

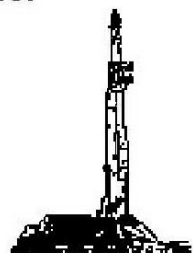
GOOLSBY BROTHERS
and associates, inc.

575 Union Blvd, Suite 208
Lakewood, CO 80228
303-945-2860 Office



Geological Wellsite
Supervision

www.goolsbybrothers.com



Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: NRC 27N-5HZ

API: 05123391560000

Location: Section 8, T1N, R67W

License Number:

Spud Date: June 22, 2014

Surface Coordinates: Sec 8 T1N R67W; 500' FNL, 1290' FEL

LAT: 40° 07'14.21 N; LONG: 104° 09'07.26 W

Bottom Hole Coordinates: Sec 5 T1N R67W; 399' FNL; 1282' FEL

Ground Elevation (ft): 5009'

Logged Interval (ft): 7100'

To: 12656'

Formation: Pierre Shales/Sands, Sharon Springs, Niobrara B Chalk (Target)

Type of Drilling Fluid: Water & Poly to 5000', LSND 5000'-12656'

K.B. Elevation (ft): 5026'

Total Depth (ft): 12656' DMTD

Region: Wattenberg, DJ Basin

Drilling Completed: June 27, 2014

Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Kerr-McGee Oil & Gas Onshore LP

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

Denver, CO 80202

CO Geologist, Tom Birmingham

GEOLOGIST

Name: Blake Stacey and Dan Kabala

Company: Goolsby Brothers & Assoc. (GBA), Inc. (www.goolsbybrothers.com)

Address: 575 Union Blvd.

Suite 208,

Lakewood CO. 80228

E-logs

MWD GR 6835.25' - 12610'

Casing

9 5/8" Surface Casing set @ 1034' MD


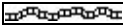
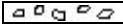


7" Intermediate Casing set @ 7793' MD



4 1/2" Production Liner hung 6/28/2014, landed @ 12646' MD

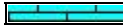




Comments






- 1) Drilling Contractor: Xtreme Drilling, Rig # 23
- 2) Directional Drilling: DRILLTECH LLC
MWD GR: DRILLTECH LLC
- 3) Gas Equipment: Pason Gas Analyzer and 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
 Sltly sh
















ACCESSORIES







MINERAL

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

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

FOSSIL

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












 Ostra
 Pelec
 Pellet
 Pisolite
 Plant
 Strom

STRINGER

 Chlkstg
 Anhy
 Arg
 Bent
 Coal
 Dol
 Gyp
 Ls

 Mrst
 Sltstgr
 Ssstrg

TEXTURE

 Boundst
 Chalky
 Cryxln
 Earthy
 Finexln
 Grainst
 Lithogr
 Microxln
 Mudst
 Packst
 Wackest

OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Vspotty

near even

POROSITY TYPE

- Earthy
- Fenest
- Fracture

OTHER SYMBOLS

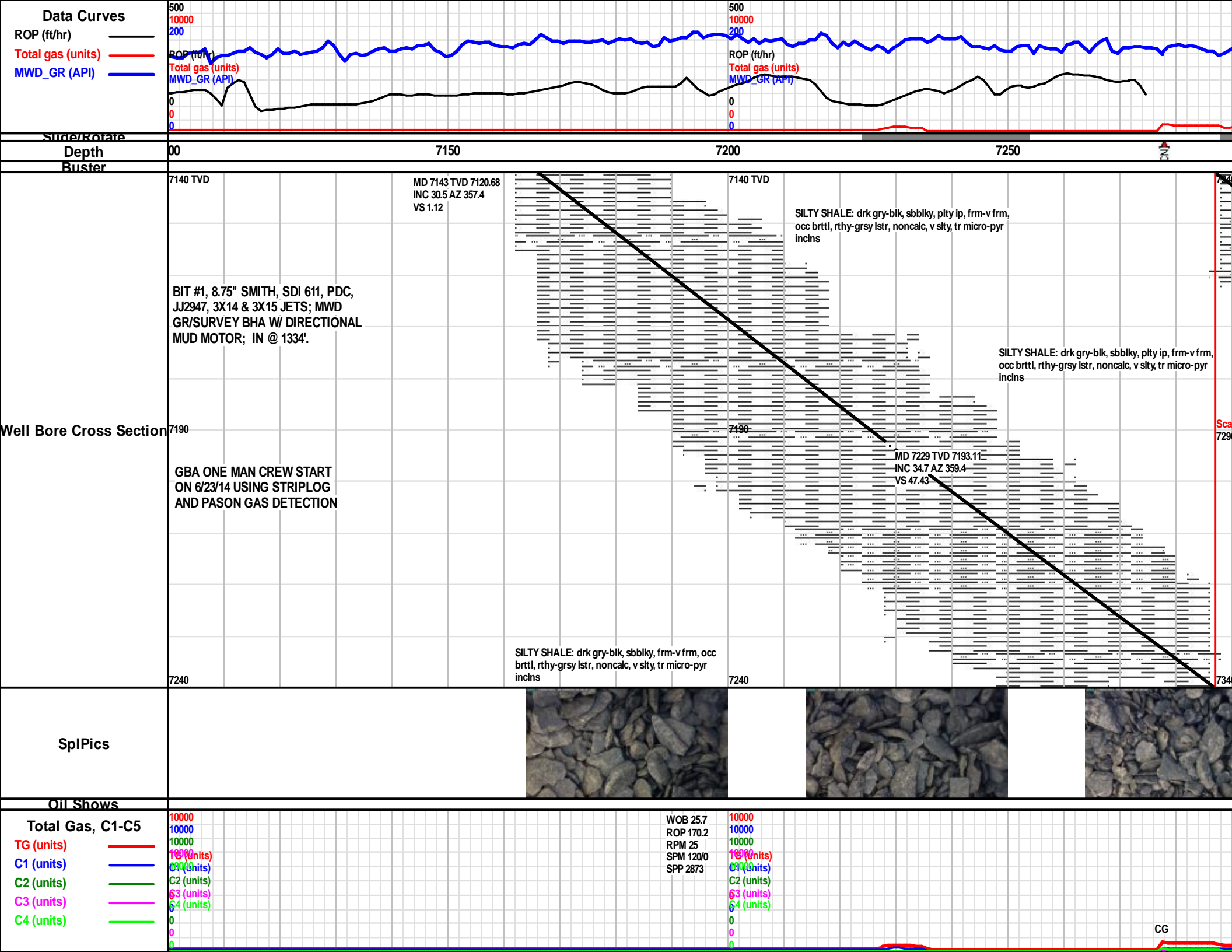
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

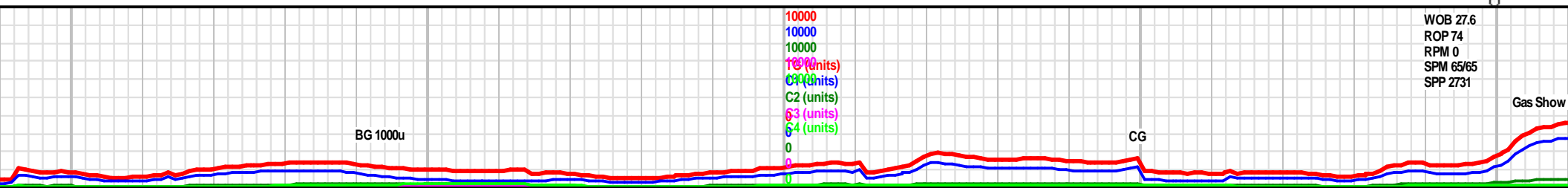
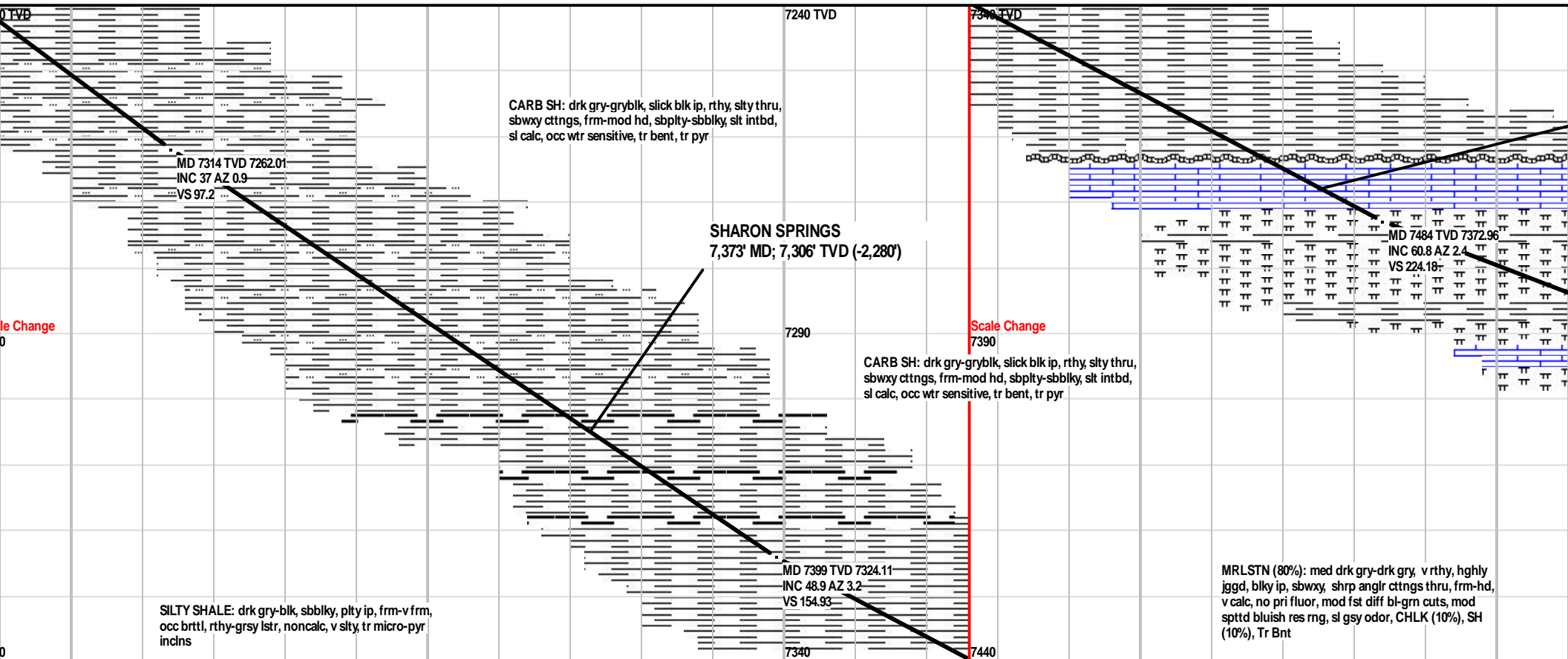
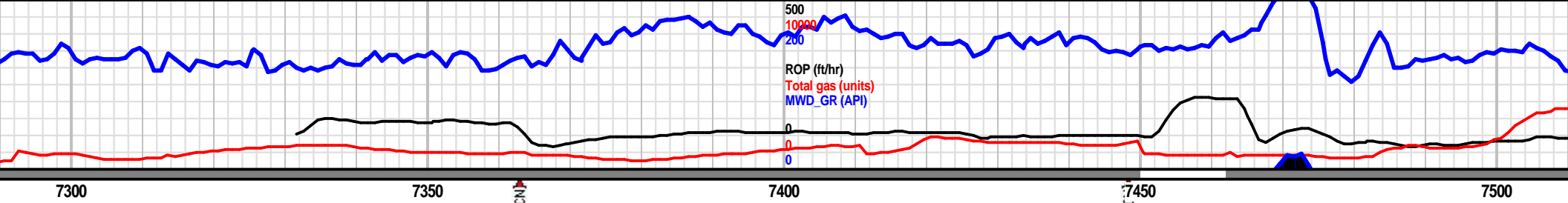
ROUNDING

