



7136 South Yale Avenue, Suite 414

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WWW.HZMUD.COM

Customer Information

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

Geologist: Renee Clackler
Noble Energy Inc.

Mud Logging Details

Logger: Sam Stelzer &
Adam Tross

Log Interval: 6400' MD to 16000' MD

Start Date: September 2, 2015

Release Date: September 6, 2015

Well Information

Well Name: Wells Ranch AE32-655

Horizontal

Location: 32-T6N-R62W

2047' FNL, 650' FWL

County: Weld

State: Colorado

Drilling Rig: H&P 321

Total Depth: 16000' MD

TD Date: September 6, 2015

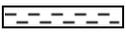
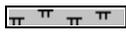
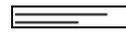
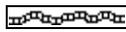
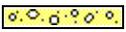
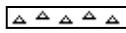
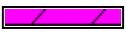
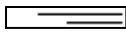
Formation: Niobrara B

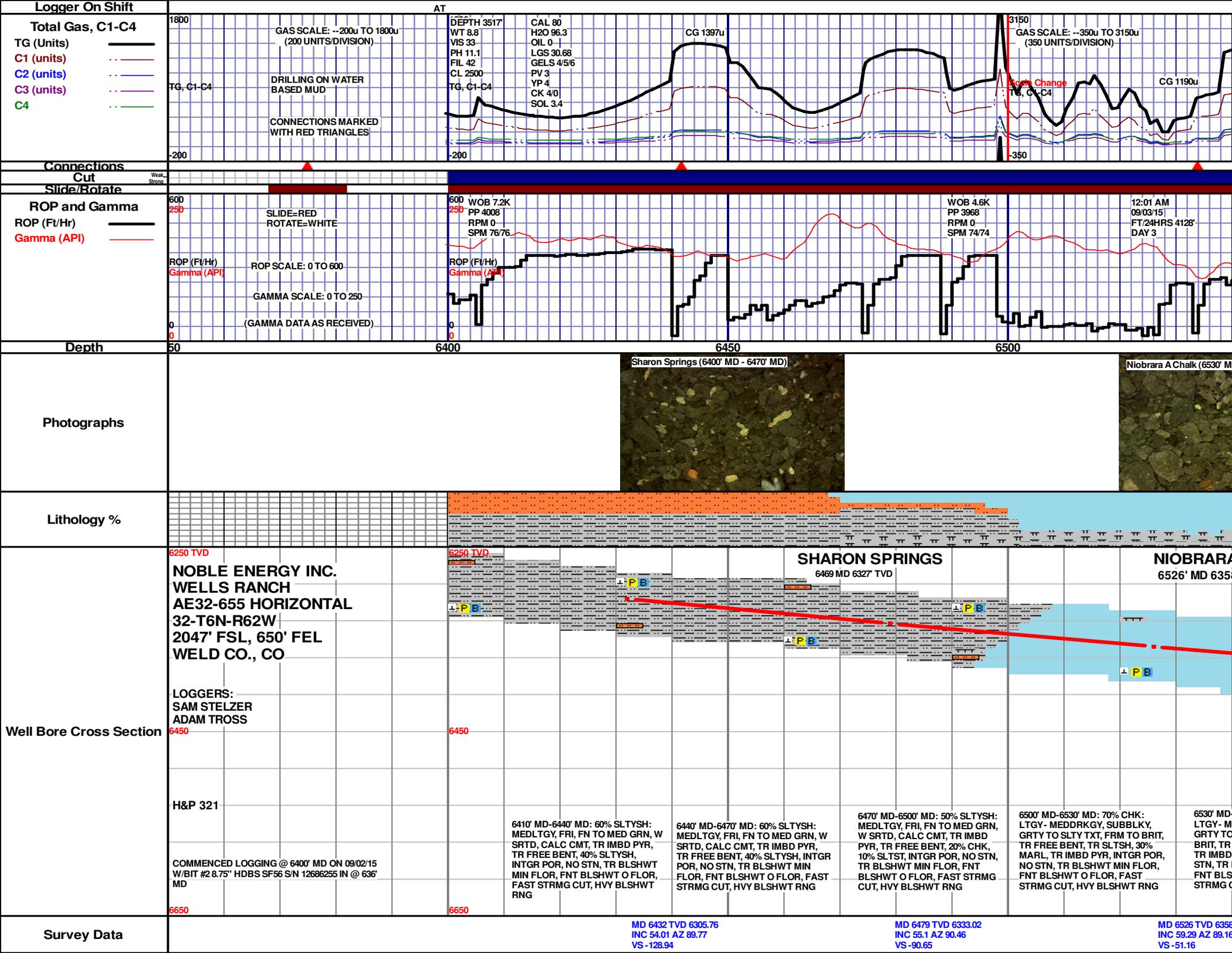
KB Elevation: 4727'

GR Elevation: 4757'

API Number: 05-123-41730-0000

ROCK TYPES

 Siltysh	 Clyst	 Gyp	 Mrlst	 Shgy	 Carbonaceous s
 Anhy	 Coal	 Cmnt	 Salt	 Sltst	 Chk
 Bent	 Congl	 Lmst	 Shale	 Ss	 NO SMPL
 Cht	 Dol	 Meta	 Shcol	 Till	 Nosmpl



Logger On Shift

Total Gas, C1-C4

- TG (Units) ———
- C1 (units) - - -
- C2 (units) - - -
- C3 (units) - - -
- C4 (units) - - -

GAS SCALE: --200u TO 1800u
(200 UNITS/DIVISION)

DRILLING ON WATER BASED MUD

CONNECTIONS MARKED WITH RED TRIANGLES

DEPTH 3517'
WT 8.8
VIS 33
PH 11.1
FIL 42
CL 2500
TG, C1-C4

CAL 80
H2O 96.3
OIL 0
LGS 30.68
GELS 4/5/6
PV 3
YP 4
CK 4/0
SOL 3.4

CG 1397u

GAS SCALE: --350u TO 3150u
(350 UNITS/DIVISION)

Scale Change
TG, C1-C4

CG 1190u

Connections Cut

Slide/Rotate

ROP and Gamma

- ROP (Ft/Hr) ———
- Gamma (API) ———

SLIDE=RED
ROTATE=WHITE

ROP SCALE: 0 TO 600

GAMMA SCALE: 0 TO 250
(GAMMA DATA AS RECEIVED)

600 WOB 7.2K
250 PP 4008
RPM 0
SPM 76/76

WOB 4.6K
PP 3968
RPM 0
SPM 74/74

12:01 AM
09/03/15
FT/24HRS 4128'
DAY 3

Depth

Photographs

Sharon Springs (6400' MD - 6470' MD)

Niobrara A Chalk (6530' MD)

Lithology %

6250 TVD

**NOBLE ENERGY INC.
WELLS RANCH
AE32-655 HORIZONTAL
32-T6N-R62W
2047' FSL, 650' FEL
WELD CO., CO**

LOGGERS:
SAM STELZER
ADAM TROSS

6450

H&P 321

COMMENCED LOGGING @ 6400' MD ON 09/02/15
W/BIT #2.8.75" HDBS SF56 S/N 12686255 IN @ 636' MD

6650

6250 TVD

6450

6450

6650

SHARON SPRINGS

6469 MD 6327 TVD

NIOBRARA

6526' MD 6350 TVD

6410' MD-6440' MD: 60% SLTYSH: MEDLTGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, TR IMBD PYR, TR FREE BENT, 40% SLTYSH, INTGR POR, NO STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

6440' MD-6470' MD: 60% SLTYSH: MEDLTGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, TR IMBD PYR, TR FREE BENT, 40% SLTYSH, INTGR POR, NO STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

6470' MD-6500' MD: 50% SLTYSH: MEDLTGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, TR IMBD PYR, TR FREE BENT, 20% CHK, 10% SLTST, INTGR POR, NO STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

6500' MD-6530' MD: 70% CHK: LTGY - MEDDRKGY, SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR SLTSH, 30% MARL, TR IMBD PYR, INTGR POR, NO STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

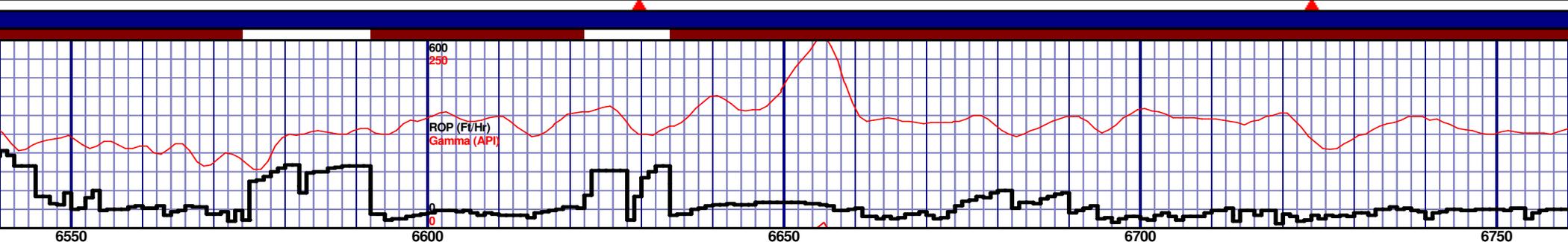
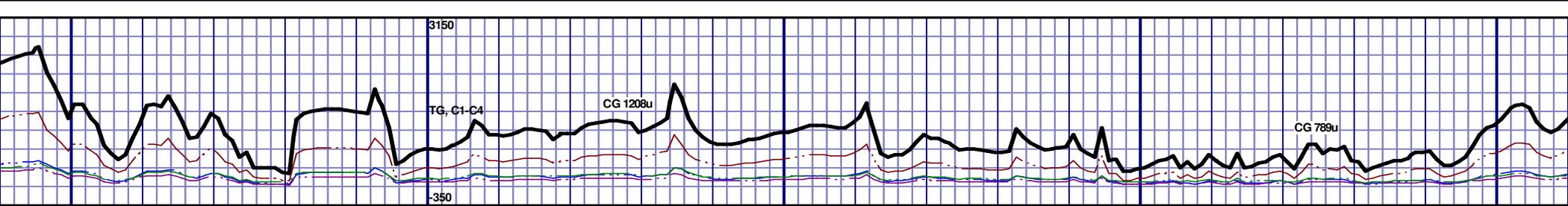
6530' MD: LTGY - MEDDRKGY, SUBBLKY, GRTY TO BRIT, TR IMBD PYR, INTGR POR, NO STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

Survey Data

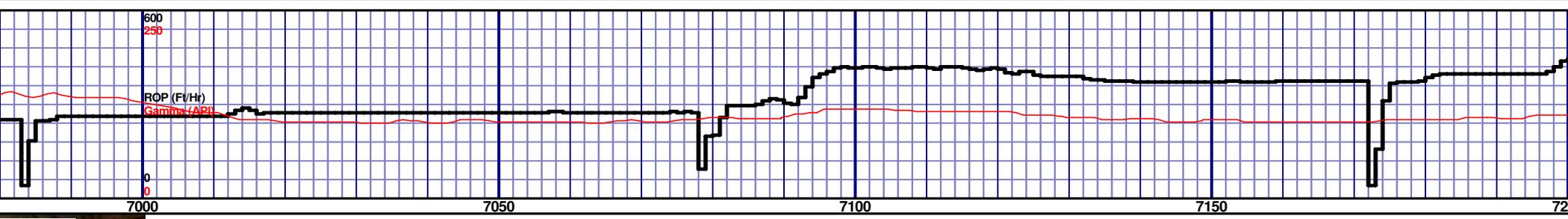
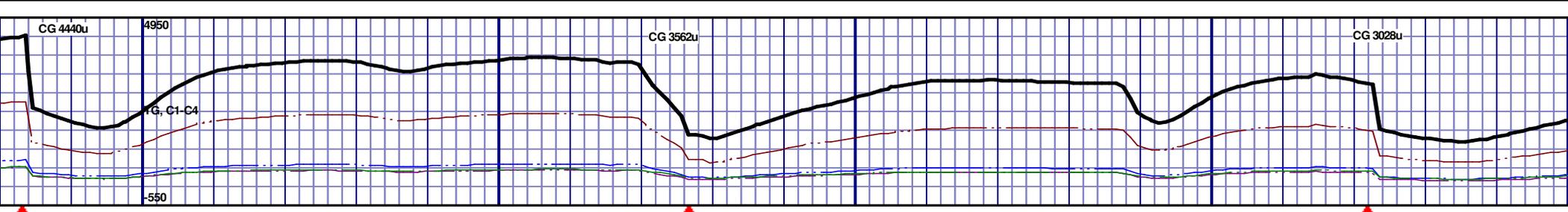
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INC 54.01 AZ 89.77
VS -128.94

