

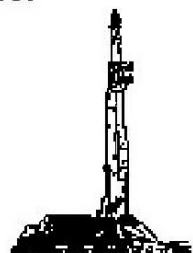
**GOOLSBY BROTHERS**  
and associates, inc.

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: SRC FAGERBERG 3C-18-M

API: 05-123-43184

Location: Section 12, T6N, R66W, Weld County, CO.

License Number:

Spud Date: JUNE 08, 2016

Surface Coordinates: SW/SW 1251' FSL & 235' FWL

Lat/Long: 40.499005/-104.734123

Bottom Hole Coordinates: NWNE 807 FNL 1936 FEL

SEC 18, T6N, R65W

Ground Elevation (ft): 4807'

Logged Interval (ft): 6800'

To: 15562'

Formation: CODELL

Type of Drilling Fluid: LSND

K.B. Elevation (ft): 4820'

Total Depth (ft): 15562' DTD

Region: Wattenberg  
Drilling Completed: JUNE 15, 2016

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

**OPERATOR**

Company: Synergy Resources Corporation

Address: 1625 Broadway, Suite 300  
Denver, Co 80202

**GEOLOGIST**

Name: Tekabe Gedamu, Blake Stacey

Company: Goolsby Brothers & Assoc. (GBA), Inc. ([www.goolsbybrothers.com](http://www.goolsbybrothers.com))

Address: 575 Union Blvd.  
Suite 208,  
Lakewood CO. 80228

## E-logs

MWD GR from 6800'-15521'

## Casing


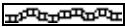
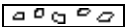

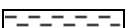
9 5/8" 36# LTC J-55 Surface Casing set @ 1715' MD.



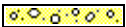


4 1/2" Production Liners/Packers run on June 17, 2016.


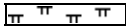



## Comments

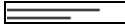




- 1) Drilling Contractor: Precision Drilling Co, LP 462
- 2) Company Man: Sean Devereaux  
Tim Jones  
Kevin Brakovec
- 3) Mud Comapny : Halliburton
- 4) Directional Drilling: Schlumberger.
- 5) Gas Equipment: Pason Gas Analyzer (Spectrometer)
- 6) Wellsite Geologist: Tekabe Gedamu, Mike Dodge

## ROCK TYPES

 Anhy  
 Bent  
 Brec  
 Cht  
 Clyst

 Coal  
 Oil sat.  
 Congl  
 Dol  
 Gyp

 Lmst  
 Mrlst  
 Salt  
 Shale  
 Shcol

 Shgy  
 Ss  
 Sltst  
 Ss  
 Chalk

 Carb sh  
 Sltly sh

## 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  
 Anhy  
 Arg  
 Bent  
 Coal  
 Dol  
 Gyp  
 Ls

Mrst  
 Sltstgr  
 Ssstgr

### 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

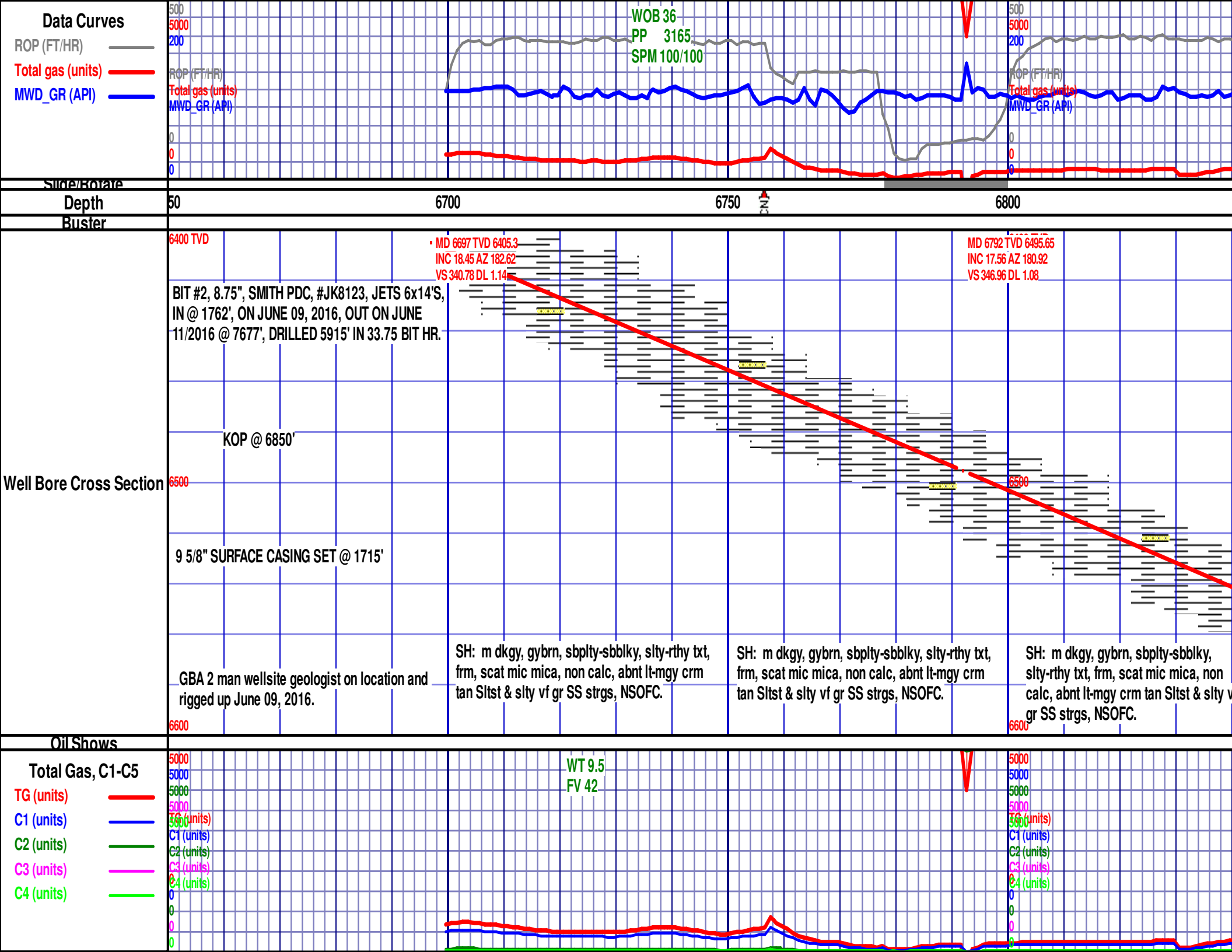
Inter  
 Moldic  
 Organic  
 Pinpoint  
 Vuggy

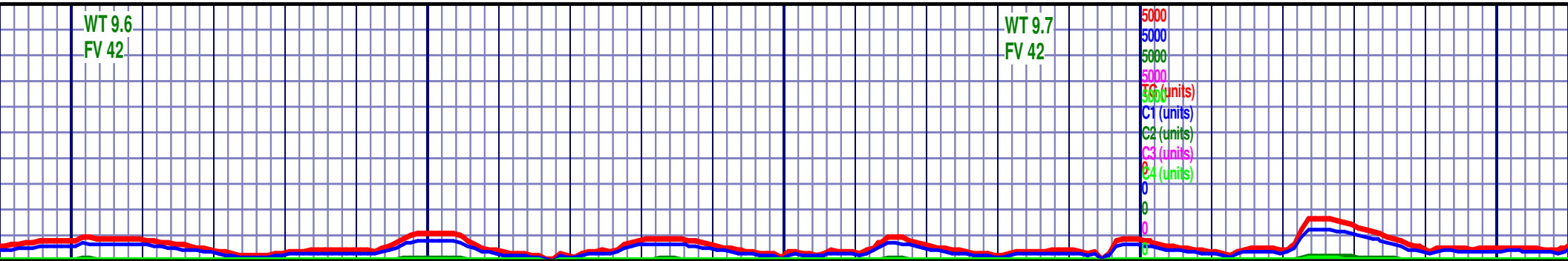
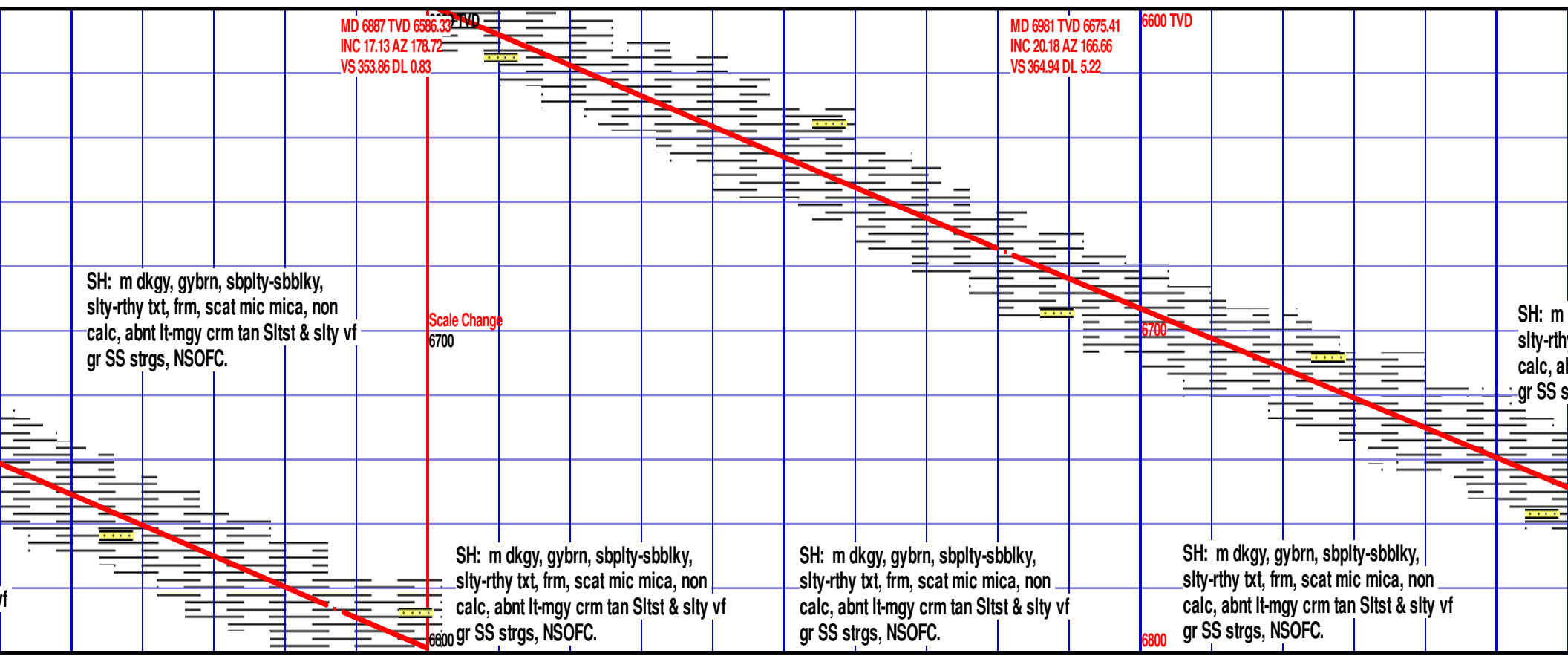
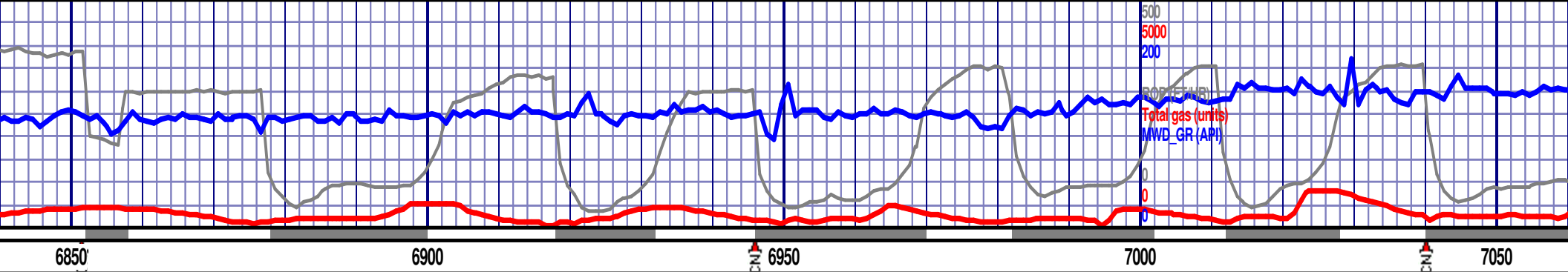
### ROUNDING

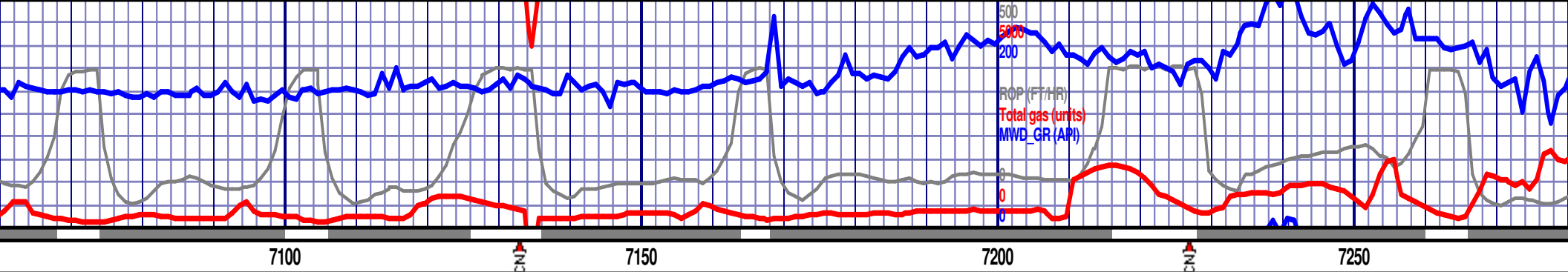
Rounded  
 Subrnd  
 Subang  
 Angular

### SORTING

Well  
 Moderate  
 Poor







MD 7074 TVD 6761.44  
INC 24.58 AZ 153.45  
VS 384.87 DL 7.15

6800 TVD

MD 7168 TVD 6845.43  
INC 28.94 AZ 140.44  
VS 415.89 DL 7.75

6800 TVD

MD 7263 TVD 6926.13  
INC 34.91 AZ 126.71  
VS 459.53 DL 9.86

dkgy, gybrn, sbply-sbblky,  
y txt, frm, scat mic mica, non  
ont lt-mgy crm tan Slst & slty vf  
strgs, NSOFC.

Scale Change  
6900

SH: m dkgy, gybrn, sbply-sbblky,  
slty-rthy txt, frm, scat mic mica, non  
calc, abnt lt-mgy crm tan Slst & slty vf  
gr SS strgs, NSOFC.

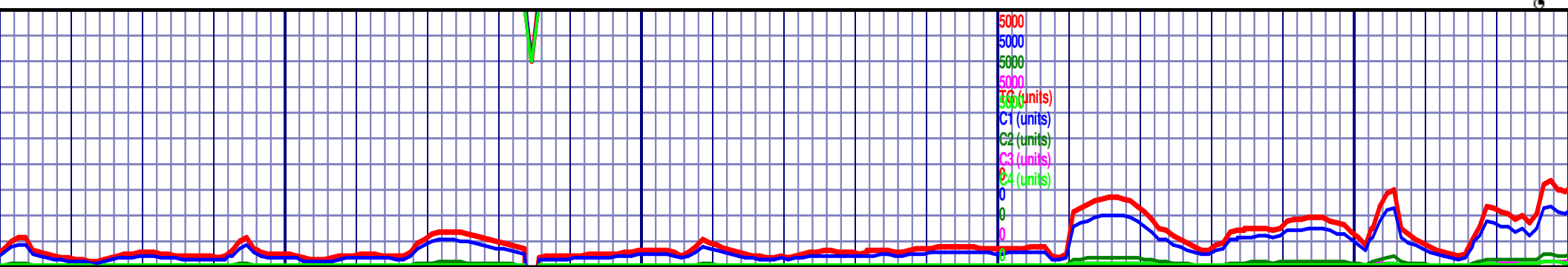
SH: m dkgy, gybrn, sbply-sbblky,  
slty-rthy txt, frm, scat mic mica, non  
calc, abnt lt-mgy crm tan Slst & slty vf  
gr SS strgs, NSOFC.

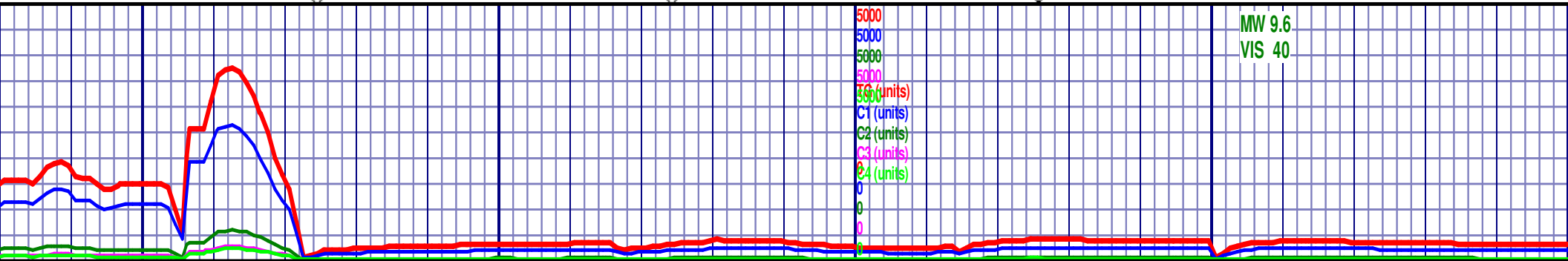
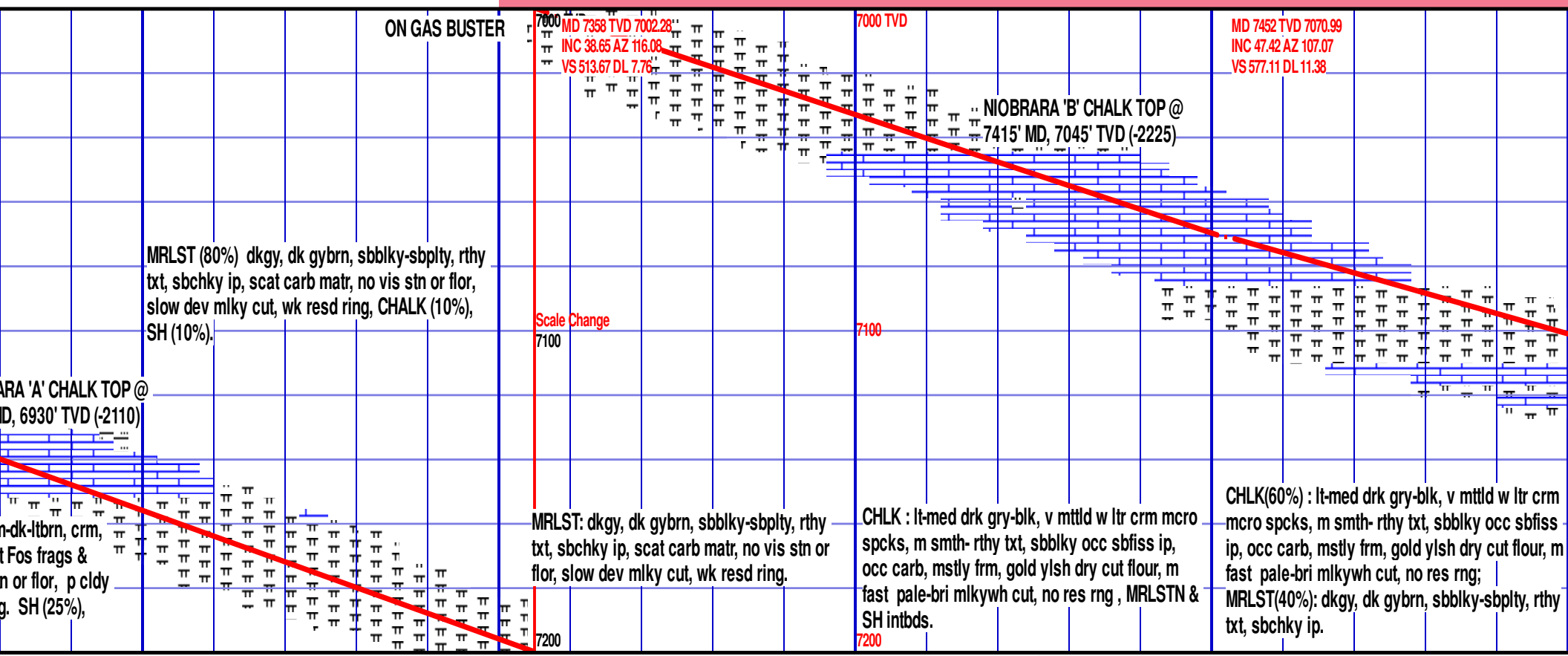
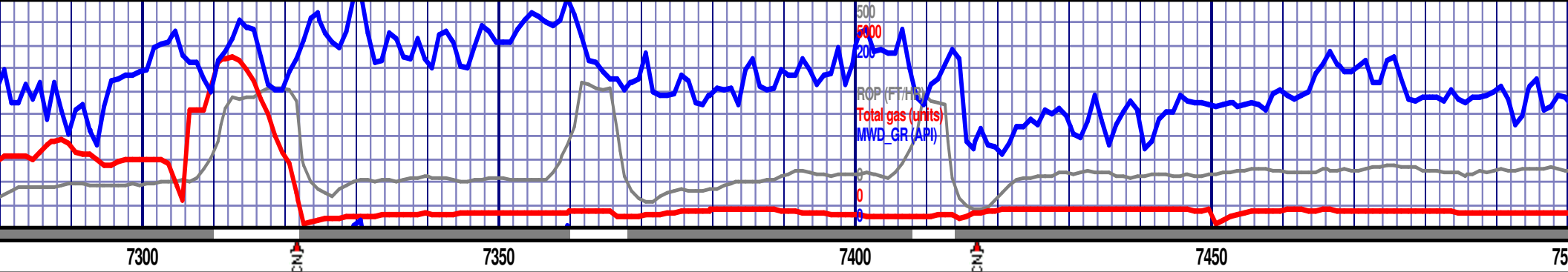
SH: m dkgy, sbply-sply-pty, rthy-sbwxy-sm  
txt, frm, scat mic mica, non-v sl calc, tr Slst  
strgs & ptgs, abn BENT, NFSOC, mnrl flr.

