



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

Well Name: Razor 11E-1403A
Location: SWNW 11-T10N-R58W
License Number: 05-123-38529
Spud Date: 1/28/2014
Surface Coordinates: Lat.: 40.853983 Long.: -103.839508
Region: Redtail Field
Drilling Completed: 2/4/2014
Bottom Hole Coordinates: Lat.: 40.831772 Long.: -103.839256
Ground Elevation (ft): 5002 **K.B. Elevation (ft):** 5019
Logged Interval (ft): 5232 **To:** 13390 **Total Depth (ft):** 13390
Formation: Pierre, Sharon Springs, Niobrara B
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: Todd Nakata and Lauren Roddy
Company: Acme Geologic Consulting
Address: 108 Berry Street
Little Rock, AR 72205

Drilling Company

Cade Drilling, LLC
Rig #23

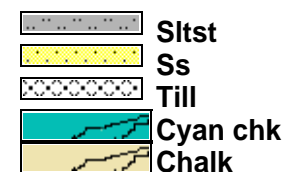
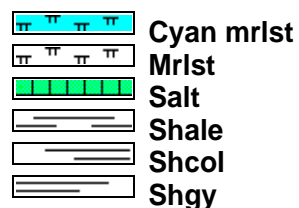
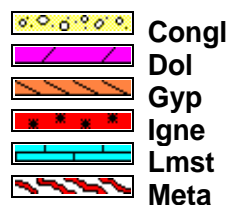
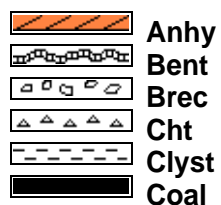
Gas Detection

Mudlogging Systems, Inc., M Logger, Model TGC, Total Gas and Chromatograph, #149

Comments

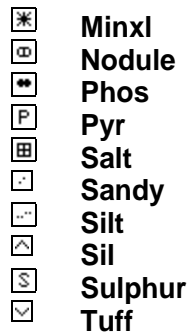
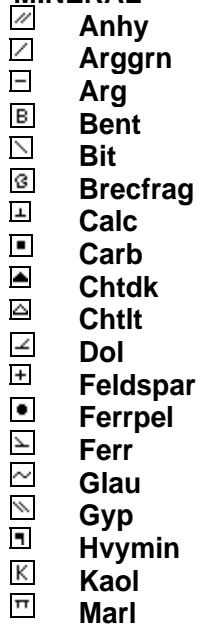
Lithologies and tops at drilled depths, not corrected to elogs. Where the well bore gas is 100% methane, the C1 line is moved to 85% for graphical purposes only.

ROCK TYPES

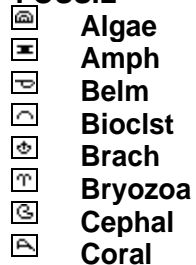


ACCESSORIES

MINERAL



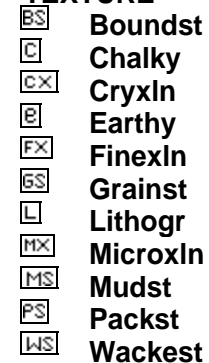
FOSSIL



STRINGER











TEXTURE



OTHER SYMBOLS




POROSITY

-  Earthy
-  Fenest
-  Fracture
-  Inter
-  Moldic
-  Organic
-  Pinpoint
-  Vuggy

SORTING





-  Well
-  Moderate
-  Poor

ROUNDING



-  Rounded
-  Subrnd
-  Subang

-  Angular

OIL SHOW

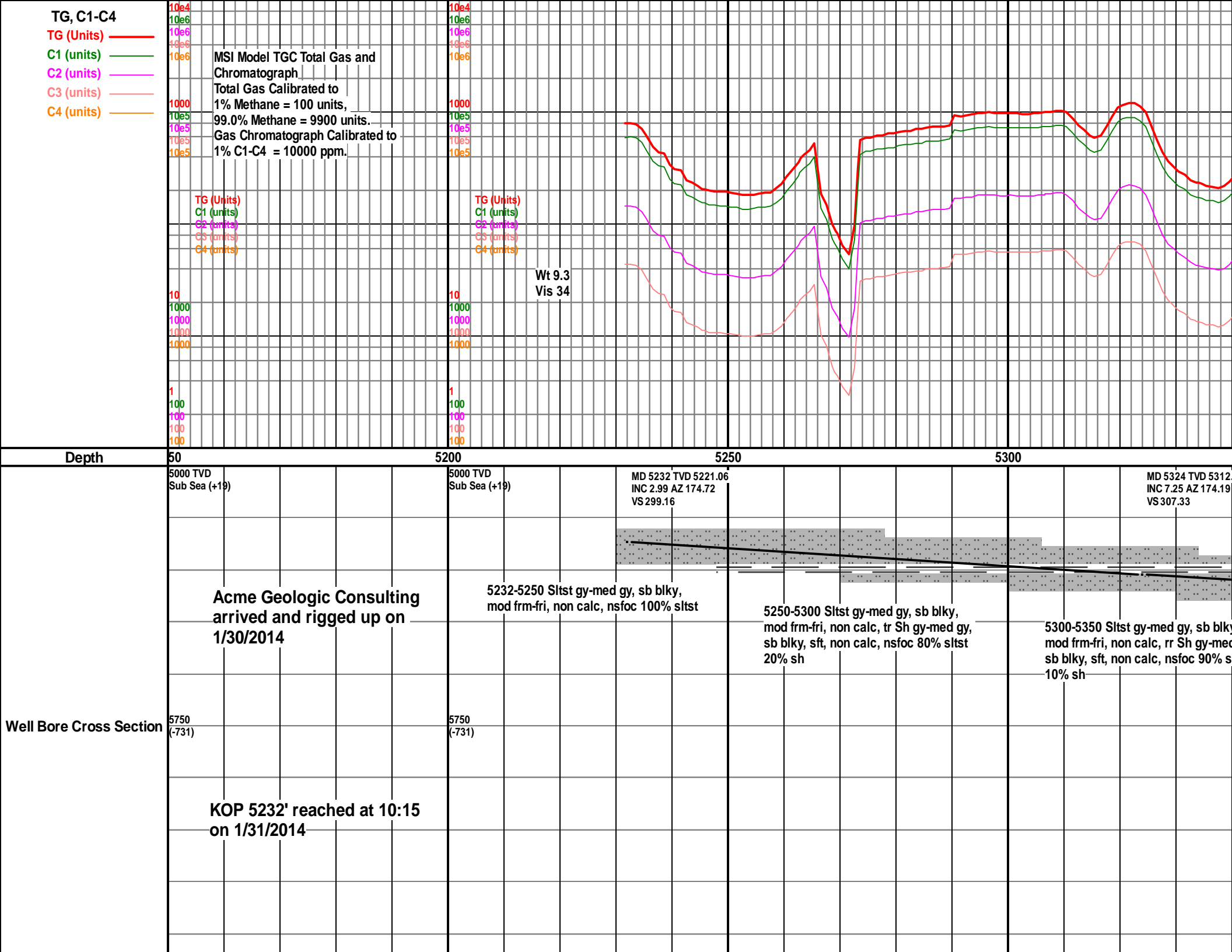
-  Even
-  Spotted
-  Ques
-  Dead

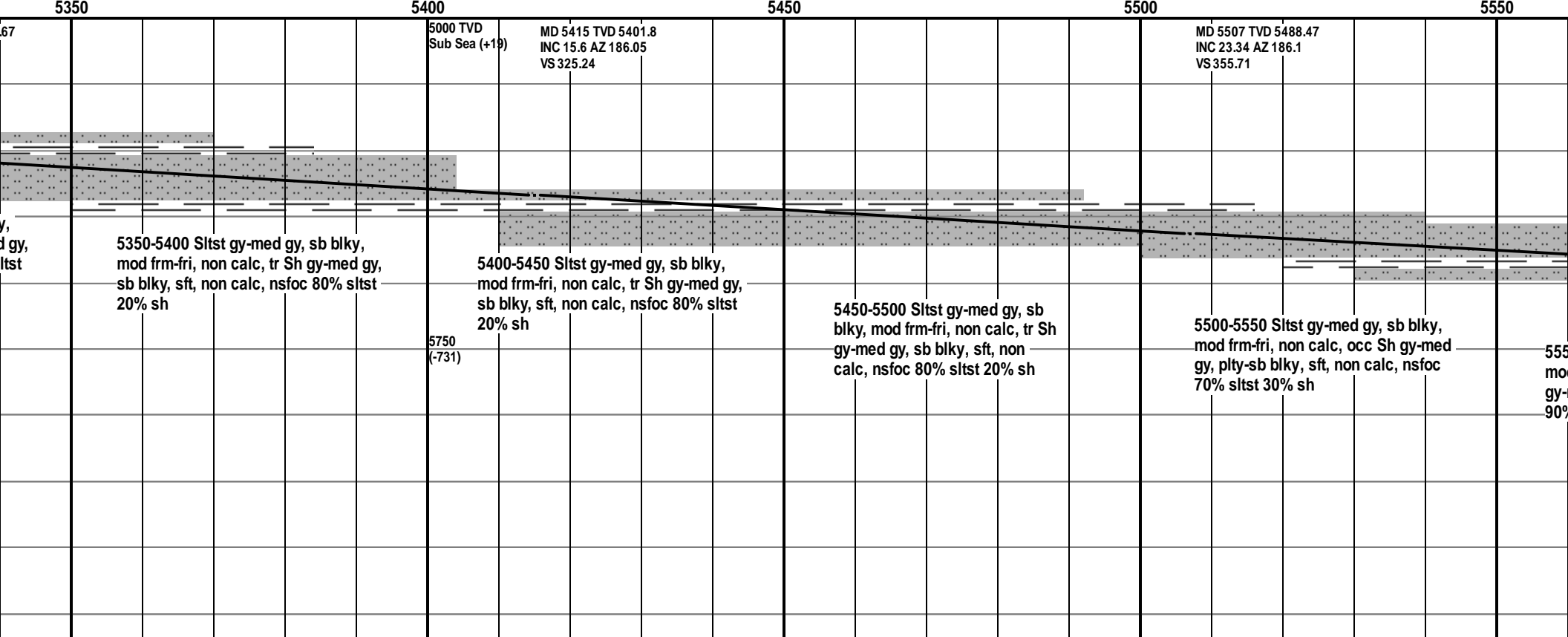
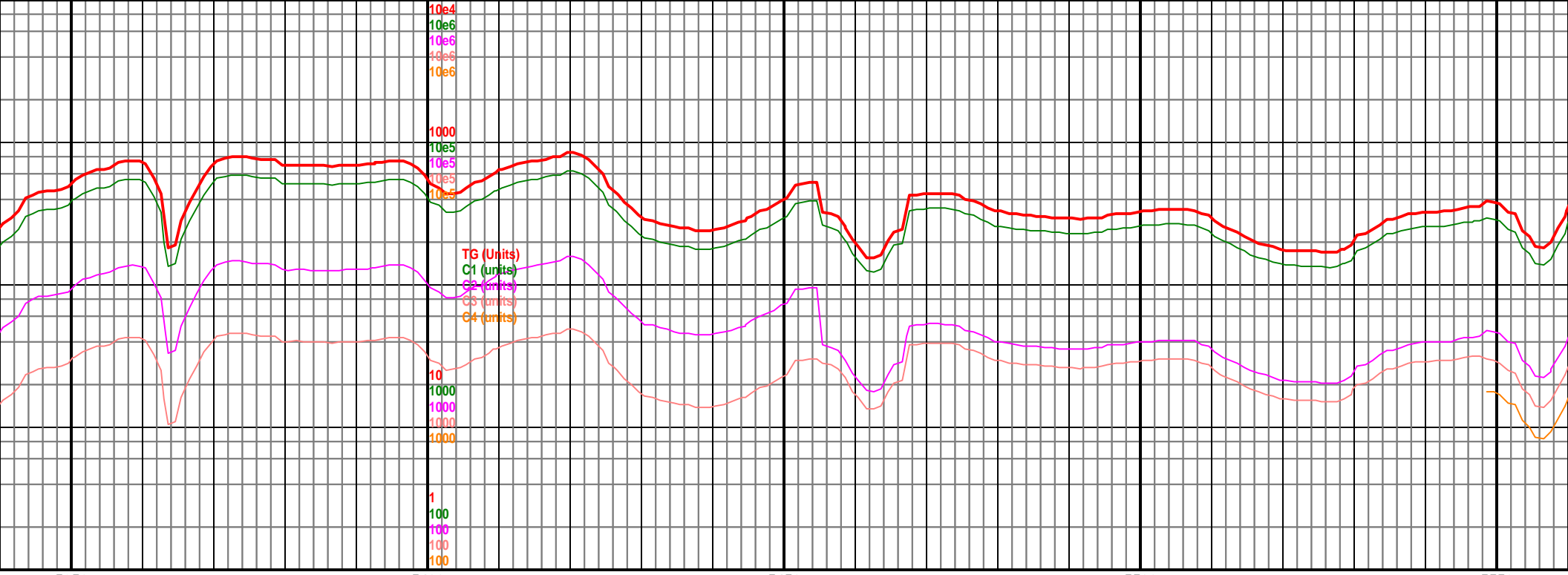
INTERVAL

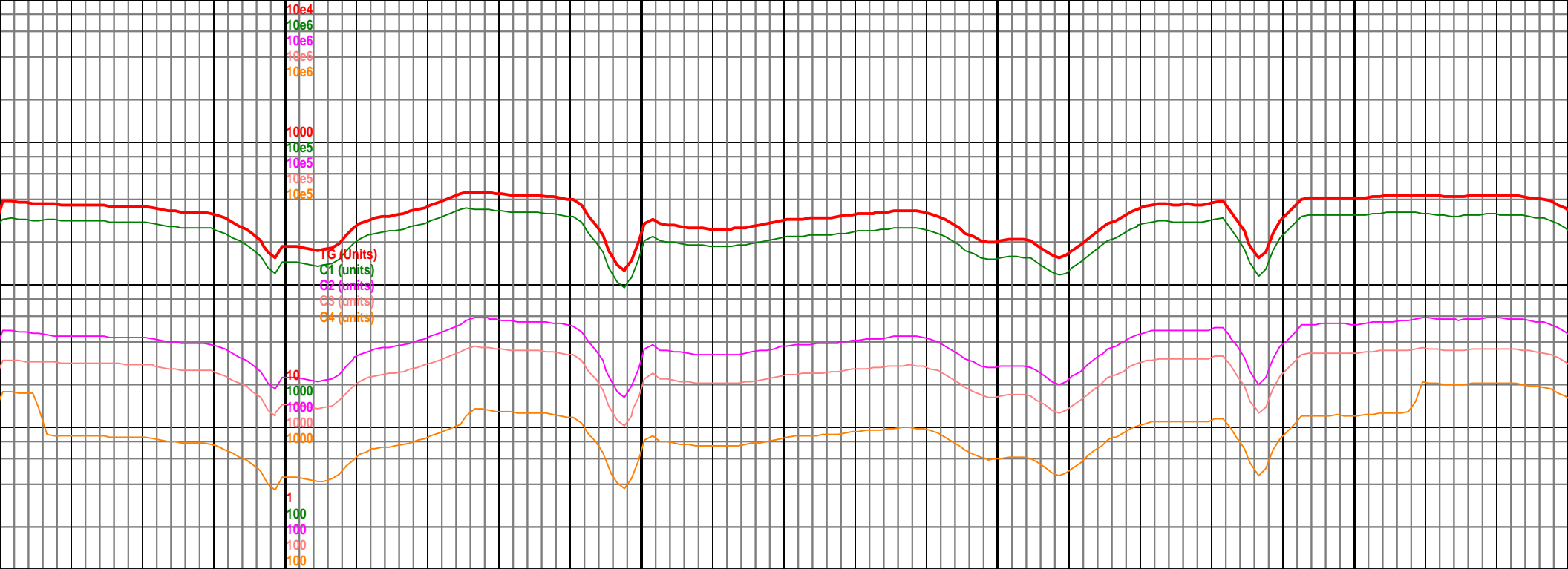
-  Core
-  Dst

EVENT

-  Rft
-  Sidewall







5600

5650

5700

5750

MD 5599 TVD 5570.25
INC 31.03 AZ 184.73
VS 397.52

MD 5689 TVD 5643.84
INC 39.16 AZ 179.85
VS 449.15

5500-5600 Sltst gy-med gy, sb blk,
mod frm-fri, dk lam, non calc, rr Sh
gy-med gy, sb blk, sft, non calc, nsfoc
90% sltst 10% sh

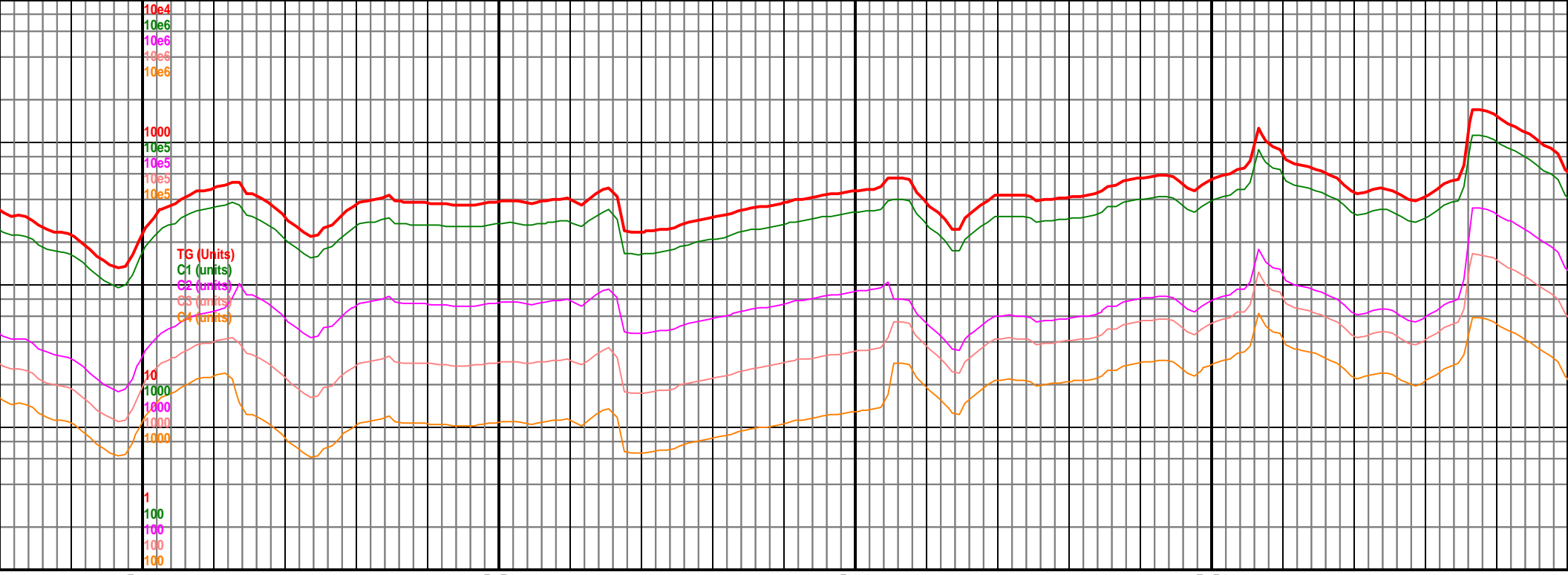
5750
(-731)

5600-5650 Sltst gy-med gy, sb blk,
mod frm-fri, dk lam, non calc, rr Sh
gy-med gy, sb blk, sft, non calc, nsfoc
90% sltst 10% sh

