

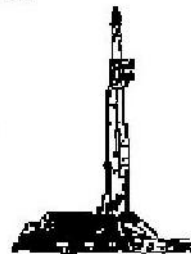
GOOLSBY BROTHERS
and associates, inc.

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: Paragon 40C-31HZ

Location: Section 6 T1N R65W, Weld County, CO.

License Number: API: 5123215030000 /AFE: 2067733

Region: Wattenberg

Spud Date: January 1, 2014

Drilling Completed: January 11, 2014

Surface Coordinates: 422' FSL & 300' FEL Sec. 6 T1N R65W

Lat: 40.074414 N Long: -104.698213 W

Bottom Hole 2197' FSL & 250' FEL Sec 31 T2N R65W

Coordinates:

Ground Elevation (ft): 4975'

K.B. Elevation (ft): 4992'

Logged Interval (ft): 6600'

To: 14409'

Total Depth (ft): 14409'

Formation: Codell

Type of Drilling Fluid: LSND (Polymer-Water)

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

OPERATOR

Company: Anadarko Petroleum Corporation

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

Denver, CO 80202

CO Geologist, Tom Birmingham.

GEOLOGIST

Name: Hank McCroskey/George Bejan
Company: Goolsby Brothers & Assoc. (GBA), Inc. (www.goolsbybrothers.com)
Address: 575 Union Blvd.
Suite 208,
Lakewood CO. 80228

E-logs

MWD Gamma:

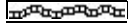
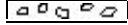




Casing

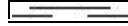
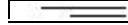


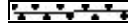

casing: 7", 26# HTP 110 DQX
liner: 4 1/2", 11.6# HTP 110 LTC DQX






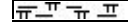
Comments

- 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, James Steen
- 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)
 Silty sh
 Carb sh
 Carb sh_
 Ss











 Arg ss
 Ss (f gr+)
 Siltst
 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
 Siltst 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

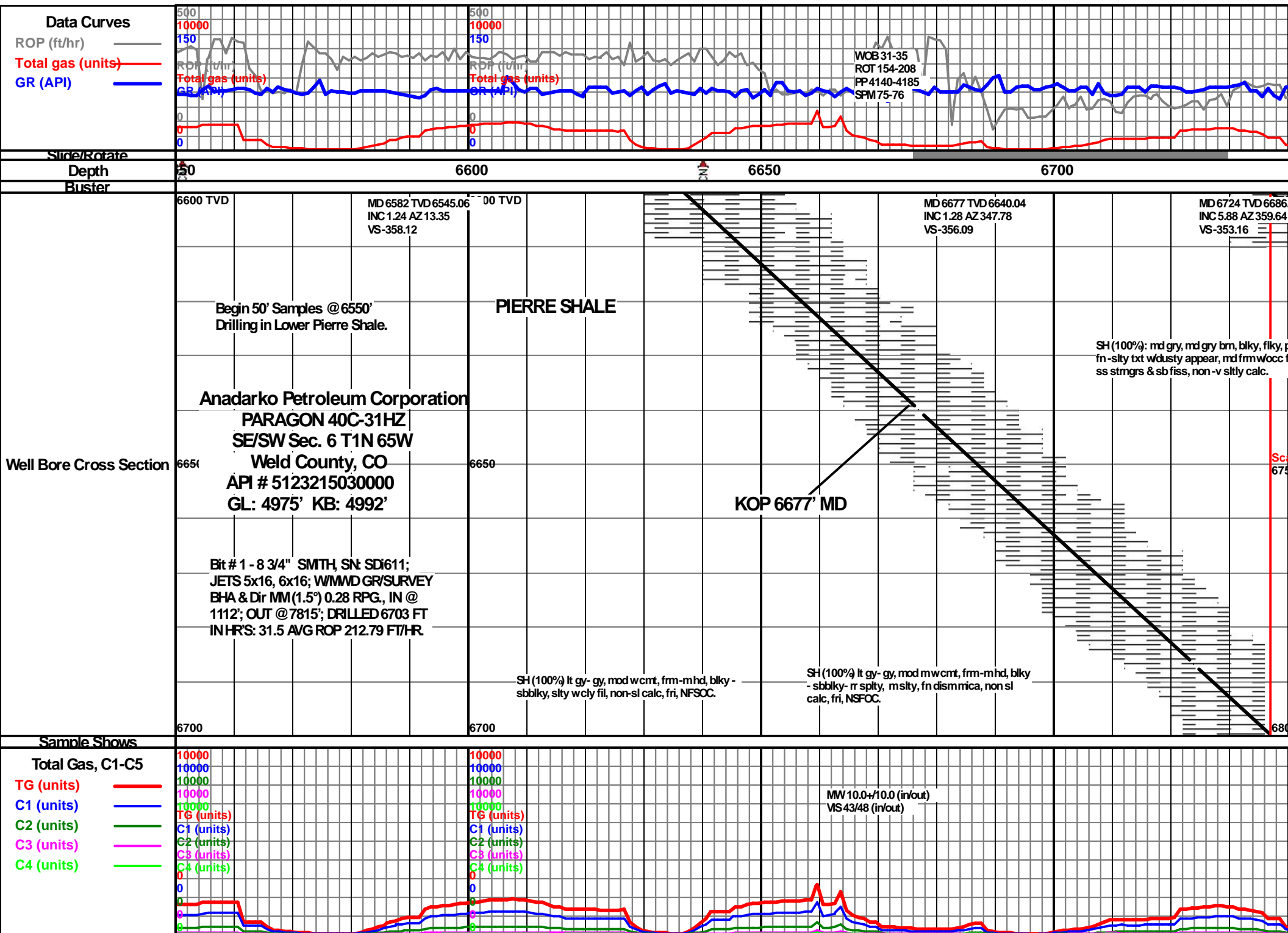
ROUNDING

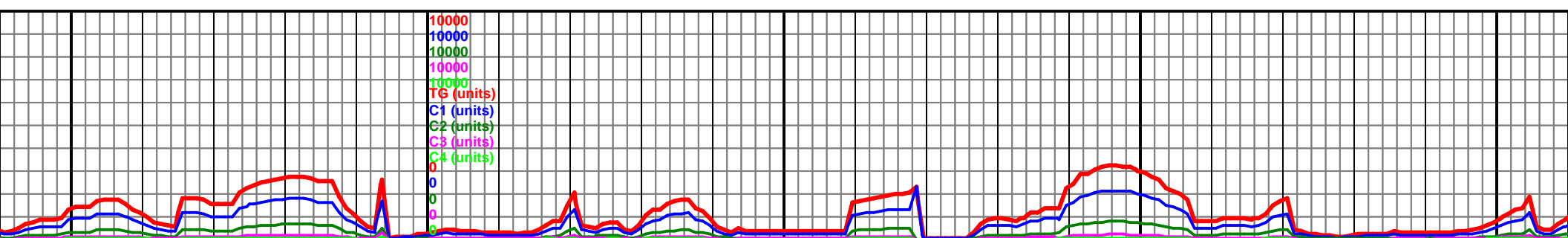
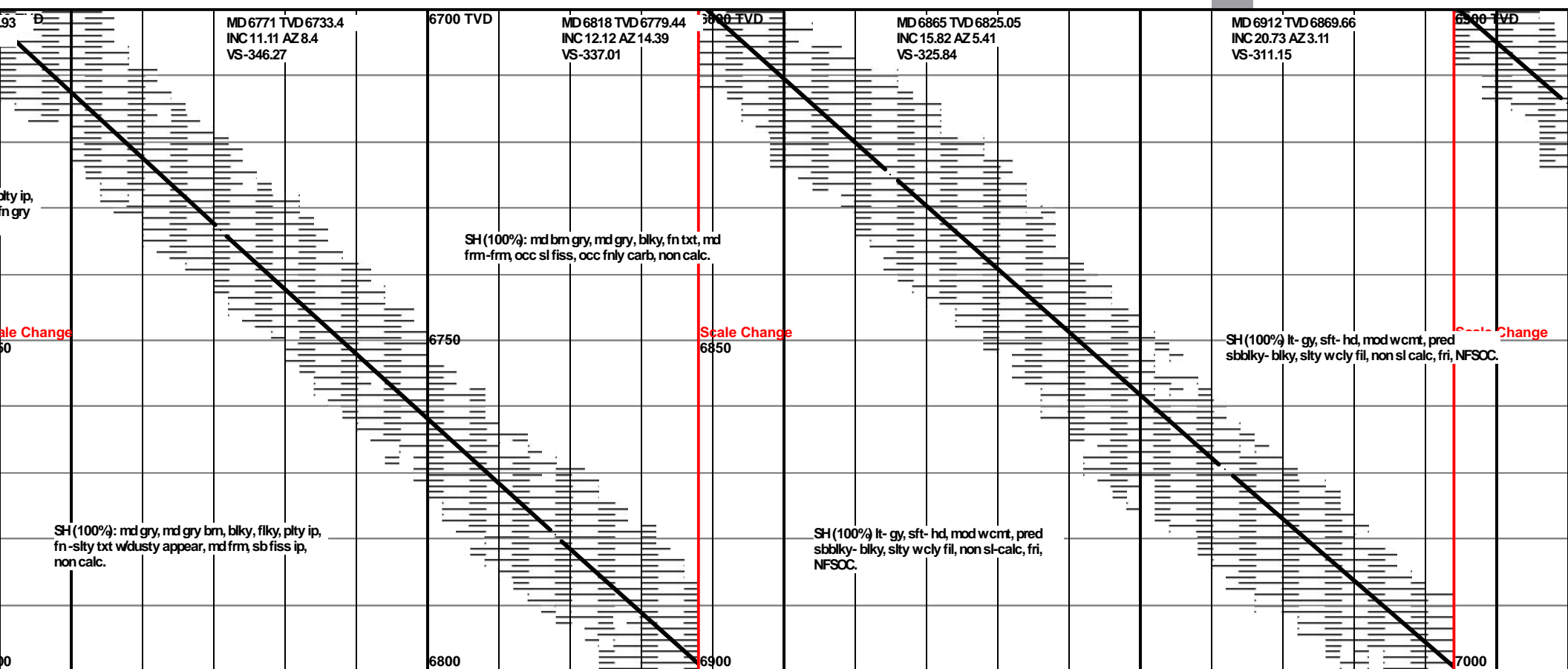
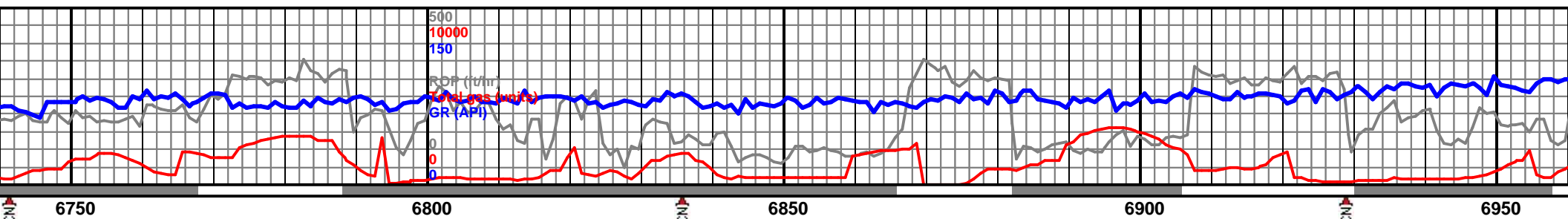
 Rounded
 Subrnd
 Subang

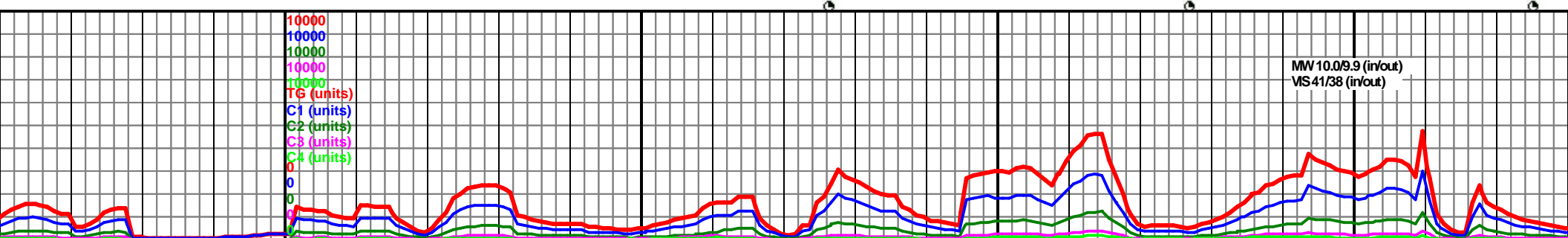
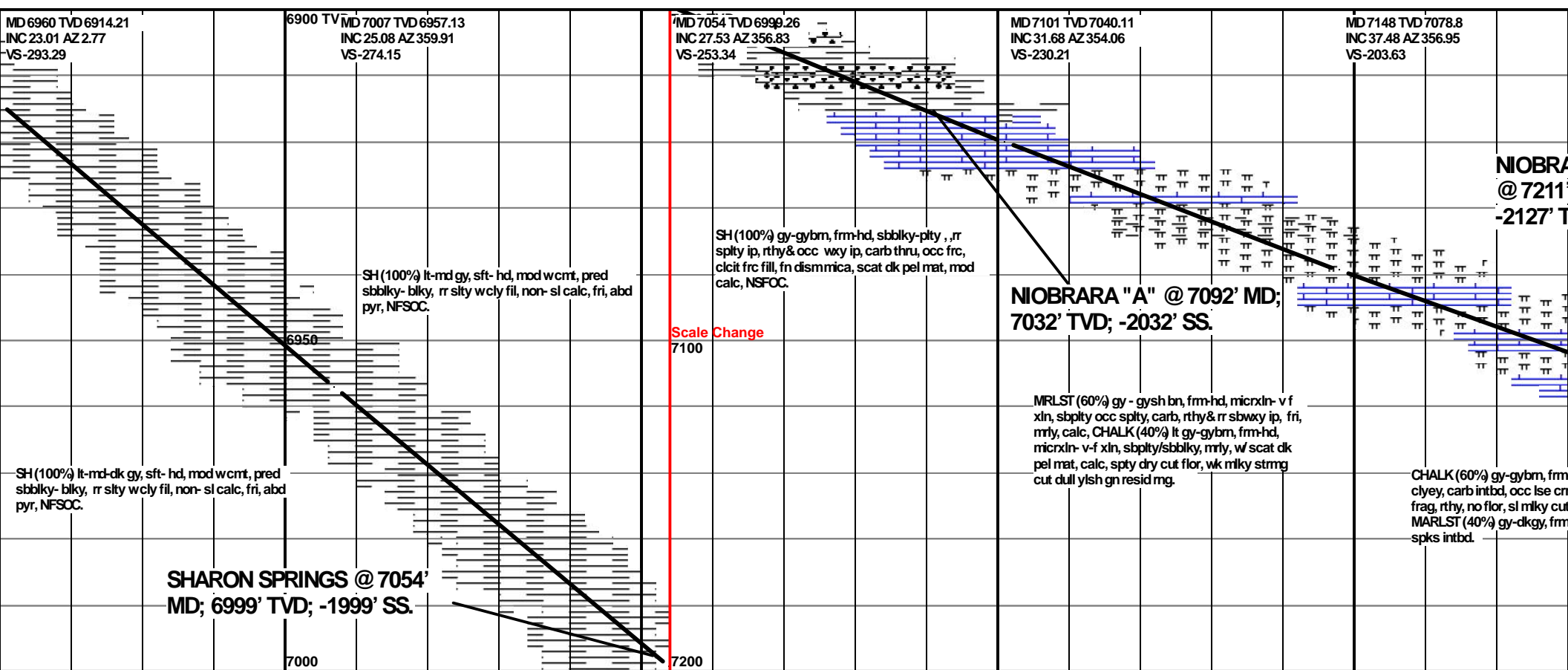
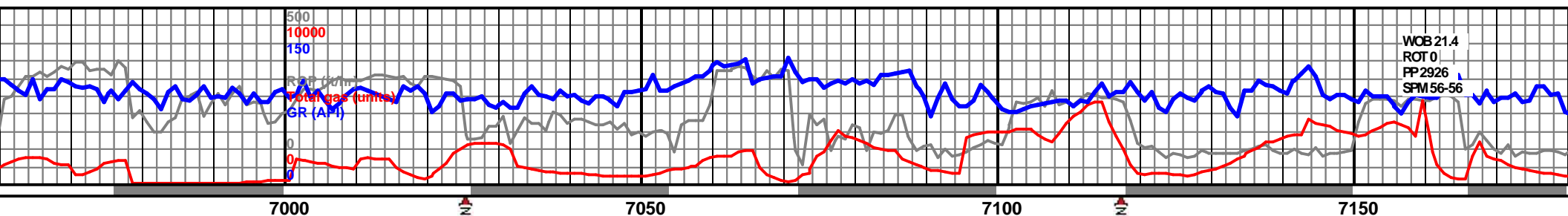
 Angular

