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

Well Name:	**Razor Federal 26L-2302B**
Location:	**NWSW 26-T10N-R58W**
License Number:	**05-123-38339**
Region:	**Redtail Field**
Spud Date:	**4/2/2014**
Drilling Completed:	**4/12/2014**
Surface Coordinates:	**Lat.: 40.808533 Long.: -103.839531**
Bottom Hole Coordinates:	**Lat.: 40.831222 Long.: -103.840439**
Ground Elevation (ft):	**4734**
K.B. Elevation (ft):	**4751**
Logged Interval (ft):	**5107 To: 13845**
Total Depth (ft):	**13845**
Formation:	**Pierre, Sharon Springs, Niobrara B**
Type of Drilling Fluid:	**Water Based Mud**

OPERATOR

Company: Whiting Oil & Gas Corp.
Address: 1700 Broadway Suite 2300
Denver, CO 80290

GEOLOGIST

Name: Todd Nakata and Luke Schwantes
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, #458

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

- 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

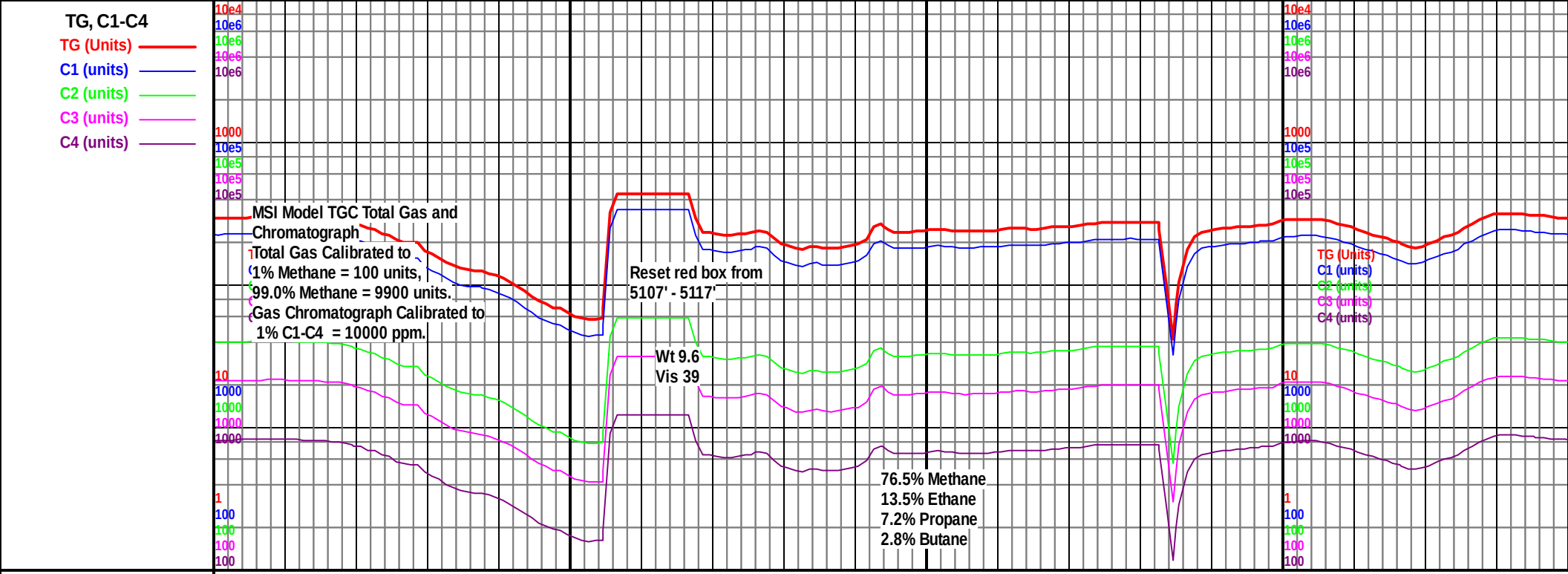
- Even
- Spotted
- Ques
- Dead

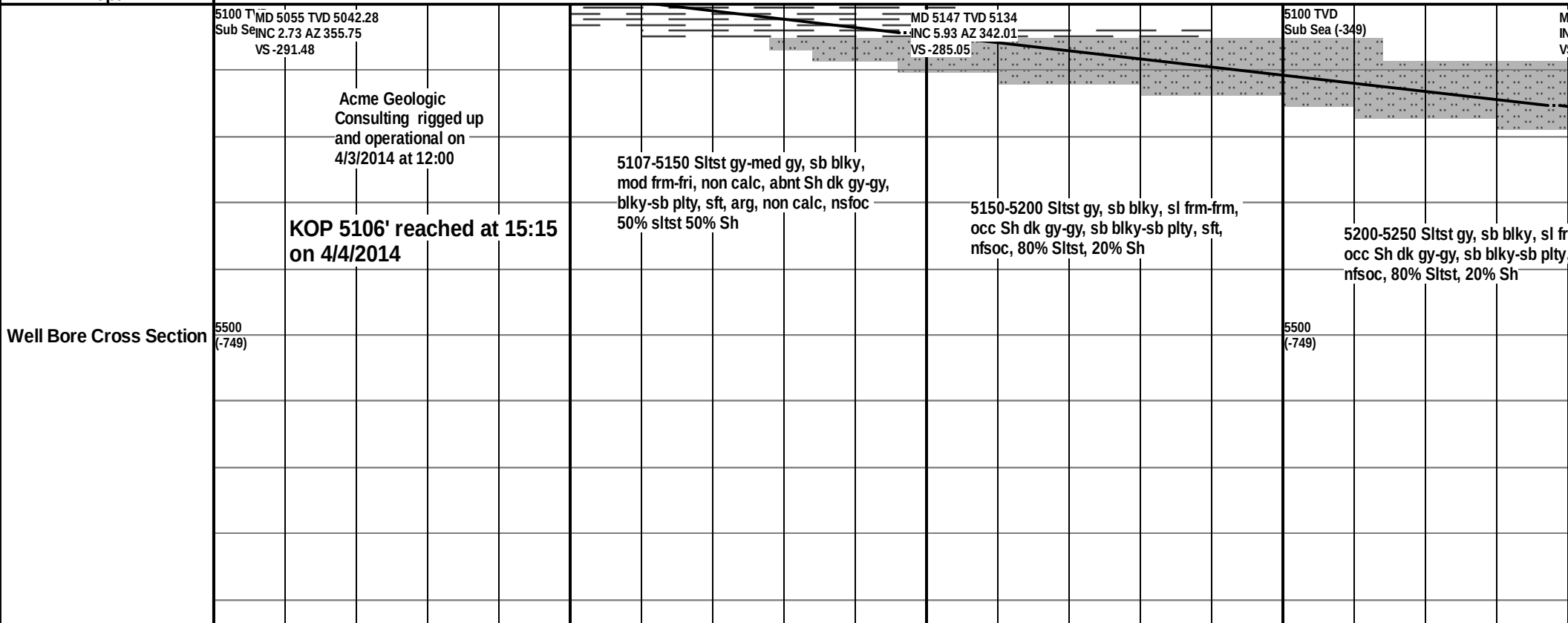
INTERVAL

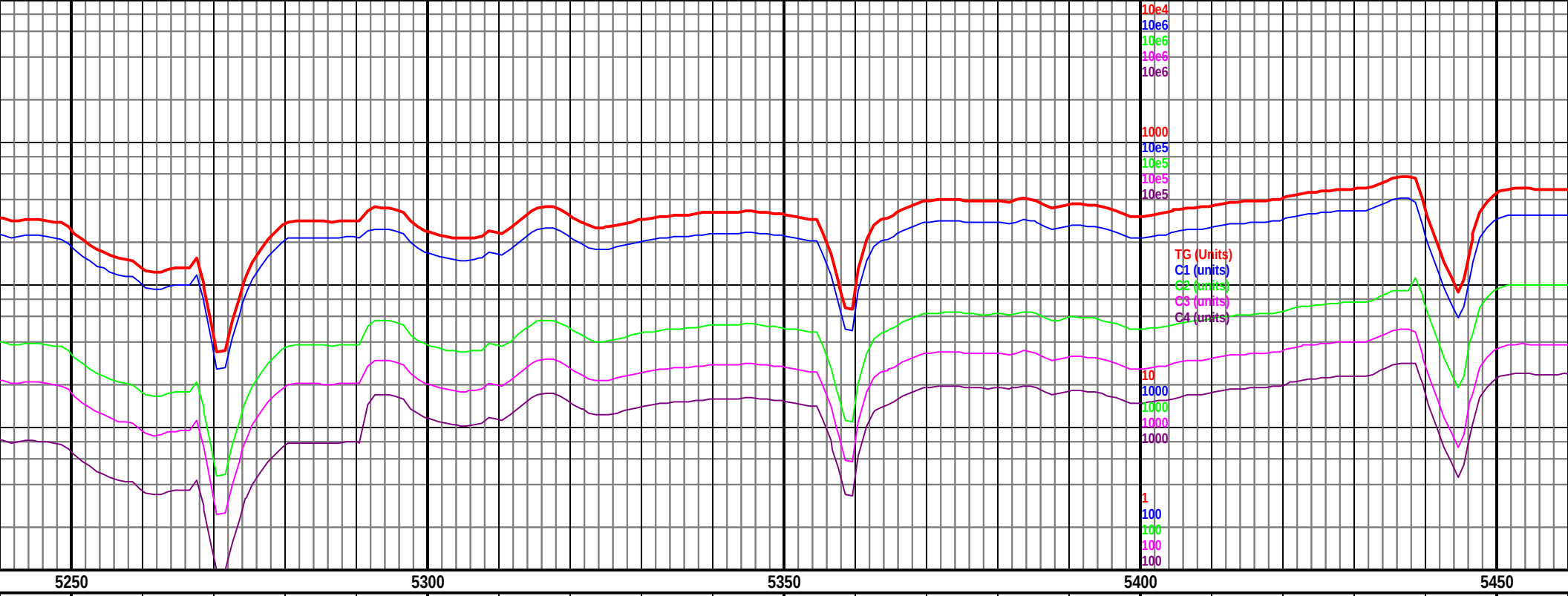
- Core
- Dst

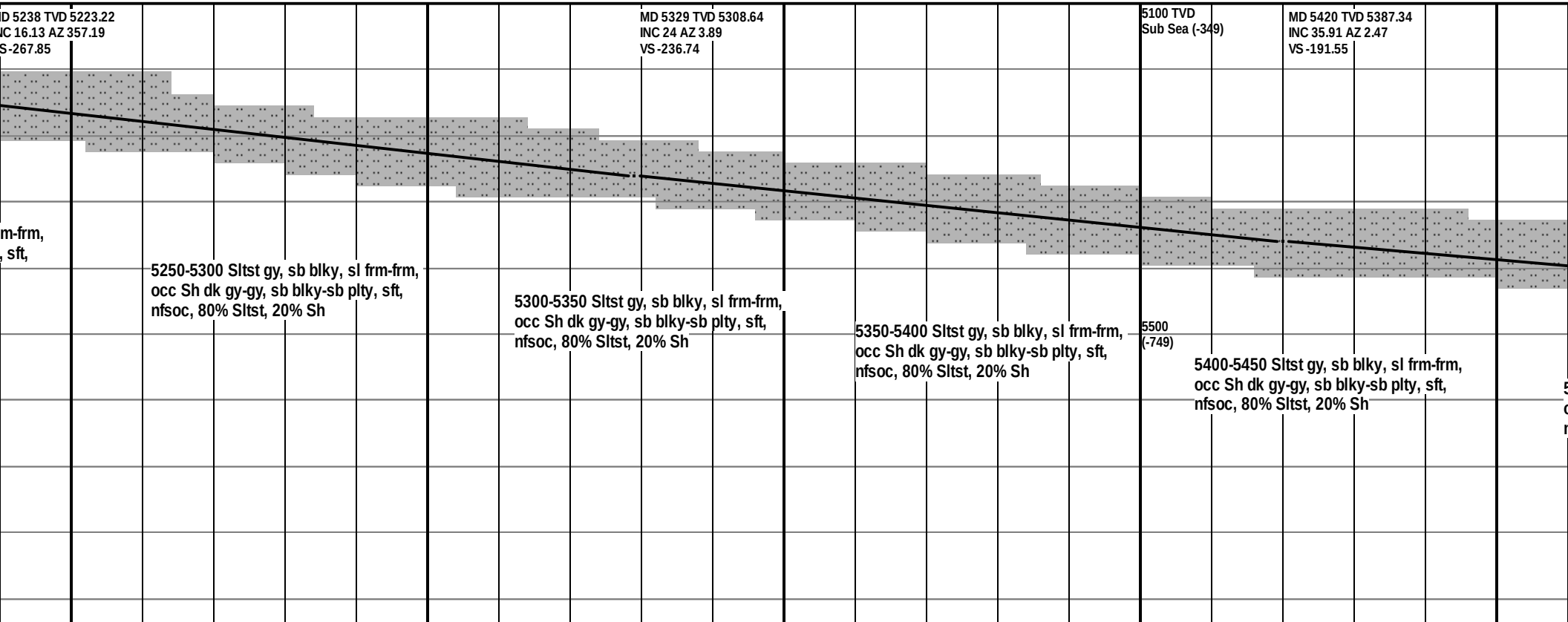
EVENT

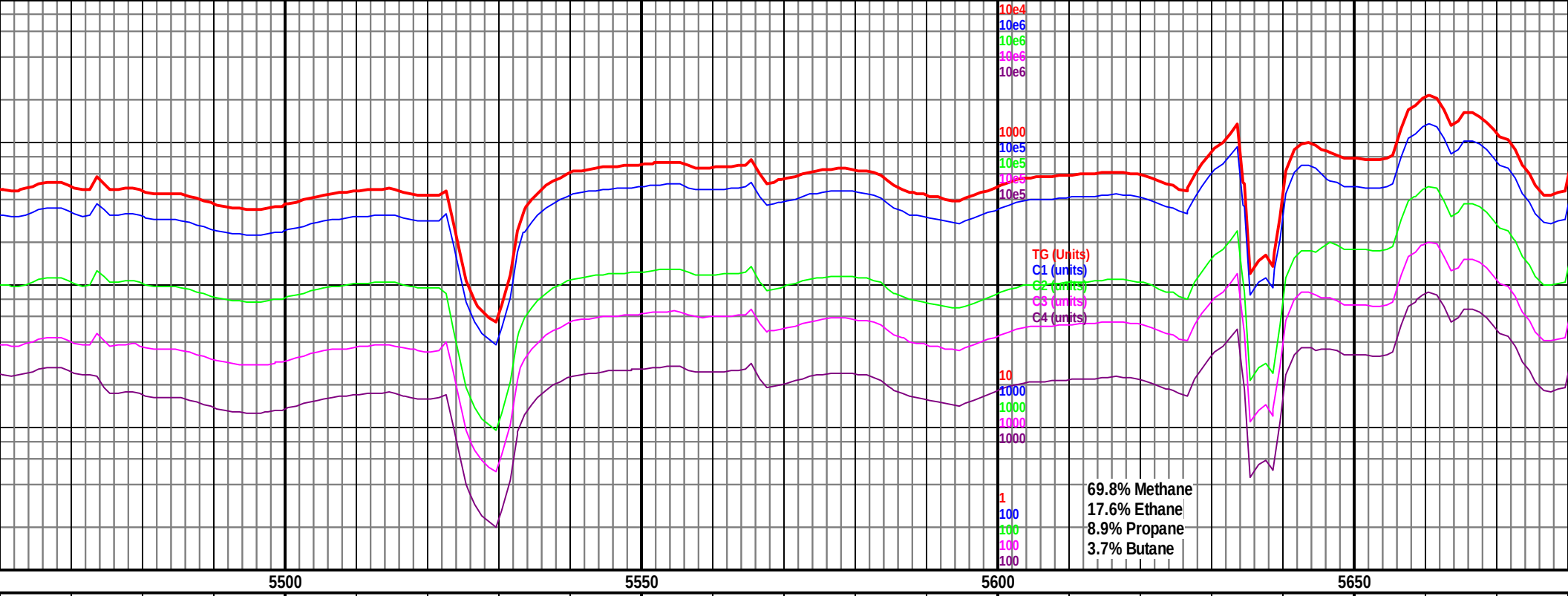
- Rft
- Sidewall

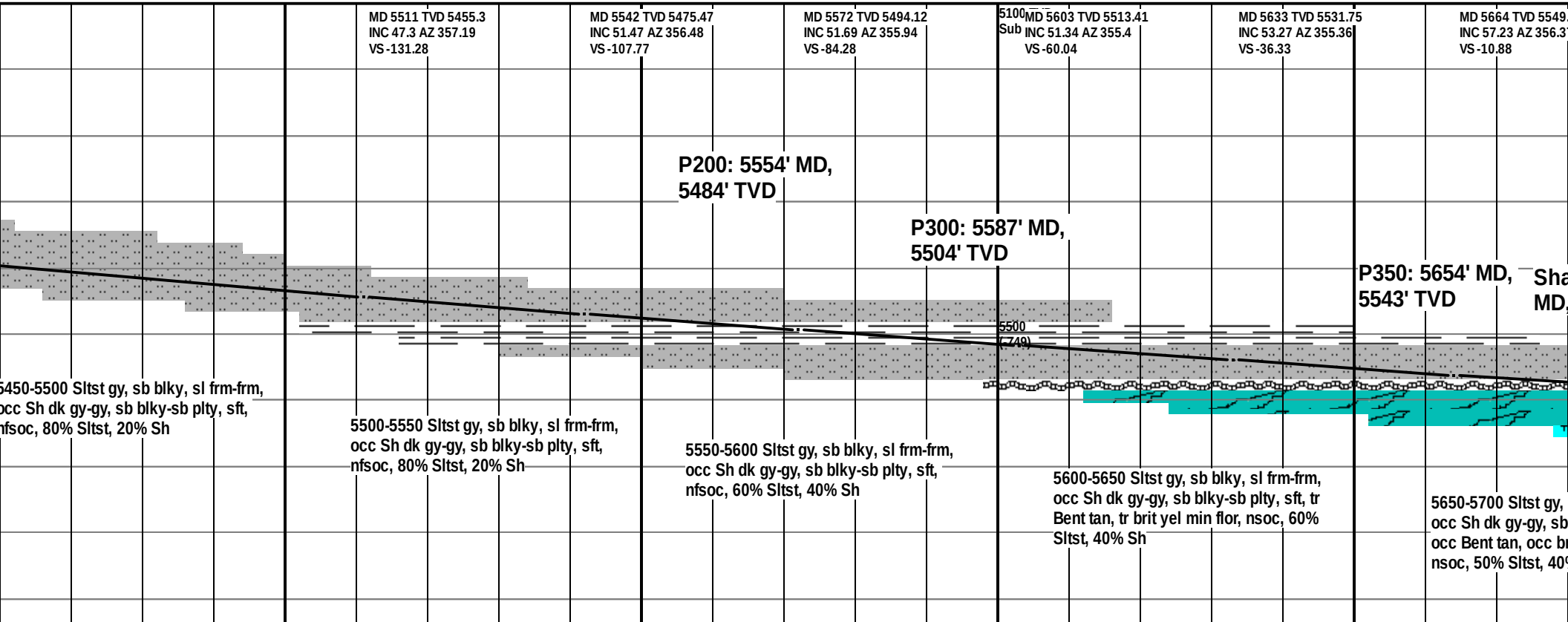

TG, C1-C4
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
MSI Model TGC Total Gas and Chromatograph
Total Gas Calibrated to
1% Methane = 100 units,
99.0% Methane = 9900 units.
Gas Chromatograph Calibrated to
1% C1-C4 = 10000 ppm.
Reset red box from
5107' - 5117'
Wt 9.6
Vis 39
76.5% Methane
13.5% Ethane
7.2% Propane
2.8% Butane
Depth
50
5100
5150
5200

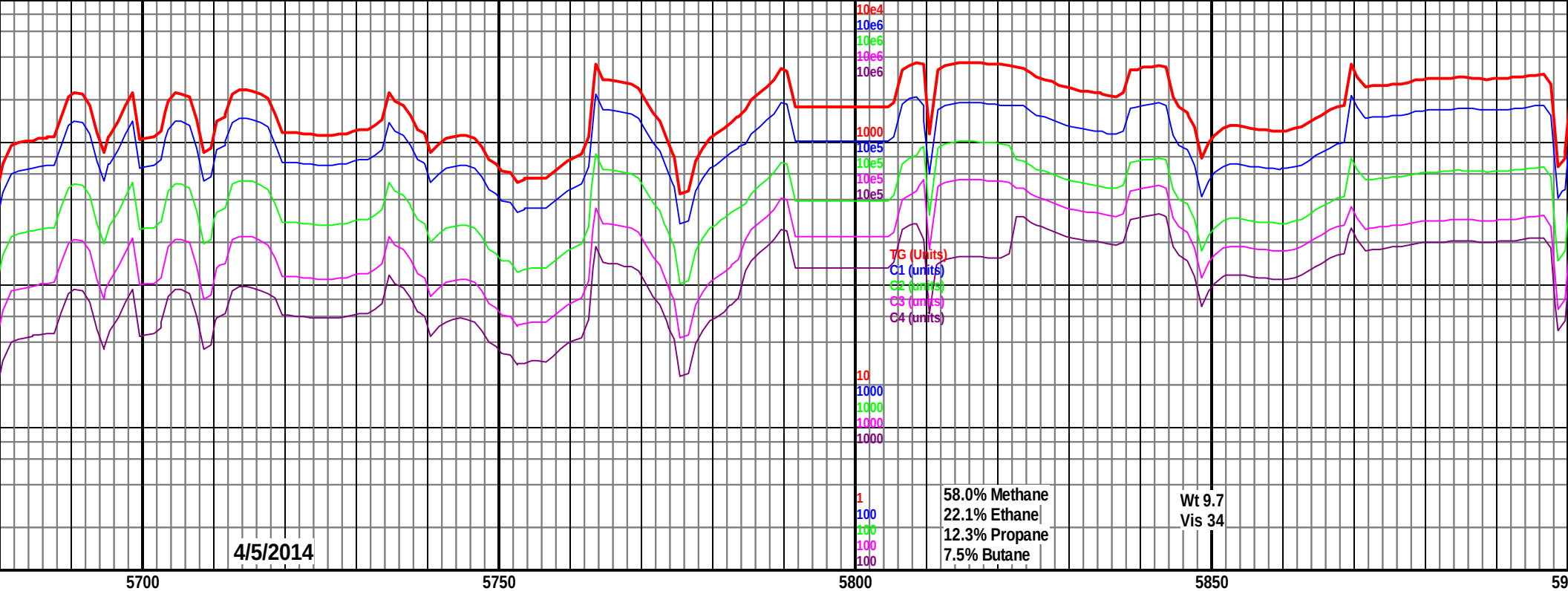

Well Bore Cross Section
MD 5055 TVD 5042.28
INC 2.73 AZ 355.75
VS -291.48
Acme Geologic Consulting rigged up and operational on 4/3/2014 at 12:00
KOP 5106' reached at 15:15 on 4/4/2014
5107-5150 Sltst gy-med gy, sb blky, mod frm-fri, non calc, abnt Sh dk gy-gy, blky-sb plty, sft, arg, non calc, nsfoc 50% sltst 50% Sh
MD 5147 TVD 5134
INC 5.93 AZ 342.01
VS -285.05
5150-5200 Sltst gy, sb blky, sl frm-frm, occ Sh dk gy-gy, sb blky-sb plty, sft, nfsoc, 80% Sltst, 20% Sh
5100 TVD
Sub Sea (-349)
5200-5250 Sltst gy, sb blky, sl fr
occ Sh dk gy-gy, sb blky-sb plty
nfsoc, 80% Sltst, 20% Sh
5500
(-749)


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
5250
5300
5350
5400
5450


D 5238 TVD 5223.22
NC 16.13 AZ 357.19
S -267.85
MD 5329 TVD 5308.64
INC 24 AZ 3.89
VS -236.74
5100 TVD
Sub Sea (-349)
MD 5420 TVD 5387.34
INC 35.91 AZ 2.47
VS -191.55
m-frm,
, sft,
5250-5300 Sltst gy, sb blky, sl frm-frm, occ Sh dk gy-gy, sb blky-sb plty, sft, nfsoc, 80% Sltst, 20% Sh
5300-5350 Sltst gy, sb blky, sl frm-frm, occ Sh dk gy-gy, sb blky-sb plty, sft, nfsoc, 80% Sltst, 20% Sh
5350-5400 Sltst gy, sb blky, sl frm-frm, occ Sh dk gy-gy, sb blky-sb plty, sft, nfsoc, 80% Sltst, 20% Sh
5500
(-749)
5400-5450 Sltst gy, sb blky, sl frm-frm, occ Sh dk gy-gy, sb blky-sb plty, sft, nfsoc, 80% Sltst, 20% Sh


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
69.8% Methane
17.6% Ethane
8.9% Propane
3.7% Butane
5500
5550
5600
5650


MD 5511 TVD 5455.3
INC 47.3 AZ 357.19
VS -131.28
MD 5542 TVD 5475.47
INC 51.47 AZ 356.48
VS -107.77
MD 5572 TVD 5494.12
INC 51.69 AZ 355.94
VS -84.28
5100
Sub
MD 5603 TVD 5513.41
INC 51.34 AZ 355.4
VS -60.04
MD 5633 TVD 5531.75
INC 53.27 AZ 355.36
VS -36.33
MD 5664 TVD 5549.
INC 57.23 AZ 356.3
VS -10.88
P200: 5554' MD,
5484' TVD
P300: 5587' MD,
5504' TVD
P350: 5654' MD,
5543' TVD
Sha
MD,
5500
(Z49)
5450-5500 Sltst gy, sb blky, sl frm-frm,
occ Sh dk gy-gy, sb blky-sb plty, sft,
nfsoc, 80% Sltst, 20% Sh
5500-5550 Sltst gy, sb blky, sl frm-frm,
occ Sh dk gy-gy, sb blky-sb plty, sft,
nfsoc, 80% Sltst, 20% Sh
5550-5600 Sltst gy, sb blky, sl frm-frm,
occ Sh dk gy-gy, sb blky-sb plty, sft,
nfsoc, 60% Sltst, 40% Sh
5600-5650 Sltst gy, sb blky, sl frm-frm,
occ Sh dk gy-gy, sb blky-sb plty, sft, tr
Bent tan, tr brit yel min flor, nsoc, 60%
Sltst, 40% Sh
5650-5700 Sltst gy,
occ Sh dk gy-gy, sb
occ Bent tan, occ br
nsoc, 50% Sltst, 40



MD 5695 TVD 5565.61
INC 59.78 AZ 357.32
VS 15.54

MD 5725 TVD 5580.6
INC 60.26 AZ 357.46
VS 41.52

MD 5756 TVD 5595.59
INC 61.89 AZ 358.43
VS 68.65

MD 5786 TVD 5609.34
INC 63.56 AZ 0.01
VS 95.31

MD 5816 TVD 5622.42
INC 64.75 AZ 1.17
VS 122.29

MD 5846 TVD 5634.85
INC 66.29 AZ 0.89
VS 149.56

MD 5877 TVD 5646.32
INC 70.29 AZ 1.24
VS 178.32

Niobrara: 5686' MD, 5560' TVD

N100: 5722' MD, 5579' TVD

N200: 5788' MD, 5611' TVD

N250: 5823' MD, 5625' TVD

N400: 5835' MD, 5630' TVD

5500 (-749)

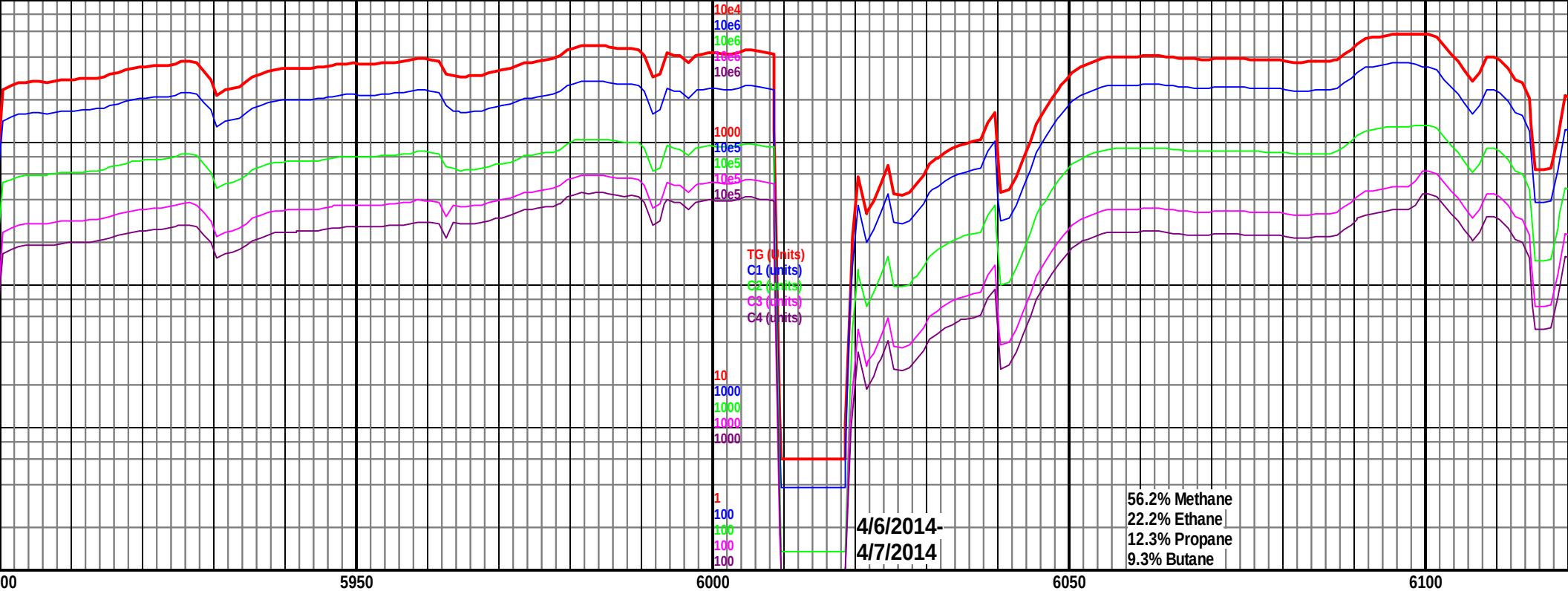
sb blky, sl frm-frm, blky-sb plty, sft, rit yel min flor, % Sh, 10% Bent