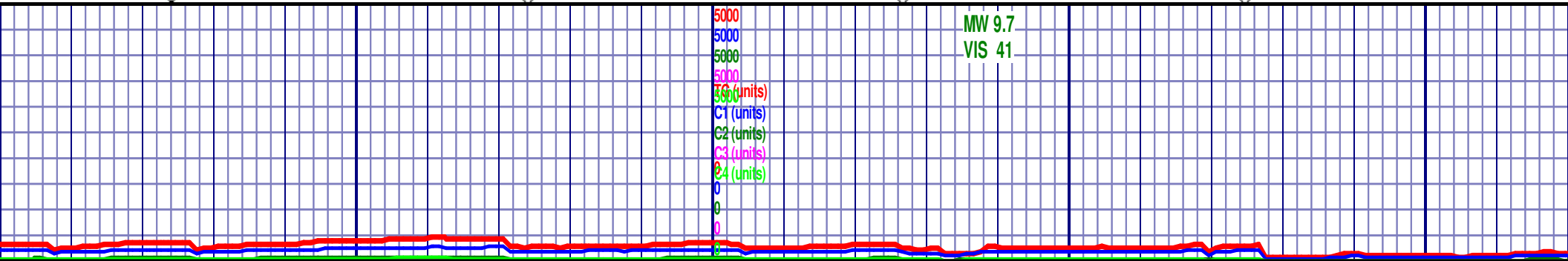
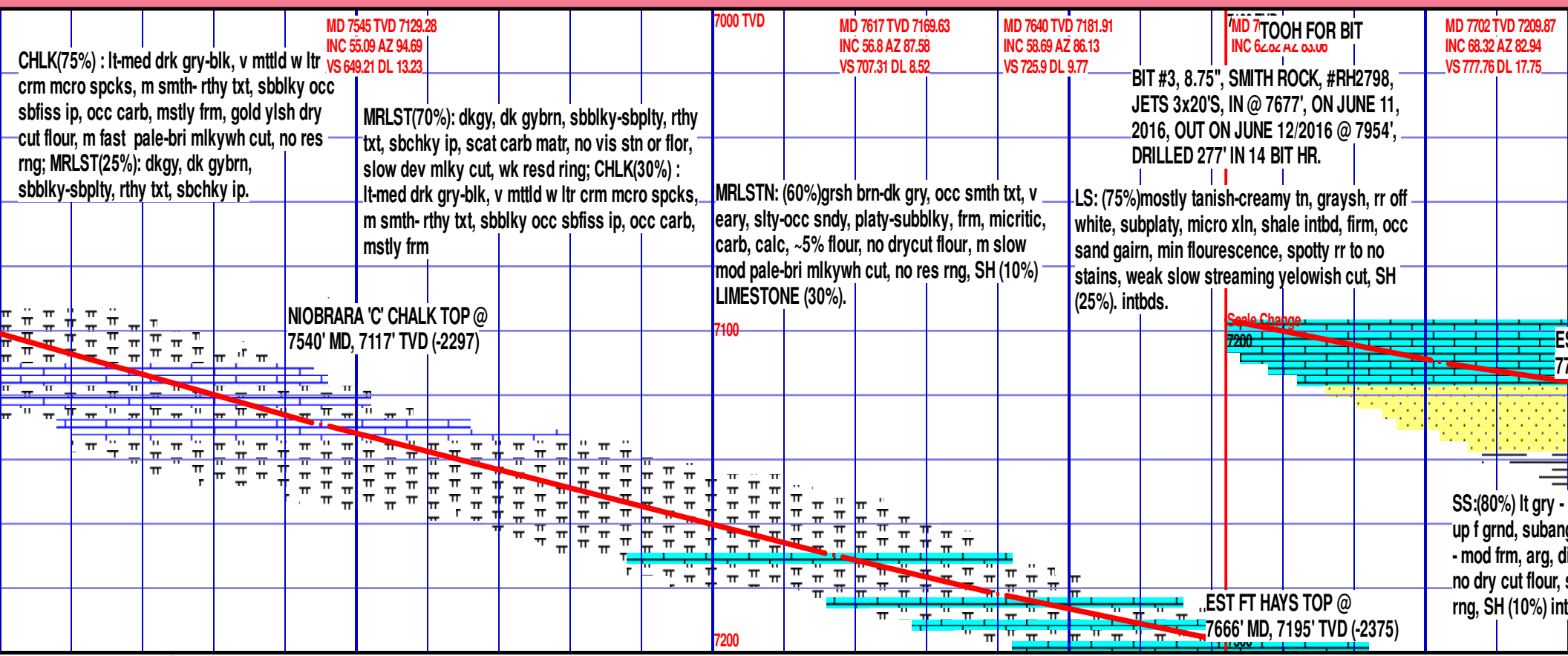
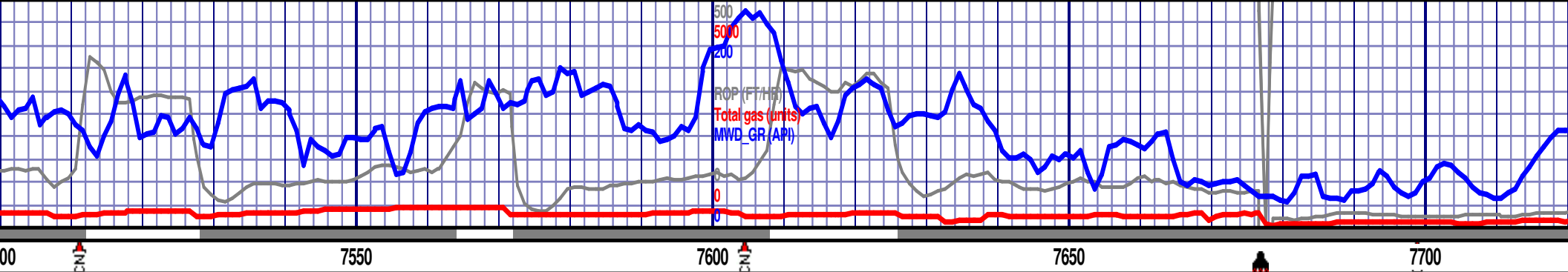
EST. SHARON SPRINGS TOP @  
7232' MD, 6901' TVD (-2081')

NIOBRA  
7275' M

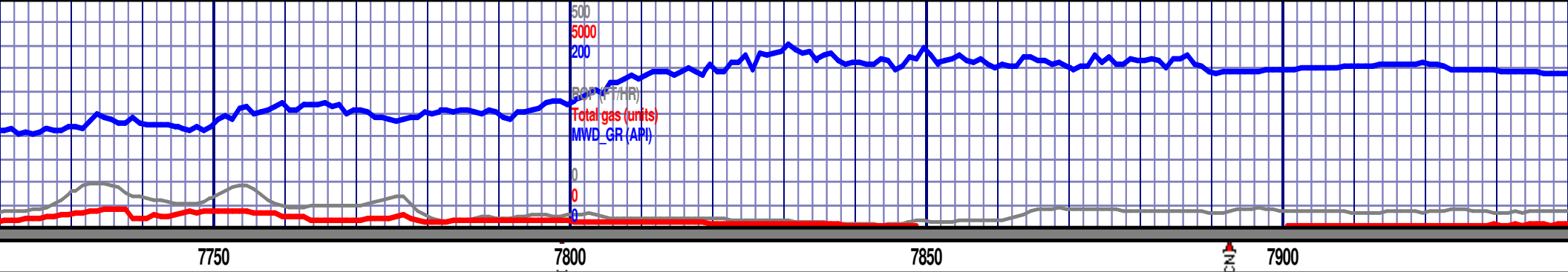
CHALK (70%) mott dk-mgy, n  
sbblky-sply, frm-brit-sft, sca  
carb matr, marly ip, no vis st  
yel cut, mod-brt yel resd ring  
BENT.











MD 7734 TVD 7220.35  
INC 73.41 AZ 82.73  
VS 805.96 DL 15.89

MD 7765 TVD 7228.1  
INC 77.63 AZ 83.3  
VS 833.99 DL 13.75

MD 7796 TVD 7233.67  
INC 81.68 AZ 84.35  
VS 862.62 DL 13.49

MD 7827 TVD 7236.79  
INC 86.77 AZ 85.8  
VS 891.79 DL 17.04

MD 7858 TVD 7237.6  
INC 90.21 AZ 87.49  
VS 921.38 DL 12.36

MD 7889 TVD 7237.27  
INC 91.03 AZ 87.8  
VS 951.13 DL 2.84

ST CODELL TOP @  
7220' MD, 7218' TVD (-2398)

FT HAYS

CODELL

CARLILE

drk grysh brn, occ off wht, f-  
g - subrndd, mod well srted, sft  
ss. pyrite, est vis por 8-10%,  
sl strmg cut w dull bl/gn resid  
bd, plty, drk gray, LS (10%).

SS:(80%) lt gry - drk grysh brn, l f - f grnd,  
subang - subrndd, mod well srted, sft - mod frm,  
arg, slty, est vis por 8-10%, no dry cut flour, sl  
strmg cut w dull bl/gn resid rng, SH (20%) intbd,  
plty, drk gray

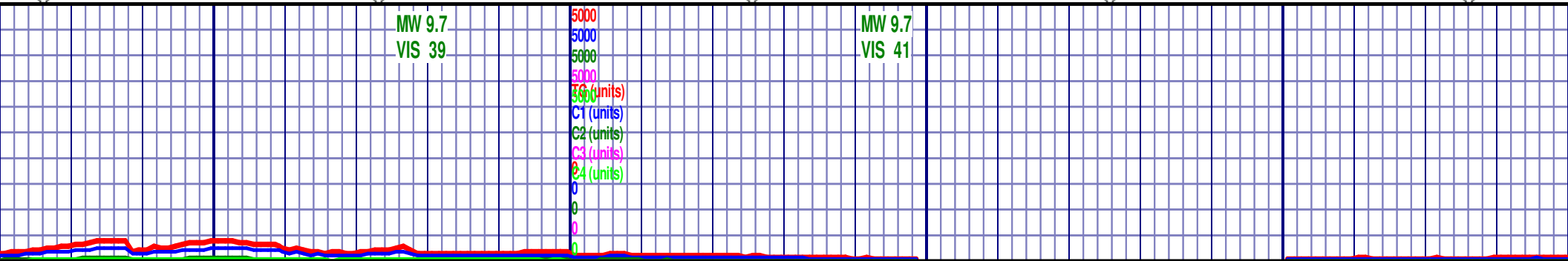
SS:(60%) lt gry - drk grysh brn, l f - f grnd,  
subang - subrndd, mod well srted, sft - mod  
frm, arg, slty, est vis por 8-10%, no dry cut  
flour, sl strmg cut w dull bl/gn resid rng, SH  
(40%) intbd, plty, drk gray

SH(70%): m to dkgr, sbply-sbblky, slty-rthy  
txt, frm, sl calc; SS:(30%) lt gry - drk grysh  
brn, l f - f grnd, subang - subrndd, mod well  
srted, sft - mod frm, arg, slty, est vis por 8-10%,  
no dry cut flour, sl strmg cut w dull bl/gn resid  
rng

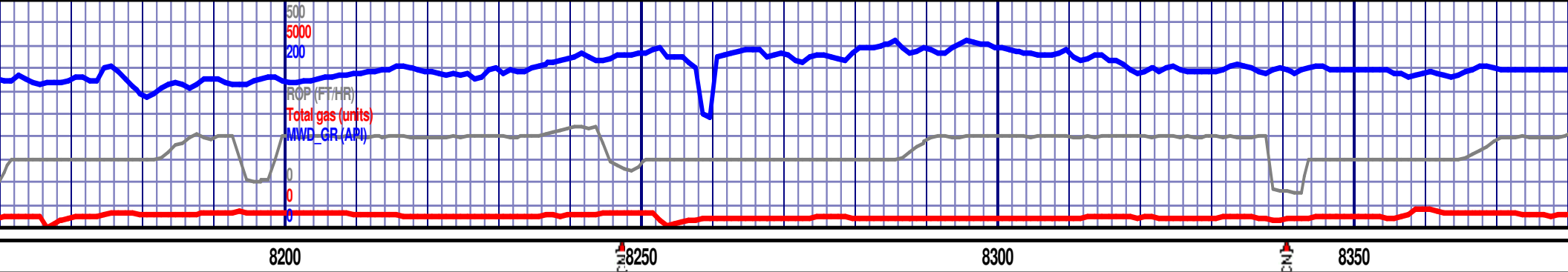
SH(75%): m to dkgr, sbply-sbblky, slty-rthy  
txt, frm, sl calc; SS:(25%) lt gry - drk grysh  
brn, l f - f grnd, subang - subrndd, mod well  
srted, sft - mod frm, arg, slty, est vis por 8-10%,  
no dry cut flour, sl strmg cut w dull bl/gn resid  
rng

MW 9.7  
VIS 39

MW 9.7  
VIS 41

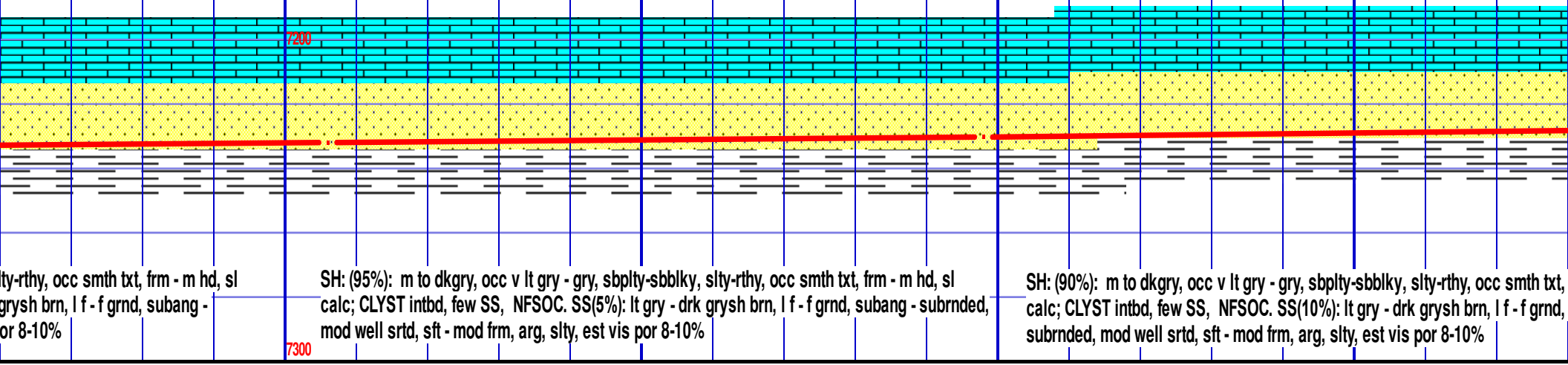
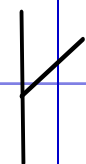






7100 TVE MD 8206 TVD 7232.04  
INC 91.27 AZ 90.41  
VS 1256.73 DL 1.55

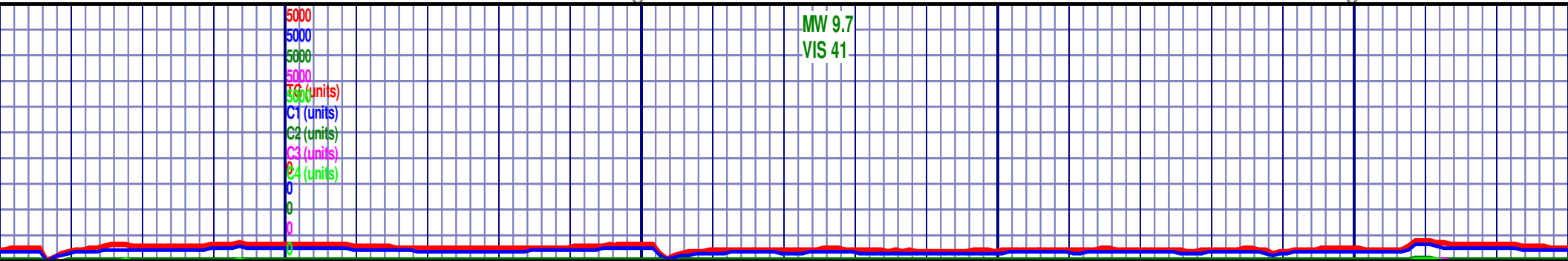
MD 8298 TVD 7230  
INC 91.27 AZ 90.19  
VS 1346.12 DL 0.24



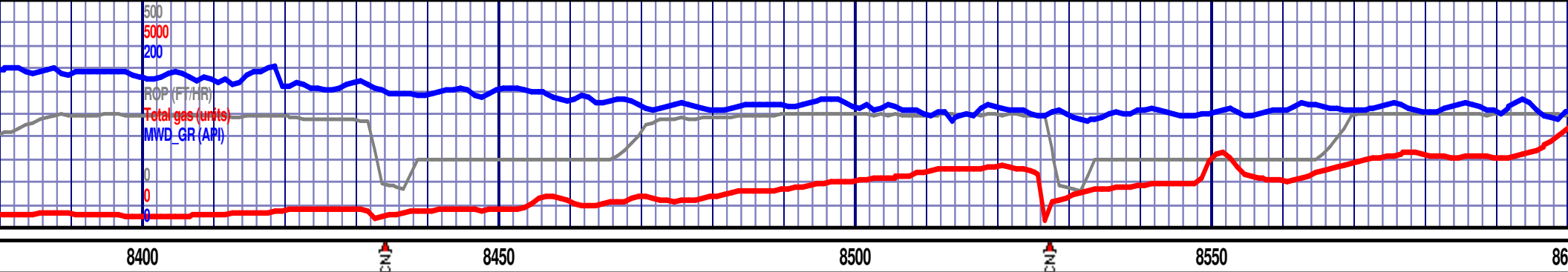
ity-rthy, occ smth txt, frm - m hd, sl  
grysh brn, l f - f grnd, subang -  
or 8-10%

