



7136 South Yale Avenue, Suite 414

Tulsa, Oklahoma 74136-6378

phone 918.925.9739

fax 866.534.4559

WWW.HZMUD.COM

Customer Information

Operator: **Noble Energy Inc**
1625 Broadway
Suite 2200
Denver, Colorado 80202

Geologist: **Holly Sell**
Noble Energy Inc.

Mud Logging Details

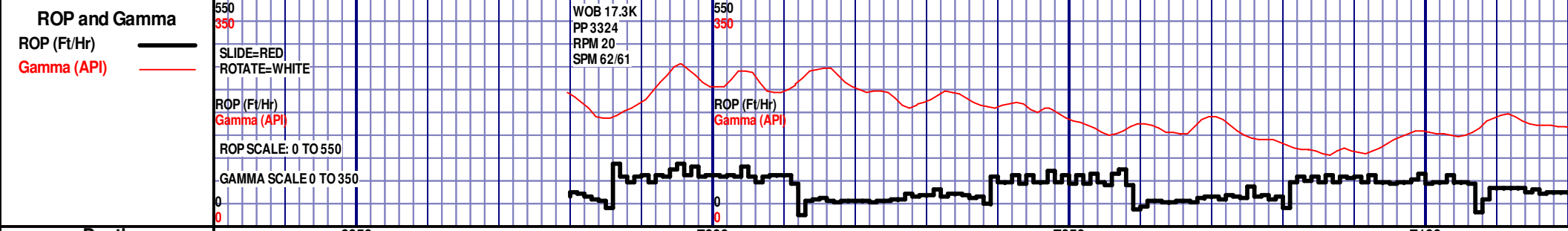
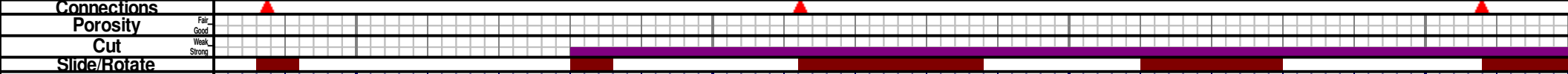
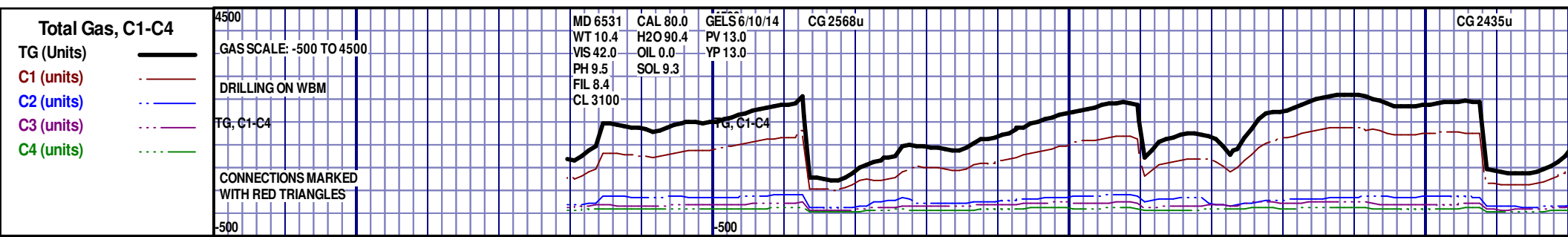
Logger: **Andrew Christiano & Ryan Bless**
Log Interval: 6980' MD to 11061' MD
Start Date: December 23, 2012
Release Date: December 26, 2012

Well Information

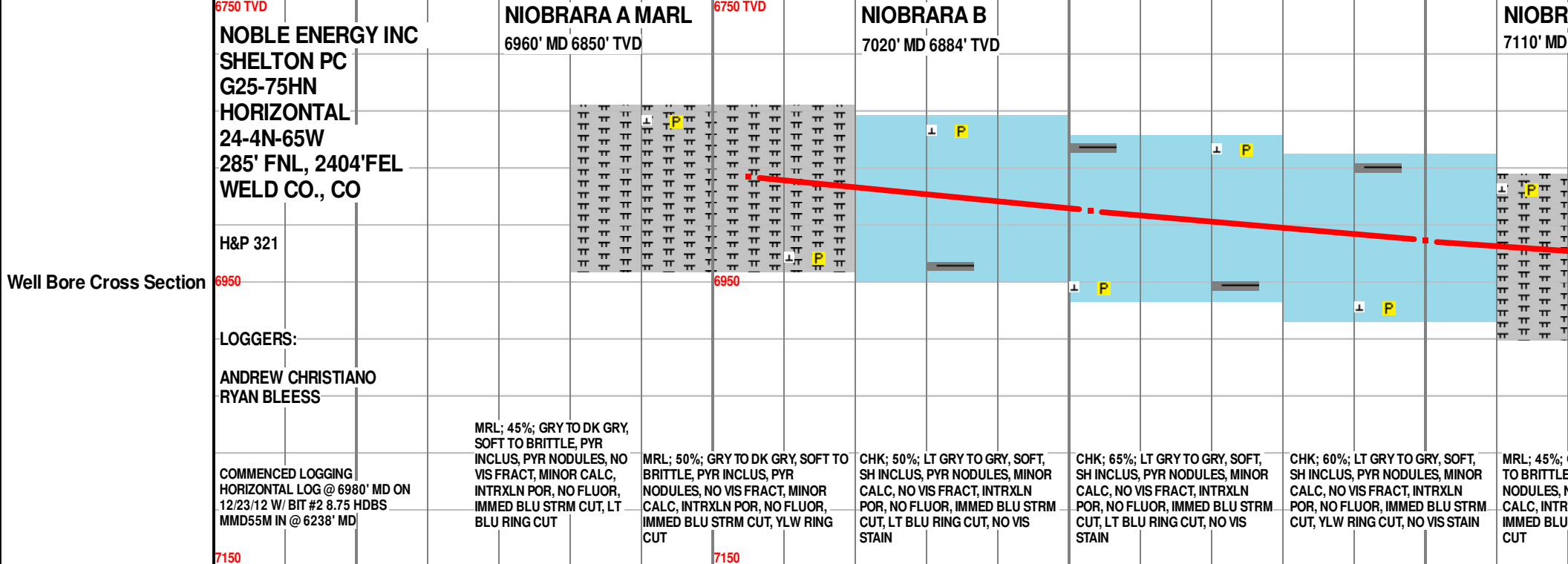
Well Name: **Shelton PC G25-75HN**
Horizontal
Location: **24-4N-65W**
285' FNL, 2404' FEL

County: **Weld**
State: **Colorado**

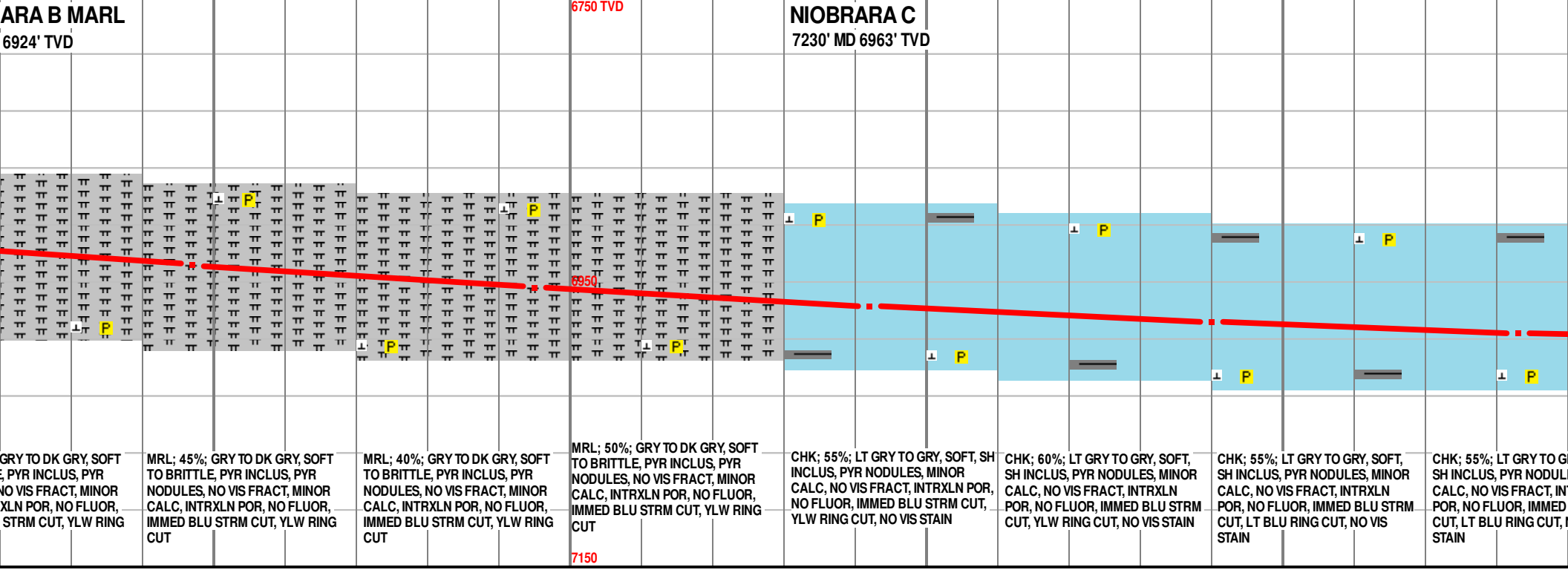
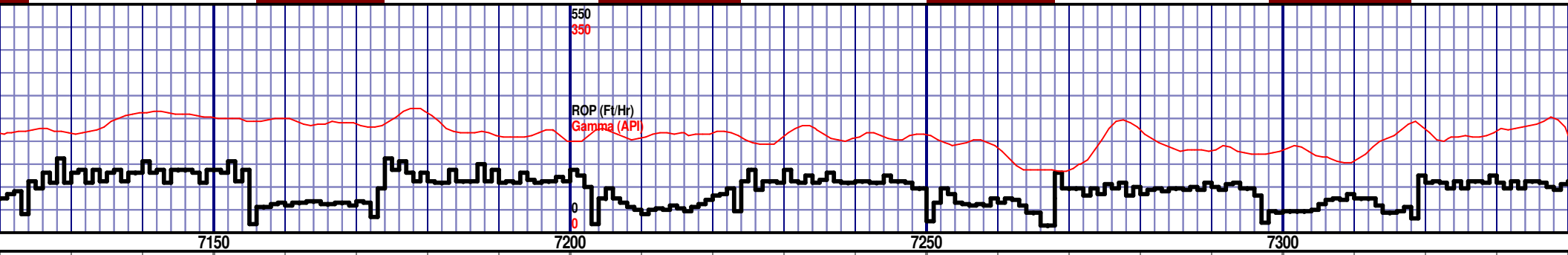
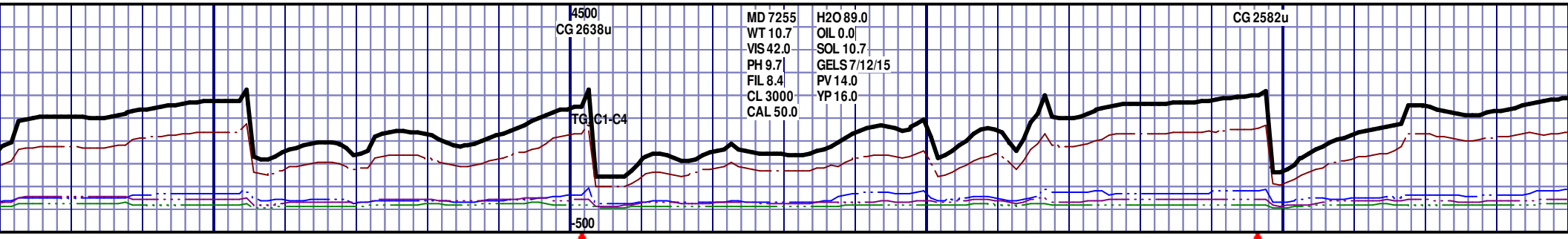
Drilling Rig: **H&P 321**
Total Depth: **11061' MD**
TD Date: **December 26, 2012**
Formation: **Niobrara C**
KB Elevation: **4824'**
GR Elevation: **4794'**
API Number: **05-123-35541**



