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WWW.HZMUD.COM/25

Customer Information

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

Geologist: Cassidy Miller
Noble Energy Inc.

Mud Logging Details

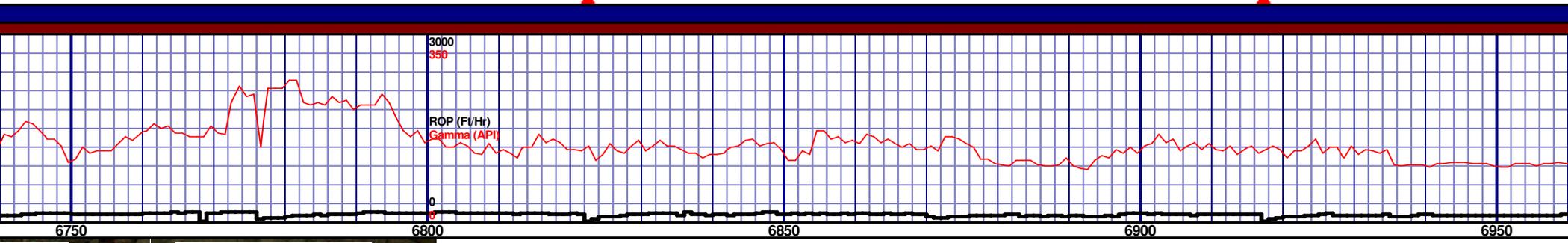
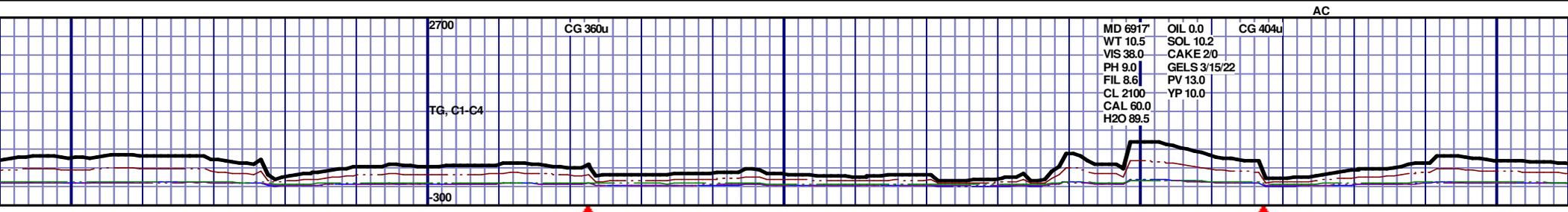
Logger: Andrew Christiano & Hannah Blatchford
Log Interval: 6600' MD to 10861' MD
Start Date: October 10, 2013
Release Date: October 14, 2013

Well Information

Well Name: Wells Ranch
AE20-67-1HN Horizontal
Location: 20-T6N-R62W
1248' FNL, 215' FWL

County: Weld Co.
State: Colorado

Drilling Rig: H&P 321
Total Depth: 10861' MD
TD Date: October 13, 2013
Formation: Niobrara B Chalk
KB Elevation: 4871'
GR Elevation: 4841'
API Number: 05-123-37212-0000



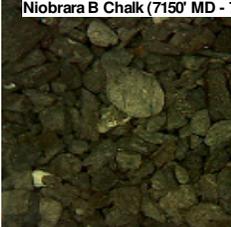
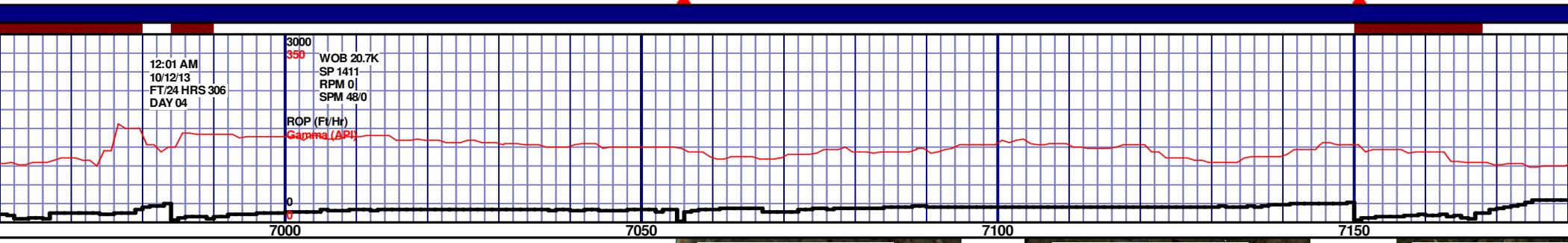
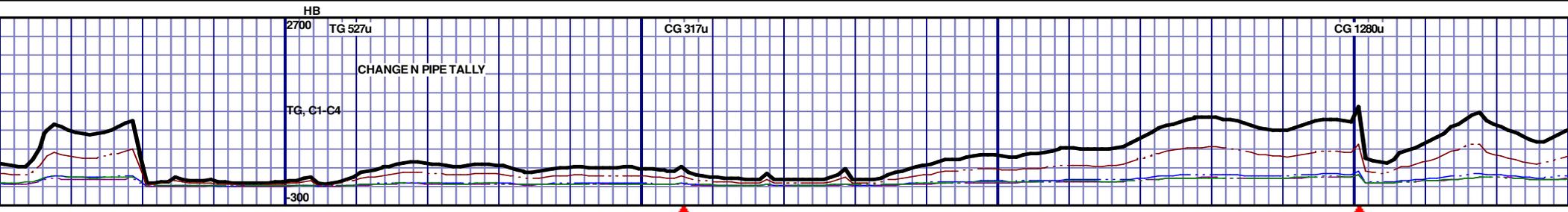
6740'-6770': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	6770'-6800': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	6800'-6830': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	6830'-6860': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	6860'-6890': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	6890'-6920': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	6920'-6950': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	6950'-6980': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG
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MD 6768 TVD 6557.68
INC 71.09 AZ 88.42
VS 331.67