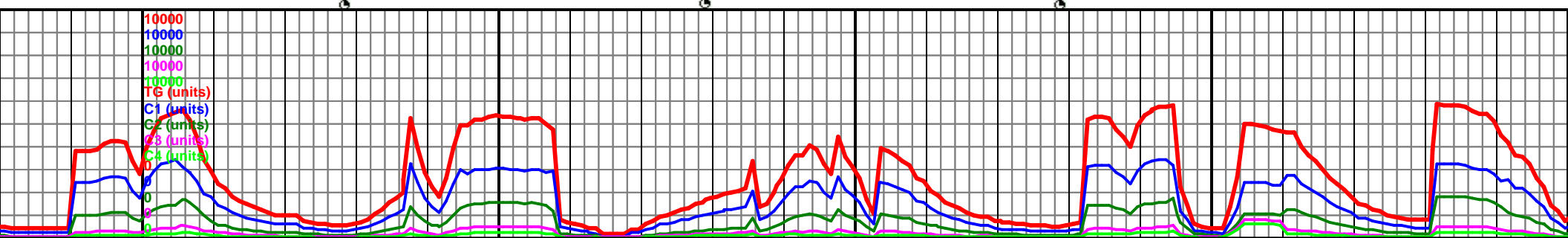
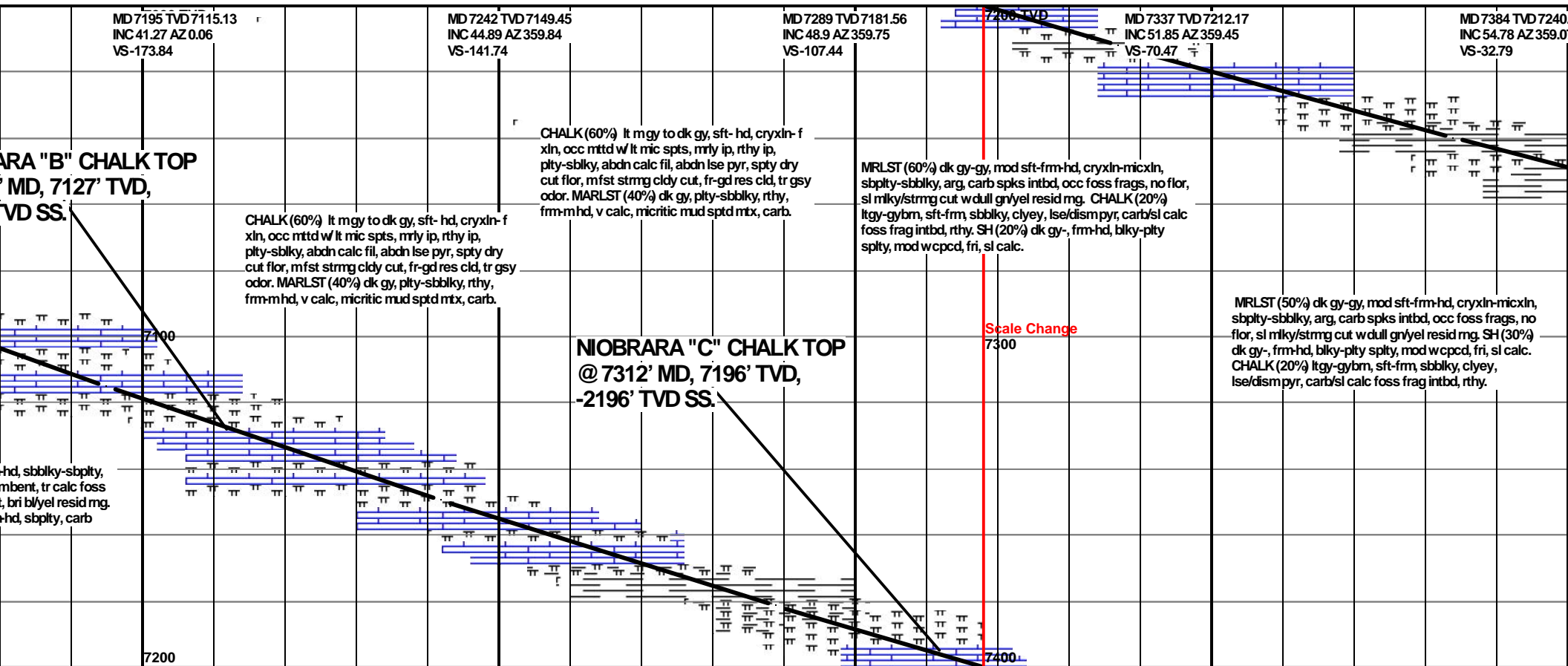
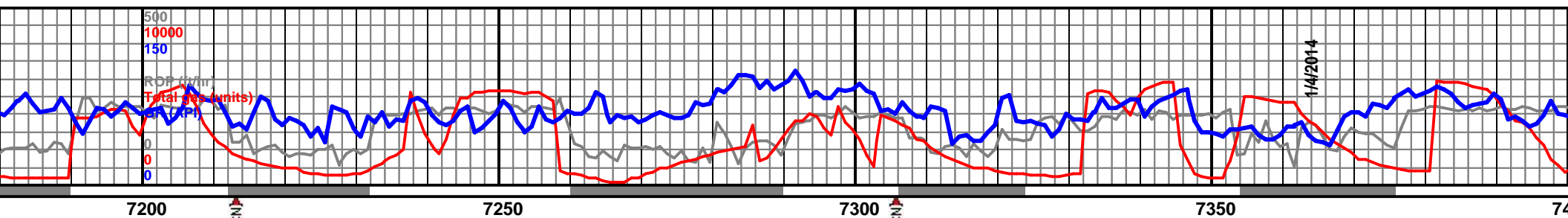
SORTING

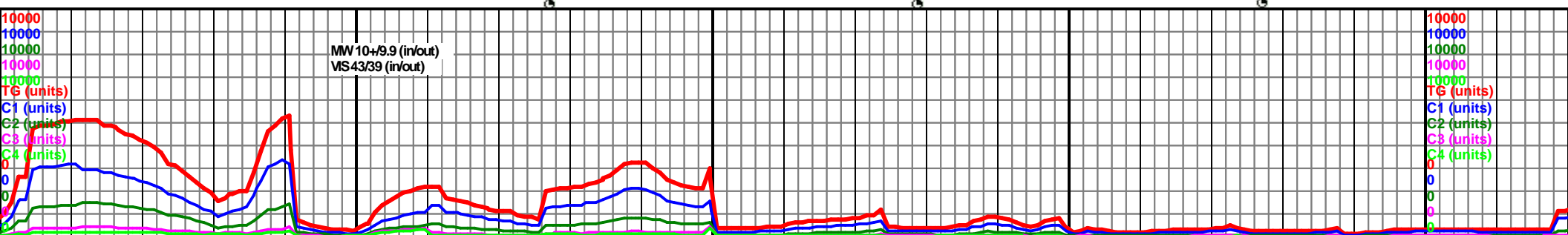
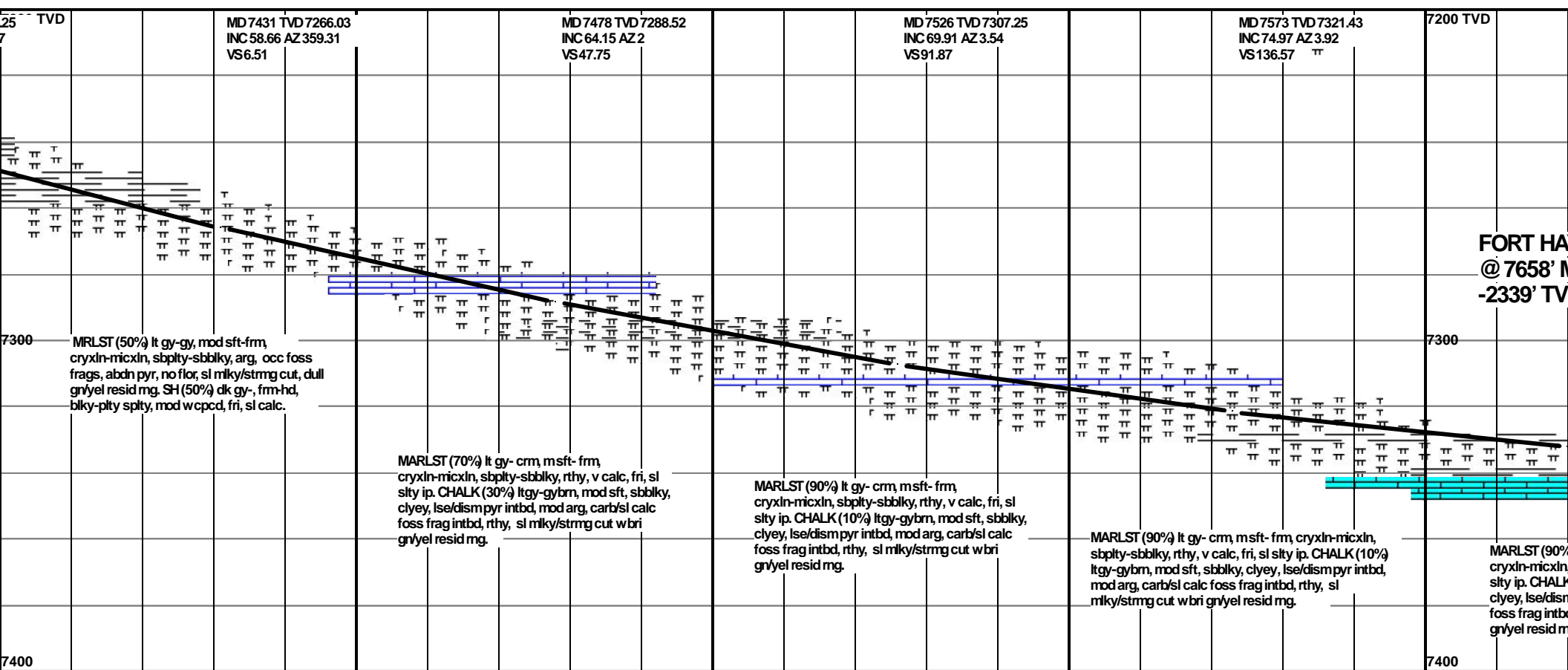
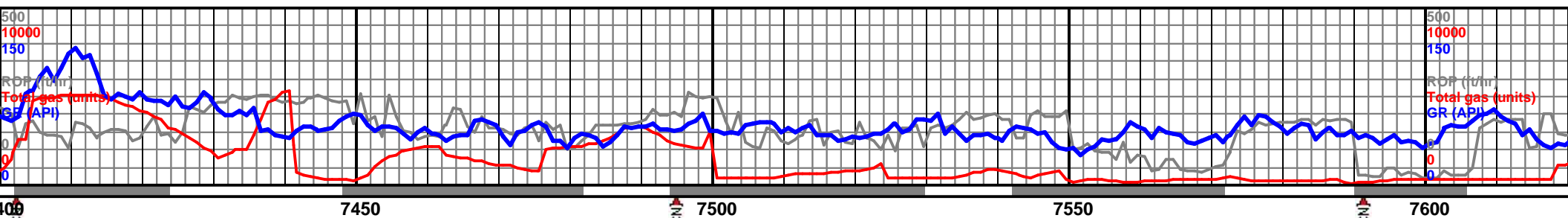
 Well
 Moderate
 Poor

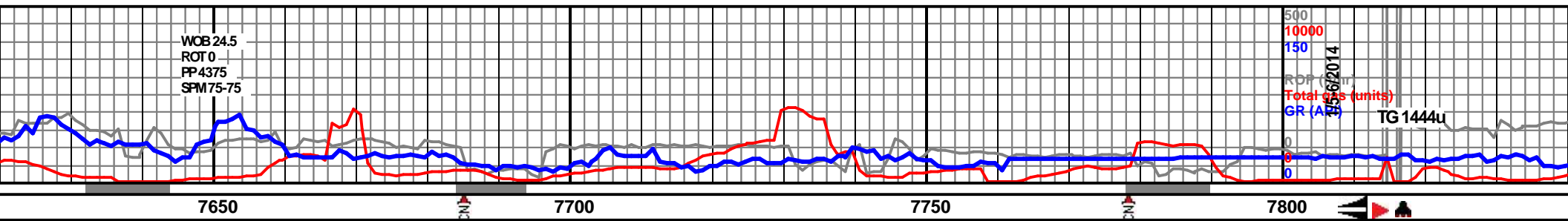




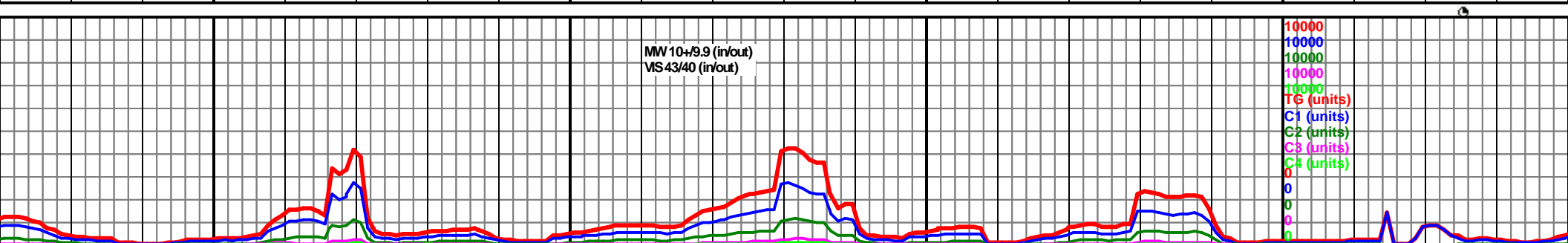


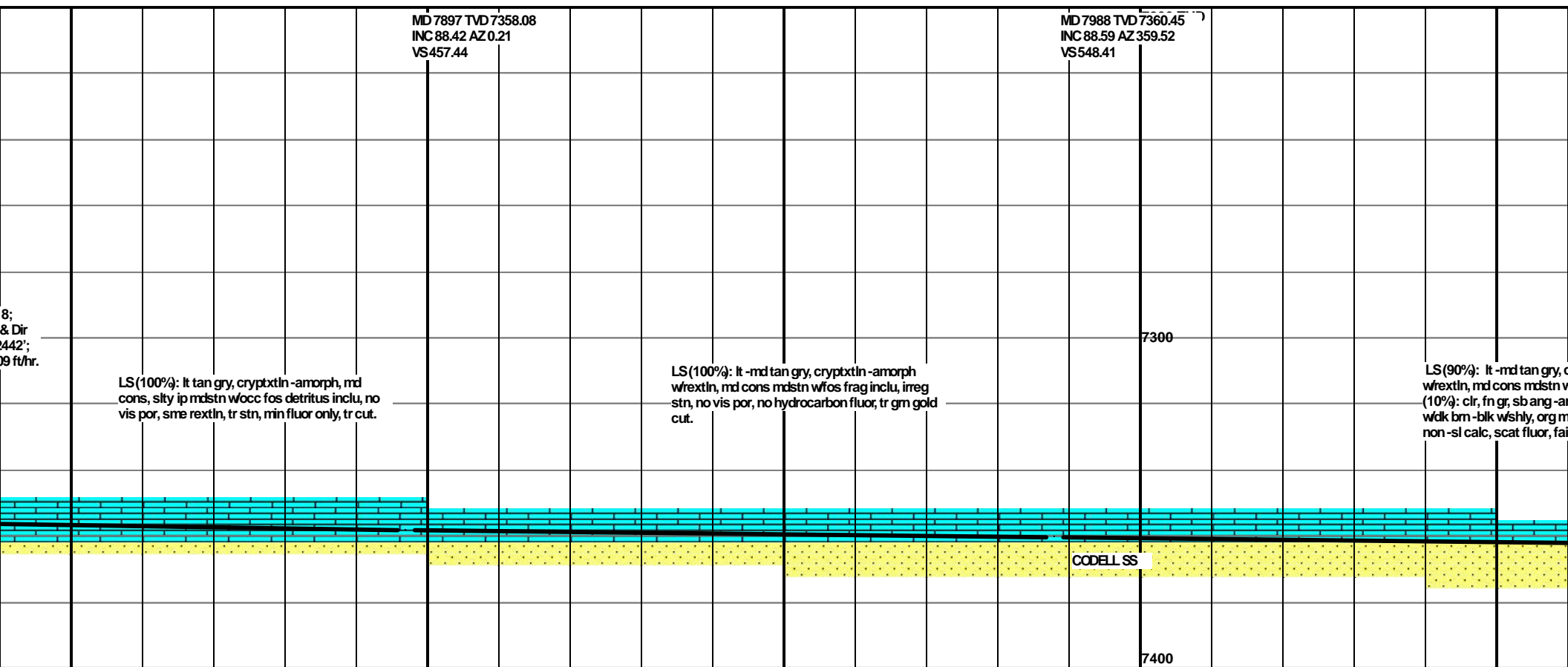
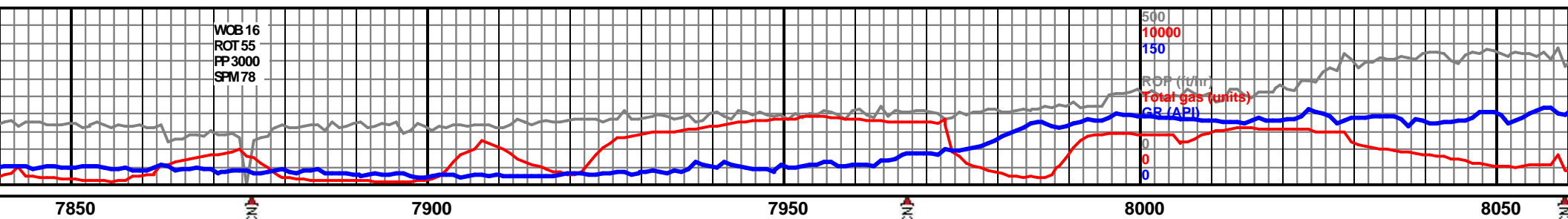


