



7136 South Yale Avenue, Suite 414
Tulsa, Oklahoma 74136-6378

phone 918.925.9739

fax 866.534.4559

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

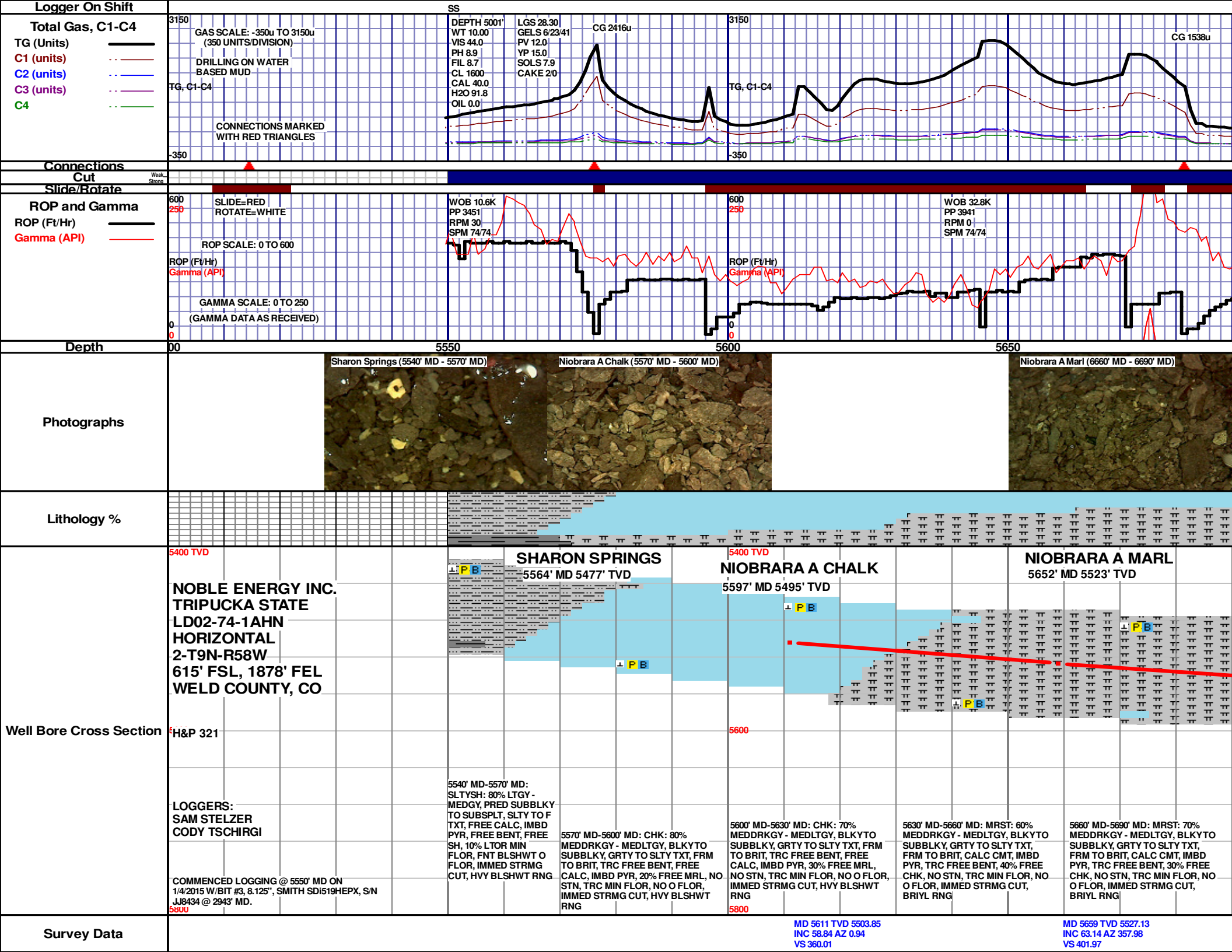
Logger: Sam Stelzer &
Cody Tschirgi
Log Interval: 5550' MD to 9579' MD
Start Date: January 4, 2015
Release Date: January 6, 2015

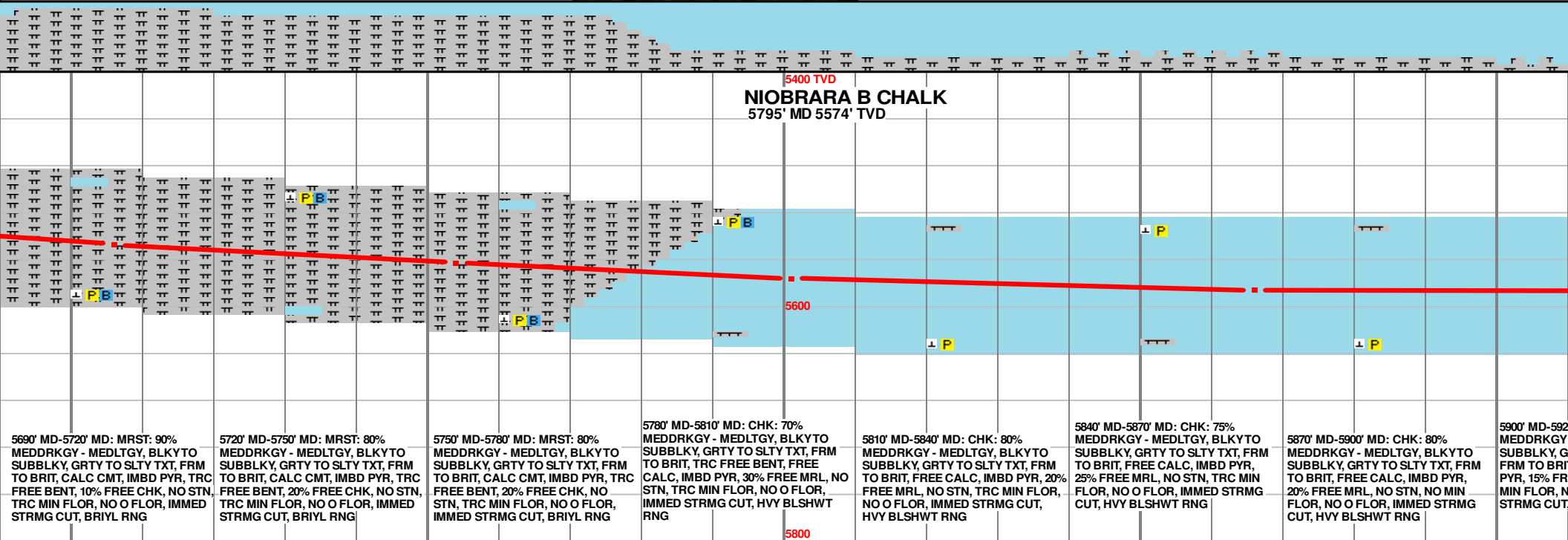
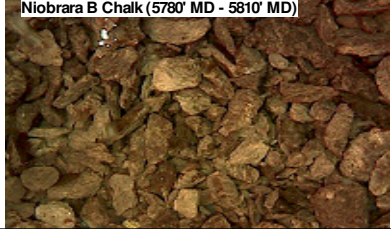
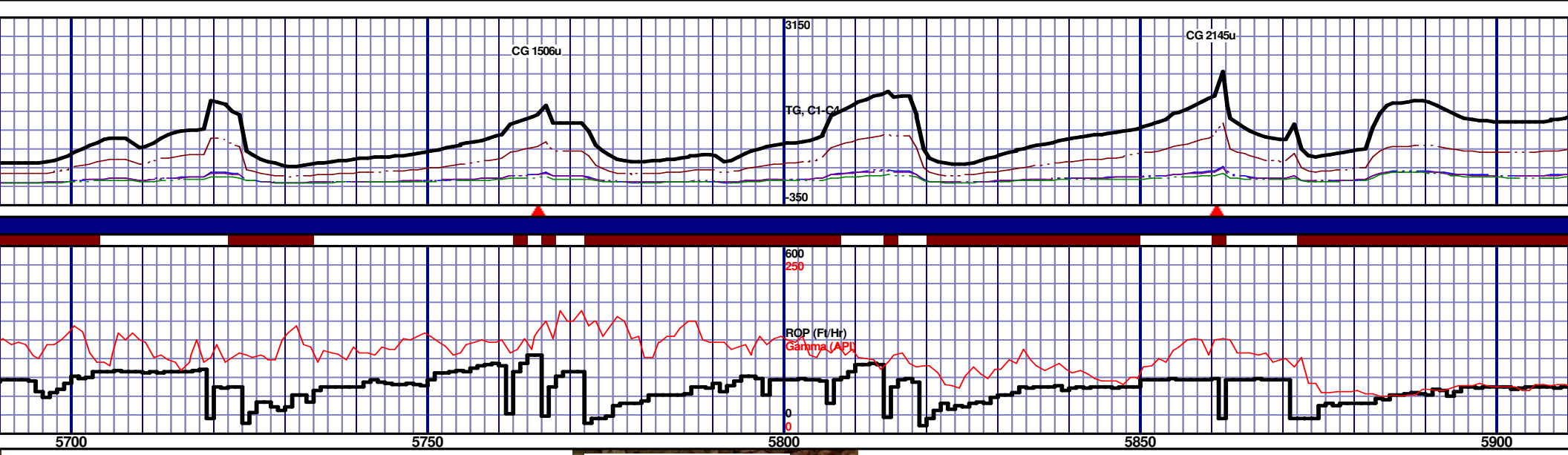
Well Information

