



COUNTY	Weld	STATE	Colorado
FIELD	DJ. Basin		
LOCATION	SW/SE Section 18, T5N - R62W		
WELL	Antelope T44-P41-18HC		
LOG TYPE			
COMPANY	Bonanza Creek Energy, Inc.		
		JOB NO	

LOCATION			
API/SERIAL NO	SEC	TYPE	RANGE
05-123-38707			

SPUD DATE		Feb 20, 2014		TOTAL DEPTH		11,157		AIR GAP	
LOGGING DATE		FROM:		TO:					
LOGGING DEPTH		FROM: 6,000'		TO: 11,157'					

[illegible]

<p>TOTAL Gas Analyzer</p> <p>1% C1 = 100 UNITS</p> <p>20% C1 = 2,000 UNITS</p>

DRILLING FLUID COMPANY	Water Based Mud	RIG NAME	Cade 21
DRILLING FLUID TYPE			
DRILLING CONTRACTOR			
LOG SCALE	1" = 20'	LOGGING UNIT	

Stringer

 SHALE STRINGER

SANDSTONE STRIN...

Engineering


 TRIP GAS




 CONNECTION GAS

Minerals

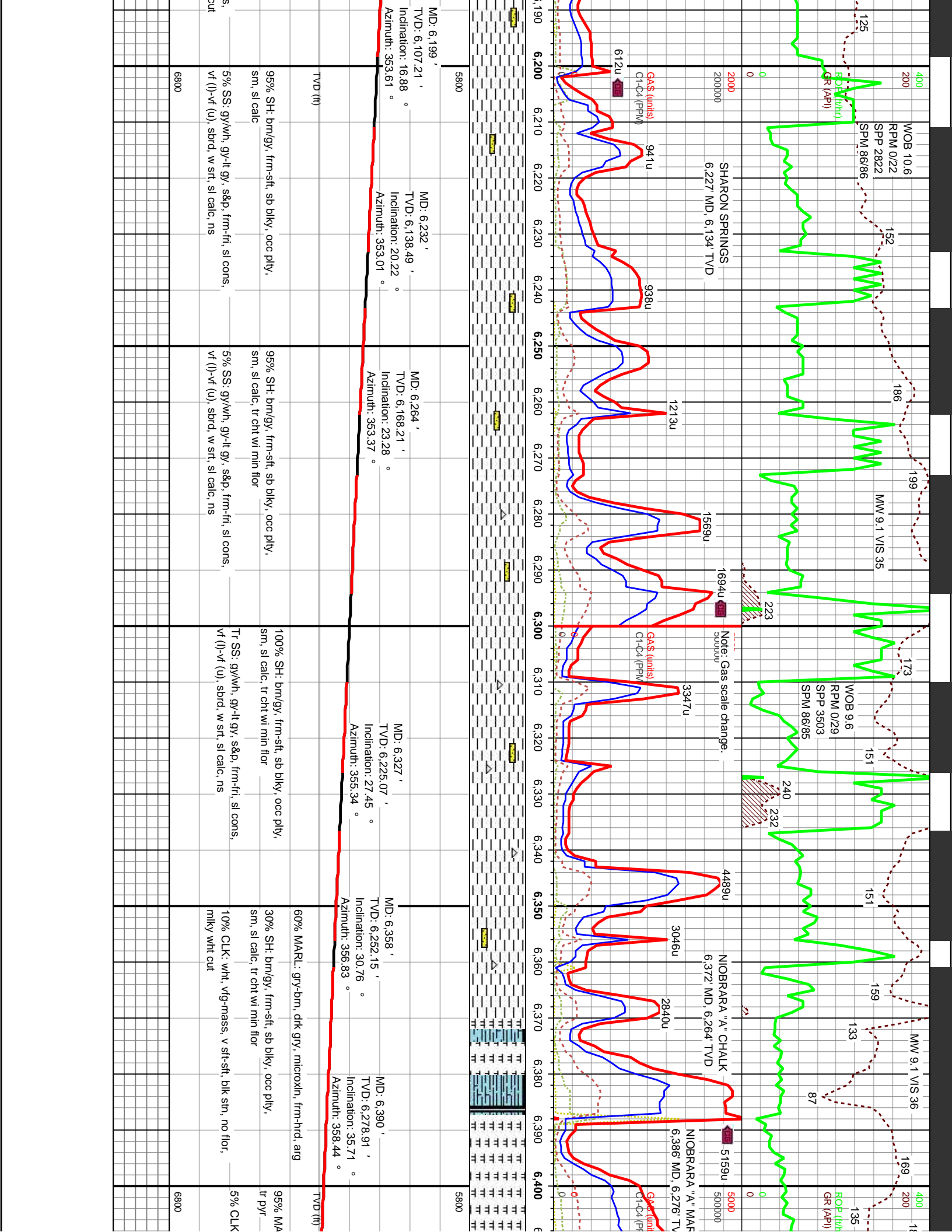
 CHTLT

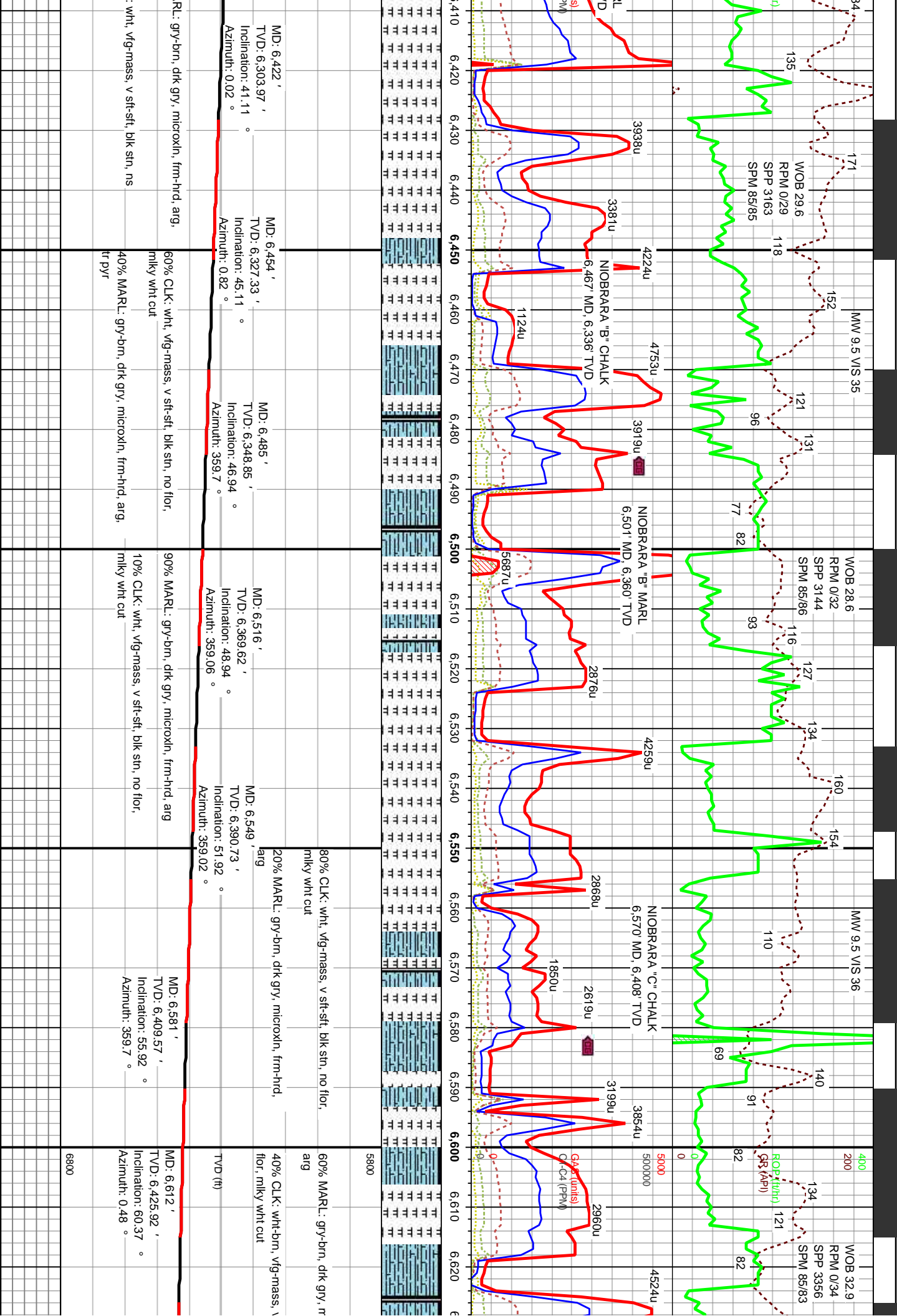
Lithology

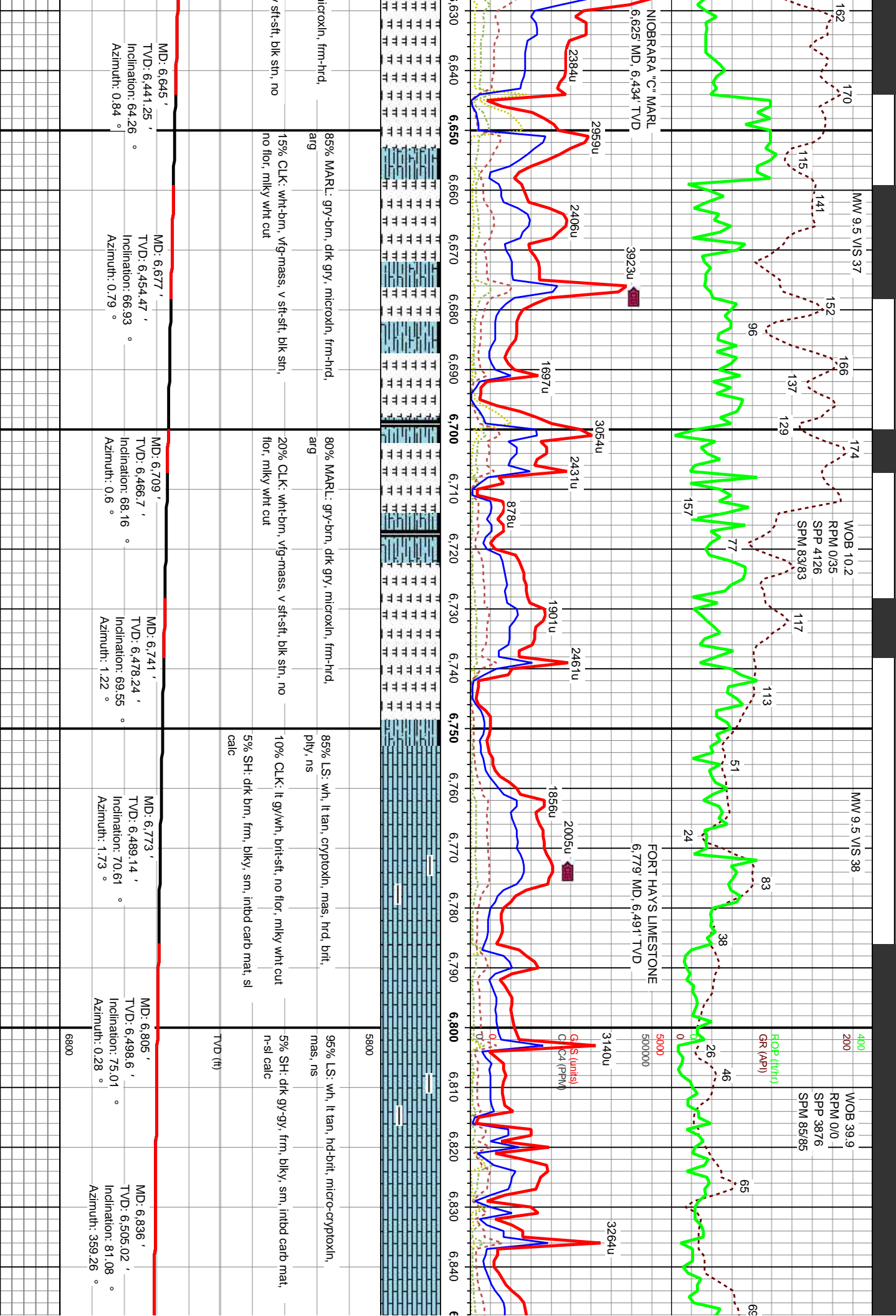
 SHALE GRAY
 SANDSTONE
 Chalk

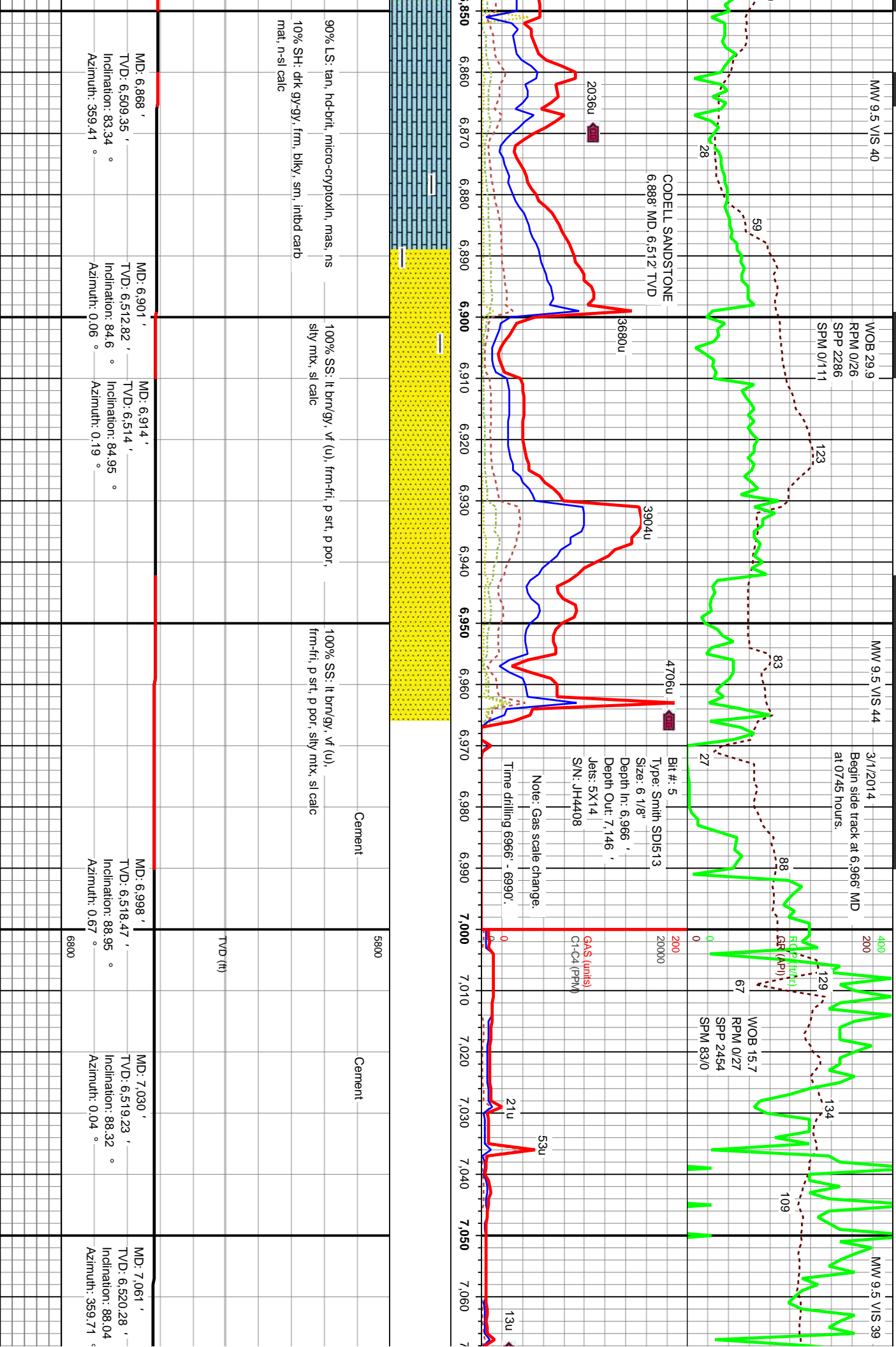
 Limestone
 MARLSTONE
 SHALE

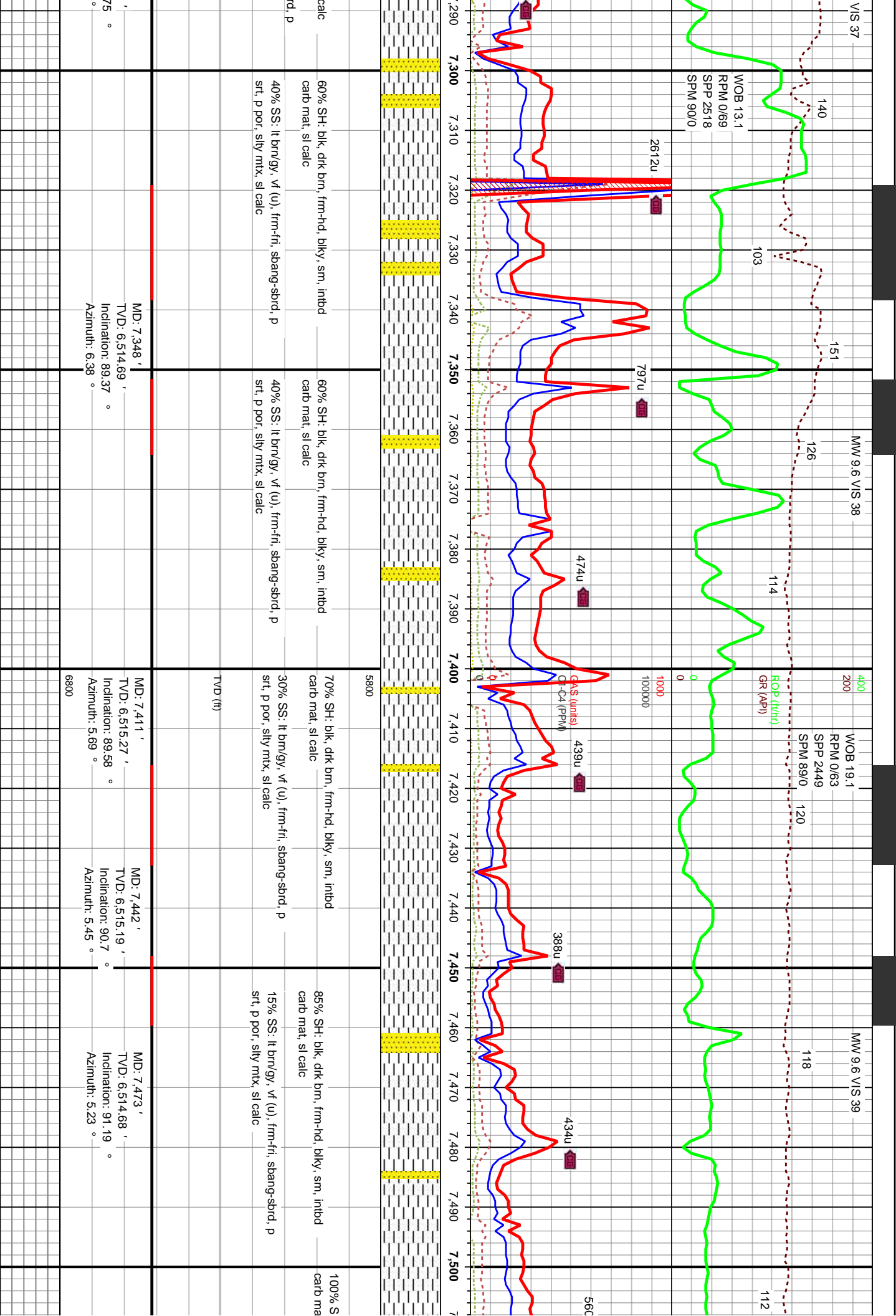
Slide/Rotate																																									
ROP ROF GR	400 200 0 0	Decollement on location 2/22/2014. Start logging at 6,000' on 2/23/14 at 0250 Hrs.				Bit #: 2 Type: Smith SD1513 Size: 8 3/4" Depth In: 480' Depth Out: 6,496' Hours: 28.6 hrs Jets: 8X13 S/N: JH9502				MW 9.1 VIS 35				WOB 27.7 RPM 0/23 SP 2651 SPW 87/86				MW 9.1 VIS 35																							
