

Logs

PULSE MWD GR from 1,841'-15,639' MD

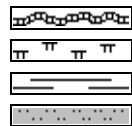
Casing

9 5/8" Surface Casing set @ 1,843' MD
5 1/2" Production Casing set @ 15,648' MD

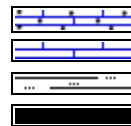
Comments

- 1) Drilling Contractor: Precision Drilling, Rig #462
Toolpusher: John Myers, David Gardner
- 2) Company Man: Steve Wilson, Buddy Davis
Lovell Young, Tony Pershall
- 3) Mud Company : Reliable Drilling Fluid
Engineer: Tim Pattison, Henry Yoes
- 4) Directional Drilling: Baker Hughes Directional
Rotary Steerable BHA
Drillers: Dustin Tissaw, Josh Otero
- 5) Gas Equipment: Pason Gas Analyzer (Spectrometer)
- 6) SRC Geologist: Tony Williams

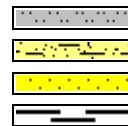
ROCK TYPES



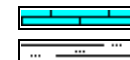
Bent
Mrlst
Shale
Slstst



Carb chalk
Chalk
Slty sh
Coal



Slstst
Arg_ss
Ss
Carb sh



Ls
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

POROSITY TYPE

	Earthy
	Fenest
	Fracture
	Inter
	Moldic
	Organic
	Pinpoint
	Vuggy

SORTING

	Well
	Moderate
	Poor

ROUNDING

	Rounded
	Subrnd
	Subang
	Angular

OIL SHOWS

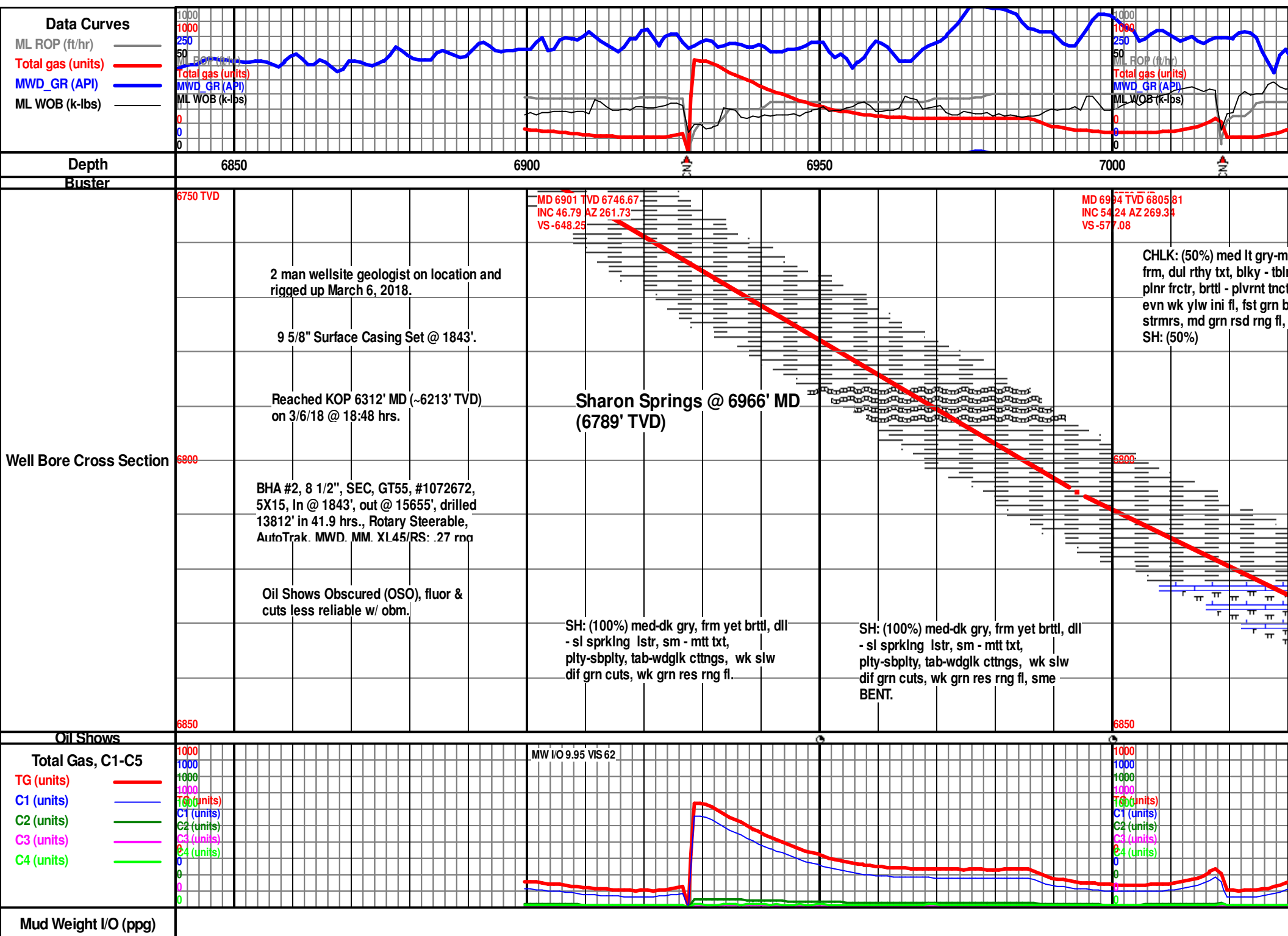
	Even
	Spotted
	Ques
	Dead
	Vspotty
	near even

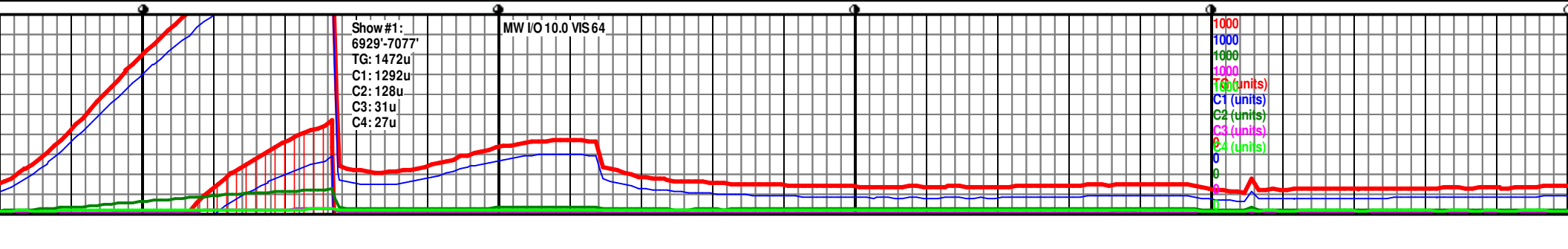
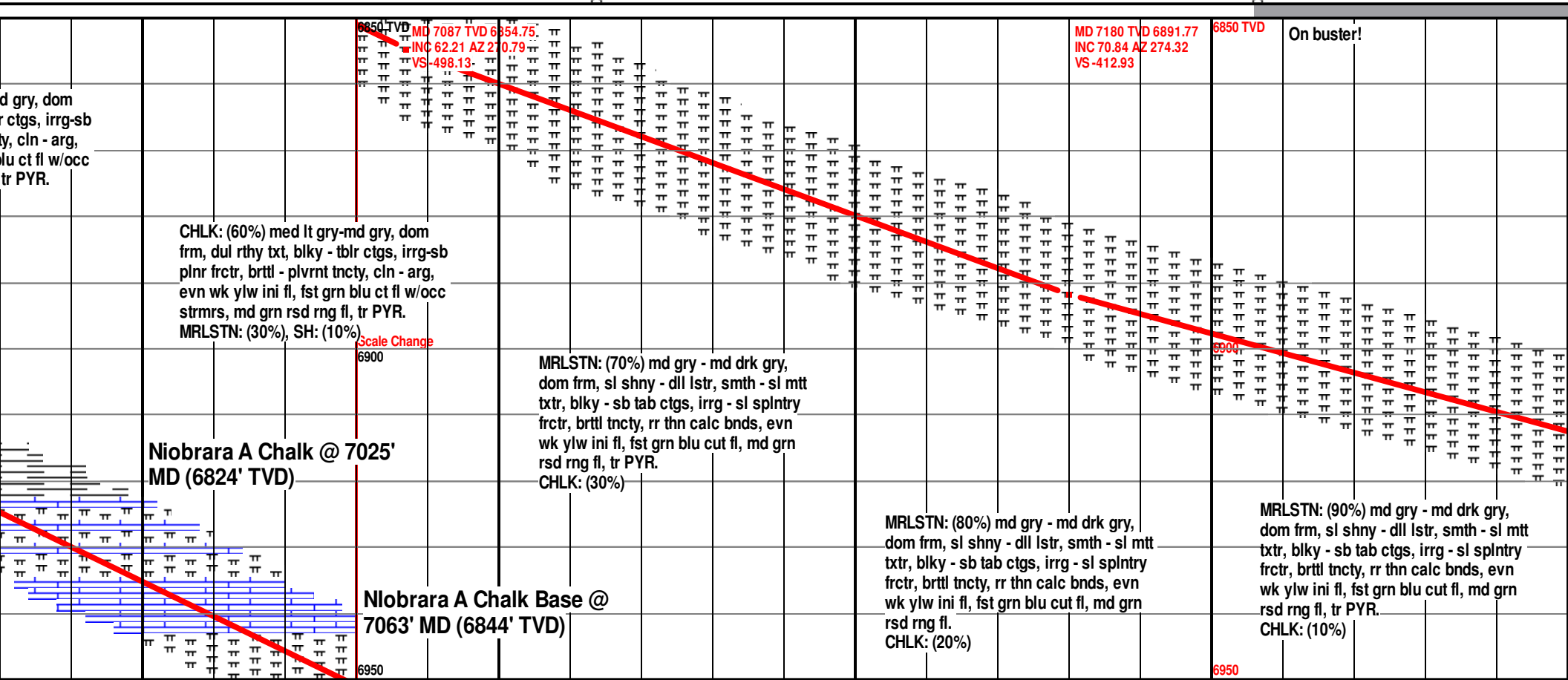
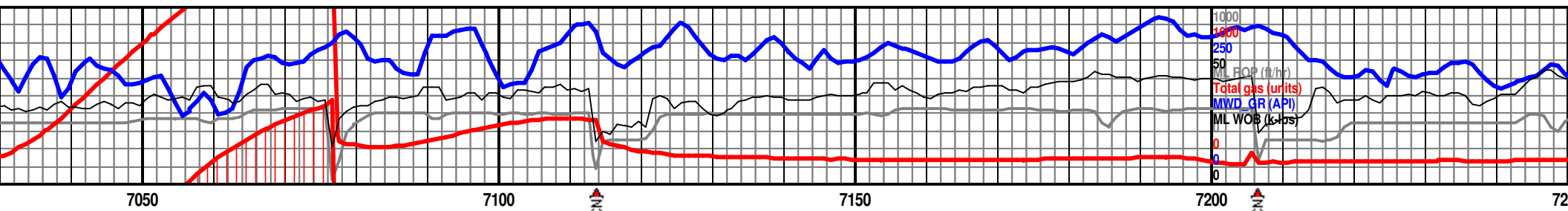
INTERVALS

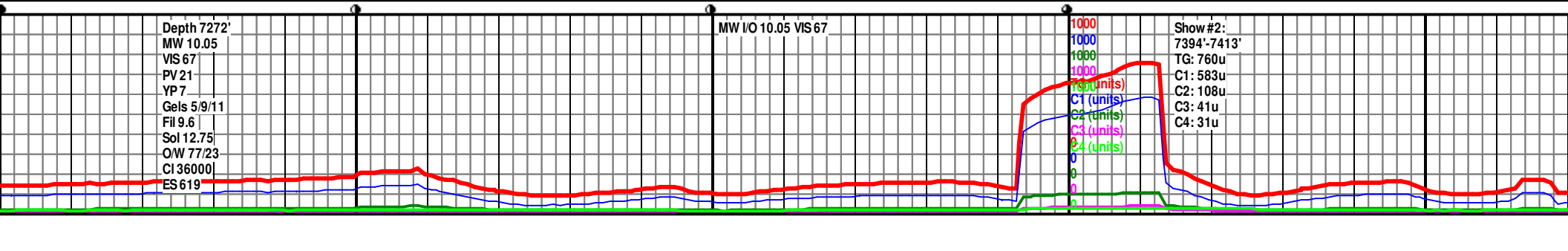
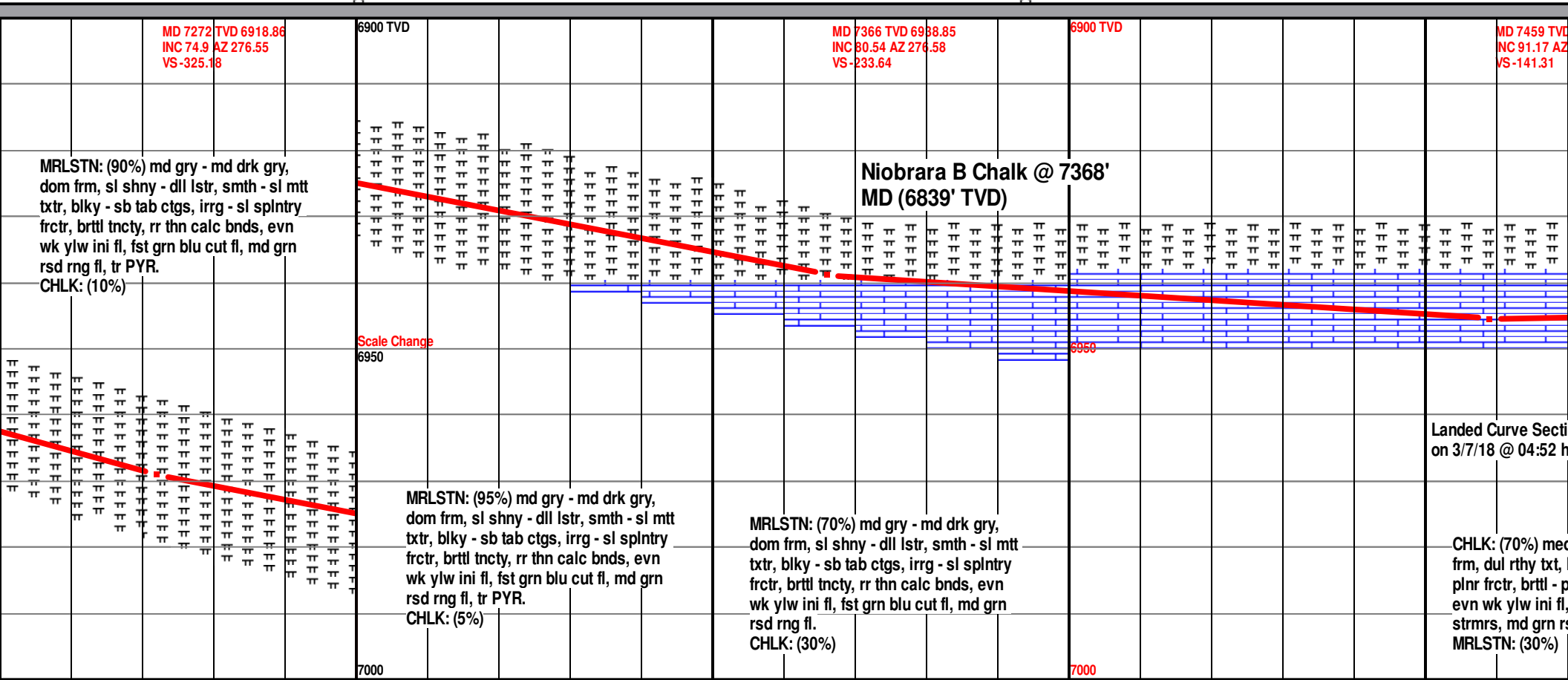
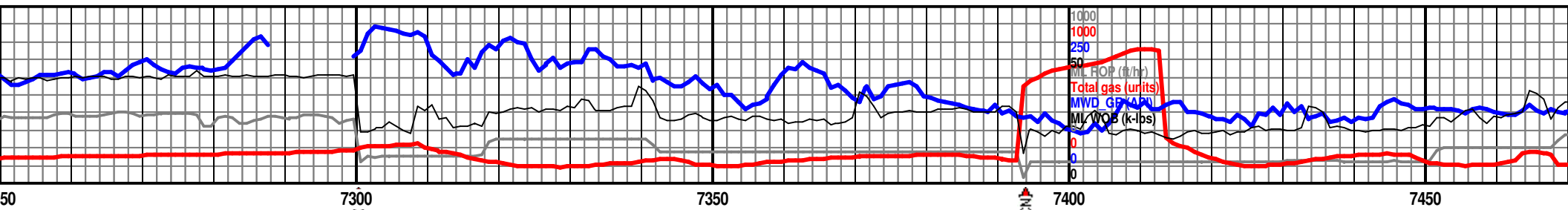
	Core
	Dst

