



Company : Stuart Petroleum Ltd

Well : Bazzard-1

Interval : 81.00 - 3213.14 meters

Created : 05/Oct/2008 6:08:41 AM



INTEQ

### FORMATION EVALUATION LOG

Drilling Rate ROP (m/hr)	CORE	MD meters 1:200	LITHOLOGY %	INTERPRETED LITHOLOGY	TOTAL GAS & RESISTIVITY		CHROMATOGRAPH					Oil Show	Calcimetry	Lithology Description				
					Total Gas %	Resistivity Deep	Methane ppm	Ethane ppm	Propane ppm	iso-Butane ppm	n-Butane ppm				iso-Pentane ppm	n-Pentane ppm		
200   160   120   80   40					0.1	10	0.1	10000	0.1	10000	0.1	10000	0.1	10000	0.1	10000		
WEIGHT ON BIT (klbf)					0.2	200	0.1	10000	0.1	10000	0.1	10000	0.1	10000	0.1	10000		
ROP Backup (m/hr)					ohm.m		0.1	10000	0.1	10000	0.1	10000	0.1	10000	0.1	10000		
400   360   320   280   240							0.1	10000	0.1	10000	0.1	10000	0.1	10000	0.1	10000		

85																		
90																		
95																		
100																		
105																		

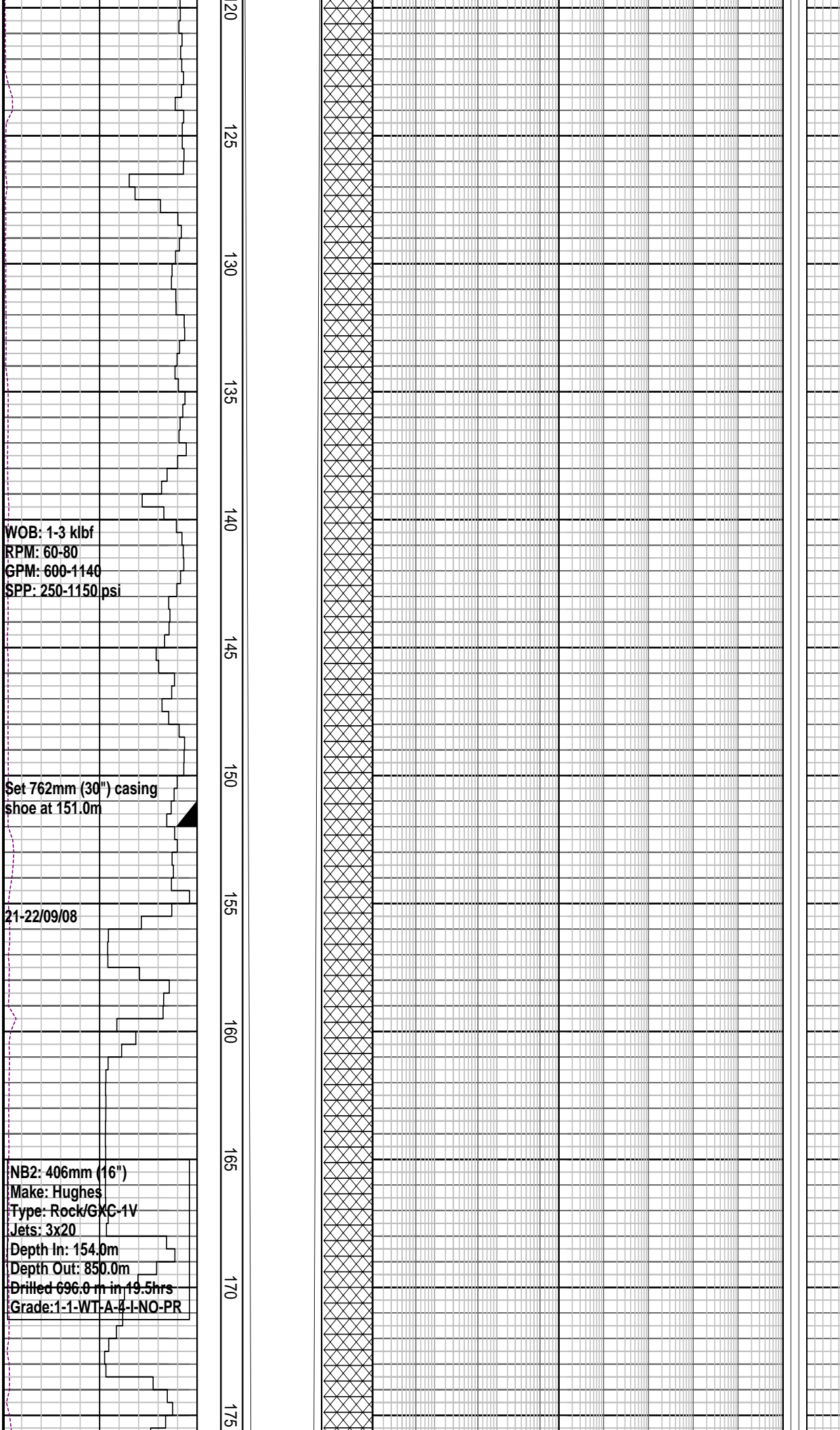
NB1: 660mm (26")  
 914mm (36") H/Opener  
 Make: Reed  
 Type: Rock/Y11C  
 Jets: 3x22, 1x16  
 Depth In: 106.4m  
 Depth Out: 154.0m  
 Grade: 1-1-WT-A-NB-I-NO-TD



