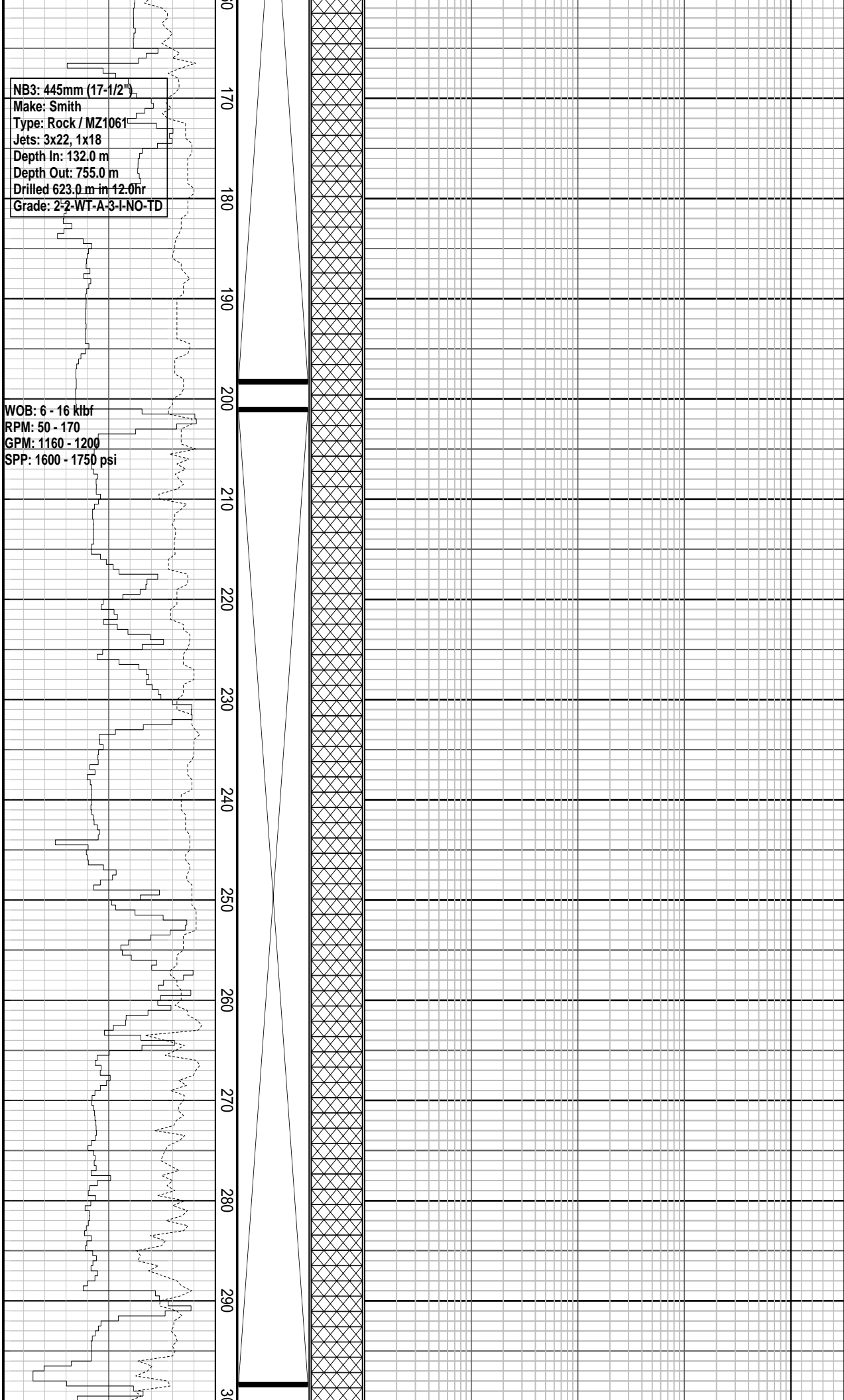


FORMATION EVALUATION LOG				Analysis	LITHOLOGY DESCRIPTIONS
Chromatograph Data				Calcimetry	
INTERPRETED LITHOLOGY	Methane ppm				50   100
	Ethane ppm				Dolomite %
	Propane ppm				50   100
	iso-Butane ppm				
	n-Butane ppm				
	iso-Pentane ppm				
	n-Pentane ppm				
	Ditch Gas %				
CUTTINGS					
MD meters 1:500					
Gamma Ray					
ROP					
m/hr					
WEIGHT ON BIT					
klbf					
ROP BACKUP					
m/hr					
300   280   260   240   220					
0					
80					
90					
100					
110					
120					
130					
140					
150					
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NB3: 445mm (17-1/2")  
Make: Smith  
Type: Rock / MZ1061  
Jets: 3x22, 1x18  
Depth In: 132.0 m  
Depth Out: 755.0 m  
Drilled 623.0 m in 12.0hr  
Grade: 2-2-WT-A-3-I-NO-TD

WOB: 6 - 16 klbf  
RPM: 50 - 170  
GPM: 1160 - 1200  
SPP: 1600 - 1750 psi

MD:167.41 m      Azi: 261.61°  
TVD: 167.41 m      Incl: 0.63°

MD:225.52 m      Azi: 223.32°  
TVD: 225.52 m      Incl: 0.37°

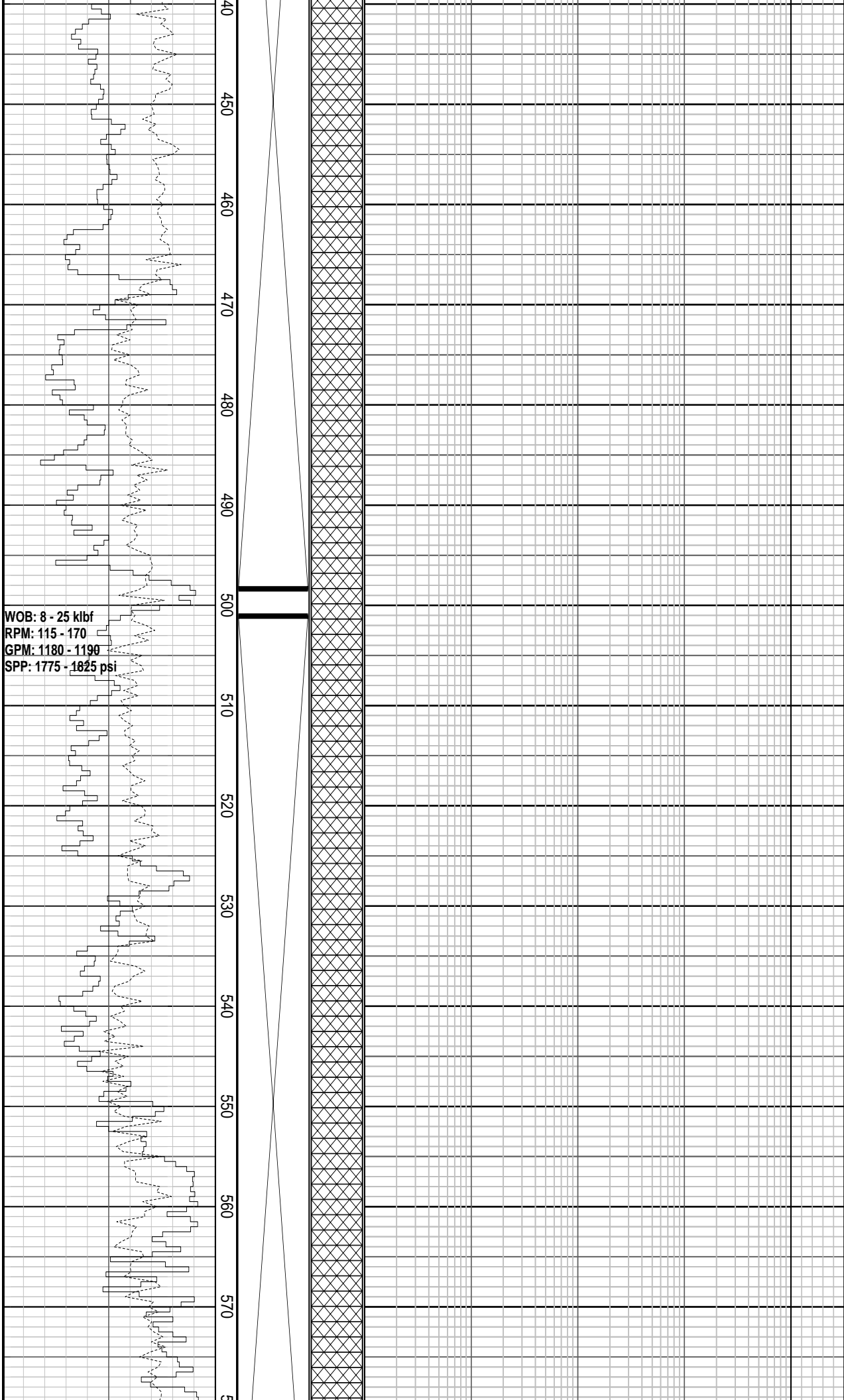
WOB: 3 - 18 klbf  
RPM: 90 - 180  
GPM: 1180 - 1190  
SPP: 1730 - 1860 psi

