



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

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

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

### Mud Logging Details

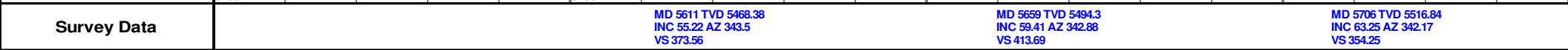
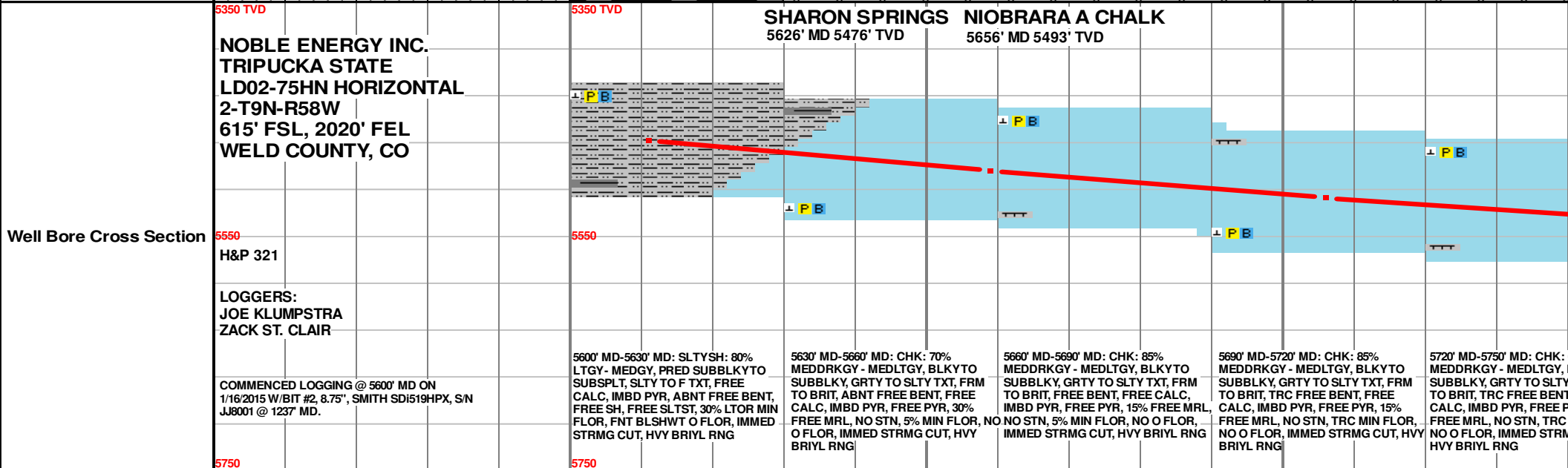
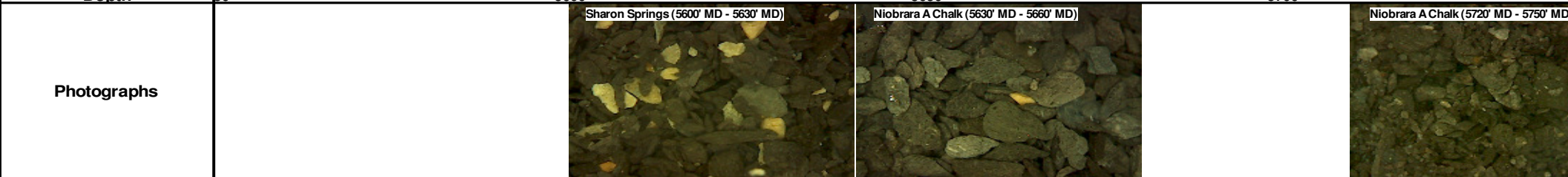
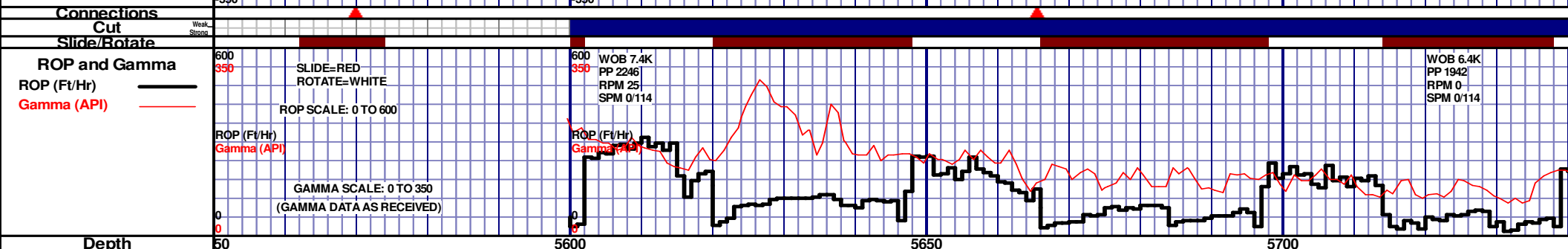
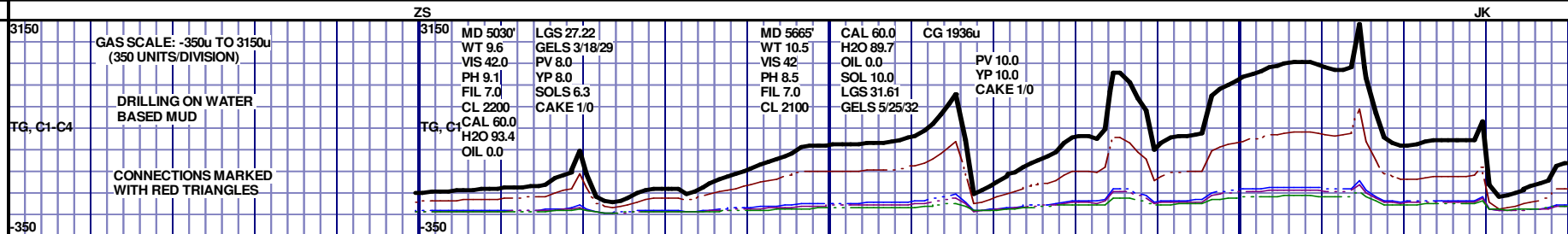
**Logger:** Joe Klumpstra &  
Zack St.Clair  
**Log Interval:** 5600' MD to 9671' MD  
**Start Date:** January 16, 2015  
**Release Date:** January 18, 2015

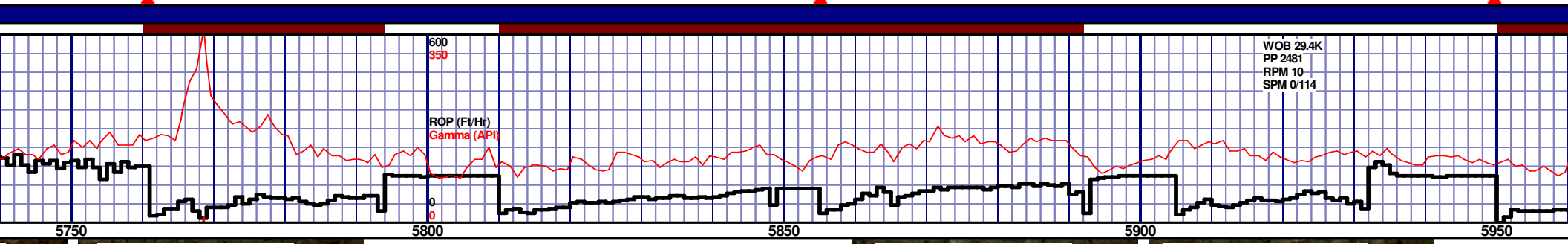
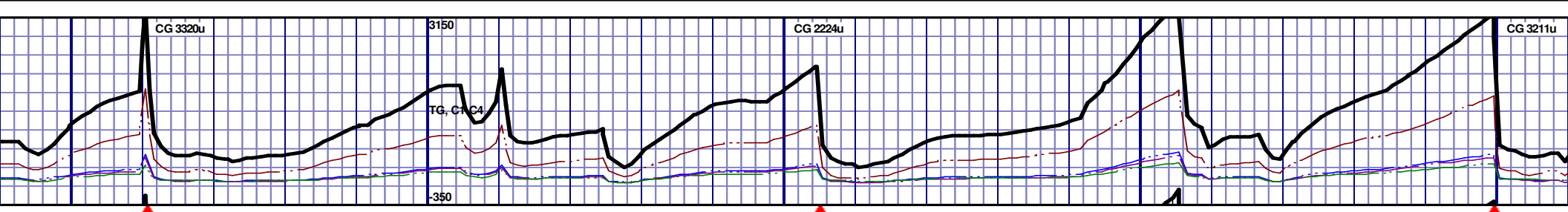
### Well Information

**Well Name:** Tripucka State LD02-75HN  
Horizontal  
**Location:** 2-T9N-R58W  
615' FSL, 2020' FEL

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

**Drilling Rig:** H&P 321  
**Total Depth:** 9671' MD  
**TD Date:** January 18, 2015  
**Formation:** Niobrara B Chalk  
**KB Elevation:** 4707'  
**GR Elevation:** 4677'  
**API Number:** 05-123-39879-0000





