

CALCILUTITE: v lt gy-lt gnsh gy, off wh, slty i/p grd to CLSLT, tr v f glauc grs, tr forams, tr oo, sft-frm, amor-sbblky

CALCISILTITE: med lt gy-lt olv gy, lt gnsh gy, argl i/p grd to CLCLT, tr v f sd grs, tr v f glauc, tr micmic, sft-frm, sbfiss-sbblky

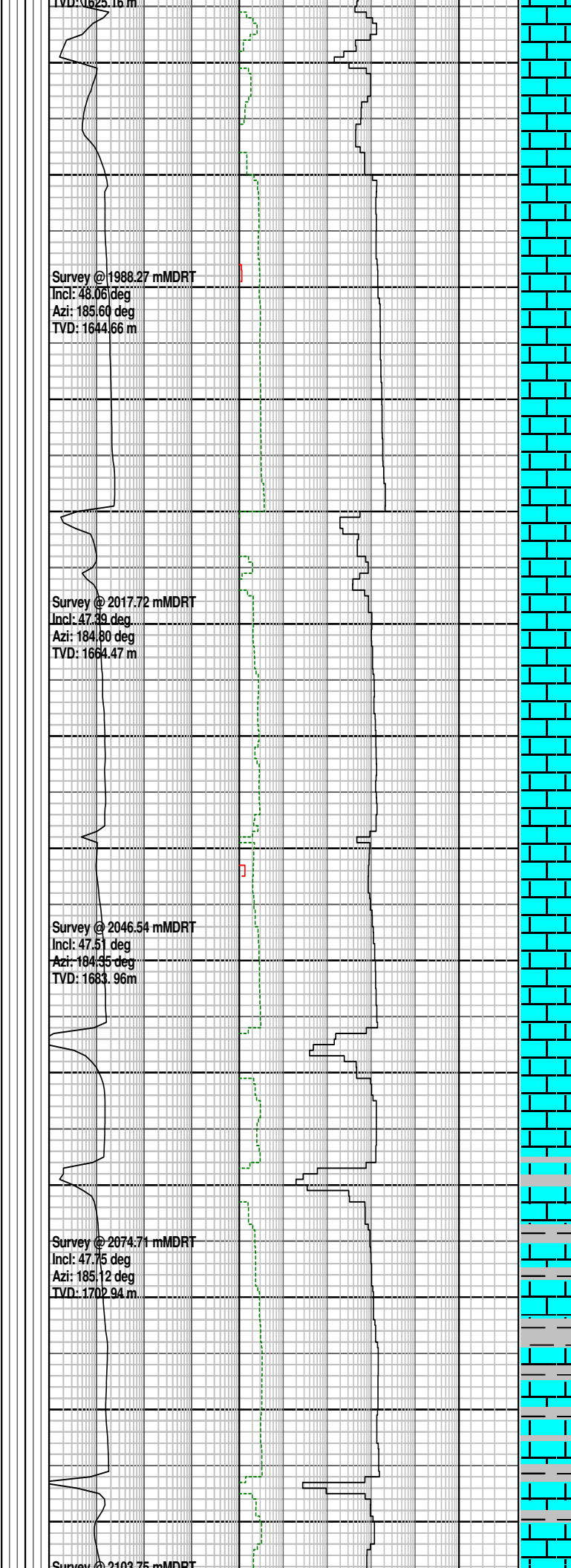
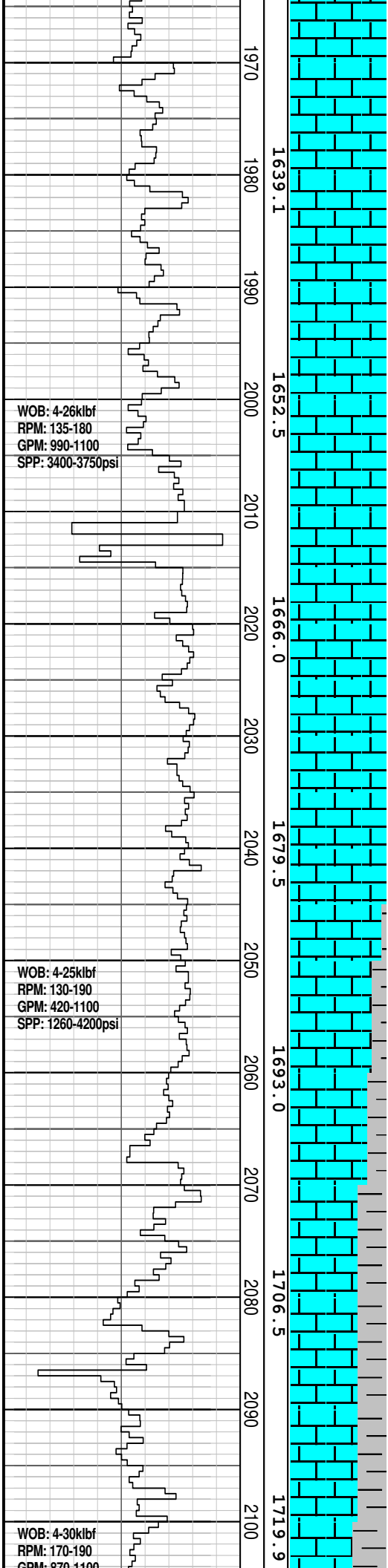
CALCILUTITE: v lt gy-lt gnsh gy, off wh, slty i/p grd to CLSLT, tr v f glauc grs, tr forams, tr oo, sft-frm, amor-sbblky

CALCARENITE: v lt gy-lt gnsh gy, off wh-pl yel org, tr f-crs sbang qtz grs, slty i/p grd to CLSLT, tr v f glauc grs, frm-mod hd, pr vis por, no hydrc fluor

CALCISILTITE: med lt gy-lt olv gy, lt gnsh gy, argl i/p grd to CLCLT, tr v f sd grs, tr v f glauc, tr micmic, sft-frm, sbfiss-sbblky

CALCARENITE: v lt gy-lt gnsh gy, off wh-pl yel org, tr f-crs sbang qtz grs, slty i/p grd to CLSLT, tr v f glauc grs, frm-mod hd, pr vis por, no hydrc fluor

CALCISILTITE: med lt gy-lt olv gy, lt gnsh gy, argl i/p grd to CLCLT, tr v f sd grs, tr v f glauc, tr micmic, sft-frm, sbfiss-sbblky



CALCARENITE: v lt gy-lt gnsh gy, off wh-pl yel org, tr f-crs sbang qtz grs, slty i/p grd to CLSLT, tr v f glauc grs, frm-mod hd, pr vis por, no hydc fluor

CALCILUTITE: v lt gy-lt gnsh gy, off wh, slty i/p grd to CLSLT, tr v f glauc grs, tr forams, tr oo, sft-frm, amor-sbblky

