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Tulsa, Oklahoma 74136-6378

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WWW.HZMUD.COM

Customer Information

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

Geologist: Teresa Malesardi
Noble Energy Inc.

Mud Logging Details

Logger: George Grozev & Cory
Shorette
Log Interval: 6950' MD to 11386' MD
Start Date: July 17, 2013
Release Date: July 21, 2013

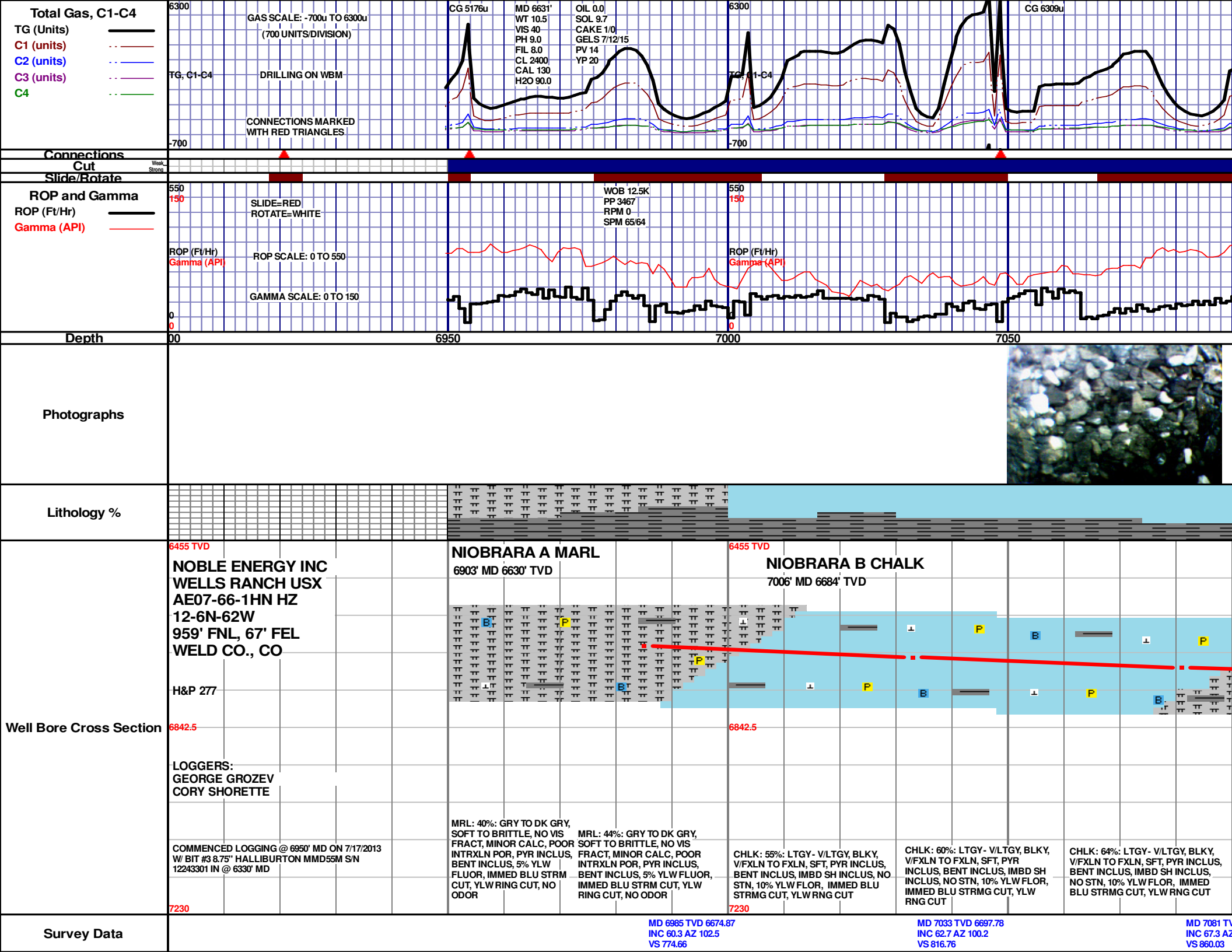
Well Information

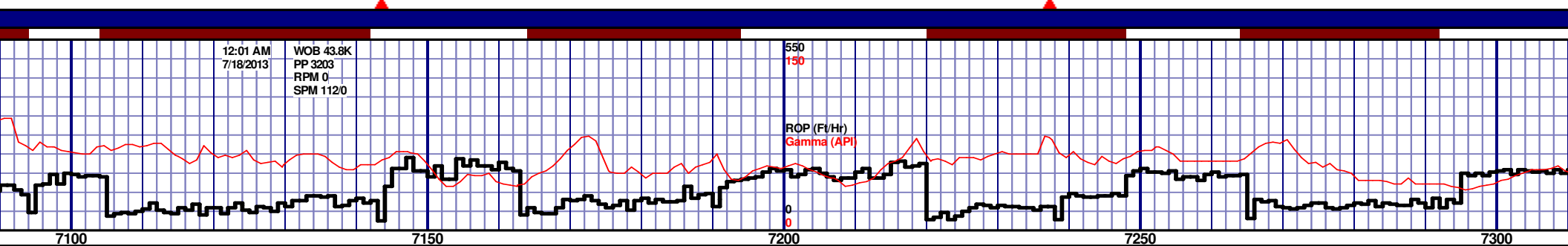
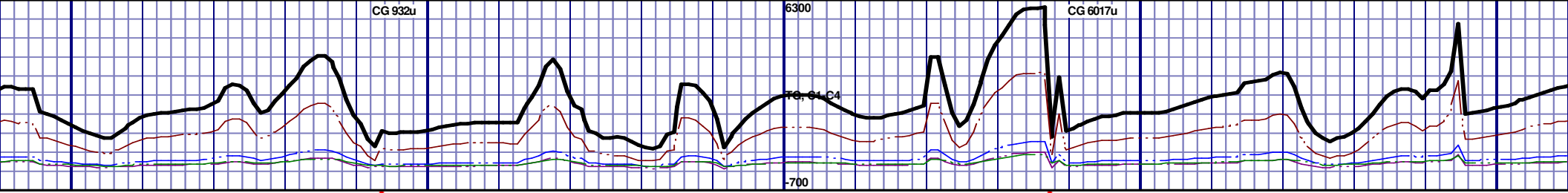
Well Name: Wells Ranch USX
AE07-66-1HN HZ

Location: 12-6N-62W
959' FNL, 67' FEL

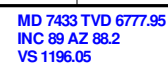
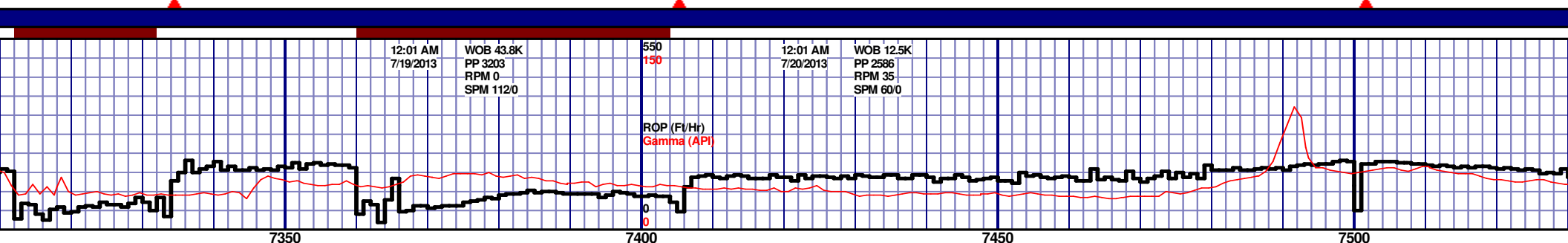
County: Weld
State: Colorado

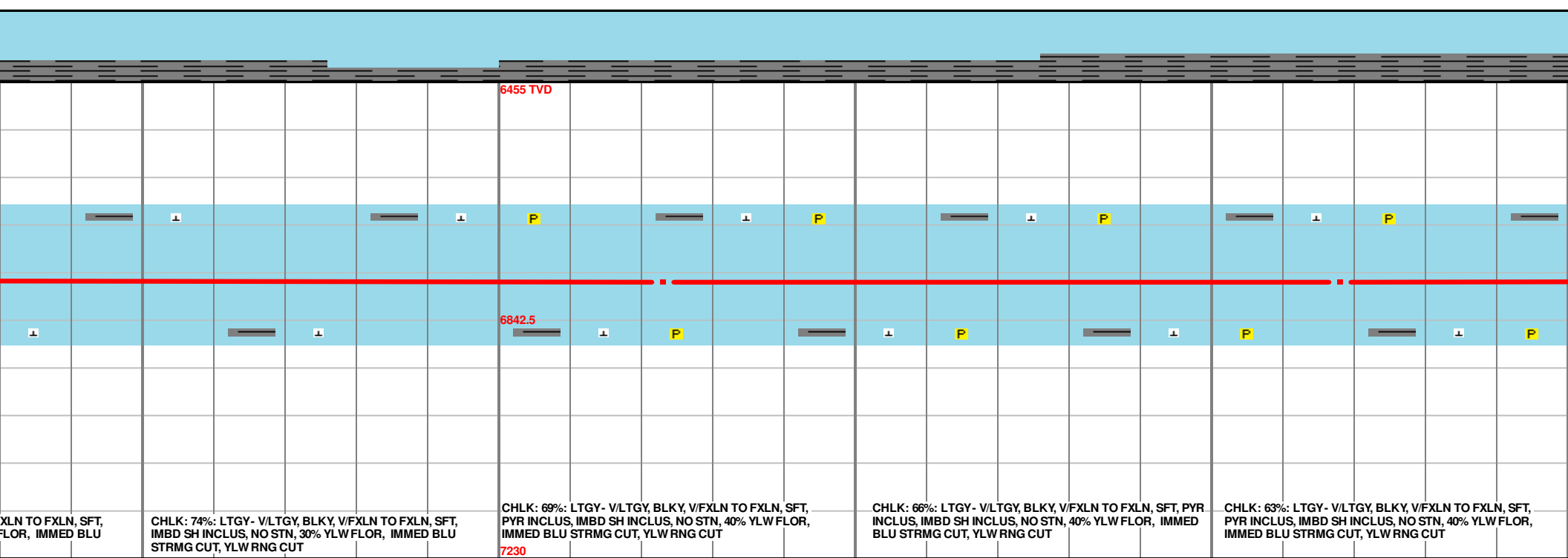
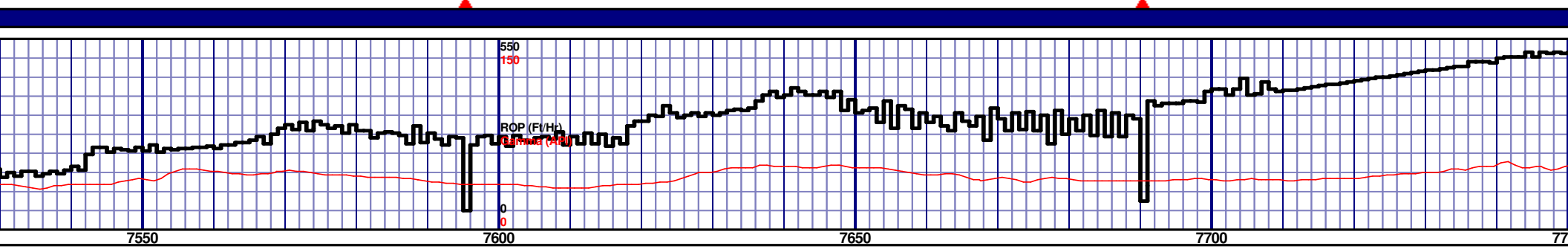
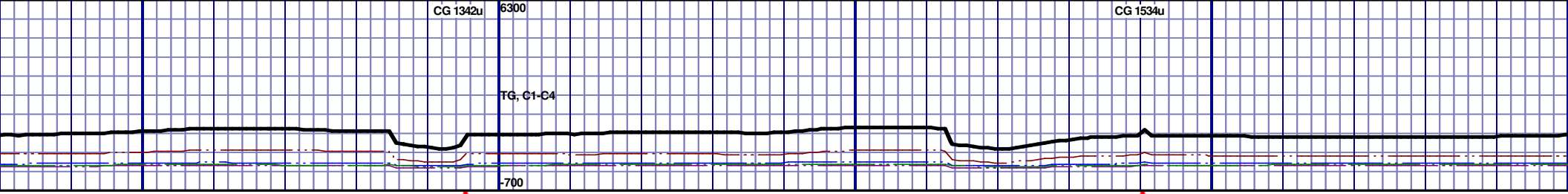
Drilling Rig: H&P 277
Total Depth: 11386' MD
TD Date: July 21, 2013
Formation: Niobrara C Chalk
KB Elevation: 4911'
GR Elevation: 4887'
API Number: 05-123-37182

