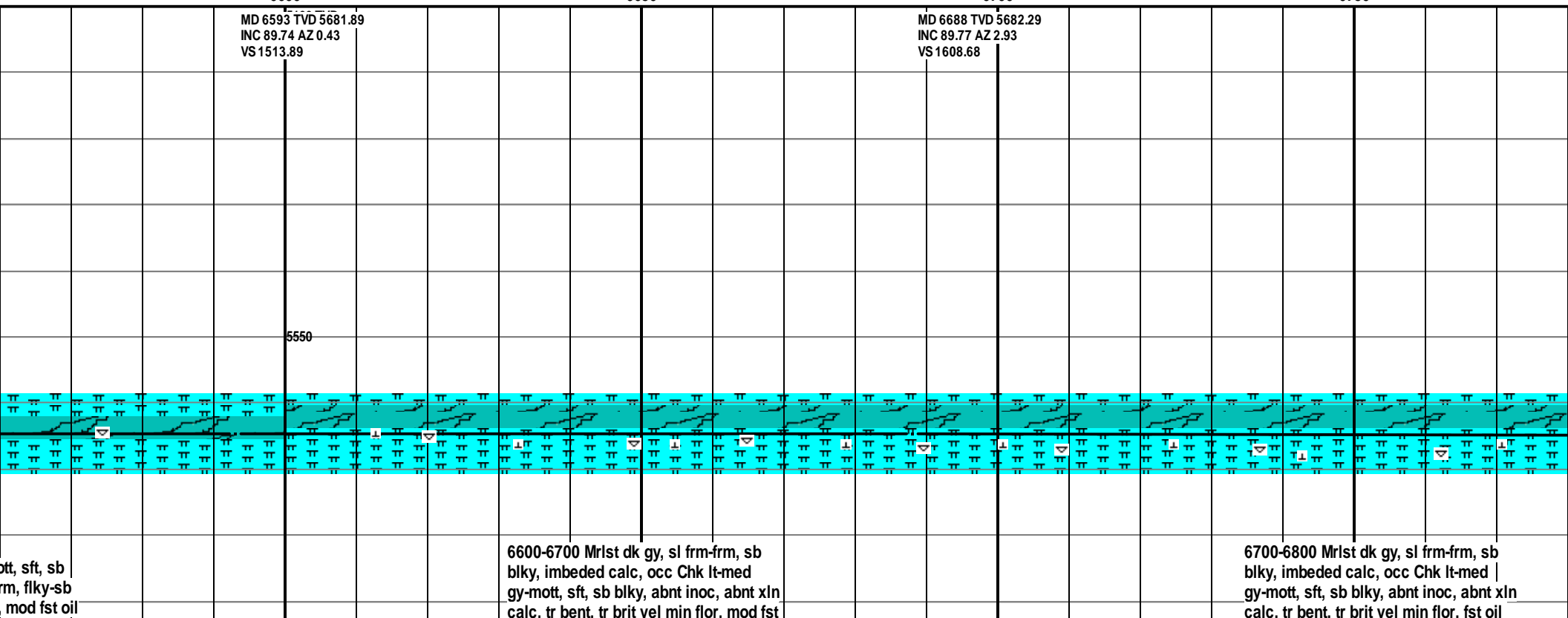


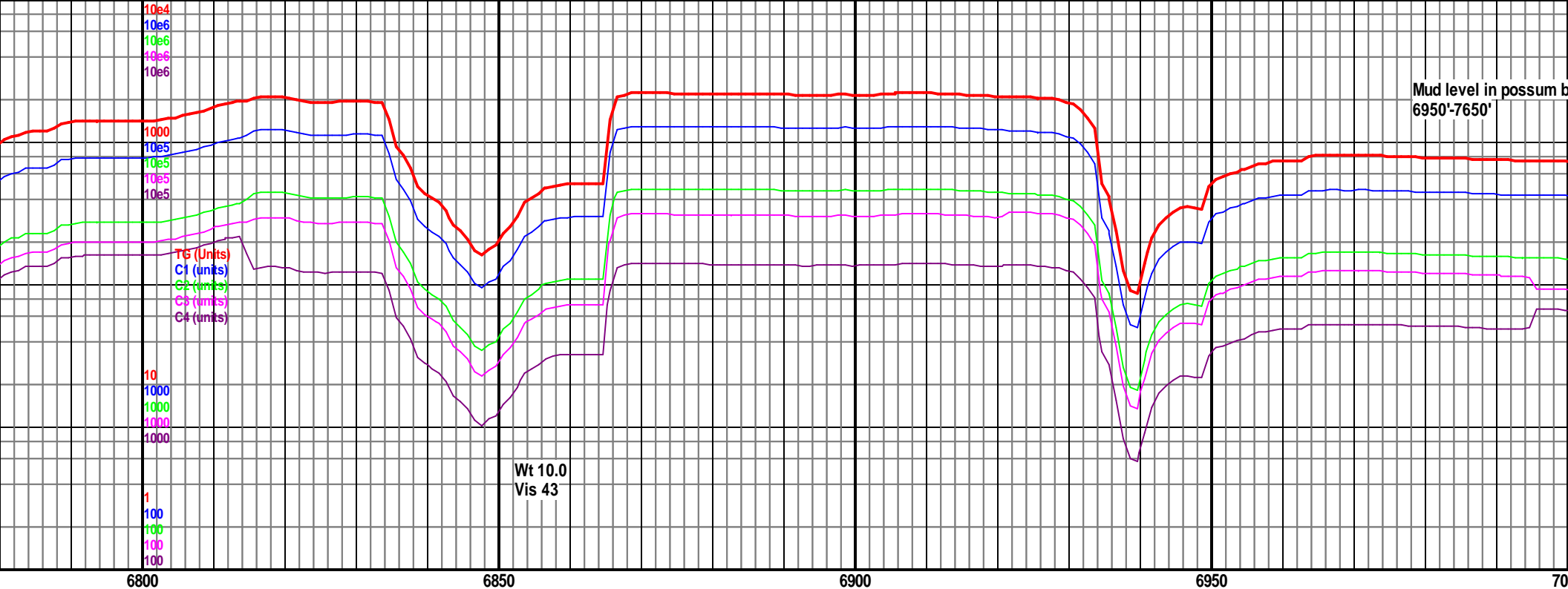




MD 6593 TVD 5681.89
INC 89.74 AZ 0.43
VS 1513.89

MD 6688 TVD 5682.29
INC 89.77 AZ 2.93
VS 1608.68

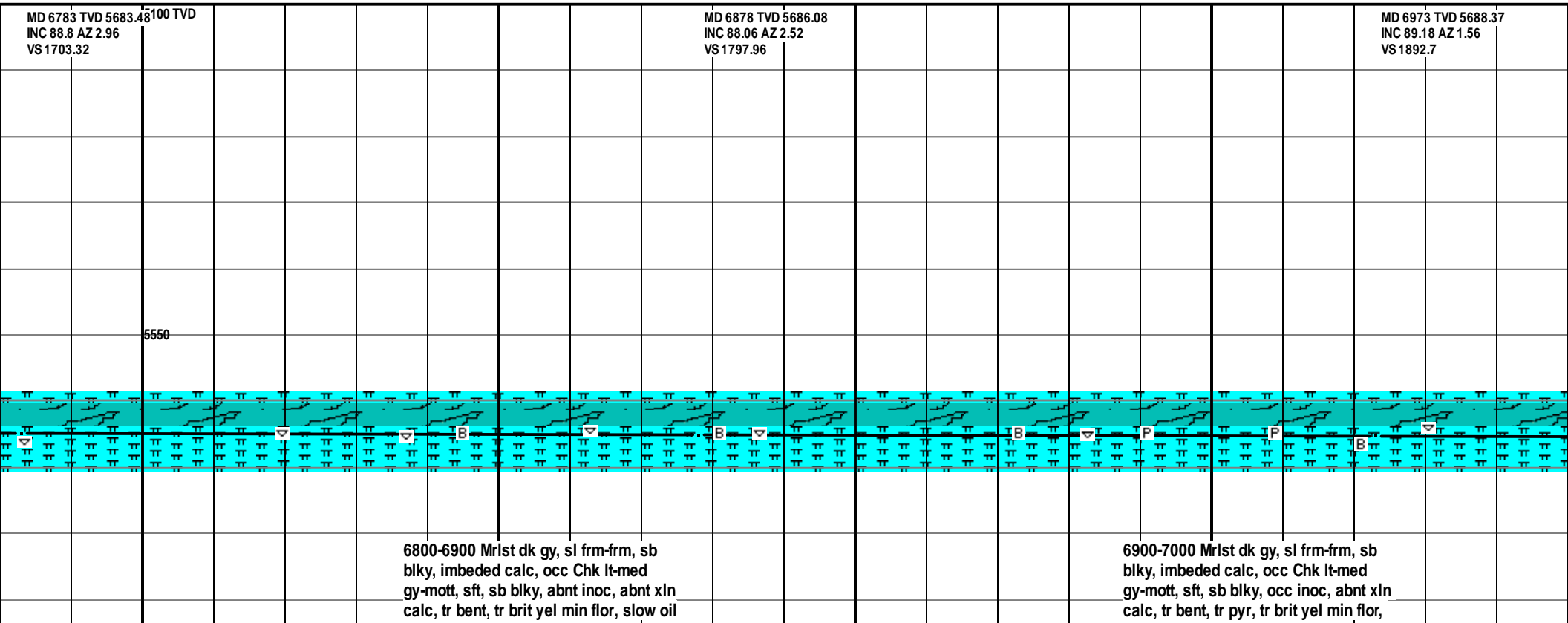


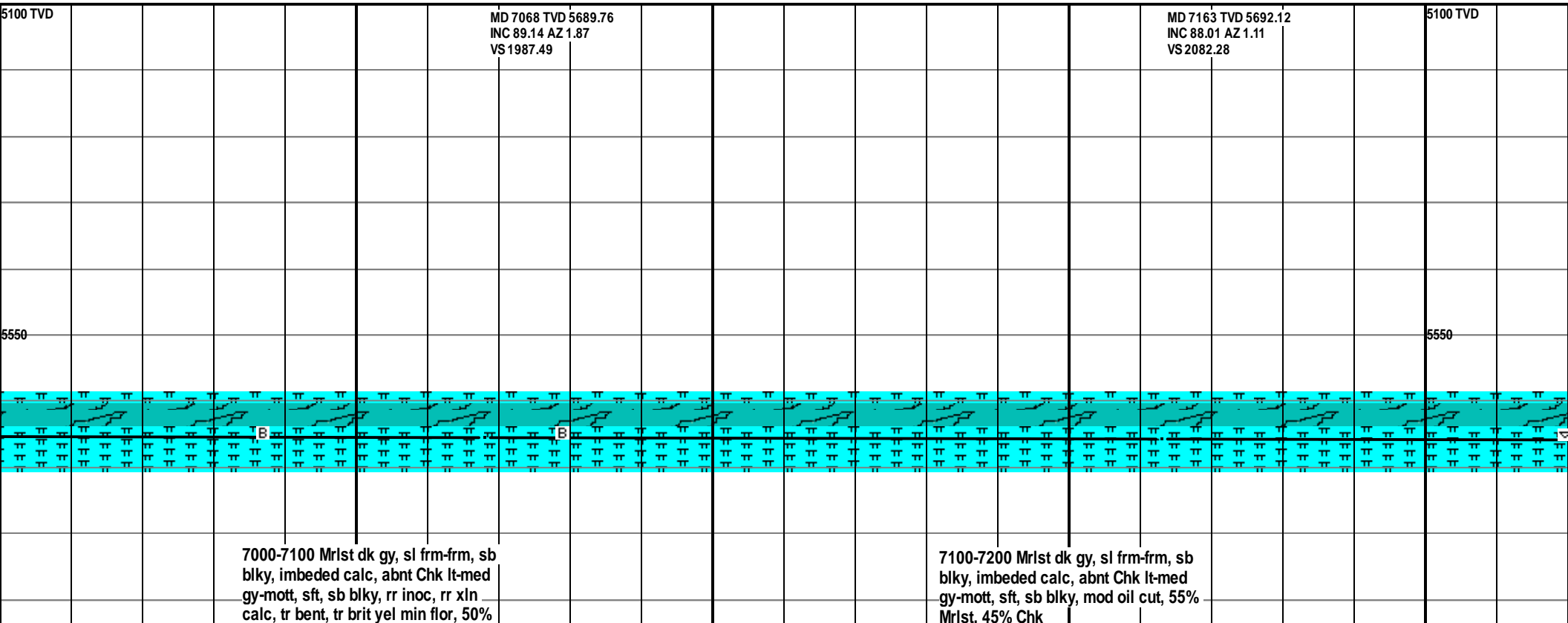
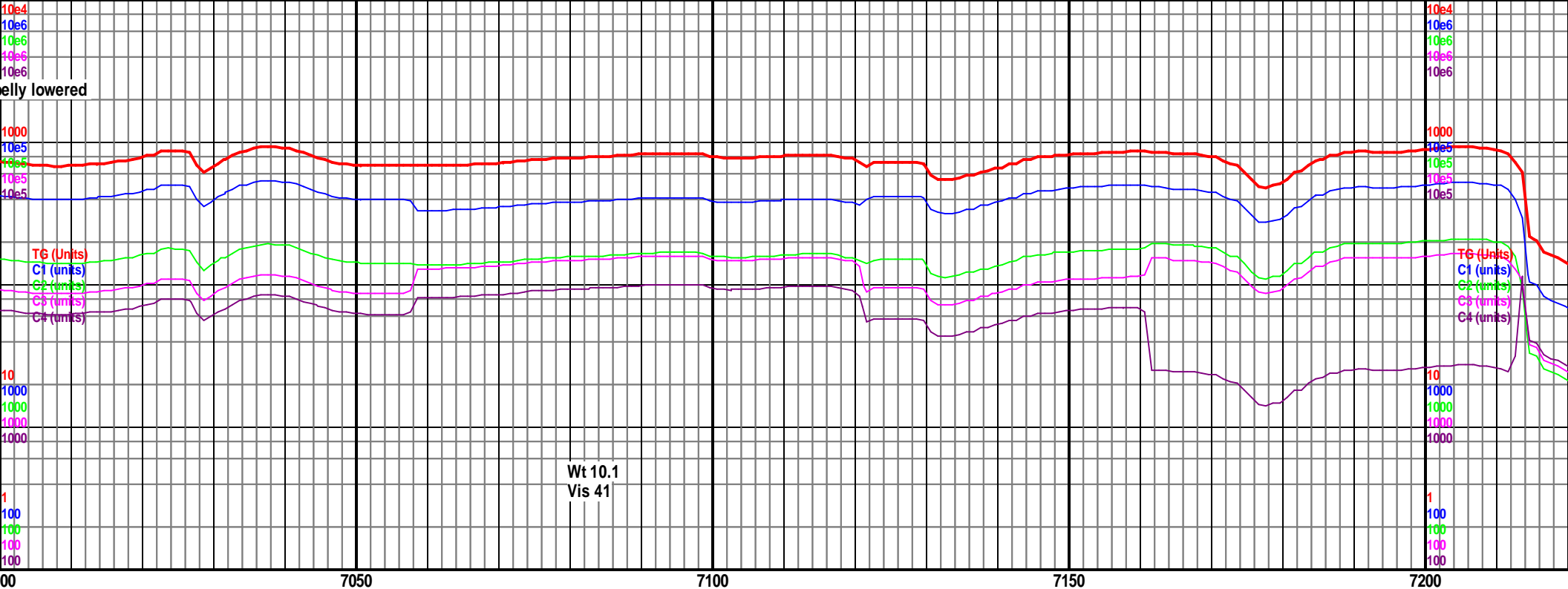


