

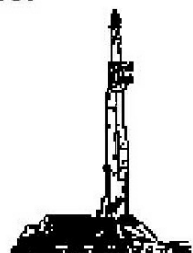
**GOOLSBY BROTHERS**  
and associates, inc.

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: HEDGE 16C-22HZ

Location: Section 22 T3N R66W, Weld County, CO.

License Number: API: 05-123-36447 AFE: 2057230

Spud Date: August 14, 2013

Surface Coordinates: 631' FNL & 404' FEL Sec. 22 T3N R66W

Lat: 40.203572 N Long: -104.757040 W

Bottom Hole Coordinates: 118' FSL & 988' FEL Sec. 22 T3N R66W

Ground Elevation (ft): 4905

Logged Interval (ft): 6,800'

To: 12,238'

Formation: Pierre Shales / Sands, Niobrara, Codell

Type of Drilling Fluid: LSND (Polymer-Water)

K.B. Elevation (ft): 4930

Total Depth (ft): 12,238'

Region: Wattenberg

Drilling Completed: August 19, 2013

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

**OPERATOR**

Company: Anadarko Petroleum Corporation

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

Denver, CO 80202

CO Geologist, Tom Birmingham.

**GEOLOGIST**

Name: Marek Ciesnik/Steve Schindler

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 Gamma: 6,800'-12,194'  
MWD Resistivity (PRT): 7,773'-12,186'

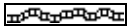
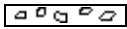

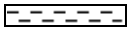

## Casing

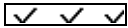

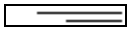

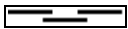
9 5/8" Surface Casing (IPSCO 36# J55) set @ 975'.  
7" Intermediate Casing (IPSCO 26# P110) set @ 7,773'.  
4 1/2" Production Liner set @12,223' Hung @ 6,484'






## Comments


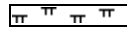
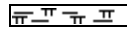


- 1) Drilling Contractor: H&P 311  
Pumps 1 & 2: Gardner Denver PZ 11 6" x 11" (.0914 bbl/stk)  
Rig Manager: Jack Truett, James Baggett.  
Drillers: Michael Munroe, Christopher Moore, Kenneth Jones, Christopher Beckstead.
- 2) Company Man: Doug Blair, David Wells
- 3) Mud Company: Halliburton, Randal Phipps
- 4) Directional Drilling: Scientific Drilling  
Directional Drillers: John Noakes, Ian Ensell  
MWD: Joshua Denning, Mohamed Sharker.
- 5) Gas Equipment: Mudlogging Systems Inc.  
by Terra Services  
Redbox # ML-419




## ROCK TYPES

 Bent  
 Brec  
 Cht  
 Clyst  
 Coal

 Anhydrite  
 Shale  
 Sh (col)  
 Slty sh  
 Carb sh

 Carb sh\_  
 Ss  
 Arg ss  
 Ss (f gr+)  
 Slstst

 Congl  
 Mrlst  
 Mrlst/sh (intbdd)  
 Dol  
 Lmst

 Marly limestone  
 Arg limestone  
 Chalk

## ACCESSORIES

### MINERAL

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

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

### FOSSIL

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

Ostra  
 Pelec  
 Pellet  
 Pisolite  
 Plant  
 Strom

### STRINGER

Anhy  
 Arg  
 Bent  
 Coal  
 Dol  
 Ls  
 Chlk  
 Mrst

Ss strg  
 Sltst strg

### TEXTURE

Boundst  
 Chalky  
 Cryxln  
 Earthy  
 Finexln  
 Grainst  
 Lithogr  
 Microxln  
 Mudst  
 Packst  
 Wackest