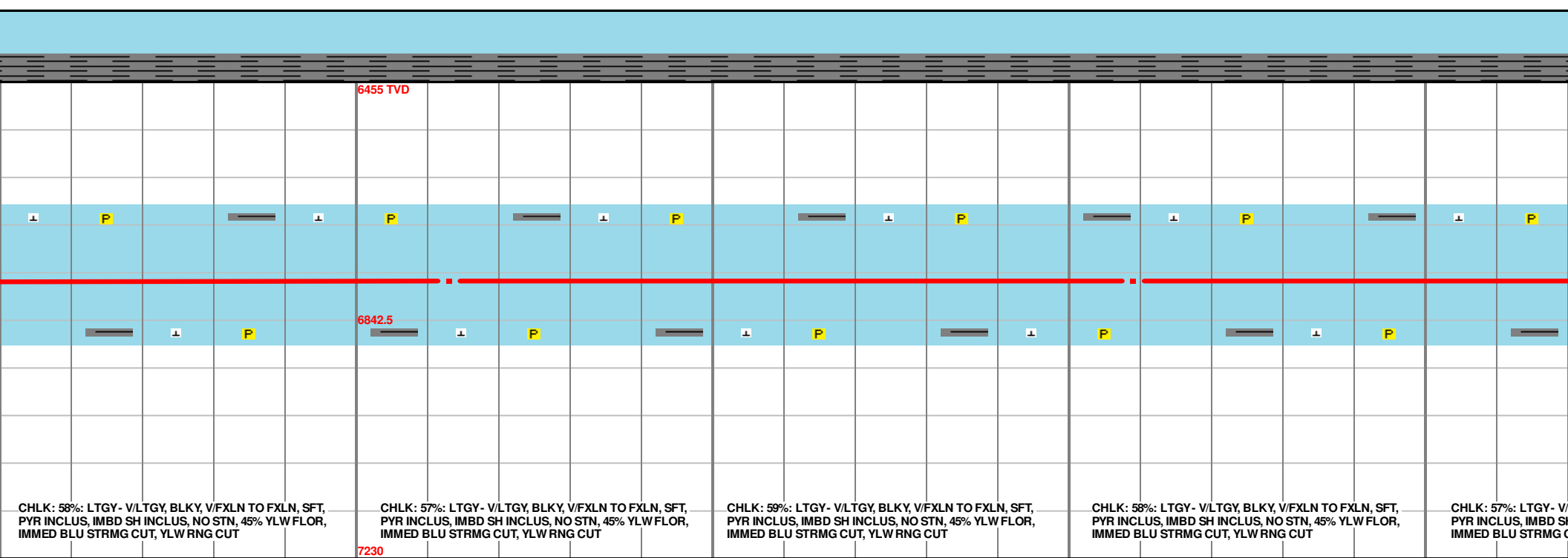
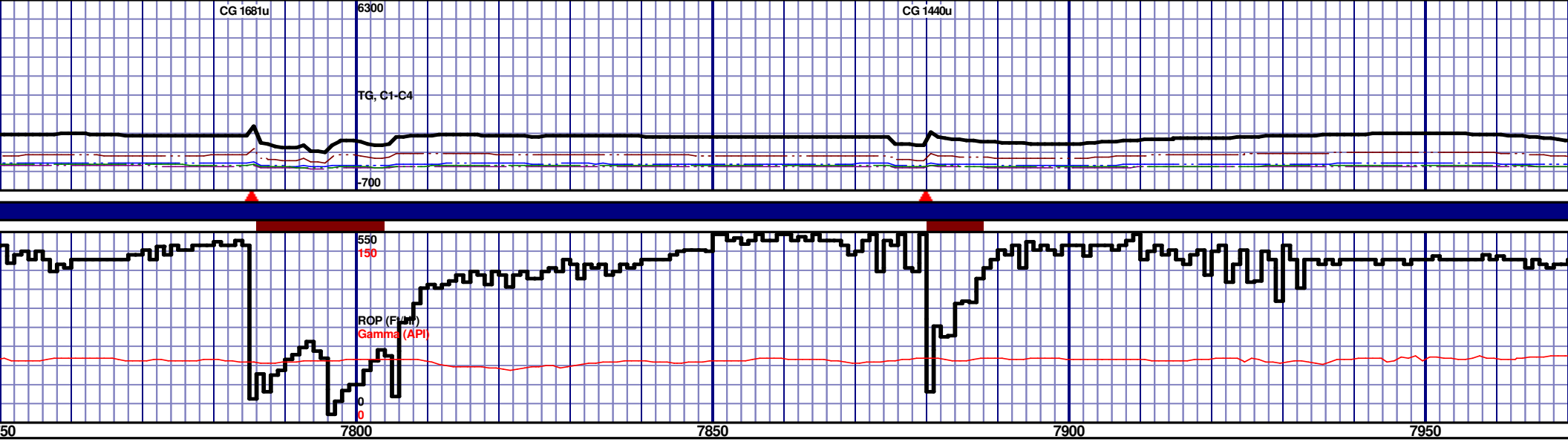




| NIOBRARA B MARL 7090' MD 6721' TVD | | | | | 6455 TVD | NIOBRARA C CHALK 7240' MD 6762' TVD | | | | |
|--|--|--|--|--|----------|--|--|--|--|--|
| | | | | | | | | | | |
| MRL: 48%: GRY TO DK GRY, SOFT TO BRITTLE, NO VIS FRACT, MINOR CALC, POOR INTRXLN POR, PYR INCLUS, BENT INCLUS, 5% YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT, NO ODOR | | | | | | MRL: 48%: GRY TO DK GRY, SOFT TO BRITTLE, NO VIS FRACT, MINOR CALC, POOR INTRXLN POR, PYR INCLUS, BENT INCLUS, 5% YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT, NO ODOR | | | | |
| MRL: 46%: GRY TO DK GRY, SOFT TO BRITTLE, NO VIS FRACT, MINOR CALC, POOR INTRXLN POR, PYR INCLUS, BENT INCLUS, 5% YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT, NO ODOR | | | | | | MRL: 46%: GRY TO DK GRY, SOFT TO BRITTLE, NO VIS FRACT, MINOR CALC, POOR INTRXLN POR, PYR INCLUS, BENT INCLUS, 5% YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT, NO ODOR | | | | |
| MRL: 44%: GRY TO DK GRY, SOFT TO BRITTLE, NO VIS FRACT, MINOR CALC, POOR INTRXLN POR, PYR INCLUS, BENT INCLUS, 5% YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT, NO ODOR | | | | | | MRL: 44%: GRY TO DK GRY, SOFT TO BRITTLE, NO VIS FRACT, MINOR CALC, POOR INTRXLN POR, PYR INCLUS, BENT INCLUS, 5% YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT, NO ODOR | | | | |
| MRL: 45%: GRY TO DK GRY, SOFT TO BRITTLE, NO VIS FRACT, MINOR CALC, POOR INTRXLN POR, PYR INCLUS, BENT INCLUS, 5% YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT, NO ODOR | | | | | | MRL: 45%: GRY TO DK GRY, SOFT TO BRITTLE, NO VIS FRACT, MINOR CALC, POOR INTRXLN POR, PYR INCLUS, BENT INCLUS, 5% YLW FLUOR, IMMED BLU STRM CUT, YLW RING CUT, NO ODOR | | | | |
| CHLK: 58%: LTGY - V/LTGY, BLKY, V/FXLN TO FXLN, SFT, PYR INCLUS, BENT INCLUS, IMBD SH INCLUS, NO STN, 10% YLW FLOR, IMMED BLU STRMG CUT, YLW RNG CUT | | | | | | CHLK: 58%: LTGY - V/LTGY, BLKY, V/FXLN TO FXLN, SFT, PYR INCLUS, BENT INCLUS, IMBD SH INCLUS, NO STN, 10% YLW FLOR, IMMED BLU STRMG CUT, YLW RNG CUT | | | | |
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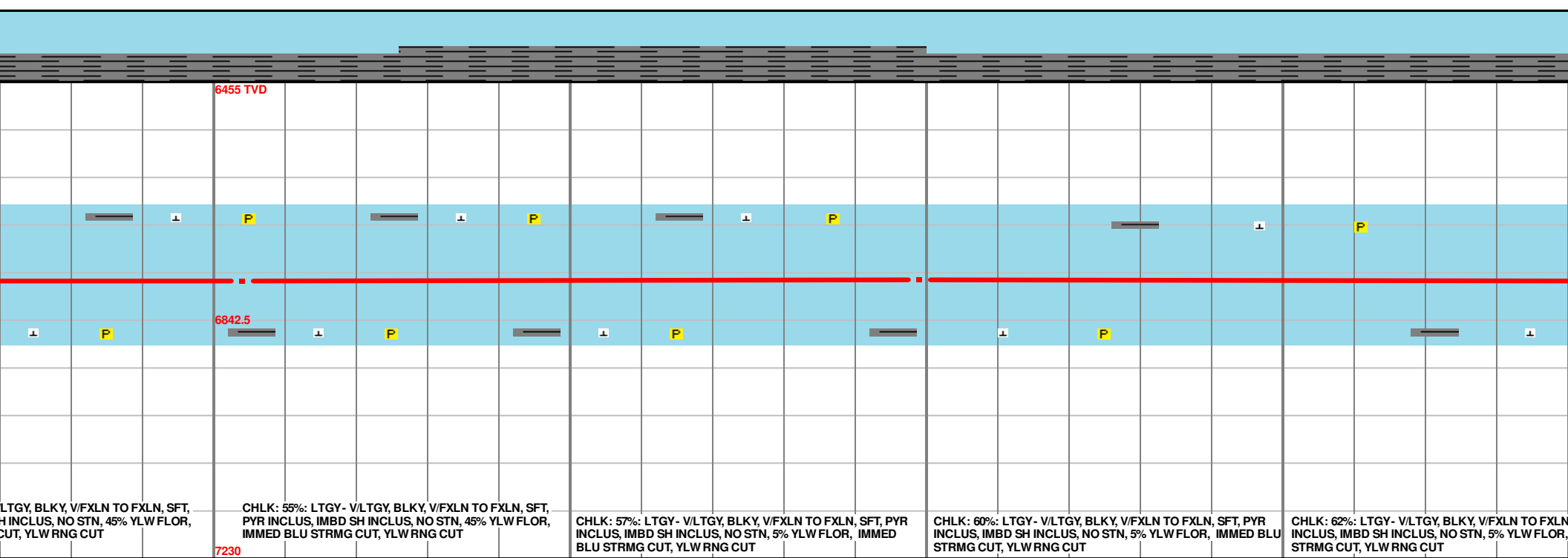
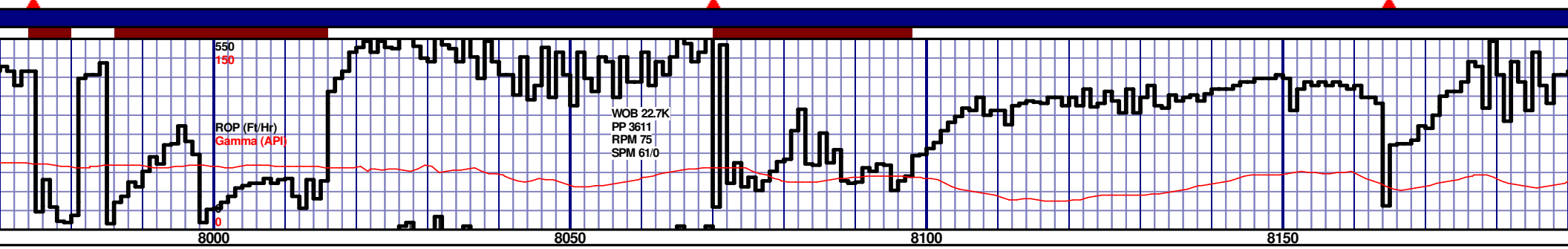
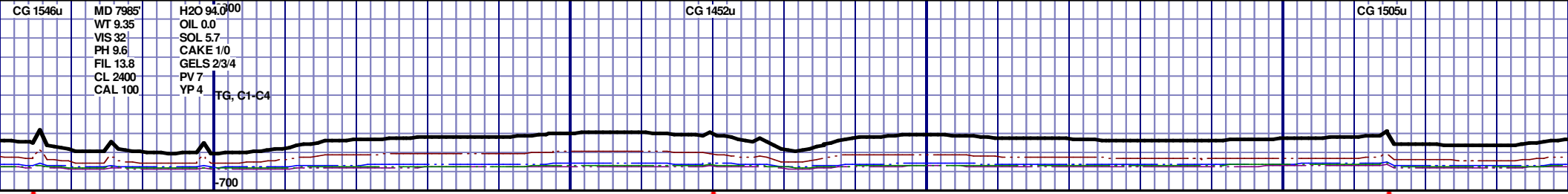