NIOBRARA A MARL				NIOBRARA B CHALK			
5754' MD 5537' TVD				5921' MD 5584' TVD			
5750' MD-5780' MD: MRST: 80% MEDDRKGY - MEDLTGY, BLKYO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 20% FREE CHK, NO STN, 5% MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG				5900' MD-5930' MD: CHK: 60% MEDDRKGY - MEDLTGY, BLKYO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TRC FREE BENT, FREE CALC, IMBD PYR, FREE PYR, 40% FREE MRL, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG			
5780' MD-5810' MD: MRST: 60% MEDDRKGY - MEDLTGY, BLKYO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 40% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG				5930' MD-5960' MD: CHK: 70% MEDDRKGY - MEDLTGY, BLKYO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE CALC, IMBD PYR, FREE PYR, 30% FREE MRL, NO STN, NO MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG			
5810' MD-5840' MD: MRST: 55% MEDDRKGY - MEDLTGY, BLKYO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 45% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG							
5840' MD-5870' MD: MRST: 55% MEDDRKGY - MEDLTGY, BLKYO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 45% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG							
5870' MD-5900' MD: MRST: 60% MEDDRKGY - MEDLTGY, BLKYO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 40% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG							

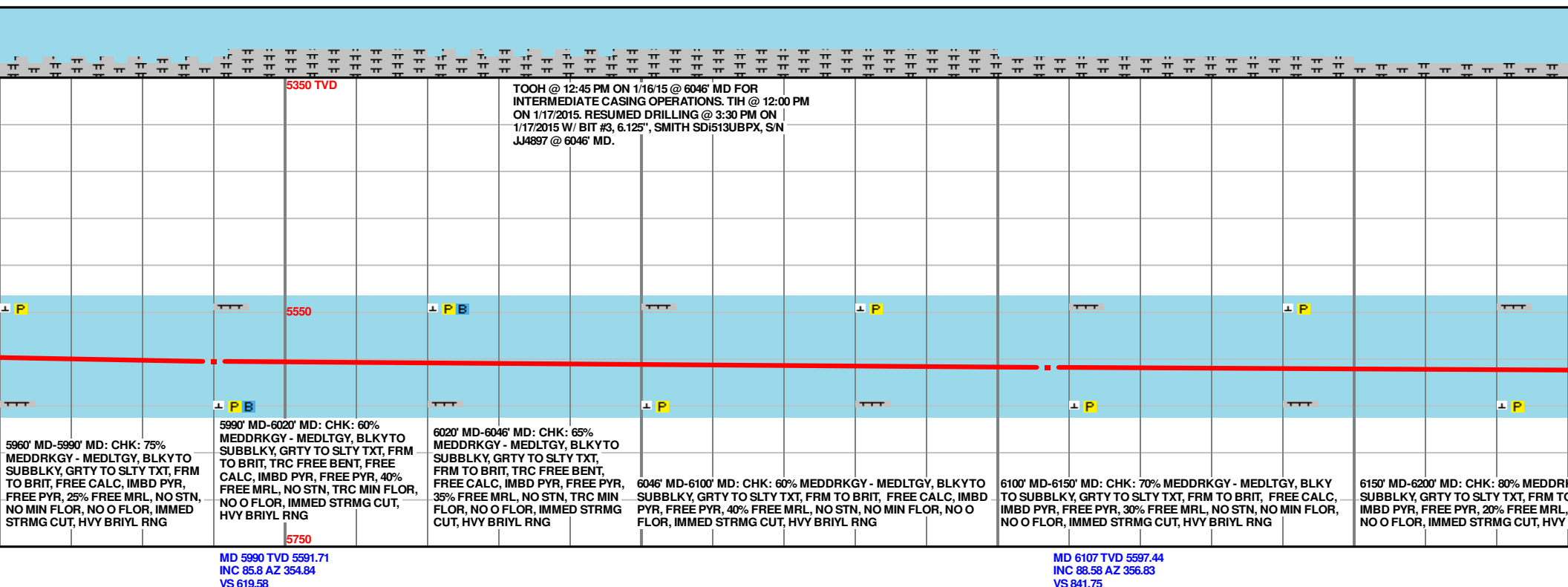
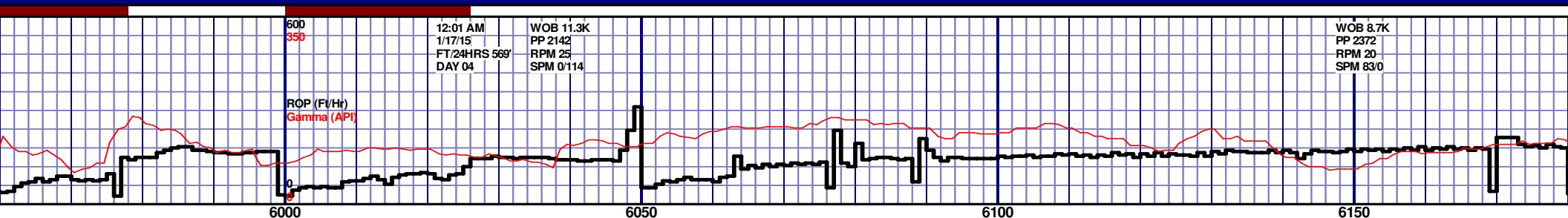
MD 5754 TVD 5537.41  
INC 66.01 AZ 343.71  
VS 395.71

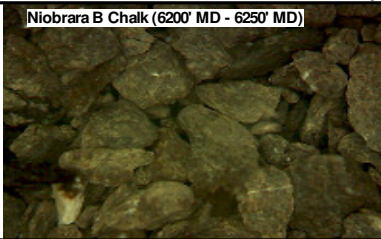
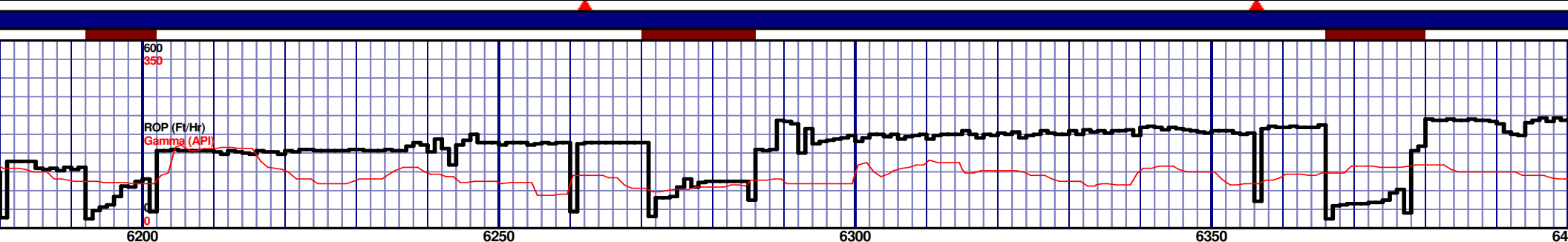
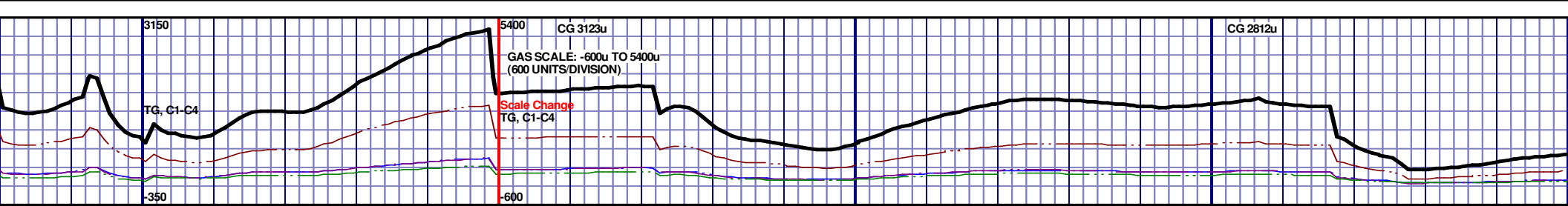
MD 5801 TVD 5555.02  
INC 69.97 AZ 344.88  
VS 437.65