## OTHER SYMBOLS

### SAMPLE SHOWS

Even  
 Near even  
 Spotted/patchy  
 Very spotty  
 Questionable

Dead

### POROSITY TYPE

Earthy  
 Fenest  
 Fracture

Inter  
 Moldic  
 Organic  
 Pinpoint  
 Vuggy

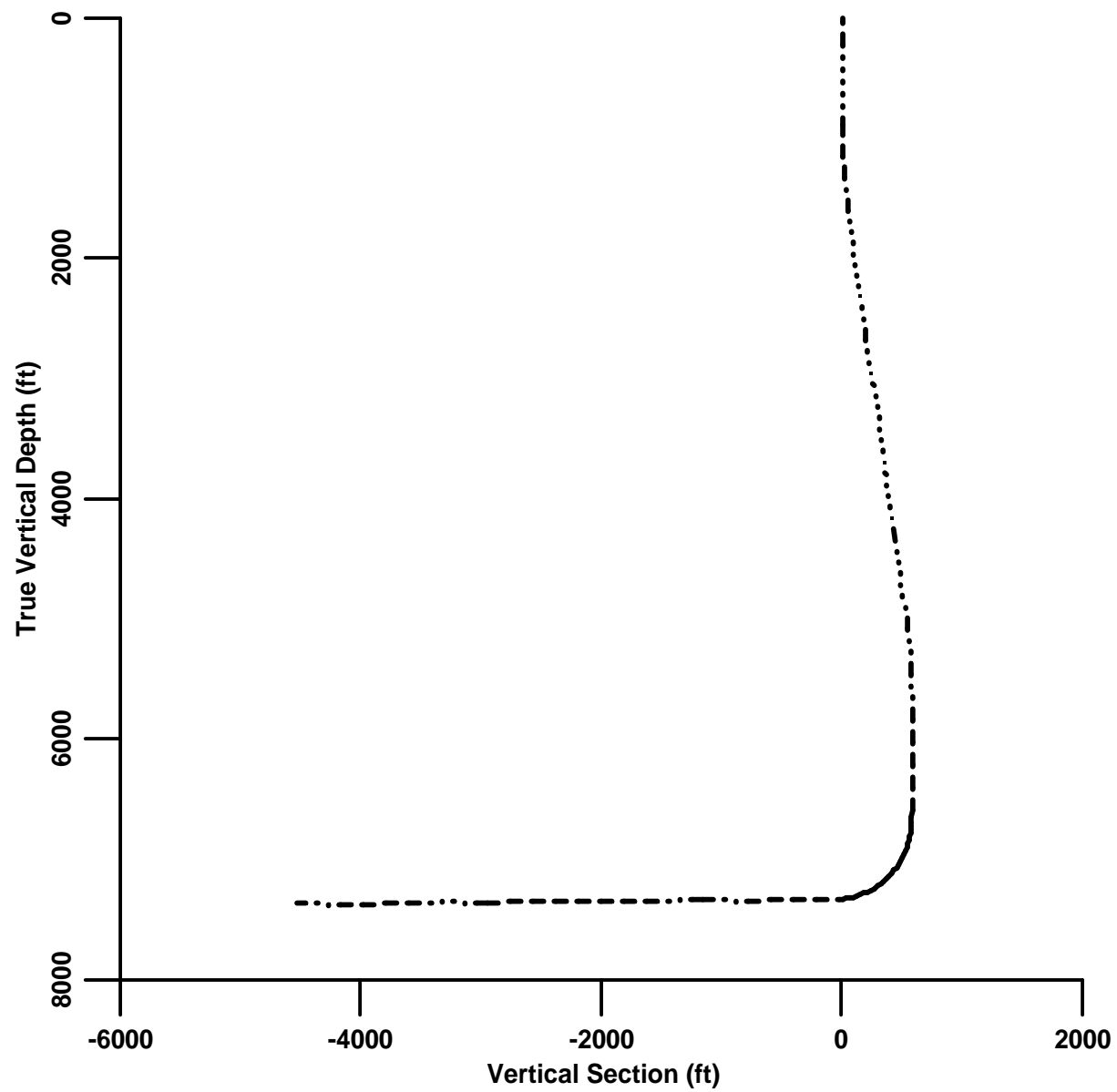
### ROUNDING

Rounded  
 Subrnd  
 Subang  
 Angular

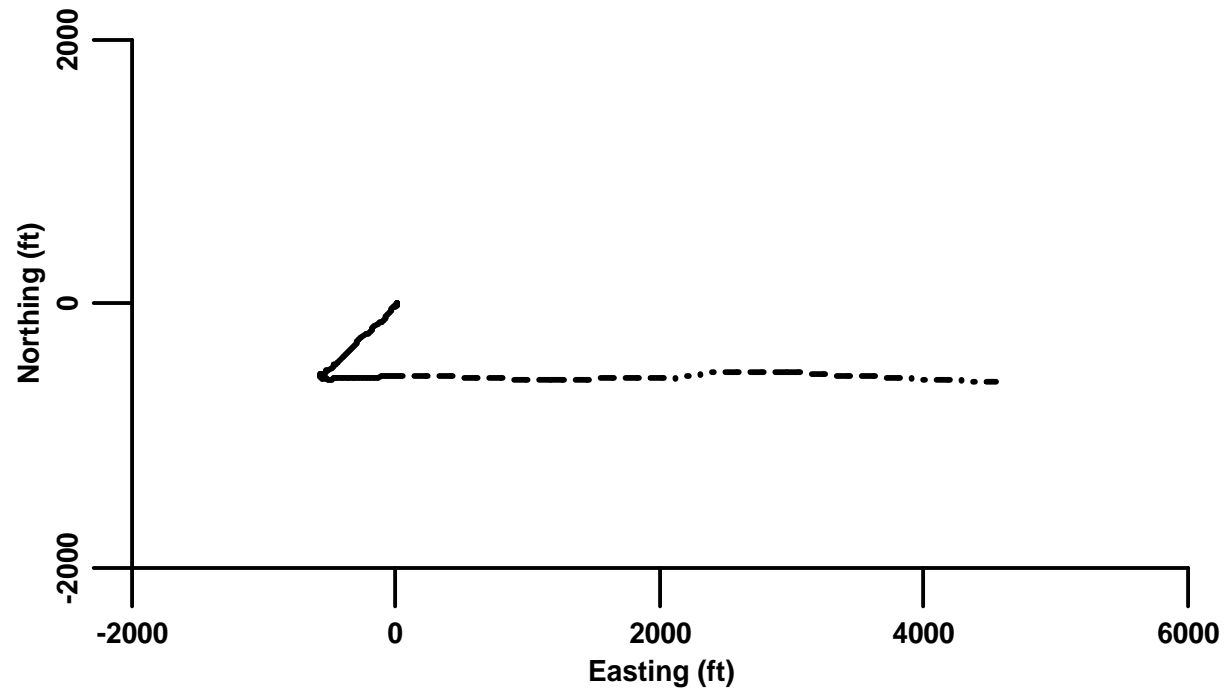
### SORTING

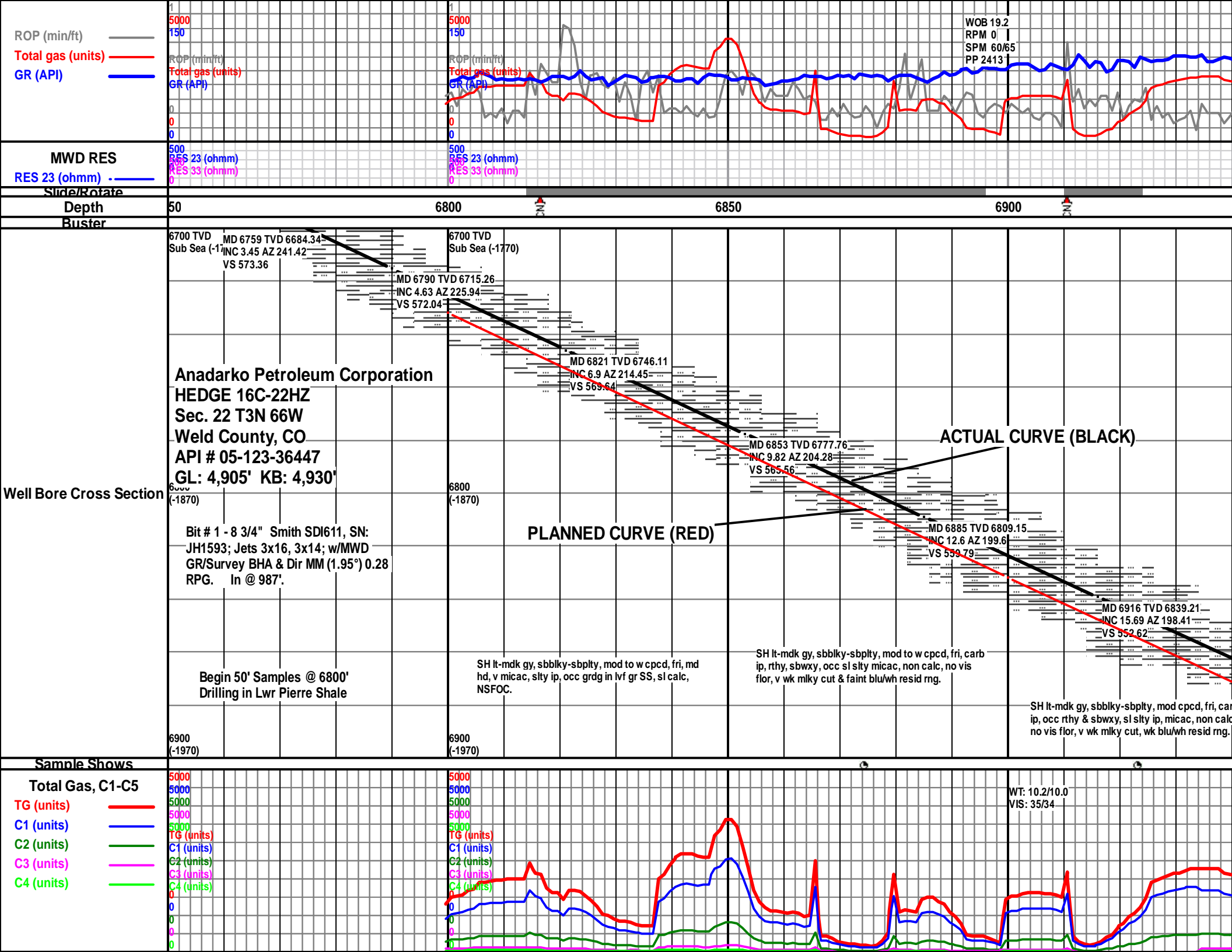
Well  
 Moderate  
 Poor

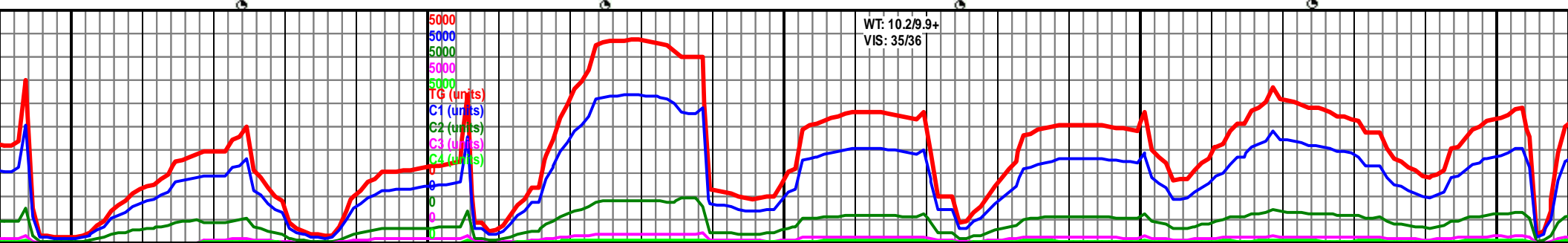
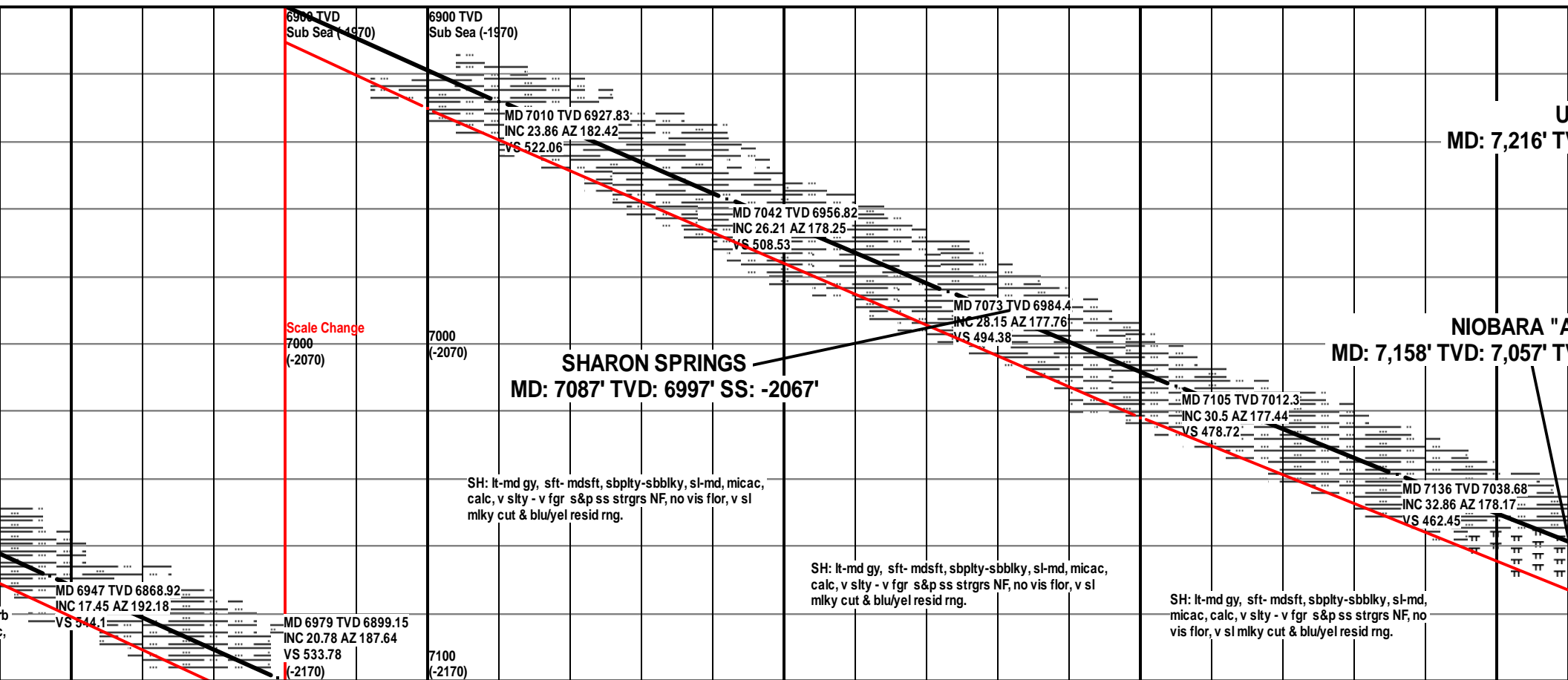
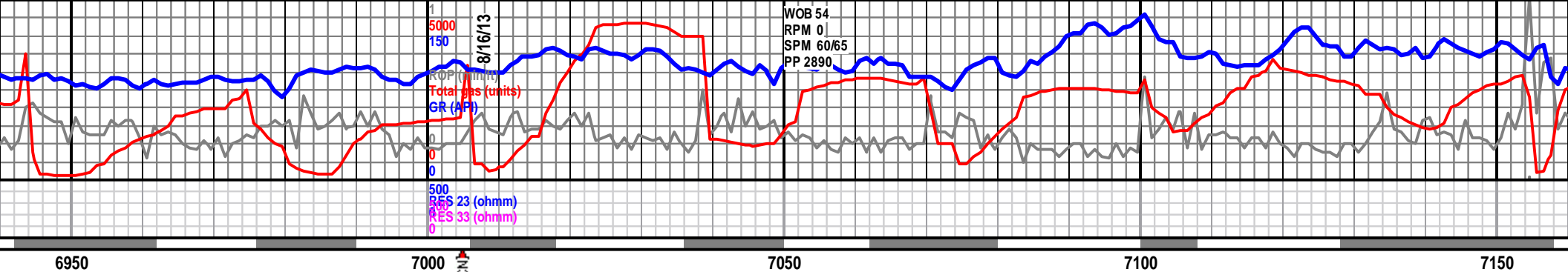
# Elevation

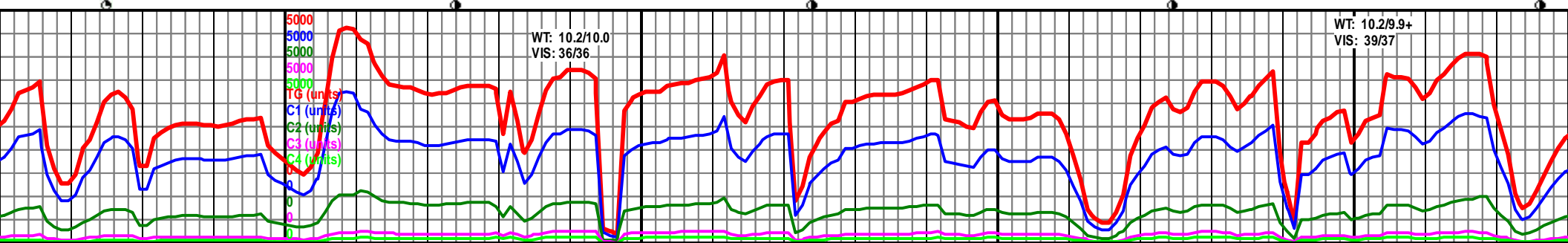
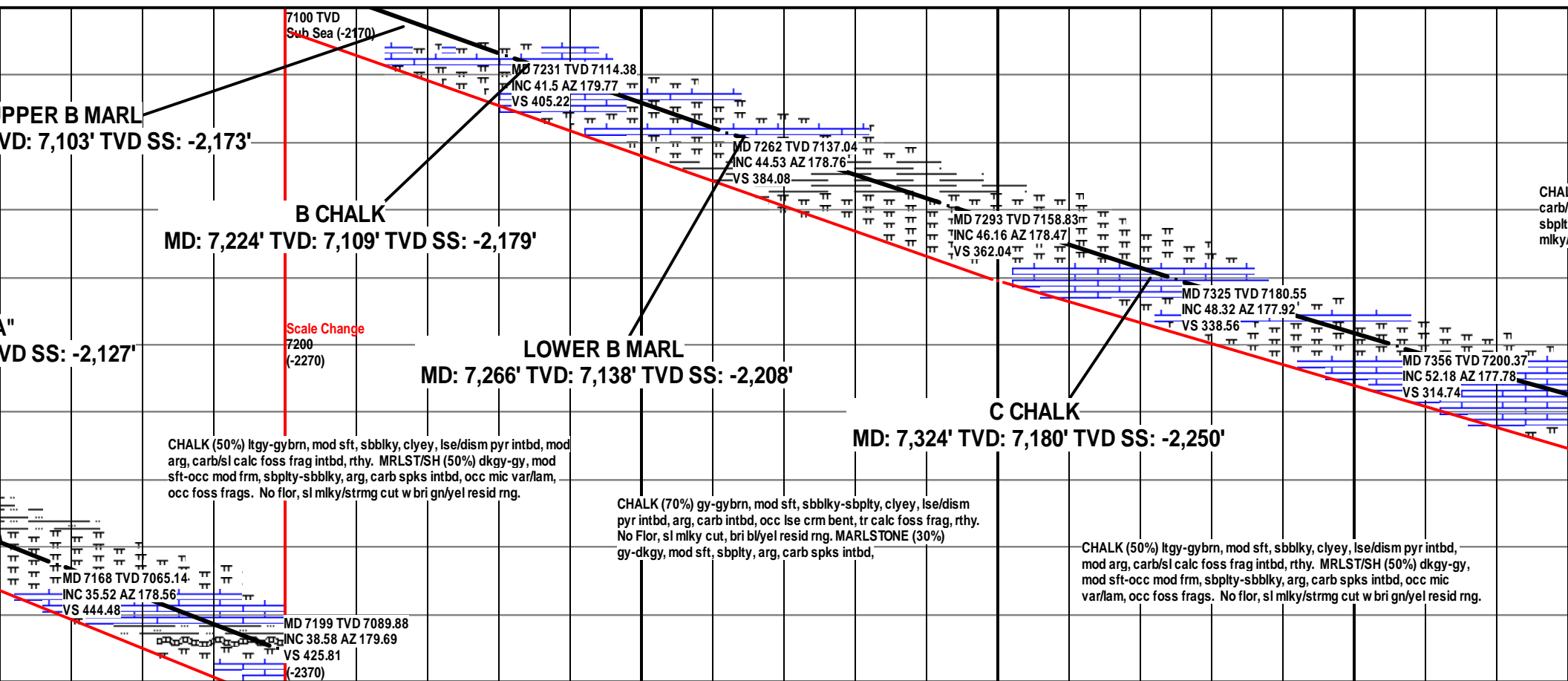
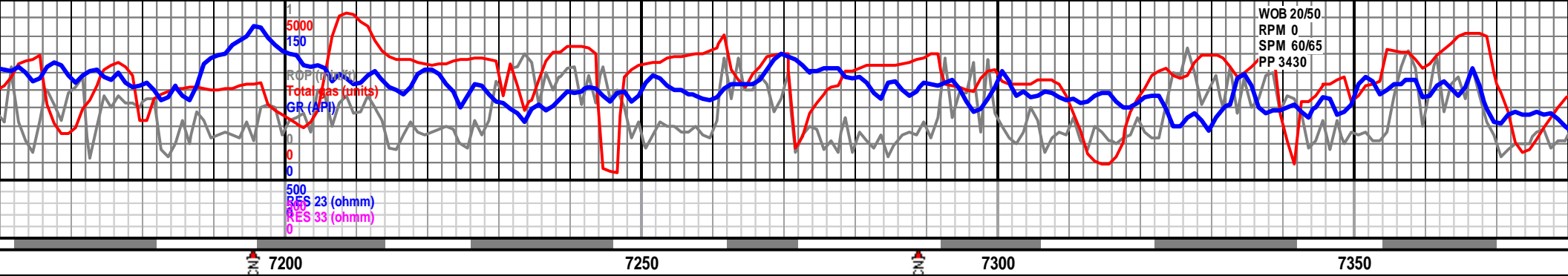