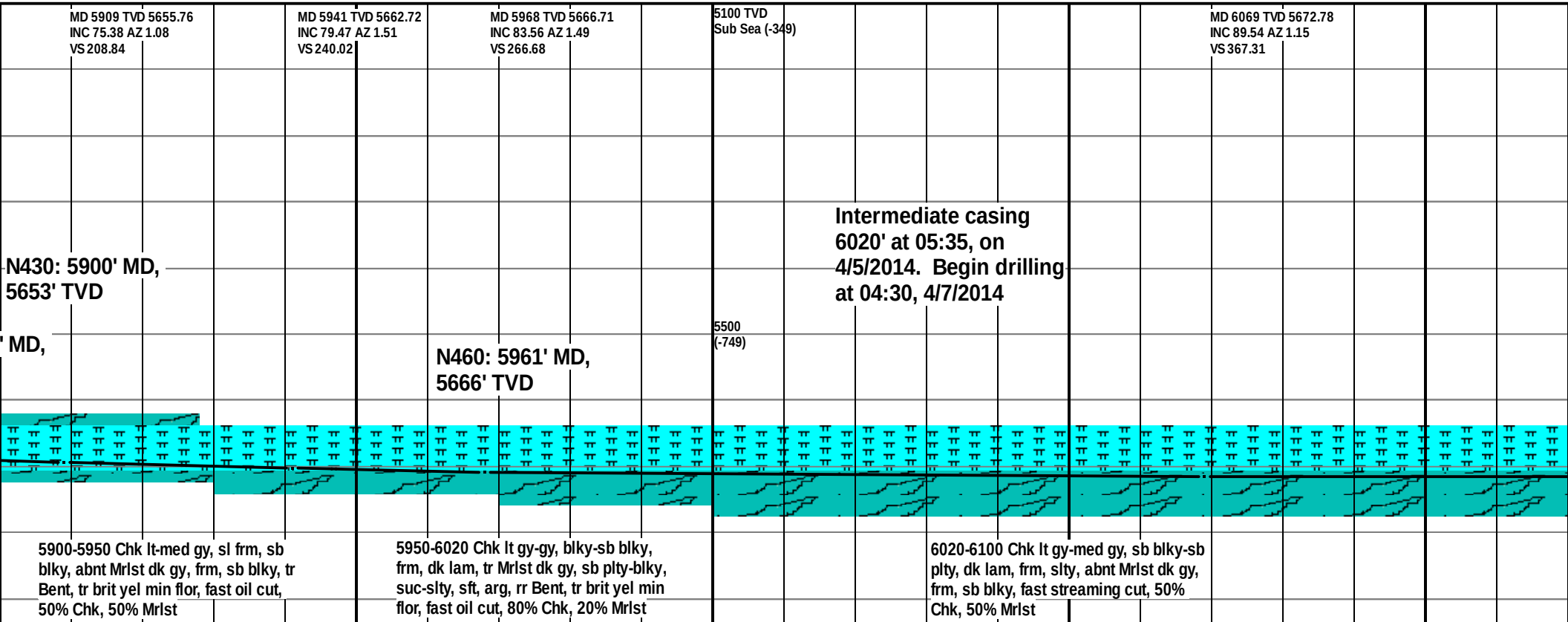
5700-5750 Chk lt-med gy, sl frm-frm, sb blky, occ Mrlst dk gy, frm, sb blky-sb plty, occ Bent, tan, occ brit yel min flor, vis oil flor, fast oil cut, 70% Chk, 20% Mrlst, 10% Bent

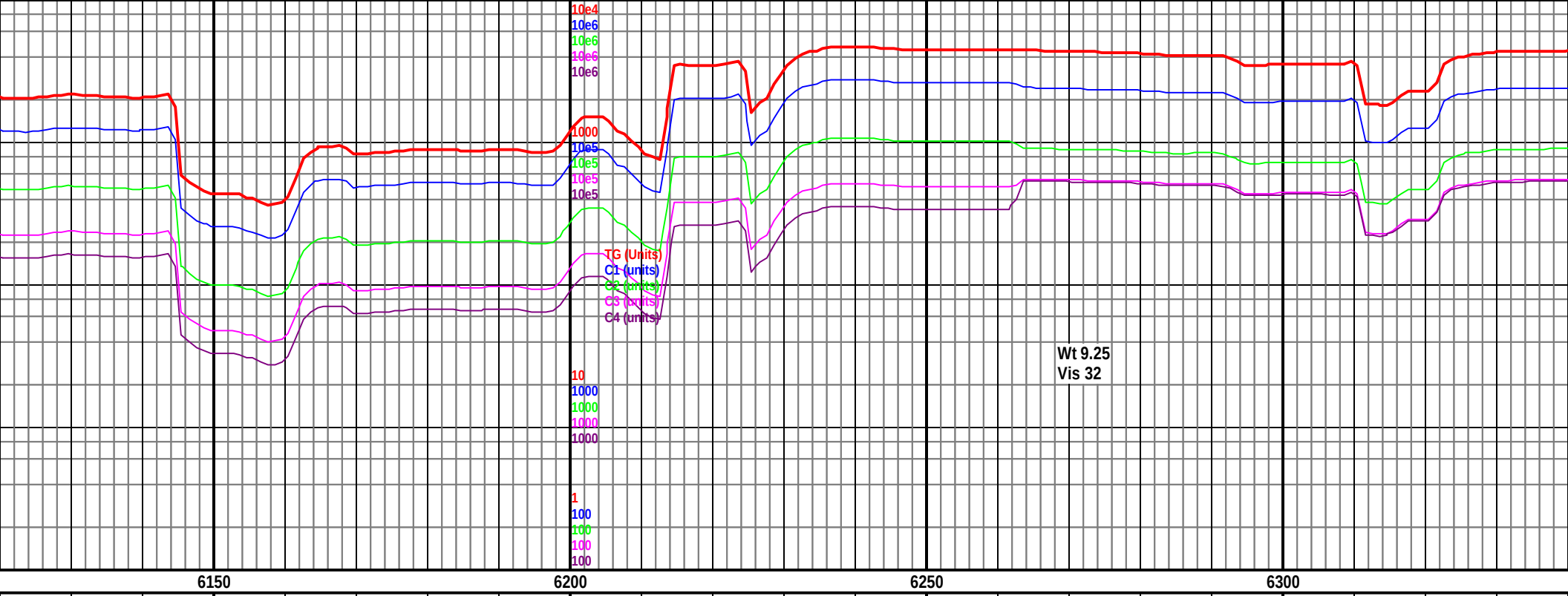
5750-5800 Mrlst dk gy, frm, sb blky, occ Chk lt-med gy, sl frm, sb blky, tr Bent, tr brit yel min flor, vis oil flor, fast oil cut, 60% Marl, 40% Chk

5800-5850 Mrlst dk gy, frm, sb blky, occ Chk lt-med gy, sl frm, sb blky, tr Bent, tr brit yel min flor, occ vis oil flor, fast oil cut, 70% Marl, 30% Chk

5850-5900 Chk lt-med gy, sl frm, sb blky, abnt Mrlst dk gy, frm, sb blky, tr Bent, tr brit yel min flor, fast oil cut, 50% Chk, 50% Mrlst


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
4/6/2014-
4/7/2014
56.2% Methane
22.2% Ethane
12.3% Propane
9.3% Butane
00
5950
6000
6050
6100


MD 5909 TVD 5655.76
INC 75.38 AZ 1.08
VS 208.84
MD 5941 TVD 5662.72
INC 79.47 AZ 1.51
VS 240.02
MD 5968 TVD 5666.71
INC 83.56 AZ 1.49
VS 266.68
5100 TVD
Sub Sea (-349)
MD 6069 TVD 5672.78
INC 89.54 AZ 1.15
VS 367.31
N430: 5900' MD,
5653' TVD
' MD,
N460: 5961' MD,
5666' TVD
Intermediate casing
6020' at 05:35, on
4/5/2014. Begin drilling
at 04:30, 4/7/2014
5500
(-749)
5900-5950 Chk lt-med gy, sl frm, sb
blky, abnt Mrlst dk gy, frm, sb blky, tr
Bent, tr brit yel min flor, fast oil cut,
50% Chk, 50% Mrlst
5950-6020 Chk lt gy-gy, blky-sb blky,
frm, dk lam, tr Mrlst dk gy, sb plty-blky,
suc-slty, sft, arg, rr Bent, tr brit yel min
flor, fast oil cut, 80% Chk, 20% Mrlst
6020-6100 Chk lt gy-med gy, sb blky-sb
plty, dk lam, frm, slty, abnt Mrlst dk gy,
frm, sb blky, fast streaming cut, 50%
Chk, 50% Mrlst



MD 6164 TVD 5673.15
INC 90.02 AZ 1.28
VS 462.18

5100 TVD
Sub Sea (-349)

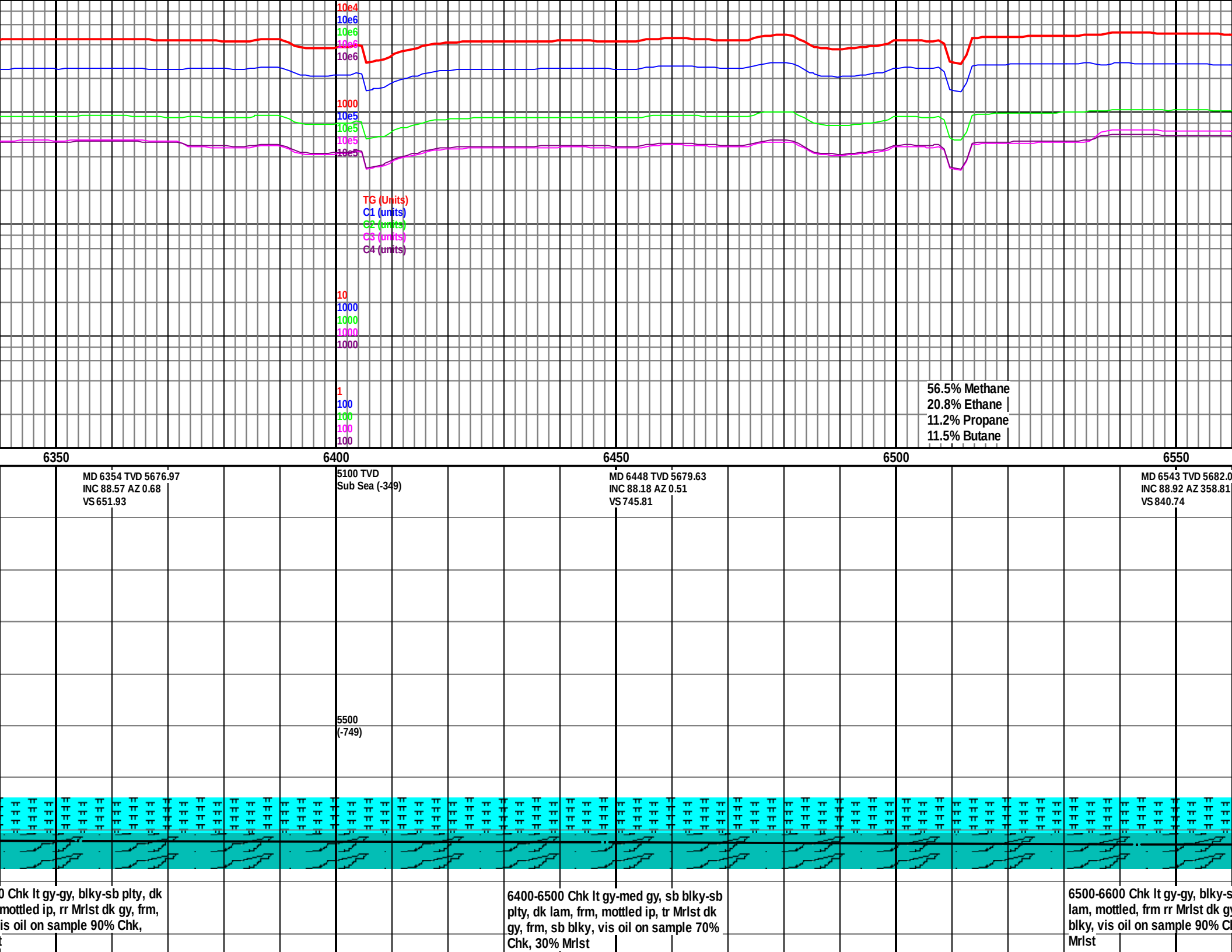
MD 6259 TVD 5674.46
INC 88.4 AZ 0.9
VS 557.05

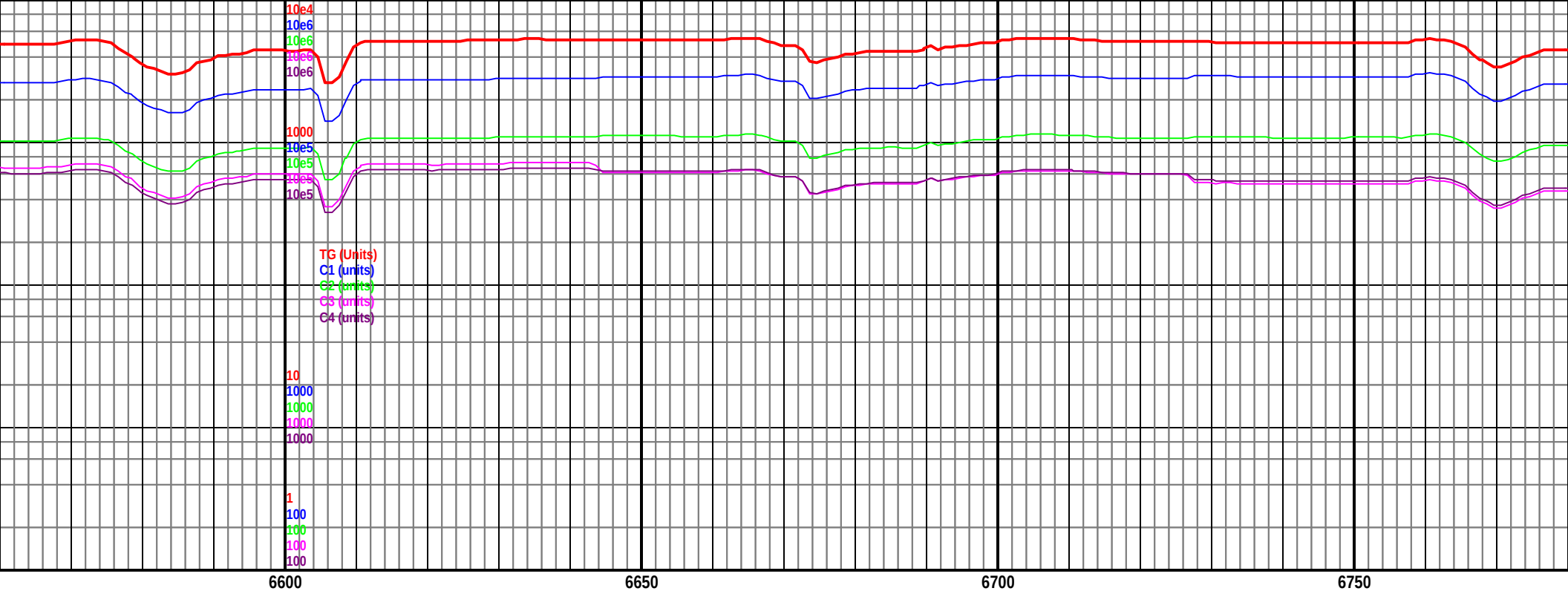
5500
(-749)

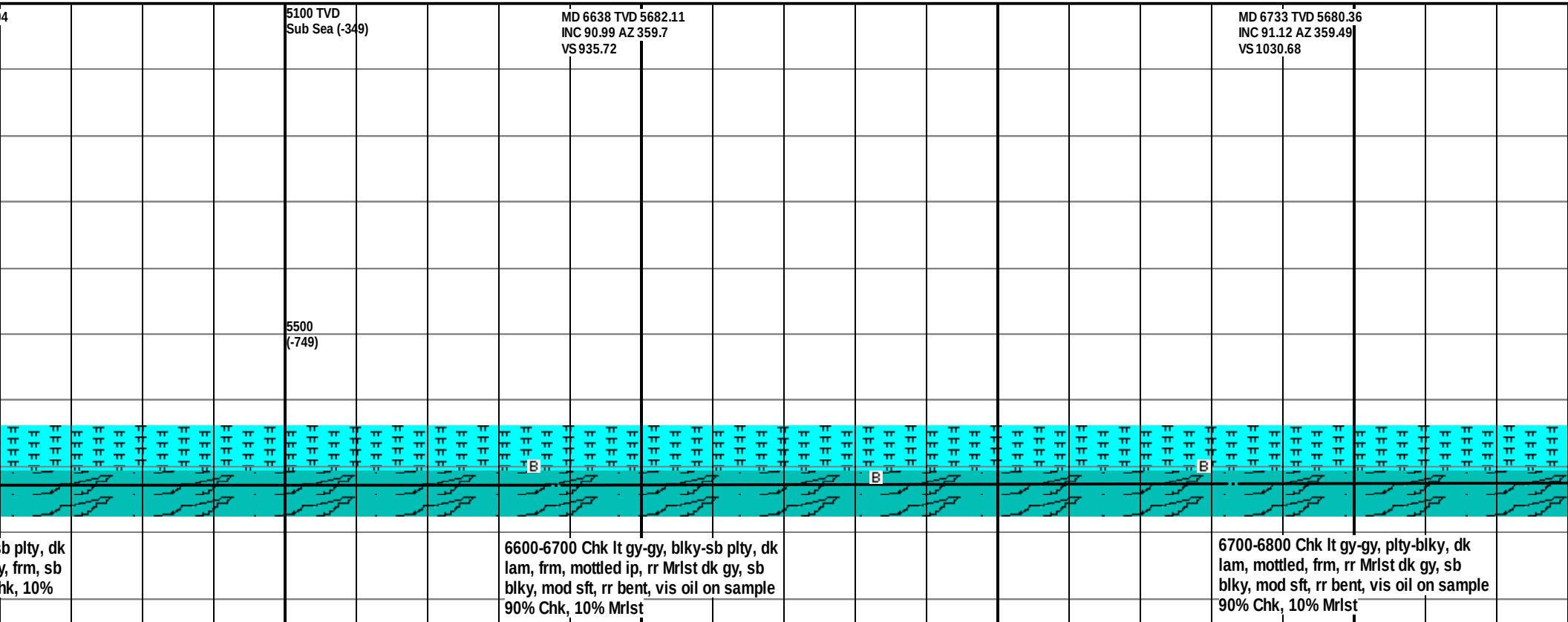
6100-6200 Chk lt gy-med gy, sb blky-sb plty, dk lam, frm, slty ip, occ Mrlst dk gy, frm, sb blky, rr pyr, fast streaming cut, 70% Chk, 30% Mrlst

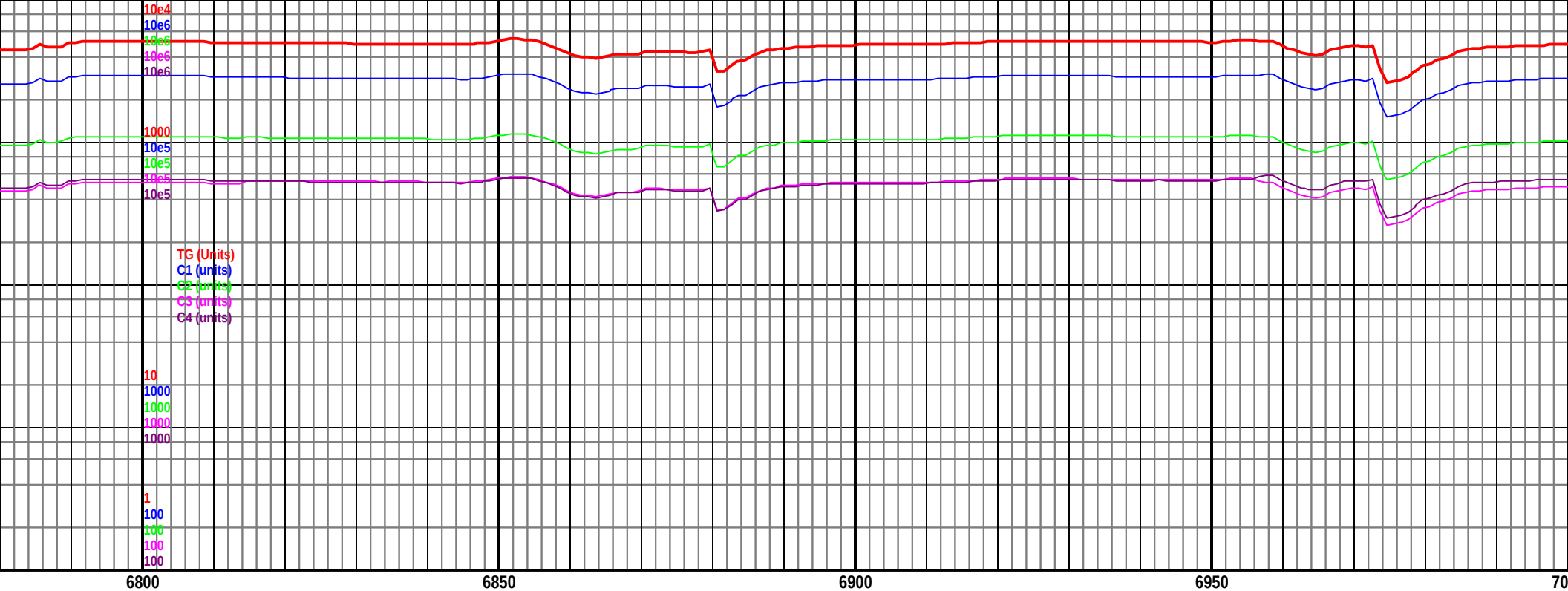
6200-6300 Chk lt gy-gy, blky-sb plty, dk lam, frm, mottled ip, rr Mrlst dk gy, frm, sb blky, vis oil on sample 90% Chk, 10% Mrlst

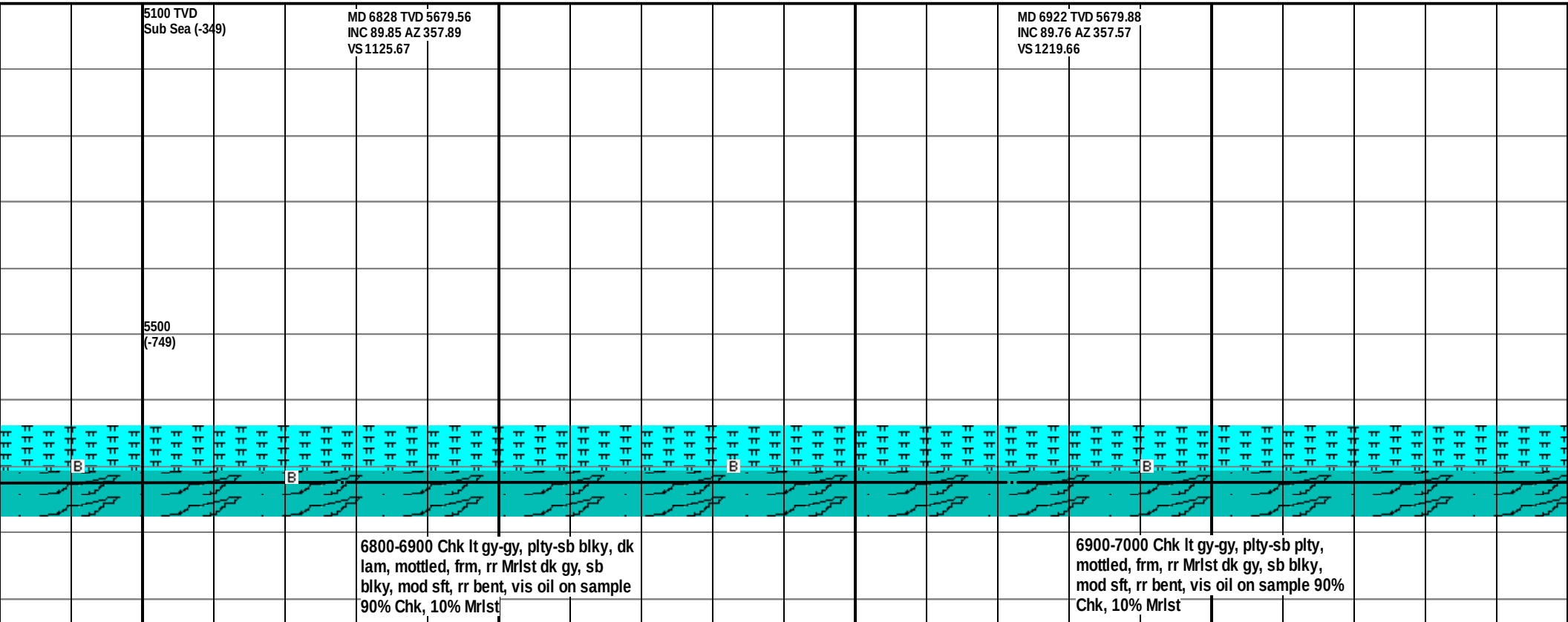
6300-640
lam, frm,
sb blky, v
10% Mrlst

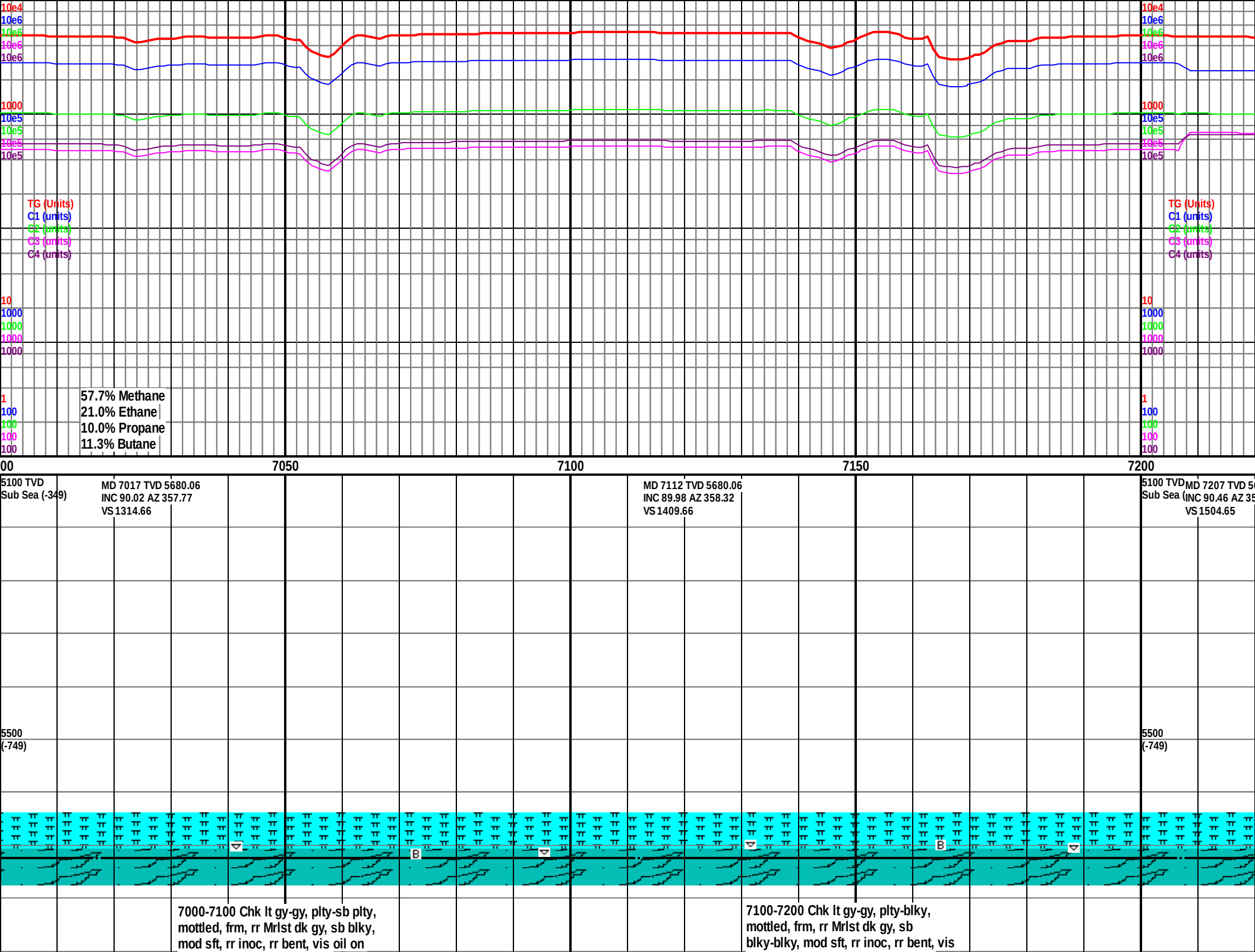

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
56.5% Methane
20.8% Ethane
11.2% Propane
11.5% Butane
6350
6400
6450
6500
6550
MD 6354 TVD 5676.97
INC 88.57 AZ 0.68
VS 651.93
5100 TVD
Sub Sea (-349)
MD 6448 TVD 5679.63
INC 88.18 AZ 0.51
VS 745.81
MD 6543 TVD 5682.0
INC 88.92 AZ 358.81
VS 840.74
5500
(-749)
0 Chk lt gy-gy, blky-sb plty, dk
mottled ip, rr Mrlst dk gy, frm,
is oil on sample 90% Chk,
6400-6500 Chk lt gy-med gy, sb blky-sb
plty, dk lam, frm, mottled ip, tr Mrlst dk
gy, frm, sb blky, vis oil on sample 70%
Chk, 30% Mrlst
6500-6600 Chk lt gy-gy, blky-s
lam, mottled, frm rr Mrlst dk g
blky, vis oil on sample 90% C
Mrlst

