

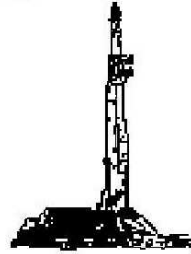
**GOOLSBY BROTHERS**  
and associates, inc.

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: Wishbone 29N-E24HZ  
Location: Section 24, T2N, R66W, Weld County, CO.  
License Number: API# 05-123-37149  
Spud Date: 1 June 2013  
Surface Coordinates: 320' FSL & 1940' FWL SE SW Sec 24 T2N, R66W  
Lat: 40° 07' 02.68" Long: -104° 43' 40.93"  
Bottom Hole Coordinates: 487 FNL & 1858' FWL NE NW Sec 24, T2N, R66W  
Ground Elevation (ft): 5084' K.B. Elevation (ft): 5100'  
Logged Interval (ft): 6900' To: 11910' Total Depth (ft): 11910'  
Formation: Sharon Springs, Niobrara chalks,  
Type of Drilling Fluid: Polymer-Water  
Region: Wattenberg  
Drilling Completed: 29 June 2013  
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: Jack R. Rogers, Alan Seeling, 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: 6850'-11843'  
MWD Resistivity: 7800'-11850'


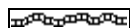
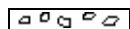
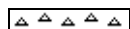
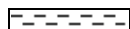

## Casing






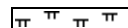
9 5/8" Surface Casing set @ 1042'  
7" Intermediate Casing set @ 7755'  
4 1/2" Production Liner to be set to 119xx' TD

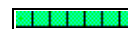





## Comments



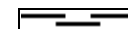
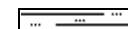
- 1) Drilling Contractor: Xtreme Drilling, Rig # 22  
Rig Manager: Mike Headley / Tyler Humphrey
- 2) Company Man: Dave Cornett / Nol Jones/  
Will Pettijohn / Peter Perry /
- 3) Well Site Geologists: Goolsby Brothers & Assoc. :  
Jack Rogers / Alan Seeling - Curve  
Hank McCroskey / Robert Nordeck - Lateral
- 4) Mud Company : Newpark Drilling Fluids,  
Mud Engineer: Michael Cook/Jody Graham
- 5) Directional Drilling: Sperry / Halliburton  
Drillers: Randy Bernatow,  
MWD: Matthew Busche, Caleb Jones, Clay Wass, Drew Perry
- 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  
 Sltst

 Ss  
 Chalk  
 Carb sh  
 Sltty 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

### ROUNDING

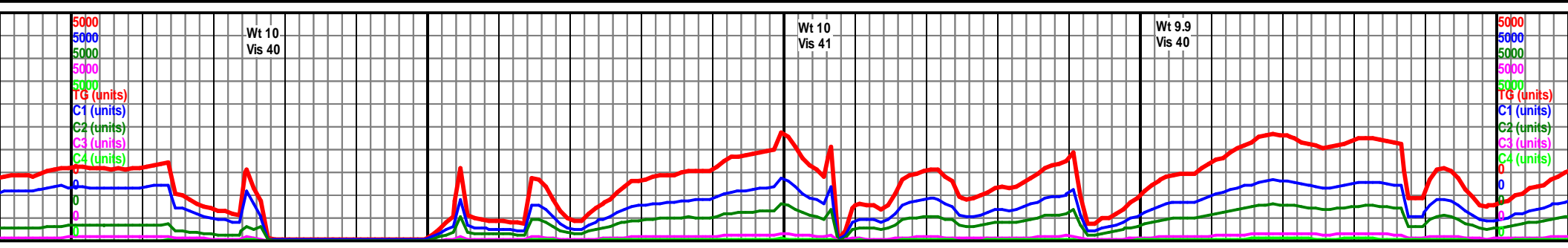
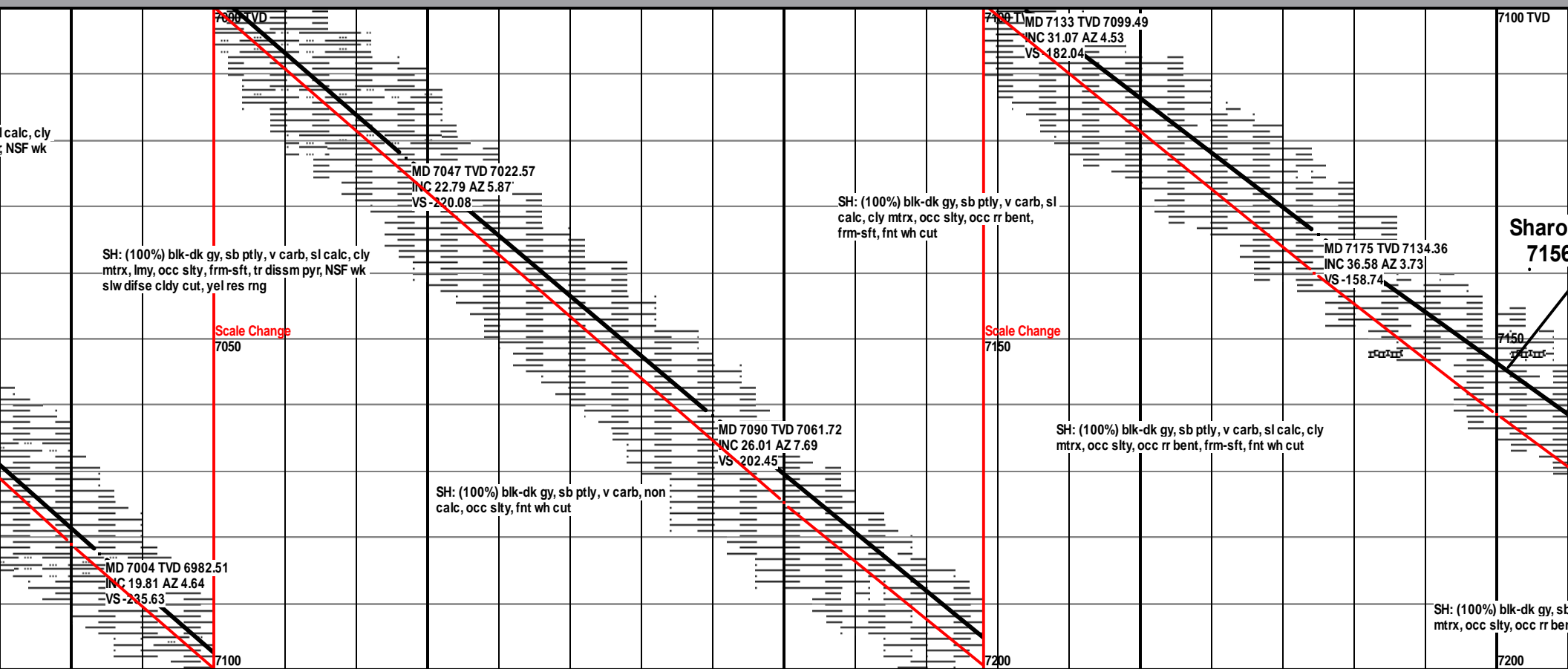
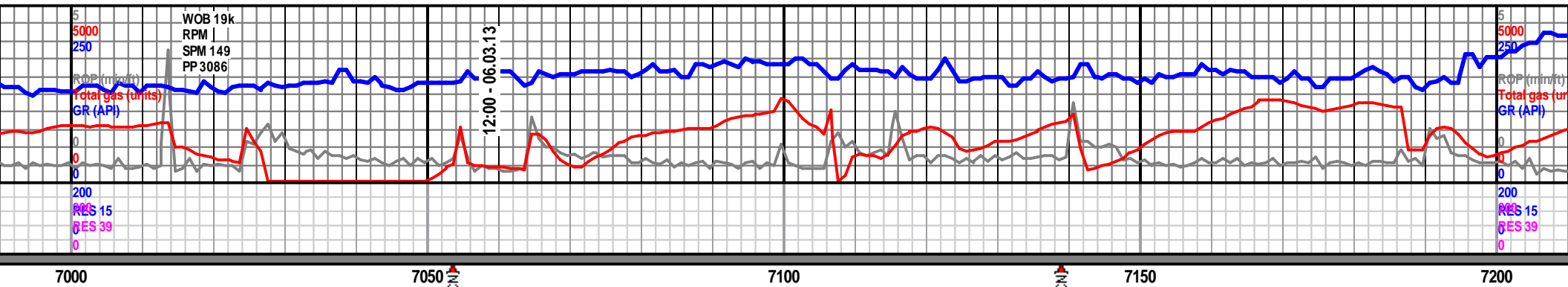
	Rounded
	Subrnd
	Subang

	Angular
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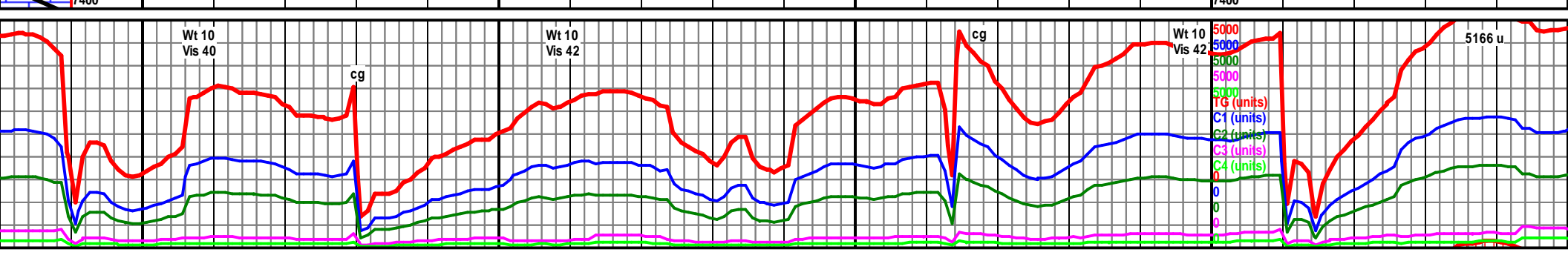
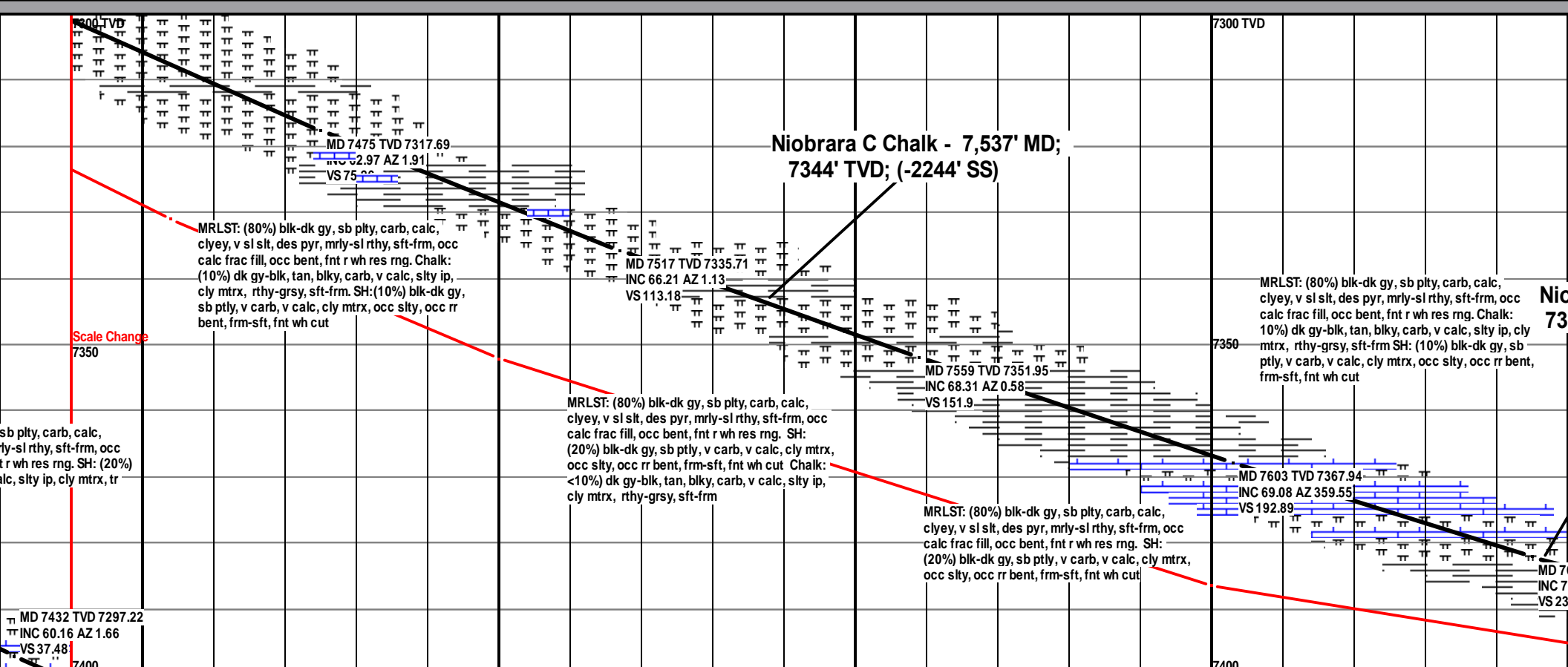
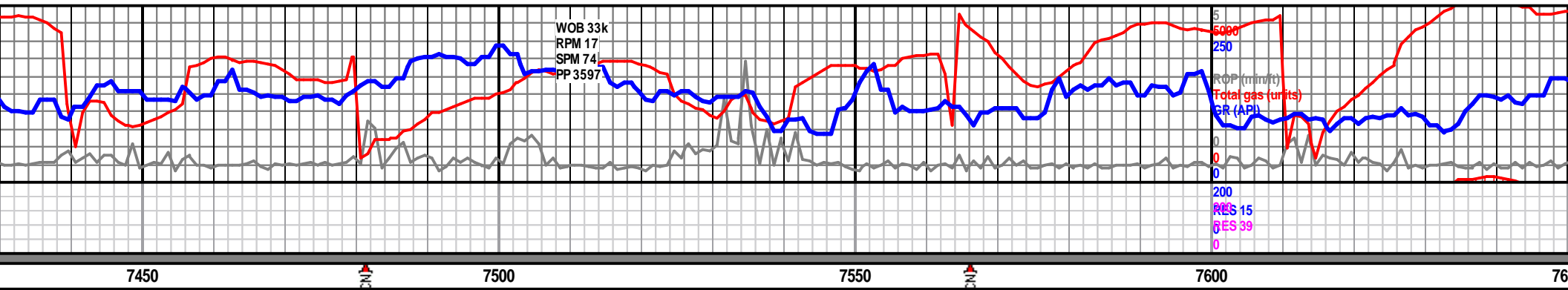
### SORTING