WOB: 6 - 25 klbf  
RPM: 145 - 175  
GPM: 1190 - 1190  
SPP: 1750 - 1800 psi

MD: 343.05 m    Azi: 75.45°  
TVD: 343.05 m    Incl: 0.23°

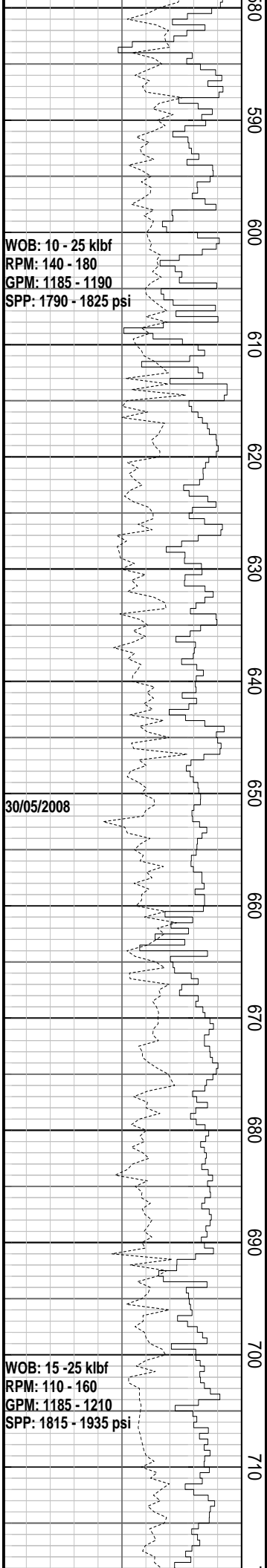
Drill with seawater & Hi-Vis sweeps,  
Returns to seabed, 96.25m to 755.0m

MD: 431.83 m    Azi: 31.60°  
TVD: 431.83 m    Incl: 0.14°



MD: 520.09 m	Azi: 306.99°
TVD: 520.09 m	Incl: 0.26°

Drill with seawater & Hi-Vis sweeps,  
Returns to seabed, 96.25m to 755.0m



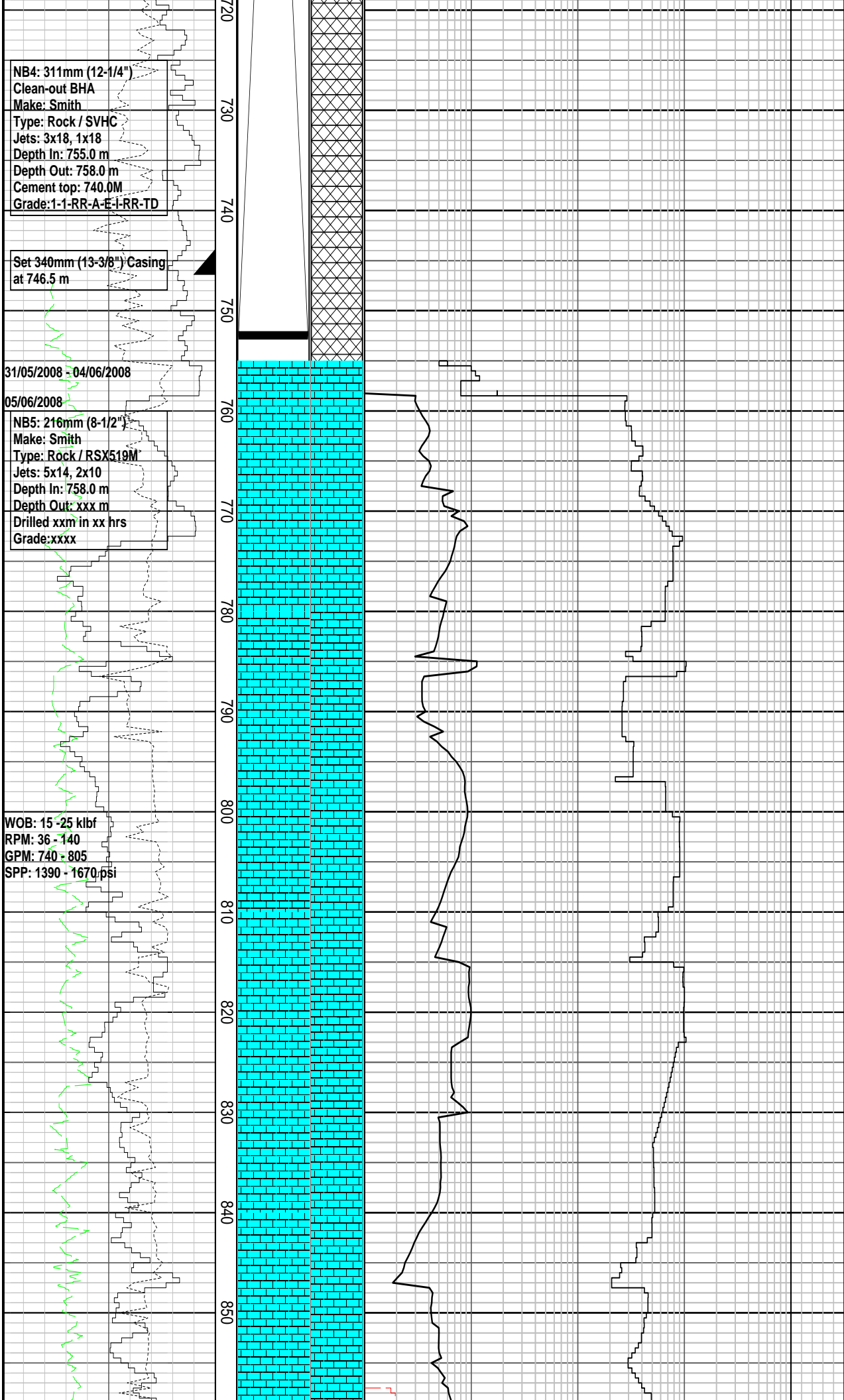
WOB: 10 - 25 klbf  
RPM: 140 - 180  
GPM: 1185 - 1190  
SPP: 1790 - 1825 psi

30/05/2008

WOB: 15 - 25 klbf  
RPM: 110 - 160  
GPM: 1185 - 1210  
SPP: 1815 - 1935 psi

MD: 608.29 m      Azi: 280.34°  
TVD: 608.28 m      Incl: 0.58°

MD: 667.52 m      Azi: 215.10°  
TVD: 667.51 m      Incl: 0.58°



NB4: 311mm (12-1/4")  
Clean-out BHA  
Make: Smith  
Type: Rock / SVHC  
Jets: 3x18, 1x18  
Depth In: 755.0 m  
Depth Out: 758.0 m  
Cement top: 740.0M  
Grade:1-1-RR-A-E-I-RR-TD

Set 340mm (13-3/8") Casing  
at 746.5 m

31/05/2008 - 04/06/2008

05/06/2008  
NB5: 216mm (8-1/2")  
Make: Smith  
Type: Rock / RSX519M  
Jets: 5x14, 2x10  
Depth In: 758.0 m  
Depth Out: xxx m  
Drilled xxm in xx hrs  
Grade:xxxx

WOB: 15 - 25 klbf  
RPM: 36 - 140  
GPM: 740 - 805  
SPP: 1390 - 1670 psi

Drill with seawater & Hi-Vis sweeps,  
Returns to seabed, 96.25m to 755.0m

MD:768.33 m      Azi: 278.20°  
TVD: 768.3 m      Incl: 0.31°

17-1/2" Section TD, 755.0m

Drill with KCL Polymer drilling  
fluid, 755.0m to well TD

MW: 9.5 ppg      FV: 58  
PV: 15      YP: 27  
Gels: 9/12/15      pH: 9.5

FIT @ 758.0m with 9.5ppg  
EMW:17.39 ppg @ 1020psi

MD:746.93 m      Azi: 194.47°  
TVD: 746.93 m      Incl: 0.21°

CALCILUTITE: m gy, v sft-sft,  
amor-sbbiky, disp, com nod pyr, com  
foss & shl frag (foram), mnr xln calc,  
tr v f gr qtz, mnr m gy arg mtrx

