

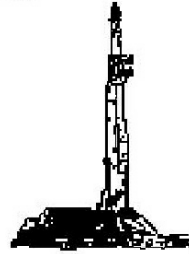
GOOLSBY BROTHERS
and associates, inc.

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: Hedge 16N-22HZ
Location: Section 22, T3N, R66W, Weld County, CO.
License Number: API: 05-123-36521, AFE: 2069550
Spud Date: August 6, 2013
Surface Coordinates: SE/SE Sec 22, T3N, R66W 631' FNL & 344' FEL
Lat: 40.21608 N Long: -104.755034 W
Region: Wattenberg
Drilling Completed: August 13, 2013
Bottom Hole Coordinates:
Ground Elevation (ft): 4,905 K.B. Elevation (ft): 4,930'
Logged Interval (ft): 6,600' To: 12,088' Total Depth (ft): 12,088'
Formation: Pierre shales / sands, Niobrara B Chalk Target
Type of Drilling Fluid: Polymer-Water

Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 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: Alan Seeling/Marek Ciesnik
Company: Goolsby Brothers & Assoc. (GBA), Inc. (www.goolsbybrothers.com)
Address: 575 Union Blvd.
Suite 208,
Lakewood CO. 80228

E-logs

MWD Gamma: xxx' - xxx'
Resistivity: xxxx'-xxxx'


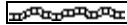
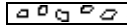

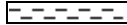

Casing







9 5/8" Surface Casing (IPSCO 36# J55) set @ 951'.
7" Intermediate Casing (IPSCO 26# P110) set @
4 1/2" Production Liner set 12,075'

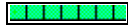

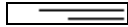
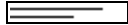


Comments





- 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, Rick Oman, David Wells
- 3) Mud Company: Halliburton, Randal Phipps
- 4) Directional Drilling: Scientific Drilling
Directional Drillers: Ian Ensell, John Noakes.
MWD: Joshua Denning, Mohamed Sharkar.
- 5) Gas Equipment: Mudlogging Systems Inc.
by Terra Services
Redbox # ML-419

ROCK TYPES

 Anhy
 Bent
 Brec
 Cht
 Clyst
 Coal

 Oil sat.
 Congl
 Dol
 Gyp
 Lmst
 Mrlst

 Salt
 Shale
 Shcol
 Shgy
 Ss
 Slst

 Ss
 Chalk
 Carb sh
 Slty 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
	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

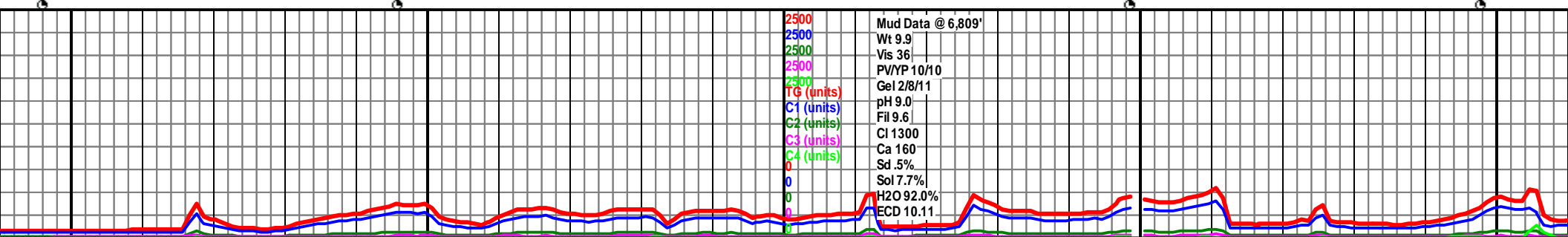
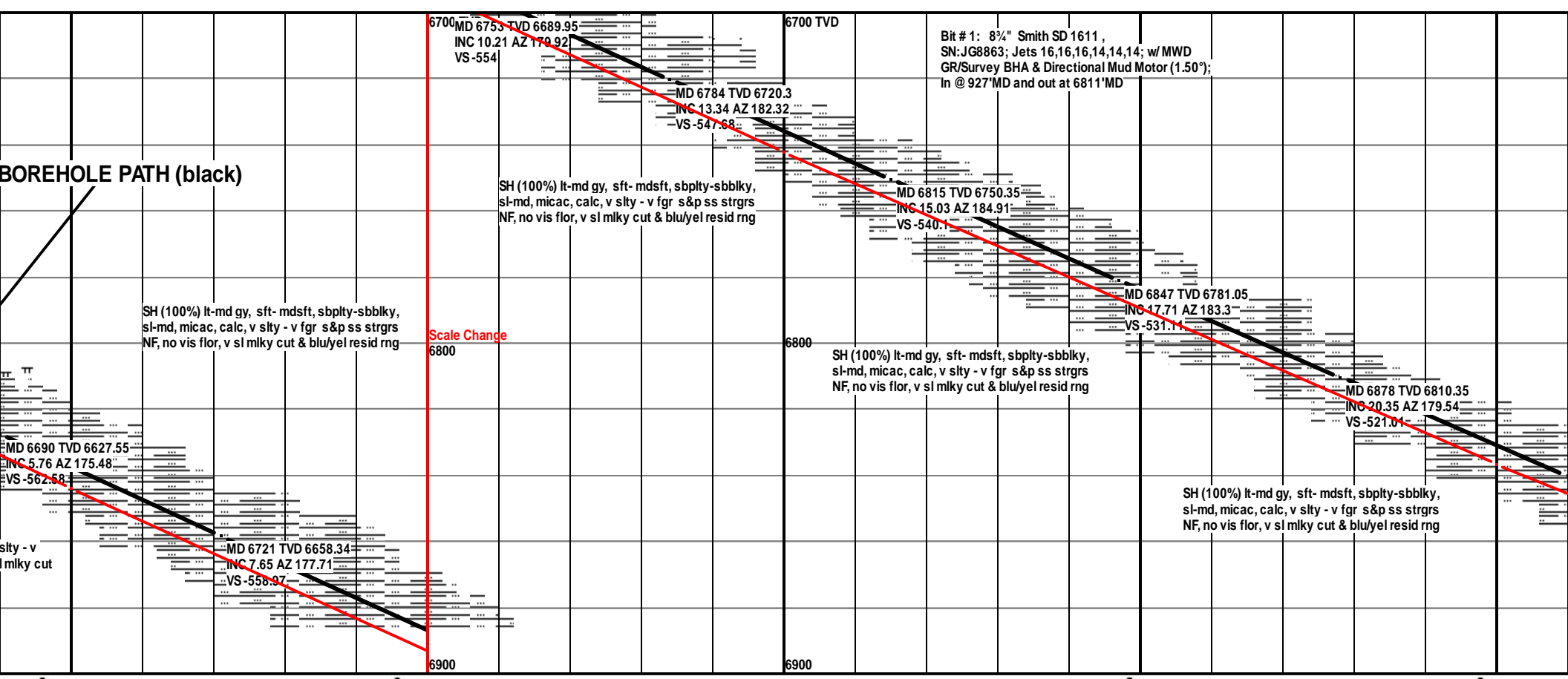
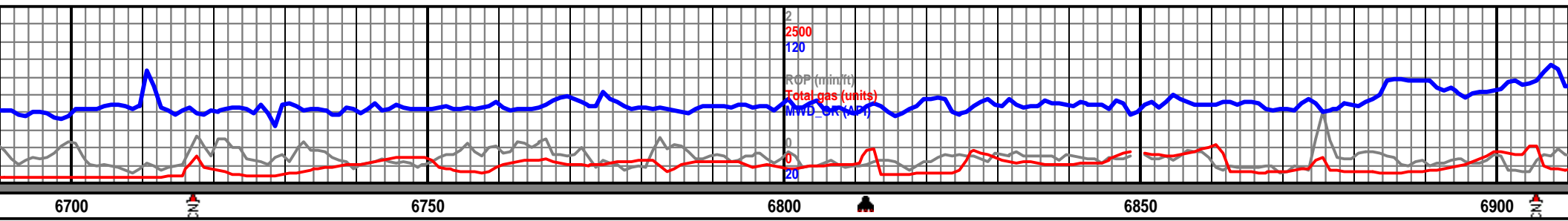
ROUNDING

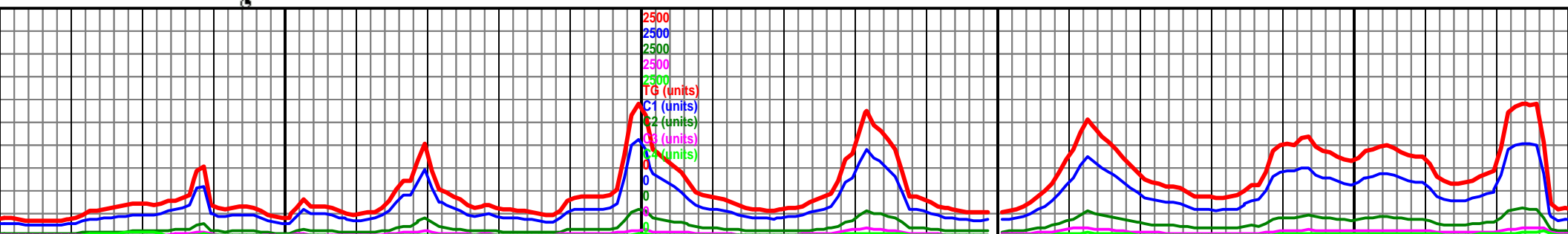
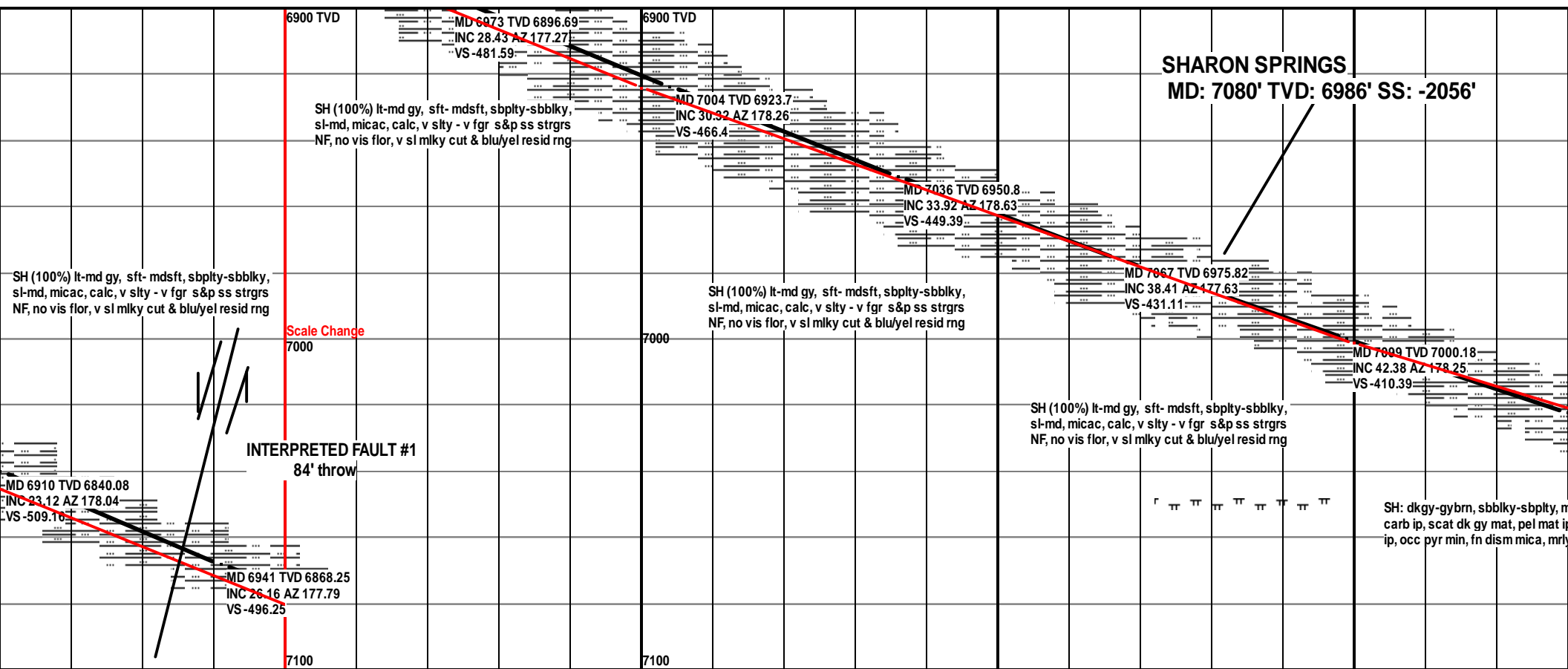
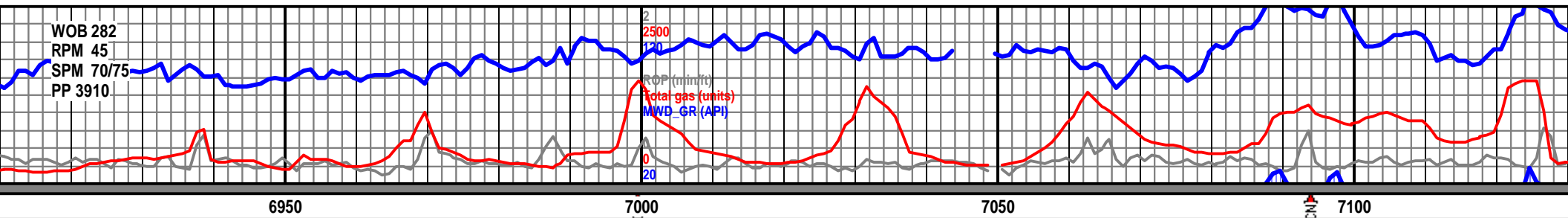
	Rounded
	Subrnd
	Subang