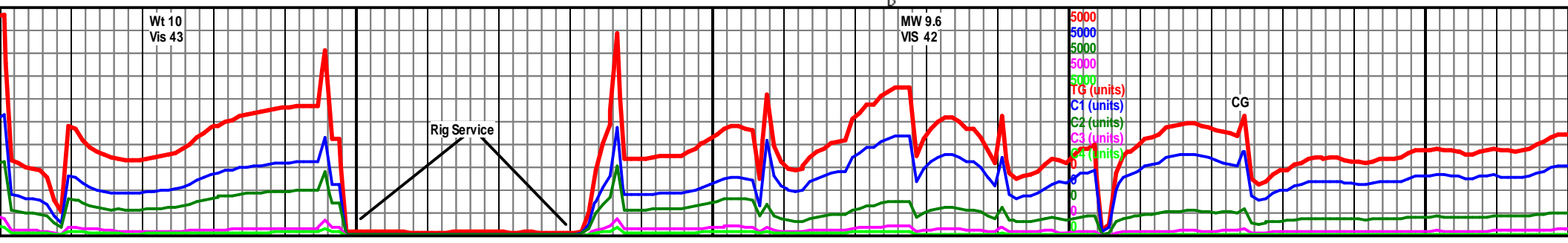
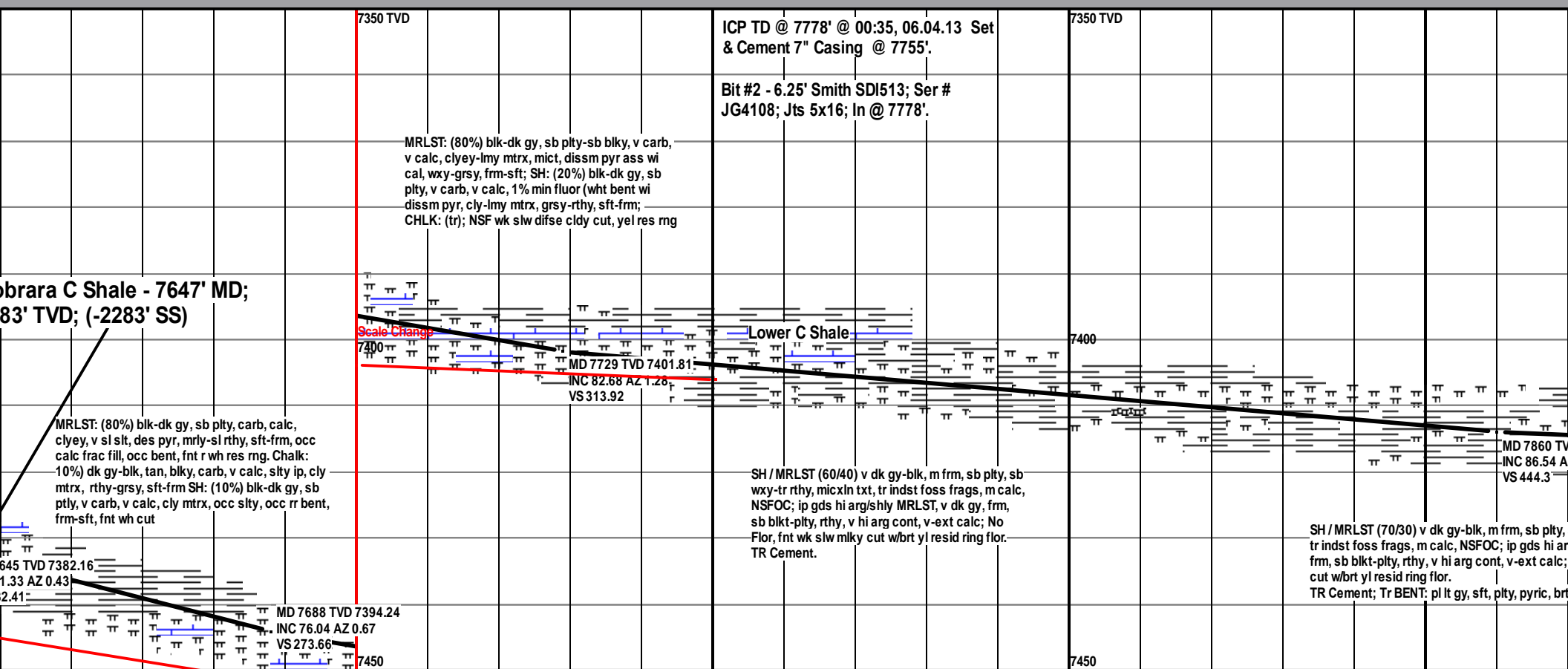
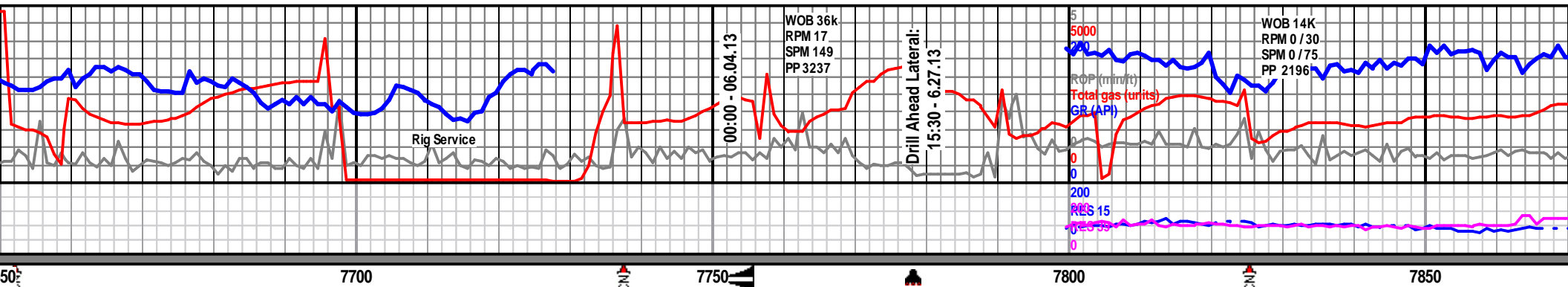
	Well
	Moderate
	Poor



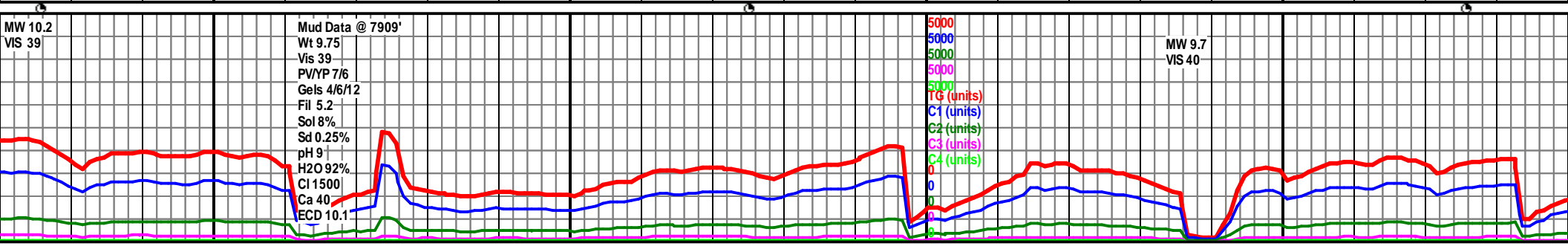
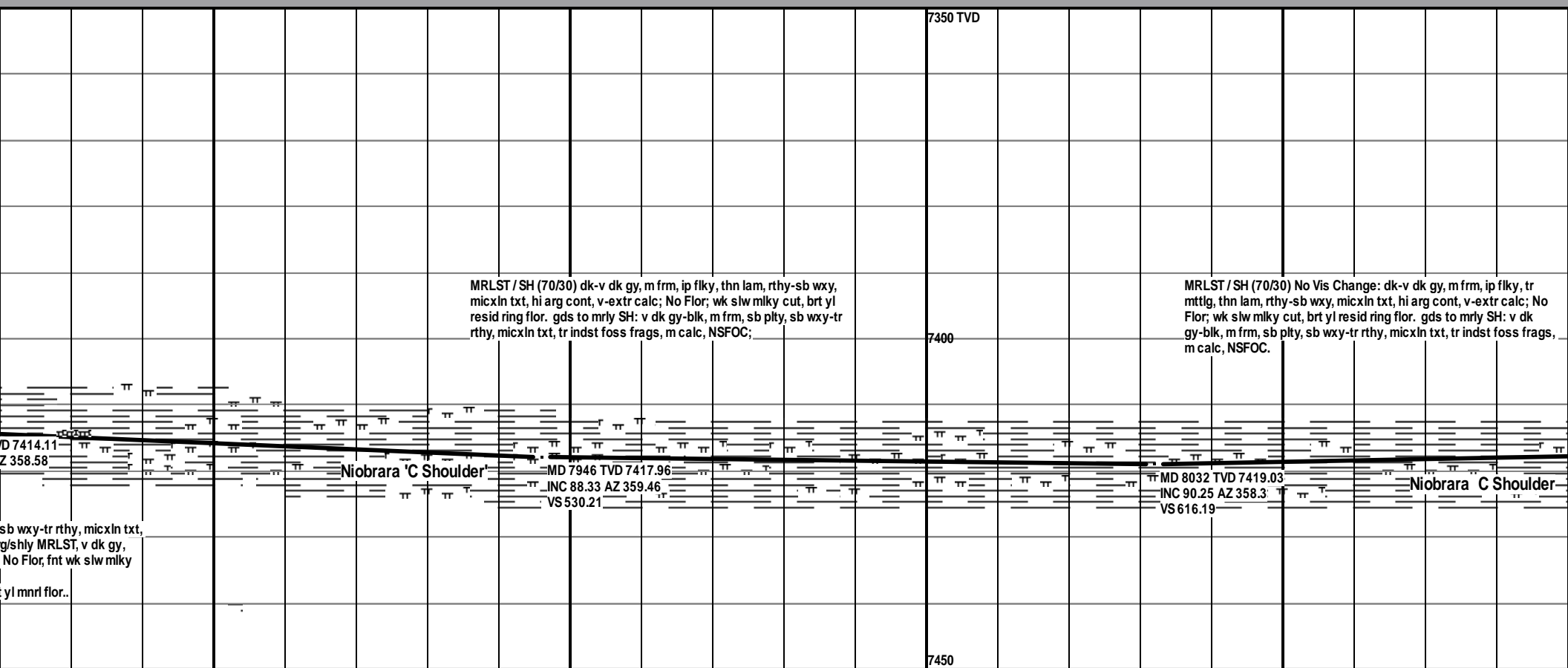