Well Name: Tripucka State
LD02-74-1AHN Horizontal
Location: 2-T9N-R58W
615' FSL, 1878' FEL

County: Weld
State: Colorado

Drilling Rig: H&P 321
Total Depth: 9579' MD
TD Date: January 6, 2015
Formation: Niobrara B Chalk
KB Elevation: 4705'
GR Elevation: 4675'
API Number: 05-123-39878-0000





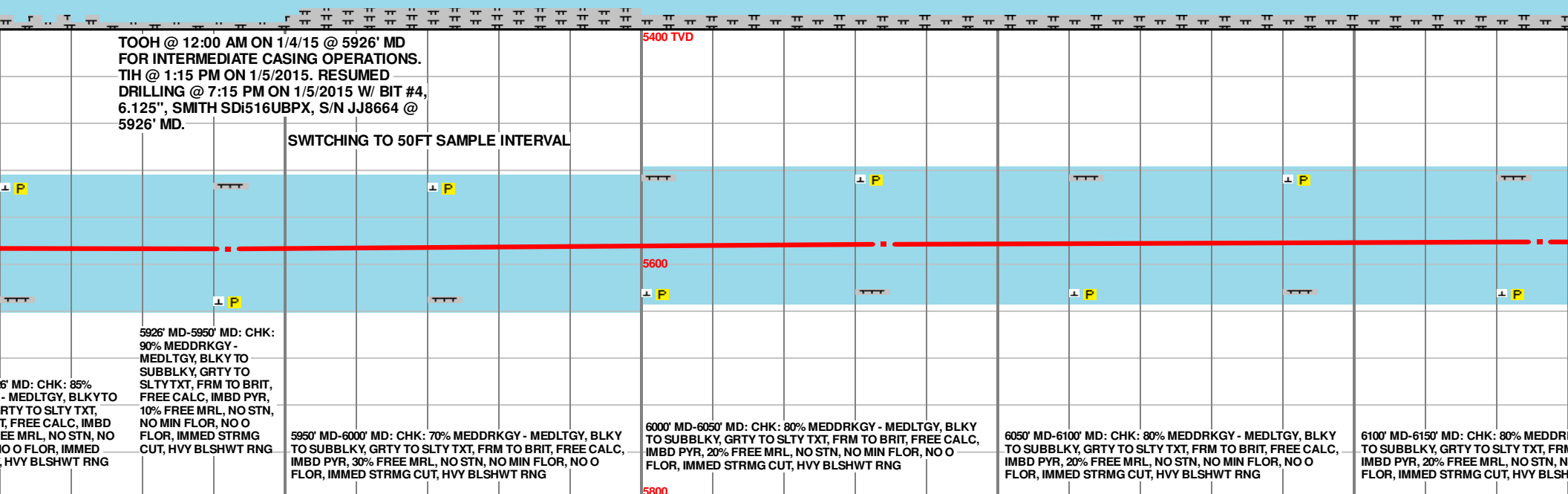
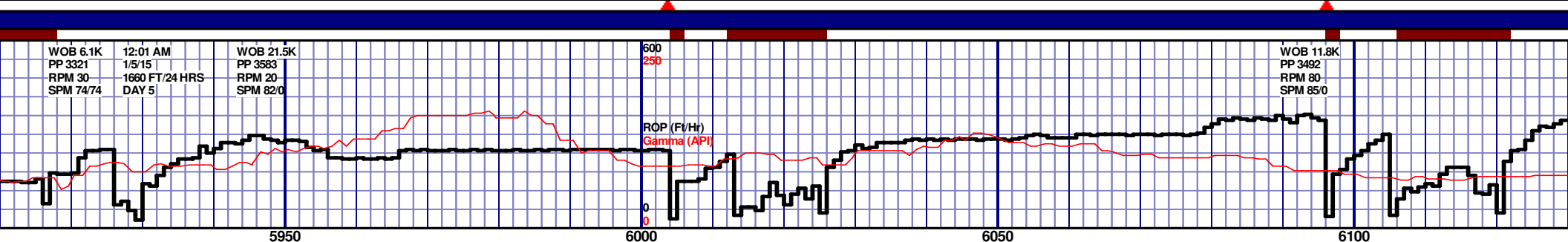
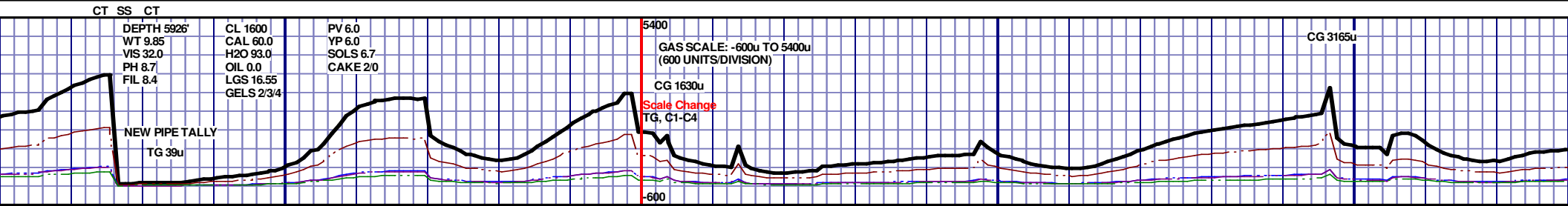
5690' MD-5720' MD: MRST: 90% MEDDRKGY - MEDLTGY, BLKYTO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 10% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, BRIYL RNG	5720' MD-5750' MD: MRST: 80% MEDDRKGY - MEDLTGY, BLKYTO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, CALC CMT, IMBD PYR, TRC FREE BENT, 20% FREE CHK, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, BRIYL RNG	5750' MD-5780' MD: MRST: 80% MEDDRKGY - MEDLTGY, BLKYTO 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, BRIYL RNG	5780' MD-5810' MD: CHK: 70% MEDDRKGY - MEDLTGY, BLKYTO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TRC FREE BENT, FREE CALC, IMBD PYR, 30% FREE MRL, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	5810' MD-5840' MD: CHK: 80% MEDDRKGY - MEDLTGY, BLKYTO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE CALC, IMBD PYR, 20% FREE MRL, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	5840' MD-5870' MD: CHK: 75% MEDDRKGY - MEDLTGY, BLKYTO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE CALC, IMBD PYR, 25% FREE MRL, NO STN, TRC MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	5870' MD-5900' MD: CHK: 80% MEDDRKGY - MEDLTGY, BLKYTO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE CALC, IMBD PYR, 20% FREE MRL, NO STN, NO MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	5900' MD-5920' MD: CHK: 80% MEDDRKGY - MEDLTGY, BLKYTO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, FREE CALC, IMBD PYR, 15% FREE MRL, NO STN, NO MIN FLOR, NO O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG
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MD 5706 TVD 5546.79
INC 67.38 AZ 356.78
VS 444.62

