

Décollement  
Consulting  
Inc.



Scale: 4.94" / 100'  
Measured Depth Log

Well Name Park 44-41-4HNB

Location SESE Sec 4, T4N, R63W

State Colorado

Country USA

API Number 05-123-36709-00

Spud Date 1/14/2013

Surface Coordinates 220 FSL X 1181 FEL (Lat: 40.33439, 104.43781)

County Weld

Rig Number Ensign 136

Ground Elevation 4,626

Logged Interval 5,893

Formation Niobrara "B" Chalk

K.B. Elevation 4,638

Company Bonanza Creek Energy

Address 410 17th Street, Suite  
Denver, CO 80202

Name Mike Hanley and Mar

Company Décollement Consulting  
13300 Braun Road  
Golden, CO 80401



Operator

gy

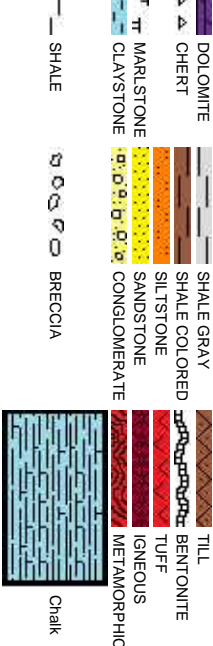
1500

Geologist

c Drillings

ng Inc.

Rock Types

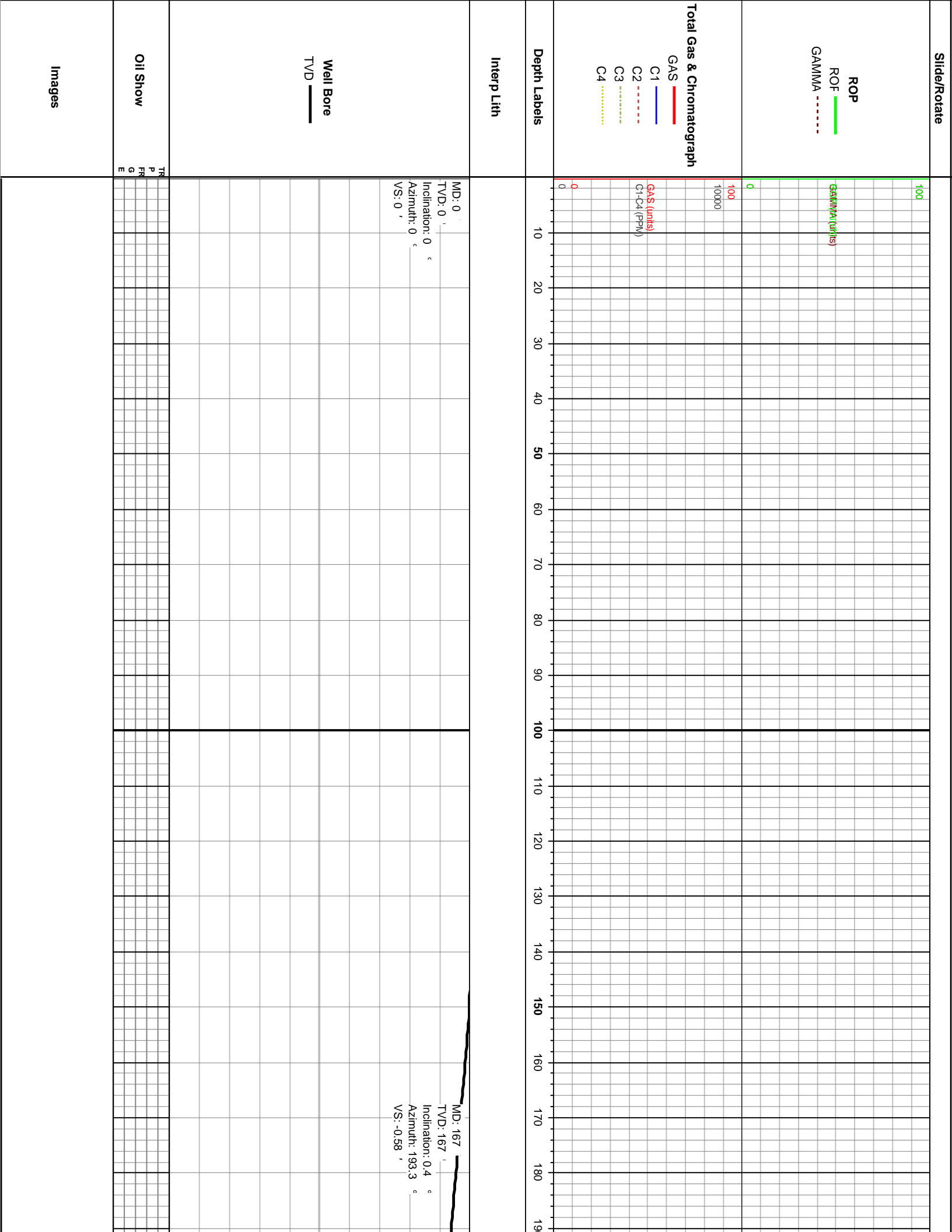


Accessories

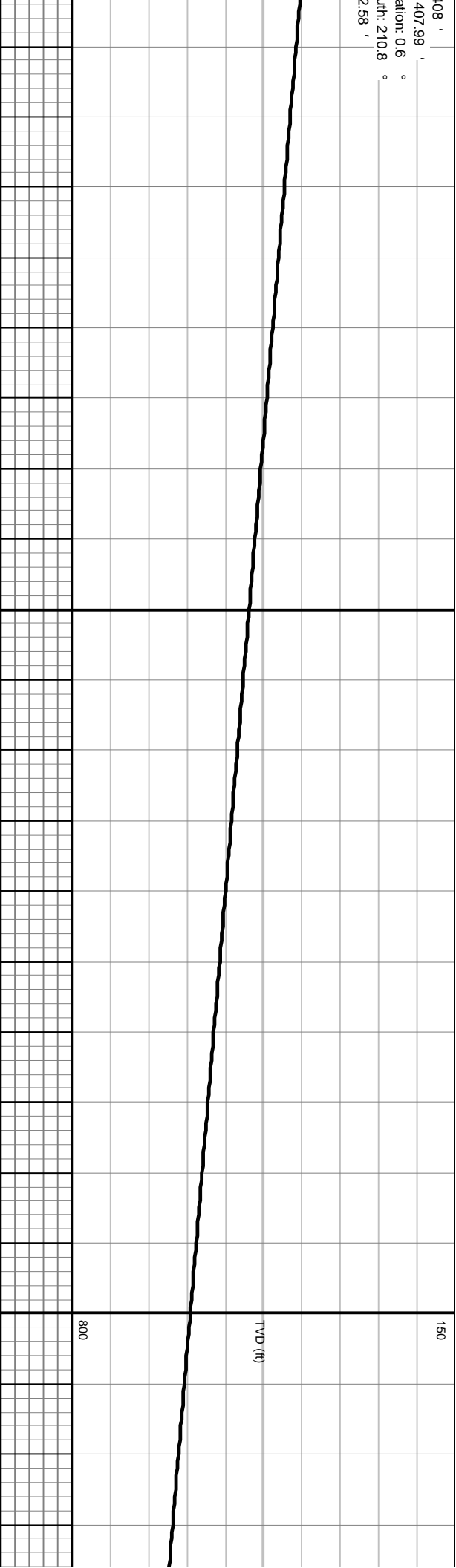
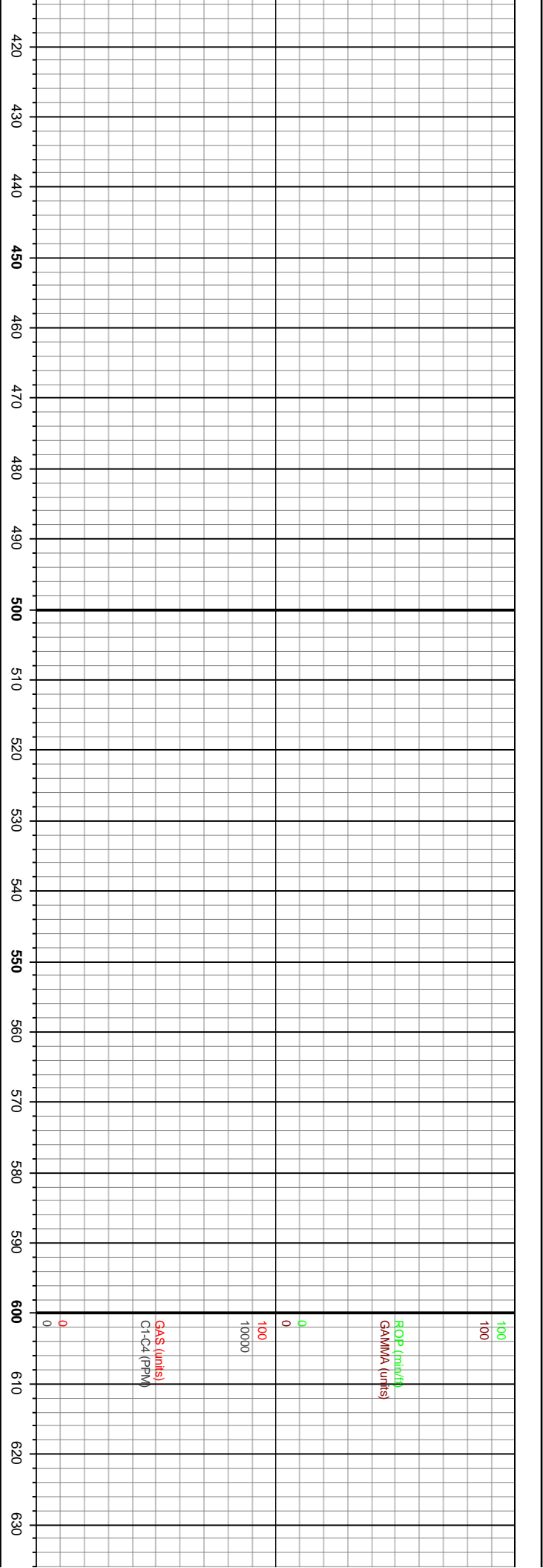
<b>Fossils</b>	<b>F</b> FOSSIL	<b>-</b> ARGILLACEOUS	<b>✓</b> GLAUCONITE
GASTROPOD	<b>/</b> ARGILLITE GRAIN	<b>≡</b> GYPSIFEROUS	<b>Stringer</b>
ALGAE	<b>Φ</b> OOLITE	<b>B</b> BENTONITE	ANHYDRITE STRINGER
AMPHIPORA	OSTRACOD	BITUMENOUS SUBSTANCE	BENTONITE STRINGER
BELEMNITE	PELECYPOD	BRECCIA FRAGMENTS	COAL STRINGER
BIOCLASTIC	PELLET	<b>1</b> CALCAREOUS	MINERAL CRYSTALS
BRACHIOPOD	PISOLITE	CARBONACEOUS FLAKES	NODULES
BRYOZOA	PLANT REMAINS	<b>▲</b> CHITDK	PHOSPHATE PELLETT
CEPHALOPOD	PLANT SPORES	<b>△</b> CHITLT	<b>P</b> PYRITE
CORAL	SCAPHOPOD	<b>-</b> COAL - THIN BEDS	SALT CAST
CRINOID	STROMATOPOROID	DOLOMITIC	<b>·</b> SANDY
ECHINOID	FISH	<b>+</b> FELDSPAR	<b>✓</b> SILICEOUS
<b>Minerals</b>	FORAMINIFERA	ANHYDRITIC	<b>..</b> SILTY
	FERRUGINOUS	TUFFACEOUS	SILTSTONE STRINGER

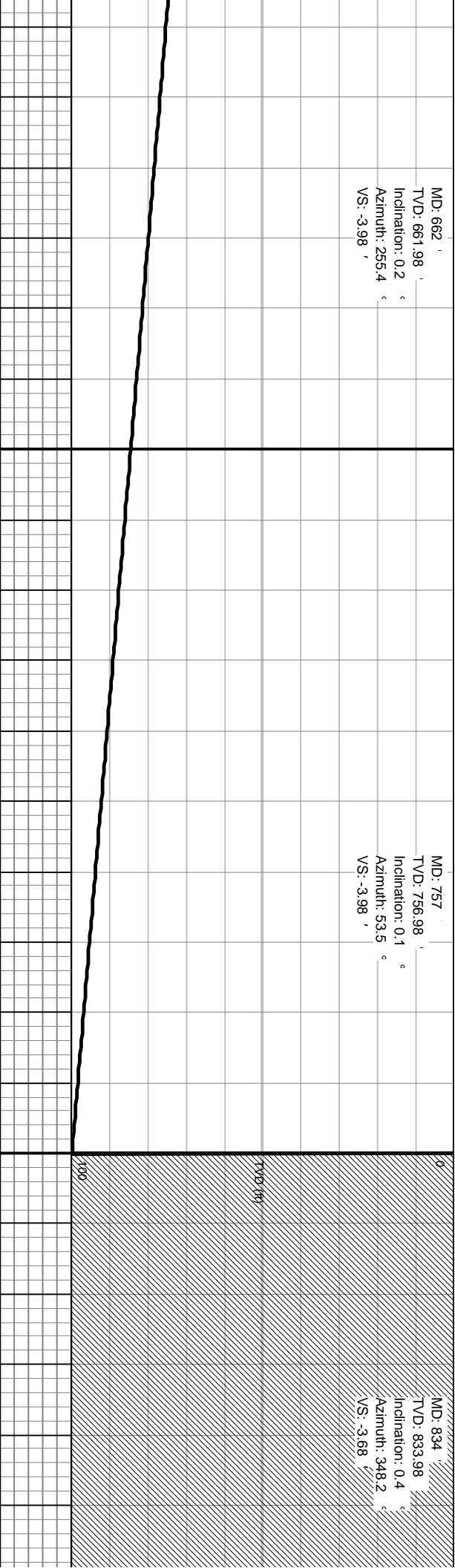
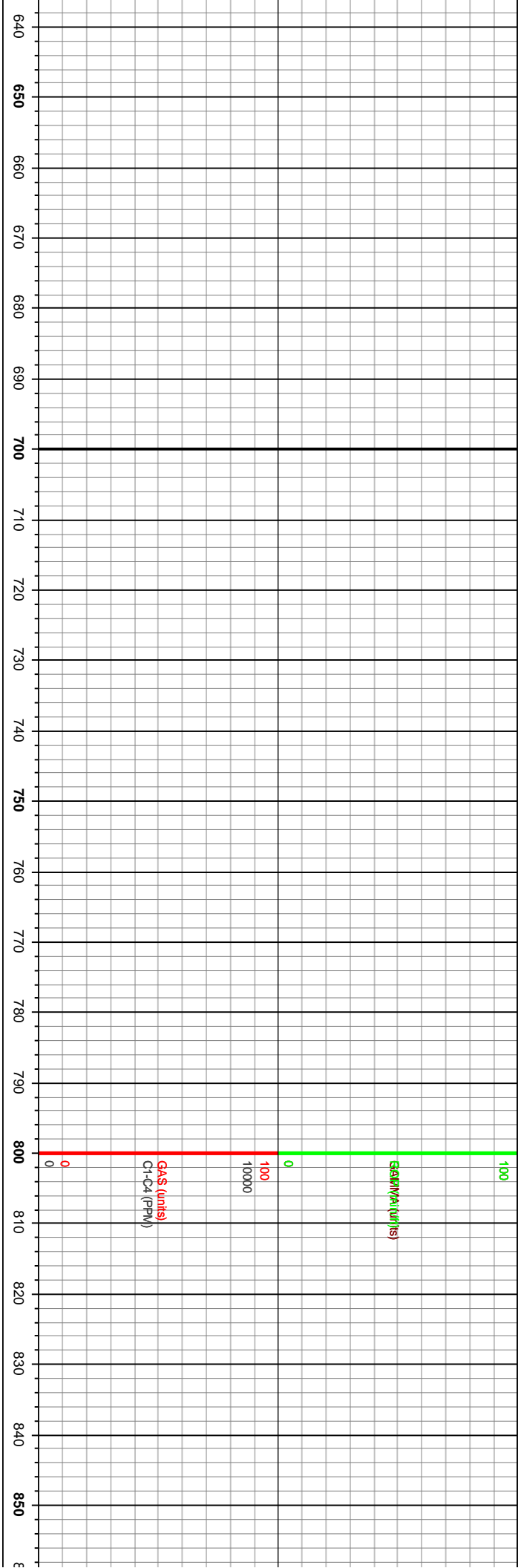
Other Symbols

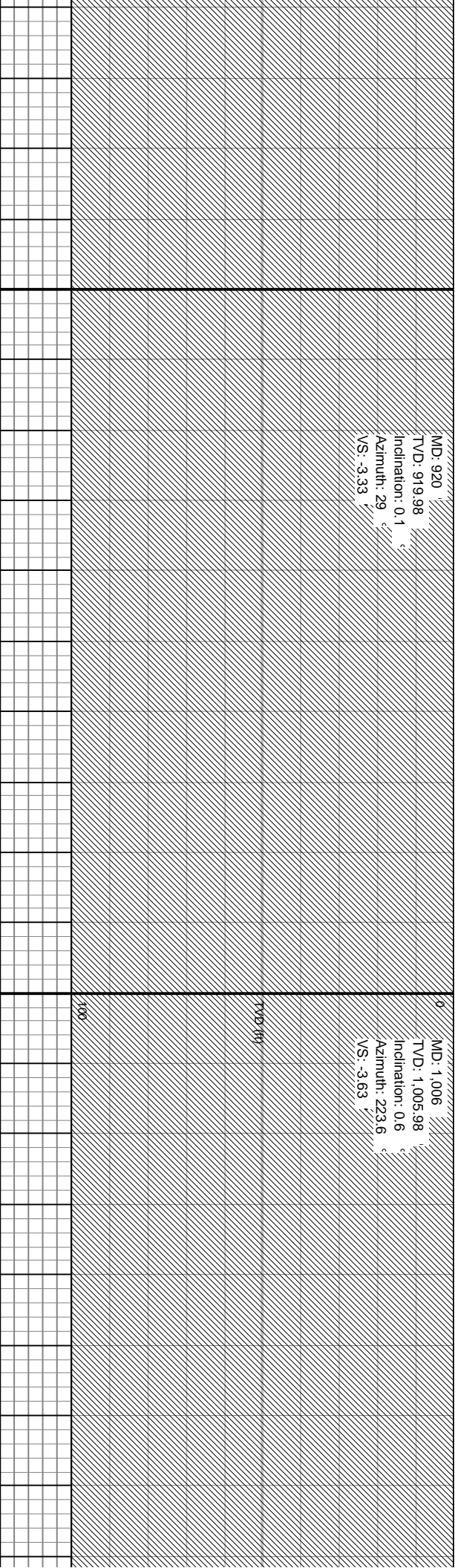
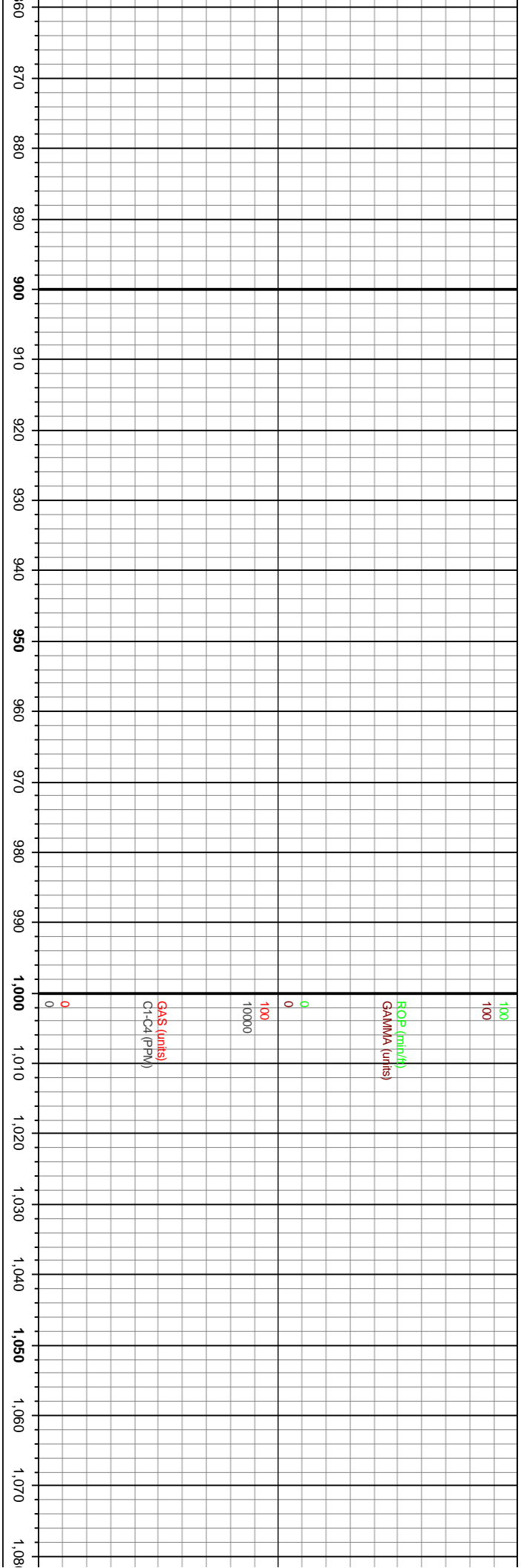
<b>Oil Show</b>	<b>0</b> ORGANIC	GAS SHOW	<b>MX</b> MICROXLN
<b>D</b> DEAD	<b>P</b> PINPOINT	MN DEPTH	<b>MJS</b> MUDSTONE
<b>●</b> EVEN	VUGGY	NORMAL FAULT	<b>R</b> ROUNDED
<b>○</b> QUESTIONABLE	OIL SHOW	OVERTURNED STRATA	<b>a</b> SUBANG
SPOTTED STAINING	<b>Engineering</b>	REVERSE FAULT	<b>r</b> SUBRND
	<b>Porosity</b>	SIDEWALL CORE (LEFT)	<b>Textures</b>
	<b>E</b> EARTHY	CONNECTION (LEFT)	SIDEWALL CORE (RIGHT)
	FENESTRAL	CONNECTION GAS	SLIDE
	<b>F</b> FRACTURE	CORE - LOST	SURVEY
	INTERCRYSTALLINE	CORE - RECOVERED	TRIP GAS
	INTEROOULTIC	DST INTERVAL	WIRELINE TESTED - LEFT
	MOLDIC	FAULT	WIRELINE TESTED - RT
		FORMATION TOP	<b>Rounding</b>
			LITHOGRAPHIC

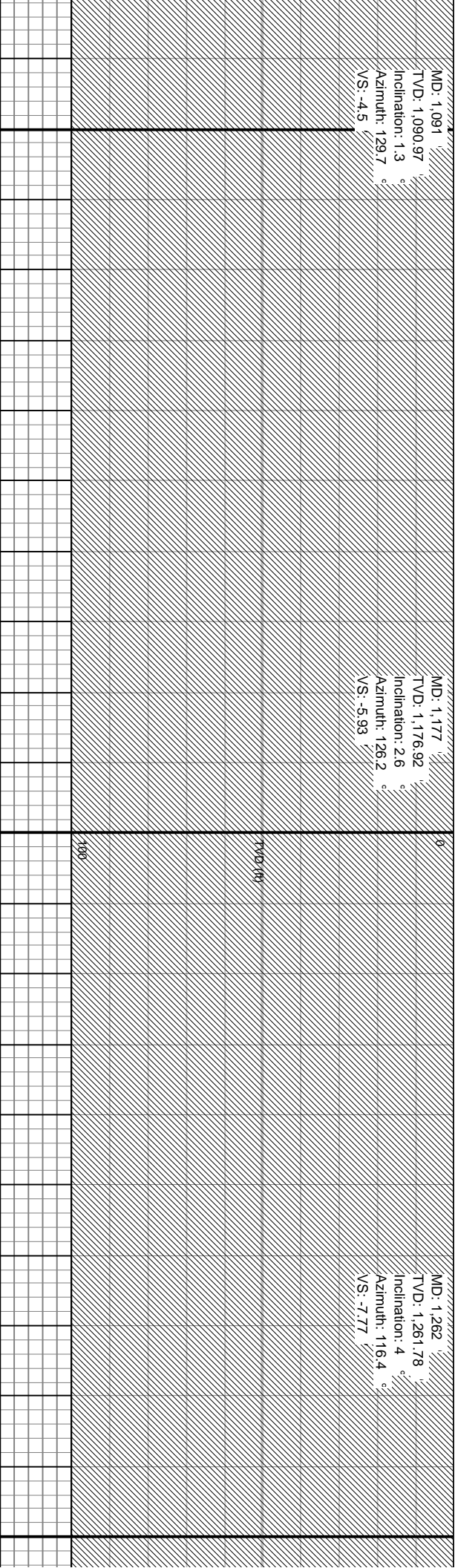
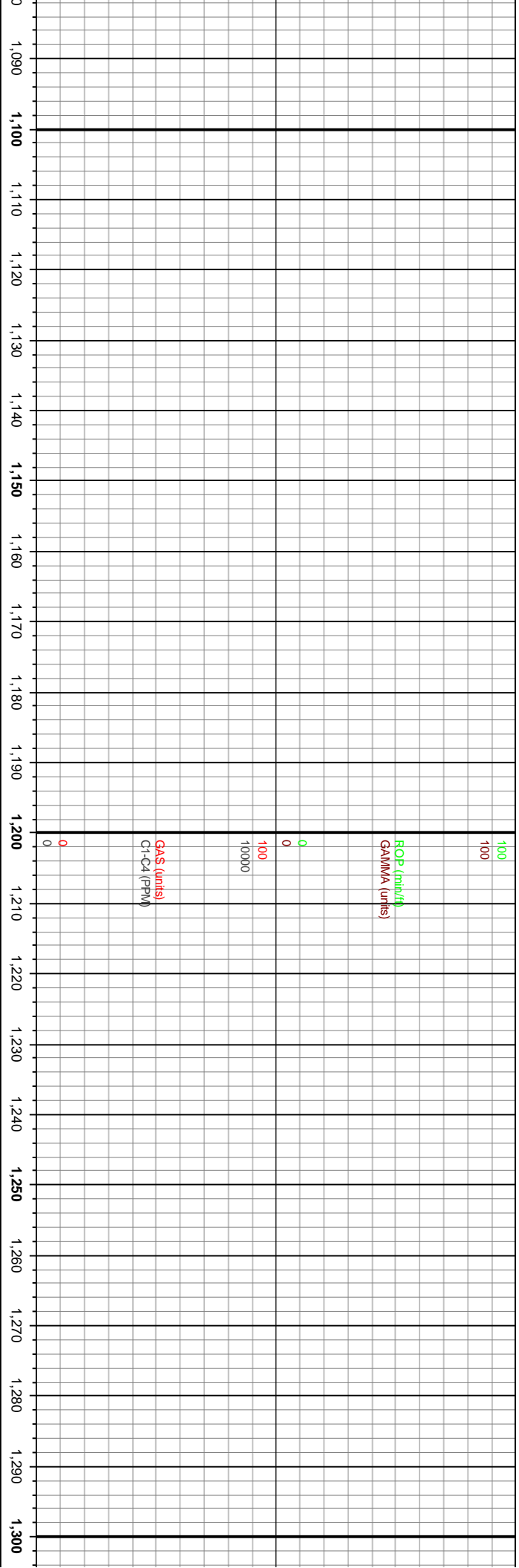