MD 6816 TVD 6572.18
INC 73.74 AZ 89.82
VS 377.42

MD 6863 TVD 6583.97
INC 77.2 AZ 89.58
VS 422.91

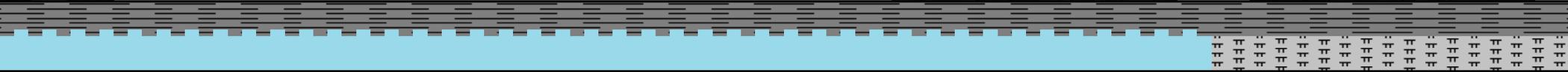
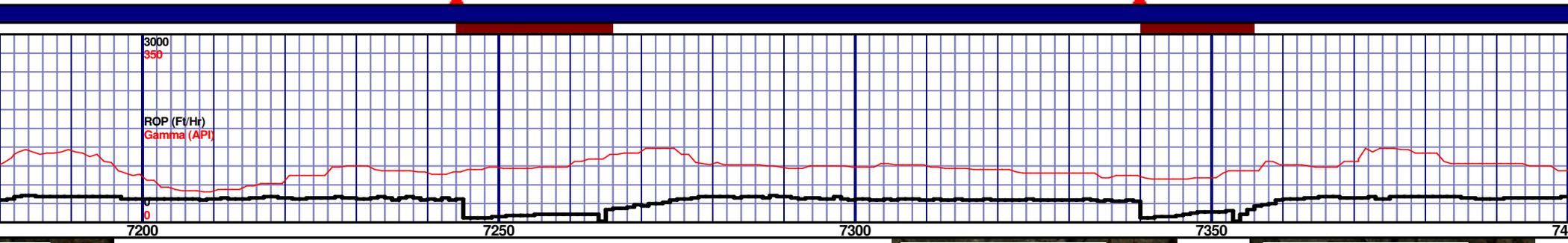
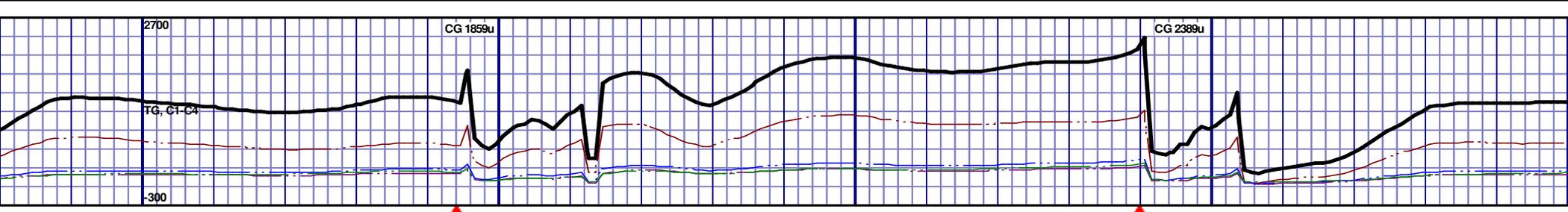
MD 6926 TVD 6594.34
INC 83.85 AZ 88.55
VS 485



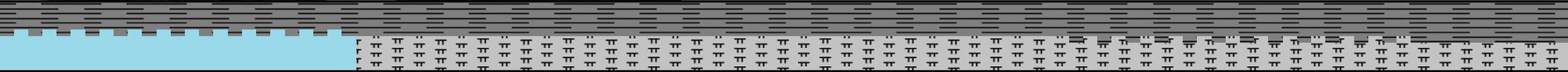
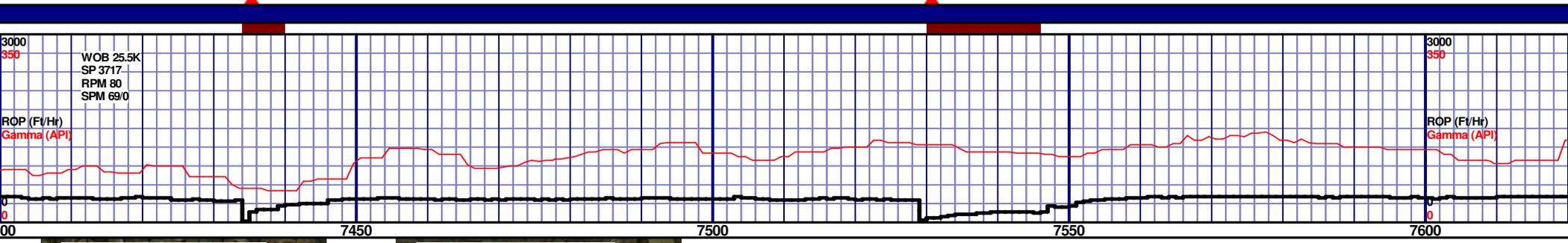
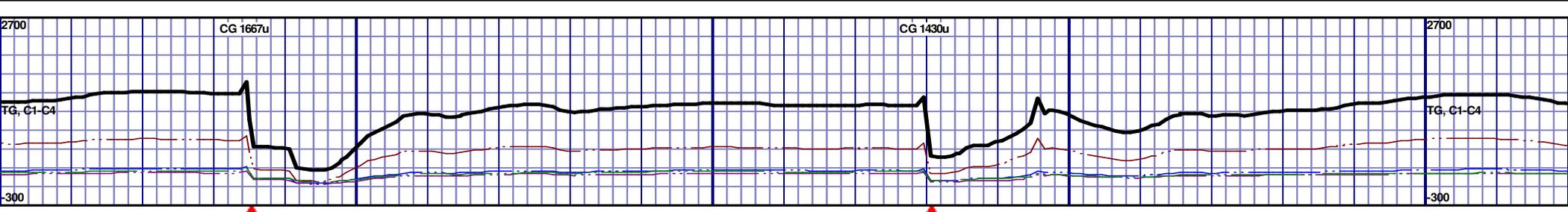
<p>TOOH @ 7:00AM ON 10/11/13 @ 6980' MD FOR INTERMEDIATE CASING OPERATIONS. TIH @ 12:45PM ON 10/12/13. RESUMED DRILLING @ 5:30PM ON 10/12/13 W/ BIT #3 6.125" OTHER PLS 51325U S/N S08668 IN @ 6890' MD.</p>										<p>NIOBARARA B CHALK 7150' MD 6601' TVD</p>																																							
<p>SWITCHED TO 50' SAMPLE INTERVAL.</p>										<p>6700</p>																																							
<p>MRLST: 45% MEDDRKGY ...KY TO SUBBLKY, FXLN FRM TO FRI, CHK IMBD CAL, FREE PYR, TT - PP POR, MOD STN, 10% LTOR FLOR, /T O FLOR, IMMED T, BRIYL RNG</p>										<p>6980'-7050': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>										<p>7050'-7100': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>										<p>7100'-7150': MRLST: 50% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>										<p>7150'-7200': CHK: 55% VLTGY - MEDGY SUBBLKY, FXLN TO CHLKY, SFT, CHK SPEC, OCC FREE CAL, FREE SH, MOD LTOR FLOR, FNT BLSHWT O FLOR, IM RNG</p>									
<p>6950</p>										<p>6950</p>																																							

