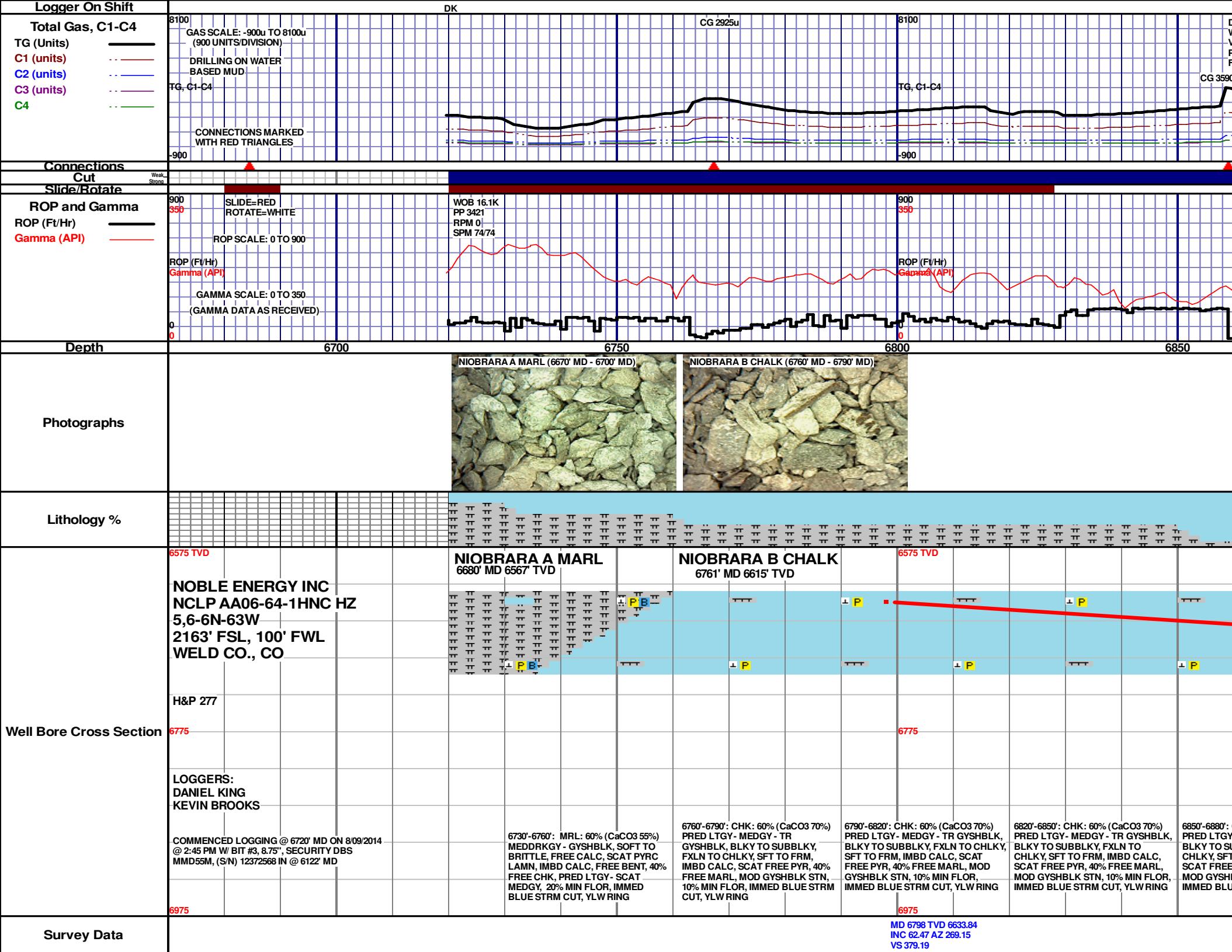
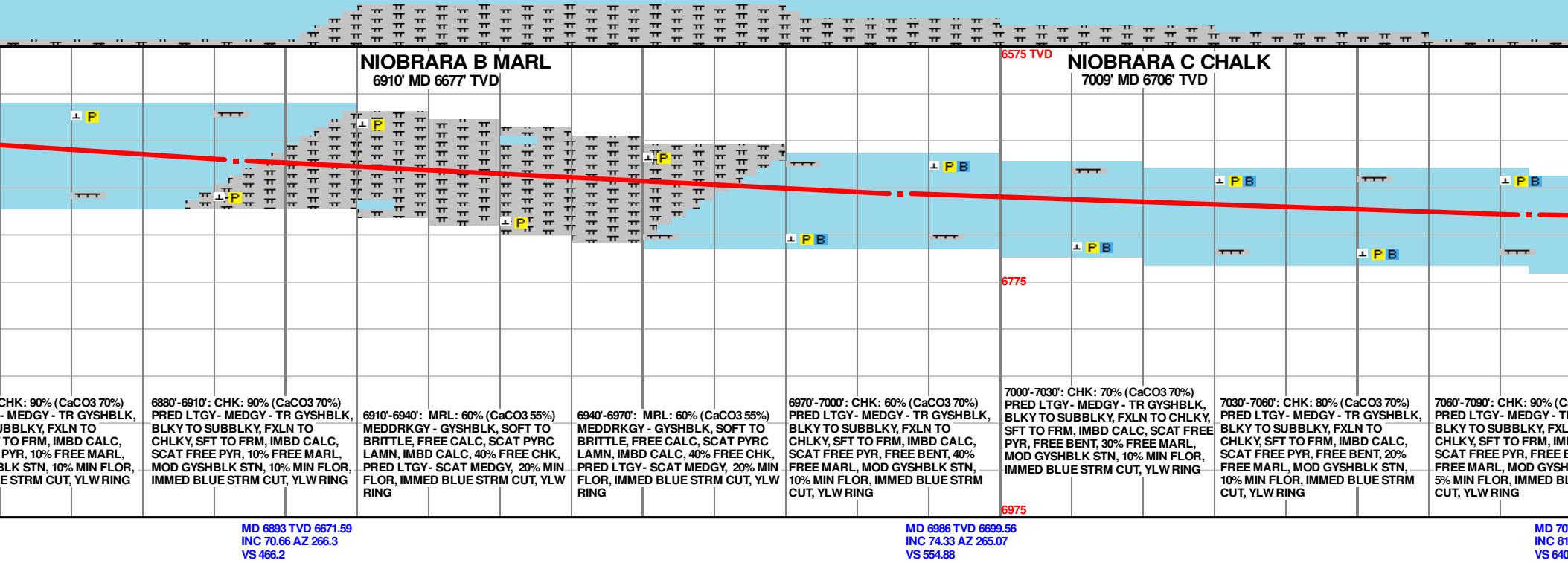
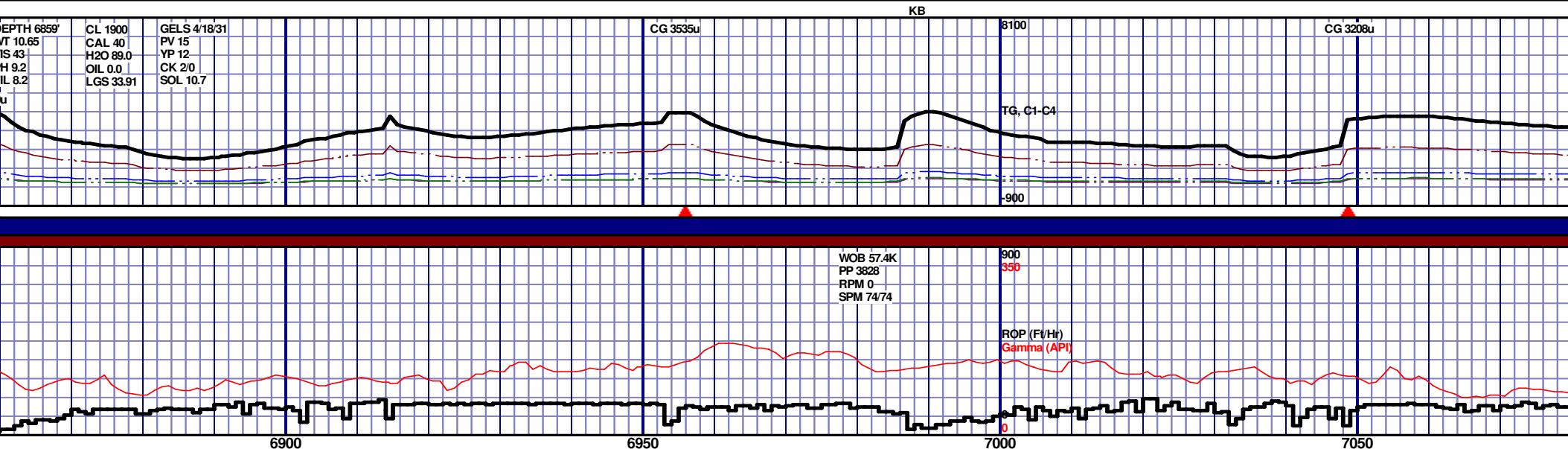


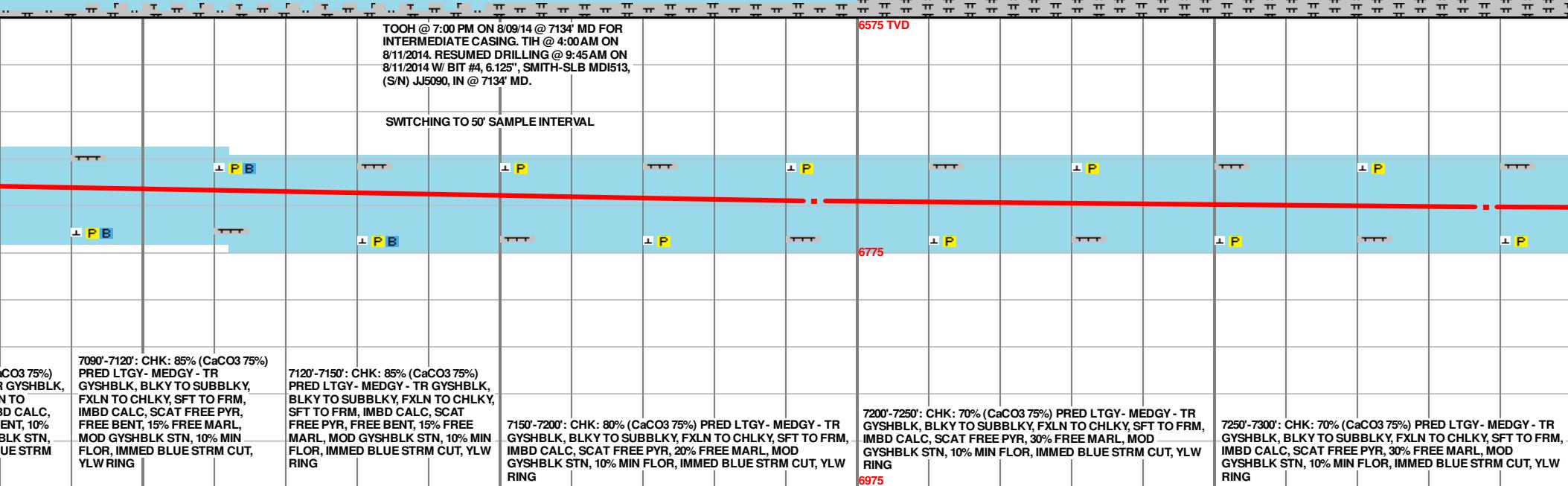
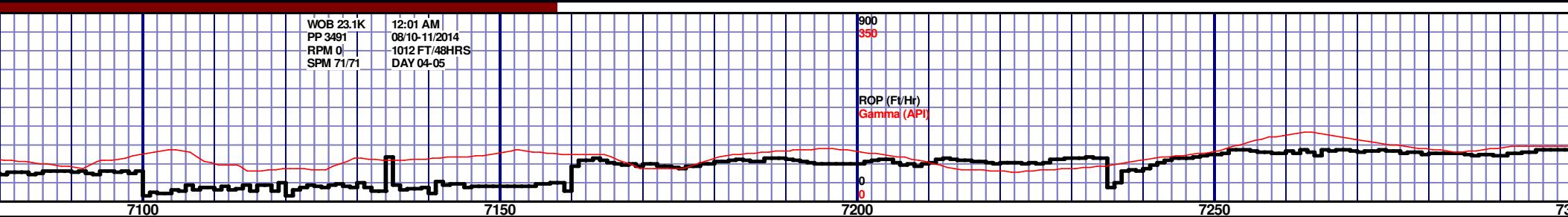
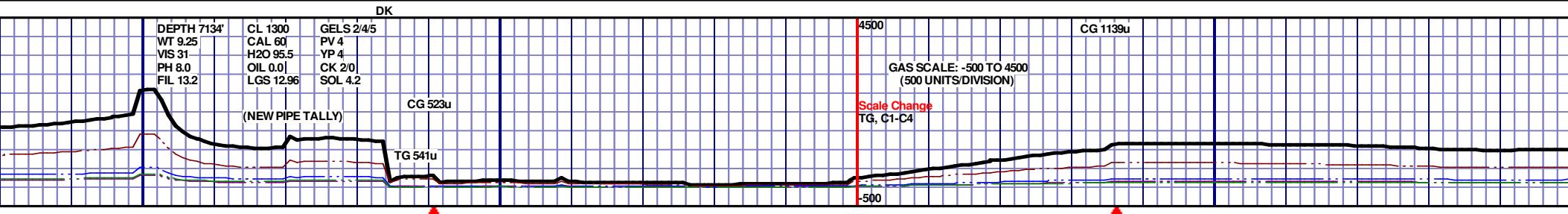


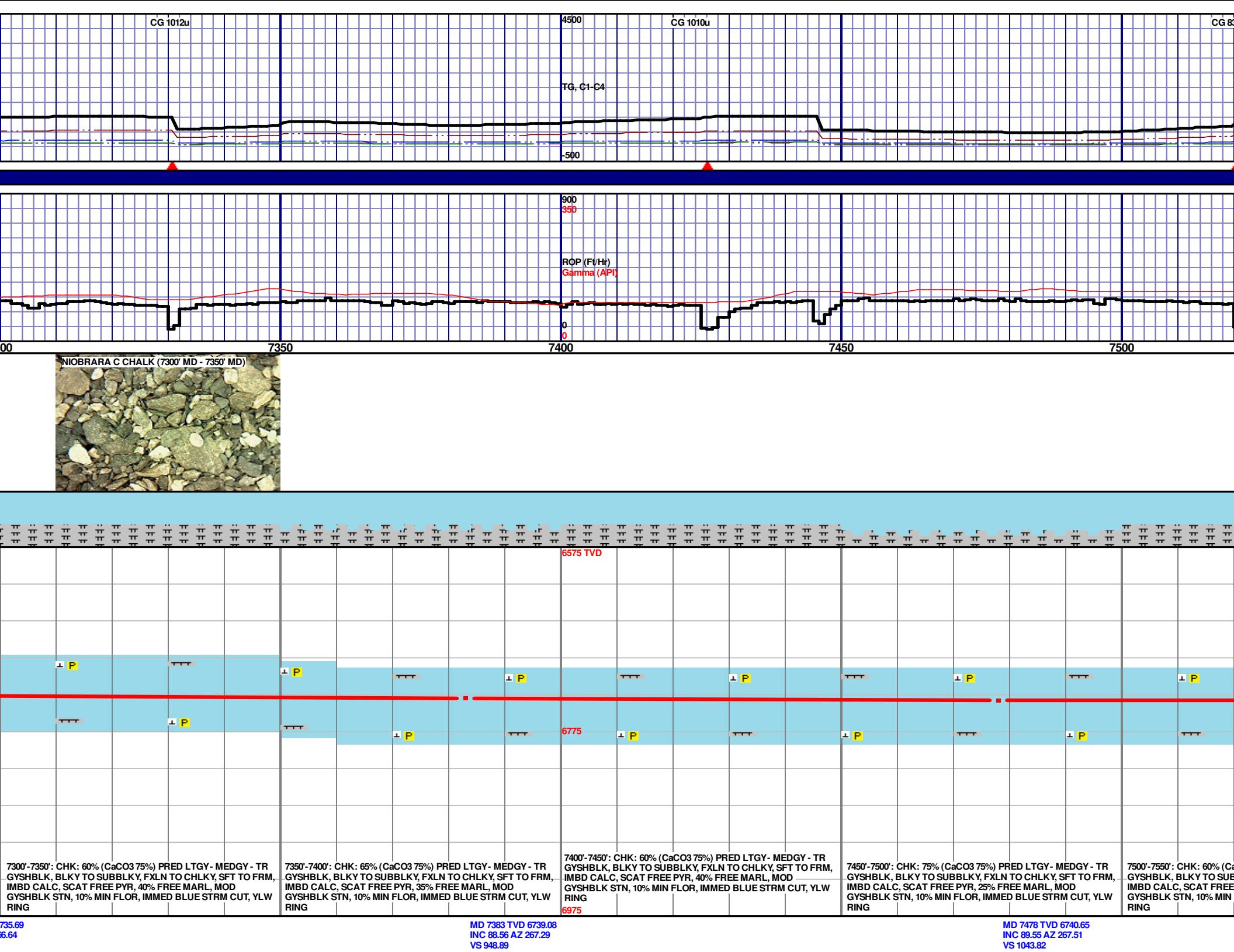
7136 South Yale Avenue, Suite 414  
Tulsa, Oklahoma 74136-6378  
phone 918.925.9739  
fax 866.534.4559  
[WWW.HZMUD.COM/25](http://WWW.HZMUD.COM/25)

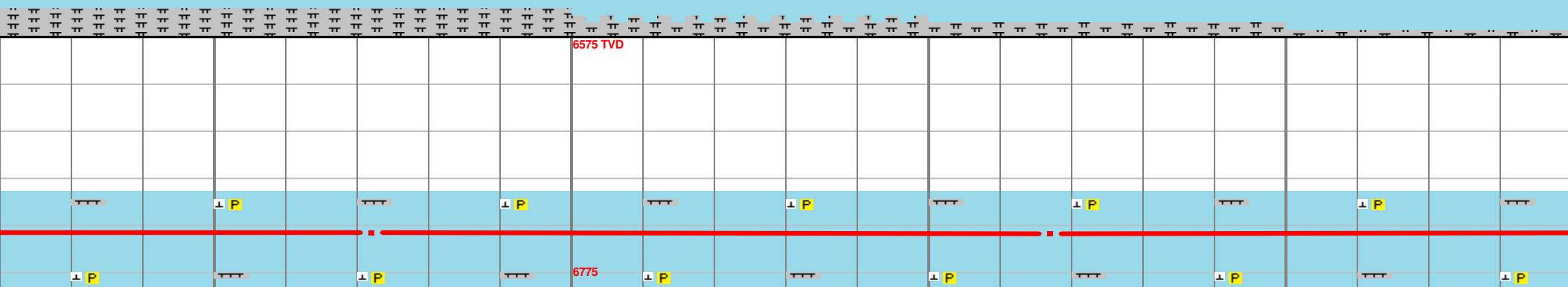
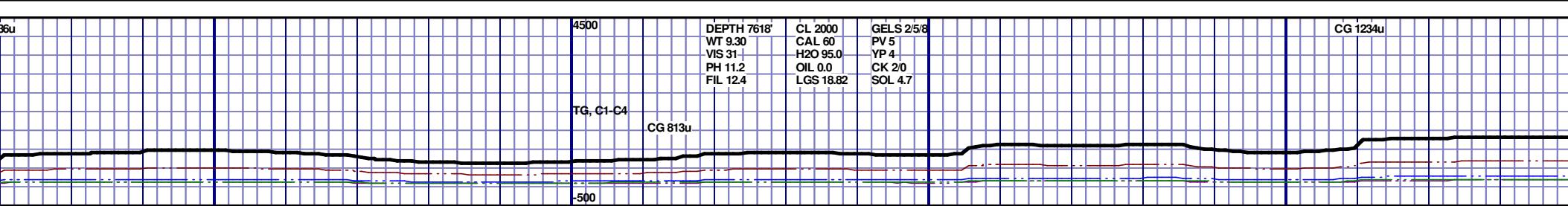
Customer Information	Well Information
<b>Operator:</b> Noble Energy Inc 1625 Broadway Suite 2200 Denver, Colorado 80202	<b>Well Name:</b> NCLP AA06-64-1HNC HZ  <b>Location:</b> 5,6-6N-63W 2163' FSL, 100' FWL
<b>Geologist:</b> Renee Clackler Noble Energy Inc.	<b>County:</b> Weld <b>State:</b> Colorado
Mud Logging Details	
<b>Logger:</b> Daniel King & Kevin Brooks  <b>Log Interval:</b> 6720' MD to 16493' MD <b>Start Date:</b> August 9, 2014 <b>Release Date:</b> August 16, 2014	<b>Drilling Rig:</b> H&P 277 <b>Total Depth:</b> 16493' MD <b>TD Date:</b> August 16, 2014 <b>Formation:</b> Niobrara C Chalk <b>KB Elevation:</b> 4735' <b>GR Elevation:</b> 4711' <b>API Number:</b> 05-123-39025-0000