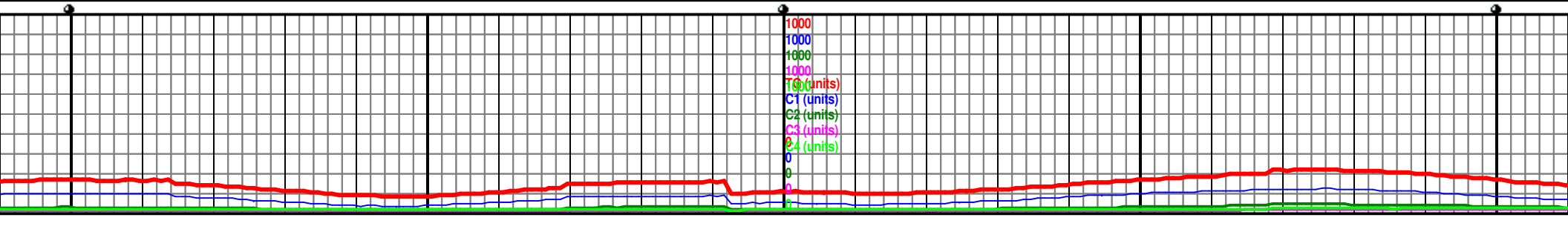
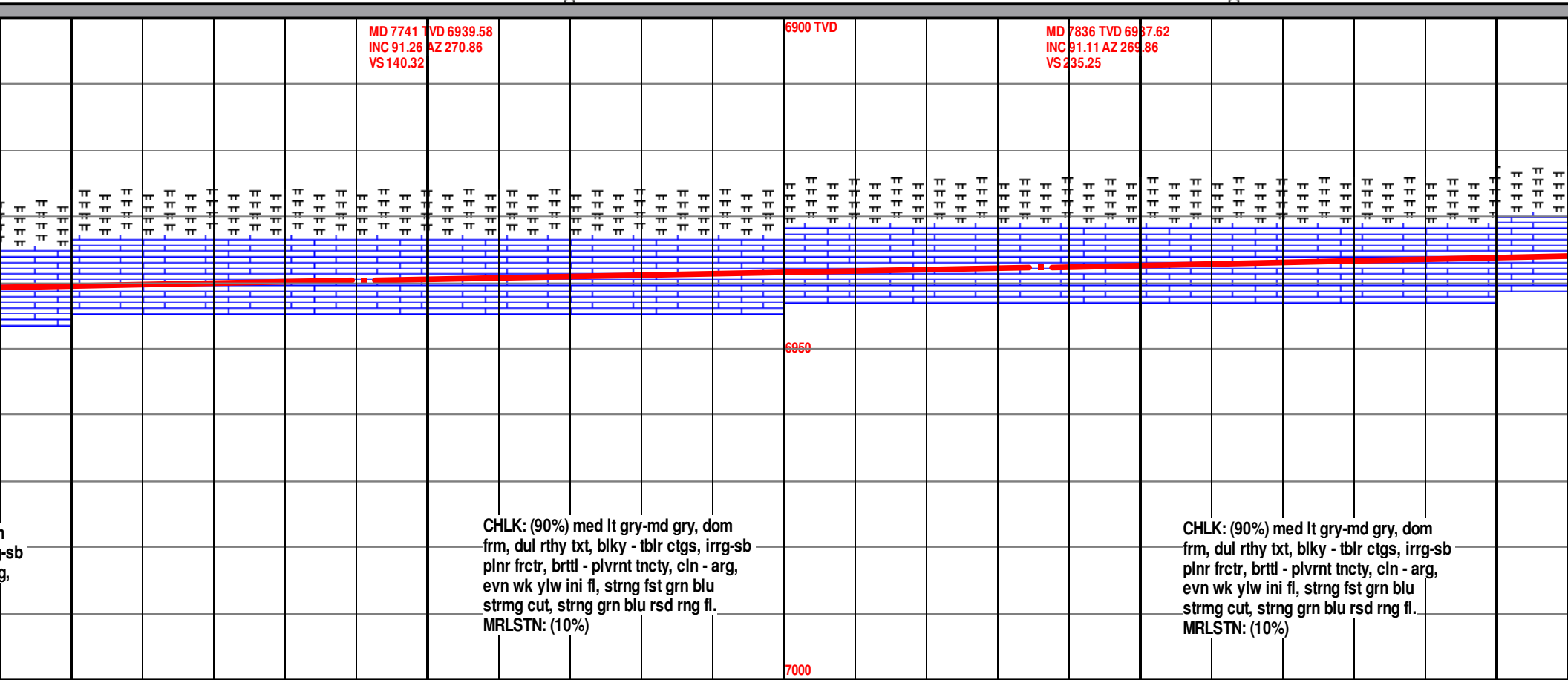
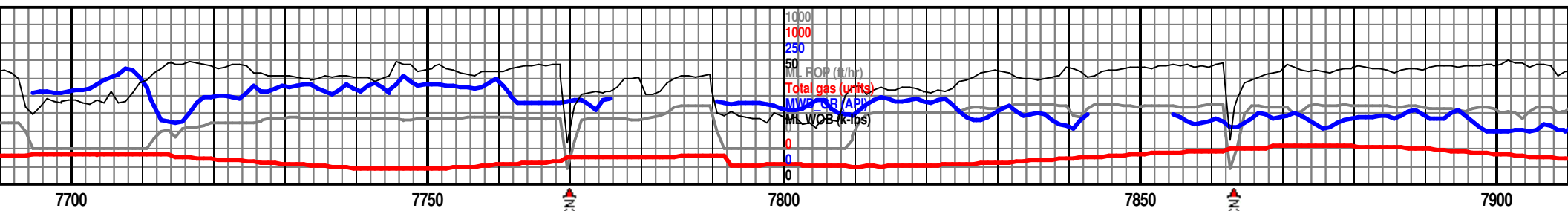
EVENTS

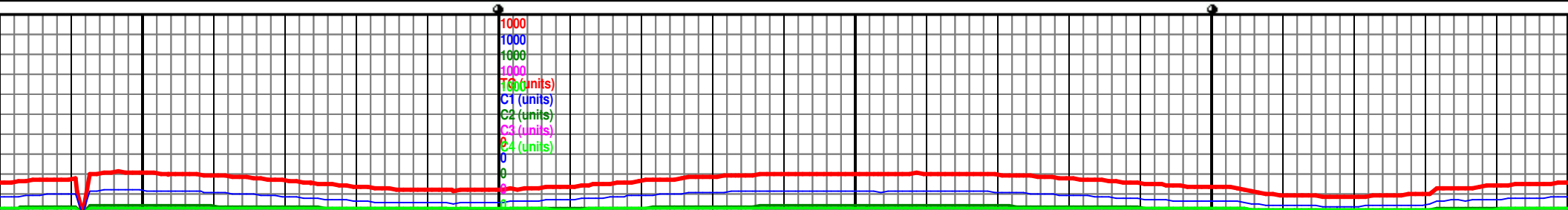
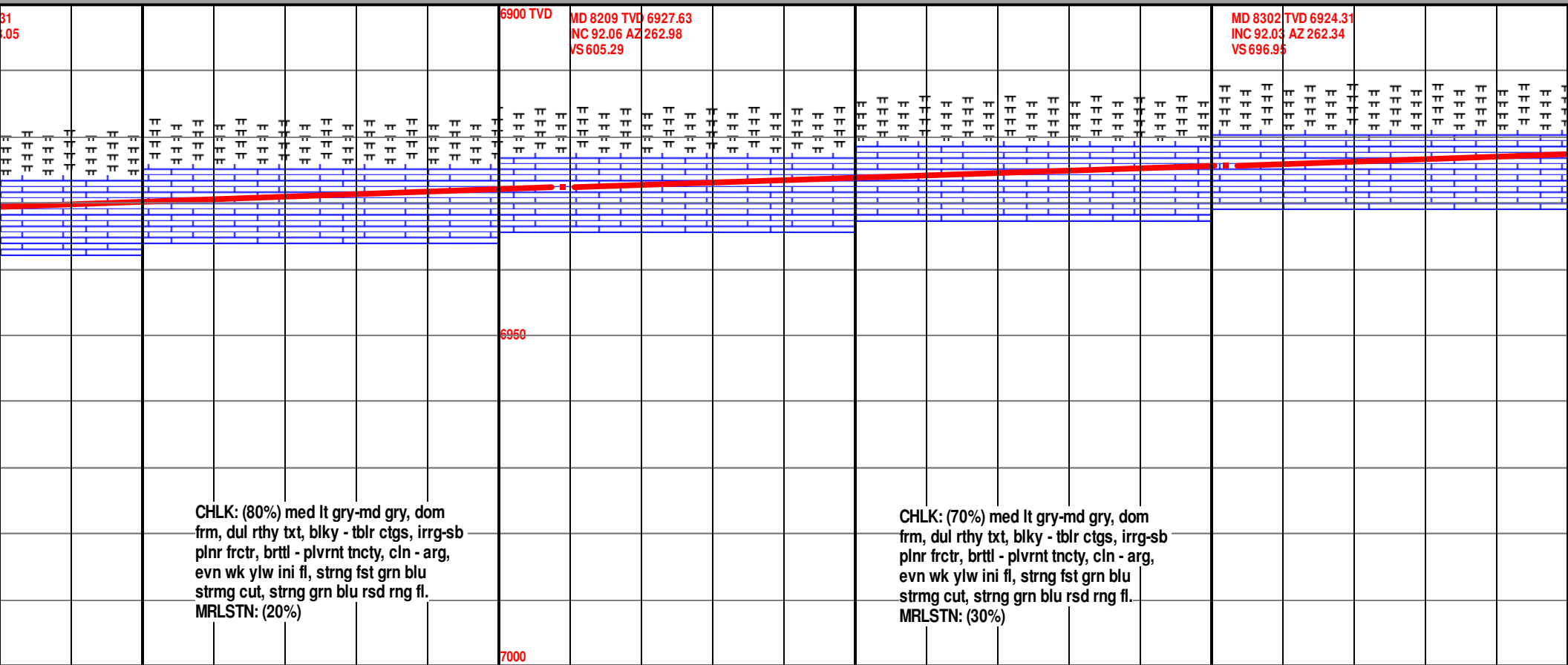
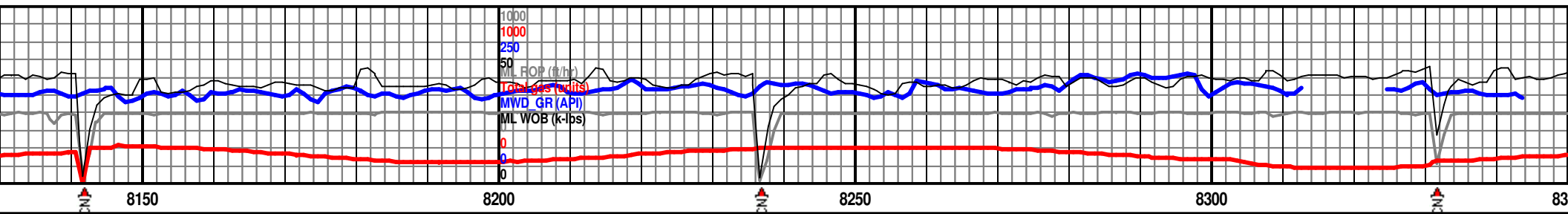
	Casing shoe_hzl
	Trip_point_1
	Off bottom
	conn
	Survey(mwd)
	Survey(red)
	bit