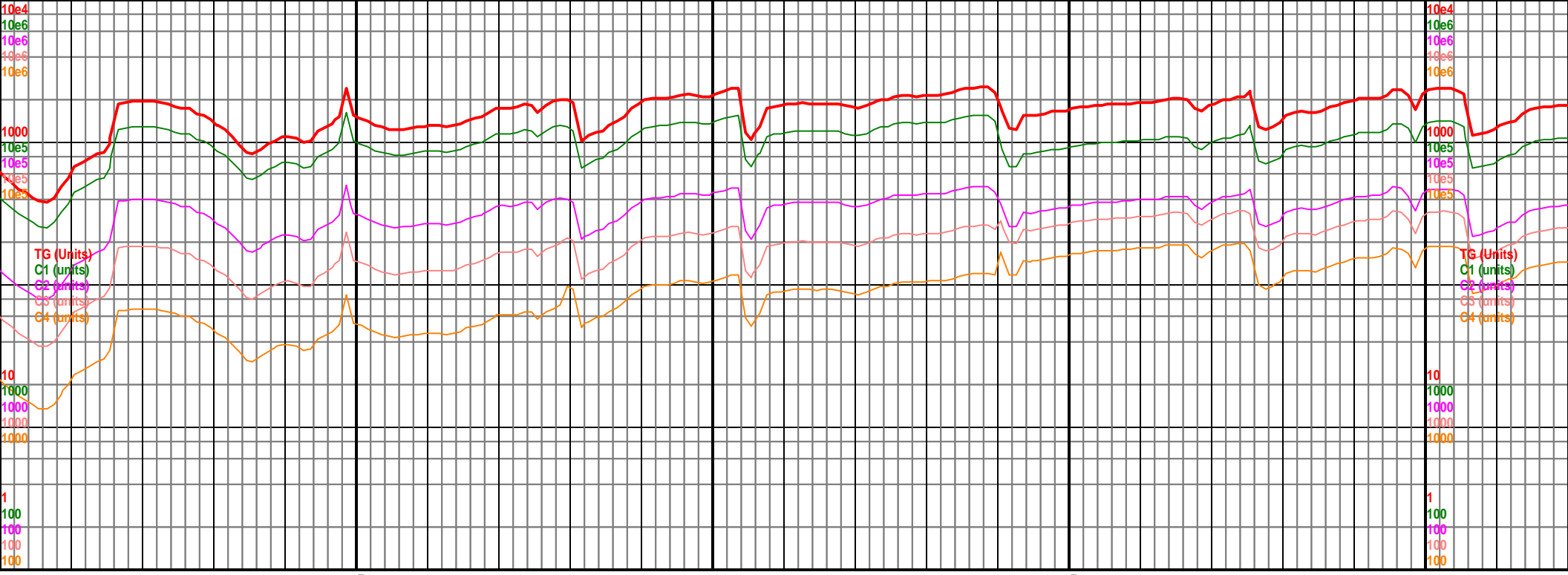
5650-5700 Sltst gy-med gy, sb blk,
mod frm-fri, dk lam ip, non calc, occ Sh
gy-med gy, plty-sb plty, sft, non calc,
nsfoc 70% sltst 30% sh

5700-5750 Sltst gy-med gy, sb blk,
mod frm-fri, dk lam ip, non calc, occ Sh
gy-med gy, plty-sb plty, sft, non calc,
nsfoc 70% sltst 30% sh

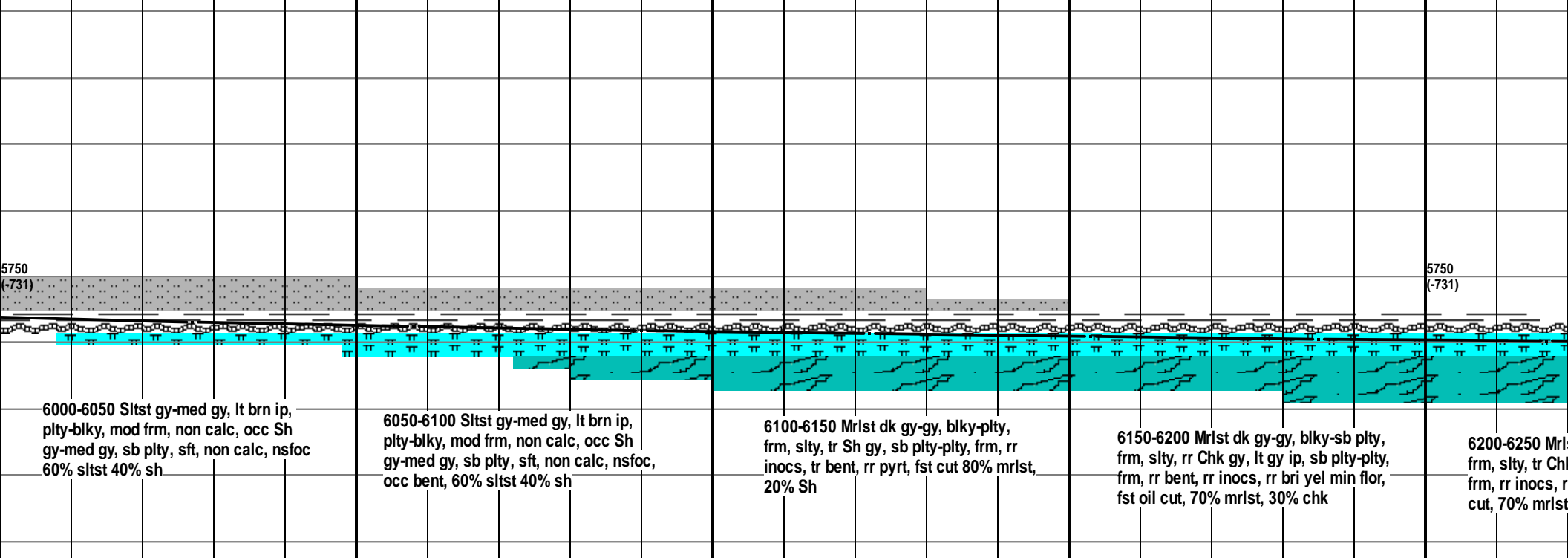
5750-5800 Sltst gy-med gy, sb blk,
mod frm, dk lam ip, non calc, occ Sh
gy-med gy, plty-sb plty, sft, non calc,
nsfoc 70% sltst 30% sh

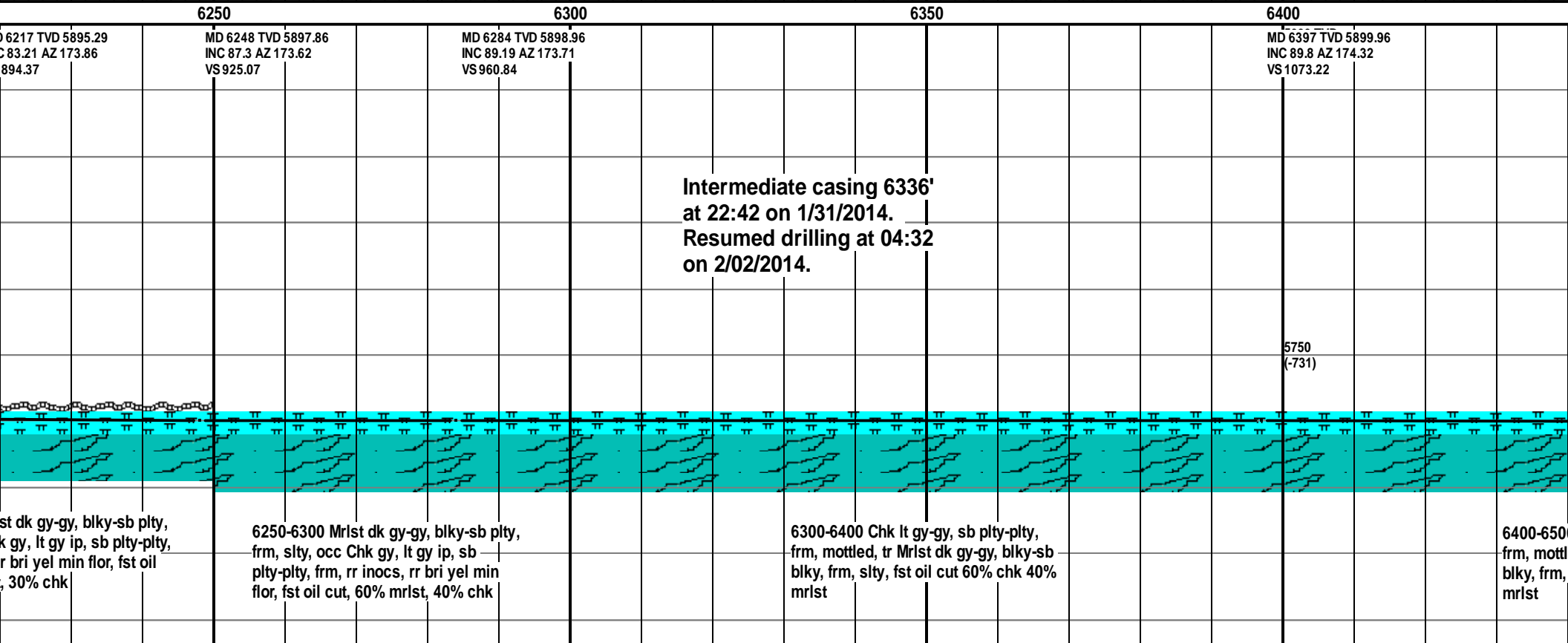
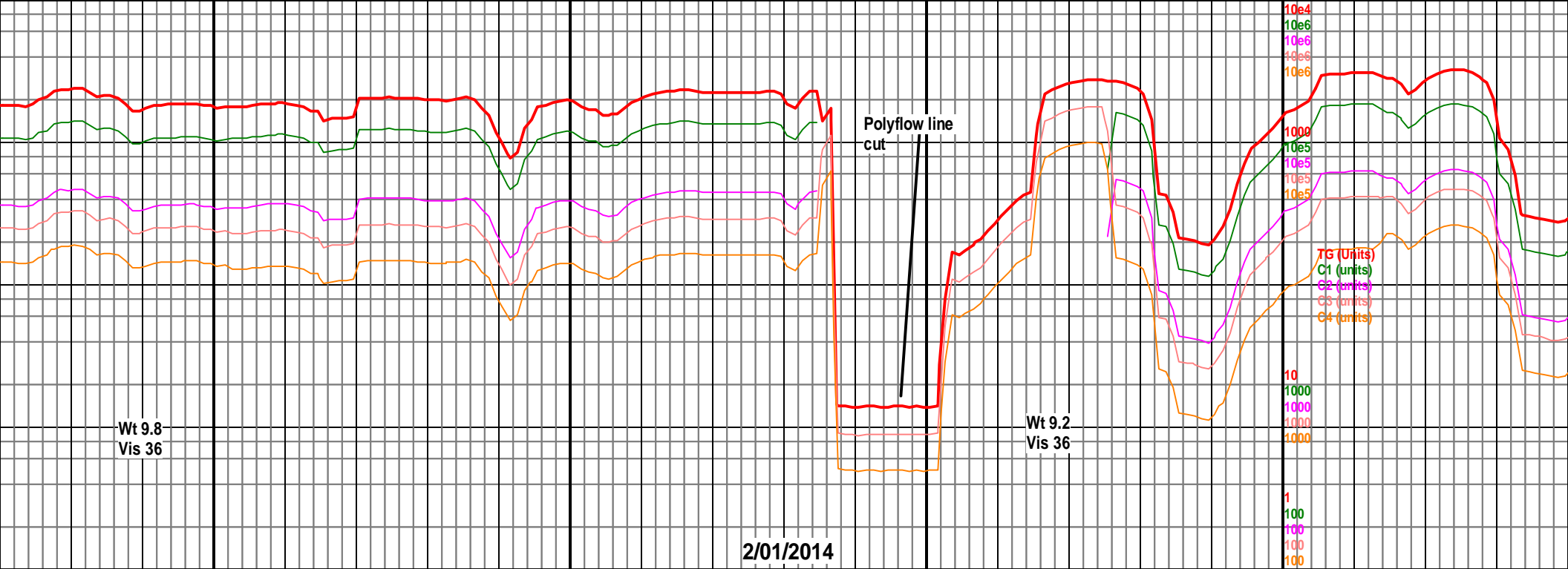


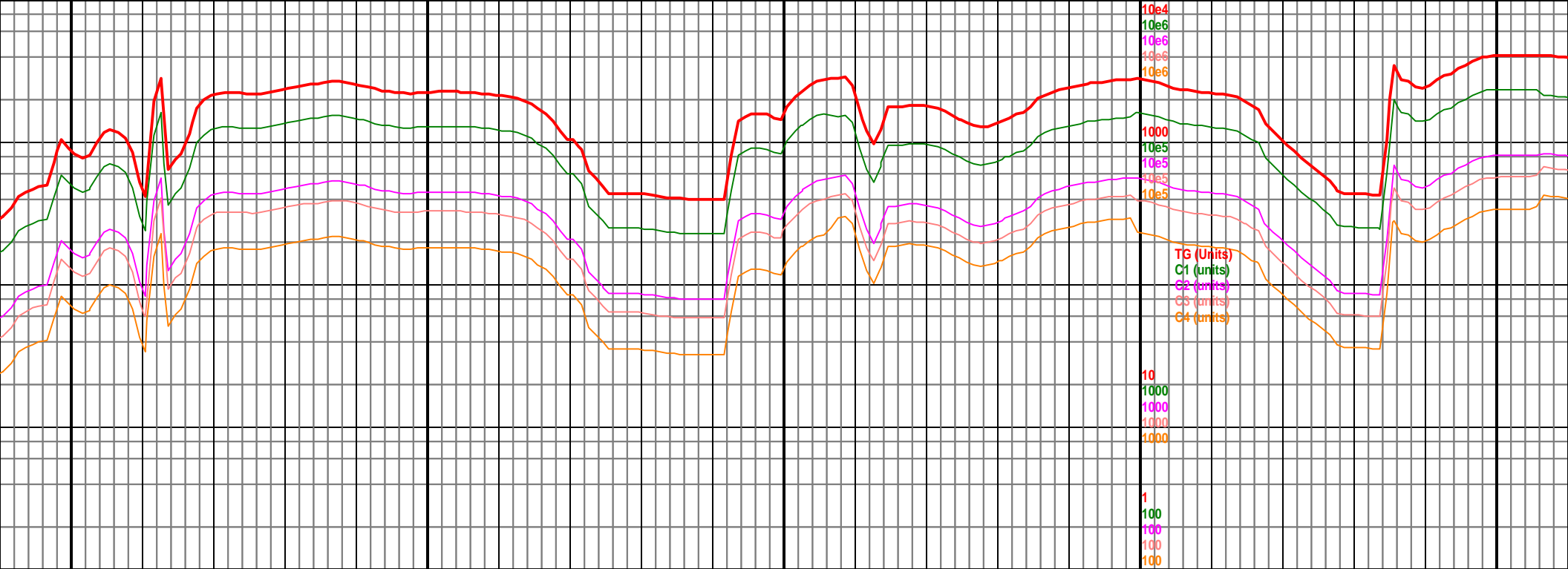
MD 5781 TVD 5711.69 INC 45.8 AZ 186.67 VS 511.06	5000 TVD Sub Sea (+19)	MD 5812 TVD 5732.71 INC 48.79 AZ 187.15 VS 533.67		MD 5872 TVD 5771 INC 51.91 AZ 188.59 VS 579.42	MD 5903 TVD 5789.73 INC 53.76 AZ 185.26 VS 603.93	MD 5933 TVD 5807.06 INC 55.65 AZ 182.1 VS 628.36	MD 5964 TVD 5823.9 INC 58.55 AZ 182.66 VS 654.36	MD 5994 TVD 5840.0 INC 61.45 AZ 182.17 VS 680.00
gy, sb plty-sb gy, non calc, occ ty, sft, non % sh	5800-5850 Slstst gy-med gy, sb plty-sb blky, mod frm, dk lam ip, non calc, occ Sh gy-med gy, plty-sb plty, sft, non calc, nsfoc 70% sltst 30% sh	5850-5900 Slstst gy-med gy, sb plty-sb blky, mod frm, dk lam ip, non calc, occ Sh gy-med gy, plty-sb plty, sft, non calc, nsfoc 70% sltst 30% sh		5900-5950 Slstst gy-med gy, sb plty-sb blky, mod frm, dk lam ip, non calc, occ Sh gy-med gy, plty-sb plty, sft, non calc, nsfoc 70% sltst 30% sh	5950-5990 Slstst gy-med gy, It brn ip, plty-blky, mod frm, dk lam ip, non calc, occ Sh gy-med gy, plty-sb plty, sft, non calc, nsfoc 70% sltst 30% sh	5990-6000 Slstst gy-med gy, It brn ip, plty-blky, mod frm, non calc, occ Sh gy-med gy, sb plty, sft, non calc, nsfoc 70% sltst 30% sh		



995 TVD 5839.09 2.73 AZ 182.09 1.35	MD 6027 TVD 5852.55 INC 67.52 AZ 182.79 VS 710.35	MD 6058 TVD 5863.34 INC 71.74 AZ 181.81 VS 739.38	MD 6090 TVD 5872.29 INC 75.78 AZ 178.93 VS 770.09	MD 6122 TVD 5879.31 INC 78.86 AZ 175.36 VS 801.26	MD 6153 TVD 5885.15 INC 79.43 AZ 173.53 VS 831.57	MD 6185 TVD 5890.74 INC 80.44 AZ 173.74 VS 862.88	MD 6200 TVD 5897.40 INC 81.44 AZ 173.74 VS 893.15
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6450

6500

6550

6600

6650

MD 6491 TVD 5900.36
INC 89.71 AZ 176.29
VS 1166.9

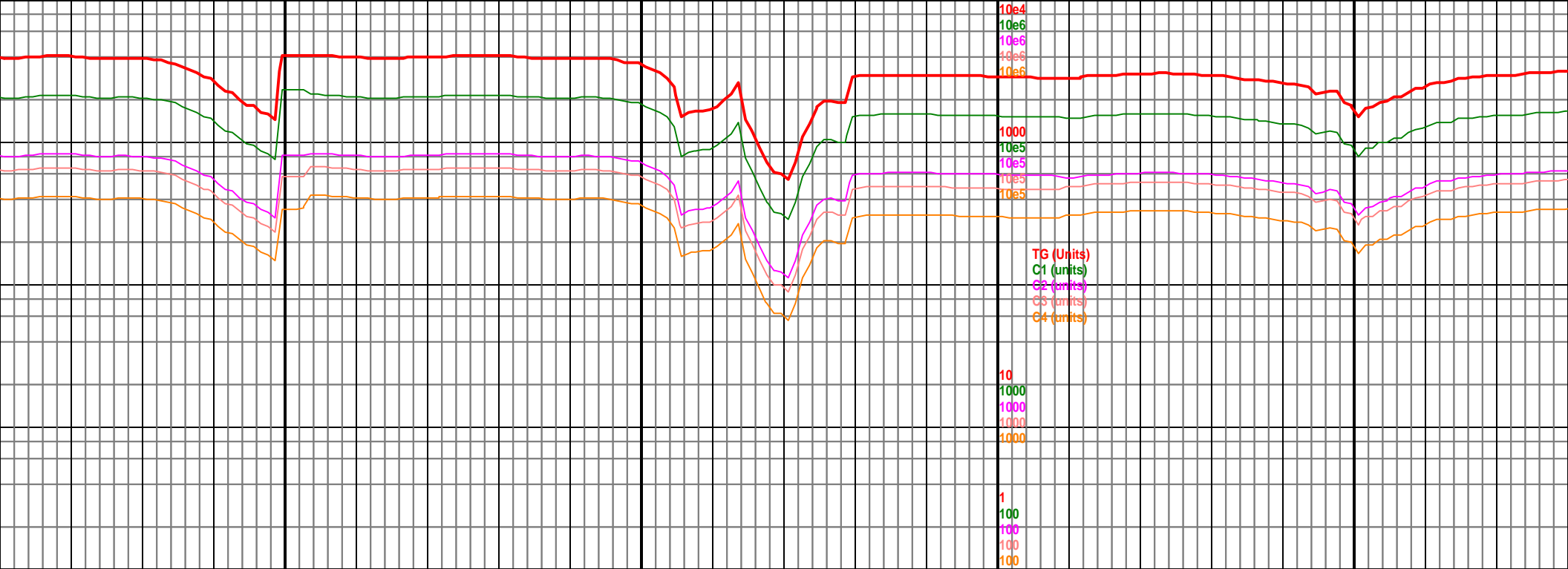
MD 6586 TVD 5901.64 TVD
INC 88.75 AZ 178.72° Sea (+19)
VS 1261.8