Depth 6950 7000 7050 7100

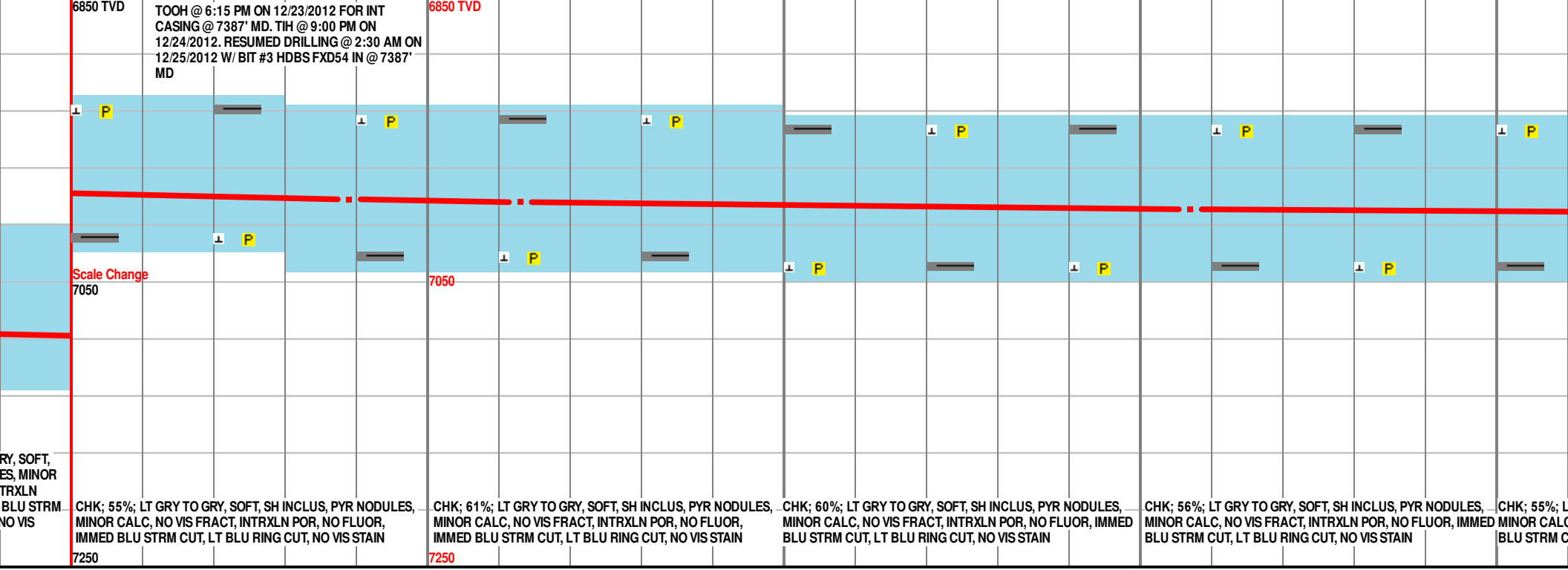
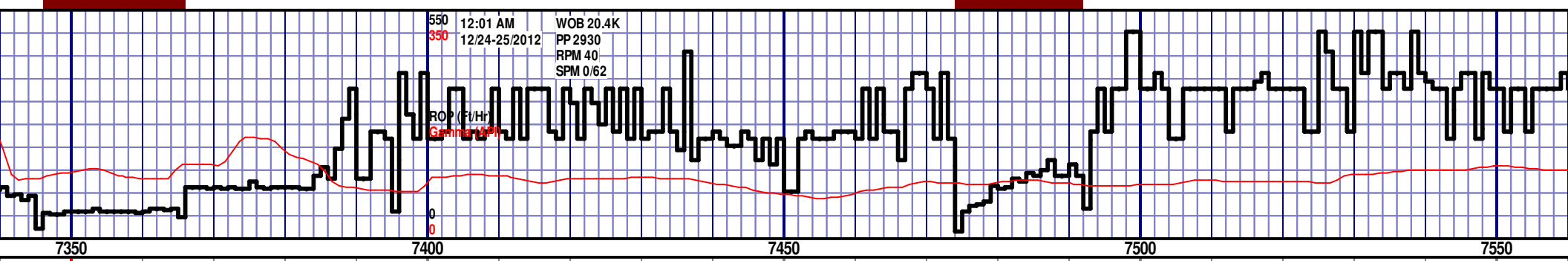
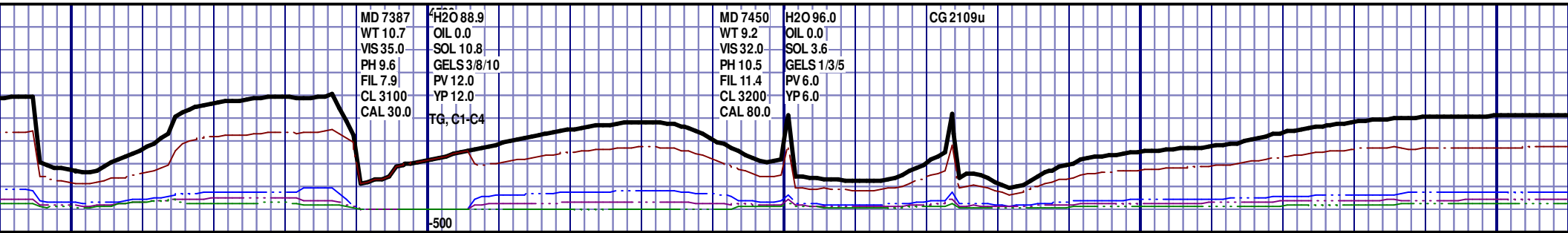


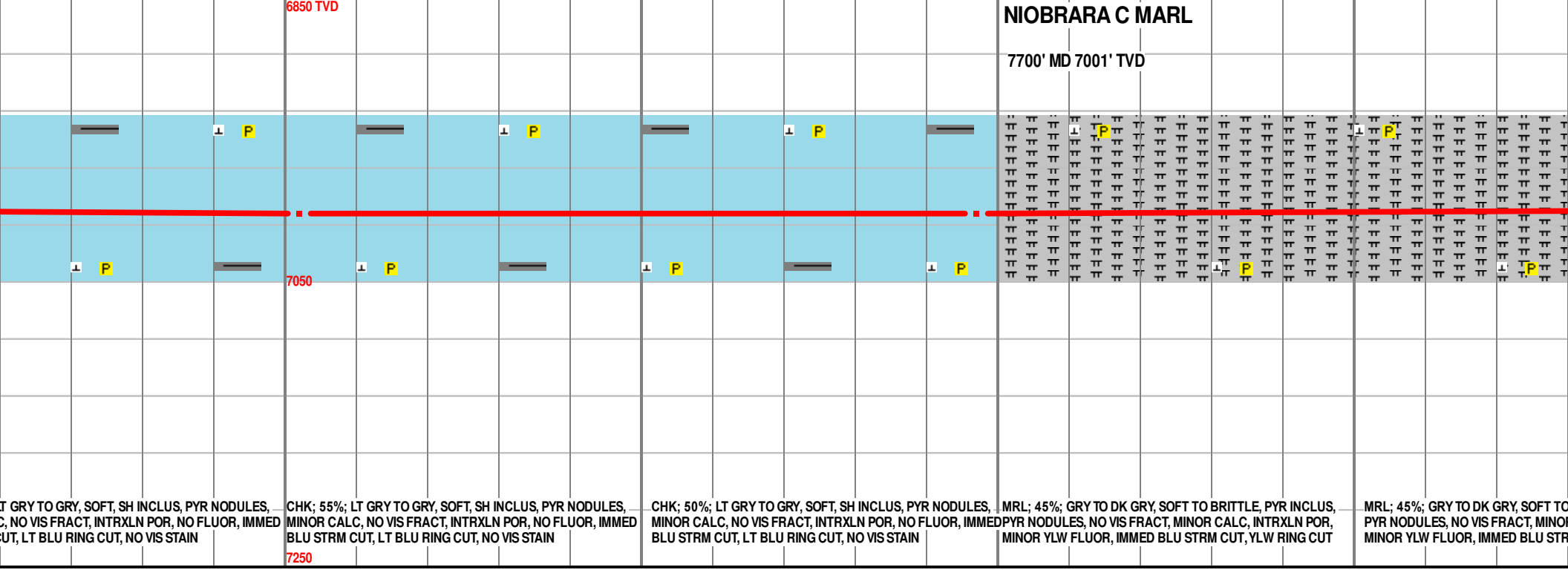
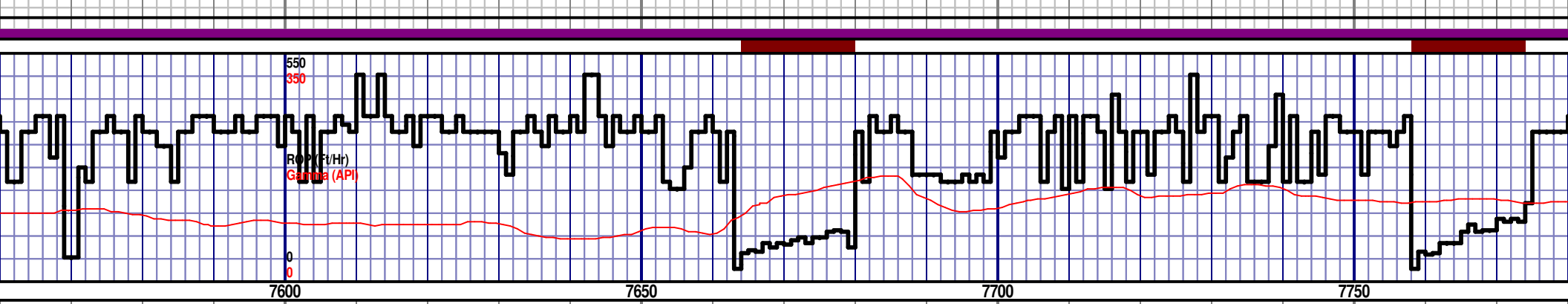
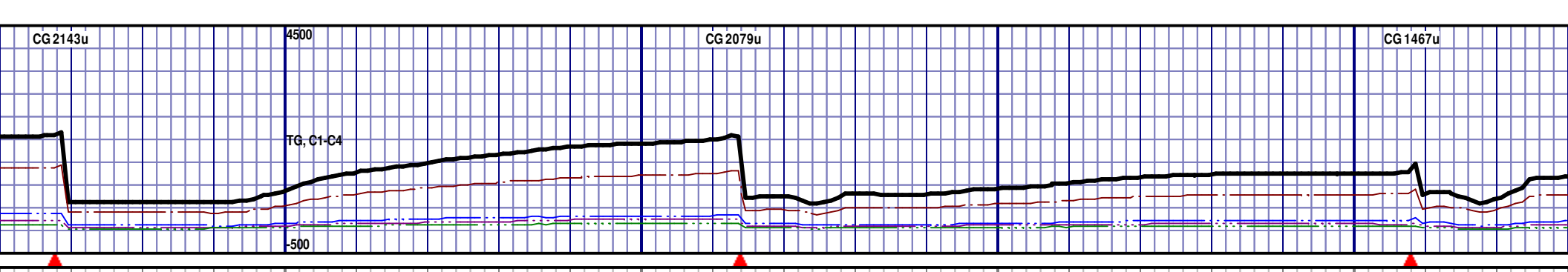
Survey Data MD 7005 TVD 6876.12 INC 57.94 AZ 170.71 VS 434.1 MD 7053 TVD 6900.12 INC 62.24 AZ 172 VS 475.15 MD 7100 TVD 6920.57 INC 65.98 AZ 172.77 VS 475.15