SH: (95%): m to dkgr, occ v lt gry - gry, sbply-sbblky, slty-rthy, occ smth txt, frm - m hd, sl  
calc; CLYST intbd, few SS, NFSOC. SS(5%): lt gry - drk grysh brn, l f - f grnd, subang - subrnded,  
mod well srted, sft - mod frm, arg, slty, est vis por 8-10%

SH: (90%): m to dkgr, occ v lt gry - gry, sbply-sbblky, slty-rthy, occ smth txt,  
calc; CLYST intbd, few SS, NFSOC. SS(10%): lt gry - drk grysh brn, l f - f grnd,  
subrnded, mod well srted, sft - mod frm, arg, slty, est vis por 8-10%



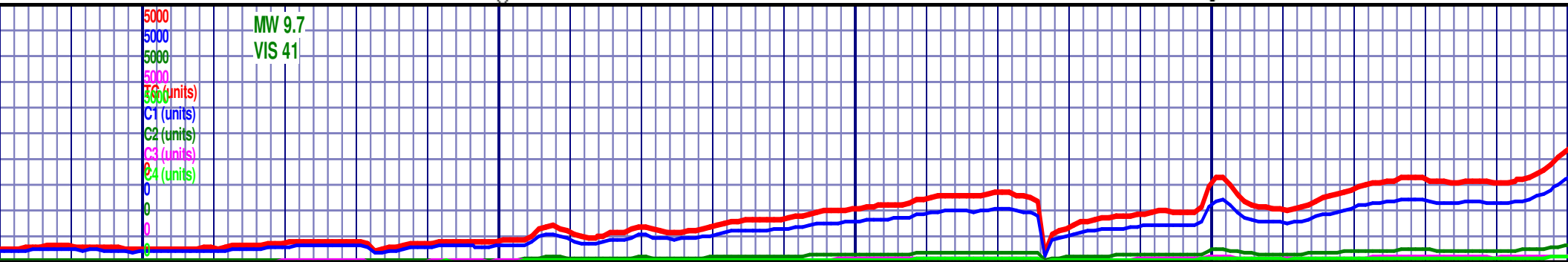
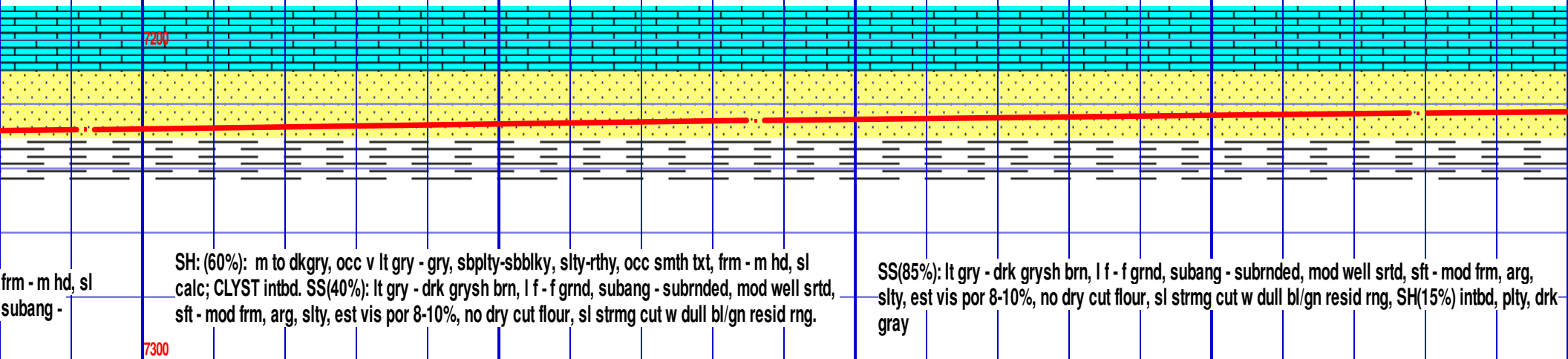
MW 9.7  
VIS 41

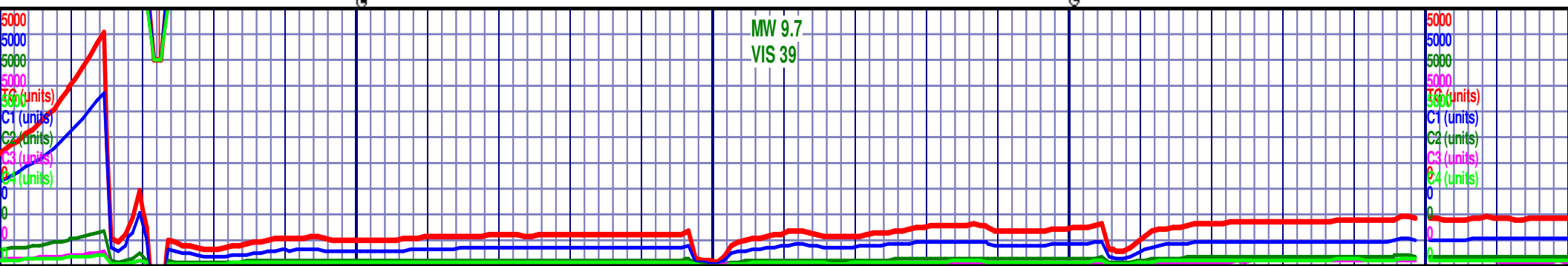
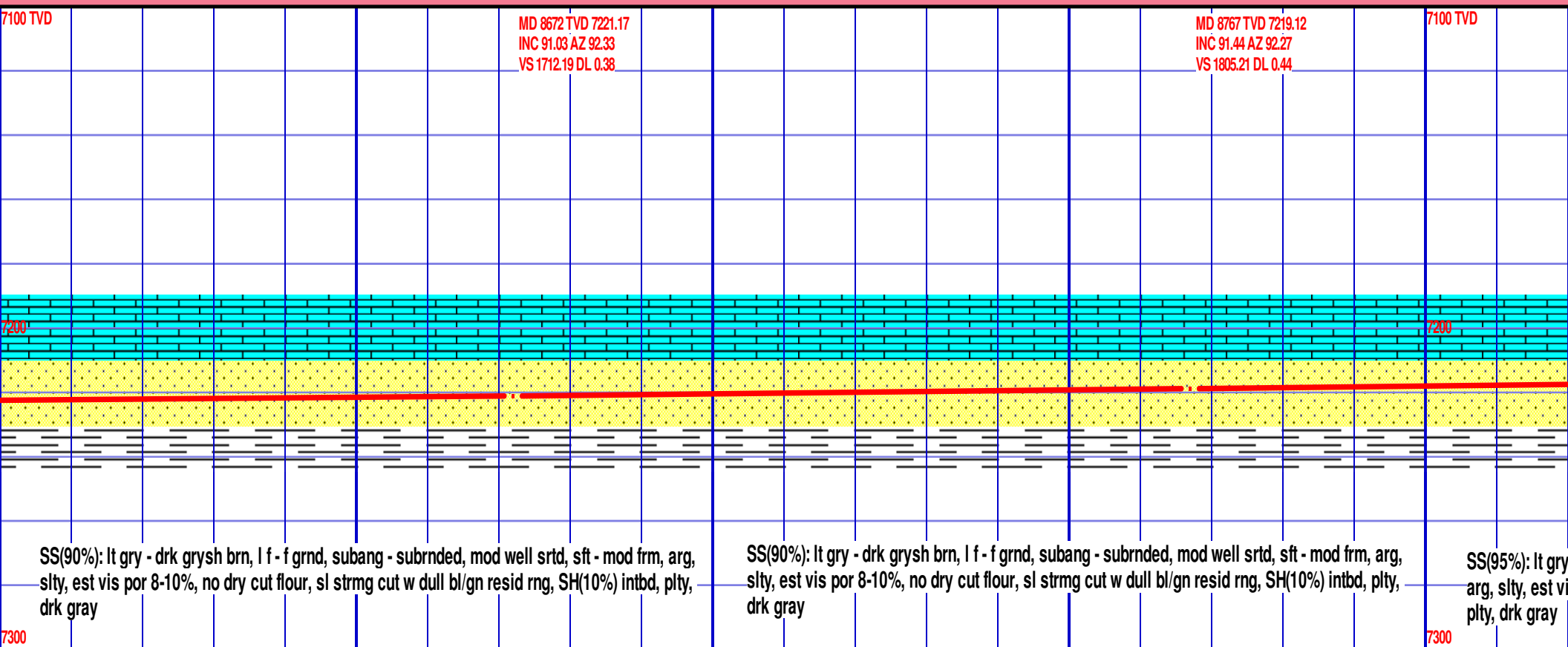


MD 8392 TVD 7227.78  
INC 91.44 AZ 92.43  
VS 1437.81 DL 2.39

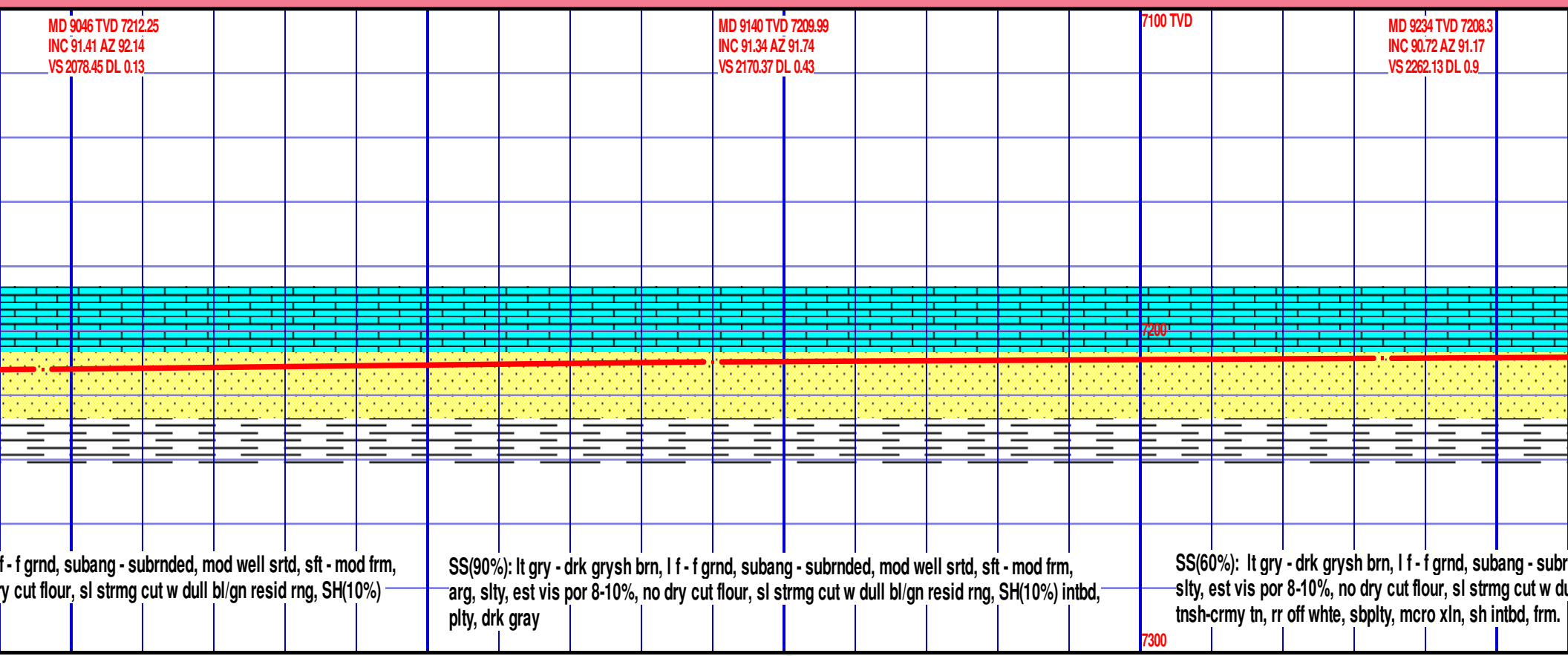
MD 8486 TVD 7225.36  
INC 91.51 AZ 92.63  
VS 1529.92 DL 0.23