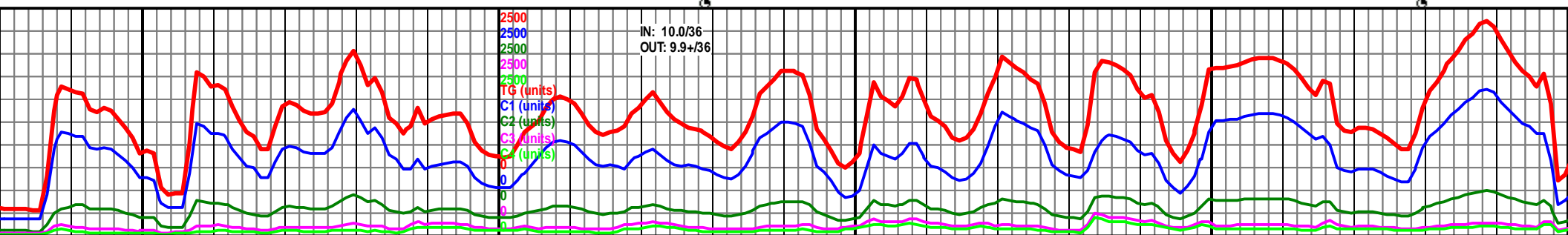
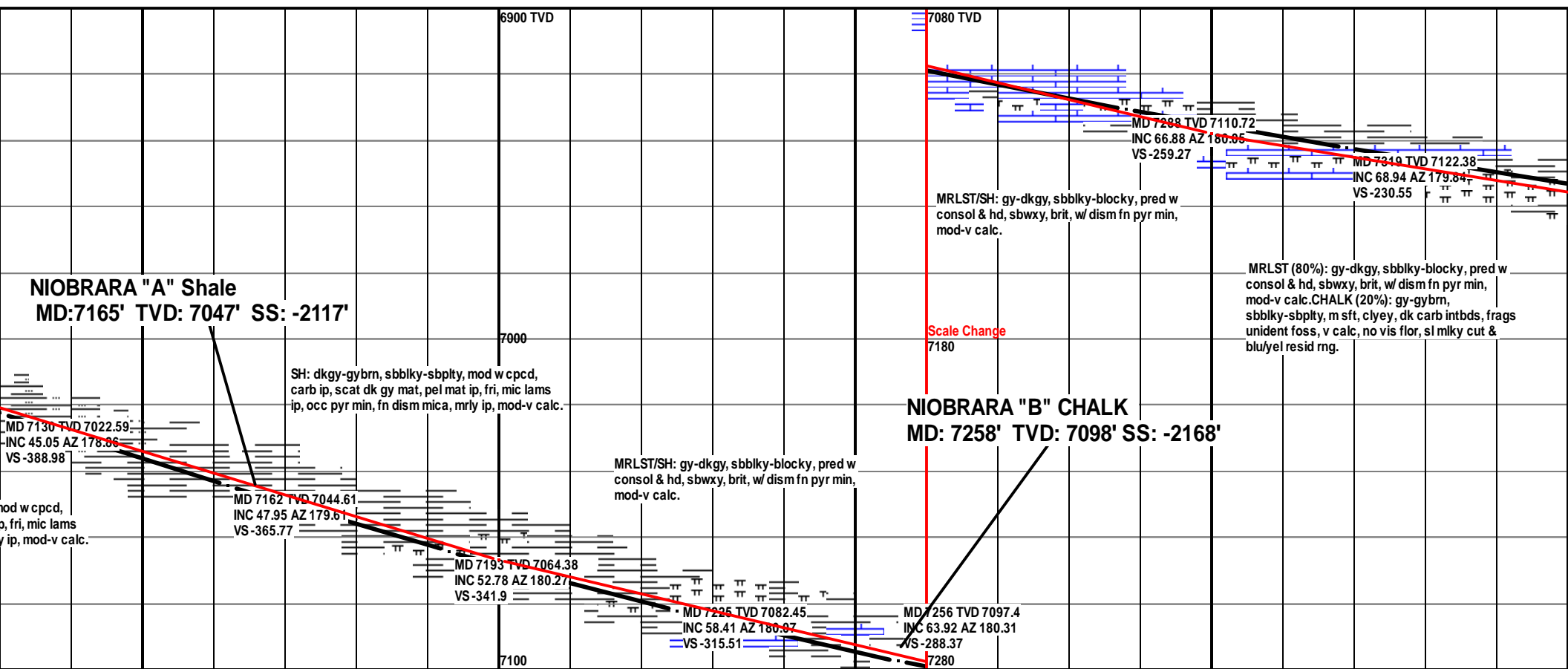
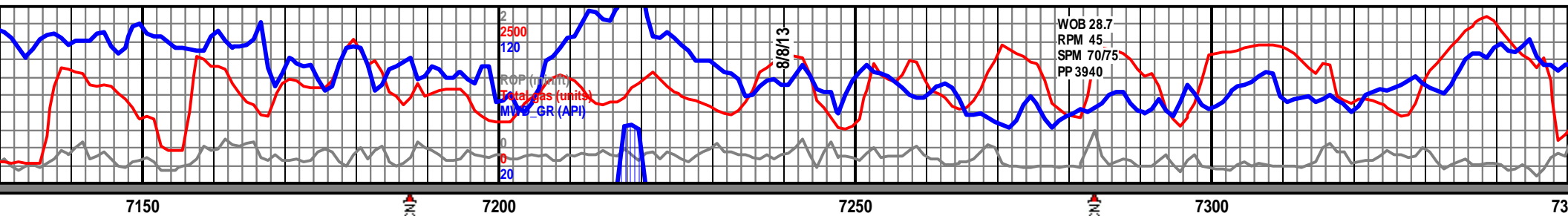
	Angular
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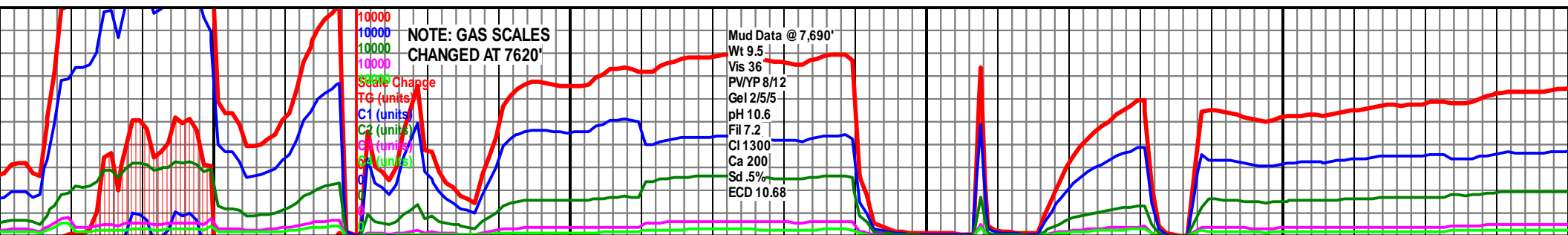
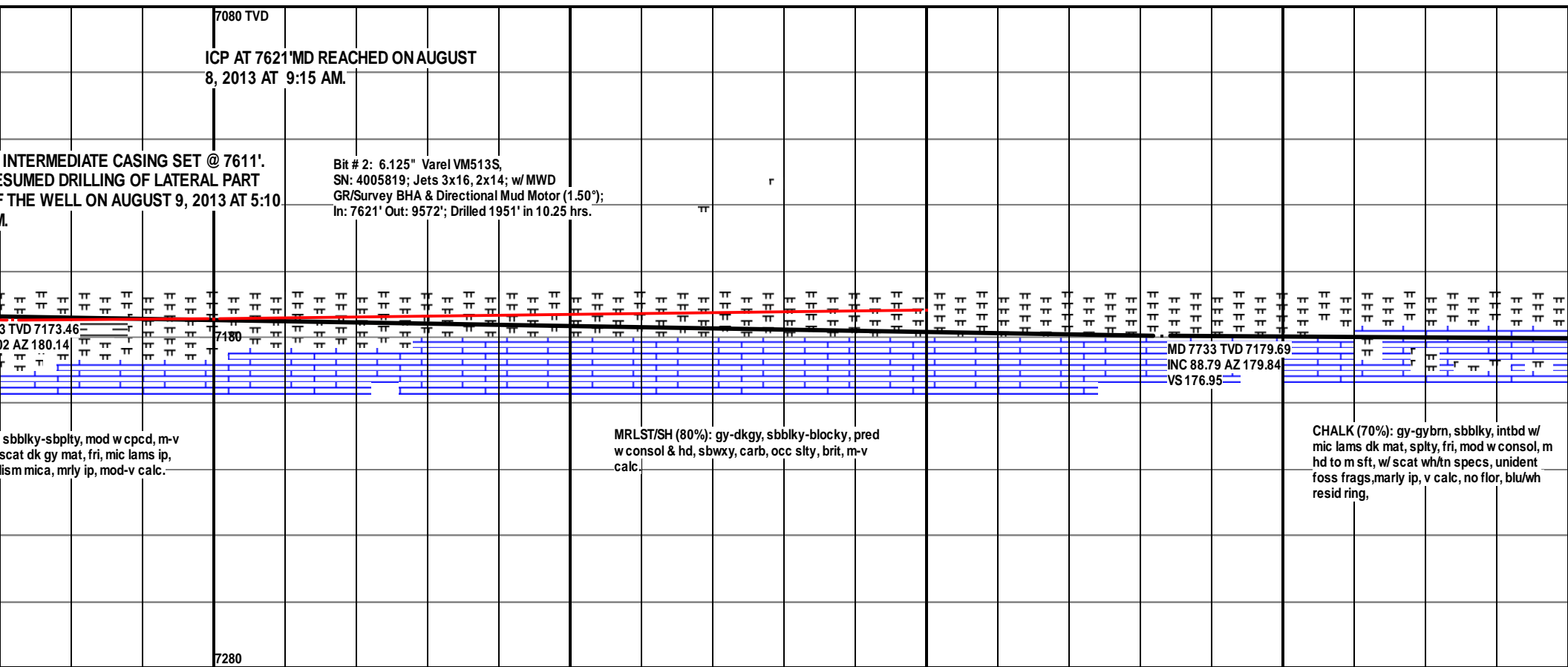
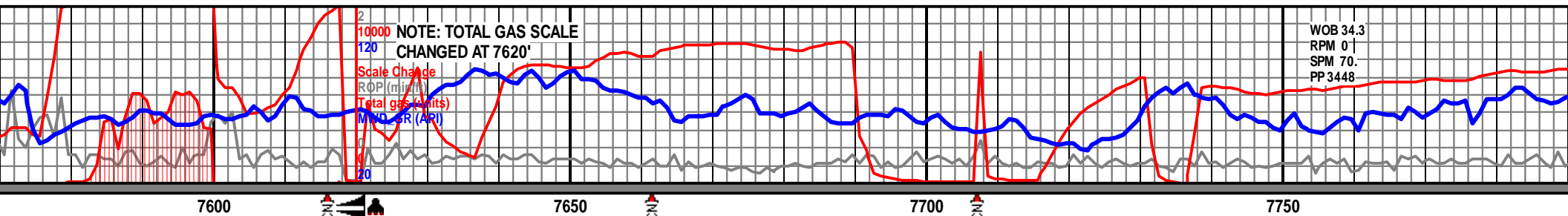
SORTING

