

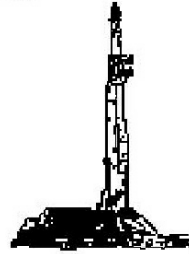
**GOOLSBY BROTHERS**  
and associates, inc.

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: HUDSON 13C-35HZ  
Location: Section 26, T2N, R65W, Weld County, CO.  
License Number: API: 05-123-35946, AFE# 2063624.DRL Region: Wattenberg  
Spud Date: January 31, 2013 Drilling Completed: February. 13, 2013  
Surface Coordinates: Sec 26, T2N, R65W 353' FNL & 501' FWL  
Lat: 40° 06' 57.17" N Long: 104° 38' 20.10" W  
Bottom Hole Coordinates: SW SW Sec 35, T2N, R65W  
9860.9' South & 89.54' West of Surface Location  
Ground Elevation (ft): 4909' K.B. Elevation (ft): 4925'  
Logged Interval (ft): 6650' To: 16845' Total Depth (ft): 16845'  
Formation: Pierre shales / sands, Niobrara B ChalkTarget  
Type of Drilling Fluid: Polymer-Water to ICP / Oil Based Mud in Lateral  
Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

**OPERATOR**

Company: Anadarko/Kerr-McGee Oil & Gas Onshore LP  
Address: Granite Tower - 1099 18th St, Ste 1800  
Denver, CO 80202  
CO Geologist, Tom Birmingham

**GEOLOGIST**

Name: Robert Nordeck, W. H. McCroskey III  
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: 6560' - 7522' & 7575' - 16772'  
MWD Resistivity: 7575' - 16779'


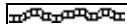
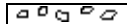

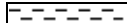

## Casing






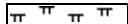
9 5/8" Surface Casing set @ 1333'  
7" Intermediate Casing set @ 7543'  
4 1/2" Production Liner to be set to 16845' TD







## Comments





- 1) Drilling Contractor: Xtreme Drilling, Rig # 22  
Rig Manager: Mike Headley / Tyler Humphrey
- 2) Company Man: Dave Cornett / Randy Anderson /  
Danny Warner / Will Pettijohn
- 3) Well Site Geologists: Goolsby Brothers & Assoc. :  
Robert Nordeck / W. H McCroskey III
- 4) Mud Company : Newpark Drilling Fluids,  
Mud Engineer: Nick Jevne
- 5) Directional Drilling: Sperry / Halliburton  
Drillers: Randy Bernatow,  
MWD: Matthew Busche, Caleb Jones, Clay Wass
- 6) Gas Equipment: Mudlogging Systems Inc.  
by Terra Services  
Redbox # ML-173 & # ML-058 w/ Ratcliff Agitator

## ROCK TYPES

 Anhy  
 Bent  
 Brec  
 Cht  
 Clyst  
 Coal

 Oil sat.  
 Congl  
 Dol  
 Gyp  
 Lmst  
 Mrlst

 Salt  
 Shale  
 Shcol  
 Shgy  
 Ss  
 Slstst

 Ss  
 Chalk  
 Carb sh  
 Slty sh

## ACCESSORIES

### MINERAL

	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtl
	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
	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

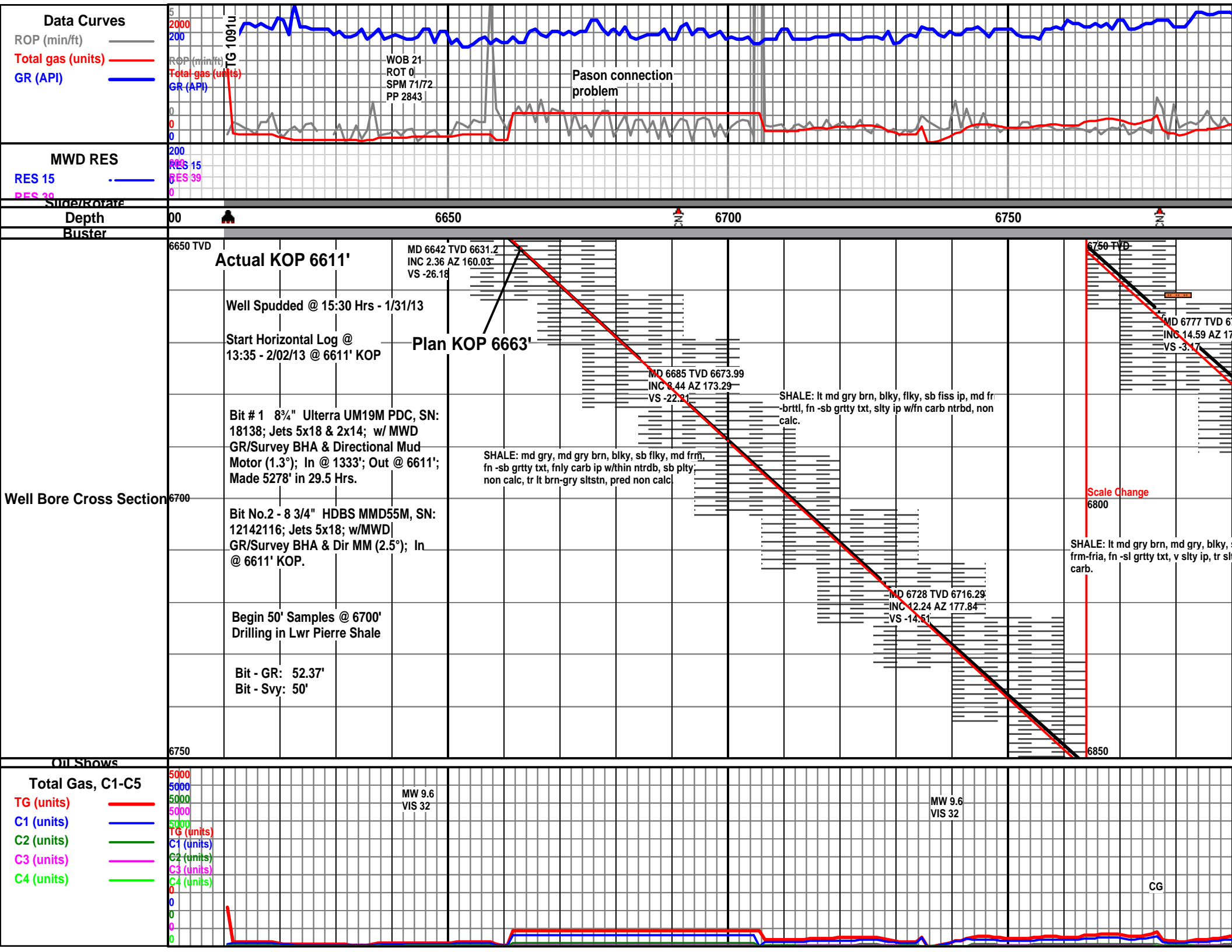
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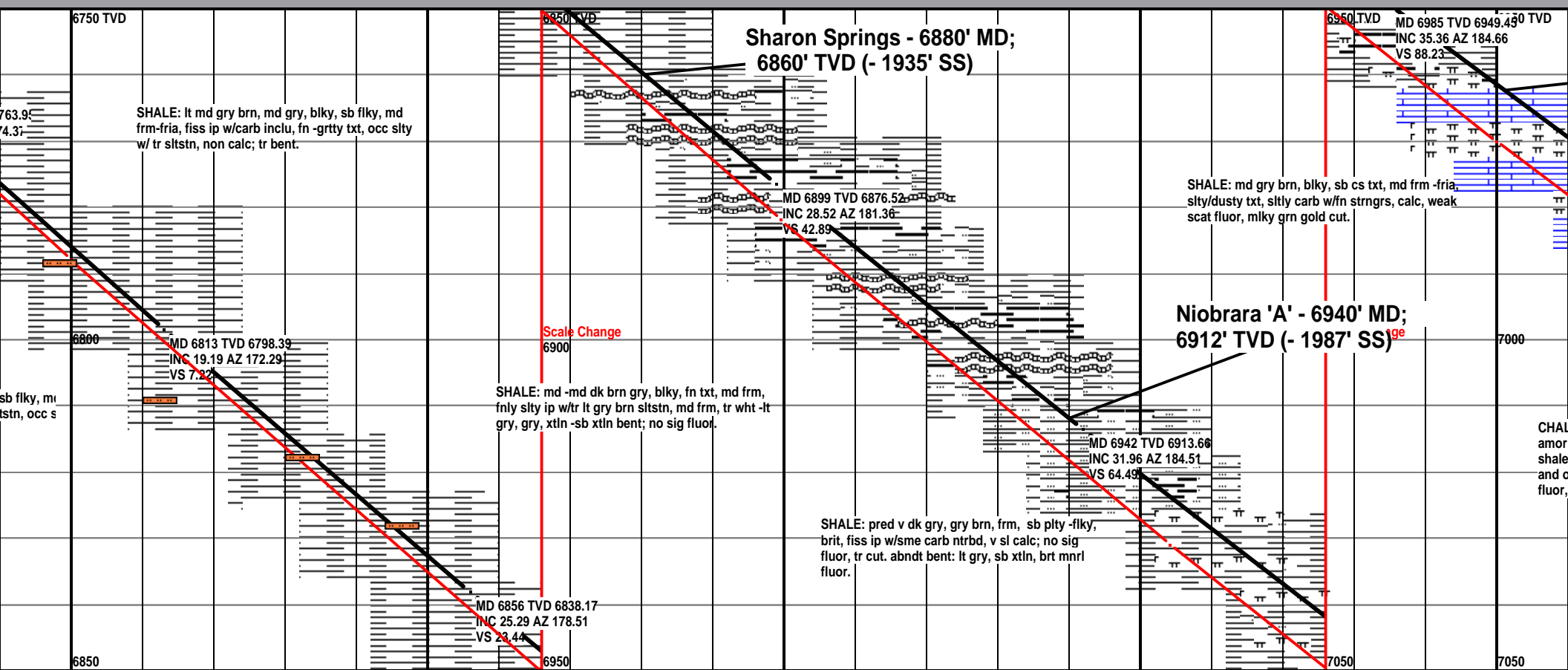
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	Subrnd
	Subang

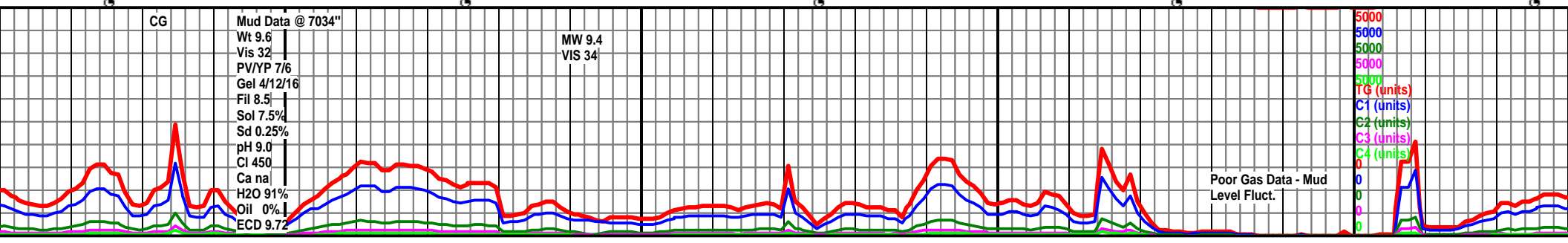
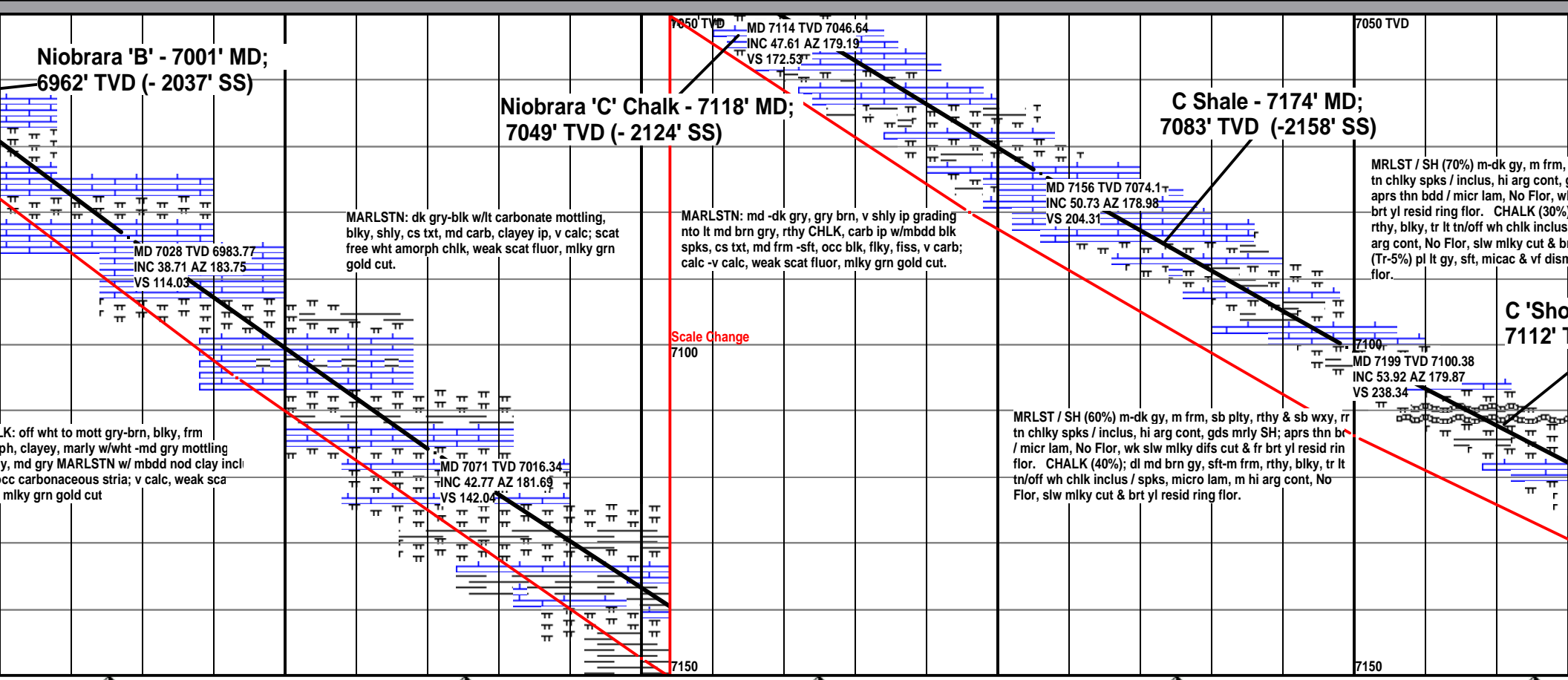
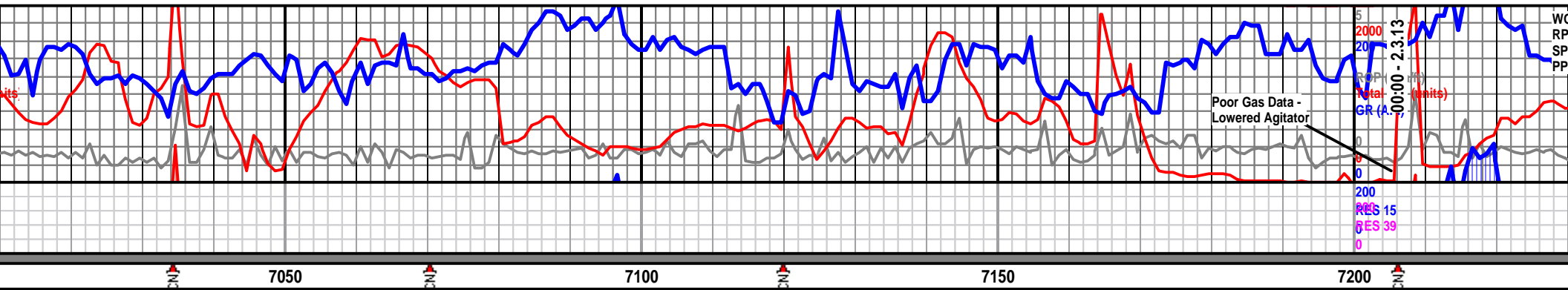
	Angular
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### SORTING

	Well
	Moderate
	Poor



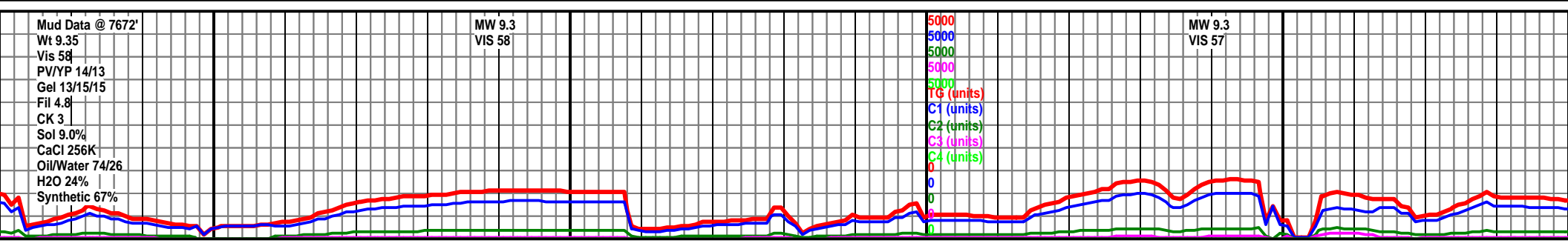
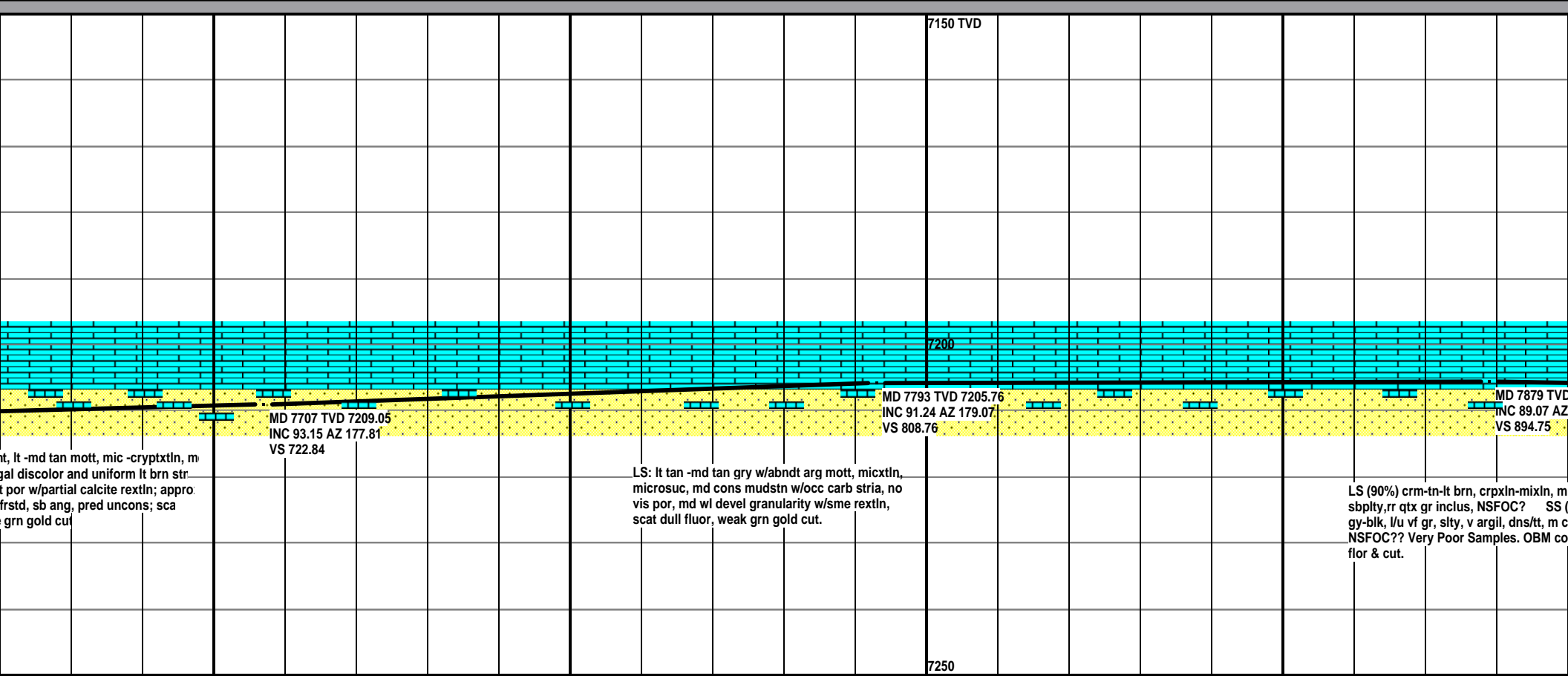
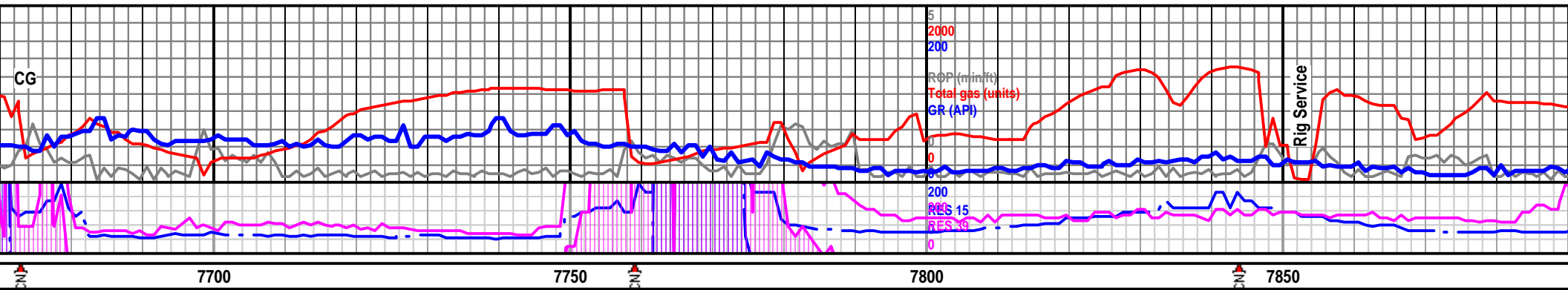


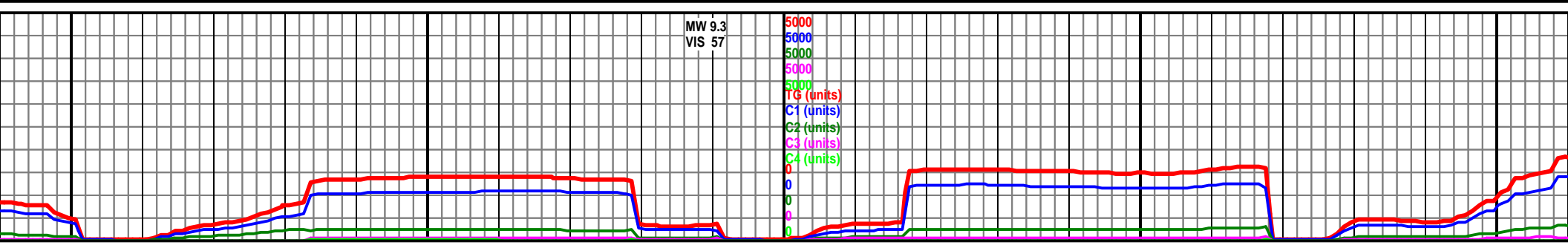
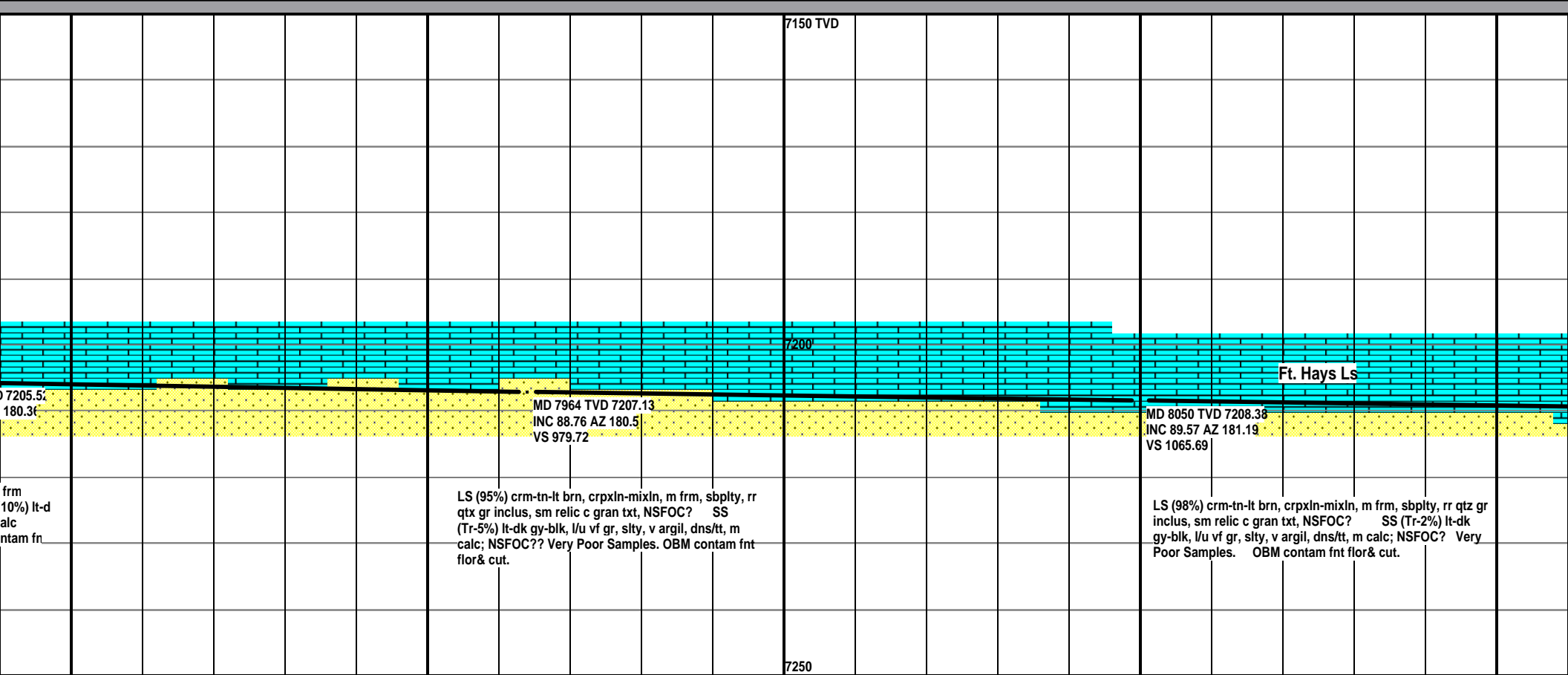
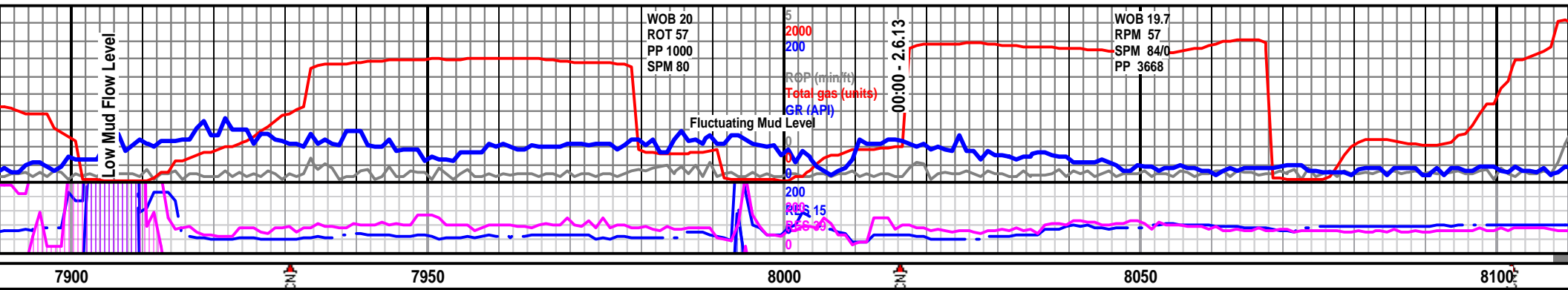