MD 5849 TVD 5569.5  
INC 74.91 AZ 347.79  
VS 482.1

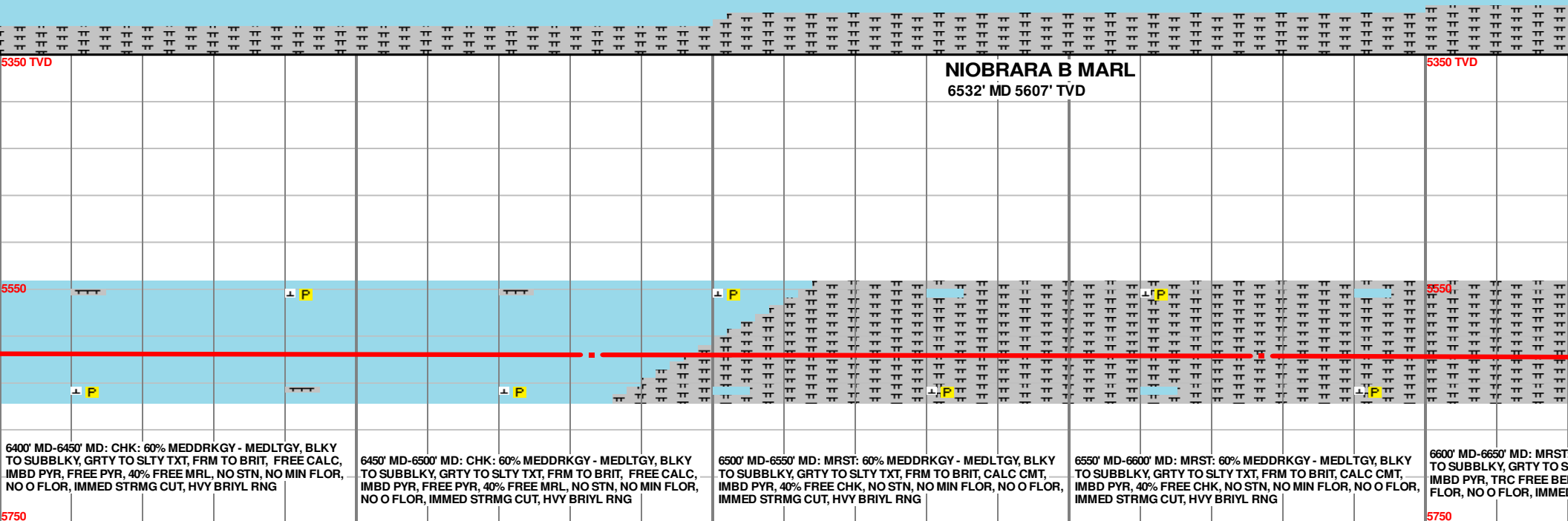
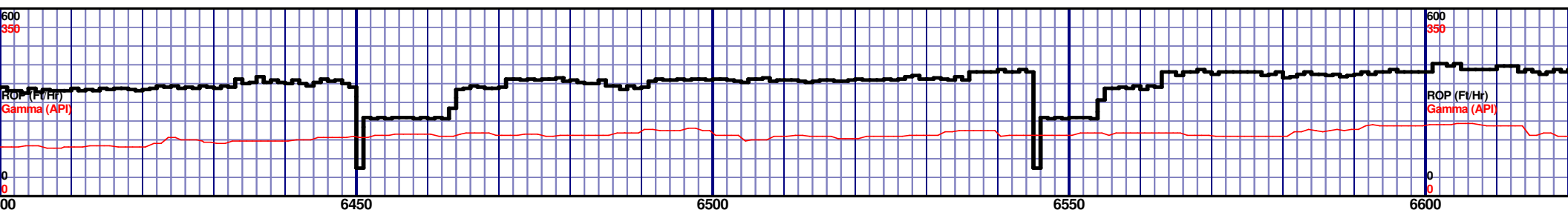
MD 5895 TVD 5579.64  
INC 79.62 AZ 350.66  
VS 526.17

MD 5943 TVD 5587.01  
INC 82.71 AZ 352.81  
VS 573.1

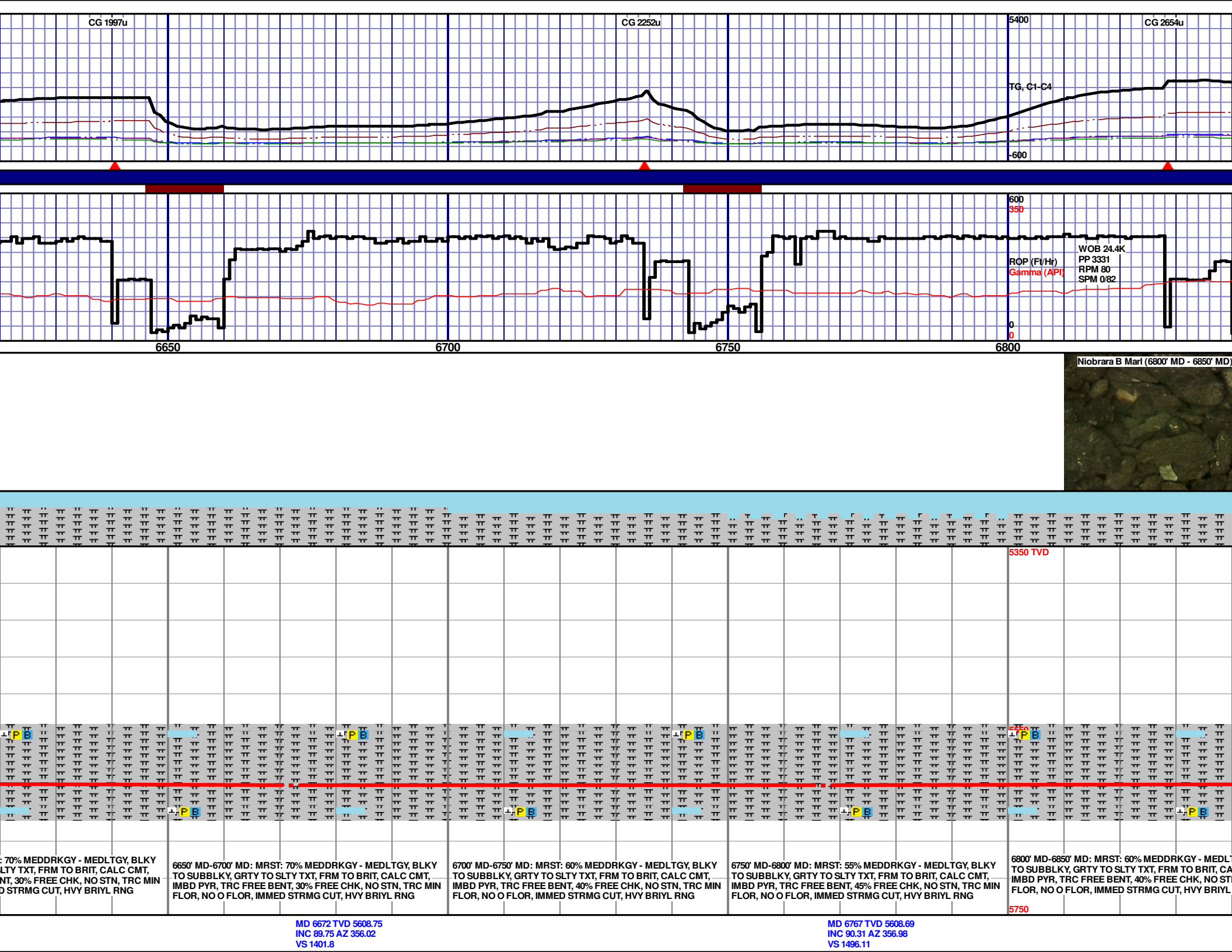




5350 TVD									

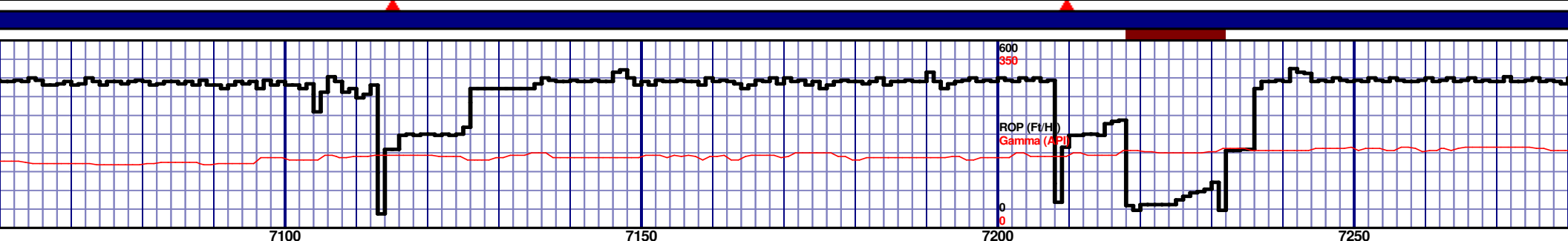




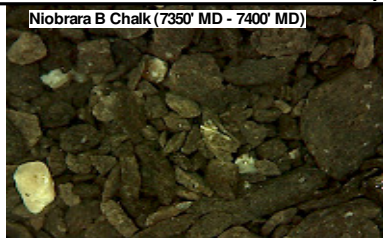
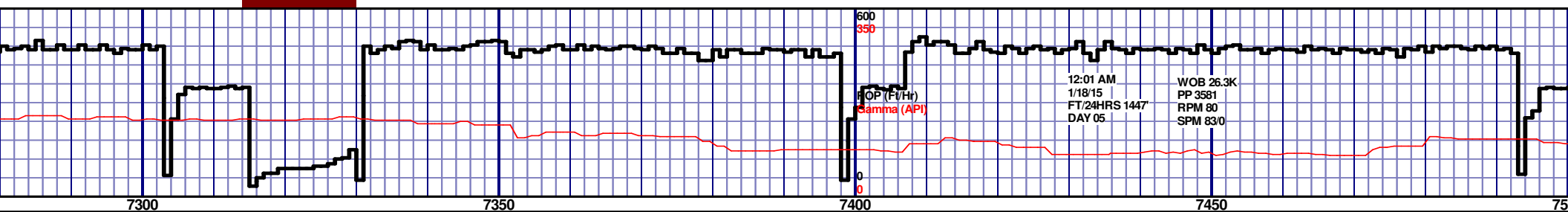
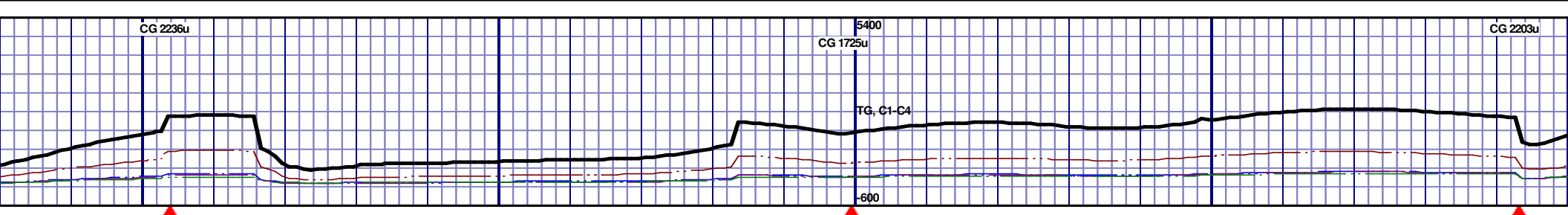