MD 5754 TVD 5563.45
INC 72.01 AZ 357.07
VS 489.59

MD 5801 TVD 5575.9
INC 77.24 AZ 358.32
VS 534.88

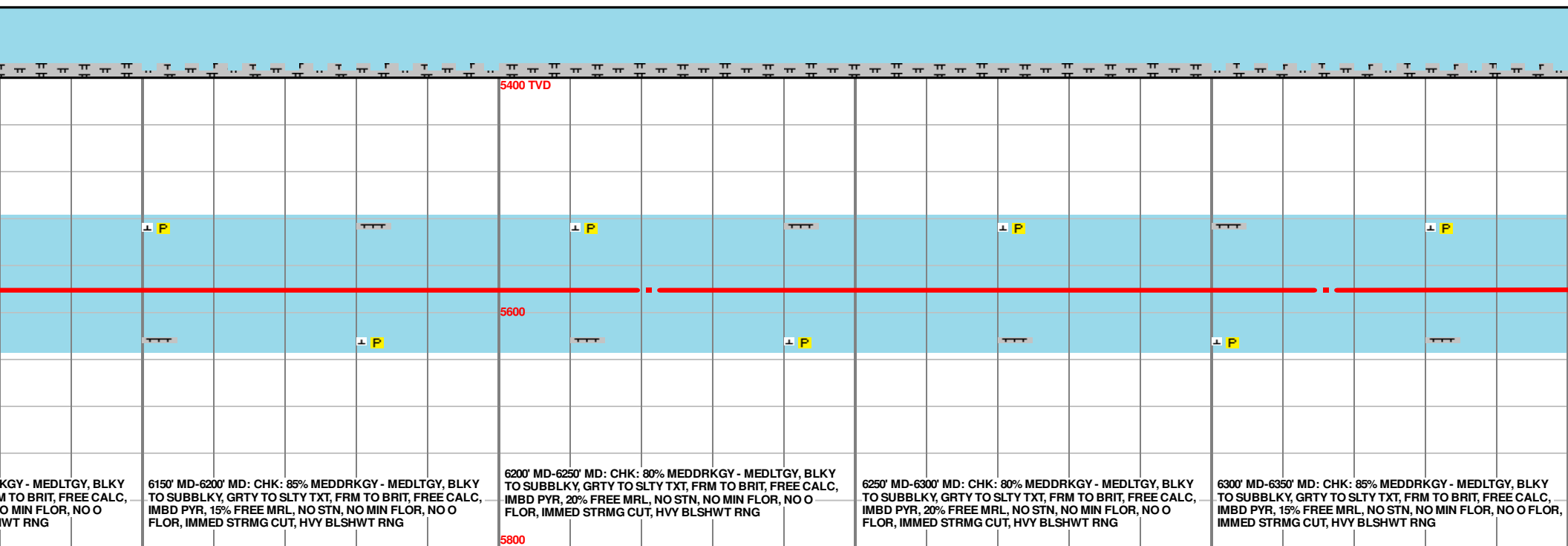
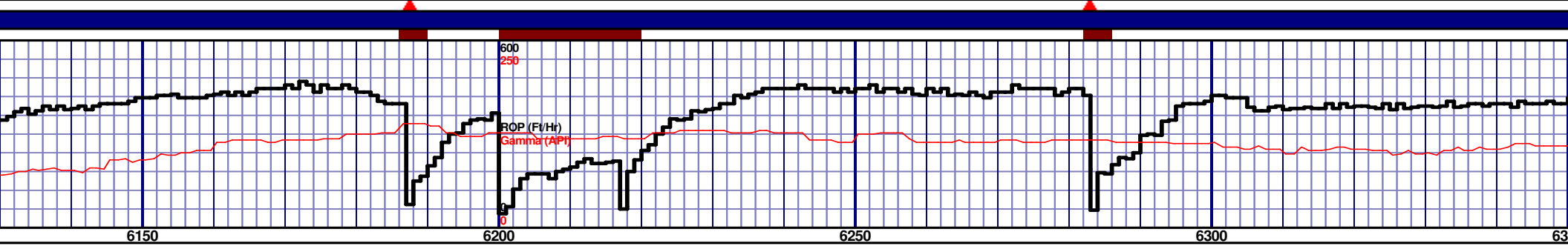
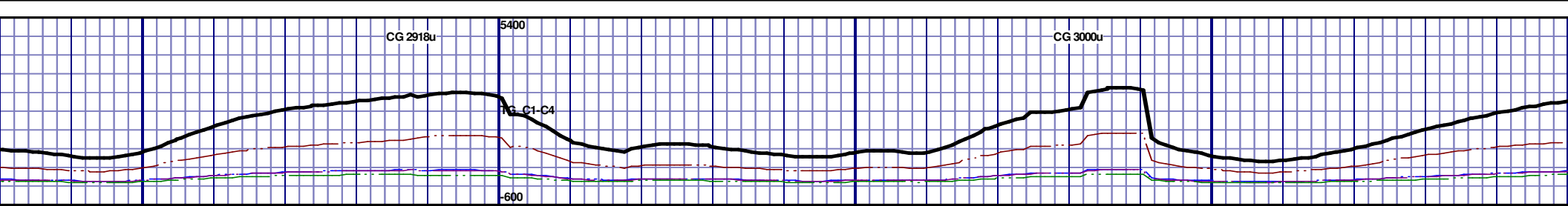
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INC 84.78 AZ 359.41
VS 599.03

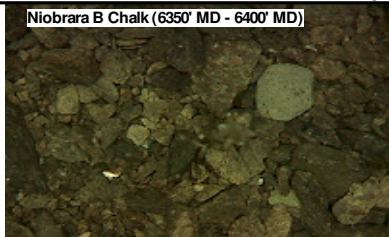
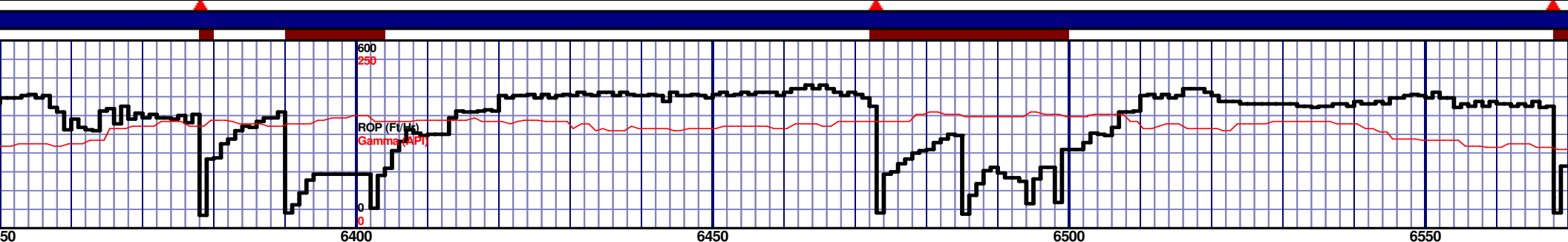
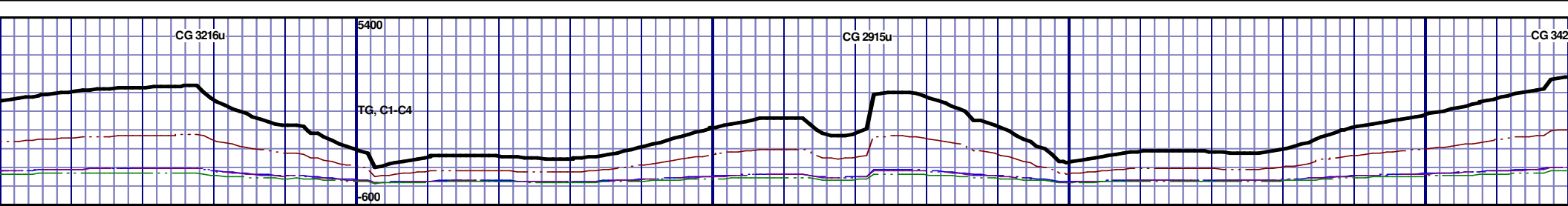


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INC 93.09 AZ 359.61
VS 674.95

