Scale 1:200 Imperial
Measured Depth Log

Well Name:	**USA FED 02N-36HZ**		
Location:	**Weld County, CO.**		
License Number:	**05123368860000**	**Region:**	**Weld County**
Spud Date:	**10/26/13**	**Drilling Completed:**	**11/01/13**
Surface Coordinates:	**611'FSL & 1963'FEL, SEC.36, T3N-R66W**		
Bottom Hole Coordinates:	**460'FSL & 2360'FEL, SEC.36, T3N-R66W**		
Ground Elevation (ft):	**4995'**	**K.B. Elevation (ft):**	**5008'**
Logged Interval (ft):	**6750' To: 11764'**	**Total Depth (ft):**	**11764'**
Formation:	**Niobrara C**		
Type of Drilling Fluid:	**Water Based Mud**		

OPERATOR

Company: **Anadarko Petroleum Corporation**
Address: **Granite Tower**
1099 18th St., Suite 1800
Denver, CO 80202

GEOLOGIST

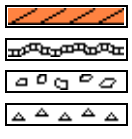
Name: Aaron Wiggins / Kyle Pickard
Company: Great Divide Consulting, Inc.
Address: P.O. Box 630263
Highlands Ranch, CO 80163

Cores

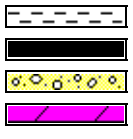
DSTs

Comments

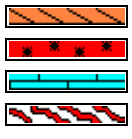
ROCK TYPES



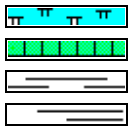
Anhy
Bent
Brec
Cht



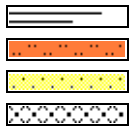
Clyst
Coal
Congl
Dol



Gyp
Igne
Lmst
Meta



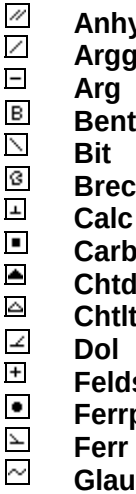
Mrlst
Salt
Shale
Shcol



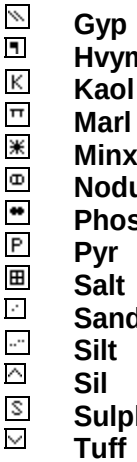
Shgy
Sltst
Ss
Till

ACCESSORIES

MINERAL

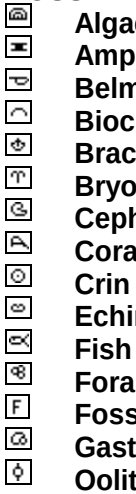


Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol
Feldspar
Ferrpel
Ferr
Glau

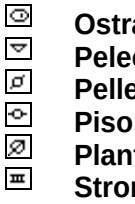


Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff

FOSSIL



Algae
Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite



Ostra
Pelec
Pellet
Pisolite
Plant
Strom

STRINGER

Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst

Sltstrg
Ssstrg

TEXTURE

Boundst
Chalky
Cryxln
Earthy
Finexln
Grainst
Lithogr
Microxln
Mudst
Packst
Wackest

OTHER SYMBOLS

POROSITY
- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

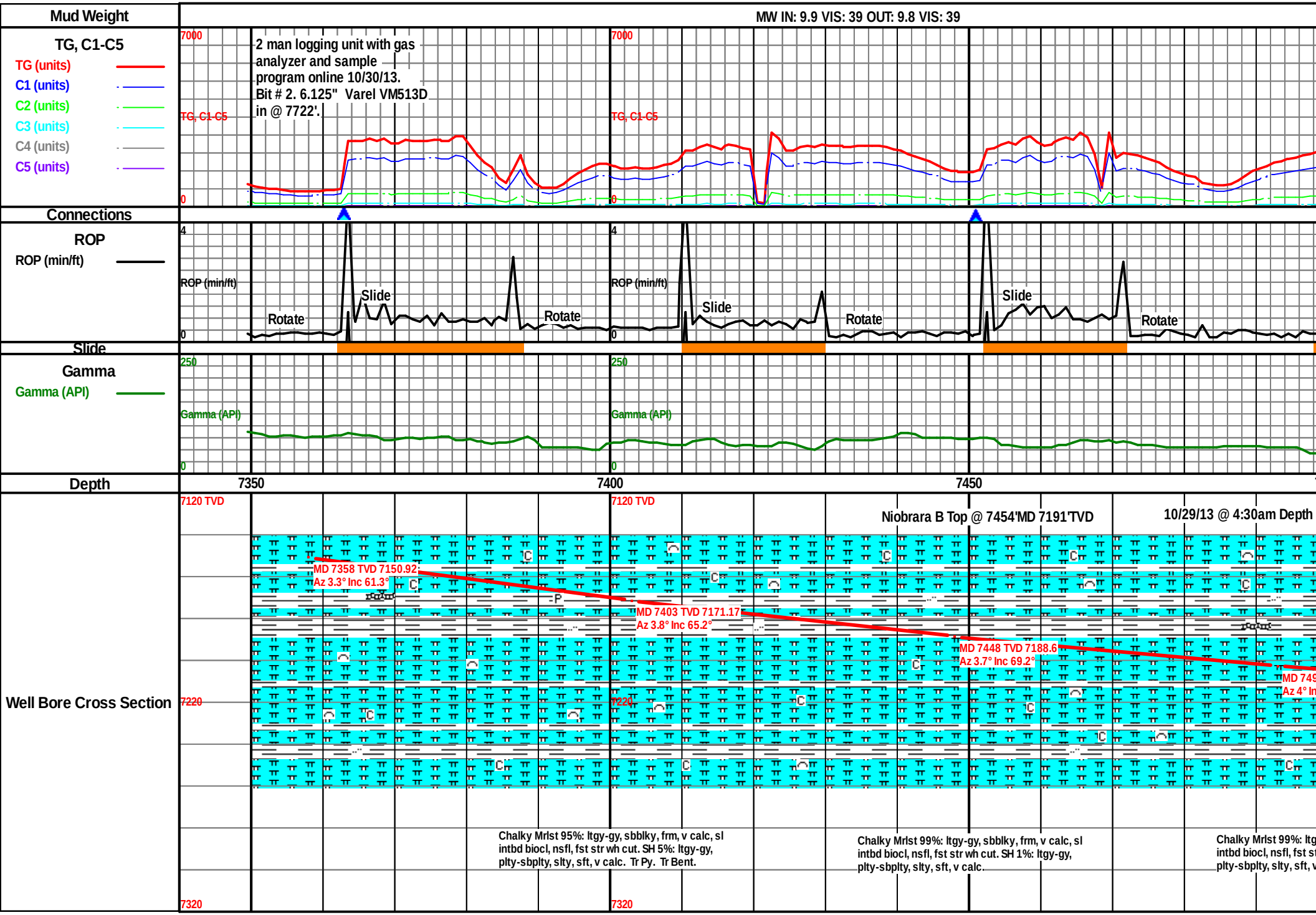
SORTING
- Well
- Moderate
- Poor

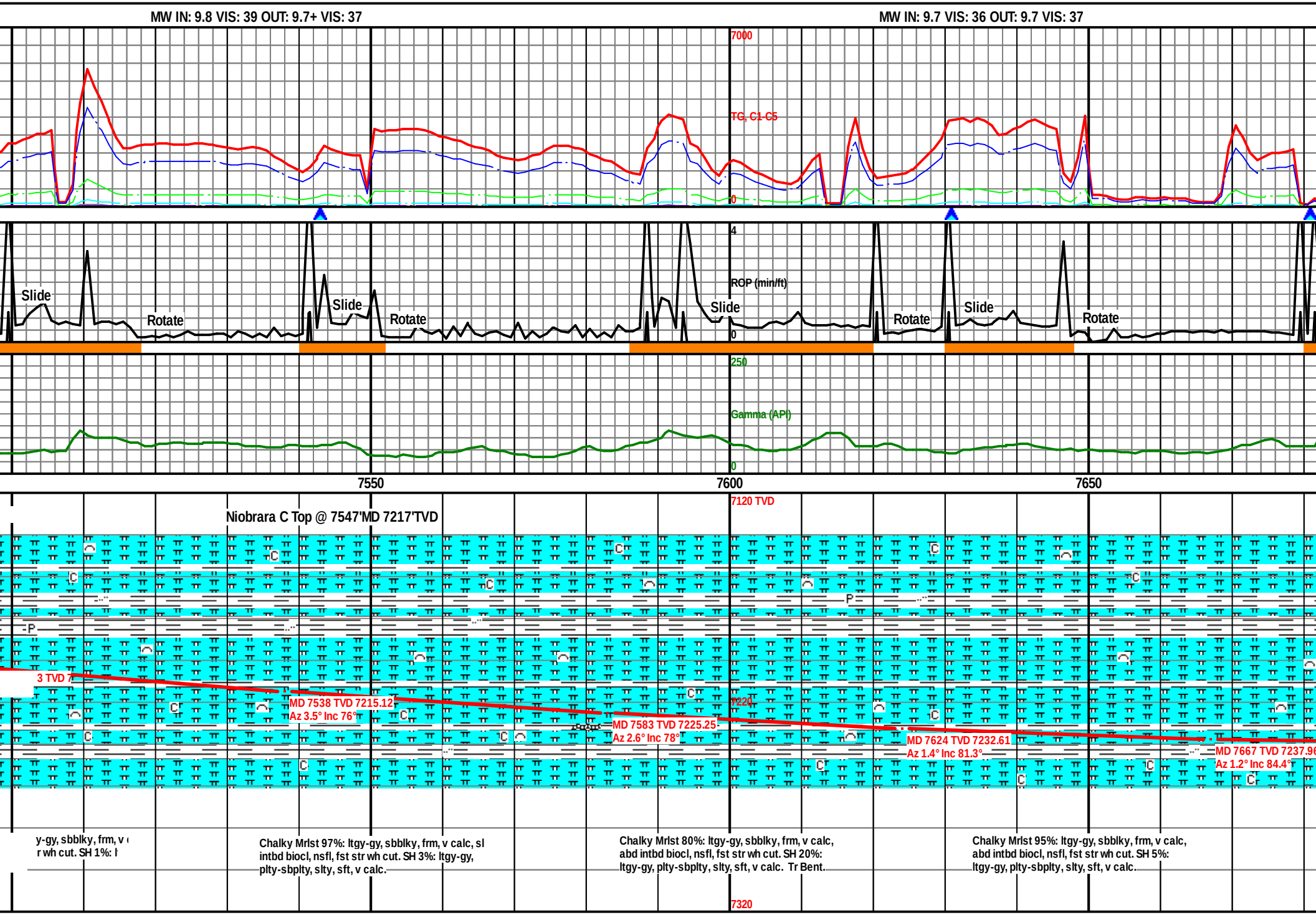
ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