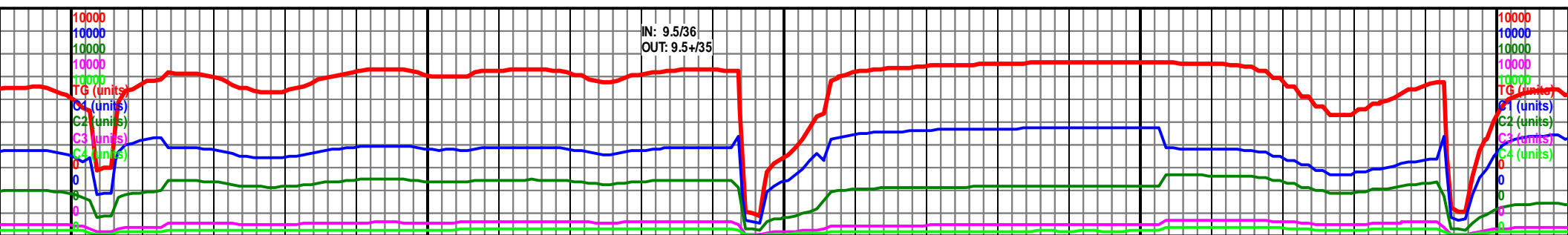
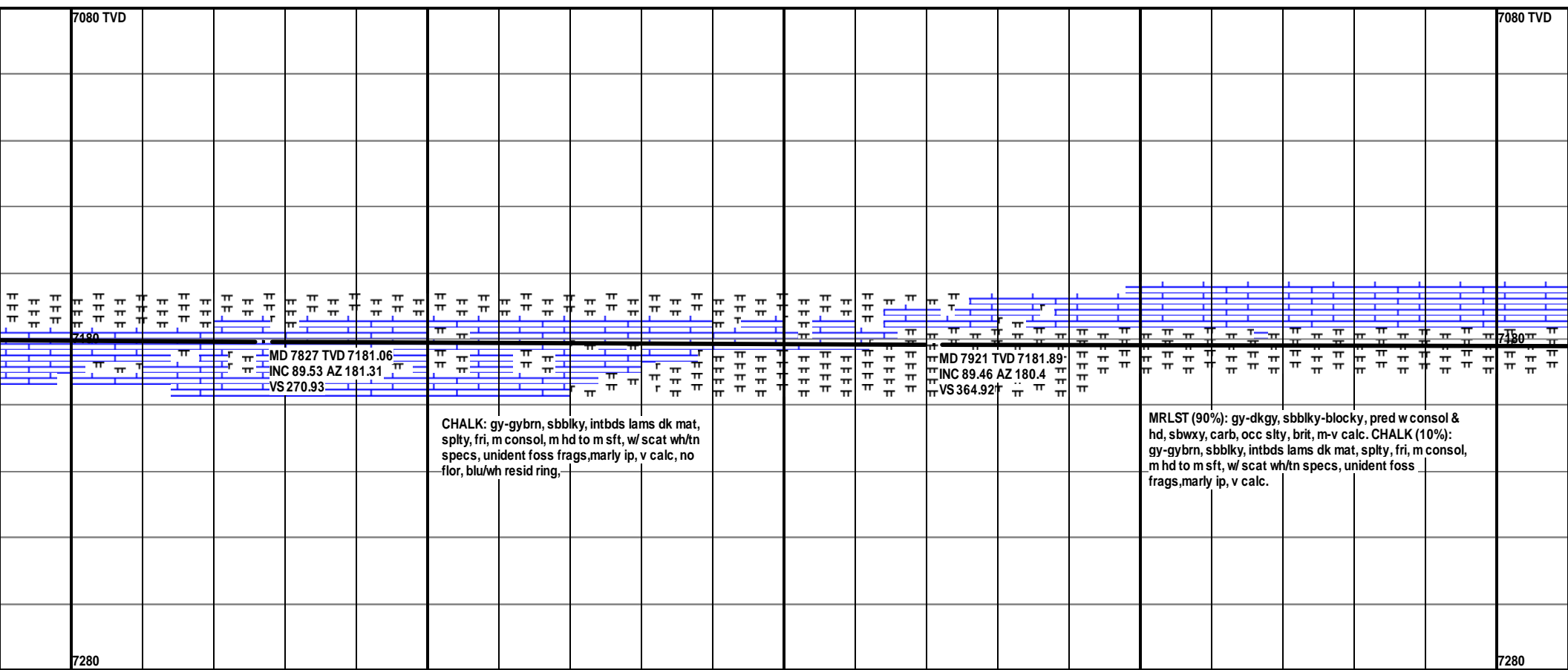
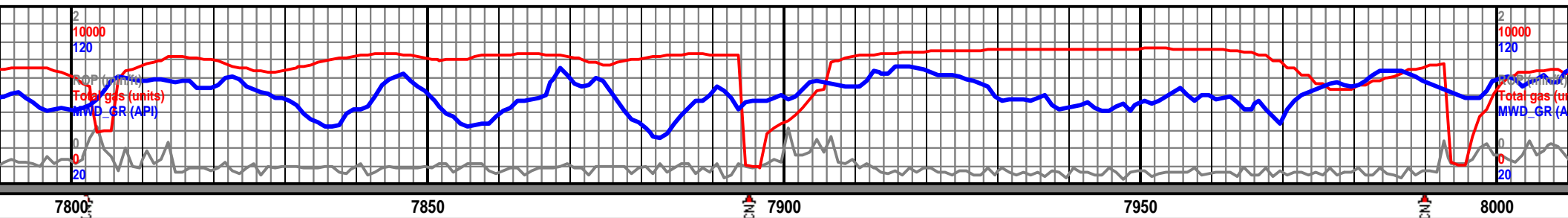
	Well
	Moderate
	Poor

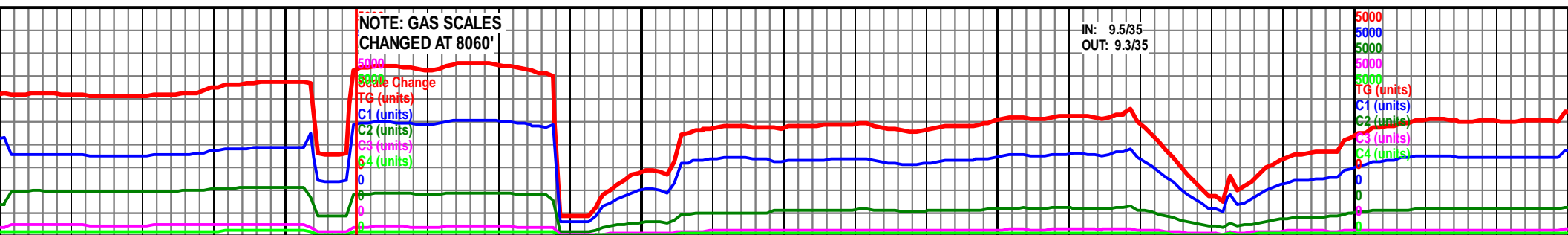
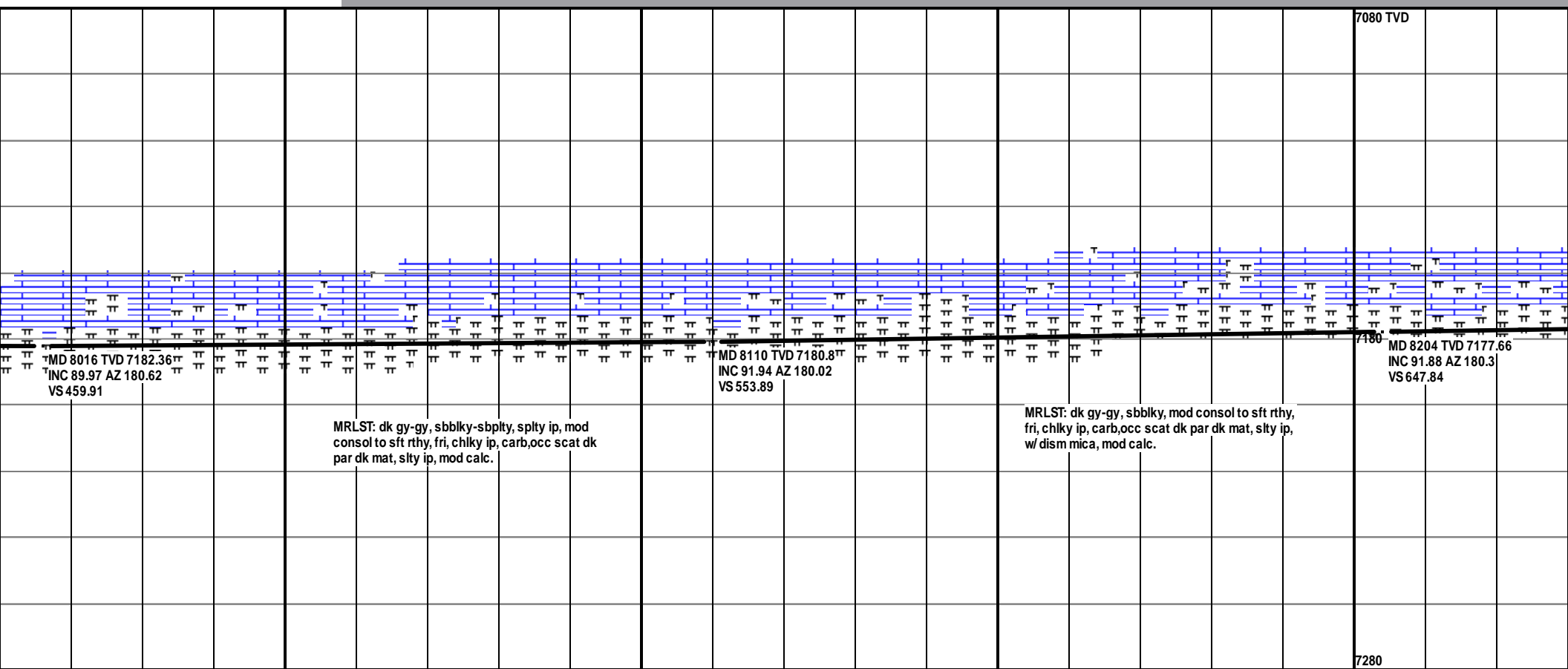
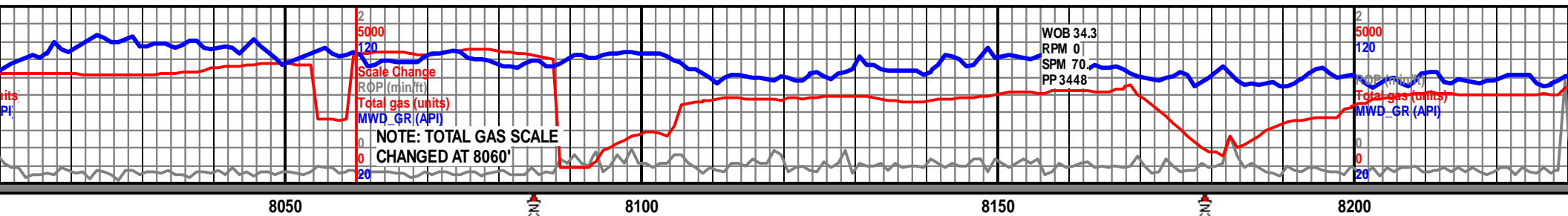


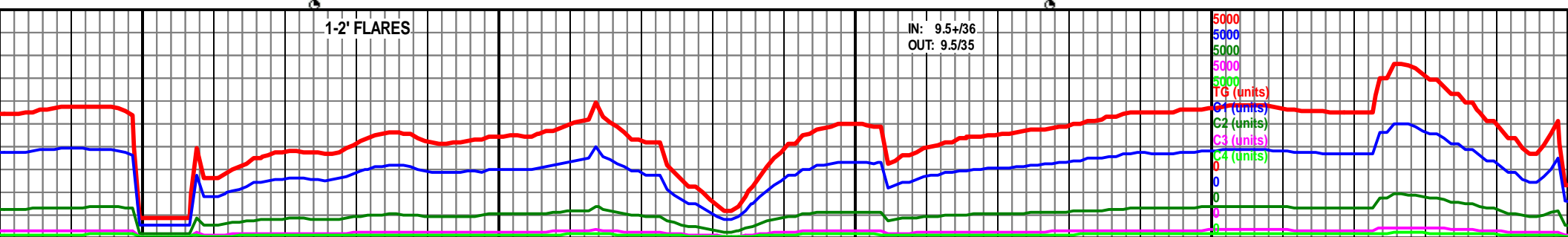
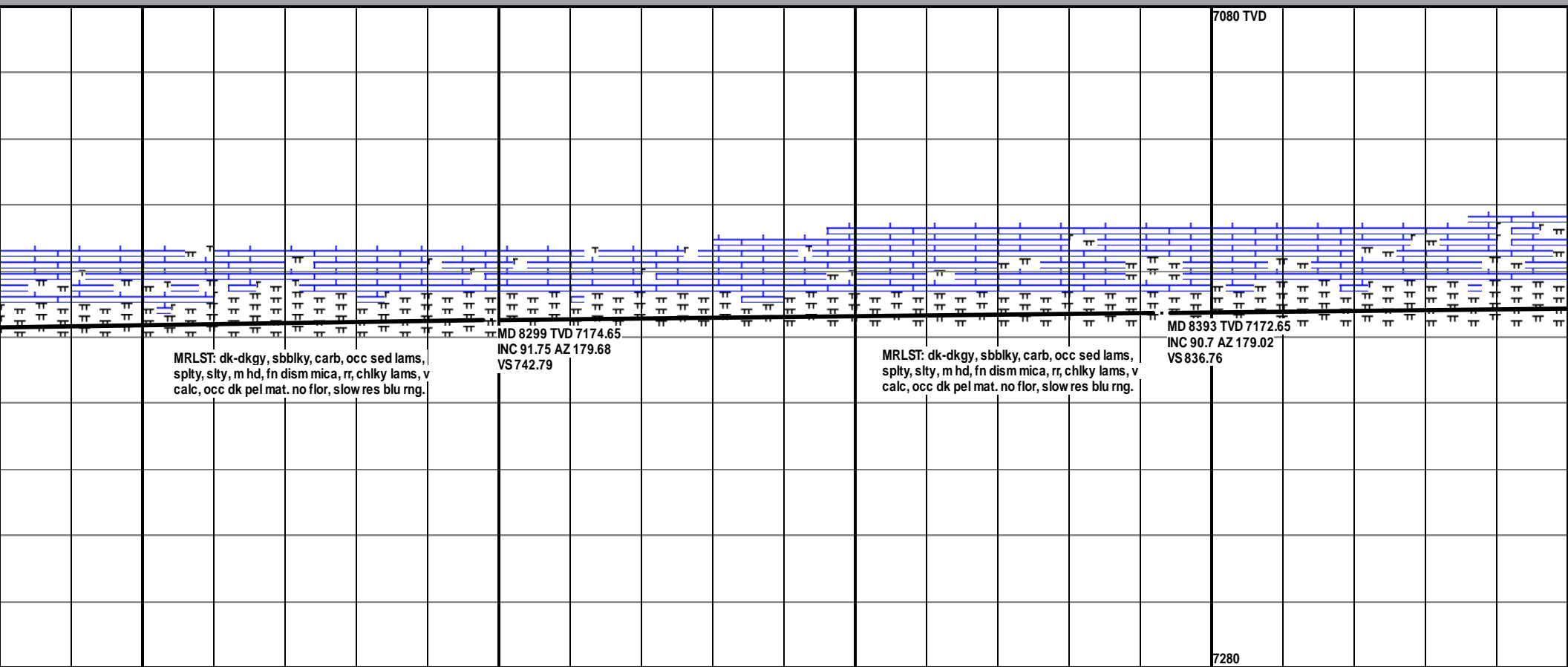
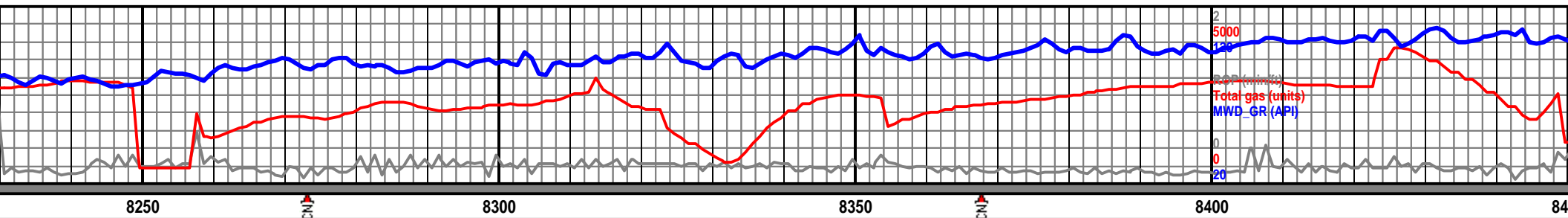