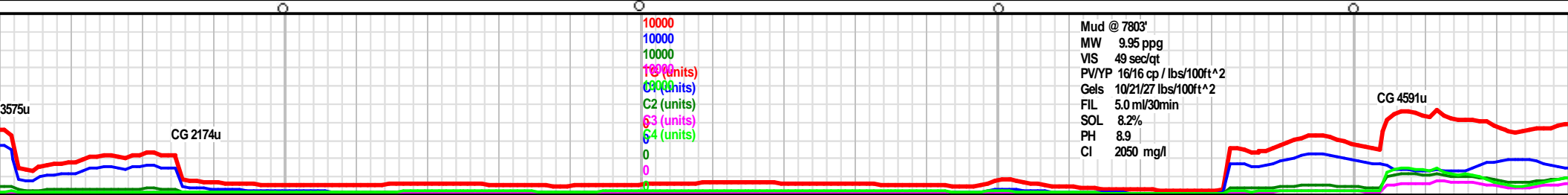
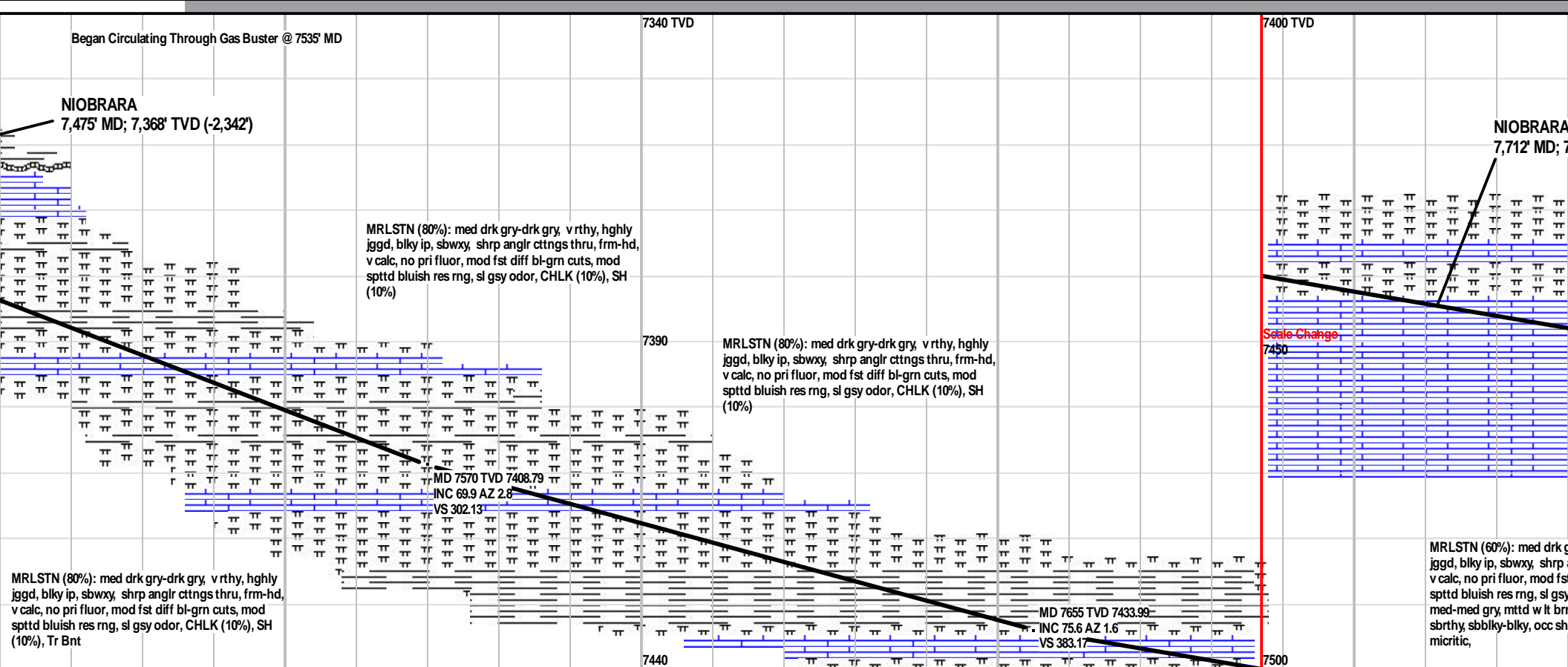
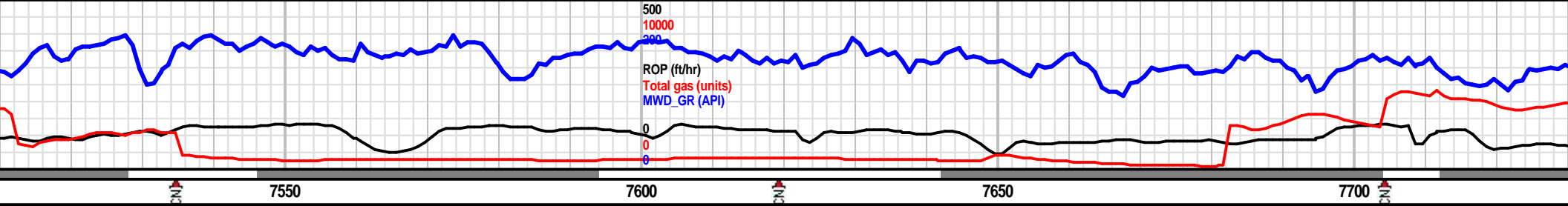
- Rounded
- Subrnd
- Subang
- Angular

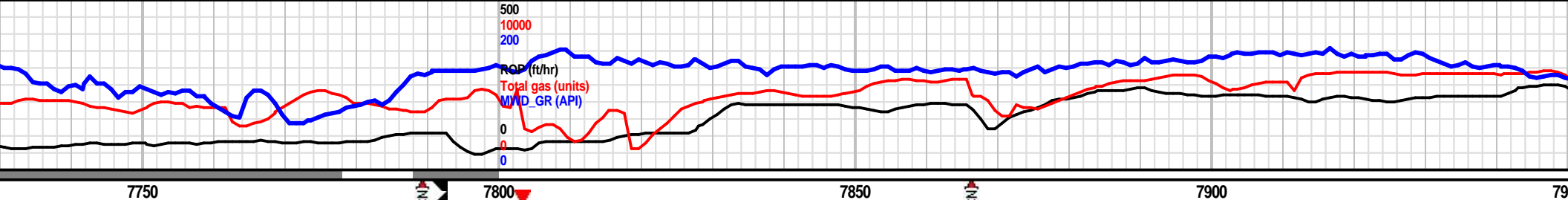
SORTING

- Well
- Moderate
- Poor

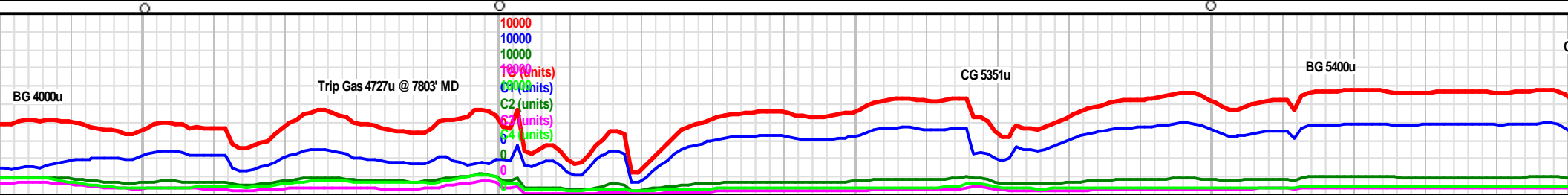


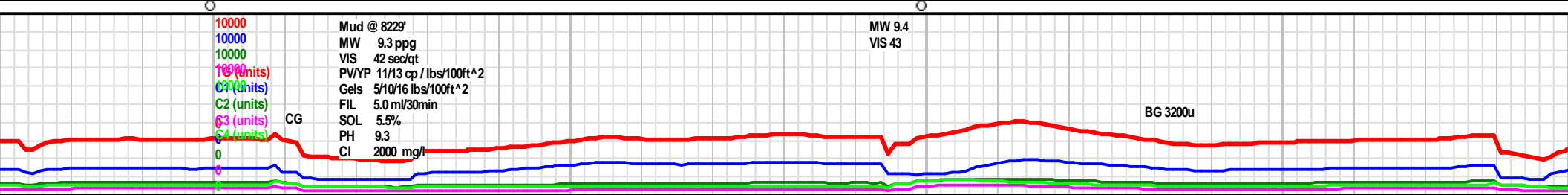
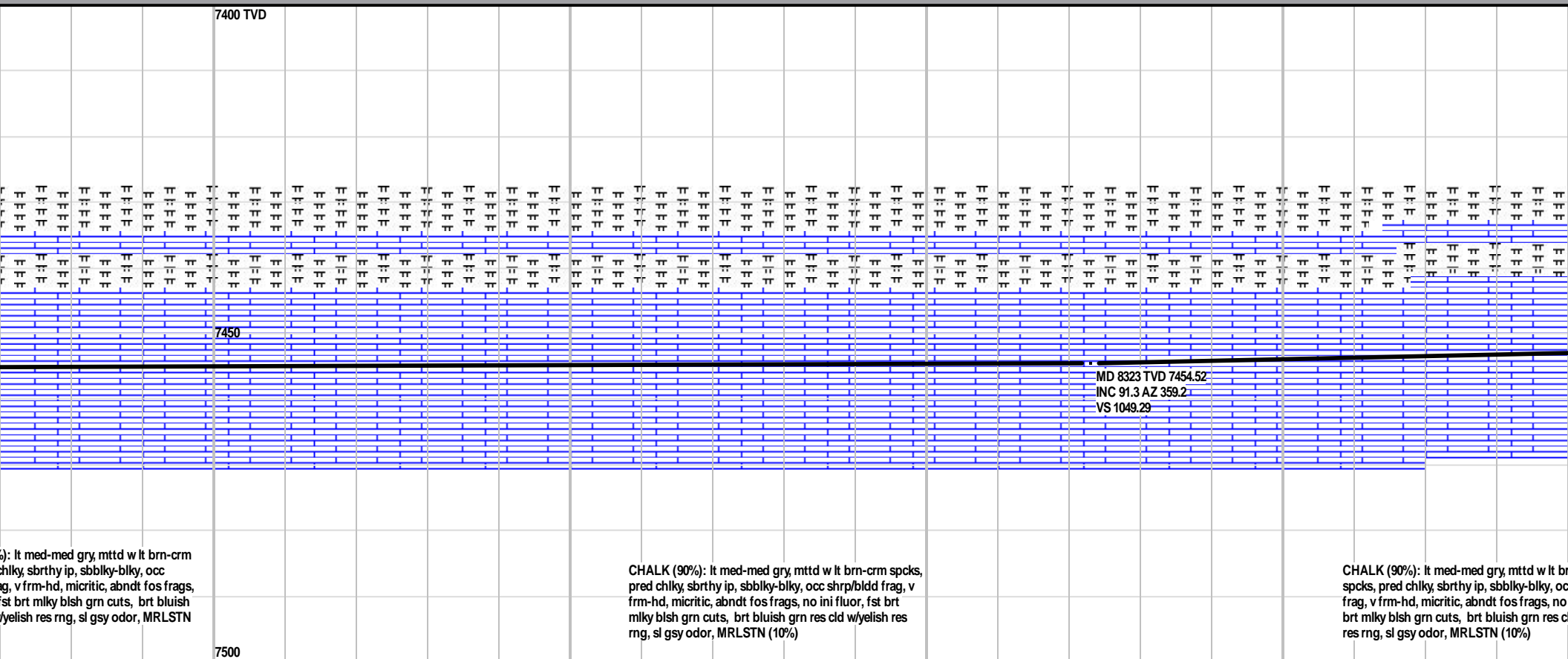
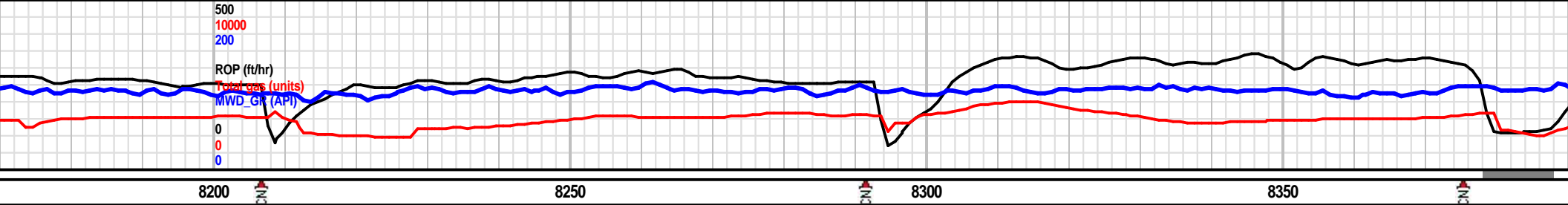