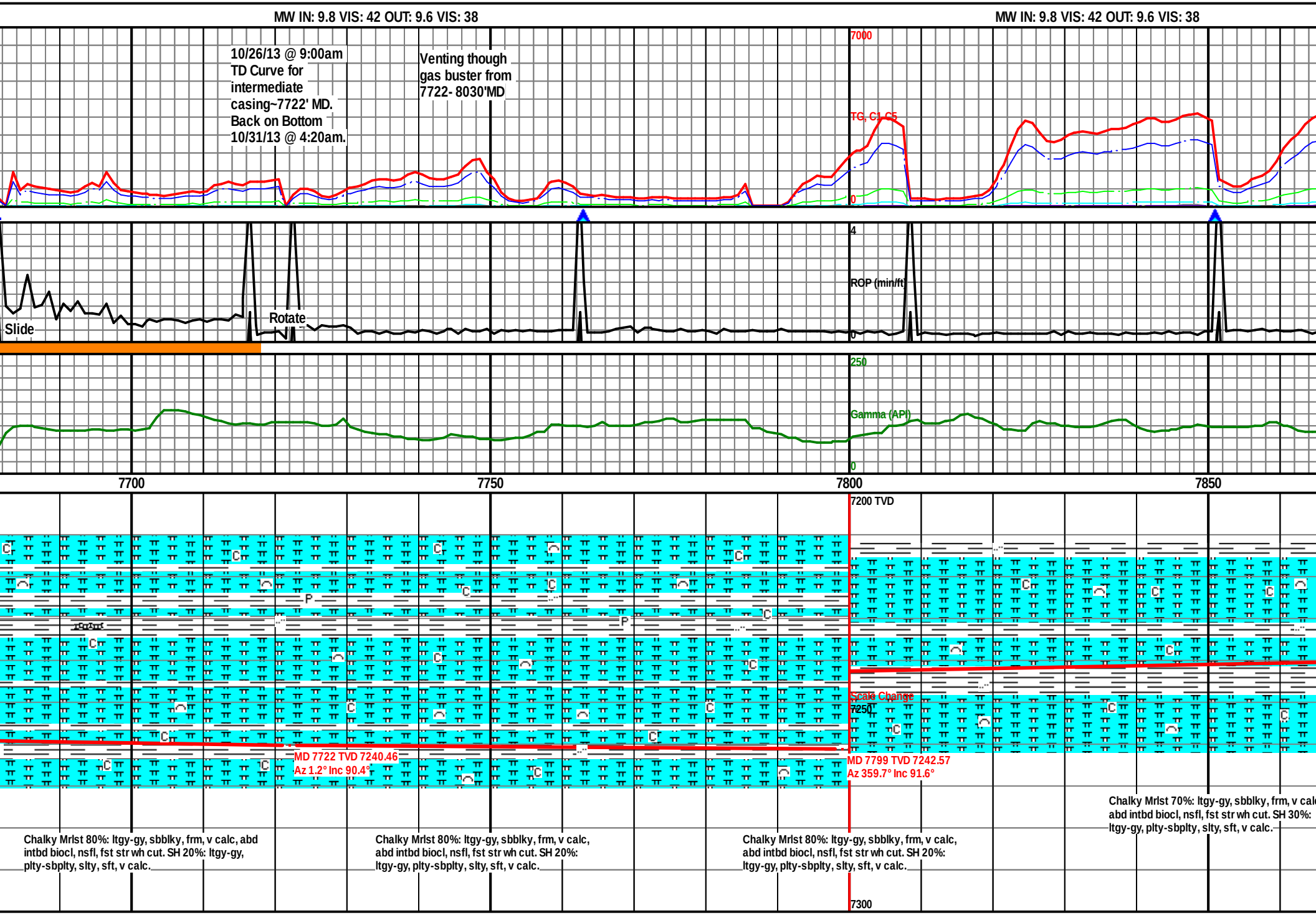
OIL SHOW
- Even
- Spotted
- Ques
- Dead

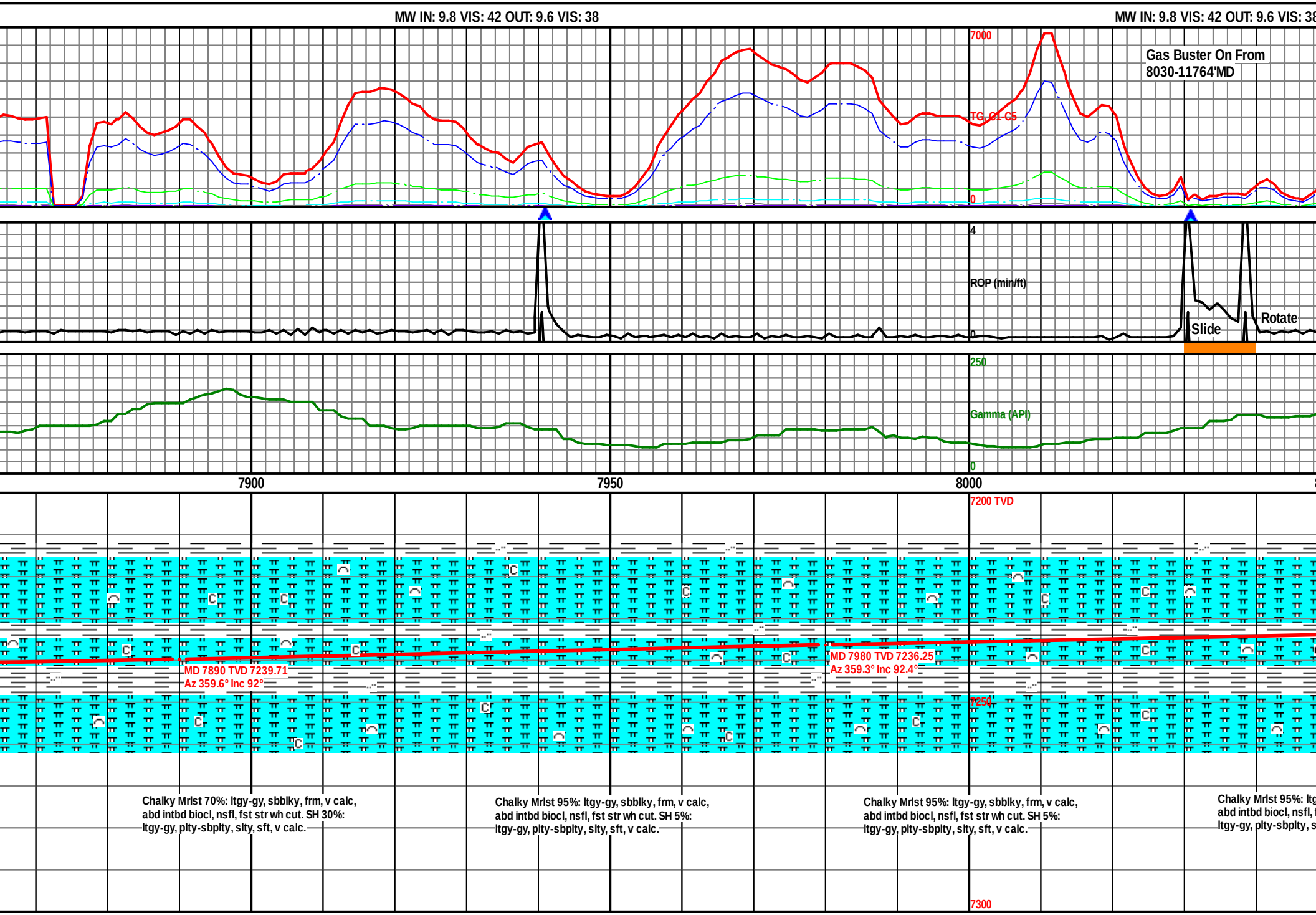
INTERVAL
- Core
- Dst

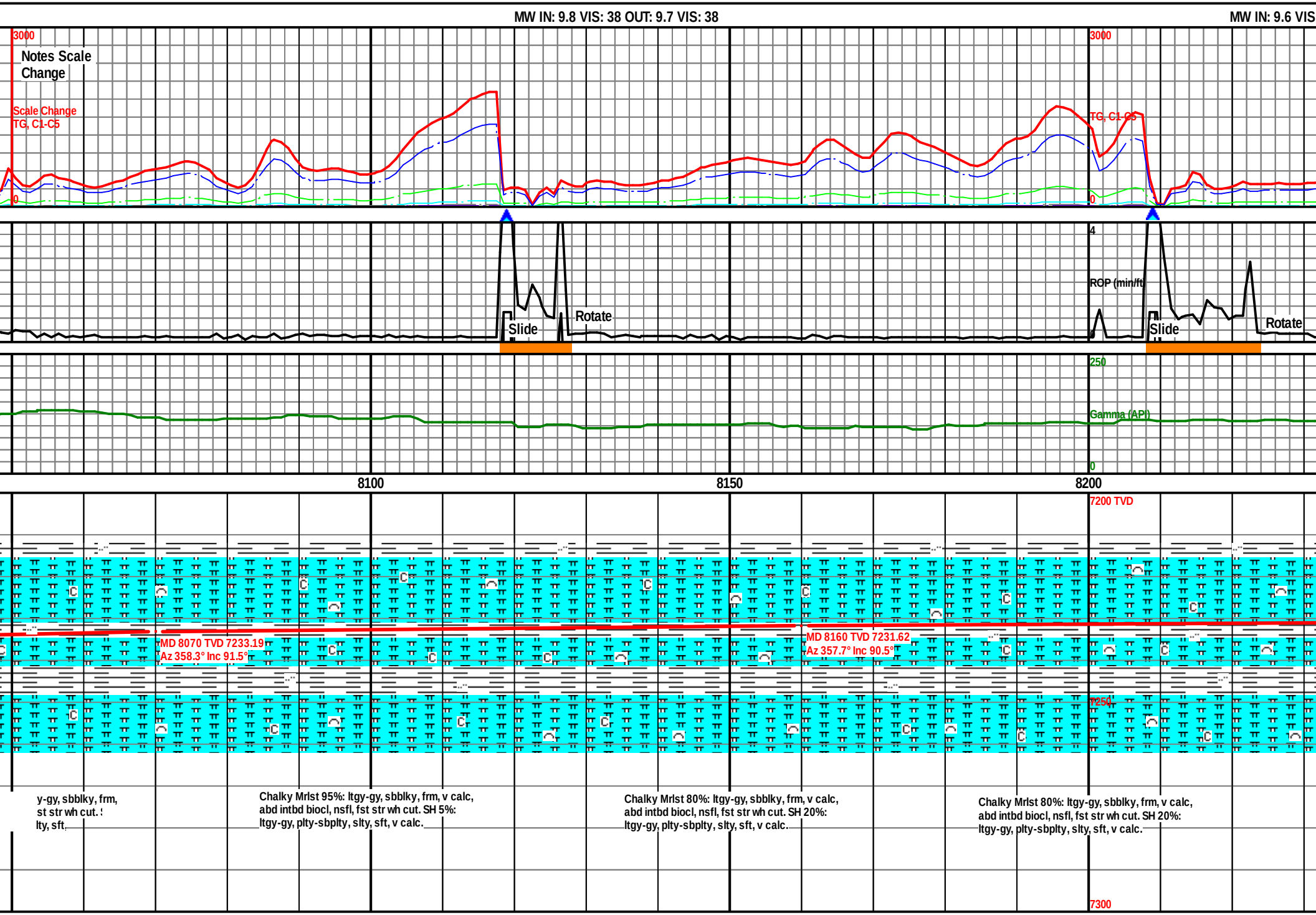
EVENT
- Rft
- Connection

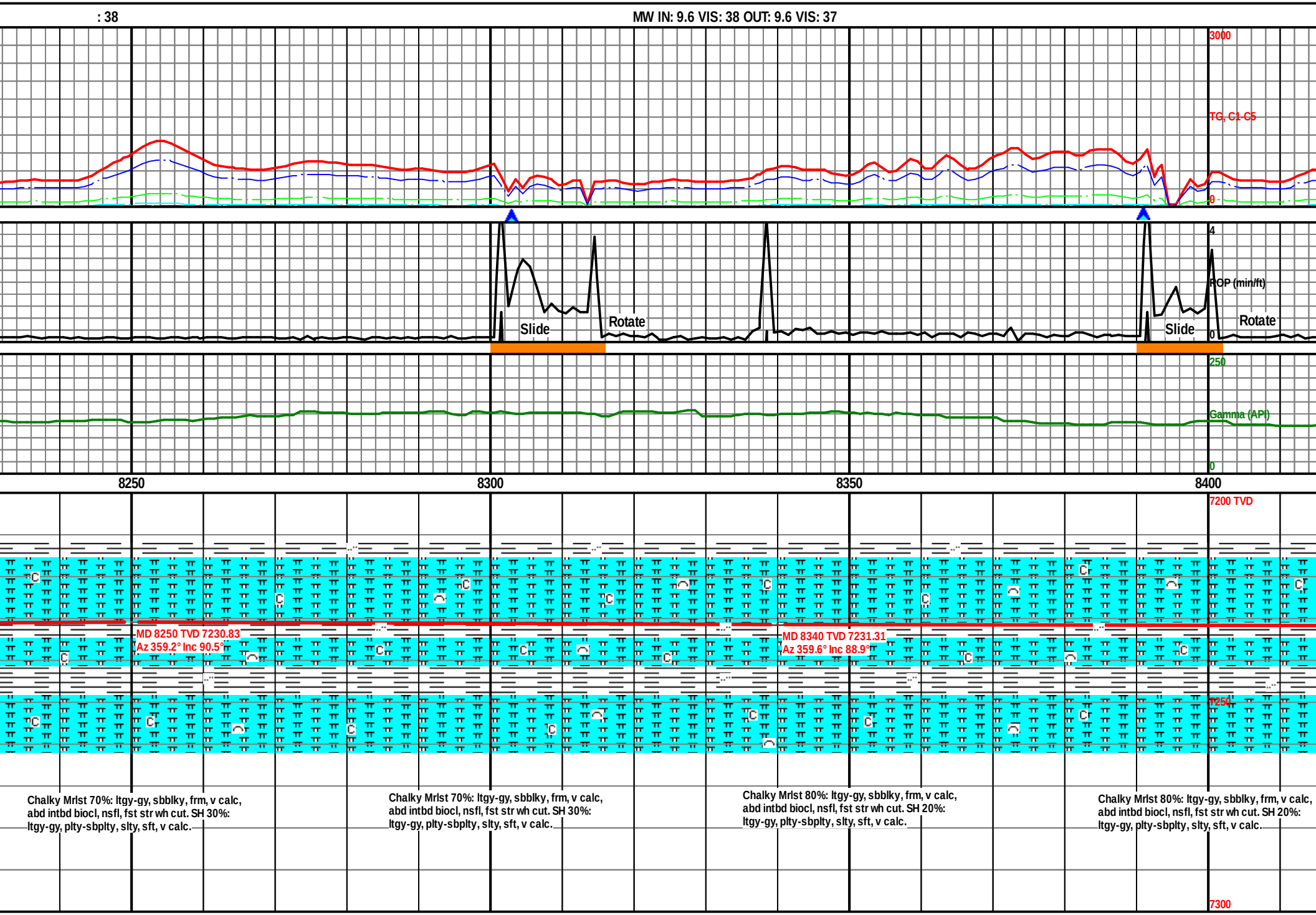

Mud Weight
MW IN: 9.9 VIS: 39 OUT: 9.8 VIS: 39
TG, C1-C5
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
C5 (units)
7000
TG, C1-C5
0
2 man logging unit with gas analyzer and sample program online 10/30/13.
Bit # 2. 6.125" Varel VM513D in @ 7722'.
Connections
ROP
ROP (min/ft)
4
ROP (min/ft)
0
Rotate
Slide
Rotate
Slide
Rotate
Slide
Rotate
Slide
Gamma
Gamma (API)
250
Gamma (API)
0
Depth
7350
7400
7450
Well Bore Cross Section
7120 TVD
7220
7320
Niobrara B Top @ 7454'MD 7191'TVD
10/29/13 @ 4:30am Depth
MD 7358 TVD 7150.92
Az 3.3° Inc 61.3°
MD 7403 TVD 7171.17
Az 3.8° Inc 65.2°
MD 7448 TVD 7188.6
Az 3.7° Inc 69.2°
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc. Tr Py. Tr Bent.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 1%: ltgy-gy, plty-sbplty, slty, sft, v calc.