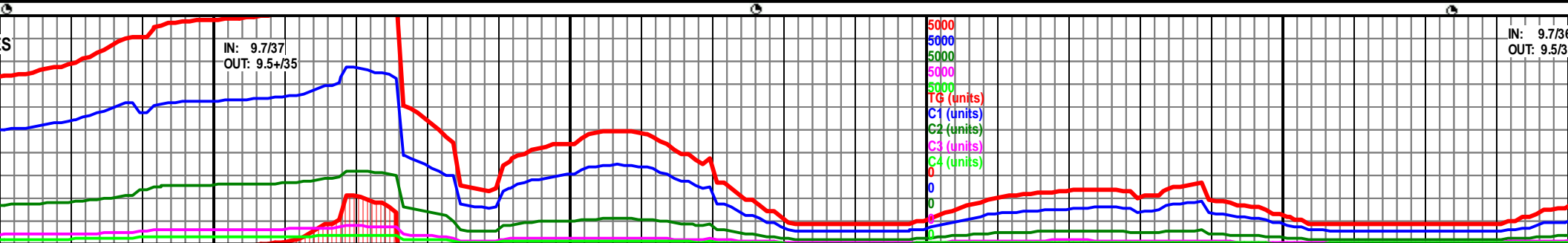
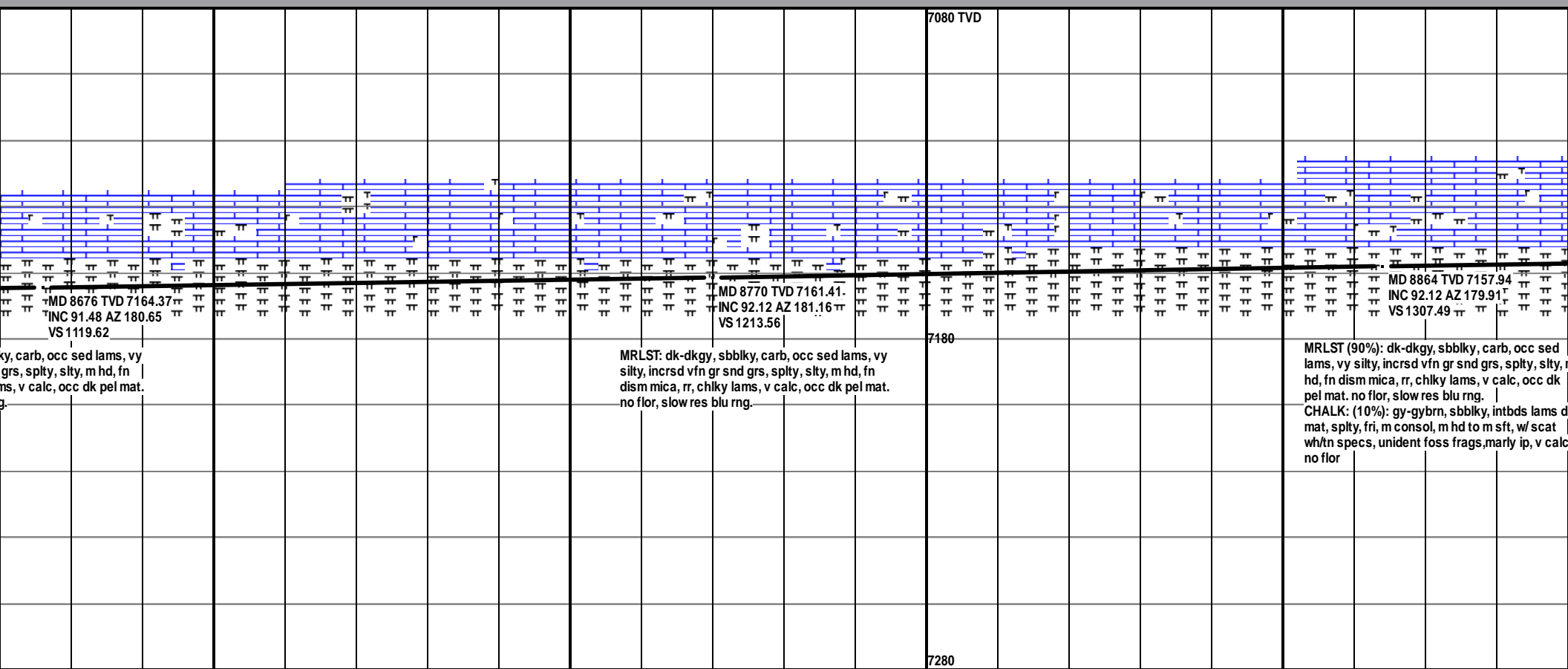
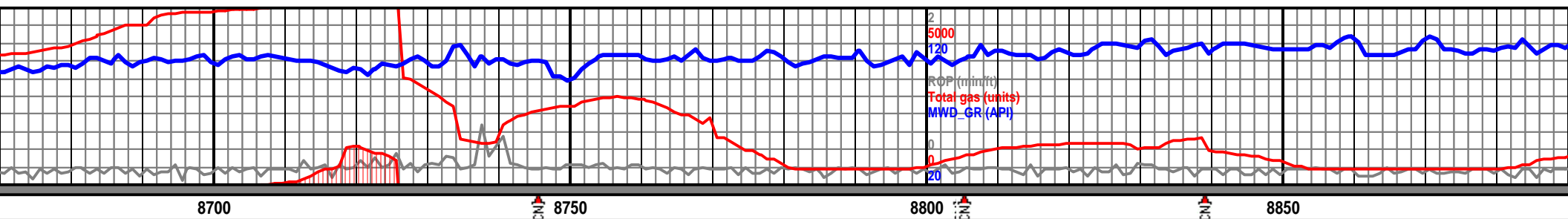


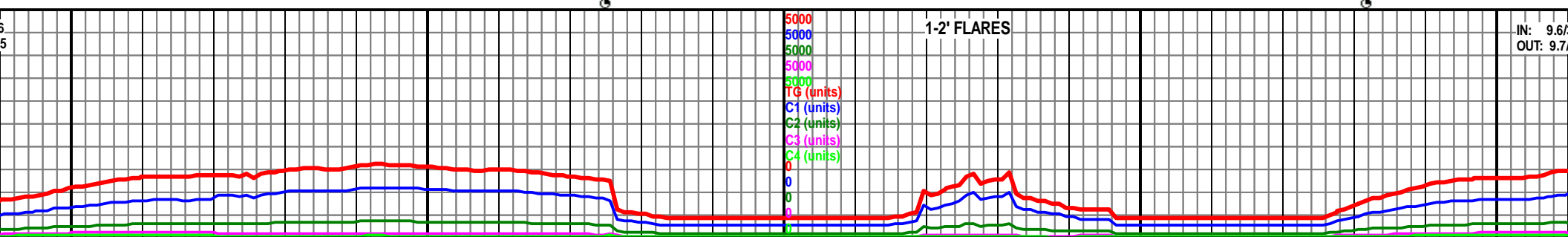
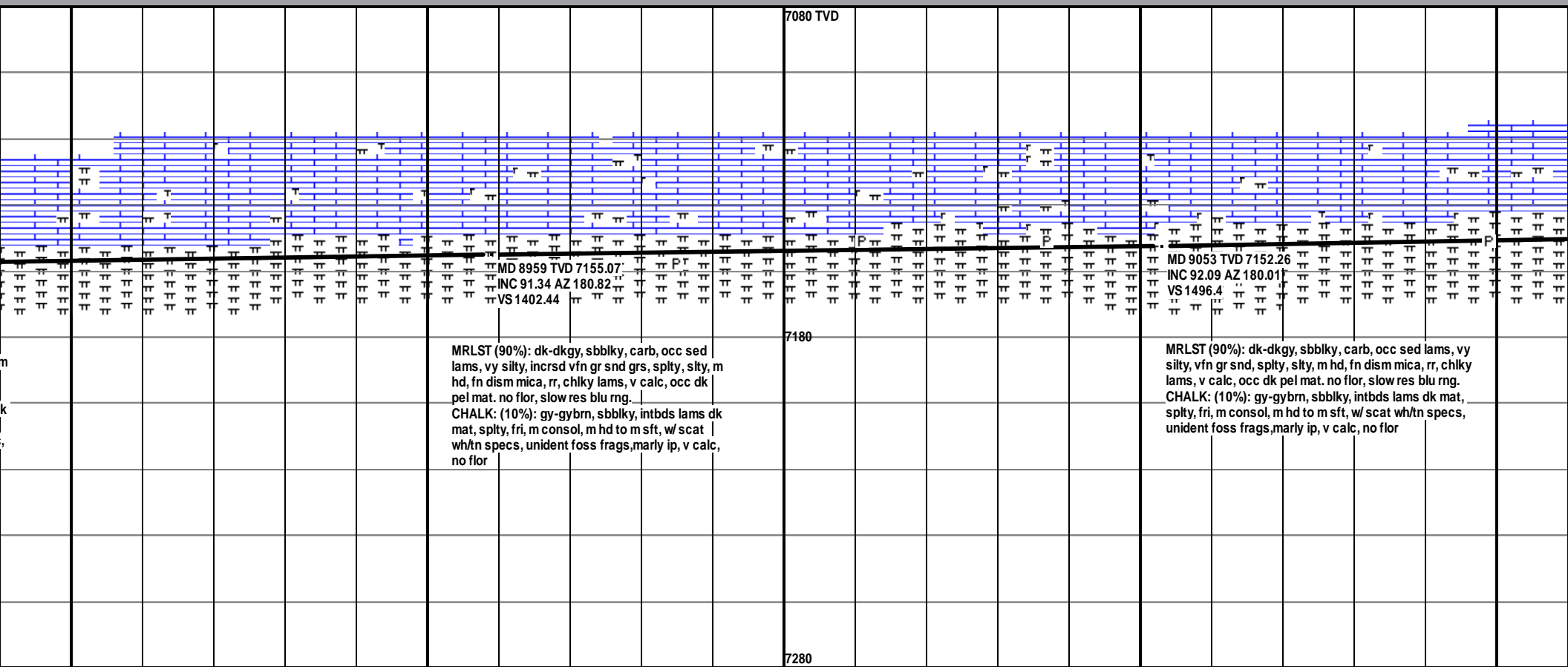
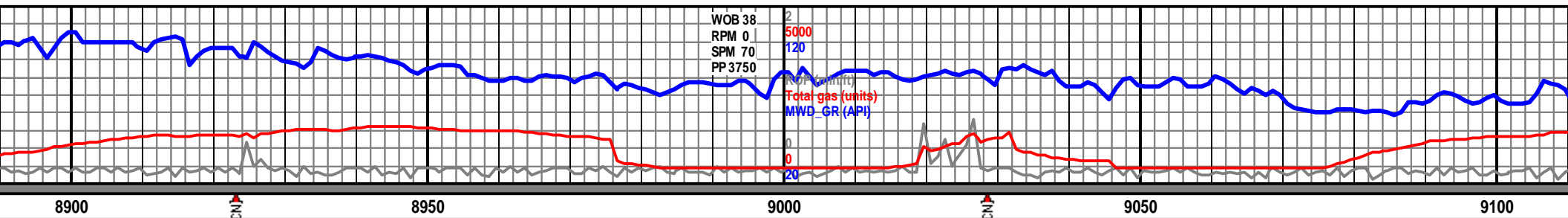


