

Survey @ 615.75mMDRT  
Incl: 0.25deg  
Azi: 22.35deg  
TVD:615.75m

Survey @ 644.51mMDRT  
Incl: 0.25deg  
Azi: 41.76deg  
TVD:644.51m

Survey @ 673.26mMDRT  
Incl: 0.25deg  
Azi: 20.31deg  
TVD:673.26m

Survey @ 702.10mMDRT  
Incl: 0.20deg  
Azi: 17.59deg  
TVD:702.10m

Survey @ 730.84mMDRT  
Incl: 0.25deg  
Azi: 3.26deg  
TVD:730.84m

Survey @ 759.63mMDRT  
Incl: 0.22deg  
Azi: 16.58deg  
TVD:759.63m

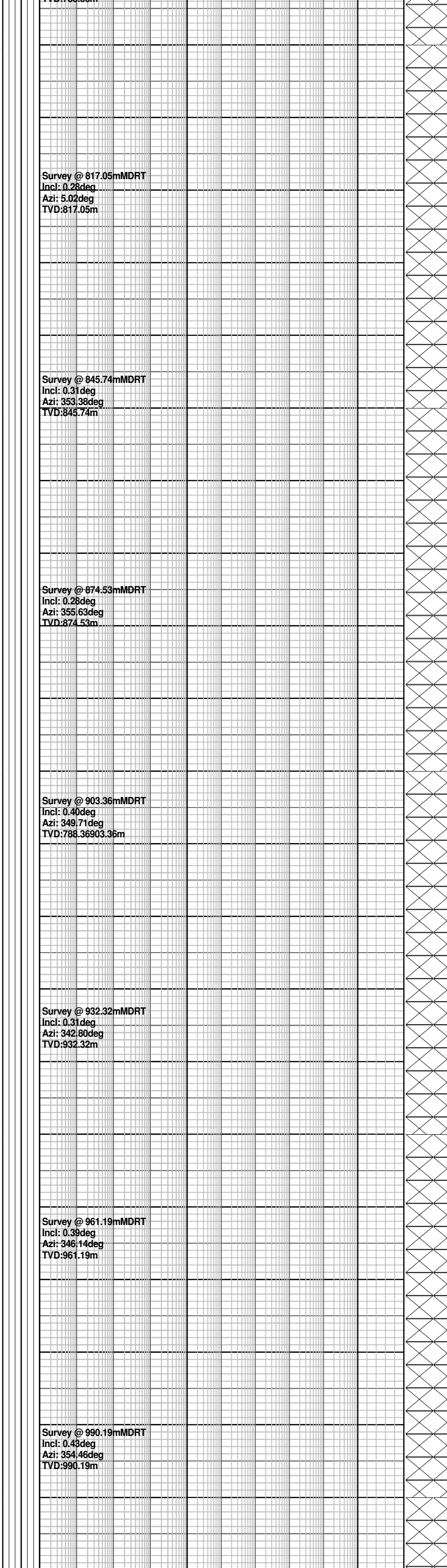
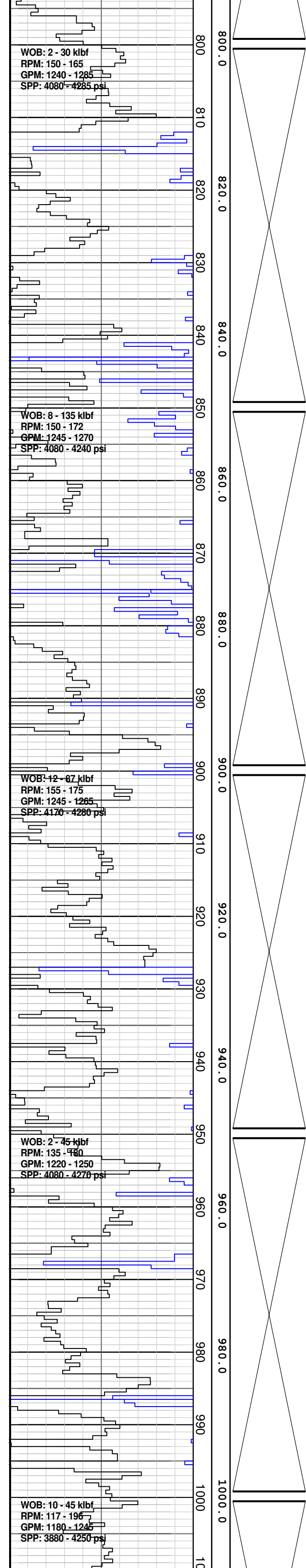
Survey @ 788.36mMDRT  
Incl: 0.25deg  
Azi: 359.64deg  
TVD:788.36m

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

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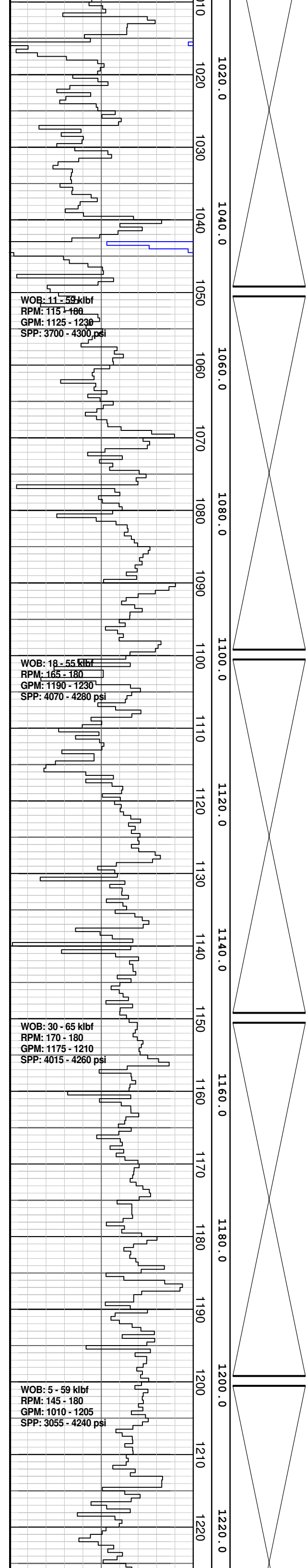


Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

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Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.



Survey @ 1019.18mMDRT  
Incl: 0.43deg  
Azi: 344.05deg  
TVD:1019.15m

Survey @ 1048.21mMDRT  
Incl: 0.48deg  
Azi: 353.62deg  
TVD:1048.20m

Survey @ 1106.07mMDRT  
Incl: 0.51deg  
Azi: 7.04deg  
TVD:1106.06m

Survey @ 1135.04mMDRT  
Incl: 0.41deg  
Azi: 345.61deg  
TVD:1135.03m

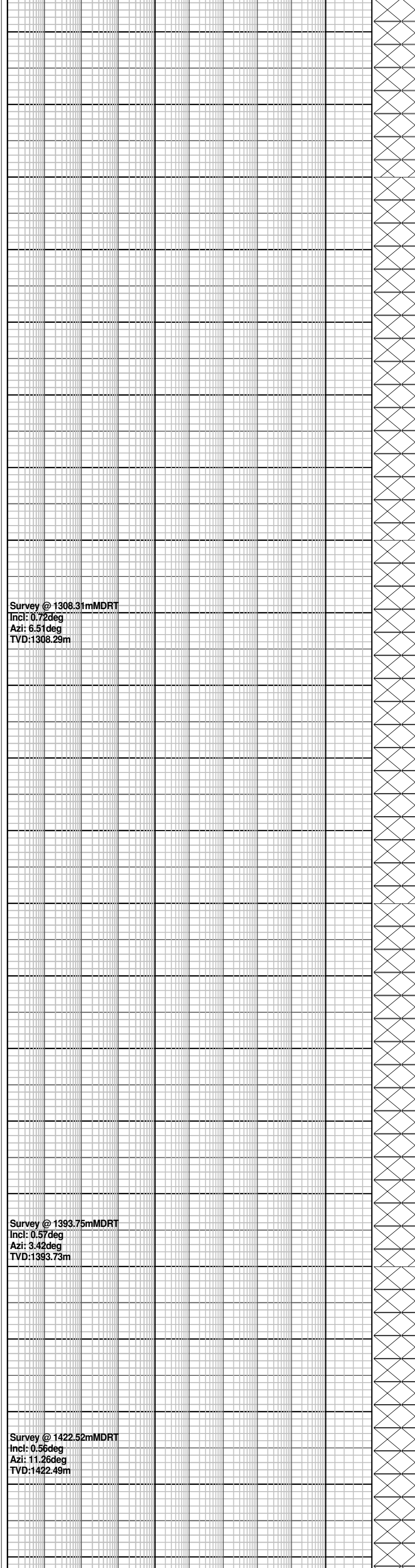
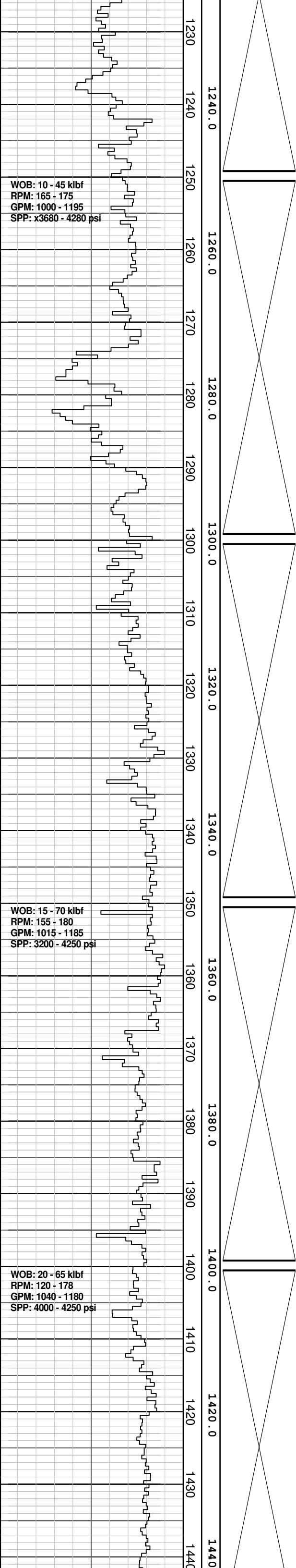
Survey @ 1164.13mMDRT  
Incl: 0.50deg  
Azi: 328.14deg  
TVD:1164.12m

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

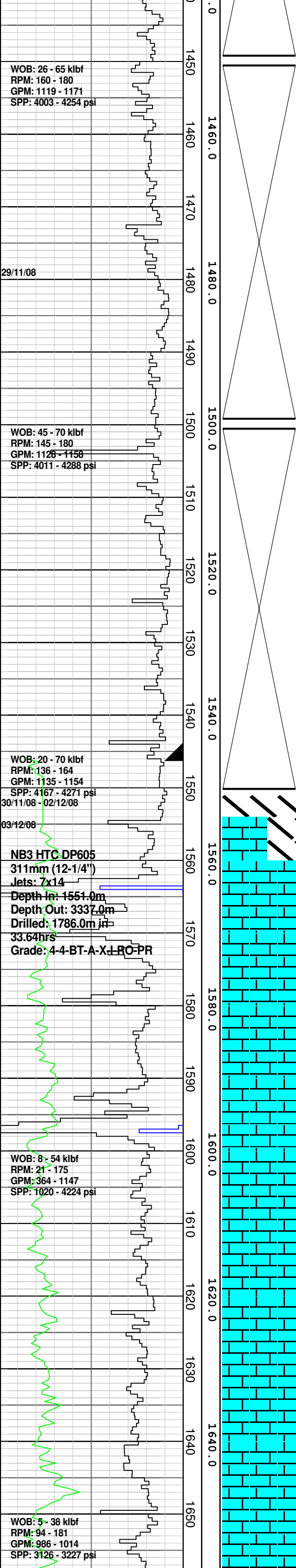


Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.



