



COUNTY	Weld	STATE	Colorado
FIELD	Wattenberg		
LOCATION	SE/SW Section 20, T5N - R62W		
WELL	Antelope 24-21-20HC		
LOG TYPE			
COMPANY	Bonanza Creek Energy, Inc.		
JOBNO			
<hr/>			
COMPANY	Bonanza Creek Energy, Inc.		
WELL	Antelope 24-21-20HC		
FIELD	Wattenberg		
COUNTY/PARISH	Weld	STATE	Colorado
UNIT MANAGER		ENGINEER	JOBNO:
GEOLOGIST	Dick Brunner / Scott Sawyer	CO. ENGINEER	
<hr/>			
ELEVATIONS			
KB 4,682'			
DRILL FLOOR			
ELEVATION 4,665'			
WATER DEPTH			

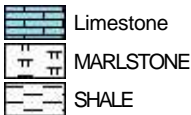
[illegible]

TOTAL Gas Analyzer		DRILLING FLUID COMPANY	
1% C1 =	100 UNITS	Water Based Mud	
20% C1 =	2,000 UNITS		
		DRILLING FLUID TYPE	
		DRILLING CONTRACTOR	
		LOGSCALE	
		1" = 20'	
		RIG NAME	Cade 21
		LOGGING UNIT	