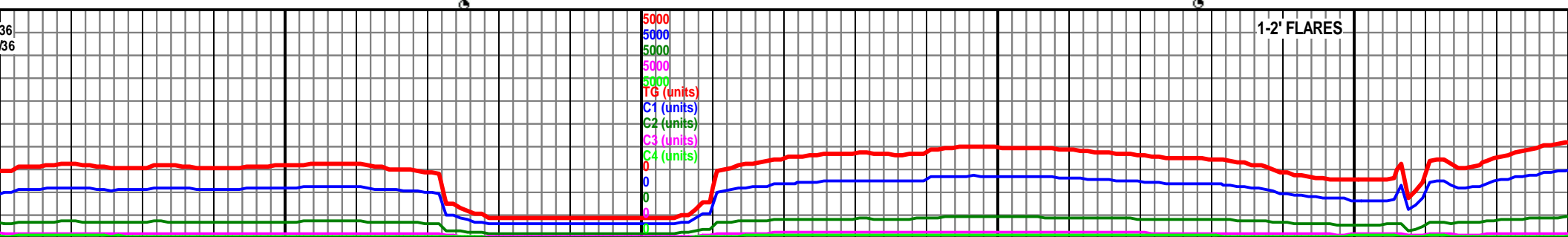
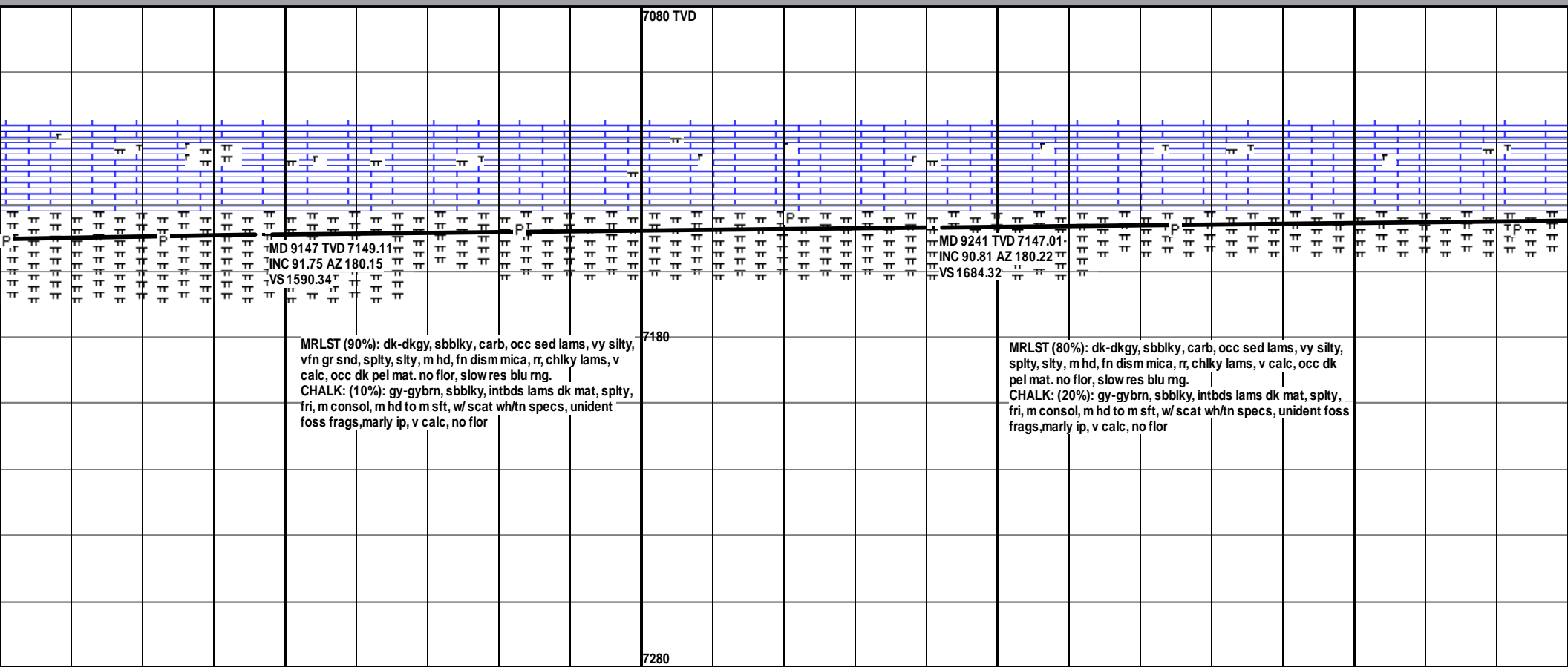
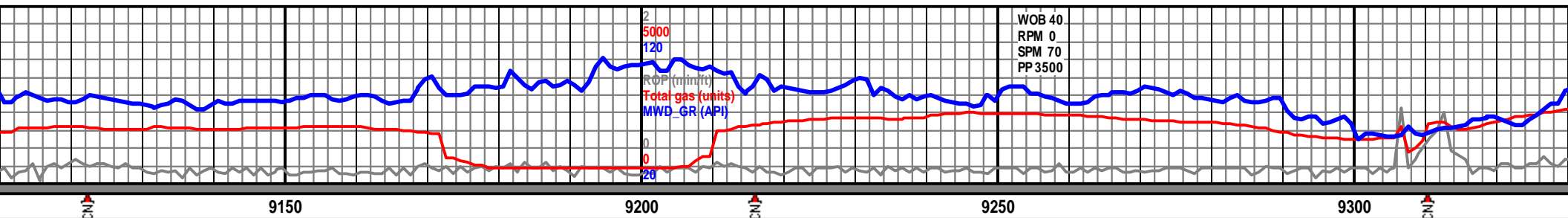


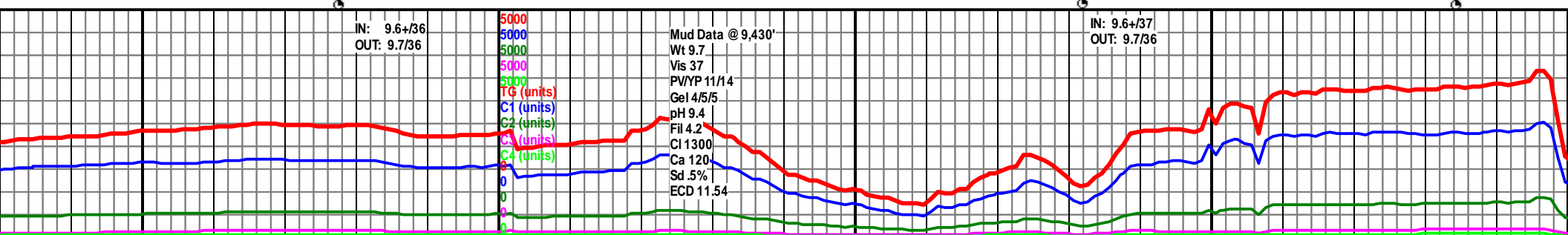
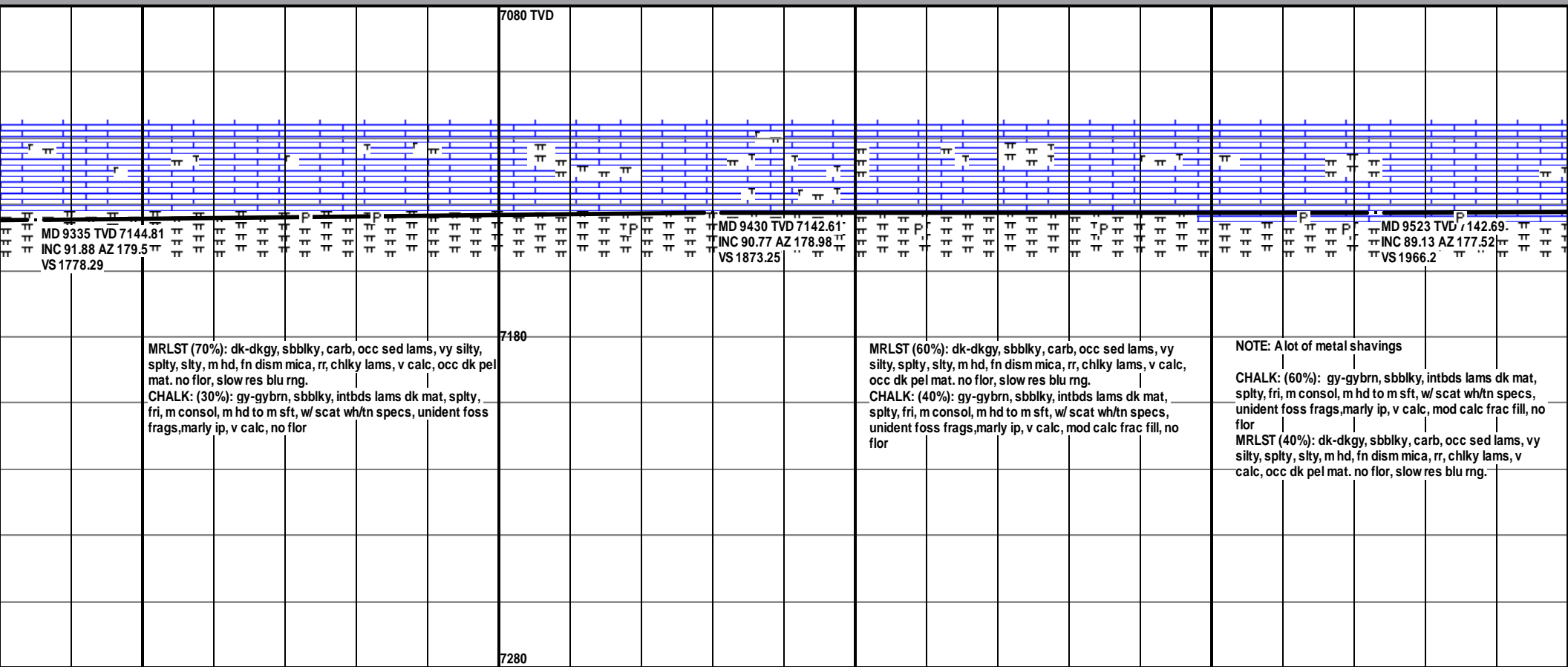
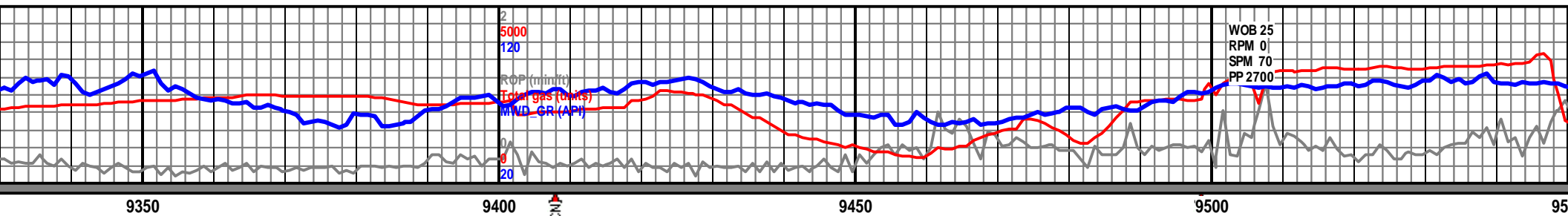


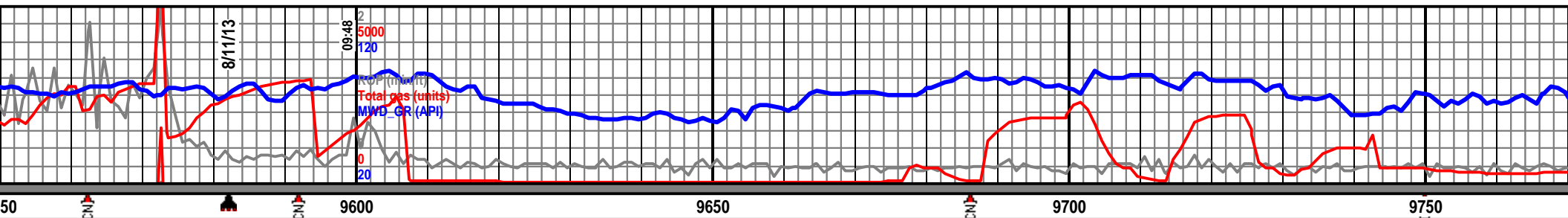












Bit # 3: 6.125" Smith MDi513; Jets 3x16, 2x14;
w/ MWD GR/Survey BHA & Directional Mud Motor
(1.50"); In: 9572' Out: 12,088"; Drilled 2516' in
23:14 hrs.

7080 TVD

MD 9617 TVD 7141.7-
INC 92.08 AZ 179.17
VS 2060.15

MD 9711 TVD 7138.28
INC 92.08 AZ 177.81
VS 2154.05

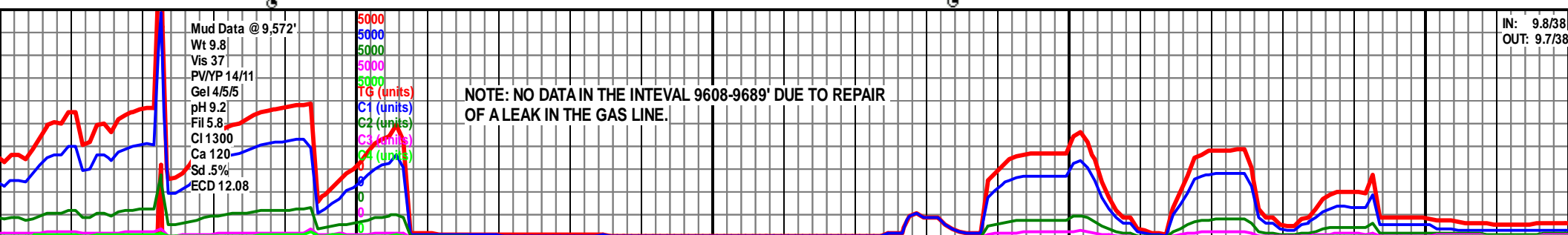
CHALK: (60%): gy-gybrn, sbbly, intbds lams dk
mat, splty, fri, m consol, m hd to m sft, w/ scat
wh/tn specs, unident foss frags, marly ip, v calc,
abund calc frac fill, no flor
MRLST (40%): dk-dkgy, sbbly, carb, occ sed
lams, v silty, splty, m hd, fn dism mica, rr, chlky
lams, v calc, occ dk pel mat. no flor, slow res blu
rng.