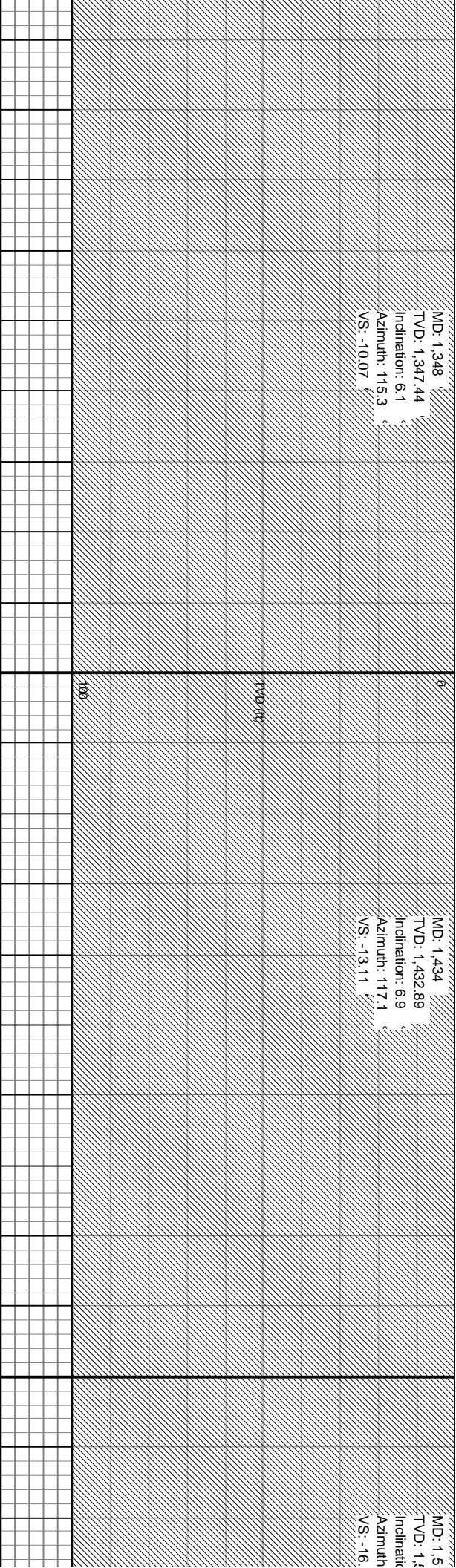
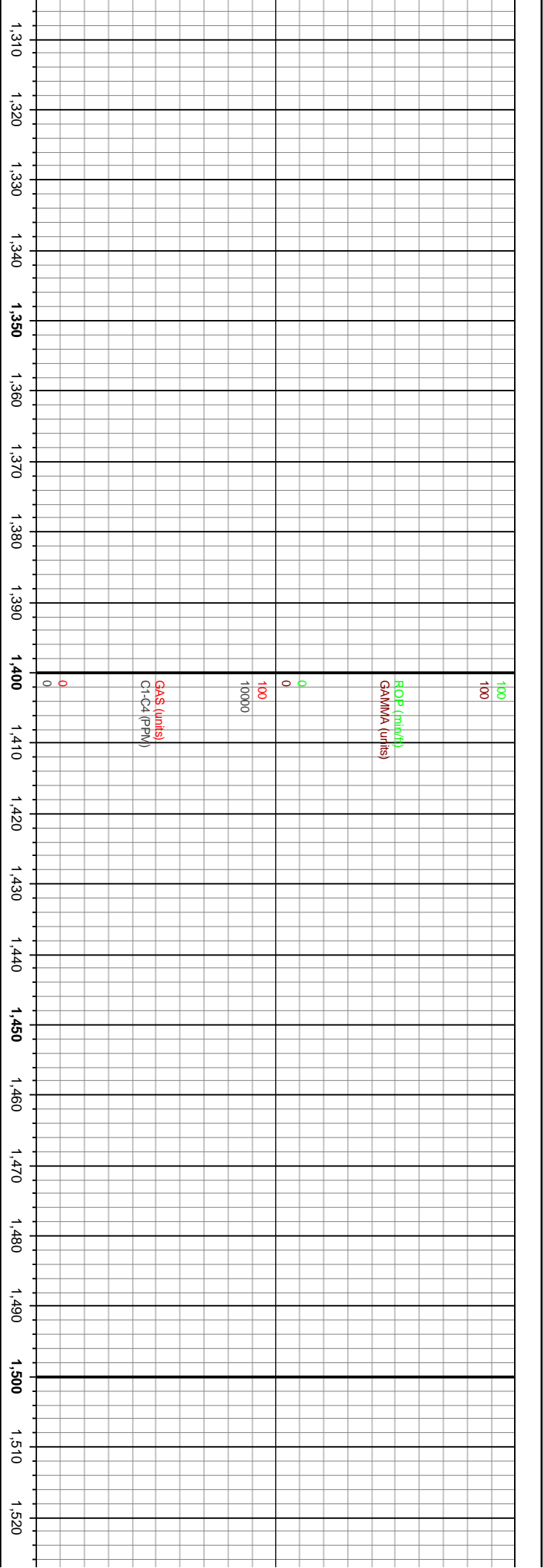


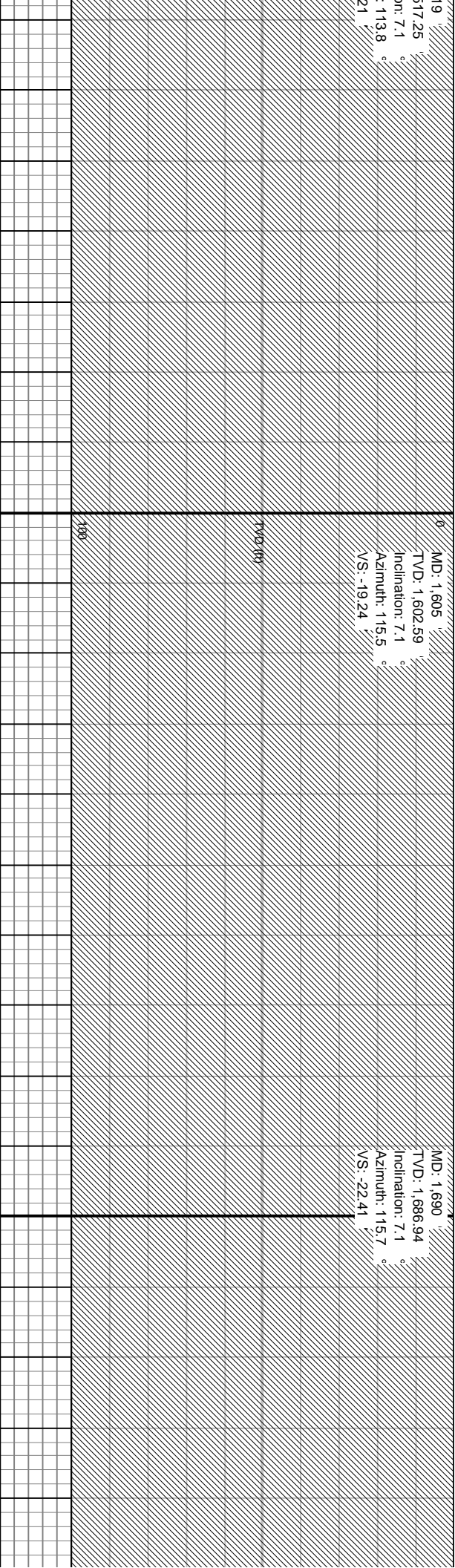
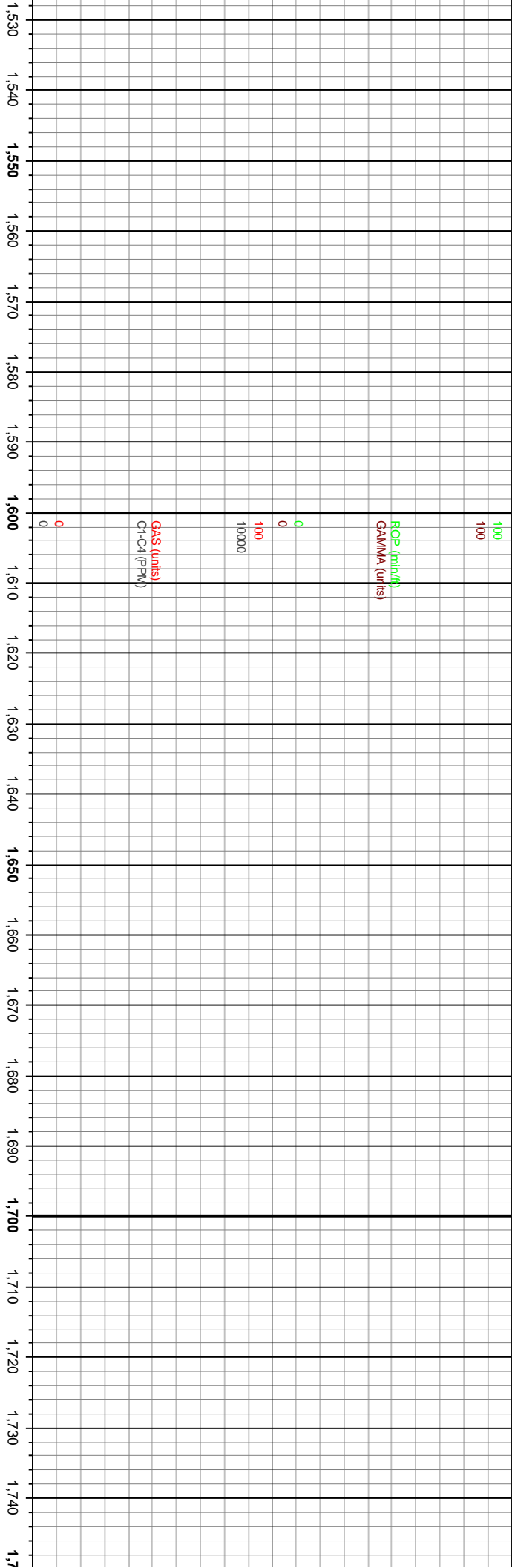


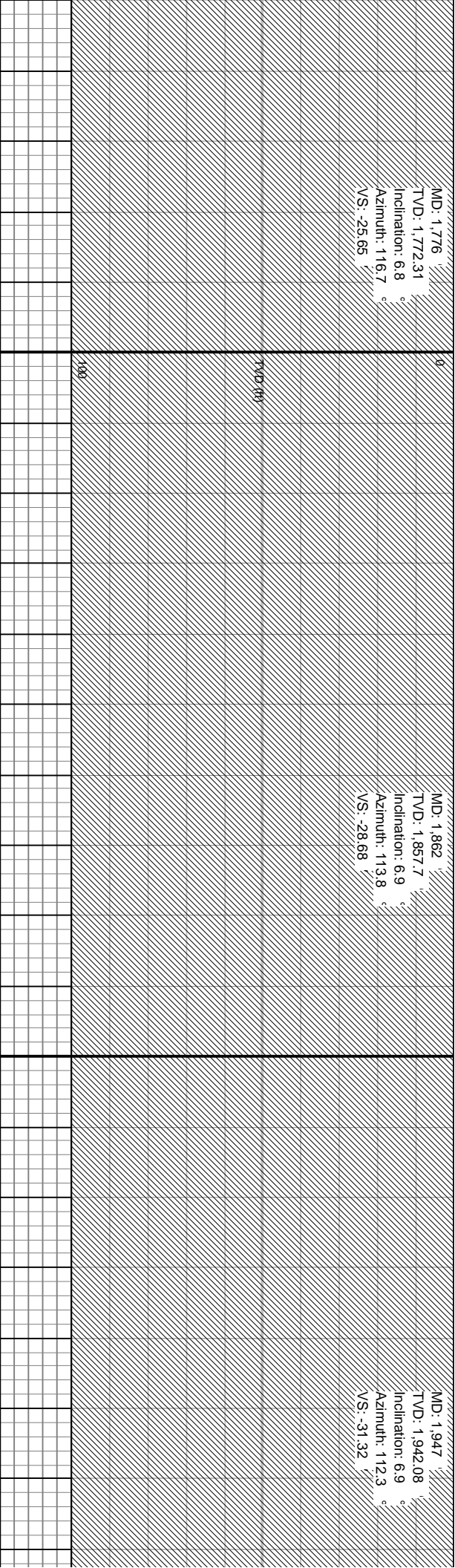
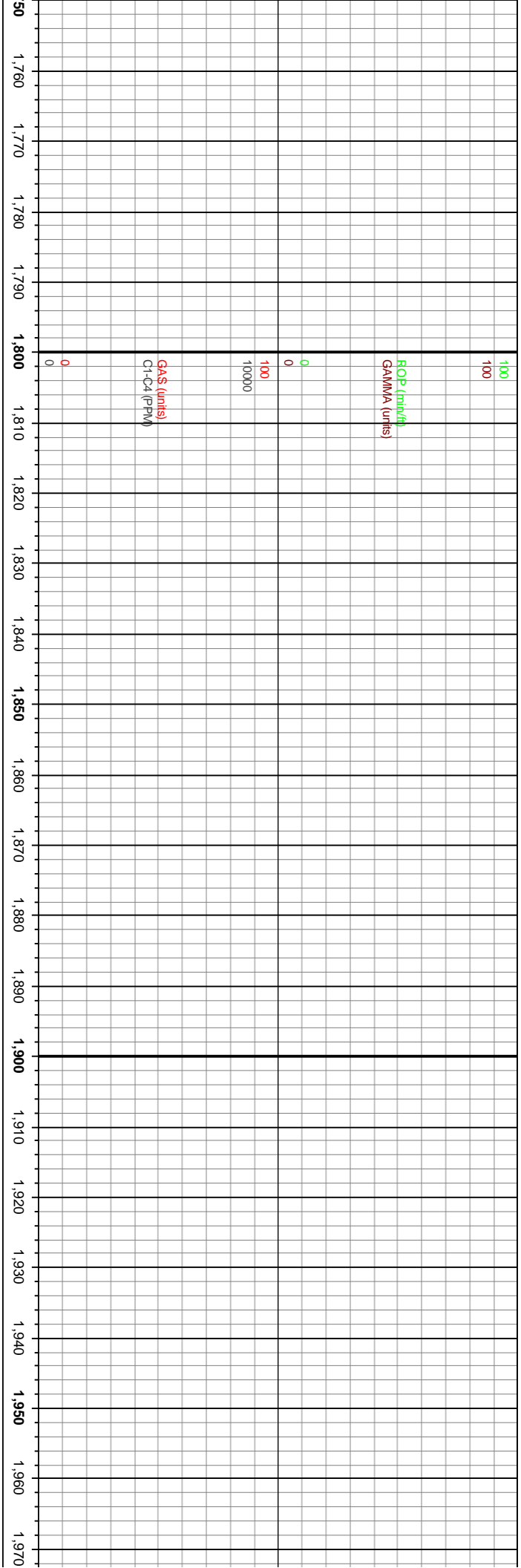


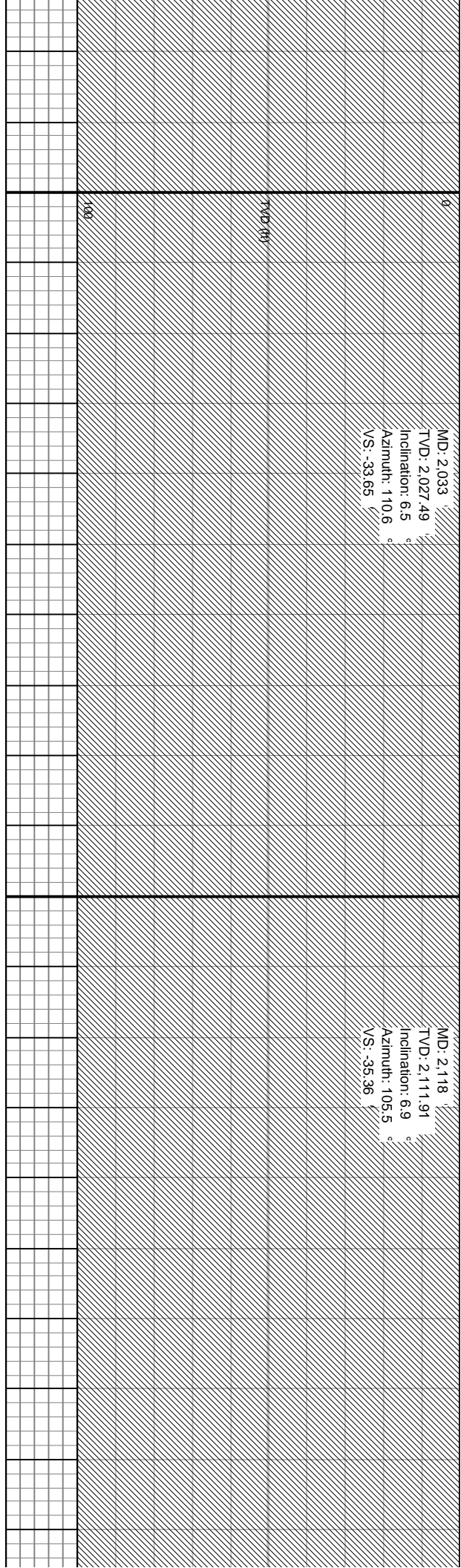
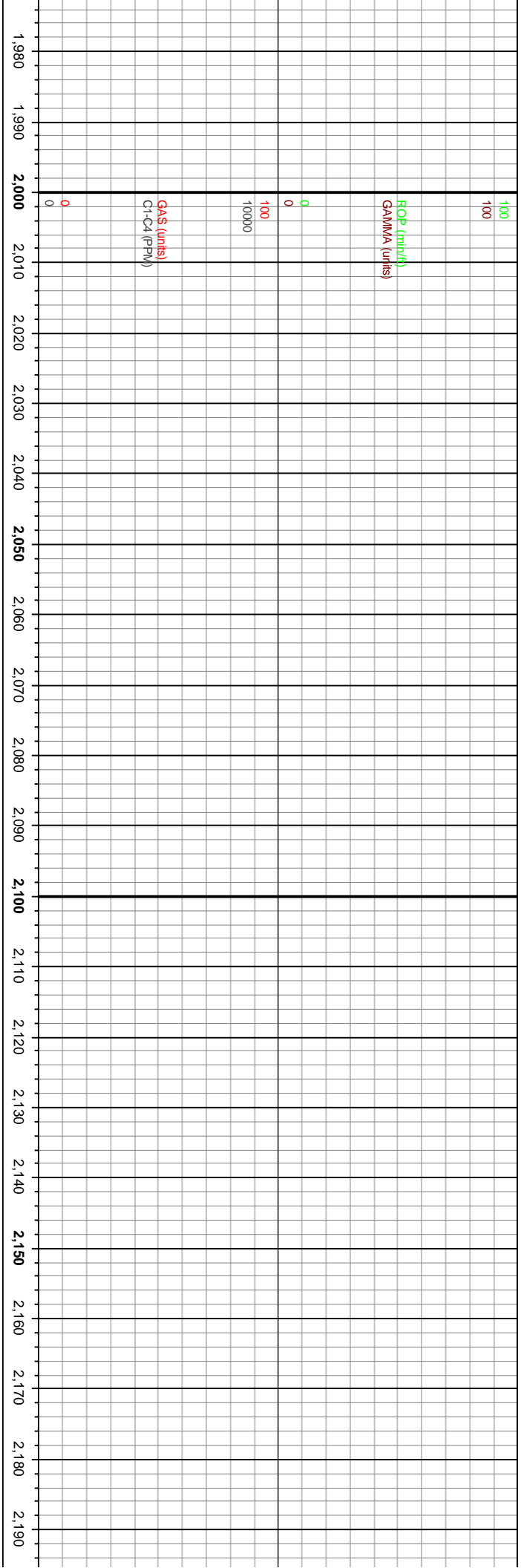


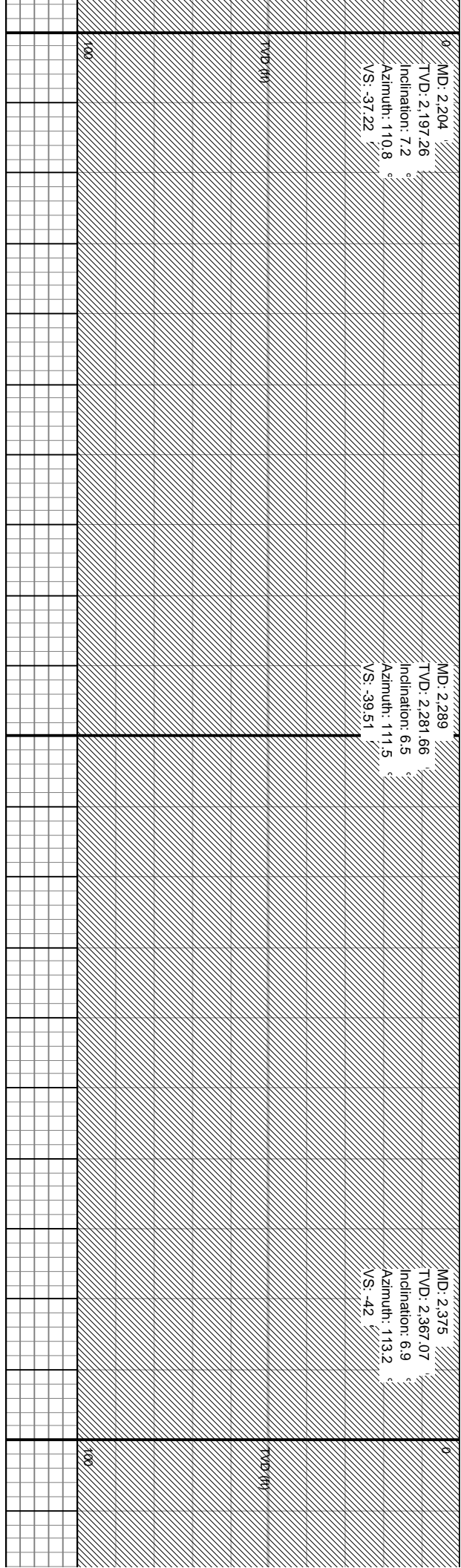
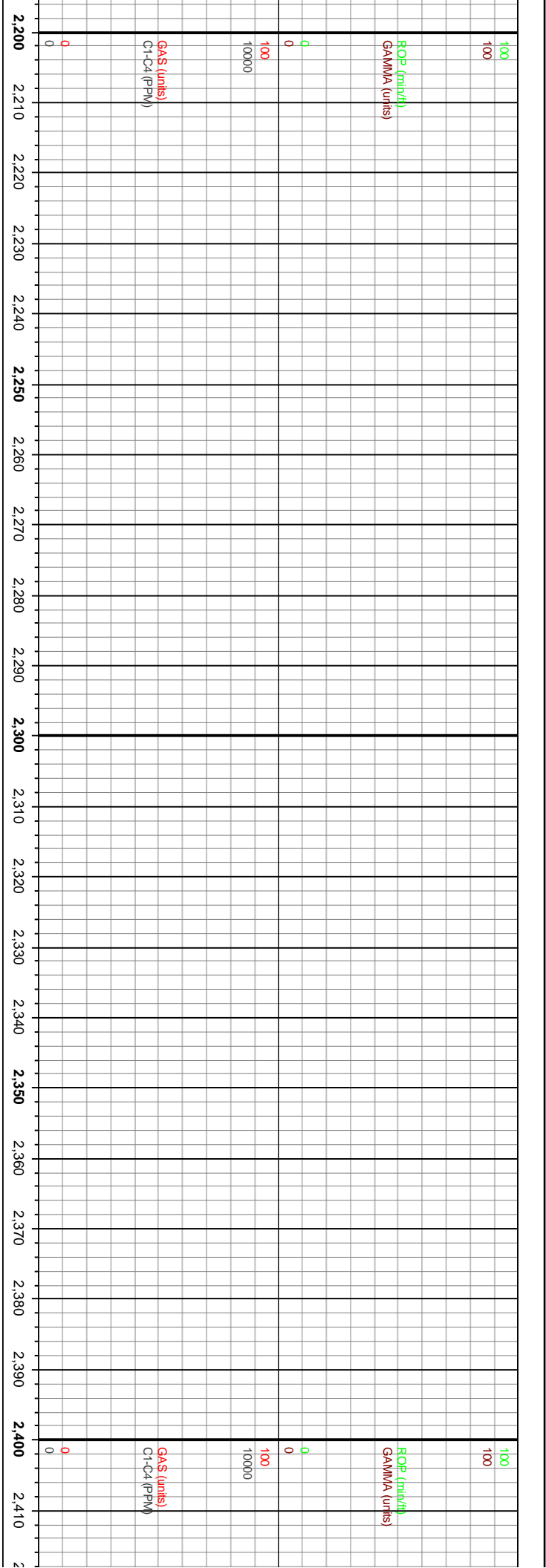