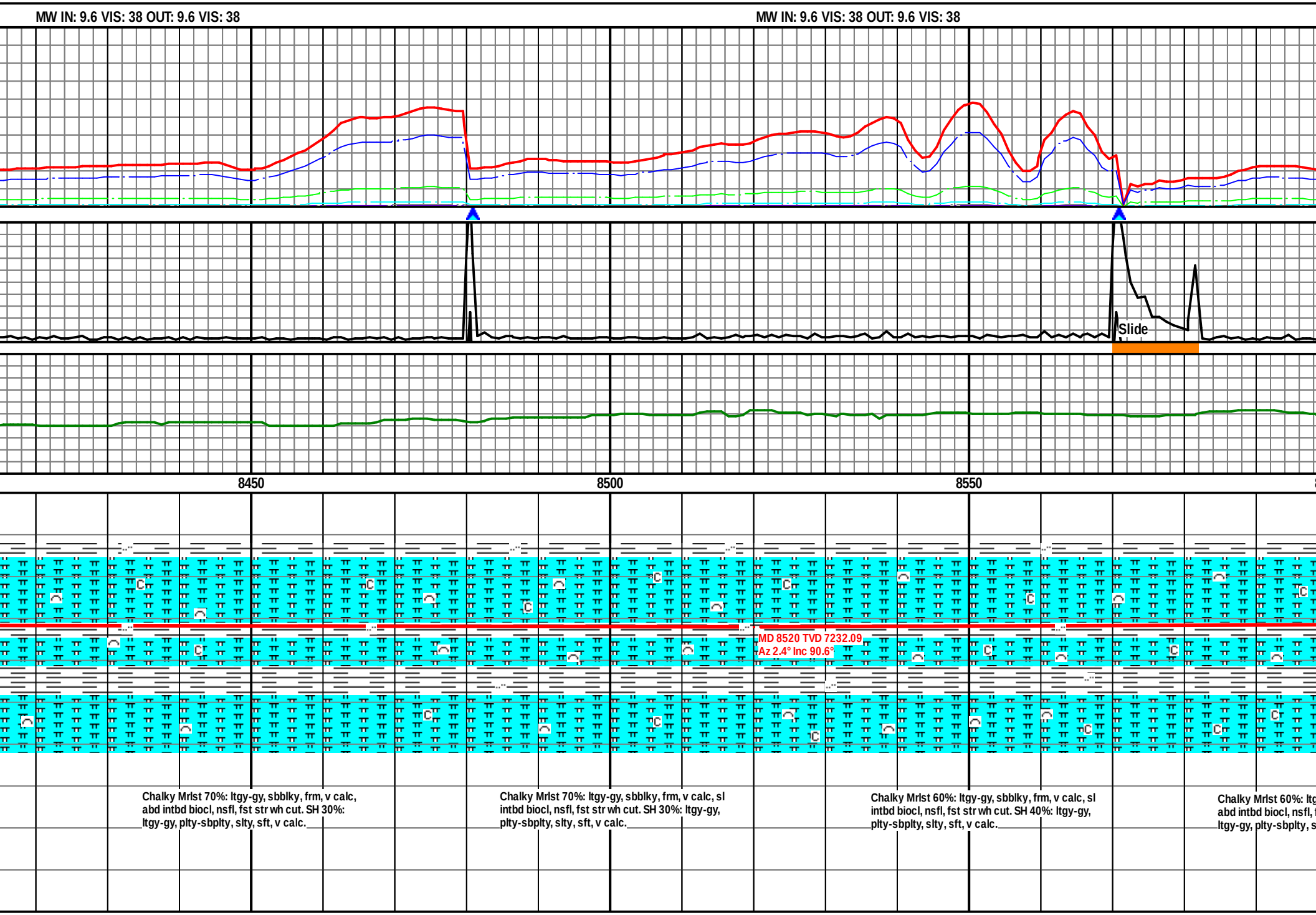

MW IN: 9.8 VIS: 39 OUT: 9.7+ VIS: 37
MW IN: 9.7 VIS: 36 OUT: 9.7 VIS: 37
7000
TG, C1-C5
0
4
ROP (min/ft)
0
Slide
Rotate
Slide
Rotate
Slide
Rotate
Slide
Rotate
250
Gamma (API)
0
7550
7600
7650
7120 TVD
Niobrara C Top @ 7547'MD 7217'TVD
MD 7538 TVD 7215.12
Az 3.5° Inc 76°
MD 7583 TVD 7225.25
Az 2.6° Inc 78°
MD 7624 TVD 7232.61
Az 1.4° Inc 81.3°
MD 7667 TVD 7237.96
Az 1.2° Inc 84.4°
7220
7320
y-gy, sbblky, frm, v
r wh cut. SH 1%: l
Chalky Mrlst 97%: ltgy-gy, sbblky, frm, v calc, sl
intbd biocl, nsfl, fst str wh cut. SH 3%: ltgy-gy,
plty-sbplty, slty, sft, v calc.
Chalky Mrlst 80%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 20%:
ltgy-gy, plty-sbplty, slty, sft, v calc. Tr Bent.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 5%:
ltgy-gy, plty-sbplty, slty, sft, v calc.

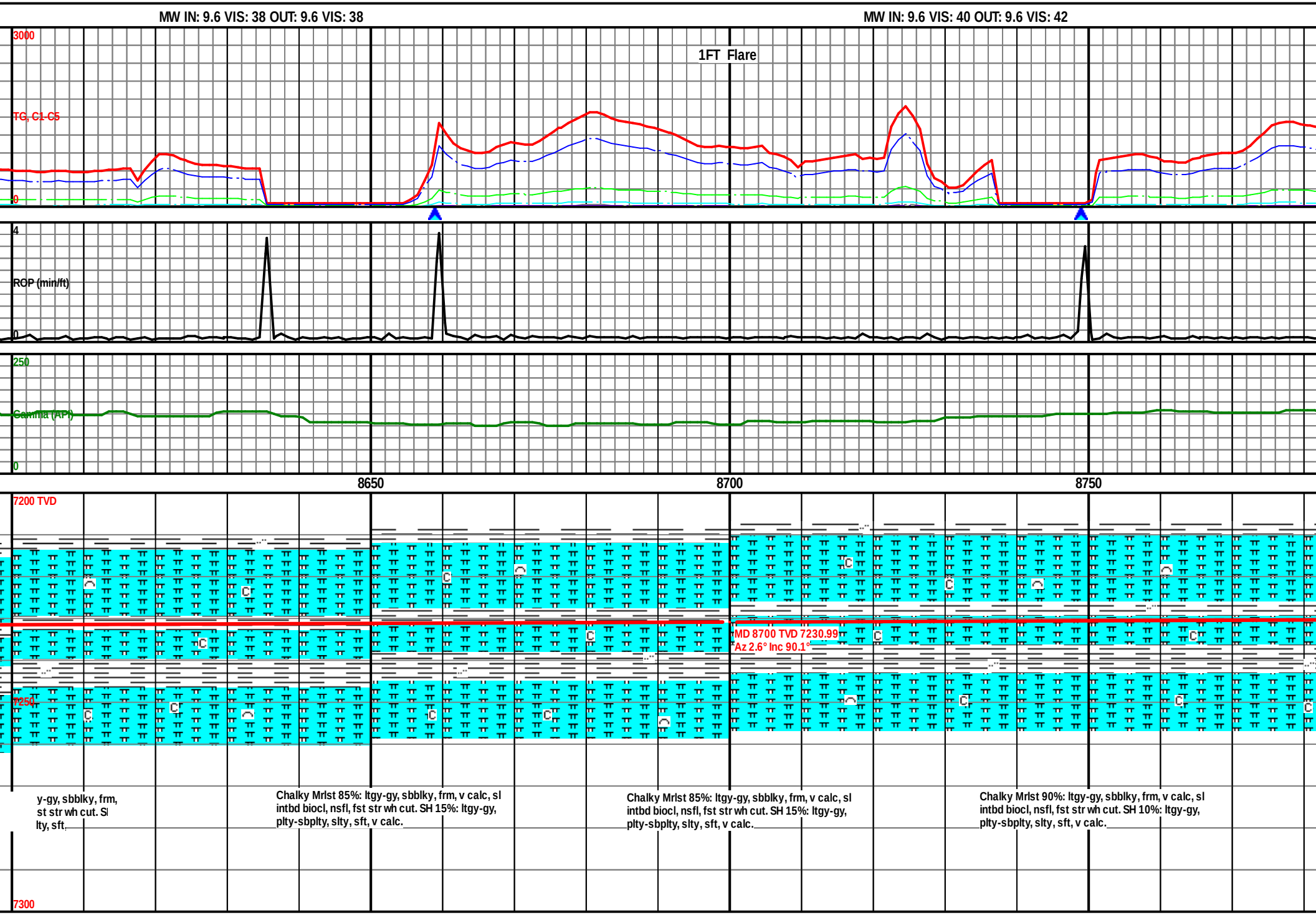

MW IN: 9.8 VIS: 42 OUT: 9.6 VIS: 38
MW IN: 9.8 VIS: 42 OUT: 9.6 VIS: 38
10/26/13 @ 9:00am
TD Curve for
intermediate
casing~7722' MD.
Back on Bottom
10/31/13 @ 4:20am.
Venting though
gas buster from
7722- 8030'MD
7000
TG, C1-C5
0
4
ROP (min/ft)
0
Slide
Rotate
250
Gamma (API)
0
7700
7750
7800
7850
7200 TVD
Scale Change
7250
MD 7722 TVD 7240.46
Az 1.2° Inc 90.4°
MD 7799 TVD 7242.57
Az 359.7° Inc 91.6°
Chalky Mrlst 80%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 20%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 80%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 20%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 80%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 20%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 70%: ltgy-gy, sbblky, frm, v calc
abd intbd biocl, nsfl, fst str wh cut. SH 30%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
7300

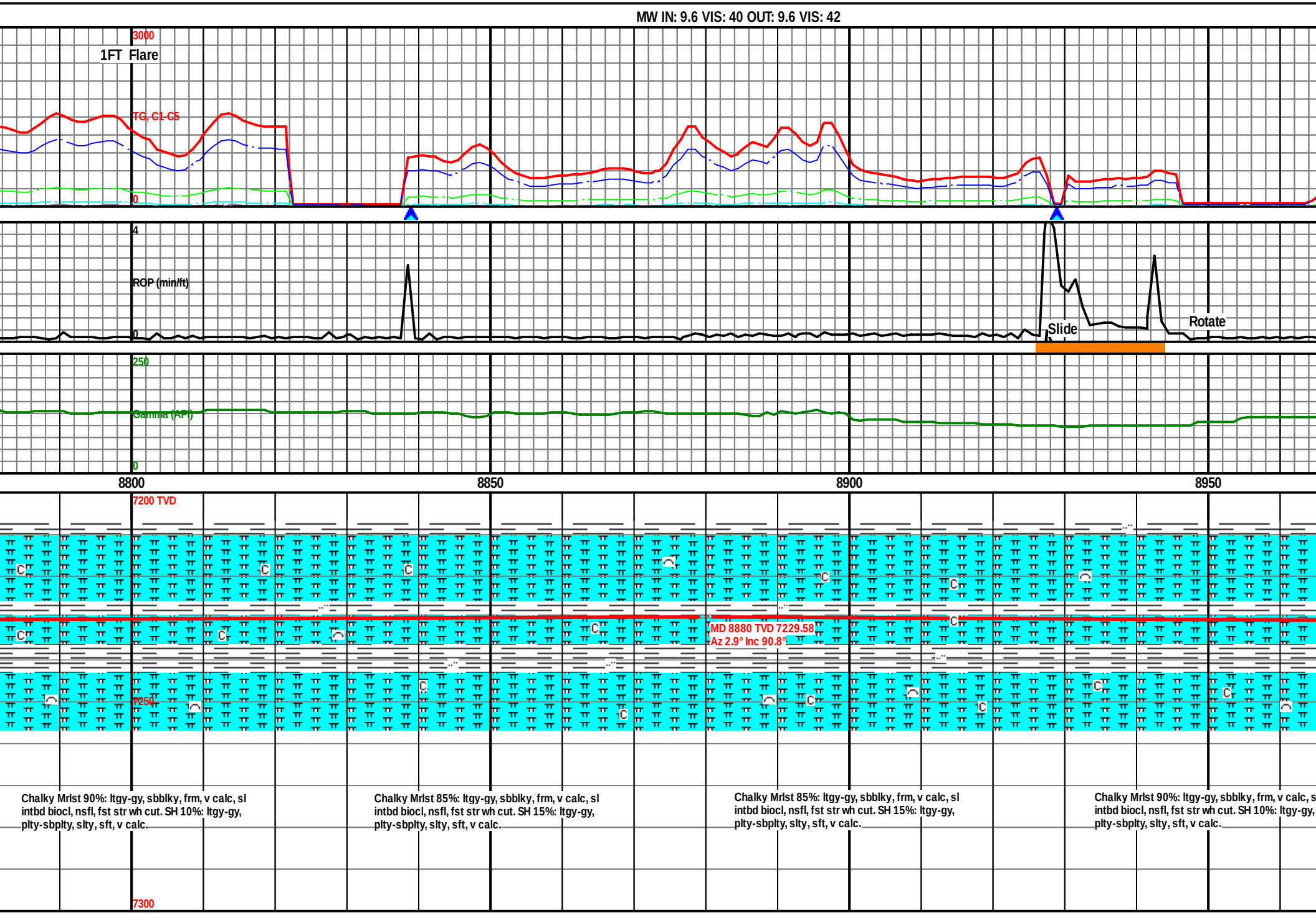

MW IN: 9.8 VIS: 42 OUT: 9.6 VIS: 38
MW IN: 9.8 VIS: 42 OUT: 9.6 VIS: 38
7000
Gas Buster On From
8030-11764'MD
TG, C1-C5
0
4
ROP (min/ft)
0
Slide
Rotate
250
Gamma (API)
0
7900
7950
8000
7200 TVD
MD 7890 TVD 7239.71
Az 359.6° Inc 92°
MD 7980 TVD 7236.25
Az 359.3° Inc 92.4°
7250
7300
Chalky Mrlst 70%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 30%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltg
abd intbd biocl, nsfl,
ltgy-gy, plty-sbplty, s