Total Gas & Chromatograph																																									
Depth Labels		6,010 6,020 6,030 6,040 6,050 6,060 6,070 6,080 6,090 6,100 6,110 6,120 6,130 6,140 6,150 6,160 6,170 6,180																																							
Interp Lith																																									
Well Bore TVD	5800											<div>MD: 6,106' TVD: 6,016.33' Inclination: 7.03° Azimuth: 355.54°</div>										<div>MD: 6,138' TVD: 6,047.96' Inclination: 10.35° Azimuth: 356.59°</div>										<div>MD: 6,169' TVD: 6,078.27' Inclination: 13.72° Azimuth: 355.69°</div>									
	TVD (ft)											90% SH, brn/gy, frm-sft, sb blk, occ ply, sm, sl calc										95% SH, brn/gy, frm-sft, sb blk, occ ply, sm, sl calc										95% SH, brn/gy, frm-sft, sb blk, occ ply, sm, sl calc									
Oil Show	20 40 60 80											10% SS, gy/wh, gy-lt gy, s&p, frm-fr, sl cons, vt (l)-vt (u), sbrd, w srt, sl calc, yel flr, no cut										5% SS, gy/wh, gy-lt gy, s&p, frm-fr, sl cons, vt (l)-vt (u), sbrd, w srt, sl calc, yel flr, no cut										5% SS, gy/wh, gy-lt gy, s&p, frm-fr, sl cons, vt (l)-vt (u), sbrd, w srt, sl calc, yel flr, no cut									
	Oil Show																																								
Images																																									

