

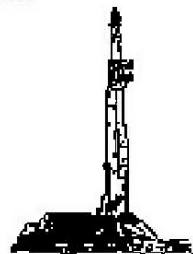
**GOOLSBY BROTHERS**  
and associates, inc.

575 Union Blvd, Suite 208  
Lakewood, CO 80228  
303-945-2860 Office



Geological Wellsite  
Supervision

[www.goolsbybrothers.com](http://www.goolsbybrothers.com)



Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: Falken 31N-14B-S  
API: 051234512100  
Location: NE/SE Section 11 T6N R66W Weld County, CO.  
License Number:  
Spud Date: December 11, 2017  
Surface Coordinates: 1664'FSL & 276'FEL NE/SE Sec.11 T6N R66W  
Lat/Long: 40°30'00.497"N/ 104°44'09.427"W  
Bottom Hole Planned: 1015'FNL & 460'FWL, SEC.14 T6N R66W  
Coordinates: Projected: 1000'FNL & 366'FWL, SEC.14 T6N R66W  
Ground Elevation (ft): 4,810'  
Logged Interval (ft): 7050' To: 13,368'  
Formation: Niobrara B Chalk  
Type of Drilling Fluid: OBM (LSND Surface).

Region: Wattenberg  
Drilling Completed: December 14, 2017

K.B. Elevation (ft): 4,835'  
Total Depth (ft): 13,368' DMTD

Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

**OPERATOR**

Company: SRC Energy, Inc Geologist Tom Jacaruso  
Address: 1675 Broadway, Suite 2600  
Denver, Colorado 80202  
(720) 616-4300

**GEOLOGIST**

Name: Dallan Gardner & Blake Stacey  
Company: Goolsby Brothers & Assoc. (GBA), Inc. ([www.goolsbybrothers.com](http://www.goolsbybrothers.com))  
Address: 575 Union Blvd. Suite 208,  
Lakewood CO. 80228  
Tel 303-618-7736

## E-logs

MWD GR from S.C. to 13,350' MD

## Casing

9 5/8" Surface Casing pre set @ 1800' MD.  
5 1/2" Production Liner run on 12/16/2017.

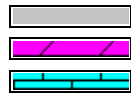
## Comments

- 1) Drilling Contractor: Precision Drilling, Rig #562  
Pumps 1&2: Rostell F-1600 5" x 12" (.0692 Bbls./stroke)  
Toolpusher: Michael Ellingsworth, Tyson Westgard.
- 2) Company Man: Kent Priddy  
Kevin Brakovec  
Tim Jones  
Kalib Ford
- 3) Mud Comapny : Reliable Drilling Fluids  
Engineer: Wally Yates, Scott Allen
- 4) Directional Drilling: Baker Hughes  
Drillers: Jeremiah Samson, Aaron Herskind  
MWD: Matthew Leopold, Garrett Gersden, Baker Remote Field Operations.
- 5) Gas Equipment: Pason Gas Analyzer (Spectrometer)
- 6) Wellsite Geologist: Dallan Gardner & Blake Stacey

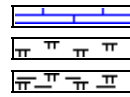
## ROCK TYPES



Bent  
Cht  
Clyst



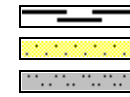
Oil sat.  
Dol  
Lmst



Chalk  
Mrlst  
Mrlst\_sh (intbdd)



Shale  
Shgy  
Slty sh



Carb sh  
Ss  
Slstst

## 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

Chlkstg  
 Arg  
 Bent  
 Dol  
 Ls  
 Mrst  
 Sltstrg  
 Ssstrg

### TEXTURE

Boundst  
 Chalky  
 Cryxln  
 Earthy  
 Finexln  
 Grainst  
 Lithogr  
 Microxln  
 Mudst  
 Packst  
 Wackest

## OTHER SYMBOLS

### OIL SHOWS

Even  
 Spotted  
 Ques  
 Dead  
 Vspotty

near even

### POROSITY TYPE

Earthy  
 Fenest  
 Fracture

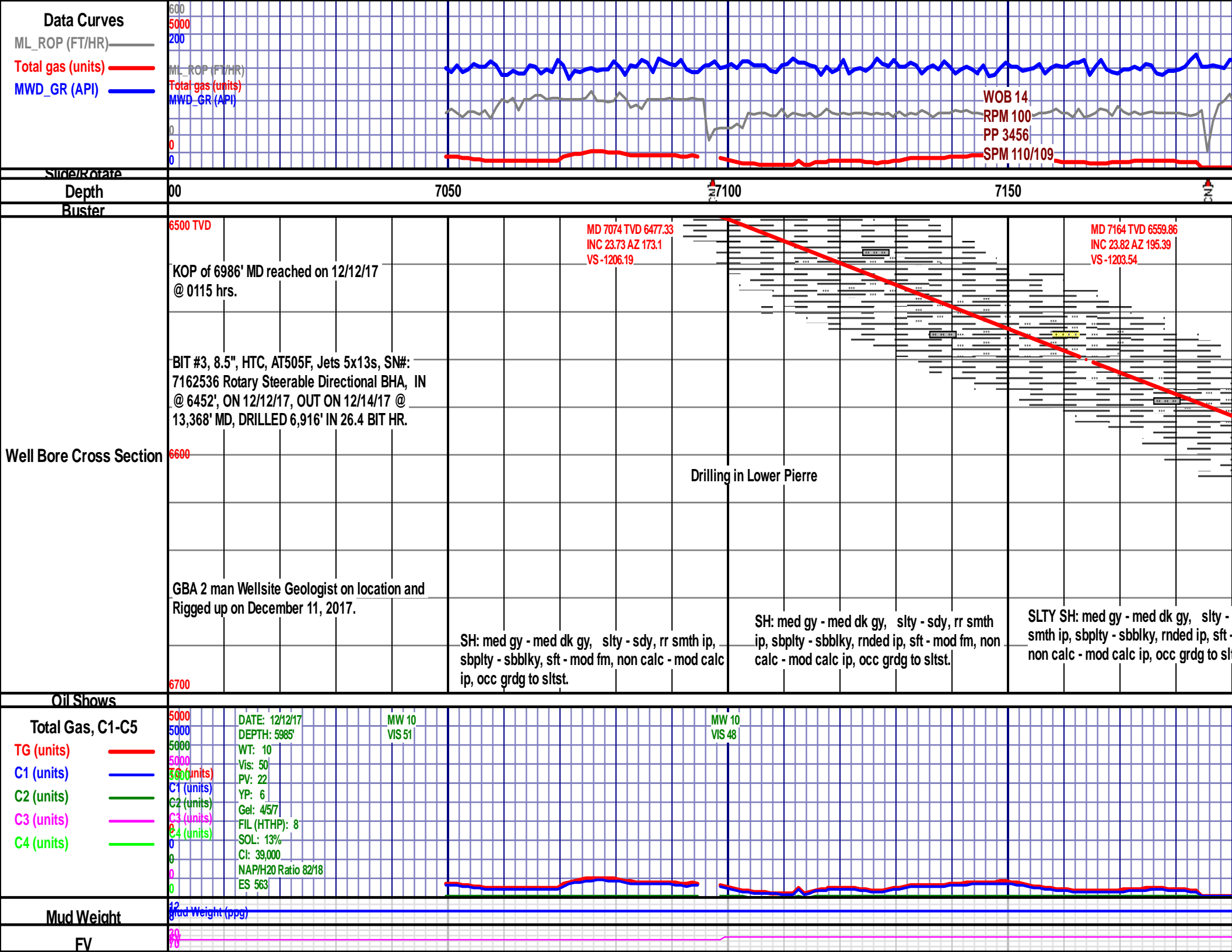
Inter  
 Moldic  
 Organic  
 Pinpoint  
 Vuggy

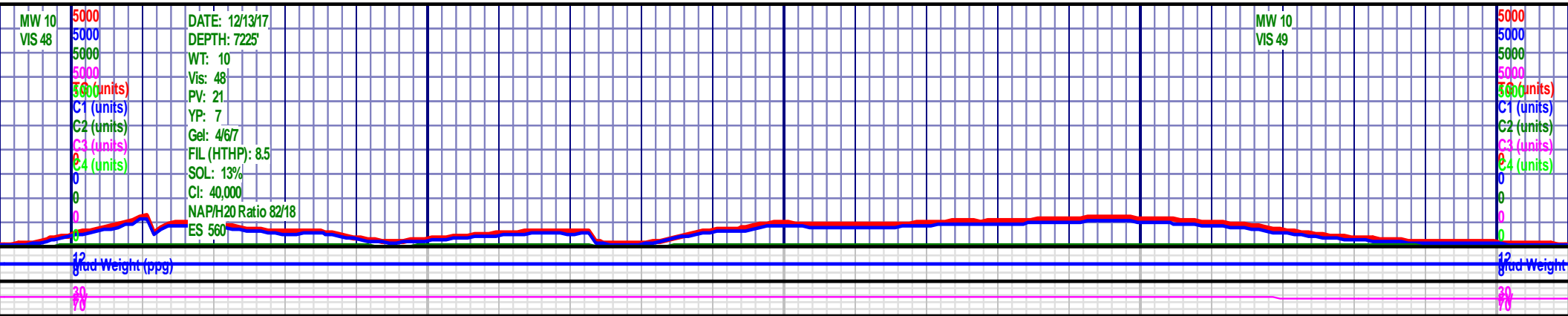
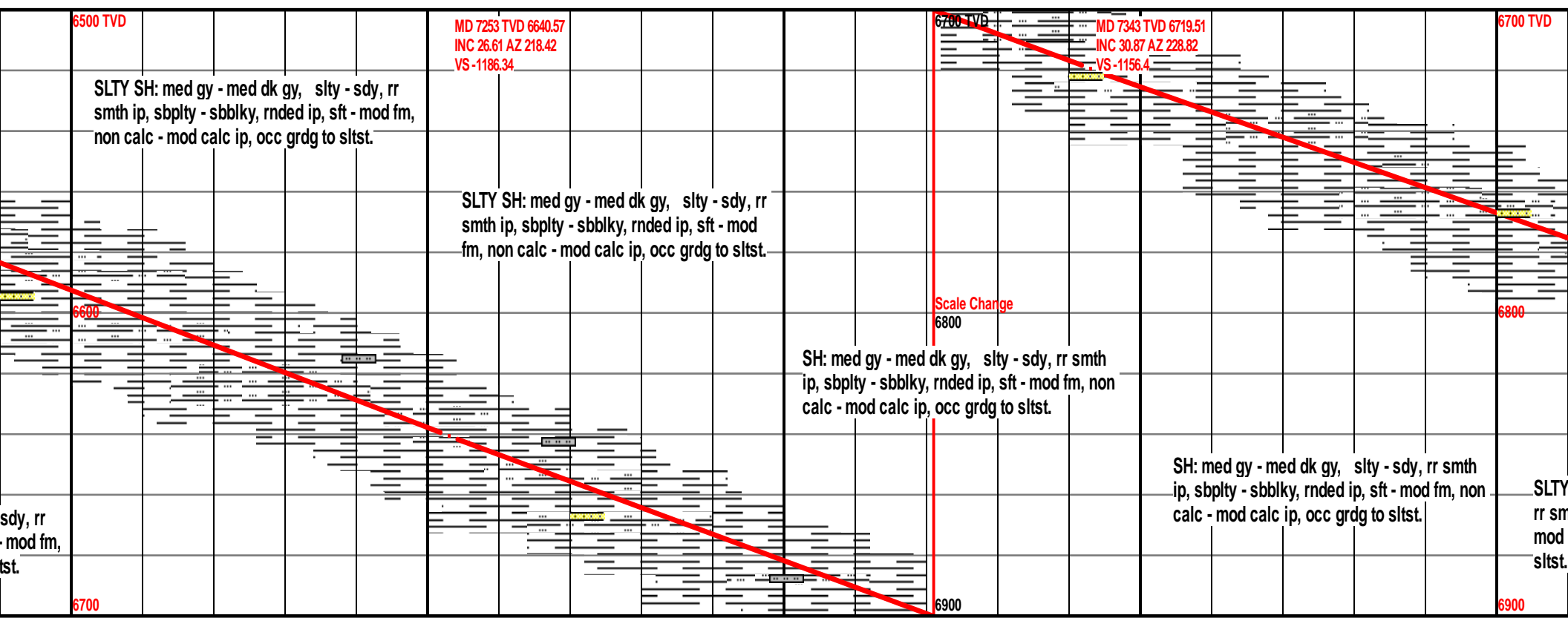
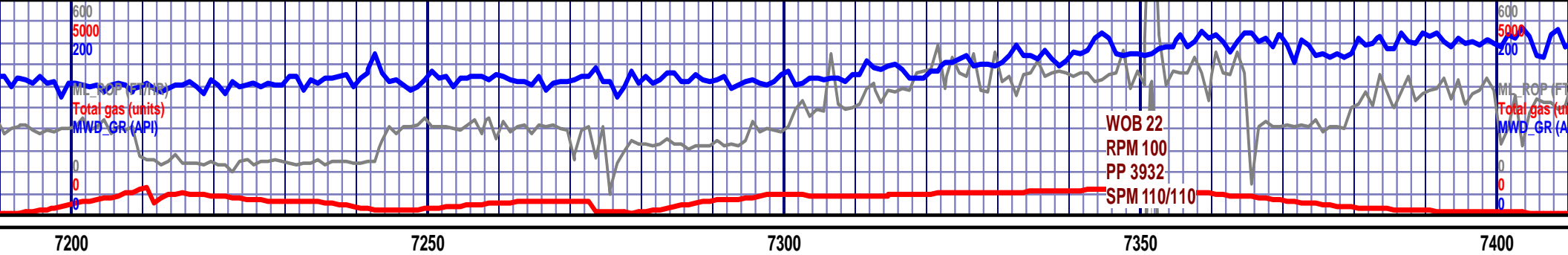
### ROUNDING

Rounded  
 Subrnd  
 Subang  
 Angular

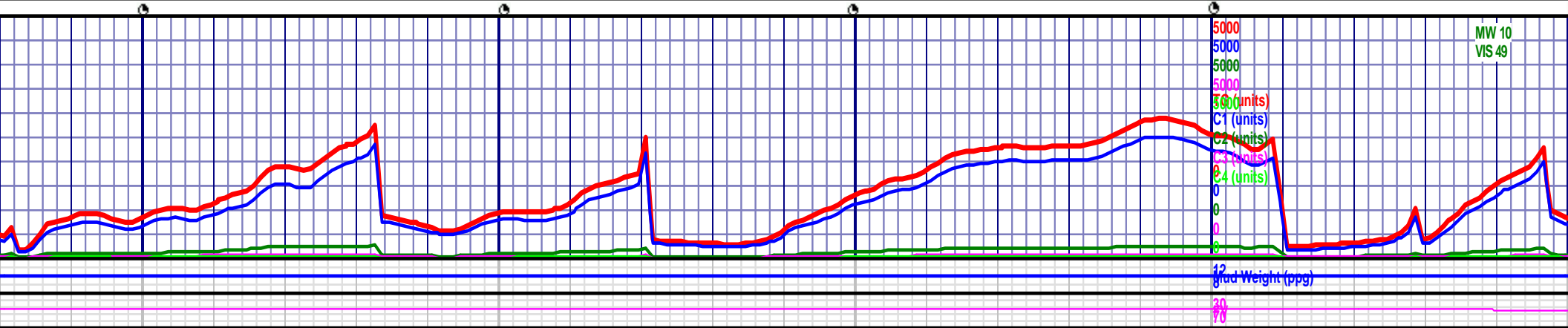
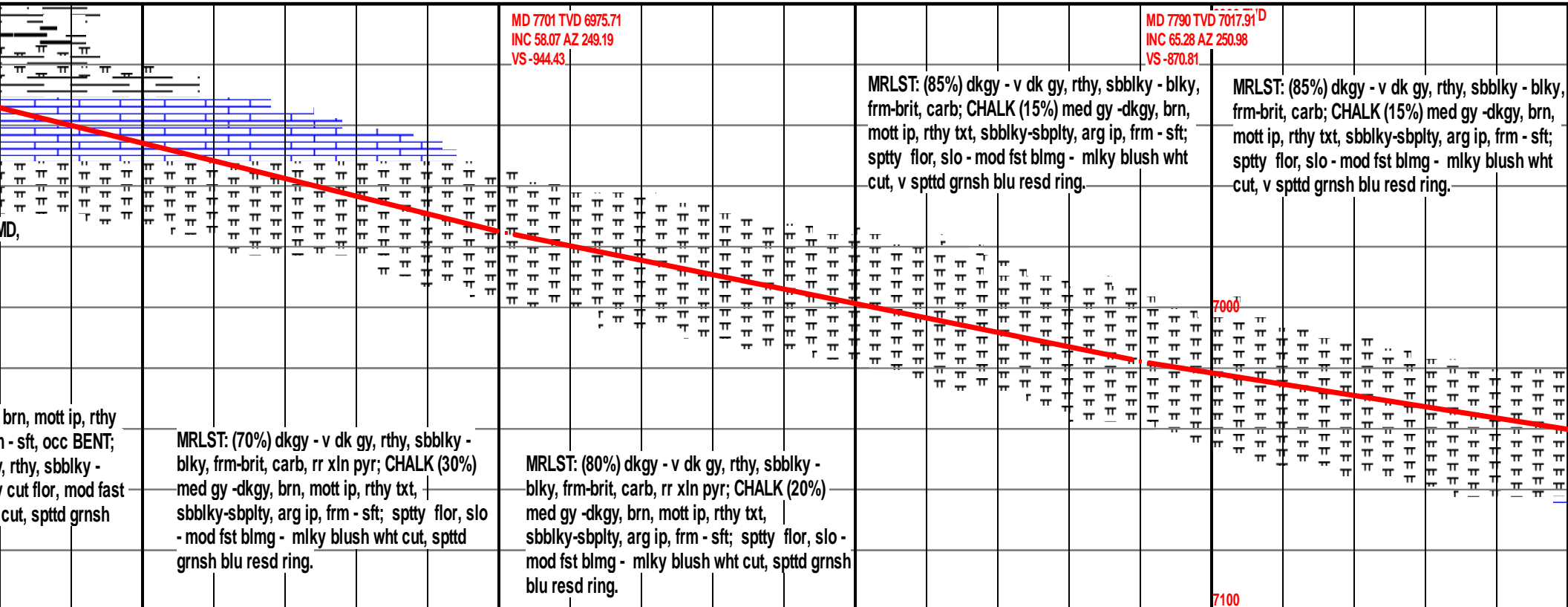
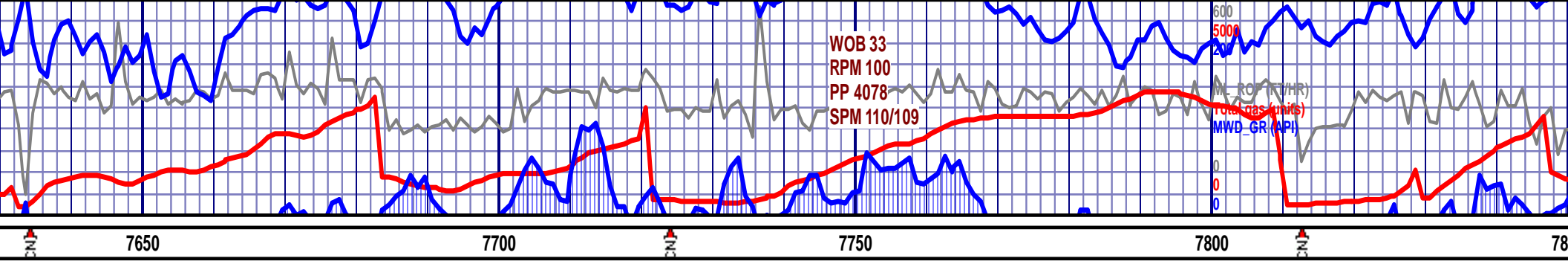
### SORTING