CHALK: (60%): gy-gybrn, sbbly, intbds lams dk
mat, splty, fri, m consol, m hd to m sft, w/ scat
wh/tn specs, unident foss frags, marly ip, v calc,
mod calc frac fill, no flor
MRLST (40%): dk-dkgy, sbbly, carb, occ sed
lams, silty, splty, m hd, fn dism mica, rr, chlky
lams, v calc, occ dk pel mat. no flor, slow res blu
rng.

CHALK: (60%)
mat, splty, fri, m
wh/tn specs, u
mod calc frac
MRLST (40%):
lams, silty, spl
lams, v calc, o
rng.

this is a windows 8
issue

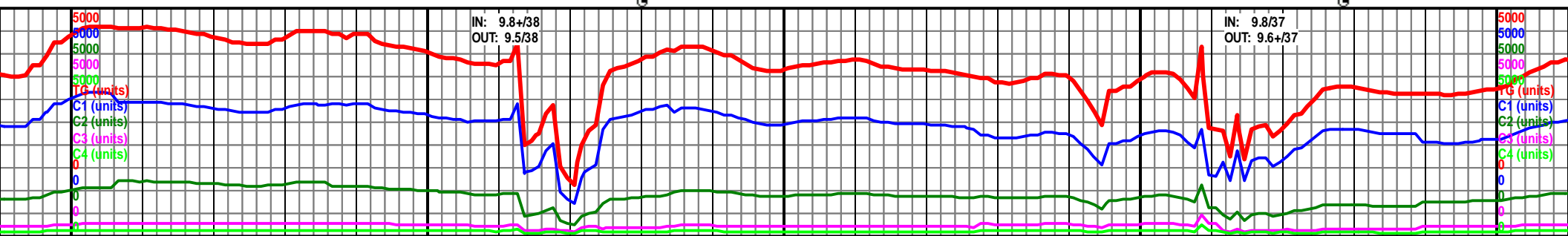
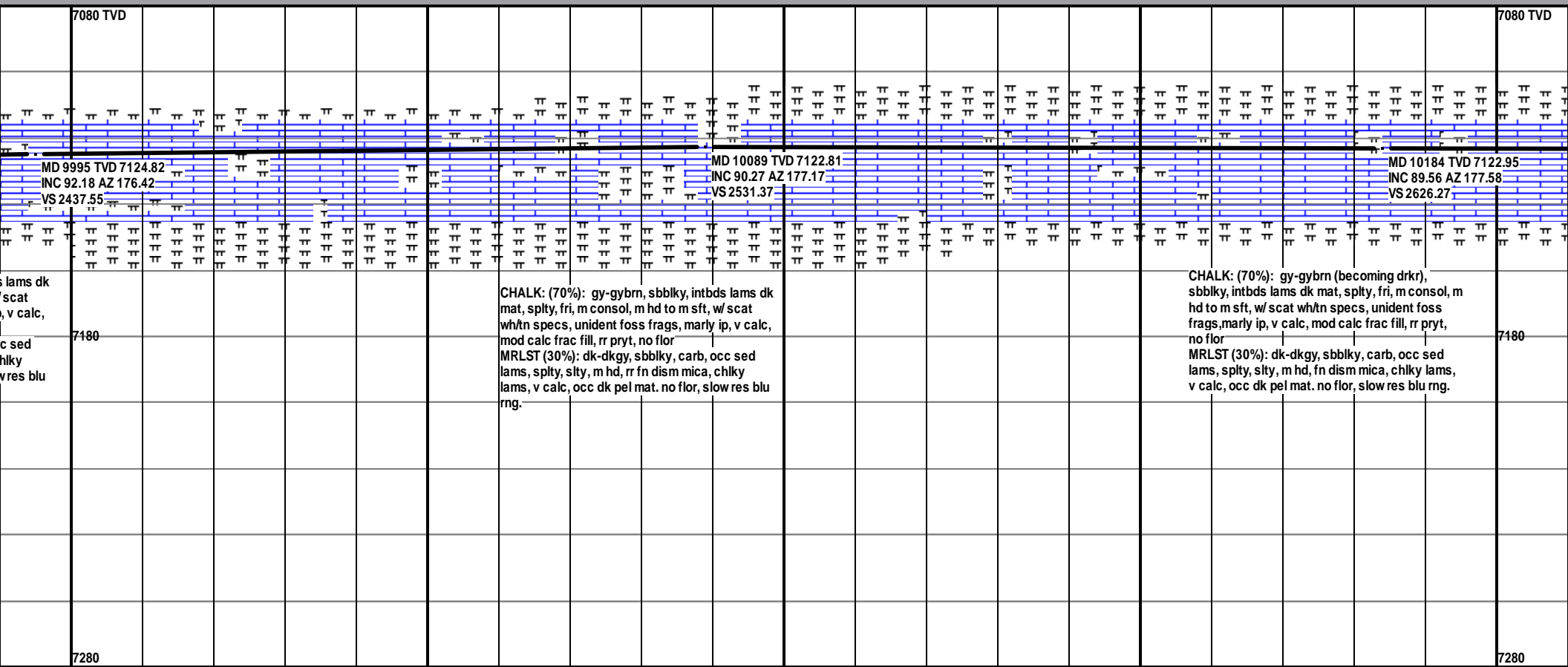
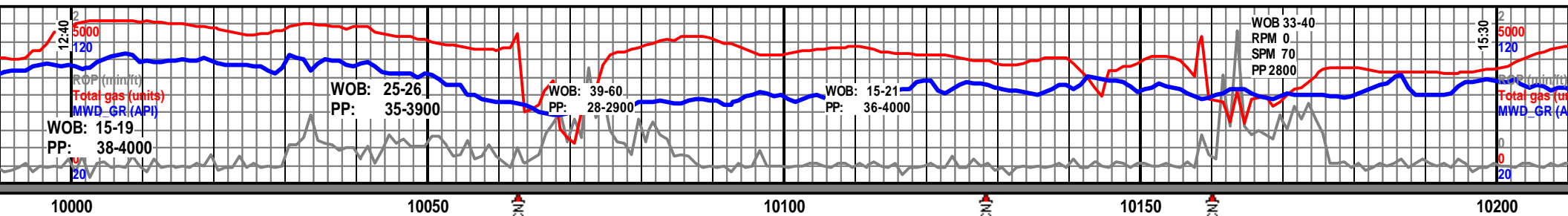
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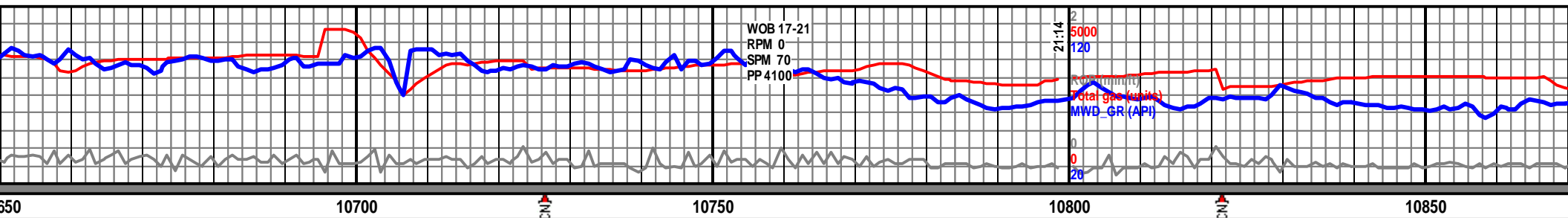


Mud Data @ 9,572'
Wt 9.8
Vis 37
PV/YP 14/11
Gel 4/5/5
pH 9.2
Fil 5.8
Cl 1300
Ca 120
Sd 5%
ECD 12.08

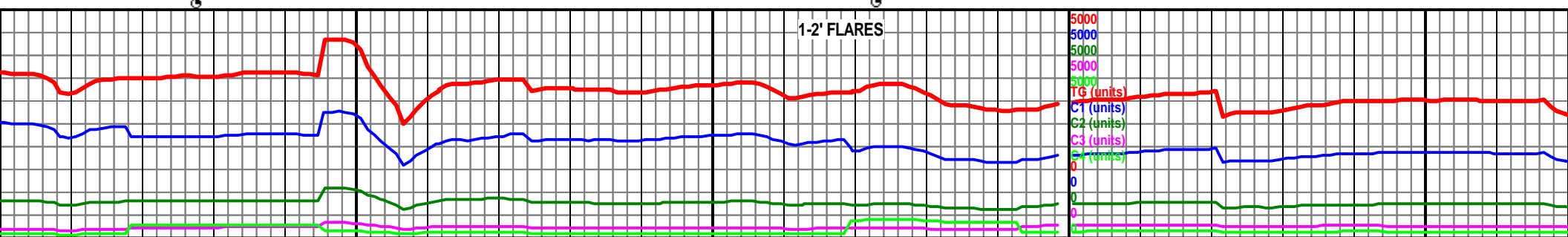
NOTE: NO DATA IN THE INTELVAL 9608-9689' DUE TO REPAIR
OF A LEAK IN THE GAS LINE.

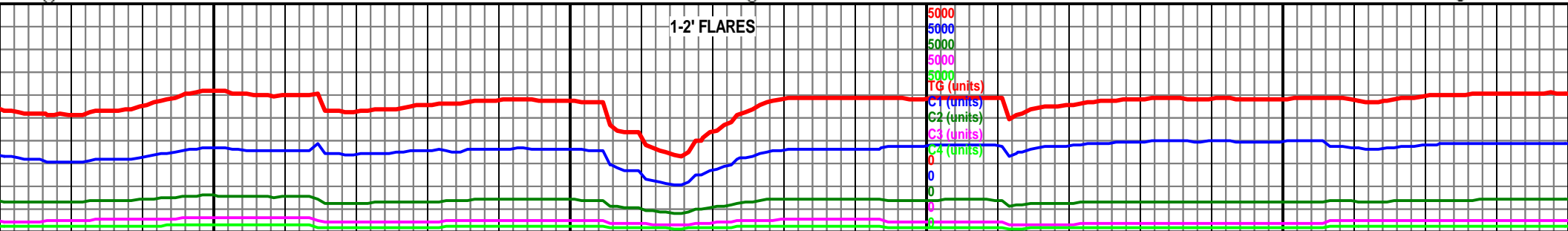
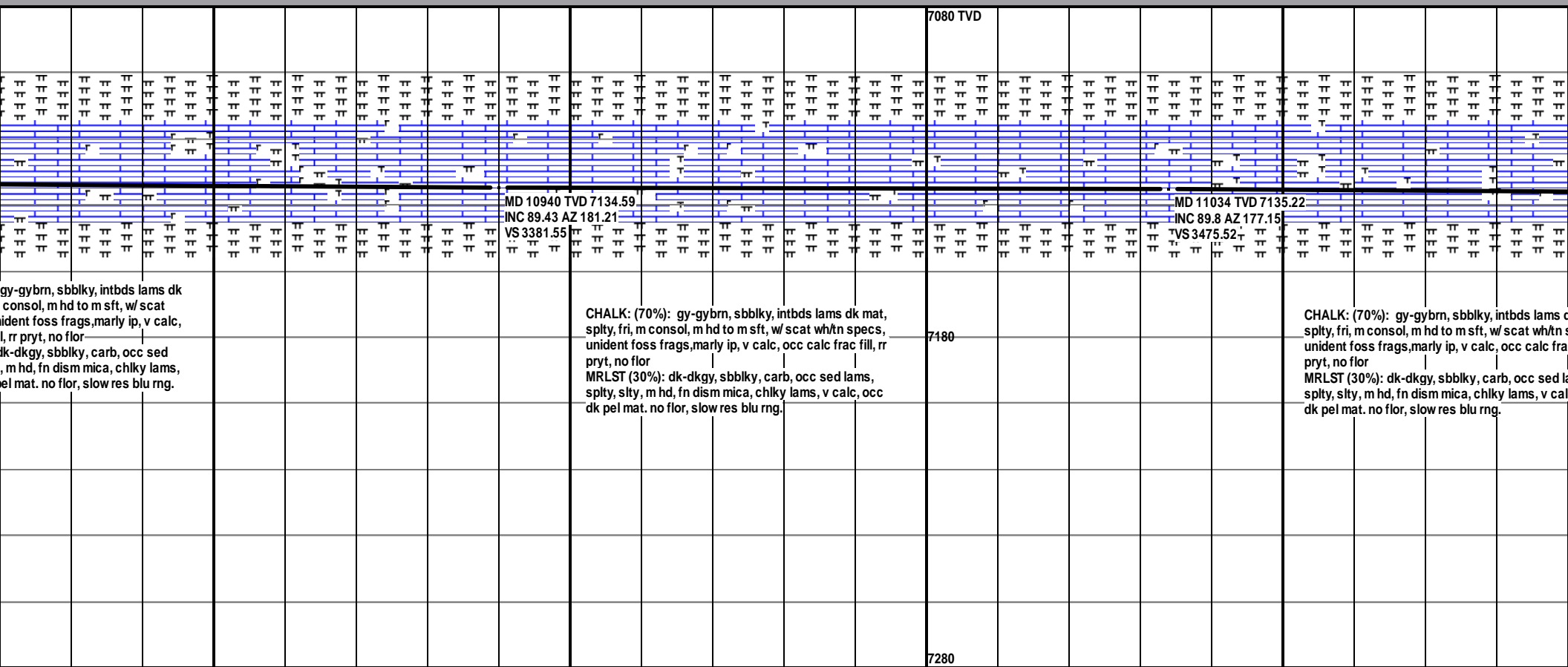
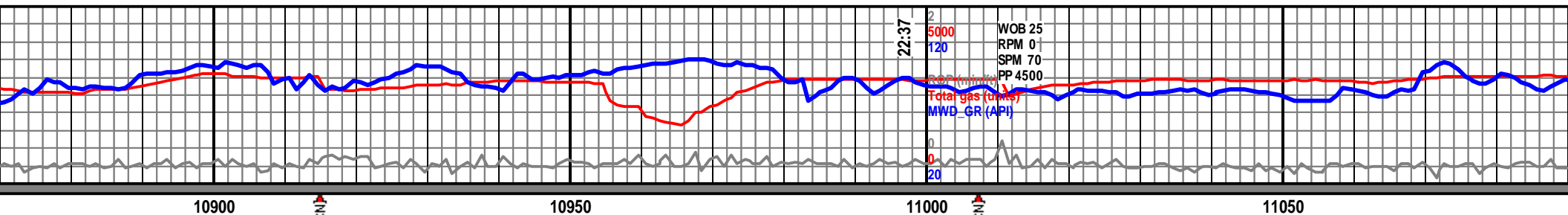
IN: 9.8/38
OUT: 9.7/38