5750
(-731)

0 Chk lt gy-gy, sb plty-plty,
ed, tr Mrlst dk gy-gy, blk-sb
sly, fst oil cut 80% chk 20%

6500-6600 Chk lt gy-gy, sb plty-plty,
frm, mottled, rr Mrlst dk gy-gy, blk-sb
blk, frm, sly, fst oil cut 90% chk 10%
mrilst

6600-6700 Chk lt gy-gy, sb plty-plty,
frm, mottled, tr Mrlst dk gy-gy,
blk, frm, sly, fst oil cut 80%
mrilst



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

10
1000
10000
100000
1000000

1
100
1000
10000
100000

6700

6750

6800

6850

MD 6681 TVD 5904.26
INC 88.09 AZ 178.66
VS 1356.74

MD 6775 TVD 5906.09
INC 89.67 AZ 180.72
VS 1450.71

5000 TVD
Sub Sea (+19)

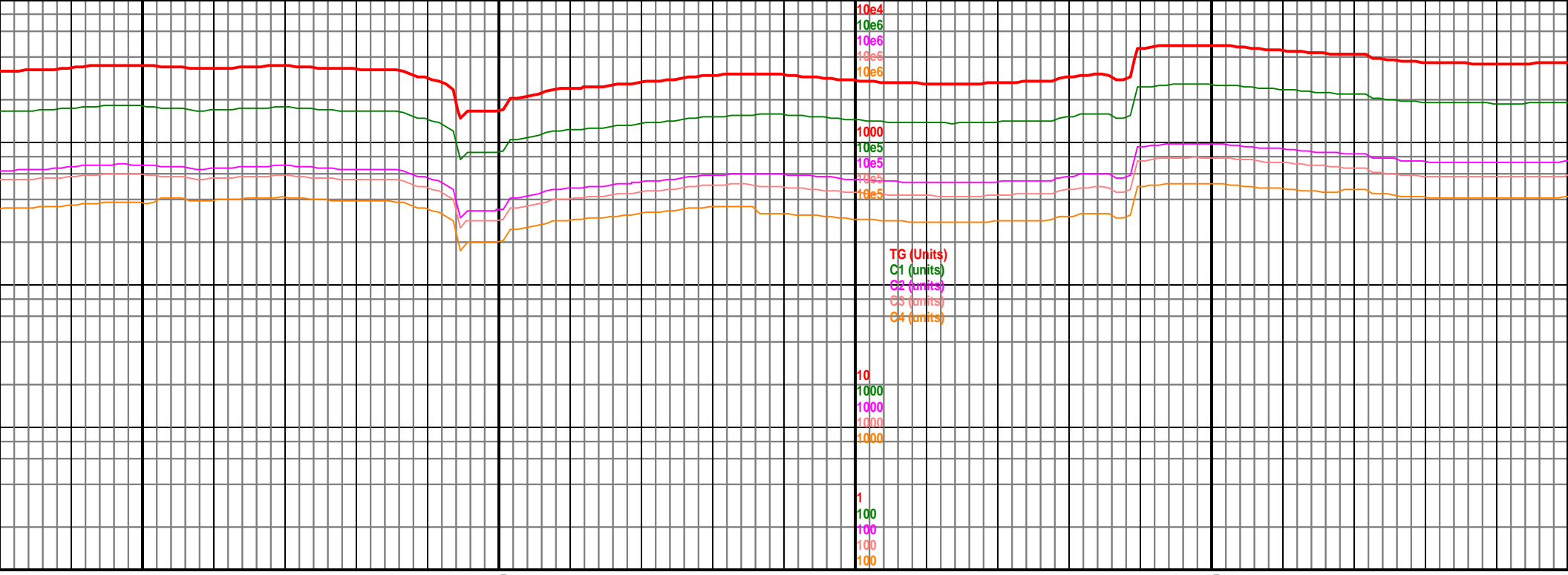
MD 6870 TVD 5906.09
INC 89.85 AZ 180.72
VS 1545.71

5750
(-731)

y-plty,
blky-sb
chk 20%

6700-6800 Chk It gy-med gy, blky-plty,
frm, mottled, grd to mrlst ip, tr Mrlst
dk gy-gy, blky-sb blky, frm, slty, fst oil
cut 80% chk 20% mrlst

6800-6900 Chk It gy-med gy, blky-plty,
frm, mottled, slty ip, tr Mrlst dk gy-gy,
blky-sb blky, frm, slty, fst oil cut 80%
chk 20% mrlst



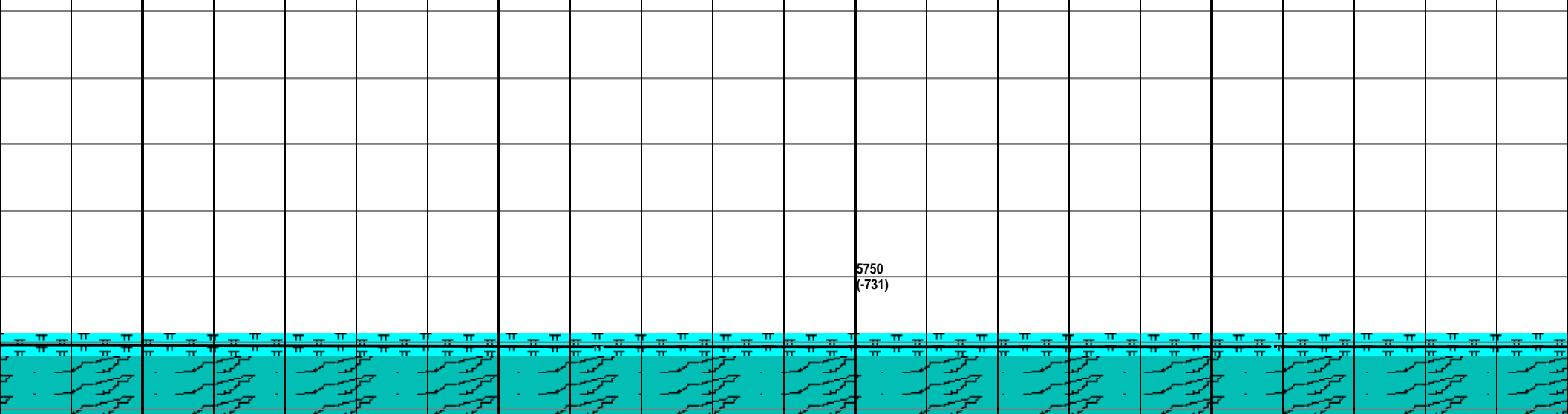
6900 6950 7000 7050 71

D 5906.49
Z 180.79

MD 6964 TVD 5907.14
INC 89.36 AZ 180.4
VS 1639.69

5000 TVD
Sub Sea (+19)

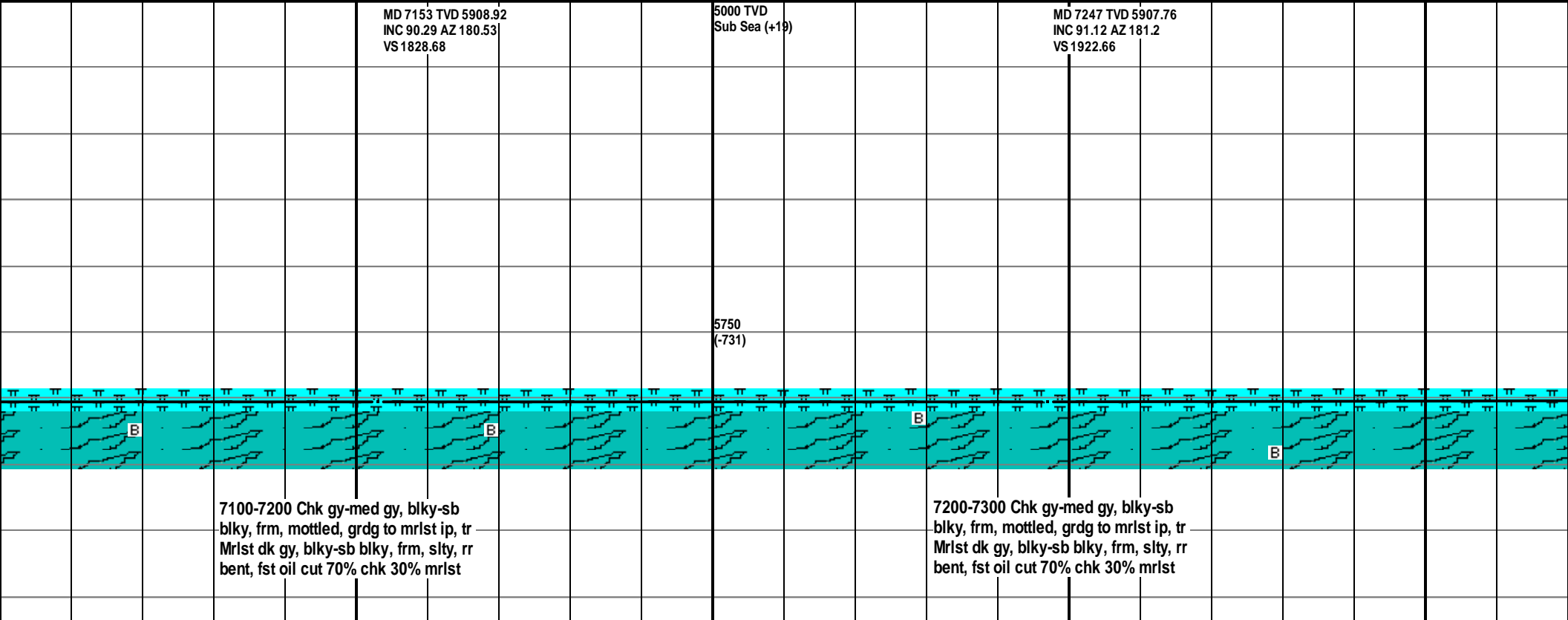
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INC 89.1 AZ 180.33
VS 1734.68

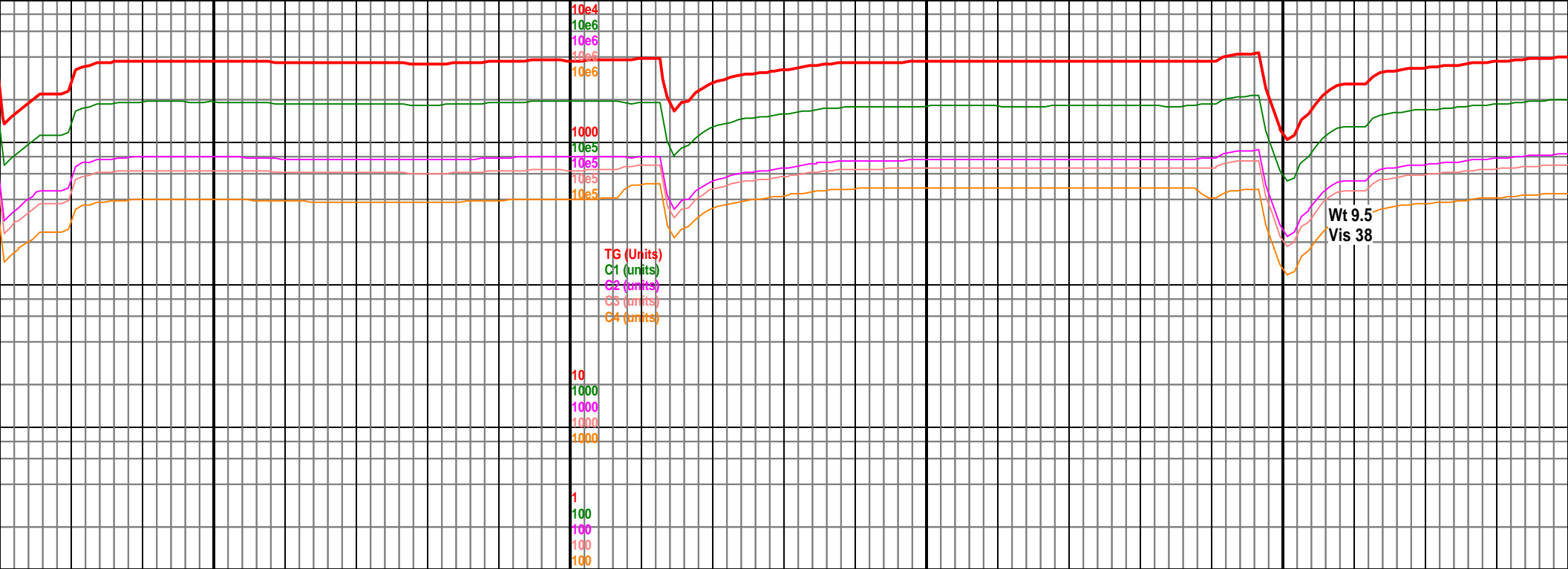


5750
(-731)

6900-7000 Chk lt gy-med gy, blk-y-sb
blk-y, frm, mottled, rr Mrlst gy, blk-y-sb
blk-y, frm, slty, fst oil cut 90% chk 10%
mrlst

7000-7100 Chk lt gy-gy, blk-y-pty, frm,
mottled, rr Mrlst dk gy, blk-y-sb blk-y,
frm, slty, fst oil cut 90% chk 10% mrlst





7350

7400

7450

7500

MD 7342 TVD 5905.32
INC 91.82 AZ 181.73
VS 2017.59

5000 TVD
Sub Sea (+19)

MD 7437 TVD 5903.61
INC 90.24 AZ 181.29
VS 2112.54

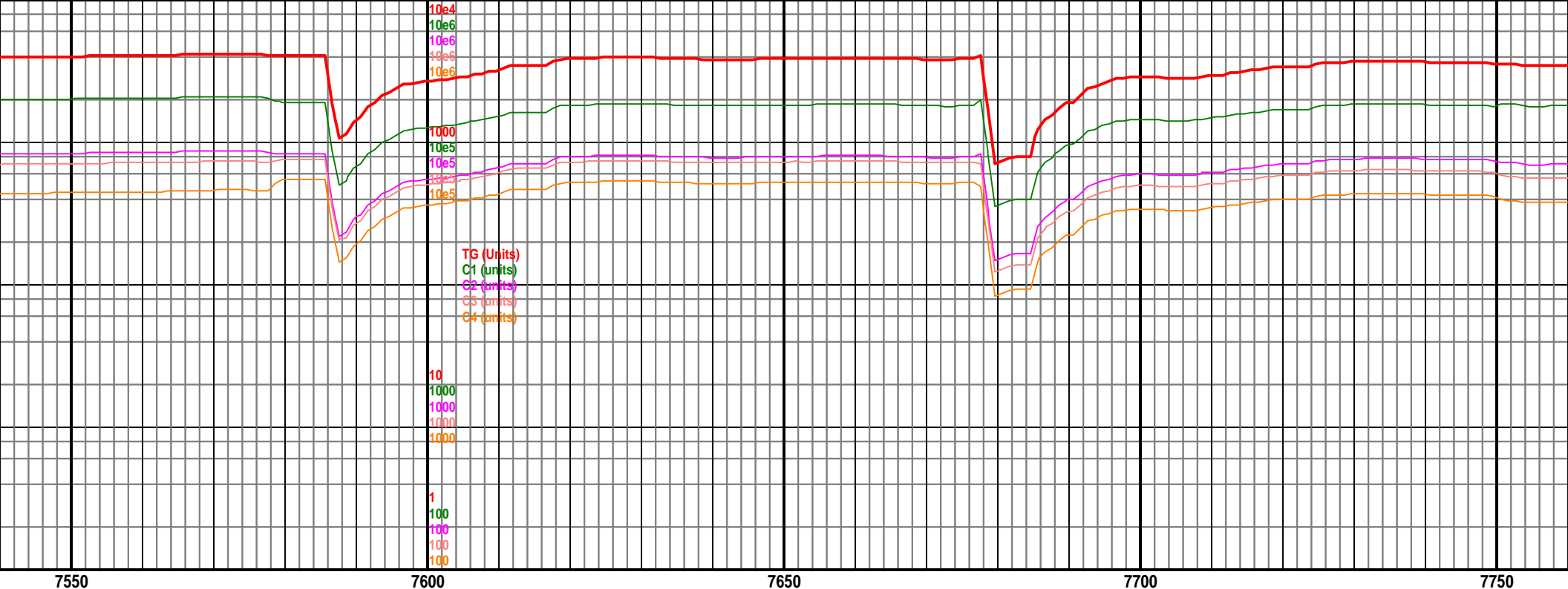
MD 7532
INC 90.55
VS 2207.5

5750
(-731)

7300-7400 Chk med gy, blk-sb blk,
frm, mottled, grdg to mrlst ip, abnt Mrlst
dk gy, blk-sb blk, frm, slty, fst oil cut
50% chk 50% mrlst

7400-7500 Chk med gy-dk gy, blk-sb
blk, frm, mottled ip, grdg to mrlst ip,
abnt Mrlst dk gy, blk-sb blk, frm, slty,
fst oil cut 50% chk 50% mrlst

7500-7600
blk, frm,
Mrlst dk g
bent, fst c



TVD 5902.96
5 AZ 181.28
51

5000 TVD	
Sub Sea (+19)	

MD 7626 TVD 5902.13
INC 90.46 AZ 181.11
VS 2301.49

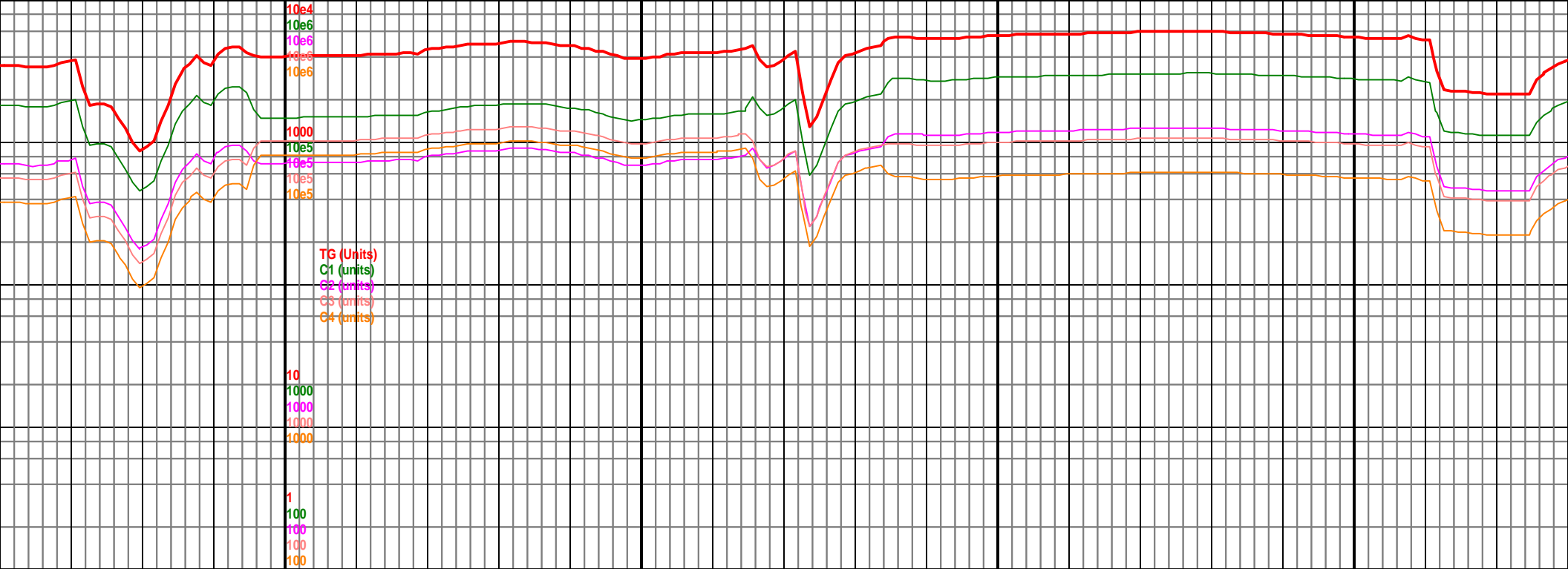
MD 7721 TVD 5901.11
INC 90.77 AZ 181.14
VS 2396.46

$$\begin{array}{r} 5750 \\ + (-731) \\ \hline \end{array}$$

0 Chk gy-med gy, blk-y-sb
mottled, grdg to mrlst ip, tr
gy, blk-y-sb blk-y, frm, slty, rr
oil cut 70% chk 30% mrlst

7600-7700 Chk gy-med gy, blk-y-pty,
frm, mottled, slty, tr Mrlst dk gy, —
blk-y-sb blk-y, frm, slty, rr bent, fst oil
cut 70% chk 30% mrlst