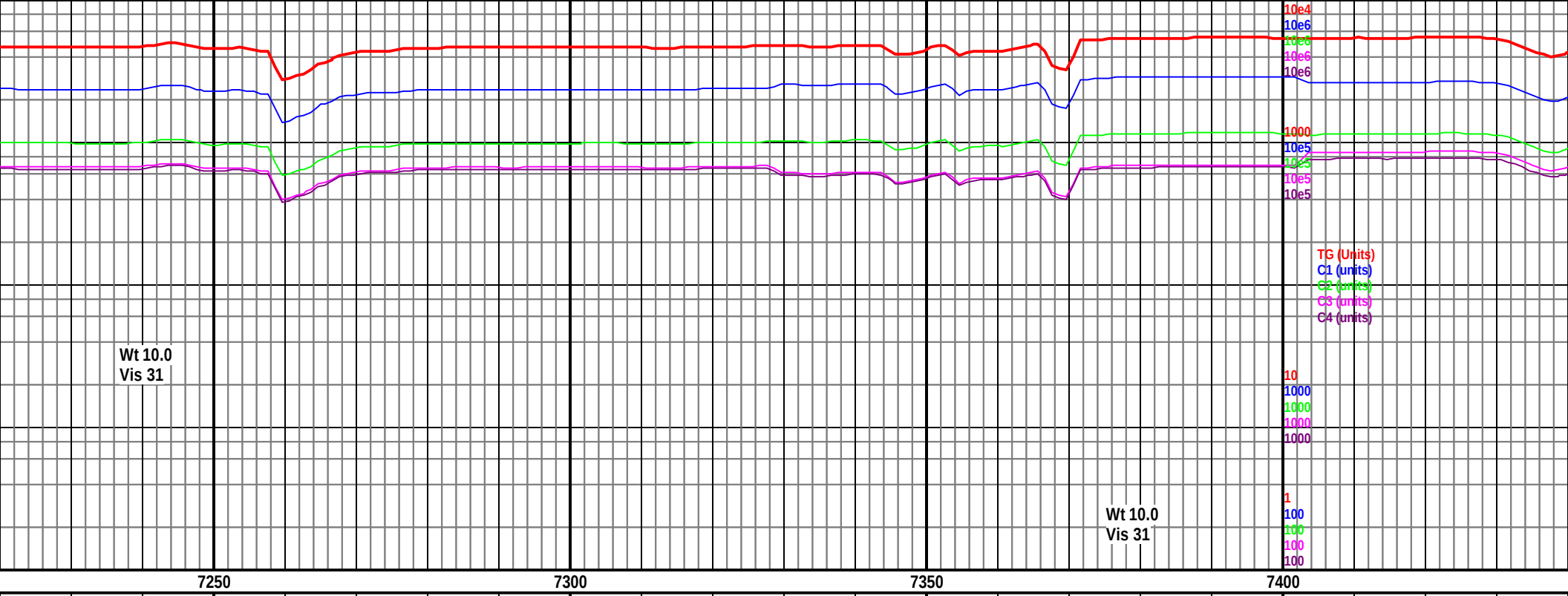

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100


6600
6650
6700
6750
5100 TVD
Sub Sea (-349)
MD 6638 TVD 5682.11
INC 90.99 AZ 359.7
VS 935.72
MD 6733 TVD 5680.36
INC 91.12 AZ 359.49
VS 1030.68
5500
(-749)
B
B
B
6600-6700 Chk lt gy-gy, blky-sb plty, dk lam, frm, mottled ip, rr Mrlst dk gy, sb blky, mod sft, rr bent, vis oil on sample 90% Chk, 10% Mrlst
6700-6800 Chk lt gy-gy, plty-blky, dk lam, mottled, frm, rr Mrlst dk gy, sb blky, mod sft, rr bent, vis oil on sample 90% Chk, 10% Mrlst


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
6800
6850
6900
6950
70


5100 TVD
Sub Sea (-349)
MD 6828 TVD 5679.56
INC 89.85 AZ 357.89
VS 1125.67
MD 6922 TVD 5679.88
INC 89.76 AZ 357.57
VS 1219.66
5500
(-749)
B
B
B
B
6800-6900 Chk lt gy-gy, plty-sb blky, dk lam, mottled, frm, rr Mrlst dk gy, sb blky, mod sft, rr bent, vis oil on sample 90% Chk, 10% Mrlst
6900-7000 Chk lt gy-gy, plty-sb plty, mottled, frm, rr Mrlst dk gy, sb blky, mod sft, rr bent, vis oil on sample 90% Chk, 10% Mrlst


TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
57.7% Methane
21.0% Ethane
10.0% Propane
11.3% Butane
7050
7100
7150
7200
5100 TVD
Sub Sea (-349)
MD 7017 TVD 5680.06
INC 90.02 AZ 357.77
VS 1314.66
MD 7112 TVD 5680.06
INC 89.98 AZ 358.32
VS 1409.66
MD 7207 TVD 5
INC 90.46 AZ 35
VS 1504.65
5500
(-749)
7000-7100 Chk lt gy-gy, plty-sb plty, mottled, frm, rr Mrlst dk gy, sb blky, mod sft, rr inoc, rr bent, vis oil on sample 90% Chk, 10% Mrlst
7100-7200 Chk lt gy-gy, plty-blky, mottled, frm, rr Mrlst dk gy, sb blky-blky, mod sft, rr inoc, rr bent, vis oil on sample 90% Chk, 10% Mrlst



679.7
59.23

MD 7302 TVD 5678.83
INC 90.59 AZ 359.97
VS 1599.62

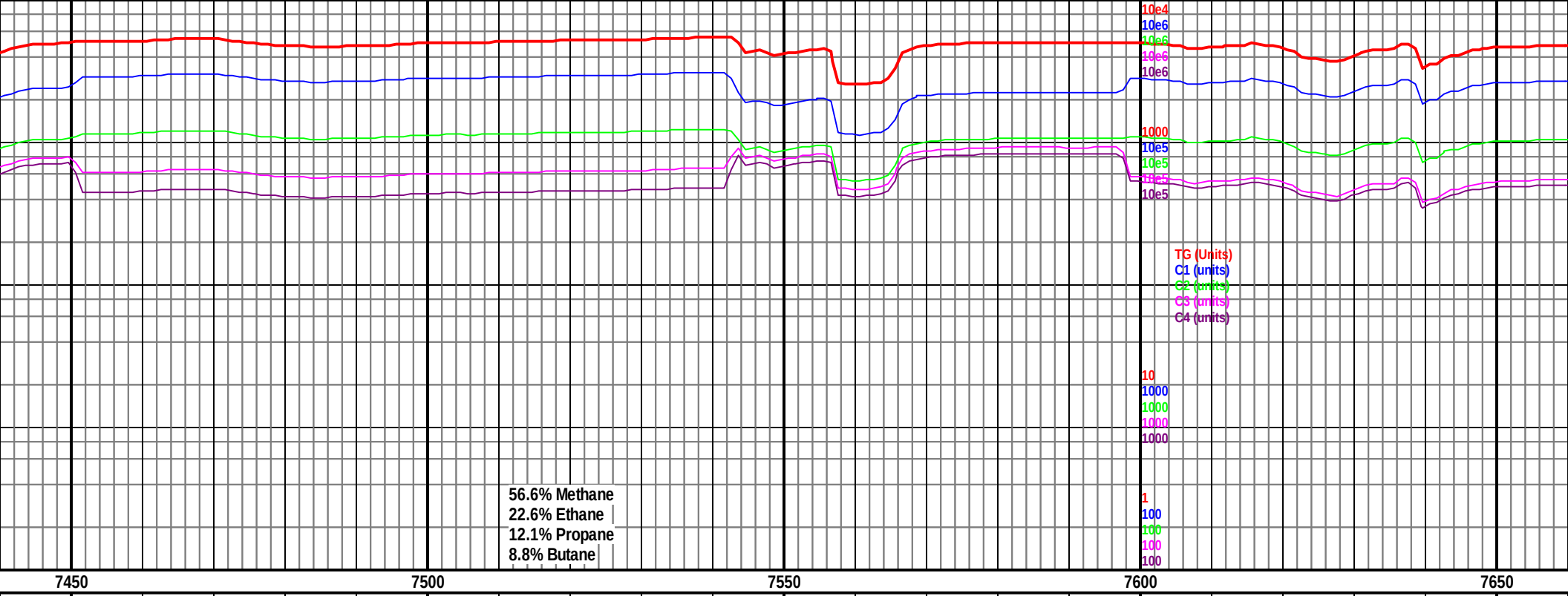
MD 7397 TVD 5679.16
INC 89.01 AZ 356.04
VS 1694.6

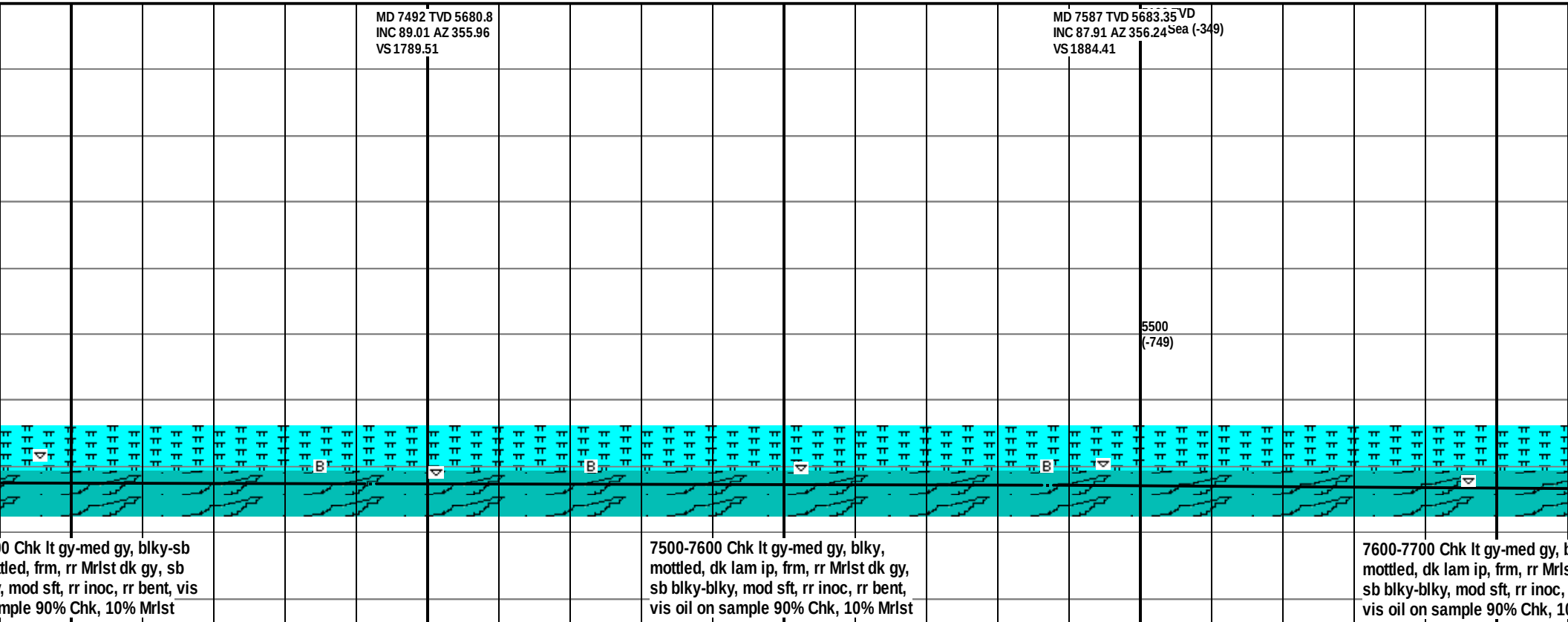
5500
(-749)

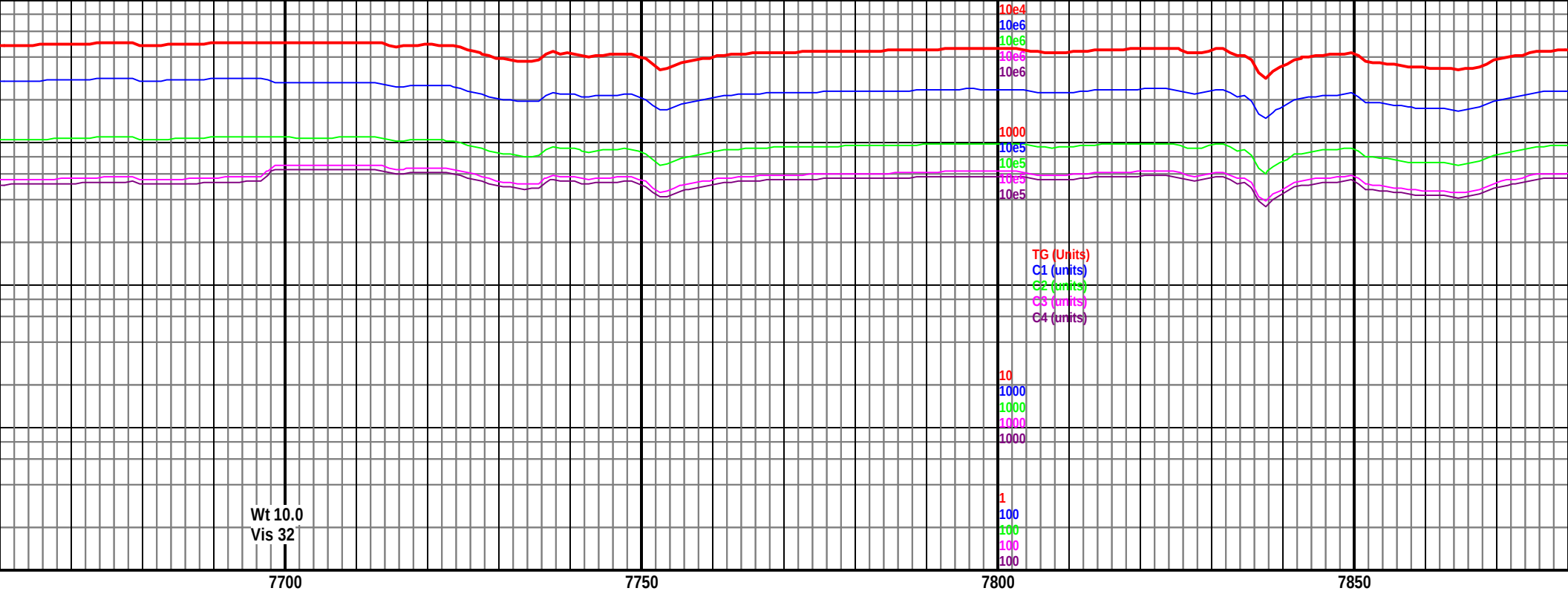
7200-7300 Chk lt gy-gy, plty-blky, mottled, frm, rr Mrlst dk gy, sb blky-blky, mod sft, rr inoc, rr bent, vis oil on sample 90% Chk, 10% Mrlst

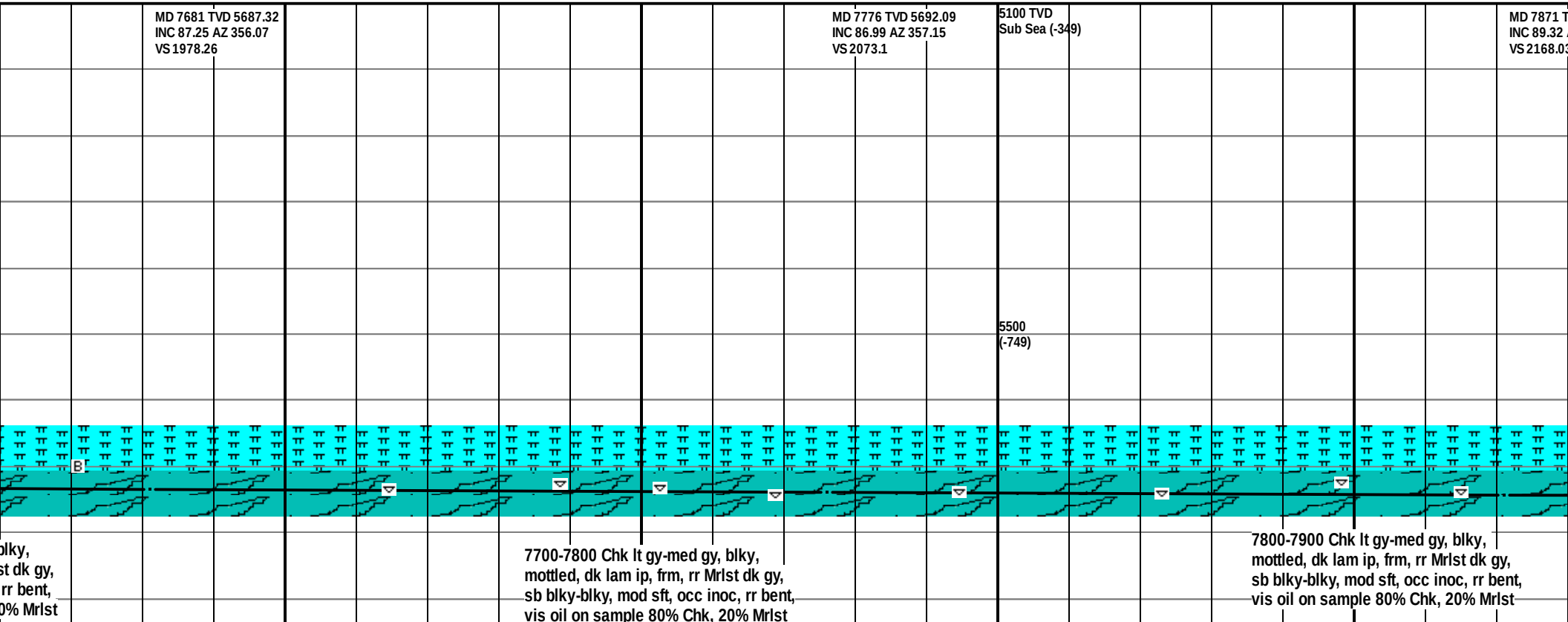
7400-7500 Chk lt gy-med gy, plty-sb plty, mottled, frm, dk lam ip, rr Mrlst dk gy-gy, sb blky-blky, mod sft, rr inoc, rr bent, vis oil on sample 90% Chk, 10%

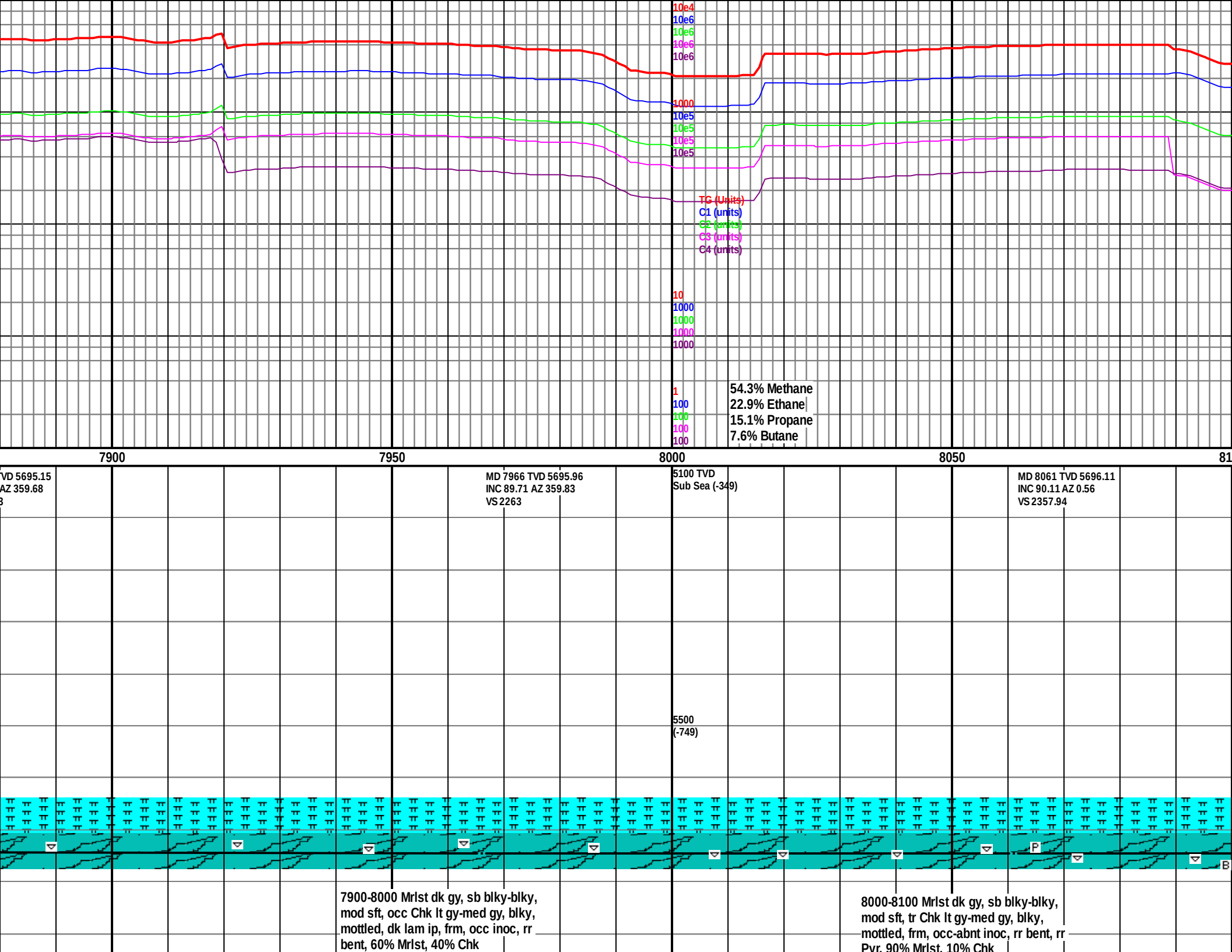
7500-760
blky, mot
blky-blky
oil on sa

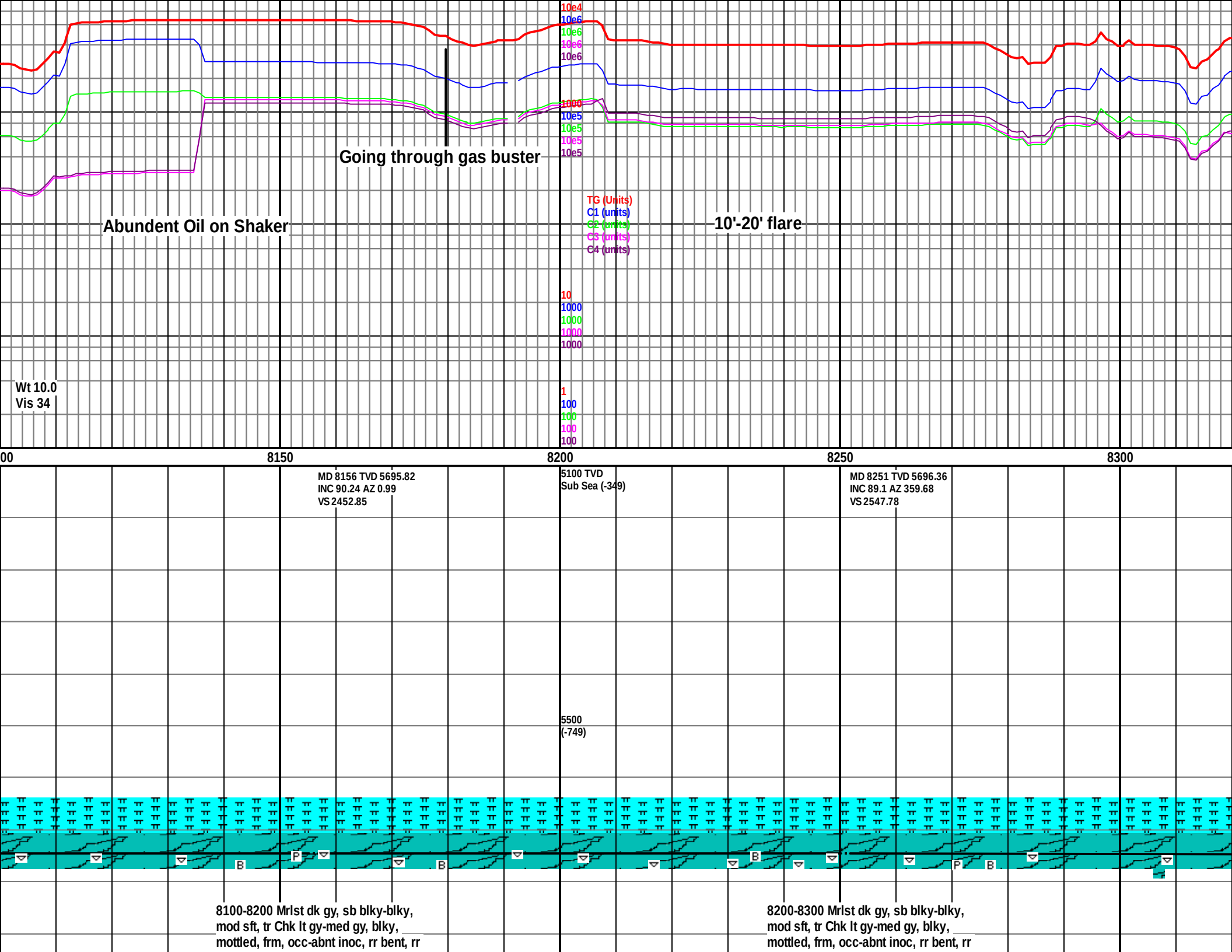

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
56.6% Methane
22.6% Ethane
12.1% Propane
8.8% Butane
7450
7500
7550
7600
7650