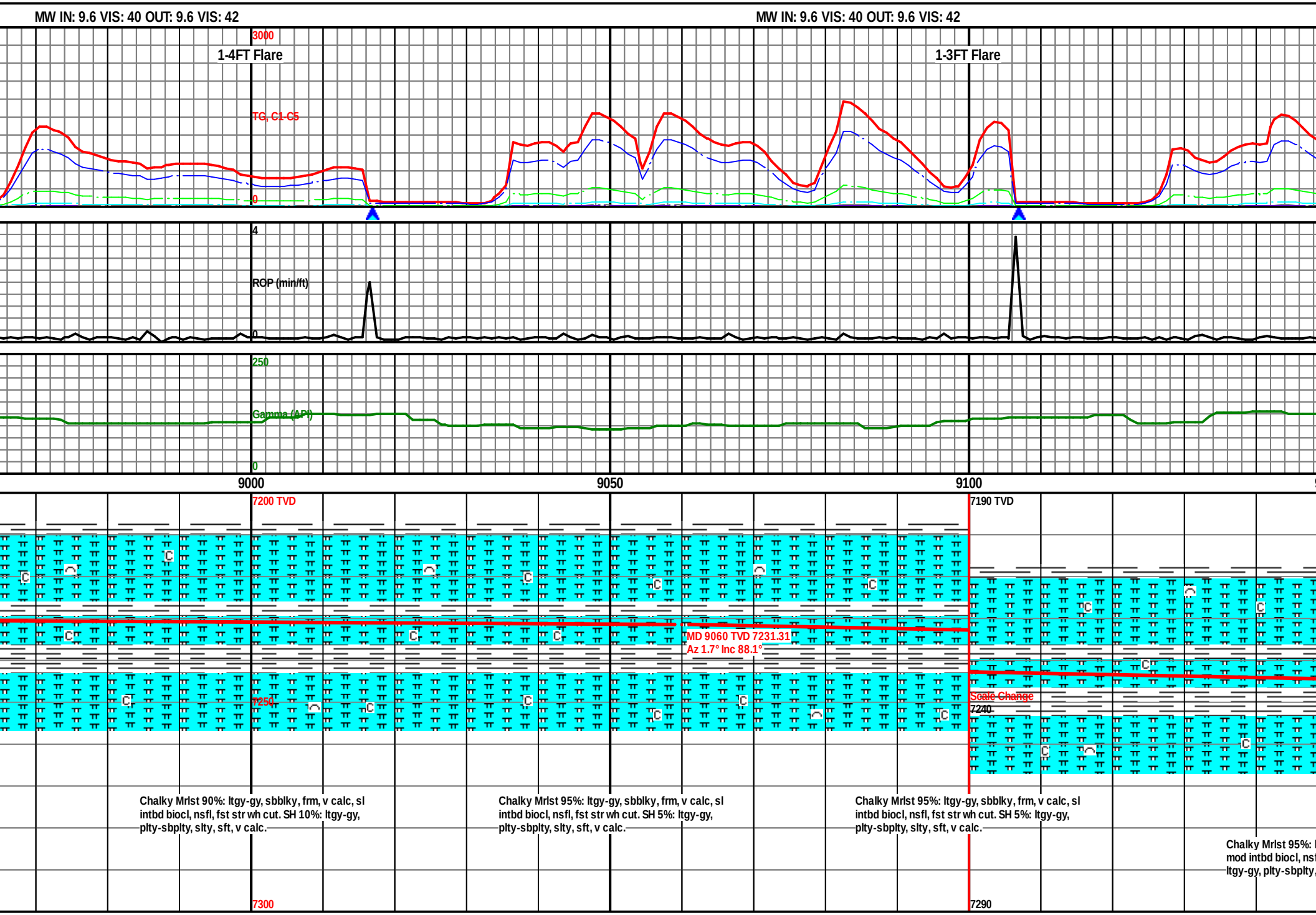

MW IN: 9.8 VIS: 38 OUT: 9.7 VIS: 38
MW IN: 9.6 VIS
3000
Notes Scale Change
Scale Change
TG, C1-C5
0
3000
TG, C1-C5
0
4
ROP (min/ft)
Slide
Rotate
Slide
Rotate
250
Gamma (API)
0
8100
8150
8200
7200 TVD
MD 8070 TVD 7233.19
Az 358.3° Inc 91.5°
MD 8160 TVD 7231.62
Az 357.7° Inc 90.5°
7250
7300
y-gy, sbblky, frm,
st str wh cut.
lty, sft,
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 5%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 80%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 20%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 80%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 20%:
ltgy-gy, plty-sbplty, slty, sft, v calc.

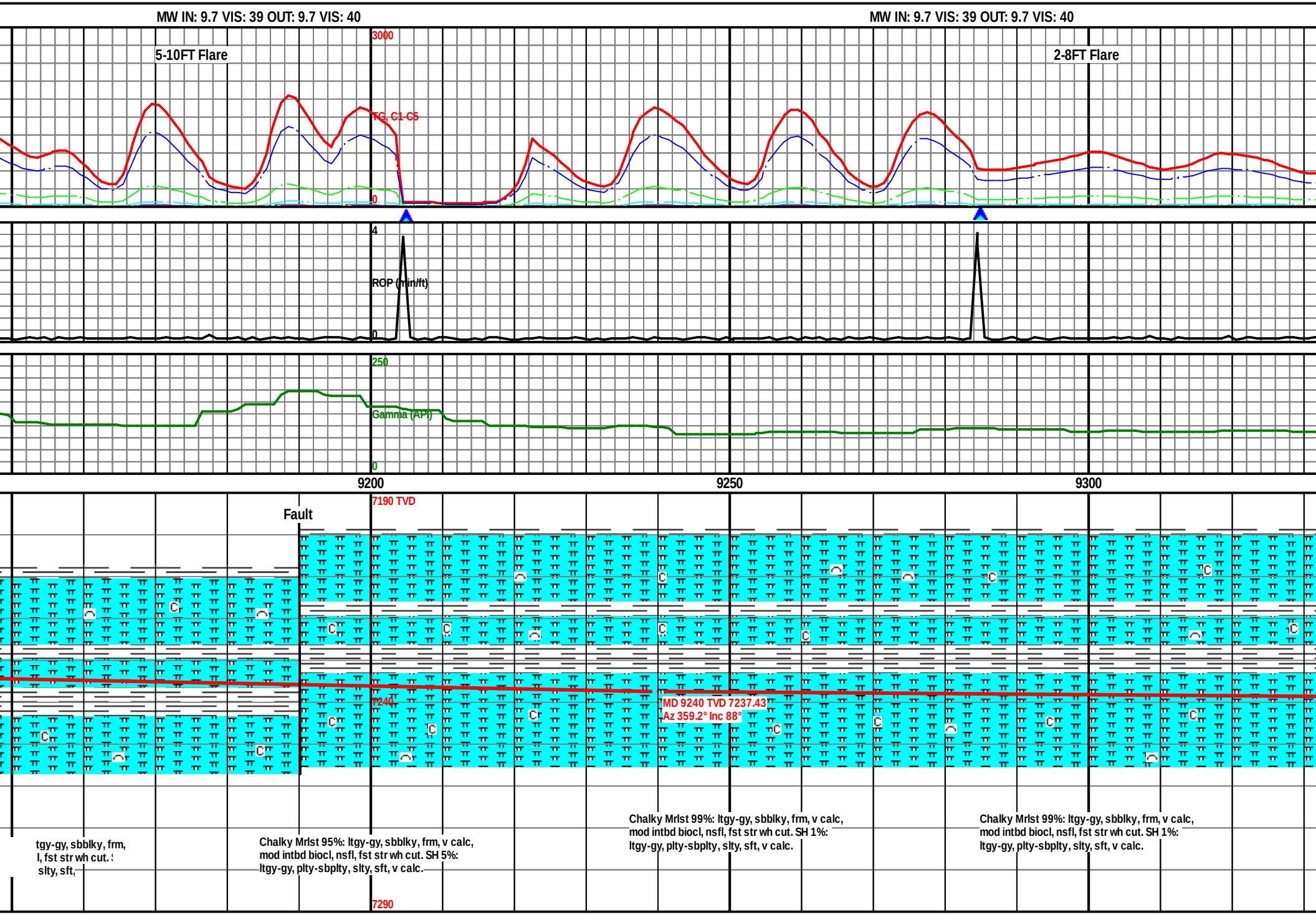

: 38
MW IN: 9.6 VIS: 38 OUT: 9.6 VIS: 37
3000
TG, C1-C5
0
4
ROP (min/ft)
Slide
Rotate
Slide
Rotate
0
250
Gamma (API)
0
8250
8300
8350
8400
7200 TVD
MD 8250 TVD 7230.83
Az 359.2° Inc 90.5°
MD 8340 TVD 7231.31
Az 359.6° Inc 88.9°
7250
7300
Chalky Mrlst 70%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 30%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 70%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 30%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 80%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 20%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 80%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 20%: ltgy-gy, plty-sbplty, slty, sft, v calc.

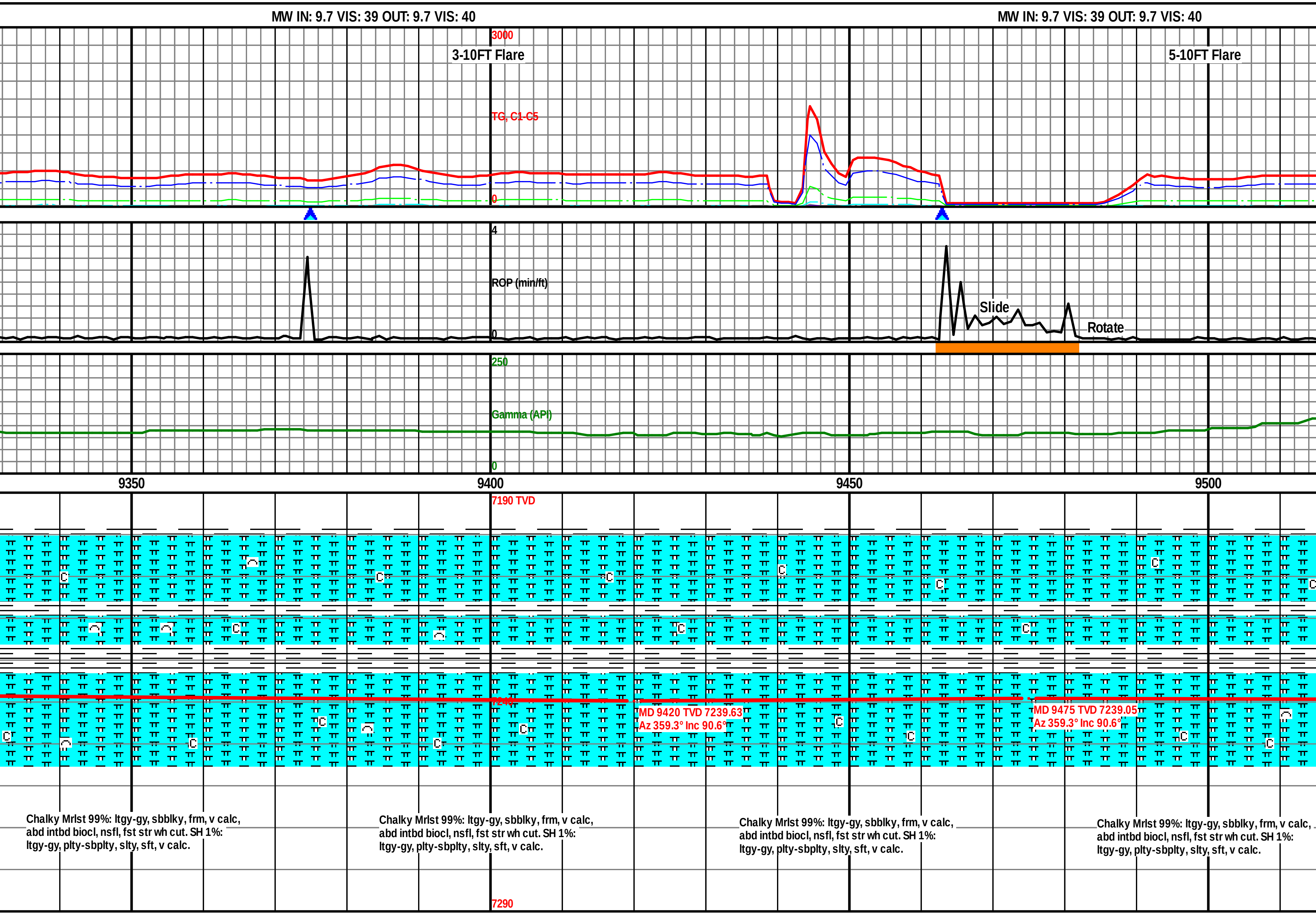

MW IN: 9.6 VIS: 38 OUT: 9.6 VIS: 38
MW IN: 9.6 VIS: 38 OUT: 9.6 VIS: 38
Slide
8450
8500
8550
MD 8520 TVD 7232.09
Az 2.4° Inc 90.6°
Chalky Mrlst 70%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 30%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 70%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 30%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 60%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 40%: ltgy-gy, plty-sbplty, slty, sft, v calc.

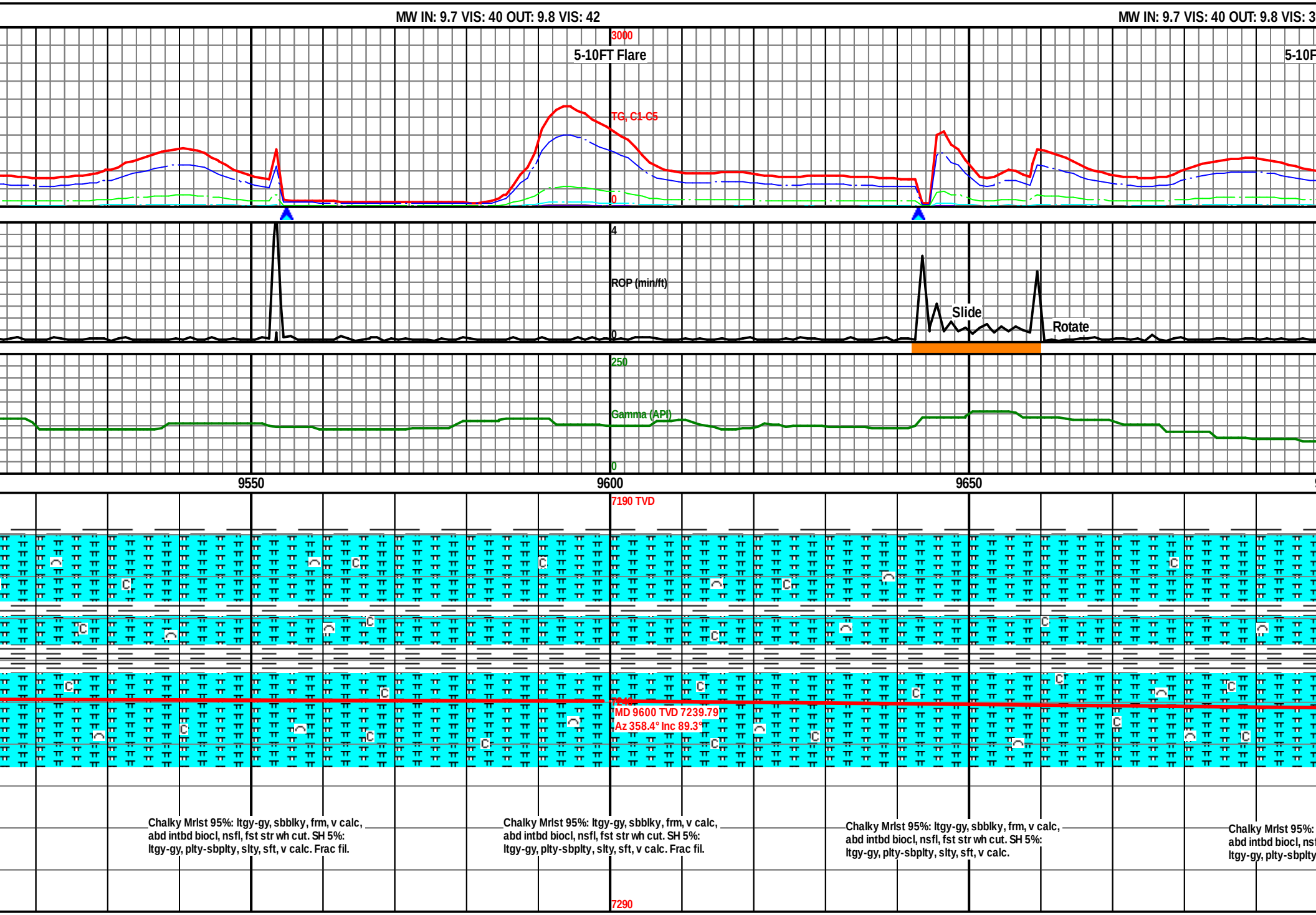

MW IN: 9.6 VIS: 38 OUT: 9.6 VIS: 38
MW IN: 9.6 VIS: 40 OUT: 9.6 VIS: 42
3000
1FT Flare
TG, C1-C5
0
4
ROP (min/ft)
0
250
Gamma (API)
0
8650
8700
8750
7200 TVD
MD 8700 TVD 7230.99
Az 2.6° Inc 90.1°
7250
y-gy, sbblky, frm,
st str wh cut. Sl
lty, sft,
Chalky Mrlst 85%: ltgy-gy, sbblky, frm, v calc, sl
intbd biocl, nsfl, fst str wh cut. SH 15%: ltgy-gy,
plty-sbplty, slty, sft, v calc.
Chalky Mrlst 85%: ltgy-gy, sbblky, frm, v calc, sl
intbd biocl, nsfl, fst str wh cut. SH 15%: ltgy-gy,
plty-sbplty, slty, sft, v calc.
Chalky Mrlst 90%: ltgy-gy, sbblky, frm, v calc, sl
intbd biocl, nsfl, fst str wh cut. SH 10%: ltgy-gy,
plty-sbplty, slty, sft, v calc.
7300

