

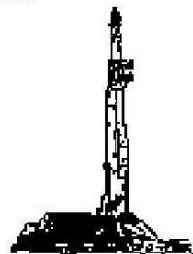
**GOOLSBY BROTHERS**  
and associates, inc.

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:** Henrickson Federal 36C-18HZ (Horizontal Hole Section)

**Location:** Section 7, T3N, R66W, Weld County, CO.

**License Number:** API: 05-123-37670

**Spud Date:** September 15, 2013

**Surface Coordinates:** NESW Sec 7 T3N R66W; 1885' FSL & 2078' FWL

Lat N 40.236993 Long W -104.822440

**Bottom Hole Coordinates:** SESW Sec 18 T3N R66W; 490' FSL, 2496' FWL

**Ground Elevation (ft):** 4794'

**Logged Interval (ft):** 6500'

**Formation:** Pierre Sands/Shales, Niobrara, Codell Target

**Type of Drilling Fluid:** Water & Poly to 6674', LSND 6674'-14528'

**K.B. Elevation (ft):** 4810'

**Total Depth (ft):** 14528' DTMD

**Region:** Wattenberg, DJ Basin

**Drilling Completed:** September 22, 2013

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

**OPERATOR**

**Company:** Kerr-McGee Oil & Gas Onshore LP

**Address:** Granite Tower - 1099 18th St, Ste 1800

Denver, CO 80202

CO Geologist, John Morgan

**GEOLOGIST**

**Name:** Andrew Krueger & Philip Wilcox

**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 1017' - 14481'  
MWD RES 7815' - 14481'





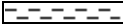
## Casing






9 5/8" Surface Casing set @ 1017' MD  
7" Intermediate Casing set @ 7806'  
4 1/2" Production Liner hung 09/24/2013, landed @ 14513'






## Comments






- 1) Drilling Contractor: Xtreme Drilling, Rig #20  
Toolpusher: Tyler Humphrey & Brad Henderson
- 2) Company Man: Marvin Hackworth & Ricky Carrol
- 3) Mud Comapny : AES Drilling Fluids  
Engineer: Ray Brewer
- 4) Directional Drilling: Baker Hughes  
Pulse Tool  
Drillers: Barry Combs, Scott Stanford  
MWD: Robert Dix, Matt Yule
- 5) Gas Equipment: Mudlogging Systems Inc.  
by Terra Services  
Redbox # ML-462 & Ratcliff Agitator

## ROCK TYPES

 Anhy  
 Bent  
 Brec  
 Cht  
 Clyst

 Coal  
 Oil sat.  
 Congl  
 Dol  
 Gyp

 Lmst  
 Mrlst  
 Salt  
 Shale  
 Shcol

 Shgy  
 Ss  
 Slst  
 Ss  
 Chalk

 Carb sh  
 Slty 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  
 Wackst

## OTHER SYMBOLS

### OIL SHOWS

Even  
 Spotted  
 Ques  
 Dead  
 Vspotty

near even

### POROSITY TYPE

Earthy  
 Fenest  
 Fracture

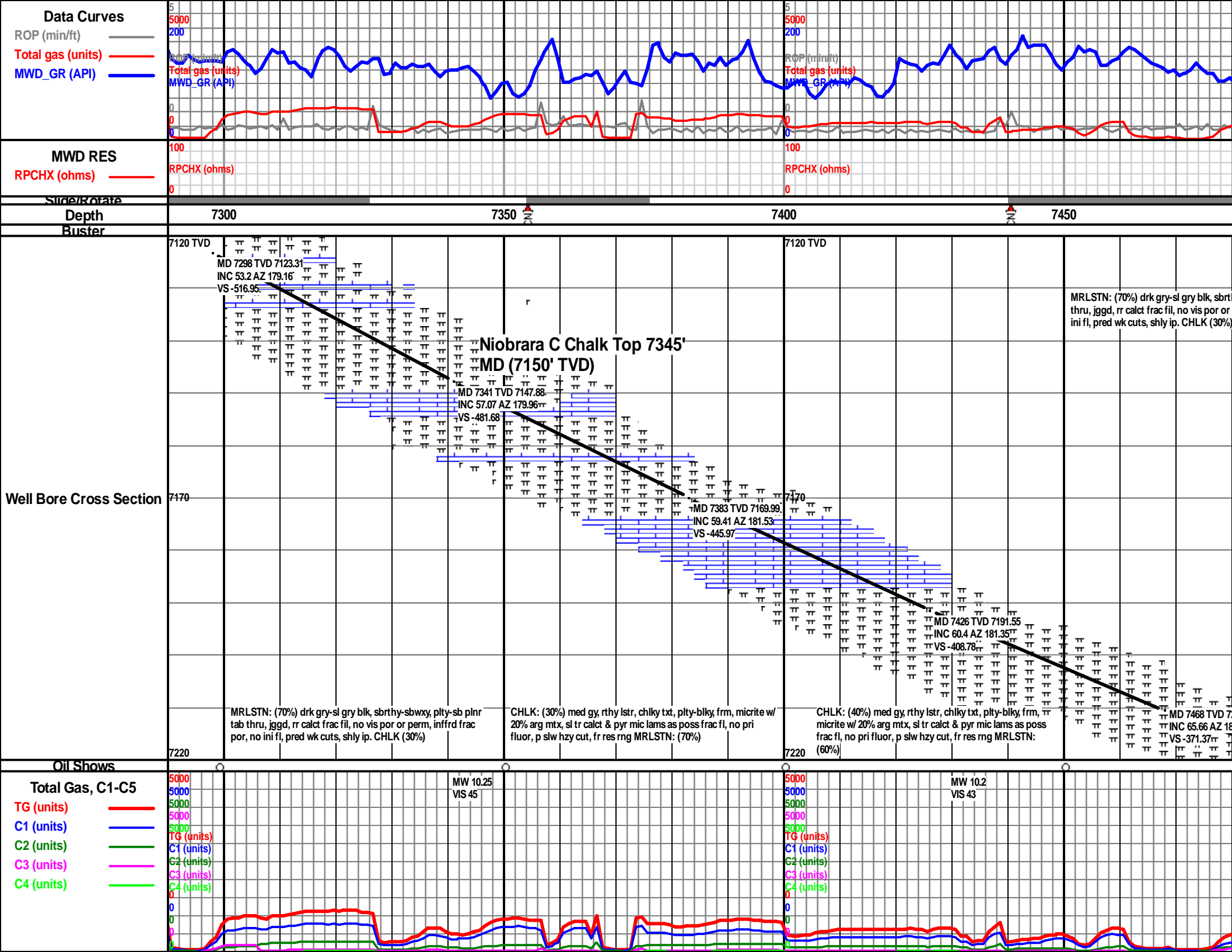
Inter  
 Moldic  
 Organic  
 Pinpoint  
 Vuggy

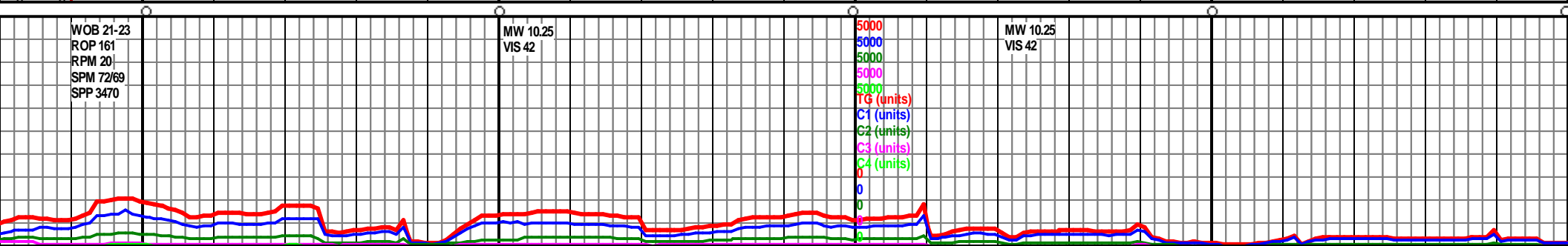
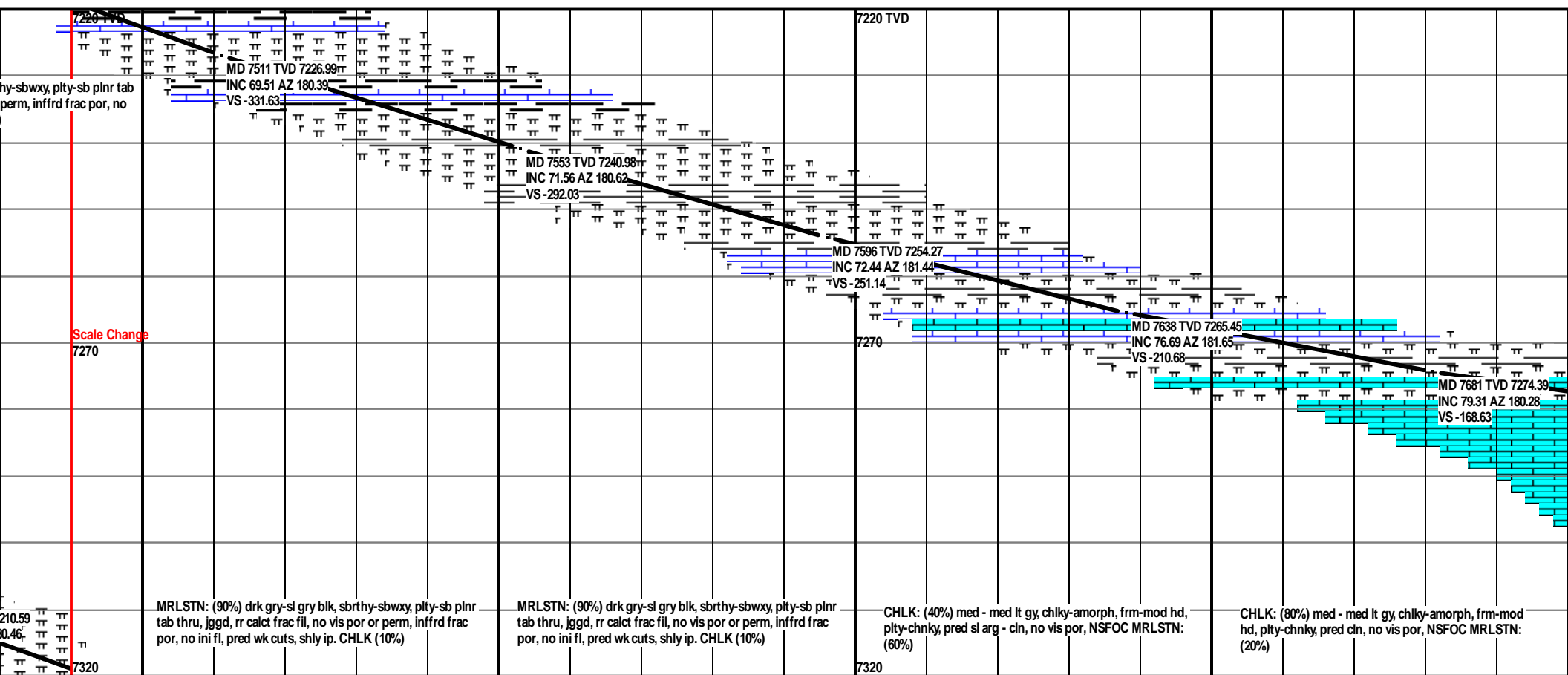
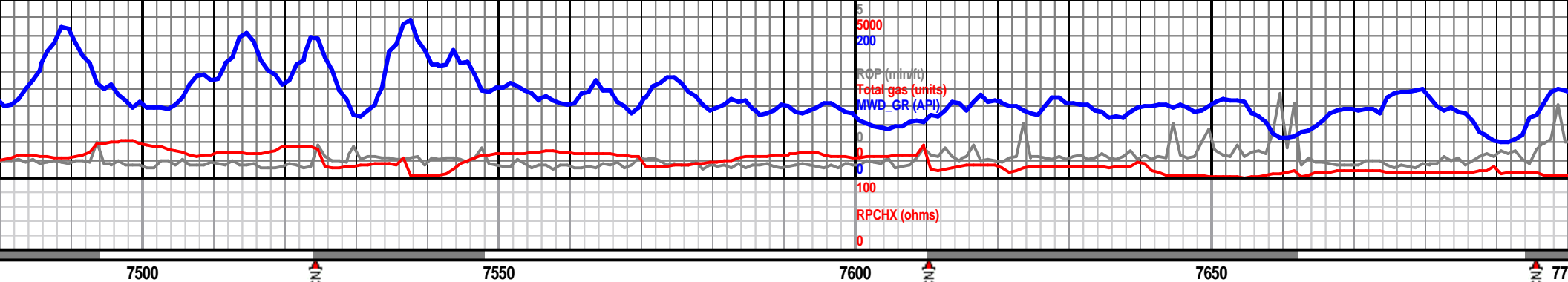
### ROUNDING

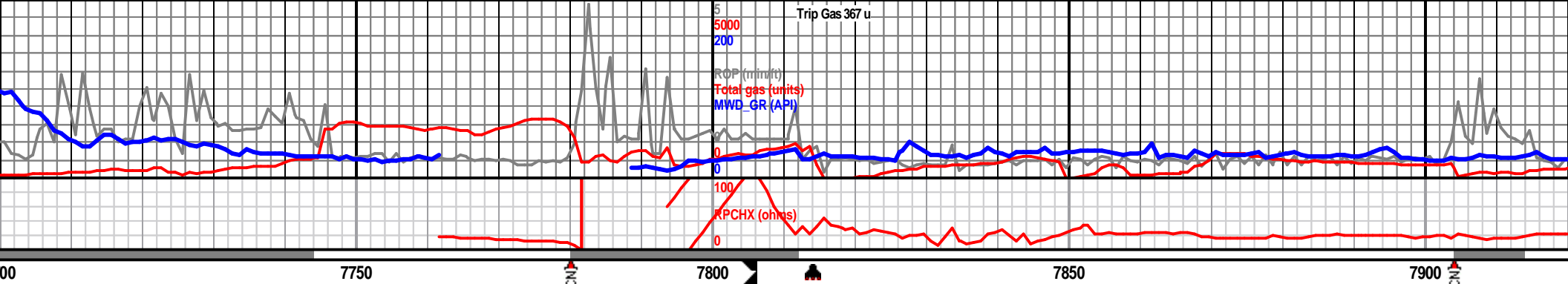
Rounded  
 Subrnd  
 Subang  
 Angular

### SORTING

Well  
 Moderate  
 Poor



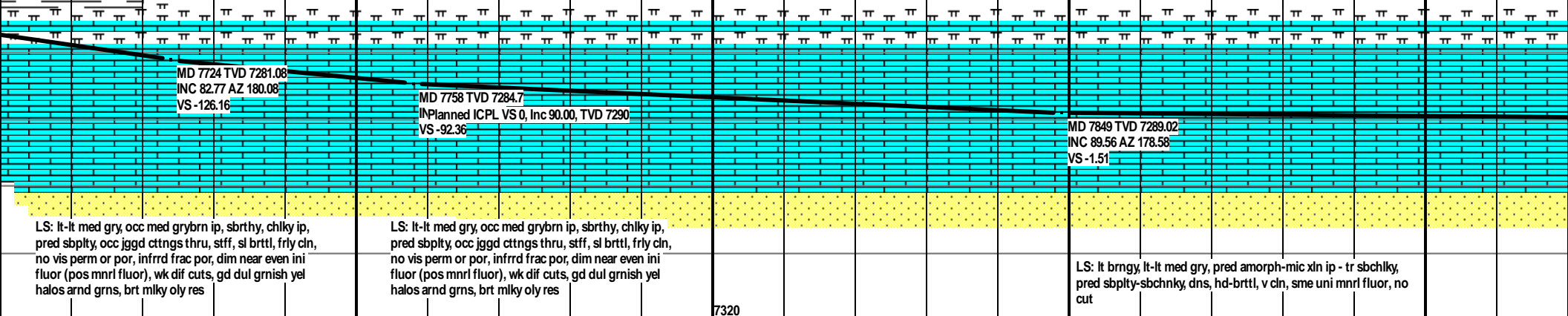




9/18-19/2013

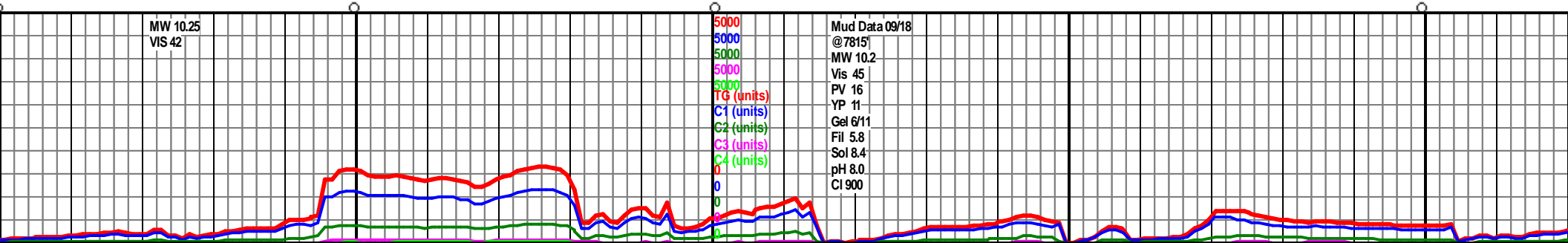
Reached ICPL @ 7815' 17:38 9/17/2013. Short trip above KOP, pmp high vis swps, condition hole, TO DP, PU & run 7" csg to 7806' MD, PU new Bit, NB #2, 6 1/8", Security, MMD54, #12301812, 5X20's, In @ 7815'. OB #1, Drld 6787' in 26.5 hrs, ave ROP 256 ft/hr.