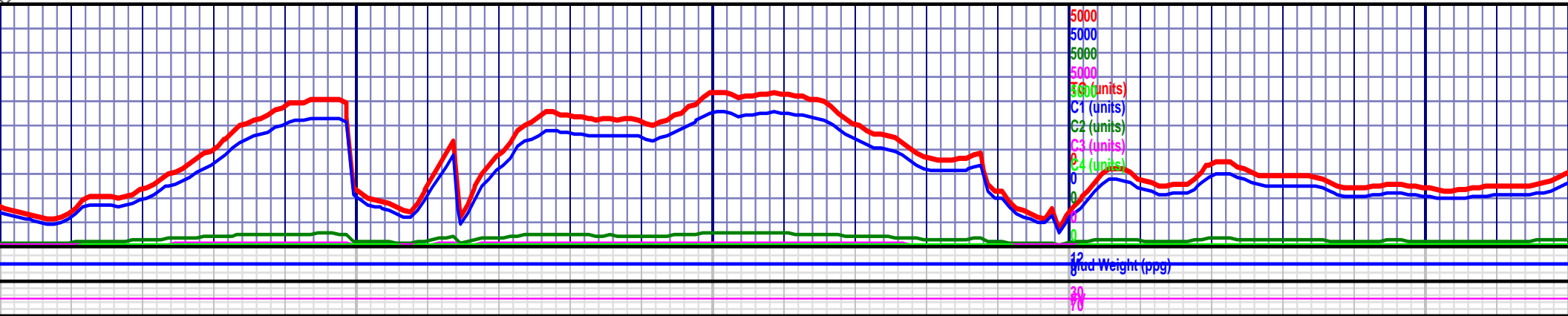
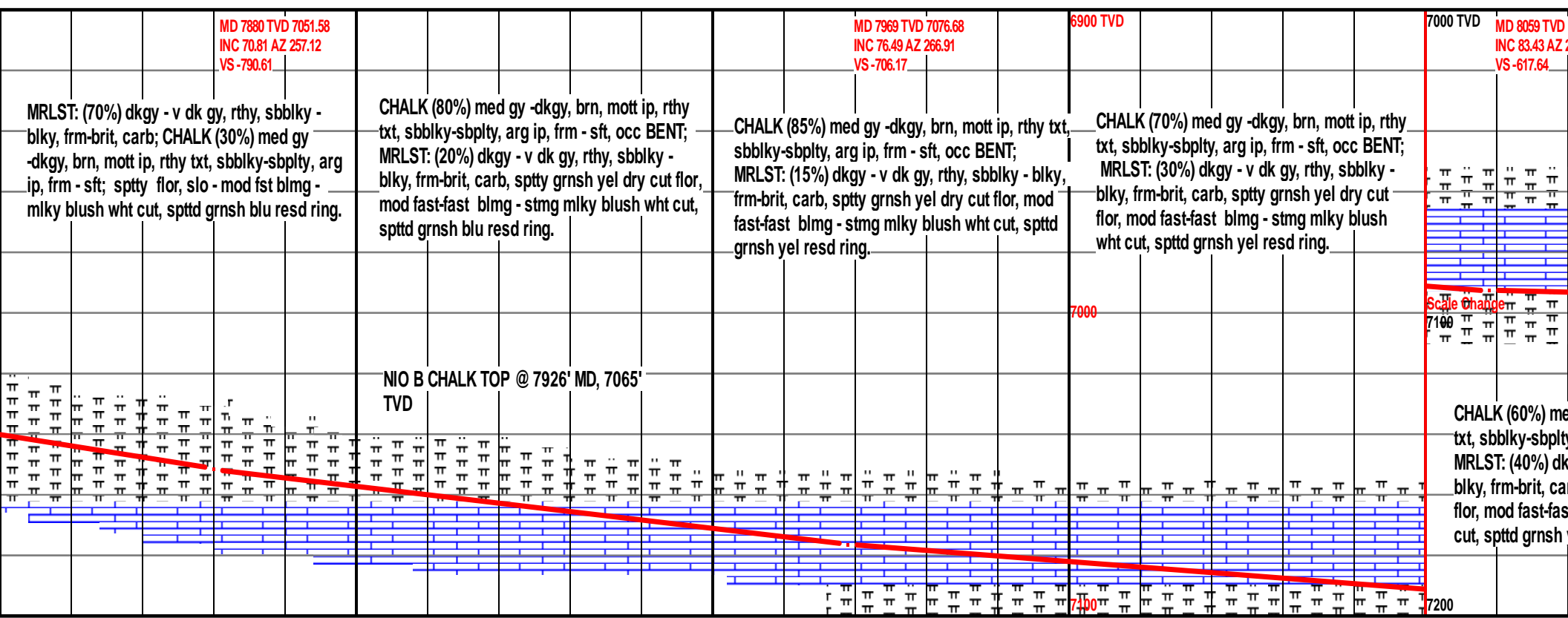
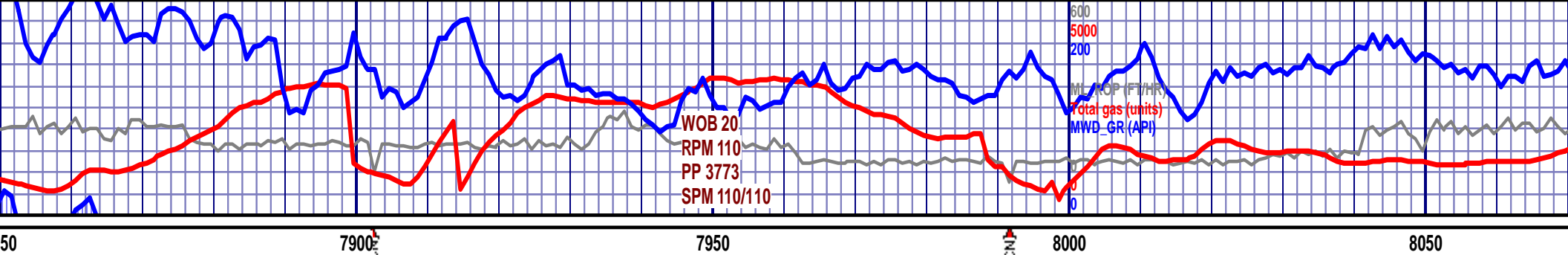
Well  
 Moderate  
 Poor