7700-7800 Chk lt gy-med gy, b
frm, mottled, tr Mrlst dk gy, blk
sly, rr bent, fst oil cut 80% ch
mrlst



7800 7850 7900 7950

5000 TVD
Sub Sea (+19)

MD 7816 TVD 5900.64
INC 89.8 AZ 180.89
VS 2491.44

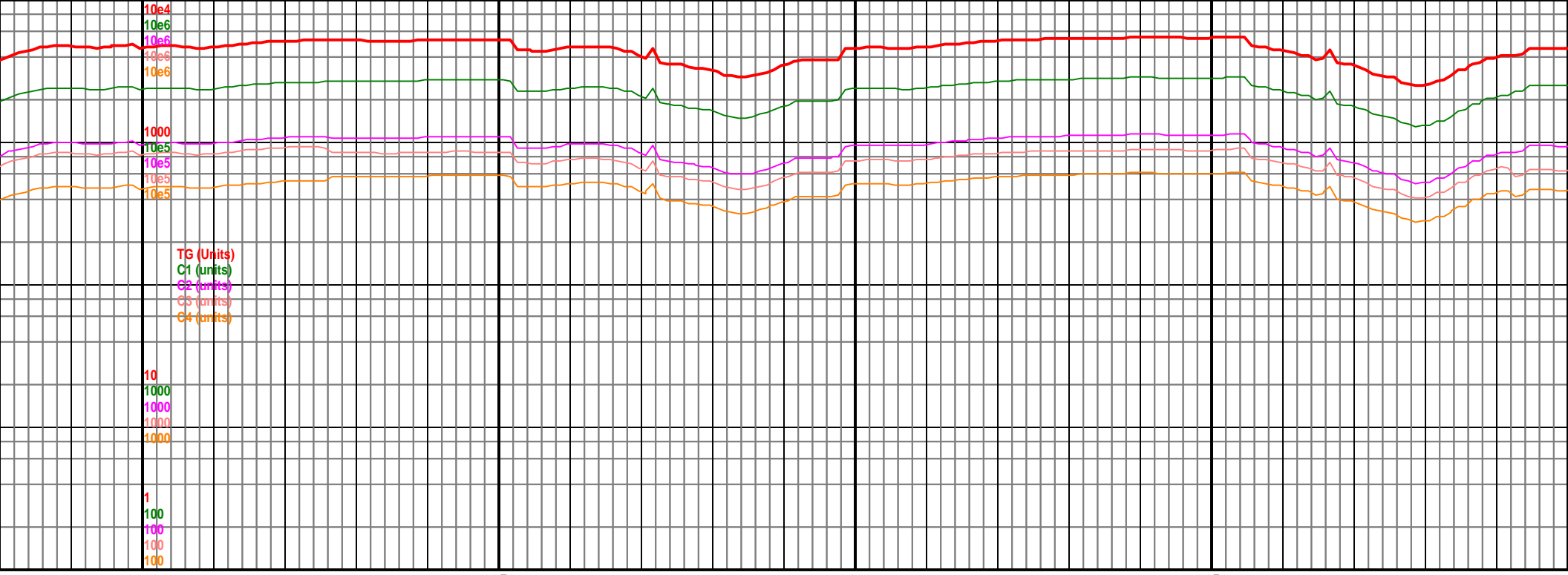
MD 7911 TVD 5901.44
INC 89.23 AZ 178.9
VS 2586.44

5750
(-731)

blky-plty,
ky, frm,
k 20%

7800-7900 Chk lt gy-med gy, blky-plty,
frm, mottled, tr Mrlst dk gy, blky, frm,
silty, rr bent, vis oil 80% chk 20% mrilst

7900-8000 Mrlst dk gy, blky, frm, slty,
grdg to chk ip, tr Chk med gy, blky-plty,
frm, mottled, vis oil 80% mrilst 20% chk



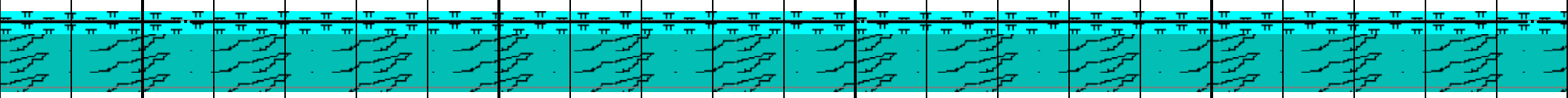
8000 8050 8100 8150 8200

5000 TVI
MD 8006 TVD 5902.65
Sub Sea
INC 89.32 AZ 178.26
VS 2681.4

MD 8101 TVD 5903.33
INC 89.85 AZ 178.42
VS 2776.36

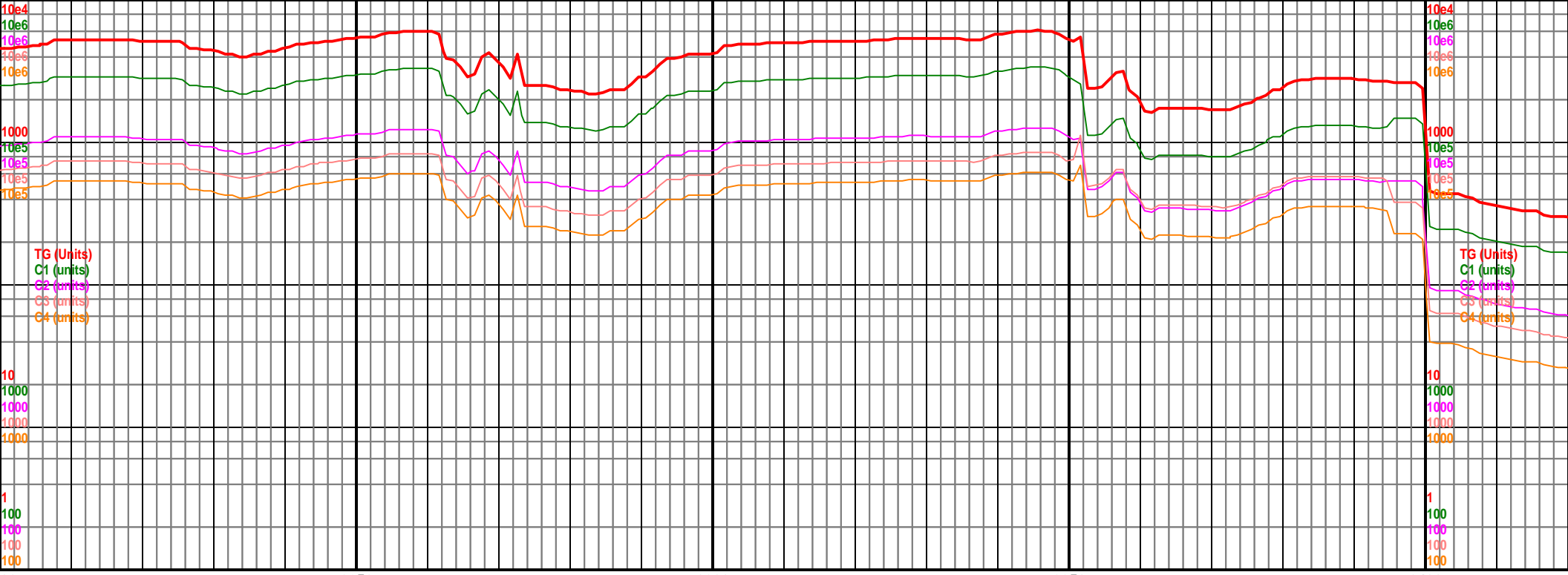
MD 8101 TVD 5903.33
INC 89.85 AZ 178.42
VS 2776.36

5750
(-731)



8000-8100 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, tr Chk med gy, blk-plty,
frm, mottled, vis oil 80% mrlst 20% chk

8100-8200 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, tr Chk med gy, blk-plty,
frm, mottled, vis oil 80% mrlst 20% chk

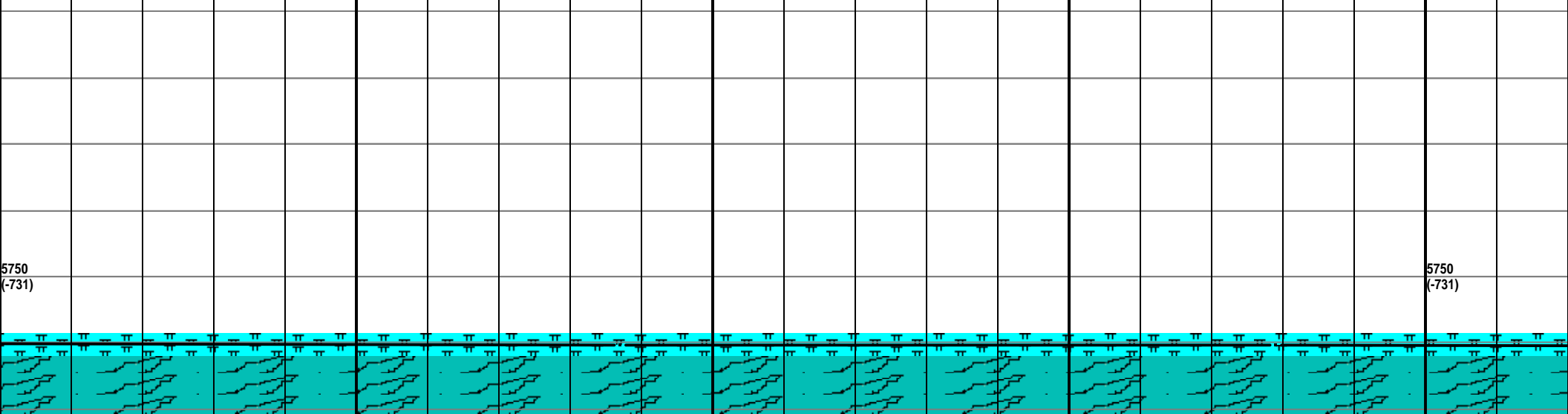


195 TVD 5903.44
0.02 AZ 178.29
70.32

MD 8287 TVD 5904.22
INC 89.01 AZ 178.55
VS 2962.28

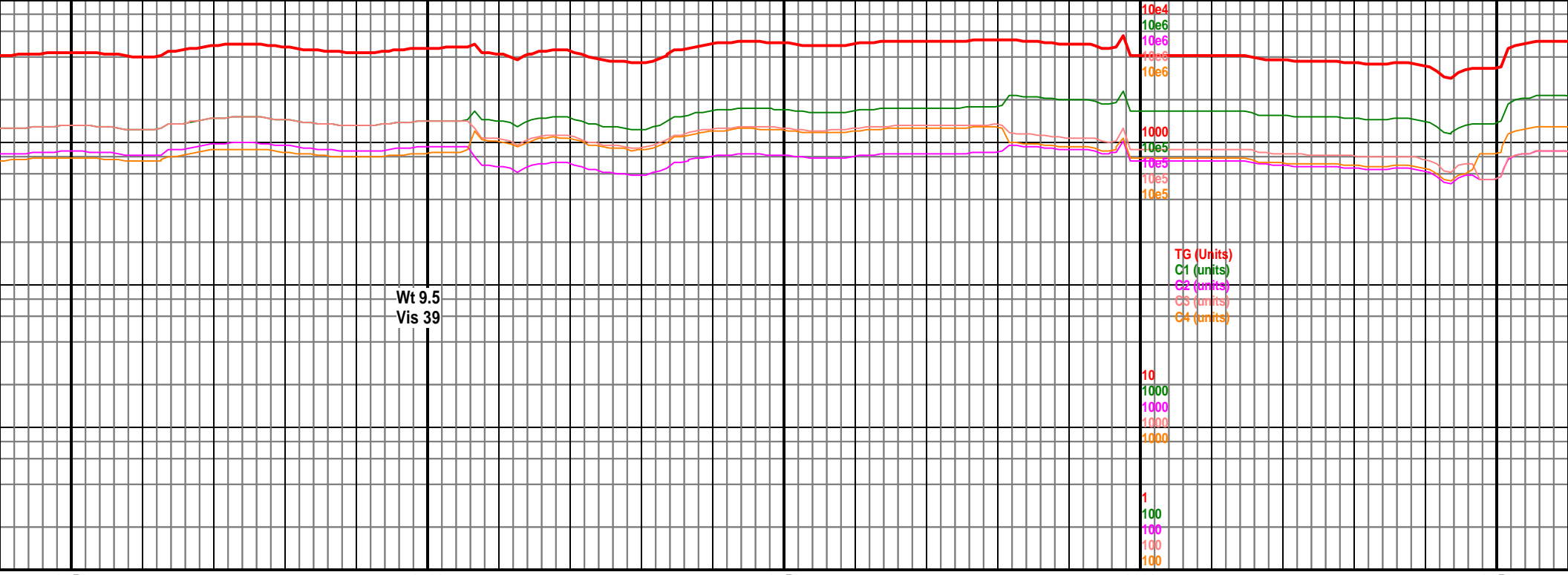
MD 8379 TVD 5905.6
INC 89.27 AZ 179.34
VS 3054.26

5000 TVD
Sub Sea (+19)



8200-8300 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, tr Chk med gy, blk-plty,
frm, mottled, vis oil 80% mrlst 20% chk

8300-8400 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, tr Chk med gy, blk-plty,
frm, mottled, vis oil 80% mrlst 20% chk



Wt 9.5
Vis 39

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

10
1000
1000
1000
1000
1
100
100
100
100

8650 8700 8750 8800 8850

MD 8653 TVD 5906.13
INC 90.68 AZ 179.84
VS 3328.19

MD 8745 TVD 5904.9
INC 90.86 AZ 181.08
VS 3420.17

5000 TVD
Sub Sea (+19)

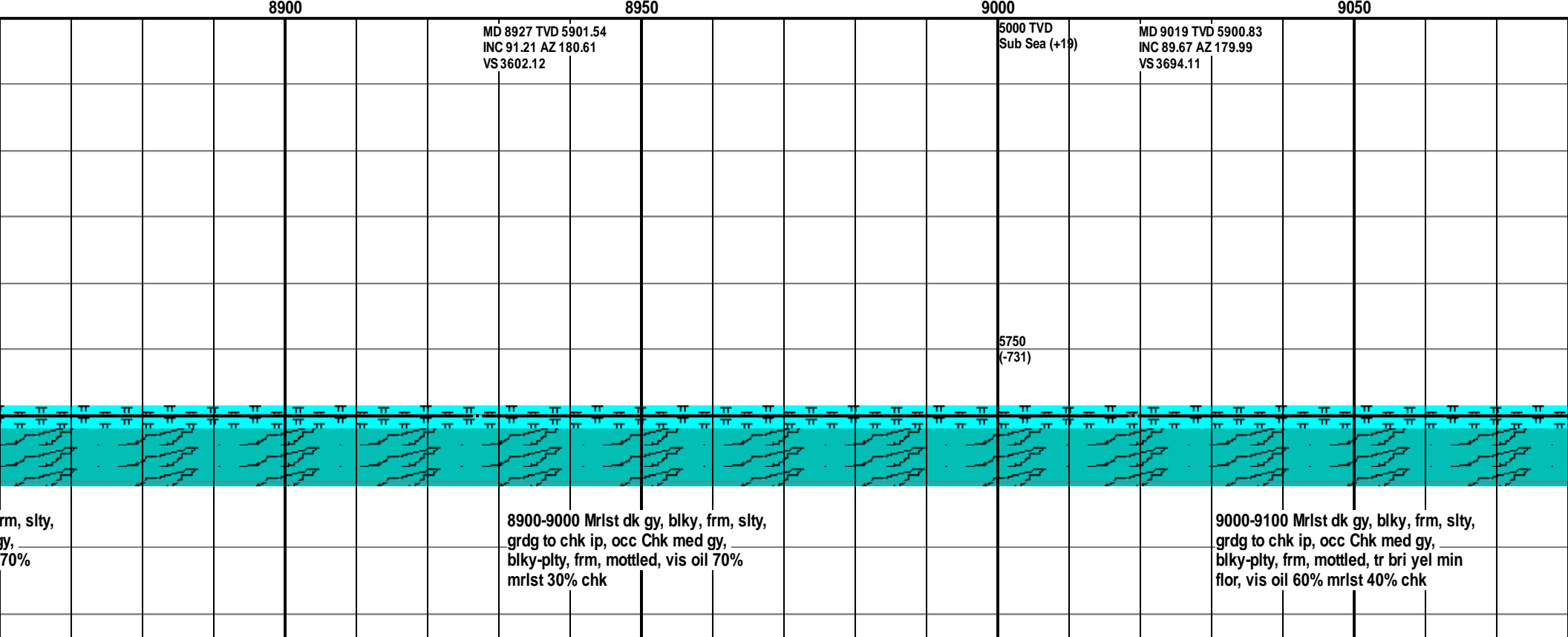
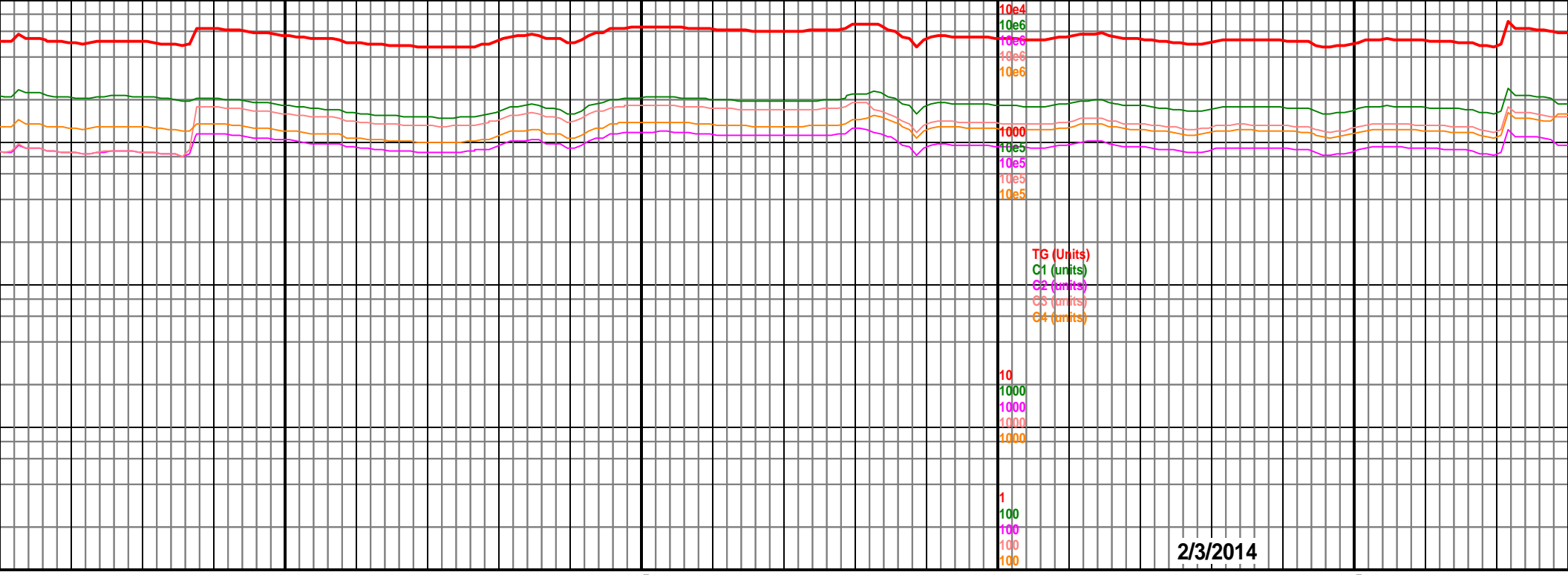
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INC 91.08 AZ 181
VS 3512.14

