



Company : Apache

Well : Dory-1

Interval : 1518.00 - 3391.42 meters

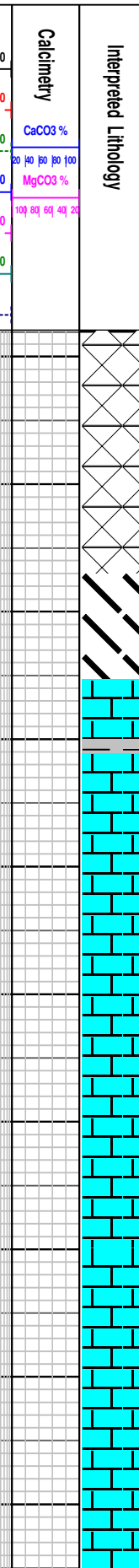
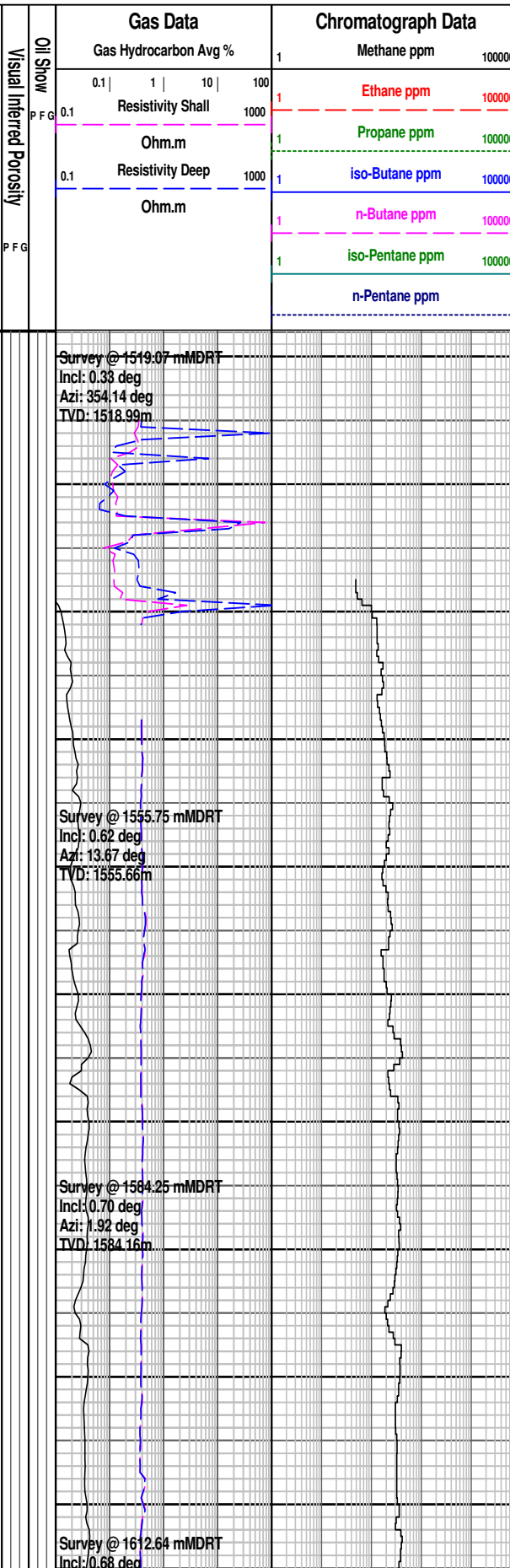
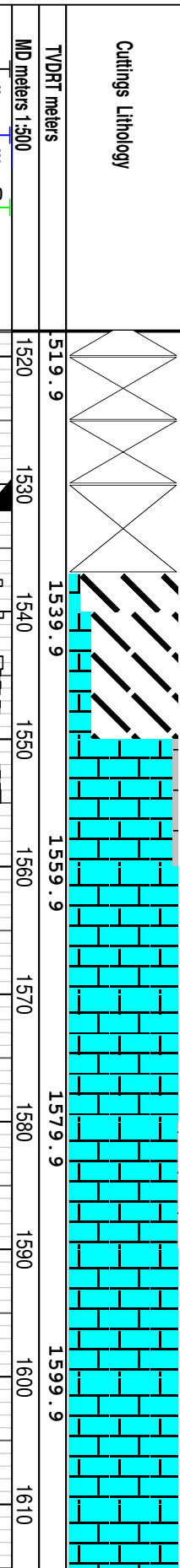
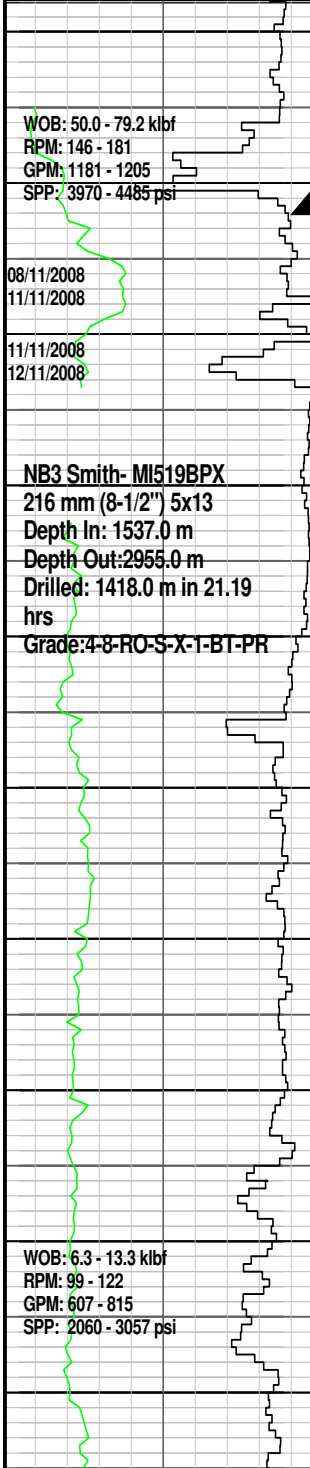
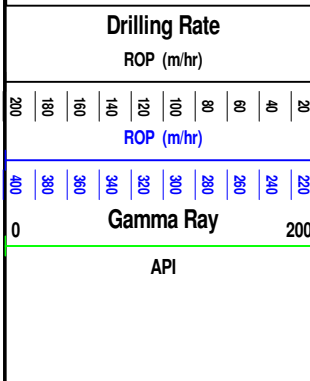
Created : 15/Nov/2008 6:41:17 AM



INTEQ

FORMATION EVALUATION LOG

Drilling Rate		MD meters	TVDRT meters	Cuttings Lithology	Visual Inferred Porosity	Oil Show	Gas Data		Chromatograph Data		Calcmetry	Interpreted Lithology	Lithology Description
ROP (m/hr)	ROP (m/hr)						Gas Hydrocarbon Avg %	Methane ppm	Ethane ppm	Propane ppm			
200	200	1520	519.9				0.1 1 10 100	1	100000	100000			
180	180	1530	1539.9				0.1	1	100000	100000			
160	160	1540	1539.9										
140	140	1550	1559.9										
120	120	1560	1559.9										
100	100	1570	1579.9										
80	80	1580	1579.9										
60	60	1590	1599.9										
40	40	1600	1599.9										
20	20	1610	1599.9										



340mm (13-3/8") Casing Shoe @ 1532.14 mMDRT

Reached 406mm (16") Section TD @ 1537.0m at 00:30 hrs on 08/11/2008

Drill with 9.6 ppg (1.15 sg) WBM

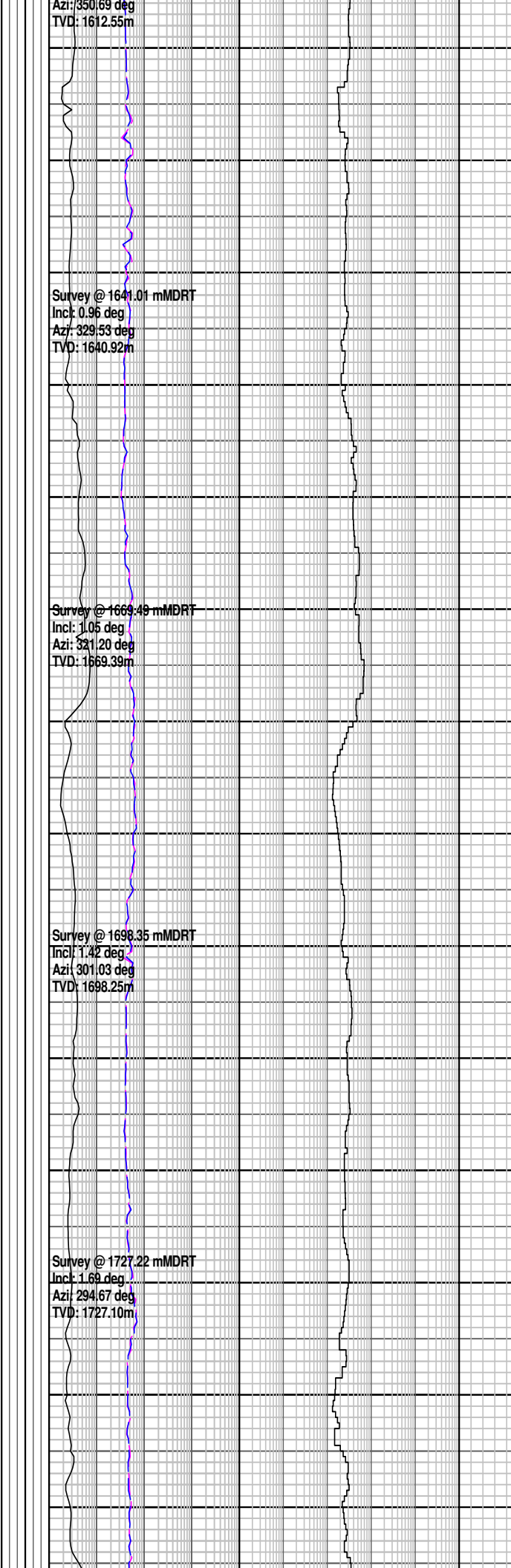
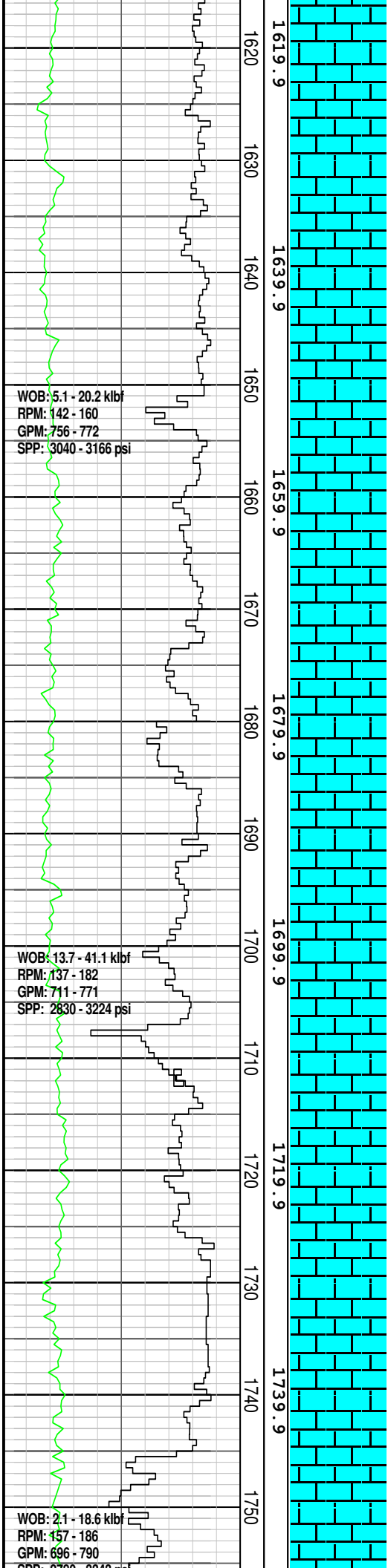
MW 1.15 V 54 PV 13 YP 20
GELS 5/7/7 CI 60 K Sol 4.8

