

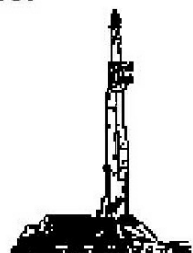
**GOOLSBY BROTHERS**  
and associates, inc.

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: THOMSEN 34C-18HZ

Location: Section 7, T2N, R65W, NWSE, Weld County, CO.

License Number: API: 05-123-36866, AFE: 2078853.DRL

Spud Date: April 8, 2013

Surface Coordinates: NW/SW Sec 7, T2N, R65W, 2,397' FNL & 460' FWL

Lat: 40.153621 N Long: -104.714230 W

Bottom Hole Coordinates: NW/SW Sec 18, T2N, R65W  
462.17' FSL & 1,141.44' FWL

Ground Elevation (ft): 4946

Logged Interval (ft): 6,800'

To: 14,675'

Formation: Pierre shales / sands, Niobrara Target

Type of Drilling Fluid: Polymer-Water

K.B. Elevation (ft): 4971

Total Depth (ft): 14,675'

Region: Wattenberg

Drilling Completed: April 17, 2013

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

**OPERATOR**

Company: Anadarko Petroleum Corp./Kerr-McGee Oil & Gas Onshore LP

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

Denver, CO 80202

CO Geologist, Tom Birmingham

**GEOLOGIST**

Name: Marek Ciesnik/Steven 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 GR 6769' - 14,625'  
Resistivity 7,800'-14,622'






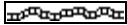




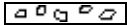

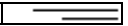







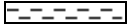





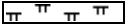

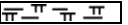
## Casing

9 5/8" (IPSCO J-55 28") Surface Casing set @ 953'  
7" (IPSCO ICP-111 26") Intermediate Casing set @ 7,805' MD  
4 1/2" (DQX HCP-110 11.6") Production Liner set @ 14,668' and cemented

## Comments

- 1) Drilling Contractor: H&P 311  
Rig Manager: James Baggett, Jack Truett  
Drillers: Michael Munroe, Christopher Moore, Kenneth Jones, Christopher Beckstead.
- 2) Company Man: Doug Blair, Terry Bradshaw, Mike Bradshaw, Marvin Hackworth, Rick Oman, David Wells
- 3) Mud Company: Water Base- Halliburton, Justin Hessenthaler.
- 4) Directional Drilling: Scientific Drilling  
Drillers: John Noakes, Steve Schlamp  
MWD: Joshua Denning, Mark Smith. Mohamed Sharker
- 5) Gas Equipment: Mudlogging Systems Inc.  
by Terra Services  
Redbox # ML-419

## ROCK TYPES

	Anhy		Oil sat.		Salt		Ss		Argls
	Bent		Congl		Shale		Chalk		Argchalk
	Brec		Dol		Shcol		Carb sh		Slty_ss
	Cht		Gyp		Shgy		Slty sh		
	Clyst		Lmst		Ss		Mrlst-ls		
	Coal		Mrlst		Sltst		Mrlst sh (interbedded)		

## 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  
 Sltstrg  
 Ssstrg

### TEXTURE

Boundst  
 Chalky  
 Cryxln  
 Earthy  
 Finexln  
 Grainst  
 Lithogr  
 Microxln  
 Mudst  
 Packst  
 Wackest

## OTHER SYMBOLS

### OIL SHOWS

Even  
 Spotted  
 Ques  
 Dead  
 Vspotty

near even

### POROSITY TYPE

Earthy  
 Fenest  
 Fracture

Inter  
 Moldic  
 Organic  
 Pinpoint  
 Vuggy

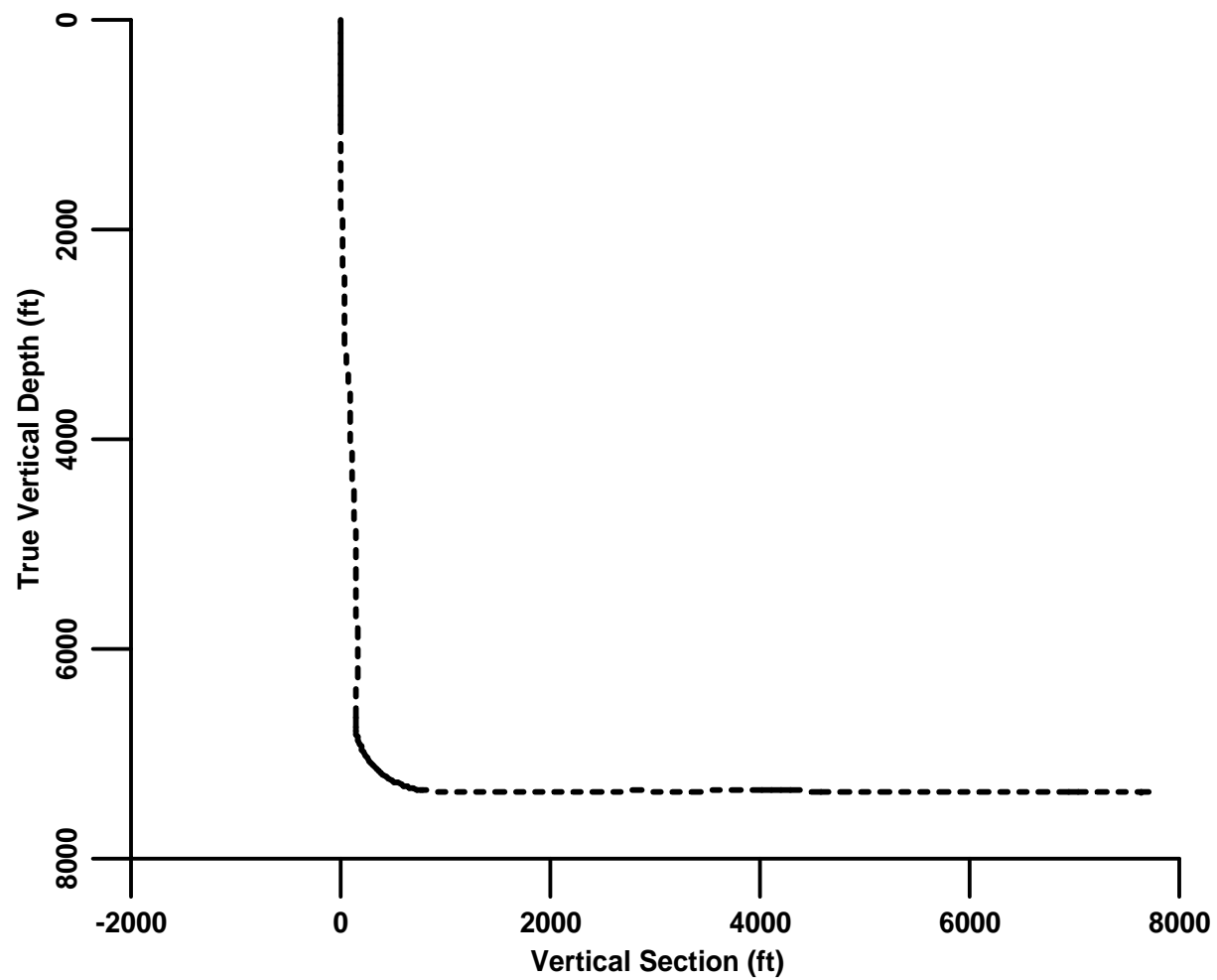
### ROUNDING

Rounded  
 Subrnd  
 Subang  
 Angular

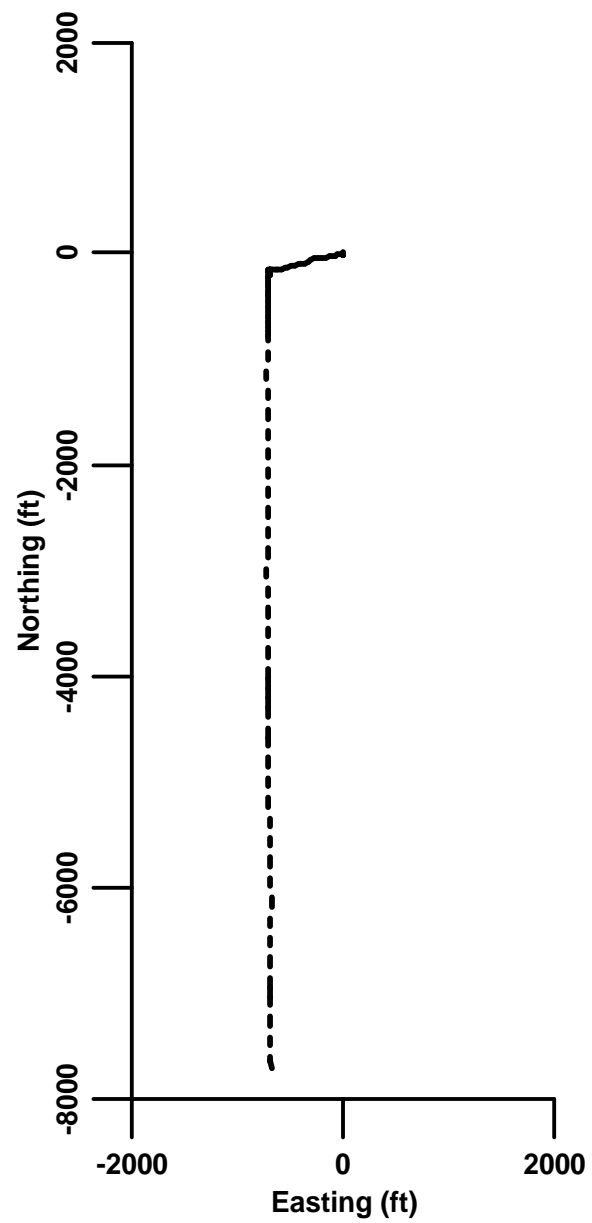
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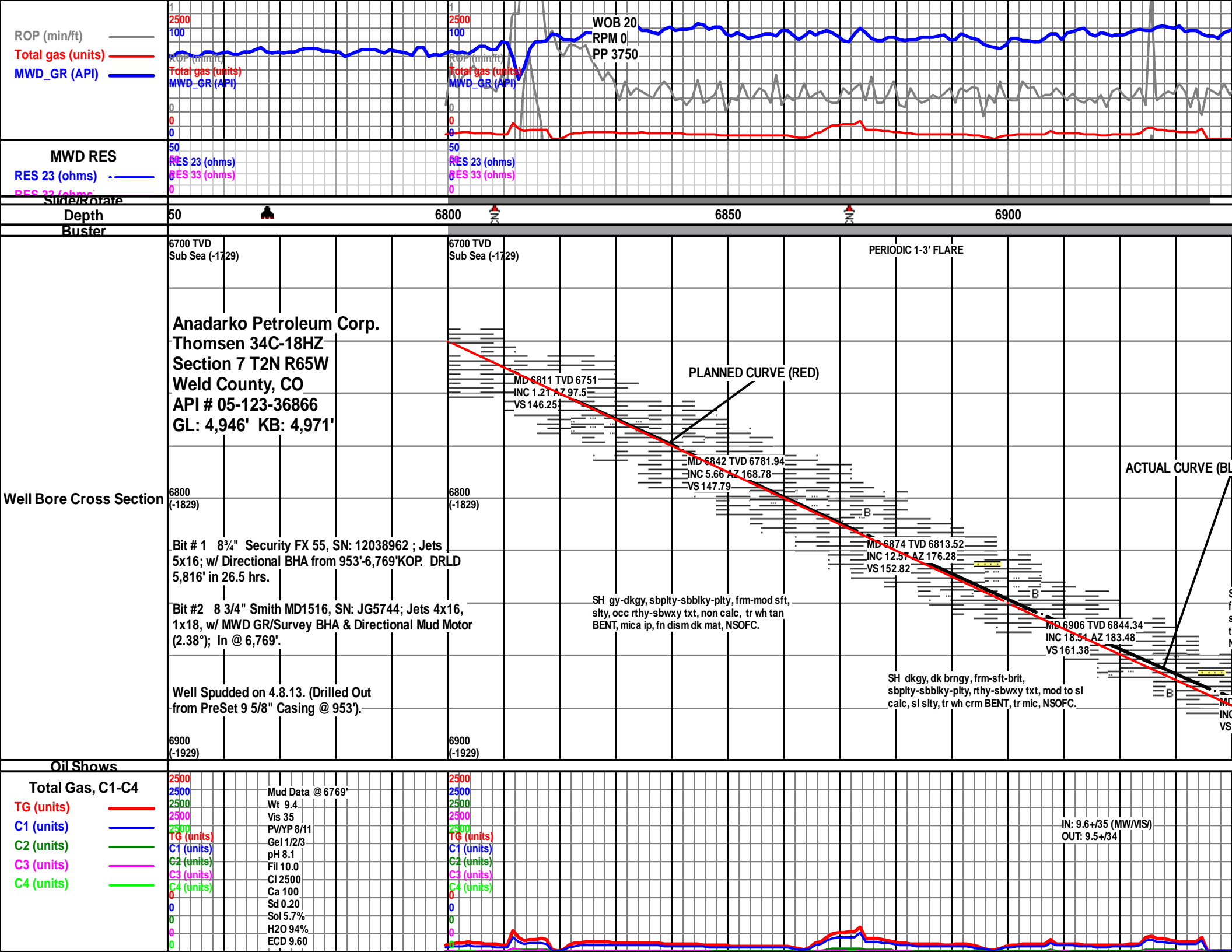
Well  
 Moderate  
 Poor

# Elevation

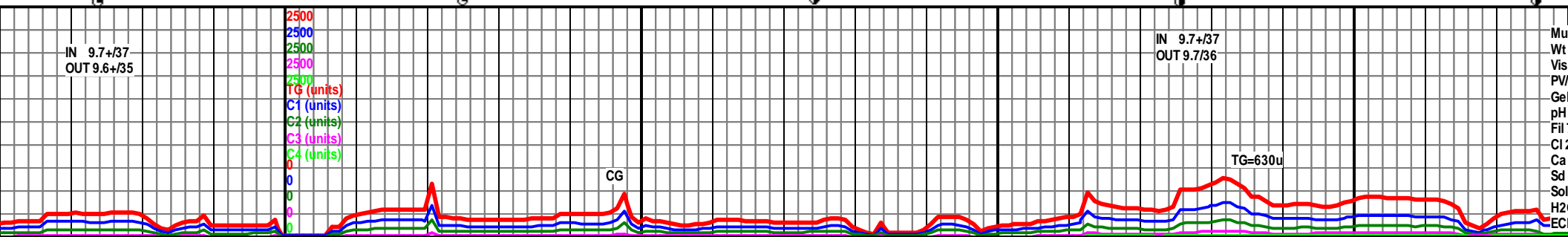
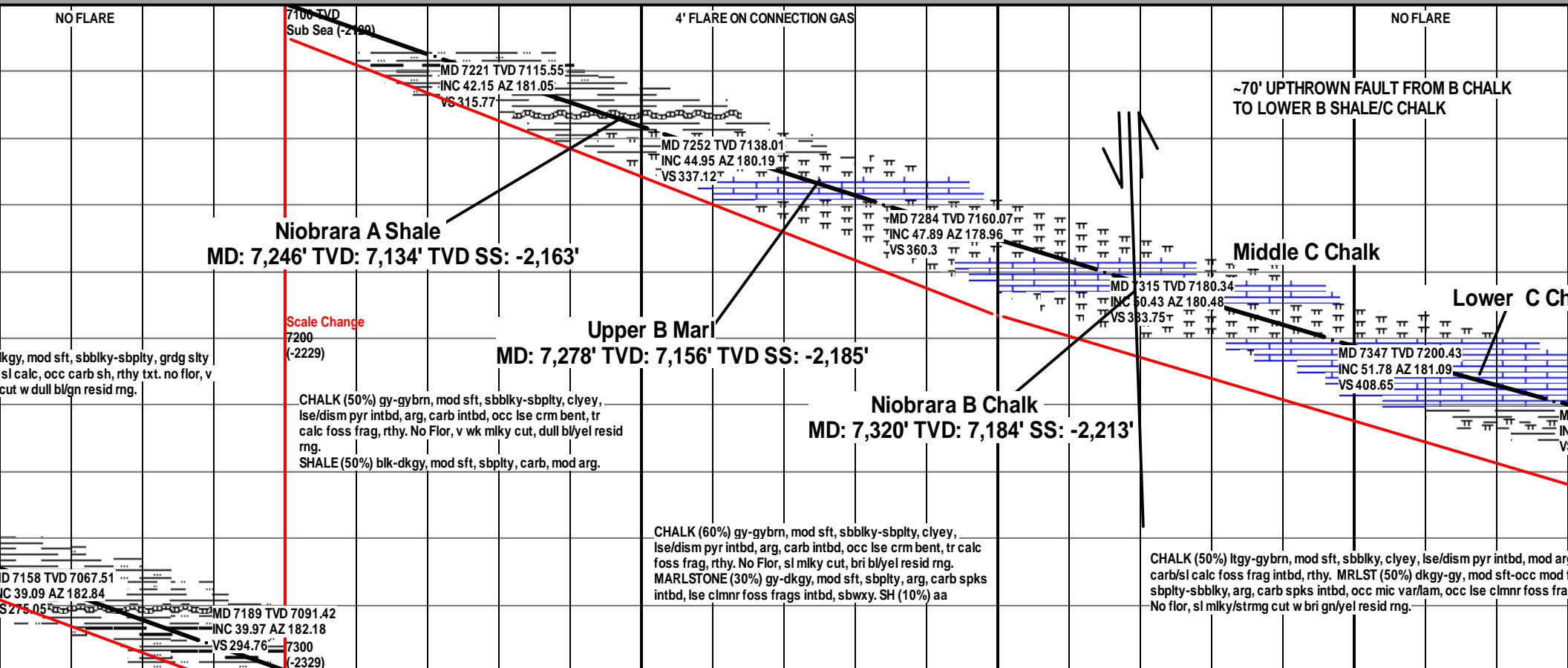
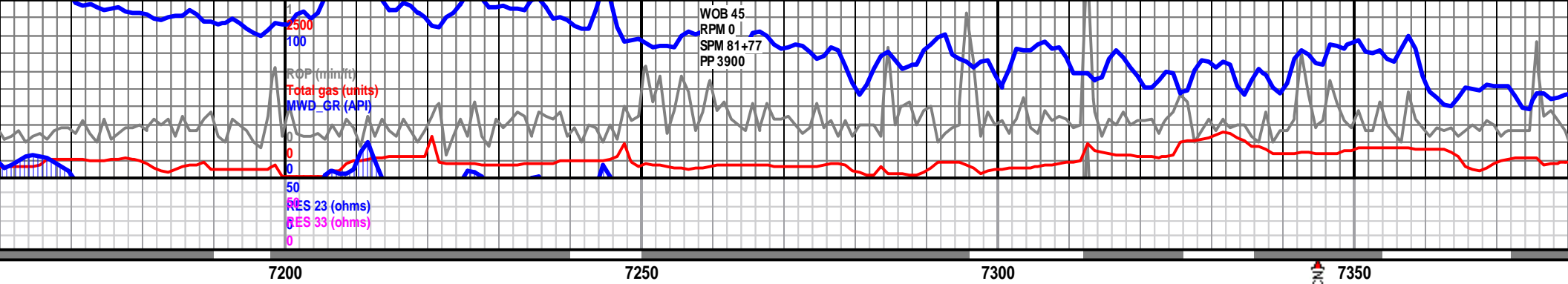