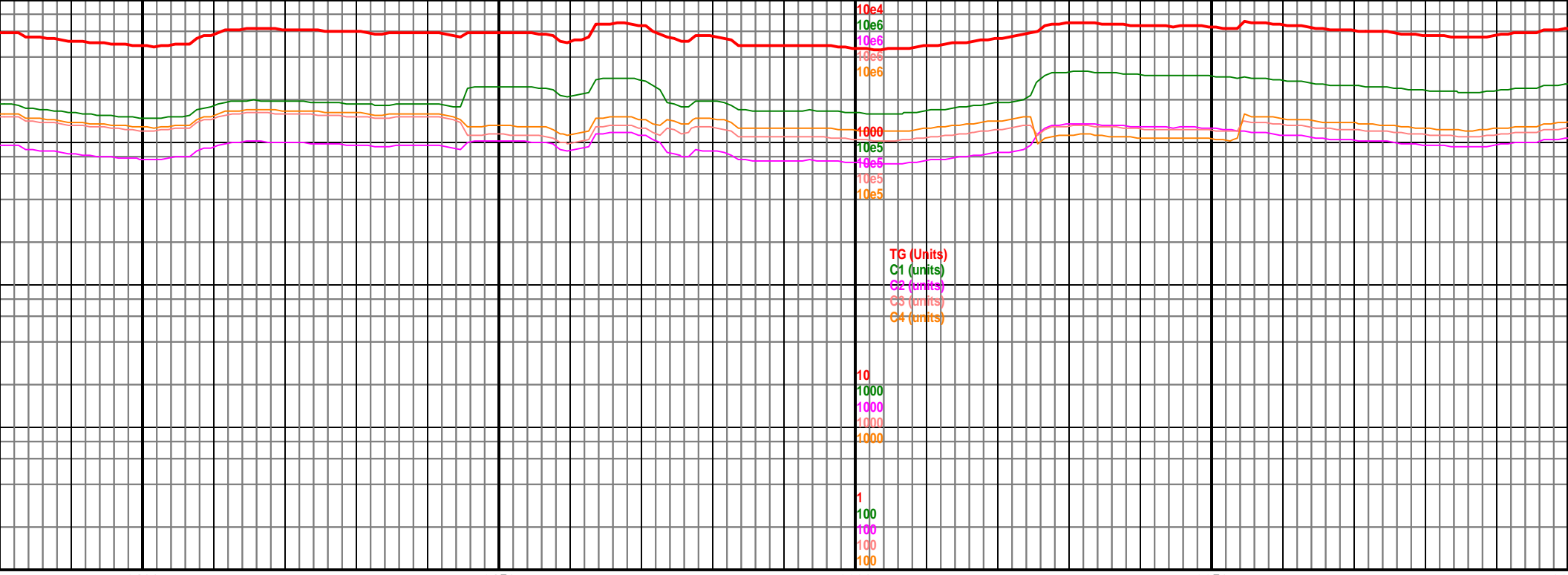
5750
(-731)

0 Mrlst dk gy, blk, frm, slty,
chk ip, occ Chk med gy,
frm, mottled, rr bent, vis oil
t 30% chk

8700-8800 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, occ Chk med gy,
blk, plty, frm, mottled, rr bent, vis oil
70% mrlist 30% chk

8800-8900 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, occ Chk med gy,
blk, plty, frm, mottled, vis oil
mrlist 30% chk





9100

9150

9200

9250

9300

MD 9110 TVD 5901.5
INC 89.49 AZ 179.22
VS 3785.1

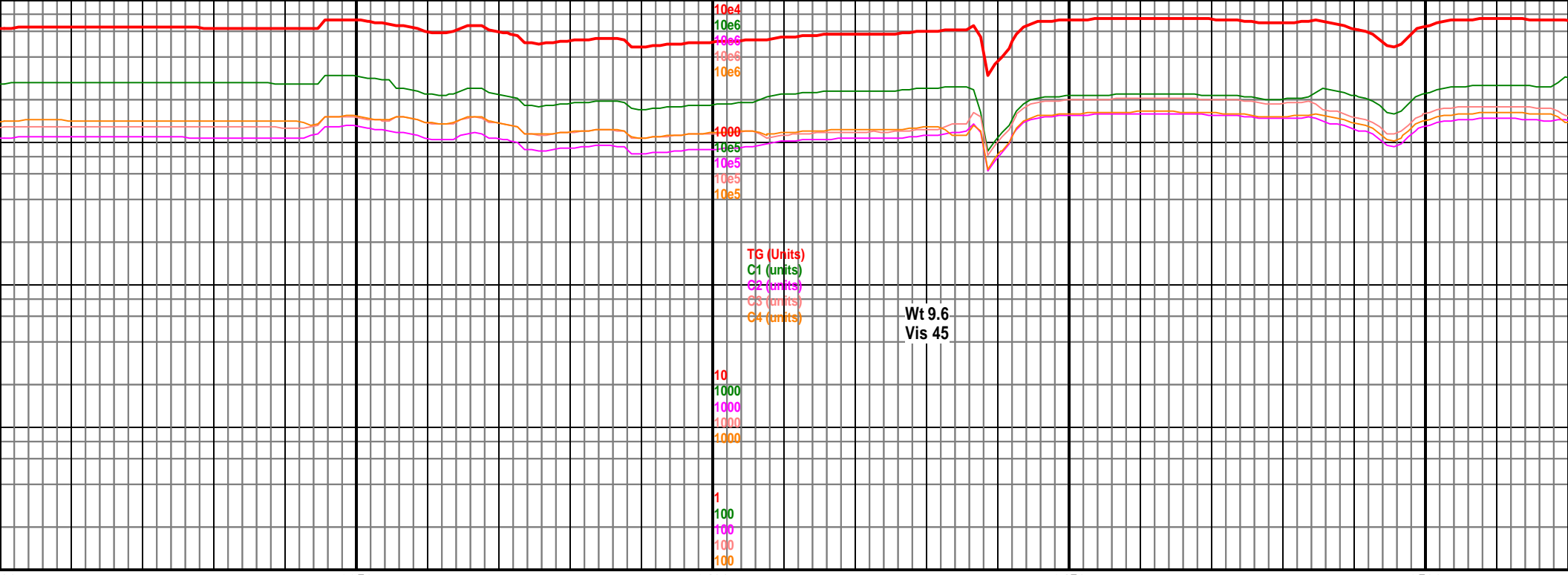
MD 9201 TVD 5901.89
INC 90.02 AZ 180.34
VS 3876.1

MD 9291 TVD 5901.89
INC 90.02 AZ 180.34
VS 3876.1

5750
(-731)

9100-9200 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, occ Chk med gy,
blk-plty, frm, mottled, tr bri yel min
flor, vis oil 60% mrlst 40% chk

9200-9300 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, occ Chk med gy,
blk-plty, frm, mottled, tr bri yel min
flor, vis oil 60% mrlst 40% chk



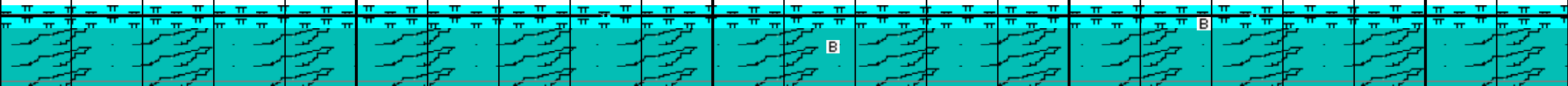
00 9350 9400 9450 9500

3 TVD 5901.43
5 AZ 180.19
.1

MD 9385 TVD 5900.76
INC 90.29 AZ 182.14
VS 4060.07

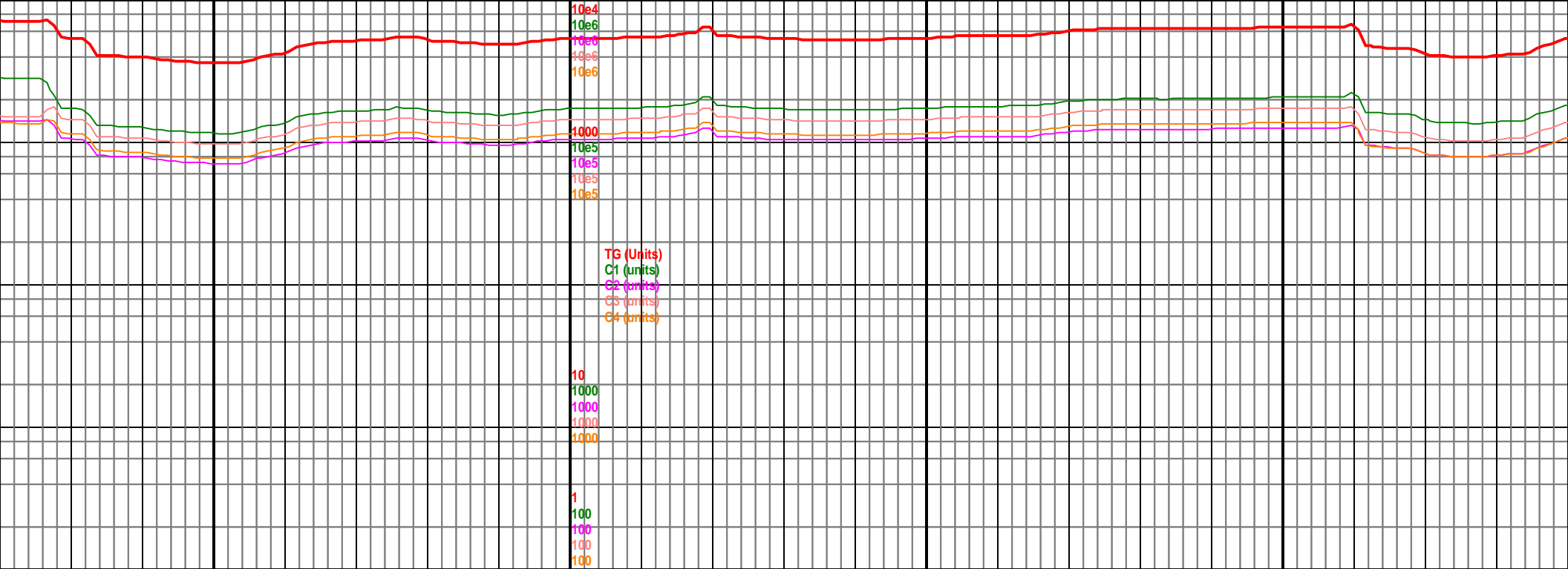
MD 9476 TVD 5900.54
INC 89.98 AZ 180.76
VS 4151.04

5750
(-731)



9300-9400 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, occ Chk med gy,
blk-ply, frm, mottled, tr bri yel min
flor, vis oil 60% mrlst 40% chk

9400-9500 Mrlst dk gy, blk, frm, slty,
grdg to chk ip, occ Chk med gy,
blk-ply, frm, mottled, tr bri yel min
flor, vis oil 60% mrlst 40% chk



9500

9600

9650

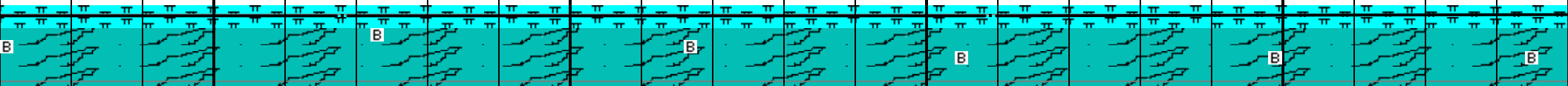
9700

MD 9568 TVD 5900.54
INC 90.02 AZ 180.12
VS 4243.04

5000 TVD
Sub Sea (+19)

MD 9659 TVD 5900.34
INC 90.24 AZ 179.5
VS 4334.03

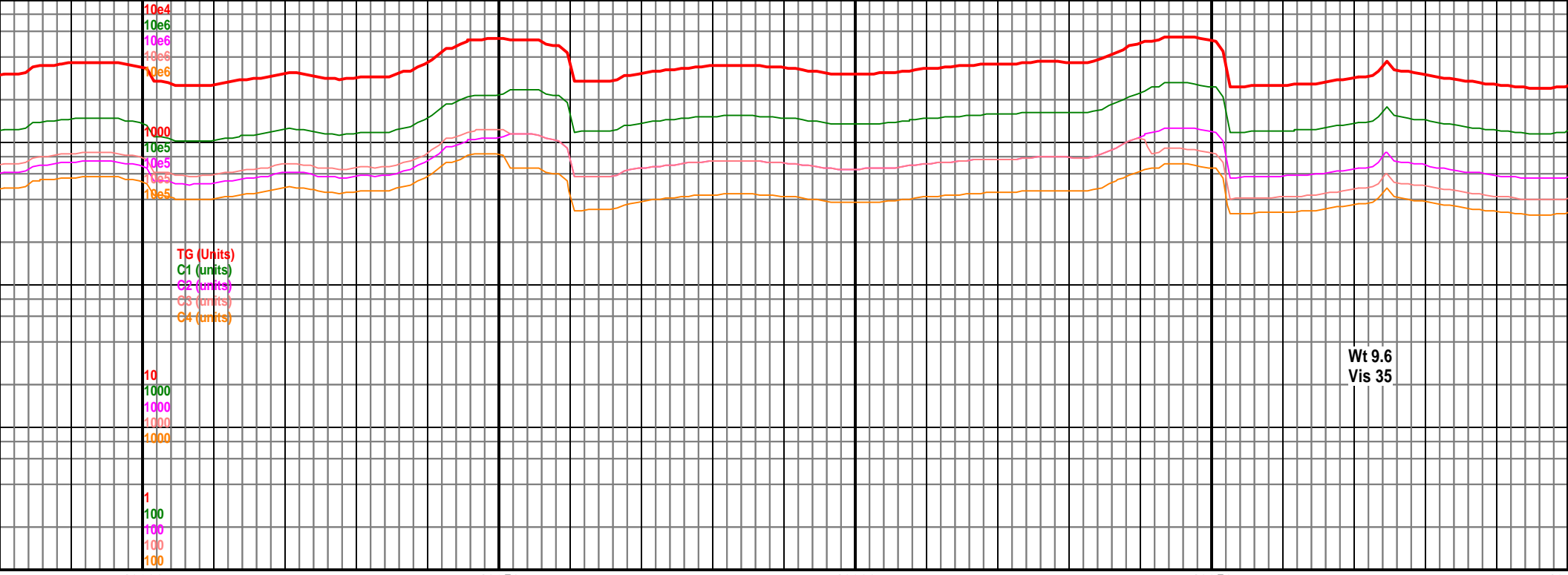
5750
(-731)



9500-9600 Mrlst dk gy, blk, frm, slty, tr
Chk med gy, blk-pty, frm, mottled, rr
bent, vis oil 80% mrlst 20% chk

9600-9700 Mrlst dk gy, blk, frm, slty, tr
Chk med gy, blk-pty, frm, mottled, rr
bent, vis oil 80% mrlst 20% chk

9700-9800 Mrlst dk gy, blk, frm, slty, tr
Chk med gy, blk-pty, frm, mottled, rr
bent, vis oil 80% mrlst 20% chk