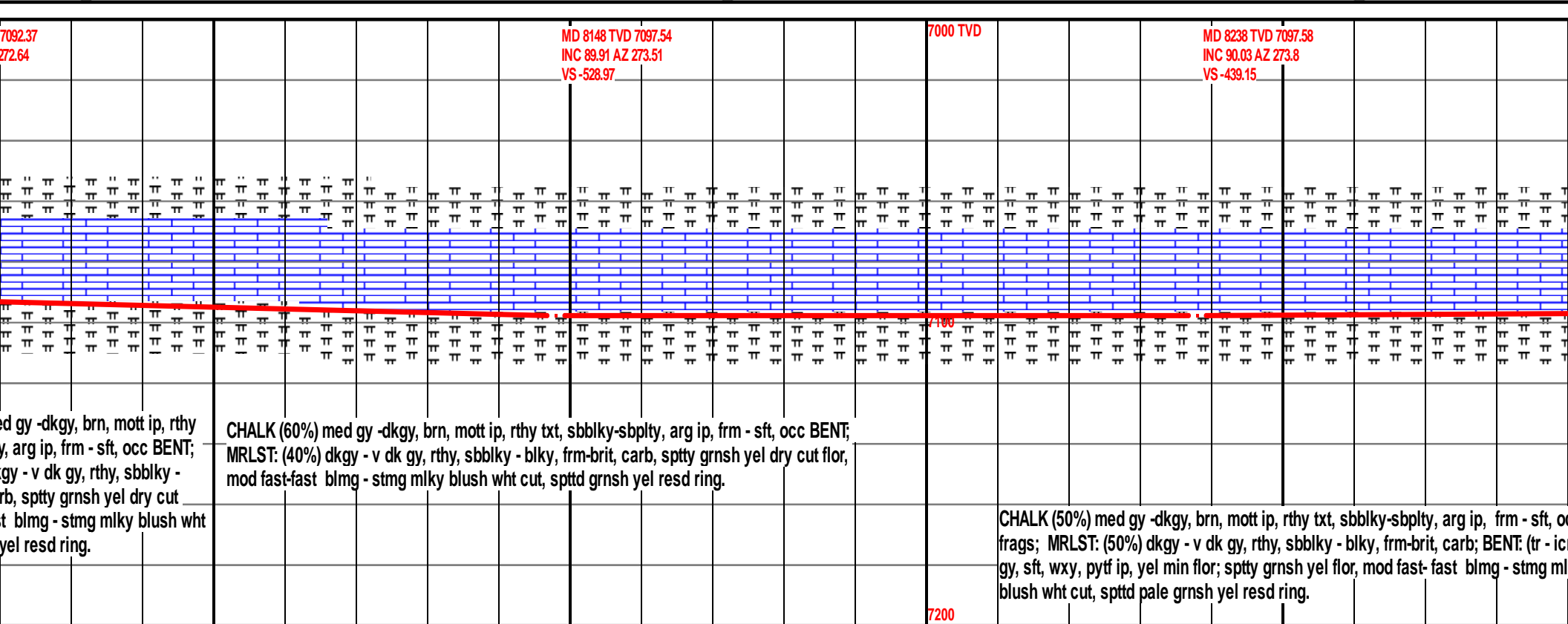


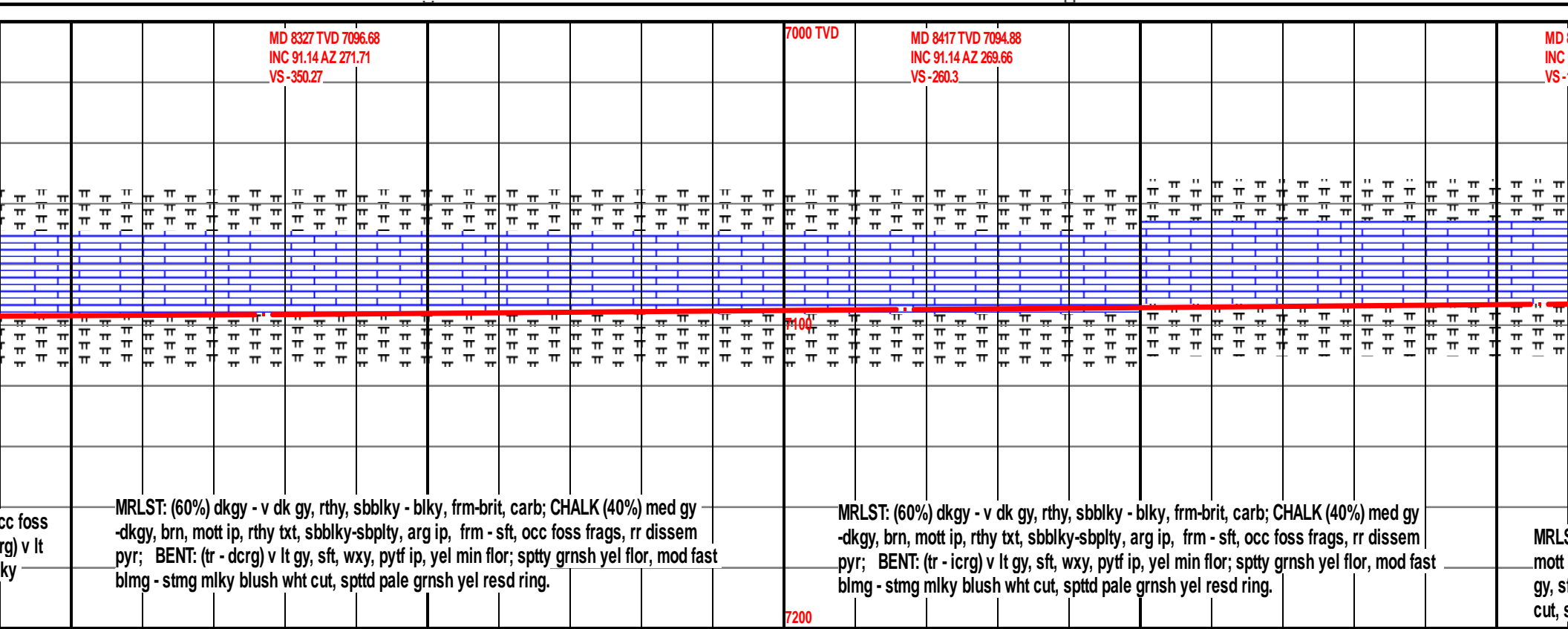


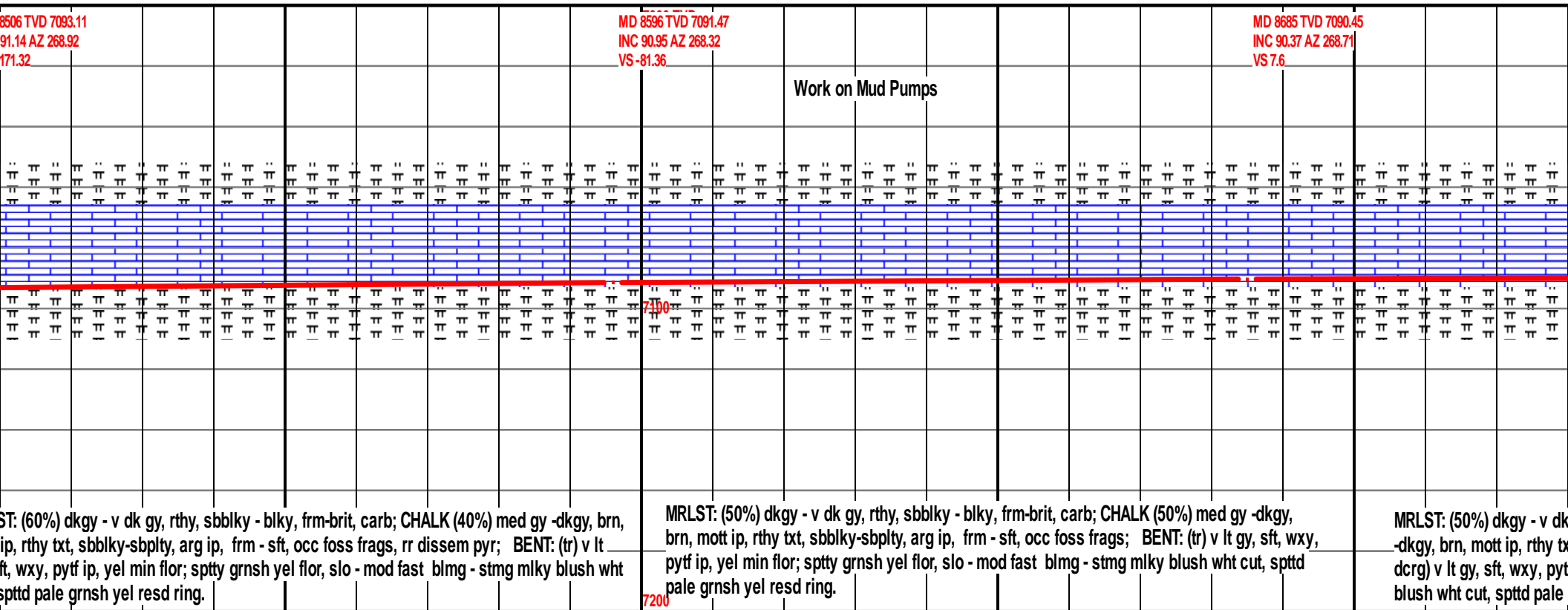


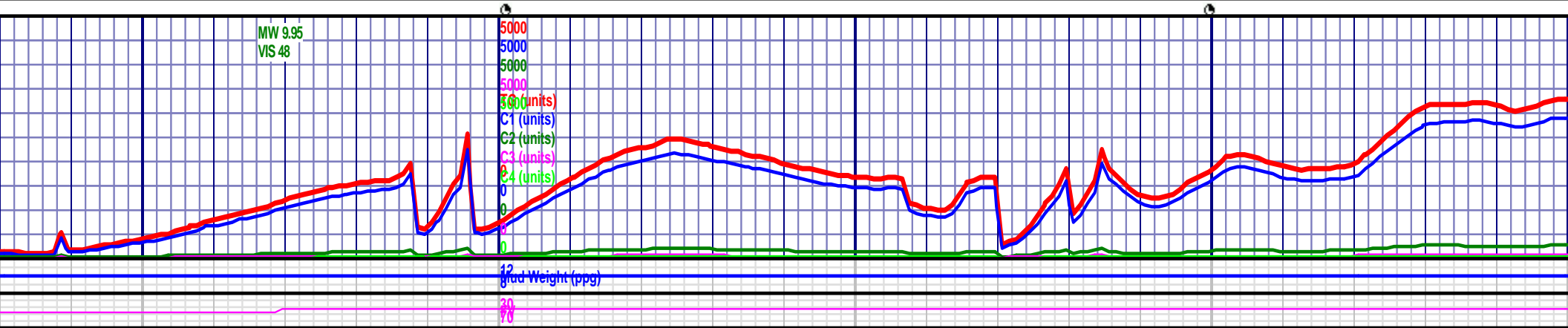
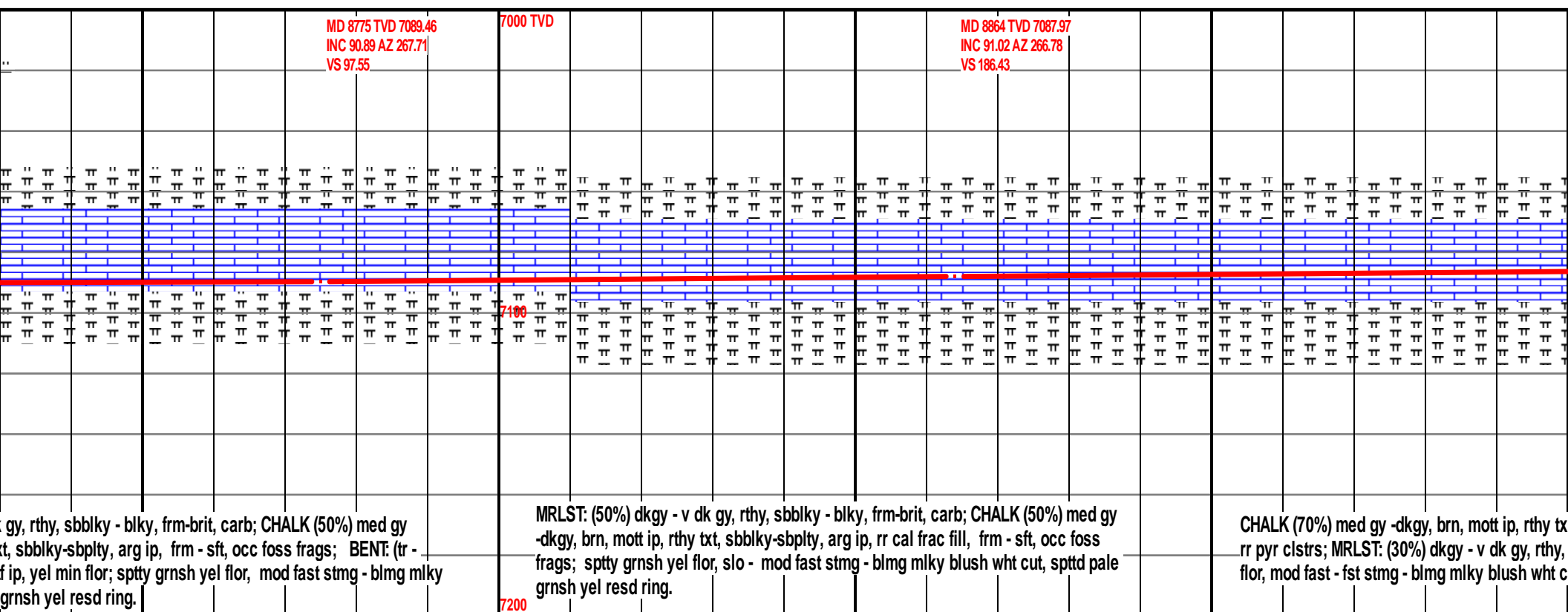
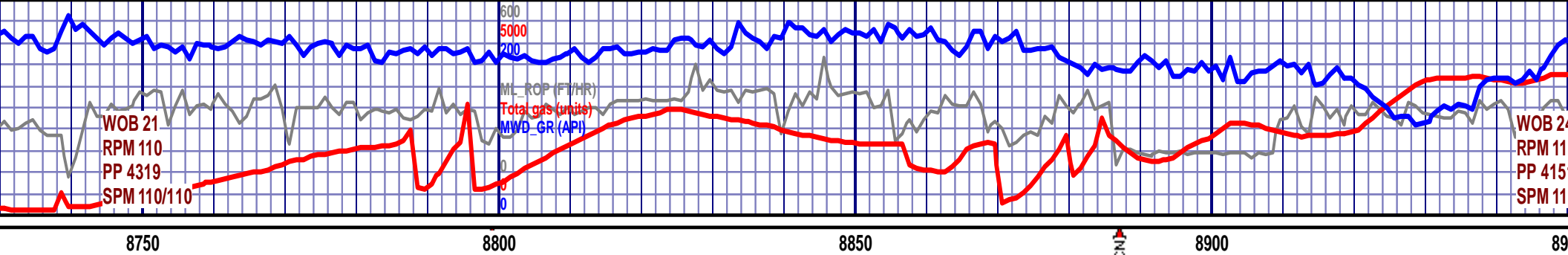


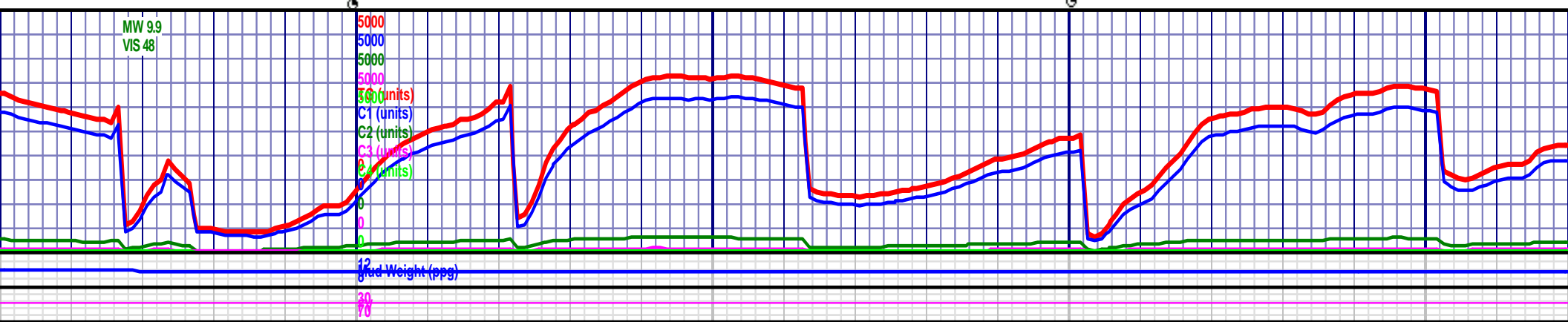
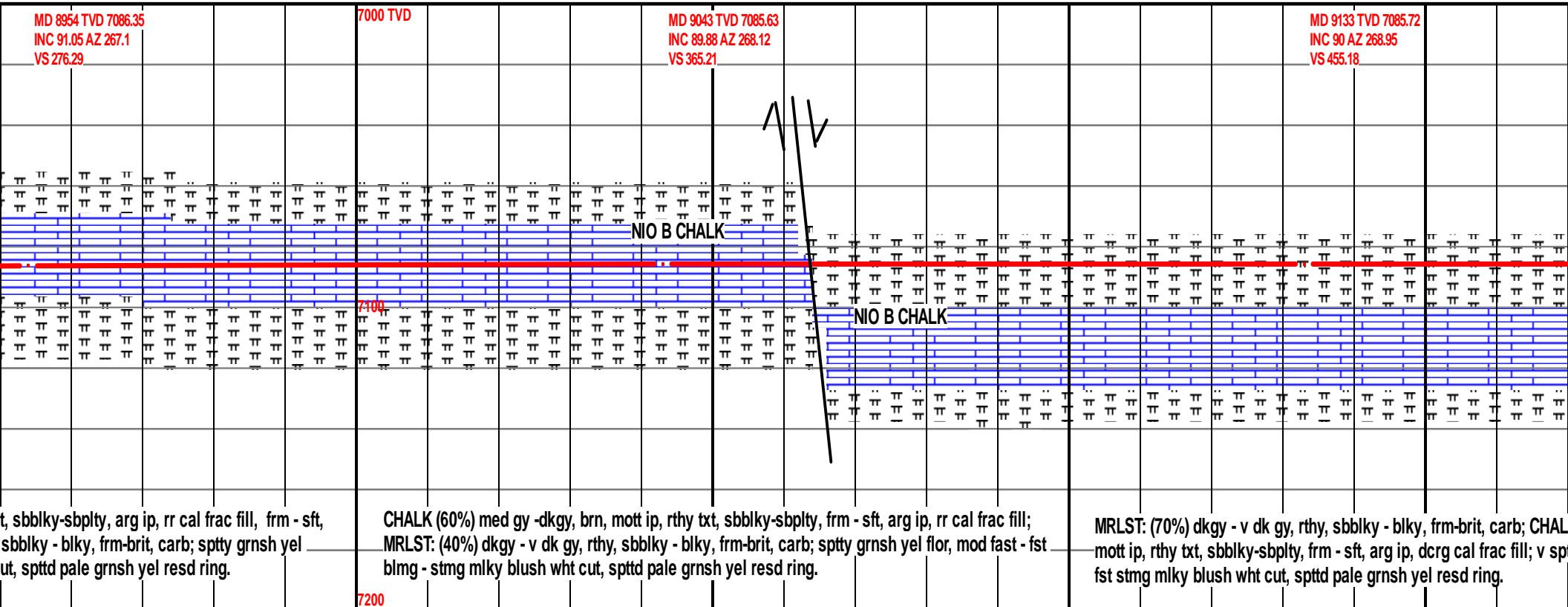
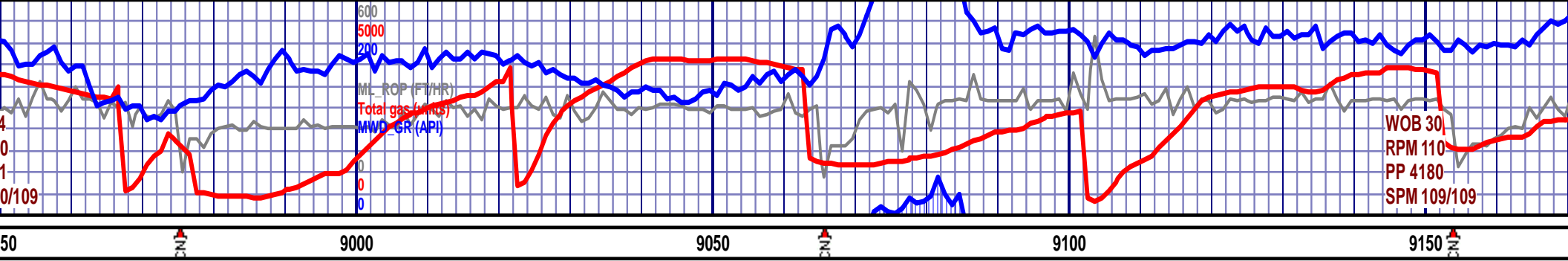


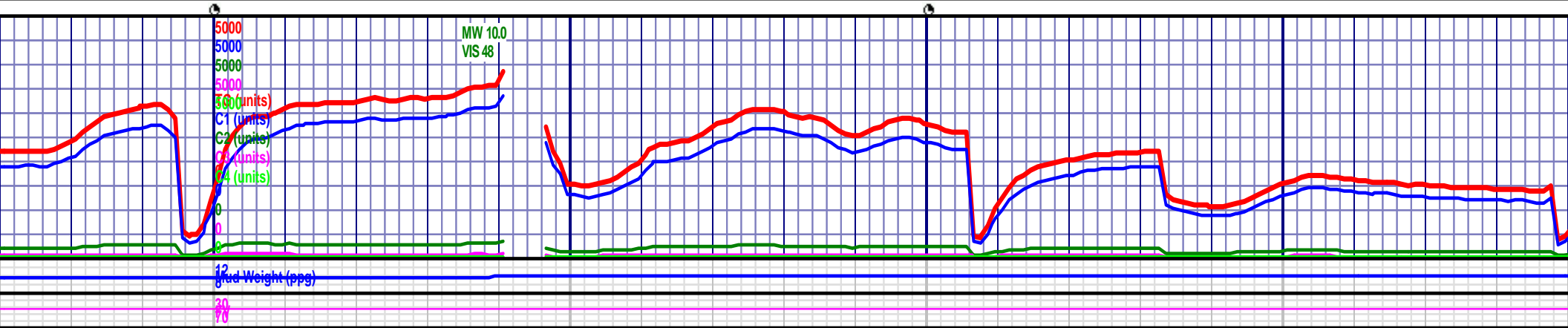
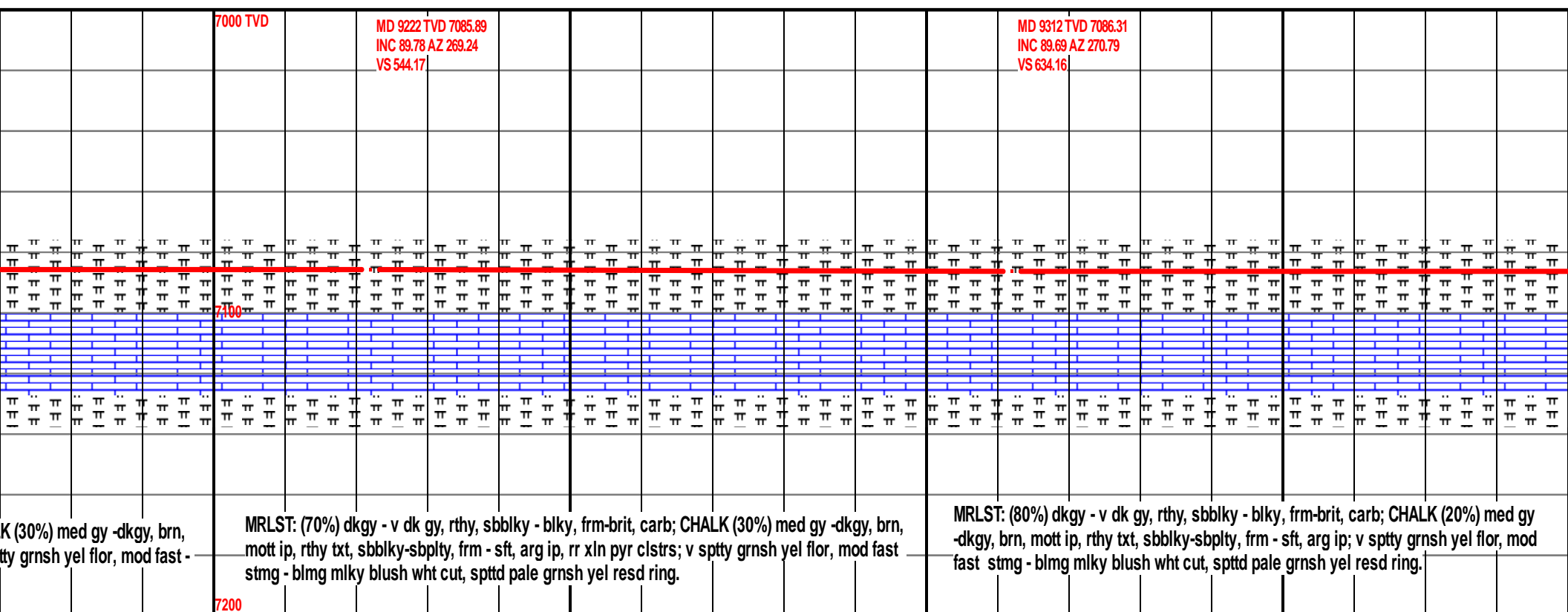
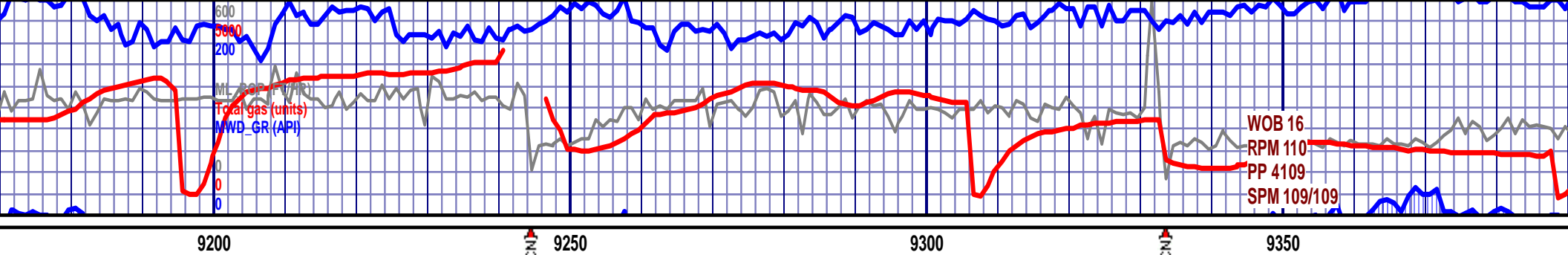