MD 6034 TVD 5583.47
INC 91.88 AZ 0.7
VS 766.85

MD
INC
VS 766.85

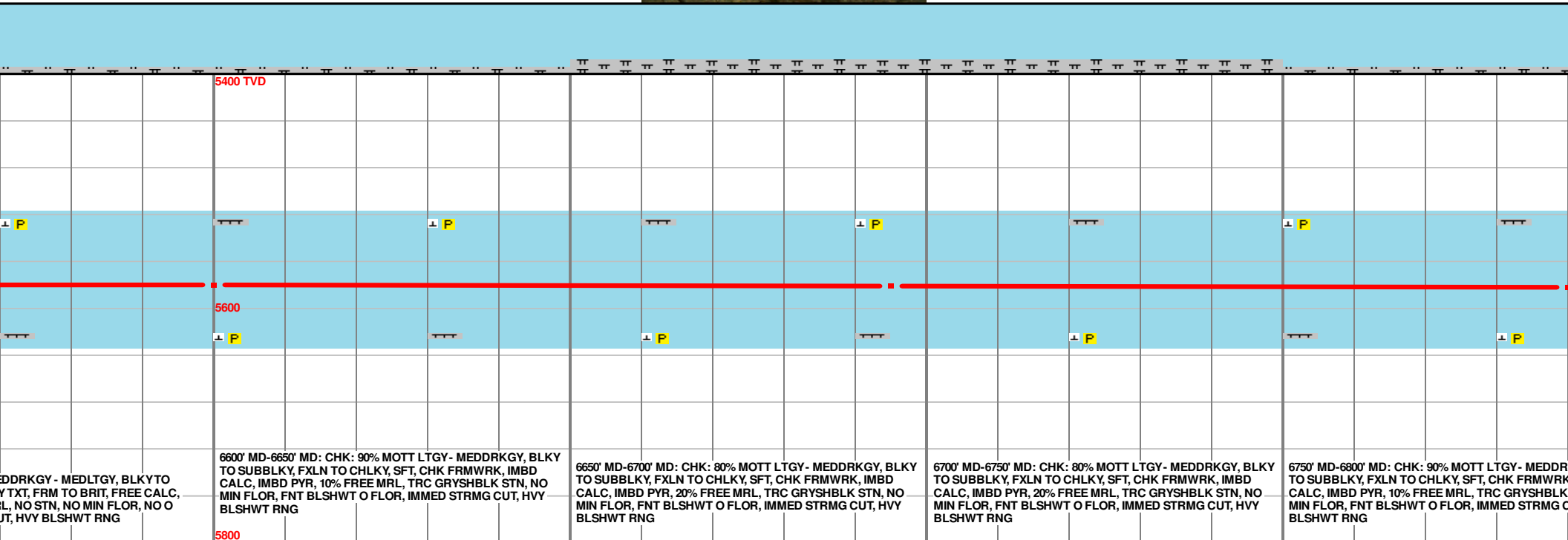
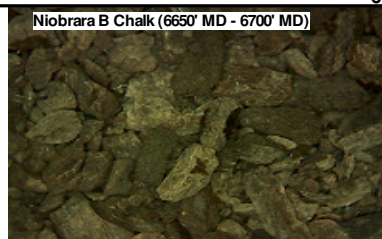
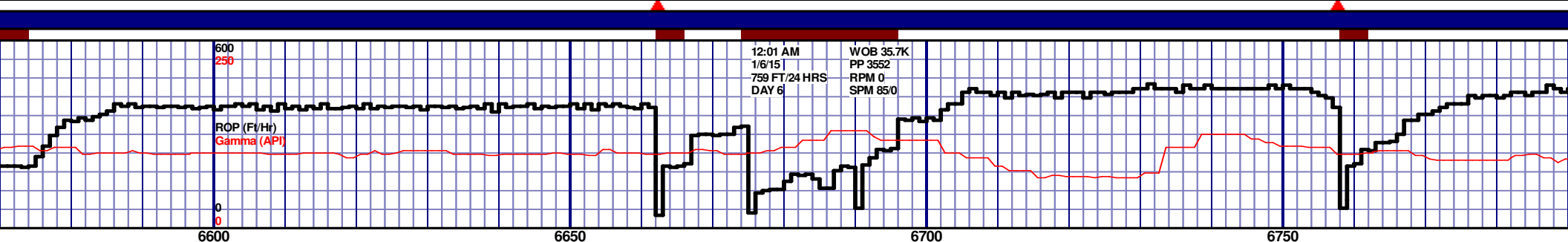
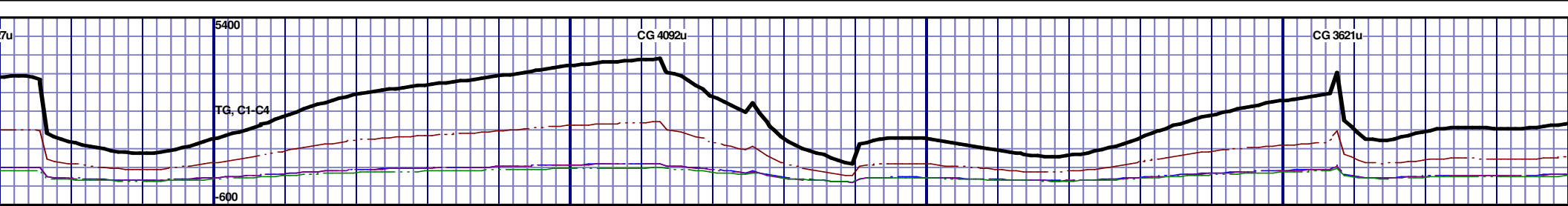




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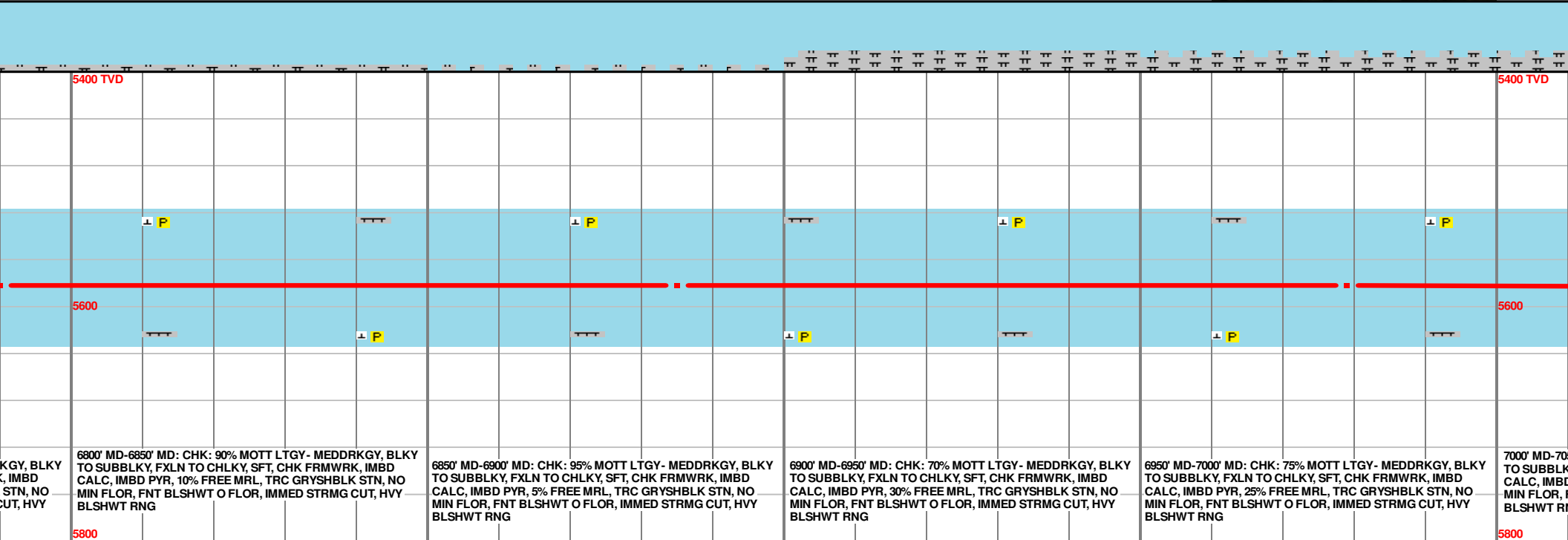
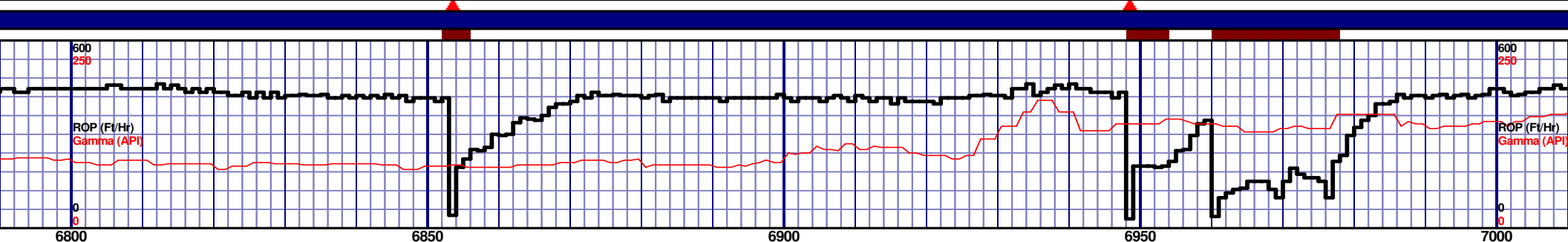
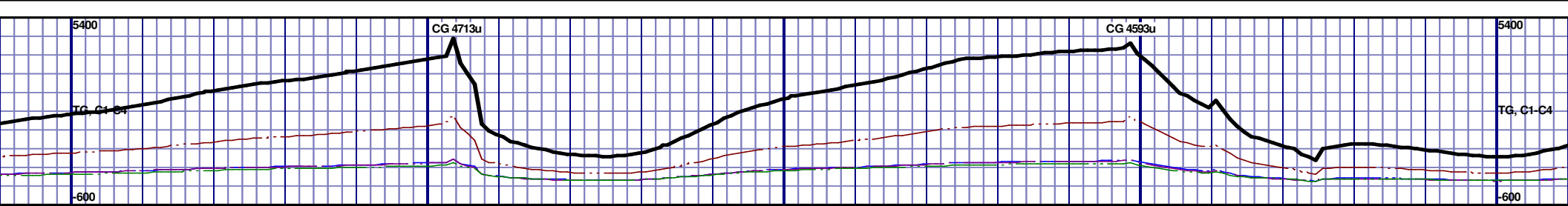
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INC 89.97 AZ 356.89
VS 1142.7