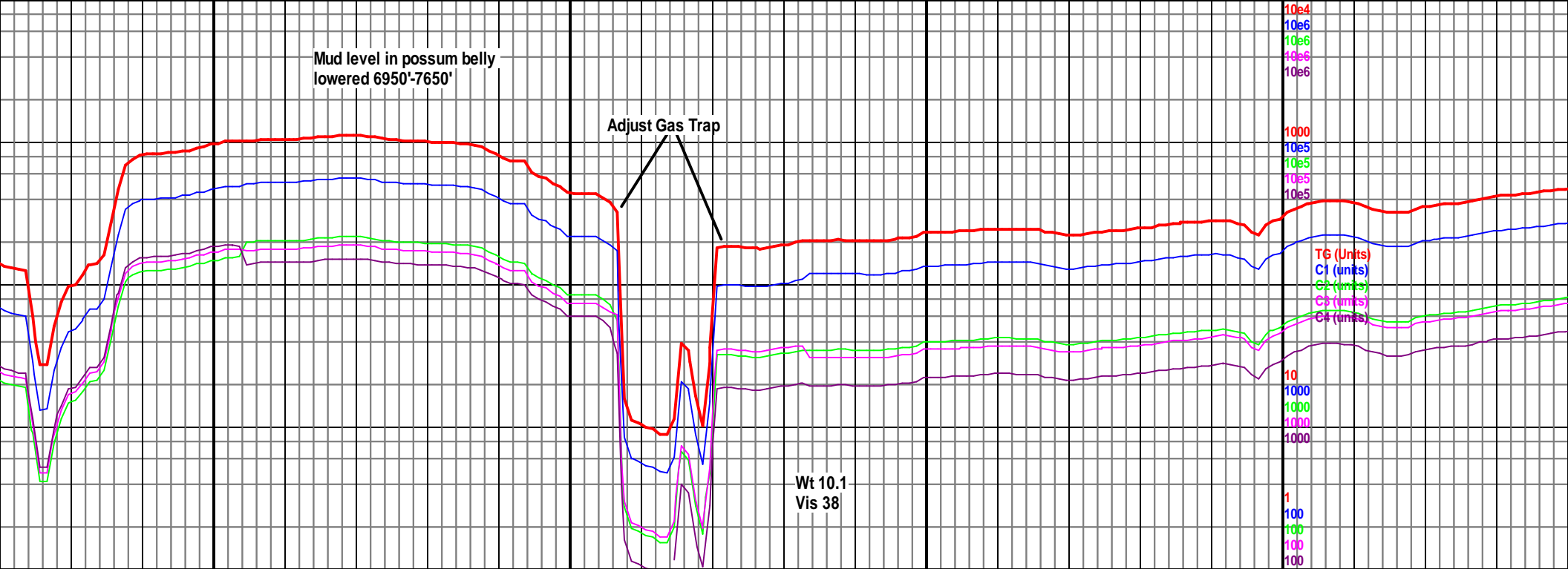
MD 6783 TVD 5683.48
INC 88.8 AZ 2.96
VS 1703.32

MD 6878 TVD 5686.08
INC 88.06 AZ 2.52
VS 1797.96

MD 6973 TVD 5688.37
INC 89.18 AZ 1.56
VS 1892.7







7250

7300

7350

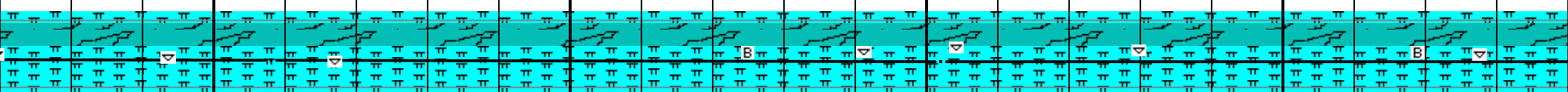
7400

MD 7258 TVD 5694.45
INC 89.18 AZ 359.89
VS 2177.16

MD 7352 TVD 5694.64
INC 90.59 AZ 359.22
VS 2271.12

5100 TVD

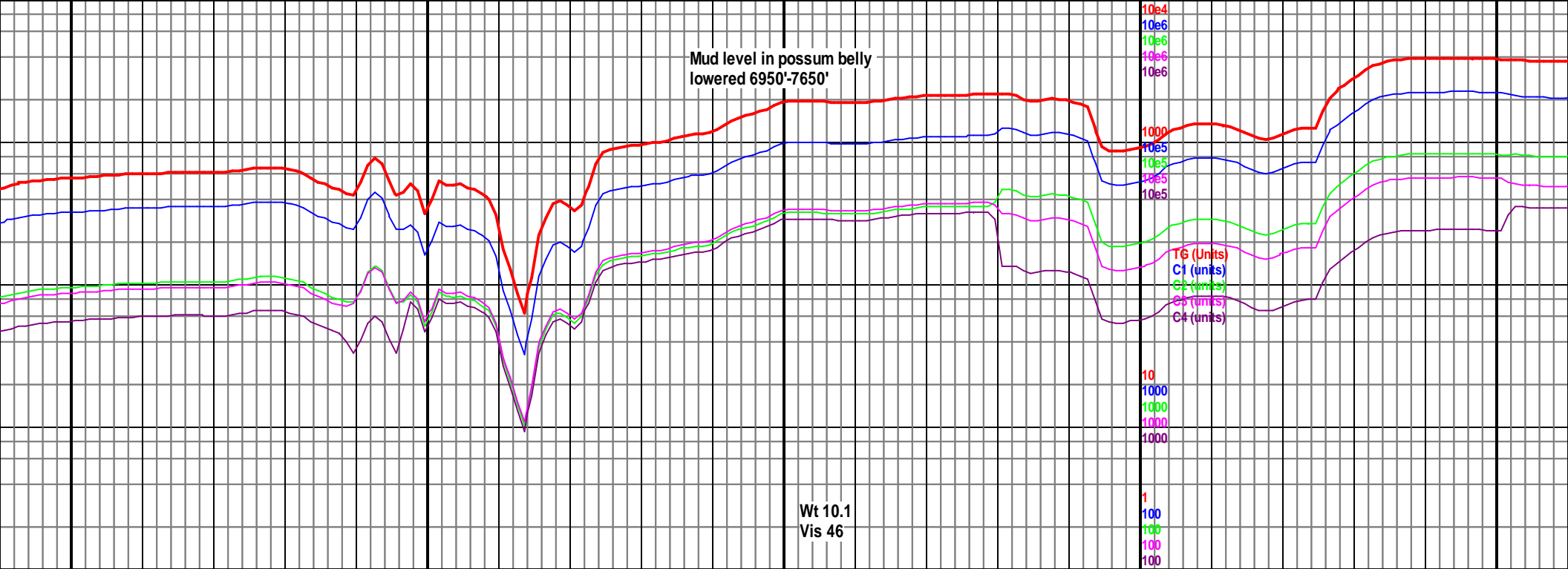
5550



7200-7300 Chk lt-med gy-mott, sft, sb
blky, abnt Mrlst dk gy, mod frm, flky-sb
blky, occ inoc, rr bent, rr yel min flor,
mod oil cut, 60% Chk, 40% Mrlst

7300-7400 Mrlst dk gy, sl frm-frm, sb
blky, occ Chk lt-med gy-mott, sft, sb
blky, occ inoc, rr bent, rr yel min flor,
mod oil cut, 70% Mrlst, 30% Chk

7400
blky
blky



7450

7500

7550

7600

7650

MD 7447 TVD 5695.14
INC 88.81 AZ 357.02
VS 2366.11

MD 7542 TVD 5695.49
INC 90.77 AZ 0.72
VS 2461.07

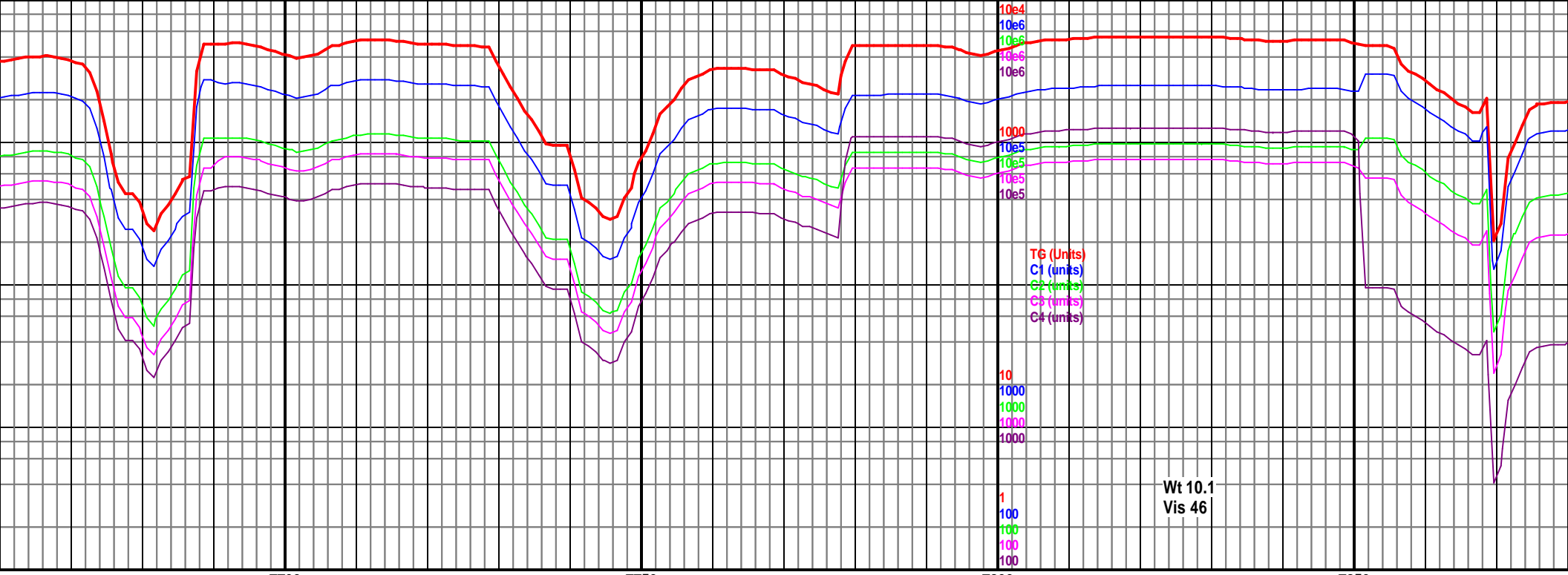
5100 TVD

MD 7637 TVD 5694.42
INC 90.52 AZ 359.37
VS 2556

7400-7500 Mrlst dk gy, sl frm-frm, sb
r, occ Chk lt-med gy-mott, sft, sb
r, occ inoc, rr bent, rr yel min flor,

7500-7600 Mrlst dk gy, sl frm-frm, sb
blky, occ Chk lt-med gy-mott, sft, sb

7600-7700 Mrlst dk gy, sl
blky, occ Chk lt-med gy-m
blky, tr inoc, mod oil cut, 6
2500-2600



7700

7750

7800

7850

MD 7728 TVD 5693.85
INC 90.2 AZ 358.99
VS 2646.98

5100 TVD

MD 7819 TVD 5693.17
INC 90.65 AZ 358.88
VS 2737.97

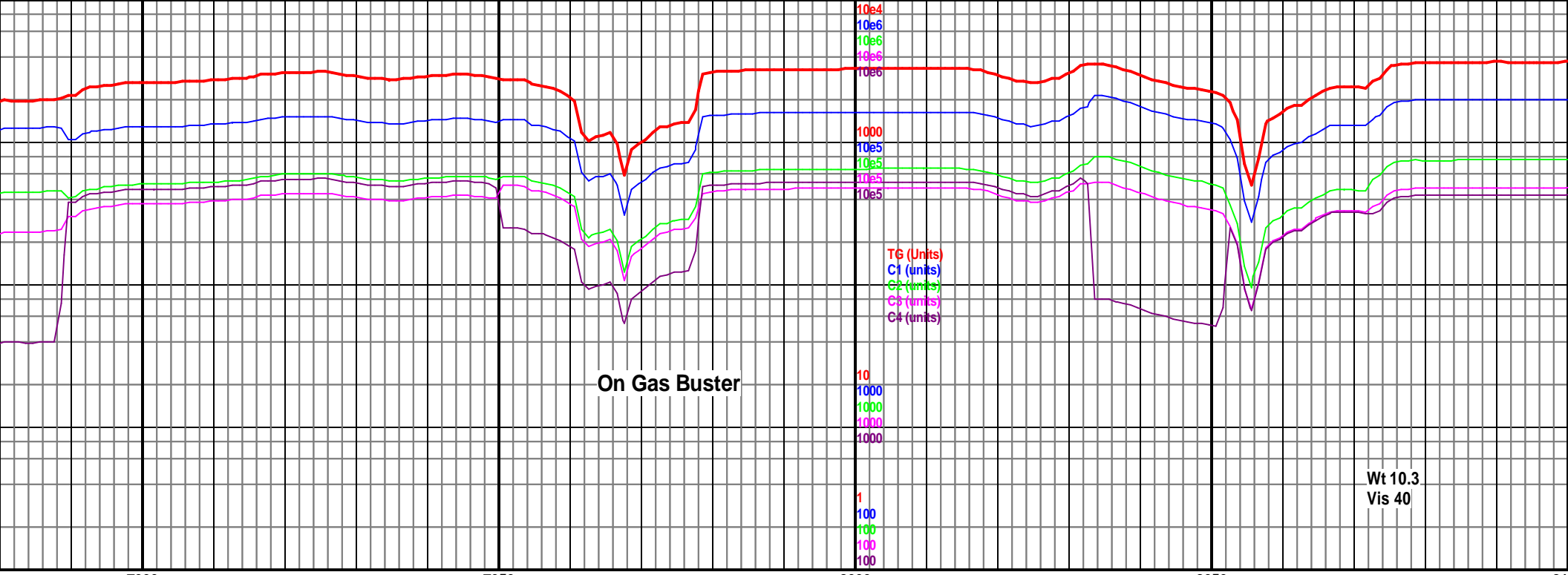
Wt 10.1
Vis 46

5550

frm-frm, sb
mott, sft, sb
65% Mrlst,

7700-7800 Mrlst dk gy, sl frm-frm, sb
blky, abnt Chk lt-med gy-mott, sft, sb
blky, tr inoc, mod oil cut, 60% Mrlst,

7800-7900 Mrlst dk gy, sl frm-frm, sb
blky, tr Chk lt-med gy-mott, sft, sb
blky, tr inoc, mod oil cut, 70% Mrlst,