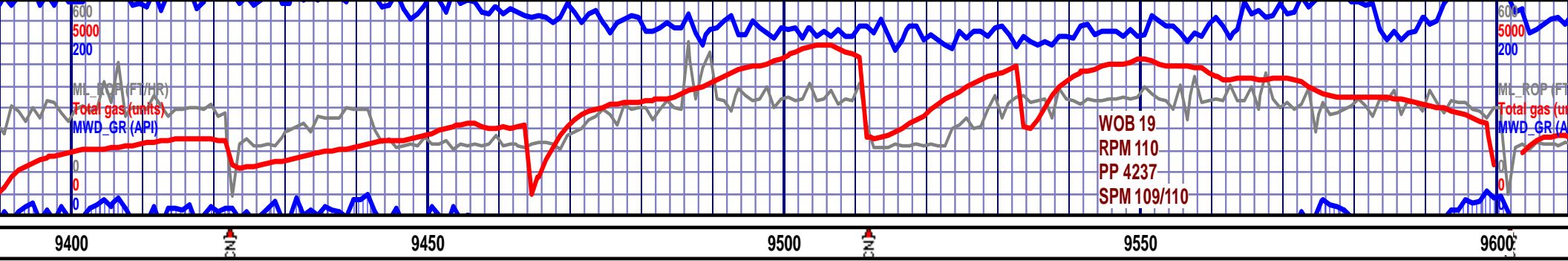




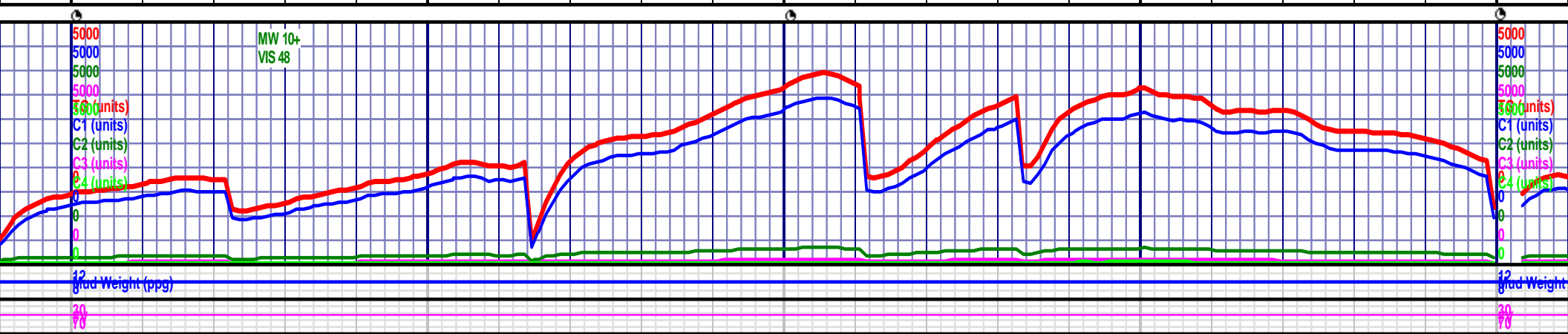


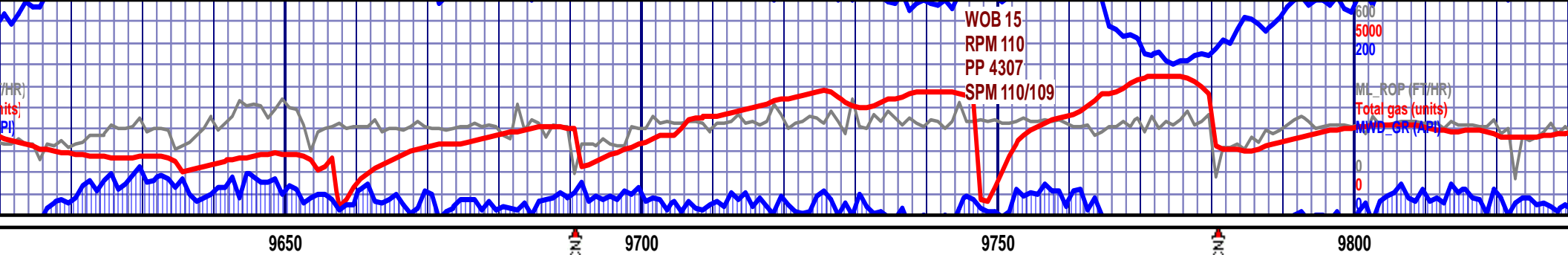




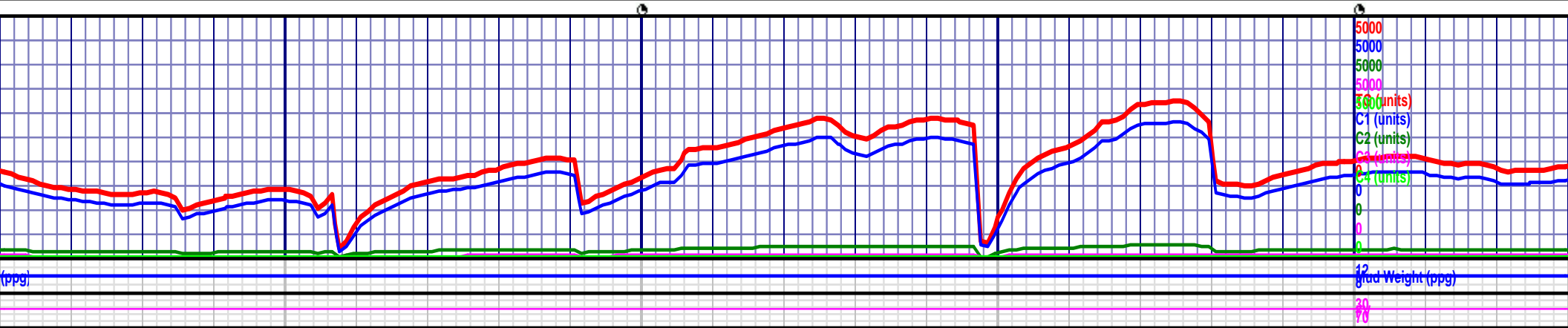


MD 9401 TVD 7086.35 INC 90.25 AZ 271.77 VS 723.14	MD 9490 TVD 7086.74 INC 89.26 AZ 271.44 VS 812.1	MD 9580 TVD 7088.02 INC 89.11 AZ 270.84 VS 902.07	7000 TVD
7100			7100
MRLST: (80%) dkgy - v dk gy, rthy, sbblky - blk, frm-brit, carb; CHALK (20%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbply, frm - sft, arg ip, v spty grnsh yel flor, mod fast stmg - blmg mlky blush wht cut, spttd pale grnsh yel resd ring.		MRLST: (80%) dkgy - v dk gy, rthy, sbblky - blk, frm-brit, carb; CHALK (20%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbply, frm - sft, arg ip, v spty grnsh yel flor, mod fast -fst stmg - blmg mlky blush wht cut, spttd pale grnsh yel resd ring.	
7200			7200

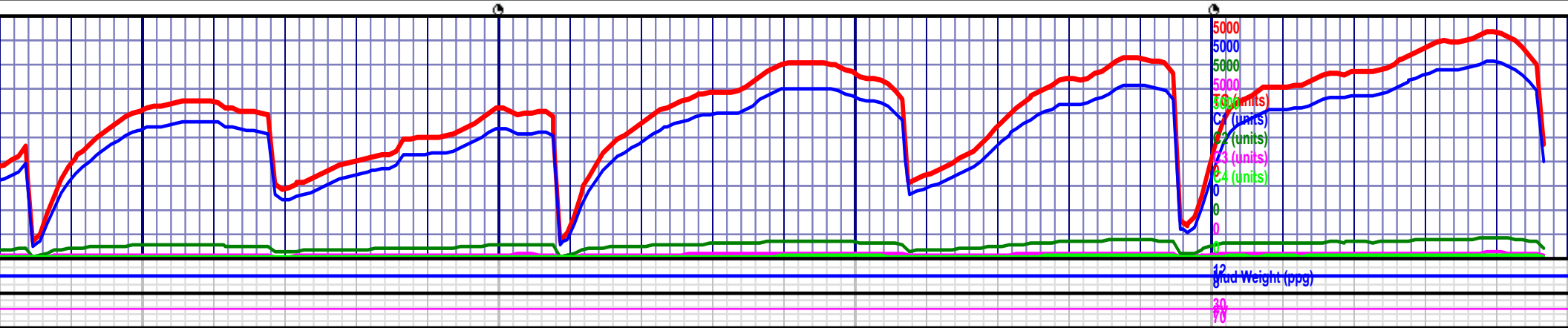
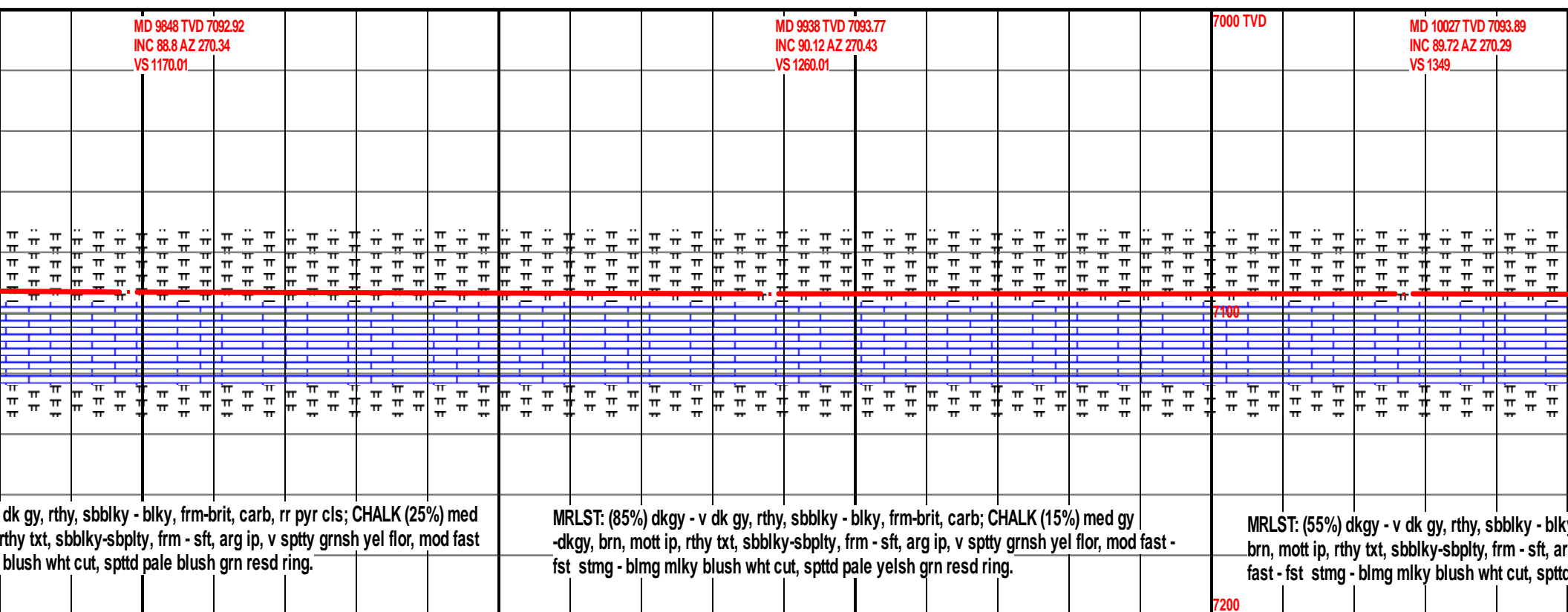
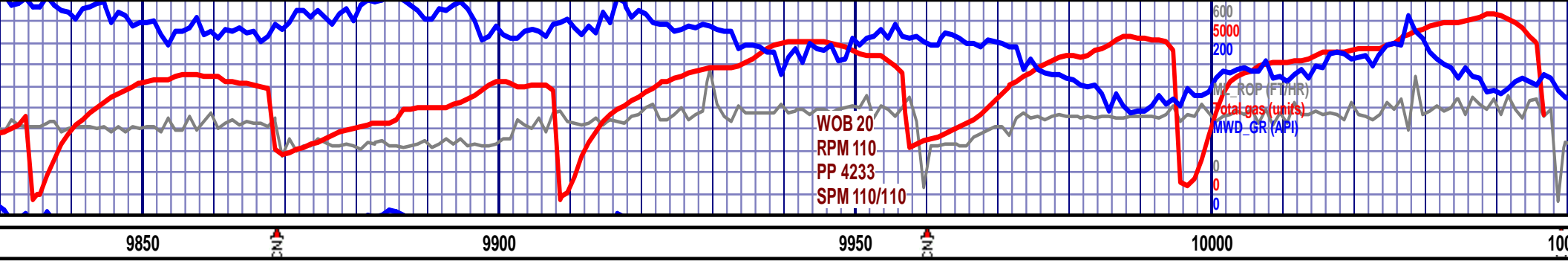




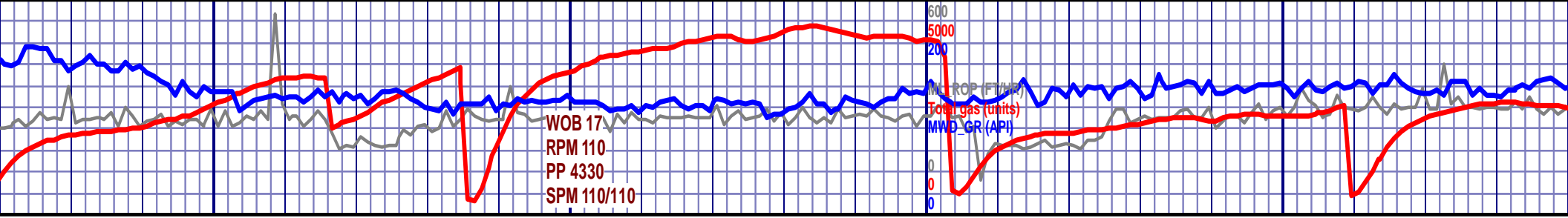
<p>MD 9669 TVD 7089.5 INC 88.98 AZ 270.63 VS 991.05</p>	<p>MD 9759 TVD 7091.15 INC 88.92 AZ 270.57 VS 1081.03</p>	<p>7000 TVD</p>
<p>ST: (85%) dkgy - v dk gy, rthy, sbblky - blky, frm-brit, carb; CHALK (15%) med gy -dkgy, mott ip, rthy txt, sbblky-sbplty, frm - sft, arg ip, v sppty grnsh yel flor, mod fast - fst stmg blmg milky blush wht cut, spttd pale blush grn resd ring.</p>	<p>MRLST: (70%) dkgy - v dk gy, rthy, sbblky - blky, frm-brit, carb; CHALK (30%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, frm - sft, arg ip, v sppty grnsh yel flor, mod fast - fst stmg - blmg milky blush wht cut, spttd pale blush grn resd ring.</p>	<p>MRLST: (75%) dkgy - v gy -dkgy, brn, mott ip, - fst stmg - blmg milky</p>