CALCARENITE: v lt gy-lt gnsh gy, off wh-pl yel org, tr f-crs sbang qtz grs, slty i/p grd to CLSLT, tr v f glauc grs, frm-mod hd, pr vis por, no hydc fluor

CALCILUTITE: v lt gy-lt gnsh gy, off wh, slty i/p grd to CLSLT, tr v f glauc grs, tr forams, tr oo, sft-frm, amor-sbblky

MW: 1.15	FV: 69
PV: 15	YP: 34
pH: 11.2	CK: 6.0
GELS: 8/9/11	CL: 48000

CALCAREOUS CLAYSTONE: med gy- lt olv gy, v calc grd to CLCLT, tr micmic, tr v f glauc, slty, sft-dom frm, sbblky-blky

CALCILUTITE: v lt gy-lt gnsh gy, off wh, slty i/p grd to CLSLT, tr v f glauc grs, tr forams, tr oo, sft-frm, amor-sbblky

CALCISILTITE: med lt gy-lt olv gy, lt gnsh gy, argl i/p grd to CLCLT, tr v f sd grs, tr v f glauc, tr micmic, sft-frm, sbfiss-sbblky

GPM: 870-1100

SPP: 3000-4220psi

WOB: 4-30klbf

RPM: 170-190

GPM: 870-1100

SPP: 3000-4220psi

WOB: 8-35klbf

RPM: 165-195

GPM: 880-1100

SPP: 3250-4200psi

2110
2120
2130
2140
2150
2160
2170
2180
2190
2200
2210
2220
2230
2240

1733.4
1746.8
1760.3
1773.7
1787.2
1800.7
1814.1

Survey @ 2103.7 mMDRT

Incl: 47.80 deg

Azi: 184.62 deg

TVD: 1722.46 m

Survey @ 2133.30 mMDRT

Incl: 47.80 deg

Azi: 184.02 deg

TVD: 1742.31 m

Survey @ 2162.82 mMDRT

Incl: 47.68 deg

Azi: 184.06 deg

TVD: 1762.16 m

Survey @ 2191.69 mMDRT

Incl: 47.71 deg

Azi: 185.00 deg

TVD: 1781.59 m

Survey @ 2220.09 mMDRT

Incl: 47.67 deg

Azi: 186.56 deg

TVD: 1800.71 m

CALCAREOUS CLAYSTONE:
med gy- lt olv gy, v calc grd to CLCLT, tr micmic, tr v f glauc, slty, sft-dom frm, sbblky-blky

CALCISILTITE: med lt gy-lt olv gy, lt gnsh gy, argl i/p grd to CLCLT, tr v f sd grs, tr v f glauc, tr micmic, sft-frm, sbfiss-sbblky

CALCAREOUS CLAYSTONE:
med gy- lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, tr v f carb spks, sft-frm, sbblky-blky

CALCISILTITE: med lt gy-lt olv gy, lt gnsh gy, com slty, argl i/p grd to CLCLT, tr v f sd grs, tr v f glauc, tr micmic, sft-frm, sbfiss-sbblky

CALCILUTITE: v lt gy-lt gnsh gy, off wh, slty i/p grd to CLSLT, argl i/p grd to CALC CLYST, tr v f glauc grs, tr v f carb spks, sft-frm, amor-sbblky

CALCAREOUS CLAYSTONE:
lt gy- lt olv gy, abdt grd to CLCLT, tr micmic, tr v f glauc, tr v f carb spks, dom sft-fr, amor-sbblky

CALCISILTITE: med lt gy-lt olv gy, lt gnsh gy, com slty, argl i/p grd to CLCLT, tr v f sd grs, tr v f glauc, tr micmic, sft-frm, sbfiss-sbblky

CALCAREOUS CLAYSTONE:
med gy- lt olv gy, v calc grd to CLCLT, tr micmic, tr v f glauc, tr v f carb spks, dom sft-frm, amor-sbblky

CALCISILTITE: med lt gy-lt olv gy, lt gnsh gy, com slty, argl i/p grd to CLCLT, tr v f sd grs, tr v f glauc, tr micmic, sft-frm, sbfiss-sbblky

slt-frm, amor-sbbkly

WOB: 6-30klbf
RPM: 170-190
GPM: 1010-1030
SPP: 4100-4200psi

2250
1827.6
2260
2270
2280
2290
2300
1854.6
2310
2320
1868.1
2330
2340
1881.6
2350
1895.1
2360
2370
2380
1908.6

Survey @ 2248.12 mMDRT
Incl: 47.64 deg
Azi: 188.19 deg
TVD: 1819.59 m

Survey @ 2276.75 mMDRT
Incl: 47.48 deg
Azi: 189.09 deg
TVD: 1838.91 m

Survey @ 2306.28 mMDRT
Incl: 47.61 deg
Azi: 190.30 deg
TVD: 1858.84 m

Survey @ 2335.22 mMDRT
Incl: 47.55 deg
Azi: 192.06 deg
TVD: 1878.37 m

Survey @ 2364.15 mMDRT
Incl: 47.47 deg
Azi: 194.28 deg
TVD: 1897.91 m

CALCAREOUS CLAYSTONE:
med gy- lt olv gy, v calc grd to CLCLT, tr micmic, tr v f glauc, tr v f carb spks, dom sft-frm, amor-sbbkly

CALCISILTITE: v lt gy-lt olv gy, grd to CLCLT, tr v f aren, tr v f glauc, tr micmic, tr v f carb spks, dom sft-frm, amor-sbbkly

CALCAREOUS CLAYSTONE:
lt gy-lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, tr v f carb spks, dom sft-frm, amor-sbbkly