MD:957.62 m      Azi: 289.14°

MD: 857.02 m      Azi: 288.14°  
TVD: 857.6 m      Incl: 0.21°

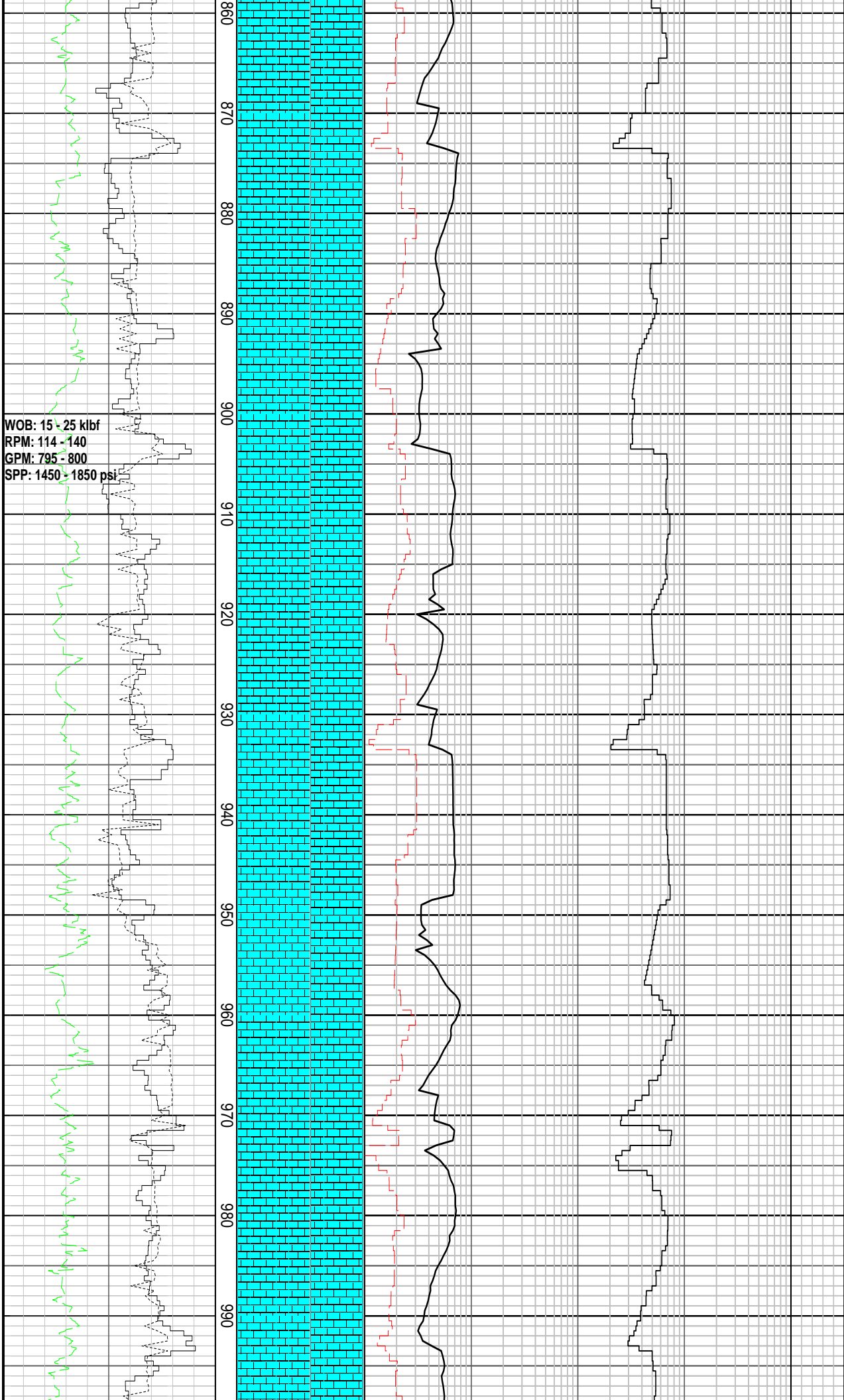
CALCILUTITE: m gy, v sft-sft,  
amor-sbbiky, disp, com nod pyr, mn  
foss & shl frag (foram), tr xln calc,  
com m gy arg mtx, grd-  
ARGILLACEOUS CALCILUTITE

MW: 9.6 ppg      FV: 46  
PV: 13      YP: 26  
Gels: 9/18/22      pH: 10

MD: 946.72 m      Azi: 341.57°  
TVD: 946.7 m      Inc: 0.13°

CALCILUTITE: m gy, sft, amor-sbbiky,  
disp, tr nod pyr, mn foss & shl frag  
(foram), tr xln calc, com m gy arg mtx,  
grd- ARGILLACEOUS CALCILUTITE

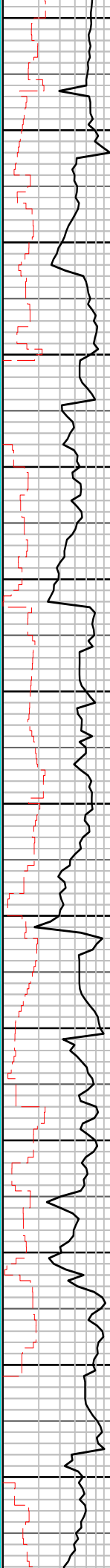
WOB: 15 - 25 klbf  
RPM: 114 - 140  
GPM: 795 - 800  
SPP: 1450 - 1850 psi



WOB: 15 - 25 klbf  
RPM: 1140 - 143  
GPM: 800 - 805  
SPP: 1685 - 2035 psi

WOB: 15 - 25 klbf  
RPM: 132-140  
GPM: 800 - 865  
SPP: 1950 - 2500 psi

1000  
1010  
1020  
1030  
1040  
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1090  
1100  
1110  
1120  
1130



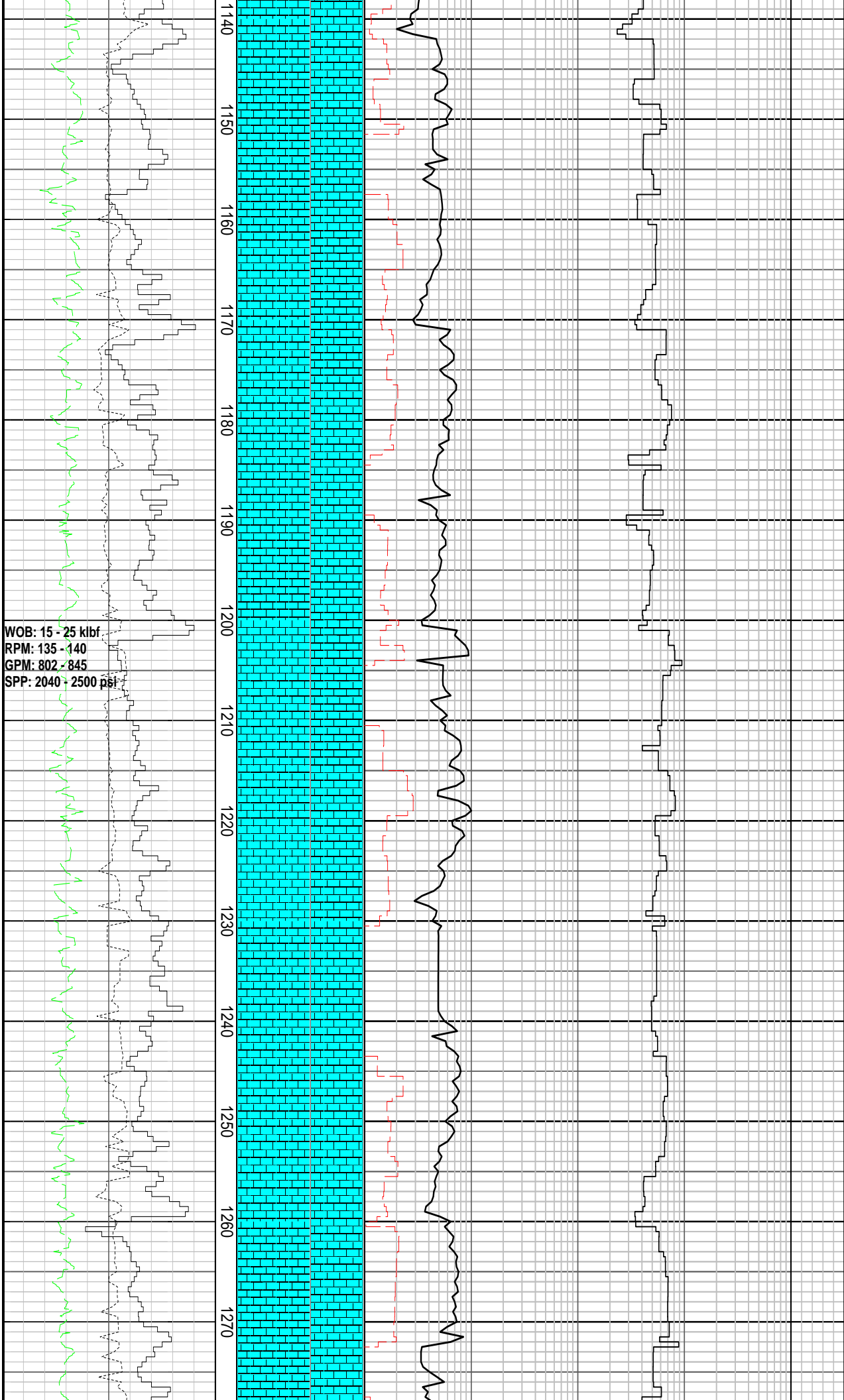
MD: 1035.71 m    Azi: 313.67°  
TVD: 1035.7 m    Inc: 0.13°