Survey @ 1451.37mMDRT  
Incl: 0.56deg  
Azi: 17.36deg  
TVD:1451.34m

Survey @ 1509.31mMDRT  
Incl: 0.57deg  
Azi: 2.04deg  
TVD:1508.31m

Survey @ 1530.13mMDRT  
Incl: 0.52deg  
Azi: 4.62deg  
TVD:1530.10m

Survey @ 1569.73mMDRT  
Incl: 0.49deg  
Azi: 1.74deg  
TVD:1569.70m

Chromatograph not working

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

Drill 406 mm (16") hole w/ seawater & PHG sweeps. Returns to seabed.

340 mm (13-3/8") casing shoe @ 1546.3 mMDRT

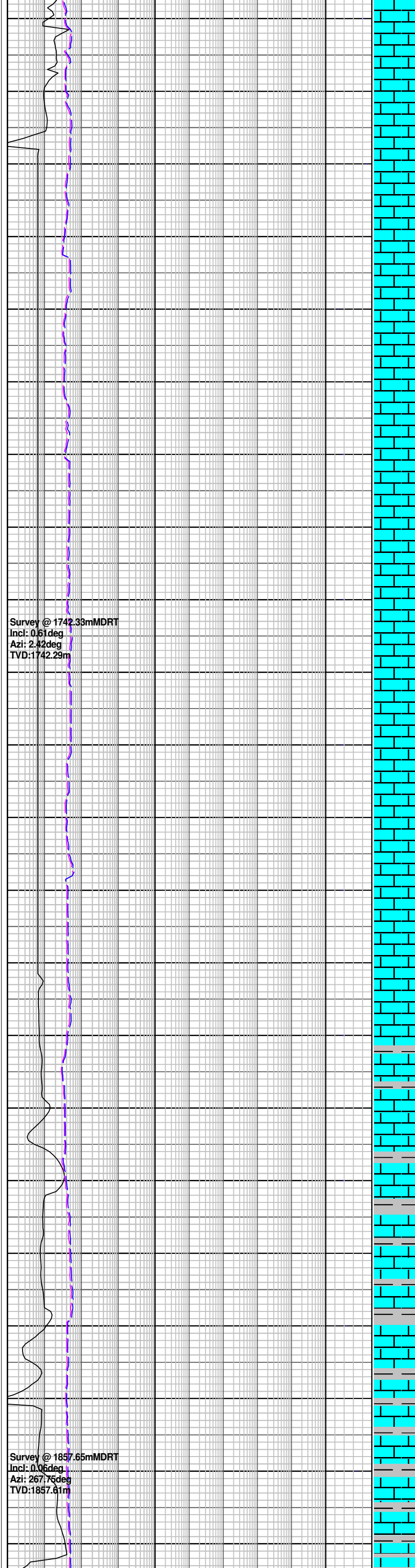
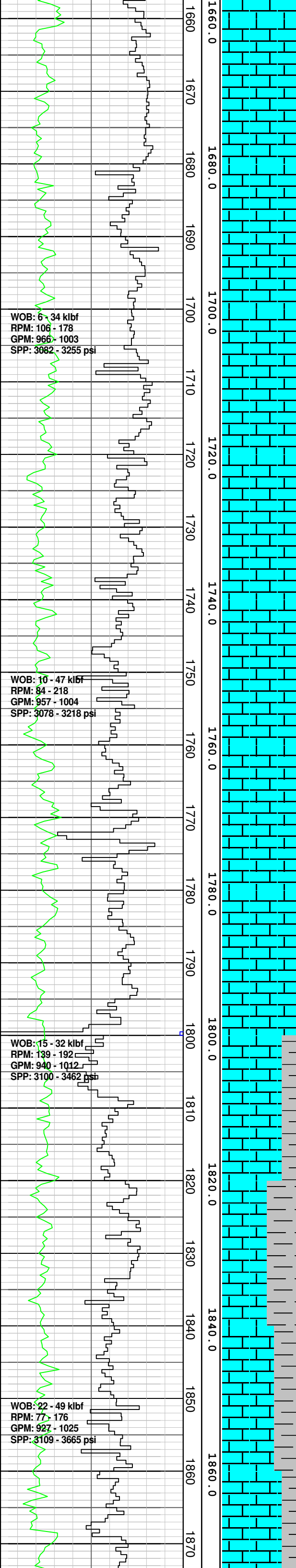
FIT @ 1546.3 mMDRT:1.65sg (1.15sg @ 7453kPa)

Reached 406 mm (16") section TD @ 1551.0 mMDRT @ 03:35 hrs on 29th November 2008.

Drill w/ KCl/PHPA Polymer mud system

**CALCARENITE:** lt gry, lt or brn, lt gnsh gry, v f-med qtz gr, dom v f-f, mod wl srt, rnd-sbang, abdt arg mtx & com grd to CLSLT, com dk lith, tr glauc mat, com microfos, com-abdt v hd or brn xln calc frag, frm-mod hd, v pr vis por, n shw

**CALCILUTITE:** lt-med gnsh gry, lt gnsh gy, lt gry-off wh, occ aren & loc grd to CLSLT, com dk lith, mnr glauc mat, com microfos, com-abdt v hd or brn xln calc frag, frm, sbblky-blky

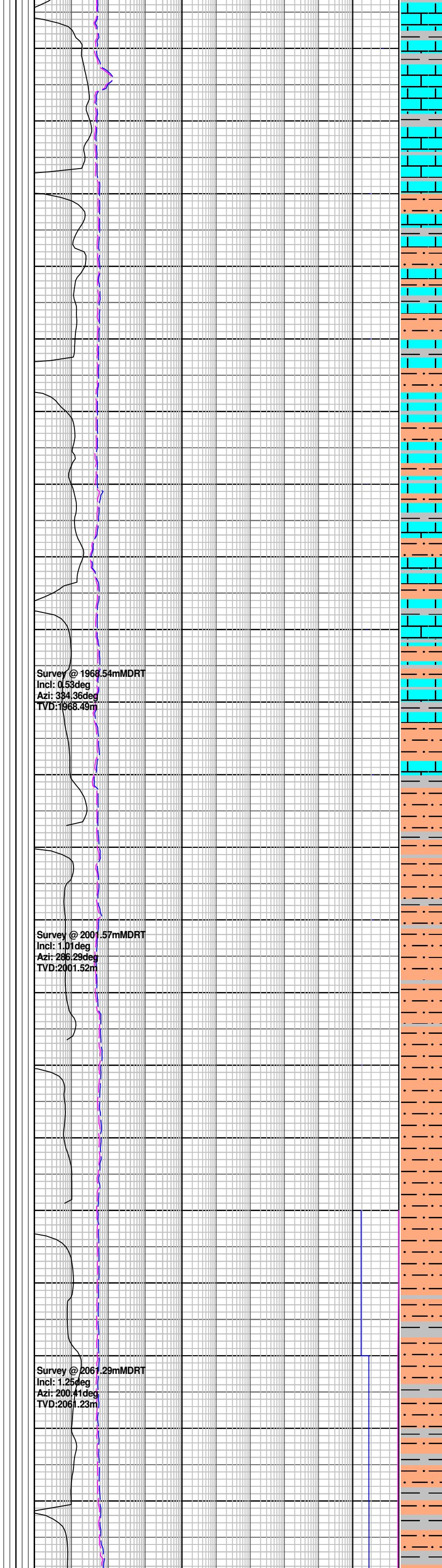
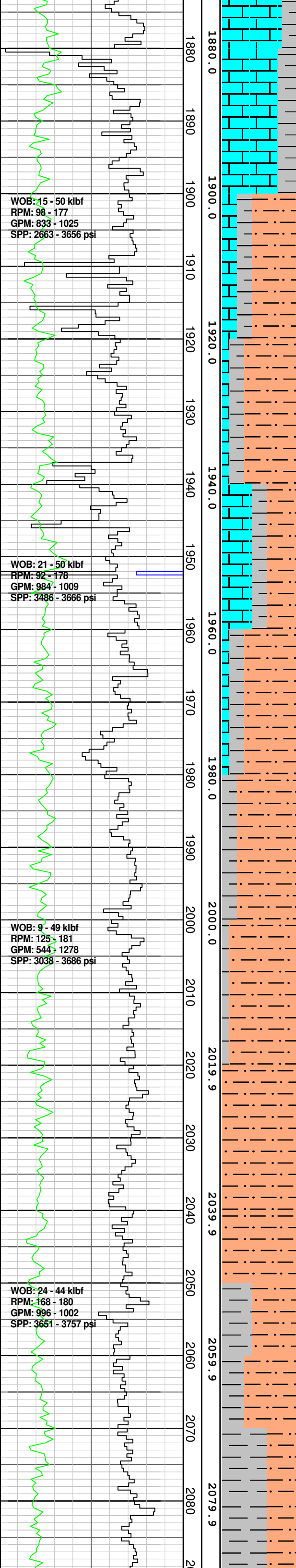


**CALCARENITE:** lt gry, lt or brn, lt gnsh gry, v f-med qtz gr, dom v f-f, mod wl srt, rnd-sbang, abd arg mtx & com grd to CLSLT, com dk lith, tr glauc mat, com microfos, com-abd v hd or brn xln calc frag, frm-mod hd, v pr vis por, no hydc fluor

**CALCISILTITE:** med gry-olv gry, com arg mtx & grd to CLCLT, mnr dk lith, mnr glauc mat, com microfos, mnr micmic, sft-frm, dom frm, mnr sft, sbblky

**CALCILUTITE:** med gry-med dk gry, mnr lt gry-med lt gry, mnr olv gry, sft & grd to CLSLT, arg & grd to CALC CLST, mnr dk lith, mnr glauc mat, com microfos, sft-frm, dom frm, sbblky

**CALCAREOUS CLAYSTONE:** med dk gry-olv gry, grd to arg CLCLT, tr dk lith, sft-frm, sbblky



**DOLomite:** olv gry-dk yelsh brn, mnr med gry, xln, grd to Dol LST, hd-brit, dom blk, fiss i/p

**CALCAREOUS SILTSTONE:** med gry-olv gry, abdt arg mtx, grd to CLSLT, mnr dk lith, mnr glauc mat, com microfos, mnr micmic, sft-frm, dom frm, sbblky