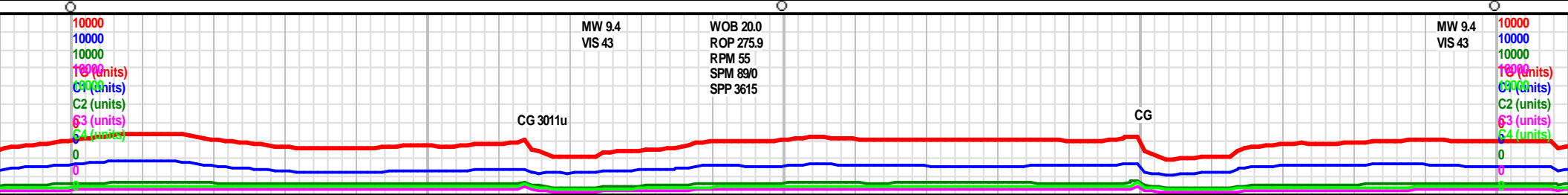
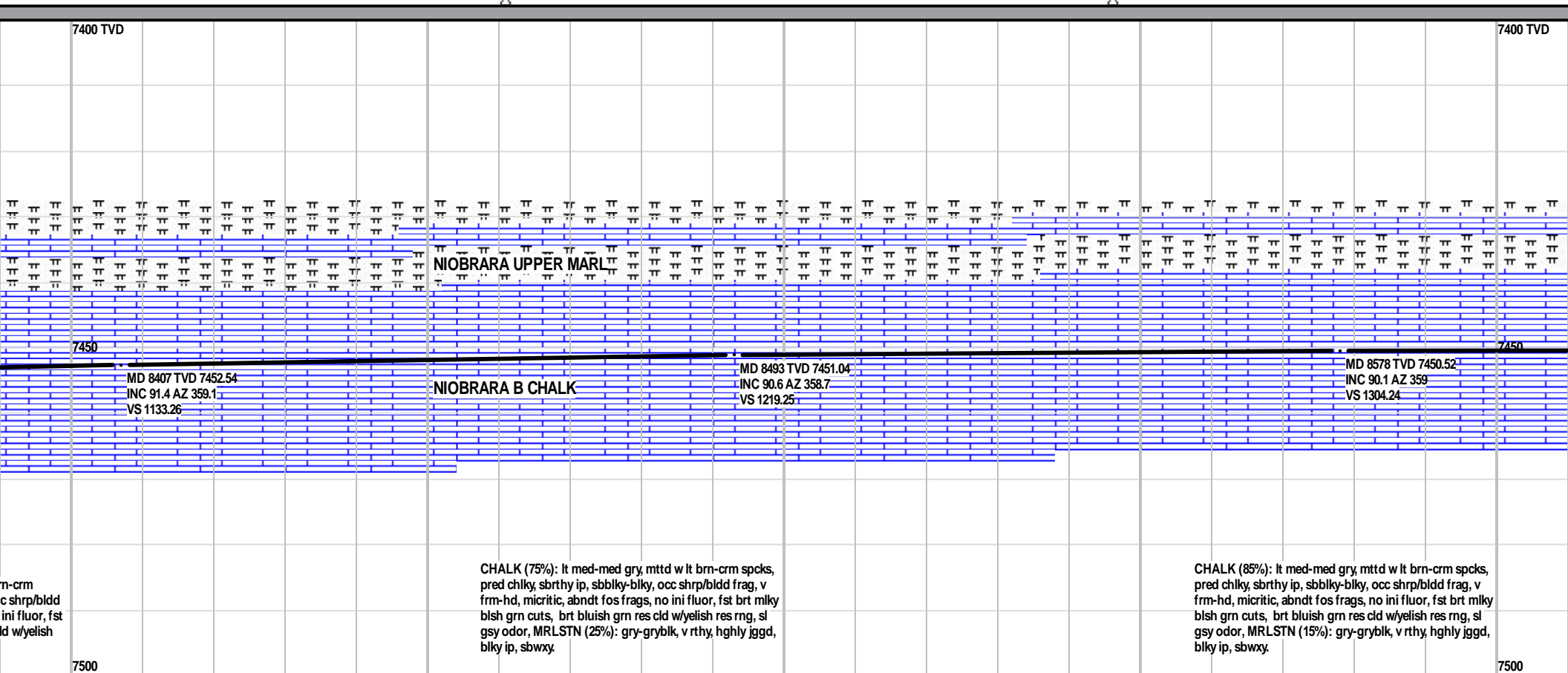
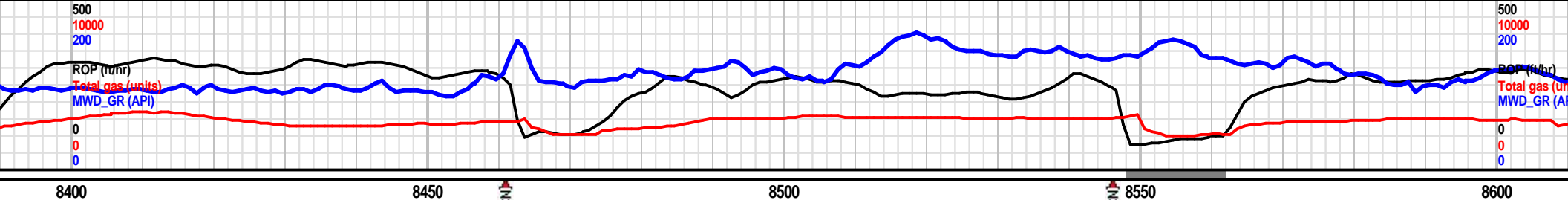


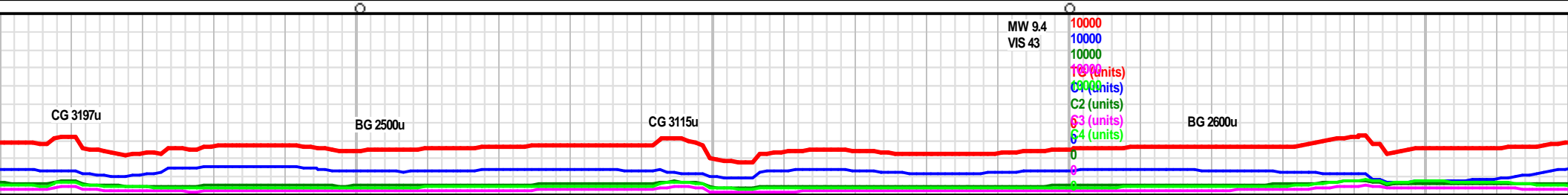
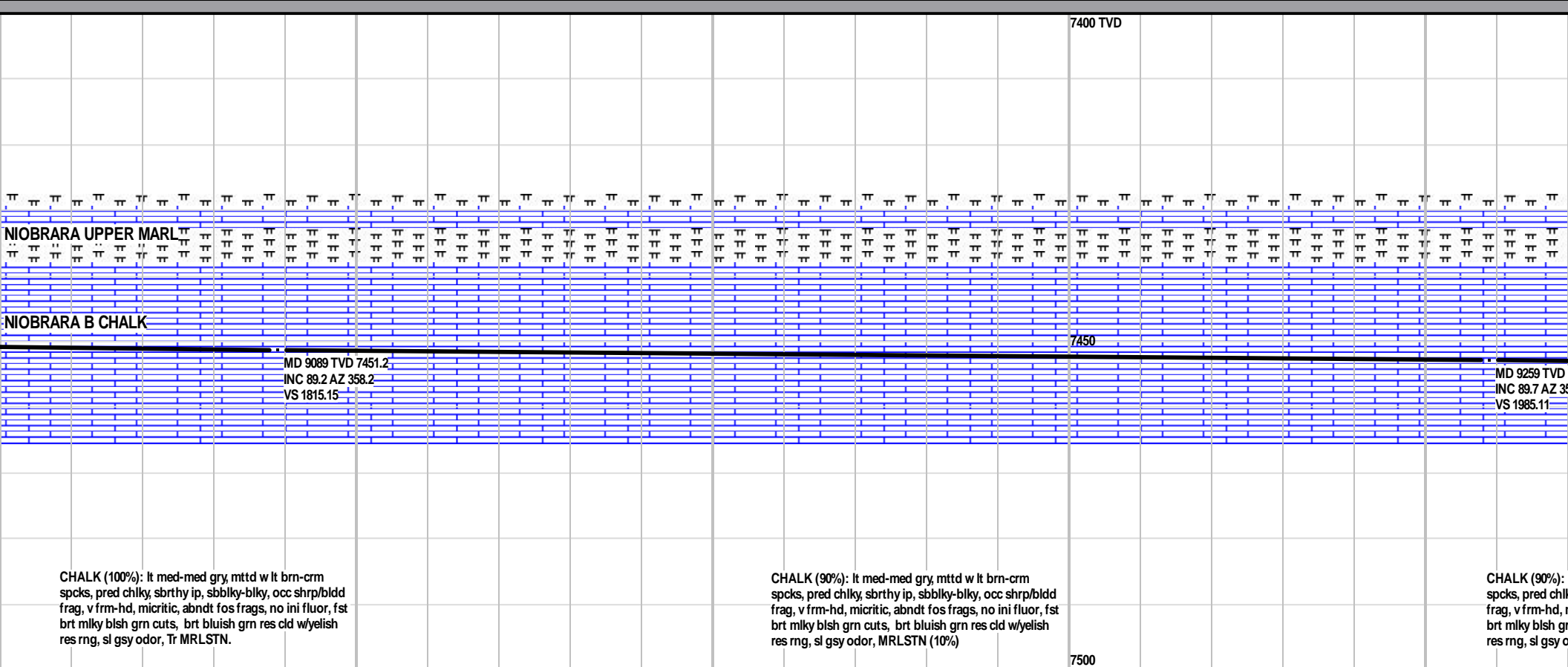
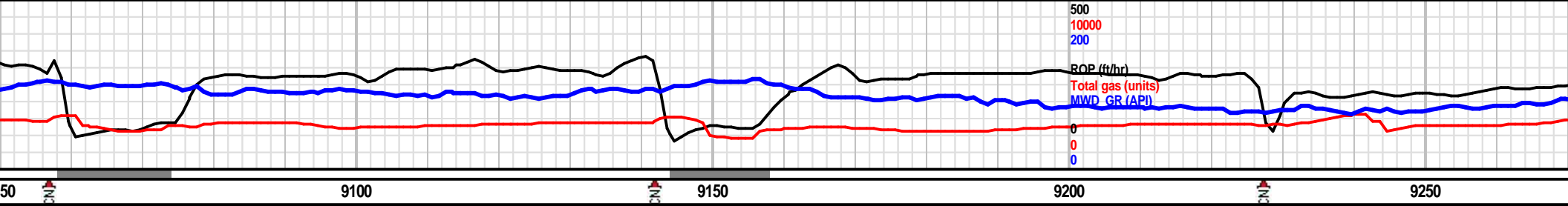