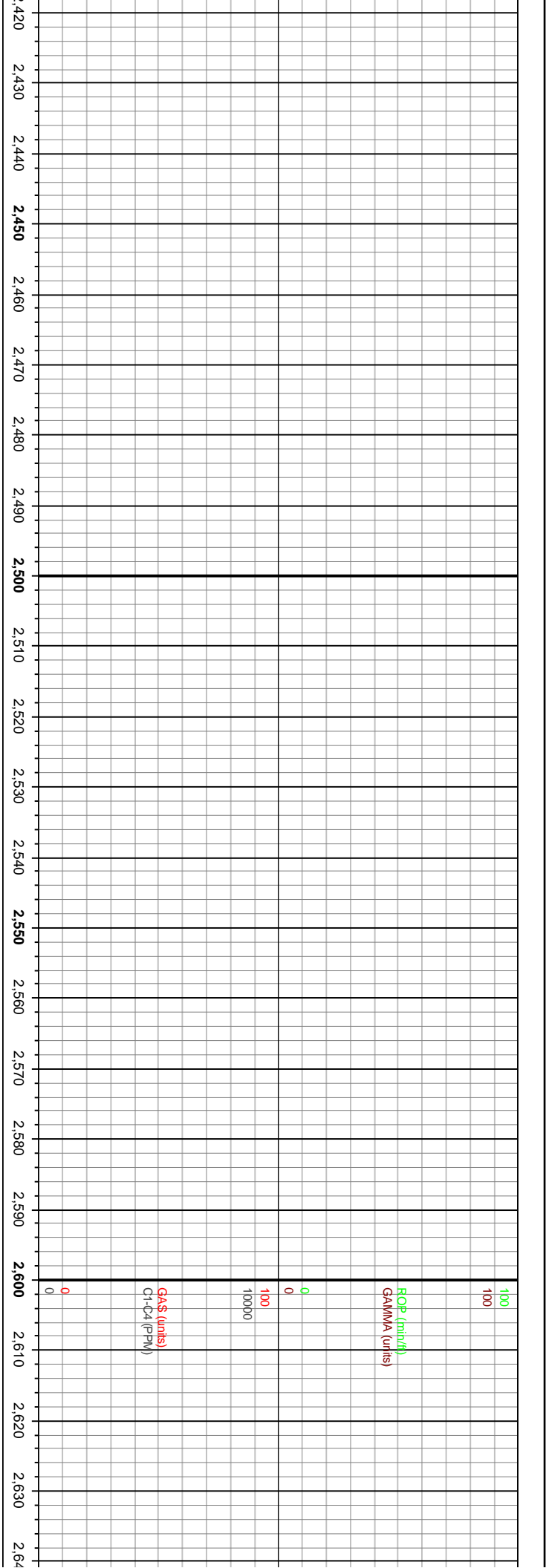












100

100

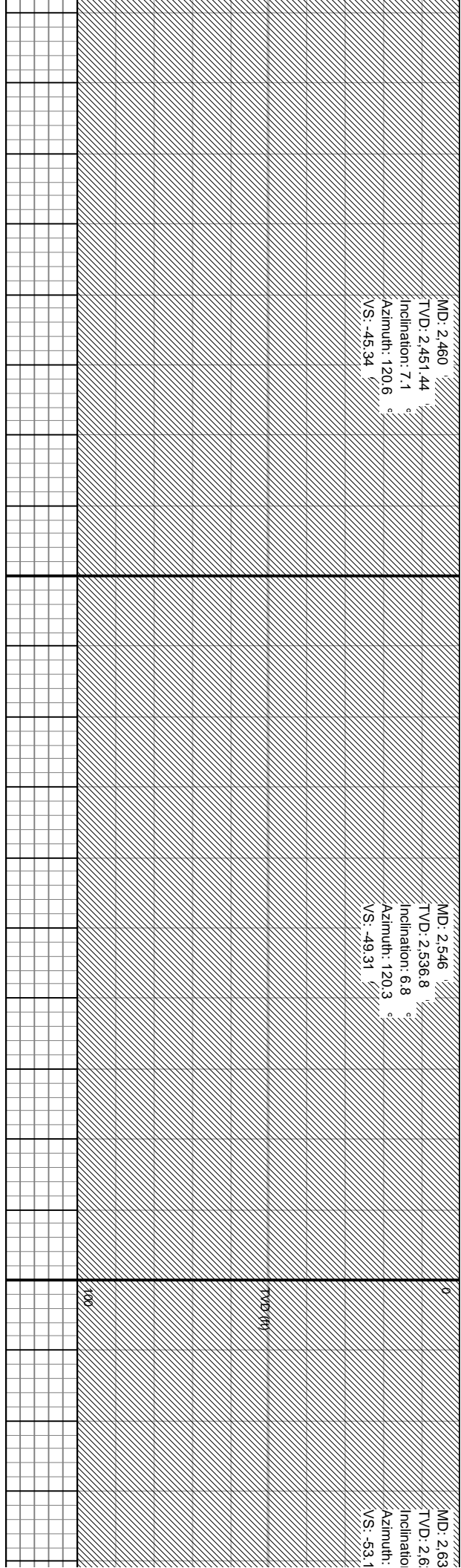
ROP (min/hr)  
GAMMA (units)

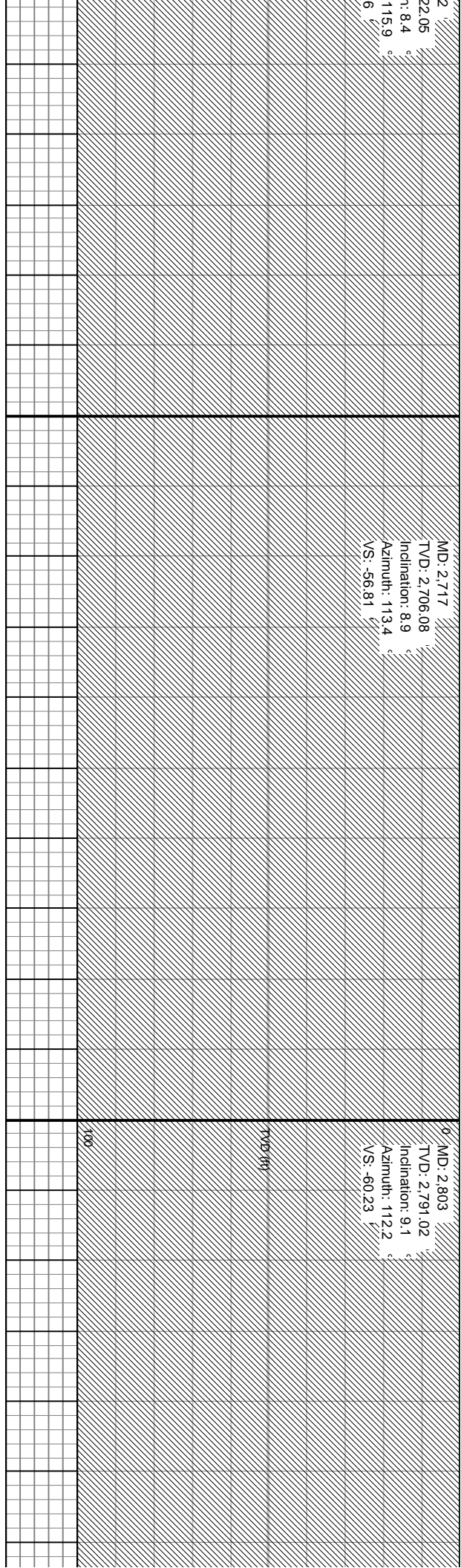
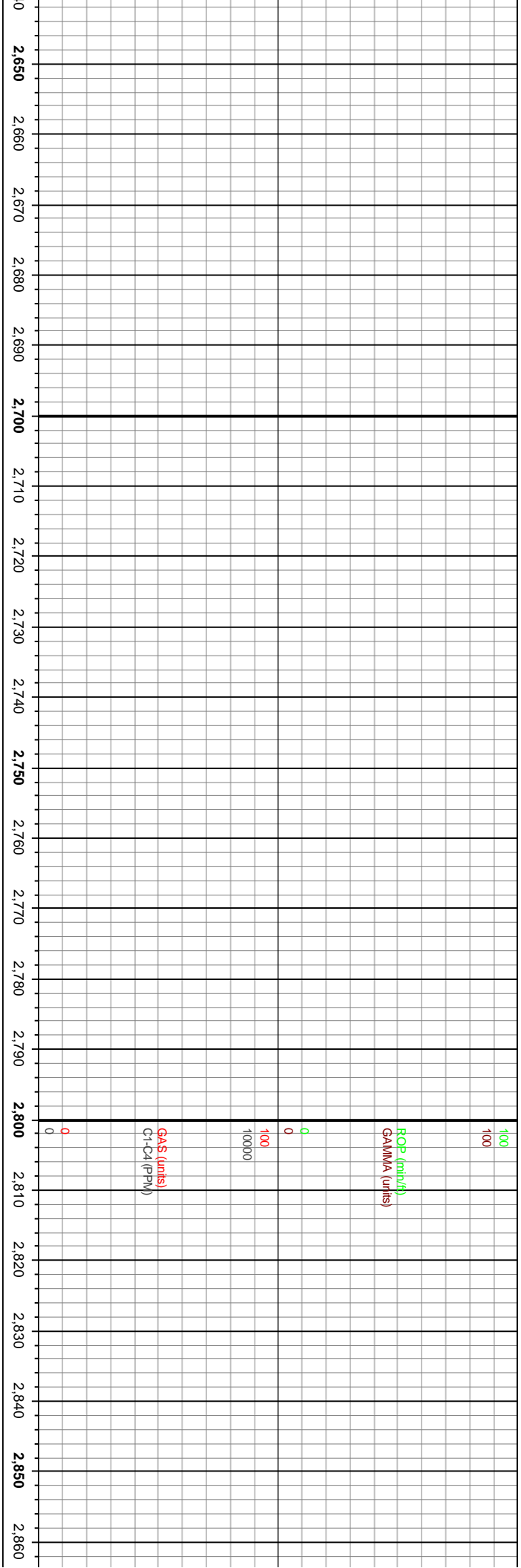
0

100  
10000

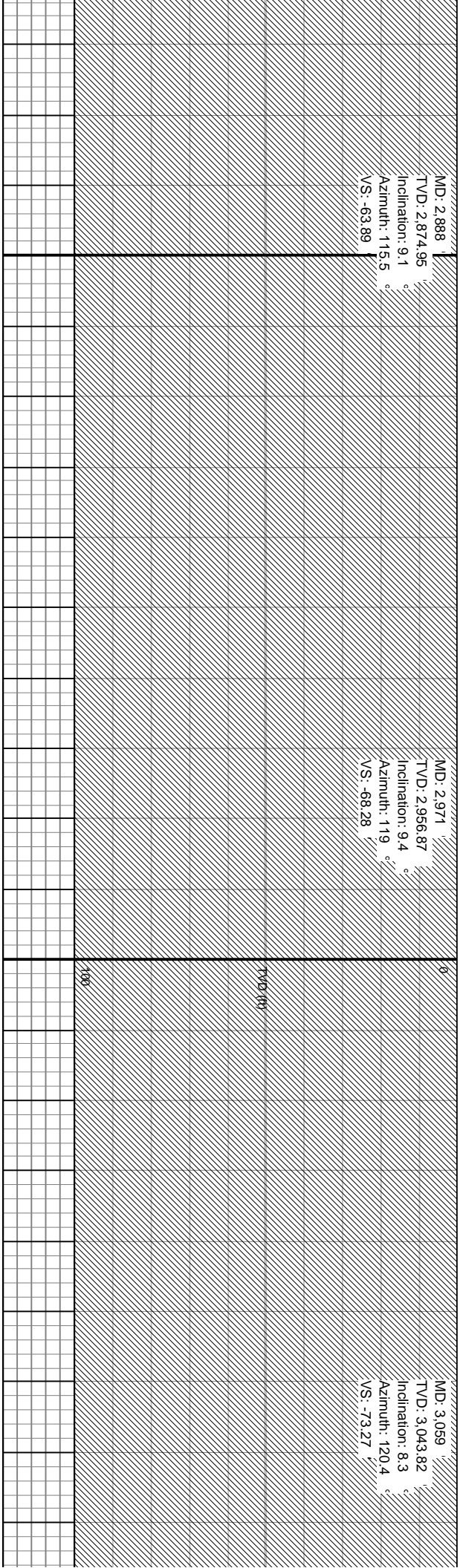
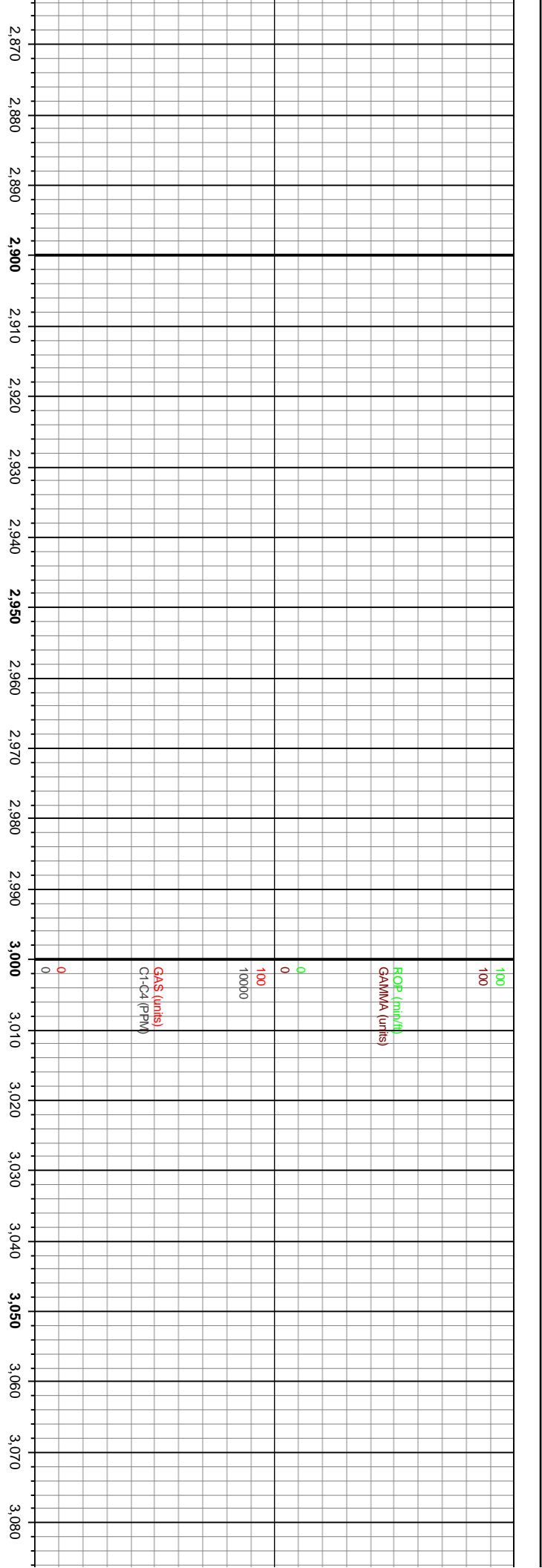
GA\$ (units)  
C1-C4 (PPM)

0

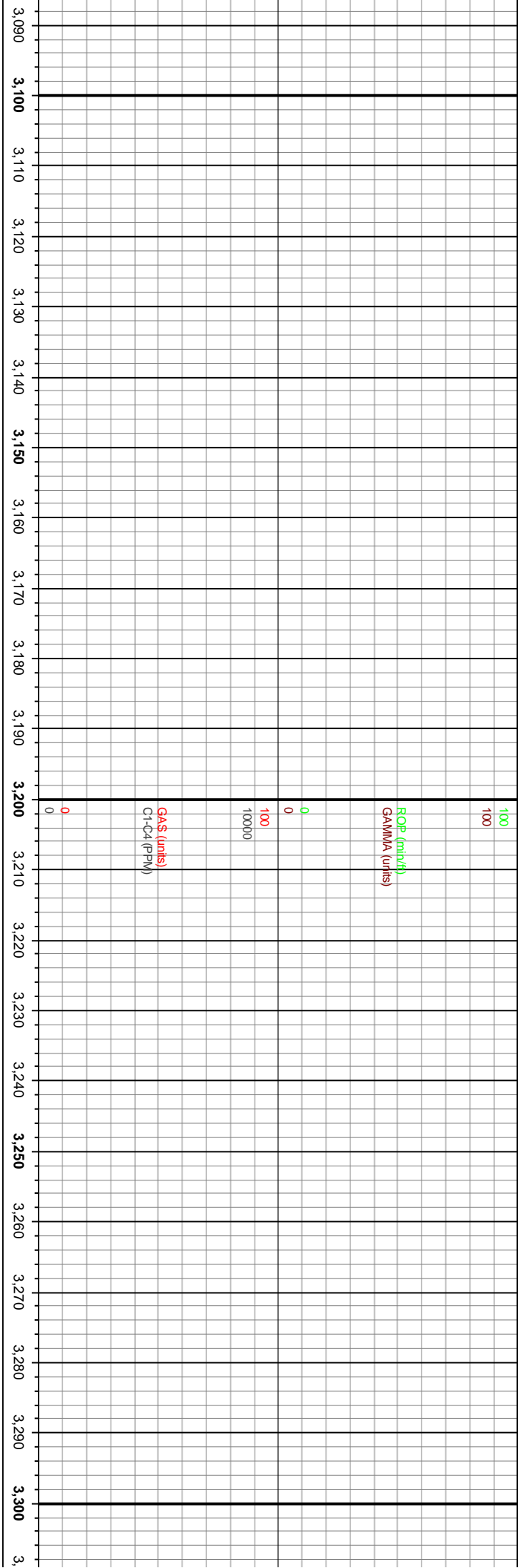












ROP (min/h)  
GAMMA (units)

0

100

10000

GAS (units)  
C1-C4 (PPM)

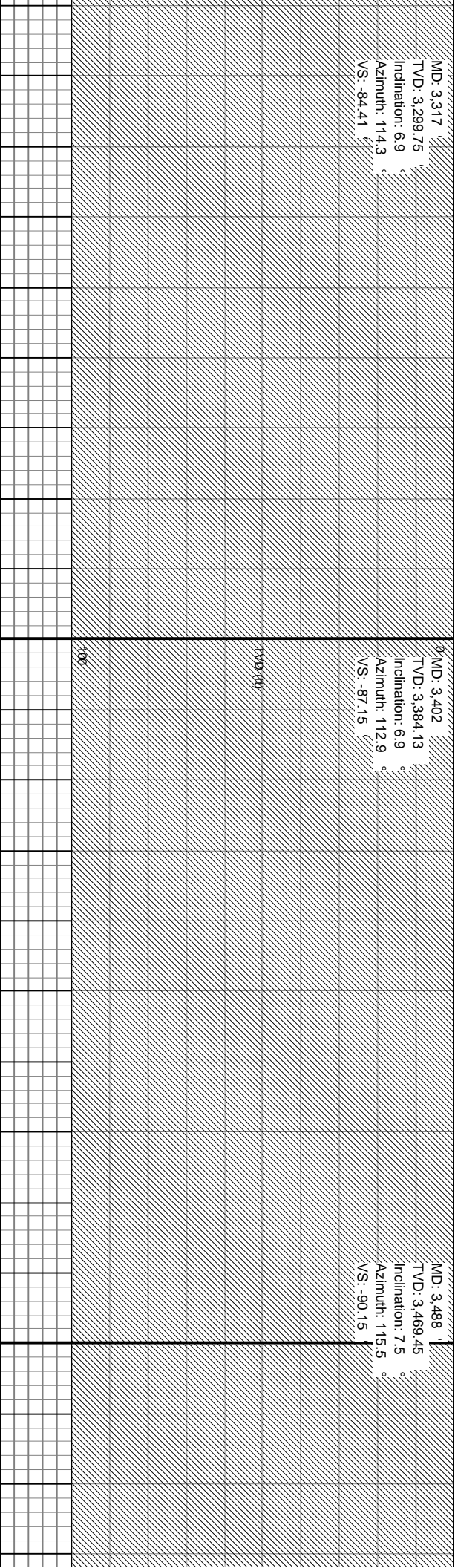
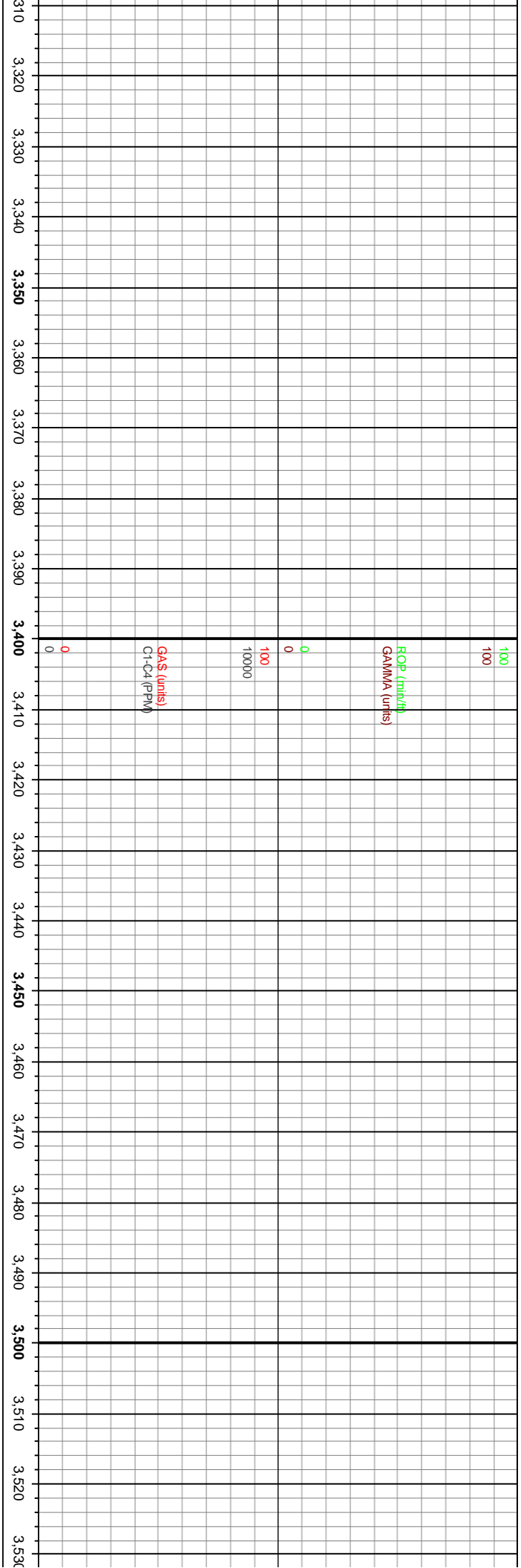
0