MD 6479 TVD 6333.02
INC 55.1 AZ 90.46
VS -90.65

MD 6526 TVD 6358.16
INC 59.29 AZ 89.16
VS -51.16



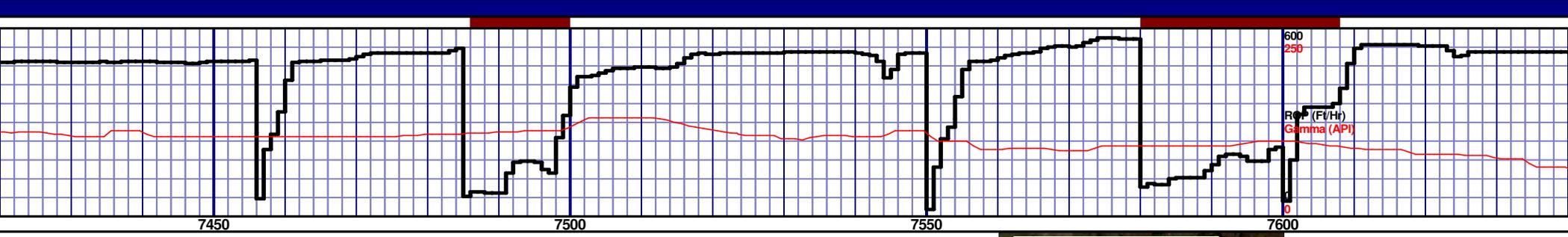
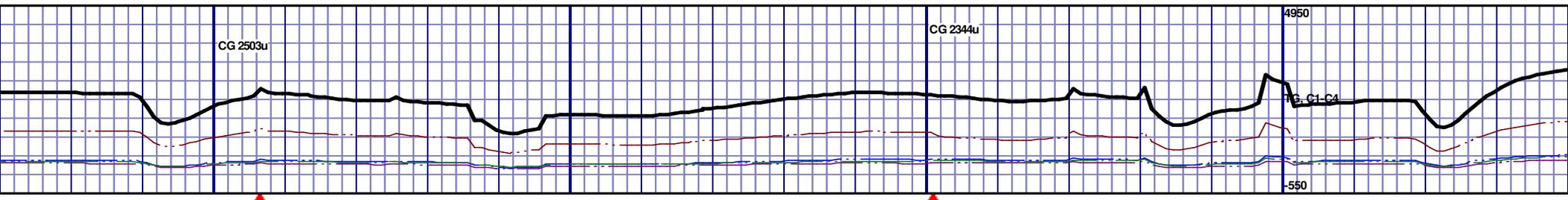
<p>NIORBARA A CHALK 6560' MD - 6590' TVD</p>	<p>NIORBARA A MARL 6578' MD 6383' TVD</p>	<p>6590' MD - 6620' MD: 70% MRL: MEDDRKGY BLKY TO SUBBLKY, GRTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, IMBD PYR, 30% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6620' MD - 6650' MD: 90% MRL: MEDDRKGY - DRKGY BLKY TO SUBBLKY, GRTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, IMBD PYR, 10% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6650' MD - 6680' MD: 90% MRL: MEDDRKGY - DRKGY SUBBLKY, GRTY TXT, FRM, TR FREE CALC, IMBD PYR, 10% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6680' MD - 6710' MD: 90% MRL: MEDDRKGY - MEDGY BLKY TO SUBBLKY, GRTY TO F TXT, FRM, TR FREE CALC, IMBD PYR, 20% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6710' MD - 6740' MD: 80% MRL: MEDDRKGY - MEDGY BLKY TO SUBBLKY, GRTY TO F TXT, FRM, TR FREE CALC, IMBD PYR, 20% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>NIORBARA B CHALK 6740' MD 6438' TVD</p>
<p>6560' MD: 75% CHK: MEDDRKGY, SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, 25% MARL, IMBD PYR, INTGR POR, NO BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6560' MD-6590' MD: 60% CHK: LTGY - MEDDRKGY, SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR IMBD CALC, TR IMBD PYR, 40% FREE MRL, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6590' MD - 6620' MD: 70% MRL: MEDDRKGY BLKY TO SUBBLKY, GRTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, IMBD PYR, 30% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6620' MD - 6650' MD: 90% MRL: MEDDRKGY - DRKGY BLKY TO SUBBLKY, GRTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, IMBD PYR, 10% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6650' MD - 6680' MD: 90% MRL: MEDDRKGY - DRKGY SUBBLKY, GRTY TXT, FRM, TR FREE CALC, IMBD PYR, 10% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6680' MD - 6710' MD: 90% MRL: MEDDRKGY - MEDGY BLKY TO SUBBLKY, GRTY TO F TXT, FRM, TR FREE CALC, IMBD PYR, 10% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6710' MD - 6740' MD: 80% MRL: MEDDRKGY - MEDGY BLKY TO SUBBLKY, GRTY TO F TXT, FRM, TR FREE CALC, IMBD PYR, 20% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>6740' MD - 6770' MD: 80% MRL: MEDDRKGY - MEDGY BLKY TO SUBBLKY, GRTY TO F TXT, FRM, TR FREE CALC, IMBD PYR, 20% FREE CHK, NO STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>
<p>MD 6574 TVD 6381.77 INC 62.66 AZ 88.65 VS -9.2</p>	<p>MD 6574 TVD 6381.77 INC 62.66 AZ 88.65 VS -9.2</p>	<p>MD 6621 TVD 6401.99 INC 66.35 AZ 88.64 VS 33.2</p>	<p>MD 6621 TVD 6401.99 INC 66.35 AZ 88.64 VS 33.2</p>	<p>MD 6669 TVD 6419.32 INC 71.31 AZ 88.9 VS 77.94</p>	<p>MD 6669 TVD 6419.32 INC 71.31 AZ 88.9 VS 77.94</p>	<p>MD 6716 TVD 6432.88 INC 75.14 AZ 90.11 VS 121.58</p>	<p>MD 6716 TVD 6432.88 INC 75.14 AZ 90.11 VS 121.58</p>



6250 TVD											
6450											
6650											
<p>LTGY - MEDDRKGY, BLKY M TO BRIT, TR FREE NO STN, TR BLSHWT ST STRMG CUT, HVY</p>			<p>7000' MD-7050' MD: 60% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>				<p>7050' MD-7100' MD: 65% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>			<p>7100' MD-7150' MD: 70% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	
<p>7150' MD-7200' MD: 60% MRL: MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, IMBD PYR, 40% FREE CHK, TR GRYSHBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>											

MD 7013 TVD 6452.41
INC 89.54 AZ 87.98
VS 417.01

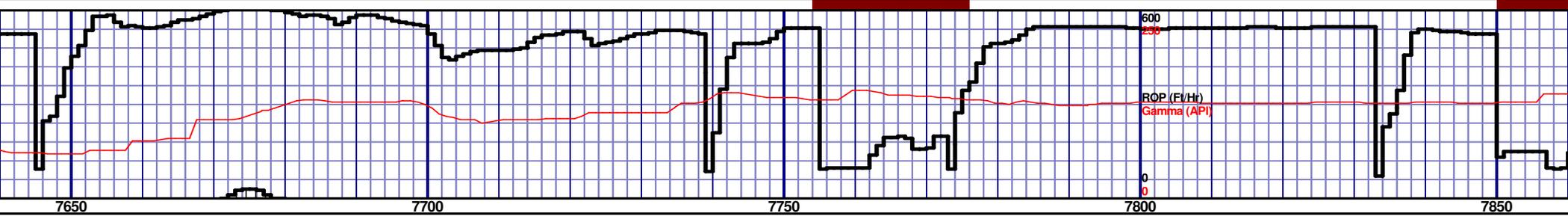
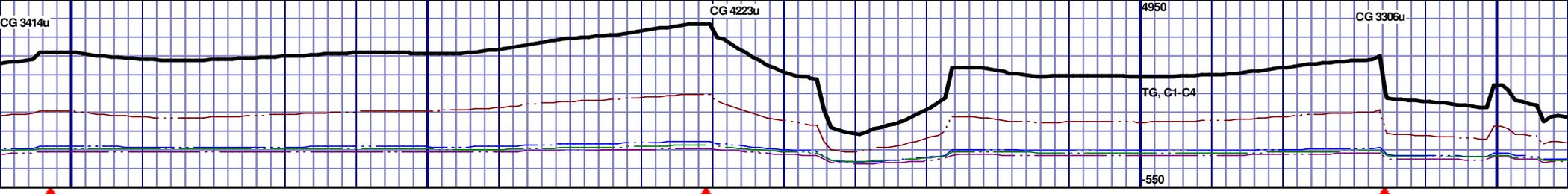
MD 7107 TVD 6452.89
INC 89.88 AZ 88.31
VS 510.98



<p>CHK: MOTT LTGY- MEDDRKGY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>															
<p>7450' MD-7500' MD: 65% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>				<p>7500' MD-7550' MD: 70% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>				<p>7550' MD-7600' MD: 70% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>				<p>7600' MD-7650' MD: 90% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 10% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>			

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 INC 90.71 AZ 82.76
 VS 887.99

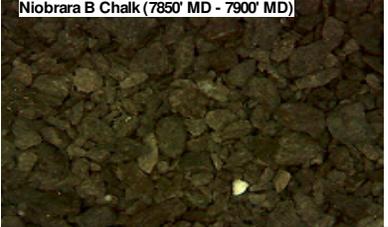
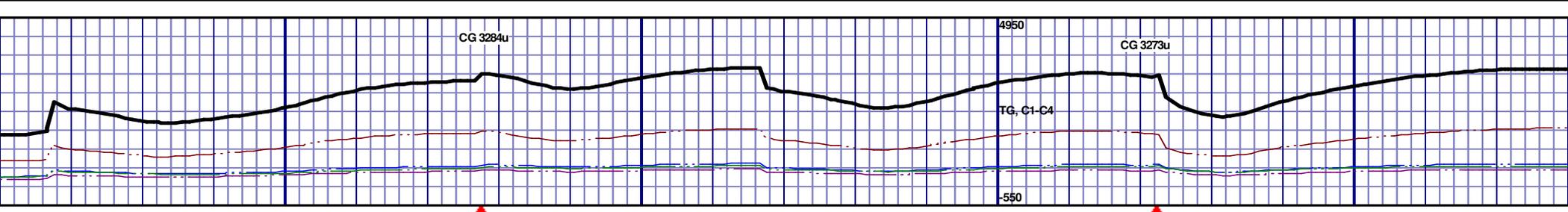
MD 7579 TVD 6448.35
 INC 91.88 AZ 84.13
 VS 981.39



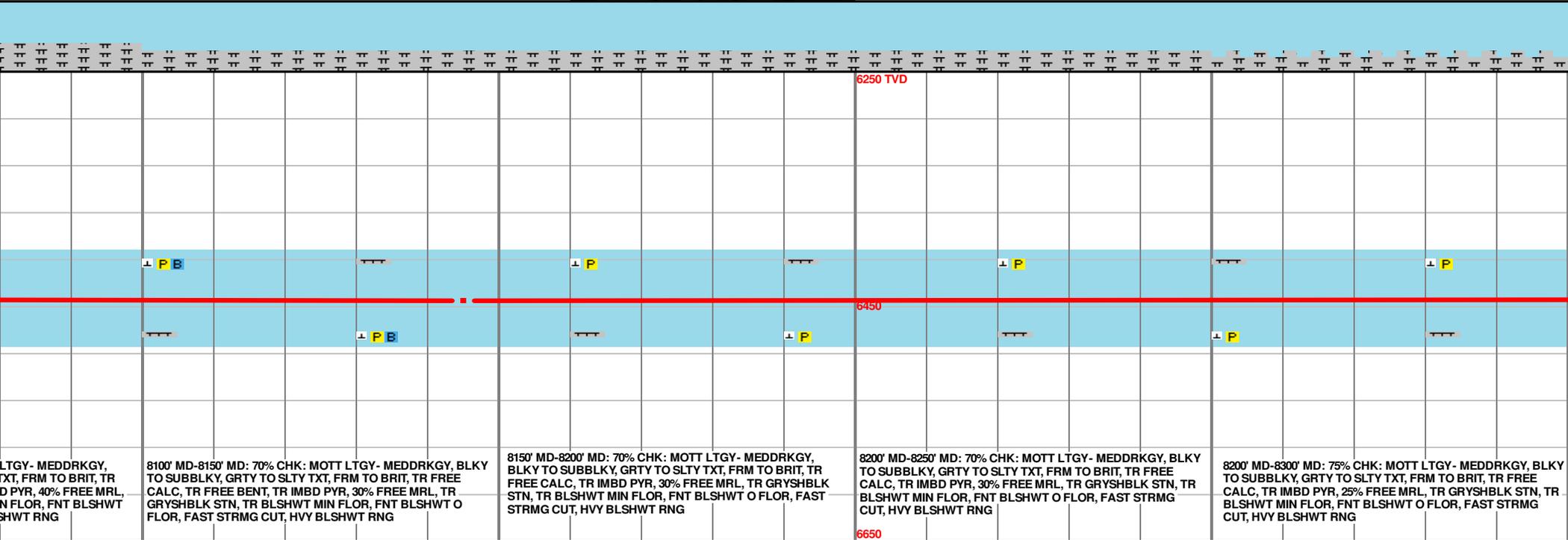
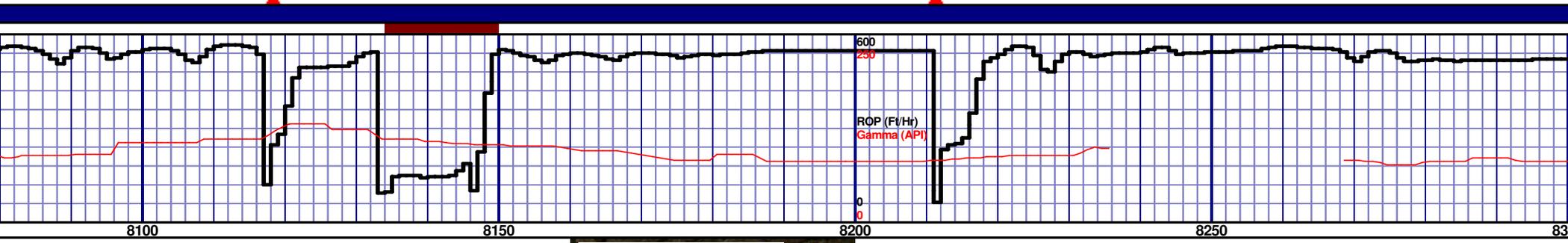
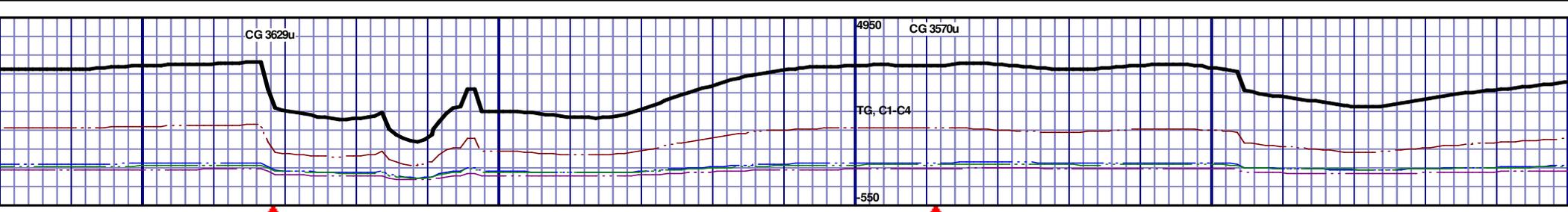
<p>6250 TVD</p>						
<p>7650' MD-7700' MD: 60% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>						
<p>7700' MD-7750' MD: 60% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>		<p>7750' MD-7800' MD: 60% MRL: MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, IMBD PYR, 40% FREE CHK, TR GRYSBLK STN, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>			<p>7800' MD-7850' MD: 70% MRL: MEDDRKGY - MEDLTGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, IMBD PYR, 30% FREE CHK, TR GRYSBLK STN, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	
<p>6650</p>						