MD 6505 TVD 5580.48
INC 89.6 AZ 357.08
VS 1237.63



MD 6600 TVD 5580.37
INC 90.52 AZ 356.92
VS 1332.55

MD 6695 TVD 5580.73
INC 89.04 AZ 357.33
VS 1427.48



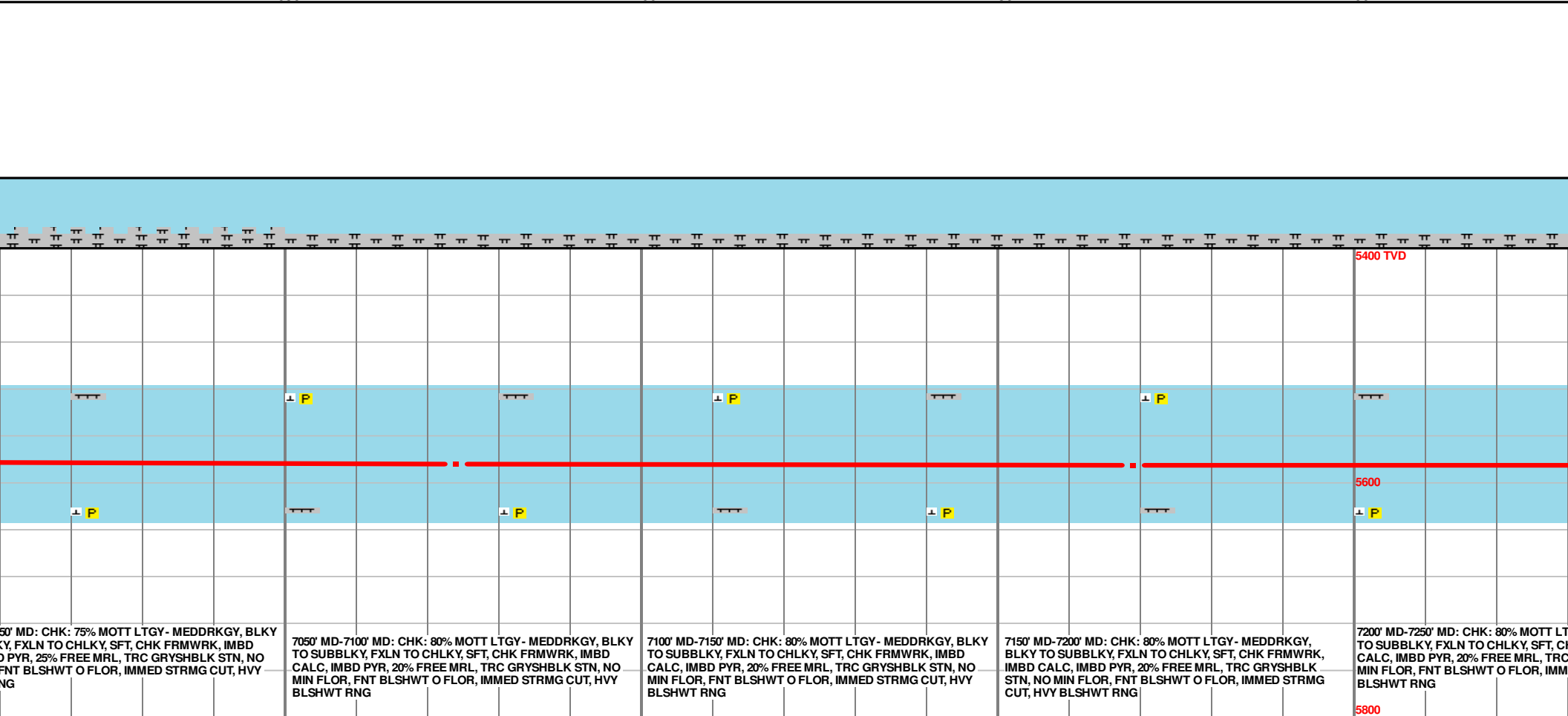
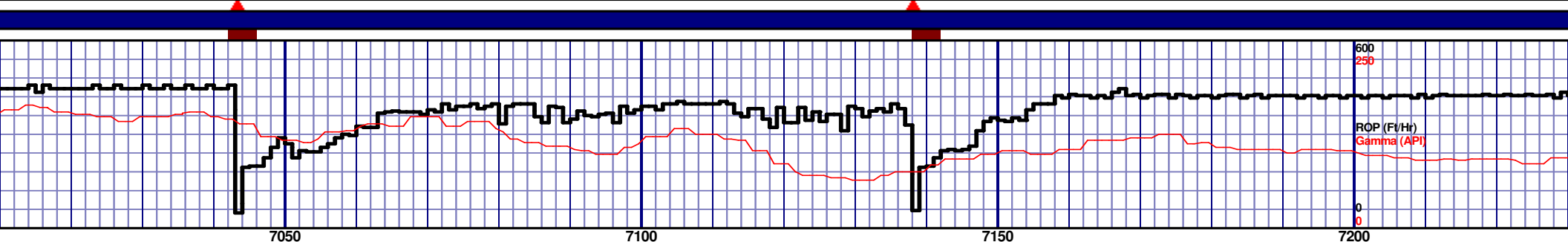
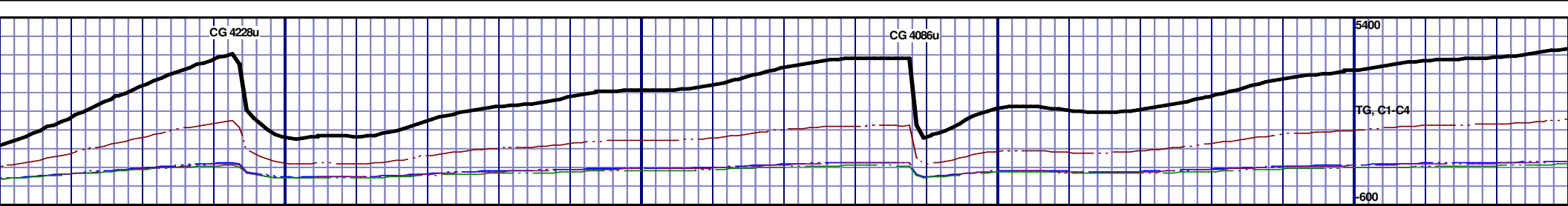
6800' MD-6850' MD: CHK: 90% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 10% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

6850' MD-6900' MD: CHK: 95% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 5% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

6900' MD-6950' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 30% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

6950' MD-7000' MD: CHK: 75% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 25% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

7000' MD-7000' MD: CHK: 75% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 25% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG



50' MD: CHK: 75% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 20% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

7050' MD-7100' MD: CHK: 80% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 20% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

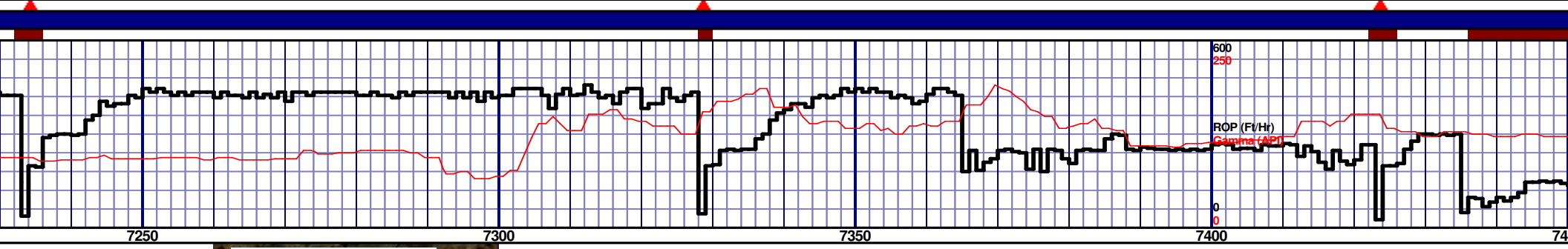
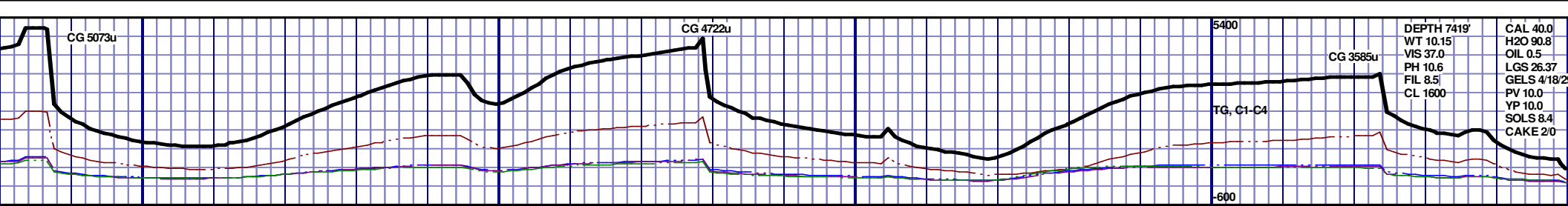
7100' MD-7150' MD: CHK: 80% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 20% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

7150' MD-7200' MD: CHK: 80% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 20% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