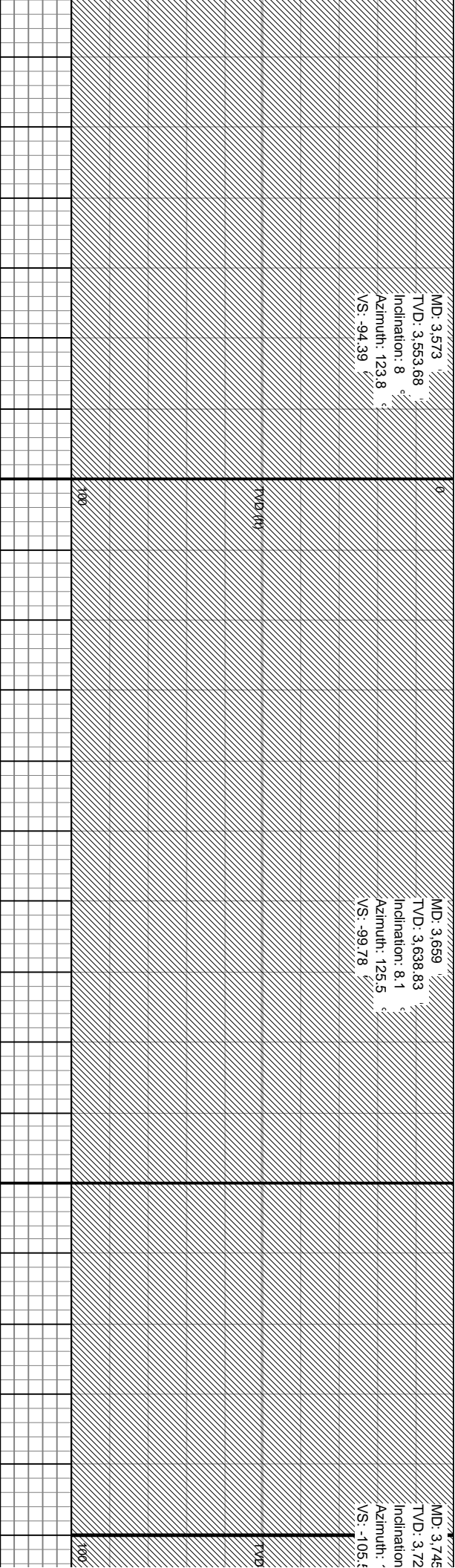
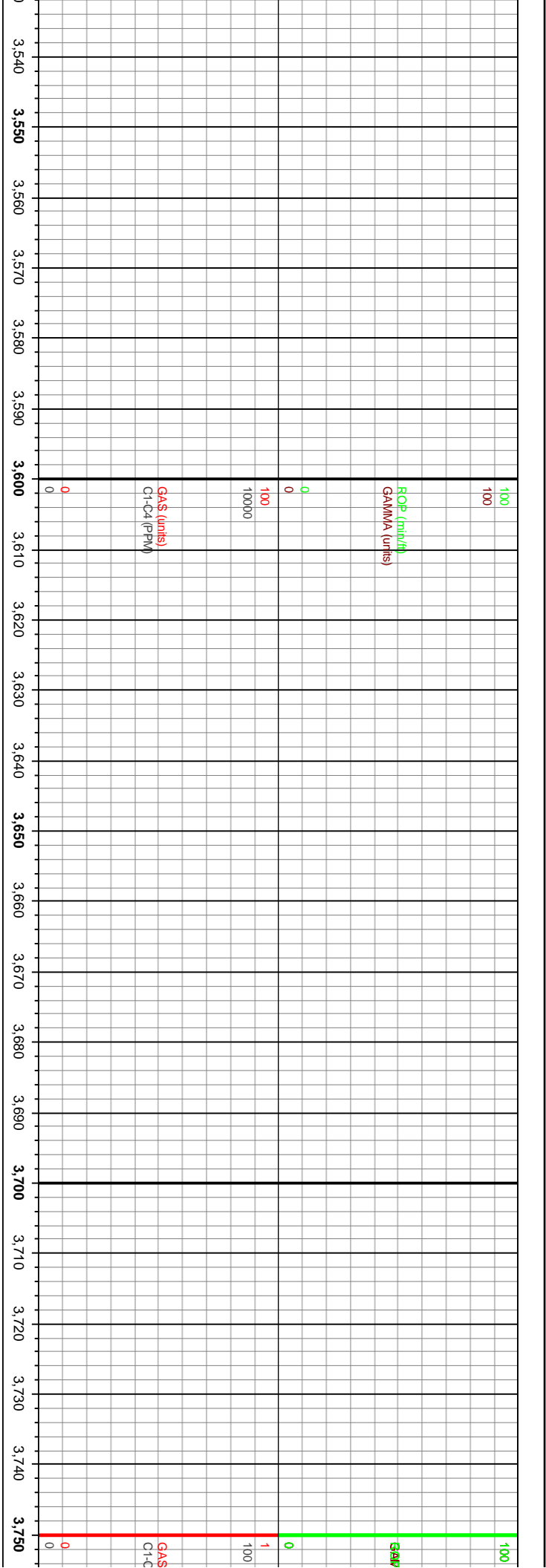
MD: 3,145  
TV/D: 3,129.03  
Inclination: 7.3  
Azimuth: 119.7  
VS: -77.64

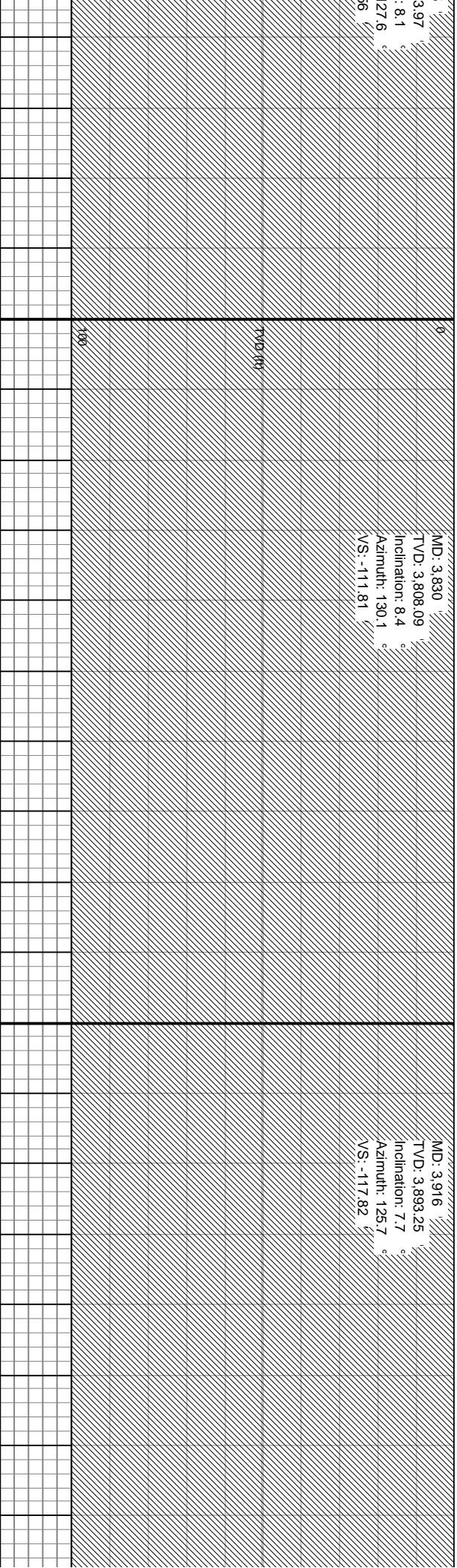
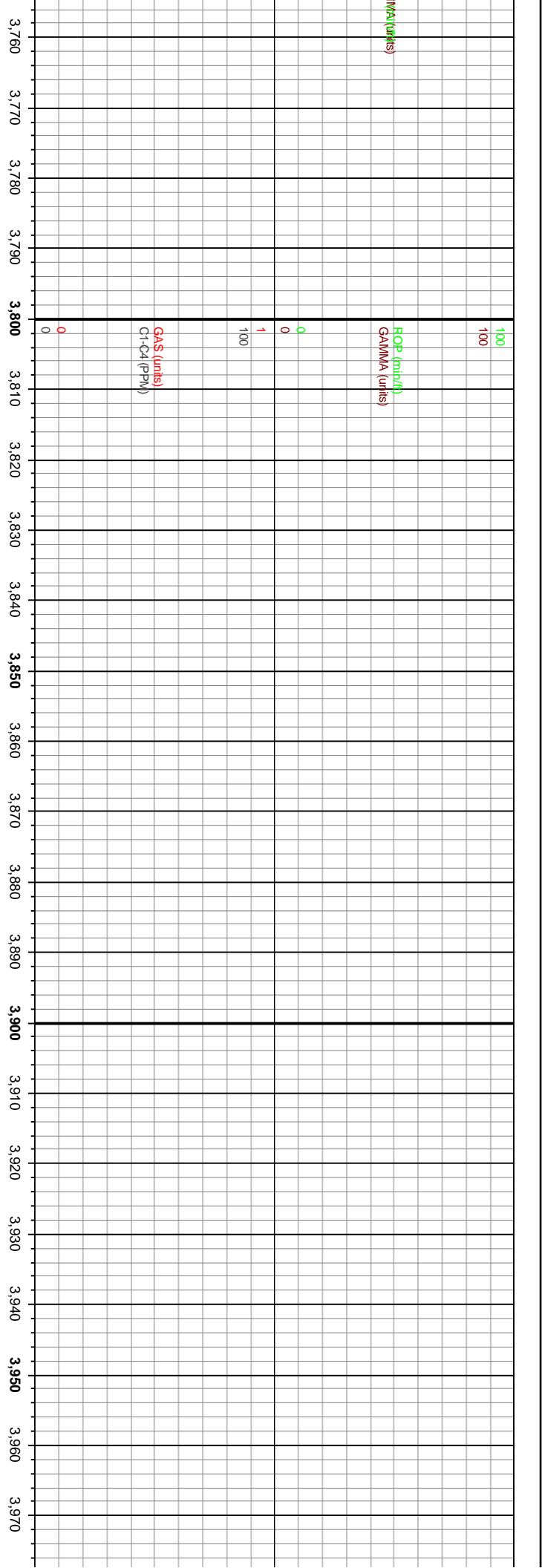
MD: 3,231  
TV/D: 3,214.37  
Inclination: 6.9  
Azimuth: 116.7  
VS: -81.31

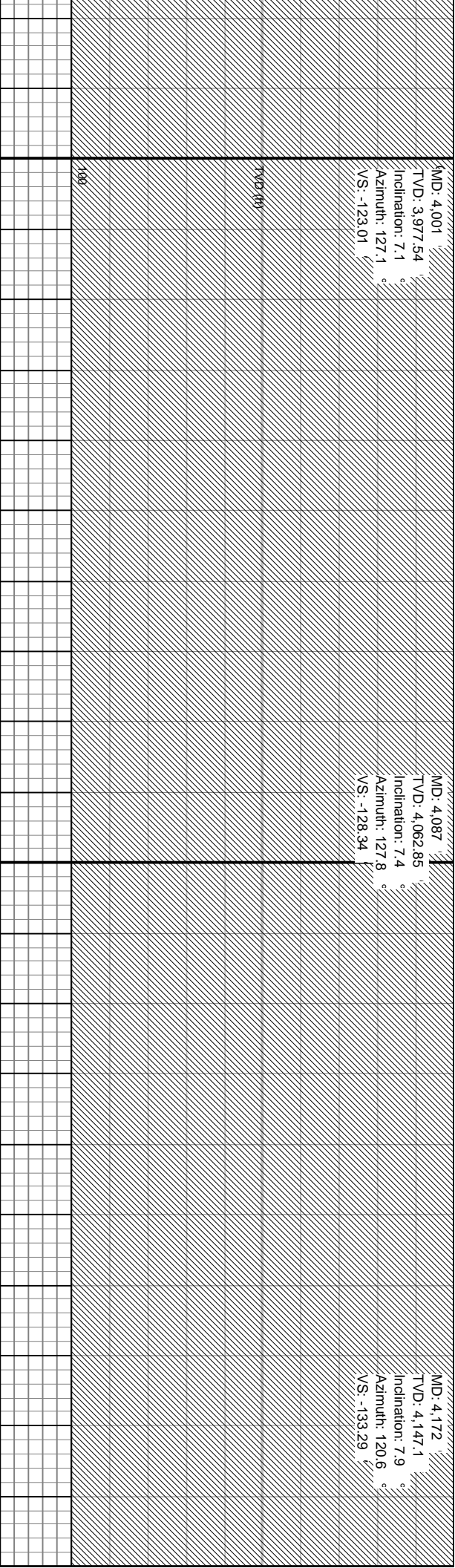
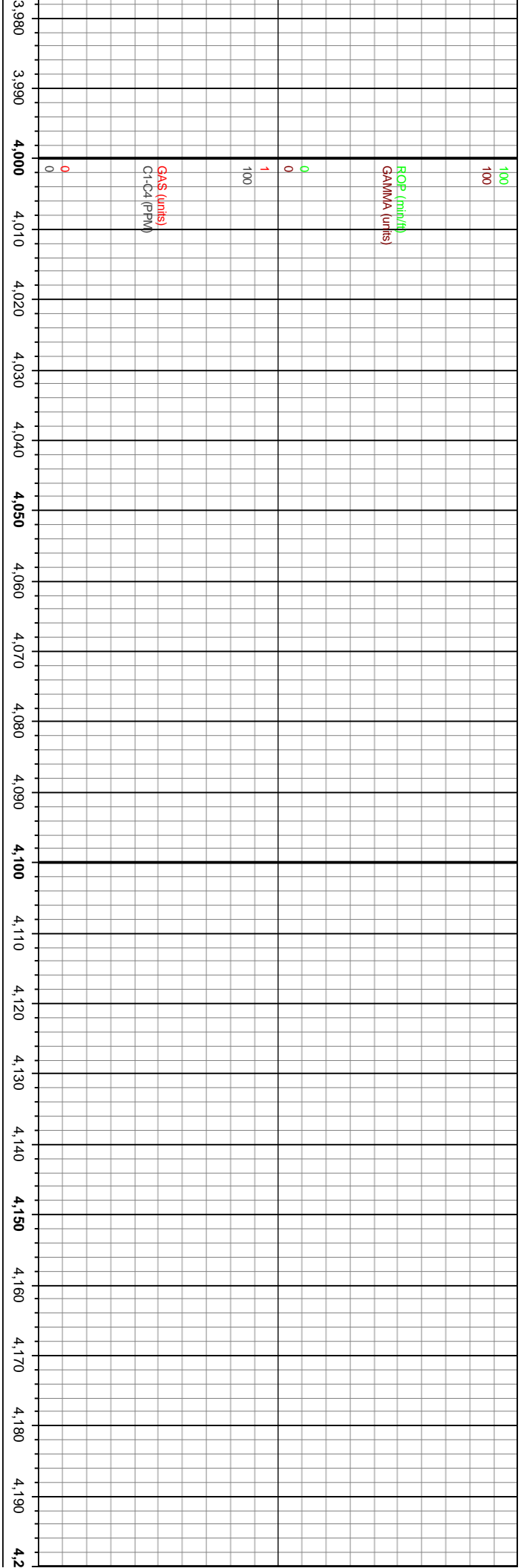
TV/D (ft)

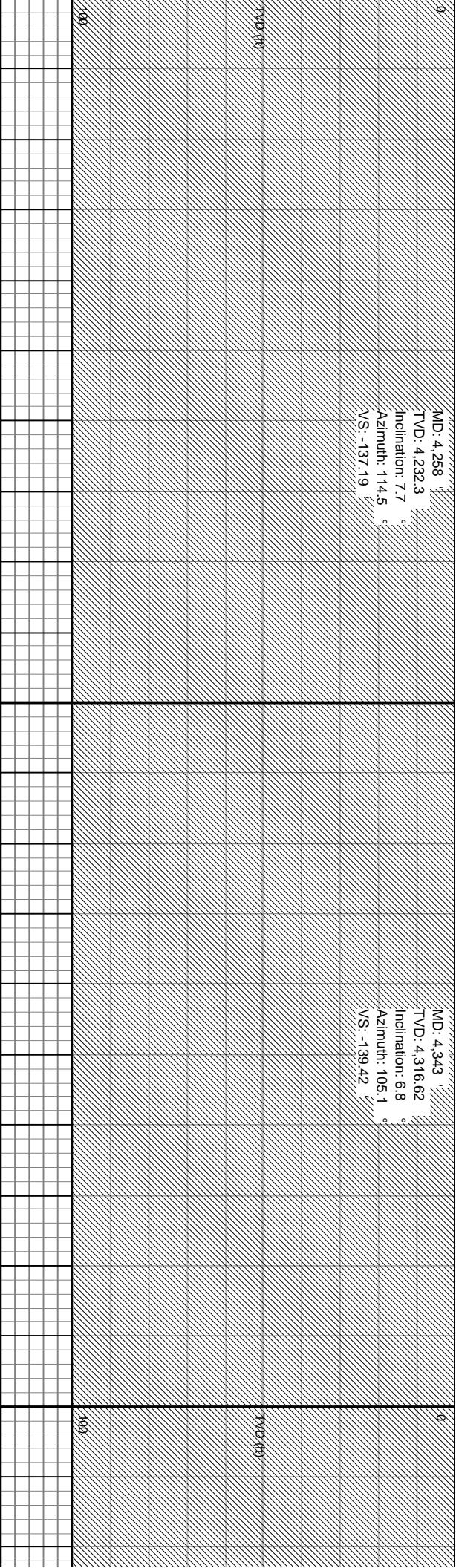
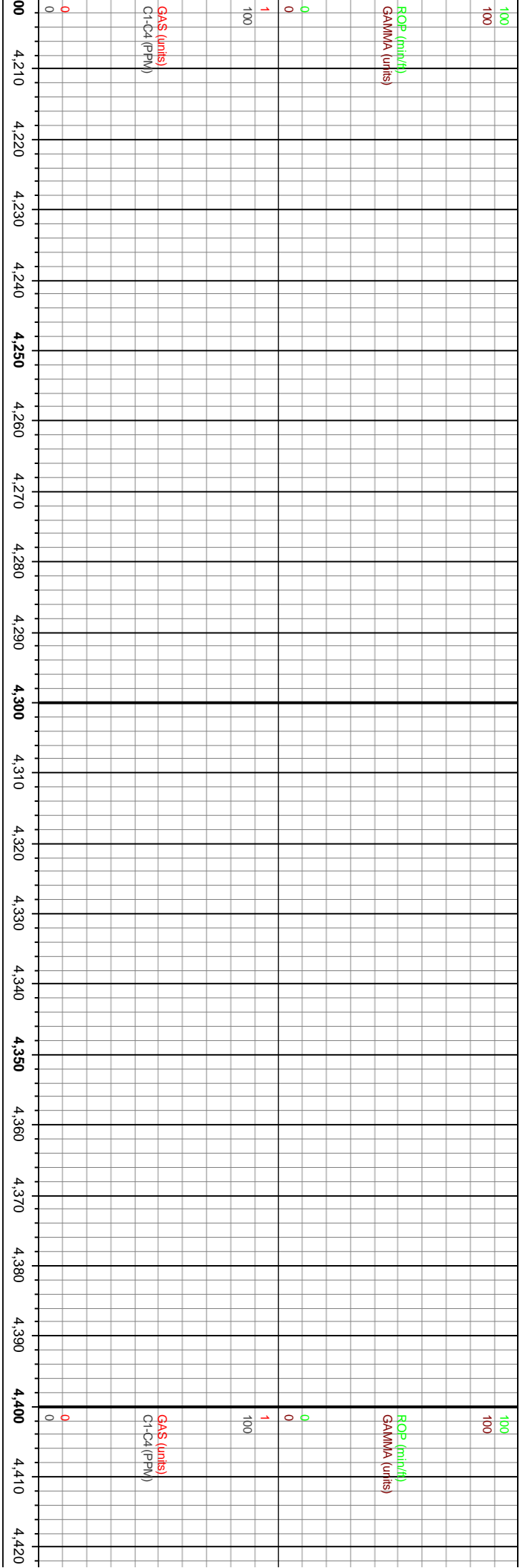
100

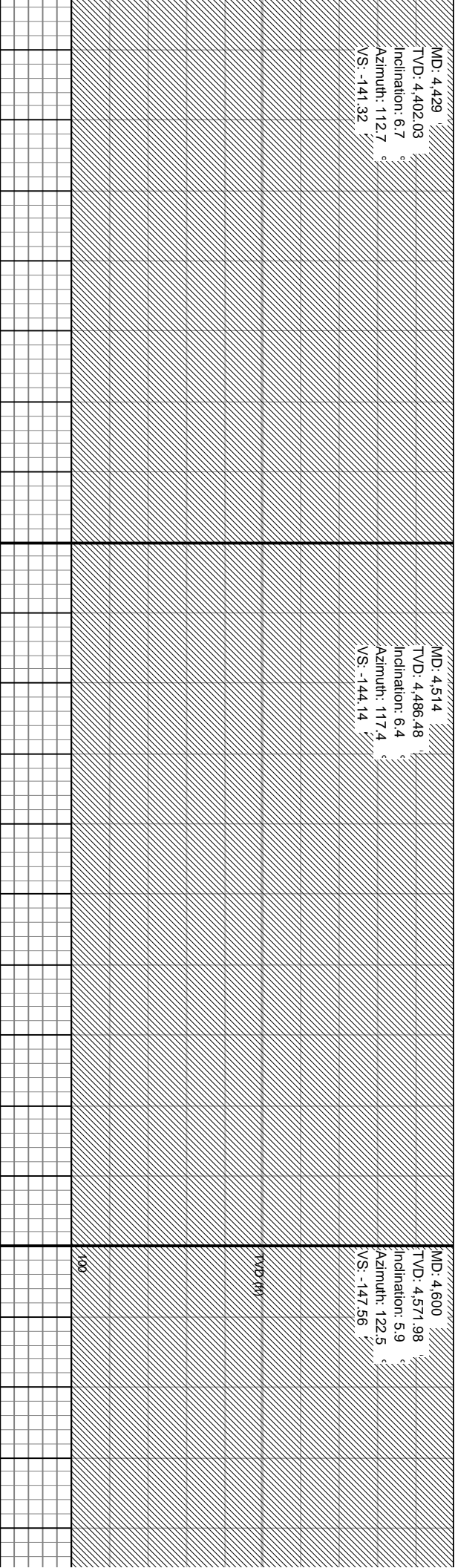
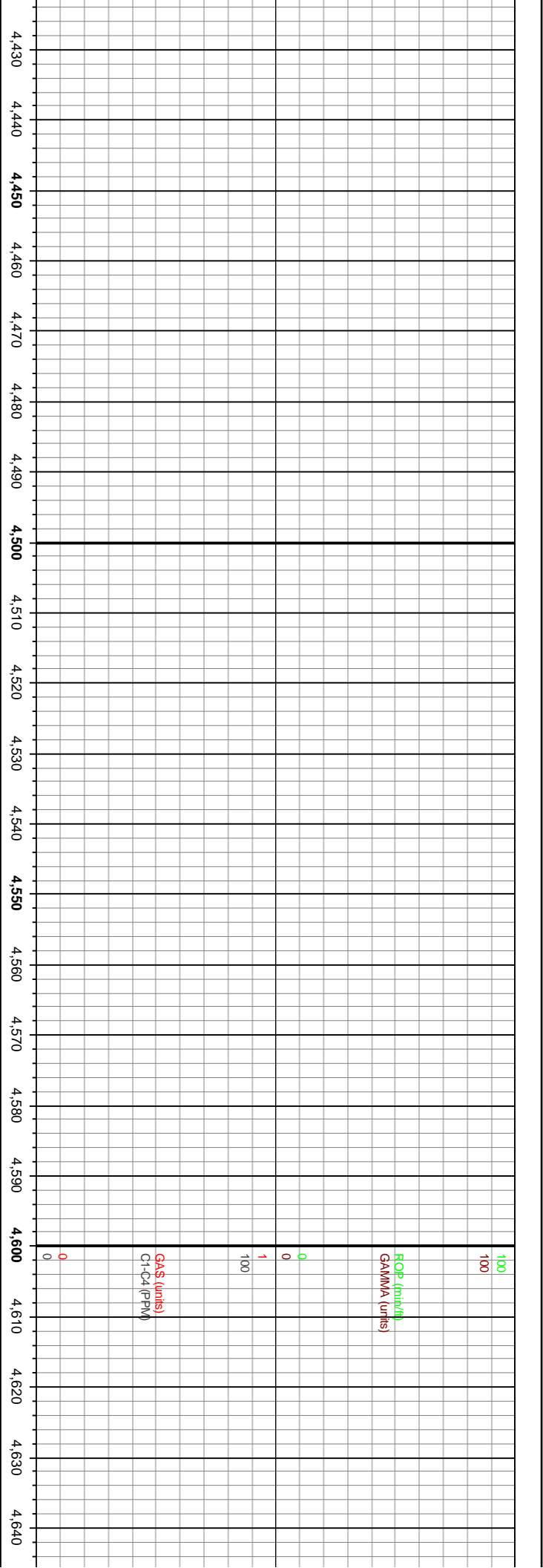