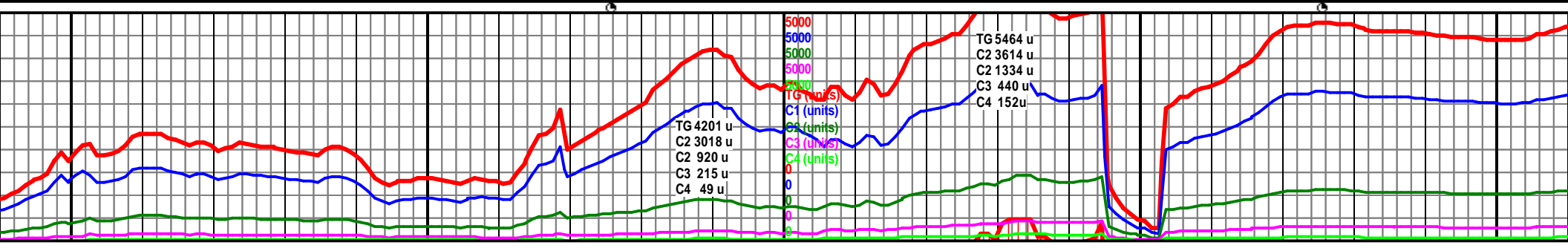
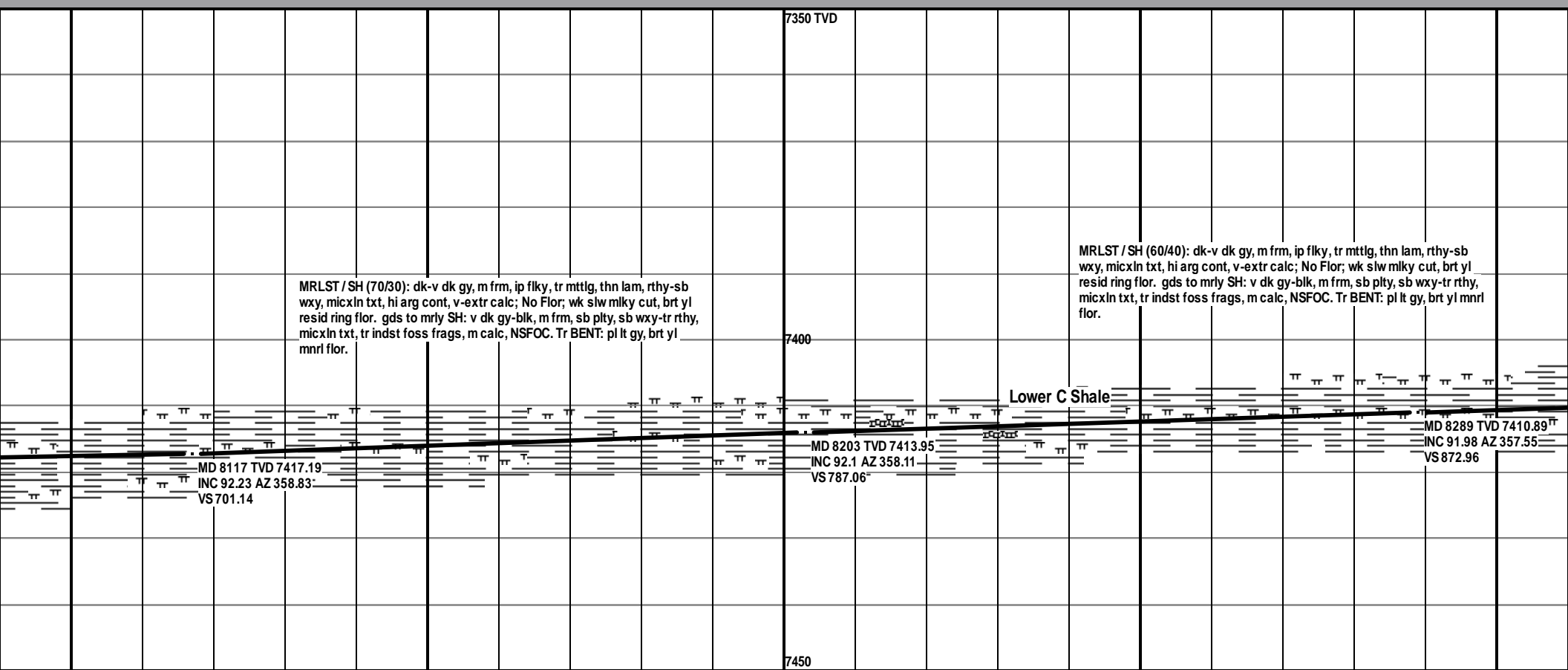
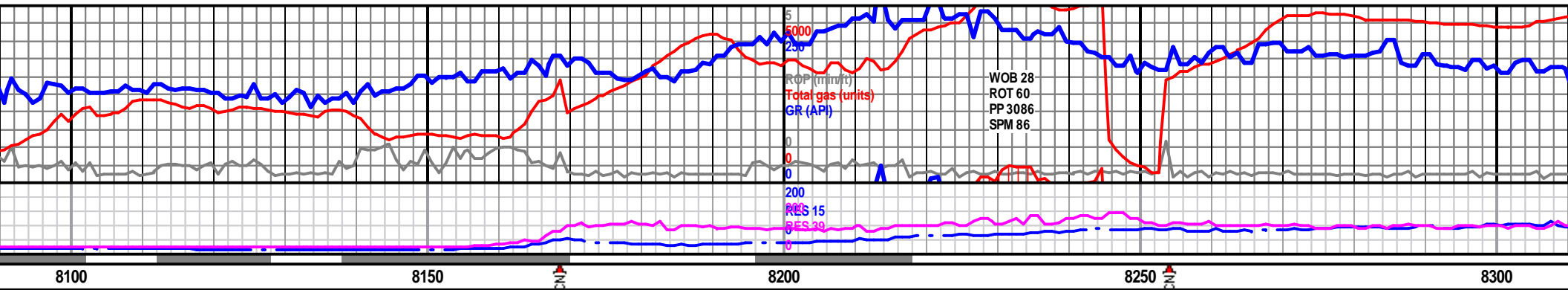


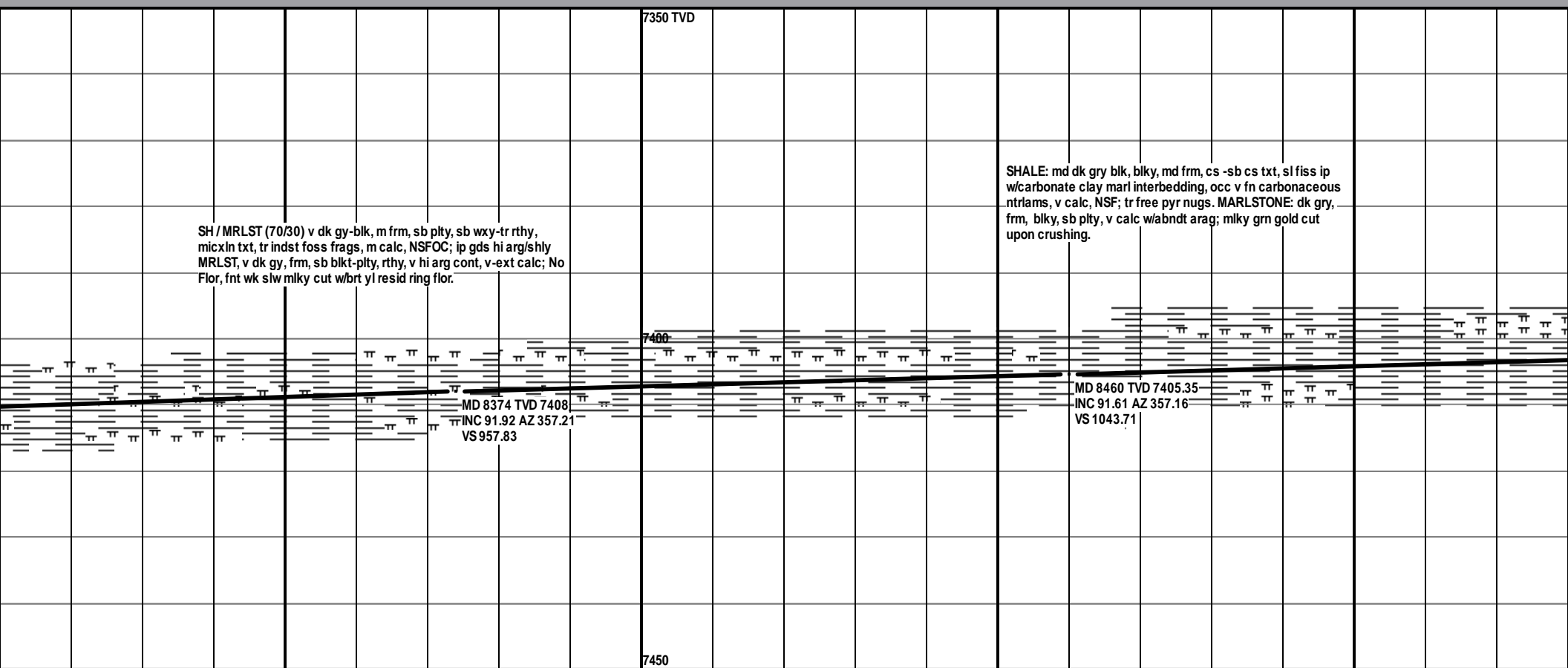




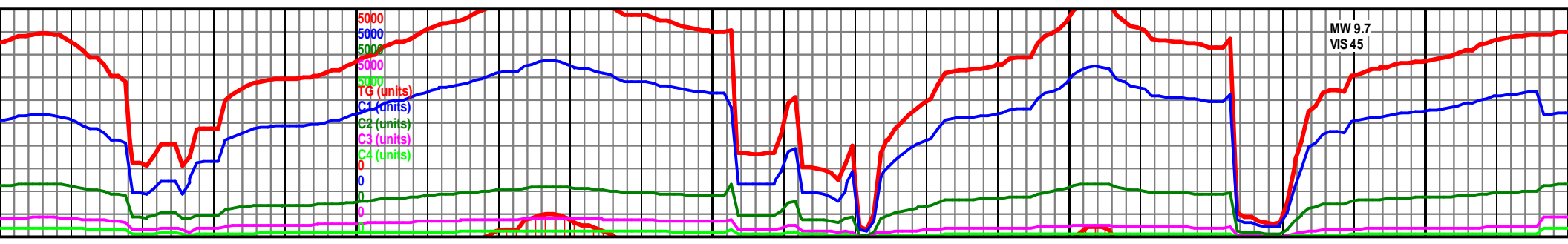
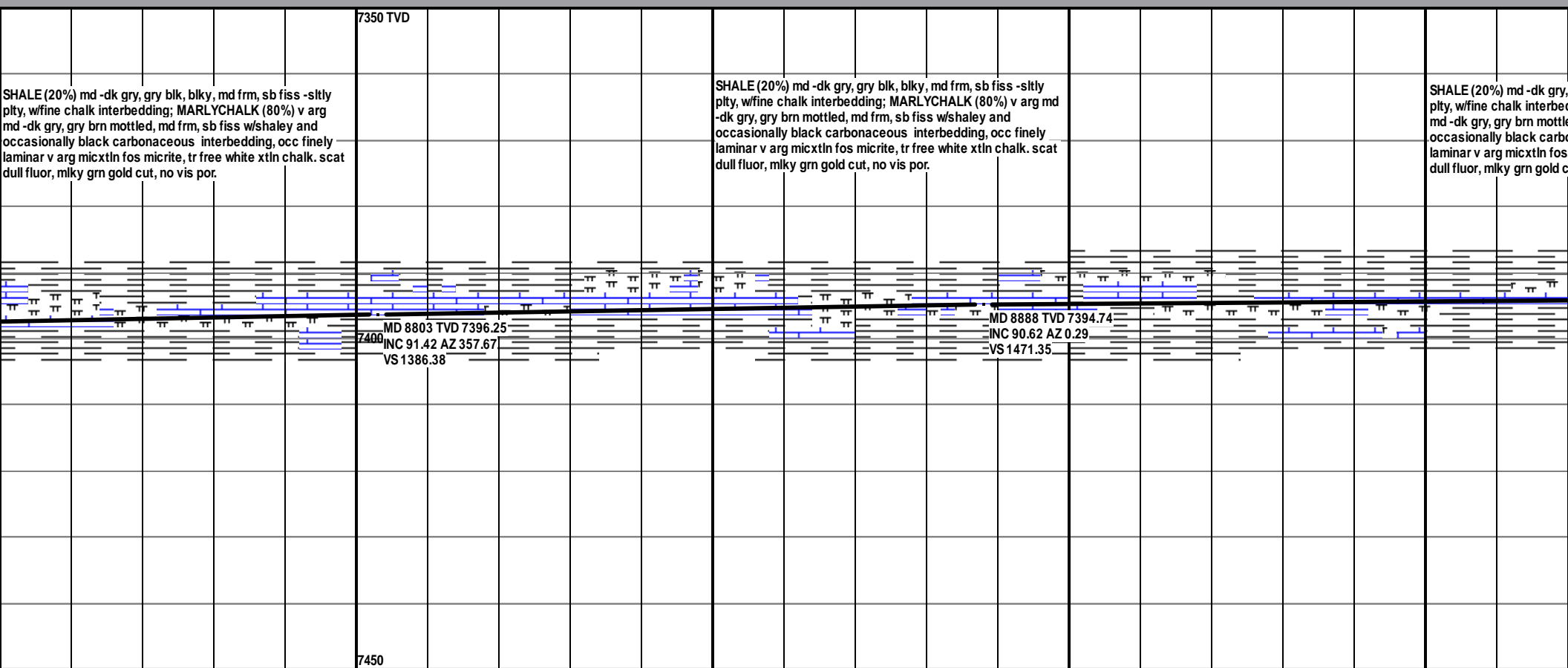
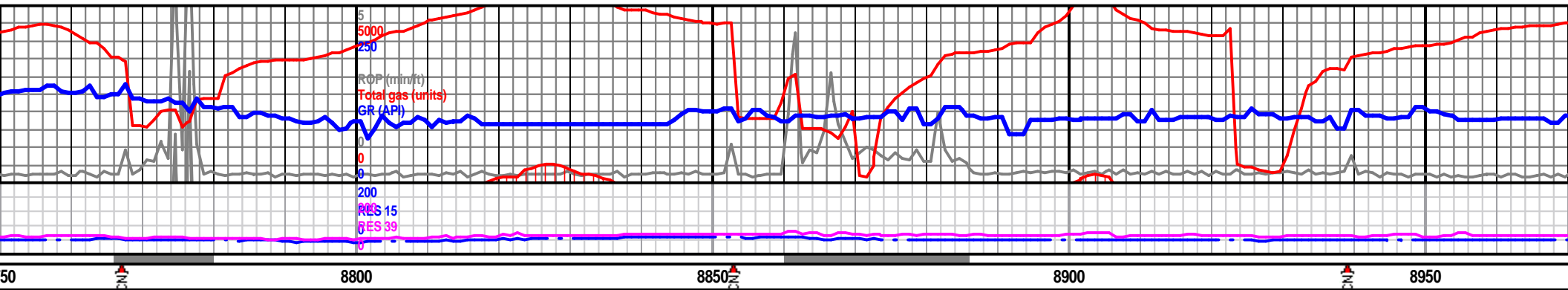