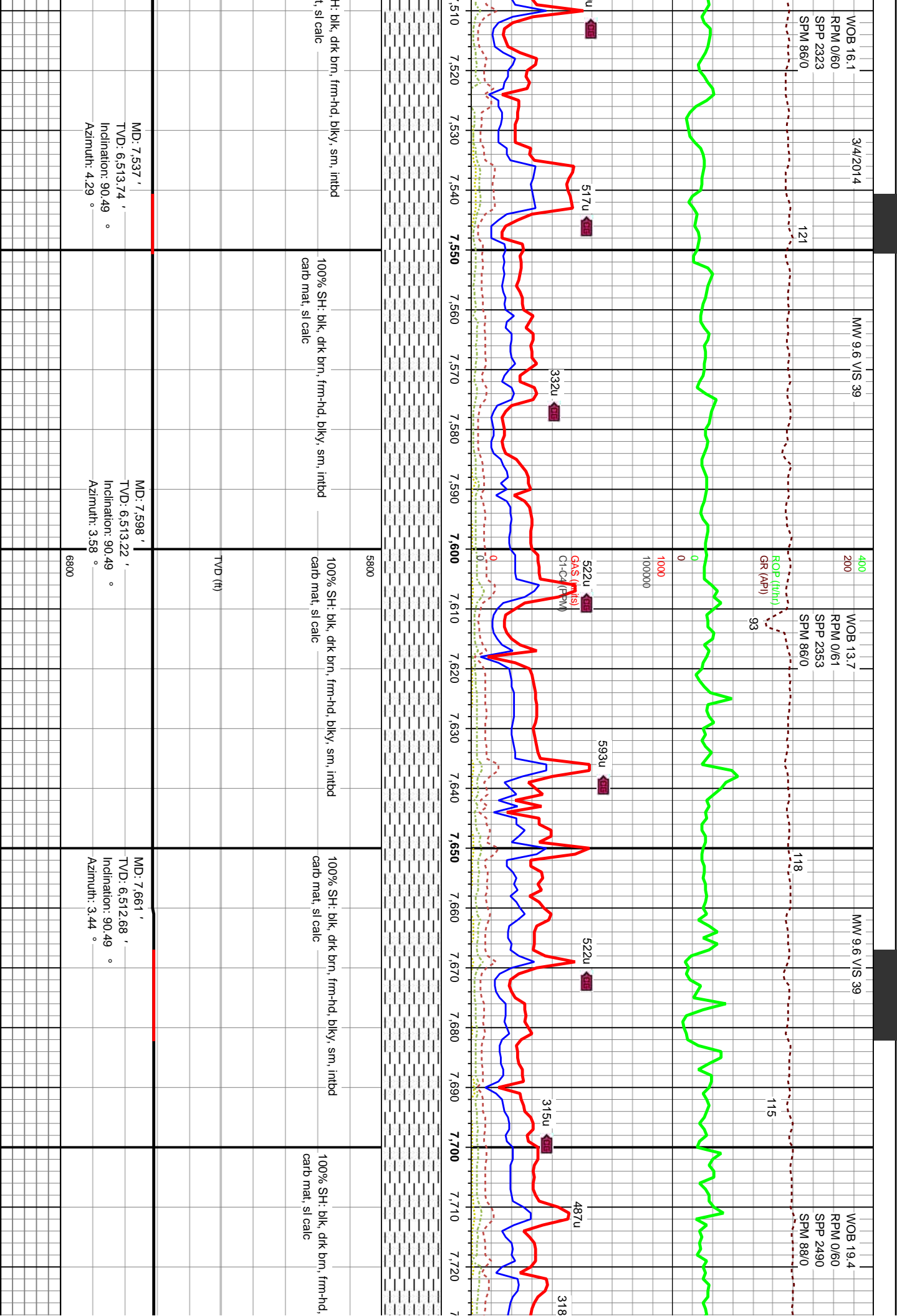


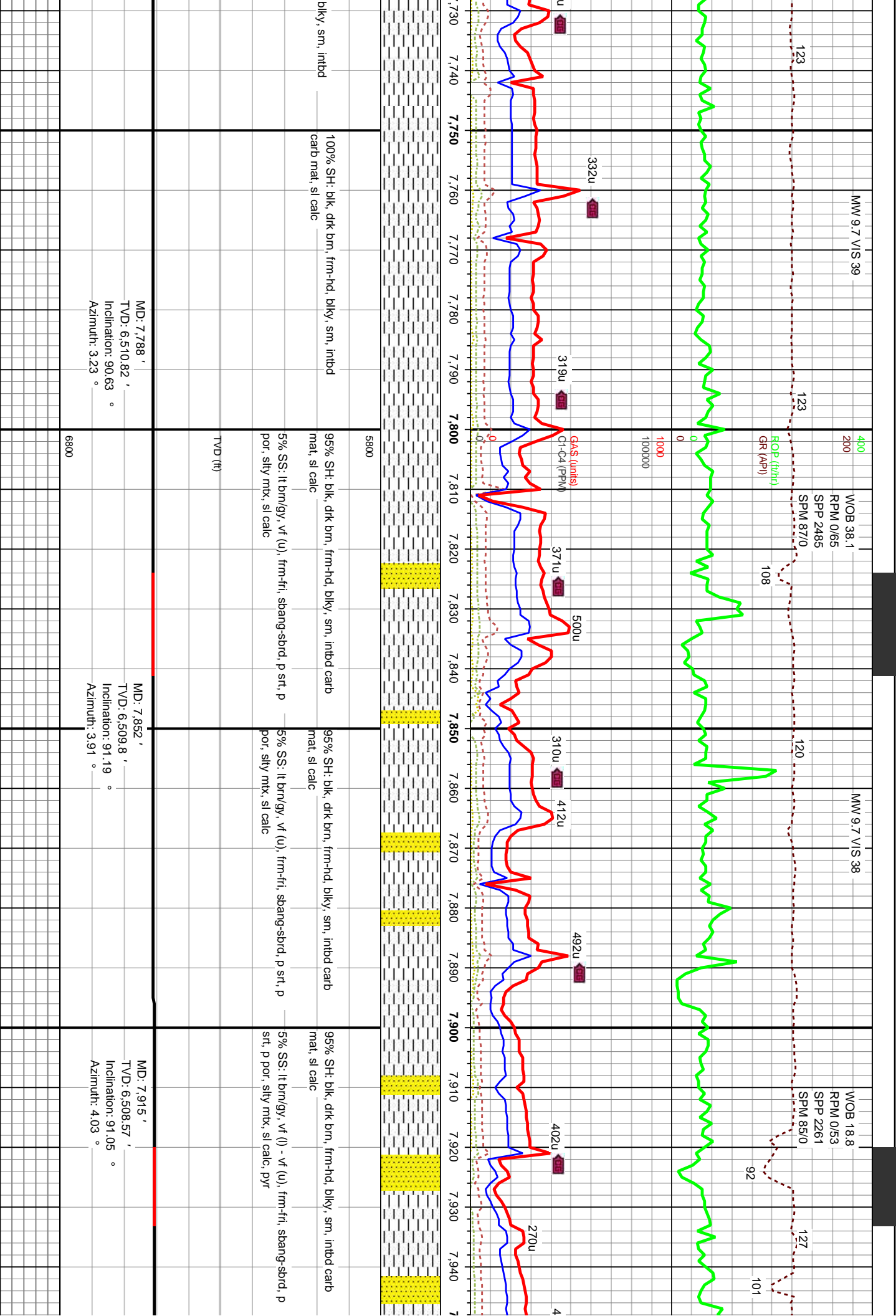


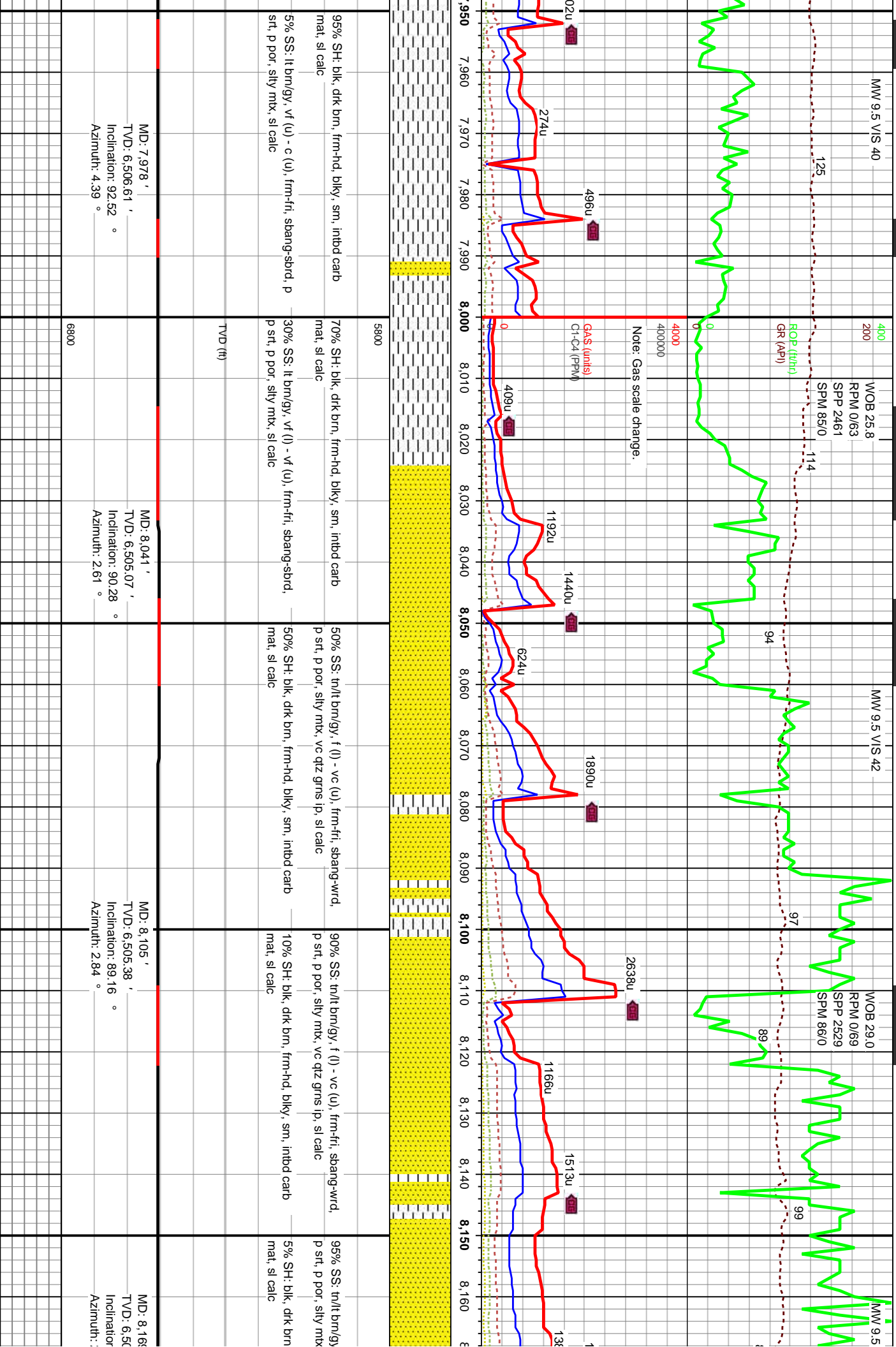


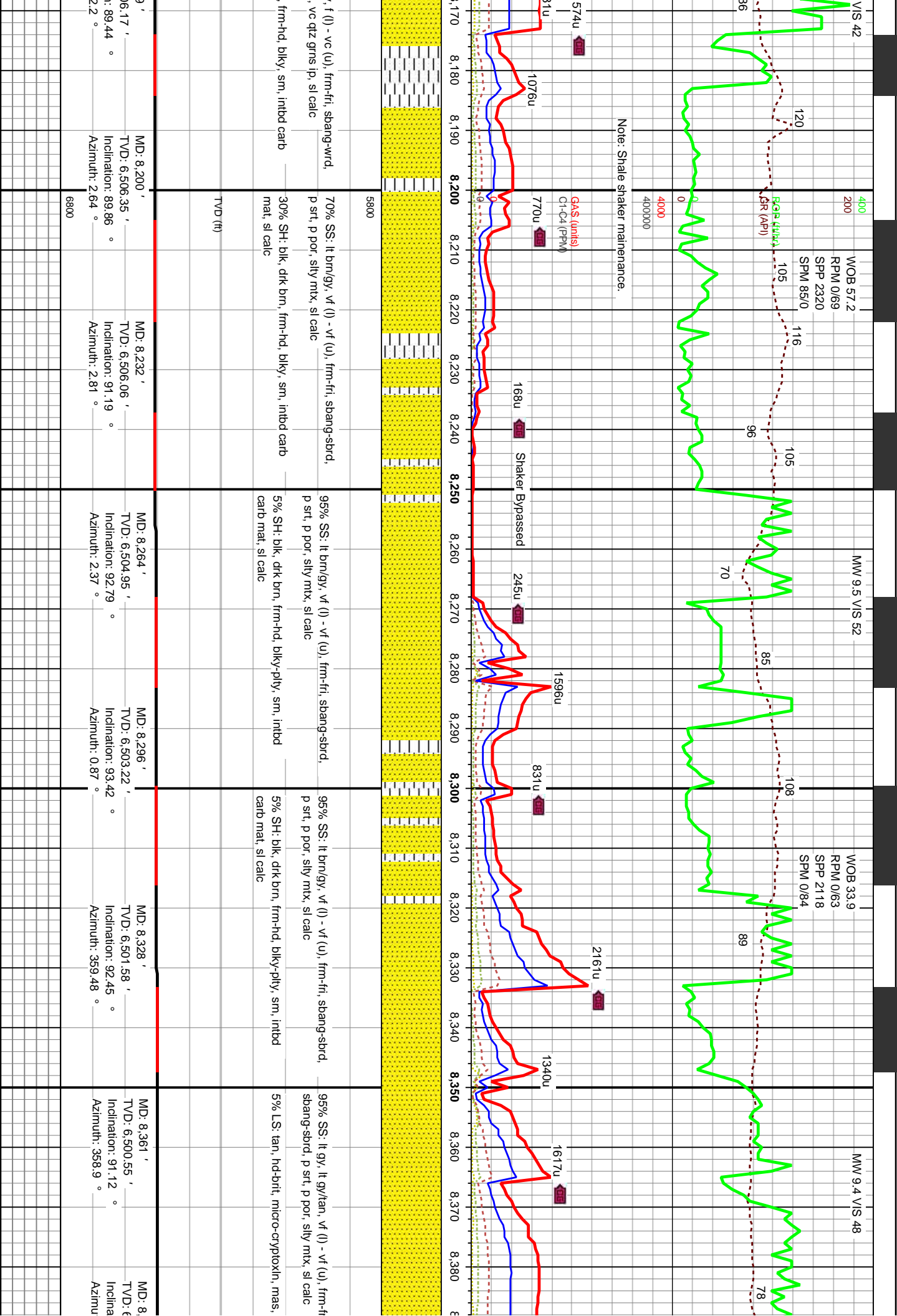


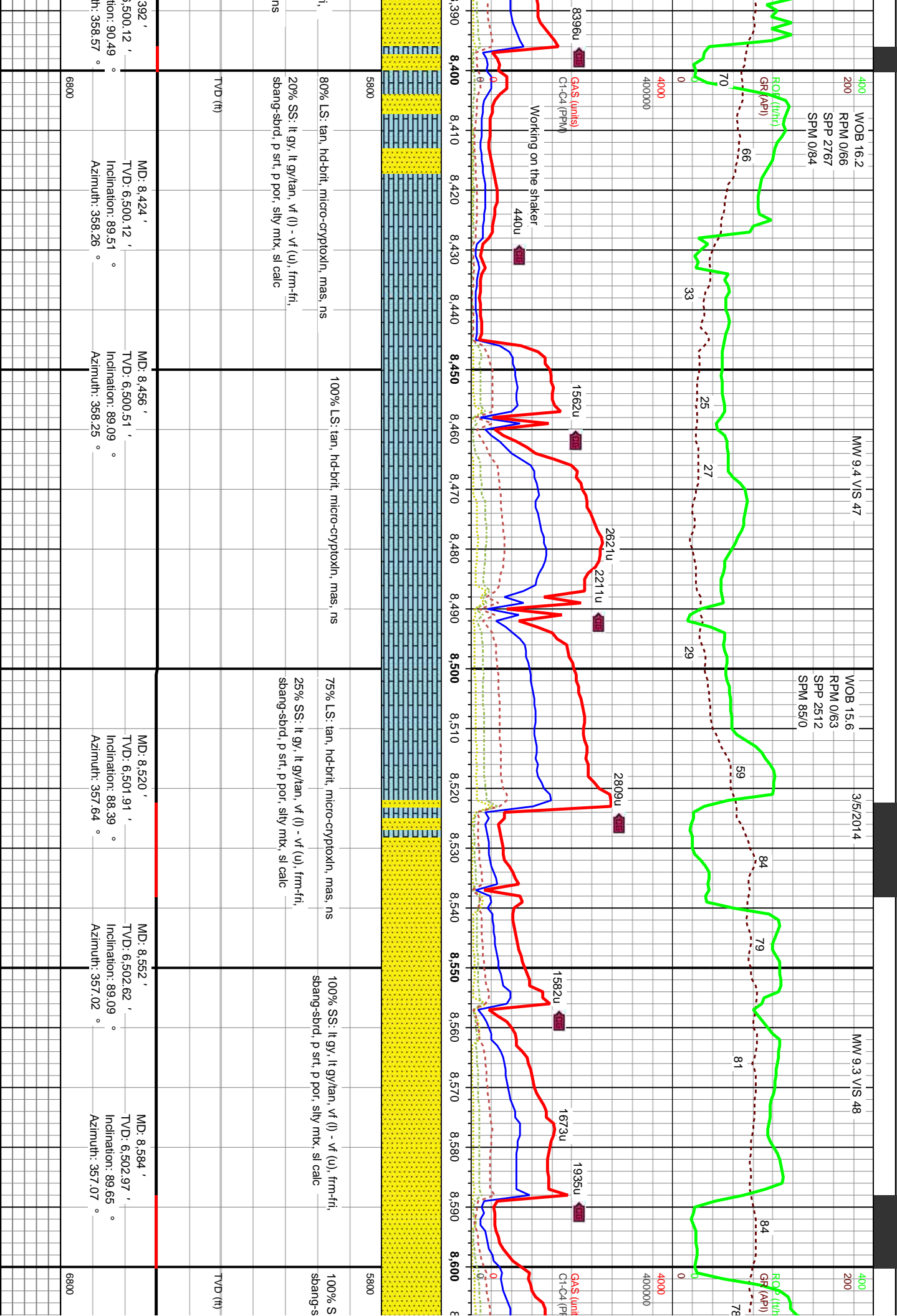


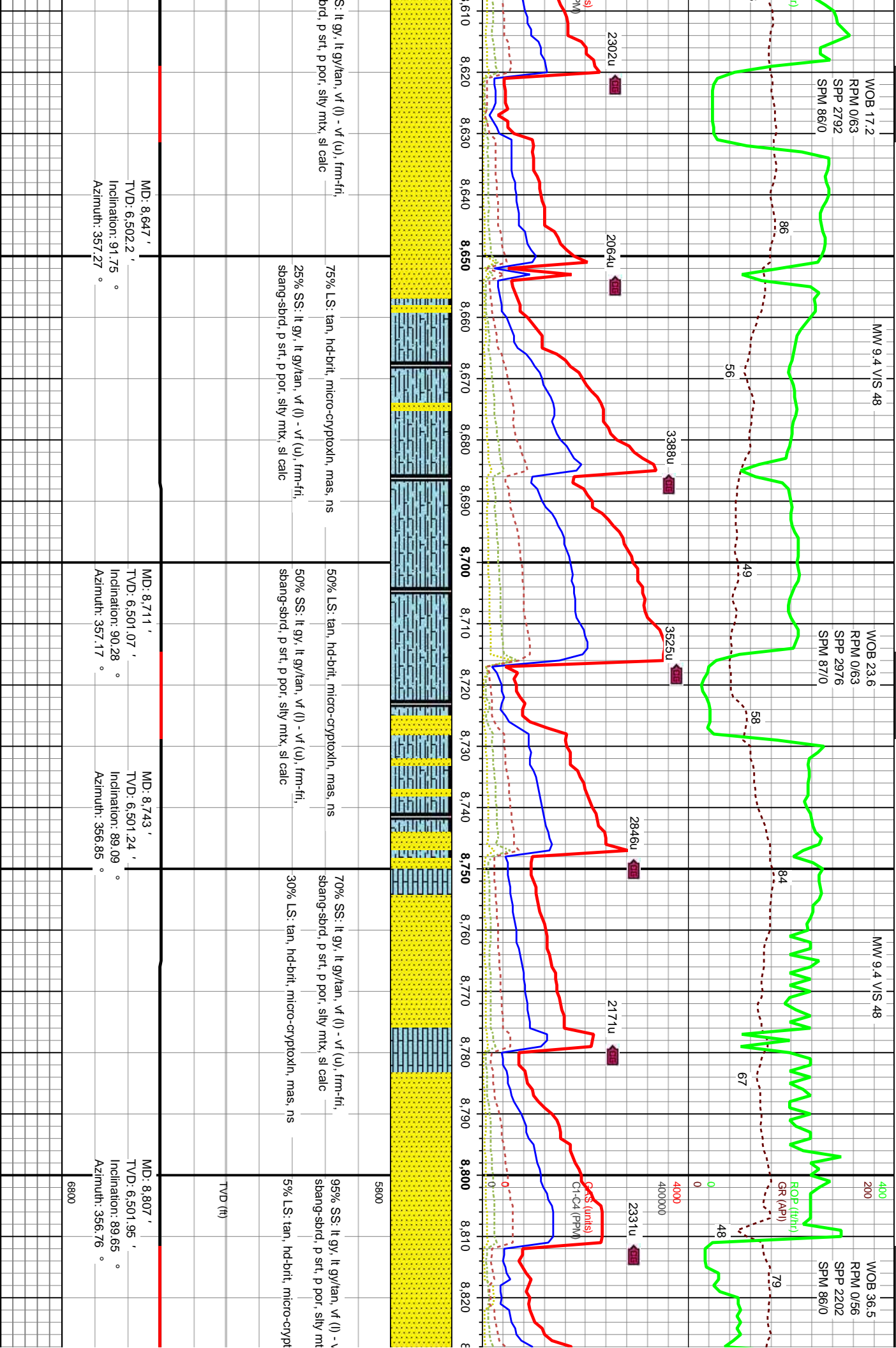