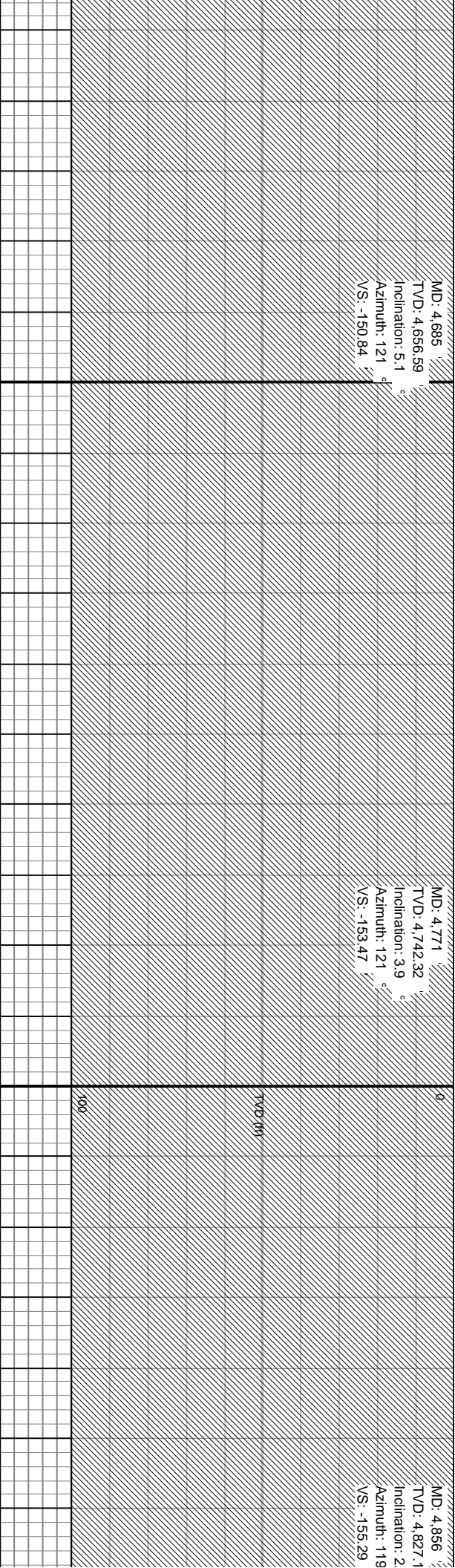
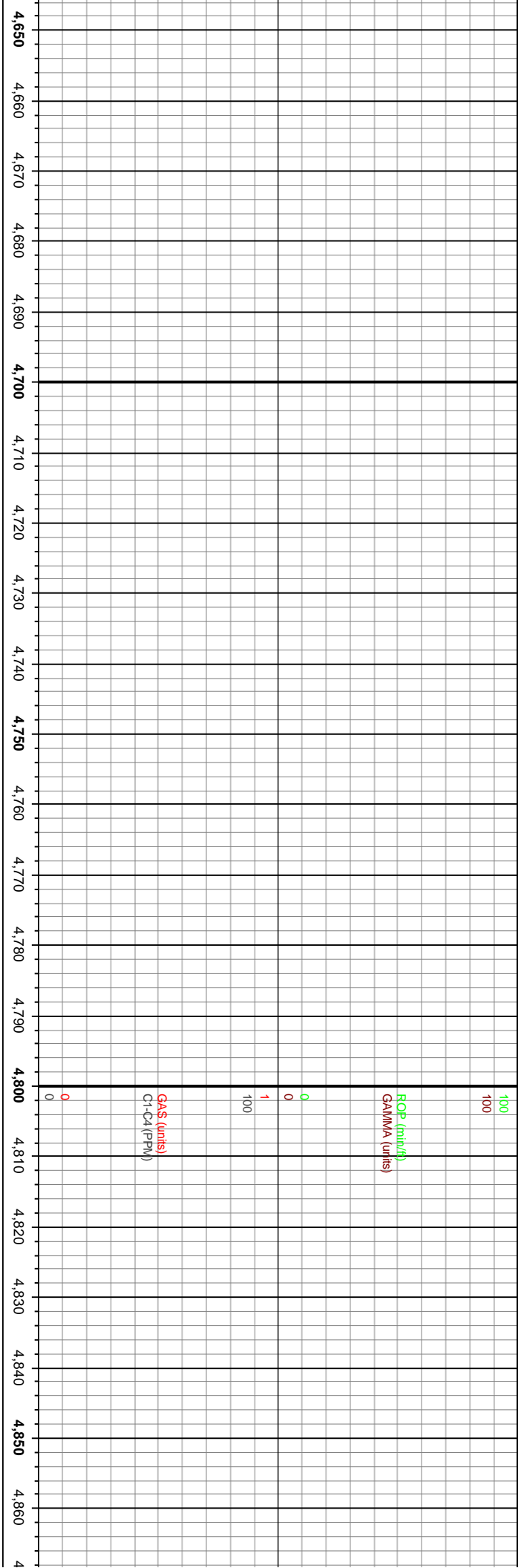




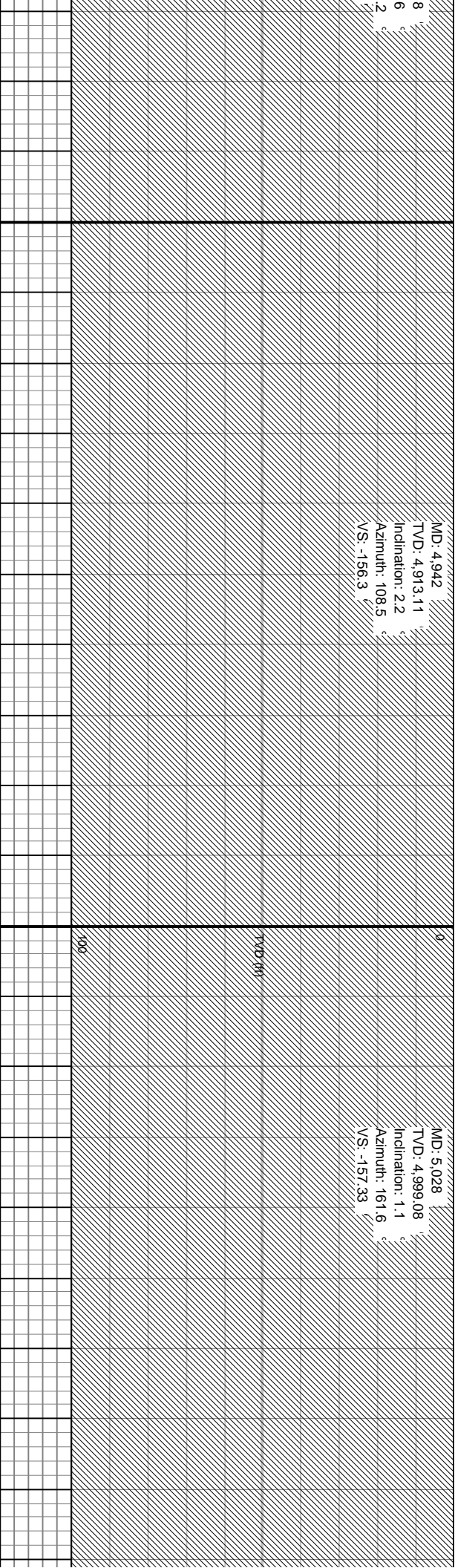
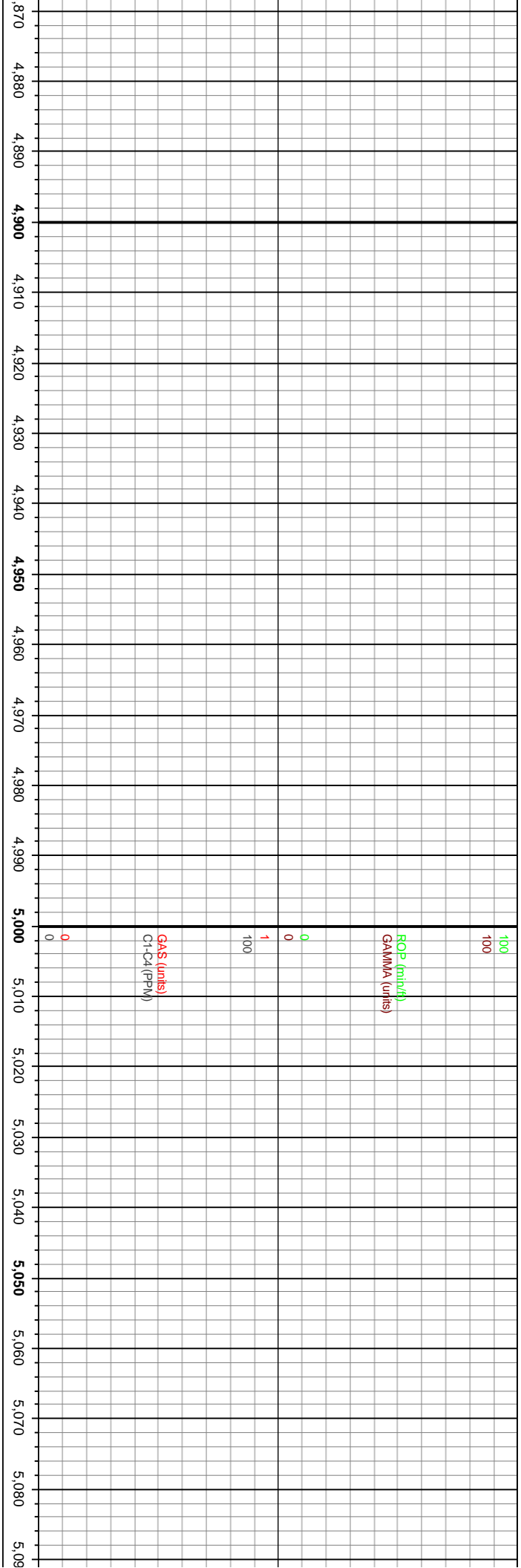


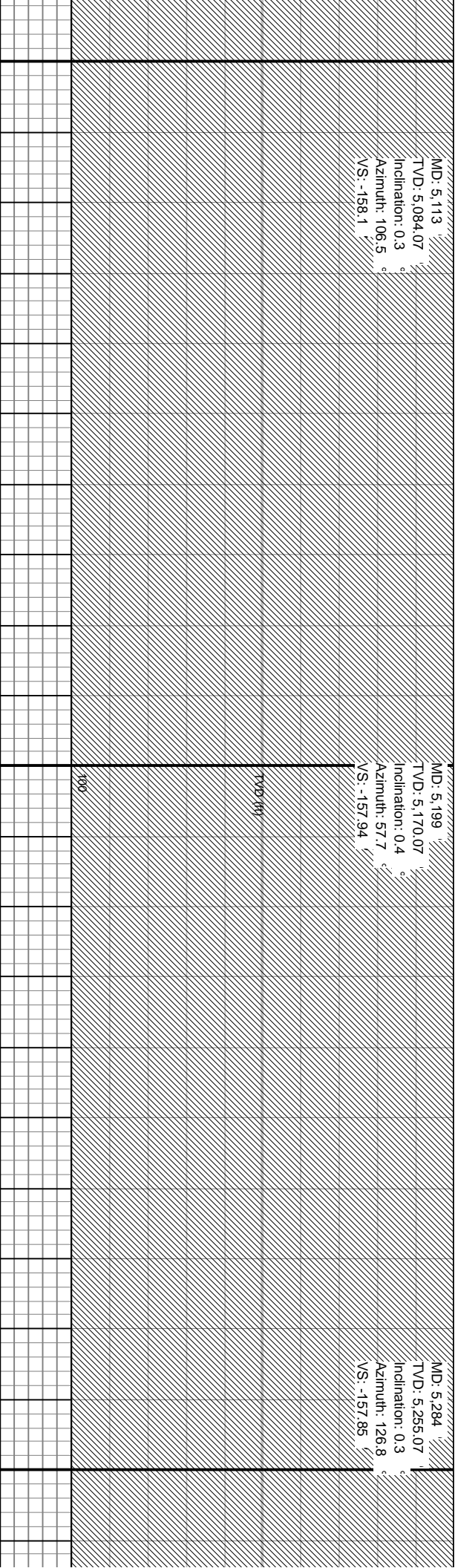
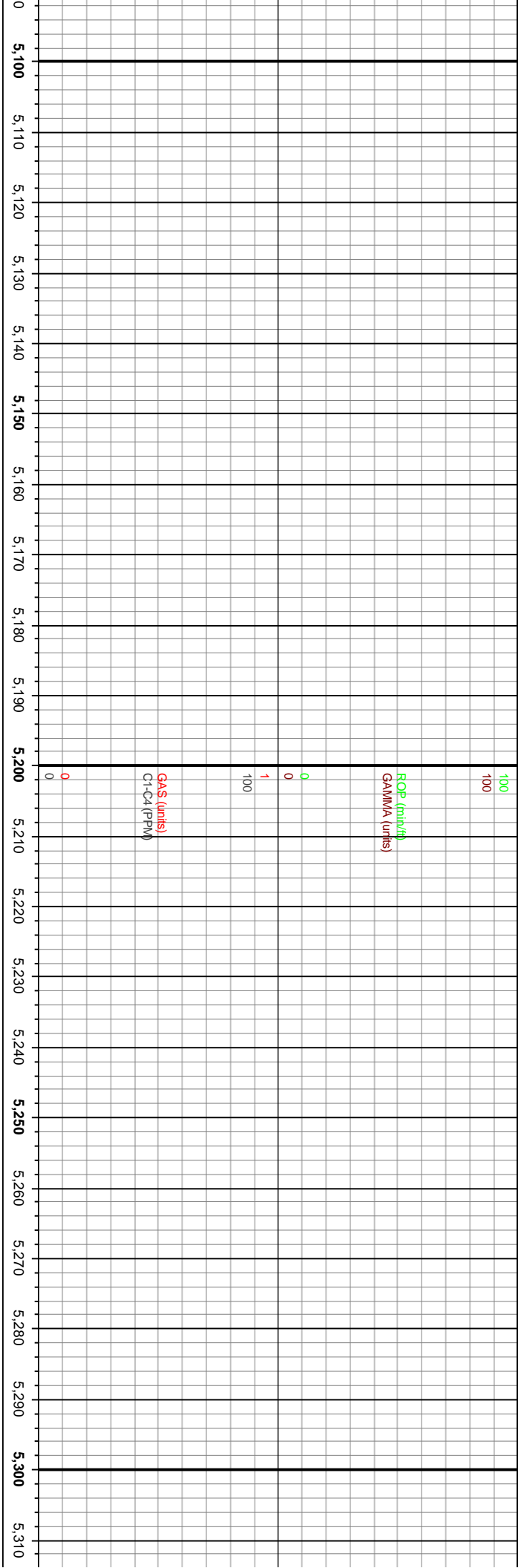


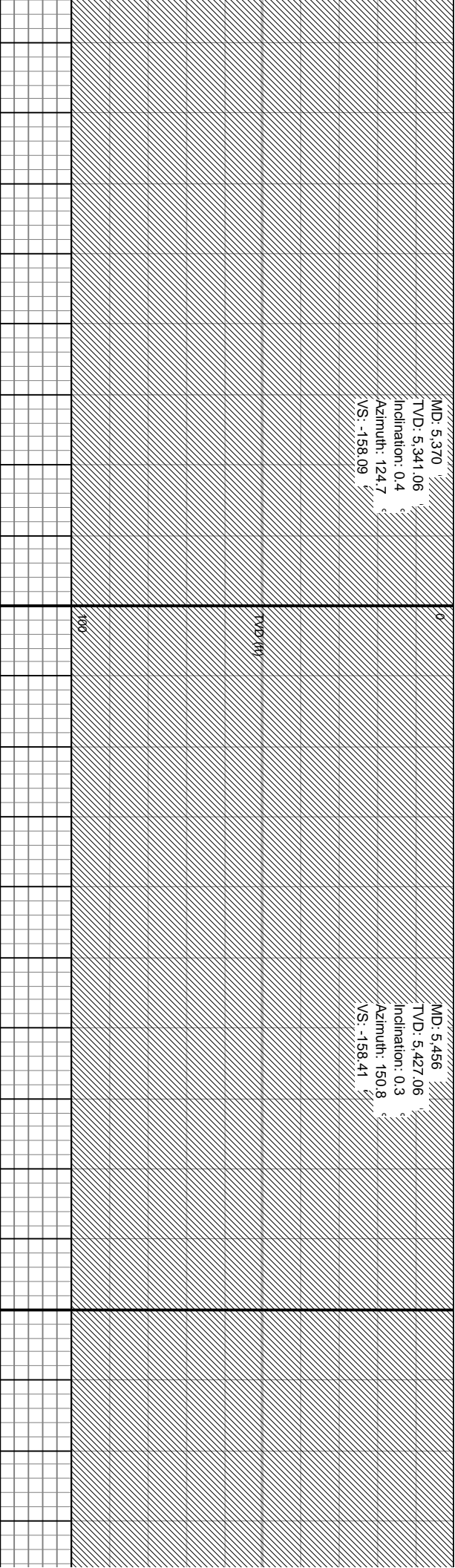
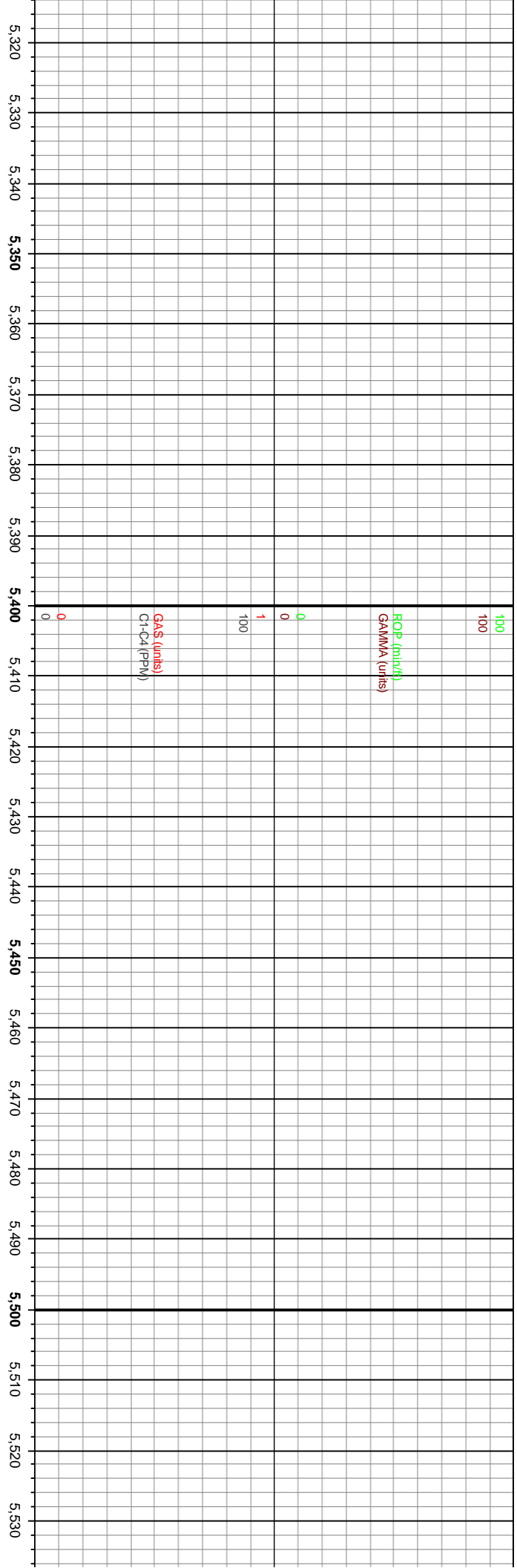


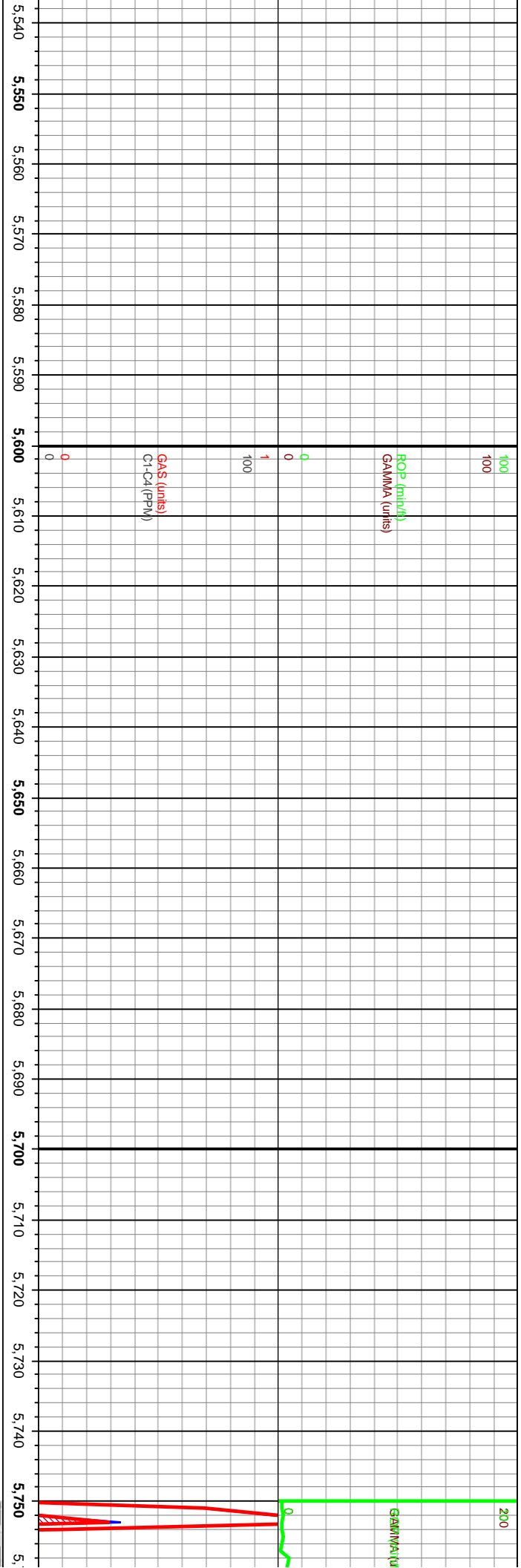








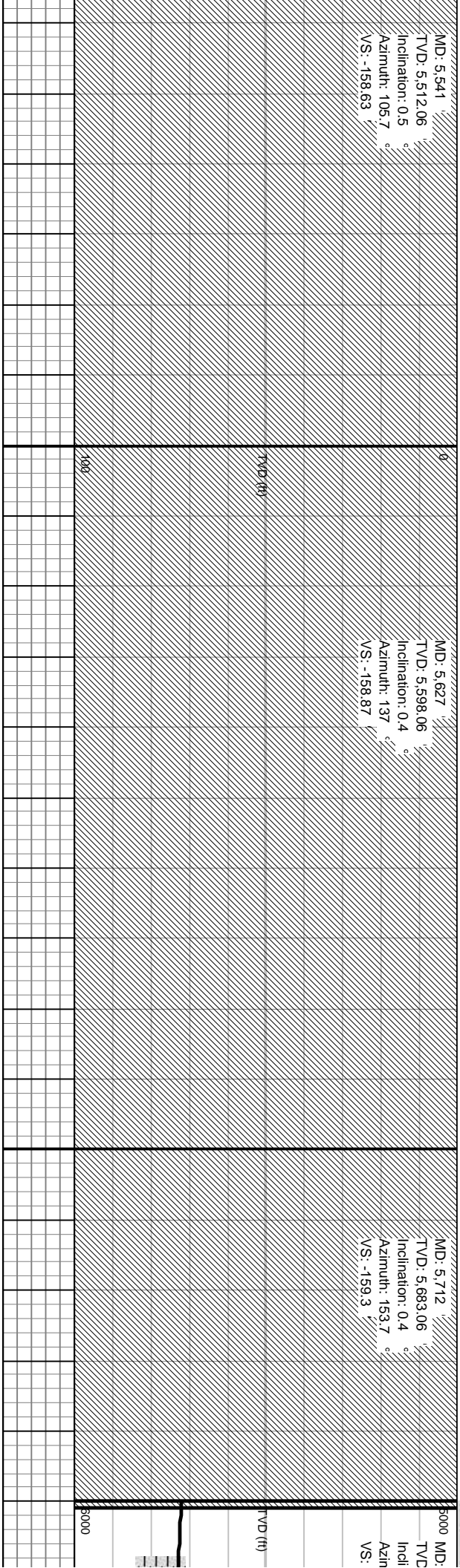




MD: 5,541  
TVD: 5,512.06  
Inclination: 0.5 °  
Azimuth: 105.7 °  
VS: -158.63

MD: 5,627  
TVD: 5,598.06  
Inclination: 0.4 °  
Azimuth: 137 °  
VS: -158.87

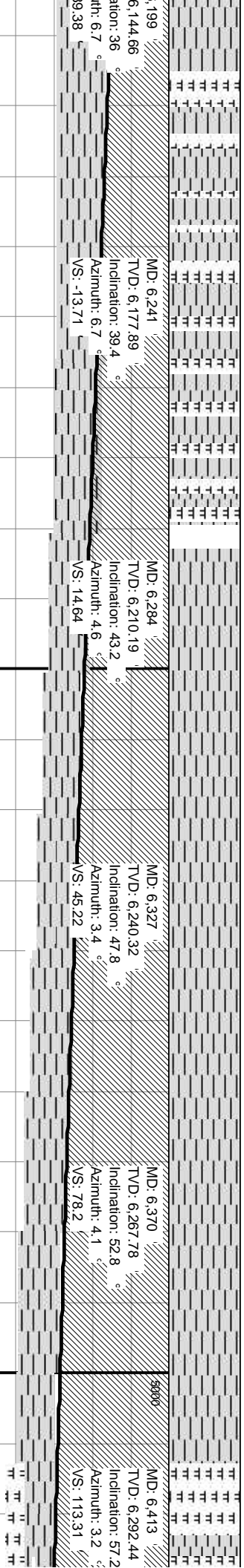
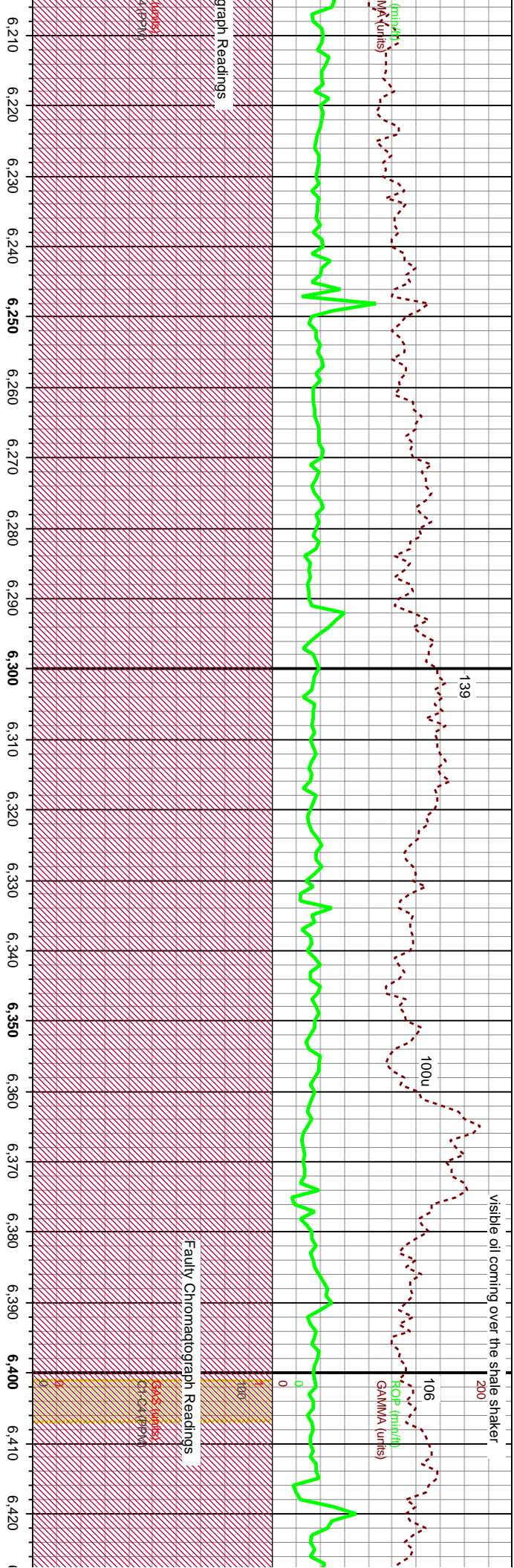
MD: 5,712  
TVD: 5,683.06  
Inclination: 0.4 °  
Azimuth: 153.7 °  
VS: -159.3