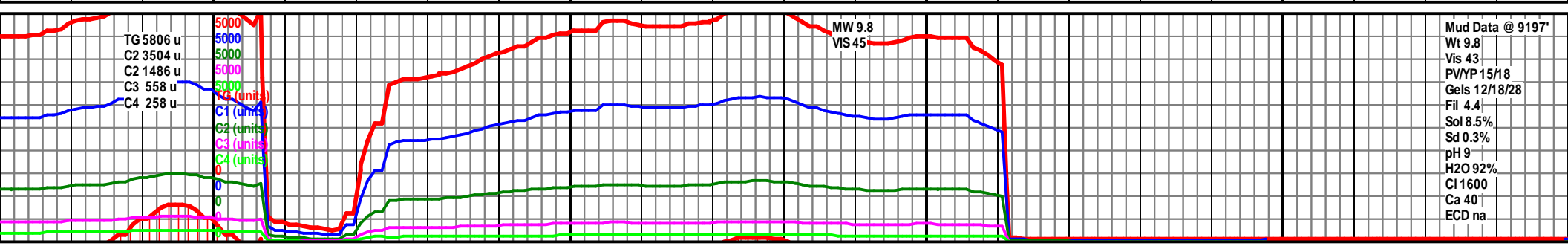
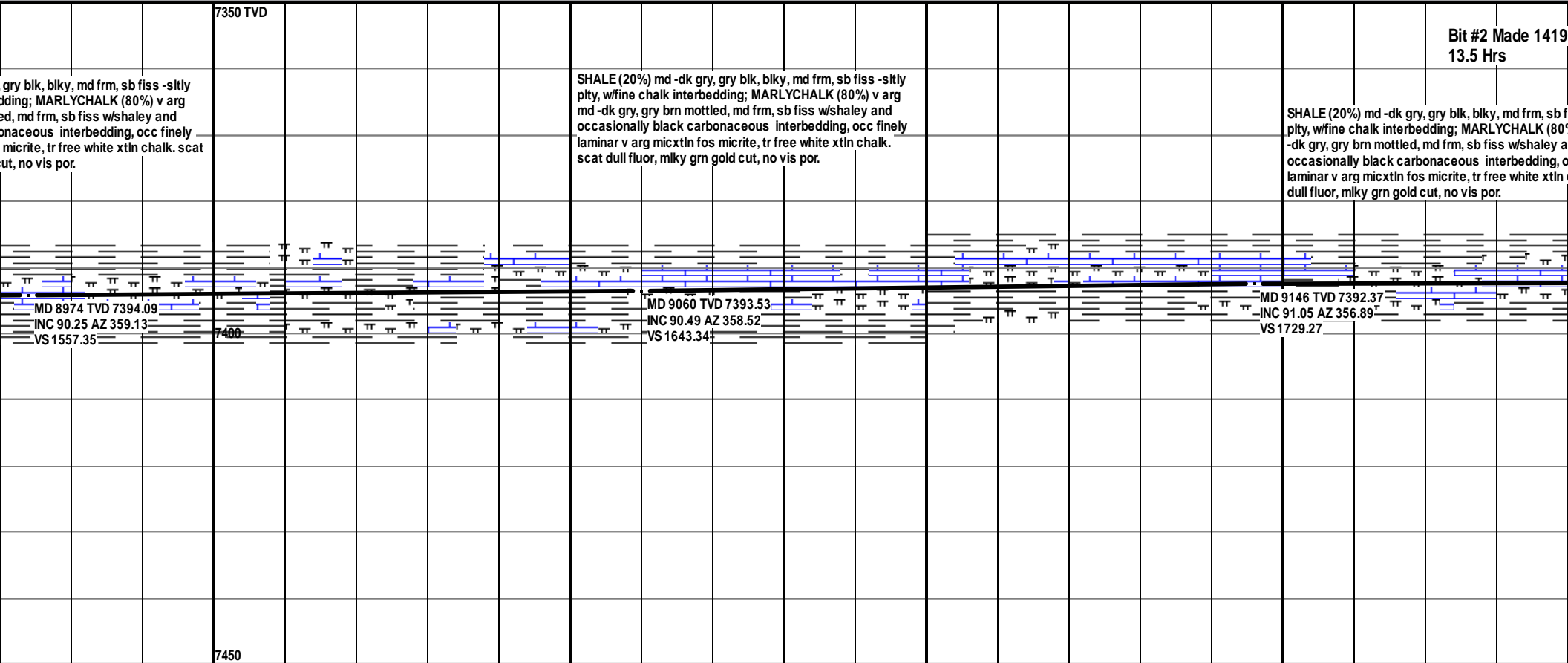
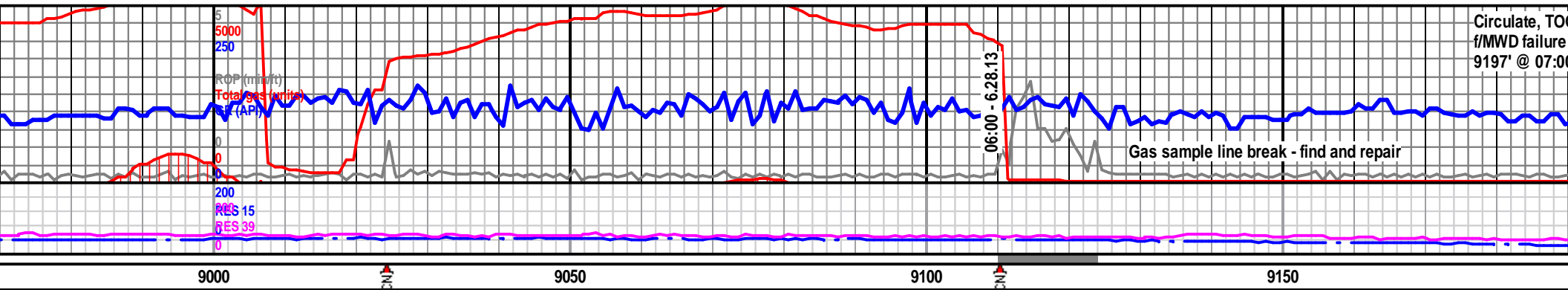


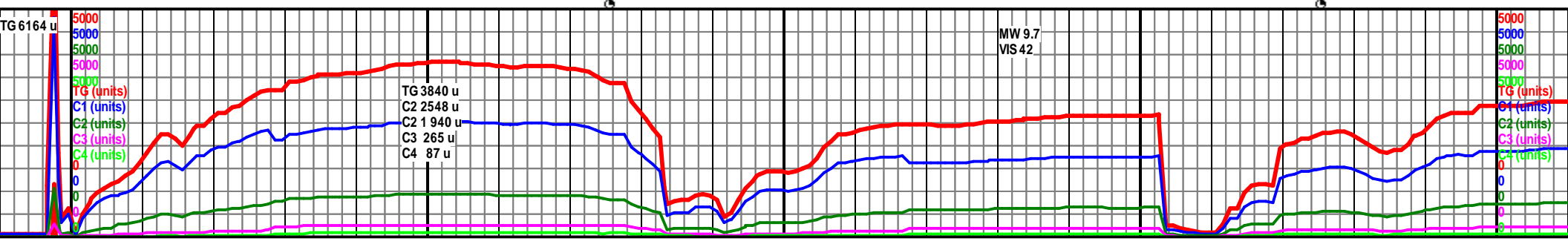
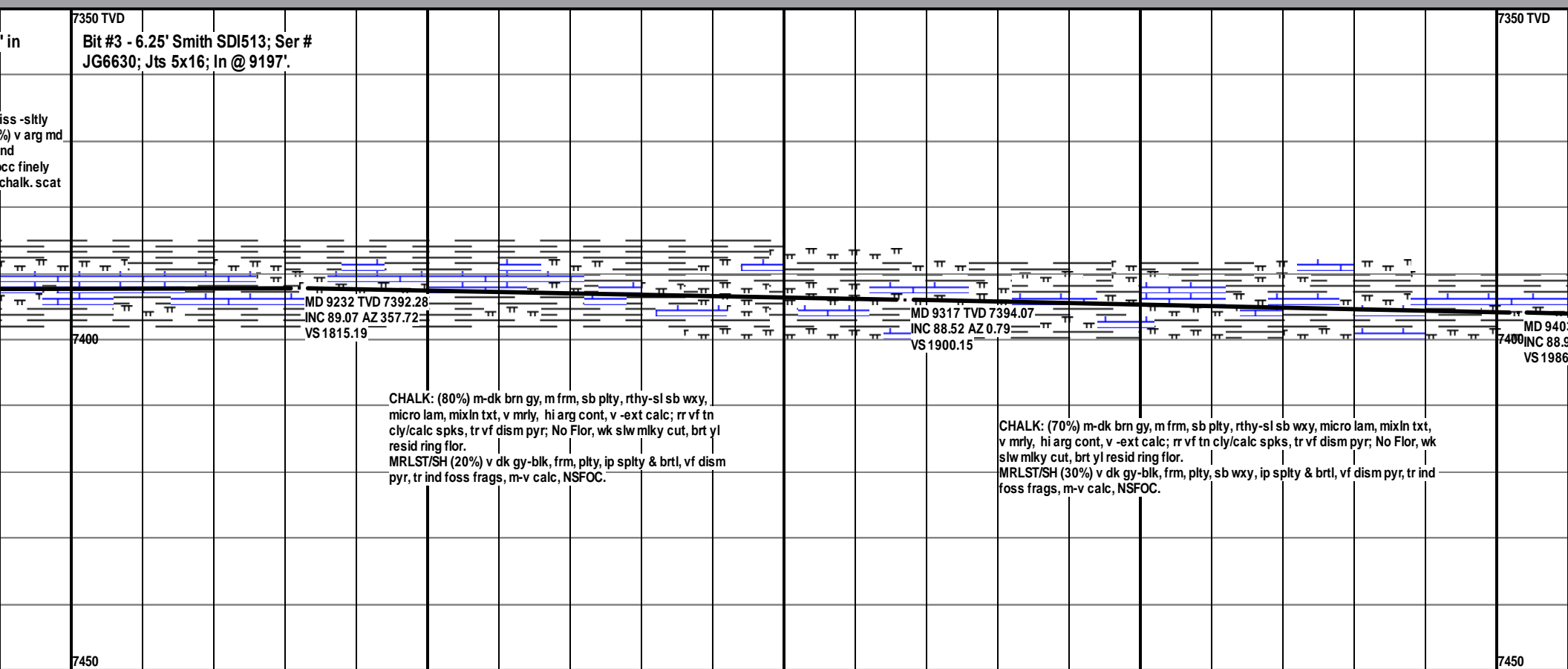
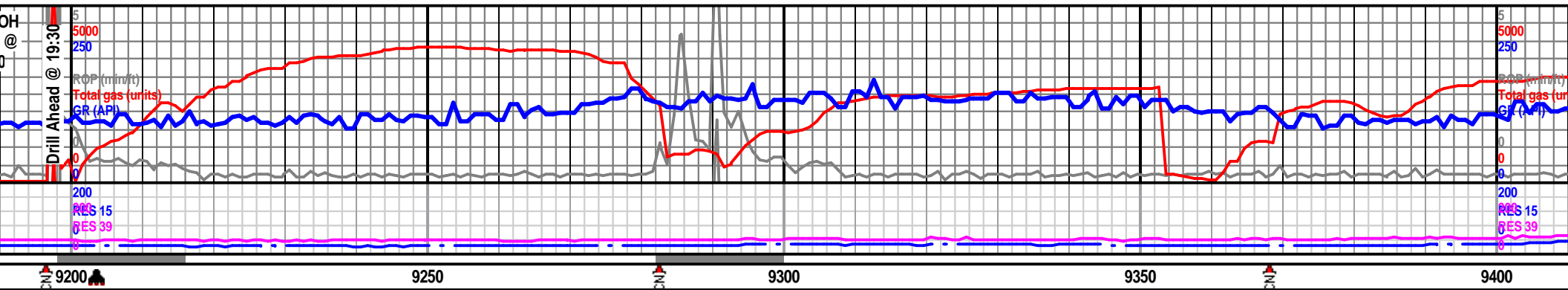