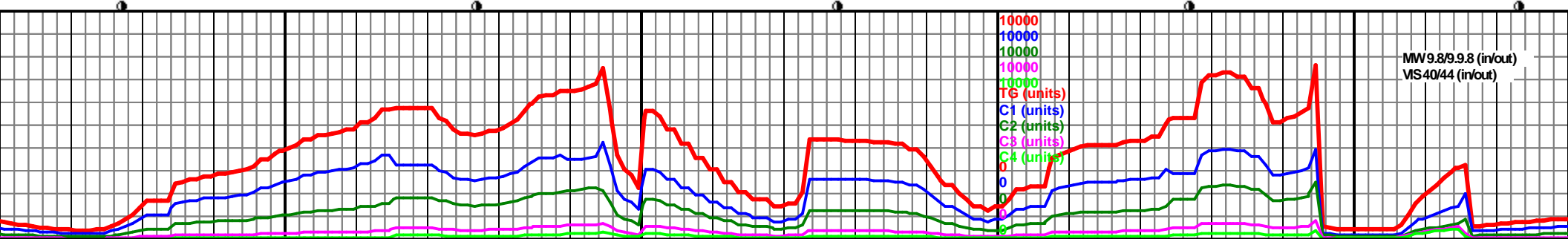
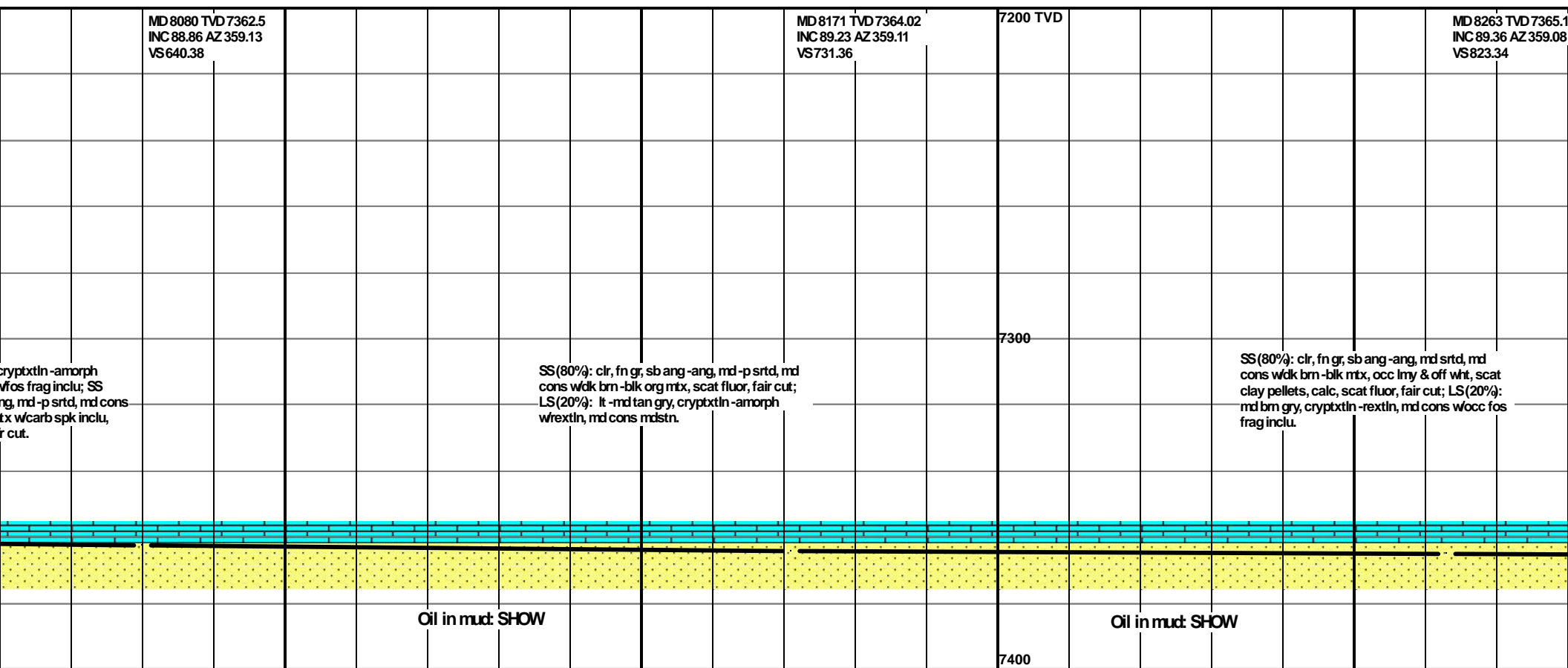
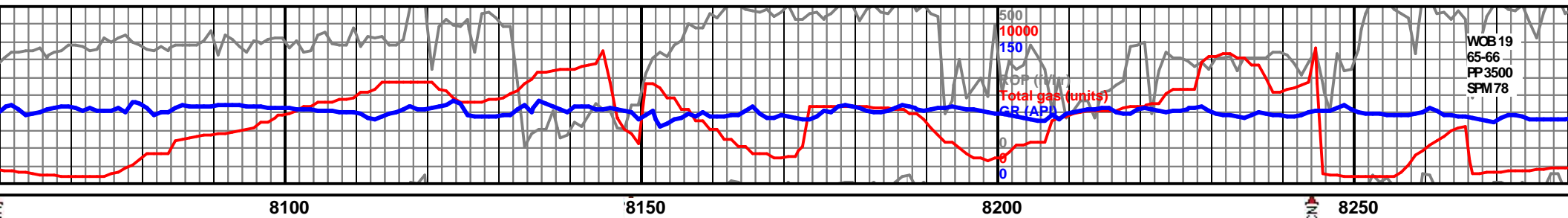


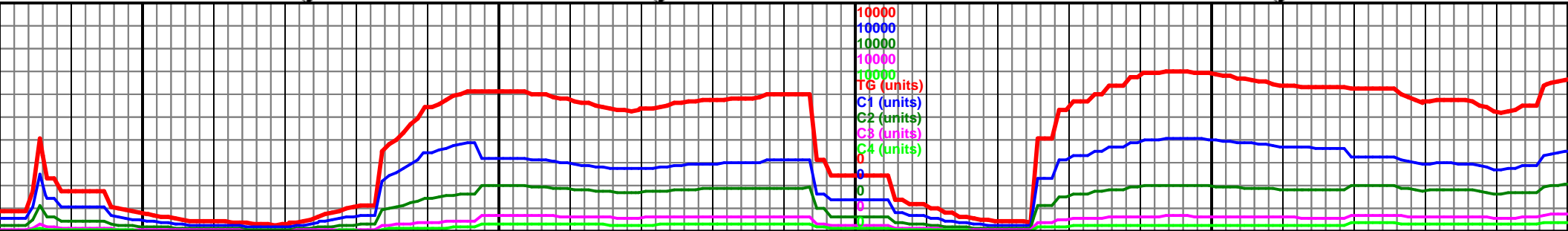
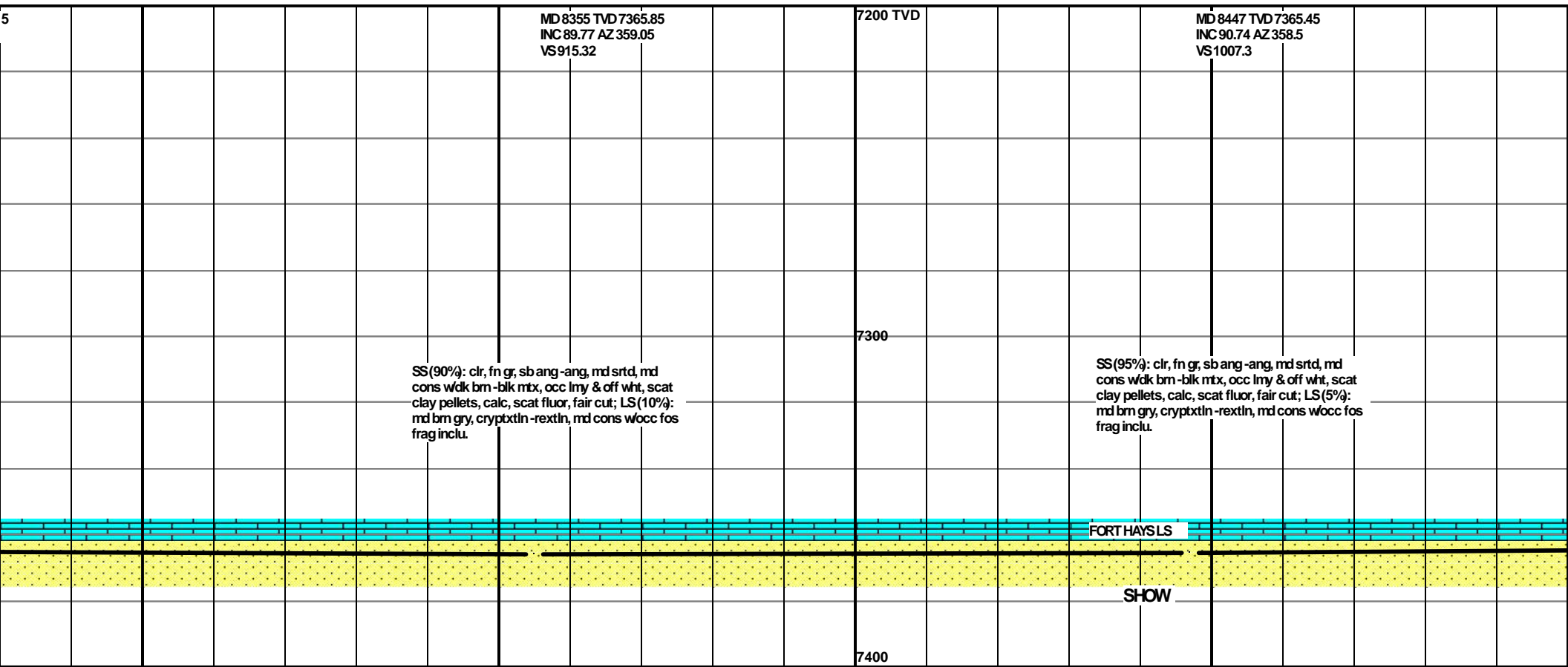
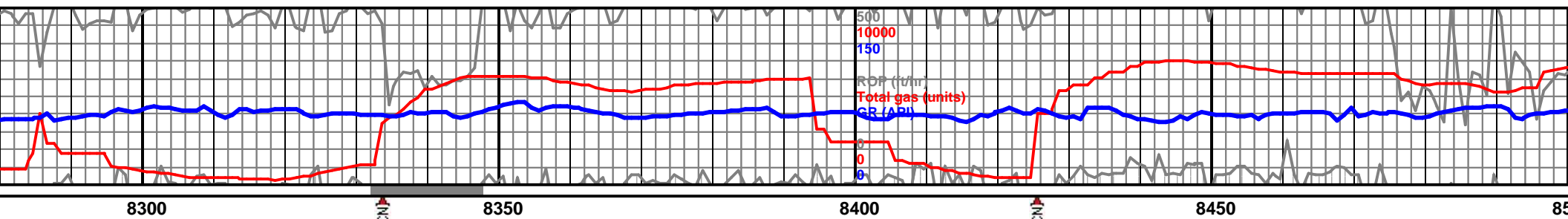


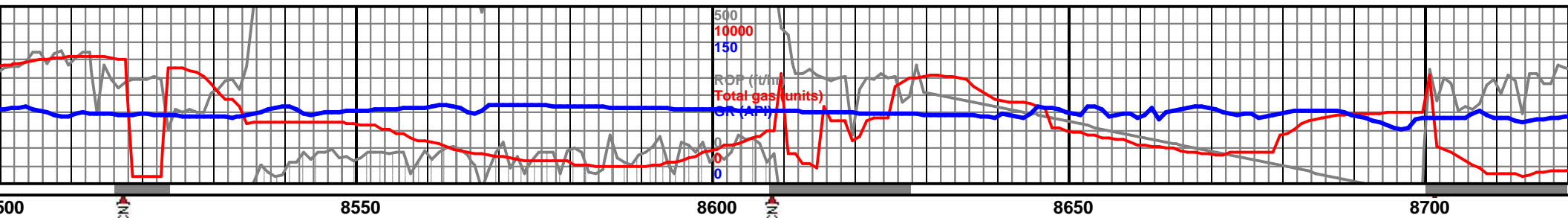
MD 7620 TVD 7332.2 INC 78.52 AZ 2.56 VS 182.24	MD 7667 TVD 7340.87 INC 80.23 AZ 2.17 VS 228.39	MD 7714 TVD 7347.78 INC 82.87 AZ 1.81 VS 274.85	MD 7751 TVD 7351.75 INC 84.79 AZ 2.04 VS 311.61	7200 MD 7805 TVD 7355.17 INC 87.95 AZ 359.78 VS 365.49
ICP AT 7815' REACHED ON 1/4/14 @ 07:44 am HRS. CONDITION HOLE, TOH, 7" CASING WT: 26 ppf; Grade: HCP110, SET @ MD 7,815'.				
Bit # 2 - 6.125" Varel VS513D, SN: 400651 Jets 3x16, 2x16; w/MWD GR/Survey BHA MM (1.5") 0.28 RPG, In @ 7,815'; Out @ 12,815'; Drilled 4627' in 34 hrs: Average ROP 136.0				
LIMESTONE (95%): buff, lt tan, amorph md cons, partially rextln mdstn w abndt fos detritus inclu grading nto boundstone, irreg silty discolor, no vis por but tr outgassing, occ silty glau; SH (5%): md gry, fn-grtly txt, md frm splinty, fnly carb; TR: fn gr, sb ang, slty ss.				
LIMESTONE (100%): lt tan, lt tan gry, cryptxtln -amorp w rextln ip, md cons, abndt fos ip w occ slty mott, no vis por; TR dk gry shale.				
LIMESTONE (100%): lt tan, lt tan gry, cryptxtln -amorp w rextln ip, md cons, abndt fos ip w occ slty mott, no vis por; TR dk gry shale.				
FORT HAYS LS				
lt gy- crm, msft- frm, sbplty-sbblky, rthy, v calc, fri, sl (10%) ltgy-gy/bm, mod sft, sbblky, mpyr intbd, mod arg, carb/sl calc d, rthy, sl mlky/strmg cut w bri ng.				
YS TOP MD, 7339' TVD, D SS.				
7400				











MD 8538 TVD 7364.25
INC 90.77 AZ 357.14
VS 1098.22

7200 TVD

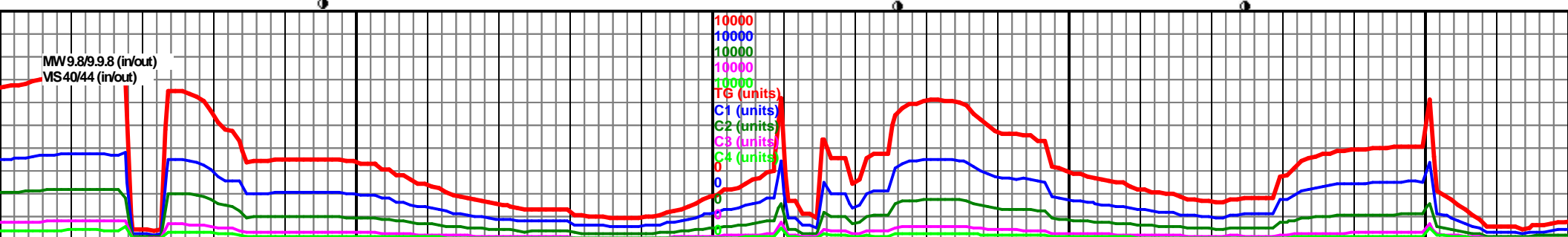
MD 8630 TVD 7363.09
INC 90.67 AZ 358.03
VS 1190.14

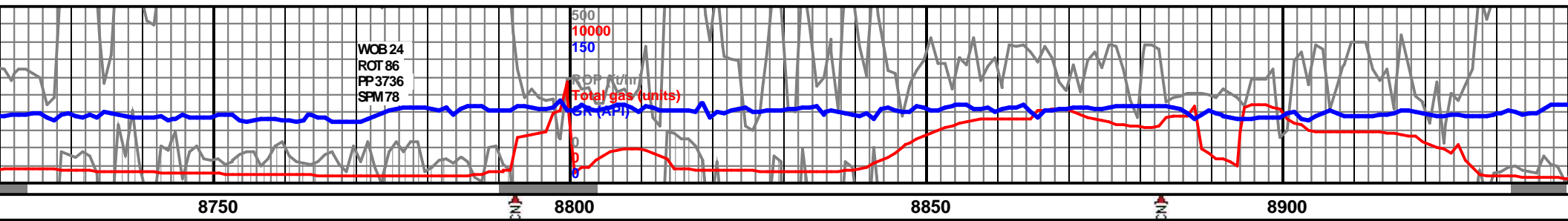
SS(95%): clr, sltly frst ip, fn gr, sb ang, md-lo
sph, md srted, md cons w/mdl dk-dk bm, slty mtx
w/scat feldspar xtl inclu, irreg blk stn, no vis por,
occ v shly, scat dull fluor w/fair gm gold cut; LS
(5%): lt-md tan gry, slty md cons mdstn; tr dk
bm sh.

SS(100%): clr, sltly frst ip, fn gr, sb ang, md-lo
sph, md srted, md cons w/mdl dk-dk bm, slty mtx
w/scat feldspar xtl inclu, irreg blk stn, no vis por,
occ v shly, scat dull fluor w/fair gm gold cut; tr
limestone, aa; tr dk bm sh.