Wt 9.6
Vis 35

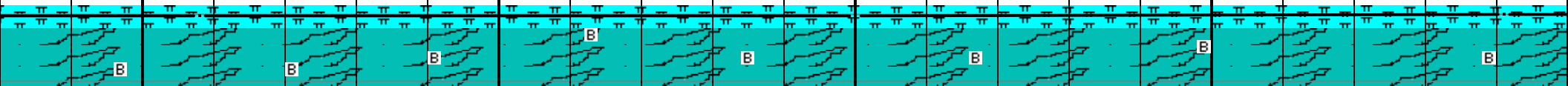
10200 10250 10300 10350 10400

5000 TVD MD 10208 TVD 5901.31
Sub Sea (+)INC 89.89 AZ 180.66
VS 4882.97

MD 10300 TVD 5900.43
INC 91.21 AZ 182.75
VS 4974.91

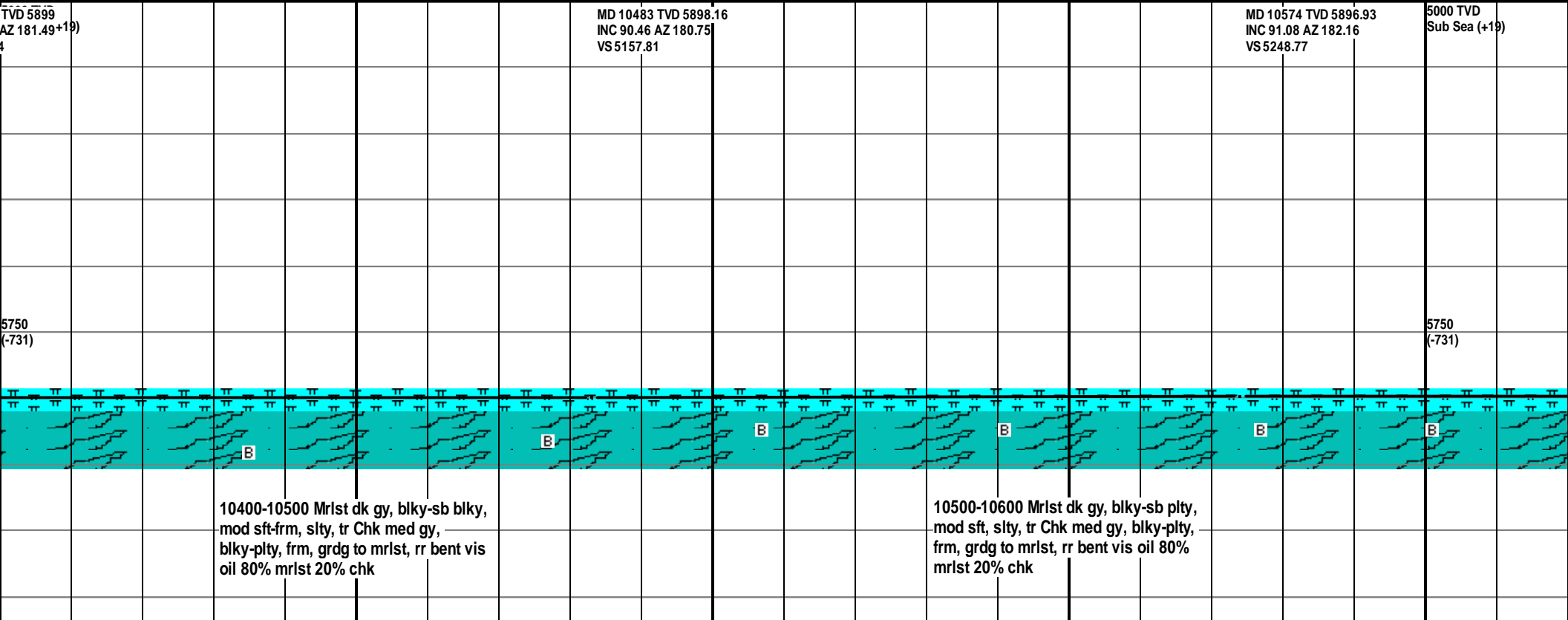
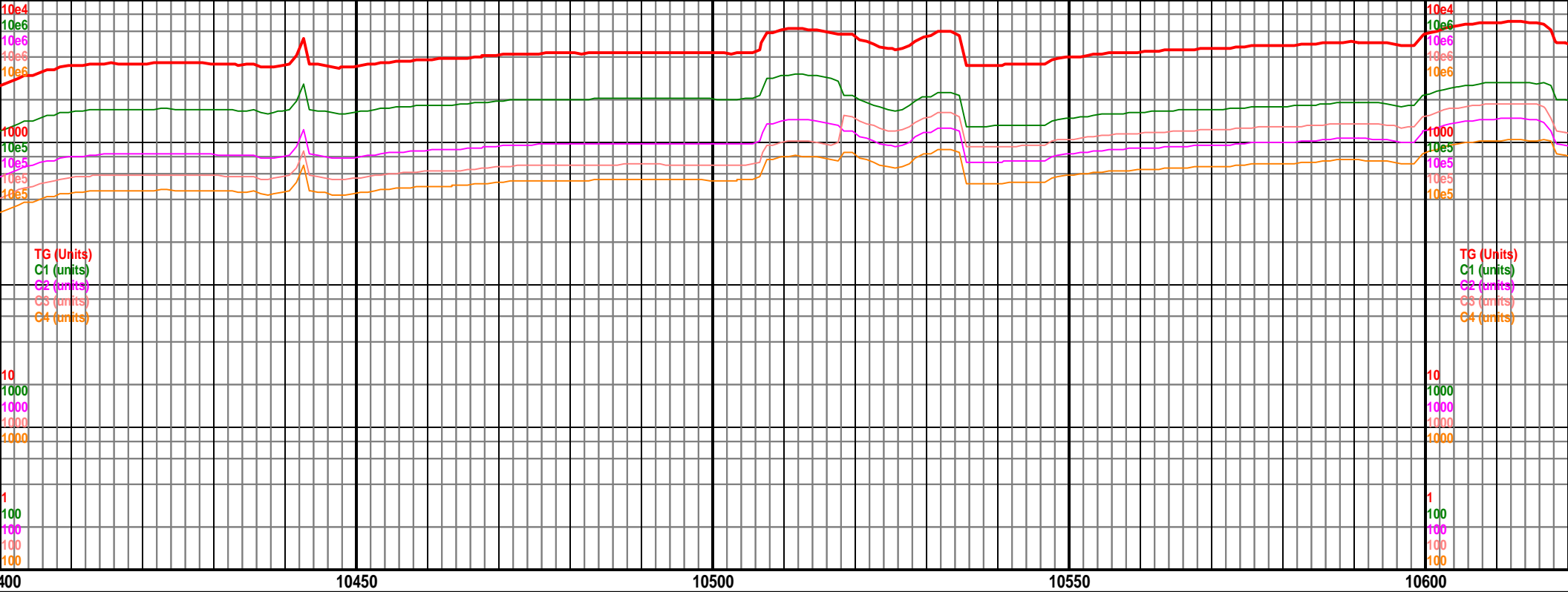
MD 10391
INC 90.59
VS 5065.8

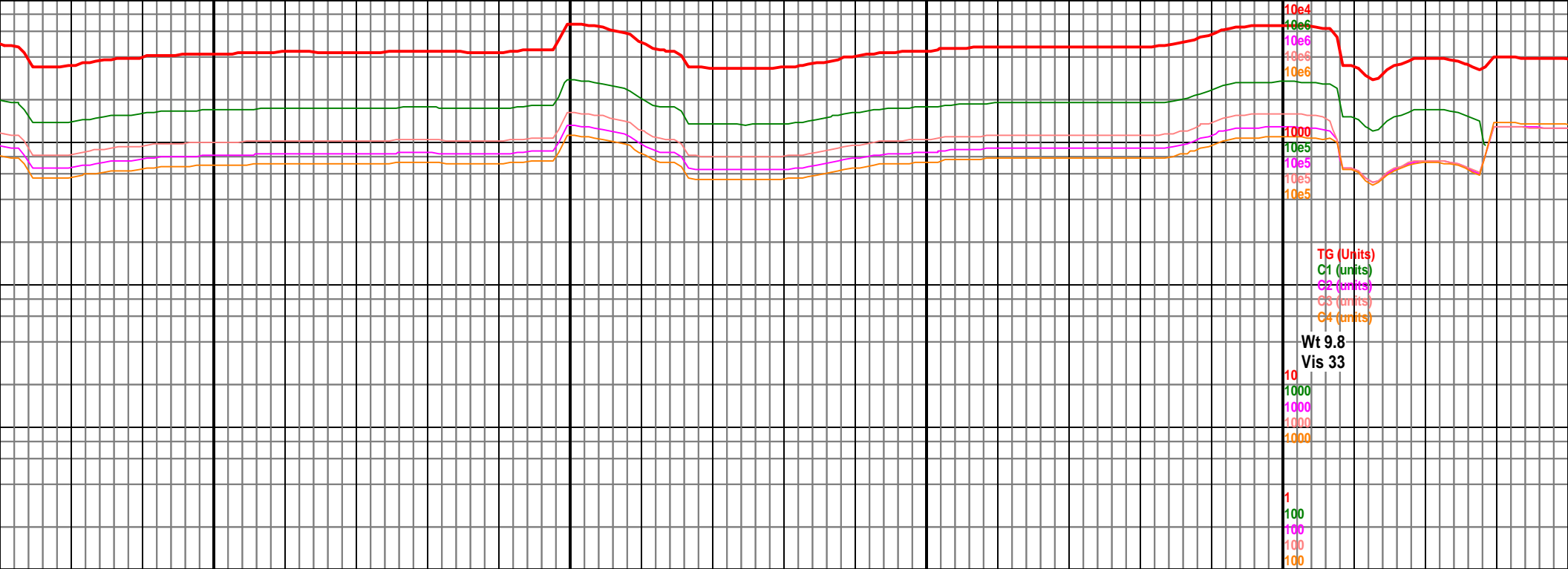
5750
(-731)



10200-10300 Mrlst dk gy-gy, blkly-sb
blkly, mod sft frm, slty, tr Chk med gy,
blkly-plty, frm, mottled, grdg to mrlst ip,
tr bent vis oil 80% mrlst 20% chk

10300-10400 Mrlst dk gy-gy, blkly-sb
blkly, mod sft frm, slty, tr Chk med gy,
blkly-plty, frm, grdg to mrlst, tr bent vis
oil 80% mrlst 20% chk





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

Wt 9.8
Vis 33

10
1000
1000
1000
1000
1
100
100
100
100

10650

10700

10750

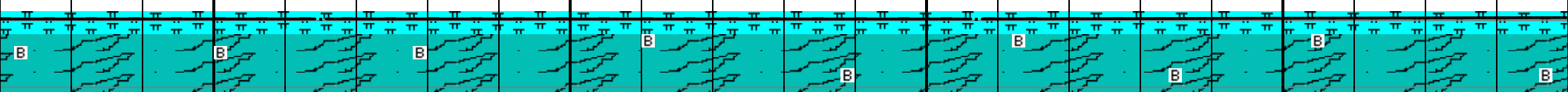
10800

MD 10665 TVD 5895.57
INC 90.64 AZ 178.7
VS 5339.74

MD 10757 TVD 5894.4
INC 90.81 AZ 177.34
VS 5431.68

5000 TVD
Sub Sea (+19)

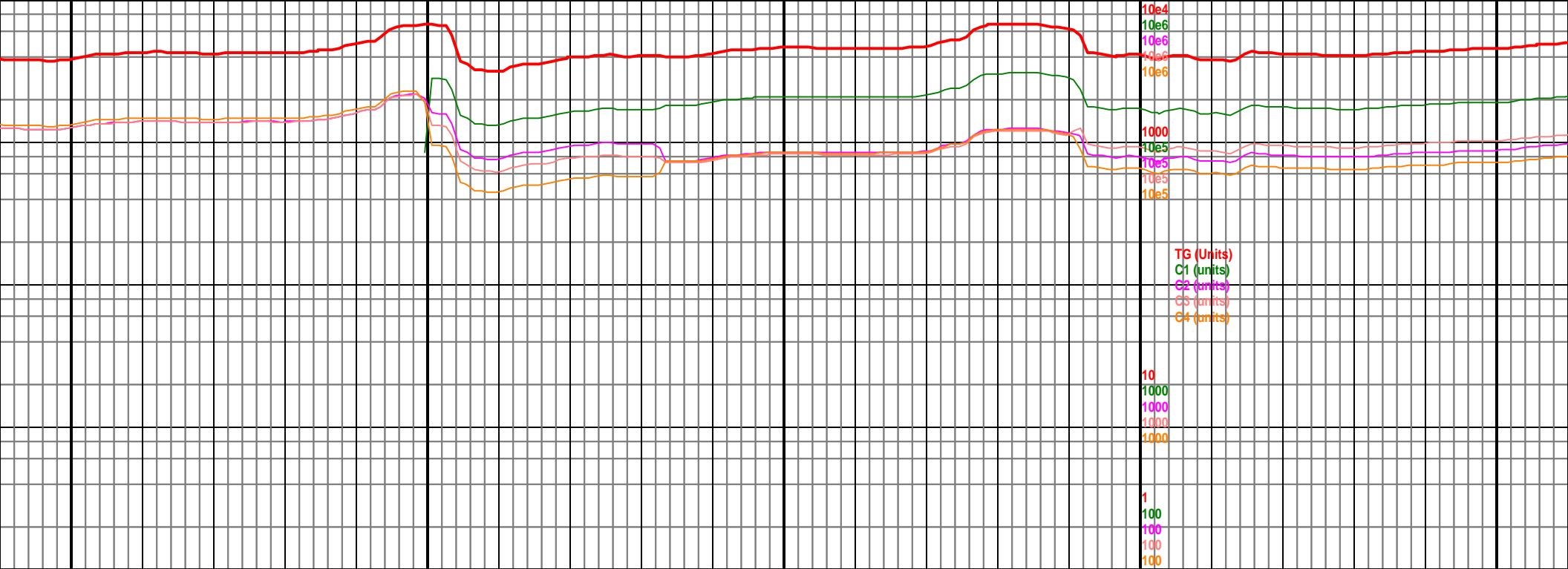
5750
(-731)



10600-10700 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 80%
mrlst 20% chk

10700-10800 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 80%
mrlst 20% chk

10800-10900 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 80%
mrlst 20% chk



10850

10900

10950

11000

11050

MD 10848 TVD 5893.32
INC 90.55 AZ 176.77
VS 5522.56

MD 10940 TVD 5892.37
INC 90.64 AZ 178
VS 5614.46

5000 TVD
Sub Sea (+19)

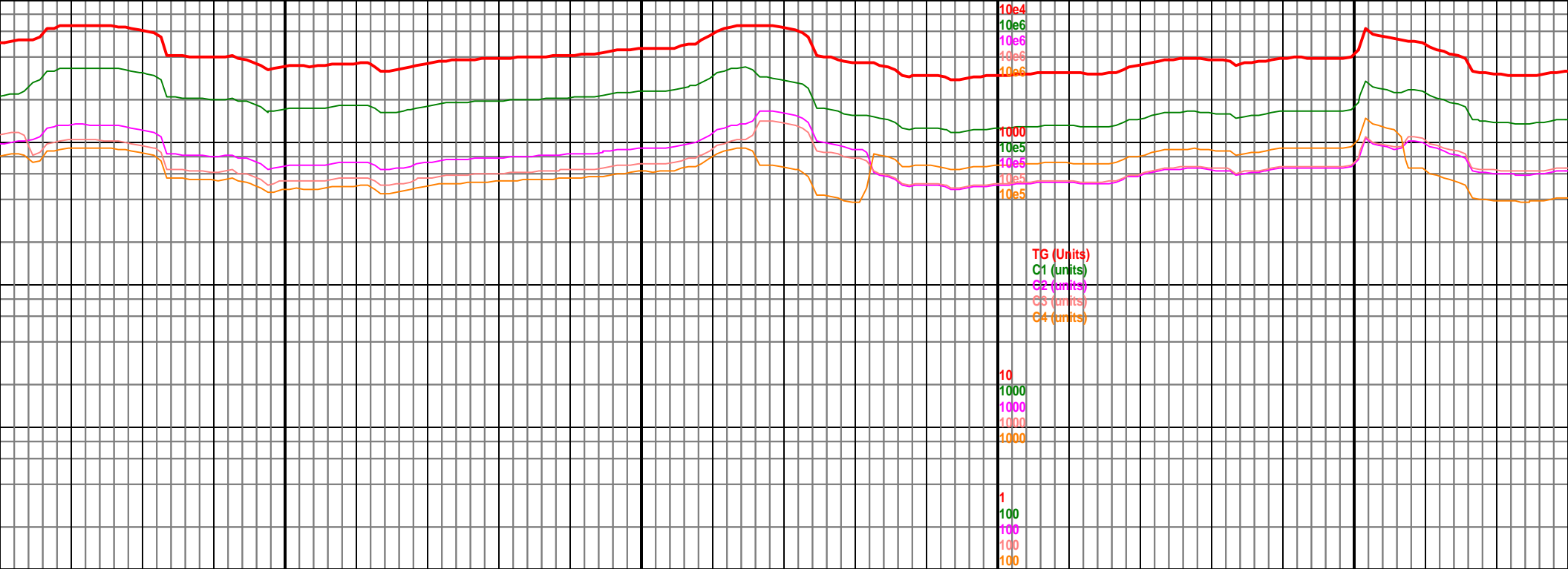
MD 11031 TVD 5891.77
INC 90.11 AZ 178.87
VS 5705.42

5750
(-731)

9000 Mrlst dk gy, blk-y-sb plty,
silty, tr Chk med gy, blk-y-plty,
to mrlst, rr bent vis oil 80%
% chk

10900-11000 Mrlst dk gy, blk-y-sb plty,
mod sft, silty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 80%
mrlst 20% chk

11000-11100 Mrlst dk gy, blk
mod sft, silty, tr Chk med gy,
frm, grdg to mrlst, rr bent vis
mrlst 20% chk



11100

11150

11200

11250

MD 11122 TVD 5892.54
INC 88.92 AZ 179.53
VS 5796.41

5000 TVD
Sub Sea (+19)

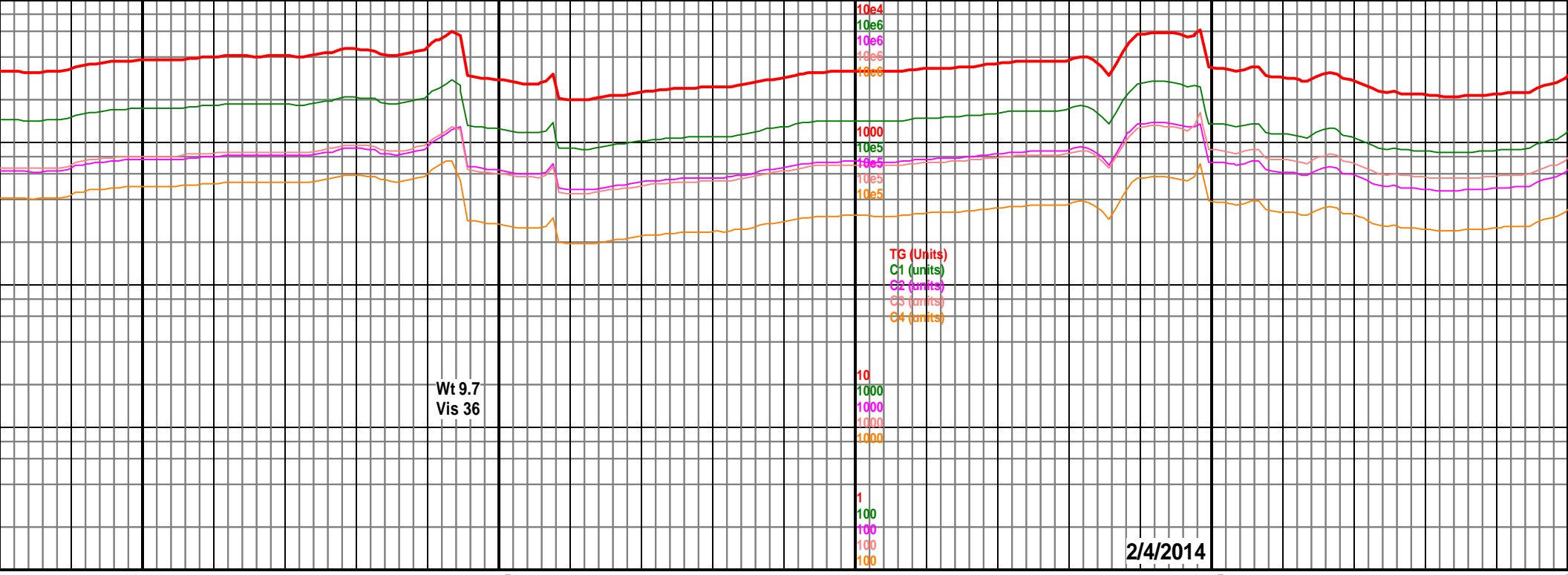
MD 11214 TVD 5894.28
INC 88.92 AZ 180.97
VS 5888.39

5750
(-731)

y-sb plty,
blky-plty,
oil 80%

11100-11200 Mrlst dk gy, blky-sb plty,
mod sft, slty, tr Chk med gy, blky-plty,
frm, grdg to mrlst, rr bent vis oil 80%
mrlst 20% chk

11200-11300 Mrlst dk gy, blky-sb plty,
mod sft, slty, tr Chk med gy, blky-plty,
frm, grdg to mrlst, rr bent vis oil 80%
mrlst 20% chk



Wt 9.7
Vis 36

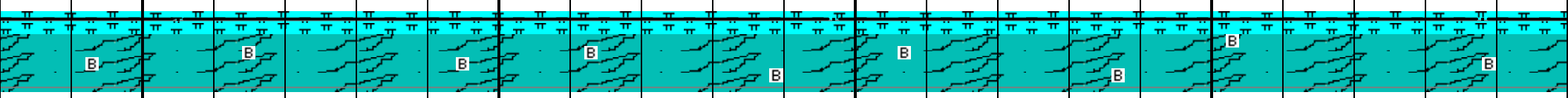
11300 11350 11400 11450 11500

MD 11305 TVD 5895.4
INC 89.67 AZ 181.8
VS 5979.35

MD 11397 TVD 5895.64
INC 90.02 AZ 181.95
VS 6071.3

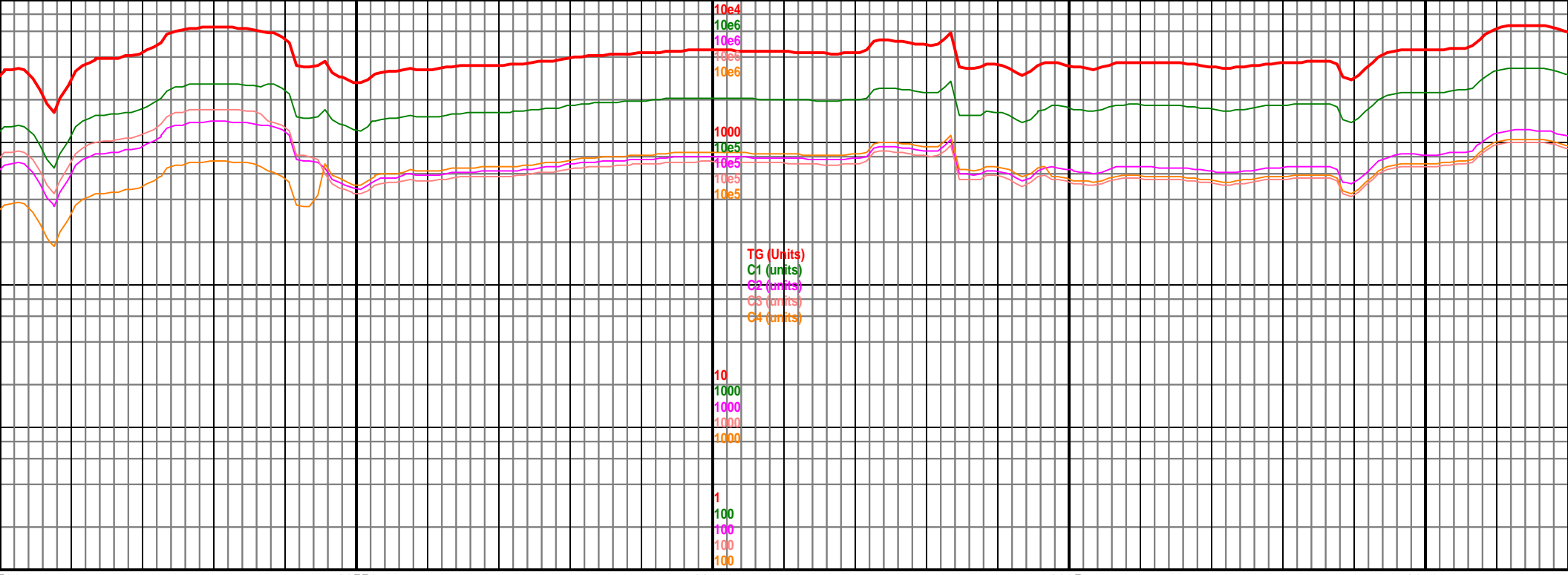
MD 11488 TVD
INC 89.19 AZ 1
VS 6162.19

5750
(-731)