# Plan

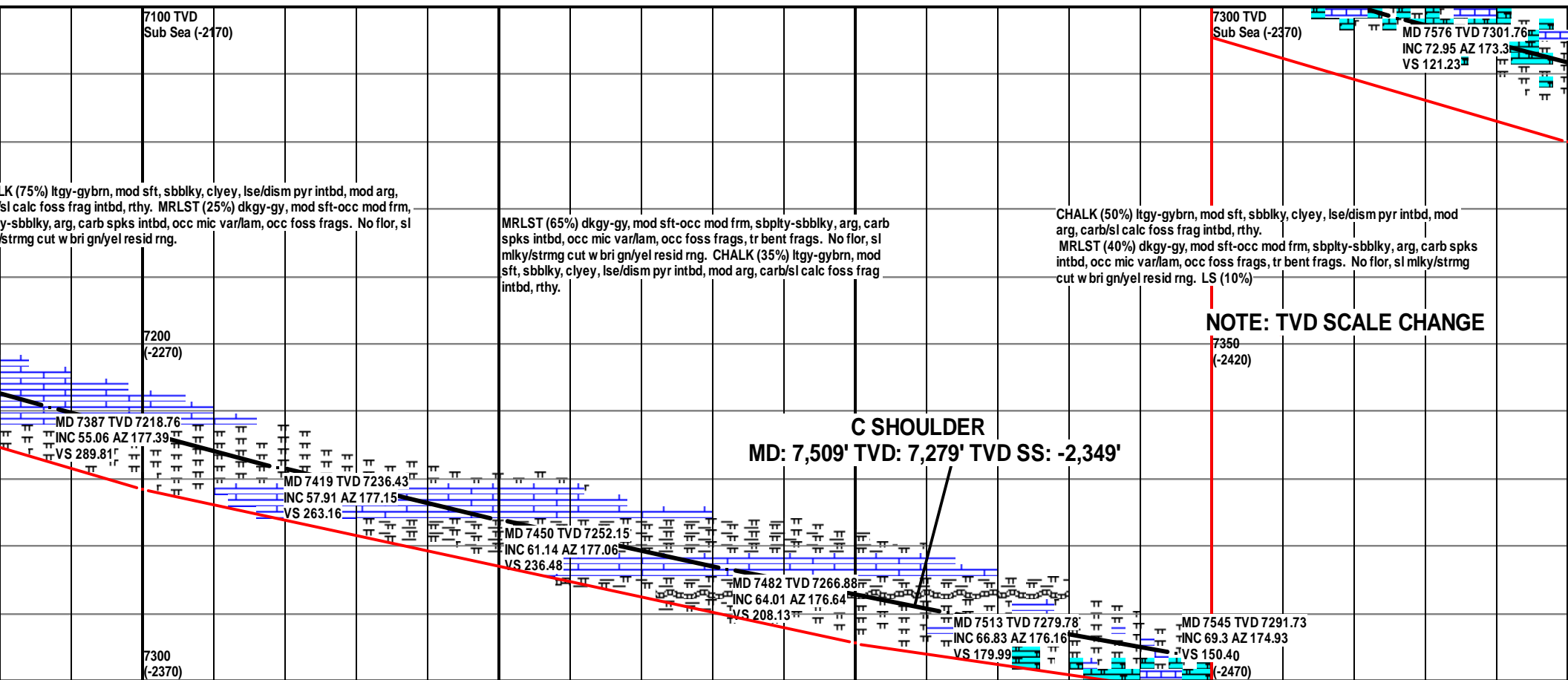


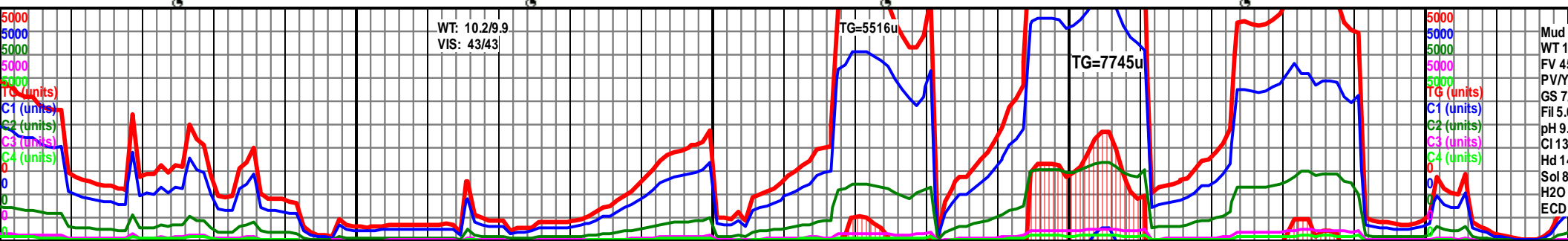
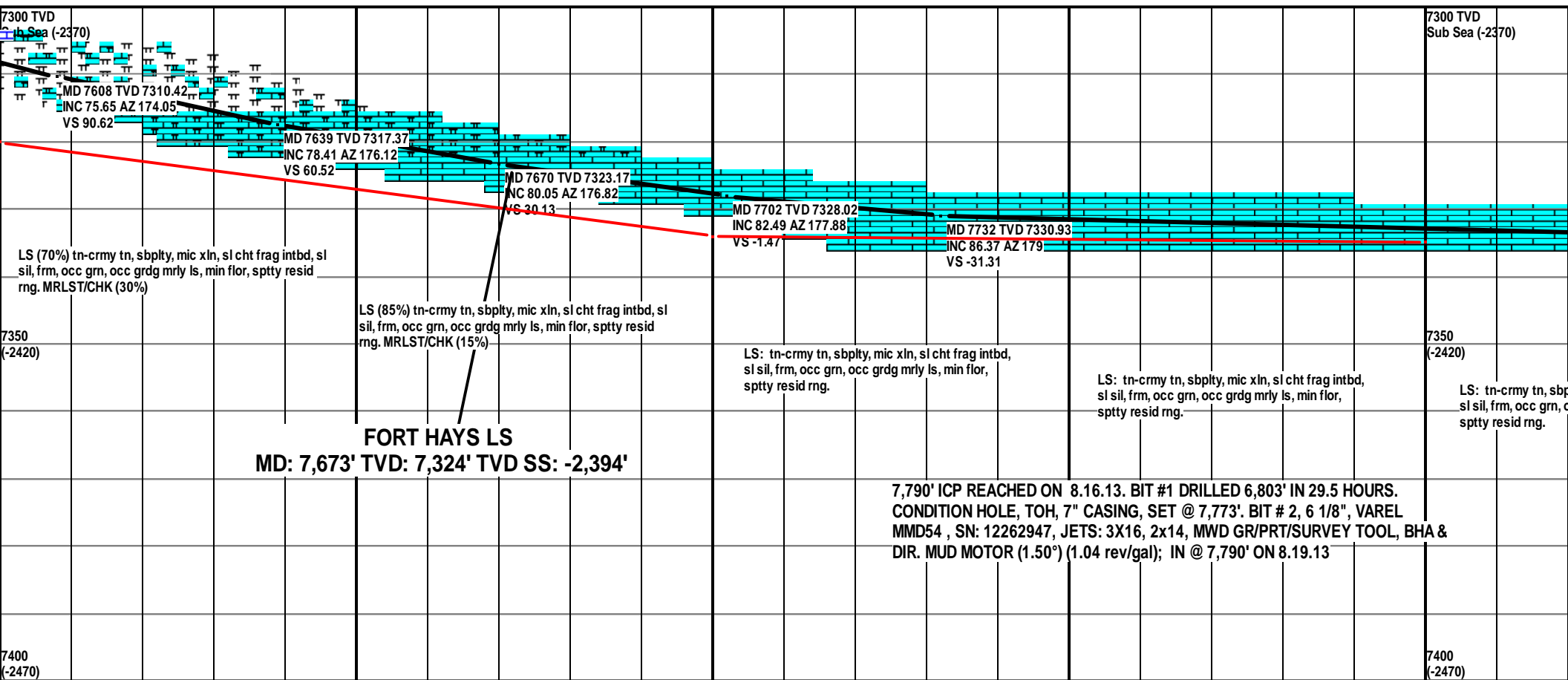
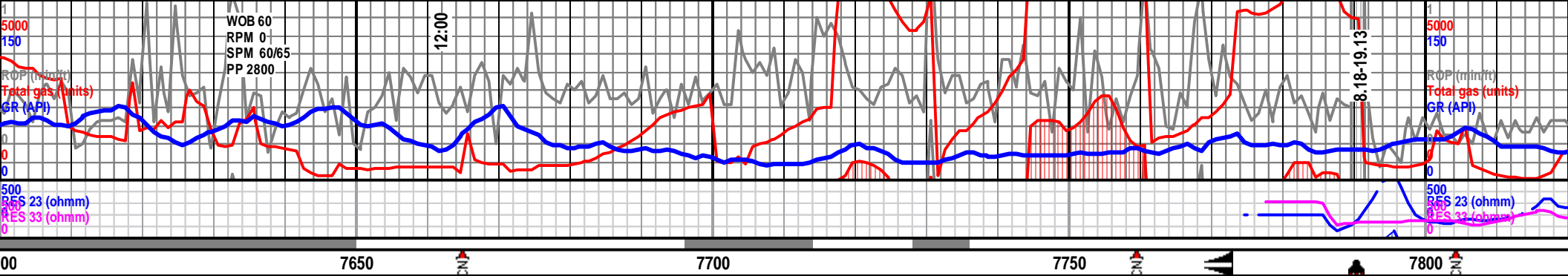