ARGILLACEOUS CALCILUTITE: m gy,  
sft- mod frm, sbbiky, disp, tr foss &  
shl frag (foram), tr xln calc, abd m gy  
arg mtx

MW: 9.6 ppg    FV: 56  
PV: 18    YP: 33  
Gels: 14/20/23    pH: 9.5

ARGILLACEOUS CALCILUTITE: m dk  
olv gy, frm, sbbiky-blky, disp, r but  
diverse range of planktic & benthic  
foram, tr bry frag, tr clus pyr nod, tr  
xln calc





WOB: 15 - 25 klb  
RPM: 135 - 140  
GPM: 802 - 845  
SPP: 2040 - 2500 psi

MD: 1184.34      Azi: 38.39°  
TVD: 1184.3      Inc: 0.20°

ARGILLACEOUS CALCILUTITE: m dk  
olv gy, frm, loc mod hd, sbblky, disp,  
foram, tr bry frag, tr clus pyr nod, sli  
more arg

ARGILLACEOUS CALCILUTITE: m olv  
gy-grnsh gy, frm, sbblky-blky, mnr sft  
mod hd, r foram, tr wh, or, trnsp xln  
calc, tr pyr

WOB: 15 - 25 klf  
RPM: 135 - 140  
GPM: 800 - 805  
SPP: 2180 - 2700 psi

06/06/2008

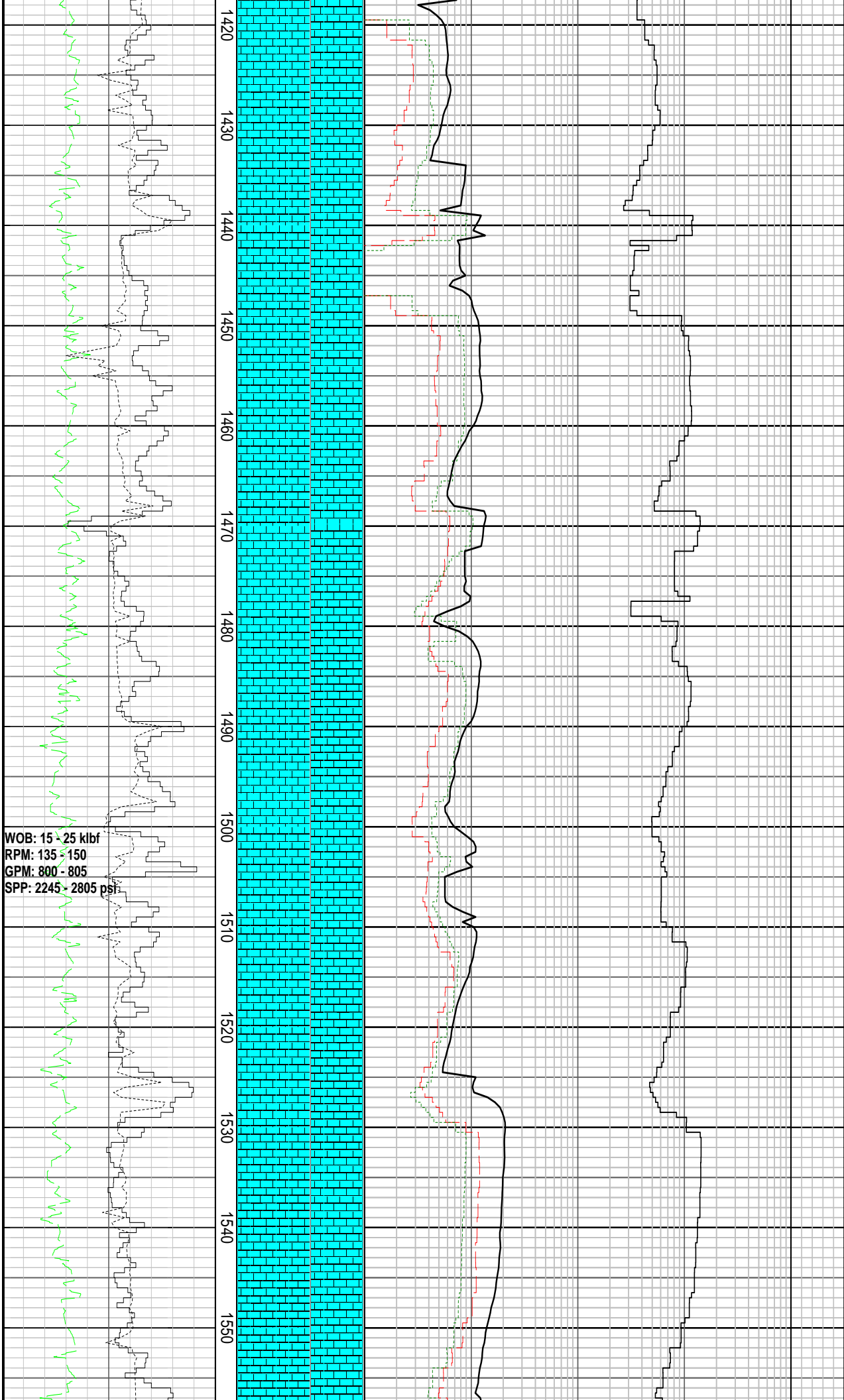
WOB: 15 - 25 klf  
RPM: 135 - 140  
GPM: 800 - 805  
SPP: 1875 - 2755 psi

ARGILLACEOUS CALCILUTITE: m olv  
gy, frm, sbblky-blky, hom, tr foram, tr  
pyr, tr bry, tr or trns calc

MD: 1333.11 m	Azi: 19.33°
TVD: 1333.1 m	Inc: 0.43°

ARGILLACEOUS CALCILUTITE: m olv  
gy-grnsh gy, sft-hd, mod frm,  
sbblky-blky, r planktic foram, tr pyr  
nod clus

ARGILLACEOUS CALCILUTITE: lt olv  
gy-grnsh gy, sft-hd, mod frm,  
sbblky-blky, tr foram, tr pyr nod clus



ARGILLACEOUS CALCILUTITE: It ol  
gy-grnsh gy, sft-hd, mod frm,  
sbbiky-blky, com foram, tr ech spn, tr  
xln pyr agg