11300-11400 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 80%
mrlst 20% chk

11400-11500 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 80%
mrlst 20% chk



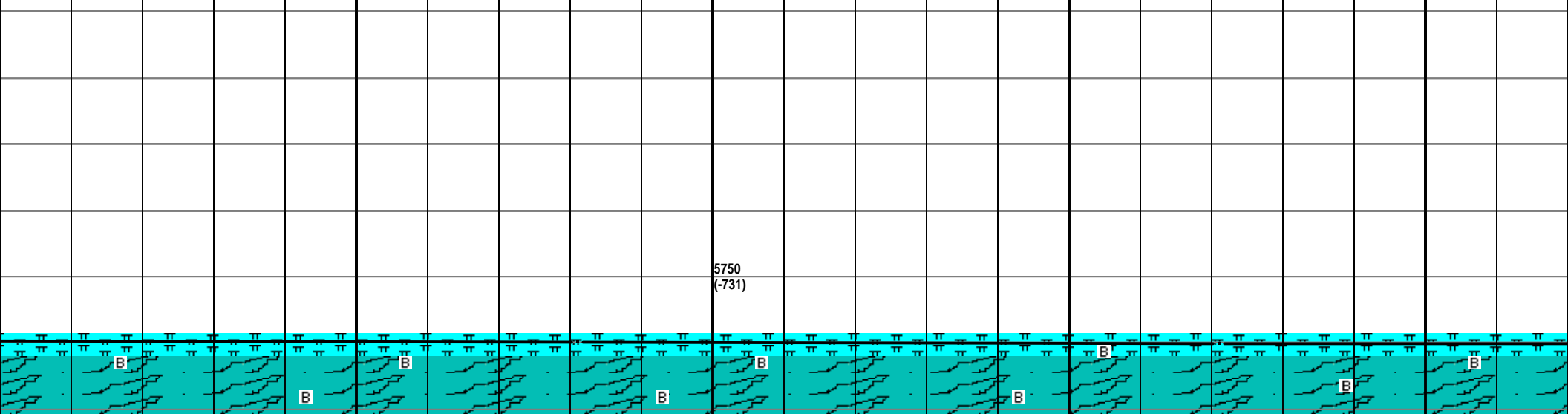
500 11500 11600 11650 11700

5896.27
183.48

MD 11581 TVD 5898.05
INC 88.62 AZ 183.8
VS 6254.98

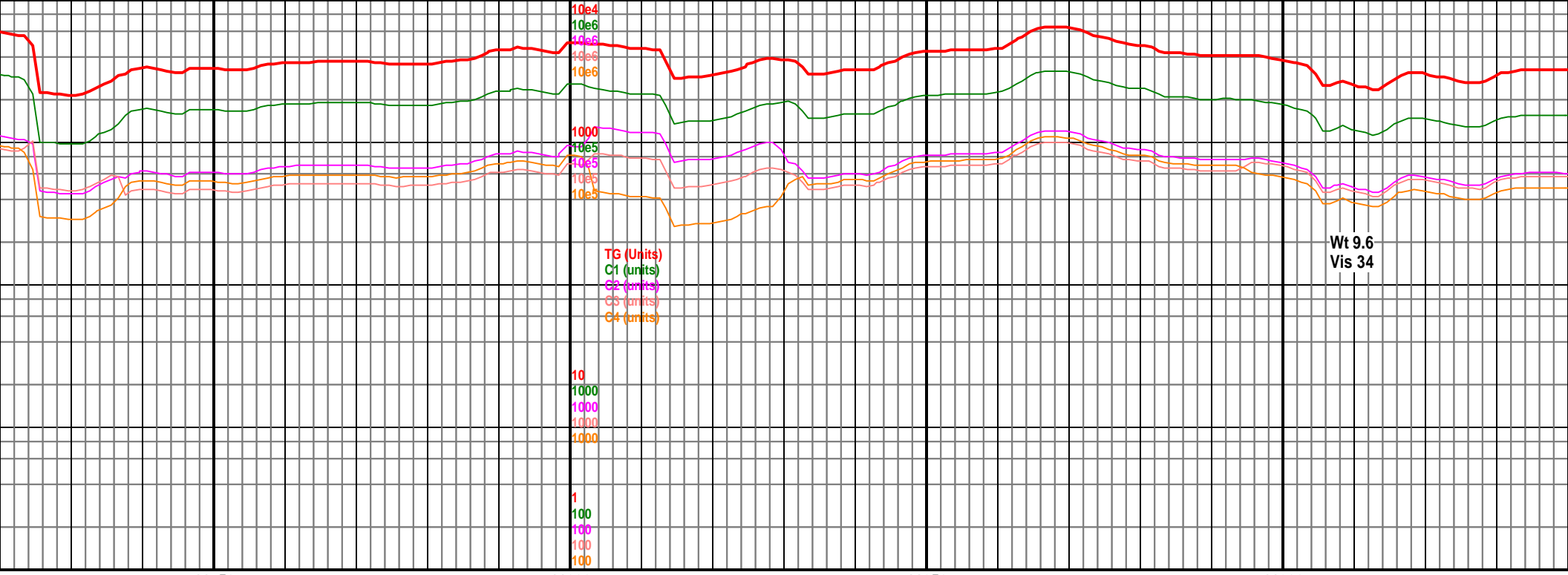
5000 TVD
Sub Sea (+19)

MD 11671 TVD 5900.36
INC 88.44 AZ 181.94
VS 6344.83



11500-11600 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 70%
mrlst 30% chk

11600-11700 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 70%
mrlst 30% chk



11750

11800

11850

11900

MD 11762 TVD 5901.41
INC 90.24 AZ 184.26
VS 6435.68

5000 TVD
Sub Sea (+19)

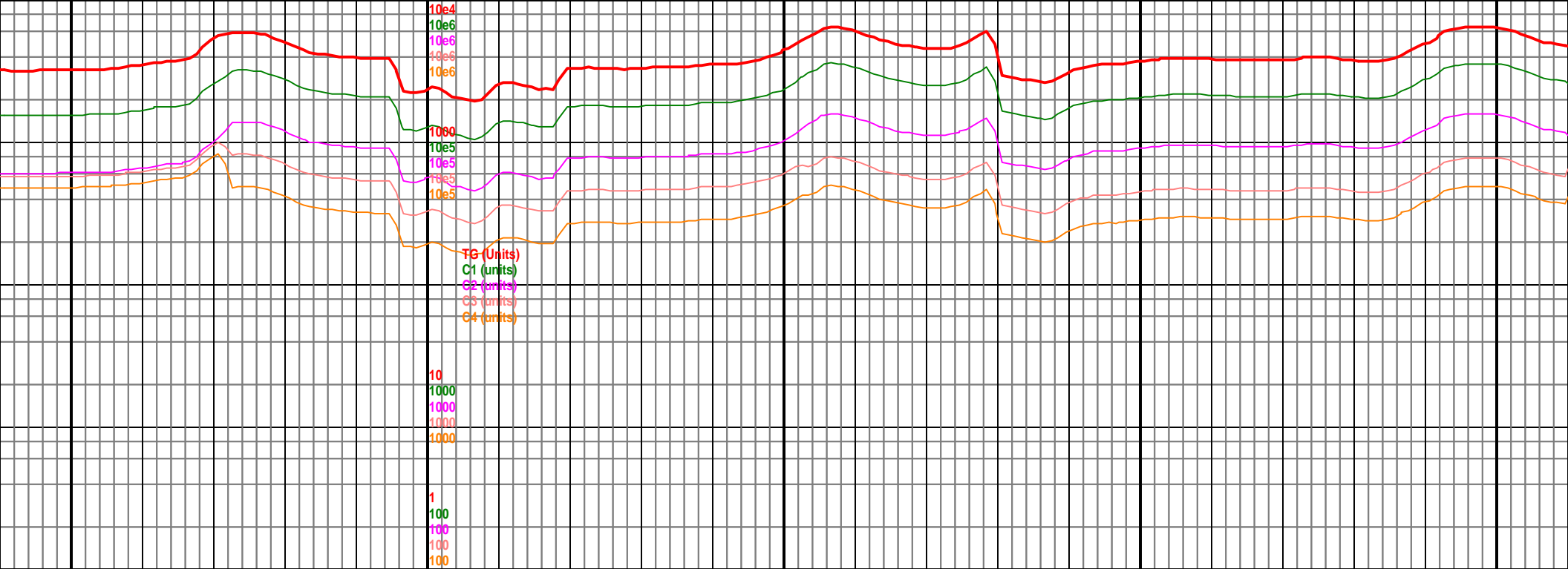
MD 11853 TVD 5902.84
INC 87.96 AZ 183.54
VS 6526.45

5750
(-731)

11700-11800 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 60%
mrlst 40% chk

11800-11900 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 60%
mrlst 40% chk

11900-12000 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy, blk-y-plty,
frm, grdg to mrlst, rr bent vis oil 60%
mrlst 40% chk



11950 12000 12050 12100 12150

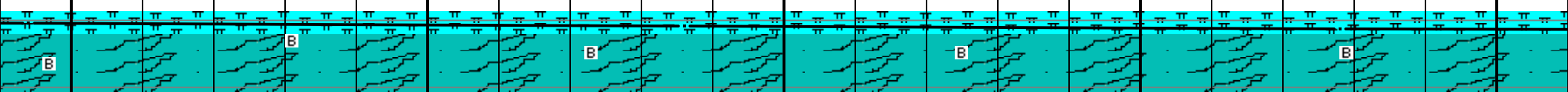
MD 11944 TVD 5906.64
INC 87.25 AZ 181.94
VS 6617.26

5000 TVD
Sub Sea (+19)

MD 12036 TVD 5911.44
INC 86.77 AZ 180.24
VS 6709.11

MD 12128 TVD 5917.15
INC 86.11 AZ 178.87
VS 6800.93

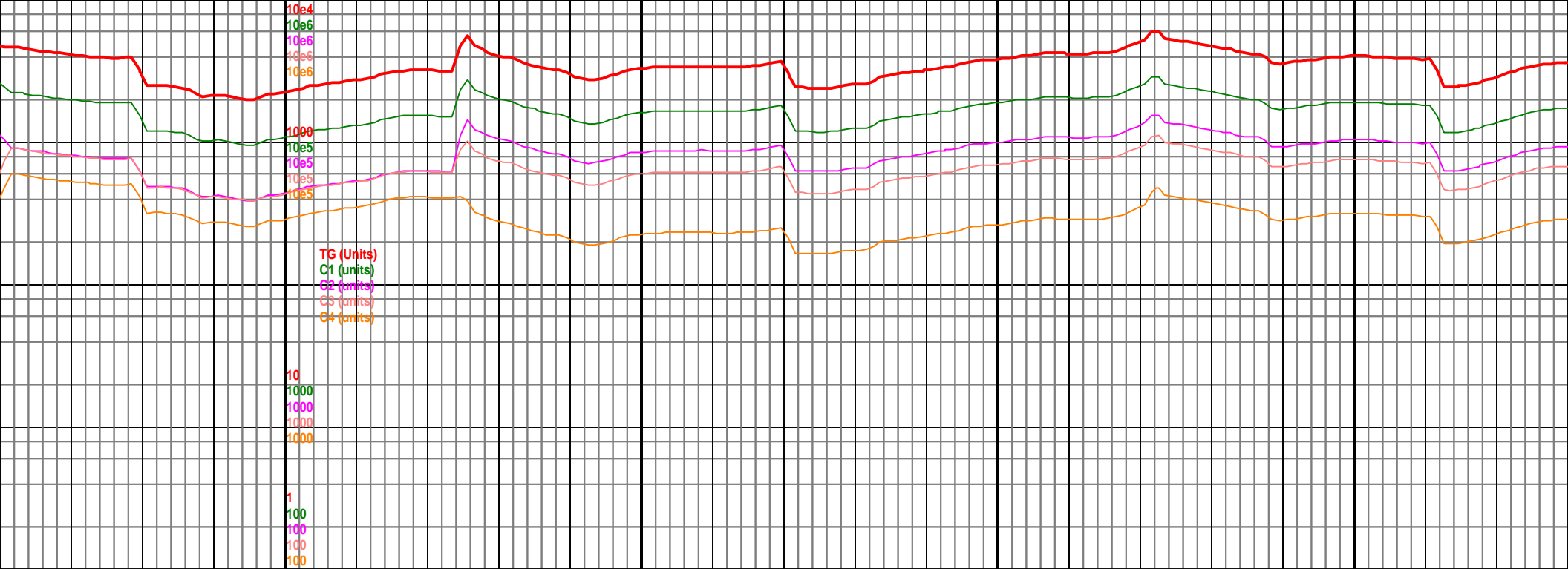
5750
(-731)



000 Mrlst dk gy, blk-sb plty,
silty, tr Chk med gy-dk gy,
frm, mottled, grdg to mrlst, rr
oil 70% mrlst 30% chk

12000-12100 Chk med gy-lt gy,
blk-sb plty, frm, mottled, occ Mrlst dk gy,
blk-sb plty, mod sft, slty, tr bent vis oil
70% chk 30% mrlst

12100-12200 Chk lt gy-gy, blk
frm, mottled, rr Mrlst dk gy, blk
plty, mod sft, slty, tr bent vis oil
chk 10% mrlst



12200

12250

12300

12350

5000 TVD
Sub Sea (+19)

MD 12219 TVD 5921.83
INC 88 AZ 178.65
VS 6891.79

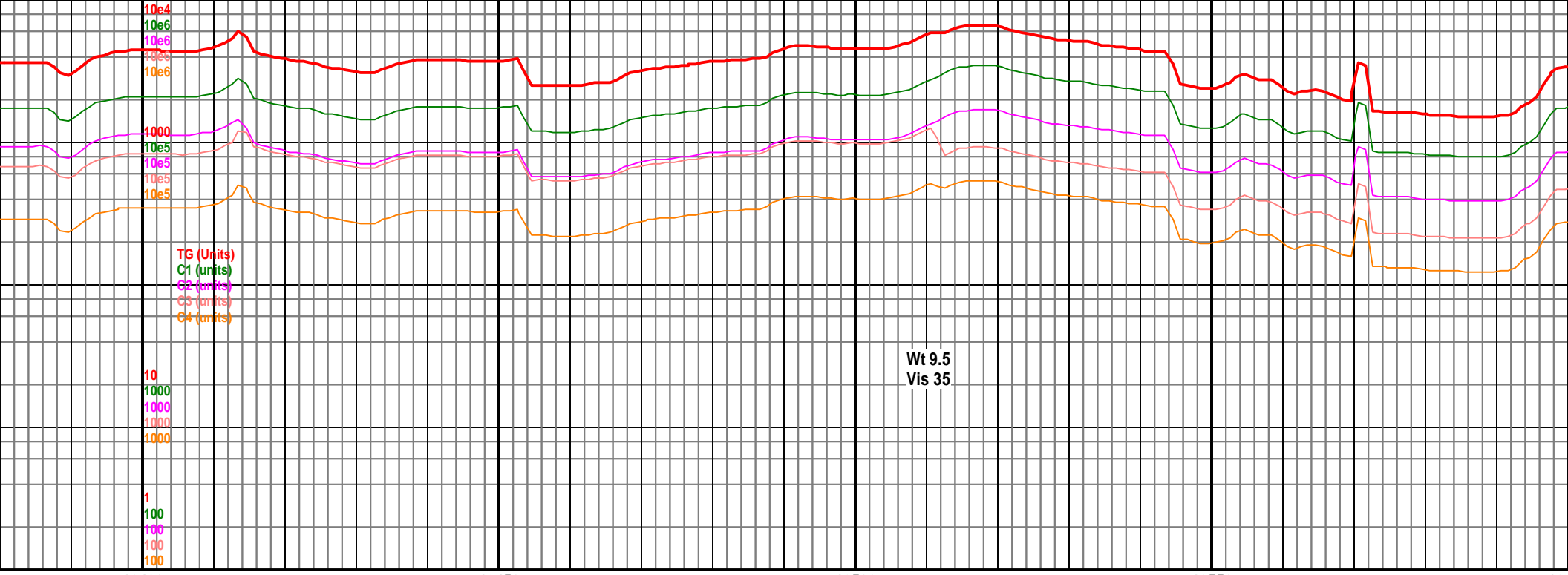
MD 12310 TVD 5924.83
INC 88.22 AZ 177.93
VS 6982.7

5750
(-731)

y-pty,
ky-sb
oil 90%

12200-12300 Chk lt gy-gy, blk-y-pty,
frm, mottled, rr Mrlst dk gy, blk-y-sb
pty, mod sft, slty, tr bent vis oil 90%
chk 10% mrlst

12300-12400 Chk lt gy-med gy,
blk-y-pty, frm, mottled, abnt Mrlst dk gy,
blk-y, mod sft, slty, rr bent vis oil 50%
chk 50% mrlst