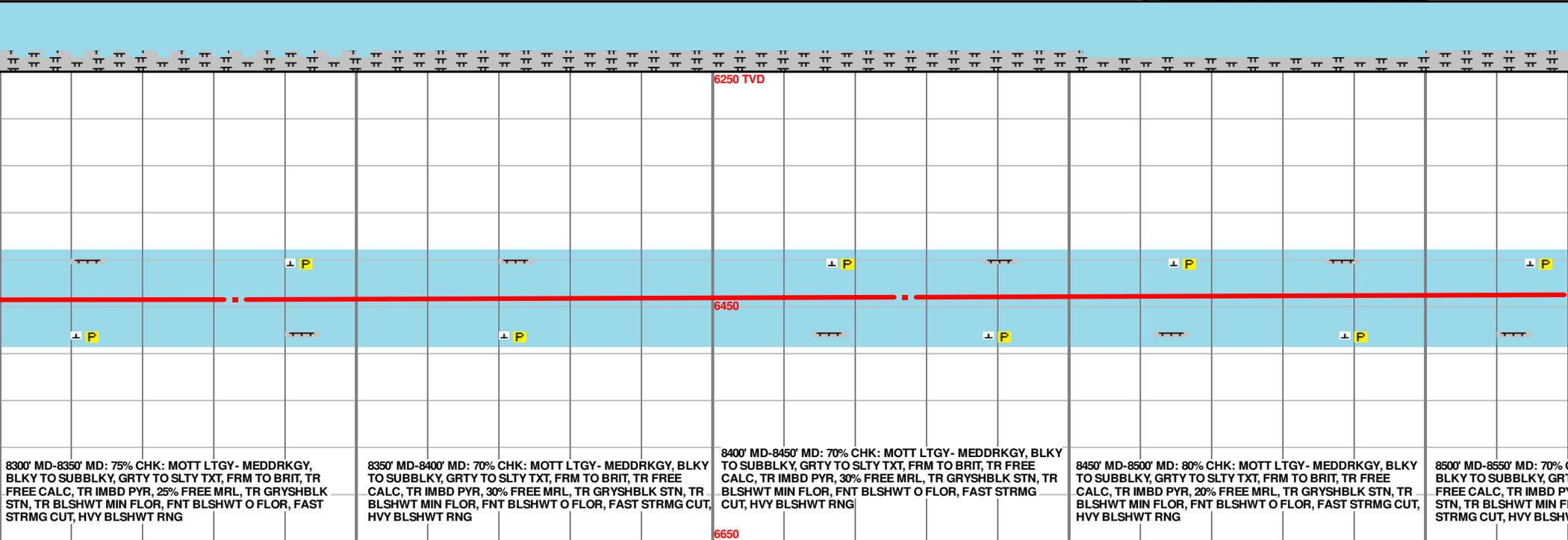
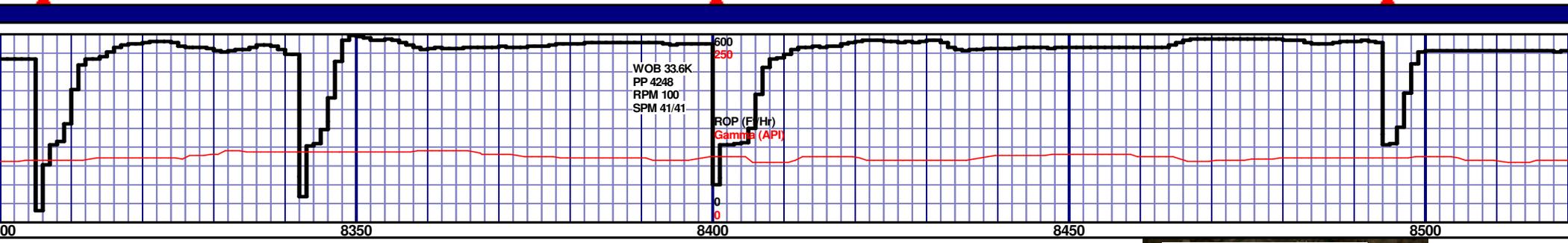
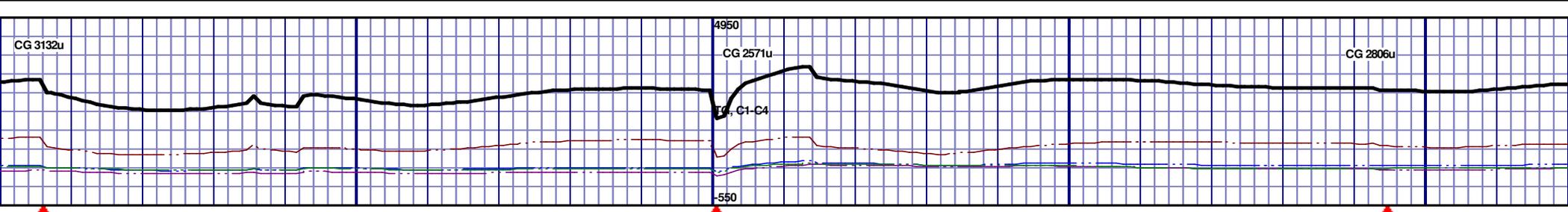
MD 7673 TVD 6444.77
 INC 92.5 AZ 85.78
 VS 1074.99

MD 7767 TVD 6441.51
 INC 91.48 AZ 86.67
 VS 1168.76



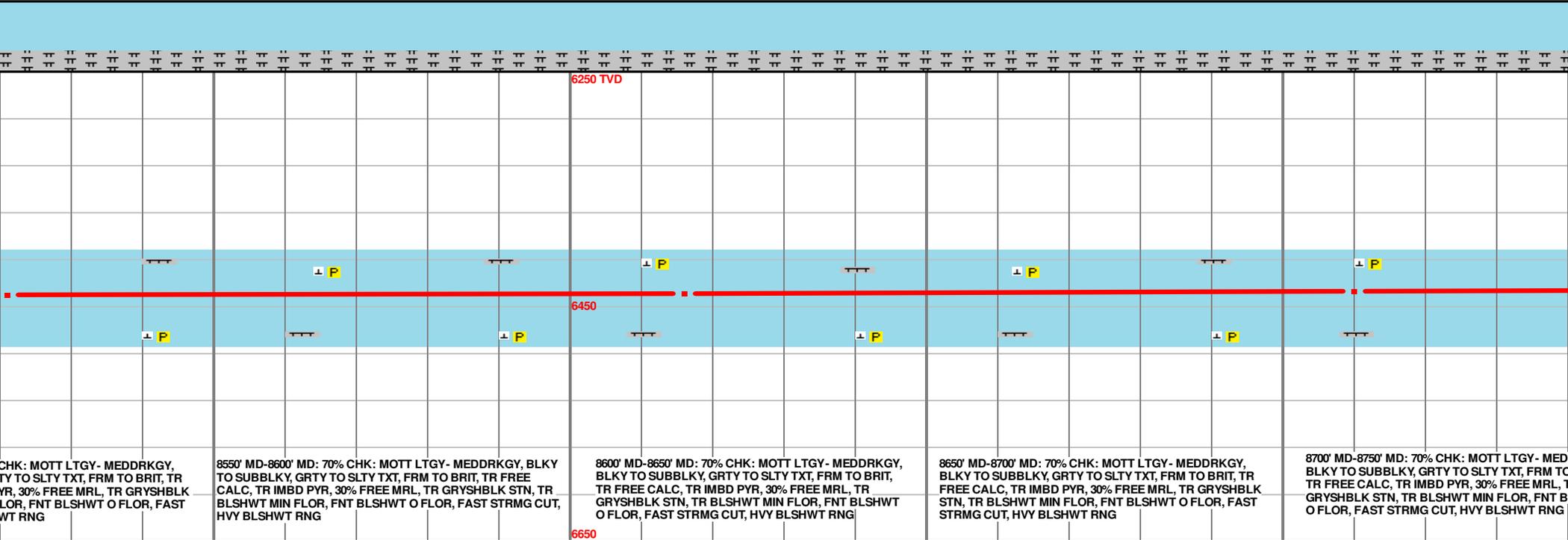
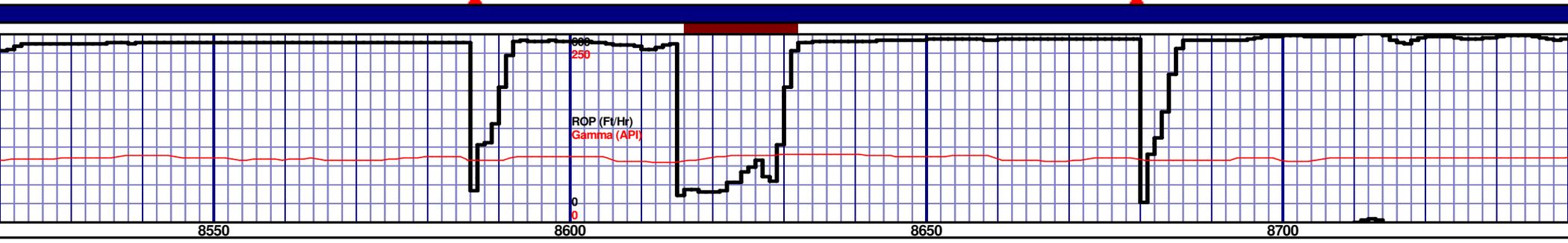
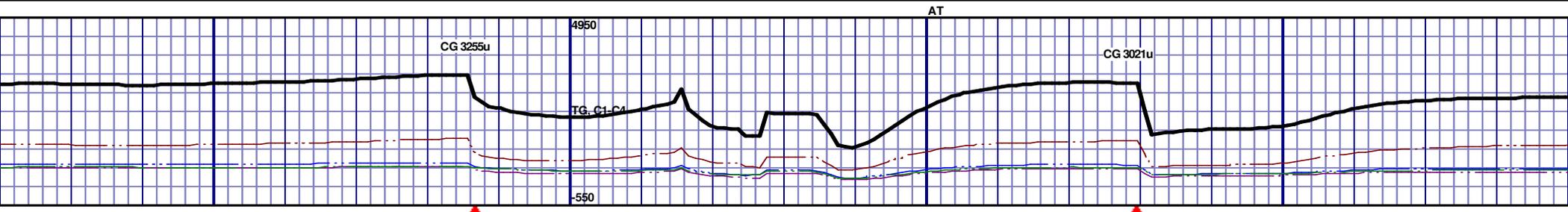
<p>6250 TVD</p>											
<p>6450</p>											
<p>6650</p>											
<p>7850' MD - 7900' MD: 70% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>		<p>7900' MD - 7950' MD: 60% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>			<p>7950' MD - 8000' MD: 75% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, TR IMBD PYR, 25% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>			<p>8000' MD - 8050' MD: 70% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>		<p>8050' MD - 8100' MD: 60% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR FREE BENT, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	