Lithology



Engineering

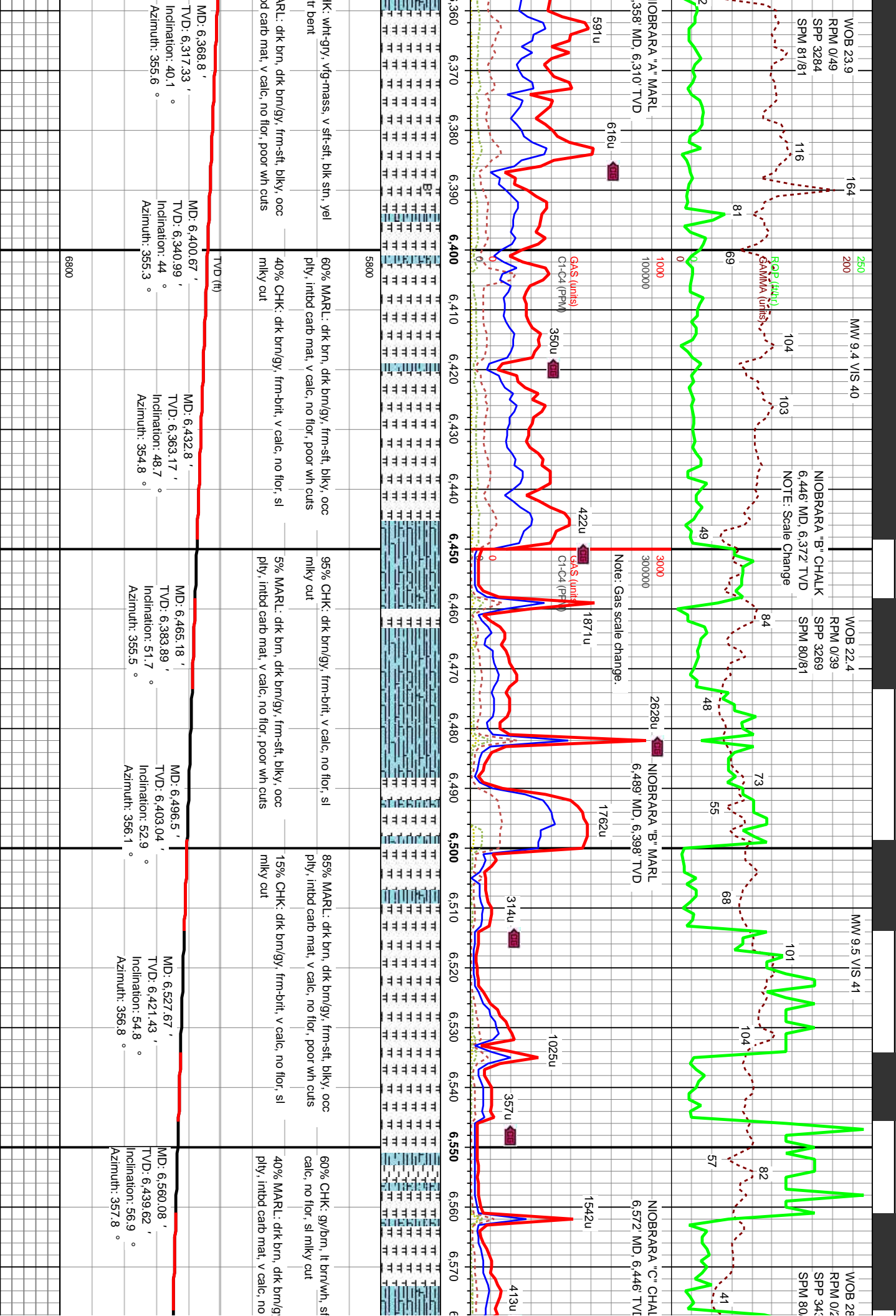


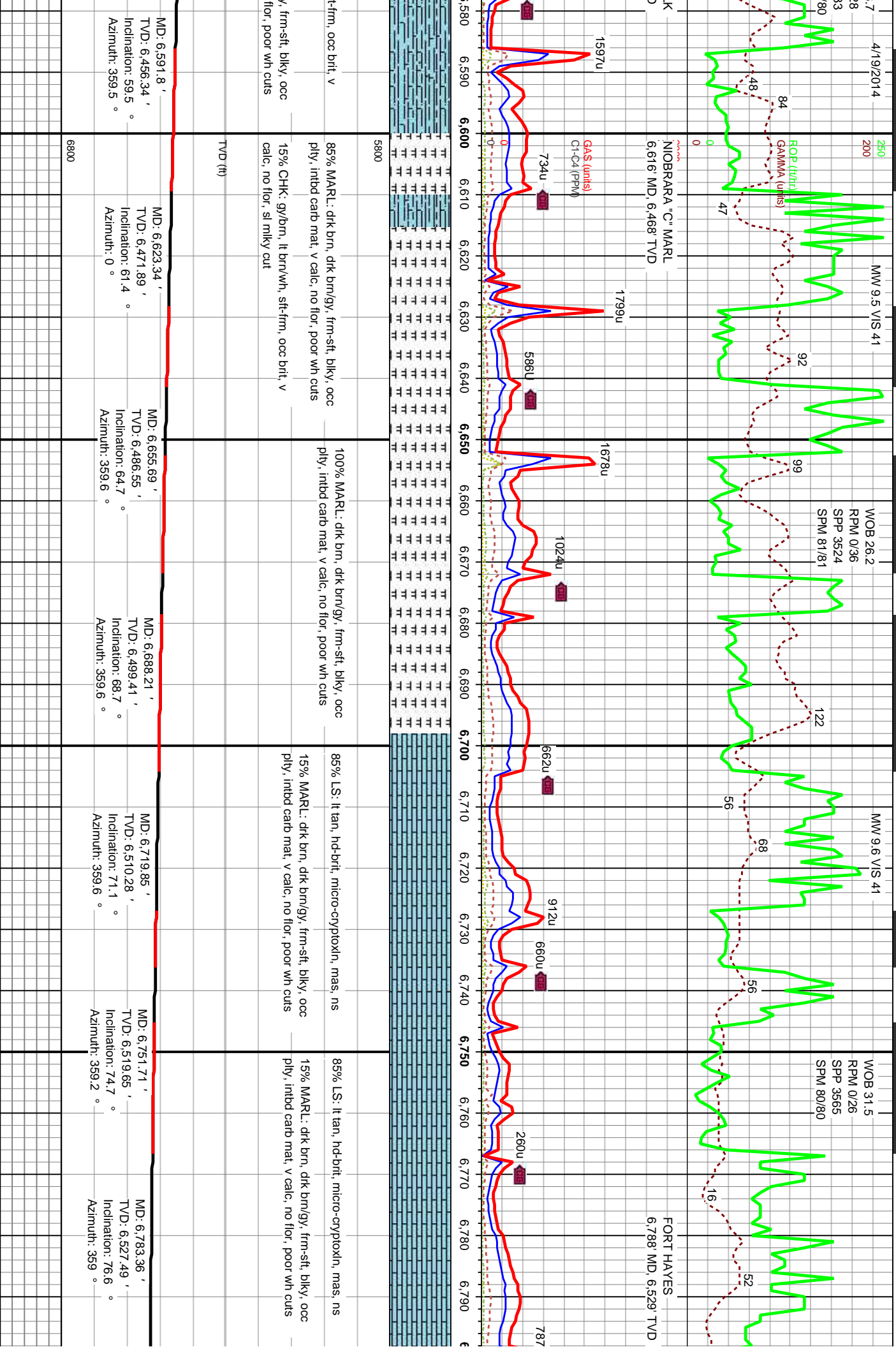
Minerals

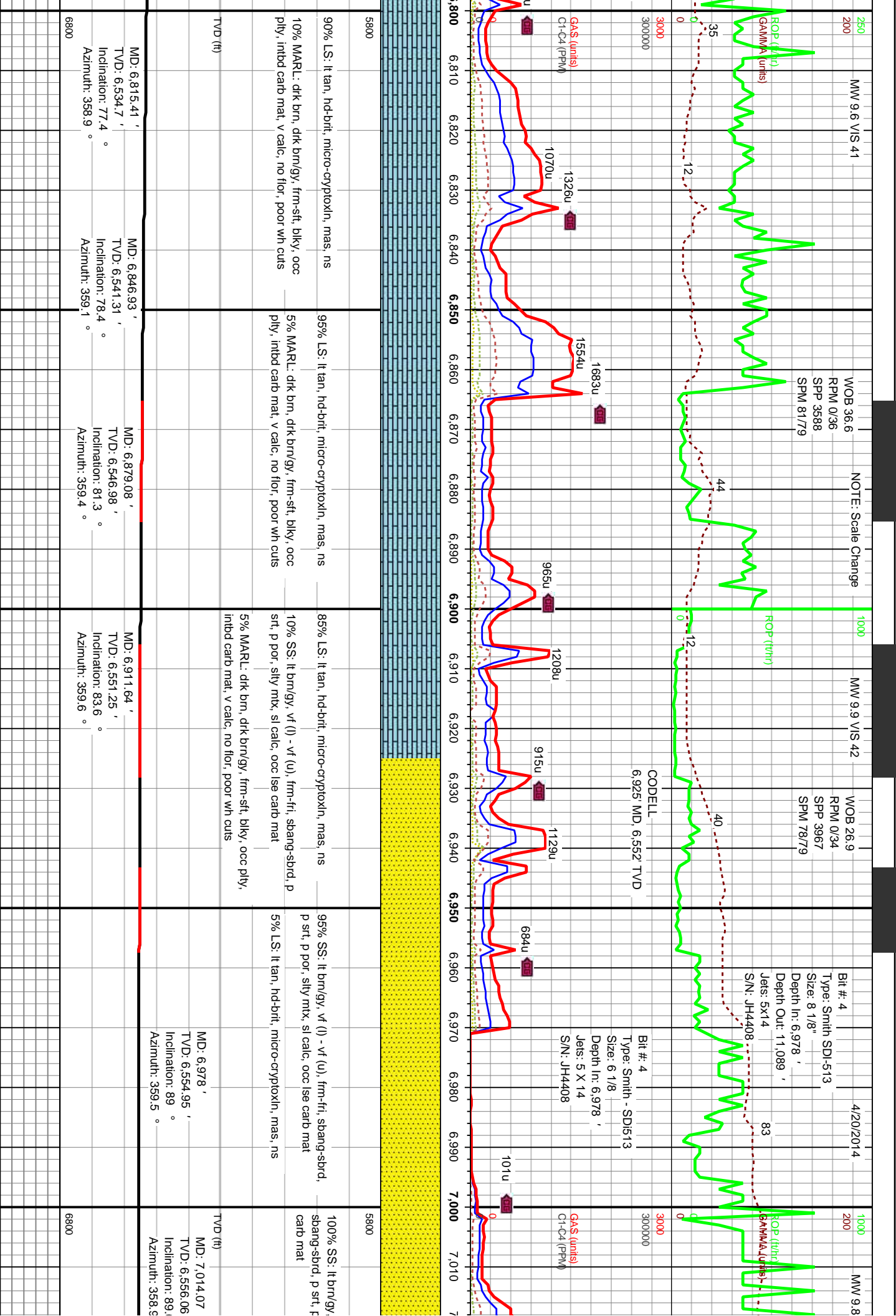


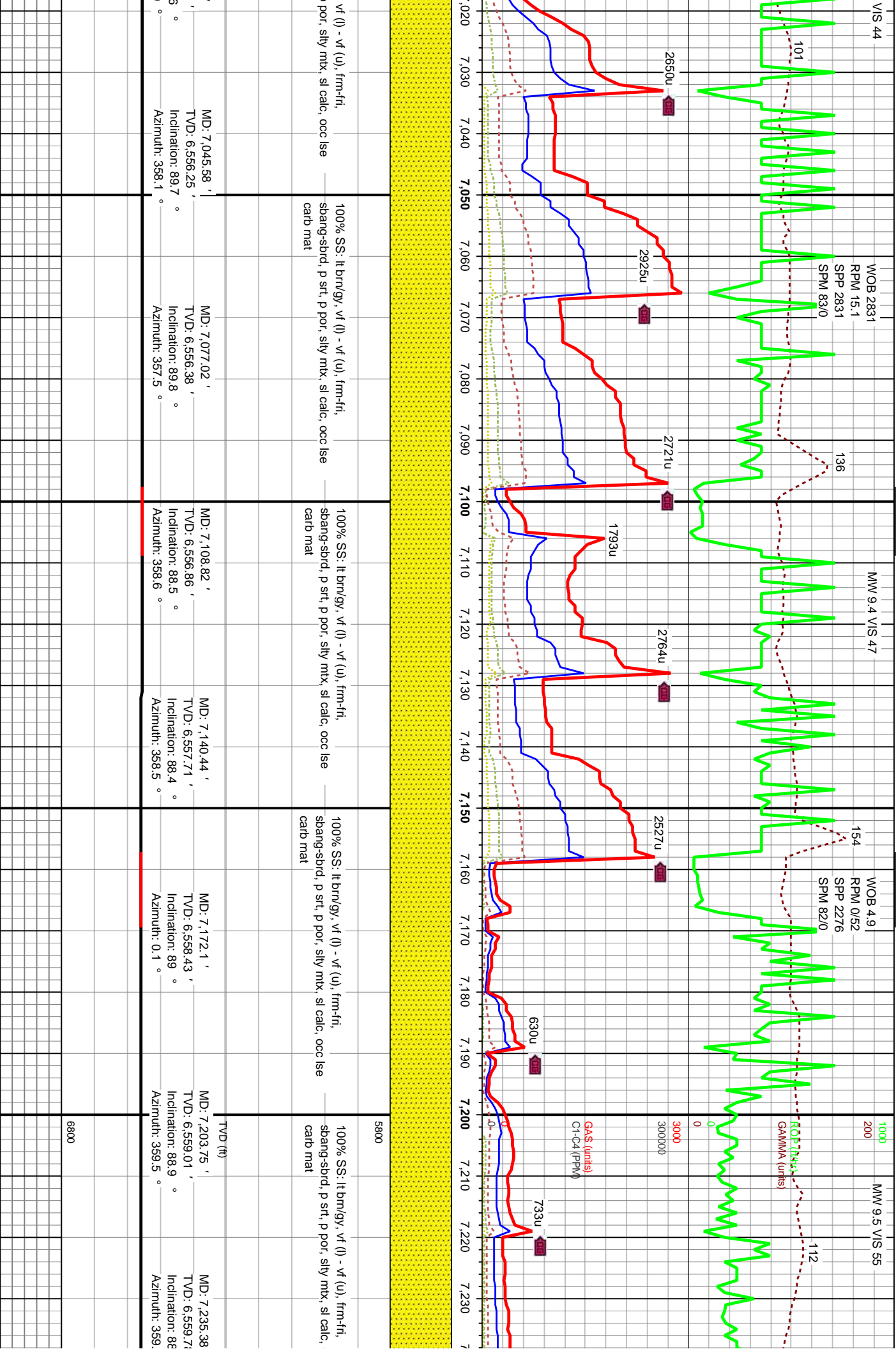
Stringer

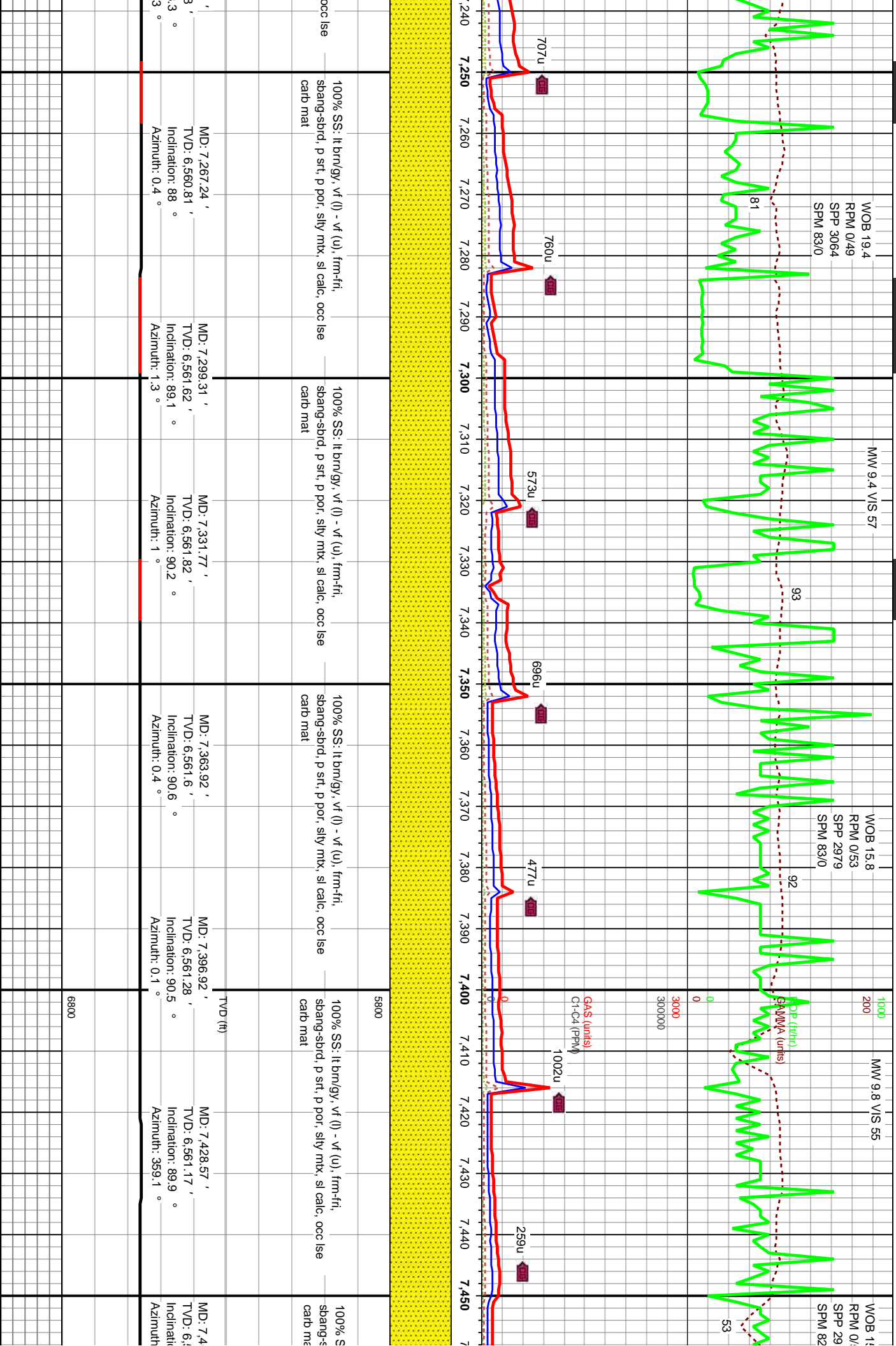


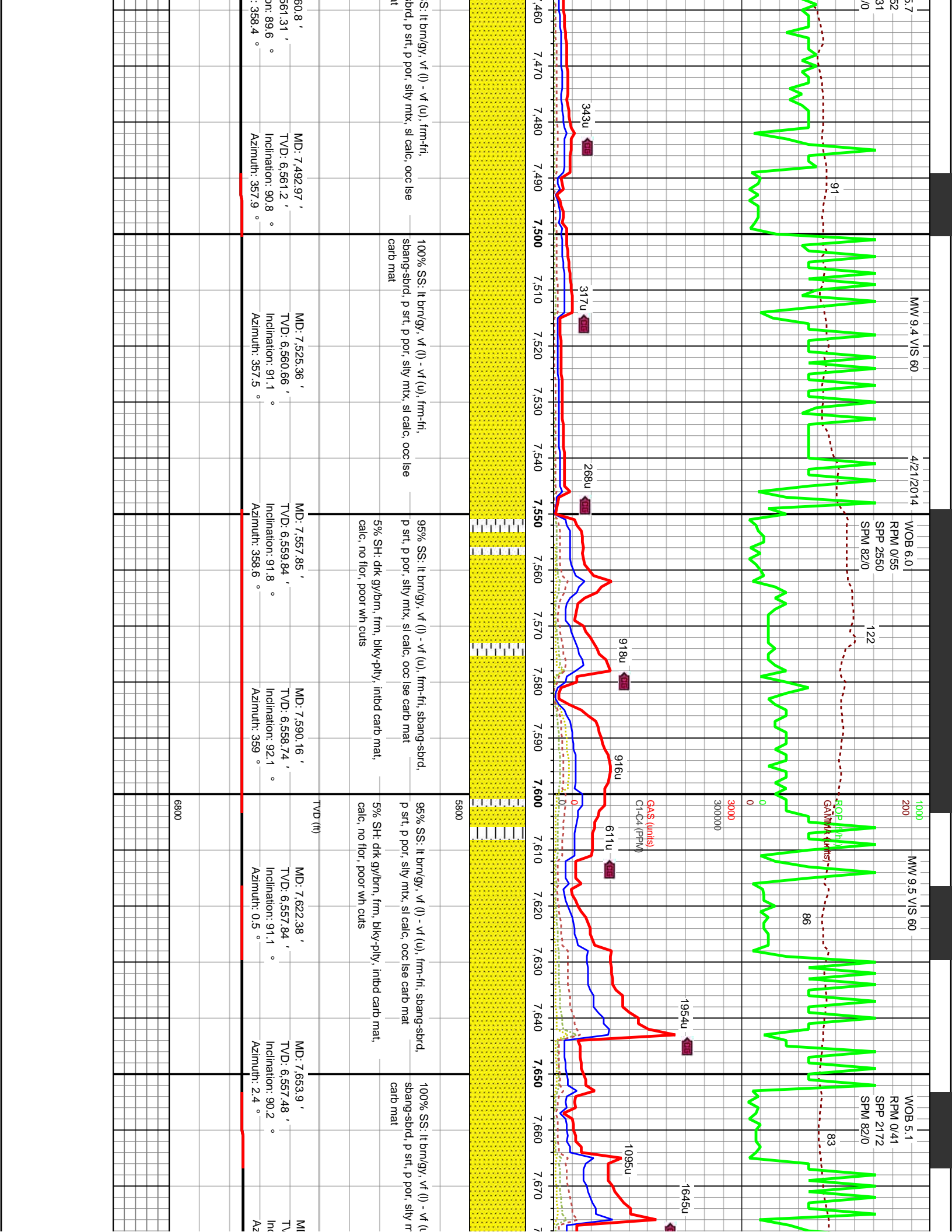


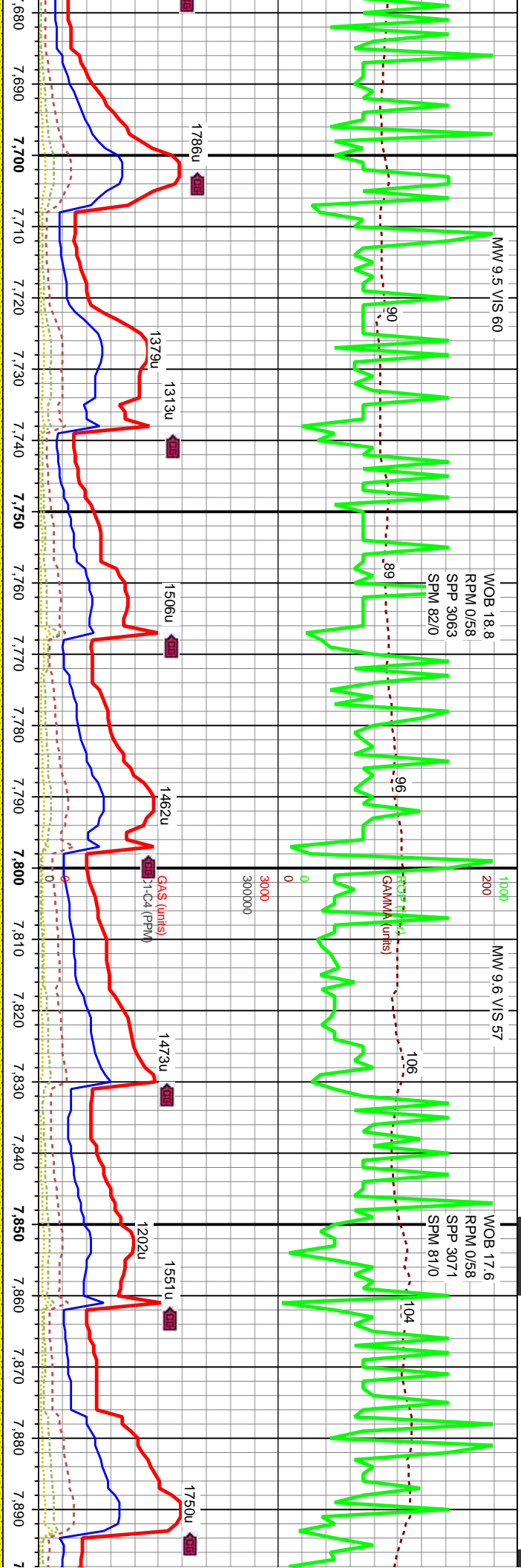




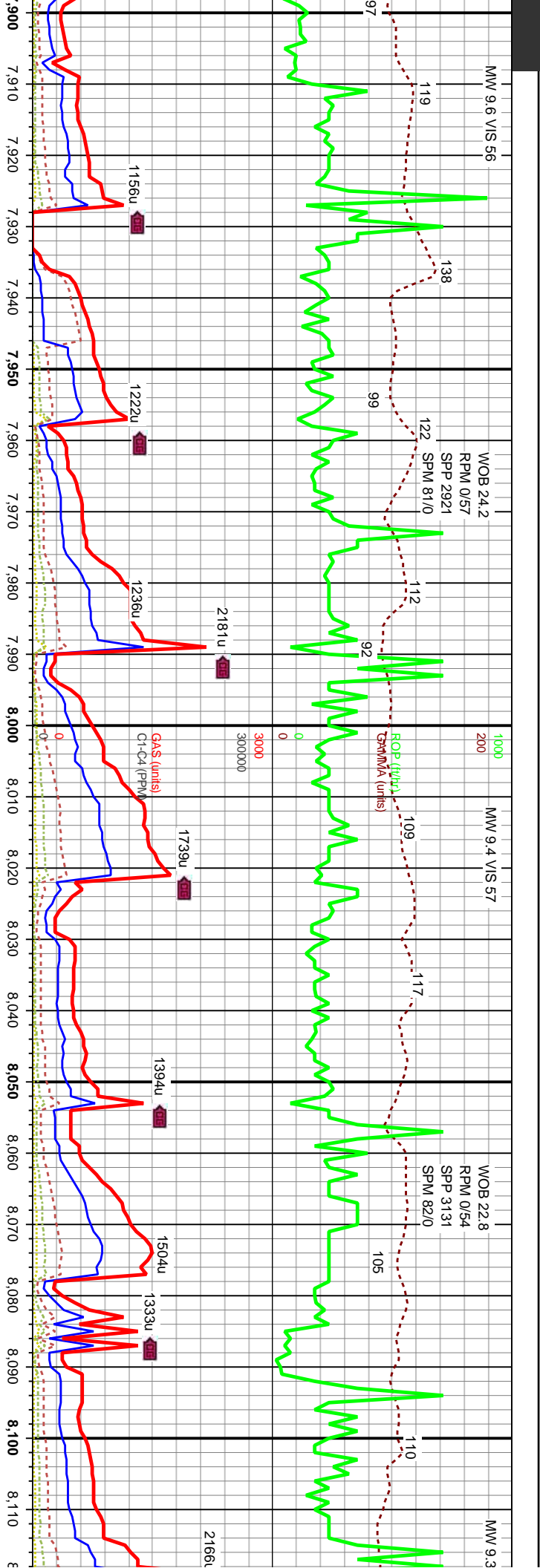