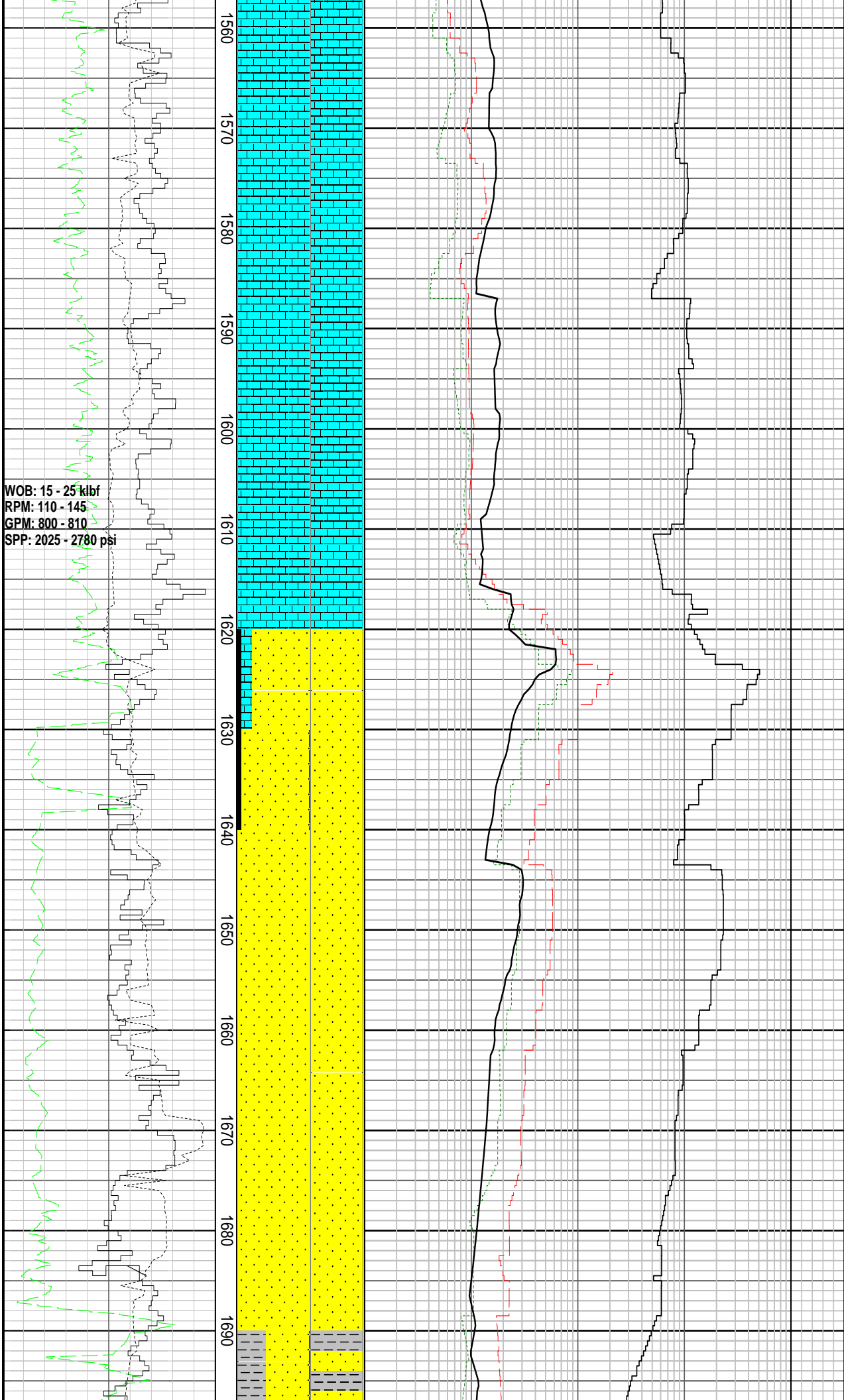
ARGILLACEOUS CALCILUTITE grd to  
CALCAREOUS CLAYSTONE: It olv  
gy-m dk olv gy, frm, sbbiky-blky, r  
foram, tr pyr strk, tr lt or trnsl xln calc

MD: 1480.34 m	Azi: 19.34°
TVD: 1480.3 m	Inc: 0.74°

ARGILLACEOUS CALCILUTITE grd to  
CALCAREOUS CLAYSTONE: It olv  
gy-m dk olv gy, frm, sbbiky-blky, r  
foram, tr pyr strk, tr lt or trnsl xln calc

tr GLAUCONITIC CALCARENITE: It  
olv gy spkld gysh gn, frm-mod hd,  
sbfis, sln, com m-crs sd szgysh gn  
glau

CLAYSTONE: m gy-m dk gy, frm,  
brnsh gy i/p, sbbiky-blky, tr qtz slt, tr  
dissem pyr, tr carb frag, non calc  
ARGILLACEOUS CALCILUTITE: It olv  
gy-m lt gy, m gy, frm, sbbiky-blky,  
hom, disp, abd m lt gy arg mtrx, grd to  
calc clst



WOB: 15 - 25 klbf  
RPM: 110 - 145  
GPM: 800 - 810  
SPP: 2025 - 2780 psi

MD: 1596.44 m  
TVD: 1569.4 m

MD: 1599.08 m  
TVD: 1599.0 m

tr GLAUCONITIC CALCARENITE: It  
olv gy spkld gysh gn, frm-mod hd,  
sbfis, sln, com m-crs sd szgysh gn  
glau

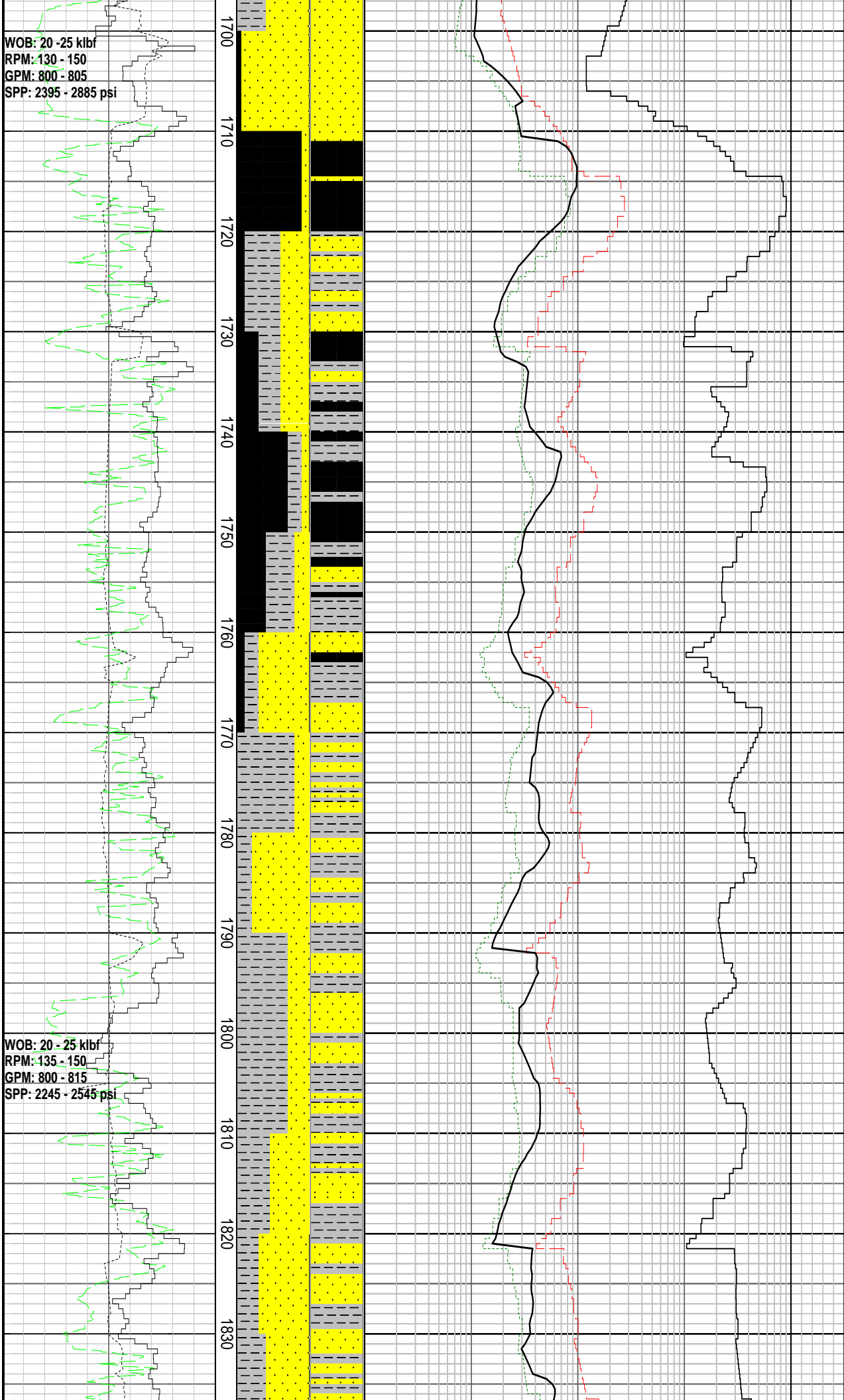
FORAMINIFERAL CALCILUTITE: It olv  
gy-m gy, frm, sbblky-blky, disp, abd  
foram, f-m gr sz, r nod pyr, abd m lt gy  
arg mtx

SANDSTONE: quartzose, wh-v lt gy,  
clr-trnsl gr, tr mky, returned lse,  
bimodal 60% v crs-gran, 40% f-crs, v  
crs-gran gr are v ang-rndd, l-hi sph,  
elong i/p, tr-r nod pyr, tr intgran  
arg mtx, tr lith gr, gd inferred por, no  
shw

SANDSTONE: quartzose, wh-v lt gy, tr  
lt brnsh gy-pl yel or, returned lse,  
clr-trnsl gr, f-gran, pred crs-gran, abd  
f-crs, ang-rnd, low-hi sp, pr srt, tr pyr  
fros on some v crs- gra

