HORIZONTAL LITHOLOGY STRIP LOG

WellSight Systems

Scale 1:600 (2"=100') Metric
Measured Depth Log

Well Name: Encana Oil and Gas Kimball Mtn DH02-6 B07
Location: Sec 7-7S-99W
License Number:
Region: Garfield Co., CO
Spud Date: 10 Nov 2010
Drilling Completed:
Surface Coordinates: 101 FNL 1893 FEL

Bottom Hole Coordinates:

Ground Elevation (m): 6649
K.B. Elevation (m): 6671
Logged Interval (m): 6748 **To:** TD
Total Depth (m):
Formation: Niobrara
Type of Drilling Fluid: LSND WBM

Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Encana Oil and Gas
Address:

GEOLOGIST

Name: Kurt Anderson
Company: Anderson Geological Services
Address: P.O. Box 216
Franktown, CO 80116

Site Supervision

Kurt Childers, Ed Asuchak

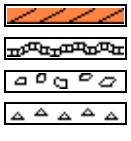
Drilling Contractor

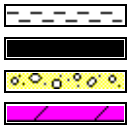
Patterson Rig 303

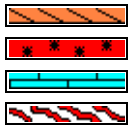
Misc.

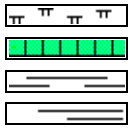
Mud: Baker Hughes
Directional Control: Cathedral Services