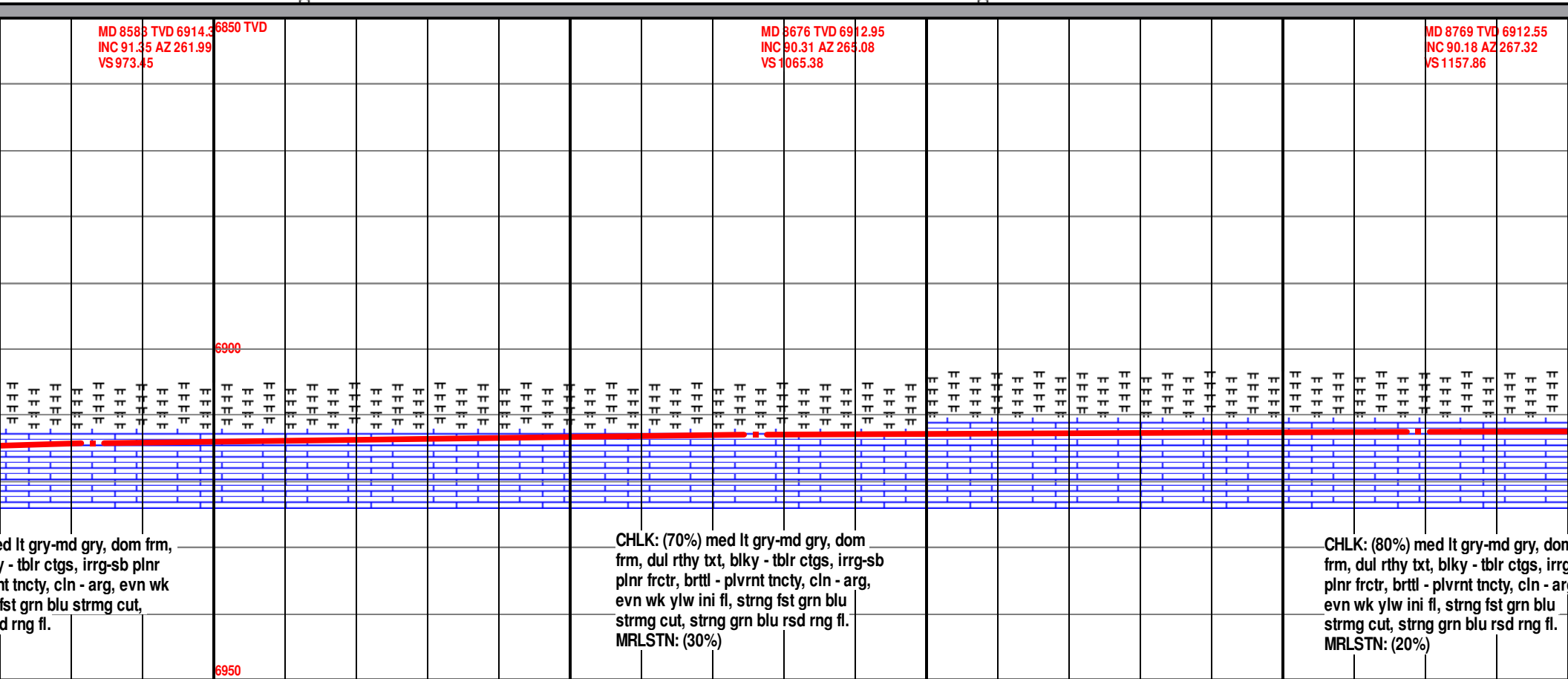


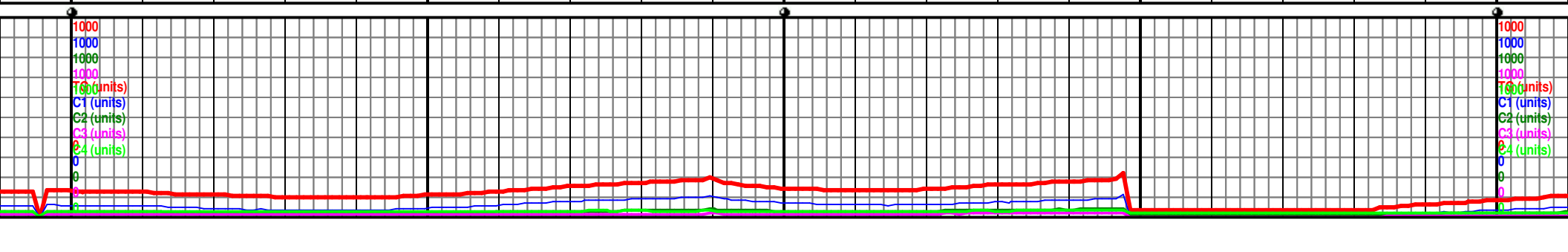
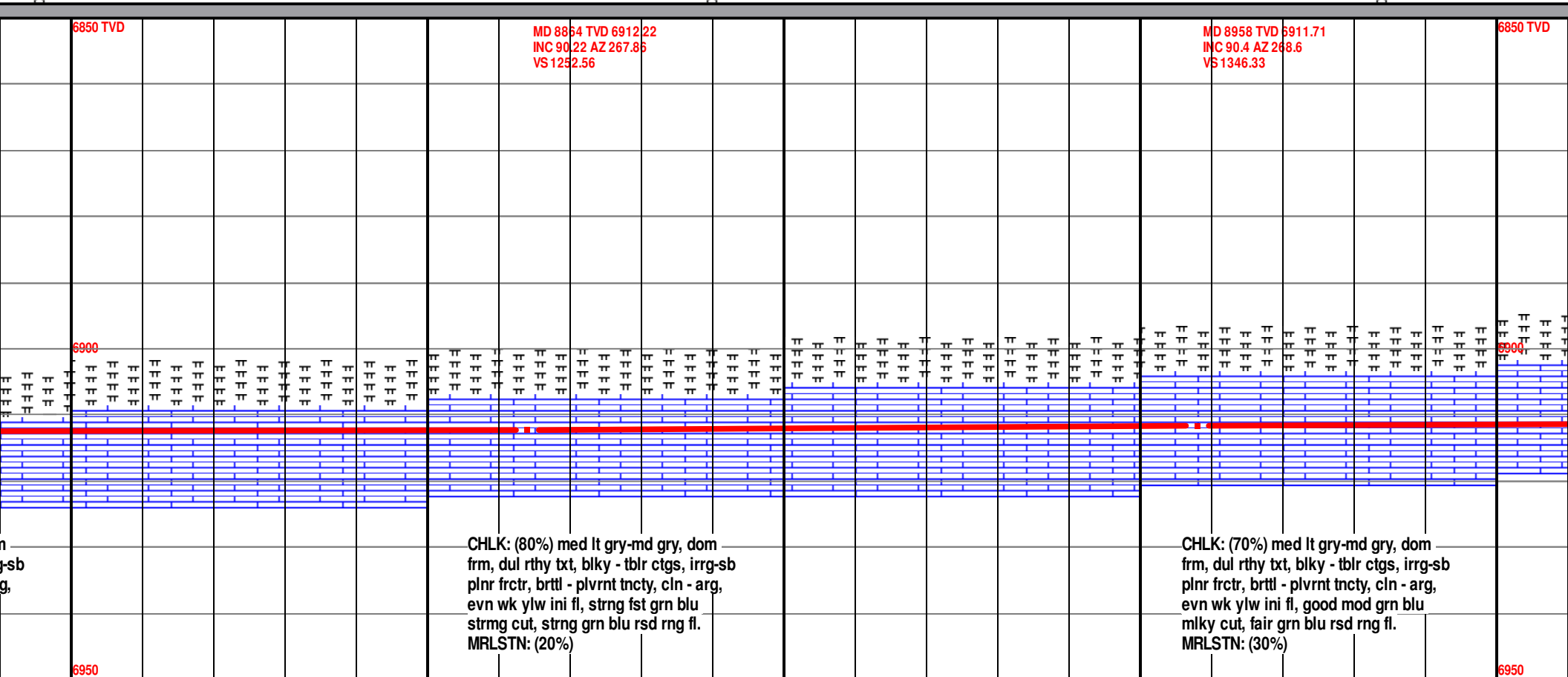
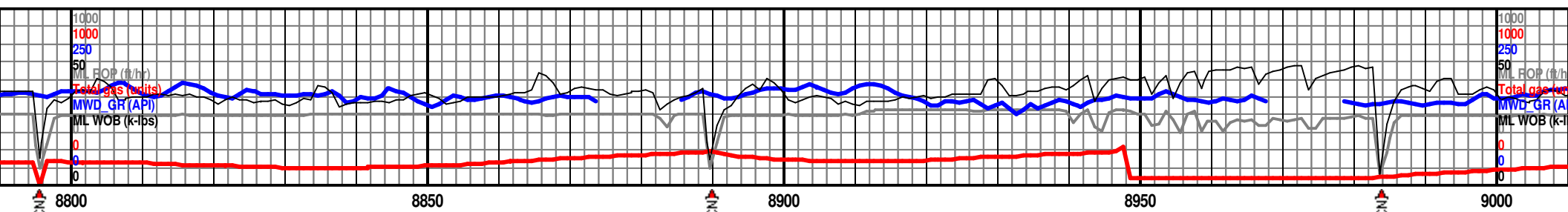


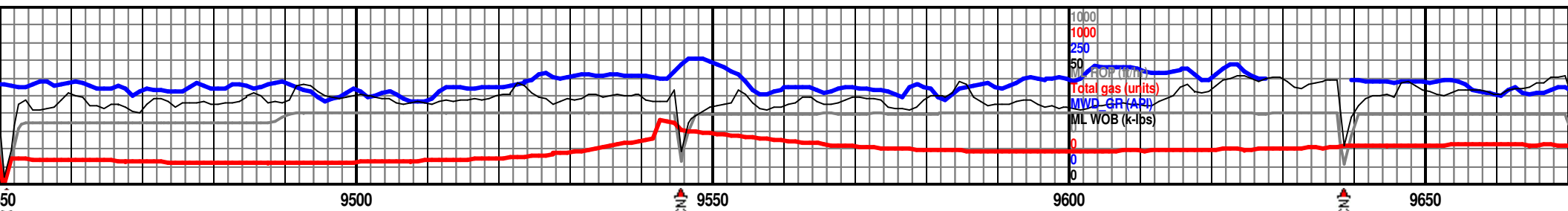








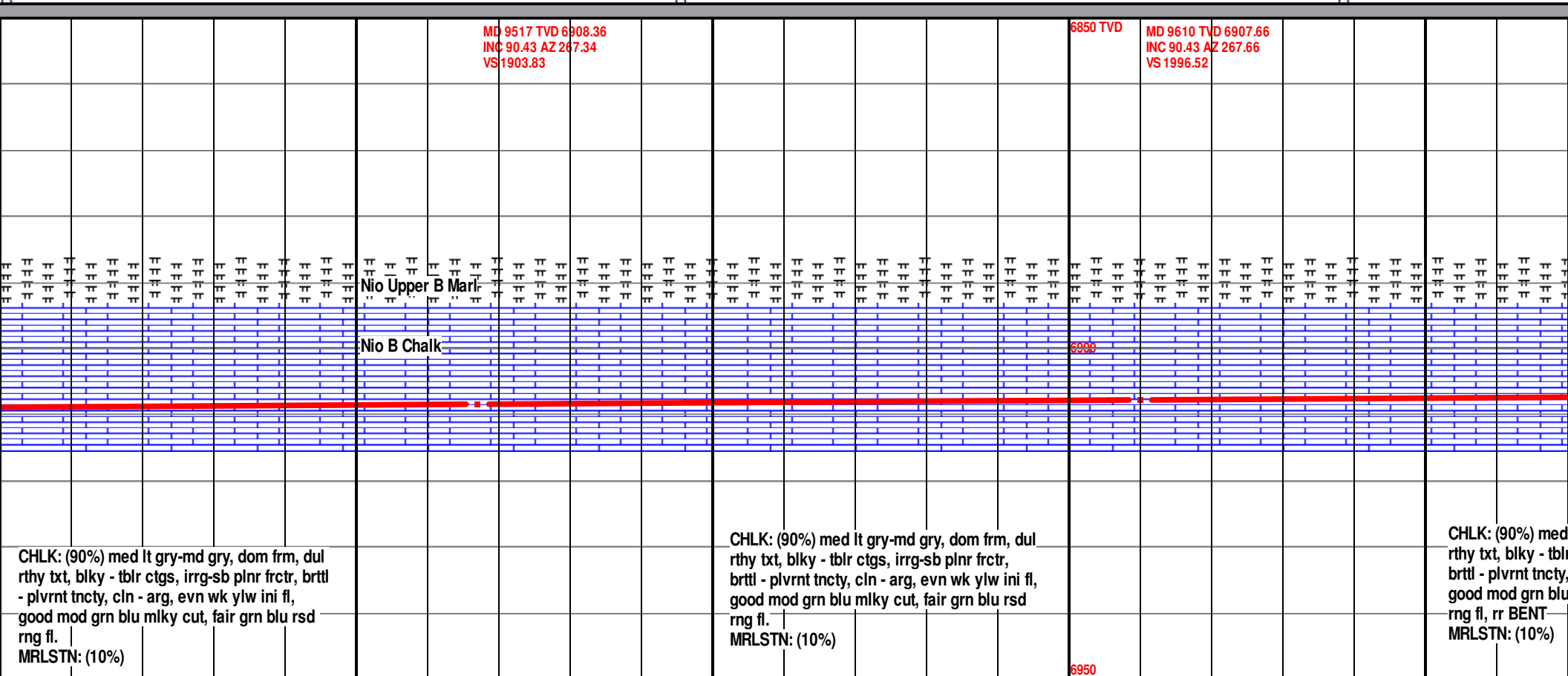




MD 9517 TVD 6908.36
INC 90.43 AZ 247.34
VS 1903.83

6850 TVD

MD 9610 TVD 6907.66
INC 90.43 AZ 267.66
VS 1996.52



Nio Upper B Marl

Nio B Chalk

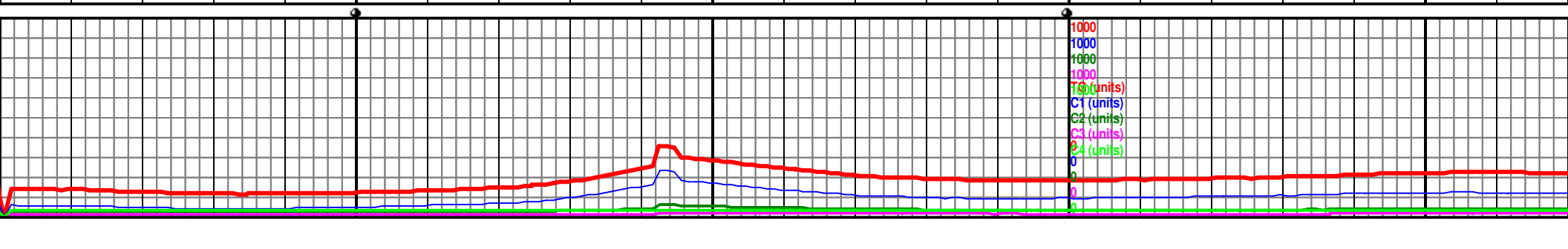
6900

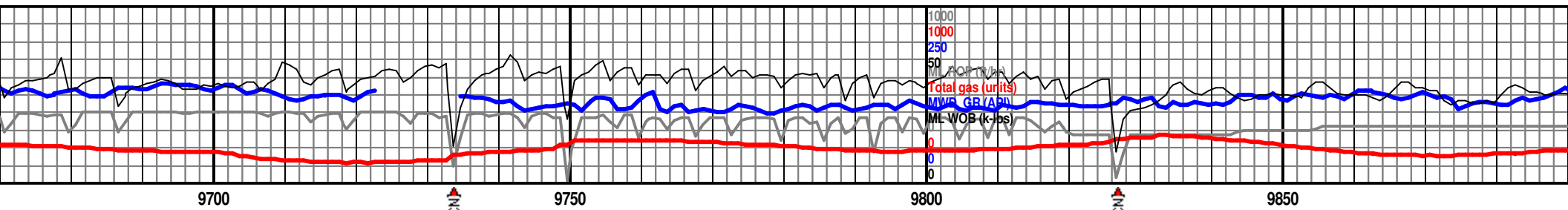
6950

CHLK: (90%) med lt gry-md gry, dom frm, dul
rthy txt, blkly - tblr ctgs, irr-gsb plnr frctr, brttl
- plvrnt tncy, cln - arg, evn wk ylw ini fl,
good mod grn blu milky cut, fair grn blu rsd
rng fl.
MRLSTN: (10%)

CHLK: (90%) med lt gry-md gry, dom frm, dul
rthy txt, blkly - tblr ctgs, irr-gsb plnr frctr,
brttl - plvrnt tncy, cln - arg, evn wk ylw ini fl,
good mod grn blu milky cut, fair grn blu rsd
rng fl.
MRLSTN: (10%)

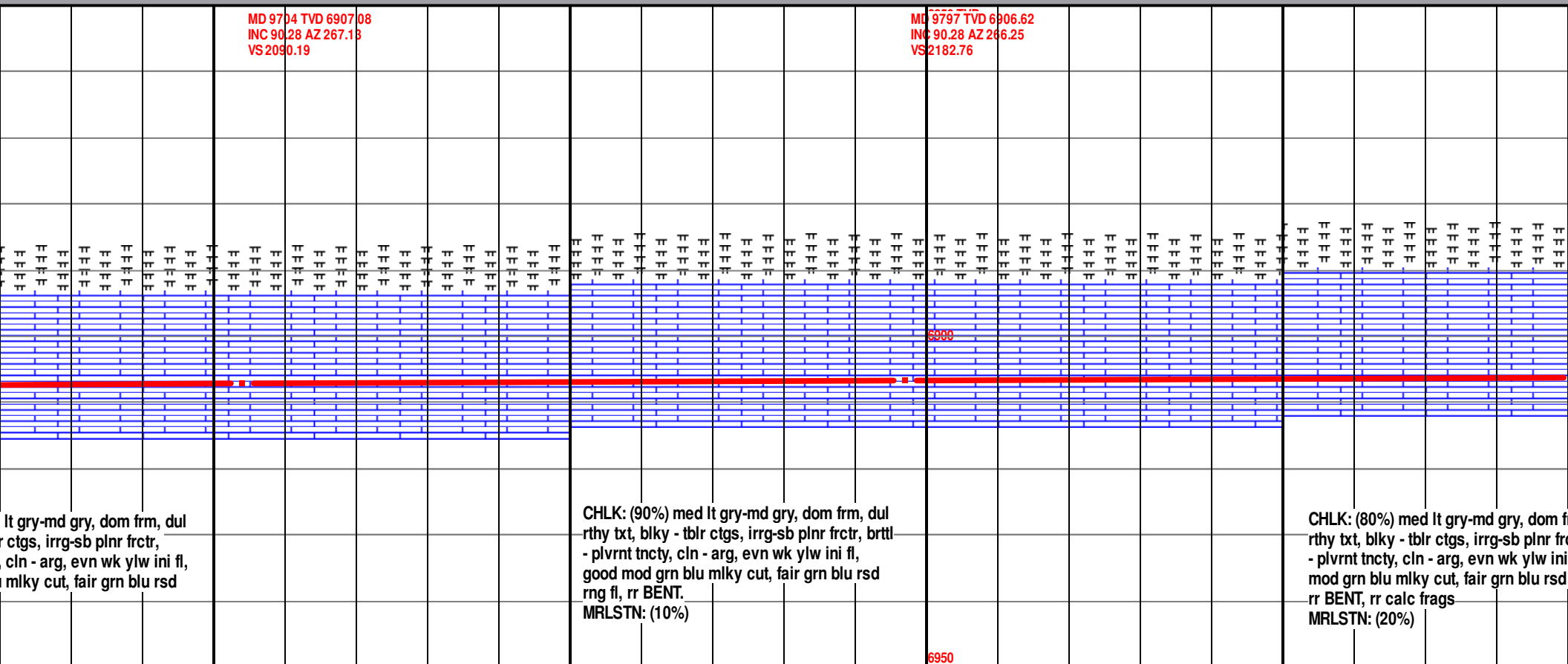
CHLK: (90%) med
rthy txt, blkly - tblr
brttl - plvrnt tncy,
good mod grn blu
rng fl, rr BENT
MRLSTN: (10%)