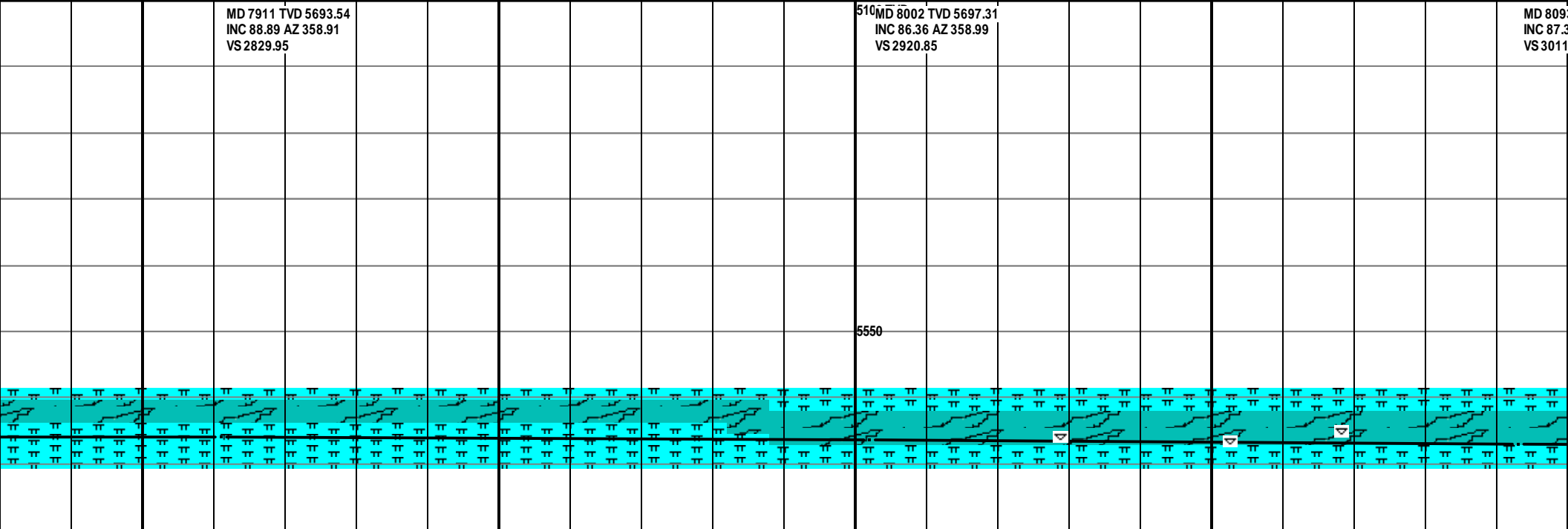


7900 7950 8000 8050 8100

MD 7911 TVD 5693.54
INC 88.89 AZ 358.91
VS 2829.95

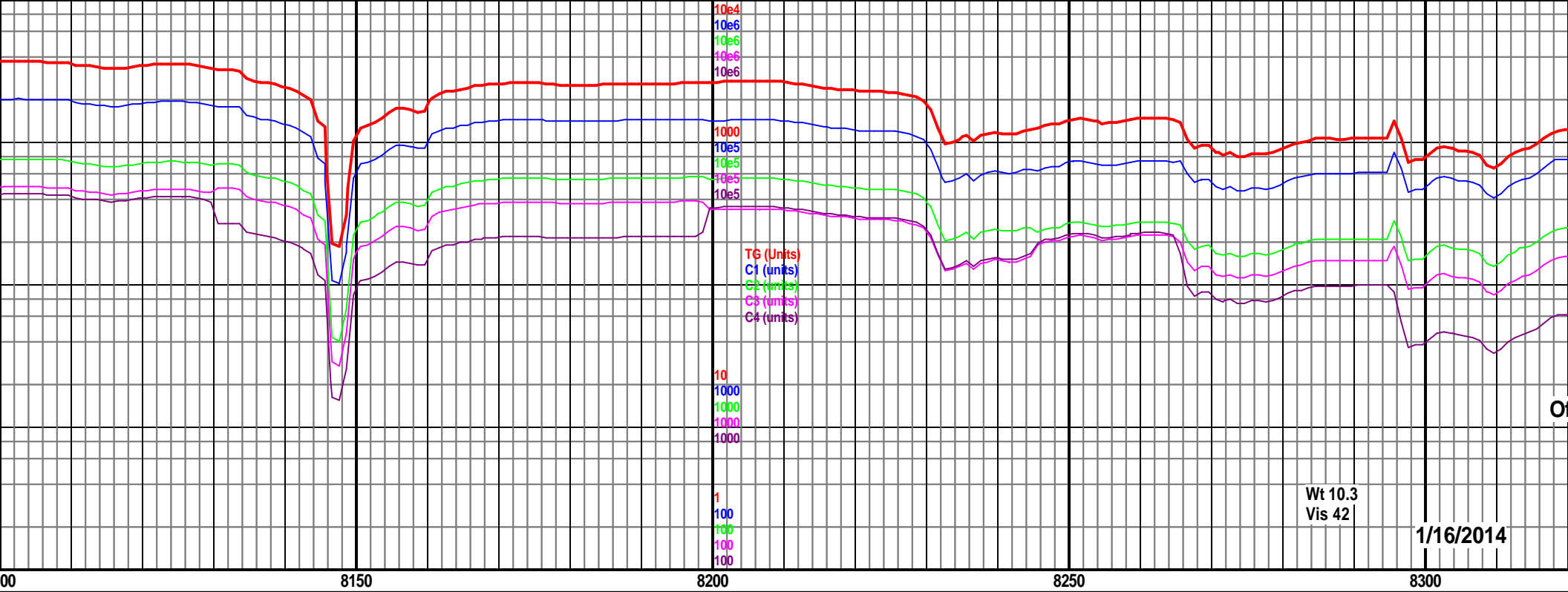
MD 8002 TVD 5697.31
INC 86.36 AZ 358.99
VS 2920.85

MD 8091 TVD 5697.31
INC 87.36 AZ 358.99
VS 3011.85

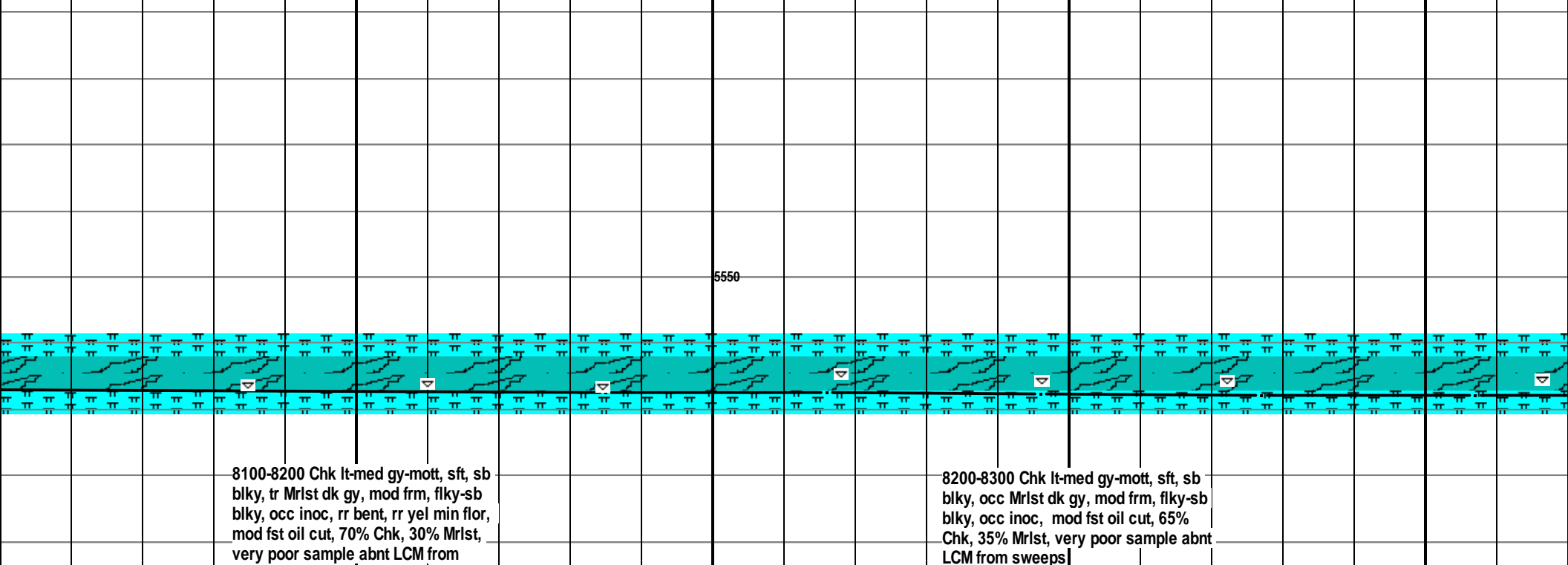


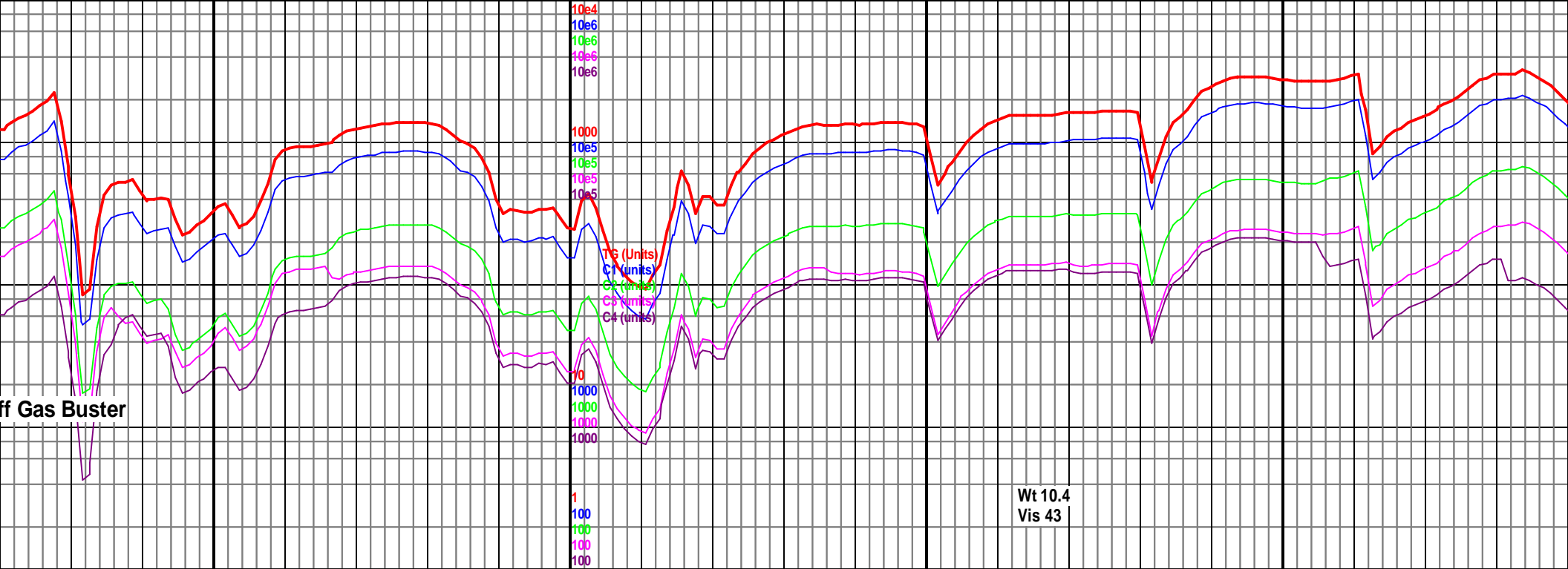
7900-8000 Chk lt-med gy-mott, sft, sb
blky, tr Mrlst dk gy, mod frm, flky-sb
blky, tr inoc, mod fst oil cut, 75% Chk,
25% Mrlst

8000-8100 Chk lt-med gy-mott, sft, sb
blky, tr Mrlst dk gy, mod frm, flky-sb
blky, occ inoc, mod fst oil cut, 85%
Chk, 15% Mrlst

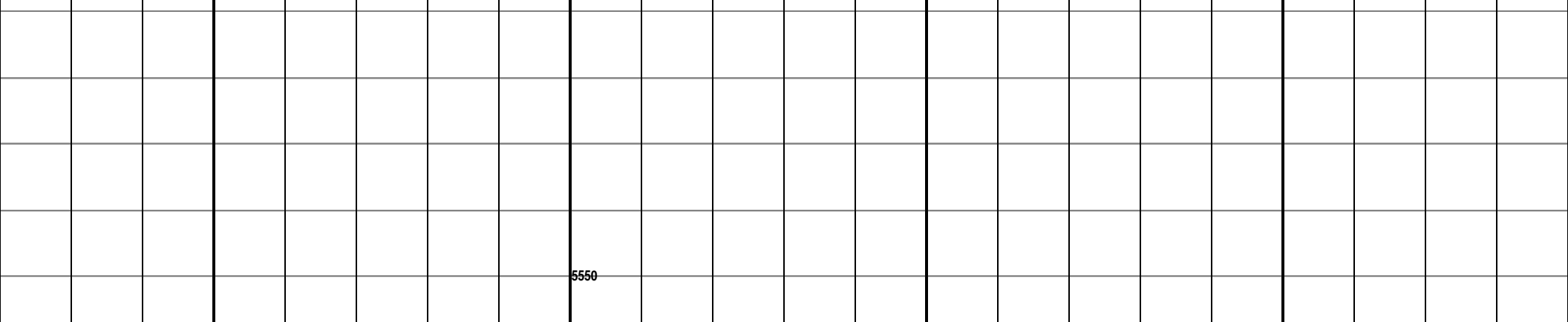


8000	8150	8200	8250	8300		
3 TVD 5702.28 88 AZ 0.31 .68		MD 8185 TVD 5706.29 TVD INC 87.63 AZ 1.19 VS 3103.48	MD 8216 TVD 5707.76 INC 86.93 AZ 0.35 VS 3134.41	MD 8246 TVD 5709.25 INC 87.35 AZ 0.69 VS 3164.35	MD 8277 TVD 5710.62 INC 87.6 AZ 1.02 VS 3195.28	MD 8307 TVD 5712.00 INC 89.2 AZ 1.7 VS 3225.21





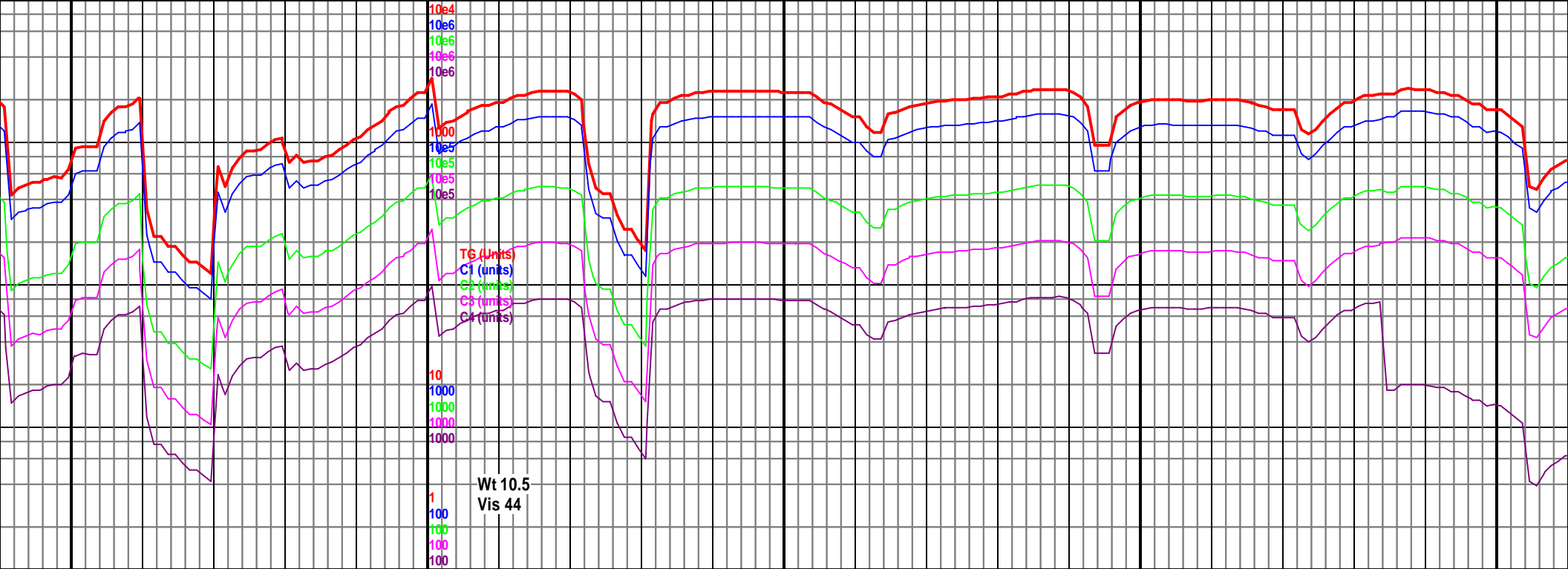
711.46 2	MD 8338 TVD 5711.93 INC 89.06 AZ 0.62 VS 3256.16	MD 8368 TVD 5712.05 INC 90.49 AZ 359.62 VS 3286.14	MD 8399 TVD 5711.37 INC 92.02 AZ 359.07 VS 3317.12	MD 8429 TVD 5710.27 INC 92.19 AZ 358.57 VS 3347.1	MD 8460 TVD 5709.02 INC 92.41 AZ 359.07 VS 3378.07	MD 8490 TVD 5707.72 INC 92.56 AZ 358.78 VS 3408.04	MD 8521 TVD 5706.26 INC 92.85 AZ 358.61 VS 3439
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8300-8400 Mrlst dk gy, sl frm-frm, sb
blky, tr Chk lt-med gy-mott, sft, sb
blky, g tr inoc, tr yel min flor, slow oil
cut, 70% Mrlst, 30% Chk