DOLOMITIC CLAYSTONE: It yel, or, abdt calc mat, mnr lith, mod hd-hd, sb-blky

LOT@ 1540.00 mMDRT: 1.34 sg (EMW)

CALCILUTITE: It gry, It gn gry, It gry-off wh, m gn gry, com arg mtx, occ f qtz gr, com dk lit & glauc mat, occ mic foss, occ or calc frag, frm-mod hd, sbbly-blky

CALCILUTITE: It gry, It gn gry, It gry-off wh, m gn gry, com arg mtx, occ f qtz gr,



com dk lit & glauc mat, occ mic foss, occ or calc frag, slty i/p & loc grd-ARG CLCLT, frm-mod hd, sbbly-blky

OOLITIC CALCARENITE: m lt gry-m gry, v f-v crs, pr srt, rnd-sbang, abdt arg mtx, rr micrxln, mnr qtz gr v f-v crs, wl rnd, tr lit, abdt foss, (oo, Foram, Amm), mnr glauc, lse, brit- mod hd i/p, dom n vis por, gd inf por, n shw

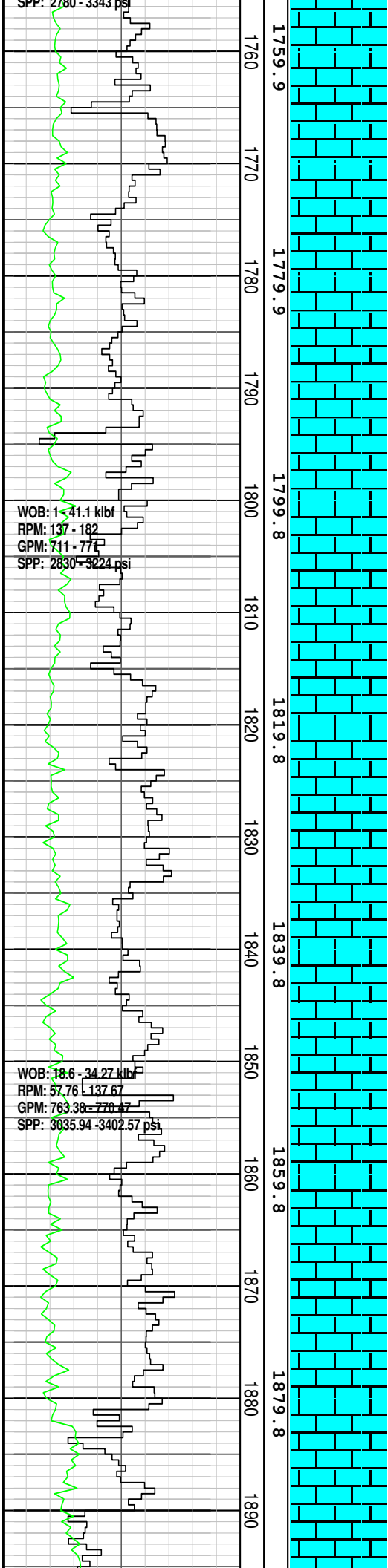
CALCISILTITE: m lt gry-lt olv gry, mnr m gry, abdt mtx & grad-CLCLT i/p, grad-CLCAR i/p, abdt v f dk lit, com foss (Foram & oo), abdt v f qtz gr, tr glauc, tr carb mat, sft-brit, dom frm, com sft & brit, sbbly, n vis por

CALCISILTITE: dom gnsh gry-lt olv gry, com m lt gry-lt olv gry, abdt mtx & grad-CLCLT i/p, abdt v f drk lit, mnr foss, oo, abdt v f qtz gr, tr-com v f glauc, tr carb, mat, sft-brit, dom frm, mnr sft & brit, sbbly, n vis por

SPP: 2780 - 3343 psi

WOB: 1541.1 klbf
RPM: 137 - 182
GPM: 711 - 777
SPP: 2830 - 3224 psi

WOB: 18.6 - 34.27 klbf
RPM: 57.76 - 137.67
GPM: 763.38 - 770.47
SPP: 3035.94 - 3402.57 psi



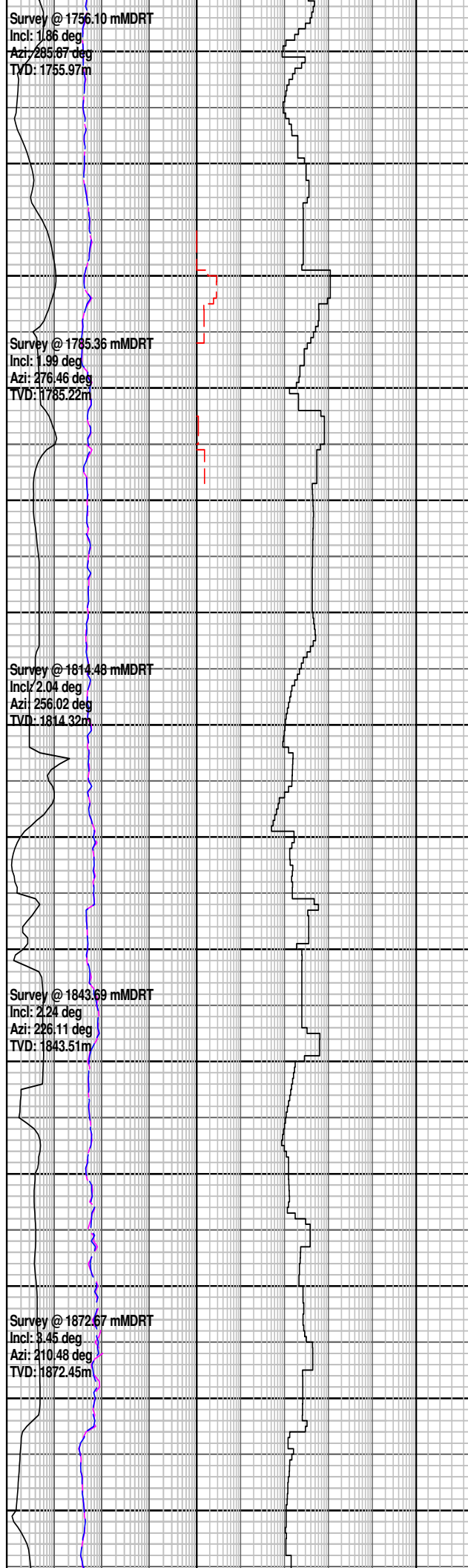
Survey @ 1756.10 mMDRT
Incl: 1.86 deg
Azi: 285.87 deg
TVD: 1755.97m