MD 9704 TVD 6907.08
INC 90.28 AZ 267.13
VS 2090.19

MD 9797 TVD 6906.62
INC 90.28 AZ 246.25
VS 2182.76

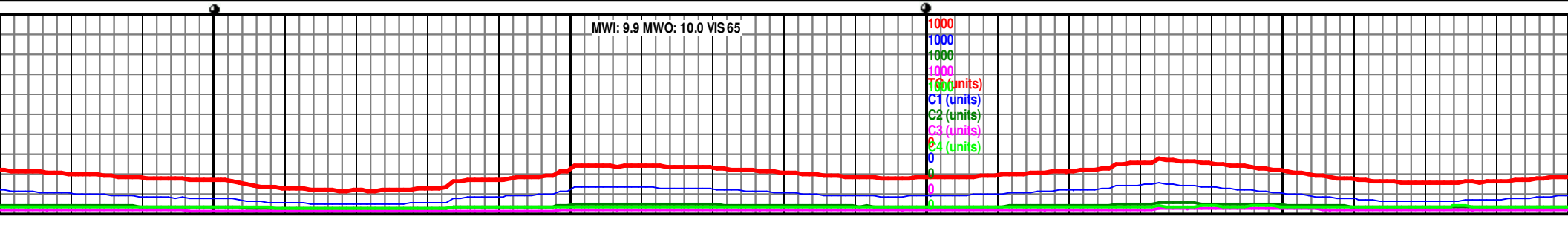


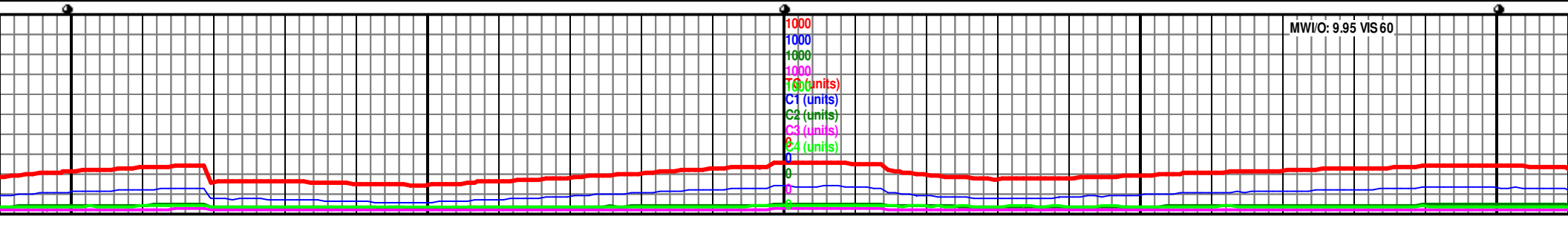
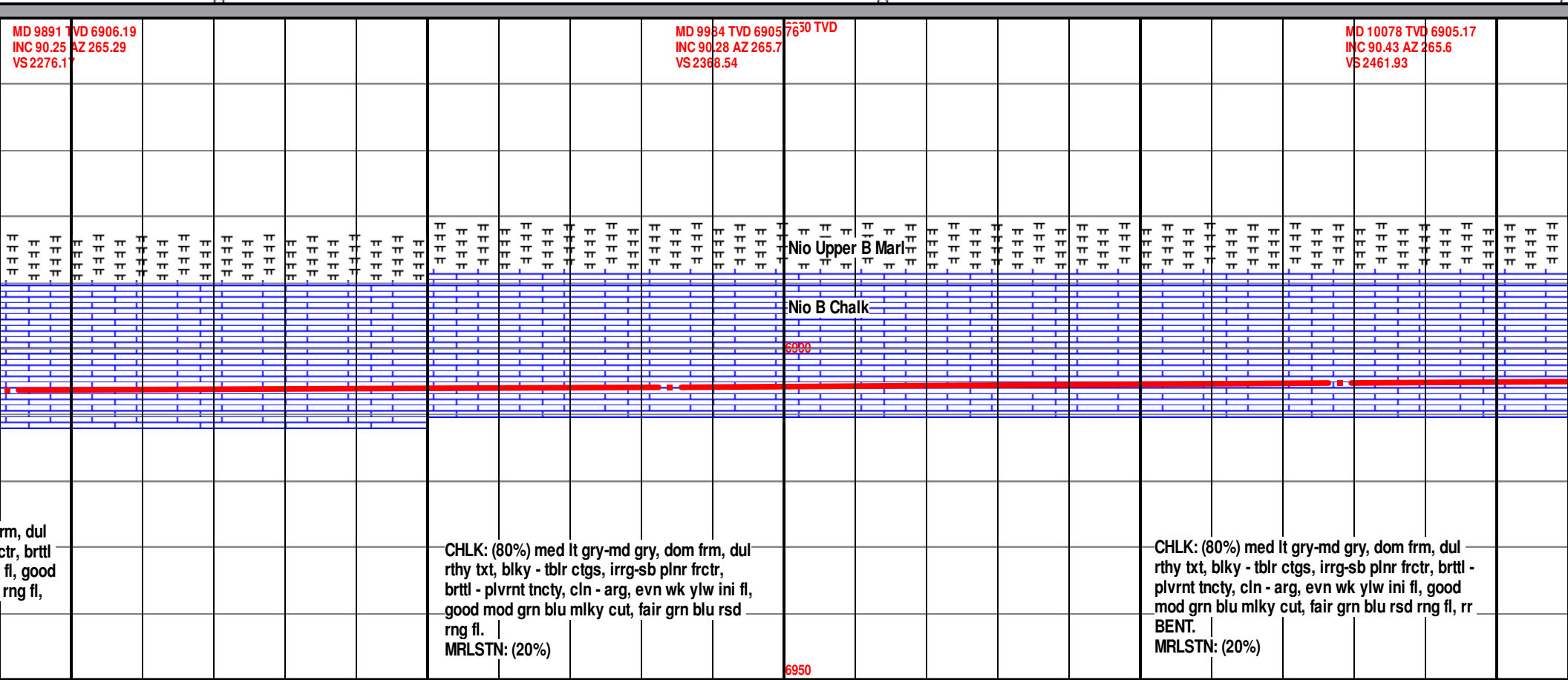
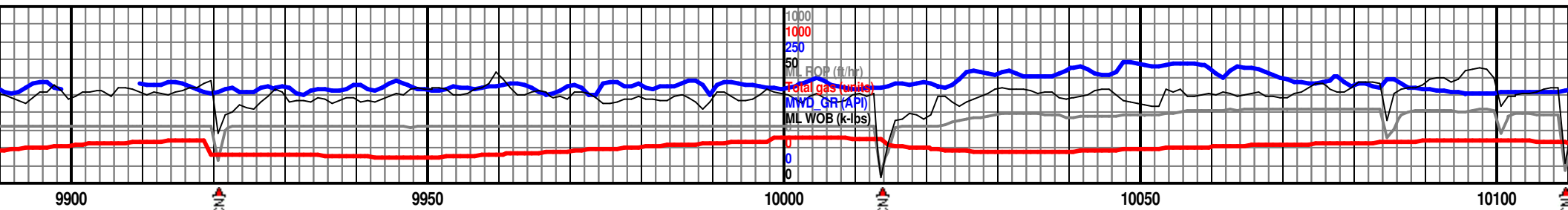
lt gry-md gry, dom frm, dul
r ctgs, irr-g-sb plnr frctr,
cln - arg, evn wk ylw ini fl,
mlky cut, fair grn blu rsd

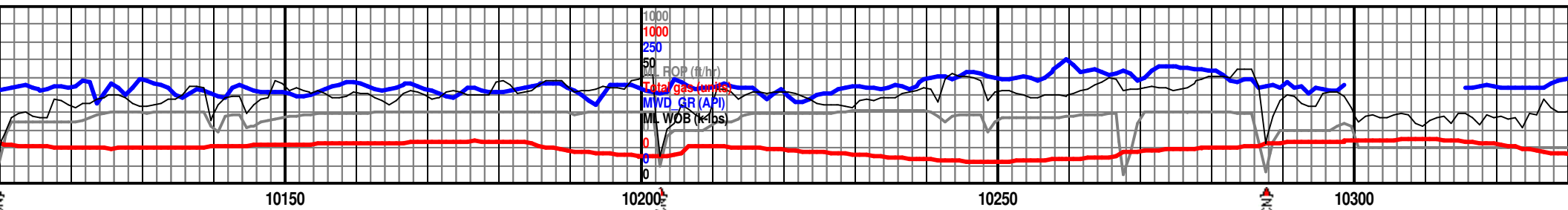
CHLK: (90%) med lt gry-md gry, dom frm, dul
rthy txt, blk-y - tblr ctgs, irr-g-sb plnr frctr, brttl
- plvrnt tncity, cln - arg, evn wk ylw ini fl,
good mod grn blu mlky cut, fair grn blu rsd
rng fl, rr BENT.
MRLSTN: (10%)

CHLK: (80%) med lt gry-md gry, dom frm, dul
rthy txt, blk-y - tblr ctgs, irr-g-sb plnr frctr, brttl
- plvrnt tncity, cln - arg, evn wk ylw ini fl,
mod grn blu mlky cut, fair grn blu rsd
rr BENT, rr calc frags
MRLSTN: (20%)

MWI: 9.9 MWO: 10.0 VIS 65



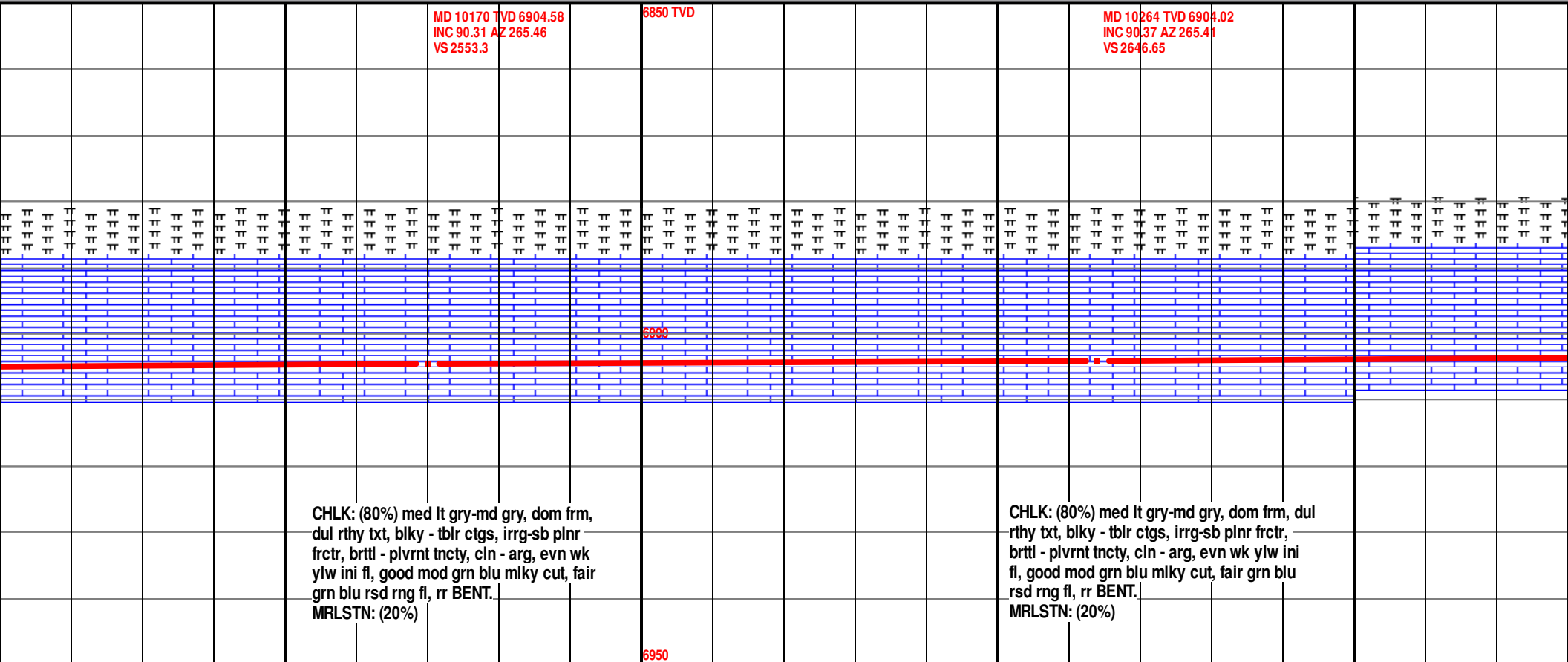




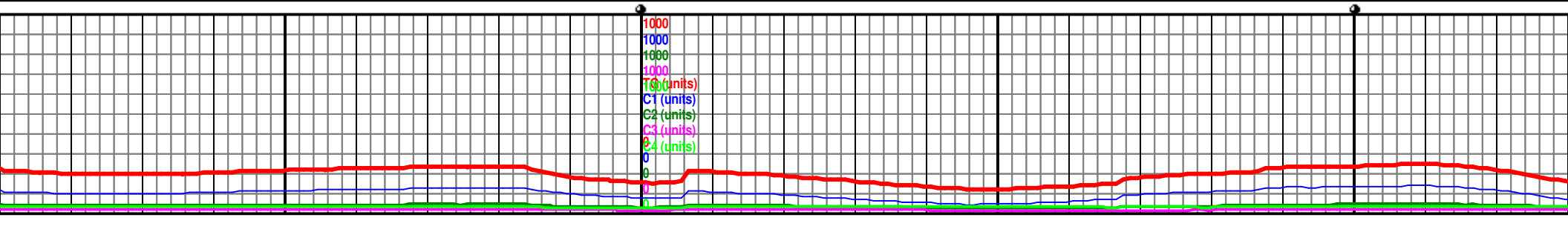
MD 10170 TVD 6904.58
INC 90.31 AZ 265.46
VS 2553.3

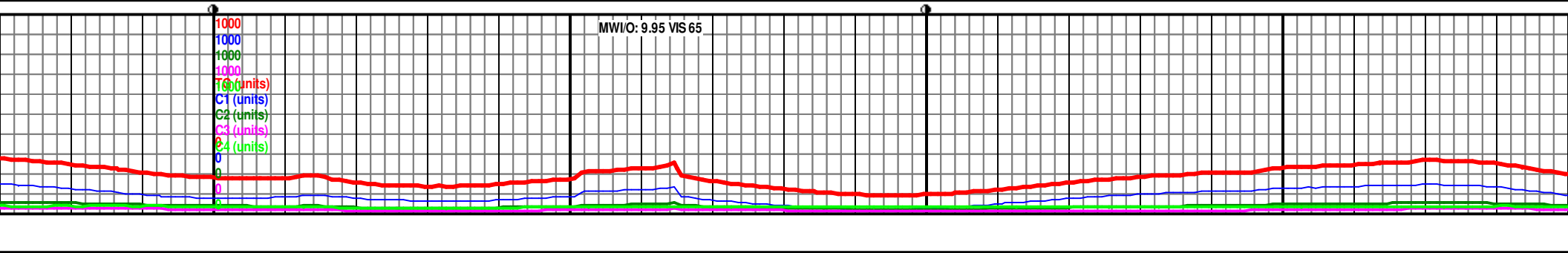
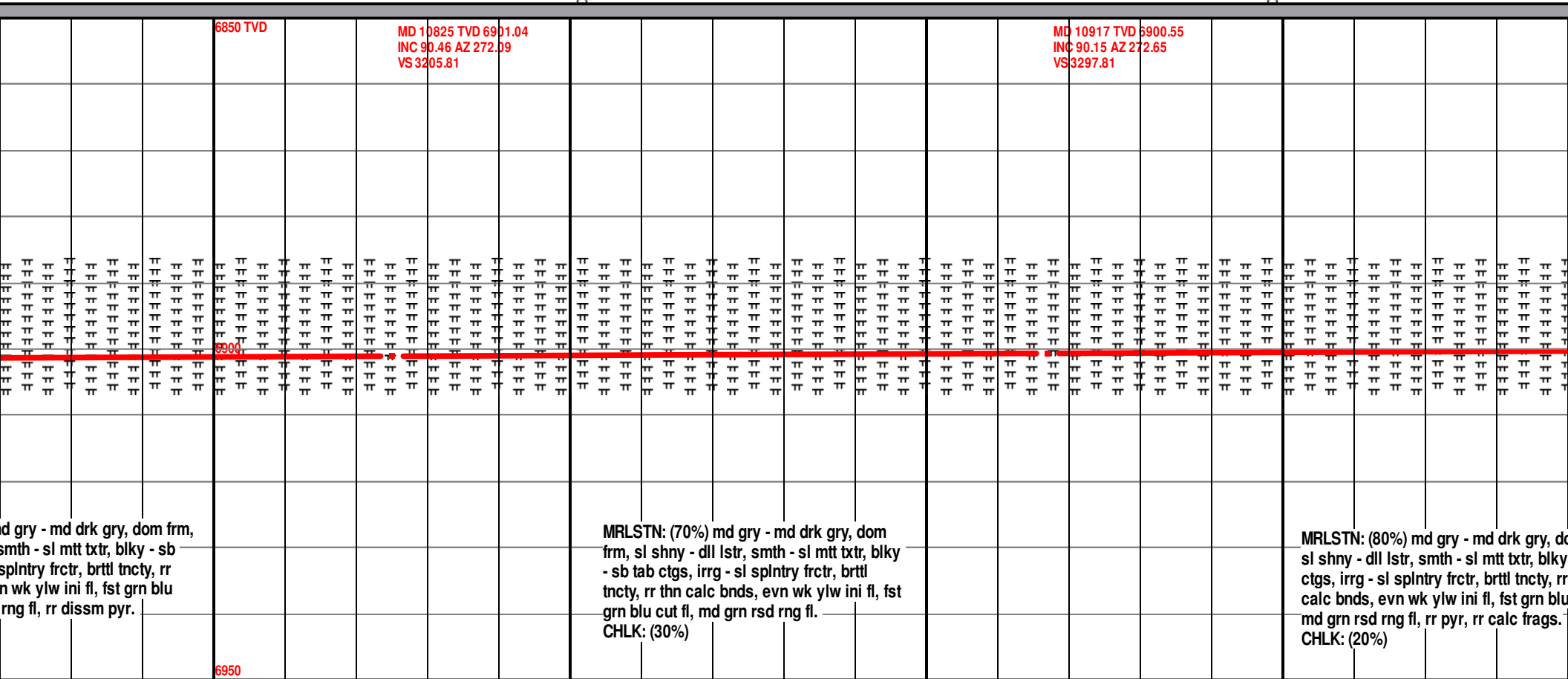
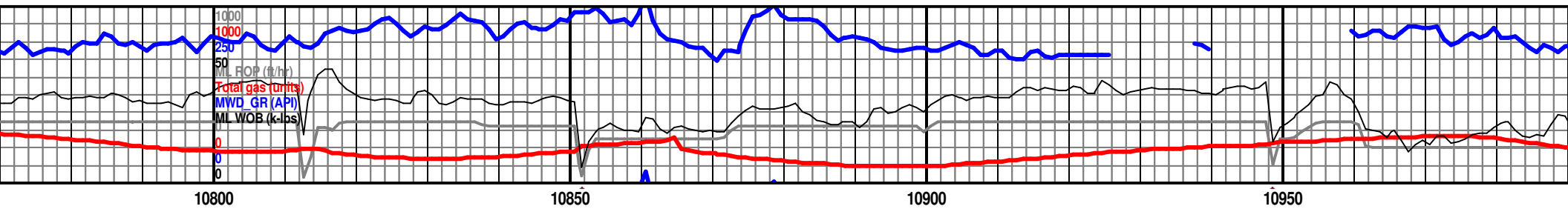
6850 TVD