10300

10350

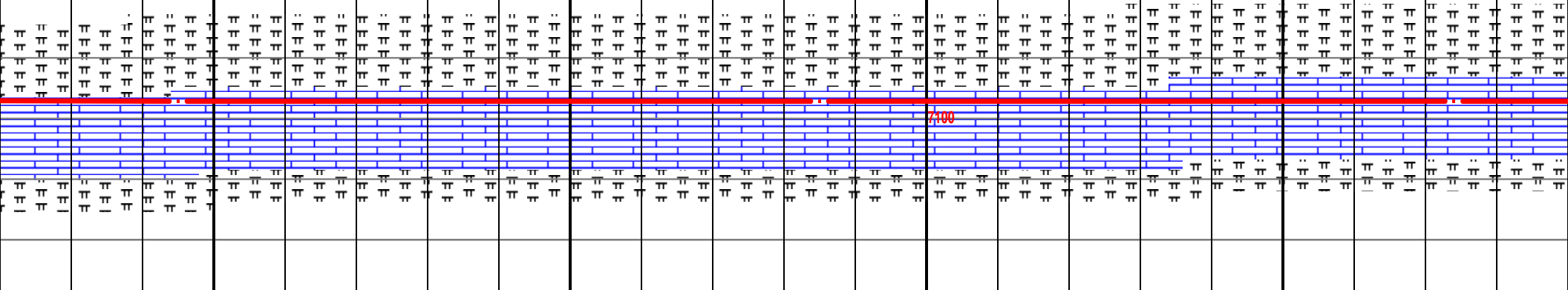
10400

10450

MD 10295 TVD 7094.09  
INC 89.72 AZ 271.1  
VS 1616.98

MD 10385 TVD 7094.26  
INC 90.06 AZ 270.59  
VS 1706.97

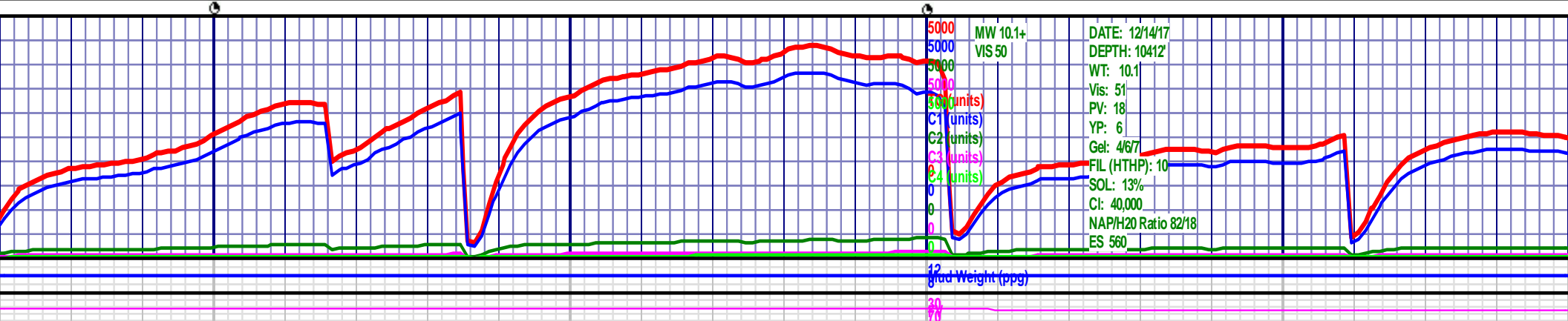
MD 10474 TVD 7094.3  
INC 89.78 AZ 268.74  
VS 1795.96



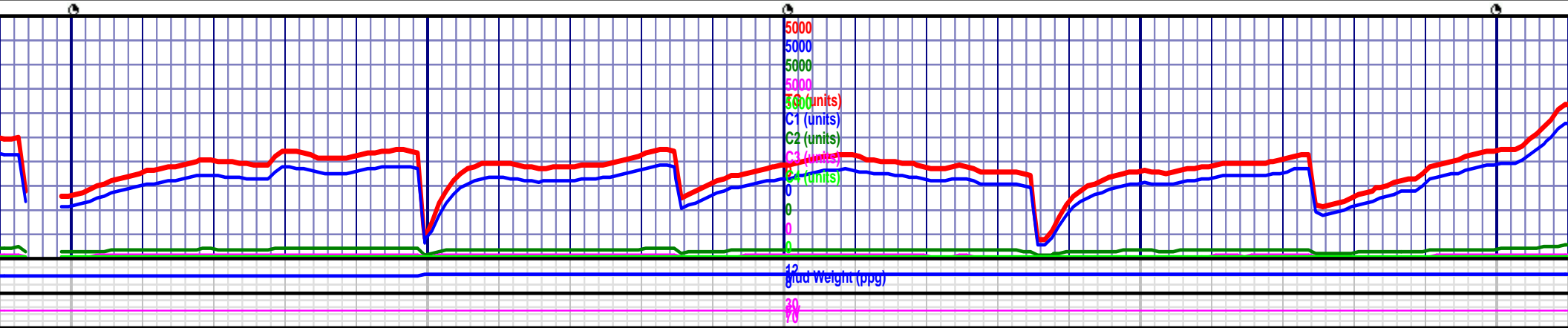
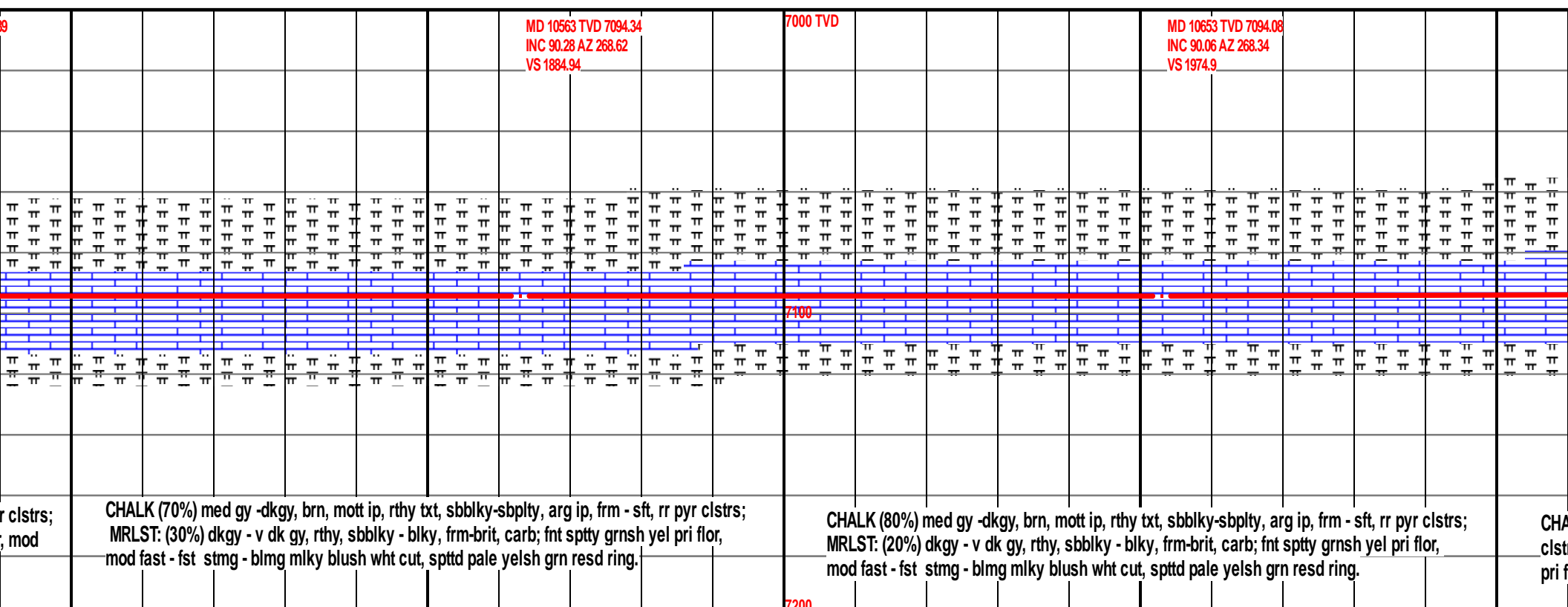
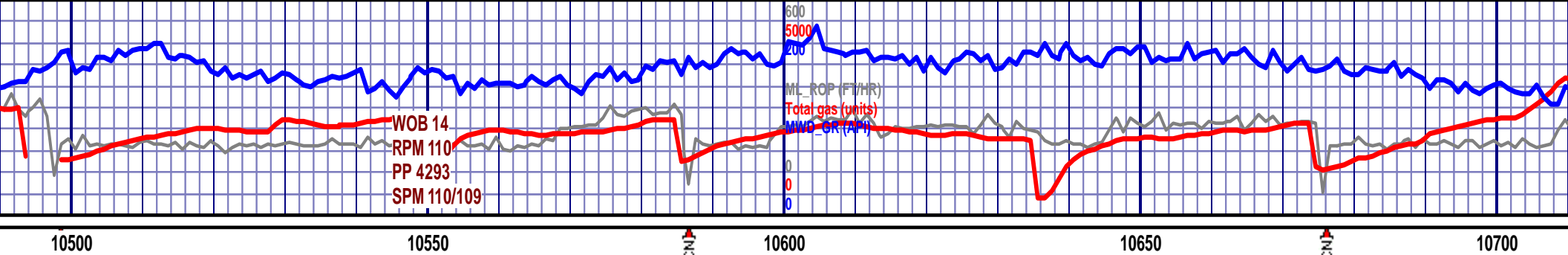
g ip, frm - sft, rr pyr clstrs;  
ty grnsh yel pri flor, mod  
d ring.

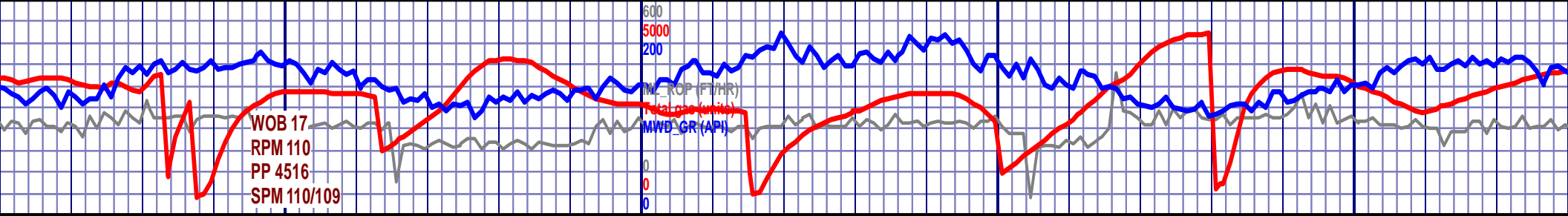
CHALK (75%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbply, arg ip, frm - sft, rr pyr clstrs;  
MRLST: (25%) dkgy - v dk gy, rthy, sbblky - blky, frm-brit, carb; sptty grnsh yel pri flor, mod fast  
- fst stmg - blmg mlky blush wht cut, spttd pale yelsh grn resd ring.

CHALK (80%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbply, arg ip, frm - sft, rr pyr clstrs;  
MRLST: (20%) dkgy - v dk gy, rthy, sbblky - blky, frm-brit, carb; sptty grnsh yel pri flor, mod fast  
- fst stmg - blmg mlky blush wht cut, spttd pale yelsh grn resd ring.



MW 10.1+  
VIS 50  
DATE: 12/14/17  
DEPTH: 10412  
WT: 10.1  
Vis: 51  
PV: 18  
YP: 6  
Gel: 4/6/7  
FIL (HTHP): 10  
SOL: 13%  
Cl: 40,000  
NAP/H2O Ratio 82/18  
ES 560





10750

10800

10850

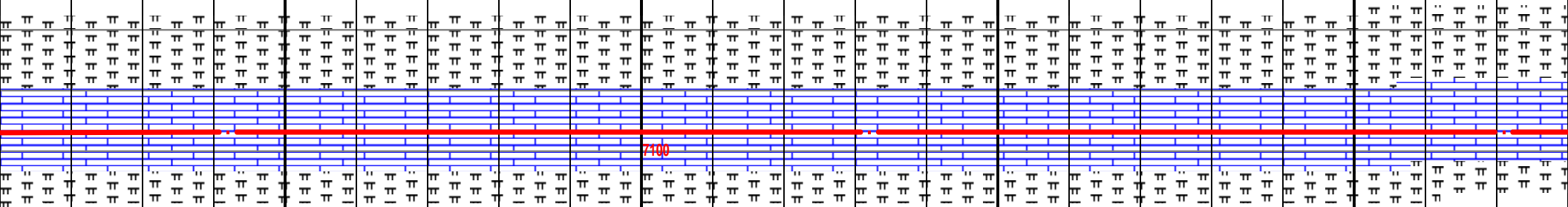
10900

MD 10742 TVD 7093.86  
INC 90.22 AZ 269.66  
VS 2063.89

7000 TVD

MD 10832 TVD 7093.66  
INC 90.03 AZ 271.07  
VS 2153.88

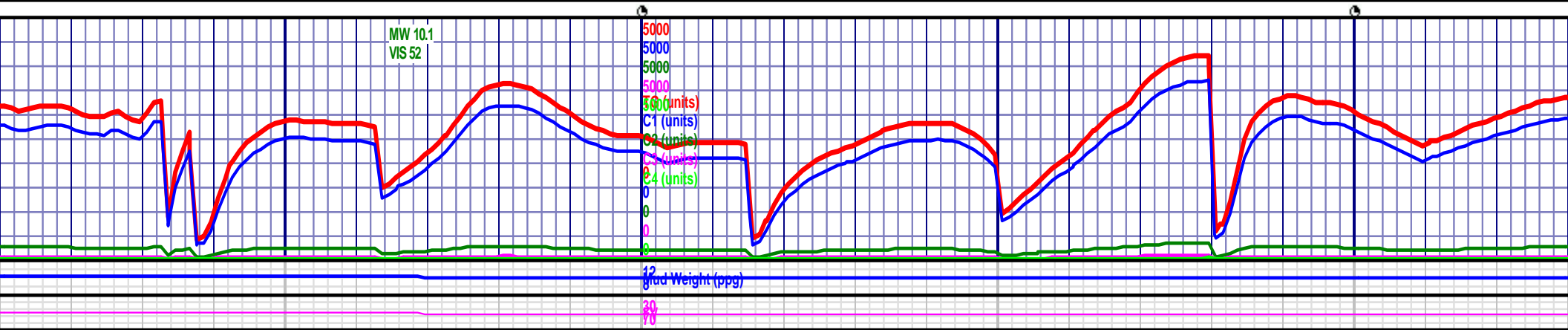
MD 10921 TVD 7093.66  
INC 90.15 AZ 271.07  
VS 2242.86