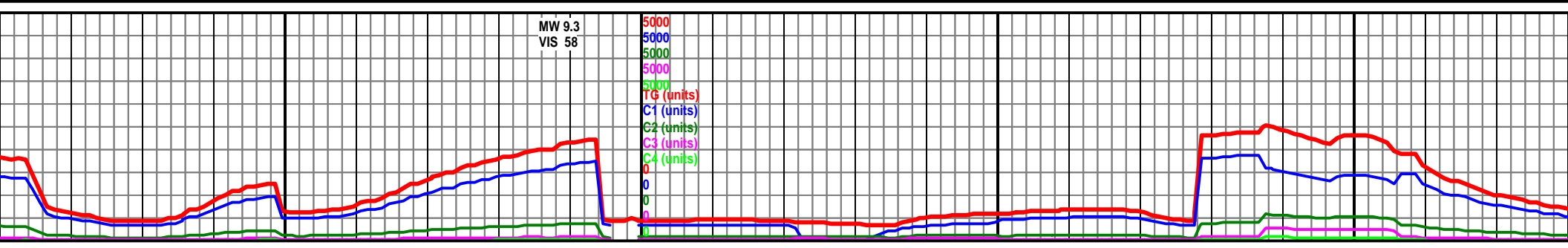
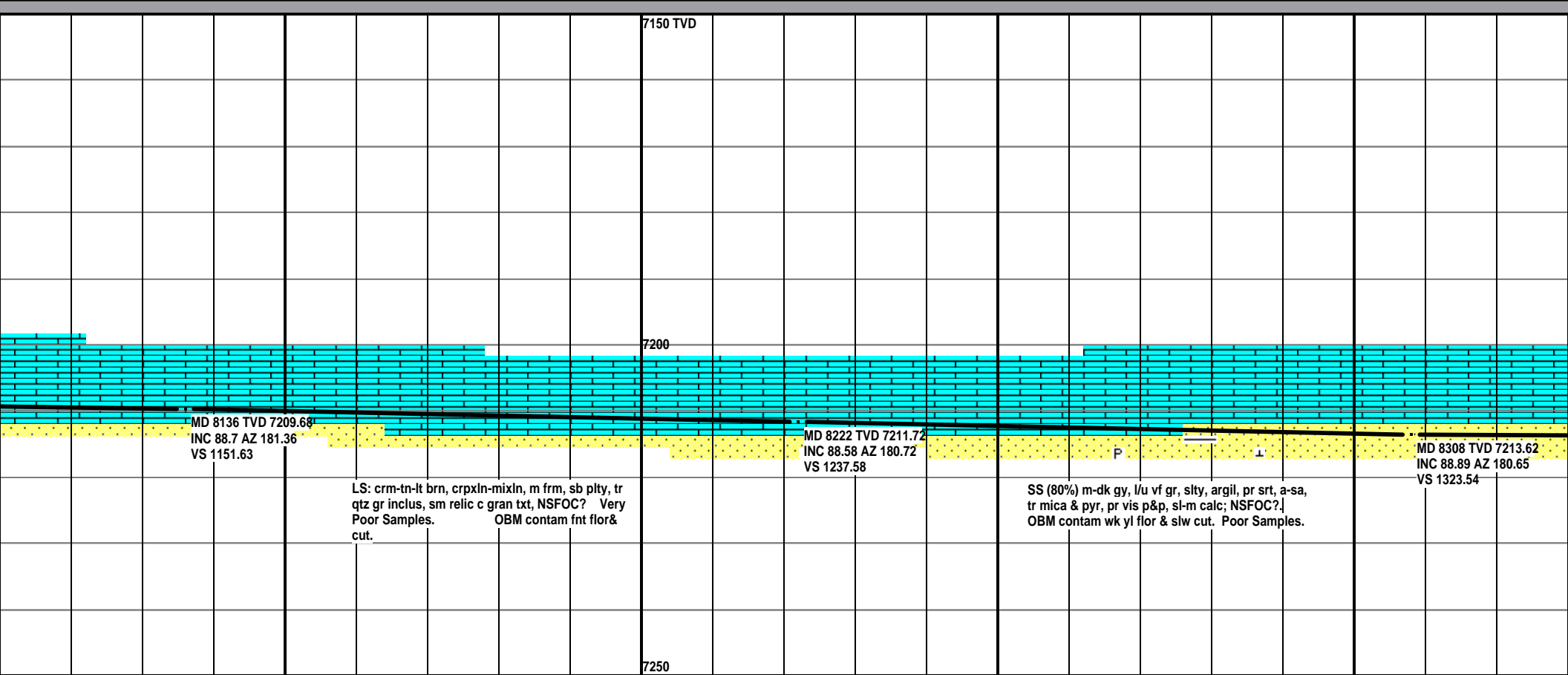
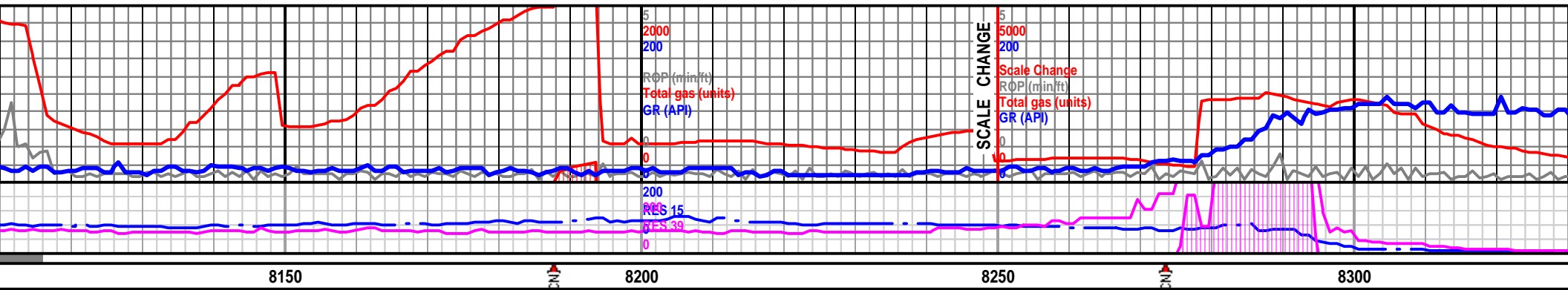


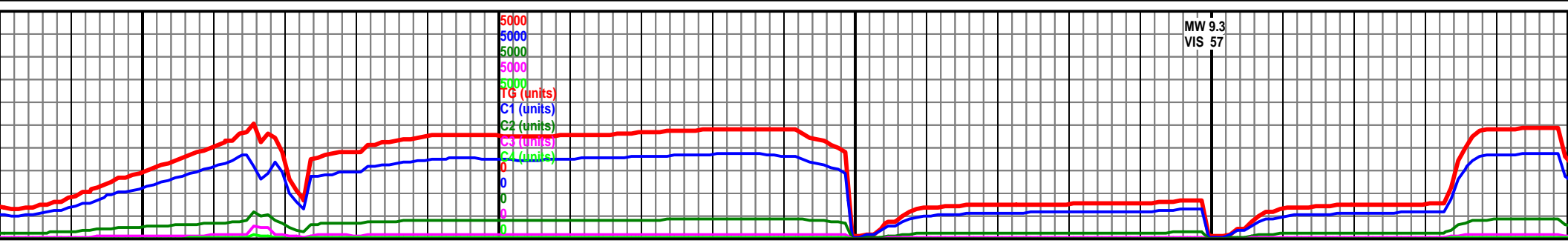
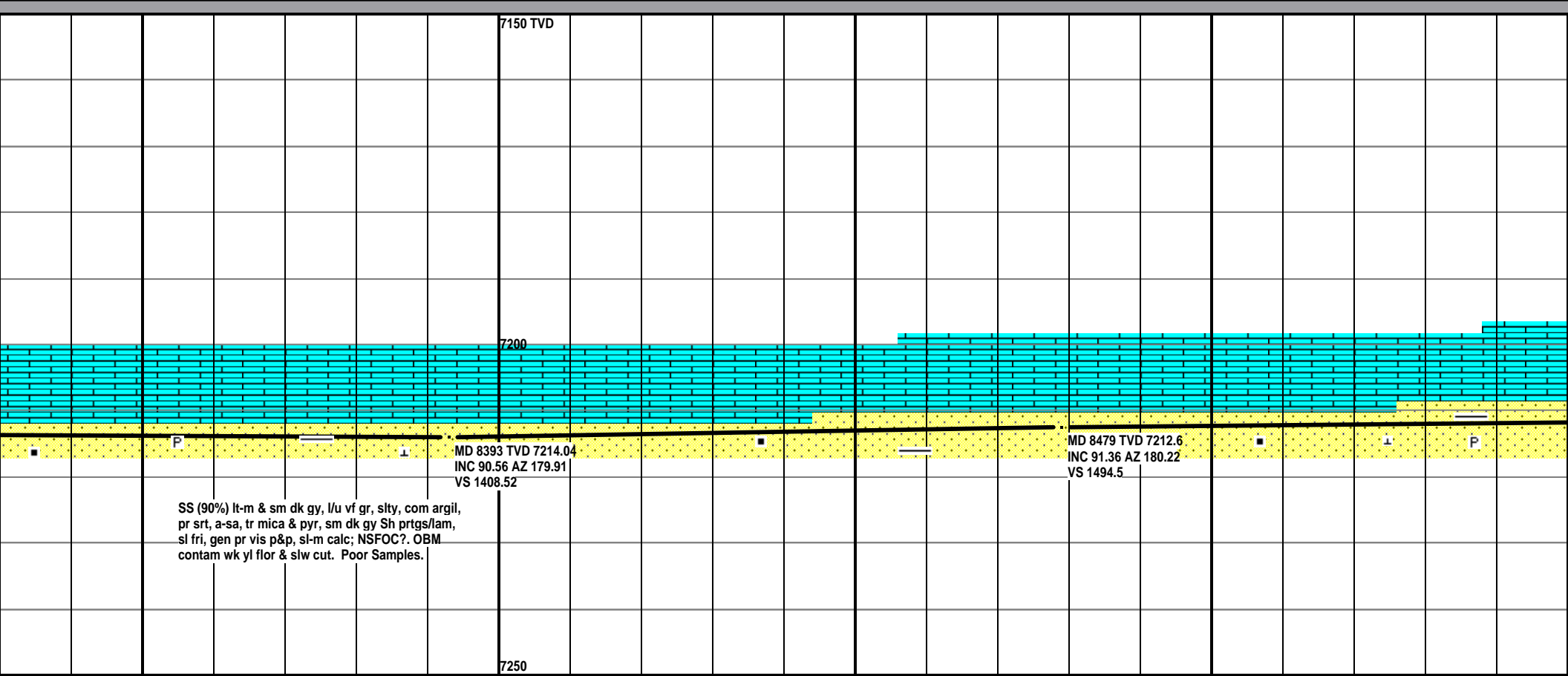
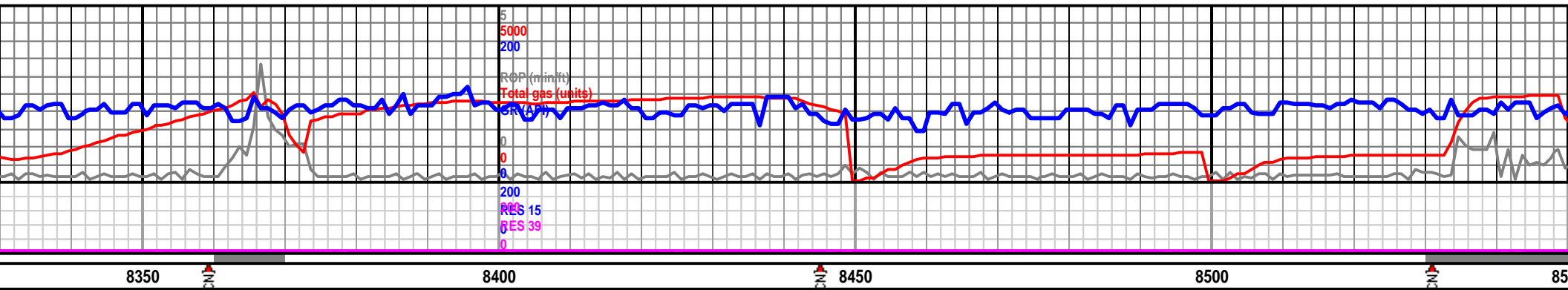


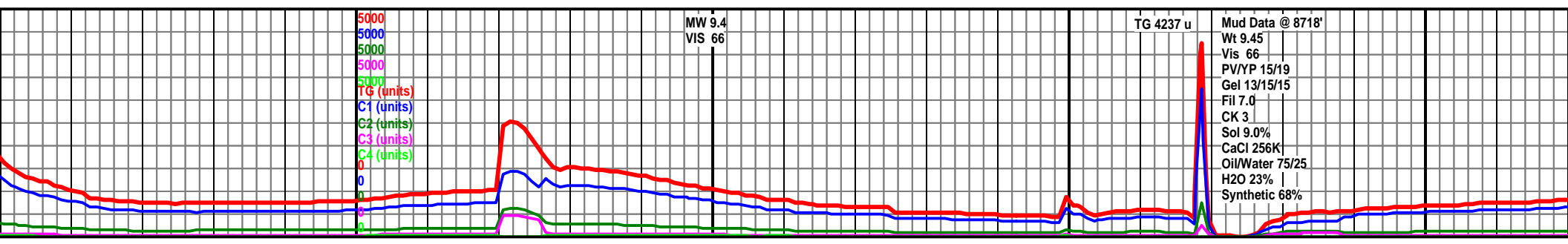
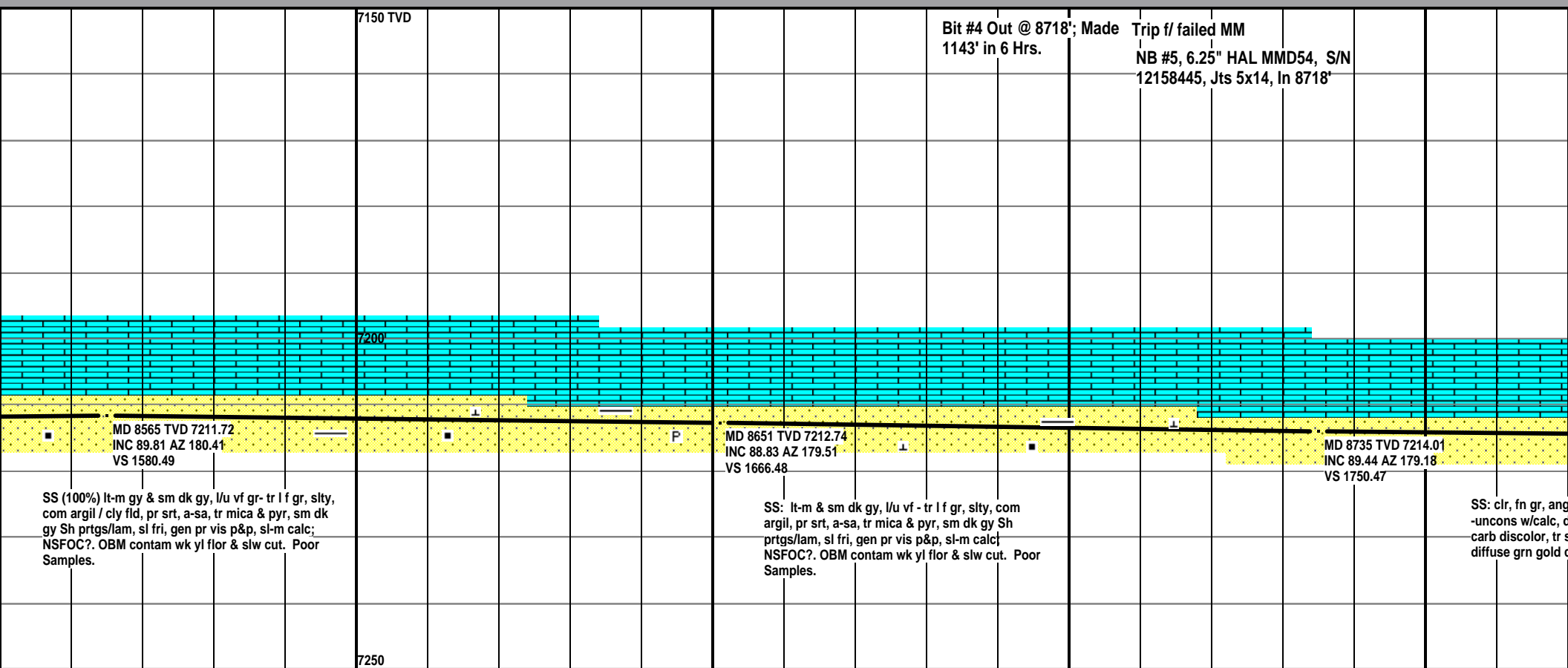
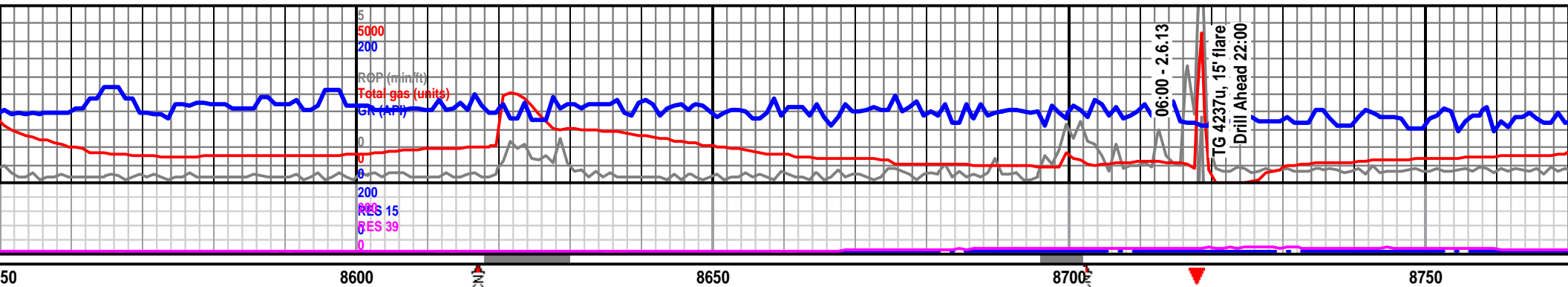


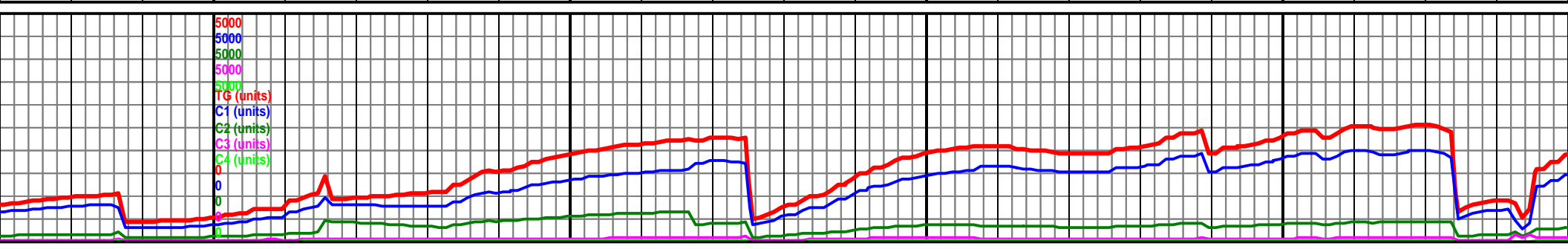
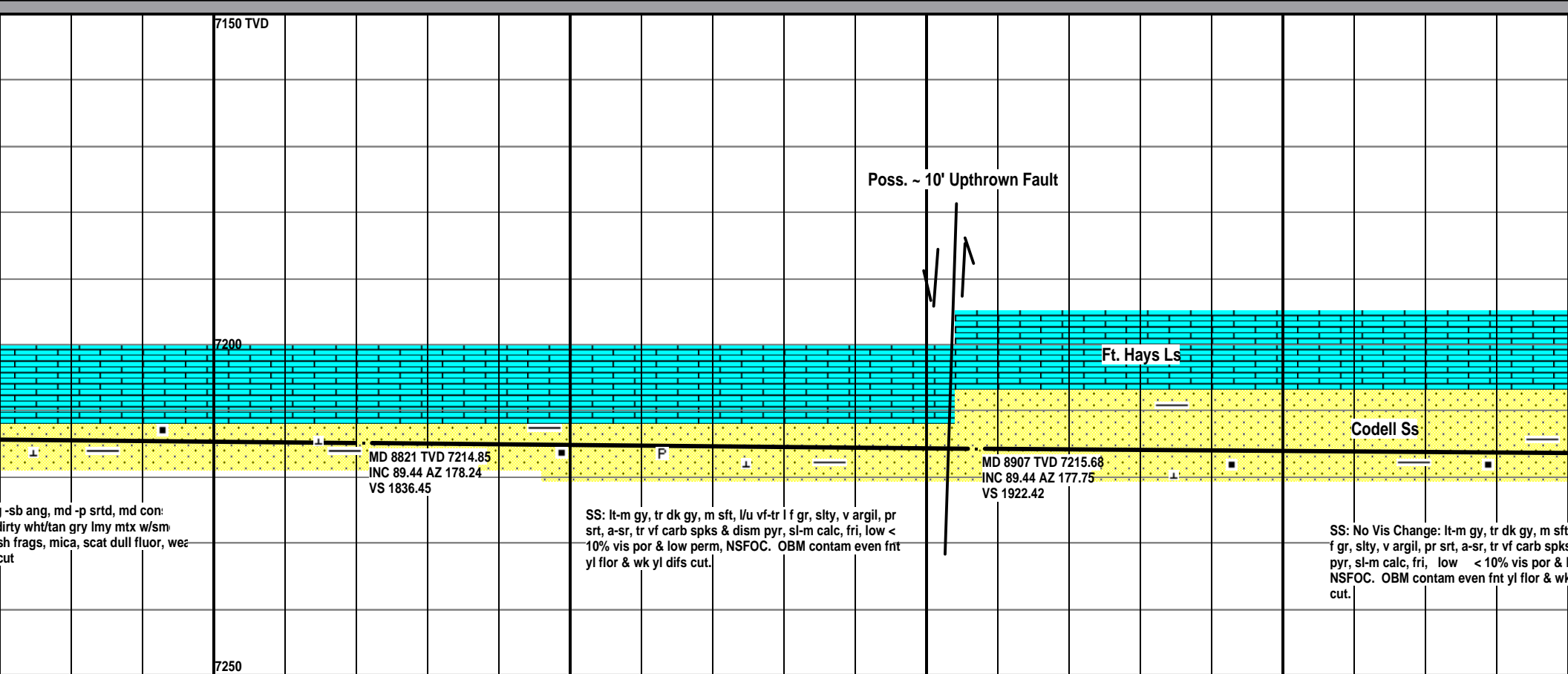
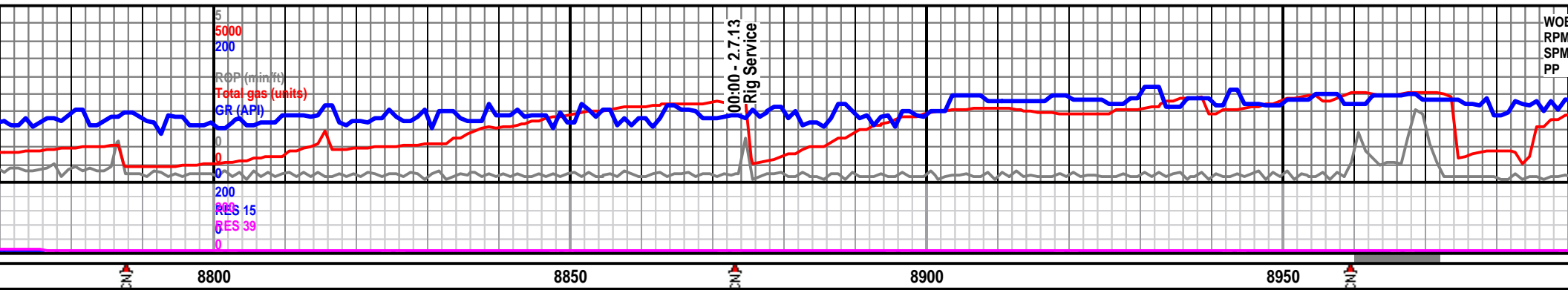