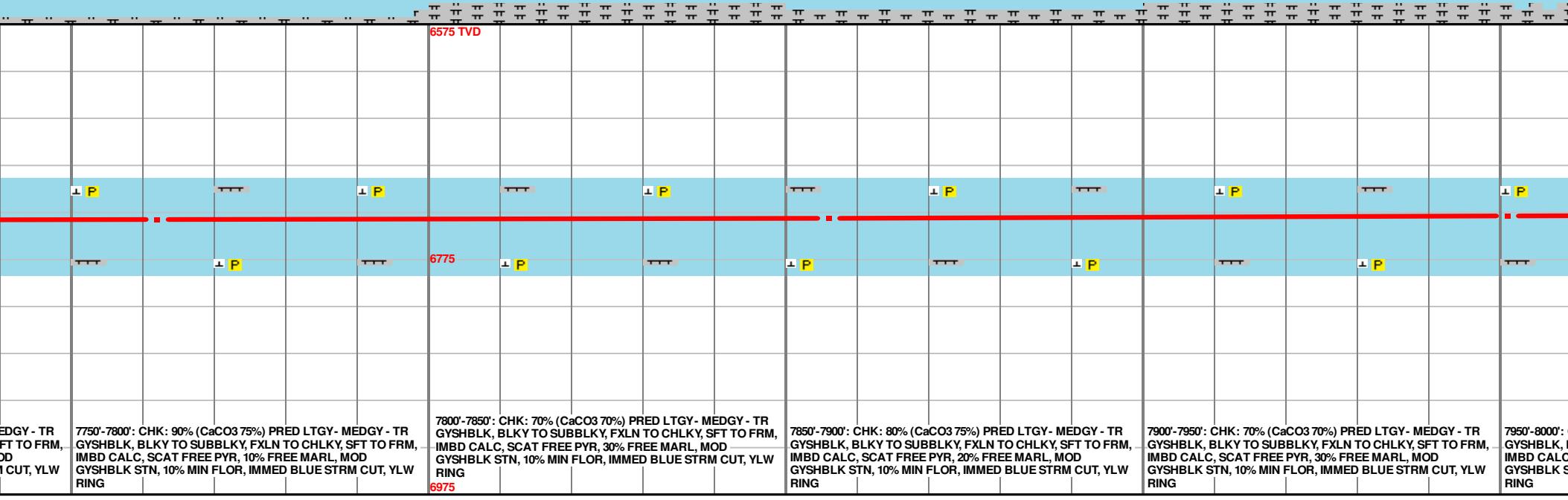
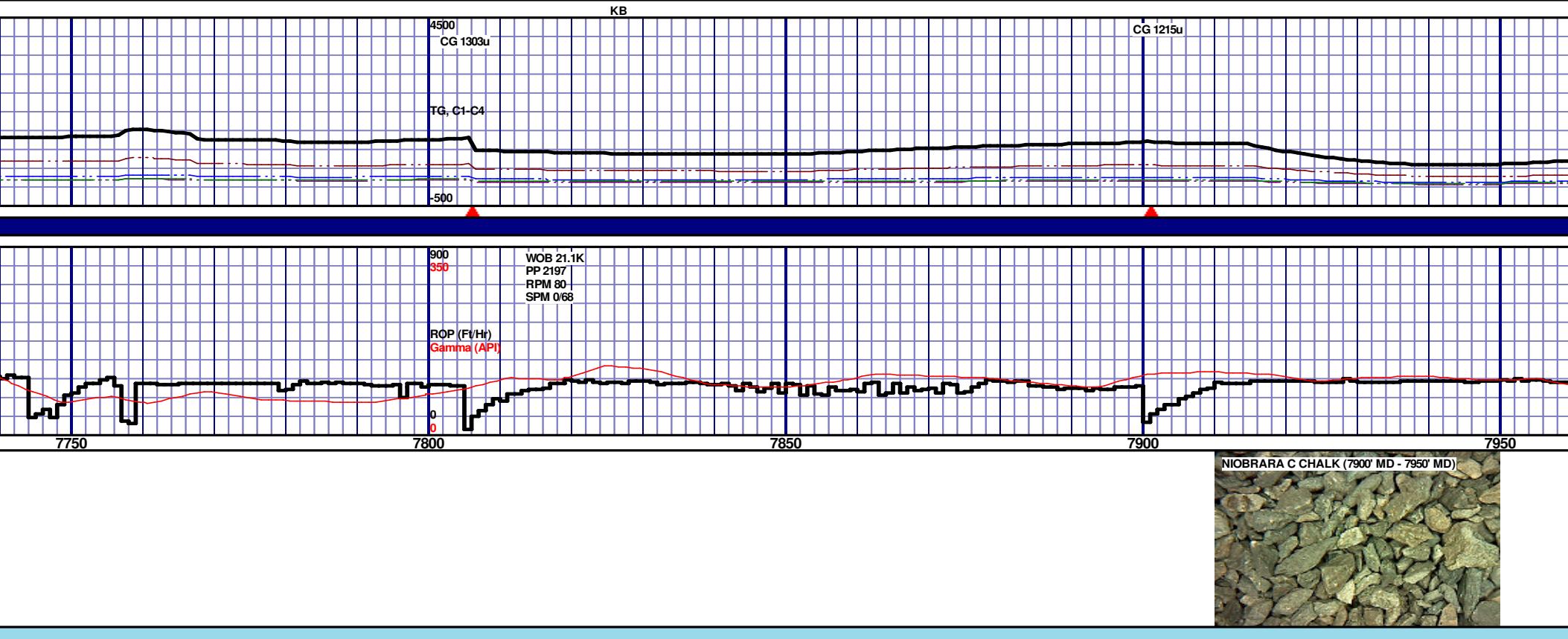
$\text{CaCO}_3$  75%) PRED LTGY - MEDGY - TR  
BLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD PYR, 40% FREE MARL, MOD  
FLOR, IMMED BLUE STRM CUT, YLW  
RING

7550'-7600': CHK: 60% ( $\text{CaCO}_3$  75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 40% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

6975  
7600'-7650': CHK: 75% ( $\text{CaCO}_3$  75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 25% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

7650'-7700': CHK: 80% ( $\text{CaCO}_3$  75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 20% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

7700'-7750': CHK: 90% ( $\text{CaCO}_3$  75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 10% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

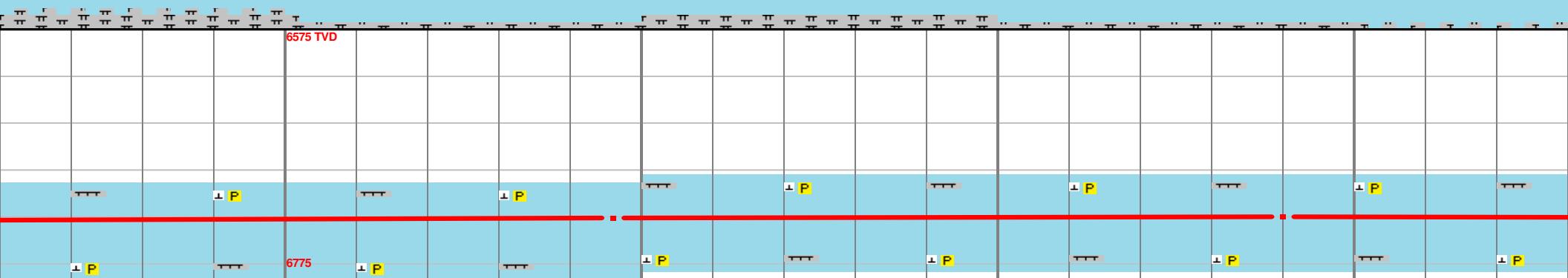
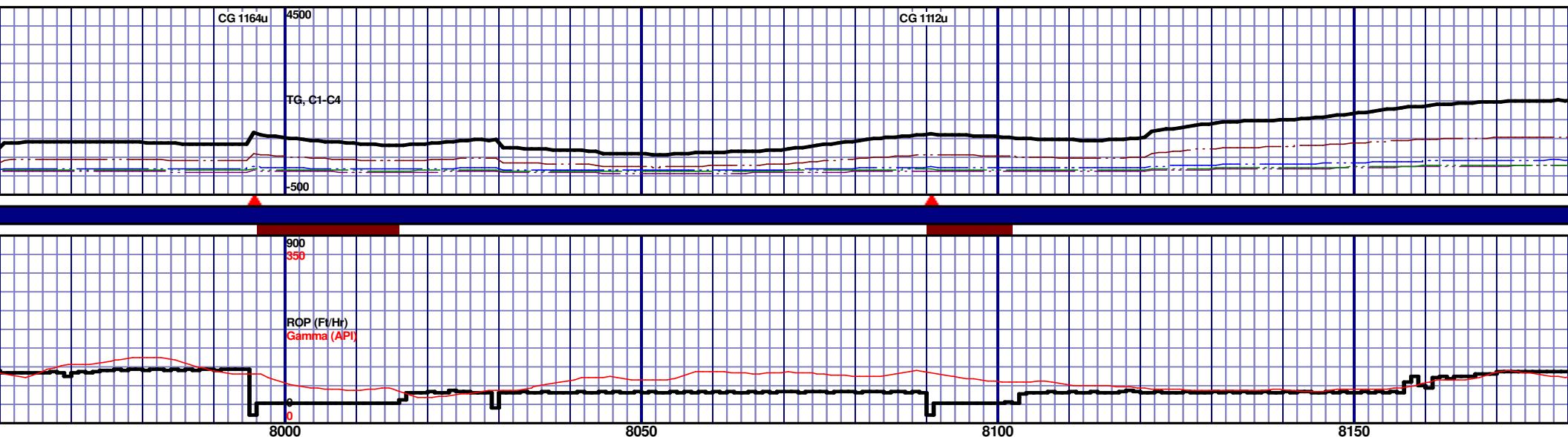


MD 7762 TVD 6740.78  
INC 90.62 AZ 268.43  
VS 1327.63

MD 7856 TVD 6739.88  
INC 90.48 AZ 269.18  
VS 1421.46

MD 7951 TVD  
INC 91.41 A  
IMBD CALC,  
IMBD CALCA  
GYSHBLK S  
RING

VS 1516.29



CHK: 75% (CaCO<sub>3</sub> 75%) PRED LTGY- MEDGY - TR  
BLKY TO SUBBLKY, FXLN TO CHLK, SFT TO FRM,  
SCAT FREE PYR, 25% FREE MARL, MOD  
TN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW

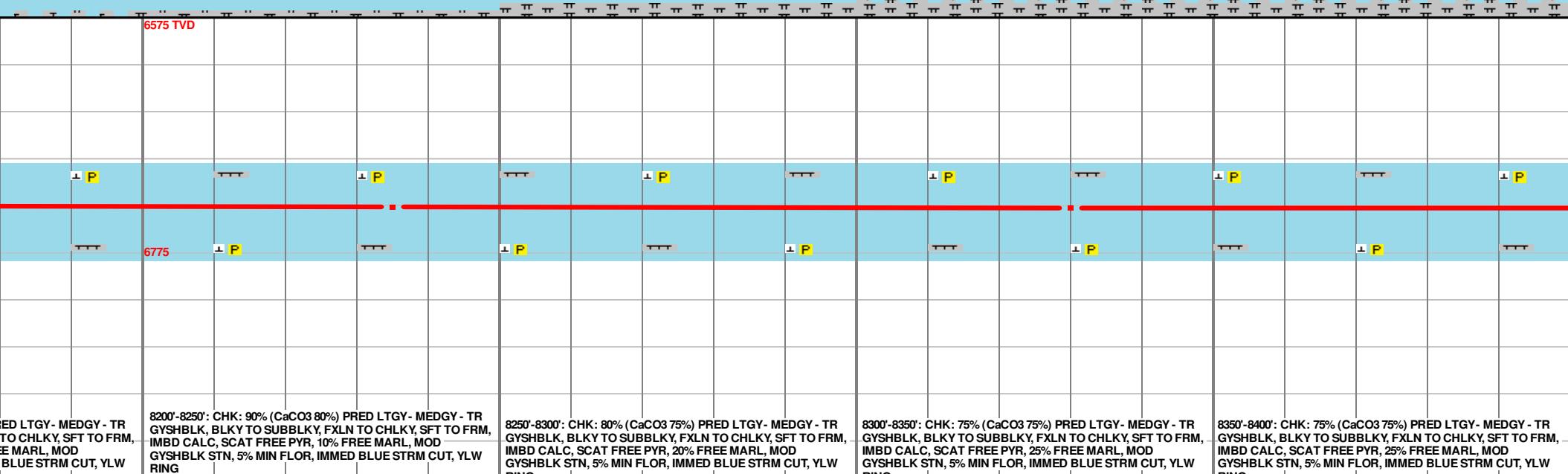
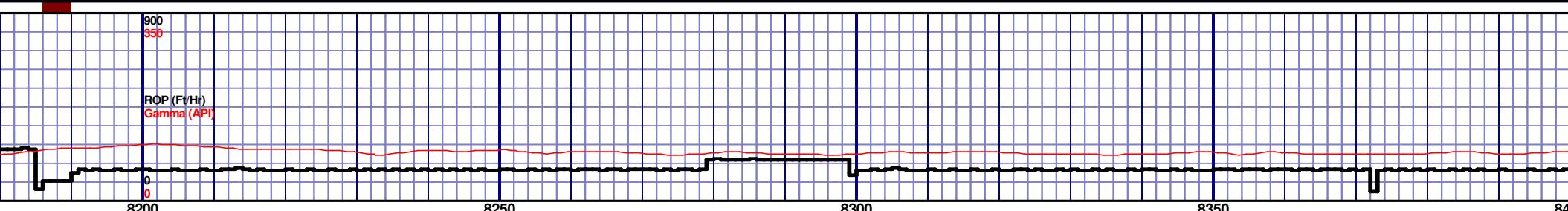
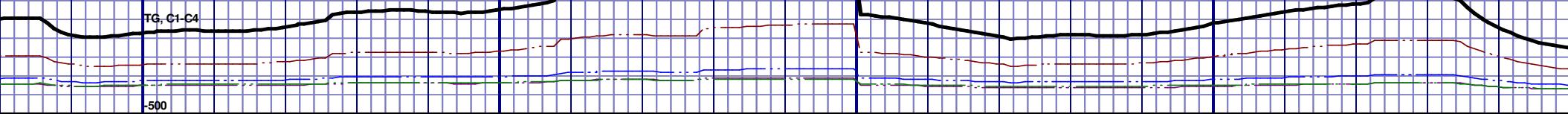
8000'-8050': CHK: 90% (CaCO<sub>3</sub> 80%) PRED LTGY- MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLK, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 10% FREE MARL, MOD  
GYSHBLK STN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING  
6975

8050'-8100': CHK: 80% (CaCO<sub>3</sub> 75%) PRED LTGY- MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLK, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 20% FREE MARL, MOD  
GYSHBLK STN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

8100'-8150': CHK: 90% (CaCO<sub>3</sub> 80%) PRED LTGY- MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLK, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 10% FREE MARL, MOD  
GYSHBLK STN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

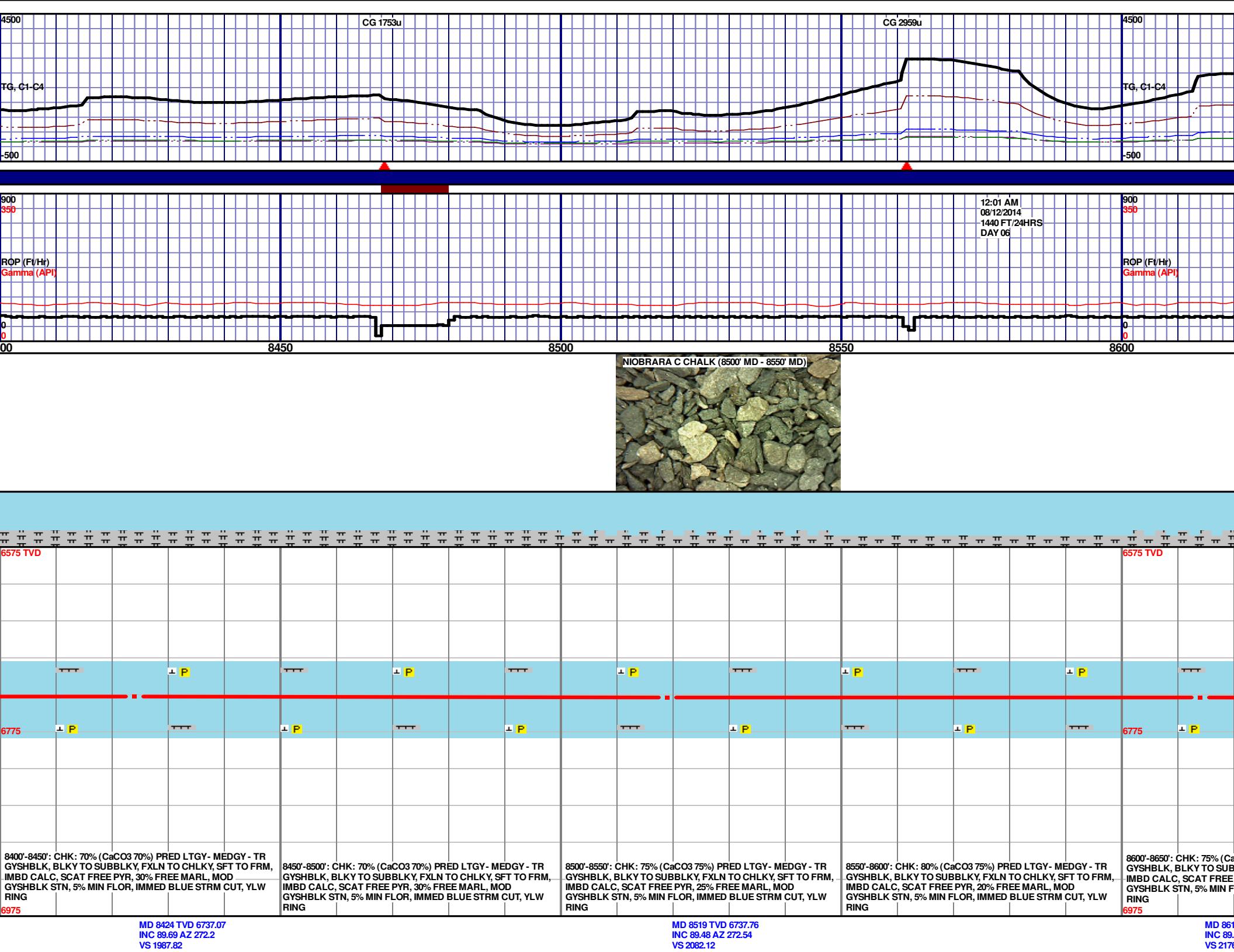
8150'-8200': CHK: 95% (CaCO<sub>3</sub> 80%) PRED LTGY- MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLK, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 5% FREE MARL, MOD  
GYSHBLK STN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

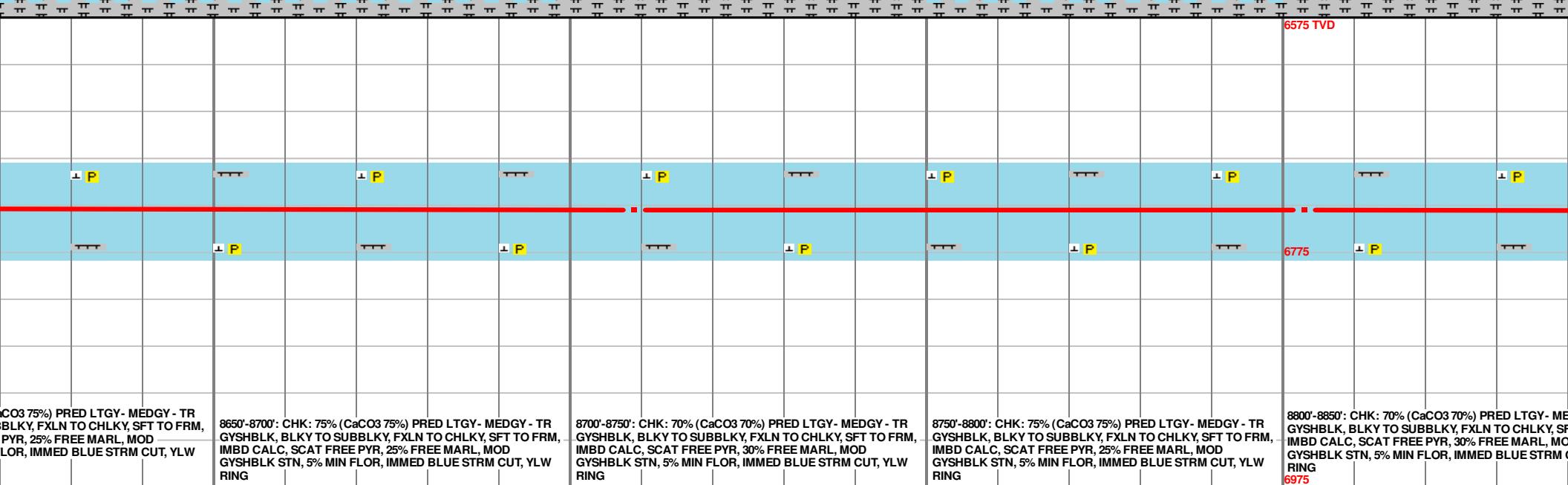
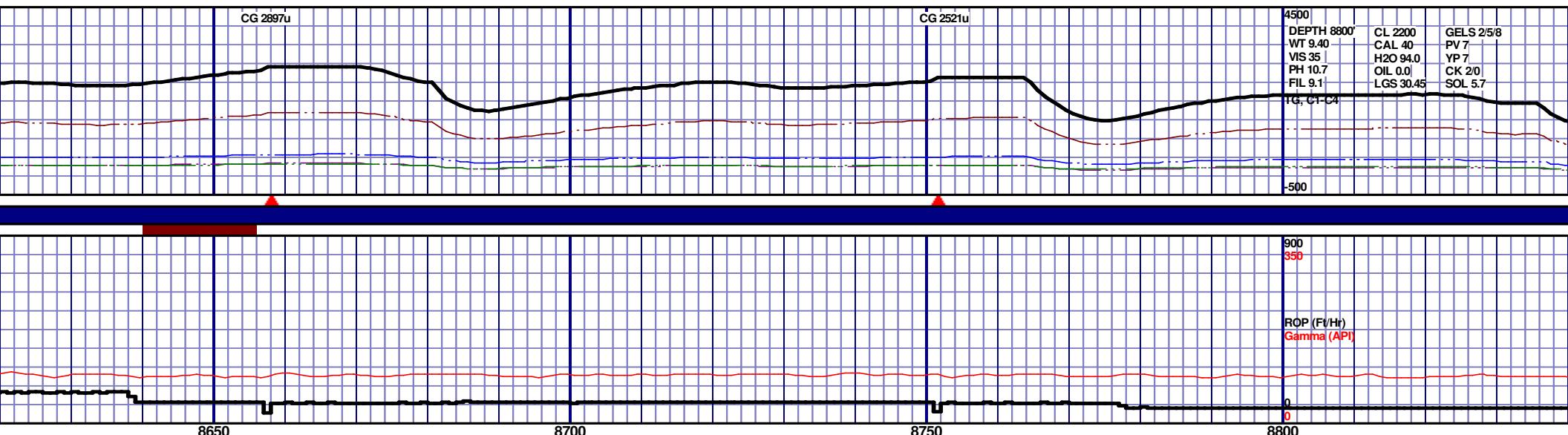
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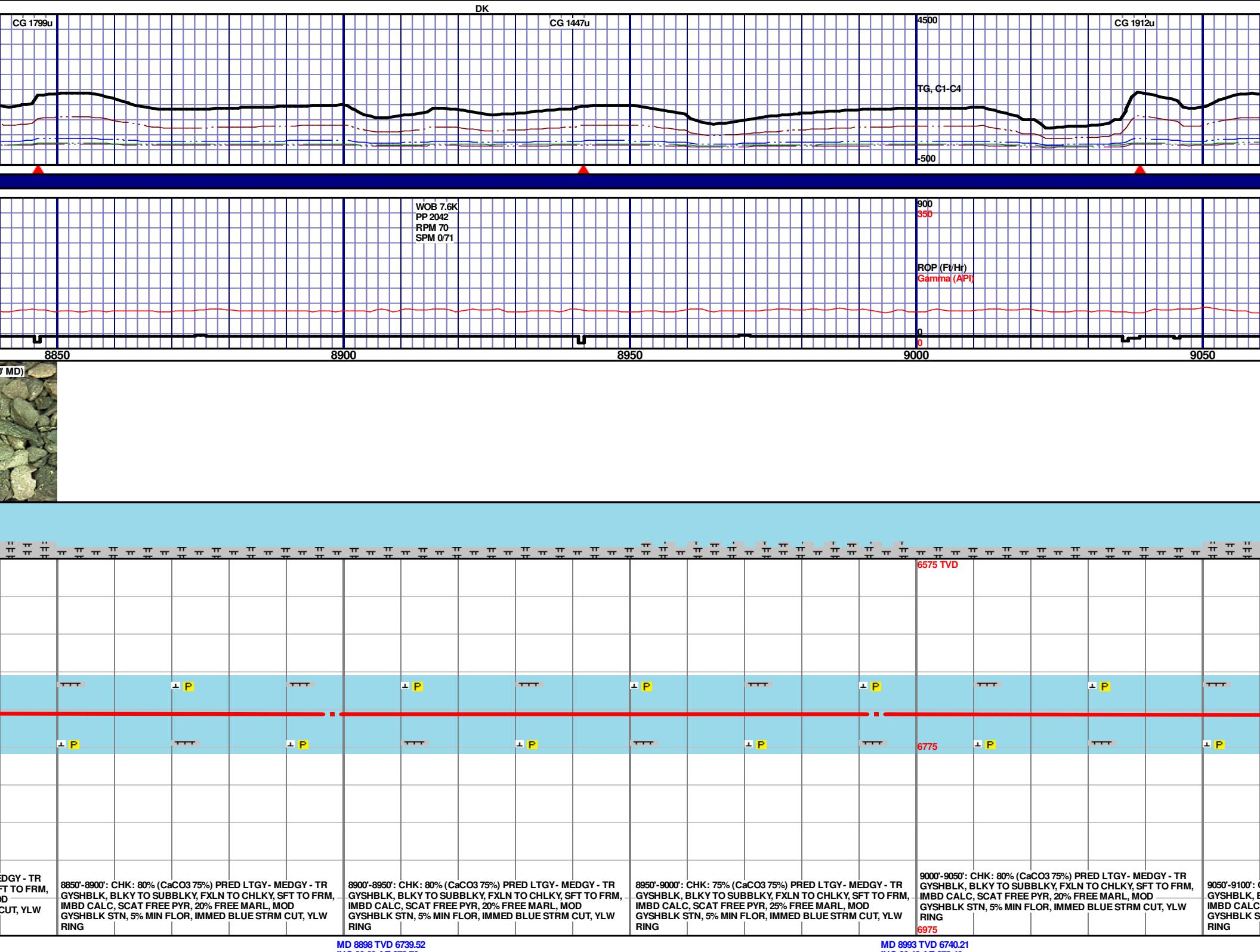