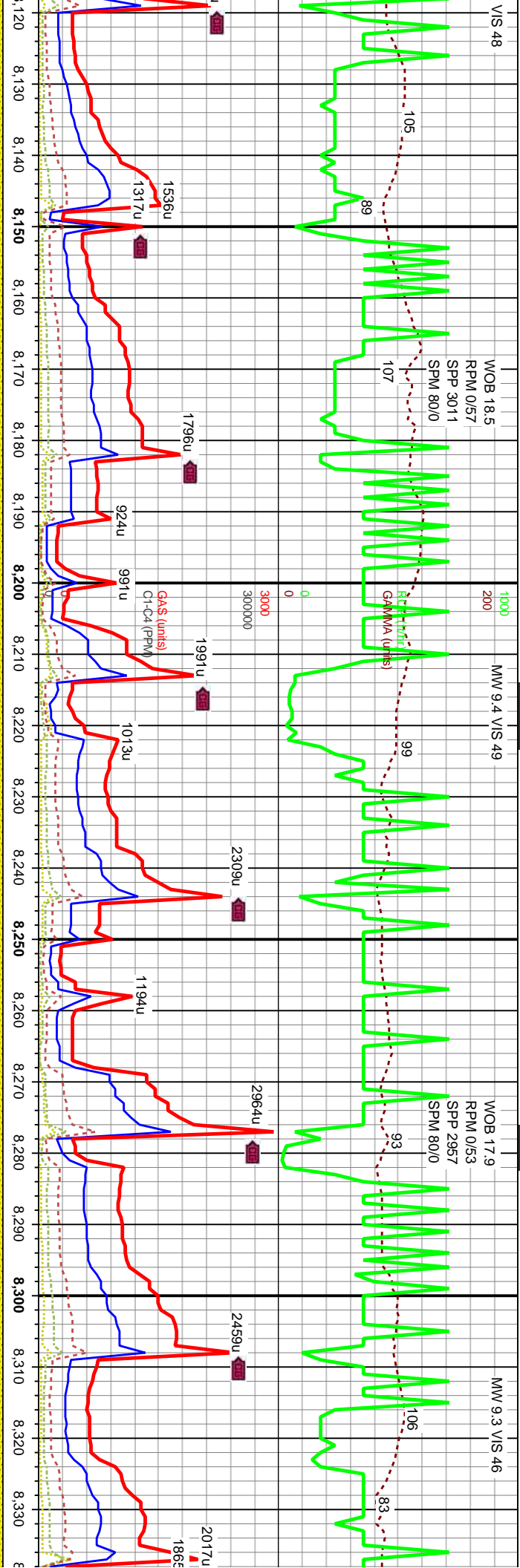




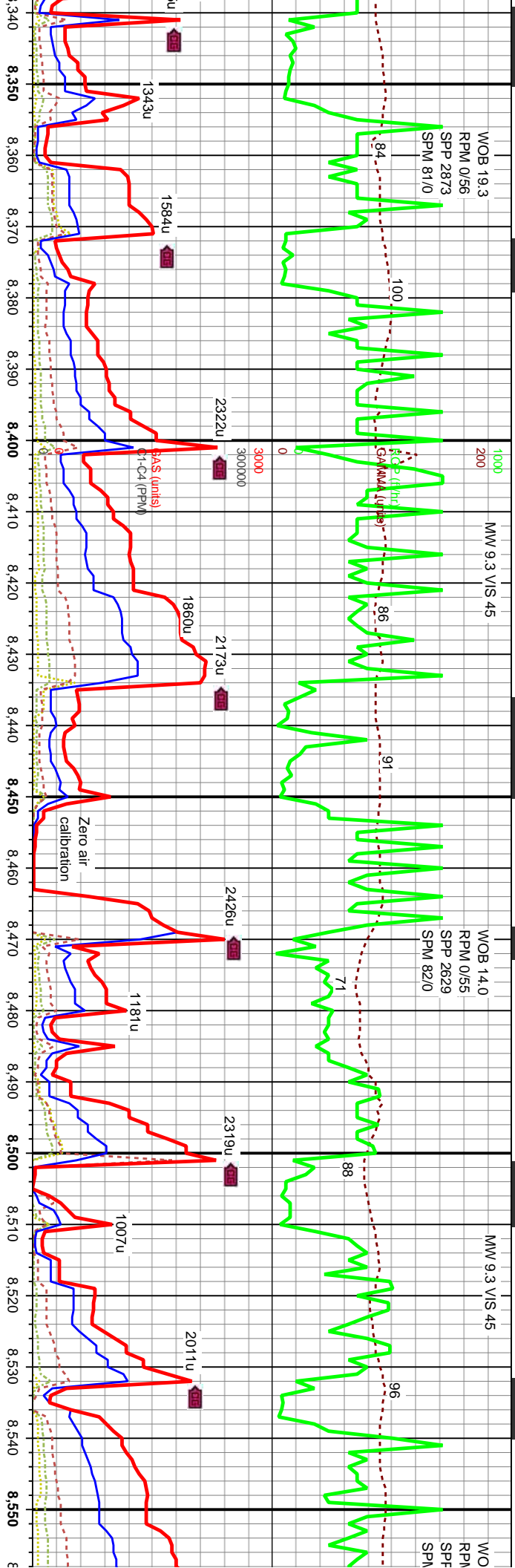


MD: 7.685.55 ' D: 6.557.4 ' Inclination: 90.1 ° Azimuth: 3 °	MD: 7.718.06 ' TVD: 6.557.4 ' Inclination: 89.9 ° Azimuth: 2.3 °	MD: 7.749.5 ' TVD: 6.557.7 ' Inclination: 89.6 ° Azimuth: 1 °	MD: 7.812.87 ' TVD: 6.557.92 ' Inclination: 89.6 ° Azimuth: 1 °	MD: 7.845.01 ' TVD: 6.558.18 ' Inclination: 89.5 ° Azimuth: 0.8 °	MD: 7.877.16 ' TVD: 6.558.46 ' Inclination: 89.5 ° Azimuth: 0.4 °
100% SS: lt brn/gy, vf (l) - vf (u), frm-fr, sbang-sbrd, p srt, p por, silty mix, sl calc, occ lse carb mat	100% SS: lt brn/gy, vf (l) - vf (u), frm-fr, sbang-sbrd, p srt, p por, silty mix, sl calc, occ lse carb mat	100% SS: lt brn/gy, vf (l) - vf (u), frm-fr, sbang-sbrd, p srt, p por, silty mix, sl calc, occ lse carb mat	100% SS: lt brn/gy, vf (l) - vf (u), frm-fr, sbang-sbrd, p srt, p por, silty mix, sl calc, occ lse carb mat	100% SS: lt brn/gy, vf (l) - vf (u), frm-fr, sbang-sbrd, p srt, p por, silty mix, sl calc, occ lse carb mat	100% SS: lt brn/gy, vf (l) - vf (u), frm-fr, sbang-sbrd, p srt, p por, silty mix, sl calc, occ lse carb mat
6800	6800	6800	6800	6800	6800