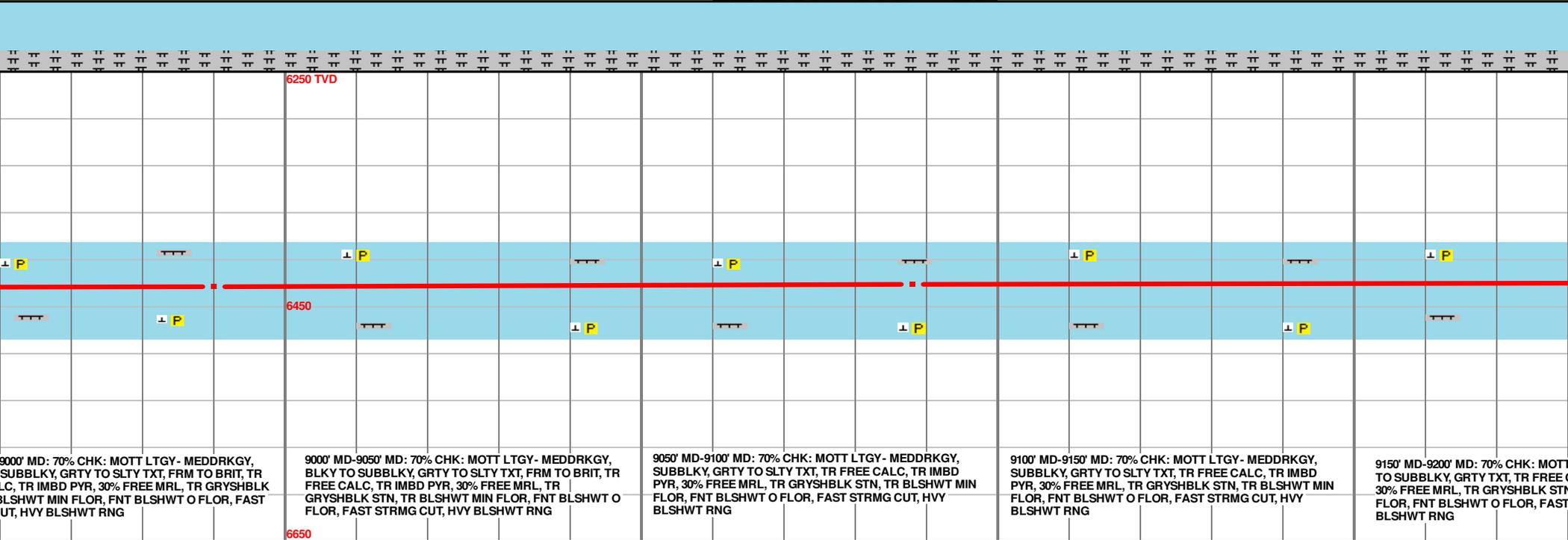
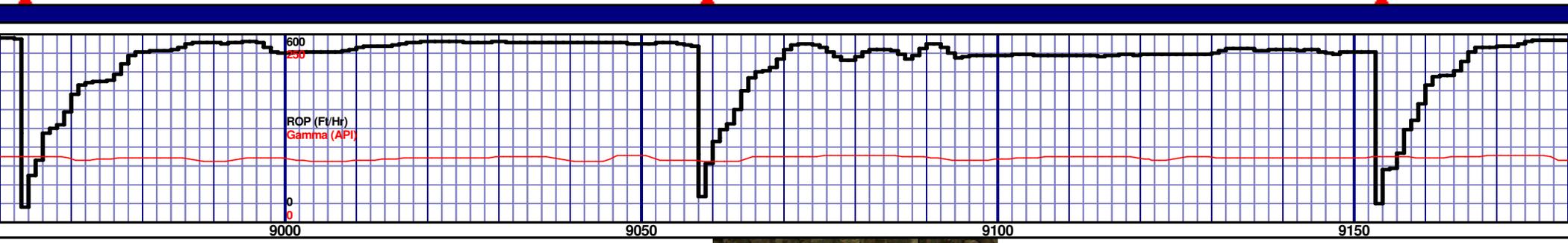
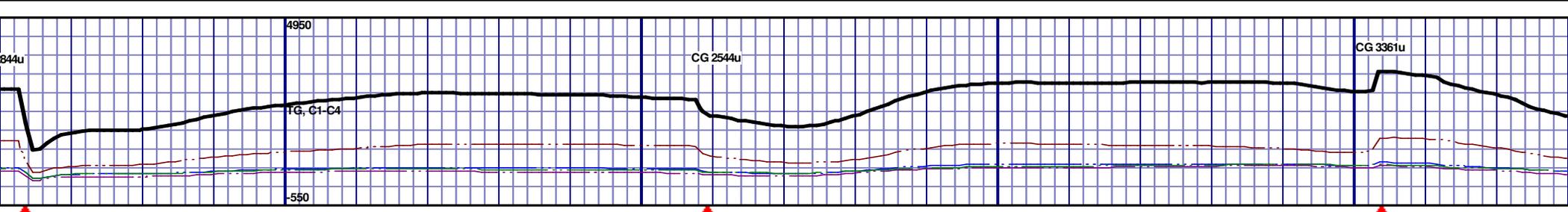




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 VS 1734.24

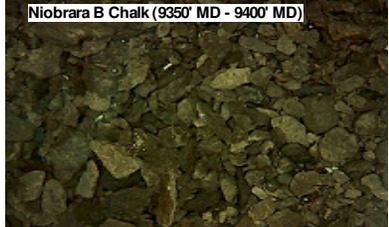
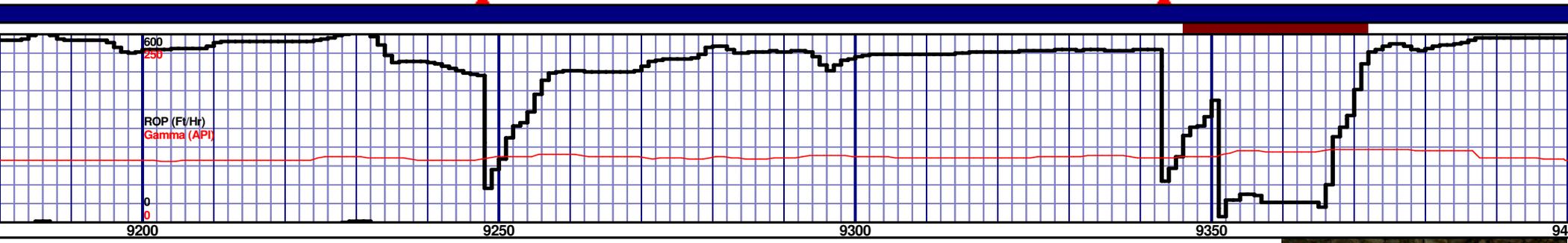
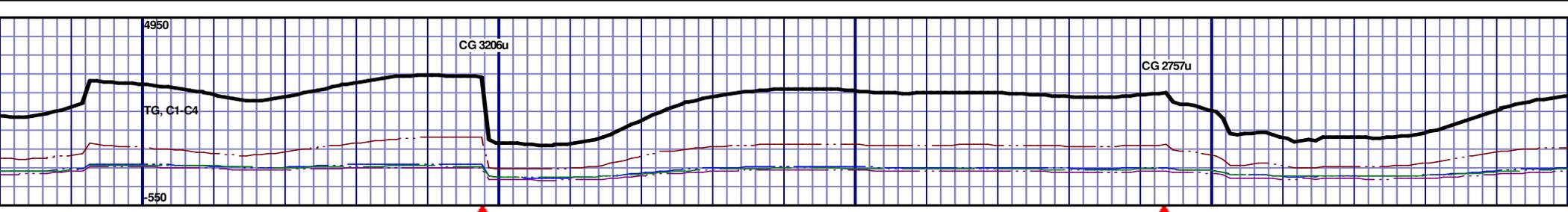
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 INC 91.14 AZ 87.47
 VS 1828.16





MD 8990 TVD 6432.5
 INC 90.65 AZ 88.73
 VS 2391.83

MD 9088 TVD 6431.33
 INC 90.71 AZ 89.25
 VS 2489.81

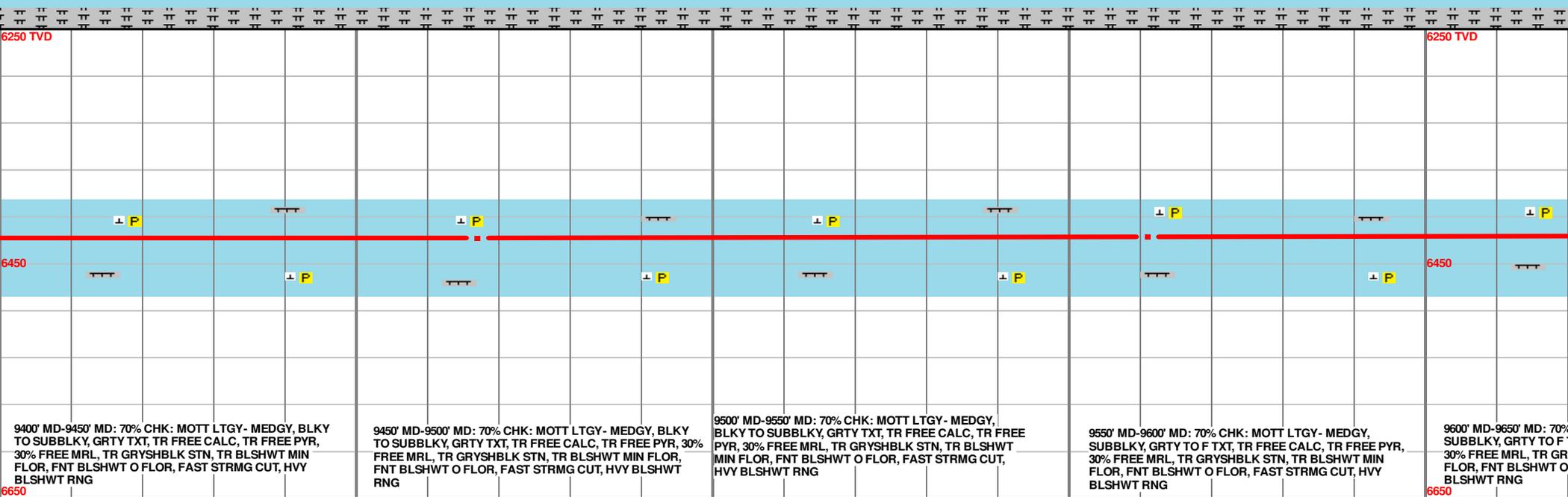
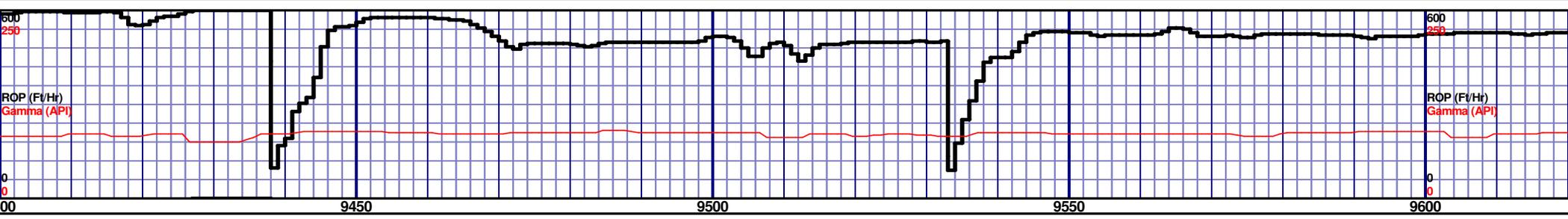
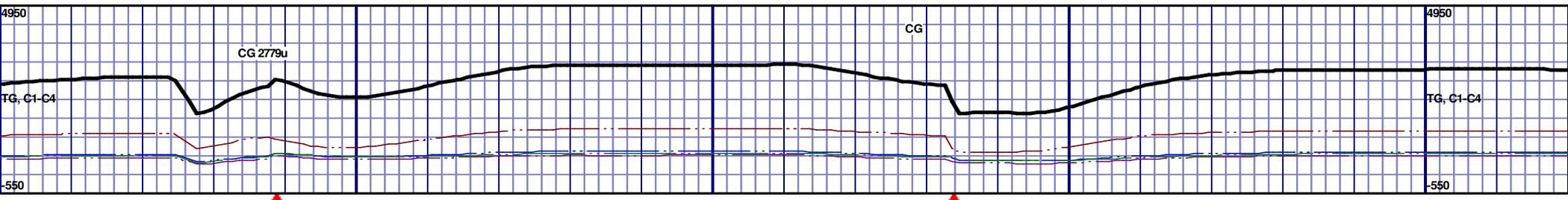


6250 TVD														
6450														
6650														
<p>LTGY - MEDGY, BLKY CALC, TR FREE PYR, N, TR BLSHW MIN STRMG CUT, HVY</p>			<p>9200' MD-9250' MD: 70% CHK: MOTT LTGY - MEDGY, BLKYTO SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHW MIN FLOR, FNT BLSHW O FLOR, FAST STRMG CUT, HVY BLSHW RNG</p>			<p>9250' MD-9300' MD: 70% CHK: MOTT LTGY - MEDGY, BLKYTO SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHW MIN FLOR, FNT BLSHW O FLOR, FAST STRMG CUT, HVY BLSHW RNG</p>			<p>9300' MD-9350' MD: 80% CHK: MOTT LTGY - MEDGY, BLKYTO SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 20% FREE MRL, TR GRYSBLK STN, TR BLSHW MIN FLOR, FNT BLSHW O FLOR, FAST STRMG CUT, HVY BLSHW RNG</p>			<p>9350' MD-9400' MD: 80% CHK: MOTT LTGY - MEDGY, BLKY TO SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 20% FREE MRL, TR GRYSBLK STN, TR BLSHW MIN FLOR, FNT BLSHW O FLOR, FAST STRMG CUT, HVY BLSHW RNG</p>		

MD 9182 TVD 6430.27
INC 90.59 AZ 89.01
VS 2583.79

MD 9277 TVD 6429.18
INC 90.74 AZ 89.59
VS 2678.78

MD 9372 TVD 6428.25
INC 90.37 AZ 87.78
VS 2773.75



9400' MD-9450' MD: 70% CHK: MOTT LTGY- MEDGY, BLKY TO SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

9450' MD-9500' MD: 70% CHK: MOTT LTGY- MEDGY, BLKY TO SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