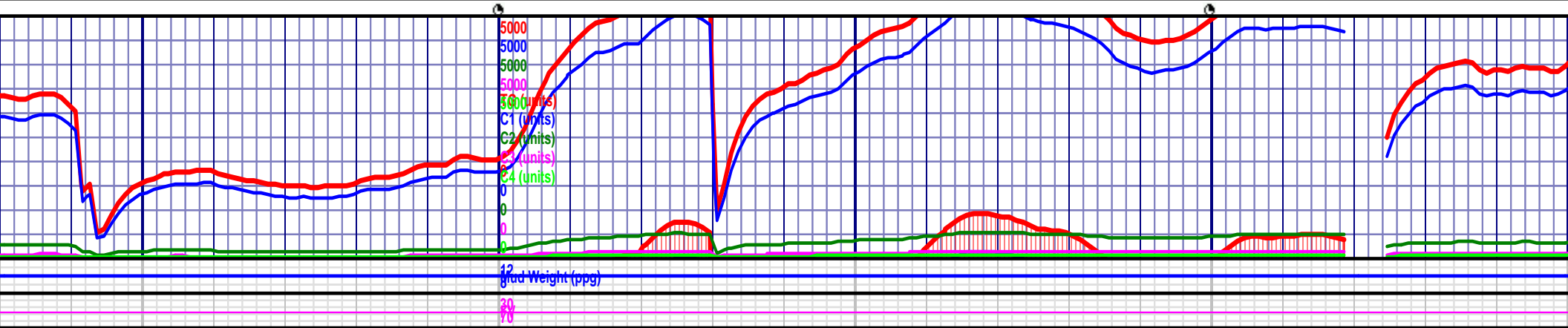
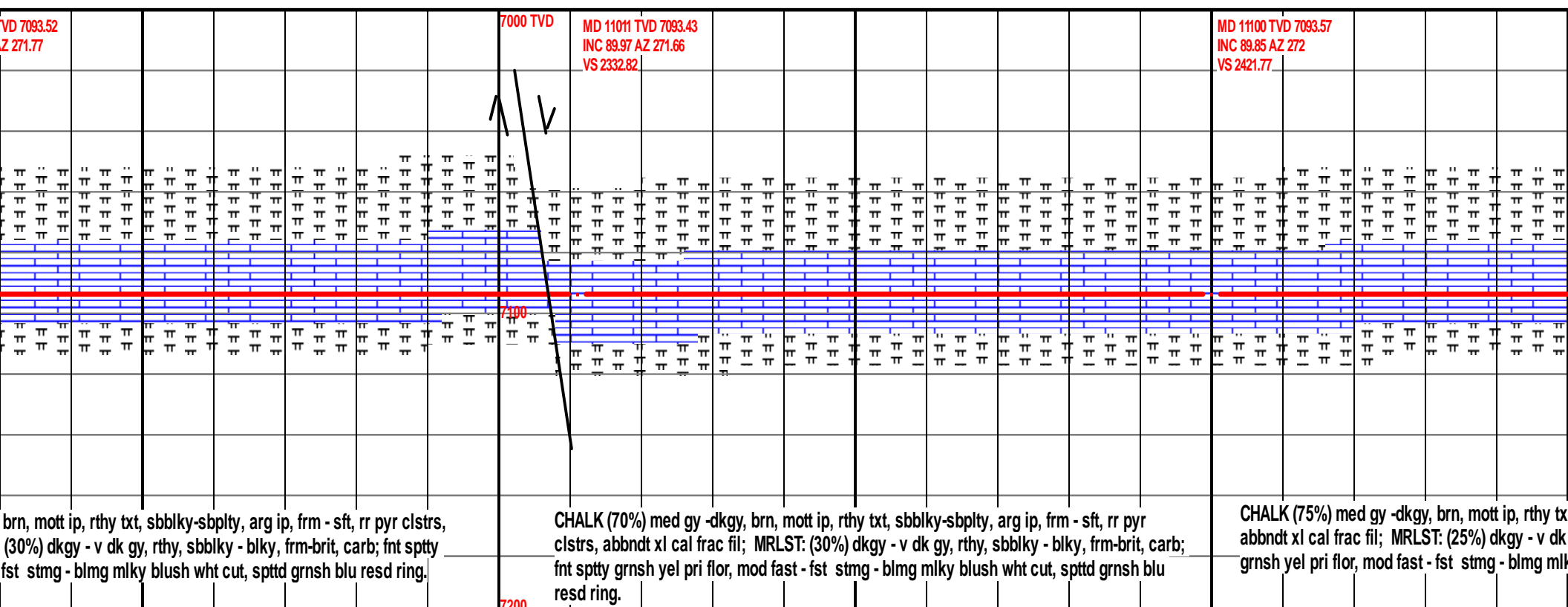
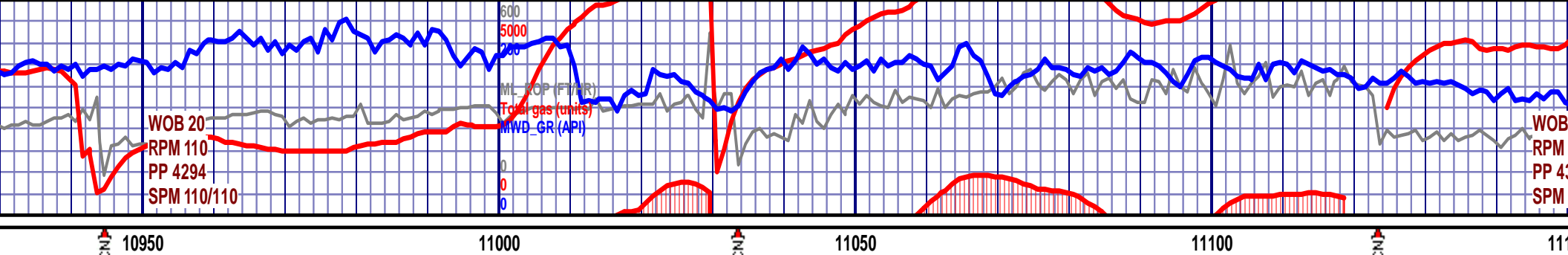


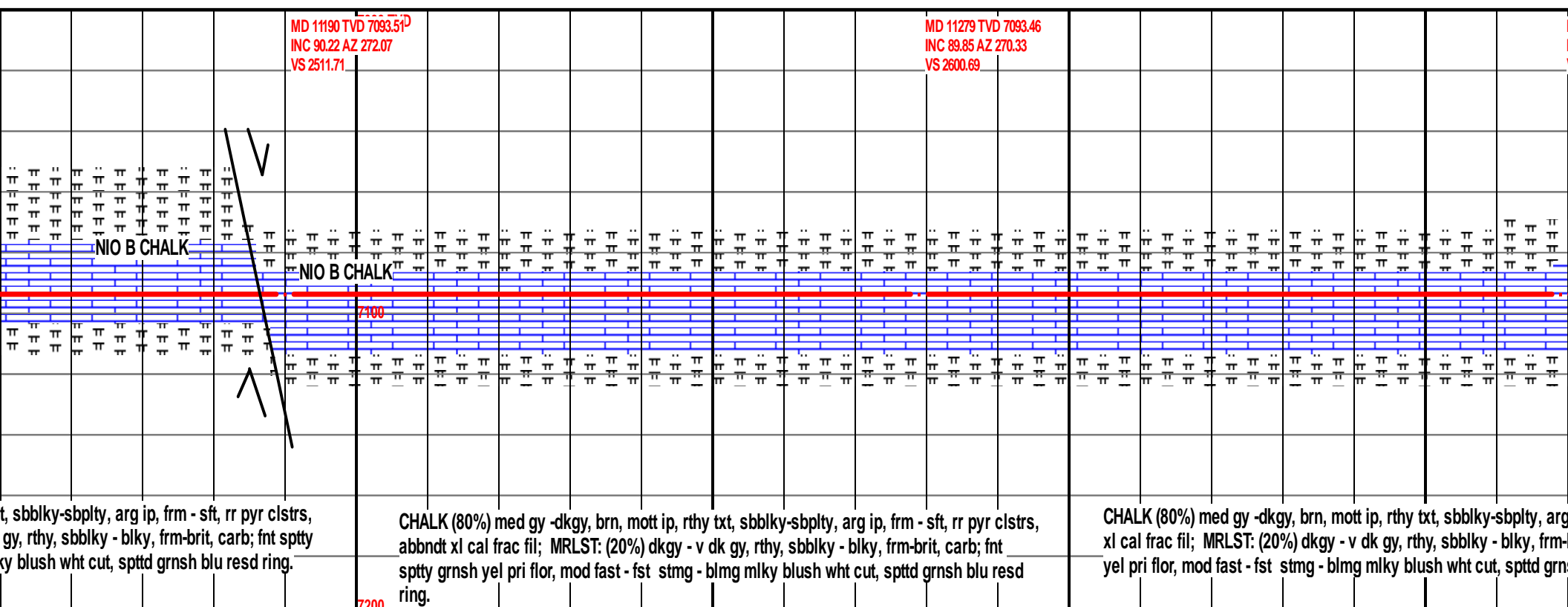
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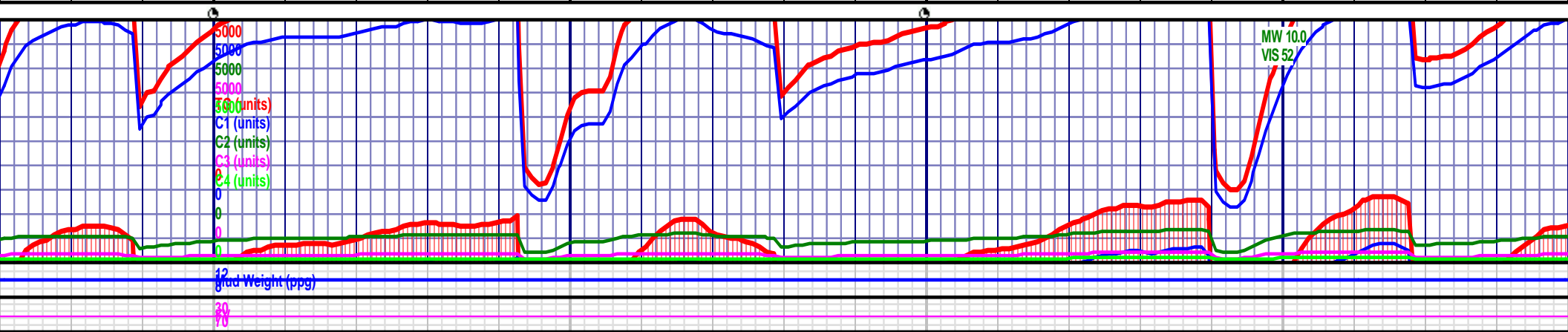
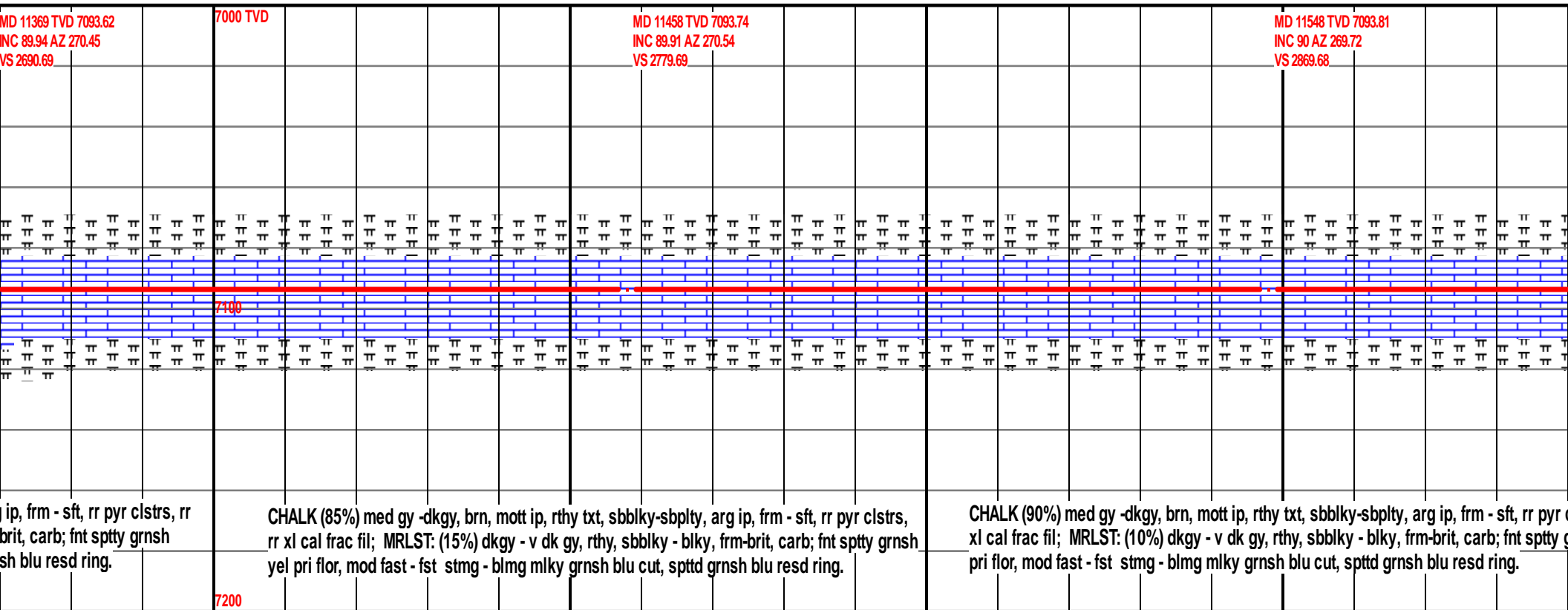
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CHALK (70%) med gy -dkgy, abndt xl cal frac fil; MRLST: grnsh yel pri flor, mod fast -

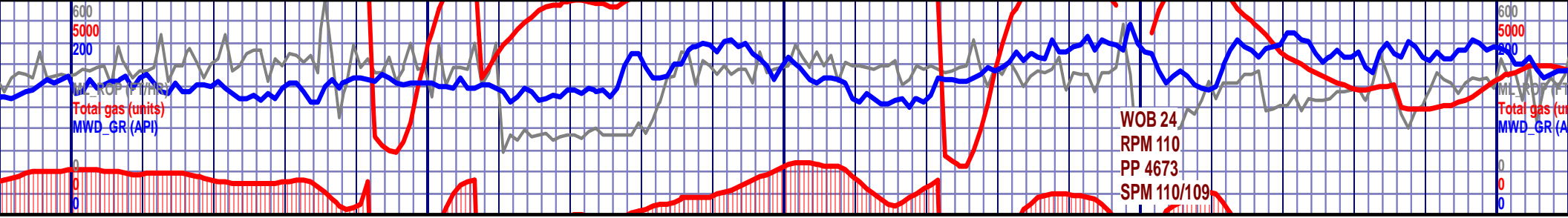












11600

11650

11700

11750

11800

7000 TVD

MD 11638 TVD 7093.86  
INC 89.94 AZ 268.93  
VS 2959.68

MD 11727 TVD 7093.9  
INC 90 AZ 268.53  
VS 3048.65

7000 TVD

7100

7100

clstrs, rr  
grnsh yel

CHALK (80%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, arg ip, frm - sft, rr xl cal frac fil; MRLST: (20%) dkgy - v dk gy, rthy, sbblky - blky, frm-brit, carb; fnt sptty grnsh yel pri flor, slo - mod fast stmg - blmg mlky grnsh blu cut, spttd grnsh blu resd ring.

CHALK (80%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, arg ip, frm - sft, rr xl cal frac fil; MRLST: (20%) dkgy - v dk gy, rthy, sbblky - blky, frm-brit, carb; BENT: (tr) v lt gy, sft, wxy, pytf ip, yel min flor; fnt sptty grnsh yel pri flor, mod fast stmg - blmg mlky grnsh blu cut, spttd grnsh blu resd ring.

C  
fr  
B  
s

7200

7200

5000  
5000  
5000  
5000  
5000  
5000  
C1 (units)  
C2 (units)  
C3 (units)  
C4 (units)

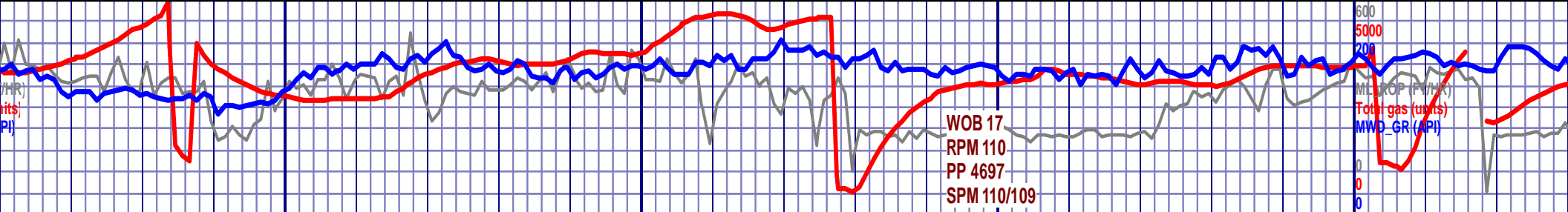
Fluid Weight (ppg)

38

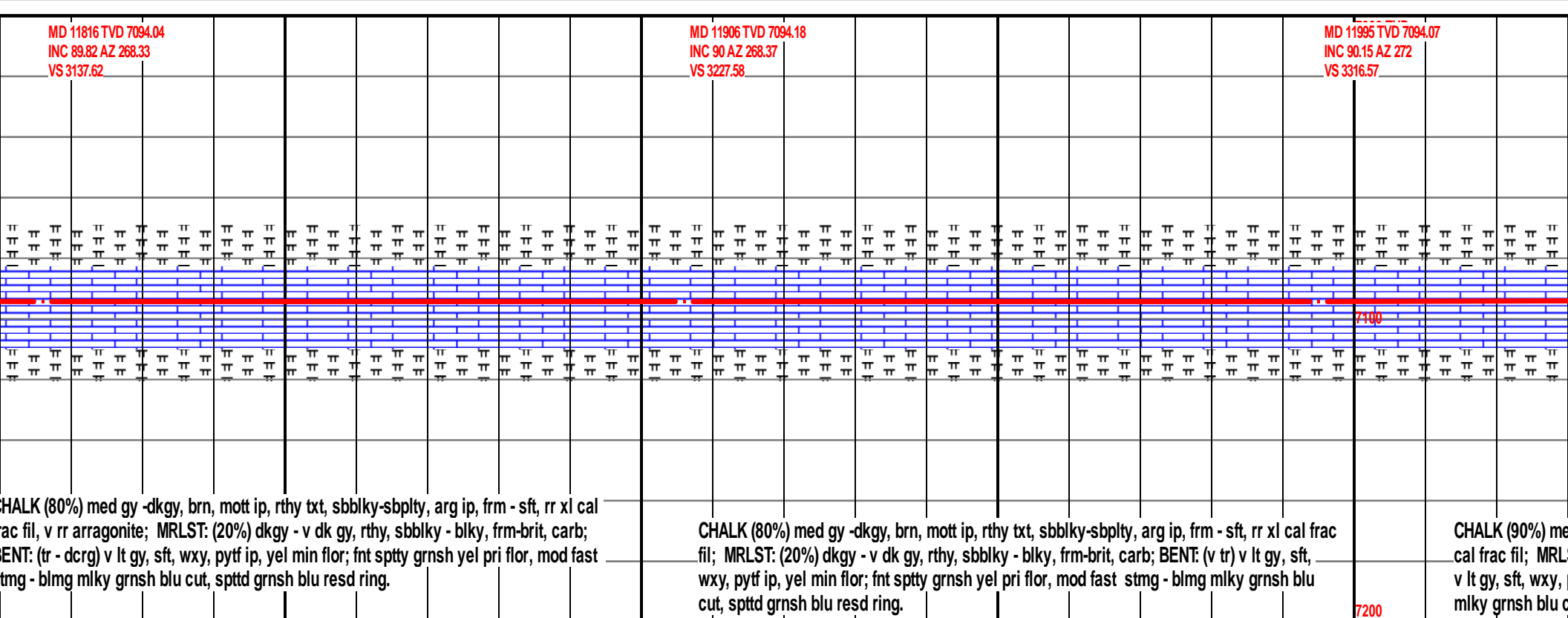
5000  
5000  
5000  
5000  
5000  
5000  
C1 (units)  
C2 (units)  
C3 (units)  
C4 (units)

Fluid Weight

38



11850 11900 11950 12000



MD 11816 TVD 7094.04  
INC 89.82 AZ 268.33  
VS 3137.62

MD 11906 TVD 7094.18  
INC 90 AZ 268.37  
VS 3227.58

MD 11995 TVD 7094.07  
INC 90.15 AZ 272  
VS 3316.57

CHALK (80%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, arg ip, frm - sft, rr xl cal

rac fil, v rr arragonite; MRLST: (20%) dkgy - v dk gy, rthy, sbblky - blky, frm-brit, carb;

BENT: (tr - dcrg) v lt gy, sft, wxy, pytf ip, yel min flor; fnt spty grnsh yel pri flor, mod fast

stmng - blmg mlky grnsh blu cut, spttd grnsh blu resd ring.