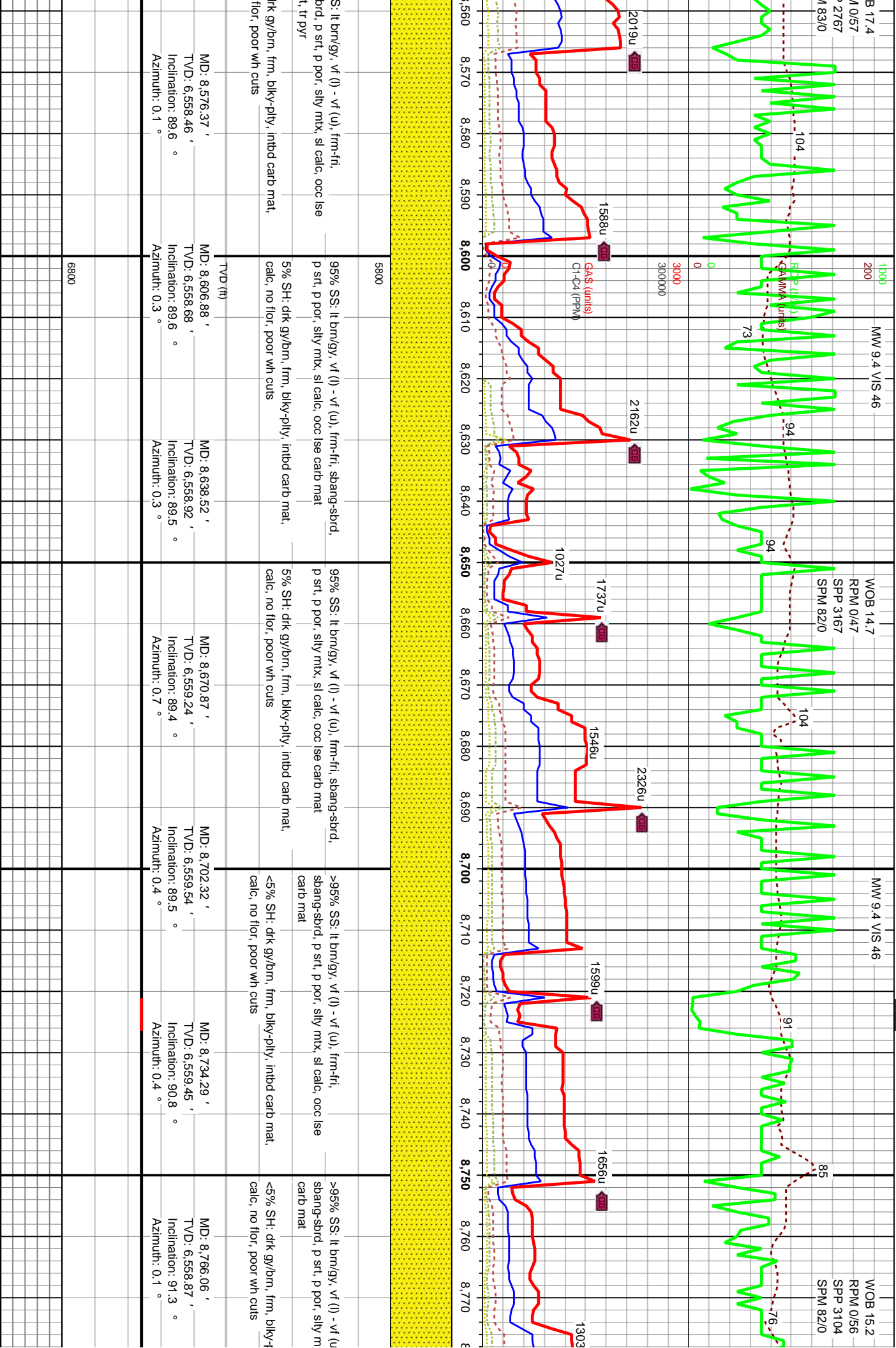


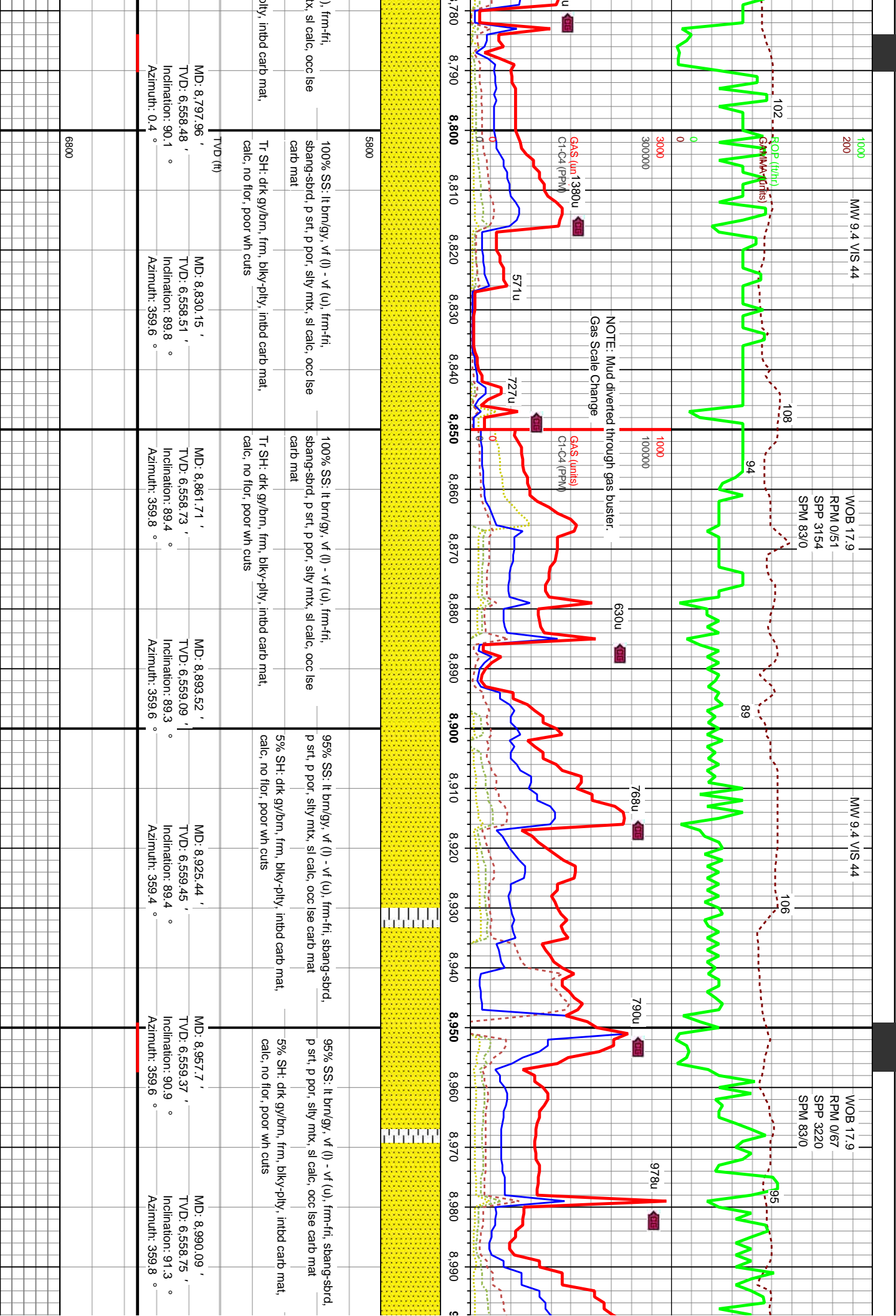


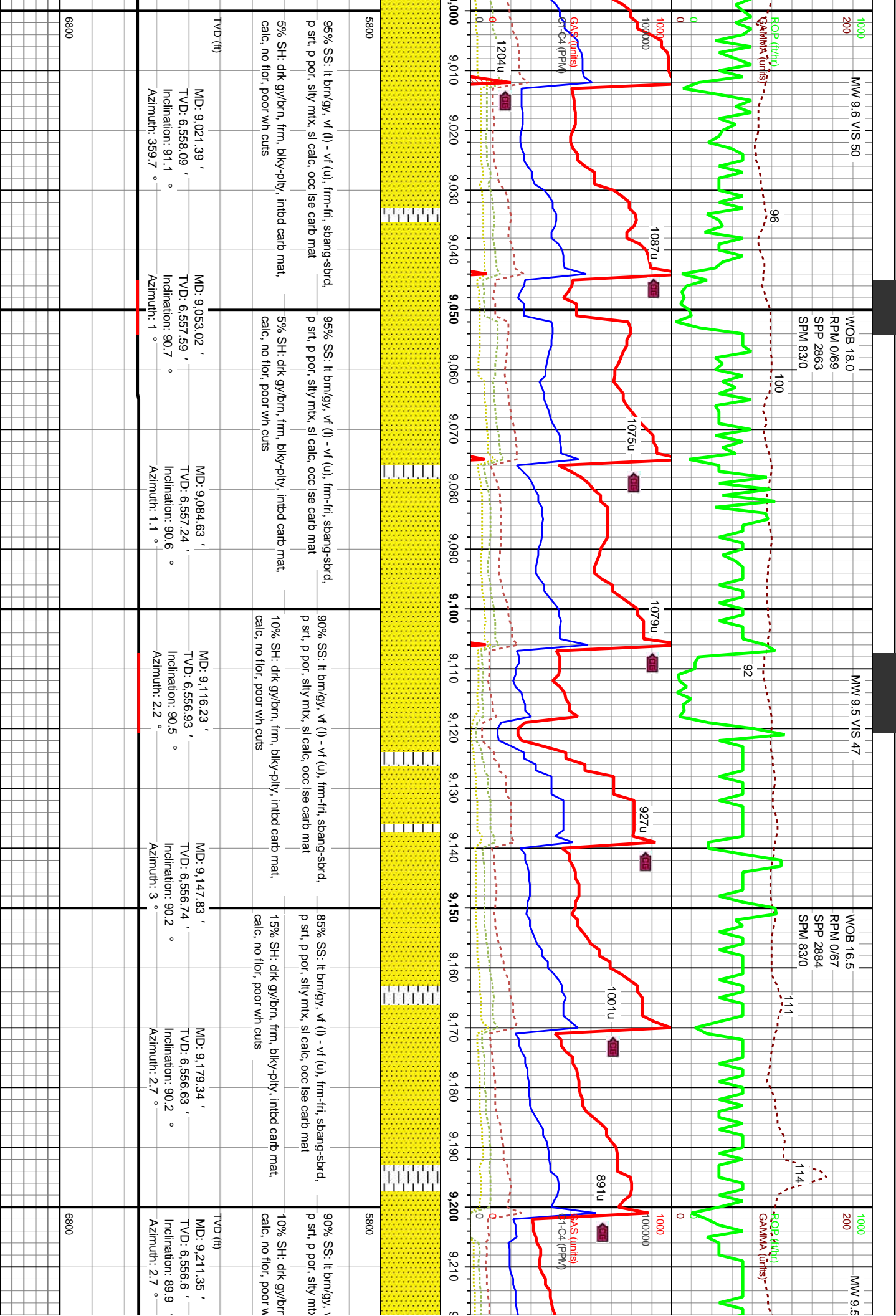
f (l) - v f (u), frm-fri, shang-sbrd, sl calc, occ lse carb mat frm, blk-y-pty, intbd carb mat, h cuts		95% SS: lt brn/gy, v f (l) - v f (u), frm-fri, shang-sbrd, p srt, p por, silty mtx, sl calc, occ lse carb mat 5% SH: drk gy/brn, frm, blk-y-pty, intbd carb mat, calc, no flor, poor wh cuts	95% SS: lt brn/gy, v f (l) - v f (u), frm-fri, shang-sbrd, p srt, p por, silty mtx, sl calc, occ lse carb mat 5% SH: drk gy/brn, frm, blk-y-pty, intbd carb mat, calc, no flor, poor wh cuts	95% SS: lt brn/gy, v f (l) - v f (u), frm-fri, shang-sbrd, p srt, p por, silty mtx, sl calc, occ lse carb mat 5% SH: drk gy/brn, frm, blk-y-pty, intbd carb mat, calc, no flor, poor wh cuts	95% SS: lt brn/gy, v f (l) - v f (u), frm-fri, shang-sbrd, p srt, p por, silty mtx, sl calc, occ lse carb mat 5% SH: drk gy/brn, frm, blk-y-pty, intbd carb mat, calc, no flor, poor wh cuts	>95% SS: lt brn/gy, v f (l) - v f (u), frm-fri, shang-sbrd, p srt, p por, silty mtx, sl calc, carb mat <5% SH: drk gy/brn, frm, blk-y-pty, intbd carb mat, calc, no flor, poor wh cuts
MD: 8,132.94 ' TVD: 6,557.84 ' Inclination: 89.7 ° Azimuth: 2.6 °		MD: 8,164.48 ' TVD: 6,558.01 ' Inclination: 89.7 ° Azimuth: 2.7 °	MD: 8,196.06 ' TVD: 6,558.31 ' Inclination: 89.2 ° Azimuth: 2.4 °	MD: 8,227.58 ' TVD: 6,558.89 ' Inclination: 88.7 ° Azimuth: 0.3 °	MD: 8,259.51 ' TVD: 6,559.61 ' Inclination: 88.7 ° Azimuth: 359.6 °	MD: 8,290.93 ' TVD: 6,560.3 ' Inclination: 88.8 ° Azimuth: 358.8 °
			TVD (ft)			MD: 8,322.44 ' TVD: 6,561.04 ' Inclination: 88.5 ° Azimuth: 358.6 °
			6800			