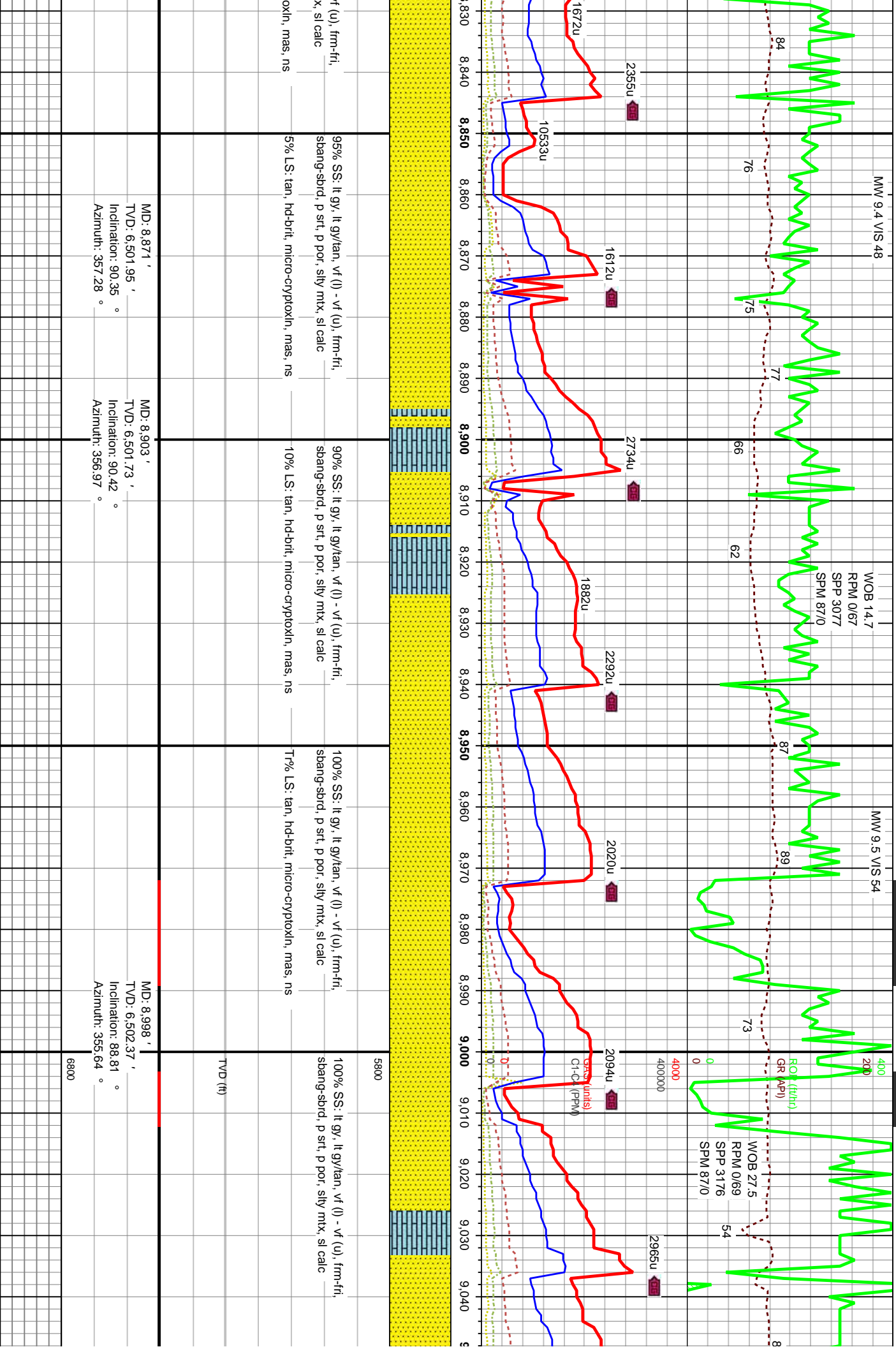


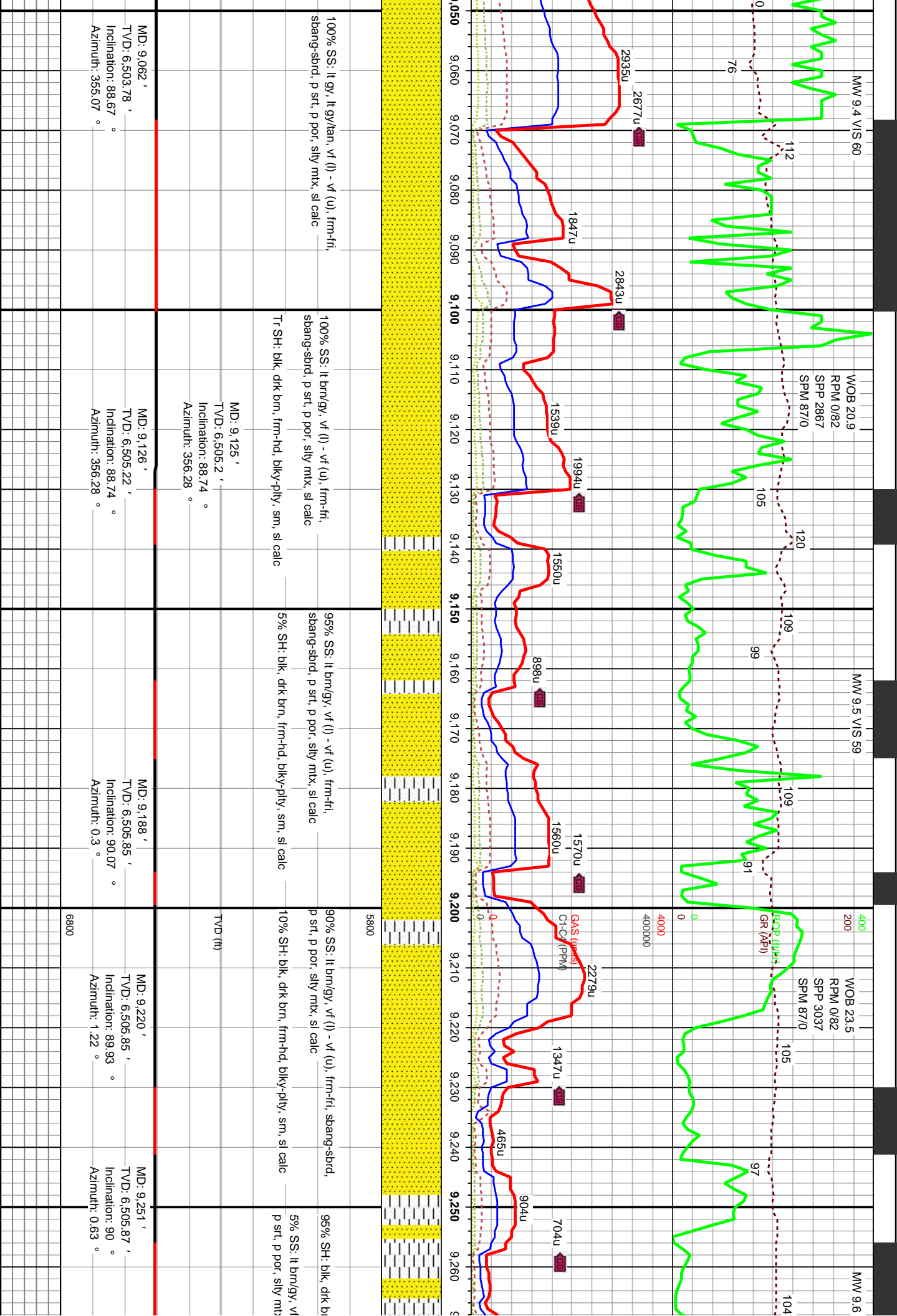


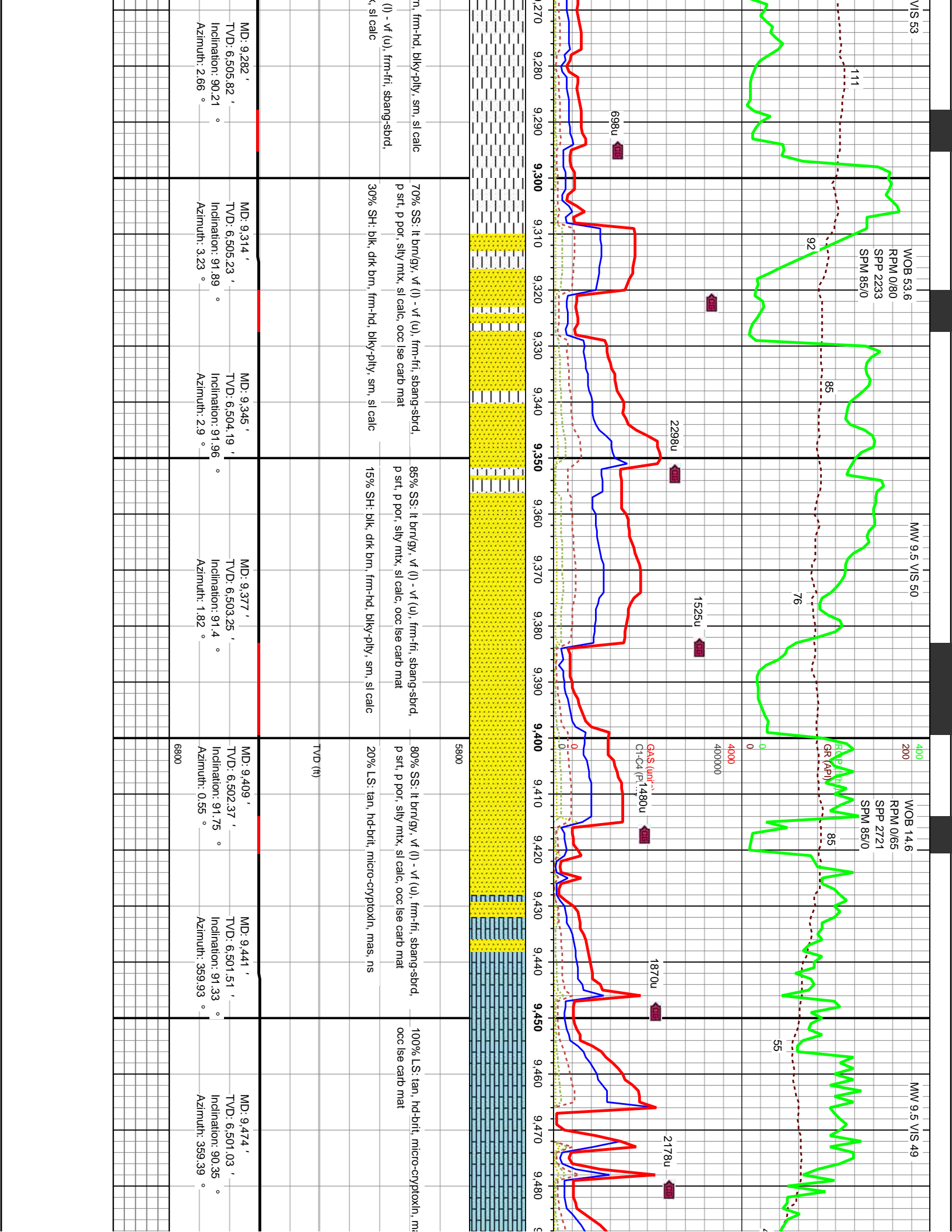


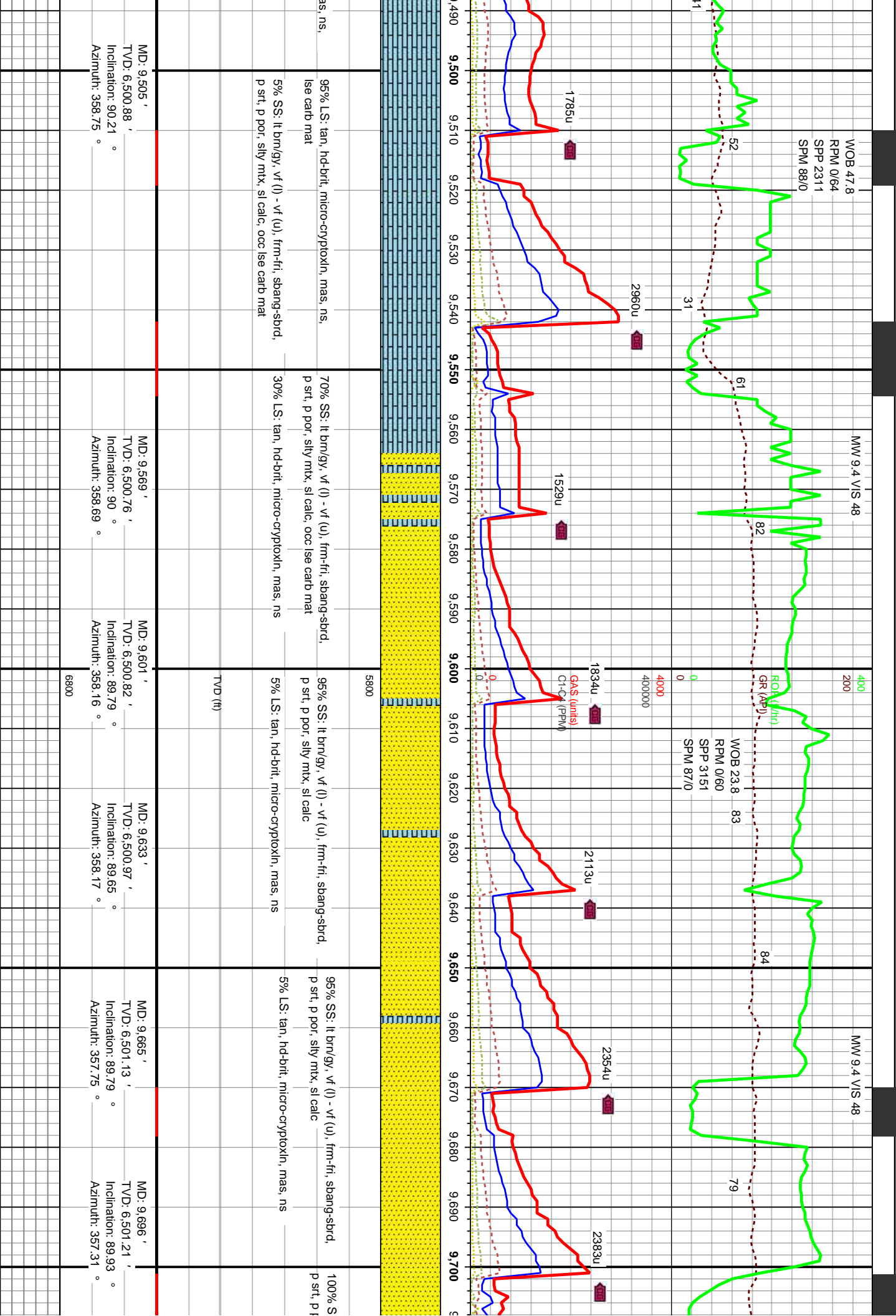












WOB 47.8
RPM 0/64
SPP 2311
SPM 88/0

MW 9.4 VIS 48