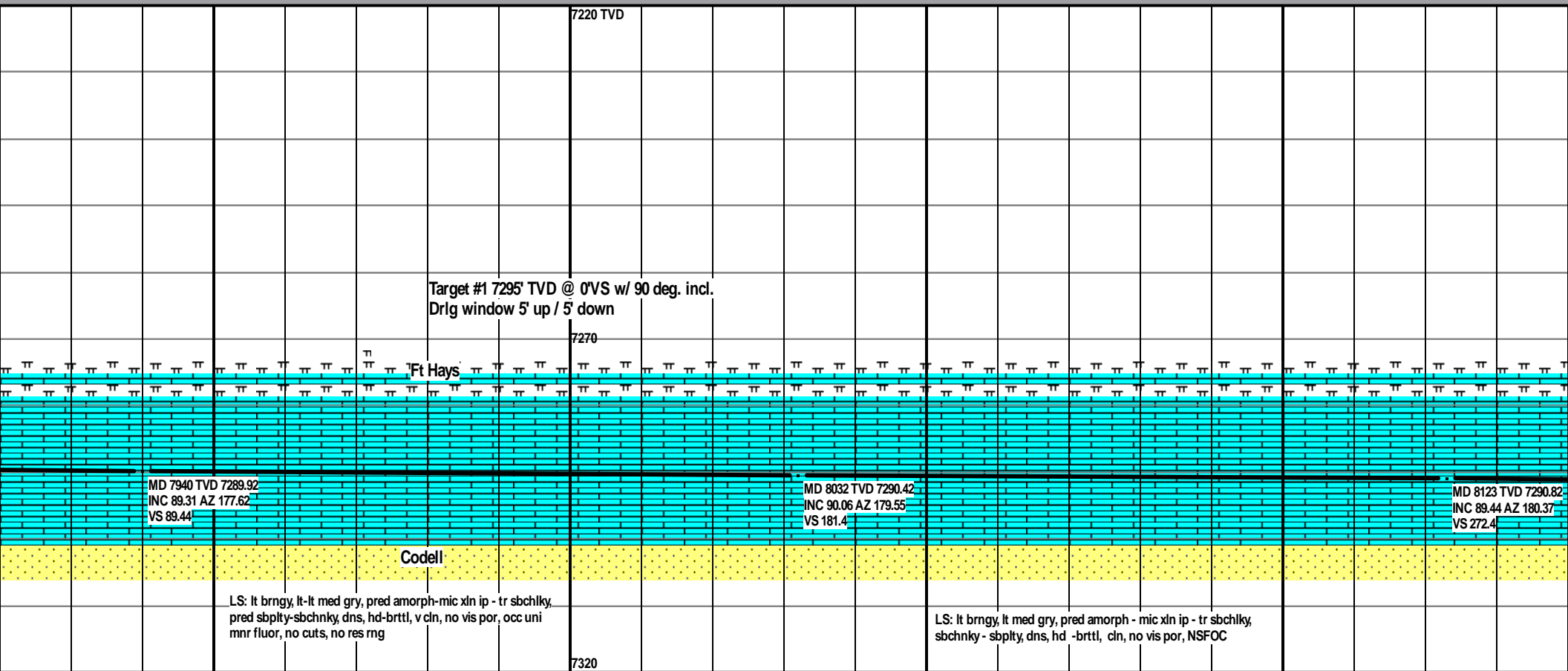
# Ft Hays Top 7688' MD (7276' TVD) based on GR & Samples



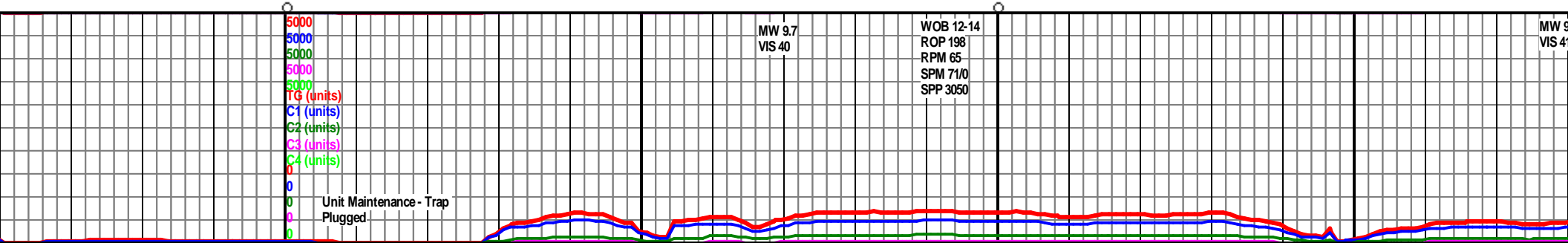
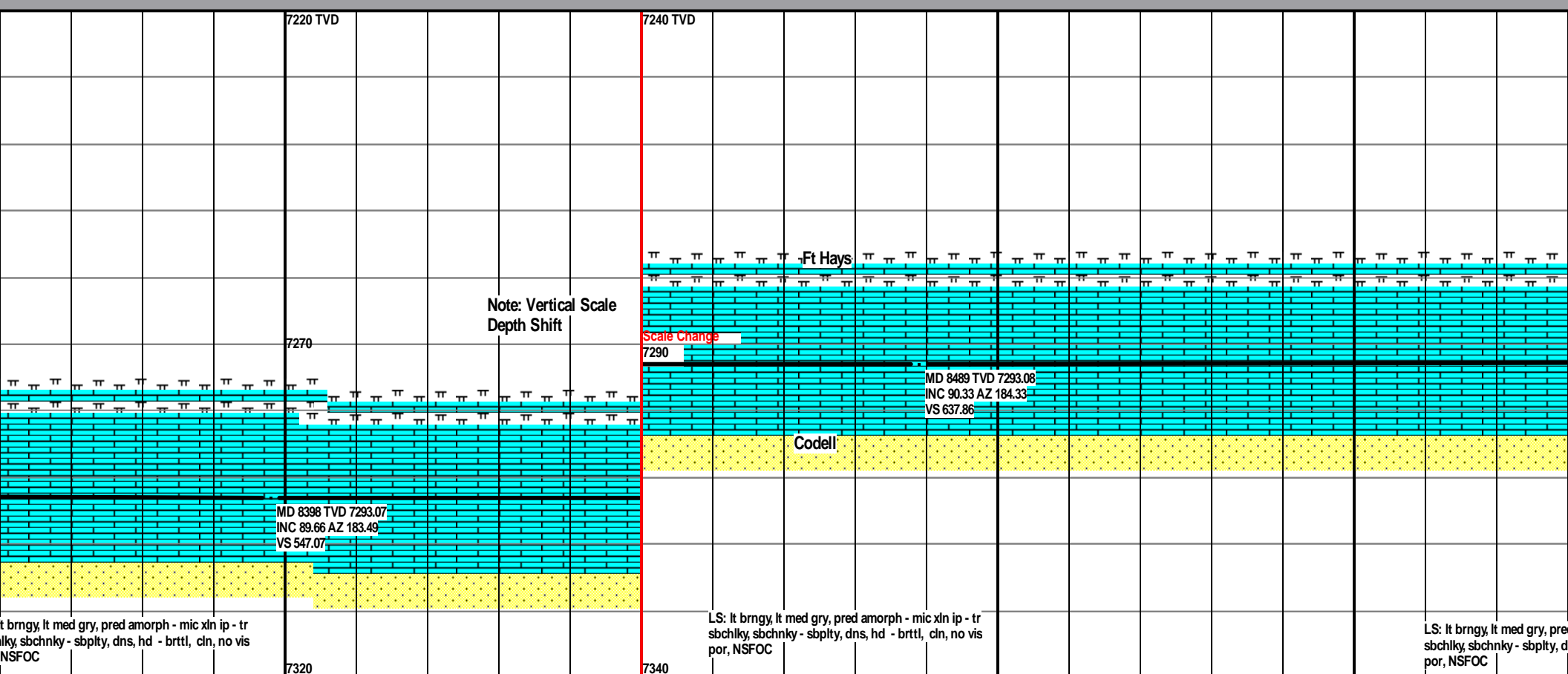
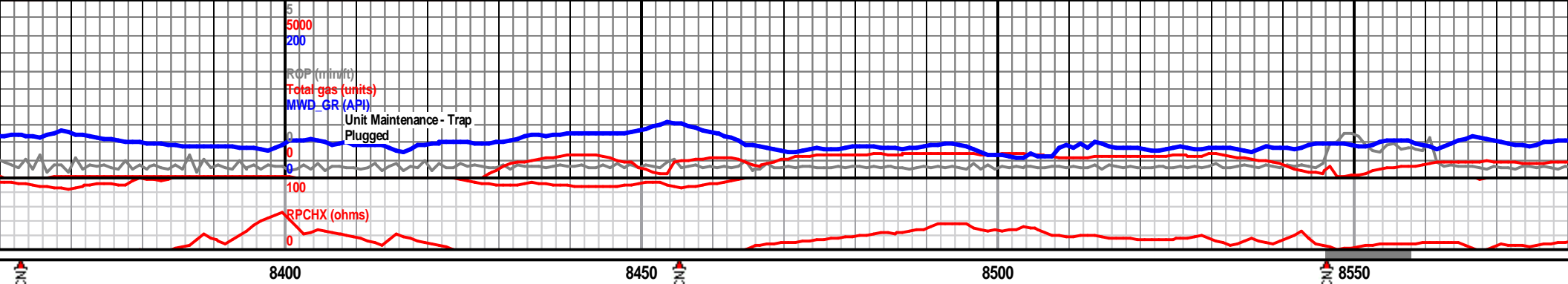
MW 10.25  
VIS 42

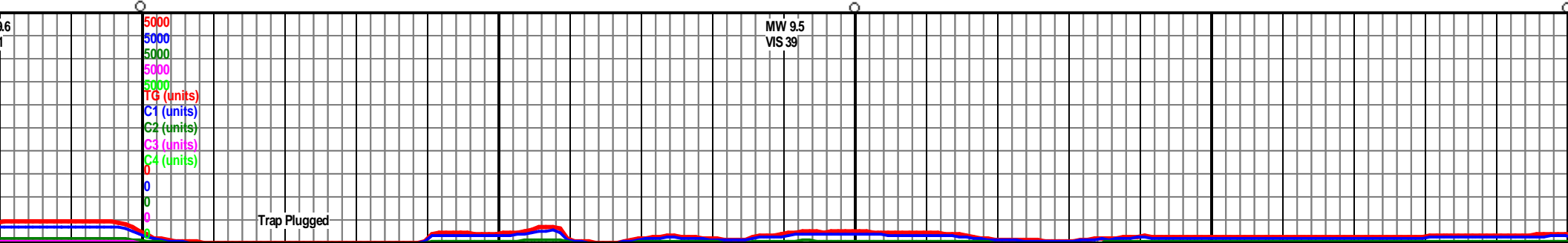
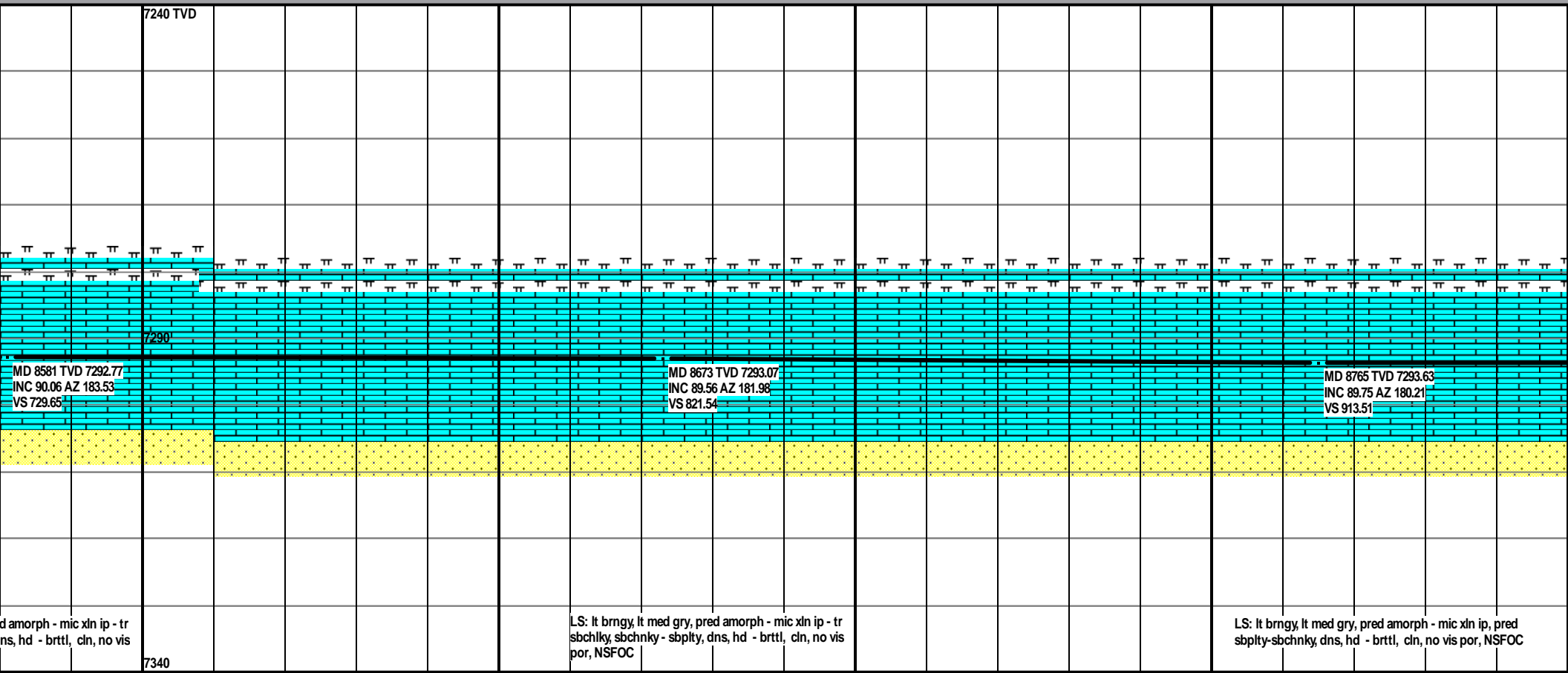
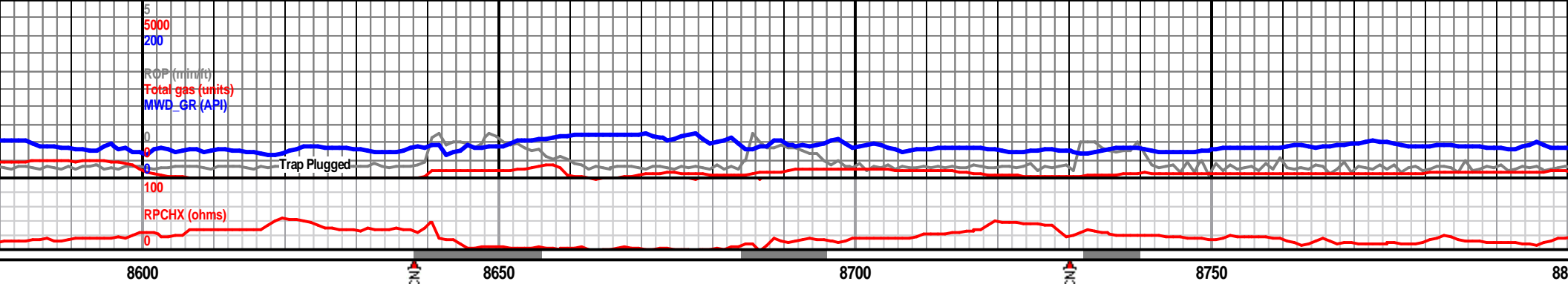
Mud Data 09/18  
@ 7815'  
MW 10.2  
Vis 45  
PV 16  
YP 11  
Gel 6/11  
Fil 5.8  
Sol 8.4  
pH 8.0  
CI 900

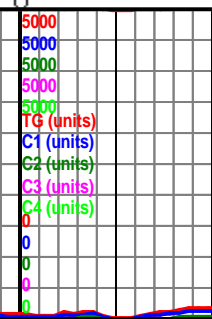
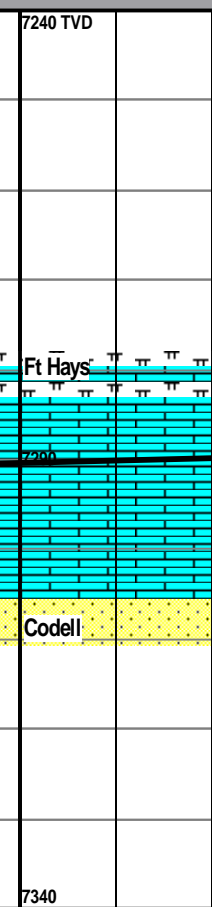
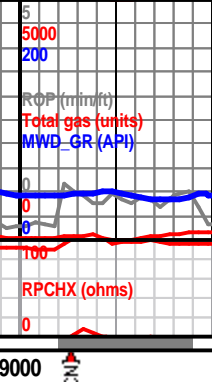




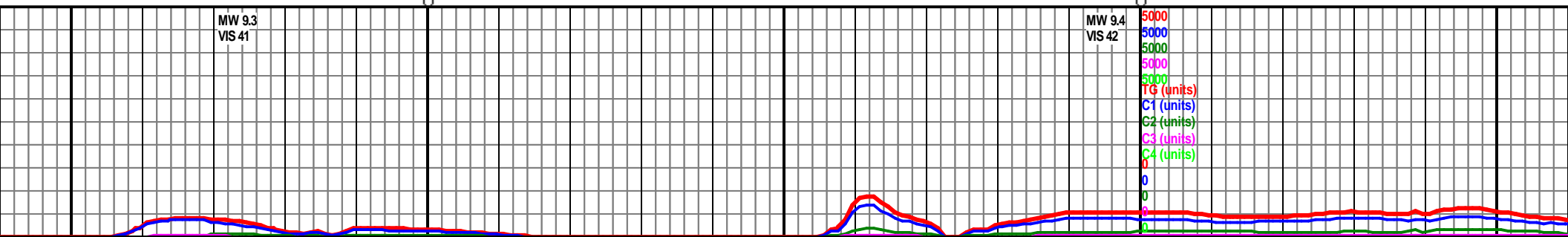
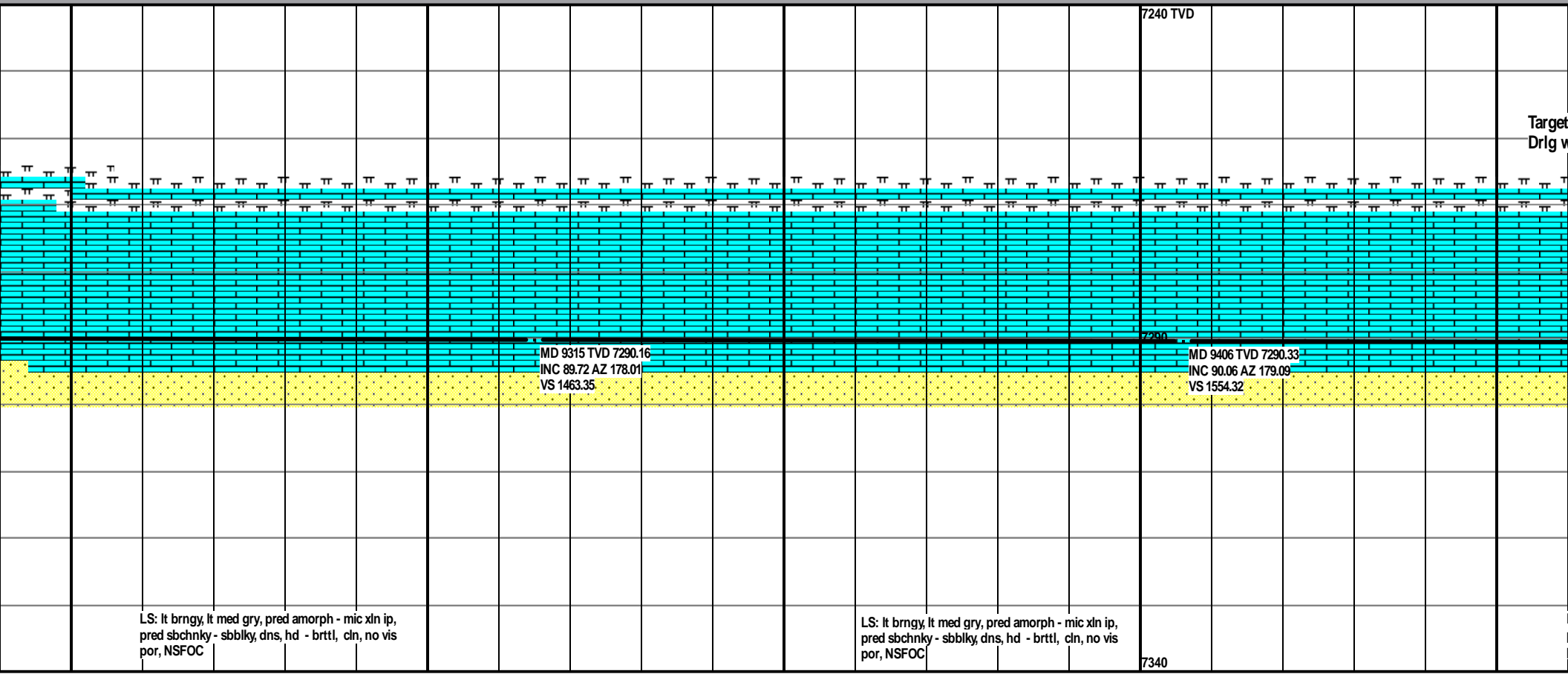
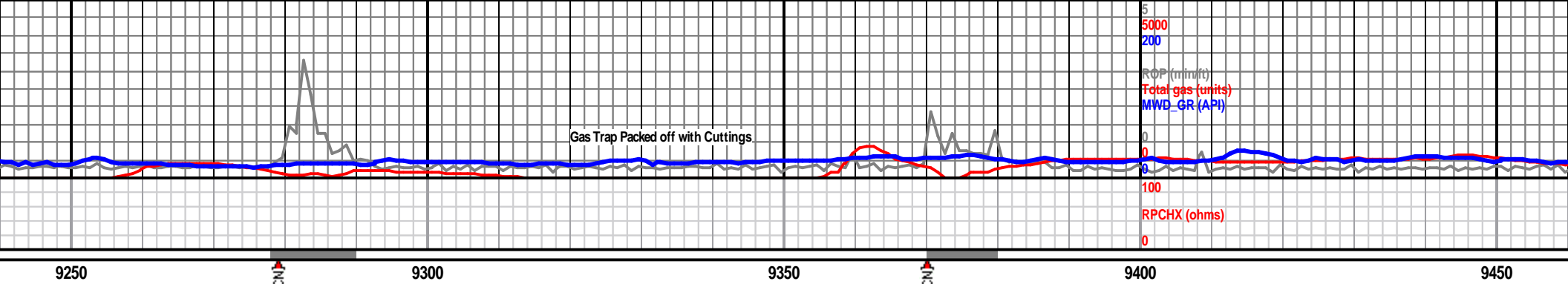