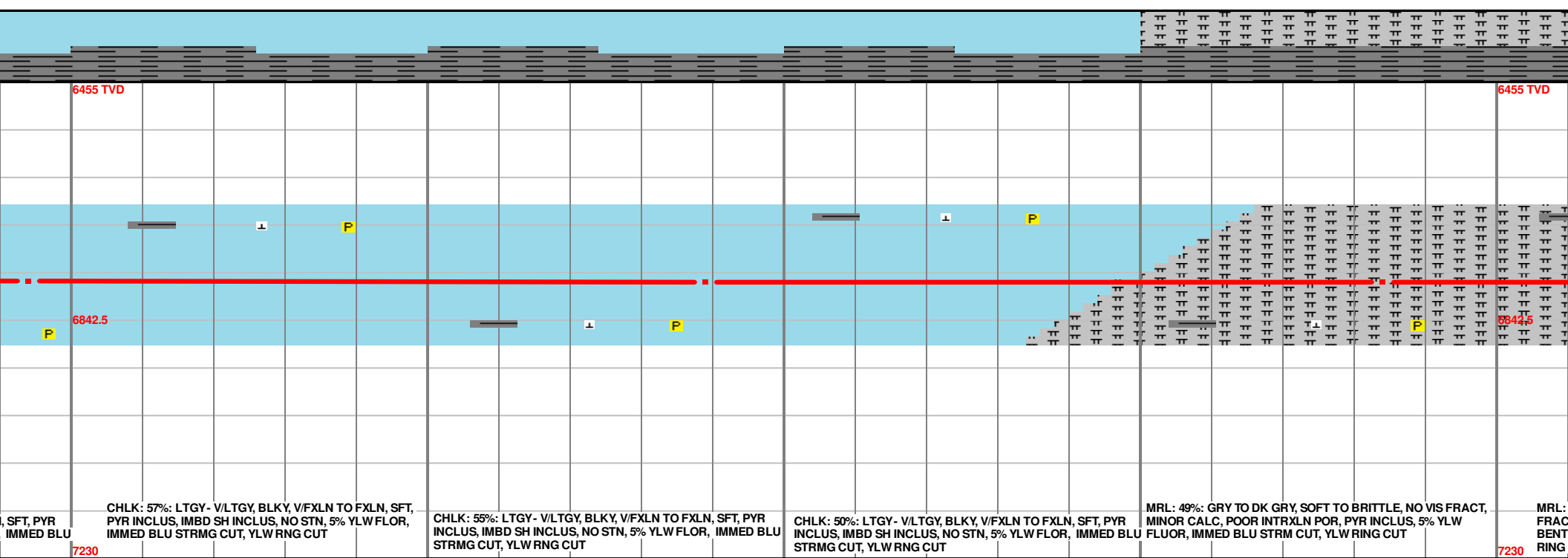
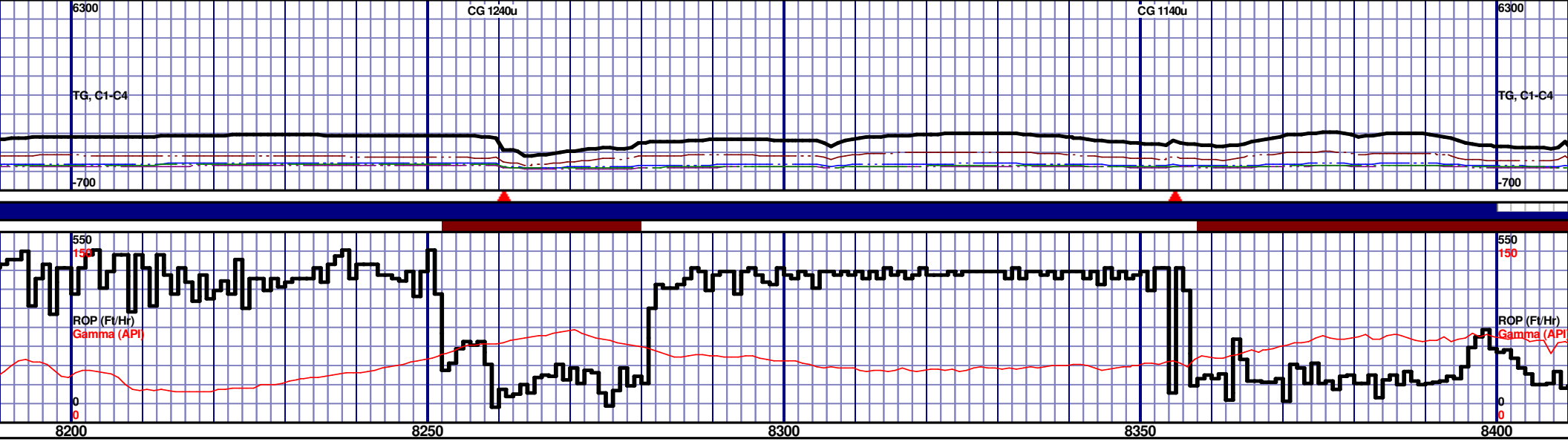


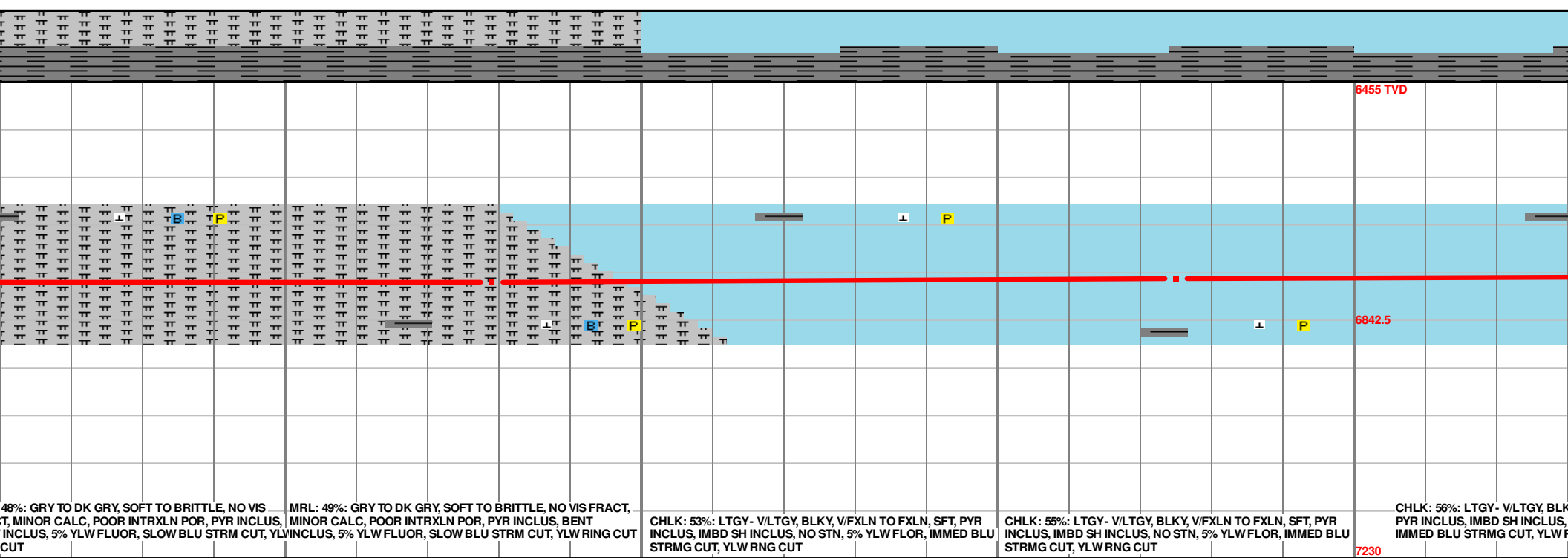
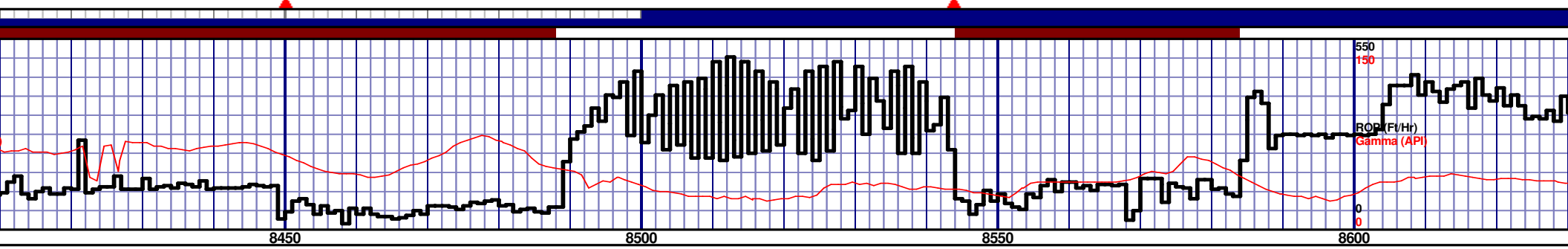
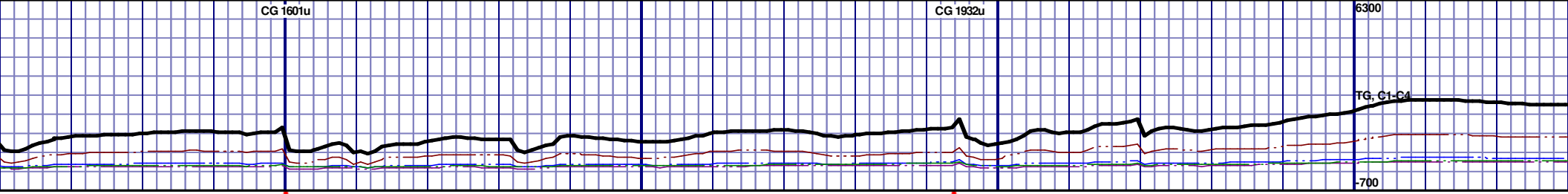


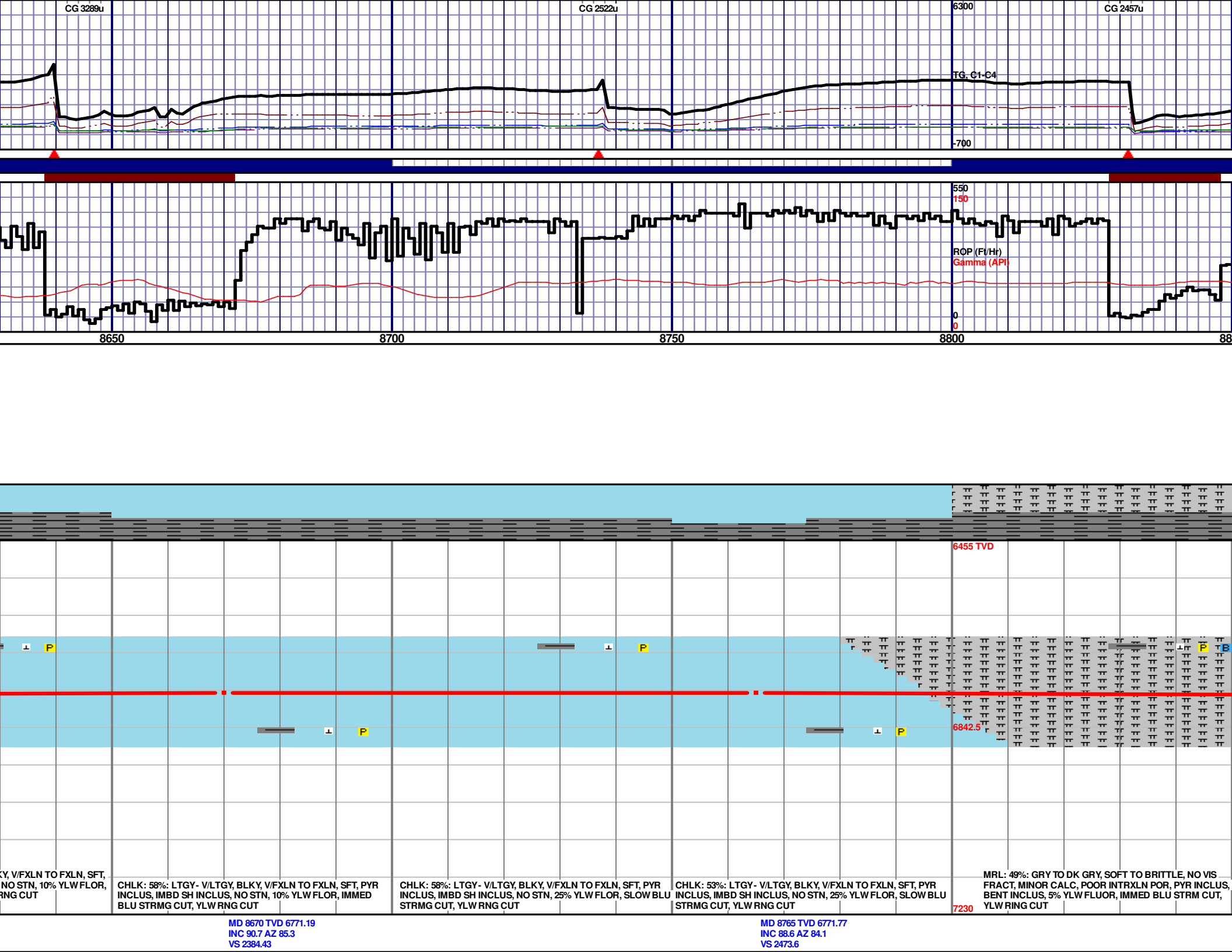
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INC 90.3 AZ 87.4
VS 1560.09