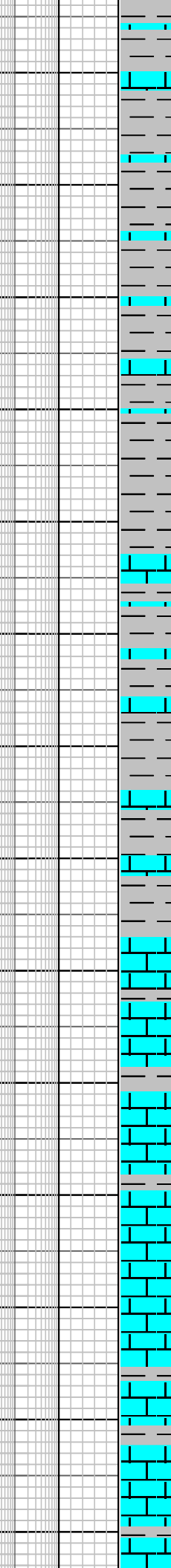
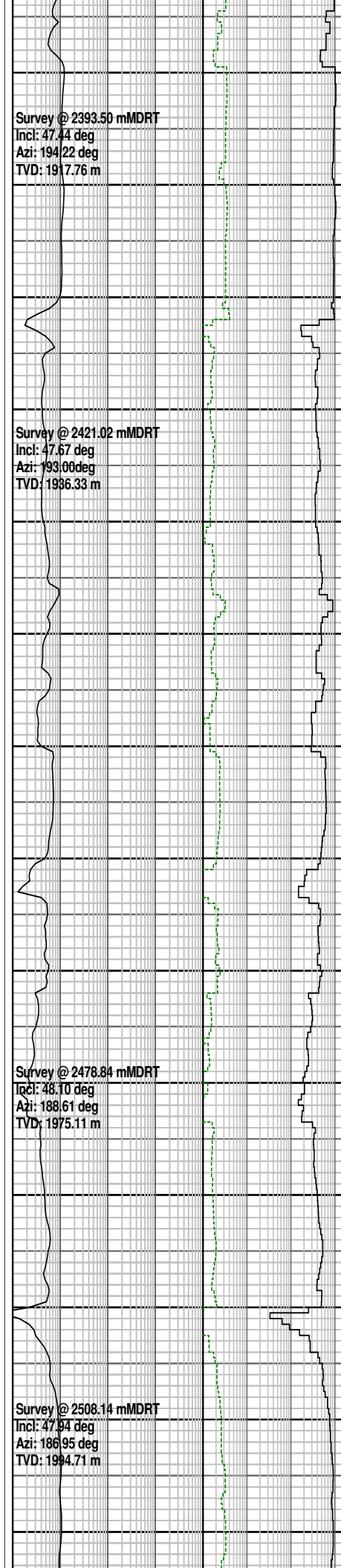
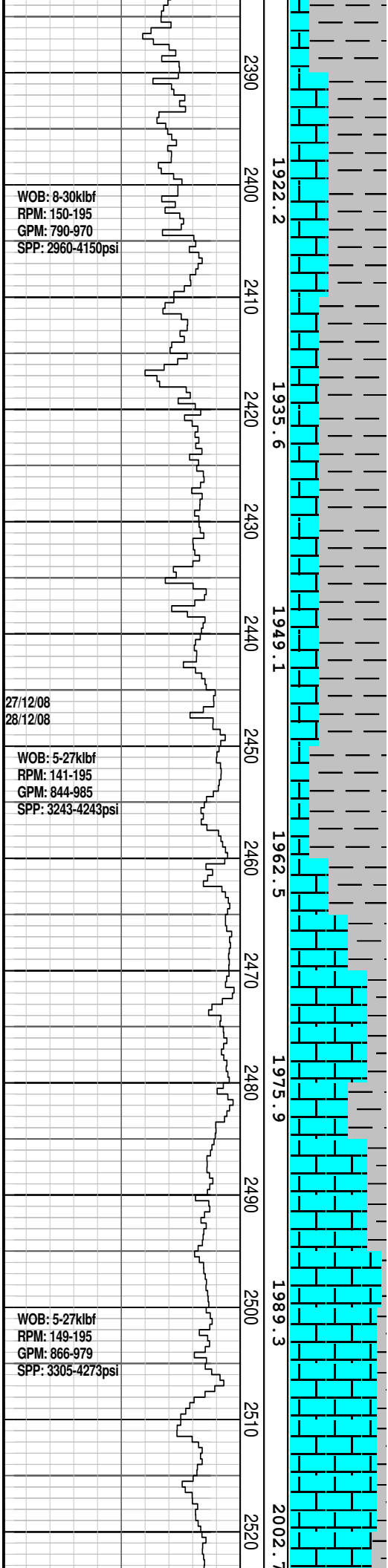
CALCAREOUS CLAYSTONE:
lt gy-med lt gy, lt olv gy, abdt calc grd to CALCILUTITE, tr micmic, tr v f glauc, tr v f carb spks, dom sft-frm, amor-sbbkly

MW: 1.16	FV: 64
PV: 19	YP: 35
pH: 11.0	CK: 4.8
GELS: 10/12/13	CL: 49000

CALCAREOUS CLAYSTONE:
lt gy-med lt gy, lt olv gy, abdt calc grd to CALCILUTITE, tr micmic, tr v f glauc, tr v f carb spks, dom sft-frm, amor-sbbkly

CALCAREOUS CLAYSTONE:
lt gy-med lt gy, lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, tr v f carb spks, dom sft-frm, amor-sbbkly

WOB: 8-30klbf
RPM: 150-190
GPM: 820-1010
SPP: 3170-4220psi



SILTY CALCISILTITE: v lt gy-lt olv gy, grd to Argillaceous SILTSTONE, tr v f aren, tr v f glauc, tr micmic, tr v f carb spks, dom sft-frm, amor-sbbiky

CALCAREOUS CLAYSTONE: lt gy-med lt gy, lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, tr v f carb spks, dom sft-frm, amor-sbbiky