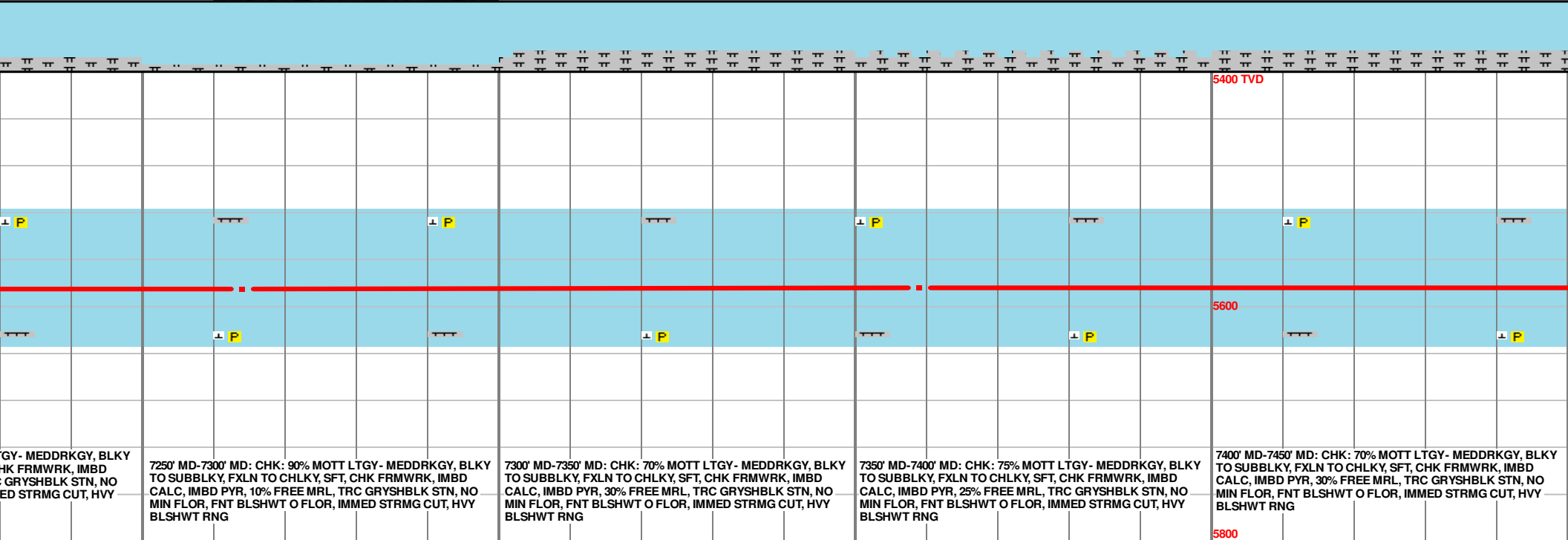
7200' MD-7250' MD: CHK: 80% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 20% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

MD 7074 TVD 5583.69
INC 89.41 AZ 356.24
VS 1806.09

MD 7169 TVD 5584.66
INC 89.41 AZ 355.97
VS 1900.94



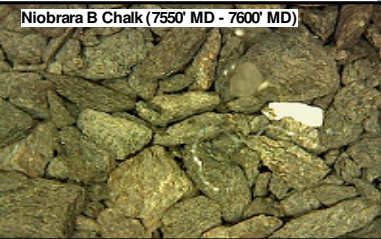
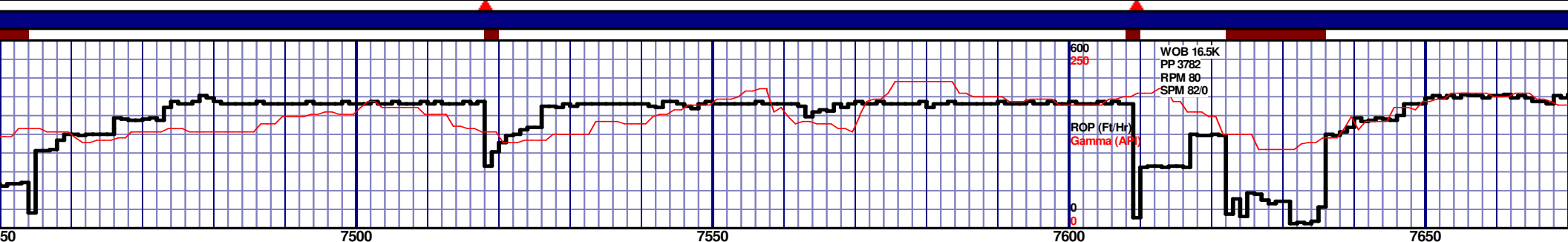
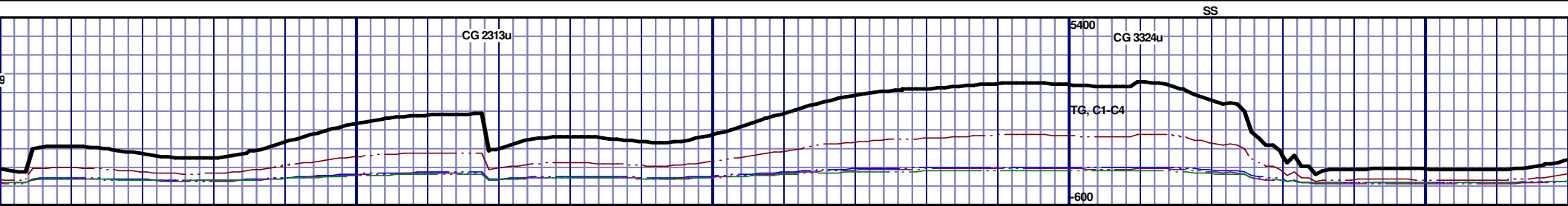
Niobrara B Chalk (7250' MD - 7300' MD)



7250' MD-7300' MD: CHK: 90% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 10% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	7300' MD-7350' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 30% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	7350' MD-7400' MD: CHK: 75% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 25% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	7400' MD-7450' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 30% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG
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MD 7264 TVD 5585.33
INC 89.78 AZ 356.49
VS 1995.8

MD 7359 TVD 5584.23
INC 91.54 AZ 356.72
VS 2090.69

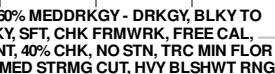


7450' MD-7500' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 30% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG			
7500' MD-7550' MD: CHK: 65% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, IMBD PYR, 35% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG			
7550' MD-7600' MD: MRL: 60% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CALC, FREE PYR, 40% CHK, NO STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG			
7600' MD-7650' MD: CHK: 65% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, 35% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG			
7650' MD-7700' MD: MRL: SUBBLKY, FXLN TO CHLKY, FREE PYR, TRC FREE BEN FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG			

MD 7454 TVD 5584.28
INC 88.4 AZ 355.61
VS 2185.54

MD 7548 TVD 5587.21
INC 88.03 AZ 355.65
VS 2279.31

MD 7643 TVD 5588.67
INC 89.01 AZ 356.26
VS 2374.12



7750' MD-7800' MD: CHK: 65% MOTT LTGY- MEDDRKGY, BLKY
TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE
CALC, IMBD PYR, 35% FREE MRL, TRC GRYSHBLK STN, NO
MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY
BLSHWT RNT

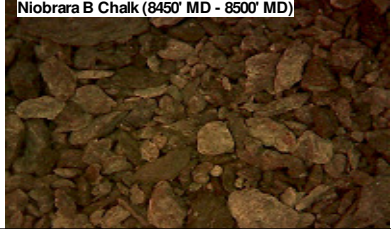
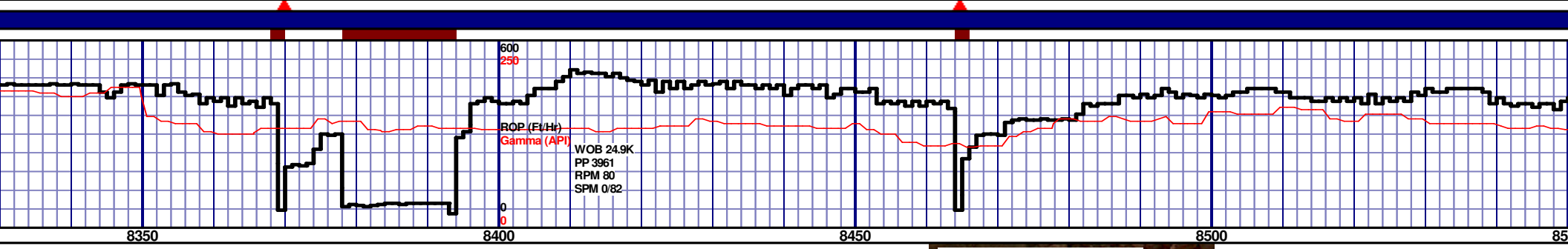
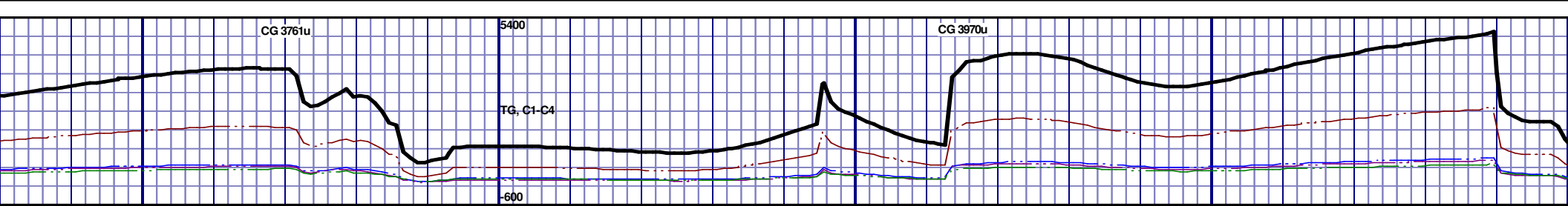
7850' MD-7900' MD: MRL: 60% MEDDRKGY - DRKGY,
SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FR
FREE PYR, TRC FREE BENT, 40% CHK, NO STN, TRC
FNT BLSHWT O FLOR. IMMED STRMG CUT. HVY BL