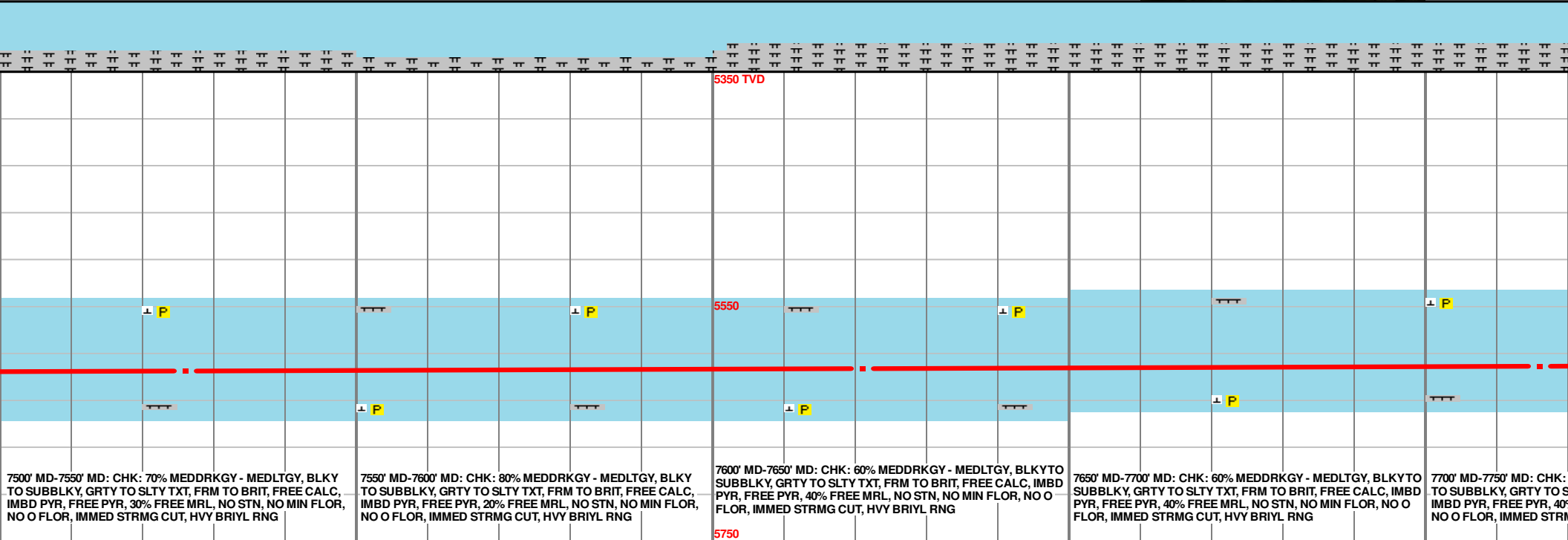
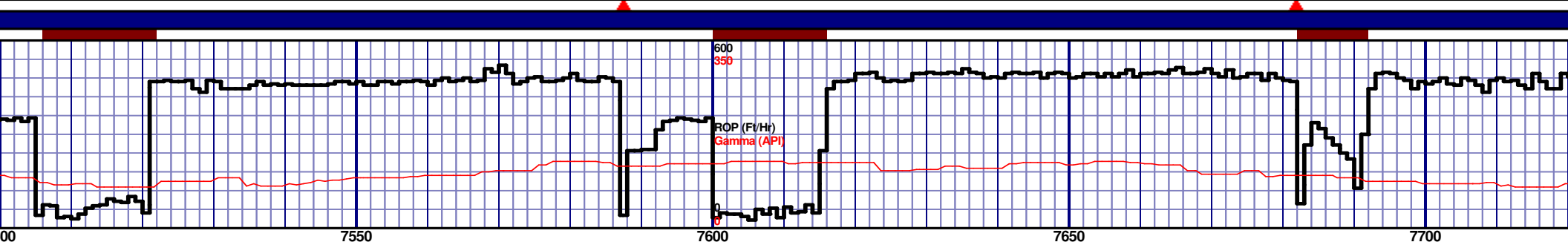
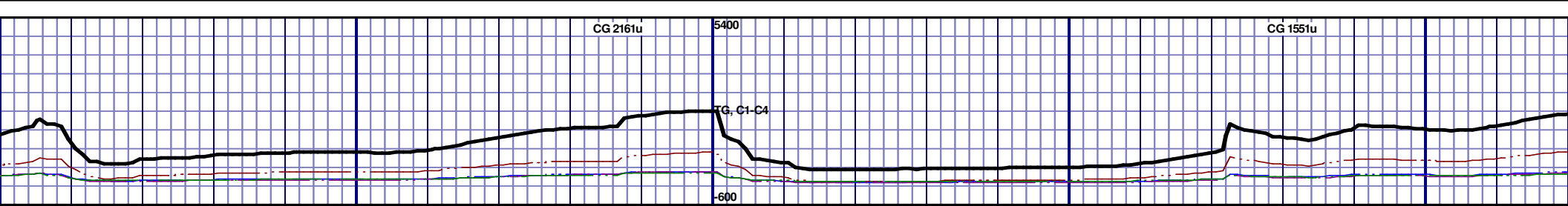
00' MD: MRST: 70% MEDDRKGY - MEDLTGY, BLKY Y, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, TRC FREE BENT, 30% FREE CHK, NO STN, TRC MIN FLOR, IMMED STRMG CUT, HVY BRIYL RNG	7100' MD-7150' MD: MRST: 80% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 20% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG	7150' MD-7200' MD: MRST: 70% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 30% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG	7200' MD-7250' MD: MRST: 80% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 20% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG	7250' MD-7300' MD: MRST: 80% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 20% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG
---	--	--	--	--



<p><b>NIORRARA B CHALK</b> 7383' MD 5606' TVD</p>									
<p>5350 TVD</p>									
<p>5550</p>									
<p>5750</p>									
<p>7300' MD-7350' MD: MRST: 70% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, FREE BENT, 30% FREE CHK, NO STN, 5% MIN FLO, NO O FLO, IMMED STRMG CUT, HVY BRIYL RNG</p>									
<p>7350' MD-7400' MD: CHK: 60% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE CALC, IMBD PYR, FREE PYR, 40% FREE MRL, NO STN, NO MIN FLO, NO O FLO, IMMED STRMG CUT, HVY BRIYL RNG</p>									
<p>7400' MD-7450' MD: CHK: 70% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE CALC, IMBD PYR, FREE PYR, 30% FREE MRL, NO STN, NO MIN FLO, NO O FLO, IMMED STRMG CUT, HVY BRIYL RNG</p>									
<p>7450' MD-7500' MD: CHK: 80% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE CALC, IMBD PYR, FREE PYR, 20% FREE MRL, NO STN, NO MIN FLO, NO O FLO, IMMED STRMG CUT, HVY BRIYL RNG</p>									