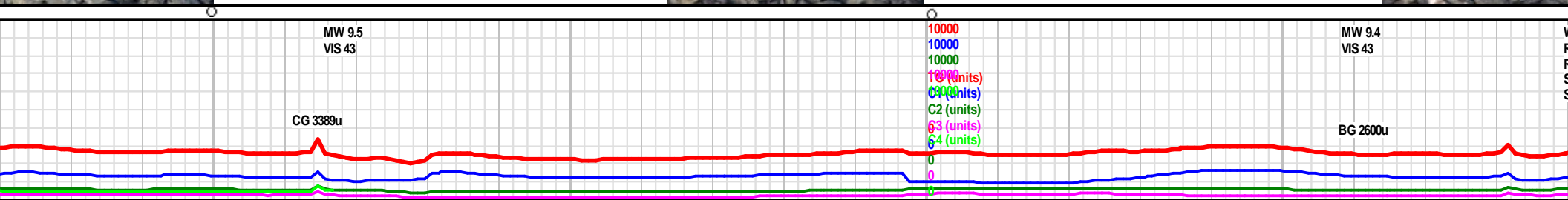
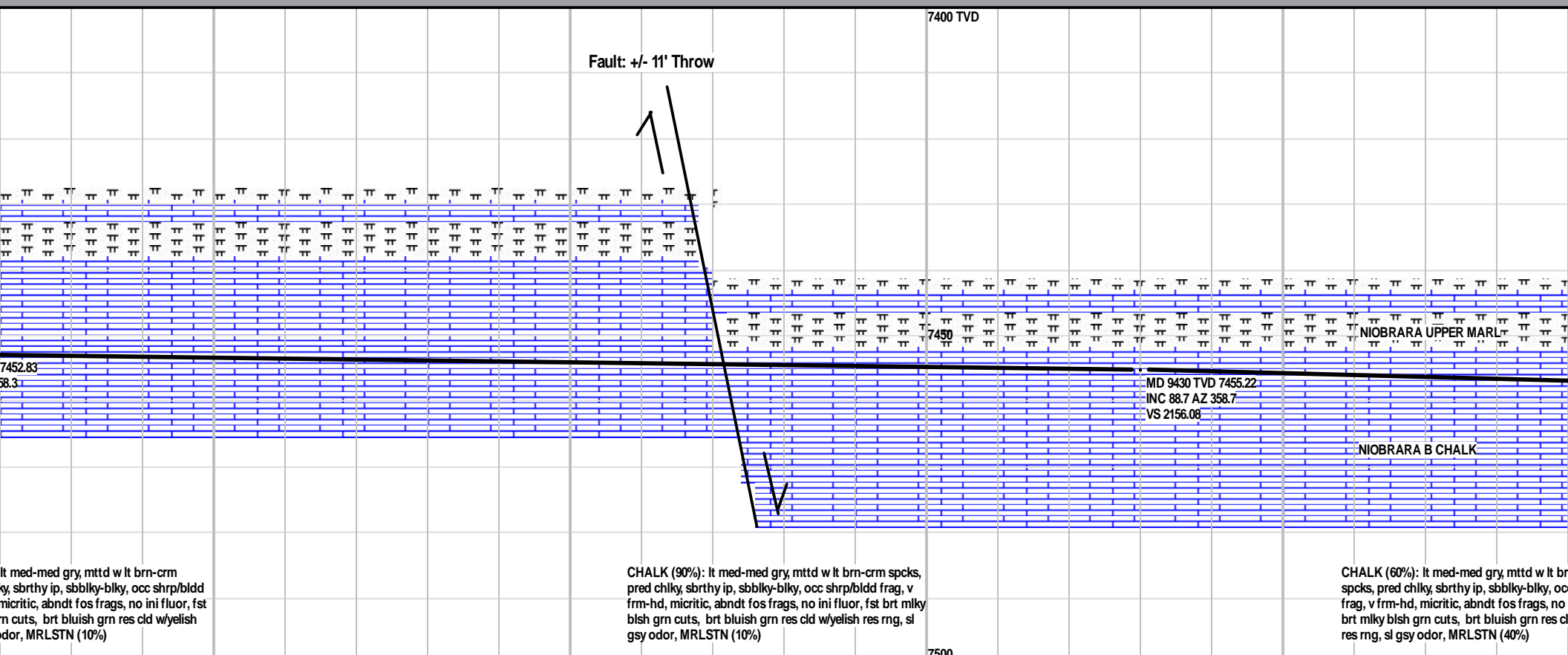
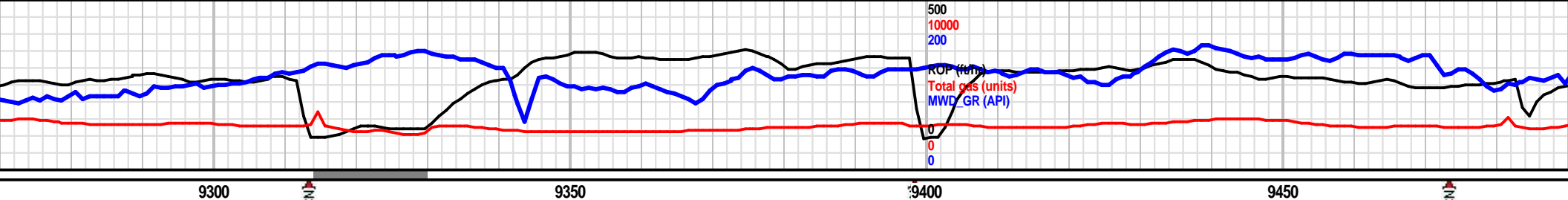
<p>B CHALK 7,446' TVD (-2,420')</p>	<p>MD 7740 TVD 7449.76 INC 83 AZ 0.4 VS 466.59</p>	<p>MD 7755 TVD 7451.3 INC 85.2 AZ 0.3 VS 481.51</p>	<p>MD 7813 TVD 7453.78 INC 89.9 AZ 0.6 VS 539.43</p>	<p>MD 7898 TVD 7453.11 INC 91 AZ 0.8 VS 624.4</p>
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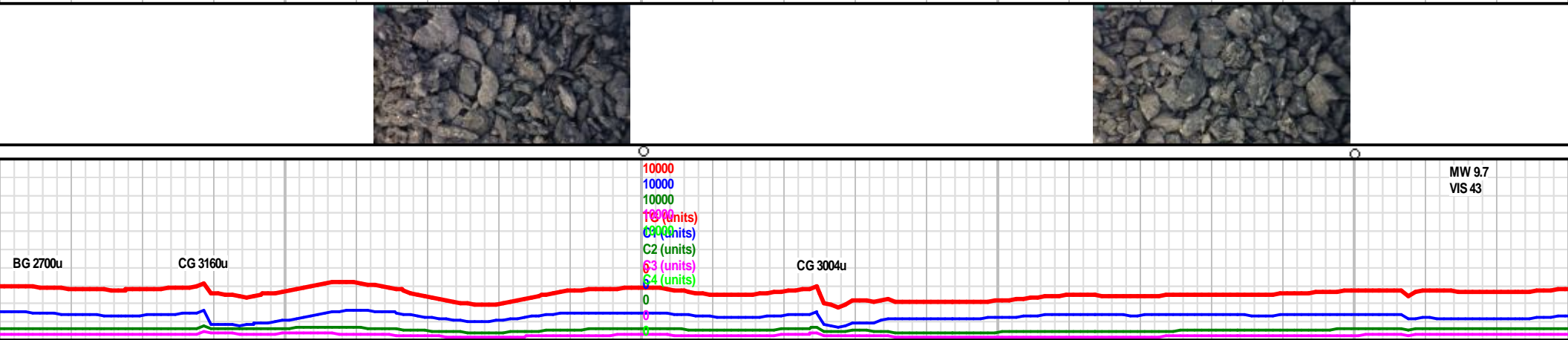
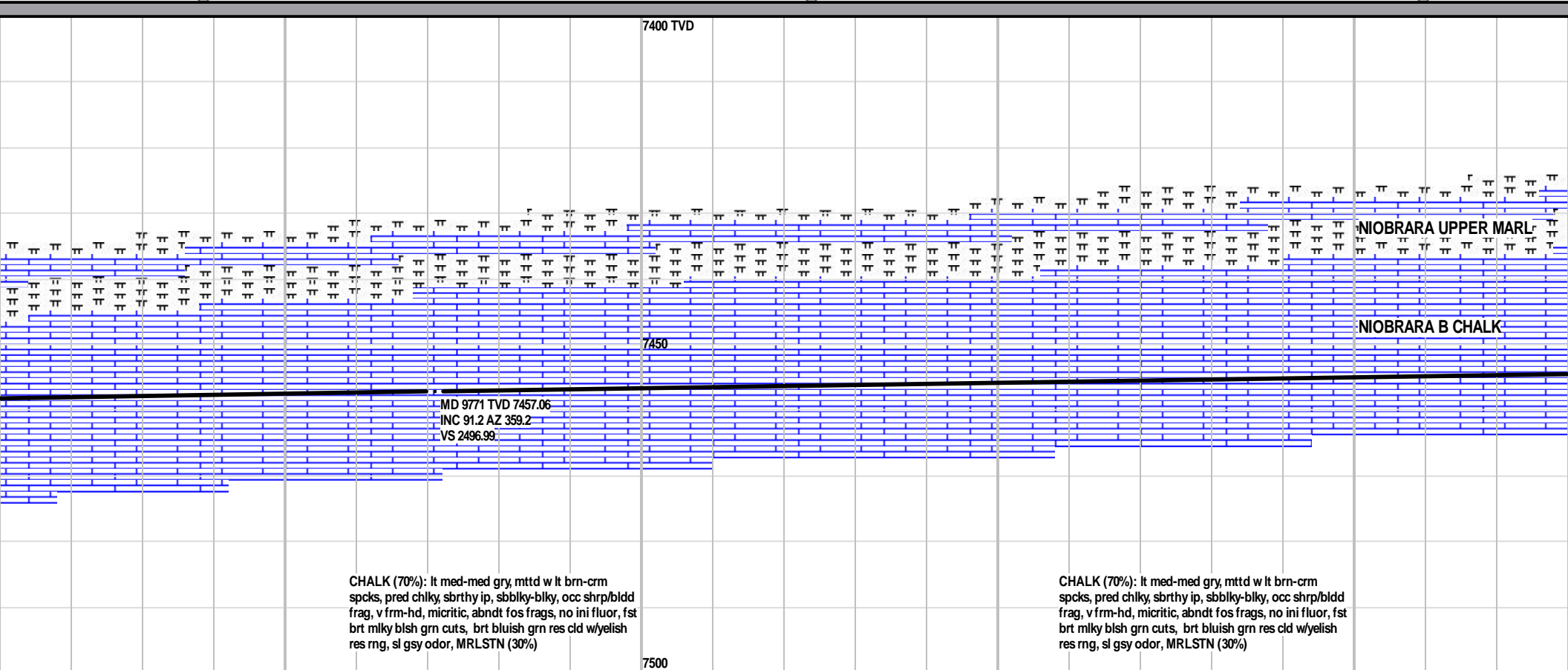