Survey @ 1785.36 mMDRT
Incl: 1.99 deg
Azi: 276.46 deg
TVD: 1785.22m

Survey @ 1814.48 mMDRT
Incl: 2.04 deg
Azi: 256.02 deg
TVD: 1814.32m

Survey @ 1843.69 mMDRT
Incl: 2.24 deg
Azi: 226.11 deg
TVD: 1843.51m

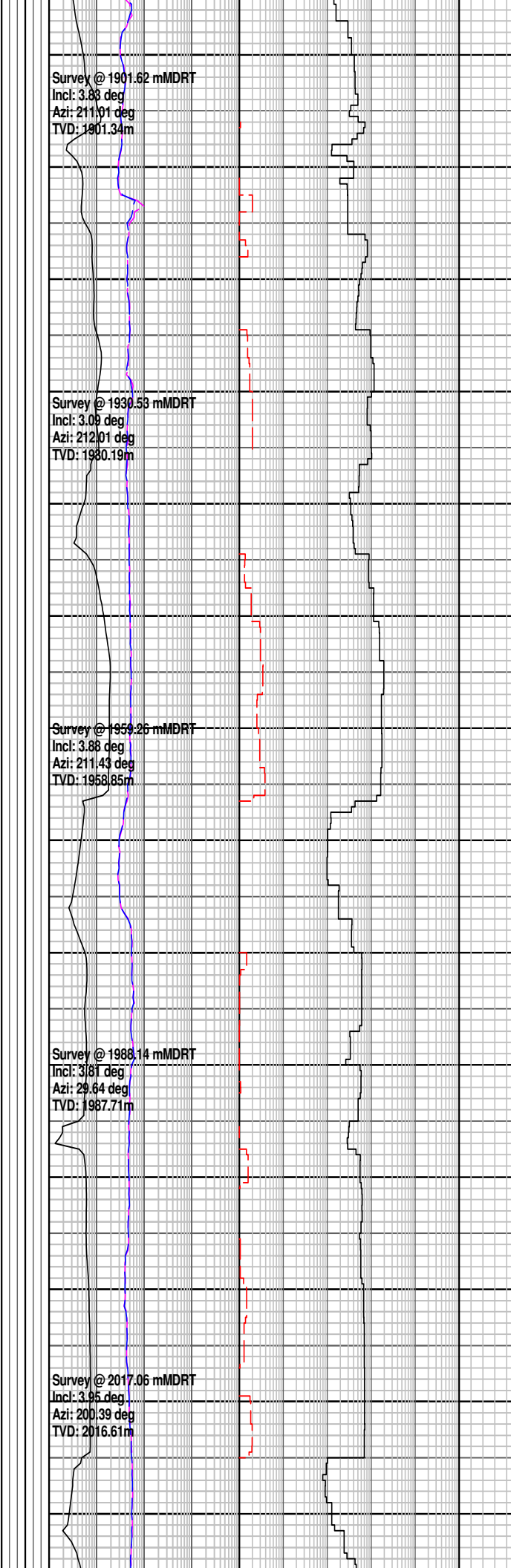
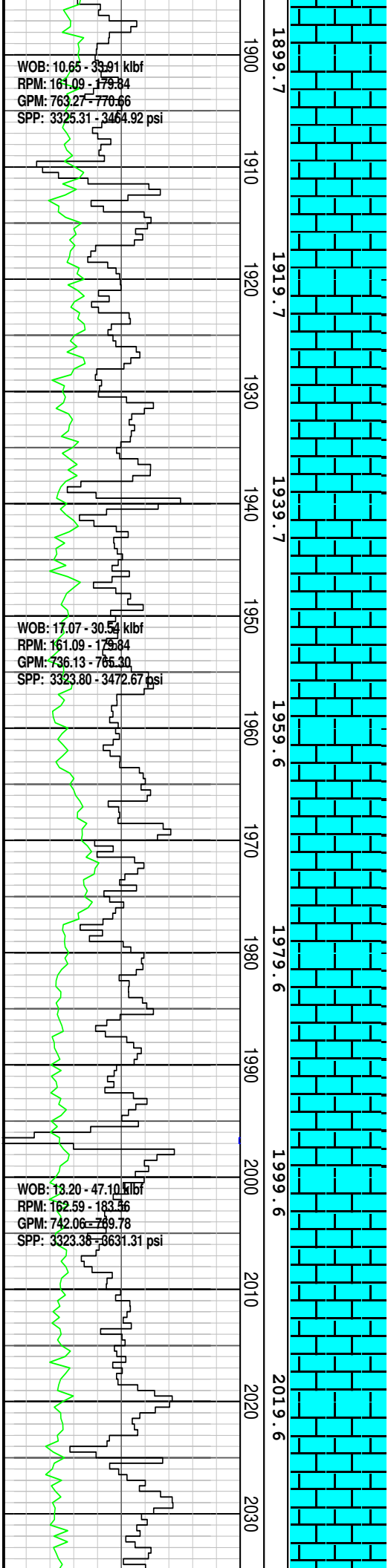
Survey @ 1872.67 mMDRT
Incl: 3.45 deg
Azi: 210.48 deg
TVD: 1872.45m



CALCARENITE: m lt gry-med gry, v f-f, wl std, rnd-sbang, abdt arg mtx, rr micrxln, tr lit, com foss (oo, Foram, Amm), rr glauc, mnr lse, dom brit-mod hd i/p, v p vis por, tr moldic por, n shw

CALCISILTITE: m lt gry, com lt olv gry-lt gry, mnr olv gry, abdt arg mtx, mnr f drk lit, mnr oo, mnr v f qtz gr, tr glauc, tr carb mat, sft-brit, dom frm, mnr sft & brit, sblbky, n vis por, n shw

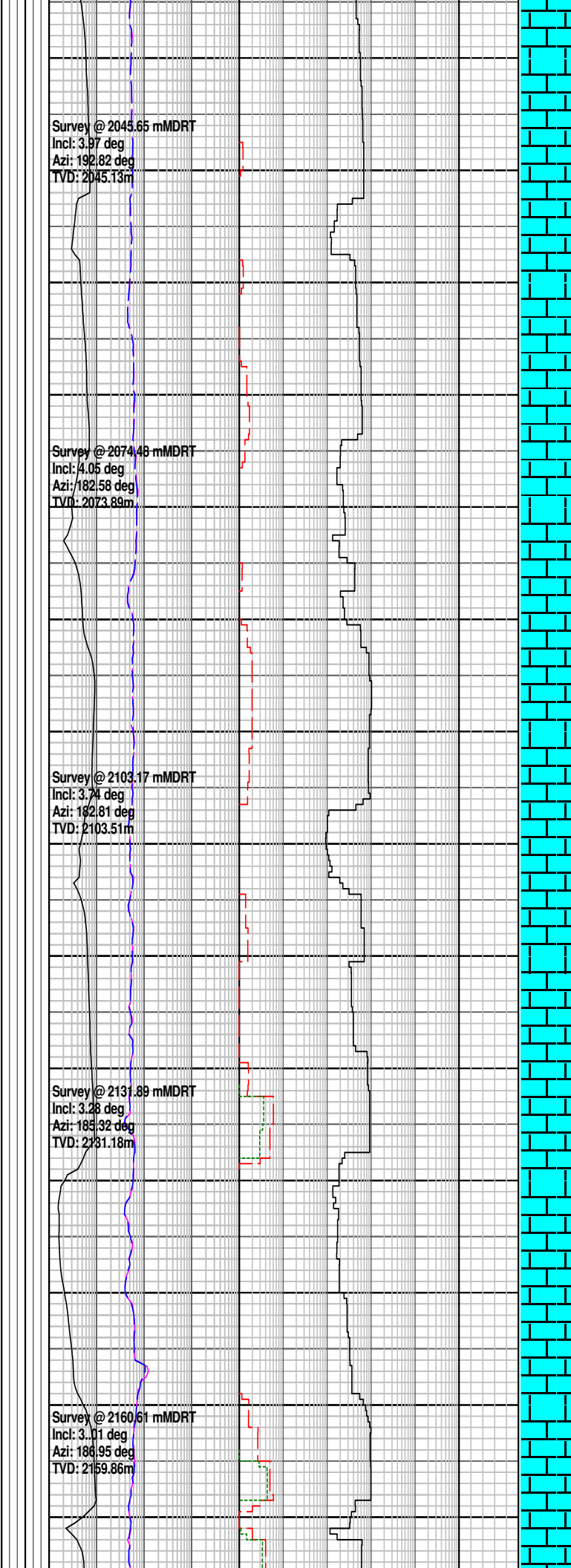
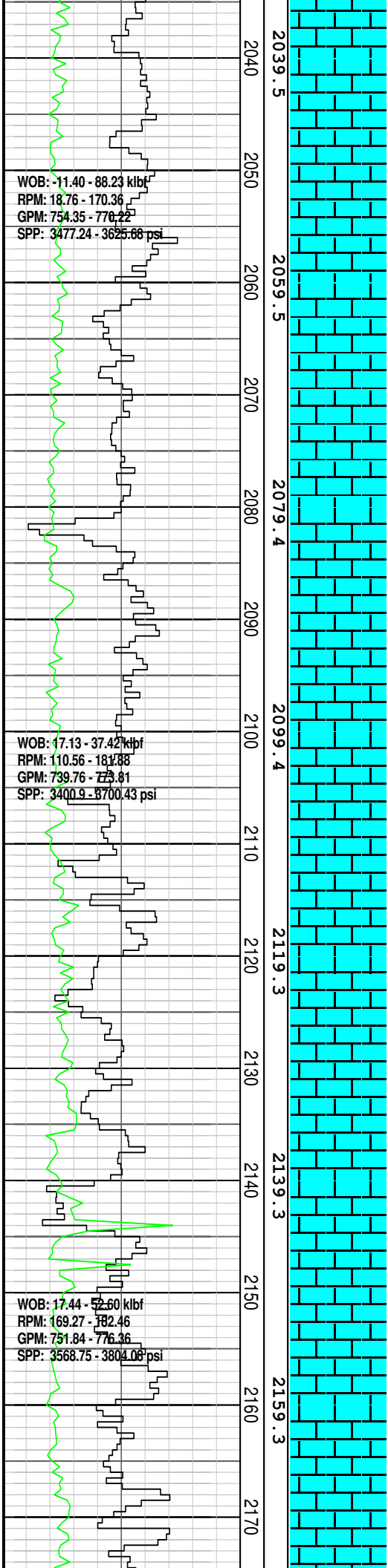
CALCILUTITE: olv gry, arg grad-CALC CLYST i/p, mnr v f drk lit, tr glauc mat, mnr oo