MW 9.4 VIS 48

WOB 23.8
RPM 0/60
SPP 3151
SPM 87/0

1785u

2960u

1529u

1834u

GCS (units)
C1-C4 (PPM)

2113u

2354u

2383u

95% LS: tan, hd-brit, micro-cryptoxln, mas, ns,
lse carb mat
5% SS: lt brn/gy, vf (l) - vf (u), frm-fri, sbang-sbrd,
p srt, p por, silty mtx, sl calc, occ lse carb mat

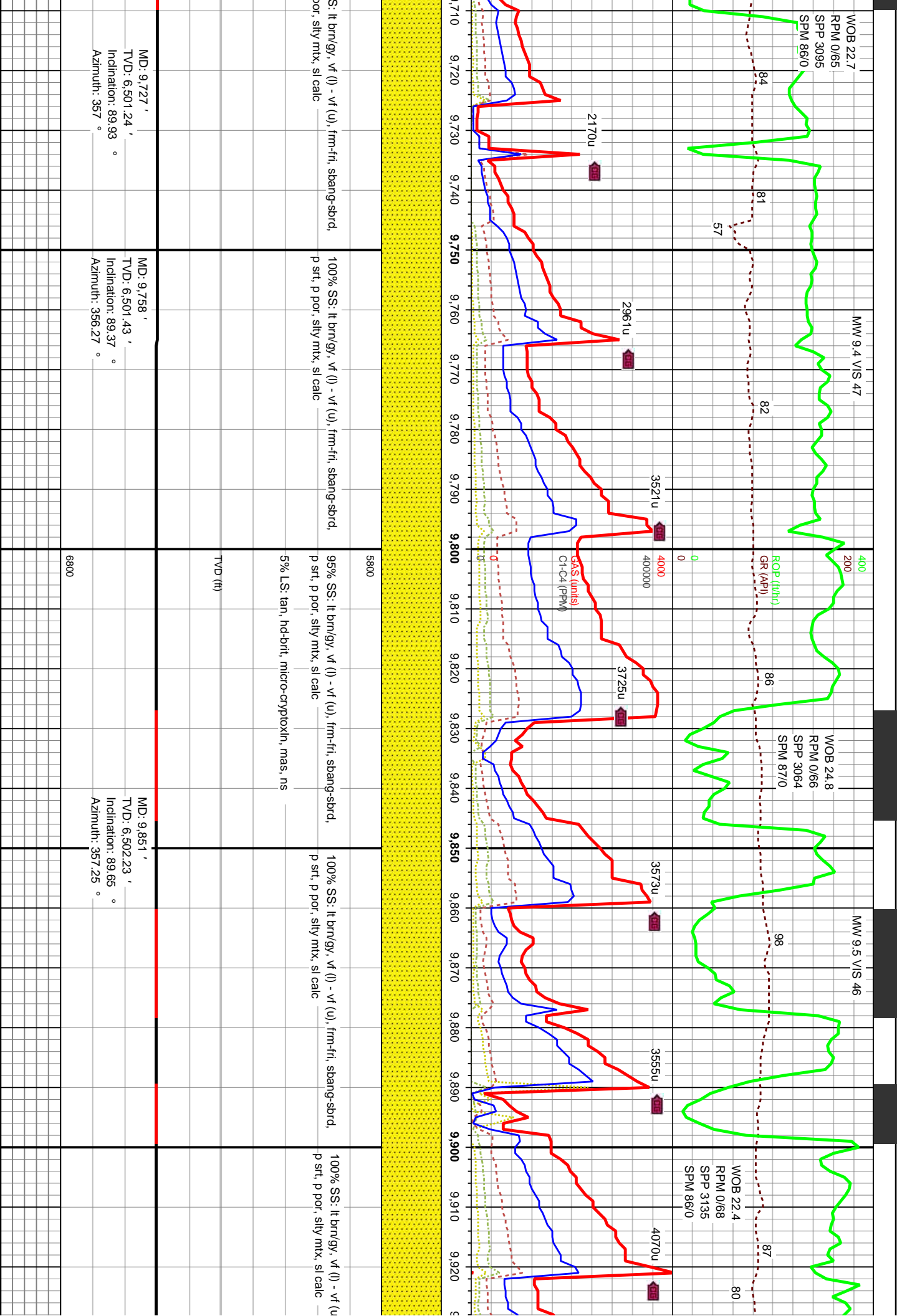
70% SS: lt brn/gy, vf (l) - vf (u), frm-fri, sbang-sbrd,
p srt, p por, silty mtx, sl calc, occ lse carb mat
30% LS: tan, hd-brit, micro-cryptoxln, mas, ns