MD 7147 TVD 6938.43 MD 7195 TVD 6953.92 MD 7242 TVD 6967.03 MD 7290 TVD 6978.15 MD 7330 TVD 6988.15

INC 69.33 AZ 172.94 VS 559.68 INC 72.85 AZ 173.83 VS 604.59 INC 74.93 AZ 176.11 VS 649.44 INC 78.13 AZ 178.38 VS 695.95 INC 81.73 AZ 180.15 VS 746.99

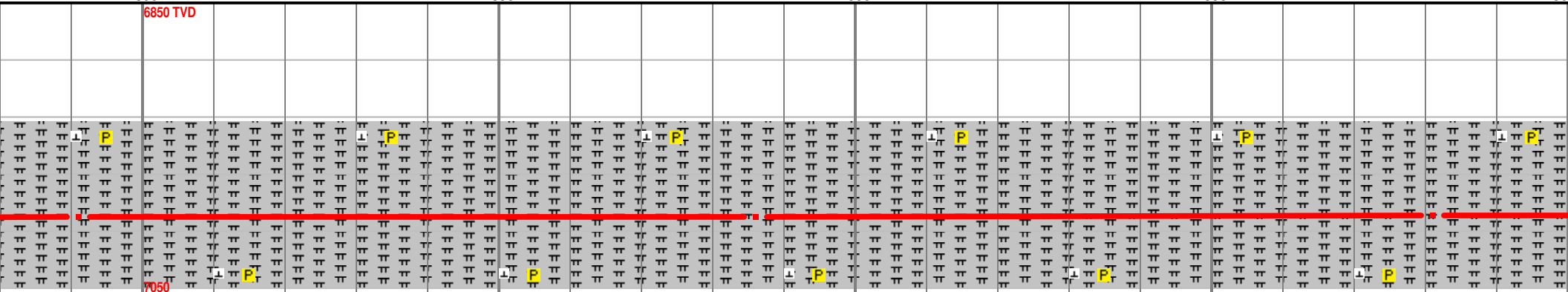
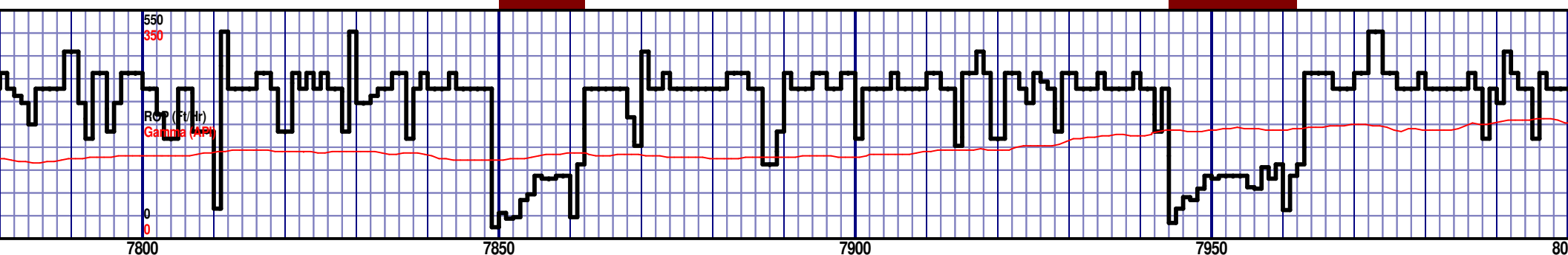
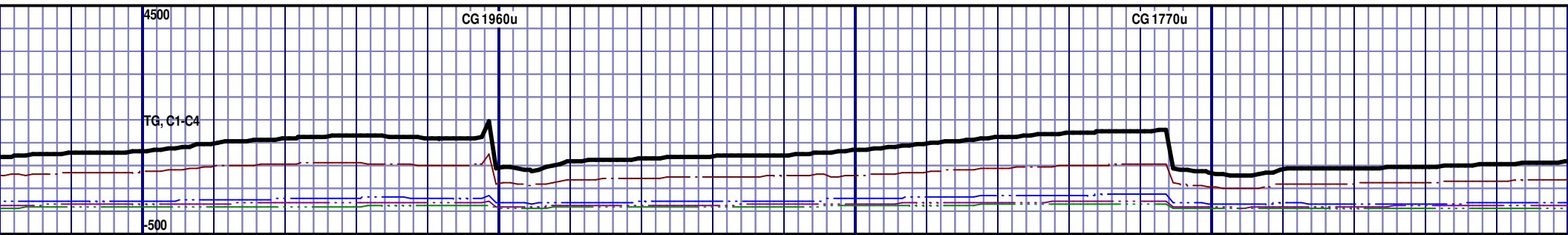




<p>LT GRY TO GRY, SOFT, SH INCLUS, PYR NODULES, NO VIS FRACT, INTRXLN POR, NO FLUOR, IMMEDIATE BLU STRM CUT, LT BLU RING CUT, NO VIS STAIN</p>	<p>CHK; 55%; LT GRY TO GRY, SOFT, SH INCLUS, PYR NODULES, MINOR CALC, NO VIS FRACT, INTRXLN POR, NO FLUOR, IMMEDIATE BLU STRM CUT, LT BLU RING CUT, NO VIS STAIN</p>	<p>CHK; 50%; LT GRY TO GRY, SOFT, SH INCLUS, PYR NODULES, MINOR CALC, NO VIS FRACT, INTRXLN POR, NO FLUOR, IMMEDIATE BLU STRM CUT, LT BLU RING CUT, NO VIS STAIN</p>	<p>MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, MINOR YLW FLUOR, IMMEDIATE BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, MINOR YLW FLUOR, IMMEDIATE BLU STRM CUT, YLW RING CUT</p>
--	--	--	--	--

MD 7602 TVD 7002.04
 INC 88.61 AZ 177.3 VS 1005.91

MD 7697 TVD 7001.97
 INC 91.48 AZ 177.79 VS 1100.65



7050

BRITTLE, PYR INCLUS, R CALC, INTRXLN POR, IMM CUT, YLW RING CUT

MRL: 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, MINOR YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL: 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, MINOR YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT

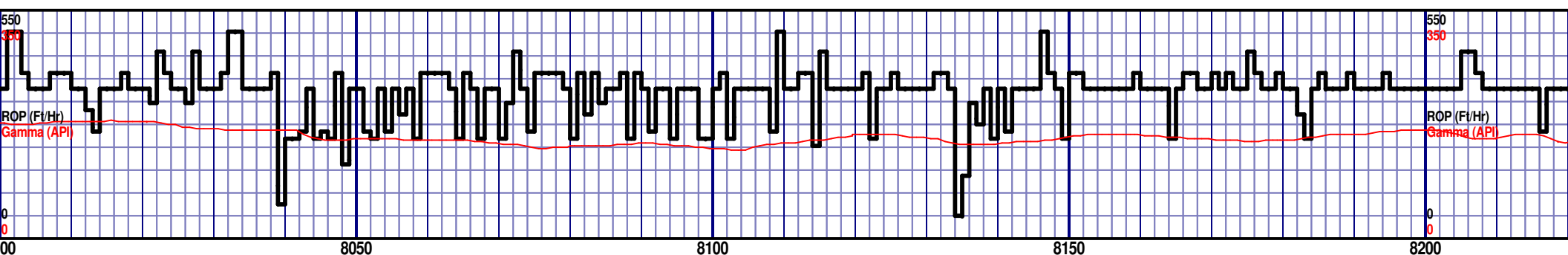
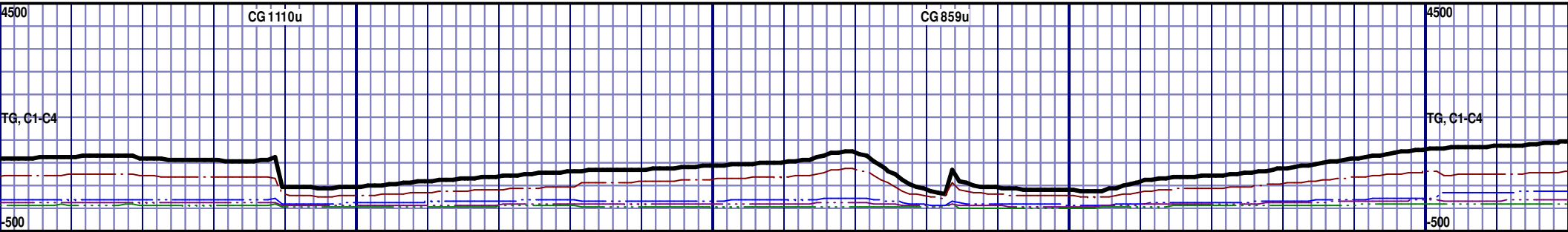
MRL: 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL: 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MD 7791 TVD 7000.45
 INC 90.37 AZ 178.36 VS 1194.44