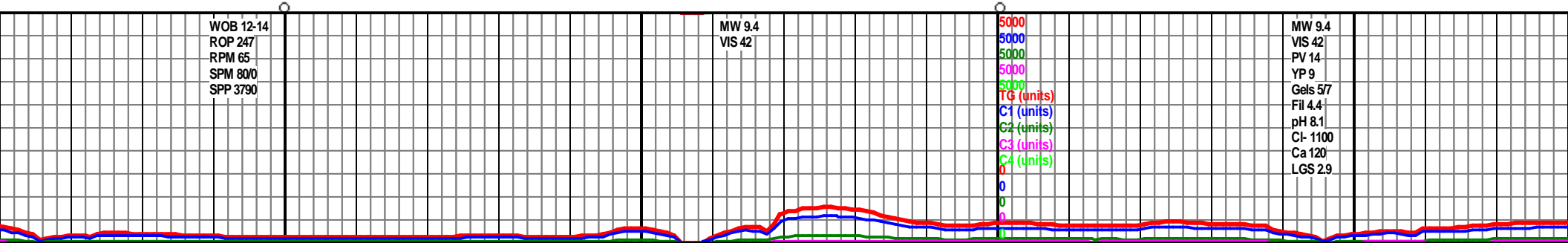
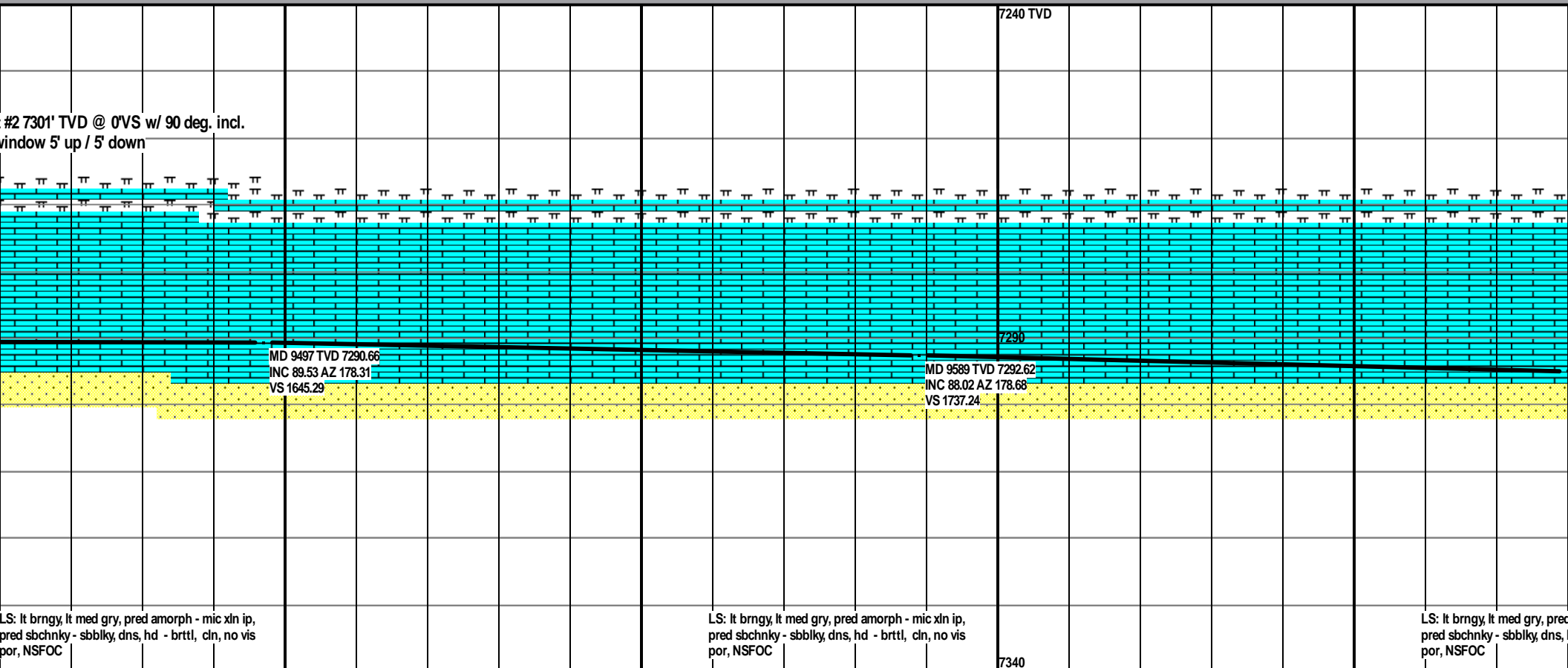
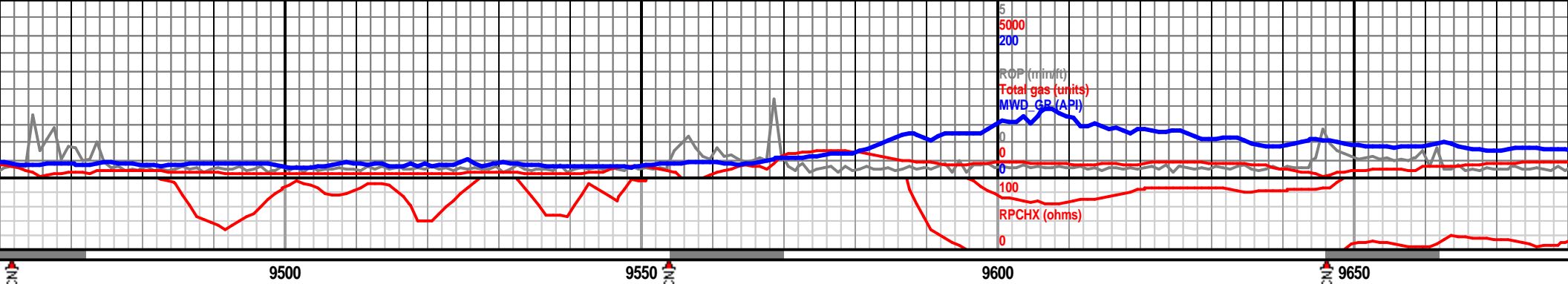


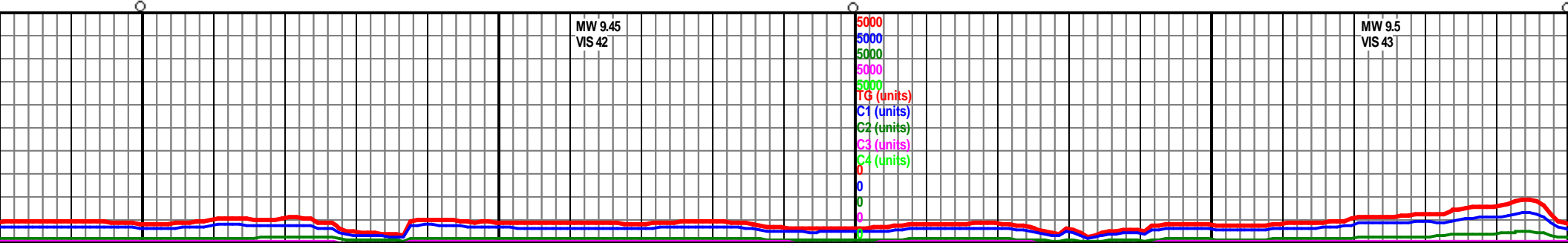
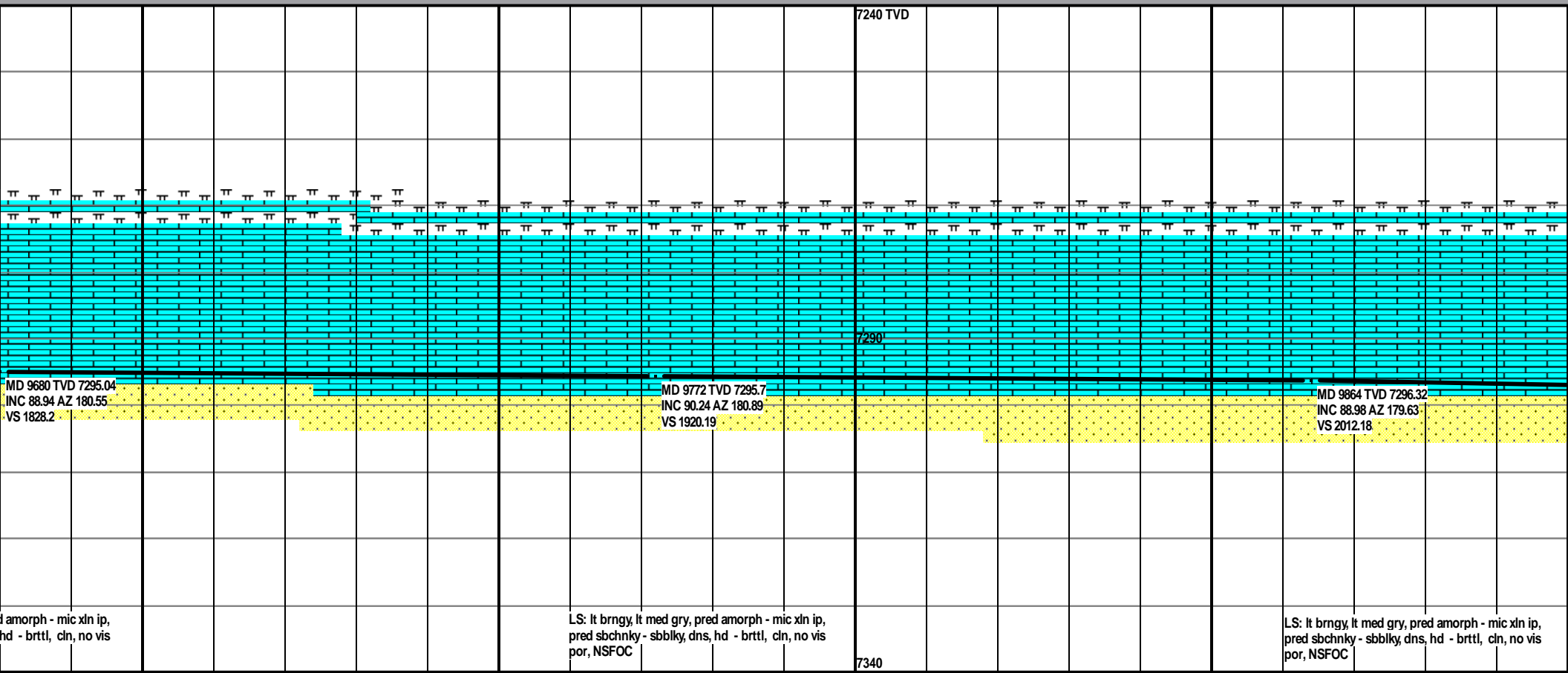
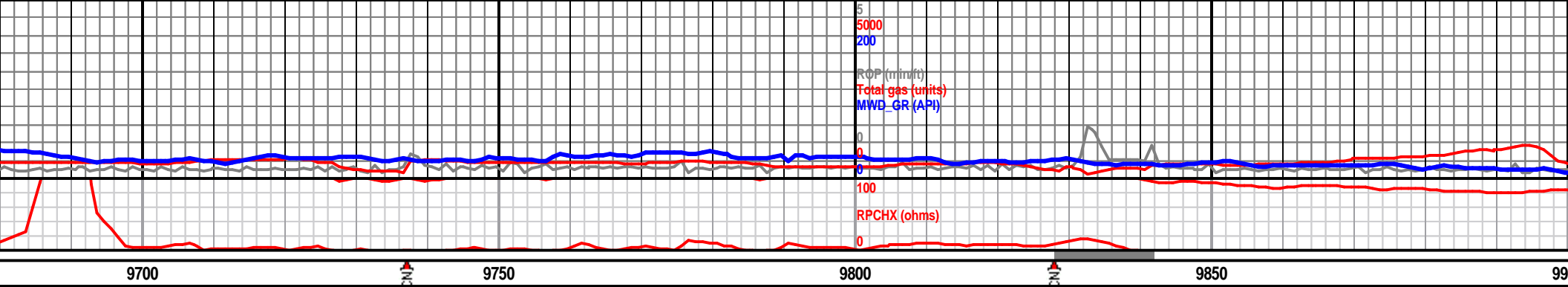


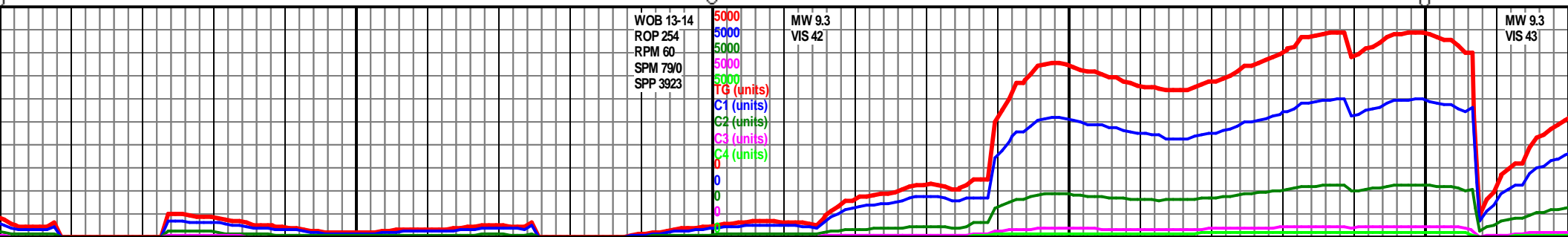
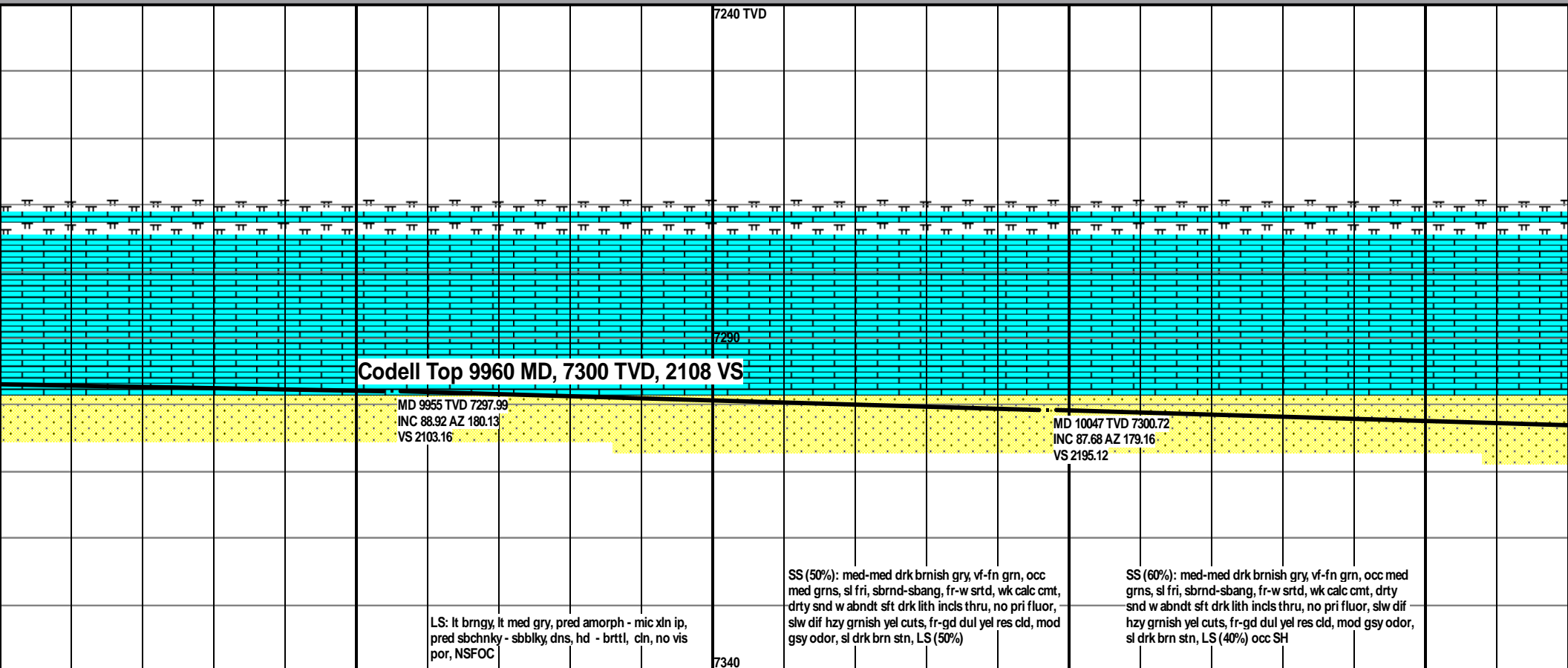
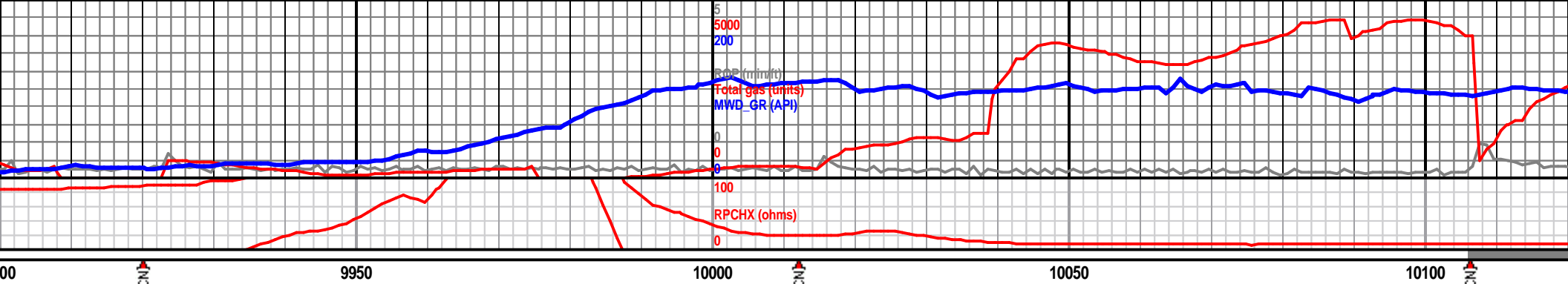