8400-8500 Mrlst dk gy, sl frm-frm, sb
blky, occ Chk lt-med gy-mott, sft, sb
blky, occ inoc, nf, mod oil cut, 70%
Mrlst, 30% Chk

8
b
b



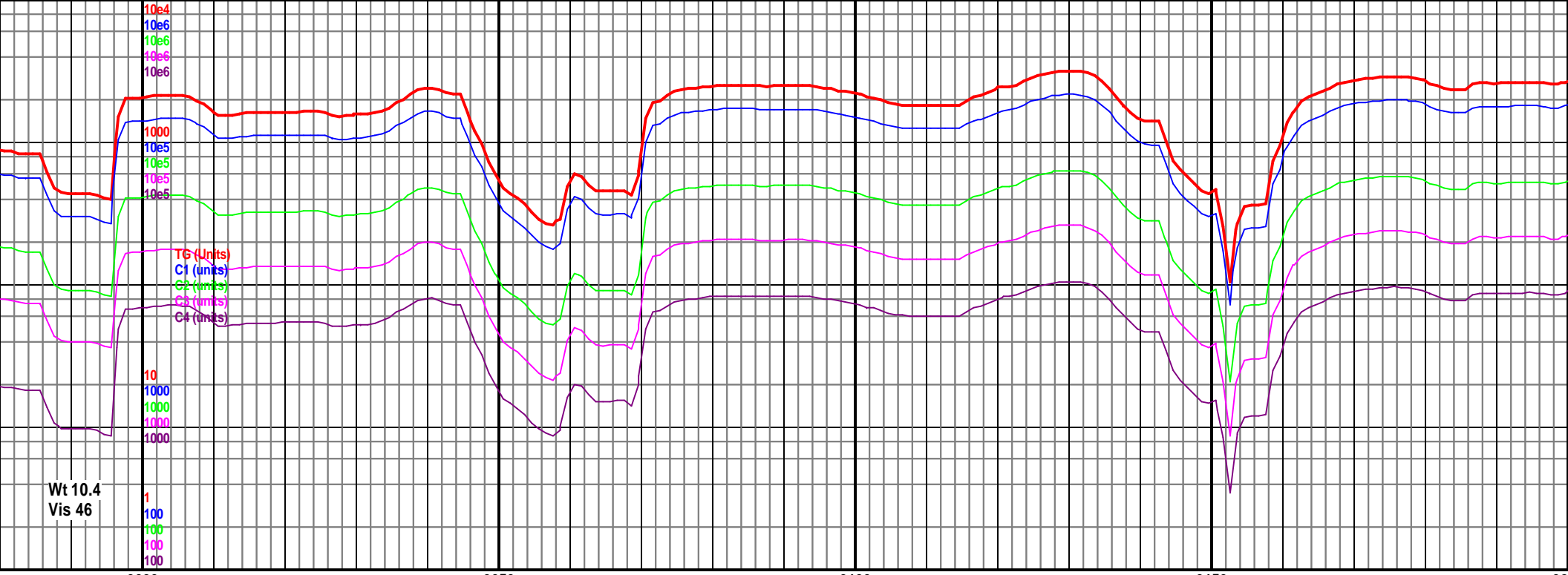
8550 8600 8650 8700 8750

	MD 8551 TVD 5704.94 INC 92.2 AZ 359.83 VS 3468.96	MD 8582 TVD 5704.03 INC 91.15 AZ 1.82 VS 3499.91	MD 8613 TVD 5703.48 INC 90.89 AZ 2.82 VS 3530.82	MD 8643 TVD 5703.07 INC 90.68 AZ 2.58 VS 3560.71	MD 8673 TVD 5702.57 INC 91.22 AZ 2.98 VS 3590.61	MD 8704 TVD 5701.73 INC 91.87 AZ 3.13 VS 3621.47		
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500-8600 Mrlst dk gy, sl frm-frm, sb
lky, abnt Chk lt-med gy-mott, sft, sb
lky, occ-abnt inoc, occ bent, occ brit

8600-8700 Mrlst dk gy, sl frm-frm, sb
blky, occ Chk lt-med gy-mott, sft, sb
blky, v abnt inoc, mod oil cut, 60%

8700-8800 Mrlst dk gy, sl
blky, occ Chk lt-med gy-m

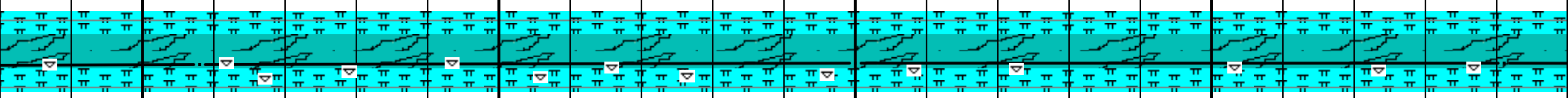


Wt 10.4
Vis 46

9000 9050 9100 9150 9200

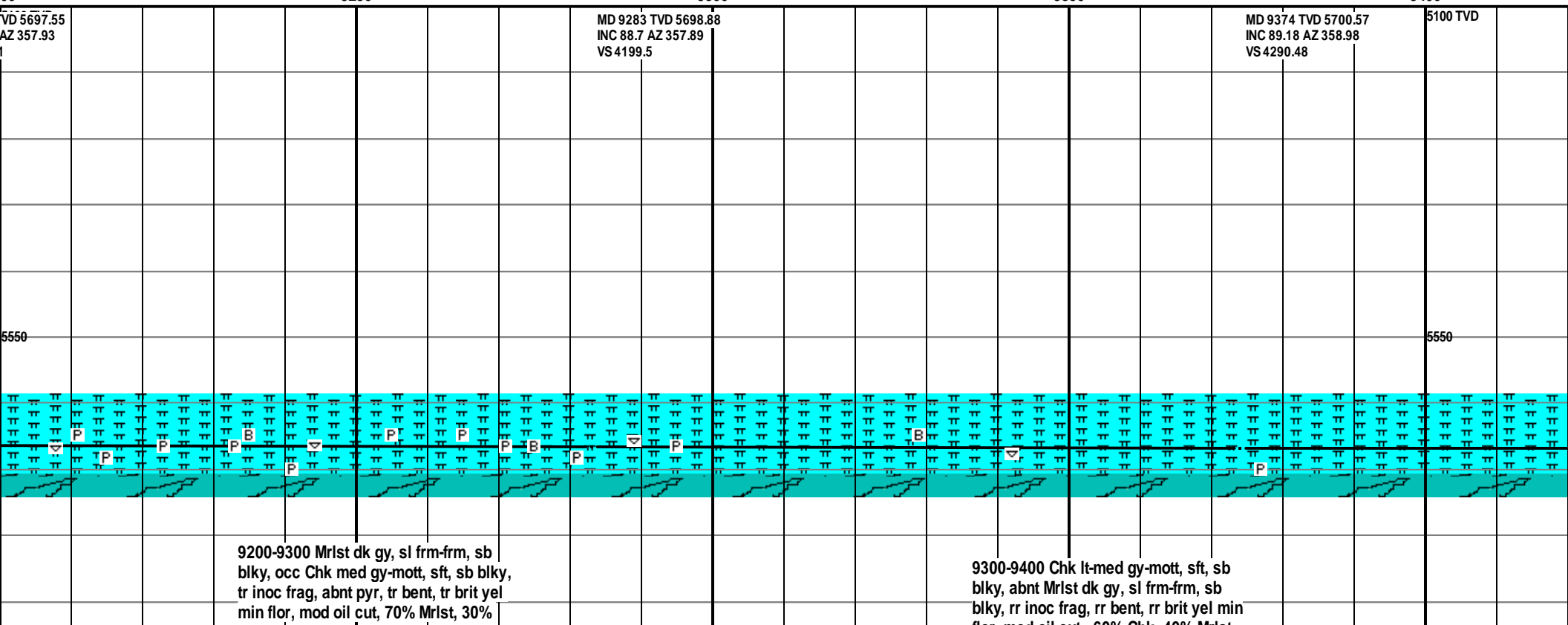
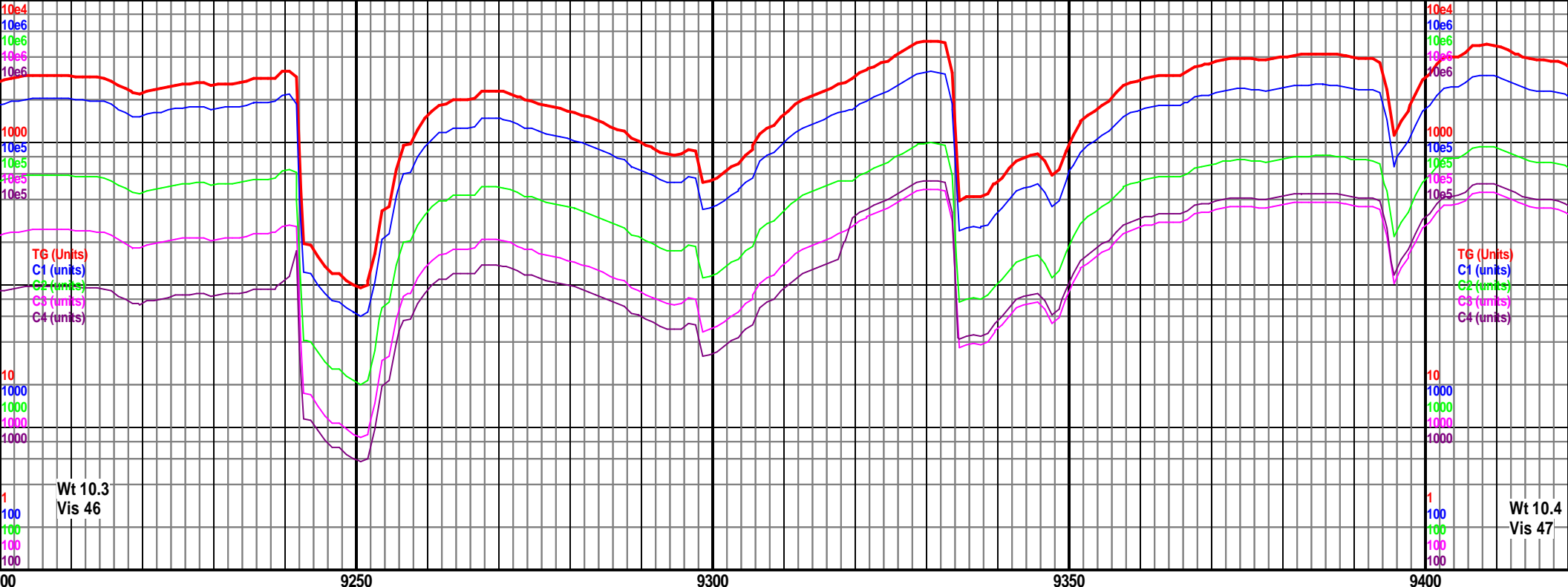
5100 TVD	MD 9008 TVD 5699.43 INC 91.6 AZ 0.84 VS 3924.61	MD 9100 TVD 5697.7 INC 90.55 AZ 359.55 VS 4016.52	MD 9191 T INC 89.64 VS 4107.5
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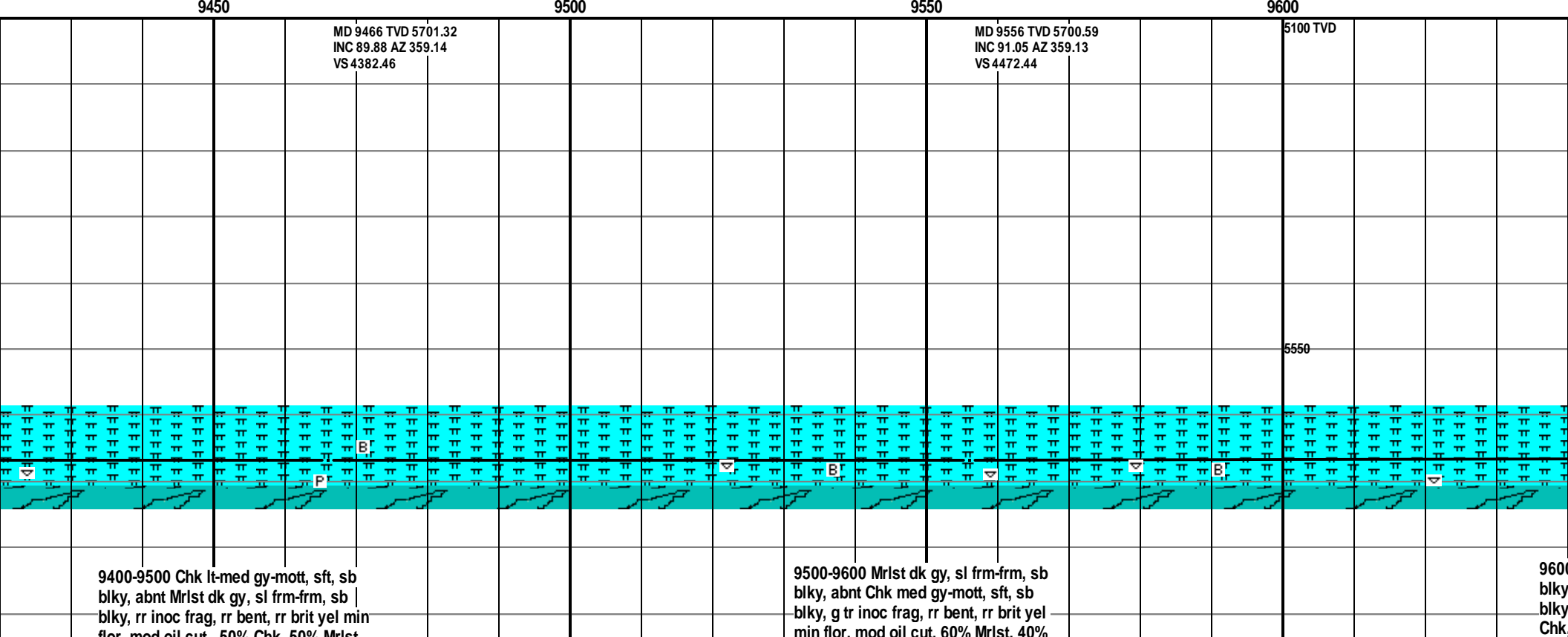
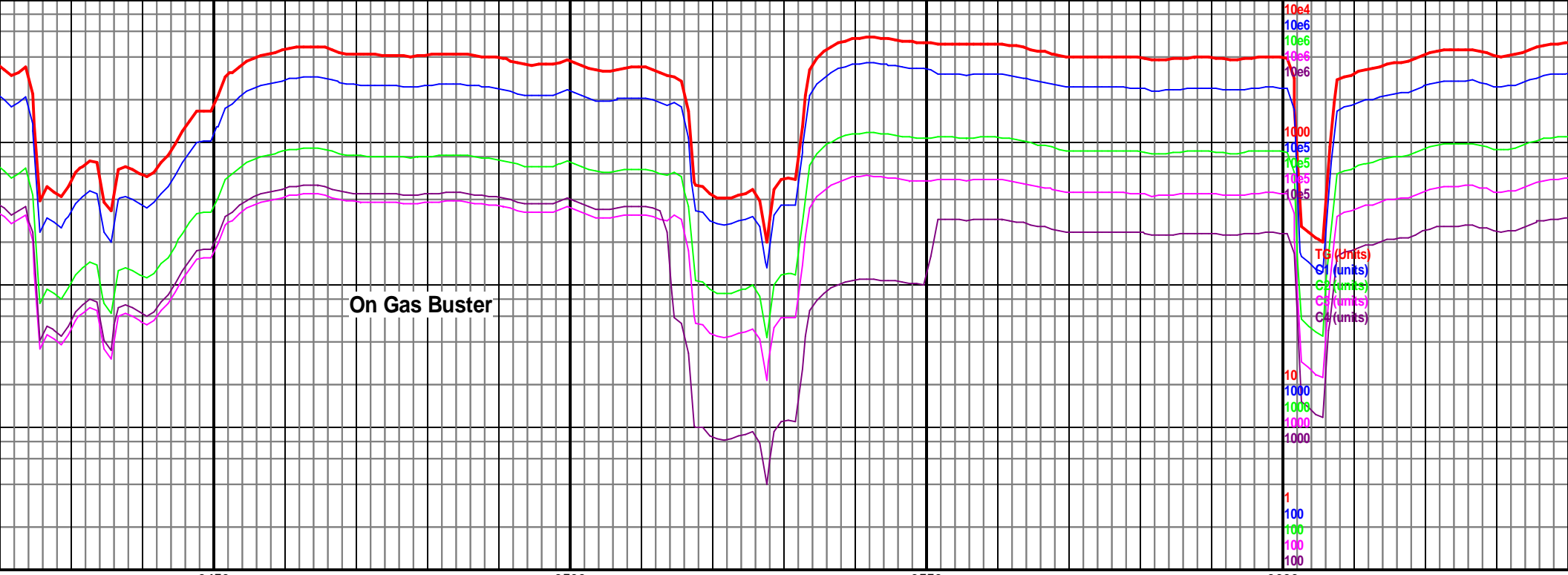
5550