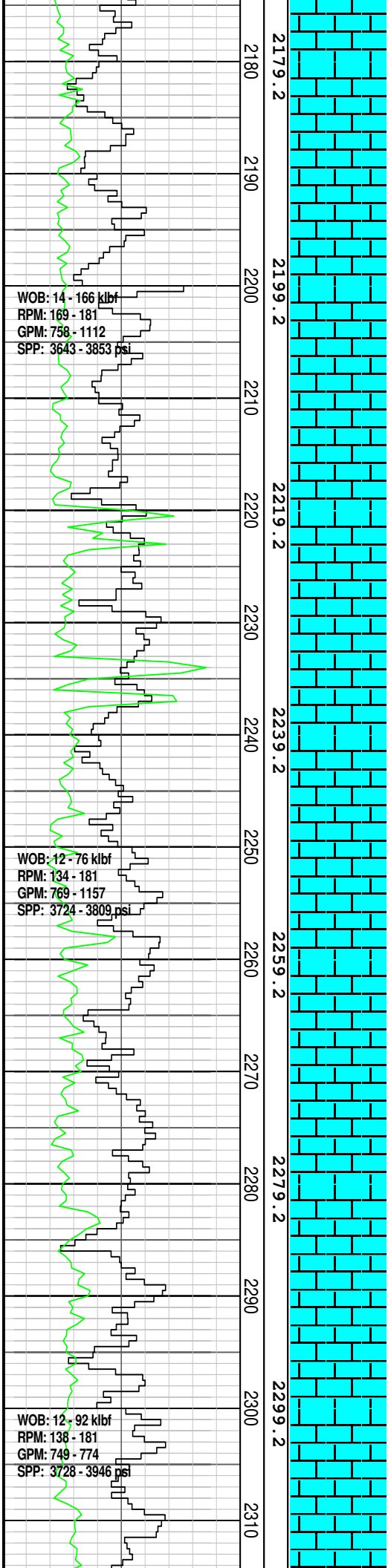
Dark lt, tr glauc mat, mm oo,
 tr carb mat, frm, sbbly, n vis
 por, n shw

DOLOMITE: m dk gry- dk gry,
 micrln, tr glauc mat, v hd,
 ang

CALCILUTITE: olv gry, arg
 abdt v f dk lt, tr glauc mat, tr
 oo, tr carb mat, tr v f qtz gr,
 frm-brit, dom frm, com brit,
 sbbly, n vis por, n shw



CALCISILTITE: olv gry, gnsh gry, lt olv gry-off wh, com-abdt arg mtx & loc grd-CLCLT i/p, com v f dk lit, com oo, mnr v f fltg qtz gr, tr v f glauc, tr carb mat, frm-mod, hd, sbbiky, n shw



Survey @ 2169.29 mMDRT
 Incl: 2.79 deg
 Azi: 187.90 deg
 TVD: 2188.41m

Survey @ 2246.65 mMDRT
 Incl: 1.8 deg
 Azi: 180.38 deg
 TVD: 2245.81m

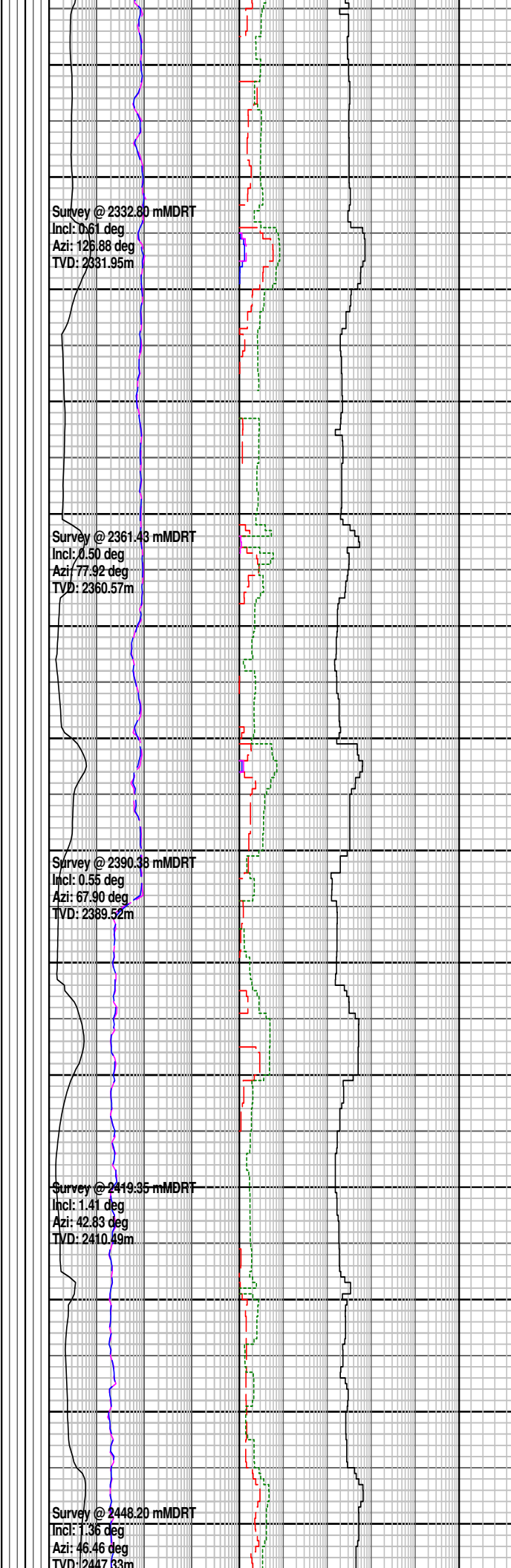
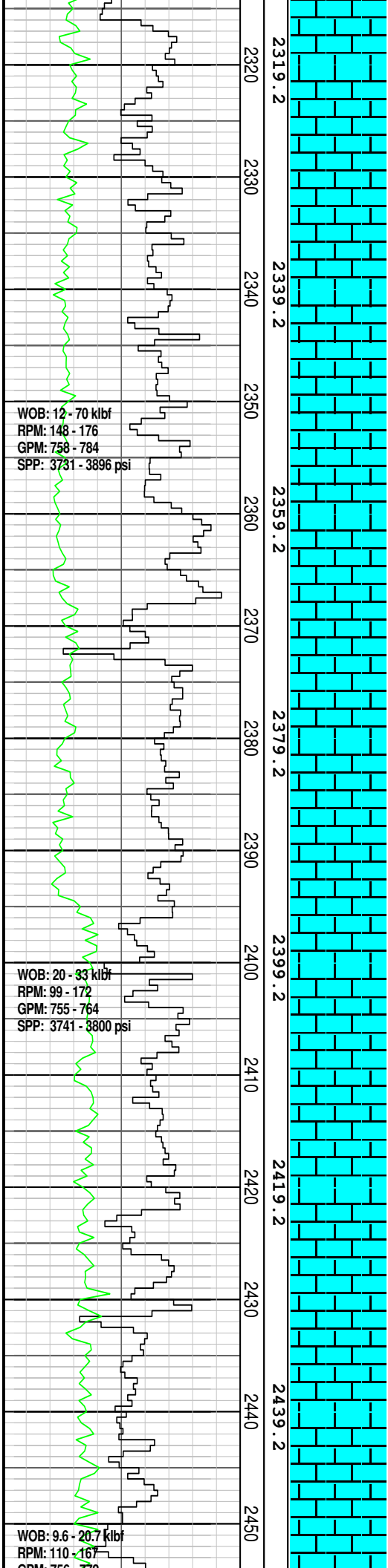
Survey @ 2275.24 mMDRT
 Incl: 1.31 deg
 Azi: 173.59 deg
 TVD: 2274.44m

Survey @ 2304.03 mMDRT
 Incl: 0.83 deg
 Azi: 157.48 deg
 TVD: 2303.18m

CALCILUTITE: olv gry, arg abdt v f dk lit, tr glauc mat, tr oo, tr carb mat, tr v f qtz gr, frm-brit, dom frm, com brit, sbbkly, n vis por, n shw

CALCISILTITE: olv gry, gnsh gry, lt olv gry-off wh, com-abdt arg mtx & loc grd-CALC CLYST i/p, loc aren, com v f dk lit, com oo, mnr v f fltg qtz gr, tr v f glauc, tr carb mat, f hd, sbbkly, n vis por, sbbkly, n vis por, n shw

CALCILUTITE: olv gry, arg abdt v f dk lit, tr glauc mat, tr oo, tr carb mat, tr v f qtz gr, frm-brit, dom frm, com brit, sbbkly, n vis por, n shw



CALCISILTITE: olv gry, gnsh gry, lt olv gry-off wh, com-abdt arg mtx & loc grd-CALC CLYST i/p, loc aren, com v f dk lit, com oo, mnv v f fltg qtz gr, tr v f glauc, tr carb mat, frm-hd, sbbiky, n vis por, sbbiky, n vis por, n shw

CALCILUTITE: olv gry, arg abdt v f dk lit, tr glauc mat, tr oo, tr carb mat, tr v f qtz gr, frm-brit, dom frm, com brit, sbbiky, n vis por, n shw