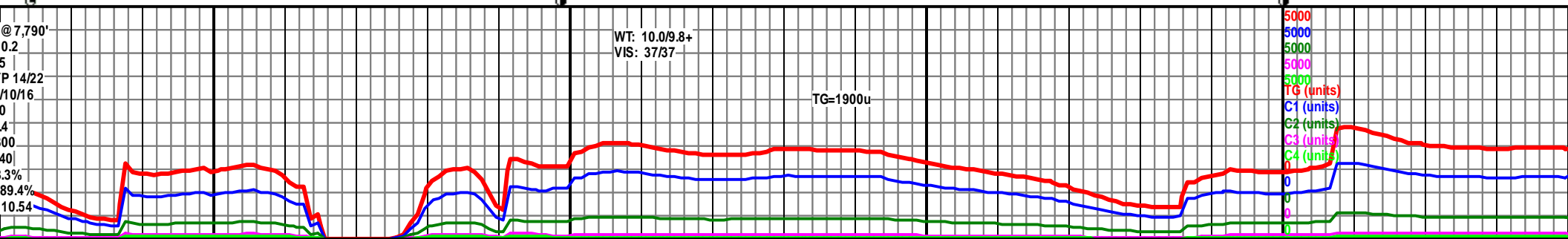
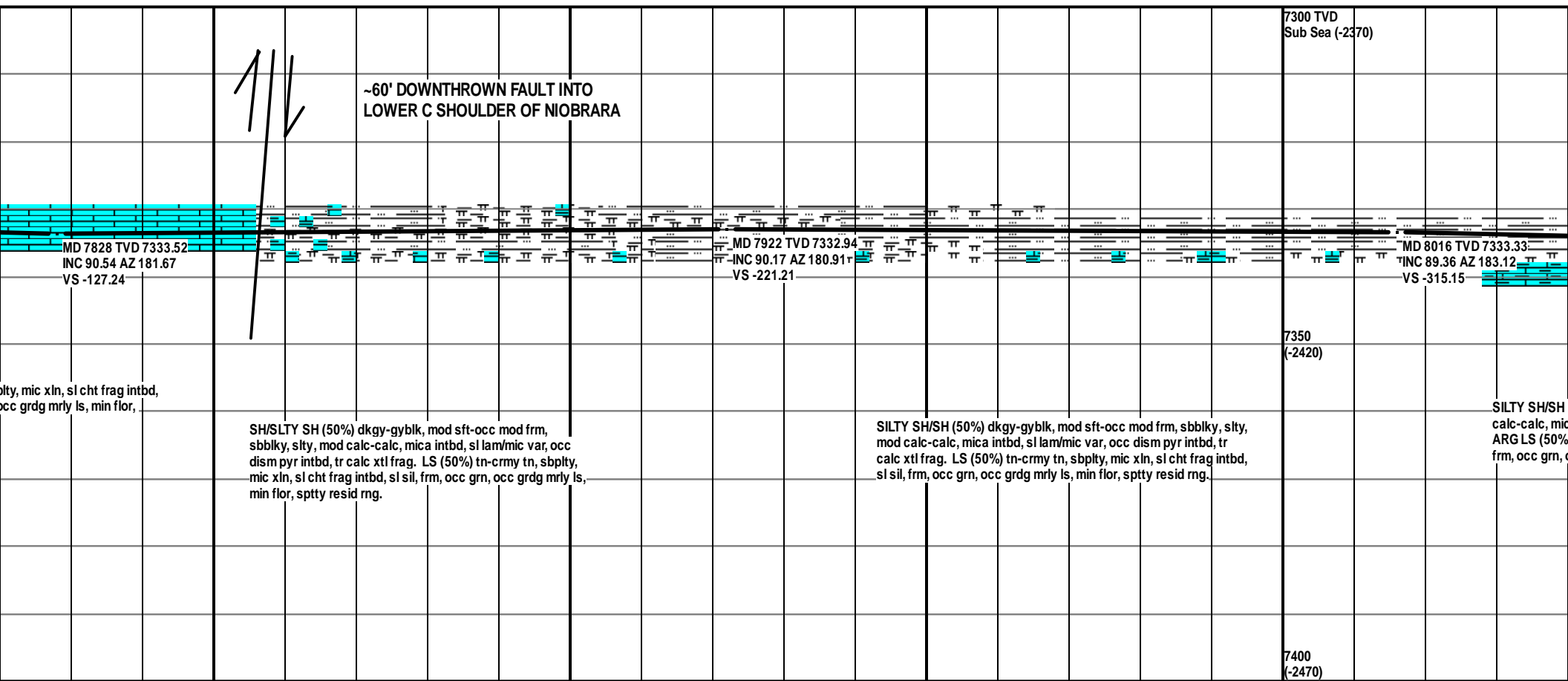
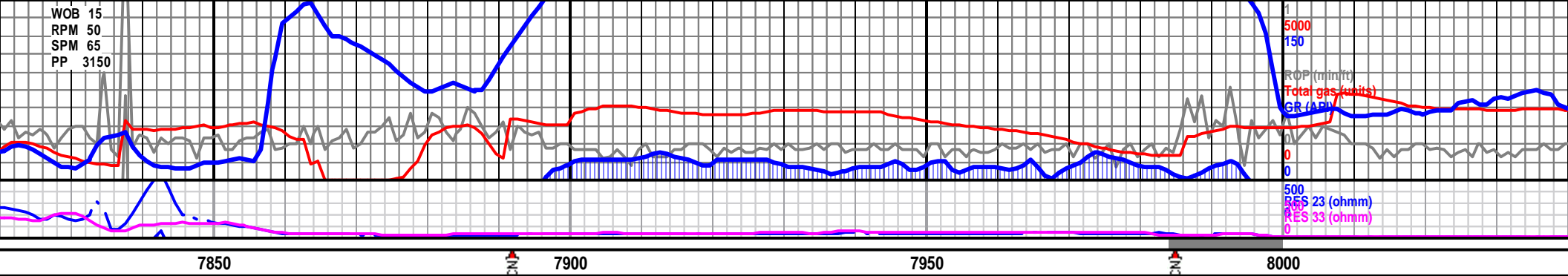


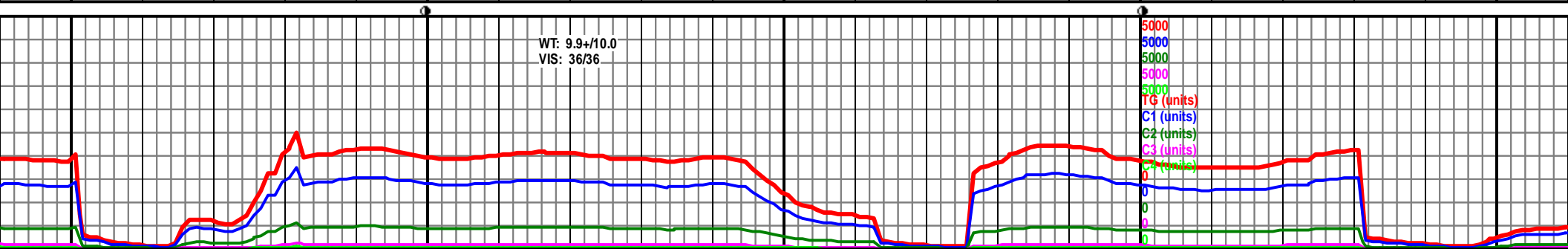
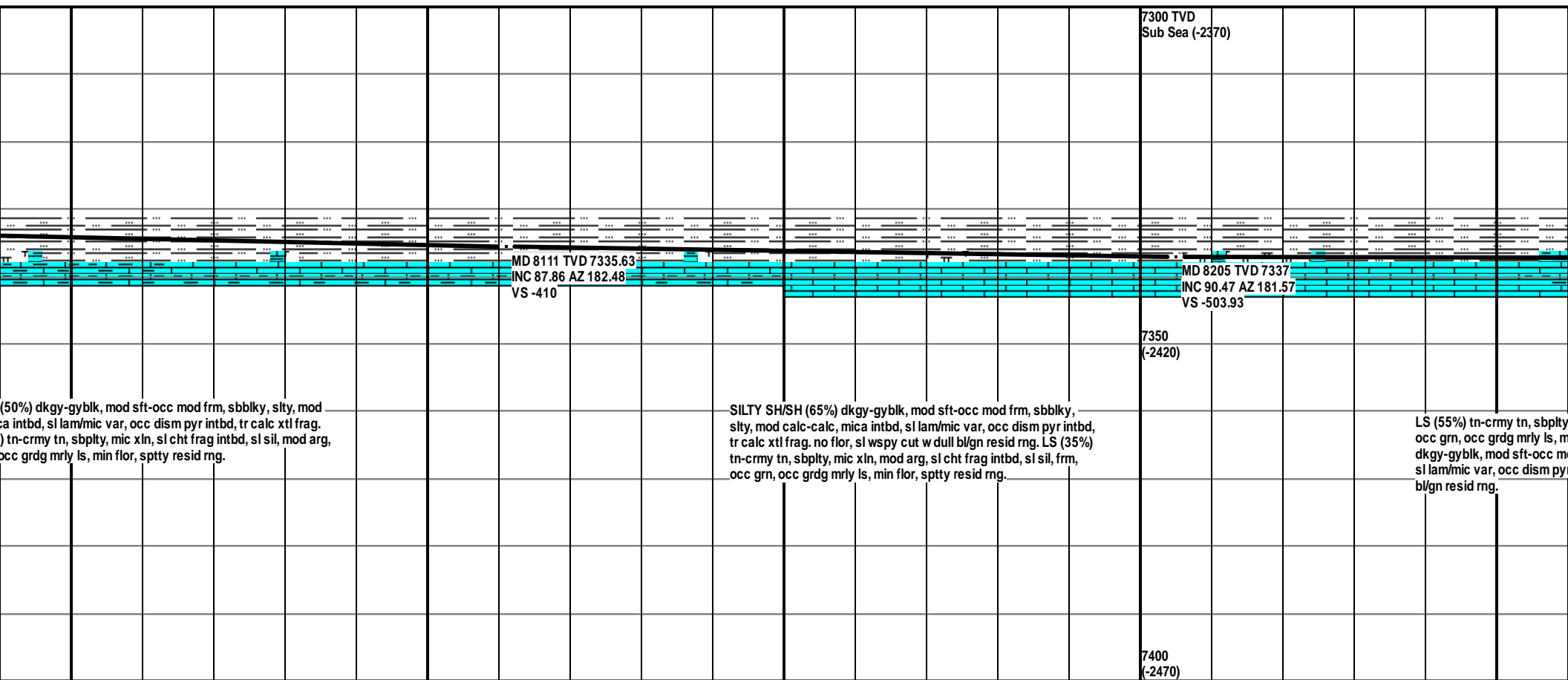


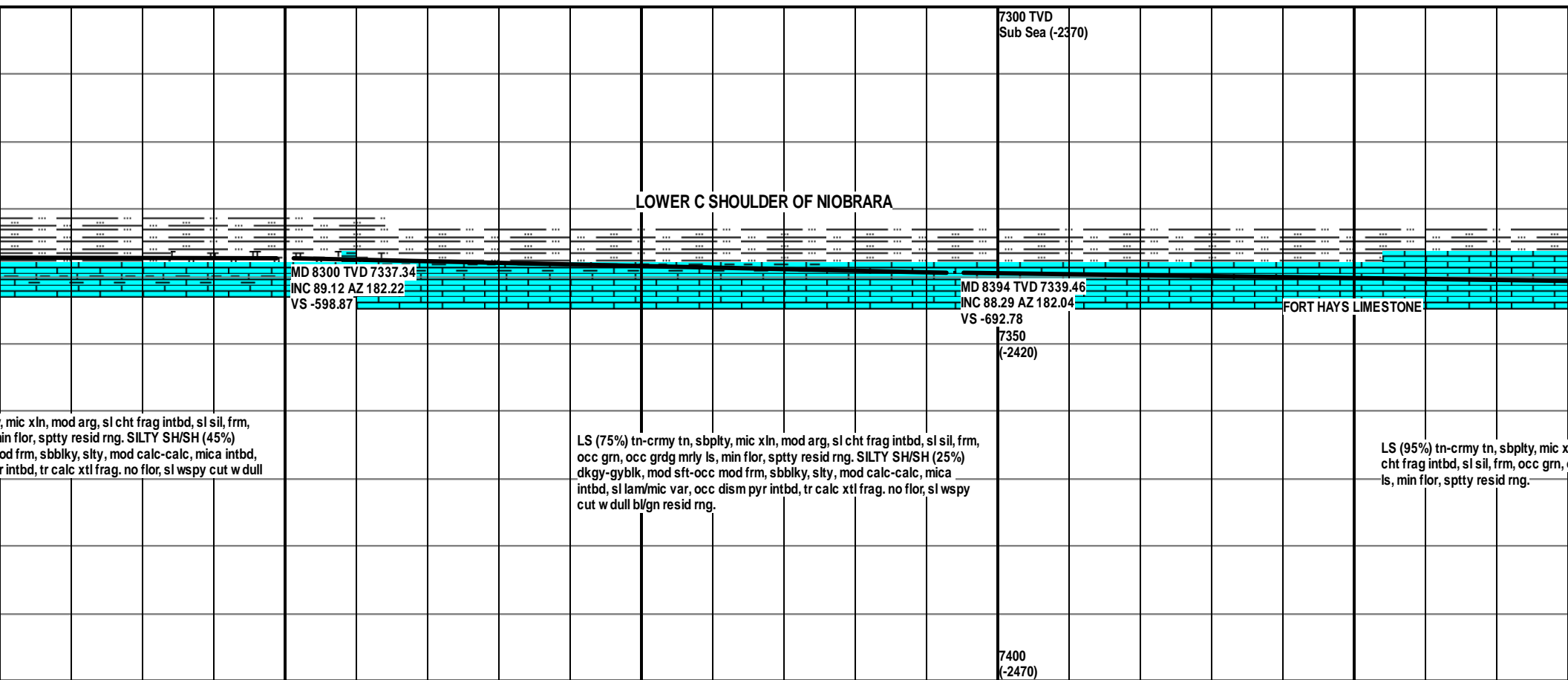
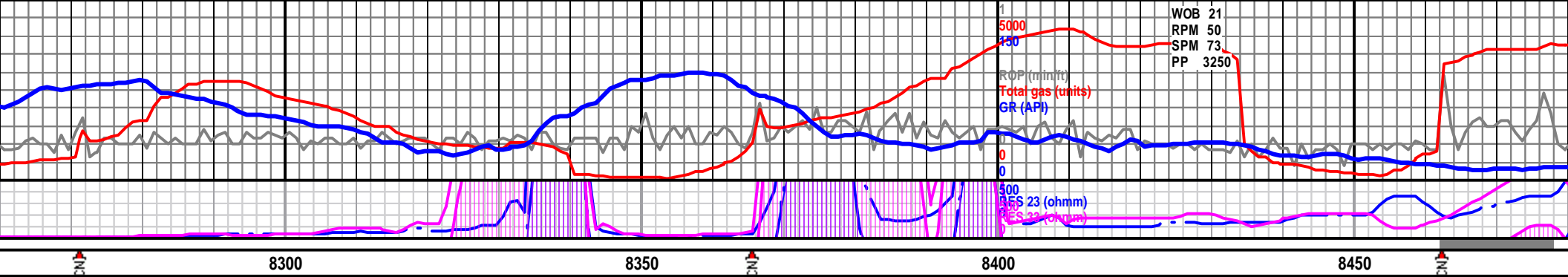