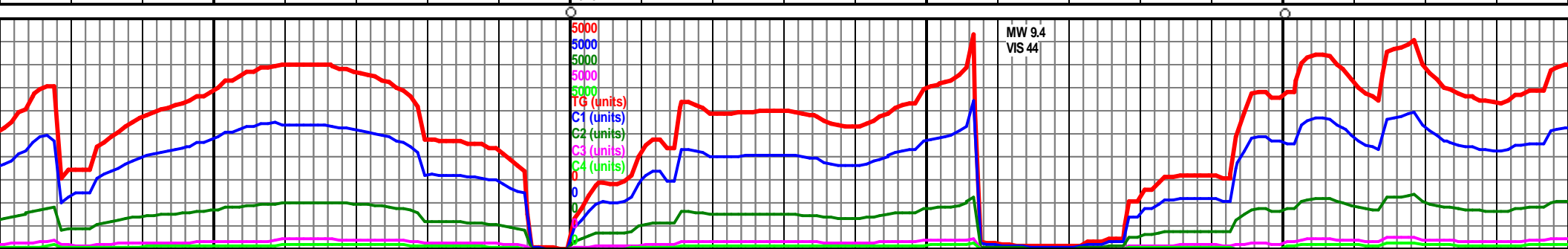
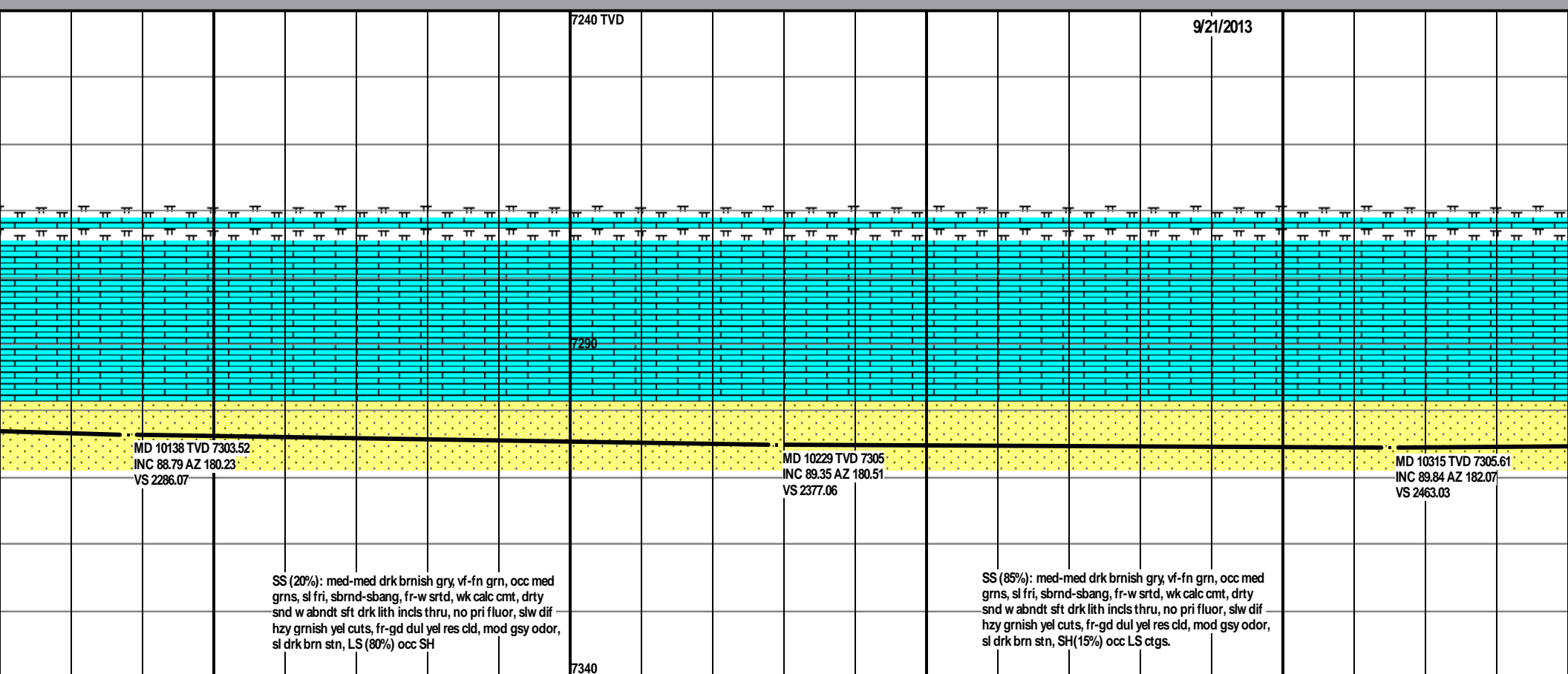
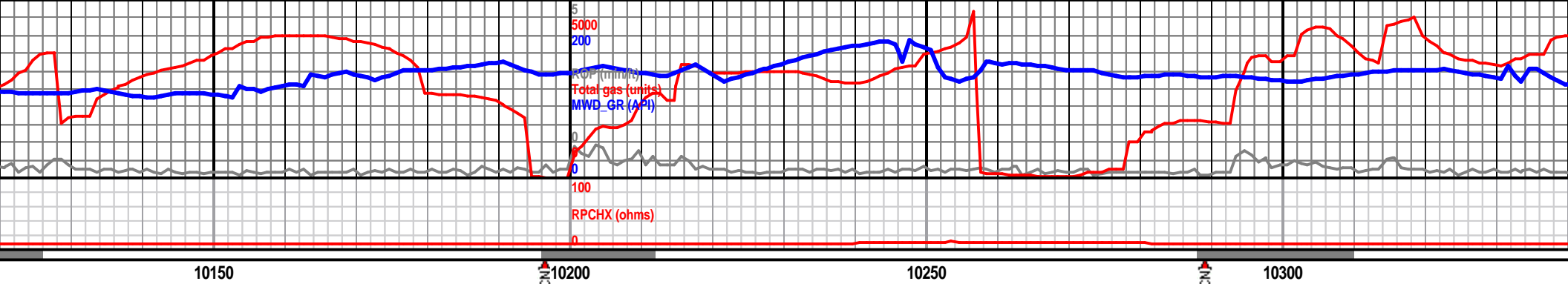


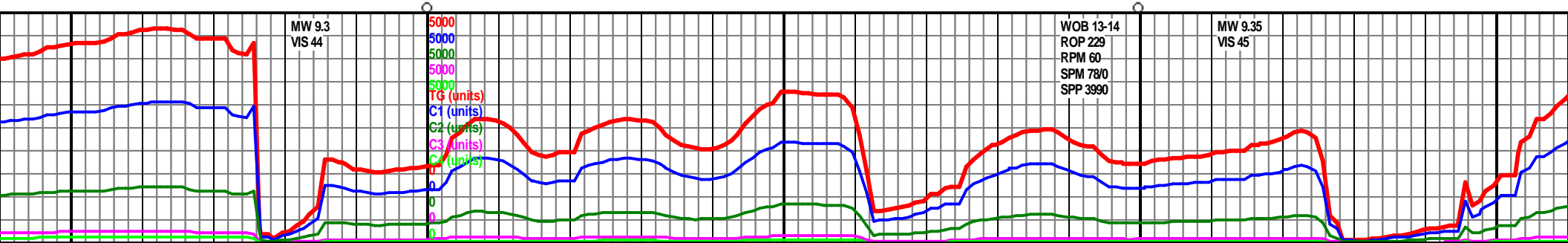
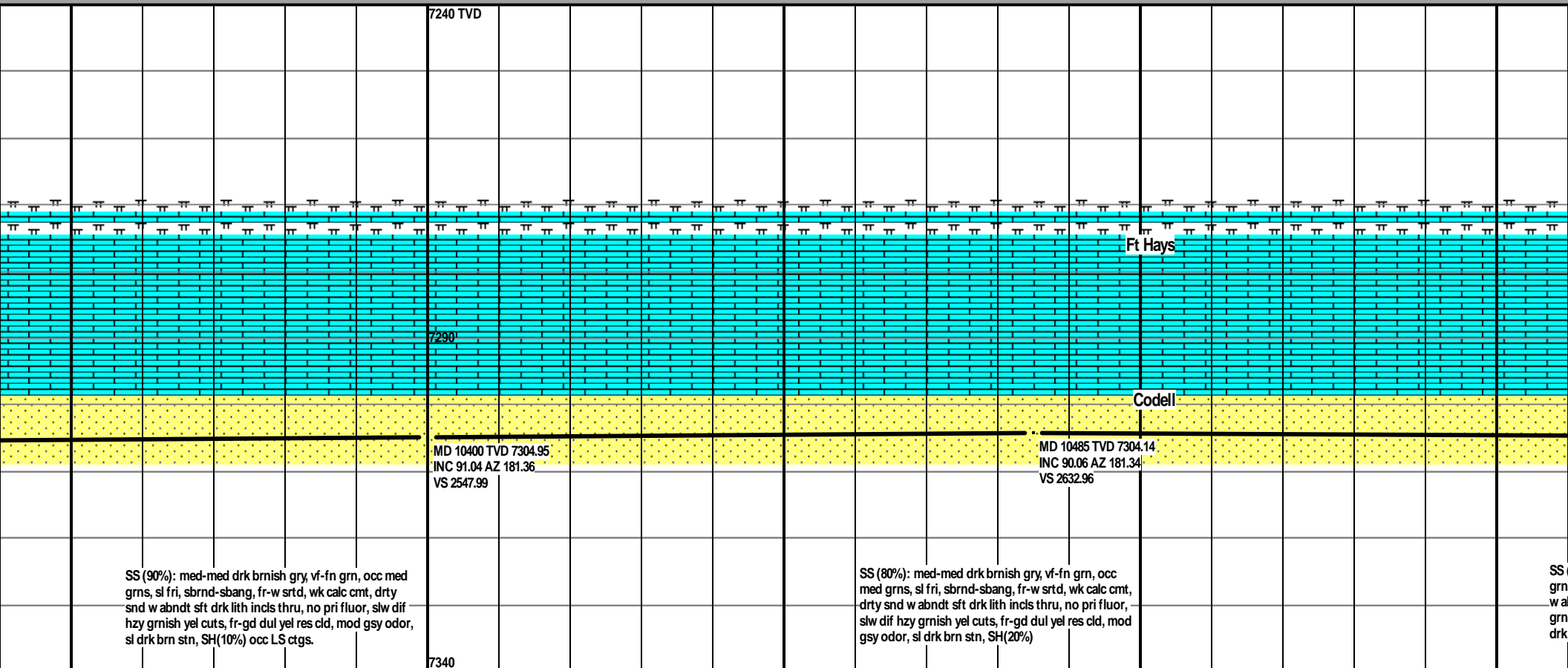
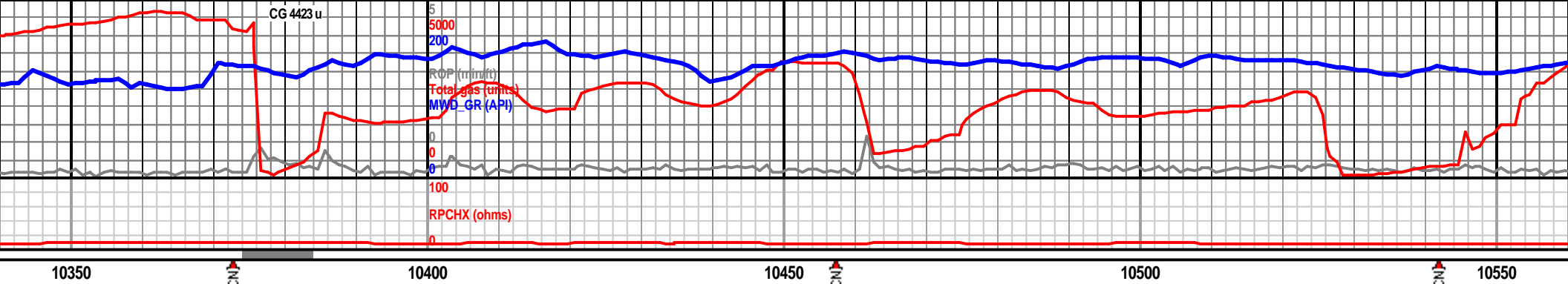


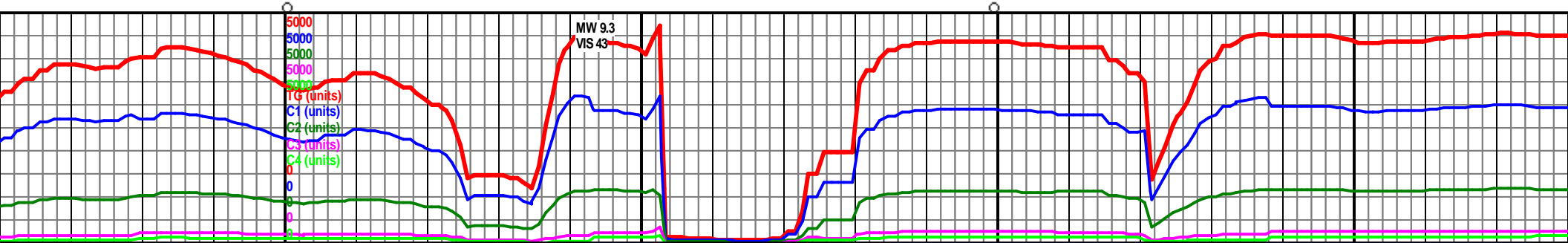
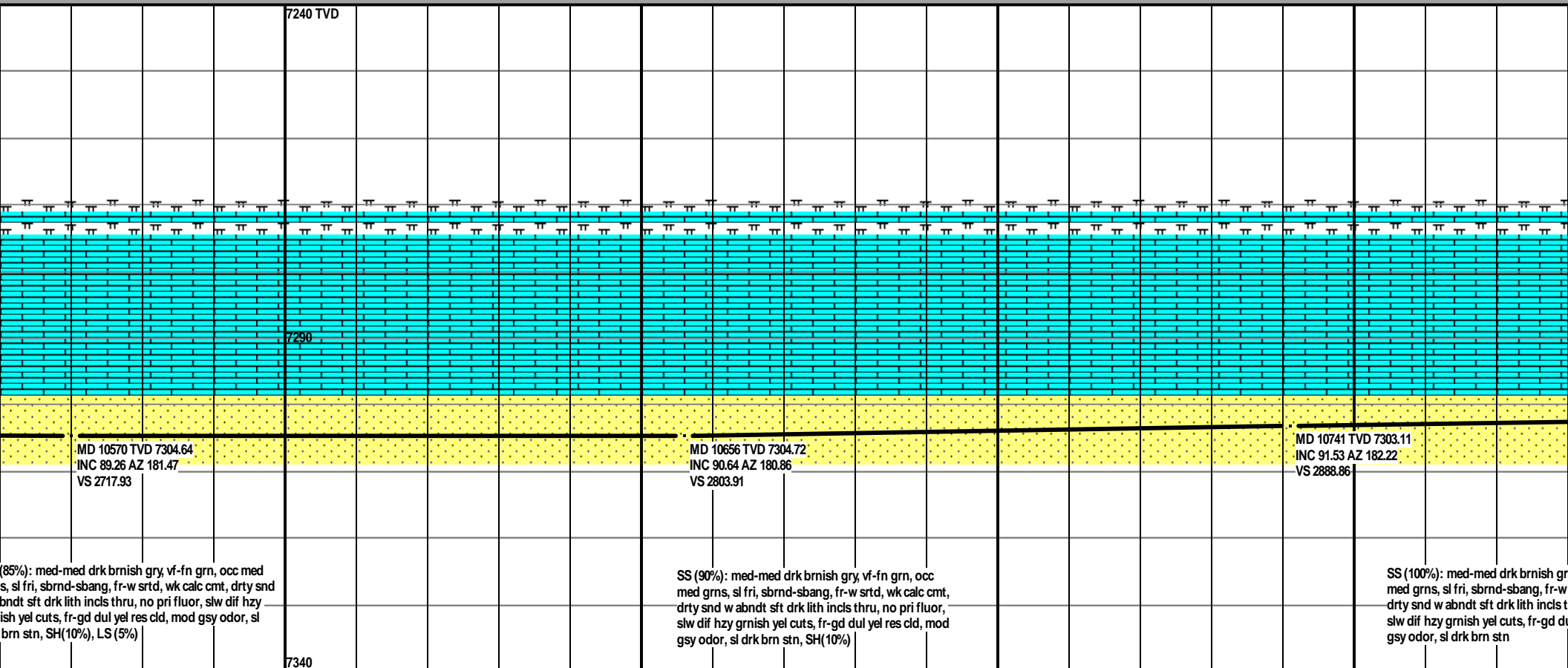
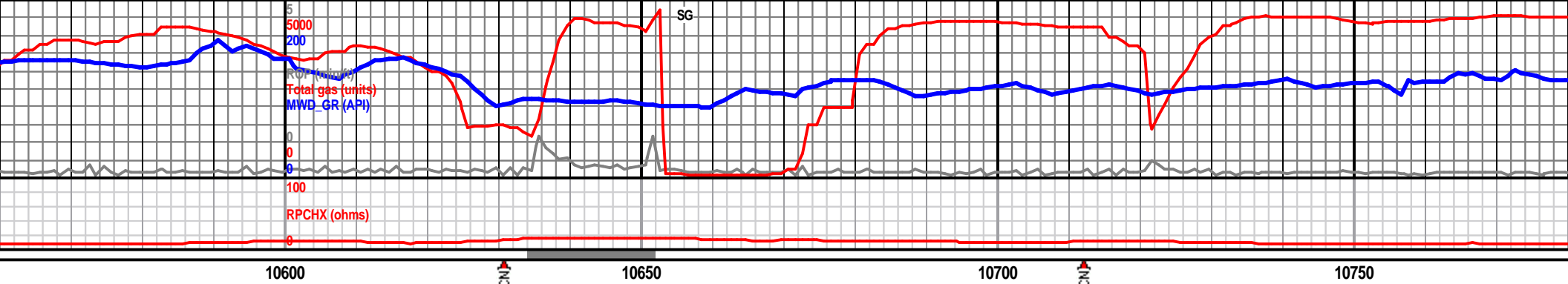