**CALCAREOUS CLAYSTONE:** med gry-olv gry, grd to arg CLSLT, tr dk lith, tr glauc mat, sft-frm, dom frm, sbblky

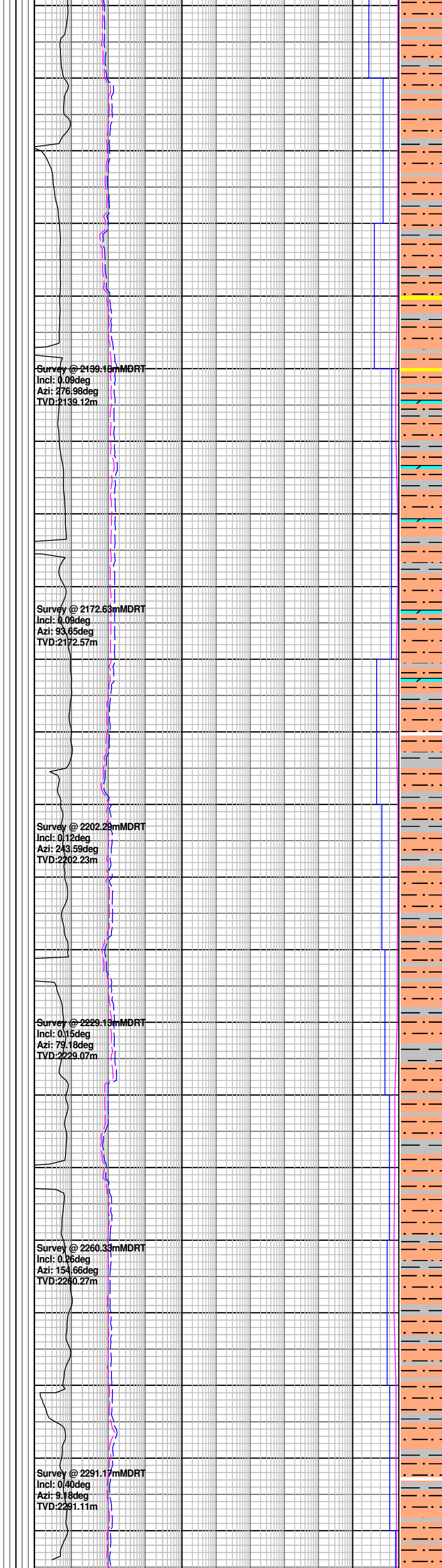
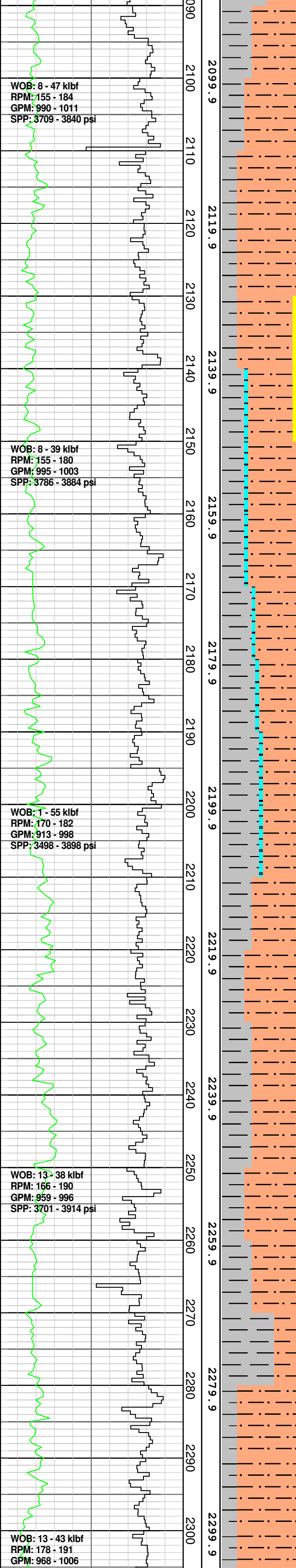
**CALCARENITE:** med lt gry, v f-med qtz gr, dom v f-f gr, wl srt, rnd-sbang, dom rnd, abdt arg mtx, mnr dk lith, sft-disagg, dom sft, mnr frm, pr vis por, pr inf por, n shw

**CALCAREOUS SILTSTONE:** med gry-olv gry, abdt arg mtx, grd to CLSLT, mnr dk lith, mnr micmic, tr oo, tr calc frag, tr glauc mat, tr v f qtz gr, frm-brit, dom frm, blk-sbblky,

**CALCAREOUS SILTSTONE:** med gry-olv gry, abdt arg mtx, grd to CLSLT, mnr dk lith, mnr micmic, tr oo, tr calc frag, tr glauc mat, tr v f qtz gr, frm-brit, dom frm, blk-sbblky, mnr bl

**CALCAREOUS CLAYSTONE:** med gry-olv gry, com-med lt gry, grd to arg CLSLT, slt & grd to CALC SLTST, tr dk lith, tr glauc mat, tr fos & oo.





sft-frm, dom frm, sbblky

**CALCAREOUS SILTSTONE:**  
med gry-olv gry, abdt arg mtx & grd to CALC CLST, tr Dol, grd to CLSLT, mnr dk lith, mnr micmic, tr oo, tr calc frag, tr glauc mat, tr v f qtz gr, frm-brit, dom frm, blkly-sbblky, mnr blkly

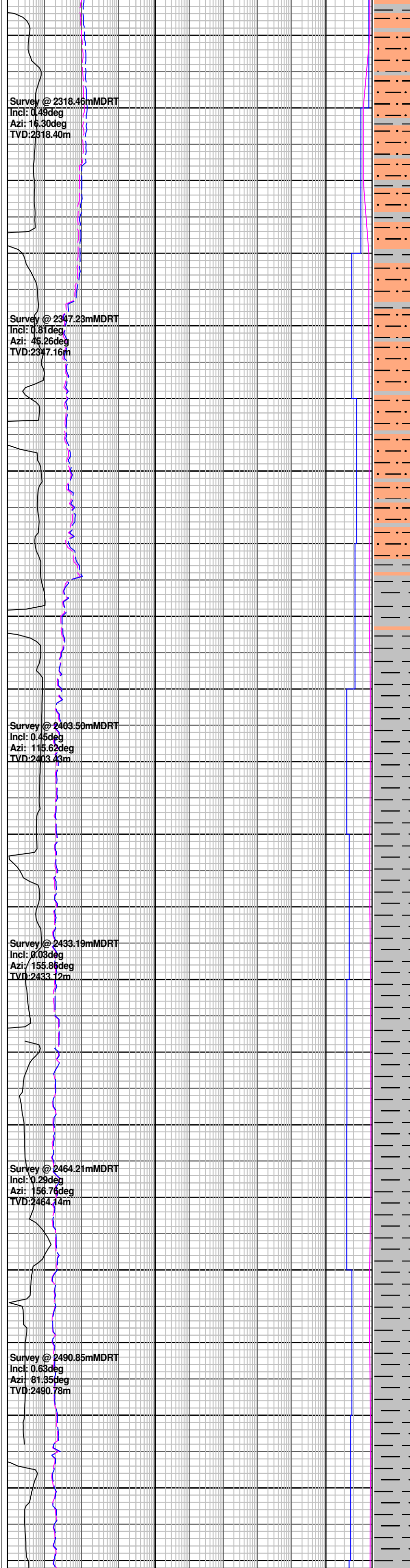
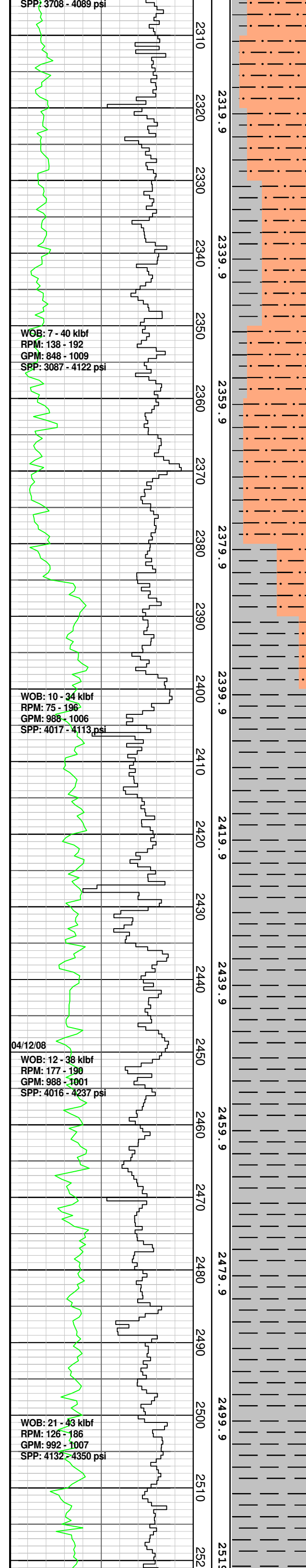
**CALCAREOUS CLAYSTONE:**  
med lt gry mott, off wh-lt olv gry, abdt arg mtx, r Dol, com dk lith, com v f aren microxln i/p, tr v f glauc, frm-hd, dom mod hd, blkly-sbblky

**CALCAREOUS SILTSTONE:**  
med lt gry w/ mott, olv gry, abdt arg mtx & grd to SLTY CALC CLST, com calc & grd to CLSLT, r Dol, mnr dk lith, mnr v f qtz gr, tr Dol microbd, tr v f glauc, frm-hd, dom mod hd, abdt brit, com frm, mnr hd, blkly-sbblky, dom sbblky, mnr blkly

**CALCAREOUS SILTSTONE:**  
med lt gry w/ mott, olv gry, abdt arg mtx, r Dol, com dk lith, com v f aren, com microxln, tr Dol microbd, tr v f glauc, frm-v hd, dom mod hd, blkly-sbblky

**CALCAREOUS CLAYSTONE:**  
off wh-med lt gry w/ mott, off wh-lt olv gry, abdt arg mtx, com dk lith, com v f aren, microxln i/p, tr microfos, frm-hd, dom mod hd, blkly-sbblky

**CALCAREOUS SILTSTONE:**  
dom off wh-olv gry w/ mott, lt-med gry, abdt arg mtx, com



lt-med gry, abdt arg mtx, com dk lith, com v f aren, com fltg qtz gr, com microxn, mnr v f glauc mat, frm-v hd, dom mod hd, blkly

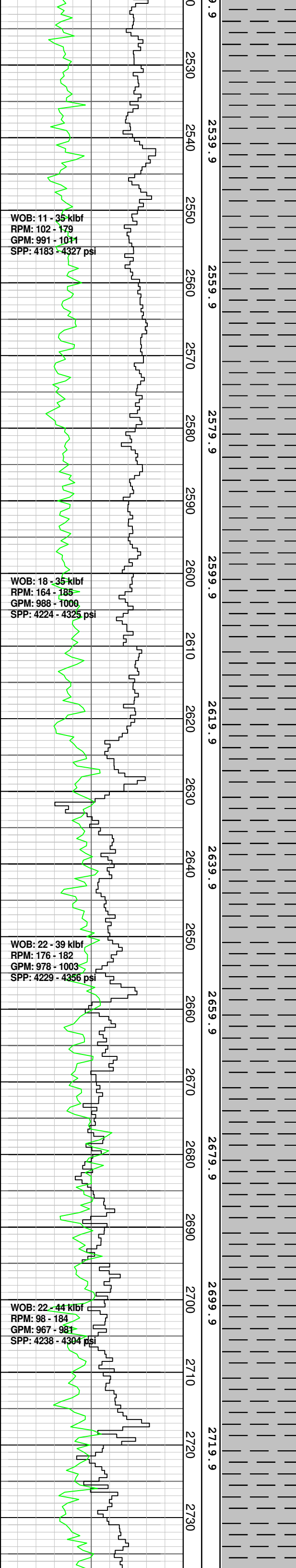
**CALCAREOUS SILTSTONE:**  
dom off wh-olv gry w/ mott, lt-med gry, abdt arg mtx, com dk lith, com v f aren, com fltg qtz gr, com microxn, mnr v f glauc mat, frm-v hd, dom hd, blkly

**CALCAREOUS SILTSTONE:**  
dom off wh-olv gry w/ mott ap, incr com olv gry, abdt arg mtx, com dk lith, com v f aren, com fltg qtz gr, tr microxn, mnr v f glauc mat, f-v hd, dom hd, blkly-sbbkly

**CALCAREOUS CLAYSTONE:**  
olv gry, med gry, mnr pl gry-off wh, com calc & grd to MARL, slty i/p & grd to CALC SLTST, occ dk lith & microlam, tr v f qtz gr, r microfos, r glauc mat, frm-mod hd, sbbkly-blkly

**CALCAREOUS CLAYSTONE:**  
lt olv gry-olv gry, off wh-lt gnsh gry, com calc & grd to MARL, mnr slty i/p, com carb spks, com lse f qtz gr, com microfos & xln frag, r dissem pyr, frm-mod hd, sbbkly-blkly