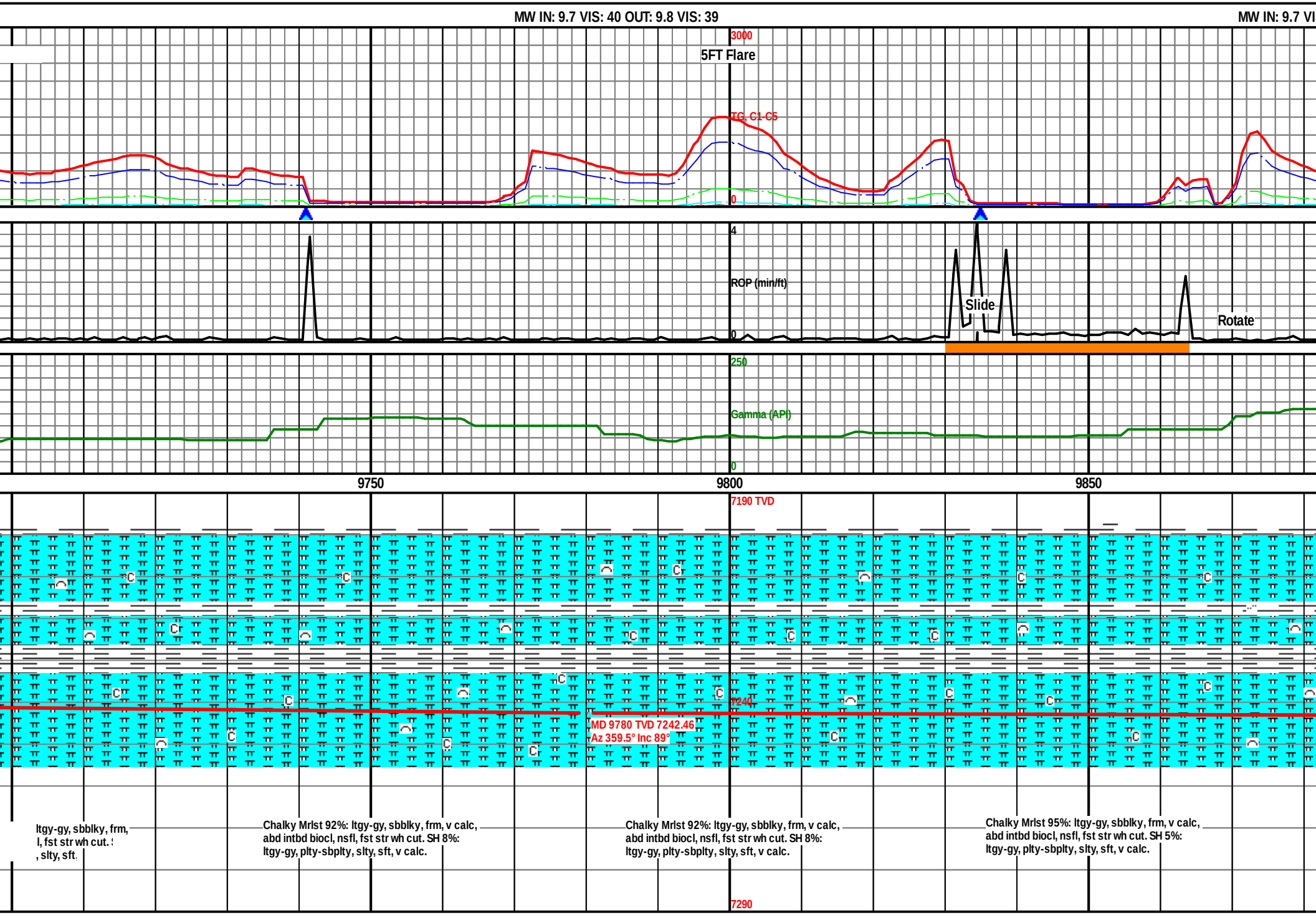

MW IN: 9.6 VIS: 40 OUT: 9.6 VIS: 42
3000
1FT Flare
TG, C1-C5
0
4
ROP (min/ft)
0
Slide
Rotate
250
Gamma (API)
0
8800
8850
8900
8950
7200 TVD
MD 8880 TVD 7229.58
Az 2.9° Inc 90.8°
7250
7300
Chalky Mrlst 90%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 10%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 85%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 15%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 85%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 15%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 90%: ltgy-gy, sbblky, frm, v calc, s intbd biocl, nsfl, fst str wh cut. SH 10%: ltgy-gy, plty-sbplty, slty, sft, v calc.

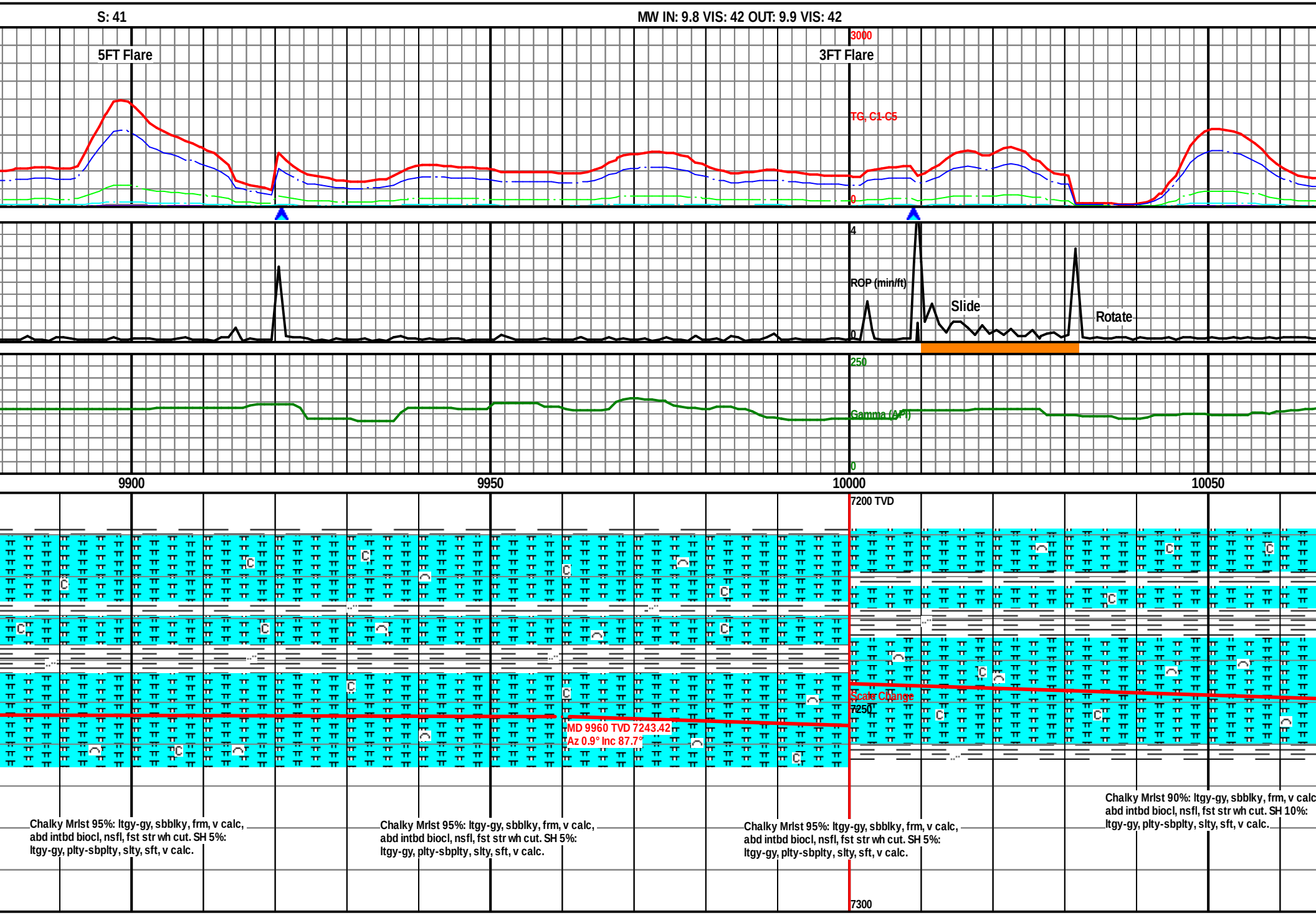

MW IN: 9.6 VIS: 40 OUT: 9.6 VIS: 42
MW IN: 9.6 VIS: 40 OUT: 9.6 VIS: 42
1-4FT Flare
1-3FT Flare
3000
TG, C1-C5
0
4
ROP (min/ft)
0
250
Gamma (API)
0
9000
9050
9100
7200 TVD
7190 TVD
MD 9060 TVD 7231.31
Az 1.7° Inc 88.1°
Scale Change
7240
7250
7300
7290
Chalky Mrlst 90%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 10%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, sl intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%:
mod intbd biocl, nsf
ltgy-gy, plty-sbplty,

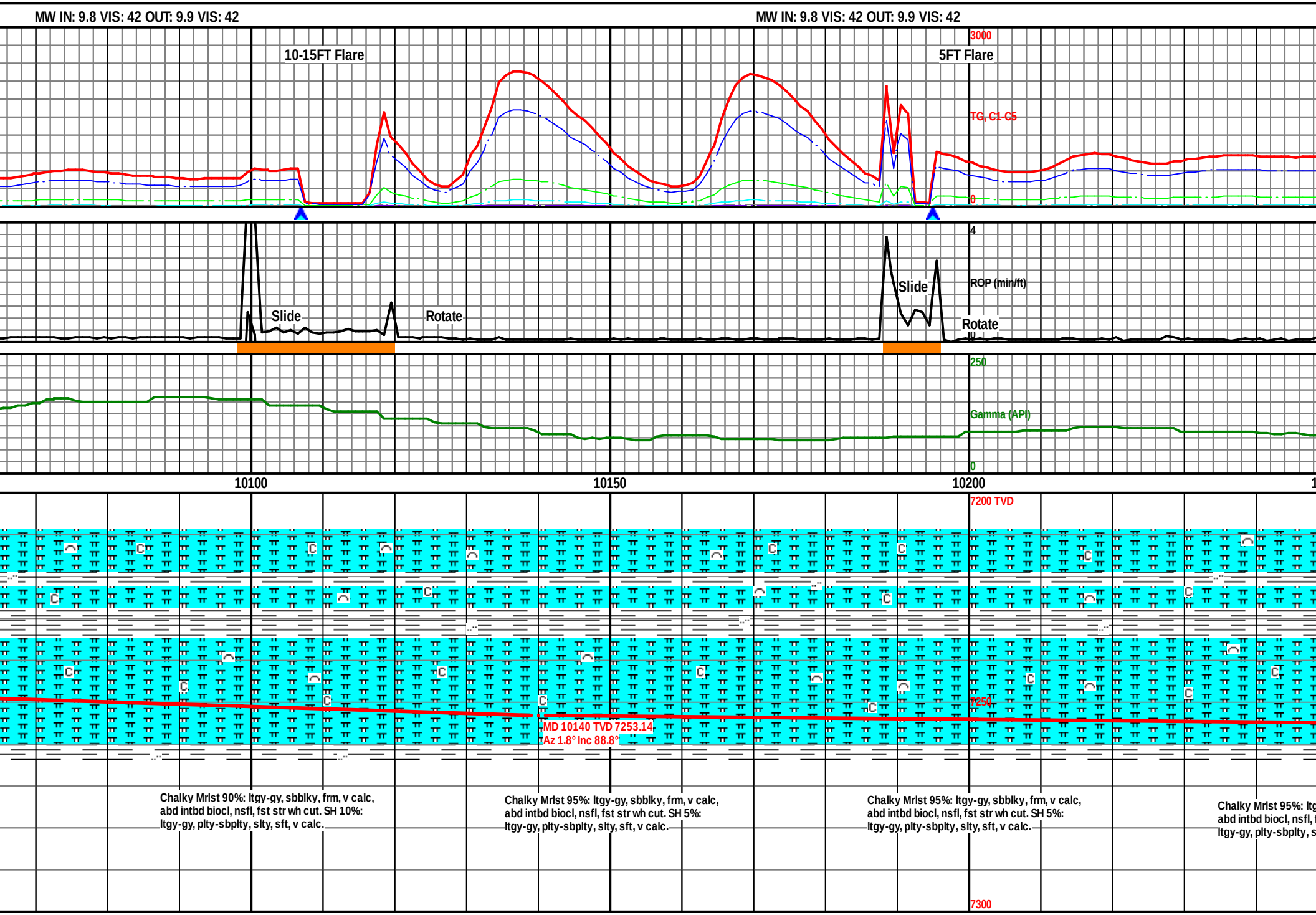

MW IN: 9.7 VIS: 39 OUT: 9.7 VIS: 40
MW IN: 9.7 VIS: 39 OUT: 9.7 VIS: 40
5-10FT Flare
2-8FT Flare
3000
TG, C1-C5
0
4
ROP (min/ft)
0
250
Gamma (API)
0
9200
9250
9300
7190 TVD
Fault
MD 9240 TVD 7237.43
Az 359.2° Inc 88°
7240
7290
tgy-gy, sbblky, frm,
l, fst str wh cut. S
slty, sft,
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc,
mod intbd biocl, nsfl, fst str wh cut. SH 5%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc,
mod intbd biocl, nsfl, fst str wh cut. SH 1%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc,
mod intbd biocl, nsfl, fst str wh cut. SH 1%:
ltgy-gy, plty-sbplty, slty, sft, v calc.