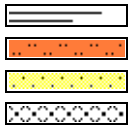
ROCK TYPES


Anhy
Bent
Brec
Cht


Clyst
Coal
Congl
Dol


Gyp
Igne
Lmst
Meta


Mrlst
Salt
Shale
Shcol


Shgy
Sltst
Ss
Till

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

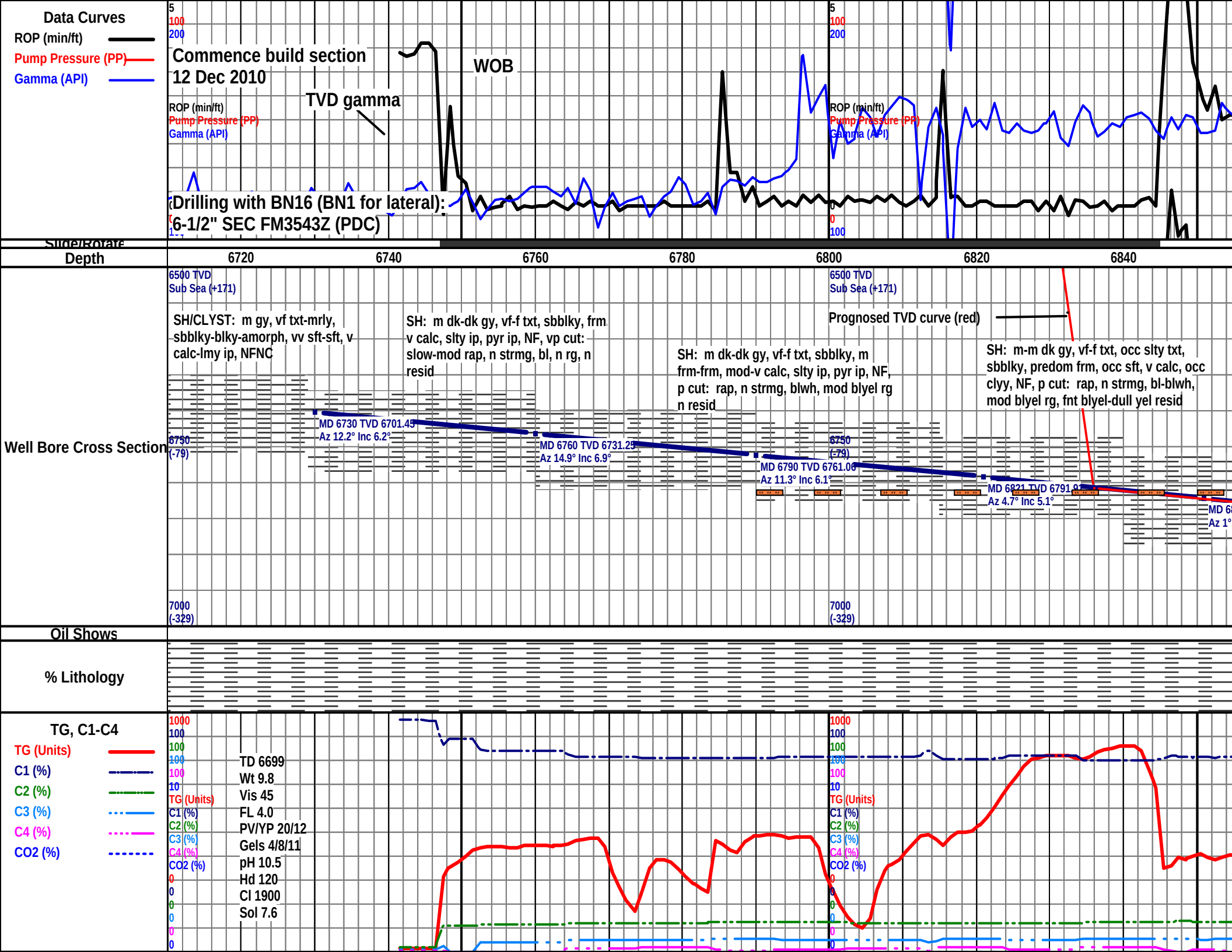
- Even
- Spotted
- Ques
- Dead

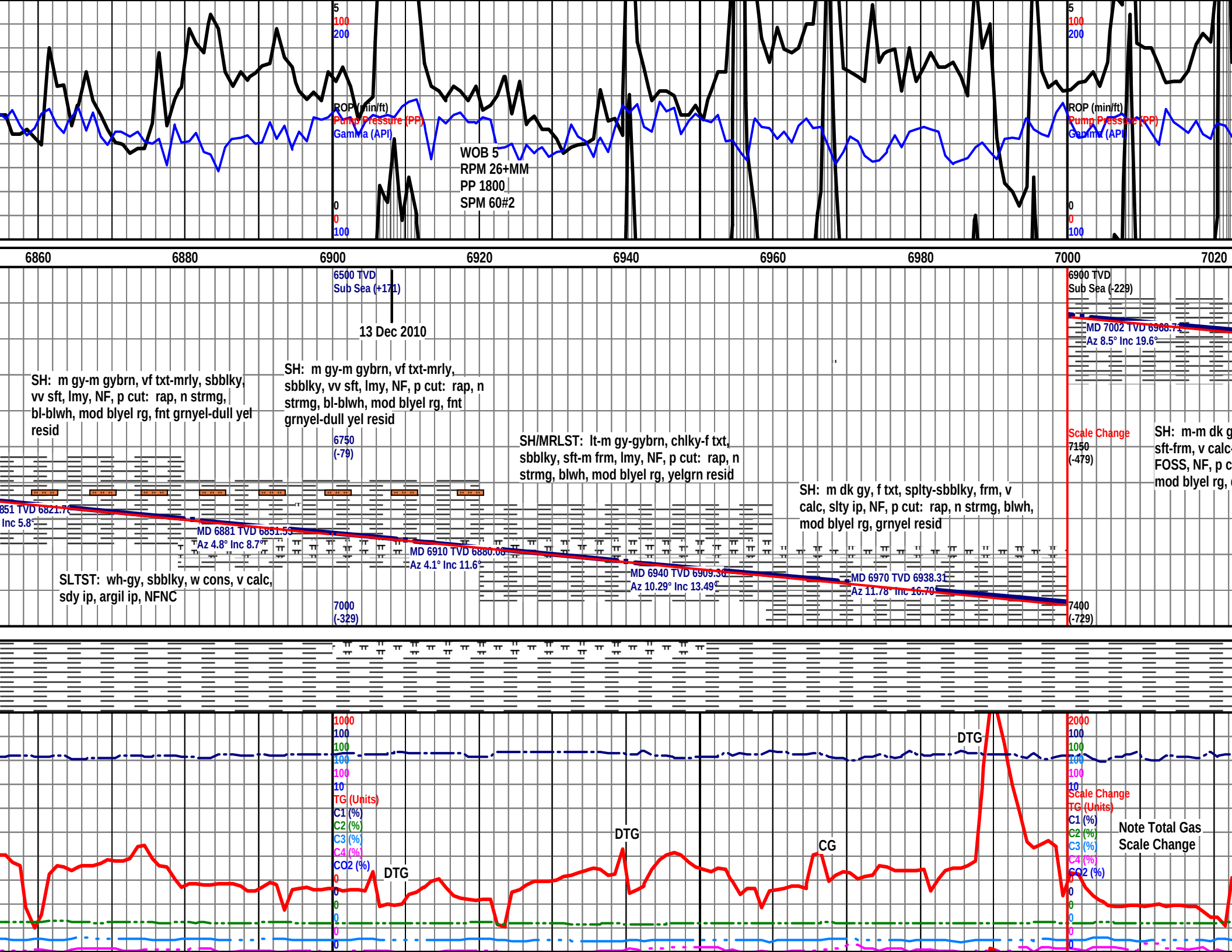
INTERVAL

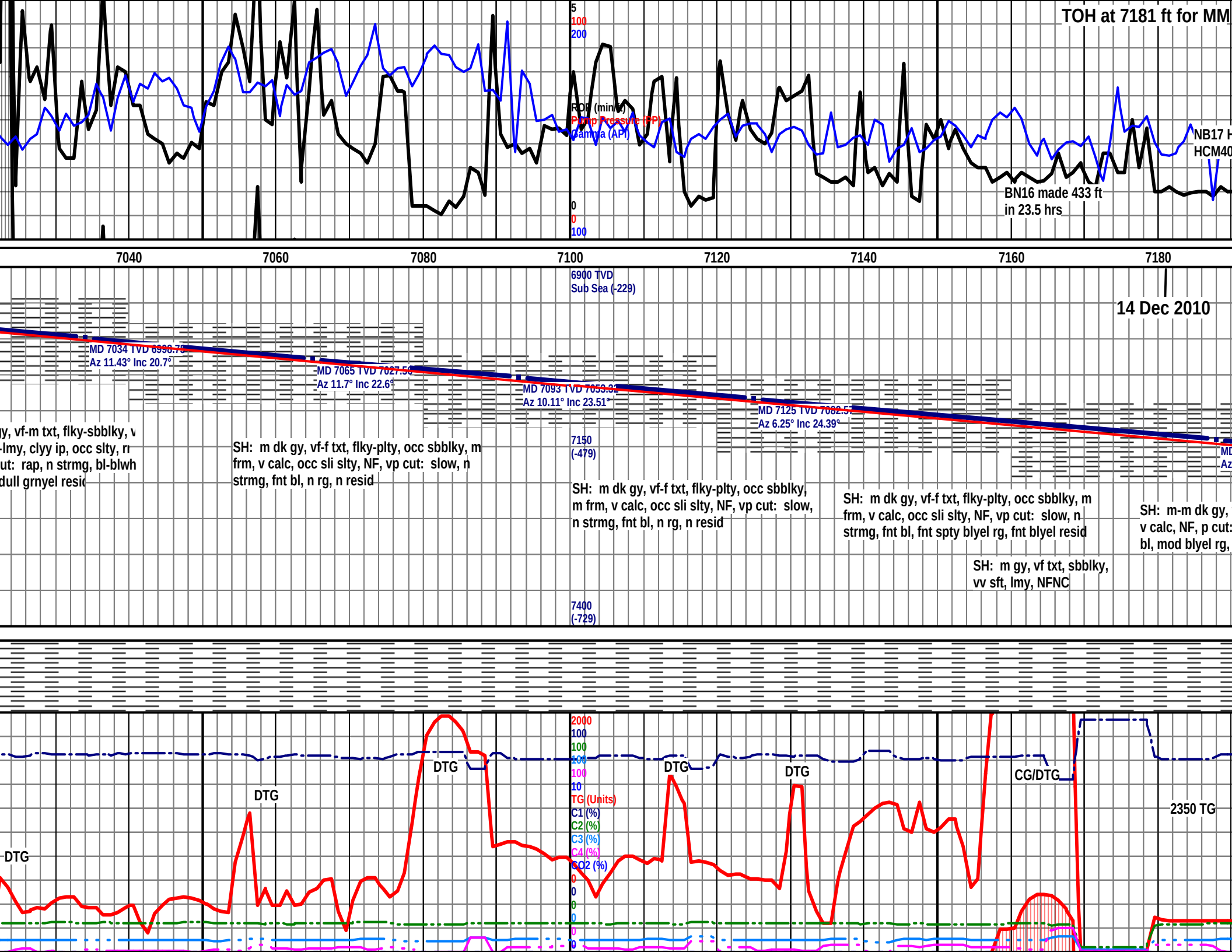
- Core
- Dst

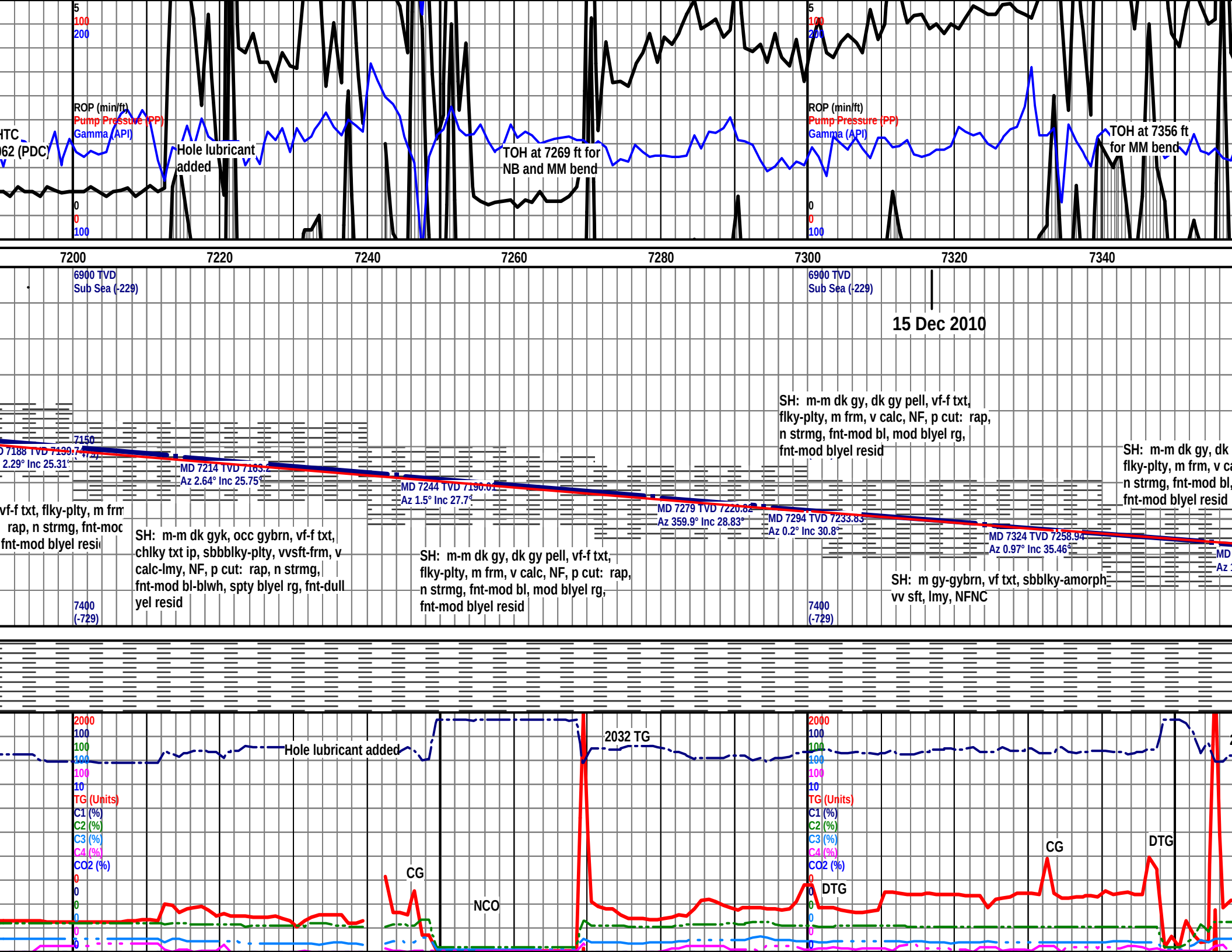
EVENT

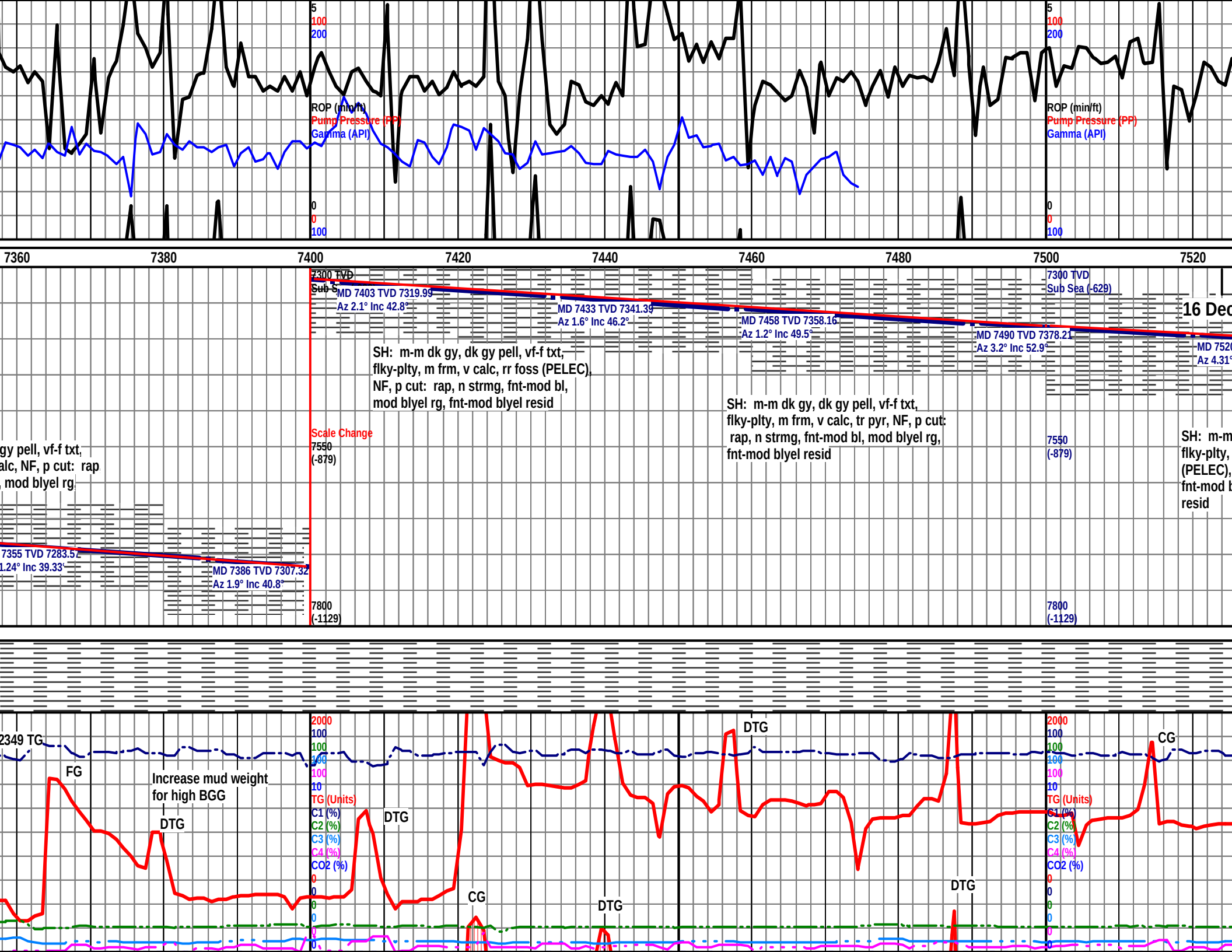
- Rft
- Sidewall

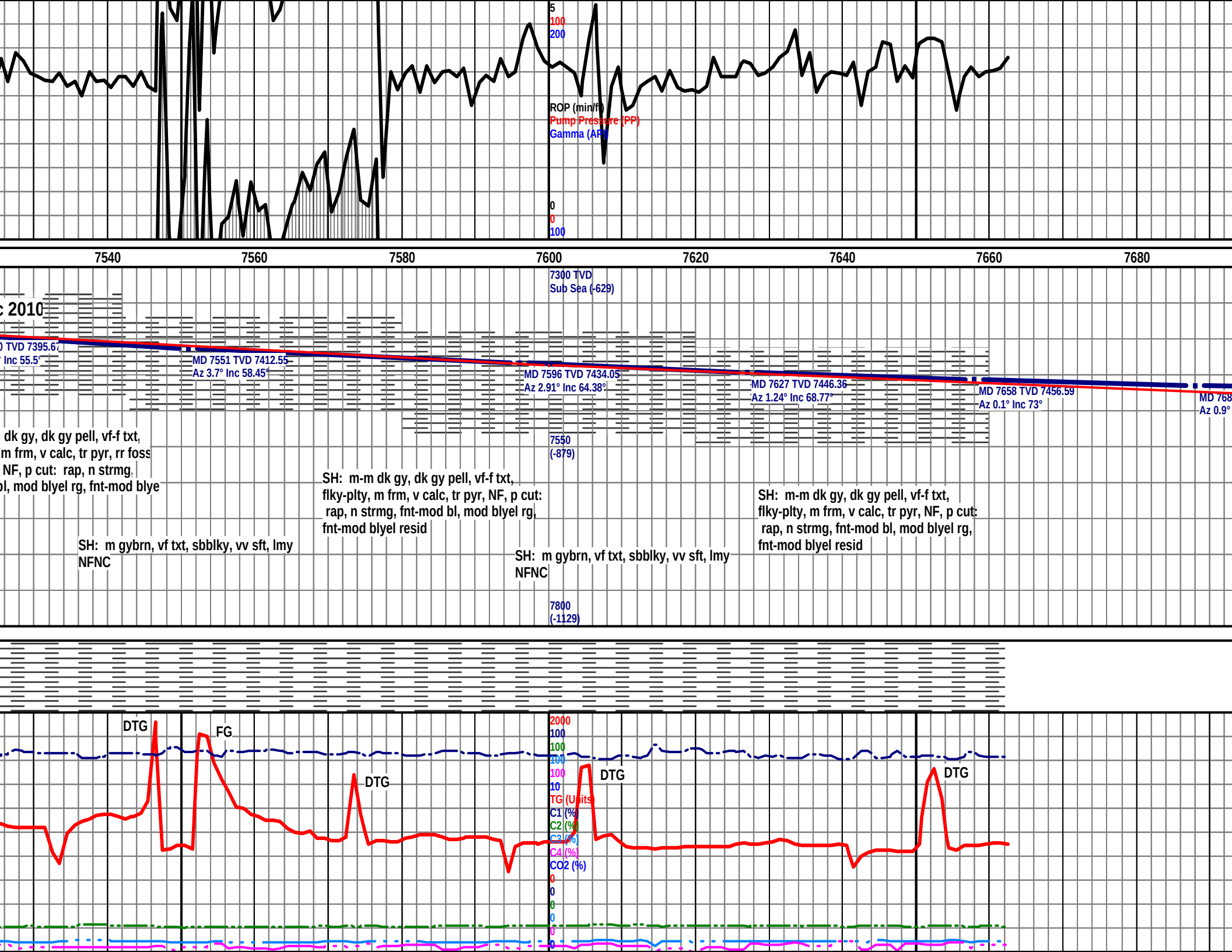

Data Curves
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
Commence build section
12 Dec 2010
TVD gamma
WOB
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
Drilling with BN16 (BN1 for lateral):
6-1/2" SEC FM3543Z (PDC)
Slide/Rotate
Depth
6720
6740
6760
6780
6800
6820
6840
Well Bore Cross Section
6500 TVD
Sub Sea (+171)
SH/CLYST: m gy, vf txt-mrly, sbblky-blky-amorph, vv sft-sft, v calc-lmy ip, NFNC
SH: m dk-dk gy, vf-f txt, sbblky, frm v calc, slty ip, pyr ip, NF, vp cut: slow-mod rap, n strmg, bl, n rg, n resid
SH: m dk-dk gy, vf-f txt, sbblky, m frm-frm, mod-v calc, slty ip, pyr ip, NF, p cut: rap, n strmg, blwh, mod blyel rg n resid
Prognosed TVD curve (red)
SH: m-m dk gy, vf-f txt, occ slty txt, sbblky, predom frm, occ sft, v calc, occ clyy, NF, p cut: rap, n strmg, bl-blwh, mod blyel rg, fnt blyel-dull yel resid
MD 6730 TVD 6701.45
Az 12.2° Inc 6.2°
MD 6760 TVD 6731.25
Az 14.9° Inc 6.9°
MD 6790 TVD 6761.00
Az 11.3° Inc 6.1°
MD 6821 TVD 6791.91
Az 4.7° Inc 5.1°
6750
(-79)
7000
(-329)
Oil Shows
% Lithology
TG, C1-C4
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
TD 6699
Wt 9.8
Vis 45
FL 4.0
PV/YP 20/12
Gels 4/8/11
pH 10.5
Hd 120
Cl 1900
Sol 7.6