WOB: 20 -25 klbf  
RPM: 130 - 150  
GPM: 800 - 805  
SPP: 2395 - 2885 psi

WOB: 20 -25 klbf  
RPM: 135 - 150  
GPM: 800 - 815  
SPP: 2245 - 2545 psi



**CALCAREOUS CLAYSTONE:** lt gy-m  
gy, mod frm-frm, sbbly-blky, sli disp,  
mnr disse pyr, loc abd, strongly calc

**COAL:** brnsh blk-blk, frm, brit,  
sbbly-sbconch, fiss-sbfiss i/p, sb  
vit-vit lstr

**SANDSTONE:** quartzose, wh-v lt gy, tr  
lt brnsh gy, returned lse, f-v crs, pred  
f-m, mnr-com crs-v crs, ang-rnd, pred  
ang-sbrnd, mod-hi sph, pr srt, tr lt gy  
arg mtx, gd inf por, no

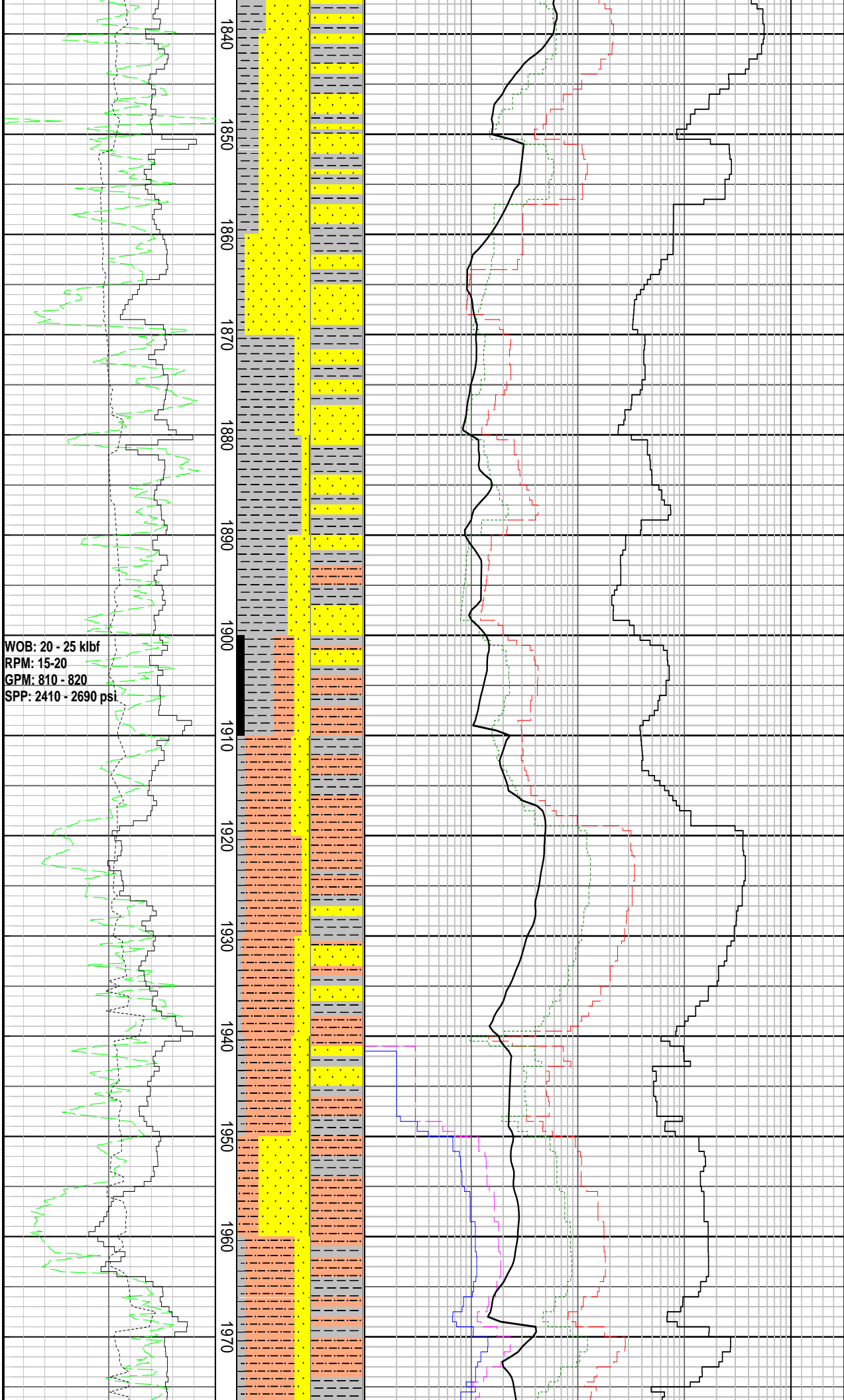
MD: 1745.75 m	Azi: 4.99°
TVD: 1745.7 m	Inc: 1.09°

MW: 9.9 ppg	FV: 53
PV: 17	YP: 33
Gels: 14/21/26	pH: 9.0

**CARBONACEOUS CLAYSTONE:** m dk  
gy-dk gy, mod frm-pred frm,  
sbbly-blky, sli disp, mnr disse pyr,  
abd carb mat, wk calc

**SANDSTONE:** quartzose, wh-v lt gy, tr  
lt brnsh gy, rtrnd lse, v f-m gr, pred  
f-m, mnr v f-f, ang-sbrnd, pred  
sbang-sbrnd, mod-hi sph, wl srt, tr-r lt  
gy arg mtx, fr inf por, no s

**CLAY:** brnsh gy-dk gy, mod frm-pred  
frm, sbbly-blky, sli disp, mnr disse  
pyr, com carb frag, wk calc



WOB: 20 - 25 klbf  
RPM: 15-20  
GPM: 810 - 820  
SPP: 2410 - 2690 psi

SANDSTONE: qrtzose, wh-v lt gy, tr lt  
brnsh gy, rtrnd lse, v f-m gr, pred f-m,  
mnr v f-f, ang-sbrnd, pred  
sbang-sbrnd, mod-hi sph, wl sr, tr-r lt  
gy arg mtx, fr inf por

CLAYSTONE: m it gy-m gy, frm,  
sbbiky-blky, sli disp, tr-r slt, tr nod &  
dissem pyr, tr carb wisps & frag, non  
calc

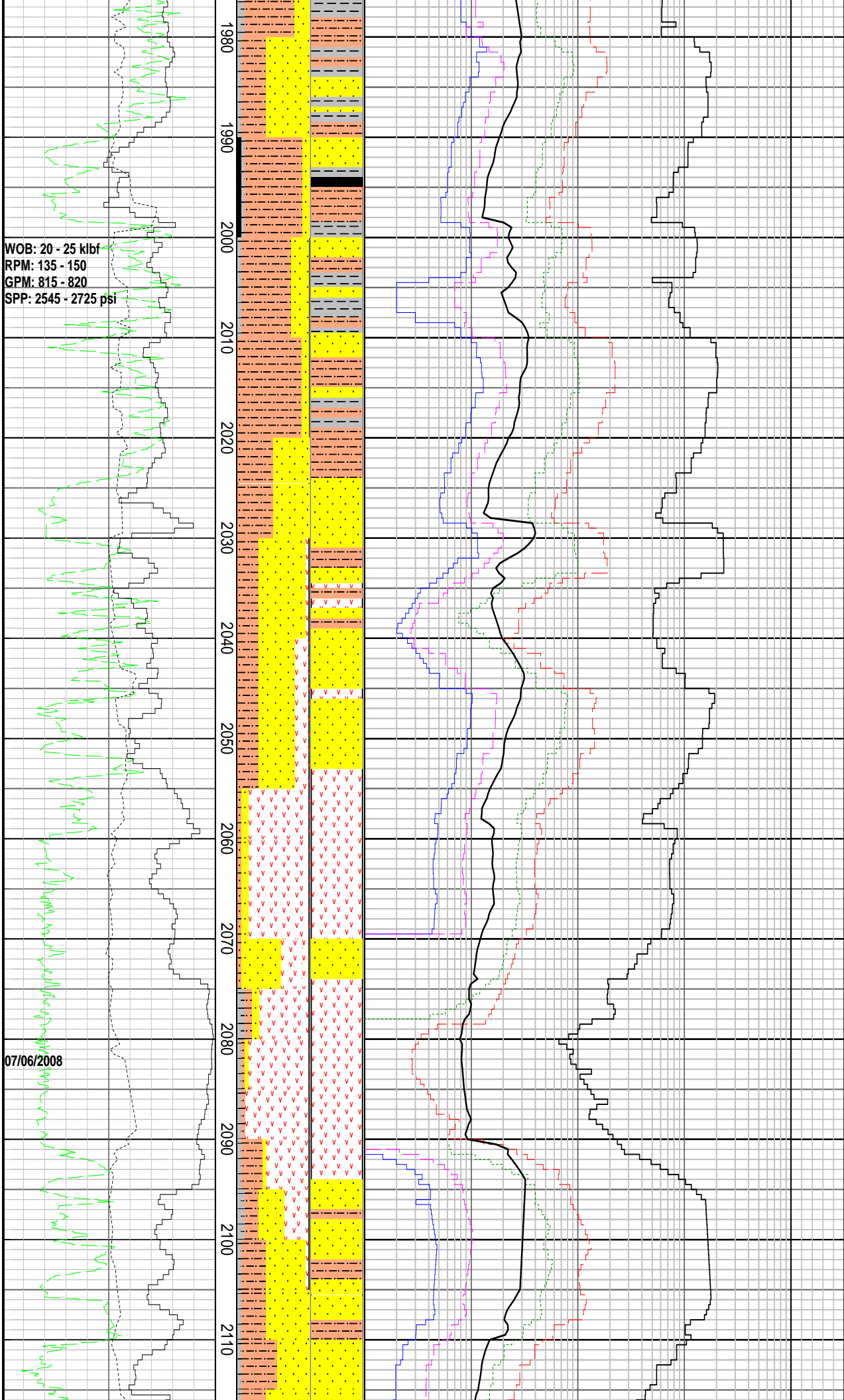
MD: 1893.73 m    Azi: 353.25°  
TVD: 1893.6 m    Inc: 1.24°