RT-MSL: 38.5 mMDRT  
 Water Depth: 67.9 mMDRT  
 RT-Seabed: 106.4 mMDRT

Spud Bazzard-1 @ 2330 hrs  
 on 20/09/08

Drill with seawater & Hi-Vis sweeps.  
Returns to seabed 106.4m - 850.0m



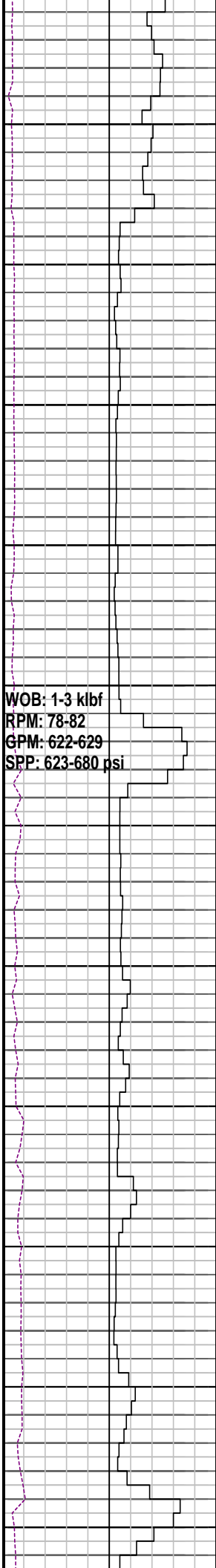
WOB: 1-3 klbf  
RPM: 60-80  
GPM: 600-1140  
SPP: 250-1150 psi

Set 762mm (30") casing shoe at 151.0m

21-22/09/08

NB2: 406mm (16")  
Make: Hughes  
Type: Rock/GXC-1V  
Jets: 3x20  
Depth In: 154.0m  
Depth Out: 850.0m  
Drilled 696.0 m in 19.5hrs  
Grade: 1-1-WT-A-2-I-NO-PR