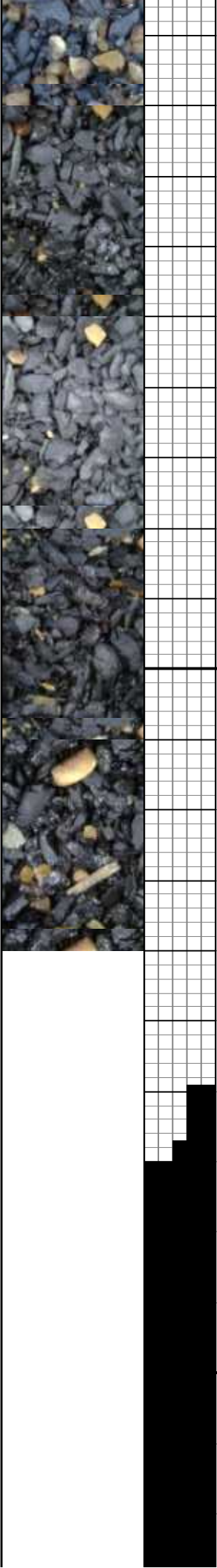








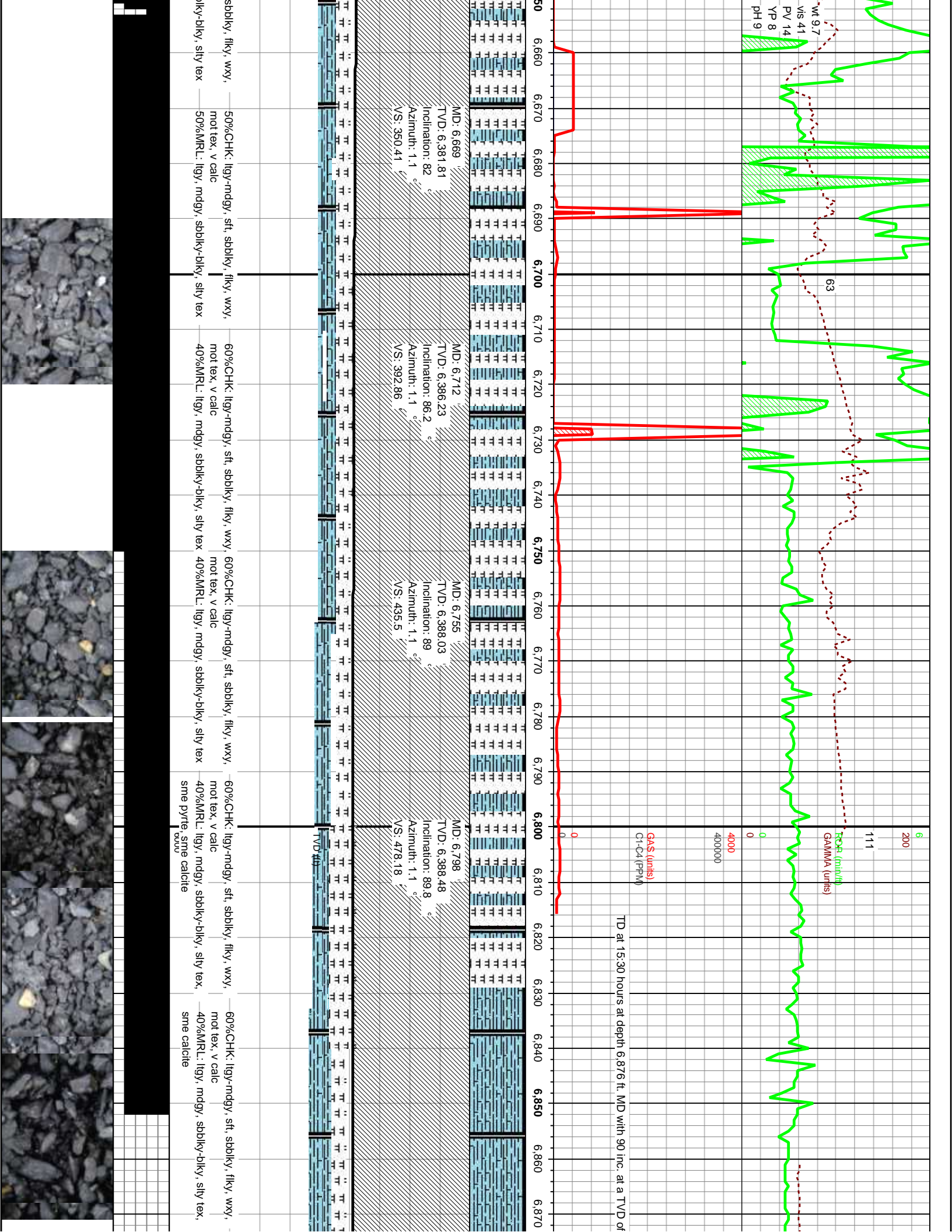
	TVD (ft)			
(ft)				
SH: mdgy-dkgy, k,lgy,frm,sbblky,flky,calc SHYSS:lgy-gry,vfg,sbang, t,fr,ang cmt	95% SH: mdgy-dkgy, grtblk, frm, sbblky, flky, sl calc 5% SHYSS: lgy-gry, vfg, sbang, w str,flky, sl calc fri, atg cmt, t min wh, yel fluor, non calc frm	95% SH: mdgy-dkgy, grtblk, frm, sbblky, flky, sl calc 5% SHYSS: lgy-gry, vfg, sbang, wstr, fri, t min wh, yel fluor, non calc	95% SH: mdgy-dkgy, grtblk, frm, sbblky, flky, sl calc 5% SHYSS: lgy-gry, vfg, sbang, wstr, fri, t min wh, yel fluor, non calc	65% MRL: lgy-mdgy 35% CHK: lgy-mdgy mot tex, v calc
				6000

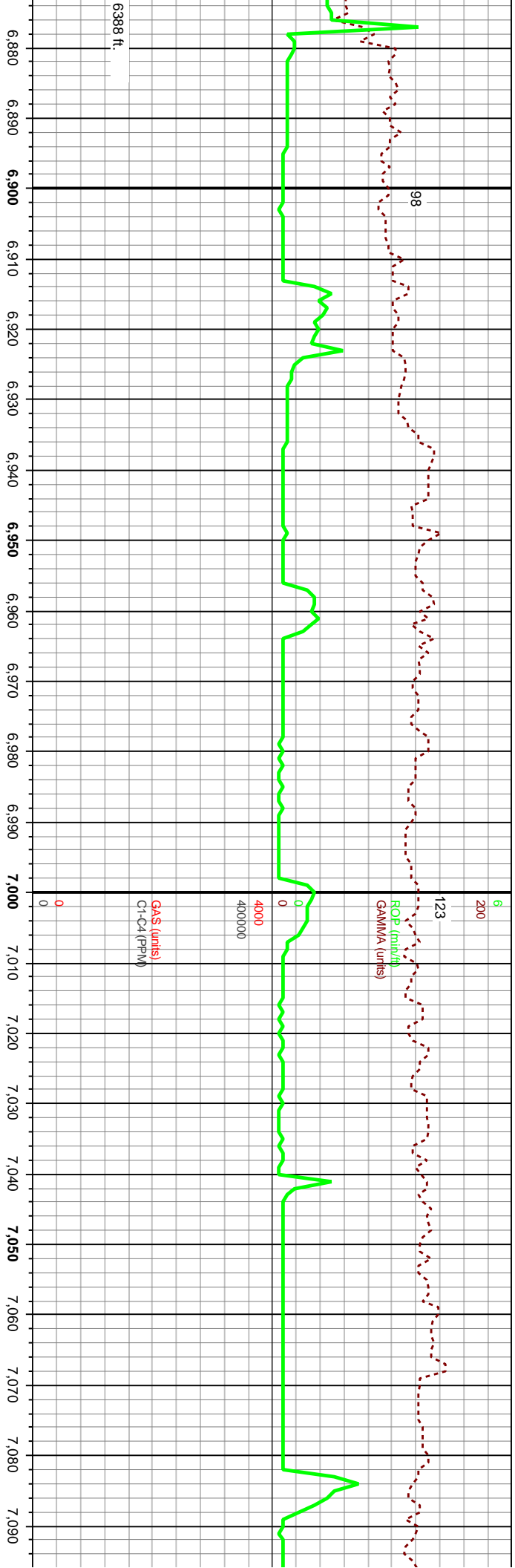




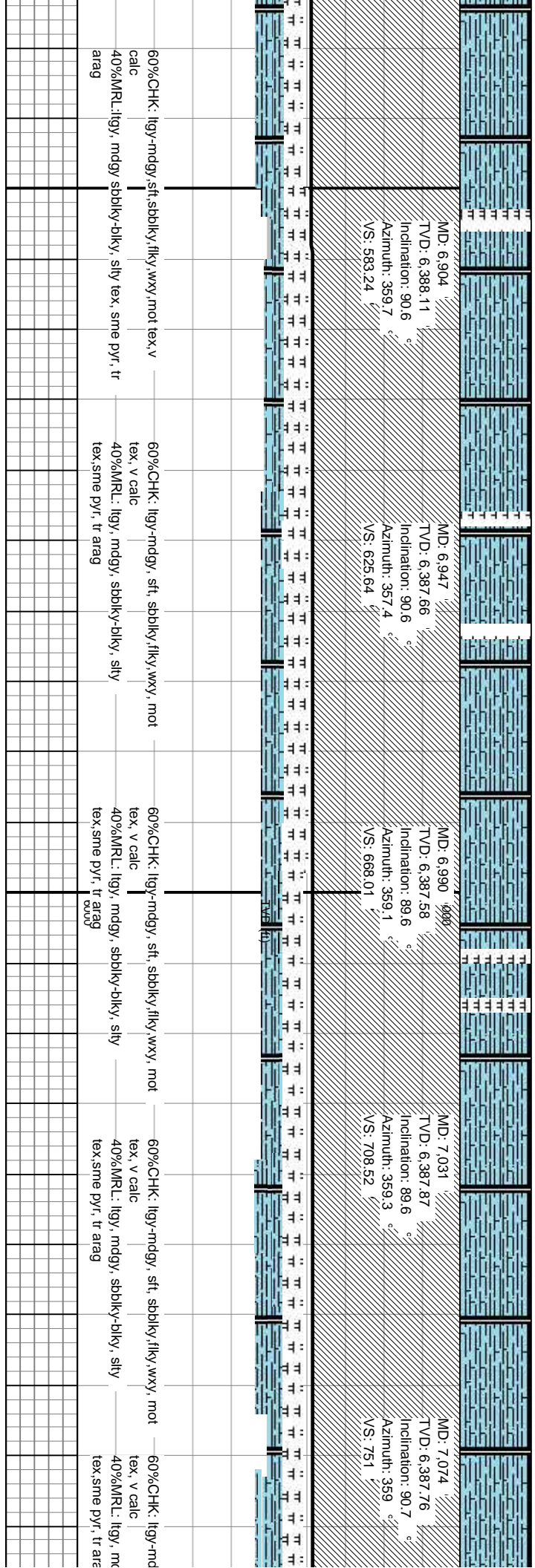






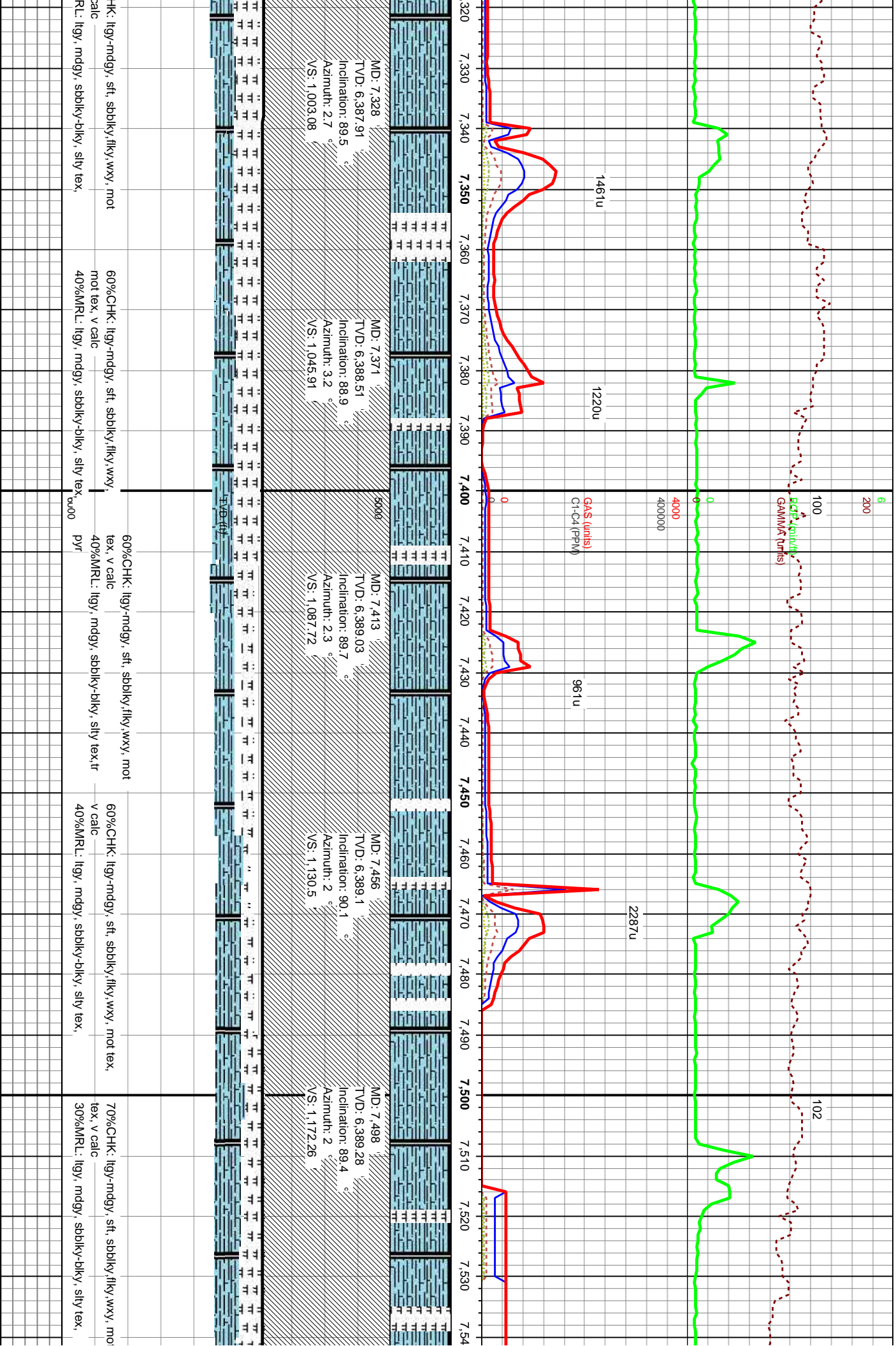


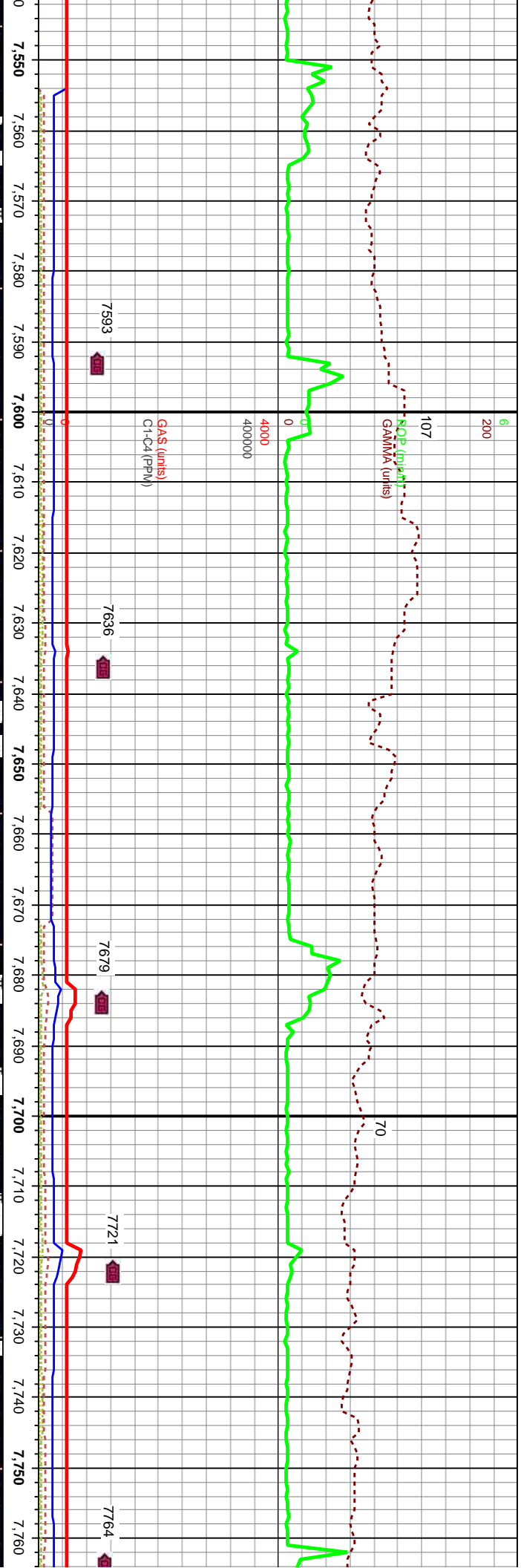
6388 ft.