# Plan

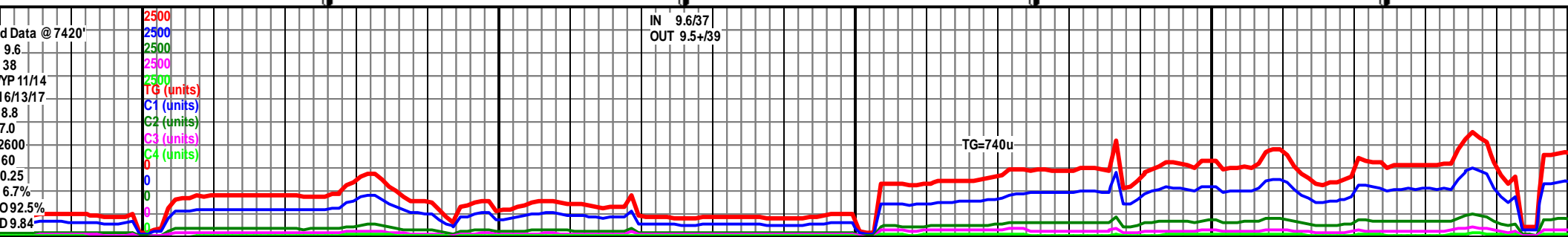
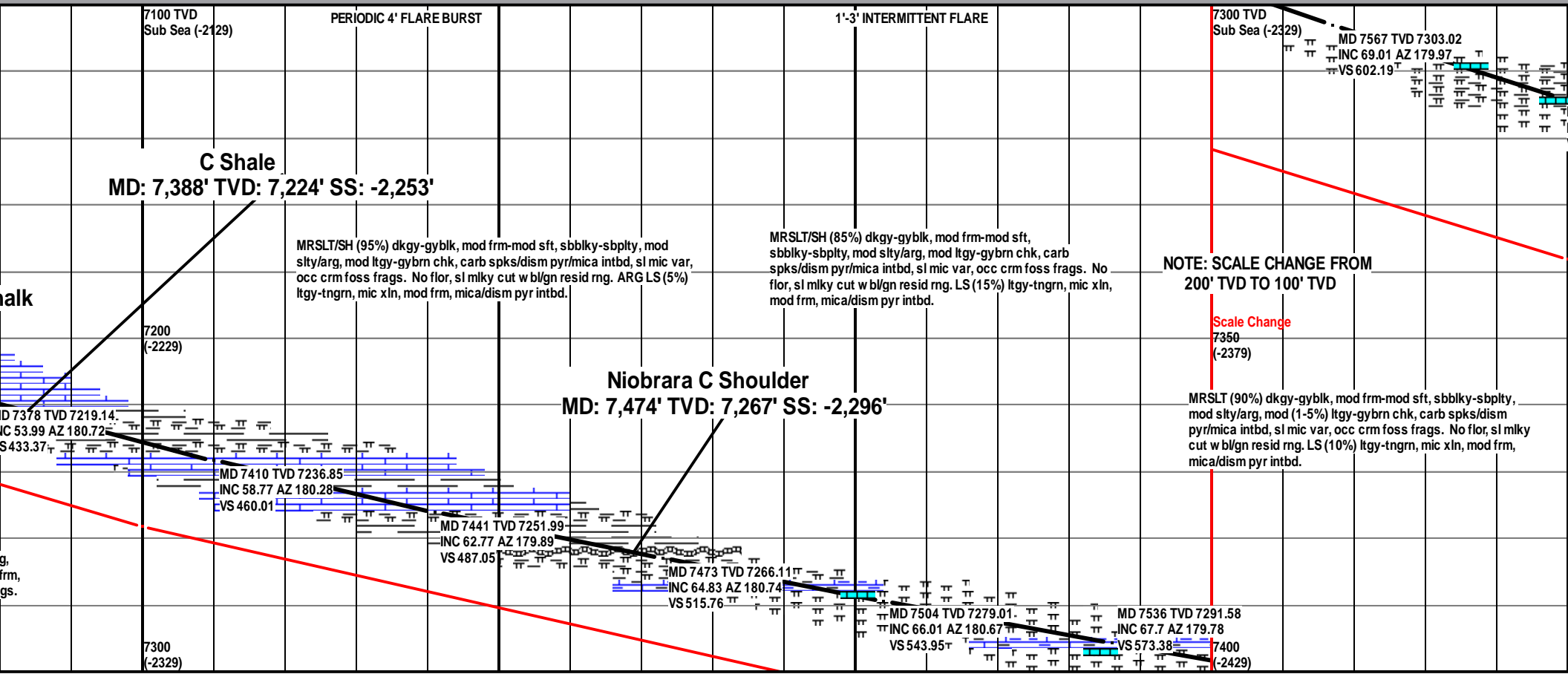
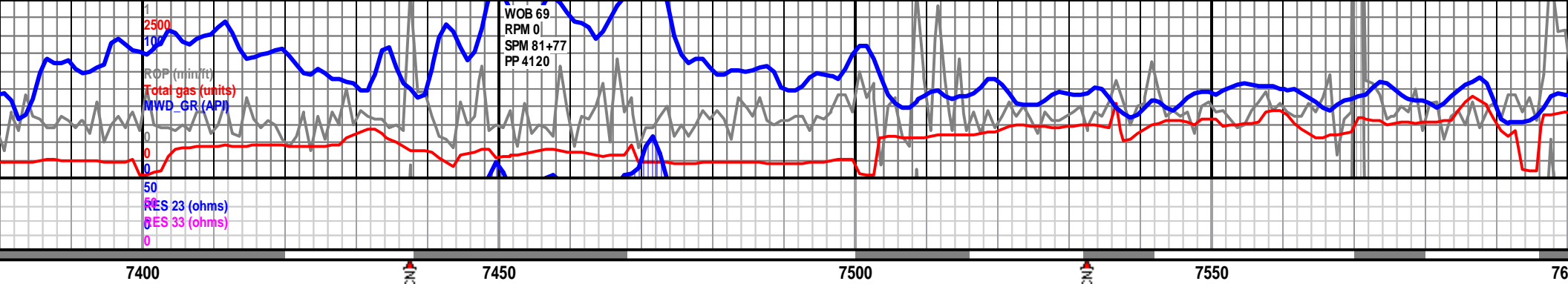


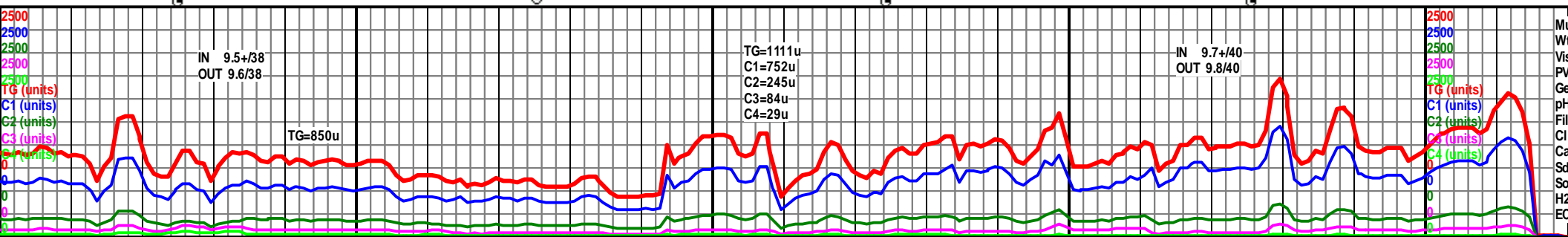
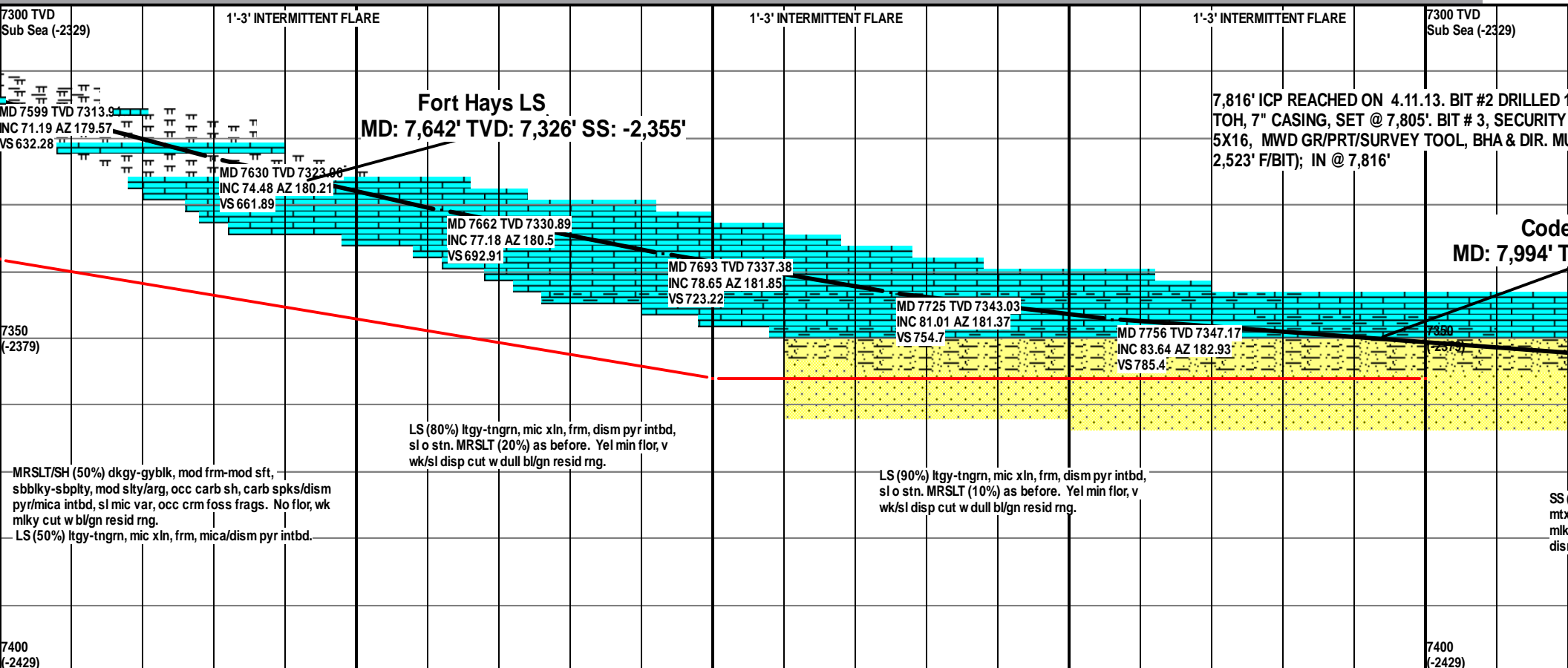
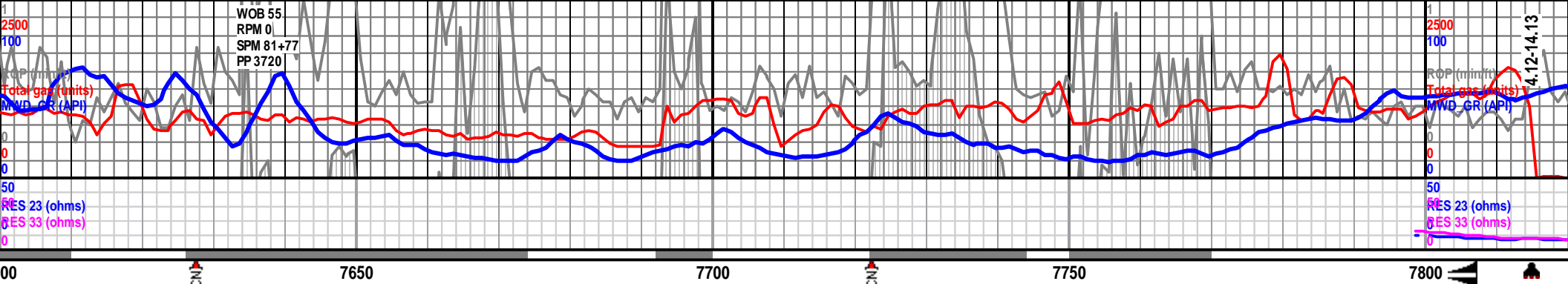




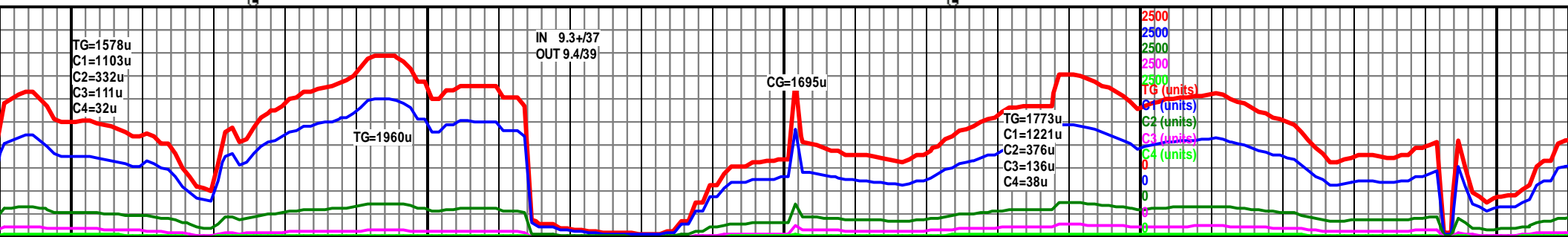
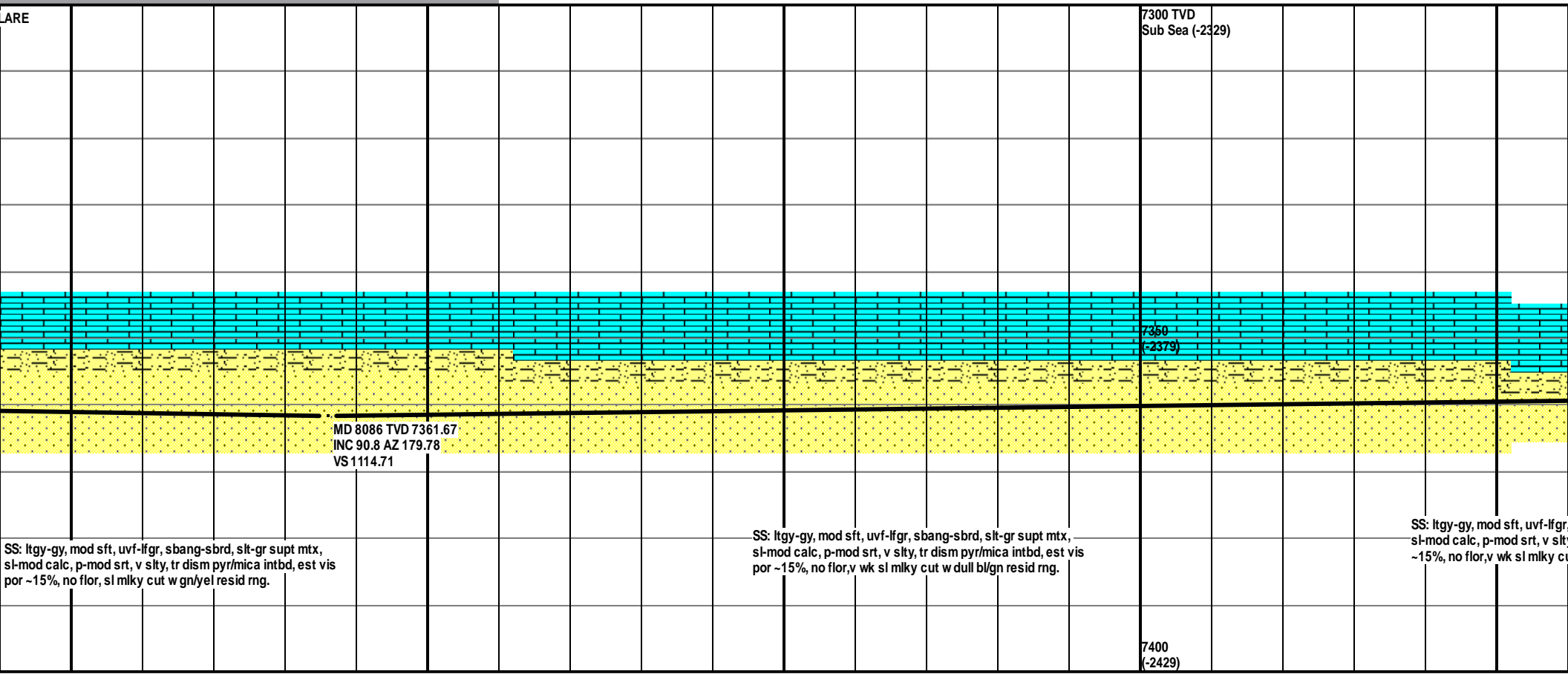
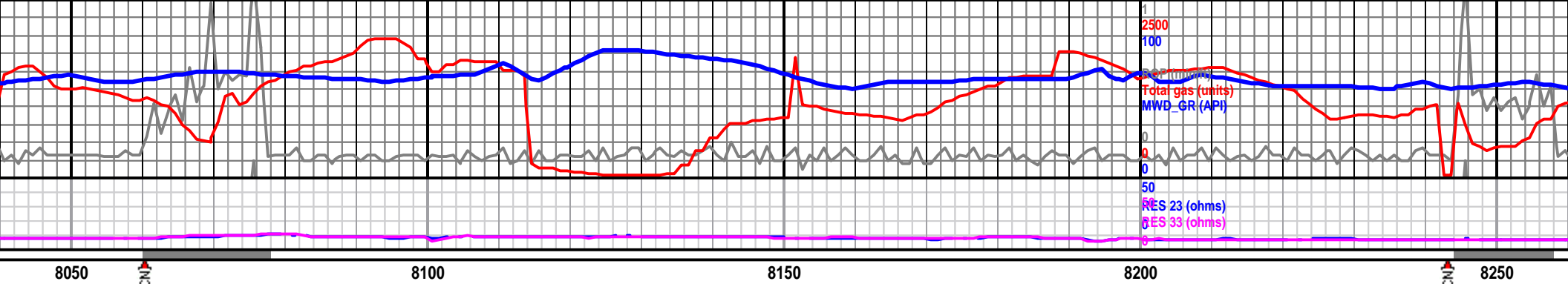


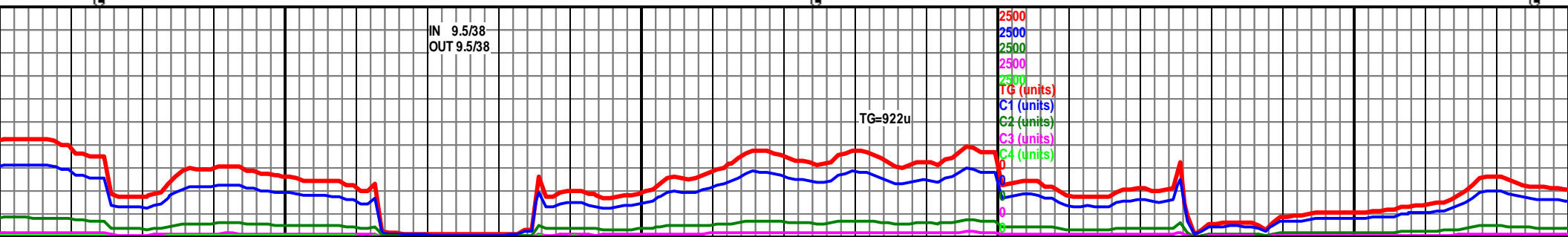
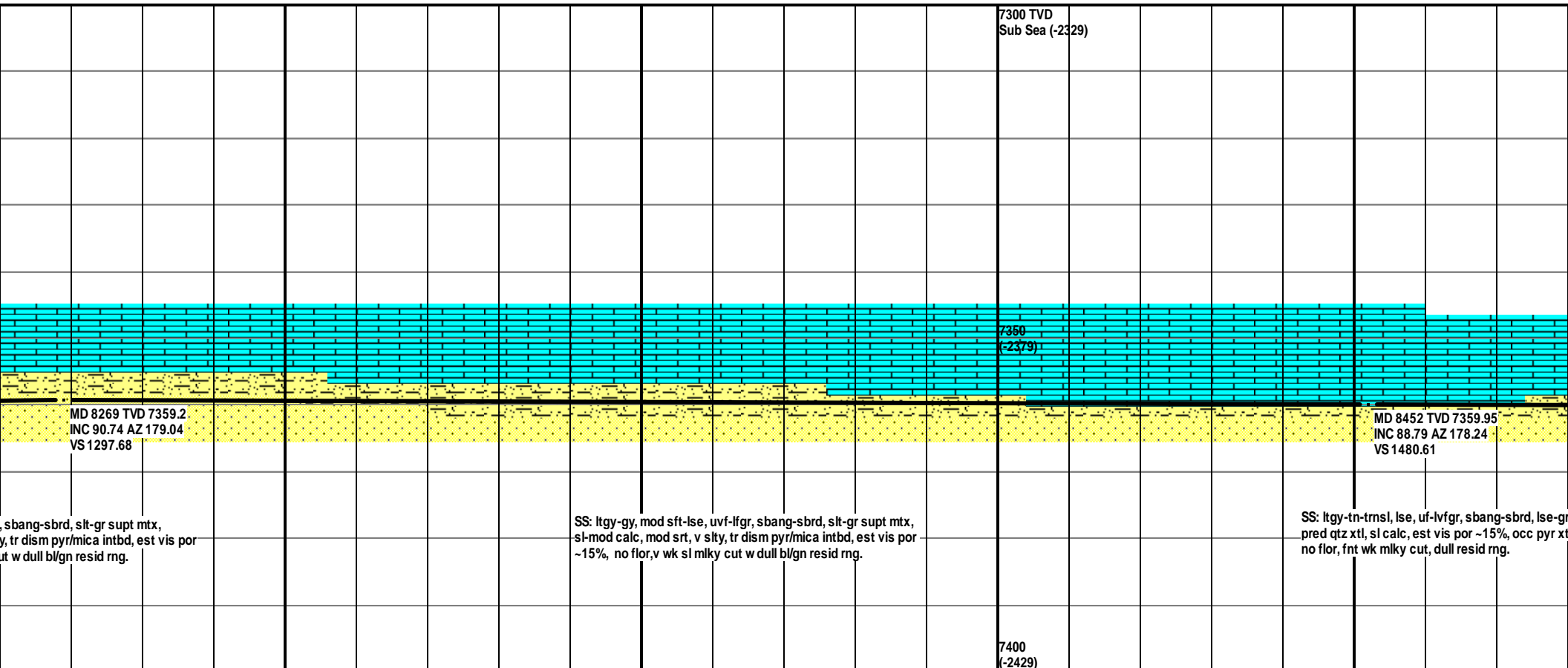
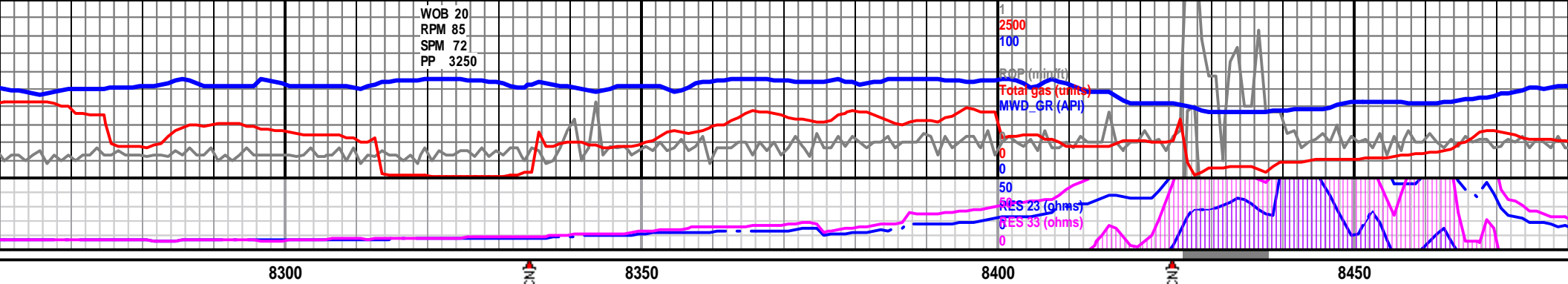