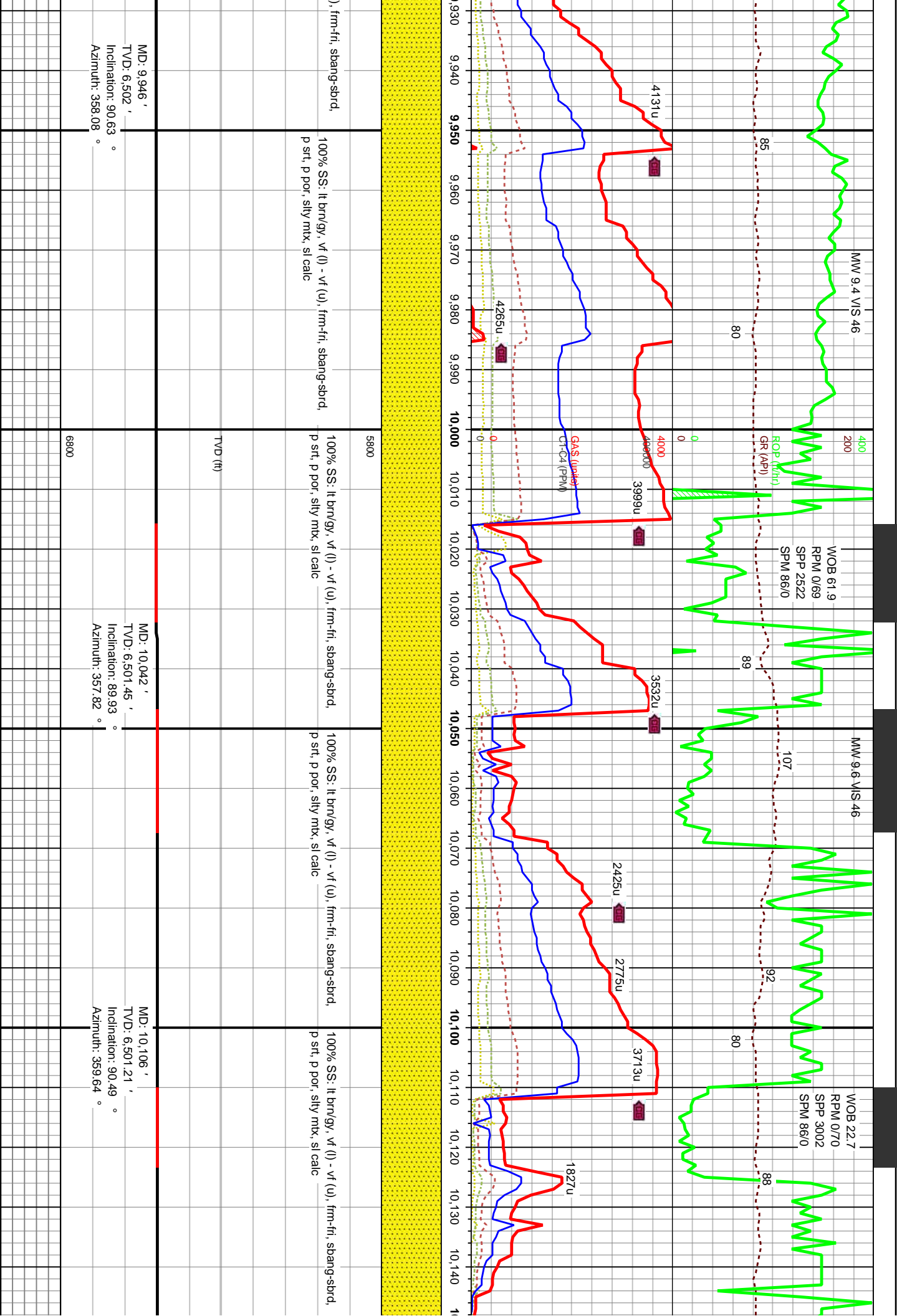
95% SS: lt brn/gy, vf (l) - vf (u), frm-fri, sbang-sbrd,
p srt, p por, silty mtx, sl calc
5% LS: tan, hd-brit, micro-cryptoxln, mas, ns

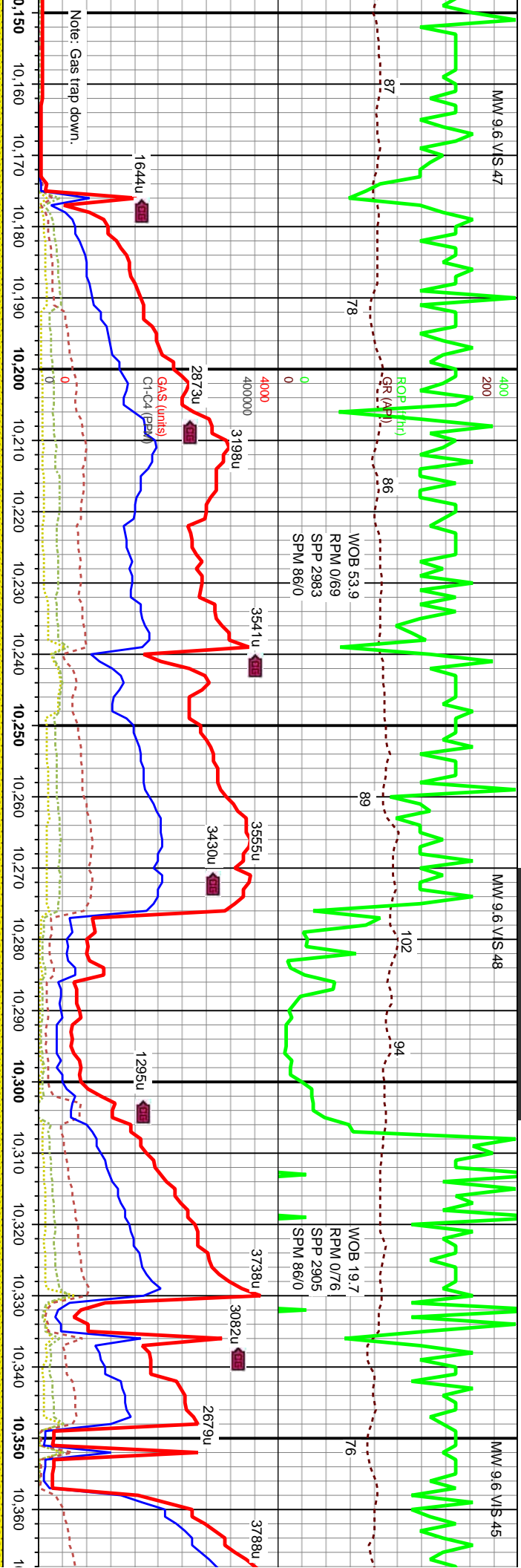
95% SS: lt brn/gy, vf (l) - vf (u), frm-fri, sbang-sbrd,
p srt, p por, silty mtx, sl calc
5% LS: tan, hd-brit, micro-cryptoxln, mas, ns

100% S
p srt, p f

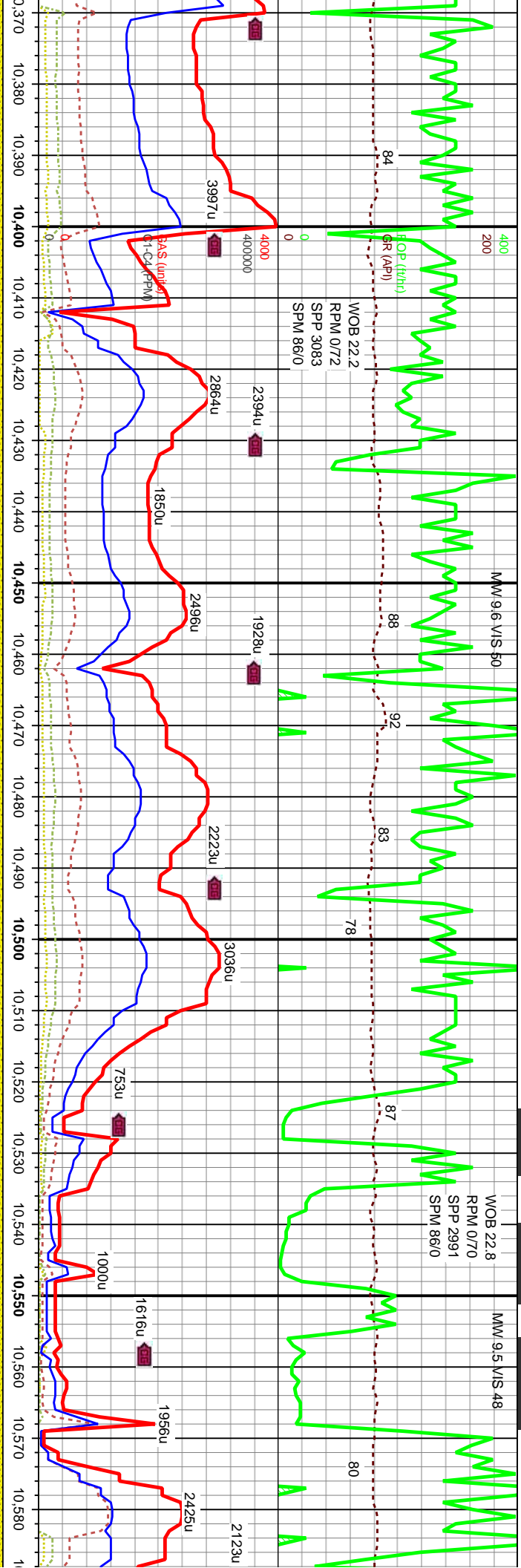
TVD (ft)