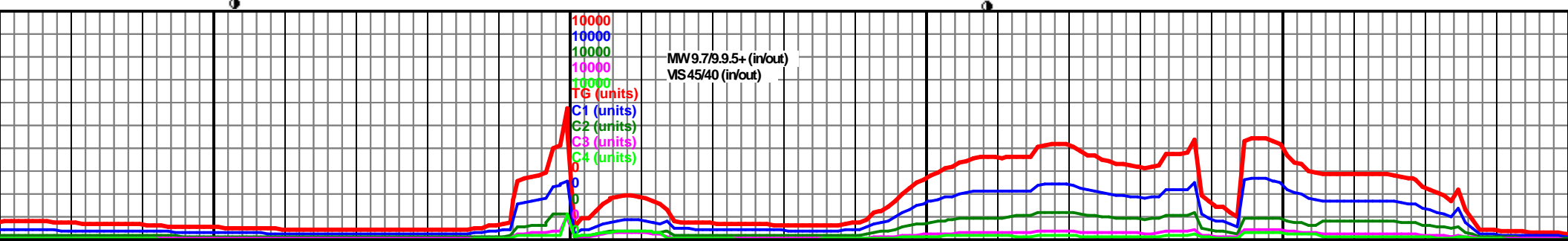
CODELL SS

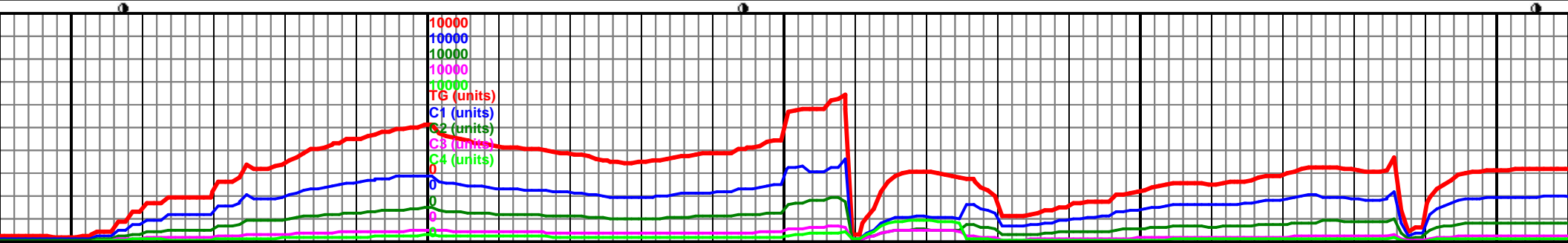
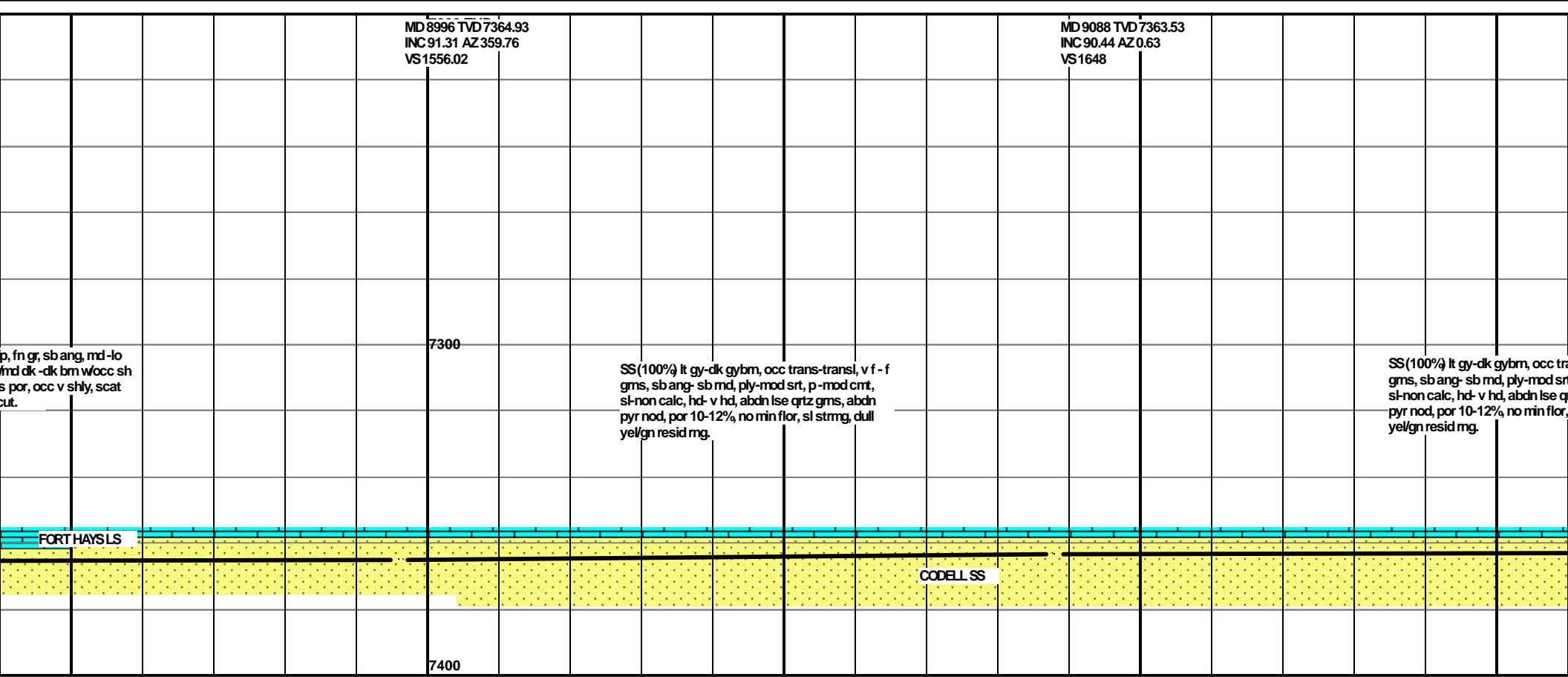
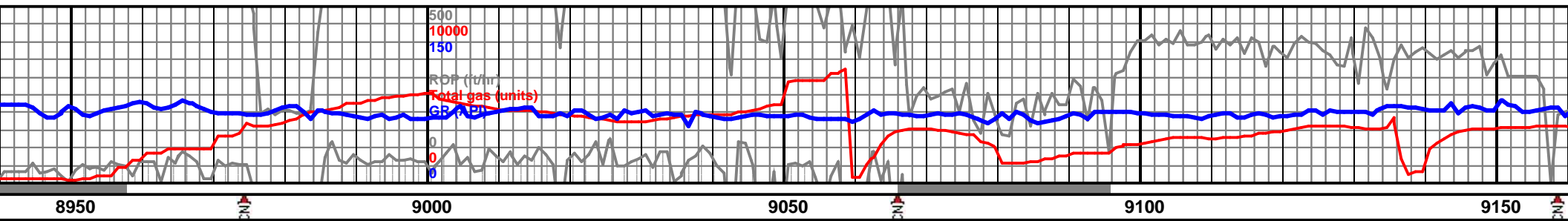
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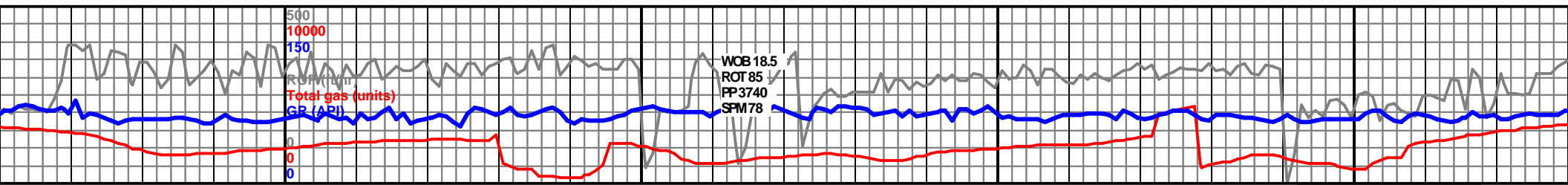




<p>MD 8721 TVD 7363.14 INC 89.26 AZ 358.06 VS 1281.08</p> <p>SS(90%): clr, sltly frst ip, fn gr, sb ang, md-lo sph, md srtcd, md cons w/mnd dk-dk brn wocc sh ntrbd, irreg blk stn, no vis por, occ v shly, scat dull fluor w/fair gm gold cut; LS(10%): lt-md tan gry, slty md cons mdstn; tr dk brn sh.</p>	<p>7200 TVD</p> <p>MD 8813 TVD 7364.6 INC 88.93 AZ 358.97 VS 1373.04</p> <p>SS(100%): clr, sltly frst ip, fn gr, sb ang, md-lo sph, md srtcd, md cons w/mnd dk-dk brn wocc sh ntrbd, irreg blk stn, no vis por, occ v shly, scat dull fluor w/fair gm gold cut.</p>	<p>MD 8904 TVD 7365.72 INC 89.66 AZ 0.1 VS 1464.02</p> <p>SS(100%): clr, sltly frst ip, fn gr, sb ang, md-lo sph, md srtcd, md cons w/mnd dk-dk brn wocc sh ntrbd, irreg blk stn, no vis por, occ v shly, scat dull fluor w/fair gm gold cut.</p>
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9200

9250

9300

9350

MD 9179 TVD 7363.13
INC 90.07 AZ 359.24
VS 1739

7200 TVD

MD 9271 TVD 7363.91
INC 88.96 AZ 358.9
VS 1830.98

MD 9362 TVD 7364.68
INC 90.07 AZ 358.18
VS 1921.95

ans-transl, v f - f
t, p-mod cmt,
rtz gms, abdn
sl strmg, dull

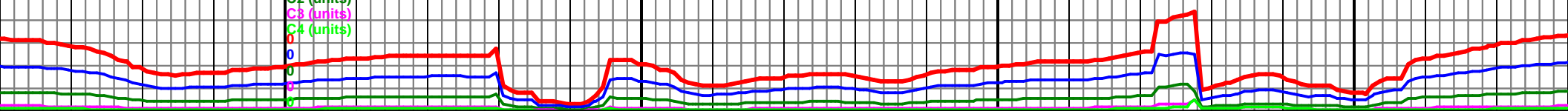
7300

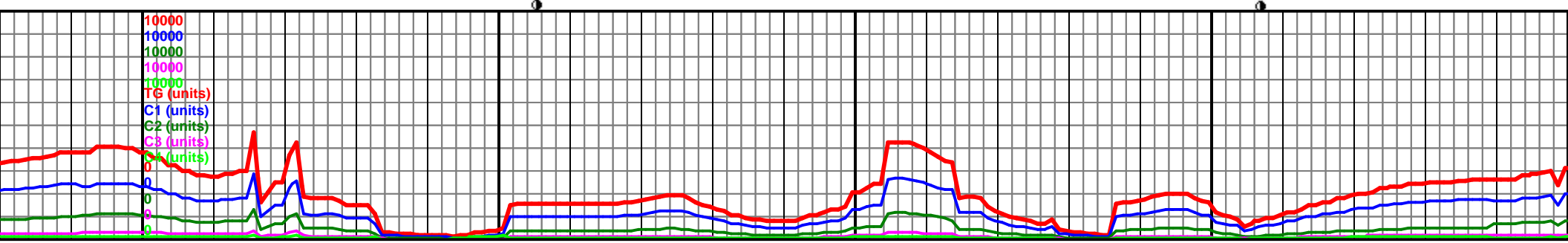
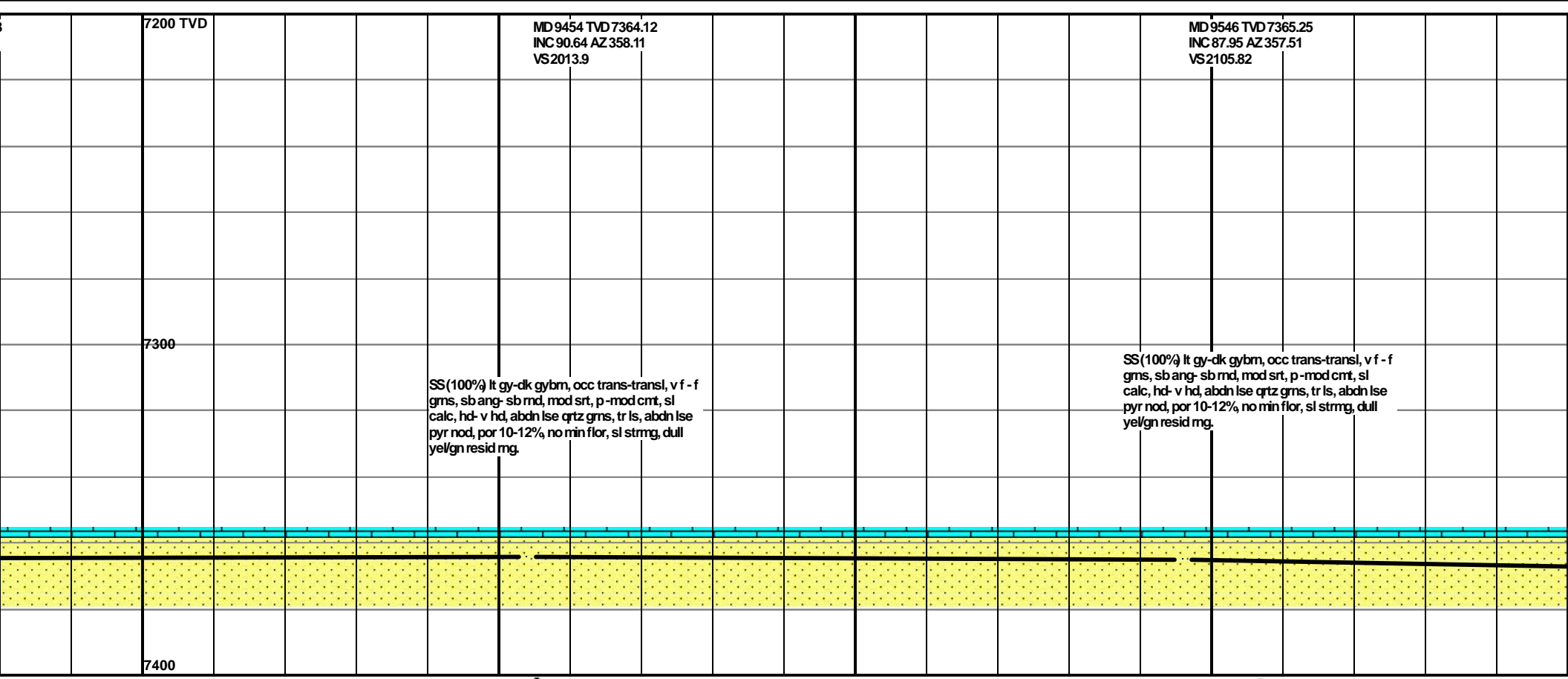
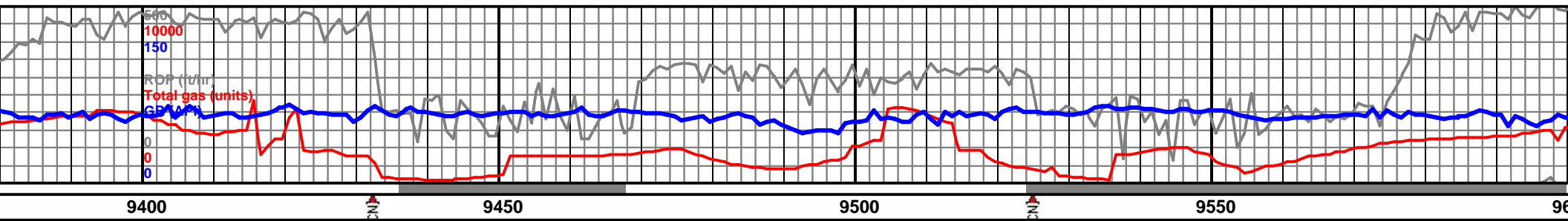
SS(100%) lt gy-dk gybm, occ trans-transl, v f - f
gms, sb ang- sb md, ply-mod srt, p-mod cmt,
sl-non calc, hcl- v hd, abdn lse qrtz gms, abdn
lse pyr nod, por 10-12%, no min flr, sl strmg, dull
yel/gn resid mg.

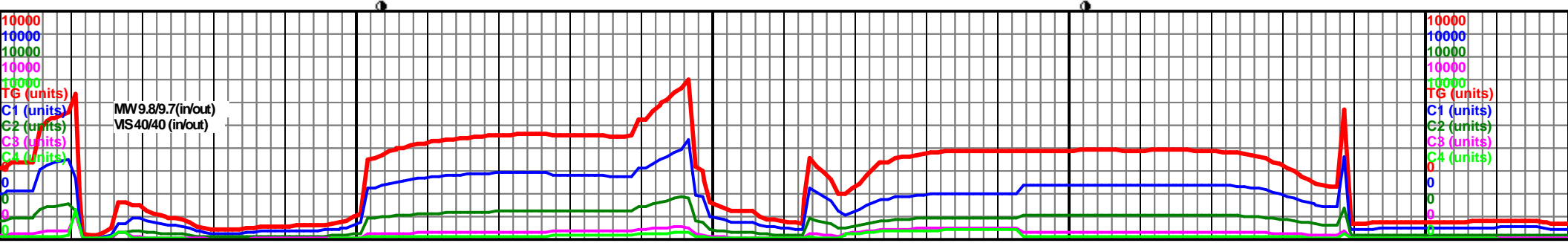
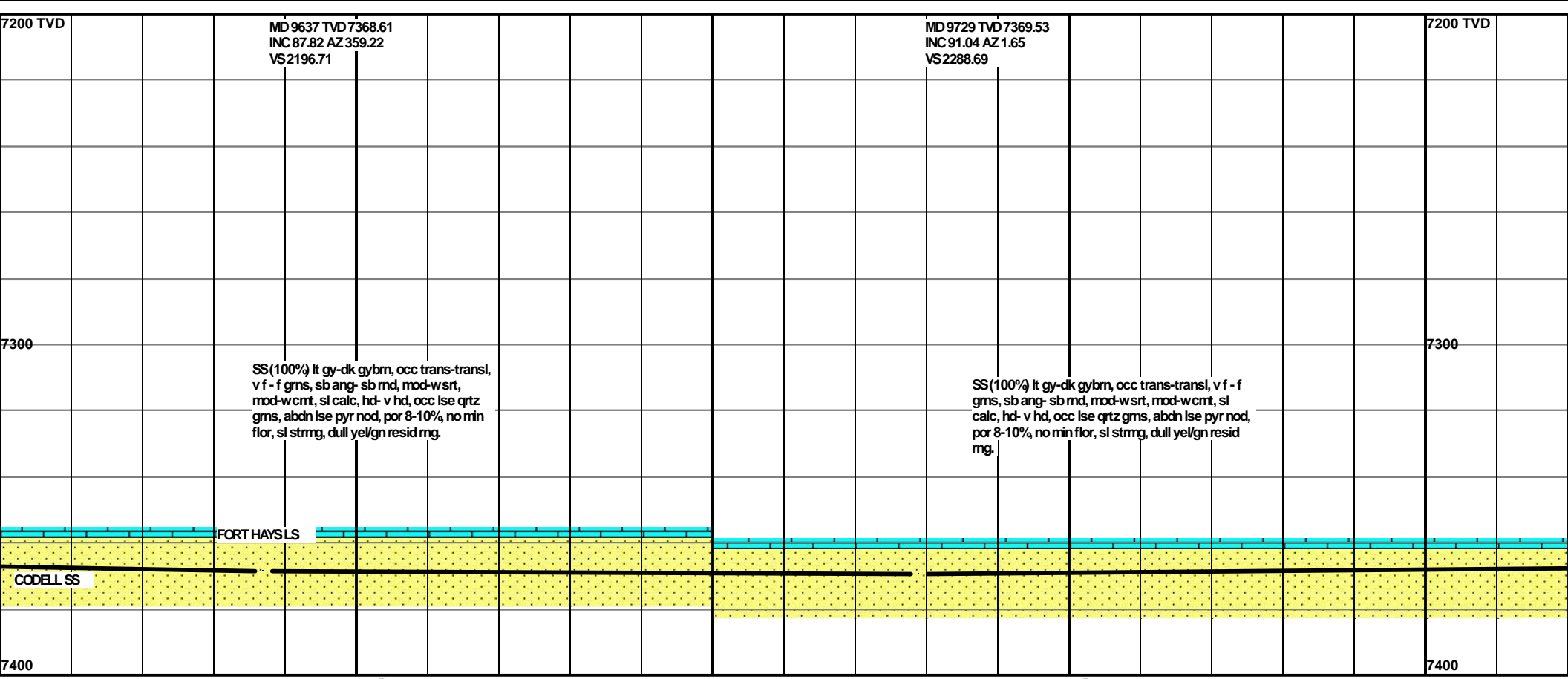
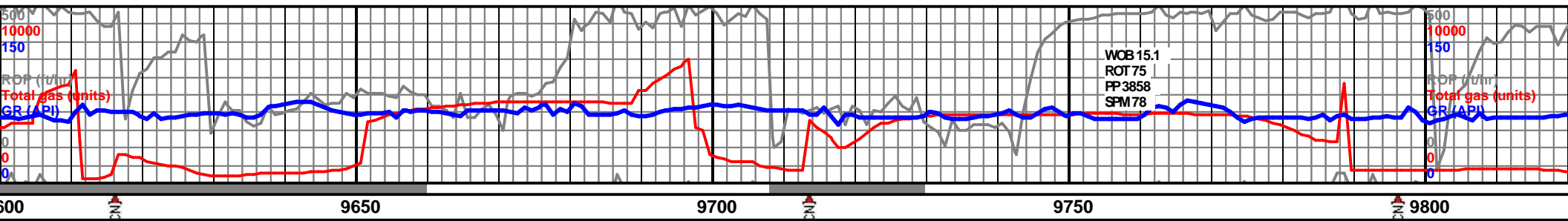
SS(100%) lt gy-dk gybm, occ trans-transl, v f - f
gms, sb ang- sb md, mod srt, p-mod cmt, sl
calc, hcl- v hd, abdn lse qrtz gms, abdn lse pyr
nod, por 10-12%, no min flr, sl strmg, dull yel/gn
resid mg.