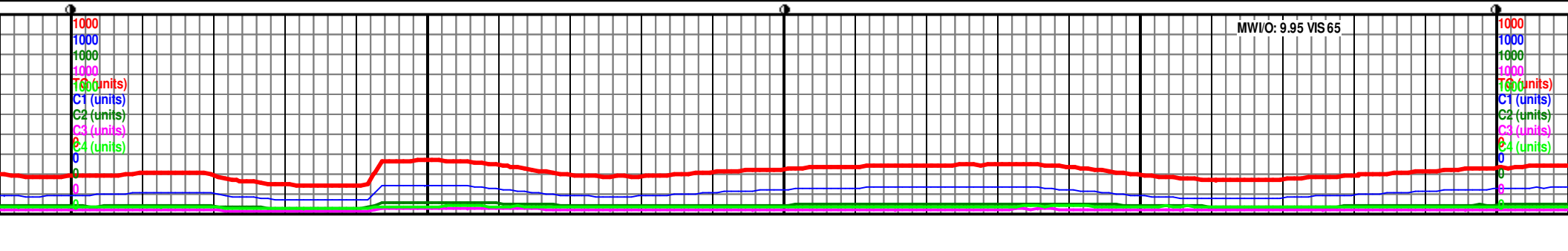
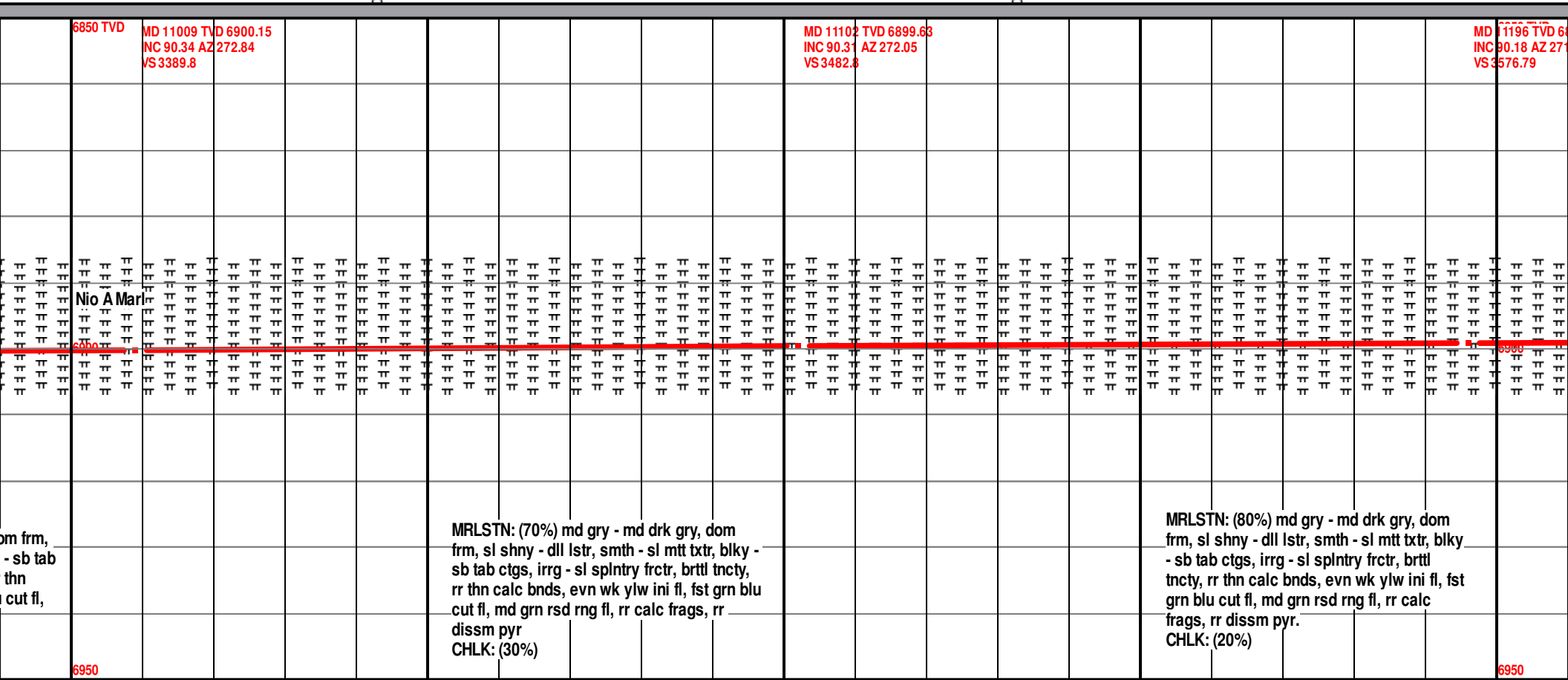
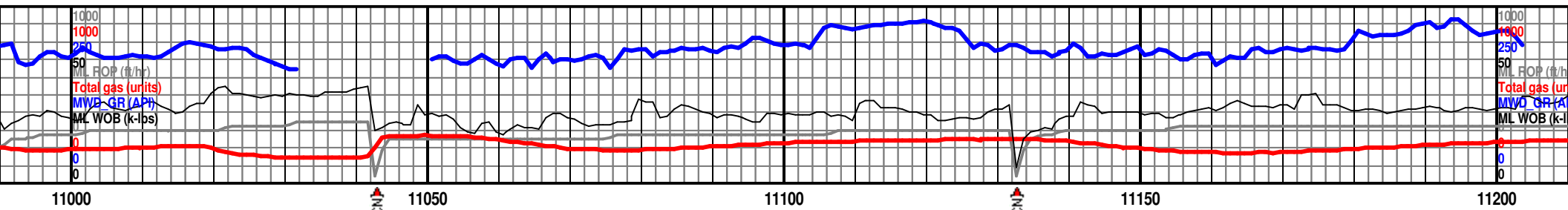
MD 10264 TVD 6904.02
INC 90.37 AZ 265.41
VS 2646.65

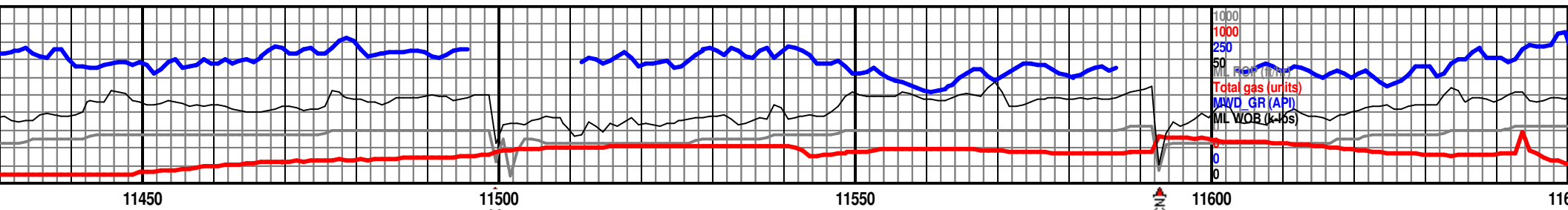


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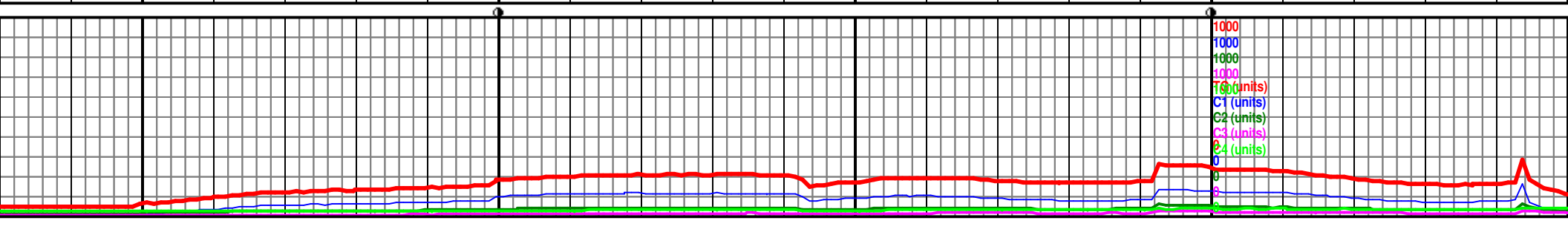


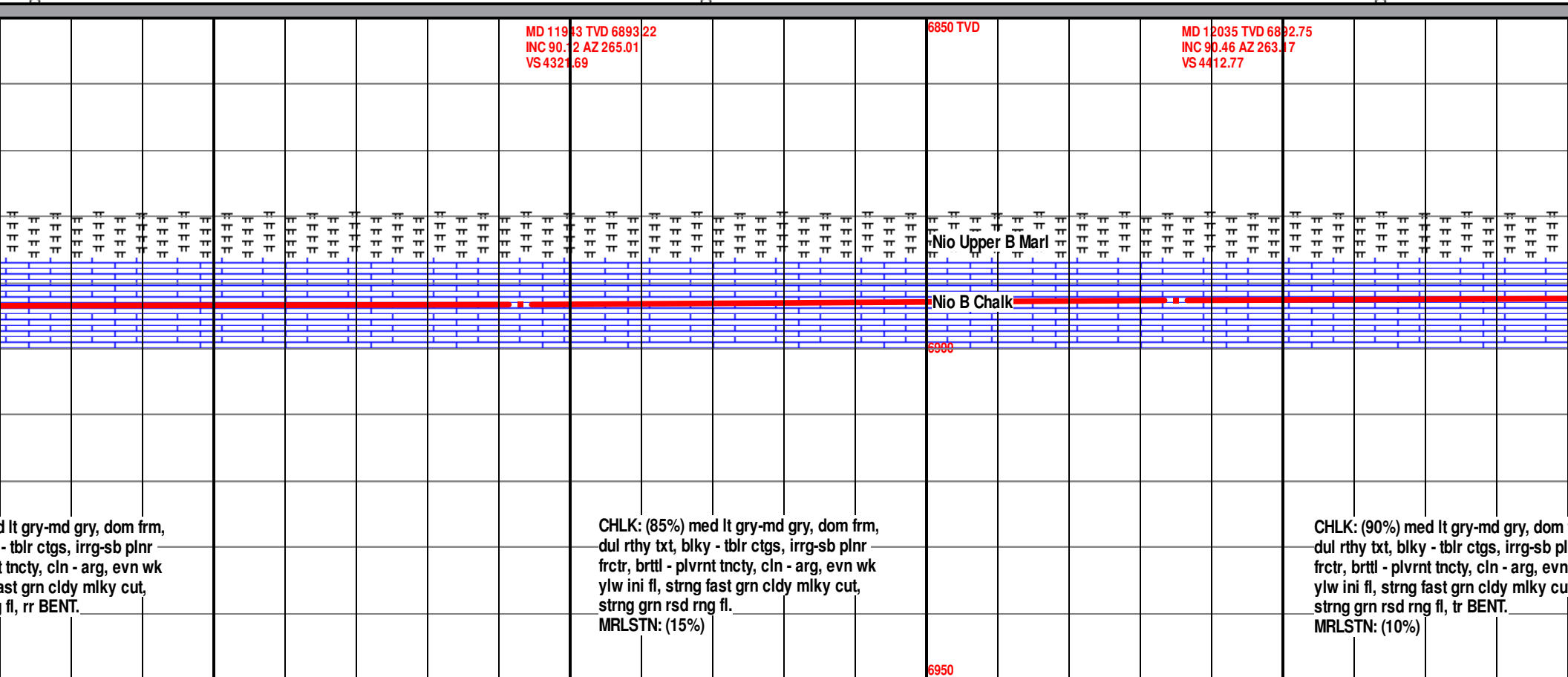


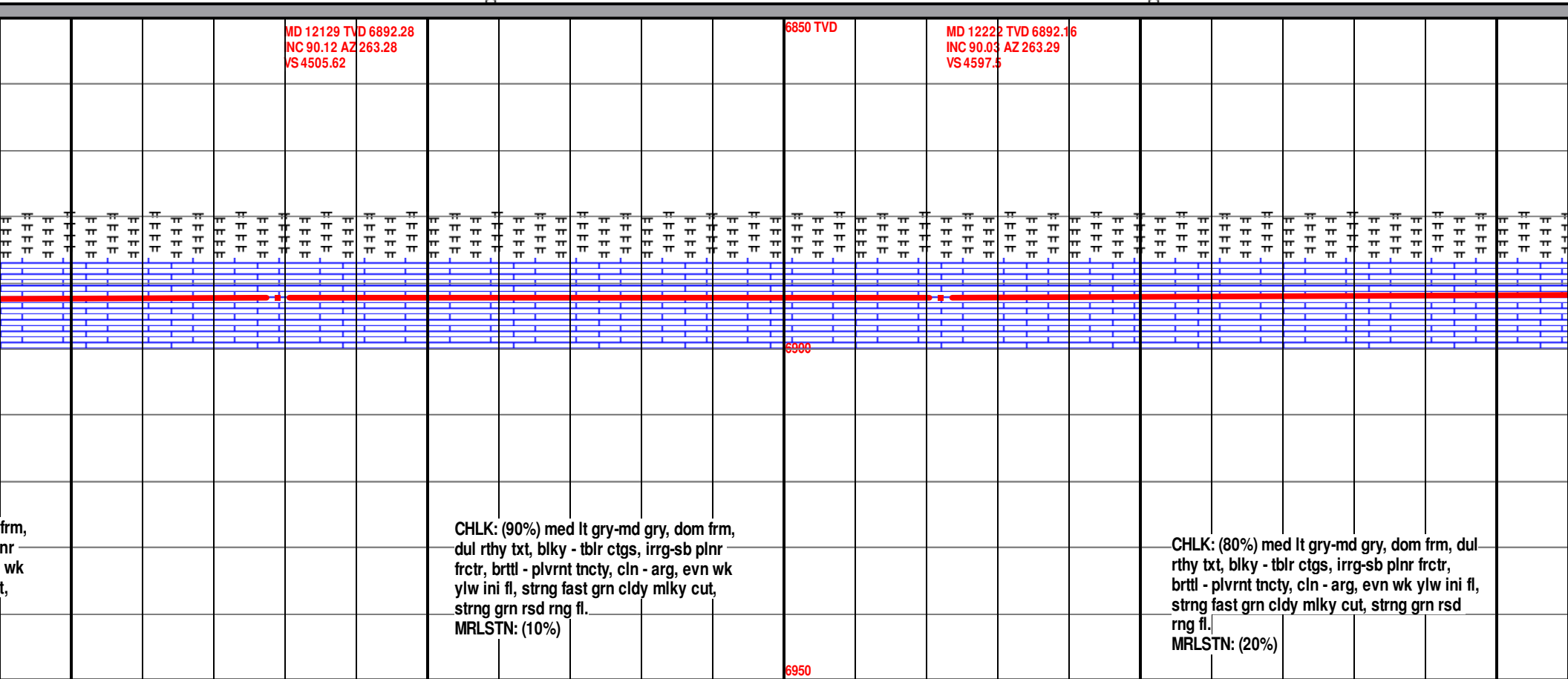


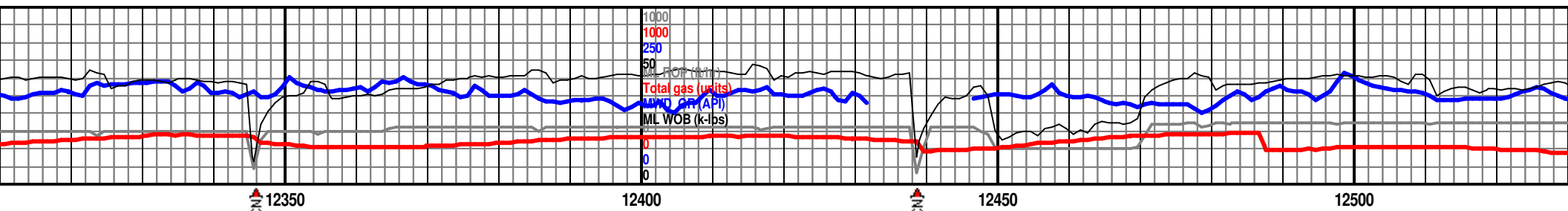


MD 11475 TVD 6897.6 INC 90.34 AZ 268.01 VS 3855.52									
MD 11569 TVD 6897.14 INC 90.22 AZ 266.85 VS 3949.2									
6850 TVD									
Nio A Marl									
MRLSTN: (70%) md gry - md drk gry, dom frm, sl shny - dll lstr, smth - sl mtt txtr, blkly - sb tab ctgs, irrg - sl splntry frctr, brttl tncy, rr thn calc bnds, evn wk ylw ini fl, fst grn blu cut fl, md grn rsd rng fl. CHLK: (30%)									
MRLSTN: (80%) md gry - md drk gry, dom frm, sl shny - dll lstr, smth - sl mtt txtr, blkly - sb tab ctgs, irrg - sl splntry frctr, brttl tncy, rr thn calc bnds, evn wk ylw ini fl, fst grn blu cut fl, md grn rsd rng fl, rr calc frags, rr dissim pyr. CHLK: (20%)									
6950									