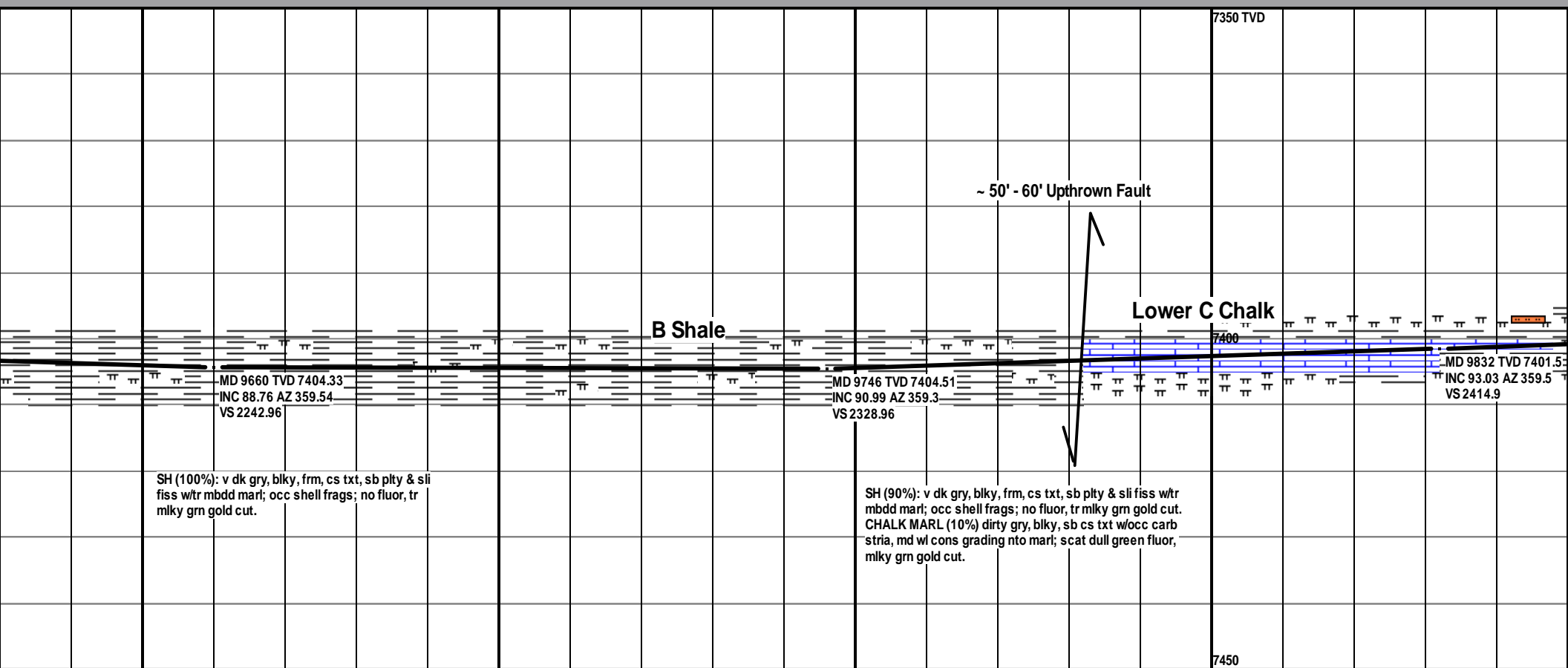


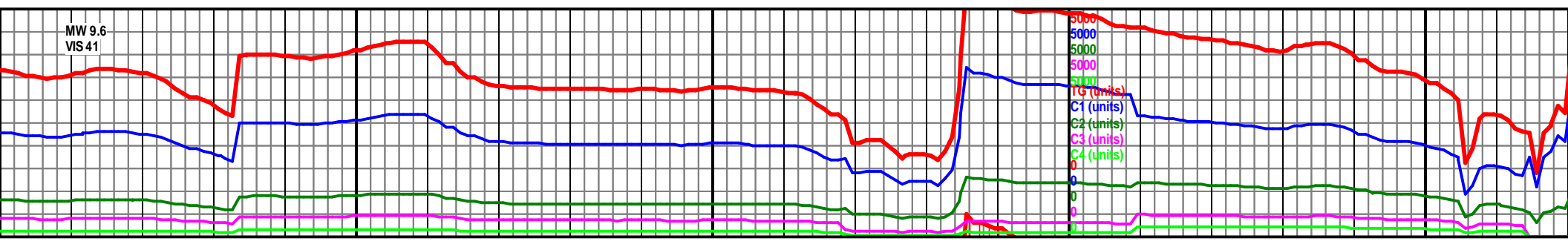
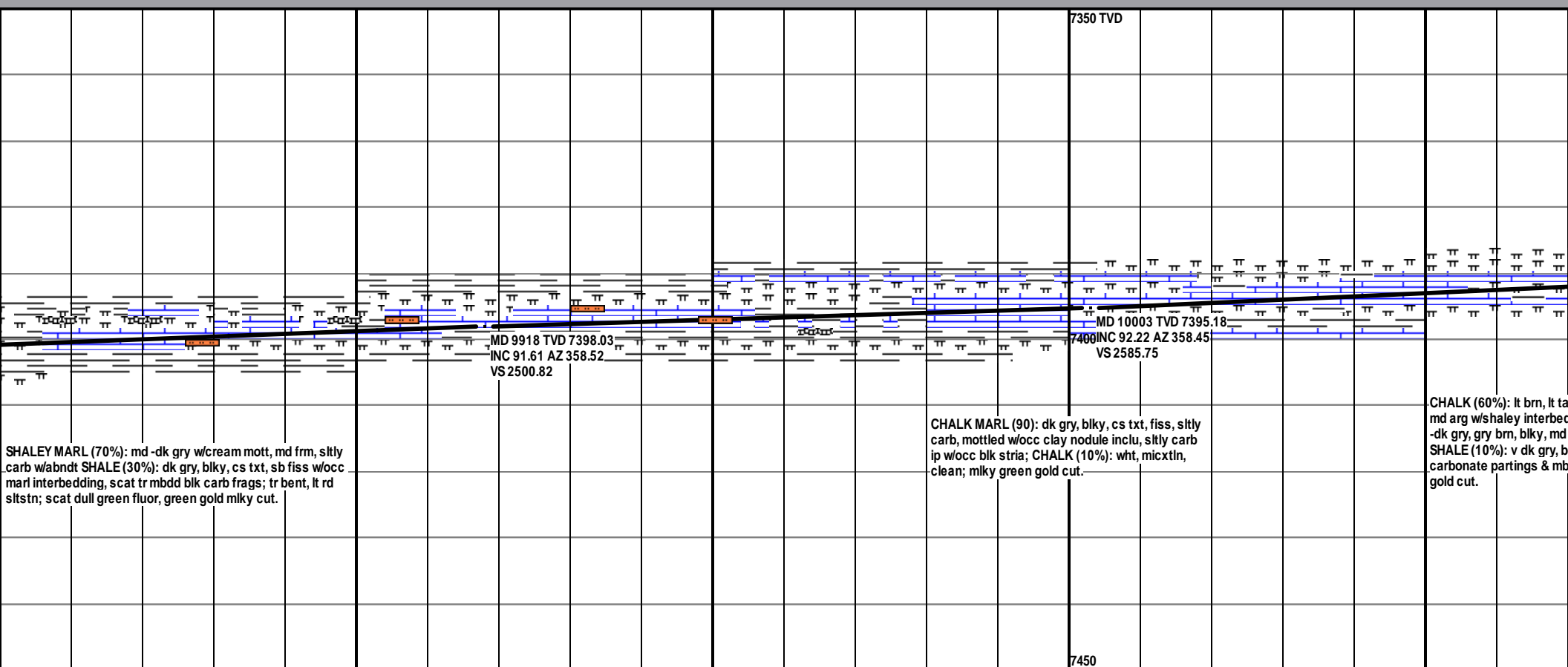
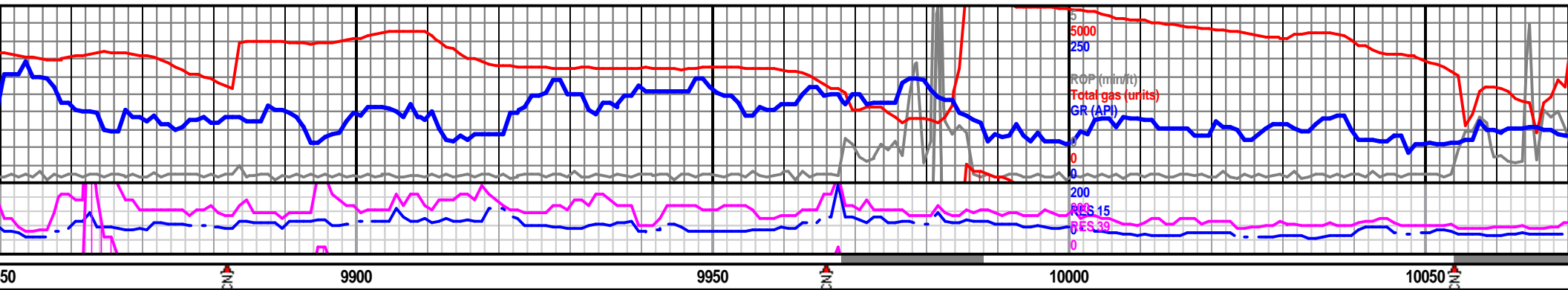


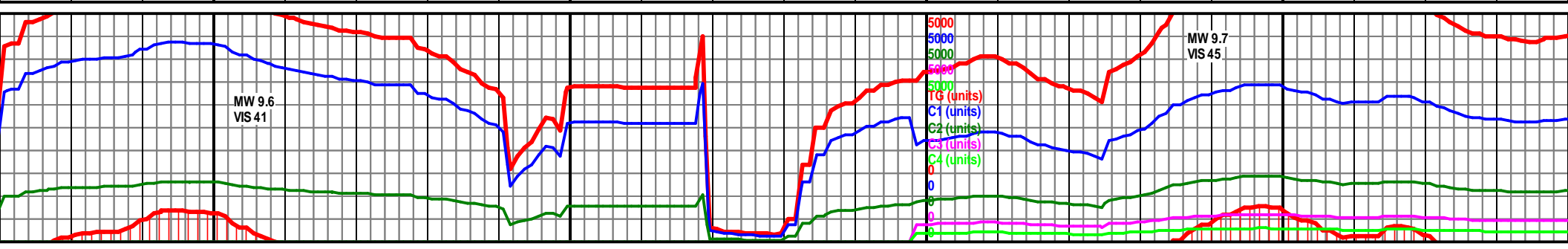
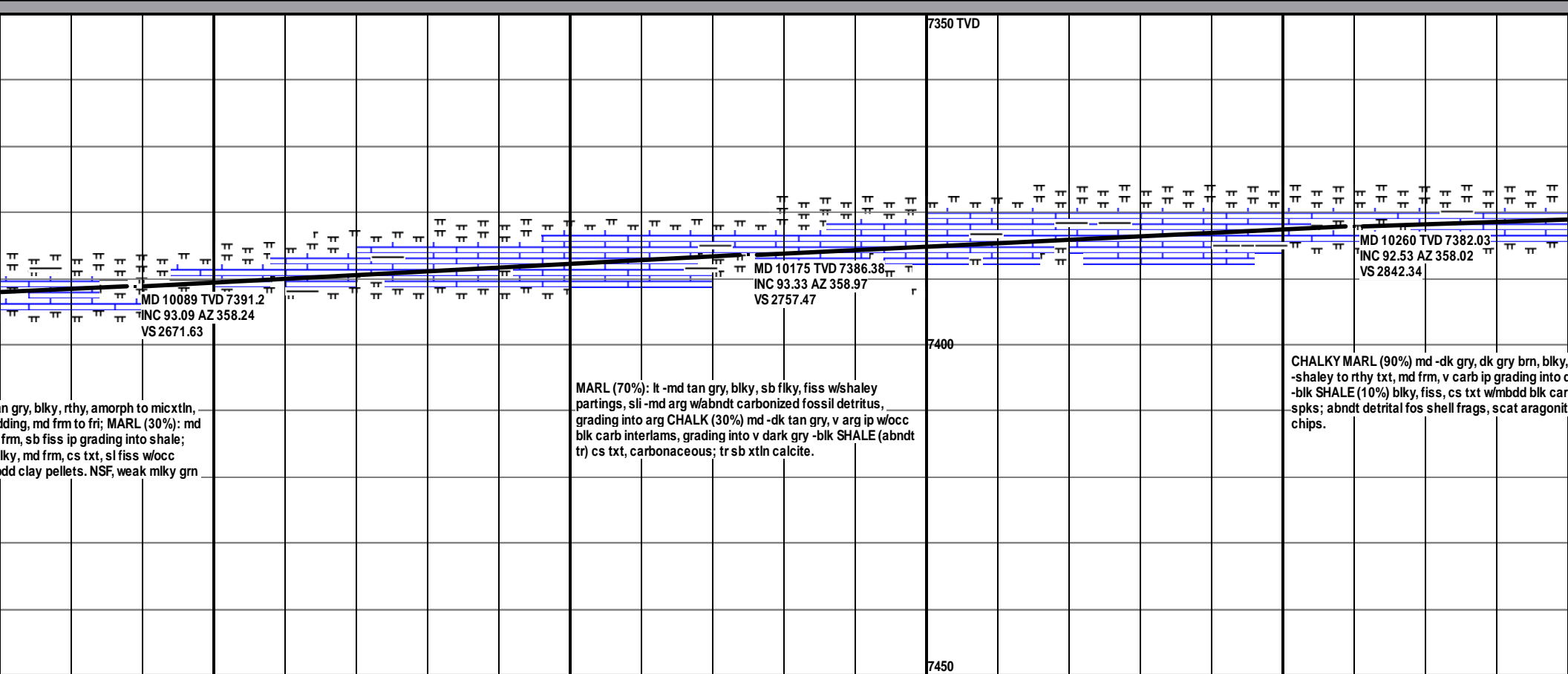
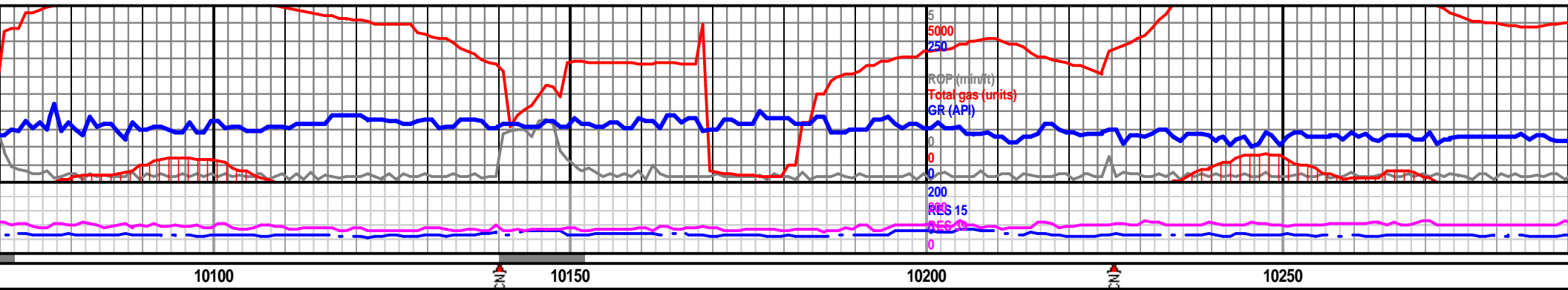