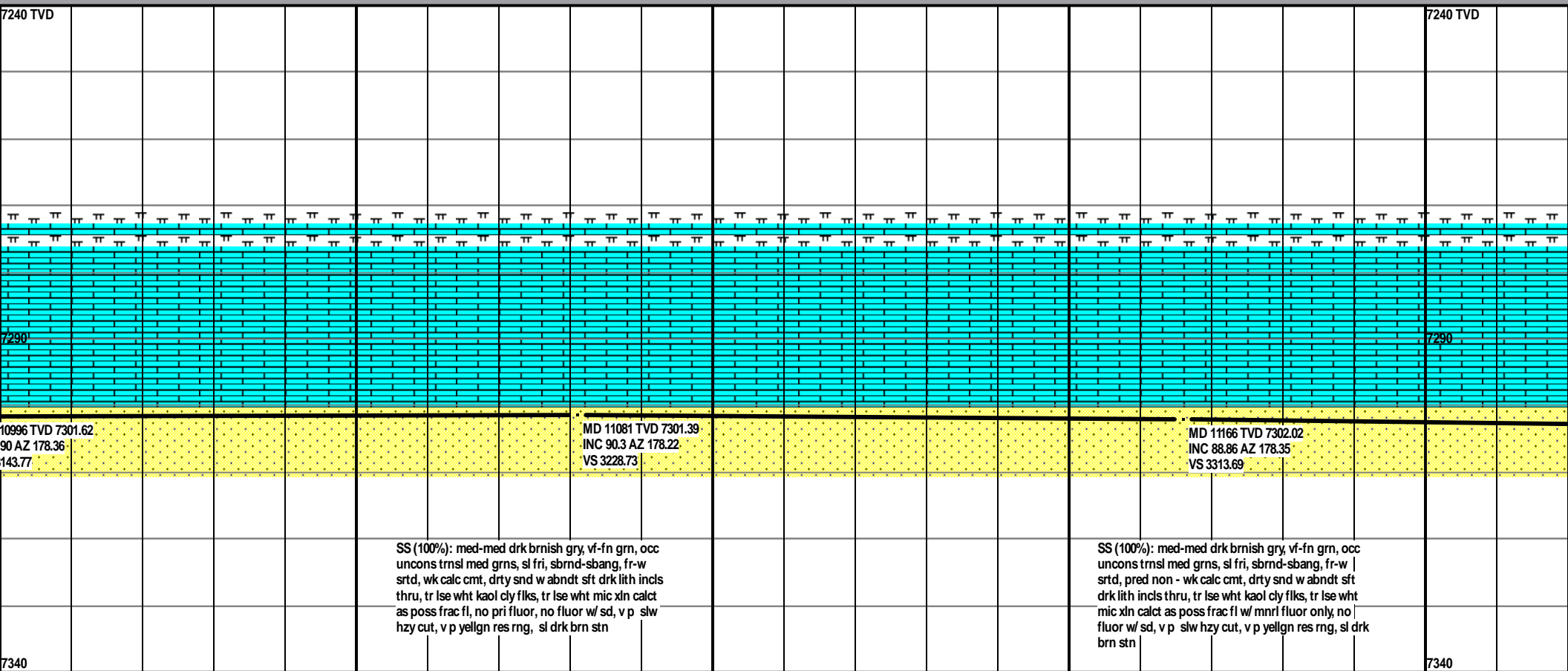


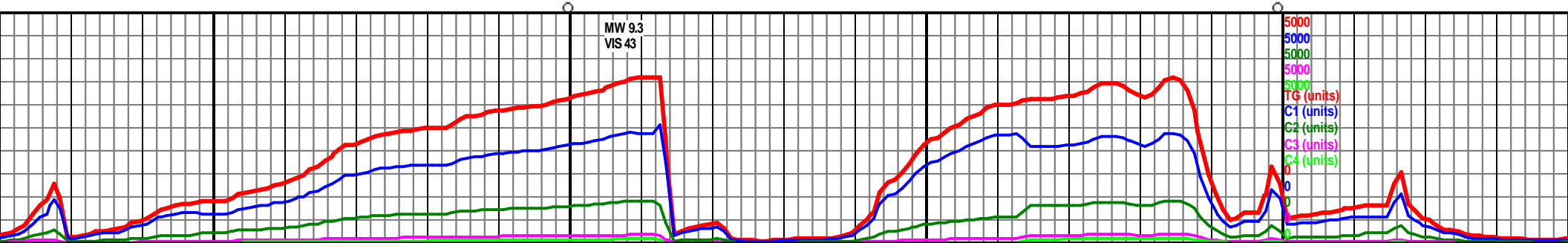
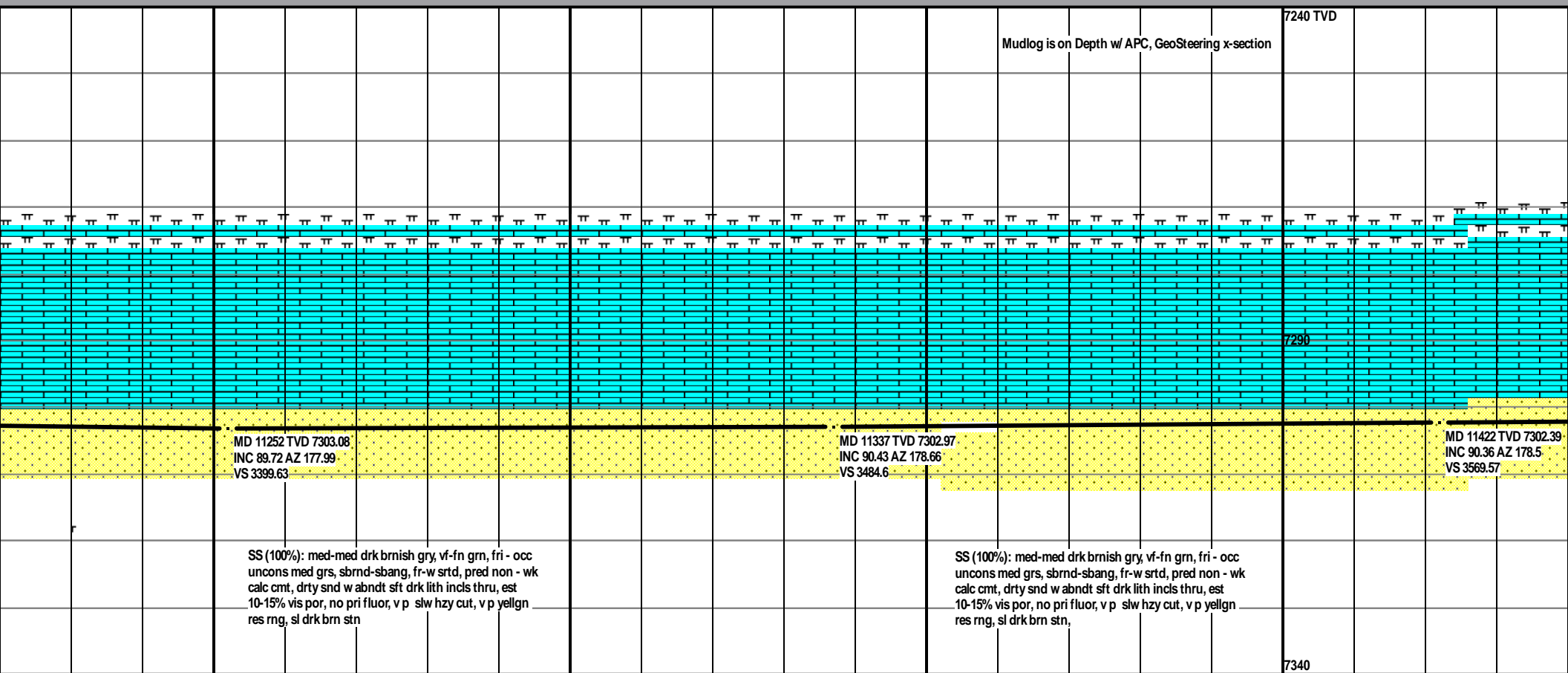
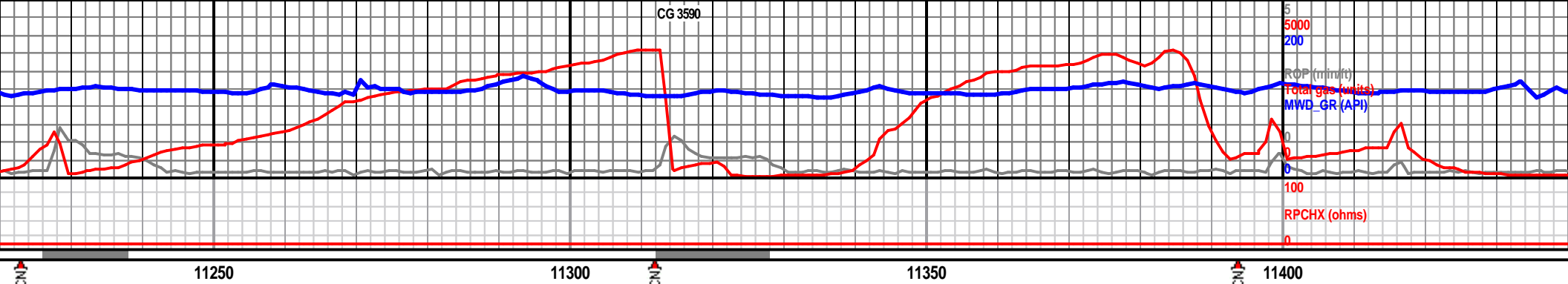


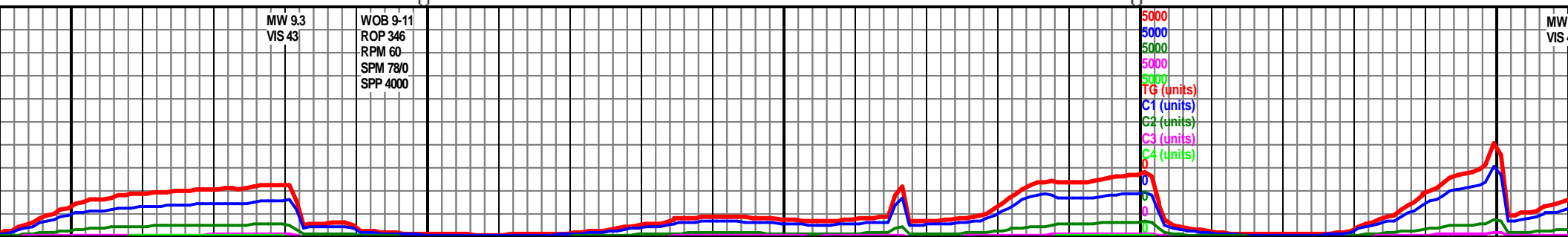
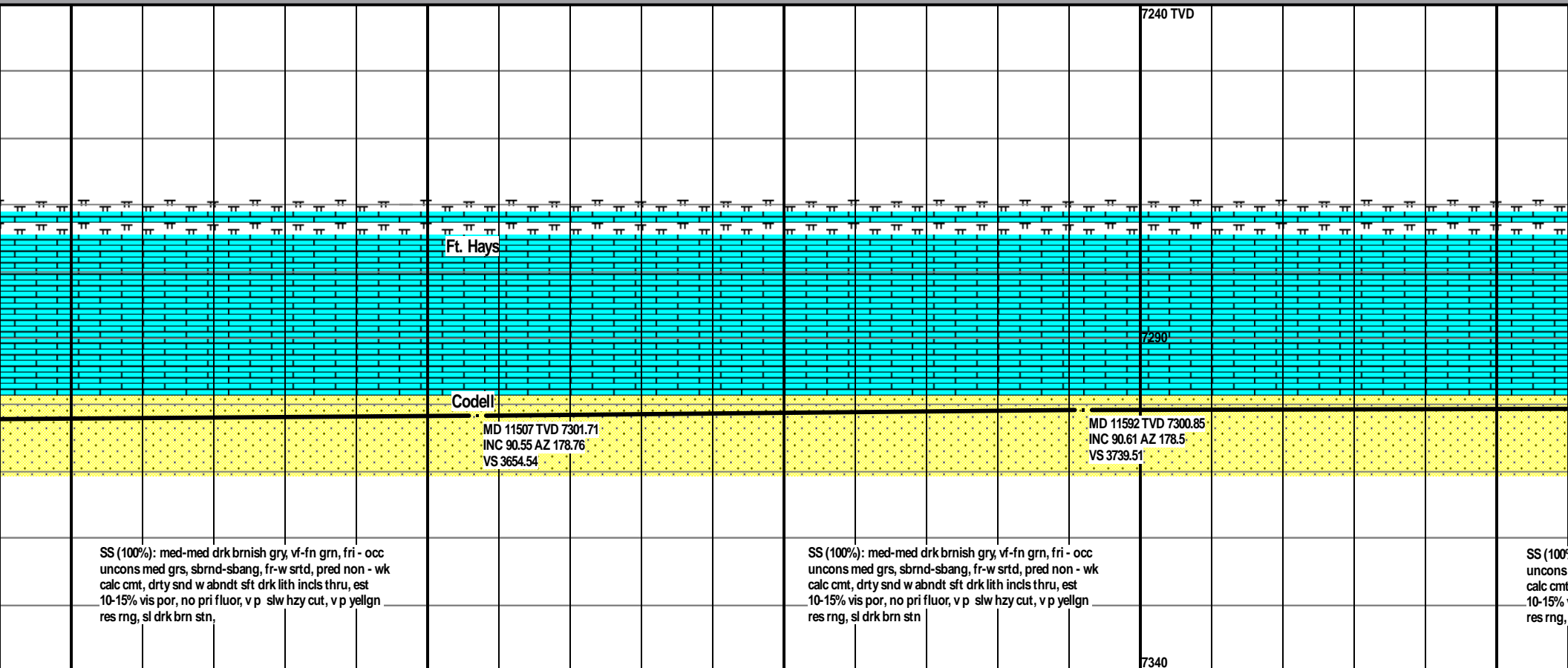
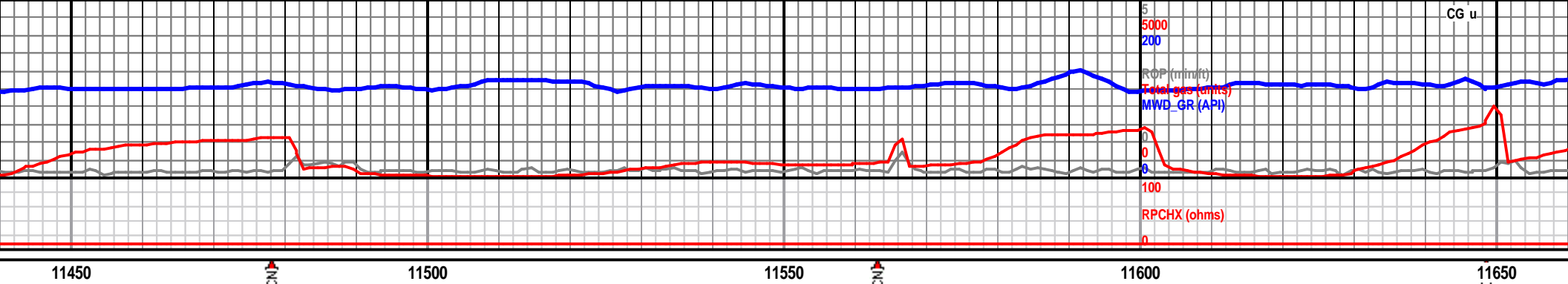


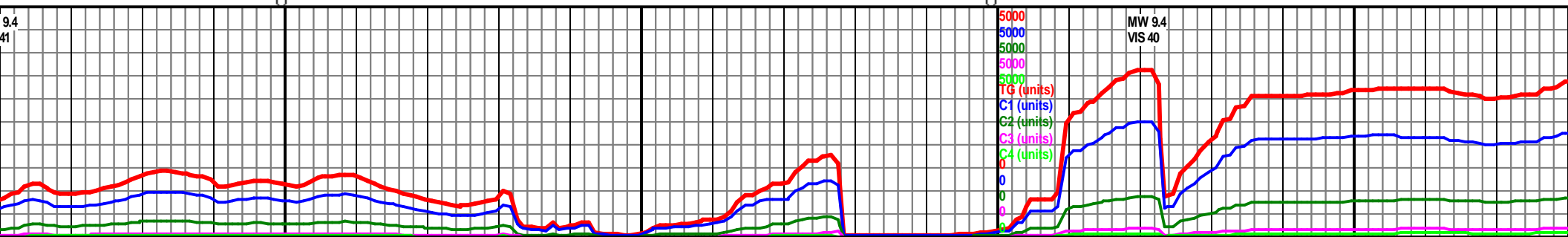
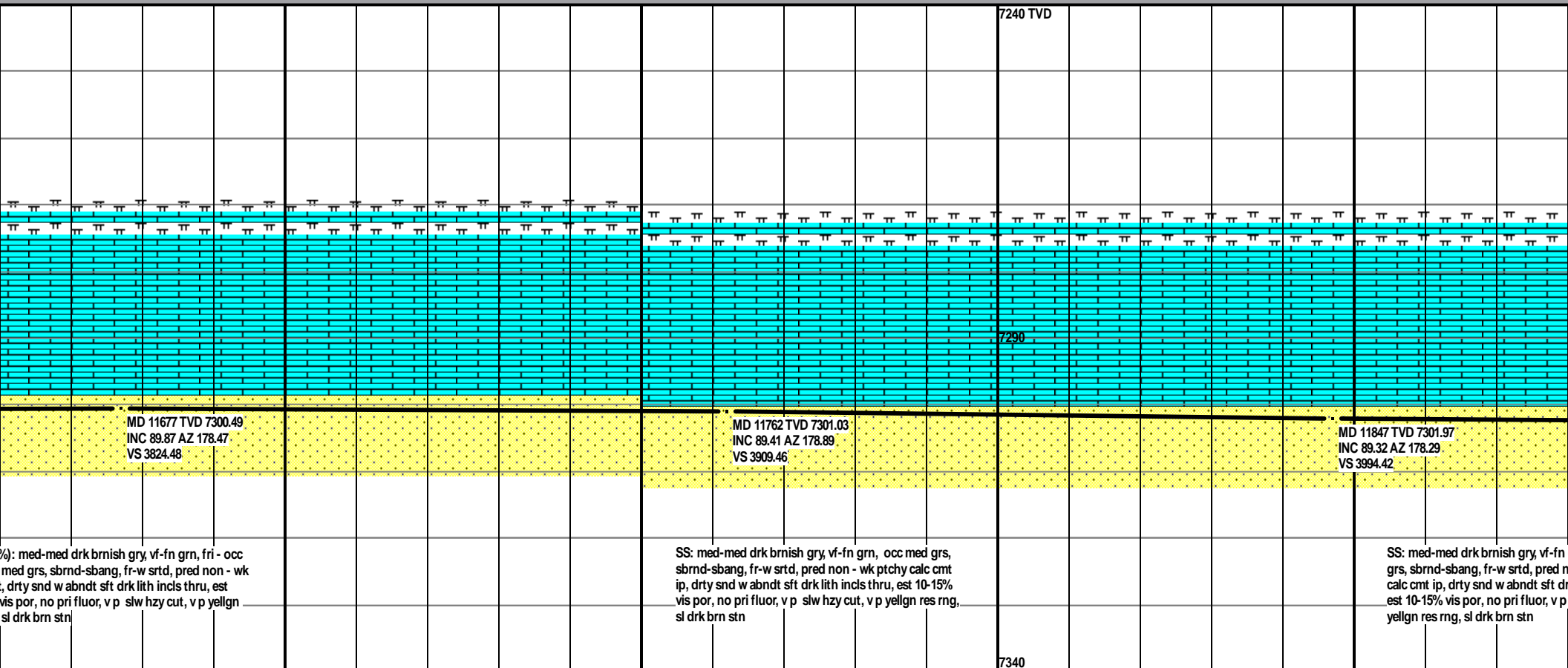
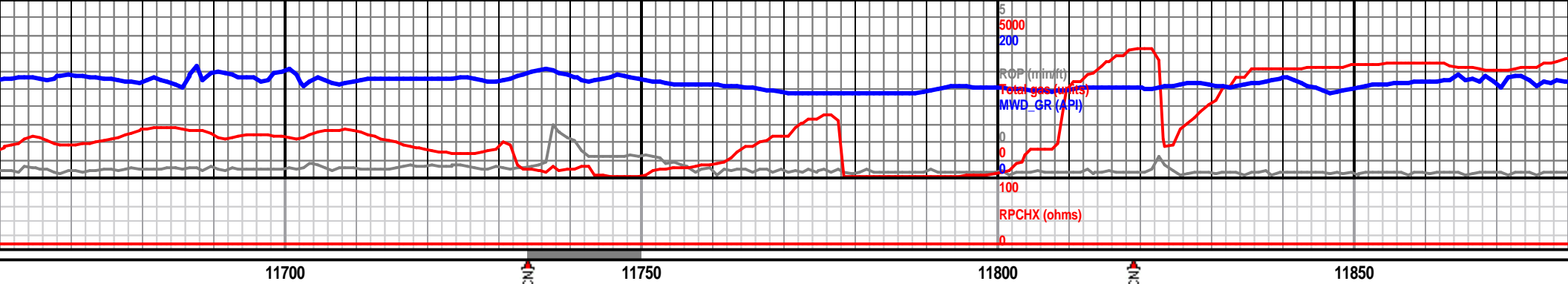