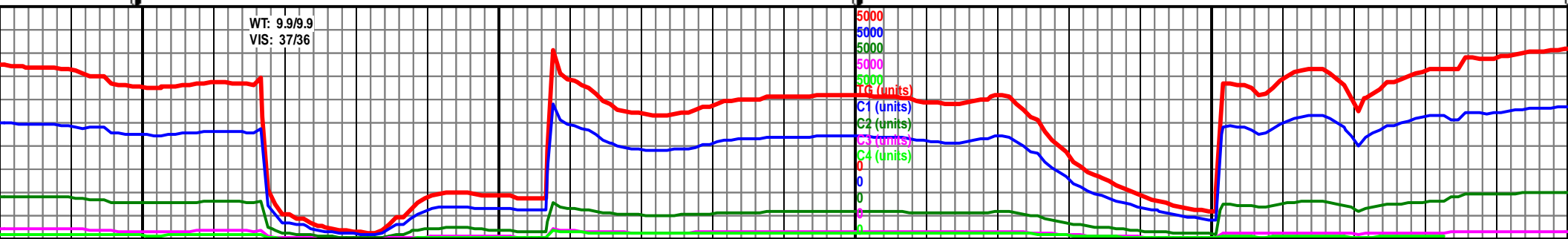
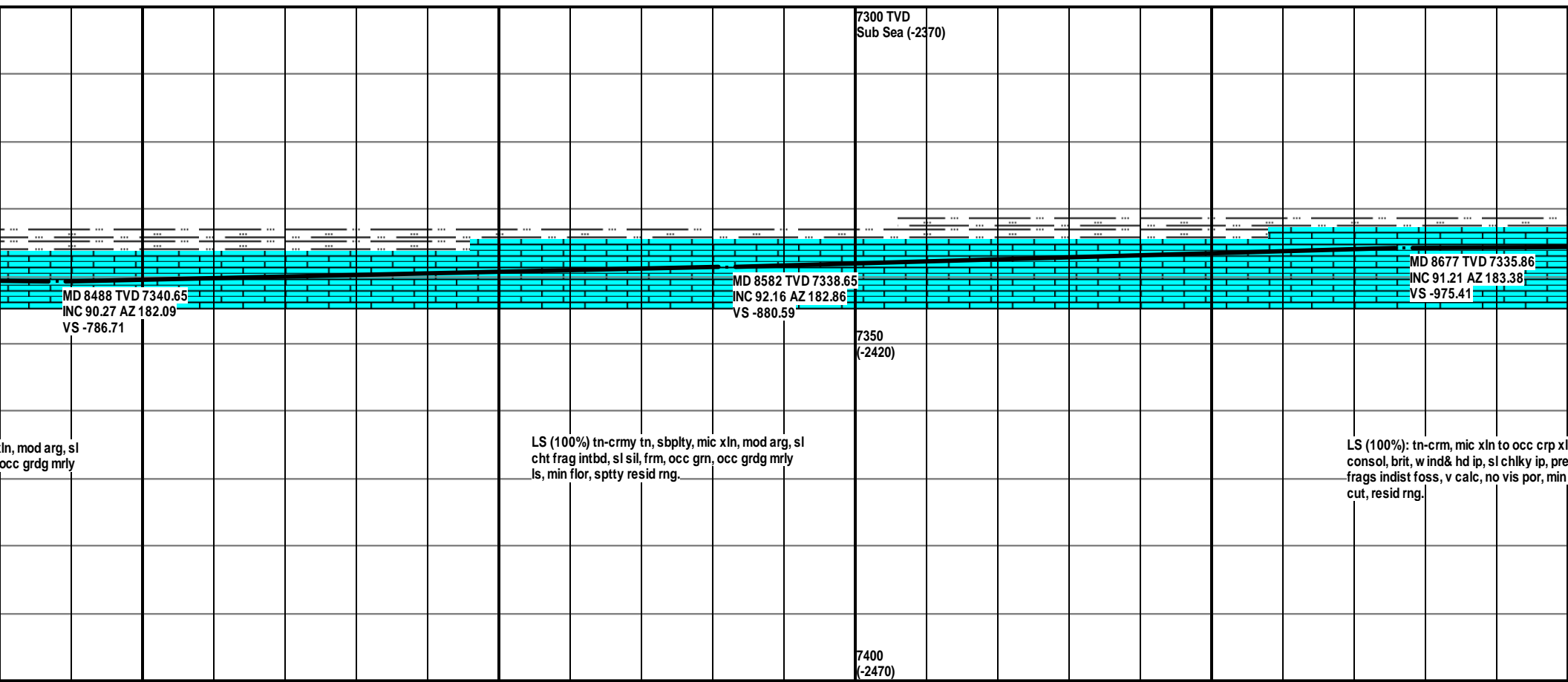
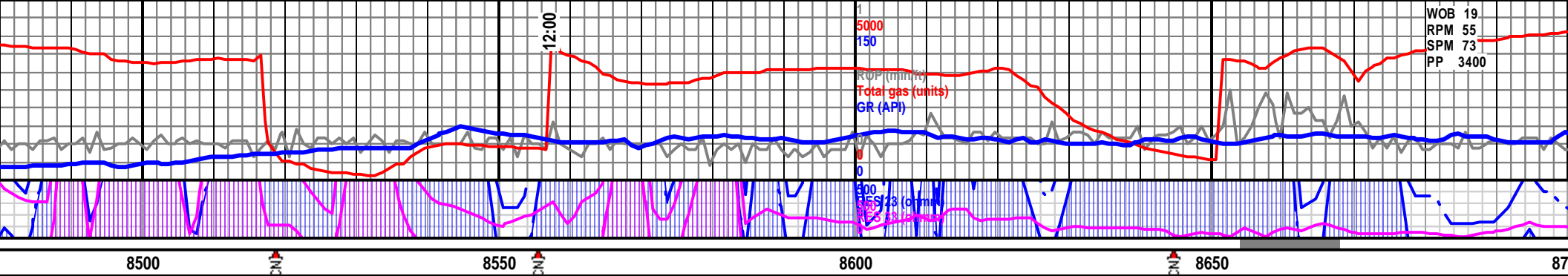


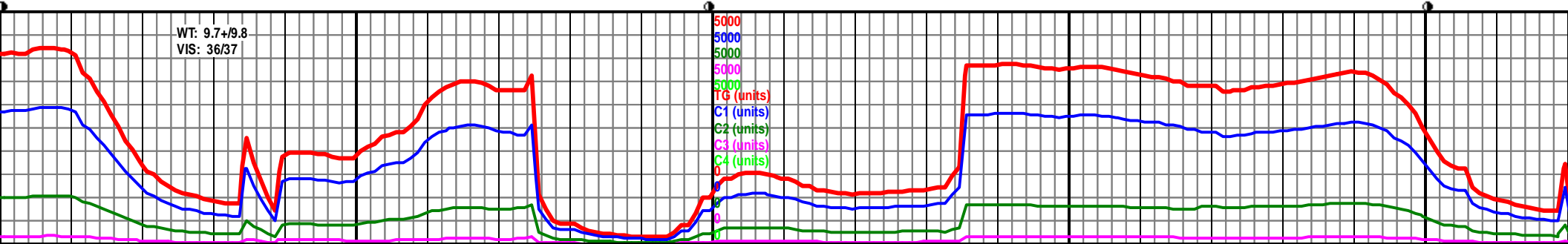
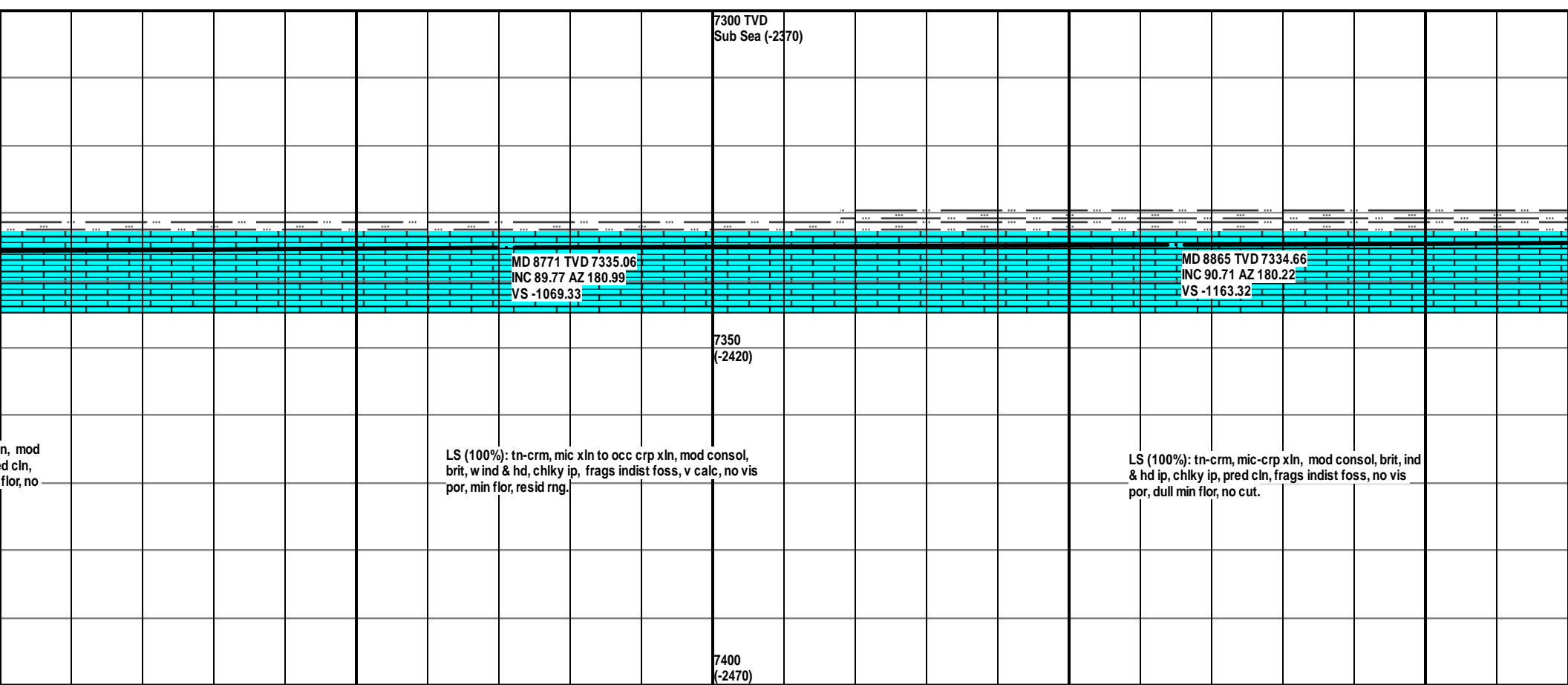
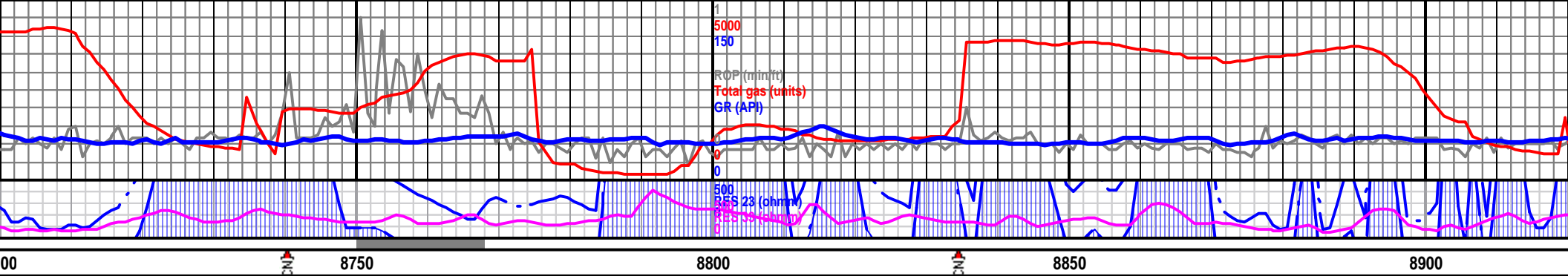