MD 8579 TVD 7223.07  
INC 91.31 AZ 92.54  
VS 1621.07 DL 0.24



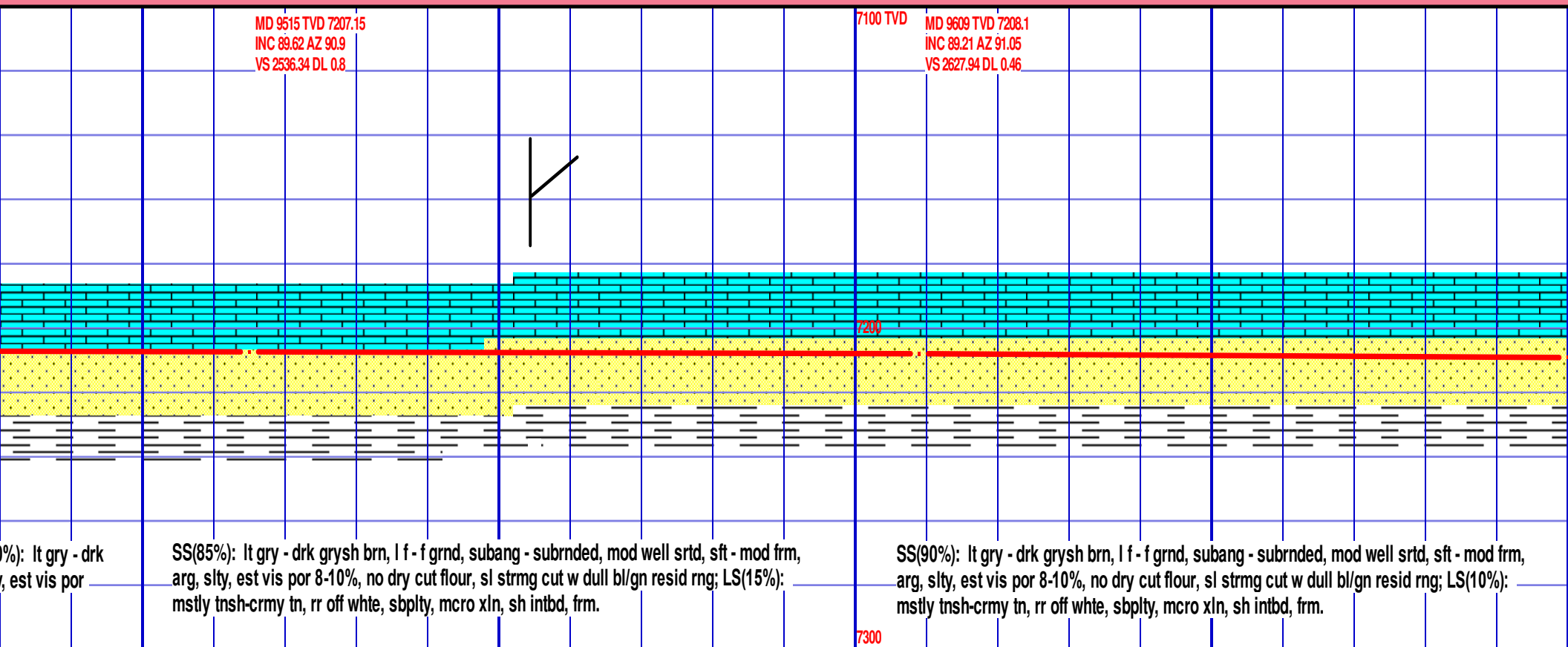


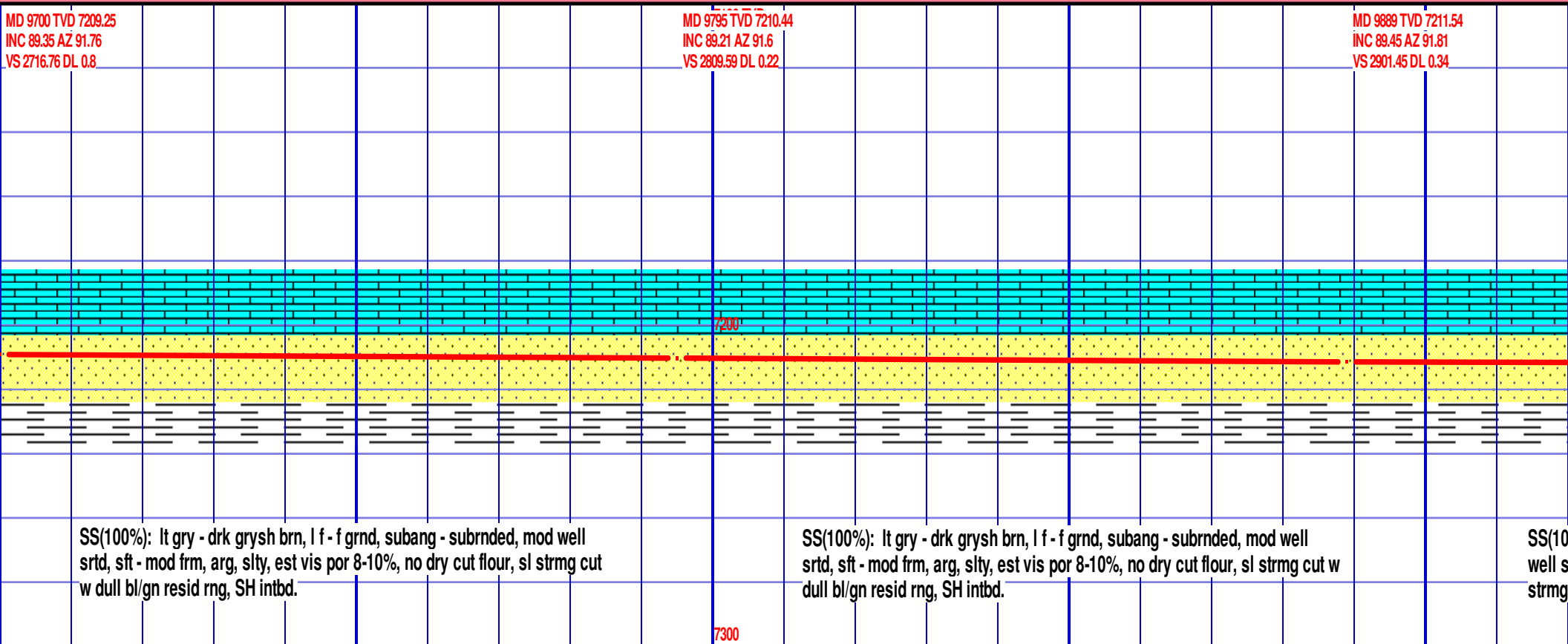


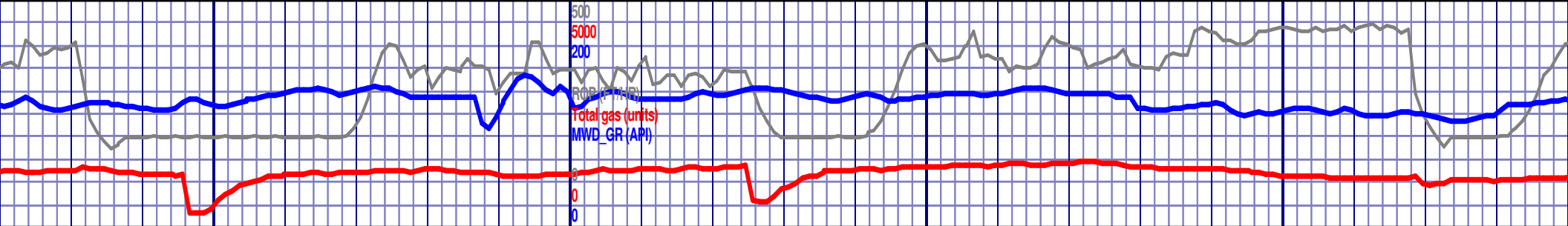








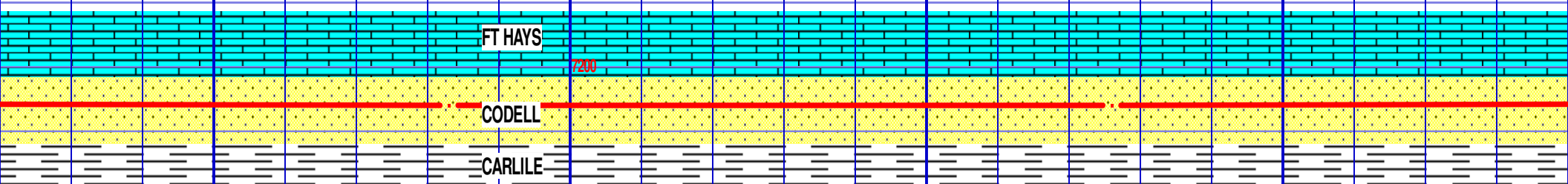




MD 9983 TVD 7212.03  
INC 89.96 AZ 91.38  
VS 2993.27 DL 0.71

7100 TVD

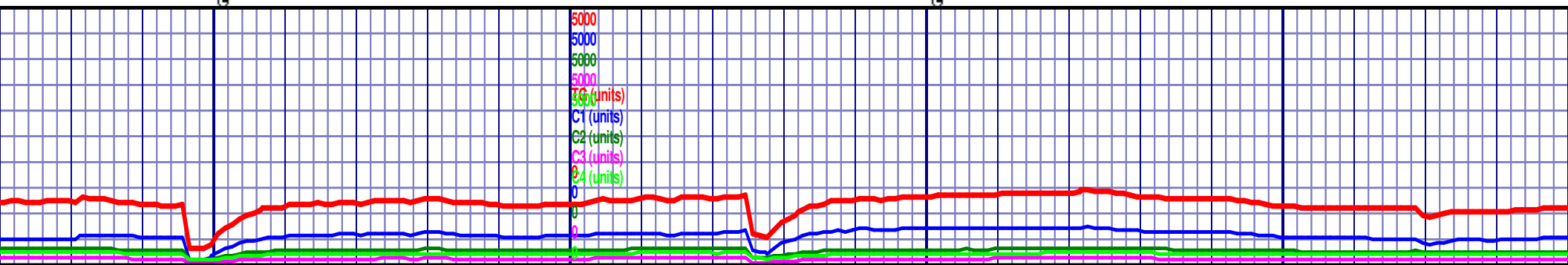
MD 10076 TVD 7211.92  
INC 90.17 AZ 89.77  
VS 3083.75 DL 1.75

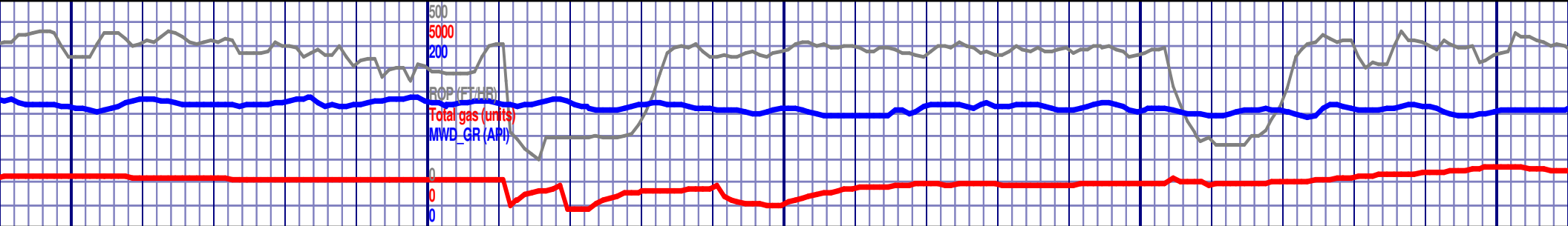


0%): lt gry - drk grysh brn, l f - f grnd, subang - subrnded, mod  
rtd, sft - mod frm, arg, slty, est vis por 8-10%, no dry cut flour, sl  
cut w dull bl/gn resid rng, SH intbd.

SS(100%): lt gry - drk grysh brn, l f - f grnd, subang - subrnded, mod well srtd, sft  
- mod frm, arg, slty, est vis por 8-10%, no dry cut flour, sl strmg cut w dull bl/gn  
resid rng, SH intbd.

SS: lt gry - drk grysh brn, l f -  
frm, arg, slty, est vis por 8-10  
rng, SH intbd.





10150

10200

10250

10300

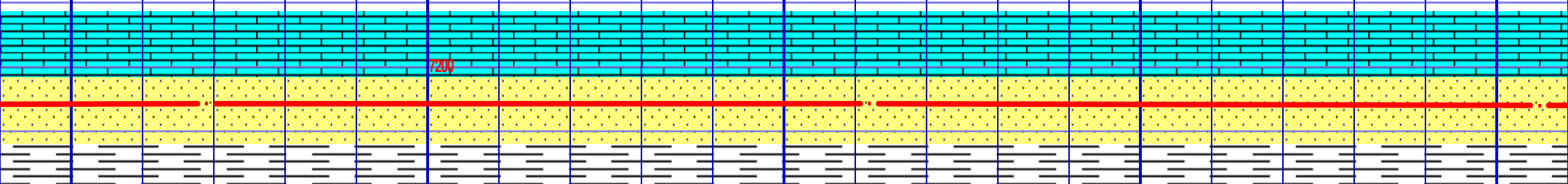
10350

MD 10169 TVD 7211.67  
INC 90.14 AZ 89.38  
VS 3173.84 DL 0.43

7100 TVD

MD 10262 TVD 7211.64  
INC 89.9 AZ 89.68  
VS 3263.91 DL 0.42

MD  
INC  
VS 3

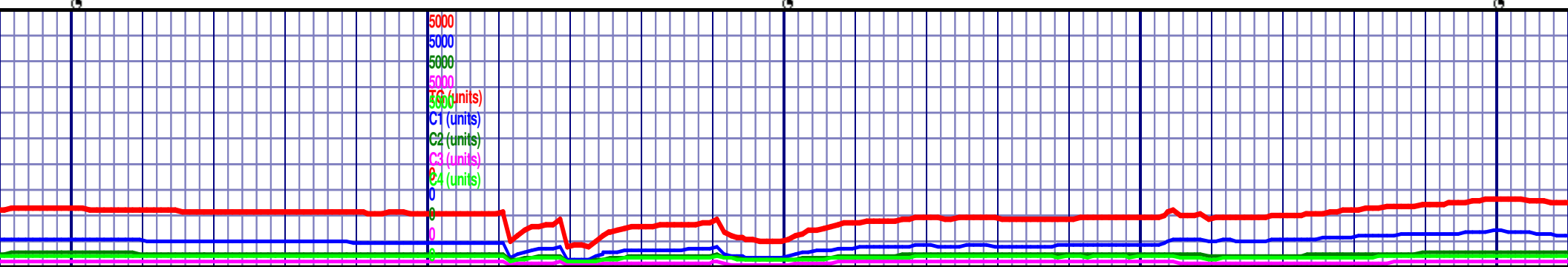


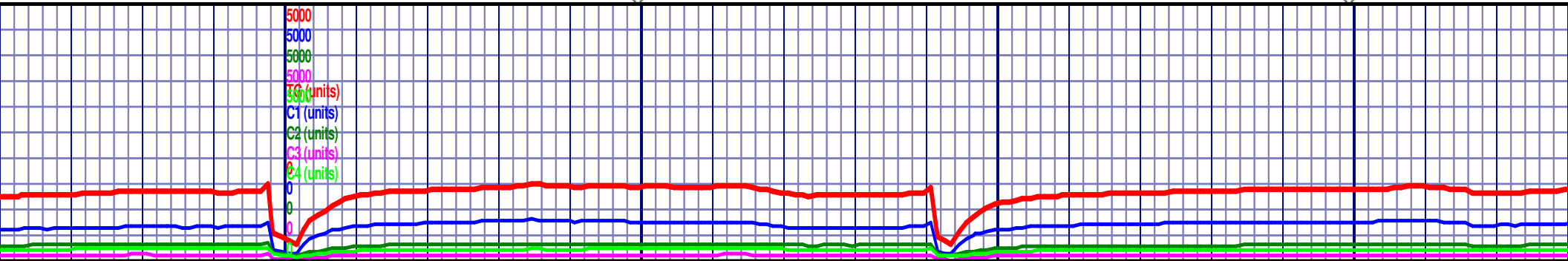
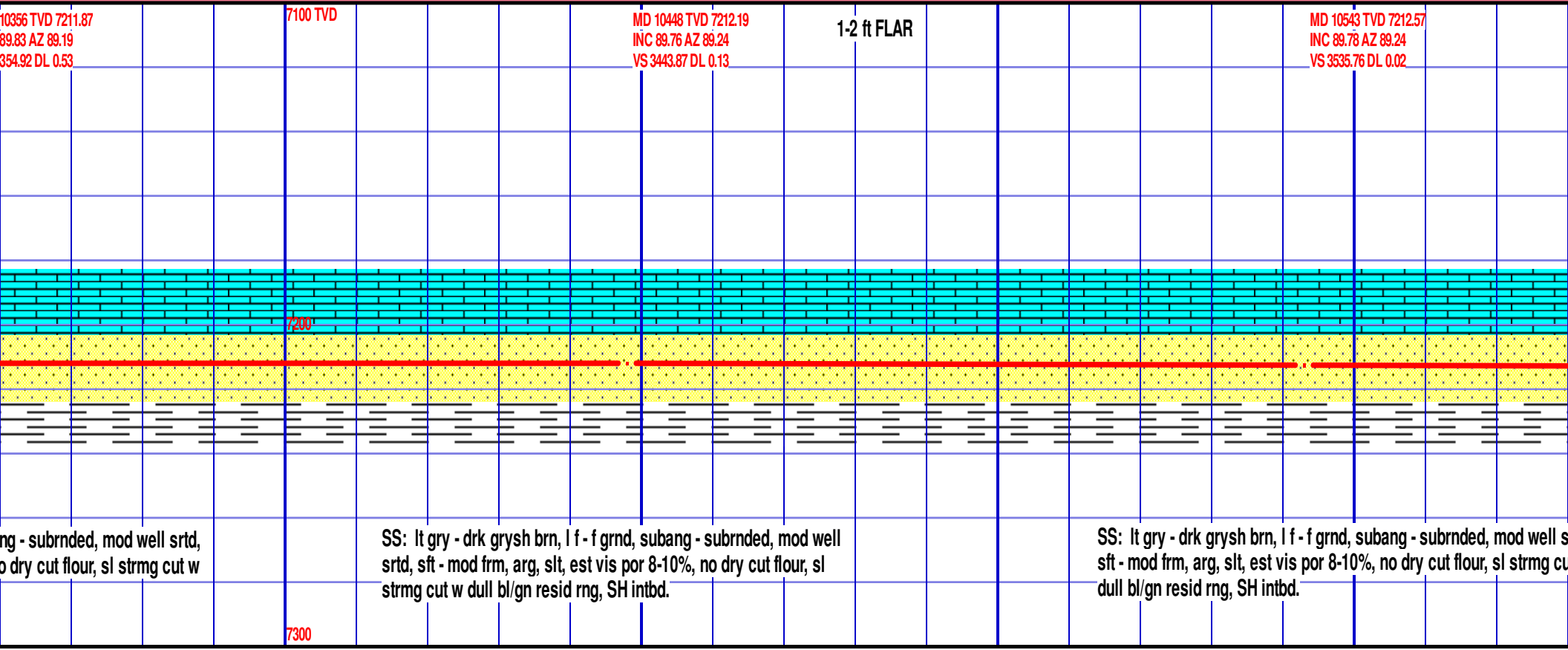
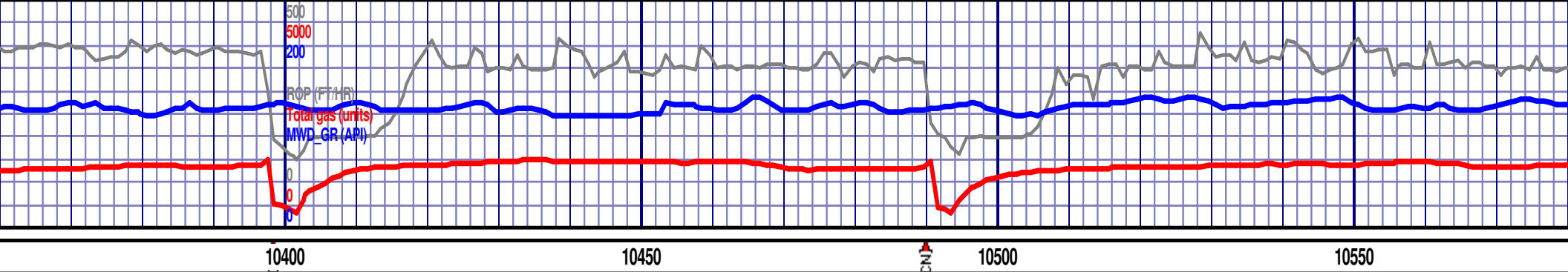
f grnd, subang - subrnded, mod well srted, sft - mod  
%, no dry cut flour, sl strmg cut w dull bl/gn resid

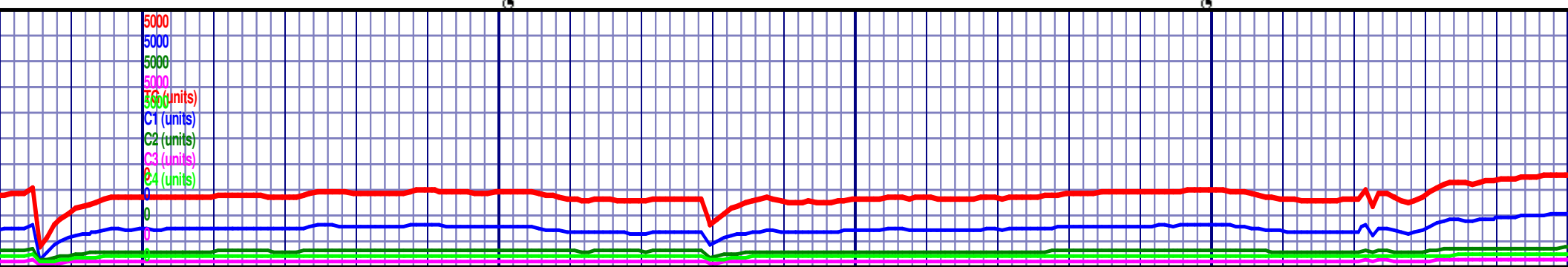
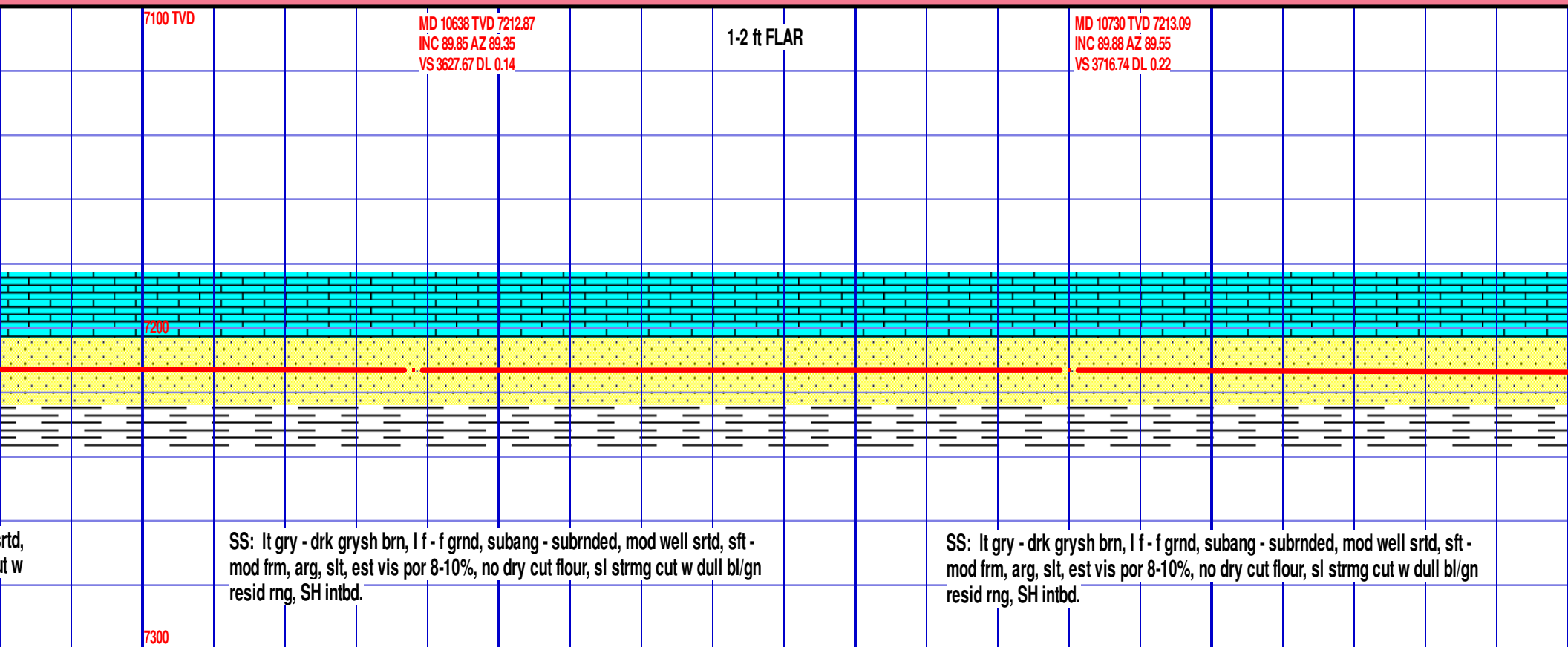
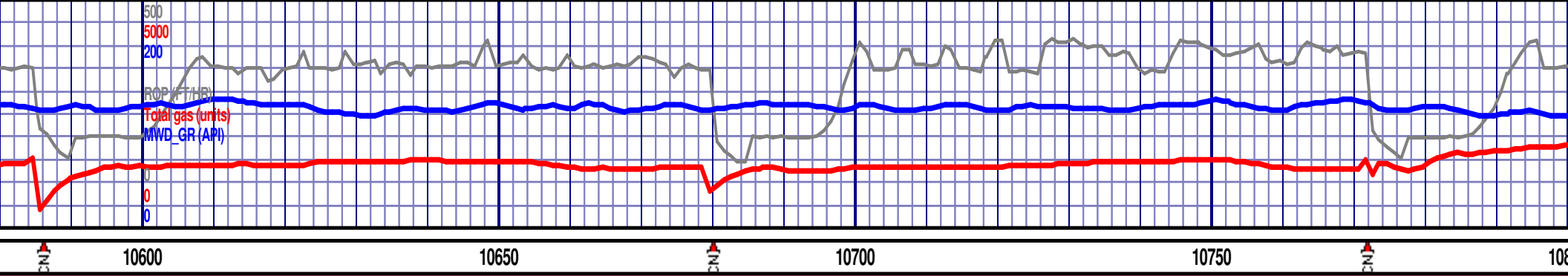
SS: lt gry - drk grysh brn, l f - f grnd, subang - subrnded, mod well srted, sft -  
mod frm, arg, slt, est vis por 8-10%, no dry cut flour, sl strmg cut w dull  
bl/gn resid rng, SH intbd.