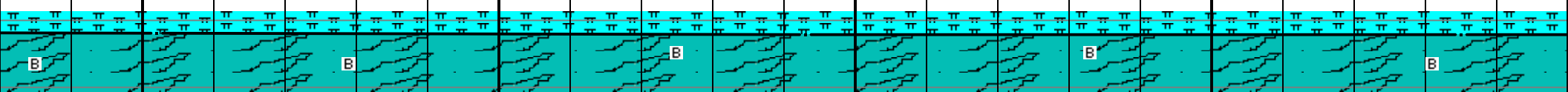
12400 12450 12500 12550 12600

MD 12402 TVD 5927.44
Sub INC 88.53 AZ 177.34
VS 7074.58

MD 12493 TVD 5929.6
INC 88.75 AZ 176.79
VS 7165.44

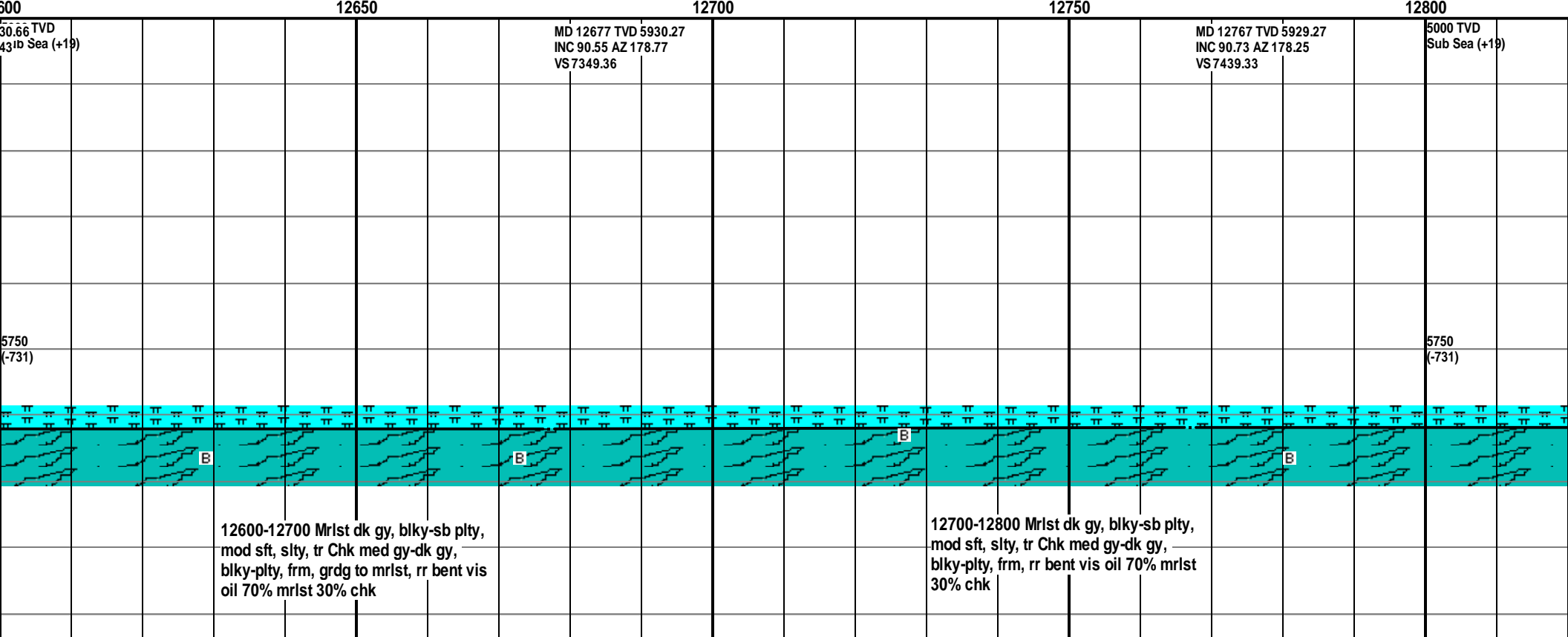
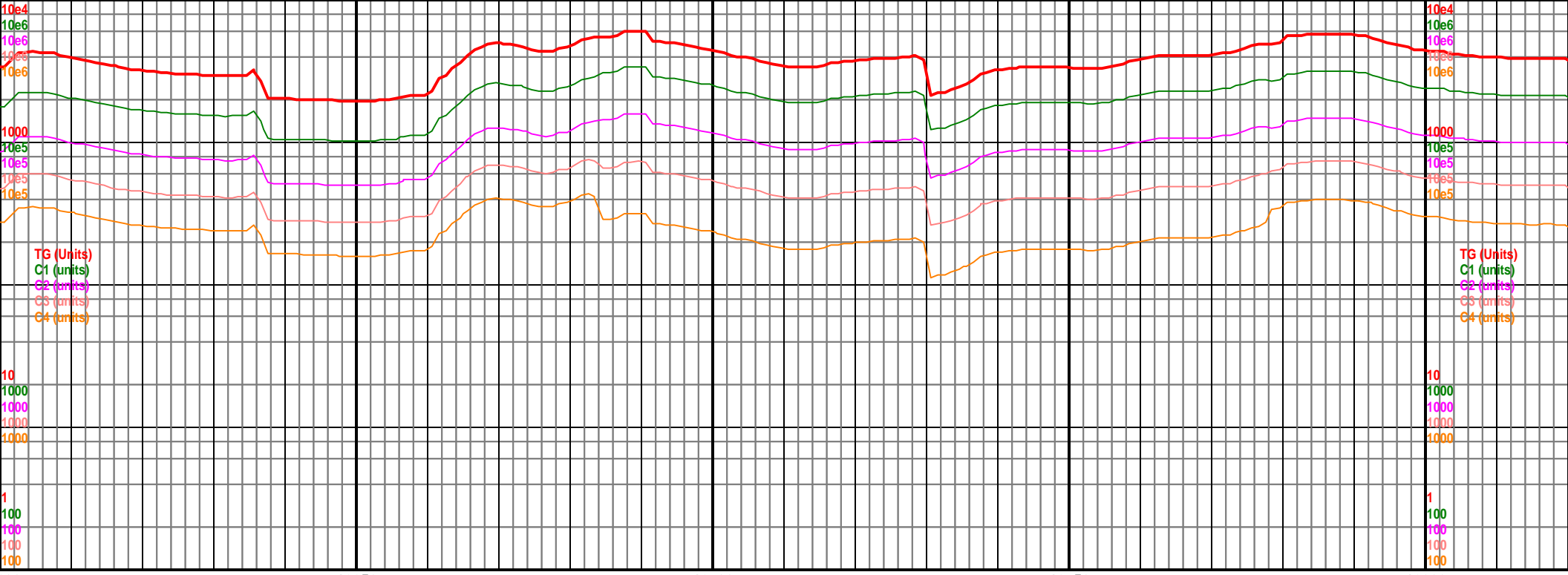
MD 12585 TVD 5929.6
INC 89.93 AZ 179.34
VS 7257.38

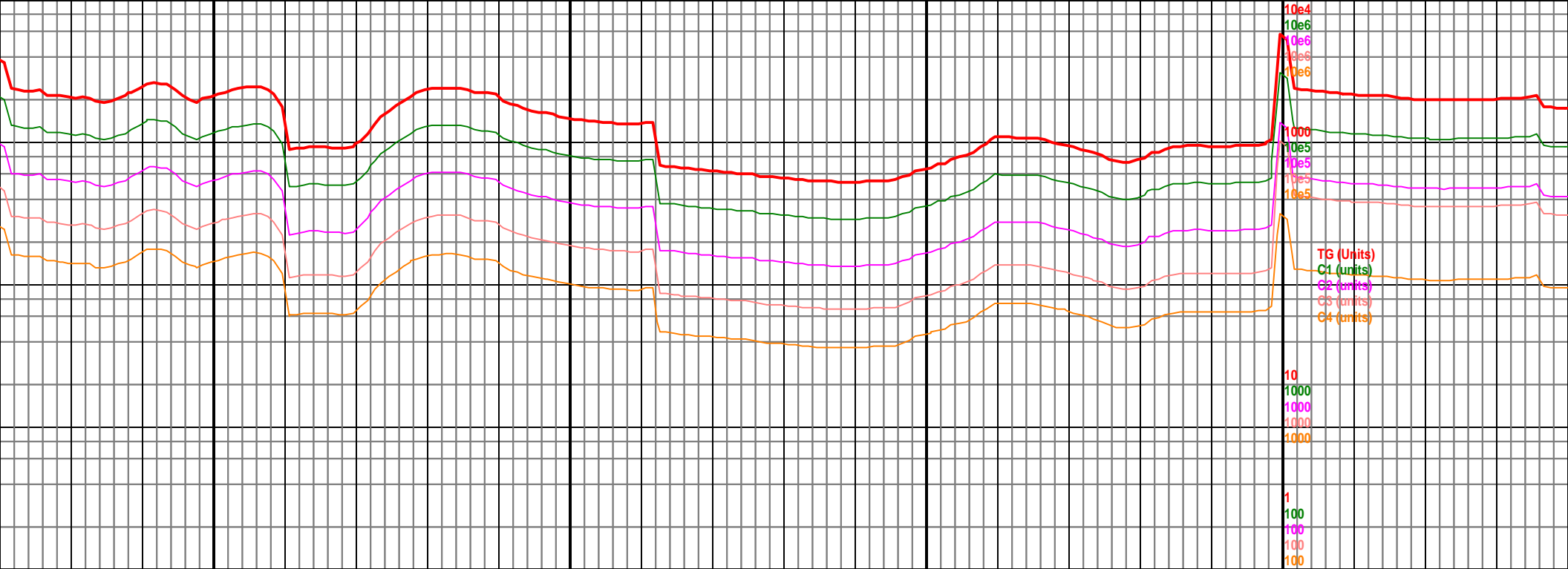
5750
(-731)



12400-12500 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, tr Chk med gy-dk gy,
blk-y-plty, frm, mottled, rr bent vis oil
70% mrlst 30% chk

12500-12600 Mrlst dk gy, blk-y-sb plty,
mod sft, slty, abnt Chk med gy-gy,
blk-y-plty, frm, mottled, rr bent vis oil
50% mrlst 50% chk





12850

12900

12950

13000

MD 12859 TVD 5929.12
INC 89.45 AZ 179.13
VS 7531.3

MD 12950 TVD 5930.2
INC 89.19 AZ 178.4
VS 7622.27

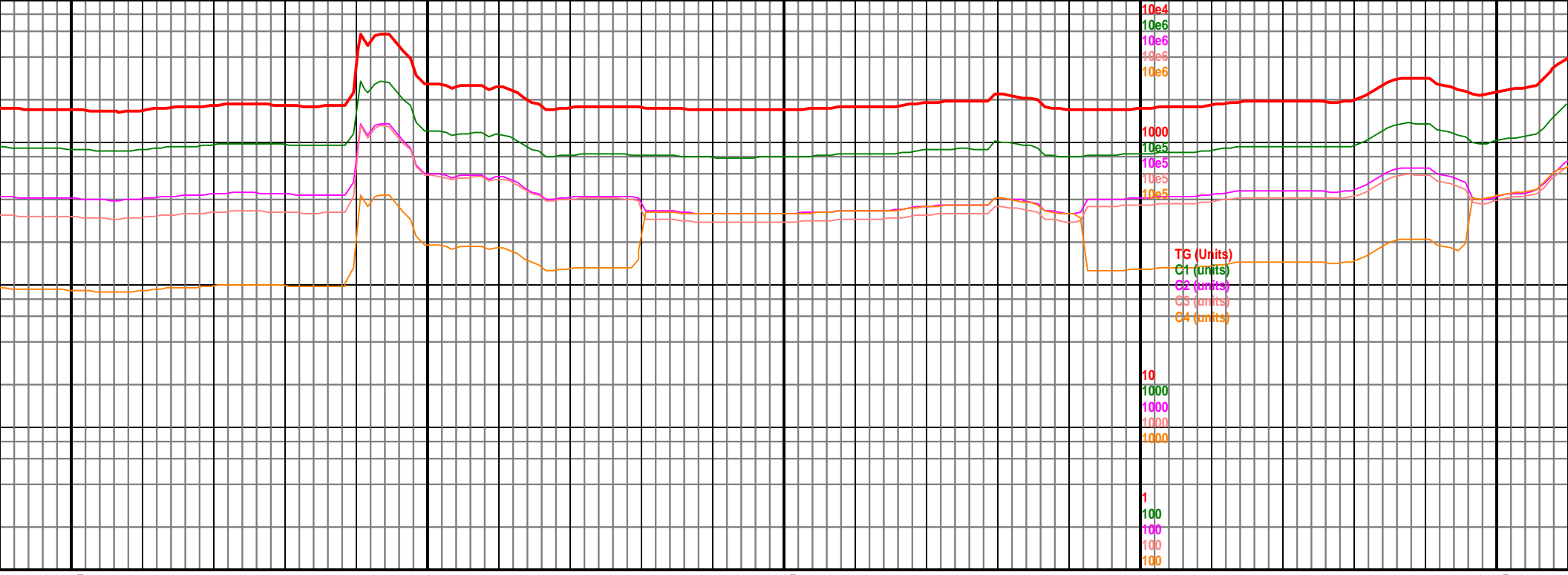
5000 TVD
Sub Sea (+19)

5750
(-731)

12800-12900 Mrlst dk gy, blk-sb plty,
mod sft, slty, abnt Chk med gy-dk gy,
blk-plty, frm, rr bent vis oil 50% mrlst
50% chk

12900-13000 Mrlst dk gy, blk-sb plty,
mod sft, slty, tr Chk med gy-dk gy,
blk-plty, frm, grdg to mrlst ip, rr bent
vis oil 70% mrlst 30% chk

13000-13100 Mrlst dk gy, blk-sb plty,
mod sft, slty, abnt Chk med gy-dk gy,
blk-plty, frm, rr bent vis oil 80% mrlst
20% chk



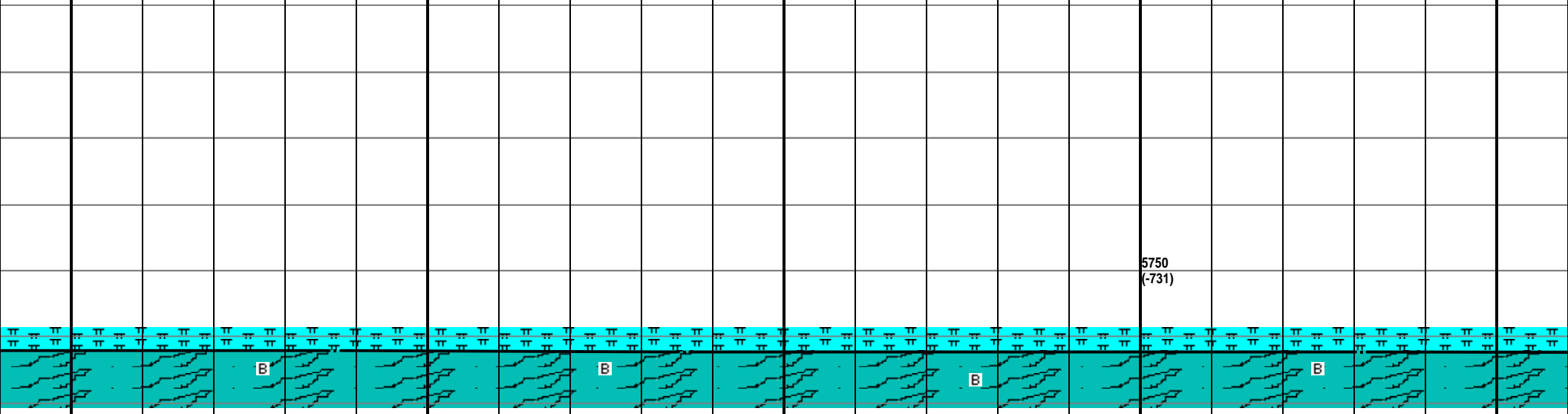
13050 13100 13150 13200 13250

MD 13087 TVD 5932.31
INC 89.05 AZ 177.74
VS 7759.18

MD 13136 TVD 5933.1
INC 89.14 AZ 179.2
VS 7808.17

5000 TVD
Sub Sea (+19)

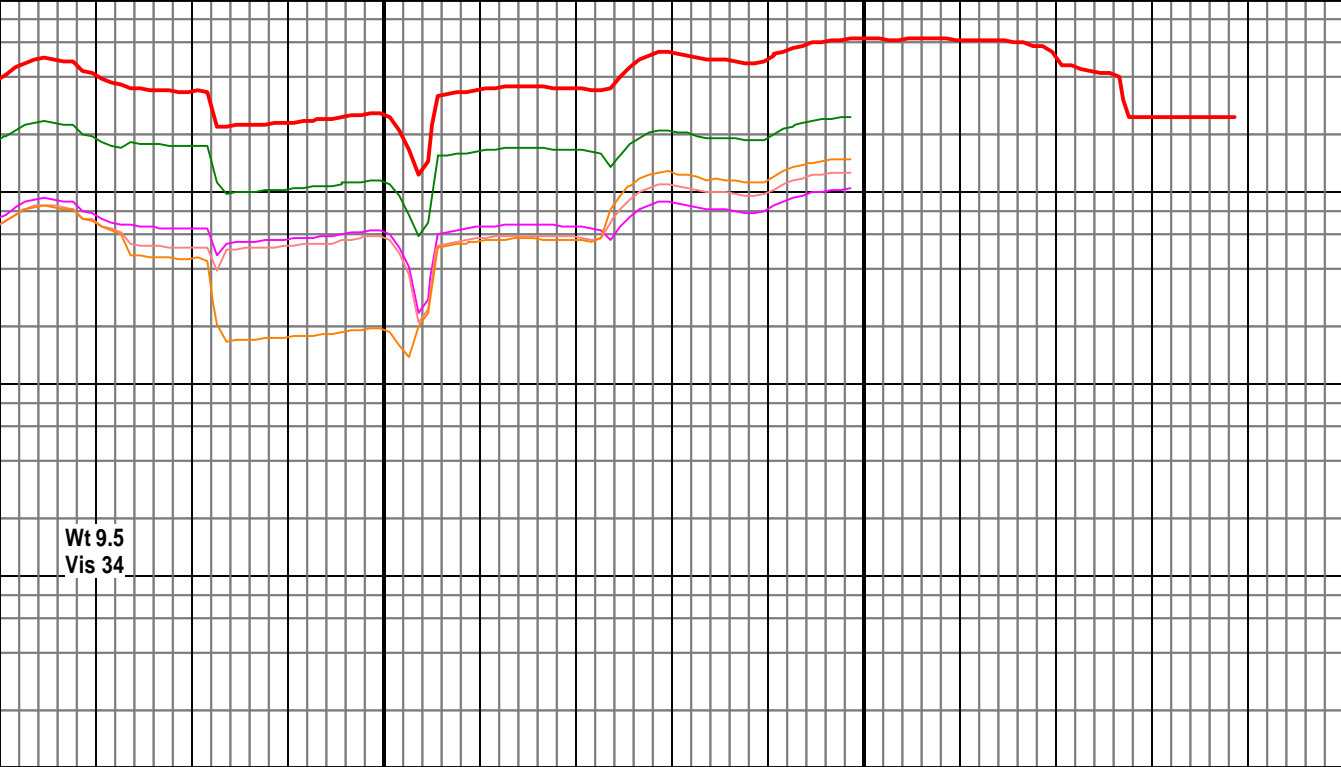
MD 13231 TVD 5934.45
INC 89.23 AZ 178.18
VS 7903.13



100 Mrlst dk gy, blk-sb plty,
silty, tr Chk med gy-dk gy,
frm, grdg to mrlst ip, rr bent
% mrlst 20% chk

13100-13200 Mrlst dk gy, blk-sb plty,
mod sft, silty, tr Chk med gy-dk gy,
blk-sb plty, frm, grdg to mrlst ip, rr bent,
rr pyrt vis oil 80% mrlst 20% chk

13200-13300 Mrlst dk gy, blk-sb plty,
mod sft, silty, tr Chk med gy-dk gy,
blk-sb plty, frm, grdg to mrlst ip, rr bent,
rr pyrt vis oil 80% mrlst 20% chk



Wt 9.5
Vis 34

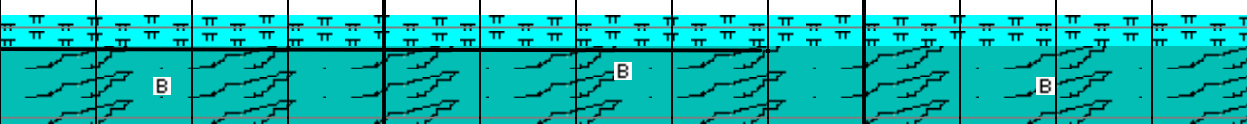
13300

13350

13400

MD 13340 TVD 5936.04
INC 89.1 AZ 177.22
VS 8012.03

TD 13390' at 20:24 on
2/04/2014



-sb plty,
k gy,
rr bent,
chk

13300-13390 Mrlst dk gy, blkyl-sb plty,
mod sft, slty, tr Chk med gy-dk gy,
blkyl-plty, frm, grdg to mrlst ip, rr bent,
rr pyrt vis oil 60% mrlst 40% chk