

Décollement  
Consulting  
Inc.



Scale: 3.66" / 100'  
Measured Depth Log

Well Name Wetco Farms F-J-4HC

Location NWNW Sec 4, T4N, R63W

State Colorado

Country USA

API Number 05-123-36767-00

Spud Date 3/1/2013

Surface Coordinates 253 FNL X 170 FWL (Lat: 40.34799, 104.45167)

County Weld

Rig Number Ensign 136

Ground Elevation 4,569

Logged Interval 5,800

Formation Codell

K.B. Elevation 4,581

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

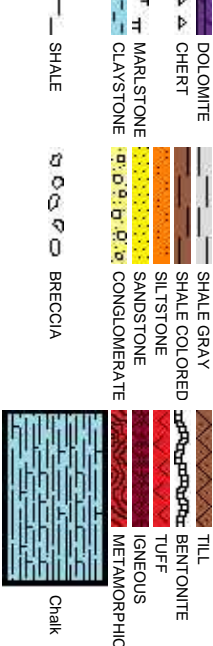
1500

Geologist

c Drillings

ng Inc.

Rock Types

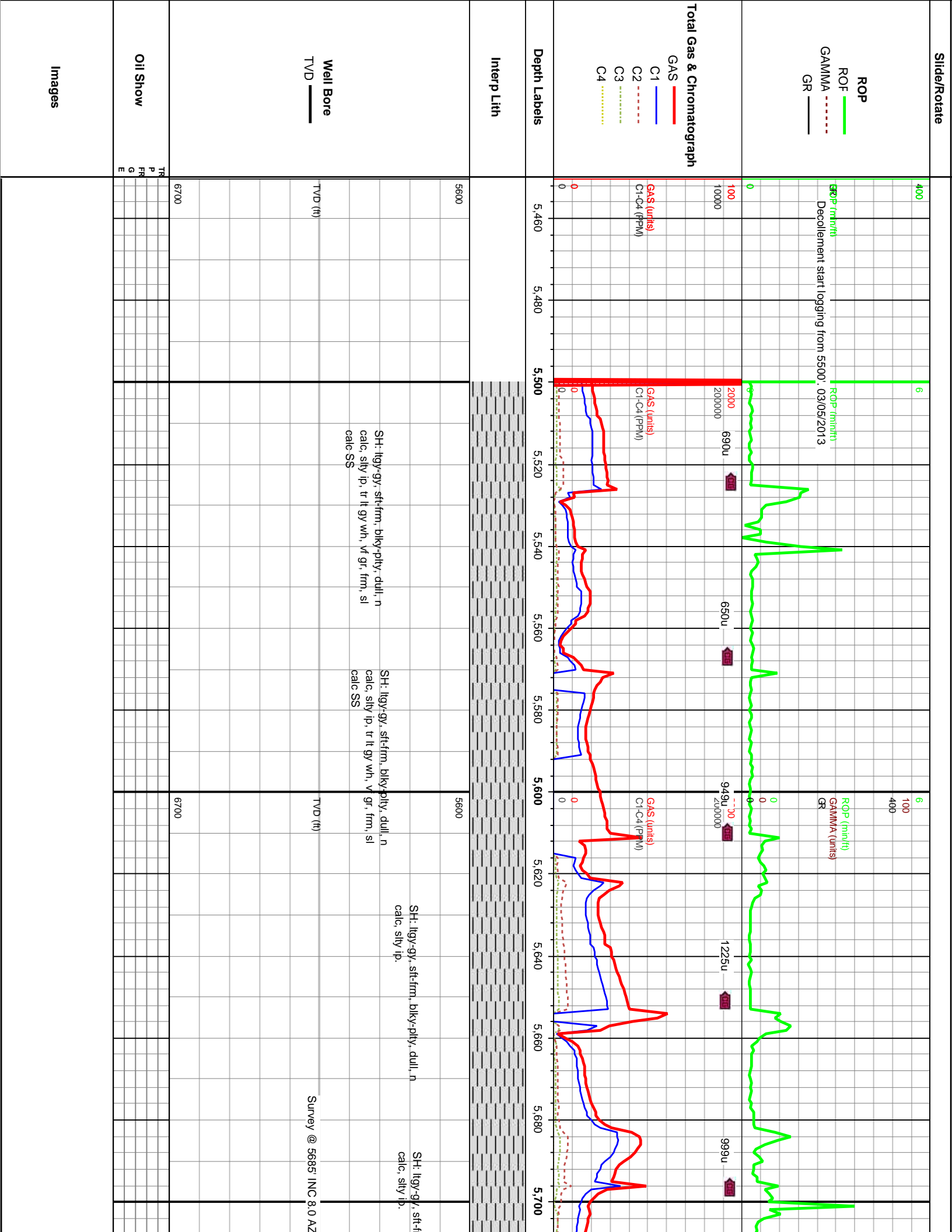


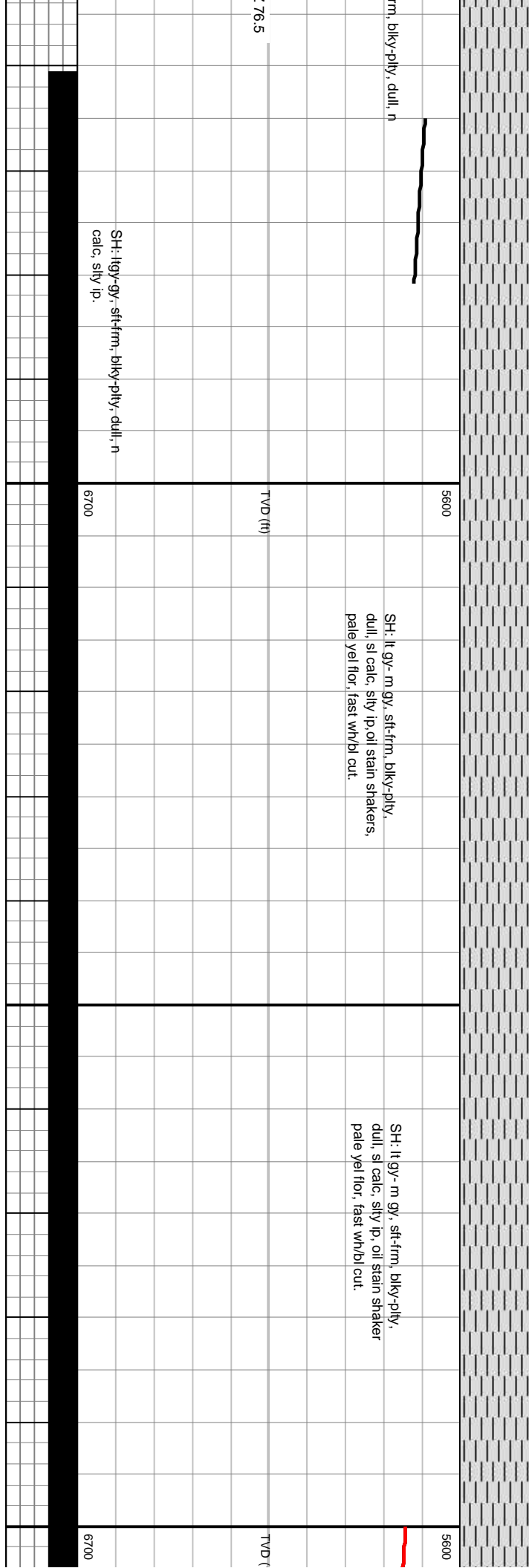
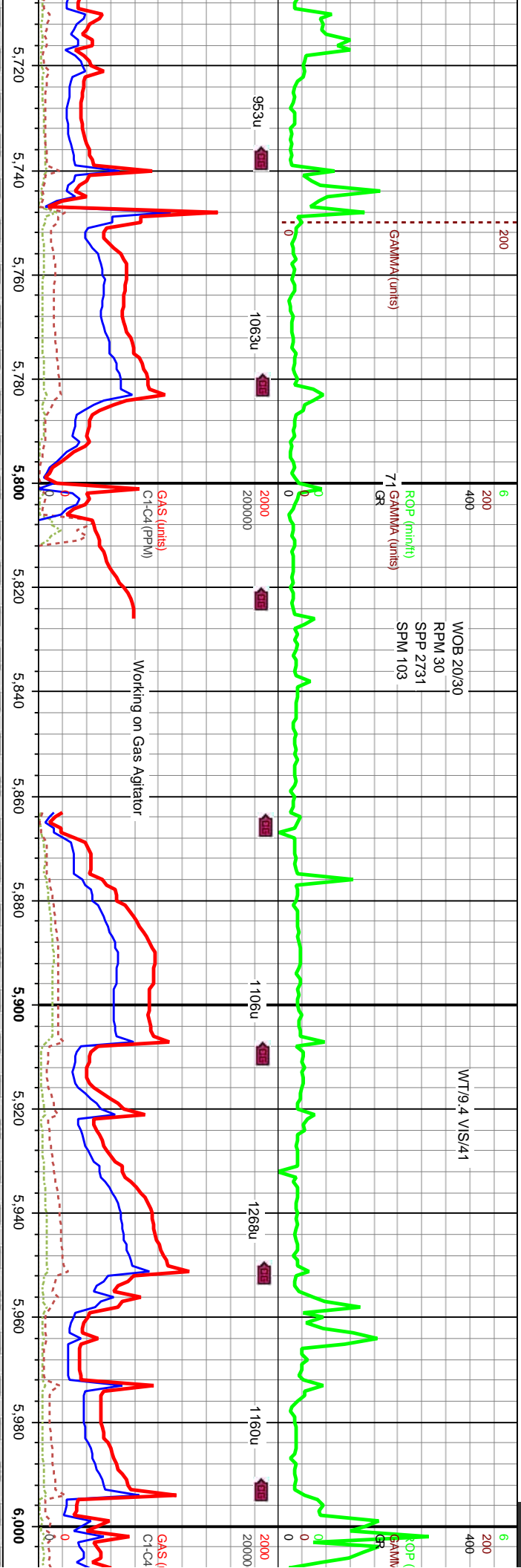
Accessories