MD 7336 TVD 5608.33  
INC 91.54 AZ 359.12  
VS 2057.98

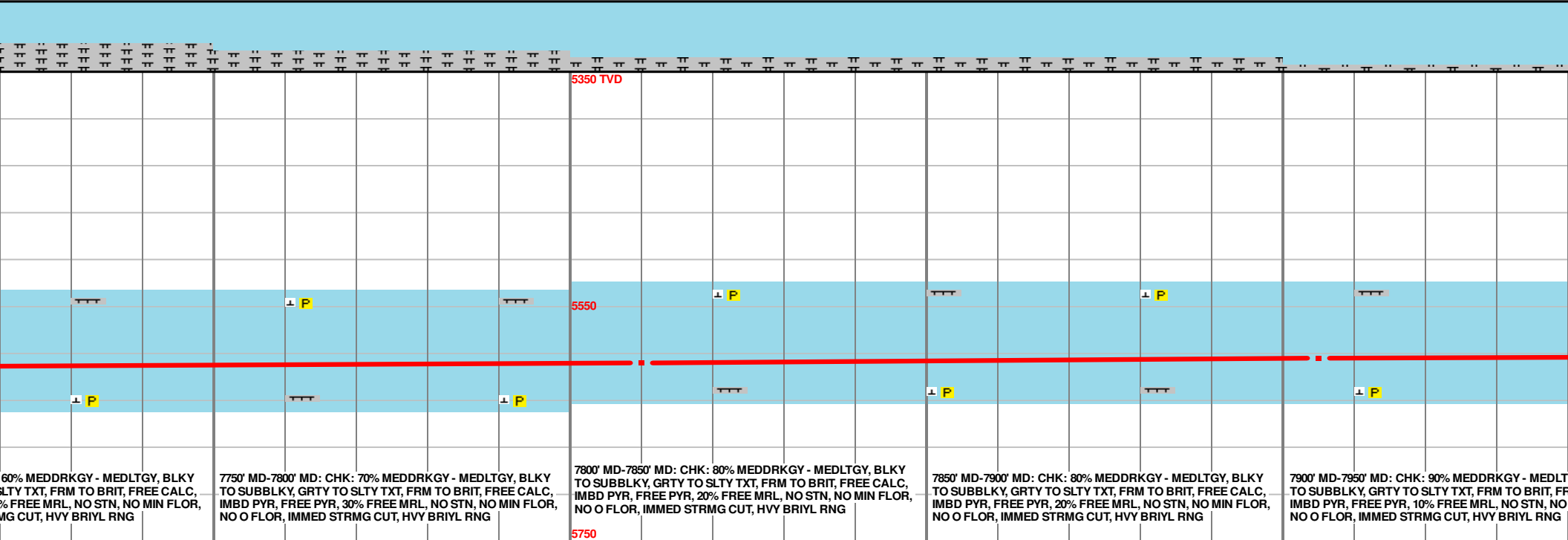
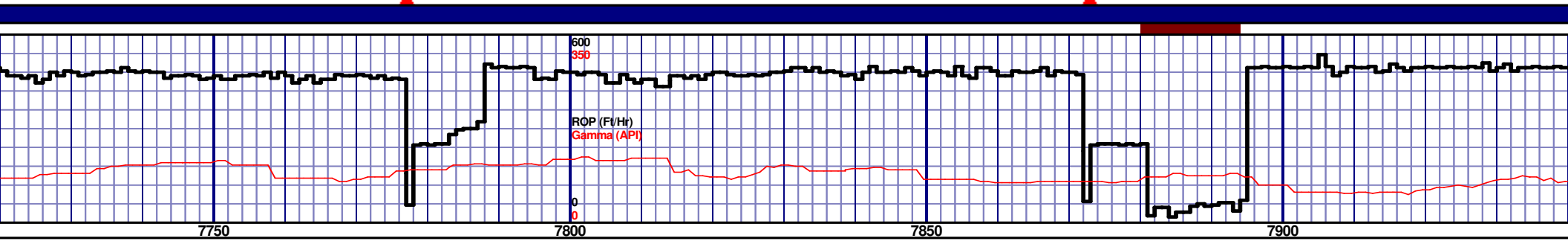
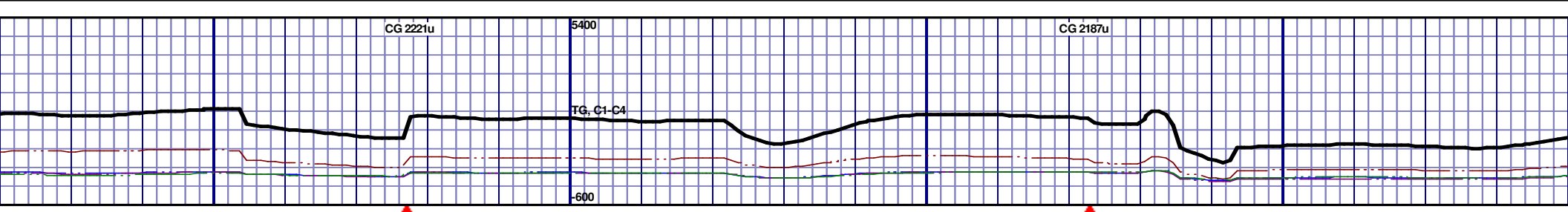
MD 7431 TVD 5606.56  
INC 90.59 AZ 357.37  
VS 2151.89

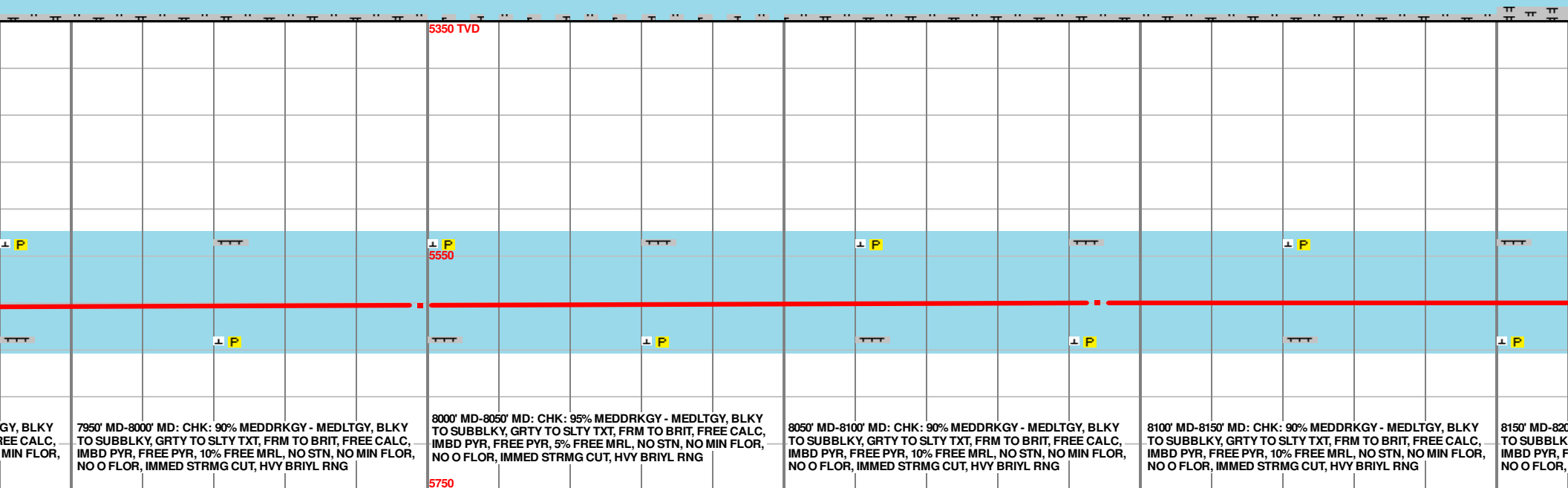
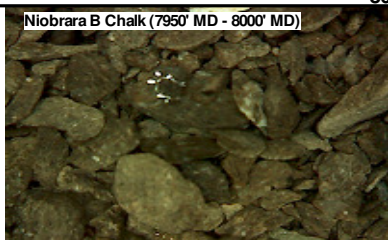
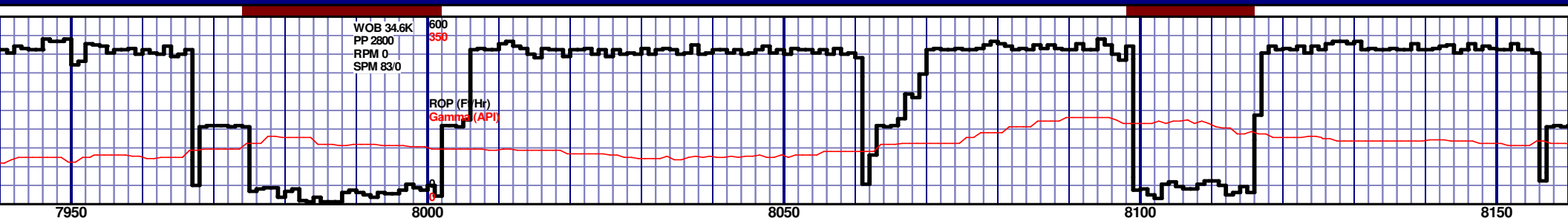
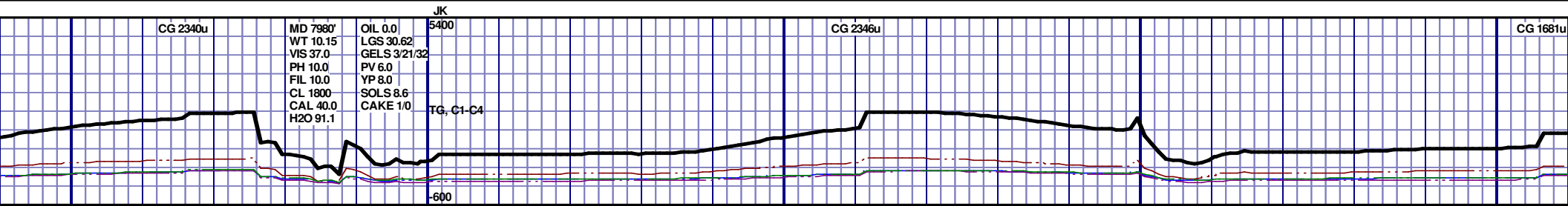