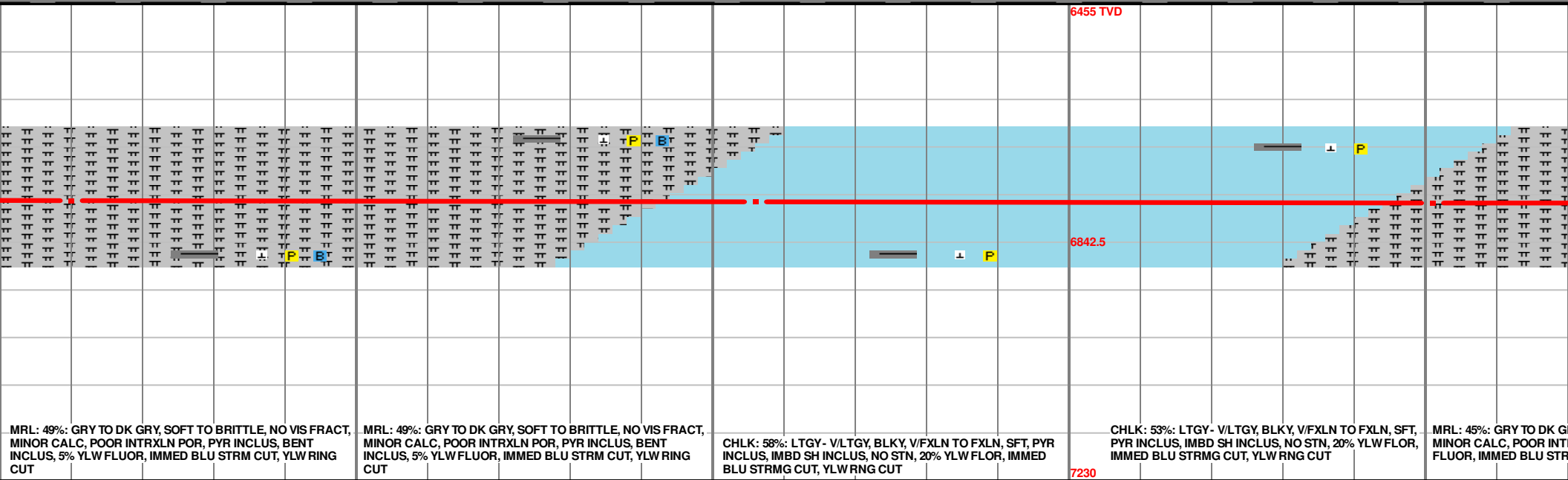
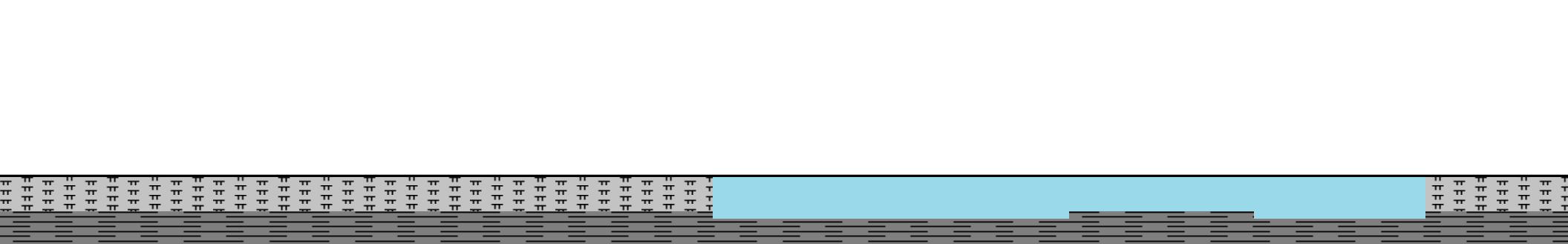
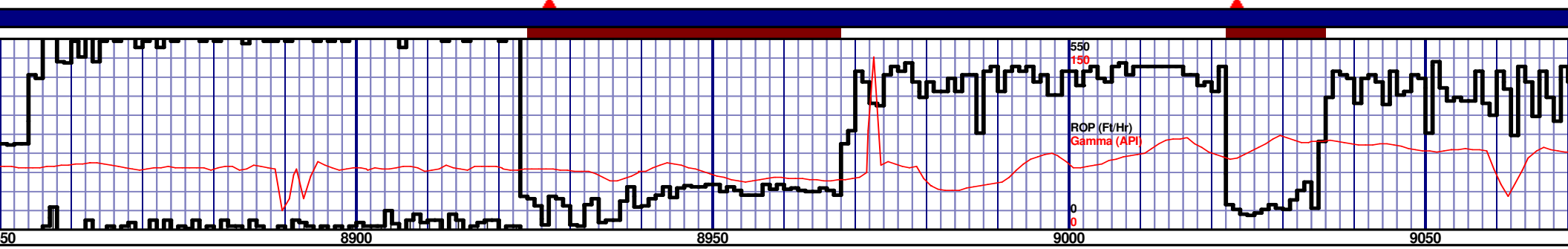
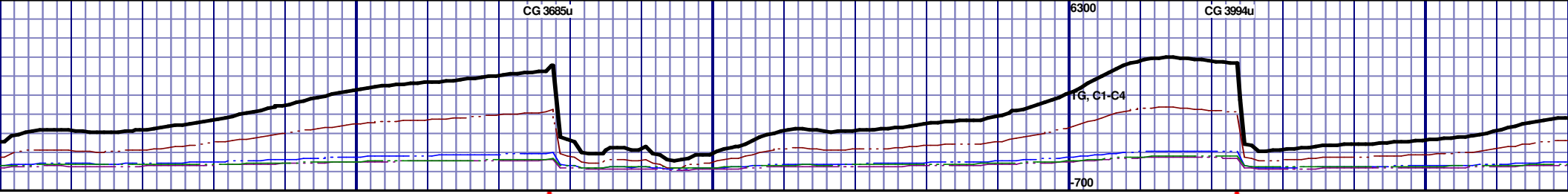
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INC 89.9 AZ 86.6
VS 1651.45







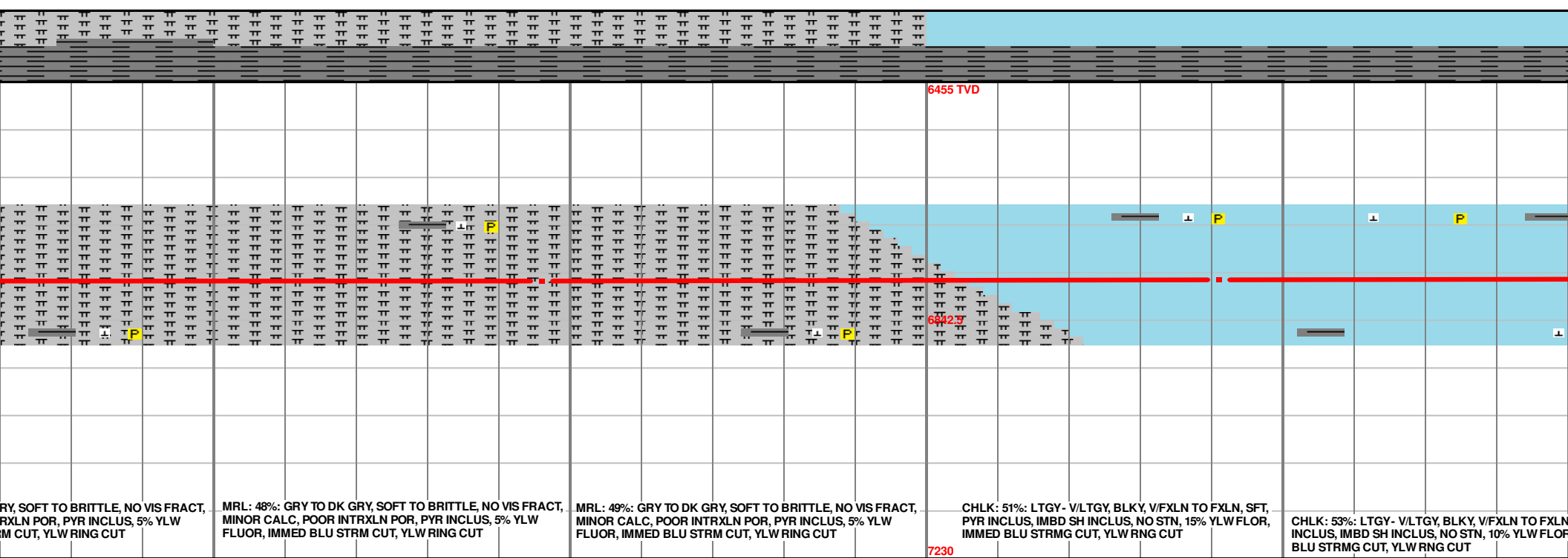
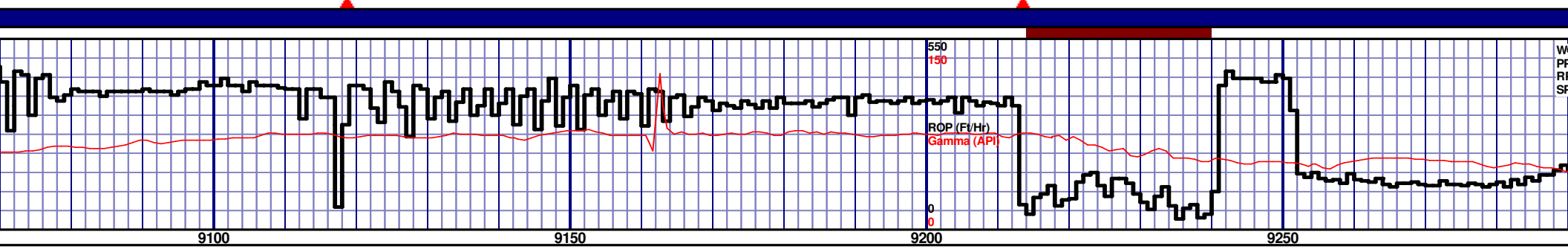
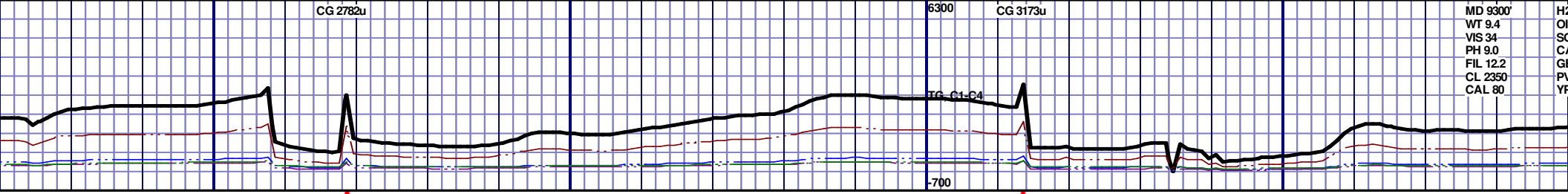