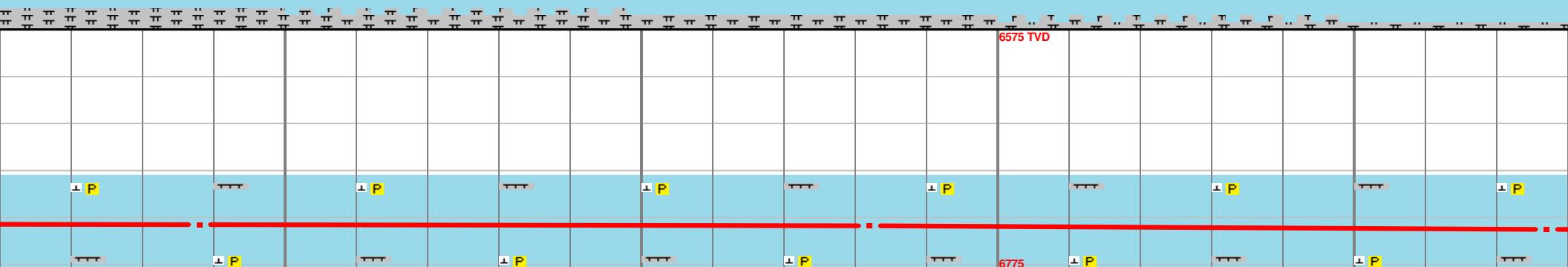
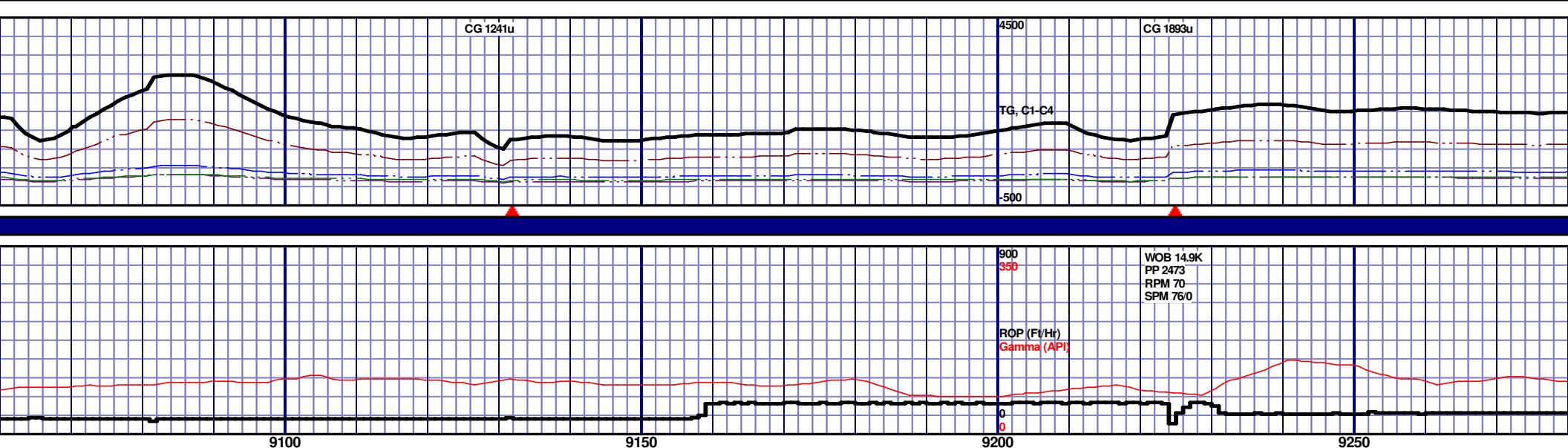
MD 8235 TVD 6735.64  
INC 89.14 AZ 269.16  
VS 1799.69

MD 8330 TVD 6736.59  
INC 89.72 AZ 270.99  
VS 1894.37









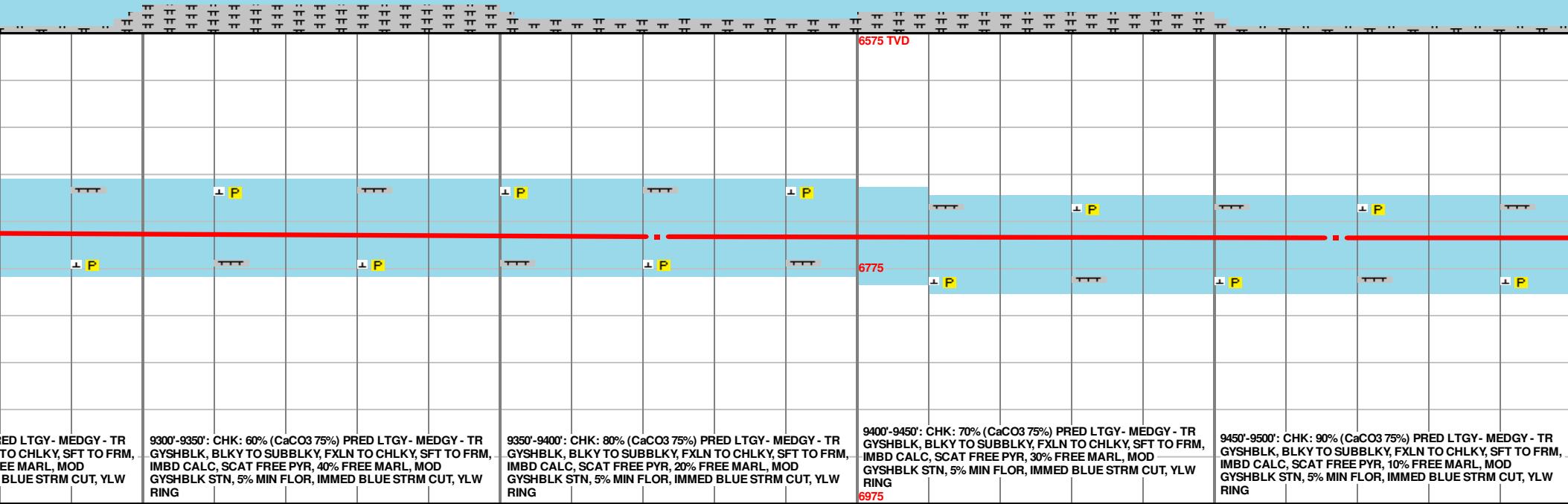
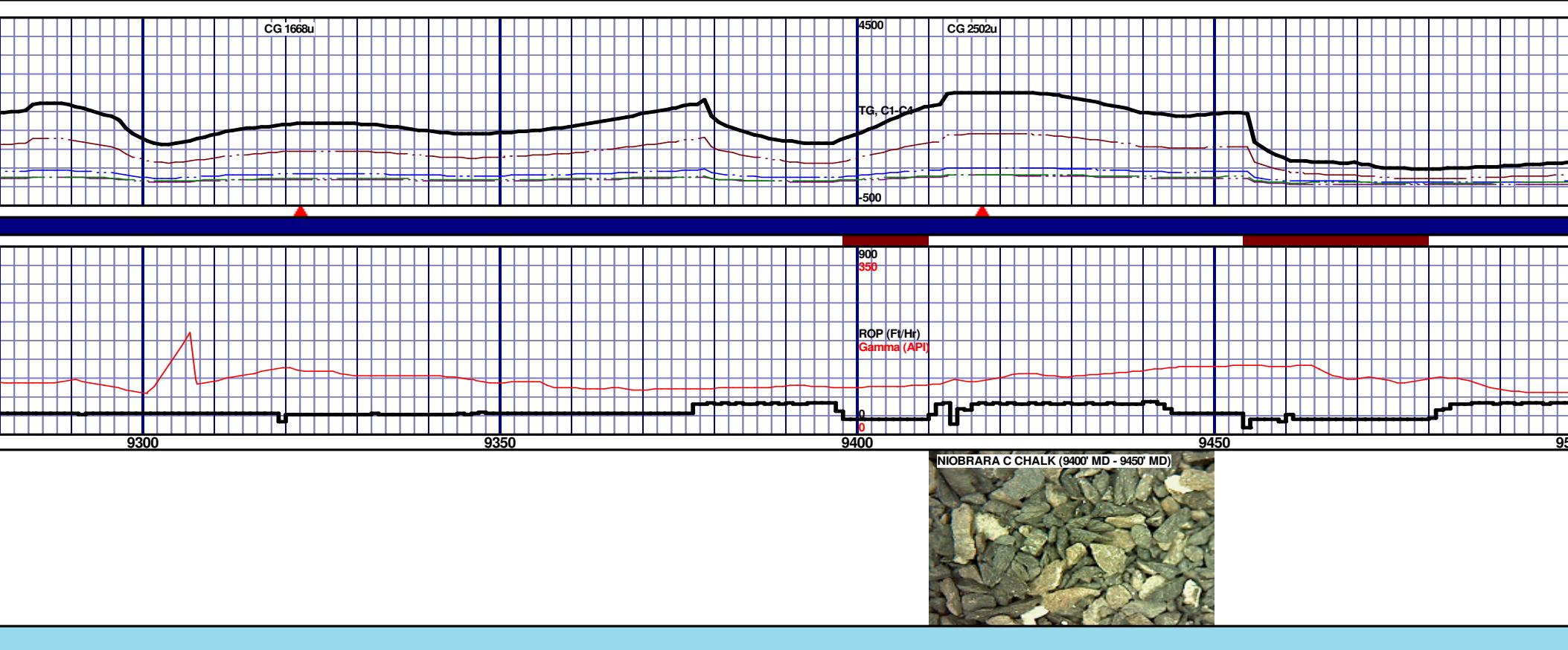
CHK: 70% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
SCAT FREE PYR, 30% FREE MARL, MOD  
TN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

9100'-9150': CHK: 75% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 25% FREE MARL, MOD  
GYSHBLK STN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

9150'-9200': CHK: 80% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 20% FREE MARL, MOD  
GYSHBLK STN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

9200'-9250': CHK: 85% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 15% FREE MARL, MOD  
GYSHBLK STN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

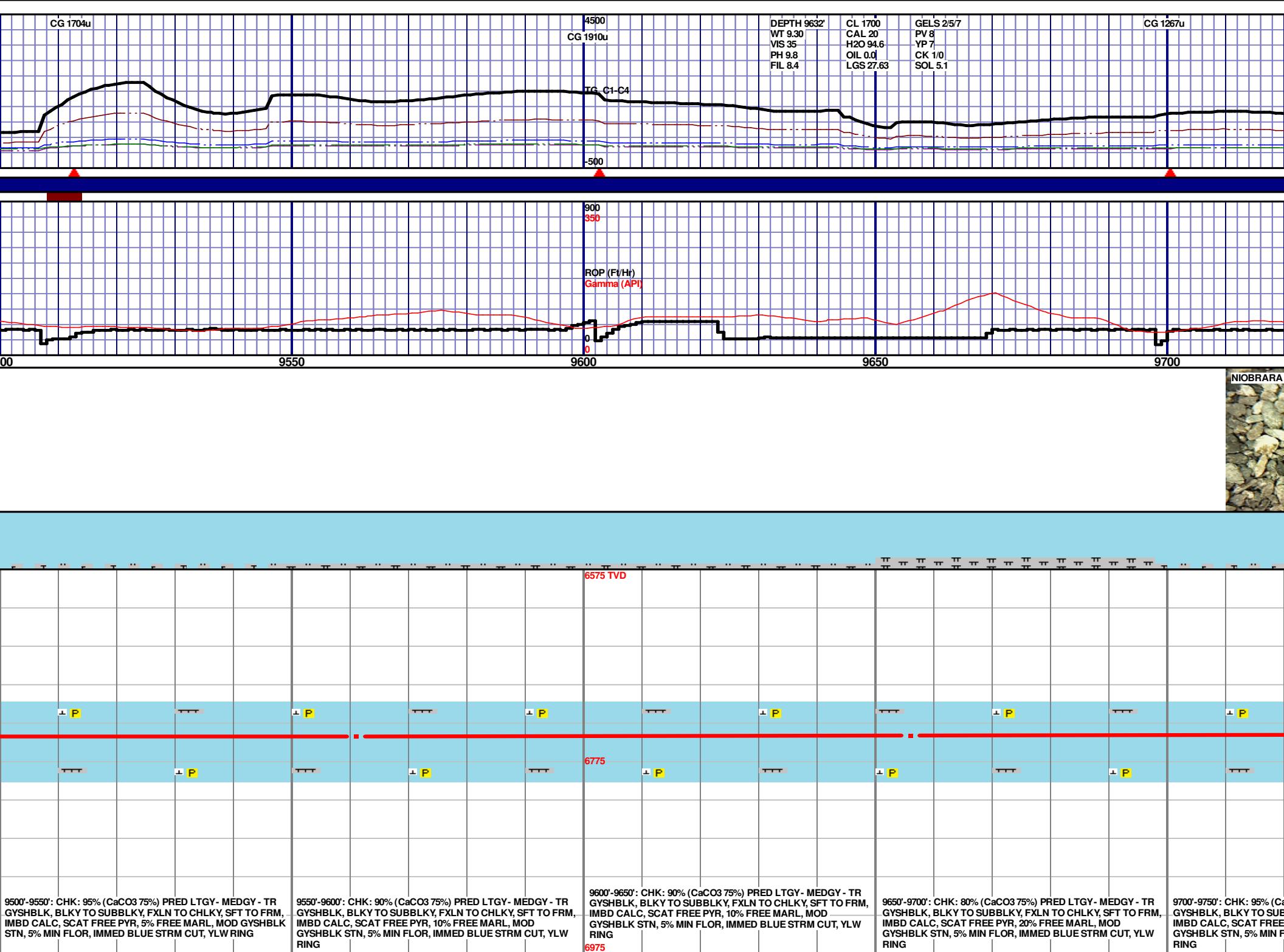
9250'-9300': CHK: 90% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 10% FREE MARL, MOD  
GYSHBLK STN, 5% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

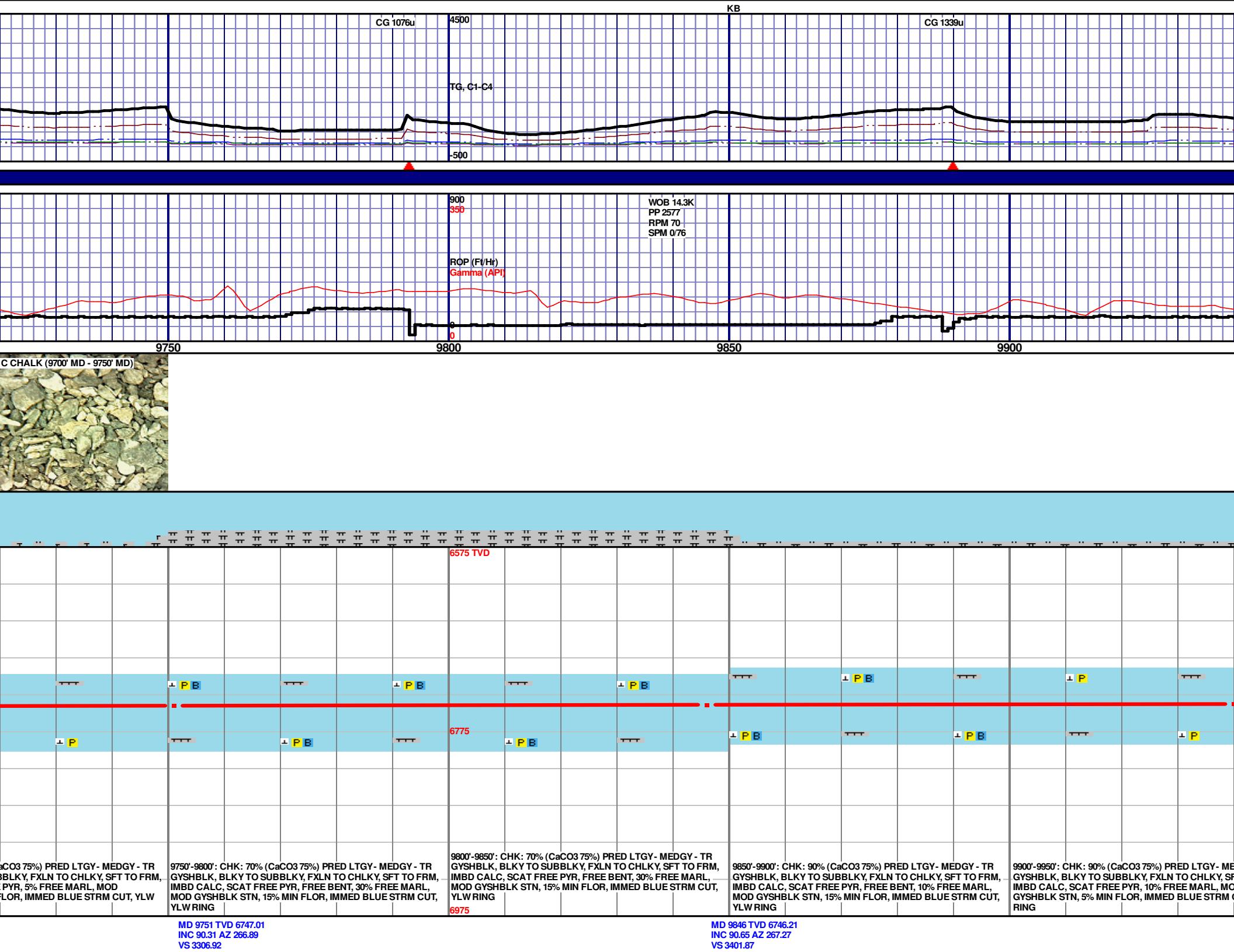


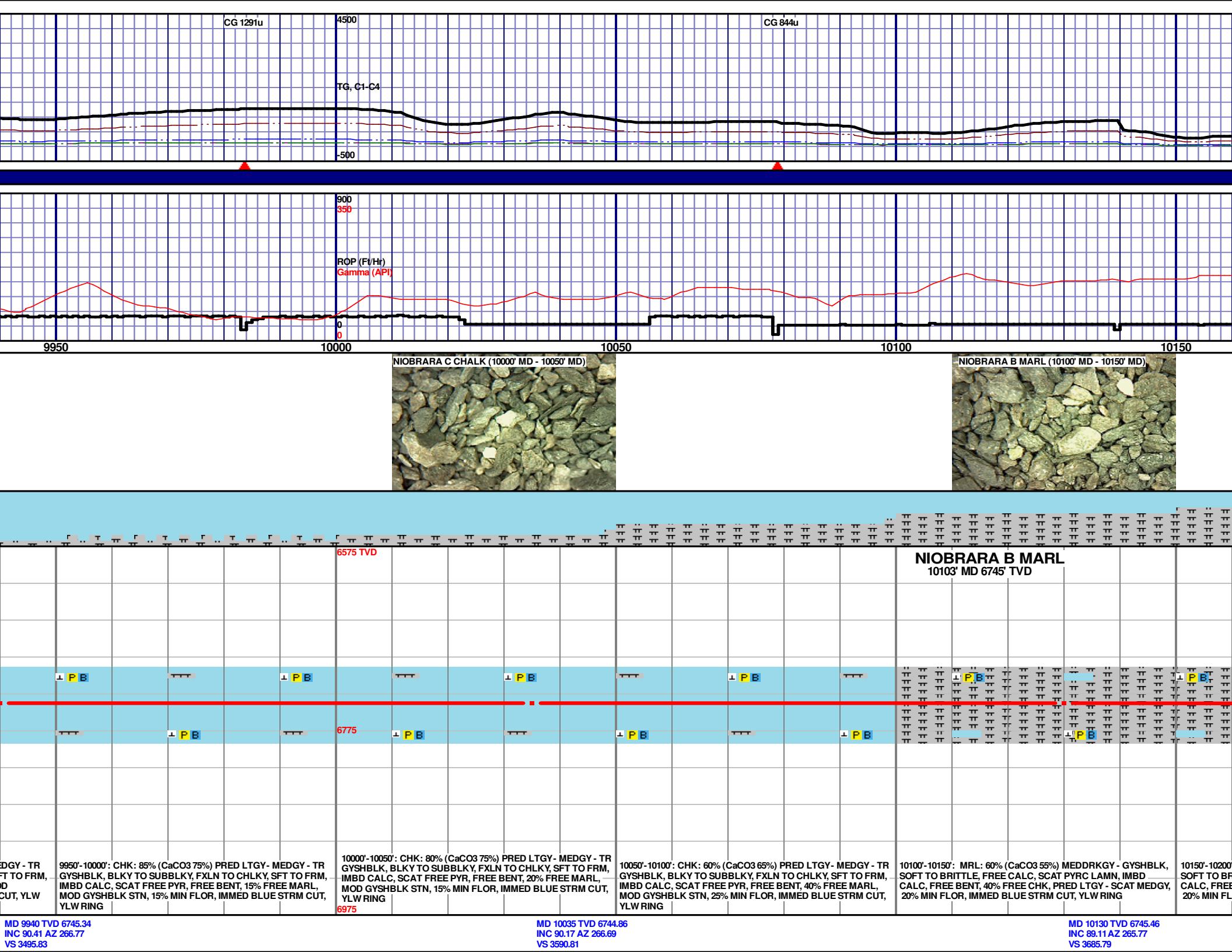
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C 87.66 AZ 269.06  
INC 88.83 AZ 269.45  
2833.85