CHALK (80%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, arg ip, frm - sft, rr xl cal frac

fil; MRLST: (20%) dkgy - v dk gy, rthy, sbblky - blky, frm-brit, carb; BENT: (v tr) v lt gy, sft,

wxy, pytf ip, yel min flor; fnt spty grnsh yel pri flor, mod fast stmng - blmg mlky grnsh blu

cut, spttd grnsh blu resd ring.

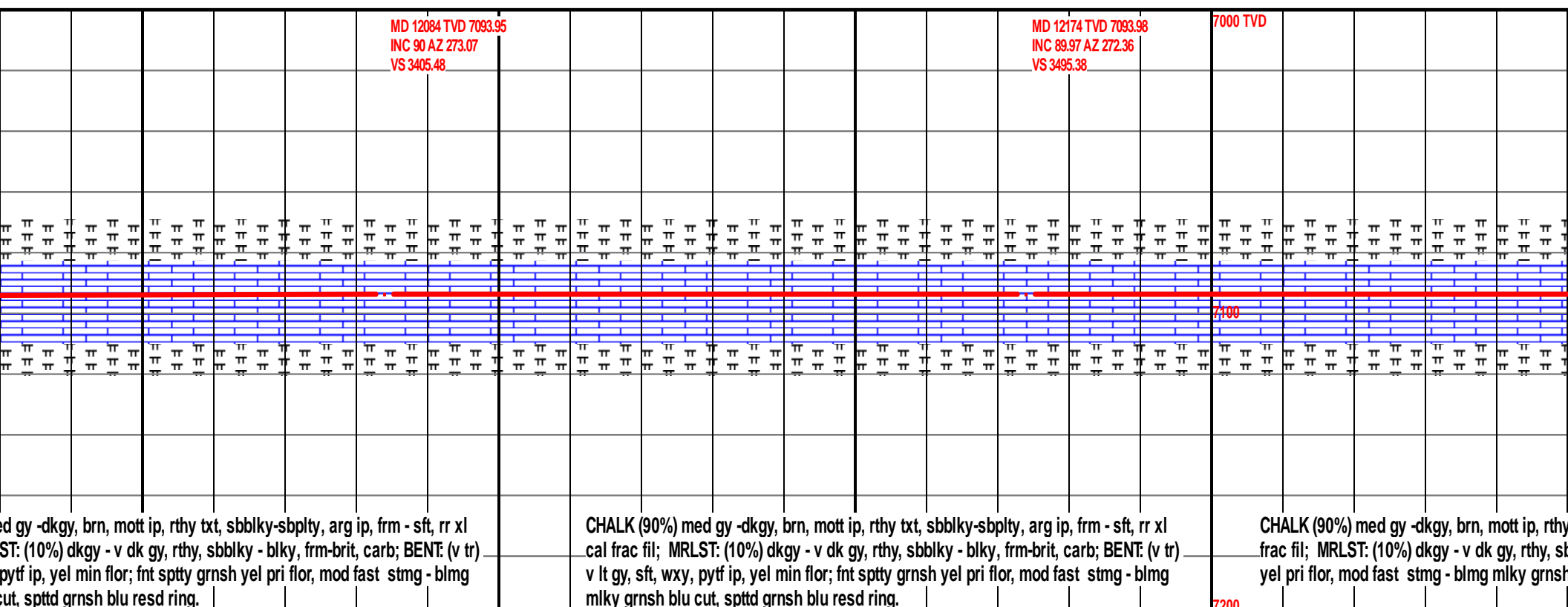
CHALK (90%) me

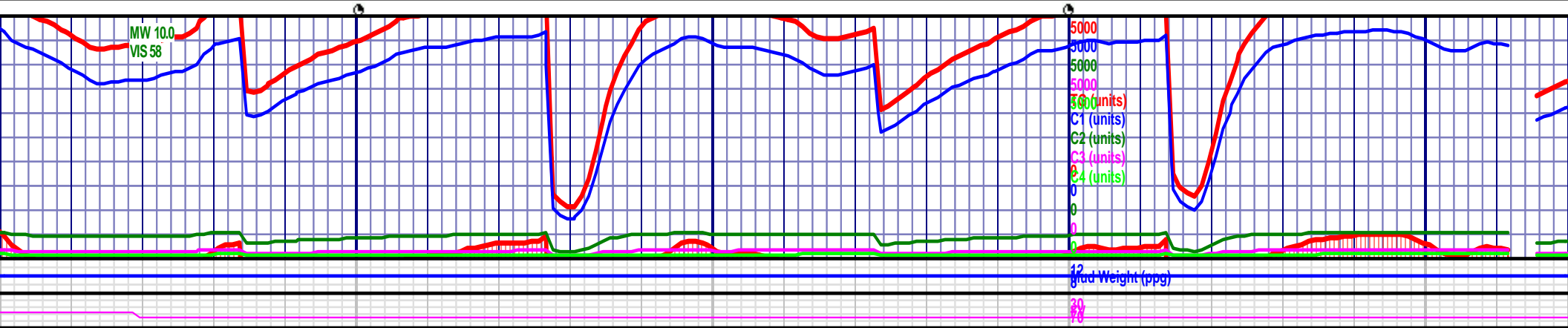
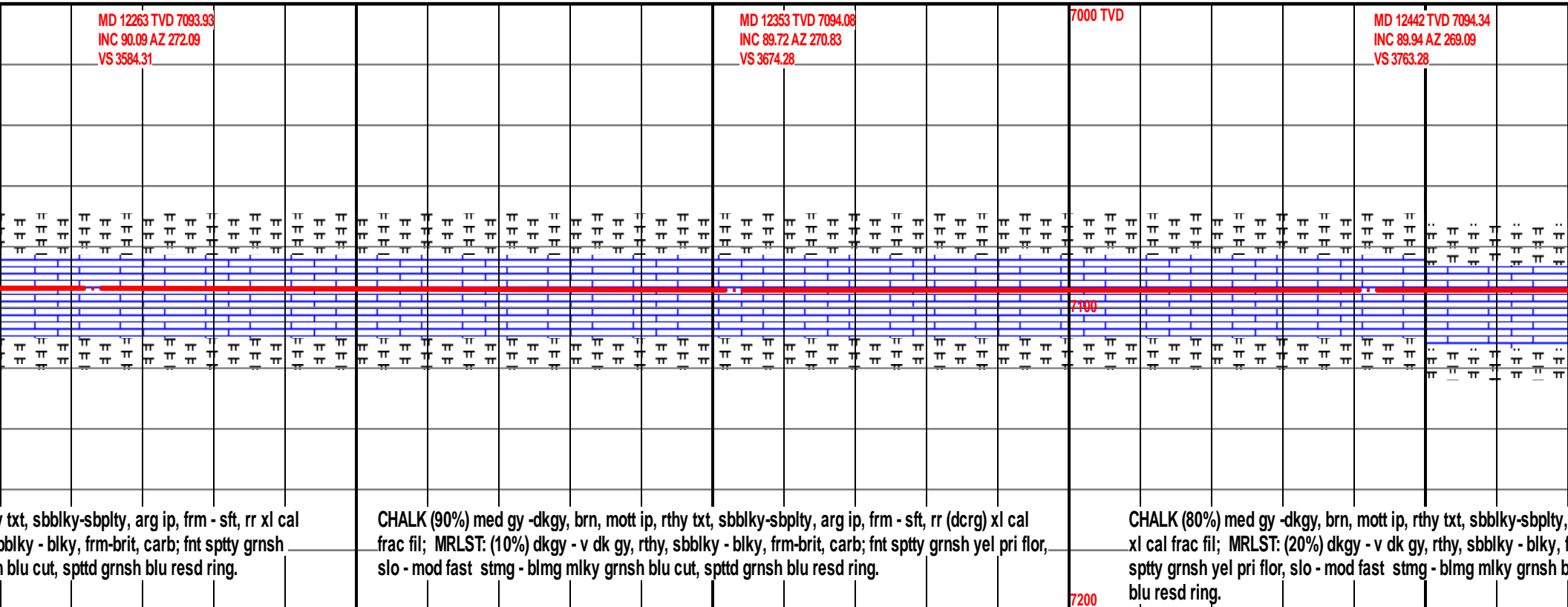
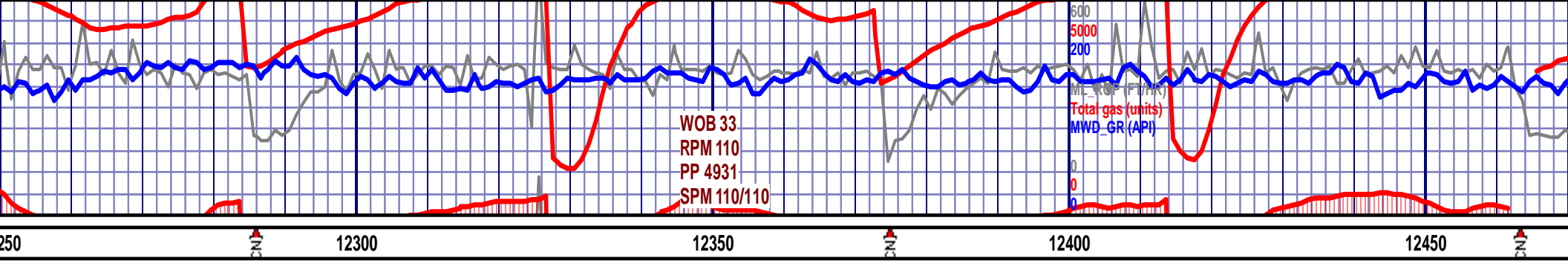
cal frac fil; MRL

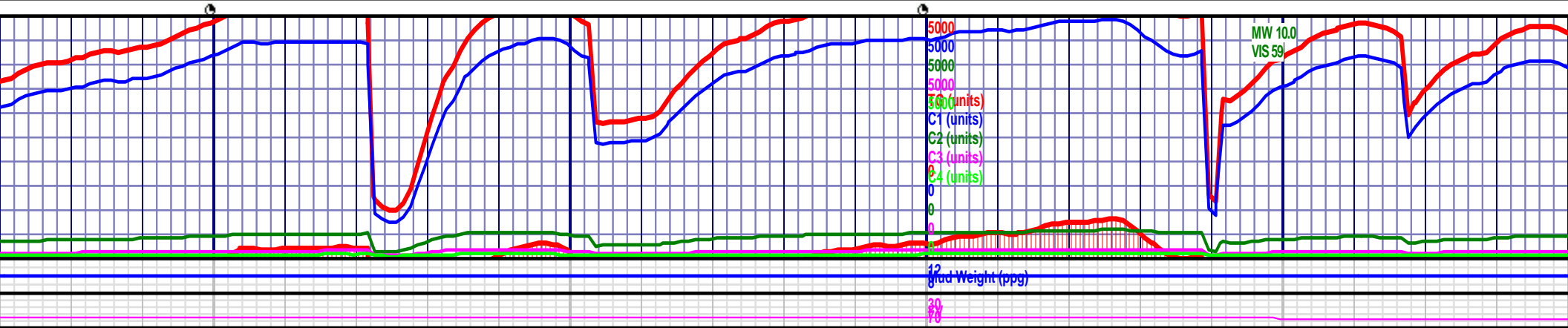
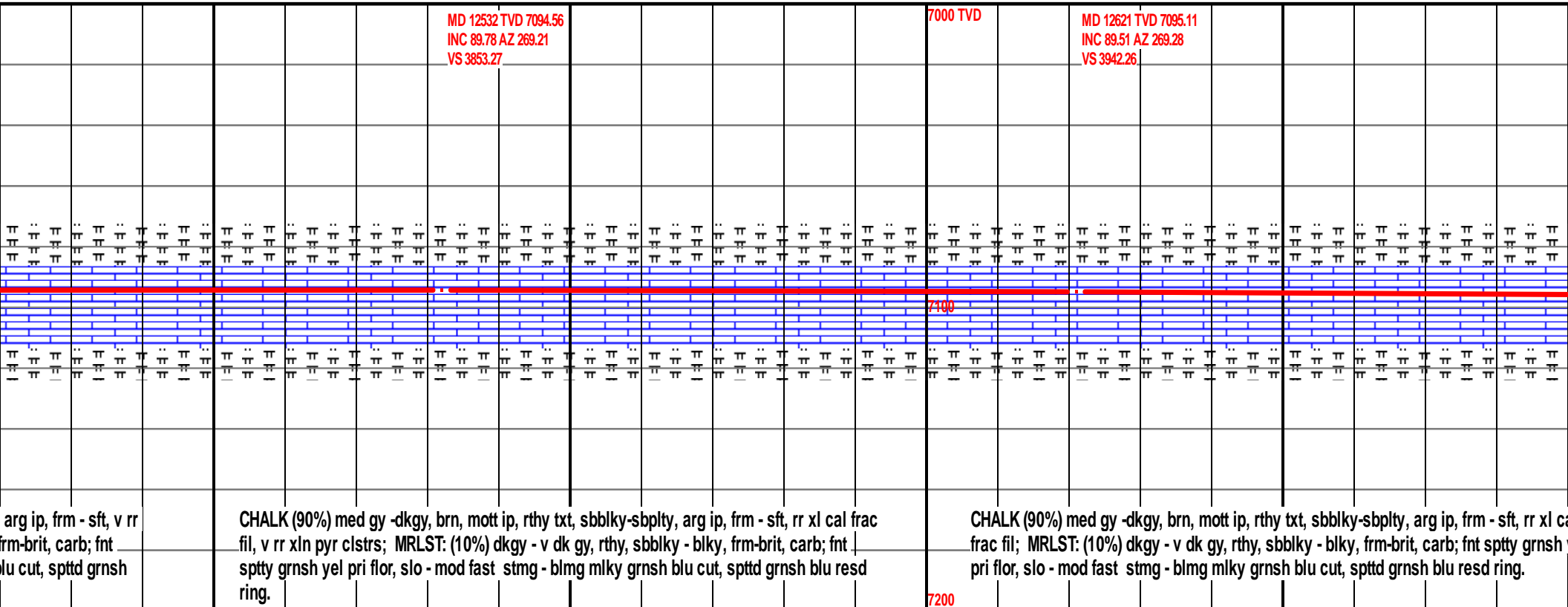
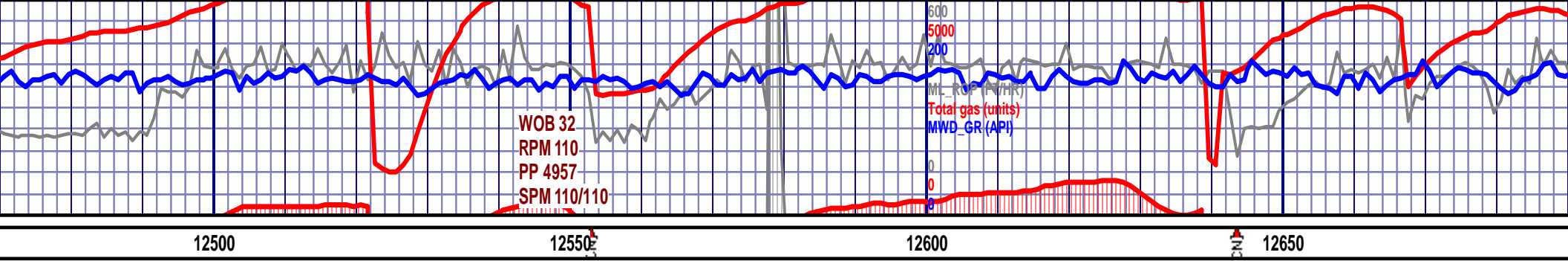
v lt gy, sft, wxy,