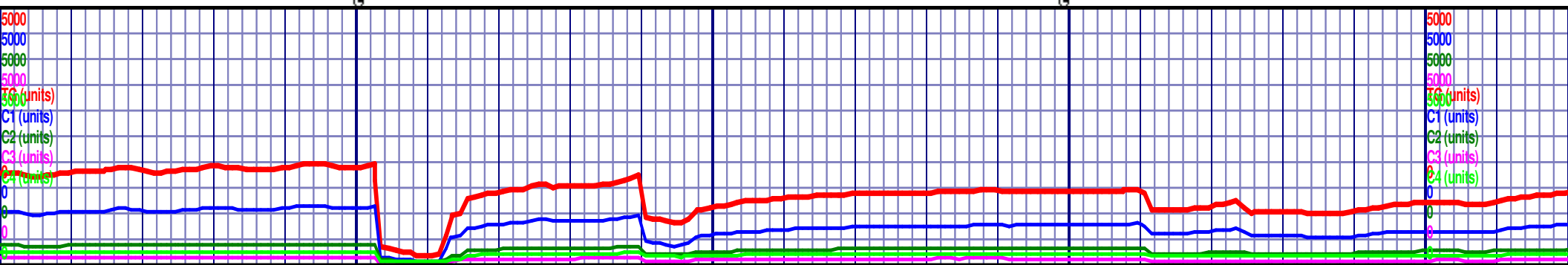
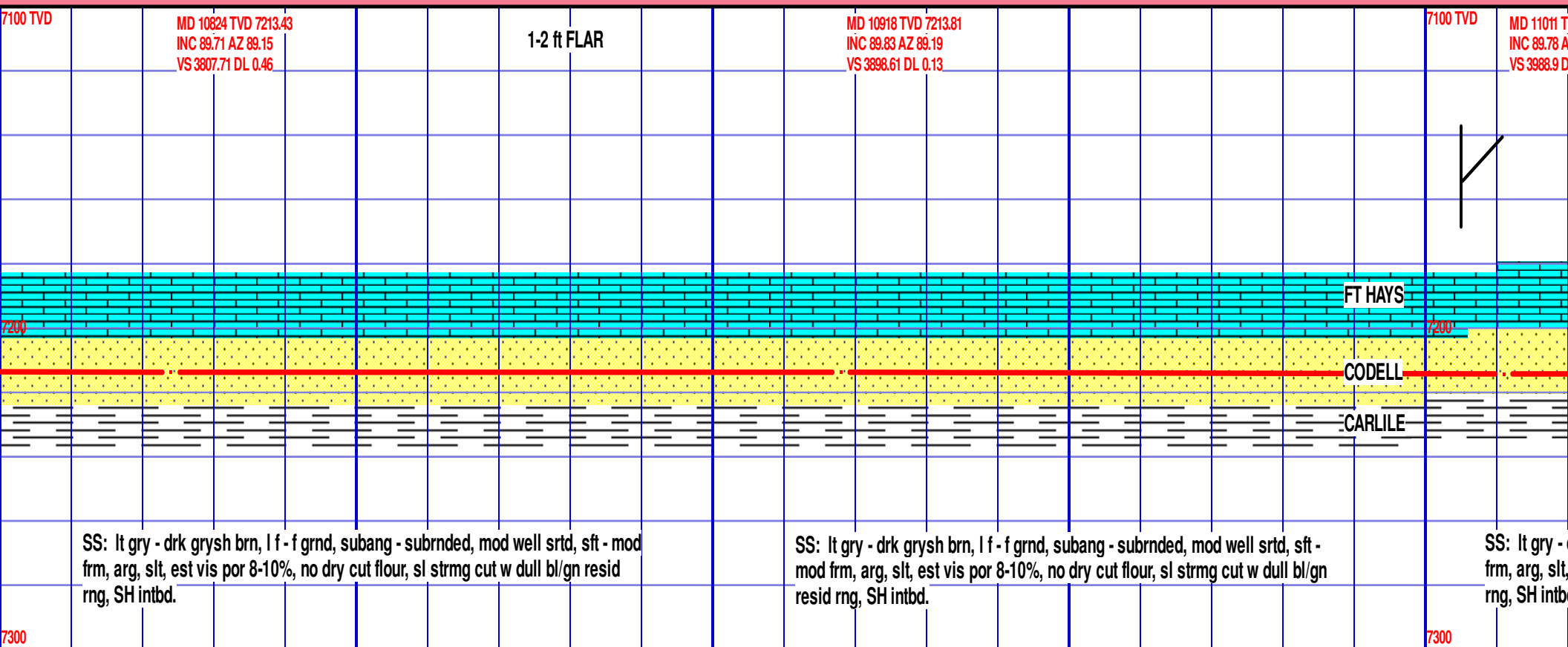
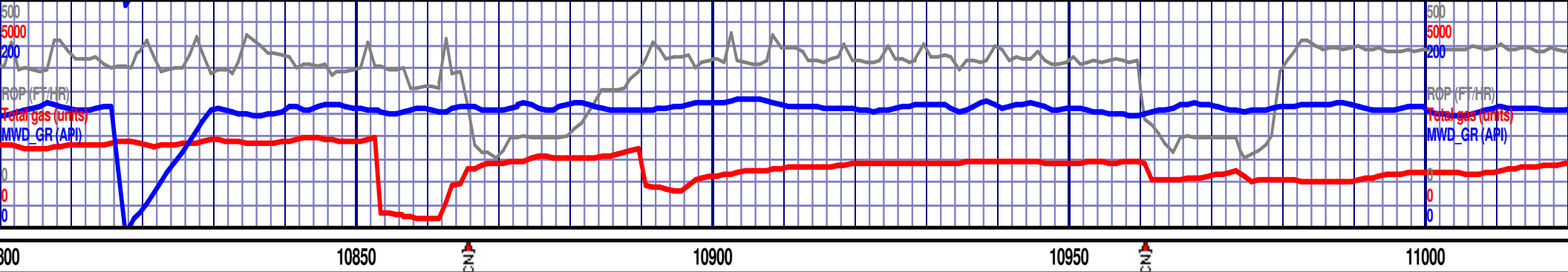
SS: lt gry - drk grysh brn, l f - f grnd, subang - subrnded, mod well srted, sft - mod frm, arg, slt, est vis por 8-10%, no  
dull bl/gn resid rng, SH intbd.

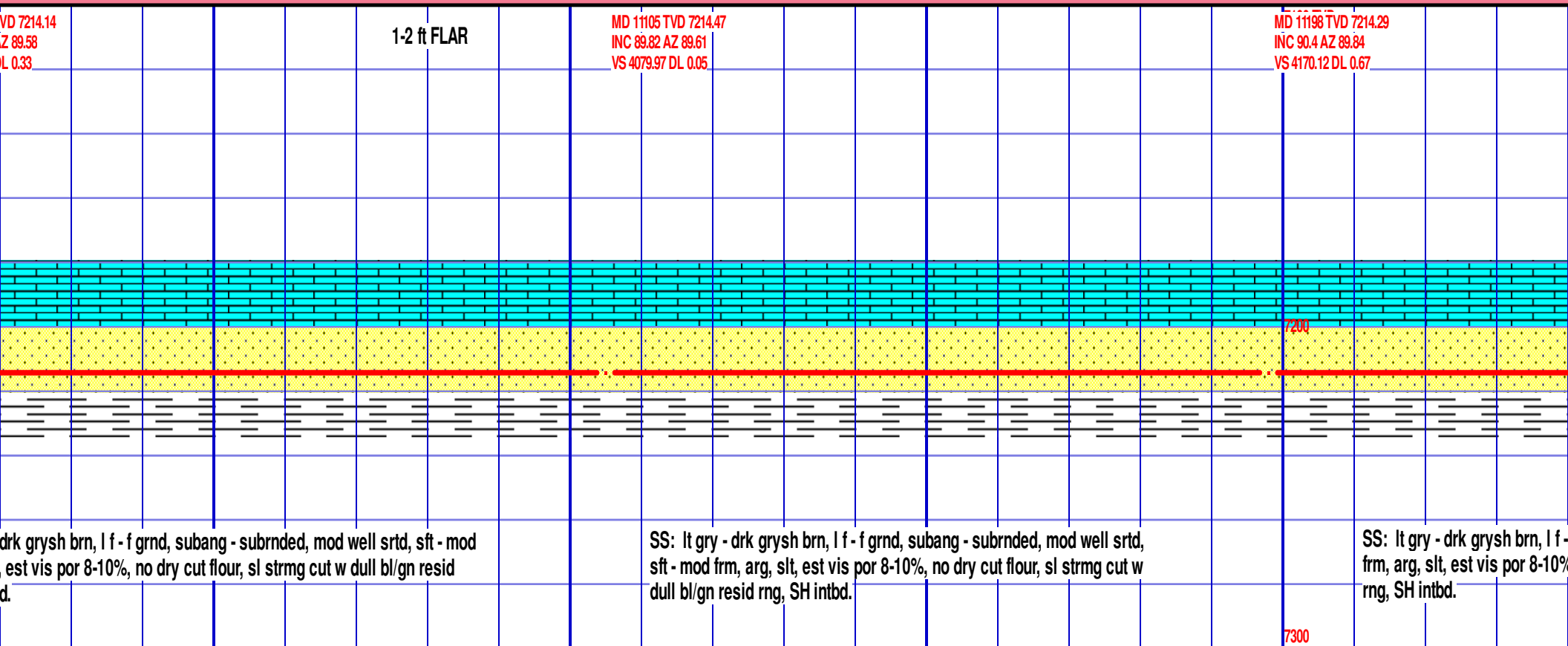
7300



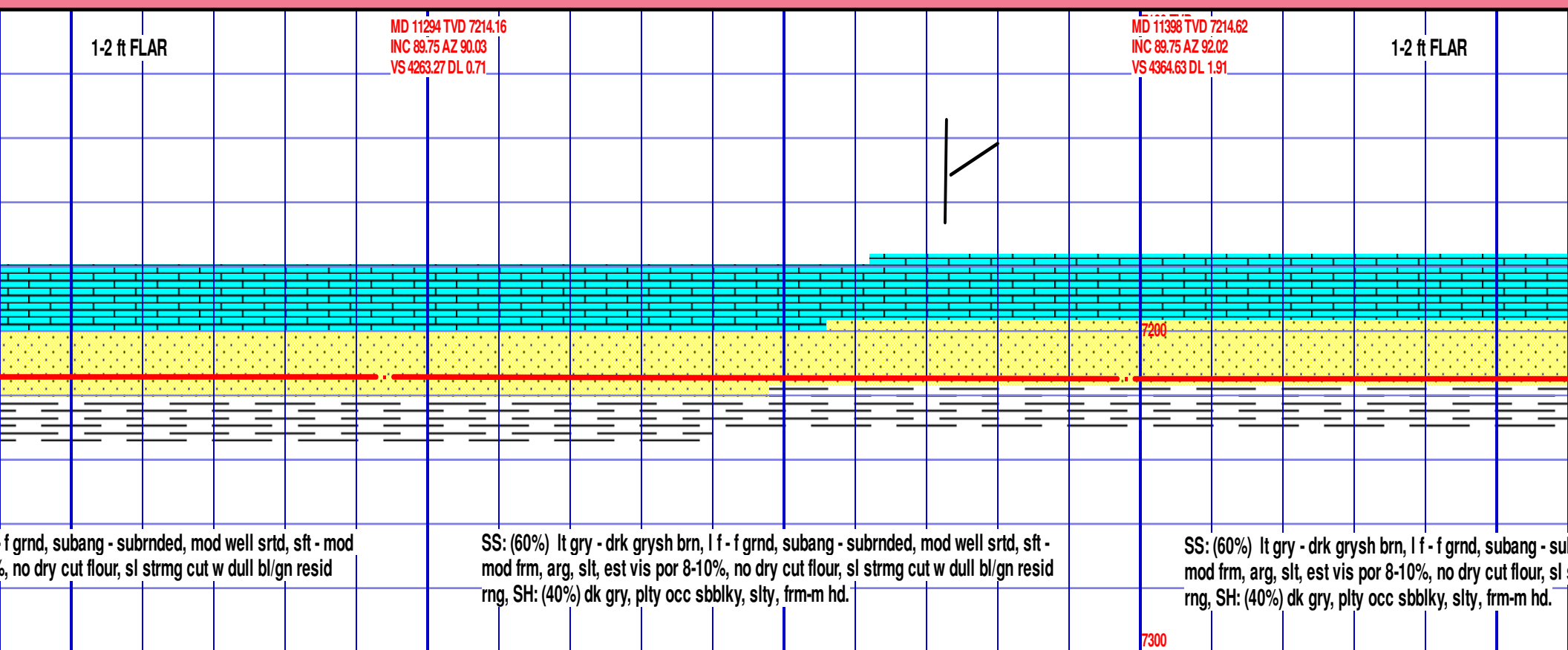


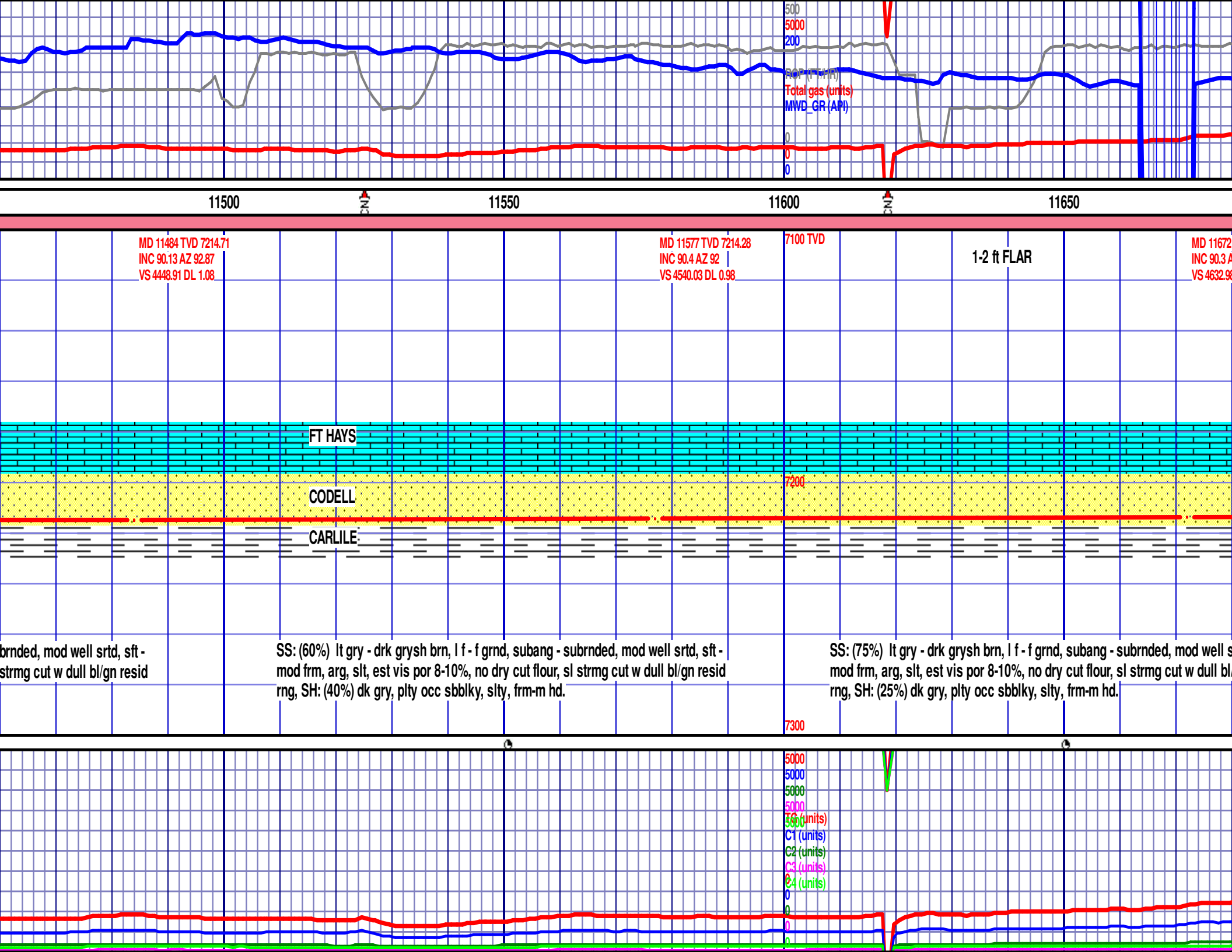


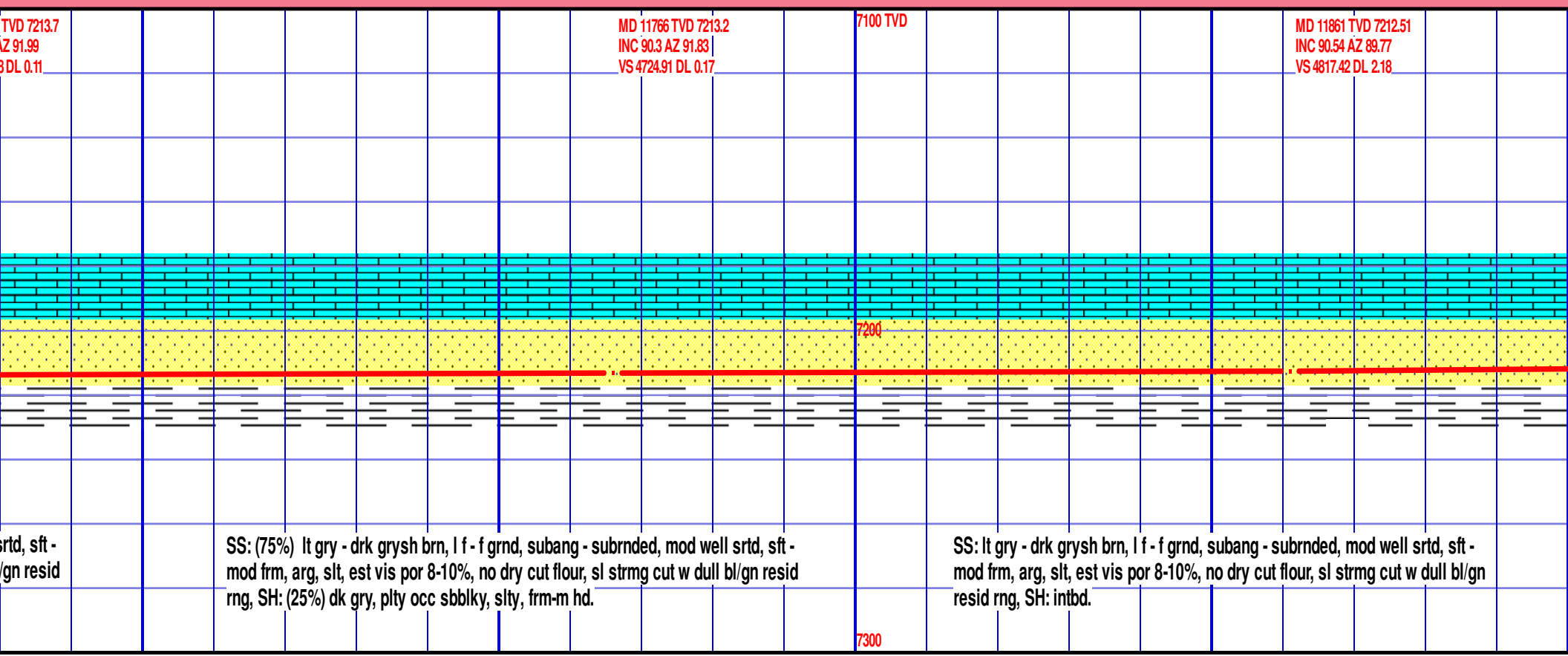


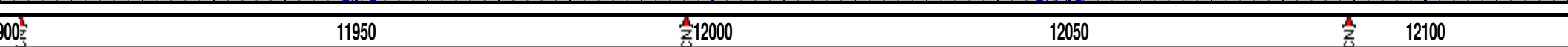
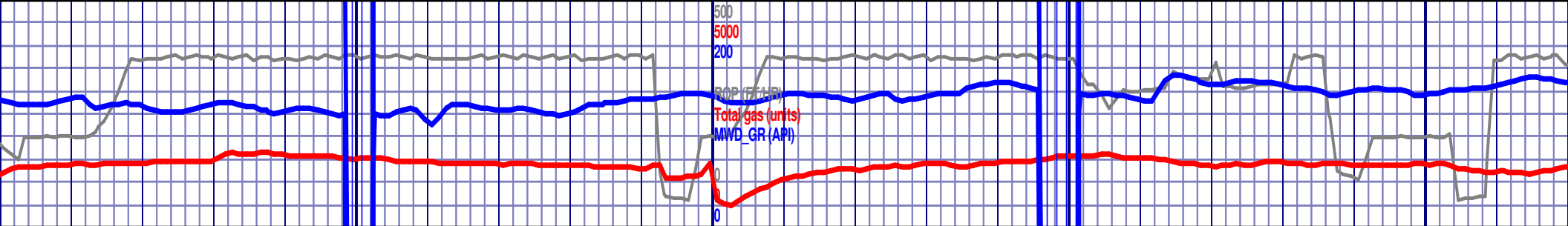