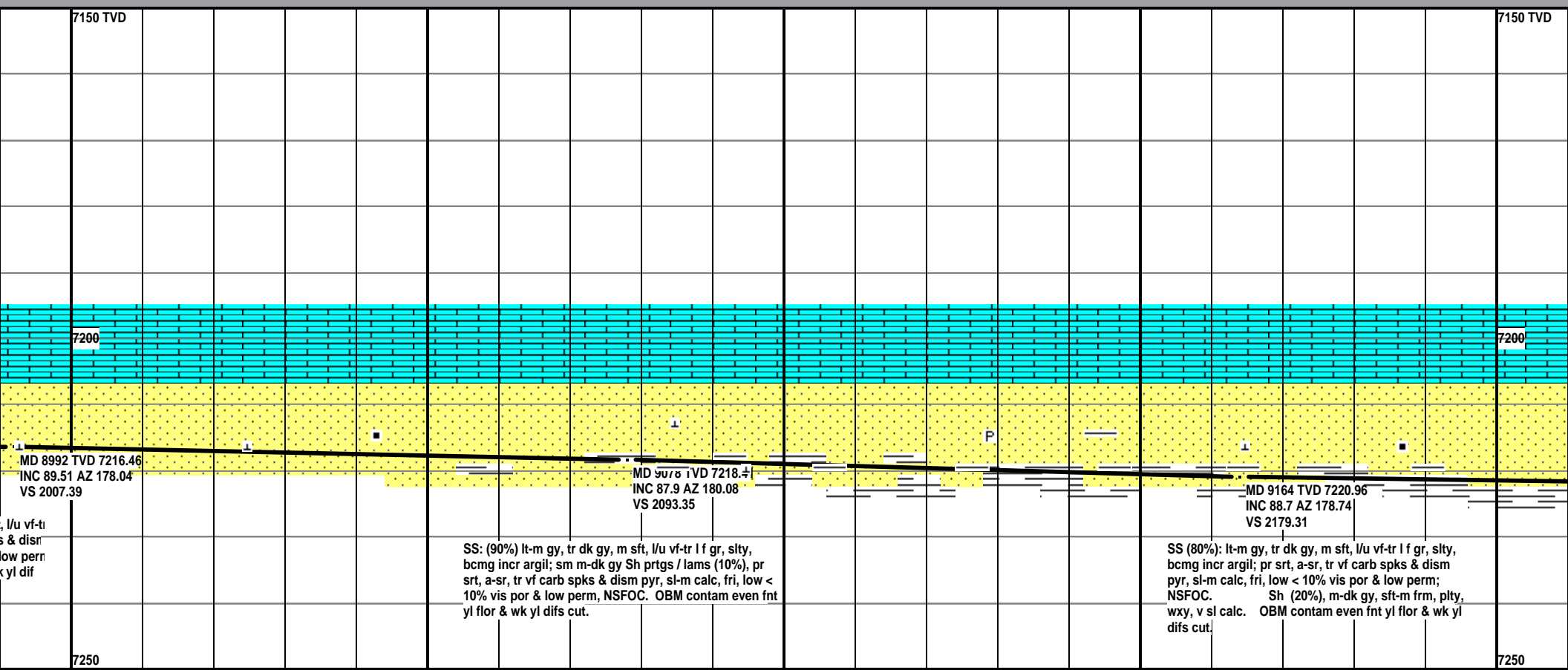


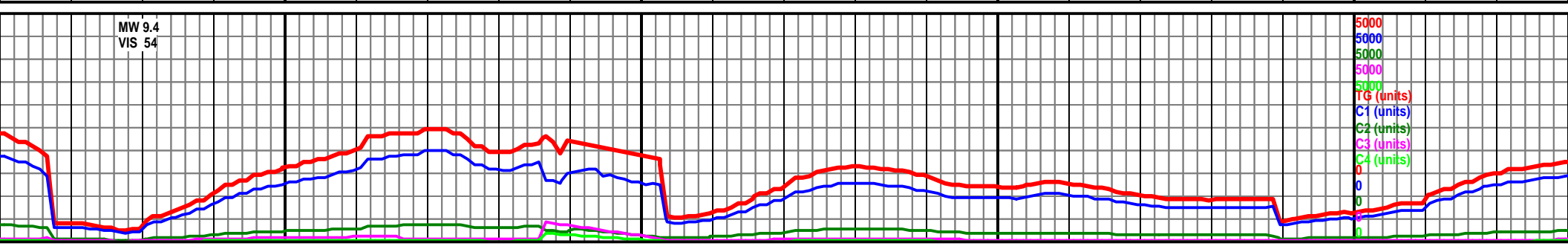
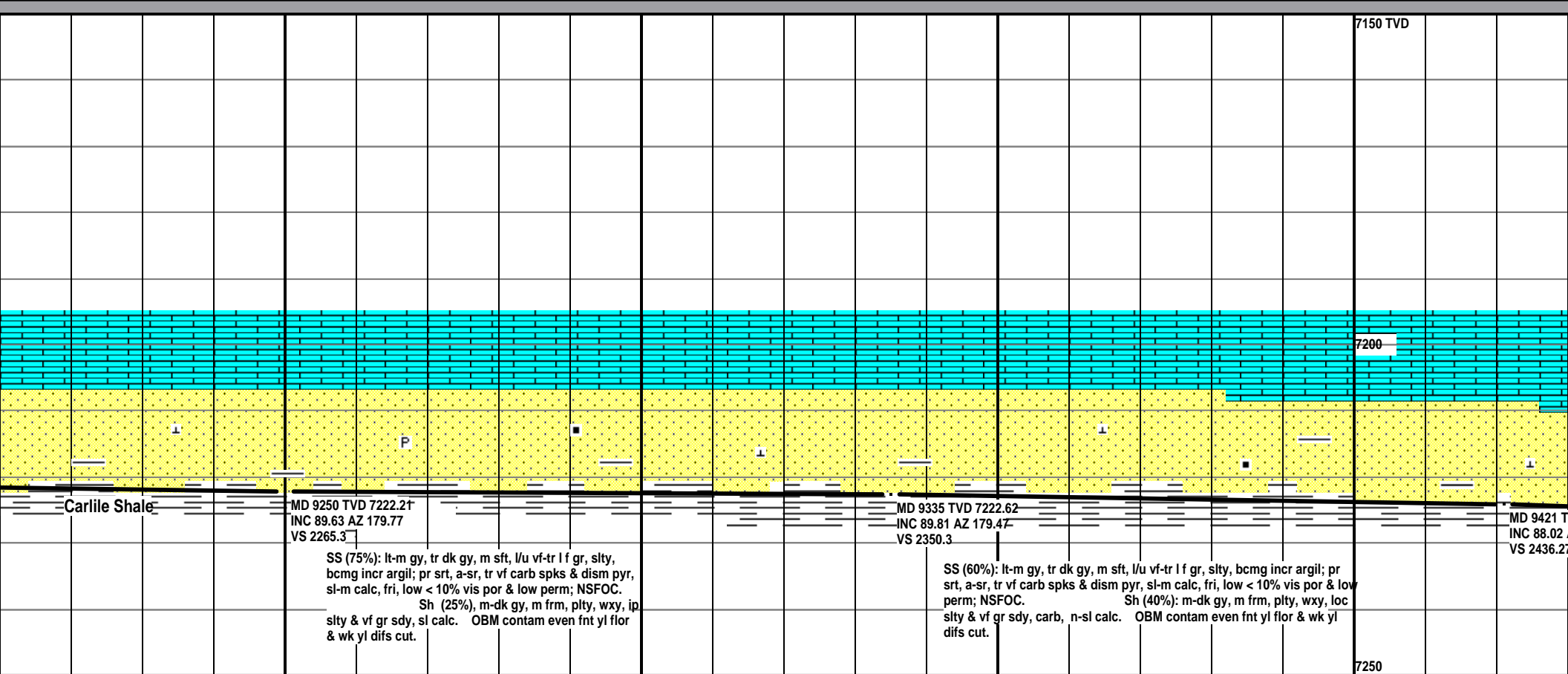
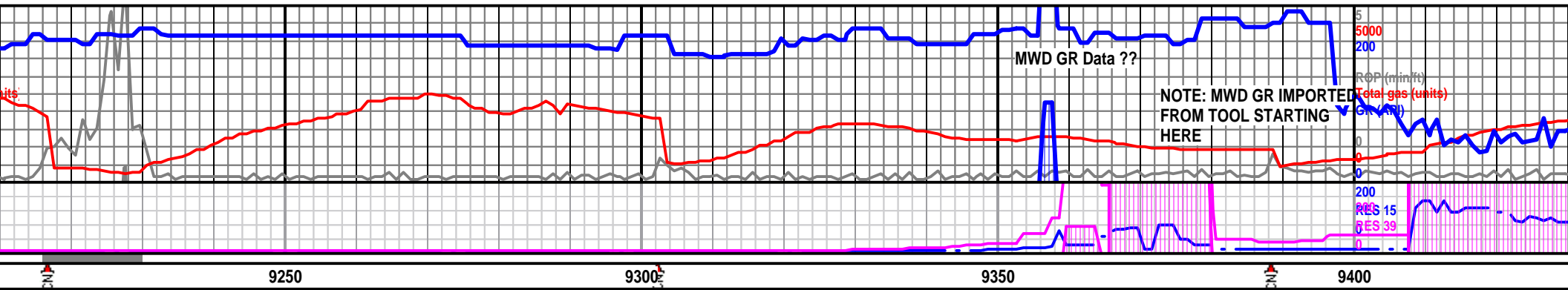






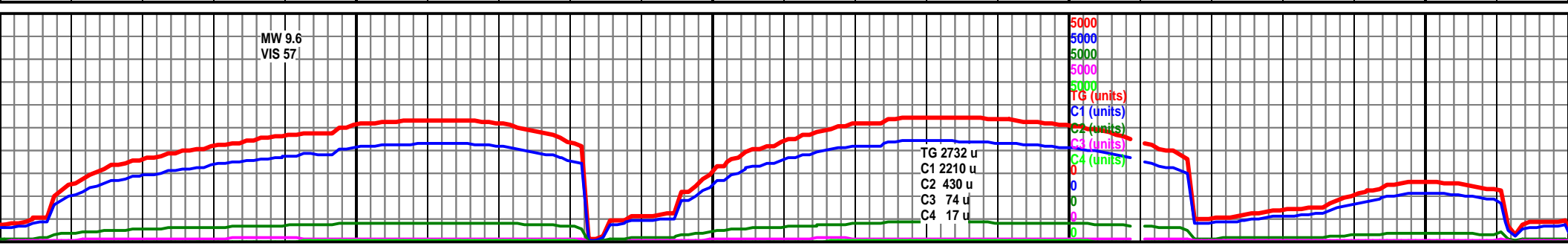
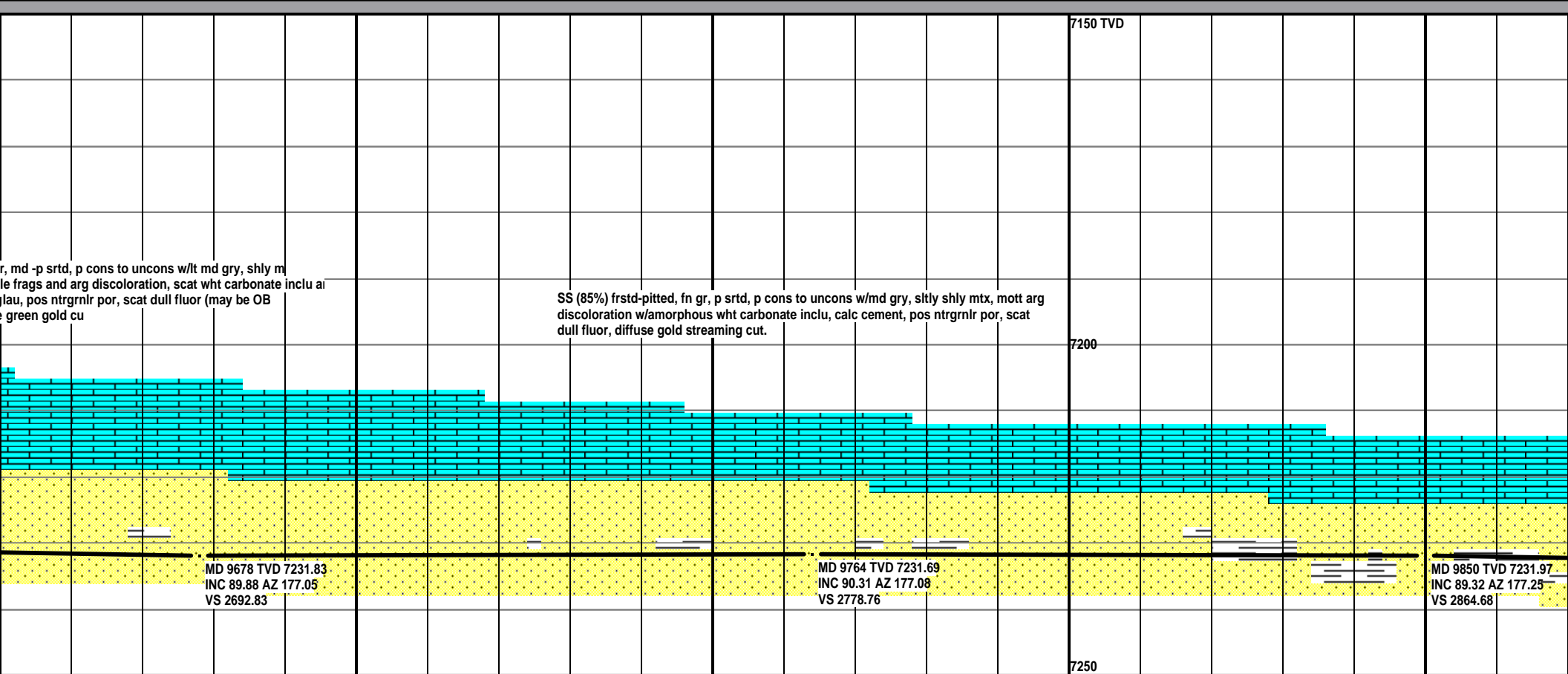
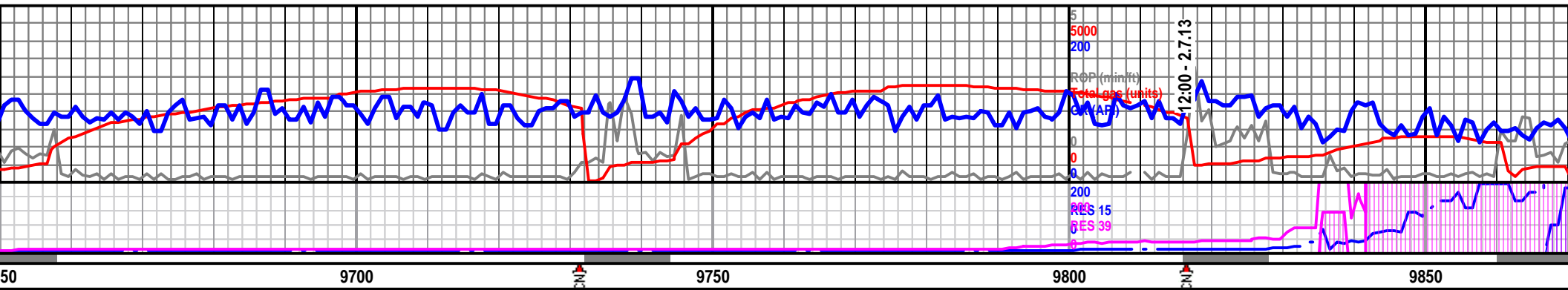


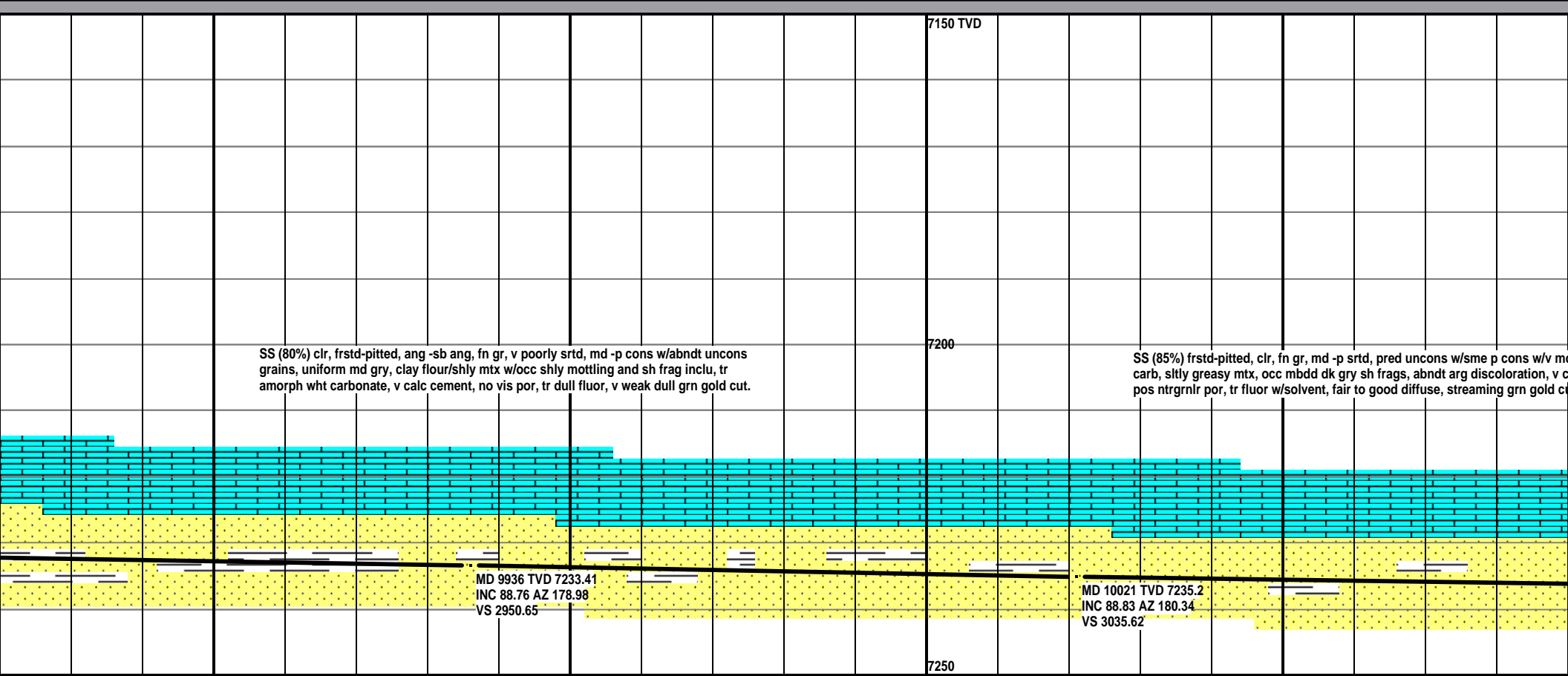


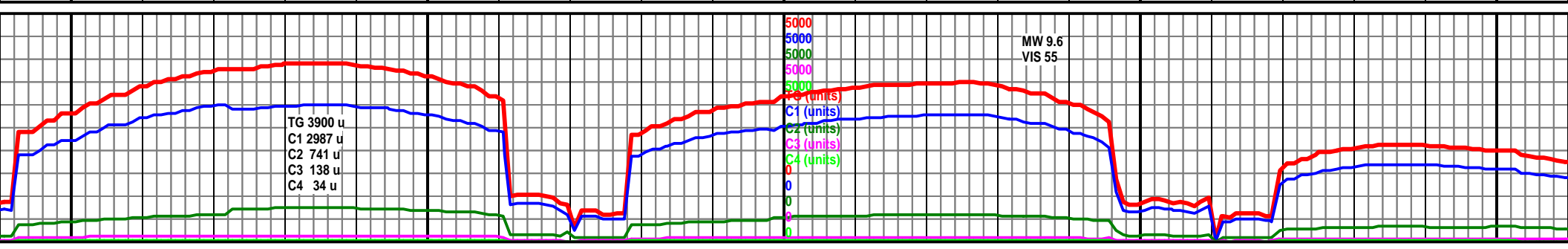
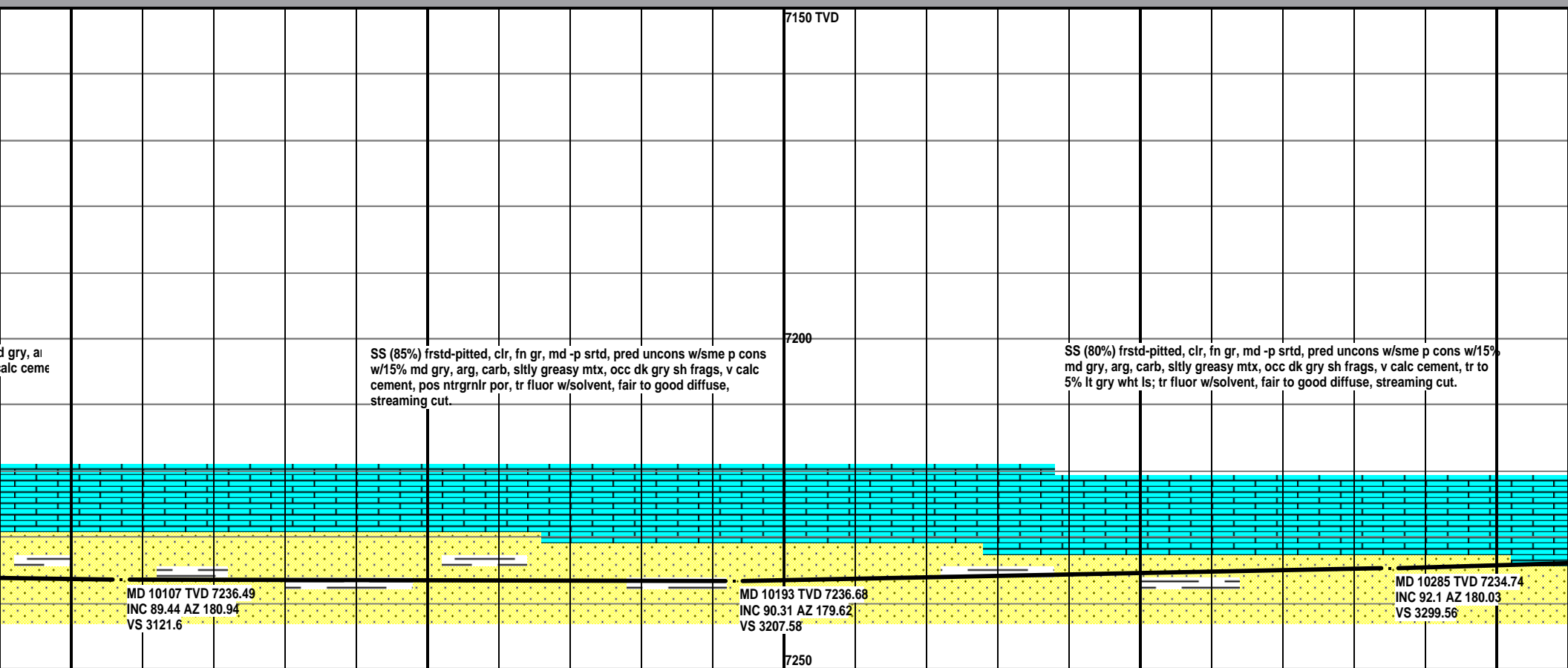


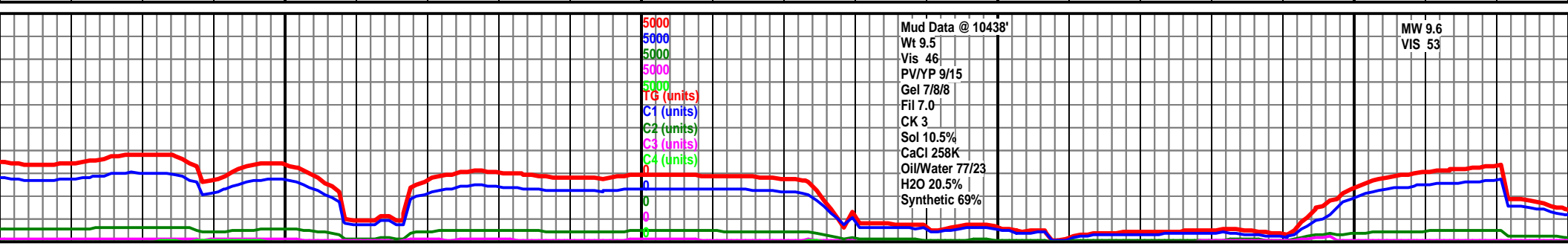
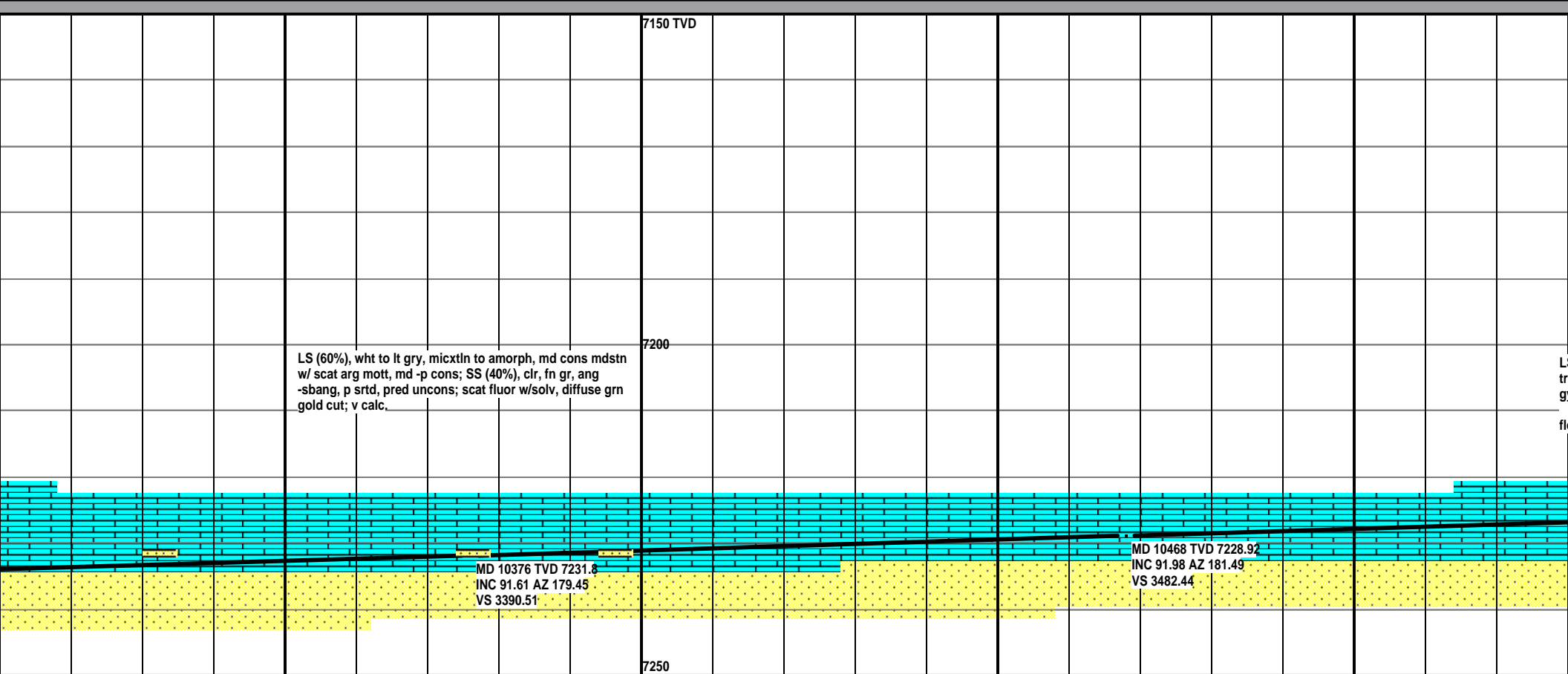
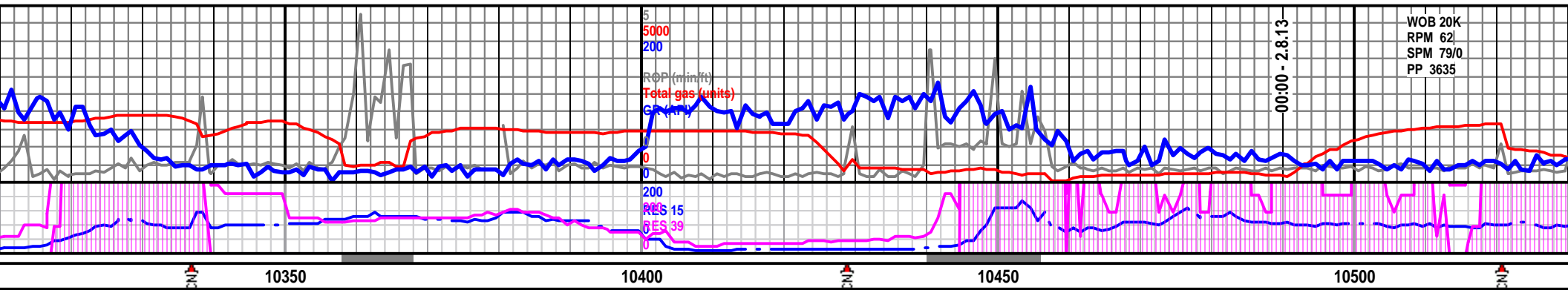