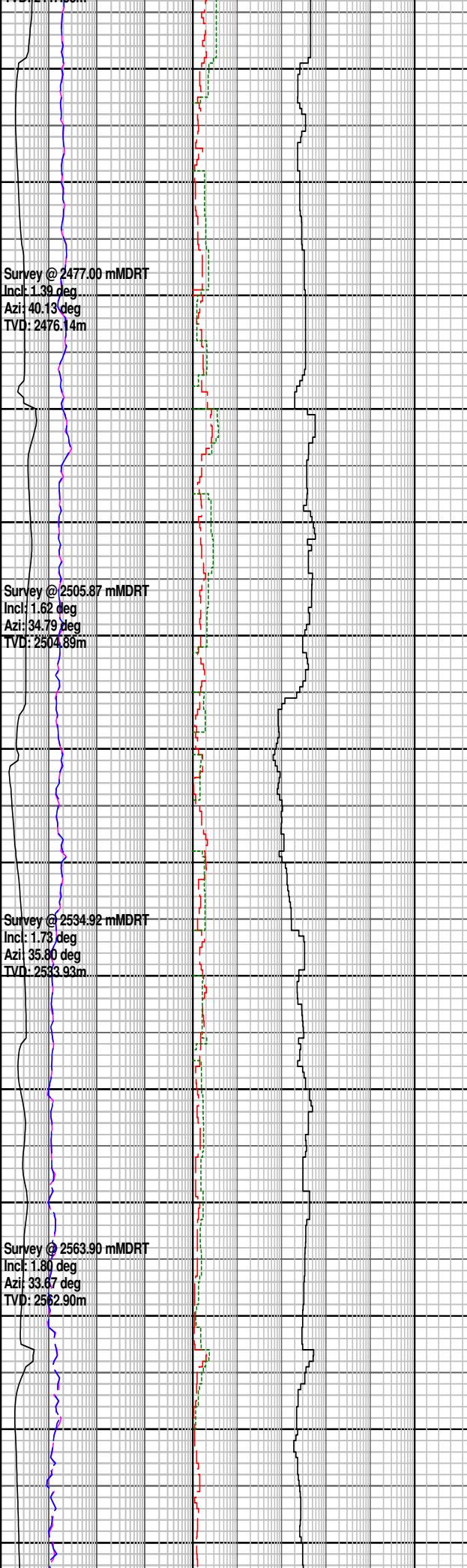
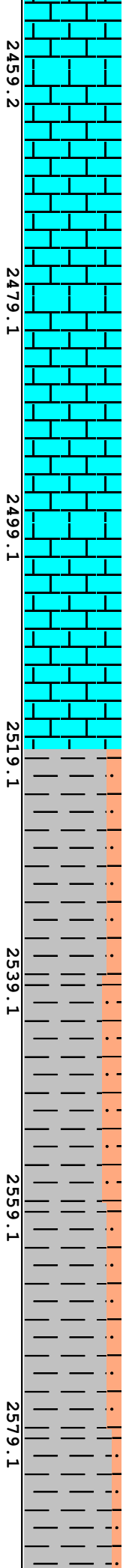
GPM: 756 - 772
SPP: 3782 - 4066 psi

WOB: 10.8 - 52 klbf
RPM: 150 - 168
GPM: 757 - 791
SPP: 3973 - 4278 psi

12/11/2008
13/11/2008

WOB: 1 - 33 klbf
RPM: 112 - 164
GPM: 718 - 796
SPP: 3214 - 4148 psi

2459.2
2460
2470
2480
2490
2499.1
2500
2510
2519.1
2520
2530
2540
2550
2559.1
2560
2570
2579.1
2580
2590



Survey @ 2477.00 mMDRT
Incl: 1.39 deg
Azi: 40.13 deg
TVD: 2476.14m

Survey @ 2505.87 mMDRT
Incl: 1.62 deg
Azi: 34.79 deg
TVD: 2504.89m

Survey @ 2534.92 mMDRT
Incl: 1.73 deg
Azi: 35.80 deg
TVD: 2533.93m

Survey @ 2563.90 mMDRT
Incl: 1.80 deg
Azi: 33.67 deg
TVD: 2562.90m

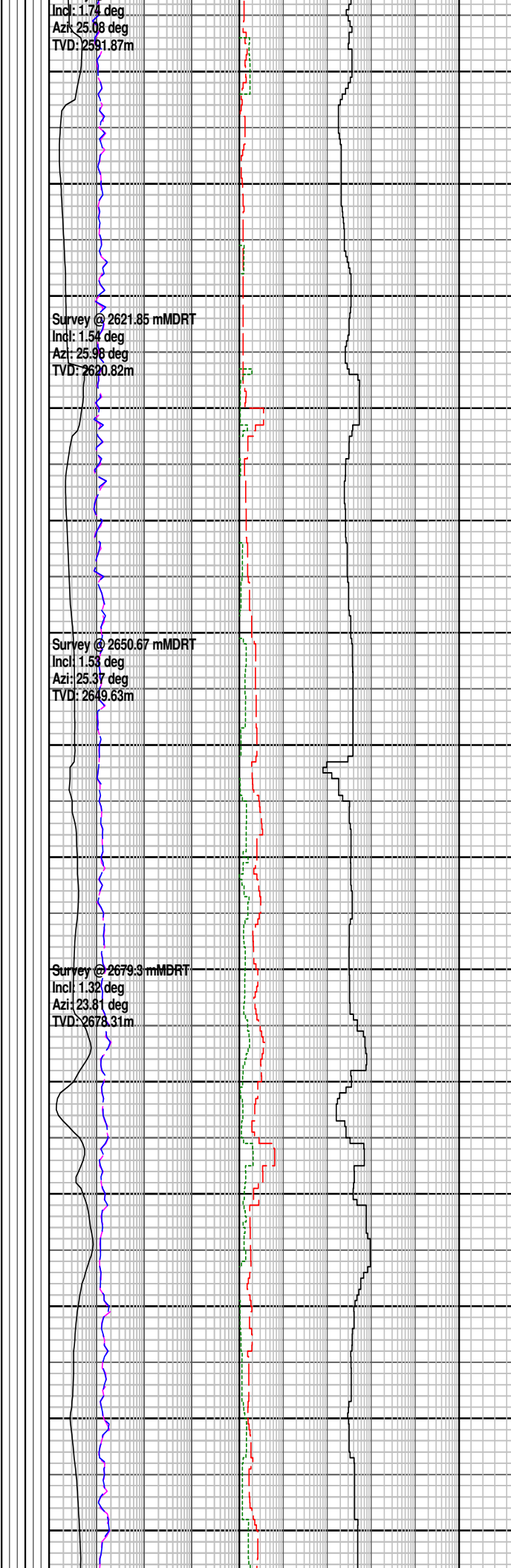
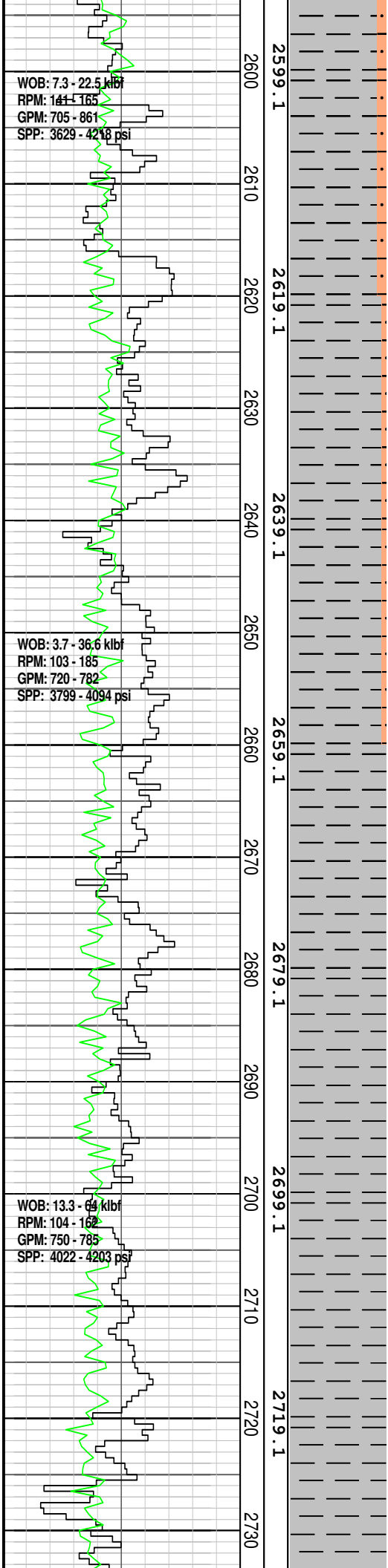
Survey @ 2592.89 mMDRT

CALCILUTITE: dom lt olv gry, lt gnsh gry, olv gry, occ v f dk lit, occ glauc mat, rr oo, rr carb mat, tr fltg qtz gr, mnr micrln frag, rr dissem pyr, mod hd-hd, v hd i/p, sbblky-blky, n vis por, n shw

CALCISILTITE: olv gry, gnsh gry, lt olv gry-off wh, com-abdt arg mtx & loc grd-CLCLT i/p, loc aren, com v f dk lit, com oo, mnr v f fltg qtz gr, tr v f glauc, tr carb mat, frm-mod hd, sbblky, n vis por, sbblky, n vis por, n shw

MW 1.15 V 53 PV 13 YP 21
GELS 6/7/7 CI 60 K Sol 4.8

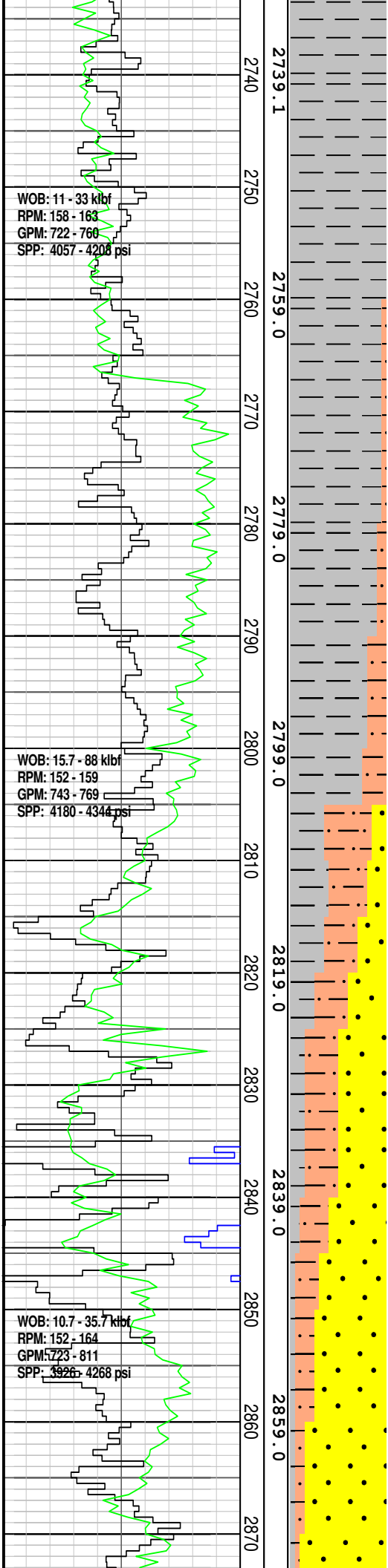
CALCAREOUS CLAYSTONE: v lt olv gry, lt gnsh gry, lt gry-off wh, occ v f dk lit, occ glauc mat, rr oo, rr carb mat, mnr v f fltg qtz gr, rr or calc frag, mnr nod & dissem pyr, mod hd-hd, v hd i/p, sbblky-blky