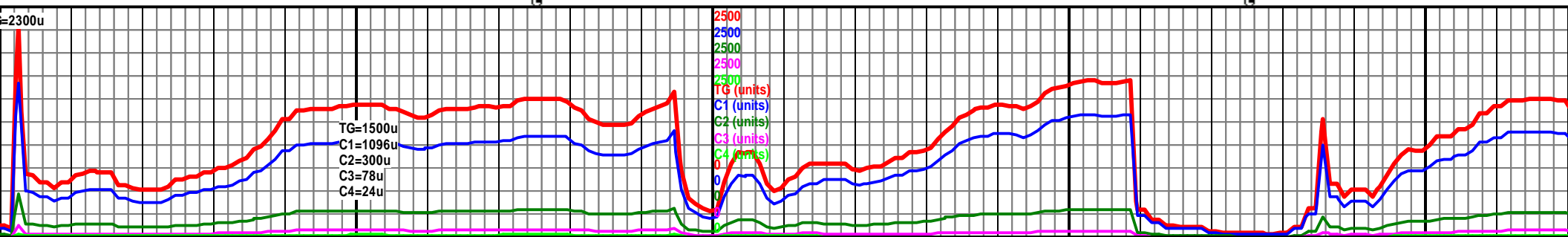
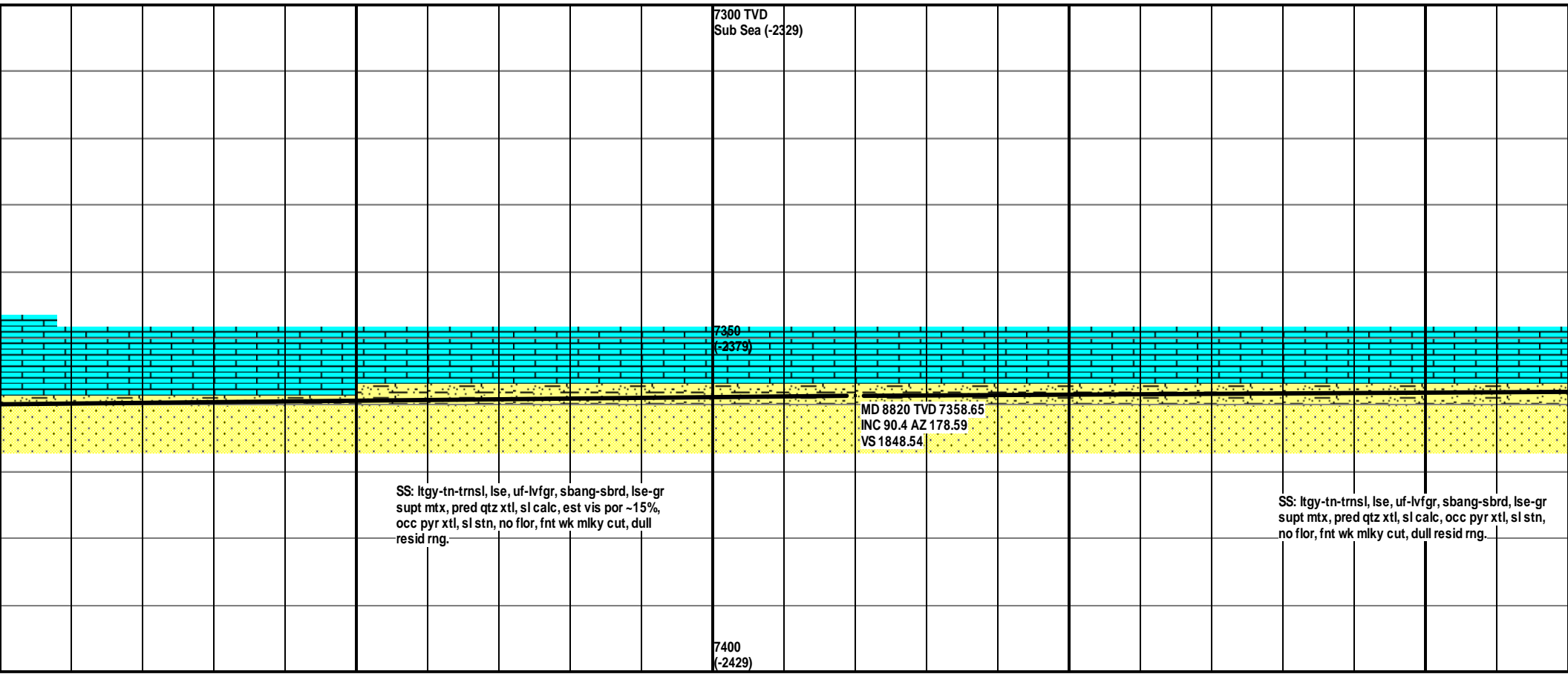
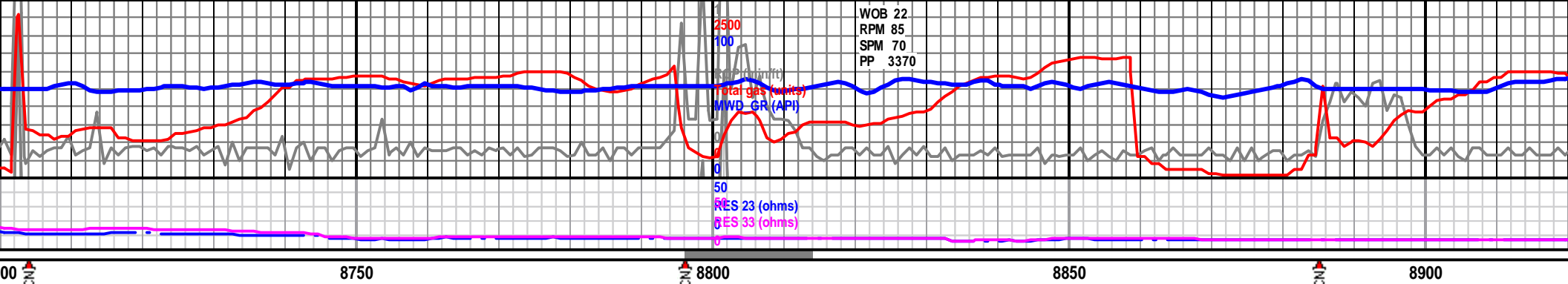


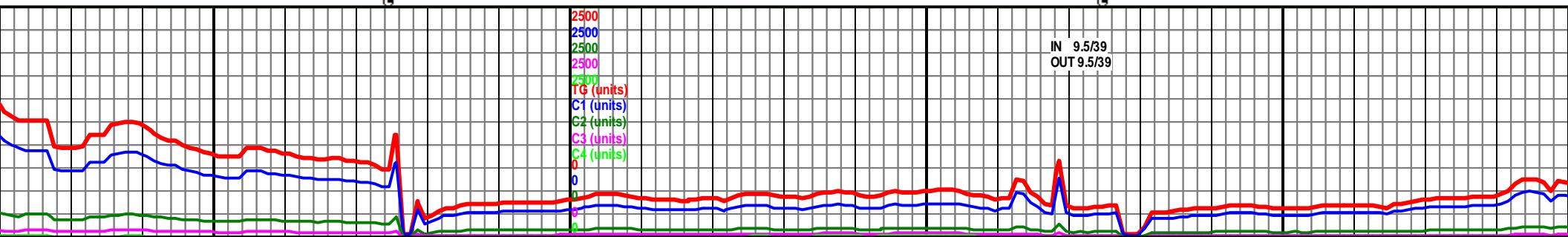
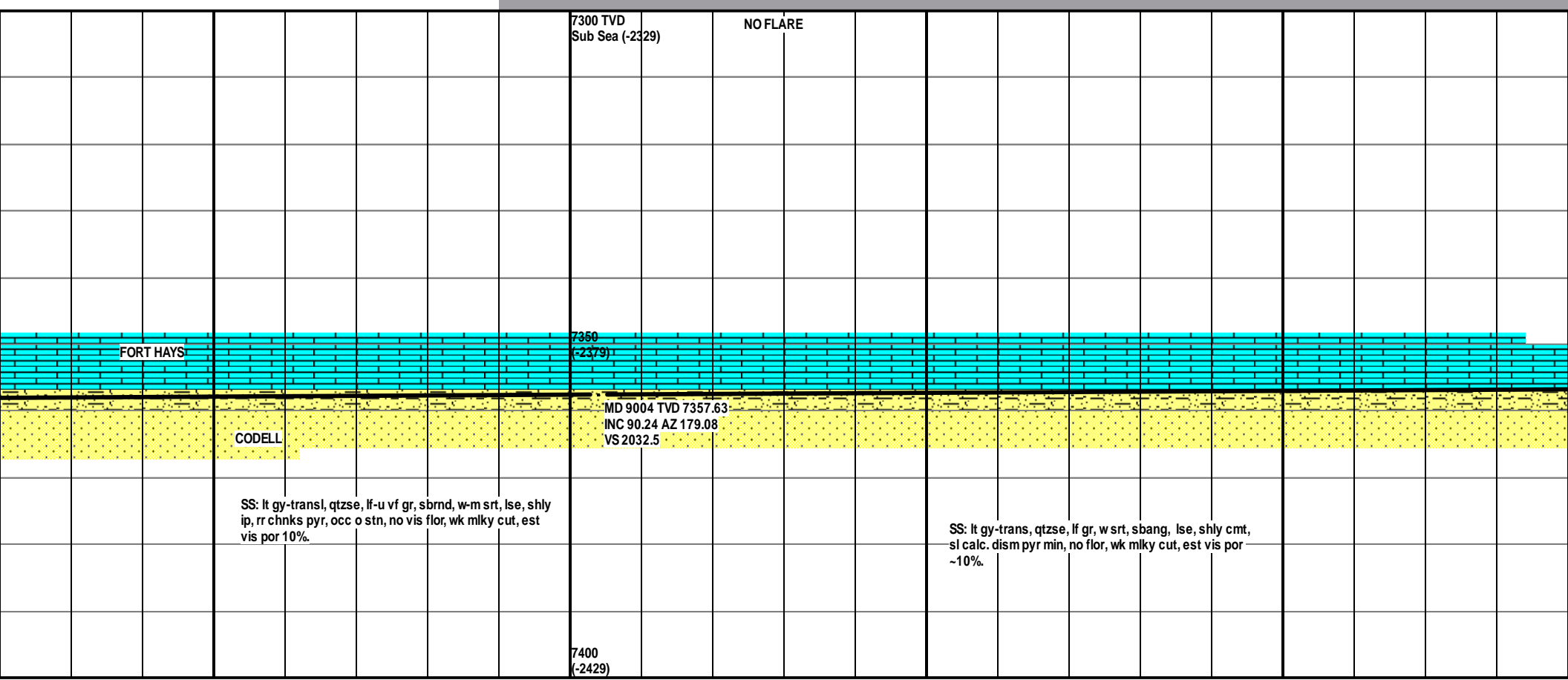
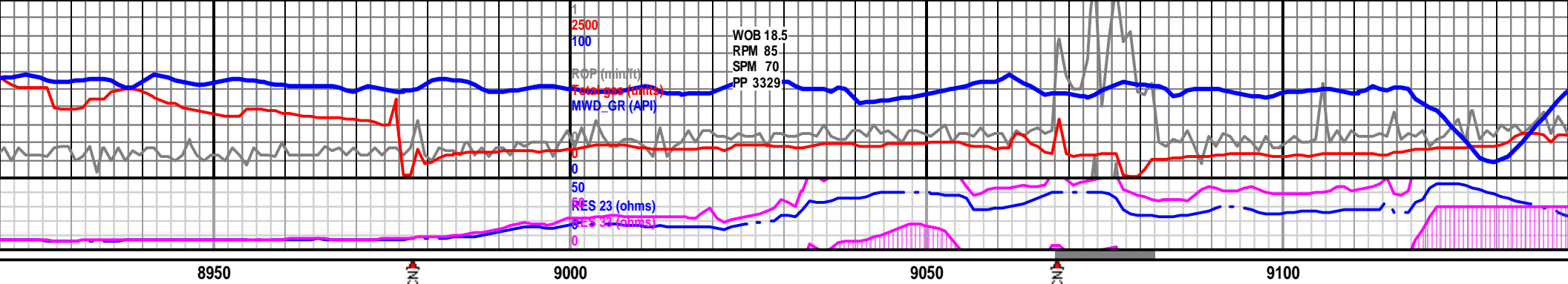




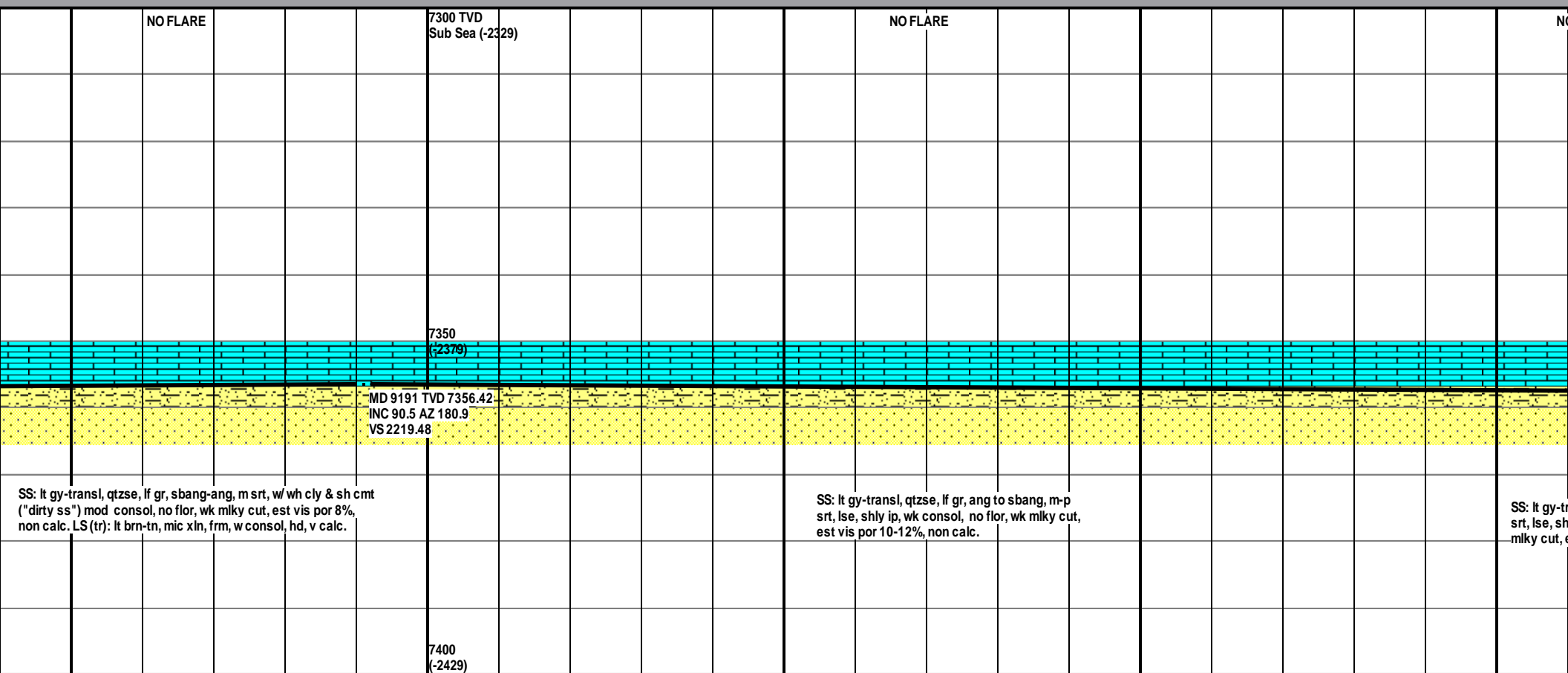






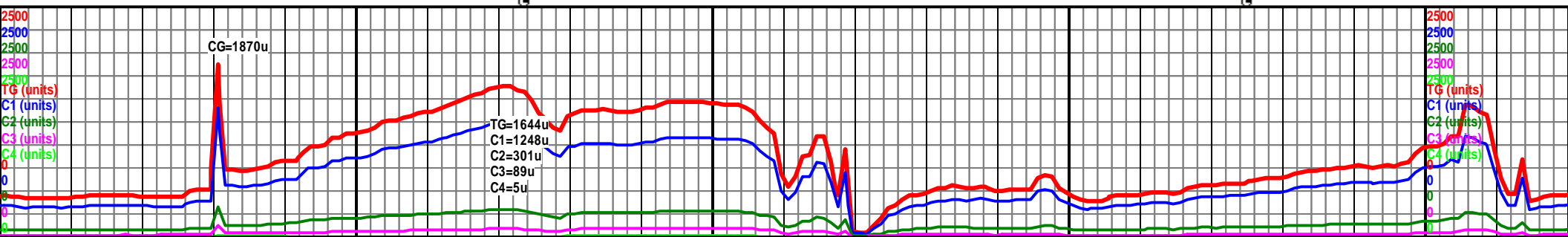
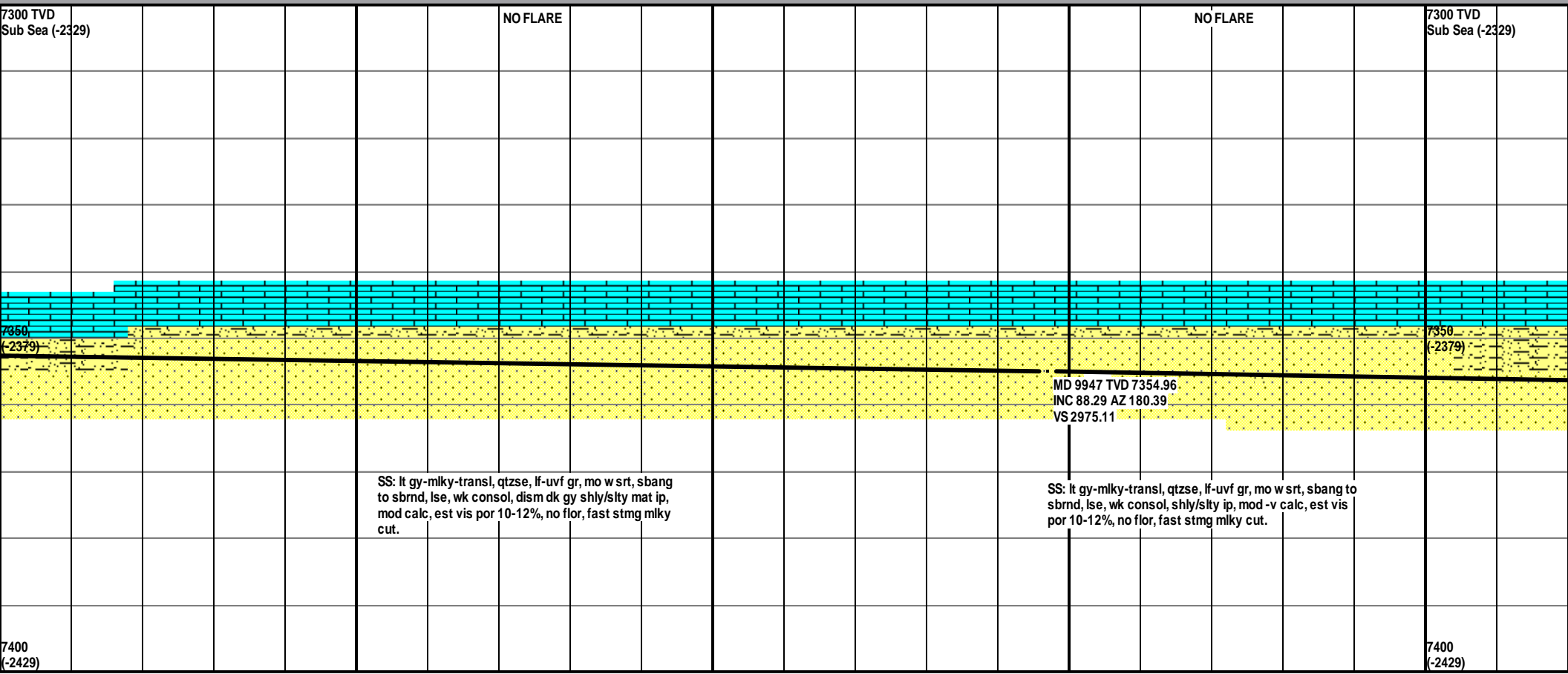
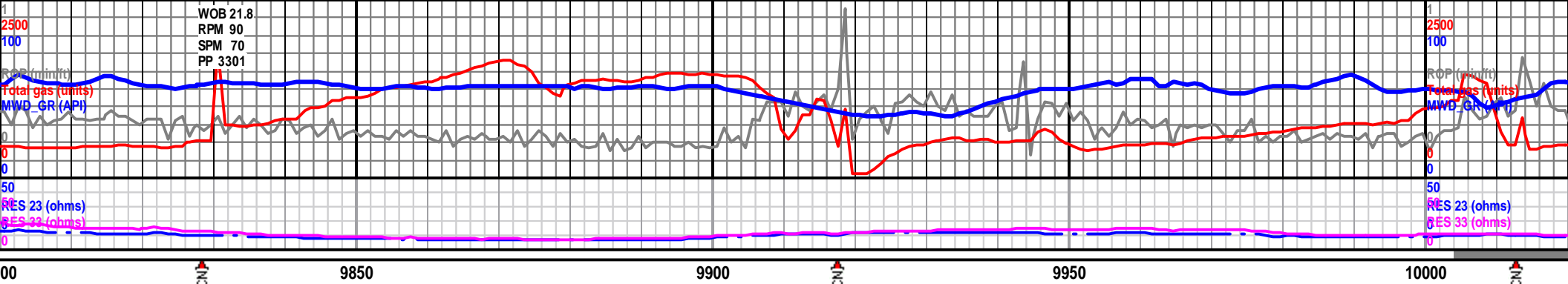