MD 7833 TVD 5590.03
INC 91.48 AZ 357.25
VS 2563.86



50' MD: CHK: 60% MOTT LTGY- MEDDRKGY,
UBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK,
C, IMBD PYR, TRC FREE BENT, 40% FREE MRL,
HBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR,
IMG CUT. HVY BLSHWT RNG

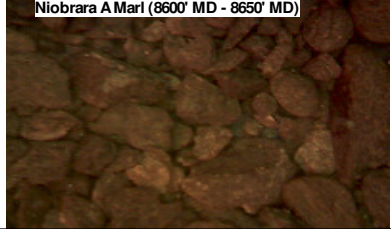
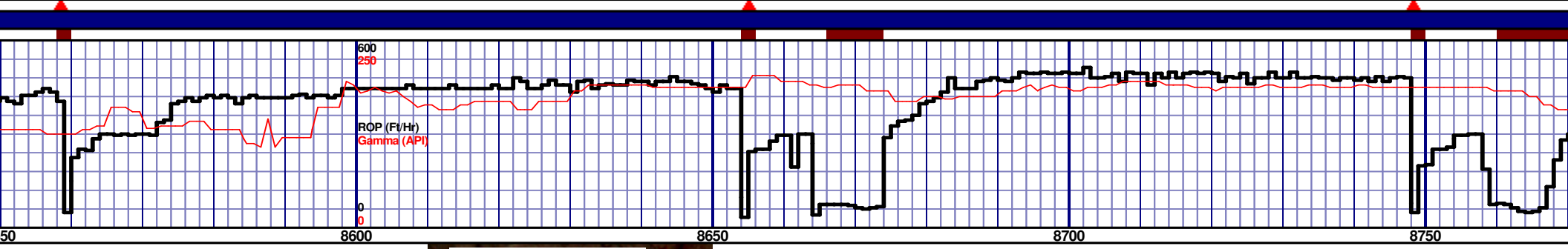
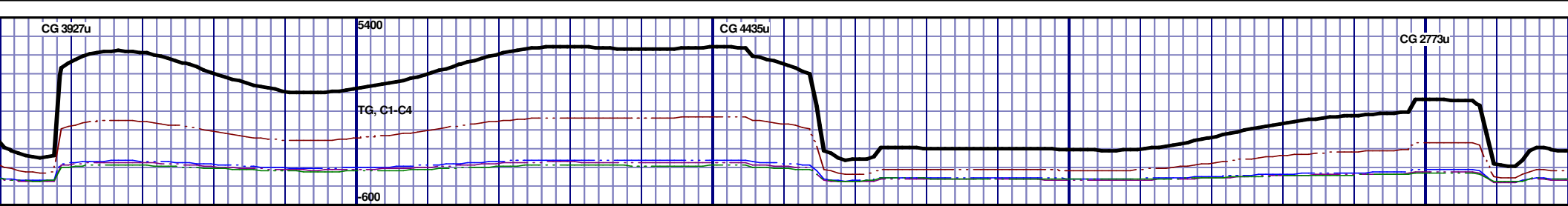
MD 8306 TVD 5587.57
INC 89.29 AZ 356.91
VS 3036.6



5400 TVD									
5600									
5800									
8350' MD-8400' MD: CHK: 60% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 40% FREE MRL, TRC GRYSHBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									
8400' MD-8450' MD: CHK: 60% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 40% FREE MRL, TRC GRYSHBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									
8500' MD-8550' MD: CHK: 60% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 40% FREE MRL, TRC GRYSHBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									
8550' MD-8550' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 30% FREE MRL, TRC GRYSHBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									

MD 8401 TVD 5588.21
INC 89.94 AZ 358.4
VS 3131.56

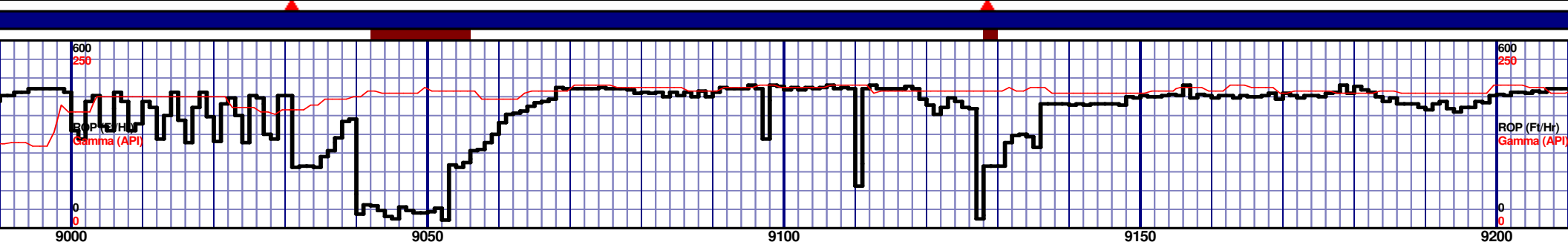
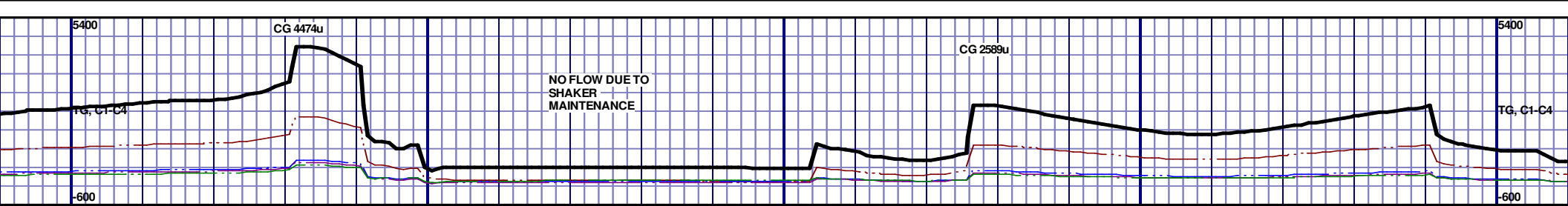
MD 8496 TVD 5587.67
INC 90.71 AZ 359.43
VS 3226.55



5400 TVD NIOBRARA A MARL 8600' MD 5587' TVD									
8550' MD-8650' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 30% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									
8600' MD-8650' MD: MRL: 60% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CAL, FREE PYR, TRC FREE BENT, 40% CHK, NO STN, TRC MIN FLOR FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									
8650' MD-8700' MD: MRL: 70% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CAL, FREE PYR, TRC FREE BENT, 30% CHK, NO STN, TRC MIN FLOR FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									
8700' MD-8750' MD: MRL: 80% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CAL, FREE PYR, TRC FREE BENT, 20% CHK, NO STN, TRC MIN FLOR FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									
8750' MD-8800' MD: MRL: SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CAL, FREE PYR, TRC FREE BENT, 20% CHK, NO STN, TRC MIN FLOR FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									