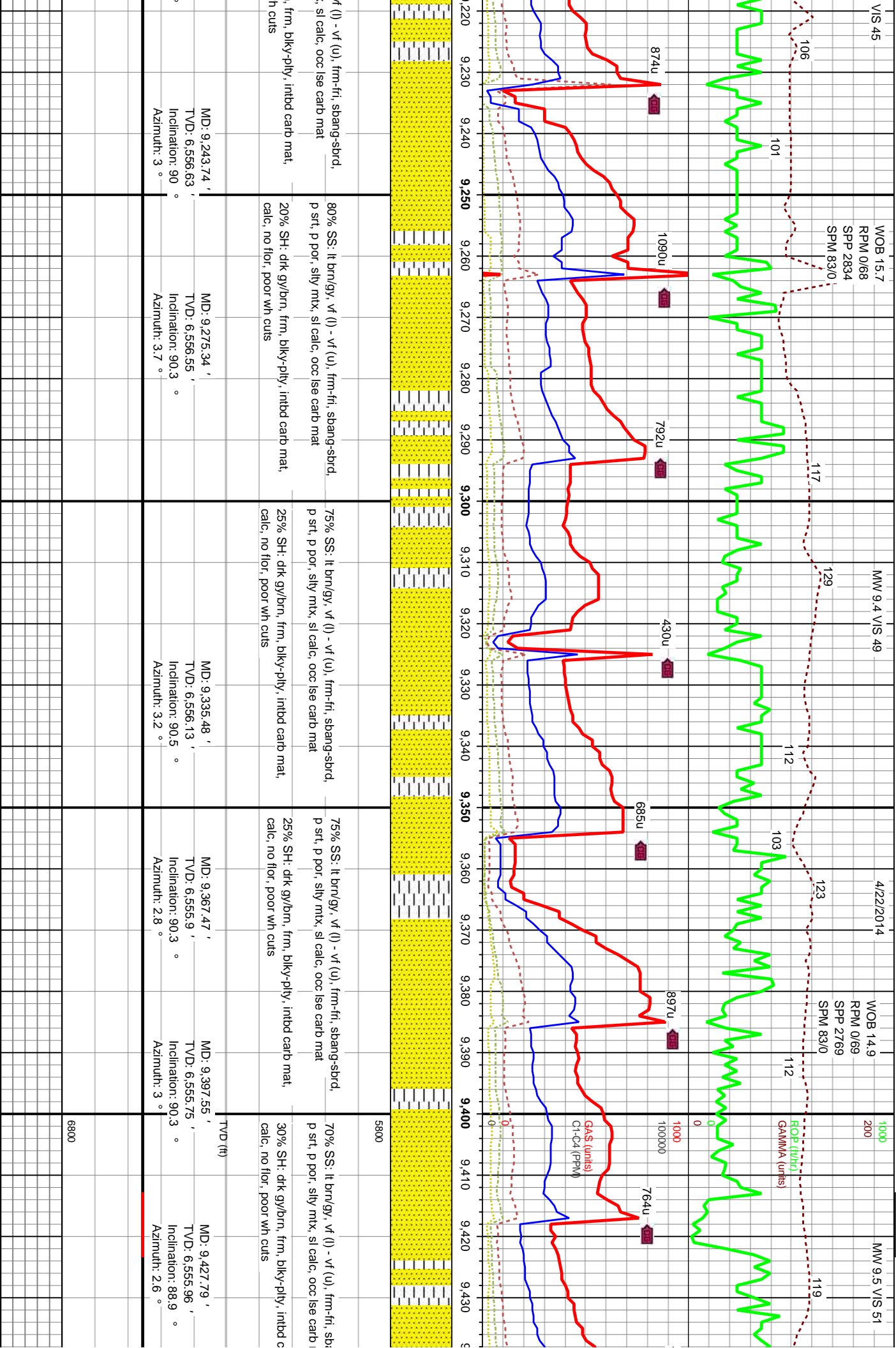


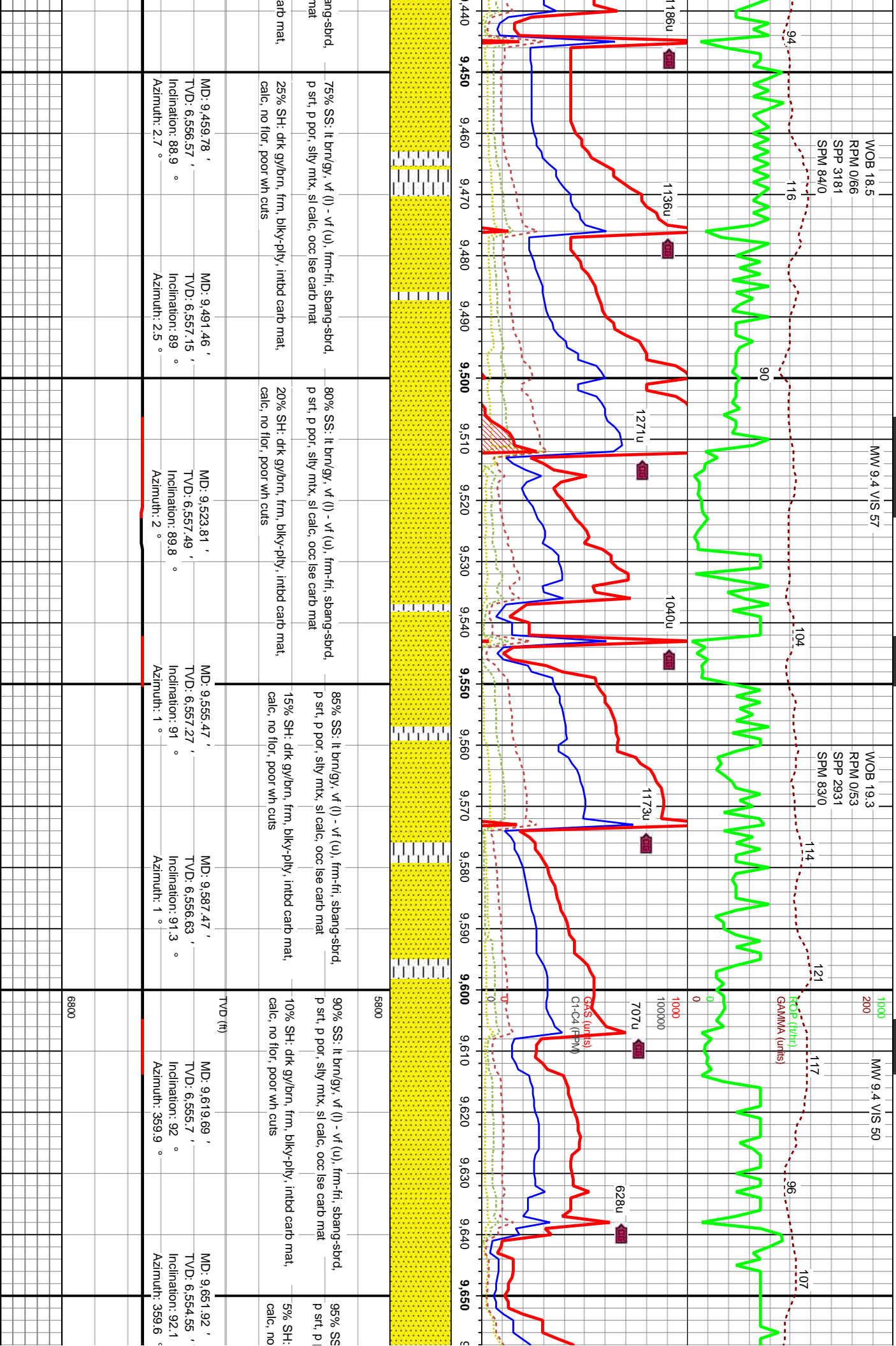
WOB 19.3 RPM 0/56 SPM 2873 SPM 81/0		MW 9.3 VIS 45		WOB 14.0 RPM 0/55 SPM 2629 SPM 82/0		MW 9.3 VIS 45		WOB RPM SPM	
8.340		8.350		8.360		8.370		8.380	
8.390		8.400		8.410		8.420		8.430	
8.440		8.450		8.460		8.470		8.480	
8.490		8.500		8.510		8.520		8.530	
8.540		8.550							
occ ise		occ ise		occ ise		occ ise		occ ise	
carb mat,		carb mat,		carb mat,		carb mat,		carb mat,	
MD: 8,354.1 ' TV D: 6,561.46 ' Inclination: 90 ° Azimuth: 357.3 °		MD: 8,385.67 ' TV D: 6,561.13 ' Inclination: 91.2 ° Azimuth: 356 °		MD: 8,417.75 ' TV D: 6,560.37 ' Inclination: 91.5 ° Azimuth: 356.5 °		MD: 8,449.38 ' TV D: 6,559.68 ' Inclination: 91 ° Azimuth: 357.9 °		MD: 8,481.05 ' TV D: 6,559.04 ' Inclination: 91.3 ° Azimuth: 358 °	
100% SS; lt brn/gy, v f (l) - v f (u), frm-frt, sbang-sbrd, p srt, p por, silty mix, sl calc, occ ise carb mat		100% SS; lt brn/gy, v f (l) - v f (u), frm-frt, sbang-sbrd, p srt, p por, silty mix, sl calc, occ ise carb mat		100% SS; lt brn/gy, v f (l) - v f (u), frm-frt, sbang-sbrd, p srt, p por, silty mix, sl calc, occ ise carb mat		100% SS; lt brn/gy, v f (l) - v f (u), frm-frt, sbang-sbrd, p srt, p por, silty mix, sl calc, occ ise carb mat, tr pyr		100% SS; lt brn/gy, v f (l) - v f (u), frm-frt, sbang-sbrd, p srt, p por, silty mix, sl calc, occ ise carb mat	
Tr SH; dtk gy/brn, frm, blk-y-pty, inbnd carb mat, calc, no flor, poor wh cuts		Tr SH; dtk gy/brn, frm, blk-y-pty, inbnd carb mat, calc, no flor, poor wh cuts		Tr SH; dtk gy/brn, frm, blk-y-pty, inbnd carb mat, calc, no flor, poor wh cuts		Tr SH; dtk gy/brn, frm, blk-y-pty, inbnd carb mat, calc, no flor, poor wh cuts		Tr SH; c	
5800		5800		5800		5800		5800	
6800		6800		6800		6800		6800	