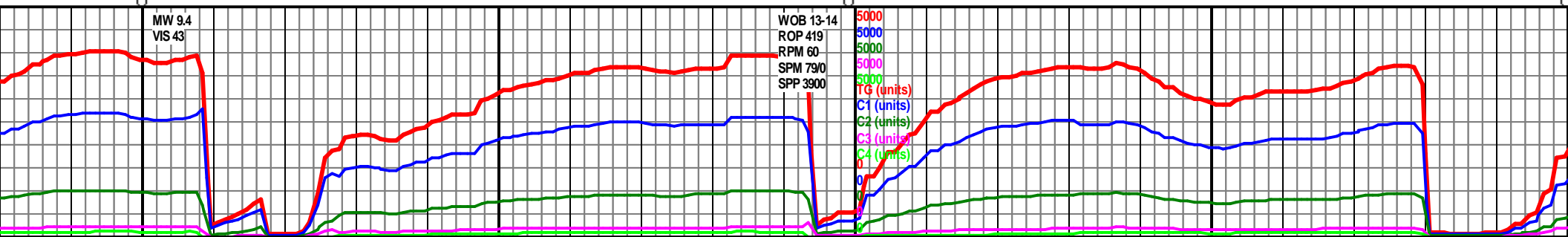
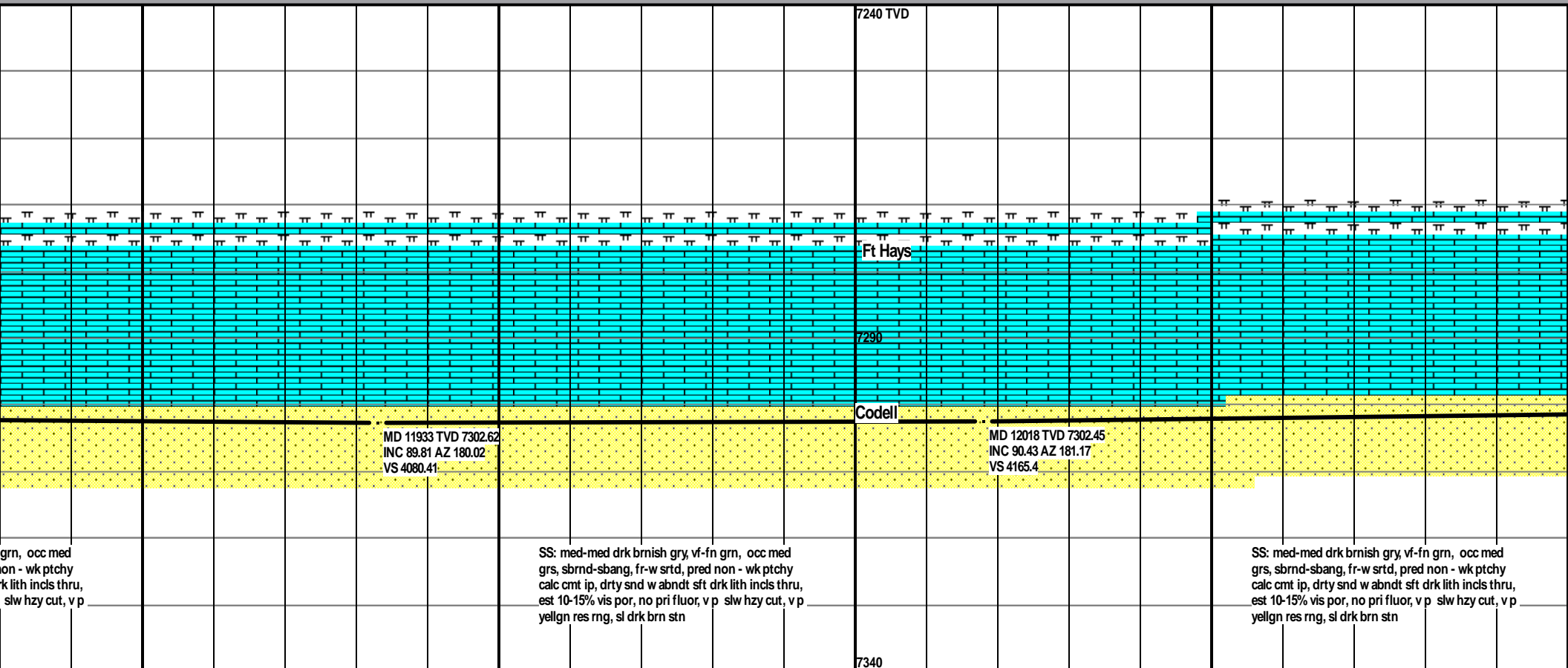
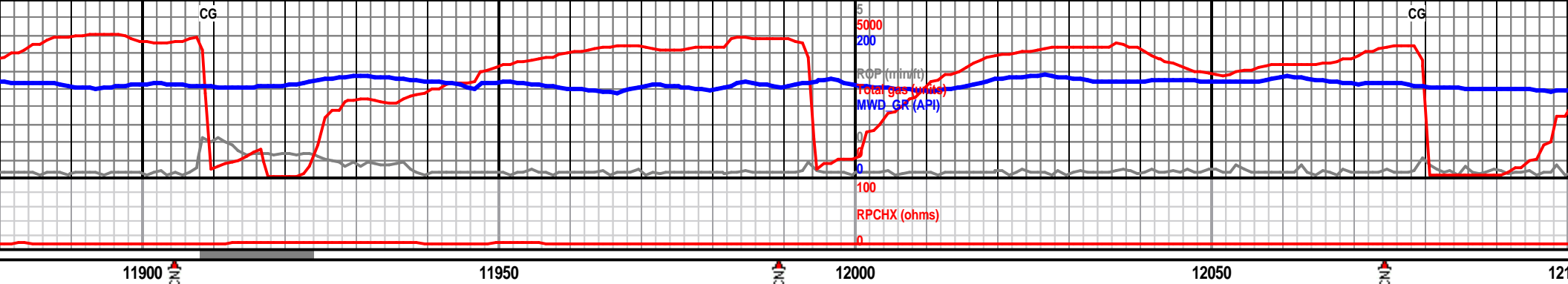


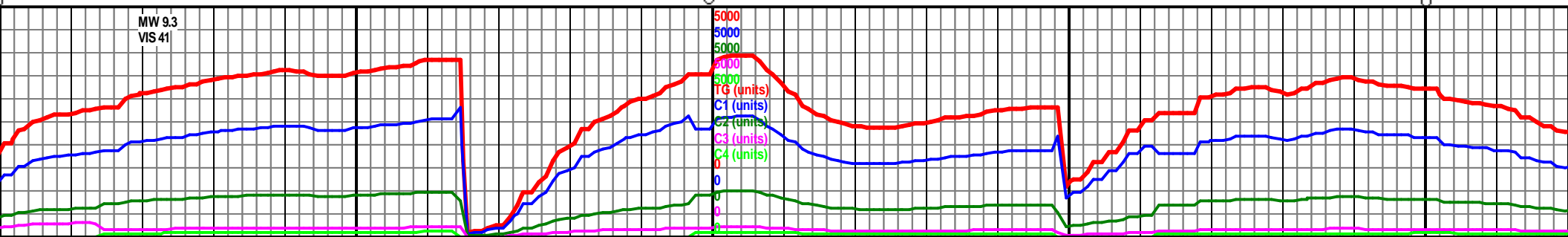
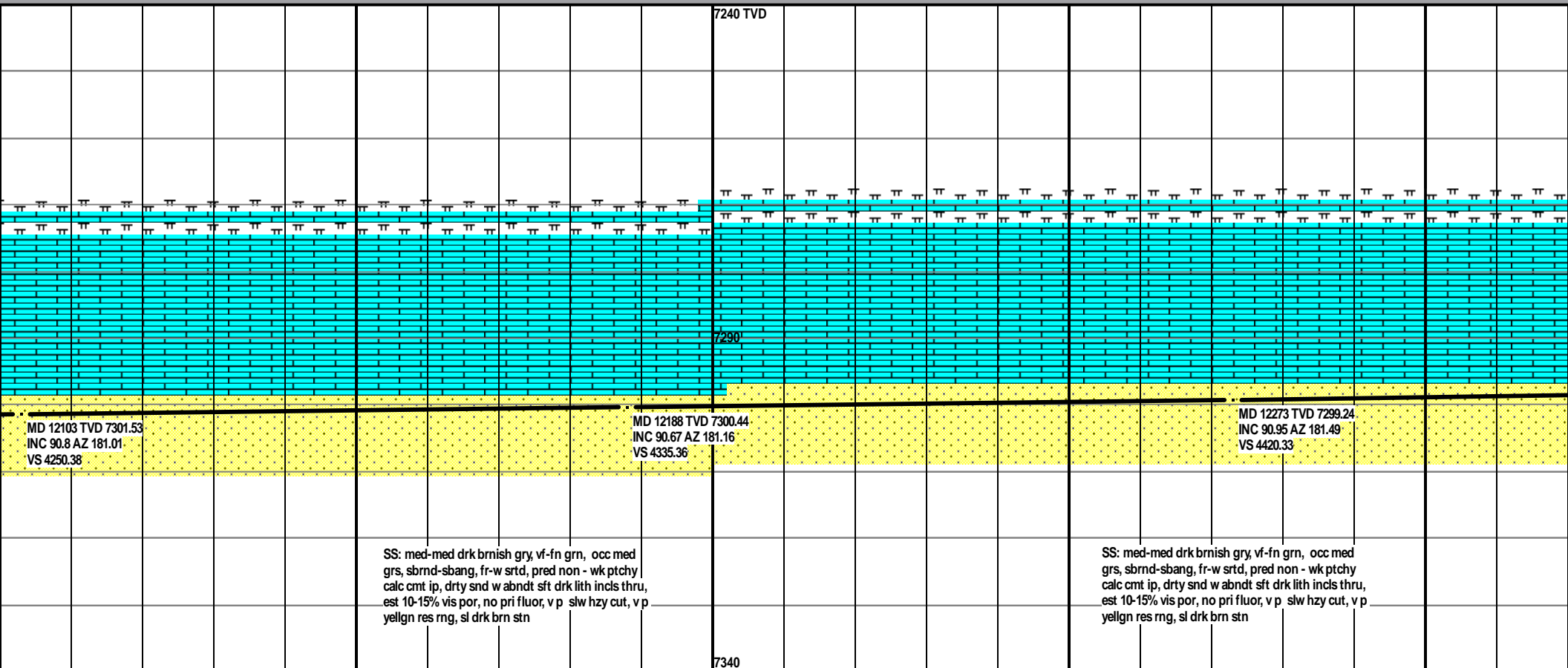
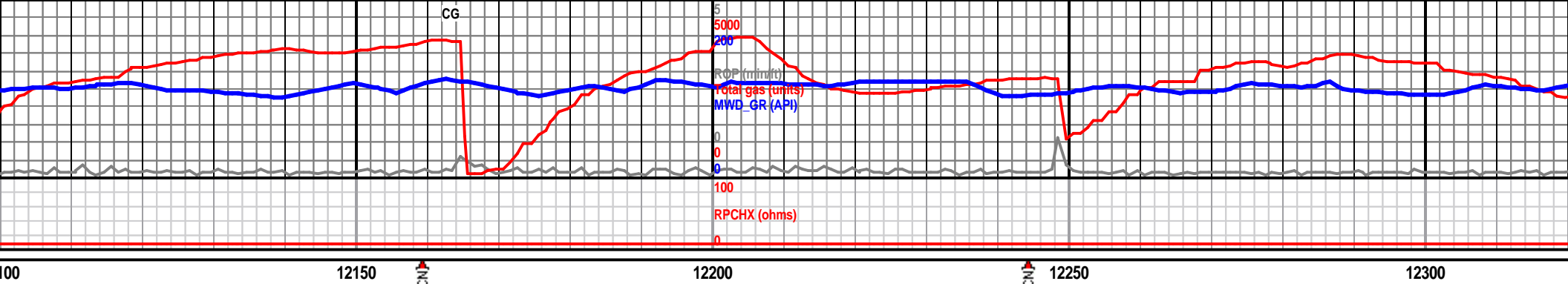




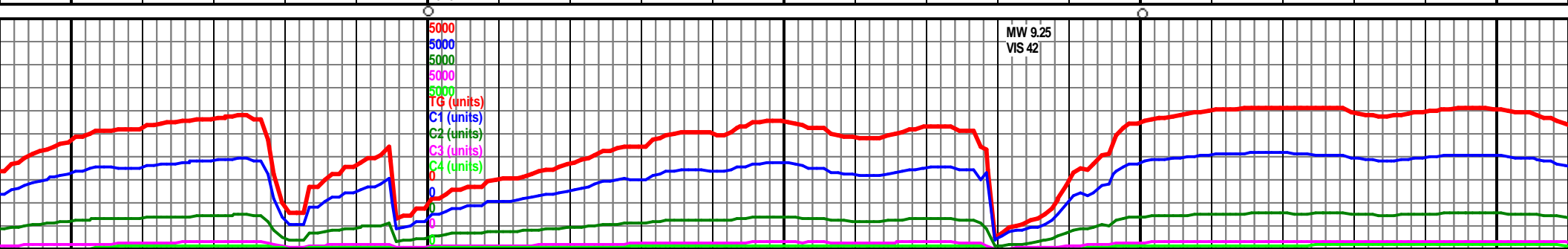
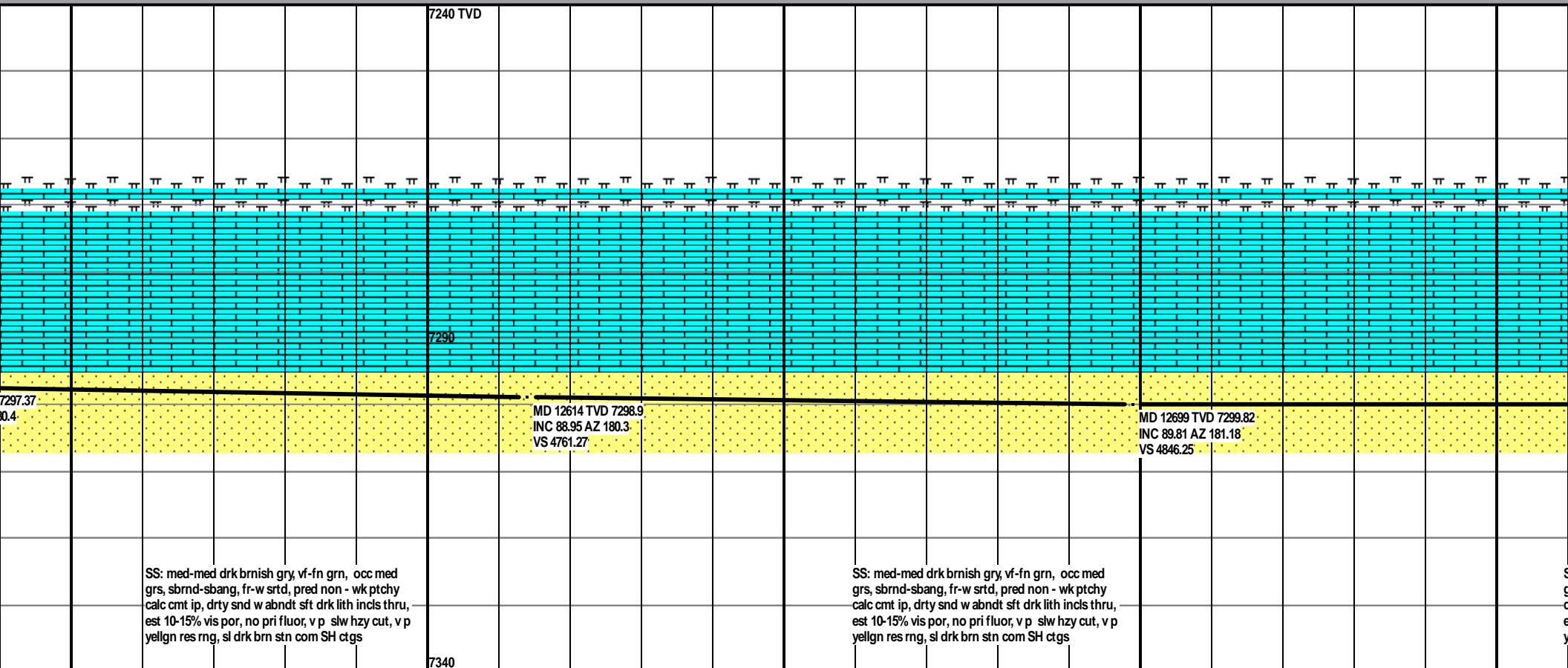
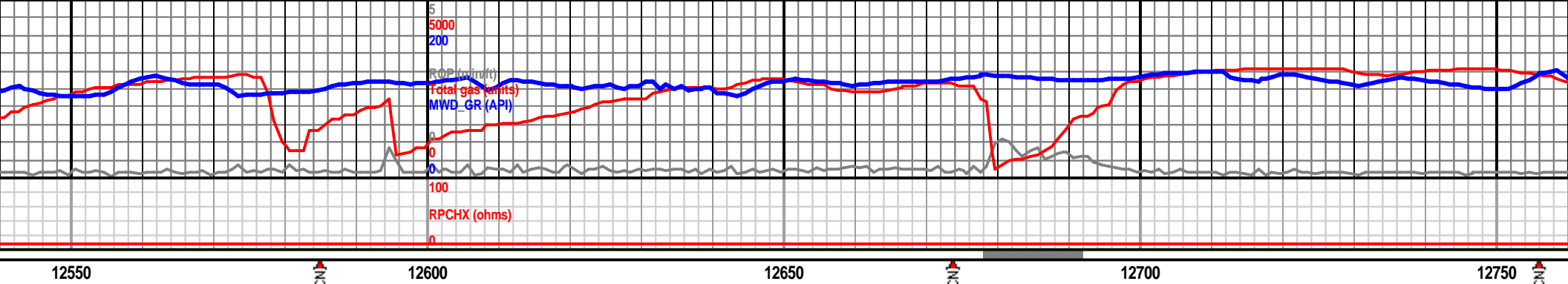