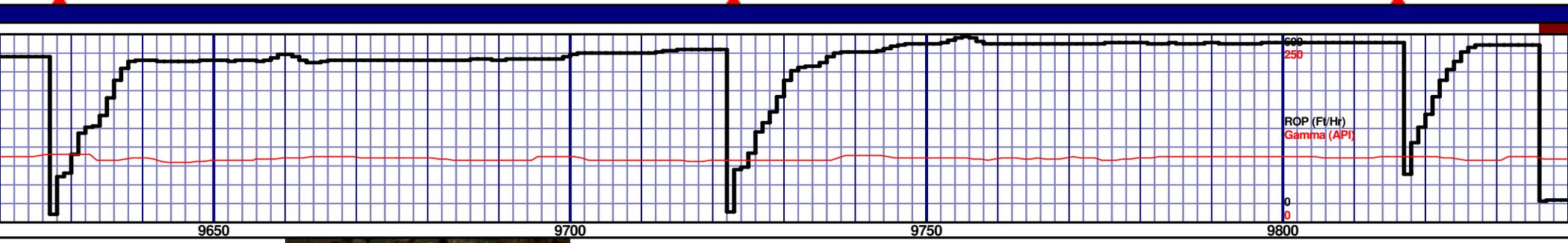
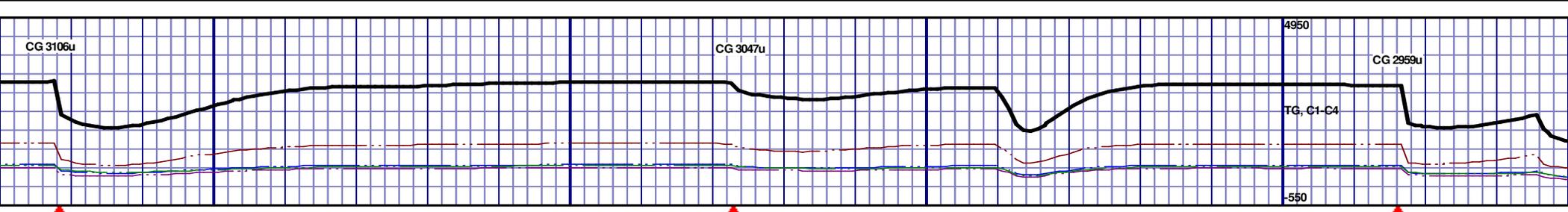
9500' MD-9550' MD: 70% CHK: MOTT LTGY- MEDGY, BLKY TO SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

9550' MD-9600' MD: 70% CHK: MOTT LTGY- MEDGY, SUBBLKY, GRTY TO F TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

9600' MD-9650' MD: 70% CHK: MOTT LTGY- MEDGY, SUBBLKY, GRTY TO F TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG

MD 9467 TVD 6427.51
 INC 90.52 AZ 87.26
 VS 2868.65

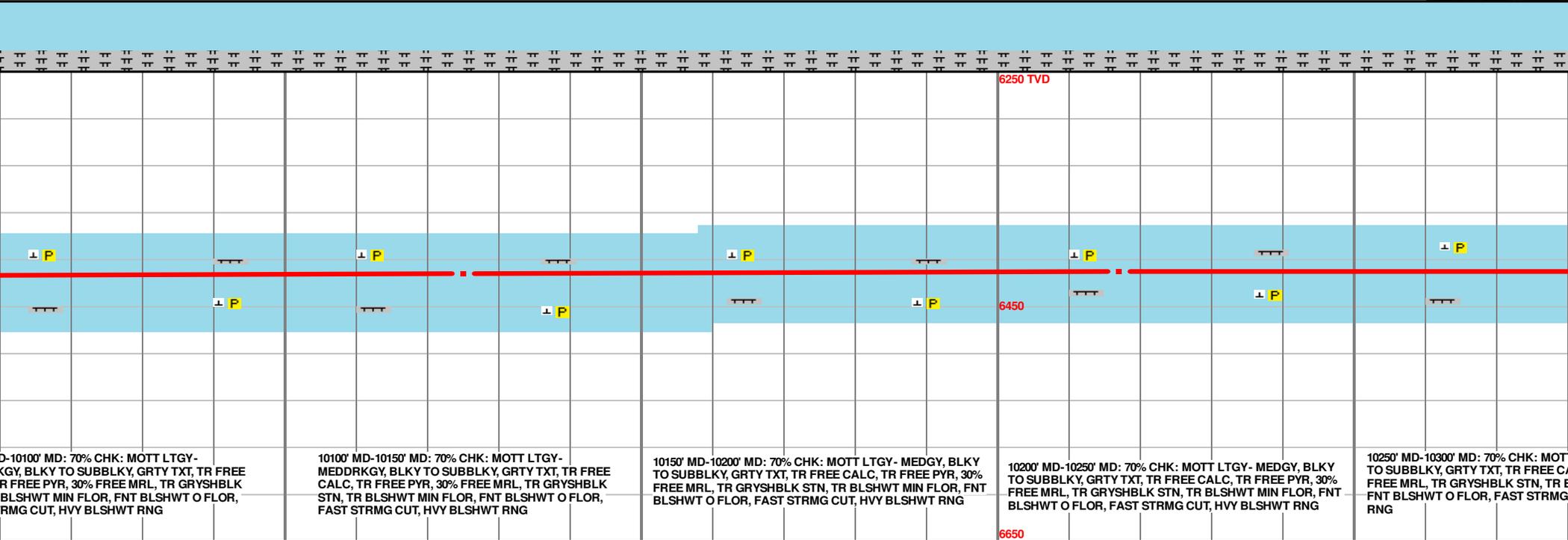
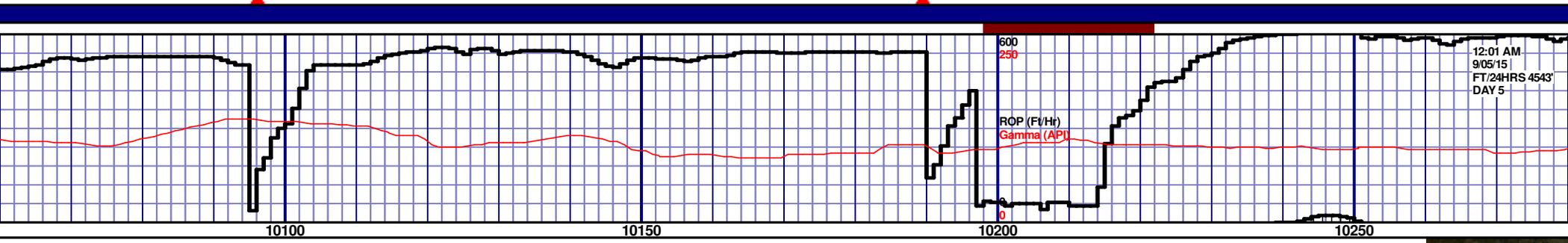
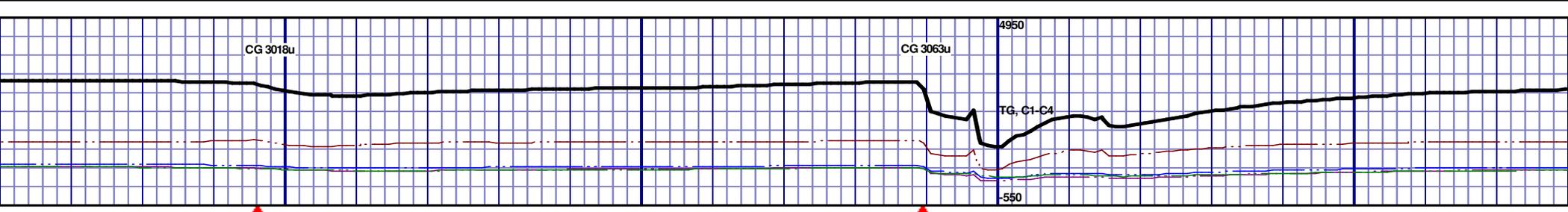
MD 9561 TVD 6426.68
 INC 90.49 AZ 87.85
 VS 2962.56



6250 TVD				
9650' MD-9700' MD: 70% CHK: MOTT LTGY- MEDDRKGY, SUBBLKY, GRTY TO F TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	9700' MD-9750' MD: 70% CHK: MOTT LTGY- MEDDRKGY, SUBBLKY, GRTY TO F TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	9750' MD-9800' MD: 70% CHK: MOTT LTGY- MEDDRKGY, SUBBLKY, GRTY TO F TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	9800' MD-9850' MD: 60% CHK: MOTT MEDGY - DR SUBBLKY, GRTY TO F TXT, TR FREE CALC, TR FREE PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	
6450				
6650				

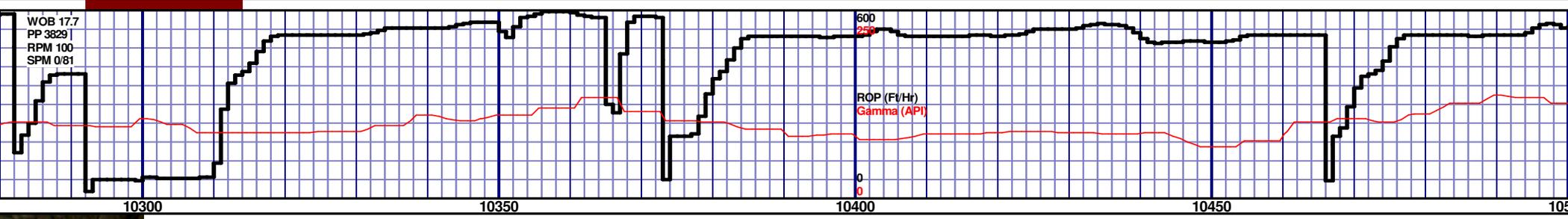
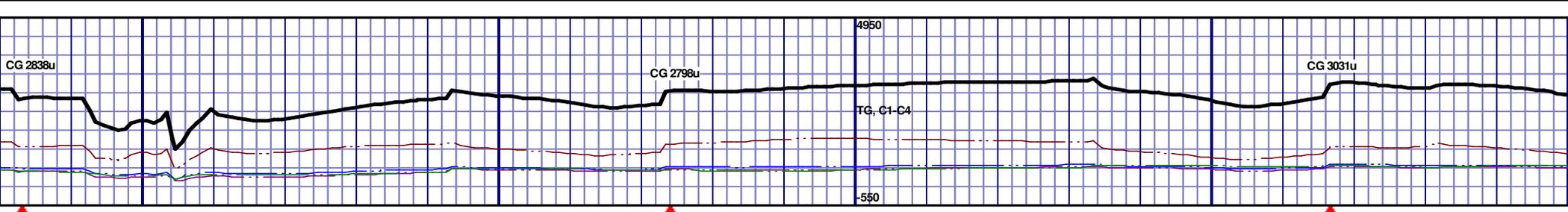
MD 9656 TVD 6426.07
 INC 90.25 AZ 87.89
 VS 3057.5

MD 9750 TVD 6425.46
 INC 90.49 AZ 90.04
 VS 3151.47



MD 10125 TVD 6421.57
 INC 91.88 AZ 88.79
 VS 3526.37

MD 10217 TVD 6419.69
 INC 90.46 AZ 88.18
 VS 3618.32

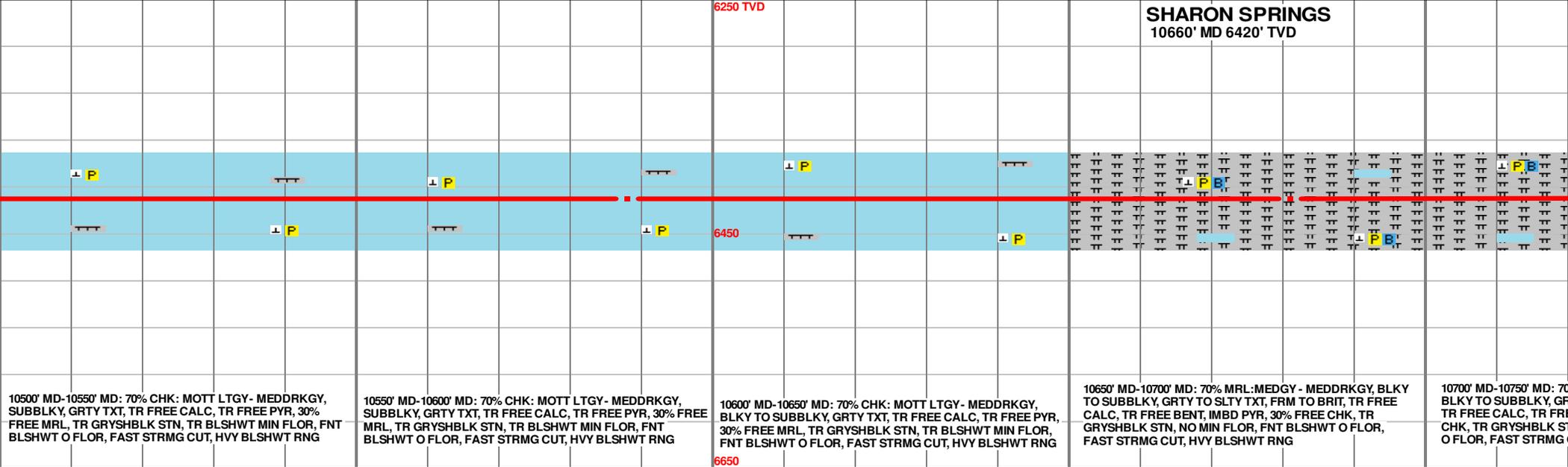
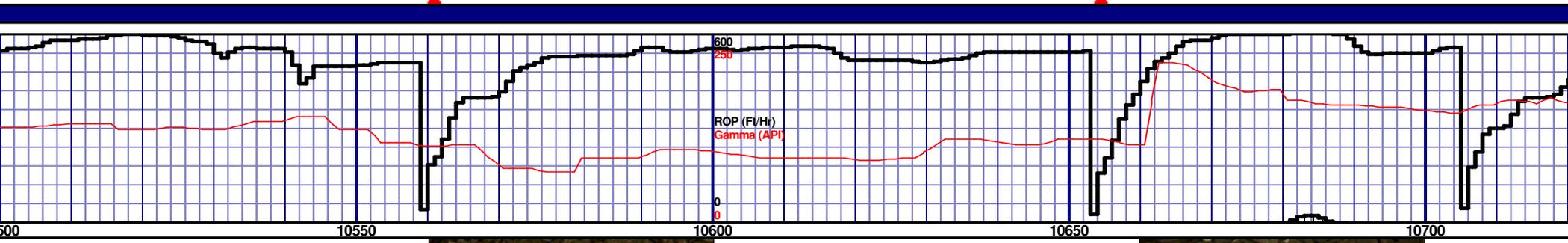
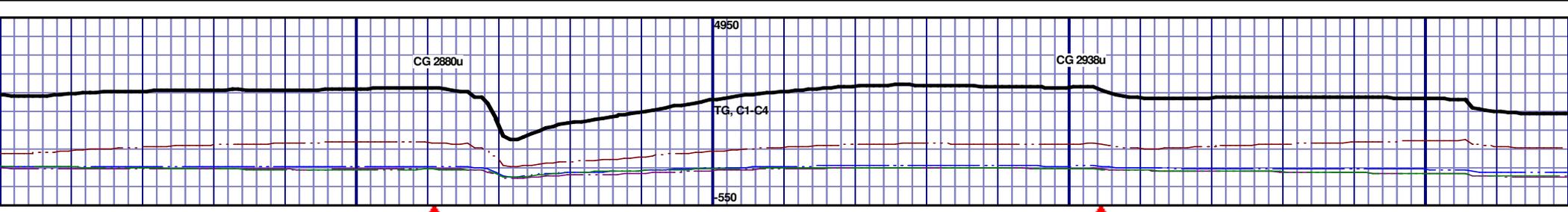