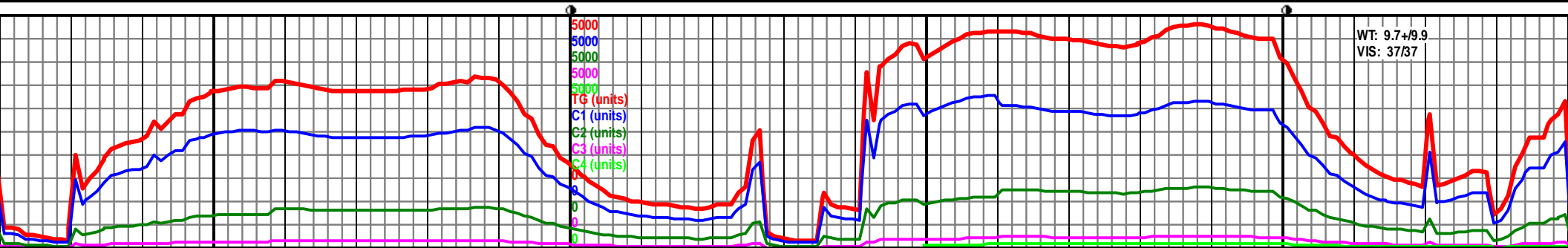
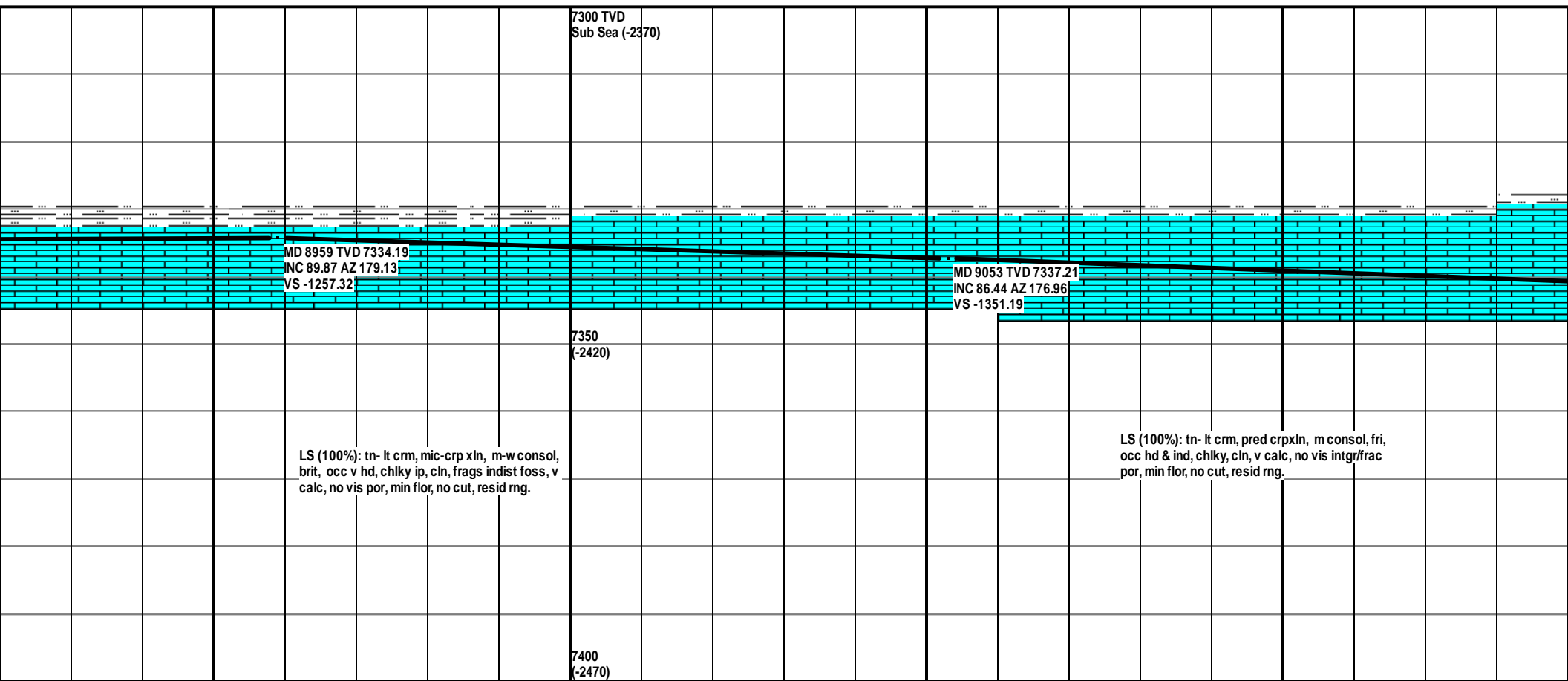
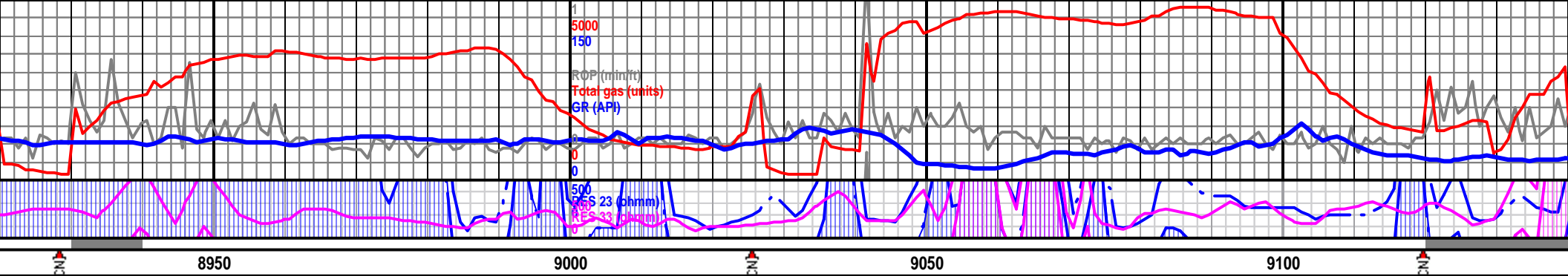






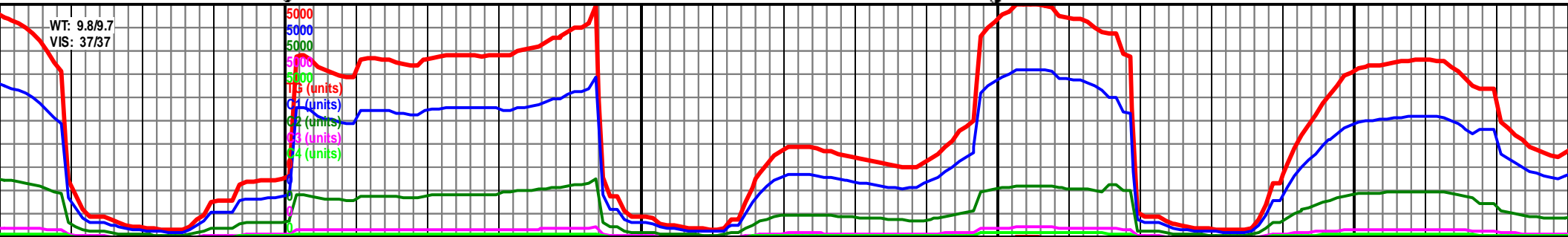
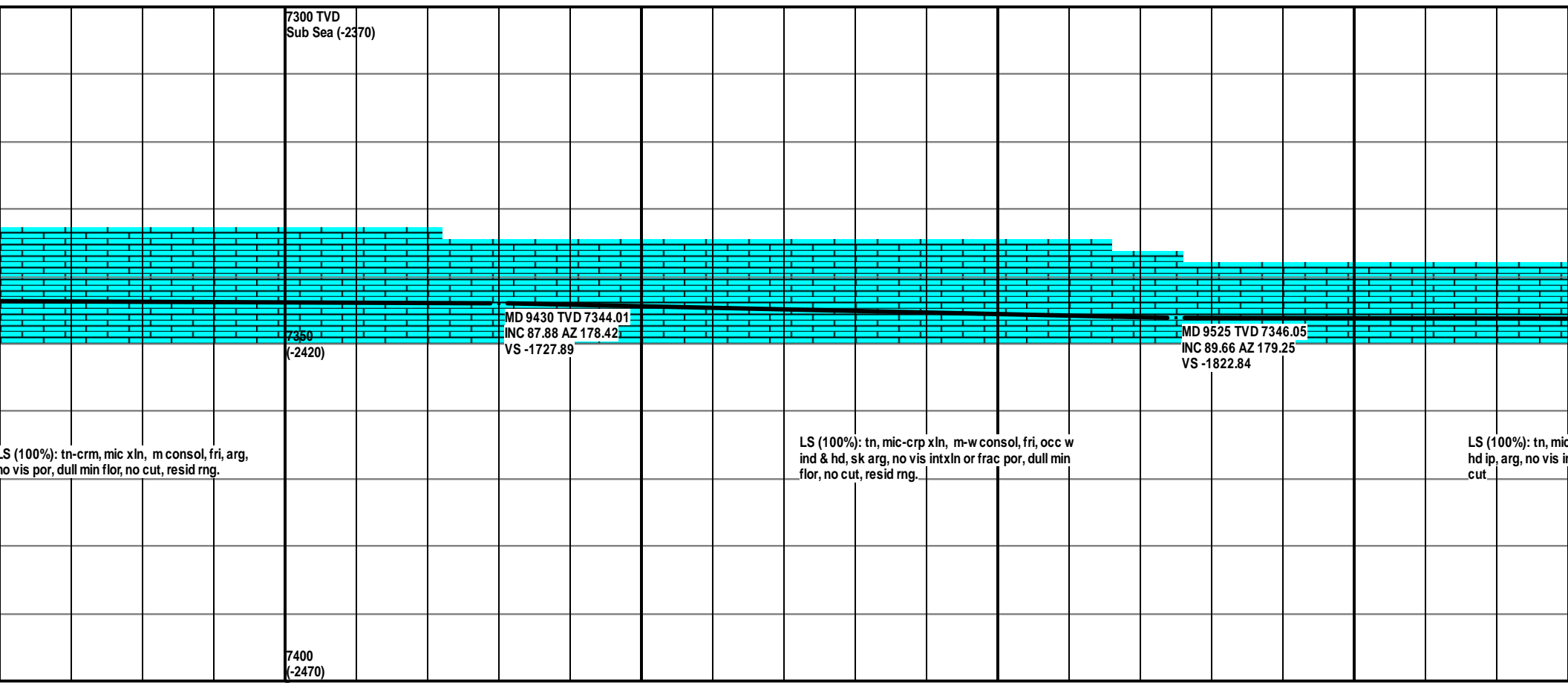
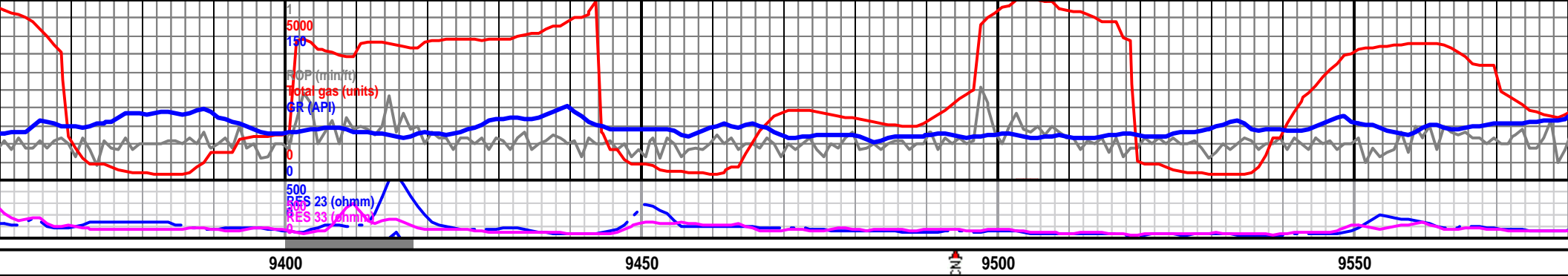