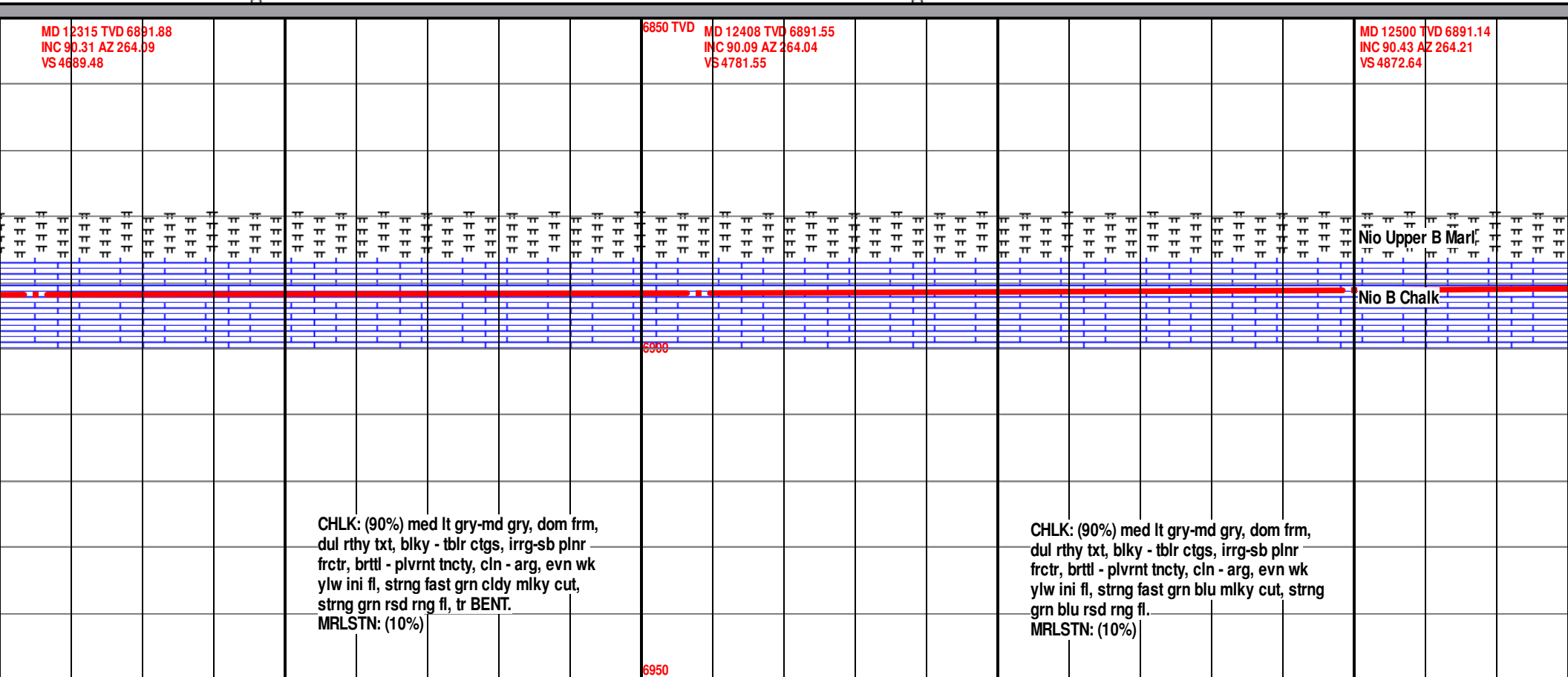




MD 12315 TVD 6891.88
INC 90.31 AZ 264.09
VS 4689.48

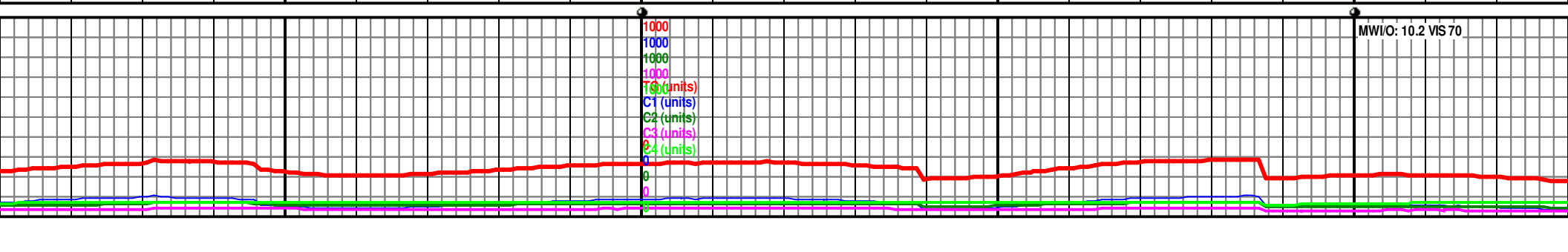
6850 TVD MD 12408 TVD 6891.55
INC 90.09 AZ 264.04
VS 4781.55

MD 12500 TVD 6891.14
INC 90.43 AZ 264.21
VS 4872.64

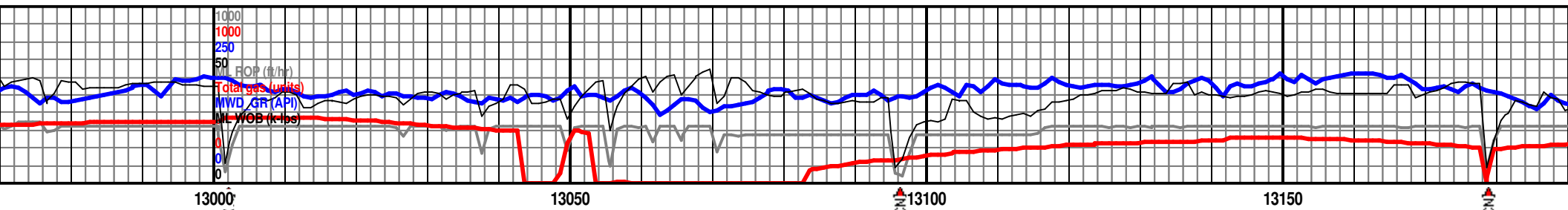


CHLK: (90%) med lt gry-md gry, dom frm,
dul rthy txt, blk - tblr ctgs, irr-gsb plnr
frctr, brttl - plvrnt tncy, cln - arg, evn wk
ylw ini fl, strng fast grn cldy mlky cut,
strng grn rsd rng fl, tr BENT.
MRLSTN: (10%)

CHLK: (90%) med lt gry-md gry, dom frm,
dul rthy txt, blk - tblr ctgs, irr-gsb plnr
frctr, brttl - plvrnt tncy, cln - arg, evn wk
ylw ini fl, strng fast grn blu mlky cut, strng
grn blu rsd rng fl.
MRLSTN: (10%)



MW/O: 10.2 VIS 70



2965 TVD 6888.16
D.34 AZ 271.09
35.85

6850 TVD

MD 13057 TVD 6887.71
INC 90.22 AZ 271.45
VS5427.84

MD 13152 TVD 6887.17
INC 90.43 AZ 270.84
VS5522.82

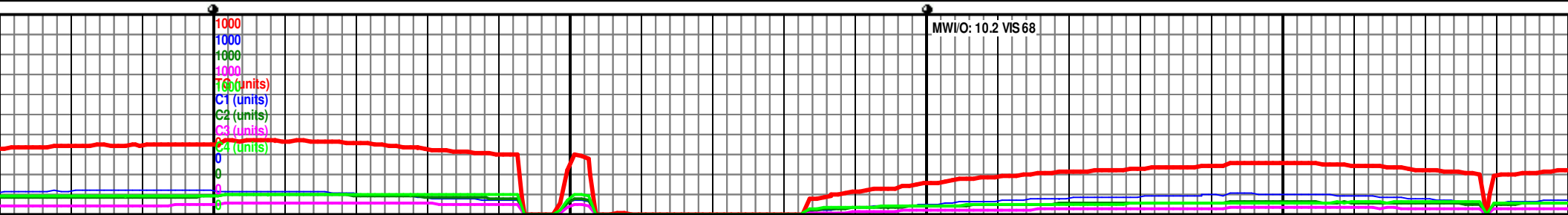
Nio Upper B Marl

Nio B Chalk

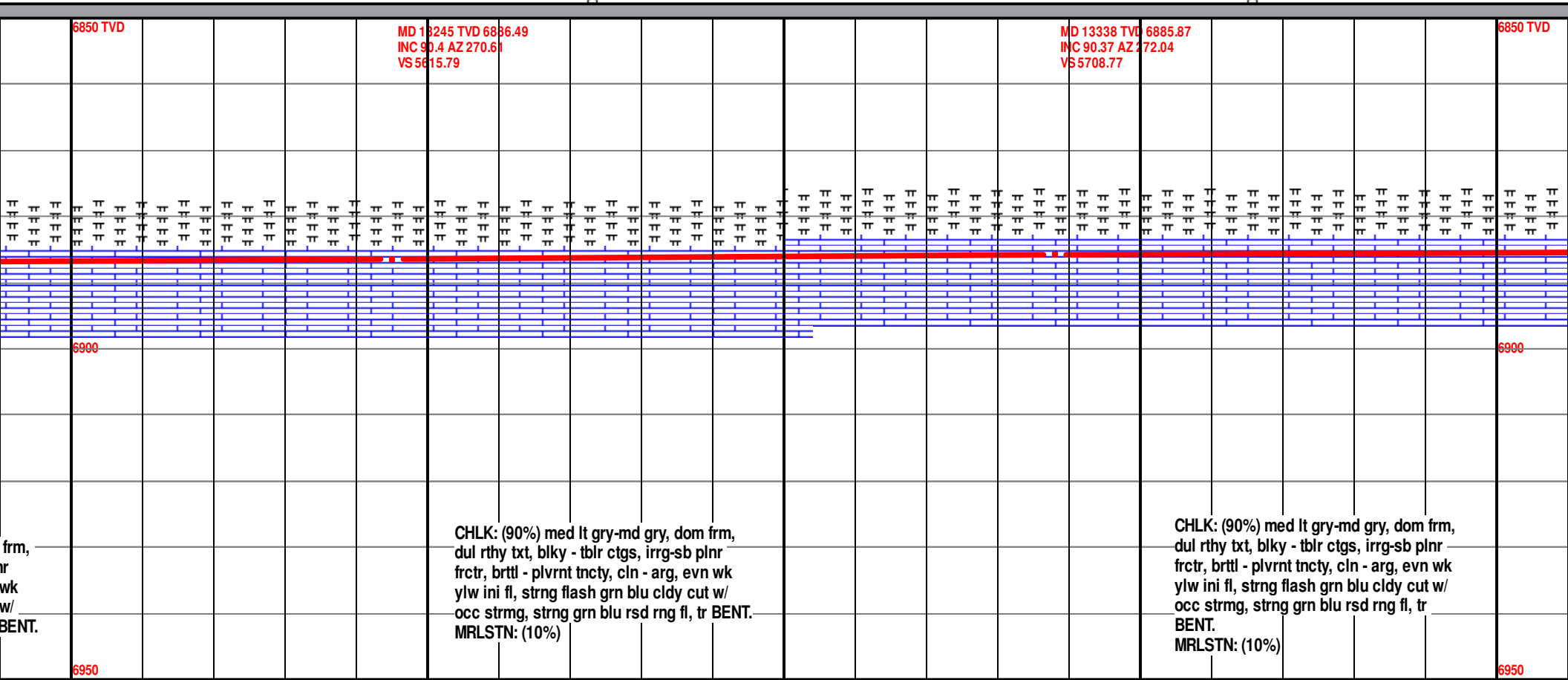
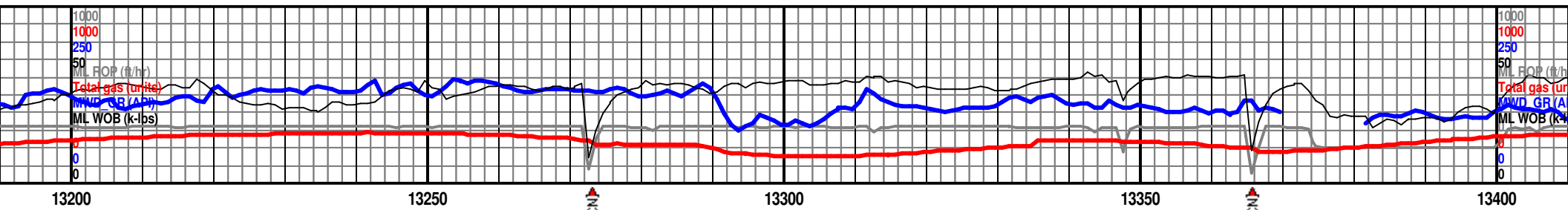
med lt gry-md gry, dom frm,
y - tblr ctgs, irr-gsb plnr frctr,
ty, cln - arg, evn wk ylw ini
n blu cldy cut w/ occ strmg,
d rng fl, tr BENT.