MD 7003 TVD 6598.67
INC 89.69 AZ 86.96
VS 561.8

MD 7088 TVD 6599.47
INC 89.23 AZ 85.66
VS 646.64



<p>6450 TVD</p> <p>DRKGY, BLKY TO FRMWRK, IMBD PYRC GYSHBLK STN, 10% IMED STRMG CUT, BRIYL RNG</p>	<p>7200'-7250': CHK: 55% V/LTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD PYRC SPEC, OCC FREE CAL, FREE SH, MOD GYSHBLK STN, 10% L TOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>7250'-7300': CHK: 55% V/LTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD PYRC SPEC, OCC FREE CAL, FREE SH, MOD GYSHBLK STN, 10% L TOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>7300'-7350': CHK: 55% V/LTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD PYRC SPEC, OCC FREE CAL, FREE SH, MOD GYSHBLK STN, 10% L TOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>7350'-7400': MRLST: 50% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, IMBD CAL, FREE PYR, TRC FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% L TOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>
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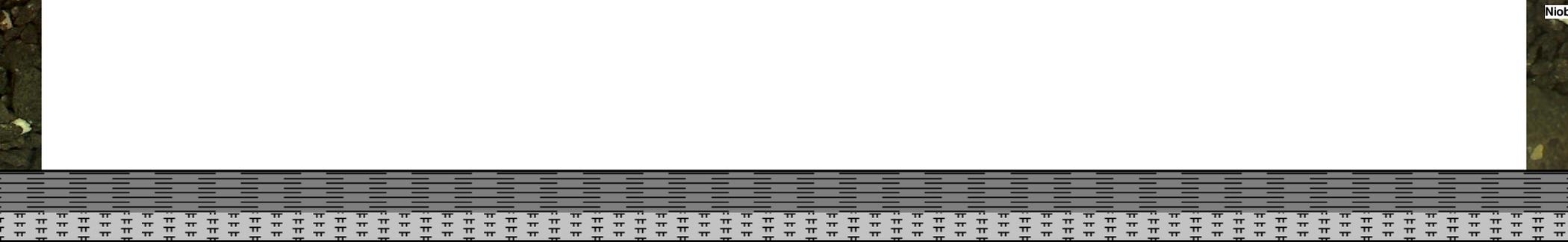
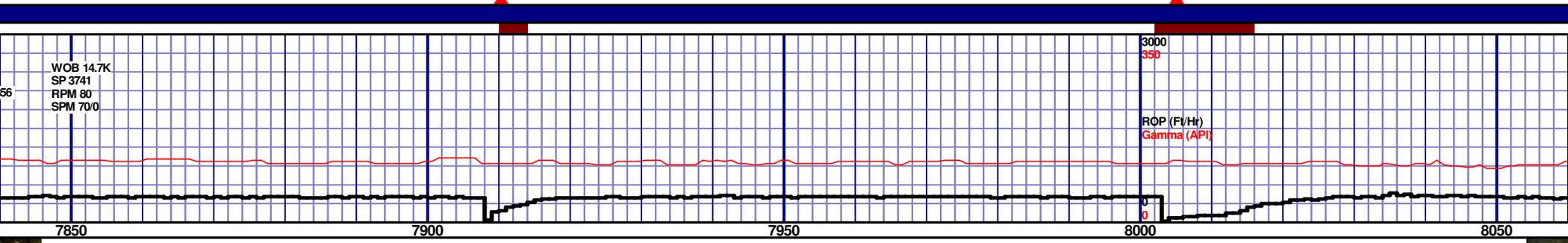
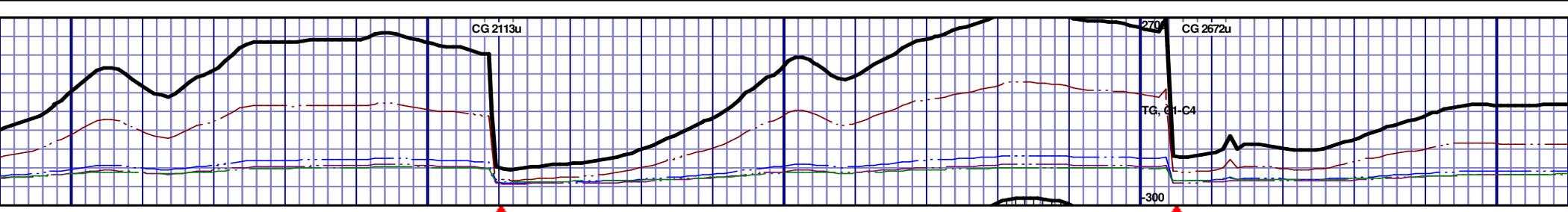


6450 TVD	NIOBARARA B MARL 7450' MD 6602' TVD					6450 TVD
L P	L P B				L P B	L P B
7400'-7450': CHK: 55% VLTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD PYRC SPEC, OCC FREE CAL, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	7450'-7500': MRLST: 50% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, TRC IMBD CAL, TRC FREE PYR, TRC FRE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG				7500'-7550': MRLST: 50% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, TRC IMBD CAL, TRC FREE PYR, TRC FRE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	7550'-7600': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, TRC IMBD CAL, TRC FREE PYR, TRC FRE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG

MD 7476 TVD 6602.85
 INC 91.45 AZ 88.66
 VS 1034.28

MD 7562 TVD 6600.91
 INC 91.14 AZ 88.21
 VS 1120.24

6950

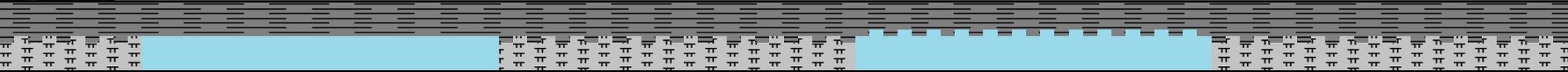
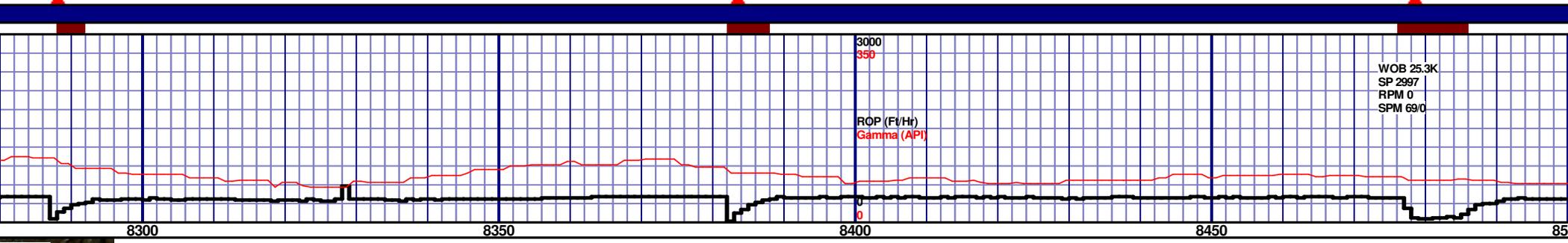
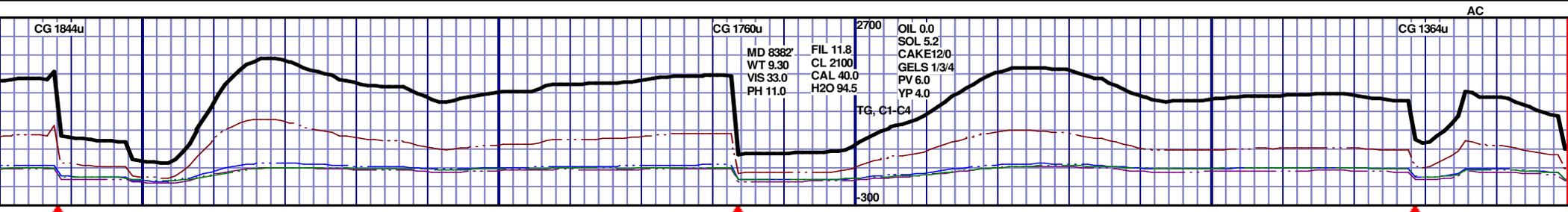


	7850'-7900': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, ABDT IMBD CAL, ABDT FREE PYR, ABDT BNT, TT - PPPOR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	7900'-7950': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, ABDT IMBD CAL, ABDT FREE PYR, ABDT BNT, TT - PPPOR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	7950'-8000': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, ABDT IMBD CAL, ABDT FREE PYR, ABDT BNT, TT - PPPOR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	8000'-8050': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, ABDT FREE CAL, ABDT FREE PYR, ABDT BNT, TT - PPPOR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG	8050'-8100': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, ABDT FREE CAL, ABDT FREE PYR, ABDT BNT, TT - PPPOR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG
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MD 7846 TVD 6602.39
INC 89.17 AZ 88.49
VS 1404.16