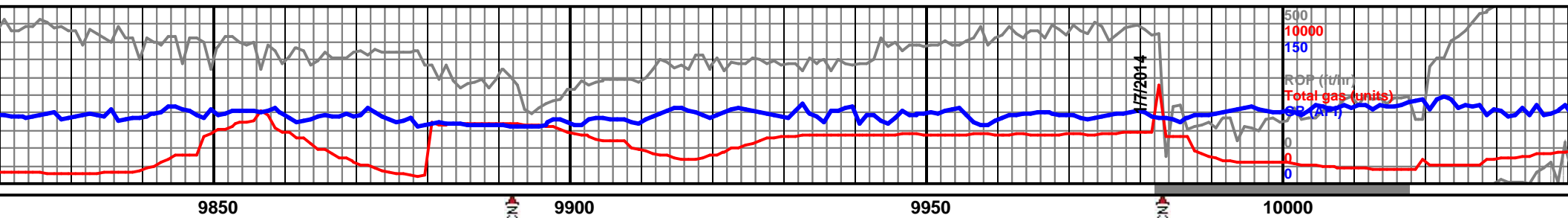
7400

10000
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)

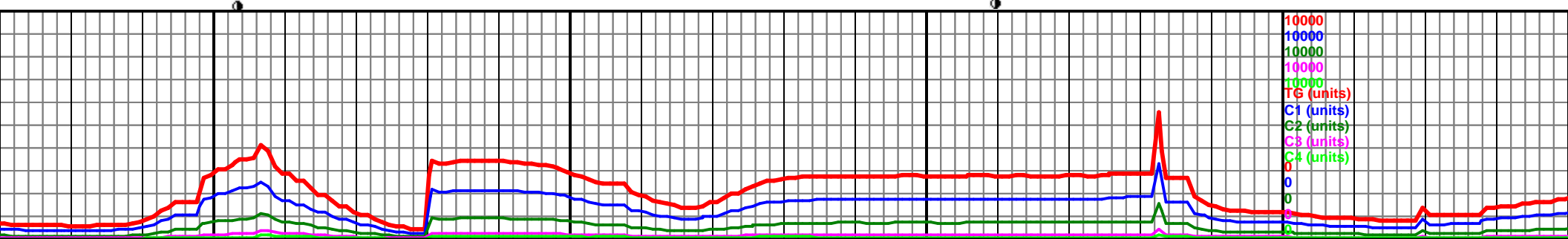


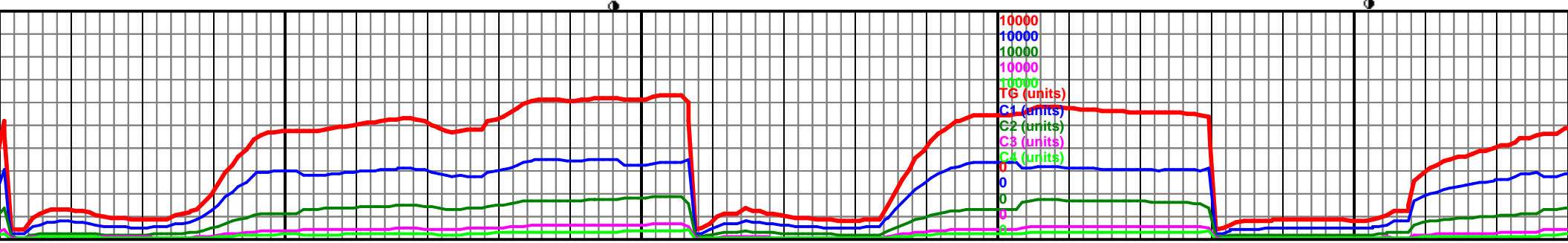
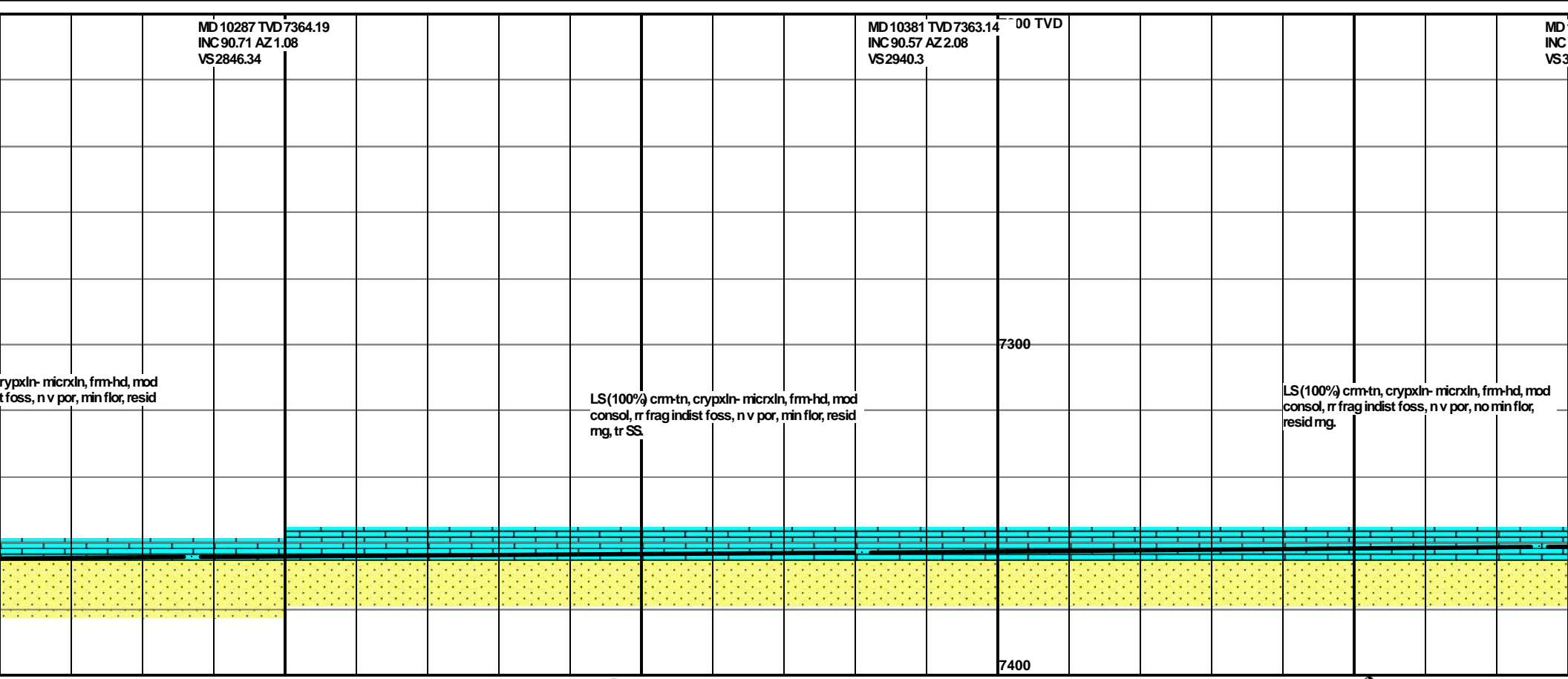
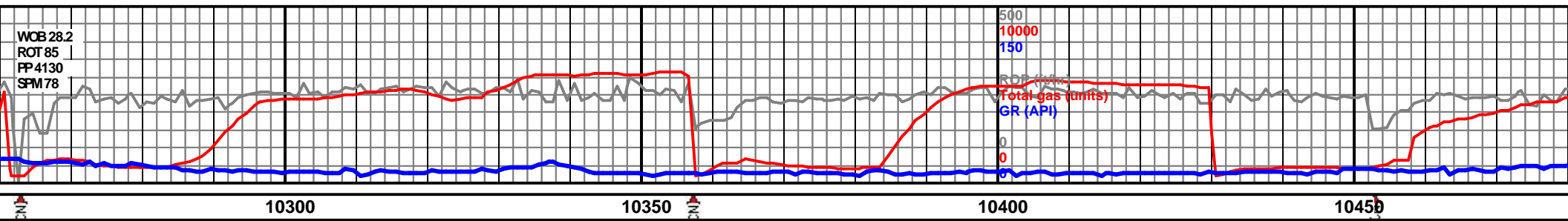


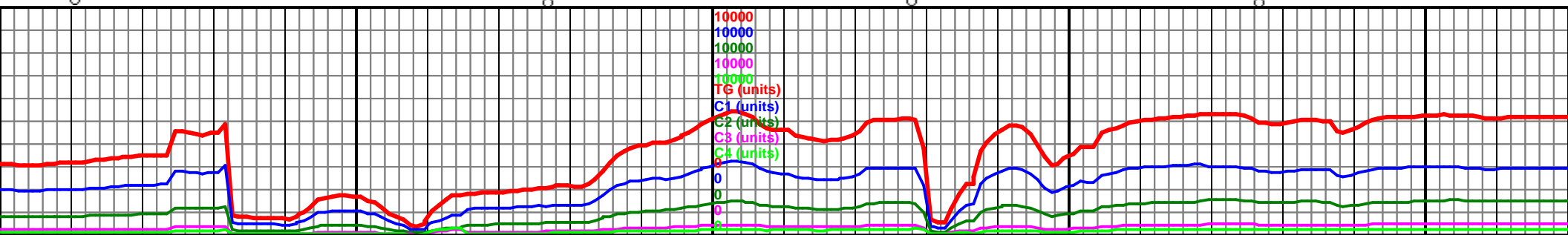
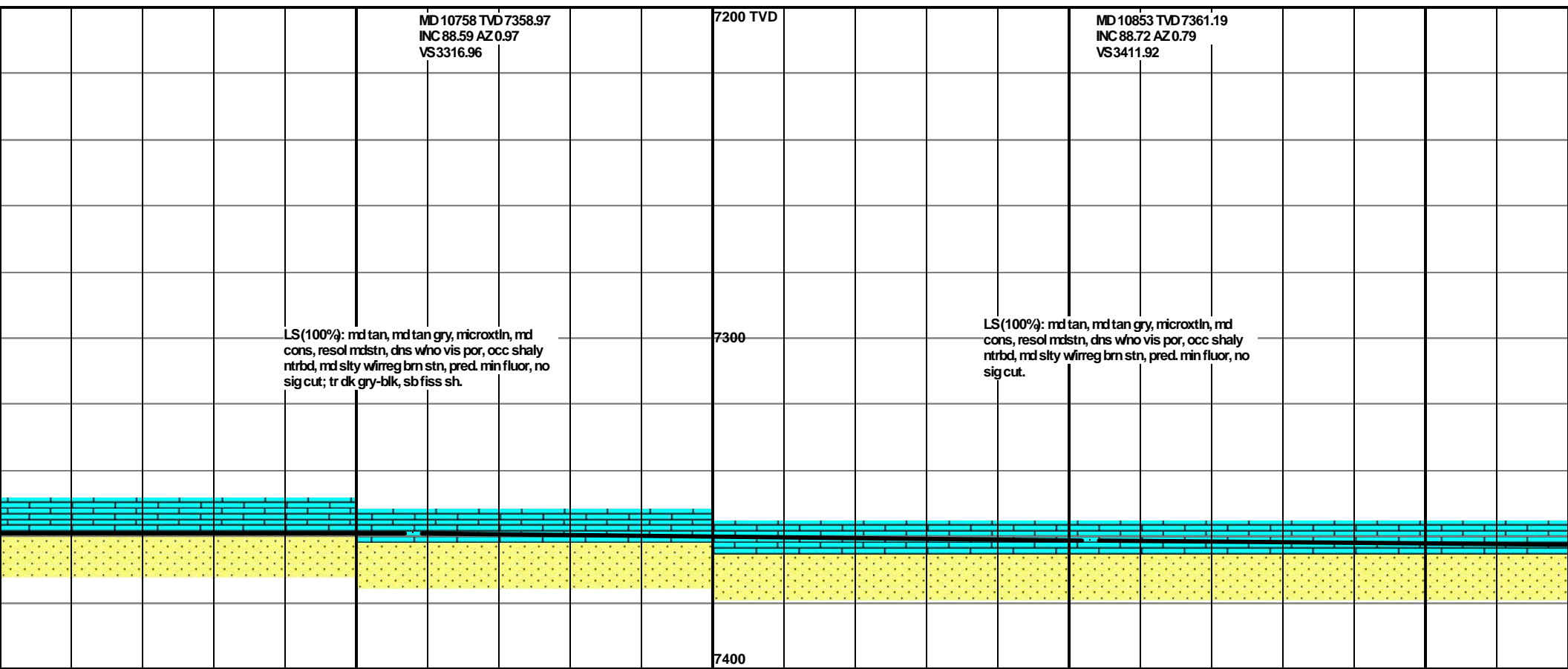
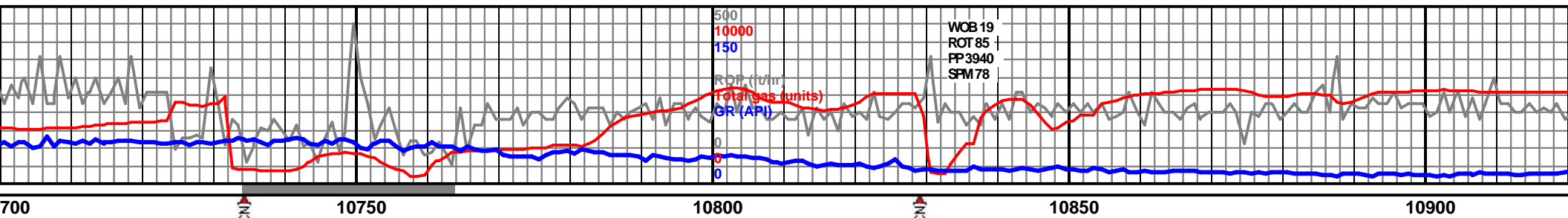


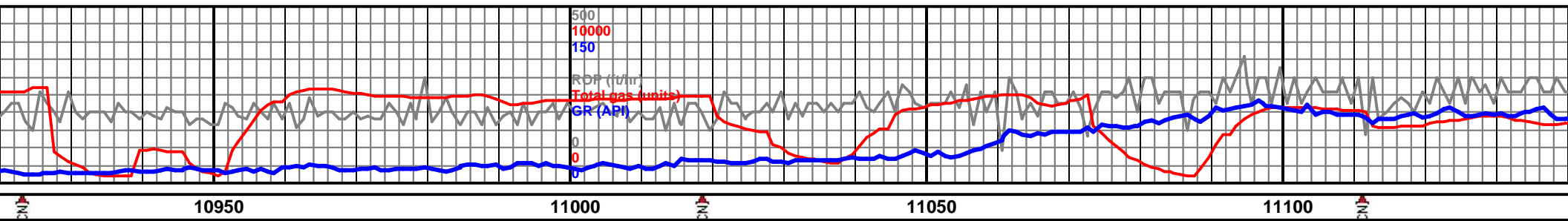


<p>MD 9821 TVD 7367.75 INC 91.18 AZ 1.79 VS 2380.63</p>	<p>SS(100%) lt gy-dk gybm, occ trans-transl, v f - f gms, sb ang- sb md, mod-wsrt, mod-wcmt, sl calc, hd- v hd, occ lse qrtz gms, abdn lse pyr nod, por 8-10%, no min flr, sl strmg, dull yel/gn resid mg.</p>	<p>MD 9912 TVD 7368.09 INC 88.39 AZ 358.99 VS 2471.61</p>	<p>SS(100%) lt gy-dk gybm, occ trans-transl, v f - f gms, sb ang- sb md, mod-wsrt, mod-wcmt, sl calc, hd- v hd, occ lse qrtz gms, abdn lse pyr nod, por 8-10%, no min flr, sl strmg, dull yel/gn resid mg.</p>	<p>7200 MD 10004 TVD 7369.98 INC 89.26 AZ 0.41 VS 2563.58</p> <p>7300</p> <p>SS(100%) lt gms, sb ang non-sl calc, pyr nod, por yel/gn resid</p> <p>7400</p>
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MD 10947 TVD 7363.06
INC 88.99 AZ 1.07
VS3505.89

7200 TVD

MD 11041 TVD 7364.44
INC 89.33 AZ 0.87
VS3599.87

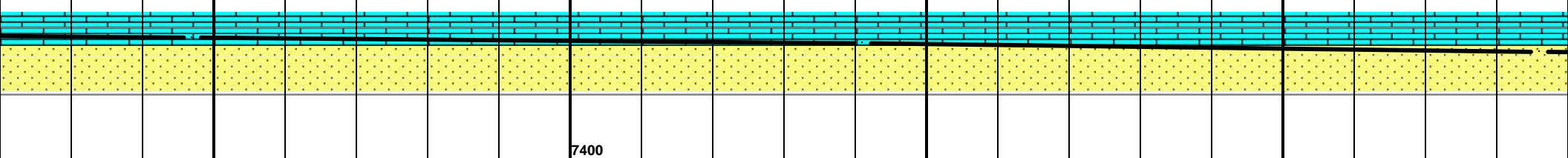
MD
INC
VS3

LS(100%): md tan, md tan gry, microxtln, md
cons, resol mdstn, dns who vis por, occ shaly
ntrbd, md slty w/irreg bm stn, pred. min fluor, no
sig cut; <2% tan to gry ntrbdd carbonate shale.