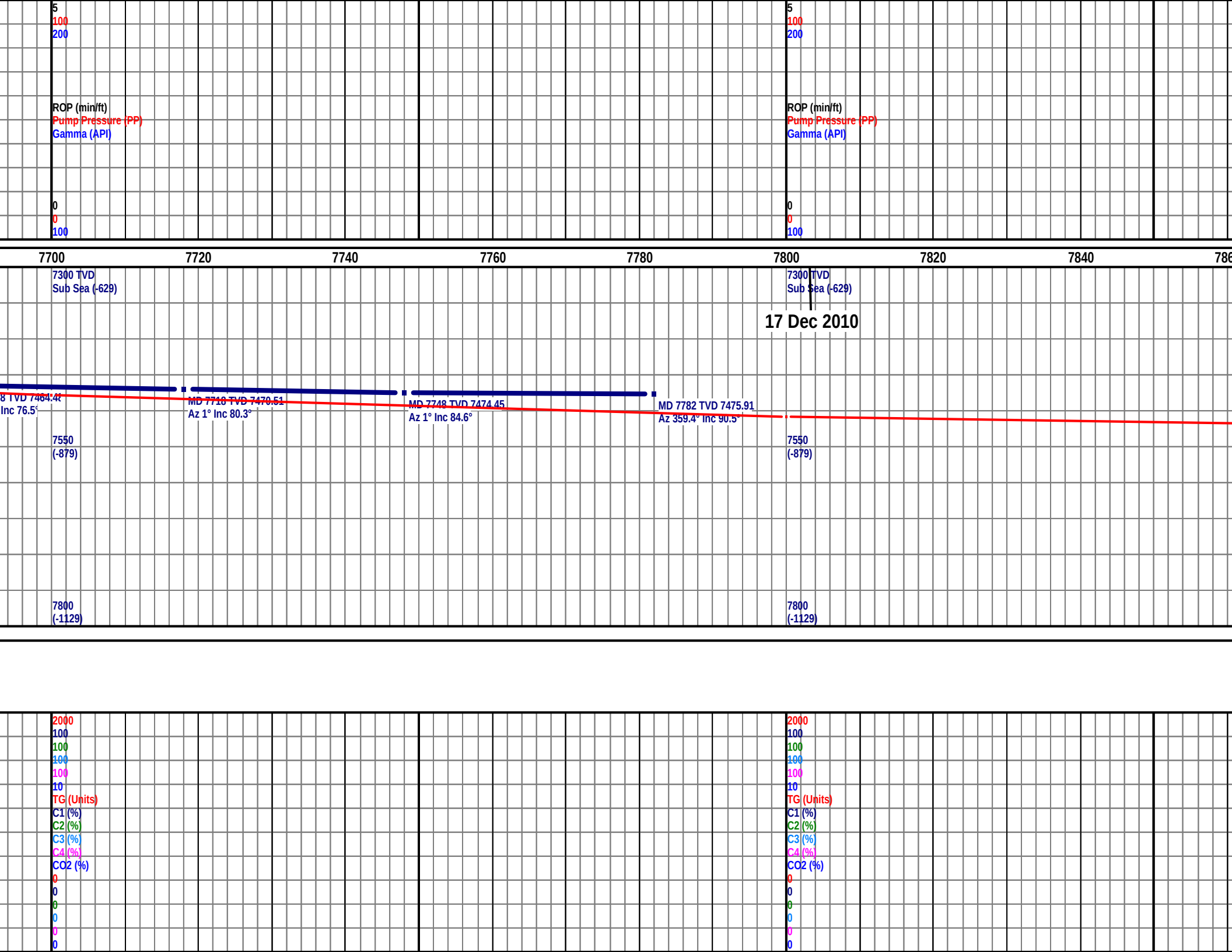

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
WOB 5
RPM 26+MM
PP 1800
SPM 60#2
6860
6880
6900
6920
6940
6960
6980
7000
7020
6500 TVD
Sub Sea (+171)
13 Dec 2010
6900 TVD
Sub Sea (-229)
MD 7002 TVD 6968.71
Az 8.5° Inc 19.6°
SH: m gy-m gybrn, vf txt-mrly, sbblky, vv sft, lmy, NF, p cut: rap, n strmg, bl-blwh, mod blyel rg, fnt grnyel-dull yel resid
SH: m gy-m gybrn, vf txt-mrly, sbblky, vv sft, lmy, NF, p cut: rap, n strmg, bl-blwh, mod blyel rg, fnt grnyel-dull yel resid
6750
(-79)
SH/MRLST: lt-m gy-gybrn, chlky-f txt, sbblky, sft-m frm, lmy, NF, p cut: rap, n strmg, blwh, mod blyel rg, yelgrn resid
SH: m dk gy, f txt, splty-sbblky, frm, v calc, slty ip, NF, p cut: rap, n strmg, blwh, mod blyel rg, grnyel resid
Scale Change
7150
(-479)
SH: m-m dk g
sft-frm, v calc
FOSS, NF, p c
mod blyel rg,
851 TVD 6821.7
Inc 5.8°
MD 6881 TVD 6851.53
Az 4.8° Inc 8.7°
MD 6910 TVD 6880.08
Az 4.1° Inc 11.6°
MD 6940 TVD 6909.36
Az 10.29° Inc 13.49°
MD 6970 TVD 6938.31
Az 11.78° Inc 16.70°
SLTST: wh-gy, sbblky, w cons, v calc, sdy ip, argil ip, NFNC
7000
(-329)
7400
(-729)
1000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
DTG
DTG
CG
DTG
2000
100
100
100
100
10
Scale Change
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
Note Total Gas
Scale Change

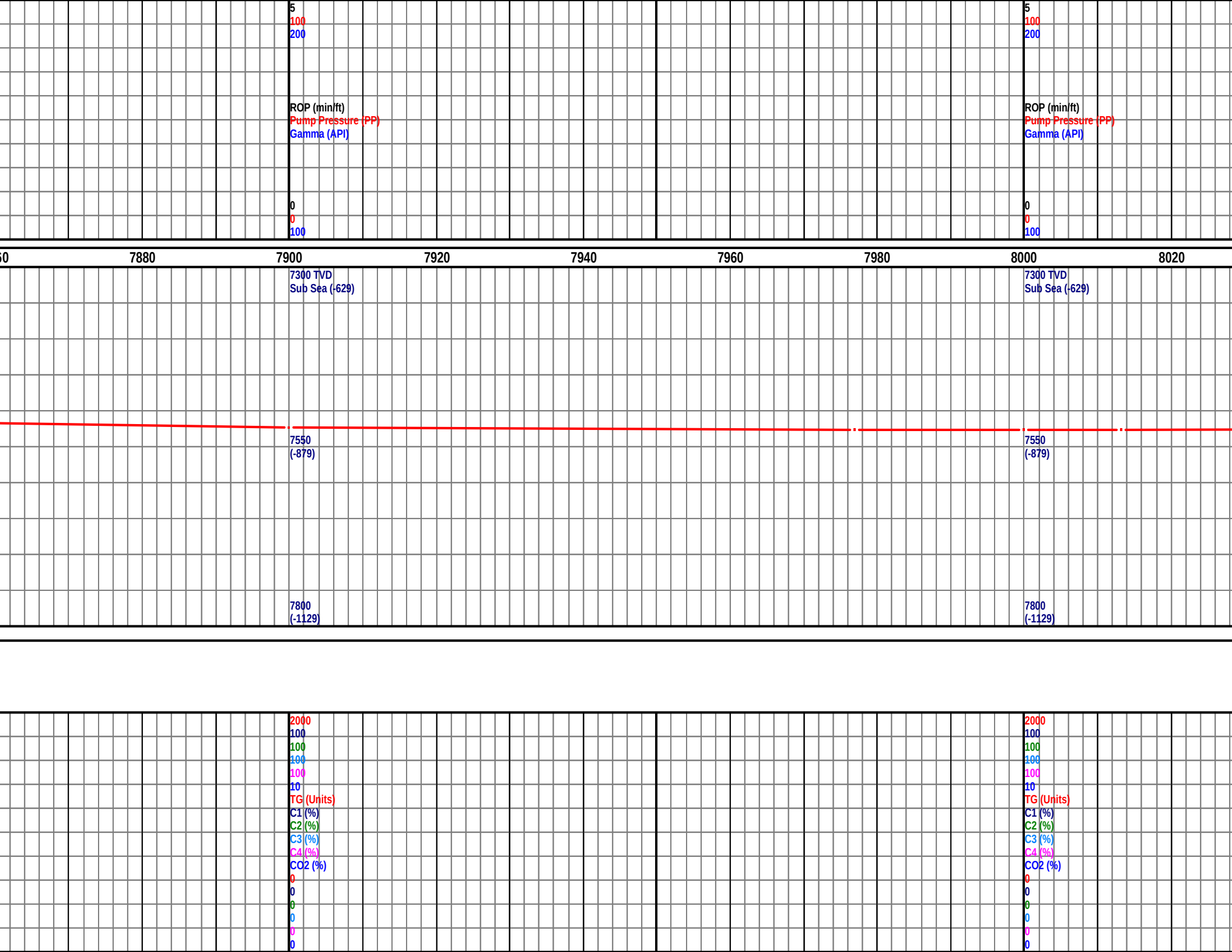

TOH at 7181 ft for MM
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
NB17 H
HCM40
BN16 made 433 ft
in 23.5 hrs
7040
7060
7080
7100
7120
7140
7160
7180
6900 TVD
Sub Sea (-229)
14 Dec 2010
MD 7034 TVD 6938.75
Az 11.43° Inc 20.7°
MD 7065 TVD 7027.50
Az 11.7° Inc 22.6°
MD 7093 TVD 7059.32
Az 10.11° Inc 23.51°
MD 7125 TVD 7082.57
Az 6.25° Inc 24.39°
MD
Az
y, vf-m txt, flky-sbblky, v
lmy, clyy ip, occ slty, rr
ut: rap, n strmg, bl-blwh
dull grnyel resid
SH: m dk gy, vf-f txt, flky-plty, occ sbblky, m
frm, v calc, occ sli slty, NF, vp cut: slow, n
strmg, fnt bl, n rg, n resid
7150
(-479)
SH: m dk gy, vf-f txt, flky-plty, occ sbblky,
m frm, v calc, occ sli slty, NF, vp cut: slow,
n strmg, fnt bl, n rg, n resid
SH: m dk gy, vf-f txt, flky-plty, occ sbblky, m
frm, v calc, occ sli slty, NF, vp cut: slow, n
strmg, fnt bl, fnt spty blyel rg, fnt blyel resid
SH: m gy, vf txt, sbblky,
vv sft, lmy, NFNC
SH: m-m dk gy,
v calc, NF, p cut:
bl, mod blyel rg,
7400
(-729)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
DTG
DTG
DTG
DTG
DTG
CG/DTG
2350 TG


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
HTC
062 (PDC)
Hole lubricant added
TOH at 7269 ft for NB and MM bend
TOH at 7356 ft for MM bend
0
0
100
7200
7220
7240
7260
7280
7300
7320
7340
6900 TVD
Sub Sea (-229)
15 Dec 2010
7150
7400
(-729)
MD 7214 TVD 7163.2
Az 2.64° Inc 25.75°
MD 7244 TVD 7190.01
Az 1.5° Inc 27.7°
MD 7279 TVD 7220.82
Az 359.9° Inc 28.83°
MD 7294 TVD 7233.83
Az 0.2° Inc 30.8°
MD 7324 TVD 7258.94
Az 0.97° Inc 35.46°
SH: m-m dk gy, dk gy pell, vf-f txt, flky-plty, m frm, v calc, NF, p cut: rap, n strmg, fnt-mod bl, mod blyel rg, fnt-mod blyel resid
SH: m-m dk gyk, occ gybrn, vf-f txt, chlky txt ip, sbbblky-plty, vvsft-frm, v calc-lmy, NF, p cut: rap, n strmg, fnt-mod bl-blwh, spty blyel rg, fnt-dull yel resid
SH: m gy-gybrn, vf txt, sbblky-amorph vv sft, lmy, NFNC
2000
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
Hole lubricant added
2032 TG
CG
NCO
DTG


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
7360
7380
7400
7420
7440
7460
7480
7500
7520
7300 TVD
Sub S
MD 7403 TVD 7319.99
Az 2.1° Inc 42.8°
MD 7433 TVD 7341.39
Az 1.6° Inc 46.2°
MD 7458 TVD 7358.16
Az 1.2° Inc 49.5°
MD 7490 TVD 7378.21
Az 3.2° Inc 52.9°
7300 TVD
Sub Sea (-629)
16 Dec
MD 752
Az 4.31°
SH: m-m dk gy, dk gy pell, vf-f txt, flky-plty, m frm, v calc, rr foss (PELEC), NF, p cut: rap, n strmg, fnt-mod bl, mod blyel rg, fnt-mod blyel resid
SH: m-m dk gy, dk gy pell, vf-f txt, flky-plty, m frm, v calc, tr pyr, NF, p cut: rap, n strmg, fnt-mod bl, mod blyel rg, fnt-mod blyel resid
SH: m-m
flky-plty,
(PELEC),
fnt-mod b
resid
gy pell, vf-f txt,
alc, NF, p cut: rap
, mod blyel rg,
Scale Change
7550
(-879)
7550
(-879)
7355 TVD 7283.57
1.24° Inc 39.33°
MD 7386 TVD 7307.32
Az 1.9° Inc 40.8°
7800
(-1129)
7800
(-1129)
2349 TG
FG
Increase mud weight
for high BGG
DTG
2000
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
DTG
DTG
CG
DTG
DTG
2000
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
CG