MD 7941 TVD 6603.59
INC 89.38 AZ 88.64
VS 1499.13

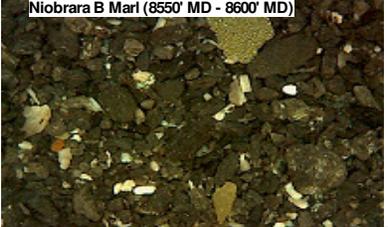
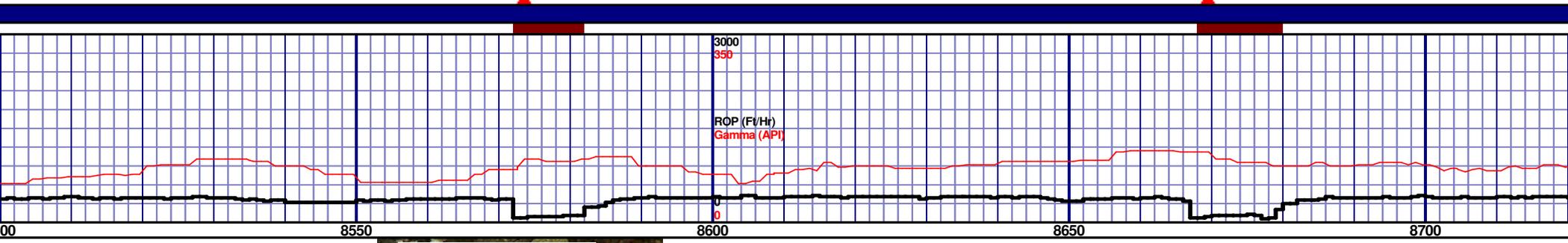
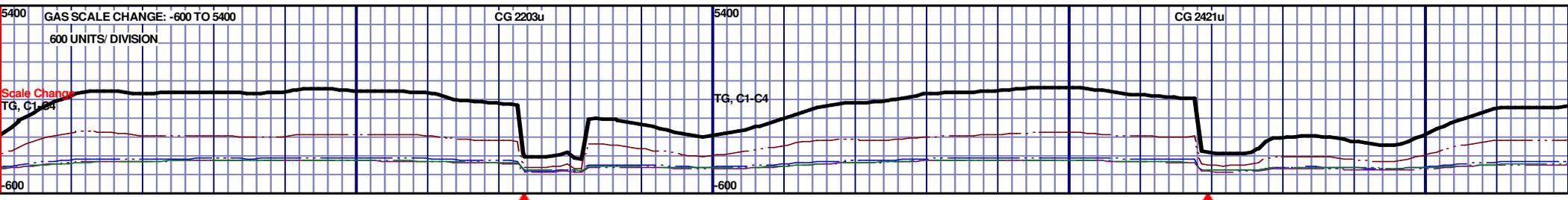
MD 8036 TVD 6604.95
INC 88.98 AZ 89.45
VS 1594.11



<p>8300'-8350': CHK: 50% VLTGY- MEDGY-DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, ABDT FREE PYR, ABDT FREE CAL, ABDT FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>8350'-8400': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, ABDT FREE CAL, ABDT FREE PYR, ABDT BNT, TT - PPROR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>8400'-8483': CHK: 55% VLTGY- MEDGY-DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, ABDT FREE PYR, ABDT FREE CAL, ABDT FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>8450'-8500': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>
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MD 8320 TVD 6600.06
 INC 91.27 AZ 89.55
 VS 1878.02

MD 8415 TVD 6597.73
 INC 91.54 AZ 89.51
 VS 1972.99

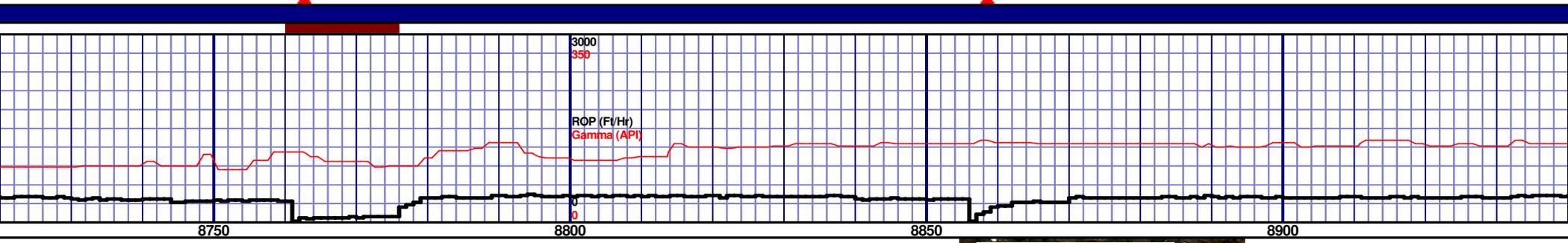
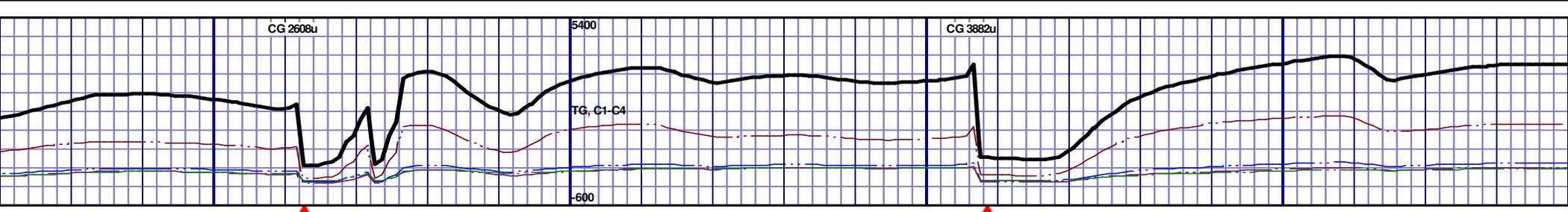


<p>8500'-8550': MRLST: 50% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>8550'-8600': MRLST: 50% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>8600'-8650': MRLST: 50% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>8650'-8700': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>8700'-8750': MRLST: 45% SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>
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MD 8510 TVD 6596.88
 INC 89.48 AZ 90.07
 VS 2067.98