MD 7886 TVD 6999.81
 INC 90.4 AZ 178.35 VS 1289.28

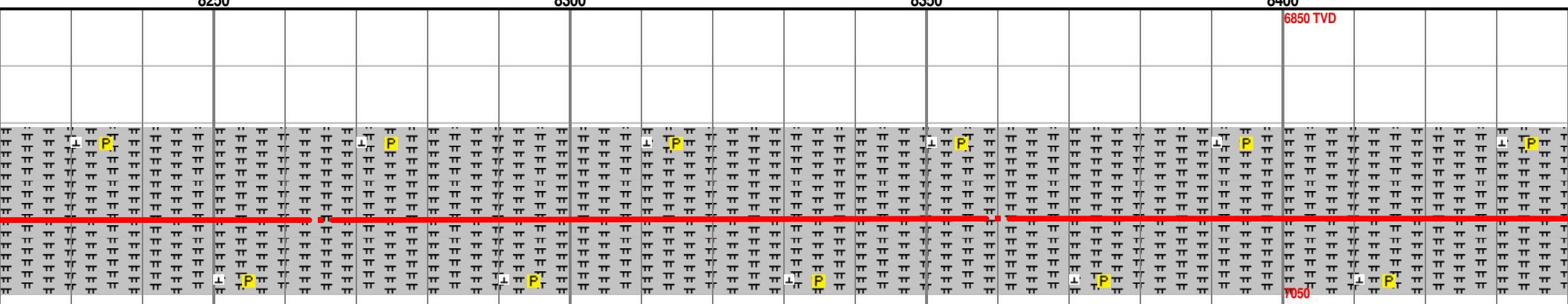
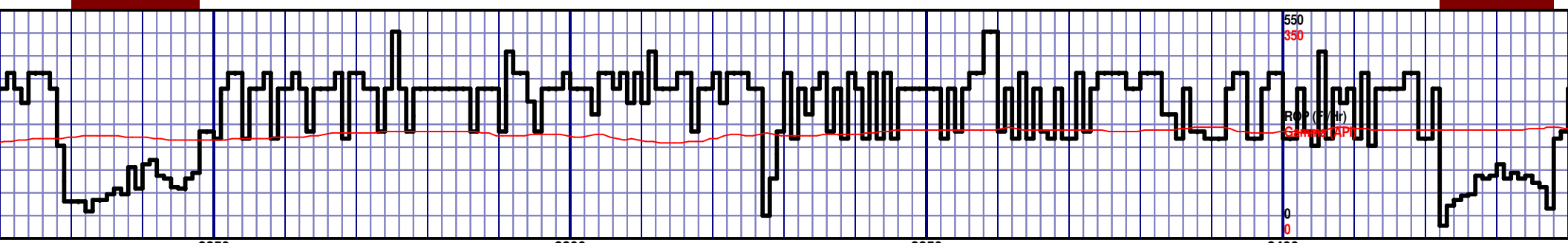
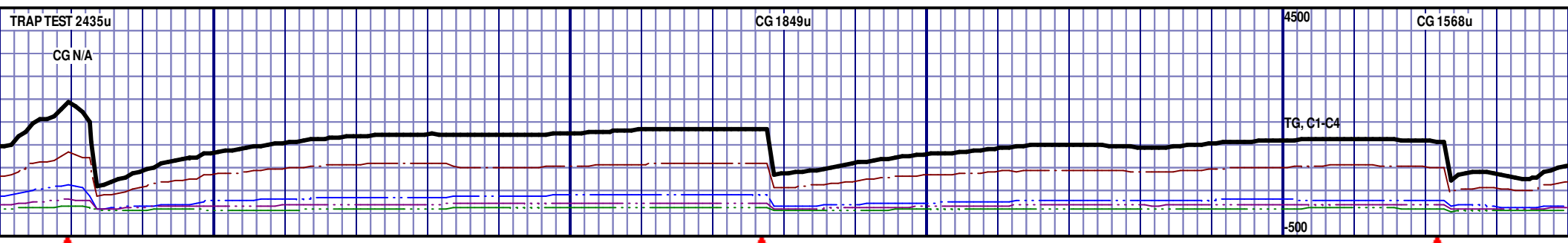
MD 7981 TVD 6999.43
 INC 90.06 AZ 181.29



6850 TVD									6850 TVD
7050									7050
7250									7250
MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMEDI BLU STRM CUT, YLW RING CUT	MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMEDI BLU STRM CUT, YLW RING CUT	MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMEDI BLU STRM CUT, YLW RING CUT	MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMEDI BLU STRM CUT, YLW RING CUT	MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMEDI BLU STRM CUT, YLW RING CUT	MRL; 35%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMEDI BLU STRM CUT, YLW RING CUT				

MD 8076 TVD 6999.2
INC 90.22 AZ 180.07 VS 1479.19

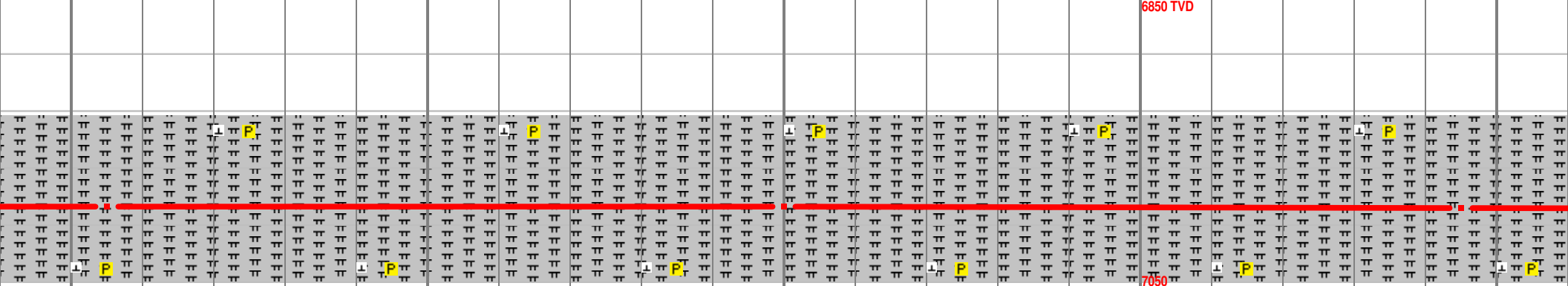
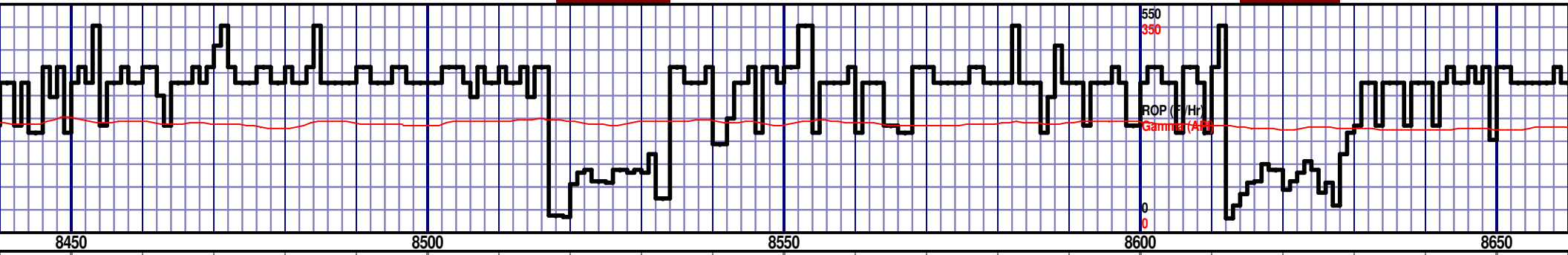
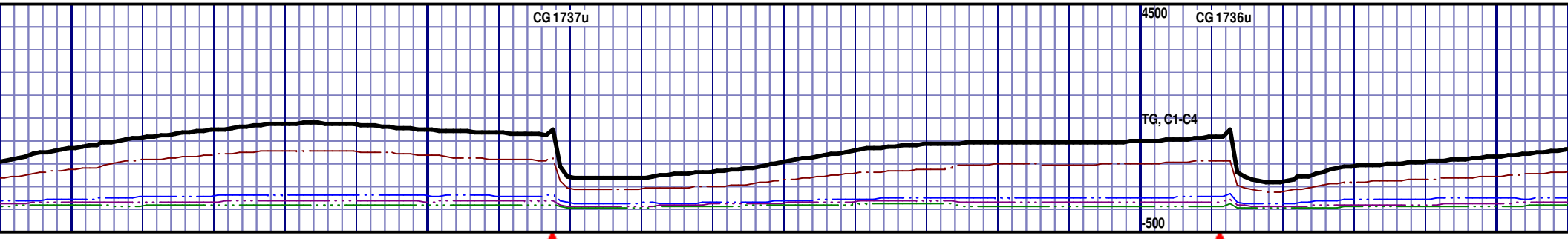
MD 8171 TVD 6998.23
INC 90.96 AZ 179.73 VS 1574.14



<p>RY, SOFT TO BRITTLE, PYR INCLUS, FRACT, MINOR CALC, INTRXLN POR, STRM CUT, YLW RING CUT</p>	<p>MRL; 35%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, MINOR YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, MINOR DIM YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>
--	--	---	---	--

MD 8265 TVD 6997.62
INC 89.78 AZ 179.7 VS 1668.08

MD 8360 TVD 6997.39
INC 90.49 AZ 178.7 VS 1762.99



MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, MINOR DIM YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 35%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 35%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