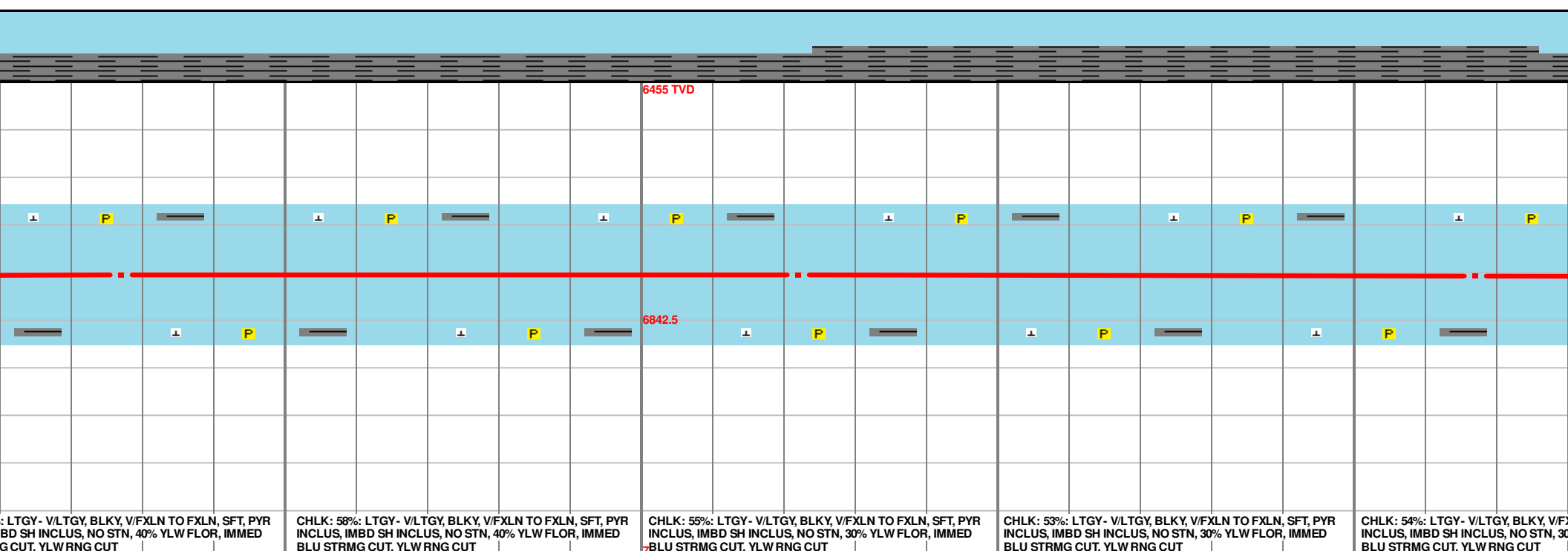
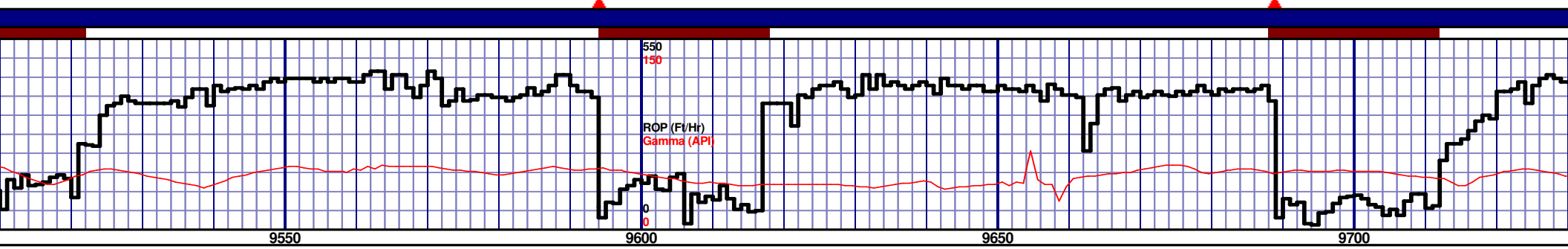
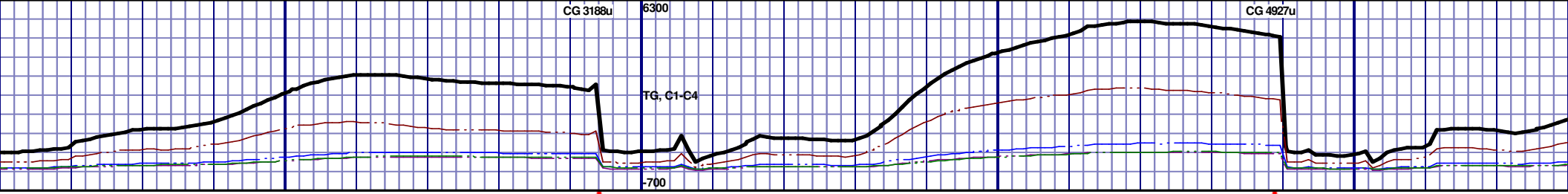


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INC 88.5 AZ 85.5
VS 2562.8

MD 8956 TVD 6777.19
INC 87.9 AZ 86.9
VS 2653.7

MD 9051 TVD 6778.35
INC 90.7 AZ 87.6
VS 2744.23





CHLK: 58%: LTGY - V/LTGY, BLKY, V/FXLN TO FXLN, SFT, PYR INCLUS, IMBD SH INCLUS, NO STN, 40% YLW FLOR, IMMED BLU STRMG CUT, YLW RNG CUT

CHLK: 55%: LTGY - V/LTGY, BLKY, V/FXLN TO FXLN, SFT, PYR INCLUS, IMBD SH INCLUS, NO STN, 30% YLW FLOR, IMMED BLU STRMG CUT, YLW RNG CUT

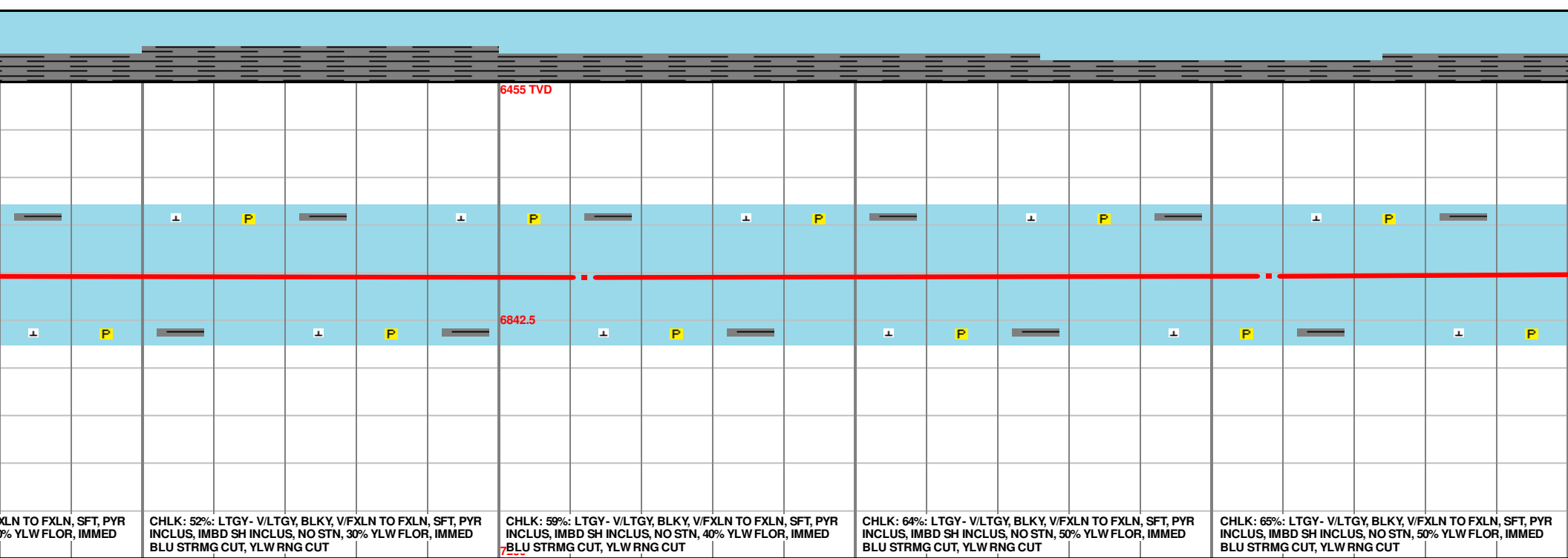
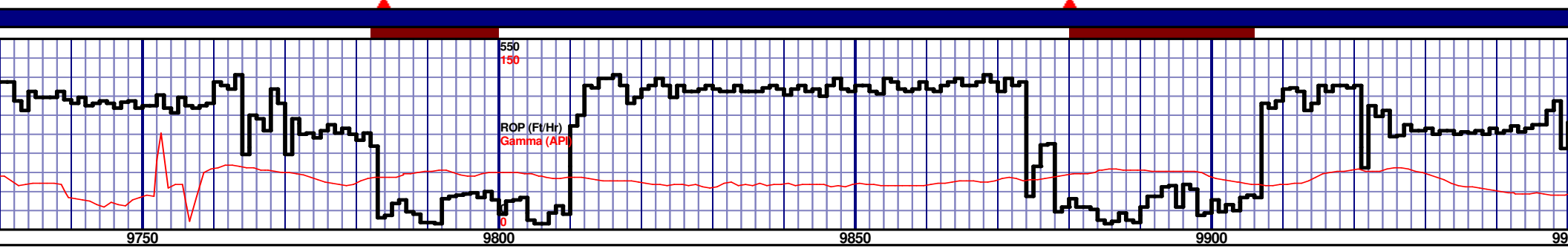
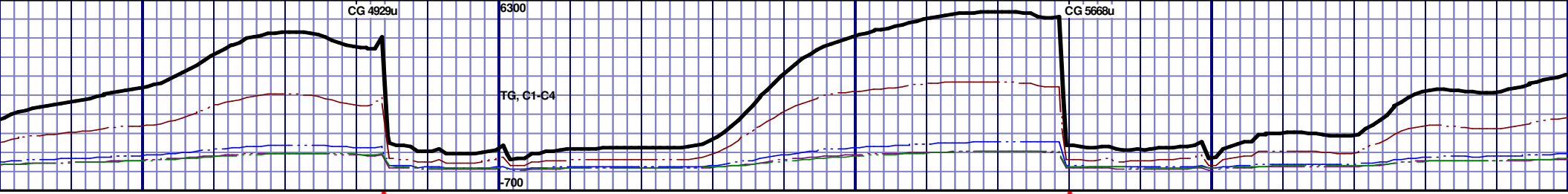
CHLK: 53%: LTGY - V/LTGY, BLKY, V/FXLN TO FXLN, SFT, PYR INCLUS, IMBD SH INCLUS, NO STN, 30% YLW FLOR, IMMED BLU STRMG CUT, YLW RNG CUT