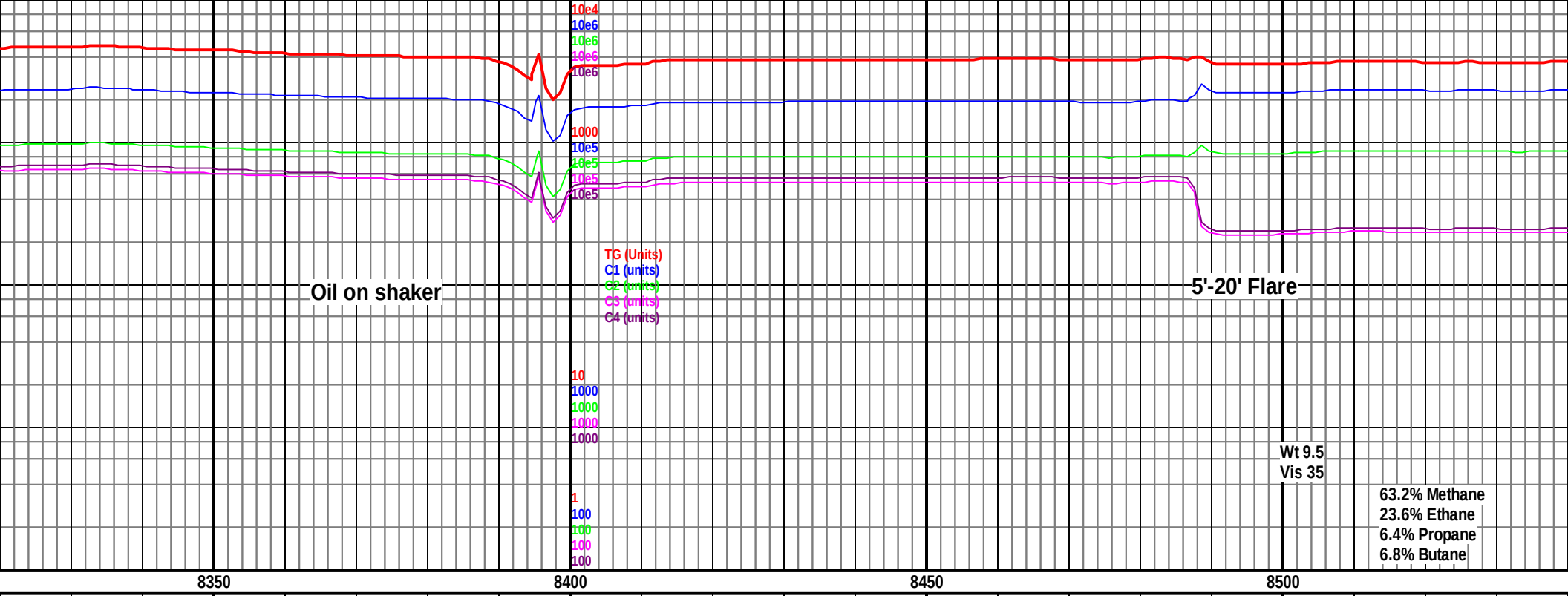

MD 7492 TVD 5680.8
INC 89.01 AZ 355.96
VS 1789.51
MD 7587 TVD 5683.35
INC 87.91 AZ 356.24
VS 1884.41
Sea (-349)
5500
(-749)
B
B
B
0 Chk lt gy-med gy, blky-sb
ttled, frm, rr Mrlst dk gy, sb
, mod sft, rr inoc, rr bent, vis
mple 90% Chk, 10% Mrlst
7500-7600 Chk lt gy-med gy, blky,
mottled, dk lam ip, frm, rr Mrlst dk gy,
sb blky-blky, mod sft, rr inoc, rr bent,
vis oil on sample 90% Chk, 10% Mrlst
7600-7700 Chk lt gy-med gy, b
mottled, dk lam ip, frm, rr Mrls
sb blky-blky, mod sft, rr inoc,
vis oil on sample 90% Chk, 1


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
Wt 10.0
Vis 32
7700
7750
7800
7850


MD 7681 TVD 5687.32
INC 87.25 AZ 356.07
VS 1978.26
MD 7776 TVD 5692.09
INC 86.99 AZ 357.15
VS 2073.1
5100 TVD
Sub Sea (-349)
MD 7871 T
INC 89.32
VS 2168.03
5500
(-749)
B
lky,
t dk gy,
rr bent,
0% Mrlst
7700-7800 Chk lt gy-med gy, blky,
mottled, dk lam ip, frm, rr Mrlst dk gy,
sb blky-blky, mod sft, occ inoc, rr bent,
vis oil on sample 80% Chk, 20% Mrlst
7800-7900 Chk lt gy-med gy, blky,
mottled, dk lam ip, frm, rr Mrlst dk gy,
sb blky-blky, mod sft, occ inoc, rr bent,
vis oil on sample 80% Chk, 20% Mrlst


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
54.3% Methane
22.9% Ethane
15.1% Propane
7.6% Butane
7900
7950
8000
8050
81
VD 5695.15
AZ 359.68
3
MD 7966 TVD 5695.96
INC 89.71 AZ 359.83
VS 2263
5100 TVD
Sub Sea (-349)
MD 8061 TVD 5696.11
INC 90.11 AZ 0.56
VS 2357.94
5500
(-749)
P
B
7900-8000 Mrlst dk gy, sb blky-blky, mod sft, occ Chk lt gy-med gy, blky, mottled, dk lam ip, frm, occ inoc, rr bent, 60% Mrlst, 40% Chk
8000-8100 Mrlst dk gy, sb blky-blky, mod sft, tr Chk lt gy-med gy, blky, mottled, frm, occ-abnt inoc, rr bent, rr Pyr, 90% Mrlst, 10% Chk


Going through gas buster
Abundent Oil on Shaker
10'-20' flare
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
Wt 10.0
Vis 34
00
8150
8200
8250
8300
MD 8156 TVD 5695.82
INC 90.24 AZ 0.99
VS 2452.85
5100 TVD
Sub Sea (-349)
MD 8251 TVD 5696.36
INC 89.1 AZ 359.68
VS 2547.78
5500
(-749)
8100-8200 Mrlst dk gy, sb blky-blky,
mod sft, tr Chk lt gy-med gy, blky,
mottled, frm, occ-abnt inoc, rr bent, rr
8200-8300 Mrlst dk gy, sb blky-blky,
mod sft, tr Chk lt gy-med gy, blky,
mottled, frm, occ-abnt inoc, rr bent, rr



MD 8346 TVD 5697.49
INC 89.54 AZ 357.94
VS 2642.77

5100 TVD
Sub Sea (-349)

MD 8441 TVD 5697.38
INC 90.59 AZ 0.75
VS 2737.74

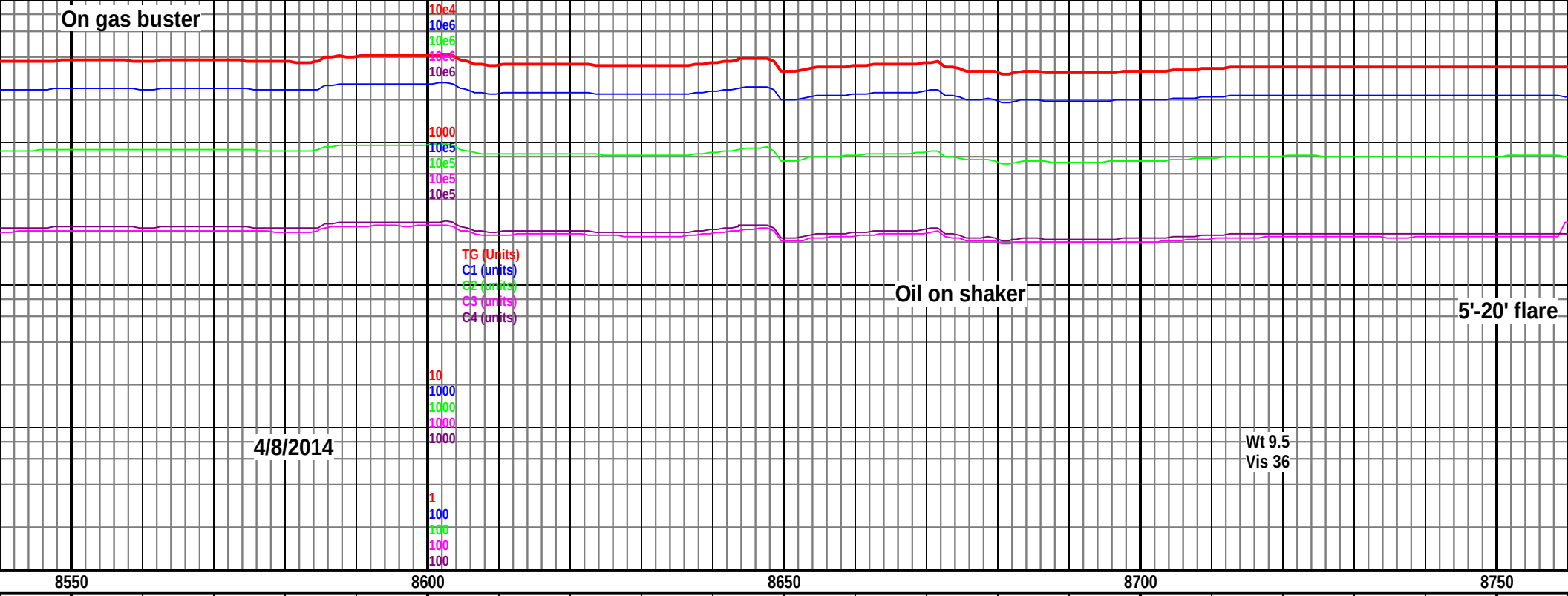
MD
INC
VS 2

5500
(-749)

8300-8400 Mrlst dk gy, sb blky-blky, mod sft, tr Chk lt gy-med gy, blky, mottled, frm, occ-abnt inoc, rr bent, rr

8400-8500 Mrlst dk gy, sb blky-blky, mod sft, tr Chk lt gy-med gy, blky, mottled, frm, occ inoc, rr bent, rr Pyr,

8500-860
mod sft, t
mottled, f
brit yel m



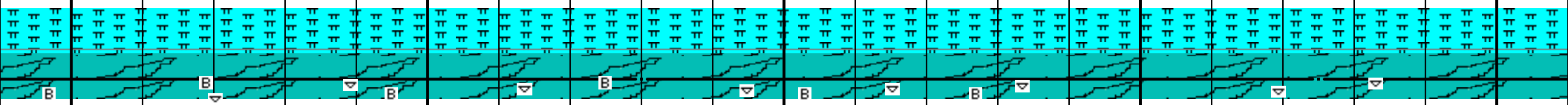
8536 TVD 5696.47
90.51 AZ 2.24
832.58

5100 TVD
Sub Sea (-349)

MD 8630 TVD 5696.22
INC 89.8 AZ 359.62
VS 2926.47

MD 8725 TVD 5696.47
INC 89.89 AZ 359.54
VS 3021.45

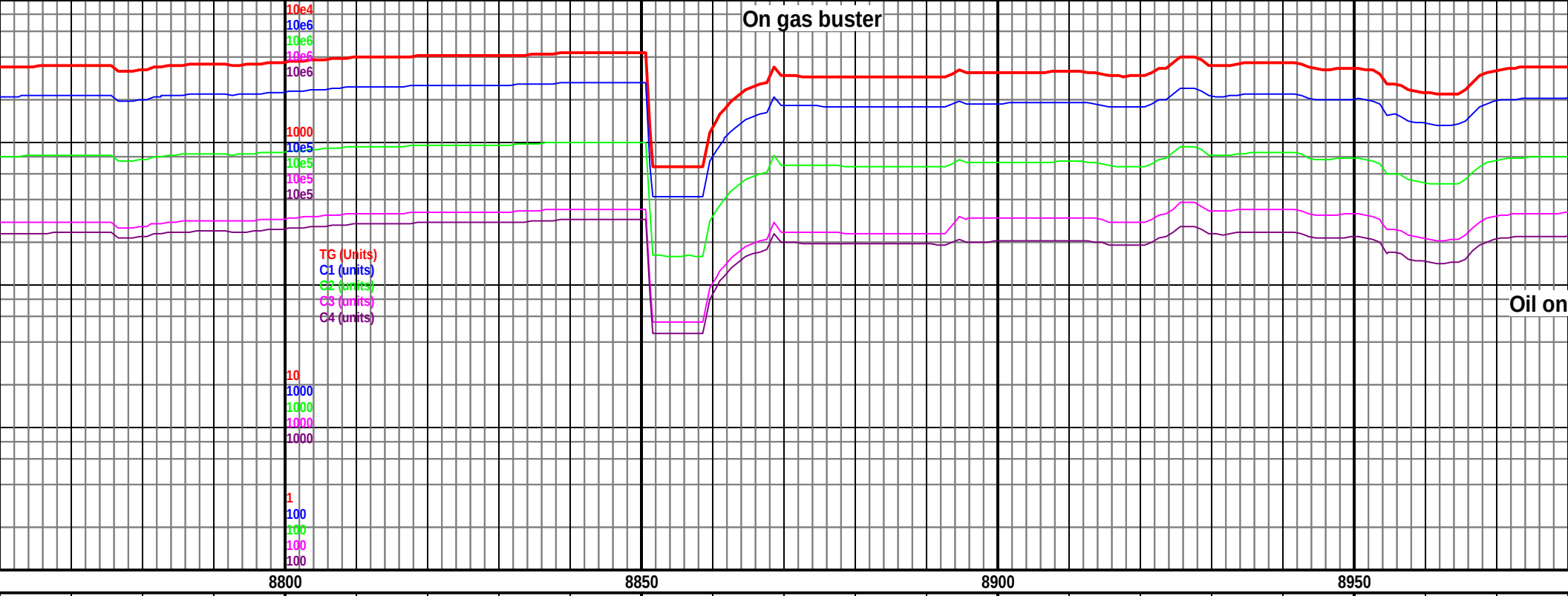
5500
(-749)

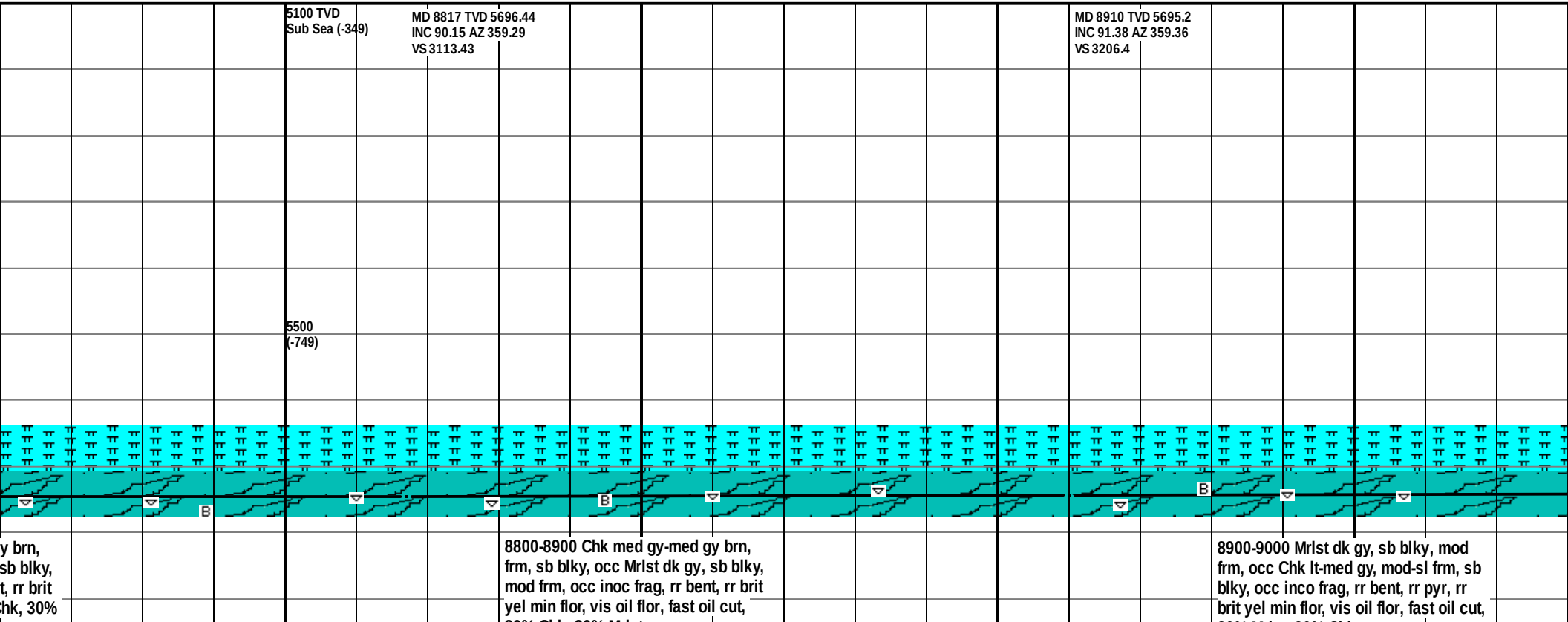


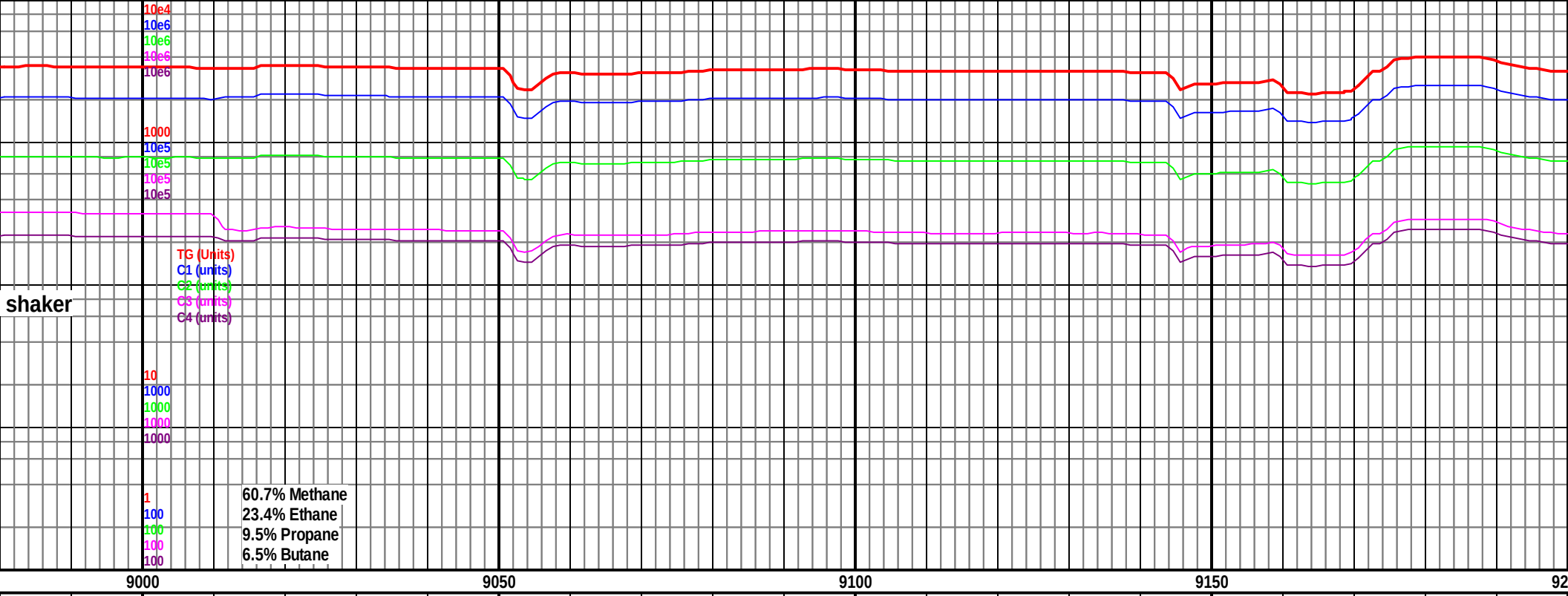
0 Mrlst dk gy, sb blky-blky,
r Chk lt gy-med gy, blky,
rm, occ inoc, occ bent, occ
in flor, rr Pyr, oil on shaker,

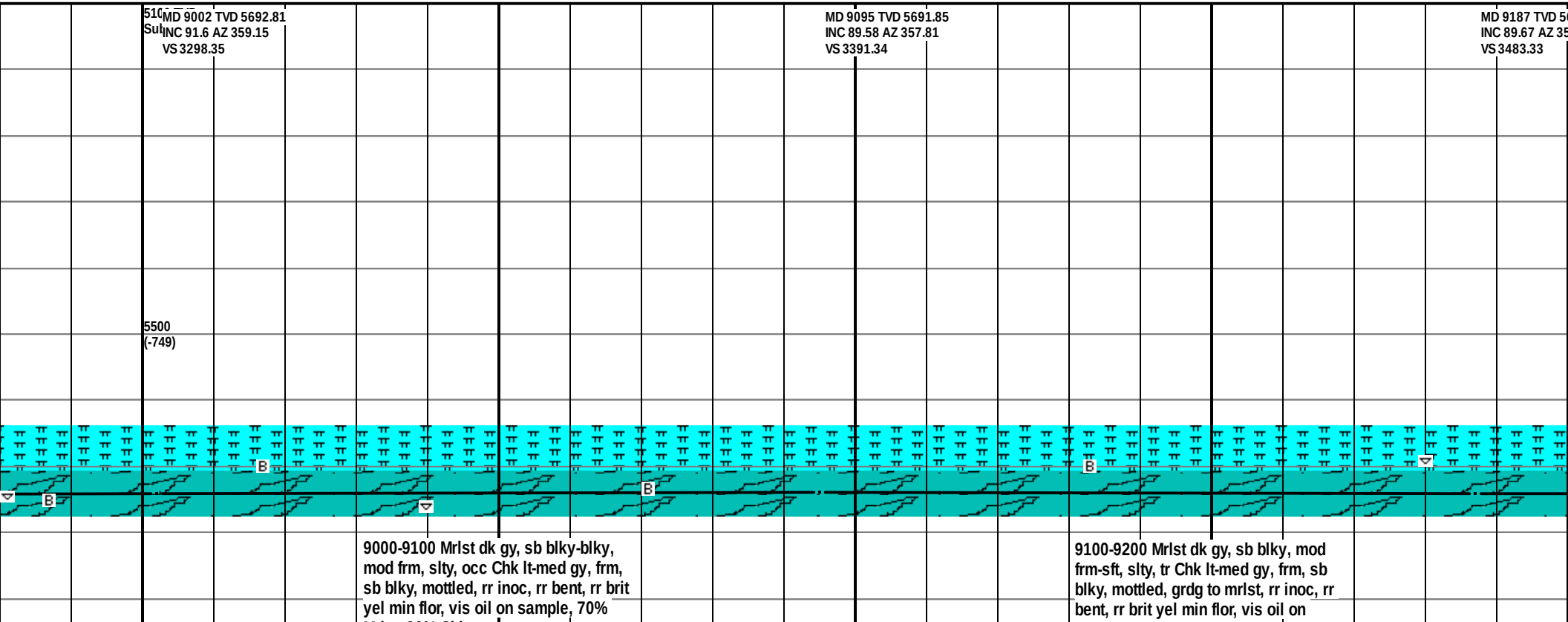
8600-8700 Mrlst dk gy, sb blky-blky,
mod sft, tr Chk lt gy-med gy, blky,
mottled, frm, occ inoc, occ bent, occ
brit yel min flor, rr Pyr, oil on shaker,

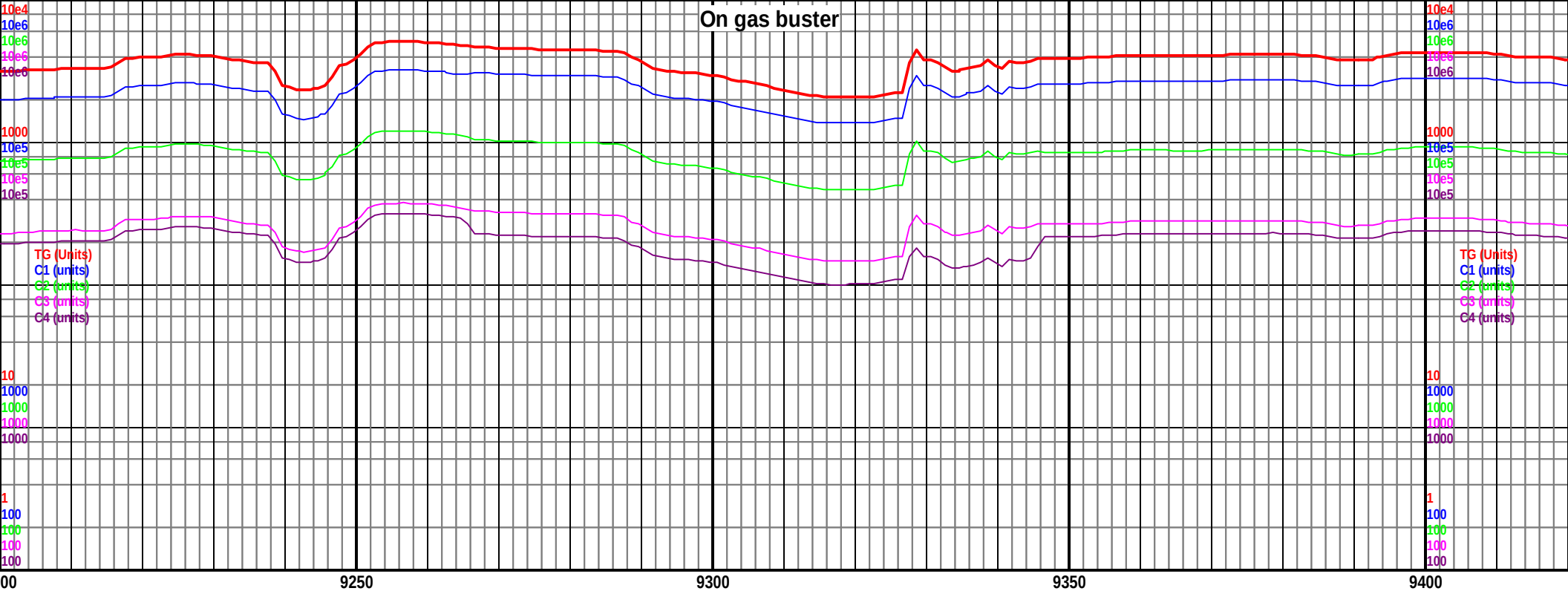
8700-8800 Chk med gy-med g
frm, sb blky, occ Mrlst dk gy,
mod frm, occ inoc frag, rr ben
yel min flor, vis oil flor, 70% C

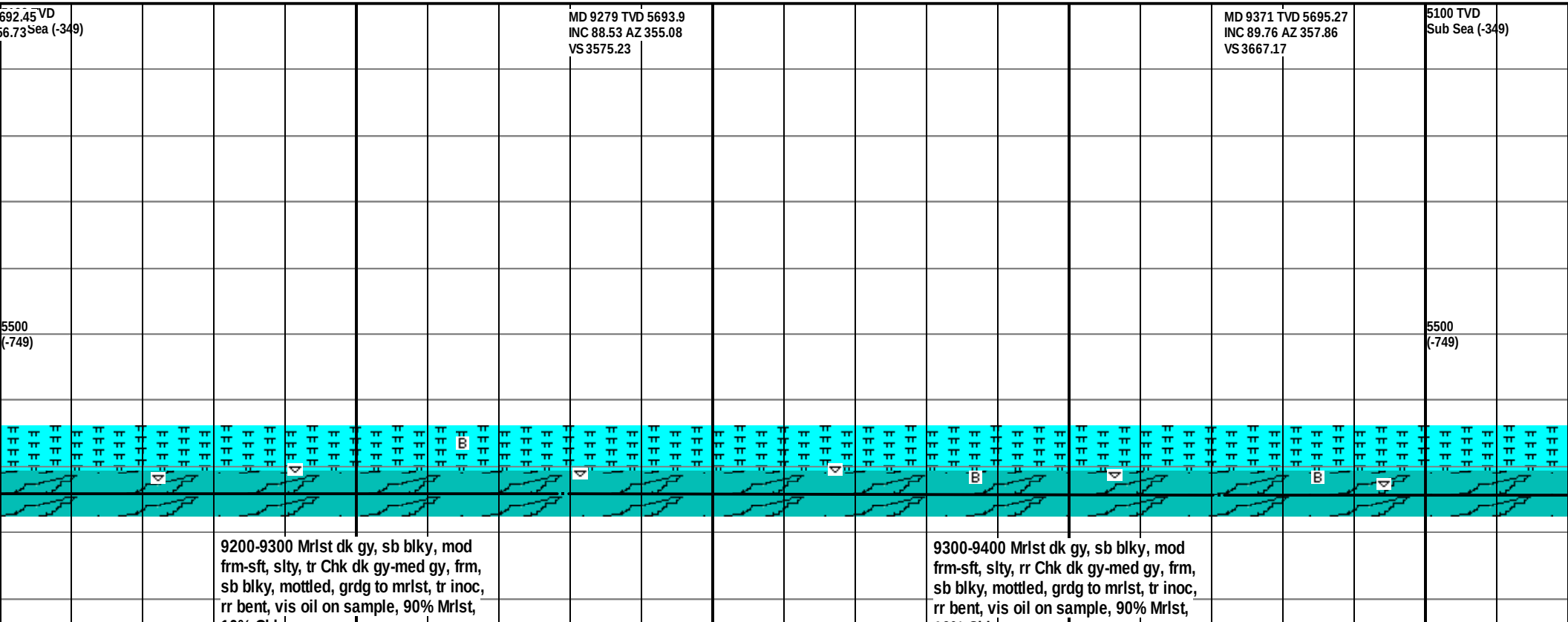

On gas buster
10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
Oil on
8800
8850
8900
8950