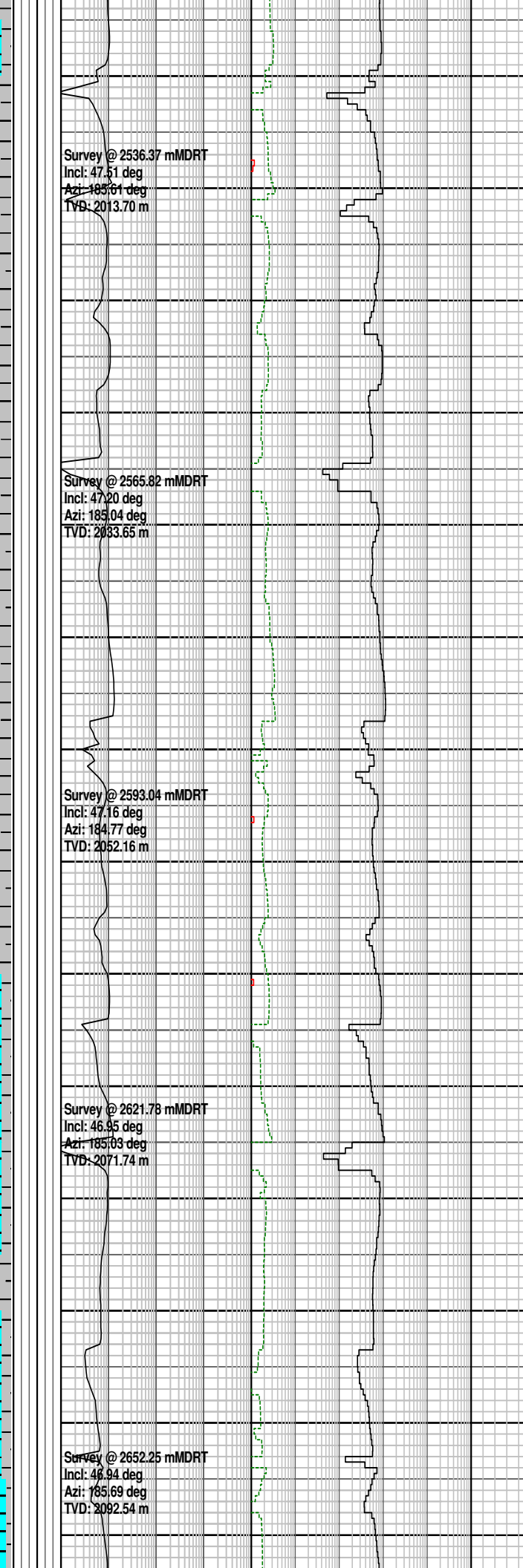
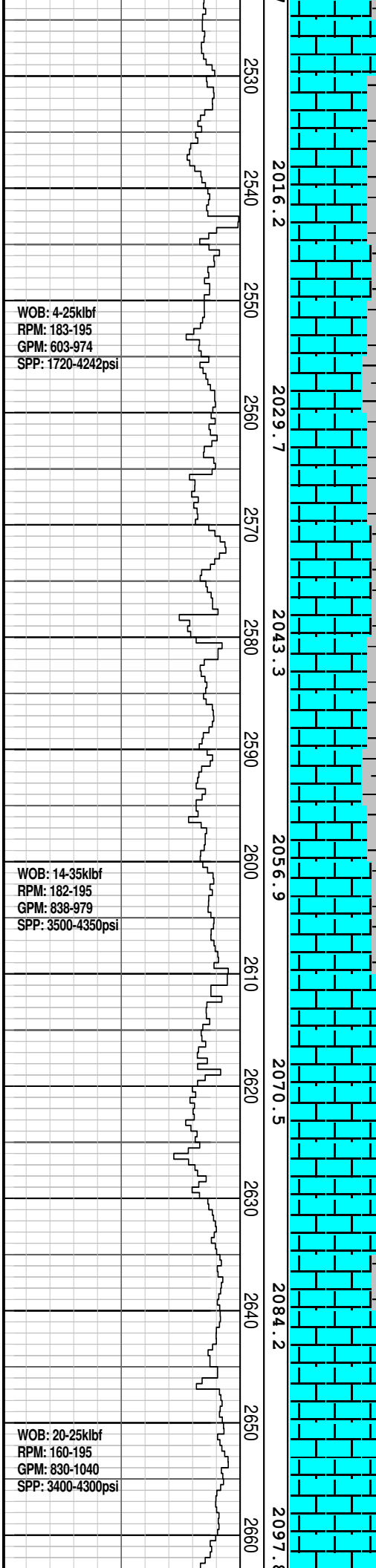
MW: 1.15	FV: 69
PV: 19	YP: 35
pH: 11.0	CK: 4.8
GELS: 10/12/13	CL: 49000

CALCARENITE: lt gy-med lt gy, v f-f, wl srt, slt i/p grd to CLSLT, tr v f glauc grs, mod hd, p vis por, no hyc fluor

CALCISILTITE: v lt gy-lt olv gy, grd to SLT CLCLT and CALC SLTST, tr v f aren, tr v f glauc, tr micmic, tr v f carb spks, dom sft-frm, amor-sbbiky, tr blkly

CALCISILTITE: v lt gy-lt olv gy, grd to SLT CLCLT and CALC SLTST, tr v f aren, tr v f glauc, tr micmic, tr v f carb spks, dom sft-frm, amor-sbbiky, tr blkly

CALCARENITE: lt gy-med lt gy, v f-f, wl srt, slt i/p grd to



gy, v f-f, wl srt, silt i/p grd to CLSLT, tr v f glauc grs, mod hd, p vis por, no hydc fluor

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, sft frm, amor-sbbiky

CALCISILTITE: v lt gy-lt olv gy, abdt silt grd to SLT CLCLT and CALC SLTST, tr v f aren, tr v f glauc, tr micmic, tr v f carb spks, dom sft frm, amor-sbbiky, tr blkly

CALCARENITE: lt gy-med lt gy, v f-f, wl srt, silt i/p grd to CLSLT, tr v f glauc grs, mod hd, p vis por, no hydc fluor

CALCAREOUS CLAYSTONE:
lt gy-med lt gy, lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, sft frm, amor-sbbiky

CALCISILTITE: v lt gy-lt olv gy, v slty grd to CALC SILTST, tr v f aren, tr v f glauc, tr micmic, sft frm, amor-sbbiky, tr blkly