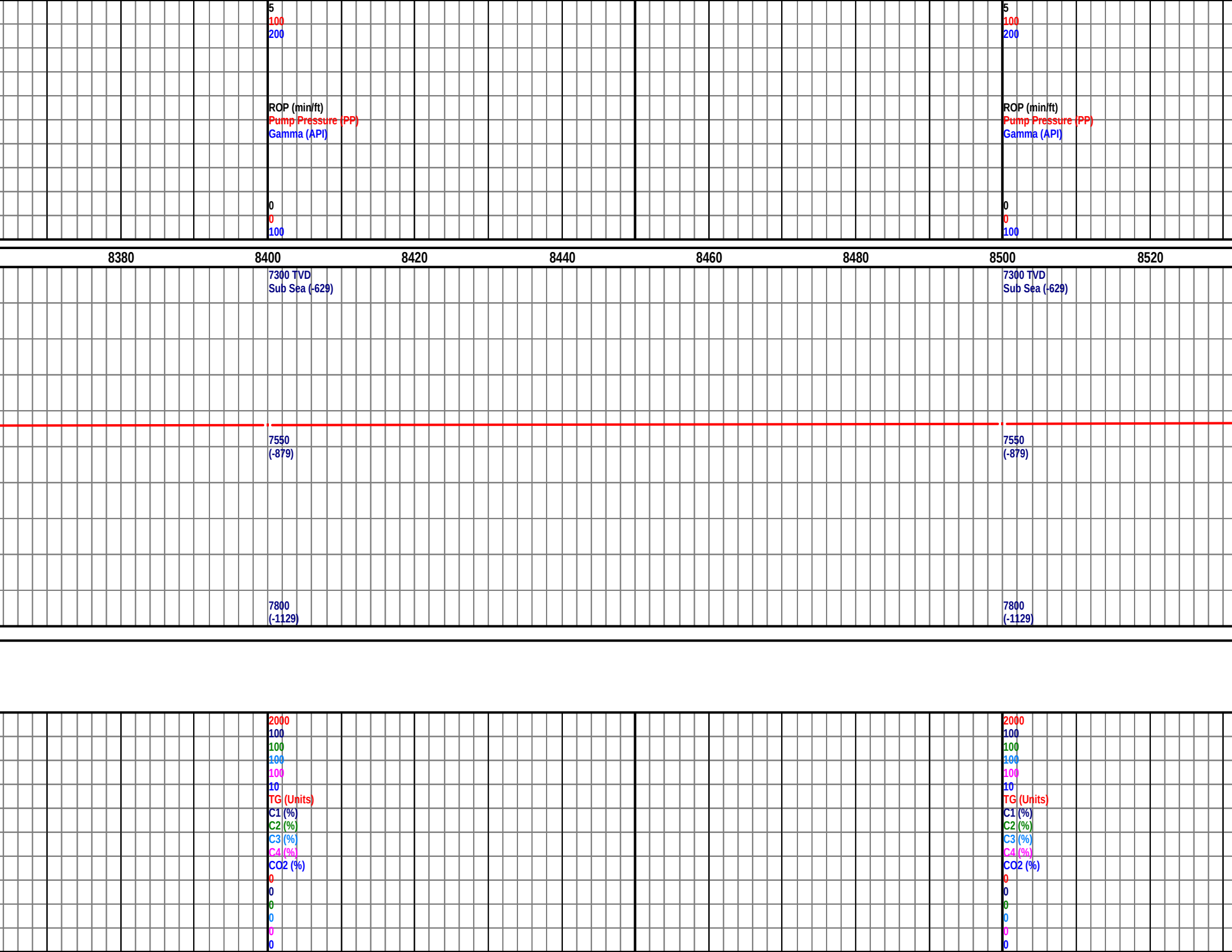

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
7540
7560
7580
7600
7620
7640
7660
7680
7300 TVD
Sub Sea (-629)
c 2010
D TVD 7395.67
° Inc 55.5°
MD 7551 TVD 7412.55
Az 3.7° Inc 58.45°
MD 7596 TVD 7434.05
Az 2.91° Inc 64.38°
MD 7627 TVD 7446.36
Az 1.24° Inc 68.77°
MD 7658 TVD 7456.59
Az 0.1° Inc 73°
MD 768
Az 0.9°
dk gy, dk gy pell, vf-f txt,
m frm, v calc, tr pyr, rr foss
NF, p cut: rap, n strmg,
bl, mod blyel rg, fnt-mod blye
7550
(-879)
SH: m-m dk gy, dk gy pell, vf-f txt,
flky-plty, m frm, v calc, tr pyr, NF, p cut:
rap, n strmg, fnt-mod bl, mod blyel rg,
fnt-mod blyel resid
SH: m-m dk gy, dk gy pell, vf-f txt,
flky-plty, m frm, v calc, tr pyr, NF, p cut:
rap, n strmg, fnt-mod bl, mod blyel rg,
fnt-mod blyel resid
SH: m gybrn, vf txt, sbblky, vv sft, lmy
NFNC
SH: m gybrn, vf txt, sbblky, vv sft, lmy
NFNC
7800
(-1129)
DTG
FG
DTG
DTG
DTG
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

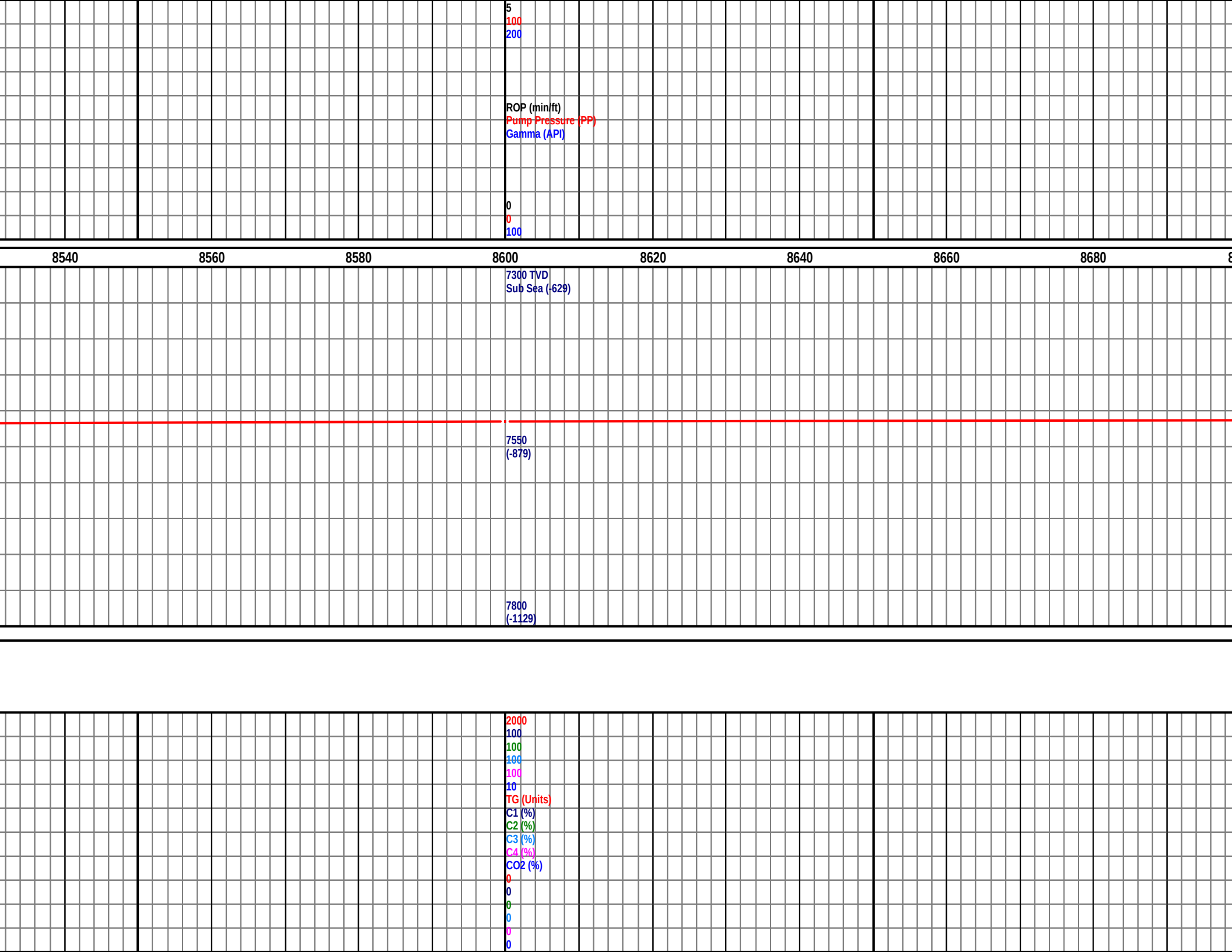

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
7700
7720
7740
7760
7780
7800
7820
7840
786
7300 TVD
Sub Sea (-629)
7300 TVD
Sub Sea (-629)
17 Dec 2010
8 TVD 7464.4
Inc 76.5°
MD 7718 TVD 7470.51
Az 1° Inc 80.3°
MD 7748 TVD 7474.45
Az 1° Inc 84.6°
MD 7782 TVD 7475.91
Az 359.4° Inc 90.5°
7550
(-879)
7550
(-879)
7800
(-1129)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
50
7880
7900
7920
7940
7960
7980
8000
8020
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

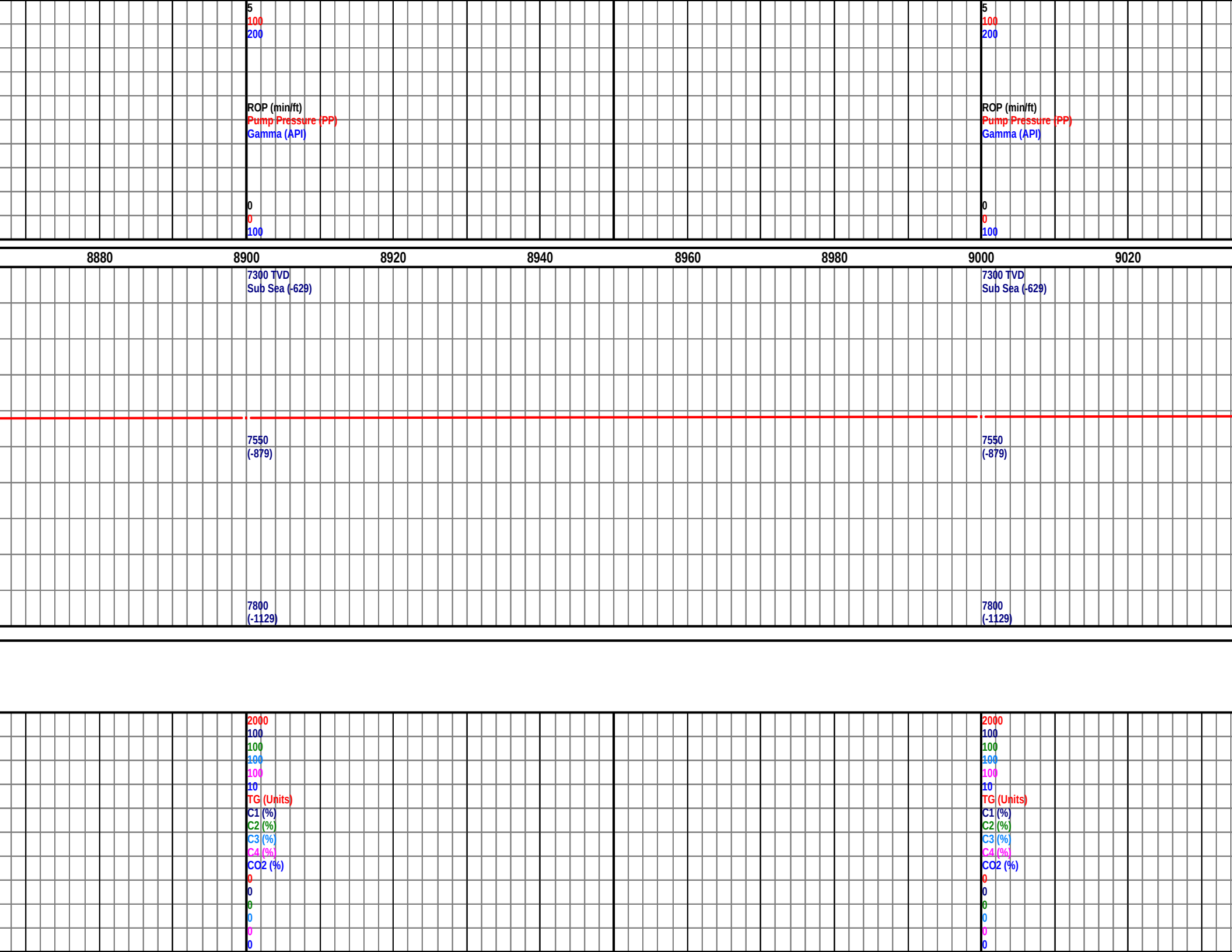
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
8040
8060
8080
8100
8120
8140
8160
8180
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
8200
8220
8240
8260
8280
8300
8320
8340
8360
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
8380
8400
8420
8440
8460
8480
8500
8520
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