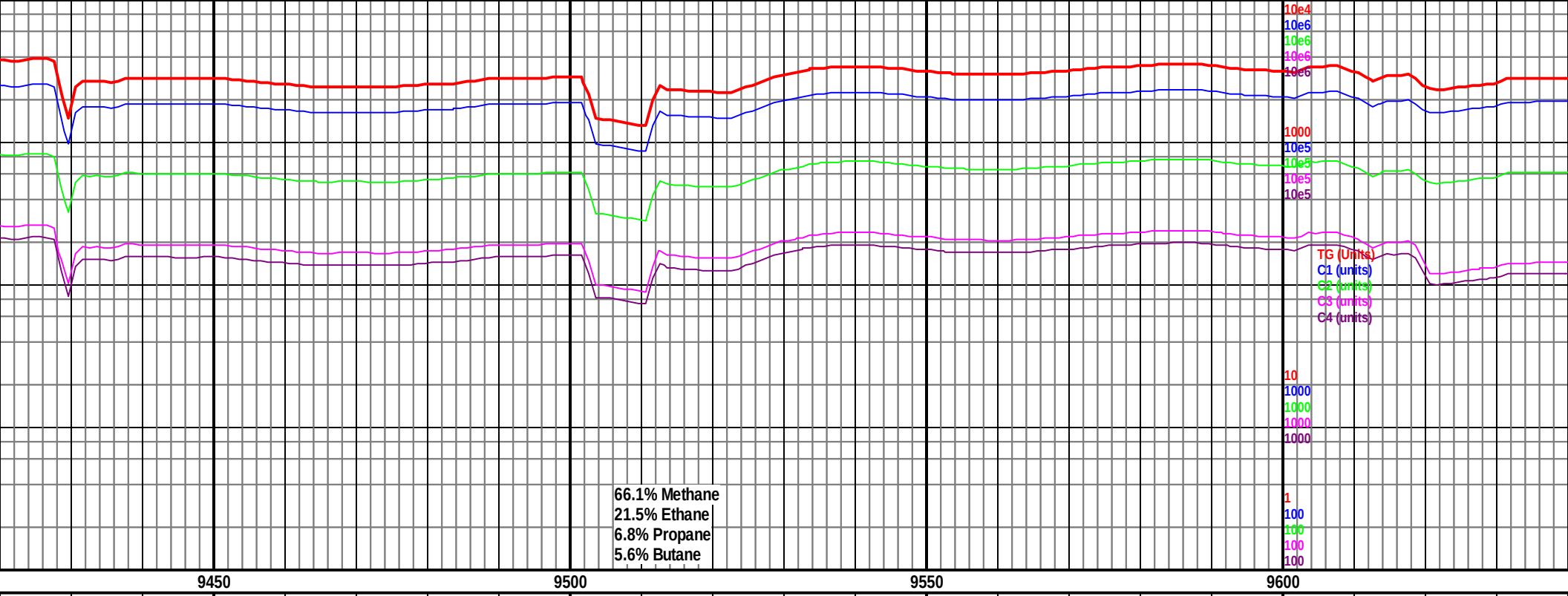

5100 TVD
Sub Sea (-349)
MD 8817 TVD 5696.44
INC 90.15 AZ 359.29
VS 3113.43
MD 8910 TVD 5695.2
INC 91.38 AZ 359.36
VS 3206.4
5500
(-749)
B
B
B
y brn,
sb blky,
t, rr brit
hk, 30%
8800-8900 Chk med gy-med gy brn, frm, sb blky, occ Mrlst dk gy, sb blky, mod frm, occ inoc frag, rr bent, rr brit yel min flor, vis oil flor, fast oil cut,
8900-9000 Mrlst dk gy, sb blky, mod frm, occ Chk lt-med gy, mod-sl frm, sb blky, occ inco frag, rr bent, rr pyr, rr brit yel min flor, vis oil flor, fast oil cut,

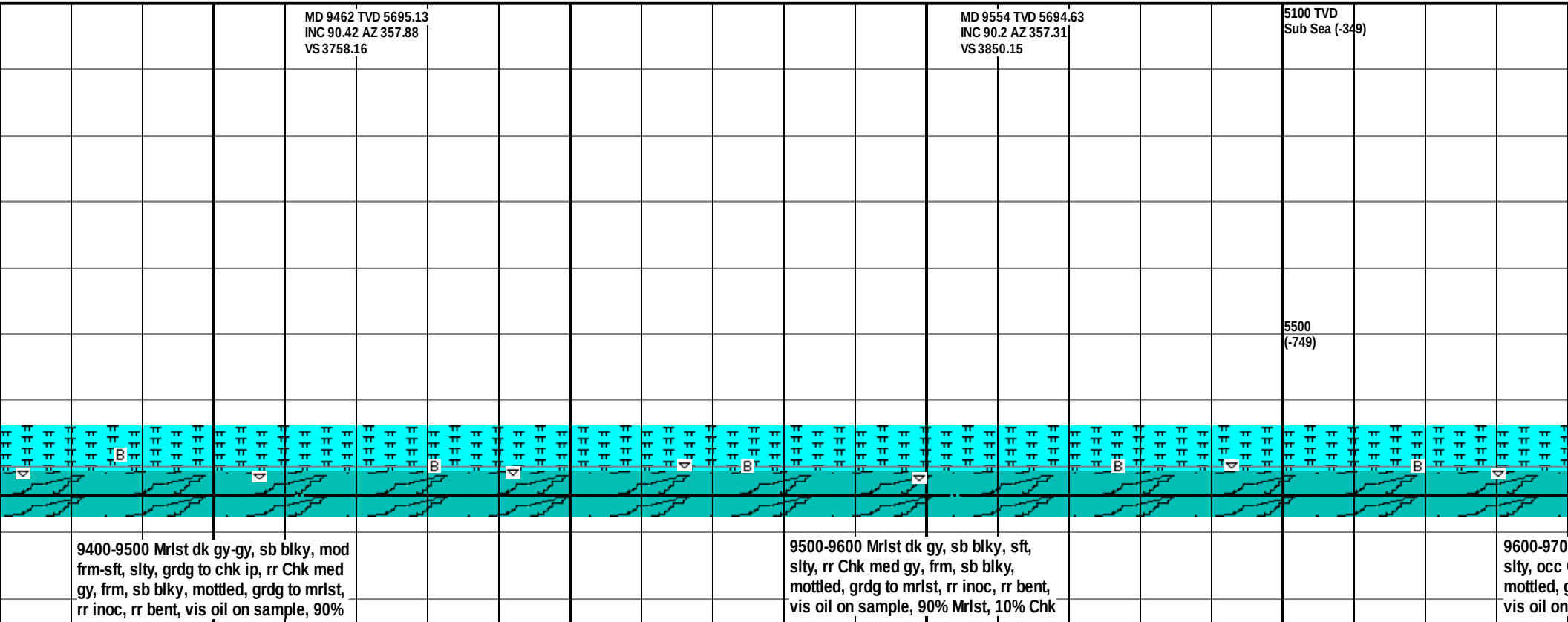

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
shaker
10
1000
1000
1000
1000
1
100
100
100
100
60.7% Methane
23.4% Ethane
9.5% Propane
6.5% Butane
9000
9050
9100
9150
92

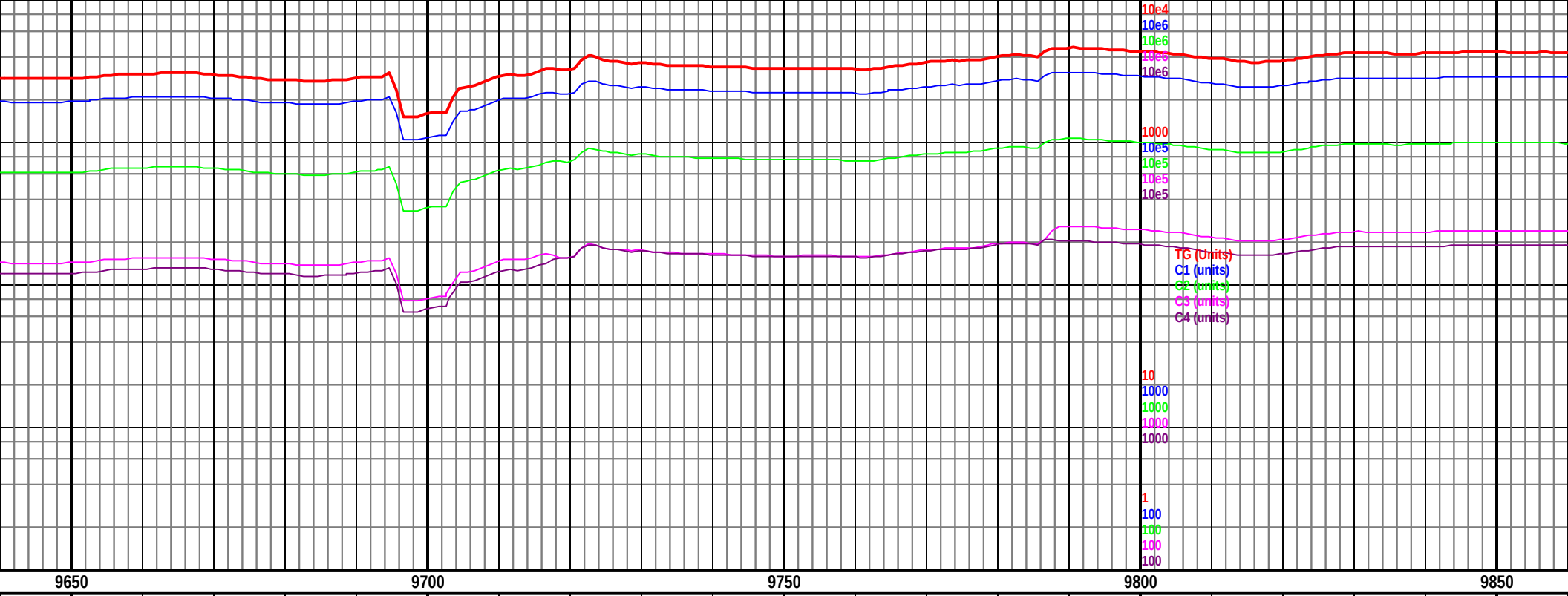

MD 9002 TVD 5692.81
INC 91.6 AZ 359.15
VS 3298.35
MD 9095 TVD 5691.85
INC 89.58 AZ 357.81
VS 3391.34
MD 9187 TVD 5
INC 89.67 AZ 35
VS 3483.33
5500
(-749)
9000-9100 Mrlst dk gy, sb blky-blky, mod frm, slty, occ Chk lt-med gy, frm, sb blky, mottled, rr inoc, rr bent, rr brit yel min flor, vis oil on sample, 70%
9100-9200 Mrlst dk gy, sb blky, mod frm-sft, slty, tr Chk lt-med gy, frm, sb blky, mottled, grdg to mrlst, rr inoc, rr bent, rr brit yel min flor, vis oil on


On gas buster
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
9250
9300
9350
9400


MD 9279 TVD 5693.9
INC 88.53 AZ 355.08
VS 3575.23
MD 9371 TVD 5695.27
INC 89.76 AZ 357.86
VS 3667.17
Sub Sea (-349)
5500
(-749)
9200-9300 Mrlst dk gy, sb blky, mod frm-sft, slty, tr Chk dk gy-med gy, frm, sb blky, mottled, grdg to mrlst, tr inoc, rr bent, vis oil on sample, 90% Mrlst,
9300-9400 Mrlst dk gy, sb blky, mod frm-sft, slty, rr Chk dk gy-med gy, frm, sb blky, mottled, grdg to mrlst, tr inoc, rr bent, vis oil on sample, 90% Mrlst,


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
66.1% Methane
21.5% Ethane
6.8% Propane
5.6% Butane
9450
9500
9550
9600


MD 9462 TVD 5695.13
INC 90.42 AZ 357.88
VS 3758.16
MD 9554 TVD 5694.63
INC 90.2 AZ 357.31
VS 3850.15
5100 TVD
Sub Sea (-349)
5500
(-749)
9400-9500 Mrlst dk gy-gy, sb blky, mod frm-sft, slty, grdg to chk ip, rr Chk med gy, frm, sb blky, mottled, grdg to mrlst, rr inoc, rr bent, vis oil on sample, 90%
9500-9600 Mrlst dk gy, sb blky, sft, slty, rr Chk med gy, frm, sb blky, mottled, grdg to mrlst, rr inoc, rr bent, vis oil on sample, 90% Mrlst, 10% Chk
9600-970
slty, occ
mottled,
vis oil on



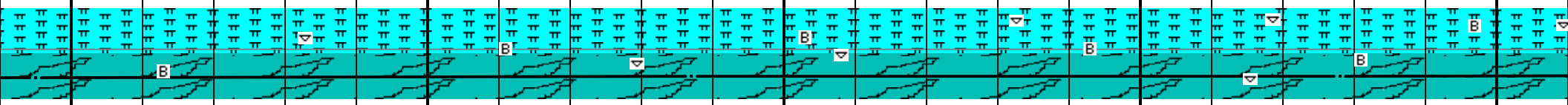
MD 9645 TVD 5694.38
INC 90.11 AZ 355.7
VS 3941.11

MD 9737 TVD 5693.89
INC 90.51 AZ 359.23
VS 4033.08

5100 TVD
Sub Sea (-349)

MD 9828 TVD 5692.94
INC 90.68 AZ 358.8
VS 4124.07

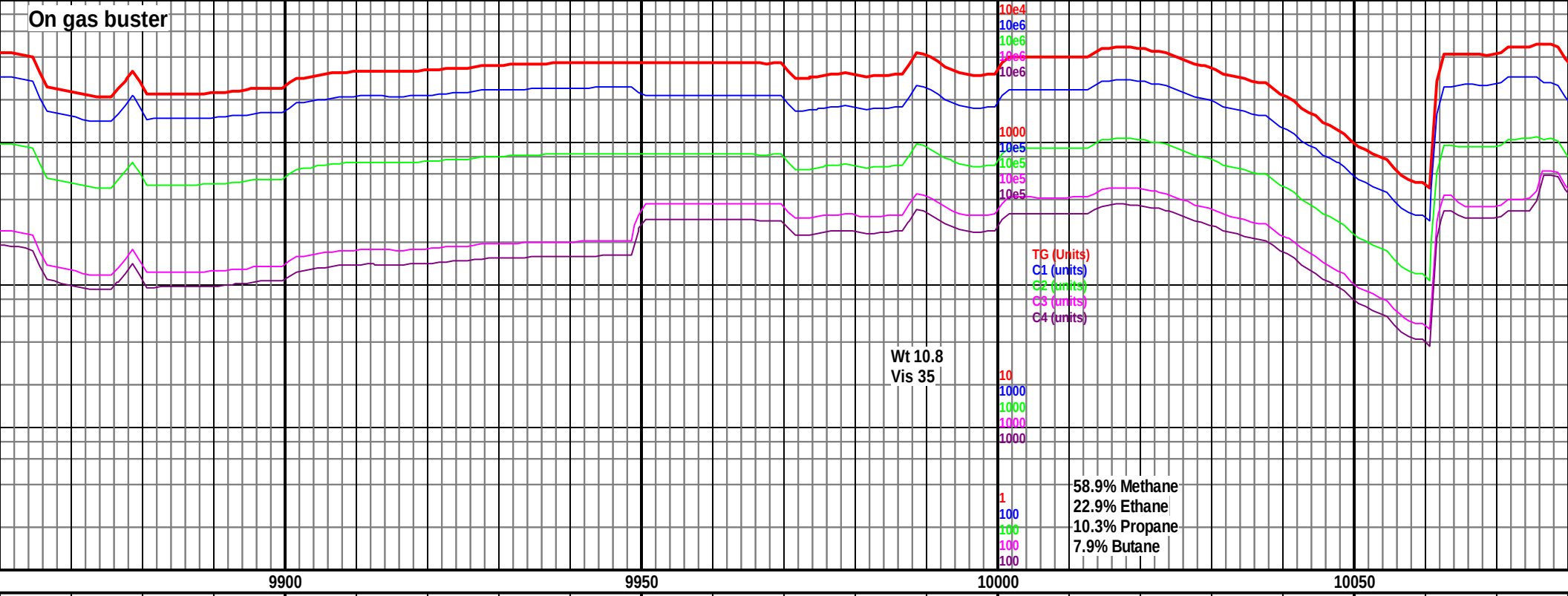
5500
(-749)

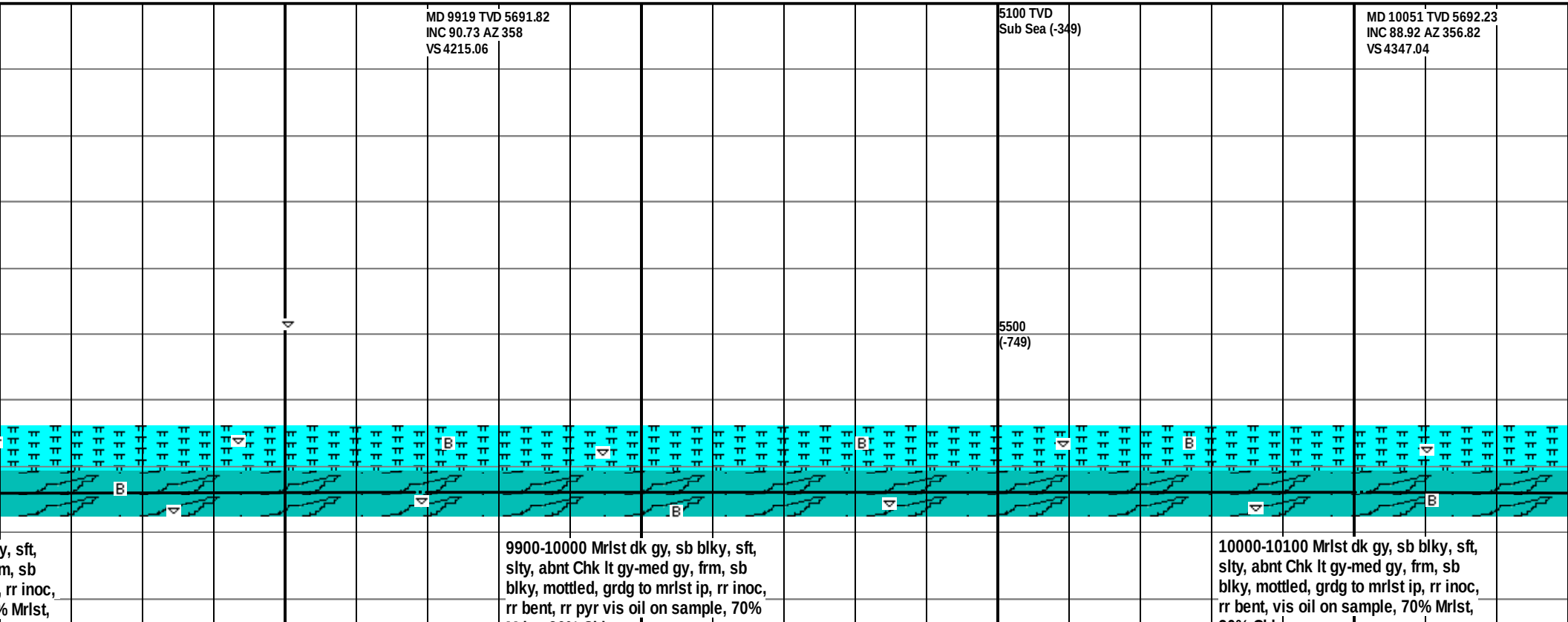


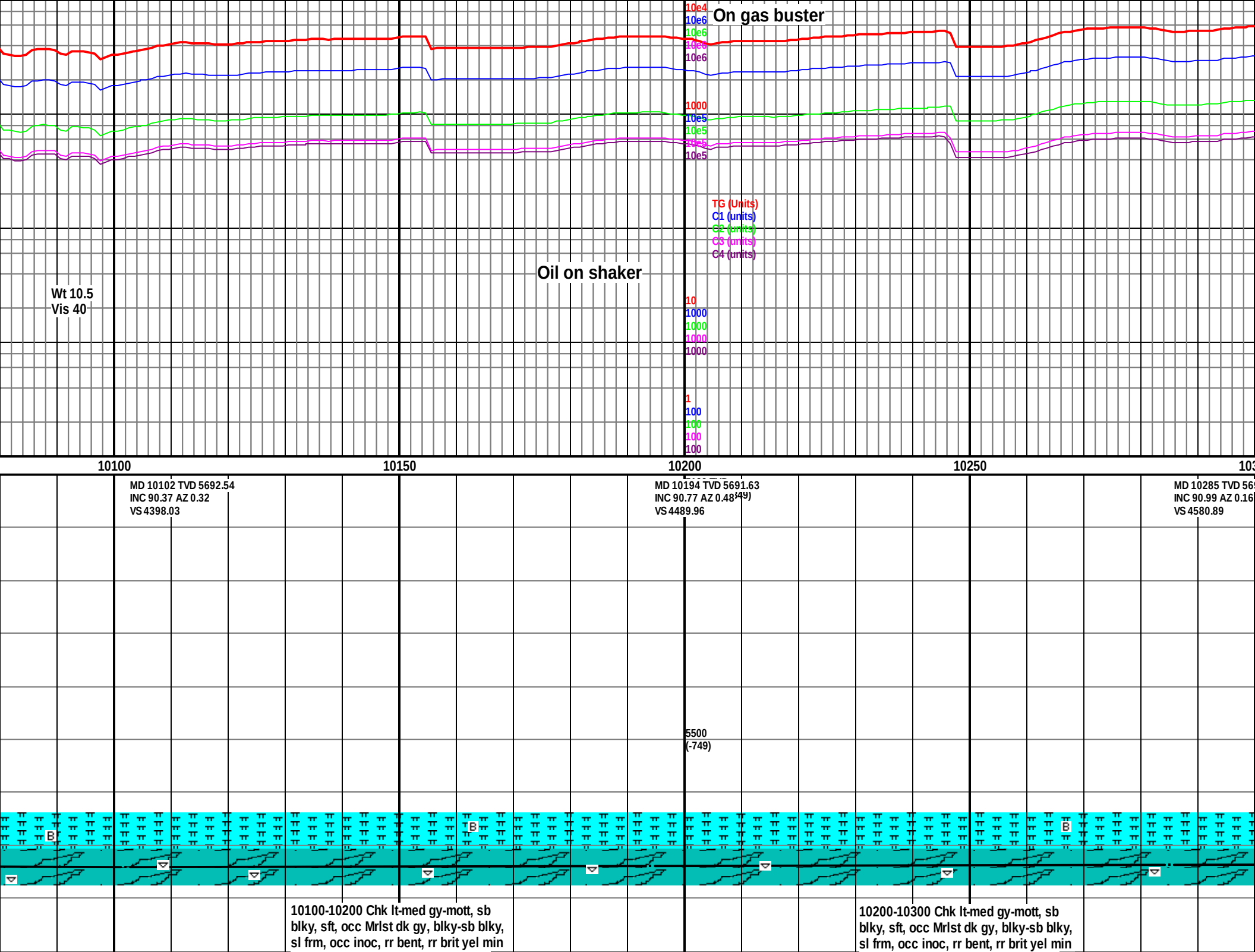
0 Mrlst dk gy, sb blky, sft,
Chk med gy, frm, sb blky,
grdg to mrlst, tr inoc, rr bent,
sample, 70% Mrlst, 30% Chk

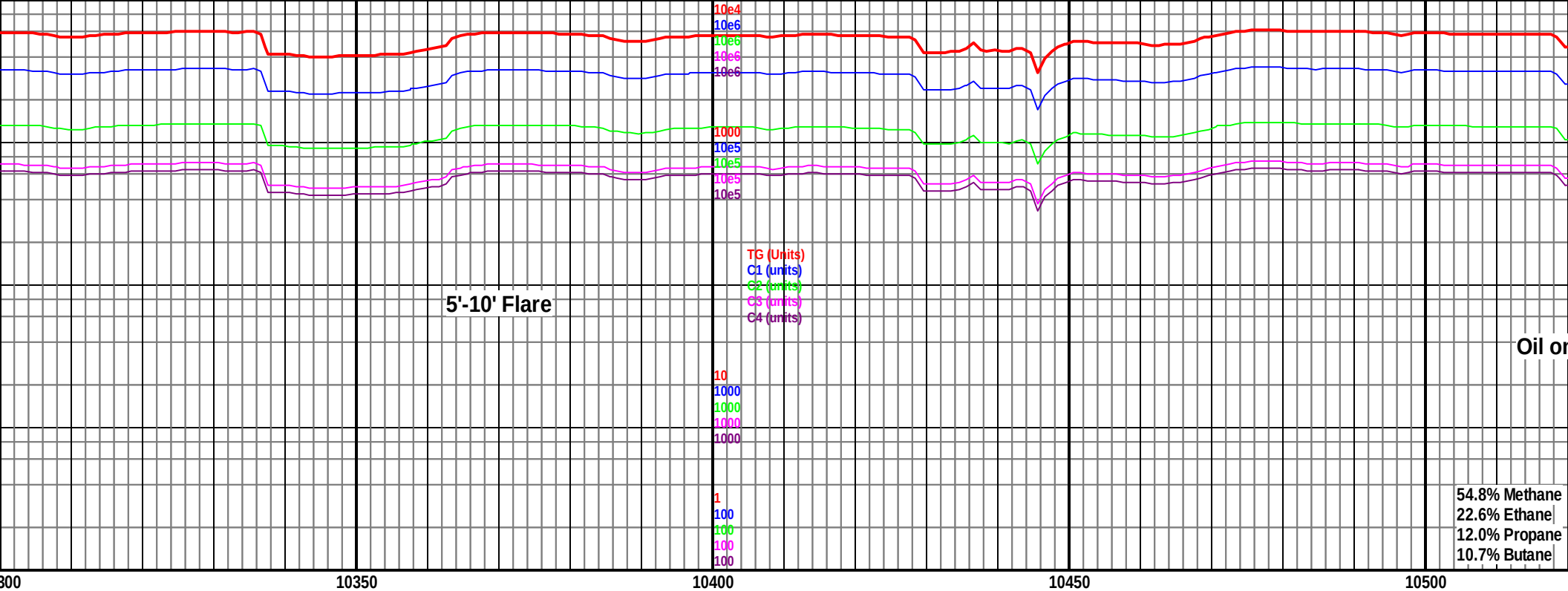
9700-9800 Mrlst dk gy, sb blky, sft,
slty, occ Chk lt gy-med gy, frm, sb blky,
mottled, grdg to mrlst ip, rr inoc, rr
bent, vis oil on sample, 70% Mrlst, 30%

9800-9900 Mrlst dk gy, sb blk
slty, abnt Chk lt gy-med gy, fr
blky, mottled, grdg to mrlst ip,
rr bent, vis oil on sample, 70%


On gas buster
10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
Wt 10.8
Vis 35
10
1000
1000
1000
1000
1
100
100
100
100
58.9% Methane
22.9% Ethane
10.3% Propane
7.9% Butane
9900
9950
10000
10050


MD 9919 TVD 5691.82
INC 90.73 AZ 358
VS 4215.06
5100 TVD
Sub Sea (-349)
MD 10051 TVD 5692.23
INC 88.92 AZ 356.82
VS 4347.04
5500
(-749)
B
B
B
B
B
y, sft,
m, sb
, rr inoc,
% Mrlst,
9900-10000 Mrlst dk gy, sb blky, sft, slty, abnt Chk lt gy-med gy, frm, sb blky, mottled, grdg to mrlst ip, rr inoc, rr bent, rr pyr vis oil on sample, 70%
10000-10100 Mrlst dk gy, sb blky, sft, slty, abnt Chk lt gy-med gy, frm, sb blky, mottled, grdg to mrlst ip, rr inoc, rr bent, vis oil on sample, 70% Mrlst,


On gas buster
Oil on shaker
Wt 10.5
Vis 40
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
10
1000
1000
1000
1000
1
100
100
100
100
10100
10150
10200
10250
MD 10102 TVD 5692.54
INC 90.37 AZ 0.32
VS 4398.03
MD 10194 TVD 5691.63
INC 90.77 AZ 0.48
VS 4489.96
MD 10285 TVD 569
INC 90.99 AZ 0.16
VS 4580.89
5500
(-749)
10100-10200 Chk lt-med gy-mott, sb blky, sft, occ Mrlst dk gy, blky-sb blky, sl frm, occ inoc, rr bent, rr brit yel min flor, fast oil cut, 80% Chk, 20% Mrlst
10200-10300 Chk lt-med gy-mott, sb blky, sft, occ Mrlst dk gy, blky-sb blky, sl frm, occ inoc, rr bent, rr brit yel min flor, fast oil cut, 70% Chk, 30% Mrlst