MD 8605 TVD 6597.88
 INC 89.32 AZ 88.67
 VS 2162.97

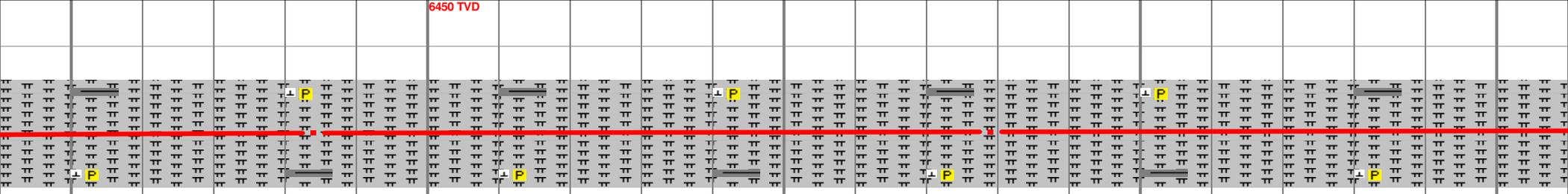
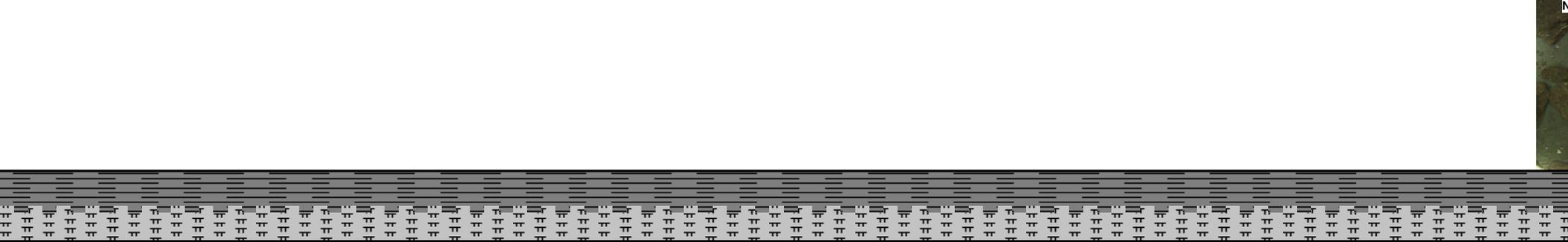
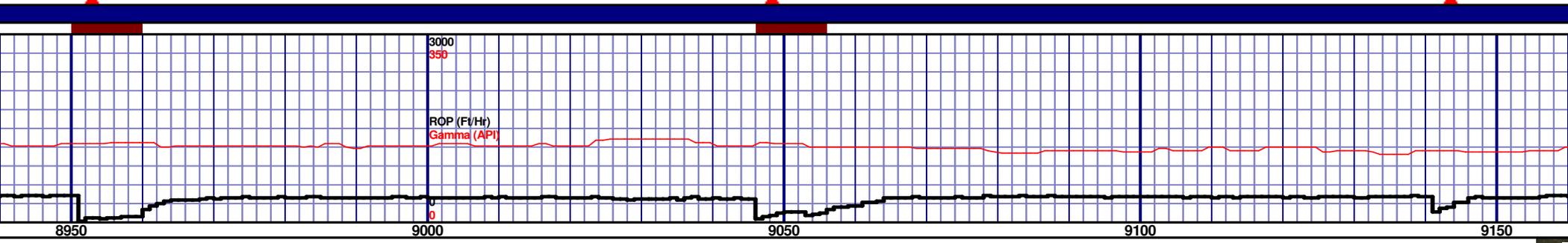
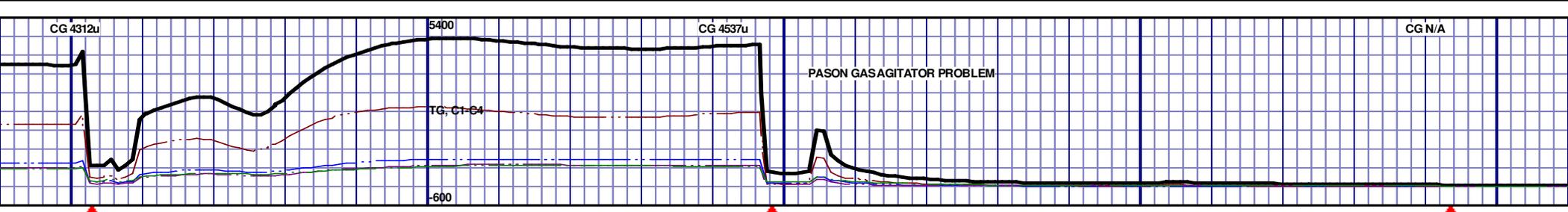
MD 8700 TVD 6598.91
 INC 89.44 AZ 88.83
 VS 2257.95



6450 TVD			
<p>MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE BENT, TT - PP POR, MOD OR FLOR, FNT BLSHWT O FLOR, BRYL RNG</p>	<p>8750'-8800': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>8800'-8850': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>8850'-8900': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>
6700			
6950			

MD 8794 TVD 6598.28
INC 91.33 AZ 87.01
VS 2351.89

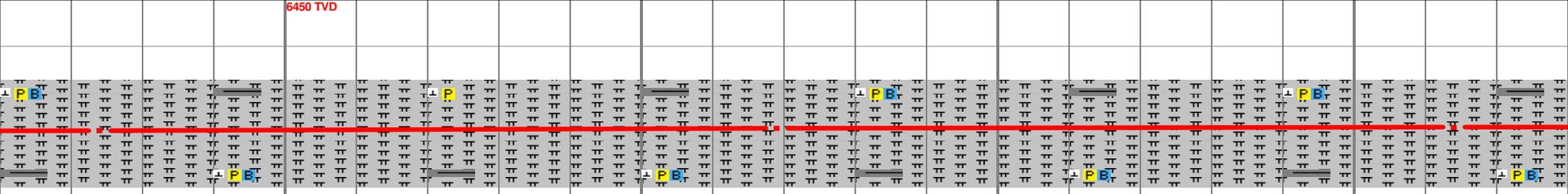
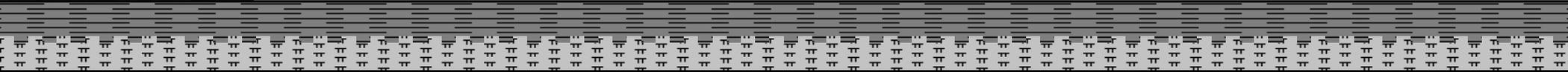
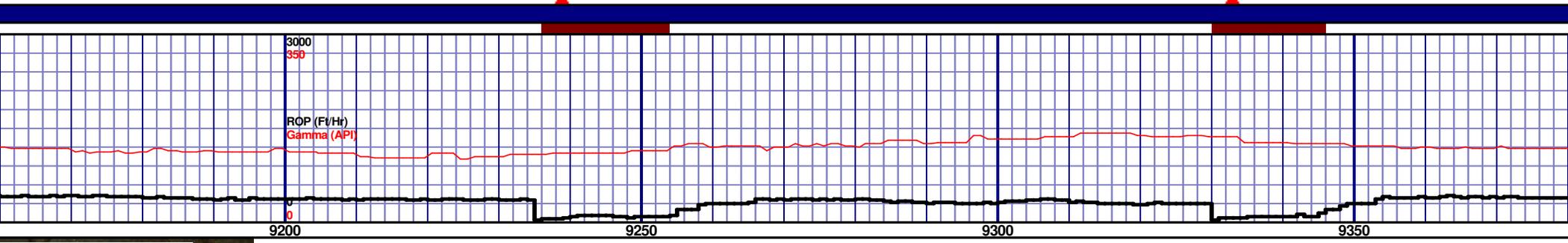
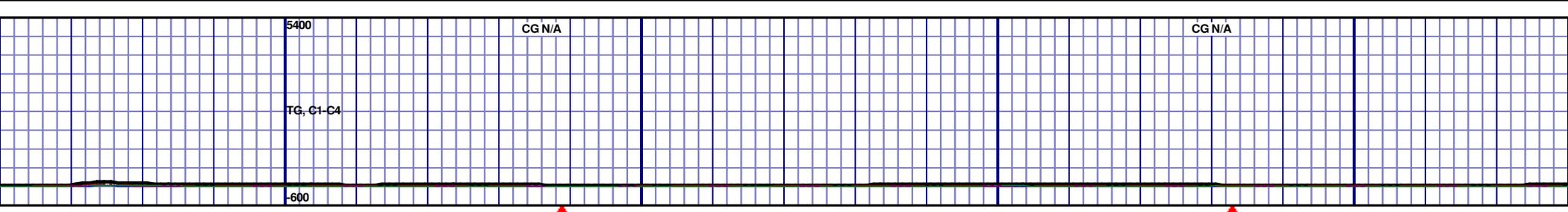
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INC 91.85 AZ 87.05
VS 2446.74