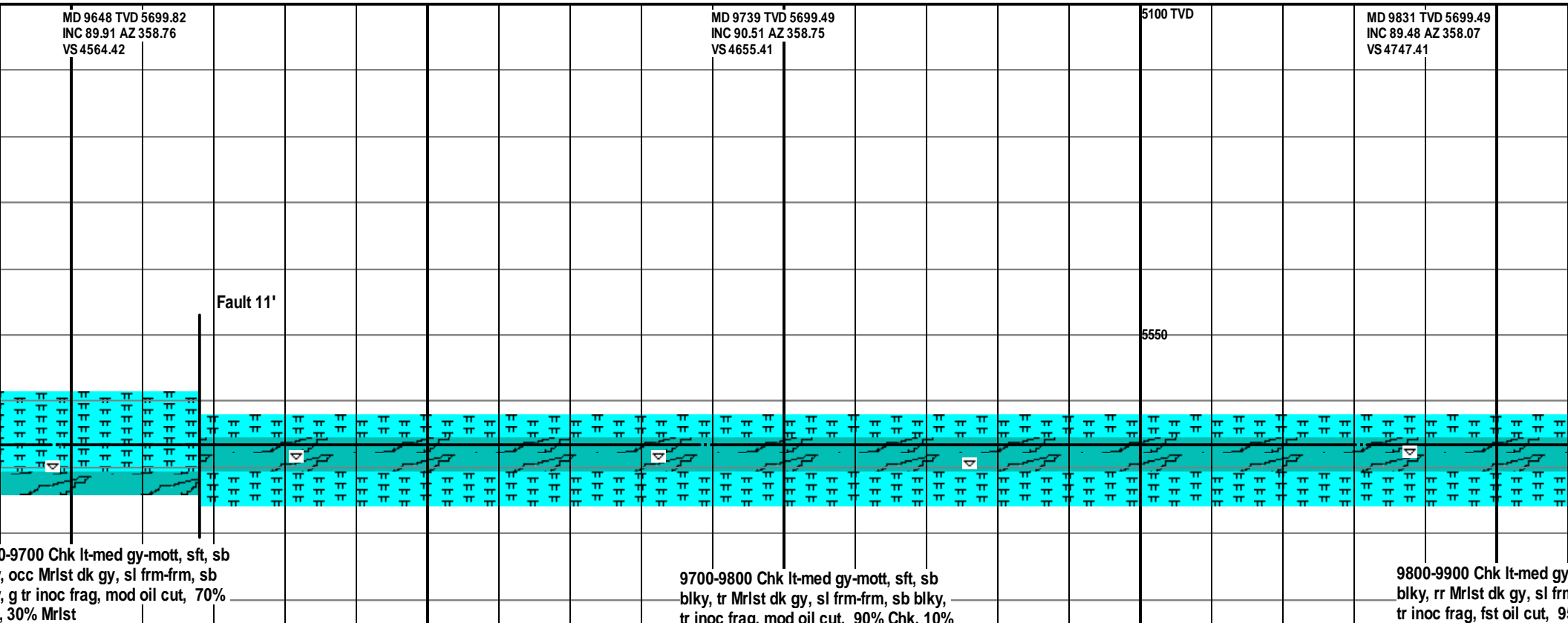
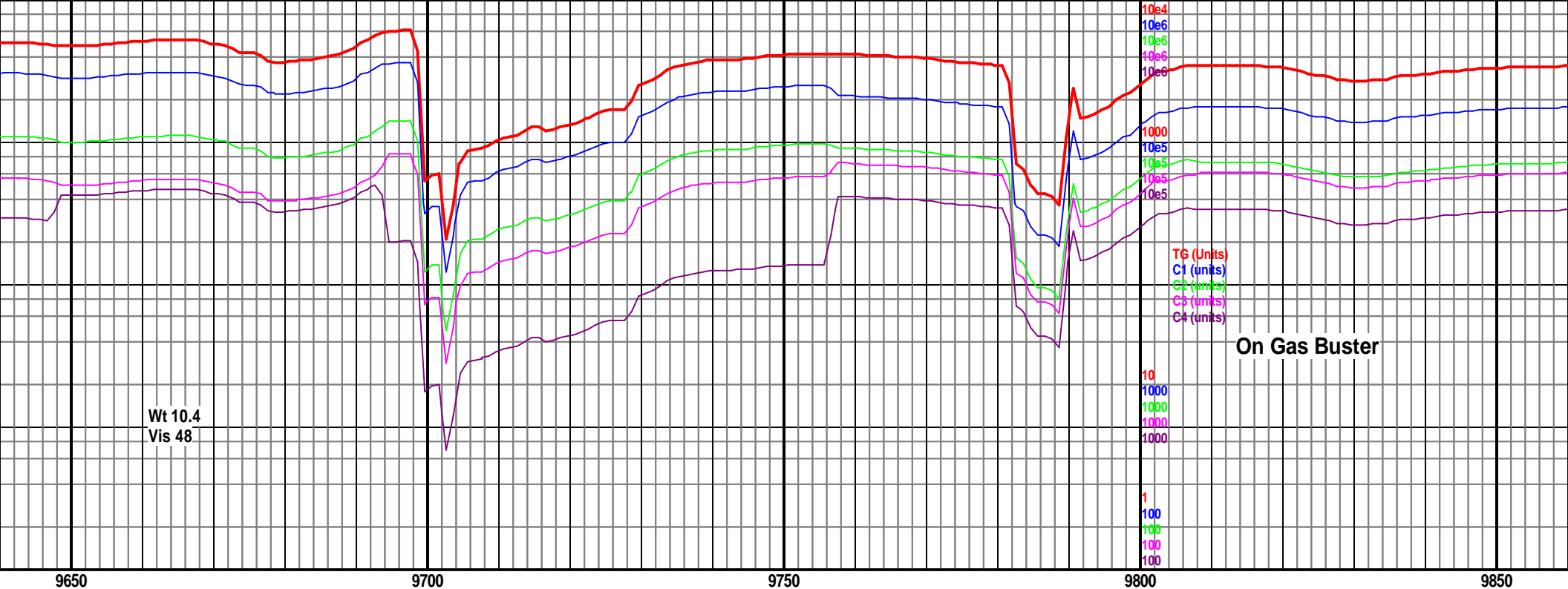


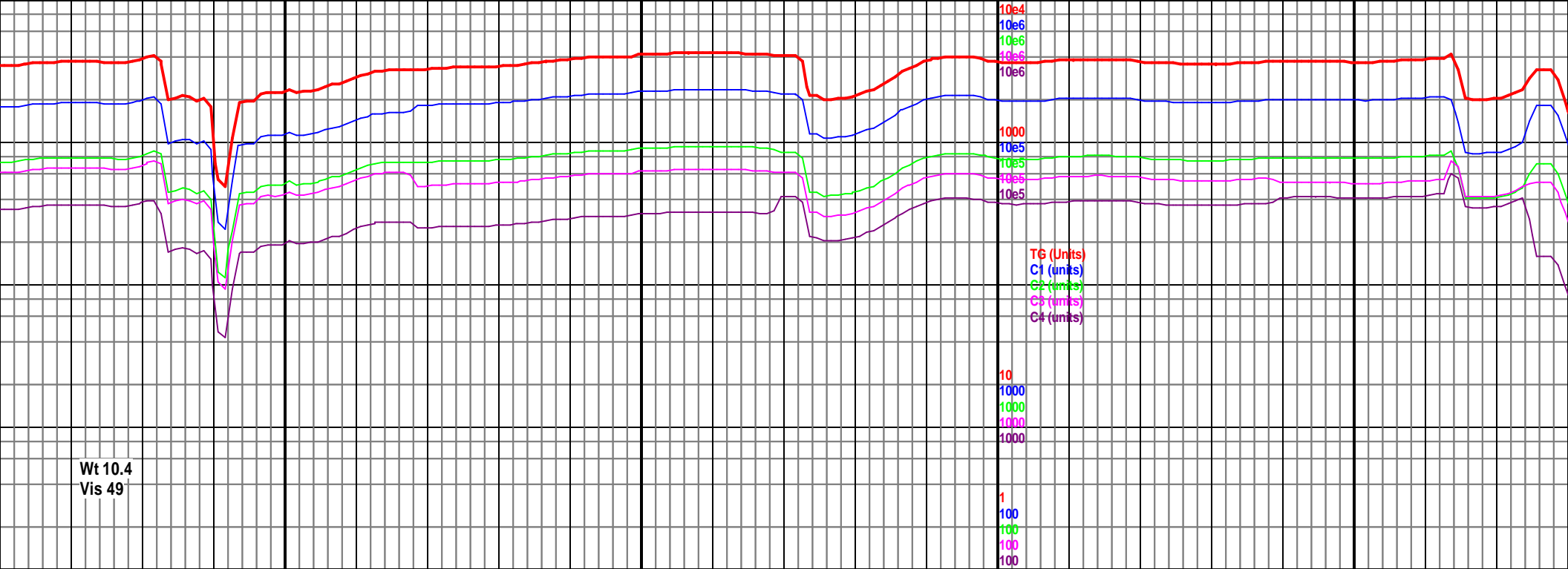
9000-9100 Mrst dk gy, sl frm-frm, sb
blky, occ Chk lt-med gy-mott, sft, sb

9100-9200 Mrst dk gy, sl frm-frm, sb
blky, occ Chk lt-med gy-mott, sft, sb









Wt 10.4
Vis 49

TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)

10e4
10e6
10e5
1000
10e3
10e6
10e5
10
1000
1000
1000
1
100
100
100
100

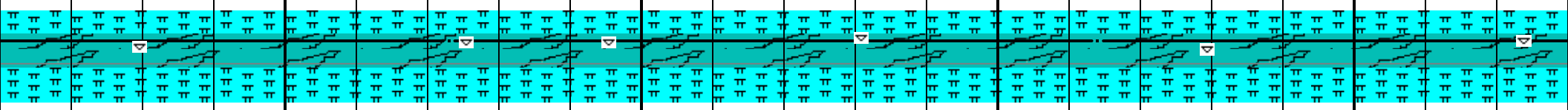
9900 9950 10000 10050

MD 9923 TVD 5699.41
INC 90.63 AZ 358.57
VS 4839.41

5100 TVD

MD 10014 TVD 5698.63
INC 90.34 AZ 357.5
VS 4930.4

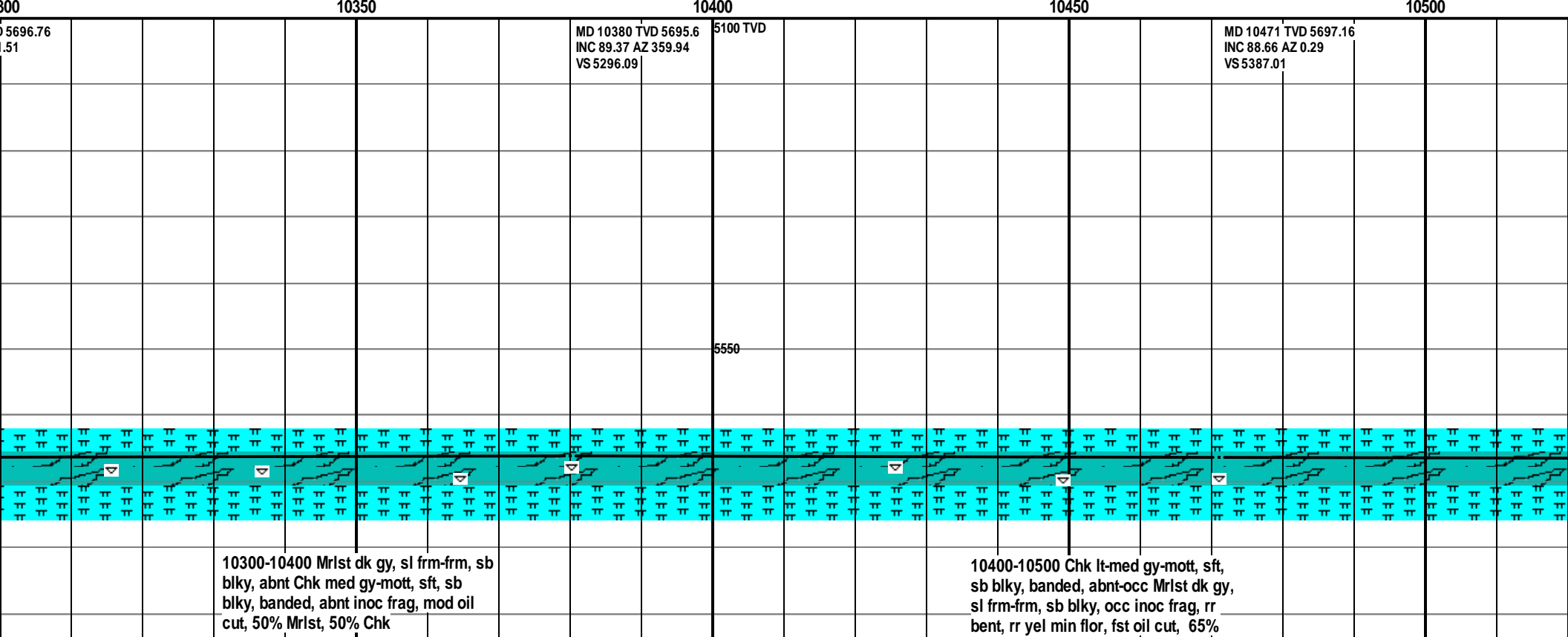
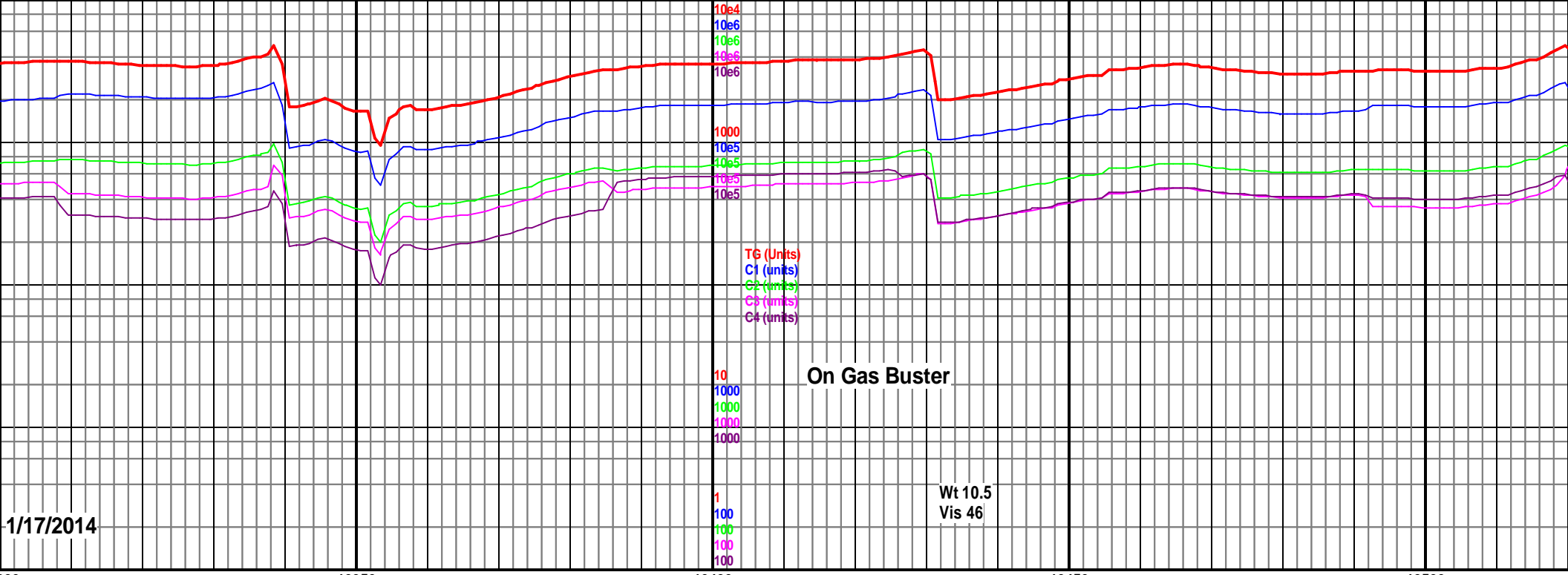
5550