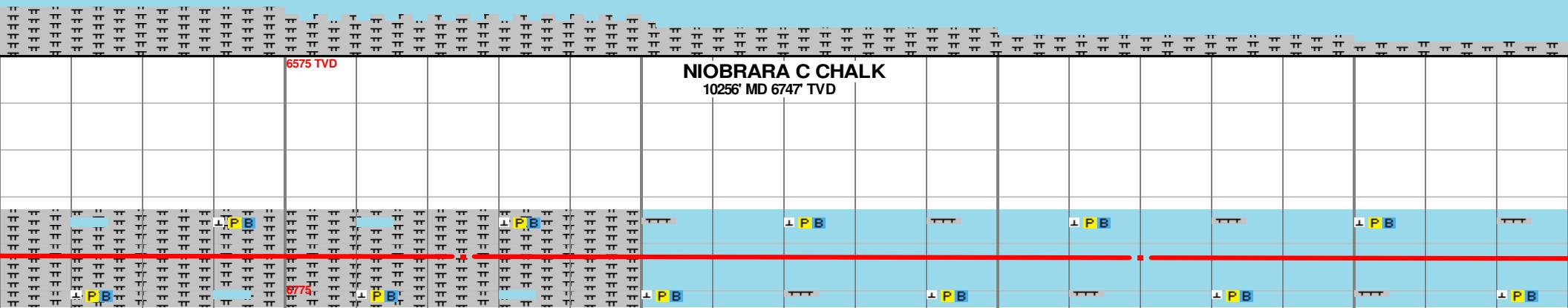
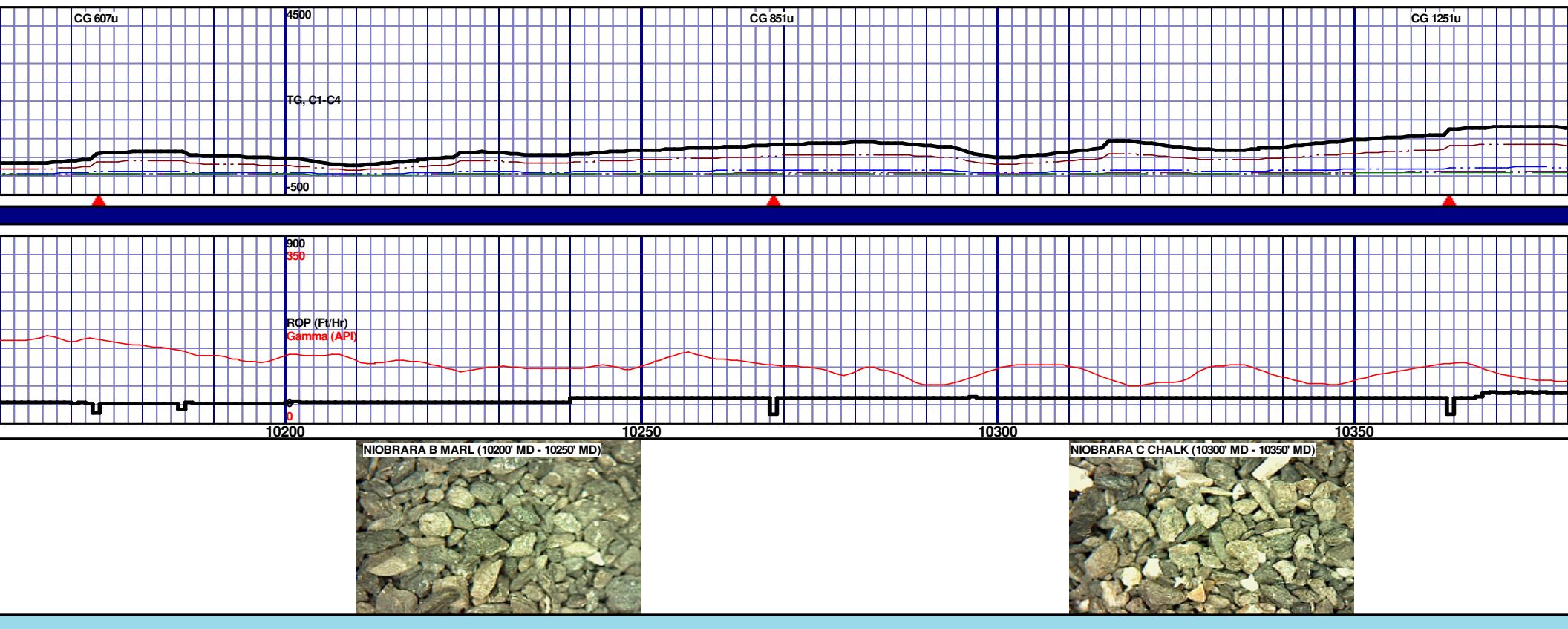
MD 9372 TVD 6748.4  
INC 88.83 AZ 269.45  
VS 2928.59

MD 9467 TVD 6749.31  
INC 90.07 AZ 269.77  
VS 3023.33









MRL: 70% (CaCO<sub>3</sub> 50%) MEDDRKGY - GYSHBLK, RITTLE, FREE CALC, SCAT PYRC LAMN, IMBD FREE BENT, 30% FREE CHK, PRED LTGY - SCAT MEDGY, OR, IMMED BLUE STRM CUT, YLW RING

10200'-10250': MRL: 55% (CaCO<sub>3</sub> 55%) MEDDRKGY - GYSHBLK, SOFT TO BRITTLE, FREE CALC, SCAT PYRC LAMN, IMBD CALC, FREE BENT, 45% FREE CHK, PRED LTGY - SCAT MEDGY, 20% MIN FLOR, IMMED BLUE STRM CUT, YLW RING

6975

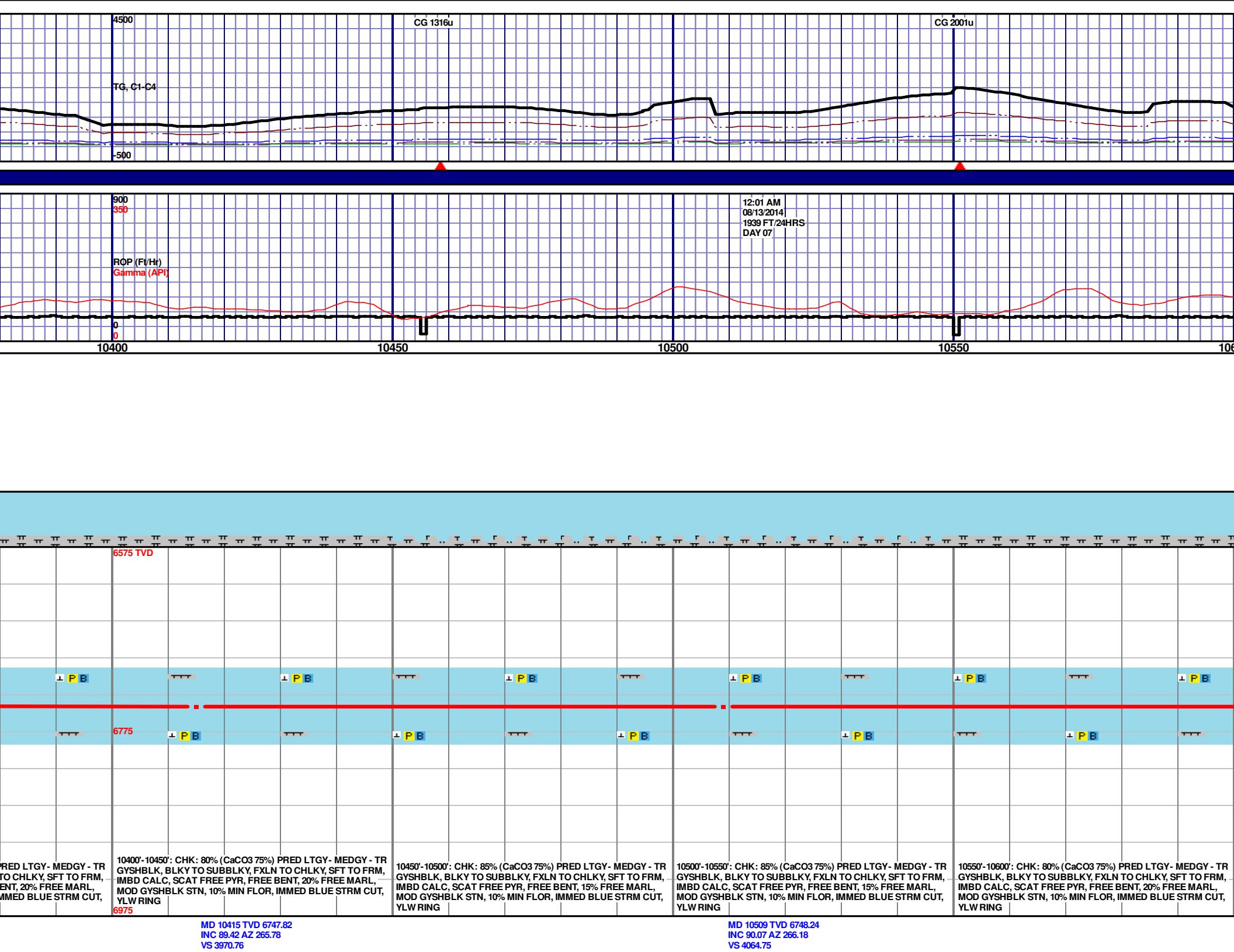
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INC 89.69 AZ 266.47  
VS 3780.78

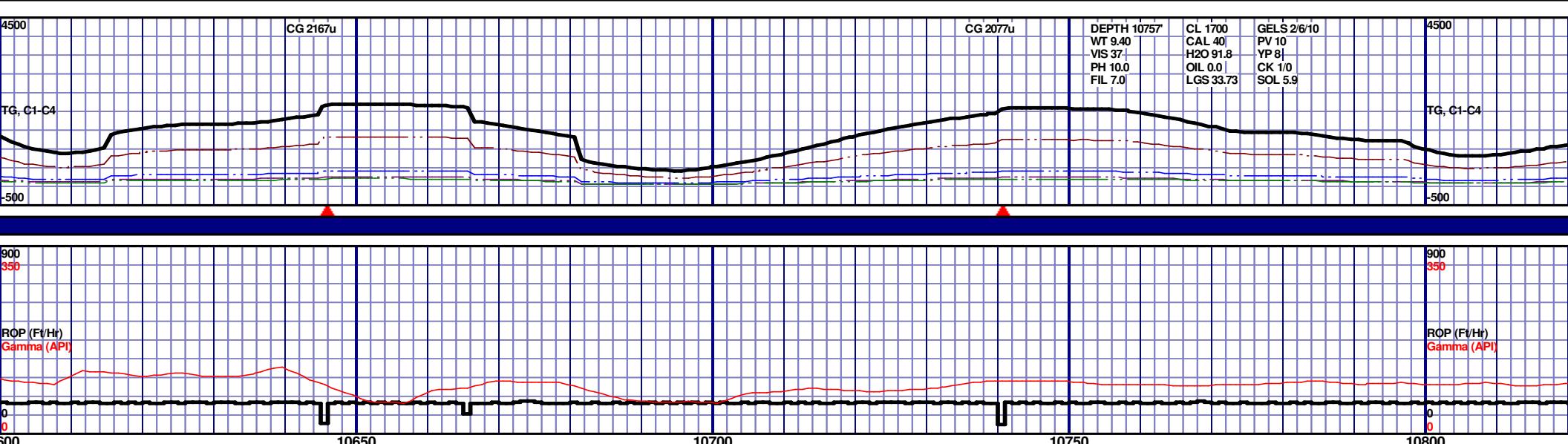
10250'-10300': CHK: 60% (CaCO<sub>3</sub> 65%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 40% FREE MARL, MOD GYSHBLK STN, 20% MIN FLOR, IMMED BLUE STRM CUT, YLW RING

10300'-10350': CHK: 70% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 30% FREE MARL, MOD GYSHBLK STN, 20% MIN FLOR, IMMED BLUE STRM CUT, YLW RING

10350'-10400': CHK: 80% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 10% MIN FLOR, MOD GYSHBLK STN, 10% MIN FLOR, YLW RING

MD 10320 TVD 6747.02  
INC 89.62 AZ 266.26  
VS 3875.76





Page 1 of 1

Page 1 of 1

A horizontal sequence of 12 blue squares arranged side-by-side. Each square contains a yellow letter 'P' positioned above a blue letter 'B'. The squares are evenly spaced, creating a repeating pattern across the width of the image.

Page 1 of 1

Page 1 of 1

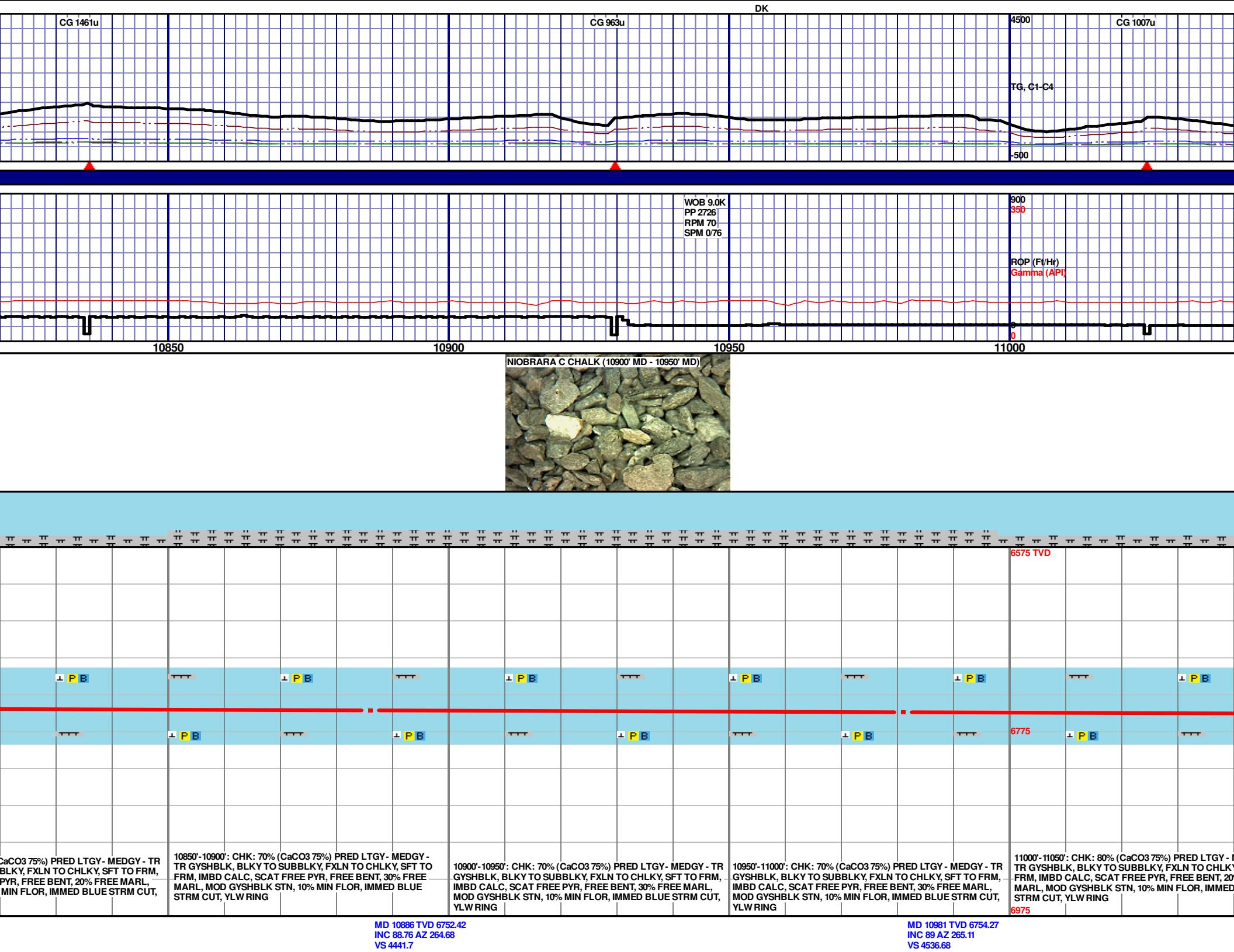
10600'-10650': CHK: 80% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
10650'-10700': CHK: 80% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
10700'-10750': CHK: 80% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
10750'-10800': CHK: 75% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
10800'-10850': CHK: 80% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR

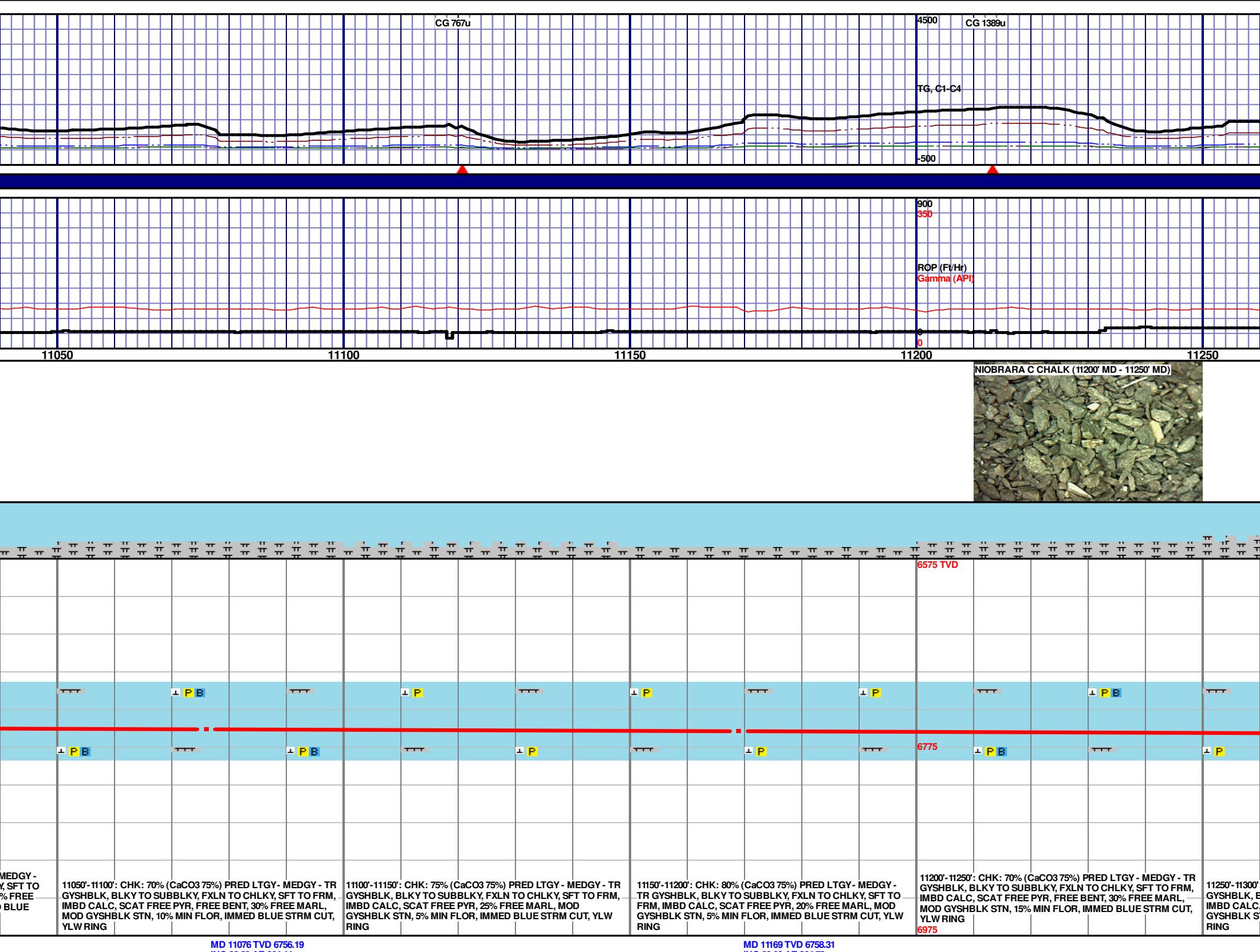
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 20% FREE MARL, MOD GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW RING | 10/69-10/70: CHK: 80% (CAC03 75%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, 20% FREE MARL, MOD GYSHBLK STN, NO MIN FLOR, IMMED BLUE STRM CUT, YLW RING | 10/70-10/70: CHK: 75% (CAC03 75%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 25% FREE MARL, MOD GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW RING | 10/70-10/80: CHK: 75% (CAC03 75%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 25% FREE MARL, MOD GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW RING |

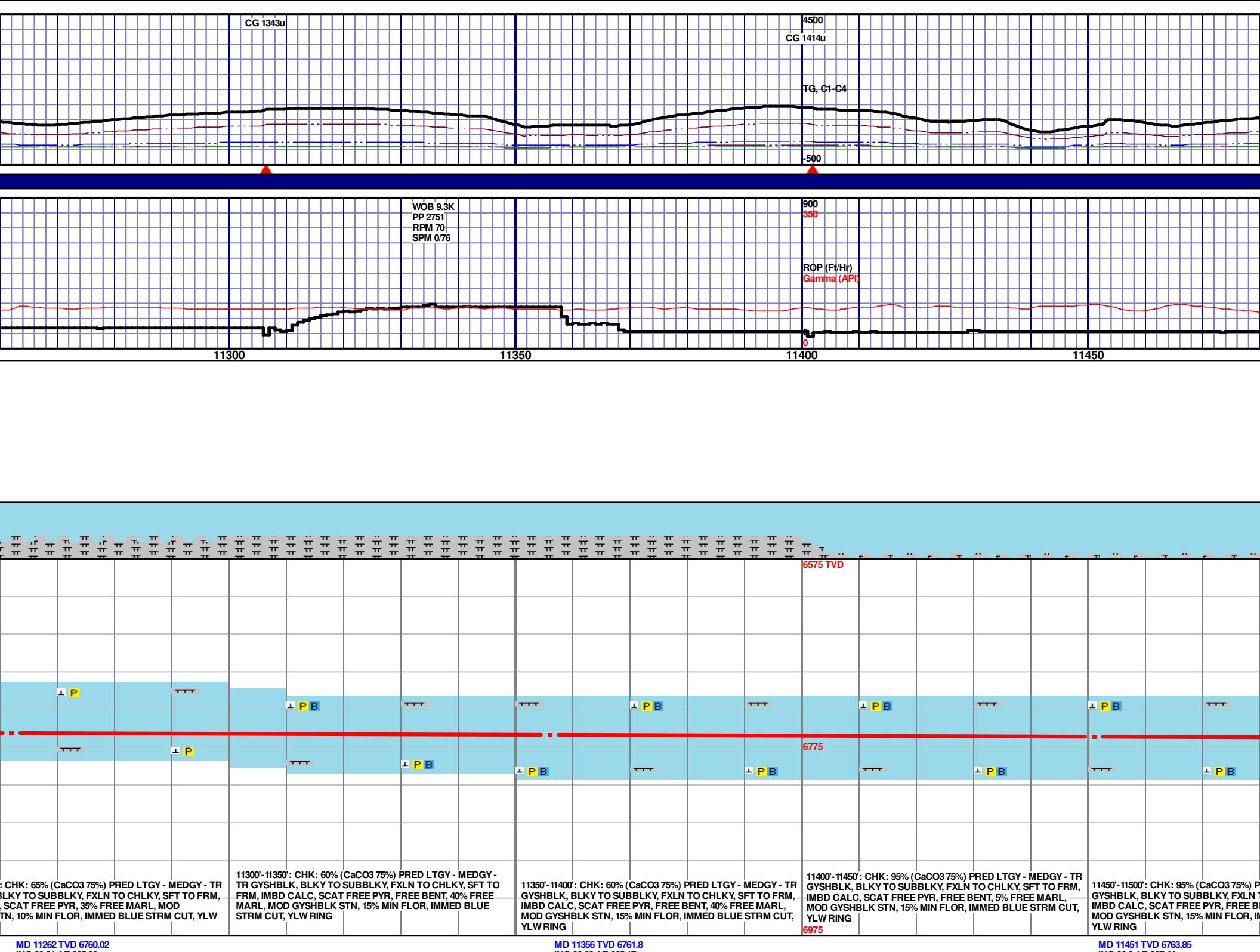
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INC 89.79 AZ 265.72  
VS 4159.75