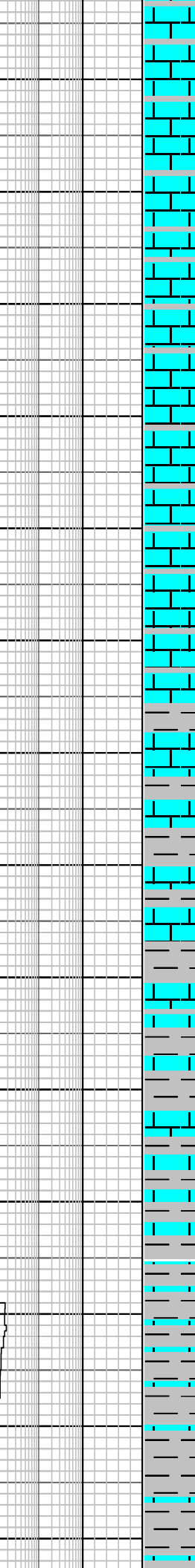
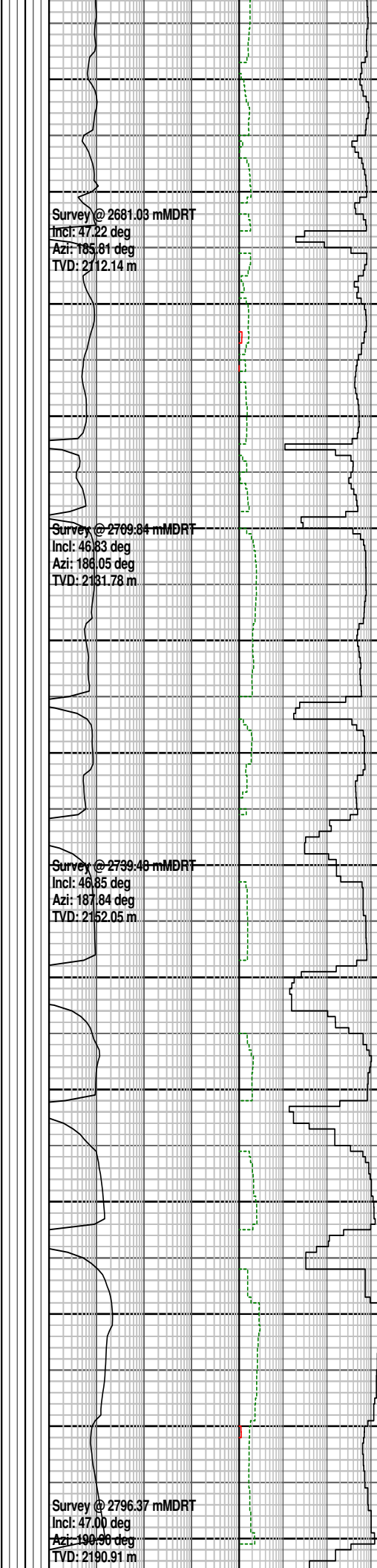
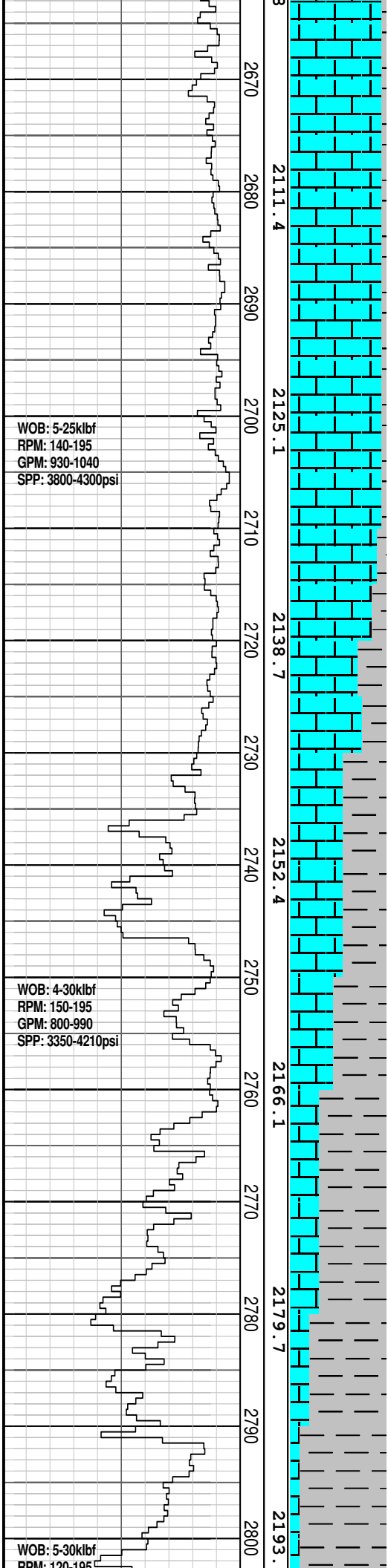
CALCARENITE: lt gy-med lt gy, v f-f, wl srt, slty i/p grd to CLSLT, tr v f glauc grs, mod hd, pr vis por, no hydc fluor

CALCAREOUS CLAYSTONE:
lt gy-med lt gy, lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, sft frm, amor-sbbiky

CALCISILTITE: v lt gy-lt olv gy, v slty grd to CALC SILTST, tr v f aren, tr v f glauc, tr micmic, sft frm, amor-sbbiky, tr blkly

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, sft frm, amor-sbbiky

CALCARENITE: lt gy-med lt gy, v f-f, wl srt, slty i/p grd to CLSLT, tr v f glauc grs, mod hd, pr vis por, no hydc fluor



gy, v f-i, wl srt, slty i/p grd to CLSLT, tr v f glauc grs, mod hd, pr vis por, no hydc fluor

CALCISILTITE: v lt gy-lt olv gy, v slty grd to CALC SILTST, tr v f aren, tr v f glauc, tr micmic, sft-frm, amor-sbblky, tr blkly

CALCARENITE: lt gy-med lt gy, v f-f, wl srt, slty i/p grd to CLSLT, tr v f glauc grs, mod hd, pr vis por, no hydc fluor

CALCAREOUS CLAYSTONE: med gy-med lt gy, lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, sft-frm, amor-sbblky

CALCISILTITE: v lt gy-lt olv gy, v slty grd to CALC SILTST, tr v f aren, tr v f glauc, tr micmic, tr carb spks, sft-frm, amor-sbblky, tr blkly

CALCARENITE: lt gy-med lt gy, lt olv gy, v f-f, wl srt, slty i/p grd to CLSLT, tr v f glauc grs, fri-mod hd, pr vis por, no hydc fluor

CALCAREOUS CLAYSTONE: med gy-med lt gy, lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, sft-frm, amor-sbblky

CALCISILTITE: v lt gy-lt olv gy, v slty grd to CALC SILTST, tr v f aren, tr v f glauc, tr micmic, tr carb spks, sft-frm, amor-sbblky, tr blkly

CALCAREOUS CLAYSTONE: med gy-med lt gy, lt olv gy, abdt calc grd to CLCLT, tr micmic, tr v f glauc, sft-frm, amor-sbblky

CALCISILTITE: v lt gy-lt olv gy, v slty grd to CALC SILTST, tr v f aren, tr v f glauc, tr micmic, tr carb spks, sft-frm,