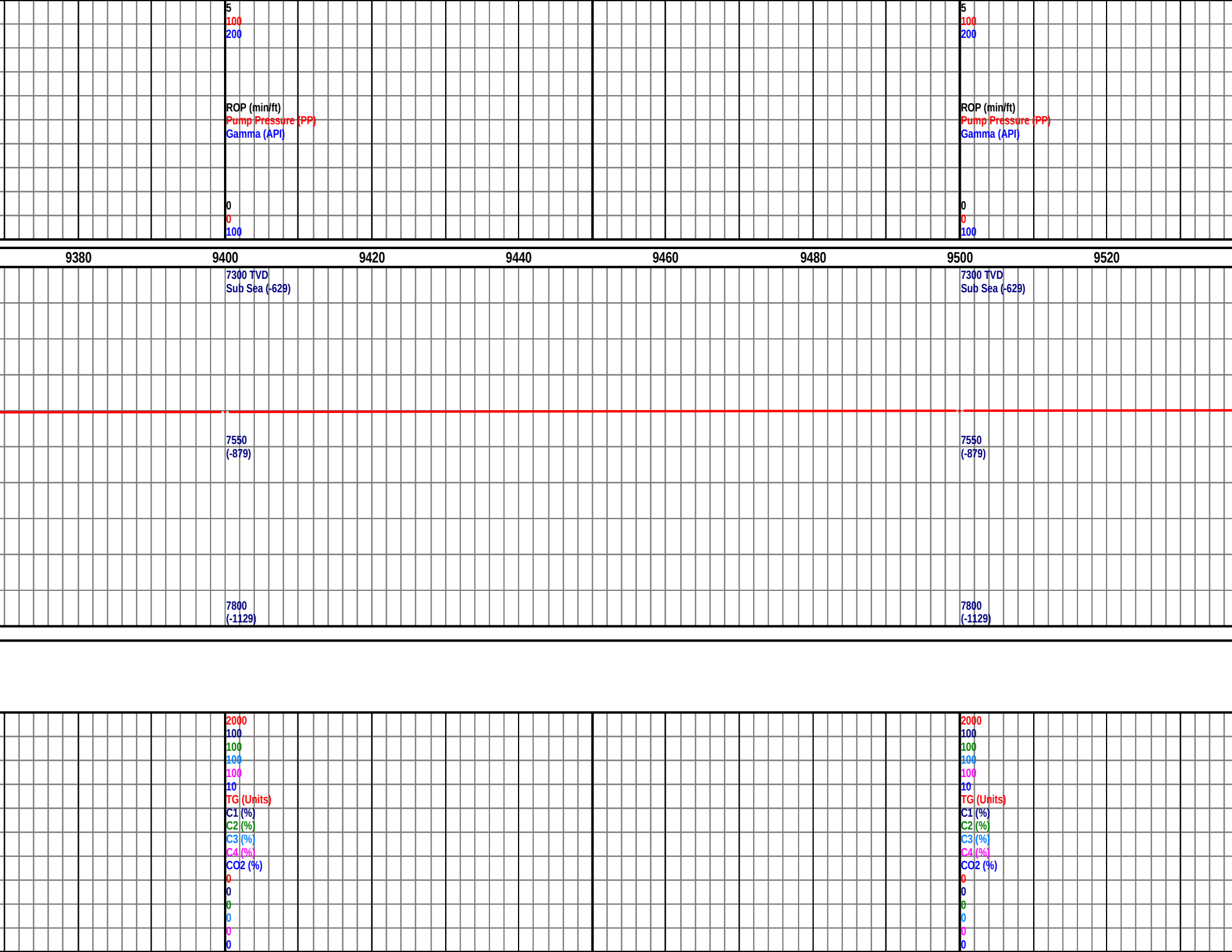

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
8540
8560
8580
8600
8620
8640
8660
8680
7300 TVD
Sub Sea (+629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
8700
8720
8740
8760
8780
8800
8820
8840
8860
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
8880
8900
8920
8940
8960
8980
9000
9020
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

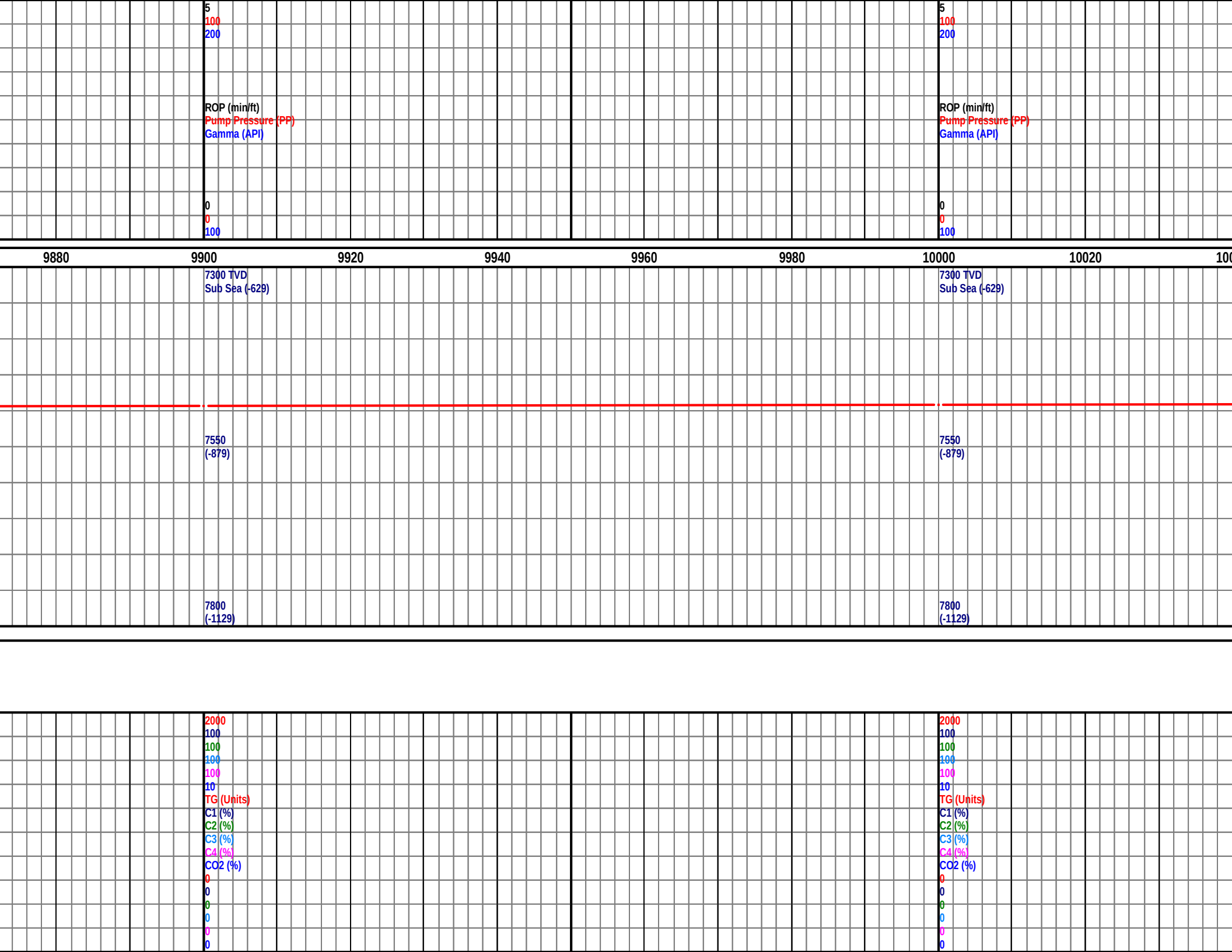
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
9040
9060
9080
9100
9120
9140
9160
9180
9200
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

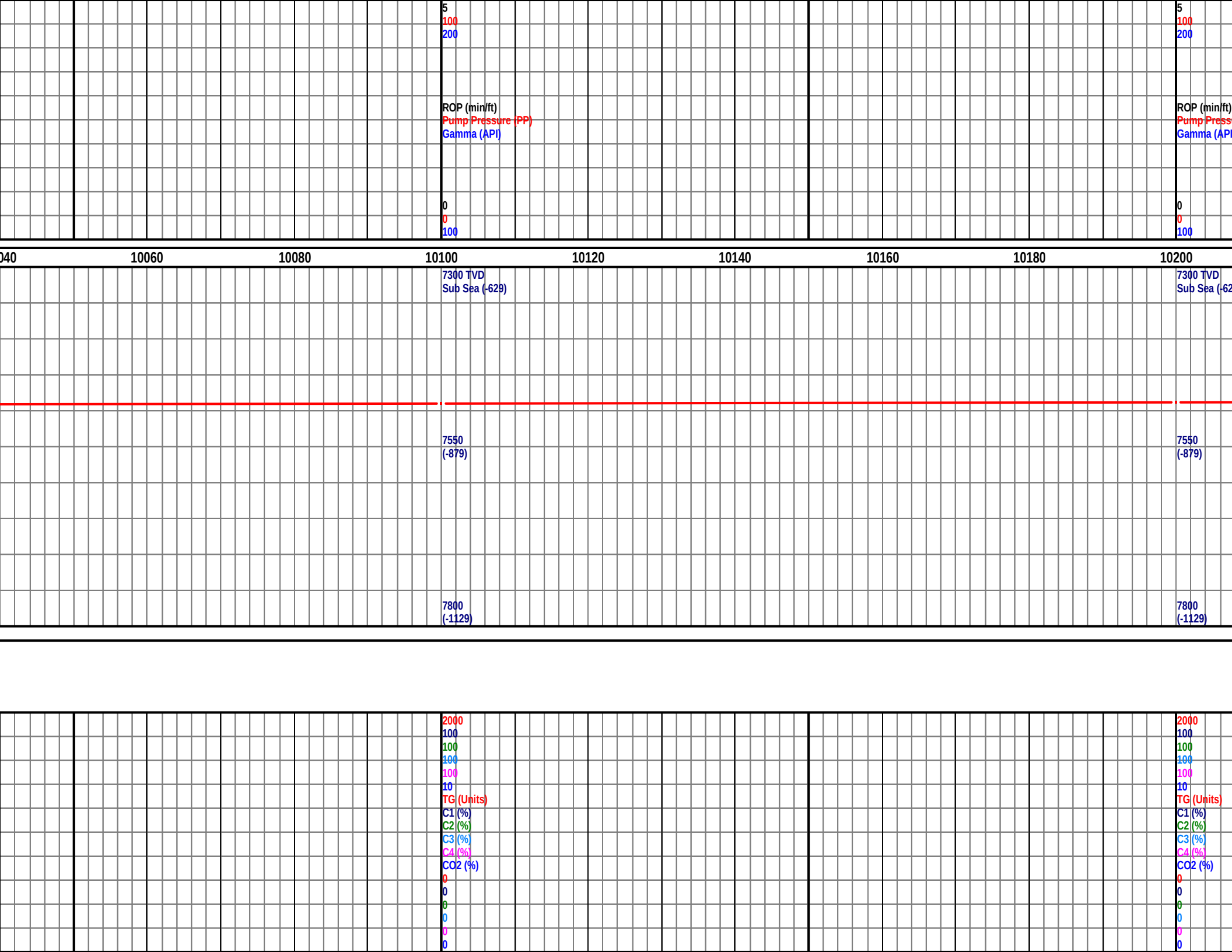
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
9220
9240
9260
9280
9300
9320
9340
9360
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