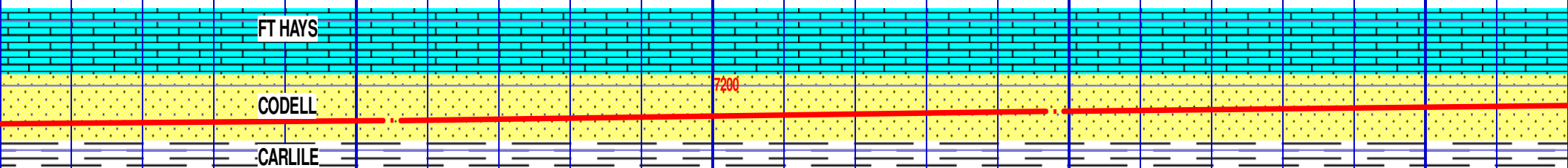




MD 11955 TVD 7210.8  
INC 91.54 AZ 89.76  
VS 4908.54 DL 1.06

7100 TVD

MD 12048 TVD 7208.28  
INC 91.57 AZ 89.79  
VS 4998.68 DL 0.05



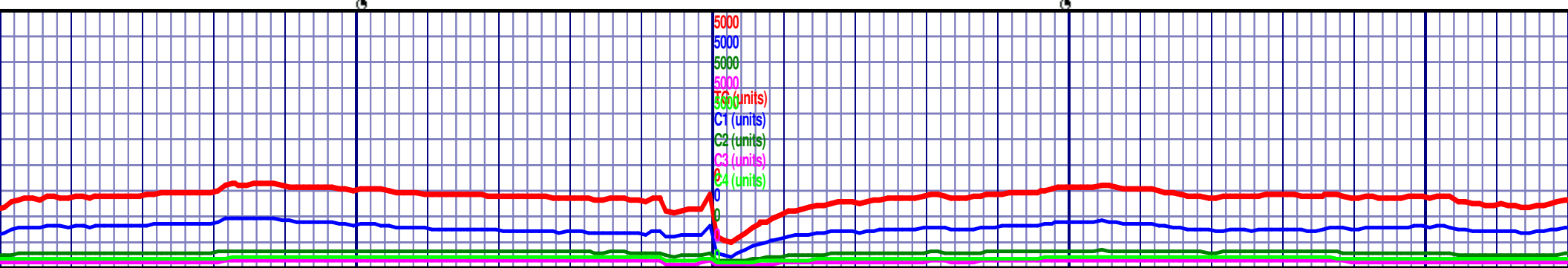
7200

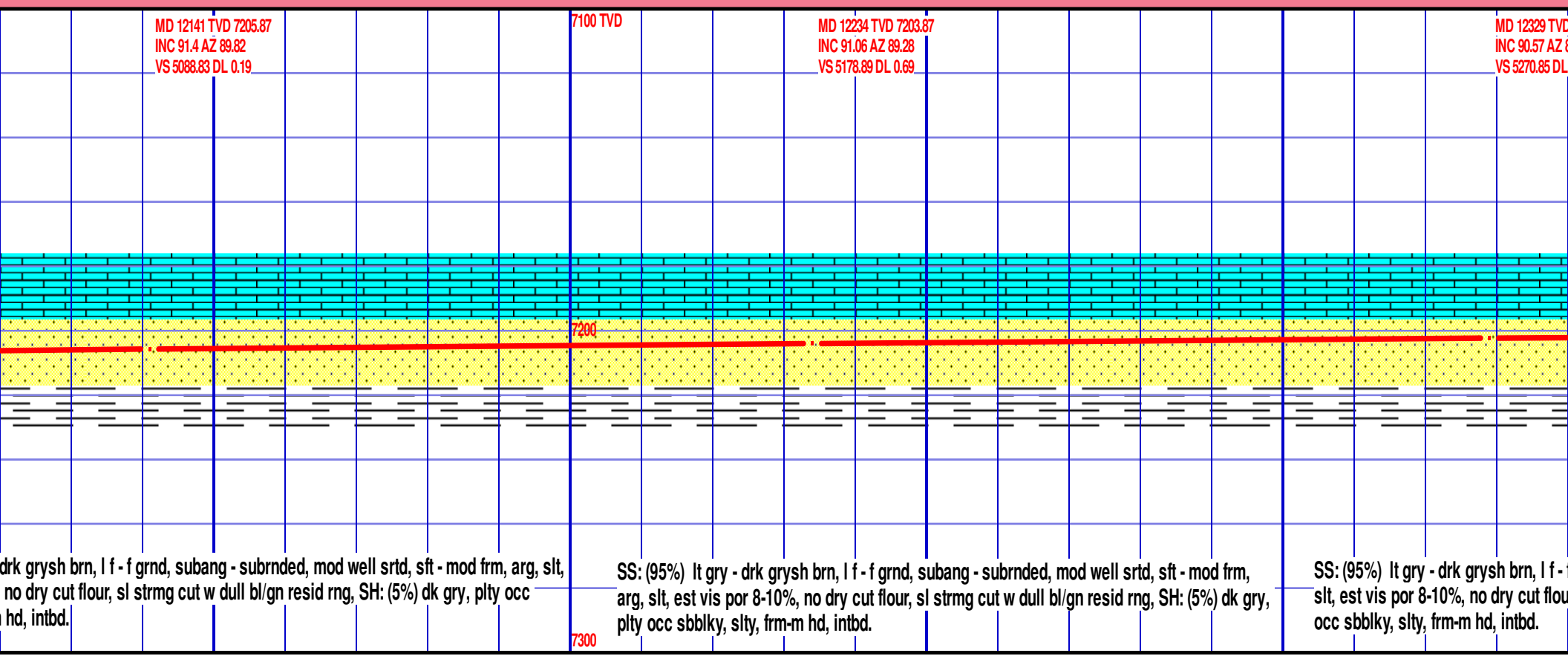
7300

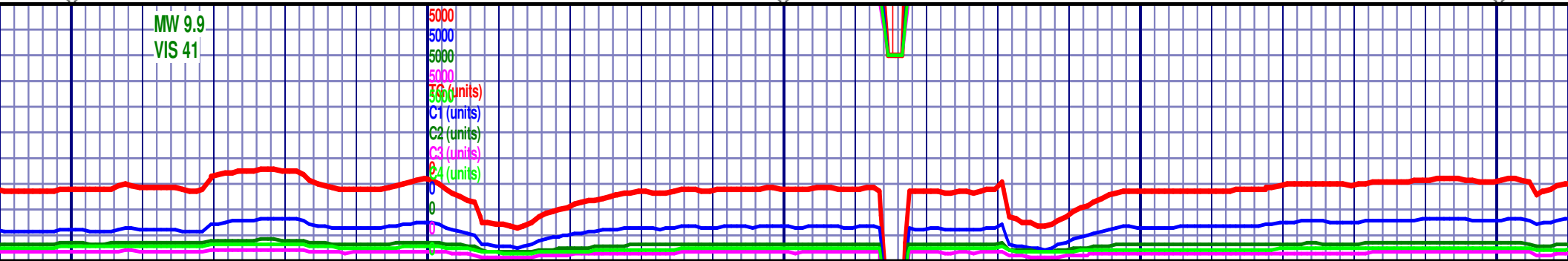
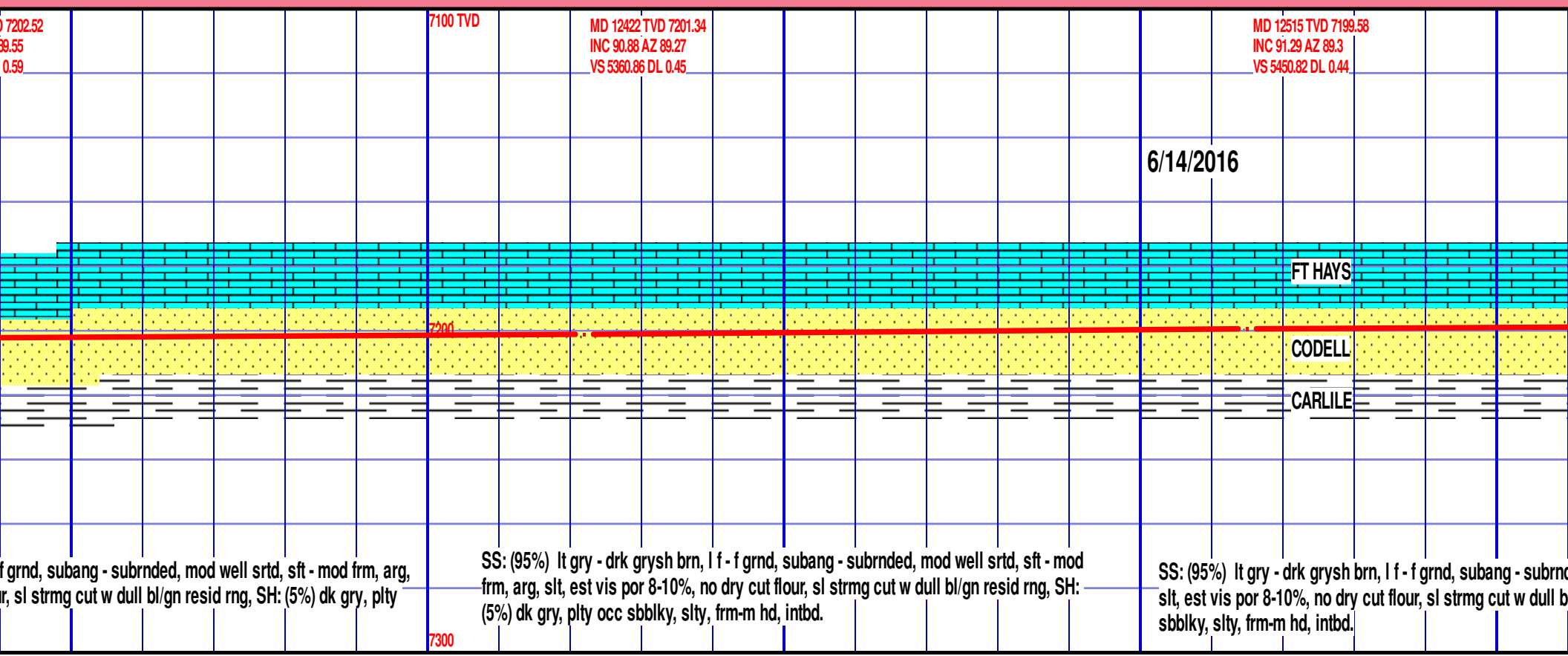
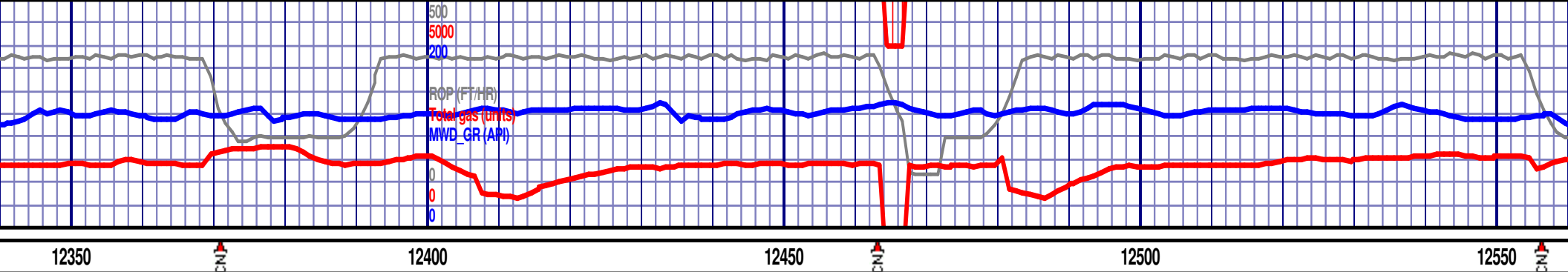
SS: (95%) lt gry - drk grysh brn, l f - f grnd, subang - subrnd, mod well srted, sft - mod frm, arg, slt, est vis por 8-10%, no dry cut flour, sl strmg cut w dull bl/gn resid rng, SH: (5%) dk gry, plty occ sbblky, slty, frm-m hd, intbd.

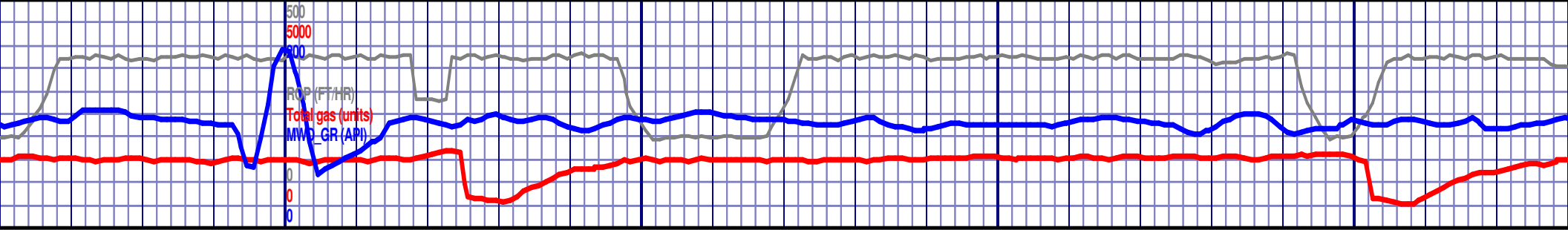
SS: (95%) lt gry - drk grysh brn, l f - f grnd, subang - subrnd, mod well srted, sft - mod frm, arg, slt, est vis por 8-10%, no dry cut flour, sl strmg cut w dull bl/gn resid rng, SH: (5%) dk gry, plty occ sbblky, slty, frm-m hd, intbd.

SS: (95%) lt gry - drk grysh brn, l f - f grnd, subang - subrnd, mod well srted, sft - mod frm, arg, slt, est vis por 8-10%, no dry cut flour, sl strmg cut w dull bl/gn resid rng, SH: (5%) dk gry, plty occ sbblky, slty, frm-m hd, intbd.









12600

12650

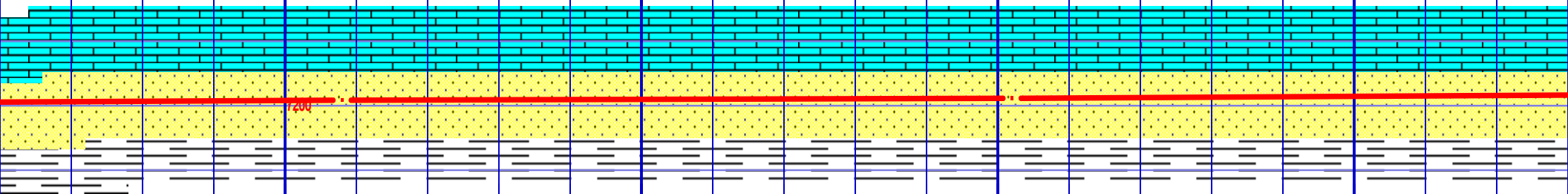
12700

▲

12750

7100 TVD MD 12608 TVD 7198.44  
INC 90.12 AZ 88.73  
VS 5540.68 DL 1.4

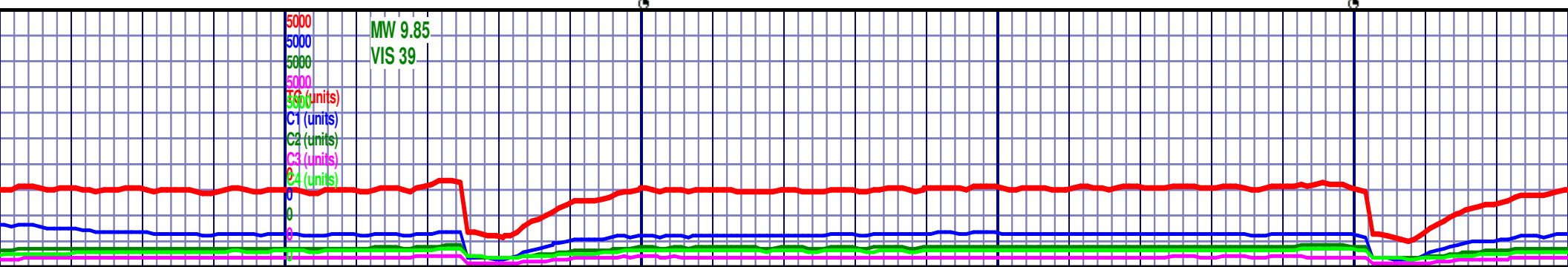
MD 12702 TVD 7197.78  
INC 90.68 AZ 89.03  
VS 5631.44 DL 0.68



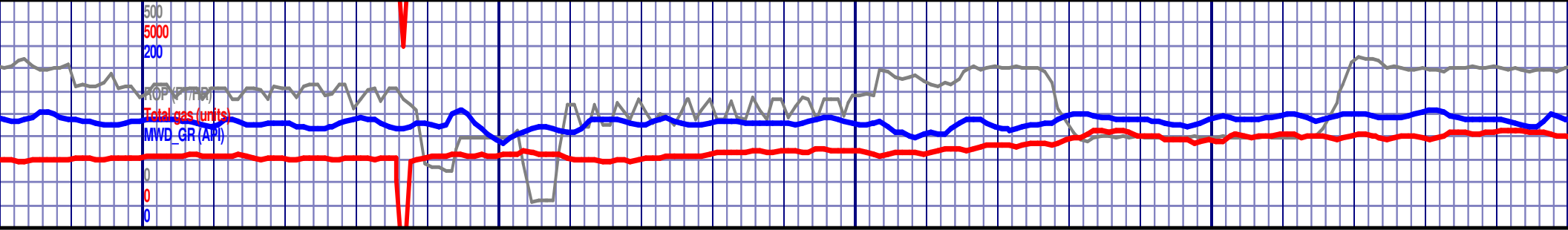
ded, mod well srtd, sft - mod frm, arg,  
l/gn resid rng, SH: (5%) dk gry, plty occ

SS: (95%) lt gry - drk grysh brn, l f - f grnd, subang - subrnded, mod well srtd, sft - mod frm, arg,  
slt, est vis por 8-10%, no dry cut flour, sl strmg cut w dull bl/gn resid rng, SH: (5%) dk gry, plty occ  
sbbkly, slty, frm-m hd, intbd.