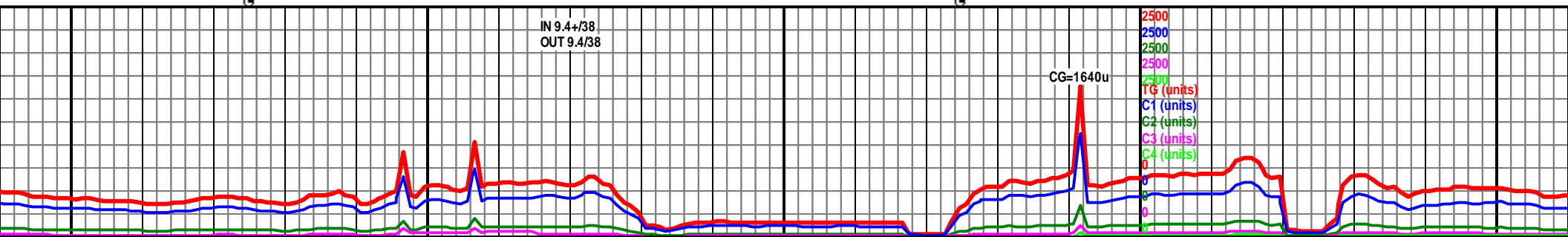
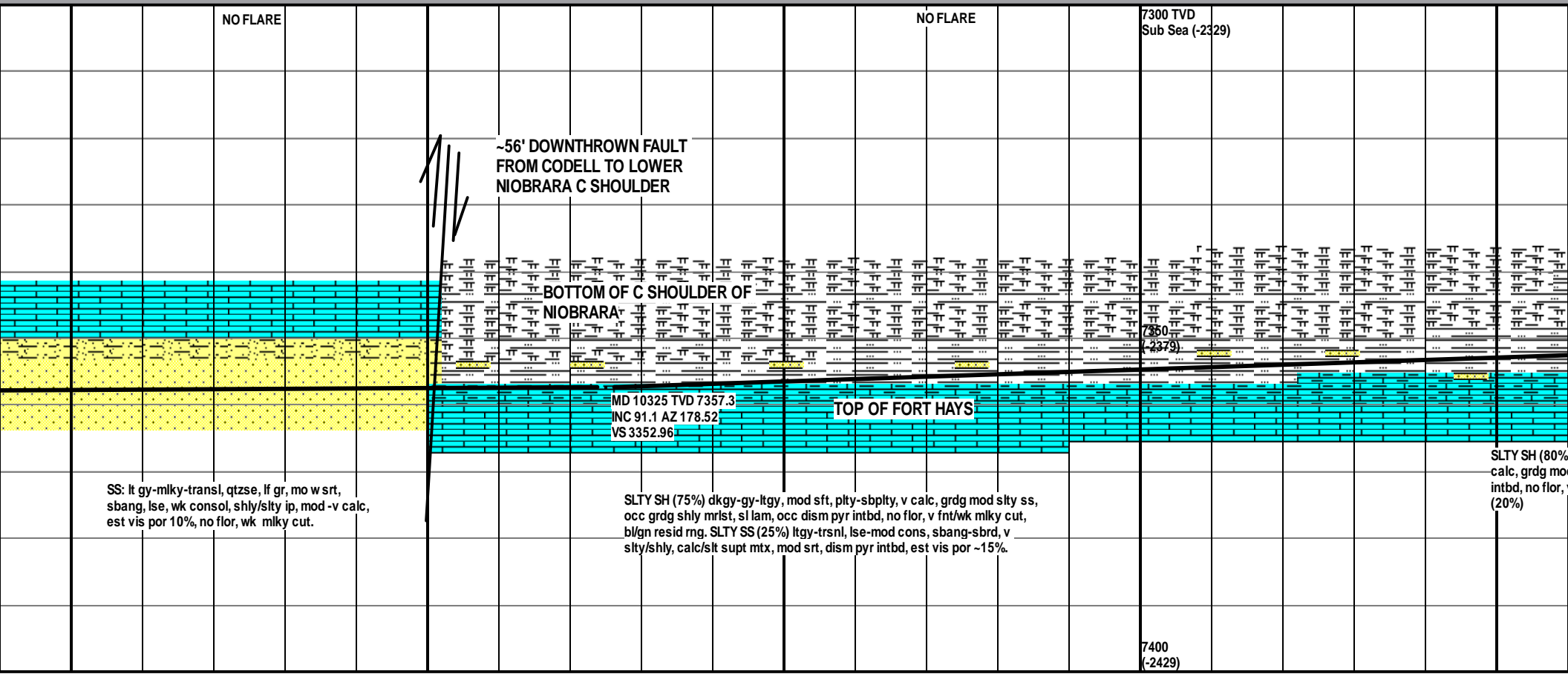
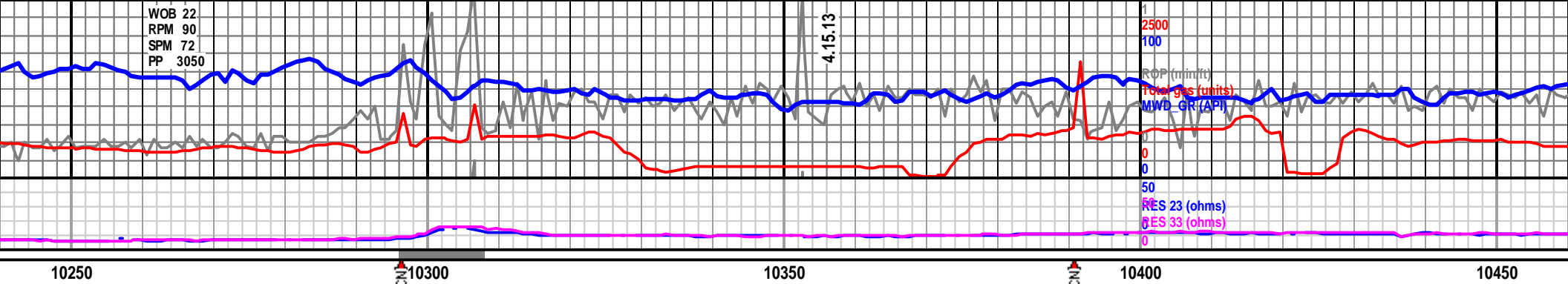




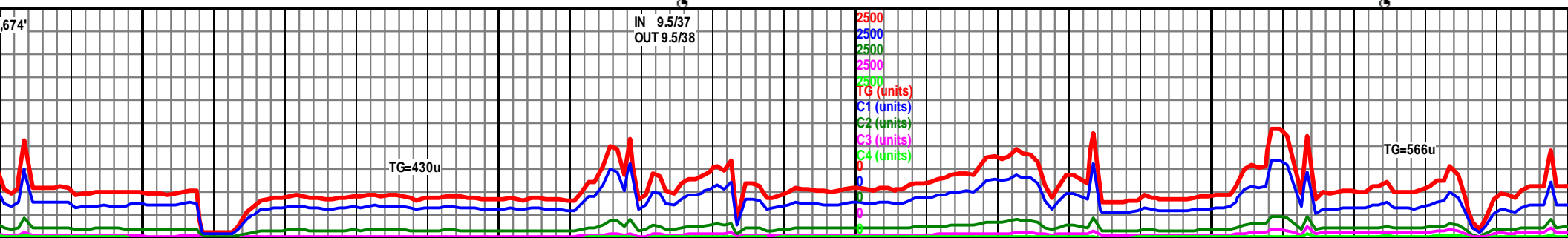
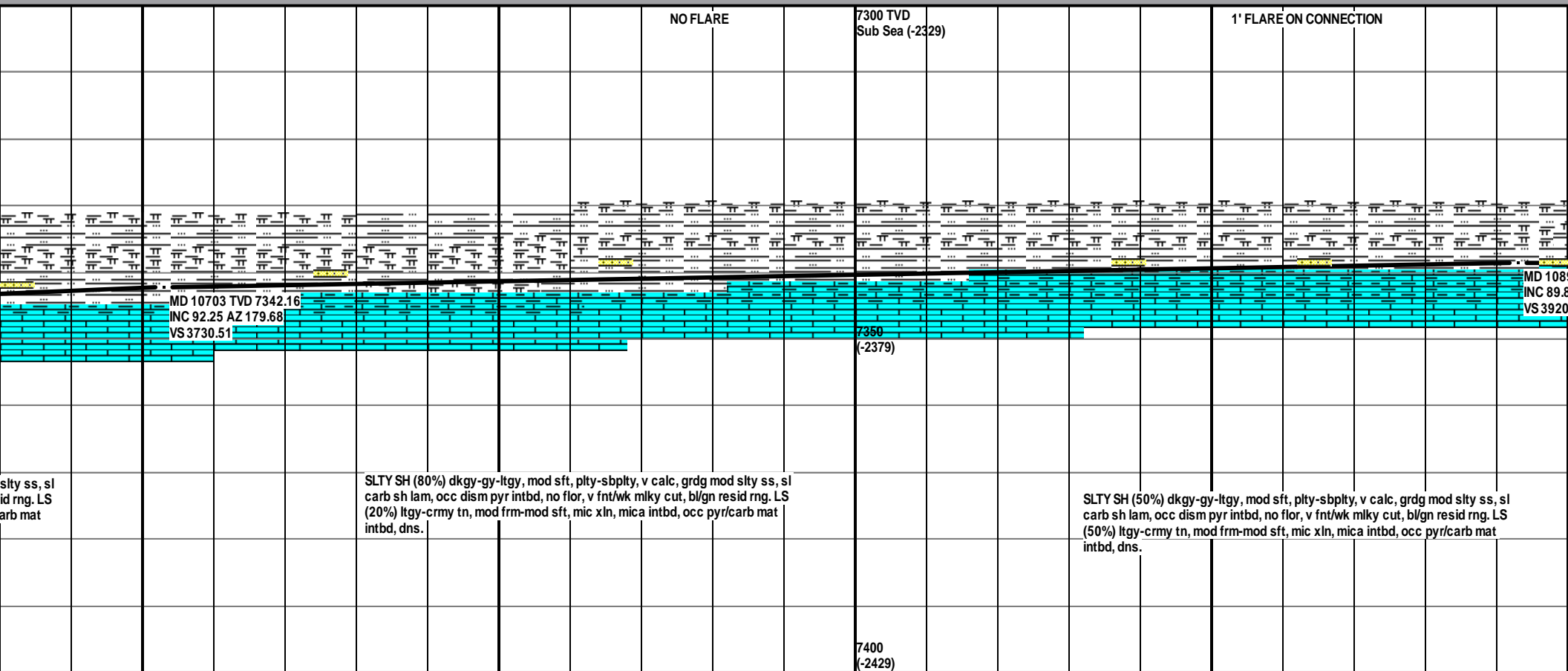
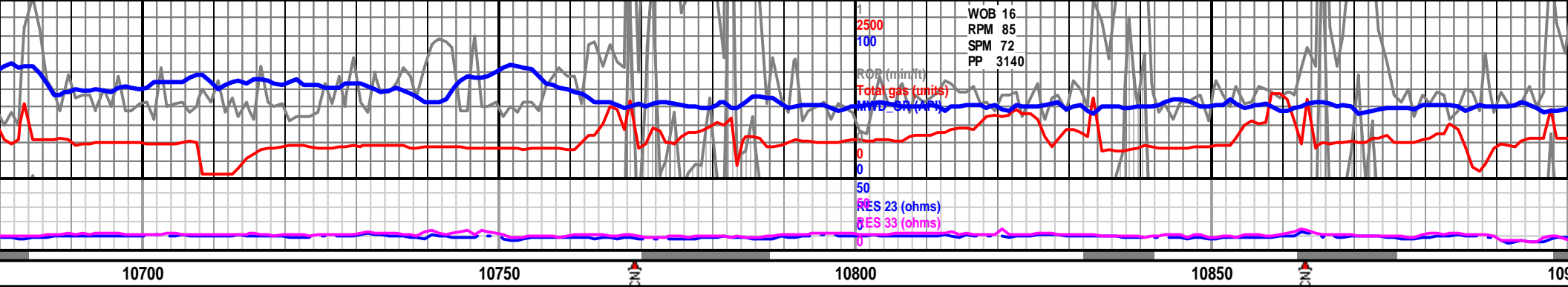




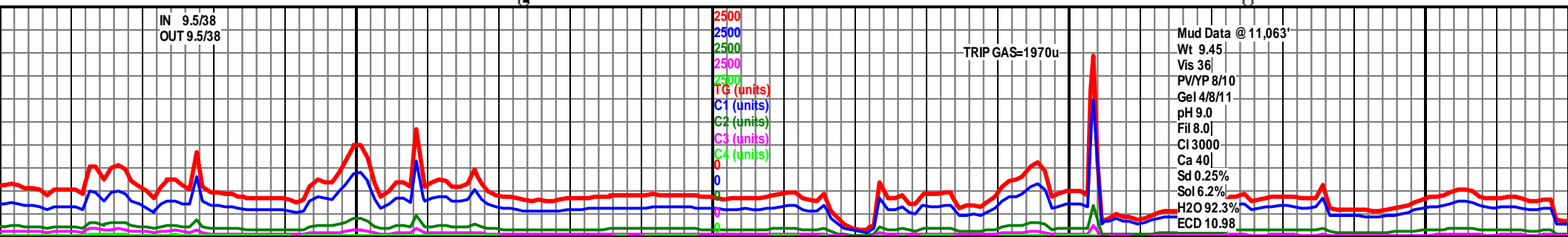
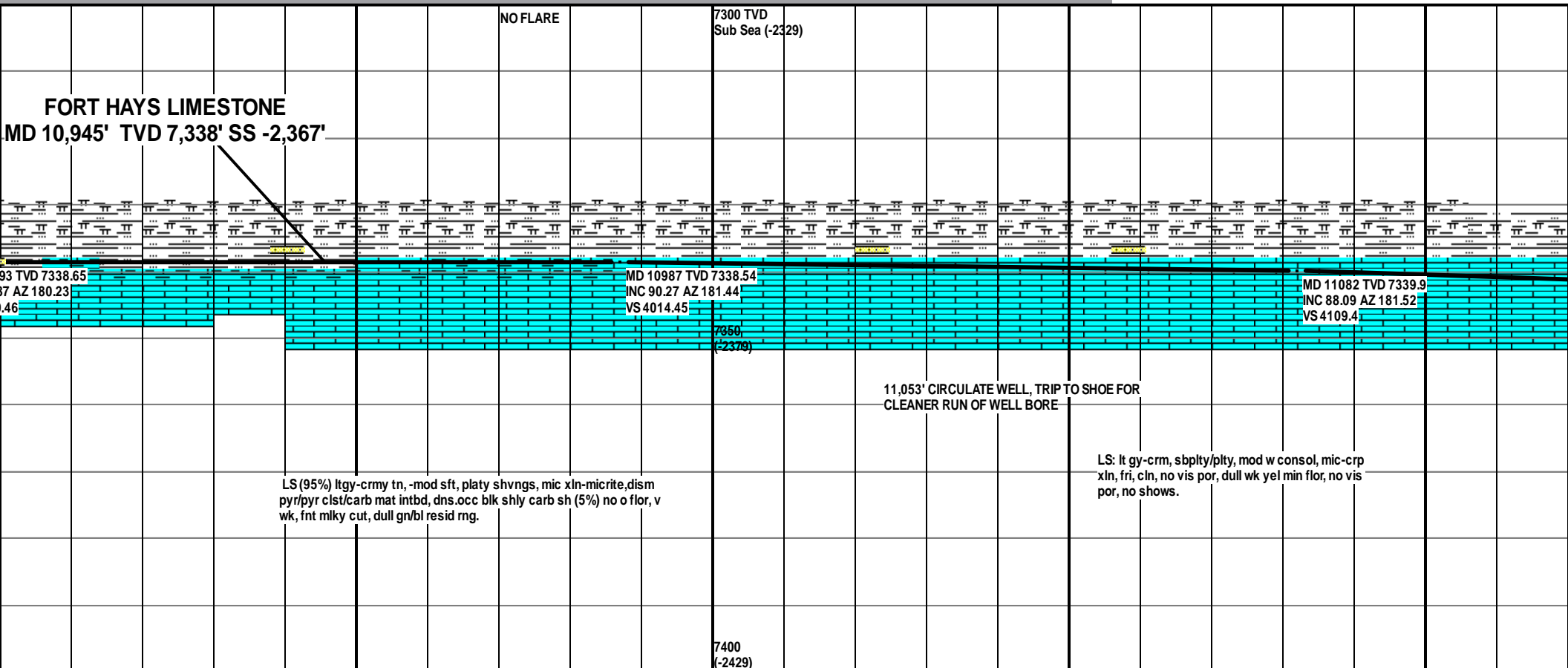
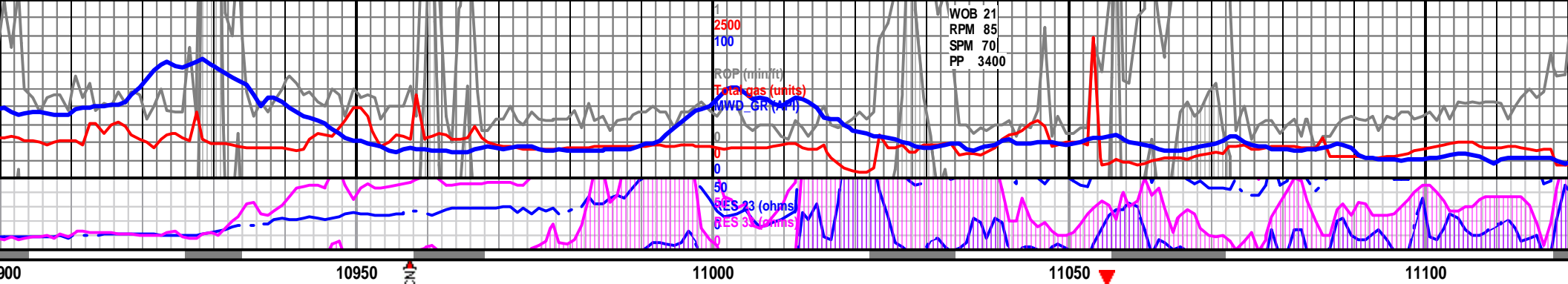


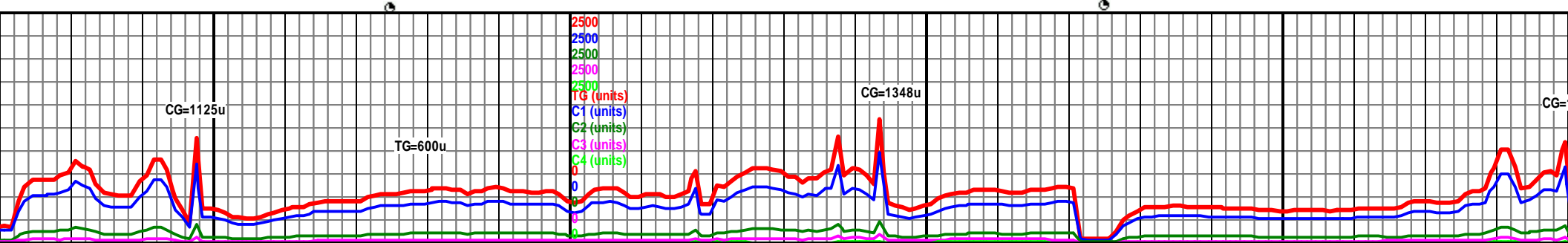
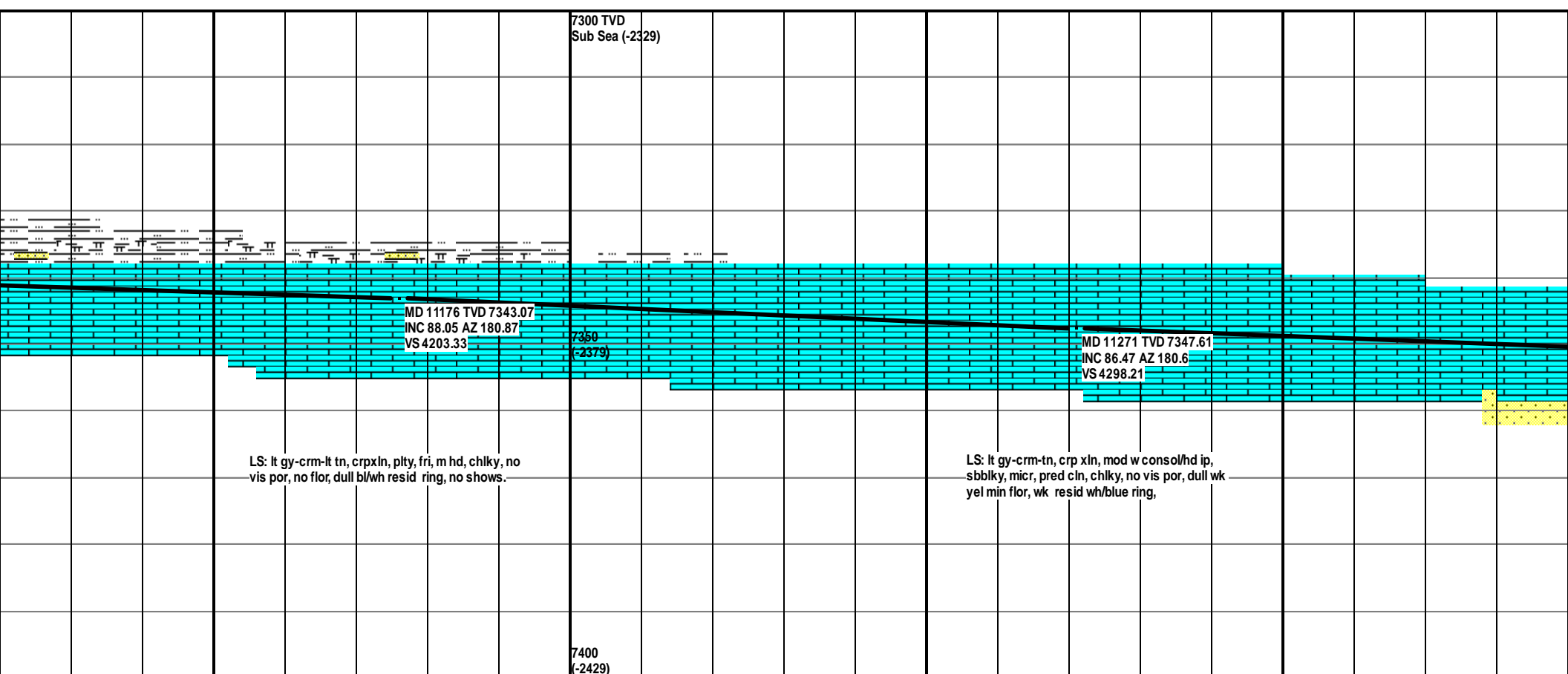
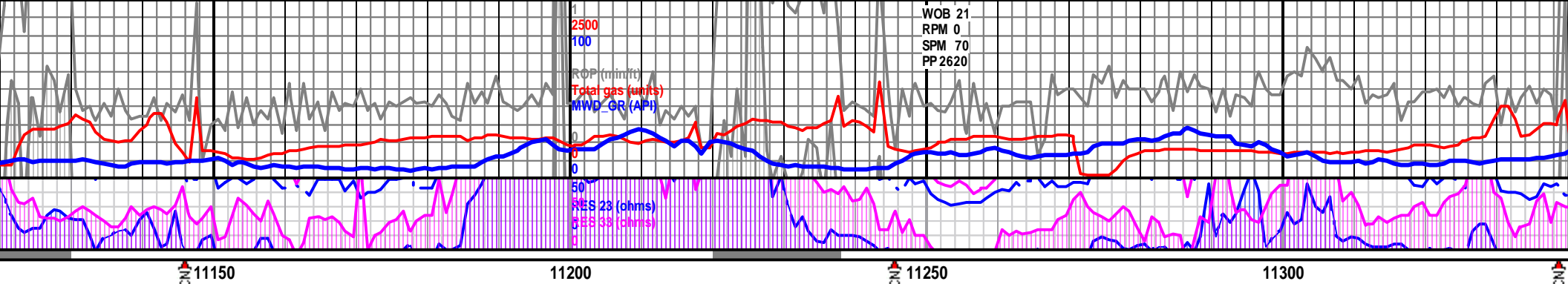