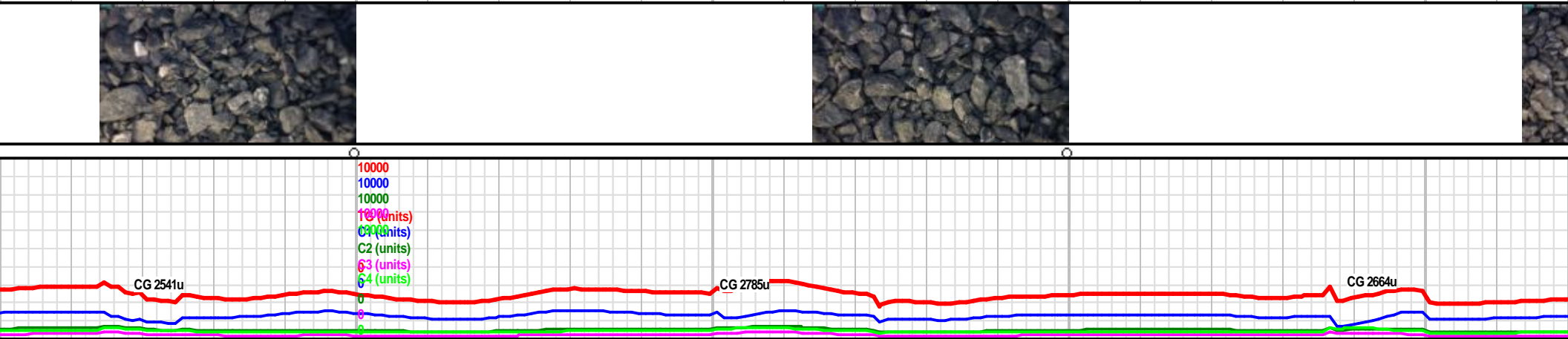
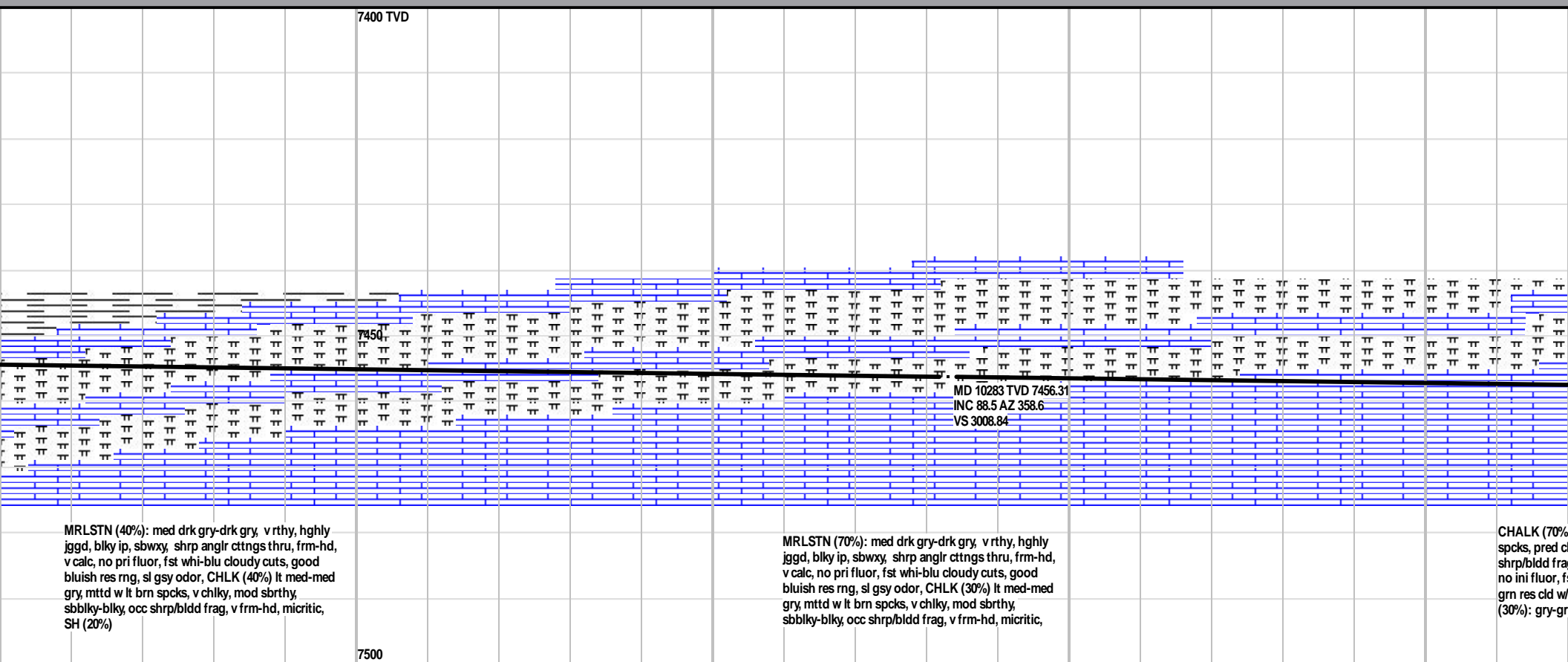
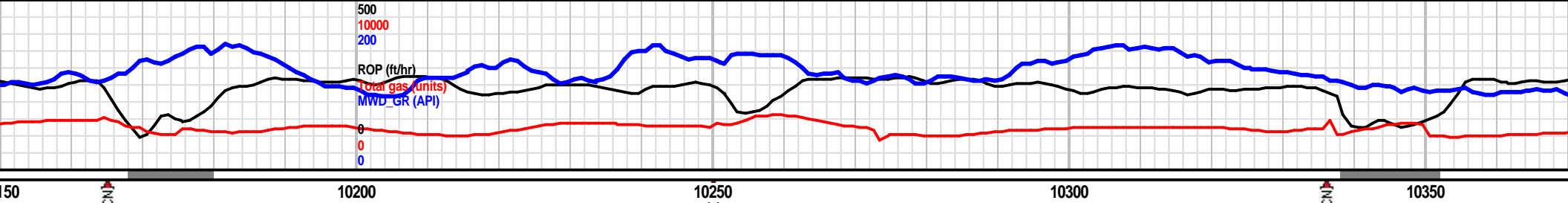


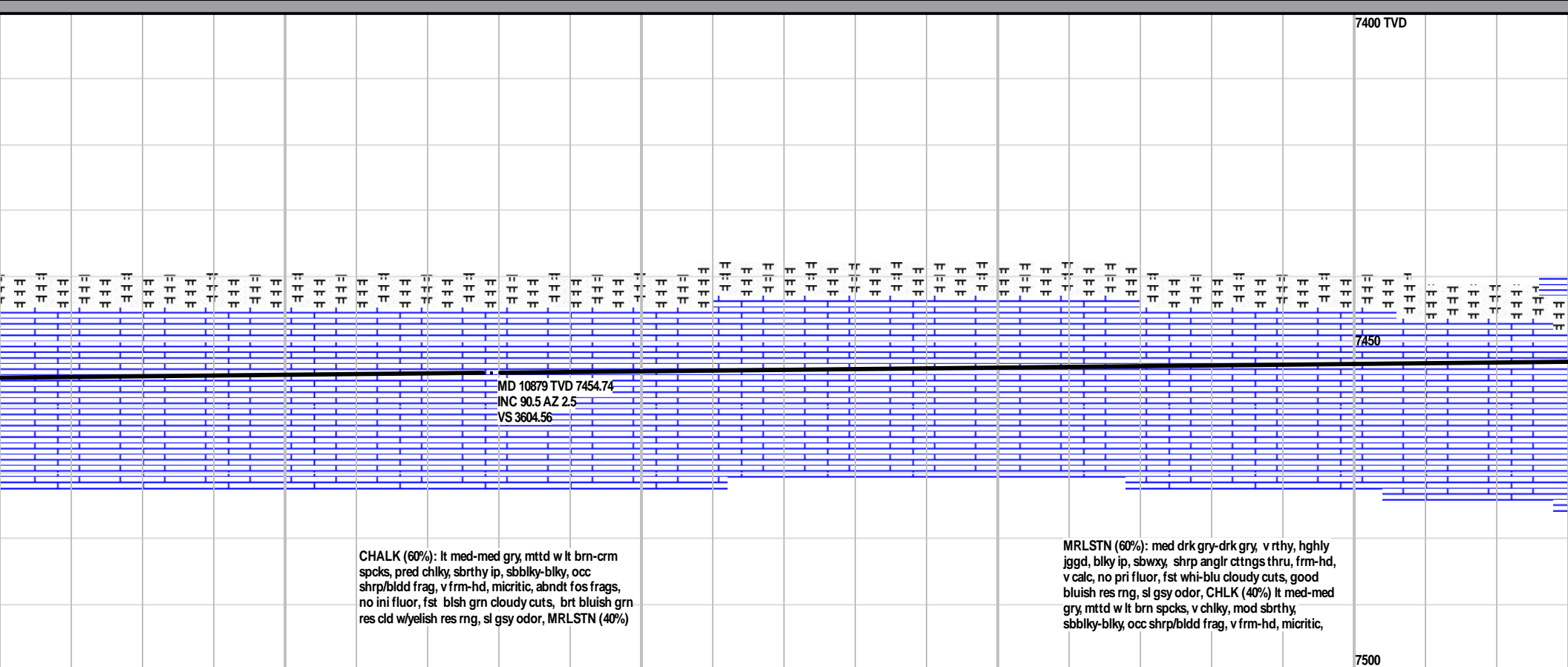
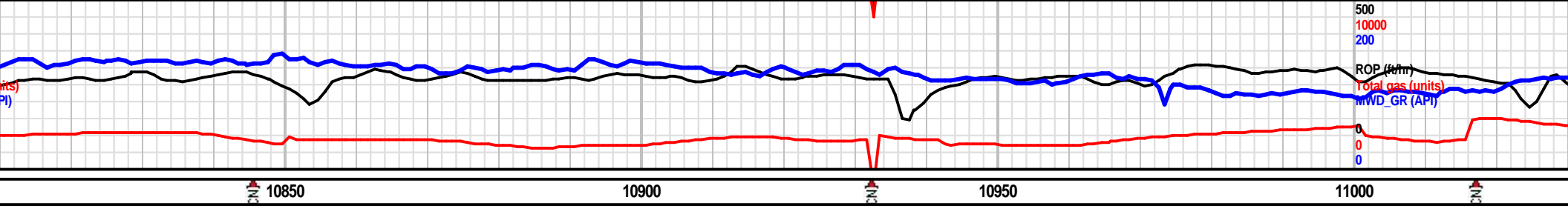






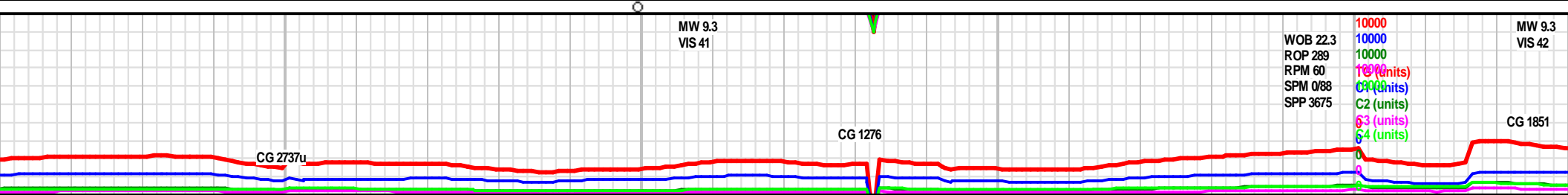






CHALK (60%): lt med-med gry, mtted w lt brn-crm spcks, pred chiky, sbrthy ip, sbbiky-blky, occ shrp/bldd frag, v frm-hd, micritic, abndt fos frags, no ini fluor, fst blsh grn cloudy cuts, brt bluish grn res cld wyelish res rng, sl gsy odor, MRLSTN (40%)

MRLSTN (60%): med drk gry-drk gry, v rthy, hghly jggd, blky ip, sbwxy, shrp anglr cttngs thru, frm-hd, v calc, no pri fluor, fst whi-blu cloudy cuts, good bluish res rng, sl gsy odor, CHLK (40%) lt med-med gry, mtted w lt brn spcks, v chiky, mod sbrthy, sbbiky-blky, occ shrp/bldd frag, v frm-hd, micritic,