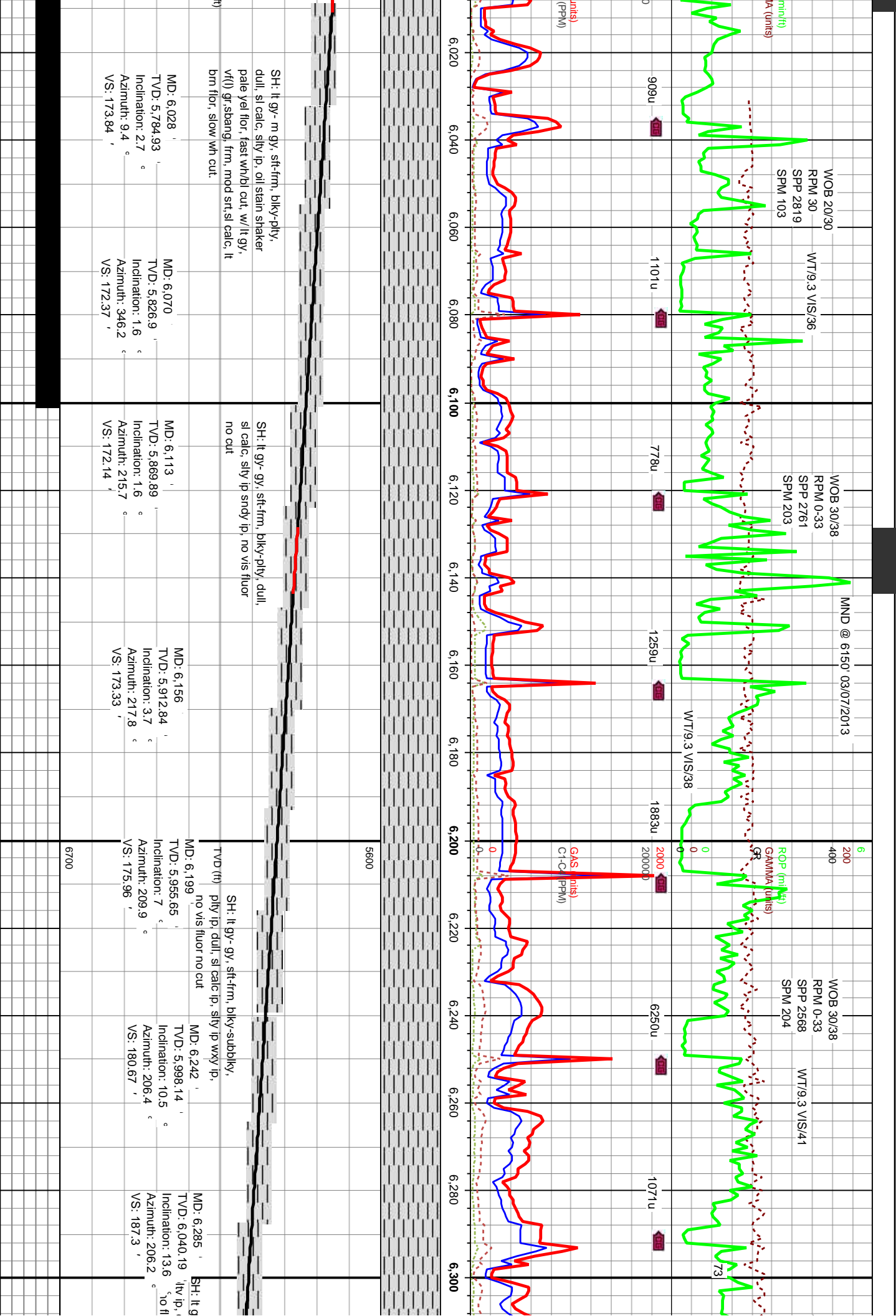
<b>Fossils</b>	<b>F</b> FOSSIL	<b>-</b> ARGILLACEOUS	<b>✓</b> GLAUCONITE
GASTROPOD	<b>/</b> ARGILLITE GRAIN	<b>✓</b> GYPSIFEROUS	<b>Stringer</b>
ALGAE	<b>B</b> BENTONITE	<b>✓</b> HEAVY MINERAL	ANHYDRITE STRINGER
AMPHIPORA	BITUMENOUS SUBSTANCE	<b>K</b> KAOLIN	BENTONITE STRINGER
BELEMNITE	BRECCIA FRAGMENTS	<b>T</b> MARLSTONE	COAL STRINGER
BIOCLASTIC	<b>1</b> CALCAREOUS	MINERAL CRYSTALS	DOLOMITE STRINGER
BRACHIOPOD	CARBONACEOUS FLAKES	NODULES	GYPSUM STRINGER
BRYOZOA	<b>▲</b> CHTDK	PHOSPHATE PELLETS	LIMESTONE STRINGER
CEPHALOPOD	CHTLT	<b>P</b> PYRITE	MARLSTONE (CALC) STRG
CORAL	<b>-</b> COAL - THIN BEDS	SALT CAST	MARLSTONE (DOL) STRG
CRINOID	SCAPHOPOD	<b>✓</b> SANDY	SANDSTONE STRINGER
ECHINOID	<b>+</b> STROMATOPOROID	<b>✓</b> SILICEOUS	SHALE STRINGER
FISH	<b>Minerals</b>	<b>•</b> FERRUGINOUS PELLETT	SILTSTONE STRINGER
FORAMINIFERA	<b>//</b> ANHYDRITIC	<b>✓</b> FERRUGINOUS	
		<b>✓</b> TUFFACEOUS	

Other Symbols

<b>Oil Show</b>	<b>O</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	<b>✓</b> VUGGY	NORMAL FAULT	<b>R</b> ROUNDED
<b>○</b> QUESTIONABLE	<b>○</b> QUESTIONABLE	OIL SHOW	<b>a</b> SUBANG
<b>●</b> SPOTTED STAINING	<b>Engineering</b>	OVERTURNED STRATA	<b>r</b> SUBRND
	<b>BIT</b>	REVERSE FAULT	<b>Textures</b>
	<b>▲</b> CONNECTION (LEFT)	SIDEWALL CORE (LEFT)	<b>M</b> MODERATE
<b>Porosity</b>	<b>▲</b> CONNECTION (RIGHT)	SIDEWALL CORE (RIGHT)	<b>P</b> POOR
<b>E</b> EARTHY	CONNECTION GAS	SLIDE	<b>C</b> CHALKY
<b>▣</b> FENESTRAL	CORE - LOST	SURVEY	<b>CX</b> CRYPTOXLN
<b>F</b> FRACTURE	CORE - RECOVERED	TRIP GAS	<b>E</b> EARTHY
<b>X</b> INTERCRYSTALLINE	DST INTERVAL	WIRELINE TESTED - LEFT	<b>FX</b> FINELYXLN
<b>○</b> INTEROOLITIC	FAULT	WIRELINE TESTED - RT	<b>GS</b> GRAINSTONE
<b>✓</b> MOLDIC	FORMATION TOP	<b>L</b> LITHOGRAPHIC	<b>Rounding</b>