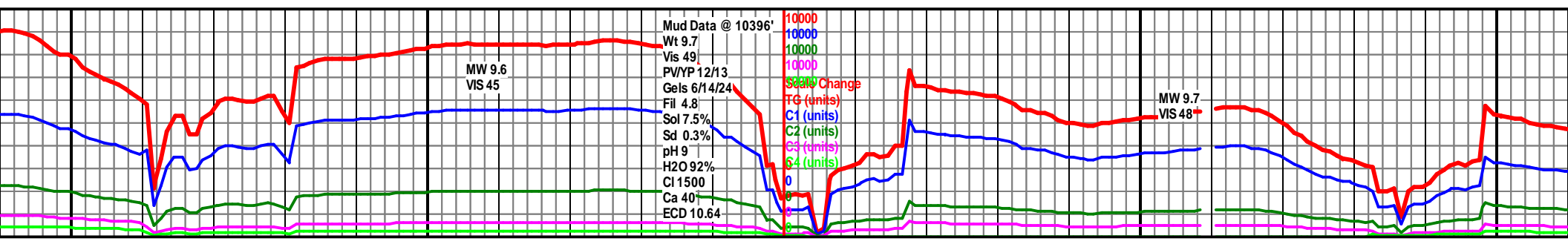
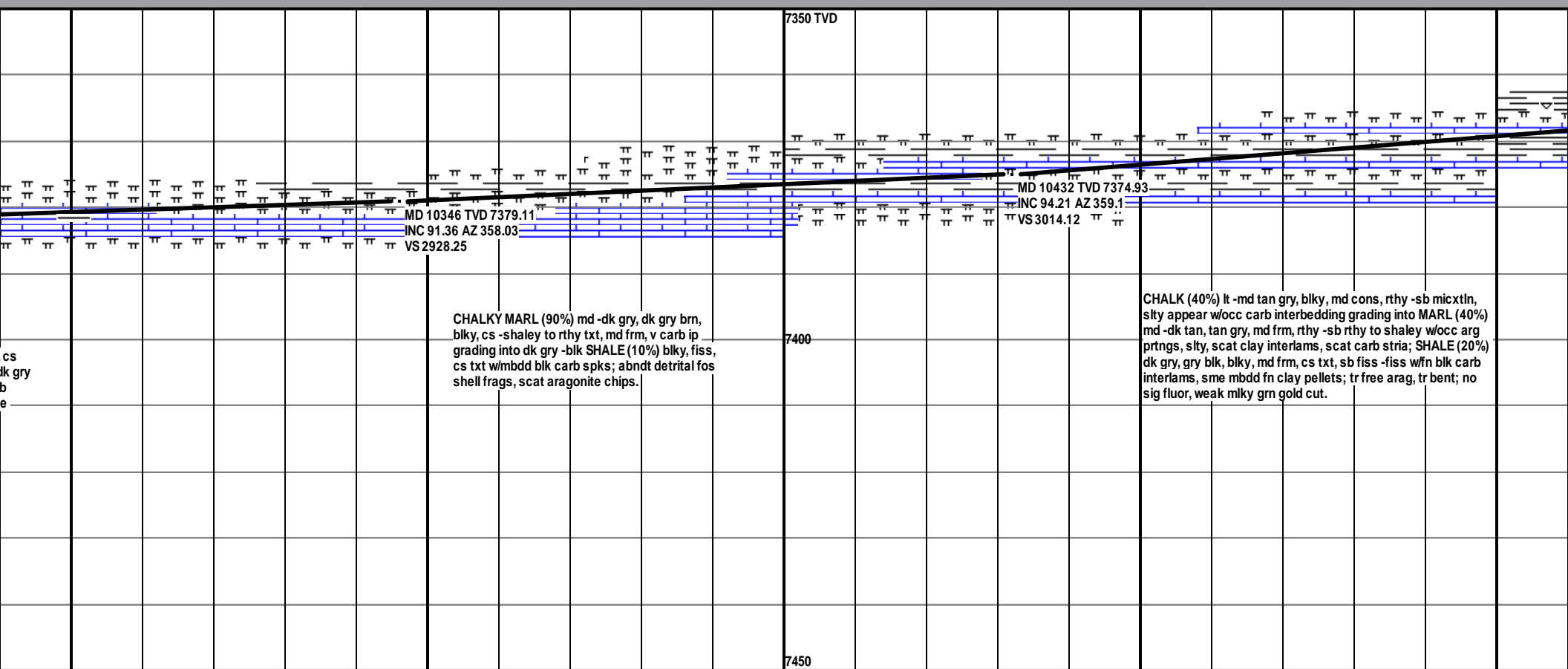
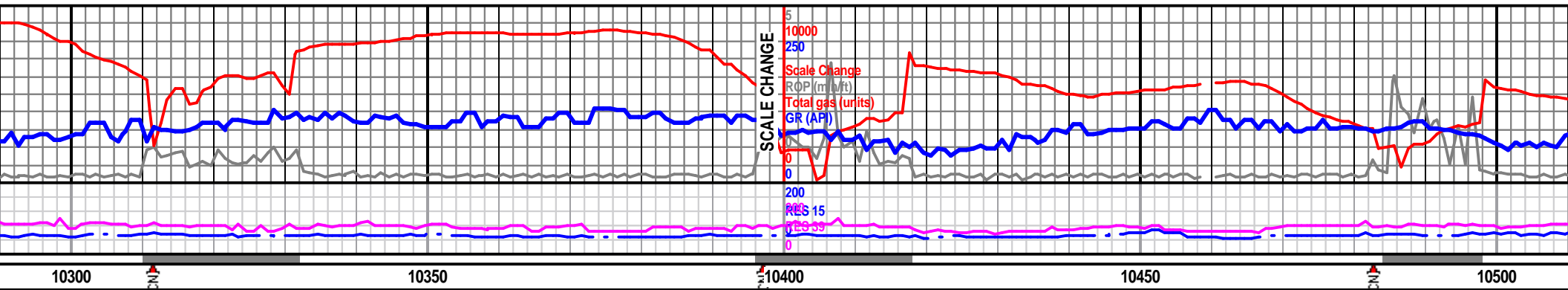


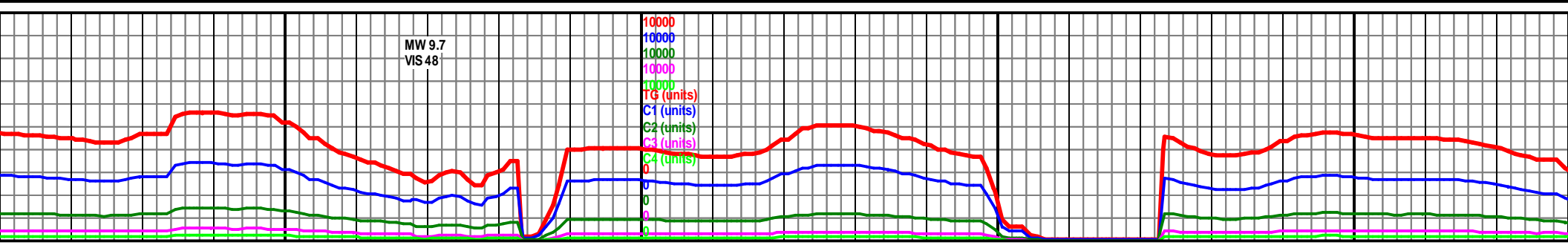
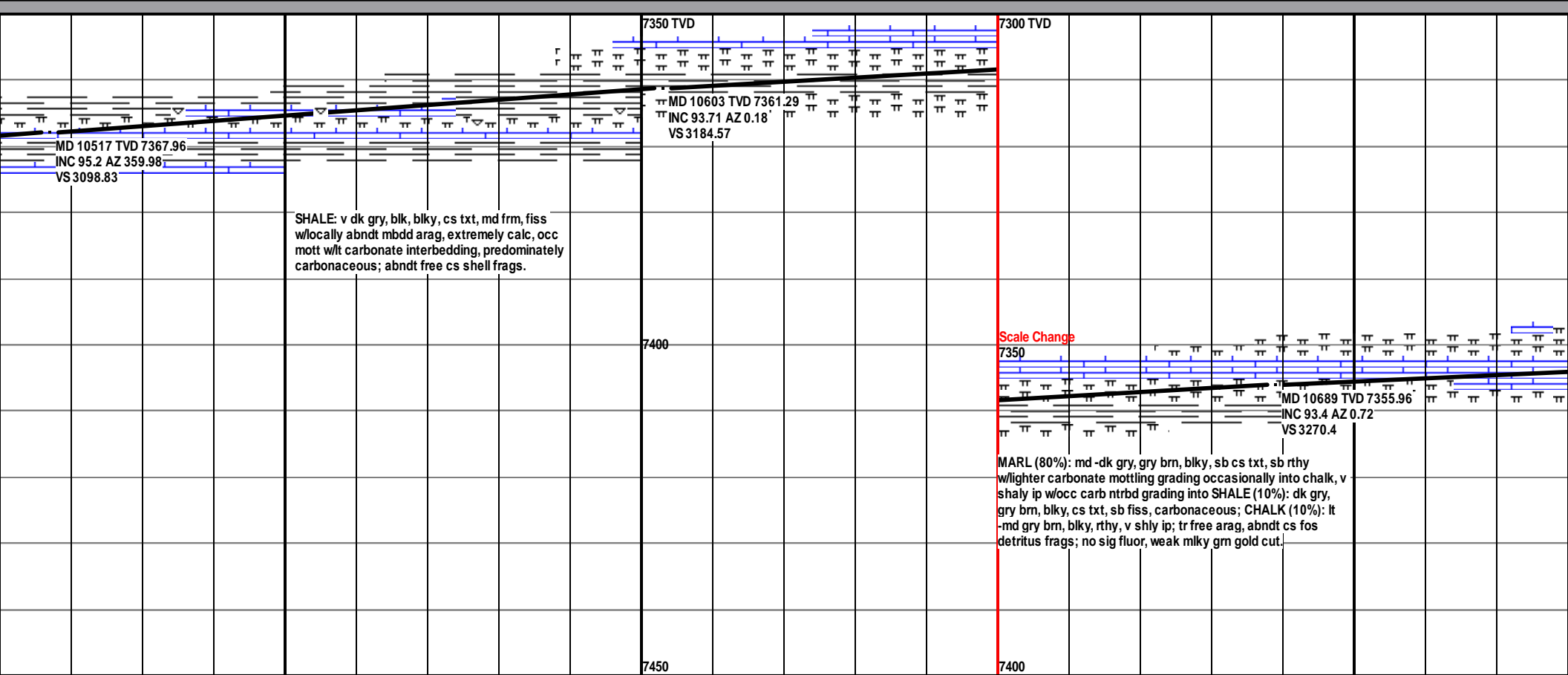
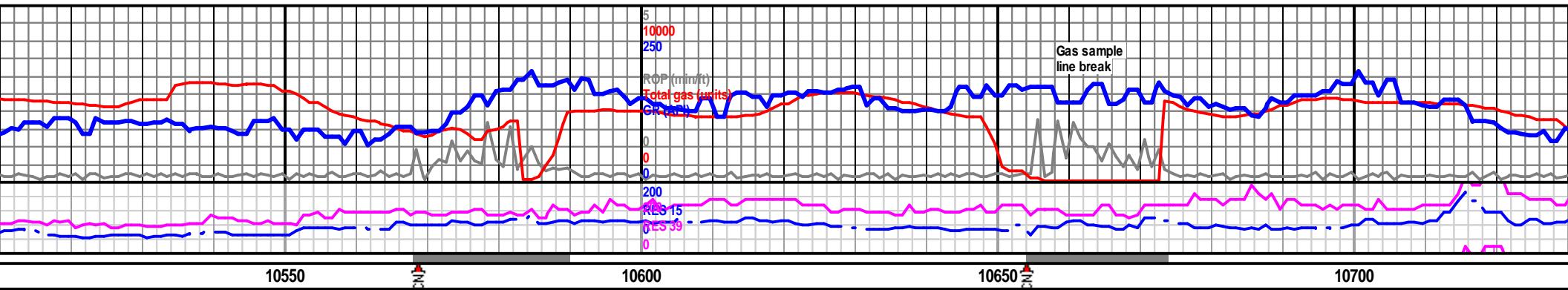