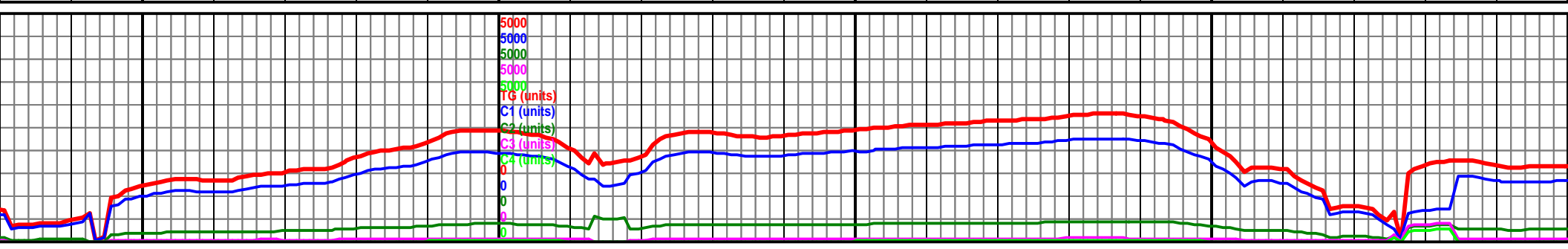
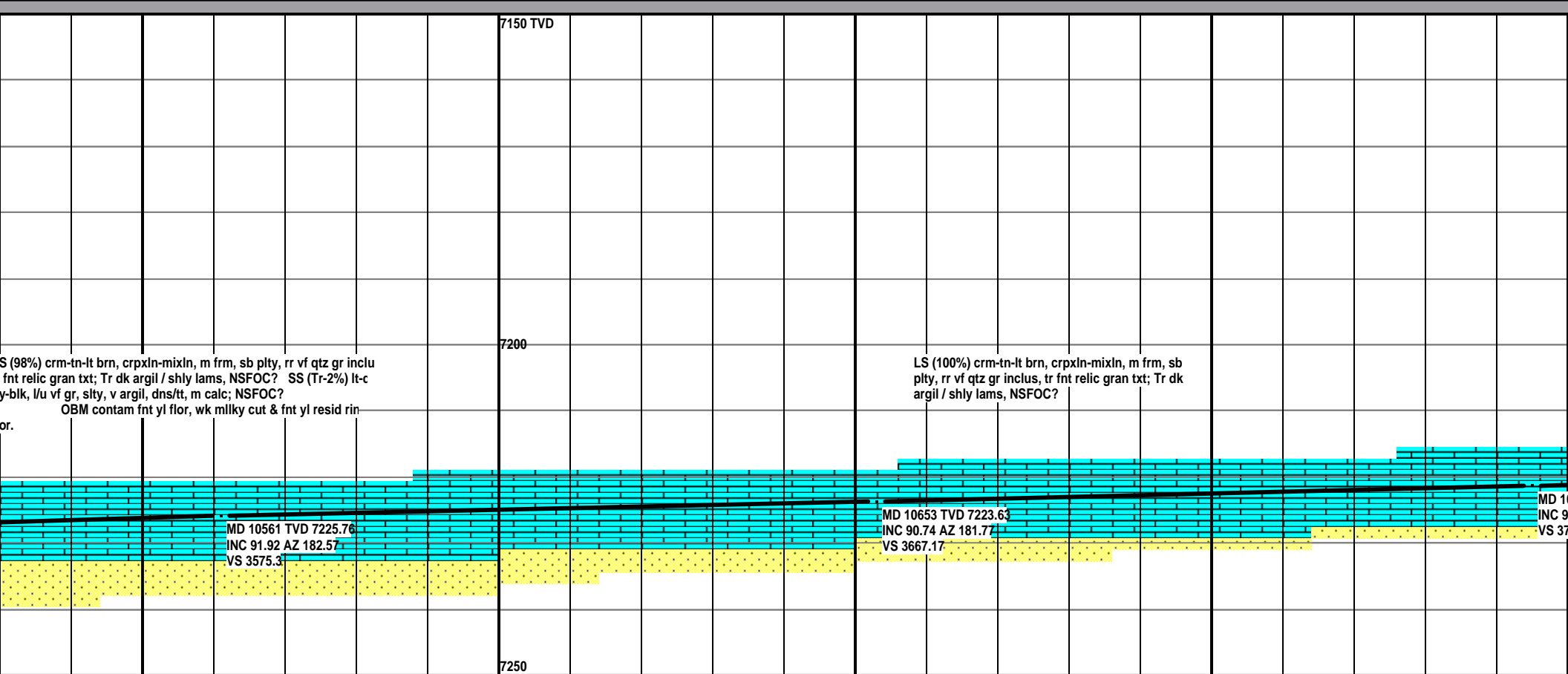
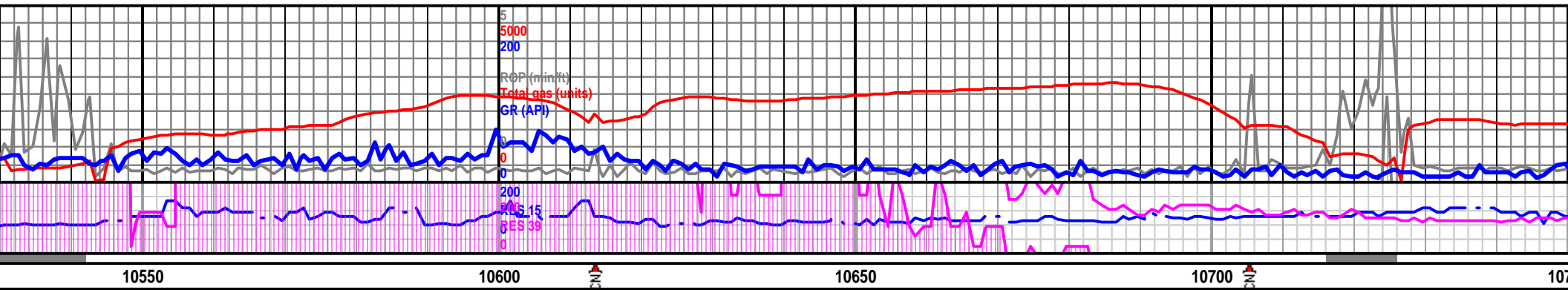


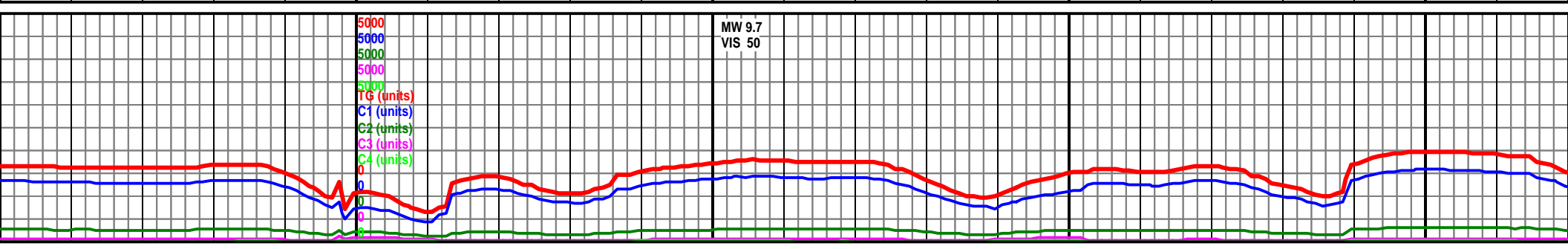
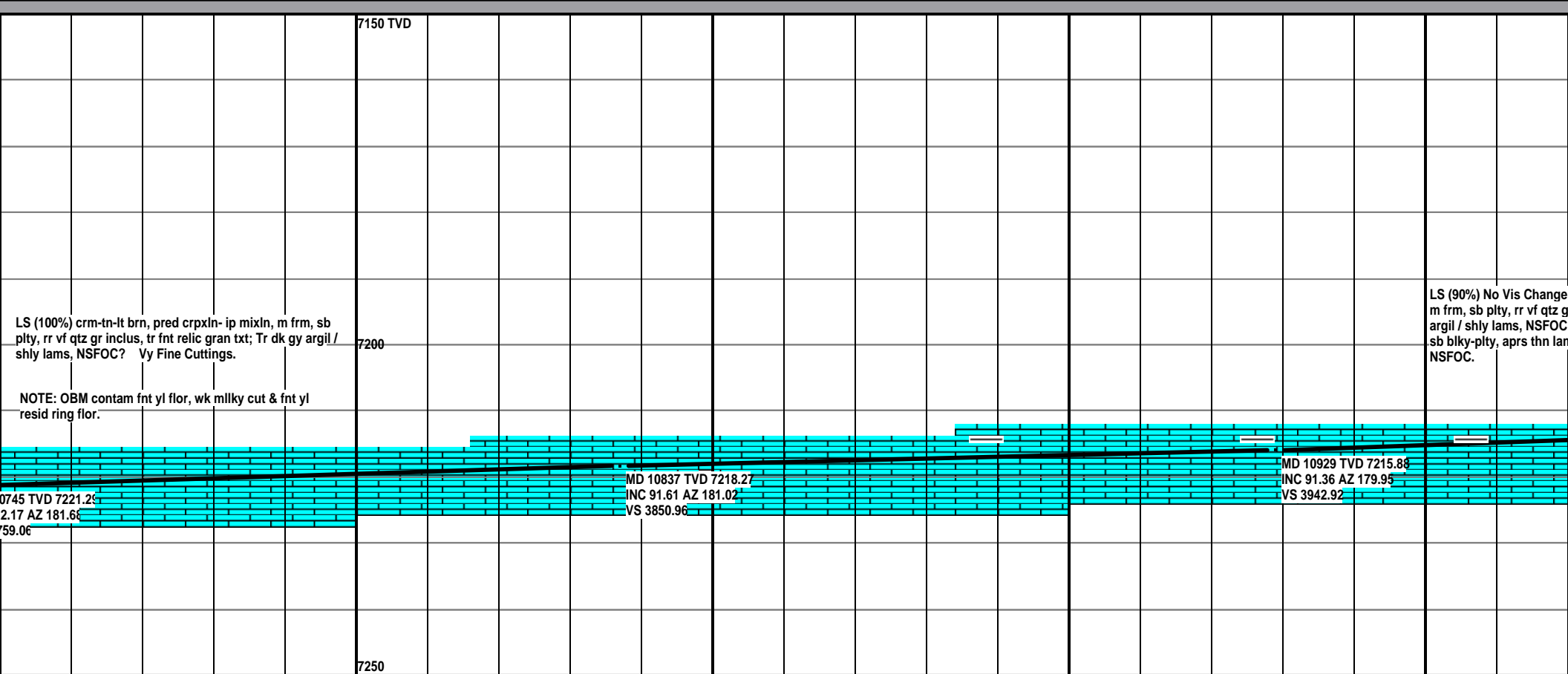
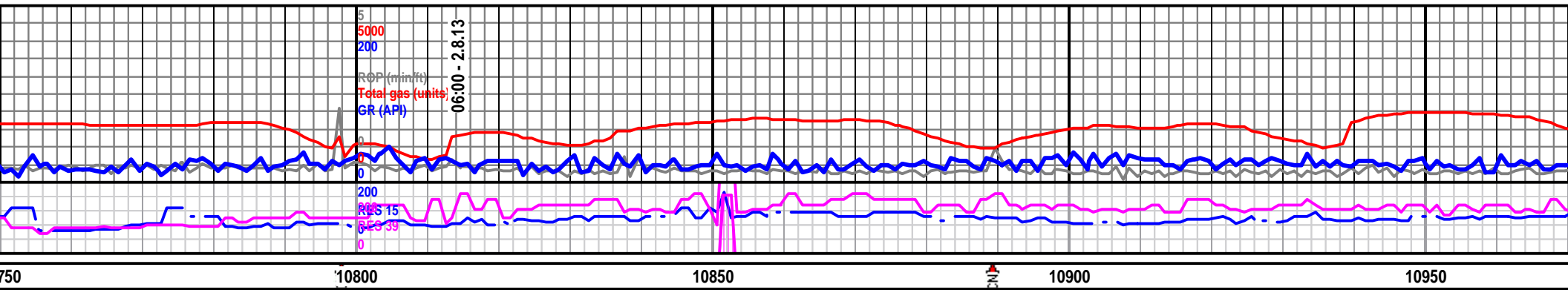


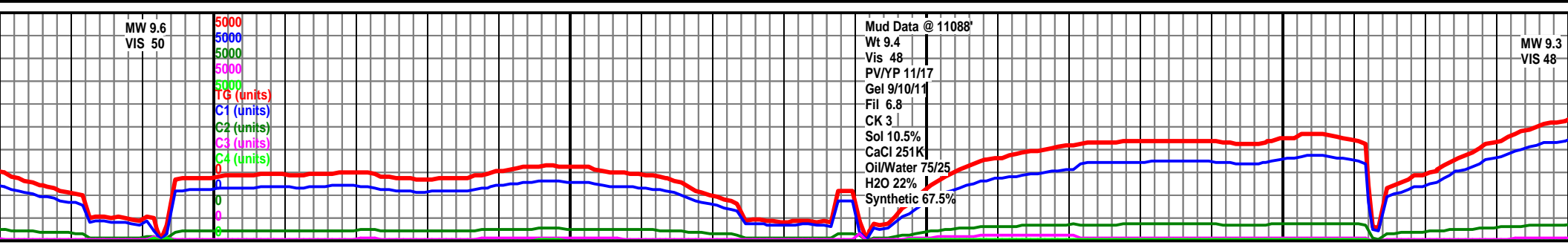
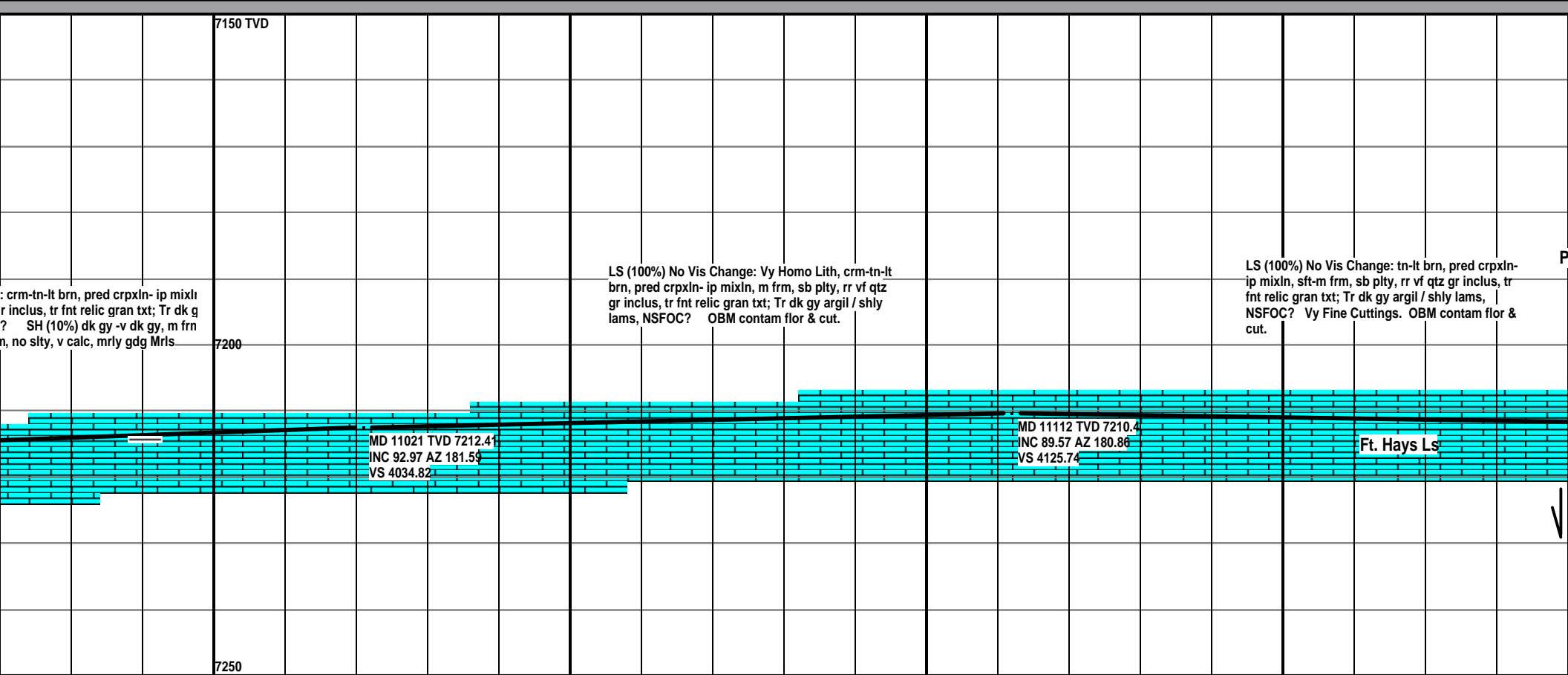
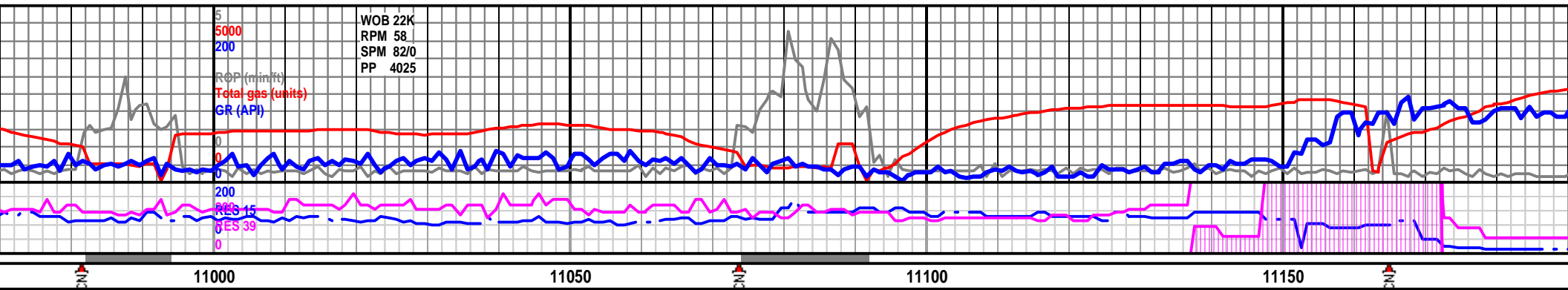




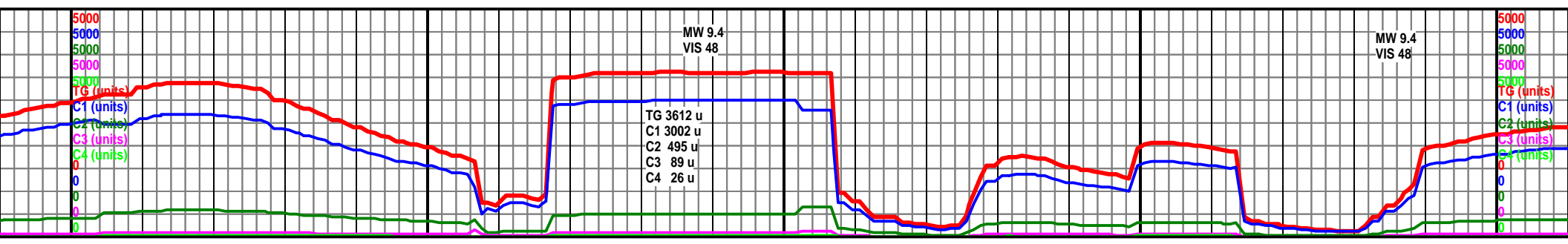
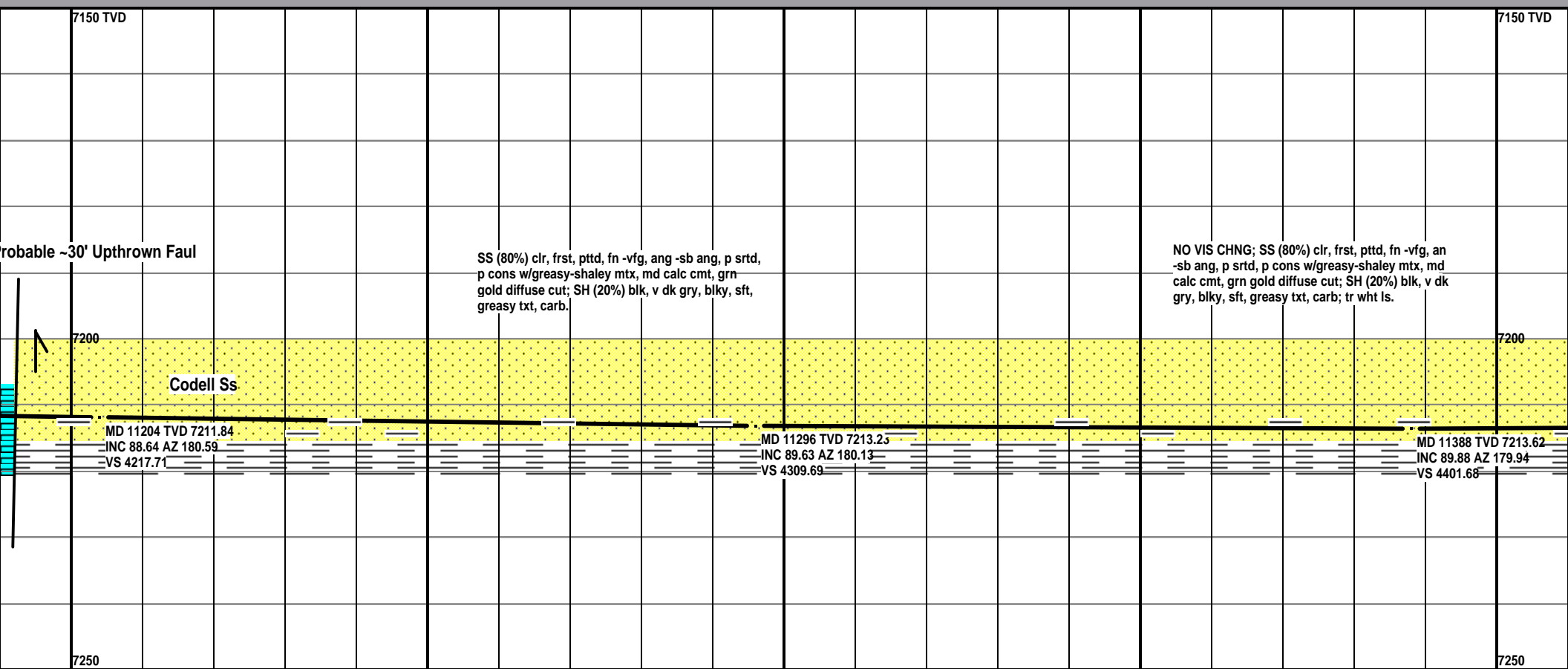
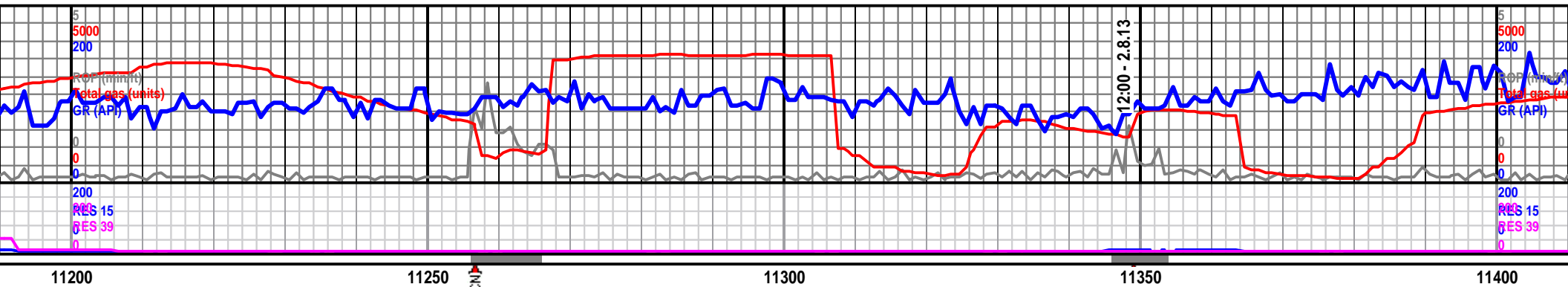


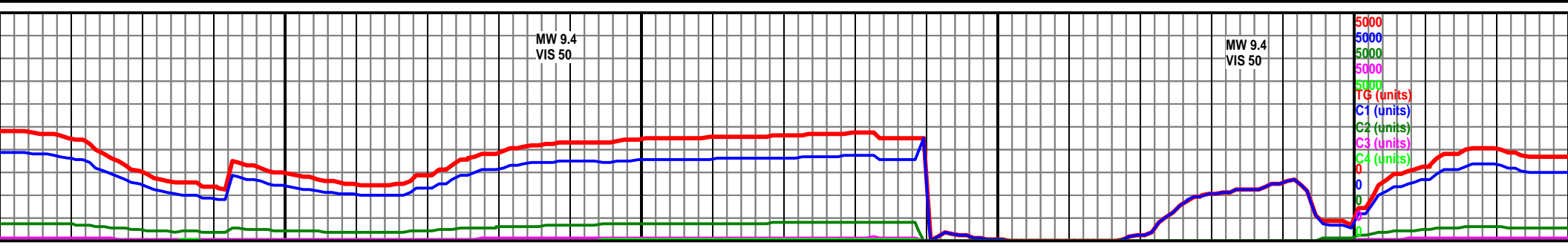
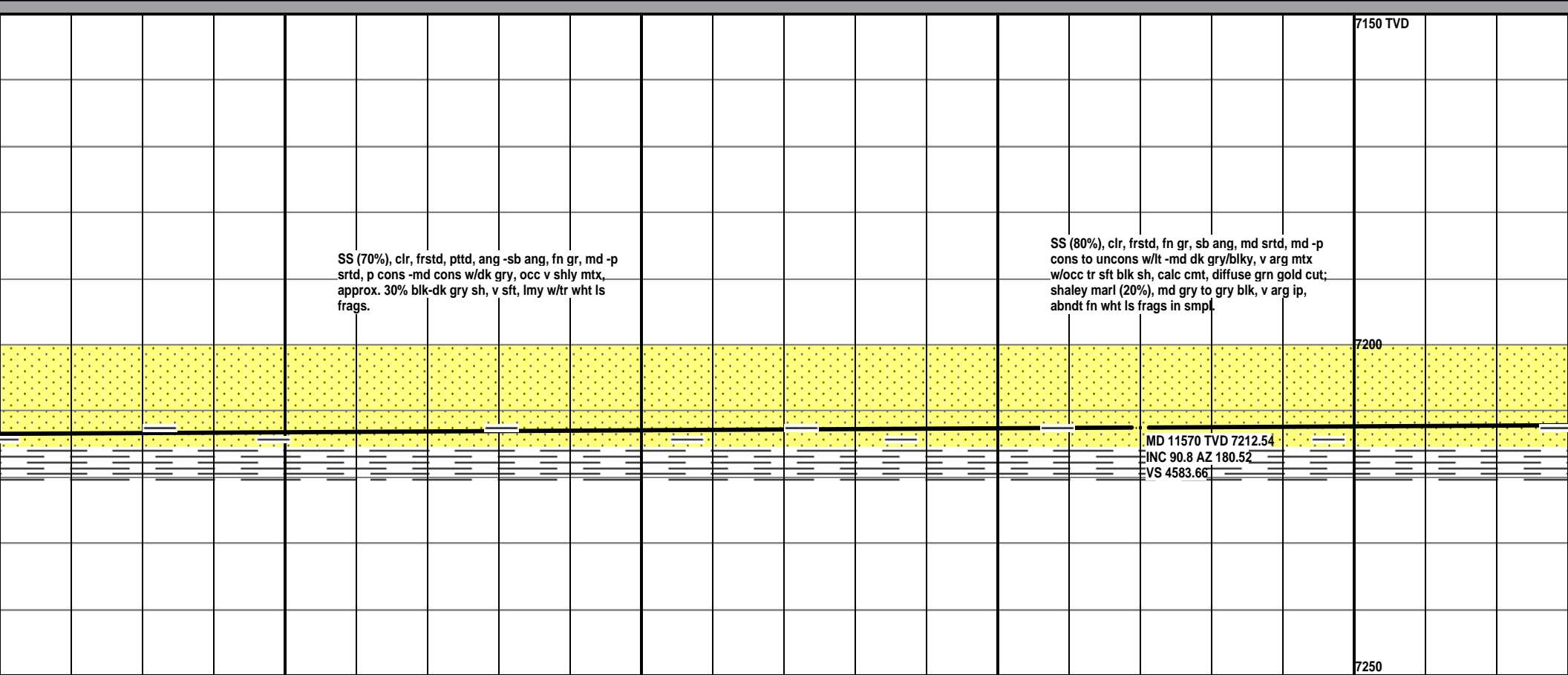
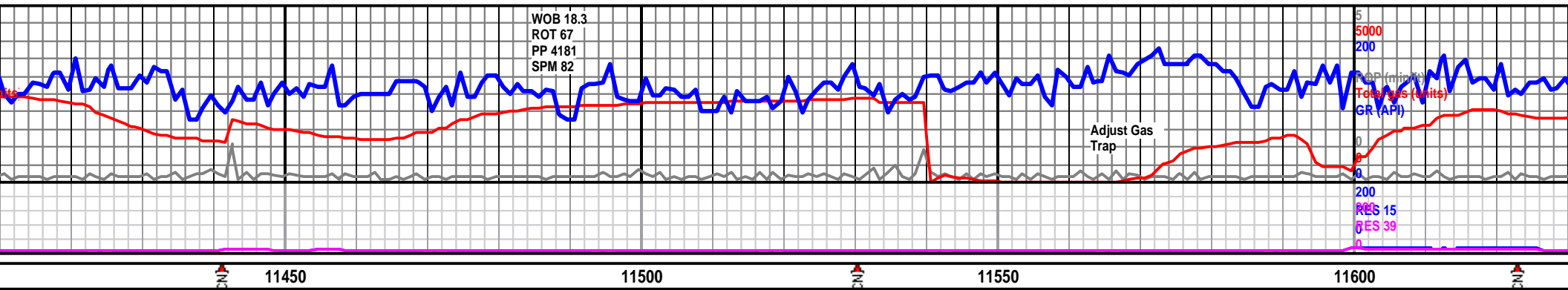