300 10350 10400 10450 10500

90.23

MD 10377 TVD 5688.25
INC 91.47 AZ 0.18
VS 4672.82

5100 TVD
Sub Sea (-349)

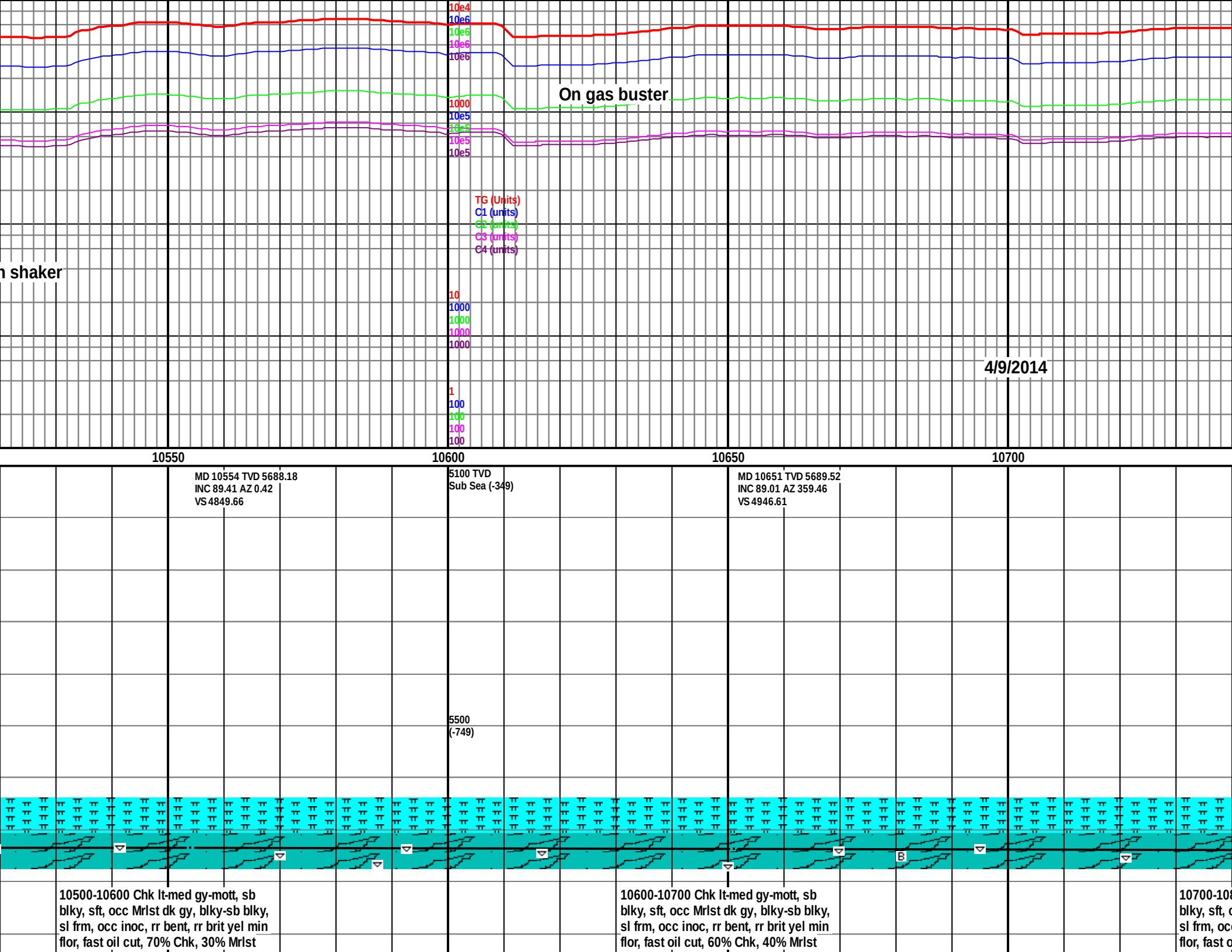
MD 10468 TVD 5687.42
INC 89.58 AZ 0.82
VS 4763.74

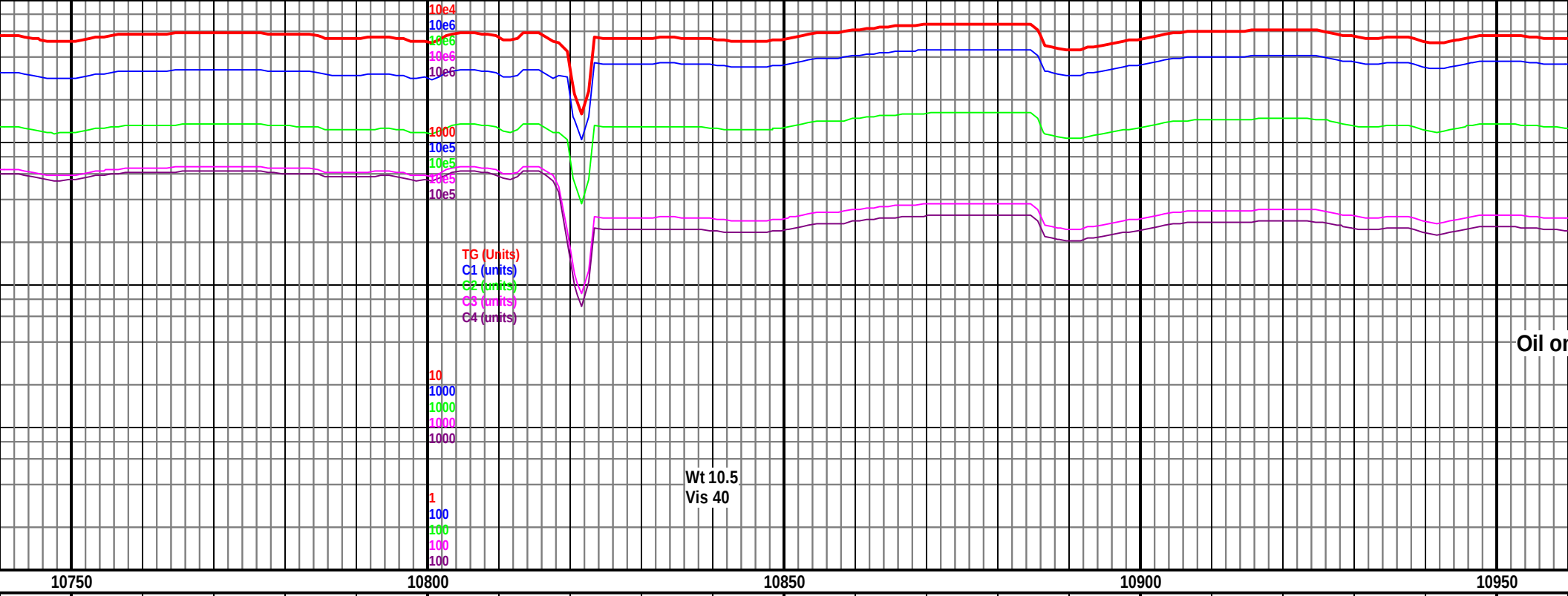
5500
(-749)

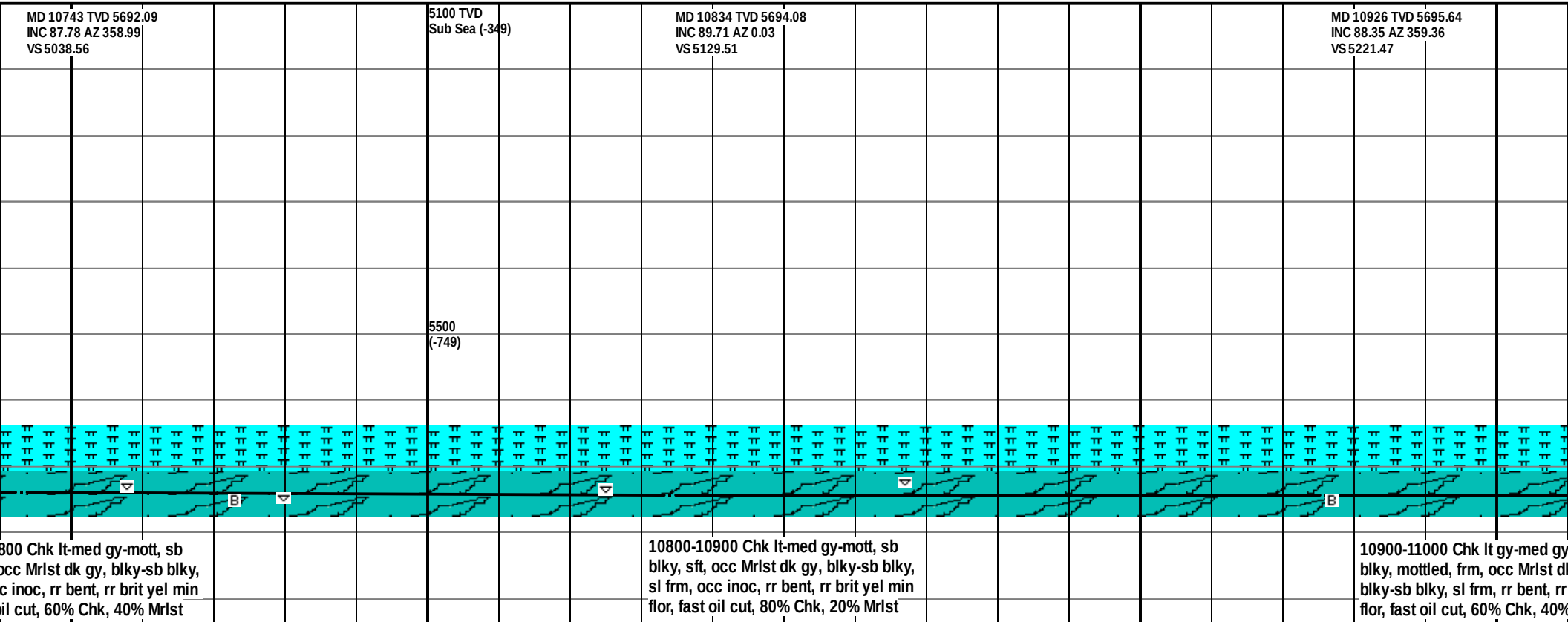
B

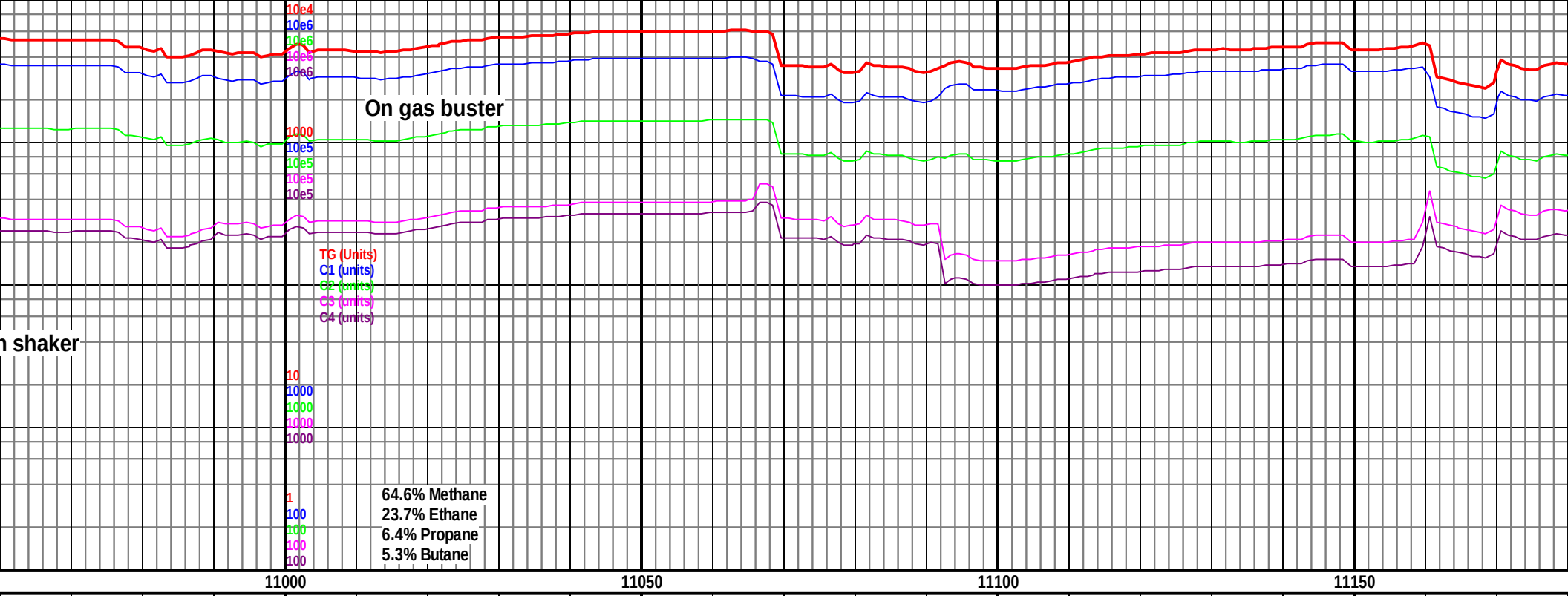
10300-10400 Chk lt-med gy-mott, sb blky, sft, occ Mrlst dk gy, blky-sb blky, sl frm, occ inoc, rr bent, rr brit yel min flor, fast oil cut, 70% Chk, 30% Mrlst

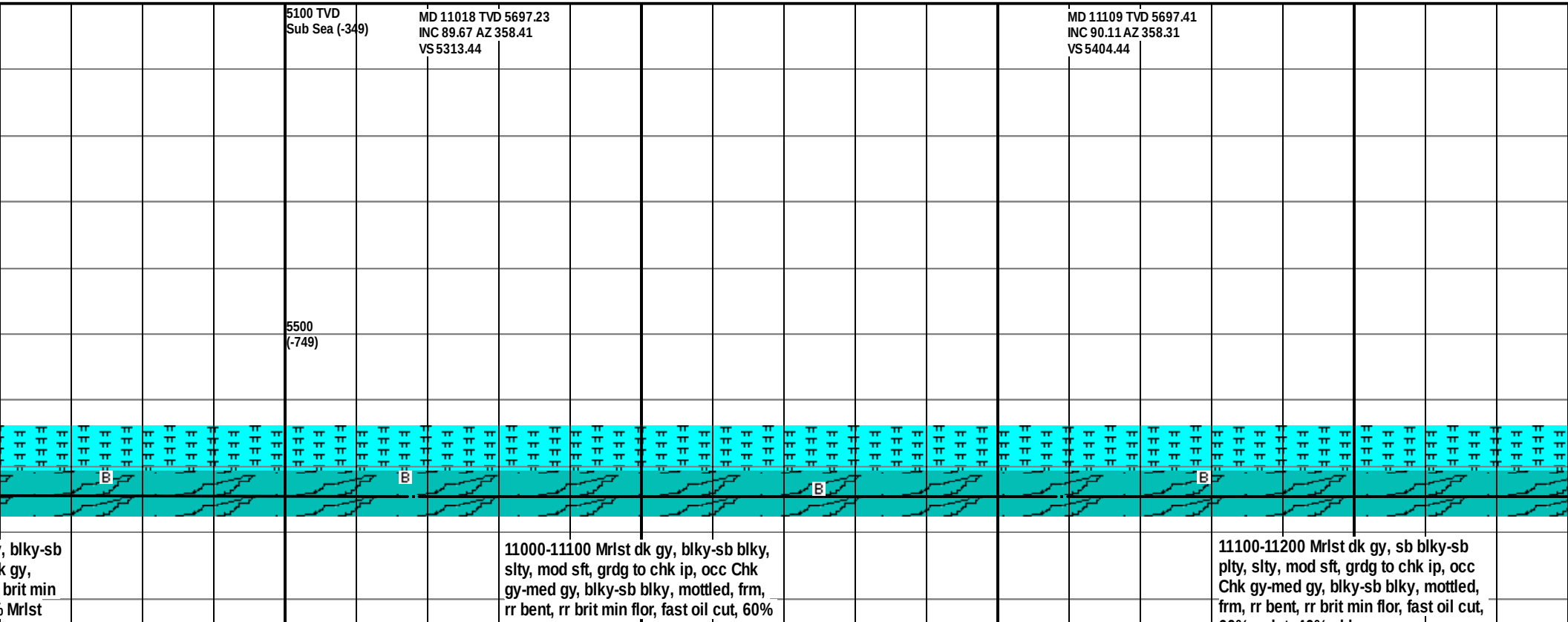
10400-10500 Chk lt-med gy-mott, sb blky, sft, occ Mrlst dk gy, blky-sb blky, sl frm, rr inoc, rr bent, rr brit yel min flor, fast oil cut, 80% Chk, 20% Mrlst

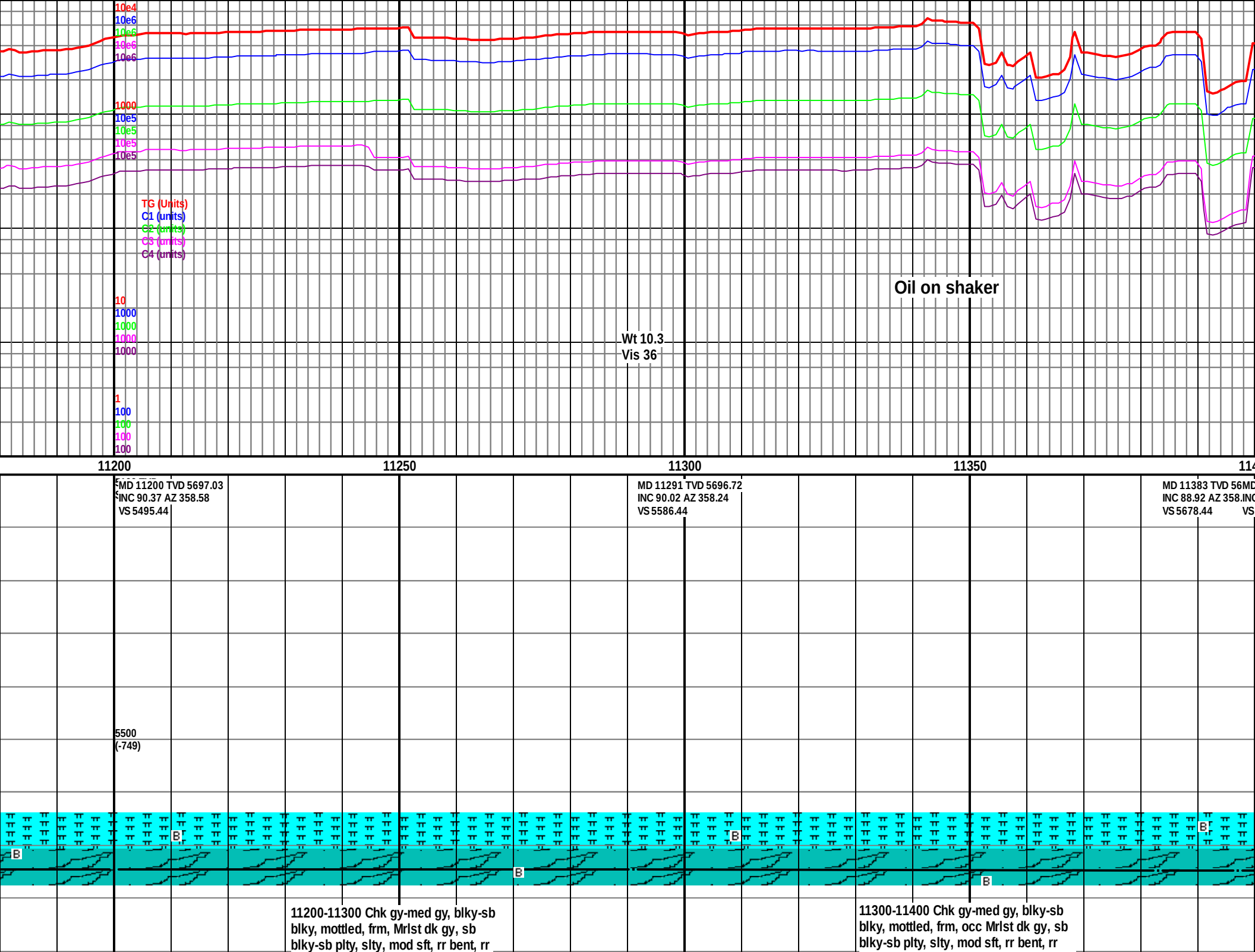

10e4
10e6
10e6
10e6
10e6
On gas buster
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
n shaker
10
1000
1000
1000
1000
4/9/2014
1
100
100
100
100
10550
10600
10650
10700
MD 10554 TVD 5688.18
INC 89.41 AZ 0.42
VS 4849.66
5100 TVD
Sub Sea (-349)
MD 10651 TVD 5689.52
INC 89.01 AZ 359.46
VS 4946.61
5500
(-749)
B
10500-10600 Chk lt-med gy-mott, sb blky, sft, occ Mrlst dk gy, blky-sb blky, sl frm, occ inoc, rr bent, rr brit yel min flor, fast oil cut, 70% Chk, 30% Mrlst
10600-10700 Chk lt-med gy-mott, sb blky, sft, occ Mrlst dk gy, blky-sb blky, sl frm, occ inoc, rr bent, rr brit yel min flor, fast oil cut, 60% Chk, 40% Mrlst

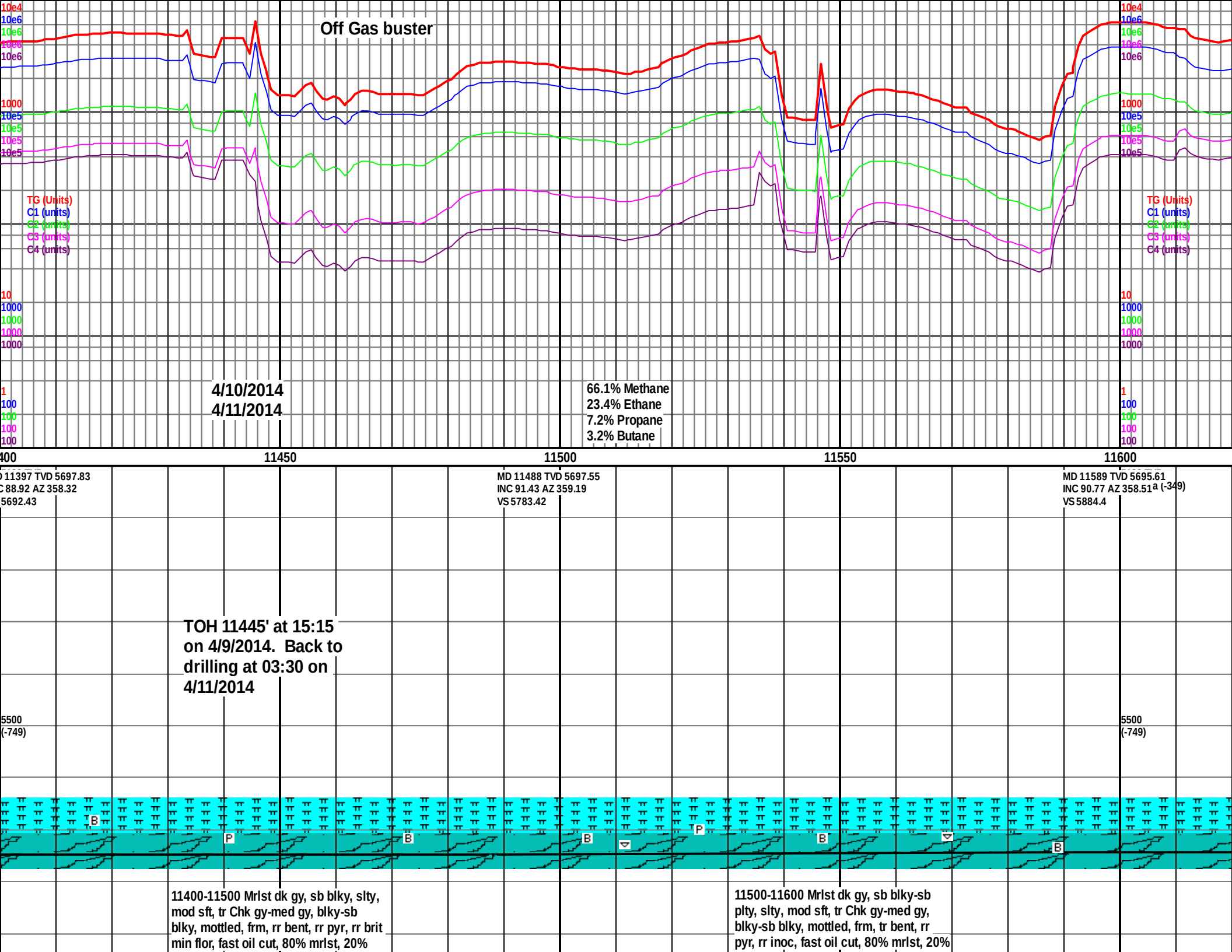

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
Wt 10.5
Vis 40
Oil or
10750
10800
10850
10900
10950

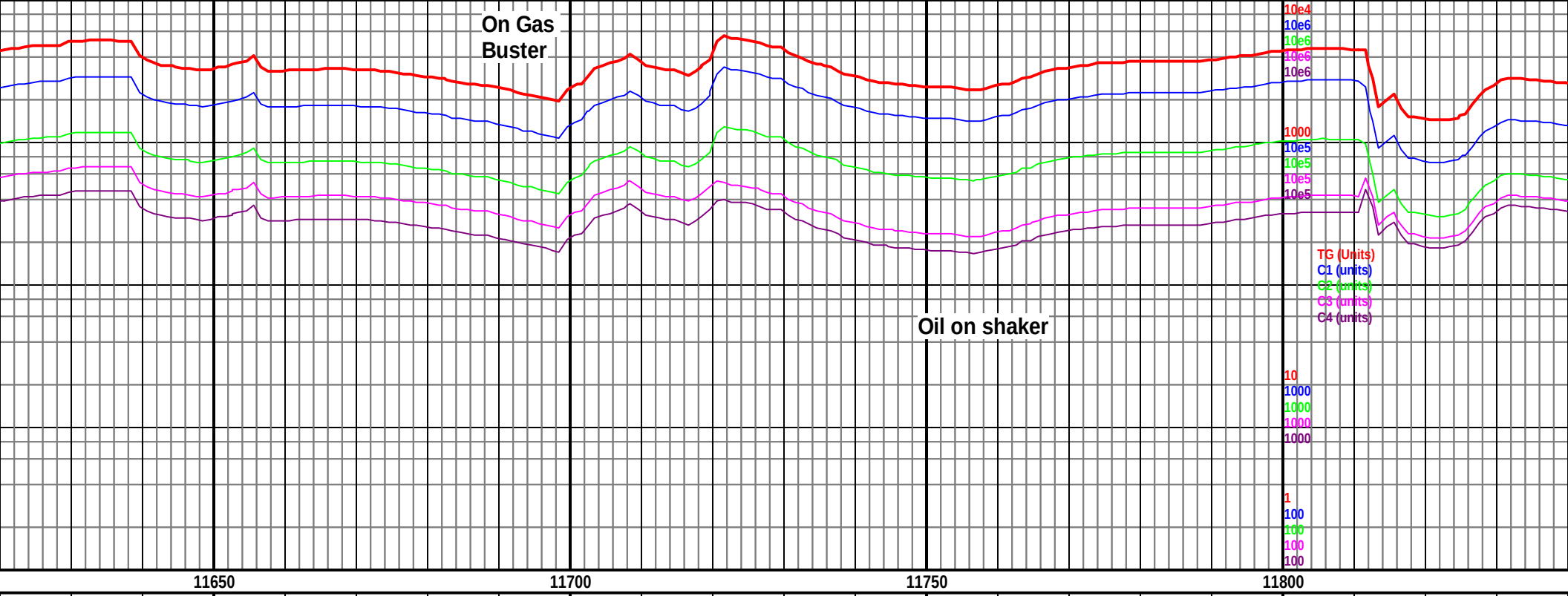

MD 10743 TVD 5692.09
INC 87.78 AZ 358.99
VS 5038.56
5100 TVD
Sub Sea (-349)
MD 10834 TVD 5694.08
INC 89.71 AZ 0.03
VS 5129.51
MD 10926 TVD 5695.64
INC 88.35 AZ 359.36
VS 5221.47
5500
(-749)
B
B
800 Chk lt-med gy-mott, sb
cc Mrlst dk gy, blky-sb blky,
c inoc, rr bent, rr brit yel min
il cut, 60% Chk, 40% Mrlst
10800-10900 Chk lt-med gy-mott, sb
blky, sft, occ Mrlst dk gy, blky-sb blky,
sl frm, occ inoc, rr bent, rr brit yel min
flor, fast oil cut, 80% Chk, 20% Mrlst
10900-11000 Chk lt gy-med gy
blky, mottled, frm, occ Mrlst dk
blky-sb blky, sl frm, rr bent, rr
flor, fast oil cut, 60% Chk, 40%

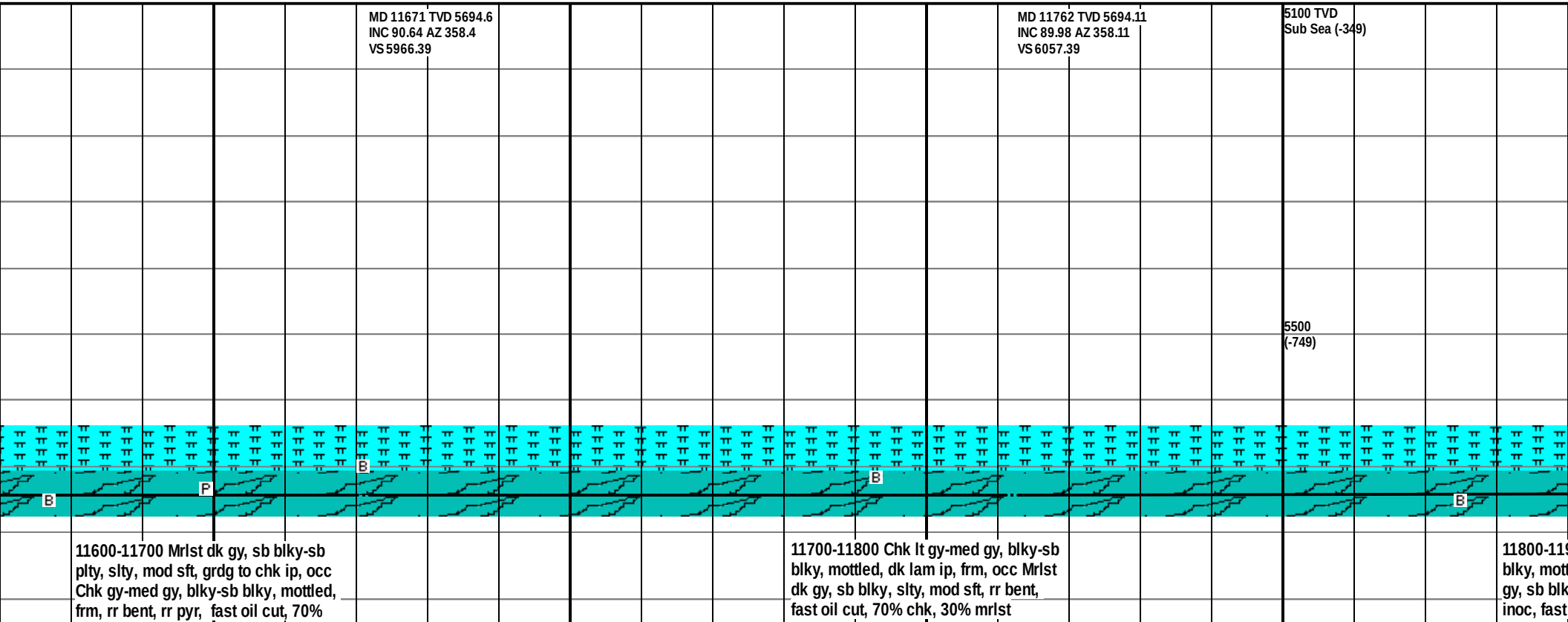

10e4
10e6
10e6
10e5
10e6
On gas buster
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
n shaker
10
1000
1000
1000
1000
1
100
100
100
100
64.6% Methane
23.7% Ethane
6.4% Propane
5.3% Butane
11000
11050
11100
11150