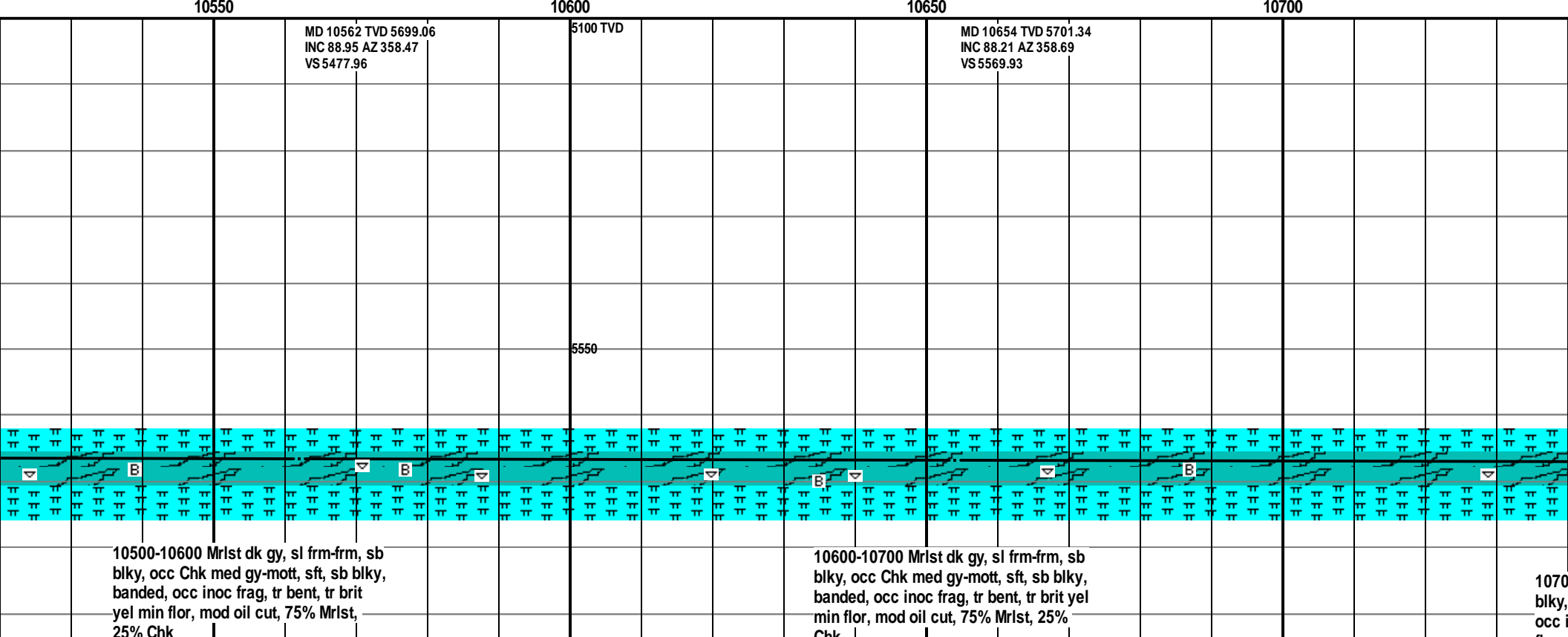
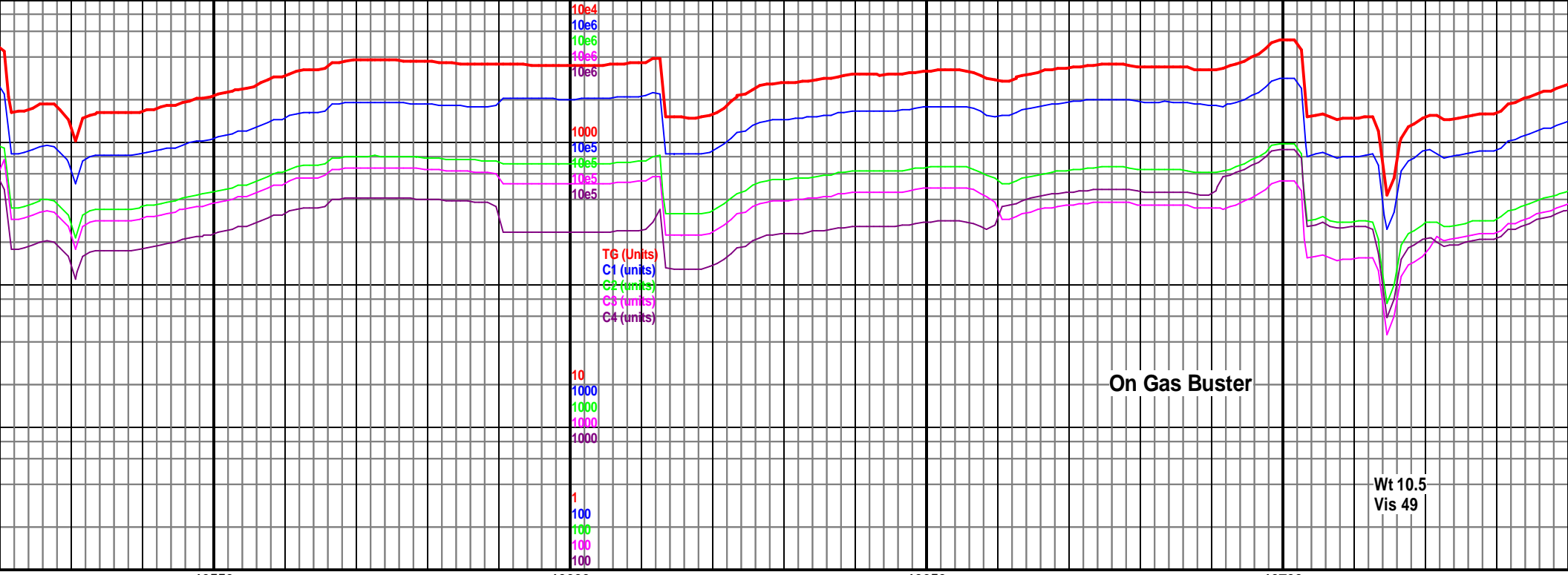


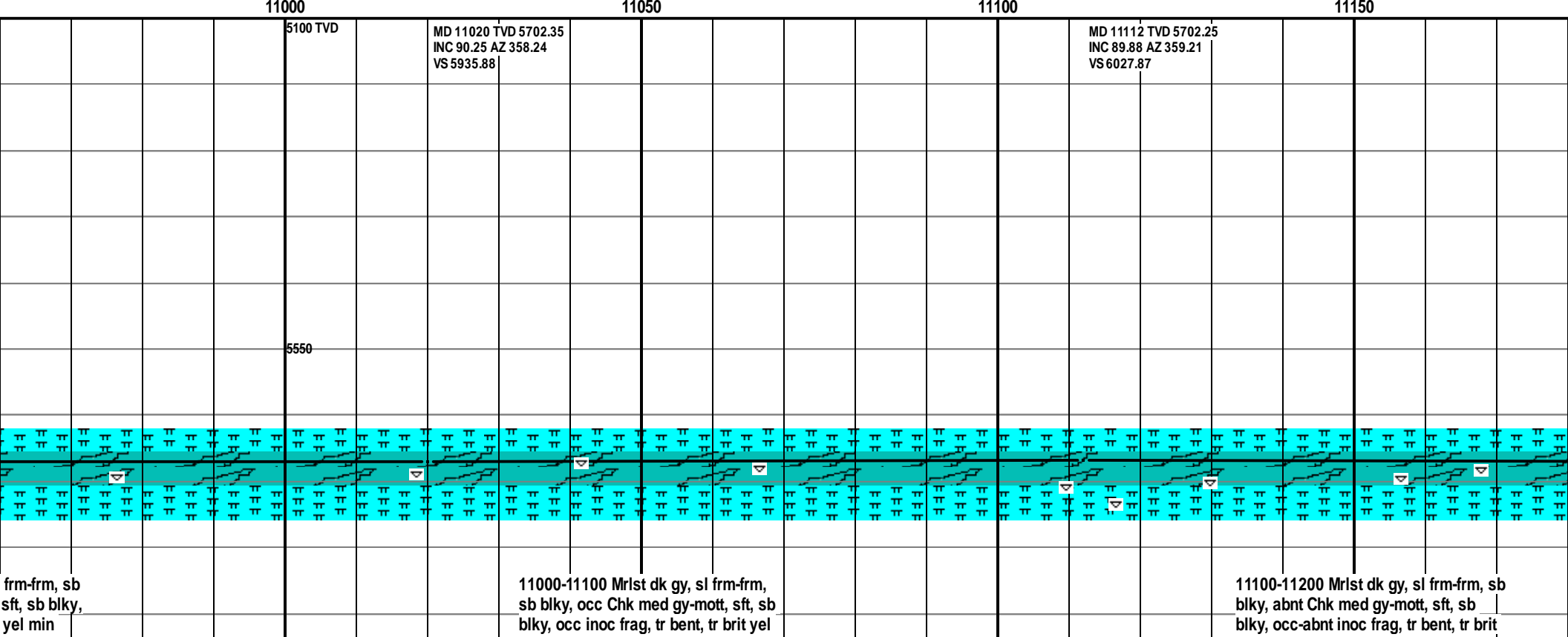
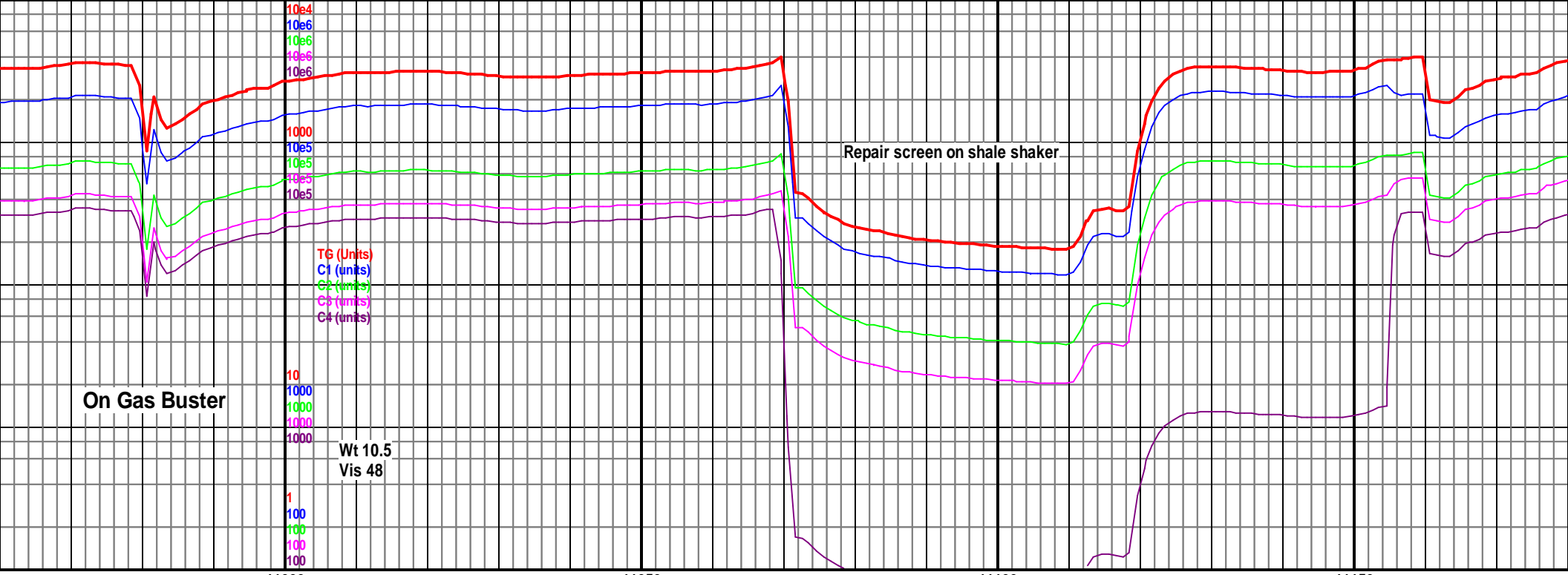
-mott, sft, sb
n-frm, sb blk,
5% Chk, 5%