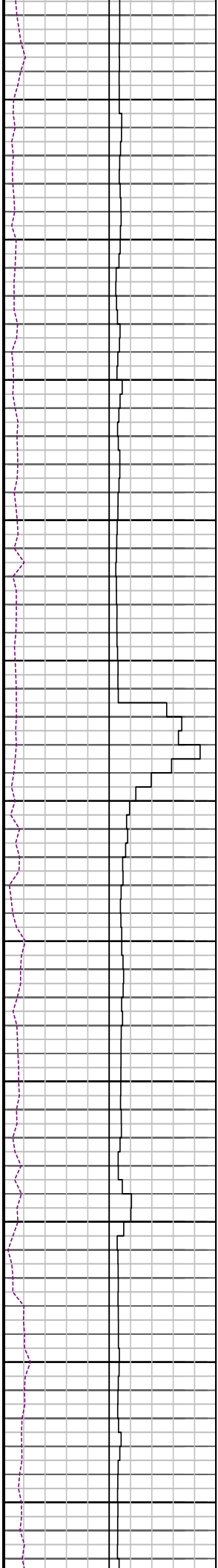
36" Hole Section TD 154.0m



180  
185  
190  
195  
200  
205  
210  
215  
220  
225  
230

MD: 195.13m Azi: 244.66°  
TVD: 195.12m Incl: 0.92°

Drill with seawater & Hi-Vis sweeps.  
Returns to seabed 106.4m - 850.0m



235

240

245

250

255

260

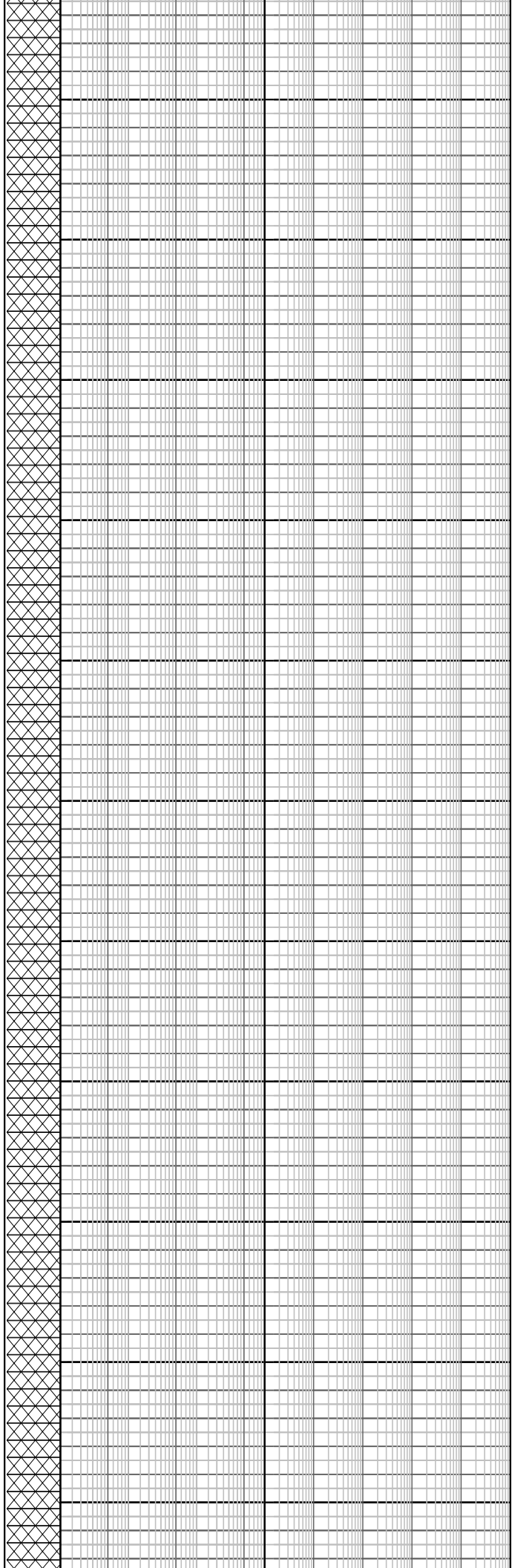
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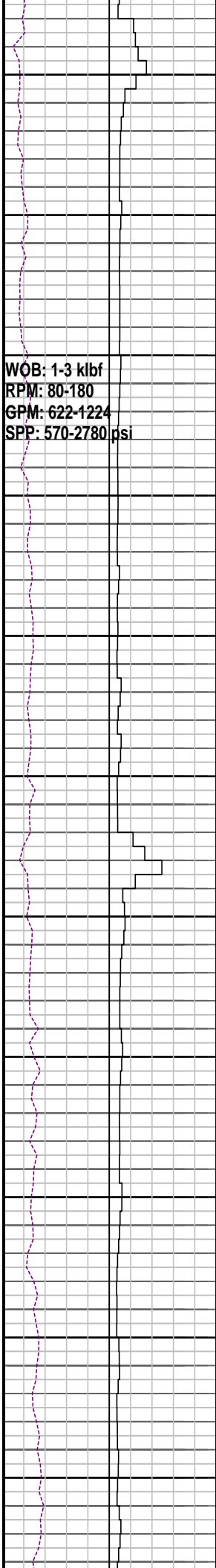
270

275

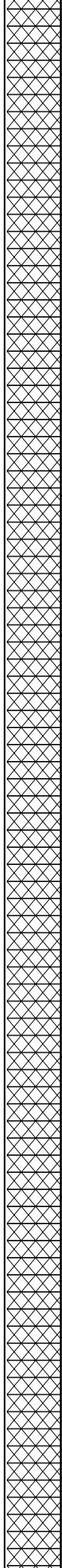
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285