CHLK: (90%) med lt gry-md gry, dom frm,
dul rthy txt, blkly - tblr ctgs, irr-gsb plnr
frctr, brttl - plvrnt tncy, cln - arg, evn wk
ylw ini fl, strng flash grn blu cldy cut w/
occ strmg, strng grn blu rsd rng fl, tr
BENT.
MRLSTN: (10%)

CHLK: (100%) med lt gry-md gry, dom
dul rthy txt, blkly - tblr ctgs, irr-gsb plnr
frctr, brttl - plvrnt tncy, cln - arg, evn
ylw ini fl, strng flash grn blu cldy cut
occ strmg, strng grn blu rsd rng fl, tr

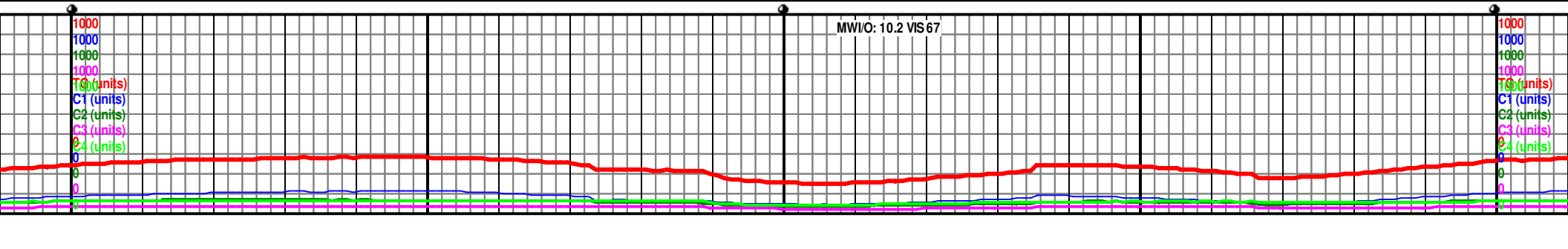


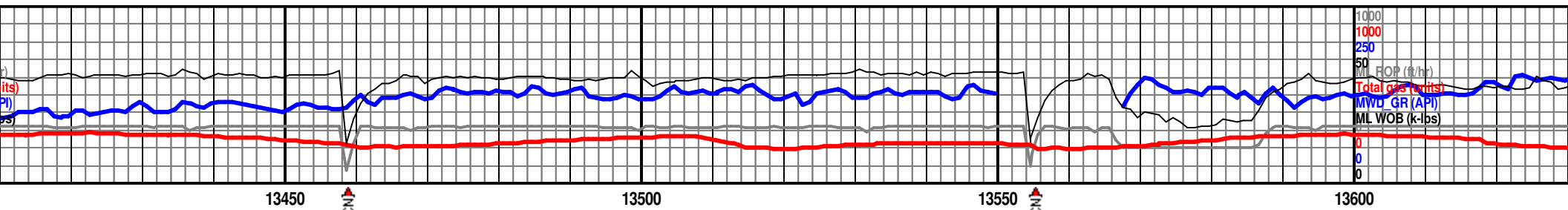
MW/O: 10.2 VIS 68



CHLK: (90%) med lt gry-md gry, dom frm,
dul rthy txt, blk - tblr ctgs, irr-sb plnr
frctr, brttl - plvrnt tncy, cln - arg, evn wk
ylw ini fl, strng flash grn blu cldy cut w/
occ strmg, strng grn blu rsd rng fl, tr BENT.
MRLSTN: (10%)

CHLK: (90%) med lt gry-md gry, dom frm,
dul rthy txt, blk - tblr ctgs, irr-sb plnr
frctr, brttl - plvrnt tncy, cln - arg, evn wk
ylw ini fl, strng flash grn blu cldy cut w/
occ strmg, strng grn blu rsd rng fl, tr
BENT.
MRLSTN: (10%)



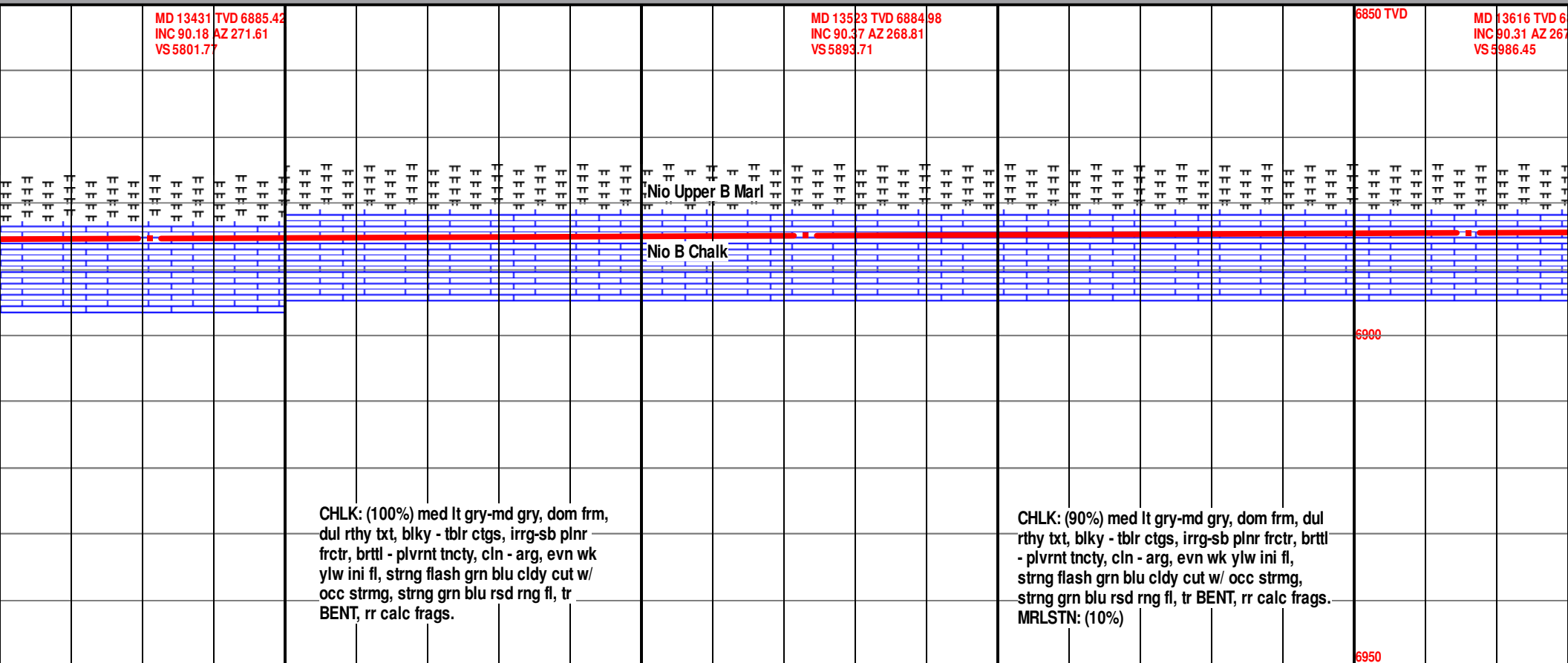


MD 13431 TVD 6885.42
INC 90.18 AZ 271.61
VS 5801.77

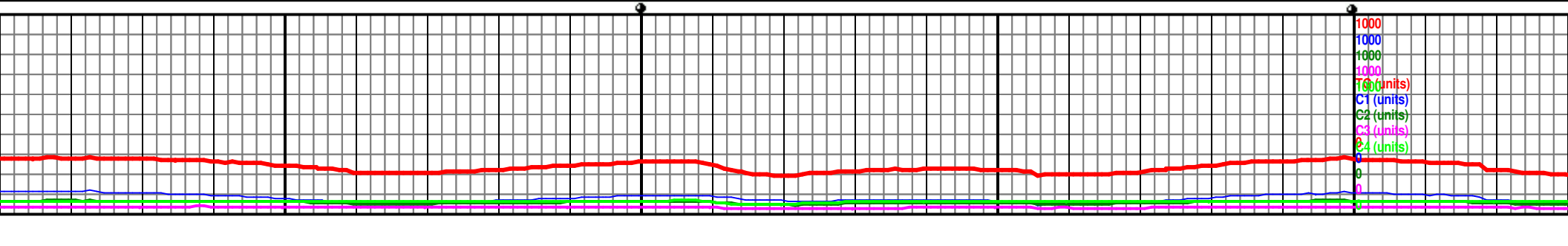
MD 13523 TVD 6884.98
INC 90.37 AZ 268.81
VS 5893.71

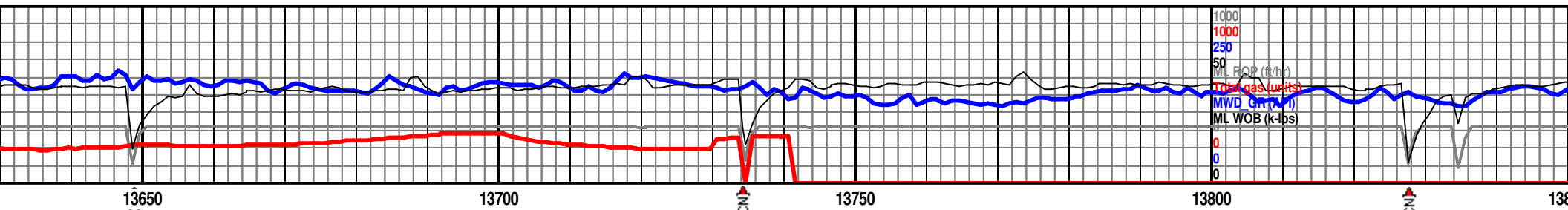
6850 TVD

MD 13616 TVD 6884.98
INC 90.31 AZ 267.81
VS 5986.45

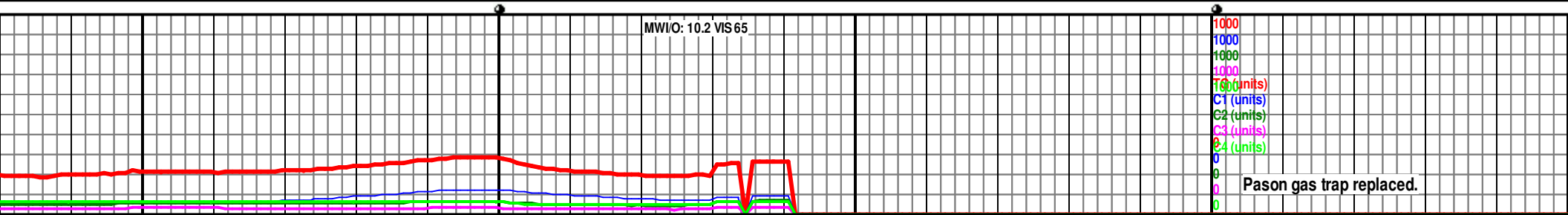


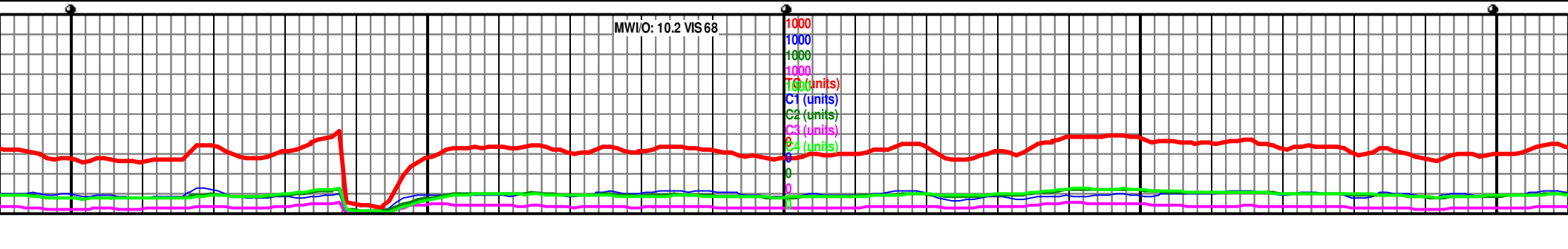
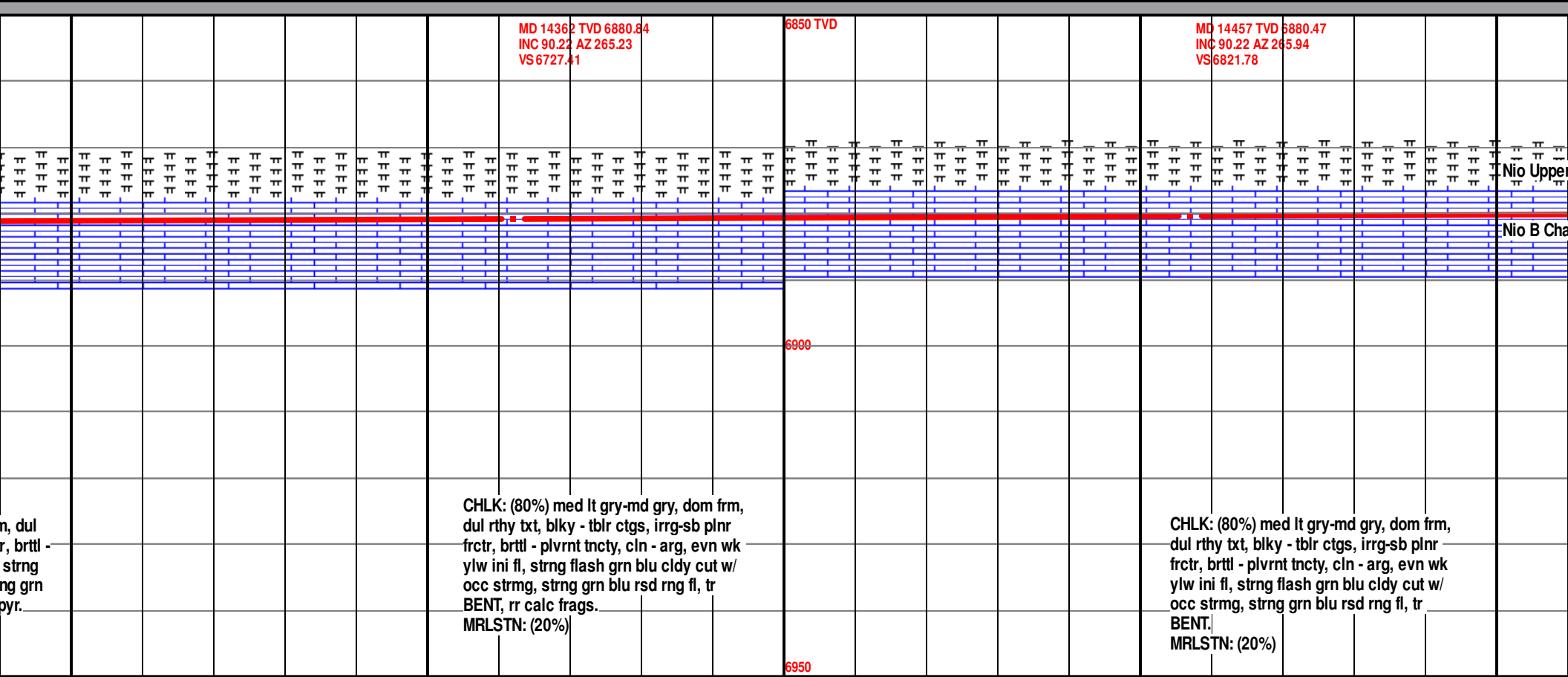
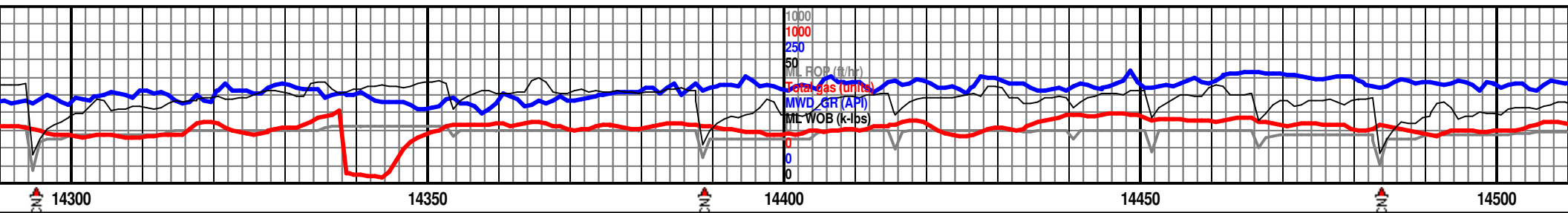
6950

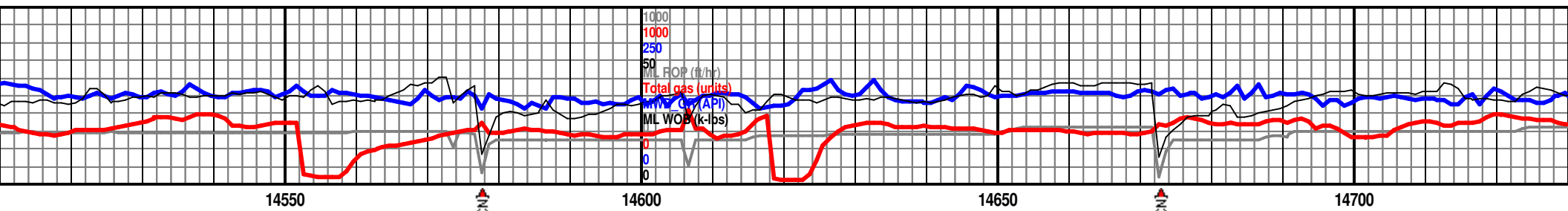




<p>884.43 .14</p> <p>MD 13708 TVD 6884.08 INC 90.12 AZ 266.88 VS 6078.08</p> <p>CHLK: (90%) med lt gry-md gry, dom frm, dul rthy txt, blkly - tblr ctgs, irr-g sb plnr frctr, brttl - plvrnt tncy, cln - arg, evn wk ylw ini fl, strng flash grn blu cldy cut w/ occ strmg, strng grn blu rsd rng fl, tr BENT. MRLSTN: (10%)</p>	<p>MD 13800 TVD 6883.74 INC 90.31 AZ 266.5 VS 6169.65</p> <p>CHLK: (90%) med lt gry-md gry, dom frm, dul rthy txt, blkly - tblr ctgs, irr-g sb plnr frctr, brttl - plvrnt tncy, cln - arg, evn wk ylw ini fl, strng flash grn blu cldy cut w/ occ strmg, strng grn blu rsd rng fl, tr BENT. MRLSTN: (10%)</p>	<p>6900</p> <p>6950</p>
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14550