RFM: 120-133
GPM: 820-1050
SPP: 3200-4200psi

WOB: 6-30klbf
RPM: 100-195
GPM: 890-1200
SPP: 3820-4250psi

WOB: 7-30klbf
RPM: 129-194
GPM: 897-909
SPP: 4046-4194psi

28/12/08
29/12/08

4
2810
2820
2830
2840
2850
2860
2870
2880
2890
2900
2910
2920
2930
2940

2207.0

2220.6

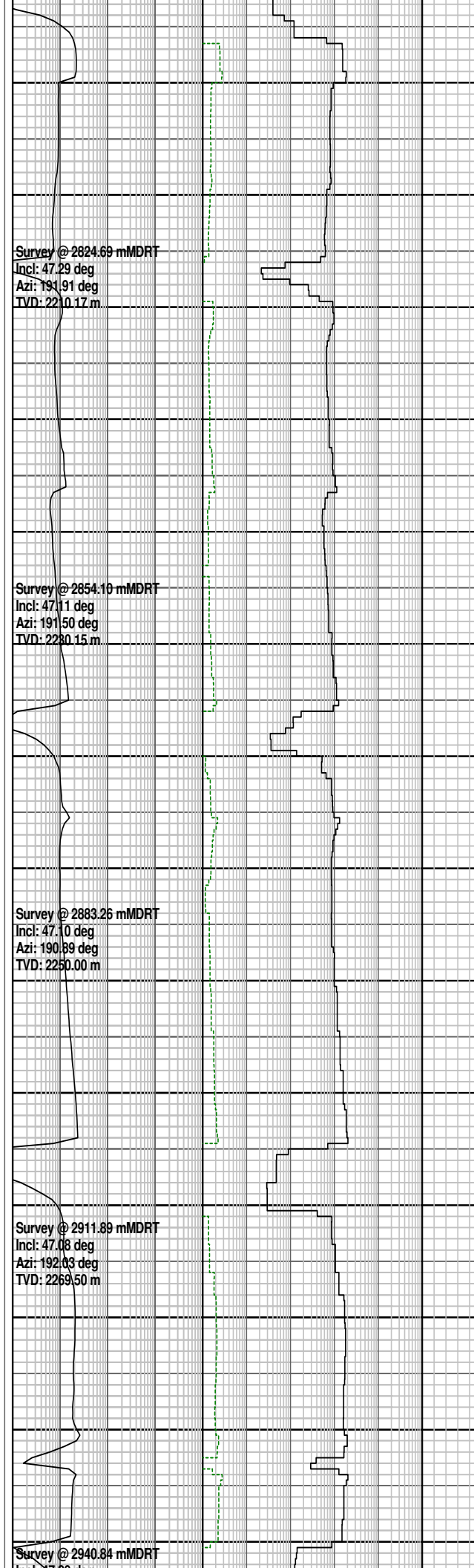
2234.2

2247.8

2261.4

2275.0

2288.0



Survey @ 2824.69 mMDRT
Incl: 47.29 deg
Azi: 191.91 deg
TVD: 2210.17 m

Survey @ 2854.10 mMDRT
Incl: 47.11 deg
Azi: 191.50 deg
TVD: 2230.15 m

Survey @ 2883.26 mMDRT
Incl: 47.10 deg
Azi: 190.89 deg
TVD: 2250.00 m

Survey @ 2911.89 mMDRT
Incl: 47.08 deg
Azi: 192.03 deg
TVD: 2269.50 m

Survey @ 2940.84 mMDRT

amor-sbblky, tr blkly

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, sft frm,
amor-sbblky

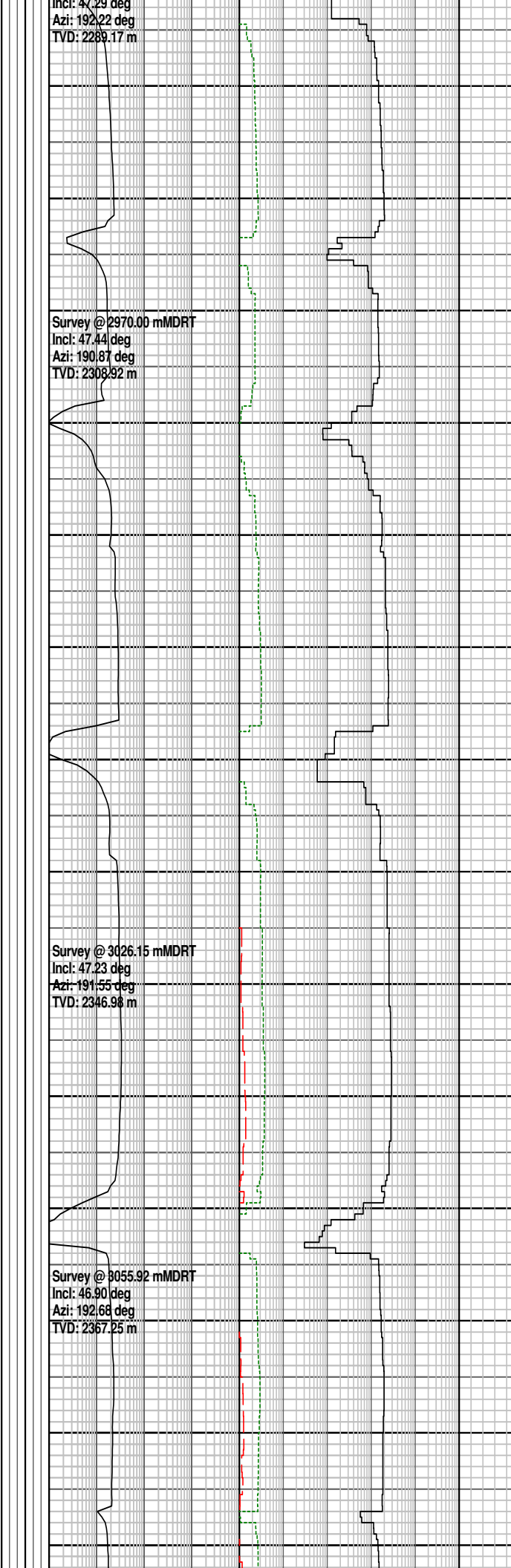
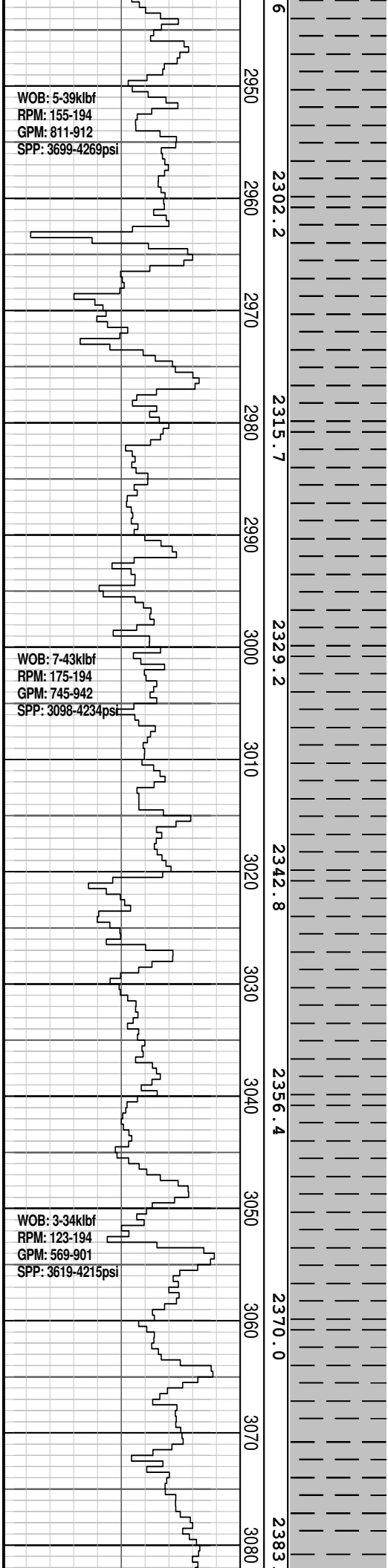
CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f carb
spks, sft frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f carb
spks, sft frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f carb
spks, sft frm, amor-sbblky