**CALCAREOUS CLAYSTONE:**



Survey @ 2547.54mMDRT  
Incl: 0.23deg  
Azi: 39.15deg  
TVD: 2547.47m

Survey @ 2604.75mMDRT  
Incl: 0.20deg  
Azi: 3.83deg  
TVD: 2604.68m

Survey @ 2634.30mMDRT  
Incl: 0.03deg  
Azi: 95.44deg  
TVD: 2634.23m

Survey @ 2664.67mMDRT  
Incl: 0.03deg  
Azi: 241.80deg  
TVD: 2664.60m

Survey @ 2722.38mMDRT  
Incl: 0.12deg  
Azi: 225.48deg  
TVD: 2722.31m

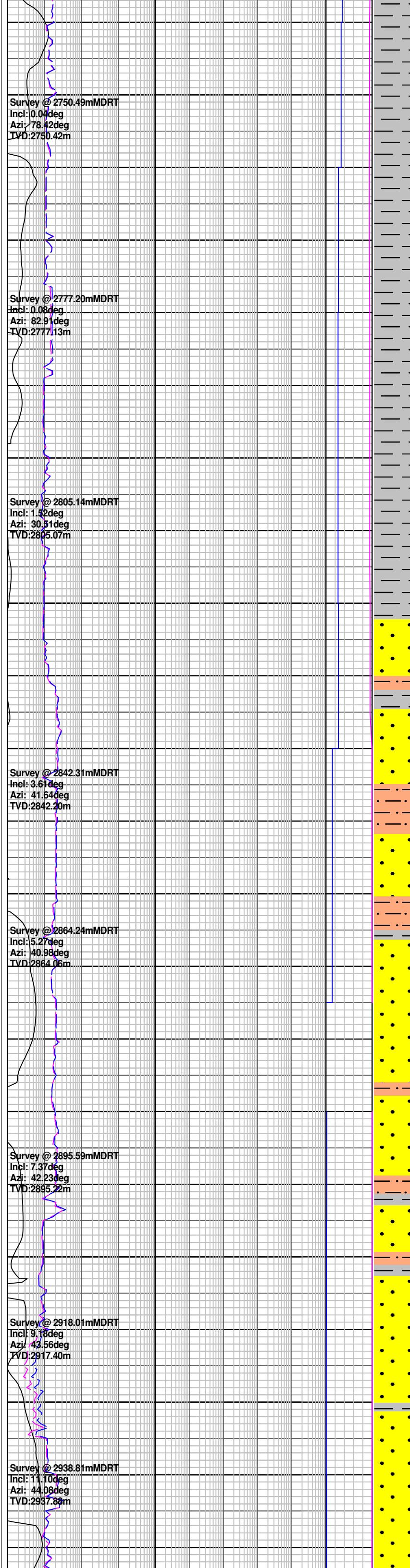
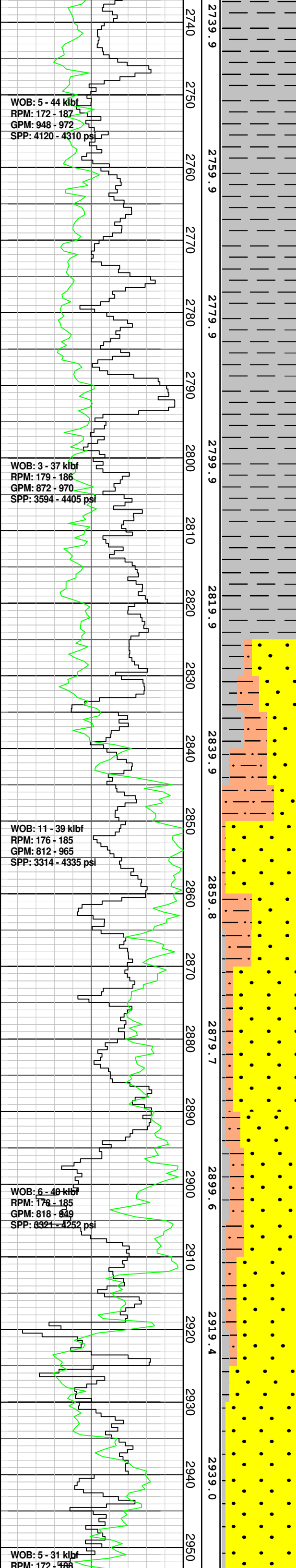
**CALCAREOUS CLAYSTONE:**  
lt olv gry-olv gry, off wh-lt  
gnsh gry, com calc & grd to  
MARL, mnr slty i/p, com carb  
spks, com lse f qtz gr, com  
microfos & xln frag, r dissem  
pyr, frm-mod hd, sbbkly-blky

**CALCAREOUS CLAYSTONE:**  
lt olv gry-olv gry, off wh-lt  
gnsh gry, com calc & grd to  
MARL, mnr slty i/p, r carb  
spks, tr mnr-lse v f-med qtz  
gr, tr microfos & xln frag, mnr  
nod & dissem pyr, frm-mod  
hd, sbbkly-blky

**CALCAREOUS CLAYSTONE:**  
lt olv gry-olv gry, off wh-lt  
gnsh gry, com calc & grd to  
MARL, mnr slty i/p, r carb  
spks, tr mnr-lse v f-med qtz  
gr, tr microfos & xln frag, mnr  
nod & dissem pyr, frm-mod  
hd, sbbkly-blky

**CALCAREOUS CLAYSTONE:**  
med gry-med dk gry, tr dk  
gnsh gry, v calc & grd to  
MARL, tr slty i/p, com lse &  
fltq v f qtz gr & grd sd CLST,  
mnr fos & xln frag, r nod  
& dissem pyr, sft-mod hd,  
dom frm, mnr sft, com  
brit-mod hd, sbbkly-sbfiss, r  
amor

**CALCAREOUS CLAYSTONE:**  
med gry-med dk gry, mnr dk  
gnsh gry, v calc & grd to  
MARL, tr slty i/p, mnr lse v f-f  
qtz gr, mnr fos & xln frag, tr  
oo, tr nod & dissem pyr, tr  
DOL microlam, sft-mod hd,  
dom frm-brit, mnr sft, mnr  
mod hd, sbbkly-sbfiss, dom  
sbbkly, r amor



**CALCAREOUS CLAYSTONE:**  
med gry, com med dk gry,  
mnr olv gry, 5% w/ mott ap &  
tr glauc, v calc & grd to  
MARL, mnr slty i/p, mnr lse v  
f-f qtz gr, tr fos & xln frag, tr  
nod & dissep pyr, tr carb  
mat, smth tex i/p, sft-mod hd,  
dom frm-brit, com mod hd,  
sbbly-sbfiss, dom sbbly

First KOP @ 2788 m & Building at 2  
deg/ 30 m DLS

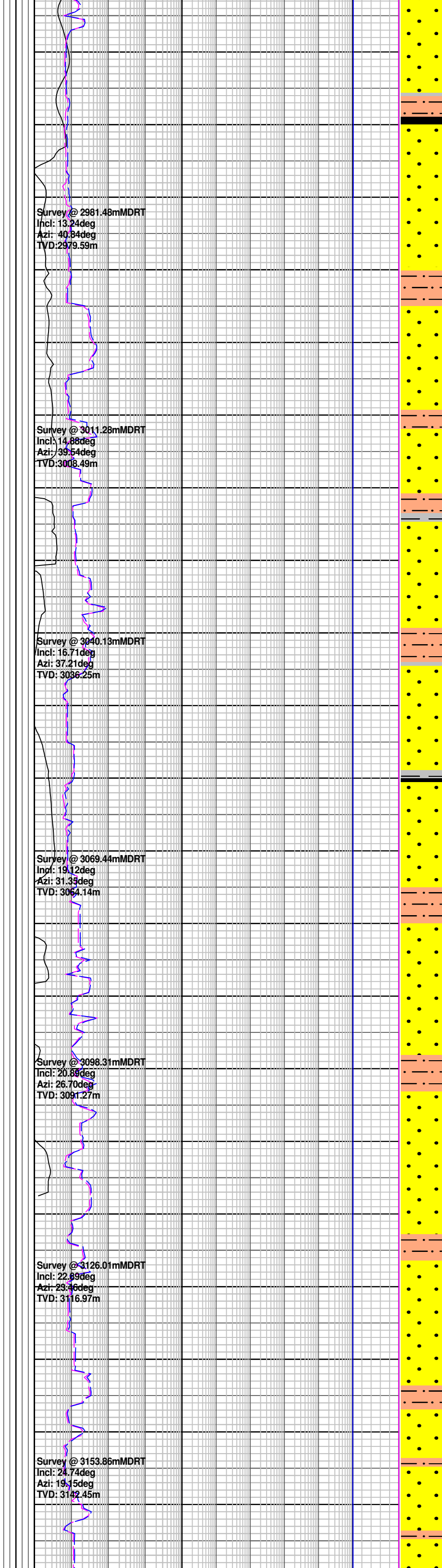
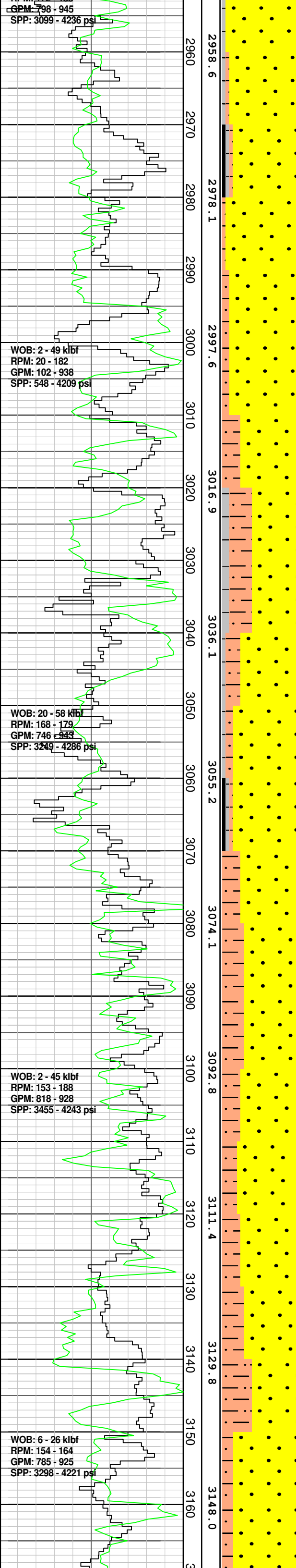
**SANDSTONE:** clr-trnsl, olv  
gry, v f-med, dom v f-f, com  
med, wl srt, sbrnd-rnd, dom  
sbrnd, abdt rnd, nil vis cmt, tr  
pyr cmt, abdt glauc, tr pyr, tr  
fos, disagg, pr inf por, n shw

**SILTSTONE:** dom olv blk,  
com grysh blk-brnsh blk, aren  
grd to arg, abdt v f-crs glauc  
& grd to GLAUC SLTST, mnr  
micmic, tr v f fltg qtz gr, r mic  
flk, tr pyr, sft-frm, sbbly

**GLAUCONITIC SANDSTONE:**  
clr-trnsl, v f-v crs, dom f-med,  
mod srt, ang-sbrnd, dom  
sbang, abdt sbrnd, nil vis  
cmt, tr pyr cmt, tr disp arg  
mtx, f-crs glauc, r pyr, r mic  
flk, disagg,

**GLAUCONITIC SILTSTONE:**  
olv blk-grysh blk, com brnsh  
blk, aren, v f-crs glauc, mnr  
micmic, r mic flk, tr pyr nod,  
frm-mod hd, sbbly