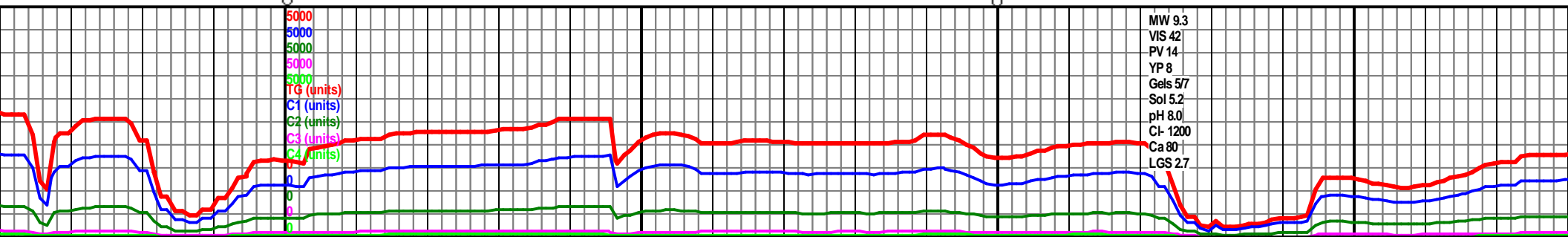
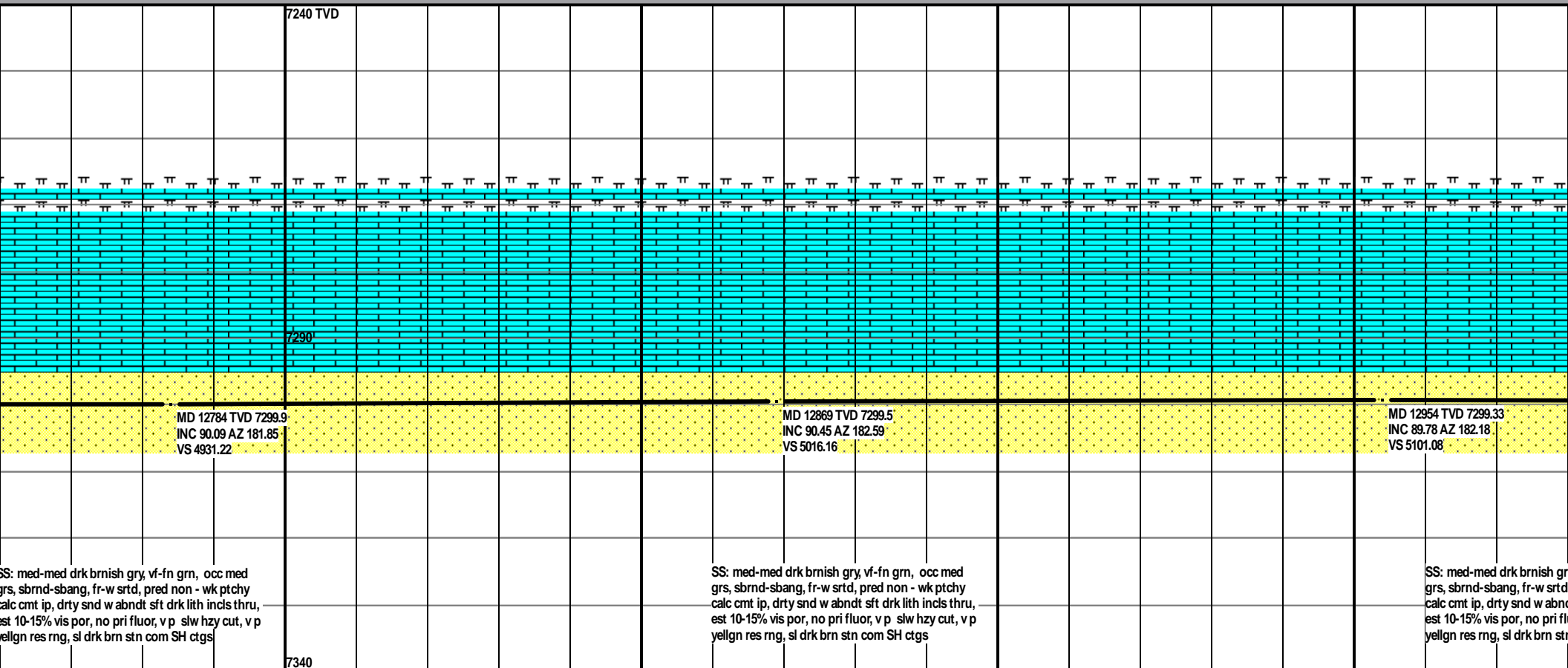
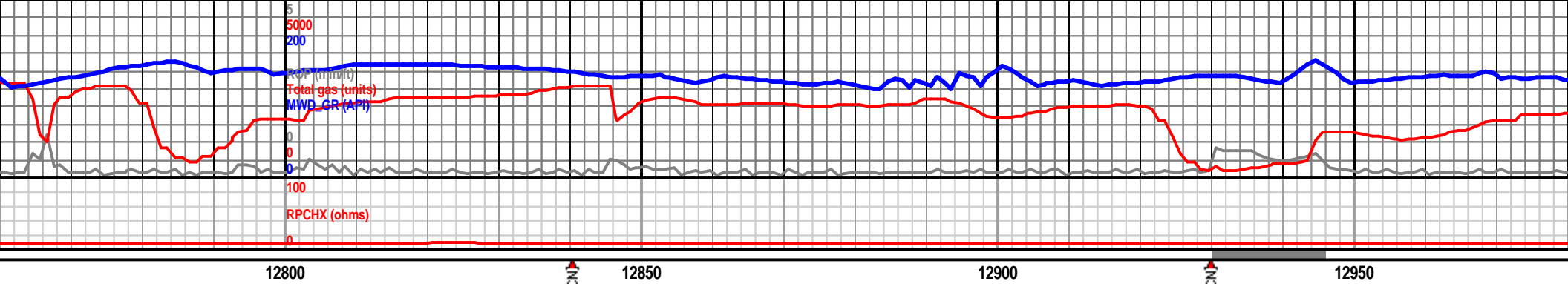




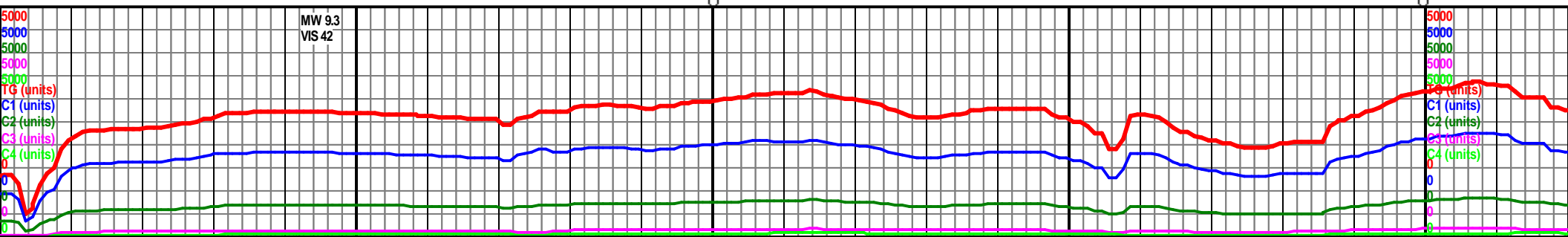
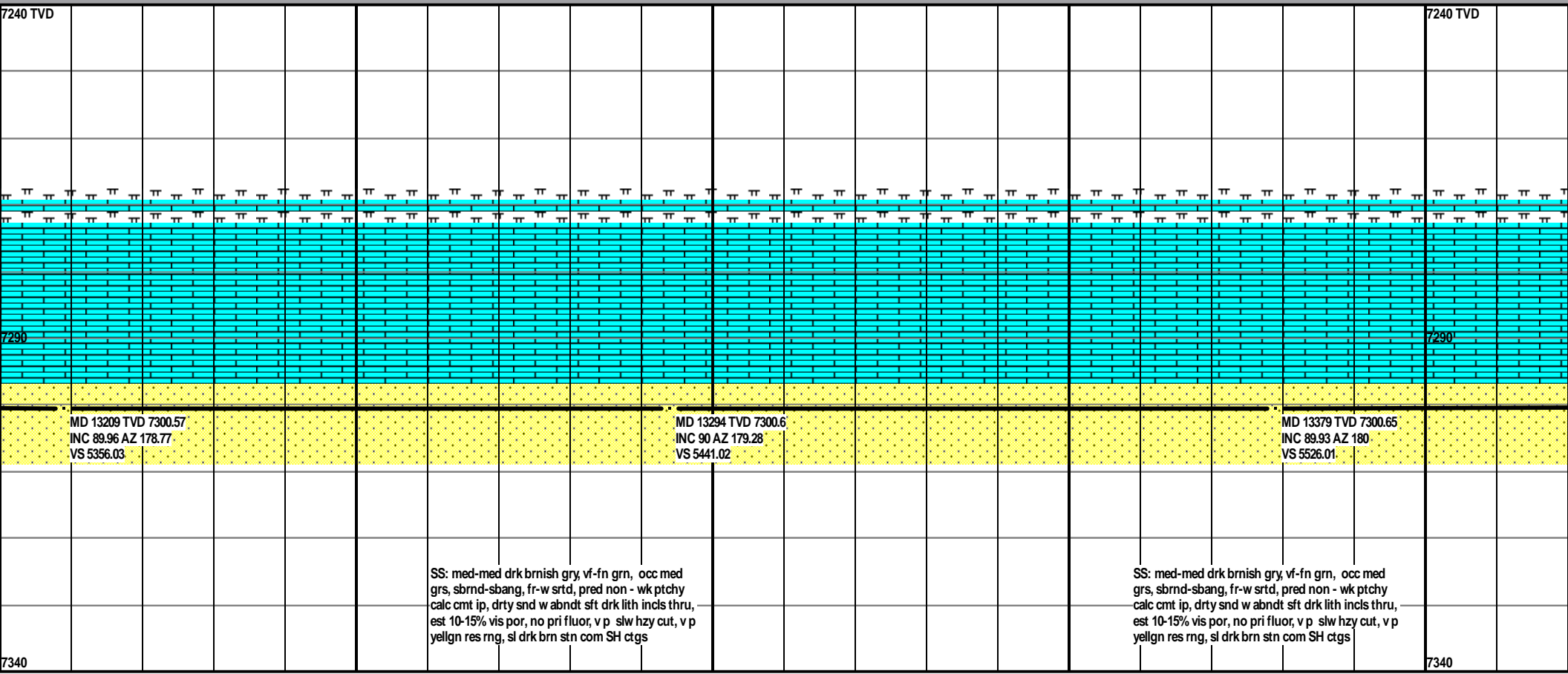
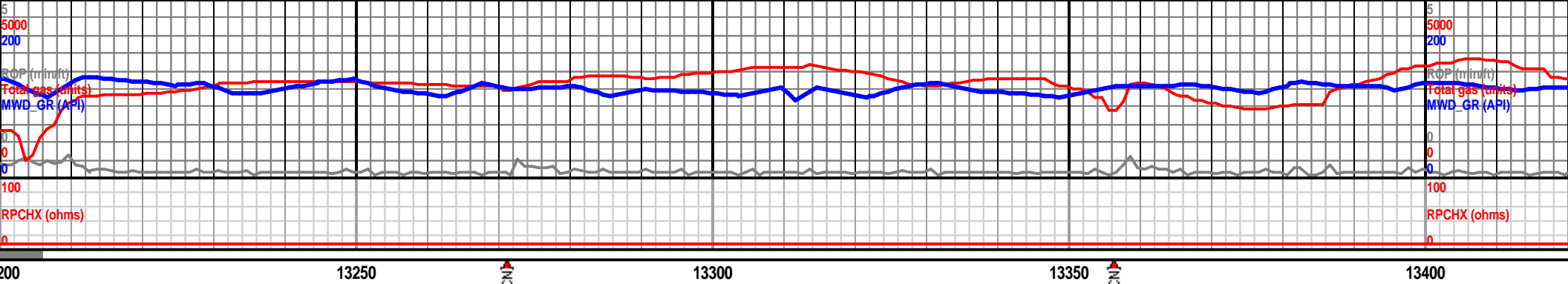


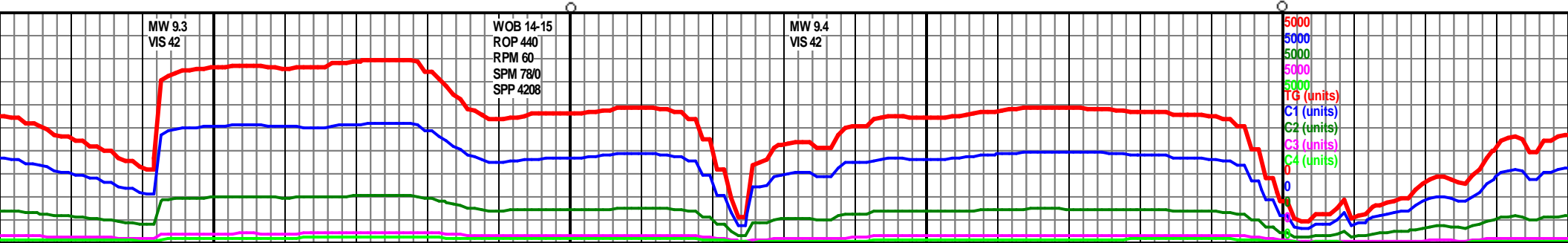
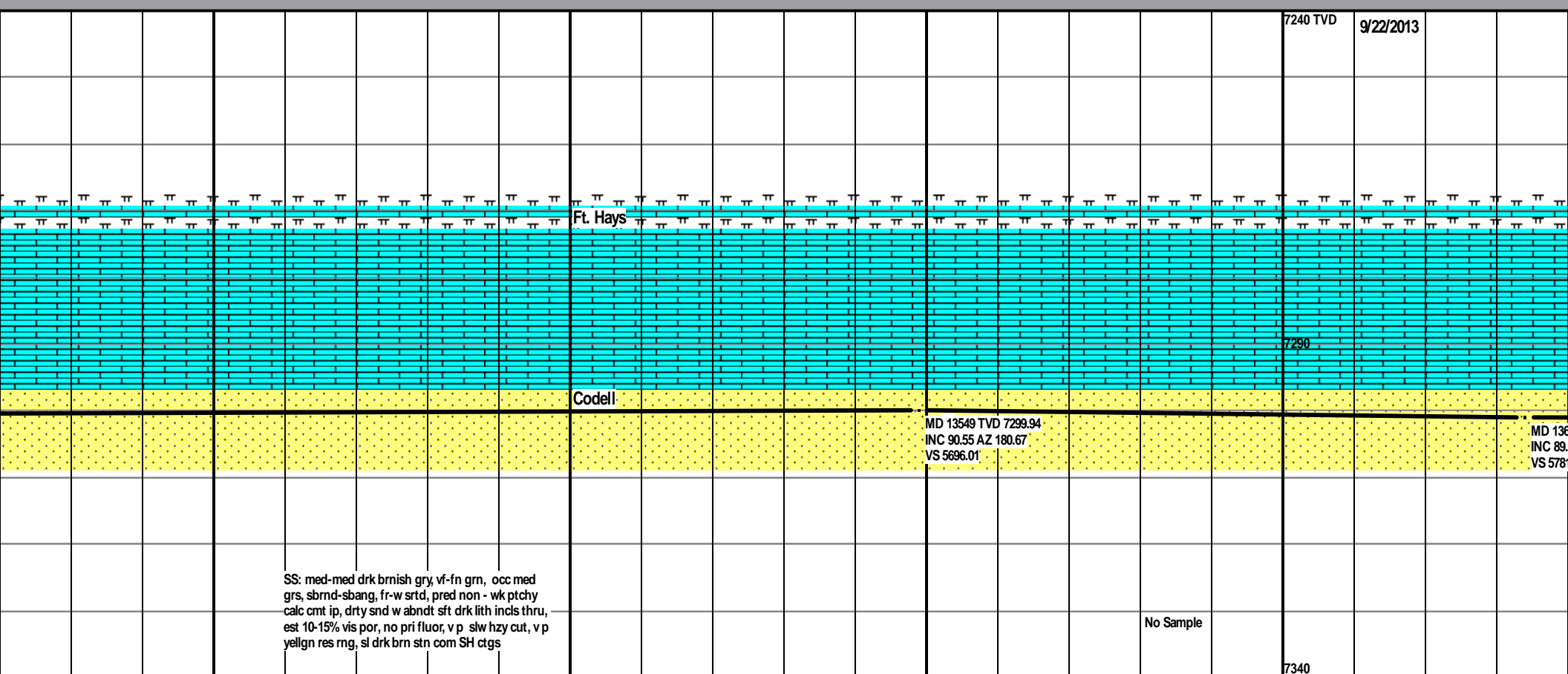
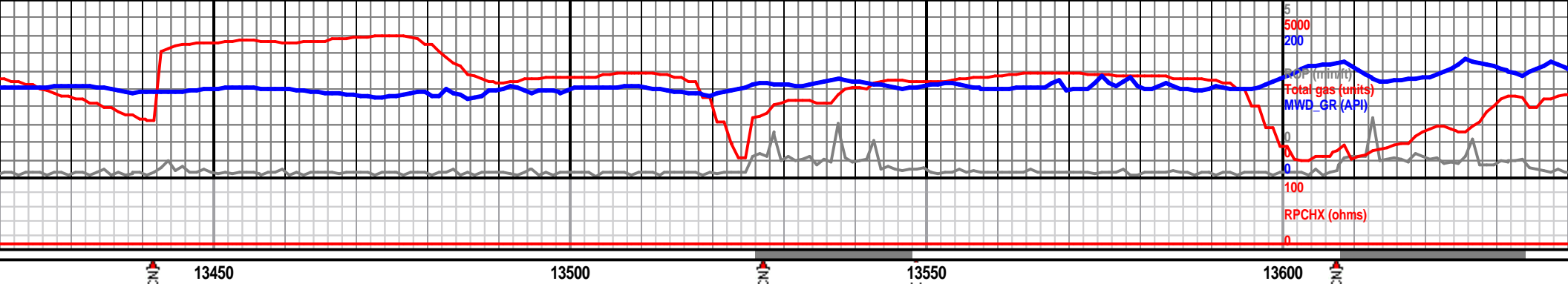


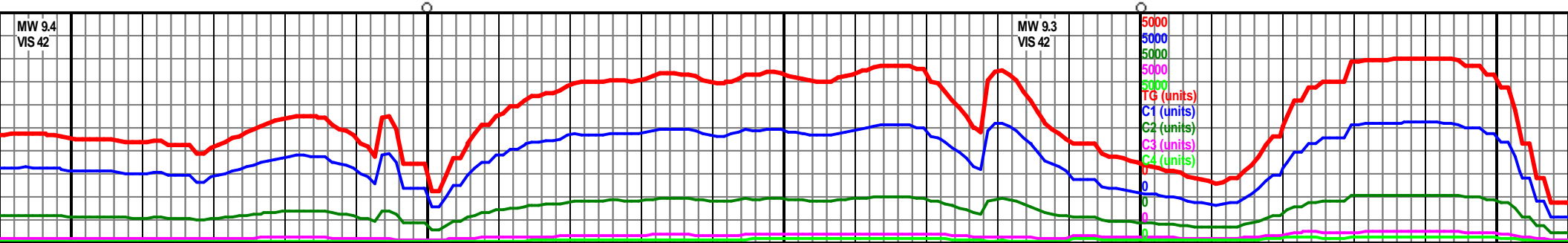
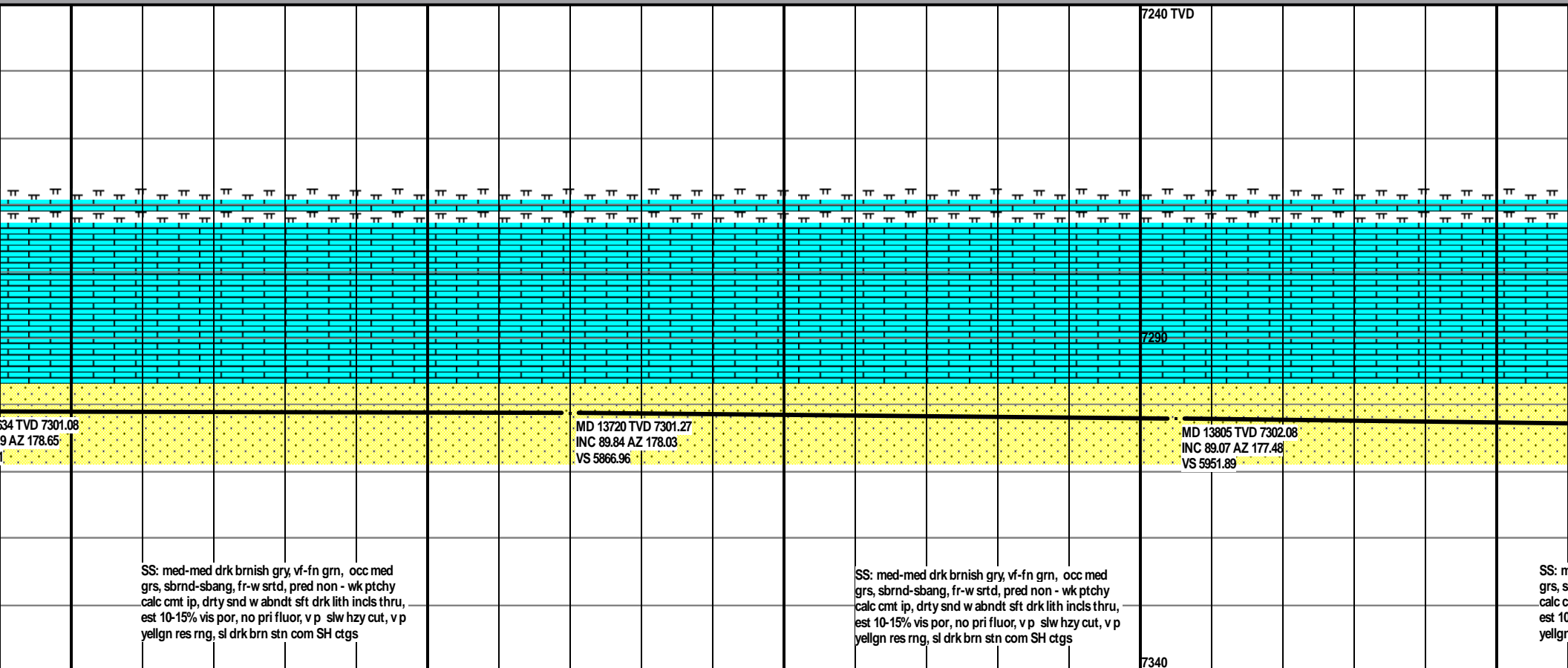
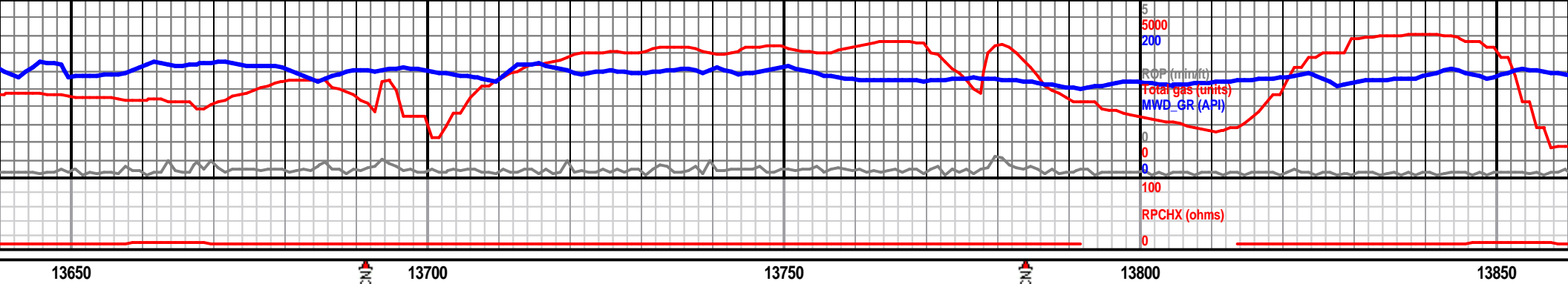