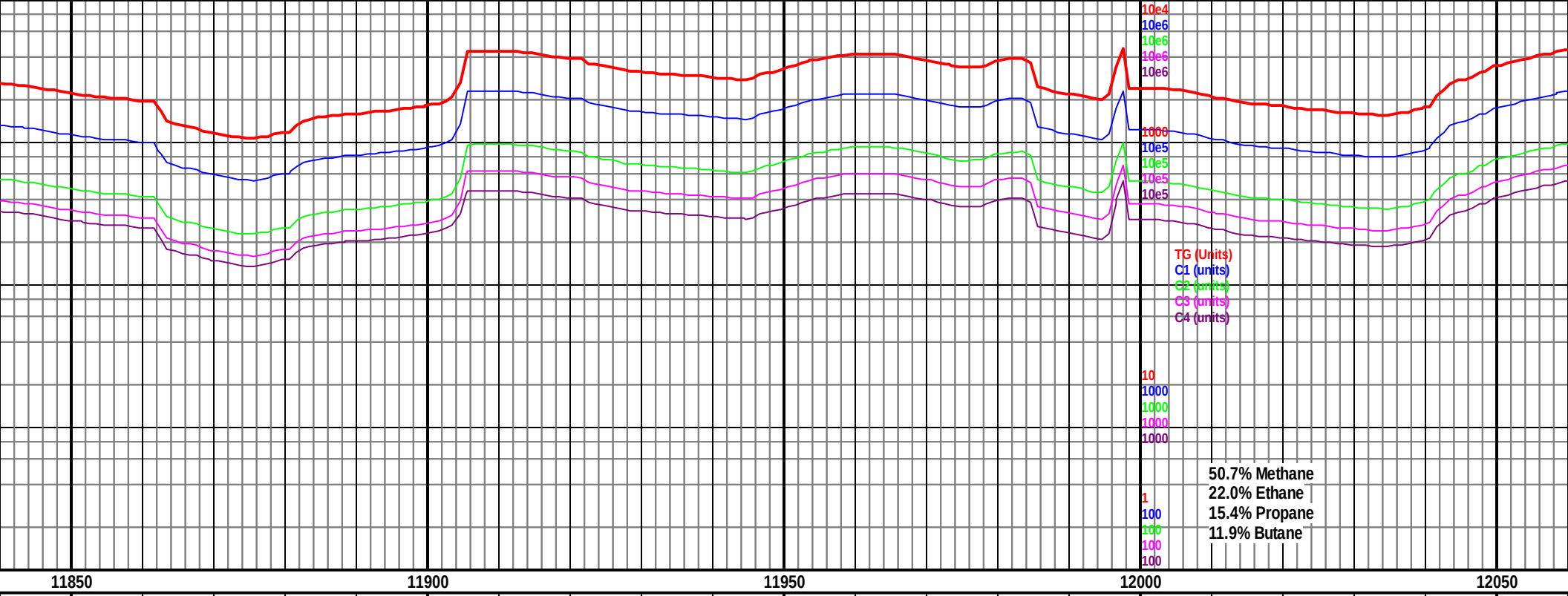

5100 TVD
Sub Sea (-349)
MD 11018 TVD 5697.23
INC 89.67 AZ 358.41
VS 5313.44
MD 11109 TVD 5697.41
INC 90.11 AZ 358.31
VS 5404.44
5500
(-749)
B
B
B
B
, blky-sb
k gy,
brit min
Mrlst
11000-11100 Mrlst dk gy, blky-sb blky, slty, mod sft, grdg to chk ip, occ Chk gy-med gy, blky-sb blky, mottled, frm, rr bent, rr brit min flor, fast oil cut, 60%
11100-11200 Mrlst dk gy, sb blky-sb plty, slty, mod sft, grdg to chk ip, occ Chk gy-med gy, blky-sb blky, mottled, frm, rr bent, rr brit min flor, fast oil cut,

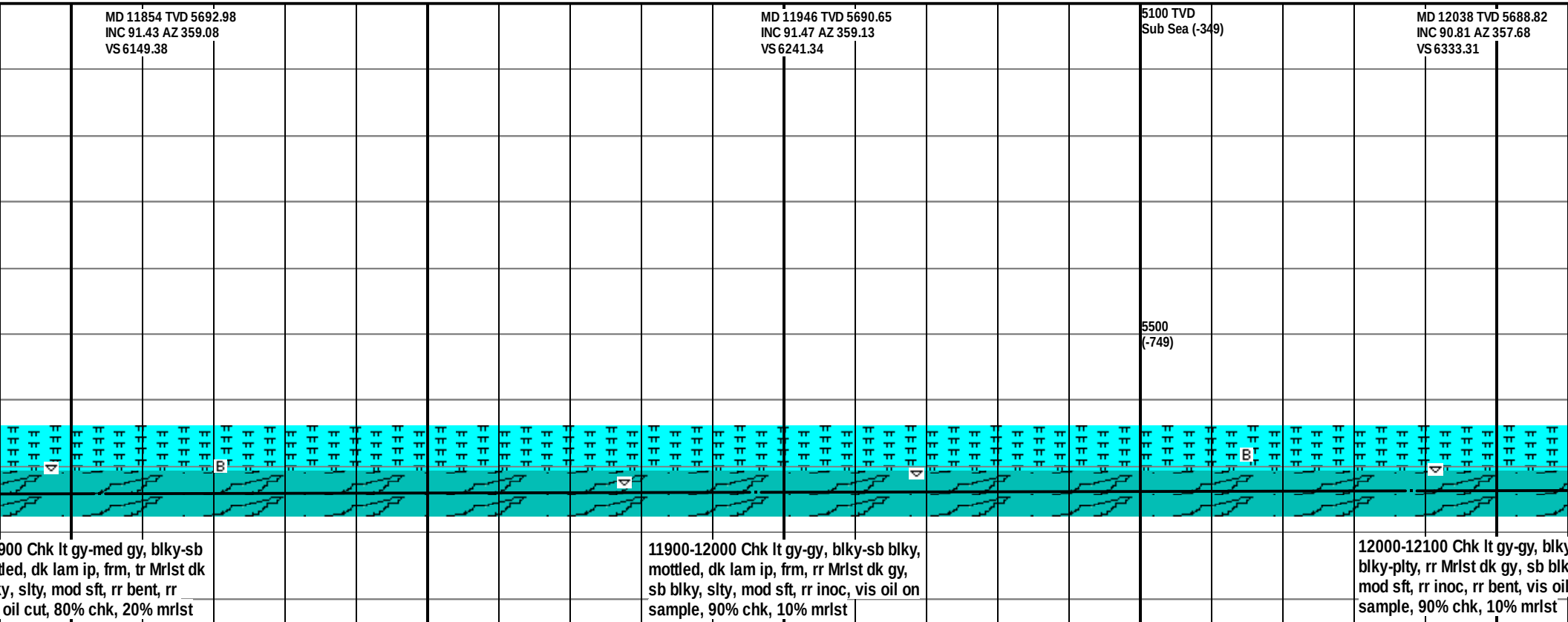

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
Oil on shaker
Wt 10.3
Vis 36
11200
11250
11300
11350
MD 11200 TVD 5697.03
INC 90.37 AZ 358.58
VS 5495.44
MD 11291 TVD 5696.72
INC 90.02 AZ 358.24
VS 5586.44
MD 11383 TVD 56MD
INC 88.92 AZ 358.INC
VS 5678.44
VS
5500
(-749)
B
B
B
B
B
11200-11300 Chk gy-med gy, blky-sb blky, mottled, frm, Mrlst dk gy, sb blky-sb plty, slty, mod sft, rr bent, rr brit min flor, fast oil cut, 70% chk, 30%
11300-11400 Chk gy-med gy, blky-sb blky, mottled, frm, occ Mrlst dk gy, sb blky-sb plty, slty, mod sft, rr bent, rr brit min flor, fast oil cut, 60% chk, 40%

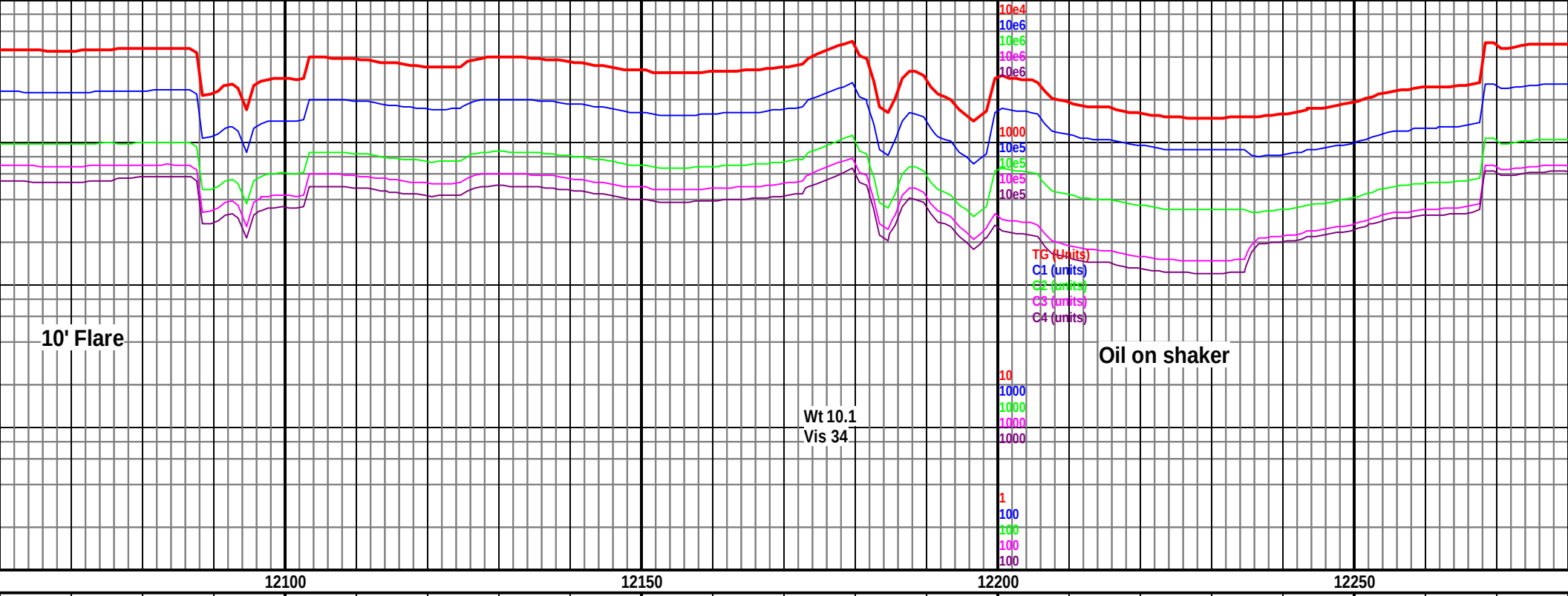

Off Gas buster
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
4/10/2014
4/11/2014
66.1% Methane
23.4% Ethane
7.2% Propane
3.2% Butane
11450
11500
11550
11600
MD 11488 TVD 5697.55
INC 91.43 AZ 359.19
VS 5783.42
MD 11589 TVD 5695.61
INC 90.77 AZ 358.51
VS 5884.4
TOH 11445' at 15:15 on 4/9/2014. Back to drilling at 03:30 on 4/11/2014
11400-11500 Mrlst dk gy, sb blky, slty, mod sft, tr Chk gy-med gy, blky-sb blky, mottled, frm, rr bent, rr pyr, rr brit min flor, fast oil cut, 80% mrlst, 20%
11500-11600 Mrlst dk gy, sb blky-sb plty, slty, mod sft, tr Chk gy-med gy, blky-sb blky, mottled, frm, tr bent, rr pyr, rr inoc, fast oil cut, 80% mrlst, 20%

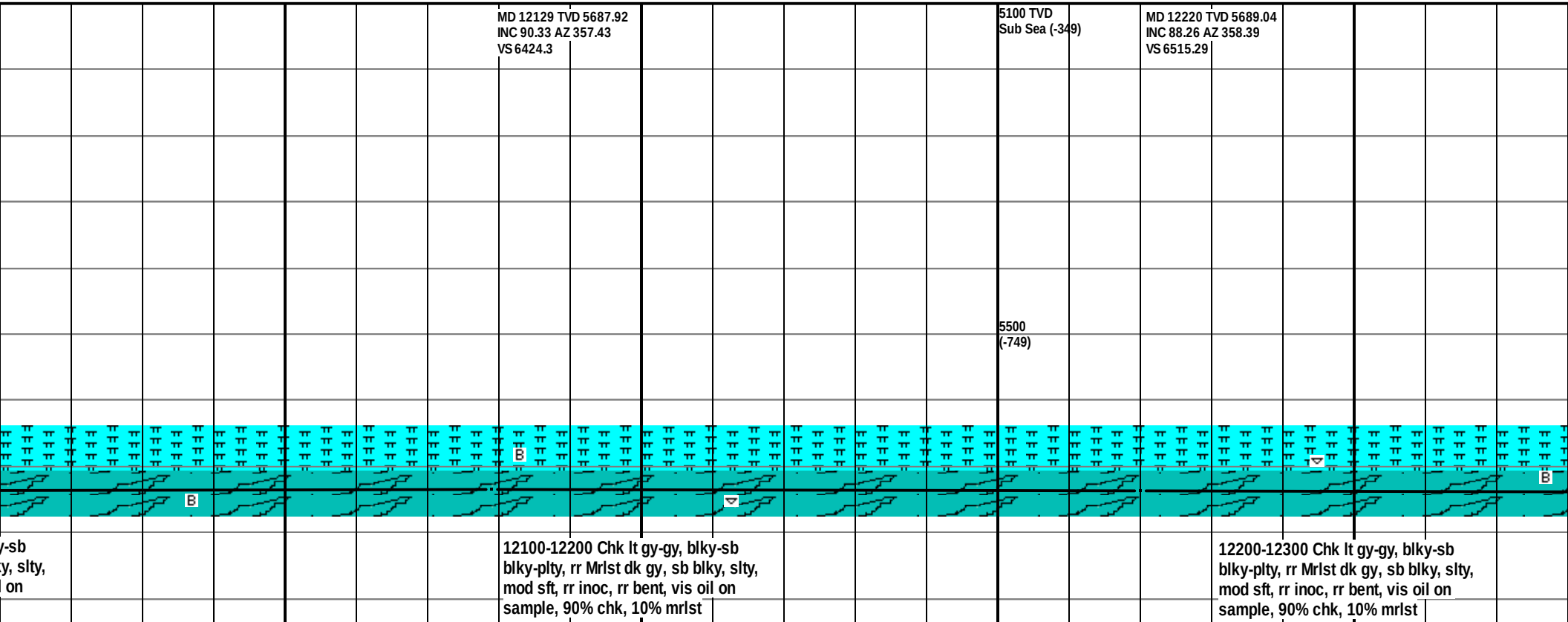

On Gas Buster
Oil on shaker
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
10
1000
1000
1000
1000
1
100
100
100
100
11650
11700
11750
11800

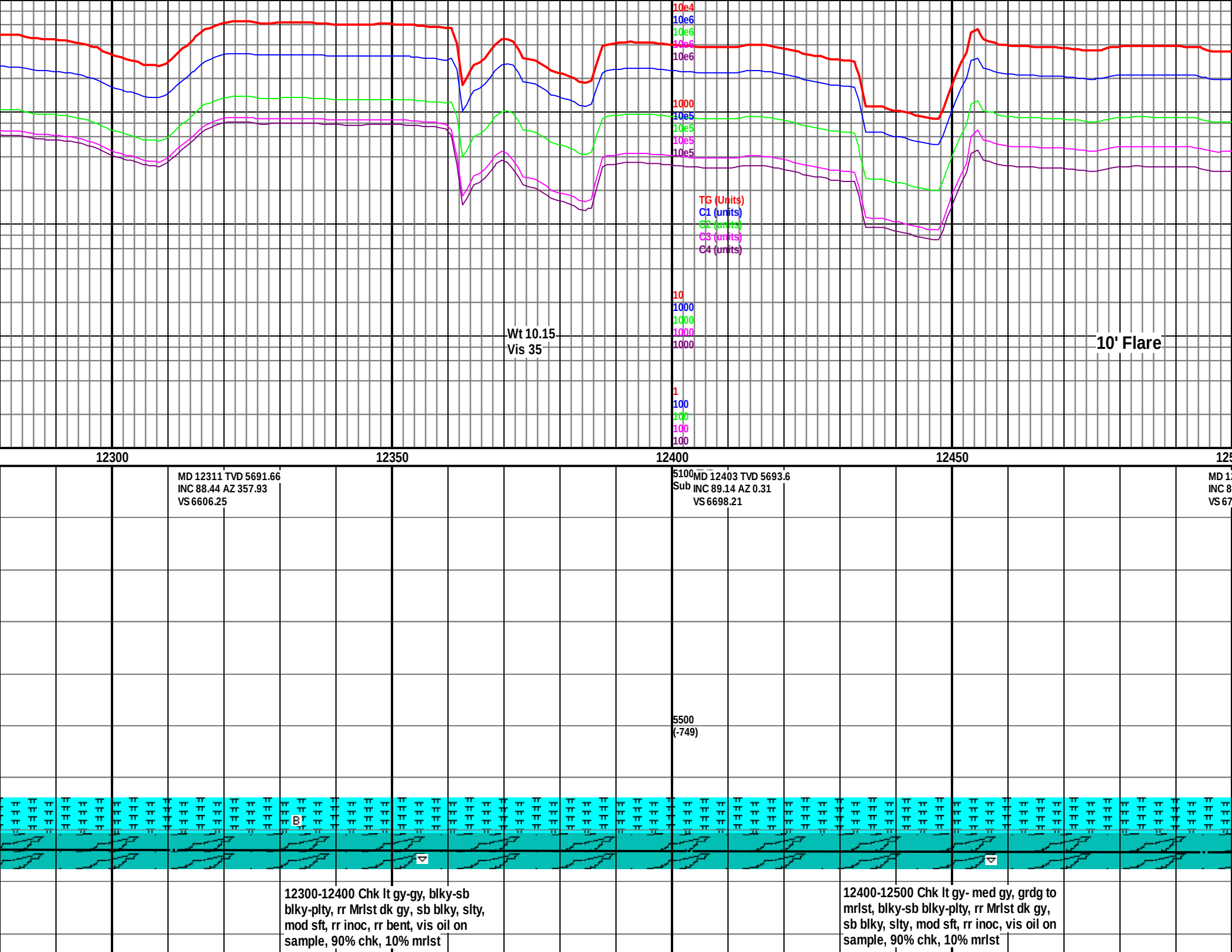

MD 11671 TVD 5694.6
INC 90.64 AZ 358.4
VS 5966.39
MD 11762 TVD 5694.11
INC 89.98 AZ 358.11
VS 6057.39
5100 TVD
Sub Sea (-349)
5500
(-749)
B
P
B
B
B
11600-11700 Mrlst dk gy, sb blky-sb plty, slty, mod sft, grdg to chk ip, occ Chk gy-med gy, blky-sb blky, mottled, frm, rr bent, rr pyr, fast oil cut, 70%
11700-11800 Chk lt gy-med gy, blky-sb blky, mottled, dk lam ip, frm, occ Mrlst dk gy, sb blky, slty, mod sft, rr bent, fast oil cut, 70% chk, 30% mrlst
11800-119
blky, mott
gy, sb blk
inoc, fast

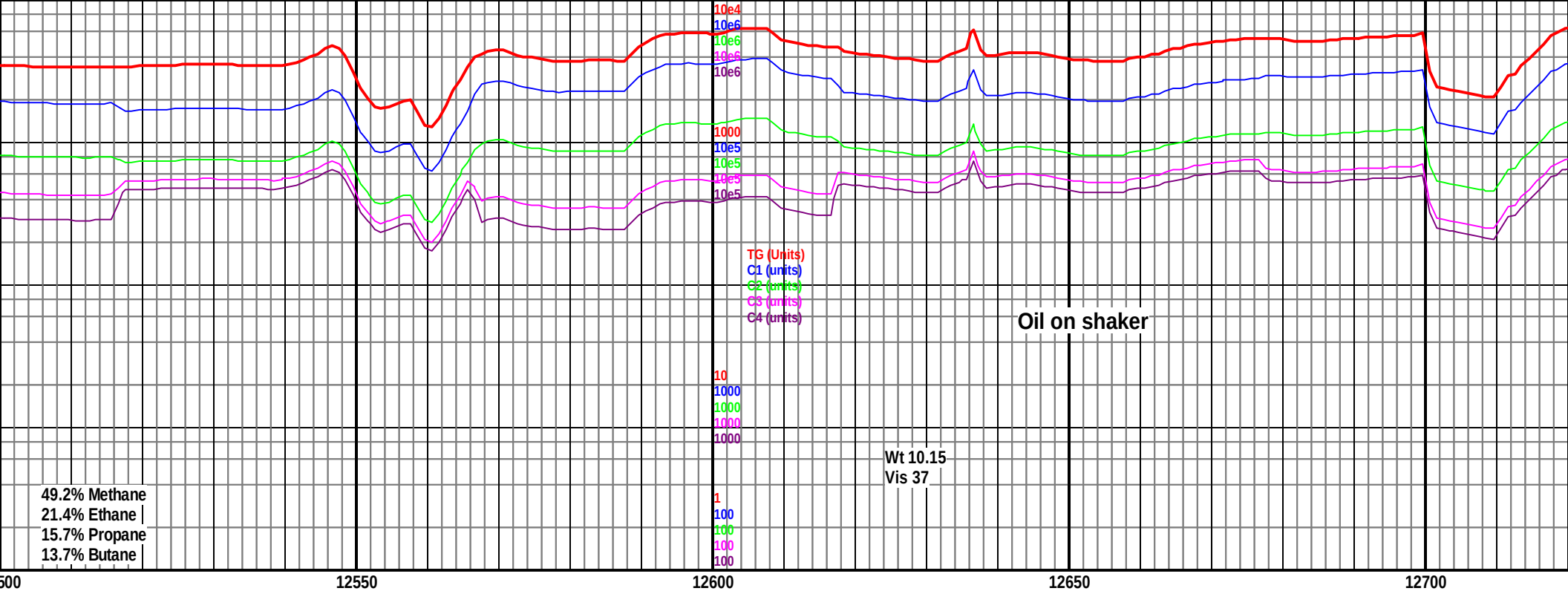

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
50.7% Methane
22.0% Ethane
15.4% Propane
11.9% Butane
1
100
100
100
100
11850
11900
11950
12000
12050

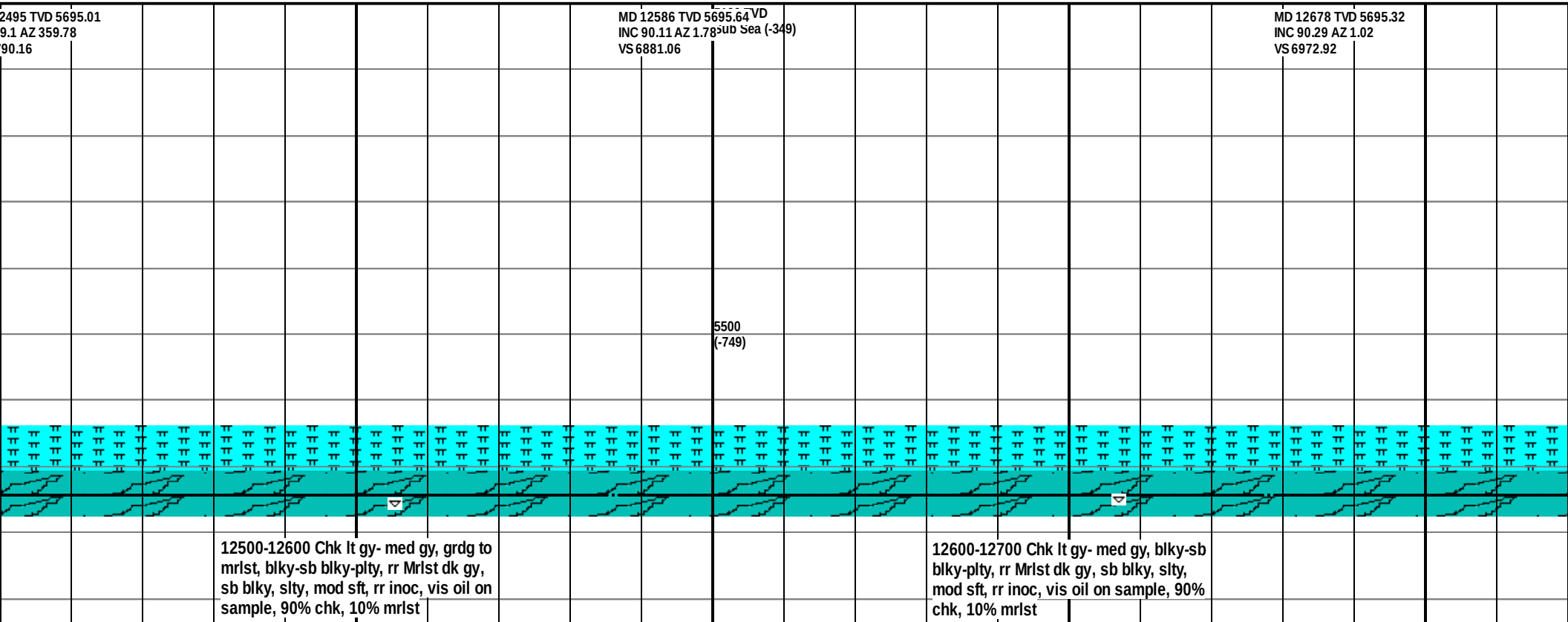

MD 11854 TVD 5692.98
INC 91.43 AZ 359.08
VS 6149.38
MD 11946 TVD 5690.65
INC 91.47 AZ 359.13
VS 6241.34
5100 TVD
Sub Sea (-349)
MD 12038 TVD 5688.82
INC 90.81 AZ 357.68
VS 6333.31
5500
(-749)
B
B
900 Chk lt gy-med gy, blky-sb
tled, dk lam ip, frm, tr Mrlst dk
y, slty, mod sft, rr bent, rr
oil cut, 80% chk, 20% mrlst
11900-12000 Chk lt gy-gy, blky-sb blky,
mottled, dk lam ip, frm, rr Mrlst dk gy,
sb blky, slty, mod sft, rr inoc, vis oil on
sample, 90% chk, 10% mrlst
12000-12100 Chk lt gy-gy, blky
blky-plty, rr Mrlst dk gy, sb blk
mod sft, rr inoc, rr bent, vis oil
sample, 90% chk, 10% mrlst

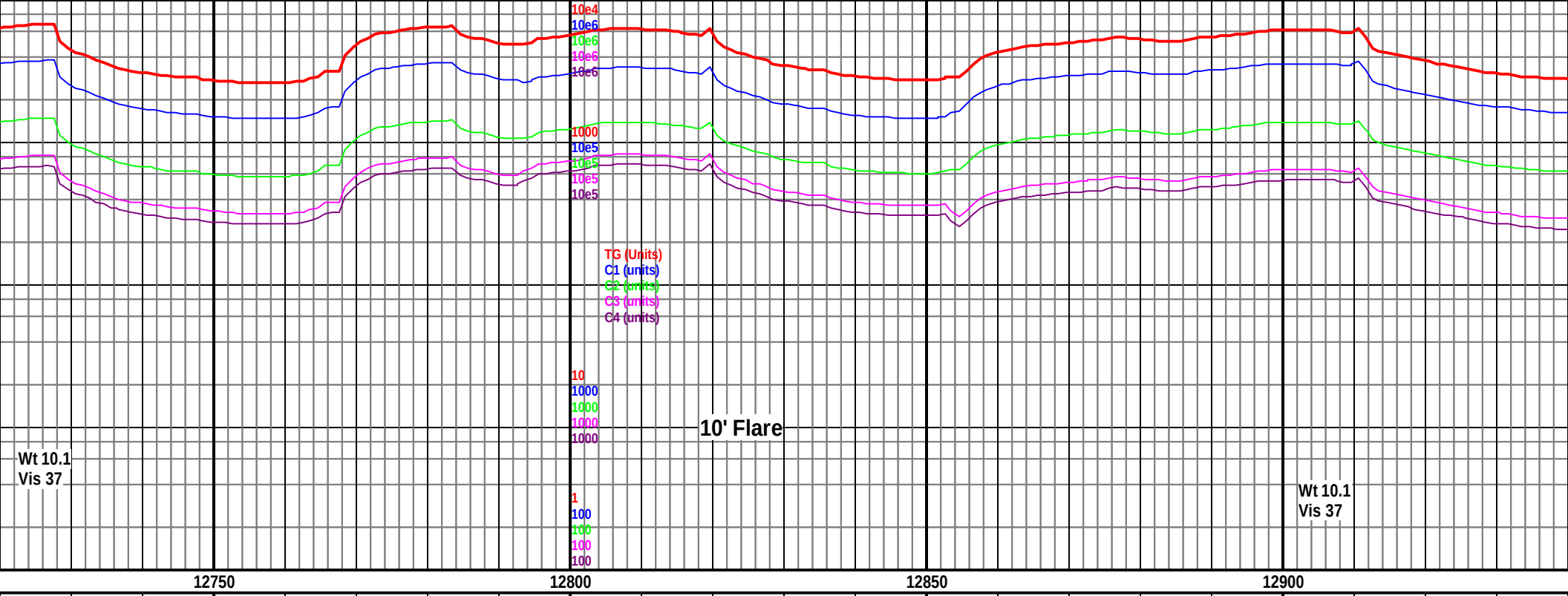

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10' Flare
Oil on shaker
10
1000
1000
1000
1000
Wt 10.1
Vis 34
1
100
100
100
100
12100
12150
12200
12250