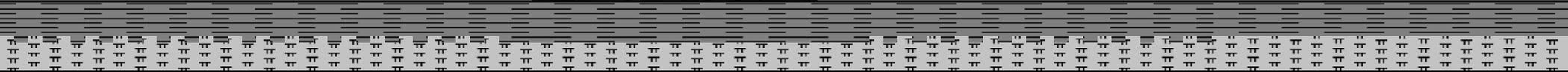
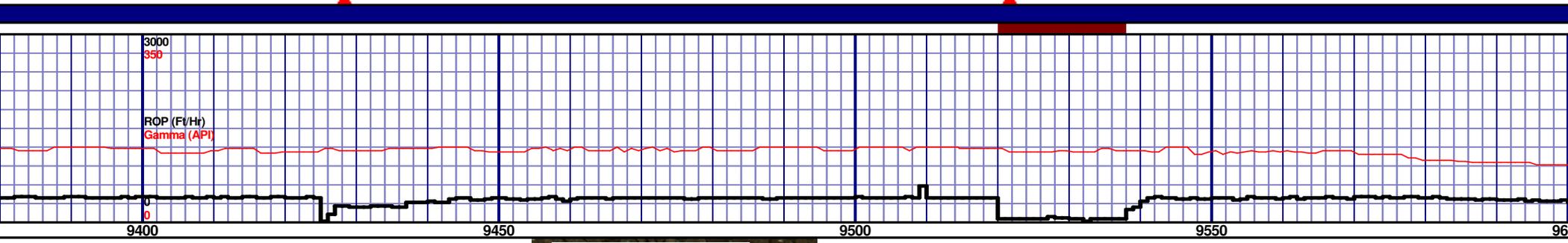
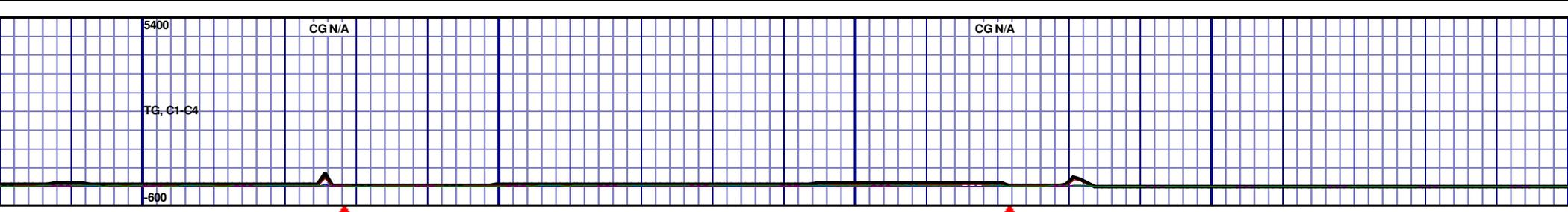
<p>8950'-9000': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>9000'-9050': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>9050'-9100': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>9100'-9150': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>9150'-9200': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>
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MD 8984 TVD 6592.95
 INC 91.39 AZ 87.58
 VS 2541.62

MD 9079 TVD 6591.29
 INC 90.62 AZ 86.38
 VS 2636.49



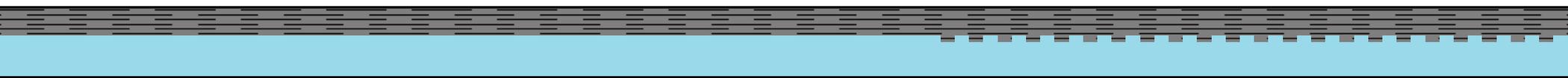
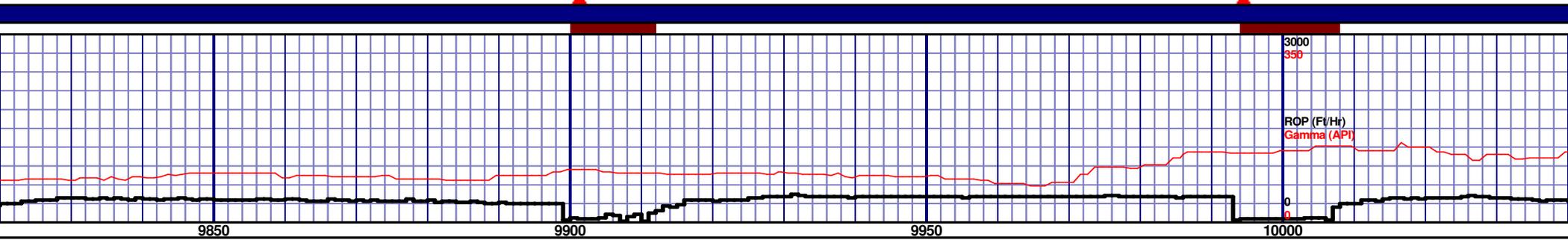
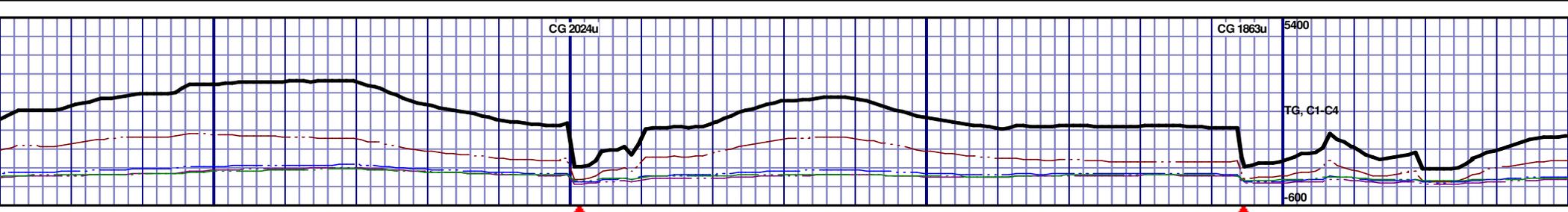
<p>MRLST: 45% MEDDRKGY - DRKGY, BLKY TO FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE PYR, FREE BENT, TT - PP POR, MOD STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMM STRMG CUT, BRIYL RNG</p>	<p>9200'-9250': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMM STRMG CUT, BRIYL RNG</p>	<p>9250'-9300': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMM STRMG CUT, BRIYL RNG</p>	<p>9300'-9350': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMM STRMG CUT, BRIYL RNG</p>	<p>9350'-9400': MRLST: 45% MEDDRKGY - SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMM STRMG CUT, BRIYL RNG</p>
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<p>6450 TVD</p> <p>DRKGY, BLKY TO FRI, CHK FRMWRK, - PP POR, MOD T BLSHWT O FLOR,</p>	<p>9400'-9450': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>9450'-9500': MRLST: 40% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>9500'-9550': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>9550'-9600': MRLST: 50% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, FREE PYR, FREE BENT, TT - PP POR, MOD GRYSBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>
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6700