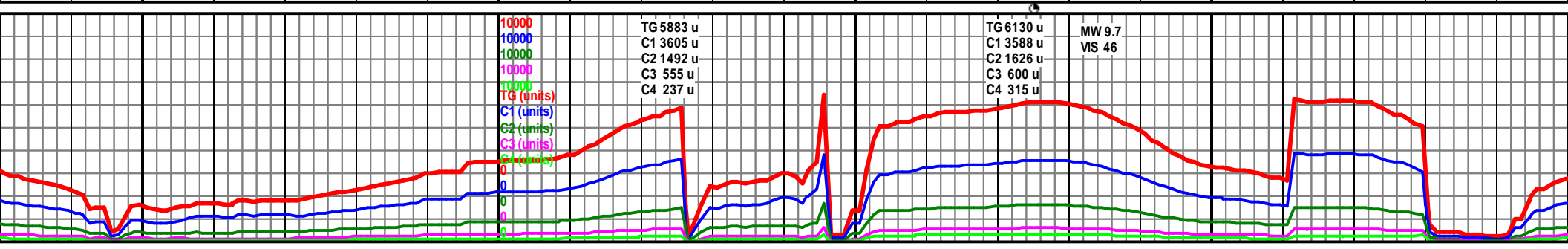
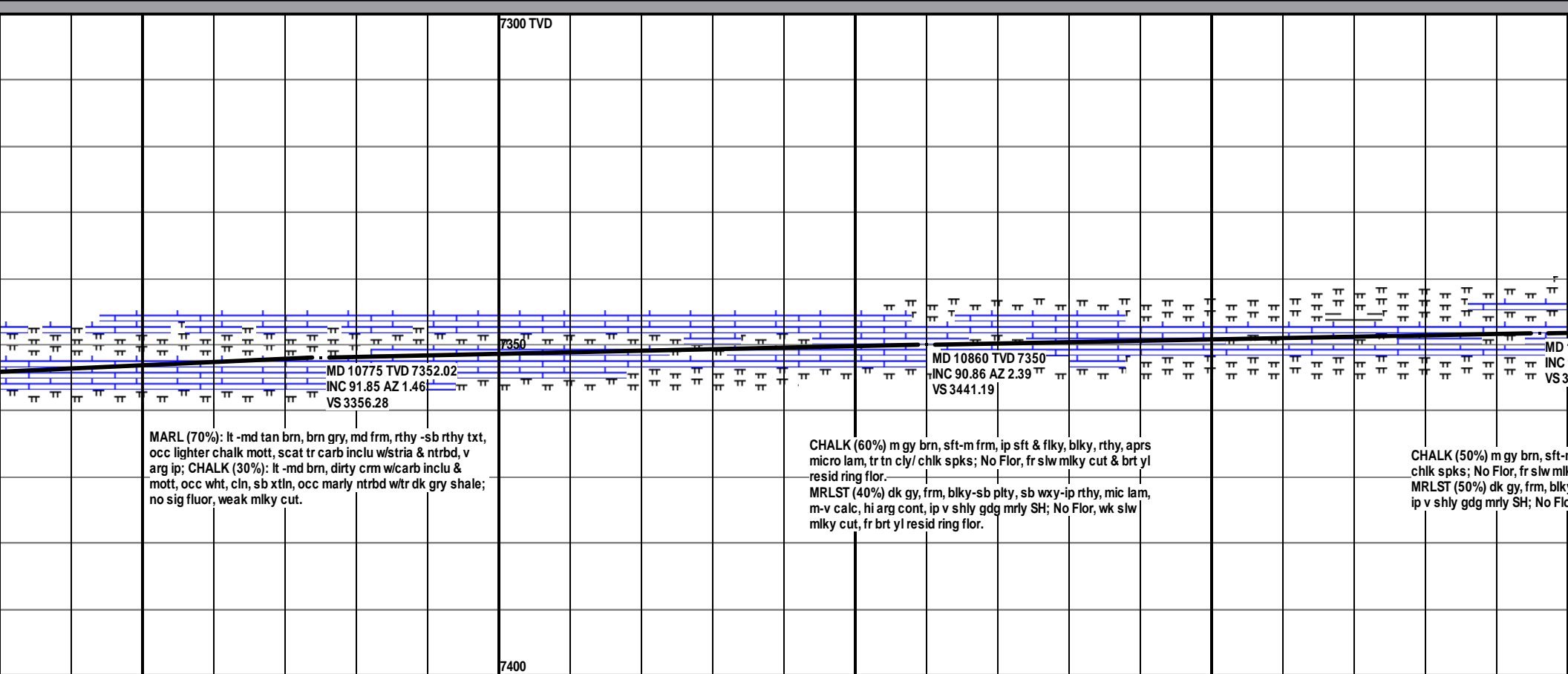
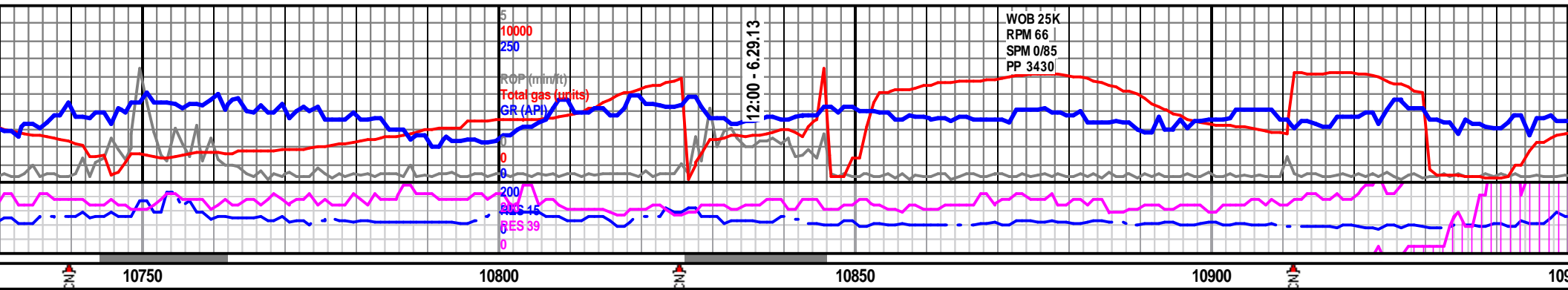


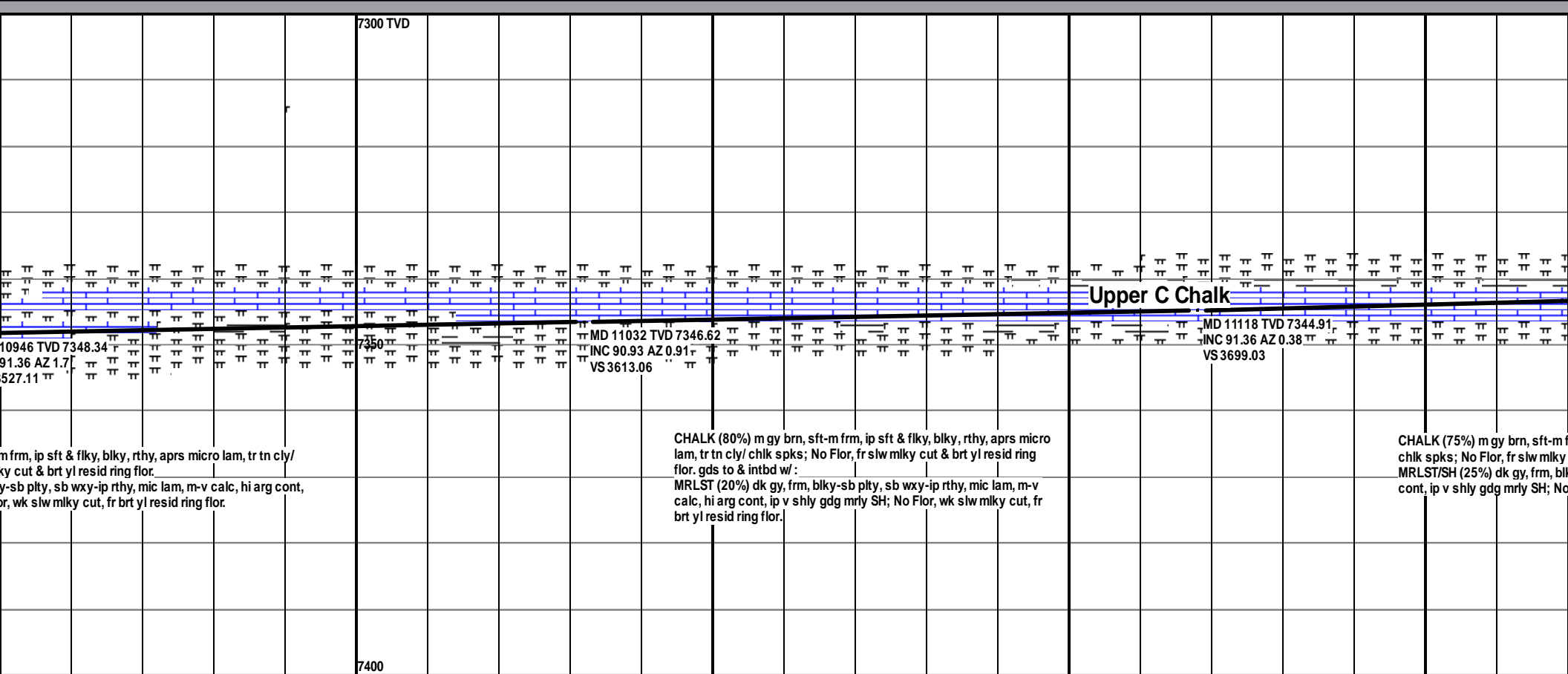
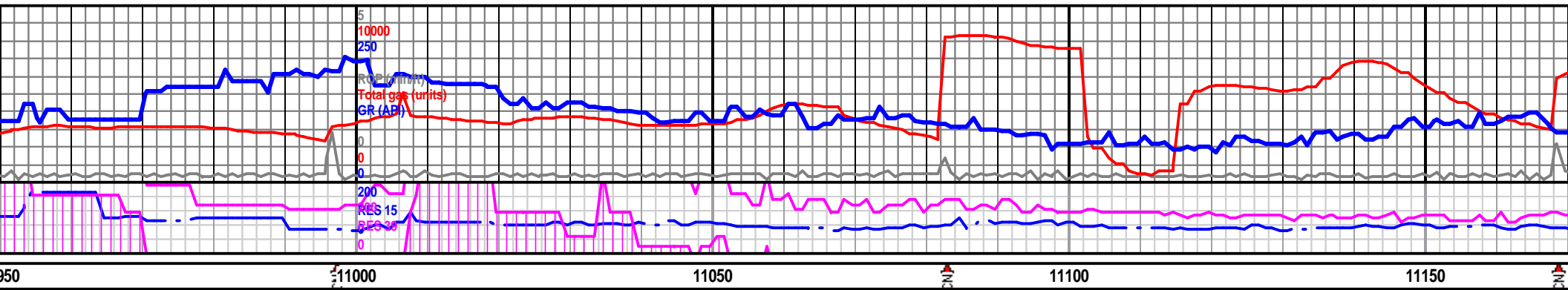