SS: (95%) lt gry - drk grysh brn, l f - f grnd, subang - subrnded, mod well srtd, sft - mod frm, arg,  
slt, est vis por 8-10%, no dry cut flour, sl strmg cut w dull bl/gn resid rng, SH: (5%) dk gry, plty occ  
sbbkly, slty, frm-m hd, intbd.



MW 9.85  
VIS 39

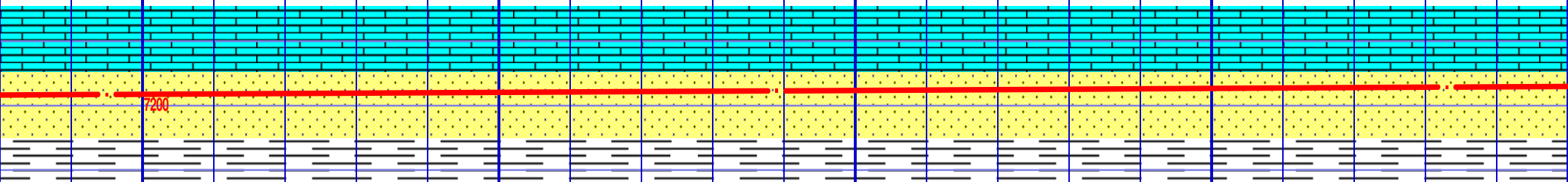


12800 12850 12900 12950 13000

MD 12795 TVD 7196.65  
INC 90.71 AZ 89.48  
VS 5721.4 DL 0.48

MD 12889 TVD 7195.35  
INC 90.88 AZ 89.51  
VS 5812.42 DL 0.18

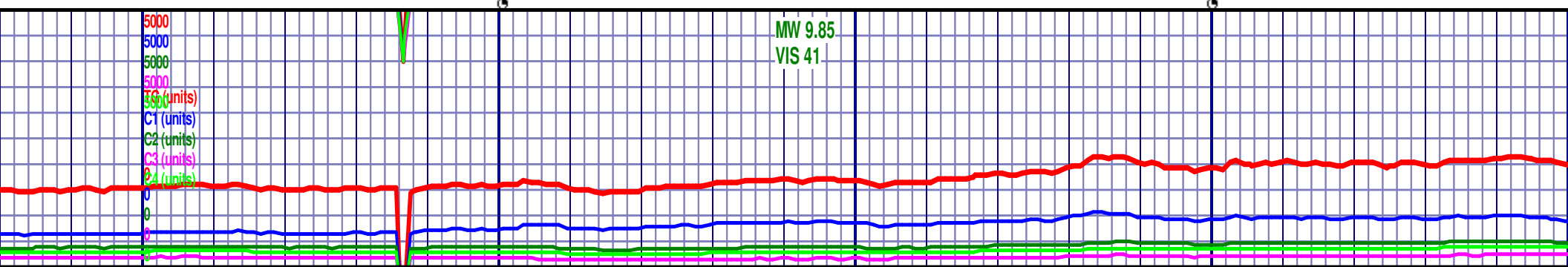
MD 12983 TVD 7194.04  
INC 90.71 AZ 89.23  
VS 5903.39 DL 0.35



lt - mod frm, arg, slt,  
dk gry, pty occ

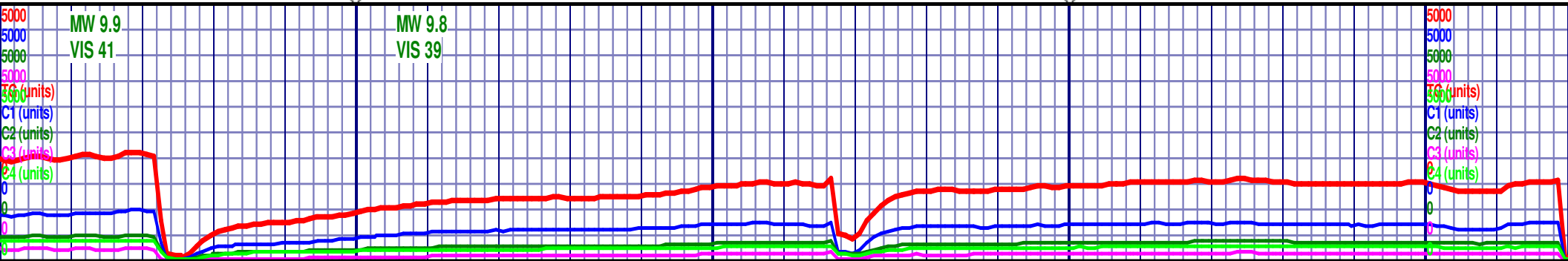
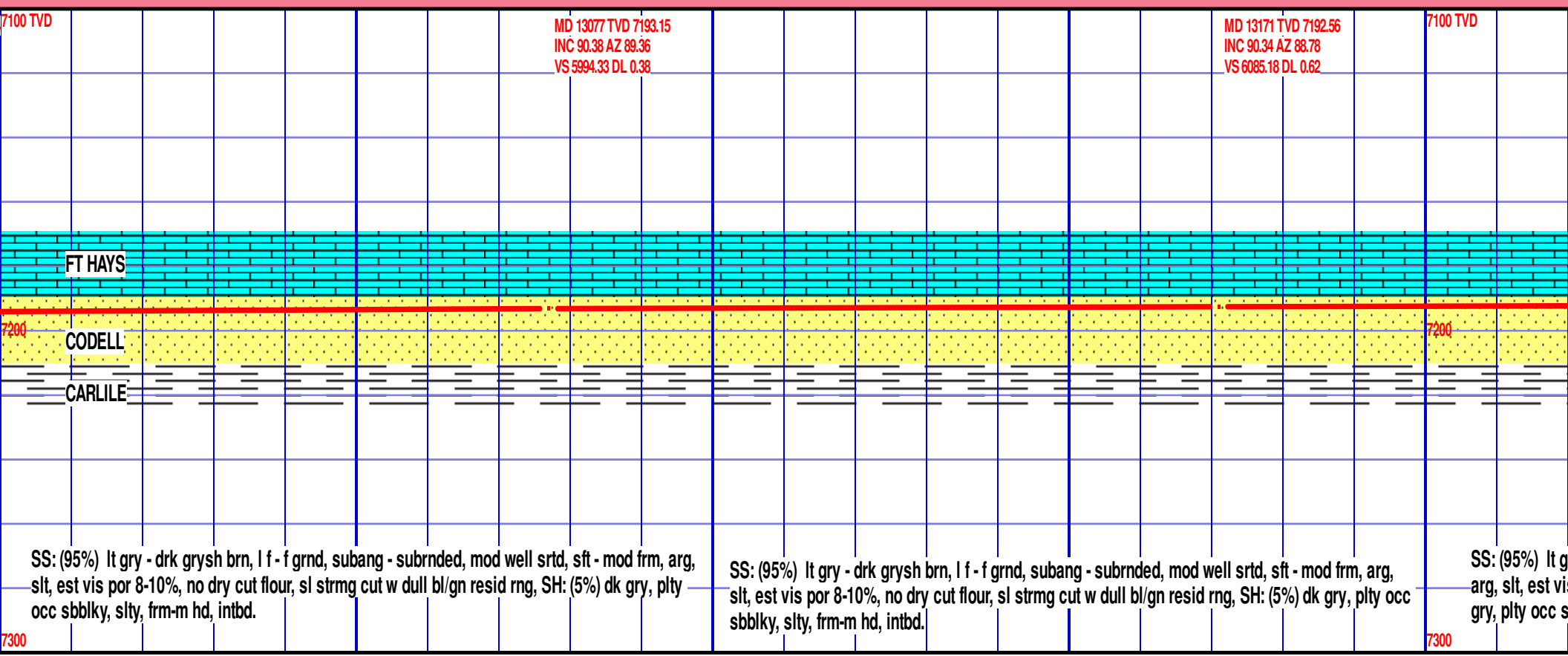
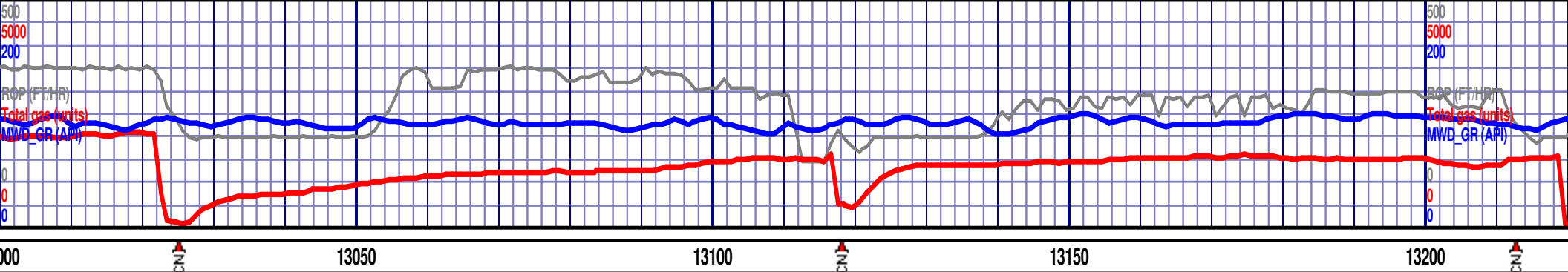
SS: (95%) lt gry - drk grysh brn, l f - f grnd, subang - subrndd, mod well srted, sft - mod frm, arg,  
slt, est vis por 8-10%, no dry cut flour, sl strmg cut w dull bl/gn resid rng, SH: (5%) dk gry, pty  
occ sbblky, slty, frm-m hd, intbd.

SS: (95%) lt gry - drk grysh brn, l f - f grnd, subang - subrndd, mod well srted, sft - mod frm,  
arg, slt, est vis por 8-10%, no dry cut flour, sl strmg cut w dull bl/gn resid rng, SH: (5%) dk  
gry, pty occ sbblky, slty, frm-m hd, intbd.



MW 9.85  
VIS 41







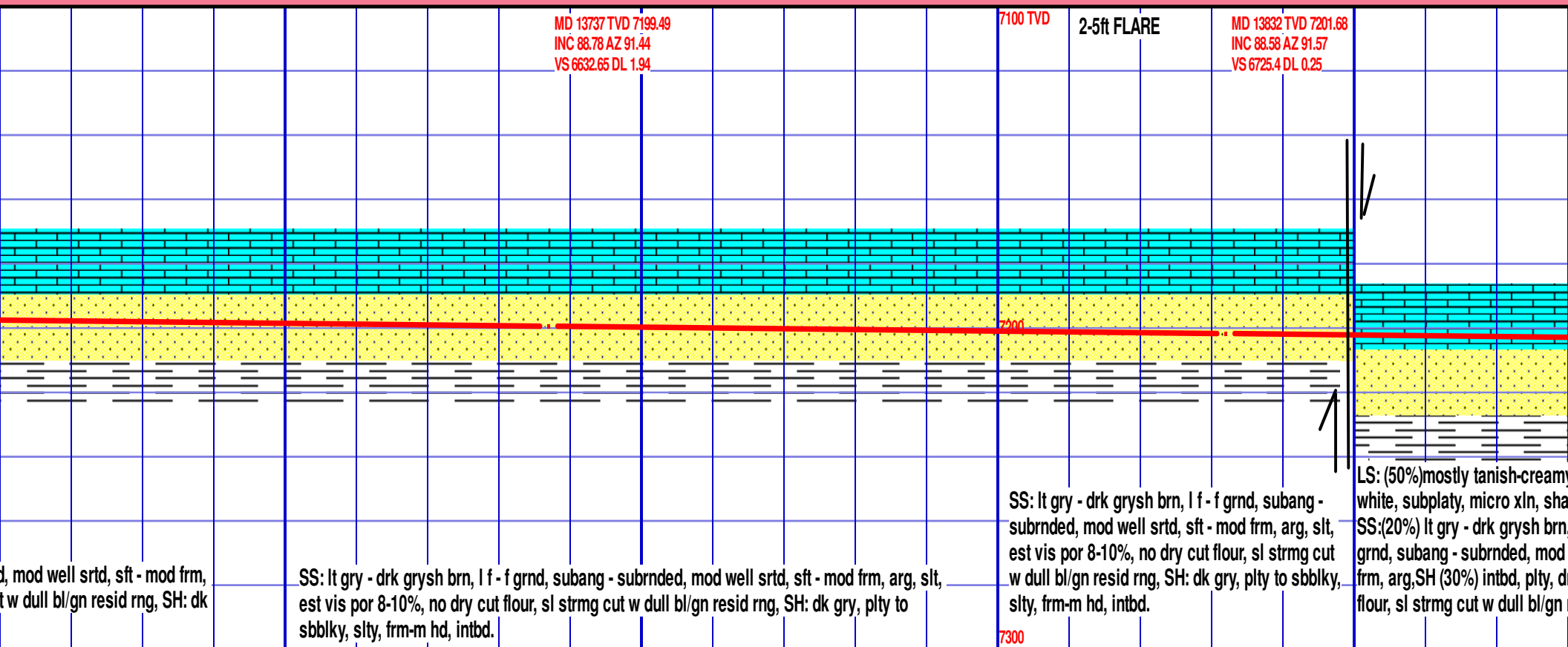
7100 TVD

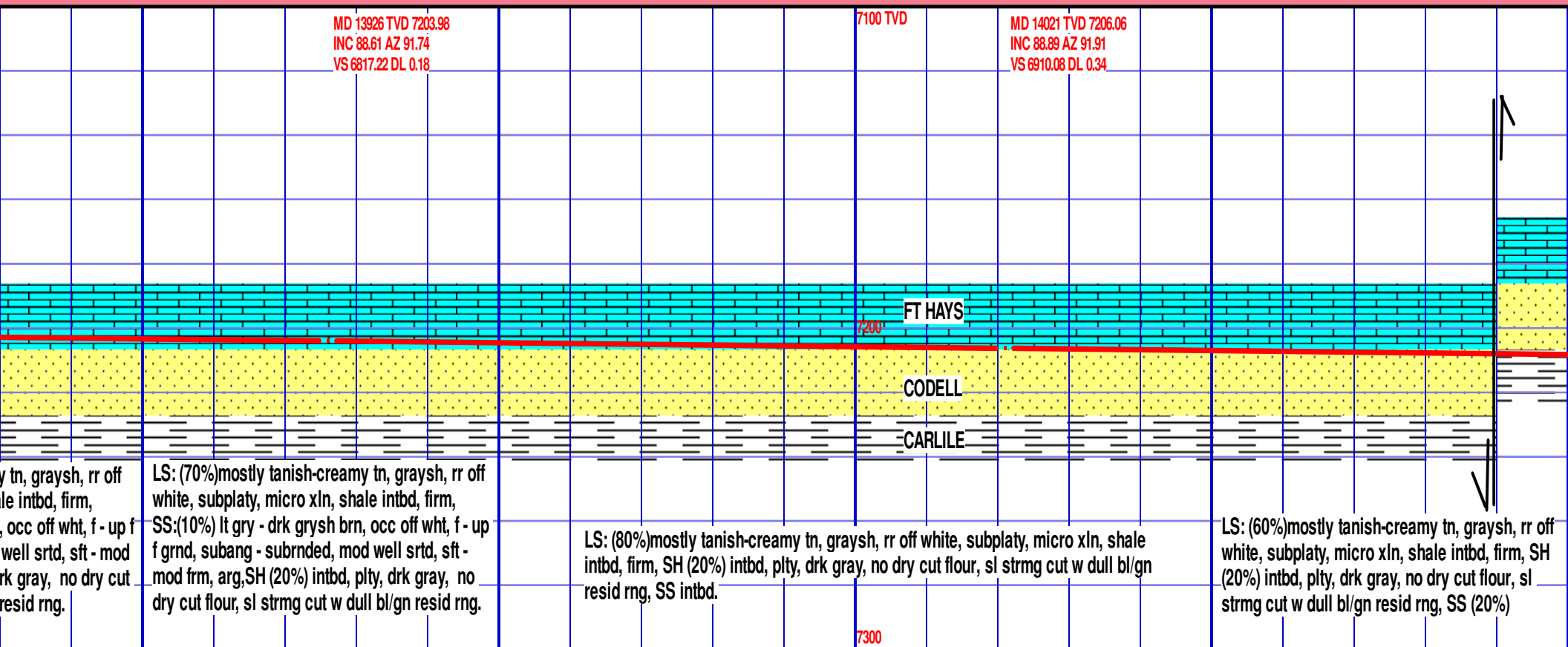


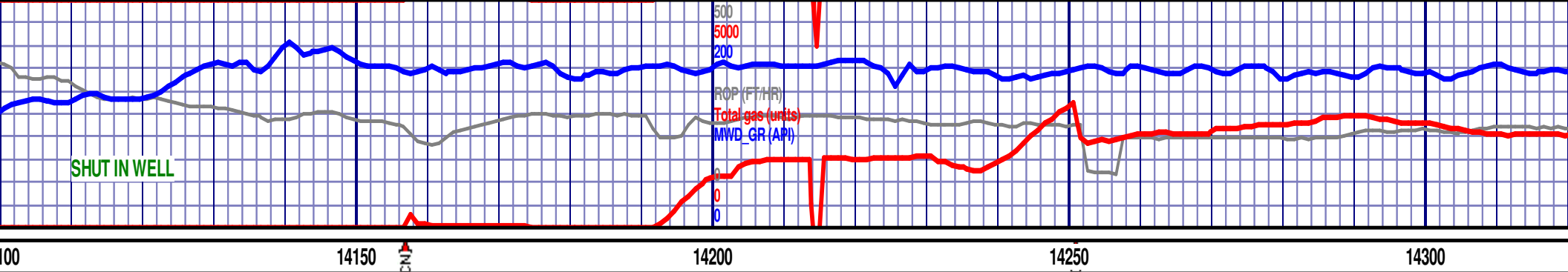
SS: (95%) lt gry - drk grysh brn, f  
frm, arg, slt, est vis por 8-10%, no  
dk gry, plty to sbblky, slty, frm-m h

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









MD 14115 TVD 7208.3  
INC 88.37 AZ 91.64  
VS 7001.94 DL 0.62

THIS SENARIO IS BASED ON GR AND  
AMOUNT OF INCREASED SH IN  
SAMPLES. MAY CHANGE AFTER NEXT  
SAMPLE AT 14300'.