CALCAREOUS SILTSTONE:
 olv gry, gnsh gry, lt olv gry-off wh, com-abdt arg mtx & loc grd-CALC CLYST i/p, loc aren, com v f dk lit, com oo, mnr v f fltg qtz gr, tr v f glauc, tr carb mat, frm-hd, sbbiky

CALCAREOUS CLAYSTONE:
 v lt olv gry, lt gnsh gry, lt gry-off wh, occ glauc mat, rr oo, rr carb mat, mnr v f fltg qtz gr, mnr nod & dissem pyr, mod hd-hd i/p, sbbiky-blky

CALCAREOUS CLAYSTONE:
 v lt olv gry, lt gnsh gry, lt gry-off wh, occ glauc mat, rr oo, rr carb mat, mnr v f fltg qtz gr, mnr nod & dissem pyr, mod hd-hd i/p, sbbiky-blky



Survey @ 2736.48 mMDRT
Incl: 1.19 deg
Azi: 38.36 deg
TVD: 2735.42m

Survey @ 2765.32 mMDRT
Incl: 1.50 deg
Azi: 54.76 deg
TVD: 2764.25m

Survey @ 2794.00 mMDRT
Incl: 1.49 deg
Azi: 54.96 deg
TVD: 2792.92m

Survey @ 2823.06 mMDRT
Incl: 1.51 deg
Azi: 57.63 deg
TVD: 2821.97m

Survey @ 2851.45 mMDRT
Incl: 1.44 deg
Azi: 61.34 deg
TVD: 2850.85m

TG: 4.21%
60/29/8/1/Tr %

TG: 8.86%
59/29/8/2/1/Tr %

TG: 9.22%
92/6/1/Tr %

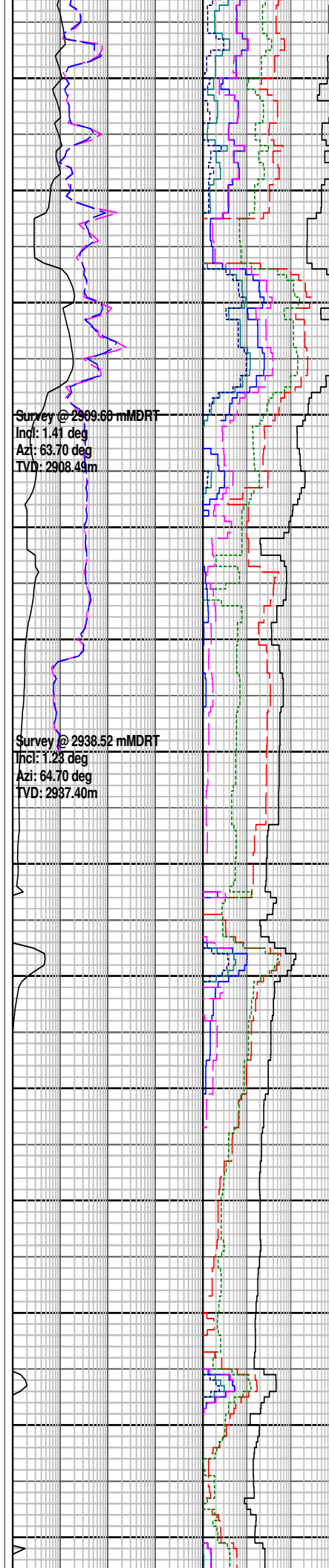
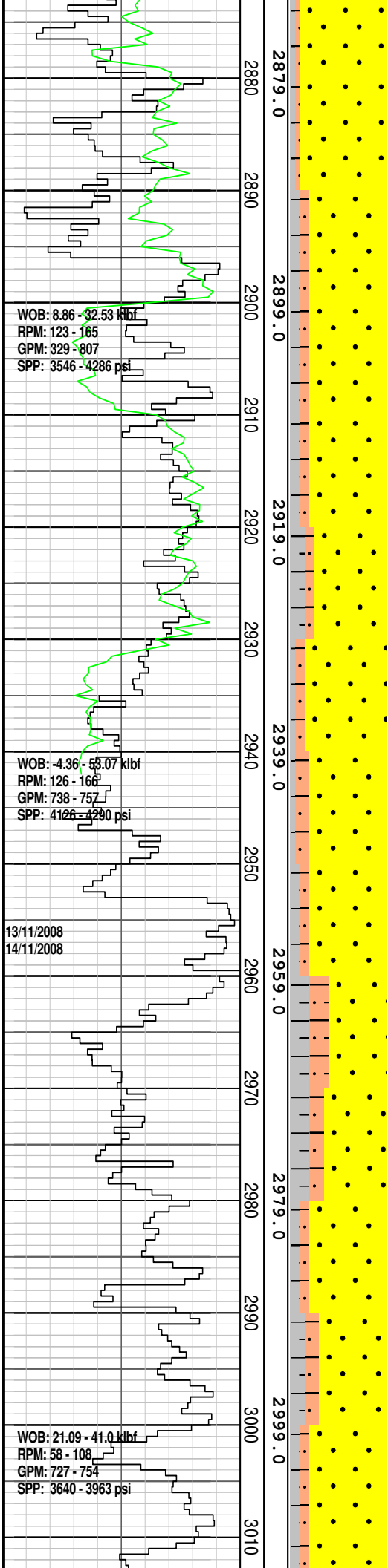
TG: 4.29%
91/6/2/Tr %

CALCAREOUS CLAYSTONE:
olv gry, mnr m lt gry-m gry, tr micmic, tr v f-f fltg qtz gr, tr oo & foss, rr carb mat, tr nod & dissem pyr, tr glauc, frm-hd, dom frm, com brit, mnr hd, v hd, i/p, sbbly-sbfis, dom sbbly, mnr sbfis

SILTSTONE: dus yelsh brn-brnsh blk, olv blk i/p, aren, abdt glauc, com slit, mnr micmic, tr v f fltg qtz gr, tr v f calc frag, tr mic flk, tr pyr, sft-frm, sbbly

SANDSTONE: cl-trnsl, v f-v crs, dom v f-f, tr-abdt med, nil- mnr crs-v crs, dom srt-wl srt, sbang-rnd, dom sbrnd, com sbang, abdt rnd, nil-com wl rnd, tr-rr strng pyr cmt/mtx, dom nil-tr mod sil cmt, tr pyr & glauc incl, abdt glauc, tr brit-v hd agg where pyr cmt, dom disagg, nil vis por, p-fr inferred por, n hycd fluor.

SANDSTONE: cl-trnsl, com op, f-v crs, dom m-crs, com f, com v crs, mod srt, sbang-wl rnd, dom sbrnd, abdt sbang, abdt rnd, mnr wl rnd (crs-v crs gr), tr strng calc cmt, tr strng pyr cmt/mtx, abdt glauc, tr pyr & glauc incl, rr fis qtz shard, tr brit-v hd agg, dom disagg, n vis por, gd inf por, n hycd fluor



SANDSTONE: cl-trnsl, abdt op, f-v crs, dom crs-v crs, mnr f, abdt med, wl srt, sbang-wl rnd, dom sbrnd-rnd, abdt sbang, com wl rnd, tr strng calc cmt, tr strng sil cmt w fUSD gr mtx, i/p abdt arg cmt/mtx w f gr & abdt glauc & grad-arg glauc Sst, com glauc, tr mic flk, tr foss, rr fis qtz shards, brit-v hd agg(10%), dom disagg(90%), n vis por, v gd inf por, n hydc fluor