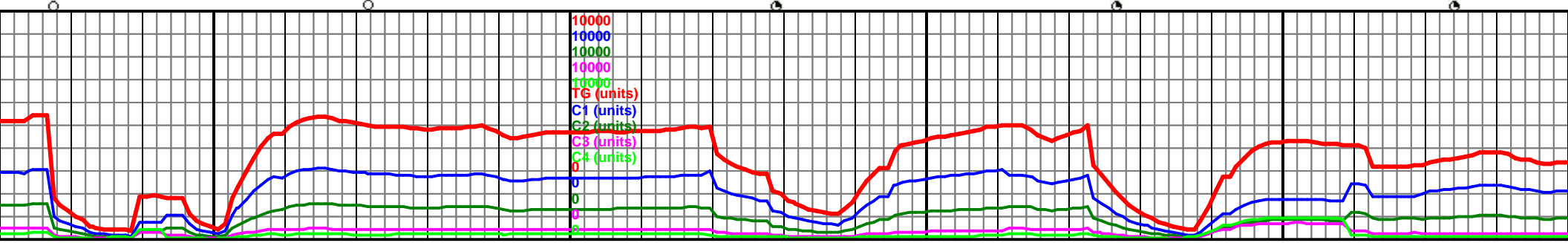
7300

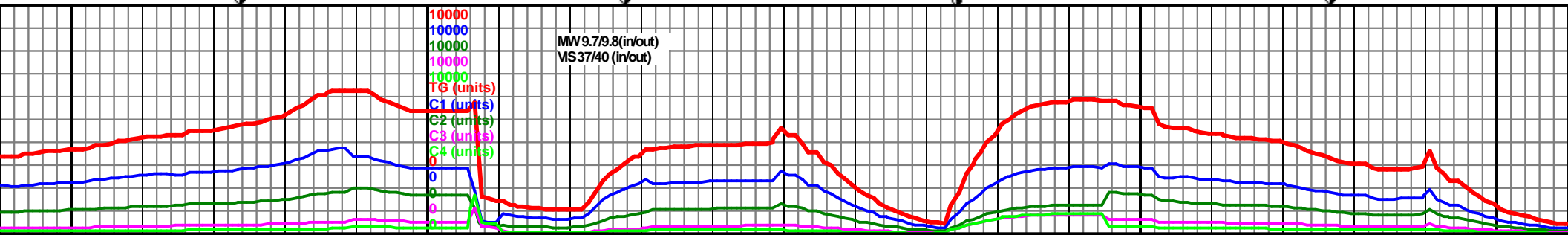
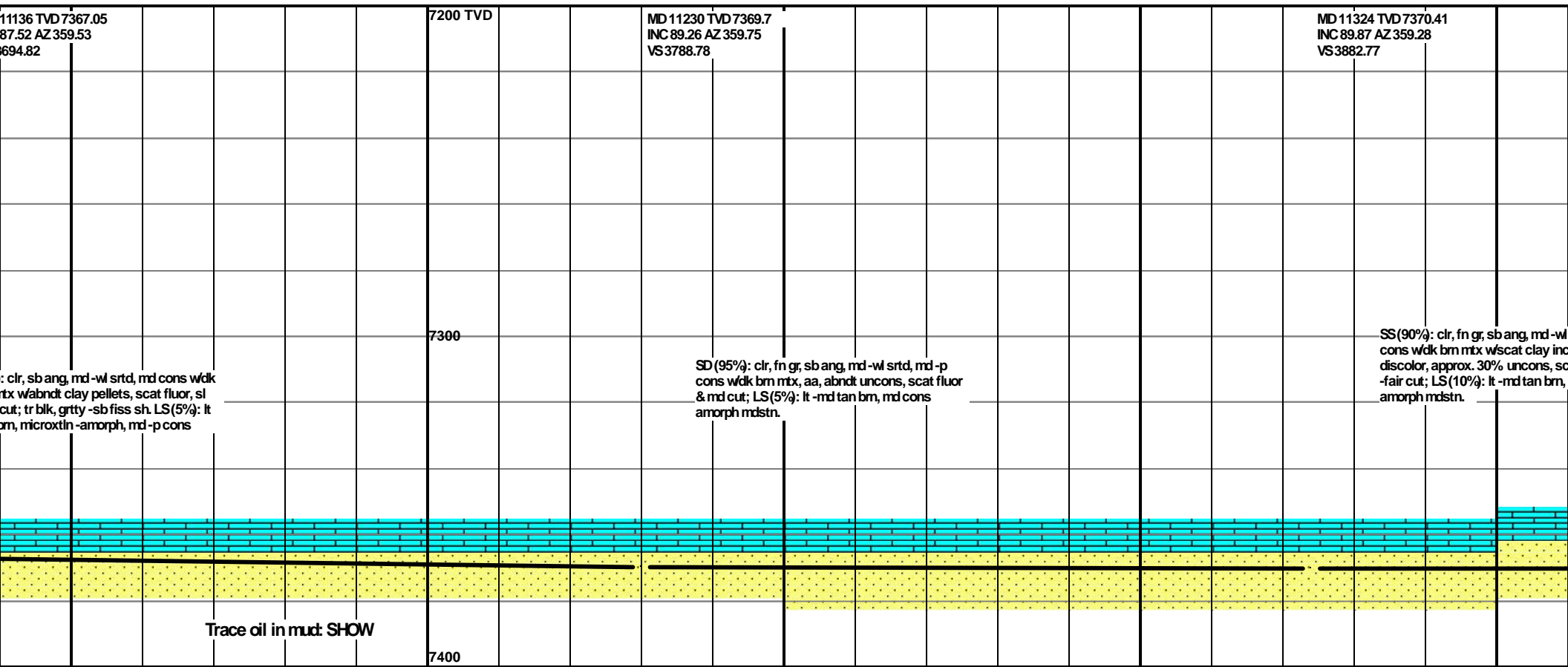
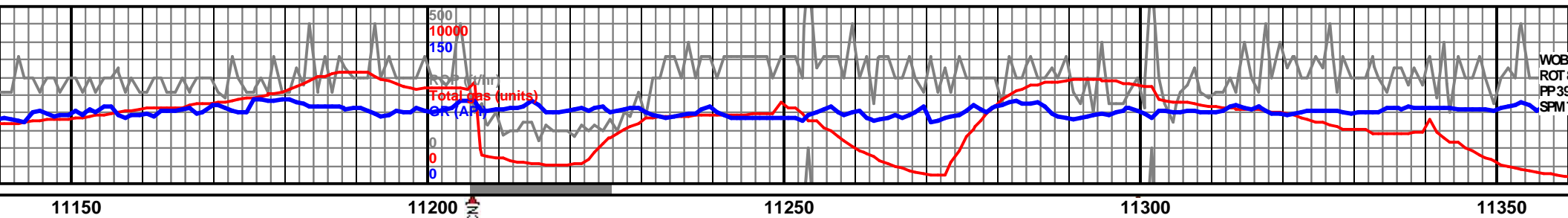
LS(100%): lt -md tan bm, microxtln mdstn, md
frm to easily crushed w/ flour residue, occ carb
stria inclu, scat tr fn gr, clr, sb ang sd w/ md -dk
bm mtx; scat bits of Codell.

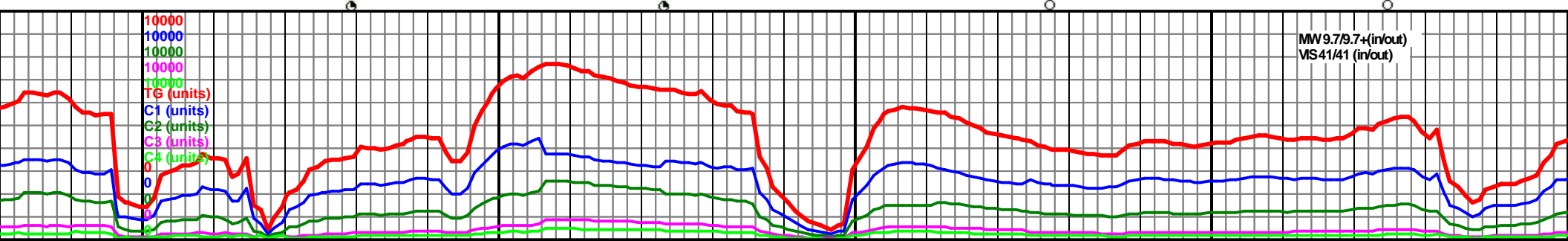
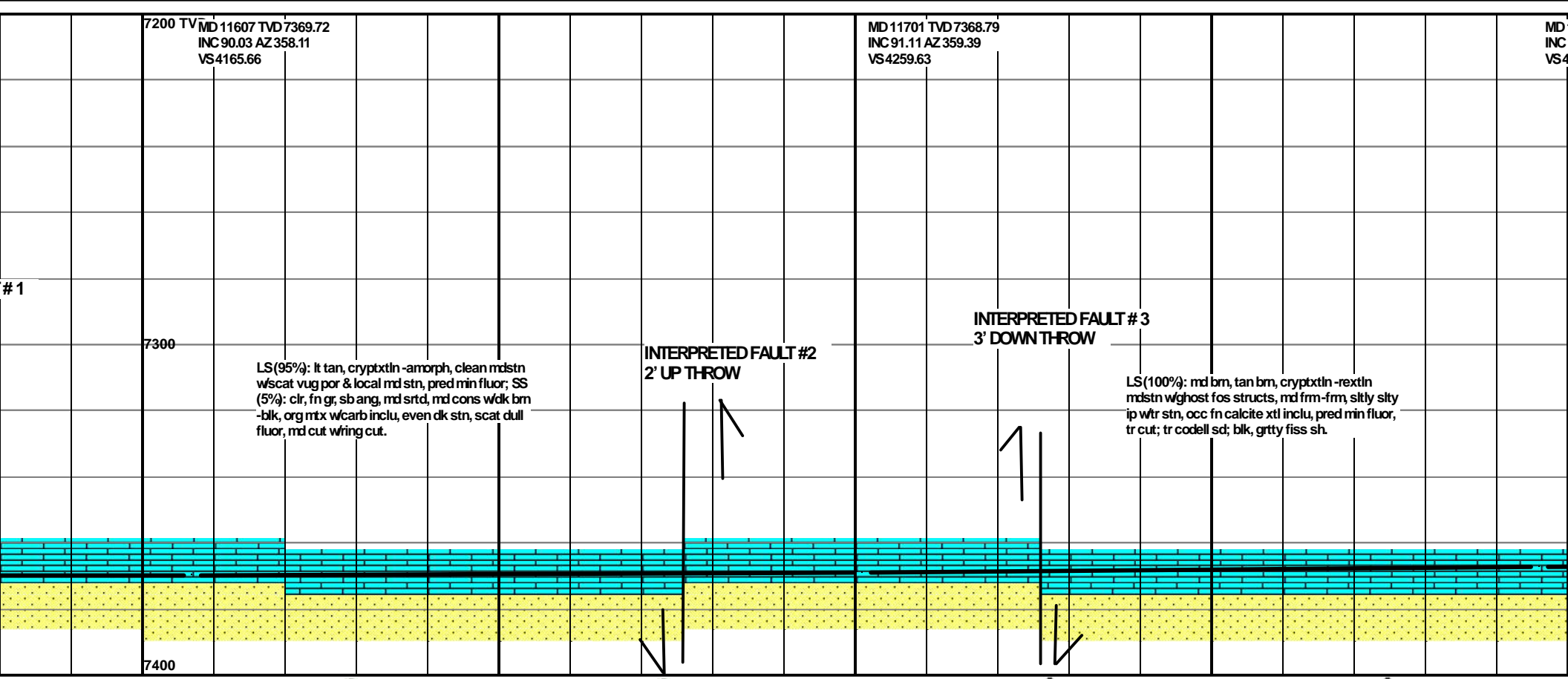
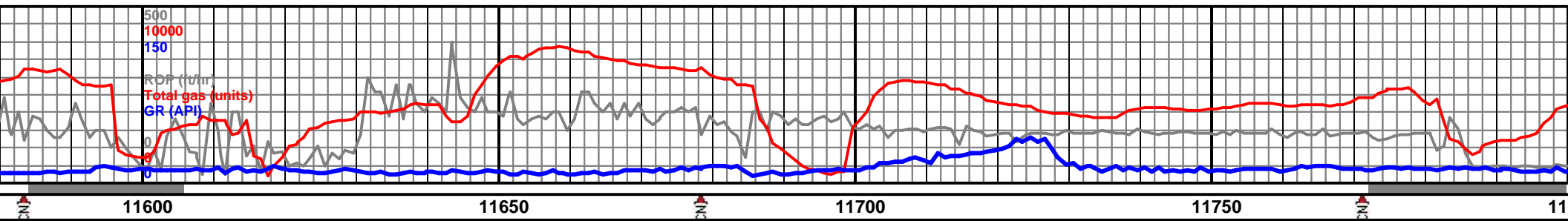
SS(95%)
bm org n
gm gold
-md tan b
mdstn.

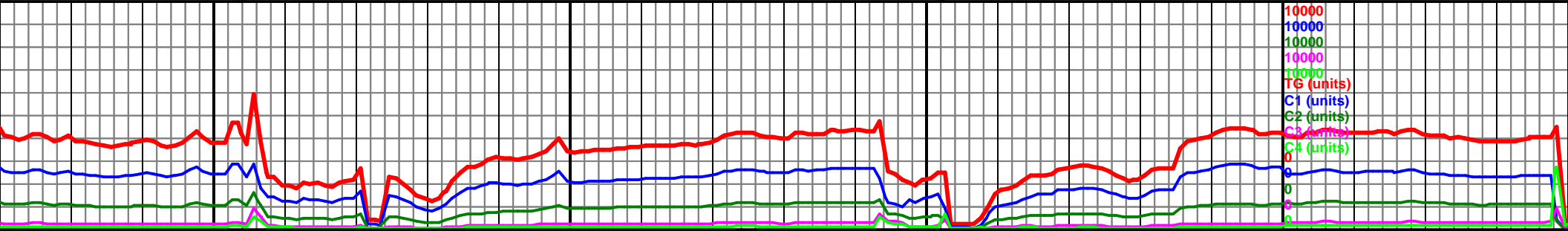
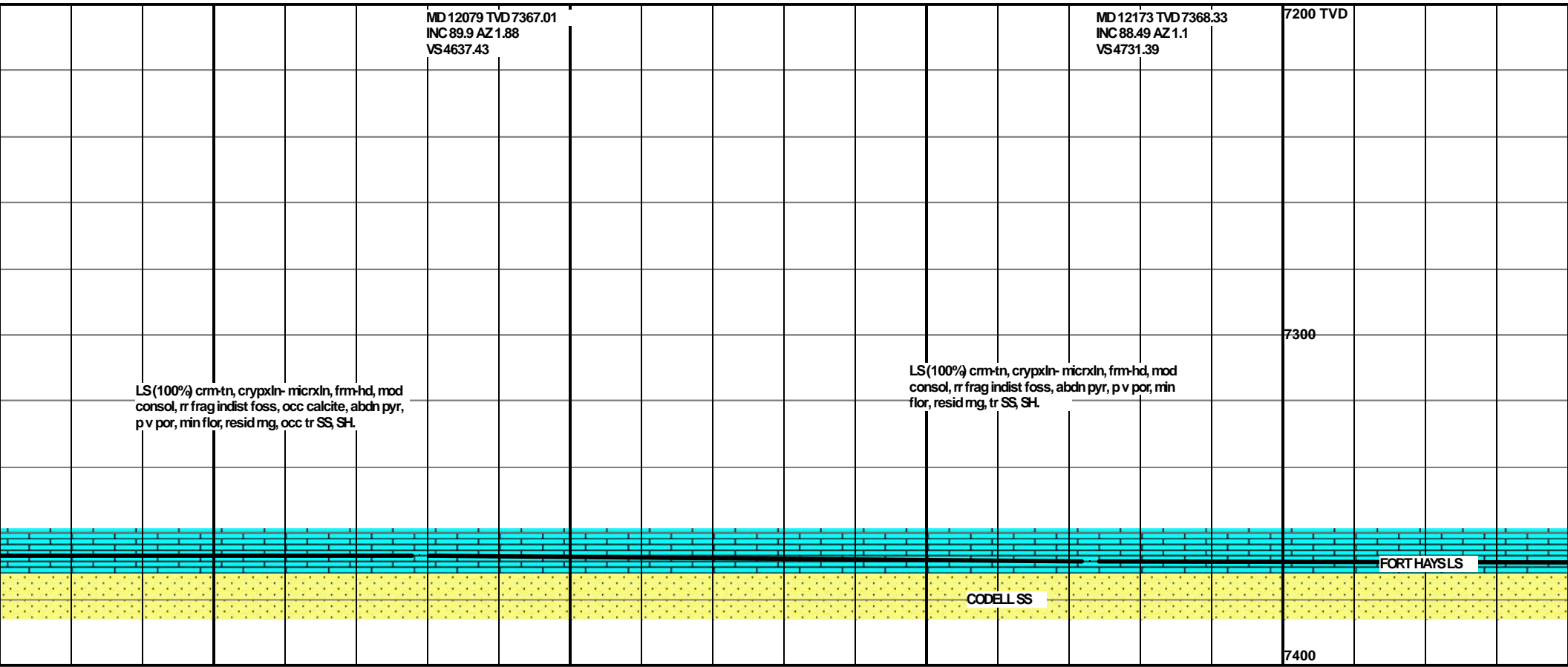
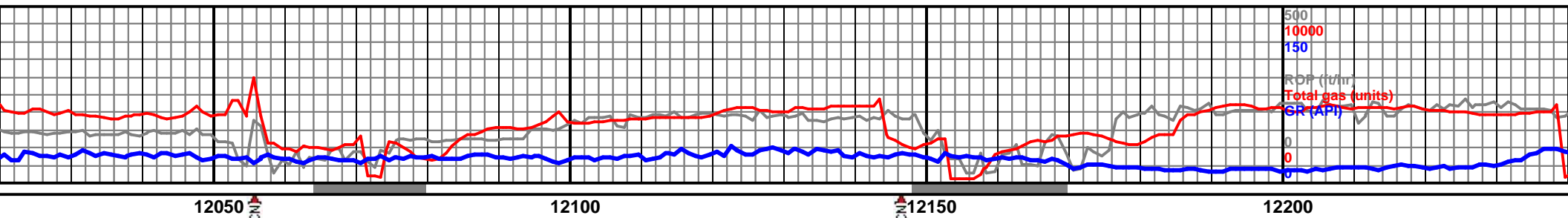


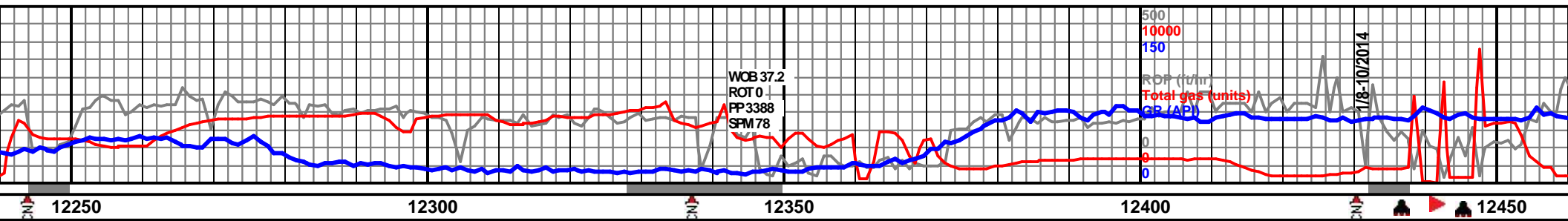
7400



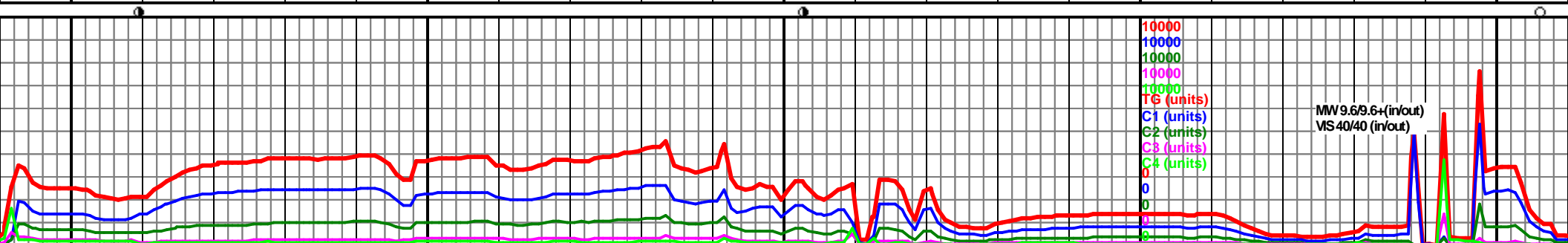


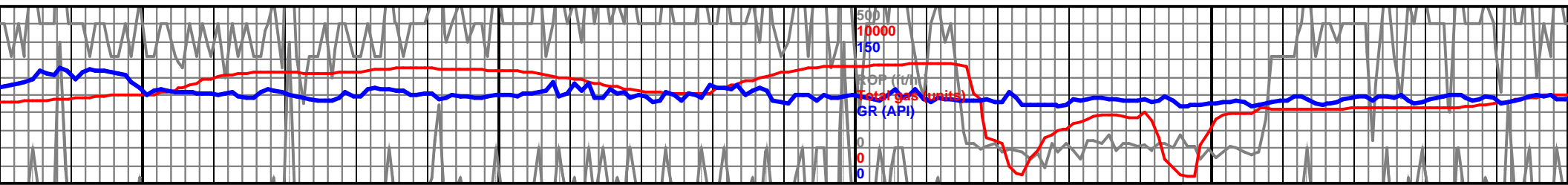






<p>MD 12267 TVD 7369.05 INC 90.64 AZ 2.29 VS 4825.34</p> <p>LS(100%) crm-tn, crypxln- micrxln, frm-hd, mod consol, rr frag indist foss, abdn pyr, p v por, min flor, resid mg.</p>	<p>MD 12362 TVD 7369.1 INC 89.3 AZ 2.11 VS 4920.26</p> <p>LS(100%) crm-tn, crypxln- micrxln, frm-hd, mod consol, rr frag indist foss, abdn pyr, p v por, min flor, resid mg, tr SH</p>	<p>7200 TVD</p> <p>Bit # 2 - 6.125" Baker Hughes DP405S, SN: 7038695; Jets 3x14, 2x16; w/MMWD GR/Survey BHA & Dir MM (1.5") 0.28 RPG, In @ 12442'; Out @ 12442'; Drilled 0' in 0 hrs: Average ROP N/A ft/hr.</p> <p>7300</p>	<p>7400</p> <p>Bit # 3 - 3x16, 2x (1.5") 0.2 Drilled 1</p> <p>SS(70%): clr, fn gr, sb ang sph, md wl cons w/md-ck feldspar xtls, no vis por, r (30%); md tan bmn, md cor w/scat carb inclu, occ vfg</p>
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12700