**SANDSTONE:** clr-trnsl, op, f-v  
crs, bi-modal w/ f-med  
(30%-50%) & crs-v crs  
(50%-70%), wl srt, ang-rnd,  
dom sbang, tr mod str sil cmt,  
r str pyr cmt,  
abdt f-crs glauc & grd to  
GLAUC SST, f-med gr, mnr  
qtz shards, r pyr, tr rose qtz,  
disagg, gd inf por, n shw



**COAL:** blk-grysh blk, humic, lig, dull-ea, r sbvit, brit-hd, blk-yl-sbbly, hkl frac, slty i/p, tr disse pyr

**SANDSTONE:** dom op, abdt clr-trnsl, f-v crs, bi-modal w/ f-med (20%-40%) & crs-v crs (60%-80%), wl srt, ang-rnd, dom sbrnd-rnd, abdt sbang, mnr ang, tr mod sil cmt, tr f glauc, tr qtz shards, tr nod pyr, r carb mat, fri agg, dom disagg, pr vis por, gd inf por, n shw

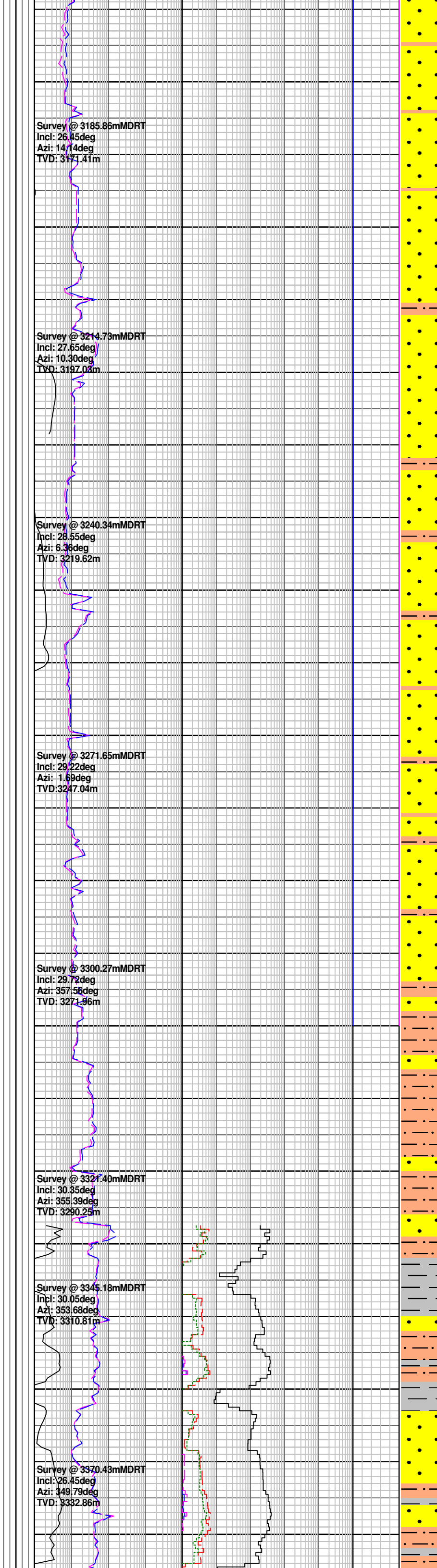
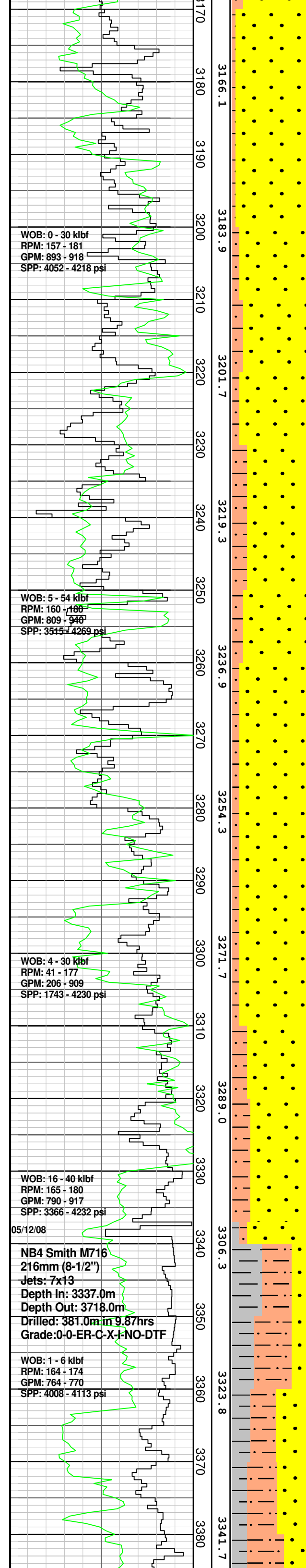
**SILTSTONE:** med dk gry, dom v f aren-mnr arg i/p, tr-mnr carb mat, abdt arg mtx & grad to SLTY CLST, tr lith, sft-brit, dom frm, com sft, mnr brit, sbbly

**CLAYSTONE:** med gry, slty & grad to SLTY CLST & ARG SLTST, tr-mnr carb mat, tr lith, tr carb mat, wk calc, frm-brit, dom frm, sbbky

**SANDSTONE:** op, clr-trnsl, v f-v crs, dom crs-v crs, abdt v f-med, p srt, ang-rnd, dom sbang-sbrnd, com ang & rnd, tr str pyr cmt, tr qtz shards, tr nod pyr, tr carb mat, disagg, gd inf por, n shw

**SANDSTONE:** clr-trnsl, pl gry & off wh, v f-v crs, dom v f-v crs, p srt, sbrnd whr v f-f, sbrnd-ang whr crs-v crs, mnr wk calc cmt, com-abdt off, wh & lt gry arg mtx whr v f & com grd to AREN SLTST i/p, tr-mnr mod str pyr cmt, mnr nod pyr, gen lse, mod hd agg, pr-fr inf por, n shw

**SILTSTONE:** olv gry-med brn gry, com lt gry-off wh, occ dk gry-olv blk, com aren & grd to SLTY SST, com carb mat & C frag whr brnsh blk, mnr micmic & lith, occ nod & disse pyr, mod hd-hd, mnr brit, sbbly-blky



SANDSTONE: clr-trnsl, pl gry & off wh i/p, dom crs- crs, mnr v f-f, wl srt, sbrnd-ang whr crs-v crs, sbrnd whr v f-f, mnr wk calc cmt, mnr to com off wh mtz whr v f, tr-mnr mod str pyr cmt, mnr nod pyr, tr C frag, gen lse frac gr, com med gry cht gr, r mod hd agg, gd inf por, n shw

SILTSTONE: off wh-lt gry, com olv gry, occ olv blk & med brn, com aren & grd to SLTY SST, com carb mat & C lam & frag whr brnsh, blk, mnr micmic & lith, occ nod & dissep pyr, mod hd-hd, sbblky-blky

SANDSTONE: clr-trnsl, pl gry & off wh i/p, dom crs-v crs, mnr v f-f, wl srt, sbrnd-ang whr crs-v crs, sbrnd whr v f-f, mnr wk calc cmt, mnr to loc com pl gry-off wh mtz whr v f-f agg, tr-mnr mod str pyr cmt, mnr nod pyr, occ C frag, occ Fe stn, gen lse frac gr, com med gry cht gr, r mod hd agg, gd inf por, n shw

MW 1.15 V 56 PV 16 YP 29  
GELS 9/10/11 Cl 64k Sol 3.46

SILTSTONE: off wh-lt gry, lt gry-med gry, r olv blk & med brn, gen aren & com grd to SLTY SST, arg i/p, com carb lam & spks, mnr micmic, occ nod & dissep pyr, mod hd-hd, sbblky-blky

Reached 311 mm (12 1/4") section TD @ 3337.0 mMDRT @ 23:00 hrs on 4th December 2008.

CLAYSTONE: med gry-med dk gry, mnr olv gry, mod calc, slty i/p & grad to ARG SLTST, mnr carb mat, com micmic, tr v f lith, tr v f glauc, disp i/p, frm-mod hd, dom frm-brit, com mod hd, sbblky-sbflss, r flss-splin, com amor

SANDSTONE: clr-trnsl, v f-v crs, dom v f-f, abdt med, mnr crs-v crs, wl srt, ang-rnd, dom sbang-sbrnd, mnr ang, tr nod pyr, mnr glauc, tr mic flk,

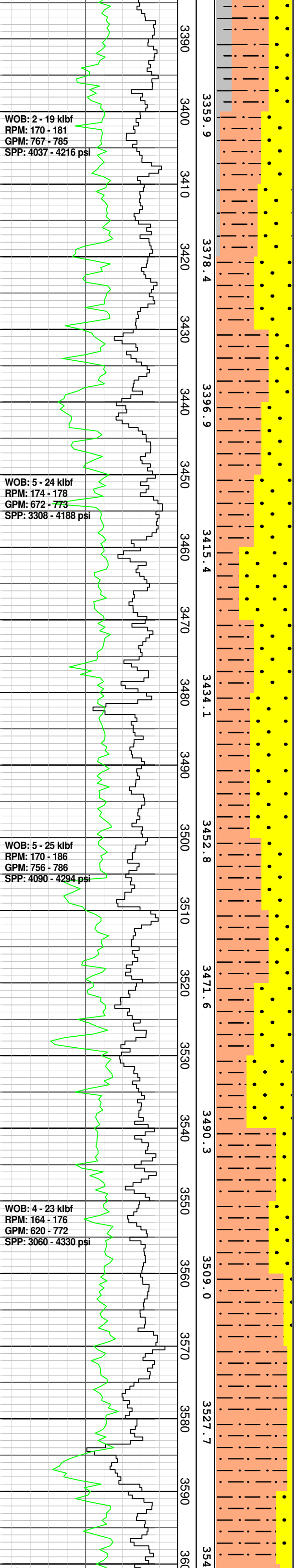
disagg, gd inf por, n shw

WOB: 2 - 19 klf  
RPM: 170 - 181  
GPM: 767 - 785  
SPP: 4037 - 4216 psi

WOB: 5 - 24 klf  
RPM: 174 - 178  
GPM: 672 - 773  
SPP: 3308 - 4188 psi

WOB: 5 - 25 klf  
RPM: 170 - 186  
GPM: 756 - 786  
SPP: 4090 - 4294 psi

WOB: 4 - 23 klf  
RPM: 164 - 176  
GPM: 620 - 772  
SPP: 3060 - 4330 psi



Survey @ 3398.43mMDRT  
Incl: 23.17deg  
Azi: 349.79deg  
TVD: 3358.46m

Survey @ 3431.37mMDRT  
Incl: 21.90deg  
Azi: 349.79deg  
TVD: 3388.89m

Survey @ 3462.00mMDRT  
Incl: 21.96deg  
Azi: 349.98deg  
TVD: 3417.30m

Survey @ 3491.18mMDRT  
Incl: 20.42deg  
Azi: 350.37deg  
TVD: 3444.51m

Survey @ 3519.65mMDRT  
Incl: 19.79deg  
Azi: 350.81deg  
TVD: 3471.24m

Survey @ 3548.44mMDRT  
Incl: 20.87deg  
Azi: 353.04deg  
TVD: 3498.24m

Survey @ 3576.22mMDRT  
Incl: 21.27deg  
Azi: 354.16deg  
TVD: 3524.16m

SILTSTONE: olv blk, v aren, com arg mtx, mnr-com carb lam & spks, tr v f glauc, com micmic, mnr nod & dissem pyr, com f qtz, grd to SLTY SST i/p, frm-brit, sbblky