MD 8591 TVD 5586.19
INC 91.08 AZ 359.94
VS 3321.54

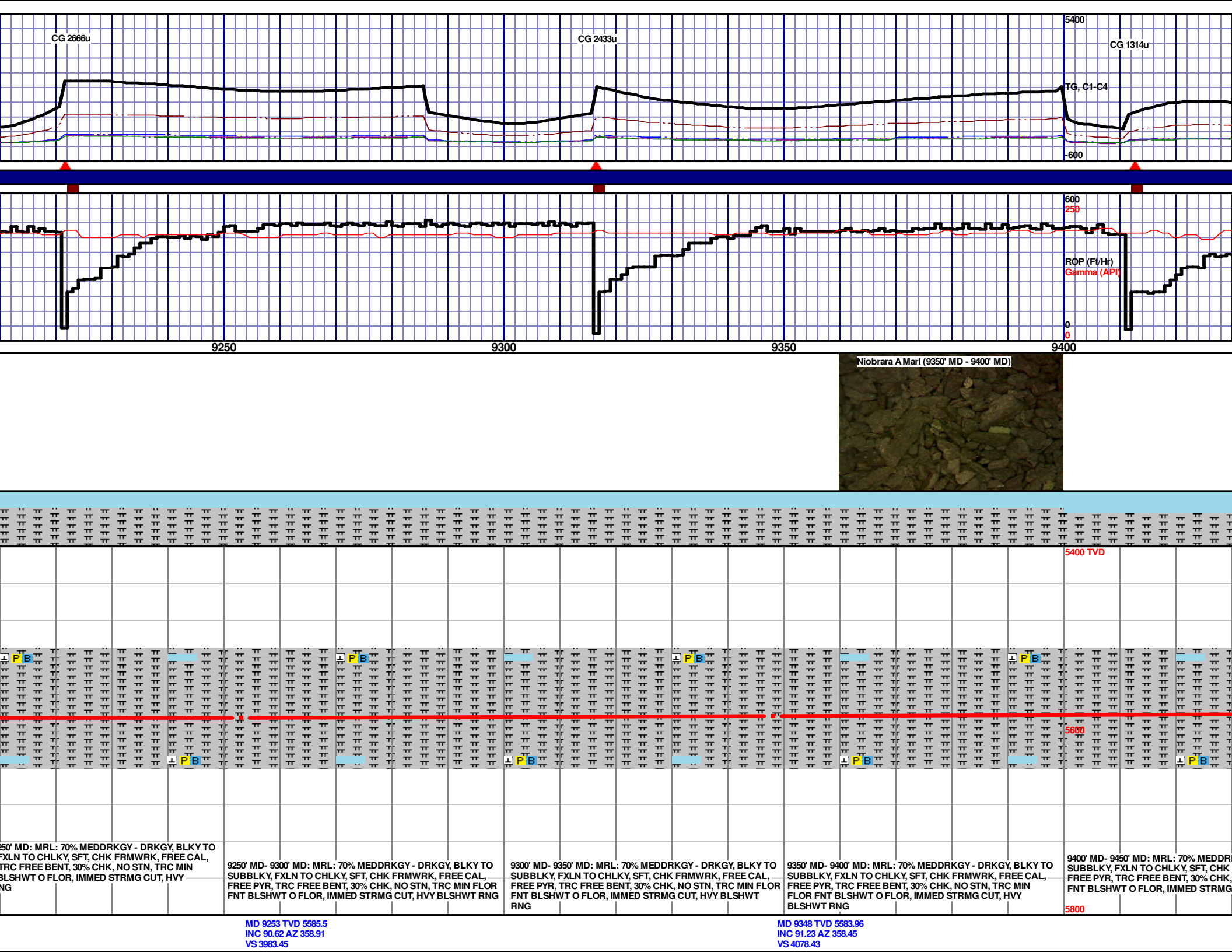
MD 8685 TVD 5585.07
INC 90.28 AZ 359.59
VS 3415.53

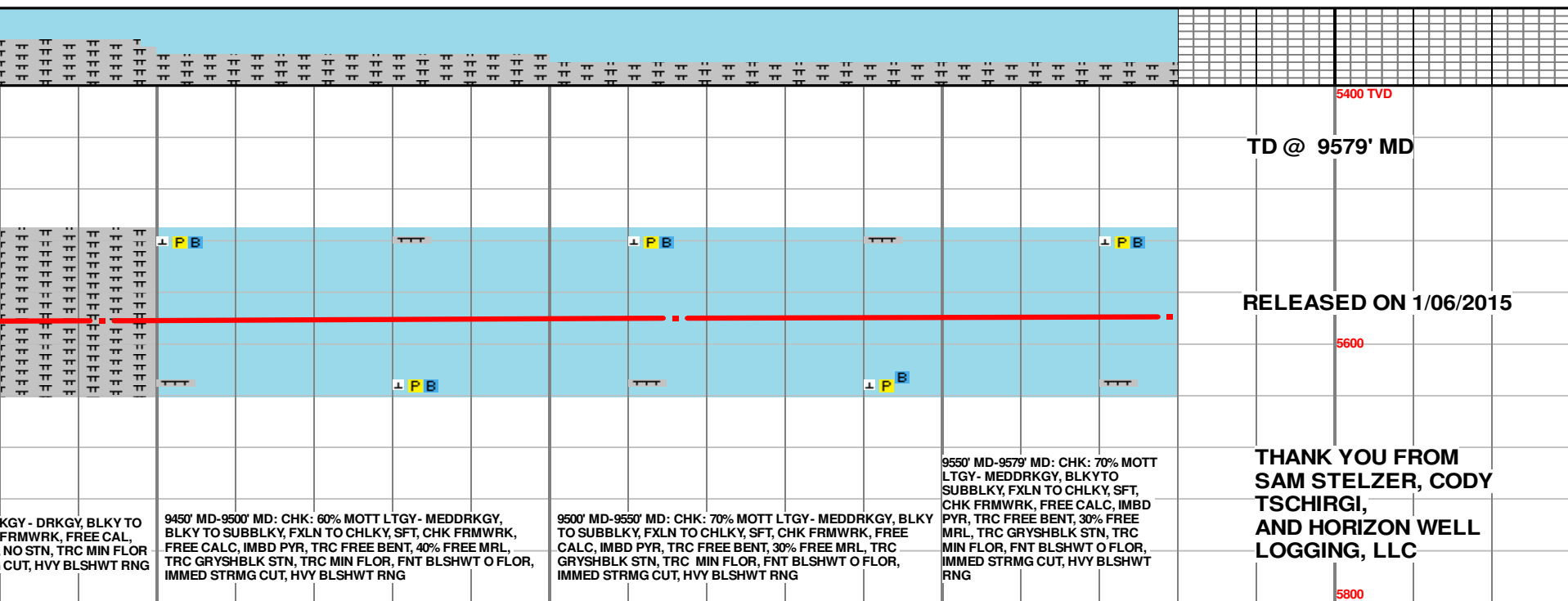
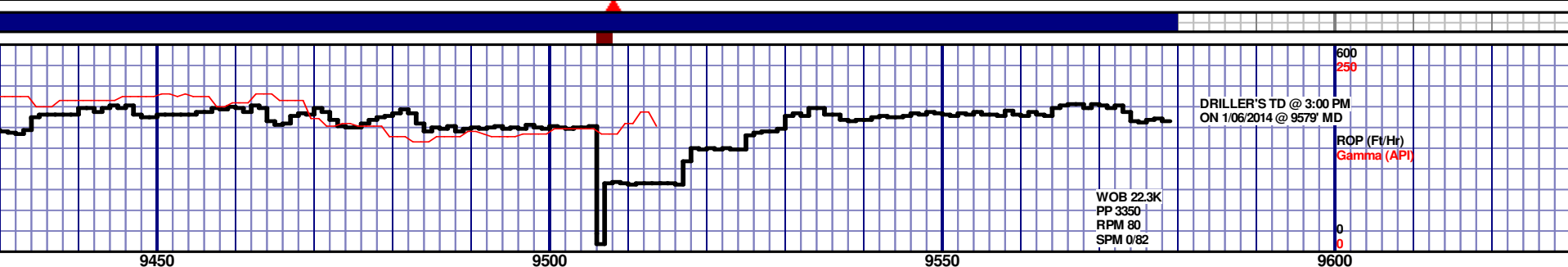
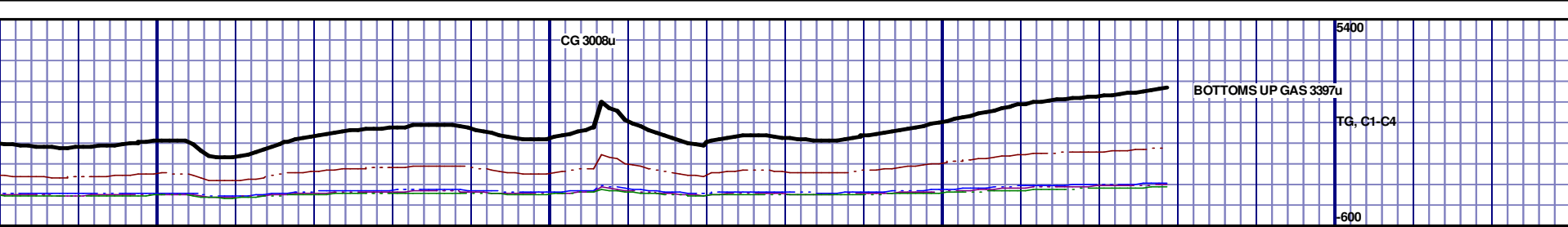


5400 TVD					5400 TVD				
NIOBRARA B CHALK					NIOBRARA A MARL				
9000' MD 5586' TVD					9100' MD 5586' TVD				
9000' MD-9050' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 30% FREE MRL, TRC GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG					9100' MD-9150' MD: MRL: 60% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CAL, FREE PYR, TRC FREE BENT, 40% CHK, NO STN, TRC MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG				
5600					5600				
5800					5800				

MD 9064 TVD 5586.44
INC 90.83 AZ 358.67
VS 3794.49

MD 9159 TVD 5585.88
INC 89.85 AZ 357.53
VS 3689.47





9450' MD-9500' MD: CHK: 60% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 40% FREE MRL, TRC GRYSBLK STN, TRC MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

9500' MD-9550' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 30% FREE MRL, TRC GRYSBLK STN, TRC MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

9550' MD-9579' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 30% FREE MRL, TRC GRYSBLK STN, TRC MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

9579' MD-9580' MD: CHK: 70% MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE CALC, IMBD PYR, TRC FREE BENT, 30% FREE MRL, TRC GRYSBLK STN, TRC MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG

THANK YOU FROM
SAM STELZER, CODY
TSCHIRGI,
AND HORIZON WELL
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