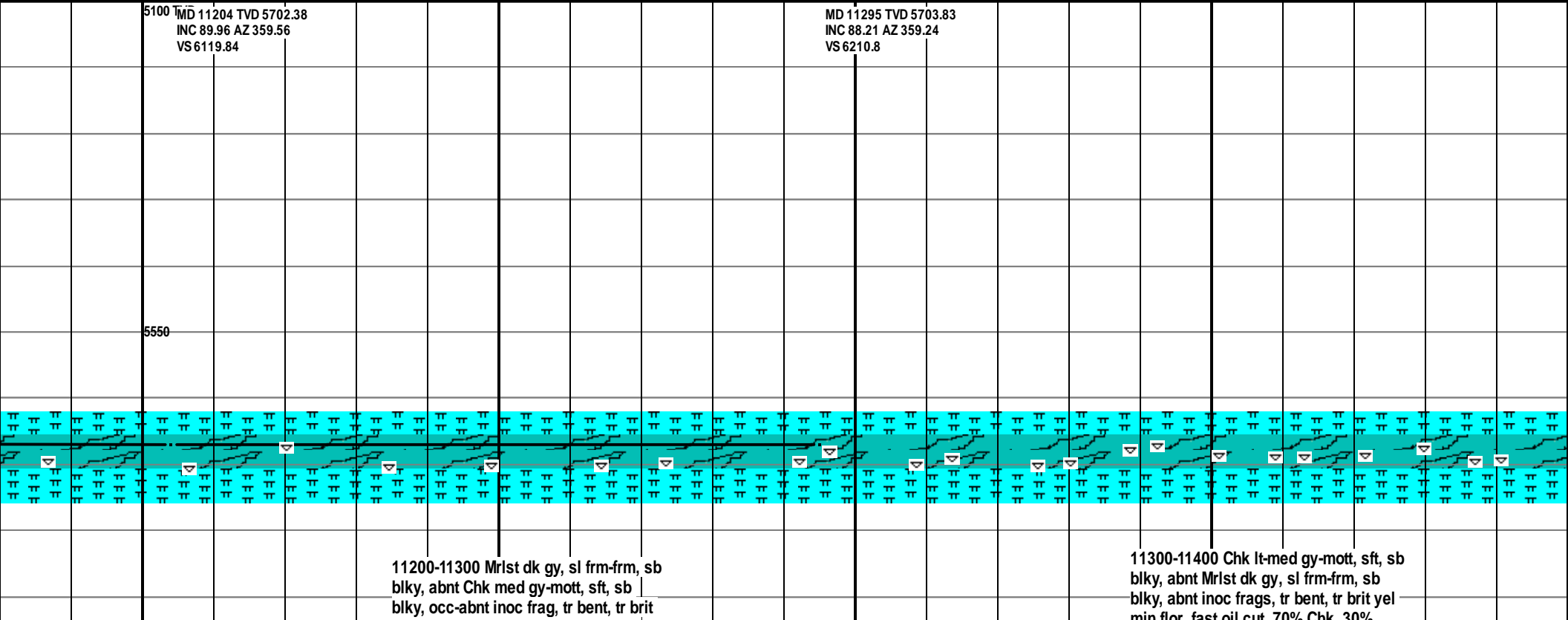
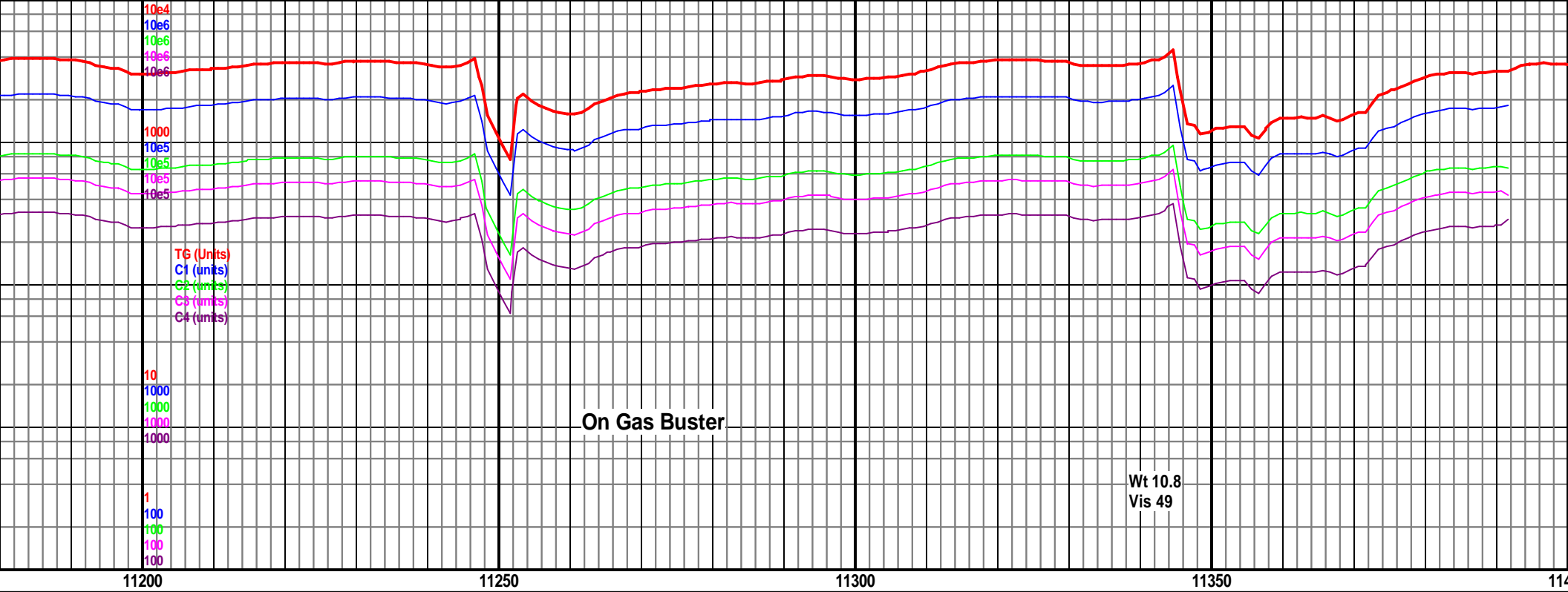
9900-10000 Chk lt-med gy-mott, sft, sb
blk, rr Mrlst dk gy, sl frm-frm, sb blk,
g tr inoc frag, fst oil cut, 90% Chk, 10%

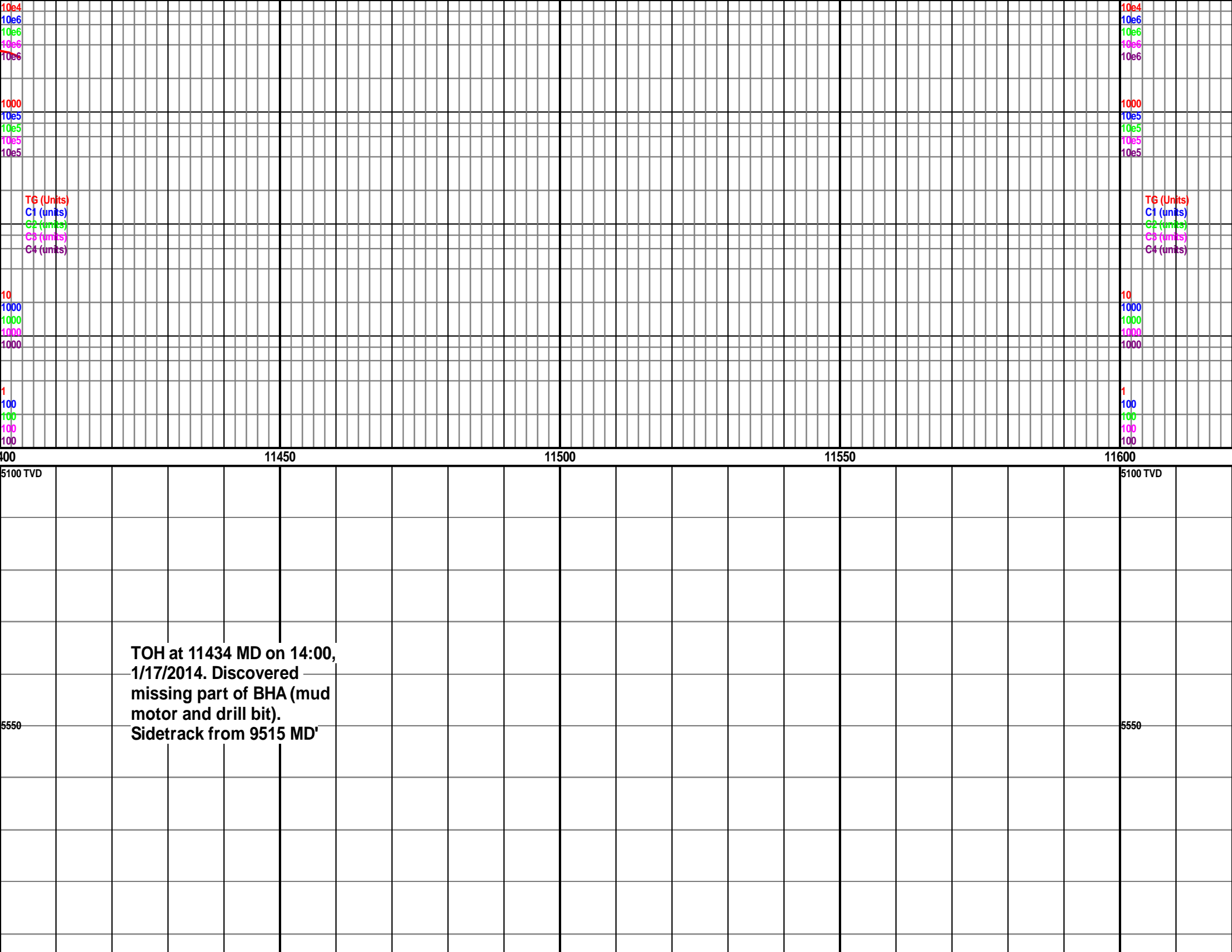
10000-10100 Chk lt-med gy-mott, sft,
sb blk, tr-occ Mrlst dk gy, sl frm-frm,
sb blk, tr inoc frag, fst oil cut, 70%
Chk, 30% Mrlst



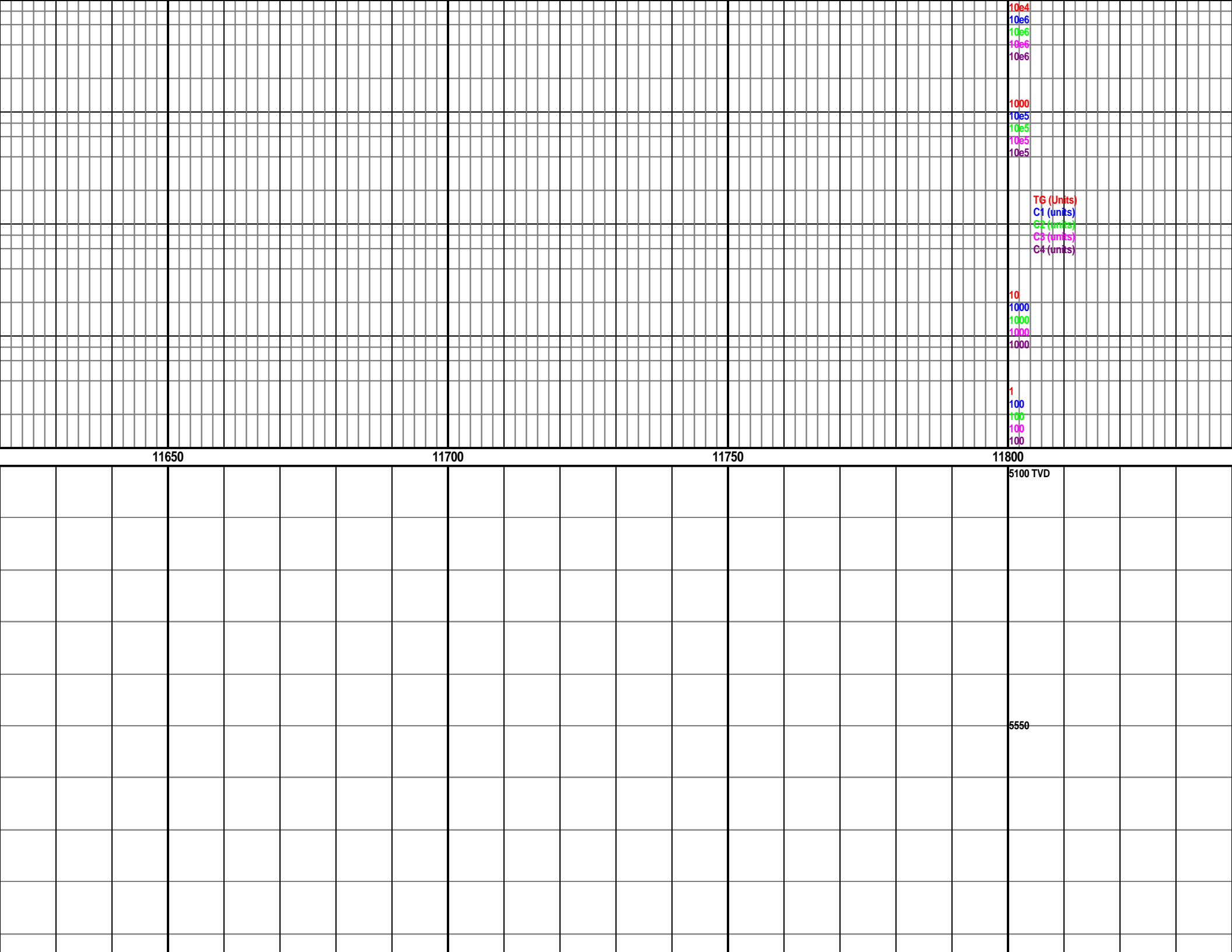








TOH at 11434 MD on 14:00,
1/17/2014. Discovered
missing part of BHA (mud
motor and drill bit).
Sidetrack from 9515 MD'