SANDSTONE: clr-trnsl, v f-crs, dom f, abdt v f, com med, r crs, wl srt, ang-rnd, dom sbrnd-rnd, abdt sbang, mnr ang, tr res pyr cmt, tr pyr nod, tr v f glauc, tr carb mat, tr mic flk, dissagg, fr inf por, n shw

SILTSTONE: olv blk, v aren, com arg mtx, sbblky, com carb lam & mat, tr v f glauc, com micmic, mnr nod & dissem pyr, com f qtz, grd to SLTY SST i/p, com-abdt carb lam & spks, frm-mod hd, sbblky

SANDSTONE: clr-trnsl, v f-f, r med gr, wl srt, sbang-sbrnd, mnr wk calc cmt, com-abdt olv gry slty mtx & com grd to AREN SLTST, com carb lam & spks, gen disagg, mnr frm agg, p vis por, fr inf por, n shw

SILTSTONE: olv blk, v aren, com arg mtx, com carb lam & mat, tr v f glauc, com micmic, tr nod pyr, com grd to SLTY SST, com-abdt carb lam & spks, sft-mod hd, dom frm-brit, com sft, com mod hd, sbblky

SANDSTONE: clr-trnsl, v f-f, r med gr, wl srt, sbang-sbrnd, tr wk calc cmt, com-abdt olv gry slty mtx & com grd to AREN SLTST, com lith, gen disagg, mnr frm agg, p vis por, fr inf por, n shw

WOB: 6 - 23 klbf  
RPM: 170 - 176  
GPM: 757 - 767  
SPP: 4179 - 4288 psi

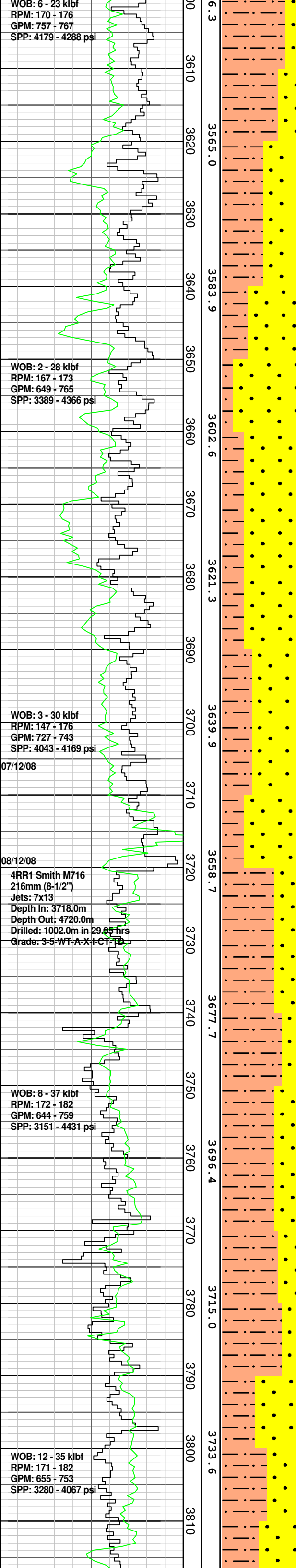
WOB: 2 - 28 klbf  
RPM: 167 - 173  
GPM: 649 - 765  
SPP: 3389 - 4366 psi

WOB: 3 - 30 klbf  
RPM: 147 - 176  
GPM: 727 - 743  
SPP: 4043 - 4169 psi

4RR1 Smith M716  
216mm (8-1/2")  
Jets: 7x13  
Depth In: 3718.0m  
Depth Out: 4720.0m  
Drilled: 1002.0m in 29.85 hrs  
Grade: 3-5-WT-A-X1-C7-1B

WOB: 8 - 37 klbf  
RPM: 172 - 182  
GPM: 644 - 759  
SPP: 3151 - 4431 psi

WOB: 12 - 35 klbf  
RPM: 171 - 182  
GPM: 655 - 753  
SPP: 3280 - 4067 psi



Survey @ 3606.05mMDRT  
Incl: 21.13deg  
Azi: 354.84deg  
TVD: 3551.97m

Survey @ 3635.38mMDRT  
Incl: 19.05deg  
Azi: 356.58deg  
TVD: 3579.52m

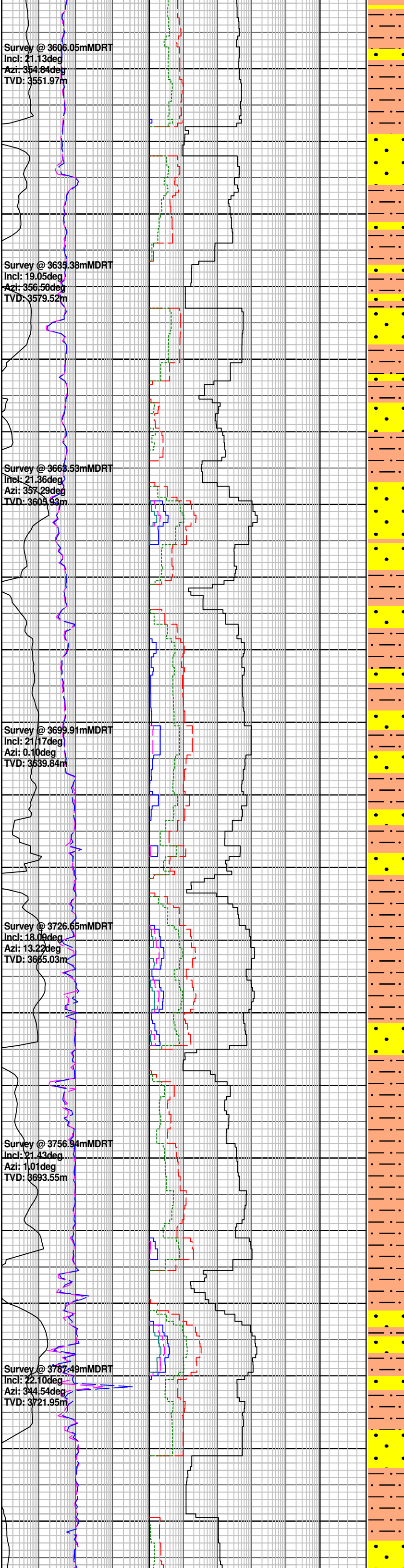
Survey @ 3668.53mMDRT  
Incl: 21.36deg  
Azi: 357.29deg  
TVD: 3604.93m

Survey @ 3699.91mMDRT  
Incl: 21.17deg  
Azi: 0.10deg  
TVD: 3639.84m

Survey @ 3726.65mMDRT  
Incl: 18.00deg  
Azi: 13.22deg  
TVD: 3665.03m

Survey @ 3756.94mMDRT  
Incl: 21.43deg  
Azi: 1.01deg  
TVD: 3693.55m

Survey @ 3787.49mMDRT  
Incl: 22.10deg  
Azi: 344.54deg  
TVD: 3721.95m



SILTSTONE: olv gry, med brn gry, aren & com grd to SLTY SST, loc com arg mtx, com carb lam & spks, mnr calc mat, tr v f glauc, com micmic, tr nod pyr, frm-mod hd, sbblky

SANDSTONE: lt brn-olv gry, trnsl i/p, v f-med gr, occ crs fros ang gr, dom v f, gen wl srt, rnd-sbang, mnr wk calc cmt, com-abdt olv gry slty mtx & com grd to AREN SLTST, com carb lam & spks, com lith, mnr nod pyr & glauc mat, gen disagg, mod hd v f gr agg, p-fr inf por, n shw

SILTSTONE: olv gry, med brn gry, aren & com grd to SLTY SST, loc com arg mtx, com carb lam & spks, mnr calc mat, tr v f glauc, com micmic, tr nod pyr, frm-mod hd, sbblky

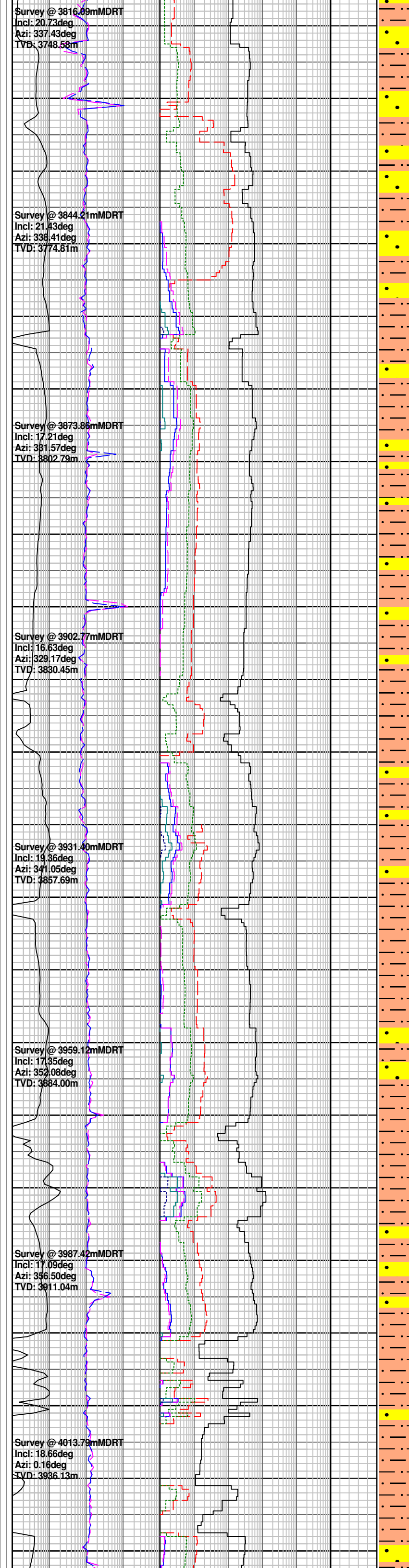
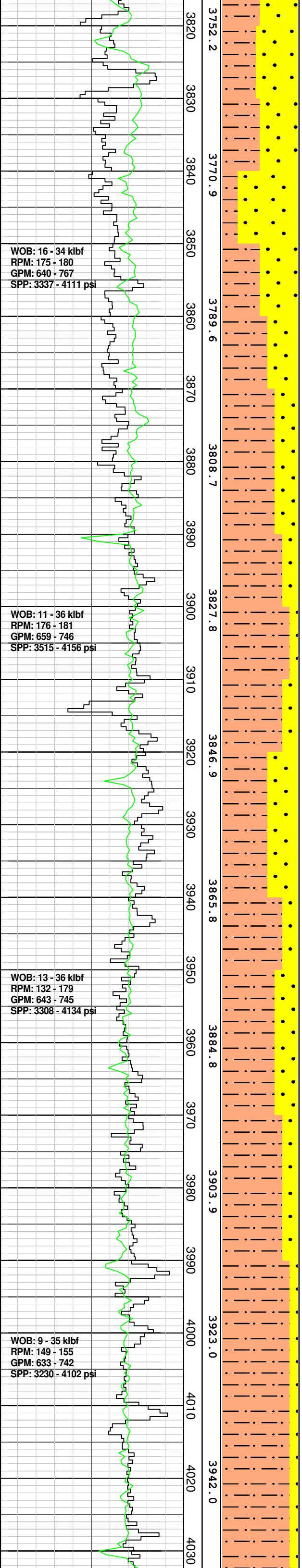
POOH due to MWD tool failure  
Gamma data from 3718.0 mMDRT to 4332.5 mMDRT is imported from Baker Atlas wireline. All other gamma data is Schlumberger Anadrill MWD data.