MD 7526 TVD 5605.03  
INC 91.26 AZ 357.71  
VS 2245.97

MD 7621 TVD 5602.96  
INC 91.23 AZ 358.96  
VS 2339.85

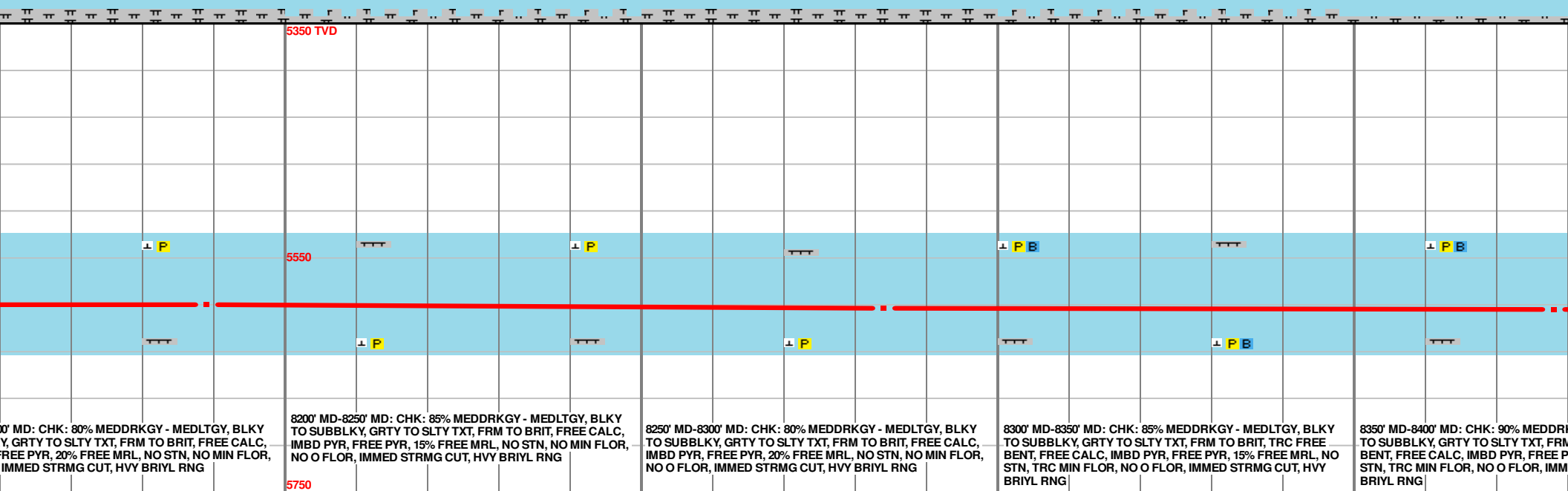
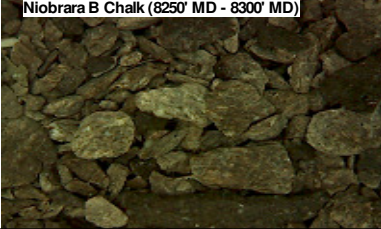
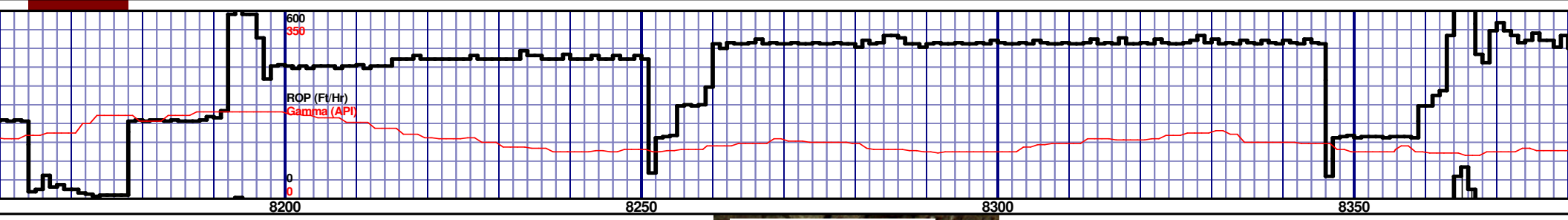
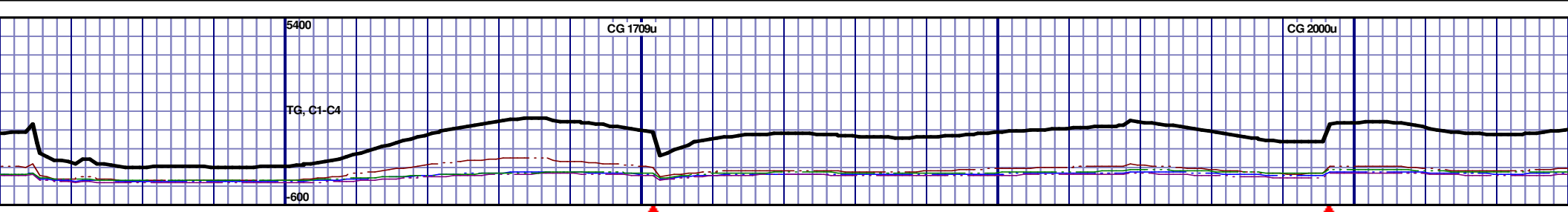
MD  
INC  
VS 2

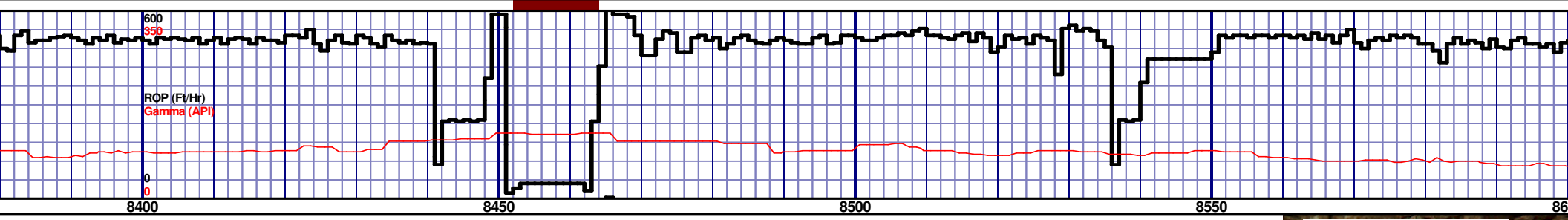
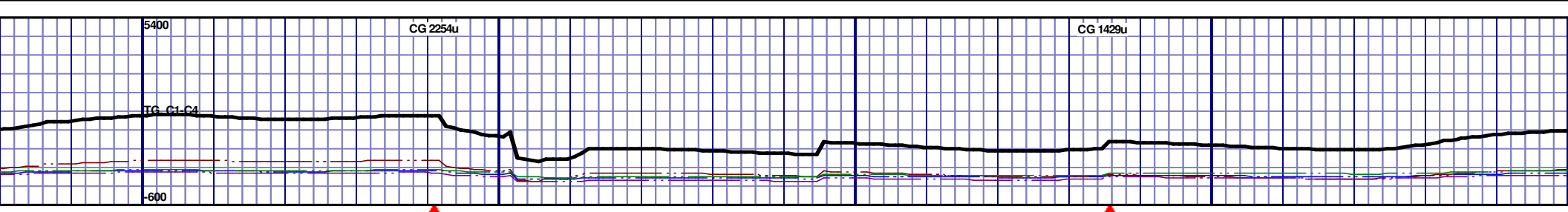




MD 7999 TVD 5591.98  
INC 90.68 AZ 357.9  
VS 2713.89

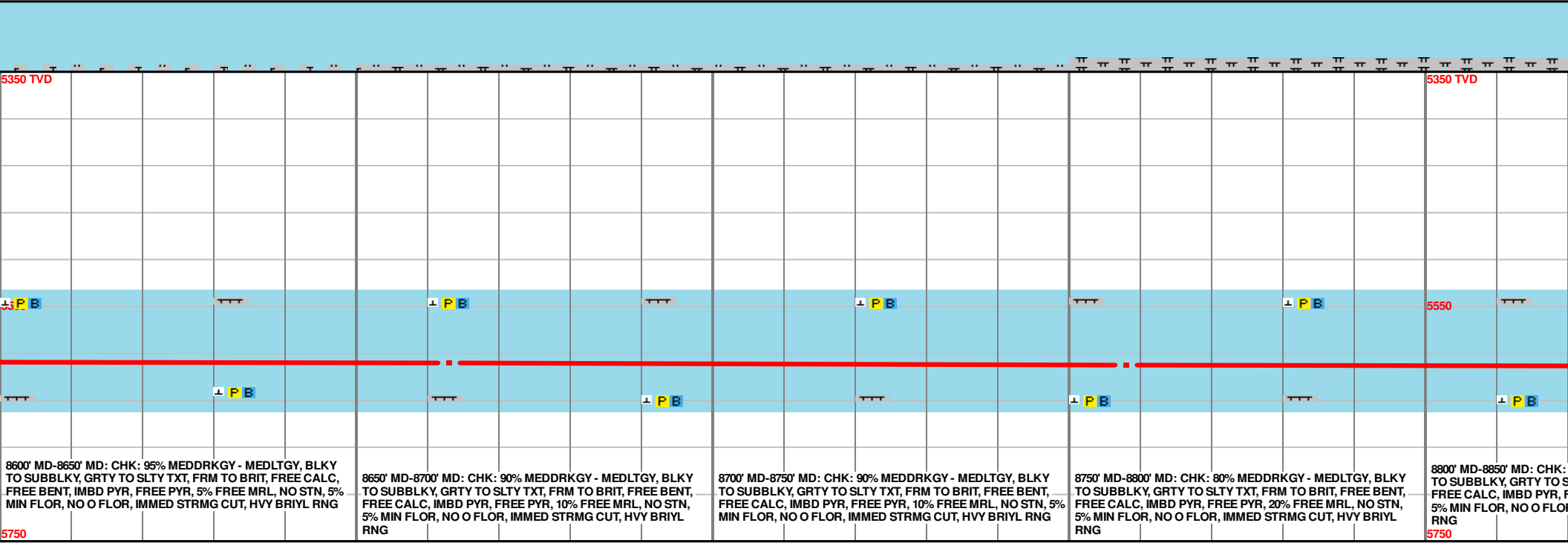
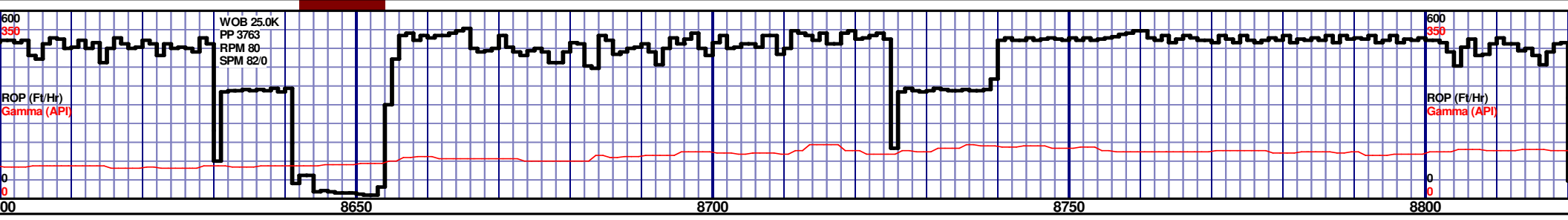
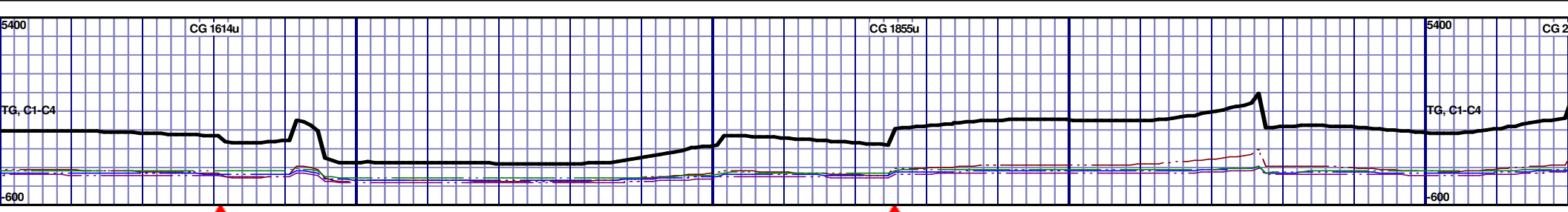
MD 8094 TVD 5590.04  
INC 91.66 AZ 358.6  
VS 2807.79