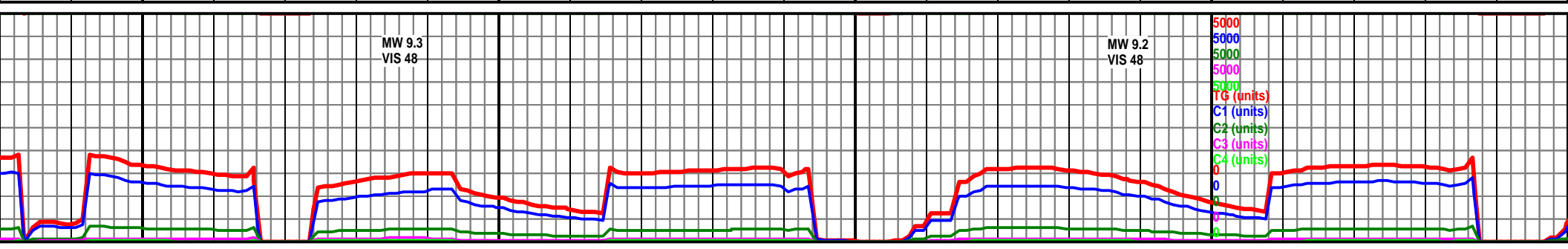
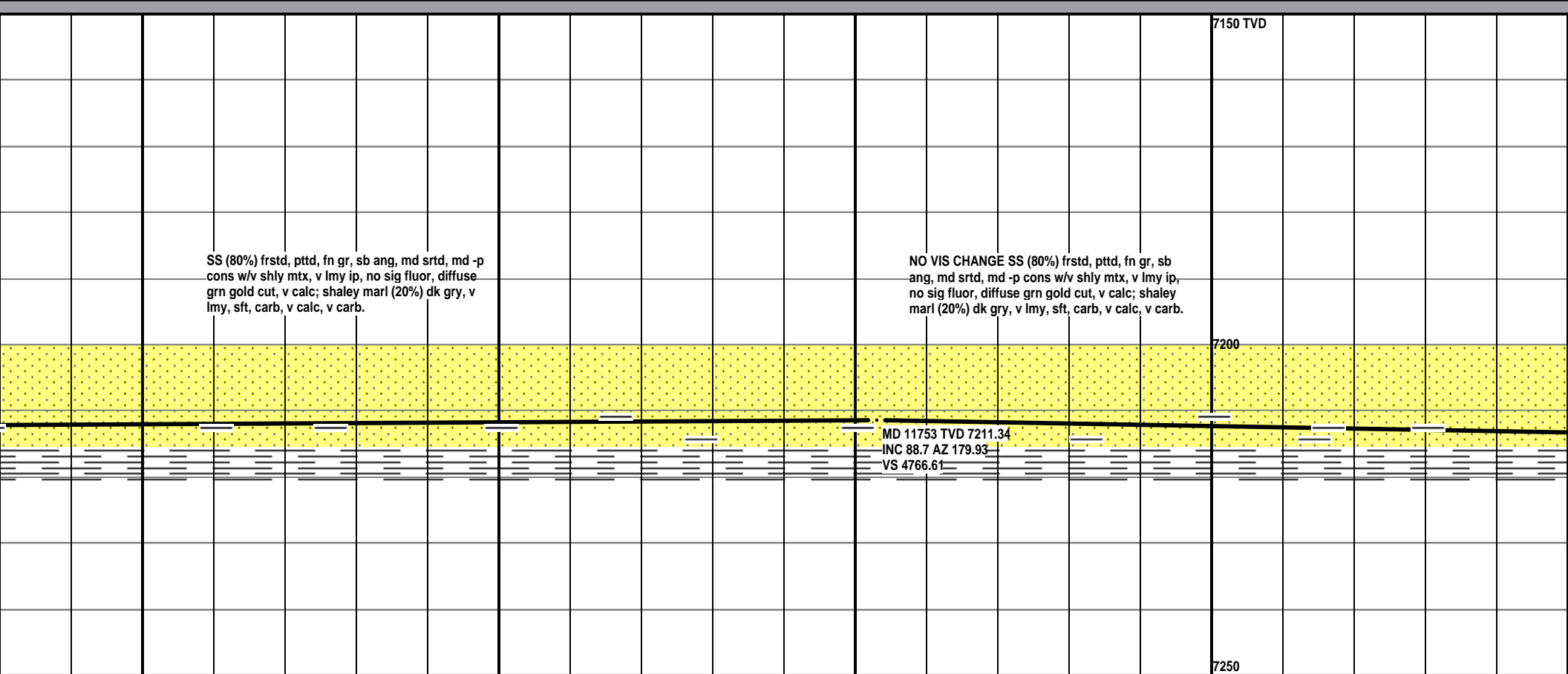
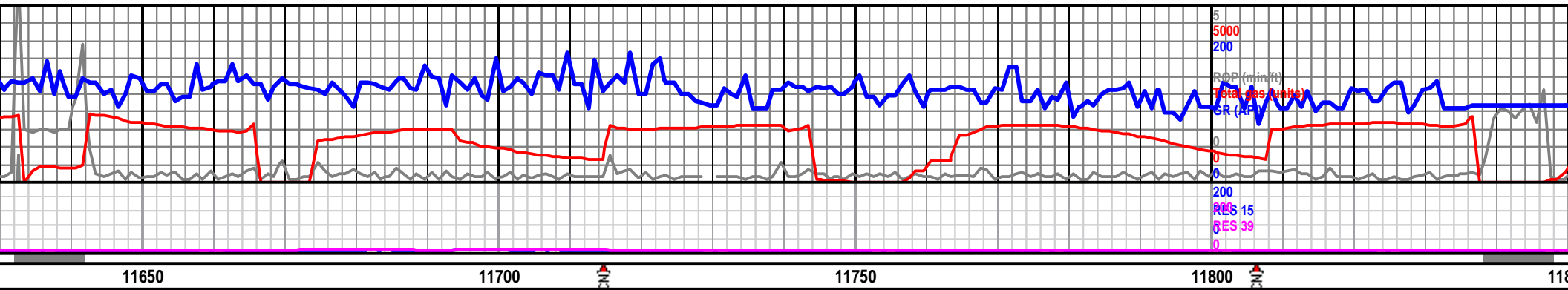


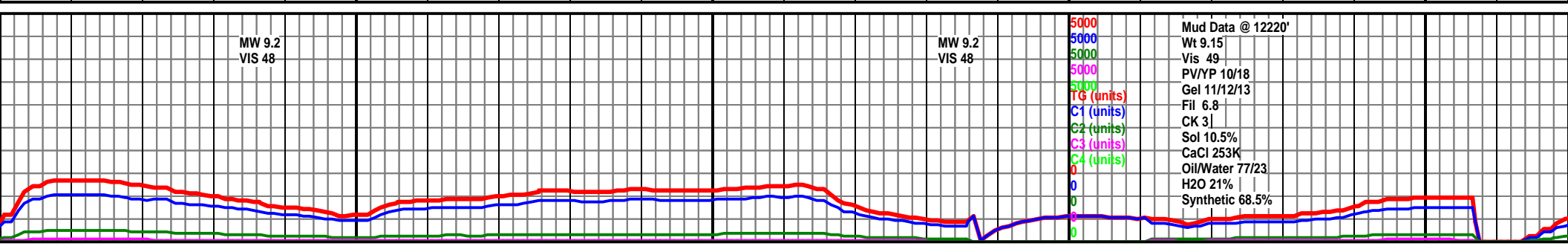
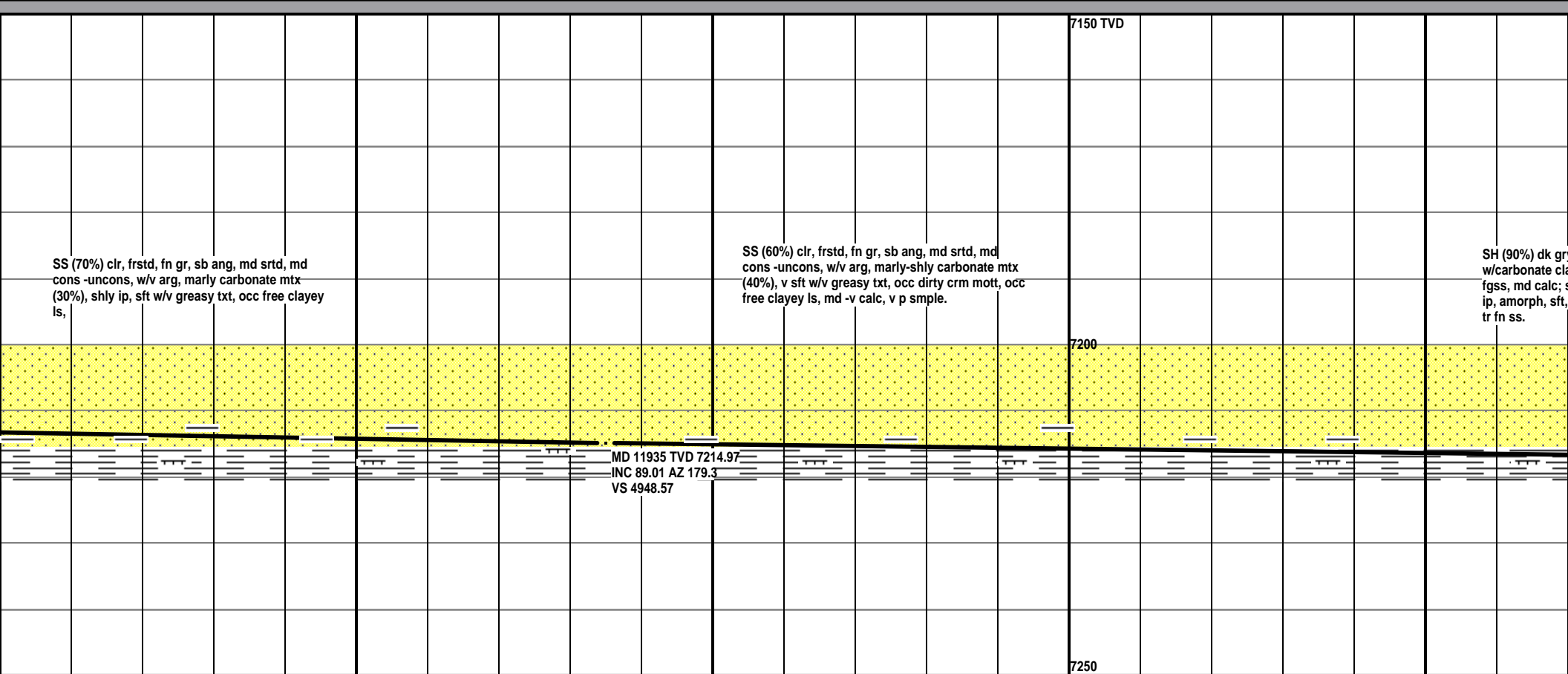
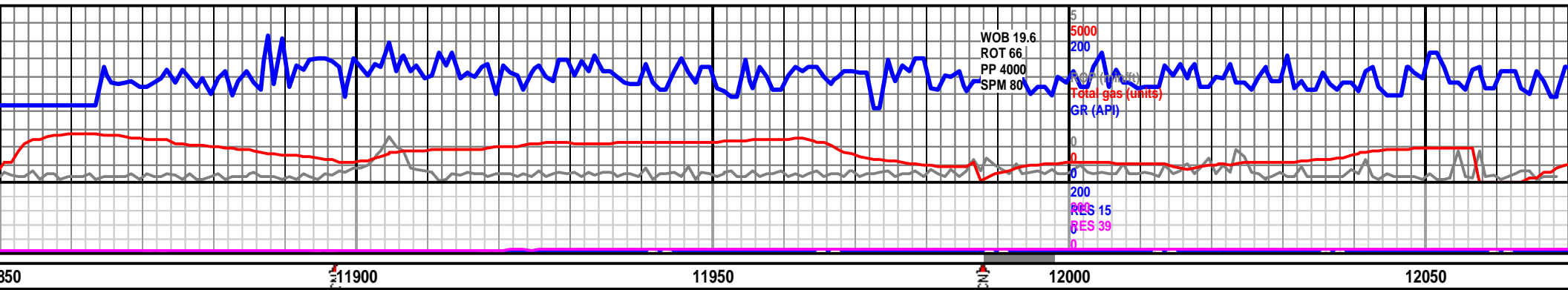


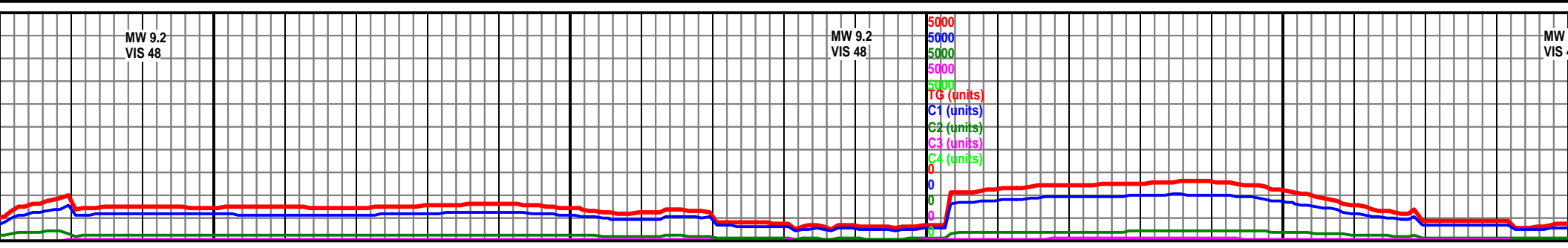
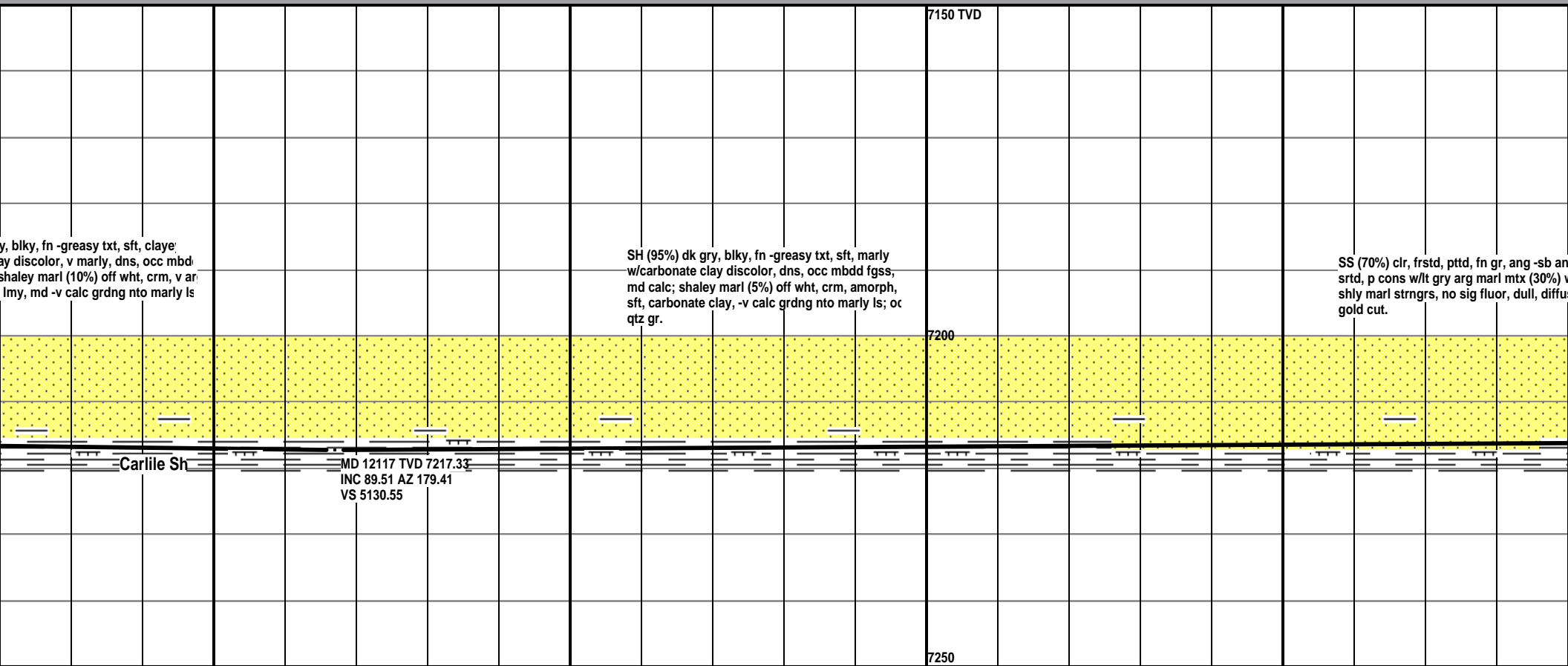


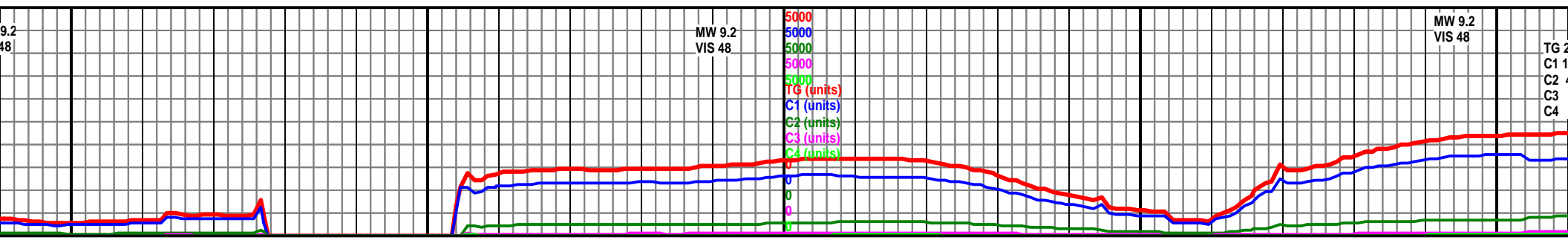
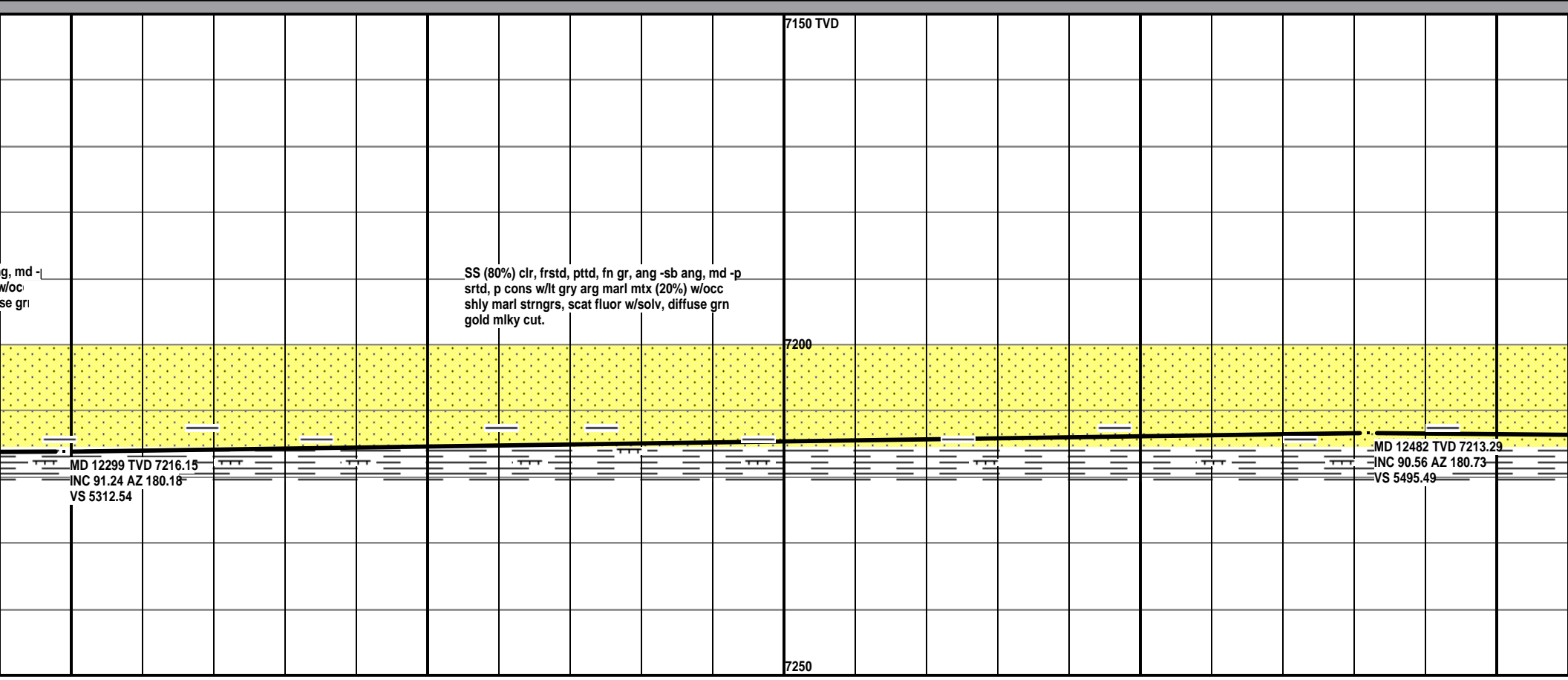
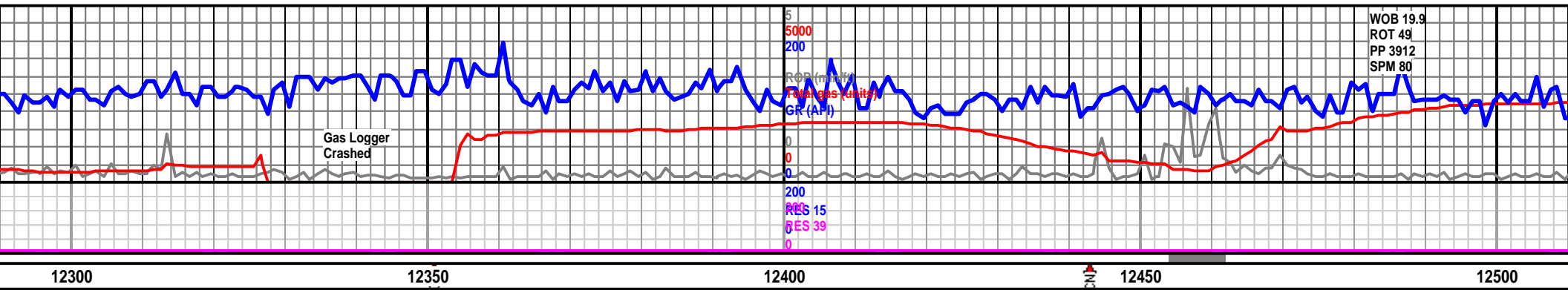


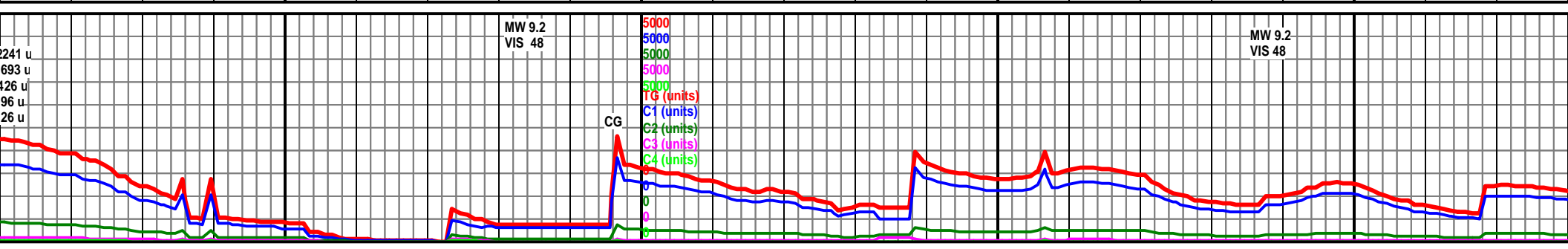
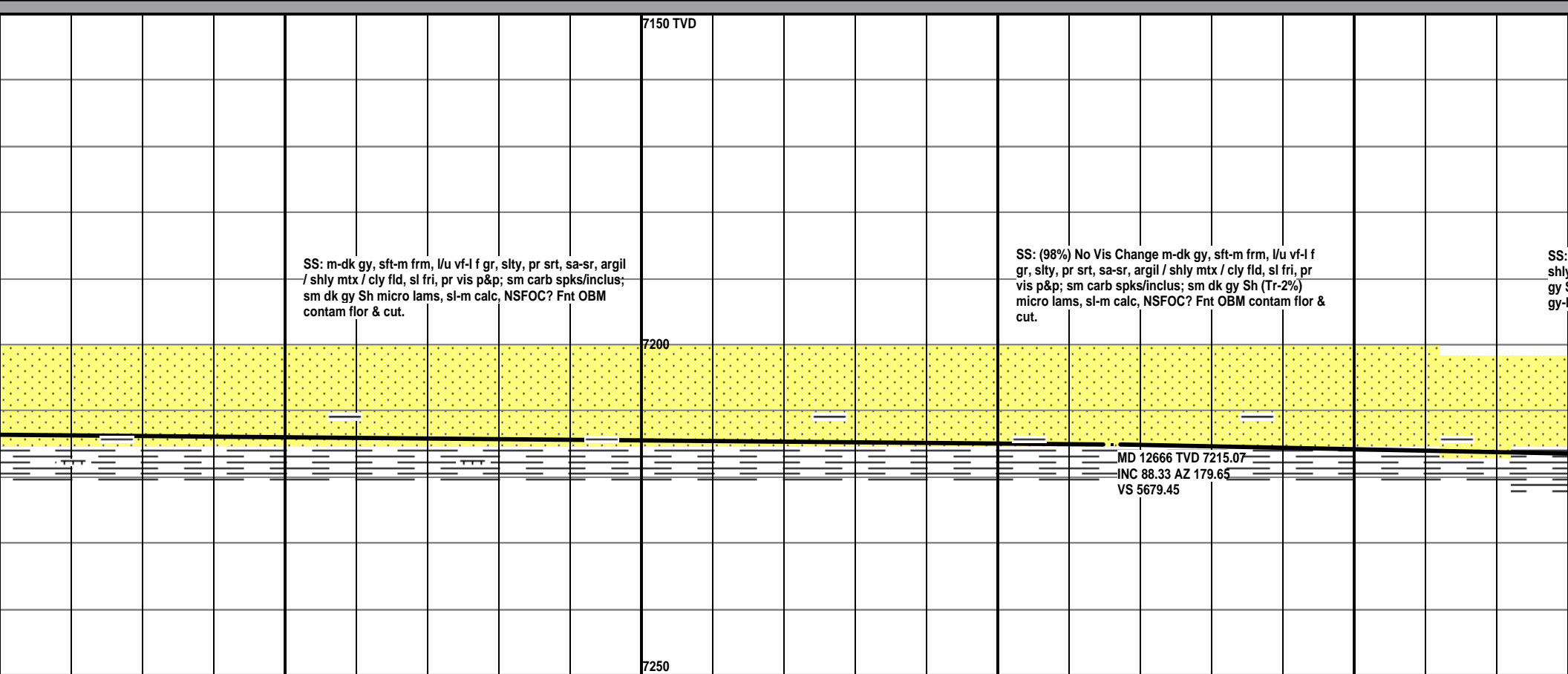