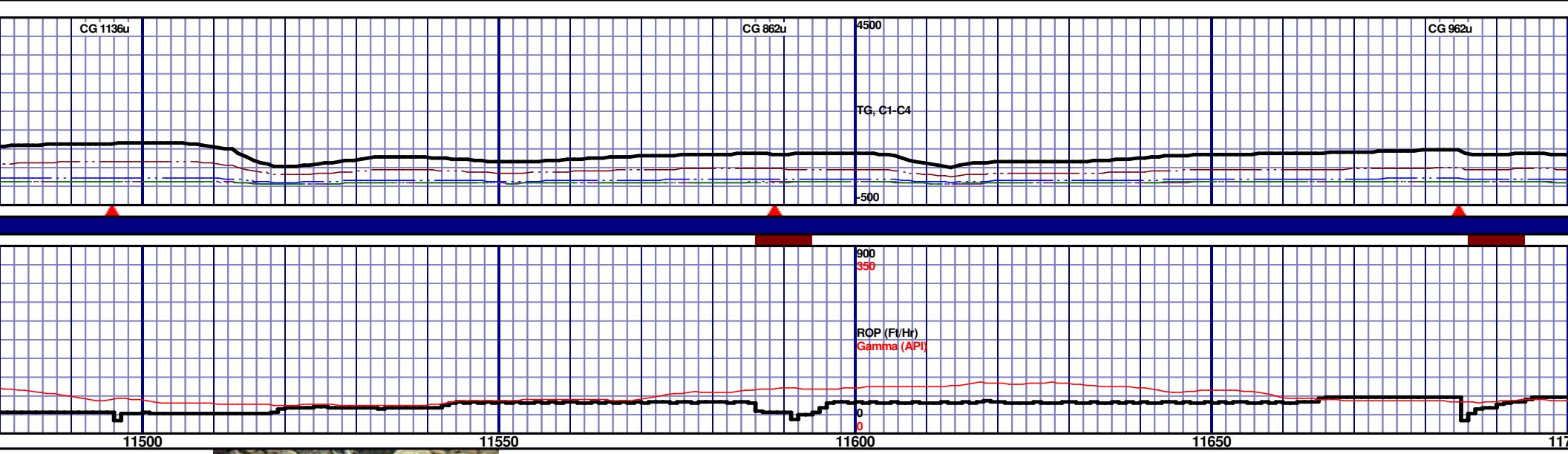
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INC 89.59 AZ 265.73  
VS 4253.74

MD 10792 TVD 6750.3  
INC 88.66 AZ 265.06  
VS 4347.73







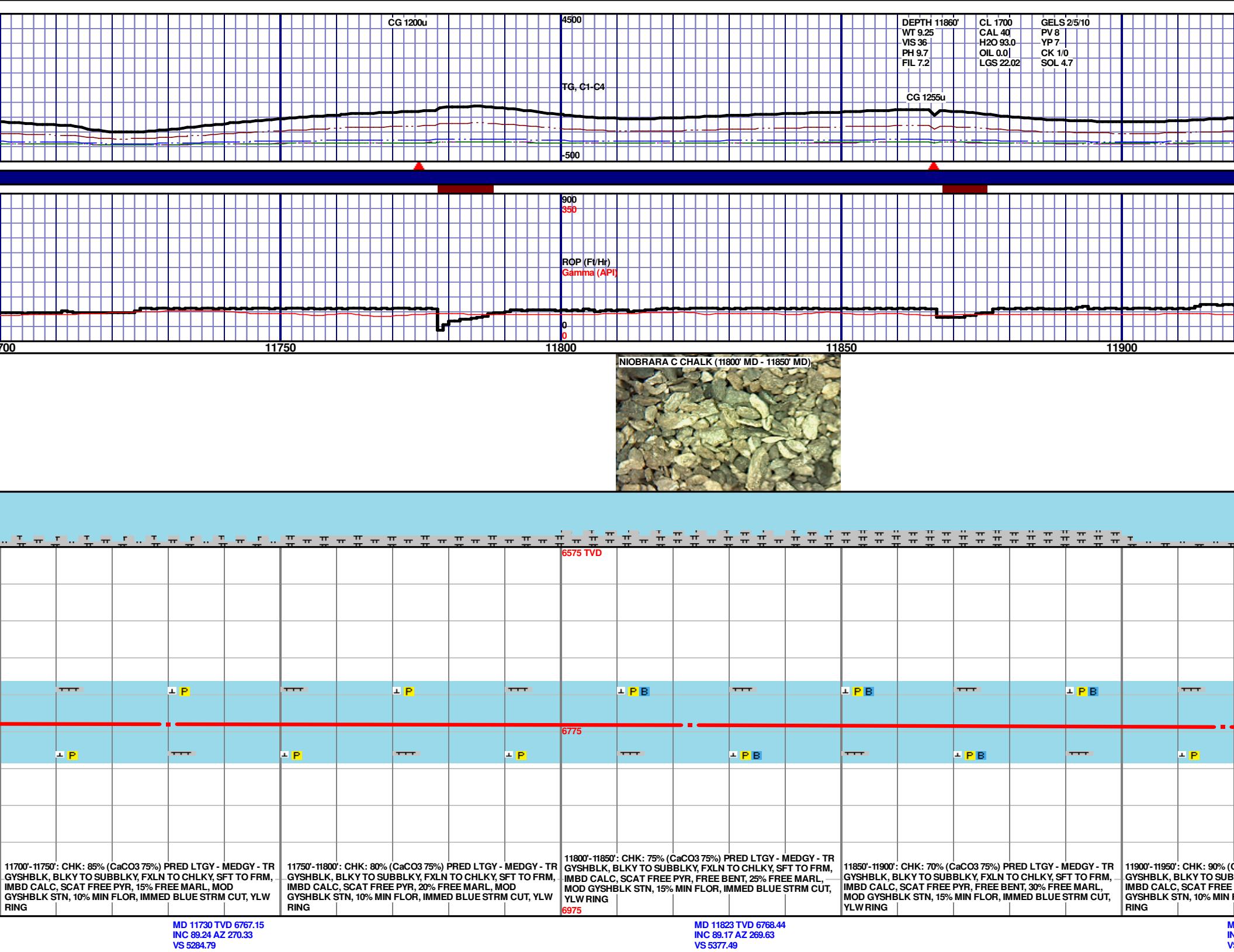


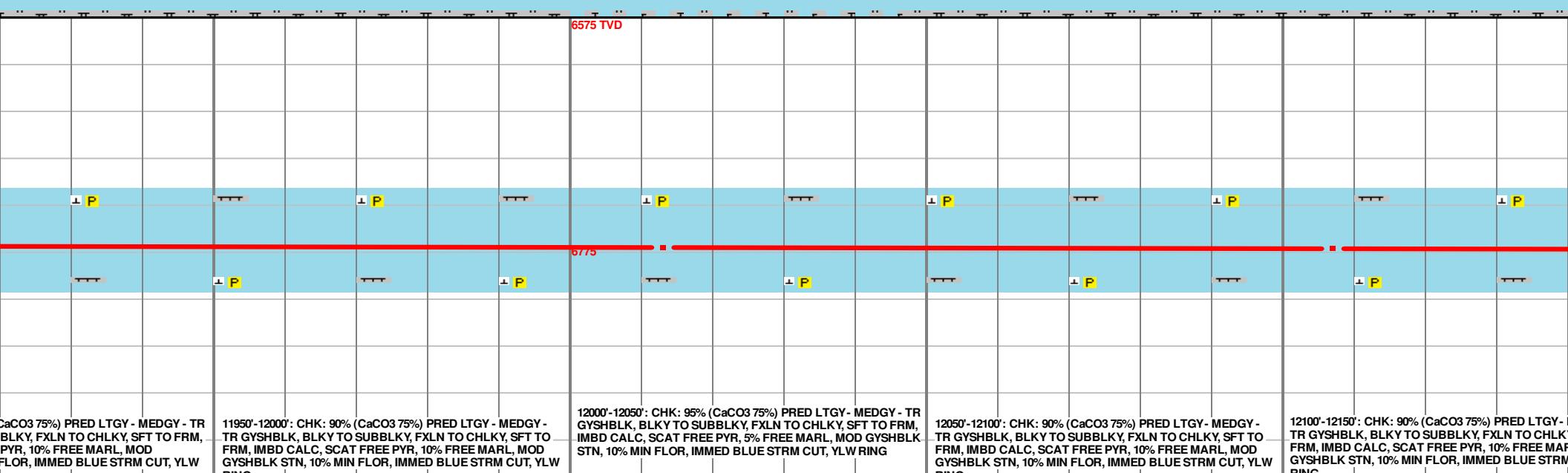
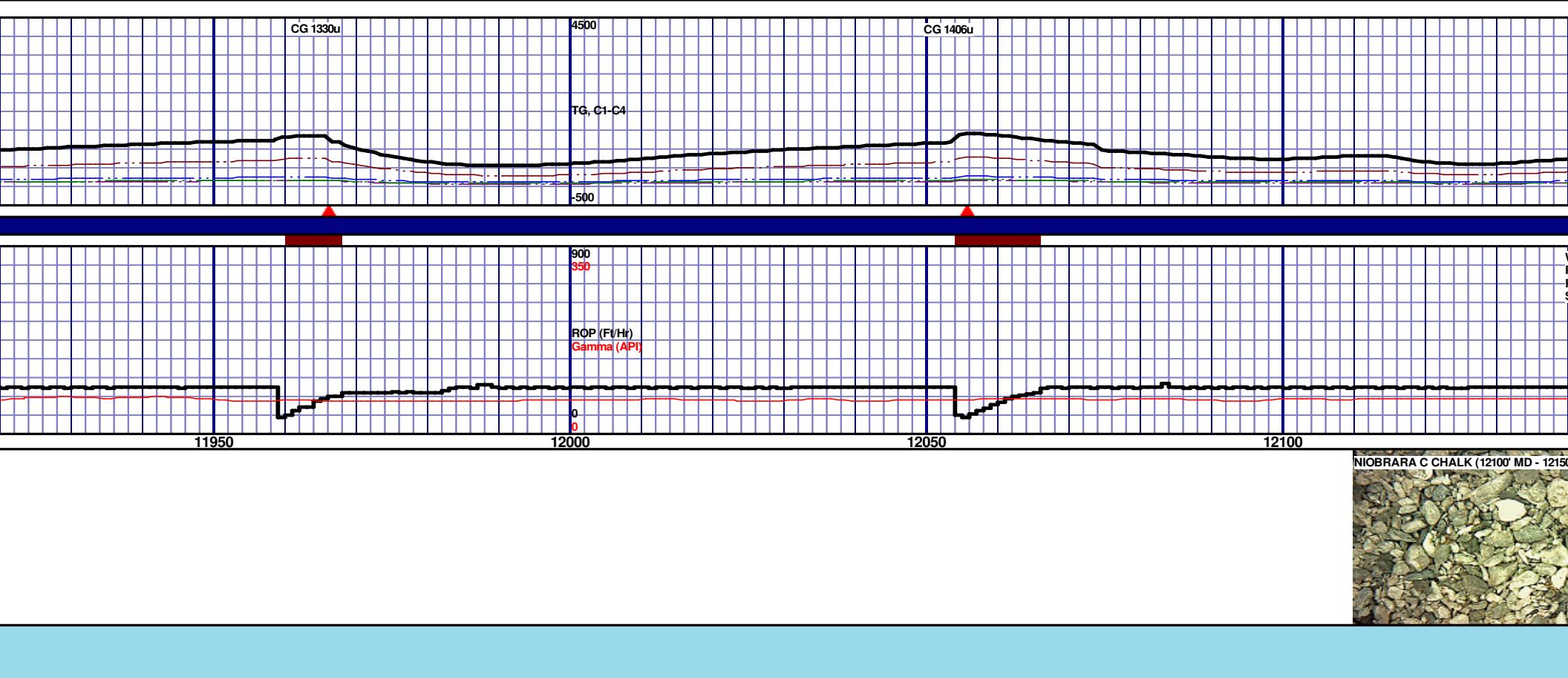
RED LTGY - MEDGY - TR TO CHLKY, SFT TO FRM, ENT, 5% FREE MARL, IMMED BLUE STRM CUT, 11500'-11550': CHK: 95% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 5% FREE MARL, MOD GYSHBLK STN, 15% MIN FLOR, IMMED BLUE STRM CUT, YLW RING

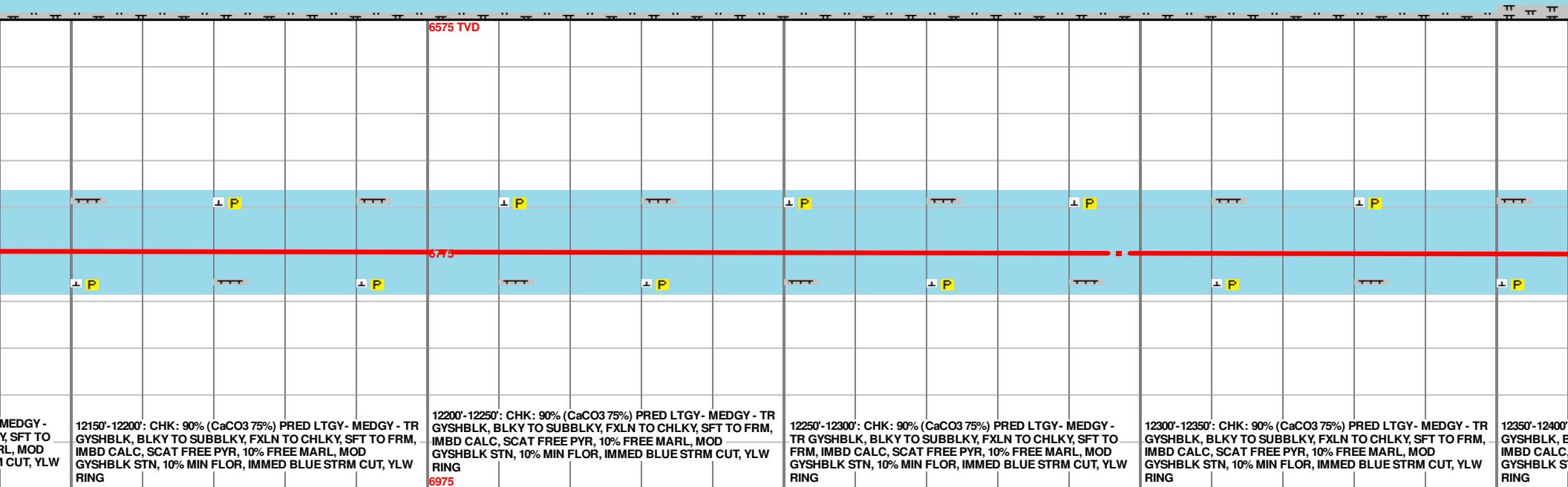
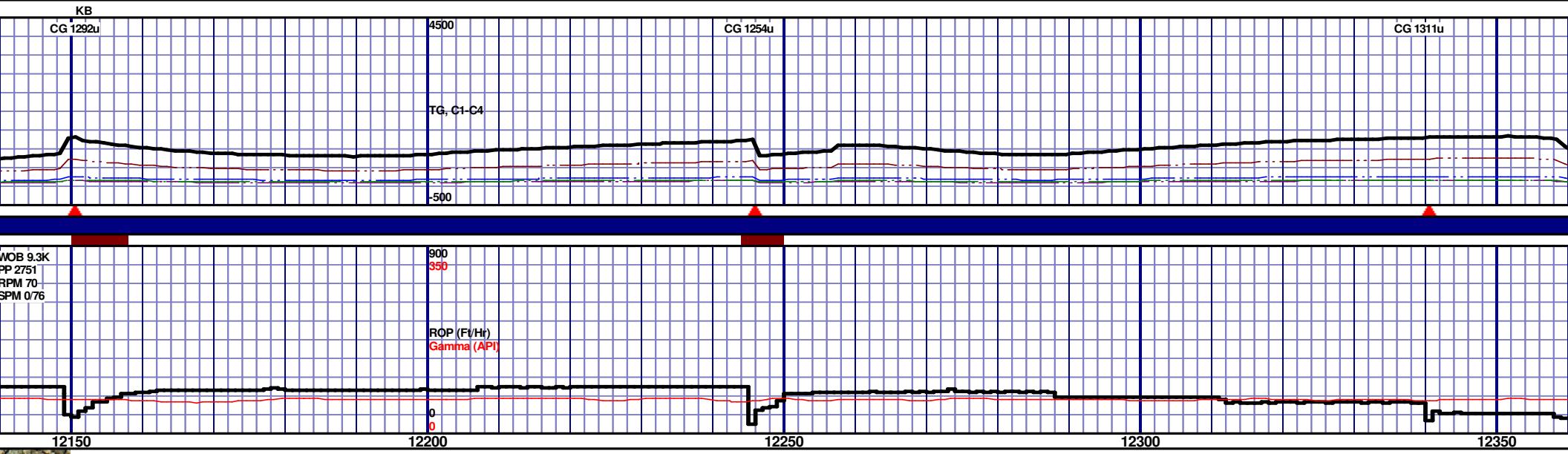
11550'-11600': CHK: 90% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 10% FREE MARL, MOD GYSHBLK STN, 15% MIN FLOR, IMMED BLUE STRM CUT, YLW RING

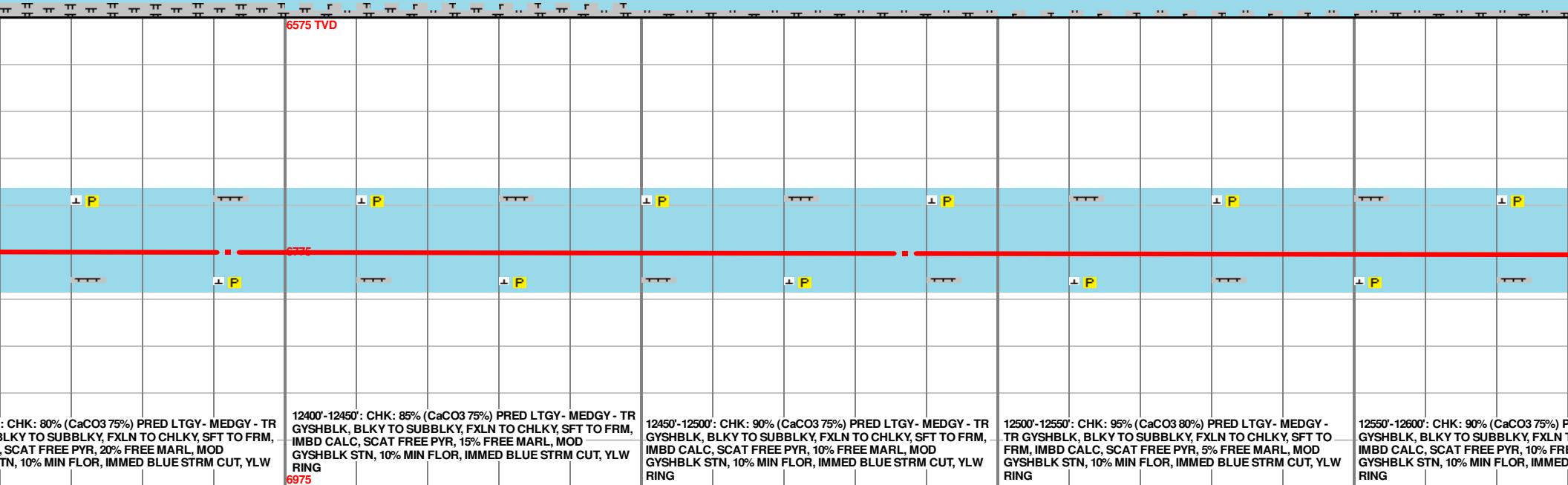
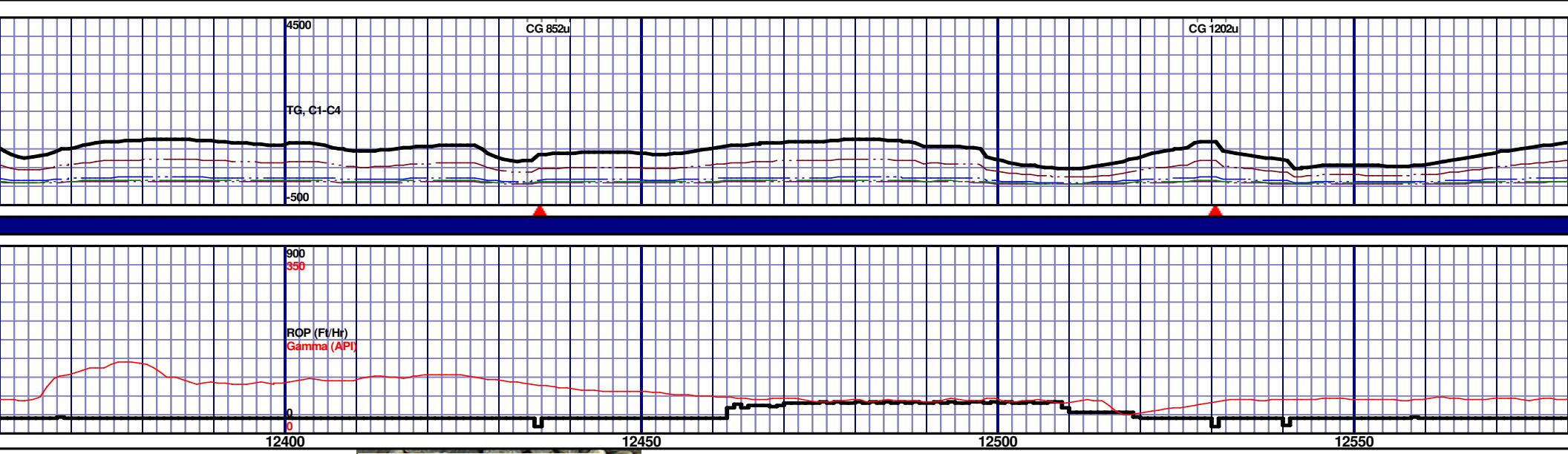
11600'-11650': CHK: 90% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 10% FREE MARL, MOD GYSHBLK STN, 15% MIN FLOR, IMMED BLUE STRM CUT, YLW RING