5350 TVD									





8600' MD-8650' MD: CHK: 95% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE CALC, FREE BENT, IMBD PYR, FREE PYR, 5% FREE MRL, NO STN, 5% MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG

8650' MD-8700' MD: CHK: 90% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE BENT, FREE CALC, IMBD PYR, FREE PYR, 10% FREE MRL, NO STN, 5% MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG

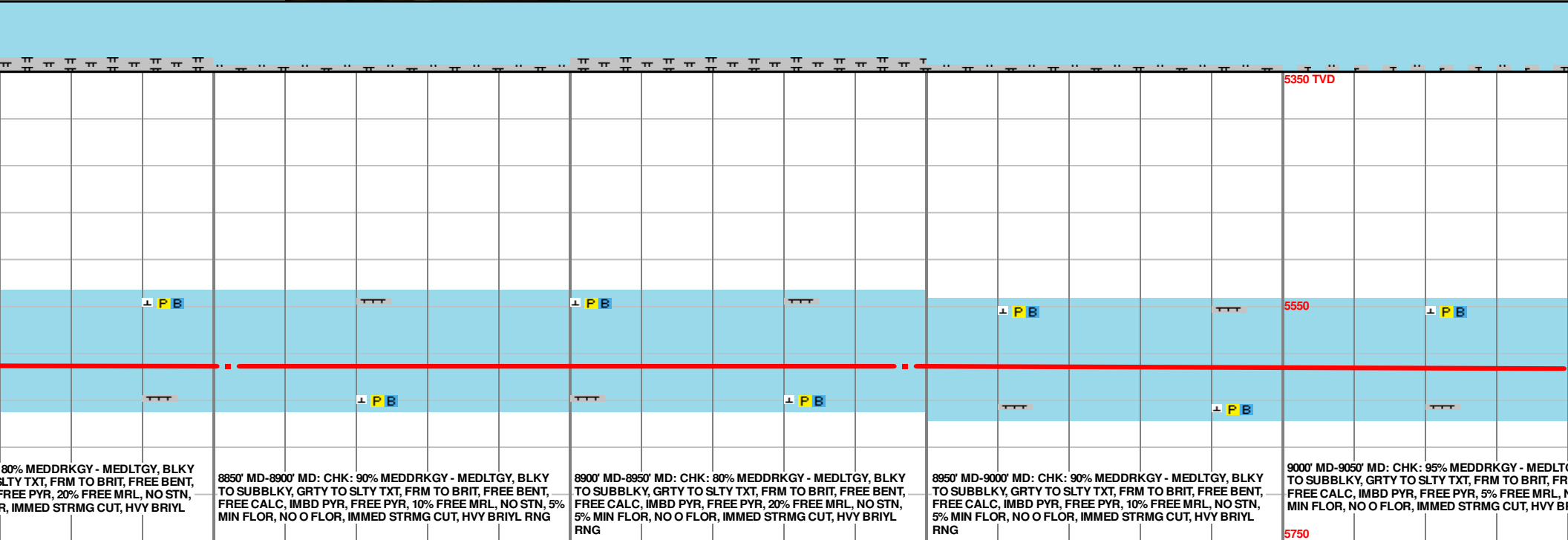
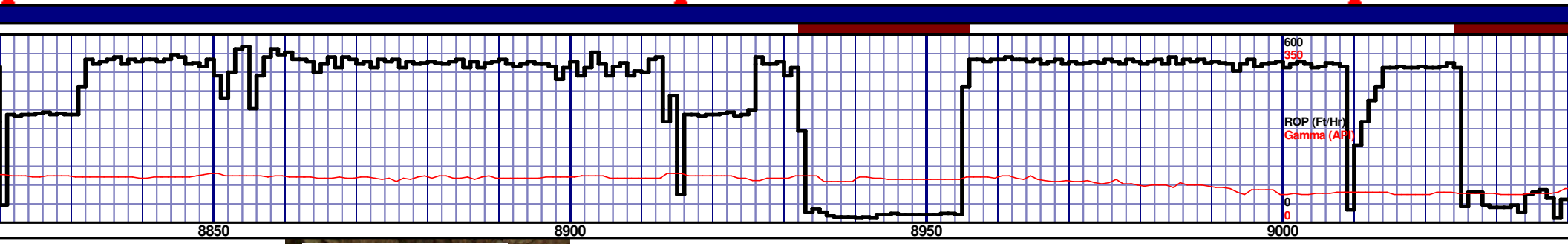
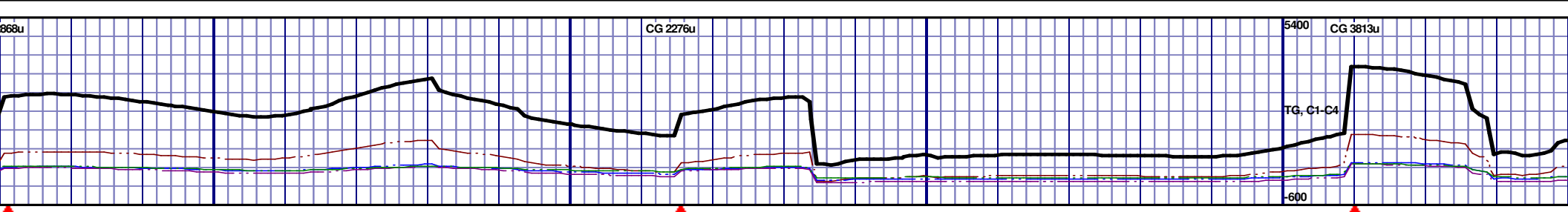
8700' MD-8750' MD: CHK: 90% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE BENT, FREE CALC, IMBD PYR, FREE PYR, 10% FREE MRL, NO STN, 5% MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG

8750' MD-8800' MD: CHK: 80% MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE BENT, FREE CALC, IMBD PYR, FREE PYR, 20% FREE MRL, NO STN, 5% MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG

8800' MD-8850' MD: CHK: TO SUBBLKY, GRTY TO S FREE CALC, IMBD PYR, 5% MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG

MD 8663 TVD 5598.41  
INC 89.2 AZ 359.04  
VS 3371.11

MD 8758 TVD 5598.89  
INC 89.01 AZ 357.31  
VS 3465.04



80% MEDDRKGY - MEDLTGY, BLKY  
SLTY TXT, FRM TO BRIT, FREE BENT,  
FREE PYR, 20% FREE MRL, NO STN,  
R, IMMED STRMG CUT, HVY BRIYL

8850' MD-8900' MD: CHK: 90% MEDDRKGY - MEDLTGY, BLKY  
TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE BENT,  
FREE CALC, IMBD PYR, FREE PYR, 10% FREE MRL, NO STN, 5%  
MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL RNG