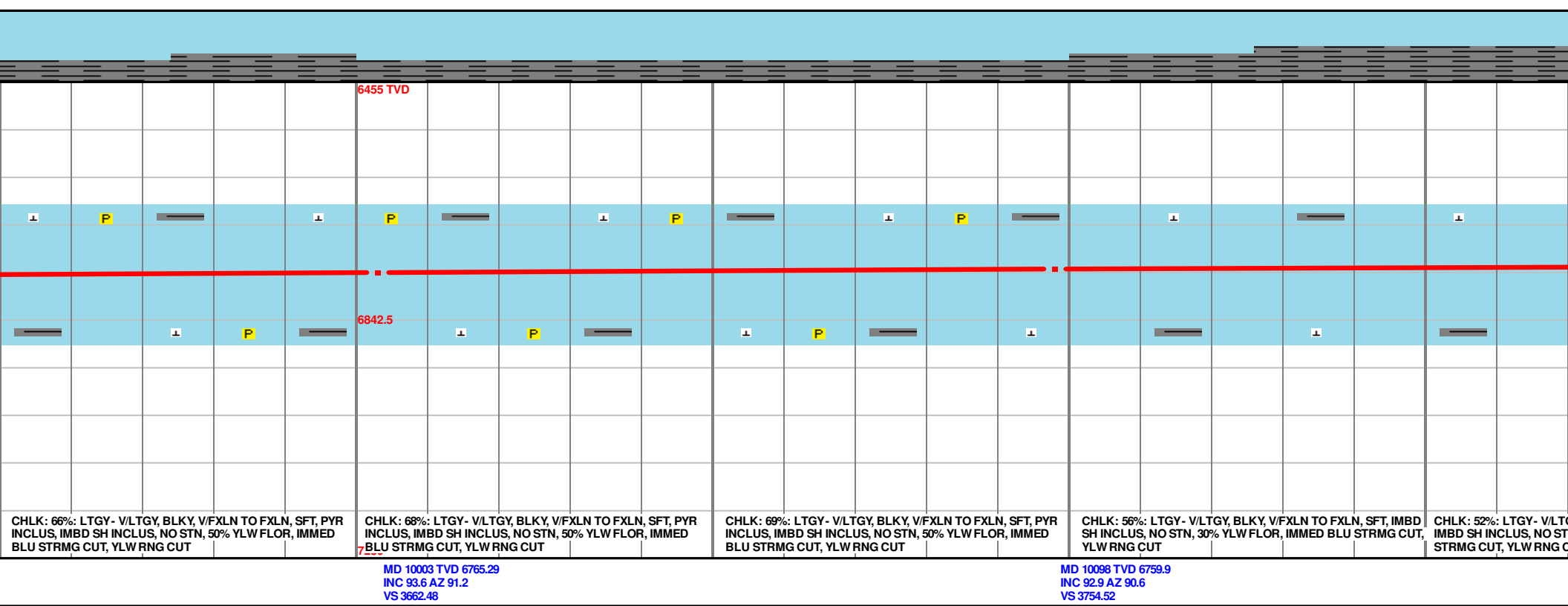
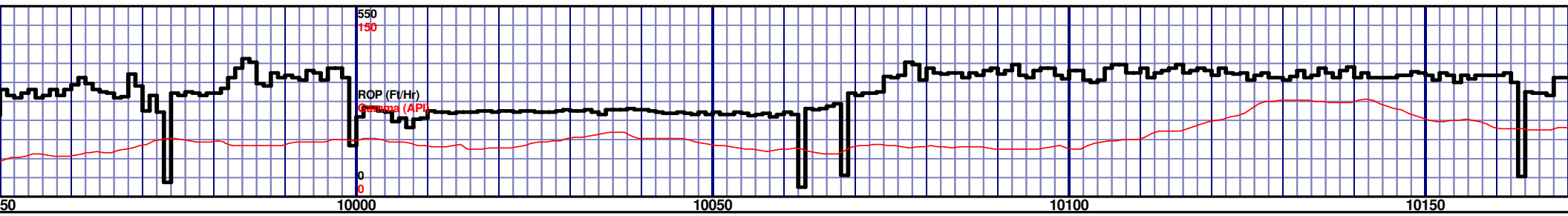
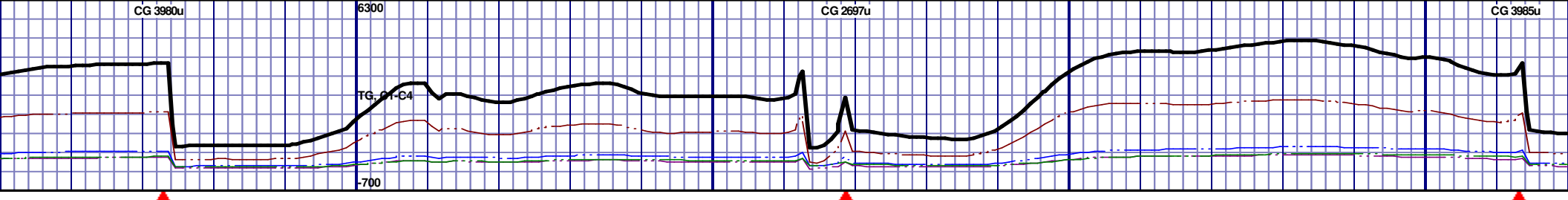
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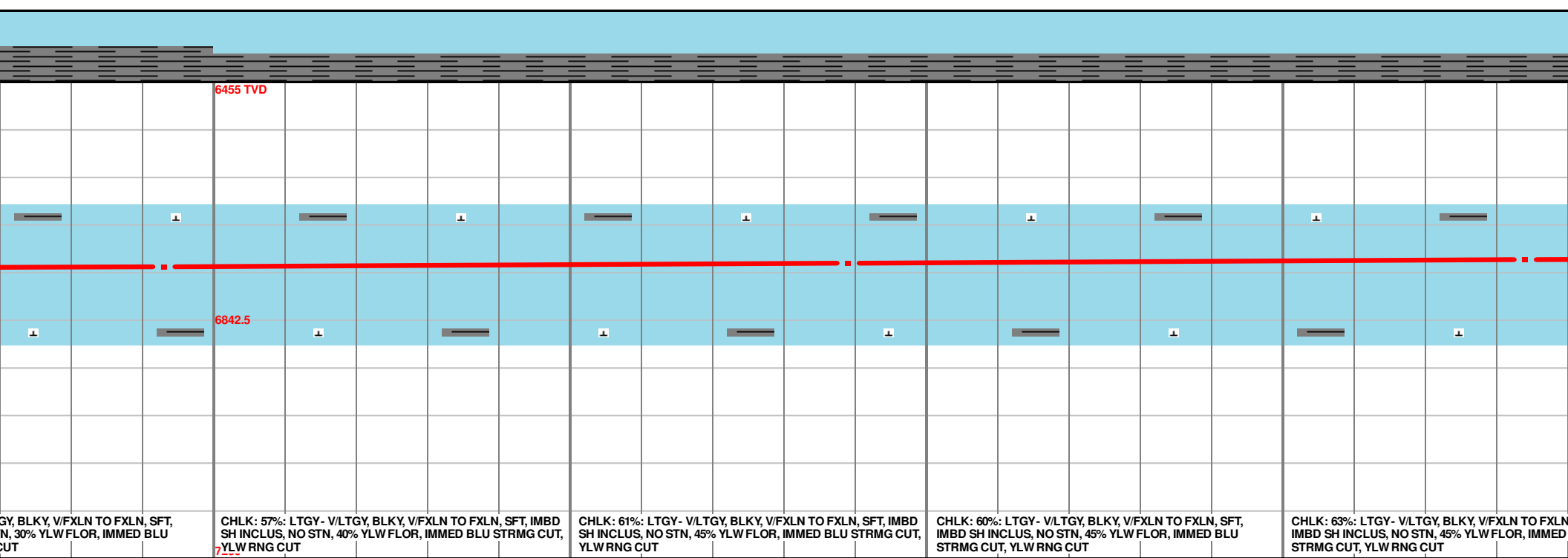
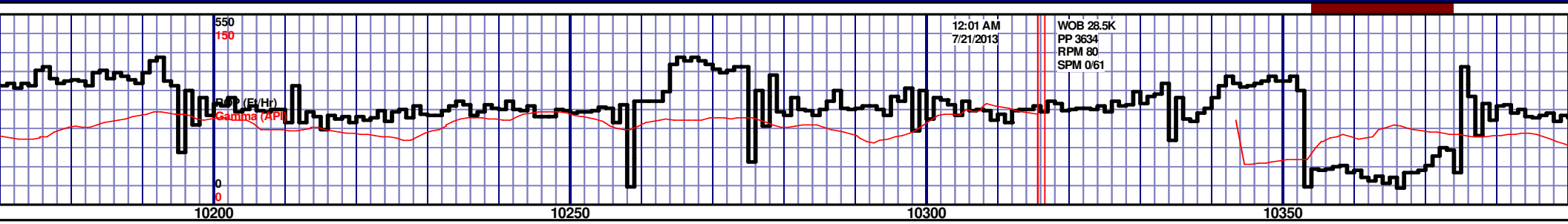
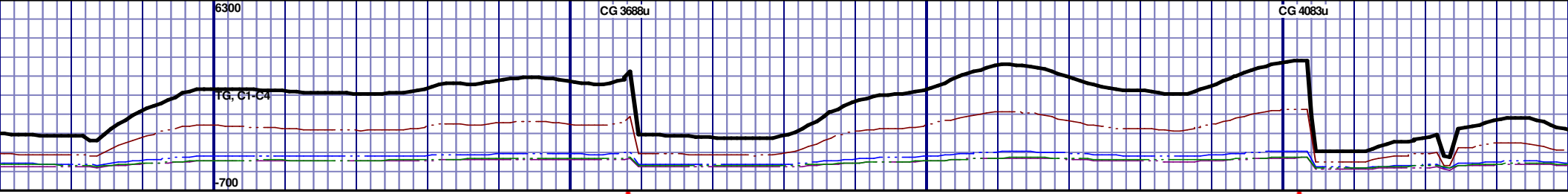
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INC 91.4 AZ 89.9
VS 3202.15

MD 9622 TVD 6769.04
INC 89.3 AZ 90.3
VS 3294.01

MD 9717 TVD 6769.04
INC 88.5 AZ 89.9
VS 3365.85





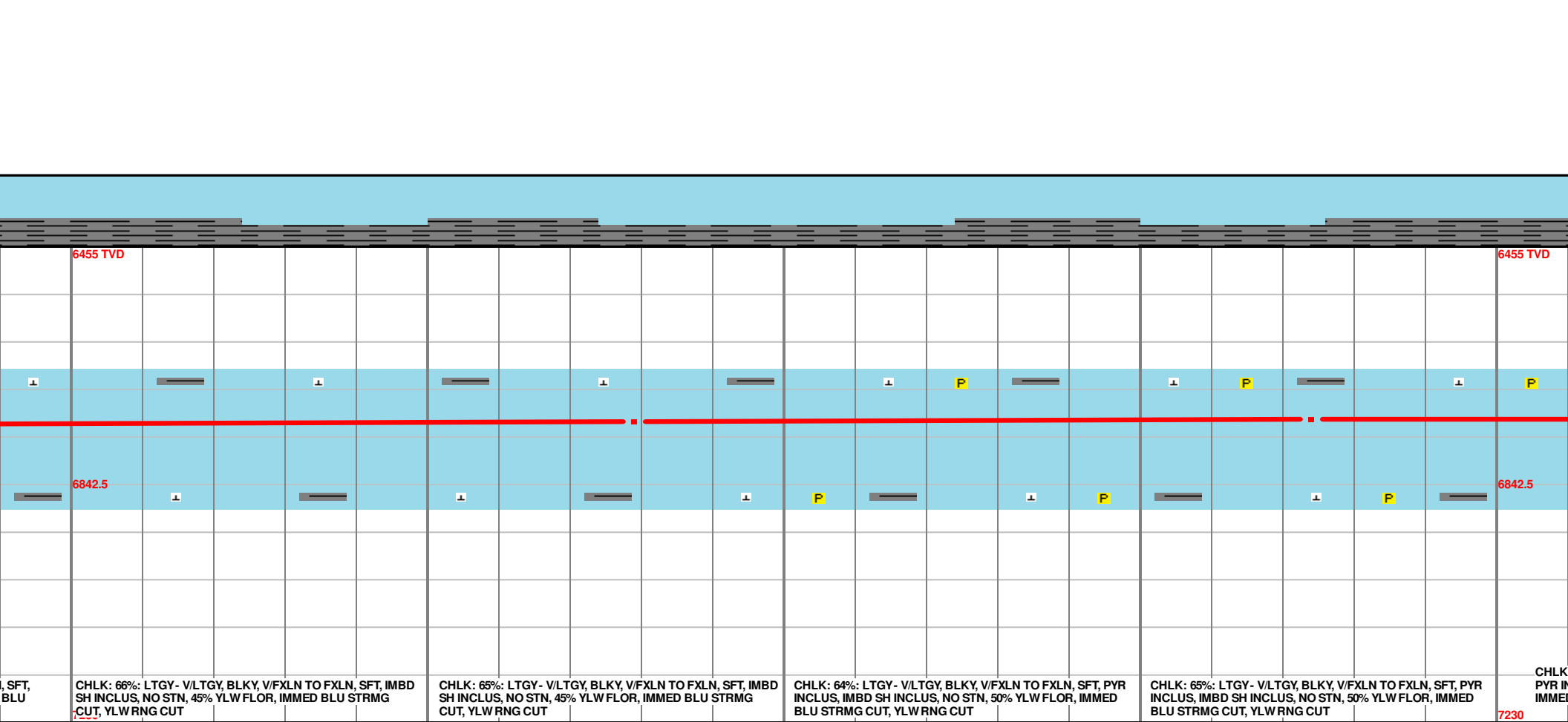
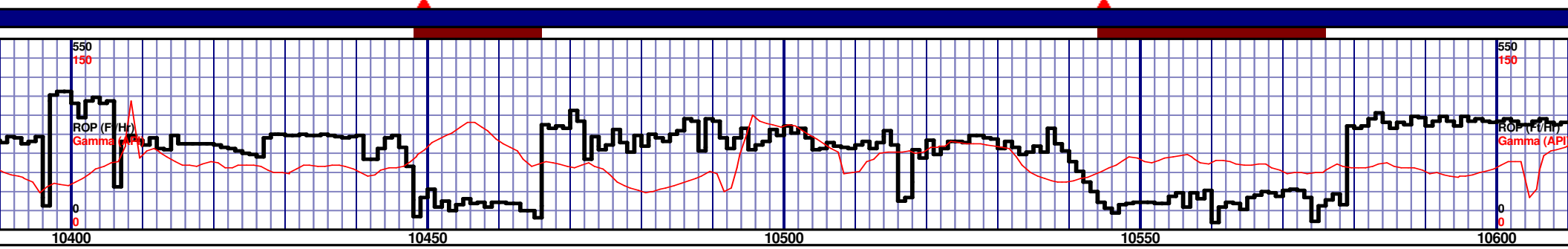
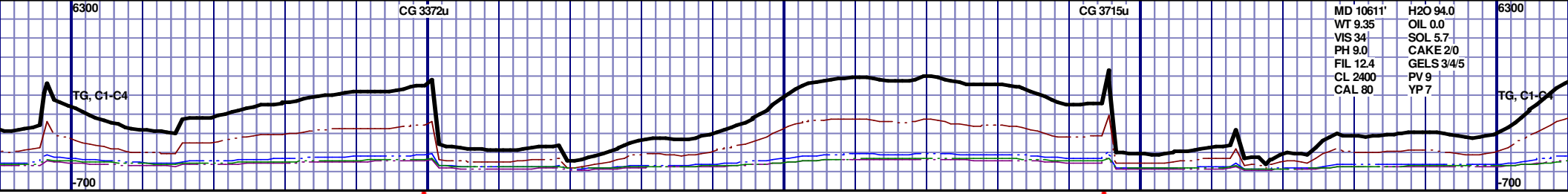