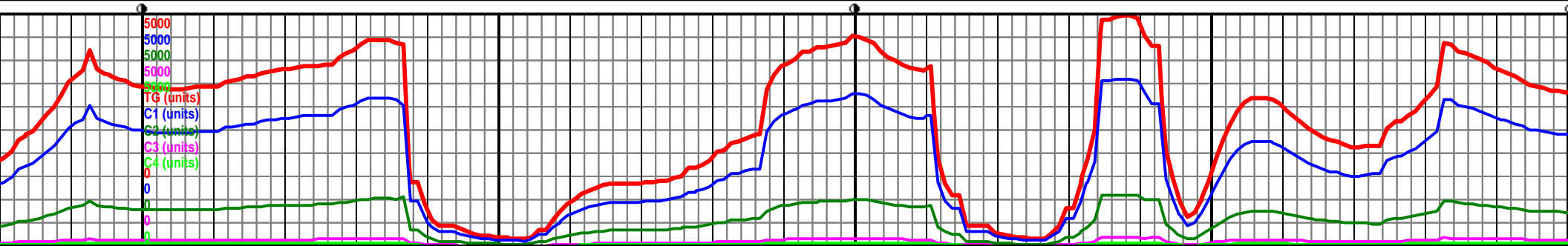
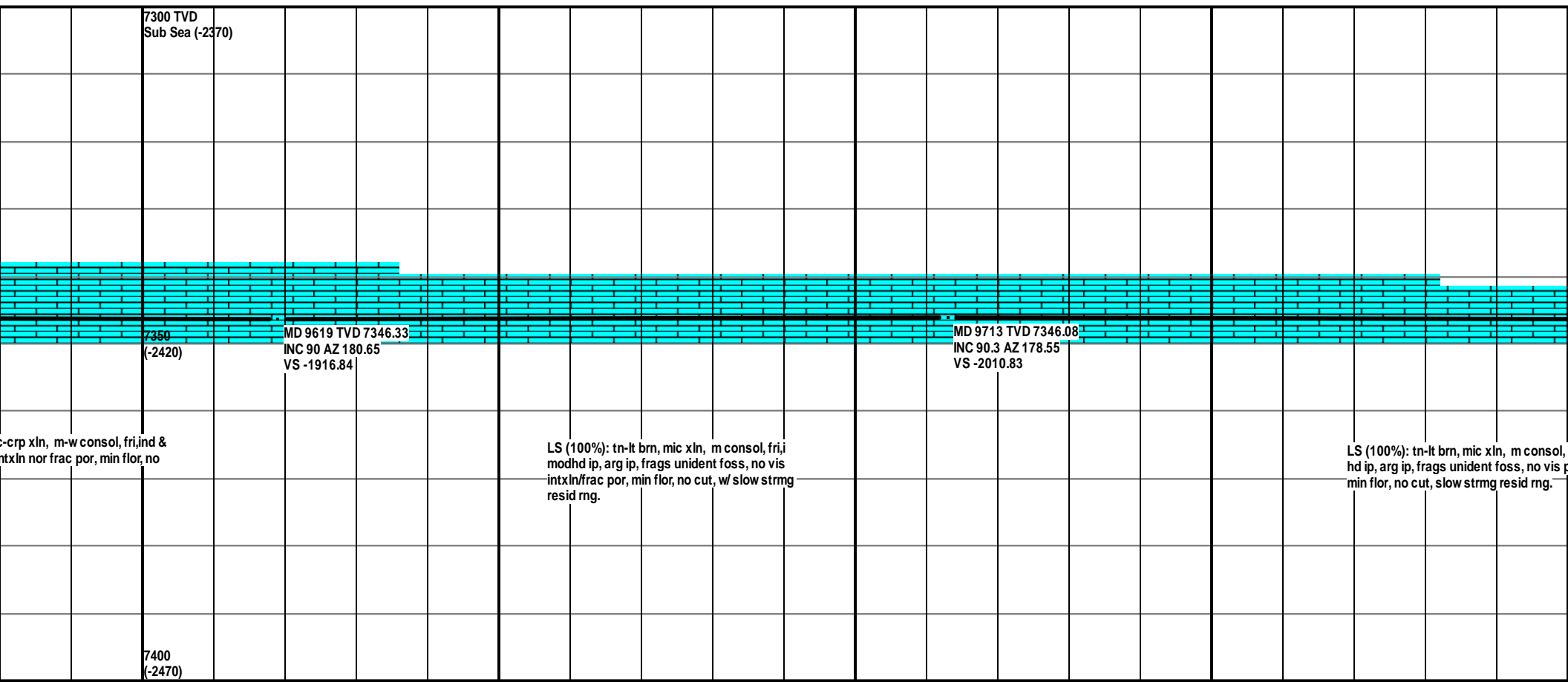
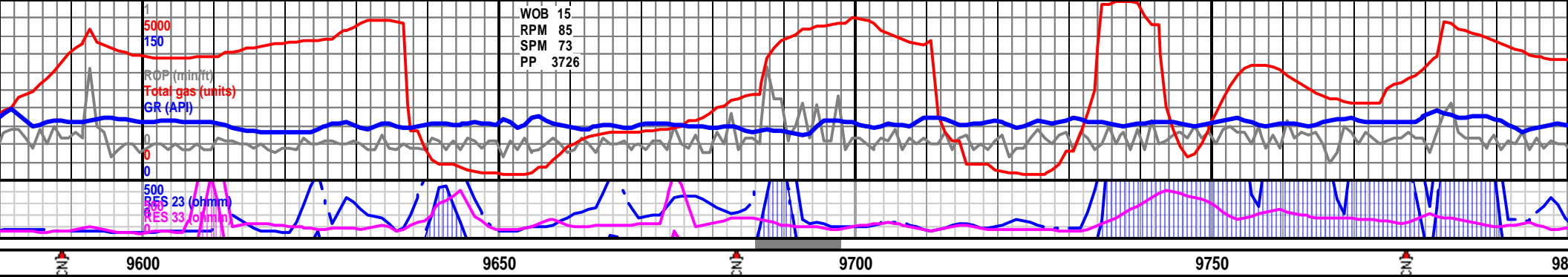


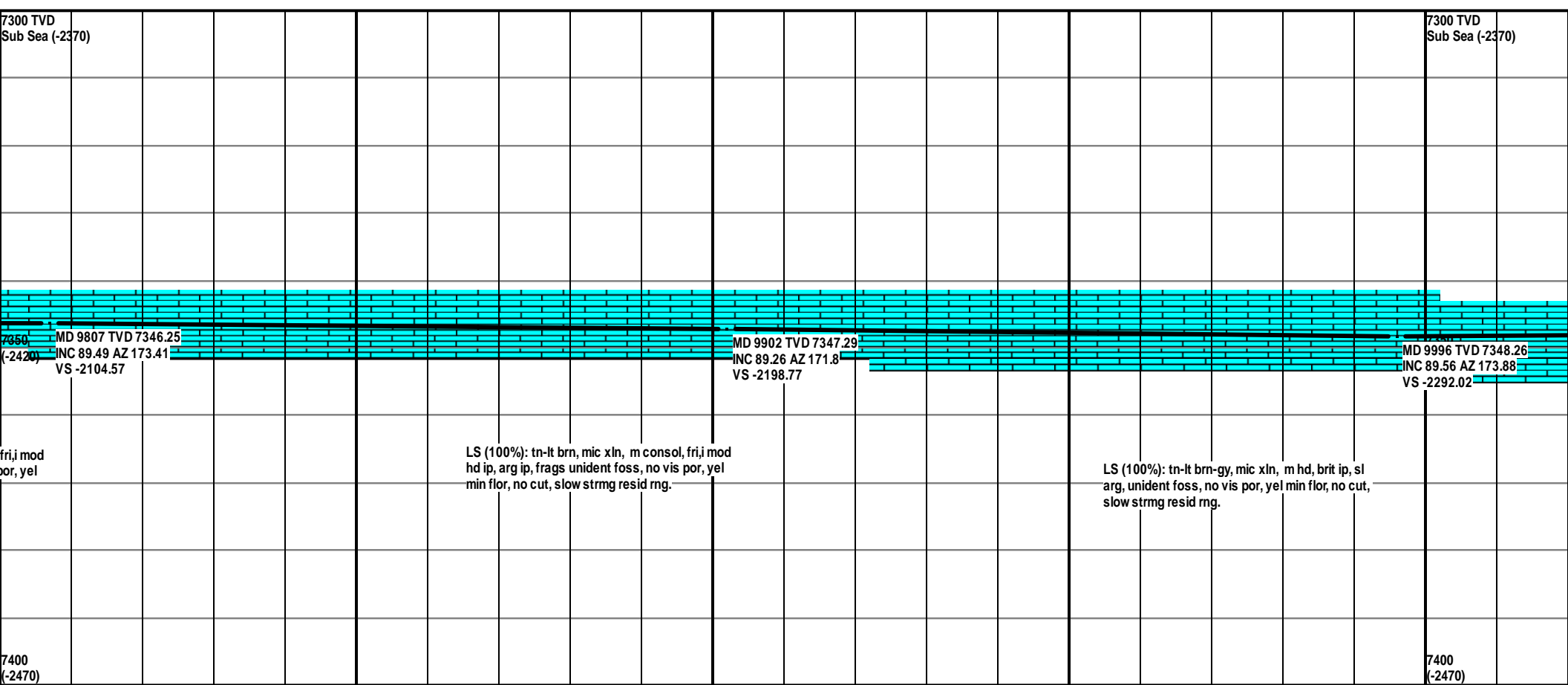


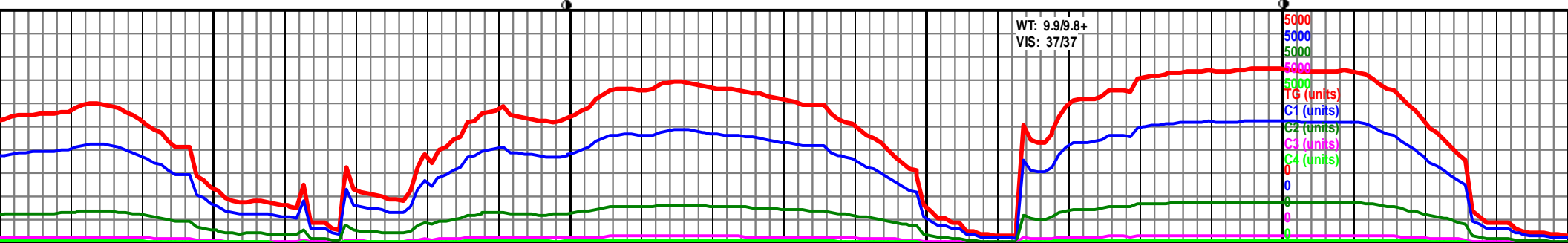
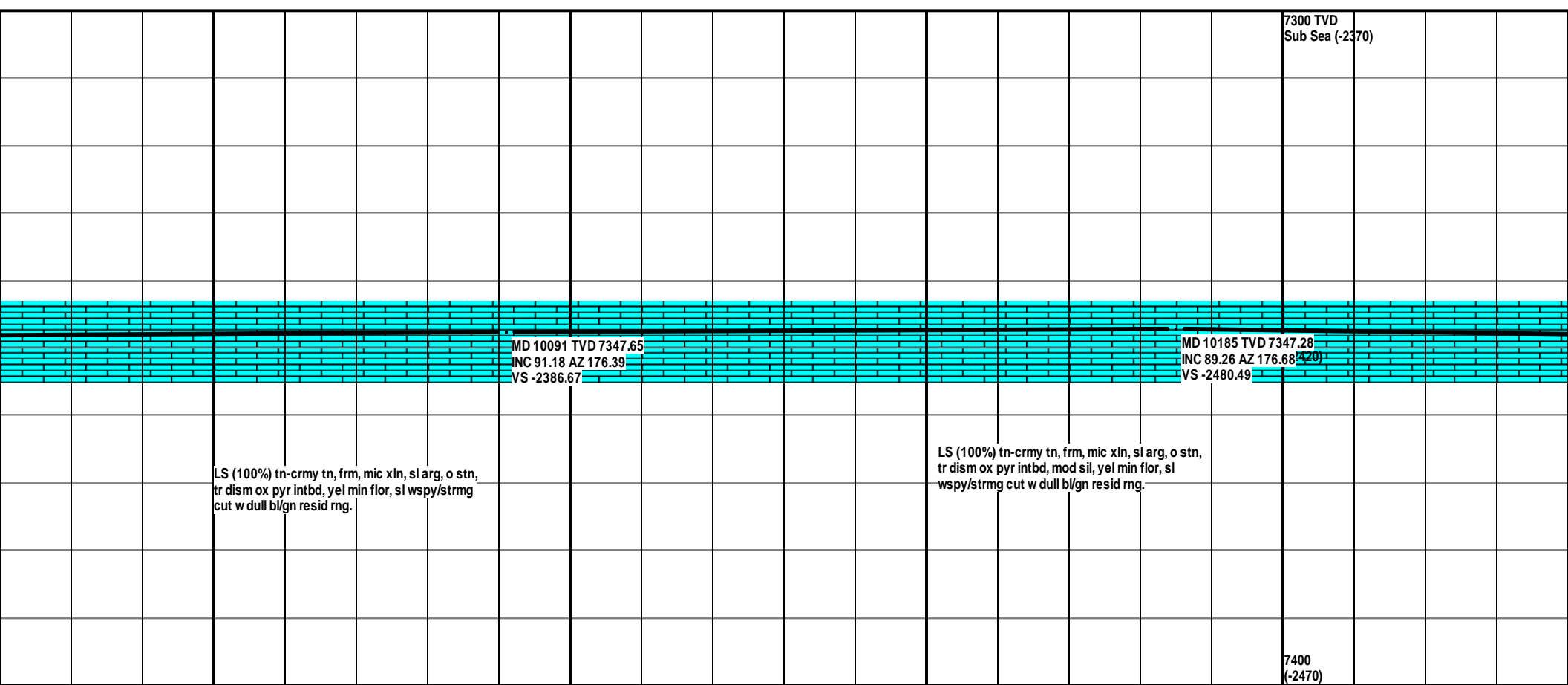
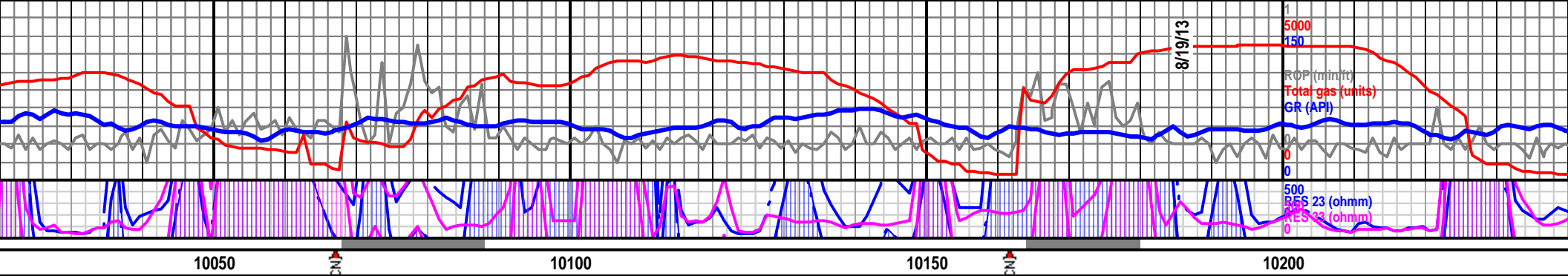