SILTSTONE: lt-m brnsh gy, sft-mnly  
frm-mod hd, sbbiky-blky, non calc,  
com hi micaceous, com w/ blk  
carb-coaly microlam, com nod-irr pyr  
mas

MW: 10.0 ppg    FV: 52  
PV: 17    YP: 29  
Gels: 14/20/25    pH: 9.0

SANDSTONE: quartzose, v lt gy, lse,  
bimodal 1) v f u-m l, pr srt 2) crs  
u-gram, mod srt, sbang-sbrnd, sbsph  
trnspr-trnsl atz, tr rnd m dk av litt





SILTSTONE: brnsh gy-gy brn, frm-mod hd, sbfiss-sbblky, w/ abd v f carb spk, non calc, r w/ lenses of microxln pyr

MD: 2040.91 m Azi: 351.03°  
TVD: 2040.8 m Inc: 1.64°

VOLCANICS: v lt yel-or, frm-mod hd, flk, lt gy grndmass w/ extnsv clay seams & codt, non calc

VOLCANICS: lt gy-lt gnsh gy, spkl lt or yel spkl dk gy, mod hd, blk, non calc, lt gy grndmass, loc apr vnlets lt yel cl, len sulphide, loc acic gy xln. No fluo

SILTSTONE: brnsh gy-dsky brn, frm-mod hd, sbblky-blky, loc ghly micaceous, loc carb, r carb microlam

SANDSTONE: lt gy, lse, f l-m u, mod srt, sbang-rndd, trnsp-trnsl qtz

SILTSTONE: dk brnsh gy, blk, mod hd, com f carb mat, c lens

BASALT: dk gnsh gy-gnsh blk, hd, blk, loc f-m grnd phenocrysts

CLAYSTONE: v lt brn-lt olb, frm, sbfiss wxy tex, non calc

VOLCANICS: v lt gy-pl gn, sft, sbblky, non calc, r clus pyr xln

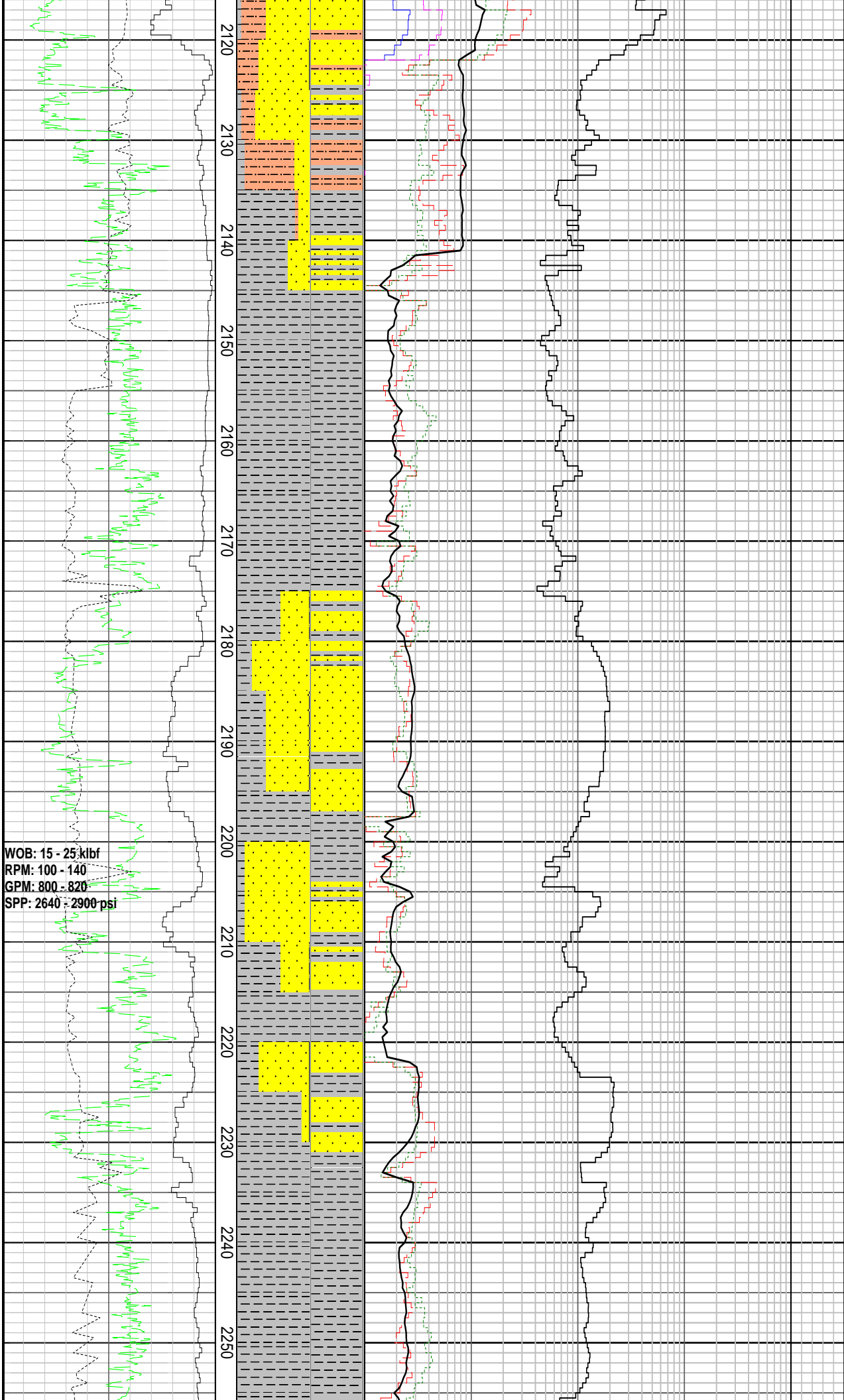
SANDSTONE: lt gy, lse, v f u-f u, w srt tr v crs gr, sbang-sbrndd, trnsp-trnsl qtz

SILTSTONE: brnsh gy, dk yelsh brn-dsky brn, mod h, blk-sbfis, non calc, r carc microlam, grd-clst

CLAYSTONE: m gy, fis, pl yel brn i/p, v sft, frm, wxy tex, non calc

SANDSTONE: lt gy, lse, bimod crs u-gran, mod srt, sbord f l-m l, mod w srt, sbang-sbrnd, r w rndd, trnsl qtz

SANDSTONE: crs u-v crs u, r gran, mod ang frag, mntr sbrnd qtz grn, t m



dk gy metased lit, incl 10% f-c sst agg  
h ang flk, stng calc cmt, n vis por, brt  
lt yel drt fluoro bt n cut,  
SILTSTONE: grd-clst, brnsh gy, dk yel  
brn, dsky brn, com carb mat or  
microlam, com lse v c sd-sz pyr nod.  
incl 2% sst brt fluoro

SANDSTONE: crs u-v crs u, r gran,  
mnly ang frag, mnr sbrnd sph qtz gr,  
tr m dk gy metased lith. includes 10  
f-crs sst agg, hd ang flk, st calc cmt,  
Ryels sst, no cut, inf calc min  
fluor