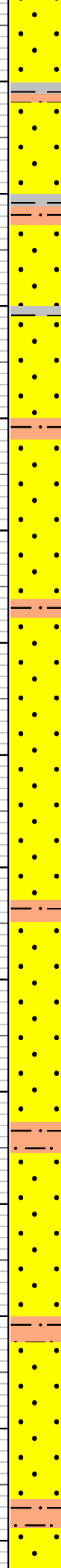
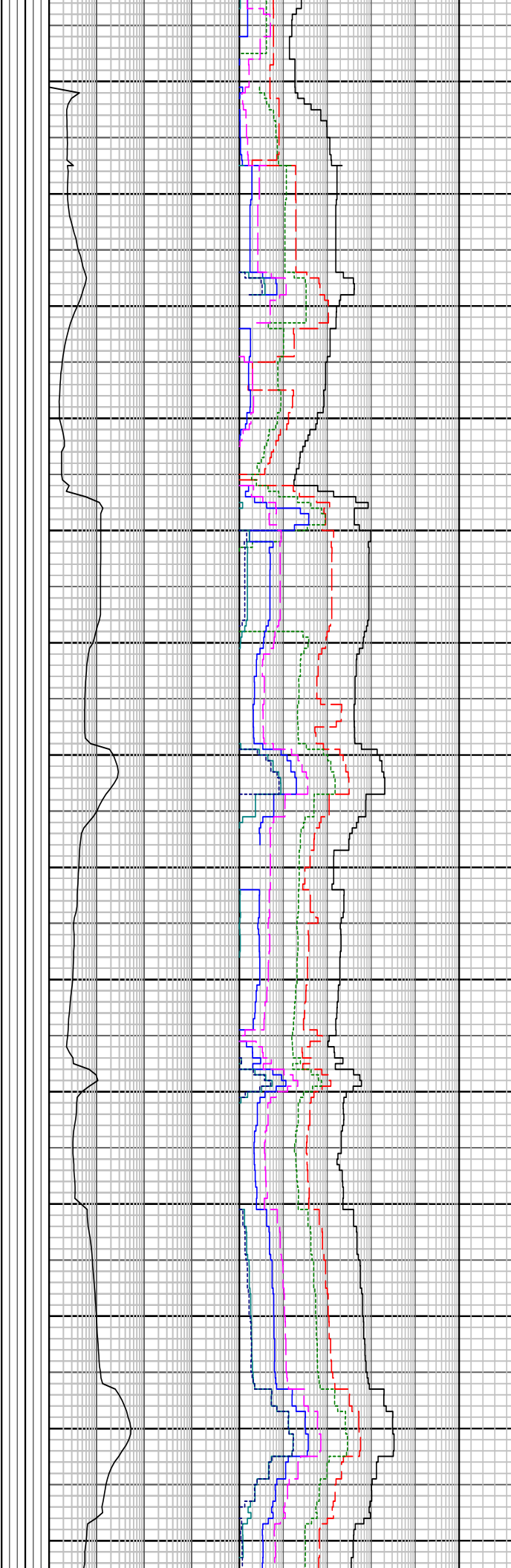
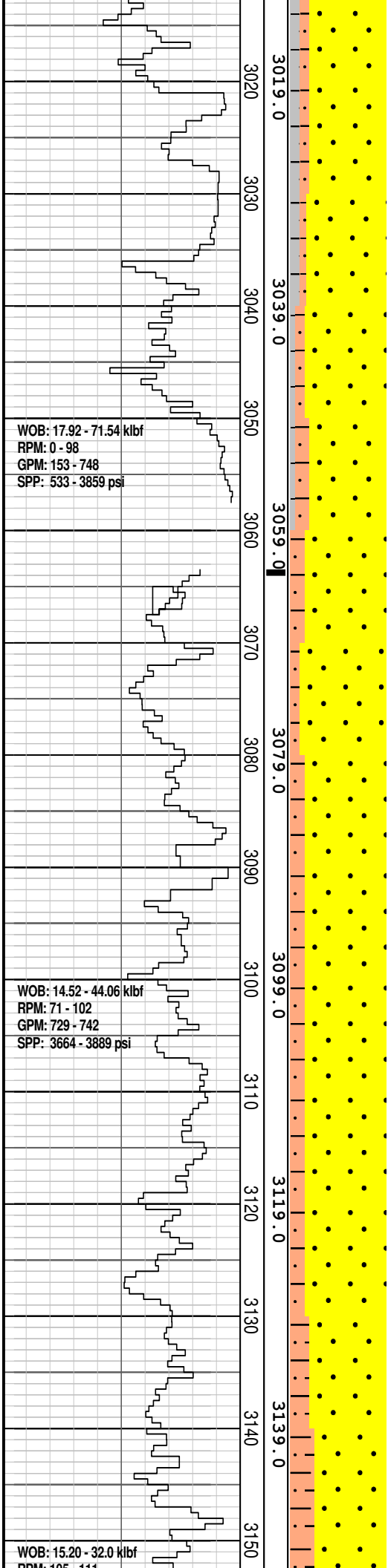
GLAUCONITIC SANDSTONE: m dk gry-olv blk, com m gry, cl-trnsl, v f-m, dom v f-f agg, dom m disagg gr, wl srt, sbang-rnd, dom sbrnd-sbang, mnr mod strng calc cmt, mnr mod strng sil cmt, tr arg cmt/mtx & grd-ARG SST, com-abdt lt gry arg mtx, com brn gry slit mtx i/p, v f-m glauc grd-GNSD i/p, tr mic flk, tr f pyr nod, tr lit, tr carb mat, abdt fri-mod hd agg, dom brit-mod hd, n hydc fluor

SANDSTONE: cl-trnsl, abdt op, m-v crs, dom crs-v crs, abdt med, wl srt, sbang-wl rnd, dom sbrnd-rnd, com sbang, abdt wl rnd, tr strng calc cmt, tr pyr cmt/mtx, tr glauc & glauc stn, tr pyr len & incl, tr mic flk, rr fiss qtz shard, brit-v hd agg, dom disagg, nil vis por, v gd inf por

POOH for bit trip @ 2955.00 mMDRT

SILTSTONE: med dk gry bn, olv blk, silly aren, com f-med glauc grn, com tan lith, mnr micmic, tr-mnr nod & dissem pyr, mod hd-hd, sbbiky

CLAYSTONE: lt blsh gry, lt gry, lt gnsh gry, sil, mnr calc mat, com off wh liths, com micmic, hd-v hd, sbfis-sbbiky



SANDSTONE: cl-trnsl, fros, dom crs- v crs, com f-med grn, p-loc wl srt, ang-sbang, sbrnd w/- f-med grn, mnr wk pyr cmt, tr wk calc cmt, n vis mtz, com nod pyr cmt glauc nod, com lse med glauc grn, gen cln disagg grn, v gd inf por

FLUORESCENCE (Tr%): mod bri pl blu-off wh sptd res fluor ass/w crs SST grn, slw diff ct & mnr slw bldg ct, thn off wh-pl gn flm res

SILTSTONE: m dk gry brn, m brn, occ off wh-tan, argi i/p, occ f-m glauc gr, com tan lith, mnr micmic, com carb mic lam, tr-mnr nod, mod hd-hd, sbbiky

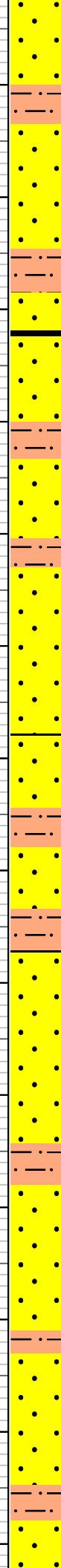
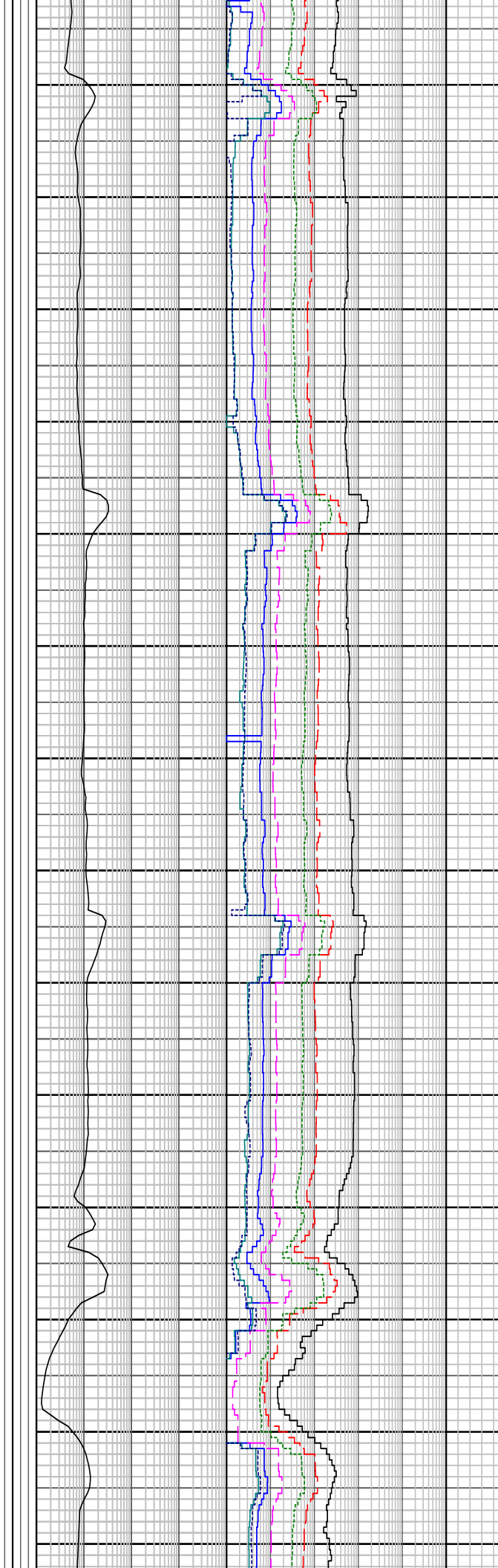
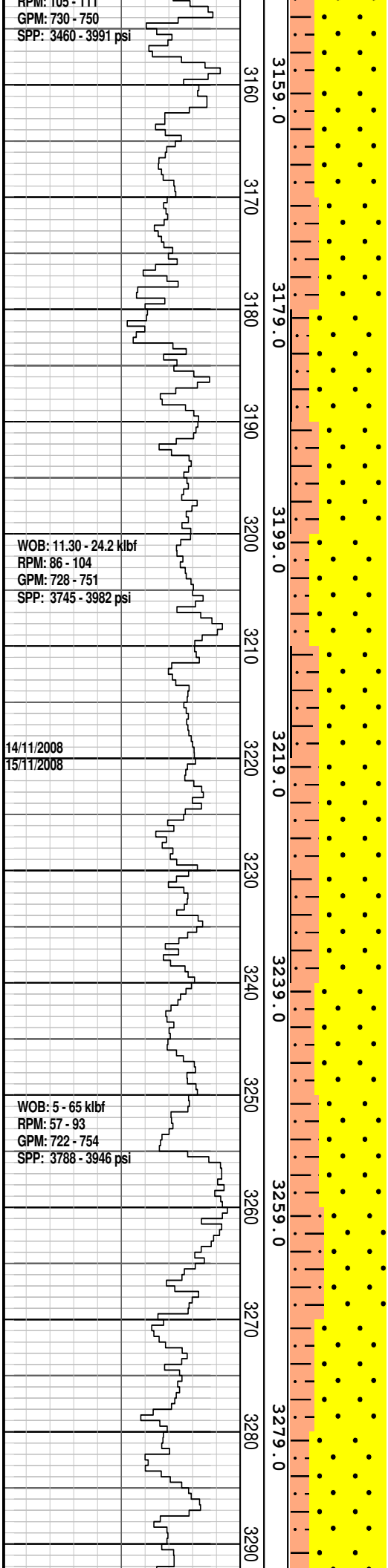
SANDSTONE: off wh, cl-trnsl, dom v f-m w/ com crs-v crs frac gr, ang-sbrnd, dom sbang, com strng sil cmt & occ fsd gr bndrs, mnr mod strng pyr cmt, tr wk calc cmt, com off wh arg mtz whr v f-f ti agg, occ carb spk com nod pyr, rr glauc nod, com cht frag, com fri-mod hd f gr gre, gen cln disag crs gr & frac qtz shrd, po-fr vis por, gen fr-gd inf por, n hydc fluor