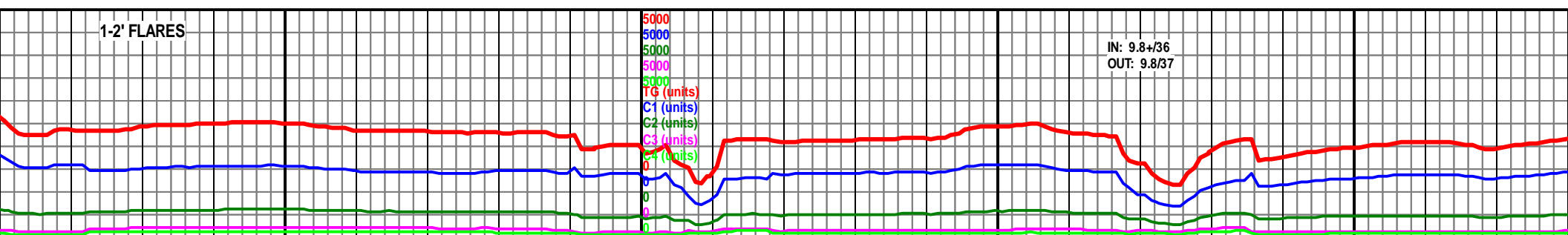
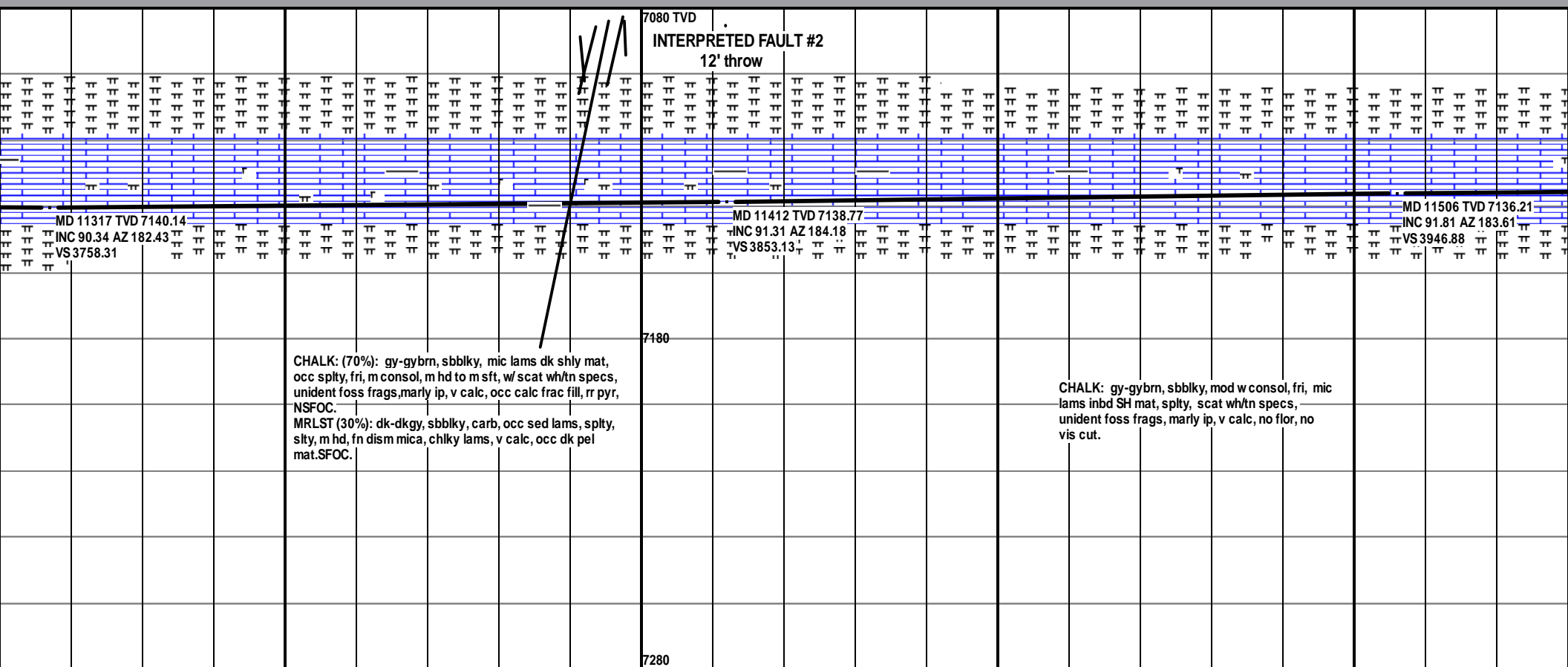
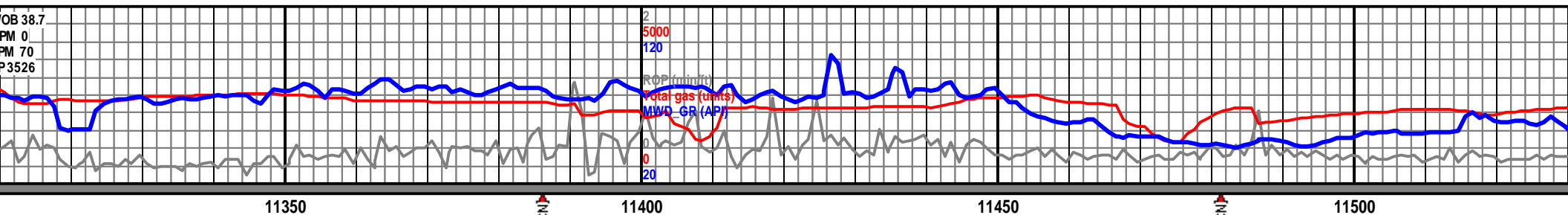


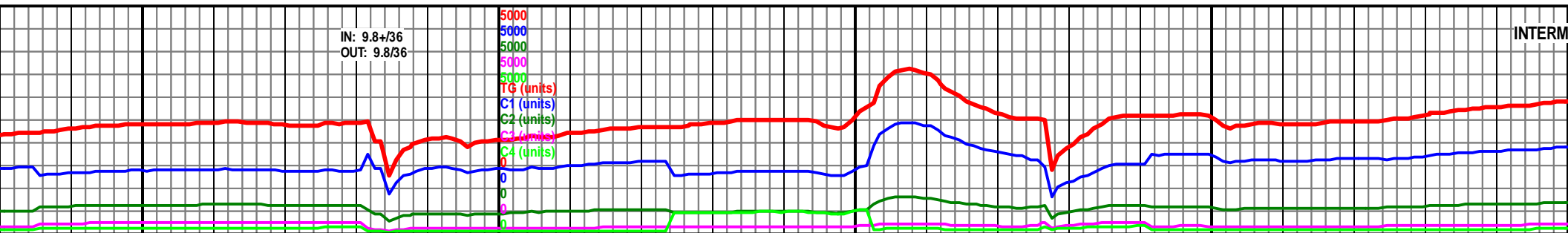
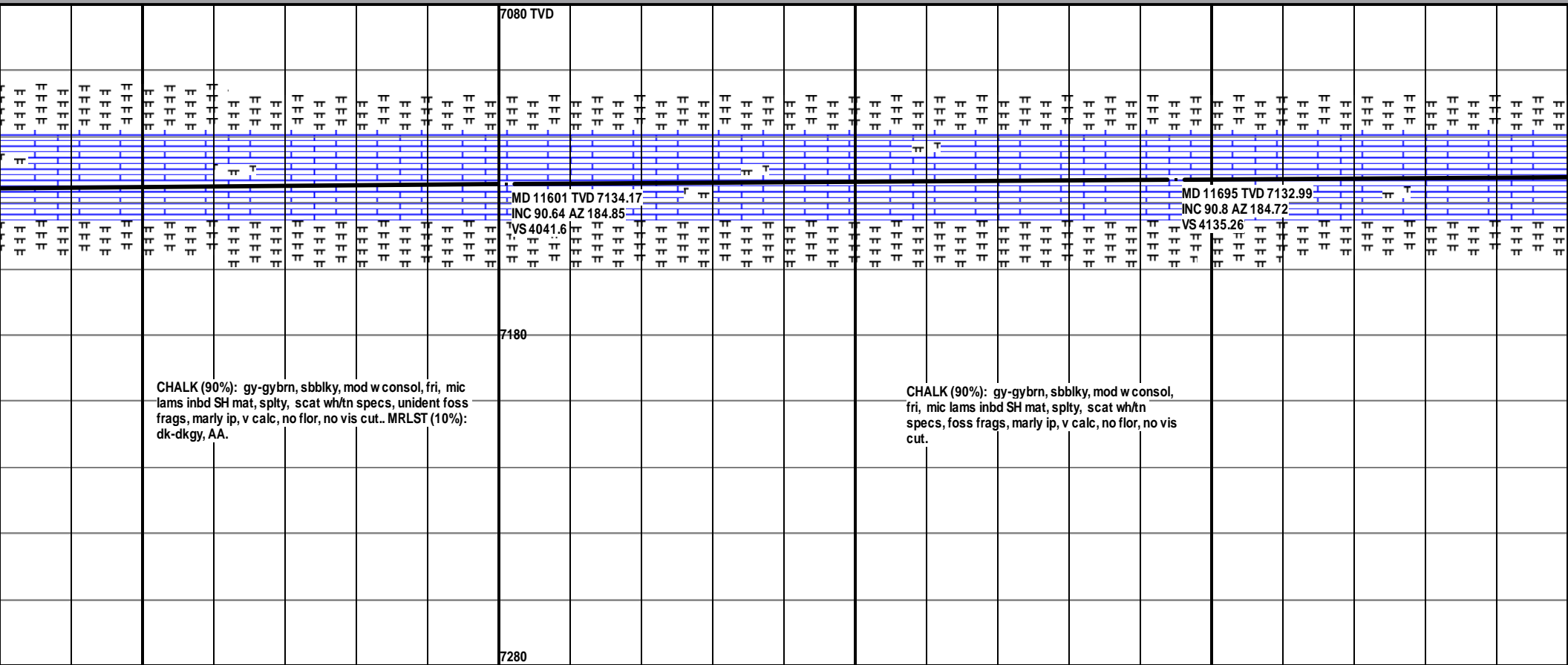
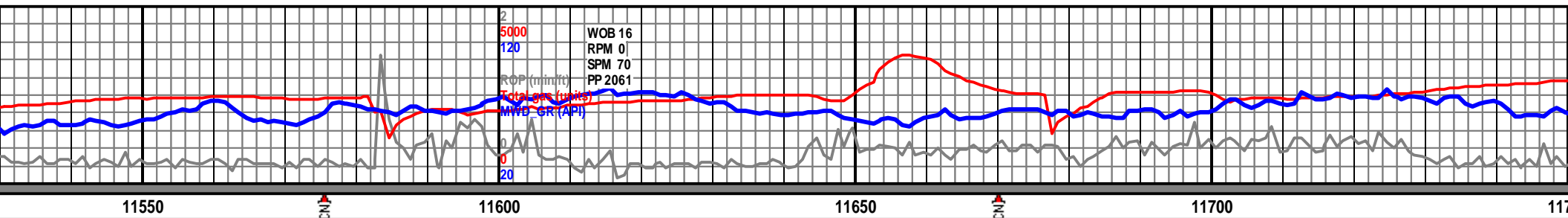
MD 10656 TVD 7130.31 INC 88.69 AZ 183.65 VS 3097.85										MD 10751 TVD 7132.18 INC 89.06 AZ 182.63 VS 3192.68										MD 10846 TVD 7133.54 INC 89.29 AZ 182.03 VS 3287.59									
CHALK: (70%): gy-gybrn, sbblky, intbds lams dk mat, splty, fri, m consol, m hd to m sft, w/ scat wh/tn specs, unident foss frags, marly ip, v calc, occ calc frac fill, rr pryt, no flor										CHALK: (70%): gy-gybrn, sbblky, intbds lams dk mat, splty, fri, m consol, m hd to m sft, w/ scat wh/tn specs, unident foss frags, marly ip, v calc, occ calc frac fill, rr pryt, no flor										CHALK: 80%: mat, splty, fri, m wh/tn specs, unident foss frags, marly ip, v calc, occ calc frac fill, rr pryt, no flor									
MRLST (30%): dk-dkgy, sbblky, carb, occ sed lams, splty, sity, m hd, fn dism mica, chlky lams, v calc, occ dk pel mat. no flor, slow res blu rng.										MRLST (30%): dk-dkgy, sbblky, carb, occ sed lams, splty, sity, m hd, fn dism mica, chlky lams, v calc, occ dk pel mat. no flor, slow res blu rng.										MRLST (20%): dk-dkgy, sbblky, carb, occ sed lams, splty, sity, m hd, fn dism mica, chlky lams, v calc, occ dk pel mat. no flor, slow res blu rng.									