6950

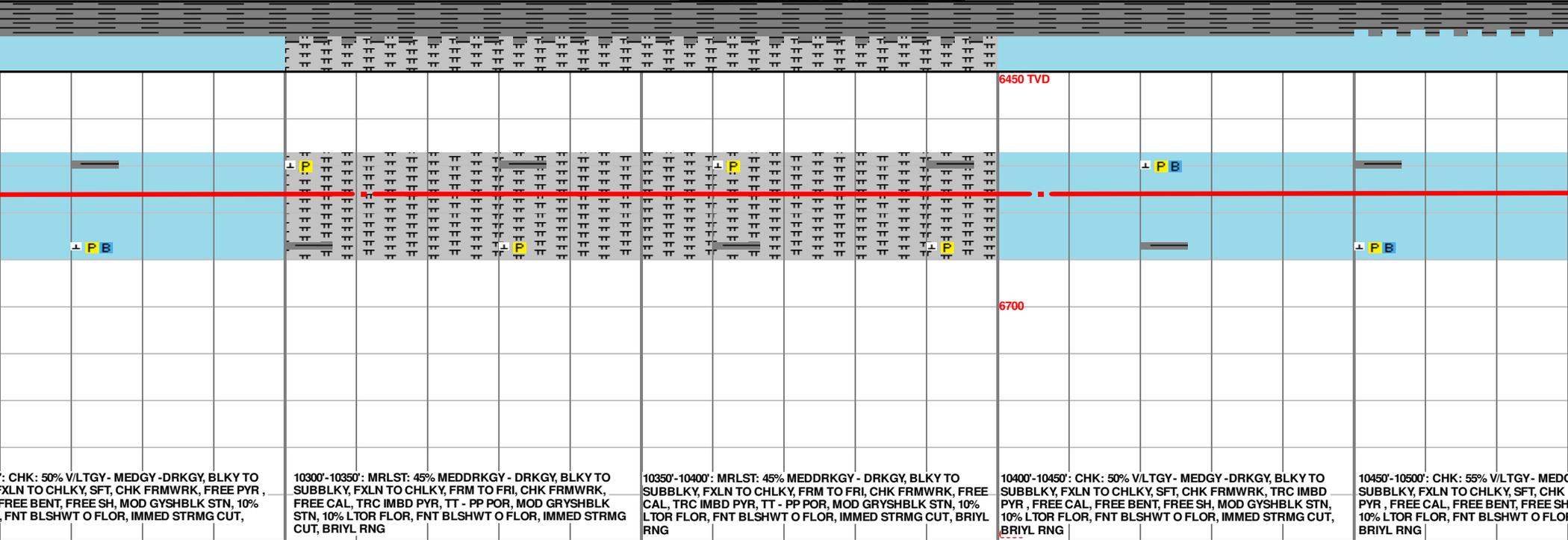
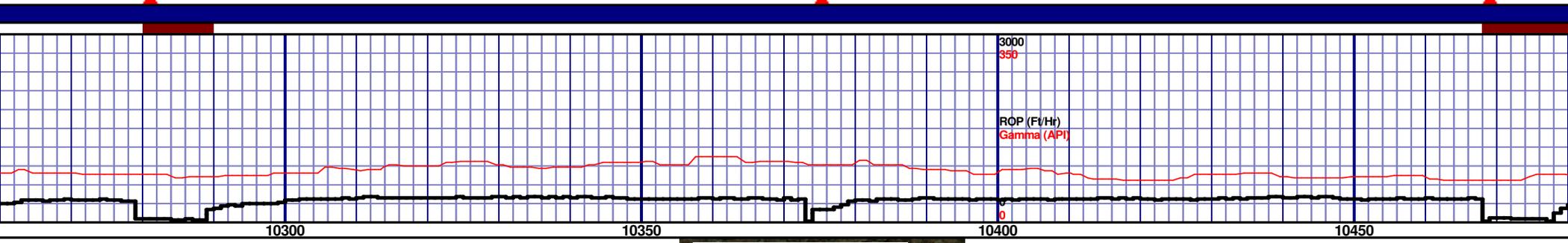
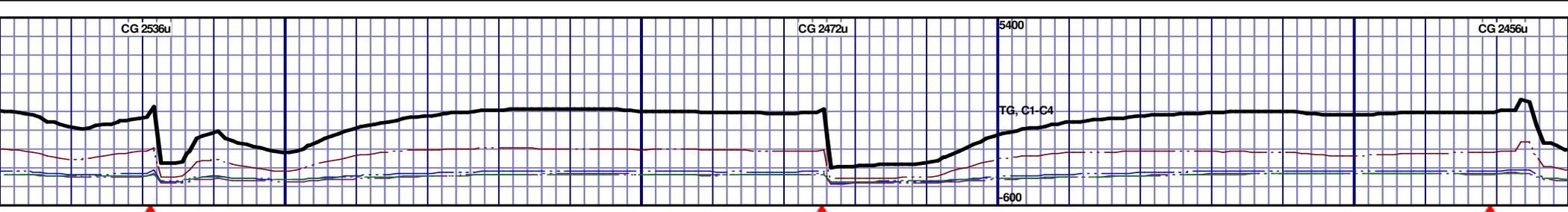


<p>9850'-9900': CHK: 60% V/LTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE PYR, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>9900'-9950': CHK: 60% V/LTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE PYR, FREE CAL, FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>9950'-10000': CHK: 55% V/LTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE PYR, FREE CAL, FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>10000'-10050': CHK: 55% V/LTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, FREE PYR, FREE CAL, FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>
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MD 9837 TVD 6584.22
 INC 90.74 AZ 89.11
 VS 3393.88

MD 9932 TVD 6583.82
 INC 89.75 AZ 88.22
 VS 3488.86

MD 10027 TVD 6583.85
 INC 90.55 AZ 89.11
 VS 3583.85



CHK: 50% VLTGY - MEDGY - DRKGY, BLKY TO FXLN TO CHLKY, SFT, CHK FRMWRK, FREE PYR, FREE BENT, FREE SH, MOD GYSHBLK STN, 10% FNT BLSHWT O FLOR, IMMED STRMG CUT,

10300'-10350': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, TRC IMBD PYR, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG