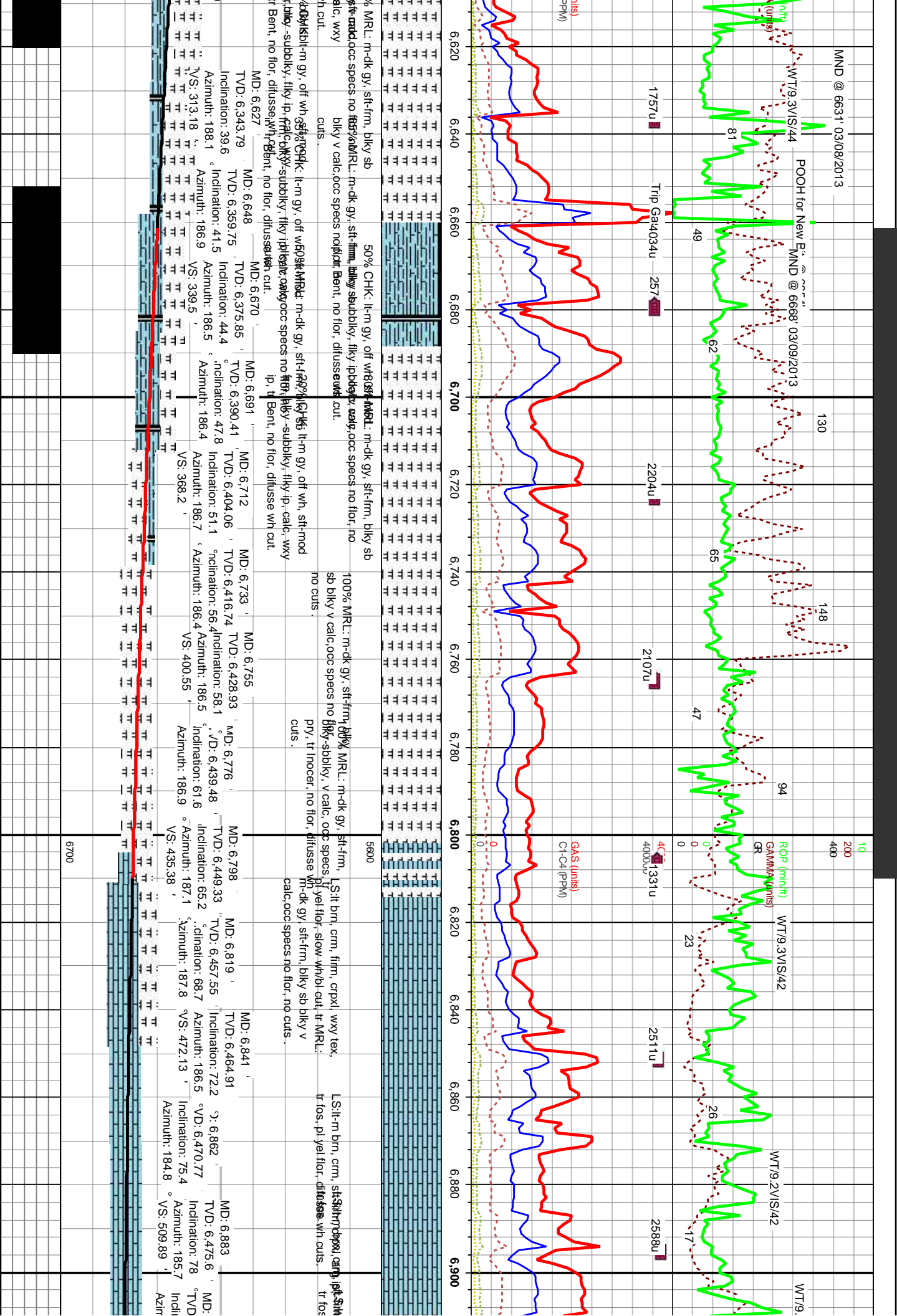


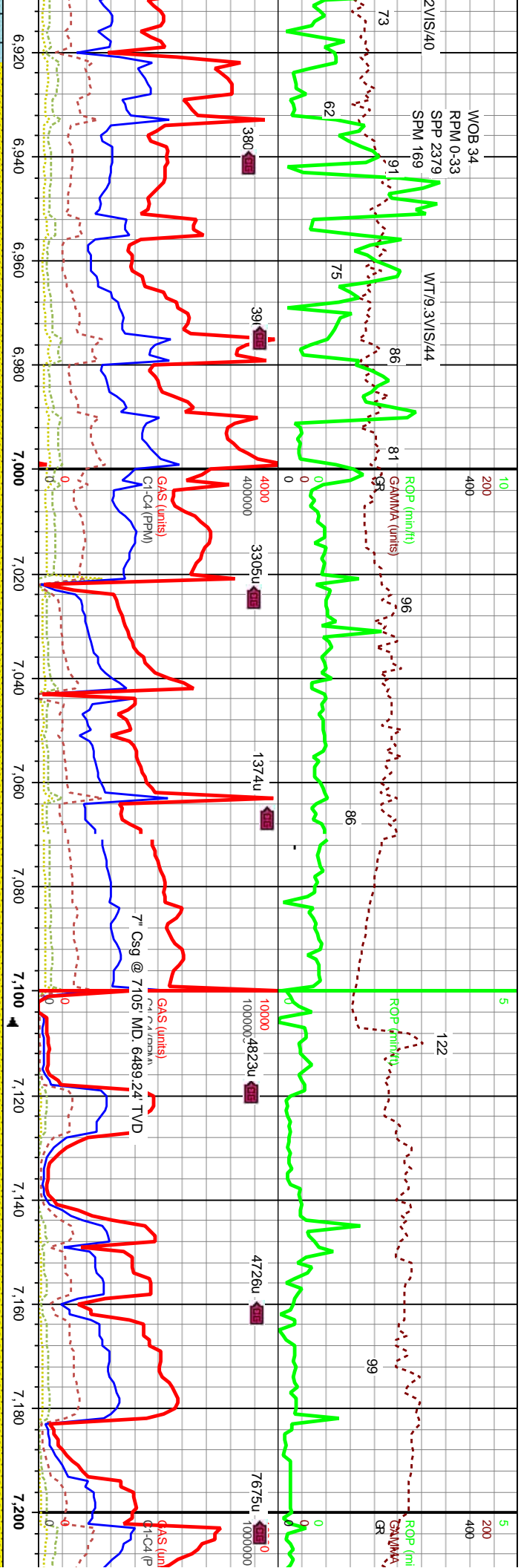










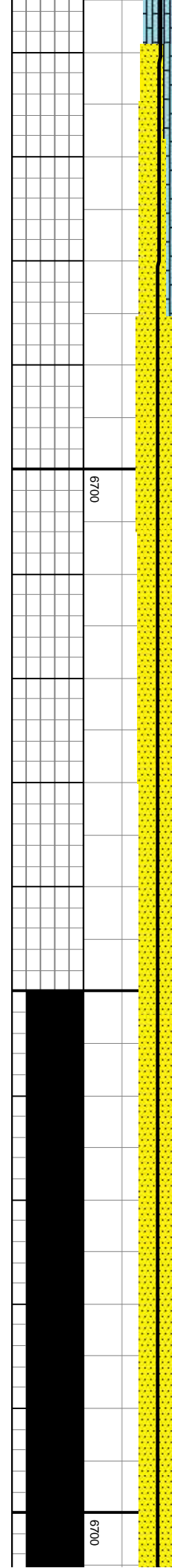


SS: lt-med gry, brn ip, vf(l)-SS: lt-med gry, brn ip, vf(l)-vf(u), SS: lt-med gry, brn ip, vf(l)-vf(u), rnd, sbang, fri, mod srt, arg cnt, sl calc, no  
sl calc, no flor, diffuse wh/bsi calc, no flor, slow w cuts. LS & SH poss cavins, no flor, slow LS & SH poss cavins, no flor, slow wh/bsi  
cuts.

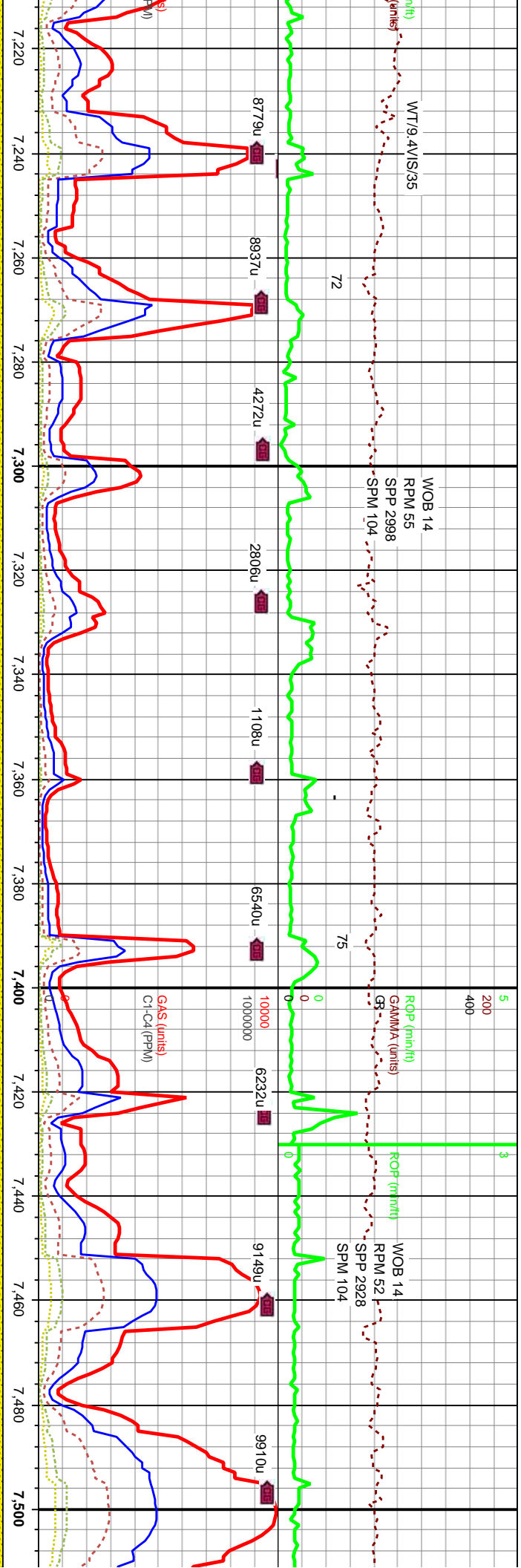
SS: lt-m gry, brn ip, vf(l)-vf(u), sbnd-  
fri-fm, w srt, arg ip, sl calc, pale yel flor,  
diffuse wh/bl cuts, bl res ring.

SS: m/dk gy  
fri-fm, w srt,  
diffuse wh/bl

MD: 6,926	MD: 6,947	MD: 6,969	MD: 6,990	MD: 7,012	MD: 7,033	MD: 7,055	MD: 7,126	MD: 7,156	MD: 7,187
TVD: 6,483.12	TVD: 6,485.59	TVD: 6,487.16	TVD: 6,487.84	TVD: 6,488.18	TVD: 6,488.47	TVD: 6,488.73	TVD: 6,489.41	TVD: 6,489.56	TVD: 6,489.51
Inclination: 82	Inclination: 84.5	Inclination: 87.3	Inclination: 89	Inclination: 89.2	Inclination: 89.3	Inclination: 89.3	Inclination: 89.6	Inclination: 89.8	Inclination: 90.4
Azimuth: 184.8	Azimuth: 186.2	Azimuth: 186.2	Azimuth: 185.8	Azimuth: 186.4	azimuth: 186	azimuth: 186	Azimuth: 186.2	Azimuth: 186.4	Azimuth: 185
VS: 549.3	VS: 589.11	VS: 628.92	VS: 628.92	VS: 668.7	VS: 734.43	VS: 762.16	VS: 790.94		







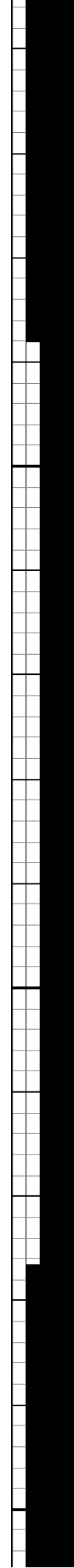
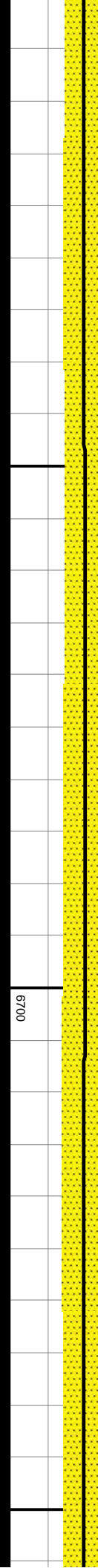
brn ip, vfl(u)-vfl(u), sbnd- rnd, arg ip, sl calc, pale yel flor, cuts, bl res ring.

SS: lt-med gy, brn ip, vfl(u)-vfl(u), sbnd- rnd, fri-frn, w srt, arg ip, sl calc, pale yel flor, diffuse wh/bl cuts, bl res ring.