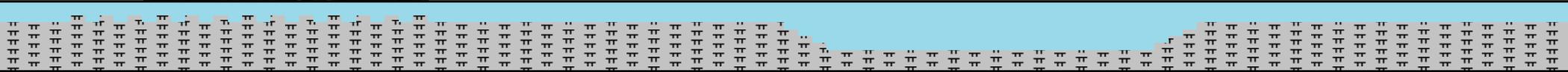
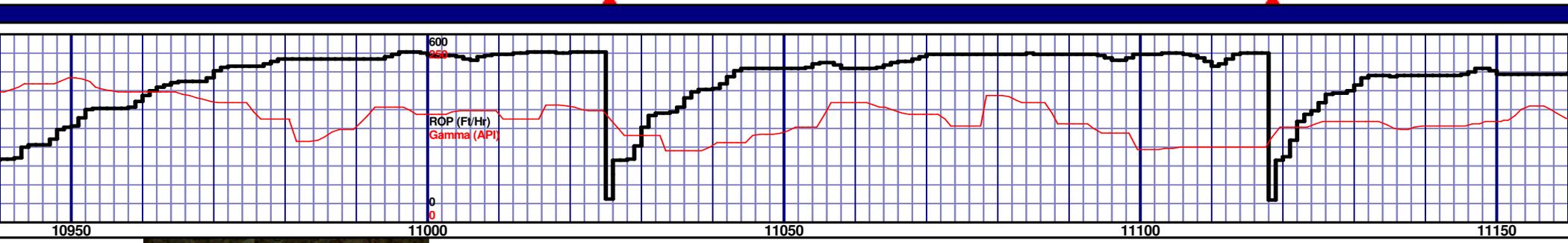
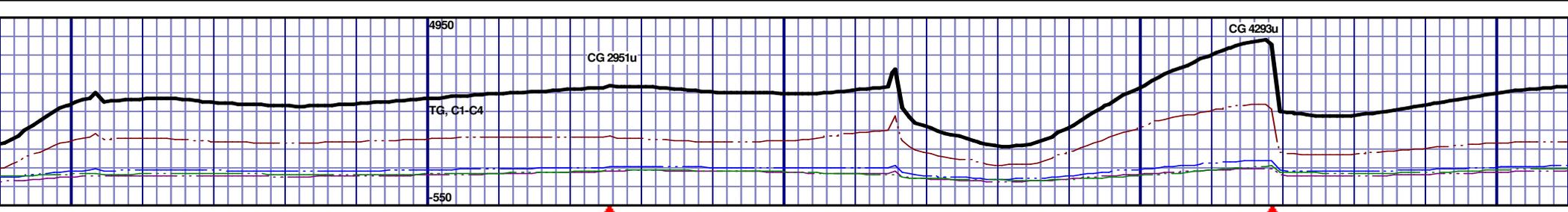
<p>6250 TVD</p>				<p>6450</p>				<p>6650</p>							
<p>10300' MD-10350' MD: 75% CHK: MOTT LTGY- MEDGY, BLKY TO SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 25% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>				<p>10350' MD-10400' MD: 60% CHK: MOTT LTGY- MEDDRKGY, SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>				<p>10400' MD-10450' MD: 70% CHK: MOTT LTGY- MEDDRKGY, SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>				<p>10450' MD-10500' MD: 70% CHK: MOTT LTGY- MEDDRKGY, SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>			

MD 10309 TVD 6419.57
INC 89.69 AZ 87.68
VS 3710.25

MD 10402 TVD 6419.87
INC 89.94 AZ 87.34
VS 3803.17

MD 10
INC 8
VS 38





6250 TVD

6450

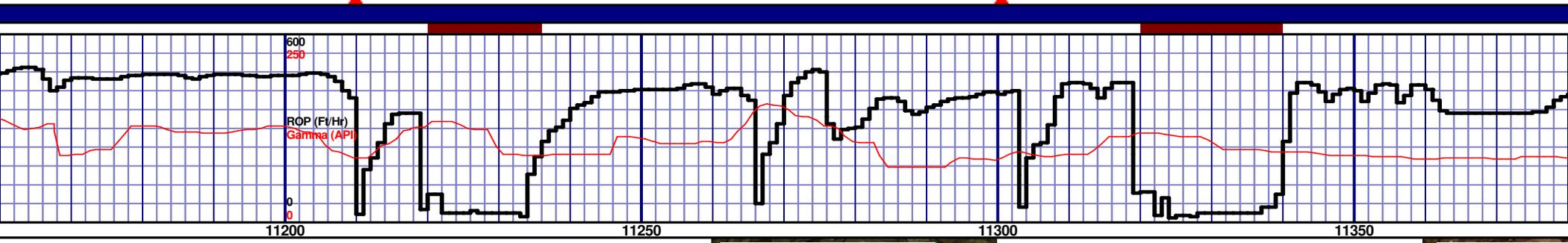
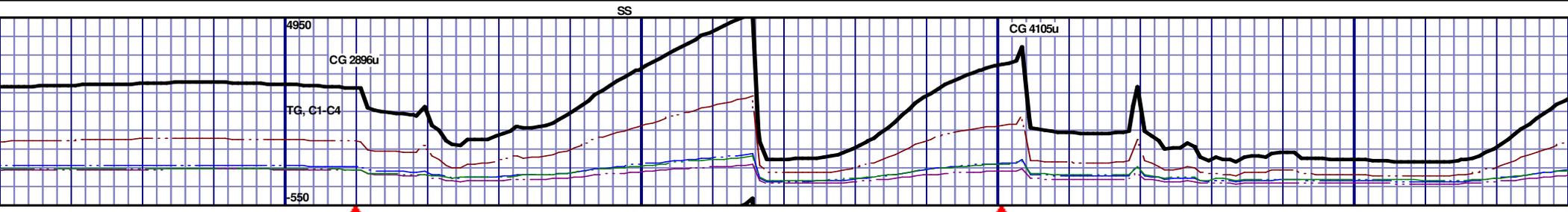
6650

<p>10950' MD-11000' MD: 75% MRL: MEDGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM, TR FREE CALC, TR FREE BENT, IMBD PYR, 25% FREE CHK, TR GRYSHBLK STN, NO MIN FLOR, FNT BLSHW O FLOR, FAST STRMG CUT, HVY BLSHW RNG</p>	<p>11000' MD-11050' MD: 70% MRL: MEDGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM, TR FREE CALC, TR FREE BENT, IMBD PYR, 30% FREE CHK, TR GRYSHBLK STN, NO MIN FLOR, FNT BLSHW O FLOR, FAST STRMG CUT, HVY BLSHW RNG</p>	<p>11050' MD-11100' MD: 70% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TXT, TR FREE CALC, TR FREE PYR, TR FREE BENT, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHW MIN FLOR, FNT BLSHW O FLOR, FAST STRMG CUT, HVY BLSHW RNG</p>	<p>11100' MD-11150' MD: 70% MRL: MEDGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM, TR FREE CALC, TR FREE BENT, IMBD PYR, 30% FREE CHK, TR GRYSHBLK STN, NO MIN FLOR, FNT BLSHW O FLOR, FAST STRMG CUT, HVY BLSHW RNG</p>	<p>11150' MD- TO SUBBL FREE BEN NO MIN FL HVY BLSH</p>
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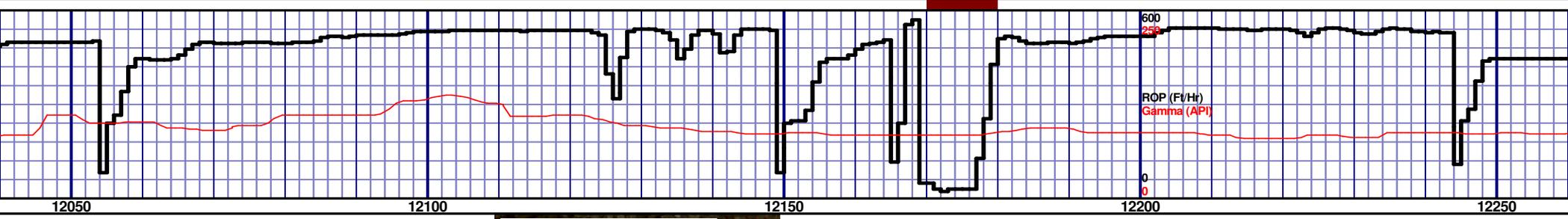
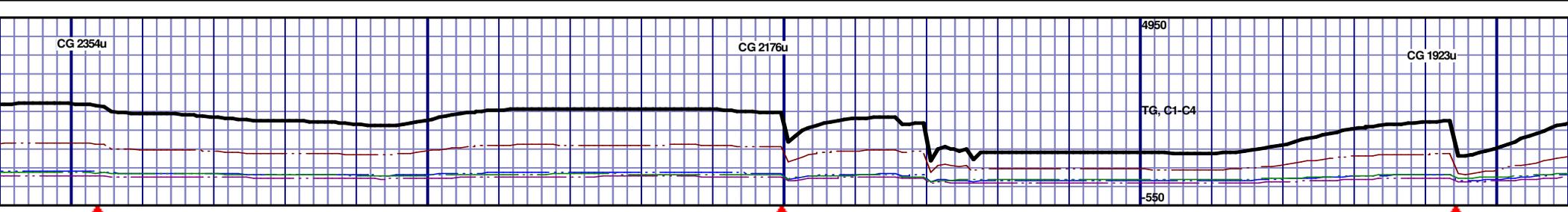
MD 10959 TVD 6422.35
INC 89.23 AZ 87.65
VS 4359.72

MD 11052 TVD 6423.97
INC 88.77 AZ 87.49
VS 4452.63

MD 11144 TVD 6426.5
INC 88.06 AZ 87.63
VS 4543.89

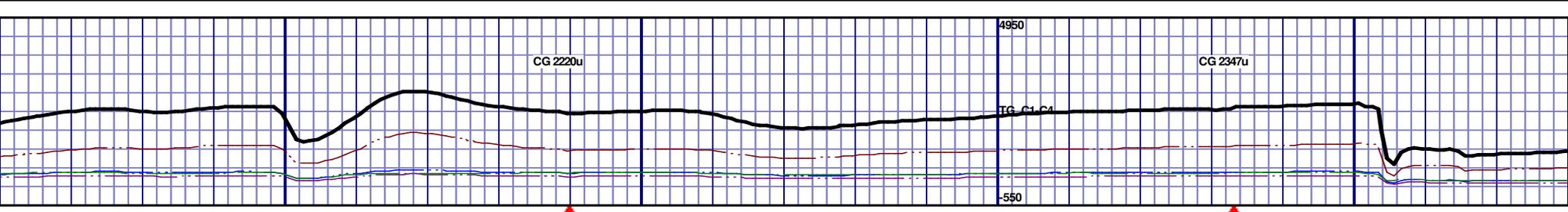


<p>6250 TVD</p> <p>NIOBARRA A CHALK 11282' MD 6429' TVD</p>									
<p>11200' MD: 70% MRL: MEDGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM, TR FREE CALC, TR T, IMBD PYR, 30% FREE CHK, TR GRYSBLK STN, OR, FNT BLSHWT O FLOR, FAST STRMG CUT, WT RNG</p>									
<p>11250' MD-11250' MD: 60% MRL: MEDGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM, TR IMBD CALC, TR FREE BENT, IMBD PYR, 40% FREE CHK, TR GRYSBLK STN, NO MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>									
<p>11250' MD-11300' MD: 70% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TXT, TR IMBD CALC, TR FREE PYR, TR FREE BENT, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>									
<p>11300' MD-11350' MD: 70% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TXT, TR IMBD CALC, TR FREE PYR, TR FREE BENT, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>									
<p>11350' MD-11400' MD: 70% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TXT, TR IMBD CALC, TR FREE PYR, TR FREE BENT, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>									
<p>6650</p>									