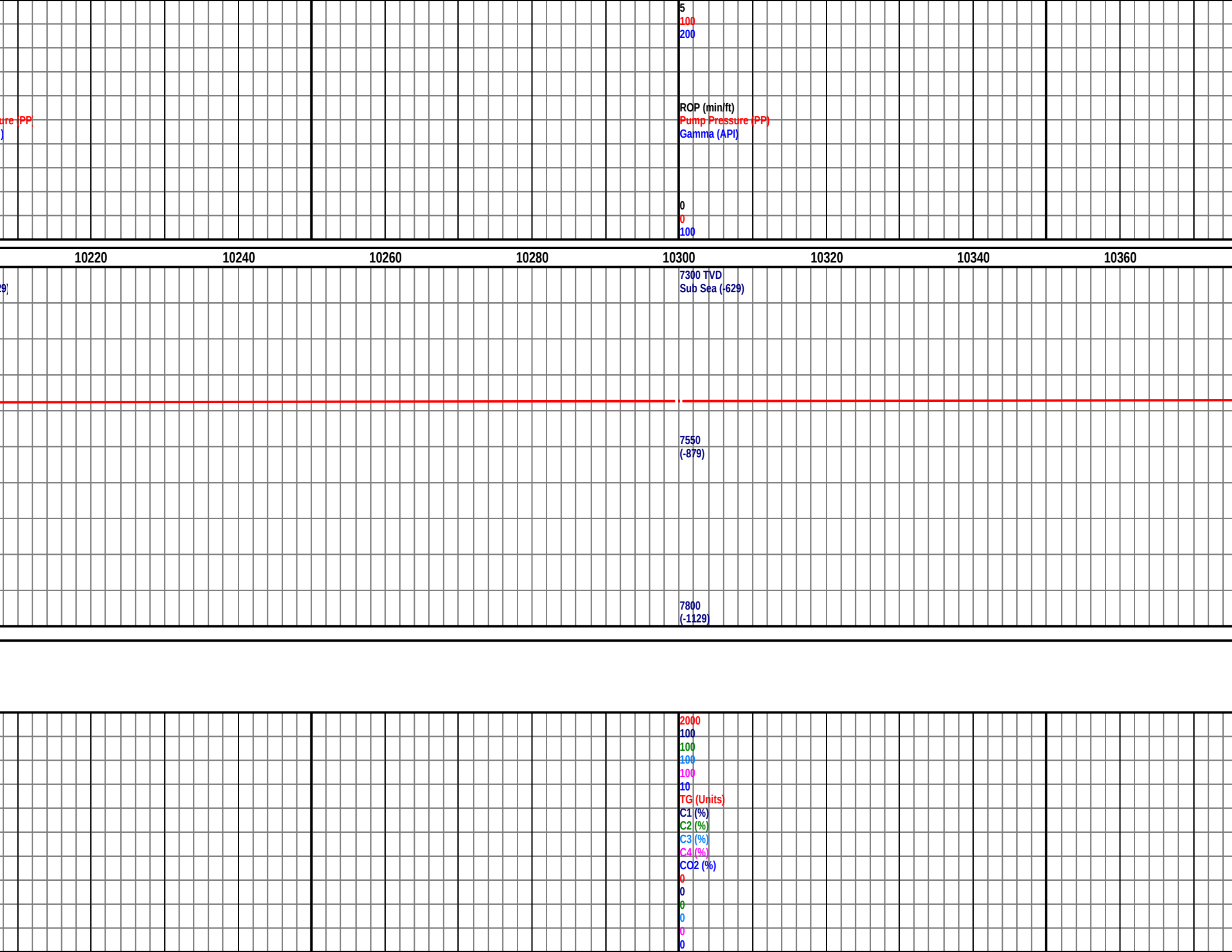

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
9380
9400
9420
9440
9460
9480
9500
9520
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
9540
9560
9580
9600
9620
9640
9660
9680
9700
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

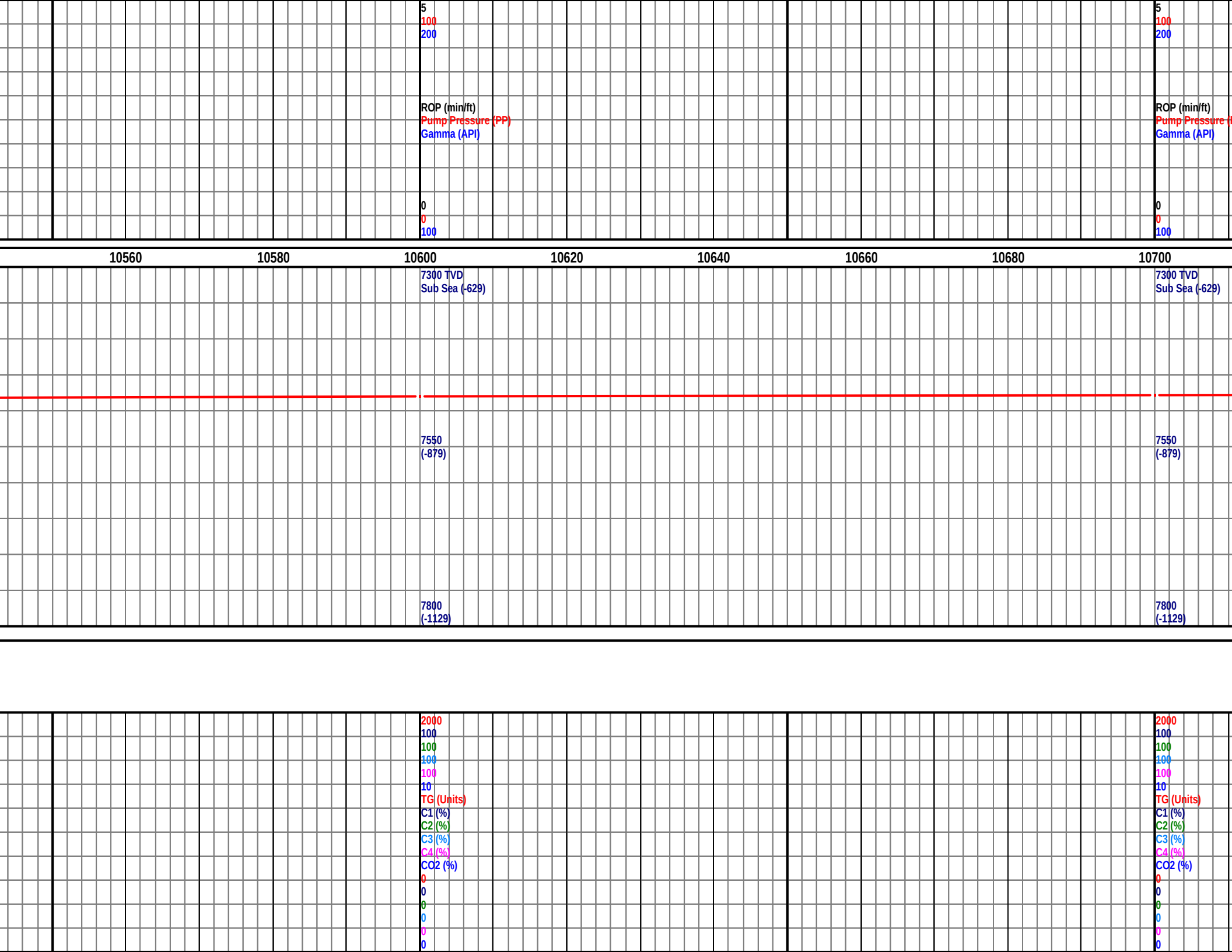
5
100
200
in/ft)
Pressure (PP
(API)
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
9720
9740
9760
9780
9800
9820
9840
9860
VD
a (-629)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
ts)
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
)
0
0
0
0
0
0

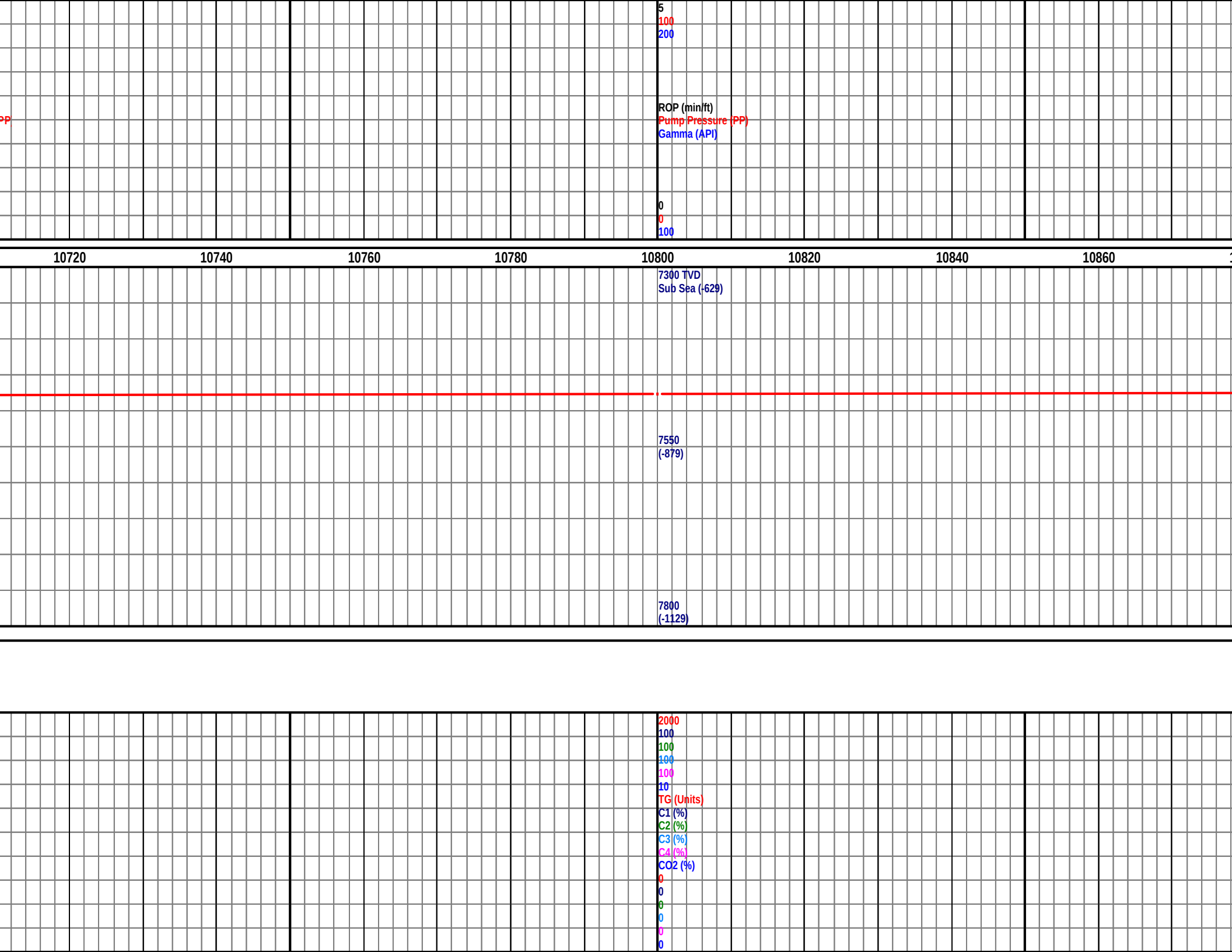

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
9880
9900
9920
9940
9960
9980
10000
10020
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Press
Gamma (API
0
0
100
040
10060
10080
10100
10120
10140
10160
10180
10200
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-62
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