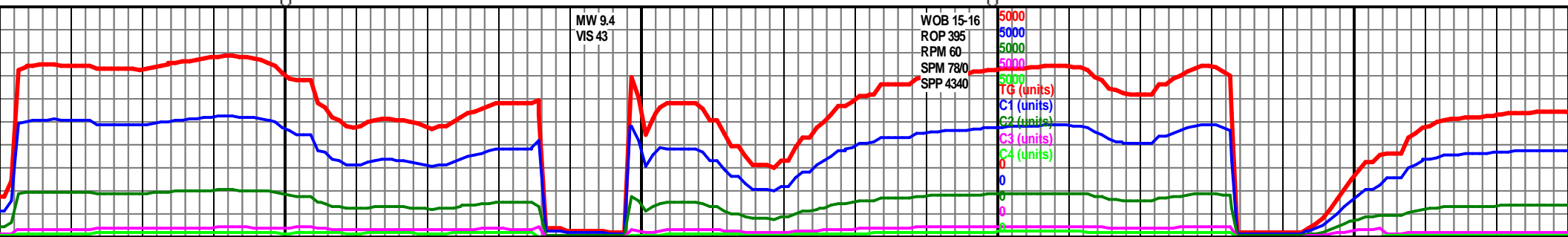
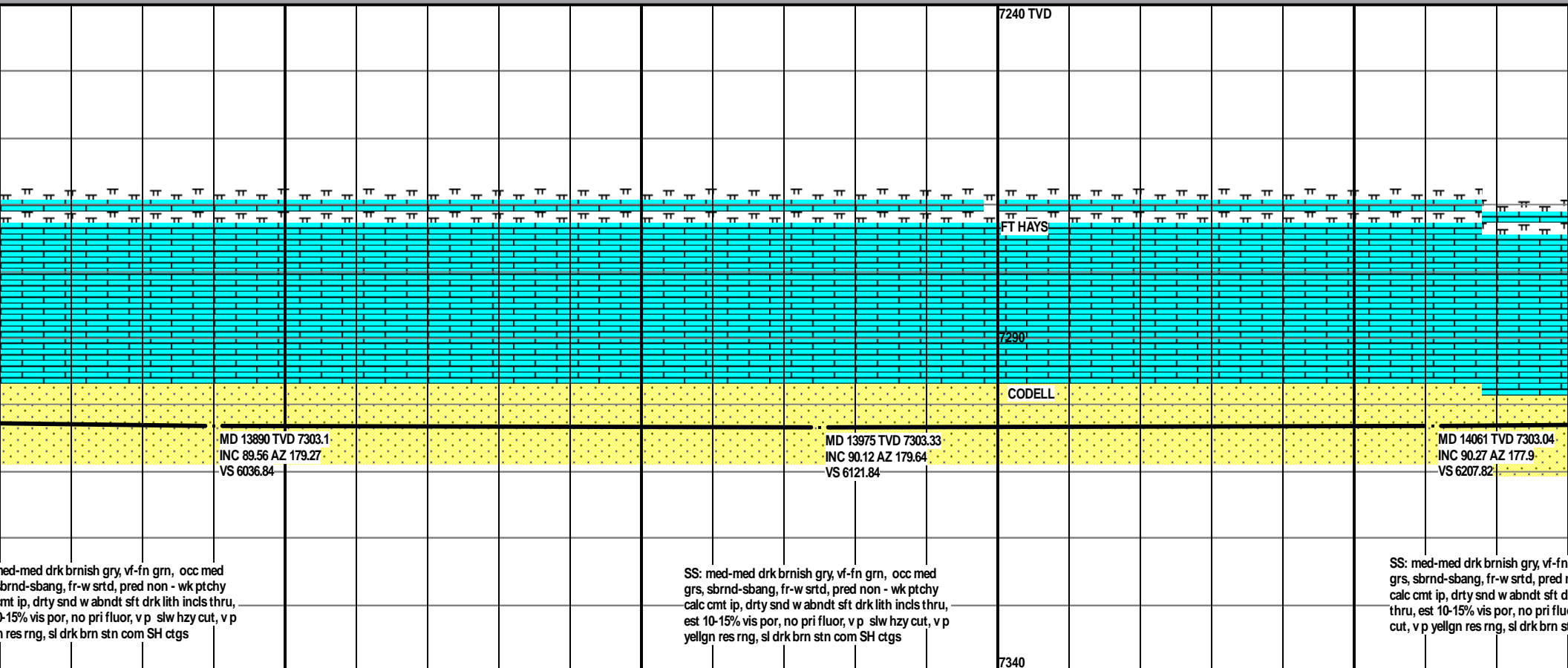
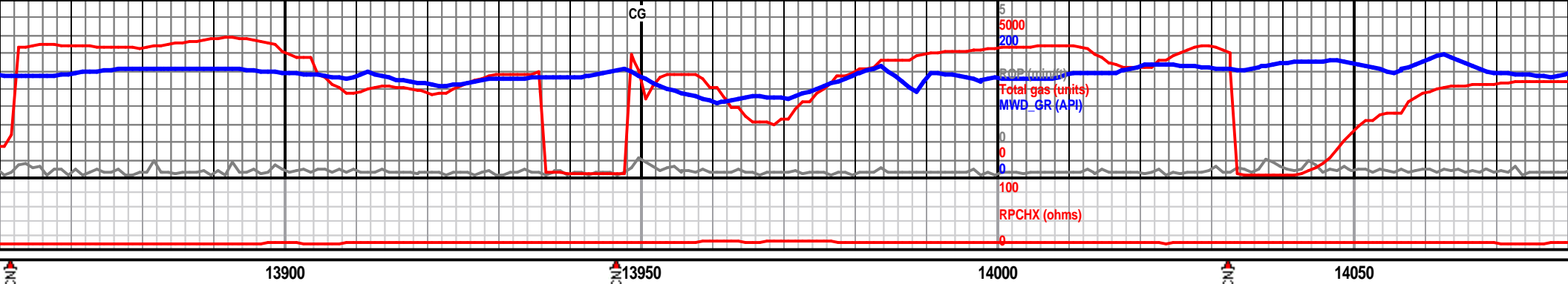


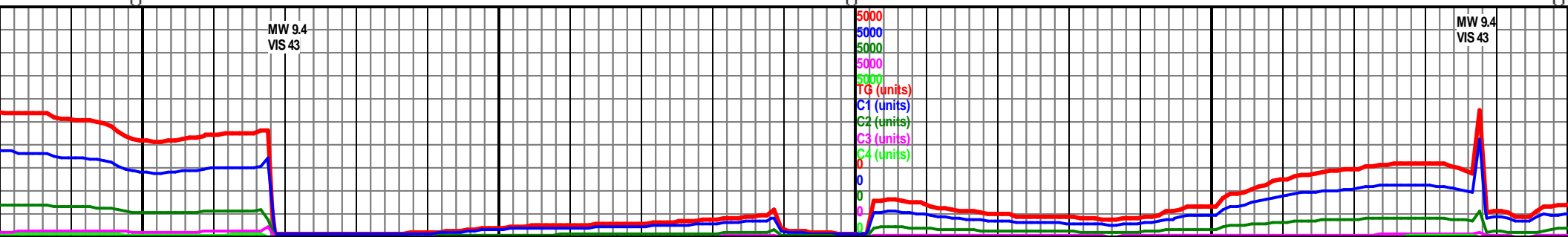
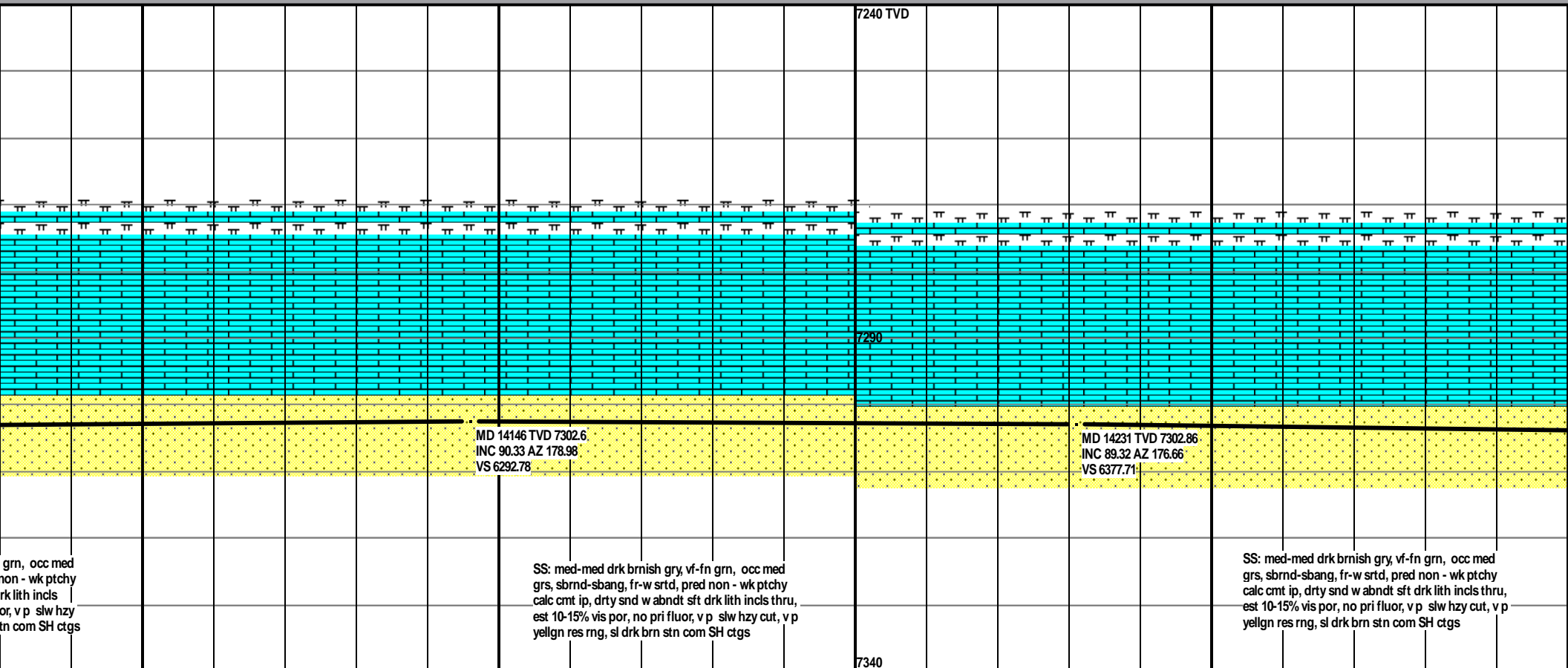
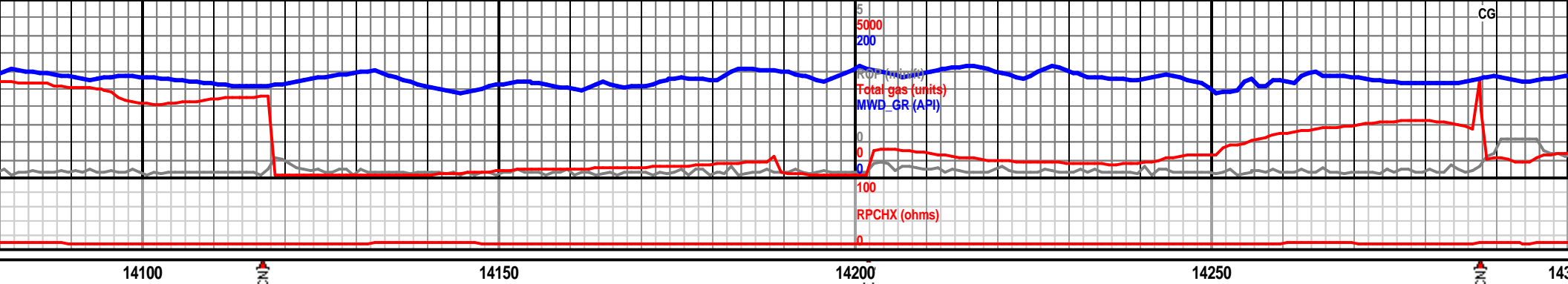


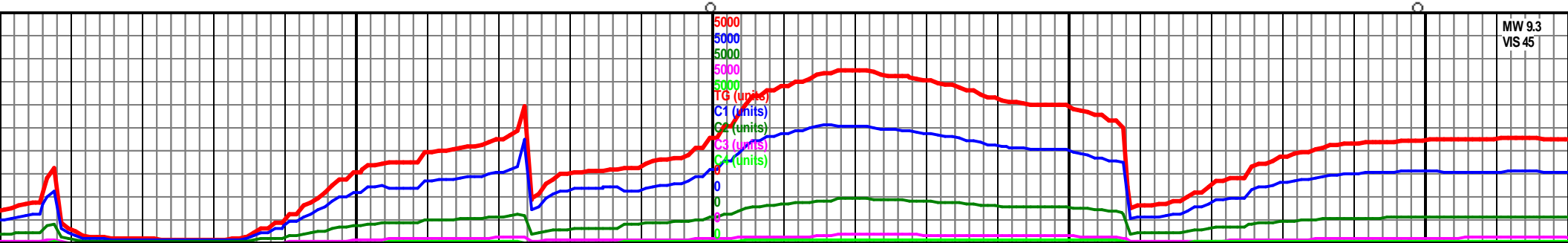
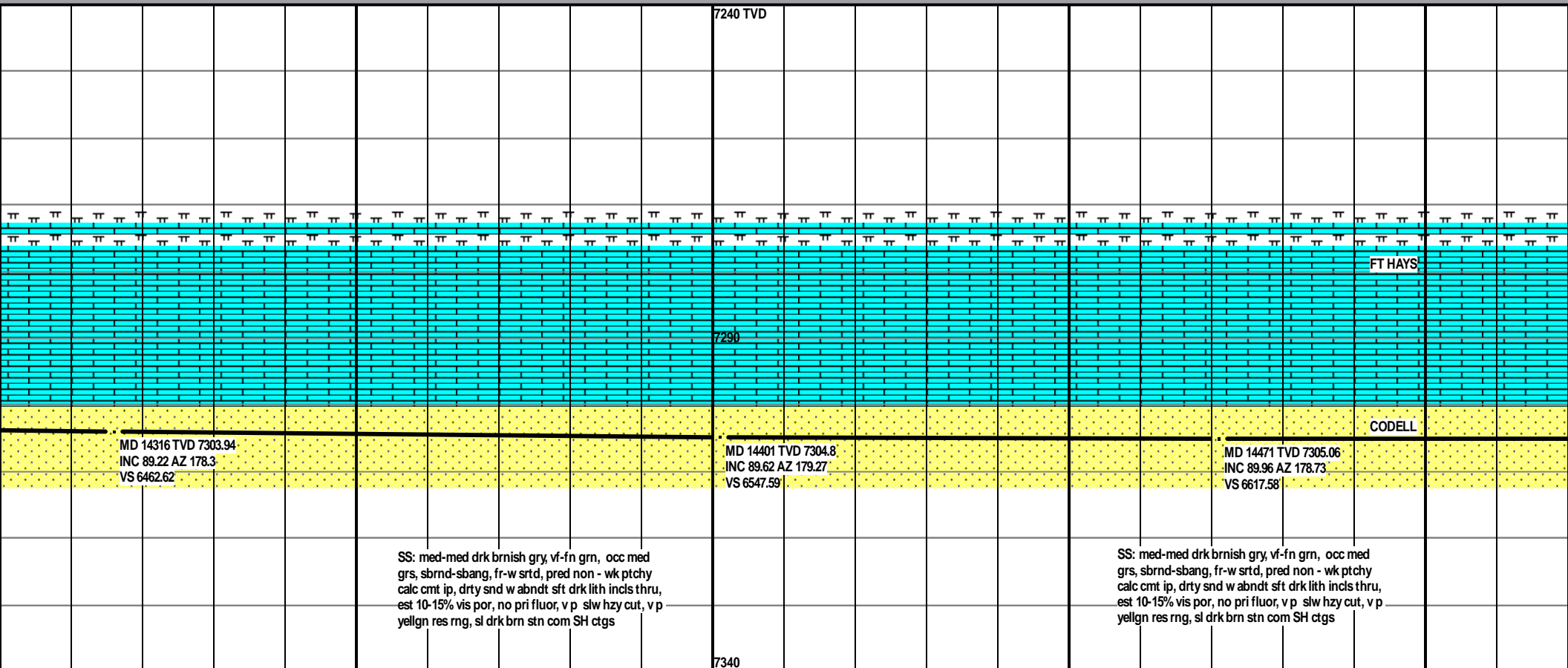
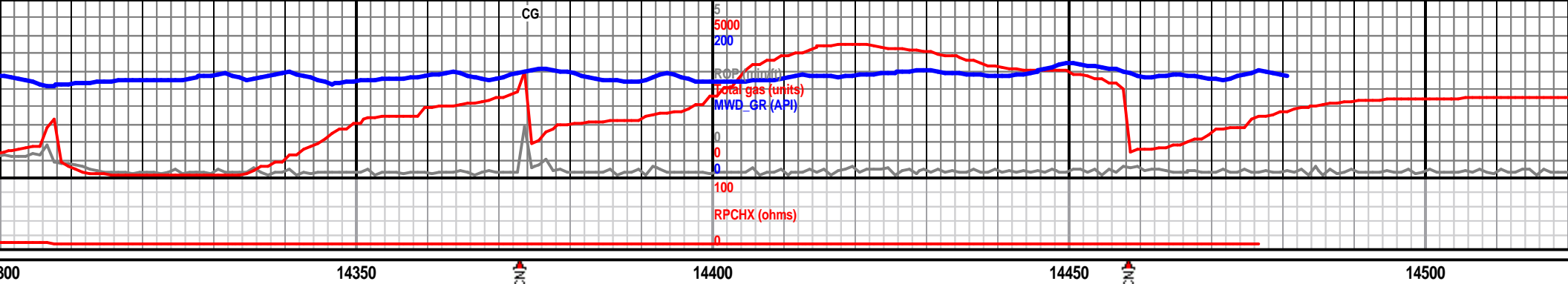












MW 9.3  
VIS 45