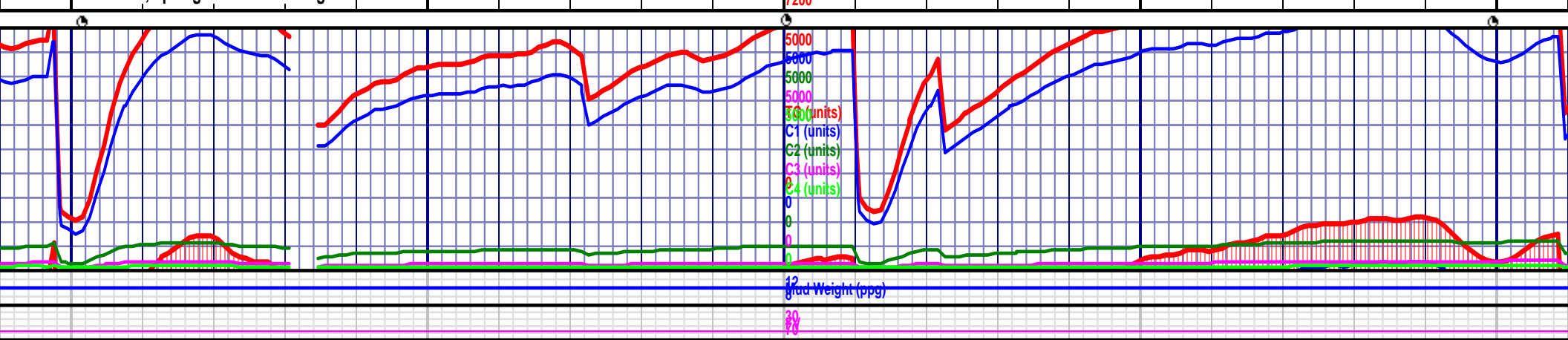
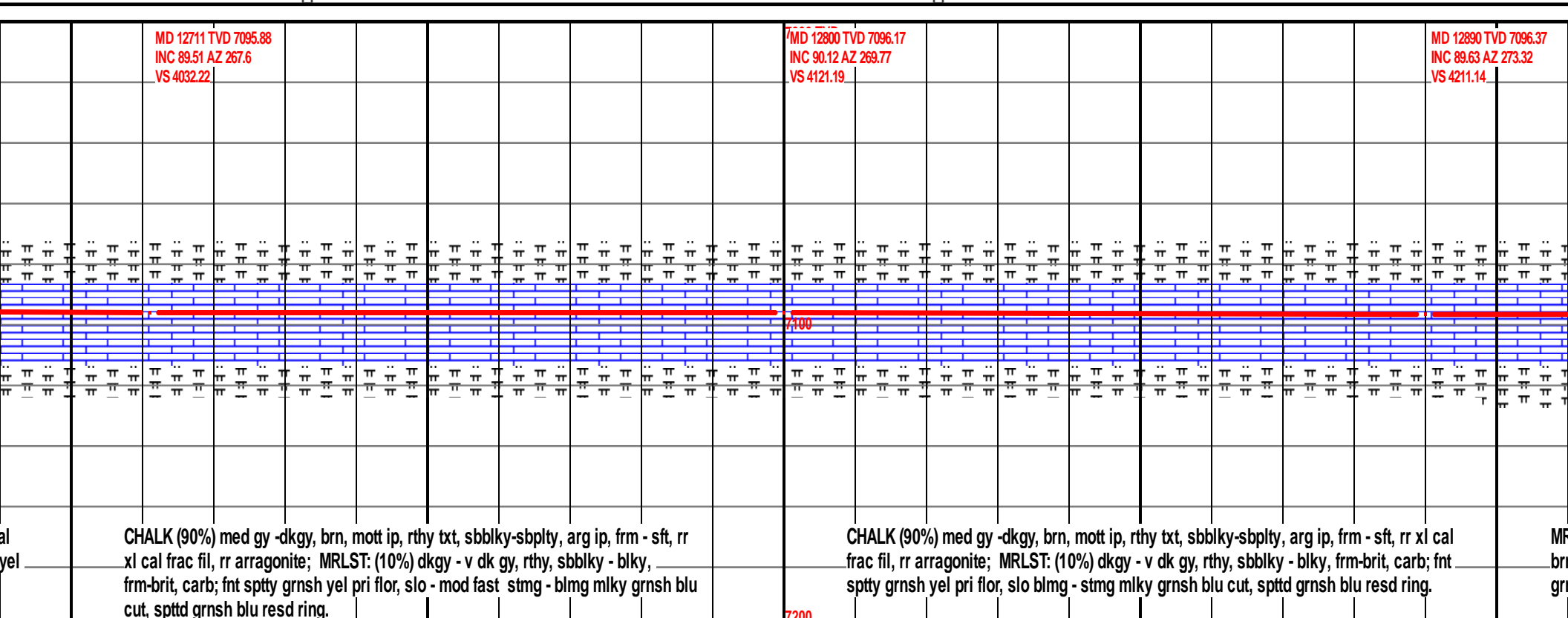
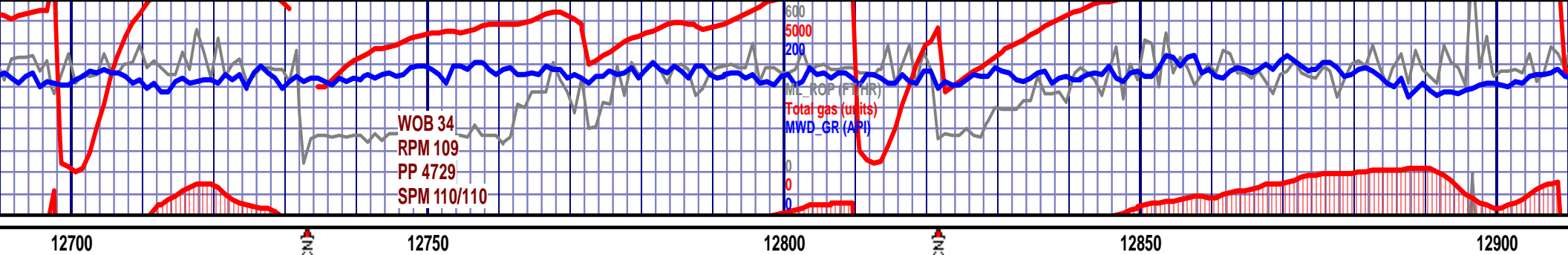
mlky grnsh blu c

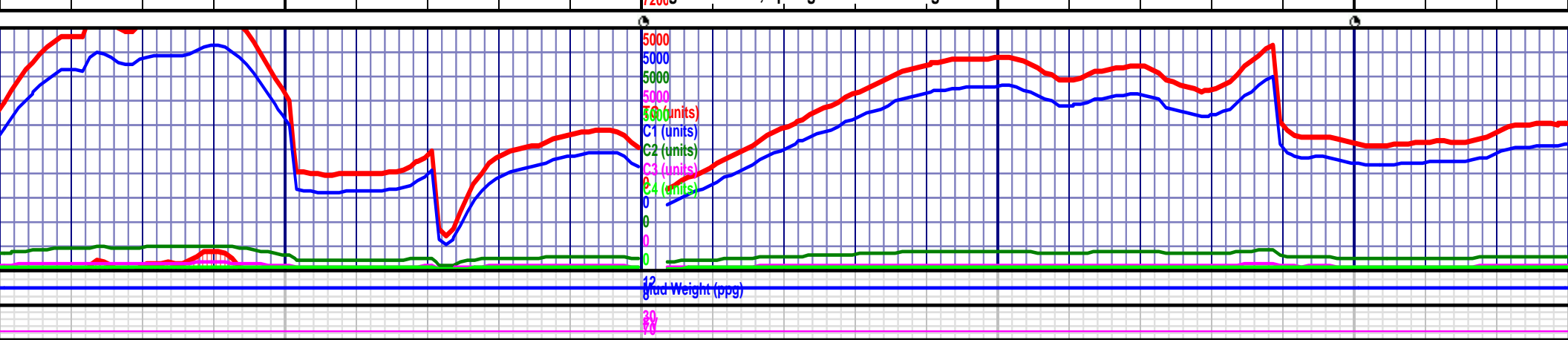
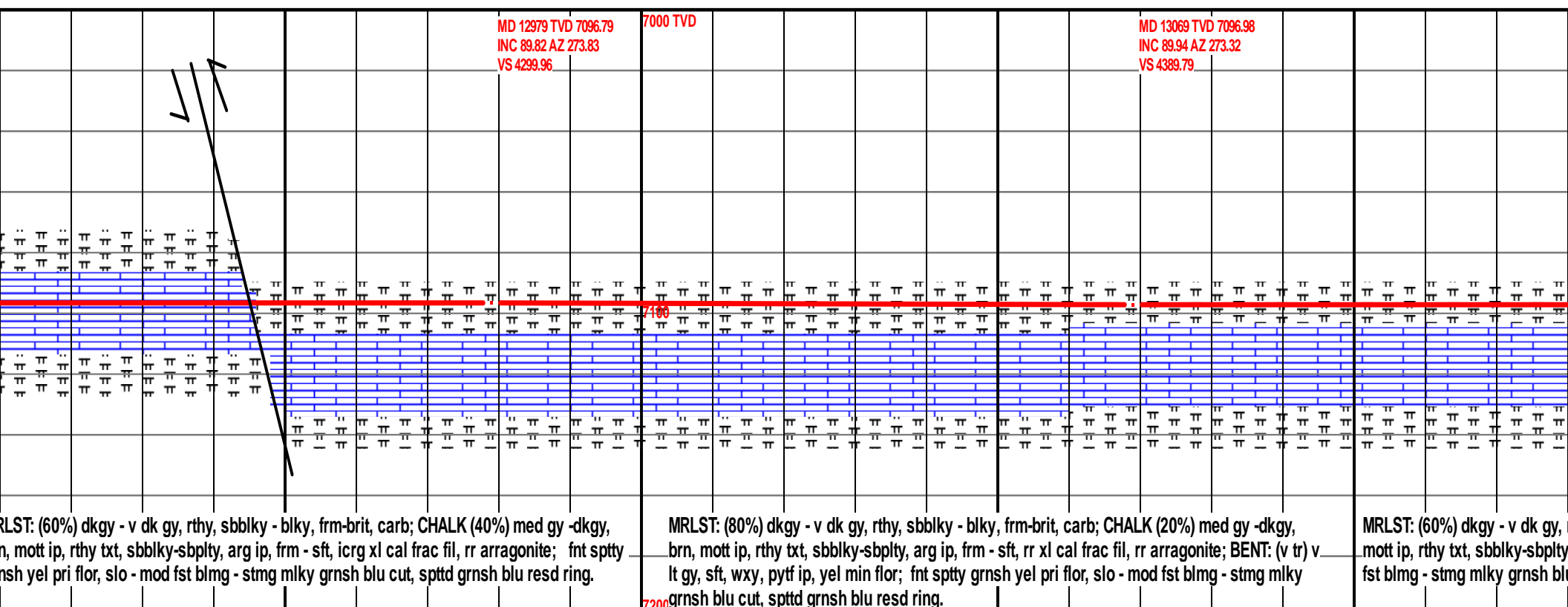
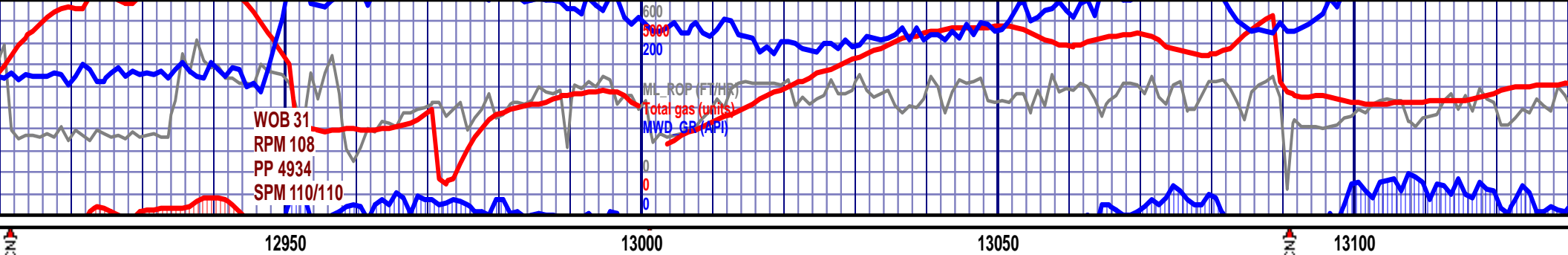


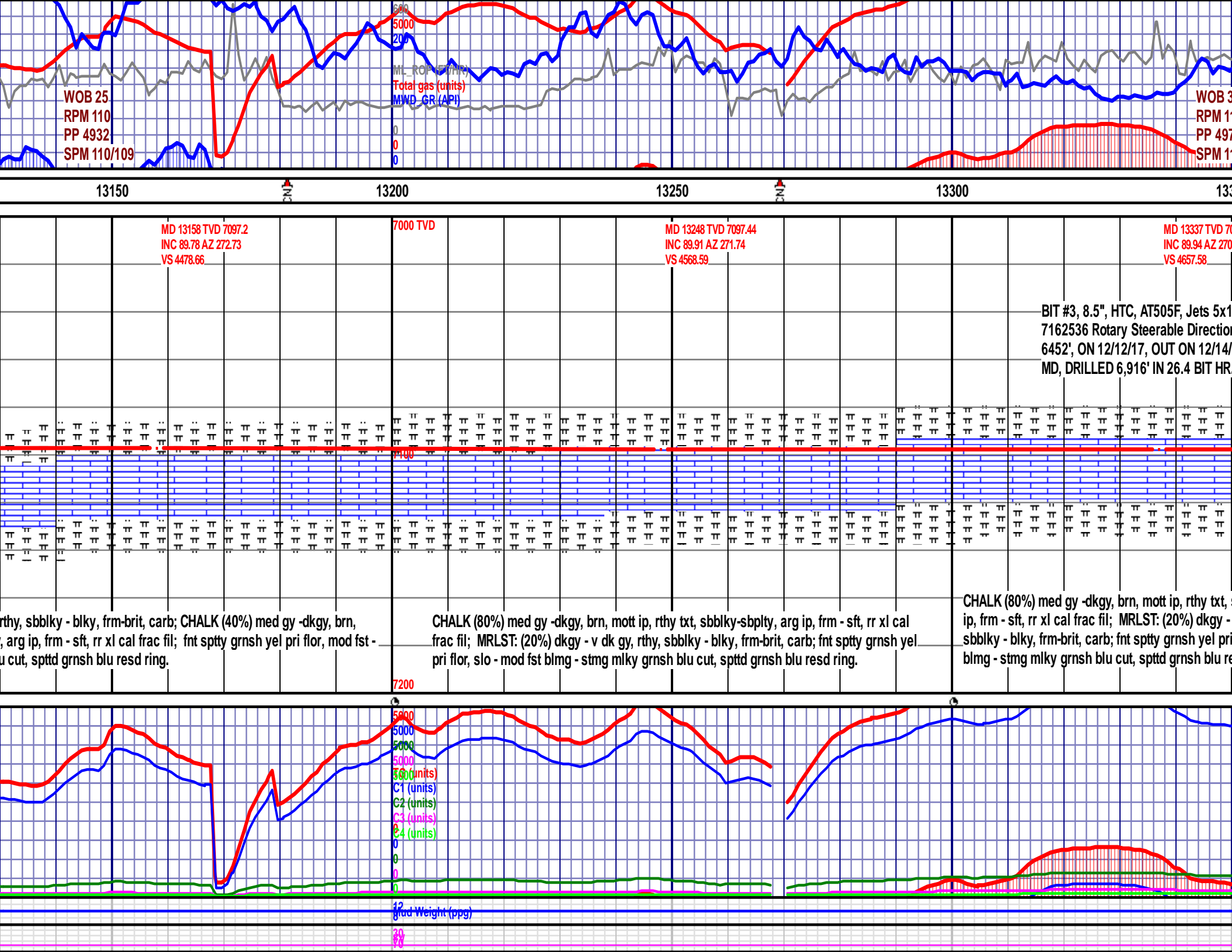




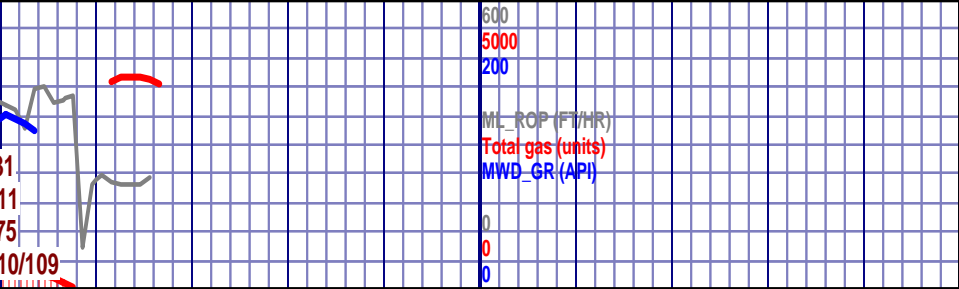












1350 13400 13

MD 13368 TVD 7097.59 INC 89.94 AZ 270.06 VS 4688.58	7000 TVD				
3s, SN#: nal BHA, IN @ 17 @ 13,368'	Final Survey is a projection to the bit				
TD of 13,368' reached at 16:20 on 12/14/2017. Production liner ran to 13,352' on 12/16/2017					
Formation Tops	MD	TVD	SSD		
Sharon Springs	7570'	6897'	-2062'		
Niobrara A Chalk	7632'	6937'	-2102'		
Niobrara B Chalk	7926'	7065'	-2230'		
ssbblky-sbplty, arg v dk gy, rthy, flor, slo - mod fst esd ring.					