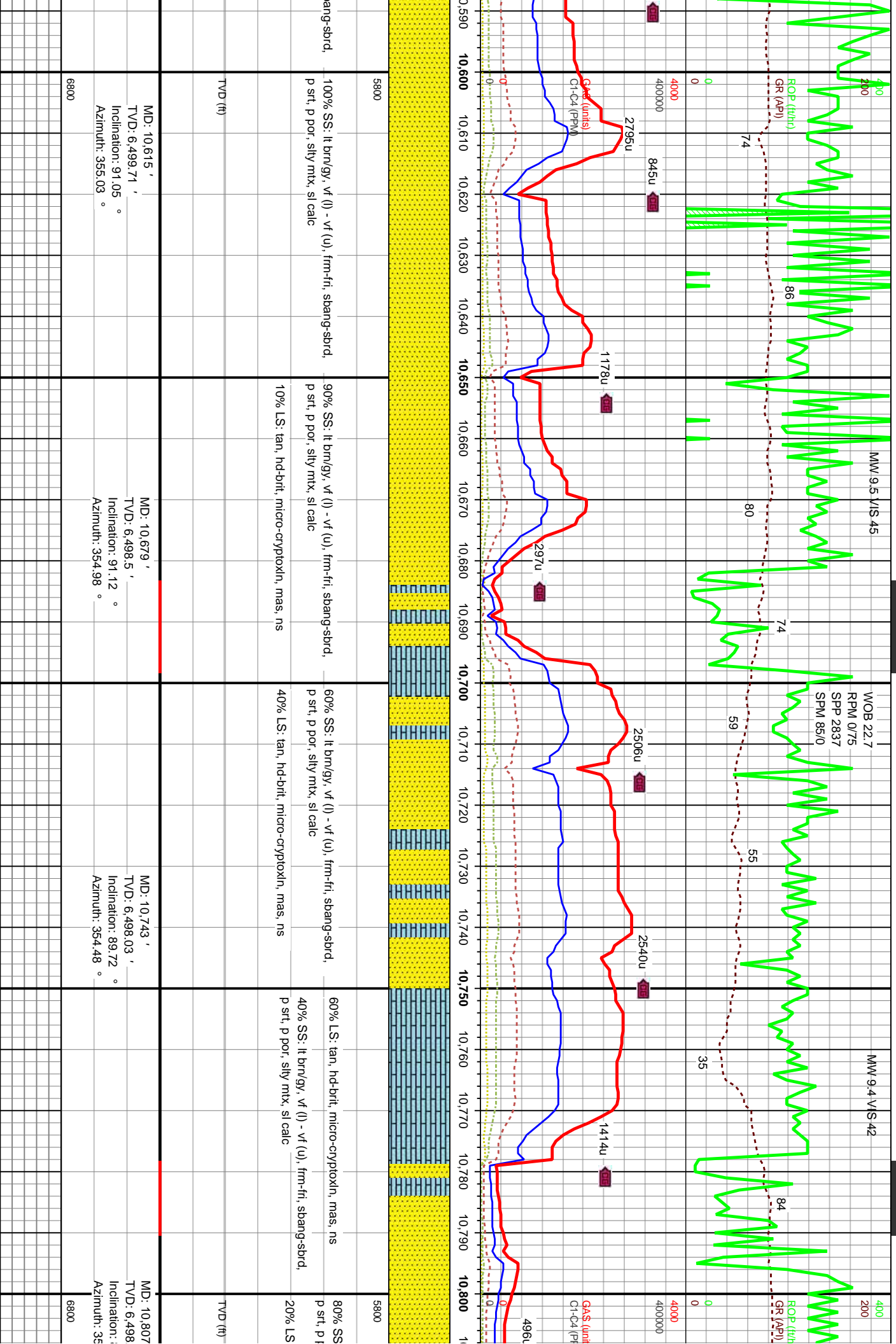


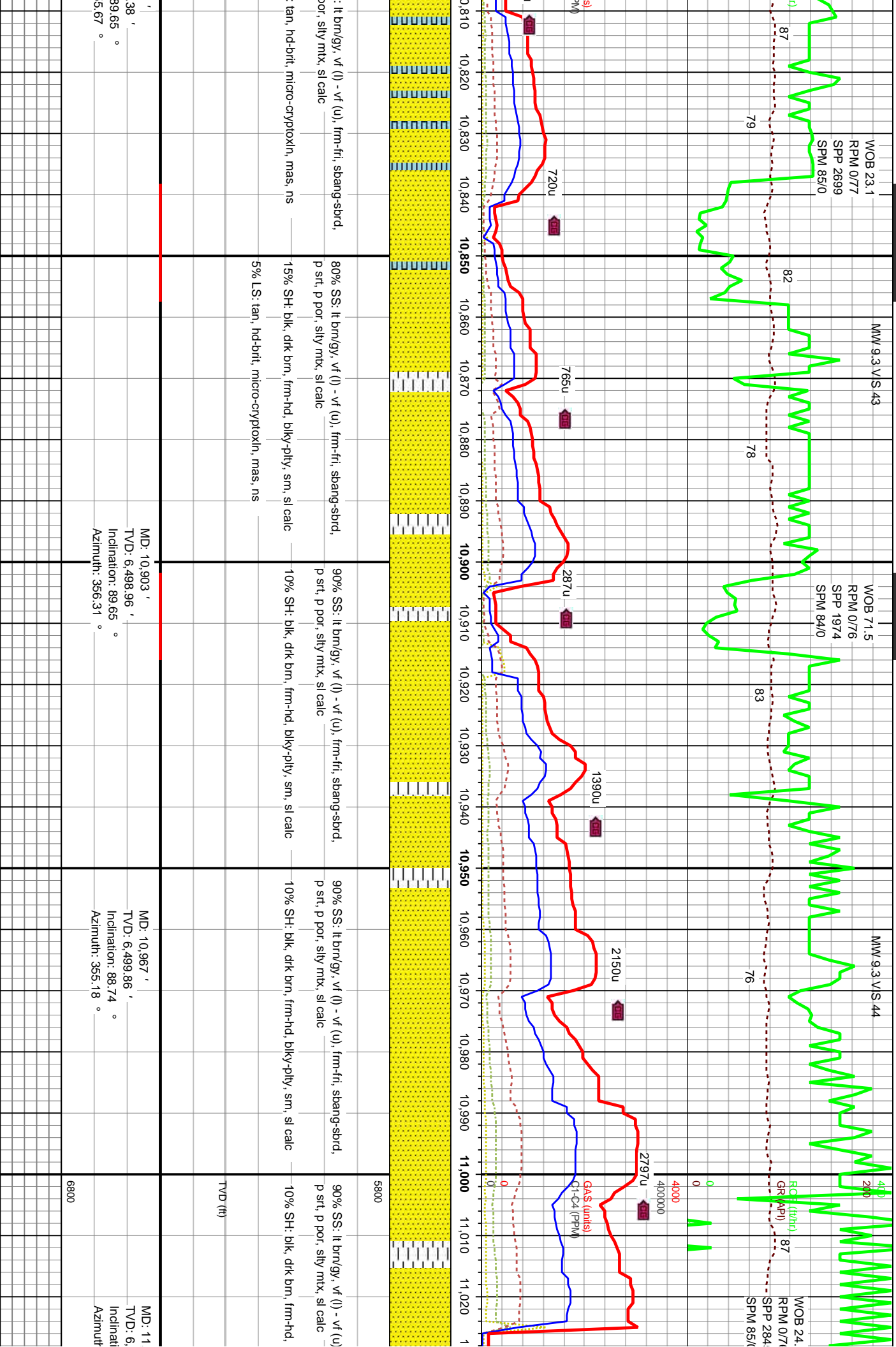


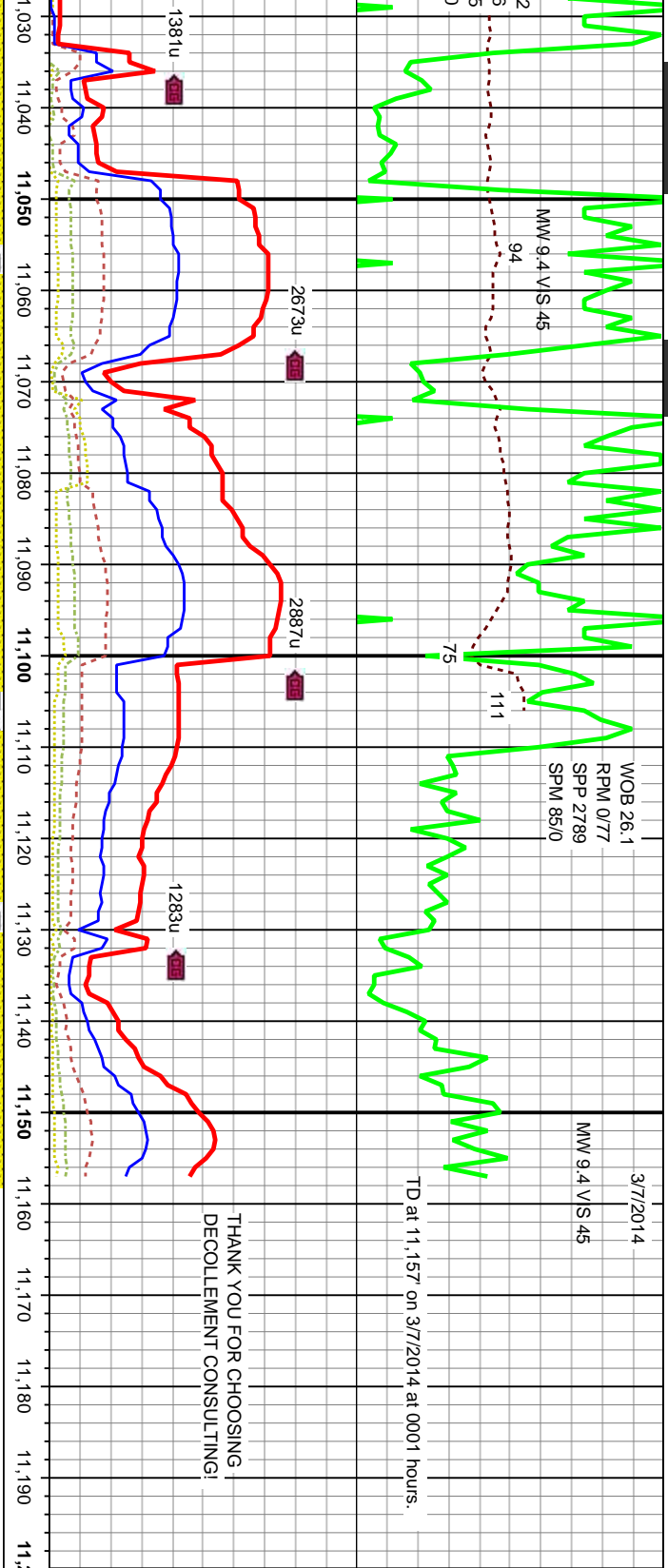
100% SS: It brn/gy, v f (l) - v f (u), frm-frt, sbang-sbrd, p srt, p por, silty mtx, sl calc		5800	100% SS: It brn/gy, v f (l) - v f (u), frm-frt, sbang-sbrd, p srt, p por, silty mtx, sl calc	100% SS: It brn/gy, v f (l) - v f (u), frm-frt, sbang-sbrd, p srt, p por, silty mtx, sl calc	100% SS: It brn/gy, v f (l) - v f (u), frm-frt, sbang-sbrd, p srt, p por, silty mtx, sl calc
TVD (ft)					
MD: 10,170 ' TVD: 6,500.9 ' Inclination: 90.07 ° Azimuth: 0.33 °		6800	MD: 10,265 ' TVD: 6,501.54 ' Inclination: 89.16 ° Azimuth: 359.92 °		MD: 10,328 ' TVD: 6,501.35 ' Inclination: 91.19 ° Azimuth: 359.26 °



0.370 10.380 10.390 10.400 10.410 10.420 10.430 10.440 10.450 10.460 10.470 10.480 10.490 10.500 10.510 10.520 10.530 10.540 10.550 10.560 10.570 10.580		100% SS: lt brn/gy, v _f (l) - v _f (u), frm-frt, sbang-sbrd, p srt, p por, silty mtx, sl calc		100% SS: lt brn/gy, v _f (l) - v _f (u), frm-frt, sbang-sbrd, p srt, p por, silty mtx, sl calc		100% SS: lt brn/gy, v _f (l) - v _f (u), frm-frt, sbang-sbrd, p srt, p por, silty mtx, sl calc		100% SS: lt brn/gy, v _f (l) - v _f (u), frm-frt, sbang-sbrd, p srt, p por, silty mtx, sl calc	
v _f (l) - v _f (u), frm-frt, sbang-sbrd, s, sl calc		5800		5800		5800		5800	
TVD (ft)									
MD: 10,392 ' TVD: 6,500.57 ' Inclination: 90.21 ° Azimuth: 358.32 °		MD: 10,456 ' TVD: 6,500.64 ' Inclination: 89.65 ° Azimuth: 356.79 °		MD: 10,488 ' TVD: 6,500.96 ' Inclination: 89.23 ° Azimuth: 356.79 °		MD: 10,551 ' TVD: 6,500.84 ' Inclination: 90.98 ° Azimuth: 355.55 °			
6800									







frn-fri, sbang-sbrd,	90% SS: lt brn/gy, v f (l) - v f (u), frn-fri, sbang-sbrd, p srt, p por, silty mtx, sl calc	75% SS: lt brn/gy, v f (l) - v f (u), frn-fri, sbang-sbrd, p srt, p por, silty mtx, sl calc	60% SS: lt brn/gy, v f (l) - v f (u), frn-fri, sbang-sbrd, p srt, p por, silty mtx, sl calc
blky-pty, sm, sl calc	10% SH: blk, drk brn, frn-hd, blk-pty, sm, sl calc	25% SH: blk, drk brn, frn-hd, blk-pty, sm, sl calc	40% SH: blk, drk brn, frn-hd, blk-pty, sm, sl calc
Projection to Bit			
MD: 11,089 ' TVD: 6,502.69 ' Inclination: 88.46 ° Azimuth: 355.23 °	MD: 11,157 ' TVD: 6,504 ' Inclination: 88.46 ° Azimuth: 355 °		