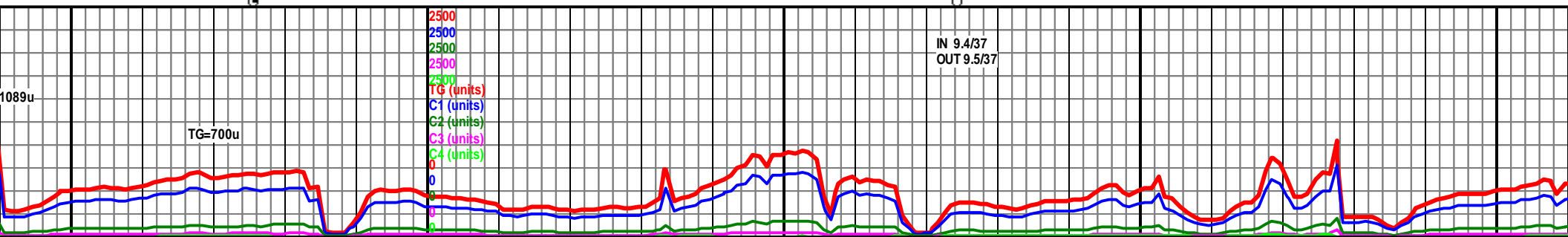
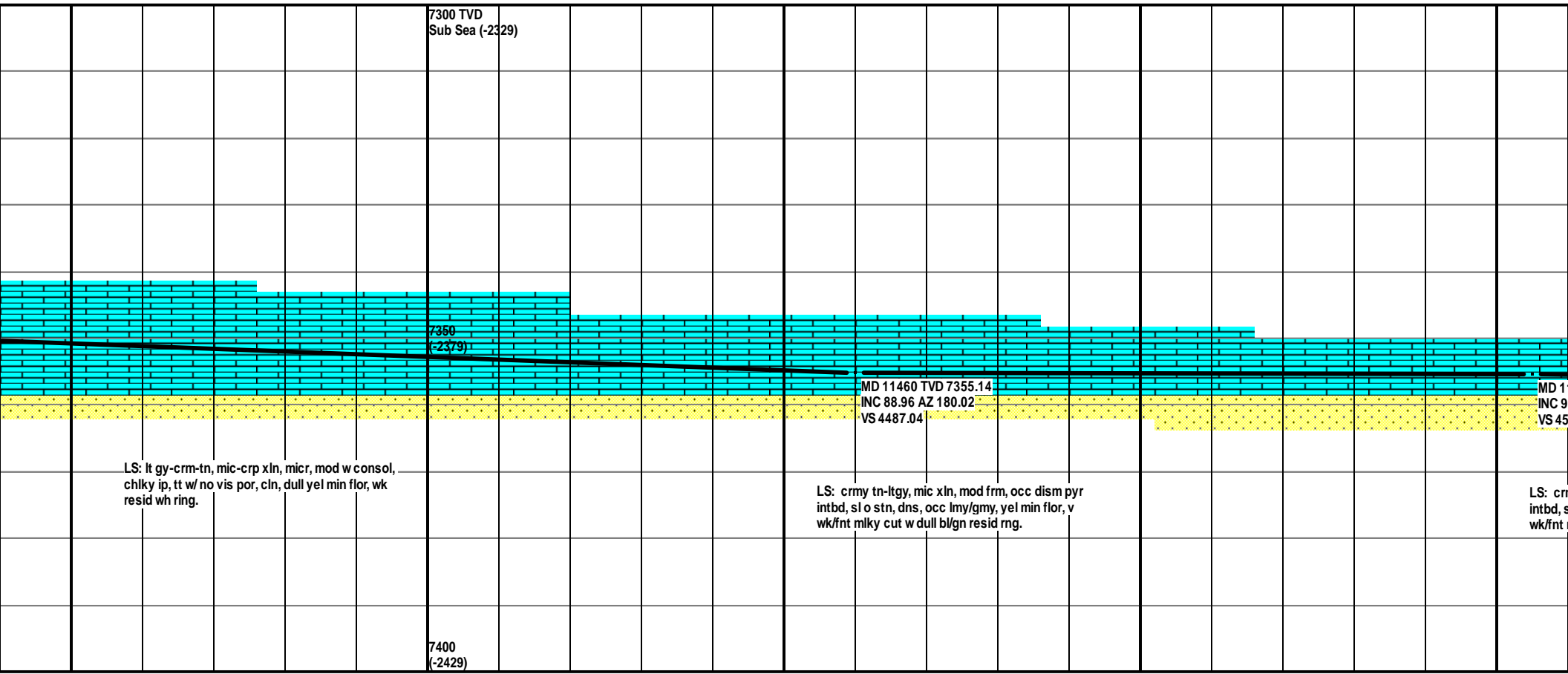
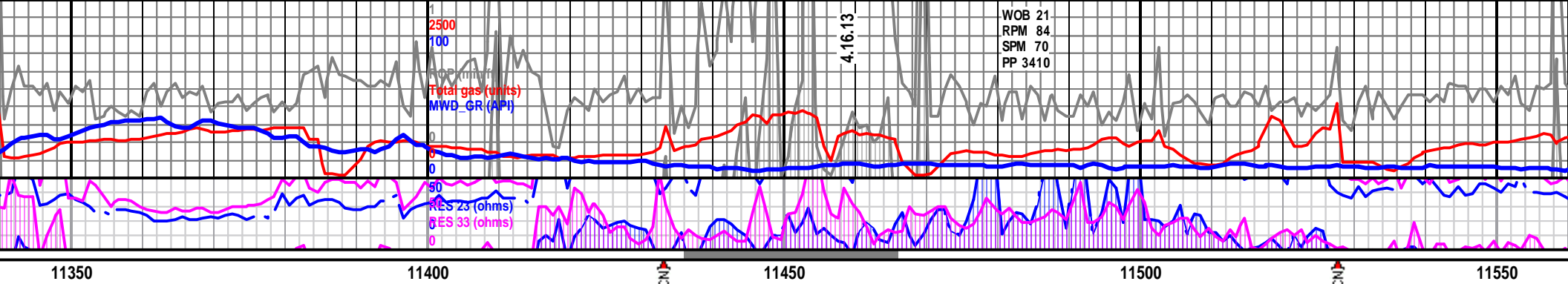


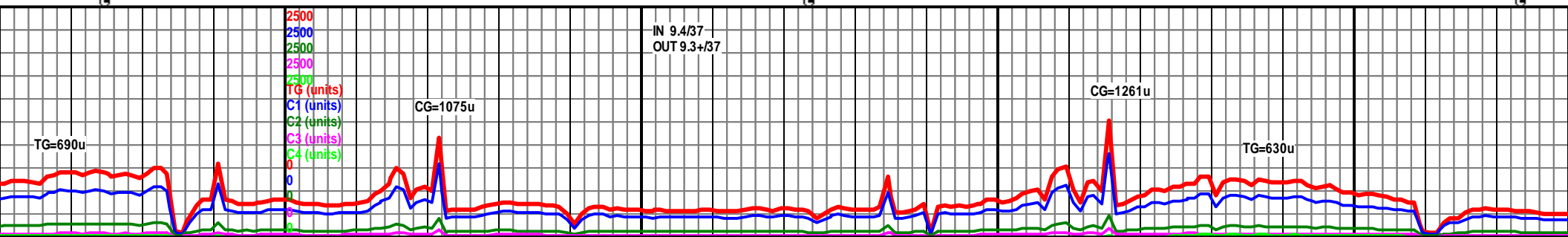
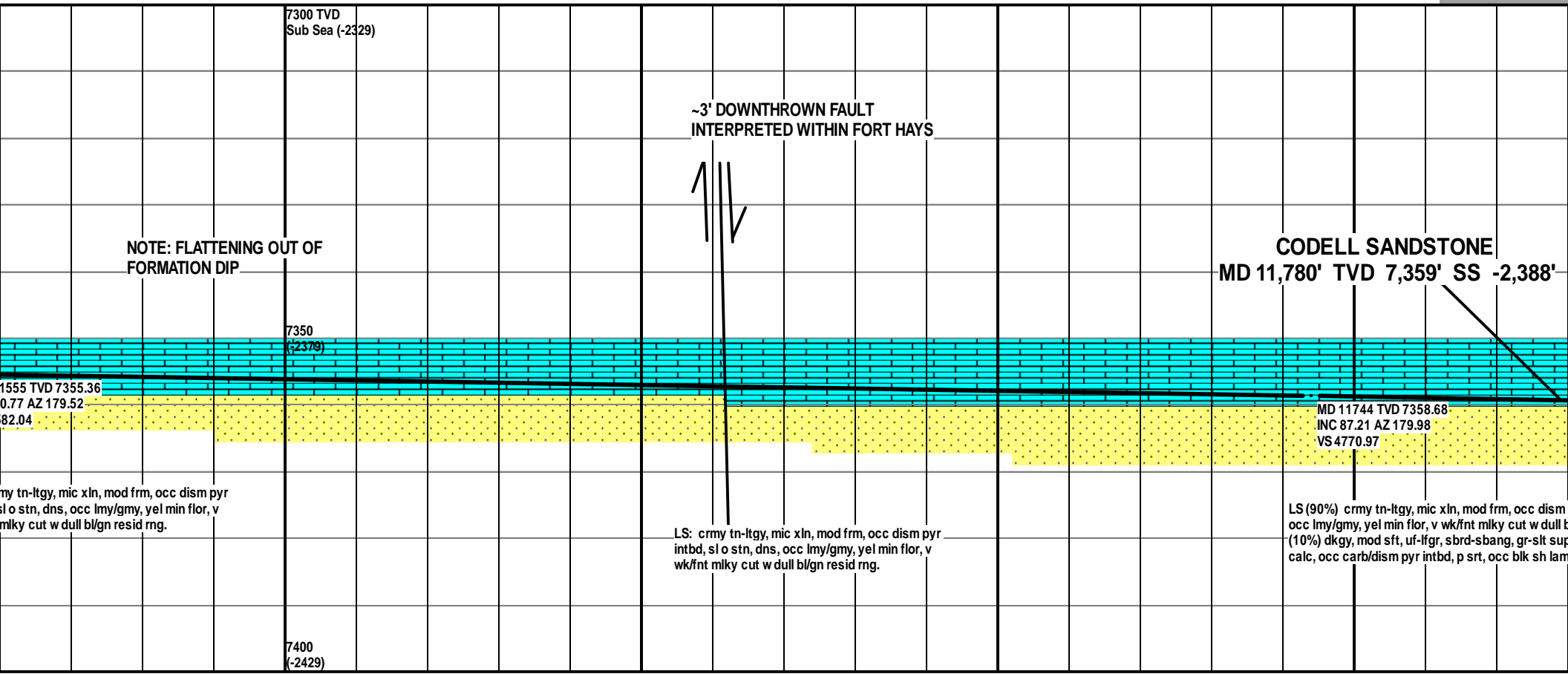
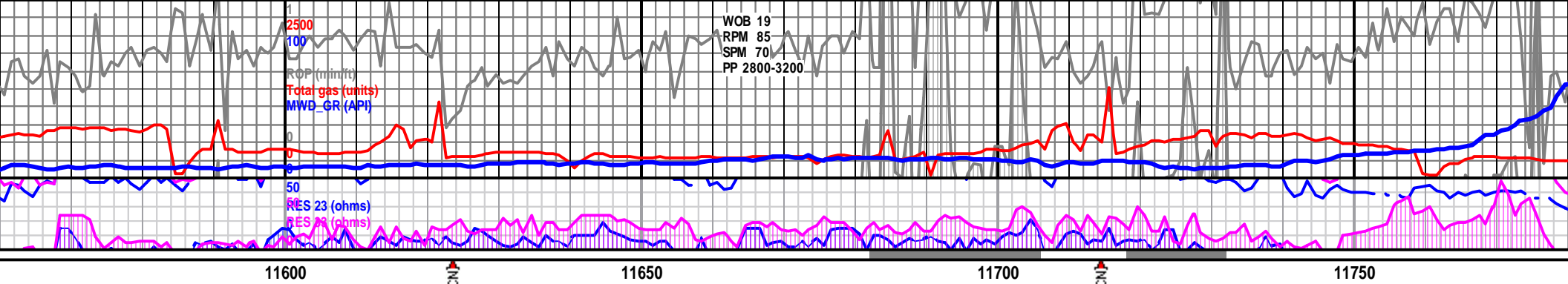


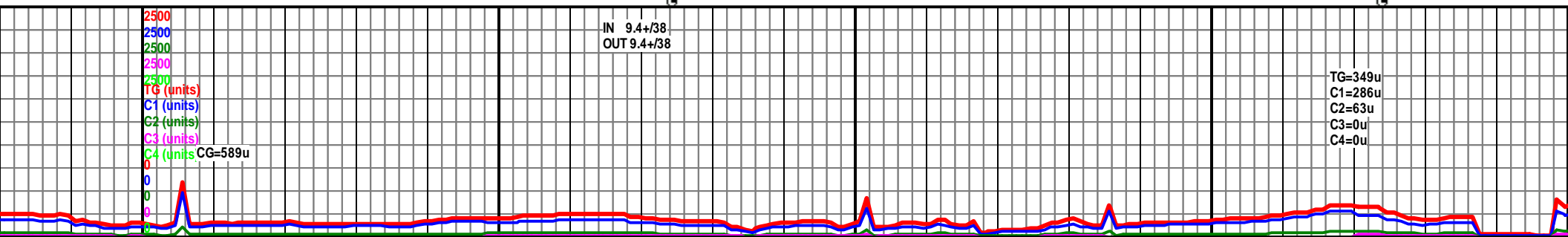
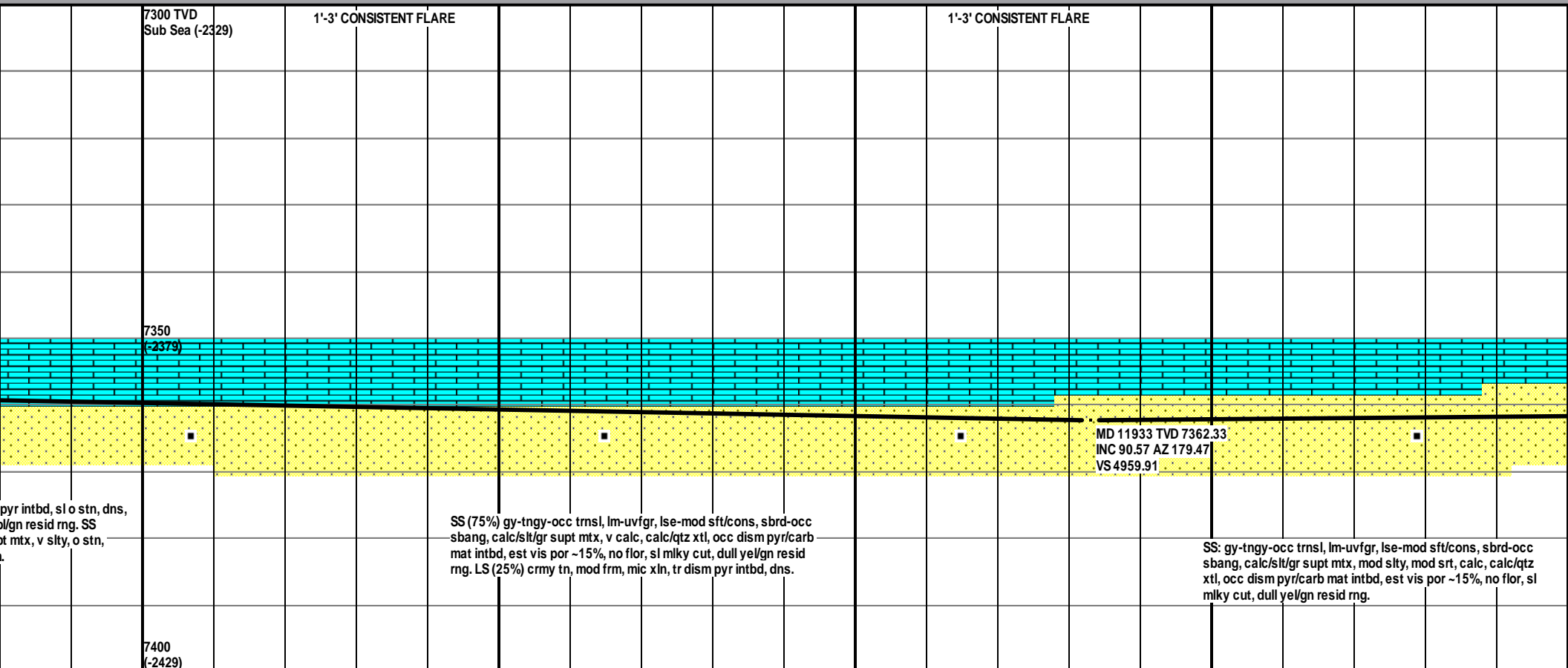
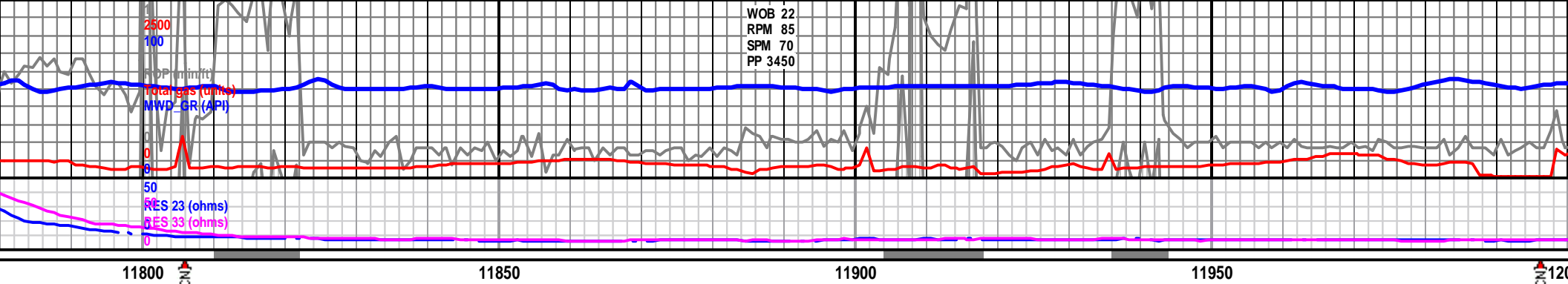