11650

11700

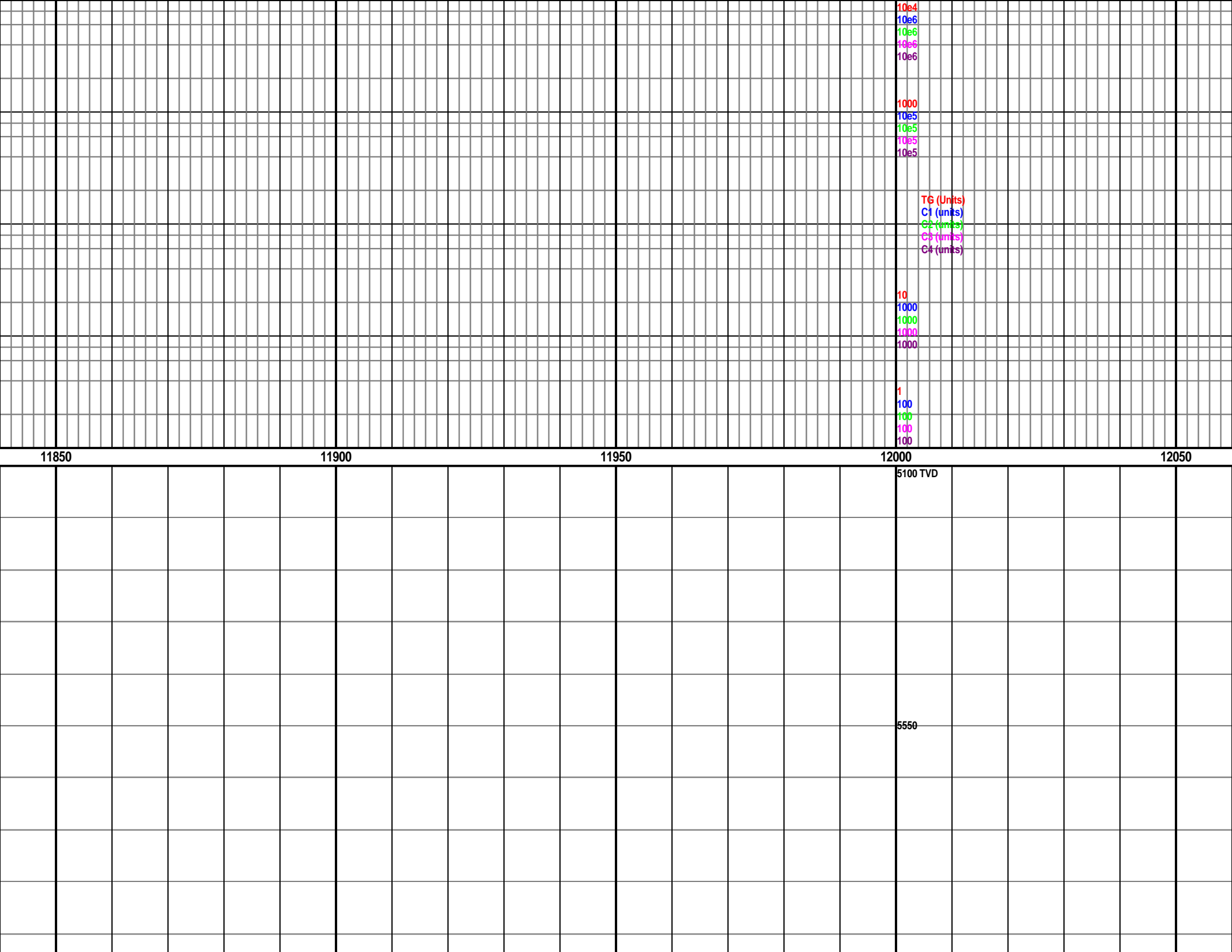
11750

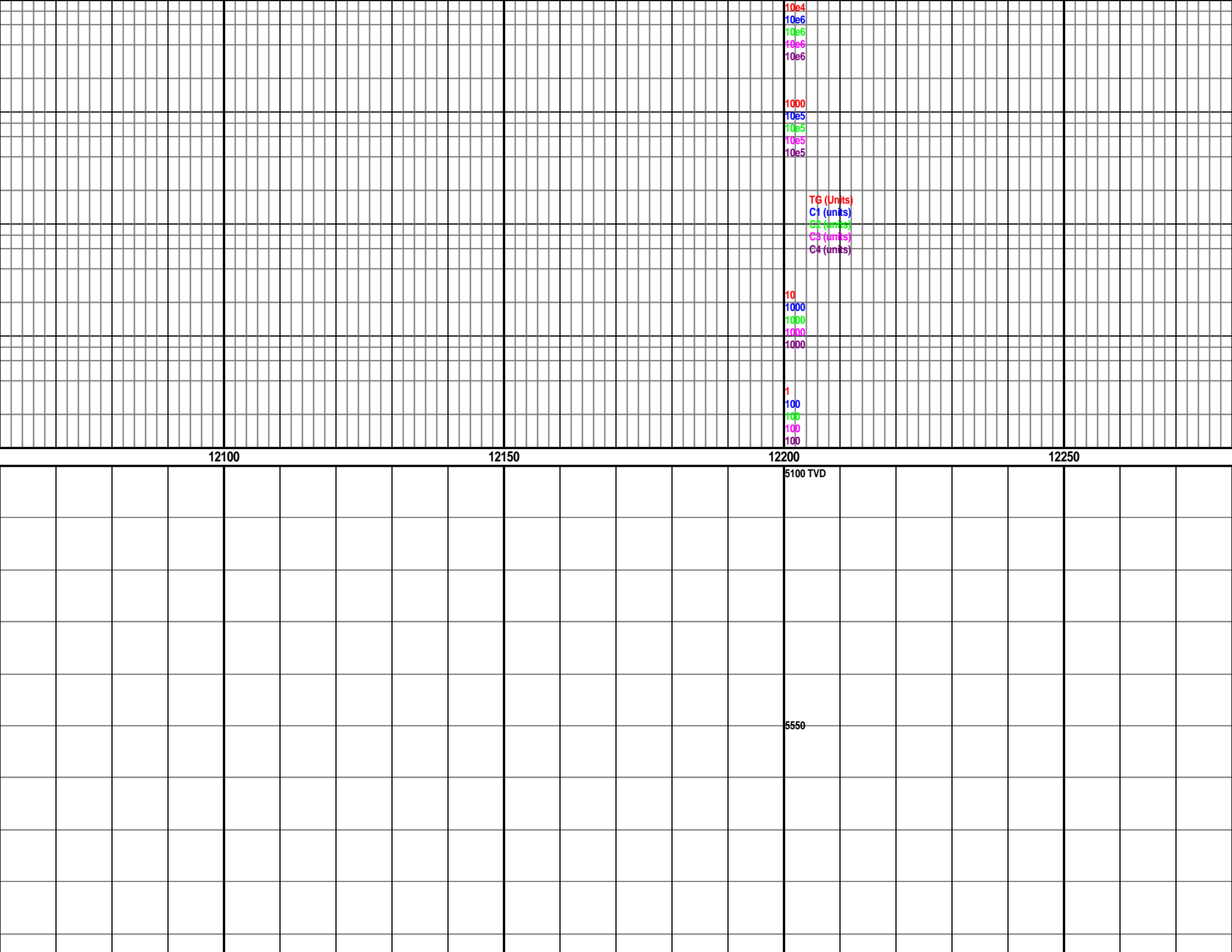
11800

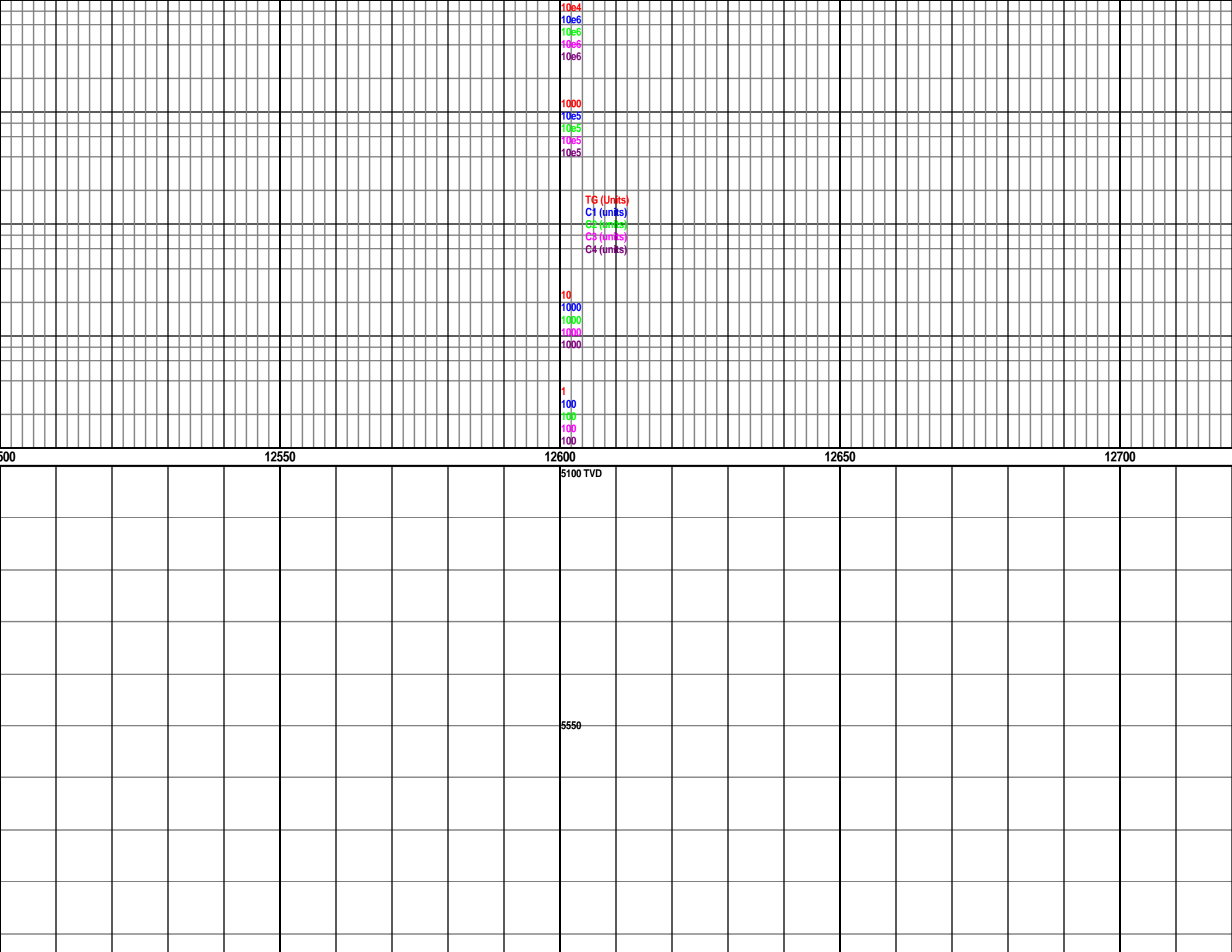
5100 TVD

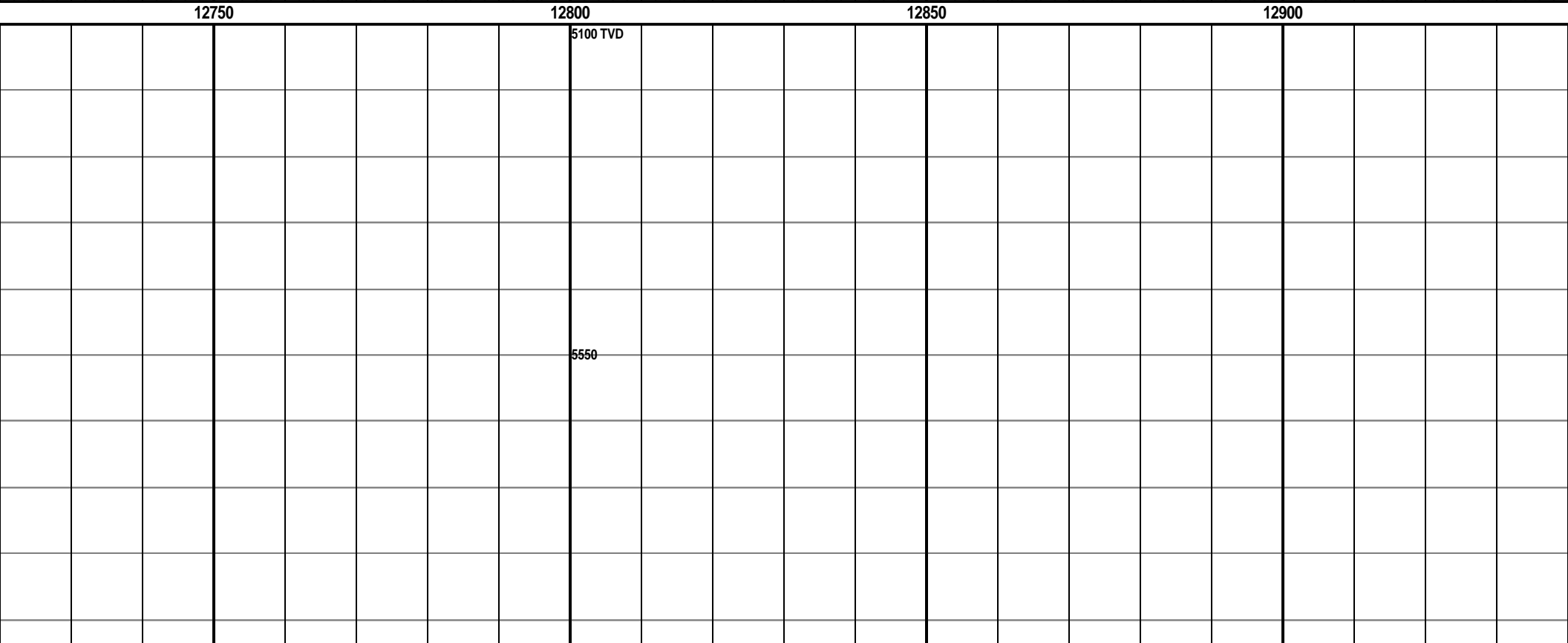
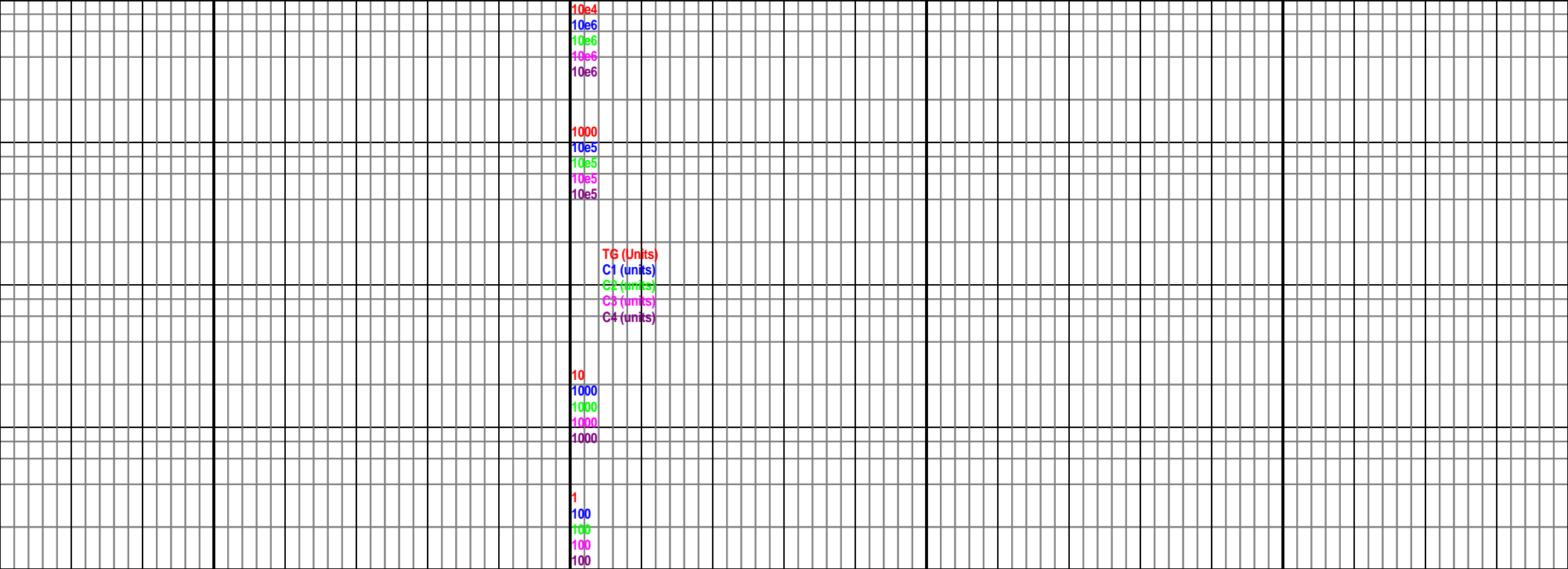
5550

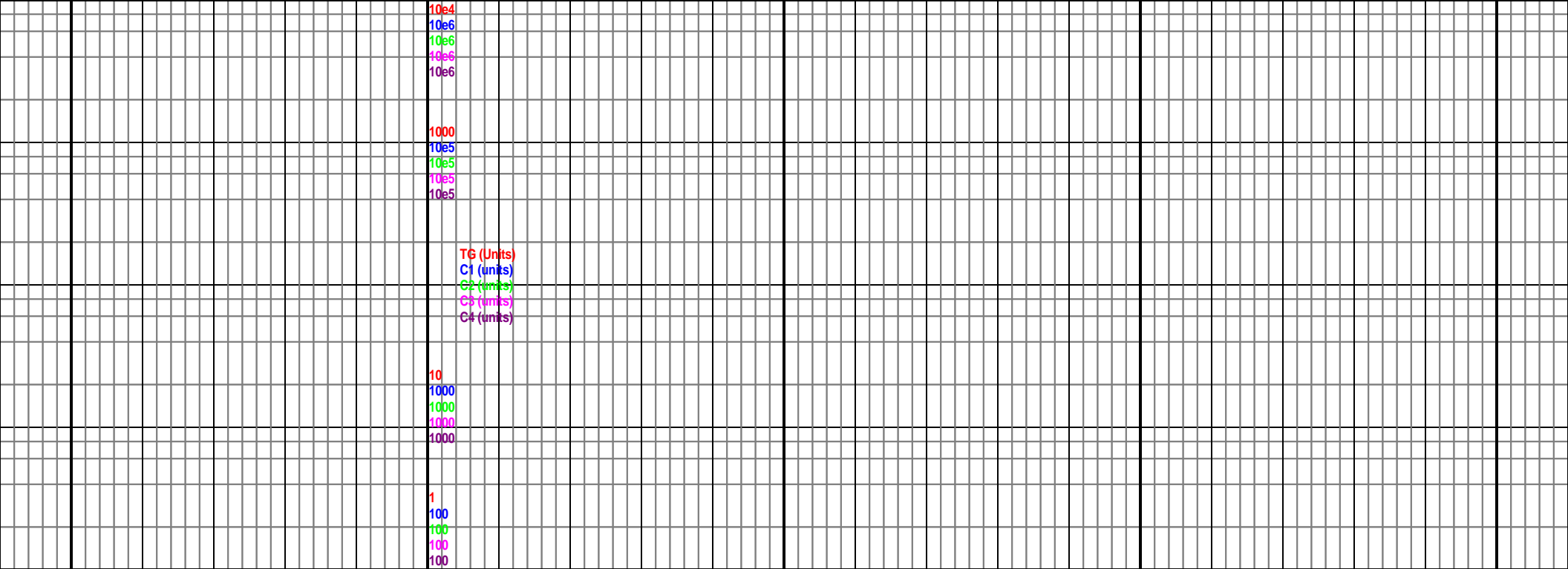
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)











12950

13000

13050

13100

13150

5100 TVD

5550