SANDSTONE: lt brn-olv gry, mnr off wh-trnsl, v f-med gr, occ crs fros ang gr, dom v f, gen wl srt, rnd-sbang, mnr wk calc cmt, incr com mod stg pyr cmt, com-abdt olv gry slty mtx & com grd to AREN SLTST, com carb spks, com lith, mnr pyr, com glauc mat, gen disagg, occ rk flour, r mod hd agg, v p vis por, n shw

SILTSTONE: olv gry, med brn gry, v aren & com grd to SLTY SST, mnr arg, com carb lam & spks, mnr calc mat, tr v f glauc, com micmic, tr nod pyr, frm-mod hd, sbblky

SANDSTONE: lt brn-olv gry, mnr off wh-trnsl, v f-med gr, occ crs fros ang gr, dom v f, gen wl srt, rnd-sbang, mnr wk calc cmt, incr com mod stg pyr cmt, com-abdt olv gry slty mtx & com grd to AREN SLTST, com carb spks, com lith, mnr pyr, com glauc mat.





gen disagg, v p vis por, n shw

Dropped carbide @ 3824.0 m and hole is in gauge

SILTSTONE: olv blk, com dk gry & grysh blk, dom aren, com arg, mnr carb lam & spks, tr micmic, tr mic flk, tr calc mat, tr lith, tr v f glauc, tr v f qtz, tr pyr, sft-mod hd, dom frm-brit, com sft, mnr mod hd, sbbiky

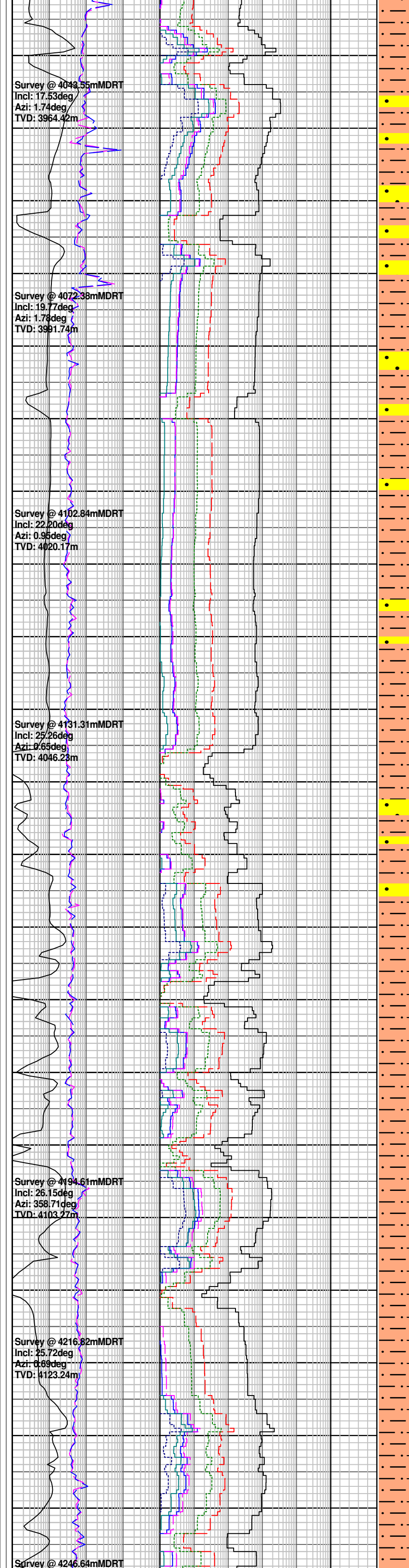
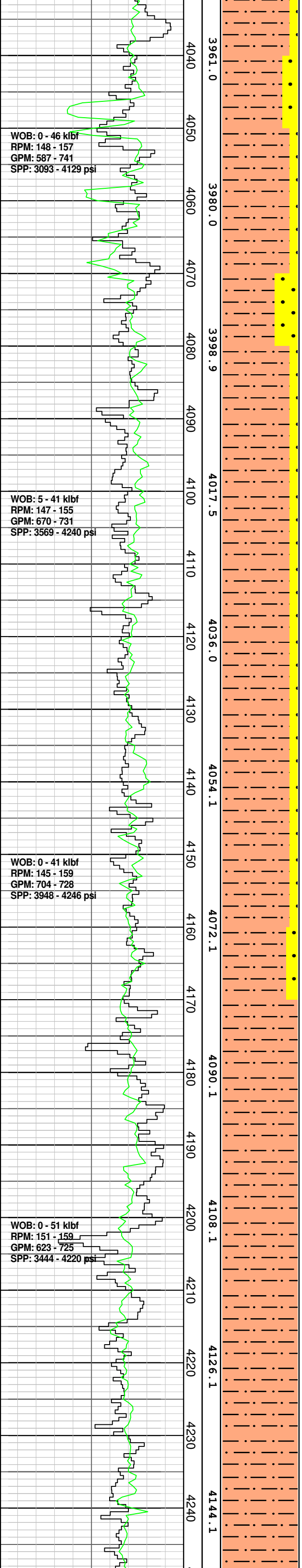
SILTSTONE: olv blk-grysh blk, mnr dk gry, aren, com arg, com carb lam & spks, tr micmic, mnr calc mat, mnr lith, tr v f glauc, tr v f qtz, tr pyr, sft-hd, dom brit-mod hd, mnr sft-frm, com brit & hd, sbbiky-sbfiss

SANDSTONE: med gry-med dk gry agg, clr-trnsl, v f-crs, dom v f-f, com med, tr crs, wl srt, rnd-ang, dom sbang-sbrnd, com rnd, mnr ang, tr str calc cmt, tr olv gry slty mtx & grad to SLTY SST, com carb spks, com lith, r mic flk, dom disagg, tr fri-hd agg, v p vis por, fr inf por, n shw

SILTSTONE: olv blk, mnr grysh blk, aren, com carb lam & spks, tr micmic, mnr calc mat, mnr lith, tr glauc, tr pyr, soft-hd, dom brit-mod hd, mnr sft-frm, com hd, sbbiky-sbfiss

SANDSTONE: clr-trnsl, v f-crs, dom v f-f, com med, tr crs, wl srt, rnd-sbang, dom sbang-sbrnd, com rnd, mnr ang, tr mic flk, disagg, p inf por, n shw

SILTSTONE: olv blk, com



grysh blk, v aren, carb whr  
grysh blk, mn arg, com carb  
lam & spks, mn micmic, mn  
lith, tr glauc, tr pyr, sft-hd,  
dom brit-hd whr aren, hd whr  
carb, mn sft frm whr arg,  
sbbly-sbfiss, dom sbbly

SILTSTONE: olv blk, aren,  
rarely carb, mn arg, r Dol,  
micmic, r carb lam & spks,  
mn lith, tr nod & dissem pyr,  
frm-mod hd, dom brit, abdt  
mod hd, com frm, sbbly-  
sbfiss, dom sbbly

FLUORESCENCE: (4100.0-4160.0)  
Tr-5% dll-mod brt ptchy-evn yeish gn  
fluor ass/w calc cmt agg, v slw yeish  
gn strmg ct, thn r/r (>5min to form r/r)

SANDSTONE: clr-trnsl, med lt  
gry-med gry agg, v f-f, v wl  
srt, sbrnd-sbang, dom mod  
stg calc cmt, tr mod stg sil  
cmt i/p, abdt arg mtx, com  
lith, tr v f carb mat, dom  
brit-hd agg, abdt disagg, v p  
vis por, p inf por, fluor

SILTSTONE: olv blk, arg, abdt  
aren, tr dol, micmic, mn v f  
carb mat, tr lith, tr nod &  
dissem pyr, tr calc frag,  
sft-mod hd, dom brit, abdt  
mod hd, com frm & sft,  
sbbly-sbfiss, dom sbbly

SILTSTONE: olv blk, dom arg,  
com aren, micmic, tr mic flk, r  
v f carb mat, tr lith, tr nod &  
dissem pyr, tr v f glauc,  
frm-mod hd, dom frm-brit,  
mn mod hd, sbbly-sbfiss,  
dom sbbly

SILTSTONE: dk gry-olv blk,  
dom arg, com aren, micmic, tr  
carb spks, tr v f glauc gr,  
frm-mod hd, brit i/p,  
sbbly-sbfiss

SILTSTONE: olv blk, dom arg,  
abdt aren, micmic, mn carb  
spks & tr lam, tr nod pyr, tr v f  
glauc gr, tr lith, tr wh calc

WOB: 0 - 46 klbf  
RPM: 151 - 163  
GPM: 599 - 723  
SPP: 3206 - 4221 psi

09/12/08

WOB: 1 - 43 klbf  
RPM: 154 - 163  
GPM: 637 - 733  
SPP: 3527 - 4229 psi

WOB: 17 - 36 klbf  
RPM: 153 - 158  
GPM: 710 - 717  
SPP: 4059 - 4184 psi

WOB: 14 - 40 klbf  
RPM: 172 - 182  
GPM: 624 - 715  
SPP: 3458 - 4127 psi

WOB: 10 - 36 klbf  
RPM: 169 - 179  
GPM: 619 - 707  
SPP: 3417 - 4072 psi

4250  
4260  
4270  
4280  
4290  
4300  
4310  
4320  
4330  
4340  
4350  
4360  
4370  
4380  
4390  
4400  
4410  
4420  
4430  
4440  
4450  
4460

4162.2  
4180.1  
4197.9  
4215.6  
4233.5  
4251.5  
4269.7  
4288.1  
4306.5  
4324.8  
4343.0

Incl: 25.44deg  
Azi: 2.82deg  
TVD: 4150.19m

Survey @ 4275.54mMDRT  
Incl: 26.86deg  
Azi: 4.02deg  
TVD: 4176.08m

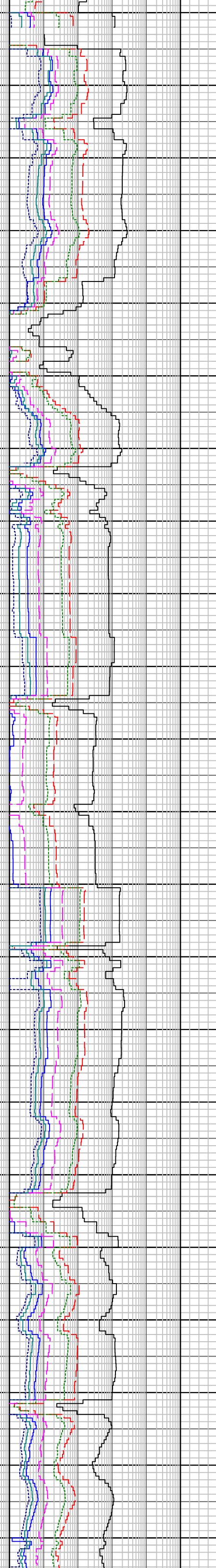
Survey @ 4306.35mMDRT  
Incl: 27.47deg  
Azi: 3.24deg  
TVD: 4203.49m

Survey @ 4335.70mMDRT  
Incl: 26.74deg  
Azi: 1.60deg  
TVD: 4229.62m

Survey @ 4395.46mMDRT  
Incl: 22.70deg  
Azi: 1.53deg  
TVD: 4283.88m

Survey @ 4425.48mMDRT  
Incl: 23.78deg  
Azi: 3.16deg  
TVD: 4311.54m

Survey @ 4454.10mMDRT  
Incl: 24.83deg  
Azi: 4.36deg  
TVD: 4337.68m



mat, frm-mod hd, brit i/p, sbbkly-sbfiss

SILTSTONE: med dk gry-olv blk, abdt arg, com aren, micmic, tr carb spks, tr v f glauc gr, tr nod pyr, tr wh calc mat, frm-mod hd, brit i/p, sbbkly-sbfiss