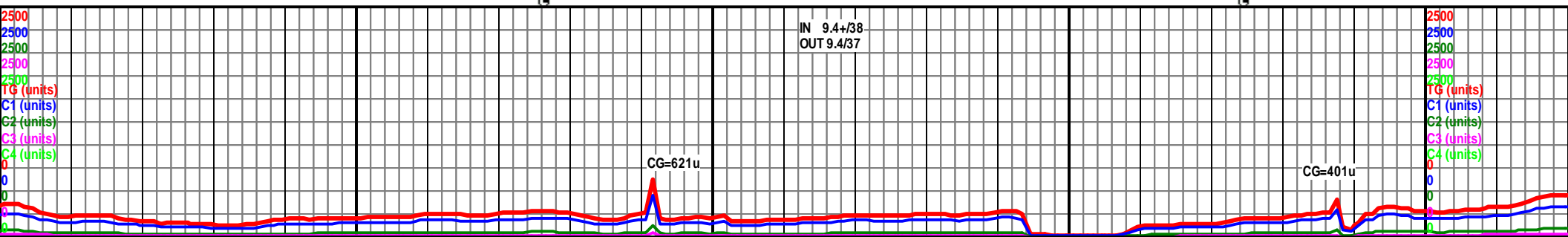
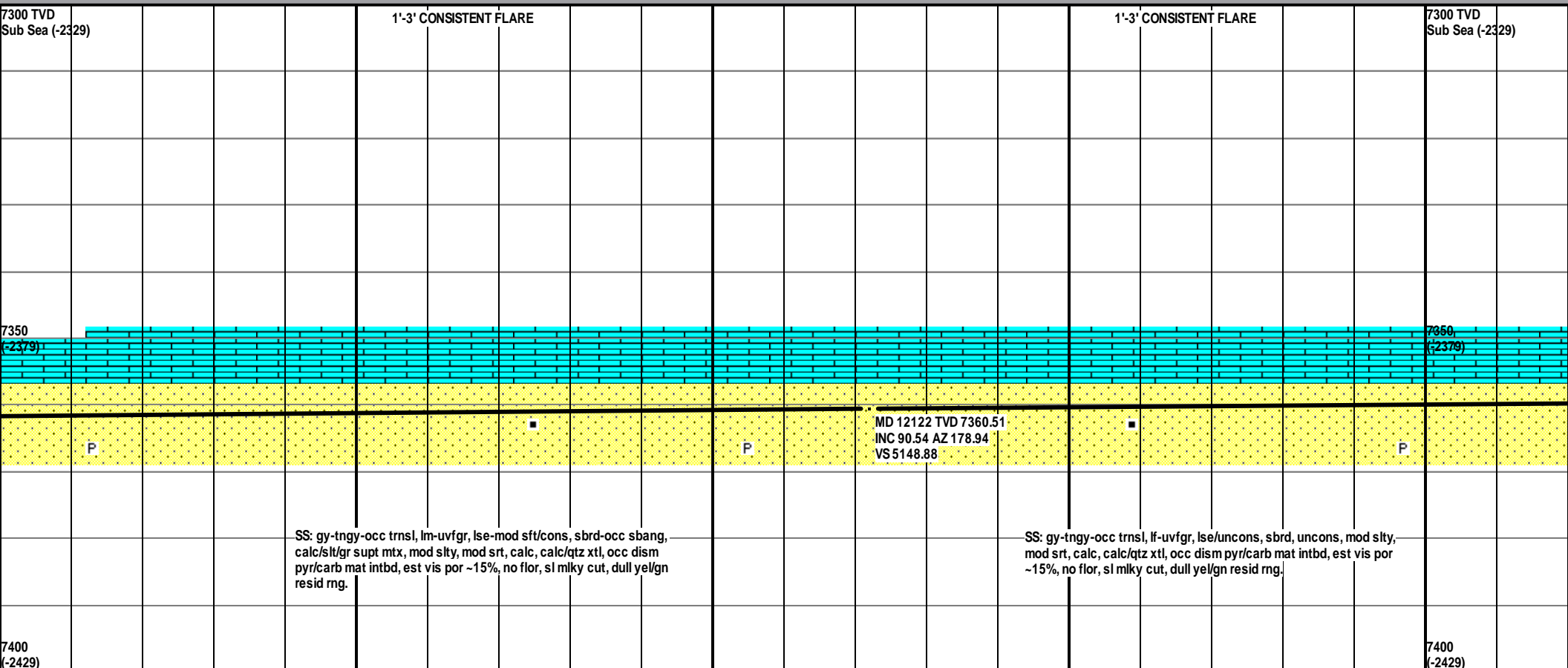
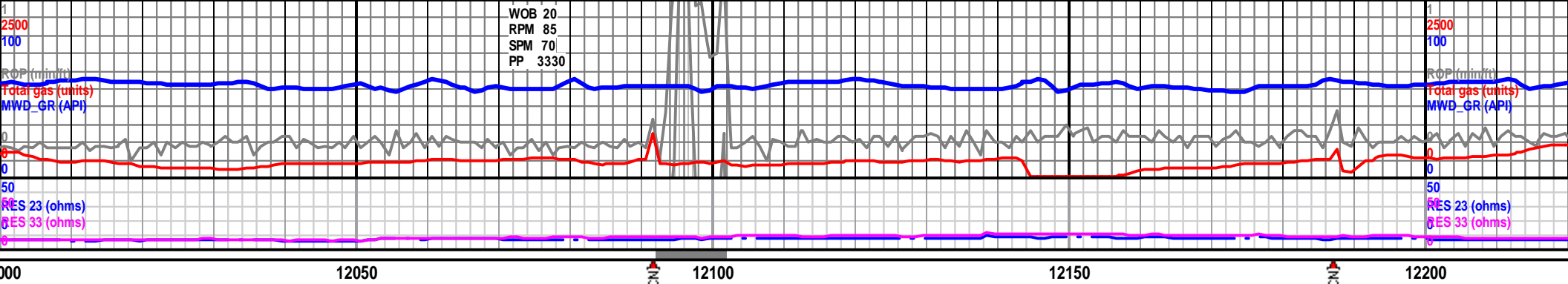


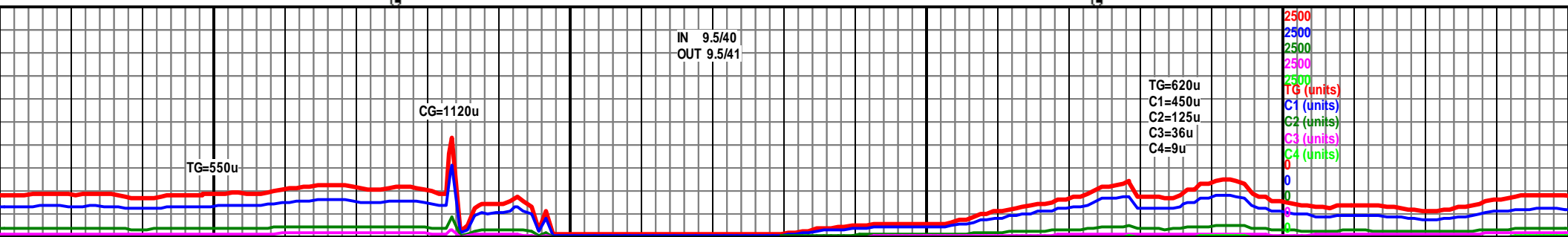
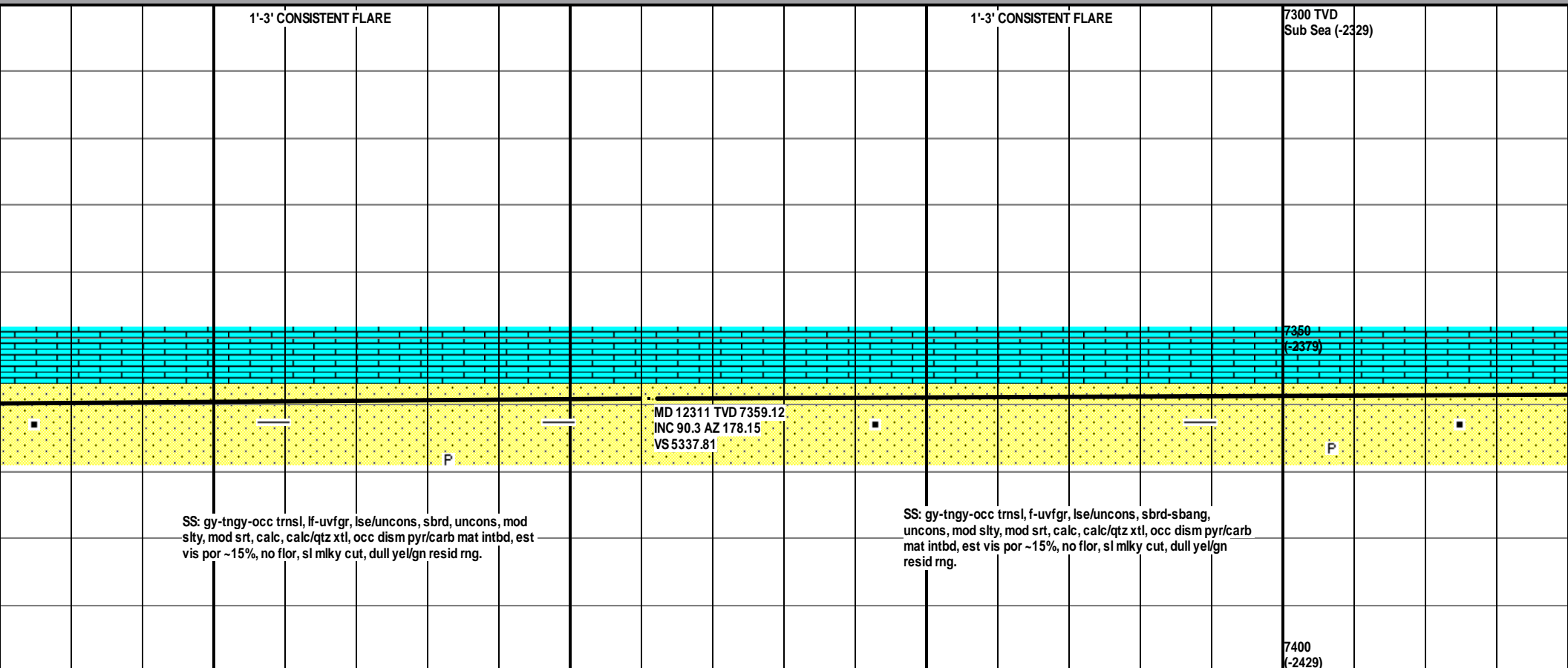
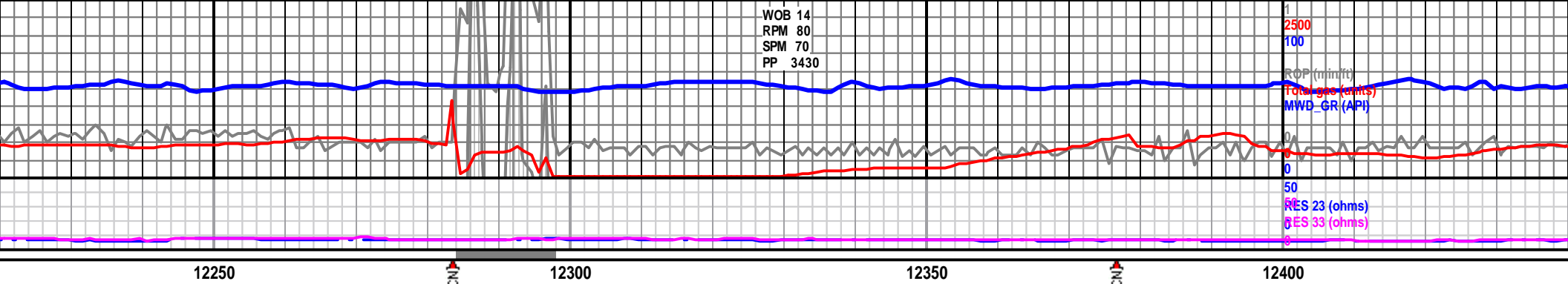


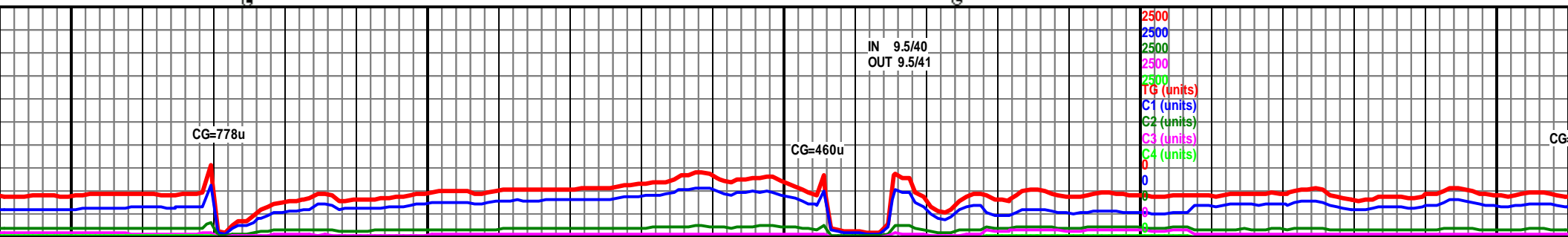
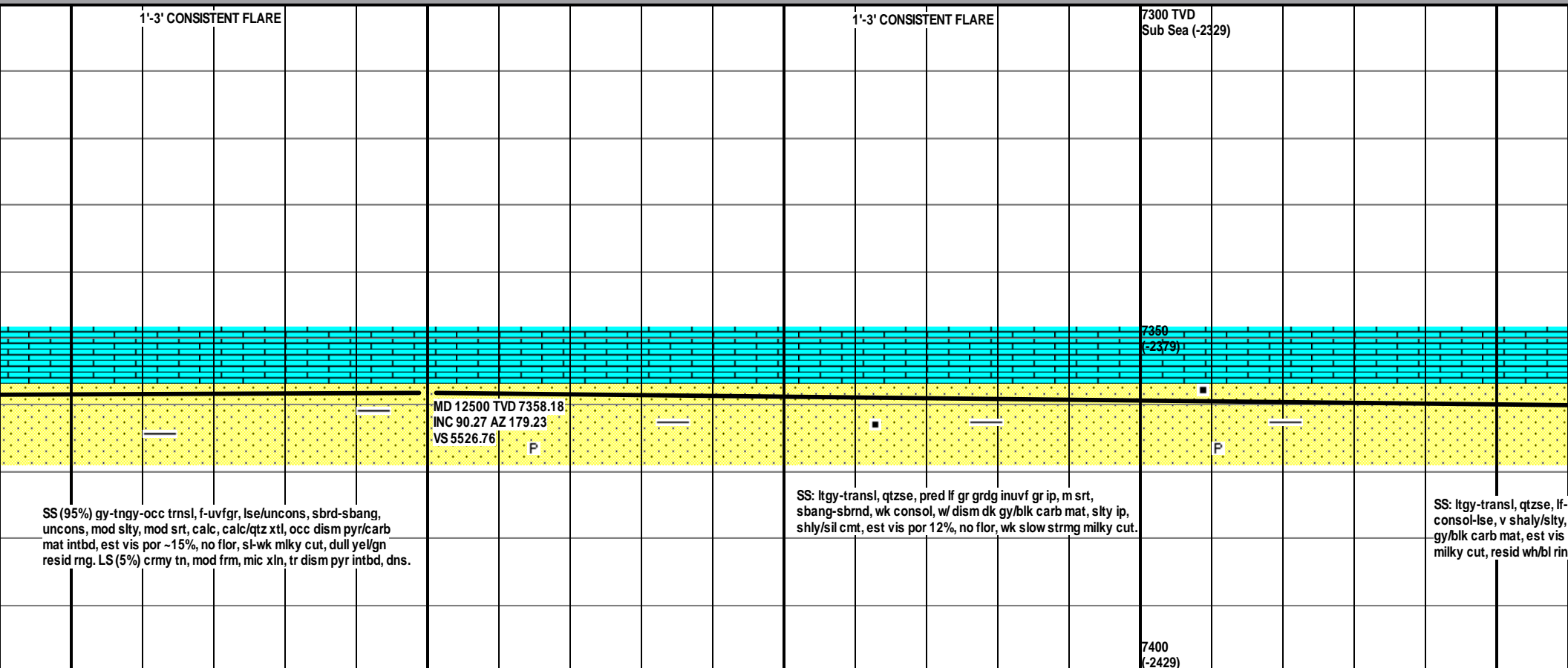
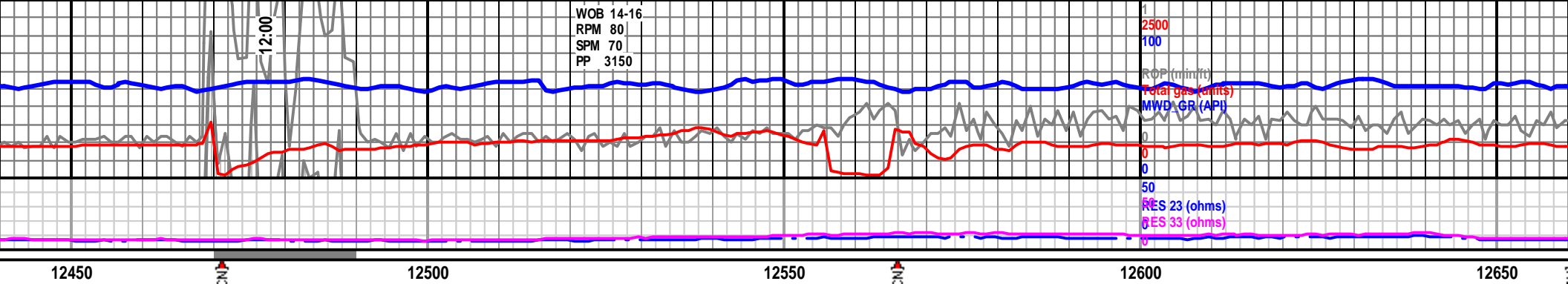




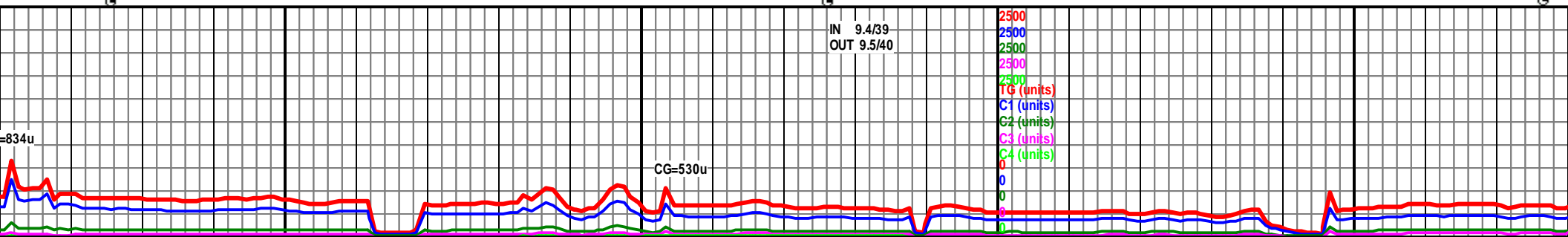
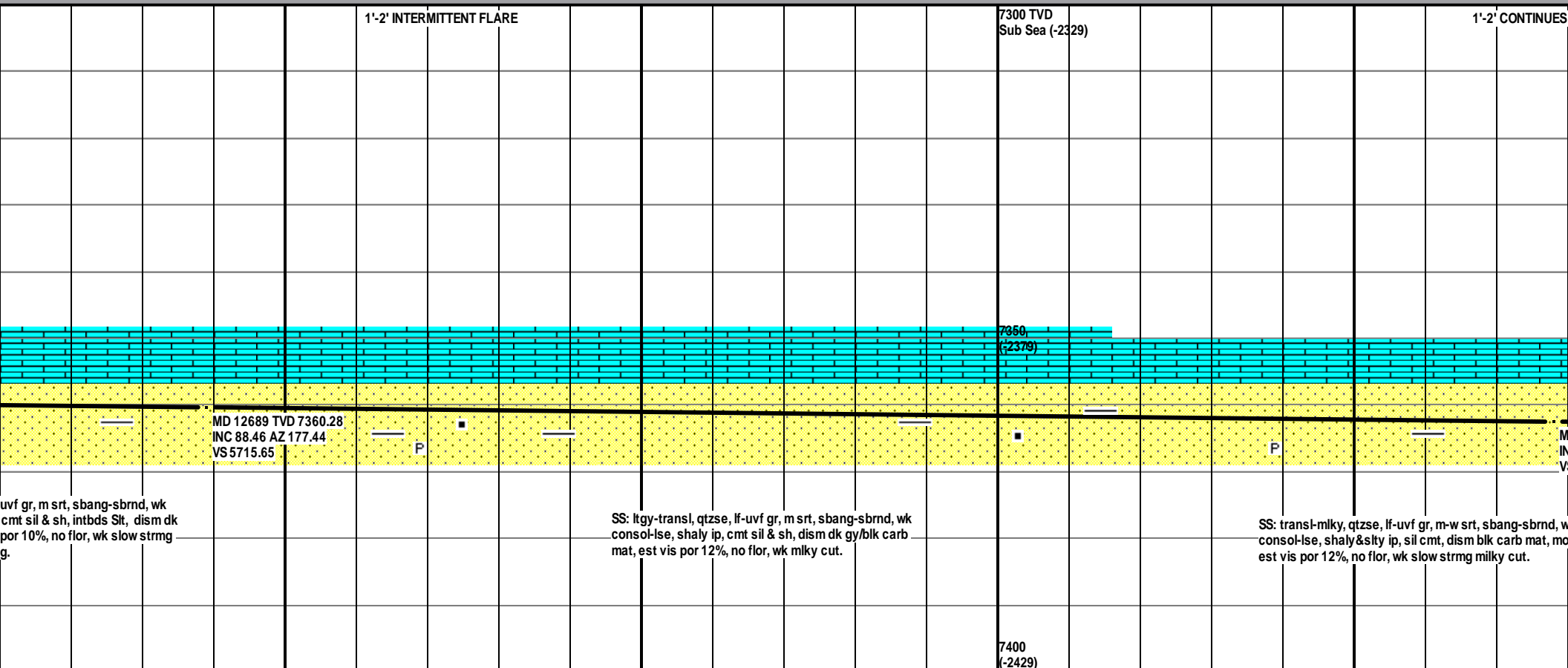
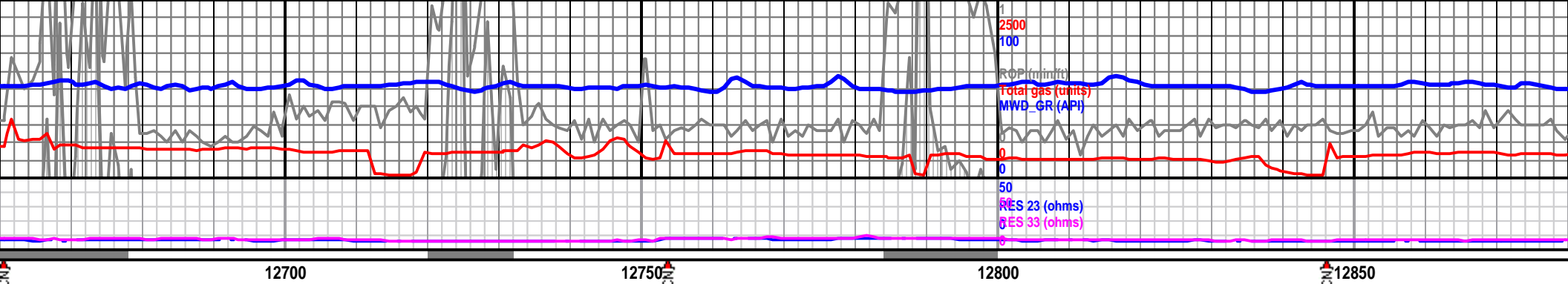