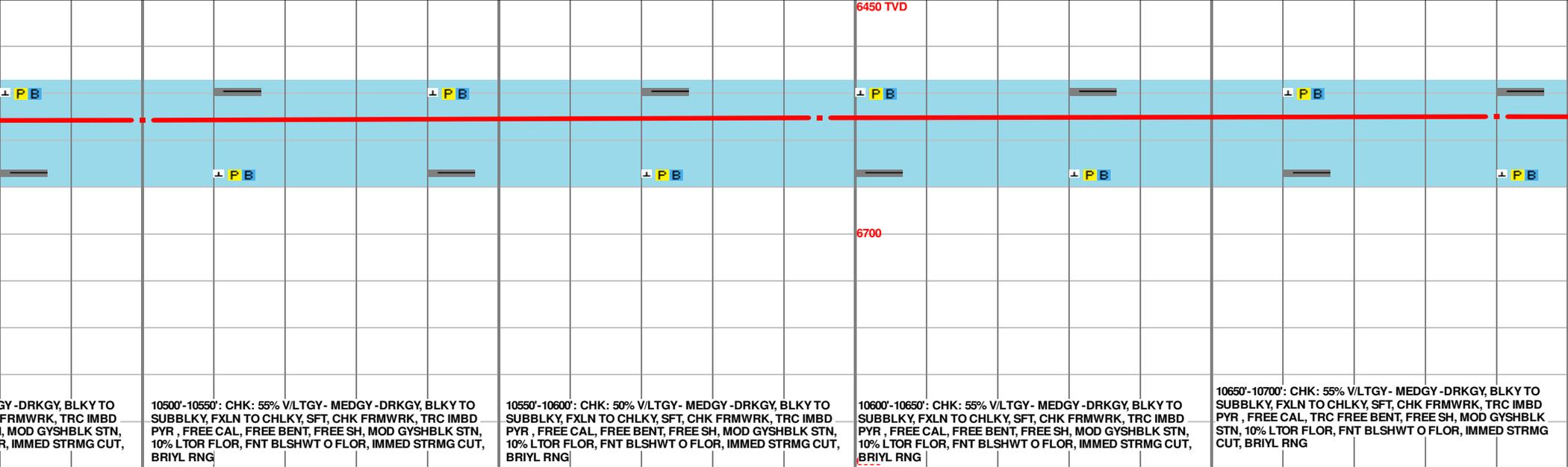
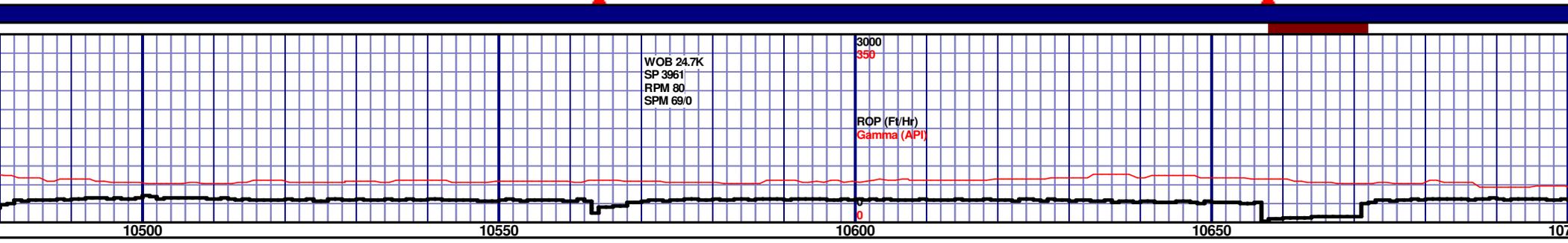
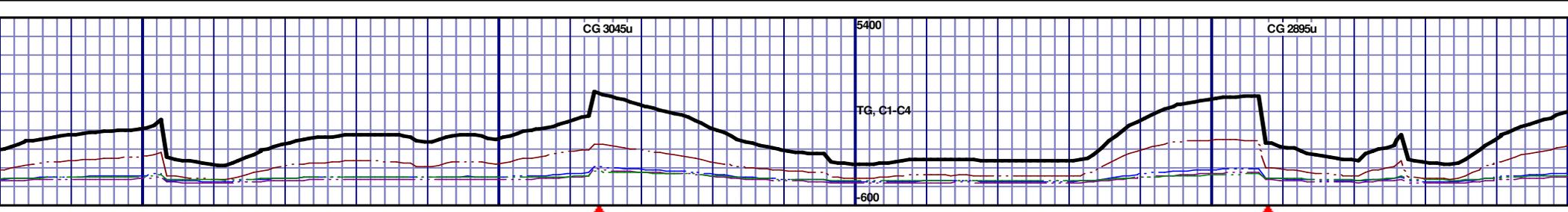
10350'-10400': MRLST: 45% MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, FRM TO FRI, CHK FRMWRK, FREE CAL, TRC IMBD PYR, TT - PP POR, MOD GRYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG

10400'-10450': CHK: 50% VLTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, TRC IMBD PYR, FREE CAL, FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG

10450'-10500': CHK: 55% VLTGY - MEDGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, TRC IMBD PYR, FREE CAL, FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG

MD 10311 TVD 6579.61
INC 90.22 AZ 87.92
VS 3867.79

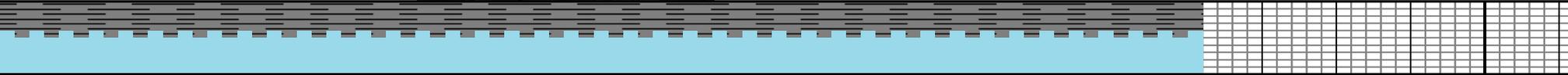
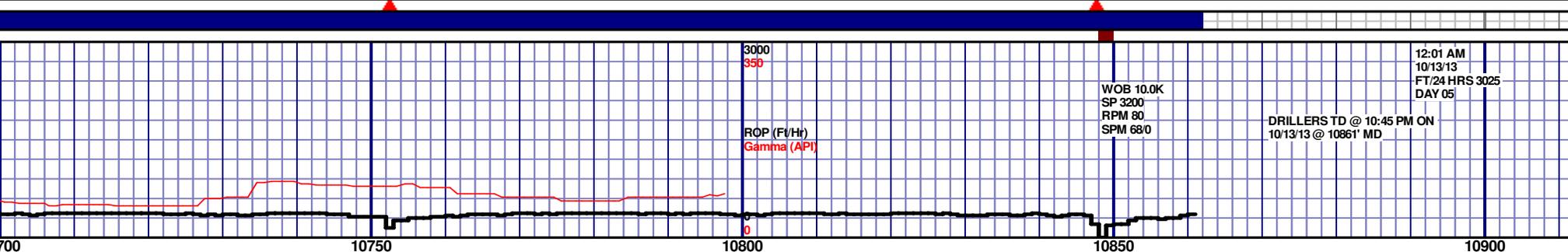
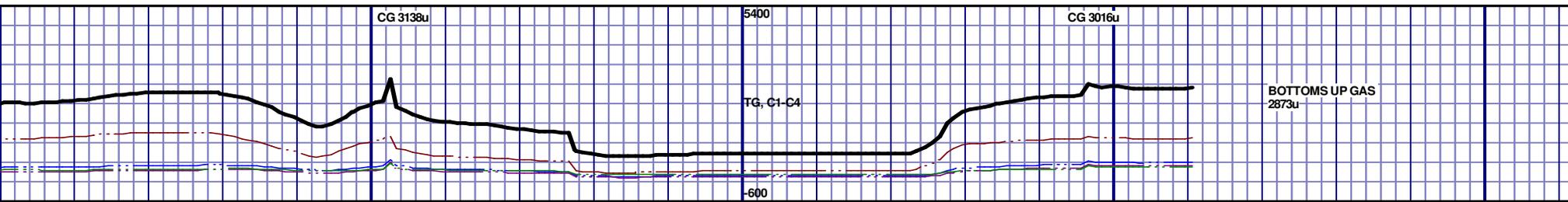
MD 10406 TVD 6579.59
INC 89.81 AZ 87.8
VS 3962.74



MD 10500 TVD 6579.06
INC 90.83 AZ 88.11
VS 4056.69

MD 10595 TVD 6576.74
INC 91.97 AZ 88.45
VS 4151.63

MD 10690 TVD
INC 89.51 AZ
VS 4246.55



<p>10700'-10750': CHK: 55% V/LTGY- MEDGY-DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, TRC IMBD PYR, FREE CAL, TRC FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>10750'-10800': CHK: 55% V/LTGY- MEDGY-DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, TRC IMBD PYR, FREE CAL, TRC FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>10800'-10861': CHK: 55% V/LTGY- MEDGY-DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, TRC IMBD PYR, FREE CAL, TRC FREE BENT, FREE SH, MOD GYSHBLK STN, 10% LTOR FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, BRIYL RNG</p>	<p>6450 TVD</p> <p>TD @ 10861' MD</p> <p>RELEASED ON 10/14/13</p>
<p>6700</p> <p>6950</p>			<p>THANK YOU FROM ANDREW CHRISTIANO, HANNAH BLATCHFORD, AND HORIZON WELL LOGGING, LLC</p>