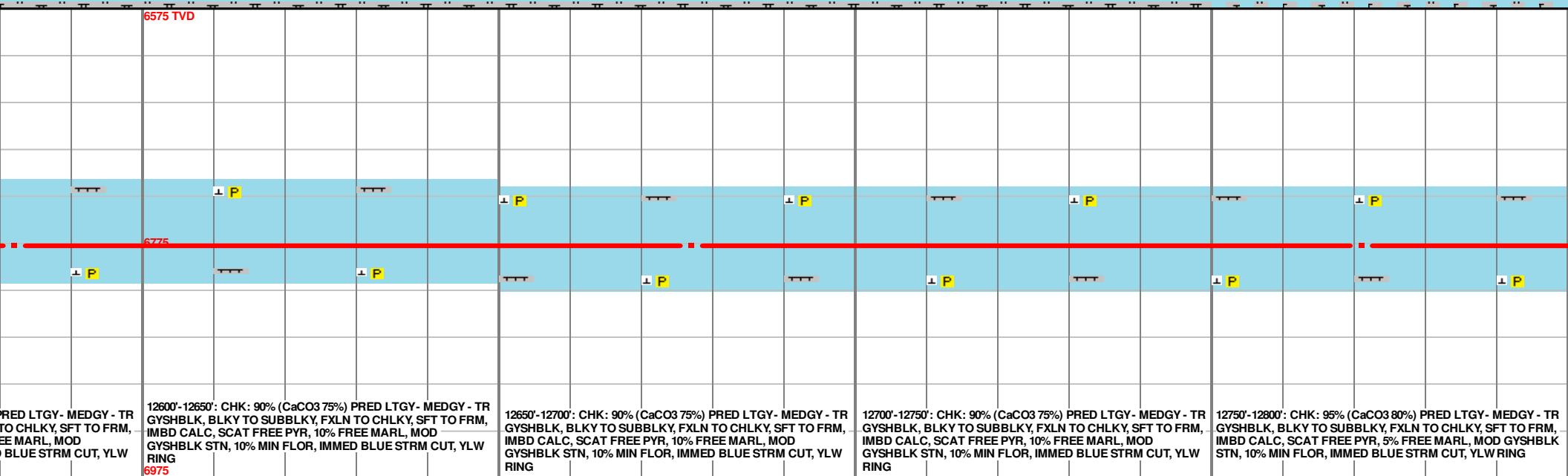
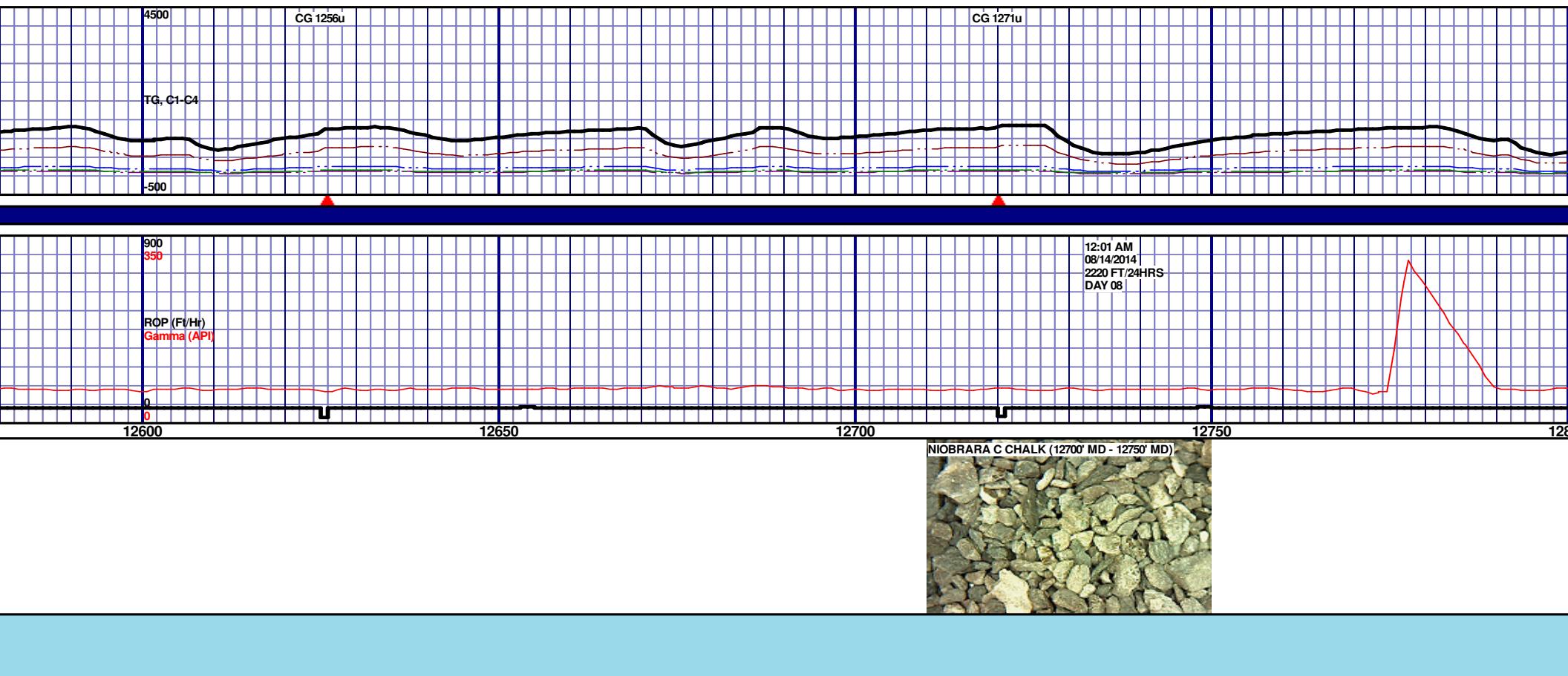
11650'-11700': CHK: 80% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, FREE BENT, 20% FREE MARL, MOD GYSHBLK STN, 15% MIN FLOR, IMMED BLUE STRM CUT, YLW RING







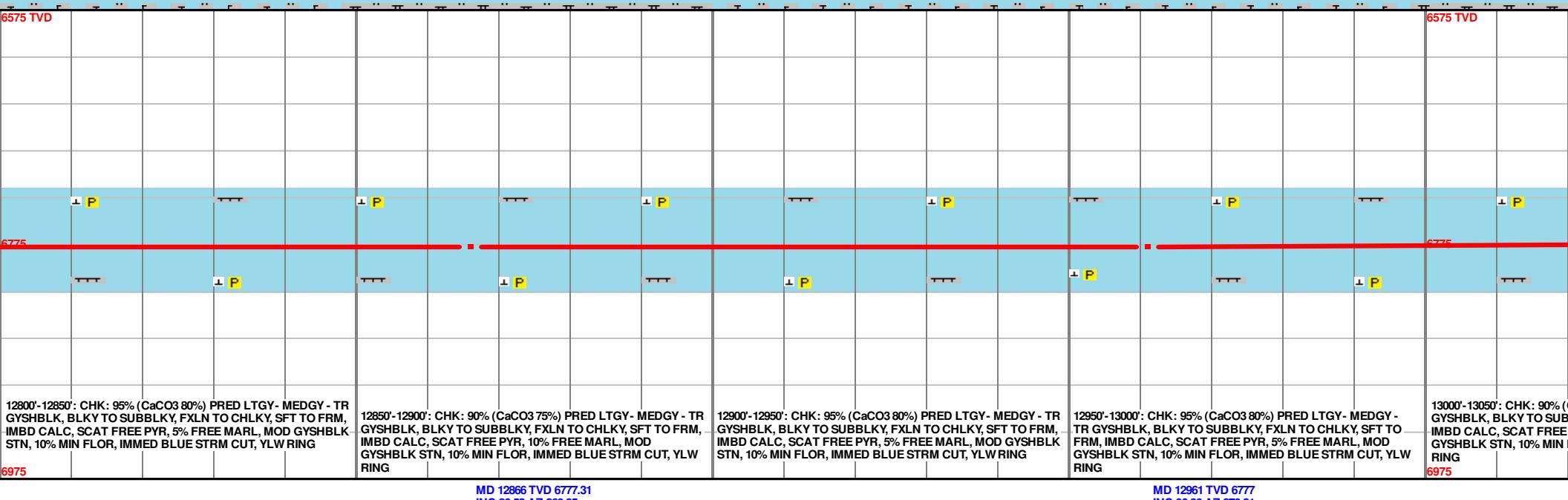
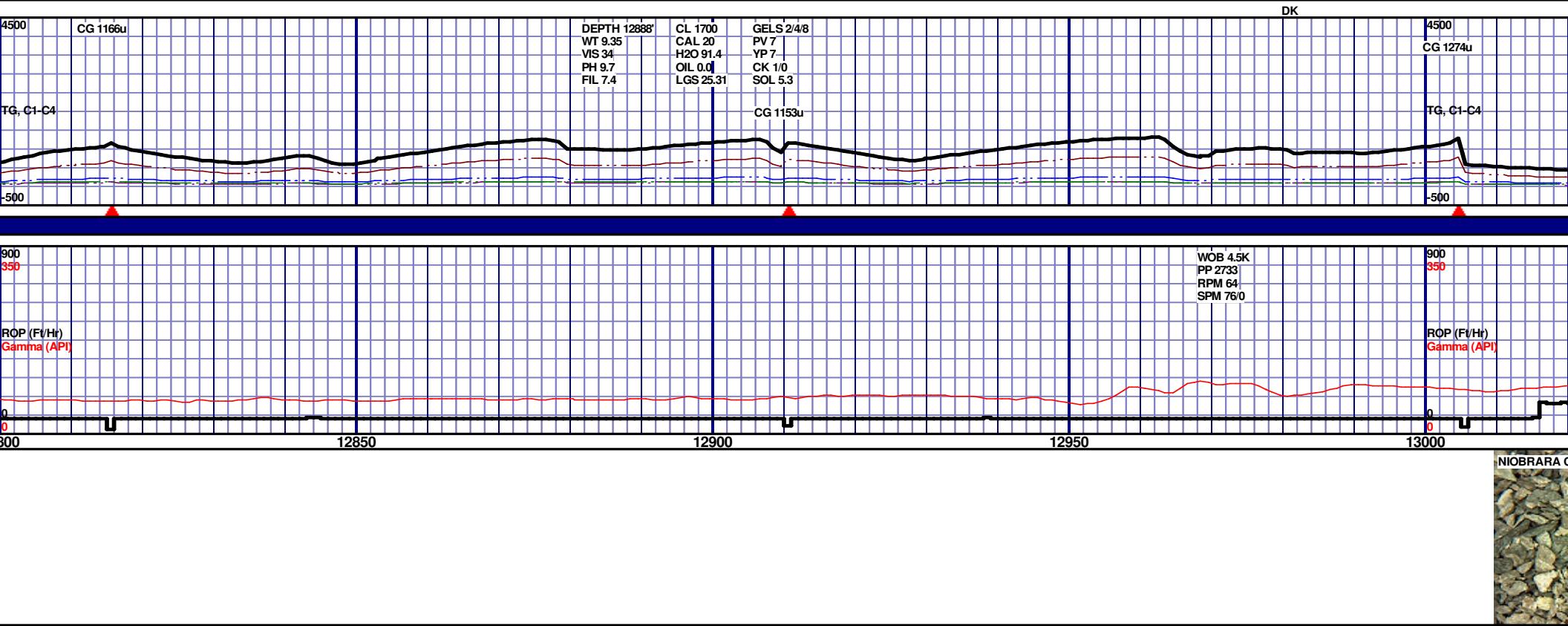


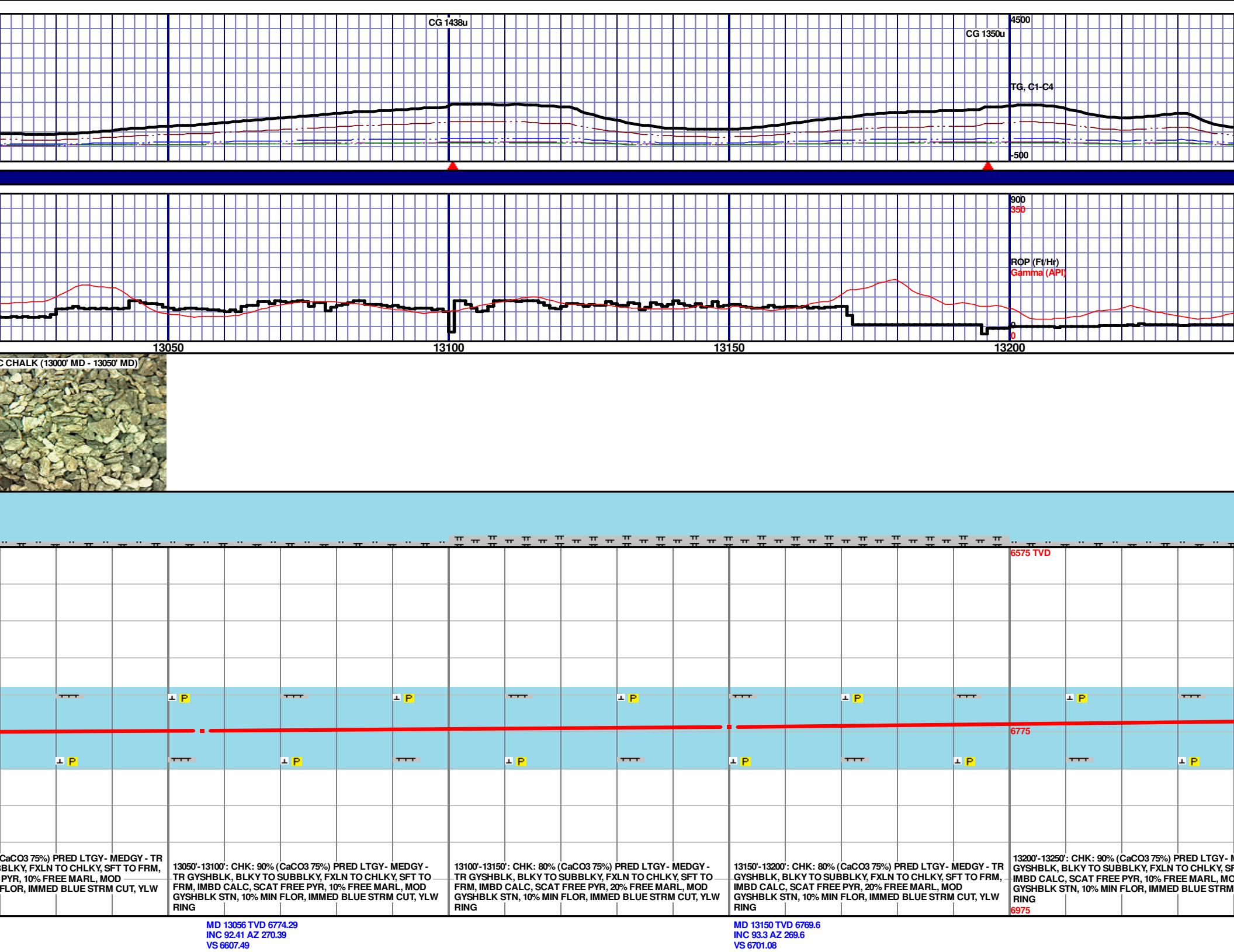


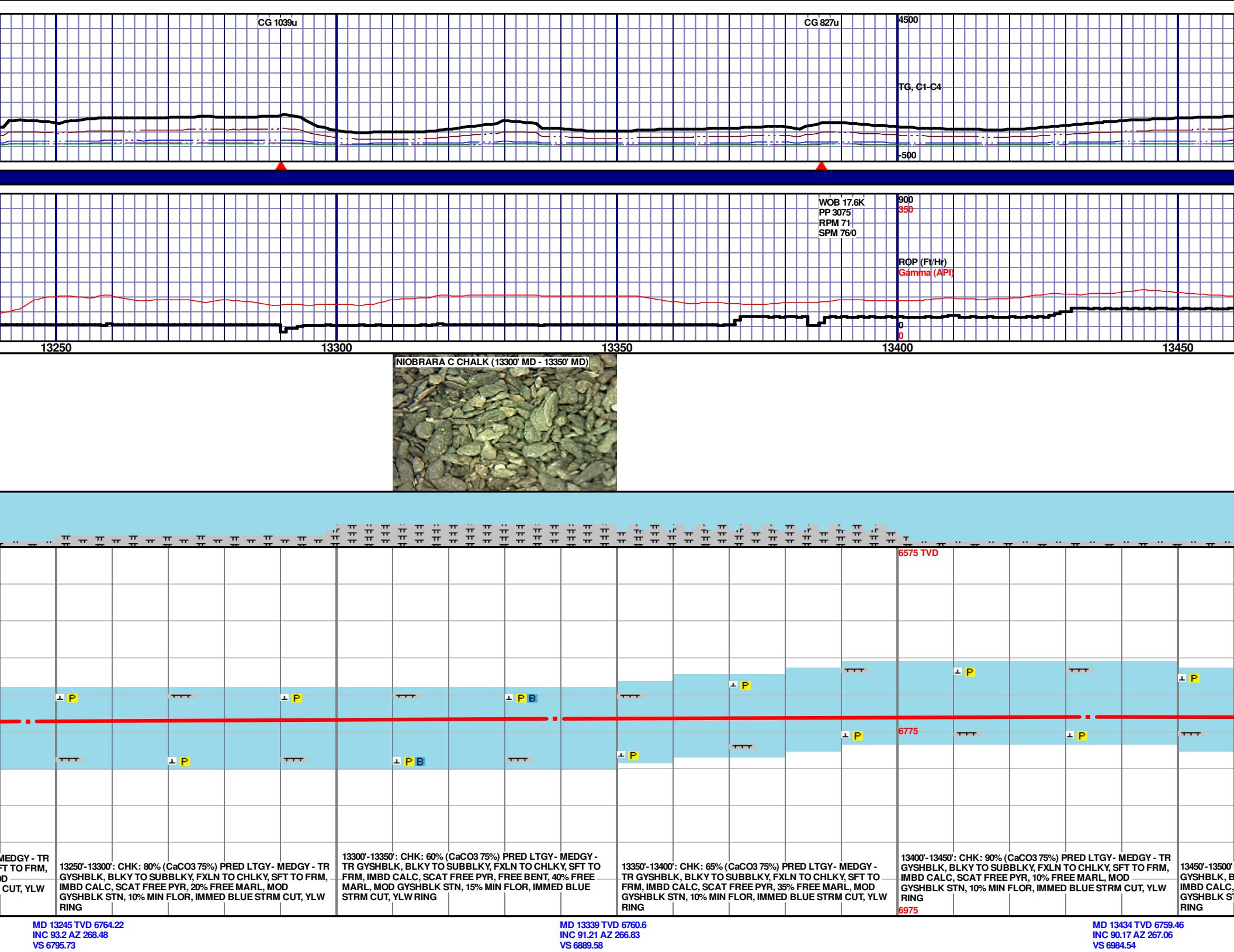
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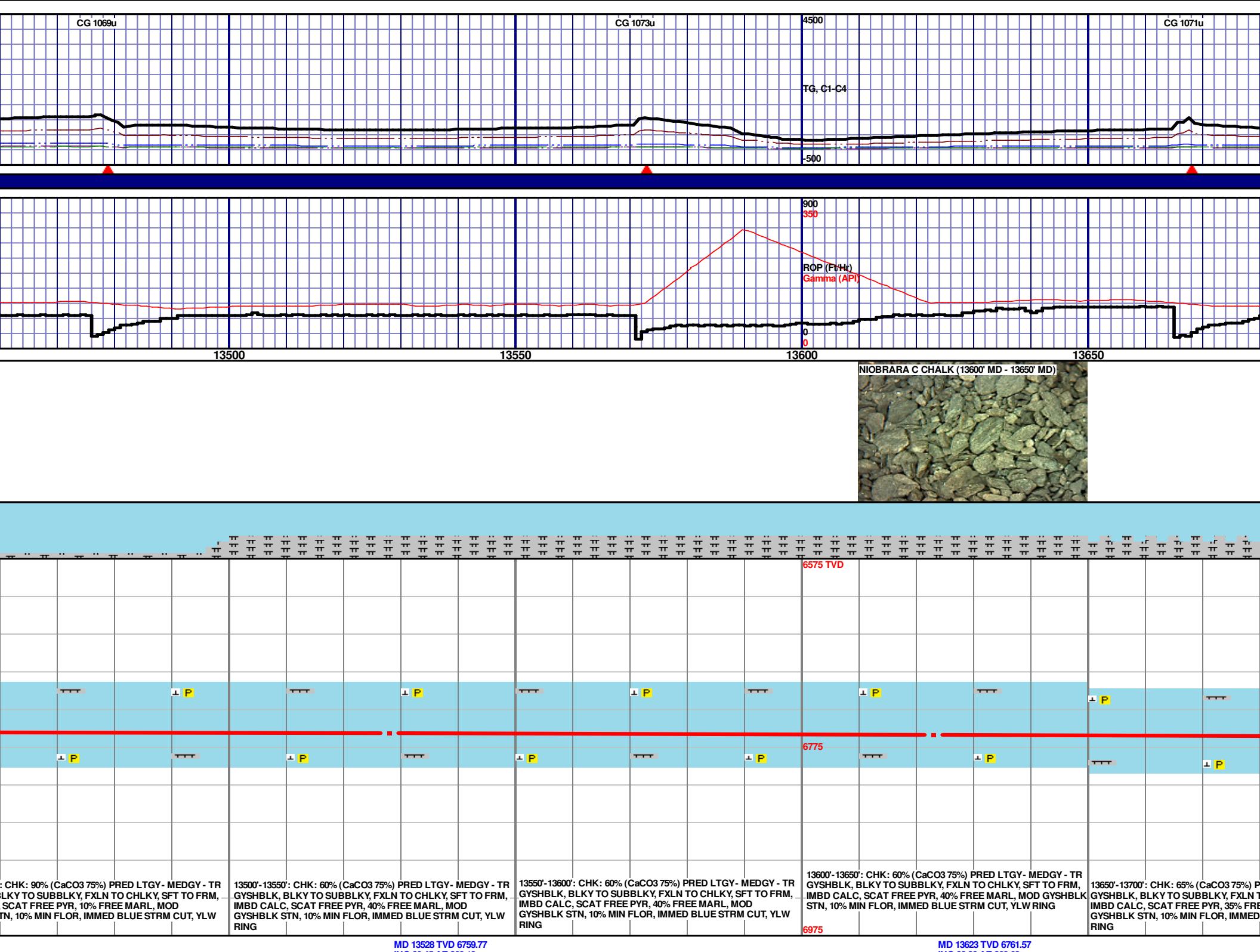
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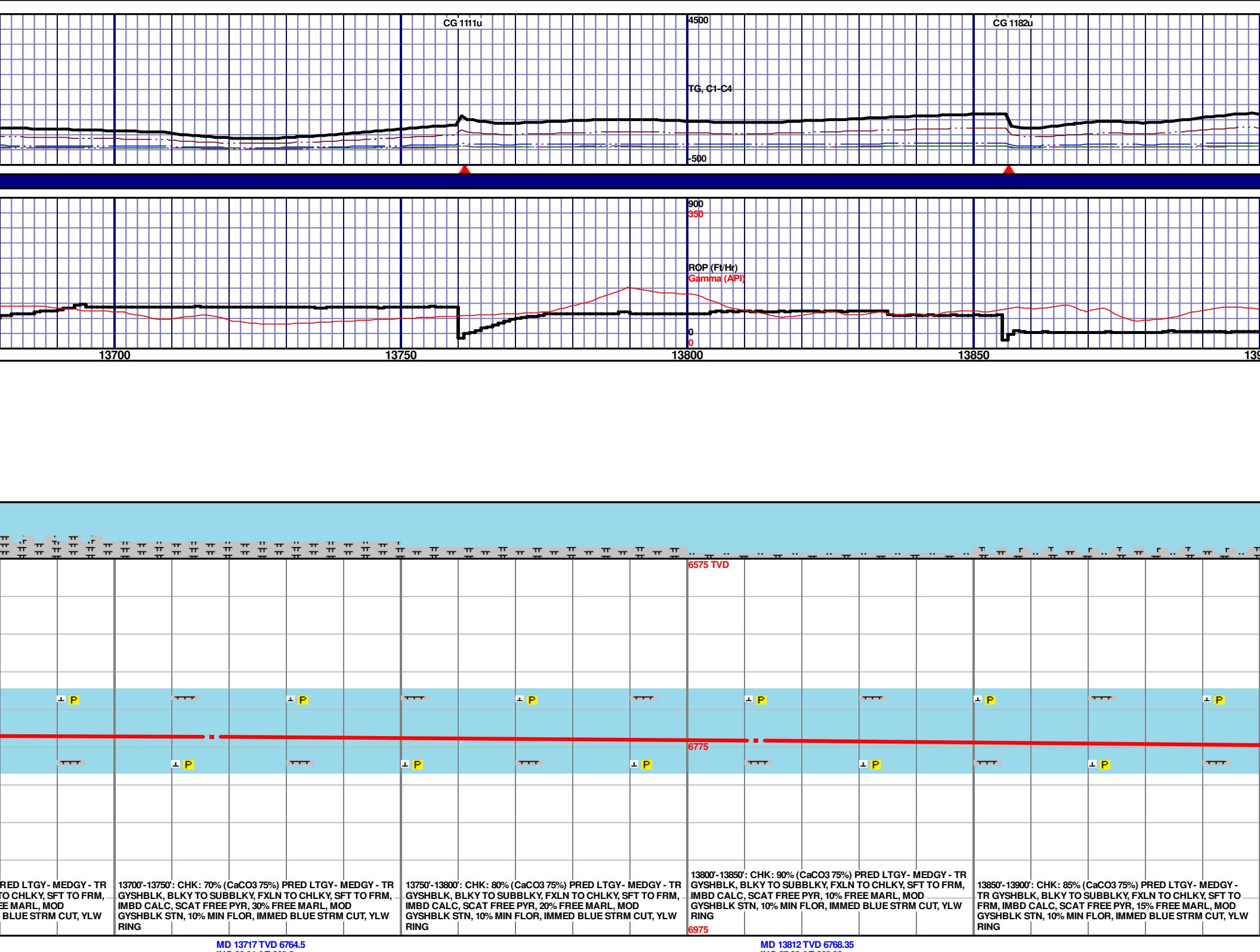
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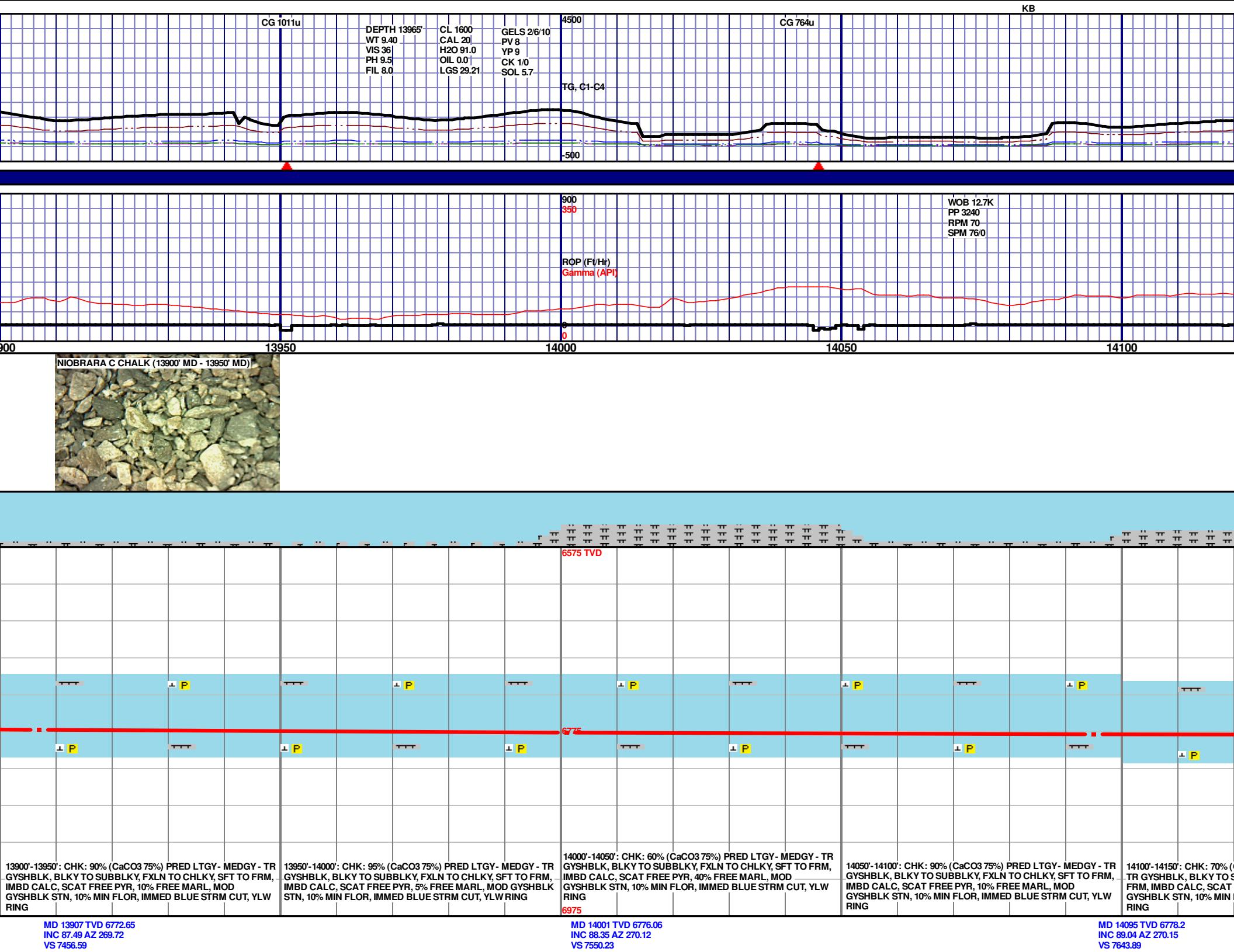