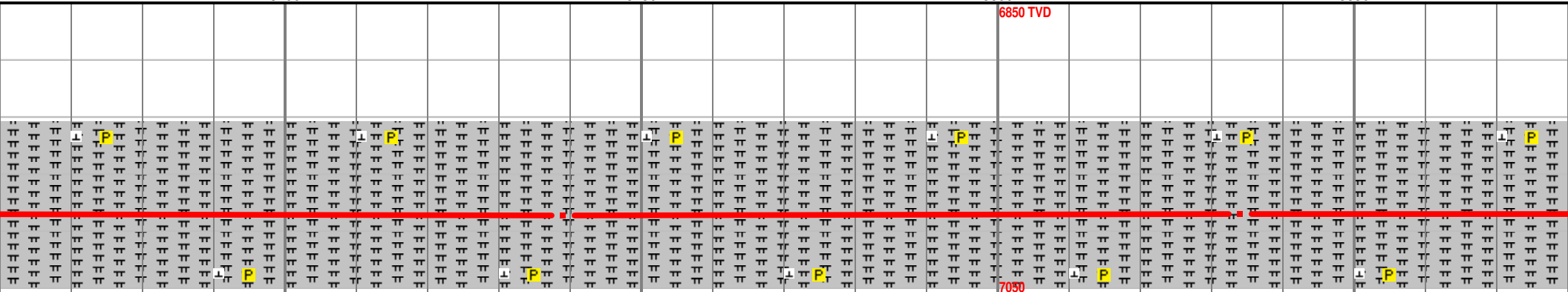
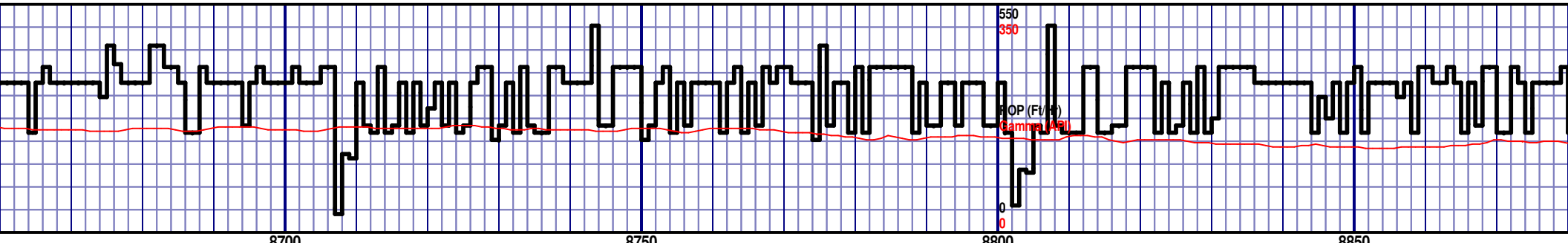
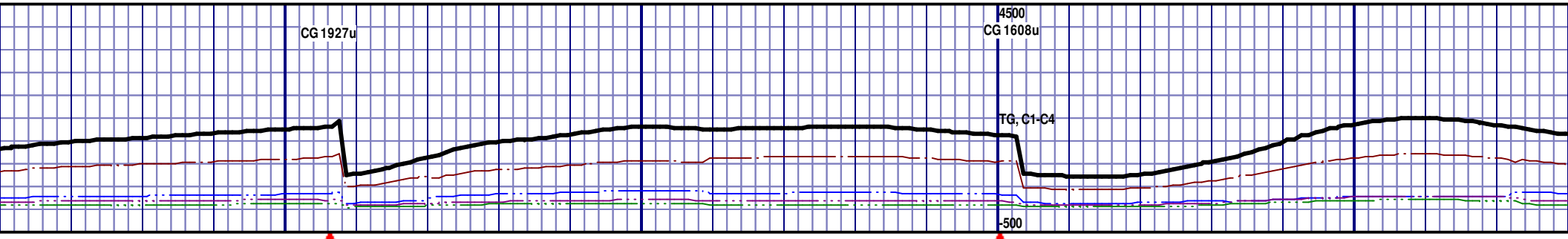
MRL; 35%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 40%; INCLUS, PYR INTRXLN POR RING CUT

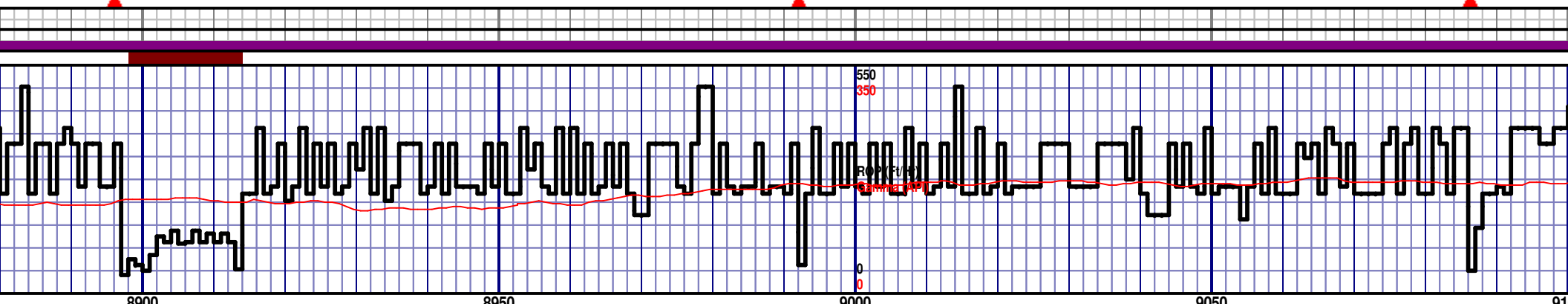
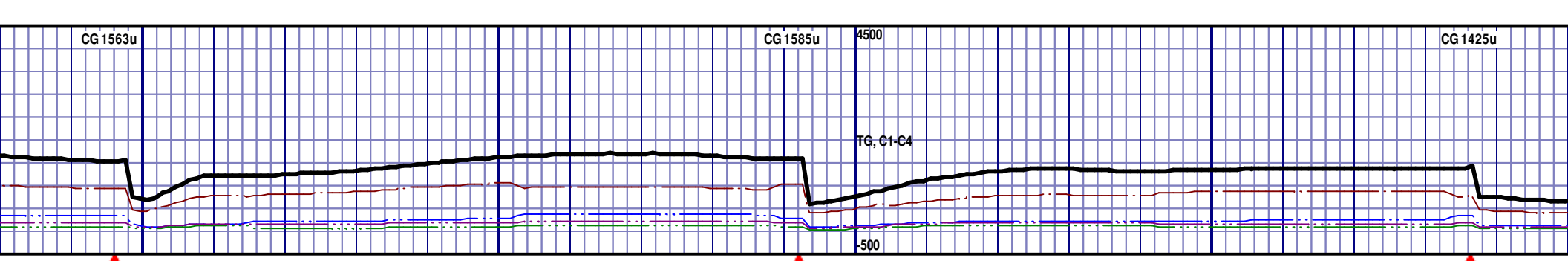
MD 8455 TVD 6997.37
INC 89.54 AZ 178.95 VS 1857.87

MD 8550 TVD 6997.49
INC 90.31 AZ 180.7 VS 1952.81

MD 8645 TVD 6997.37
INC 89.01 AZ 181.1 VS 1857.87



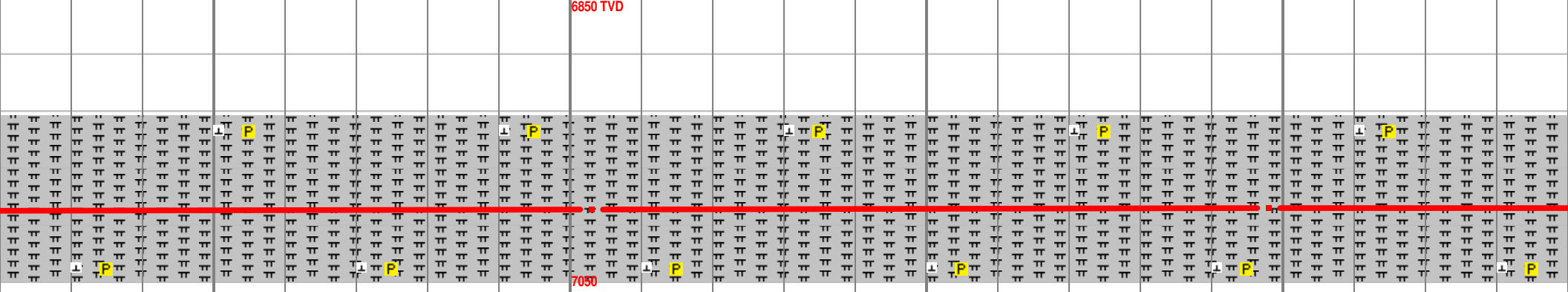
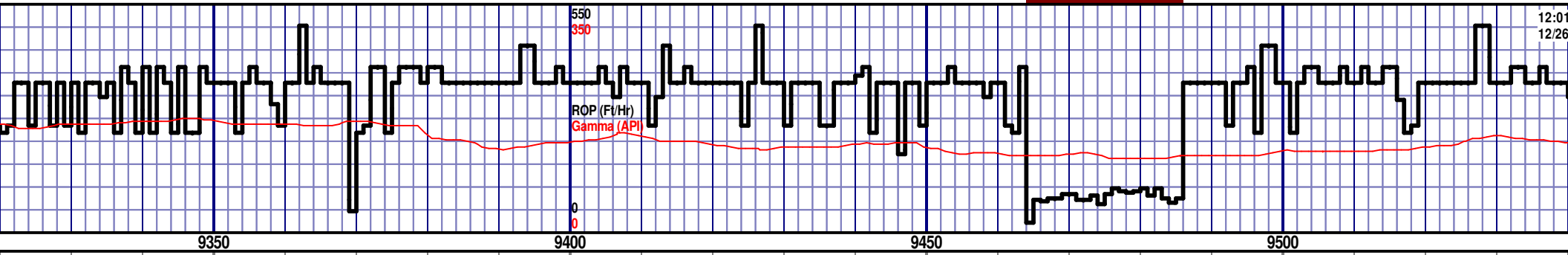
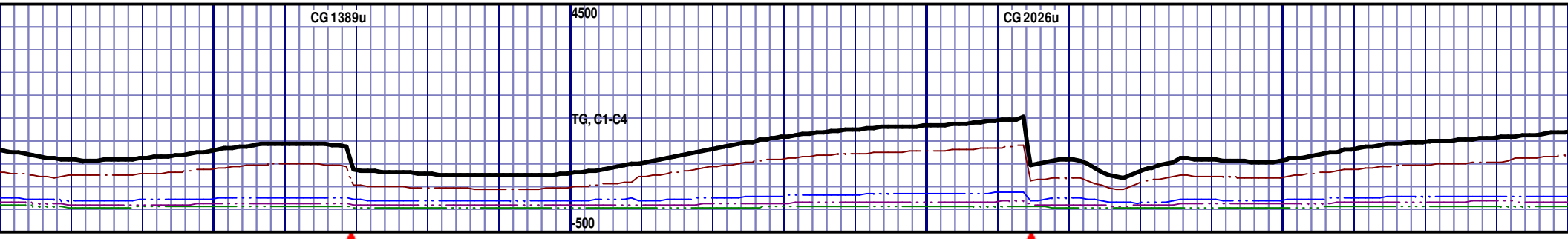
<p>GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>
--	---	---	---	---



6850 TVD										
7050										
BRITTLE, PYR INCLUS, CALC, INTRXLN POR, M CUT, YLW RING CUT	MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT	MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT	MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT	MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT						