MW 9.3
VIS 41

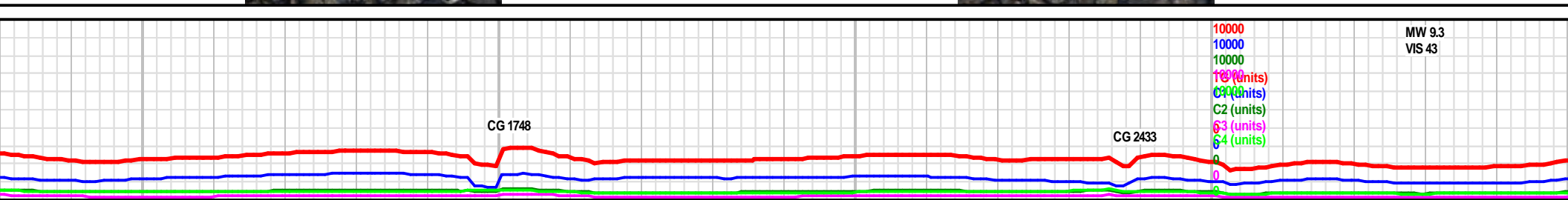
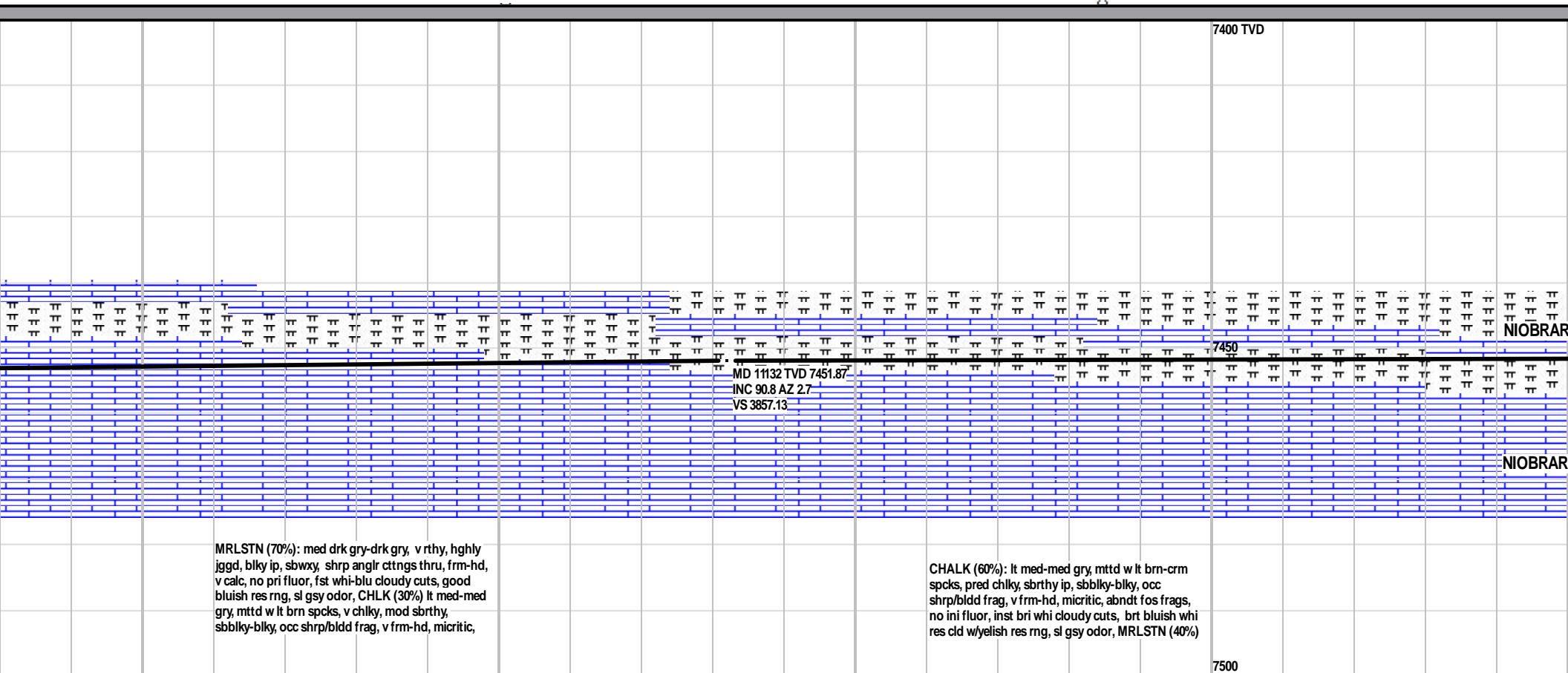
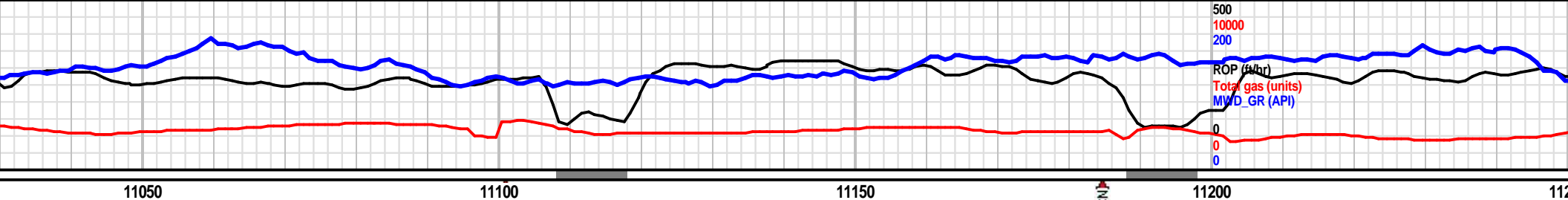
WOB 22.3
ROP 289
RPM 60
SPM 0/88
SPP 3675

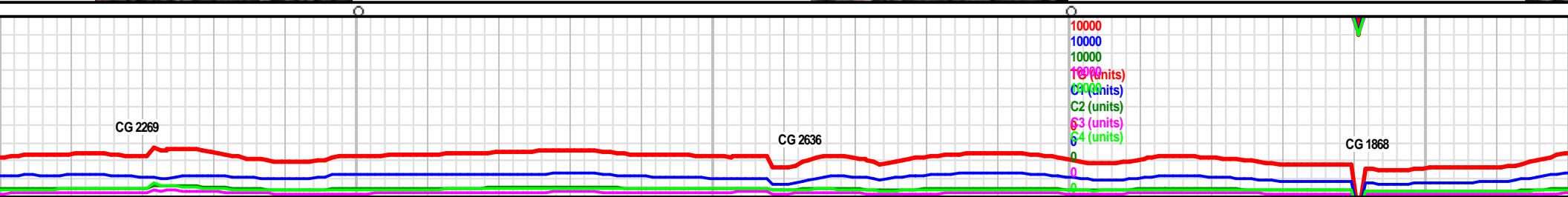
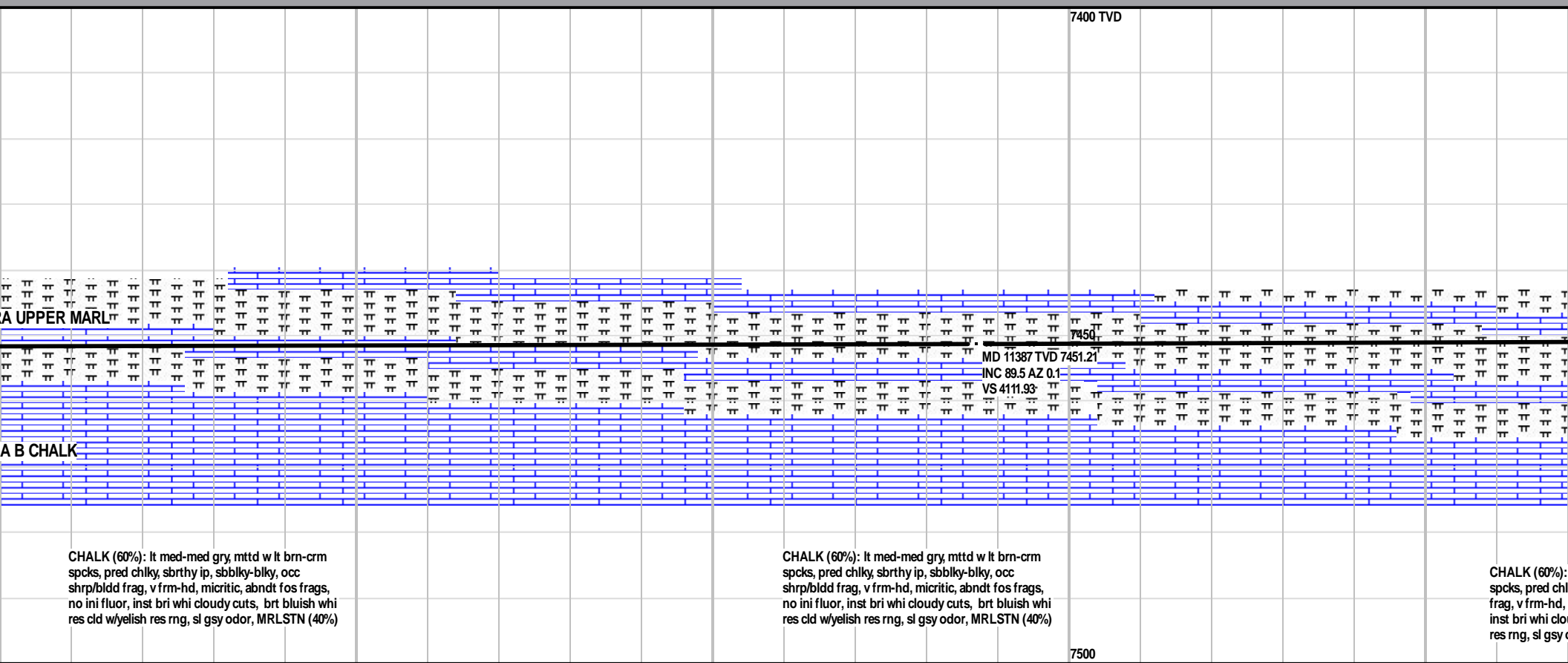
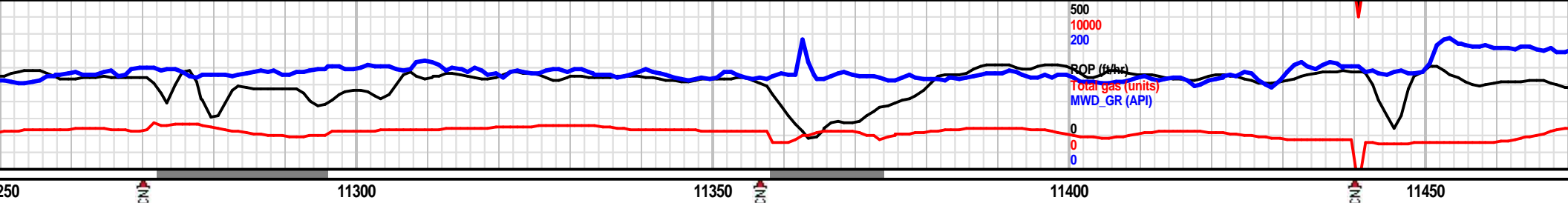
MW 9.3
VIS 42