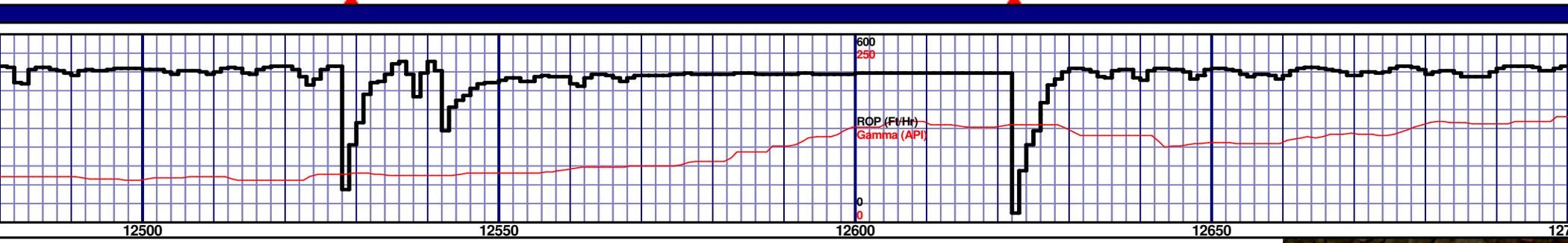
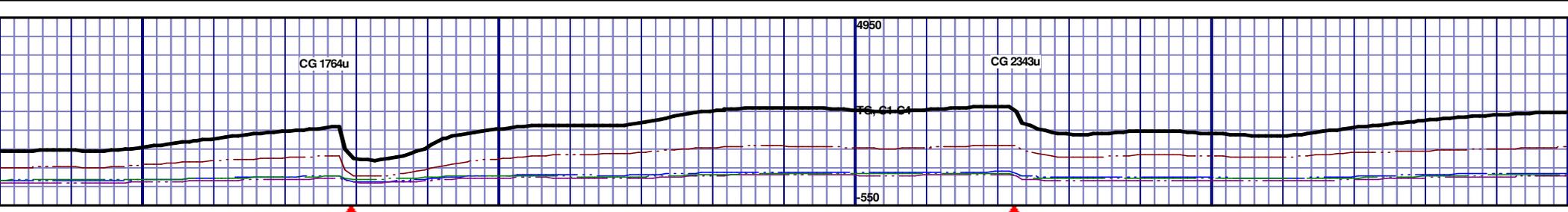


NIORARA B CHALK
12112' MD 6422' TVD

GY, BLKY TO C, TR FREE STN, TR STRMG CUT,	12050' MD-12100' MD: 75% MRL: MEDGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM, TR FREE CALC, TR FREE BENT, IMBD PYR, 25% FREE CHK, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	12100' MD-12150' MD: 60% MRL: MEDGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM, TR FREE CALC, TR FREE BENT, IMBD PYR, 40% FREE CHK, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	12150' MD-12200' MD: 60% MRL: MEDGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM, TR FREE CALC, TR FREE BENT, IMBD PYR, 40% FREE CHK, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	12200' MD-12250' MD: 60% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	12250' MD-12300' MD: 60% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG
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<p>6250 TVD</p>				
<p>12300' MD: 70% CHK: MOTT LTGY- MEDDRKGY, SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK SHWT MIN FLOR, FNT BLSHWT O FLOR, FAST T, HVY BLSHWT RNG</p>	<p>12300' MD-12350' MD: 60% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>12350' MD-12400' MD: 60% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>12400' MD-12450' MD: 60% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>12450' MD-12500' MD: 65% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>
<p>6450</p>				
<p>6650</p>				

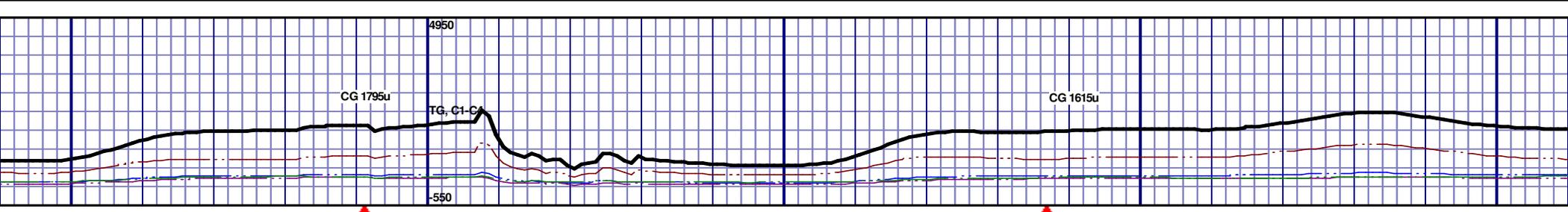


6250 TVD				
P B	P B	P B	P B	P B
P B	P B	P B	P B	P B
<p>LTGY - MEDDRKGY, CT, FRM TO BRIT, TR MRL, TR GRYSBLK SHWT O FLOR, FAST</p>	<p>12500' MD-12550' MD: 65% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>12550' MD-12600' MD: 80% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 20% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>12600' MD-12650' MD: 75% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 25% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>12650' MD-12700' MD: 70% CHK: MOTT LTGY - MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>

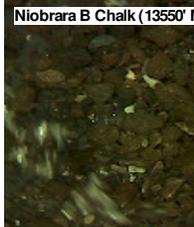
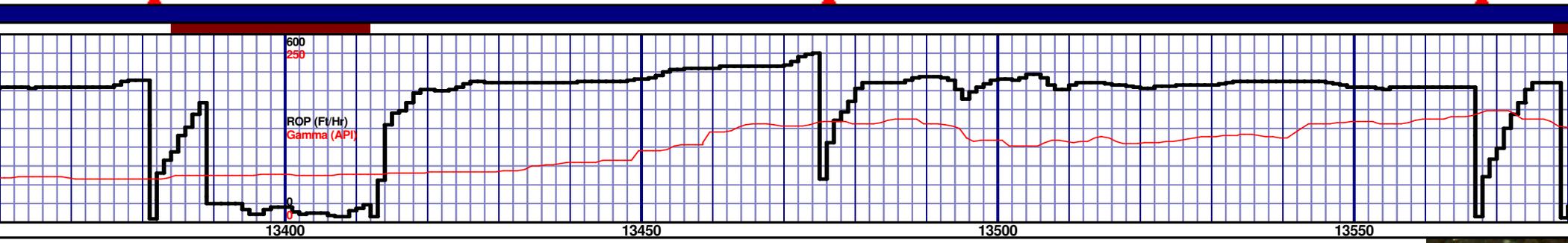
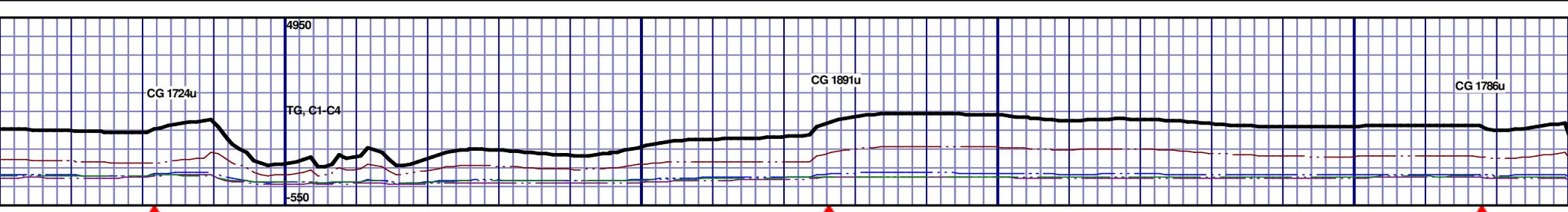
6650

MD 12557 TVD 6412.68
 INC 91.2 AZ 89.42
 VS 5956.27

MD 12651 TVD 6409.98
 INC 92.09 AZ 89.49
 VS 6050.23



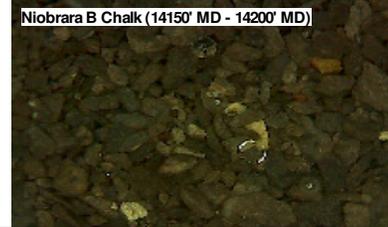
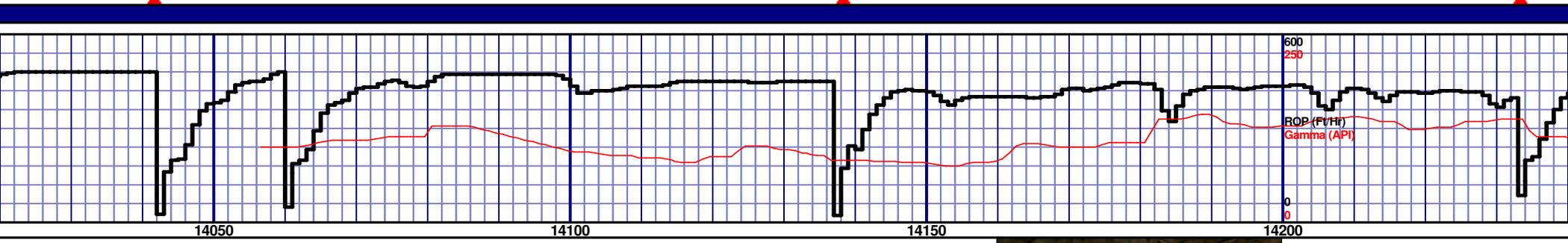
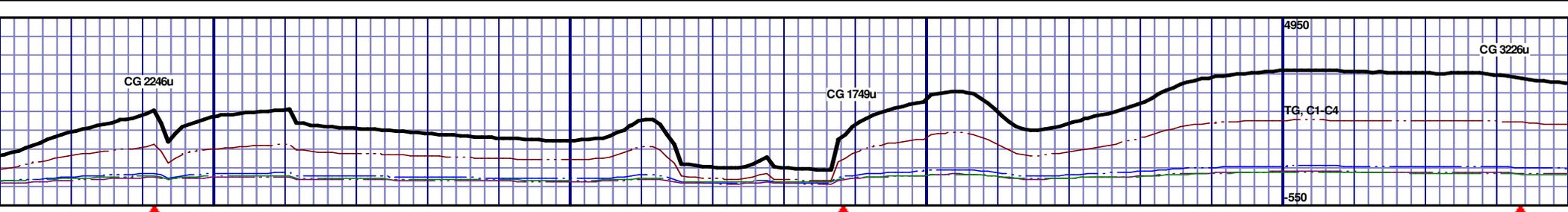
6250 TVD	6450	6650		
13150' MD-13200' MD: 60% MRL: LTGY- MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM, TR FREE CALC, TR FREE BENT, IMBD PYR, 40% FREE CHK, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	13200' MD-13250' MD: 65% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	13250' MD-13300' MD: 70% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	13300' MD-13350' MD: 70% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG	13350' MD-13350' MD: 70% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG



6250 TVD				
P B	P B	P B	P B	P B
6450				
6650				
13400' MD-13450' MD: 60% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLO, FAST STRMG CUT, HVY BLSHWT RNG	13450' MD-13500' MD: 70% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLO, FAST STRMG CUT, HVY BLSHWT RNG	13500' MD-13550' MD: 70% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLO, FAST STRMG CUT, HVY BLSHWT RNG	13550' MD-13600' MD: 70% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLO, FAST STRMG CUT, HVY BLSHWT RNG	13600' MD-13650' MD: 70% CHK: MOTT LTGY- MEDDRKGY, BLKY TO SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLO, FAST STRMG CUT, HVY BLSHWT RNG

MD 13408 TVD 6407.47
 INC 90.89 AZ 88.5
 VS 6806.44

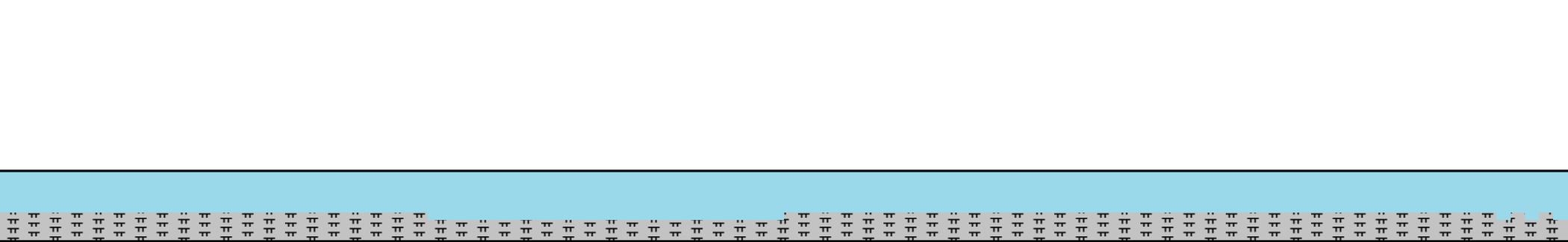
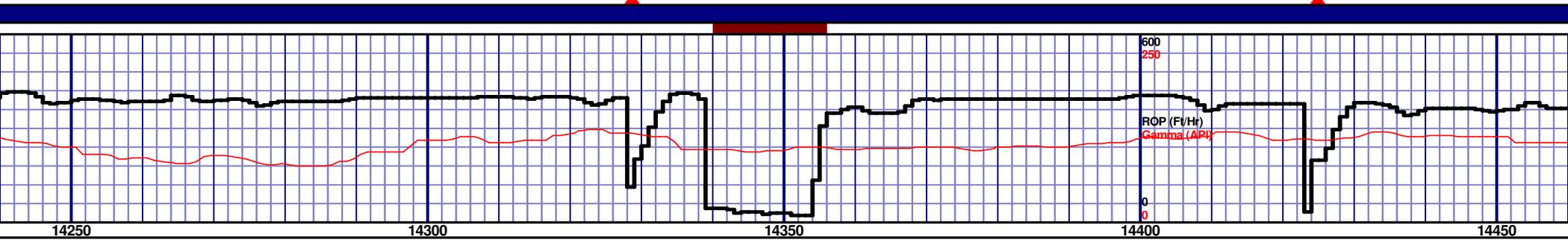
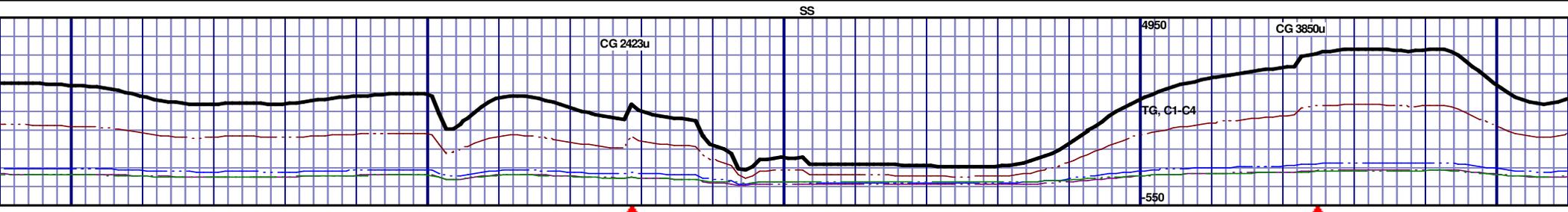
MD 13503 TVD 6405.2
 INC 91.85 AZ 88.96
 VS 6901.39