12750

12800



12850

12900

MD 12741 TVD 7376.18
INC 88.79 AZ 0.86
VS 5299.1

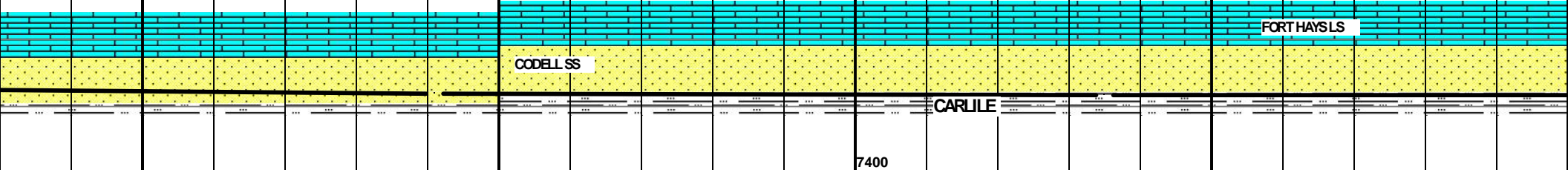
7200 TVD

MD 12835 TVD 7376.9
INC 90.34 AZ 0.38
VS 5393.09

SS (80%): clr, frstd ip, fn gr, sb ang, md-lo sph,
md-p cons -uncons wmd brn, clayey mtx, tr
feldspar, no fluor, fair-p cut; SH (10%): md-dk
gry, blk, sb pty, sl fiss ip, occ fnly carb; LS
(10%): md-lt tan, micxtln-amorph, md cons, fos
boundstone.

7300

SS (70%): clr, frstd, fn gr, sb ang-sb rdd, md sph,
md srted, md cons wmd brn, sltly clayey mtx
wdead oil staining, tr feldsp, no vis por, no fluor,
v p cut; SHALE (20%): md-dk gry, blk, flky, fnly
carb ip; LS (10%): md tan, micxtln, prtly rxtln
mdstn.

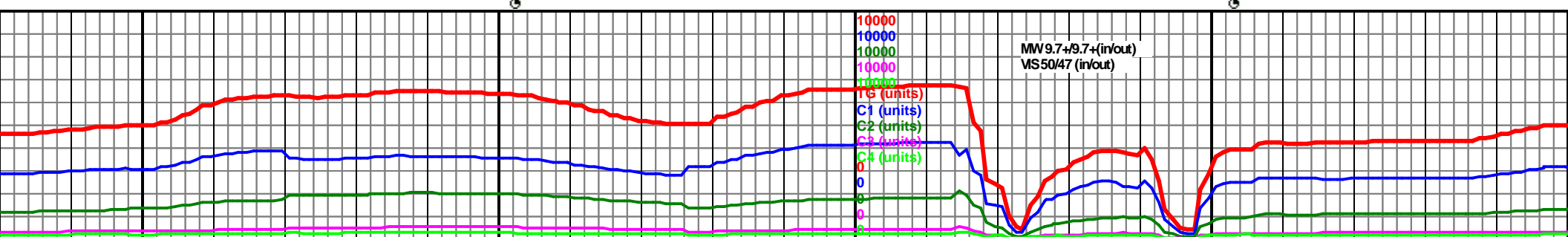


CODELL SS

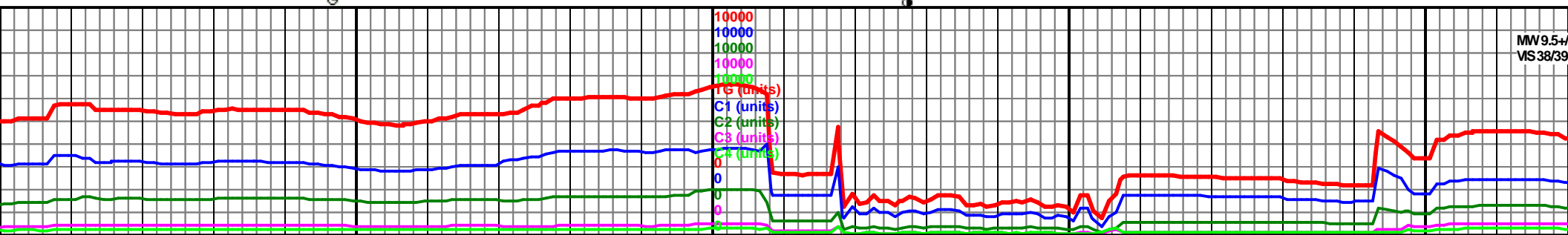
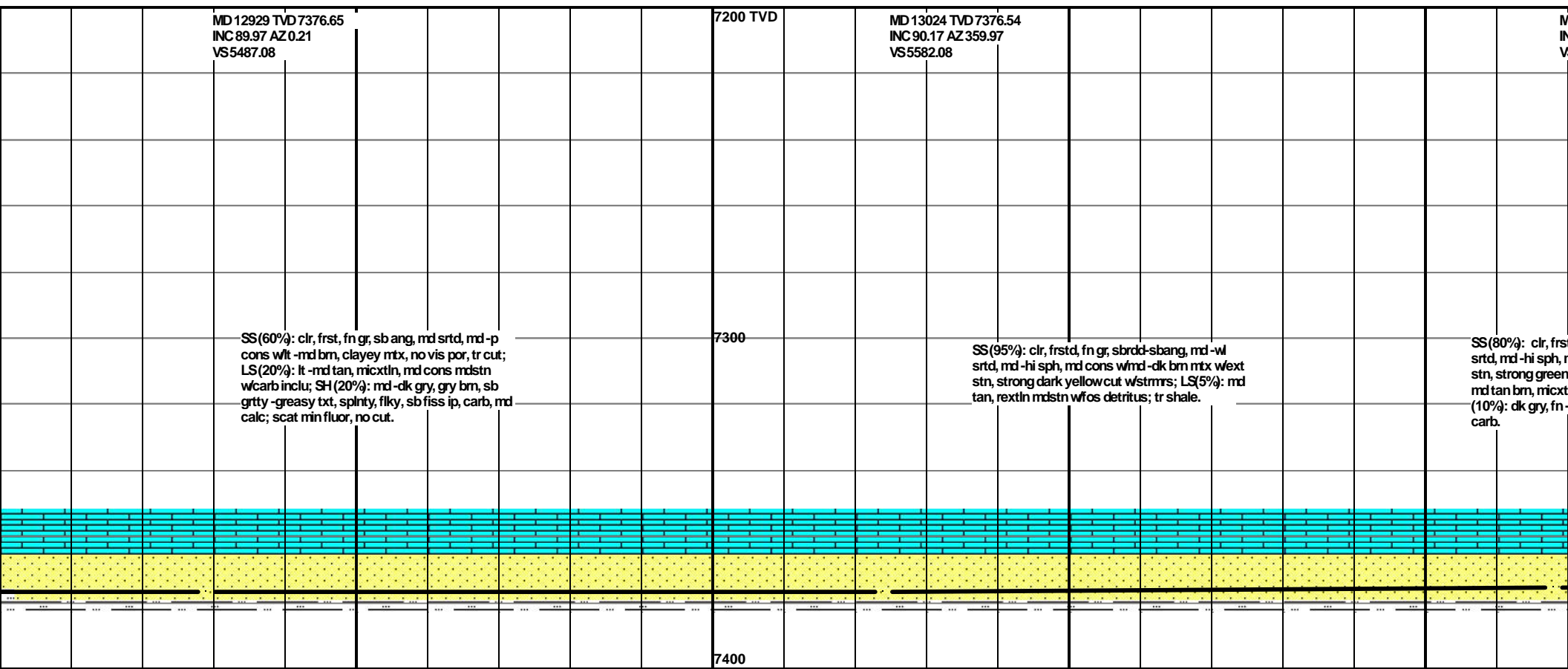
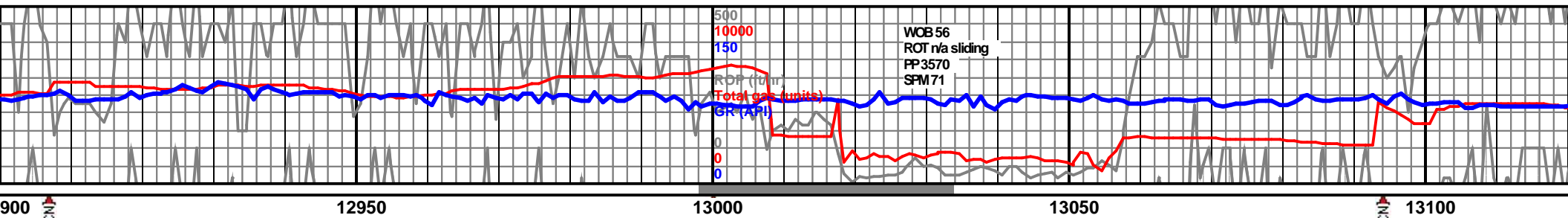
FORT HAYS LS

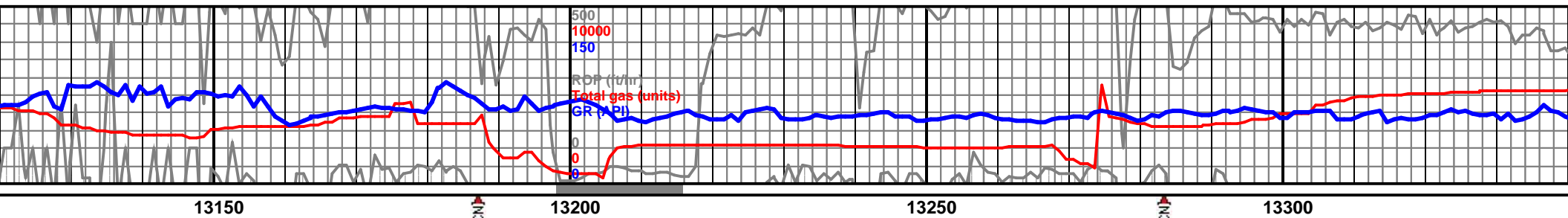
CARLILE

7400



MW 9.7+9.7+(in/out)
VS 5047 (in/out)





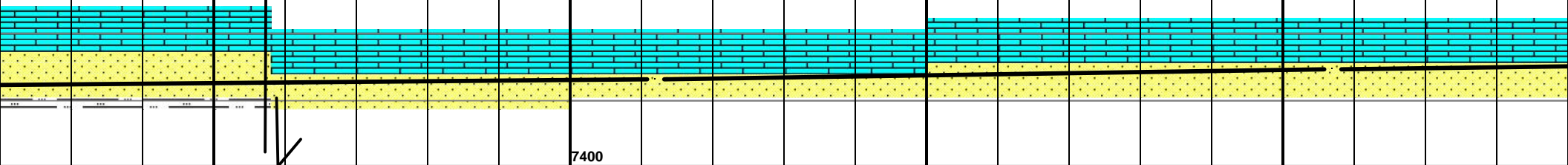
MD 13118 TVD 7375.63 INC 90.94 AZ 0.66 SS 5676.08	7200 TVD	MD 13212 TVD 7373.54 INC 91.61 AZ 0.35 VS 5770.05	MD 13307 TVD 7370.76 INC 91.75 AZ 0.43 VS 5865.01
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md, fn gr, sbdd-sbang, md-wl
md cons wmd-olk brn mtz, scat
gold cut; LIMESTONE(10%):
ln, md-wl cons mdstn; SHALE
greasy txt, splnty, fiss, firm,

INTERPRETED FAULT # 4
4' DOWN THROW

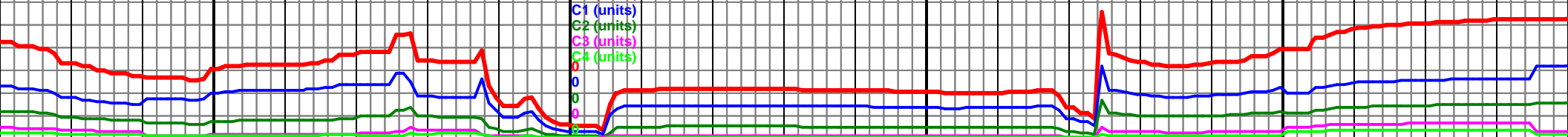
SS(80%): clr, frstd, fn gr, sbdd-sbang, md-wl
srted, md-hi sph, md cons wmd-olk brn mtz,
abndt dull green fluor, scat str, very strong
green gold cut; LS(10%): md tan brn, micxtin,
md-wl cons mdstn; SHALE(10%): dk gry, fn
-greasy txt, splnty, fiss, firm, carb.

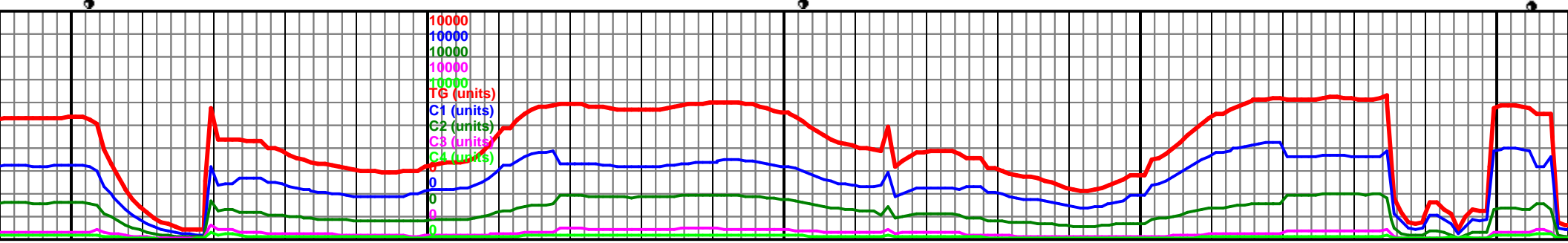
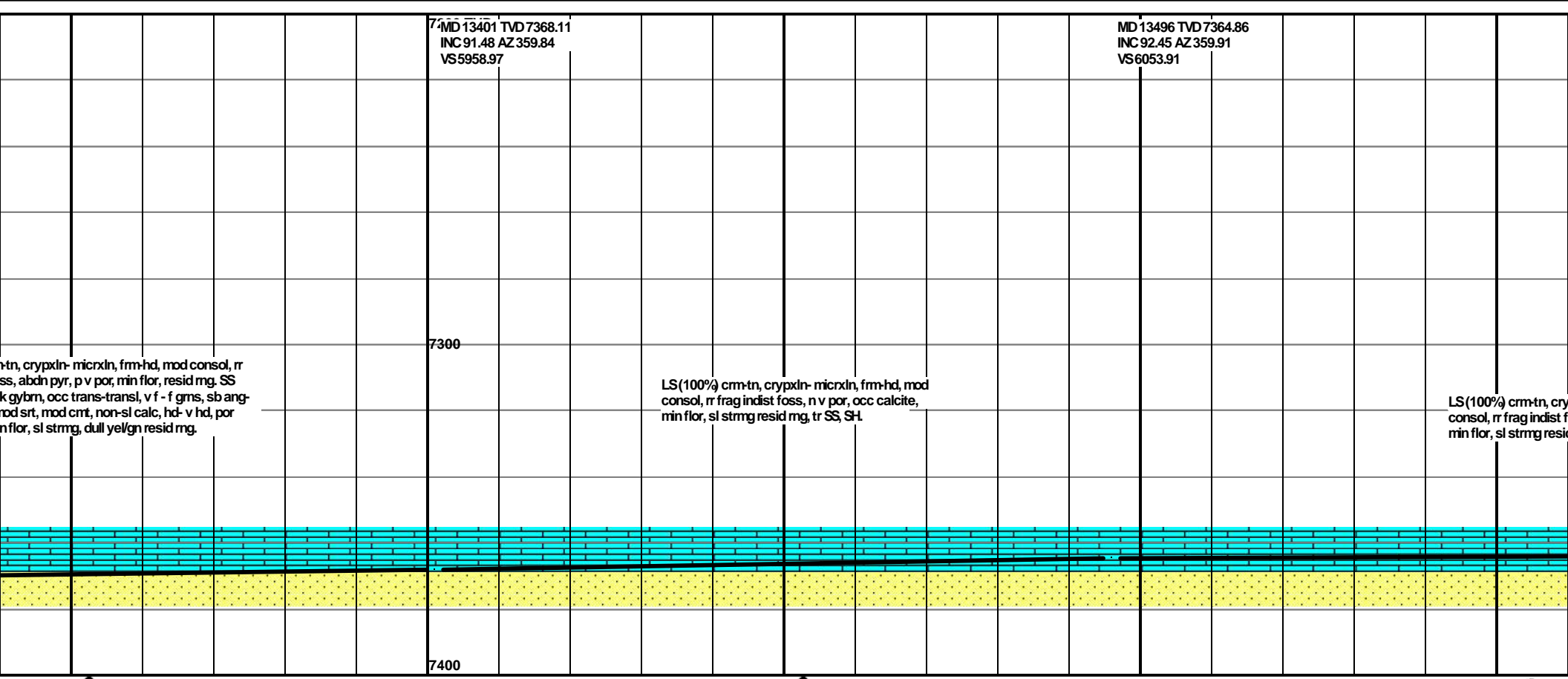
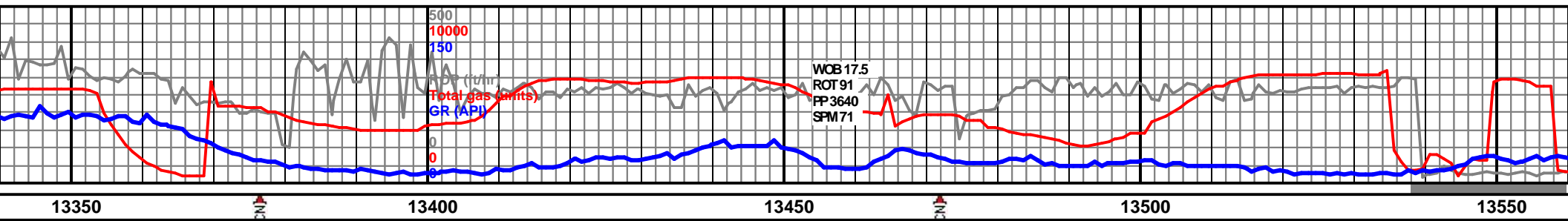
LS(60%) cm
frag indist fo
(40%) lt gy-d
sb md, ply- n
8-10%, no mi