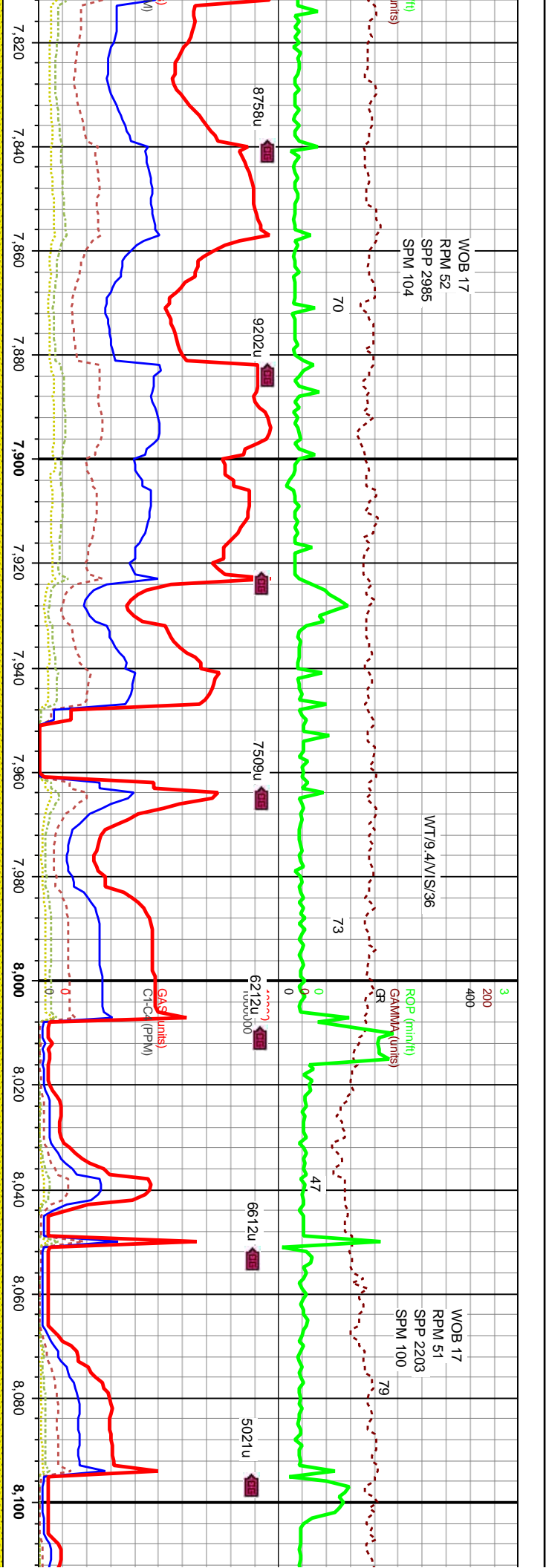
SS: lt-med gy, brn ip, vfl(u)-vfl(u), sbnd- mSS, lt-m gy, brn ip, vfl(u)-vfl(u), sbnd- rSS, lt-m gy, brn ip, vfl(u)-fl(), sbnd- nSS, lt-m g wh/bl cuts, bl res ring.

SS: lt-m g wh/bl cuts, bl res ring.

MD: 7.217	MD: 7.247	MD: 7.278	MD: 7.308	MD: 7.338	MD: 7.368	MD: 7.399	MD: 7.442	MD: 7.484
TVD: 6,489.07	TVD: 6,488.23	TVD: 6,487.15	TVD: 6,486.18	TVD: 6,485.76	TVD: 6,485.81	TVD: 6,486.16	TVD: 6,487.33	TVD: 6,488.76
Inclination: 91.3 °	Inclination: 91.9 °	Inclination: 92.1 °	Inclination: 91.6 °	Inclination: 90 °	Inclination: 89.8 °	Inclination: 88.9 °	Inclination: 88 °	Inclination: 88.1 °
Azimuth: 185.1 °	Azimuth: 185 °	Azimuth: 183.7 °	Azimuth: 182.5 °	Azimuth: 181.8 °	Azimuth: 180.6 °	Azimuth: 180.6 °	Azimuth: 180 °	Azimuth: 179.3 °
VS: 818.92	VS: 846.88	VS: 875.91	VS: 904.22	VS: 932.71	VS: 961.35	VS: 991.04	VS: 1,032.27	VS: 1,072.67







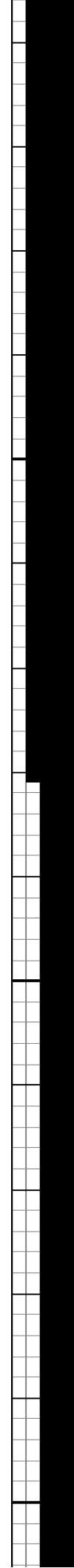
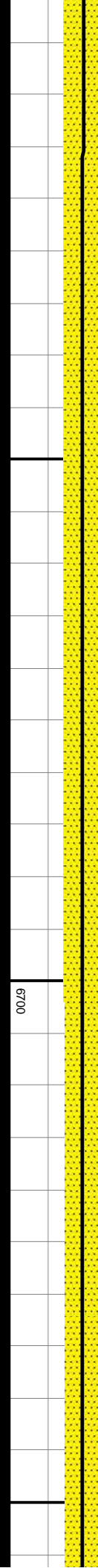
SS: lt-m gy, vfl(u)-f(l)gr, sbnd-nd, fr-frSS: lt-m gy, vfl(u)-f(l)gr, sbnd-nd, fr-frm, reg srt, calc, abnt lse c qtx gr, t' pry, pale cuts.

SS: lt-m gy, vfl(u)-f(l)gr, sbnd-nd, fr-frm, reg srt, calc, pale bn flr, diffuse wh/bl cuts.

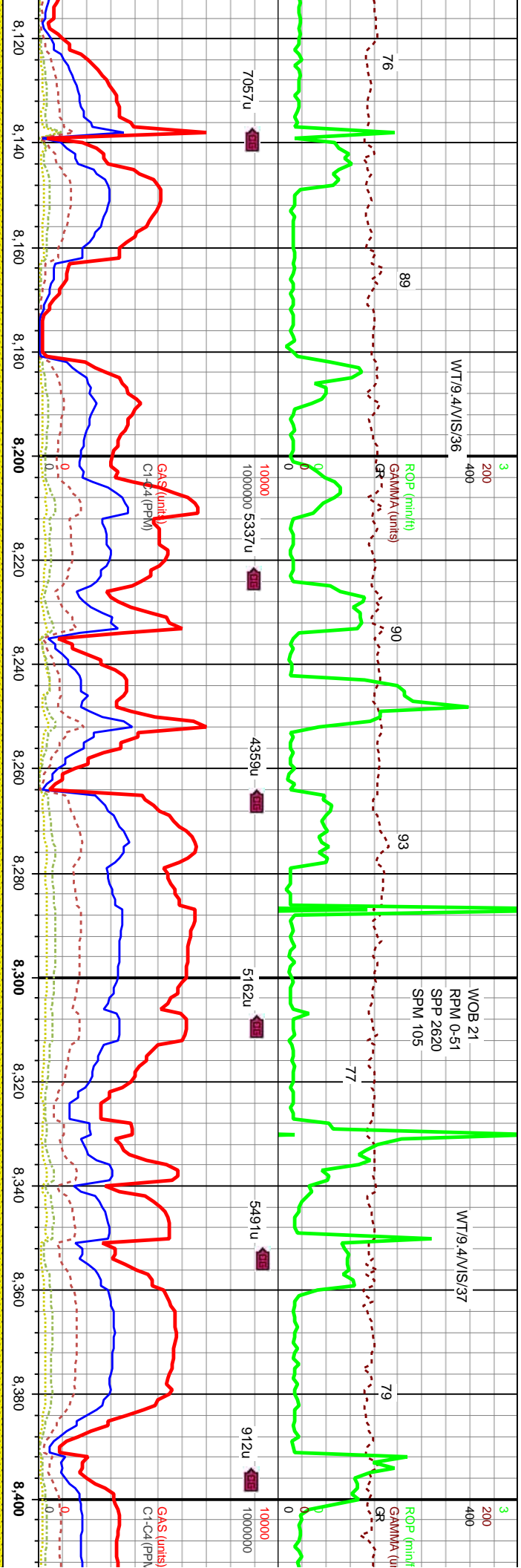
SS: lt-m gy, vfl(u)-f(l)gr, sbnd-nd, fr-frm, reg srt, v calc, pale bn flr, diffuse wh/bl cuts.

Ls.

MD: 7,827 ' TVD: 6,490.56 ' Inclination: 89.7 ° Azimuth: 176.9 ° VS: 1,404.3 '	MD: 7,869 ' TVD: 6,490.89 ' Inclination: 89.4 ° Azimuth: 176.2 ° VS: 1,445.27 '	MD: 7,912 ' TVD: 6,491.22 ' Inclination: 89.7 ° Azimuth: 175.8 ° VS: 1,487.32 '	MD: 7,955 ' TVD: 6,491.34 ' Inclination: 90 ° Azimuth: 174.1 ° VS: 1,529.52 '	MD: 7,998 ' TVD: 6,491 ' Inclination: 90.9 ° Azimuth: 174.9 ° VS: 1,571.78 '	MD: 8,040 ' TVD: 6,490.74 ' Inclination: 89.8 ° Azimuth: 173.4 ° VS: 1,613.1 '	MD: 8,083 ' TVD: 6,491.34 ' Inclination: 88.6 ° Azimuth: 173 ° VS: 1,655.53 '
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100% SS: lt-m gy, vll(u)-f(l)gr,  
sbnd- md, fr-fm, reg srt, sl calc,  
abn lse qtzx gr, pale yel flor, wh  
cuts.

100% SS: lt-m gy, vll(u)-f(l)gr,  
sbnd- md, fr-fm, reg srt, sl calc,  
abn lse qtzx gr, pale yel flor, wh  
cuts.

100% SS: lt-m gy, vll(u)-f(l)gr,  
sbnd- md sb ang lp, fr-fm, reg  
srt, sl calc, abn lse qtzx gr, pale yel  
flor, slw wh blm cuts.

100% SS: lt-m gy, vll(u)-f(l)gr,  
sbnd- md sb ang lp, fr-fm, reg  
srt, sl calc, abn lse qtzx gr, pale yel  
flor, slw wh blm cuts.

100% SS: lt-m gy, vll(u)-f(l)gr,  
sbnd- md sb ang lp, fr-fm, reg  
srt, sl calc, abn lse qtzx gr, pale yel  
flor, slw wh blm cuts.

100% SS: lt-m gy, vll(u)-f(l)gr,  
sbnd- rnd sb ang lp, fr-fm, reg srt,  
sl calc, abn lse qtzx gr, pale yel flor,  
slw wh blm cuts.