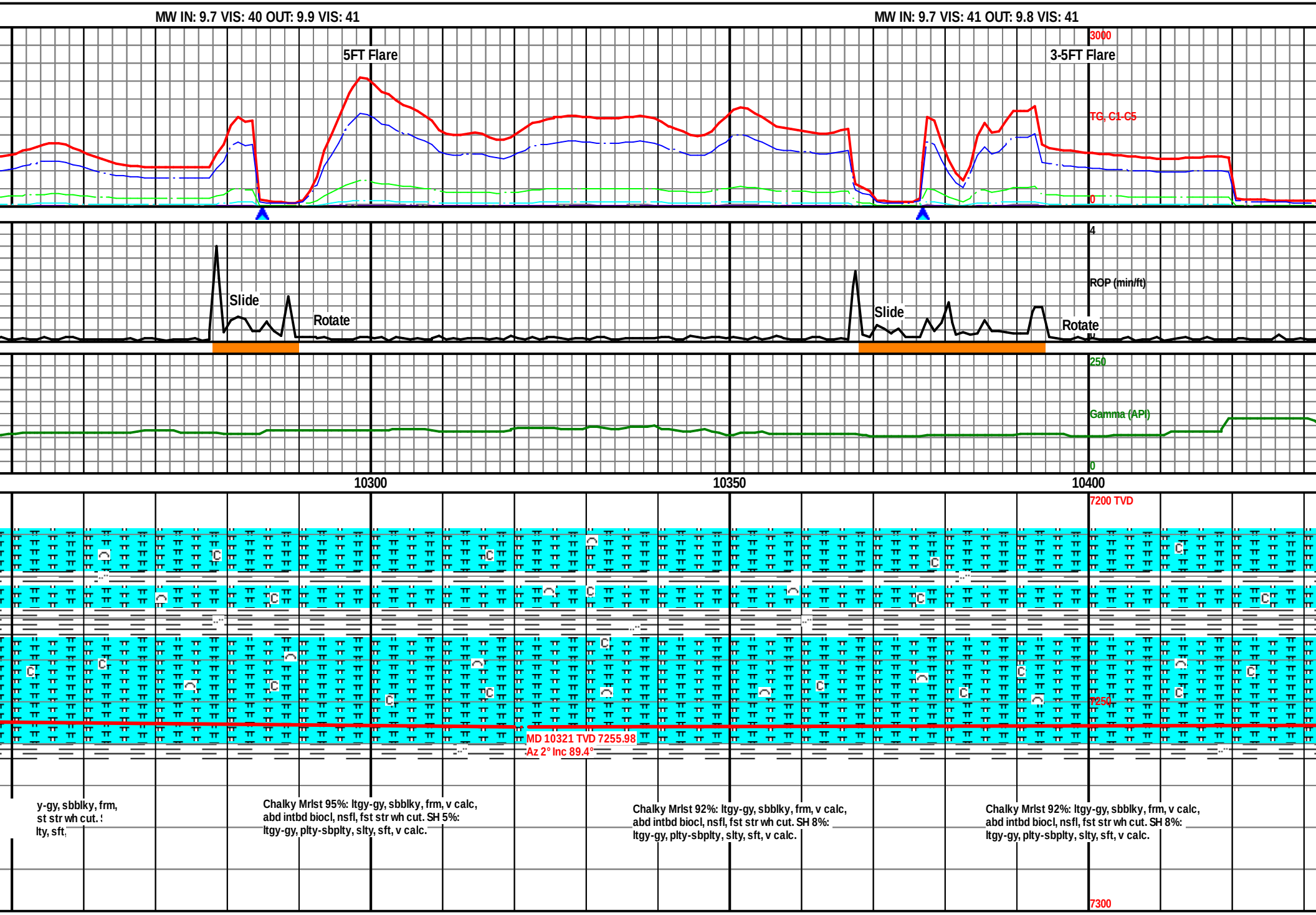

MW IN: 9.7 VIS: 39 OUT: 9.7 VIS: 40
MW IN: 9.7 VIS: 39 OUT: 9.7 VIS: 40
3000
3-10FT Flare
5-10FT Flare
TG, C1-C5
0
4
ROP (min/ft)
Slide
Rotate
0
250
Gamma (API)
0
9350
9400
9450
9500
7190 TVD
7240
MD 9420 TVD 7239.63
Az 359.3° Inc 90.6°
MD 9475 TVD 7239.05
Az 359.3° Inc 90.6°
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 1%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 1%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 1%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 1%: ltgy-gy, plty-sbplty, slty, sft, v calc.
7290

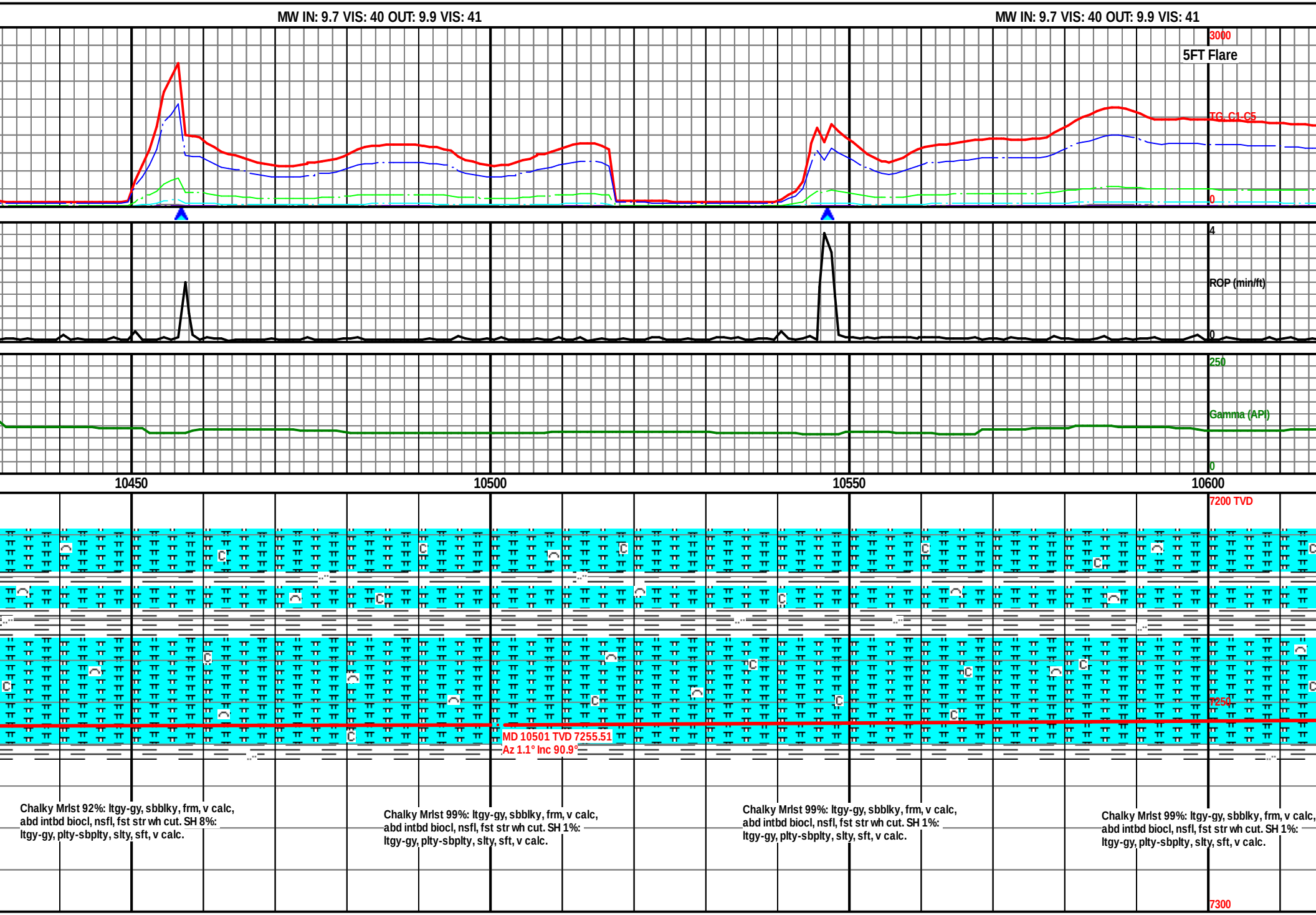

MW IN: 9.7 VIS: 40 OUT: 9.8 VIS: 42
MW IN: 9.7 VIS: 40 OUT: 9.8 VIS: 3
3000
5-10FT Flare
5-10F
TG, C1-C5
0
4
ROP (min/ft)
0
Slide
Rotate
250
Gamma (API)
0
9550
9600
9650
7190 TVD
MD 9600 TVD 7239.79
Az 358.4° Inc 89.3°
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc. Frac fil.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc. Frac fil.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%:
abd intbd biocl, nsf
ltgy-gy, plty-sbplty
7290

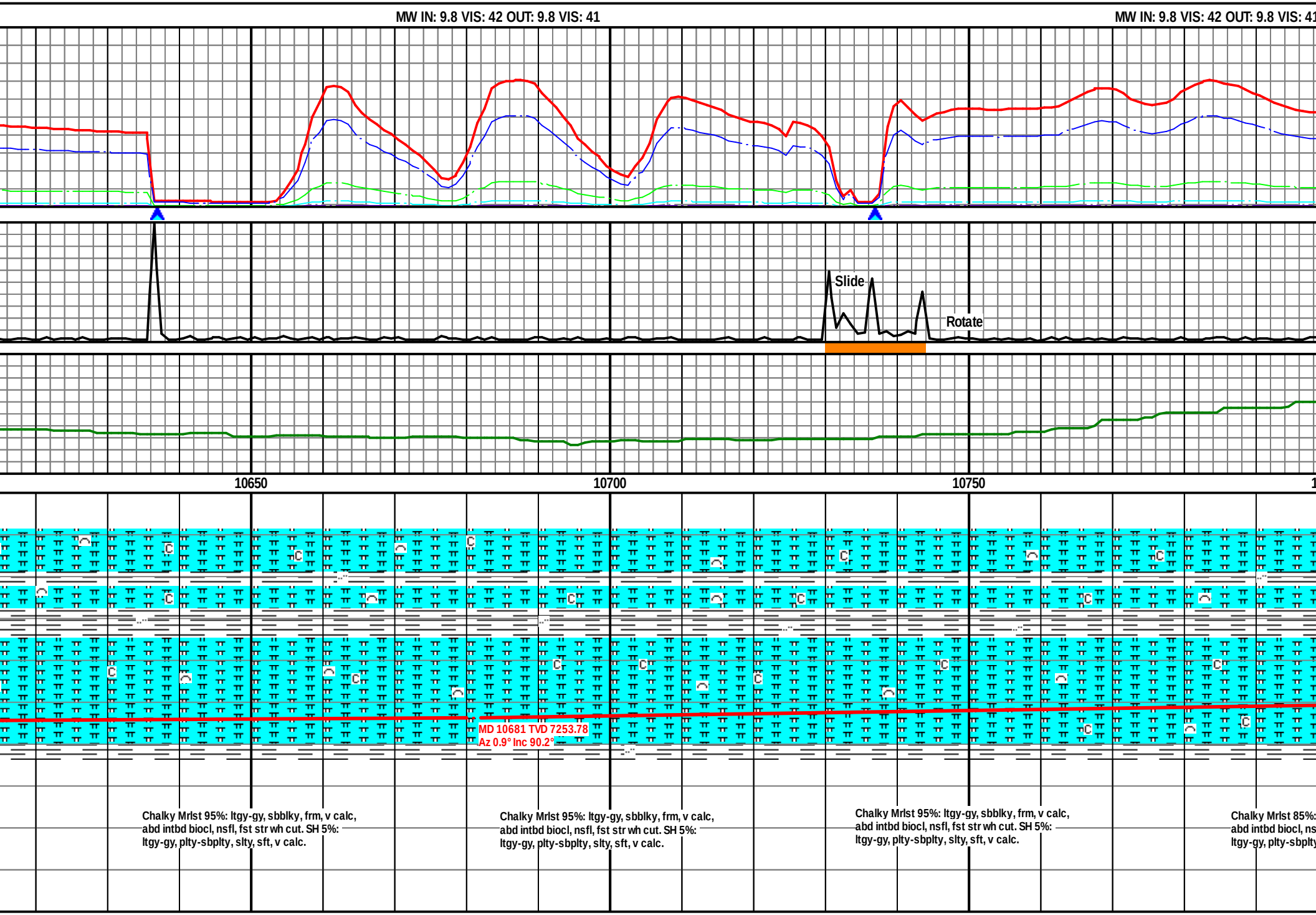

MW IN: 9.7 VIS: 40 OUT: 9.8 VIS: 39
MW IN: 9.7 VI
3000
5FT Flare
TG, C1-C5
0
4
ROP (min/ft)
Slide
Rotate
0
250
Gamma (API)
0
9750
9800
9850
7190 TVD
MD 9780 TVD 7242.46
Az 359.5° Inc 89°
7240
7290
ltgy-gy, sbblky, frm,
l, fst str wh cut.
, slty, sft,
Chalky Mrlst 92%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 8%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 92%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 8%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 5%:
ltgy-gy, plty-sbplty, slty, sft, v calc.