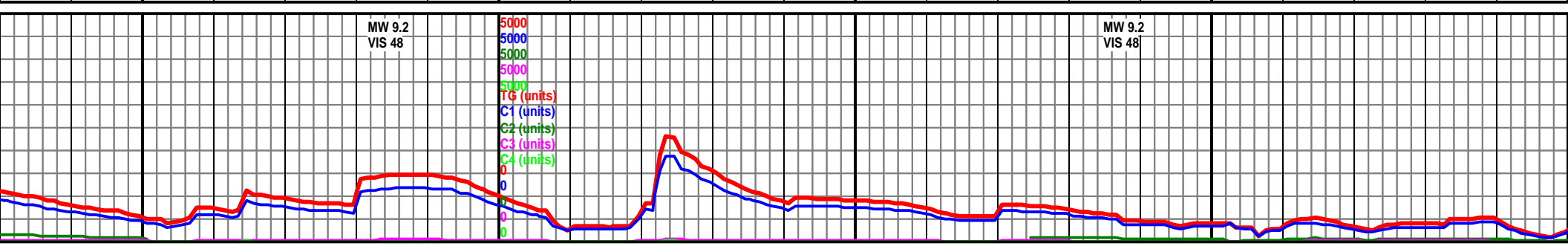
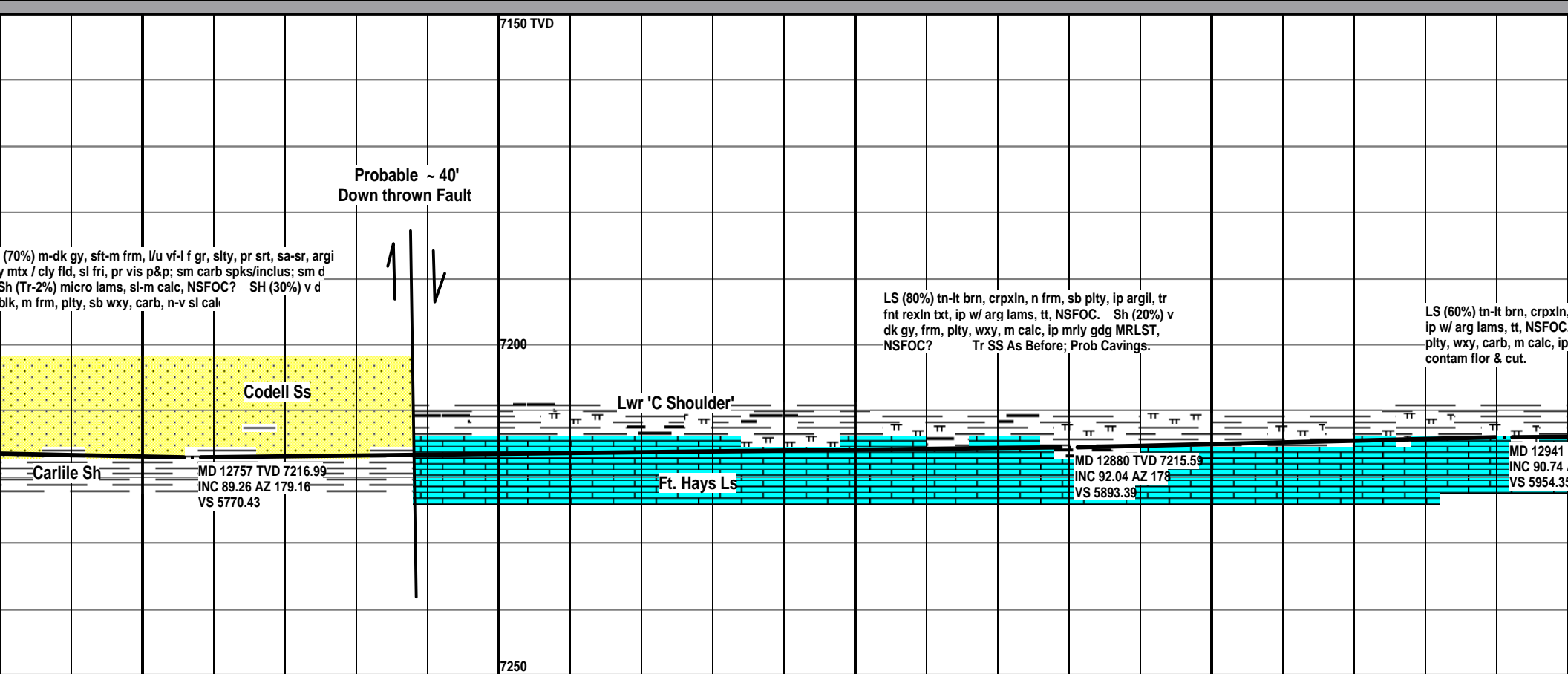
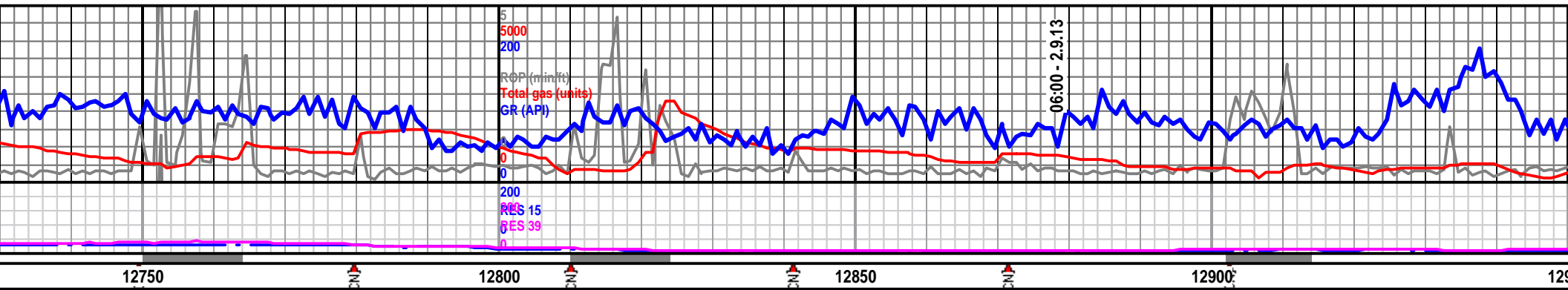




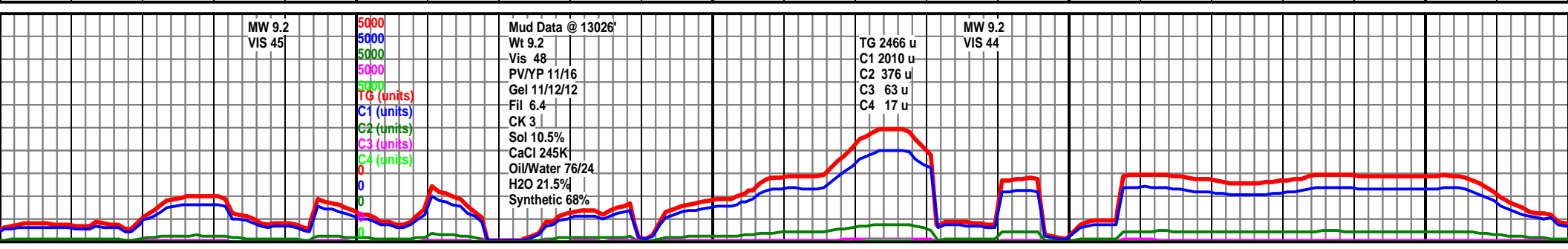
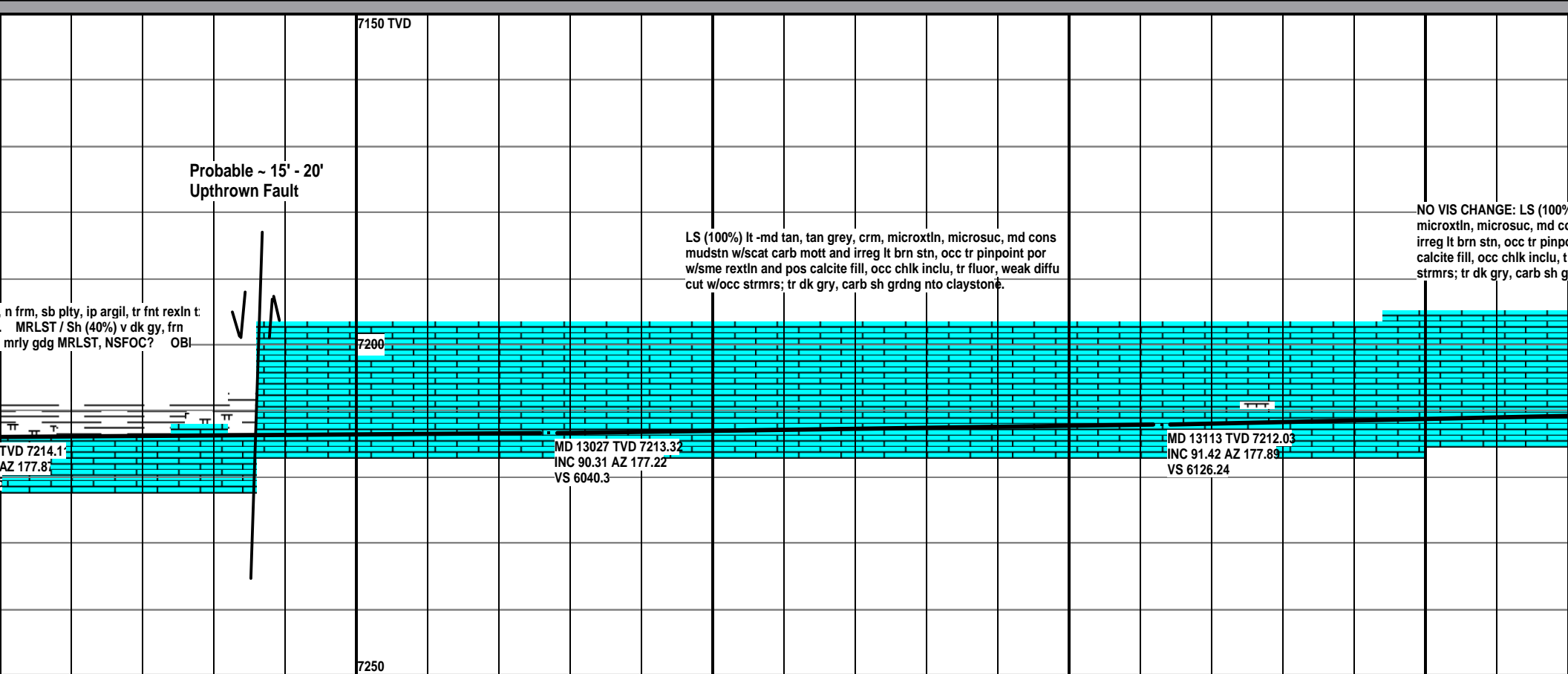
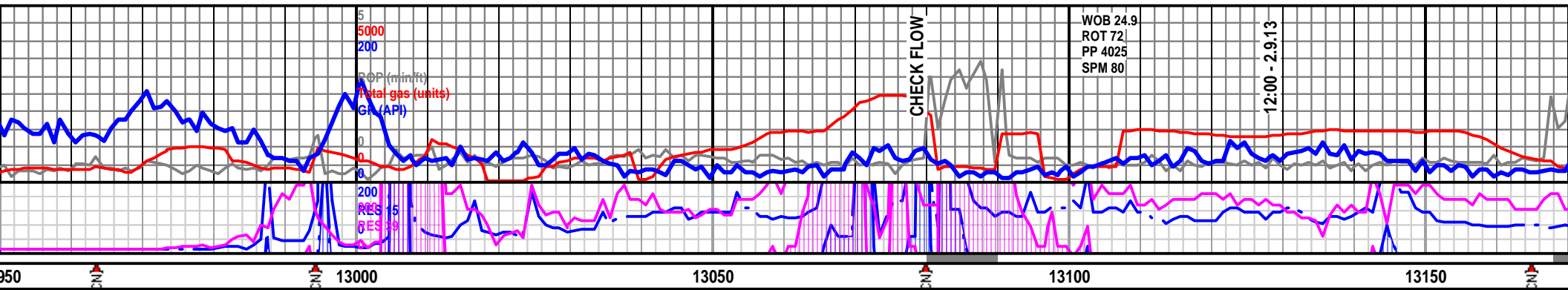


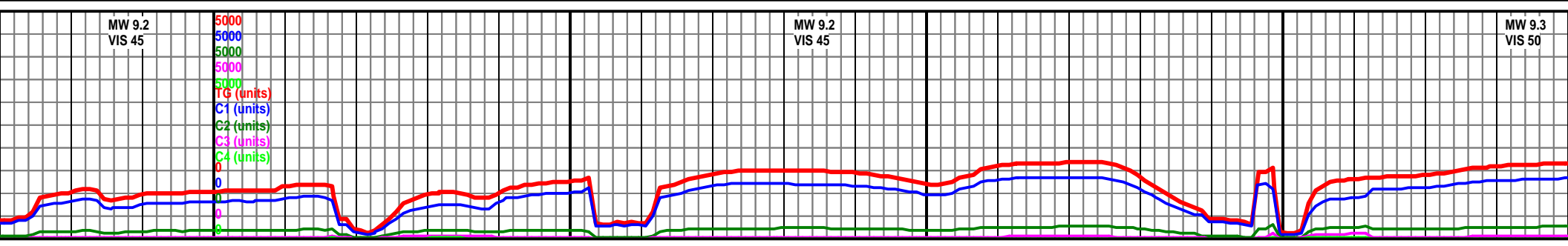
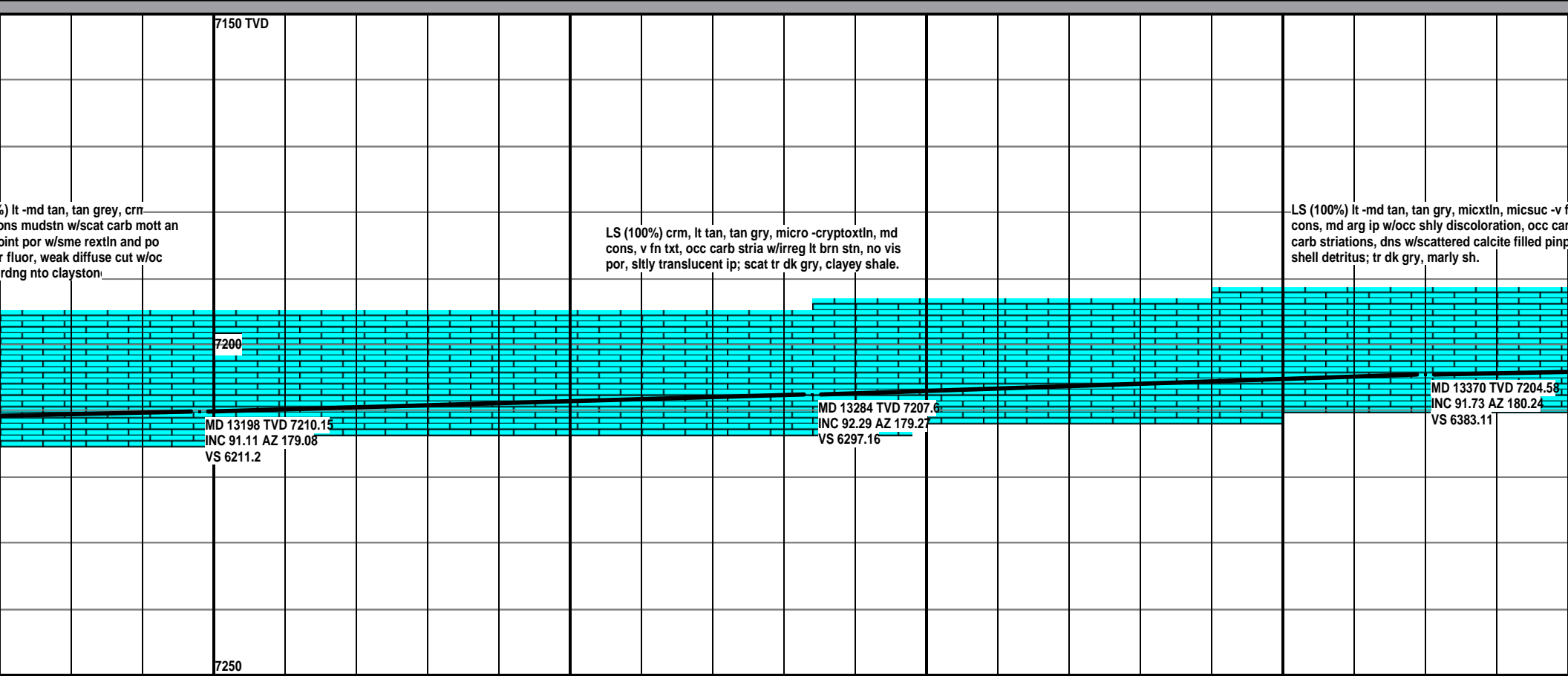
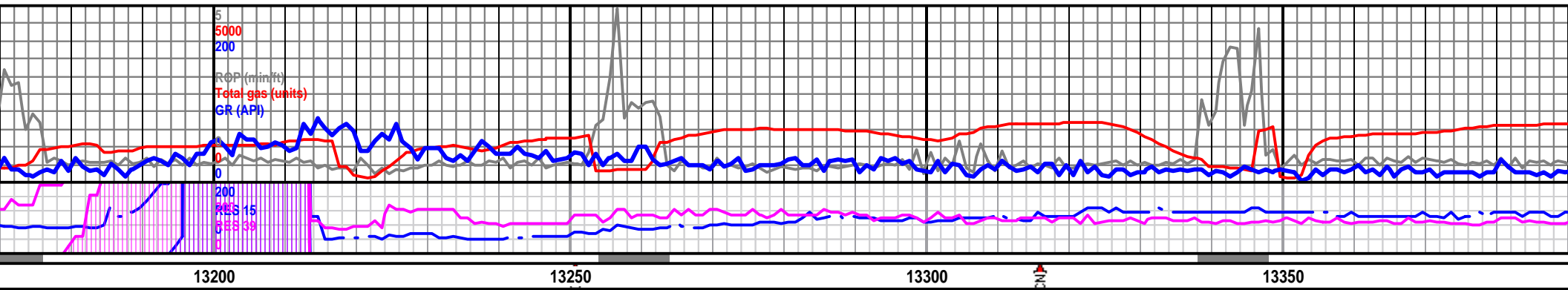


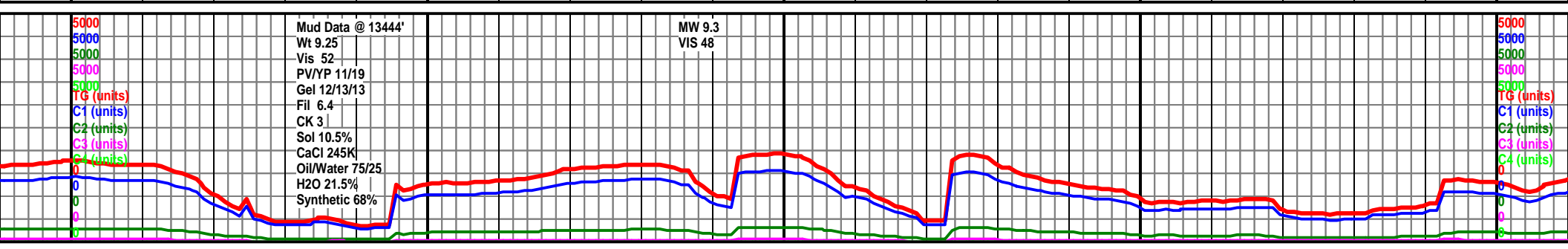
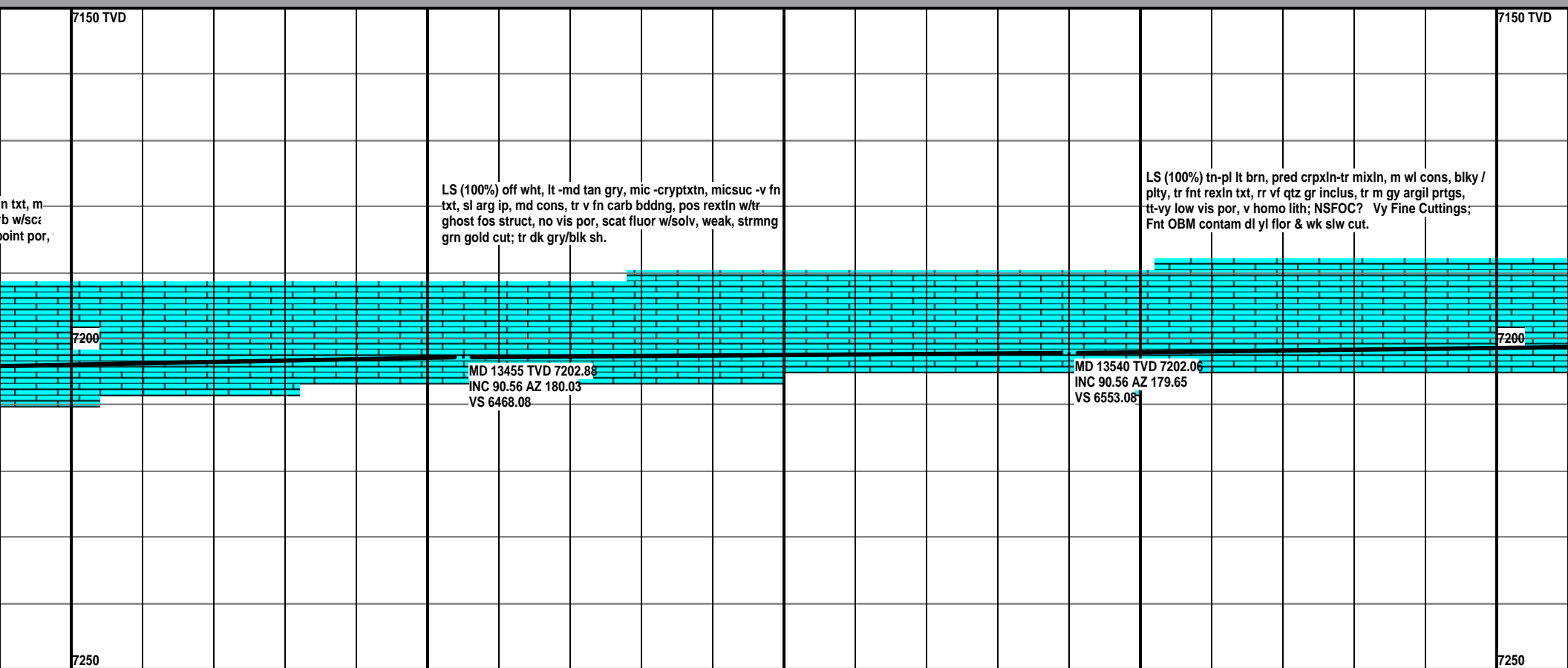




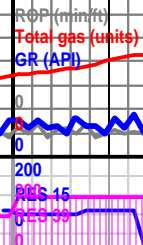






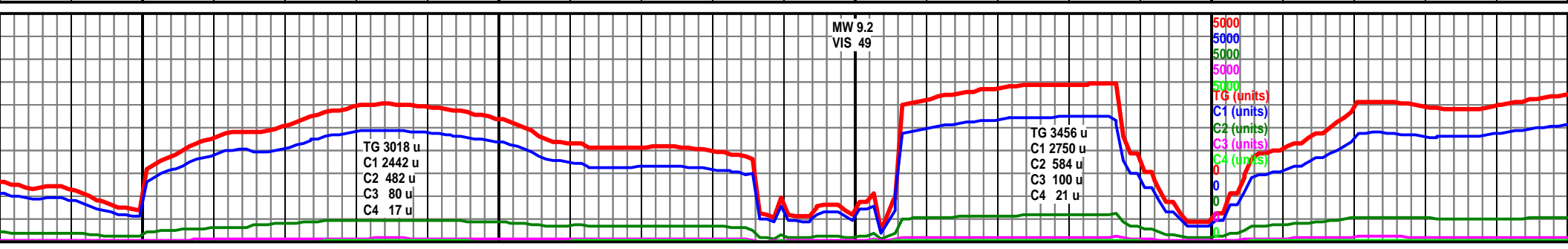
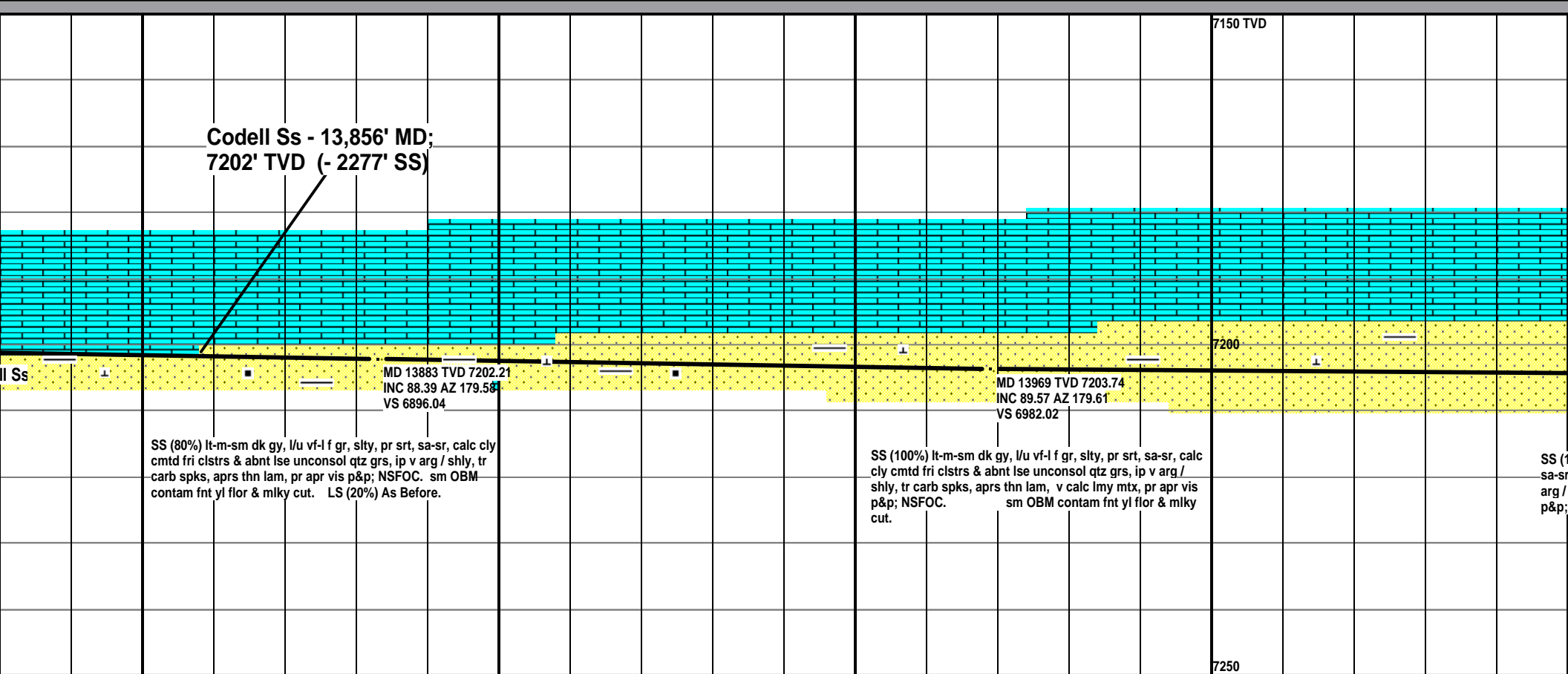
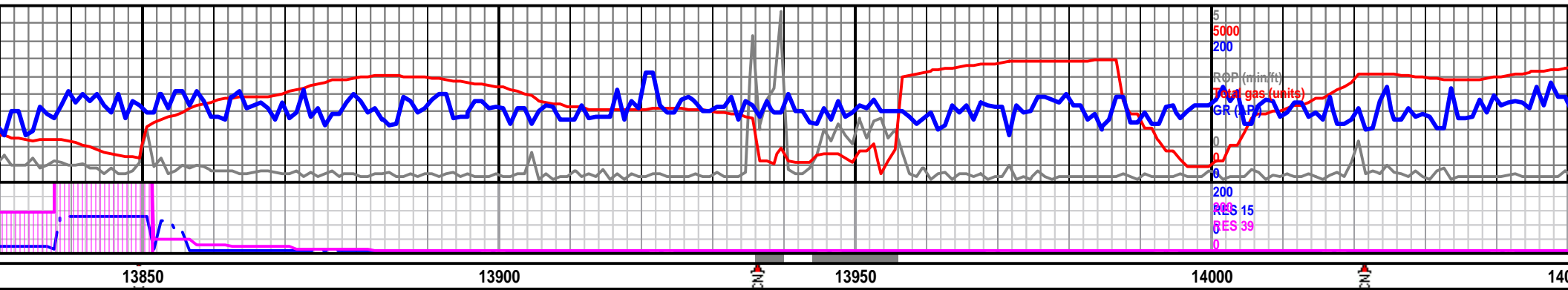


mits'



The graph displays the evolution of five variables over 100 minutes. The y-axis ranges from 0 to 5000. The x-axis represents time in minutes from 0 to 100. The legend indicates: TG (red), C1 (blue), C2 (green), C3 (magenta), and C4 (cyan). TG starts at 5000 and decreases linearly to 0 by 100 minutes. C1 starts at 0 and increases linearly to 5000 by 100 minutes. C2, C3, and C4 remain at 0 throughout the 100-minute period.