100% SS: lt-r  
sbnd- rnd sb  
srt, sl calc, abn  
yel flor, slw w

MD: 8,126  
TVD: 6,492.39  
Inclination: 88.6  
Azimuth: 173.4  
VS: 1.697, 95

MD: 8,169  
TVD: 6,493.37  
Inclination: 88.8  
Azimuth: 172.8

MD: 8,212  
TVD: 6,494.08  
Inclination: 89.3  
Azimuth: 173.7

MD: 8,254  
TVD: 6,493.97  
Inclination: 91  
Azimuth: 175.3

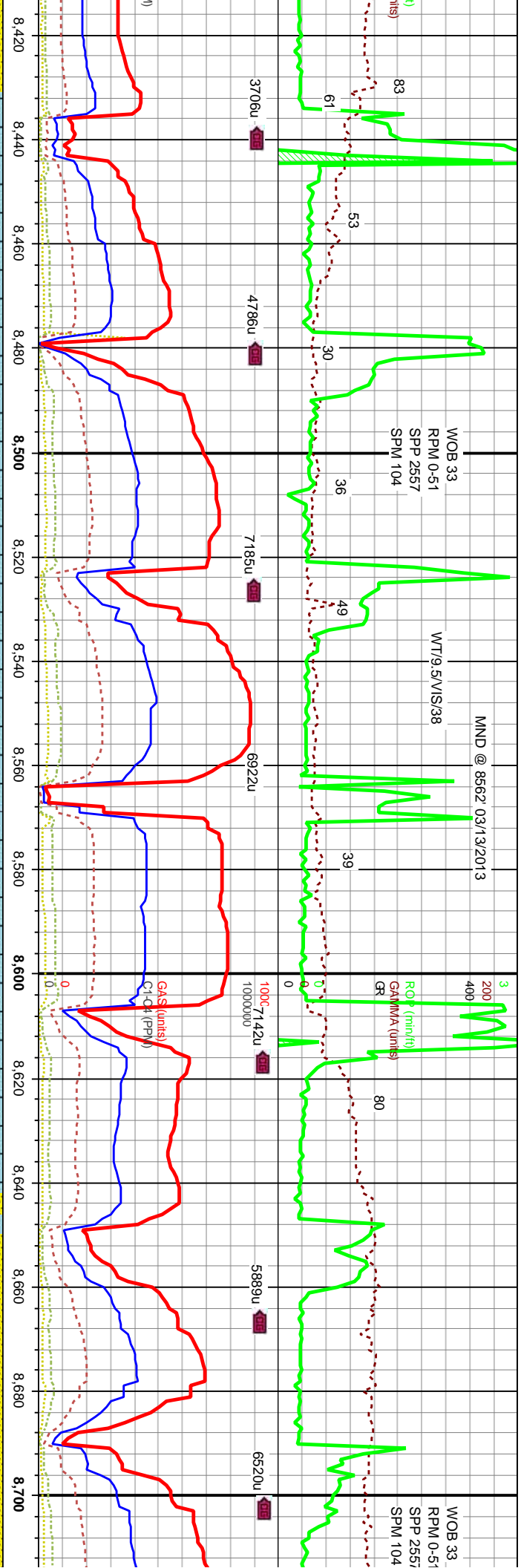
MD: 8,297  
TVD: 6,493.3  
Inclination: 90.8  
Azimuth: 175.5

MD: 8,340  
TVD: 6,492.88  
Inclination: 90.3  
Azimuth: 177.1

MD: 8,383  
TVD: 6,492.77  
Inclination: 90  
Azimuth: 176.5

6700

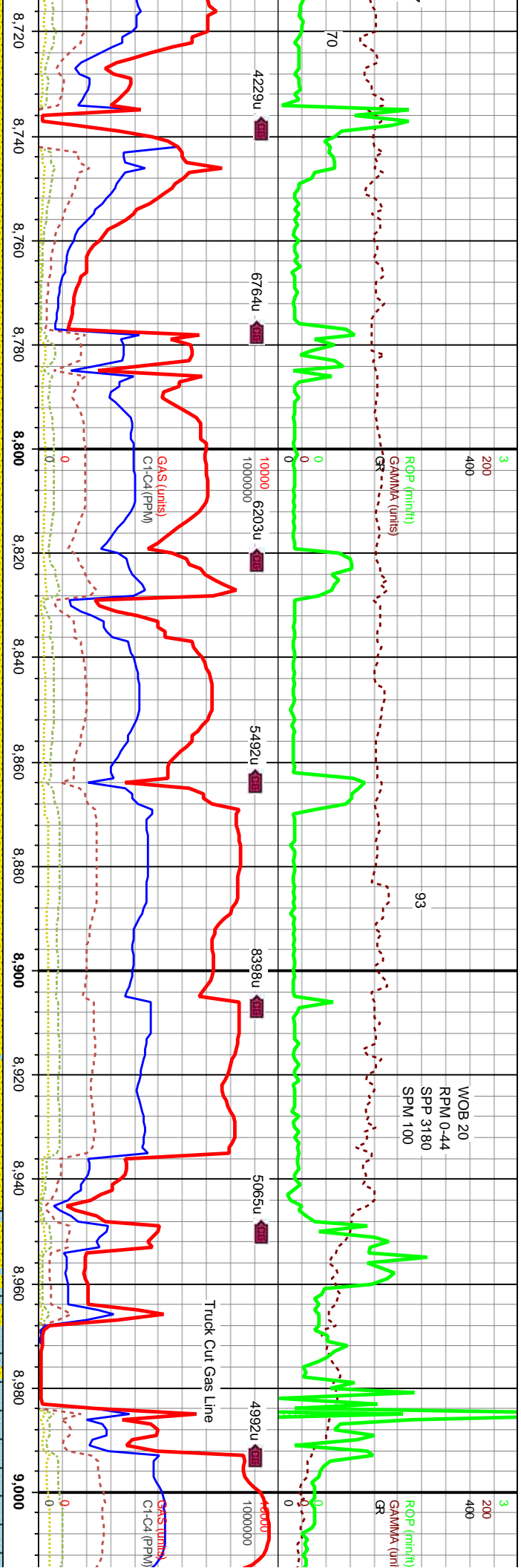
6700



gray, w/((u)-fl)gr, ang ip, fr-firm, reg n lse qtzx gr, pale n brn cuts.	LS: lt-m brn, crm, off wh, sft-firm, cpxxl, ang ip, tr fos, no flor, slow wh cut.	LS: lt-m brn, crm, off wh, sft-firm, cpxxl, ang ip, tr fos, no flor, slow wh cut.	LS: lt-m brn, crm, off wh, sft-firm, cpxxl, ang ip, tr fos, no flor, slow wh cut.	LS:lt-m brn, crm, off wh, sft-firm,cpxxl,ang ip, tr fos, tr + lse qtzxl c gr, v ang, no flor, slw wt cut,	20%LS:lt-m brn, crm, off wh sft-firm,cpxxl,ang ip, no flor,slw wt cut. 80% SS: m gy, w/((u)-fl)gr, shnd-mnd sb ang ip, fr-firm, mod srt, sl calc, pale yel flor, slw wh cuts.
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	MD: 8,426	MD: 8,468	MD: 8,511	MD: 8,554	MD: 8,597	MD: 8,640	MD: 8,682
TVD:	6,492.51	6,492.07	6,491.88	6,492.11	6,492.86	6,494.1	6,495.12
Inclination:	90.7 °	90.5 °	90 °	89.4 °	88.6 °	88.1 °	88.1 °
Azimuth:	177.6 °	177.6 °	177.9 °	179 °	179.3 °	180 °	179.9 °
Vs:						VS: 2,199	VS: 2,239.35





SS: m gy, v(l(u)-f(l)gr, sbmd- rnd, fri-frn,  
reg srt, v calc, pale yel flr, diffuse wh/bl  
cuts.

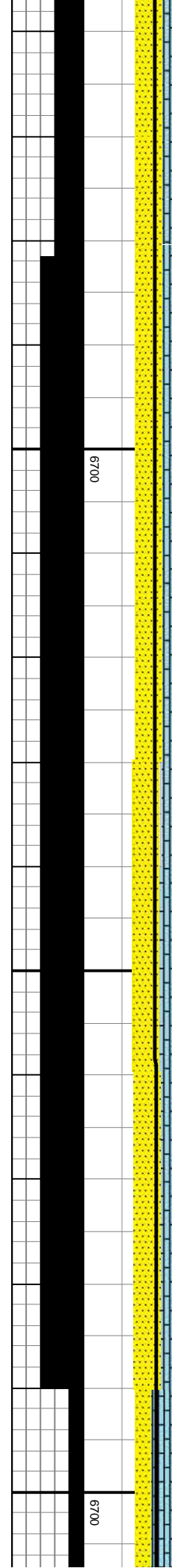
SS: m gy, v(l(u)-f(l)gr, sbmd- rnd, fri-frn,  
reg srt, v calc, pale yel flr, diffuse wh/bl  
cuts. 8800'