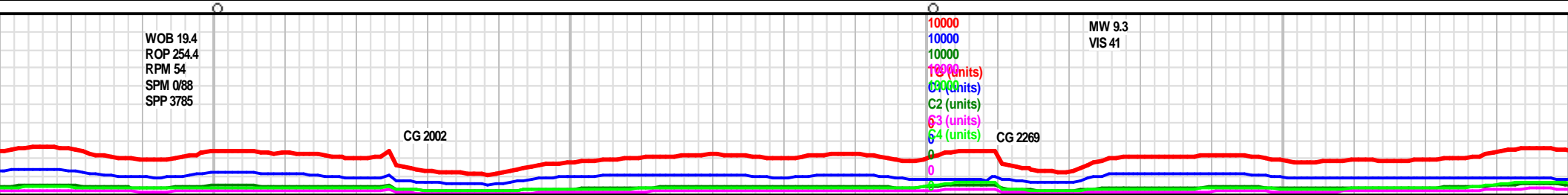
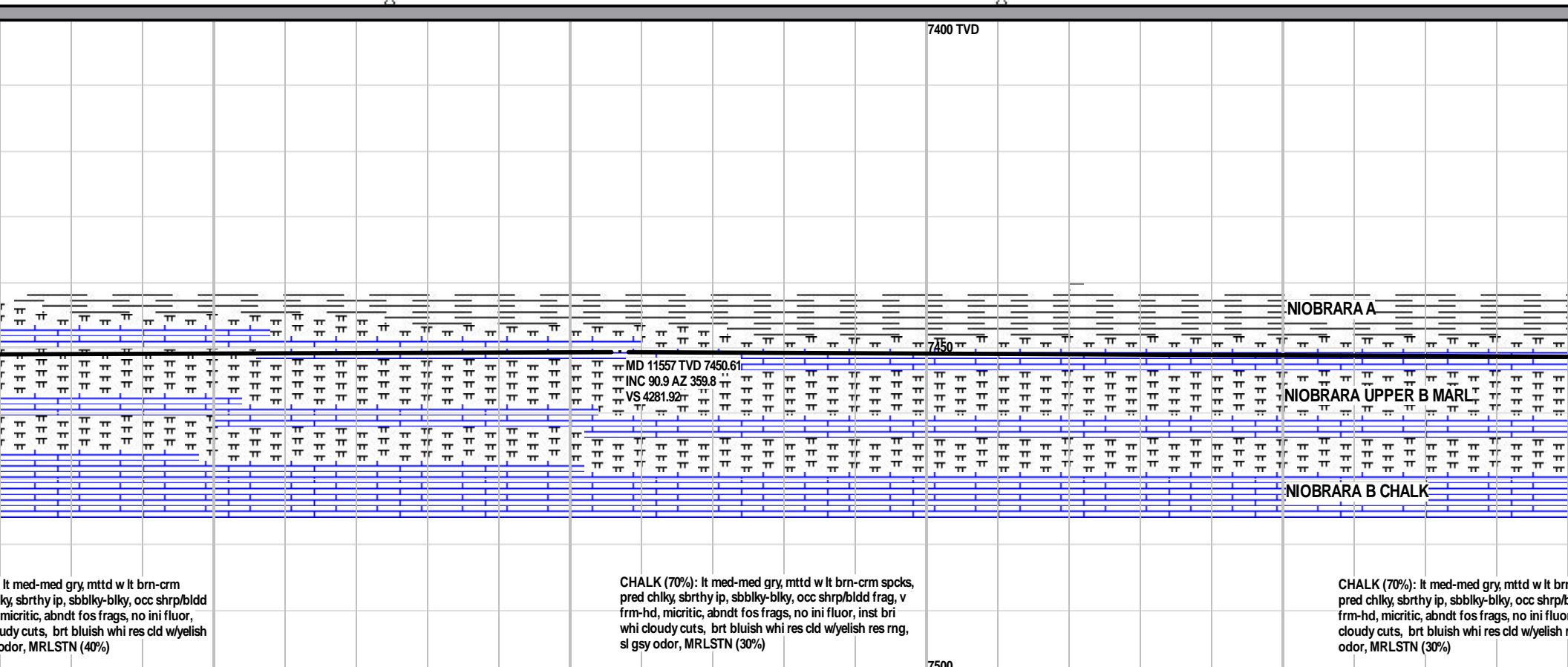
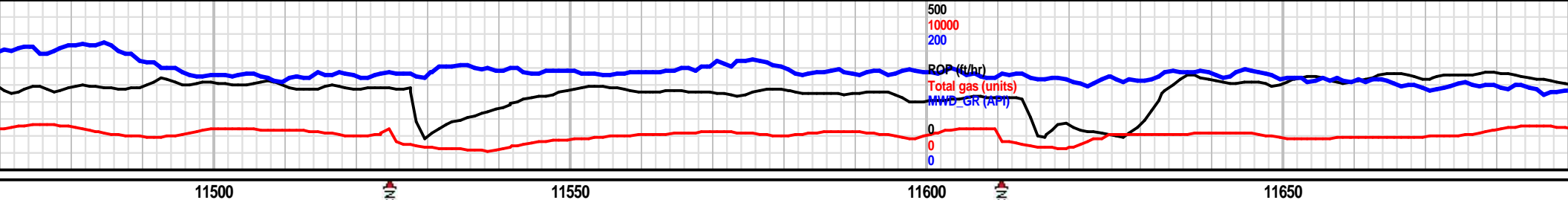
CG 2737u