MD 8929 TVD 6998.3
INC 89.14 AZ 181.02 VS 2331.75

MD 9024 TVD 6999.5
INC 89.41 AZ 180.76 VS 2426.73



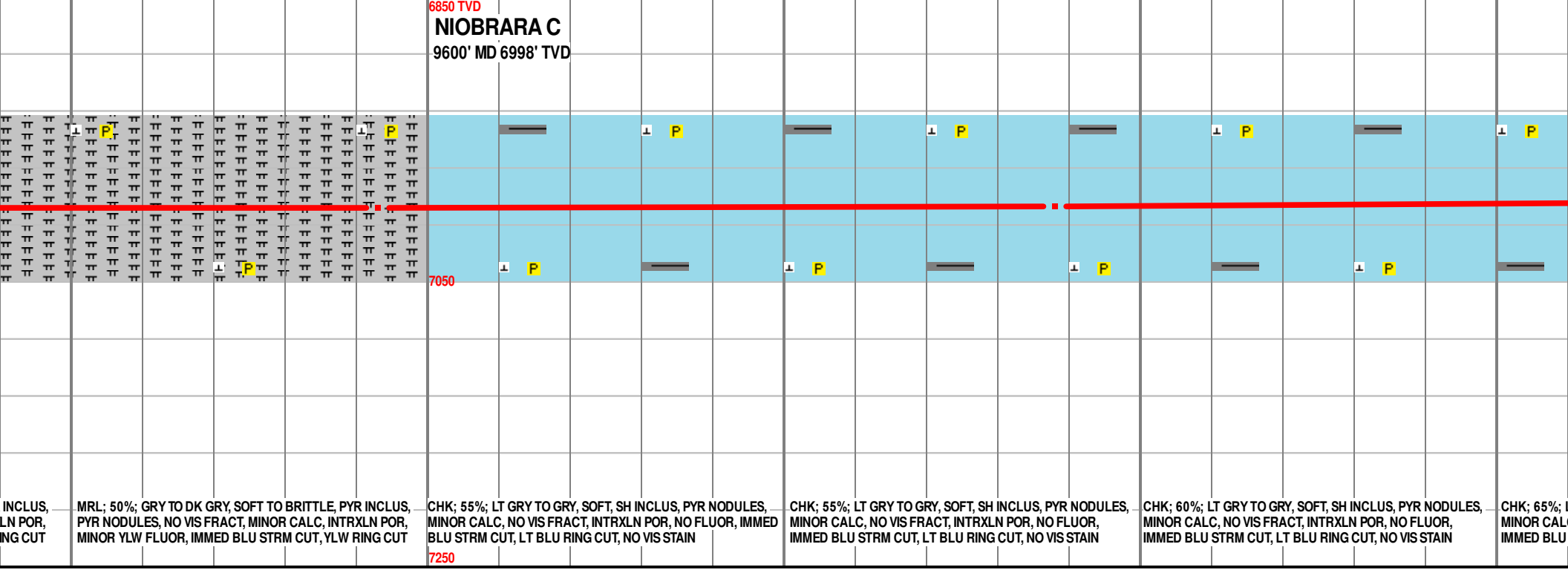
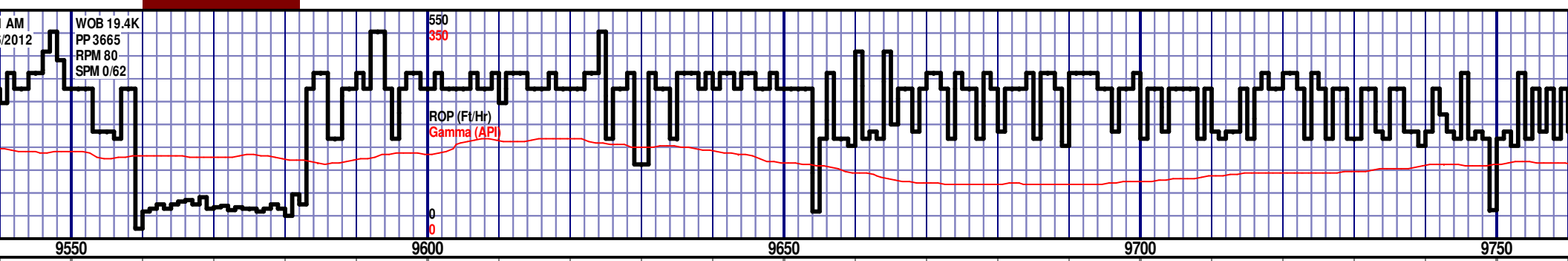
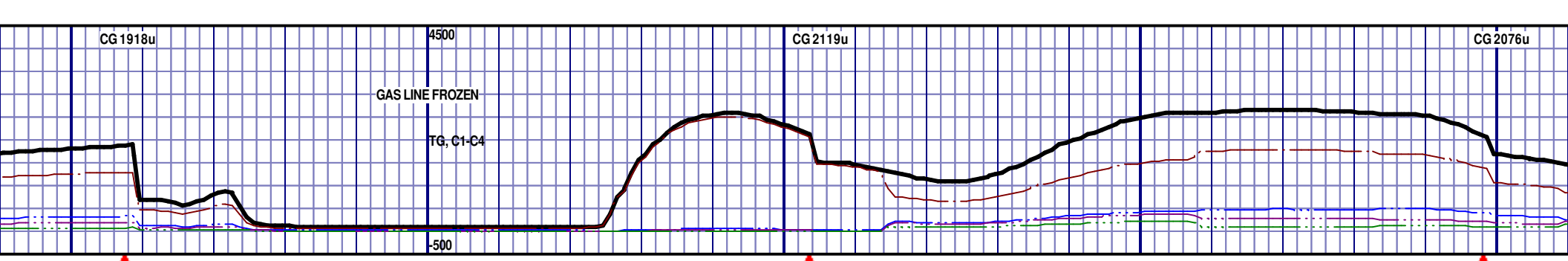
RY, SOFT TO BRITTLE, PYR INCLUS,
RACT, MINOR CALC, INTRXLN POR,
ED BLU STRM CUT, LT BLU RING CUT

MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN
POR, MINOR YLW FLUOR, IMMED BLU STRM CUT, LT BLU
RING CUT

MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
MINOR YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 50%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
MINOR YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 50%; GRY TO DK GRY, SOFT TO BRITTLE, PYR
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRX
MINOR YLW FLUOR, IMMED BLU STRM CUT, YLW R



INCLUS, LN POR, NG CUT

MRL; 50%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, MINOR YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT

CHK; 55%; LT GRY TO GRY, SOFT, SH INCLUS, PYR NODULES, MINOR CALC, NO VIS FRACT, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, LT BLU RING CUT, NO VIS STAIN

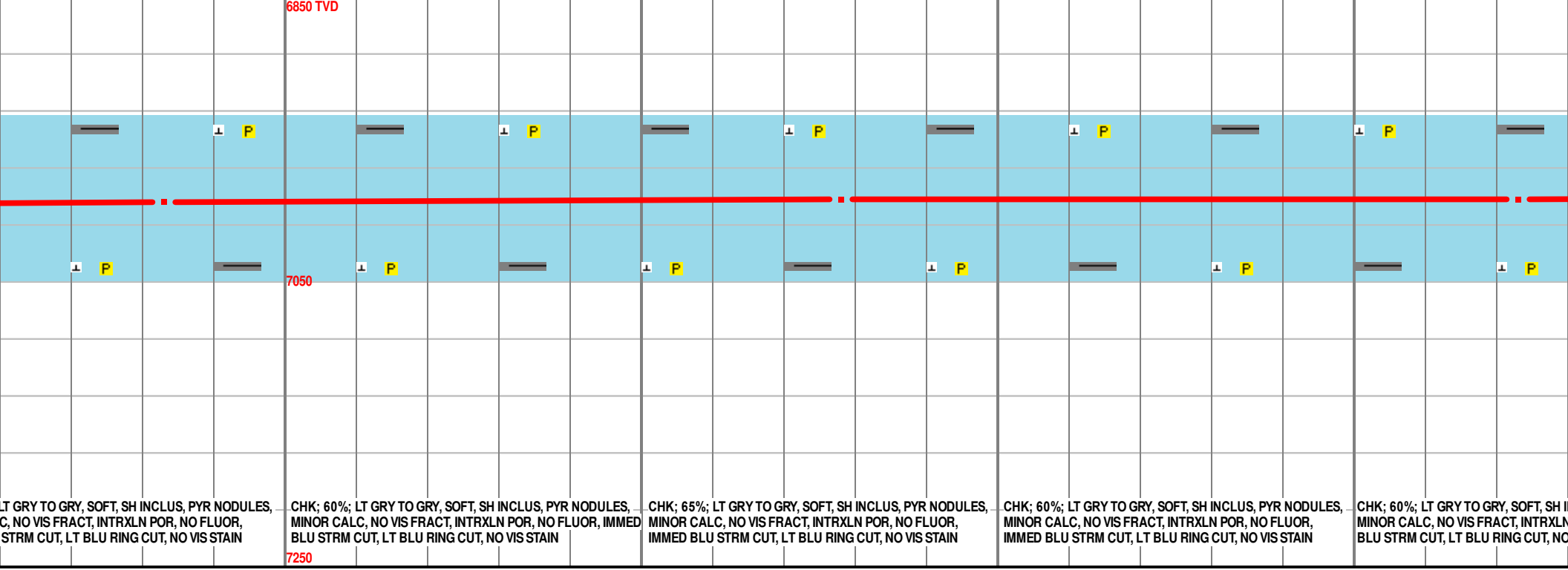
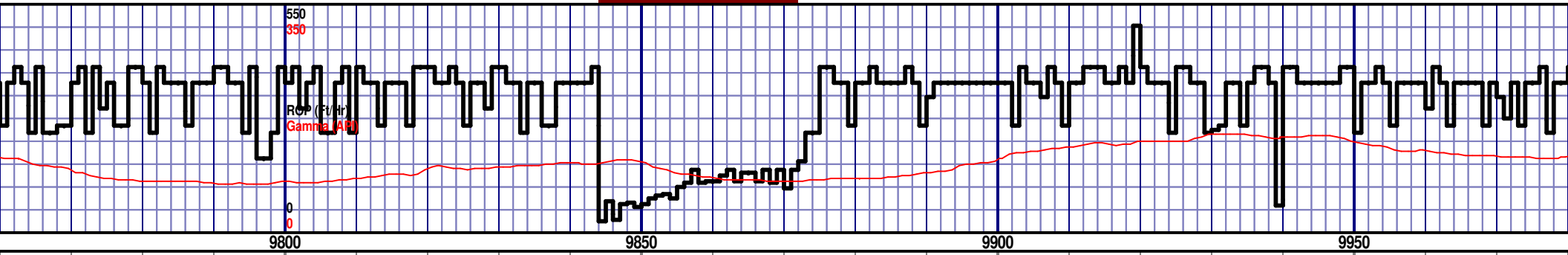
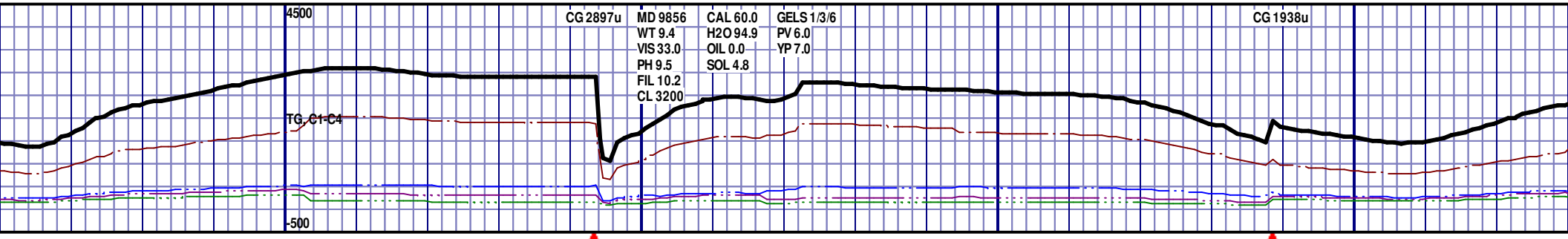
CHK; 55%; LT GRY TO GRY, SOFT, SH INCLUS, PYR NODULES, MINOR CALC, NO VIS FRACT, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, LT BLU RING CUT, NO VIS STAIN