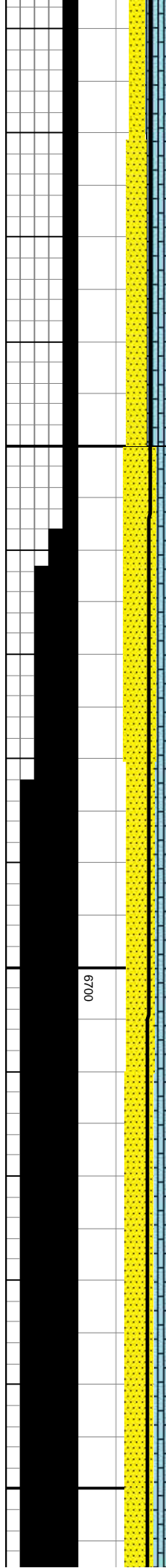
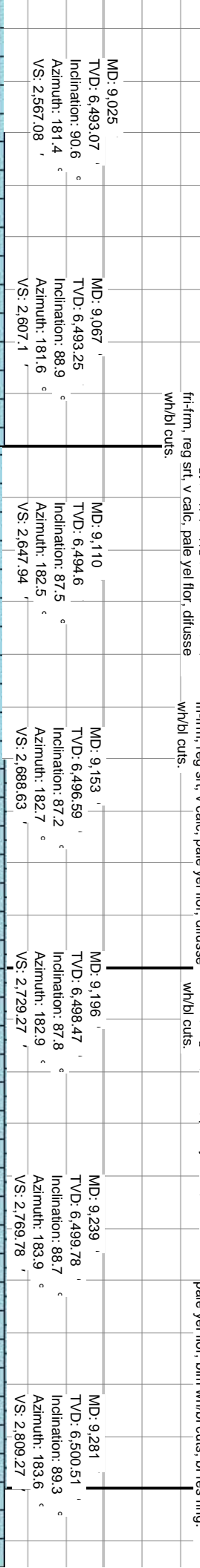
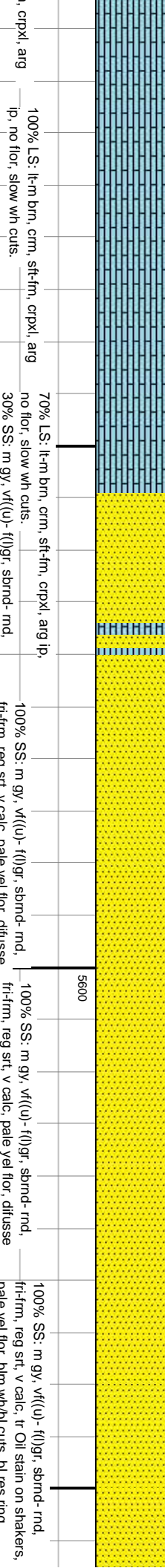
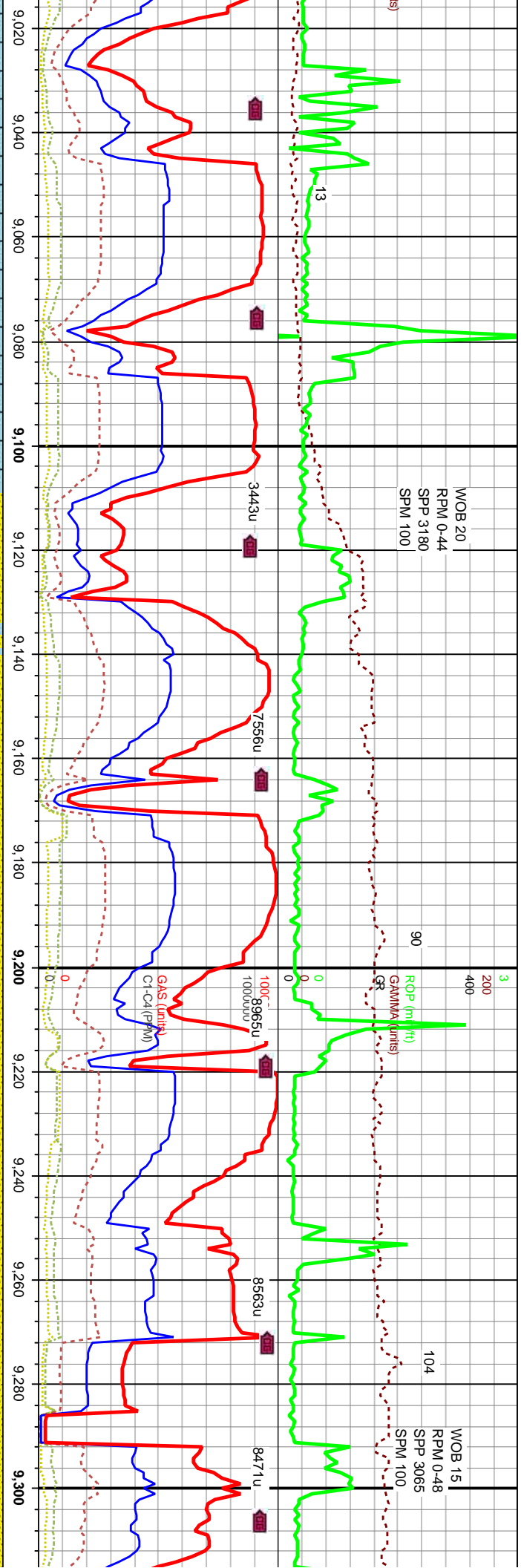
SS: m gy, v(l(u)-f(l)gr, sbmd- rnd, fri-frn,  
reg srt, v calc, pale yel flr, diffuse wh/bl  
cuts.

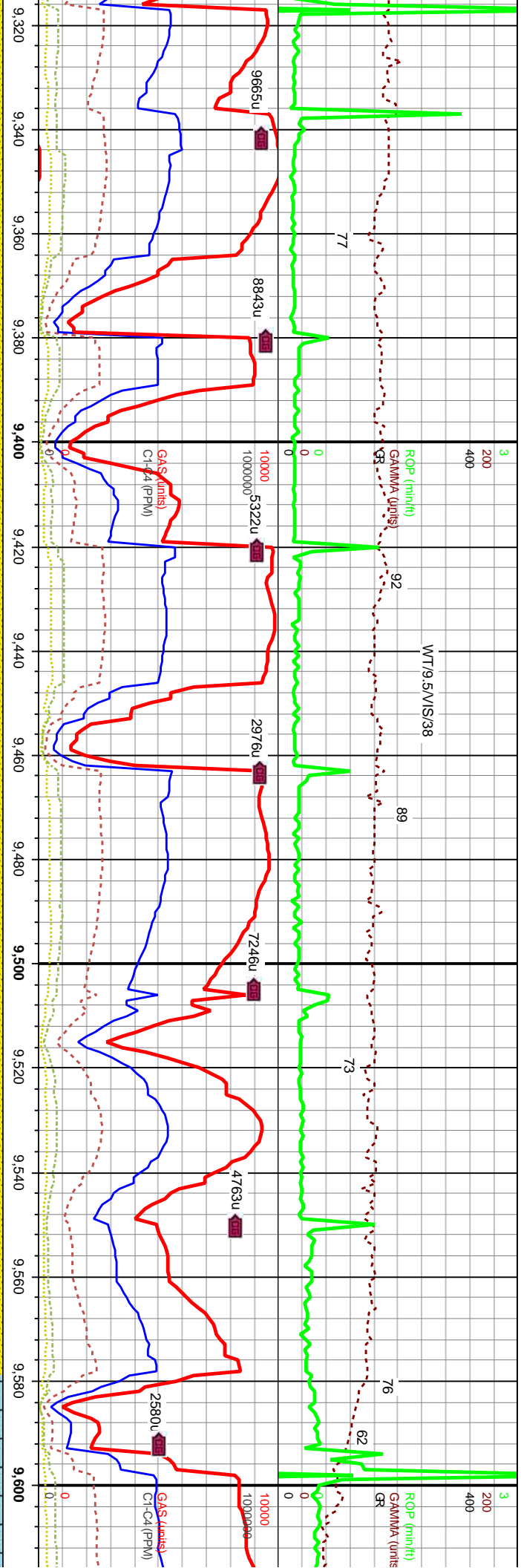
SS: m gy, v(l(u)-f(l)gr, sbmd- rnd, fri-frn,  
reg srt, v calc, tr LS, pale yel flr, diffuse  
wh/bl cuts. 8920'

100% LS: lt-m brn, crm, sft-fr  
lp, no flr, slow wh cuts.

MD: 8.725	MD: 8.768	TVD (ft)	MD: 8.811	MD: 8.853	MD: 8.896	MD: 8.939	MD: 8.982
TVD: 6,495.72	TVD: 6,496.43		TVD: 6,496.81	TVD: 6,496.33	TVD: 6,495.28	TVD: 6,494.27	TVD: 6,493.59
Inclination: 89.3	Inclination: 88.8		Inclination: 90.2	Inclination: 91.1	Inclination: 91.7	Inclination: 91	Inclination: 90.8
Azimuth: 180.9	Azimuth: 182		Azimuth: 181.6	Azimuth: 181.3	Azimuth: 180.4	Azimuth: 180.2	Azimuth: 181.1
VS: 2,280.57	VS: 2,321.56		VS: 2,362.48	VS: 2,402.52	VS: 2,443.63	VS: 2,484.87	VS: 2,526.04







100% SS: m gy, v(l(u)-f(l)gr, sbnd- md, fr-frm, reg srt, v calc, pale yel flr, blm wh/bl cuts, bl res ring.

100% SS: m gy, v(l(u)-f(l)gr, sbnd- md, fr-frm, reg srt, v calc, pale yel flr, blm wh/bl cuts, bl res ring.

100% SS: m gy, v(l(u)-f(l)gr, sbnd- md, fr-frm, reg srt, v calc, pale yel flr, blm wh/bl cuts, bl res ring.

100% SS: m gy, v(l(u)-f(l)gr, sbnd- md, fr-frm, reg srt, v calc, pale yel flr, blm wh/bl cuts, bl res ring.