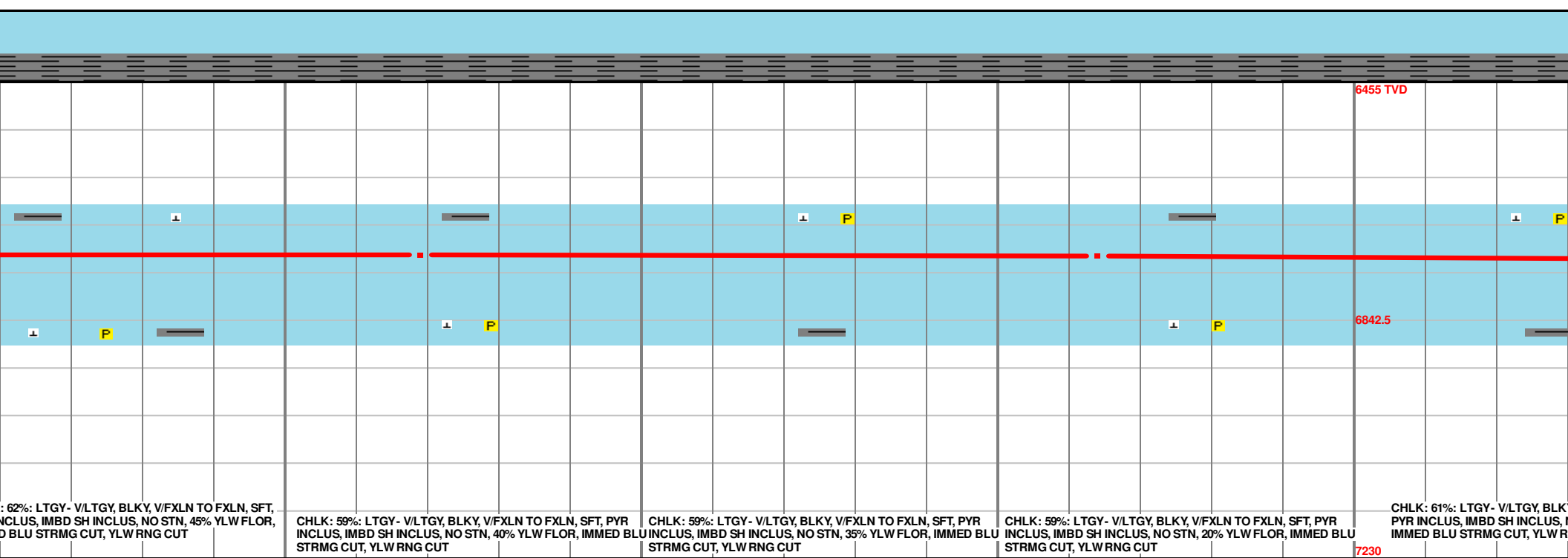
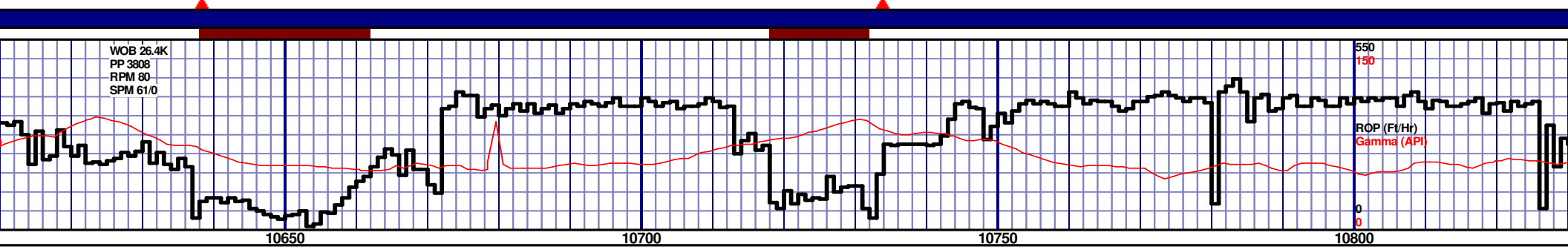
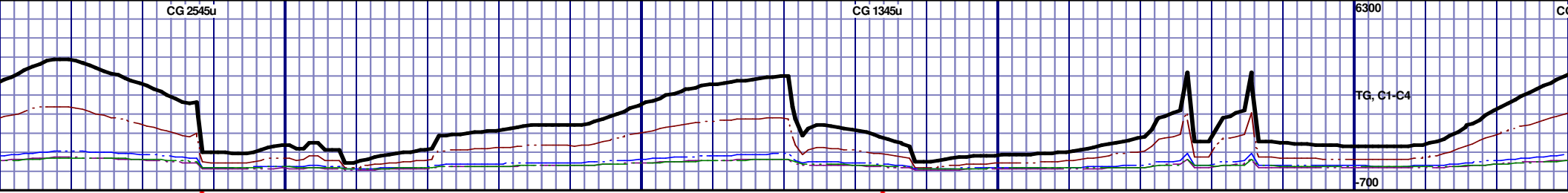
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|---|---|---|---|
| CHLK: 57%: LTGY - V/LTGY, BLKY, V/FXLN TO FXLN, SFT, IMBD SH INCLUS, NO STN, 40% YLW FLOR, IMMED BLU STRMG CUT, YLW RNG CUT | CHLK: 61%: LTGY - V/LTGY, BLKY, V/FXLN TO FXLN, SFT, IMBD SH INCLUS, NO STN, 45% YLW FLOR, IMMED BLU STRMG CUT, YLW RNG CUT | CHLK: 60%: LTGY - V/LTGY, BLKY, V/FXLN TO FXLN, SFT, IMBD SH INCLUS, NO STN, 45% YLW FLOR, IMMED BLU STRMG CUT, YLW RNG CUT | CHLK: 63%: LTGY - V/LTGY, BLKY, V/FXLN TO FXLN, SFT, IMBD SH INCLUS, NO STN, 45% YLW FLOR, IMMED BLU STRMG CUT, YLW RNG CUT |
|---|---|---|---|

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INC 93.3 AZ 90.1
VS 3846.35

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VS 3938.88

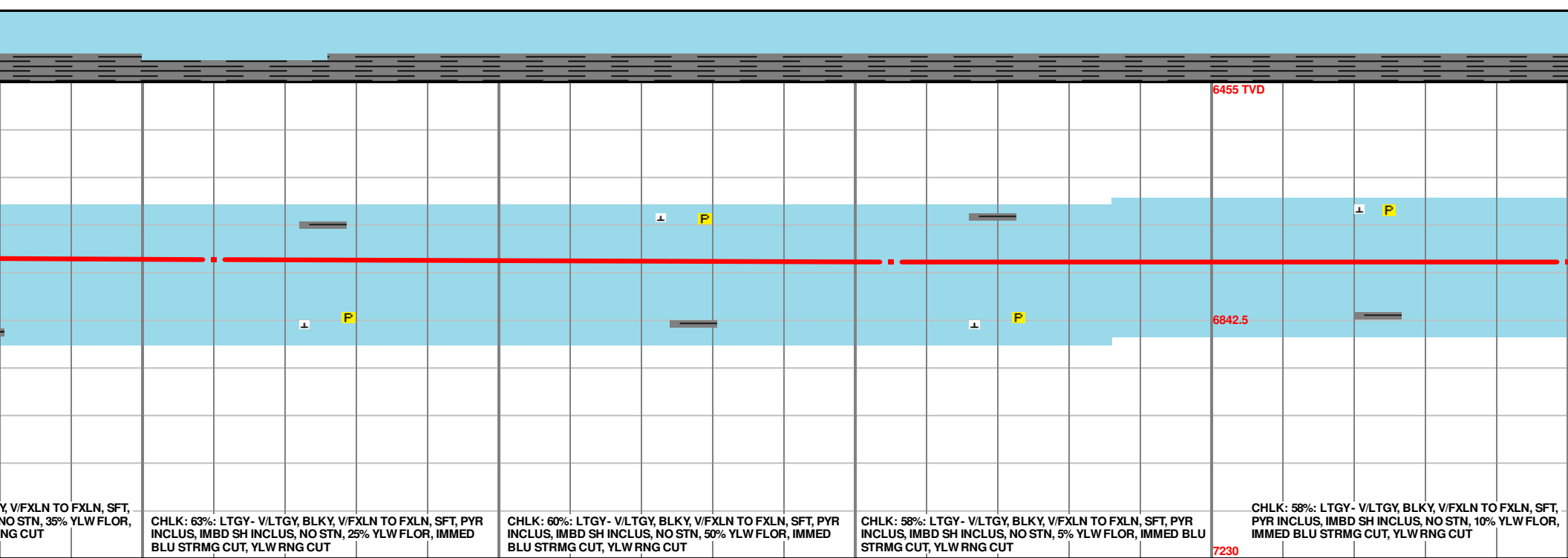
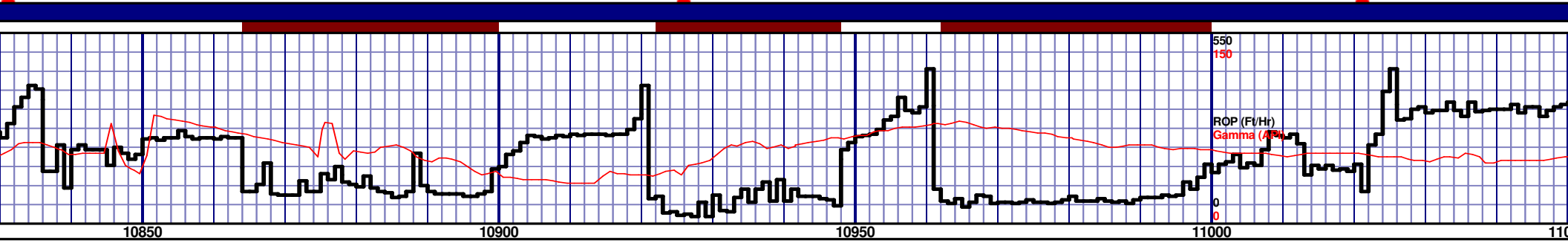
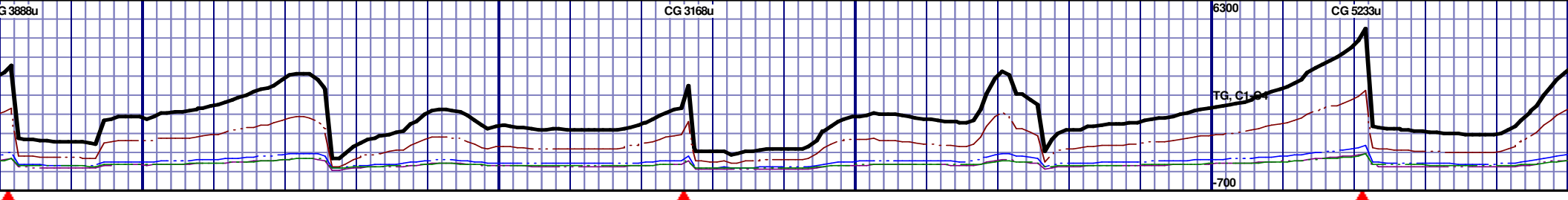
MD 103
INC 92.
VS 403