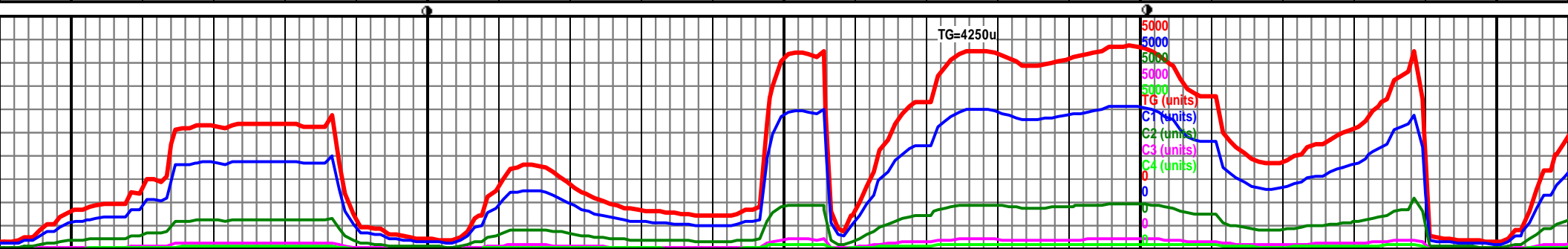
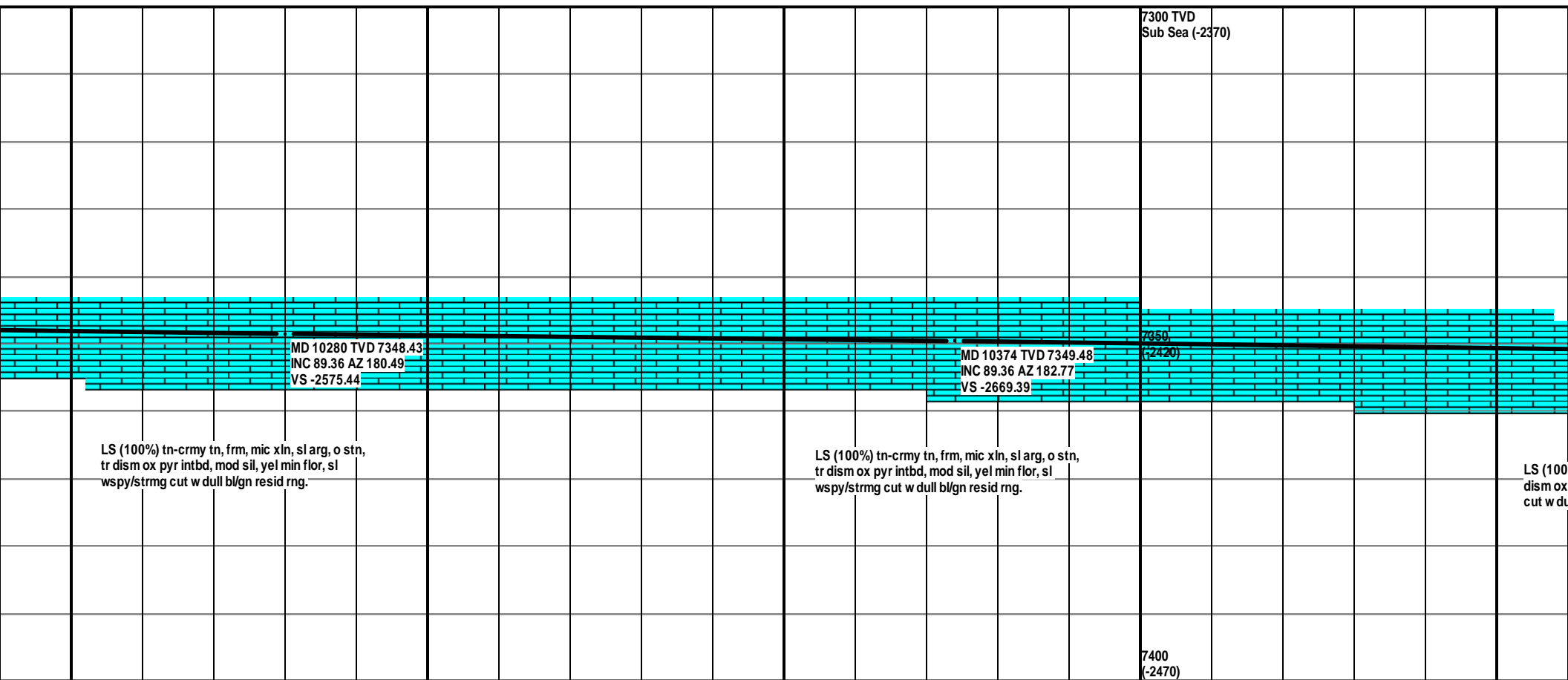
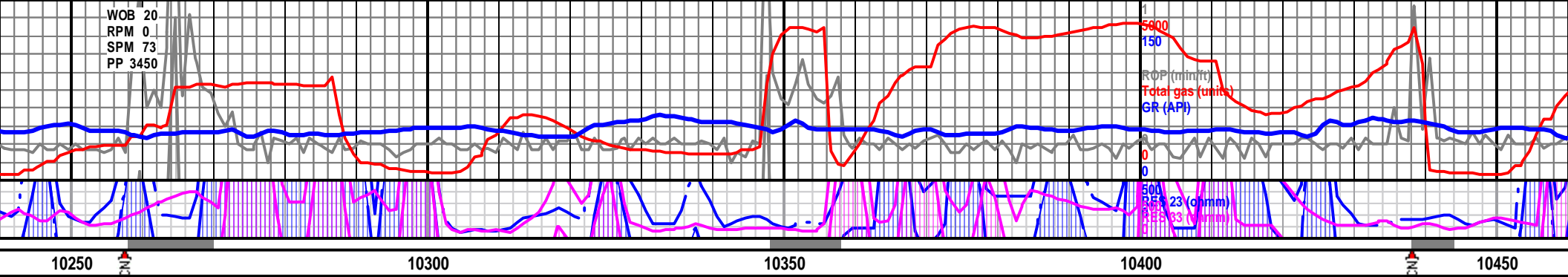


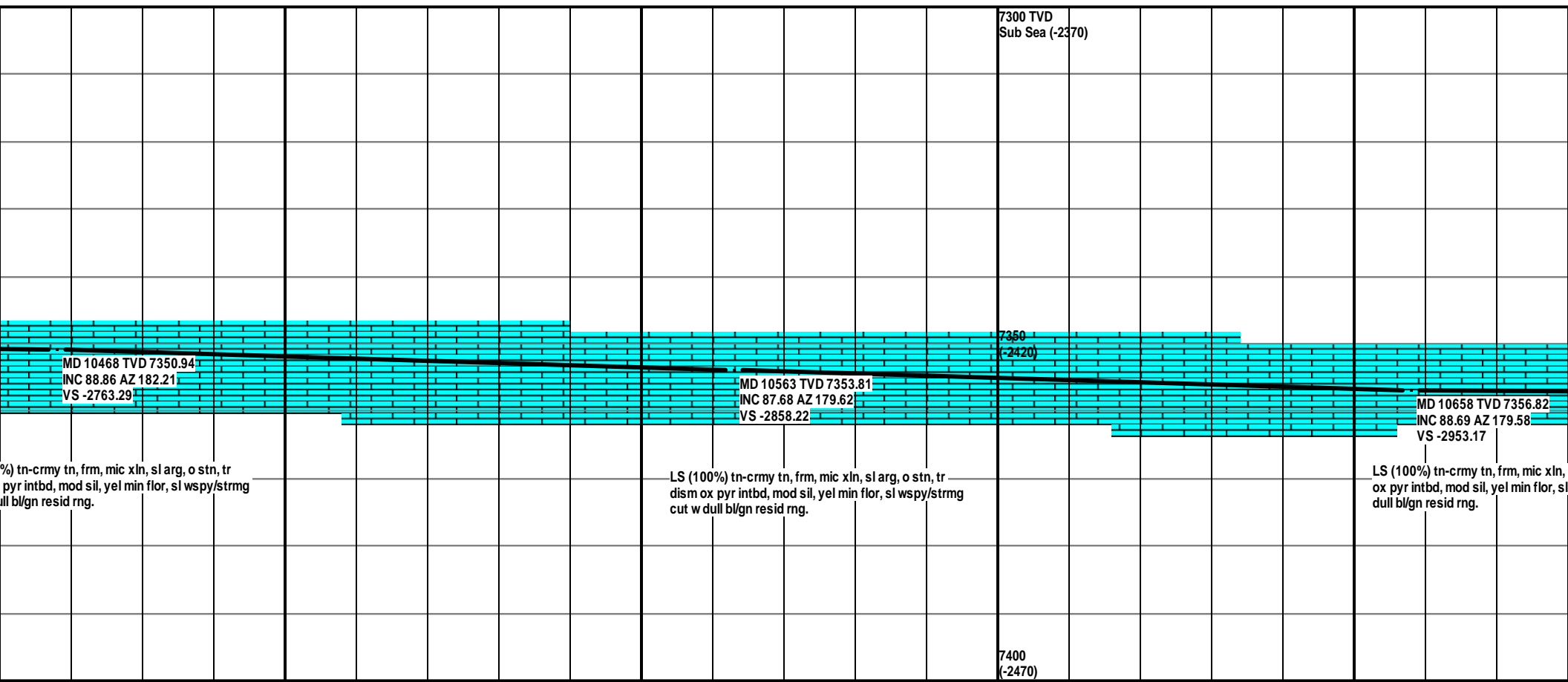






WOB 20  
RPM 0  
SPM 73  
PP 3450





RES 23 (ohmm)  
RES 33 (ohmm)

10700

10750

10800

10850

109

7300 TVD	
Sub Sea (-2370)	

7350  
(-2420)

MD 10752 TVD 7357.65  
INC 90.3 AZ 180.6  
VS -3047.16

MD 10847 TVD 7354.78  
INC 93.15 AZ 185.26  
VS -3141.96

sl arg, o stn, tr dism  
wspy/strmg cut w

LS (100%) tn-crmy tn, frm, mic xln, sl arg, o stn, tr dism  
ox pyr intbd, mod sil, yel min flor, sl wspy/strmg cut w  
dull bl/gn resid rng.

LS (100%) tn-crmy tn, frm, mic xln, sl arg, o stn, tr dism ox pyr intbd, mod sil, yel min flor, sl wspy/strmg cut w dull bl/gn resid rng.			
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7400  
(-2470)

WT: 9.9+/-9.9  
VIS: 37/37

5000		
5000		
5000		
5000		
5000		
TG (units)		
C1 (units)		
C2 (units)		
C3 (units)		
C4 (units)		
0		