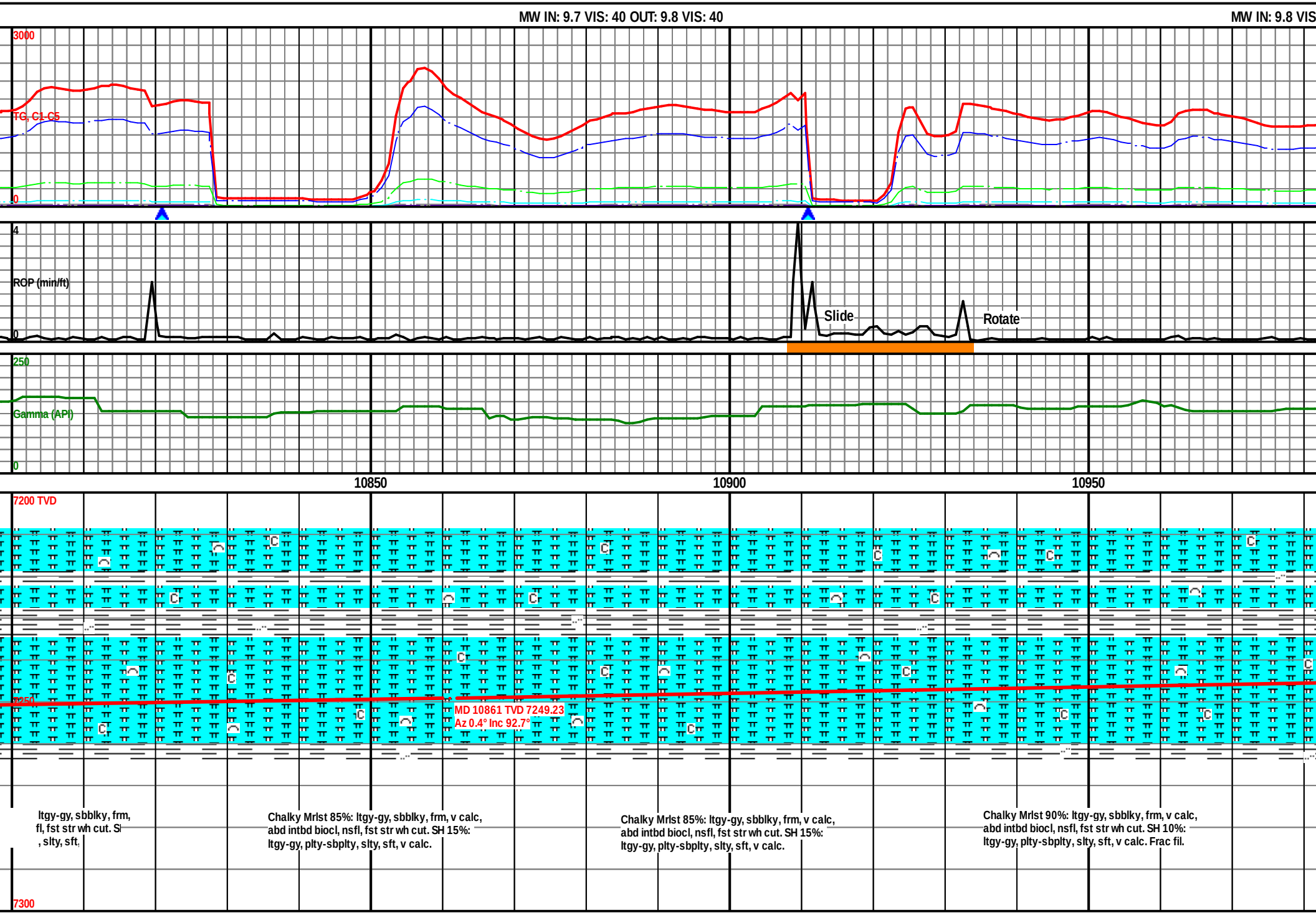

S: 41
MW IN: 9.8 VIS: 42 OUT: 9.9 VIS: 42
5FT Flare
3FT Flare
3000
TG, C1-C5
0
4
ROP (min/ft)
Slide
Rotate
0
250
Gamma (API)
0
9900
9950
10000
10050
7200 TVD
Scale Change
7250
MD 9960 TVD 7243.42
Az 0.9° Inc 87.7°
7300
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 90%: ltgy-gy, sbblky, frm, v calc abd intbd biocl, nsfl, fst str wh cut. SH 10%: ltgy-gy, plty-sbplty, slty, sft, v calc.

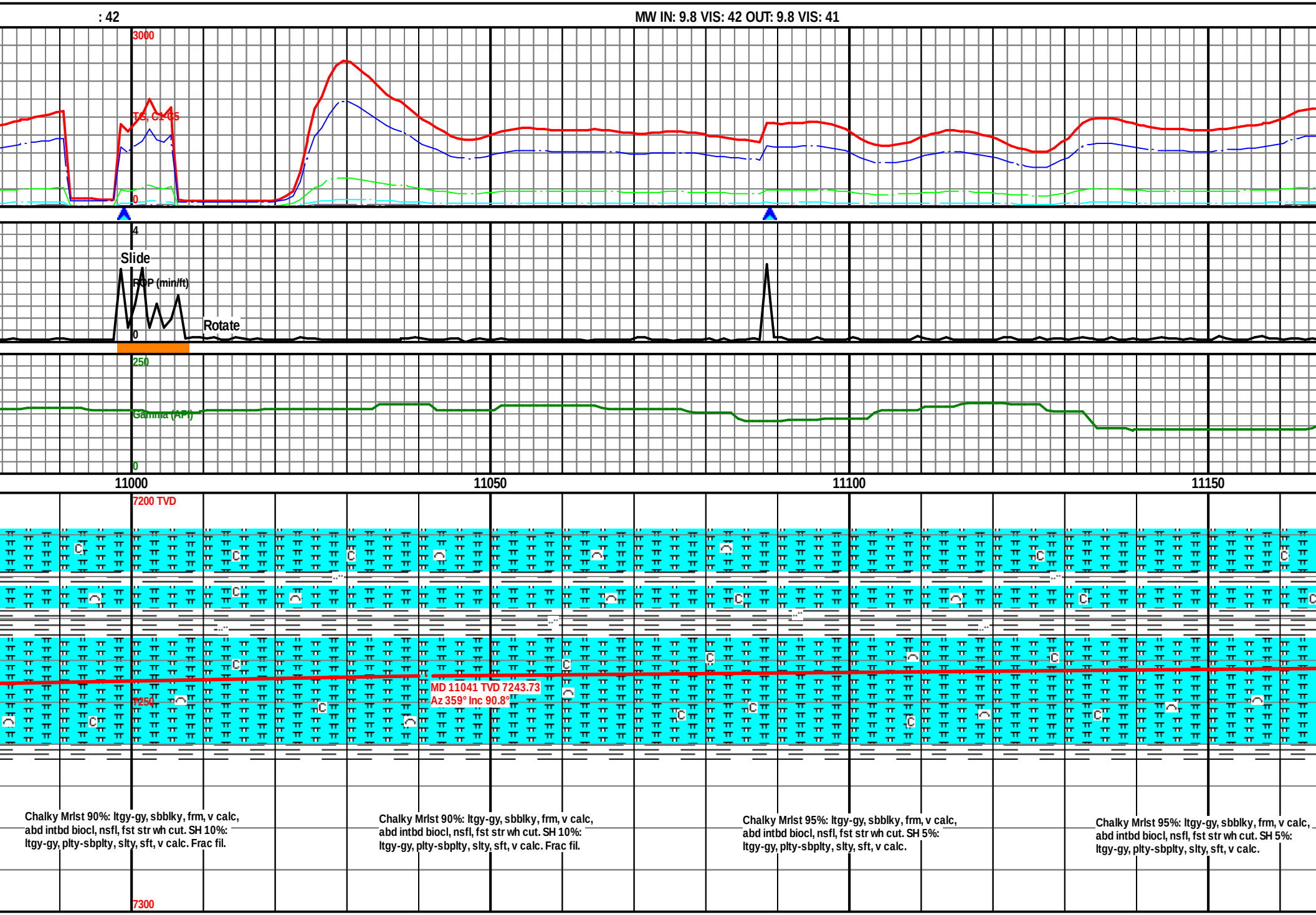

MW IN: 9.8 VIS: 42 OUT: 9.9 VIS: 42
MW IN: 9.8 VIS: 42 OUT: 9.9 VIS: 42
10-15FT Flare
5FT Flare
3000
TG, C1-C5
0
Slide
Rotate
Slide
Rotate
4
ROP (min/ft)
0
250
Gamma (API)
0
10100
10150
10200
7200 TVD
7250
7300
MD 10140 TVD 7253.14
Az 1.8° Inc 88.8°
Chalky Mrlst 90%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 10%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.

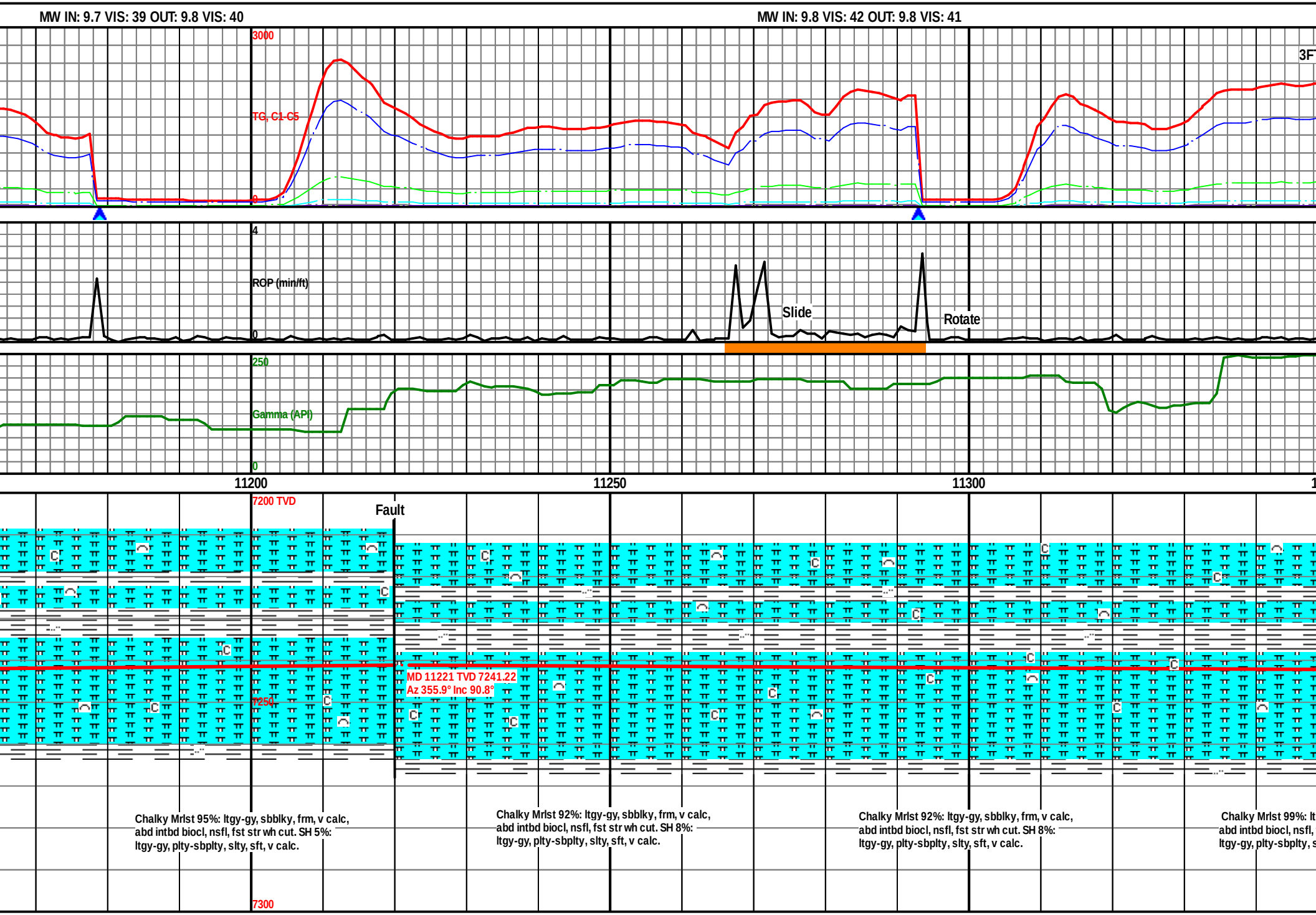

MW IN: 9.7 VIS: 40 OUT: 9.9 VIS: 41
MW IN: 9.7 VIS: 41 OUT: 9.8 VIS: 41
5FT Flare
3-5FT Flare
3000
TG, C1-C5
0
Slide
Rotate
Slide
Rotate
4
ROP (min/ft)
250
Gamma (API)
0
10300
10350
10400
7200 TVD
7250
7300
MD 10321 TVD 7255.98
Az 2° Inc 89.4°
y-gy, sbblky, frm,
st str wh cut.
lty, sft,
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 5%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 92%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 8%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 92%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 8%:
ltgy-gy, plty-sbplty, slty, sft, v calc.