6250 TVD							
L P B	L P B	L P B	L P B	L P B	L P B	L P B	L P B
6450							
14050' MD-14100' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG		14100' MD-14150' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG		14150' MD-14200' MD: 70% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG		14200' MD-14250' MD: 60% CHK: MOTT MEDGY - M... SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO B... FREE BENT, TR FREE CALC, TR IMBD PYR, 40% F... TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT... FLOR, FAST STRMG CUT, HVY BLSHWT RNG	
6650							

MD 14072 TVD 6409.99
 INC 88.09 AZ 87.29
 VS 7469.84

MD 14166 TVD 6413
 INC 88.24 AZ 87
 VS 7563.7

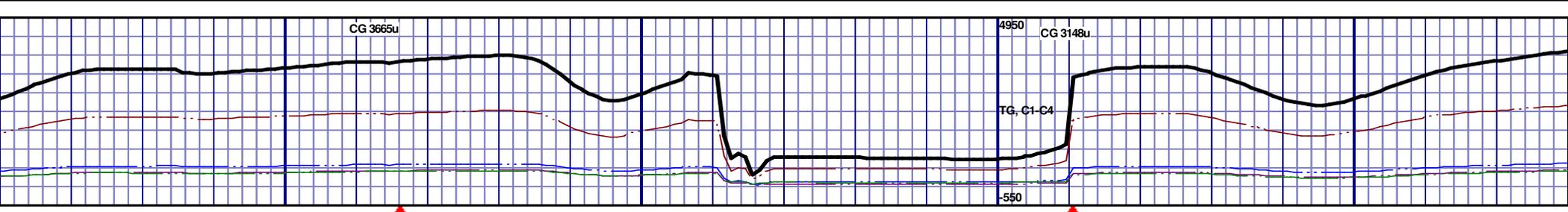


<p>EDDRKGY, BRIT, TR FREE MRL, BLSHWT O</p>	<p>14250' MD-14300' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>14300' MD-14350' MD: 70% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>14350' MD-14400' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>14400' MD-14450' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>14450' MD-14451' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>
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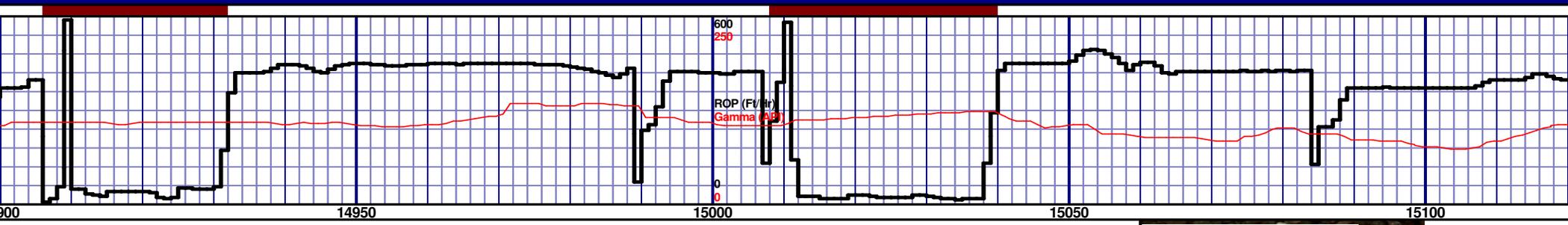
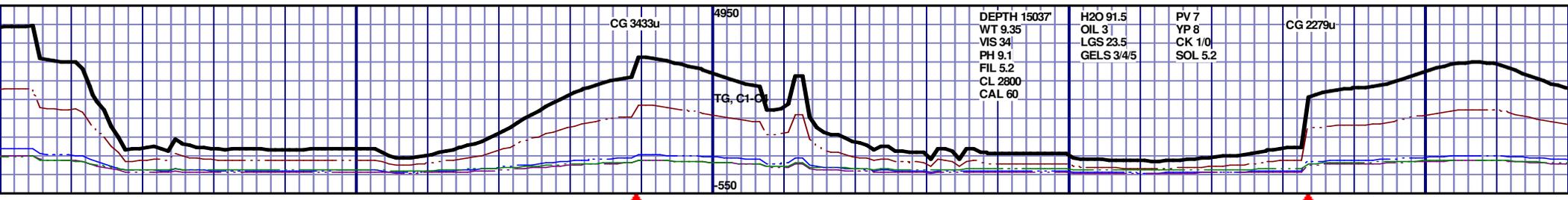
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INC 88.34 AZ 87.04
VS 7658.55

MD 14356 TVD 6416.72
INC 90.59 AZ 86.84
VS 7753.43

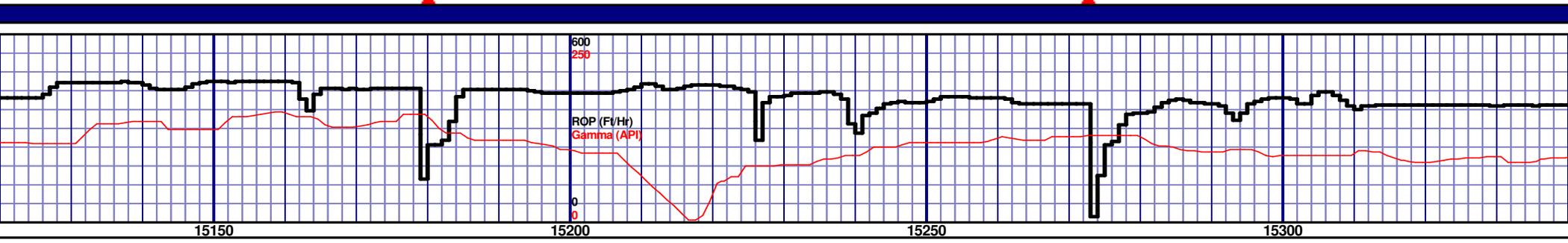
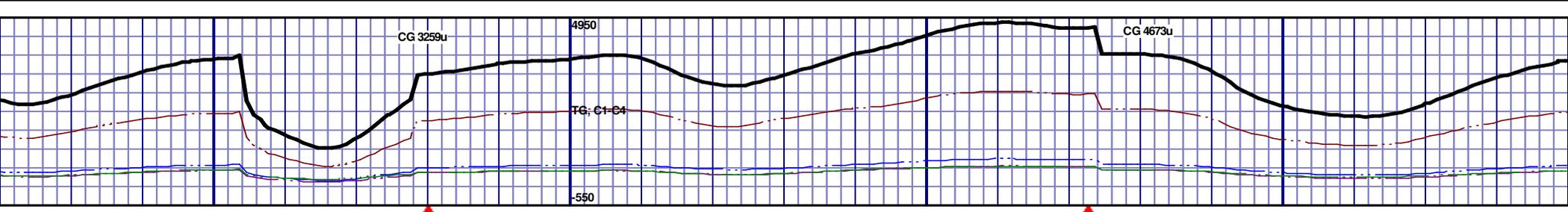
MD 14451 TVD 6416.72
INC 91.66 AZ 86.84
VS 7848.25



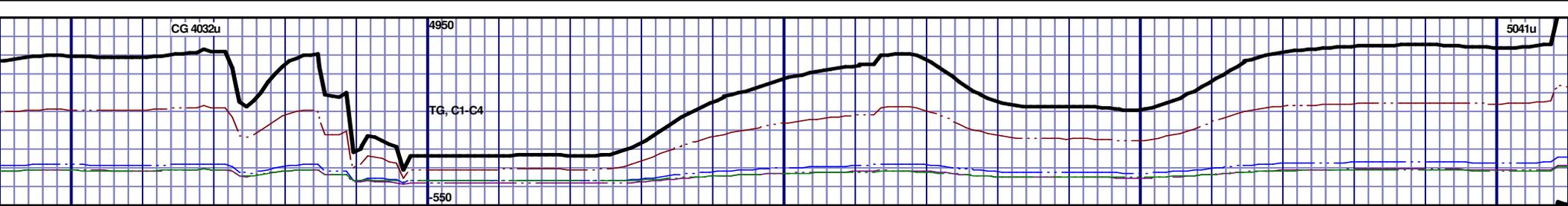
<p>14500' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>14500' MD-14550' MD: 70% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>14550' MD-14600' MD: 70% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>14500' MD-14550' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>14650' MD-14700' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>
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<p>14900' MD-14950' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>14950' MD-15000' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15000' MD-15050' MD: 70% MRL: MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM, TR FREE CALC, ABNT FREE BENT, IMBD PYR, 30% FREE CHK, TR GRYSHBLK STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15050' MD-15100' MD: 65% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15100' MD-15150' MD: 70% MRL: MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE CHK, TR GRYSHBLK STN, MOD BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>
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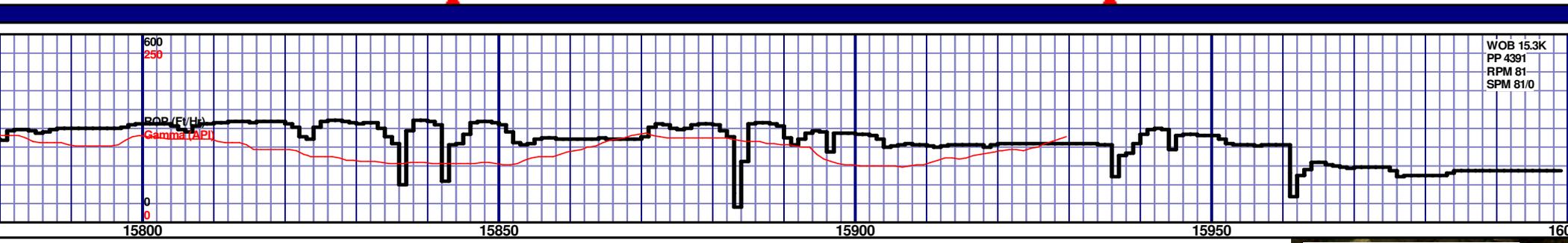
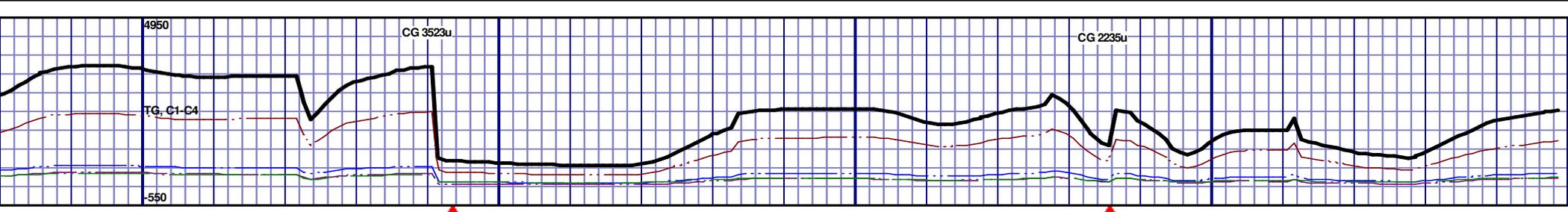
6250 TVD				
P B	P B	P B	P B	P B
6450				
6650				
<p>CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, HVY BLSHWT RNG</p>	<p>15150' MD-15200' MD: 70% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15200' MD-15250' MD: 75% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 25% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15250' MD-15300' MD: 75% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 25% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15300' MD-15350' MD: 80% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 20% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>



6250 TVD									
P B	P B	P B	P B	P B	P B	P B	P B	P B	P B
6450									
<p>DRKGY, RIT, TR EE MRL LSHWT O</p>	<p>15350' MD-15400' MD: 65% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15400' MD-15450' MD: 70% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15450' MD-15500' MD: 80% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 20% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15500' MD-15550' MD: 65% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 35% FREE MRL, TR GRYSBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15550' MD-15 SUBBLKY T FREE BENT, TR GRYSB FLOR, FAST</p>				

MD 15398 TVD 6411.29
INC 89.63 AZ 88.54
VS 8794.54

MD 15492 TVD 6410.86
INC 90.89 AZ 89
VS 8888.52



WOB 15.3K
 PP 4391
 RPM 81
 SPM 81/0



<p>6250 TVD</p>	<p>6450</p>	<p>6650</p>		
<p>MEDGY - MEDDRKGY, CT, FRM TO BRIT, TR PYR, 20% FREE MRL, TR POR, FNT BLSHWT O /T RNG</p>	<p>15800' MD-15850' MD: 70% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 30% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15850' MD-15900' MD: 80% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 20% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15900' MD-15950' MD: 80% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 20% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>	<p>15950' MD-16000' MD: 60% CHK: MOTT MEDGY - MEDDRKGY, SUBBLKY TO BLKY, GRTY TO SLTY TXT, FRM TO BRIT, TR FREE BENT, TR FREE CALC, TR IMBD PYR, 40% FREE MRL, TR GRYSHBLK STN, TR BLSHWT MIN FLOR, FNT BLSHWT O FLOR, FAST STRMG CUT, HVY BLSHWT RNG</p>

4950
BOTTOMS UP GAS 2237u
TG, C1-C4
-550

600
250
DRILLER'S TD @ 6:50 PM
ON 09/06/2015 @ 16000' MD
ROP (Ft/Hr)
Gamma (API)
0
0

16000 16

6250 TVD
TD @ 16000' MD
RELEASED ON 09/06/2015
6450
THANK YOU FROM
SAM STELZER,
ADAM TROSS,
AND HORIZON WELL
LOGGING, LLC

6650
MD 16000 TVD 6417.95
INC 89.08 AZ 86.31
VS 9395.81