Time (min)	TG (units)	C1 (units)	C2 (units)	C3 (units)	C4 (units)
0	5000	0	0	0	0
20	4000	1000	0	0	0
40	3000	2000	0	0	0
60	2000	3000	0	0	0
80	1000	4000	0	0	0
100	0	5000	0	0	0



00%) No Vis Change: lt-m-sm dk gy, l/u vf-l f gr, slty, pr s  
 , calc cly cmtd fri clstrs & abnt lse unconsol qtz grs, ip  
 shly, tr carb spks, aprs thn lam, v calc lmy mtx, pr apr vi  
 NSFOC. OBM contam fnt yl flor & mlky ct

MD 14054 TVD 7204.34  
 INC 89.63 AZ 179.94  
 VS 7067.02

MD 14140 TVD 7204.8  
 INC 89.75 AZ 179.77  
 VS 7153.01

MD 14226 TVD 7204.24  
 INC 90.99 AZ 179.6  
 VS 7239.01

NO VISIBLE CHANGE SS (100%) No Vis Change: lt-m-sm  
 dk gy, l/u vf-l f gr, slty, pr srt, sa-sr, calc cly cmtd fri clstrs  
 & abnt lse unconsol qtz grs, ip v arg / shly, tr carb spks,  
 aprs thn lam, v calc lmy mtx, pr apr vis p&p; NSFOC

SS (100%) clr, fn g  
 -p cons w/abndt u  
 w/tr vfig ss, non-  
 greasy txt sh.

7150 TVD

7200

7250

00%) No Vis Change: lt-m-sm dk gy, l/u vf-l f gr, slty, pr s  
 , calc cly cmtd fri clstrs & abnt lse unconsol qtz grs, ip  
 shly, tr carb spks, aprs thn lam, v calc lmy mtx, pr apr vi  
 NSFOC. OBM contam fnt yl flor & mlky ct

MD 14054 TVD 7204.34  
 INC 89.63 AZ 179.94  
 VS 7067.02

MD 14140 TVD 7204.8  
 INC 89.75 AZ 179.77  
 VS 7153.01

MD 14226 TVD 7204.24  
 INC 90.99 AZ 179.6  
 VS 7239.01

NO VISIBLE CHANGE SS (100%) No Vis Change: lt-m-sm  
 dk gy, l/u vf-l f gr, slty, pr srt, sa-sr, calc cly cmtd fri clstrs  
 & abnt lse unconsol qtz grs, ip v arg / shly, tr carb spks,  
 aprs thn lam, v calc lmy mtx, pr apr vis p&p; NSFOC

SS (100%) clr, fn g  
 -p cons w/abndt u  
 w/tr vfig ss, non-  
 greasy txt sh.

7150 TVD

7200

7250

00% No Vis Change: It-m-sm dk gy, l/u vf-l f gr, slty, pr s, calc cly cmtd fri clstrs & abnt lse unconsol qtz grs, ip shly, tr carb spks, aprs thn lam, v calc lmy mtz, pr apr vi NSFOC. OBM contam fnt yl flor & mlky ct

NO VISIBLE CHANGE SS (100%) No Vis Change: It-m-sm dk gy, l/u vf-l f gr, slty, pr srt, sa-sr, calc cly cmtd fri clstrs & abnt lse unconsol qtz grs, ip v arg / shly, tr carb spks, aprs thn lam, v calc lmy mtz, pr apr vis p&p; NSFOC

SS (100%) clr, fn g -p cons w/abndt u w/tr vvf g ss, non-greasy txt sh.

00% No Vis Change: It-m-sm dk gy, l/u vf-l f gr, slty, pr s, calc cly cmtd fri clstrs & abnt lse unconsol qtz grs, ip shly, tr carb spks, aprs thn lam, v calc lmy mtz, pr apr vi NSFOC. OBM contam fnt yl flor & mlky ct

NO VISIBLE CHANGE SS (100%) No Vis Change: It-m-sm dk gy, l/u vf-l f gr, slty, pr srt, sa-sr, calc cly cmtd fri clstrs & abnt lse unconsol qtz grs, ip v arg / shly, tr carb spks, aprs thn lam, v calc lmy mtz, pr apr vis p&p; NSFOC

SS (100%) clr, fn g -p cons w/abndt u w/tr vvf g ss, non-greasy txt sh.

MW 9.2  
VIS 49

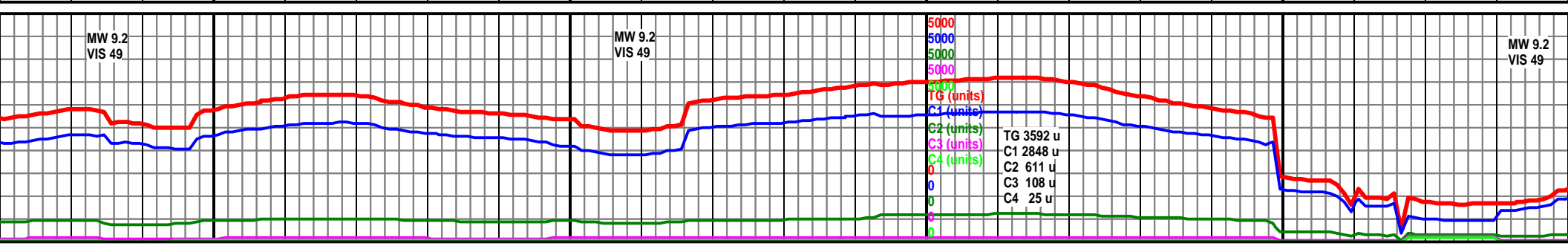
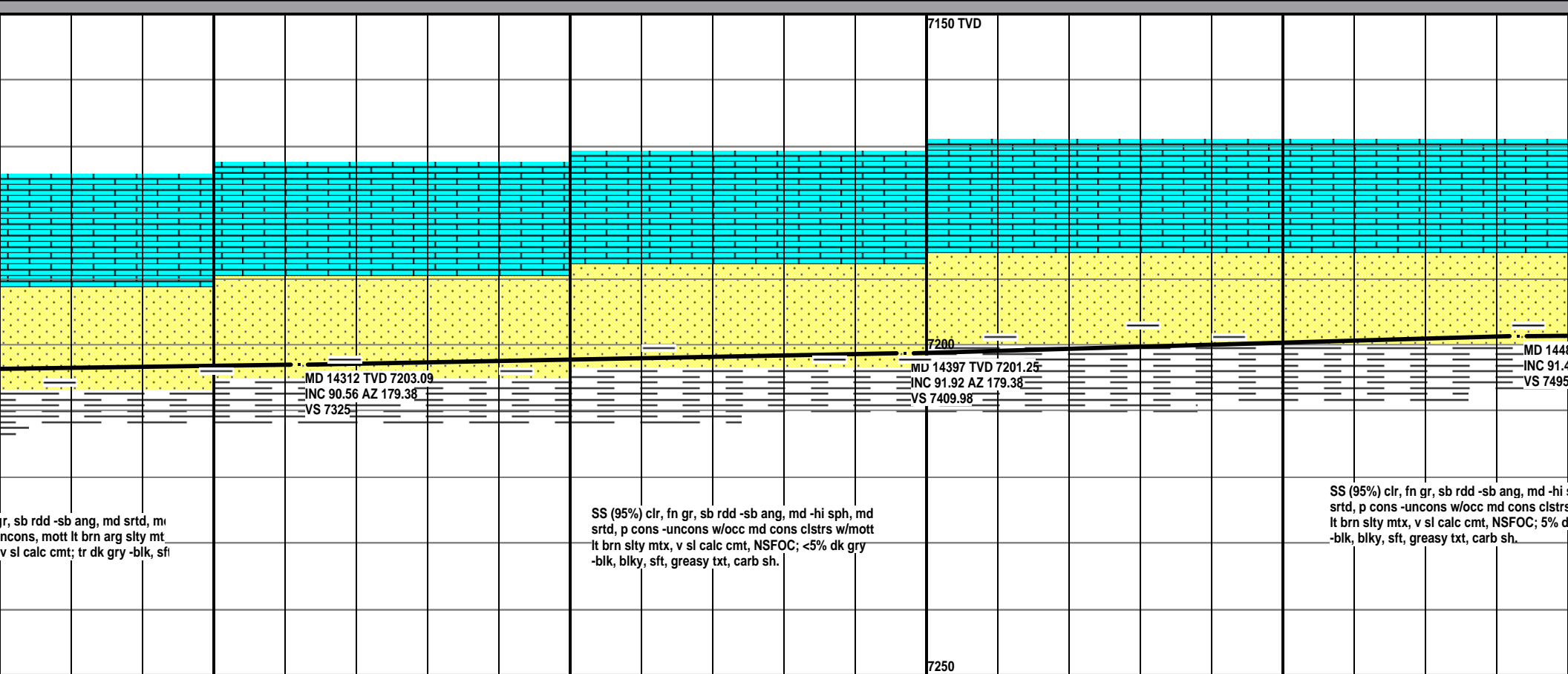
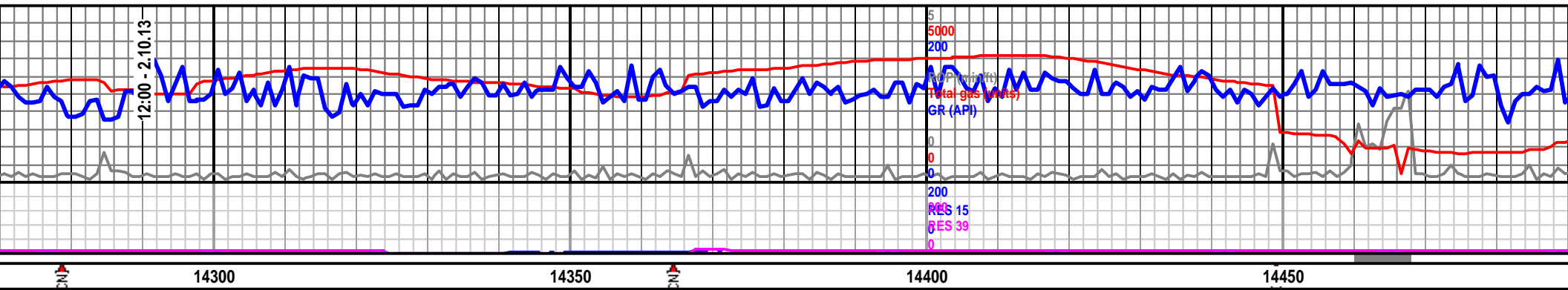
MW 9.2  
VIS 48

CG

TG (units)  
C1 (units)  
C2 (units)  
C3 (units)  
C4 (units)

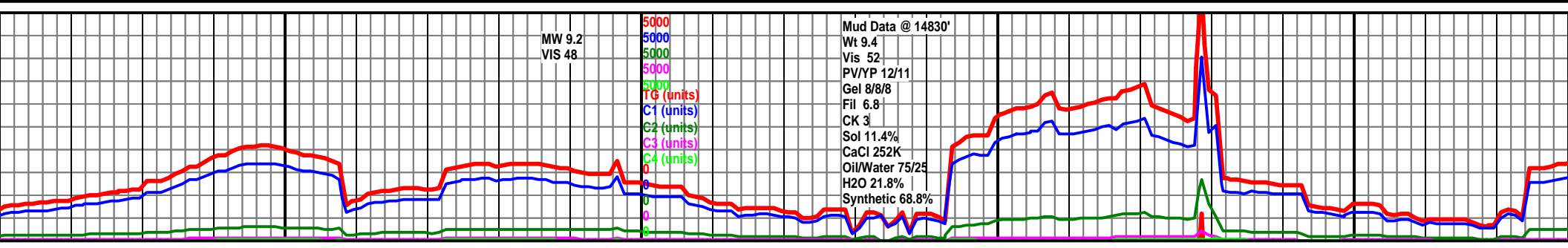
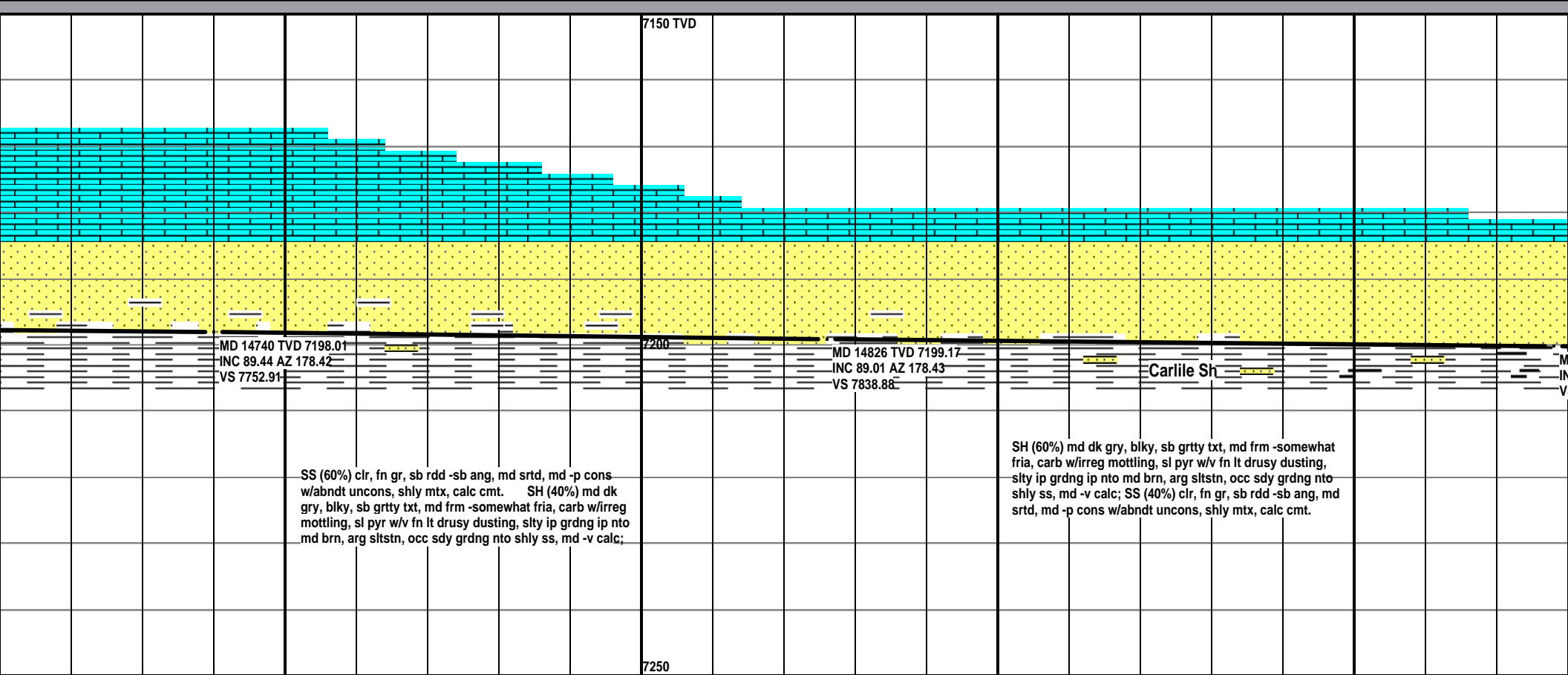
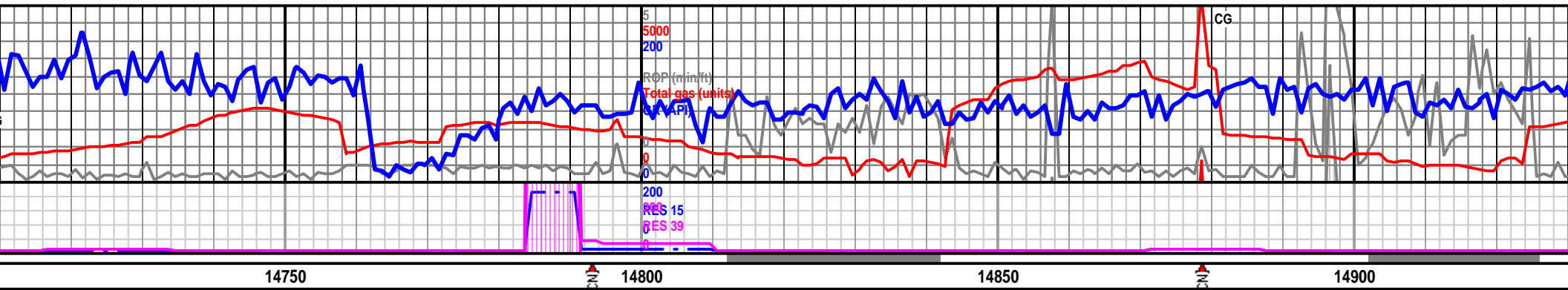
TG 3295 u  
C1 2625 u  
C2 549 u  
C3 96 u  
C4 25 u

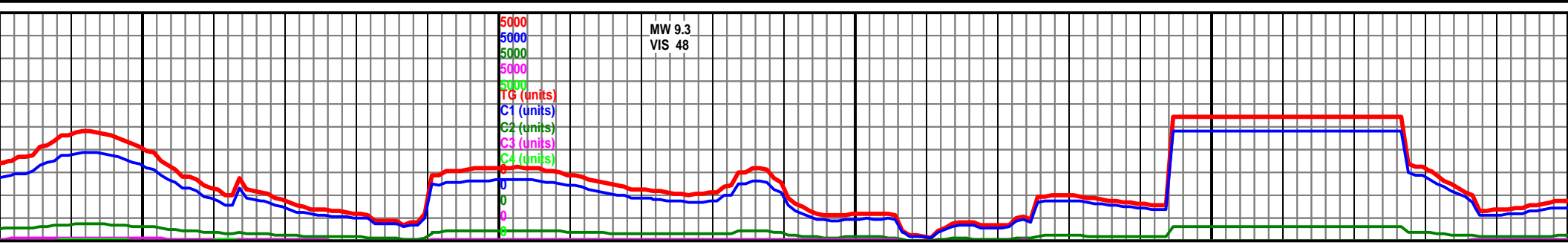
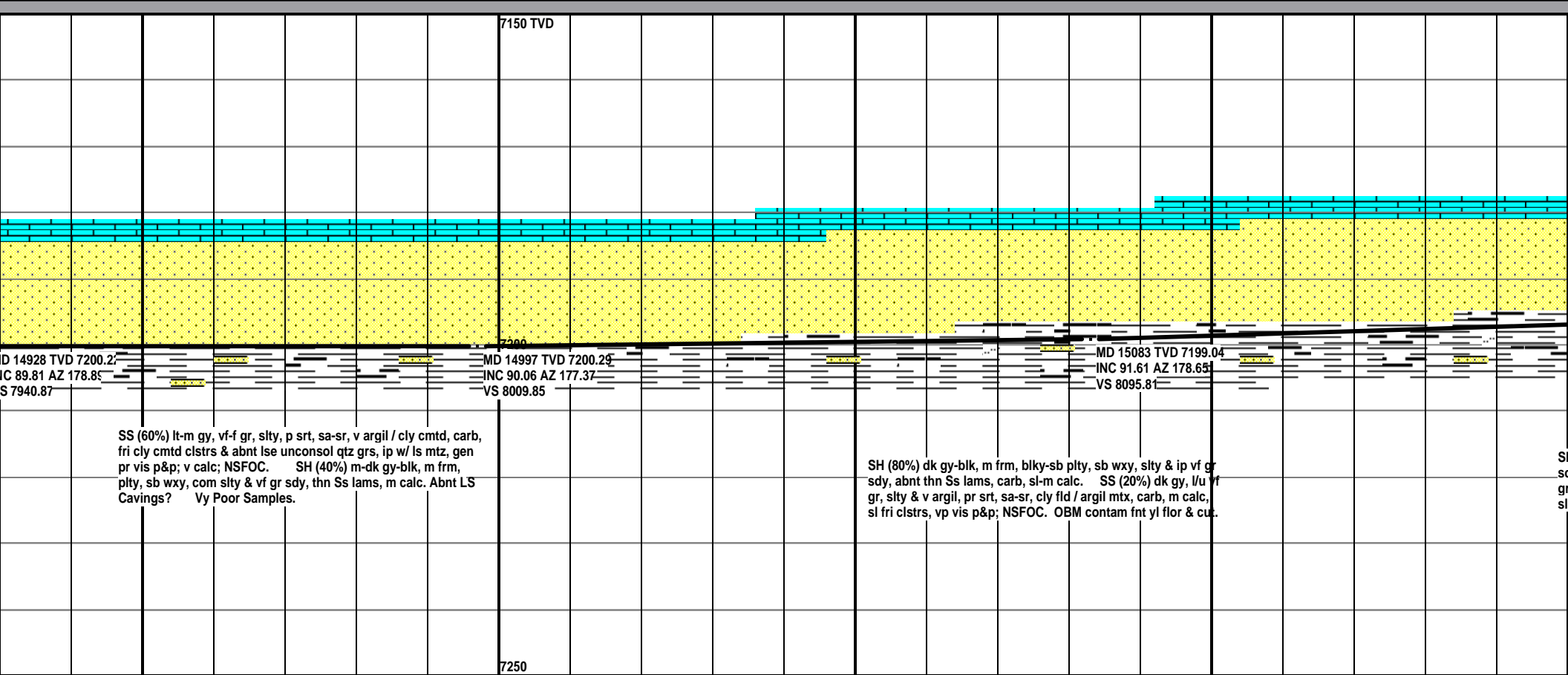
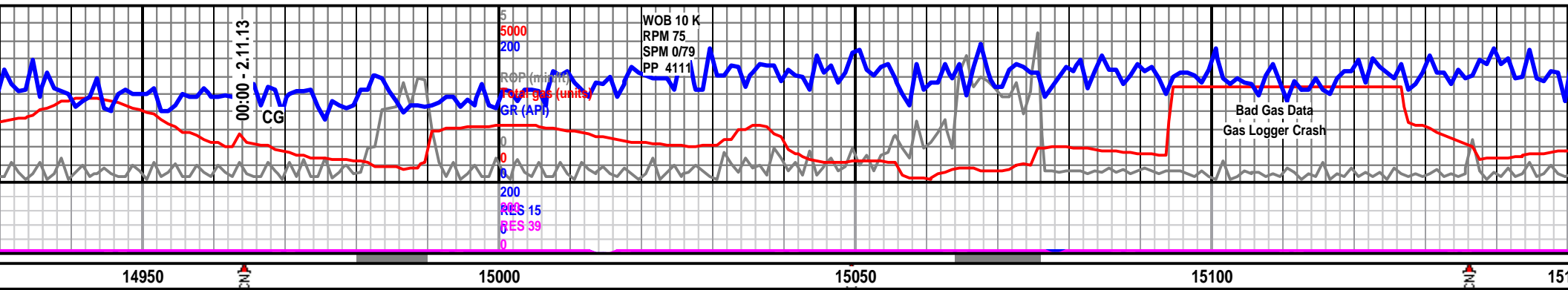
5000  
5000  
5000  
5000  
5000  
0  
0  
0  
0



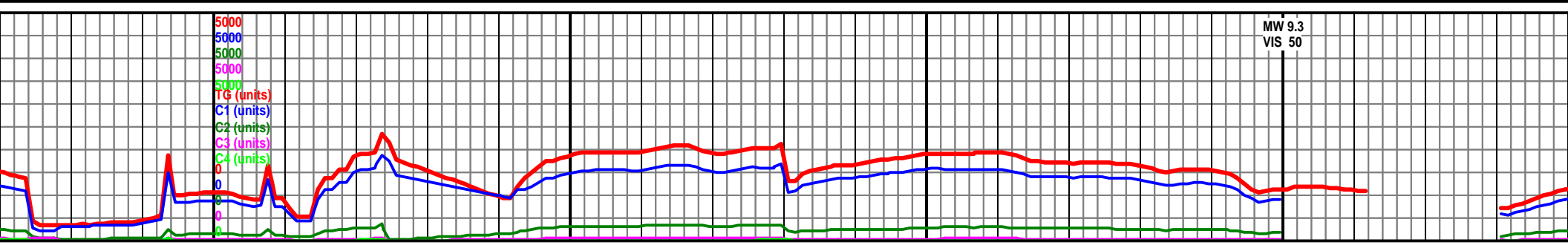
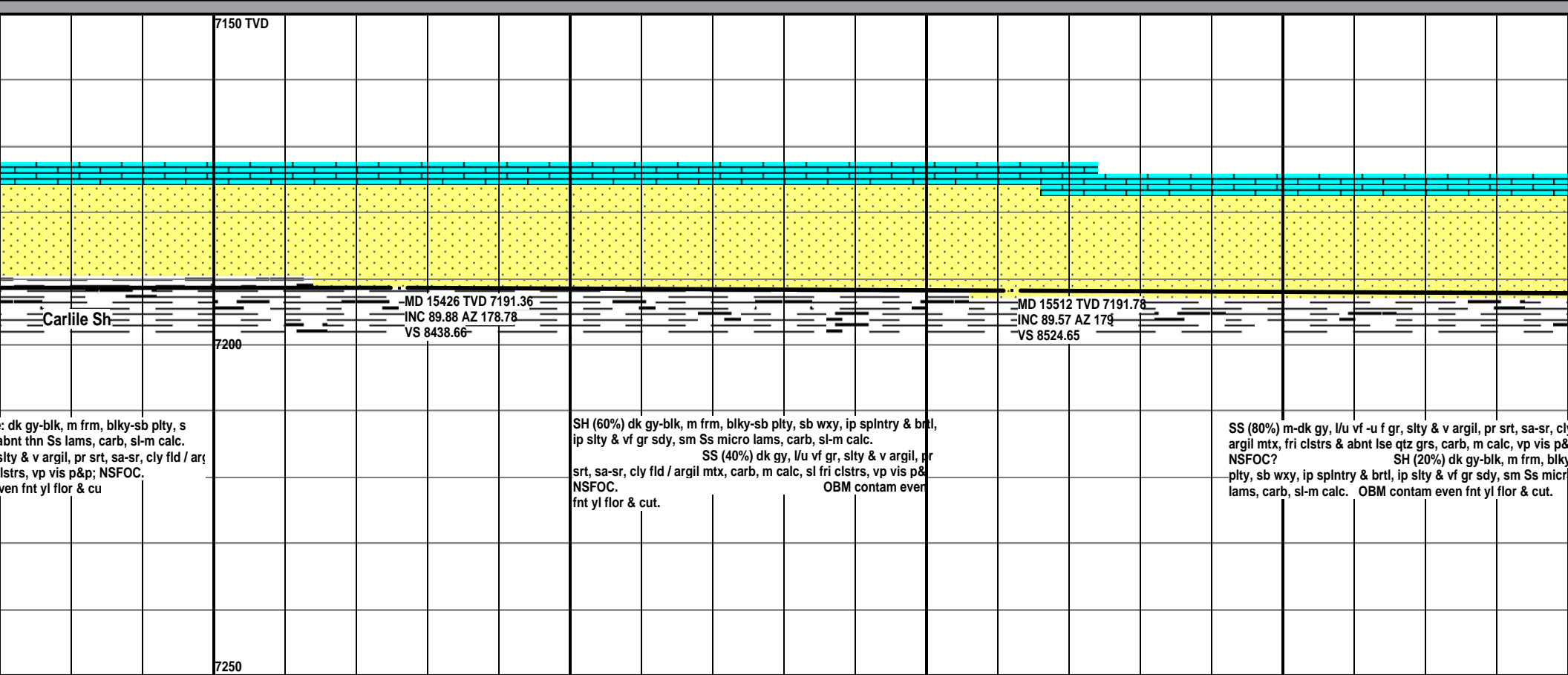
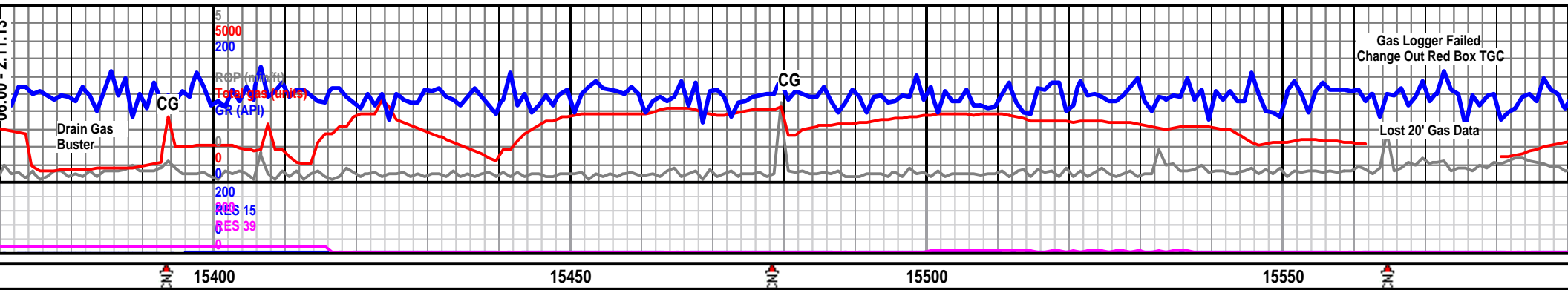