MW: 1.16	FV: 61
PV: 19	YP: 30
pH: 10.8	CK: 6.0
GELS: 9/12/15	CL: 51000

CALCAREOUS CLAYSTONE:



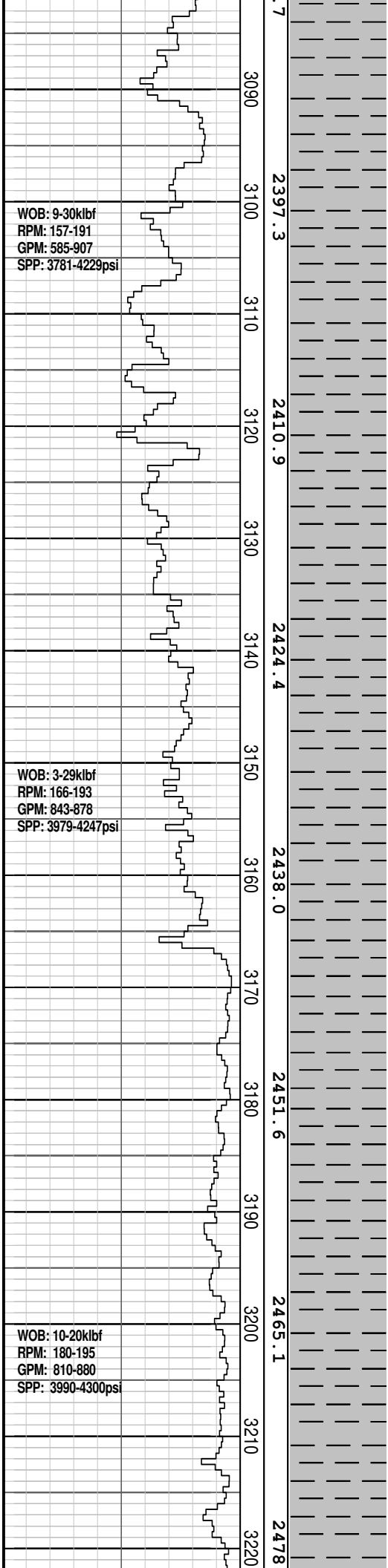
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abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f carb
spks, sft-frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f carb
spks, sft-frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f carb
spks, sft-frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f carb
spks, sft-frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f carb
spks, sft-frm, amor-sbblky



Survey @ 3084.82 mMDRT
Incl: 47.15 deg
Azi: 192.29 deg
TVD: 2386.96 m

Survey @ 3142.18 mMDRT
Incl: 47.27 deg
Azi: 192.87 deg
TVD: 2425.92 m

Survey @ 3171.47 mMDRT
Incl: 47.35 deg
Azi: 193.07 deg
TVD: 2445.78 m

Survey @ 3199.83 mMDRT
Incl: 47.71 deg
Azi: 192.78 deg
TVD: 2464.93 m

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f-med
carb spks, sft-frm,
amor-sbblky

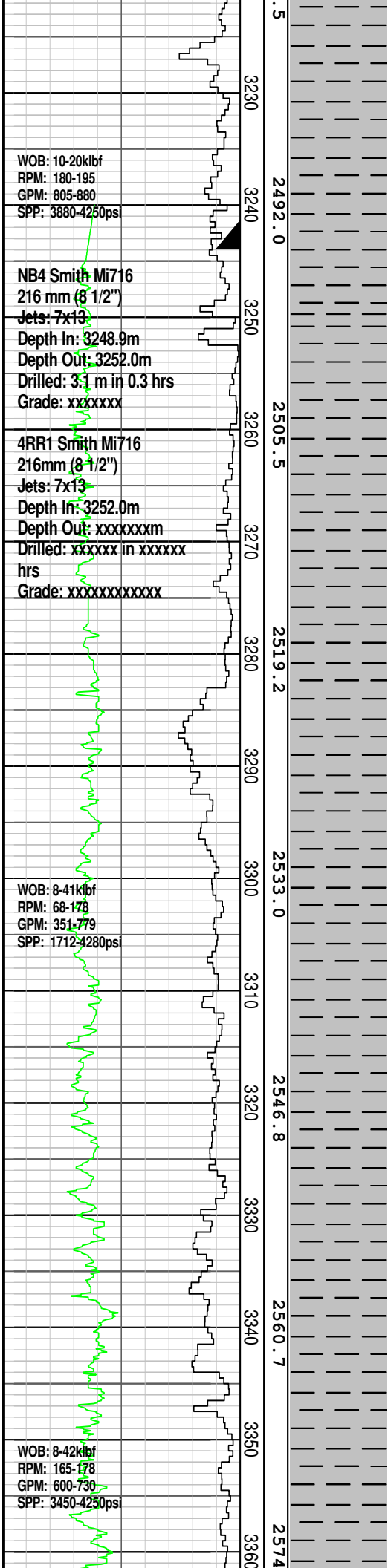
CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr microfos,
sft-frm, amor-sbblky,

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr microfos,
sft-frm, amor-sbblky,

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr microfos,
sft-frm, amor-sbblky,

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr microfos,
sft-frm, amor-sbblky,

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr dissem pyr, tr
microfos, sft-frm,



Survey @ 3225.02 mMDRT
Incl: 47.61 deg
Azi: 192.02 deg
TVD: 2481.90 m

Survey @ 3258.55 mMDRT
Incl: 47.12 deg
Azi: 192.57 deg
TVD: 2504.60 m

Survey @ 3289.21 mMDRT
Incl: 46.56 deg
Azi: 190.31 deg
TVD: 2525.60 m

Survey @ 3318.02 mMDRT
Incl: 45.87 deg
Azi: 190.74 deg
TVD: 2545.50 m

Survey @ 3347.09 mMDRT
Incl: 46.75 deg
Azi: 193.83 deg
TVD: 2565.60 m

amor-sbblky,
CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr com pyr nod, tr
microfos, sft-frm,
amor-sbblky,

244mm (9 5/8") casing shoe @ 3243.9 mMDRT

Reached 311mm (12 1/4") section TD @ 3248.9 mMDRT @ 1300 hrs on 29th December 2008