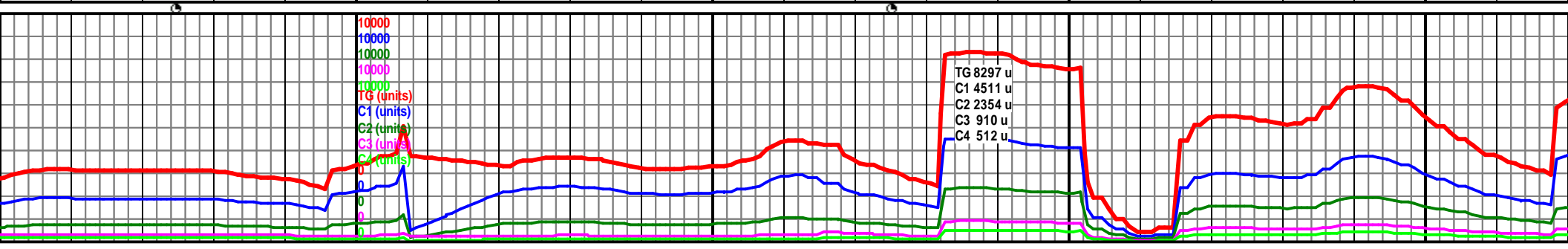


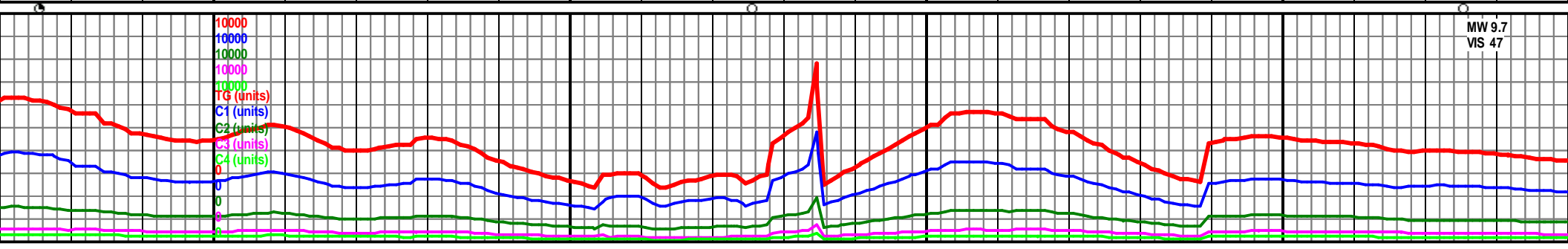
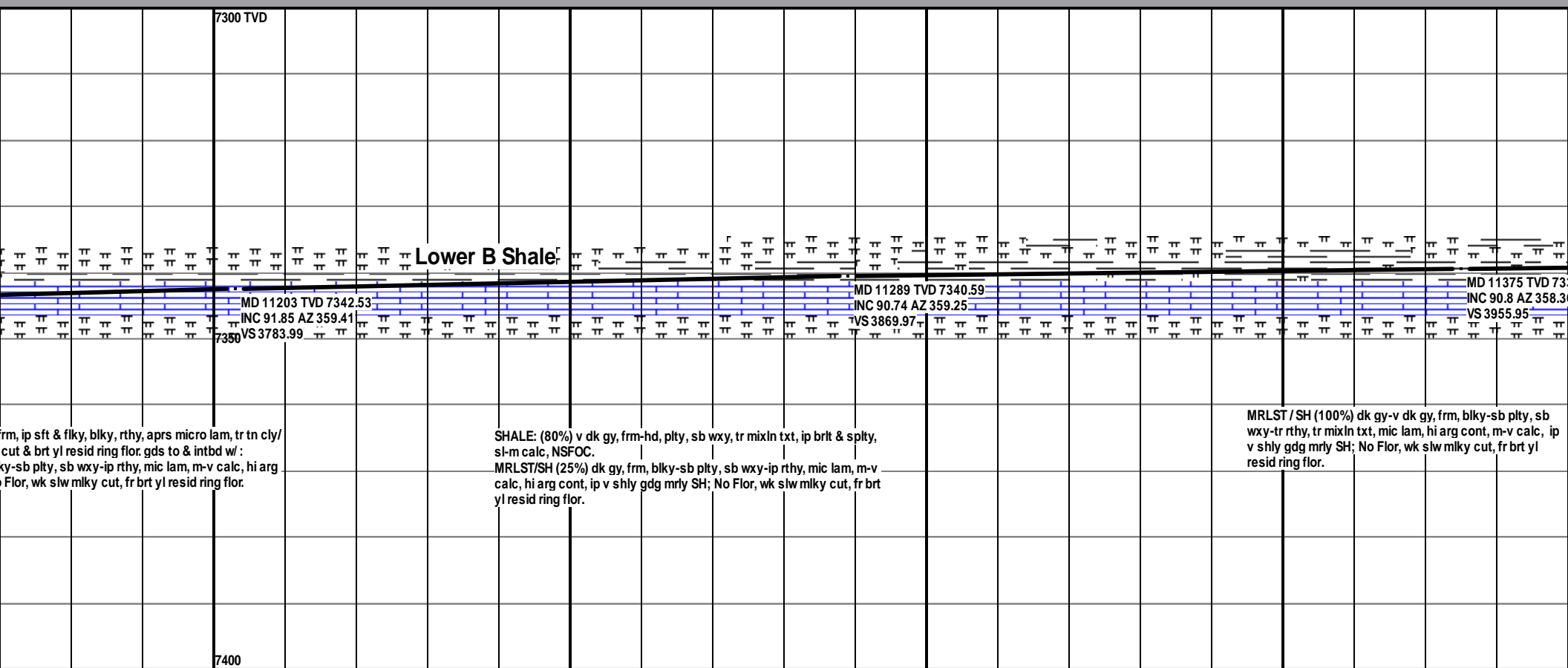


m frm, ip sft & flky, blk, rthy, aprs micro lam, tr tn cly/  
ky cut & brt yl resid ring flor.  
y-sb plty, sb wxy-ip rthy, mic lam, m-v calc, hi arg cont,  
or, wk slw mlky cut, fr brt yl resid ring flor.

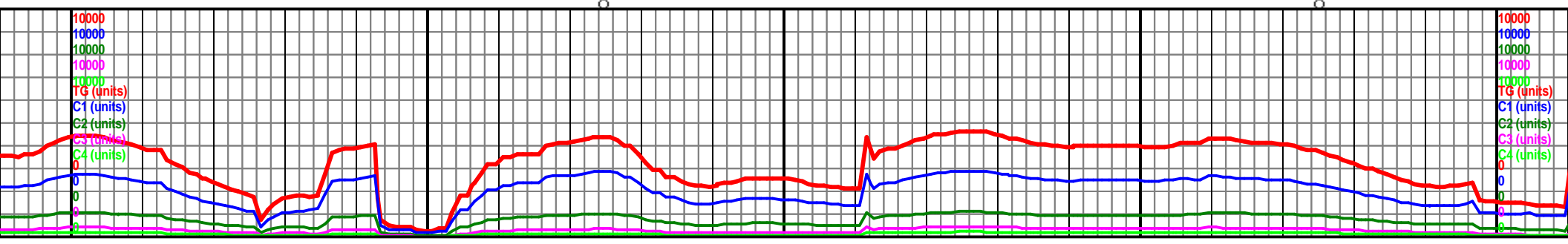
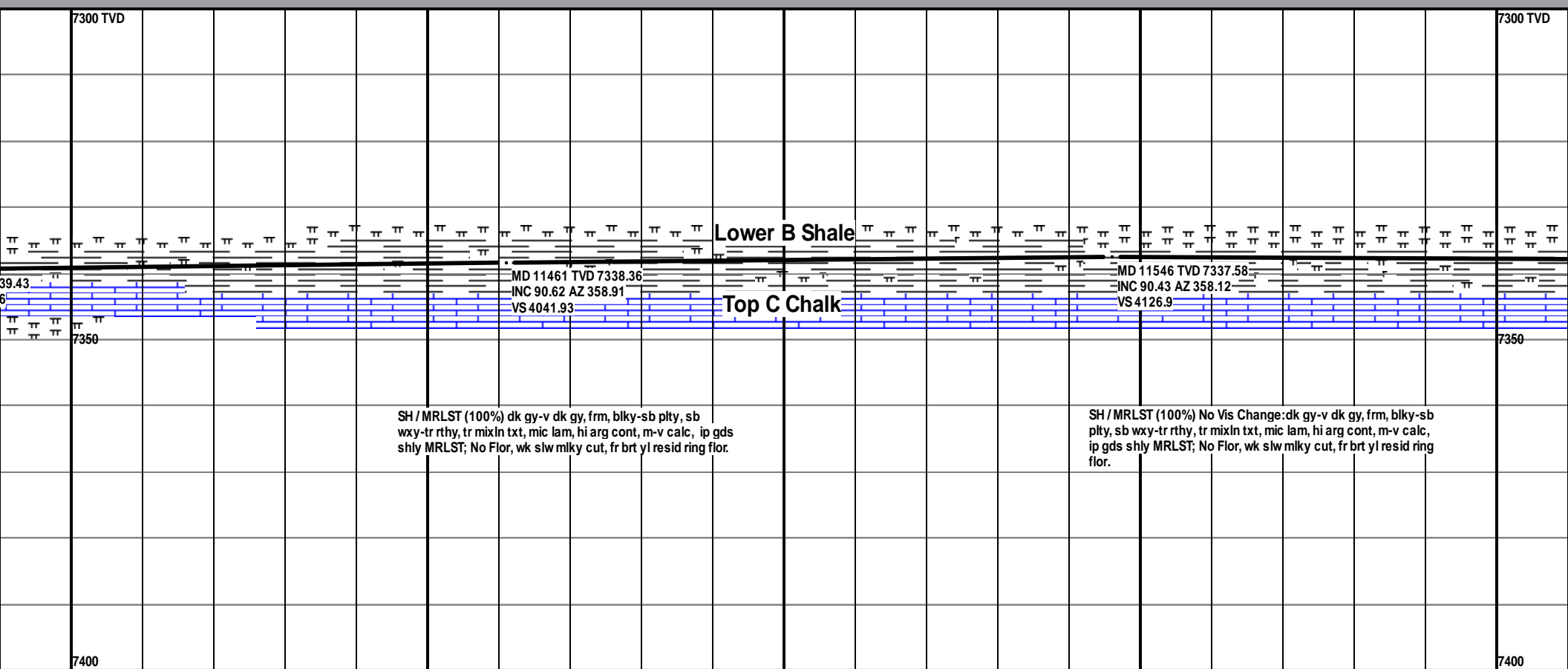
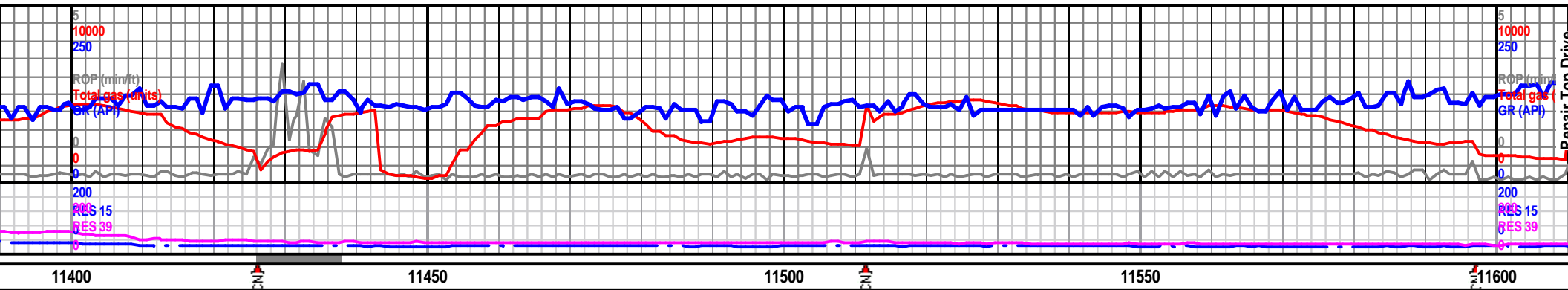
CHALK (80%) m gy brn, sft-m frm, ip sft & flky, blk, rthy, aprs micro  
lam, tr tn cly/ chlk spks; No Flor, fr slw mlky cut & brt yl resid ring  
flor. gds to & intbd w/ :  
MRLST (20%) dk gy, frm, blk, sb plty, sb wxy-ip rthy, mic lam, m-v  
calc, hi arg cont, ip v shly gdg mrlly SH; No Flor, wk slw mlky cut, fr  
brt yl resid ring flor.

CHALK (75%) m gy brn, sft-m  
chlks spks; No Flor, fr slw mlky  
MRLST/SH (25%) dk gy, frm, blk  
cont, ip v shly gdg mrlly SH; No

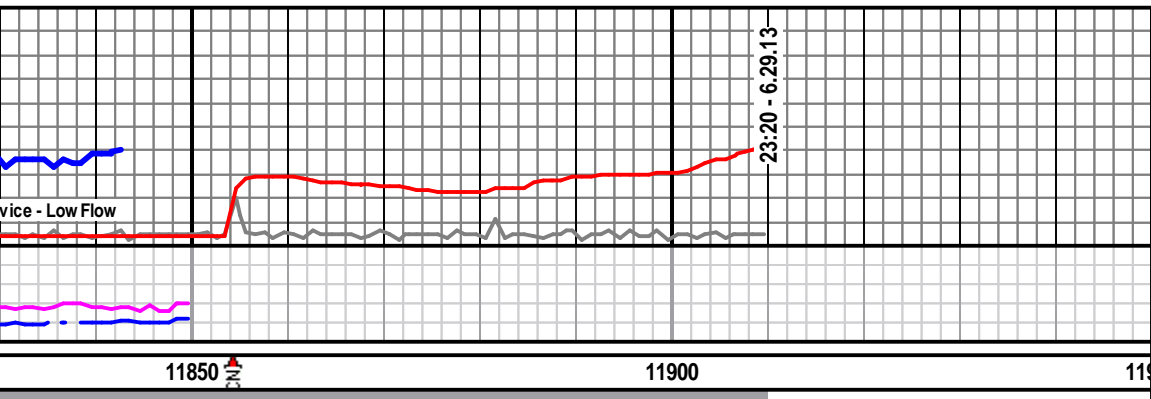








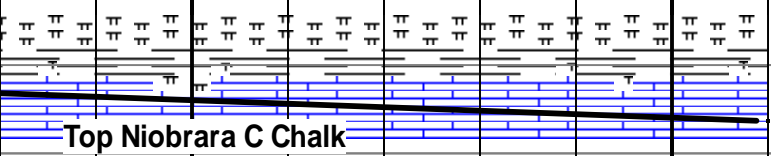




Bit # 3 Made 713'  
in 24.25 Hrs.

TD @ 11,910' MD @ 23:20 hours,  
06.29.2013; Circ & Cond; Pump Mud  
Sweeps; hang liner, 4.5" OD, 4" ID,  
P-110 11.6 ppf, Top 6821.26' MDKB, Toe  
11895.00' MDKB

Released 07/04/2013



Projection to Bit:  
MD 11910 TVD 7346.41  
INC 87.65 AZ 359.09  
VS 4490.73

CHALK (70%) m gy brn, m frm, ip sft, flky, blk, rthy, m hi arg cont, ip mrl, ext  
calc; No Flor, wk slw mky cut w/bt yl resid ring flor.  
SH / MRLST (30%) dk-v dk gy, sm brn gy, frm, pred sb plty, sb wxy-tr rthy, tr  
mixln txt, mic lam, hi arg cont, m-v calc, ip gds shly MRLST; No Flor, wk slw wk  
mky cut, fr brt yl resid ring flor.

**THANK YOU FOR CHOOSING  
GOOLSBY BROTHERS &  
ASSOCIATES**

**JACK ROGERS  
ROBERT NORDECK  
W. H. McCROSKEY III**