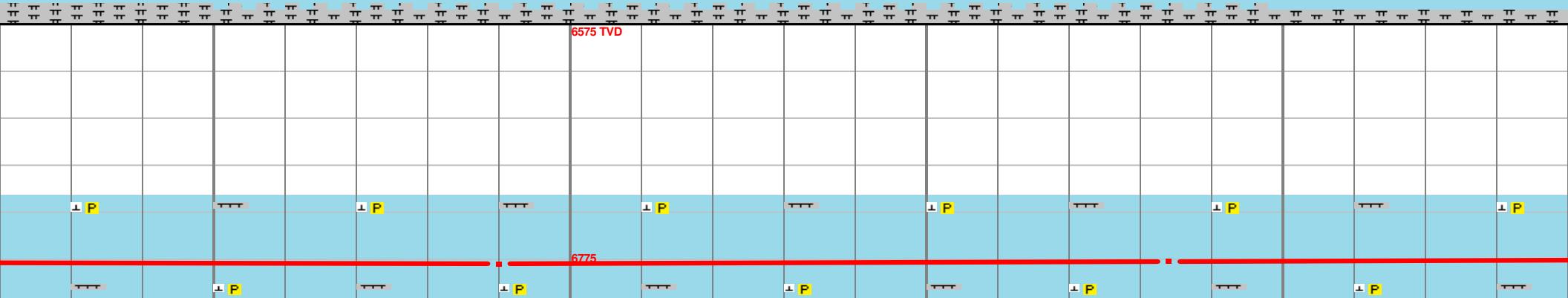
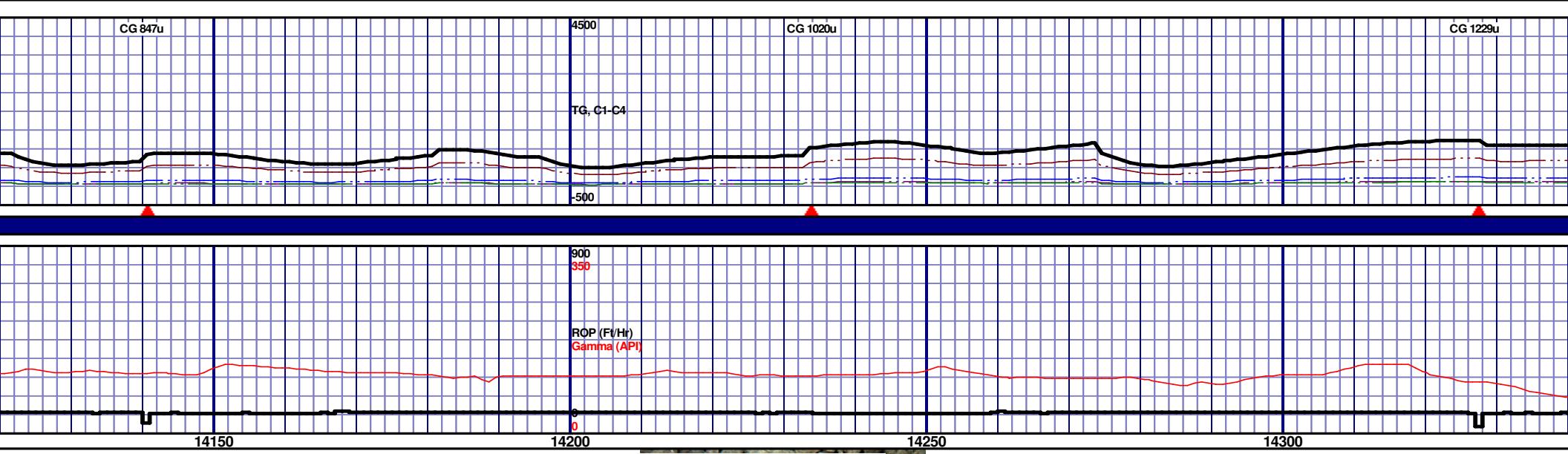












CaCO<sub>3</sub> 75% PRED LTGY - MEDGY -  
SUBBLKY, FXLN TO CHLKY, SFT TO  
FREE PYR, 30% FREE MARL, MOD  
FLOR, IMMED BLUE STRM CUT, YLW  
RING

14150'-14200': CHK: 75% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 25% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

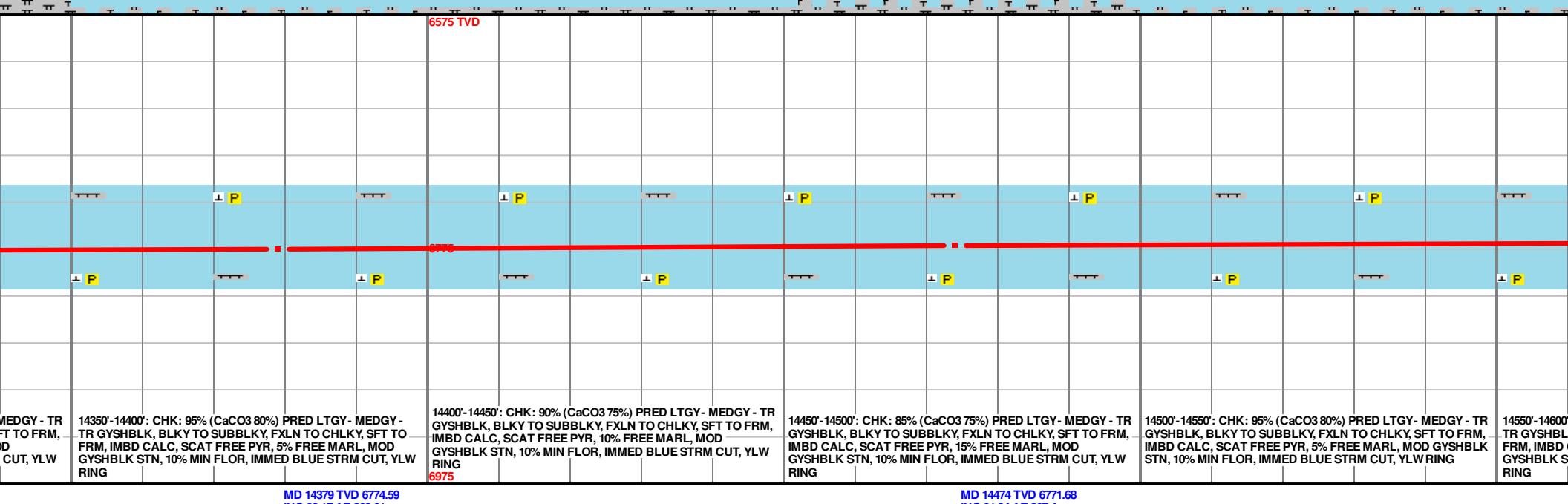
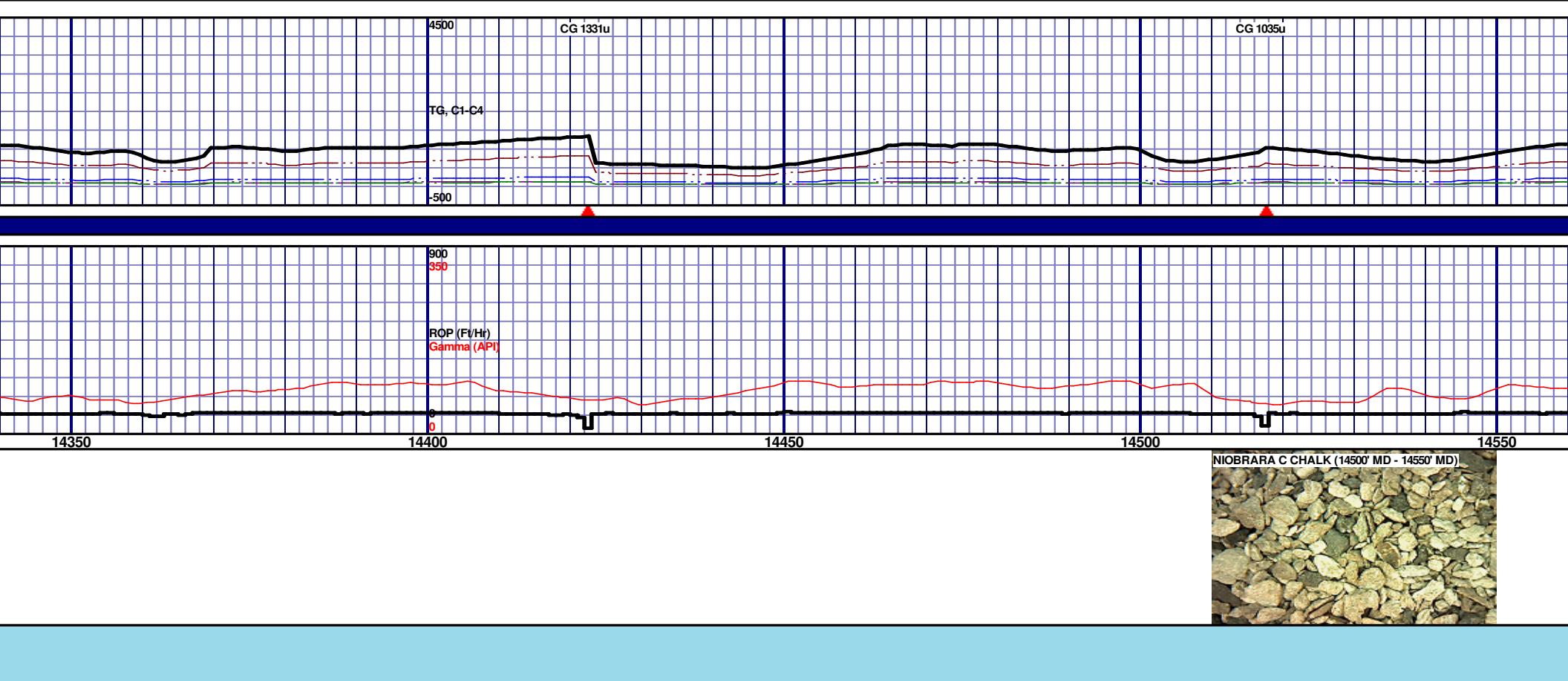
14200'-14250': CHK: 75% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 25% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

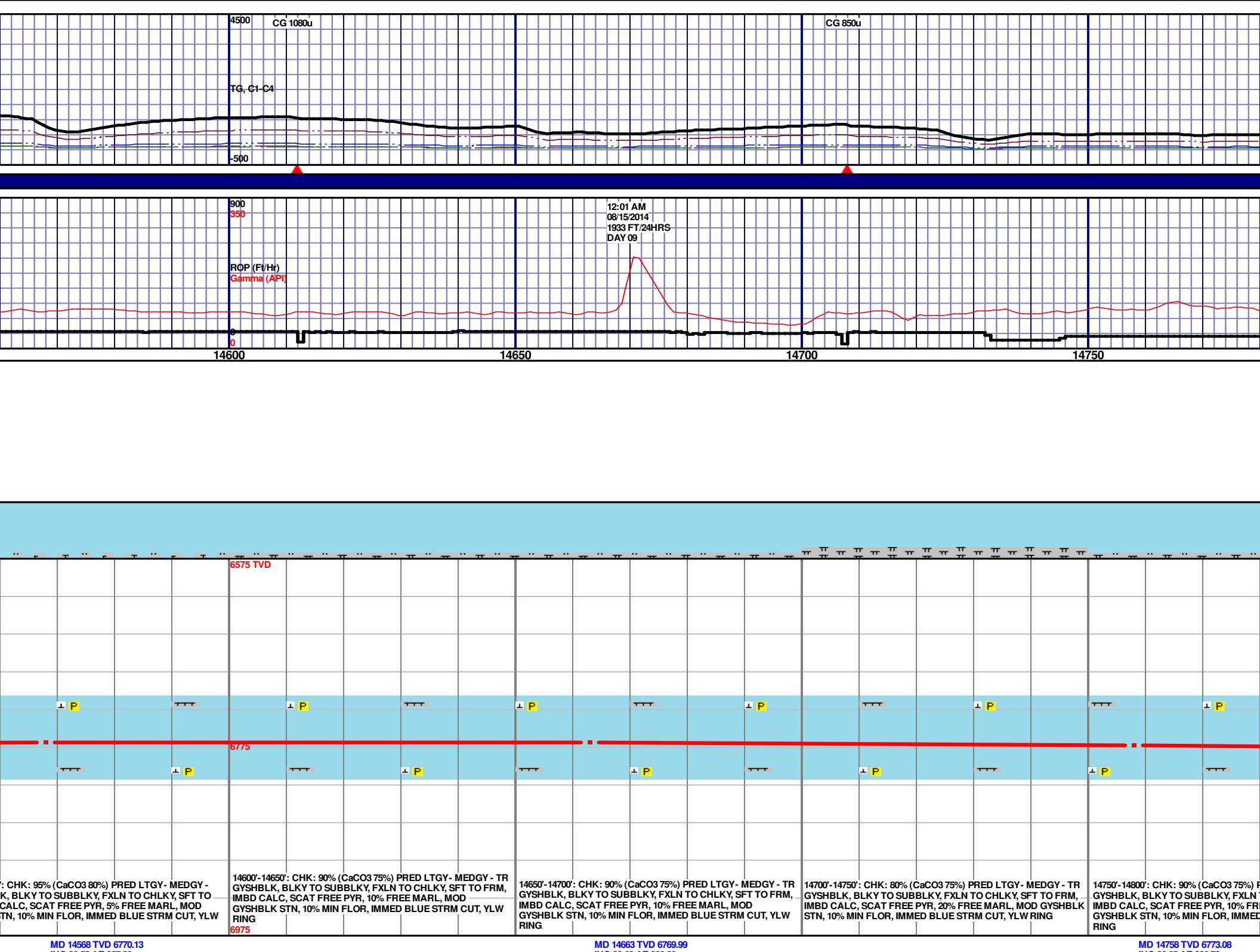
14250'-14300': CHK: 75% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 25% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

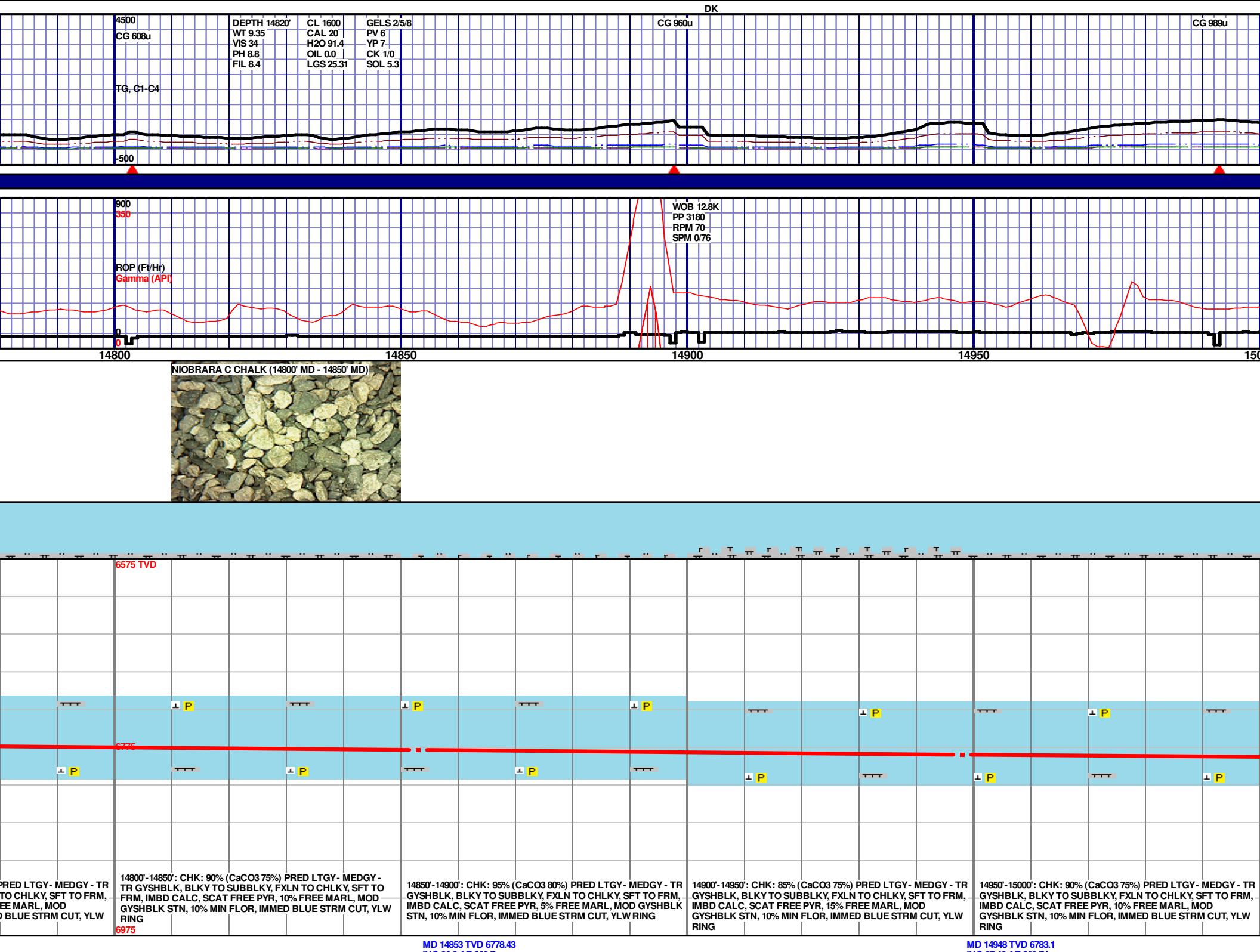
14300'-14350': CHK: 80% (CaCO<sub>3</sub> 75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 20% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