POOH @3252.0 m to change the failed MWD tool

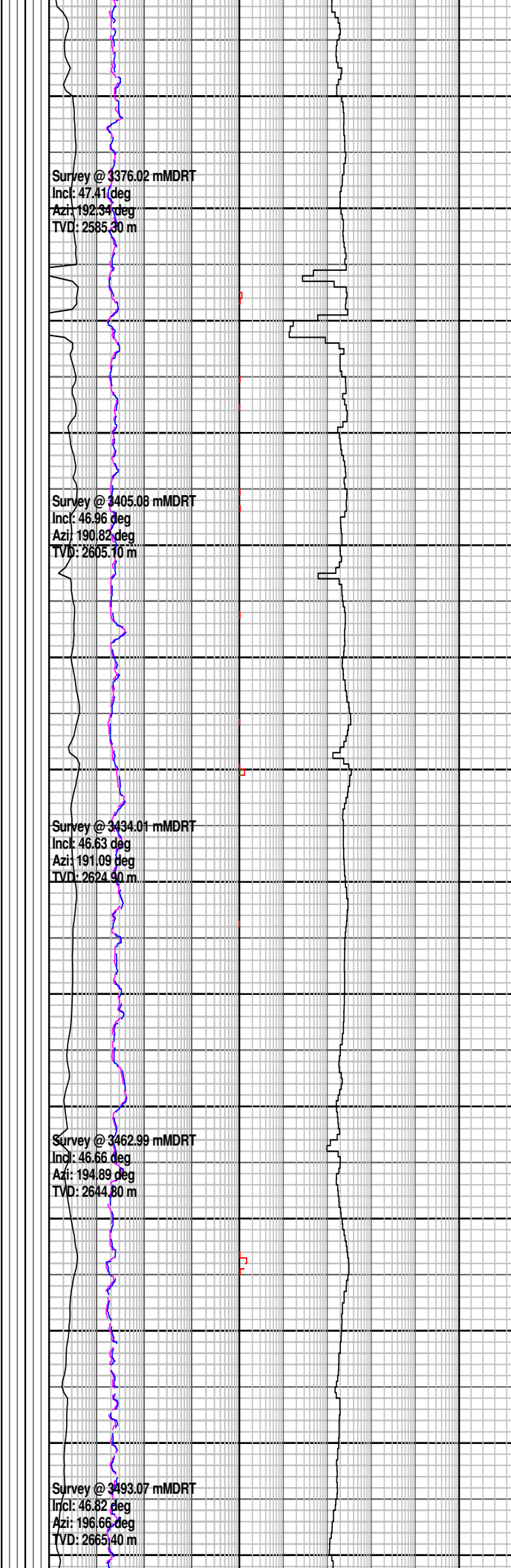
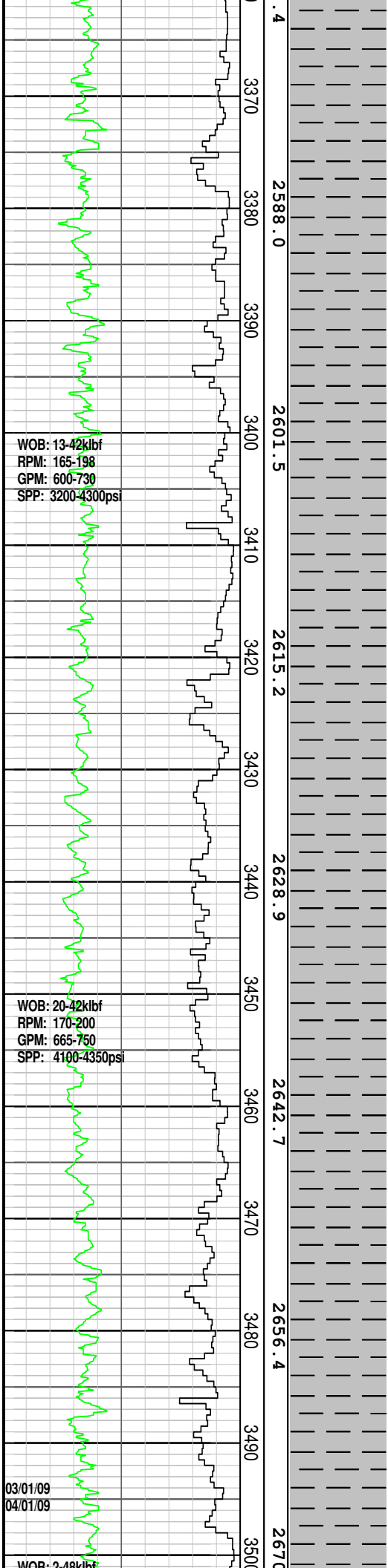
CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to CLCLT, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr dissem
pyr, tr ang qtz, tr microfos,
sft-frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to MARL, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr dissem
pyr, tr ang qtz, tr microfos,
sft-frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to MARL, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr dissem
pyr, tr ang qtz, tr microfos,
sft-frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy,
abdt calc grd to MARL, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr dissem
pyr, tr ang qtz, tr microfos,
sft-frm, amor-sbblky

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy, tr
micmic, tr v f glauc, tr v f-med
carb spks, tr pyr nod, tr ang
qtz, tr microfos, sft-frm,
amor-sbblky, sbfiss i/p



CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy, tr micmic, tr v f glauc, tr v f-med carb spks, tr pyr nod, tr ang qtz, tr microfos, sft-frm, amor-sbblky, sbfiss i/p

CALCAREOUS CLAYSTONE:
med gy-med lt gy, lt olv gy, tr micmic, tr v f aren, tr v f glauc, tr v f-med carb spks, tr pyr nod, tr ang qtz, tr microfos, sft-frm, amor-sbblky, sbfiss i/p

CALCAREOUS CLAYSTONE:
med lt gy-med dk gy, lt olv gy-lt gnsh gy, mod calc, slt i/p, tr imcmic, tr v f glauc, tr v f aren, tr v f carb spks, dom frm-mod hd, amor-sbblky, tr sbfiss

CALCAREOUS CLAYSTONE:
med lt gy-med dk gy, lt olv gy-lt gnsh gy, mod calc, slt i/p, tr imcmic, tr v f glauc, tr v f aren, tr v f carb spks, tr nod-dissem pyr, dom frm-mod hd, amor

CALCAREOUS CLAYSTONE:
med lt gy-med dk gy, lt olv gy-lt gnsh gy, mod calc, slt i/p, tr imcmic, tr v f glauc, tr v f aren, tr v f carb spks, tr dissem pyr, dom frm-mod hd, amor-sbb

CALCAREOUS CLAYSTONE:
med lt gy-med dk gy, lt olv gy-lt gnsh gy, mod calc, slt i/p, tr imcmic, tr v f glauc, tr v f aren, tr v f carb spks, tr dissem pyr, dom frm-mod hd, amor-sbb

CALCAREOUS CLAYSTONE:
med lt gy-med dk gy, lt olv gy-lt gnsh gy, mod calc, slt i/p, tr imcmic, tr v f glauc, tr v f aren, tr v f carb spks, tr dissem pyr, dom frm-mod hd, amor-sbb