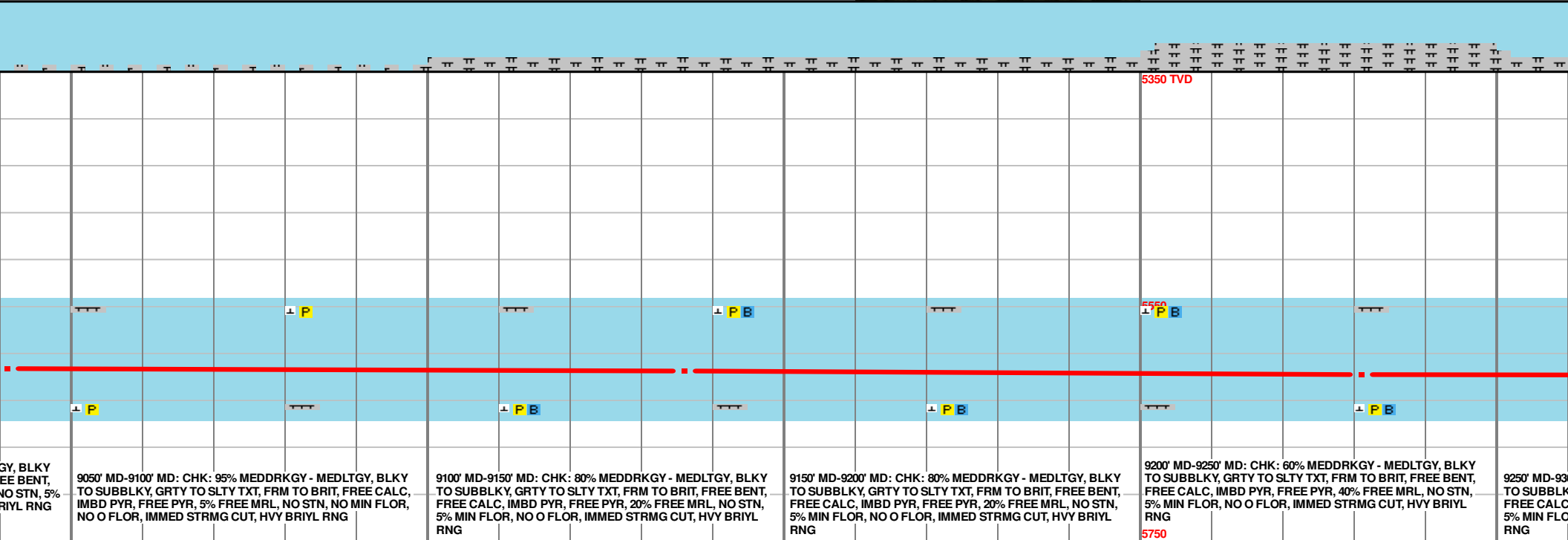
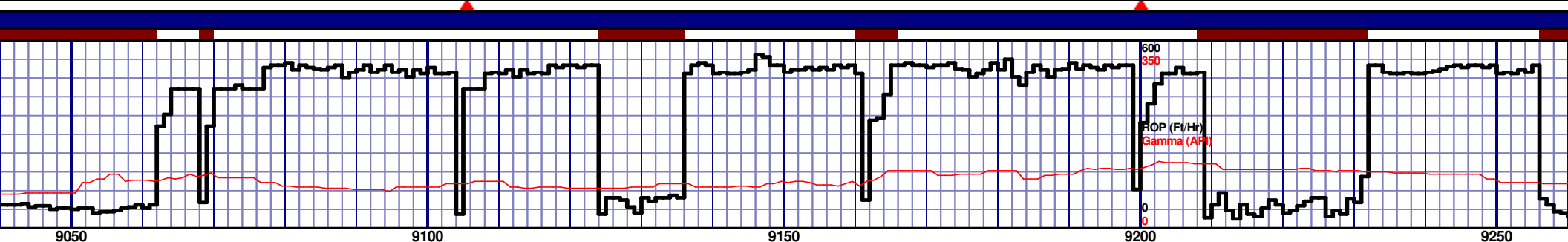
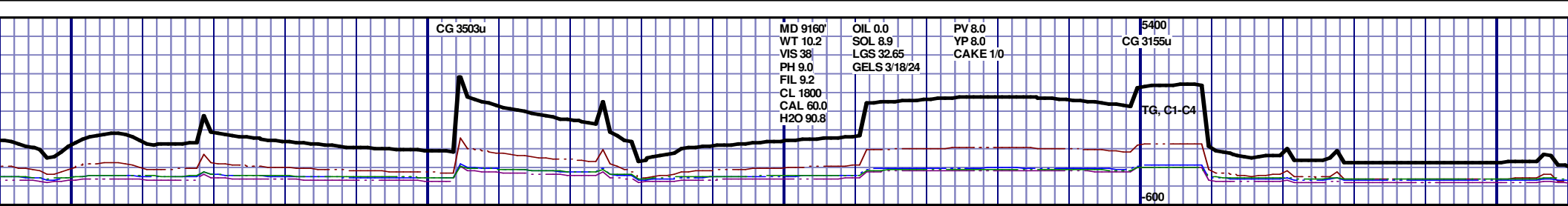
8900' MD-8950' MD: CHK: 80% MEDDRKGY - MEDLTGY, BLKY  
TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE BENT,  
FREE CALC, IMBD PYR, FREE PYR, 20% FREE MRL, NO STN,  
5% MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL  
RNG

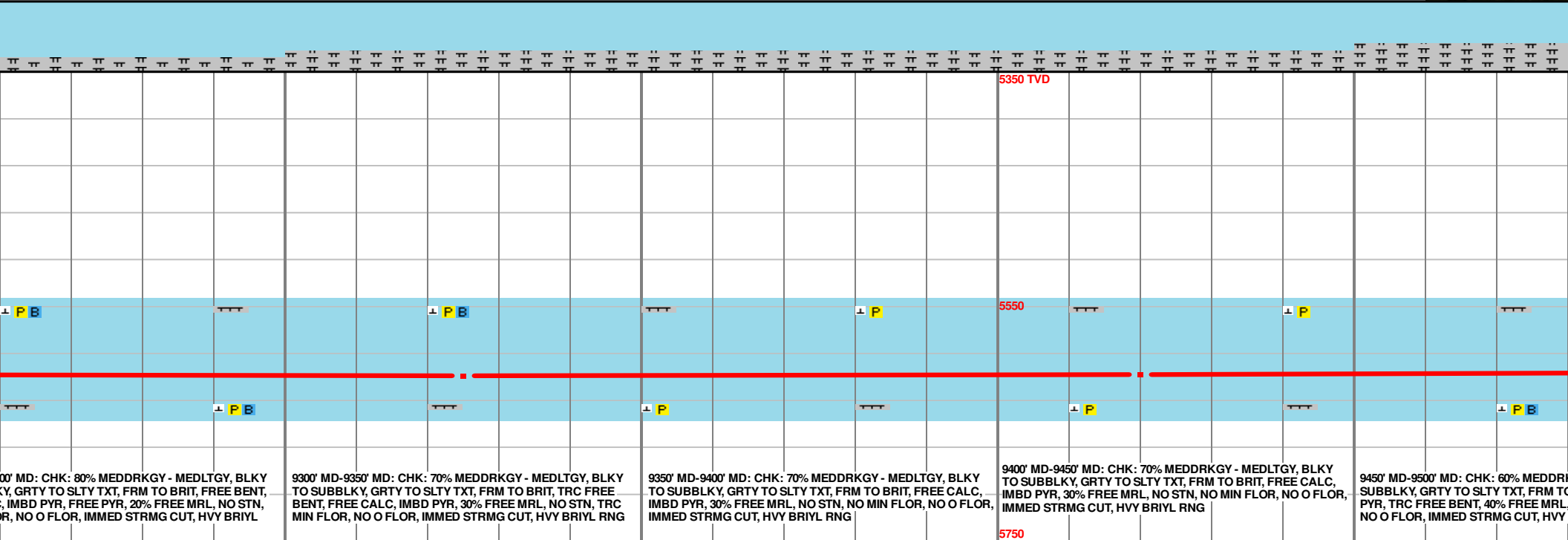
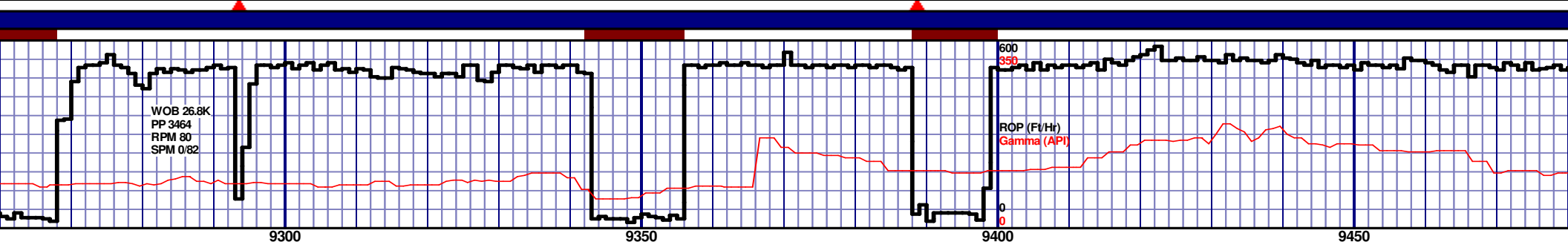
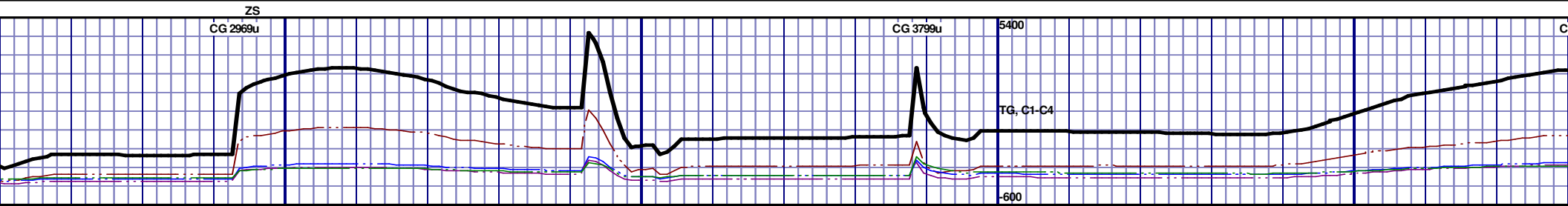
8950' MD-9000' MD: CHK: 90% MEDDRKGY - MEDLTGY, BLKY  
TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE BENT,  
FREE CALC, IMBD PYR, FREE PYR, 10% FREE MRL, NO STN,  
5% MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL  
RNG

9000' MD-9050' MD: CHK: 95% MEDDRKGY - MEDLTGY, BLKY  
TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE BENT,  
FREE CALC, IMBD PYR, FREE PYR, 5% FREE MRL, NO STN, 5%  
MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BRIYL

MD 8852 TVD 5600.92  
INC 89.72 AZ 1.41  
VS 3557.66

MD 8947 TVD 5601.46  
INC 89.63 AZ 6  
VS 3649.78







[illegible]