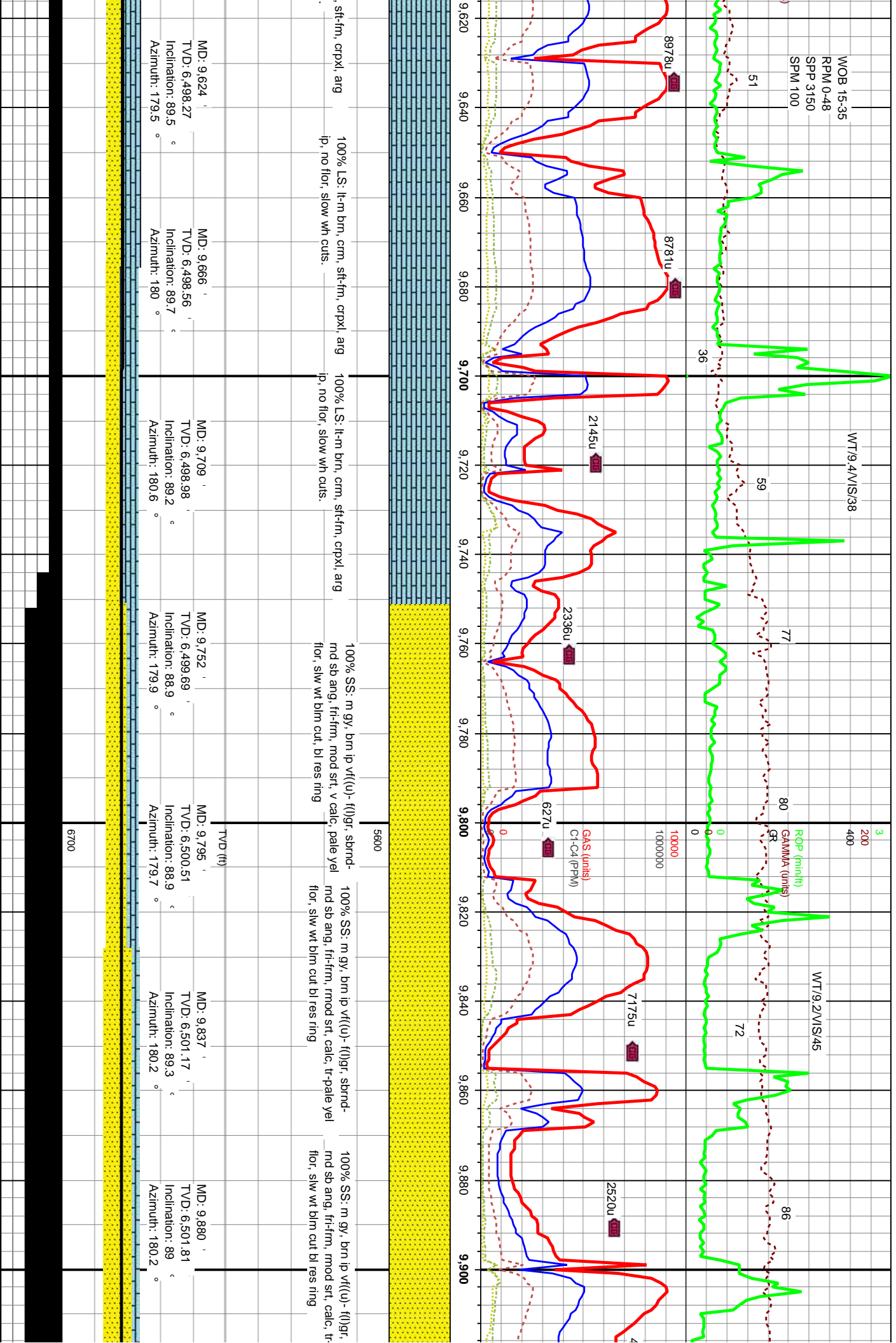
100% LS: lk-m brn, crm ip, no flr, slow wh cuts

MD: 9.324 TVD: 6,500.74 Inclination: 90.1 Azimuth: 183.6 VS: 2,849.75	MD: 9.367 TVD: 6,500.66 Inclination: 90.1 Azimuth: 183 VS: 2,890.31	MD: 9.410 TVD: 6,500.55 Inclination: 90.2 Azimuth: 182.3 VS: 2,931.02	MD: 9.452 TVD: 6,500.22 Inclination: 90.7 Azimuth: 182.2	MD: 9.495 TVD: 6,499.62 Inclination: 90.9 Azimuth: 182	MD: 9.538 TVD: 6,498.42 Inclination: 90.7 Azimuth: 181.3	MD: 9.581 TVD: 6,498.42 Inclination: 90.9 Azimuth: 179.5
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6700

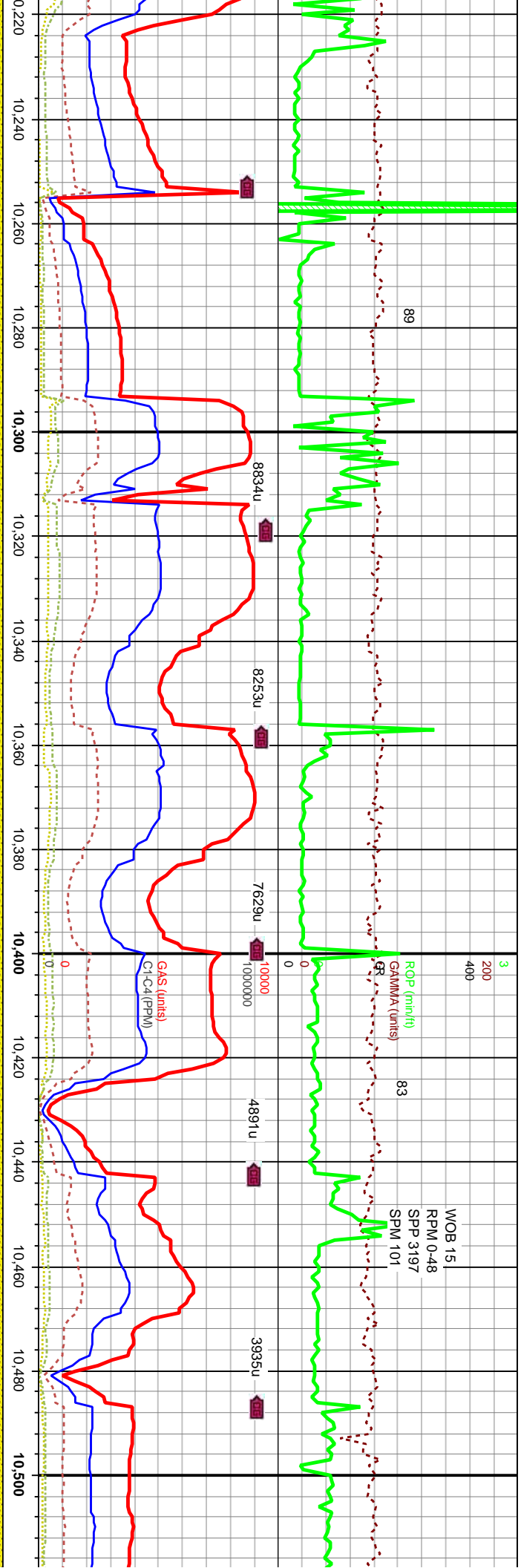
6700











SS: m gy, brn ip, vll(u)-f(l)gr, sbnd-  
b ang ip, fr-frm, mod srt, calc, abnt  
tz c gr, reg vis por, pale yel flr, slw  
it, bl res ring.

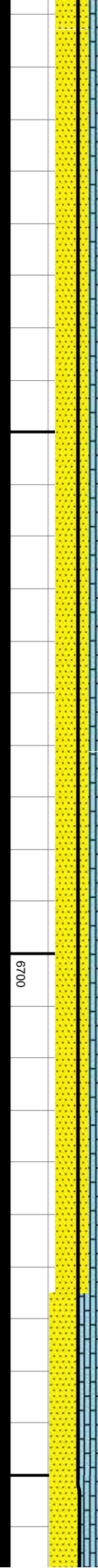
100% SS: m gy, brn ip, vll(u)-f(l)gr, sbnd-  
md, sb ang ip, fr-frm, mod srt, calc, abnt  
lse qtz c gr, reg vis por, pale yel flr, slw  
wh cut, bl res ring.

100% S4: m gy, brn ip, vll(u)-f(l)gr, sbnd-  
md, sb ang ip, fr-frm, mod srt, calc, abnt  
lse qtz c gr, reg vis por, pale yel flr, slw  
wh cut, bl res ring.

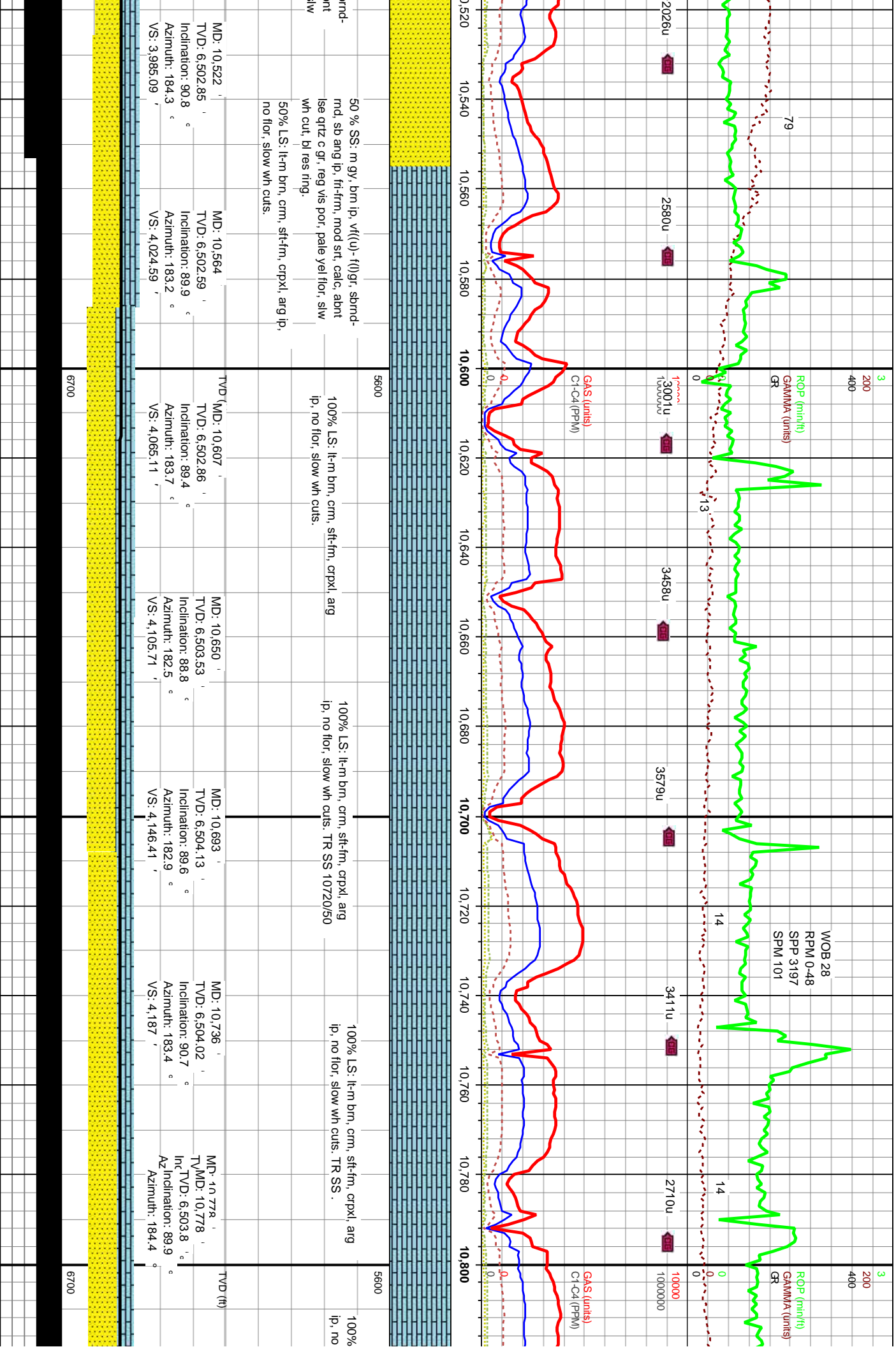
100% SS: m gy, brn ip, vll(u)-f(l)gr, sbnd-  
md, sb ang ip, fr-frm, mod srt, calc, abnt  
lse qtz c gr, reg vis por, pale yel flr, slw  
wh cut, bl res ring.