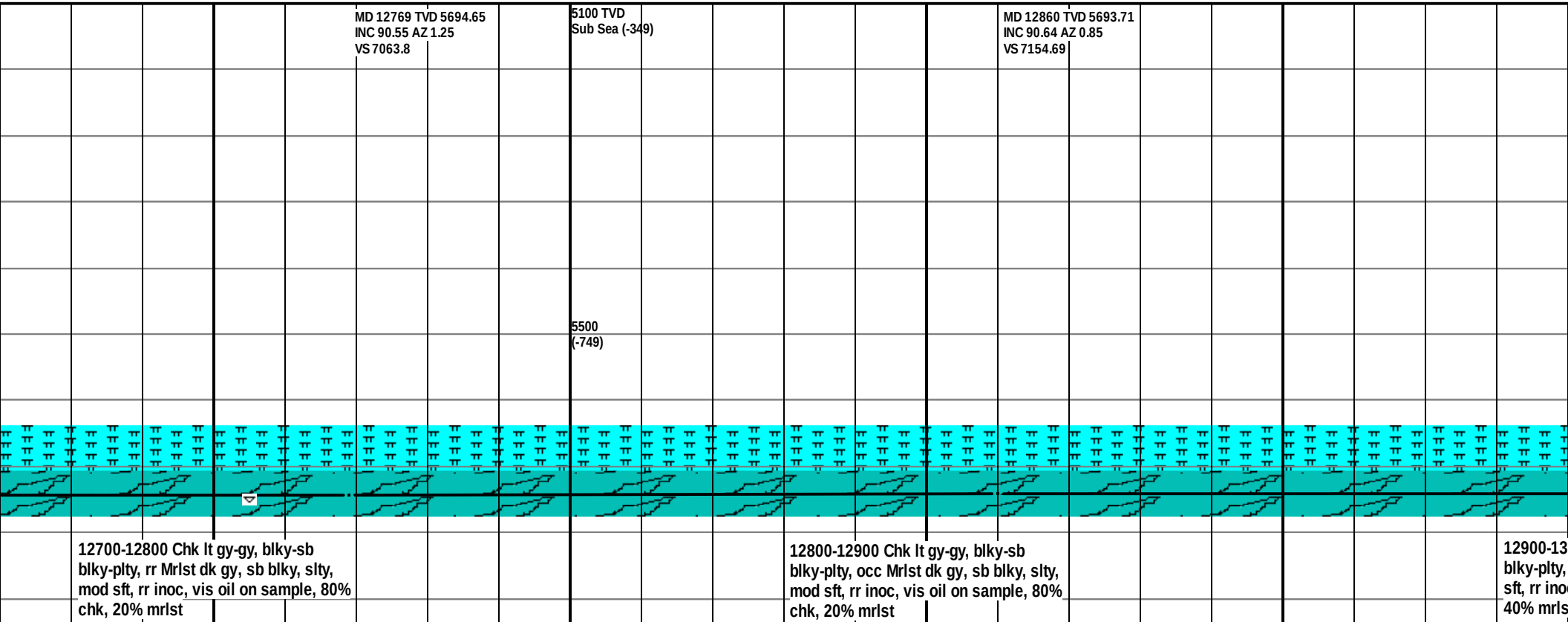

MD 12129 TVD 5687.92
INC 90.33 AZ 357.43
VS 6424.3
5100 TVD
Sub Sea (-349)
MD 12220 TVD 5689.04
INC 88.26 AZ 358.39
VS 6515.29
5500
(-749)
B
B
B
y-sb
y, slty,
l on
12100-12200 Chk lt gy-gy, blky-sb blky-plty, rr Mrlst dk gy, sb blky, slty, mod sft, rr inoc, rr bent, vis oil on sample, 90% chk, 10% mrlst
12200-12300 Chk lt gy-gy, blky-sb blky-plty, rr Mrlst dk gy, sb blky, slty, mod sft, rr inoc, rr bent, vis oil on sample, 90% chk, 10% mrlst

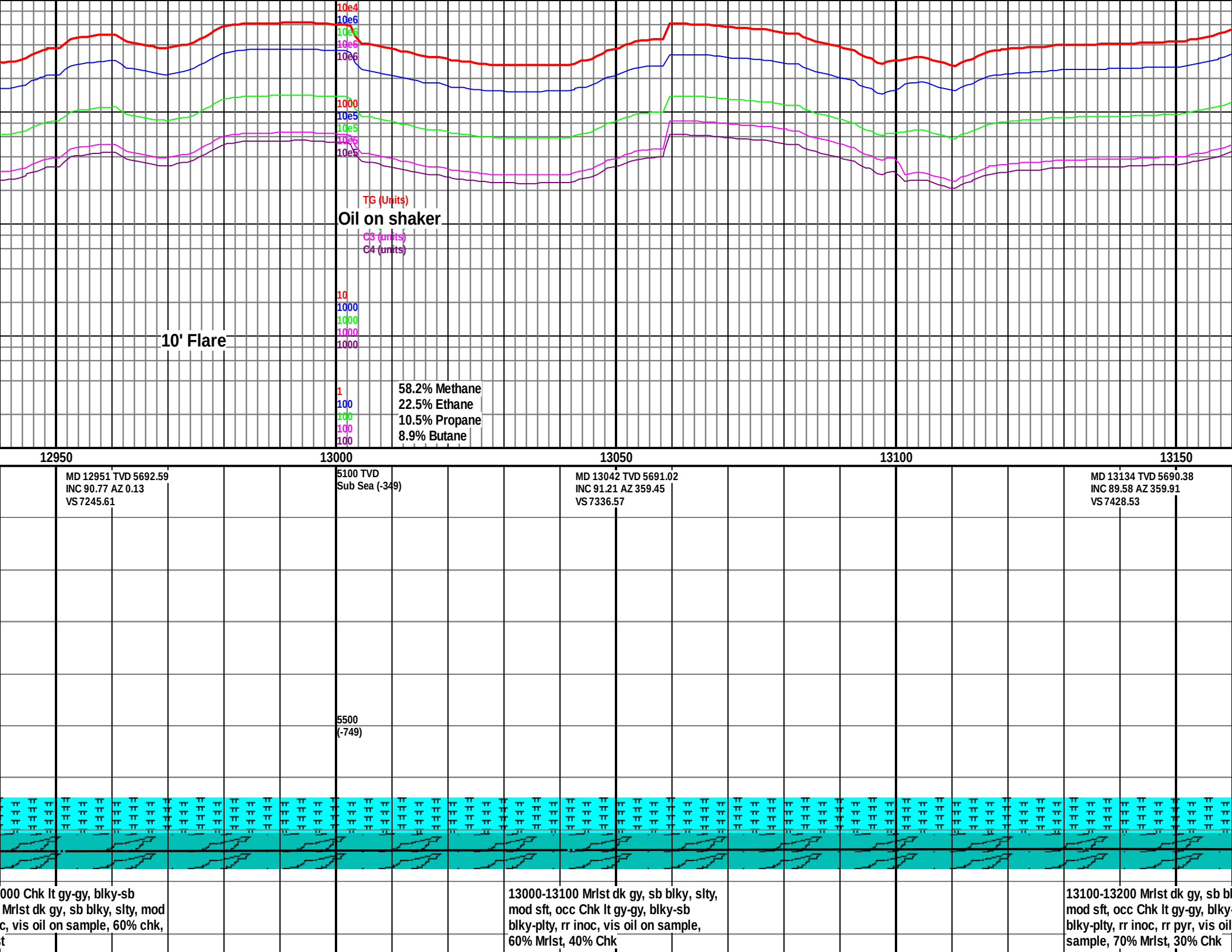

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
Wt 10.15
Vis 35
10' Flare
12300
12350
12400
12450
MD 12311 TVD 5691.66
INC 88.44 AZ 357.93
VS 6606.25
5100
Sub
MD 12403 TVD 5693.6
INC 89.14 AZ 0.31
VS 6698.21
5500
(-749)
12300-12400 Chk lt gy-gy, blky-sb blky-plty, rr Mrlst dk gy, sb blky, slty, mod sft, rr inoc, rr bent, vis oil on sample, 90% chk, 10% mrlst
12400-12500 Chk lt gy- med gy, grdg to mrlst, blky-sb blky-plty, rr Mrlst dk gy, sb blky, slty, mod sft, rr inoc, vis oil on sample, 90% chk, 10% mrlst

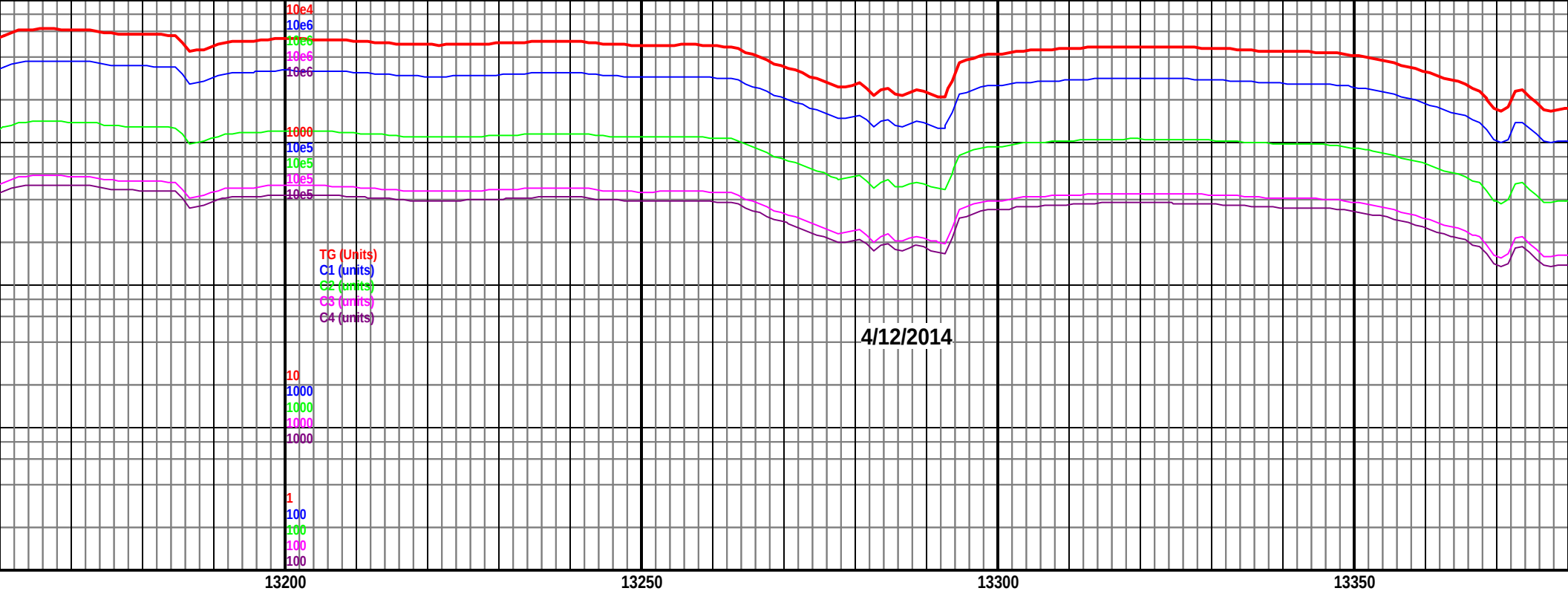

10e4
10e6
10e6
10e5
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
Oil on shaker
10
1000
1000
1000
1000
Wt 10.15
Vis 37
1
100
100
100
100
49.2% Methane
21.4% Ethane
15.7% Propane
13.7% Butane
500
12550
12600
12650
12700

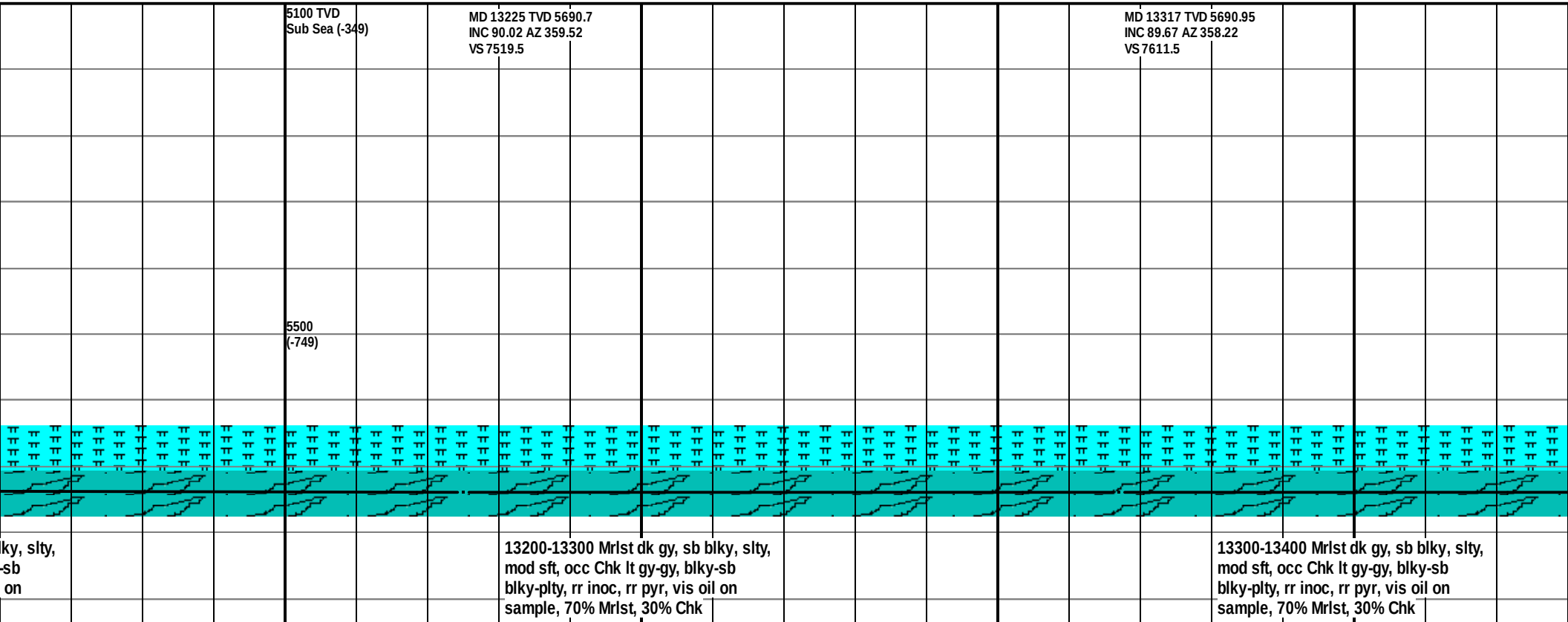

2495 TVD 5695.01
9.1 AZ 359.78
90.16
MD 12586 TVD 5695.64
INC 90.11 AZ 1.78
VS 6881.06
Sub Sea (-349)
MD 12678 TVD 5695.32
INC 90.29 AZ 1.02
VS 6972.92
5500
(-749)
12500-12600 Chk lt gy- med gy, grdg to mrlst, blky-sb blky-plty, rr Mrlst dk gy, sb blky, slty, mod sft, rr inoc, vis oil on sample, 90% chk, 10% mrlst
12600-12700 Chk lt gy- med gy, blky-sb blky-plty, rr Mrlst dk gy, sb blky, slty, mod sft, rr inoc, vis oil on sample, 90% chk, 10% mrlst

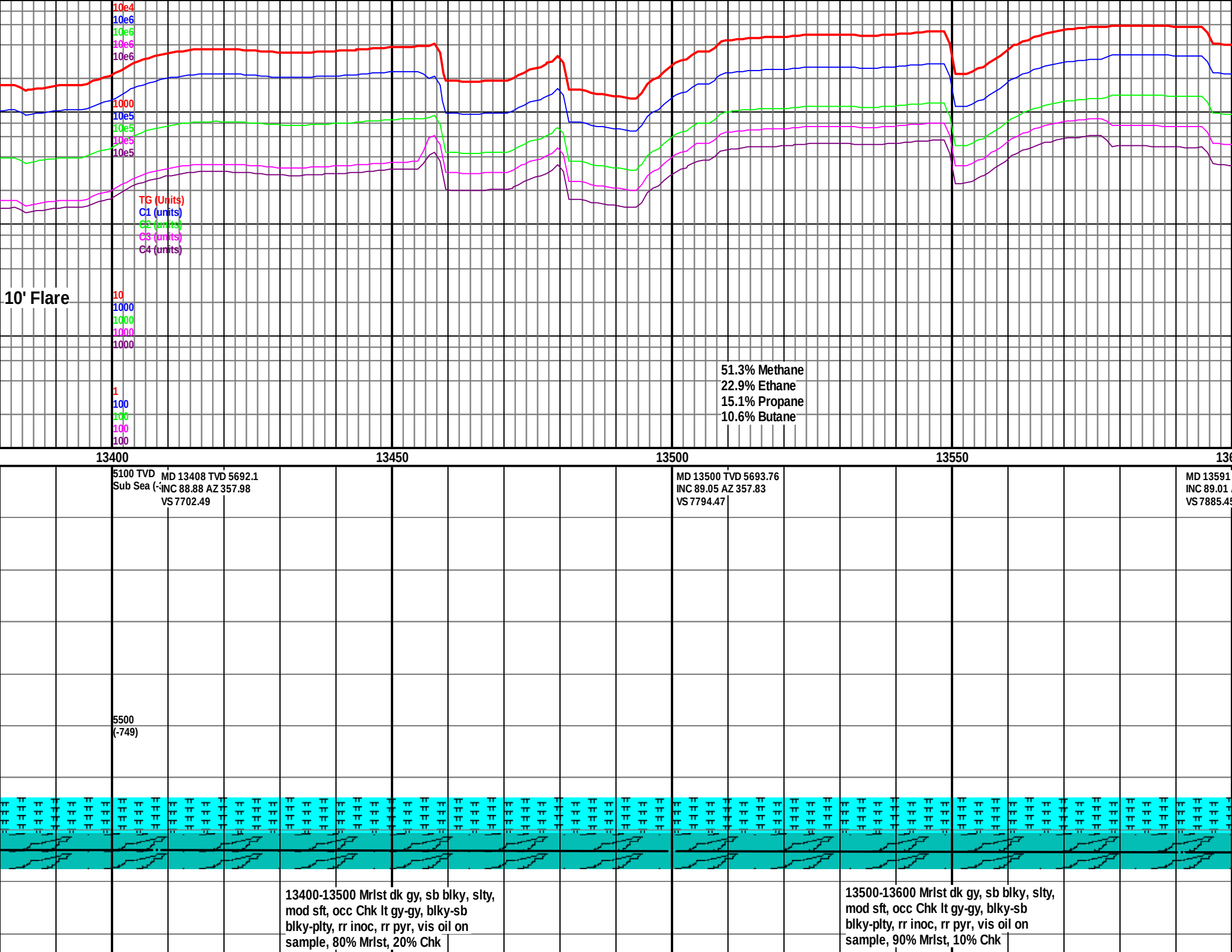

10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10
1000
1000
1000
1000
1
100
100
100
100
10' Flare
Wt 10.1
Vis 37
Wt 10.1
Vis 37
12750
12800
12850
12900

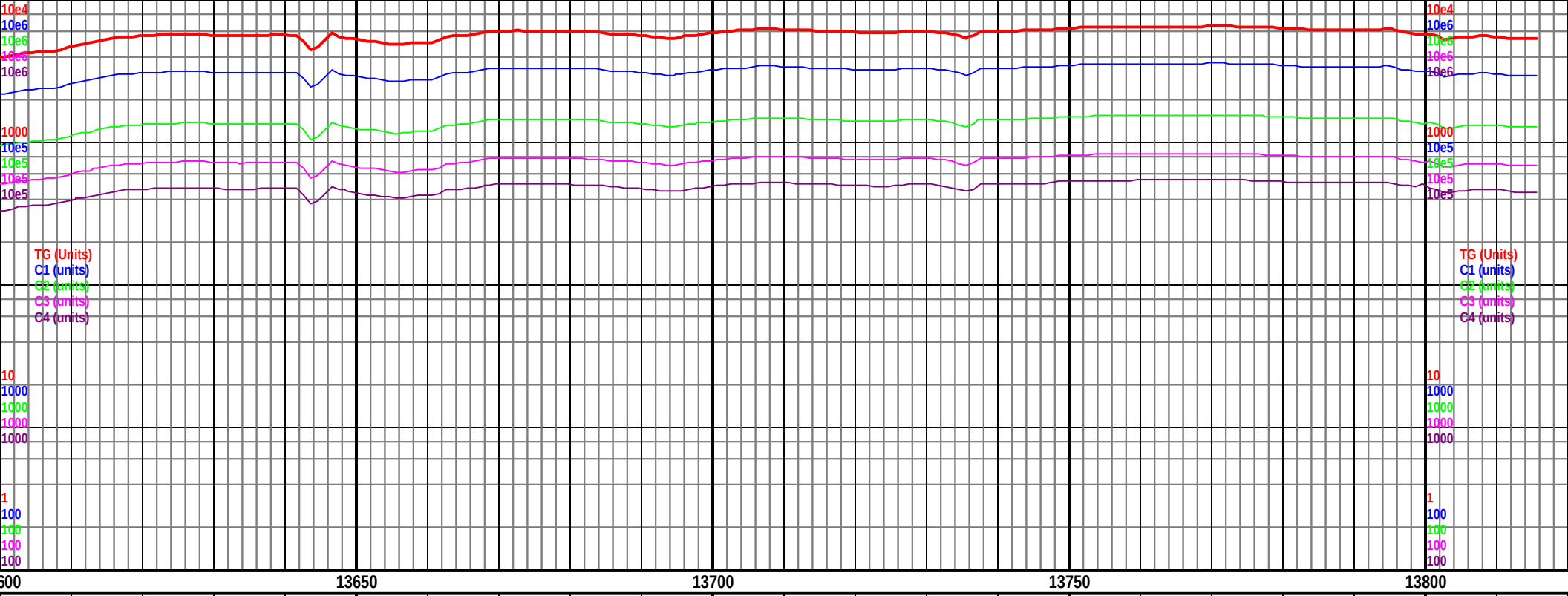

MD 12769 TVD 5694.65
INC 90.55 AZ 1.25
VS 7063.8
5100 TVD
Sub Sea (-349)
MD 12860 TVD 5693.71
INC 90.64 AZ 0.85
VS 7154.69
5500
(-749)
12700-12800 Chk lt gy-gy, blky-sb blky-plty, rr Mrlst dk gy, sb blky, slty, mod sft, rr inoc, vis oil on sample, 80% chk, 20% mrlst
12800-12900 Chk lt gy-gy, blky-sb blky-plty, occ Mrlst dk gy, sb blky, slty, mod sft, rr inoc, vis oil on sample, 80% chk, 20% mrlst
12900-13
blky-plty,
sft, rr ino
40% mrls


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
Oil on shaker
C3 (units)
C4 (units)
10
1000
1000
1000
1000
10' Flare
1
100
100
100
100
58.2% Methane
22.5% Ethane
10.5% Propane
8.9% Butane
12950
13000
13050
13100
13150
MD 12951 TVD 5692.59
INC 90.77 AZ 0.13
VS 7245.61
5100 TVD
Sub Sea (-349)
MD 13042 TVD 5691.02
INC 91.21 AZ 359.45
VS 7336.57
MD 13134 TVD 5690.38
INC 89.58 AZ 359.91
VS 7428.53
5500
(-749)
000 Chk lt gy-gy, blky-sb
Mrlst dk gy, sb blky, slty, mod
c, vis oil on sample, 60% chk,
13000-13100 Mrlst dk gy, sb blky, slty,
mod sft, occ Chk lt gy-gy, blky-sb
blky-plty, rr inoc, vis oil on sample,
60% Mrlst, 40% Chk
13100-13200 Mrlst dk gy, sb bl
mod sft, occ Chk lt gy-gy, blky-
blky-plty, rr inoc, rr pyr, vis oil
sample, 70% Mrlst, 30% Chk


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
4/12/2014
10
1000
1000
1000
1000
1
100
100
100
100
13200
13250
13300
13350


5100 TVD
Sub Sea (-349)
MD 13225 TVD 5690.7
INC 90.02 AZ 359.52
VS 7519.5
MD 13317 TVD 5690.95
INC 89.67 AZ 358.22
VS 7611.5
5500
(-749)
lky, slty,
-sb
on
13200-13300 Mrlst dk gy, sb blky, slty, mod sft, occ Chk lt gy-gy, blky-sb blky-plty, rr inoc, rr pyr, vis oil on sample, 70% Mrlst, 30% Chk
13300-13400 Mrlst dk gy, sb blky, slty, mod sft, occ Chk lt gy-gy, blky-sb blky-plty, rr inoc, rr pyr, vis oil on sample, 70% Mrlst, 30% Chk


10e4
10e6
10e6
10e6
10e6
1000
10e5
10e5
10e5
10e5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
10' Flare
10
1000
1000
1000
1000
1
100
100
100
100
51.3% Methane
22.9% Ethane
15.1% Propane
10.6% Butane
13400
13450
13500
13550
5100 TVD
Sub Sea (-
MD 13408 TVD 5692.1
INC 88.88 AZ 357.98
VS 7702.49
MD 13500 TVD 5693.76
INC 89.05 AZ 357.83
VS 7794.47
MD 13591
INC 89.01
VS 7885.45
5500
(-749)
13400-13500 Mrlst dk gy, sb blky, slty, mod sft, occ Chk lt gy-gy, blky-sb blky-plty, rr inoc, rr pyr, vis oil on sample, 80% Mrlst, 20% Chk
13500-13600 Mrlst dk gy, sb blky, slty, mod sft, occ Chk lt gy-gy, blky-sb blky-plty, rr inoc, rr pyr, vis oil on sample, 90% Mrlst, 10% Chk



TVD 5695.3
AZ 357.52 -349)

MD 13686 TVD 5696.75
INC 89.45 AZ 357.02
VS 7980.43

MD 13781 TVD 5
INC 90.2 AZ 356.
VS 8075.39

MD 13794 TVD 5696.99
INC 90.24 AZ 356.41 1)
VS 8088.39

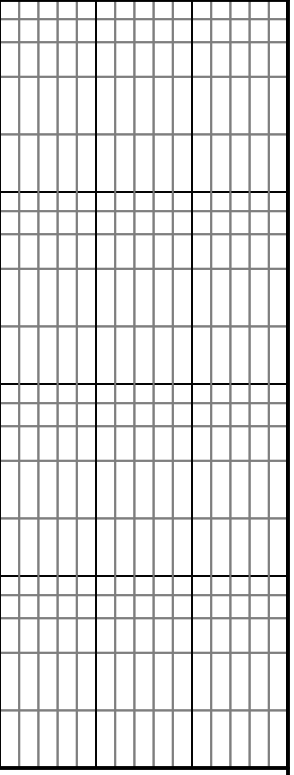
TD 13844
4/12/2014

5500
(-749)

13600-13700 Chk lt-med gy, sl frm, sb blky, occ Mrlst dk gy, sb blky, frm, rr bent, rr brit yel min flor, vis oil flor, fast oil cut, 90% Chk, 10% Mrlst

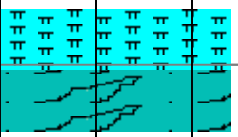
13700-13800 Chk lt-med gy, sl frm, sb blky, occ Mrlst dk gy, sb blky, frm, rr bent, rr brit yel min flor, vis oil flor, fast oil cut, 80% Chk, 20% Mrlst

13800-13844
blky, frm grdg
gy, sb blky, f
flor, vis oil flo



13

4.6' at 05:15 on
4



Chk lt-med gy, blky-sb
g to mrlst ip, occ Mrlst dk
rm, rr bent, rr brit yel min
or, fast oil cut, 70% Chk,