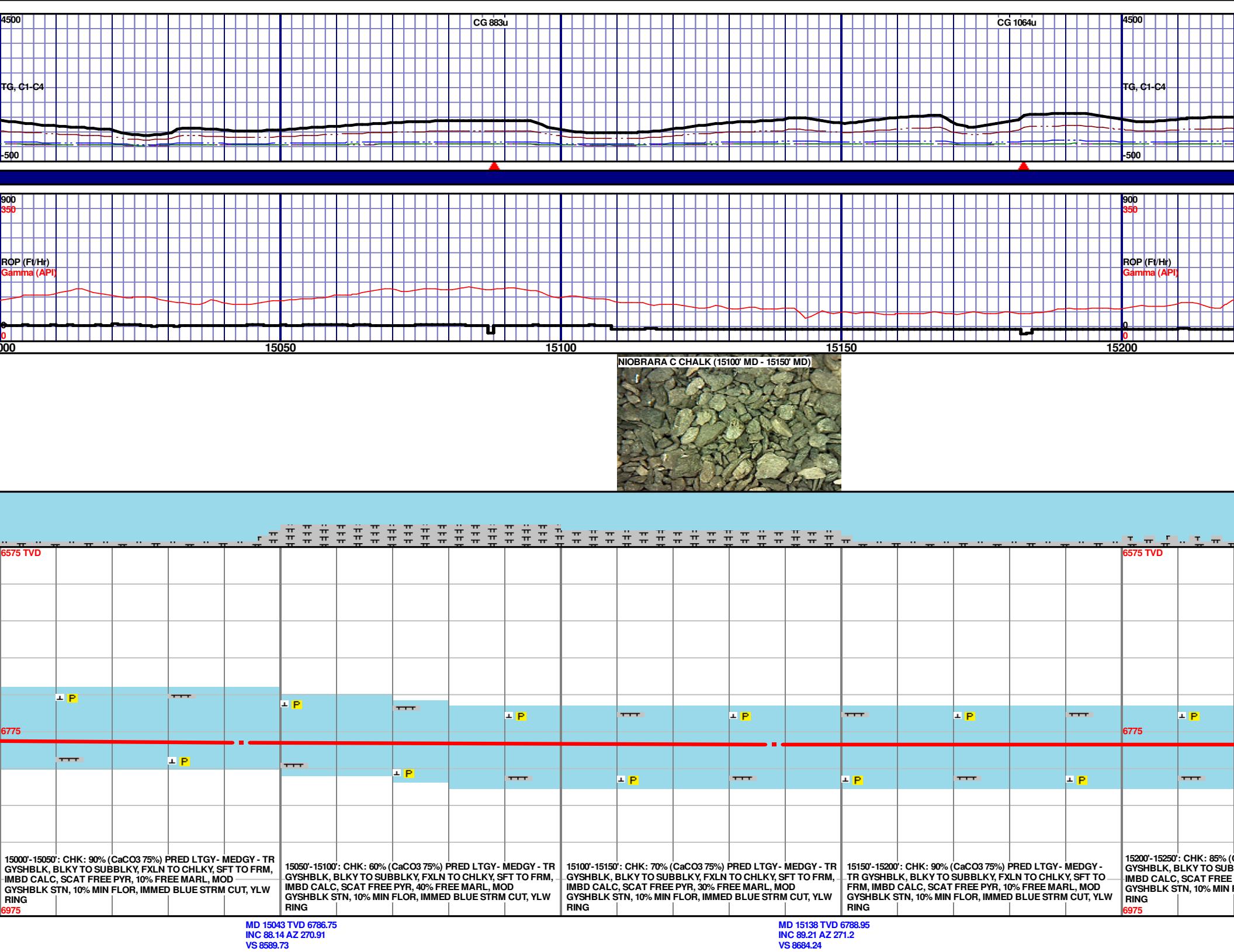
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VS 7738.54

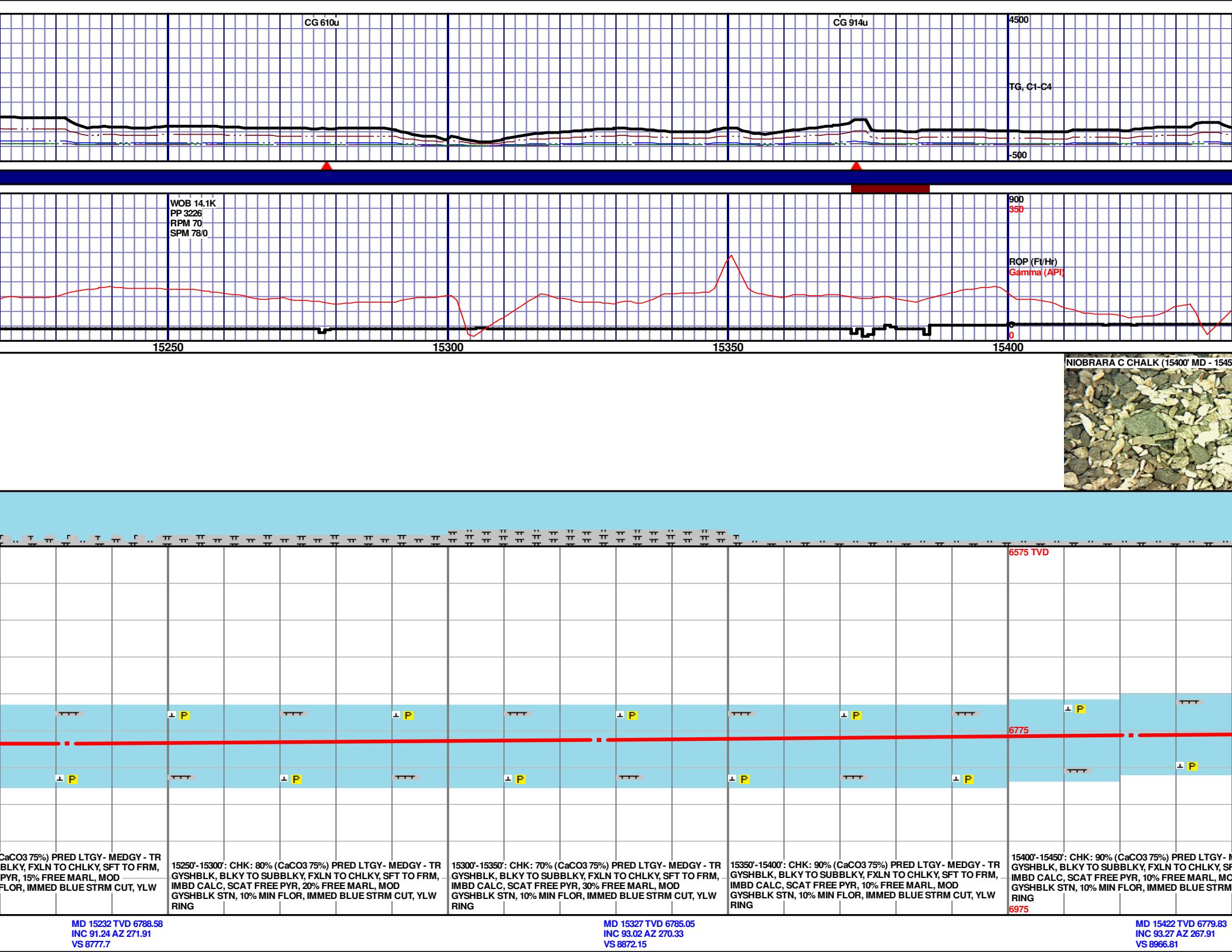
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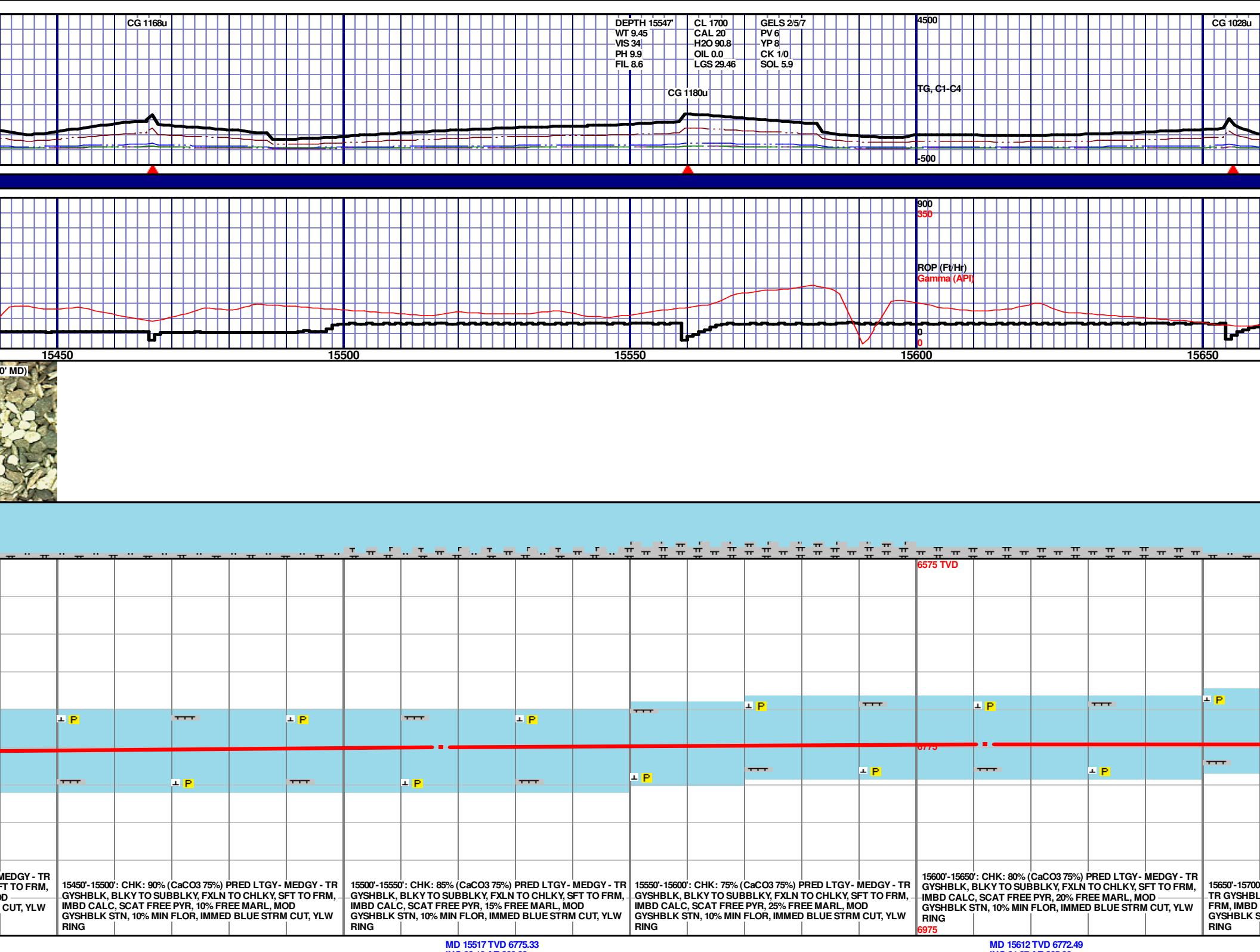


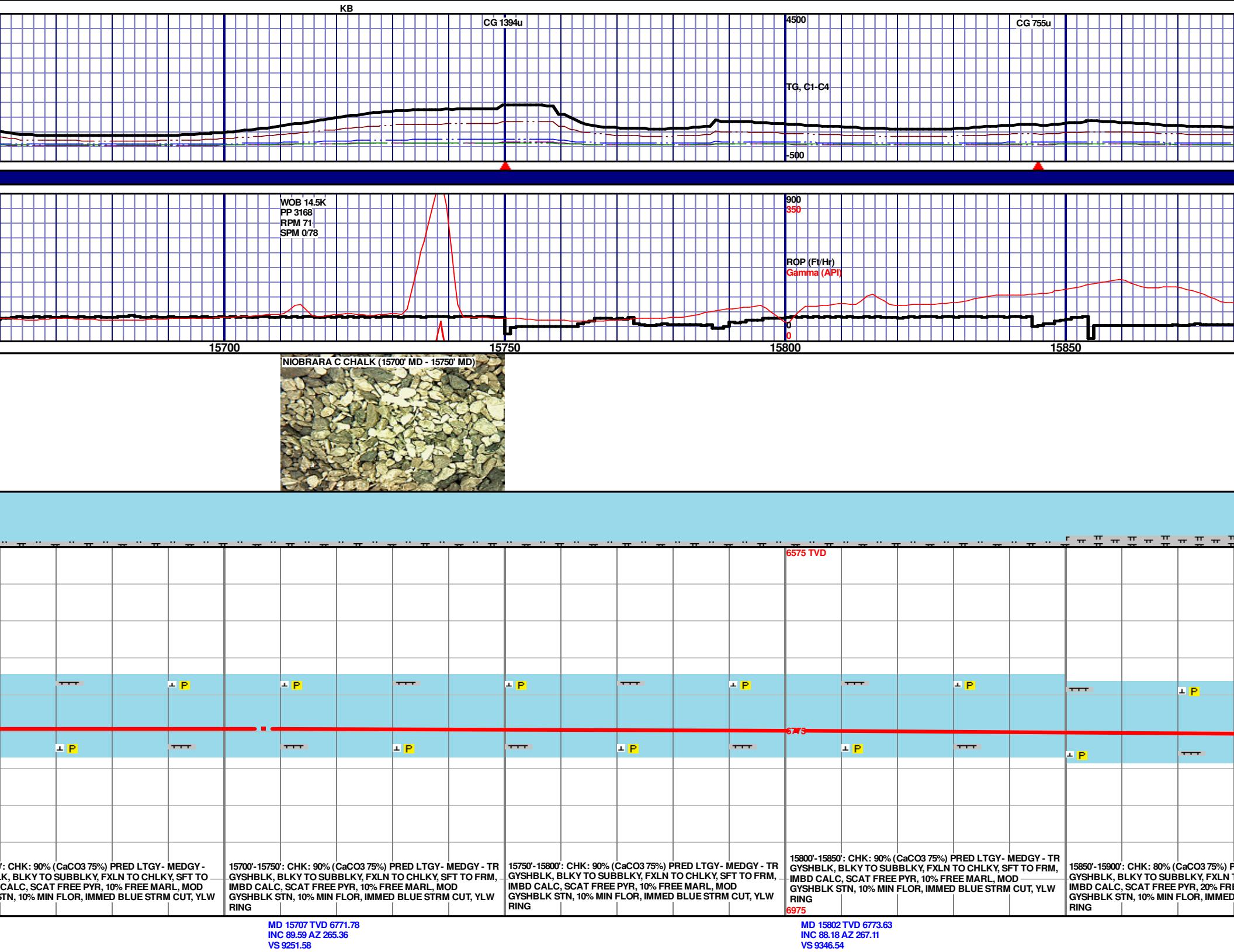


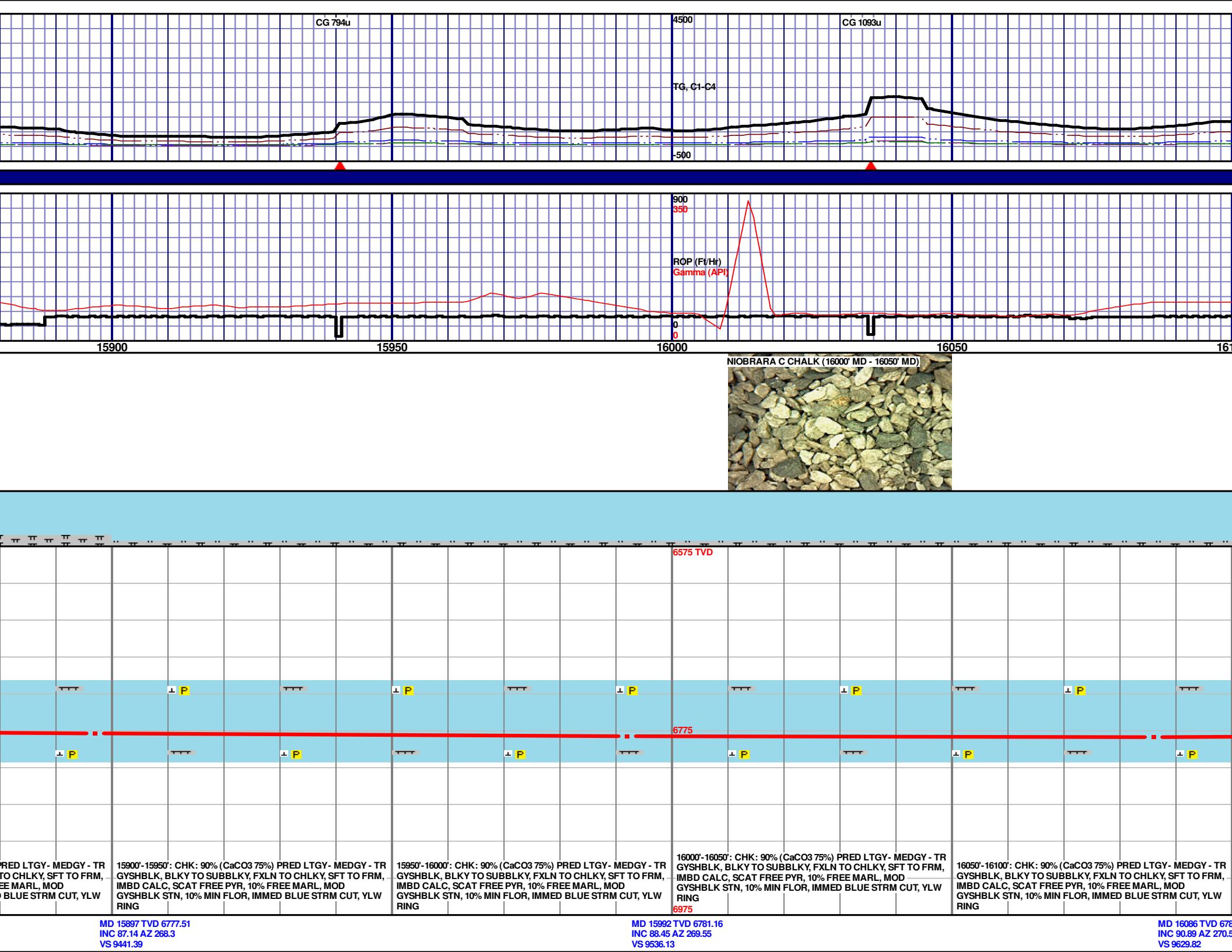


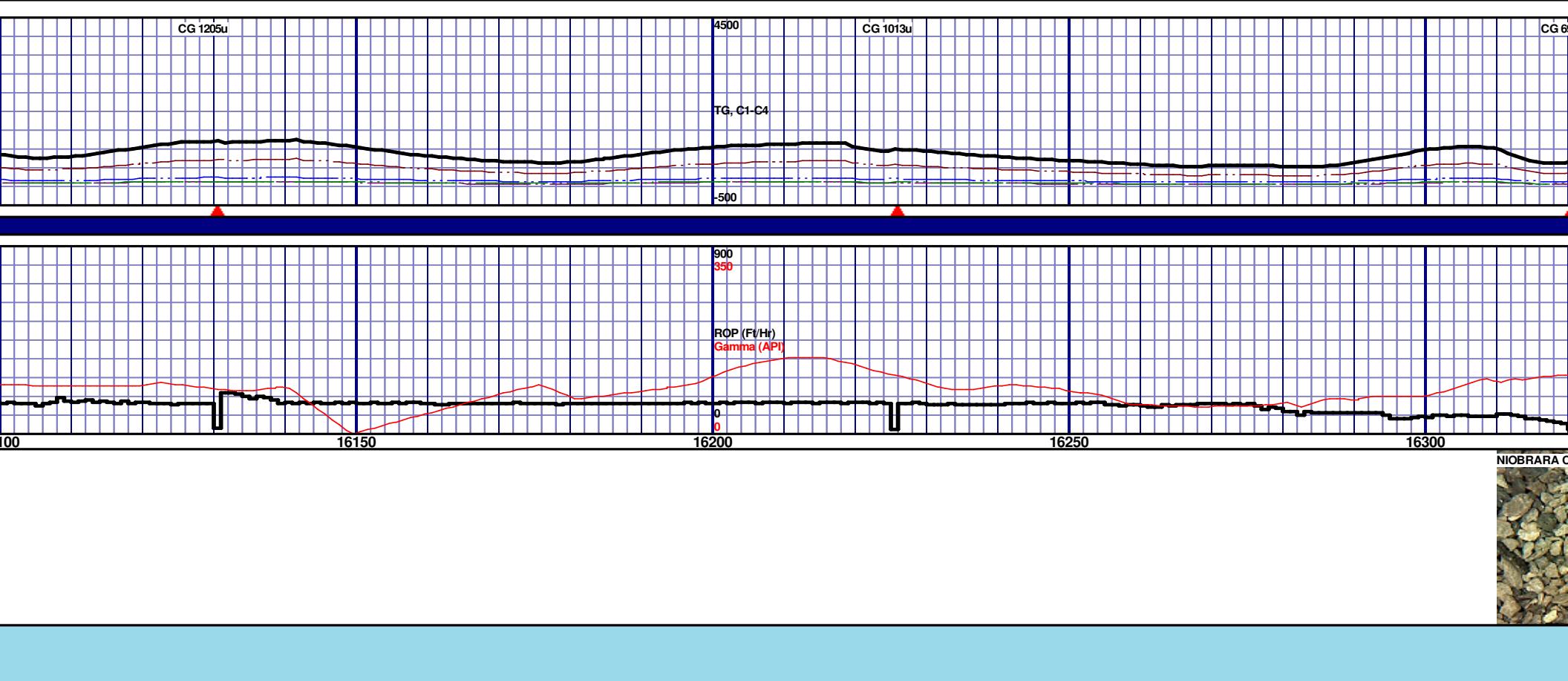












16100'-16150': CHK: 90% (CaCO3 75%) PRED LTGY- MEDGY - TR  
GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 10% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW

16150'-16200': CHK: 90% (CaCO<sub>3</sub> 75%) PRED LTGY- MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, 10% FREE MARL, MOD GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW

162000-162500: CHK: 90% (CaCO3 75%) PRED LTGY - MEDGY - TR  
GYSHBLK, BLKY TO SUBBLK, FXLN TO CHLKY, SFT TO FRM,  
IMBD CALC, SCAT FREE PYR, 10% FREE MARL, MOD  
GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW  
RING

16250'-16300': CHK: 85% (CaCO<sub>3</sub> 75%) PRED LTGY- MEDGY - TR GYSHBLK, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT TO FRM, IMBD CALC, SCAT FREE PYR, 15% FREE MARL, MOD GYSHBLK STN, 10% MIN FLOR, IMMED BLUE STRM CUT, YLW

16300'-16350': CHK: 80% ( )  
TR GYSHBLK, BLKY TO S  
FRM, IMBD CALC, SCAT  
GYSHBLK STN, 10% MIN