CHK; 60%; LT GRY TO GRY, SOFT, SH INCLUS, PYR NODULES, MINOR CALC, NO VIS FRACT, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, LT BLU RING CUT, NO VIS STAIN

CHK; 65%; LT GRY TO GRY, SOFT, SH INCLUS, PYR NODULES, MINOR CALC, NO VIS FRACT, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, LT BLU RING CUT, NO VIS STAIN

MD 9593 TVD 6998.05
 INC 89.94 AZ 181.75 VS 2995.41

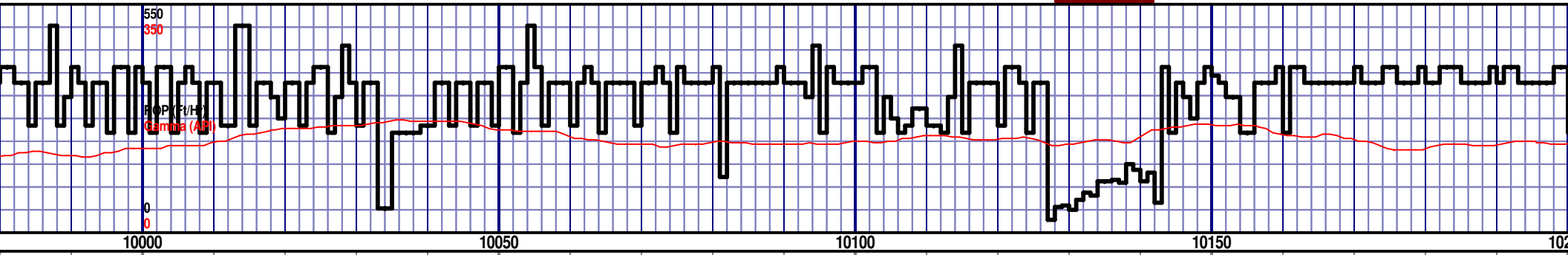
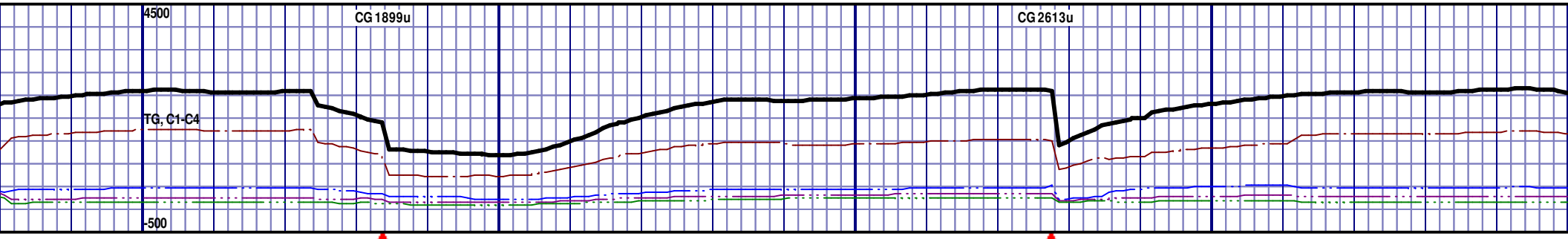
MD 9688 TVD 6997.38
 INC 90.86 AZ 181.94 VS 3090.40



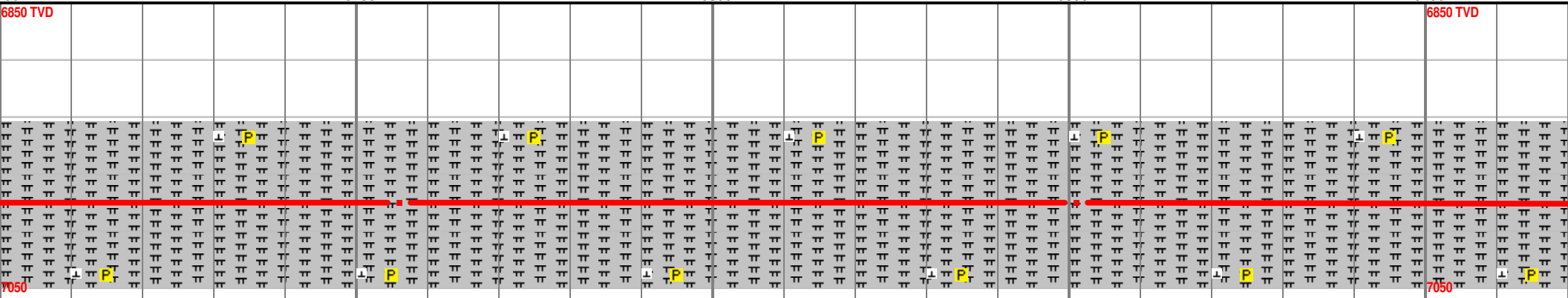
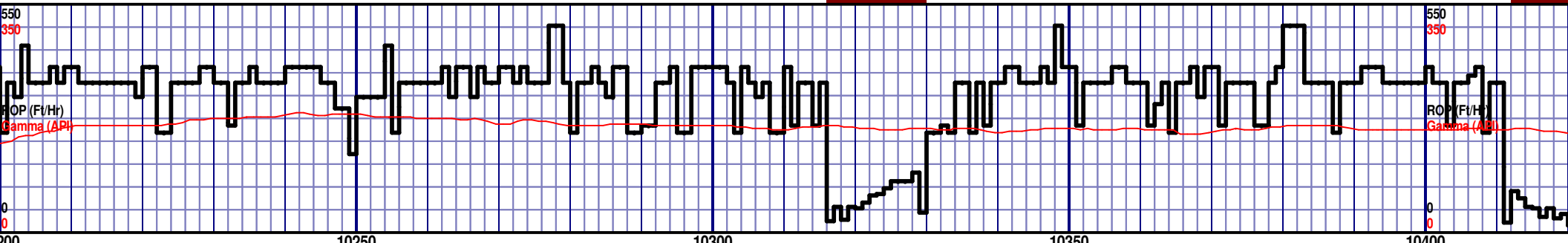
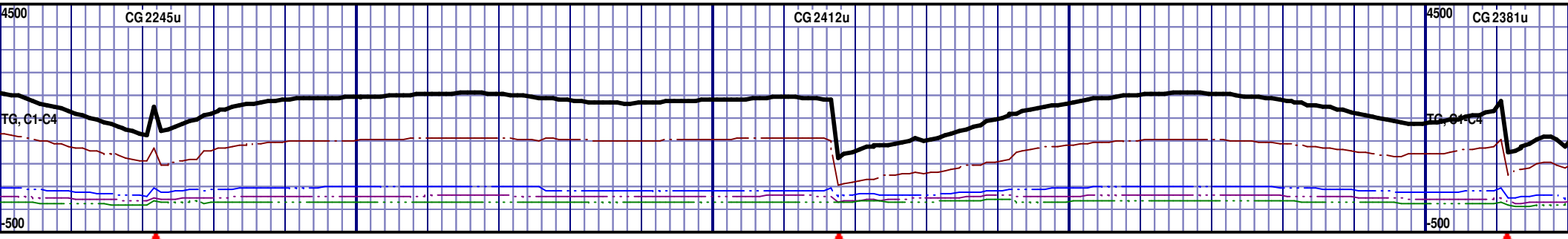
MD 9783 TVD 6993.65
INC 92.59 AZ 182.86 VS 3185.34

MD 9878 TVD 6991.71
INC 89.75 AZ 180.83 VS 3280.31

MD 9973 TVD 6991.71
INC 90.33 AZ 180.83 VS 3280.31



<p>6850 TVD</p> <p>7050</p>	<p>NIOBARARA C MARL 10100' MD 6990' TVD</p>		
<p>INCLUS, PYR NODULES, INTRXLN POR, NO FLUOR, IMMEDIATE VIS STAIN</p> <p>CHK; 55%; LT GRAY TO GRAY, SOFT, SH INCLUS, PYR NODULES, MINOR CALC, NO VIS FRACT, INTRXLN POR, NO FLUOR, IMMEDIATE BLU STRM CUT, LT BLU RING CUT, NO VIS STAIN</p>	<p>CHK; 50%; LT GRAY TO GRAY, SOFT, SH INCLUS, PYR NODULES, MINOR CALC, NO VIS FRACT, INTRXLN POR, NO FLUOR, IMMEDIATE BLU STRM CUT, LT BLU RING CUT, NO VIS STAIN</p>	<p>MRL; 50%; GRAY TO DK GRAY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, MINOR YLW FLUOR, IMMEDIATE BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 45%; GRAY TO DK GRAY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMEDIATE BLU STRM CUT, YLW RING CUT</p>



MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

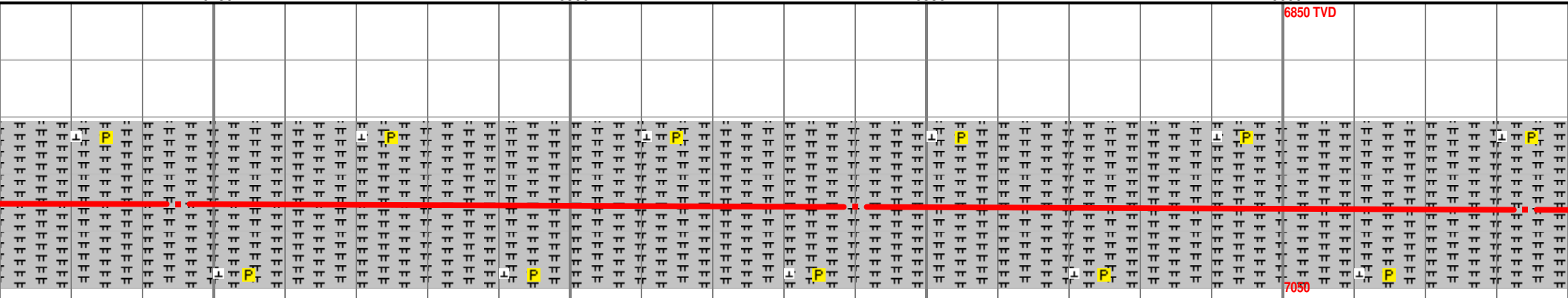
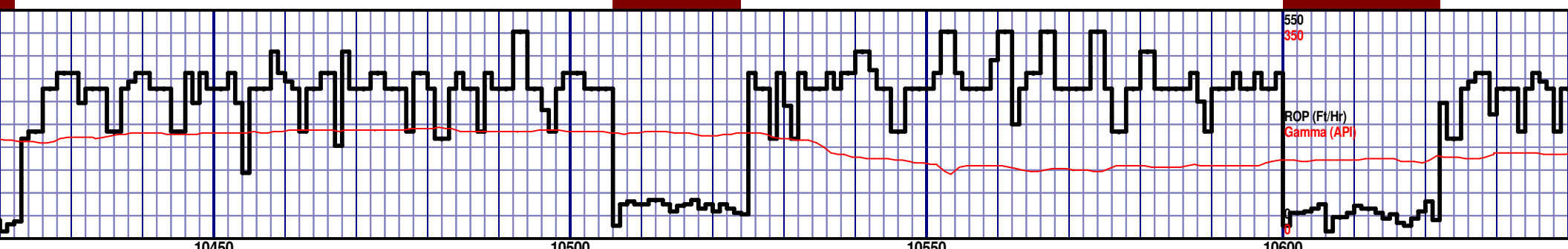
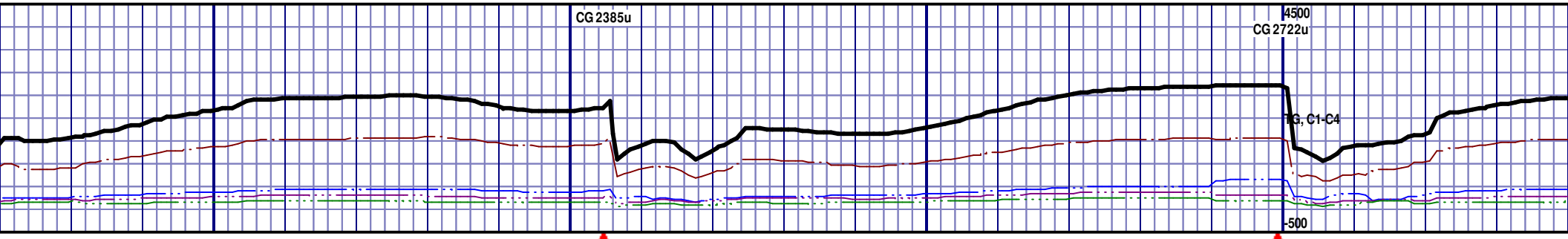
MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MD 10256 TVD 6990.18
INC 89.82 AZ 178.62 VS 3658.1

MD 10351 TVD 6990.21
INC 90.15 AZ 179.45 VS 3752.99



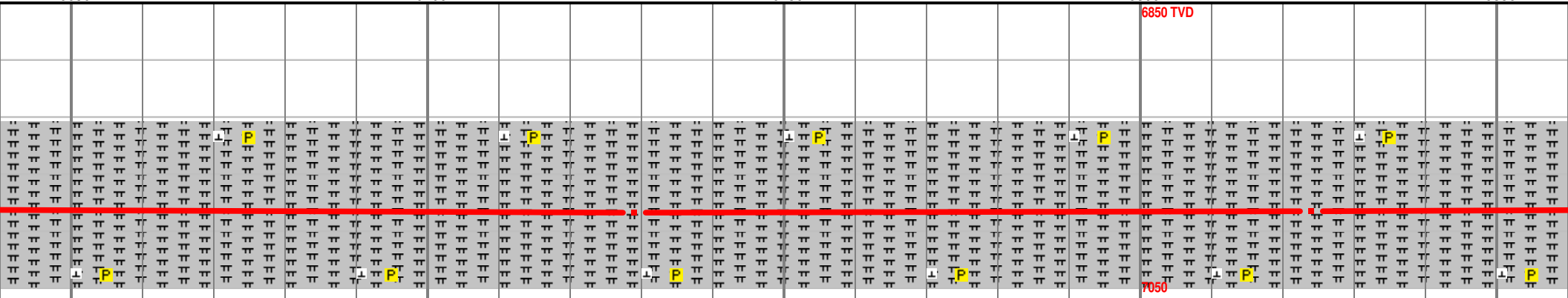
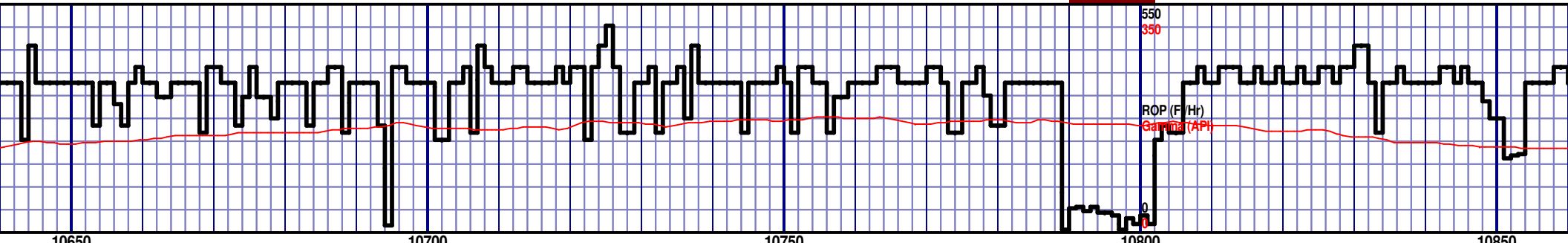
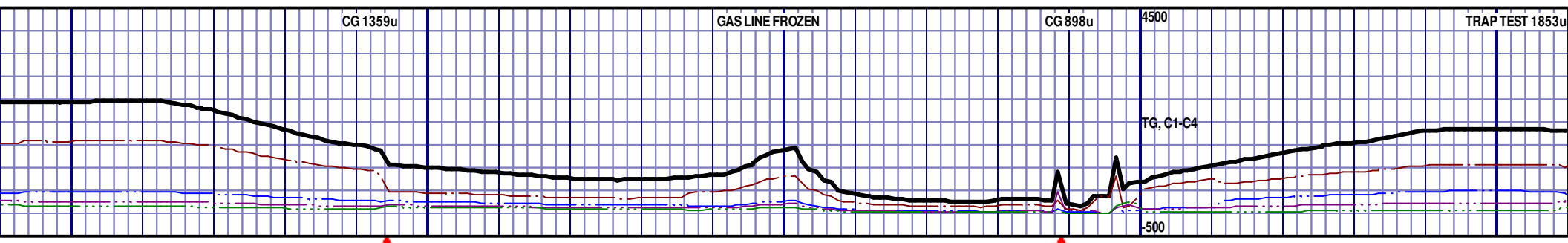
RY, SOFT TO BRITTLE, PYR INCLUS,
RACT, MINOR CALC, INTRXLN POR,
STRM CUT, YLW RING CUT

MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
DIM GRN FLUOR, IMMED BLU STRM CUT, YLW RING CUT

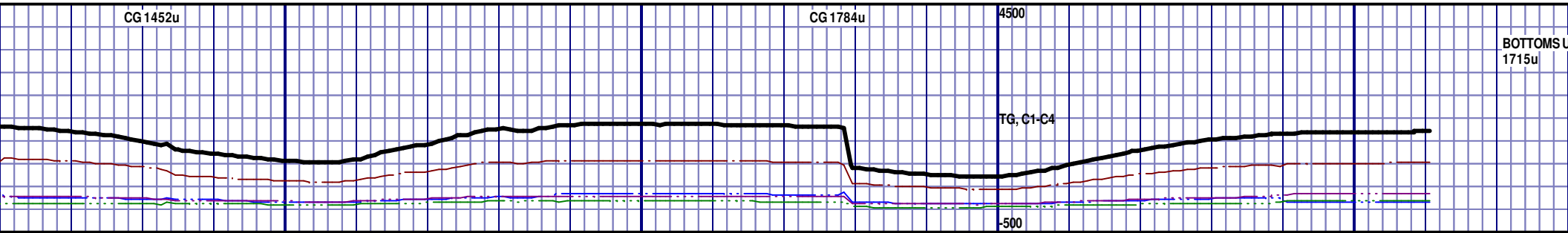
MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

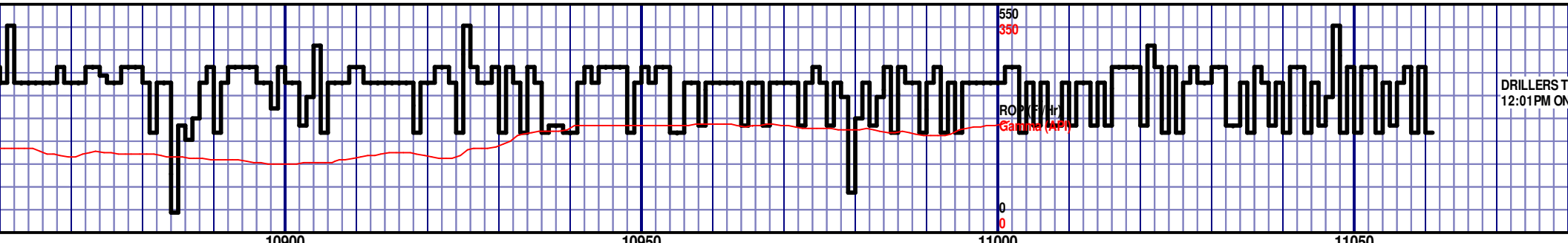
MRL; 45%; GRY TO DK GRY, SOFT TO BRITTLE, PYR
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT



<p>R INCLUS, XLN POR,</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS, PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR, NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT</p>	<p>MRL; 45%; PYR NODUL NO FLUOR,</p>
-------------------------------	---	---	---	---	--



BOTTOMS U
1715u



DRILLERS T
12:01PM ON

10900	10950	11000	11050
6850 TVD			
7050			

TD @

RELEASE

GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
ES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
IMMED BLU STRM CUT, YLW RING CUT

MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 40%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

MRL; 35%; GRY TO DK GRY, SOFT TO BRITTLE, PYR INCLUS,
PYR NODULES, NO VIS FRACT, MINOR CALC, INTRXLN POR,
NO FLUOR, IMMED BLU STRM CUT, YLW RING CUT

7250

THAN
RYAN
ANDP
AND I
LOGO

JP GAS

D @ 10061' MD AT
12/26/2012

11100

11061' MD

CEASED 12/26/2012

THANK YOU FROM
BLEESS,
REW CHRISTIANO
HORIZON WELL
SERVICES, LLC.