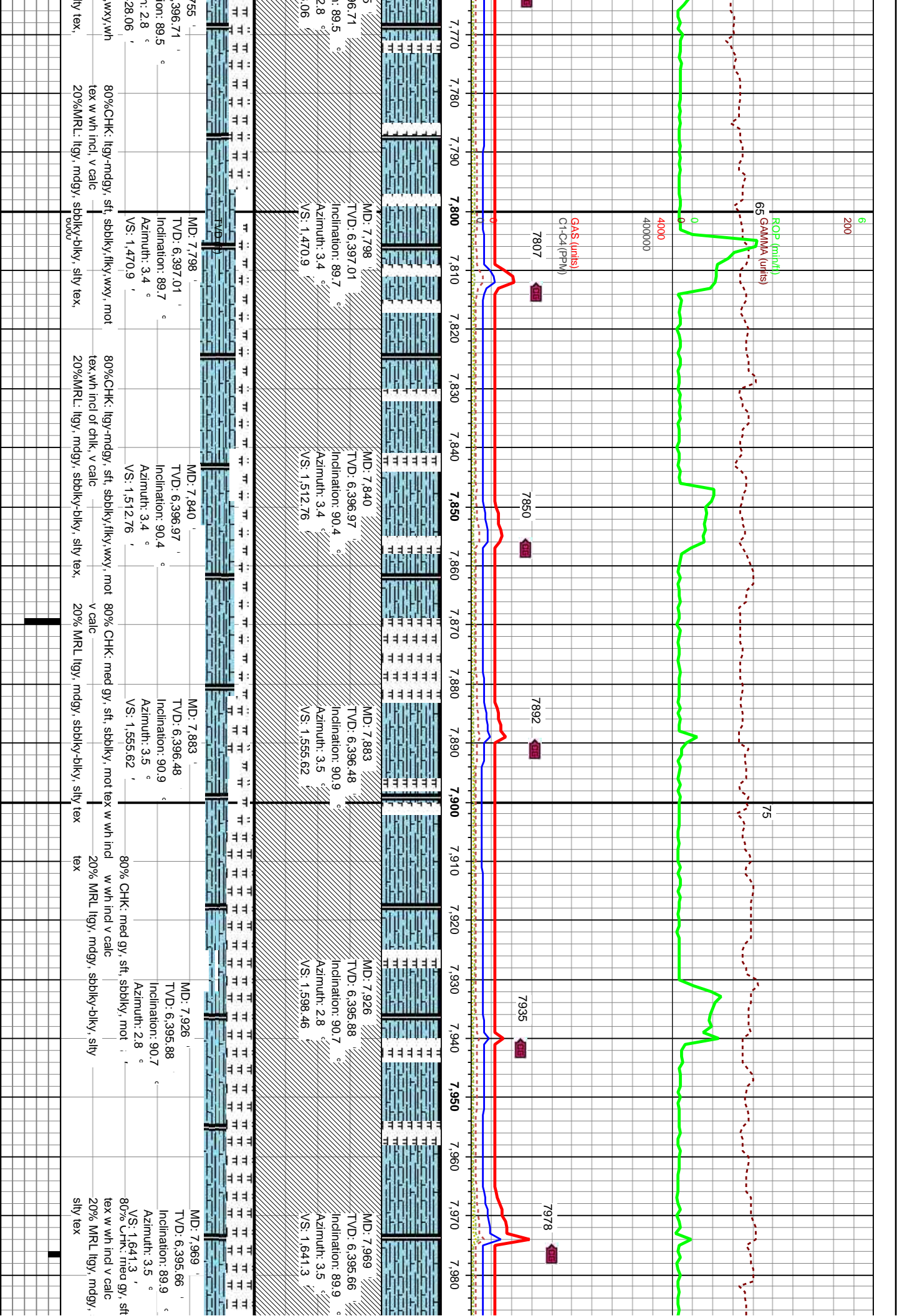




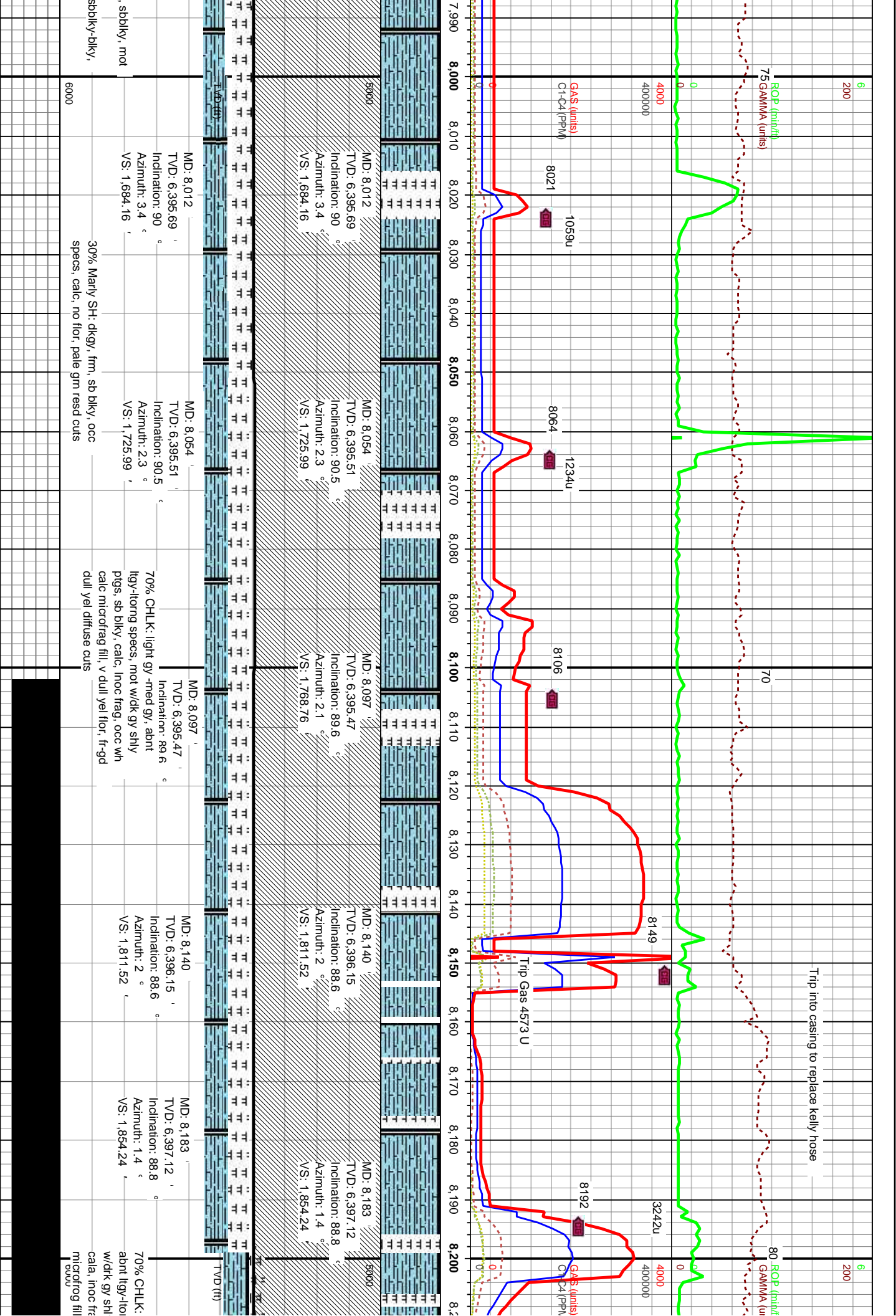


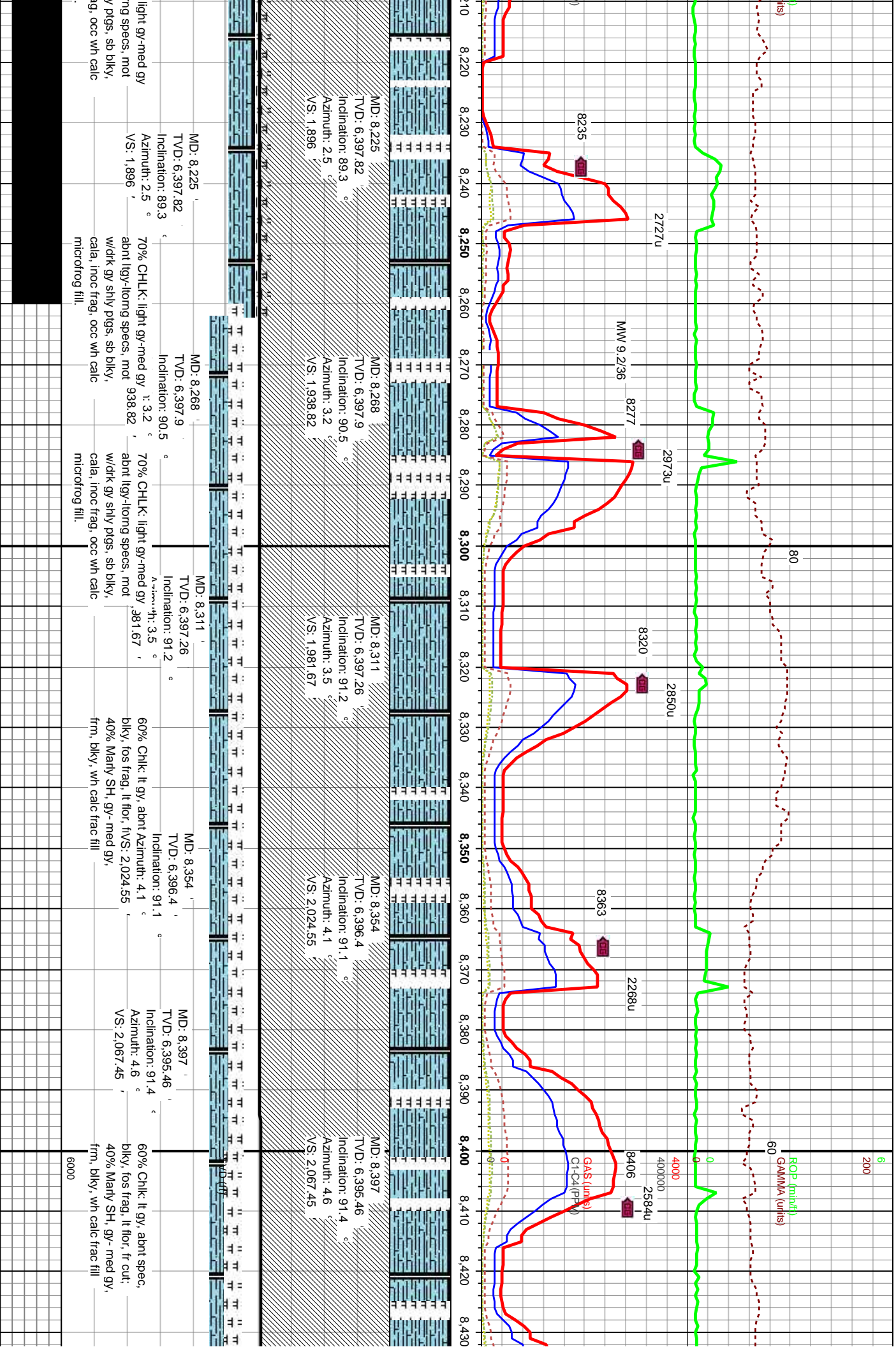


MD: 7.541 TVD: 6,390.07 Inclination: 88.5 ° Azimuth: 2.5 ° VS: 1,215.03 Azimuth: 2.5 ° VS: 1,215.03	MD: 7.584 TVD: 6,391.2 Inclination: 88.5 ° Azimuth: 3.4 ° VS: 1,257.85 Azimuth: 3.4 ° VS: 1,257.85	MD: 7.627 TVD: 6,392.66 Inclination: 87.6 ° Azimuth: 2.5 ° VS: 1,300.65 Azimuth: 2.5 ° VS: 1,300.65	MD: 7.669 TVD: 6,394.46 Inclination: 87.5 ° Azimuth: 3 ° VS: 1,342.43 Azimuth: 3 ° VS: 1,342.43	MD: 7.712 TVD: 6,395.96 Inclination: 88.5 ° Azimuth: 3 ° VS: 1,385.24 Azimuth: 3 ° VS: 1,385.24	MD: 7.754 TVD: 6,397.46 Inclination: 88.5 ° Azimuth: 3 ° VS: 1,428.00 Azimuth: 3 ° VS: 1,428.00
70%CHK: lgy-mdgy, sft, sbblky,flky,wxxy, mot tex, v calc 30%MRIL: lgy, mdgy, sbblky-blky, slty tex.	70%CHK: lgy-mdgy, sft, sbblky,flky,wxxy, mot v calc 30%MRIL: lgy, mdgy, sbblky-blky, slty tex.	80%CHK: lgy-mdgy, sft, sbblky,flky,wxxy,abun wh mot inc, v calc 20%MRIL: lgy, mdgy, sbblky-blky, slty tex, tr arag	80%CHK: lgy-mdgy, sft, sbblky,flky,wxxy,abun wh mot inc, v calc 20%MRIL: lgy, mdgy, sbblky-blky, slty tex,	80%CHK: lgy-mdgy, sft, sbblky,flky mot tex, v calc 20%MRIL: lgy, mdgy, sbblky-blky, slty tex,	80%CHK: lgy-mdgy, sft, sbblky,flky chiky incl mot tex, v calc 20%MRIL: lgy, mdgy, sbblky-blky, slty tex,

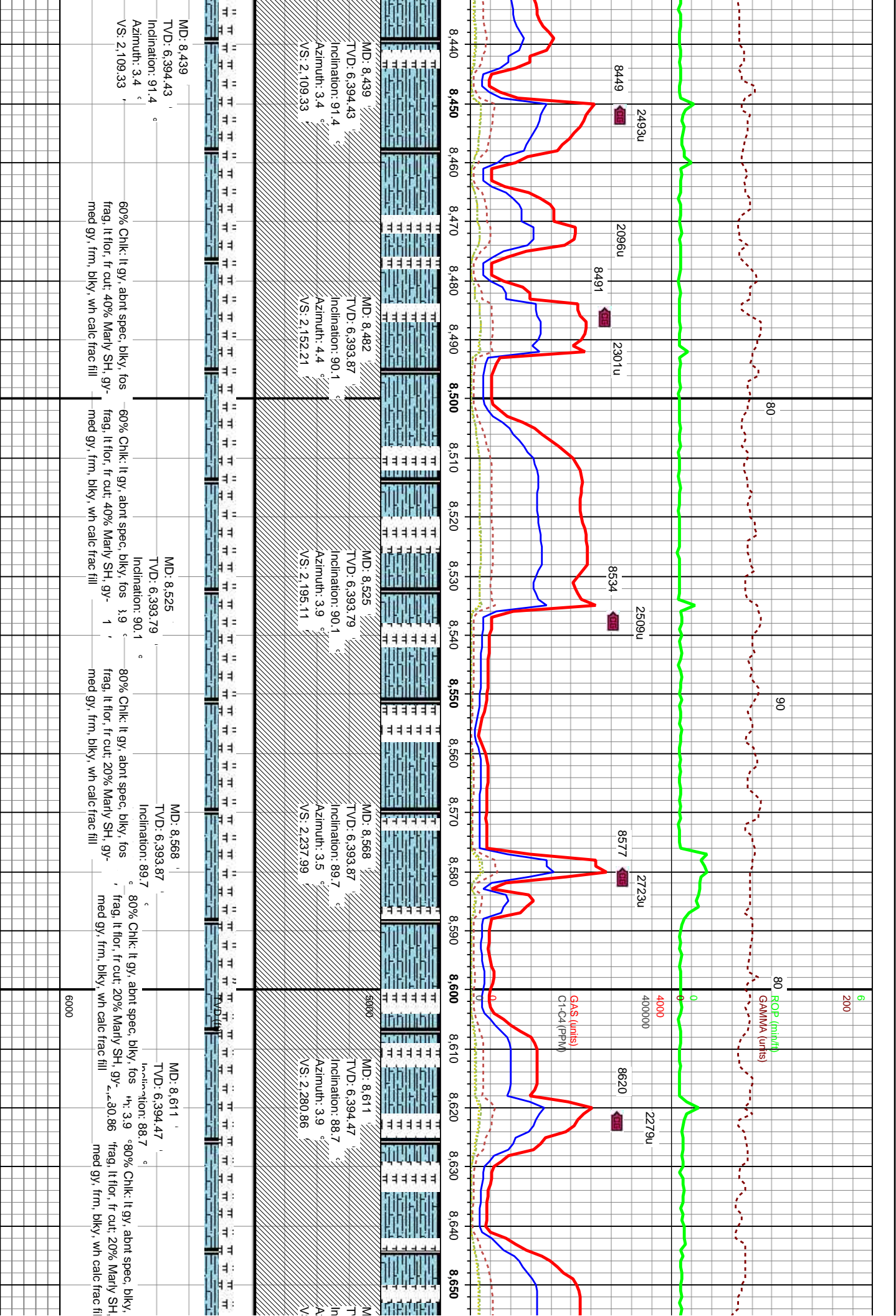


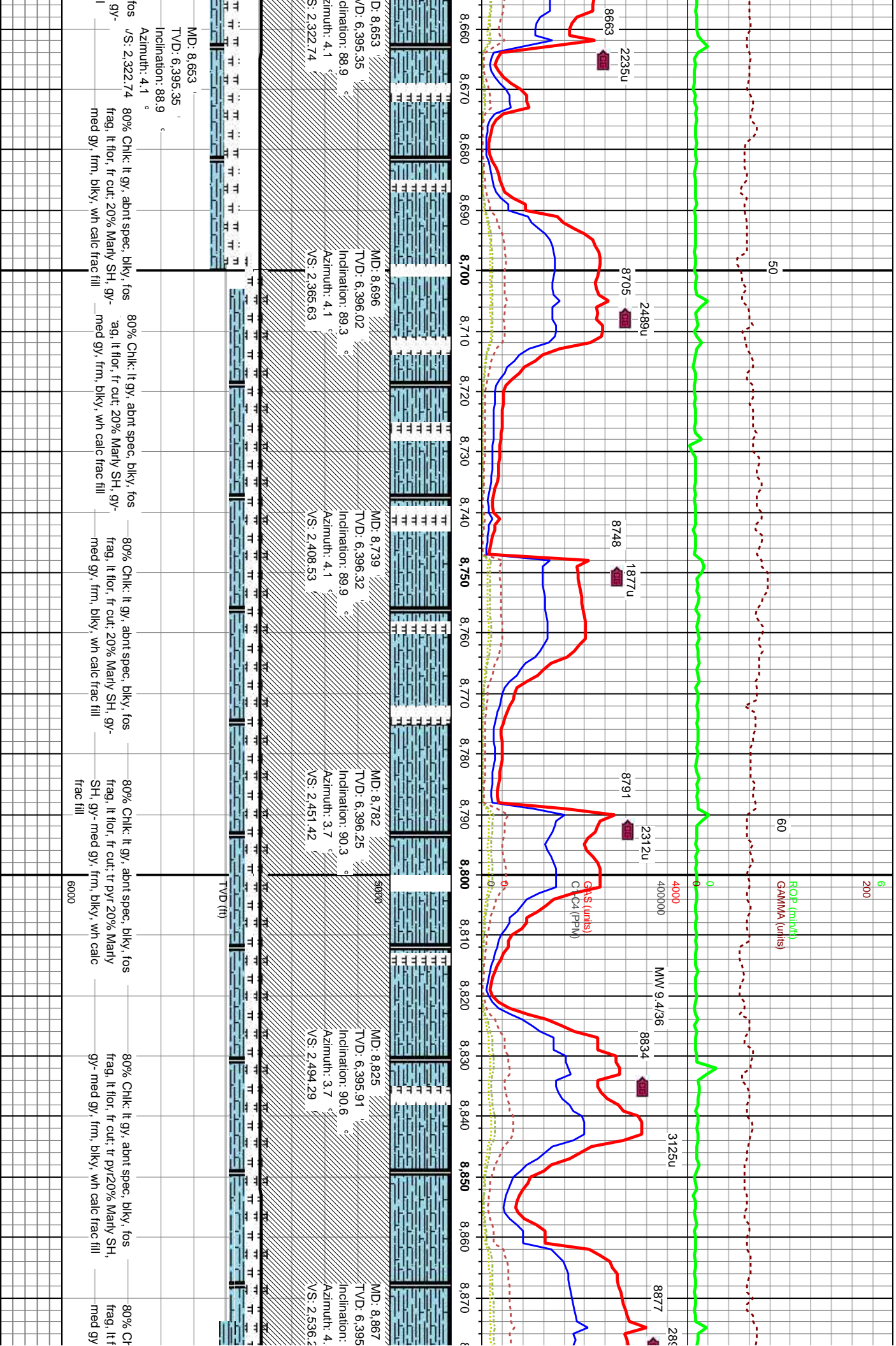


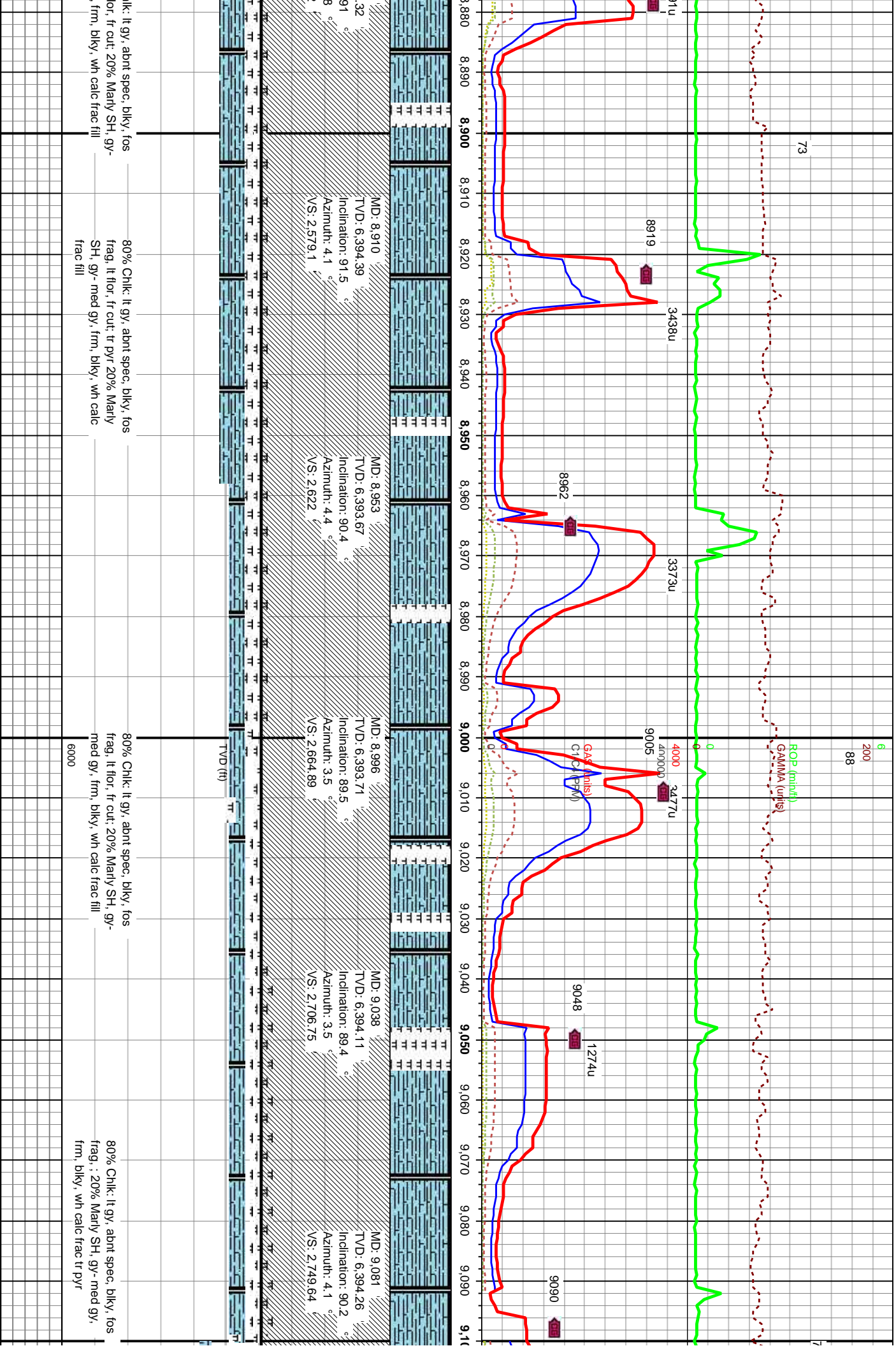














6  
200

71

ROP (in/hr)  
GAMMA (urts)

0  
4000  
400000

Intermittent Gas line freezing

GAS (units)  
C1 ~ "PPM

919

9219

9262

1872u

9304

604u

75

9,110 9,120 9,130 9,140 9,150 9,160 9,170 9,180 9,190 9,200 9,210 9,220 9,230 9,240 9,250 9,260 9,270 9,280 9,290 9,300 9,310 9,320

MD: 9.124  
TVD: 6.394.19  
Inclination: 90  
Azimuth: 3.7  
VS: 2.792.52

MD: 9.167  
TVD: 6.394.49  
Inclination: 89.2  
Azimuth: 3.4  
VS: 2.835.39

MD: 9.210  
TVD: 6.394.83  
Inclination: 89.9  
Azimuth: 4.1  
VS: 2.878.27

MD: 9.252  
TVD: 6.394.64  
Inclination: 90.6  
Azimuth: 3.2  
VS: 2.920.14

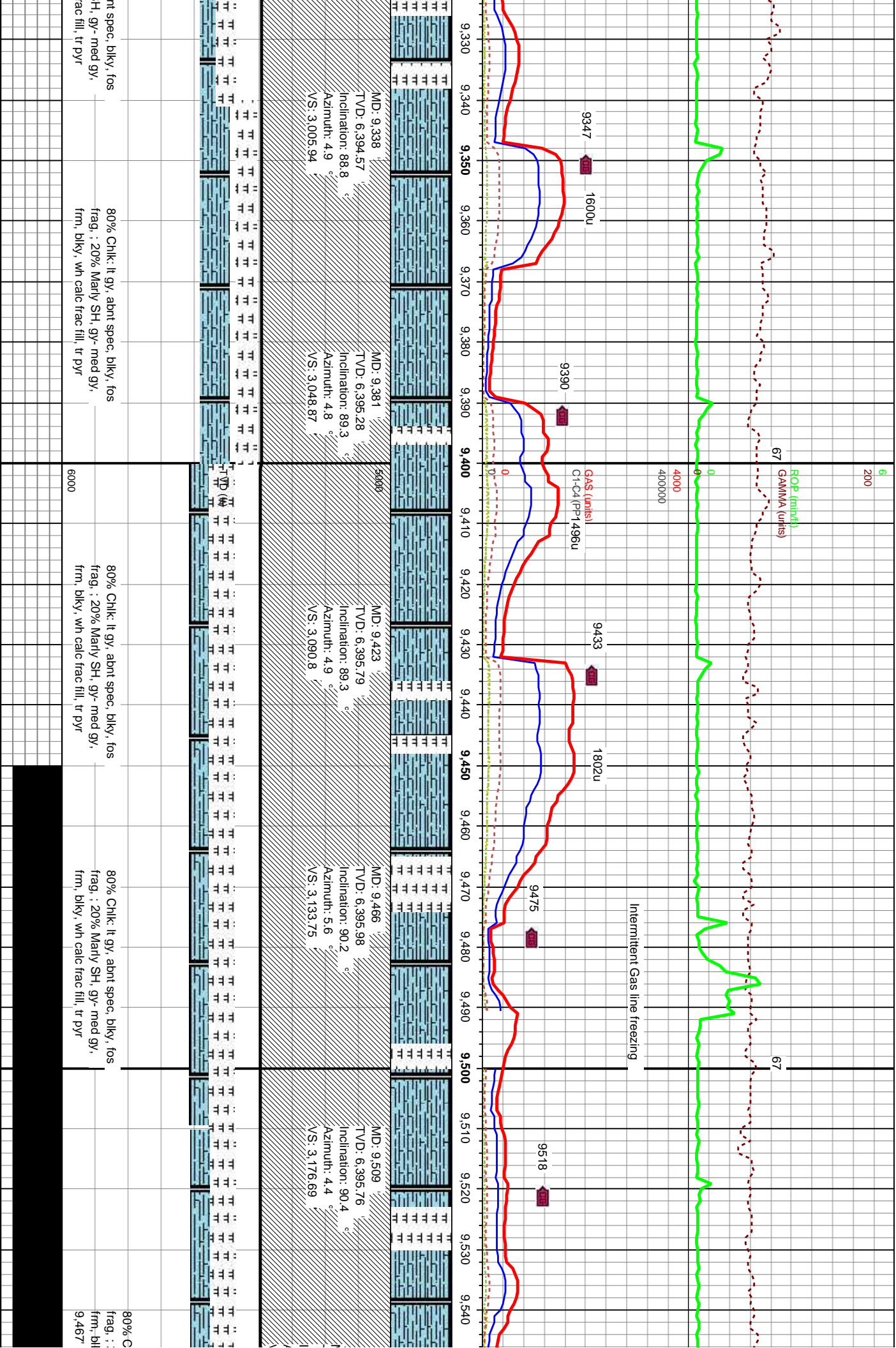
MD: 9.295  
TVD: 6.394.27  
Inclination: 90.4  
Azimuth: 4.4  
VS: 2.963.02

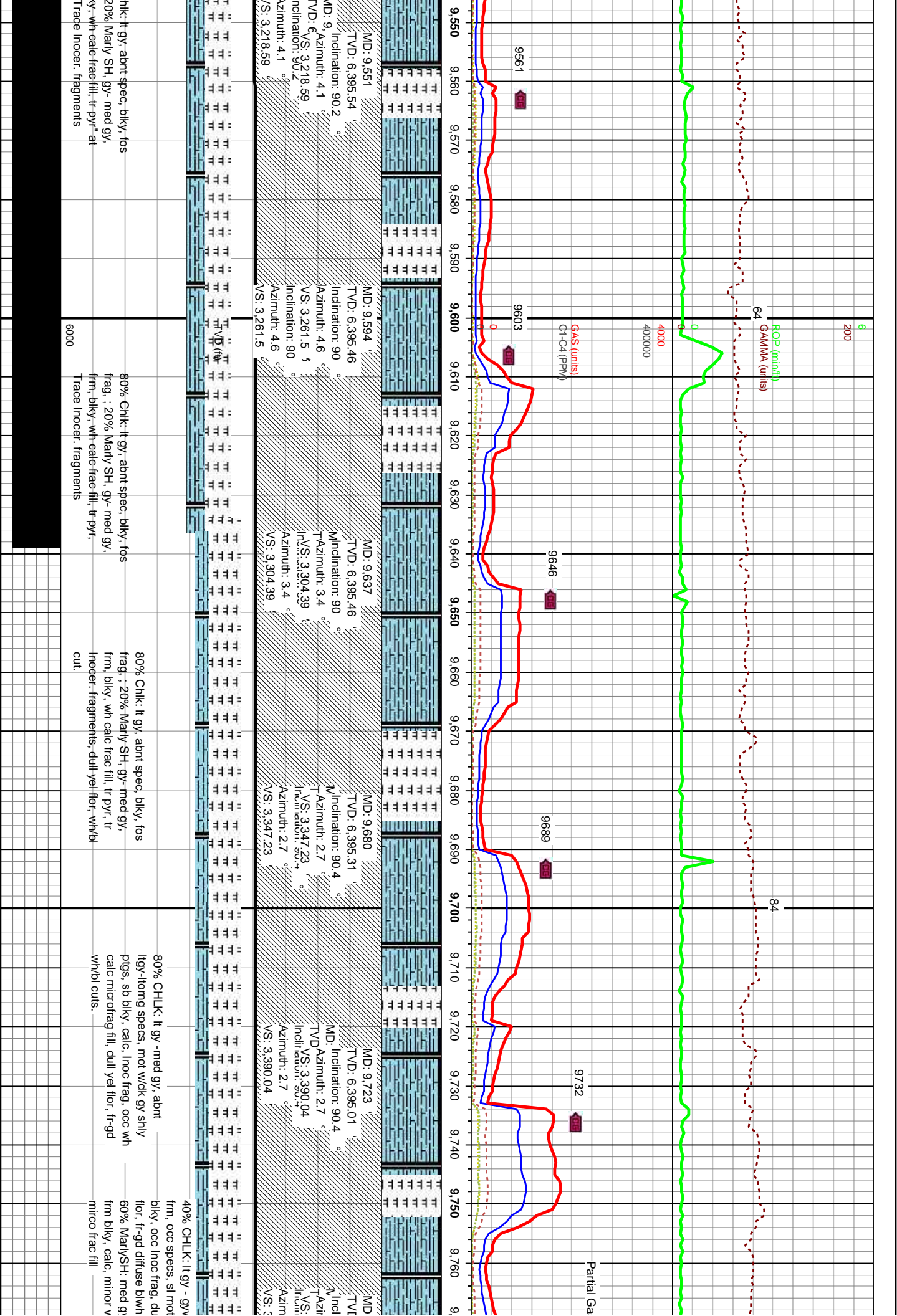
80% Chlk: lt gy, abnt spec, blk, fos  
frag: 20% Marly SH, gy- med gy,  
frm, blk, wh calc frac fill tr pyr