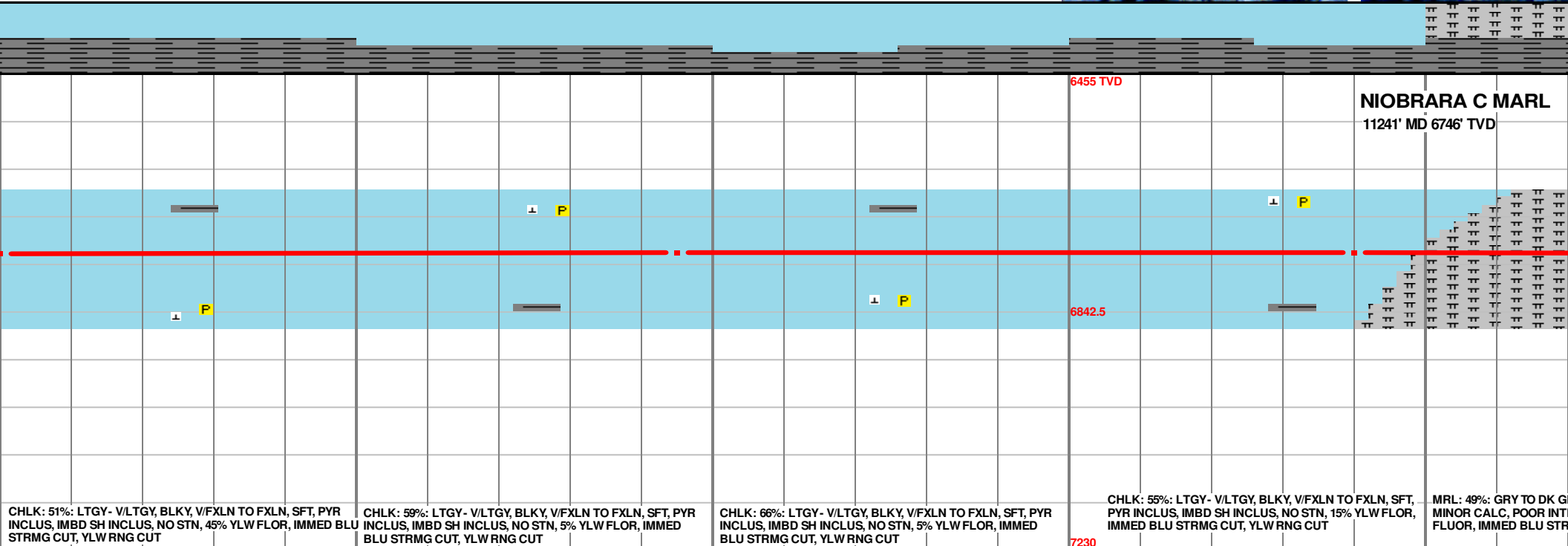
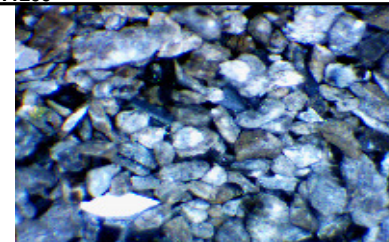
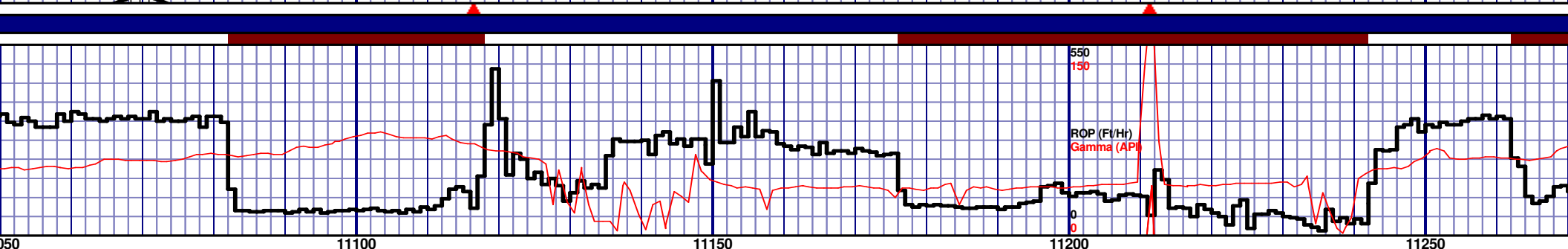
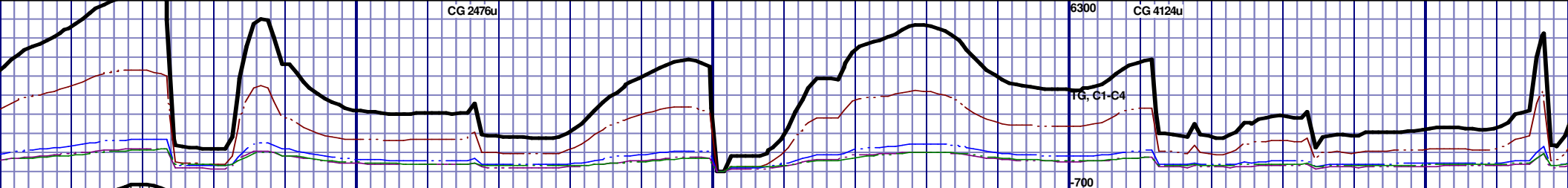
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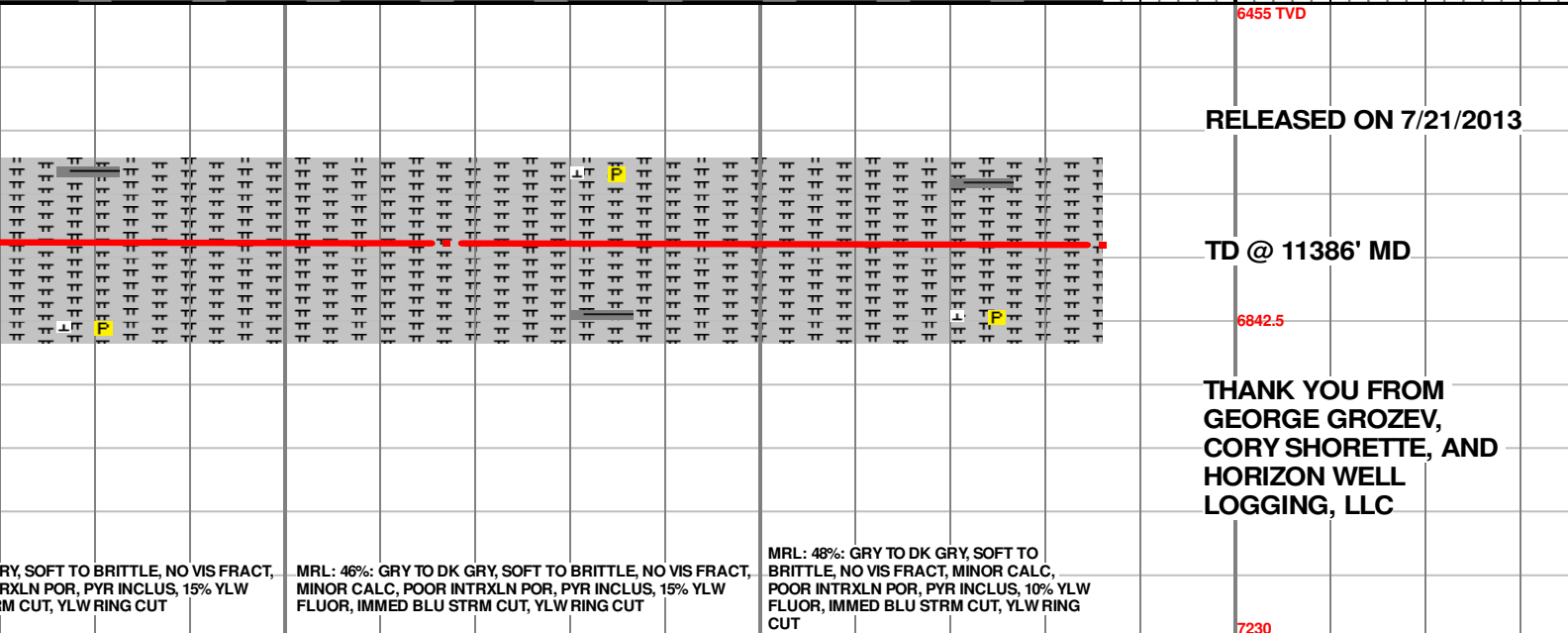
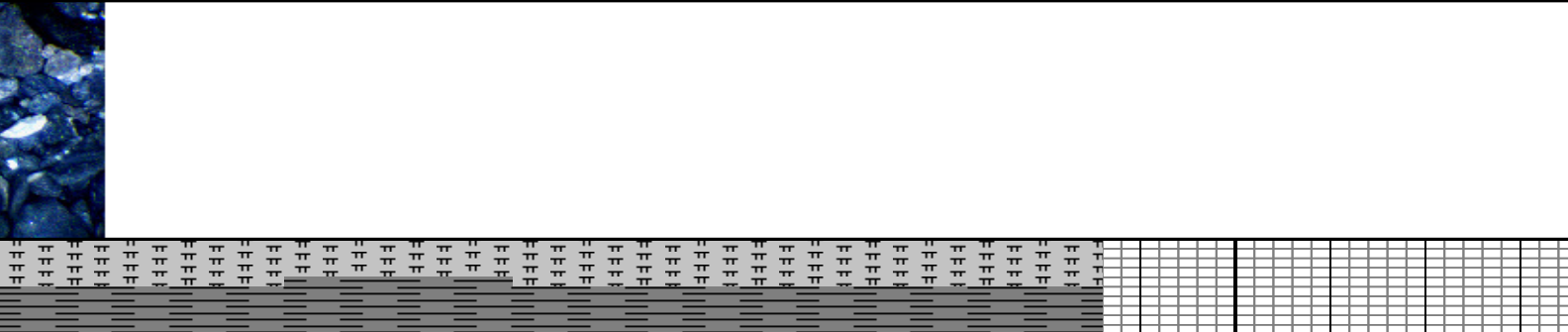
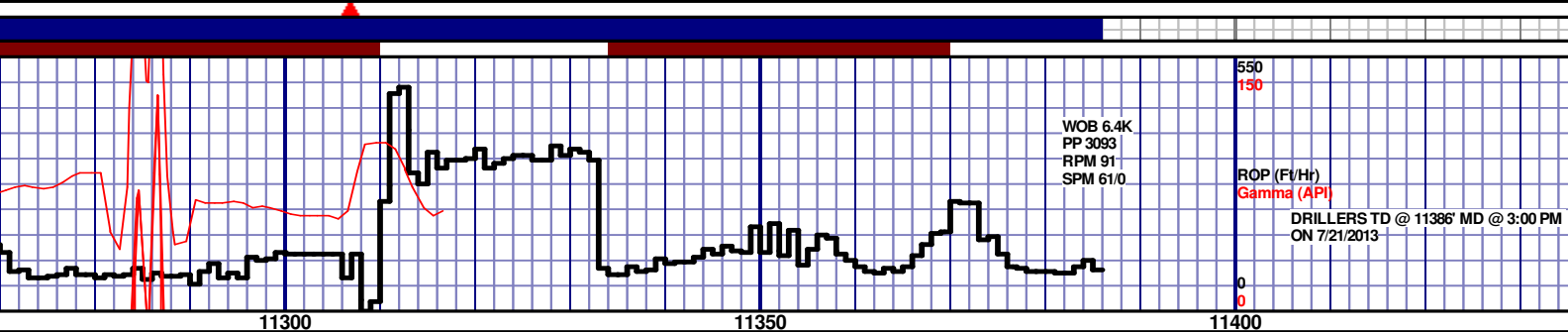
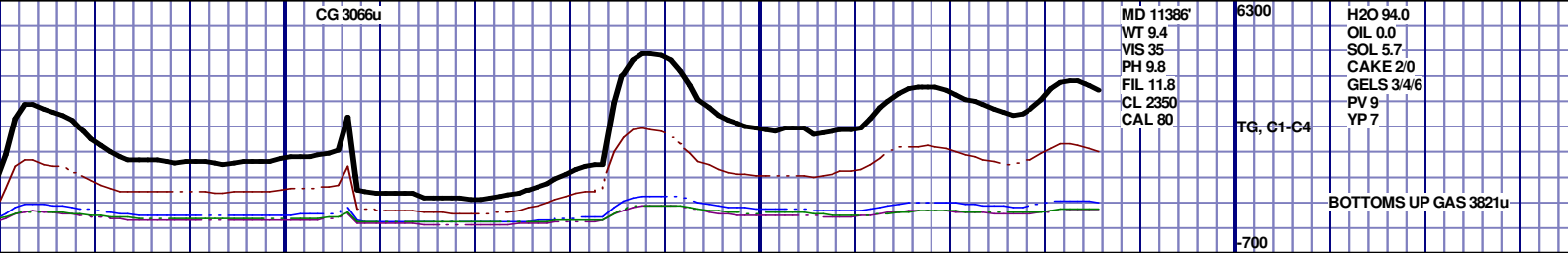
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INC 87.9 AZ 89.6
VS 4399.4



MD 10860 TVD 6743.07
INC 87 AZ 88.4
VS 4491.65

MD 10955 TVD 6746.72
INC 88.6 AZ 89.9
VS 4583.02





MD 11317 TVD 6747.69
INC 88.3 AZ 86.9
VS 4930.67

PTB: MD 11386 TVD 6749.73
INC 88.3 AZ 86.9
VS 4996.27