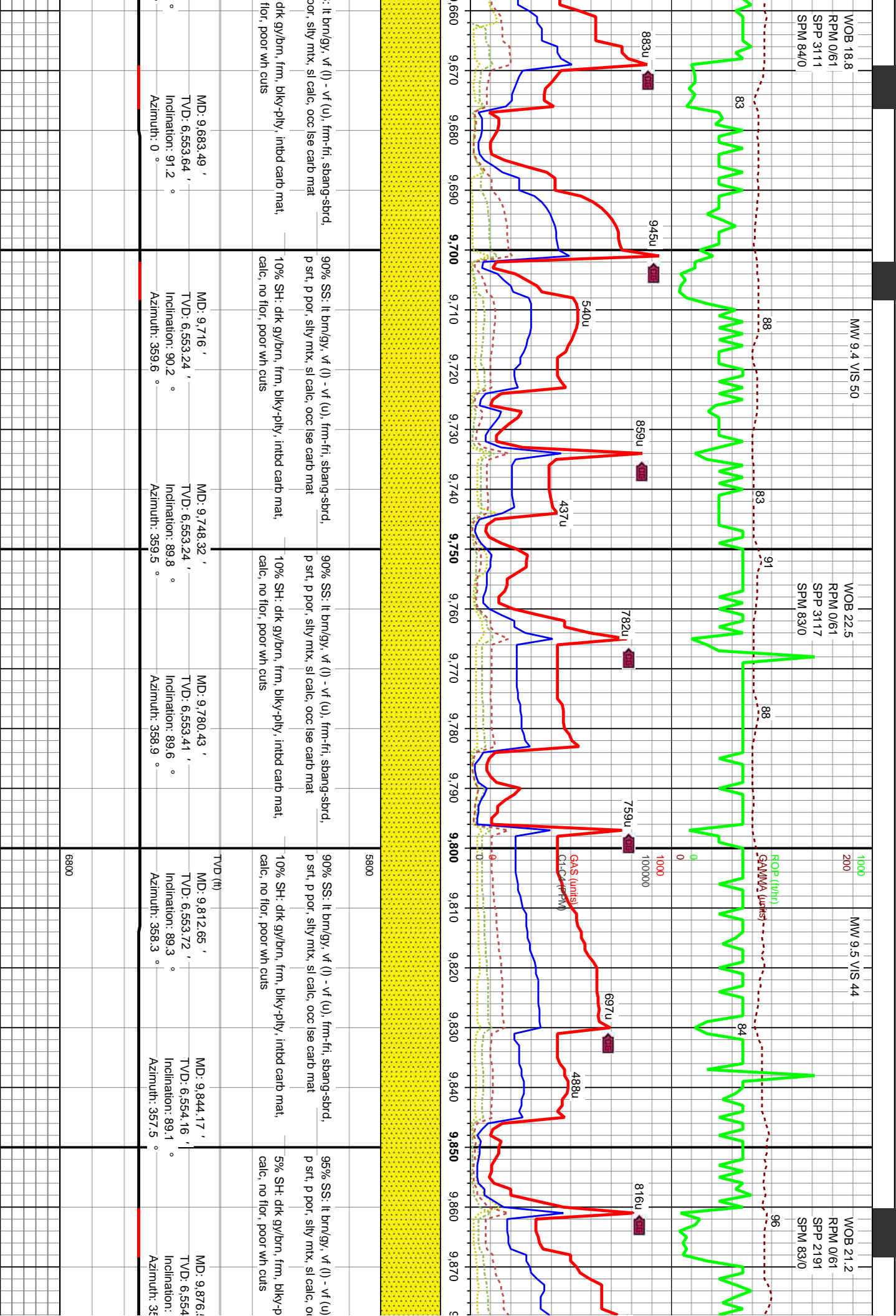


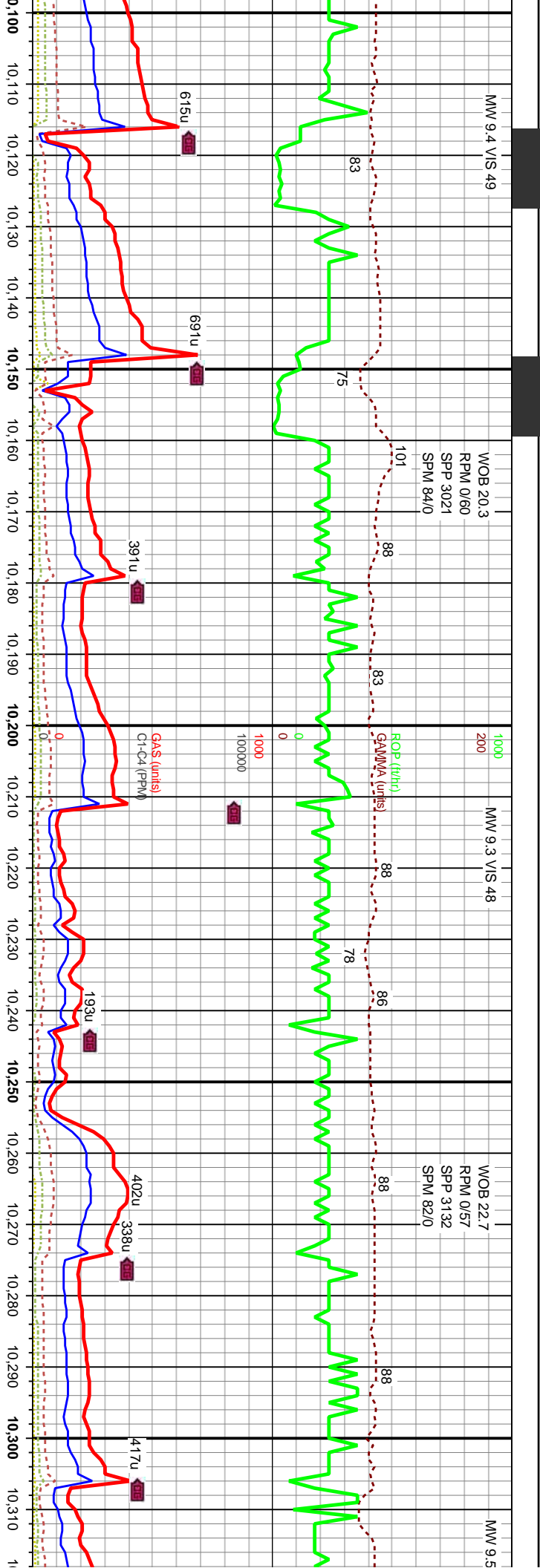












100% SS: lt brn/gy, vf (l) - vf (u), frm-fri, sbang-sbrd, p srt, p por, silty mtx, sl calc, occ lse carb mat	95% SS: lt brn/gy, vf (l) - vf (u), frm-fri, sbang-sbrd, p srt, p por, silty mtx, sl calc, occ lse carb mat	95% SS: lt brn/gy, vf (l) - vf (u), frm-fri, sbang-sbrd, p srt, p por, silty mtx, sl calc, occ lse carb mat	95% SS: lt brn/gy, vf (l) - vf (u), frm-fri, sbang-sbrd, p srt, p por, silty mtx, sl calc, occ lse carb mat	90% SS: lt brn/gy, vf (l) - vf (u), frm-fri, sbang-sbrd, p srt, p por, silty mtx, sl calc, no flor, poor wh cuts
TR SH: dk gy/brn, frm, blk-ply, inbtd carb mat, calc, no flor, poor wh cuts	5% SH: dk gy/brn, frm, blk-ply, inbtd carb mat, calc, no flor, poor wh cuts	5% SH: dk gy/brn, frm, blk-ply, inbtd carb mat, calc, no flor, poor wh cuts	5% SH: dk gy/brn, frm, blk-ply, inbtd carb mat, calc, no flor, poor wh cuts	10% SH: dk gy/brn, frm, blk-ply, inbtd carb mat, calc, no flor, poor wh cuts
MD: 10,130.83 ' TVD: 6,551.13 ' Inclination: 89.8 ° Azimuth: 357.5 °	MD: 10,162.38 ' TVD: 6,551.13 ' Inclination: 90.2 ° Azimuth: 359.6 °	MD: 10,193.38 ' TVD: 6,551.02 ' Inclination: 90.2 ° Azimuth: 359.2 °	MD: 10,225.45 ' TVD: 6,550.93 ' Inclination: 90.1 ° Azimuth: 358.5 °	MD: 10,257.08 ' TVD: 6,550.96 ' Inclination: 89.8 ° Azimuth: 358.1 °
MD: 10,288.7 ' TVD: 6,551.04 ' Inclination: 89.9 ° Azimuth: 357.6 °	MD: 10,310.83 ' TVD: 6,551.13 ' Inclination: 89.8 ° Azimuth: 357.5 °	MD: 10,340.83 ' TVD: 6,551.13 ' Inclination: 89.8 ° Azimuth: 357.5 °	MD: 10,370.83 ' TVD: 6,551.13 ' Inclination: 89.8 ° Azimuth: 357.5 °	MD: 10,400.83 ' TVD: 6,551.13 ' Inclination: 89.8 ° Azimuth: 357.5 °