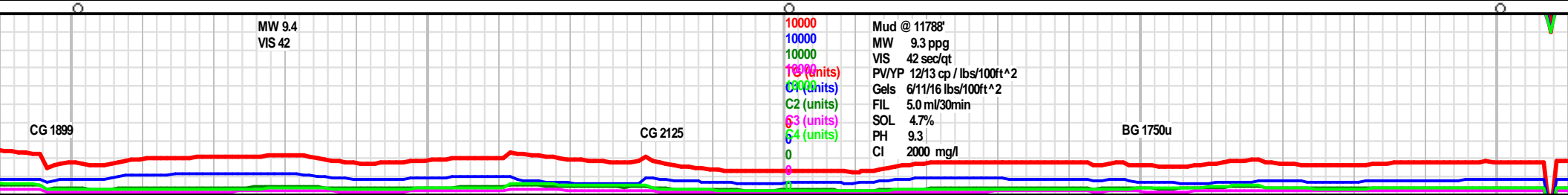
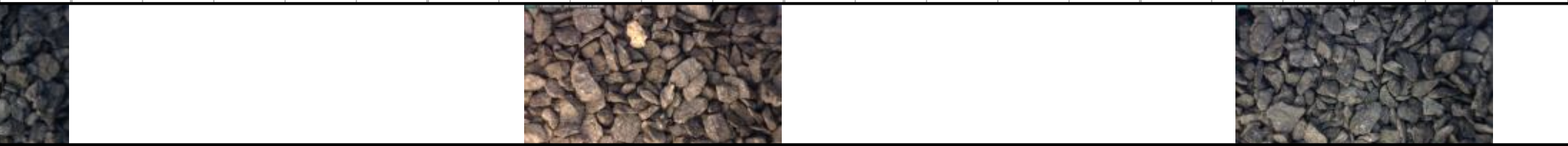
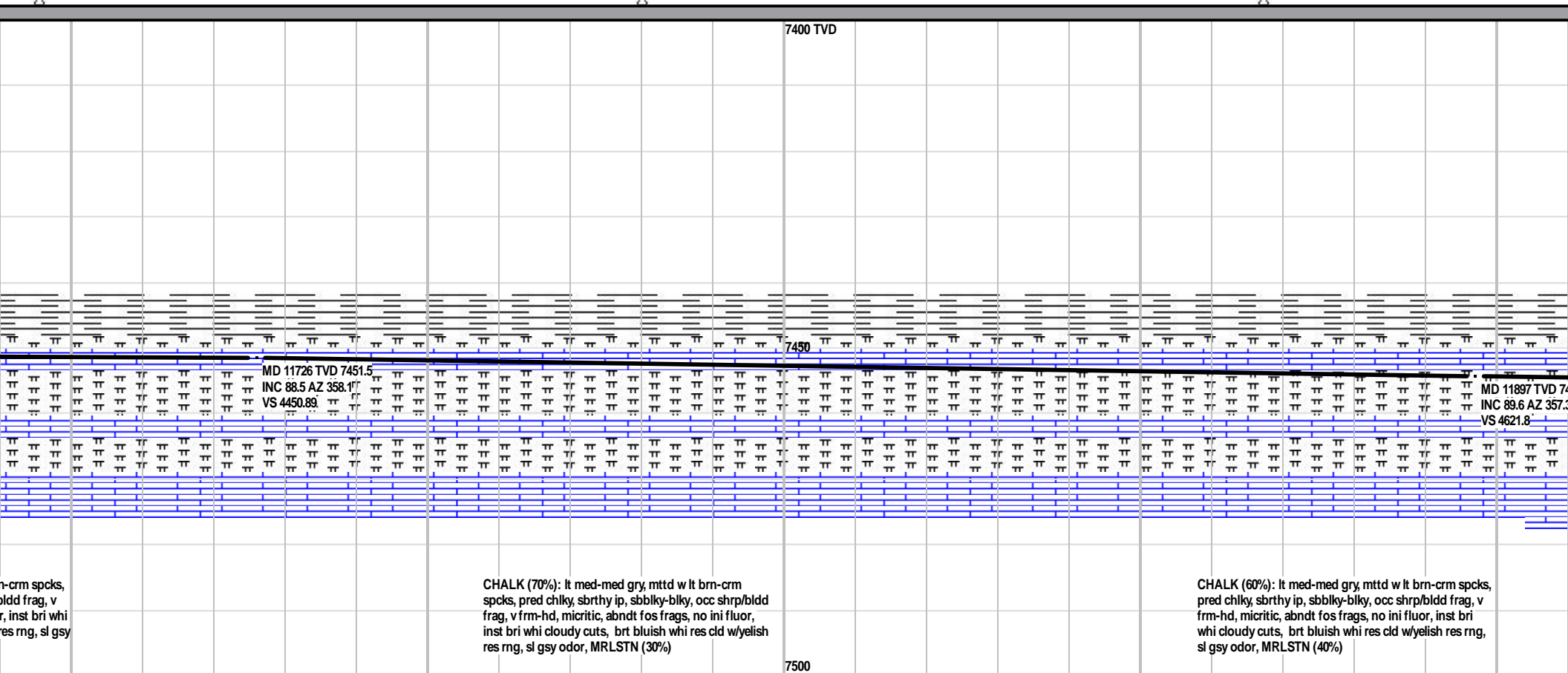
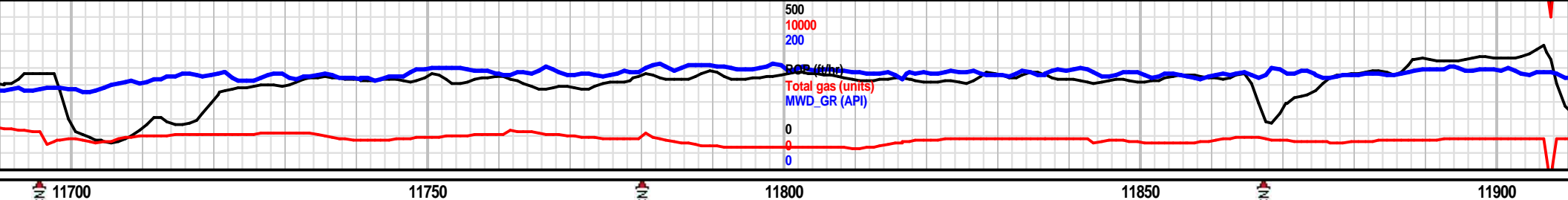
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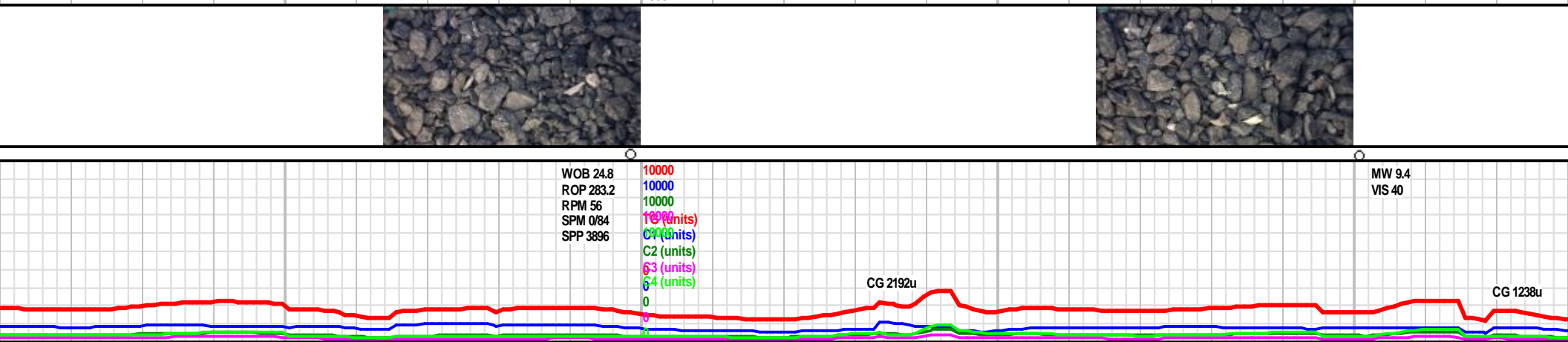
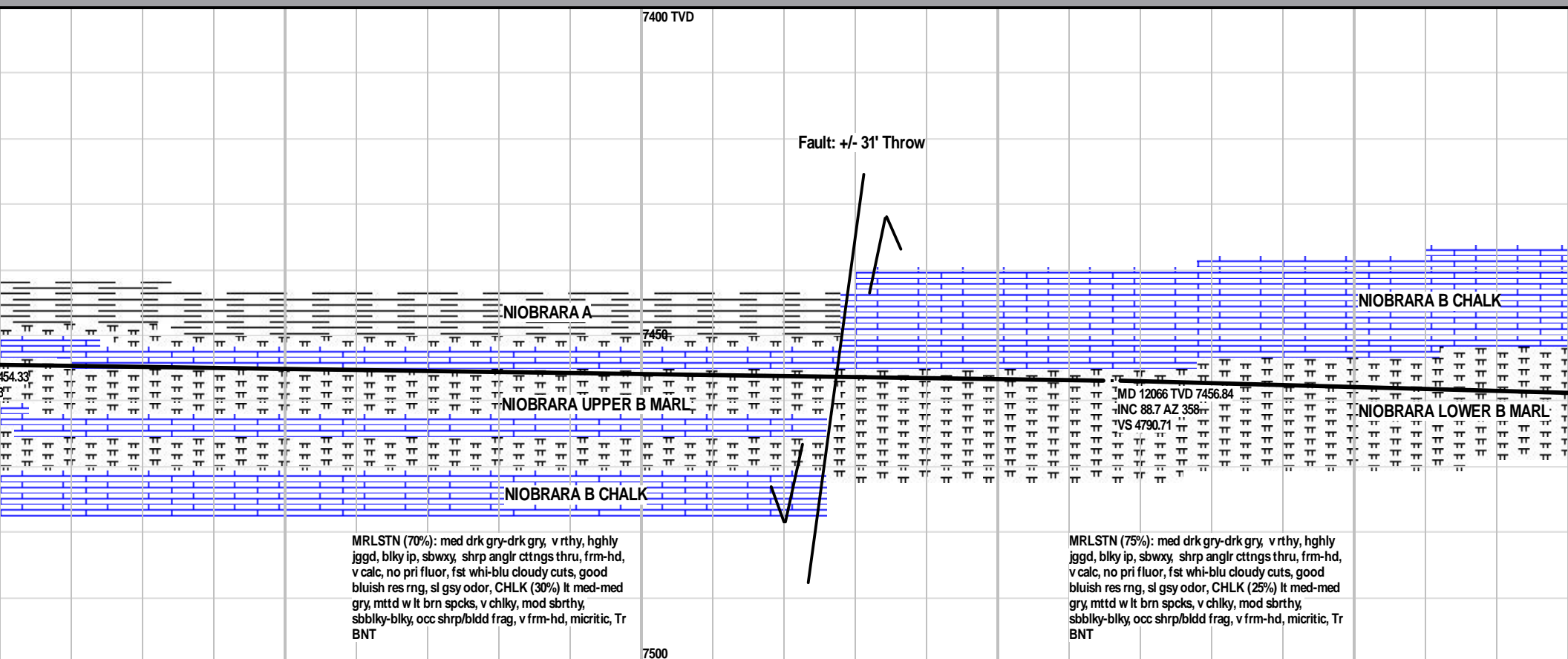
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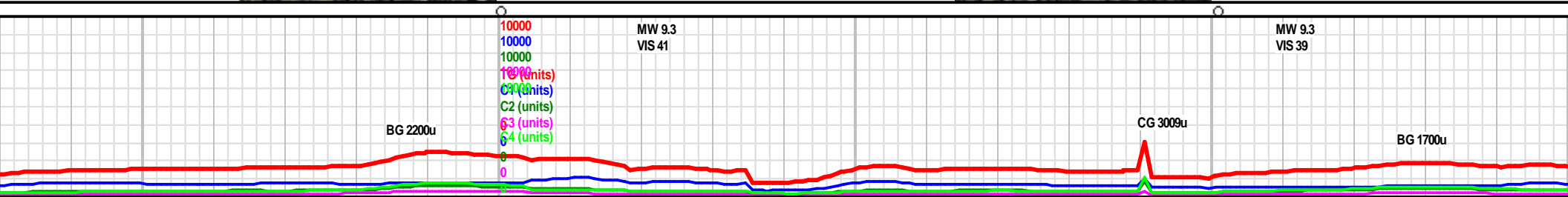
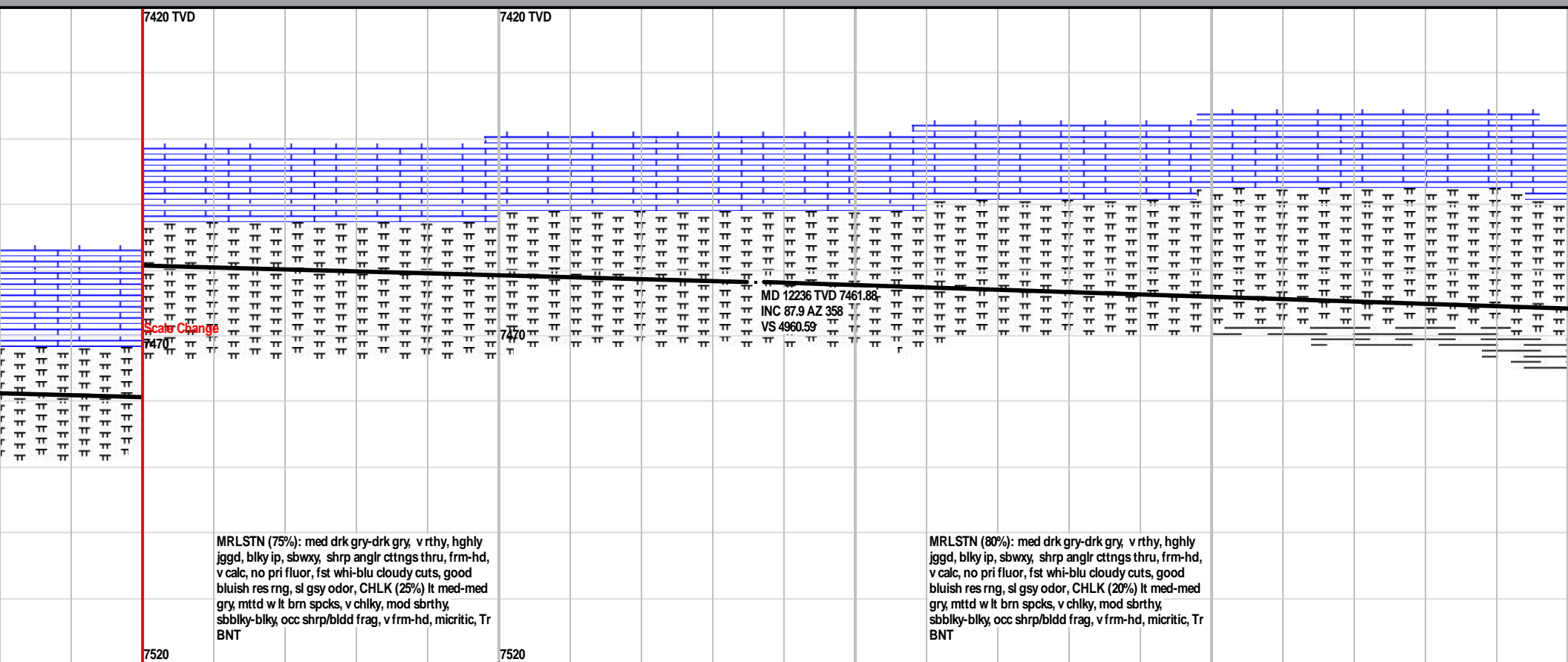
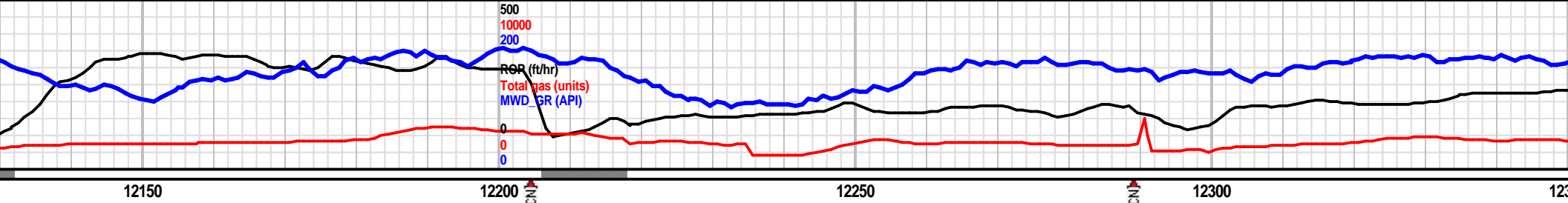


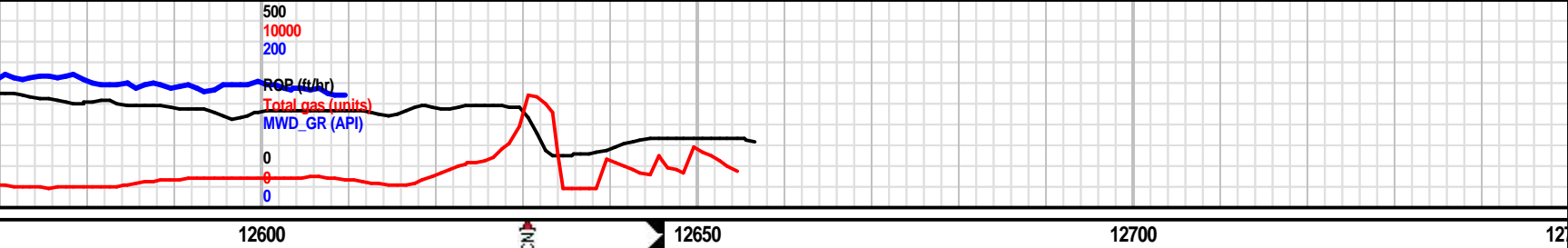












7420 TVD	TD @ 12,656' MD, REACHED ON JUNE 27, 2014 @ 02:58 HRS, CIRCULATE BOTTOMS UP, BIT #2 DRILLED 4,853' IN 22.5 HRS, AVG ROP 216 ft/hr. WIPER TRIP TO SHOE, TRIP OUT OF HOLE FOR 4 1/2" LINER, SET @ 12,646' ON JUNE 28, 2014.	
A B CHALK		
A LOWER B MARL		
A B SHALE		
MD 12605 TVD 7473.38	MD 12656 TVD 7474.54	
INC 88.7 AZ 357.5	INC 88.7 AZ 357.5	
VS 5329.28	VS 5380.24	
7520		

FORMATION TOPS

Sharon Springs	7,373' MD (7,306' TVD)
Niobrara A	7,475' MD (7,368' TVD)
Niobrara B Chalk	7,712' MD (7,446' TVD)
DMTD	12,656' MD
Production Liner	12,646' MD

Projected to Bit

Thank You
Goolsby Bros. & Assoc.
Blake Stacey and Dan Kabala

0%): med drk gry-drk gry, v rthy, highly
o, sbwxy, shrp anglr ctngs thru, frm-hd,
ri fluor, fst whi-blu cloudy cuts, good
ng, sl gsy odor, CHLK (10%), Tr BNT

MRLSTN (80%): med drk gry-drk gry, v rthy, highly
jggd, blk ip, sbwxy, shrp anglr ctngs thru, frm-hd,
v calc, no pri fluor, fst whi-blu cloudy cuts, good
bluish res rng, sl gsy odor, CHLK (20%), Sample
collected at 12,656' MD at BU