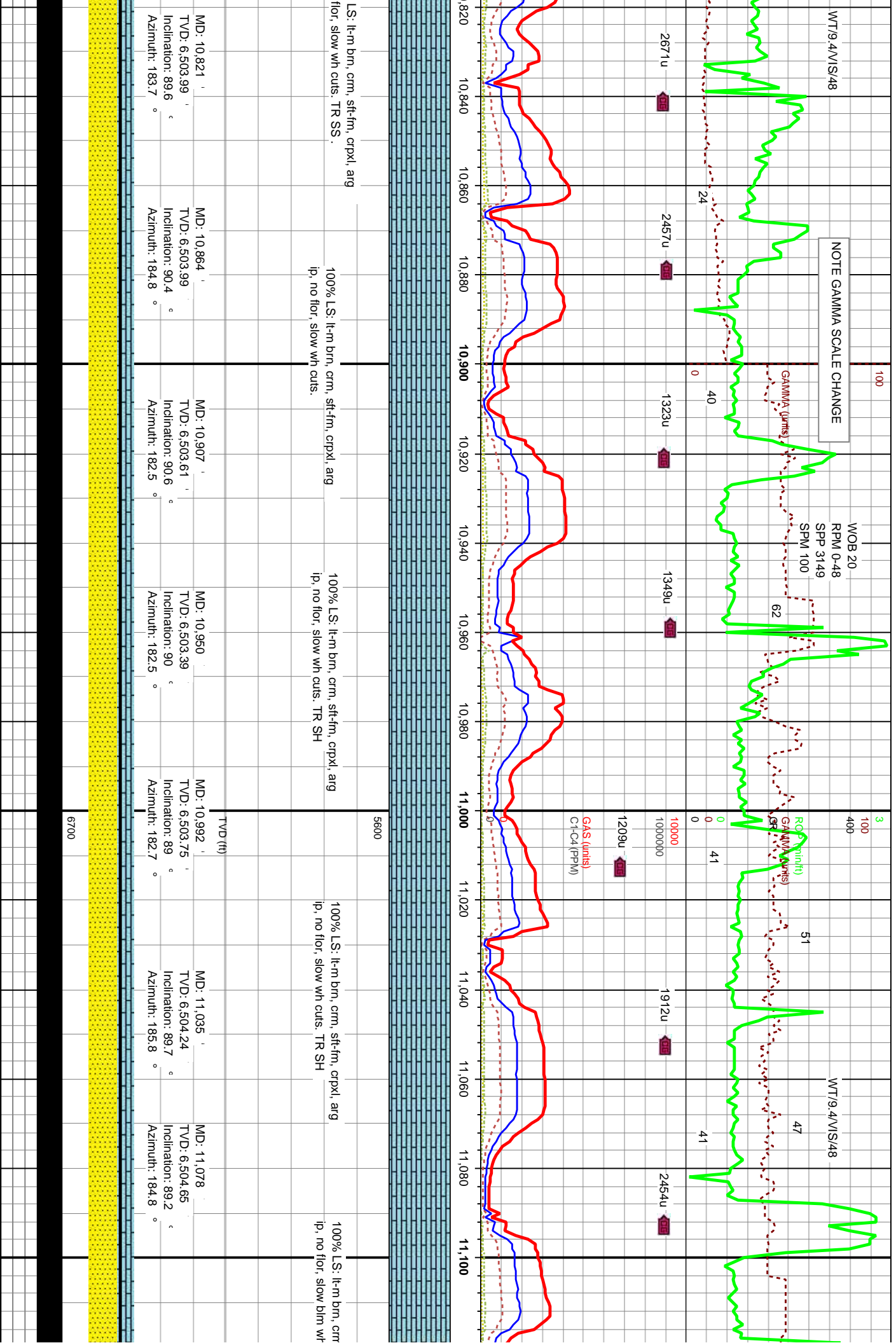
100% S4: m gy, brn ip, vll(u)-f(l)gr, sbnd-  
md, sb ang ip, fr-frm, mod srt, calc, abnt  
lse qtz c gr, reg vis por, pale yel flr, slw  
wh cut, bl res ring.

MD: 10,222 TVD: 6,504 Inclination: 89.1 Azimuth: 183.9 VS: 3,705.2	MD: 10,265 TVD: 6,504.6 Inclination: 89.3 Azimuth: 185.3 VS: 3,745.41	MD: 10,308 TVD: 6,504.75 Inclination: 90.3 Azimuth: 186.4 VS: 3,785.29	MD: 10,350 TVD: 6,504.39 Inclination: 90.7 Azimuth: 185.8 VS: 3,824.18	MD: 10,393 TVD: 6,503.83 Inclination: 90.8 Azimuth: 184.6 VS: 3,864.23	MD: 10,436 TVD: 6,503.34 Inclination: 90.5 Azimuth: 184.3 VS: 3,904.49	MD: 10,479 TVD: 6,503.15 Inclination: 90 Azimuth: 184.3 VS: 3,944.79
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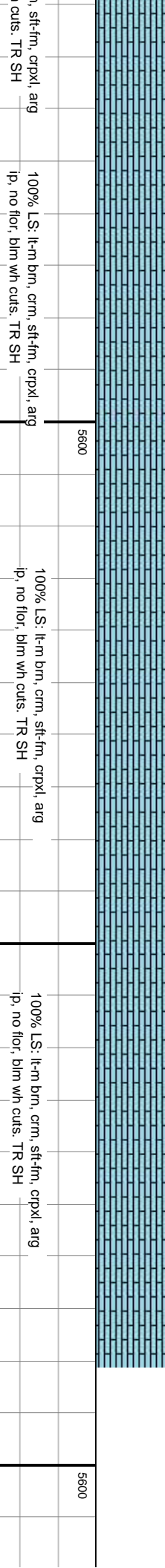
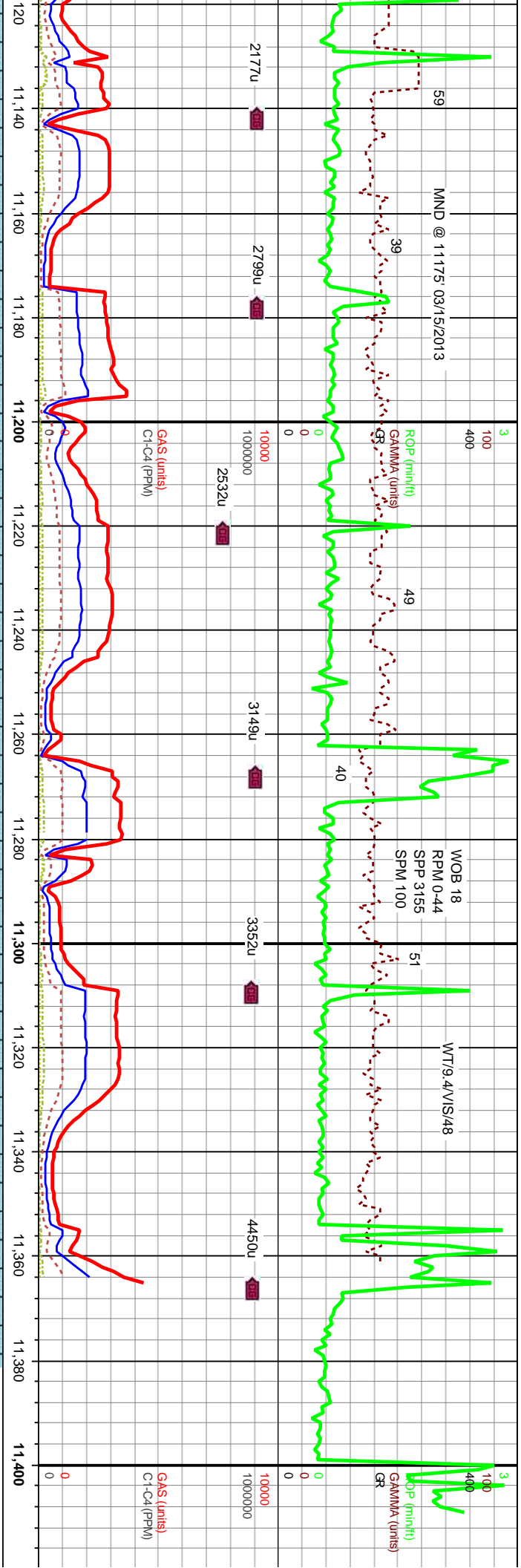


MD: 10,222 TVD: 6,504 Inclination: 89.1 Azimuth: 183.9 VS: 3,705.2	MD: 10,265 TVD: 6,504.6 Inclination: 89.3 Azimuth: 185.3 VS: 3,745.41	MD: 10,308 TVD: 6,504.75 Inclination: 90.3 Azimuth: 186.4 VS: 3,785.29	MD: 10,350 TVD: 6,504.39 Inclination: 90.7 Azimuth: 185.8 VS: 3,824.18	MD: 10,393 TVD: 6,503.83 Inclination: 90.8 Azimuth: 184.6 VS: 3,864.23	MD: 10,436 TVD: 6,503.34 Inclination: 90.5 Azimuth: 184.3 VS: 3,904.49	MD: 10,479 TVD: 6,503.15 Inclination: 90 Azimuth: 184.3 VS: 3,944.79
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MD: 11,123 TVD: 6,505.2 Inclination: 89.4 Azimuth: 185	MD: 11,168 TVD: 6,505.91 Inclination: 88.8 Azimuth: 183.7	MD: 11,212 TVD: 6,506.87 Inclination: 88.7 Azimuth: 183	MD: 11,257 TVD: 6,507.69 Inclination: 89.2 Azimuth: 182.5	MD: 11,302 TVD: 6,508.99 Inclination: 87.5 Azimuth: 181.1 VS: 4,719.48	MD: 11,347 TVD: 6,510.72 Inclination: 88.1 Azimuth: 180.6 VS: 4,762.49
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