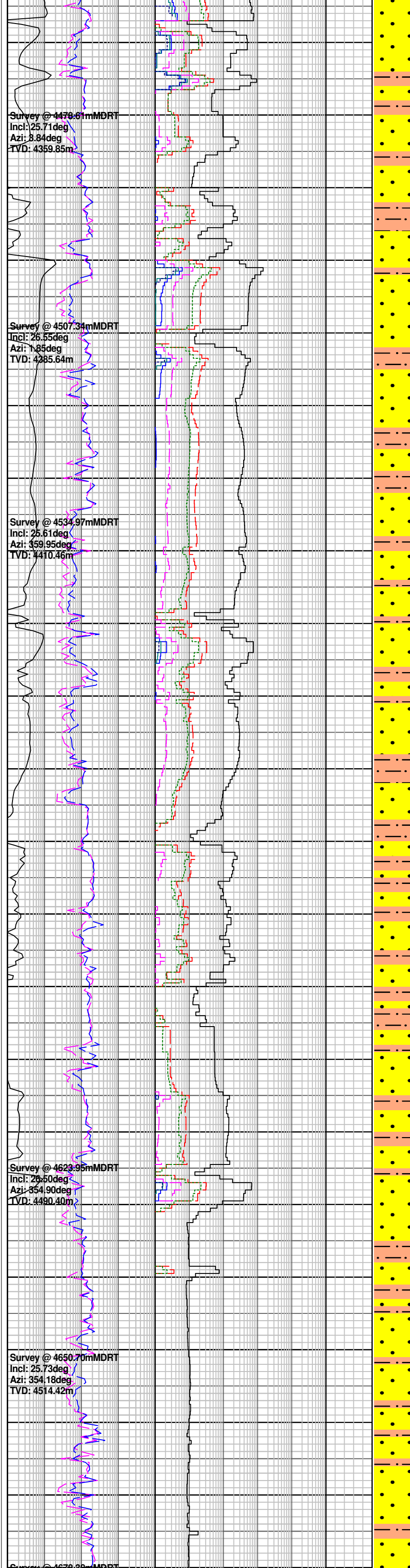
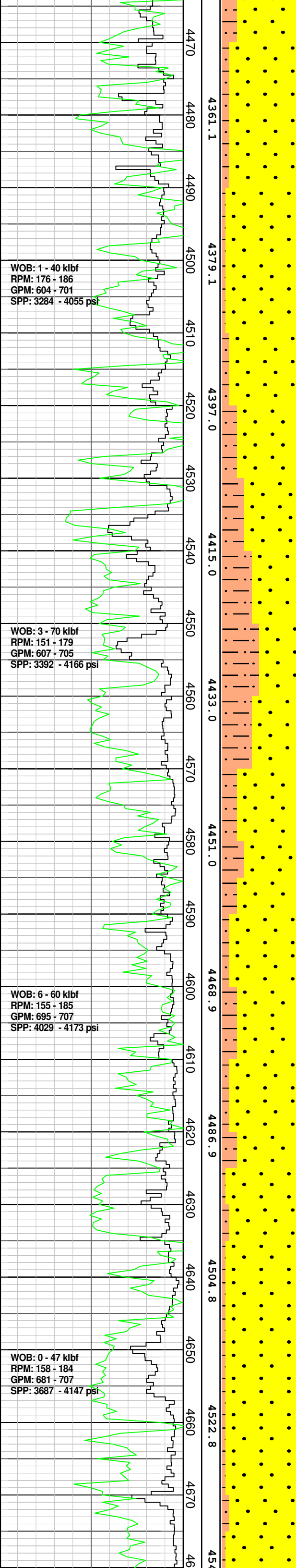
SILTSTONE: dk gry-olv blk, arg, mnr aren, micmic, tr carb spks, tr v f glauc gr, tr nod pyr, tr wh calc mat, frm-mod hd, brit i/p, sbbkly-sbfiss

SILTSTONE: dk gry-olv blk, arg, mnr aren, micmic, tr carb spks, tr v f glauc gr, tr nod pyr, tr wh calc mat, frm-mod hd, brit i/p, sbbkly-sbfiss

SANDSTONE: clr-trnsl, med-lt gry agg, v f-f, v wl srted, sbrnd-ang, dom sbang-sbrnd, com ang, wk sil cmt, fri agg, dom disagg, p vis por, p inf por, n shw

SILTSTONE: olv blk-dk gry, com gnsh blk, arg & aren, micmic, tr mic flk, mnr carb spks & mat, tr v f glauc, tr calc frag, tr nod & dissem pyr, tr lith, frm-hd, dom mod hd-hd, com frm & brit, dom sbbkly, com sbfiss

SANDSTONE: clr-trnsl, med lt gry agg, v f-v crs, dom f-med, abdt v f, abdt crs-v crs, agg are v f-f, p srt, sbrnd-ang, dom sbang, com sbrnd, com ang, dom wk-mod sil cmt, mnr stg calc cmt, abdt wh arg mtv & ard to ARG SST, tr lt



mix & grd to ARG SST, tr lith, tr carb mat, tr nod pyr, fri-brit agg, dom disagg, p vis por, p inf por, n shw

SILTSTONE: olv blk-dk gry, aren, com carb, micmic, com carb spks & mat, tr v f glauc, tr calc frag, tr nod & dissem pyr, tr lith, frm-hd, dom mod hd-hd, com frm-brit, dom sbbiky, com sbfiss

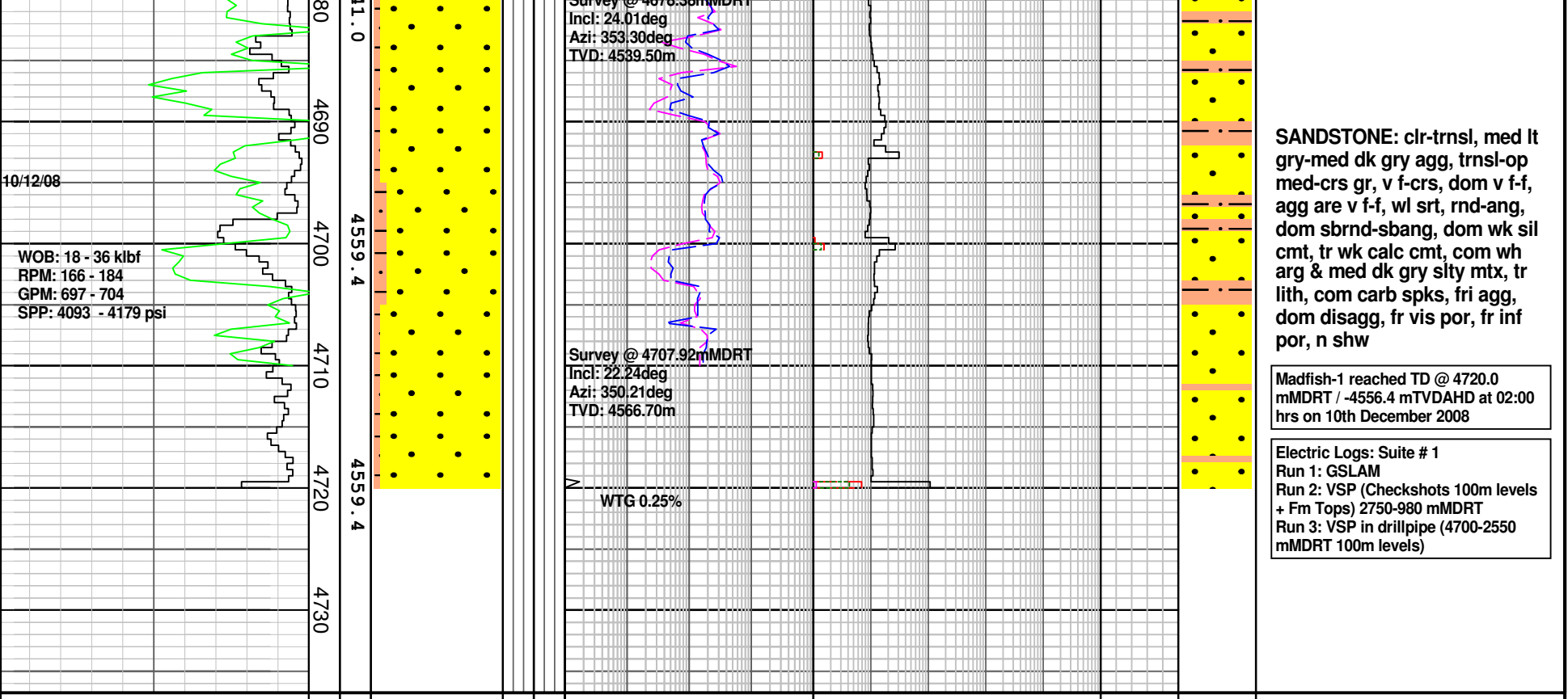
SANDSTONE: clr-trnsl, med lt gry-med gry agg, op crs-v crs gr, v f-v crs, dom f, abdt med, com v f, com crs-v crs, v f-f agg, mod srt, sbrnd-ang, dom sbang, com sbrnd, dom wk-mod sil cmt, tr stg calc cmt, tr res pyr cmt, abdt wh arg mtx & grd-ARG SST, tr lith, abdt carb mat, tr nod pyr, com calc frag, tr glauc, fri-brit agg, dom disagg, fr vis por, fr inf por, n shw

SILTSTONE: olv blk-dk gry, mnv olv gry, aren, com carb, mnv arg, micmic, com carb spks & mat, tr v f glauc, tr calc frag, tr nod & dissem pyr, tr lith, frm-hd, dom mod hd-hd, com frm & brit, dom sbbiky, com sbfiss

SANDSTONE: clr-trnsl, med lt gry-med gry agg, trnsl-op crs-v crs gr, v f-v crs, dom v f-f, v f-f agg, wl srt, rnd-ang, dom sbrnd-sbang, dom wk-mod sil cmt, com wh arg & med dk gry slty mtx, r lith, com carb spks, fri agg, disagg, fr vis por, fr inf por, n shw

SILTSTONE: olv blk-dk gry, aren, tr arg, micmic, com carb mat, tr calc frag, tr v f glauc gr, tr lith, frm-mod hd, dom frm, brit, sbbiky-sbfiss

SILTSTONE: olv blk-dk gry, aren, tr arg, micmic, com carb mat, tr calc frag, tr v f glauc gr, tr lith, frm-mod hd, dom frm, brit, sbbiky-sbfiss



**FORMATION EVALUATION LOG**

Drilling Rate		MID meters 1:500	TVDR meters	Cuttings Lithology	Oil Show P F G	Visual Inferred Porosity P F G	Gas Data		Chromatograph Data					Calciemetry CaCO3 % MgCO3 %	Interpreted Lithology	Lithology Description		
ROP (m/hr)	API						Gas Hydrocarbon Avg %	Methane ppm	Ethane ppm	Propane ppm	iso-Butane ppm	n-Butane ppm	iso-Pentane ppm				n-Pentane ppm	
200	200						0.1   1   10   100	1	100000	1	100000	1	100000	1	100000	1	100000	
180	240						Resistivity Shallow	1	1000	1	100000	1	100000	1	100000	1	100000	
160	280						ohm.m	1	1000	1	100000	1	100000	1	100000	1	100000	
140	320						Resistivity Deep	1	1000	1	100000	1	100000	1	100000	1	100000	
120	360						ohm.m	1	1000	1	100000	1	100000	1	100000	1	100000	
100	400							1	1000	1	100000	1	100000	1	100000	1	100000	
80								1	1000	1	100000	1	100000	1	100000	1	100000	
60								1	1000	1	100000	1	100000	1	100000	1	100000	
40								1	1000	1	100000	1	100000	1	100000	1	100000	
20								1	1000	1	100000	1	100000	1	100000	1	100000	