80% Chlk: lt gy, abnt spec, blk, fos  
frag: 20% Marly SH, gy- med gy,  
frm, blk, wh calc frac fill tr pyr

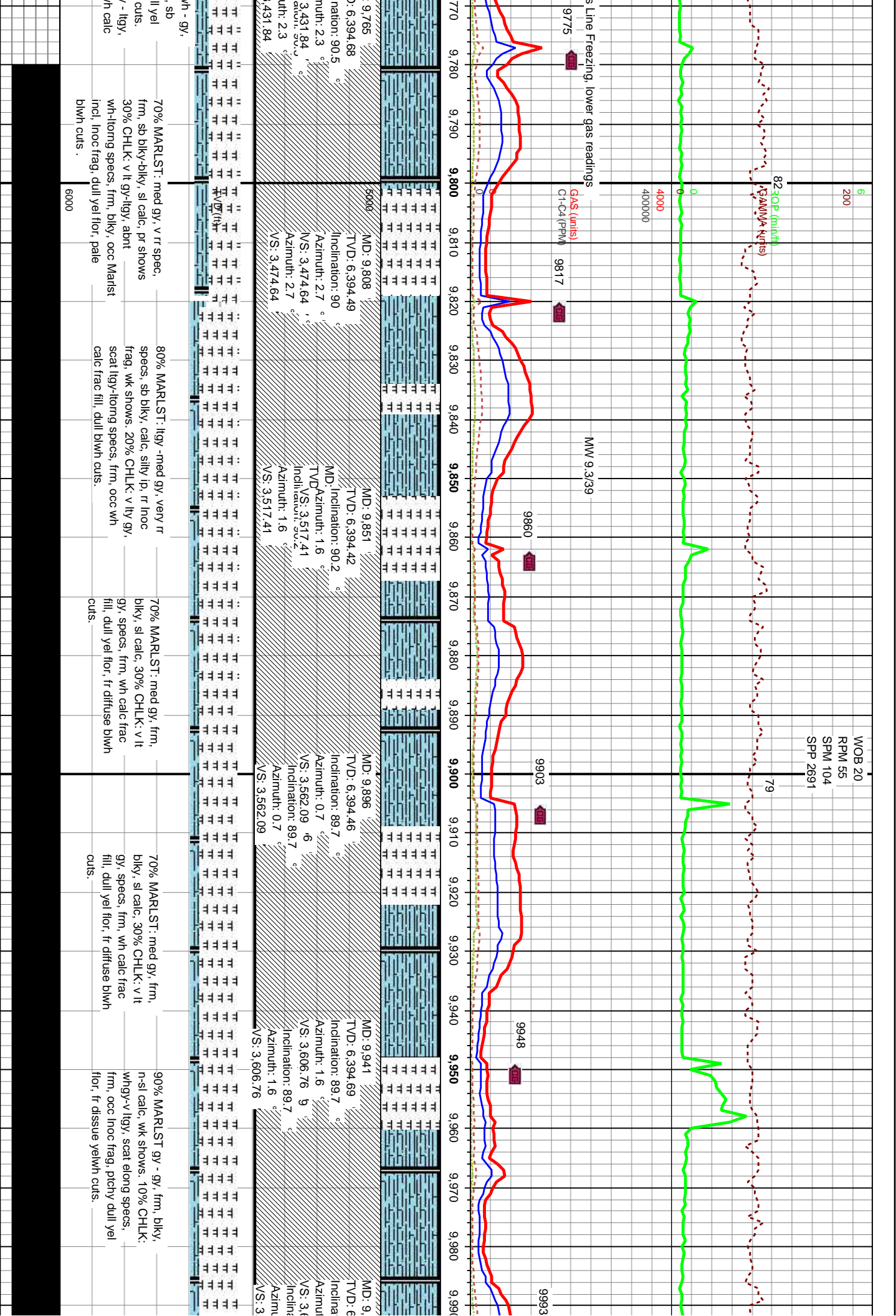
80% Chlk: lt gy, abnt spec, blk, fos  
frag: 20% Marly SH, gy- med gy,  
frm, blk, wh calc frac fill, tr pyr

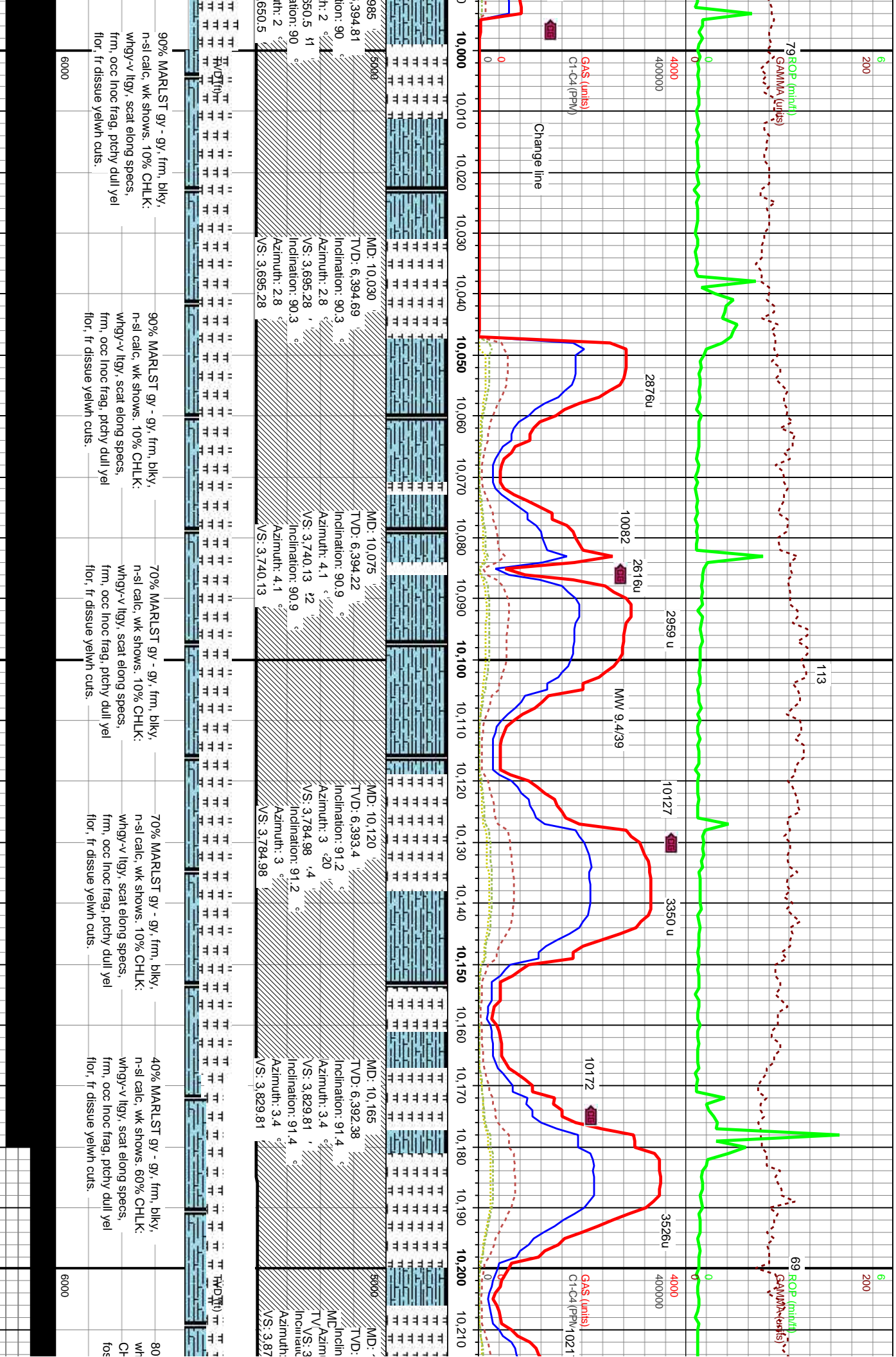
80% Chlk: lt gy, ab  
frag: 20% Marly S  
frm, blk, wh calc f

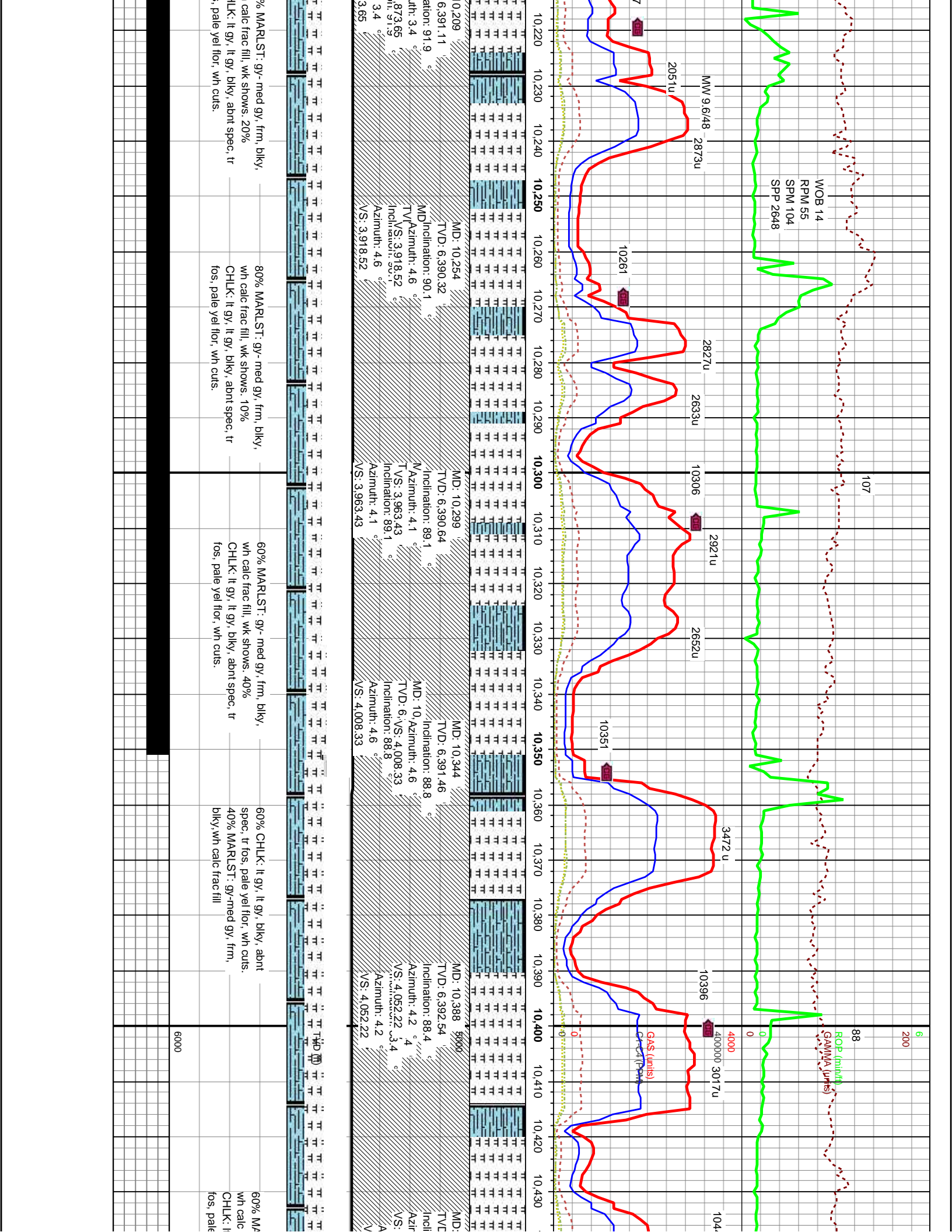










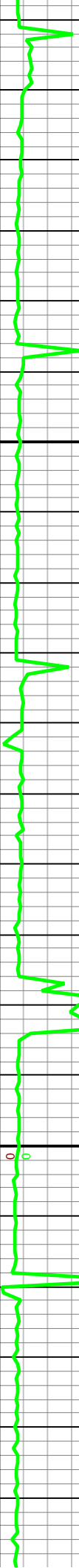




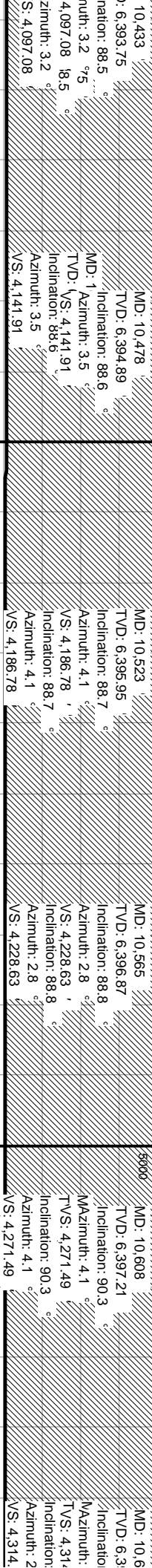
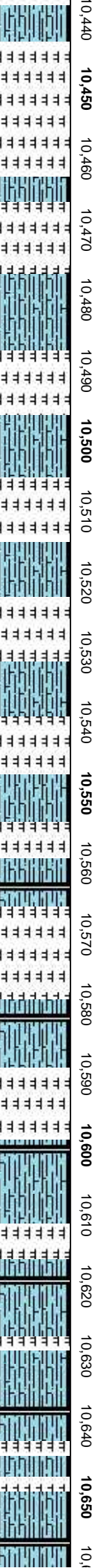
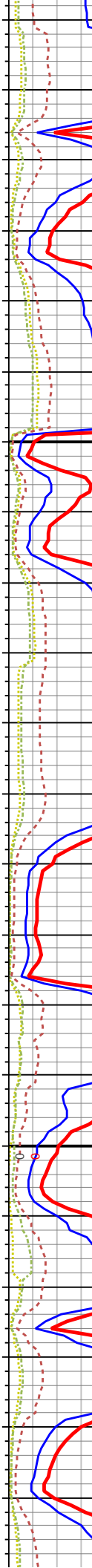
6  
200

104

84.2 (min/d)  
GAMMA (units)



GAS (units)  
C1-C4 (PPM)



MD: 10.478  
TVD: 6.394.89  
Inclination: 88.6 °  
MD: 1 Azimuth: 3.5 °  
TVD: VS: 4.141.91  
Inclination: 88.6 °  
Azimuth: 3.5 °  
VS: 4.141.91

MD: 10.523  
TVD: 6.395.95  
Inclination: 88.7 °  
MD: 1 Azimuth: 4.1 °  
TVD: VS: 4.186.78  
Inclination: 88.7 °  
Azimuth: 4.1 °  
VS: 4.186.78

MD: 10.565  
TVD: 6.396.87  
Inclination: 88.8 °  
MD: 1 Azimuth: 2.8 °  
TVD: VS: 4.228.63  
Inclination: 88.8 °  
Azimuth: 2.8 °  
VS: 4.228.63

MD: 10.608  
TVD: 6.397.21  
Inclination: 90.3 °  
MD: 1 Azimuth: 4.1 °  
TVD: VS: 4.271.49  
Inclination: 90.3 °  
Azimuth: 4.1 °  
VS: 4.271.49

MD: 10.6  
TVD: 6.3  
Inclination:  
MD: 1 Azimuth: 2  
TVD: VS: 4.314  
Inclination:  
Azimuth: 2  
VS: 4.314

RLST: gy- med gy, frm, blk,  
frac fill, wk shows. 40%  
gy, lt gy, blk, abnt spec, t  
yel flor, wh cuts.

50% CHLK: lt gy, abnt spec, blk, fos  
frag, pale yel flor, wh cut, 50%  
MARLST: gy- med gy, frm, blk, wh  
calc frac fill, wk shows.

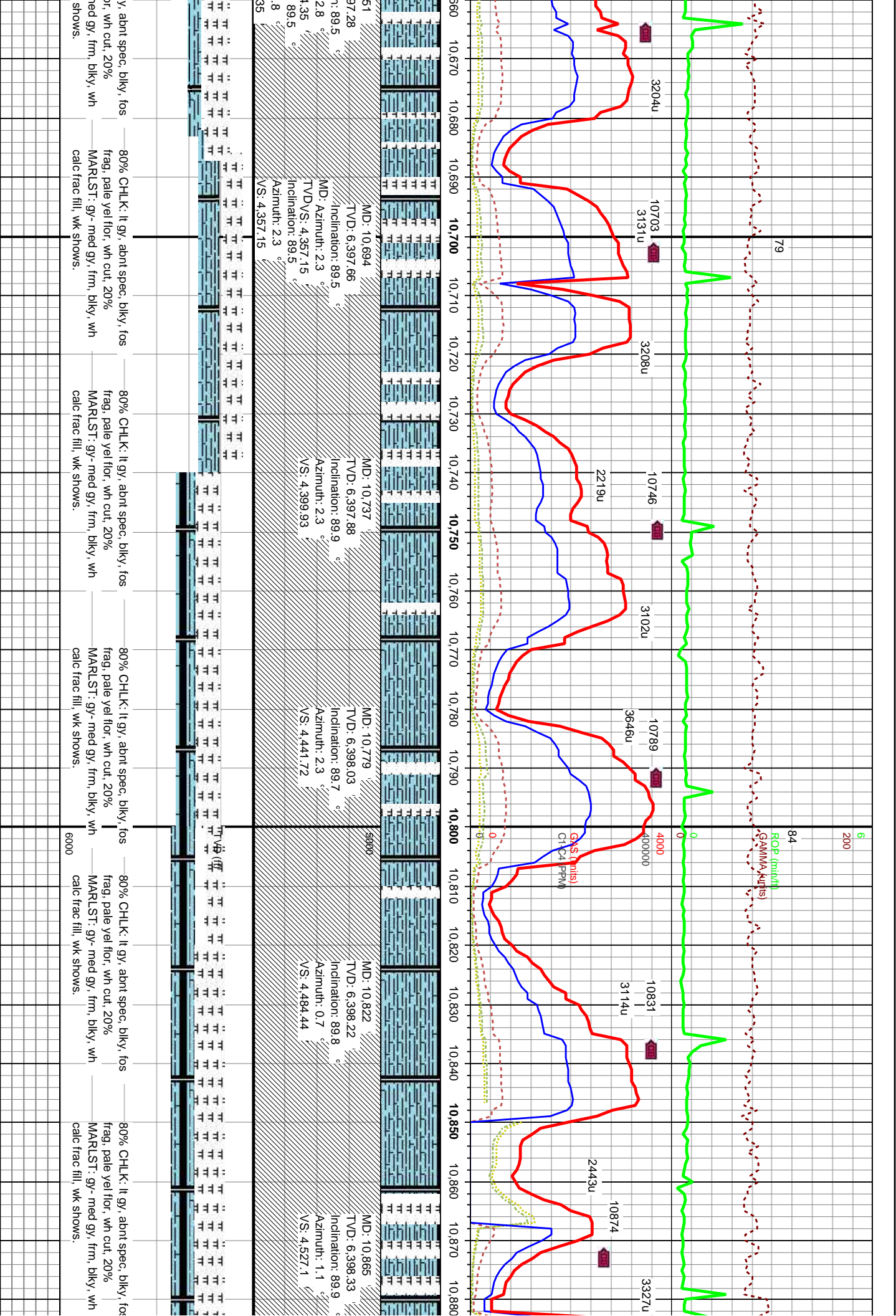
50% CHLK: lt gy, abnt spec, blk, fos  
ag, pale yel flor, wh cut, 50%  
MARLST: gy- med gy, frm, blk, wh  
calc frac fill, wk shows.

50% CHLK: lt gy, abnt spec, blk, fos  
frag, pale yel flor, wh cut, 50%  
MARLST: gy- med gy, frm, blk, wh  
calc frac fill, wk shows.

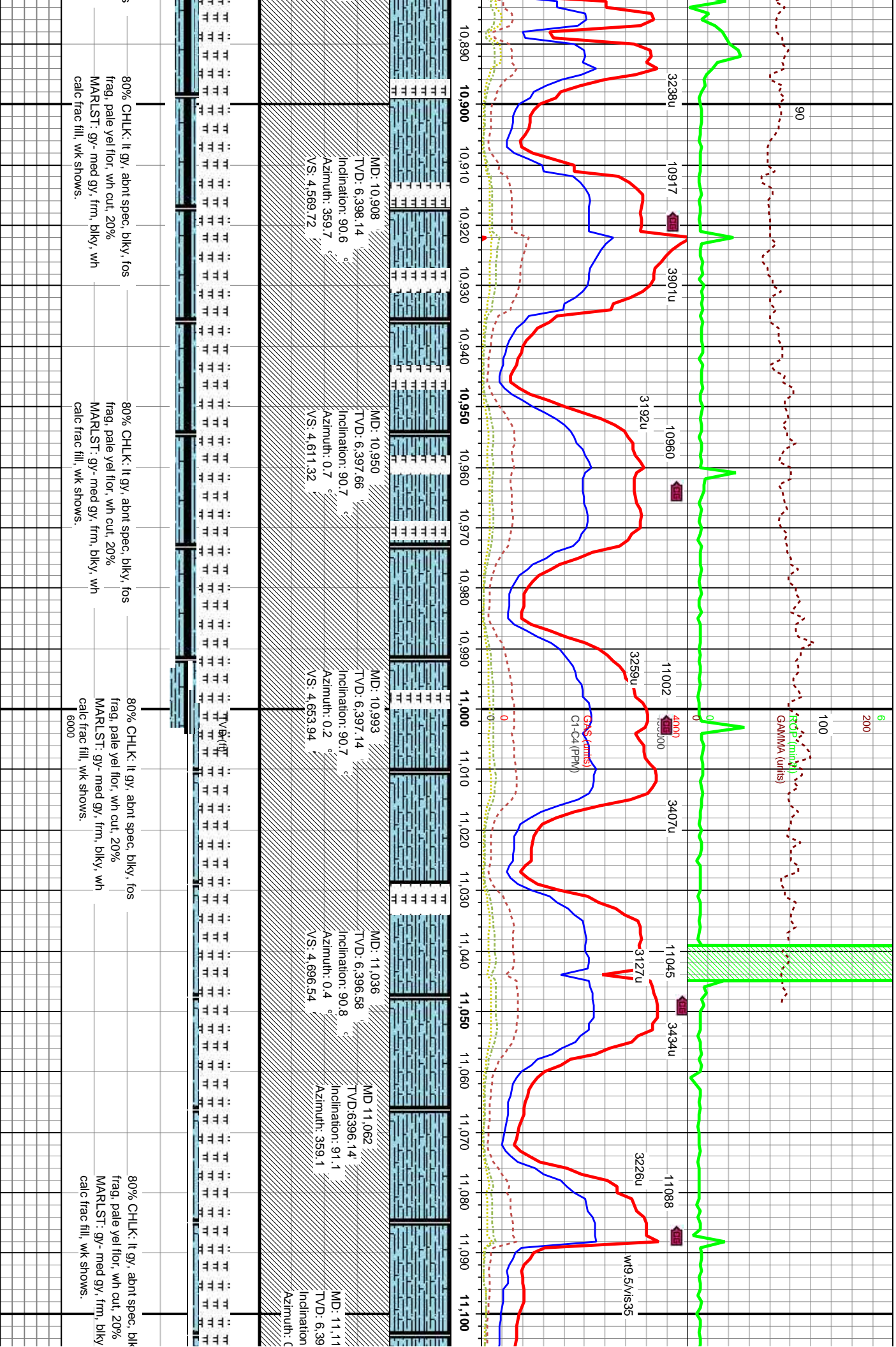
70% CHLK: lt gy, abnt spec, blk, fos  
frag, pale yel flor, wh cut, 30%  
MARLST: gy- med gy, frm, blk, wh  
calc frac fill, wk shows.

80% CHLK: lt g  
frag, pale yel fl  
MARLST: gy- n  
calc frac fill, wk

6000







TD @ 11114' 02/26/2013