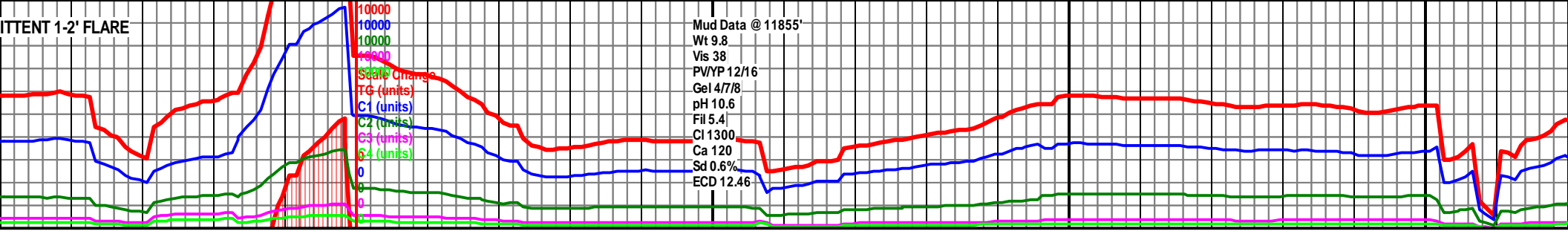
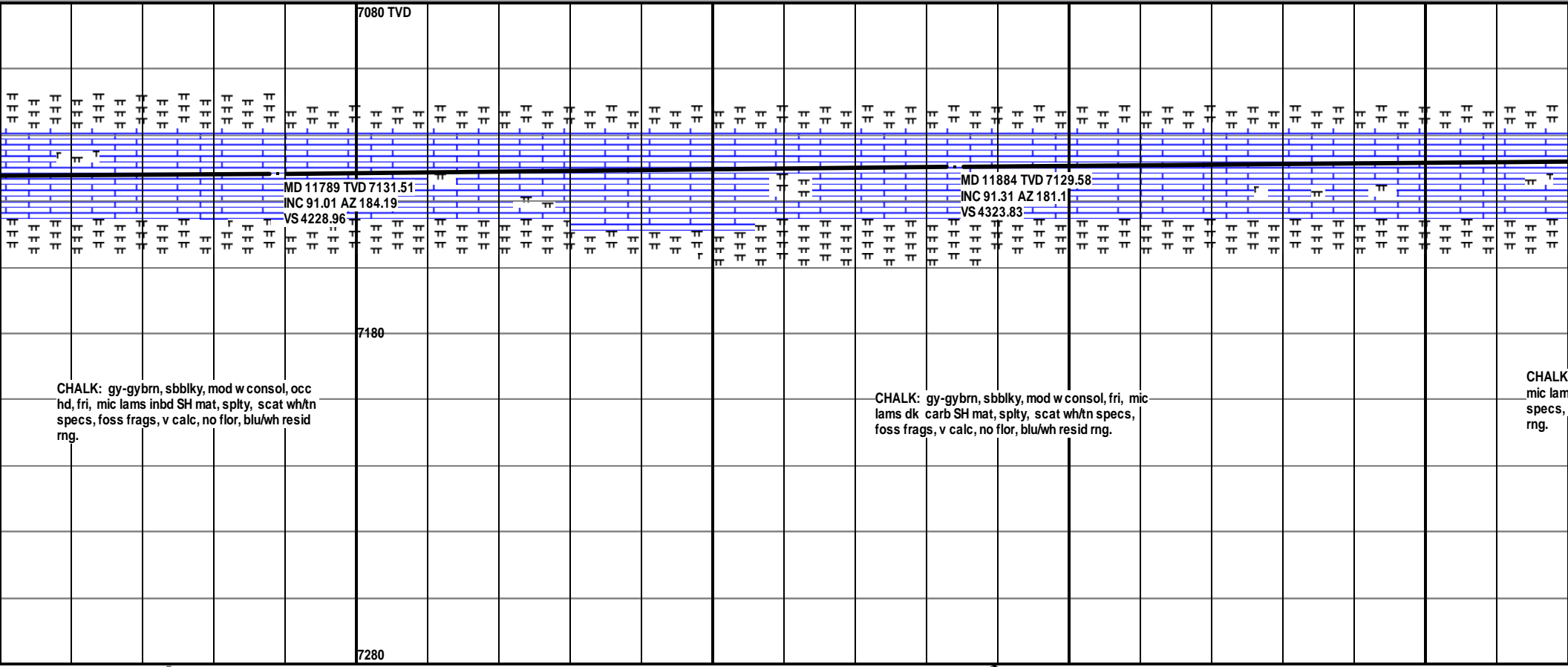
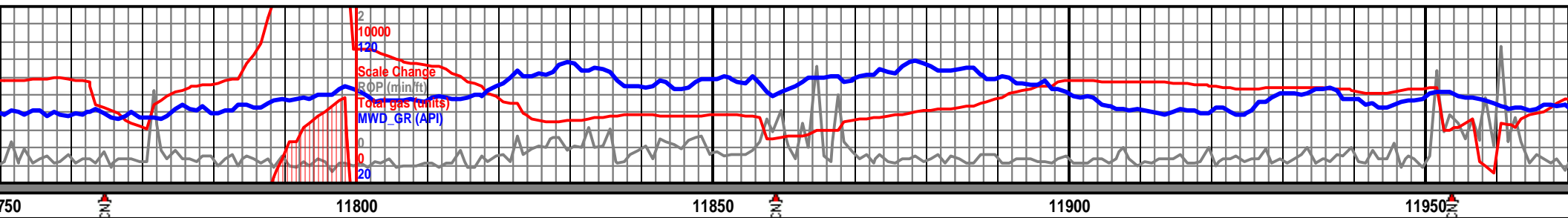




OB 38.7
PM 0
PM 70
P 3526





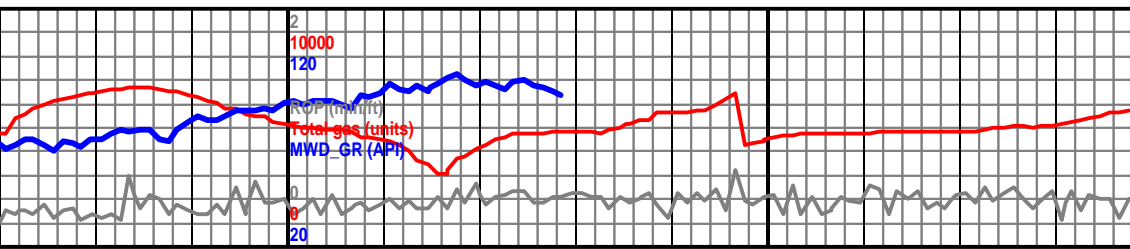


CHALK: gy-gybrn, sbblky, mod w consol, occ
hd, fri, mic lams inbd SH mat, spity, scat wh/tn
specs, foss frags, v calc, no flor, blu/wh resid
rng.

CHALK: gy-gybrn, sbblky, mod w consol, fri, mic
lams dk carb SH mat, spity, scat wh/tn specs,
foss frags, v calc, no flor, blu/wh resid rng.

CHALK
mic lam
specs,
rng.

Mud Data @ 11855'
Wt 9.8
Vis 38
PV/YP 12/16
Gel 4/7/8
pH 10.6
Fil 5.4
Cl 1300
Ca 120
Sd 0.6%
ECD 12.46

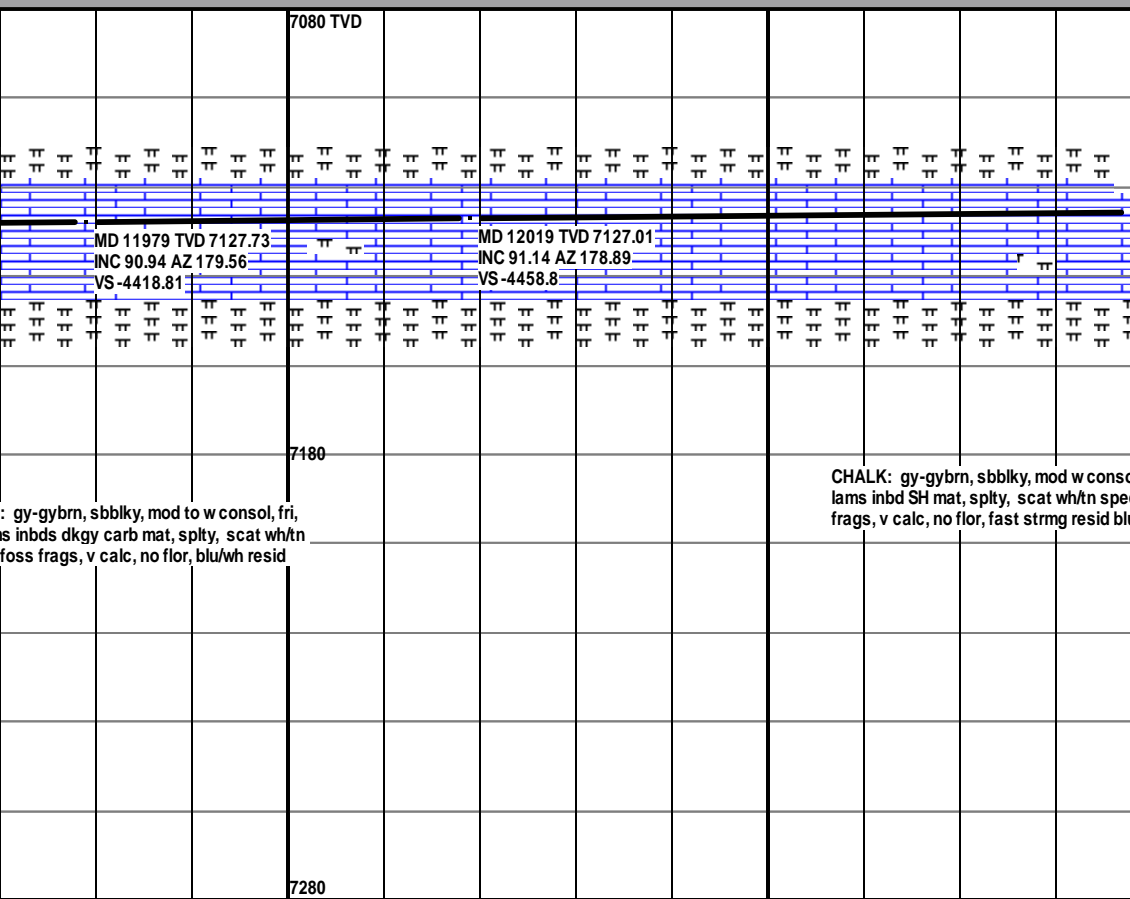


12000

12050

12100

12150



TD @ 12,088' REACHED AT 8:40 AM ON 8/12/13 4
1/2" LINER SET @ 12075' ON 8/13/13, Kept 10.4+
mud in liner as it was inserted.

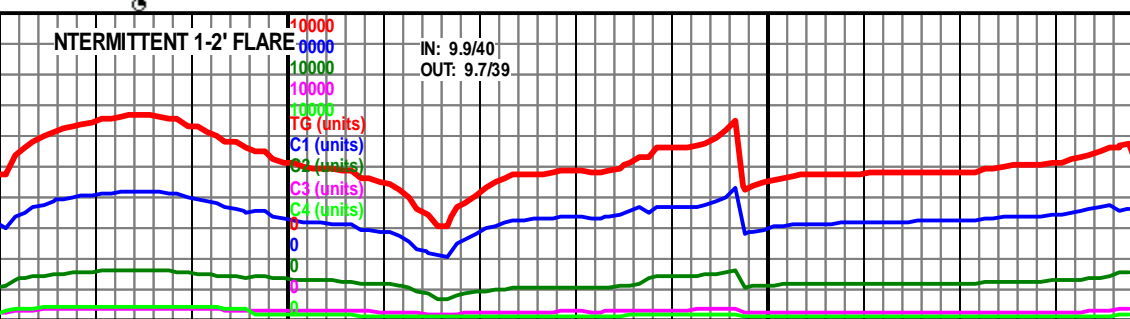
CIRCULATED BOTTOMS UP, BIT #3 In:
9572', Out: 12,088, made 2516' in 23:14
hrs

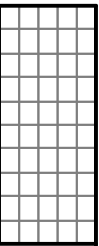
BHL:-375ft Northing; 4543 ft Easting;
Closure distance: -4527.78 ft

CHALK: gy-gybrn, sbblky, mod w consol, fri, mic
lams inbd SH mat, splty, scat wh/tn specs, foss
frags, v calc, no flor, fast strmg resid blu rng..

THANK YOU FOR CHOSING
GOOLSBY BROS. & ASSOCIATES

Marek Ciesnik
Alan Seeling





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