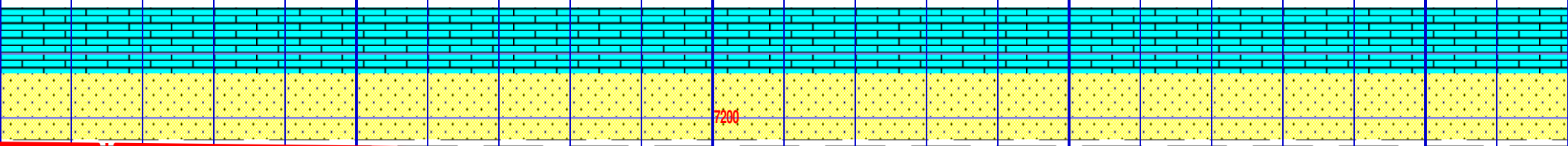
7100 TVD

MD 14210 TVD 7210.95  
INC 88.44 AZ 92.02  
VS 7094.79 DL 0.41

4 HR SHUT IN WELL DUE TO KICK MUD  
UPTO MW 10IN OUT 9.5, VIS 40

>25 ft FLARE

MD 14303 TVD 7213.46  
INC 88.47 AZ 91.63  
VS 7185.69 DL 0.42



7200

7300

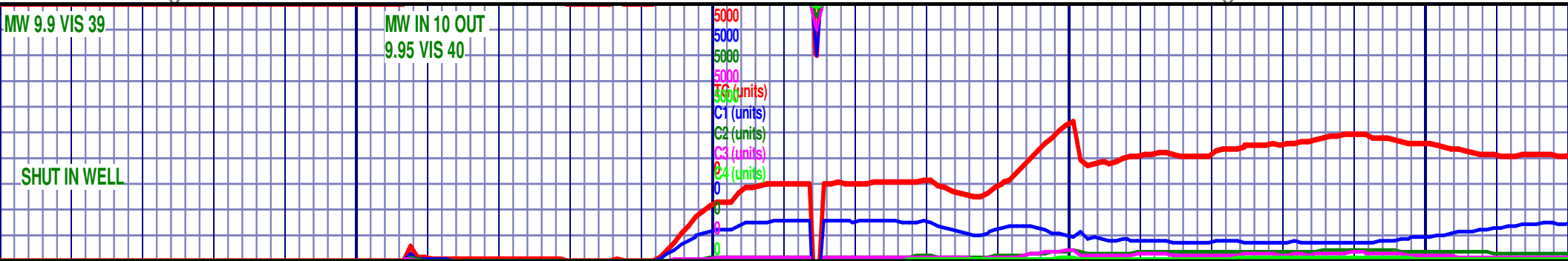
LS: (50%)mostly tanish-creamy tn, graysh, rr  
off white, subplaty, micro xln, shale intbd,  
firm, SH (40%) intbd, plty, drk gray, no dry cut  
flour, sl strmg cut w dull bl/gn resid rng, SS  
(10%)

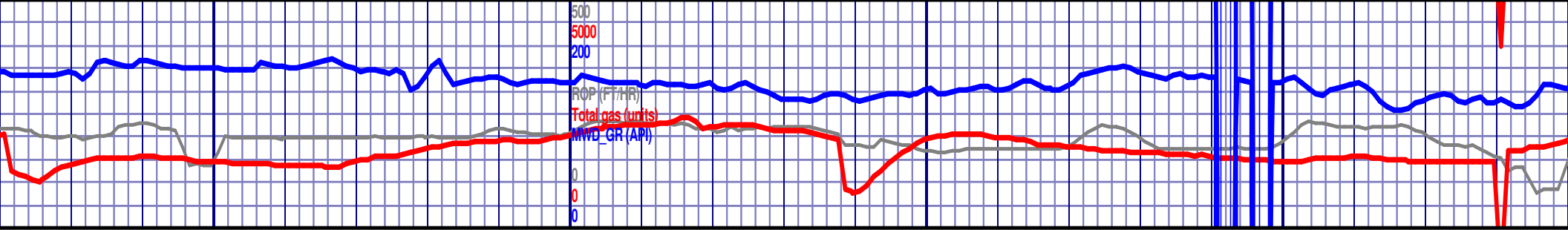
NO SAMPLE DUE TO SHUT IN WELL

BY PASS SHACKERS, NO SAMPLE

SH: (95%): m to dk gry, occ v lt gry - gry,  
sbply-sbblky, slty-rthy, occ smth txt, frm - m hd,  
sl calc, NFSOC. SS: (5%): lt gry - drk grysh brn,  
lf - f grnd, subang - subrndd, mod well srtd, sft  
- mod frm, arg, slty, est vis por 8-10%

SH: m to dk  
sbply-sbbl  
frm - m hd,





14350

14400

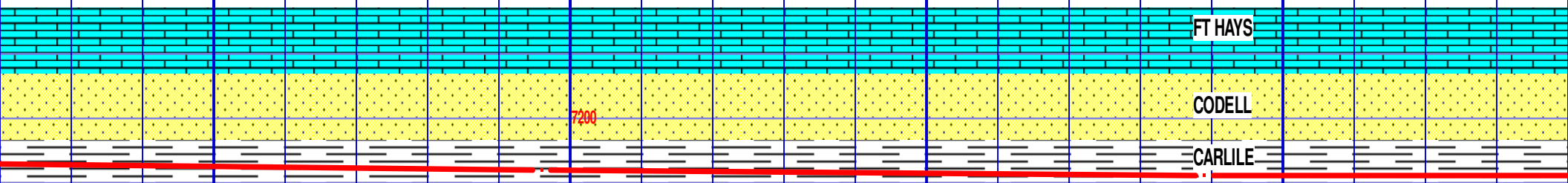
14450

14500

14550

MD 14396 TVD 7215.75  
INC 88.71 AZ 90.81  
VS 7276.38 DL 0.92

MD 14489 TVD 7217.53  
INC 89.09 AZ 90.59  
VS 7366.89 DL 0.47



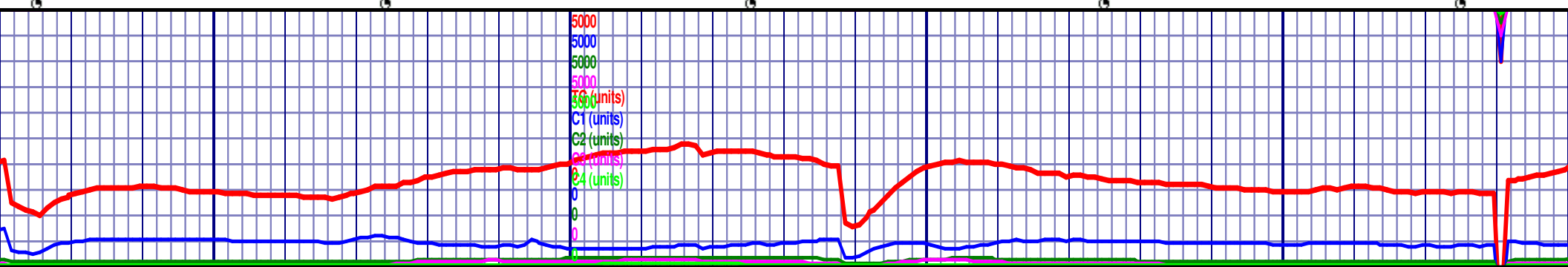
gry, occ v lt gry - gry,  
ky, slty-rthy, occ smth txt,  
sl calc, NFSOC.

SH: m to dkgr, occ v lt gry - gry,  
sbply-sbblky, slty-rthy, occ smth txt,  
frm - m hd, sl calc, NFSOC.

SH: m to dkgr, occ v lt gry - gry,  
sbply-sbblky, slty-rthy, occ smth txt,  
frm - m hd, sl calc, NFSOC.

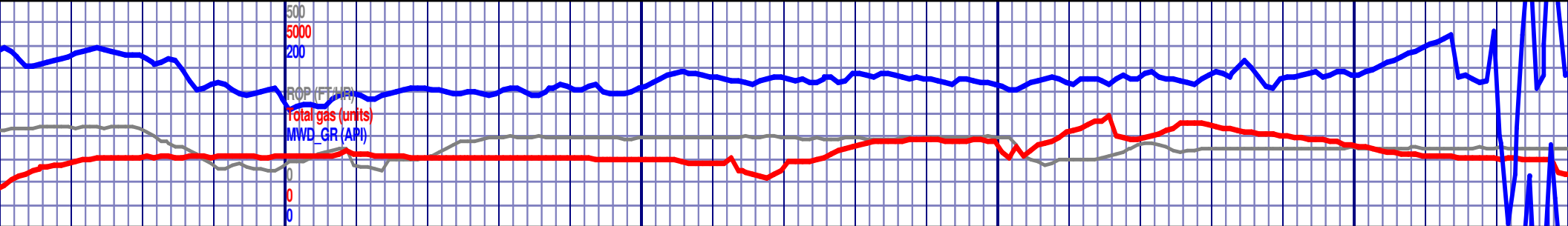
SH: m to dkgr, occ v lt gry - gry,  
sbply-sbblky, slty-rthy, occ smth txt,  
frm - m hd, sl calc, NFSOC.

SH: m to dkgr, occ v lt gry - gry,  
sbply-sbblky, slty-rthy, occ smth txt,  
frm - m hd, sl calc, NFSOC.









14800

14850

14900

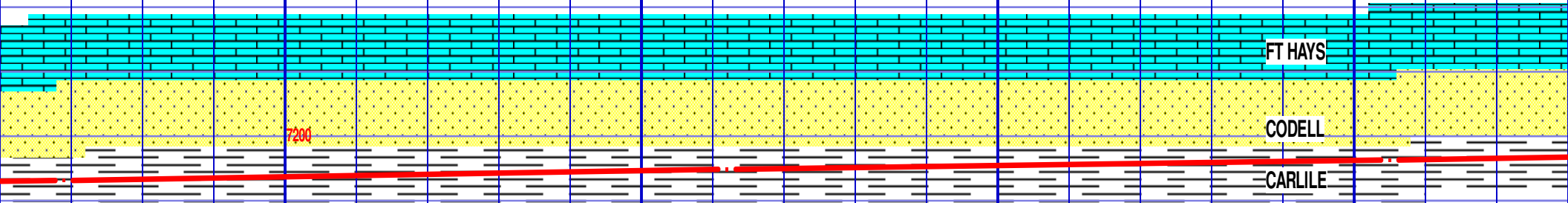
14950

MD 14769 TVD 7213.68  
INC 91.98 AZ 89.28  
VS 7638.91 DL 1.14

7100 TVD

MD 14862 TVD 7210.52  
INC 91.91 AZ 89.18  
VS 7728.81 DL 0.13

MD 14955 TVD 7207.37  
INC 91.98 AZ 89.83  
VS 7818.82 DL 0.7

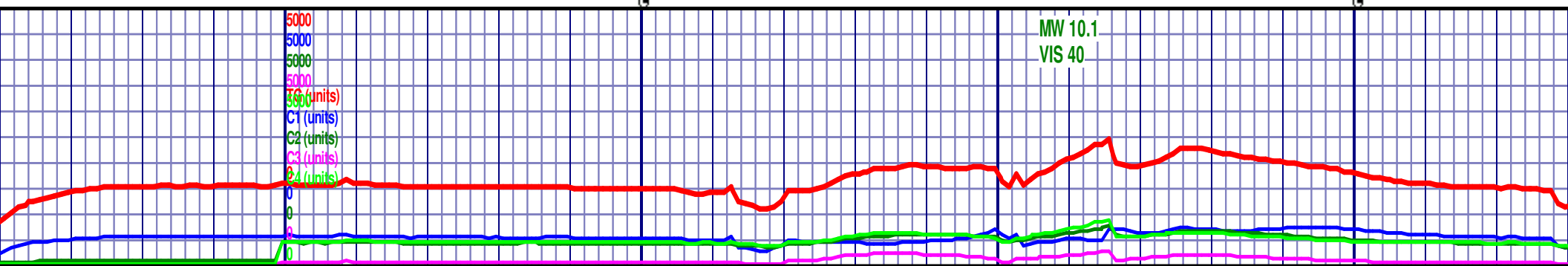


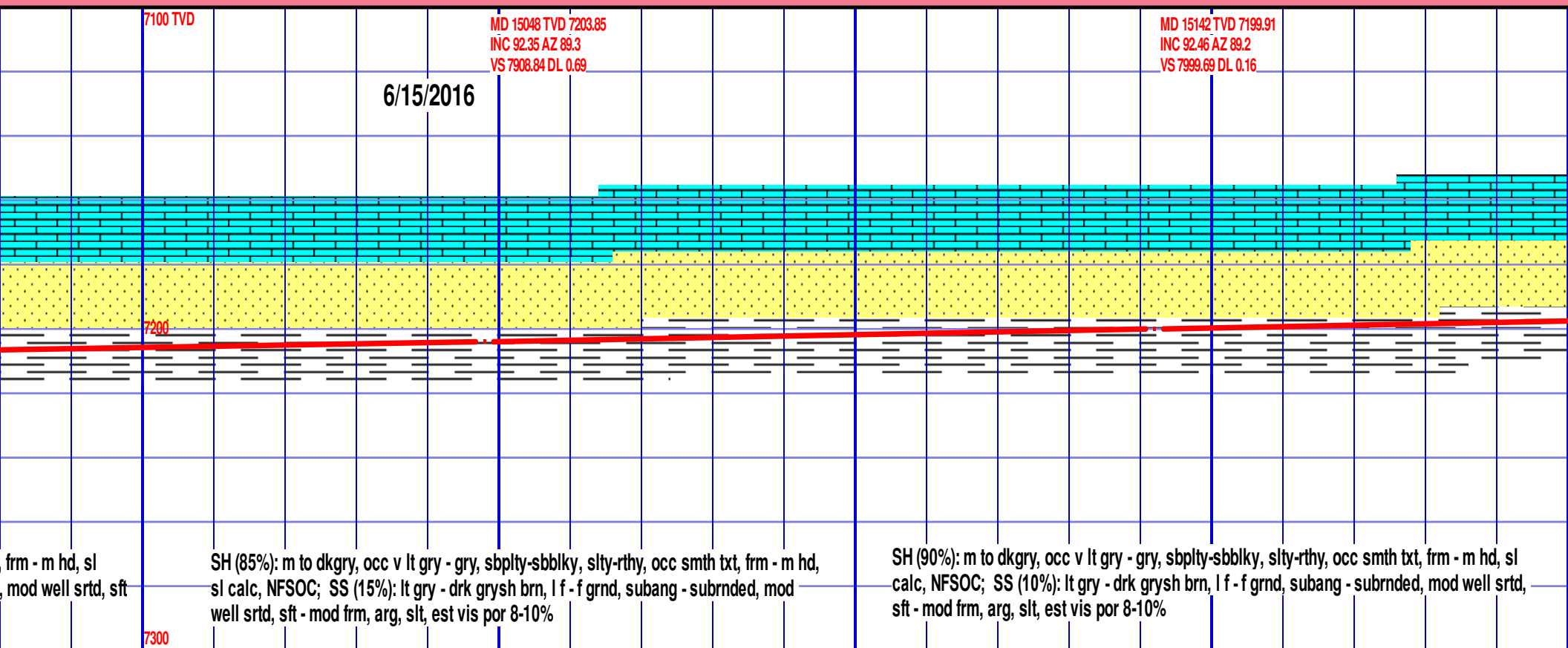
ky, slty-rthy, occ smth

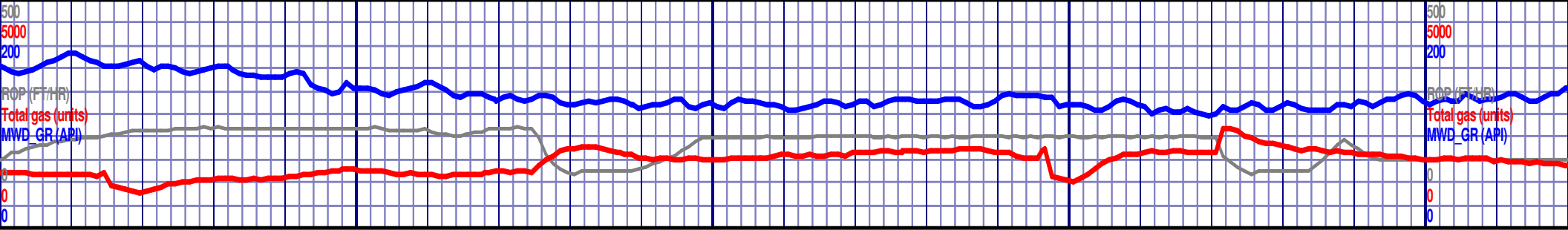
SH: m to dkgr, occ v lt gry - gry, sbpty-sbblky, slty-rthy, occ smth txt, frm - m hd, sl calc, NFSOC.

SH (90%): m to dkgr, occ v lt gry - gry, sbpty-sbblky, slty-rthy, occ smth txt, calc, NFSOC; SS (10%): lt gry - drk grysh brn, lf-f grnd, subang - subrnded - mod frm, arg, slt, est vis por 8-10%

7300

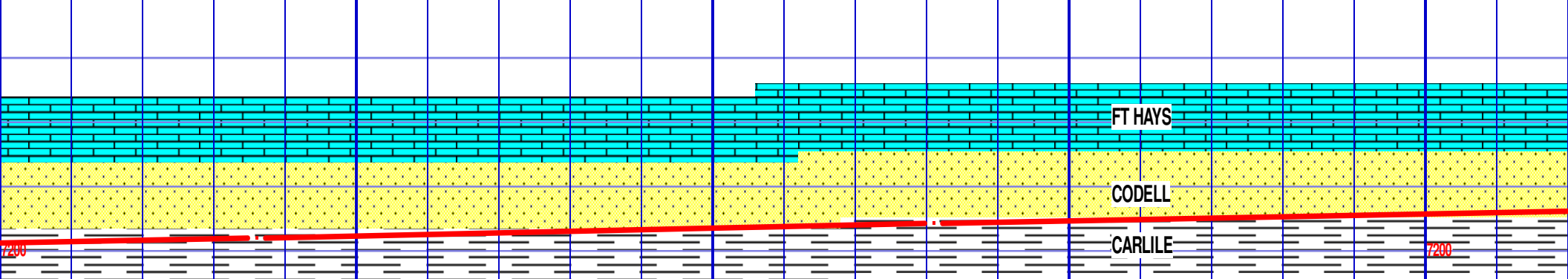






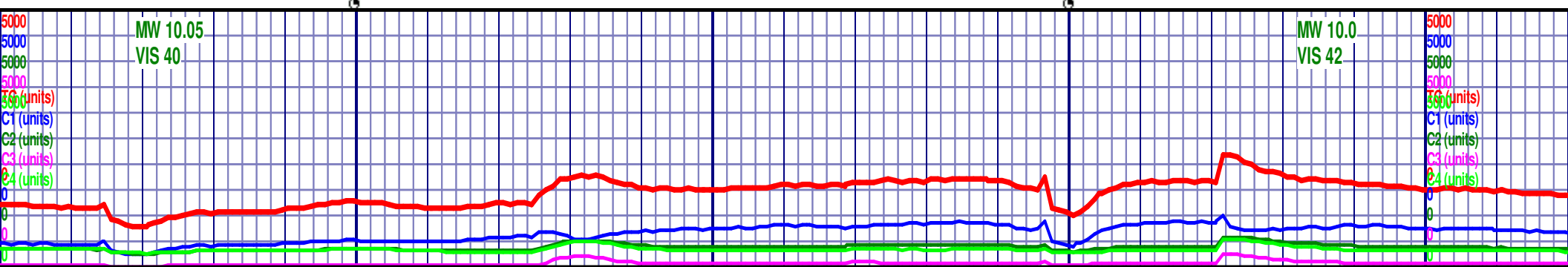
200 15250 15300 15350 15400

7100 TVD MD 15236 TVD 7195.79 MD 15331 TVD 7191.61 7100 TVD  
INC 92.56 AZ 89.39 INC 92.49 AZ 88.86  
VS 8090.55 DL 0.23 VS 8182.3 DL 0.56



SH (80%): m to dk gry, occ v lt gry - gry, sbply-sbblky, slty-rthy, occ smth txt, frm - m hd, sl calc, no dry cut flour, sl wk strmg cut w dull bl/gn resid rng; SS (20%): lt gry - drk grysh brn, l f - f grnd, subang - subrndd, mod well srted, sft - mod frm, arg, slt, est vis por 8-10%  
SS: (65%) lt gry - drk grysh brn, l f - f grnd, subang - subrndd, mod well srted, sft - mod frm, arg, slt, est vis por 8-10%  
SS: (65%) lt gry - drk grysh brn, l f - f grnd, subang - subrndd, mod well srted, sft - mod frm, arg, slt, est vis por 8-10%  
SS: (65%) lt gry - drk grysh brn, l f - f grnd, subang - subrndd, mod well srted, sft - mod frm, arg, slt, est vis por 8-10%

7300





7100 TVD

TD @ 15562' on 06/15/16  
@ 0424 hr



Sharon Springs	7232'	6901'	-2801'
Niobrara A Chalk	7275'	6930'	-2110'
Niobrara B Chalk	7415'	7045'	-2225'
Niobrara C Chalk	7450'	7117'	-2297'
Ft Hays	7666'	7195'	-2375'
Codell	7720'	7218'	-2398'

THANK YOU  
GOOLSBY BROTHERS & ASSOC.

7300