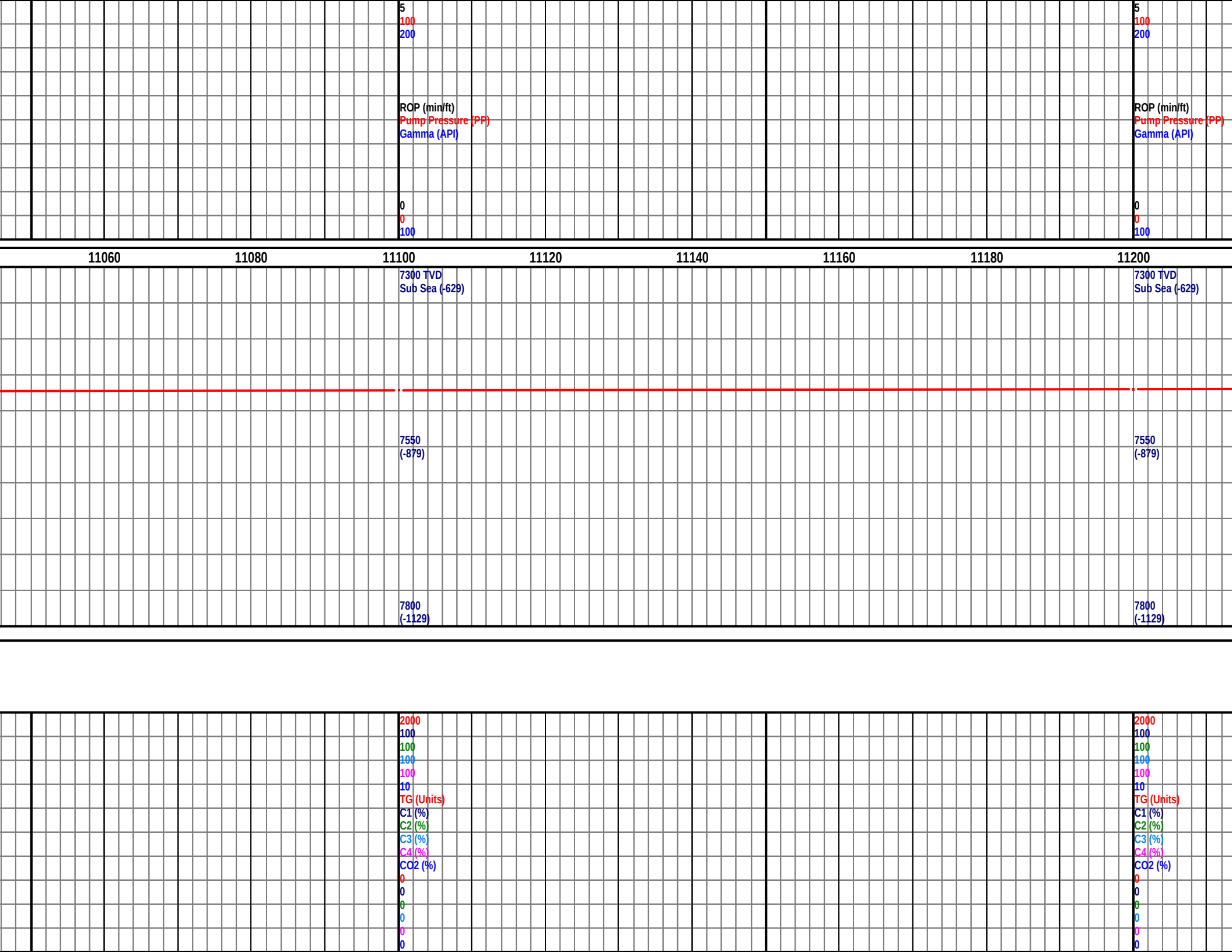

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
10220
10240
10260
10280
10300
10320
10340
10360
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
10380
10400
10420
10440
10460
10480
10500
10520
10540
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
10560
10580
10600
10620
10640
10660
10680
10700
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

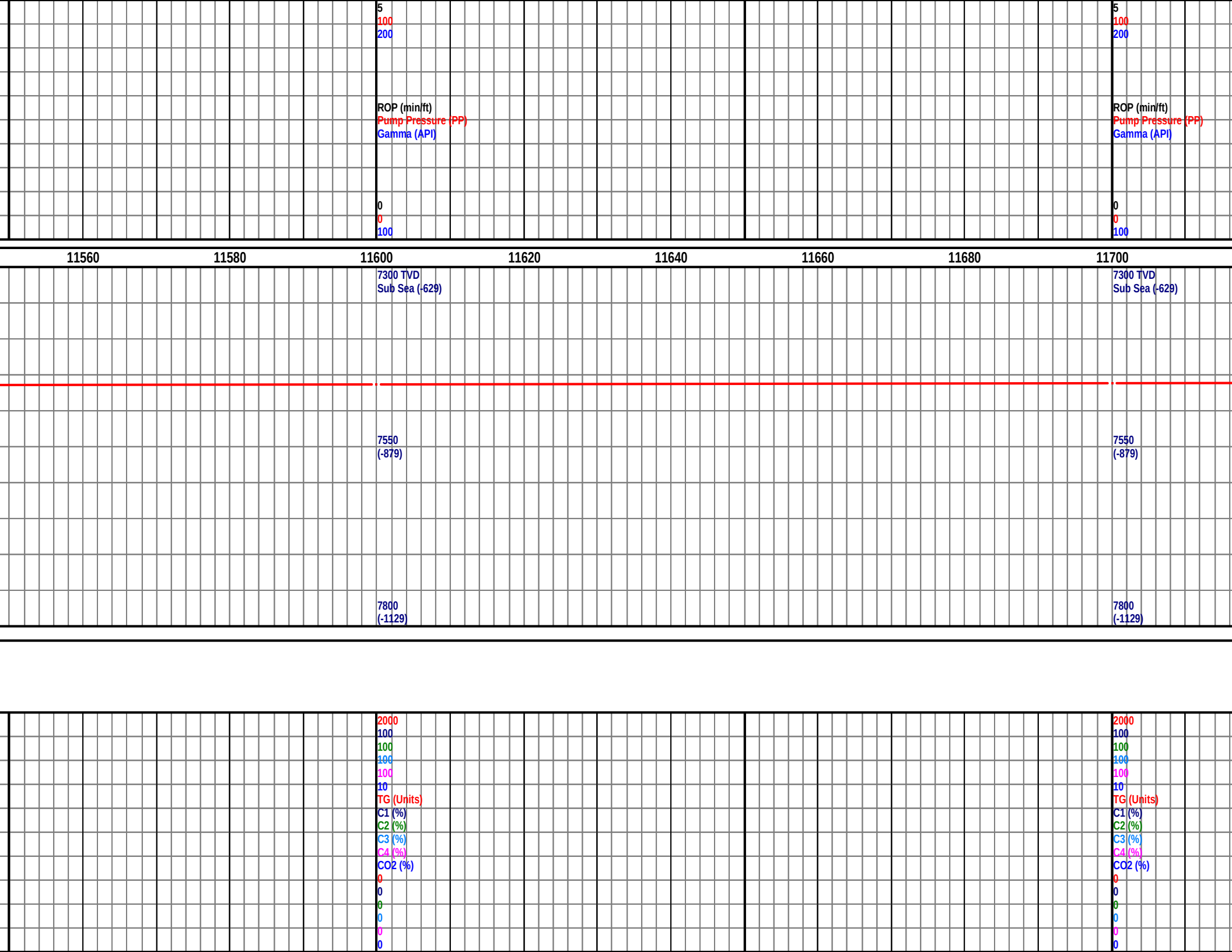

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
PP
10720
10740
10760
10780
10800
10820
10840
10860
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
10880
10900
10920
10940
10960
10980
11000
11020
11040
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

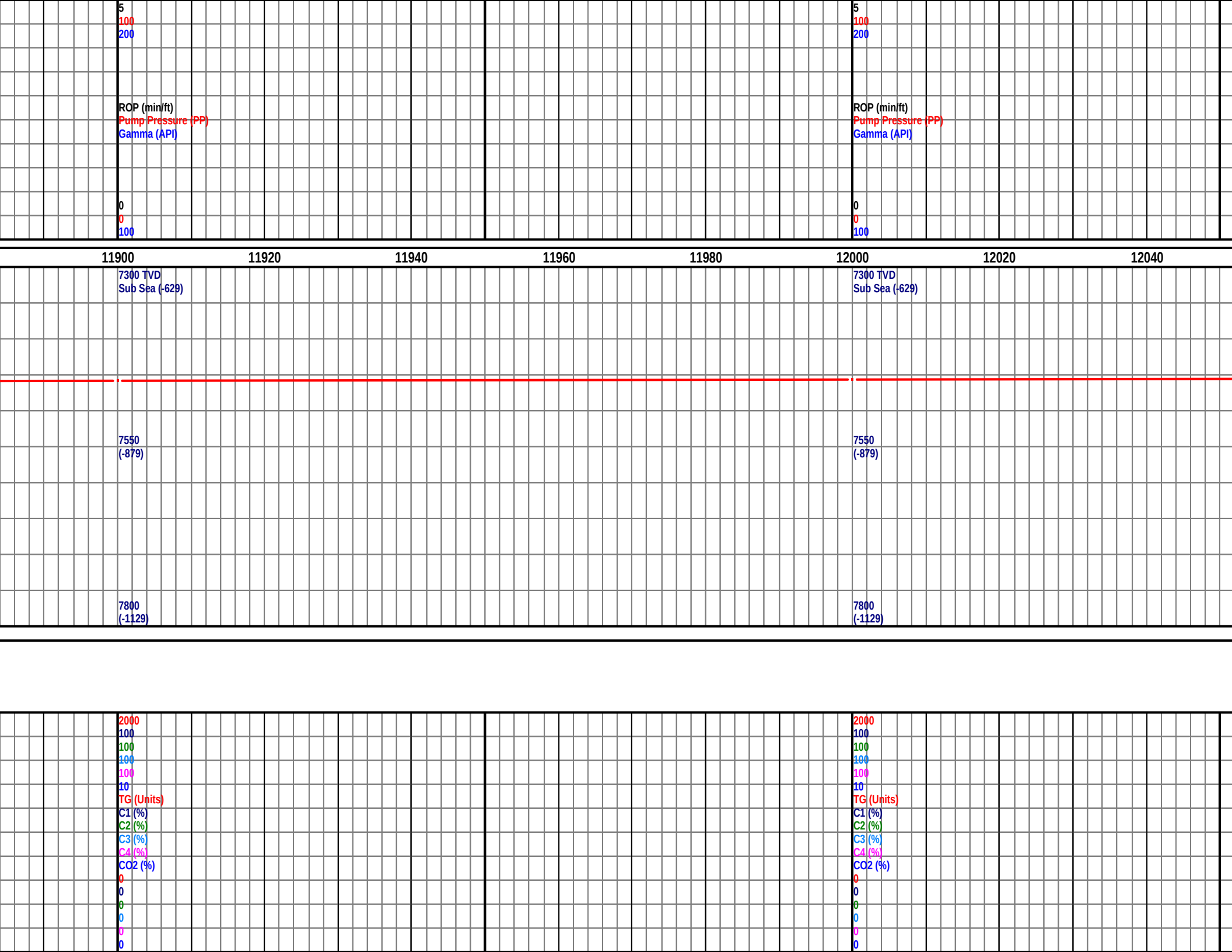

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
11060
11080
11100
11120
11140
11160
11180
11200
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
11220
11240
11260
11280
11300
11320
11340
11360
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

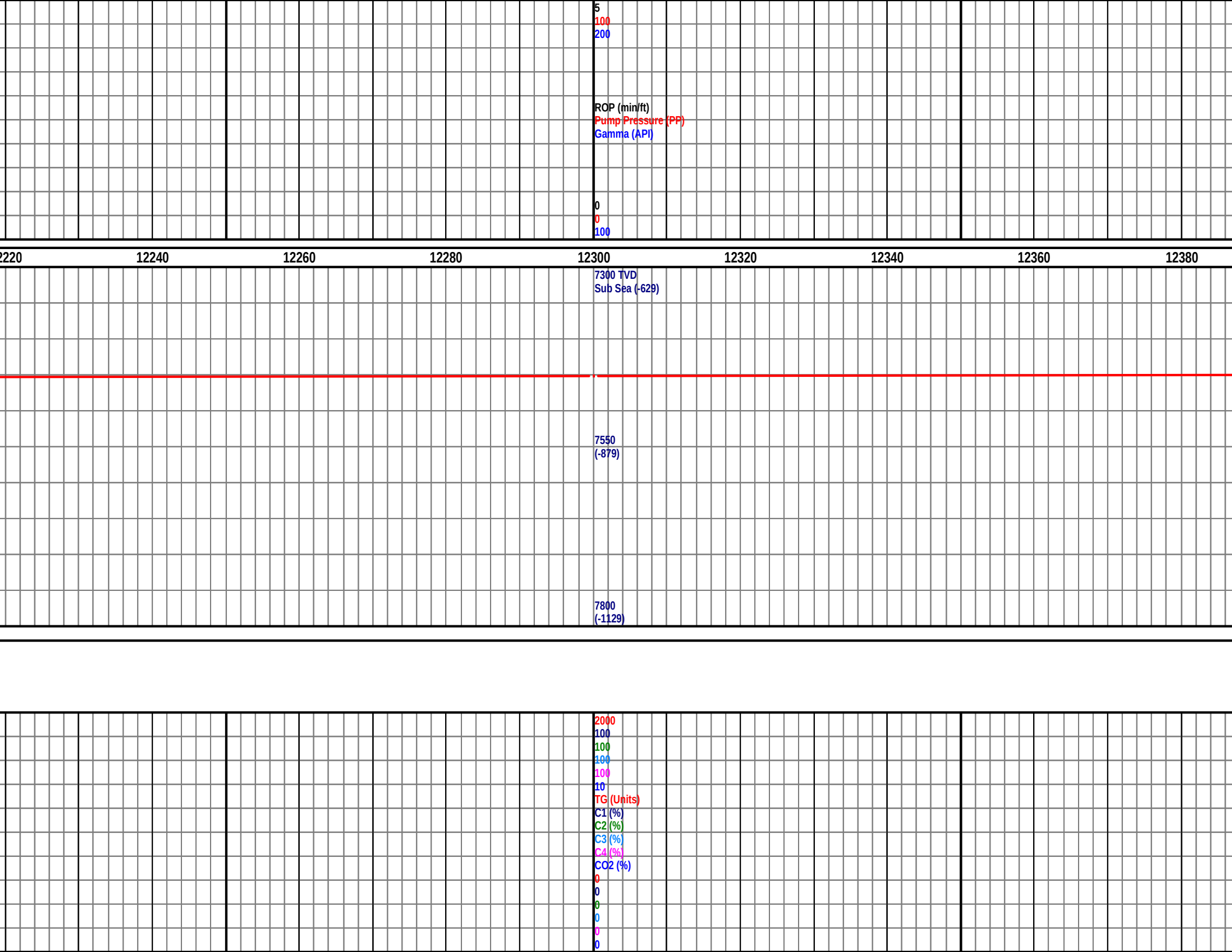
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
30
11400
11420
11440
11460
11480
11500
11520
11540
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