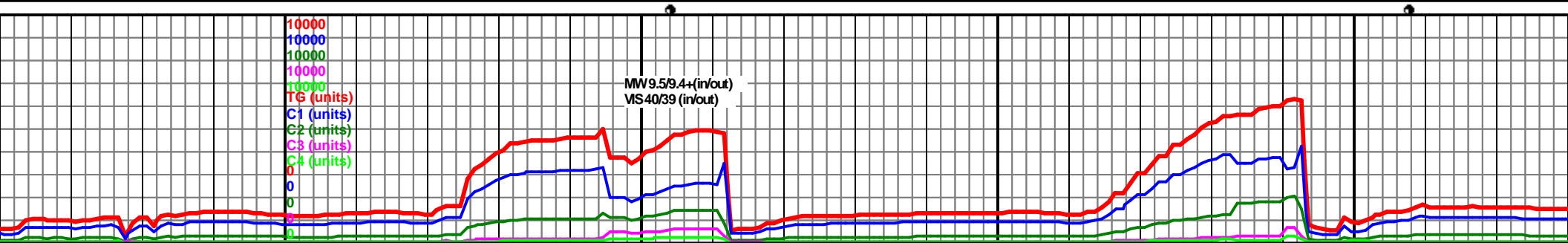
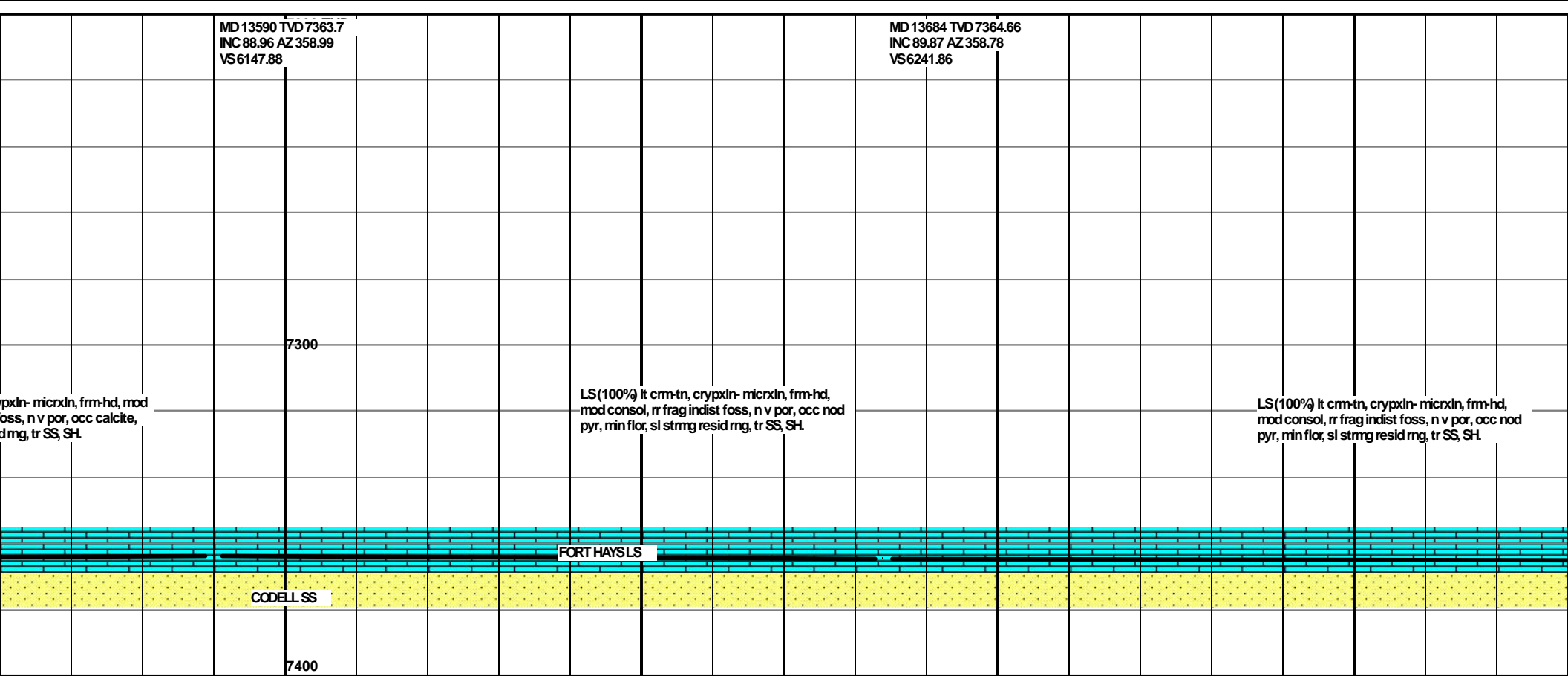
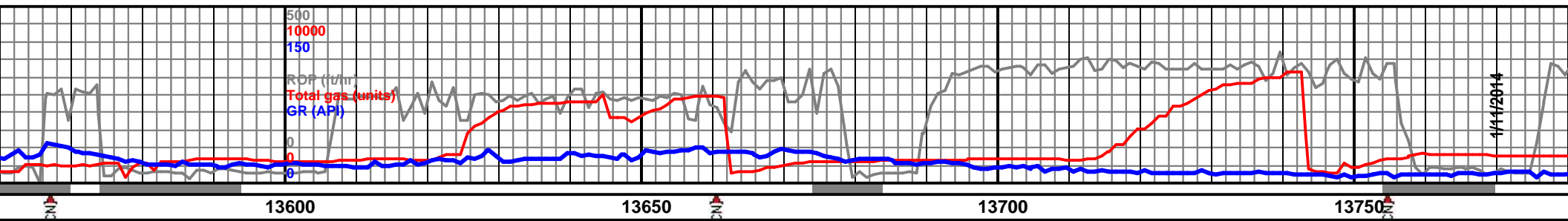


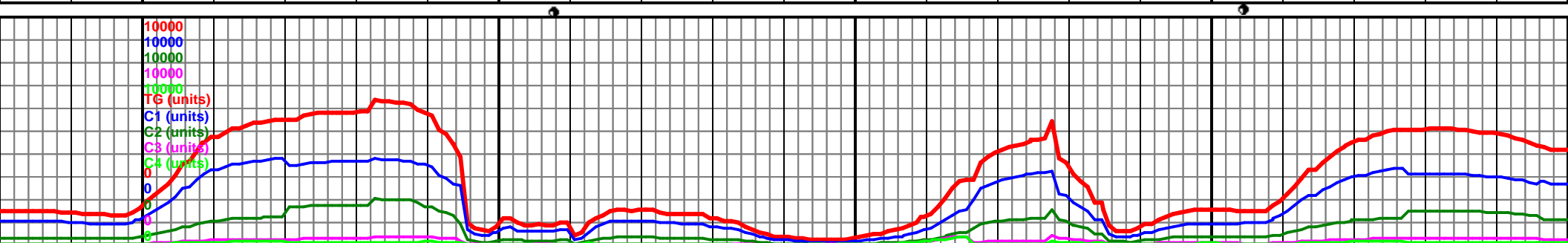
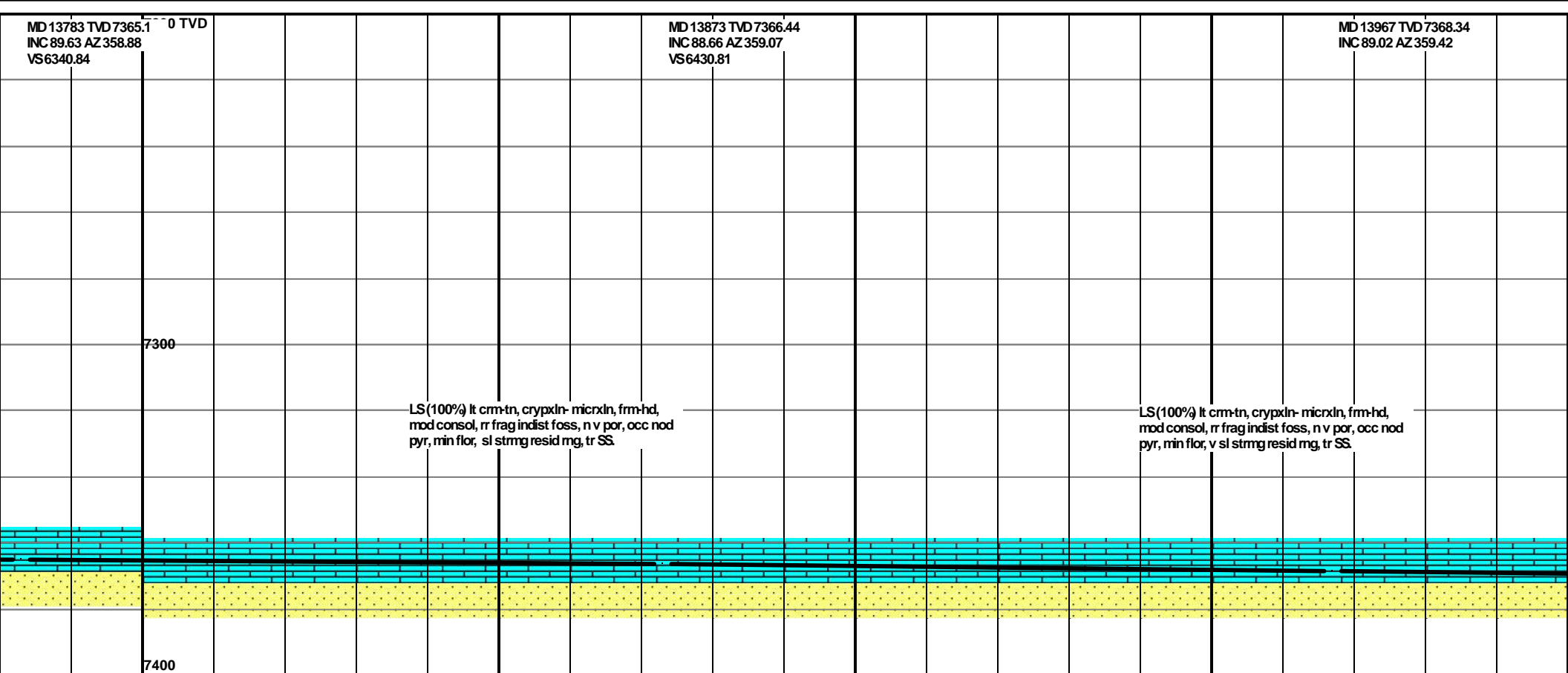
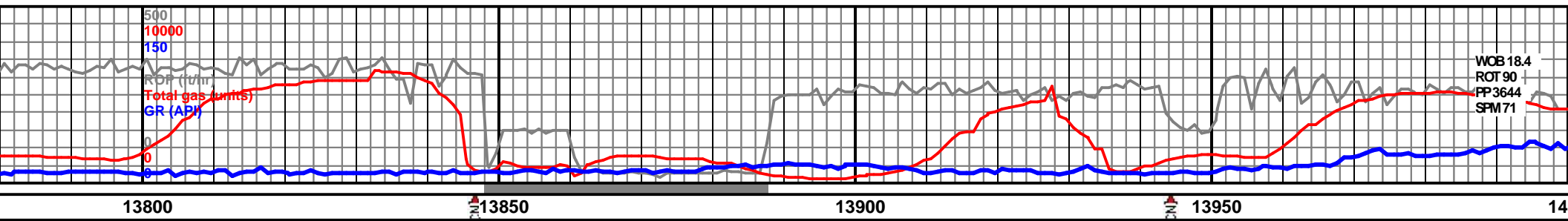
9.7(in/out)
(in/out)

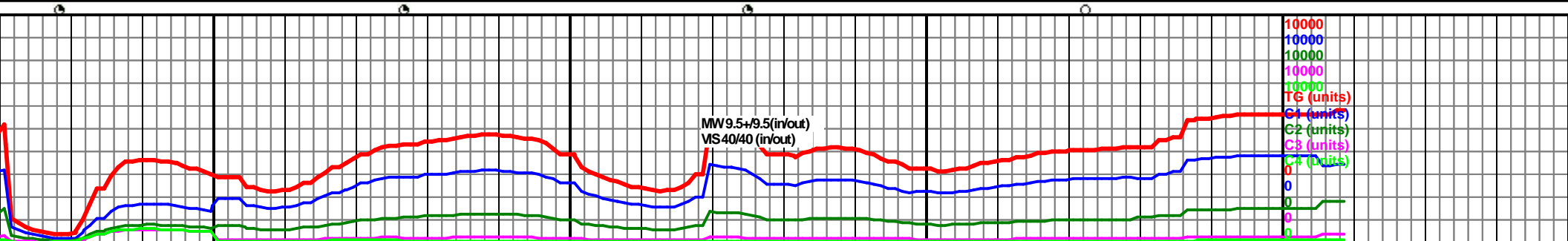
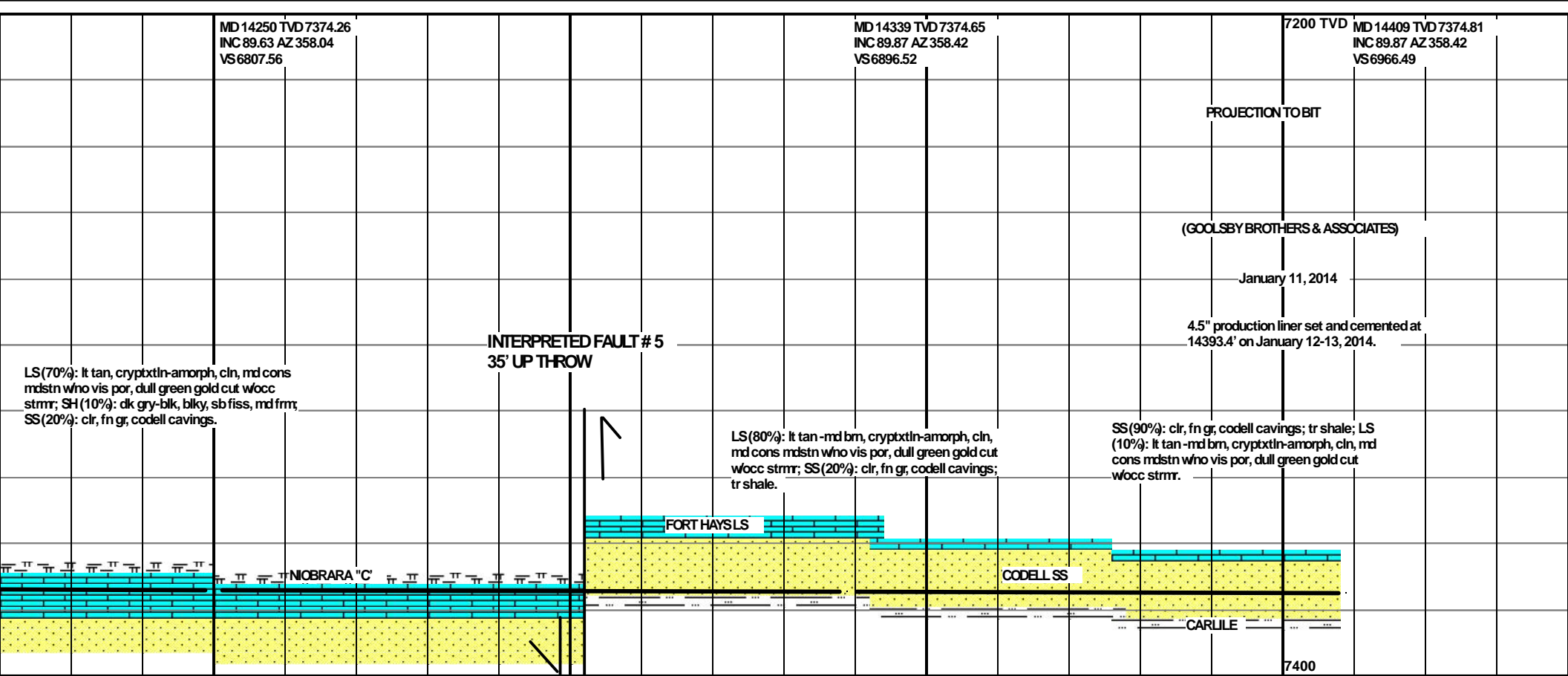
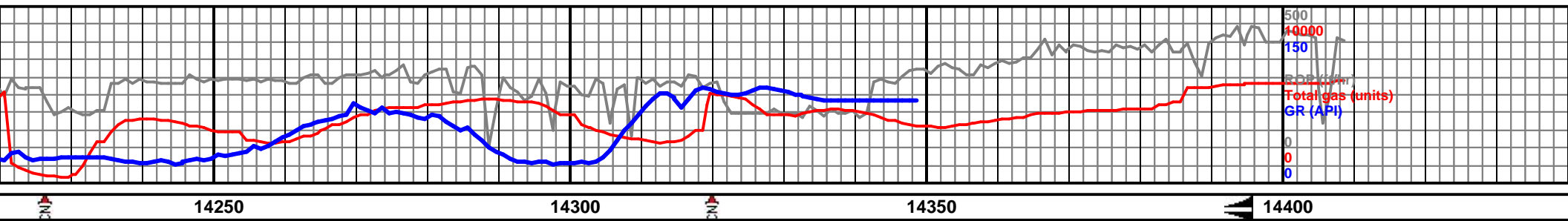
10000
10000
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)

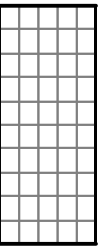












14