RPM: 105 - 111
GPM: 730 - 750
SPP: 3460 - 3991 psi

WOB: 11.30 - 24.2 klbf
RPM: 86 - 104
GPM: 728 - 751
SPP: 3745 - 3982 psi

14/11/2008
15/11/2008

WOB: 5 - 65 klbf
RPM: 57 - 93
GPM: 722 - 754
SPP: 3788 - 3946 psi



COAL: blk, olv blk, vit-sbvit & grd, com slit lam & com grd-CARB SITST, hkl i/p, hd-v hd, sb conch-sbbkly

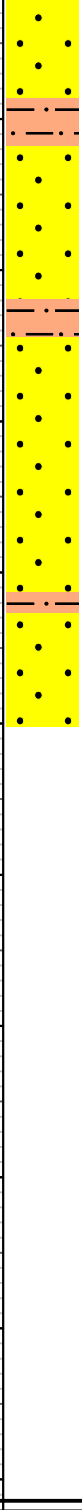
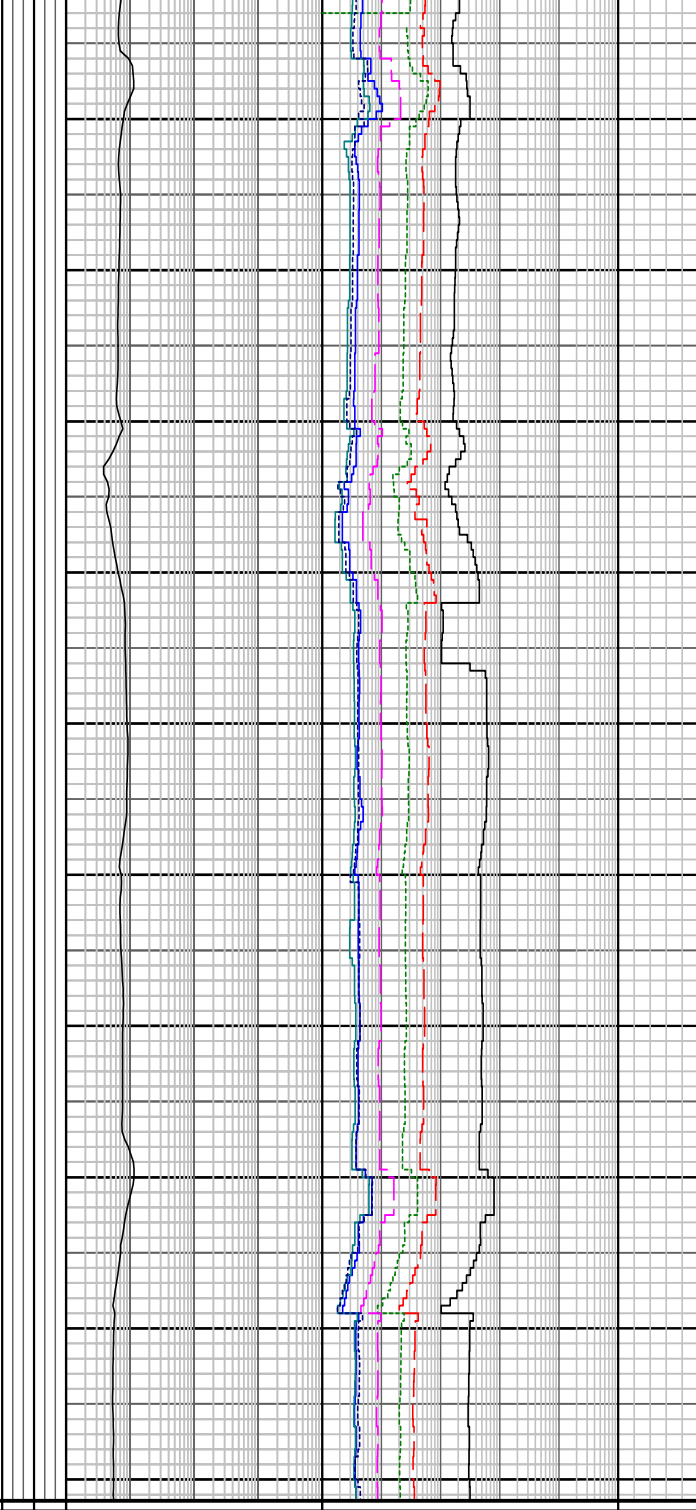
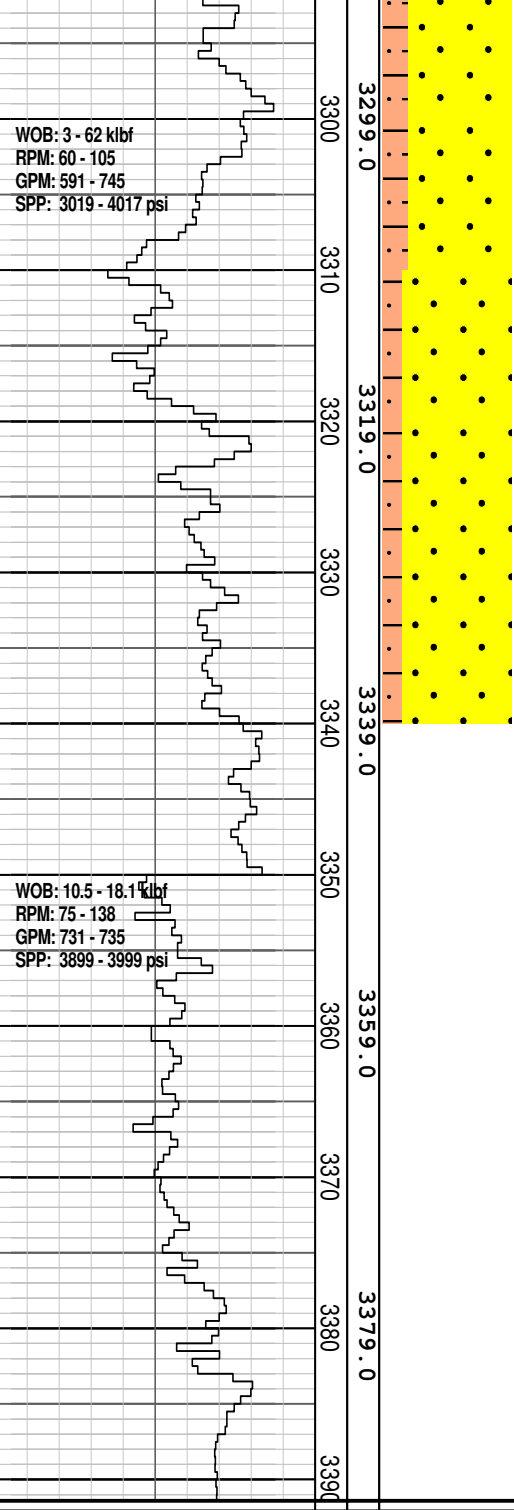
MW 1.15 V 53 PV 12 YP 28
GELS 9/10/11 CI 55K Sol 4.3

SILTSTONE: m brn, m gry brn, lt olv gry, com arg & loc grd-SLT CLST, com carb lam & spk & loc grd-VIT C strgr, loc aren & grd to SLT SST i/p, mnr micmic, tr lith, mod hd-hd, sbfis-sbbkly

SANDSTONE: off wh, pl brn, clr-trnsl, v f-m, decr com crs-v crs frac gr, sbang-sbrnd, com strng sil cmt & occ fsd gr bndrs whr crs gr, tr pyr cmt, tr wk calc cmt, com off wh arg mtz whr v f-f ti agg, occ pl brn slit mtz & loc grd-ARE SLTST, com carb spk, com nod pyr w/ occ glauc gr, com fri-mod hd f gr greg, gen clin disagg gr, pr-fr pr in f agg, pr-gen fr inf por, n hydrc fluor

SILTSTONE: lt-m gry brn, lt olv gry, com aren & loc grd-SLT SST, com carb lam & spk, loc arg, mnr micmic tr

SPH, 100 ug, min n-monic, v lith, mod hd-hd, sbbkly, sbfis i/p



SANDSTONE: clr-trnsl, fros, v f-v crs, dom m-crs, pr std, sbang-sbrnd, ang i/p, com wk sil & calc cmt, rr pyr cmt, loc com pl brn-off wh arg & slt mtz whr v f-f gr agg, com nod pyr w/ occ glauc gr, com lith mnr carb spk, gen cln disagg gr, mnv h vd, v f-f gr agg, gd inf por

FLUORESCENCE (Tr%): bri pl blu-off wh sptd res fluor ass/with crs SST gr, slw diff ct & wk slw bldg ct, thk off wh-pl gn flm res

FORMATION EVALUATION LOG

Drilling Rate ROP (m/hr) 200 180 160 140 120 100 80 60 40 20 ROP (m/hr) 200 180 160 140 120 100 80 60 40 20 Gamma Ray 200 API	MD meters 1:500 T/DRT meters	Cuttings Lithology	Visual Inferred Porosity P F G	Oil Show P F G	Gas Data Gas Hydrocarbon Avg % 0.1 1 10 100 Resistivity Shall 0.1 1000 Ohm.m Resistivity Deep 0.1 1000 Ohm.m	Chromatograph Data Methane ppm 100000 Ethane ppm 100000 Propane ppm 100000 iso-Butane ppm 100000 n-Butane ppm 100000 iso-Pentane ppm 100000 n-Pentane ppm	Calcmtry CaCO3 % 20 40 60 80 100 MgCO3 % 100 80 60 40 20	Interpreted Lithology	Lithology Description
					P F G	P F G			