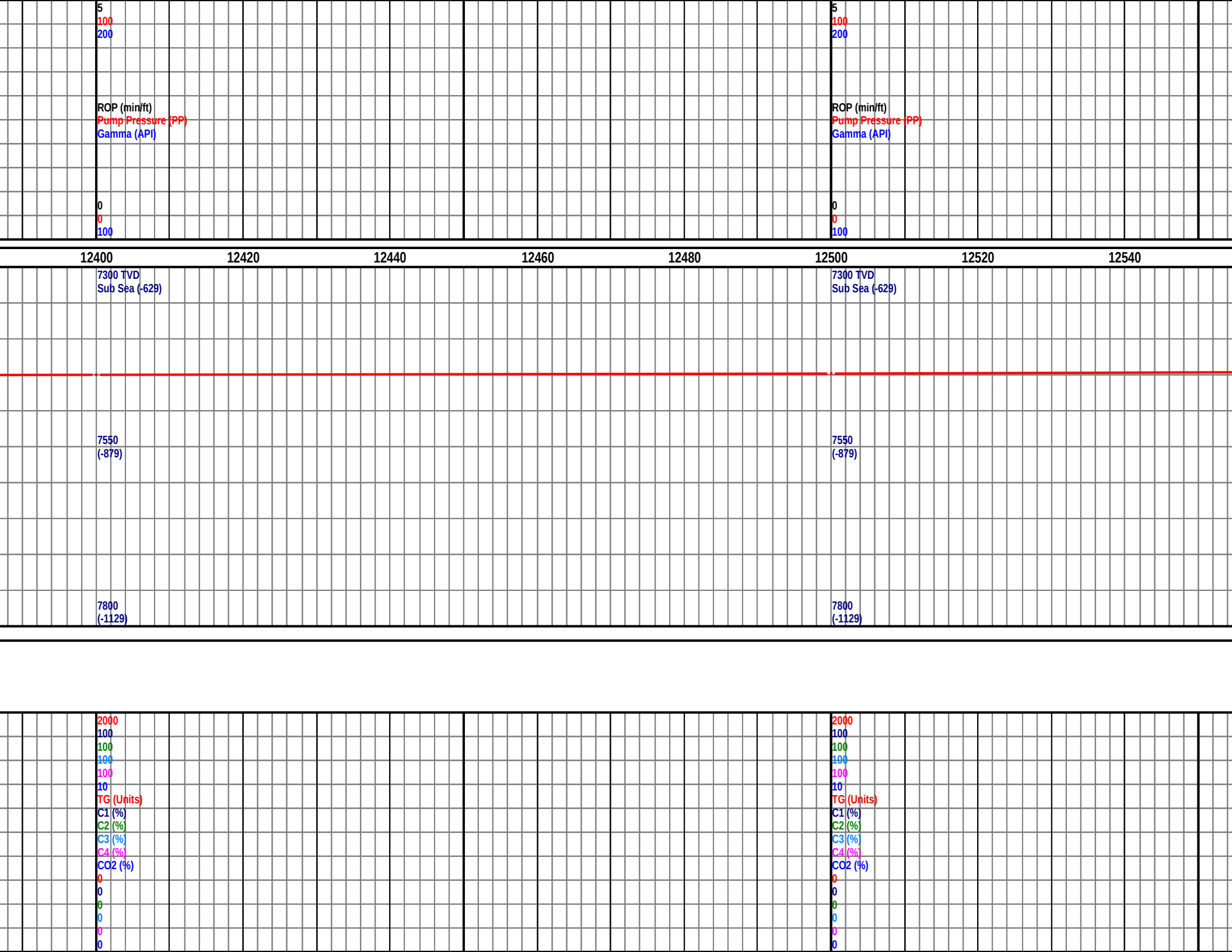

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
11560
11580
11600
11620
11640
11660
11680
11700
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

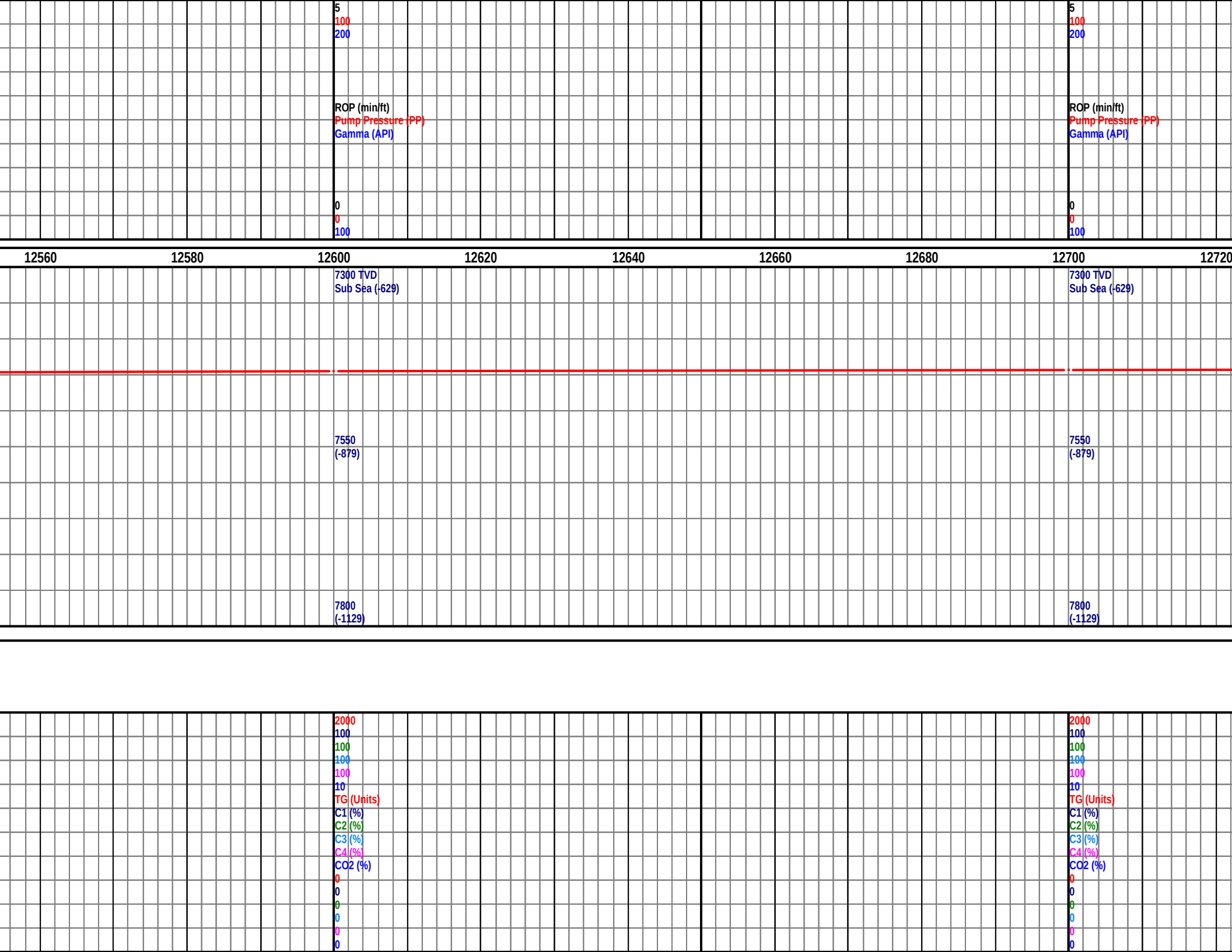
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
11720
11740
11760
11780
11800
11820
11840
11860
11880
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
11900
11920
11940
11960
11980
12000
12020
12040
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
12060
12080
12100
12120
12140
12160
12180
12200
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
2220
12240
12260
12280
12300
12320
12340
12360
12380
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

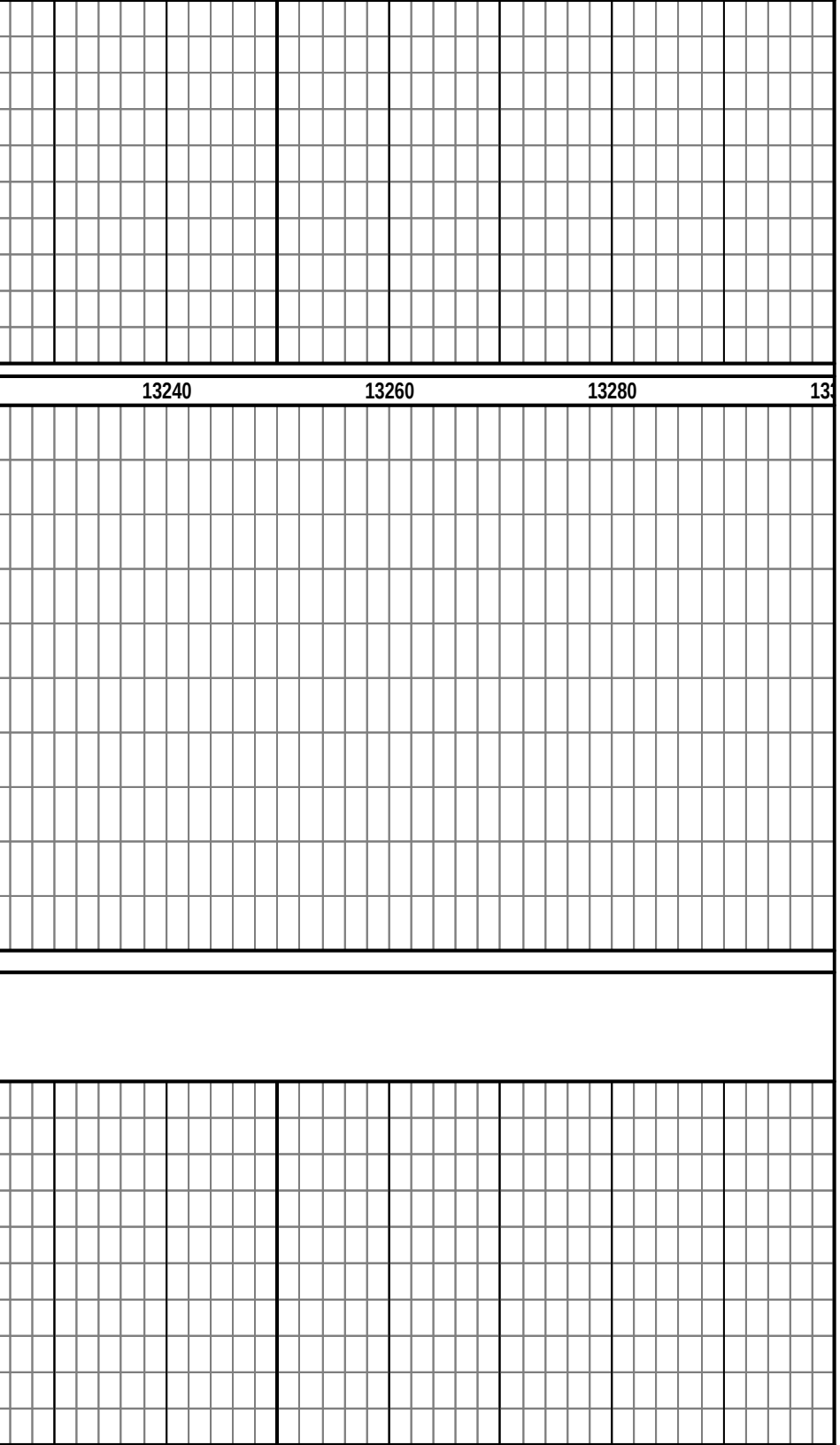

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
12400
12420
12440
12460
12480
12500
12520
12540
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0


5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
12560
12580
12600
12620
12640
12660
12680
12700
12720
7300 TVD
Sub Sea (+629)
7550
(-879)
7800
(-1129)
7300 TVD
Sub Sea (+629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
12740
12760
12780
12800
12820
12840
12860
12880
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
12900
12920
12940
12960
12980
13000
13020
13040
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0

5
100
200
ROP (min/ft)
Pump Pressure (PP)
Gamma (API)
0
0
100
13060
13080
13100
13120
13140
13160
13180
13200
13220
7300 TVD
Sub Sea (-629)
7550
(-879)
7800
(-1129)
2000
100
100
100
100
10
TG (Units)
C1 (%)
C2 (%)
C3 (%)
C4 (%)
CO2 (%)
0
0
0
0
0
0


13240
13260
13280
13