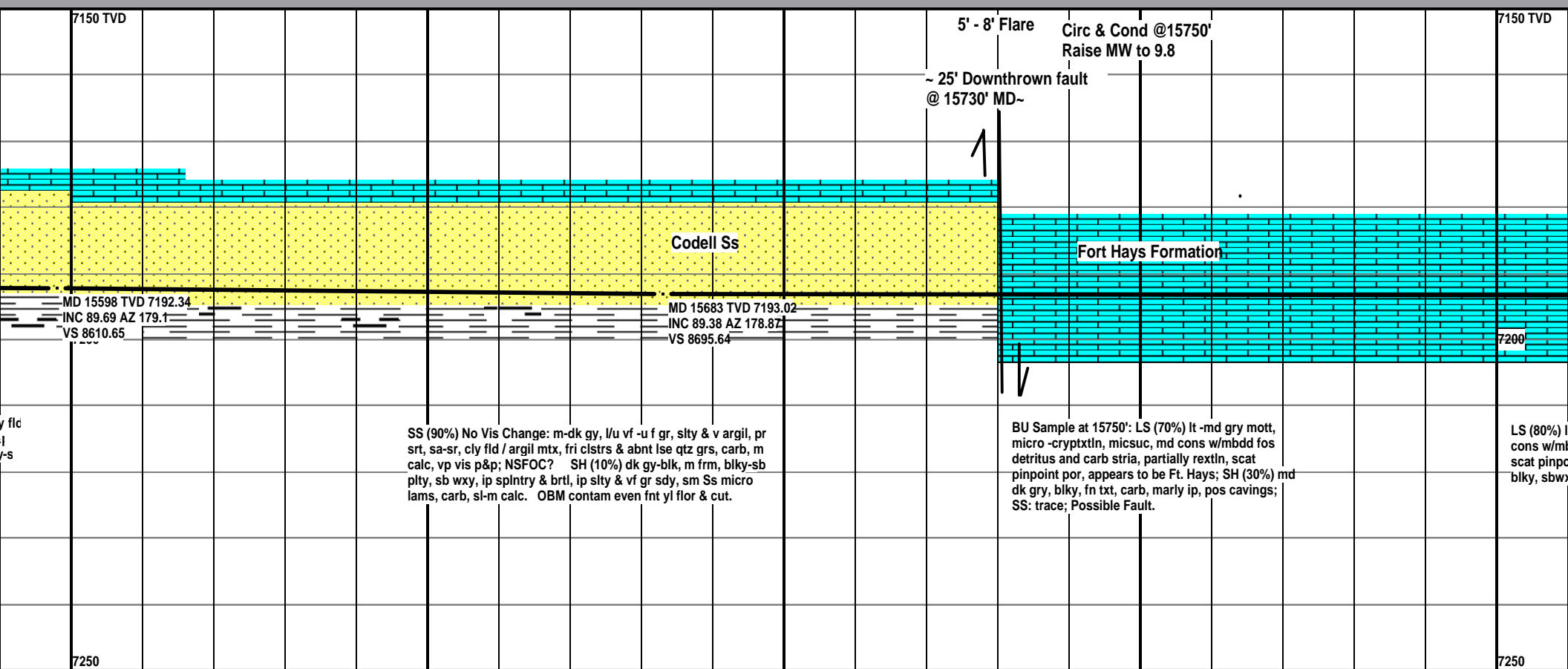


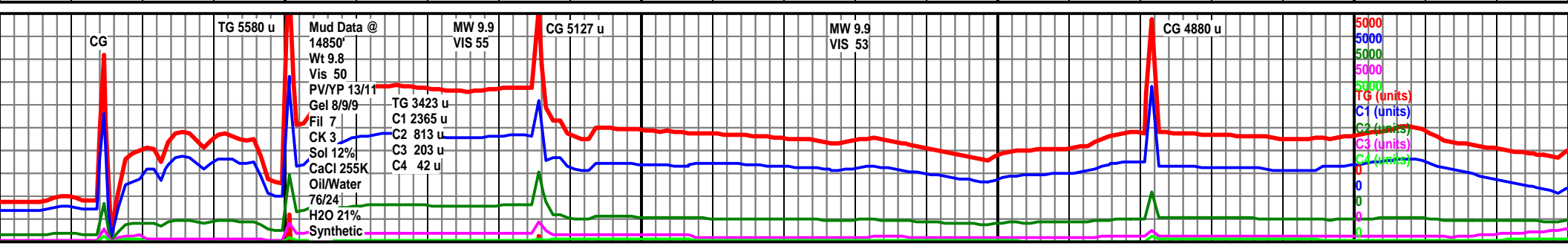
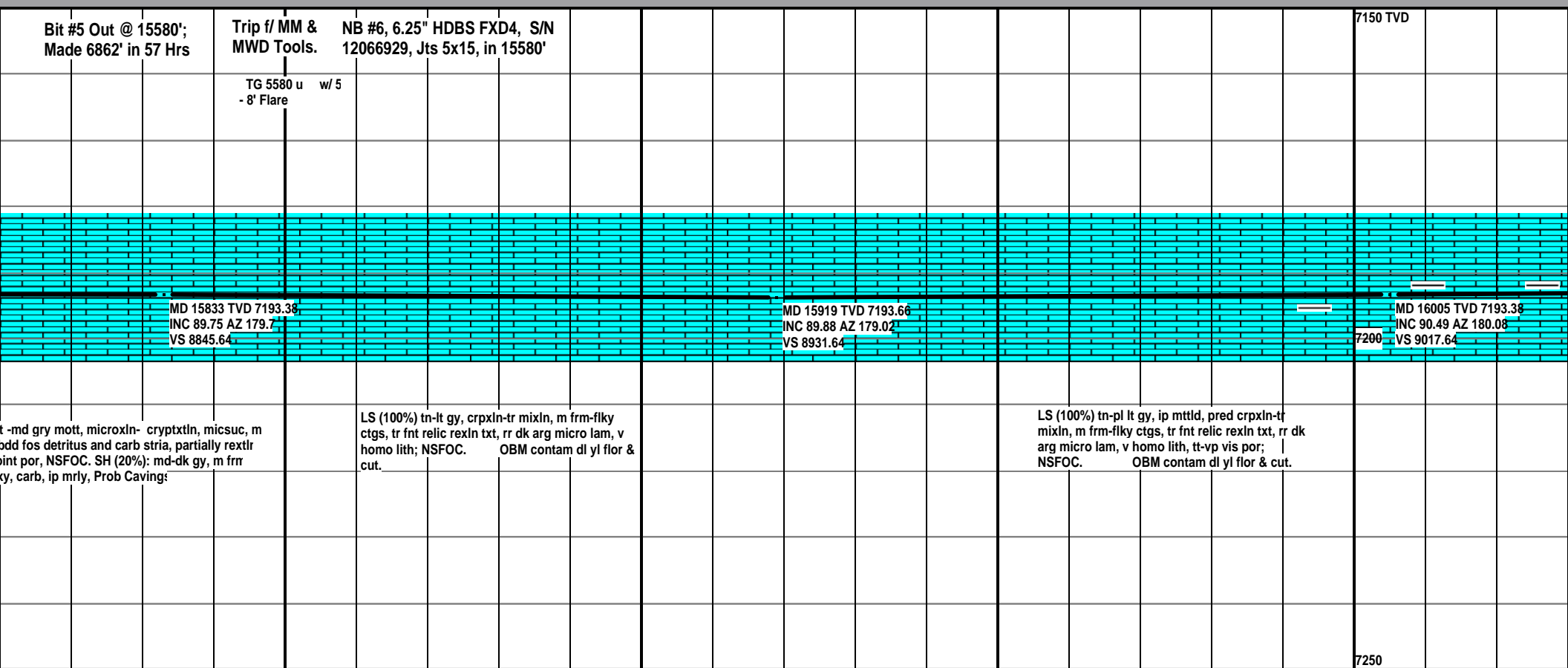


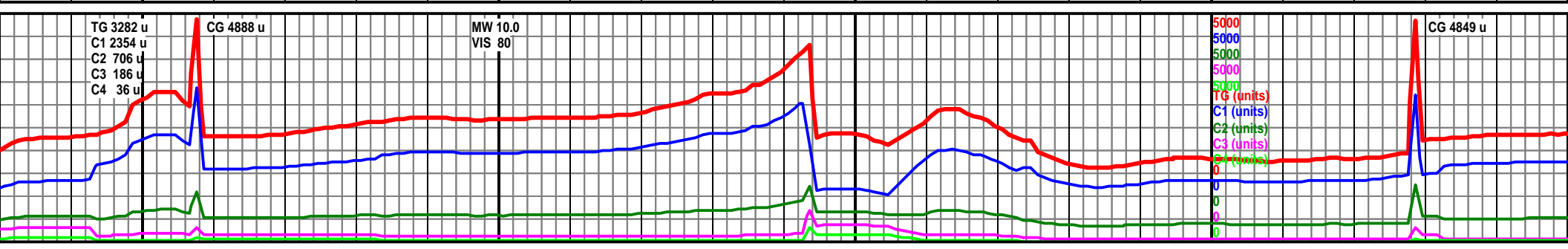
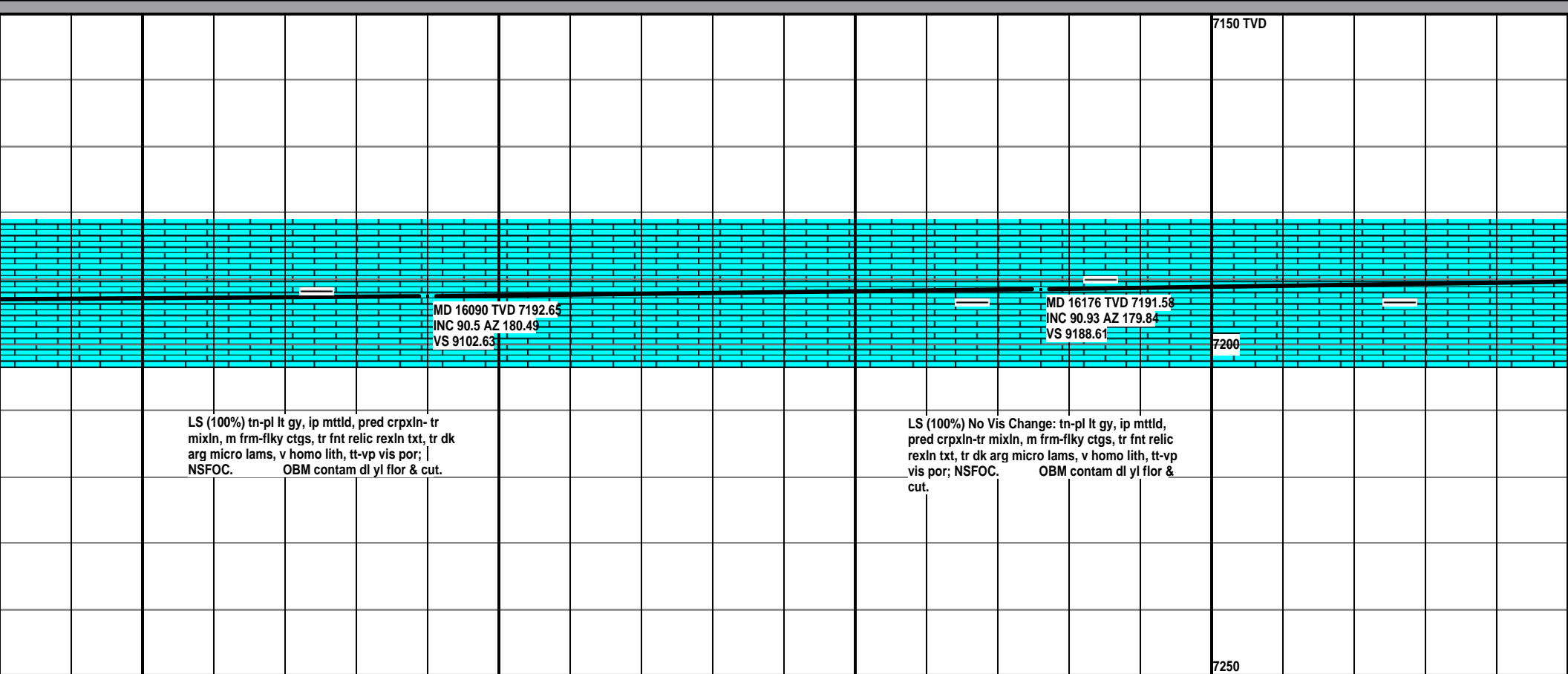
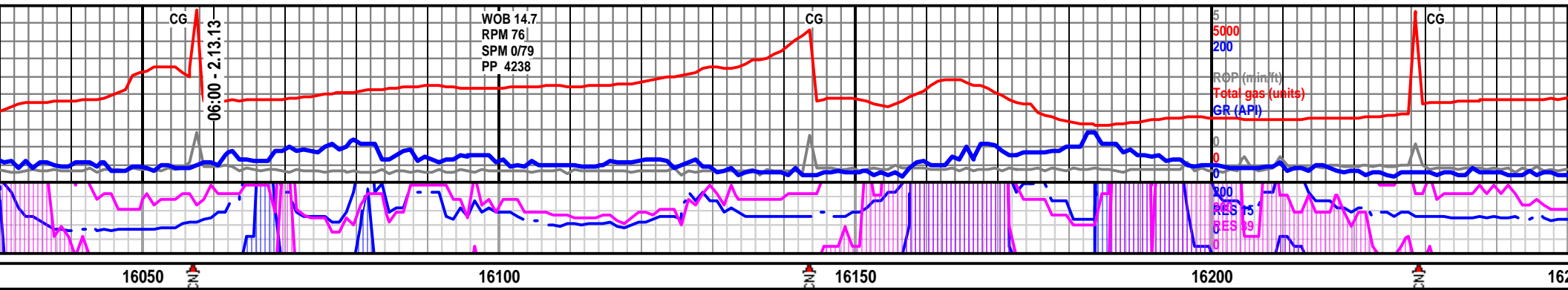


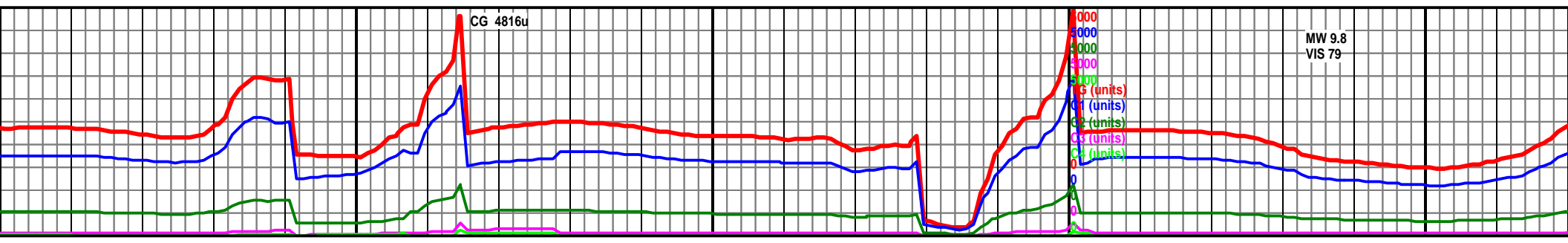
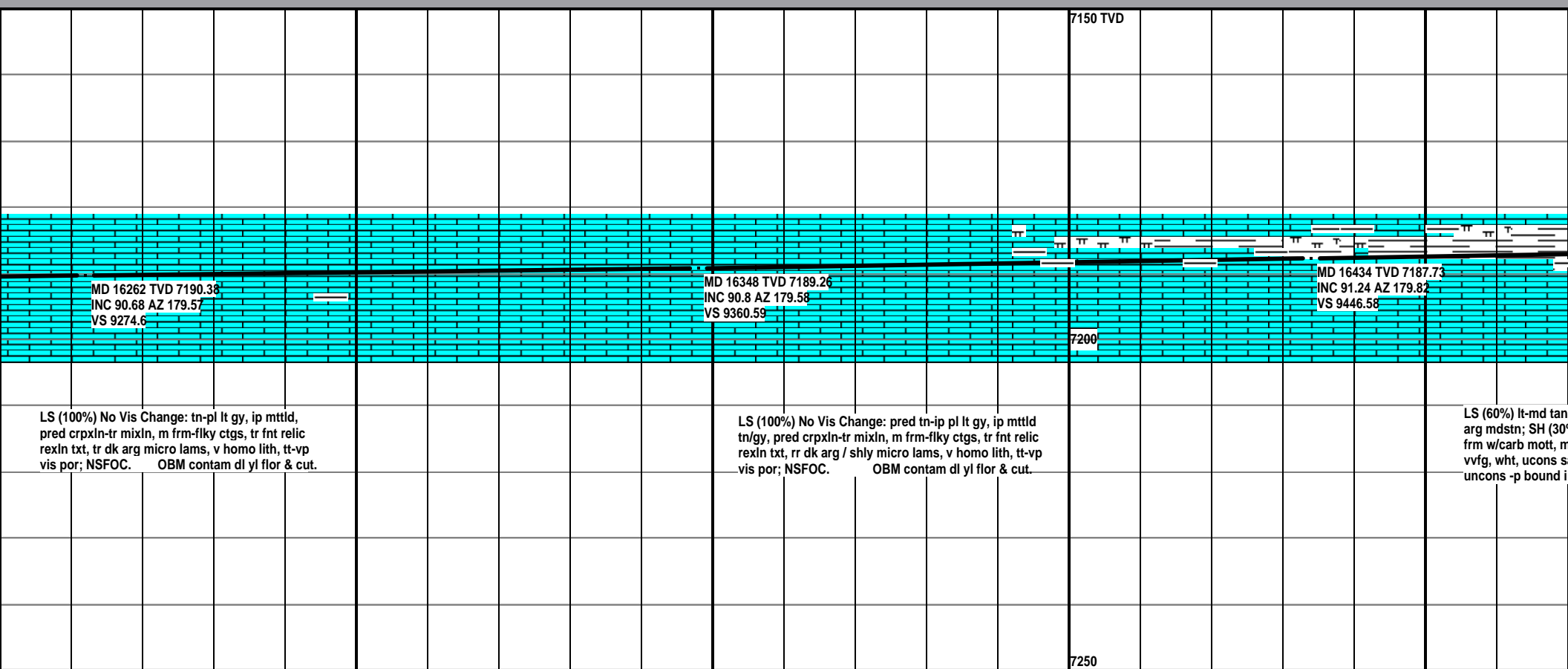
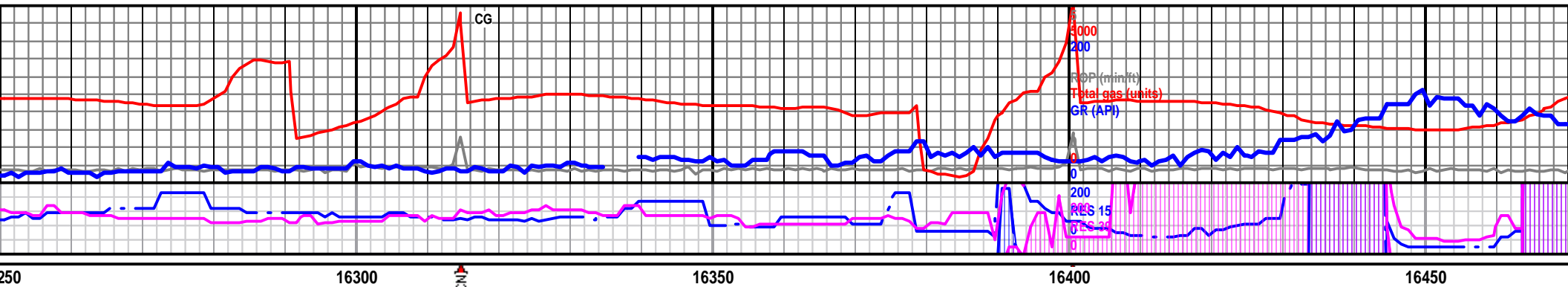




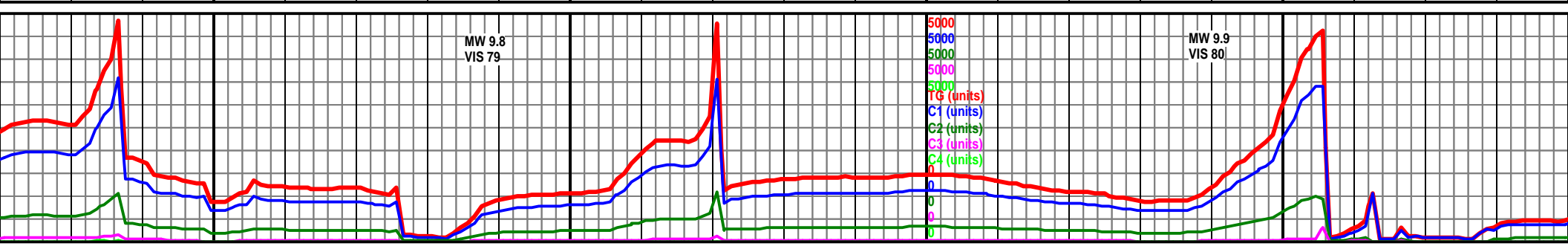
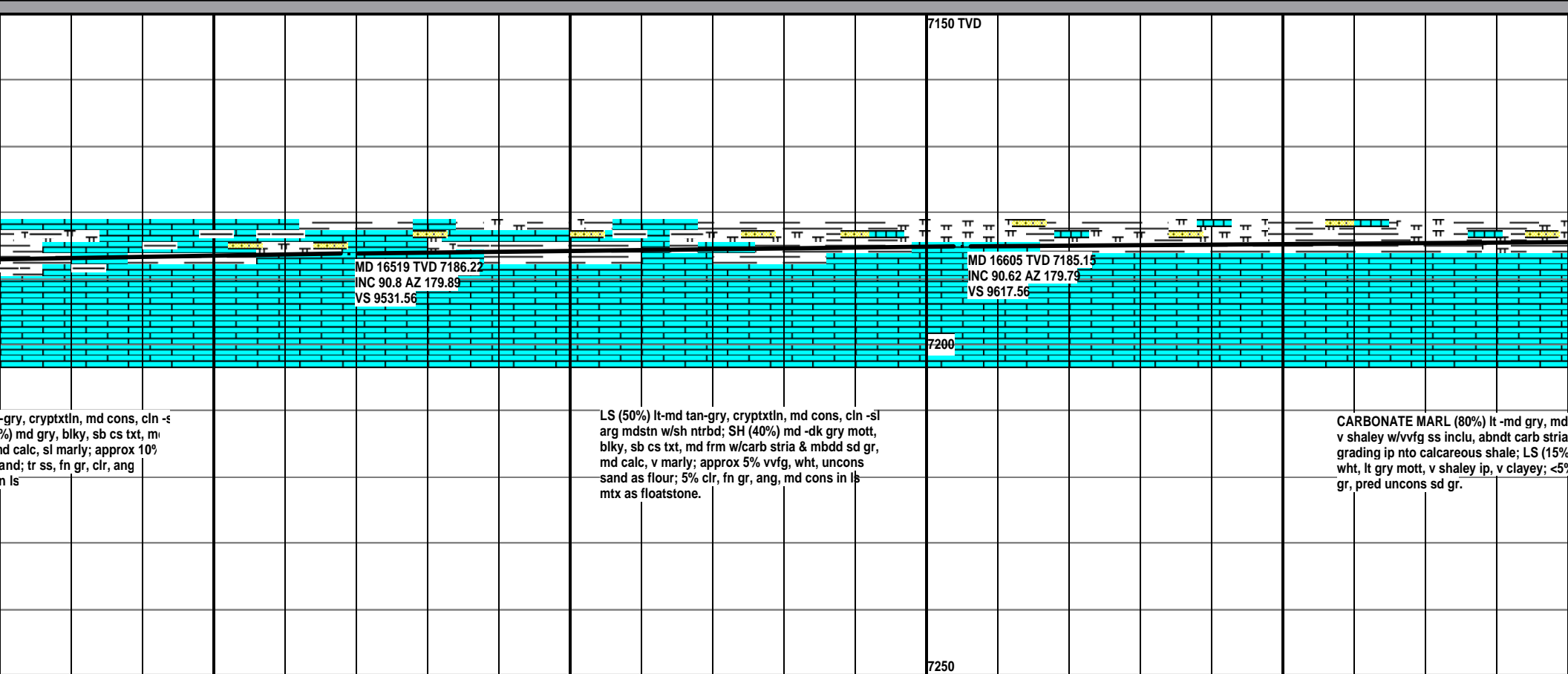
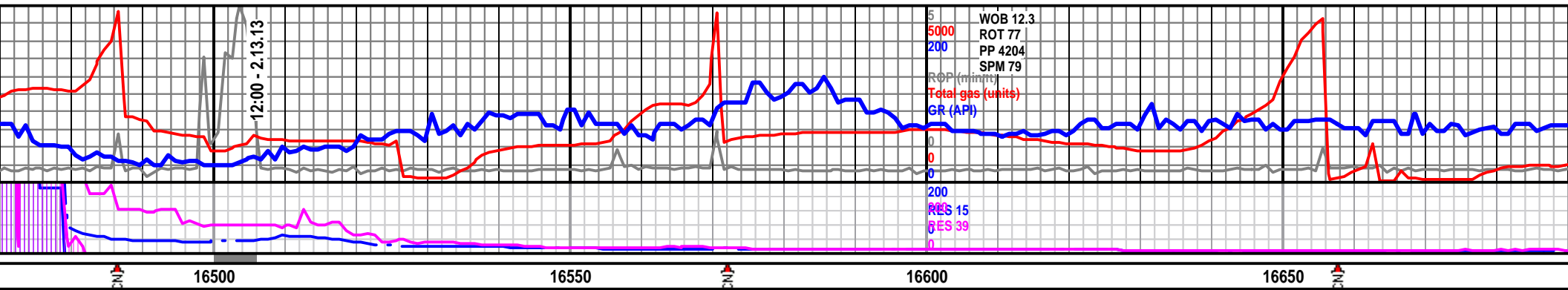














[illegible]