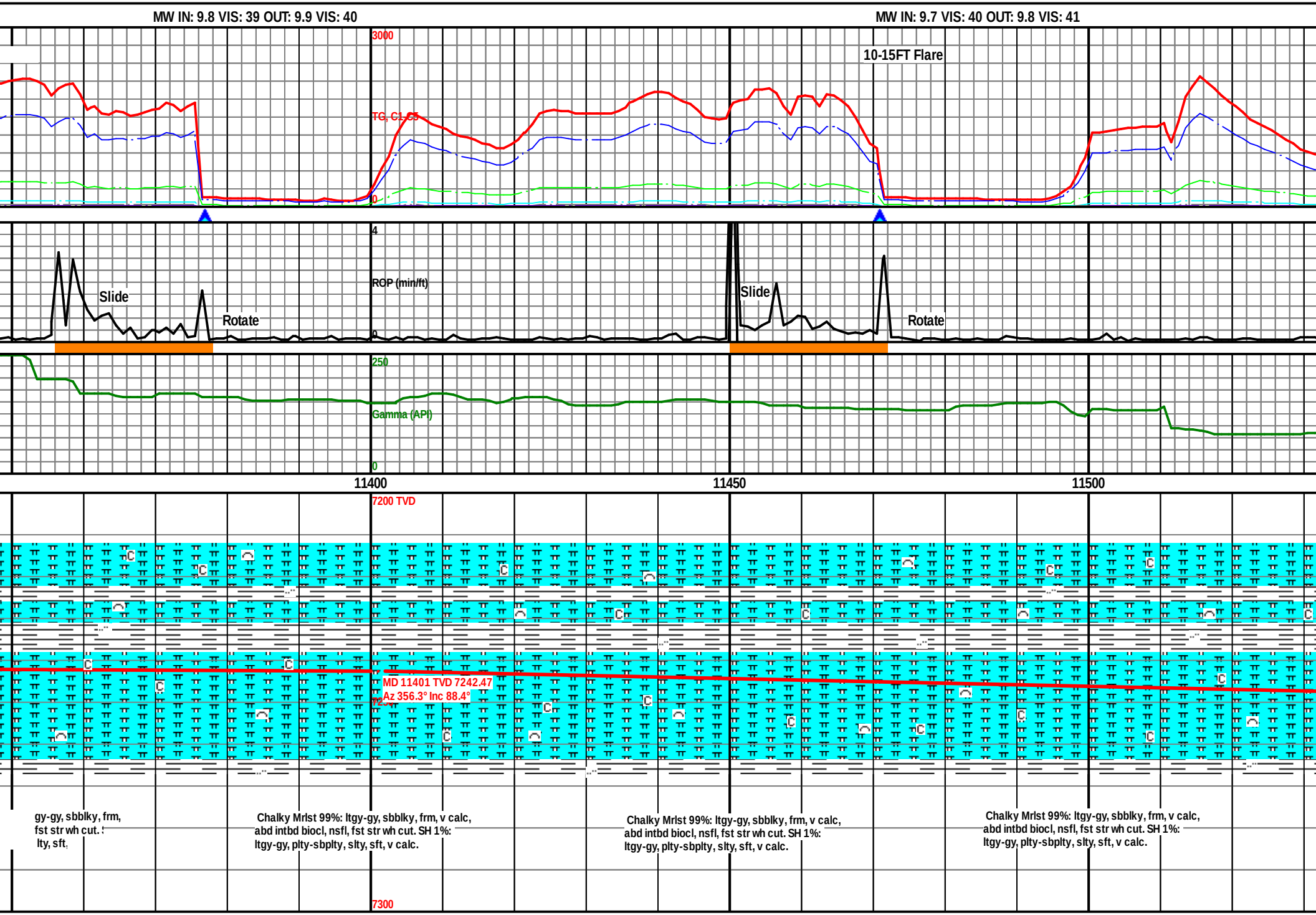

MW IN: 9.7 VIS: 40 OUT: 9.9 VIS: 41
MW IN: 9.7 VIS: 40 OUT: 9.9 VIS: 41
3000
5FT Flare
TG, C1-C5
0
4
ROP (min/ft)
0
250
Gamma (API)
0
10450
10500
10550
10600
7200 TVD
MD 10501 TVD 7255.51
Az 1.1° Inc 90.9°
7250
7300
Chalky Mrlst 92%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 8%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 1%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 1%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 1%: ltgy-gy, plty-sbplty, slty, sft, v calc.

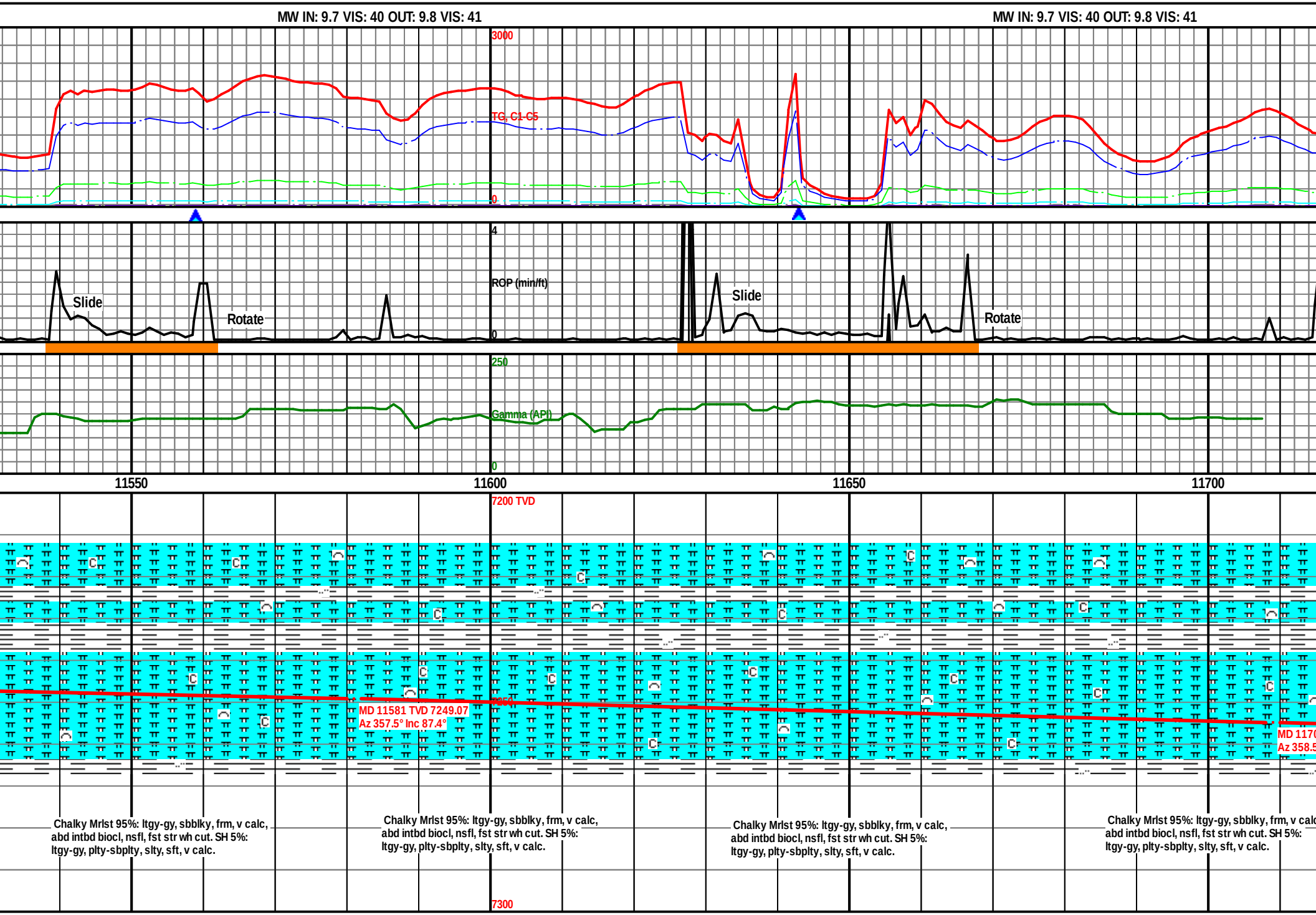

MW IN: 9.8 VIS: 42 OUT: 9.8 VIS: 41
MW IN: 9.8 VIS: 42 OUT: 9.8 VIS: 41
Slide
Rotate
10650
10700
10750
MD 10681 TVD 7253.78
Az 0.9° Inc 90.2°
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 85%: abd intbd biocl, ns ltgy-gy, plty-sbplty

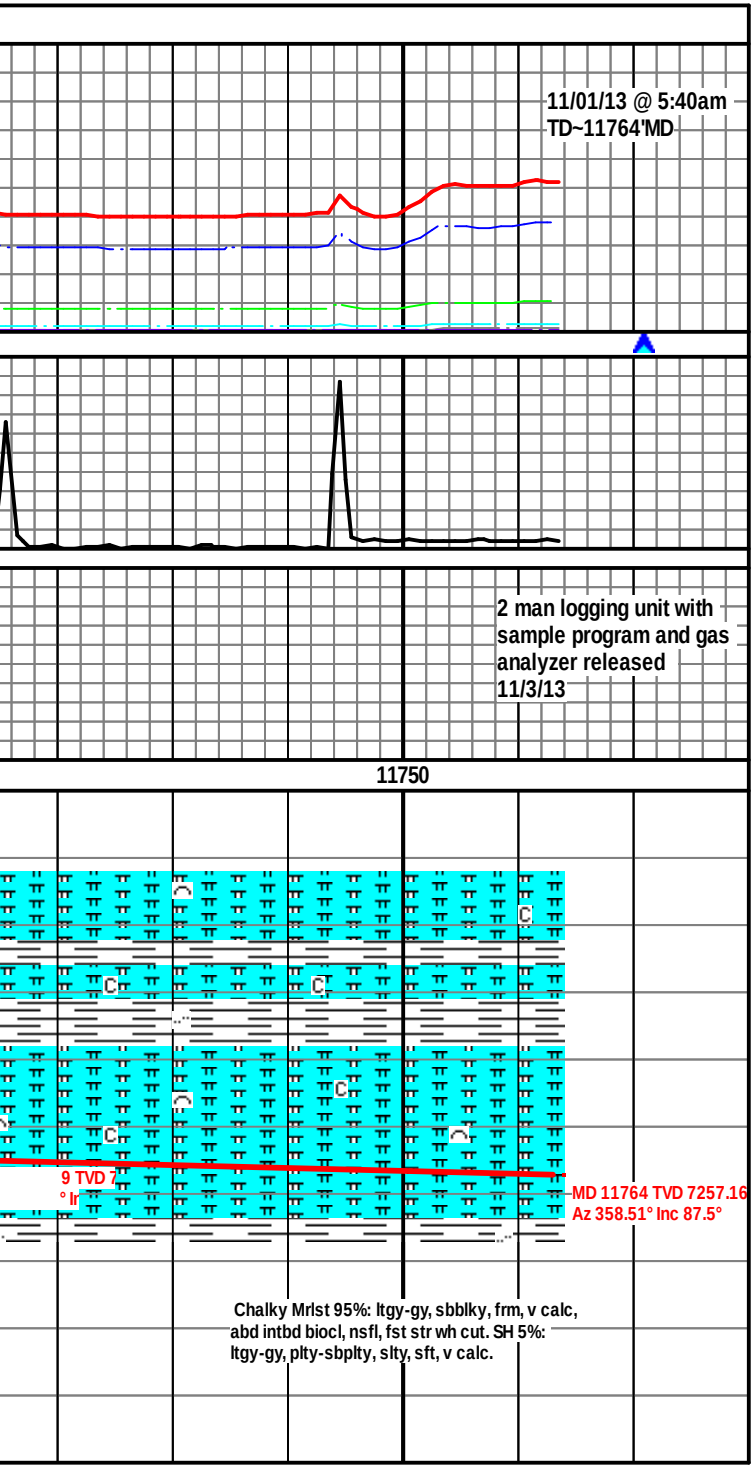

MW IN: 9.7 VIS: 40 OUT: 9.8 VIS: 40
MW IN: 9.8 VIS
3000
TG, C1 C5
0
4
ROP (min/ft)
0
Slide
Rotate
250
Gamma (API)
0
10850
10900
10950
7200 TVD
MD 10861 TVD 7249.23
Az 0.4° Inc 92.7°
ltgy-gy, sbblky, frm,
fl, fst str wh cut. Sl
, slty, sft,
Chalky Mrlst 85%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 15%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 85%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 15%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 90%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 10%:
ltgy-gy, plty-sbplty, slty, sft, v calc. Frac fil.
7300


: 42
MW IN: 9.8 VIS: 42 OUT: 9.8 VIS: 41
3000
TG, C1-C5
0
4
Slide
ROP (min/ft)
Rotate
0
250
Gamma (API)
0
11000
11050
11100
11150
7200 TVD
MD 11041 TVD 7243.73
Az 359° Inc 90.8°
7250
7300
Chalky Mrlst 90%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 10%: ltgy-gy, plty-sbplty, slty, sft, v calc. Frac fil.
Chalky Mrlst 90%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 10%: ltgy-gy, plty-sbplty, slty, sft, v calc. Frac fil.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.


MW IN: 9.7 VIS: 39 OUT: 9.8 VIS: 40
MW IN: 9.8 VIS: 42 OUT: 9.8 VIS: 41
3000
TG, C1-C5
0
3F
4
ROP (min/ft)
0
Slide
Rotate
250
Gamma (API)
0
11200
11250
11300
7200 TVD
Fault
MD 11221 TVD 7241.22
Az 355.9° Inc 90.8°
7250
7300
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 92%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 8%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 92%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 8%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: lt
abd intbd biocl, nsfl,
ltgy-gy, plty-sbplty, s


MW IN: 9.8 VIS: 39 OUT: 9.9 VIS: 40
MW IN: 9.7 VIS: 40 OUT: 9.8 VIS: 41
10-15FT Flare
3000
TG, C1, C5
0
4
ROP (min/ft)
0
Slide
Rotate
Slide
Rotate
250
Gamma (API)
0
11400
11450
11500
7200 TVD
MD 11401 TVD 7242.47
Az 356.3° Inc 88.4°
7300
gy-gy, sbblky, frm,
fst str wh cut.
lty, sft,
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 1%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 1%:
ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 99%: ltgy-gy, sbblky, frm, v calc,
abd intbd biocl, nsfl, fst str wh cut. SH 1%:
ltgy-gy, plty-sbplty, slty, sft, v calc.


MW IN: 9.7 VIS: 40 OUT: 9.8 VIS: 41
MW IN: 9.7 VIS: 40 OUT: 9.8 VIS: 41
3000
TG, C1-C5
0
4
ROP (min/ft)
0
Slide
Rotate
Slide
Rotate
250
Gamma (API)
0
11550
11600
11650
11700
7200 TVD
MD 11581 TVD 7249.07
Az 357.5° Inc 87.4°
MD 117
Az 358.5
7300
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc
abd intbd biocl, nsfl, fst str wh cut. SH 5%:
ltgy-gy, plty-sbplty, slty, sft, v calc.


11/01/13 @ 5:40am
TD~11764'MD
2 man logging unit with sample program and gas analyzer released 11/3/13
11750
MD 11764 TVD 7257.16
Az 358.51° Inc 87.5°
Chalky Mrlst 95%: ltgy-gy, sbblky, frm, v calc, abd intbd biocl, nsfl, fst str wh cut. SH 5%: ltgy-gy, plty-sbplty, slty, sft, v calc.