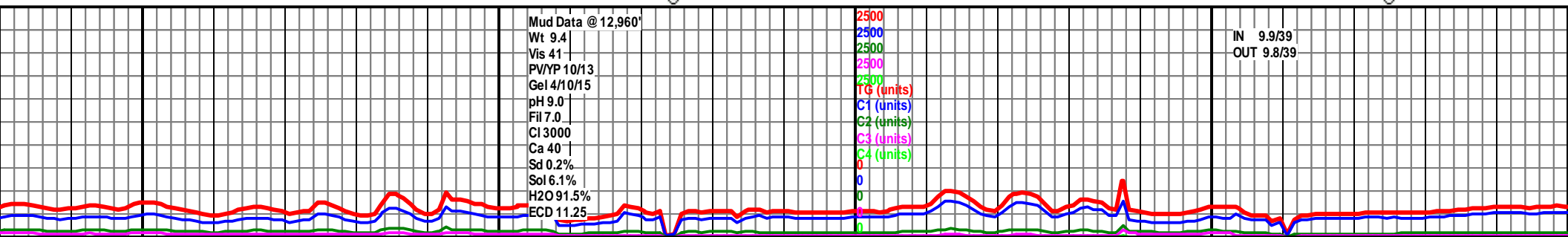
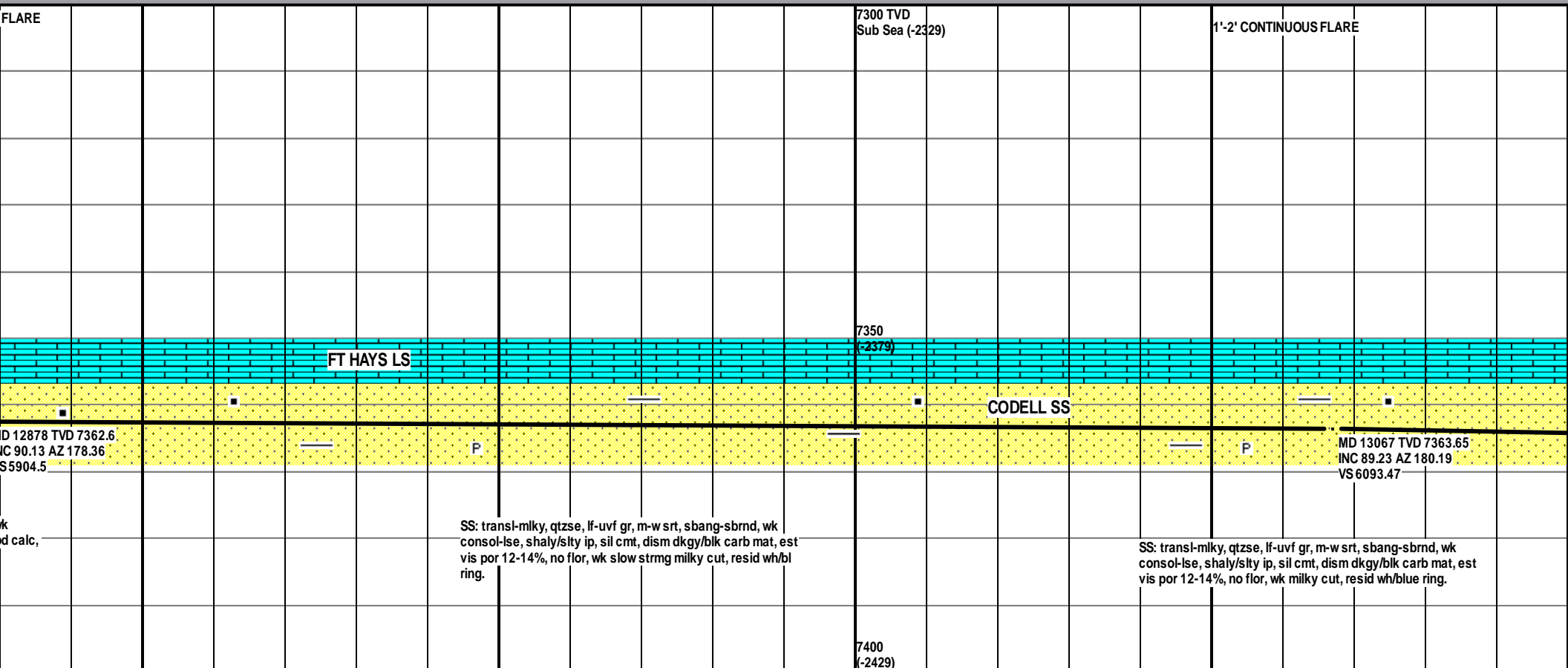
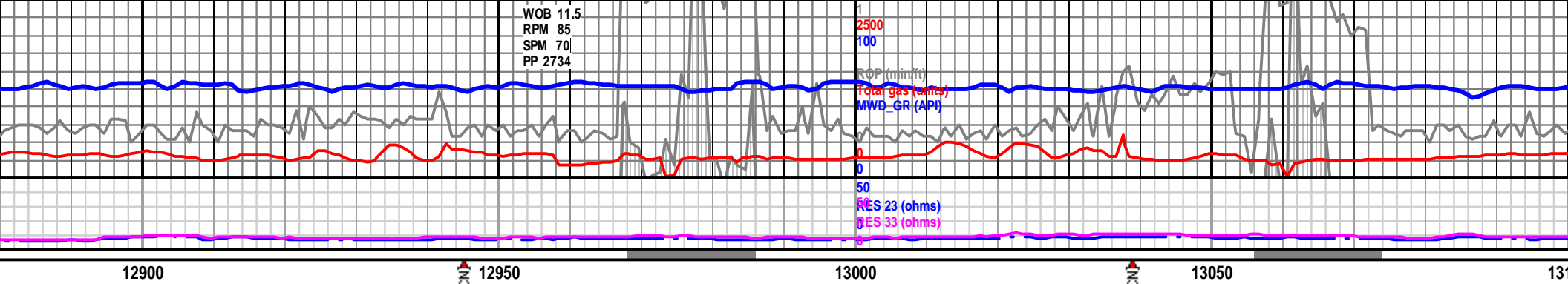


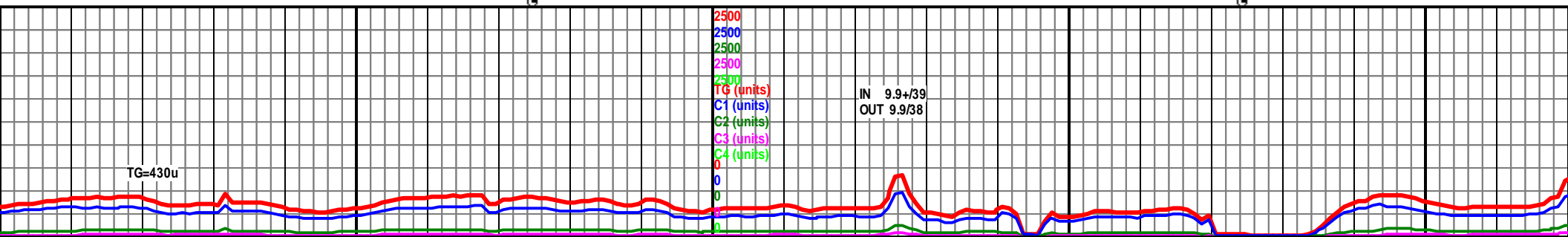
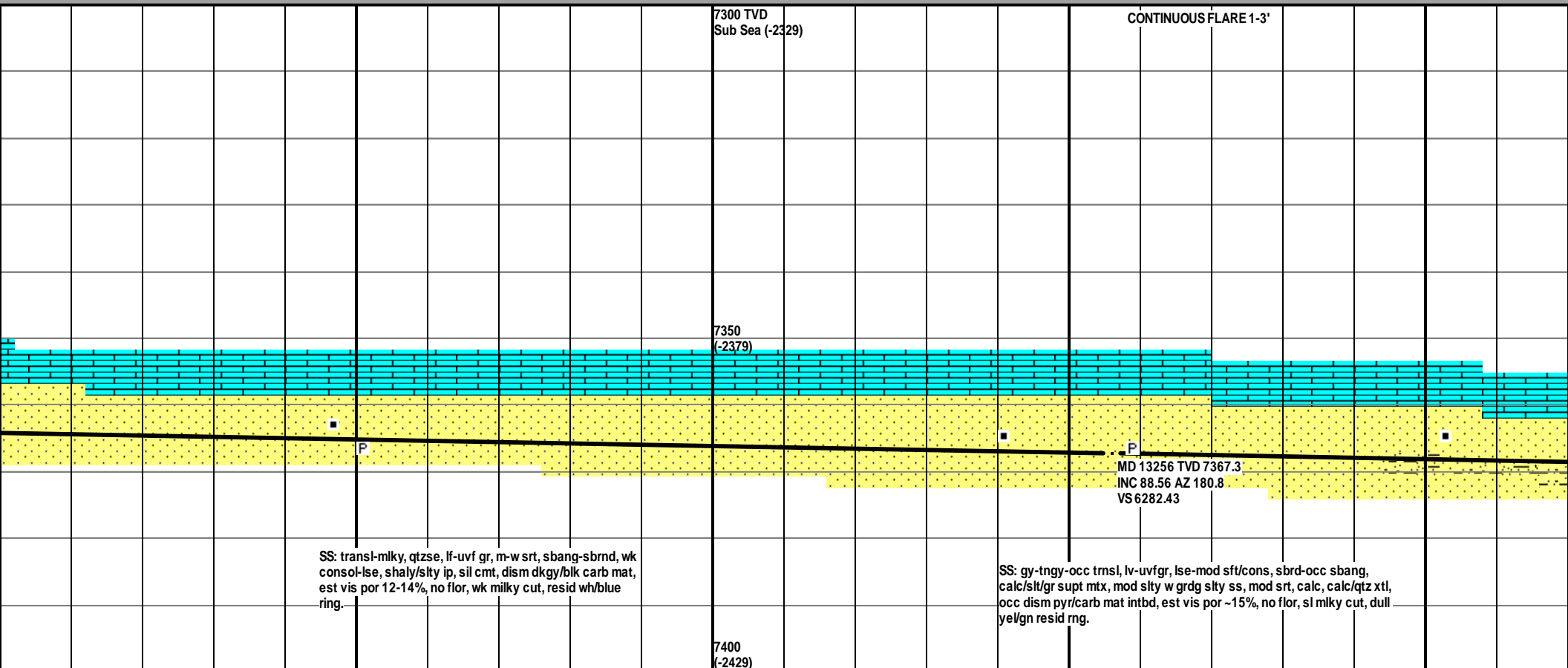
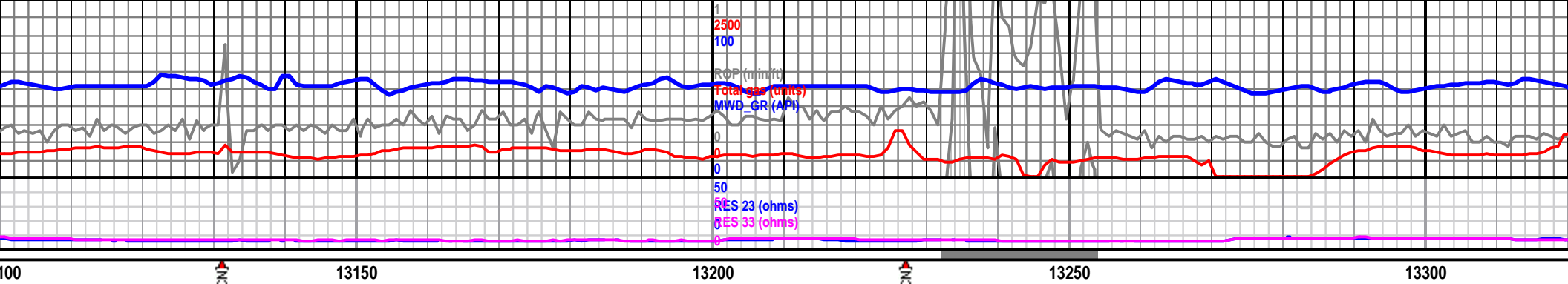


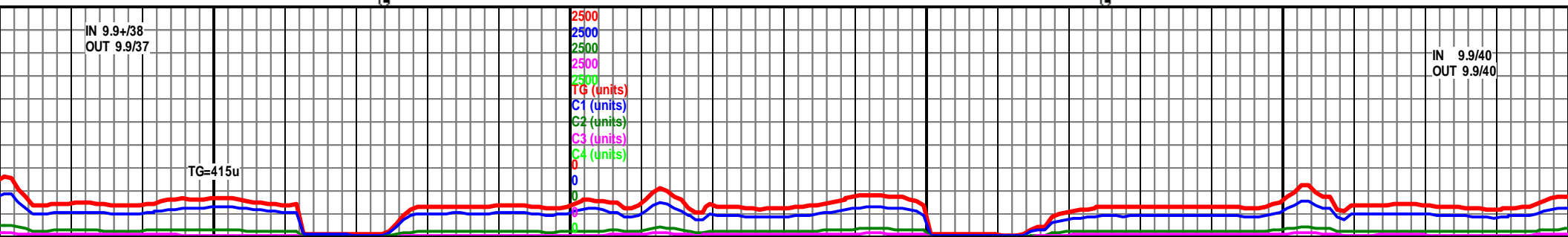
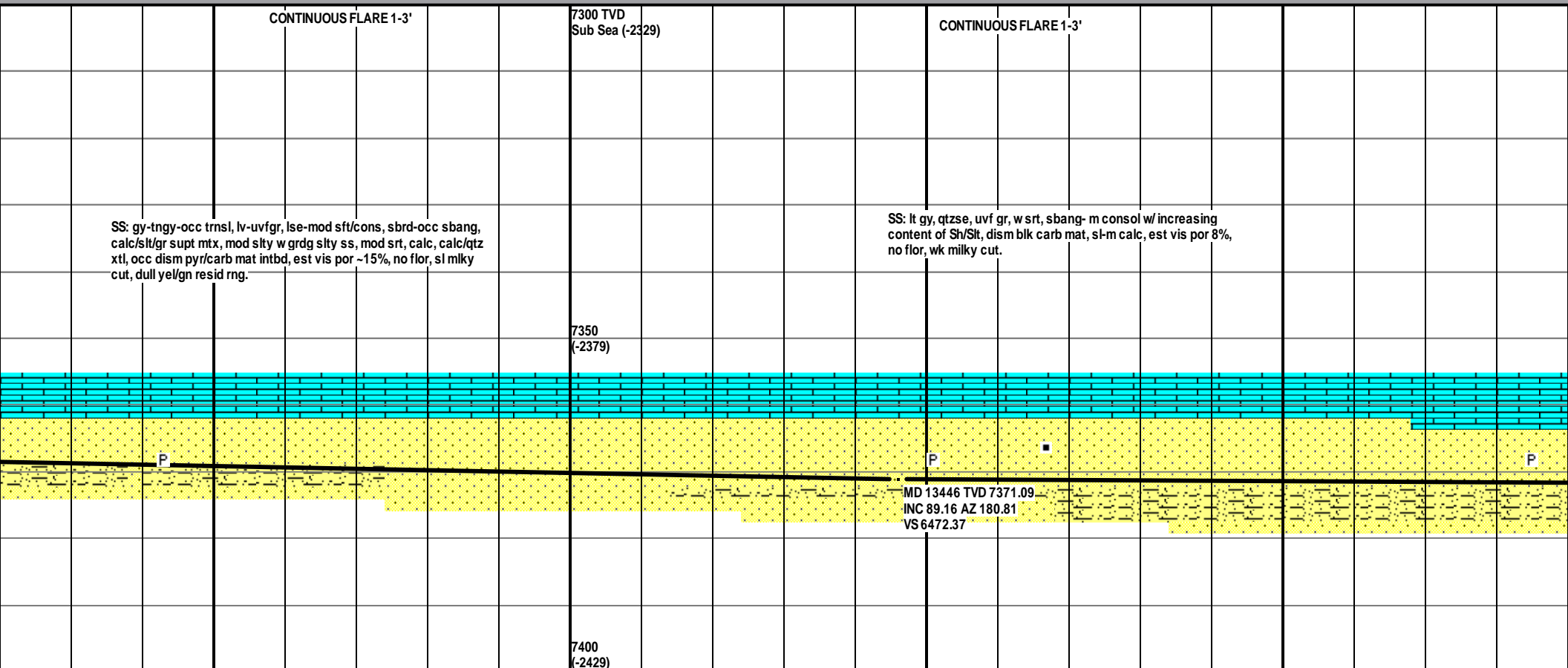
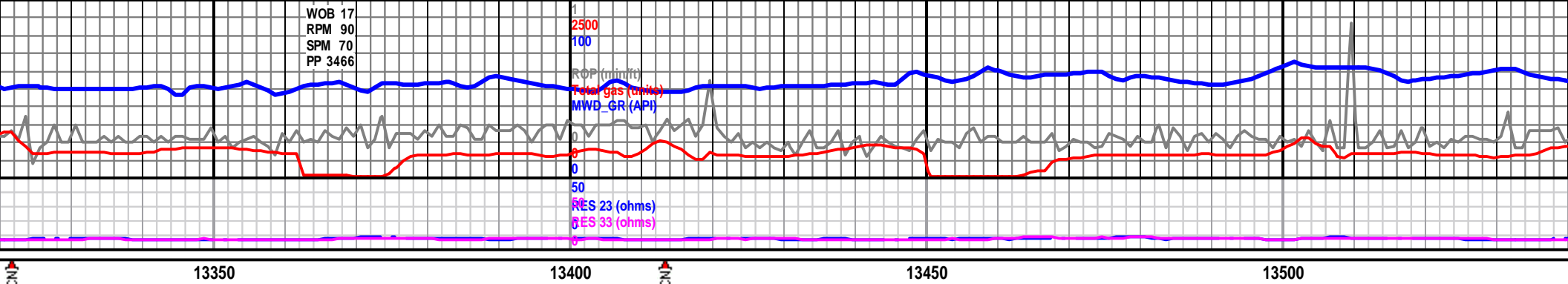