14600

14650

14700

MD 14550	TVD 6879.87
INC 90.52	AZ 267.15
VS 6914.32	

6850 TVD

MD 14544	TVD 6879.3
INC 90.18	AZ 266.28
VS 7007.89	

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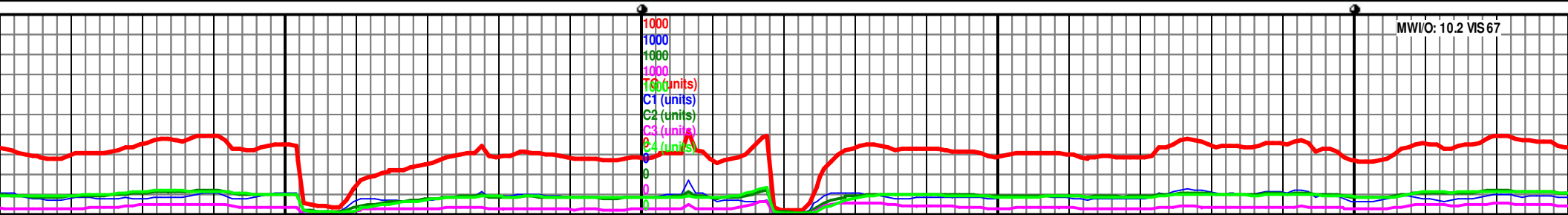
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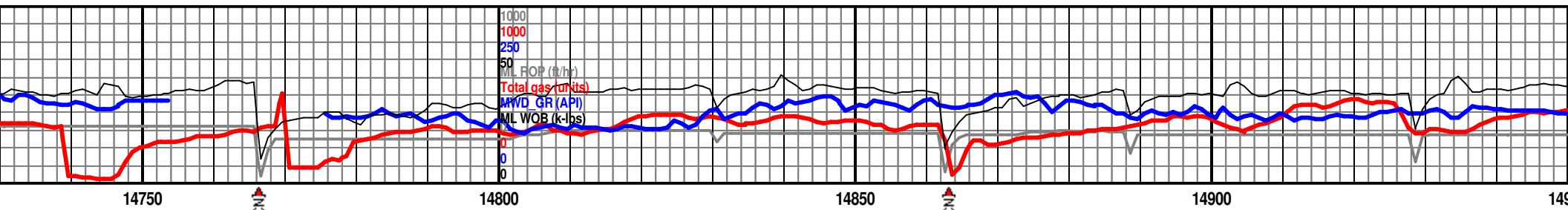
CHLK: (90%) med lt gry-md gry, dom frm,
dul rthy txt, bkly - tblr ctgs, irrg-sb plnr
frctr, brttl - plvrnt tncty, cln - arg, evn wk
ylw ini fl, strng flash grn blu cldy cut w/
occ strmg, strng grn blu rsd rng fl, tr
BENT.
MRLSTN: (10%)

CHLK: (80%) med lt gry-md gry, dom frm, dul
rthy txt, blkly - tblr ctgs, irrg-sb plnr frctr, brttl
- plvrnt tncy, cln - arg, evn wk ylw ini fl,
strng flash grn blu cldy cut w/ occ strmg,
strng grn blu rsd rng fl, tr BENT.

MRLSTN: (20%)

MWI/O: 10.2 VIS 67



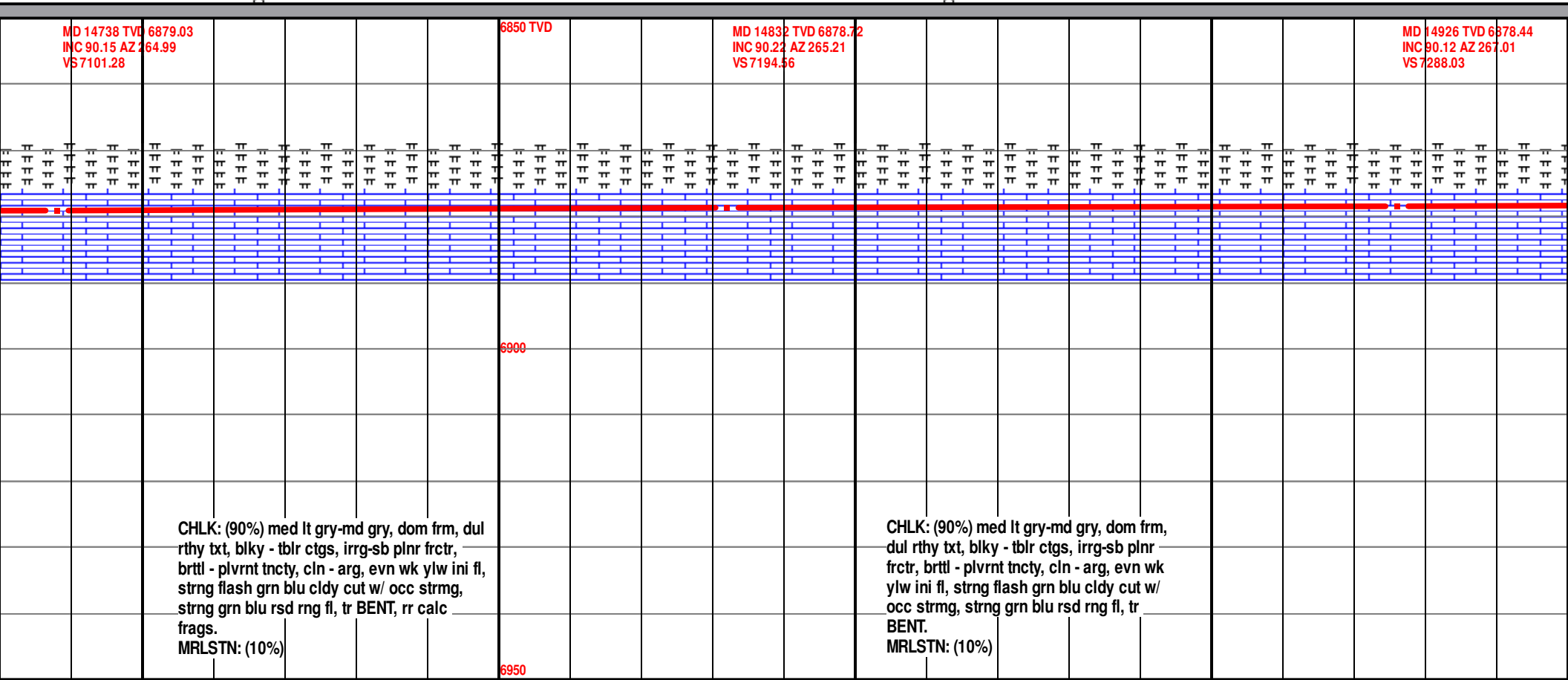


MD 14738 TVD 6879.03
INC 90.15 AZ 264.99
VS 7101.28

6850 TVD

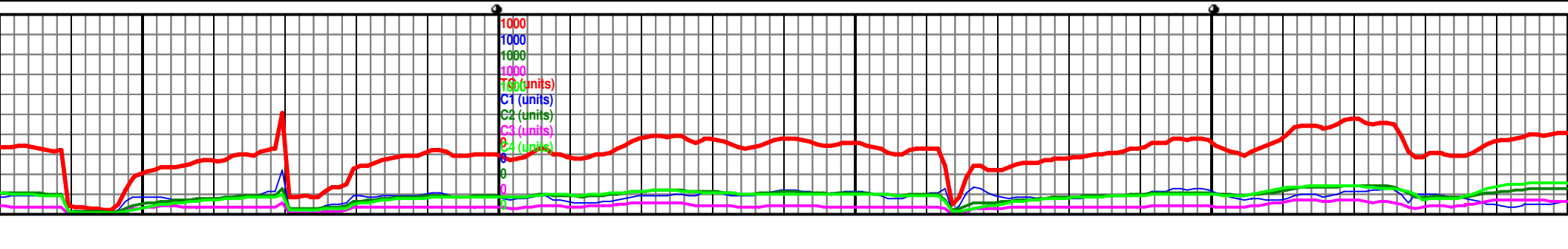
MD 14832 TVD 6878.72
INC 90.22 AZ 265.21
VS 7194.56

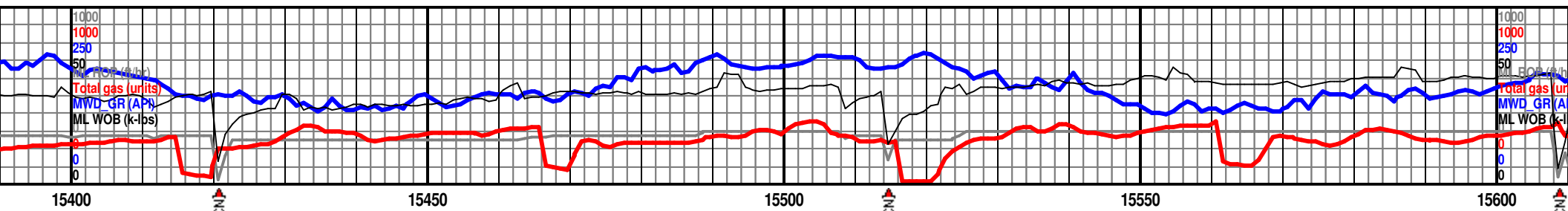
MD 14926 TVD 6878.44
INC 90.12 AZ 267.01
VS 7288.03



6900

6950



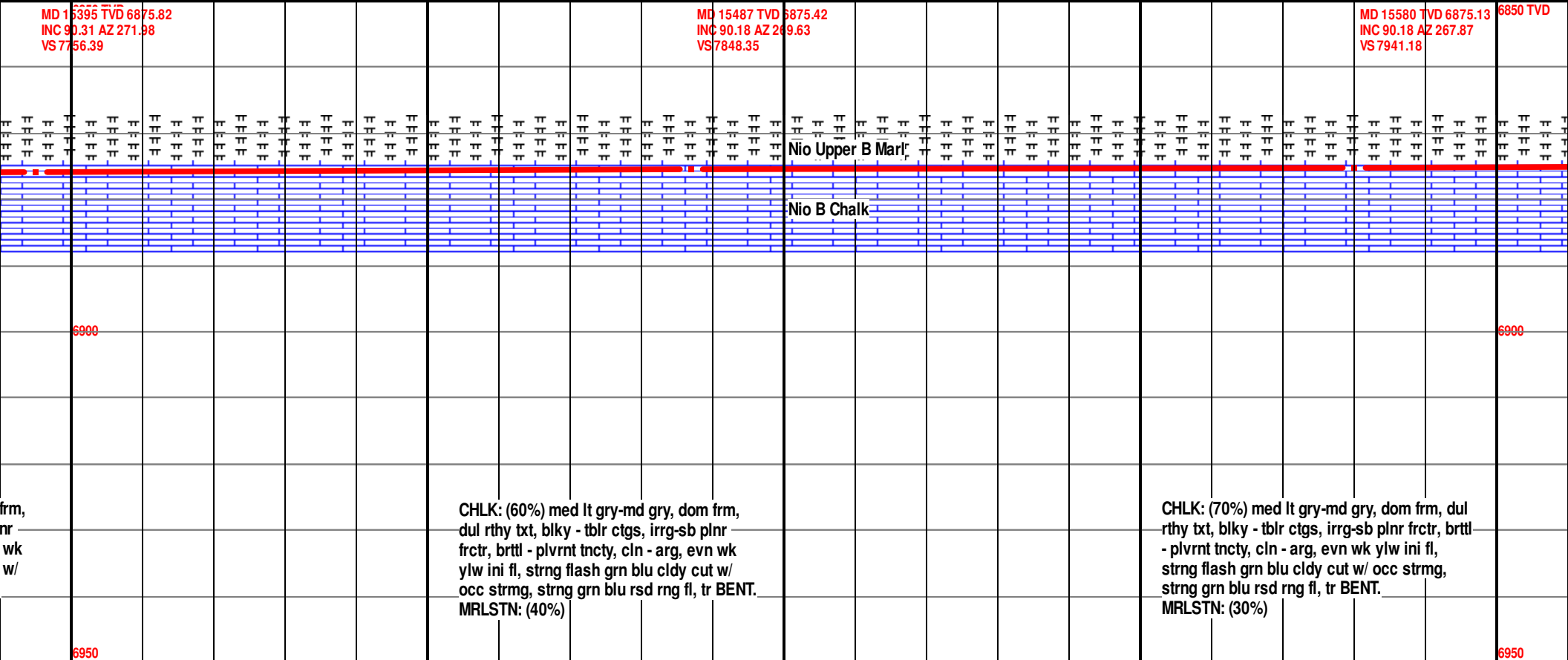


MD 15395 TVD 6875.82
INC 90.31 AZ 271.98
VS 7756.39

MD 15487 TVD 6875.42
INC 90.18 AZ 249.63
VS 7848.35

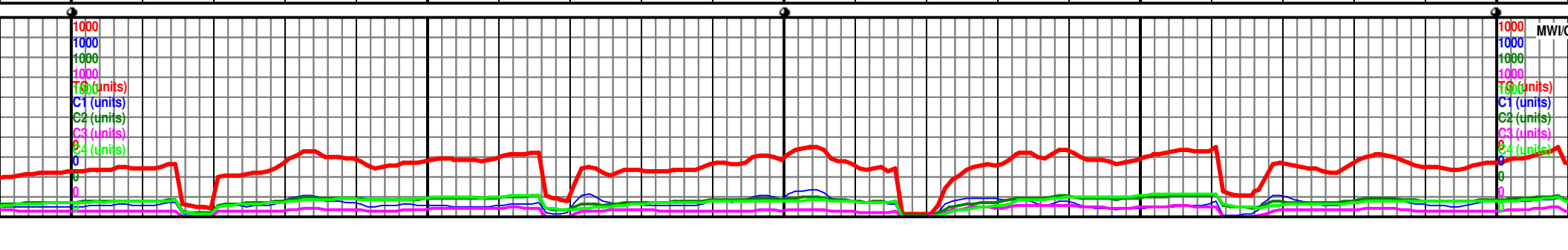
MD 15580 TVD 6875.13
INC 90.18 AZ 267.87
VS 7941.18

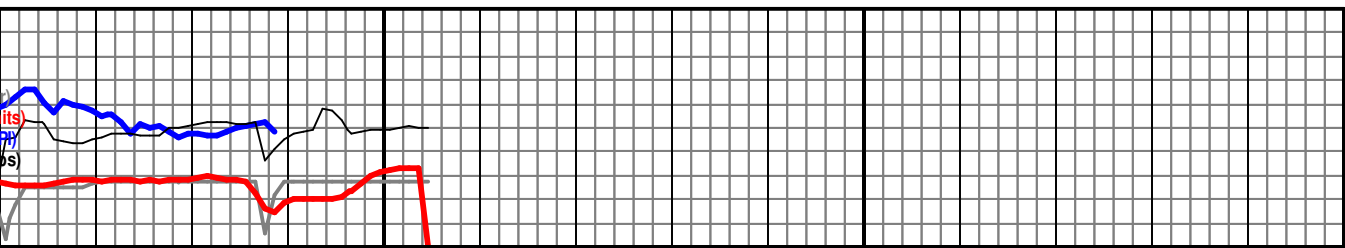
6850 TVD
VS 7941.18



CHLK: (60%) med lt gry-md gry, dom frm, dul rthy txt, blkly - tblr ctgs, irrg-sb plnr frctr, brttl - plvrnt tncy, cln - arg, evn wk ylw ini fl, strng flash grn blu cldy cut w/ occ strmg, strng grn blu rsd rng fl, tr BENT.
MRLSTN: (40%)

CHLK: (70%) med lt gry-md gry, dom frm, dul rthy txt, blkly - tblr ctgs, irrg-sb plnr frctr, brttl - plvrnt tncy, cln - arg, evn wk ylw ini fl, strng flash grn blu cldy cut w/ occ strmg, strng grn blu rsd rng fl, tr BENT.
MRLSTN: (30%)





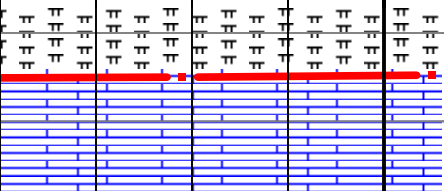
15650

15700

15

MD 15629 TVD 6874.93
INC 90.28 AZ 266.72
VS 7990

MD 15655 TVD 6874.81
INC 90.28 AZ 266.72
VS 8015.88



Reached DMTD of 15655' MD on 3/9/2018 @ 03:19 hrs.

Formation tops picked by Ryan Scribner and Brian Spitzmiller (GBA)

5 1/2" Production casing set at 15,648' MD

	MD	TVD	SSD
Sharon Springs	6966'	6789'	-2000'
A Chalk	7025'	6824'	-2035'
A Chalk Base	7063'	6844'	-2055'
B Upper Marl	7349'	6935'	-2146'
B Chalk	7399'	6942'	-2153'
DMTD	15655'	6875'	-2086'

CHLK: (70%) med lt gry-md gry, dom frm, dul rthy txt, blk - tblr ctgs, irr-g sb plnr frctr, brttl - plvrnt tncy, cln - arg, evn wk ylw ini fl, strng flash grn blu cldy cut w/ occ strmg, strng grn blu rsd rng fl, tr BENT.
MRLSTN: (30%)

D: 10.2 VIS 69