MW: 11.0 ppg	FV: 51
PV: 18	YP: 30
Gels: 11/22/27	pH: 8.5

CLAYSTONE: m gy-m dk gy, frm,  
brnsh gy i/p, sb blkly-blky, tr qtz slt, tr  
pyr, tr carb frag, non calc

SANDSTONE: qtzose, wh-v lt gy, tr  
mod or pk, cl-pred trns gr, rtrnd lse, v  
f-m gr, pred f-m, com v f, ang-sbrnd,  
low-mod sph, w srt, tr calc cmt, tr lith  
gr, fr-gd inf por,

MD: 2188.18 m	Azi: 348.05°
TVD: 2188.0 m	Inc: 1.63°

CLAYSTONE: m gy-m dk gy, lt brnsh  
gy-brnsh gy i/p, frm, sbblkly-blky, tr  
qtz slt, tr dissem&nod pyr, tr carb  
frag, non calc

SANDSTONE: qrtzose, wh-v lt gy, tr  
mod or pk, cl-pred trns gr, rtrnd lse, v  
f-m gr, pred f-m, com v f, ang-sbrnd,  
lo-mod shp, tr elong, w srt, nil-tr calc  
cmt, tr lith gr, fr-gd p

MW: 11.0 ppg	FV: 51
PV: 17	YP: 30
Gels: 13/22/26	pH: 9.0



MW: 11.0 ppg FV: 51  
PV: 17 YP: 30  
Gels: 13/22/33 pH: 9.0

SILTSTONE: m gy-brnsh gy, rm-mod hd, sbbiky-blky, non calc, r v f-f sd, com carb mat&lens, loc com micromica

SANDSTONE: qrtzose, wh-v lt gy, tr mod or pk, cl-pred trns l gr, mnly lse, v f-m gr, pred f-m, com v f, ang-sbrnd, lo-mod shp, tr elong, w srt, in frd wk s cmt, gy lith, non calc,

COAL: blk-brnsh blk, frm-mod hd, fis, shly, prb uphole contam

CLAYSTONE: m dk gy, frm-mod hd, sbfis, tab-elong ctgs, non calc, homo

SILTSTONE: m gy-brnsh gy, rm-mod hd, sbbiky-blky, non calc, r v f-f sd, com carb mat&lens, loc com micromica, grd-clst

CLAYSTONE: m dk gy, frm-mod hd, sbfiss. tab-elong ctgs, non calc, hom, tr lt brn clst prb uphole

MW: 11.0 ppg FV: 51  
PV: 15 YP: 30  
Gels: 12/25/- pH: 9.0

CLAYSTONE: dk gy, frm-hd, sbfis, tab-elong ctgs, non calc, homo, tr lt brn clst prb uphole

SANDSTONE: lt gy, lse, v f l-m u, tr crs, mod srt, ang-sbrnd, trnspr-transl qtz

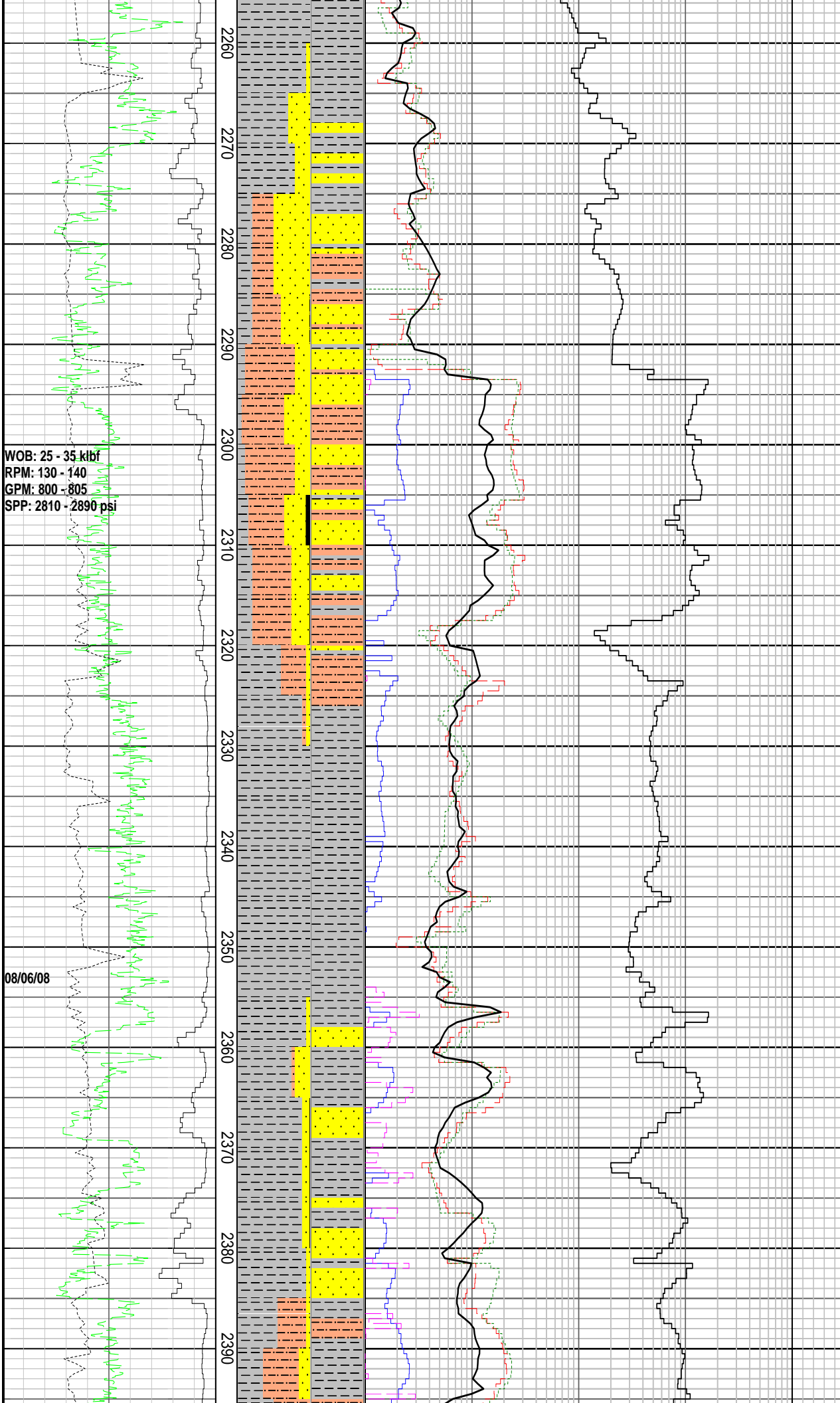
CLAYSTONE: lt-m brnsh gy, mn r m gy, mnly frm, sbfis-sbbiky, mn r sft, sbbiky, non calc, loc carb strk

SANDSTONE: lt gy, lse, f l-m l, w srt, ang-sbrnd, transp-transl qtz; 5% f sst agg, fri-mod had, loc tnd-rkflr, wkly calc cmnt, pr vis por. No shows

SILTSTONE: m brnsh gy, frm, sbbiky-blky, com v f sd, com-abd blk carb spk, non calc

WOB: 25 - 35 kbf  
RPM: 130 - 140  
GPM: 800 - 805  
SPP: 2810 - 2890 psi

08/06/08



**SANDSTONE:** lt gy, lse, v f u-m l, mod  
srt, sbang-rnd, transp-transl qtz, tr v  
crs, rnd, sbspheroidal qtz gr no agg

WOB: 20 - 35 klbf  
RPM: 90 - 150  
GPM: 800 - 815  
SPP: 2800 - 3000 psi

2400	2410	2420	2430
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## Cuttings

MD meters 1:500

**INTERPRETED  
LITHOLOGY**

## FORMATION EVALUATION LOG

### Chromatograph Data

Methane ppm

10	100	1000	10000
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Ethane ppm

10 | 100 | 1000 | 10000

Propane ppm

10 | 100 | 1000 | 10000

iso-Butane ppm

10 | 100 | 1000 | 10000

n-Butane ppm

A horizontal logarithmic scale with major tick marks at 10, 100, 1000, and 10000. The scale is represented by a line with vertical tick marks at these values.

so-Pentane ppm

10 | 100 | 1000 | 10000

n-Pentane ppm

10 | 100 | 1000 | 10000

Ditch Gas %

0.1 | 1 | 10 | 100

0.1 | 1 | 10 | 100

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## Analysis

## Calciometry

Dolomite %

00	50	100
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**DIRECT FLUOR**

## LITHOLOGY DESCRIPTIONS