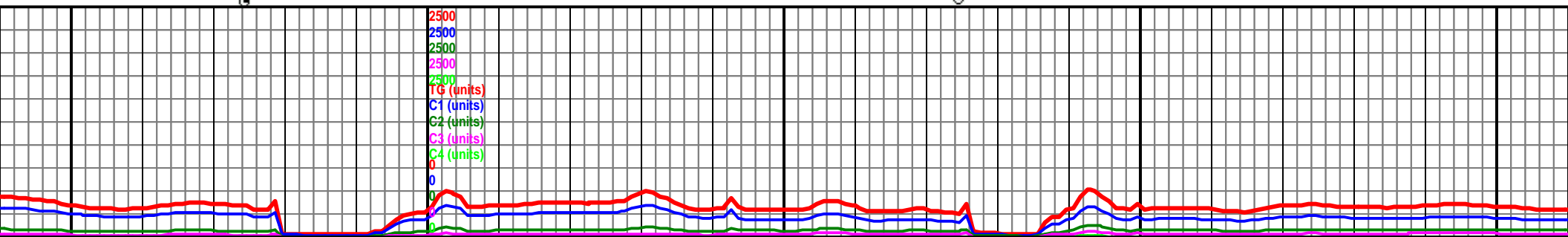
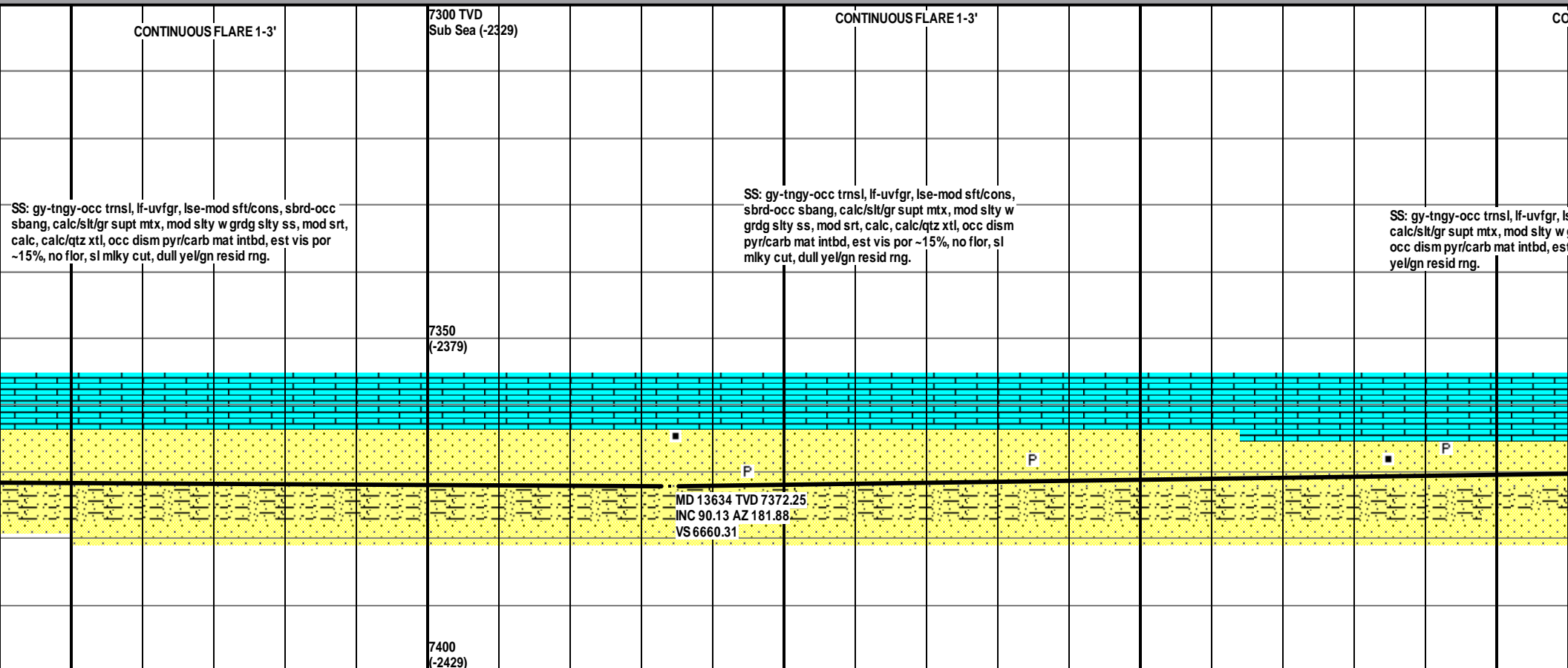
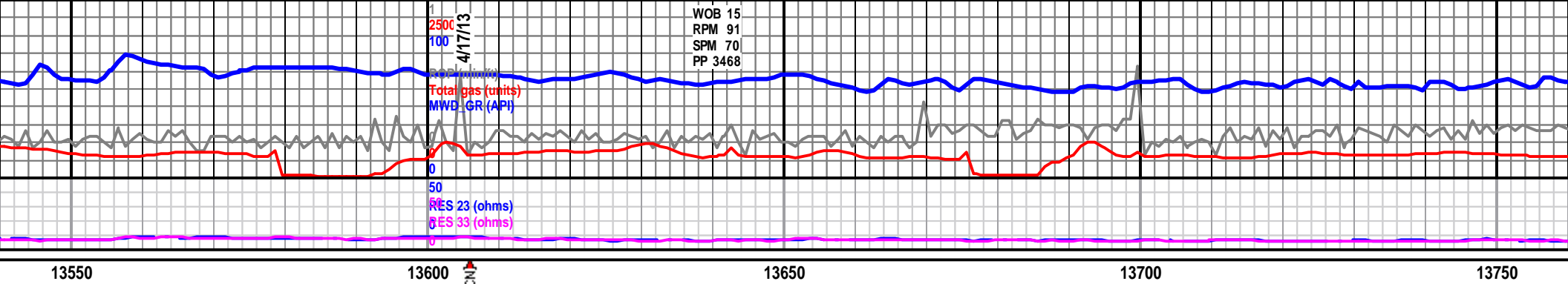


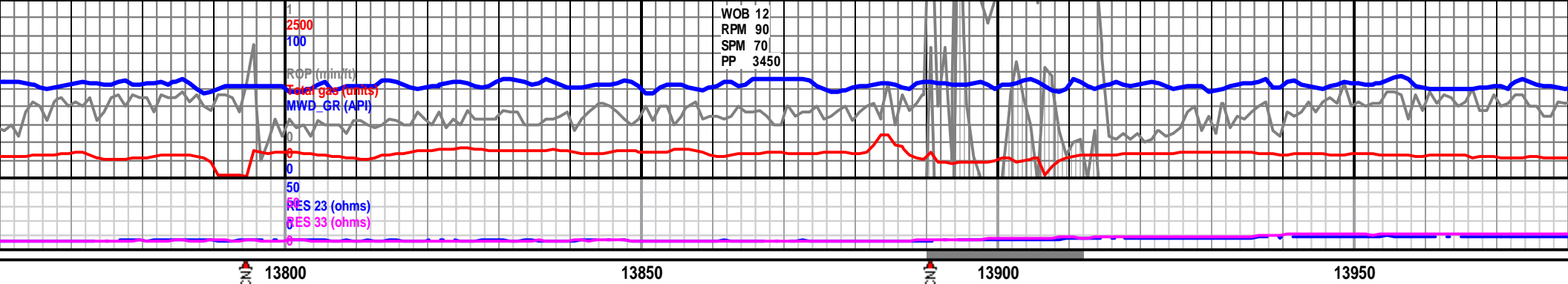




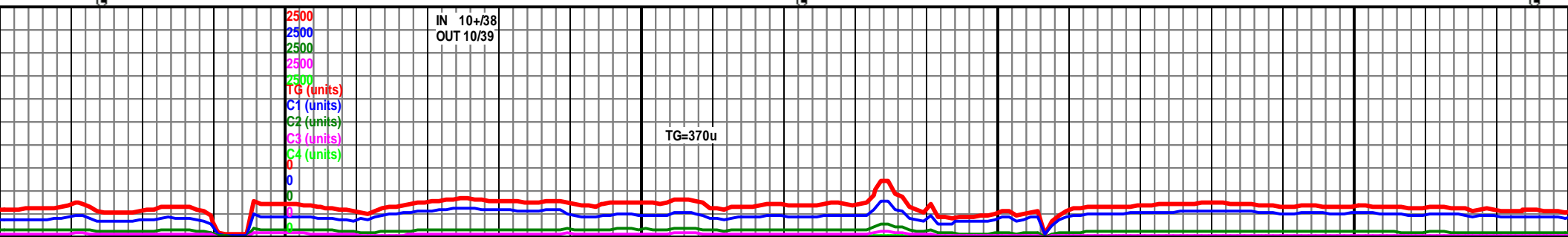


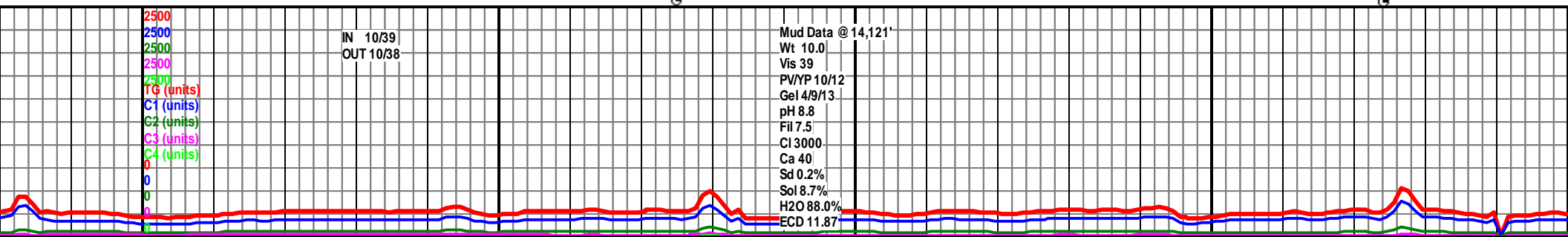
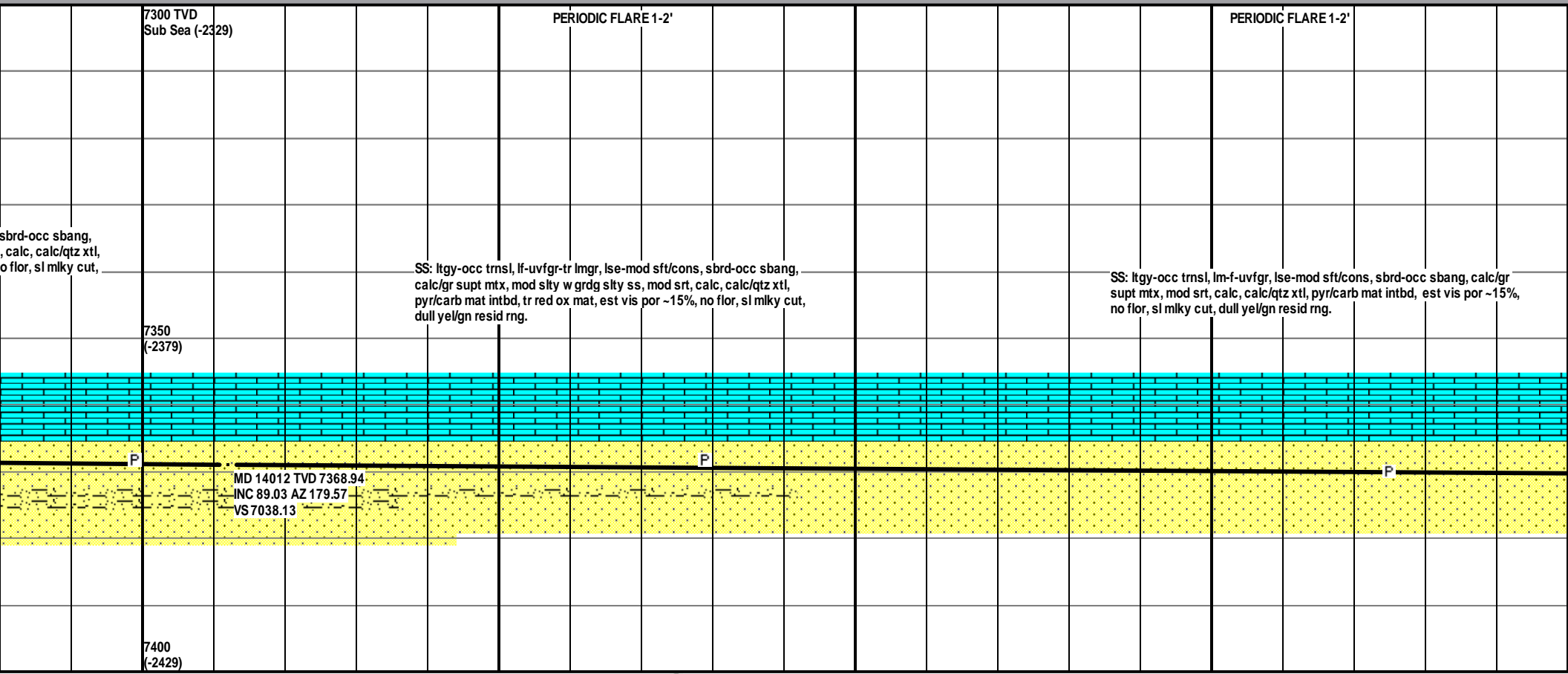
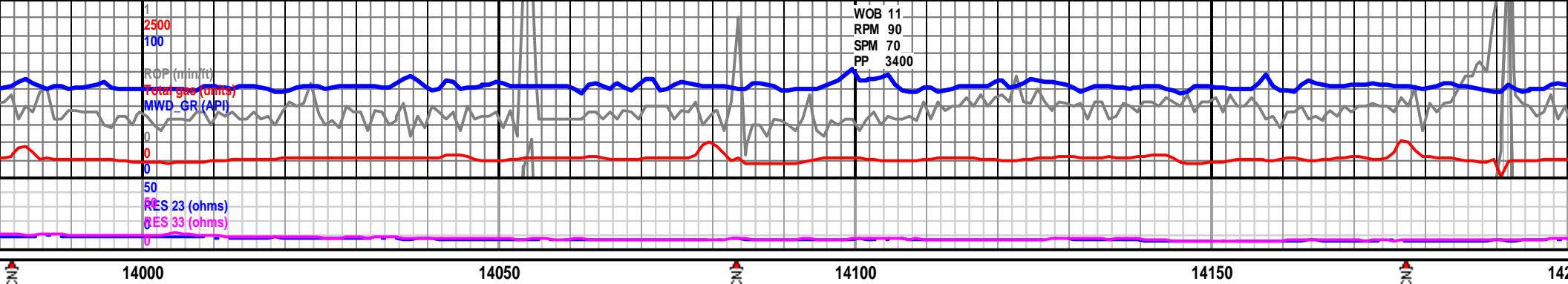


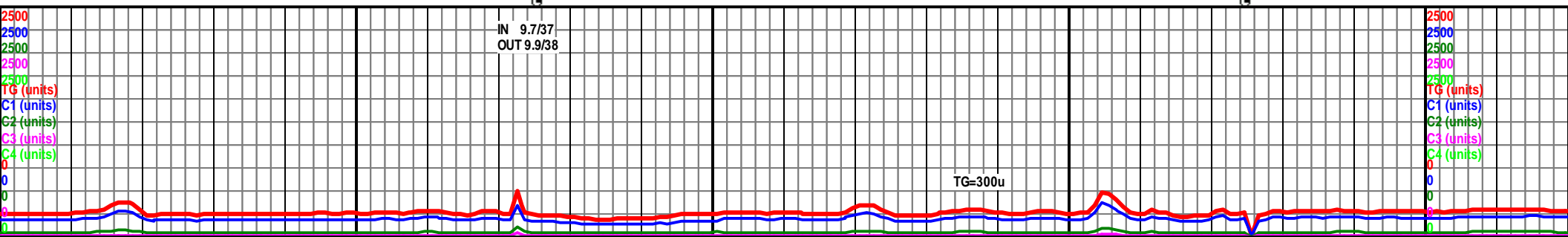
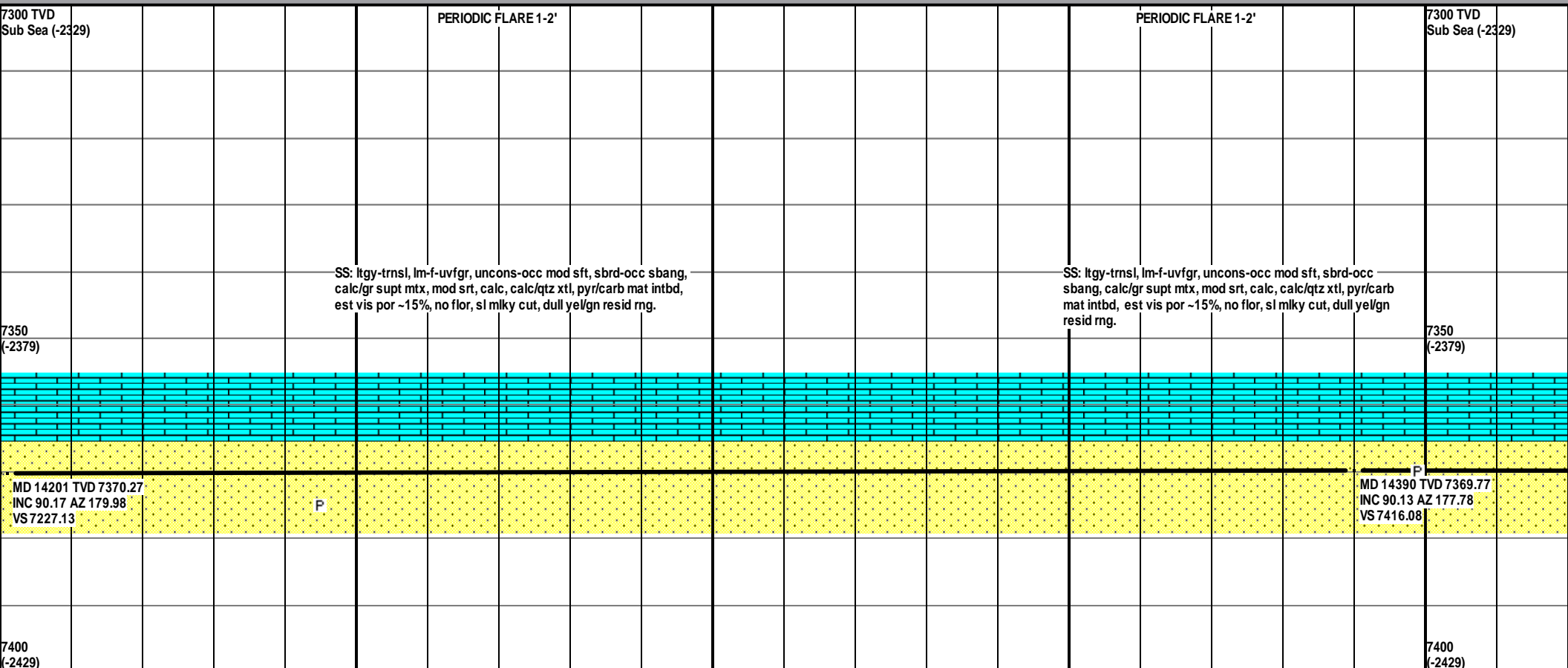
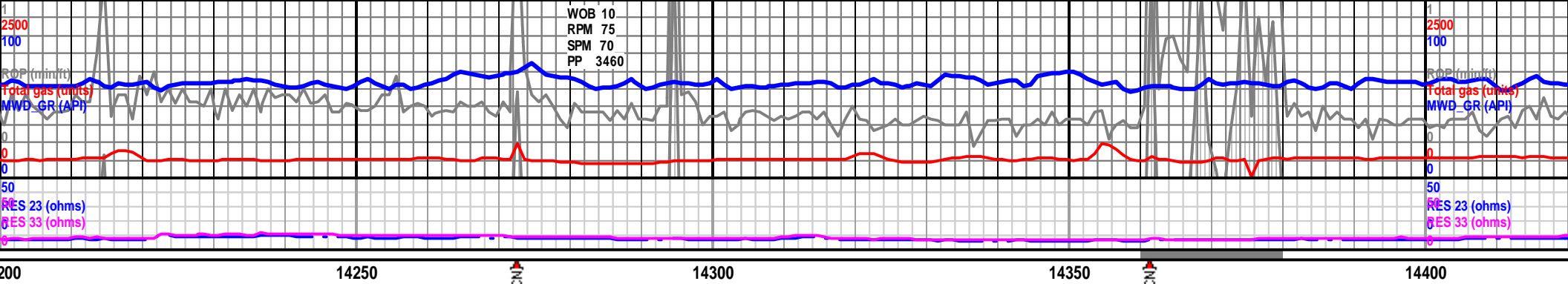




CONTINUOUS FLARE 1-3'			CONTINUOUS FLARE 1-3'			PERIODIC FLARE 1-2'		
7300 TVD Sub Sea (-2329)								
lse-mod sft/cons, sbrd-occ sbang, grdg slty ss, mod srt, calc, calc/qtz xtl, t vis por ~15%, no flor, sl mlky cut, dull			SS: gy-tngy-occ trns l, lf-uvfgr-tr lmgr, lse-mod sft/cons, sbrd-occ sbang, calc/slt/gr supt mtx, mod slty w grdg slty ss, mod srt, calc, calc/qtz xtl, pyr/carb mat intbd, est vis por ~15%, no flor, sl mlky cut, dull yel/gn resid rng.			SS: ltgy-occ trns l, lf-uvfgr-tr lmgr, lse-mod sft/cons, calc/slt/gr supt mtx, mod slty w grdg slty ss, mod srt, pyr/carb mat intbd, tr red ox mat, est vis por ~15%, n dull yel/gn resid rng.		
7350 (-2379)								
P			P			P		
MD 13823 TVD 7369.48 INC 91.54 AZ 182.05 VS 6849.17						MD 13918 TVD 7368.17 INC 90.03 AZ 180.21 VS 6944.14		
7400 (-2429)								

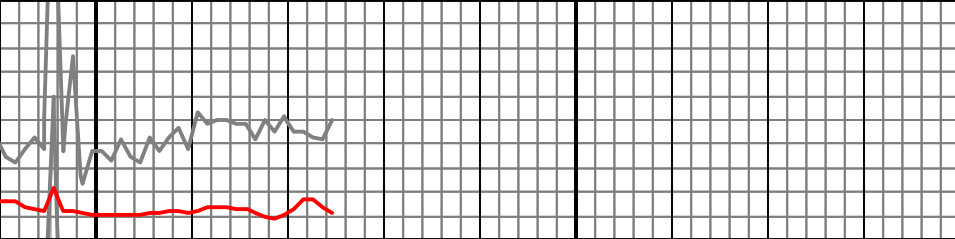












14650

14700

TD OF 14,675' REACHED ON 4.17.13.  
CIRCULATE BOTTOMS UP, BIT #3  
DRILLED 6,859' IN 71 HRS. 4 1/2"  
LINER SET @ 14,668'

BOTTOM HOLE LOCATION  
Sec 18, T2N\_R65W  
462.17' FSL x 1,141.44' FWL

PROJECTION TO BIT SURVEY

MD 14675 TVD 7370.37  
INC 89.83 AZ 177.89  
VS 7700.83

THANK YOU  
GOOLSBY BROTHERS & ASSOCIATES

MAREK CIESNIK  
STEVEN SCHINDLER

TRIP GAS  
REAMER RUN 1= 3,714u  
REAMER RUN 2= 4,290u