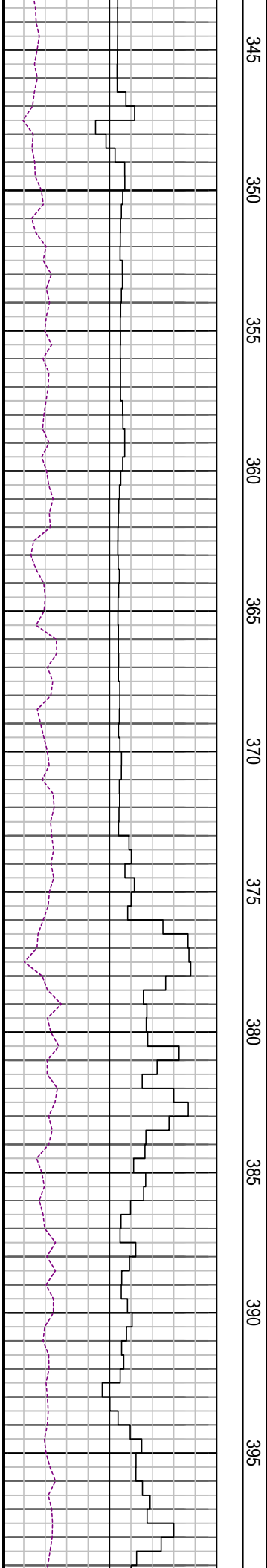


290  
295  
300  
305  
310  
315  
320  
325  
330  
335  
340



MD: 341.42m Azi: 323.79°  
TVD: 341.40m Incl: 0.03°

Drill with seawater & Hi-Vis sweeps.  
Returns to seabed 106.4m - 850.0m



345

350

355

360

365

370

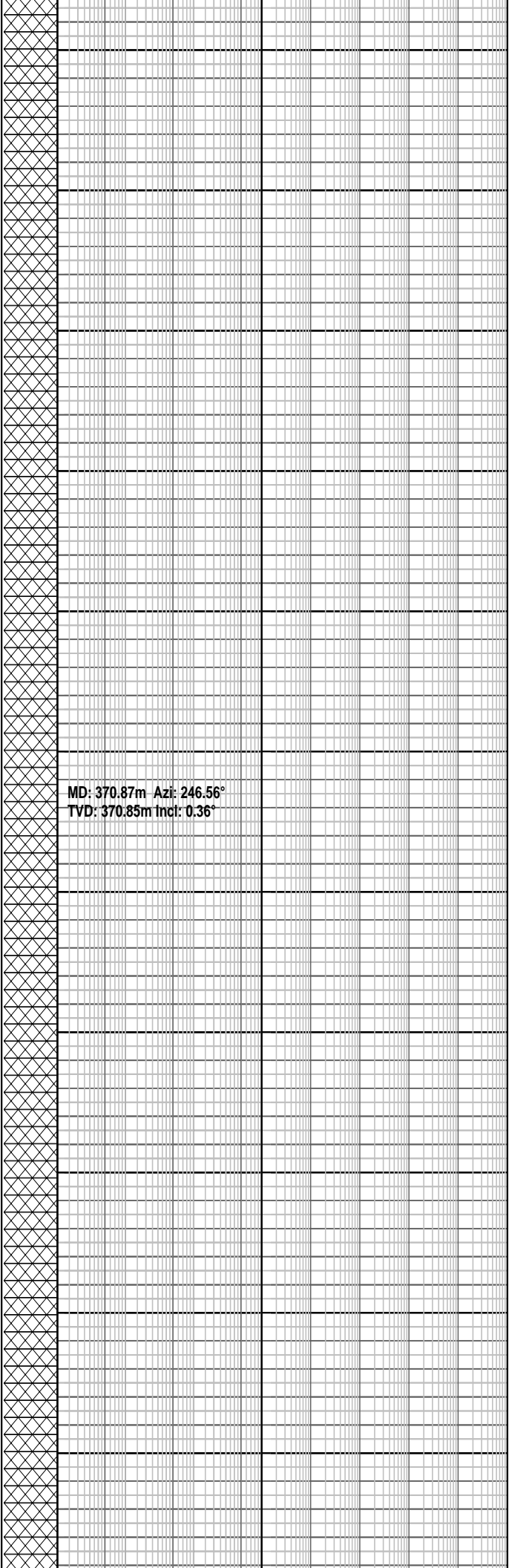
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380

385

390

395

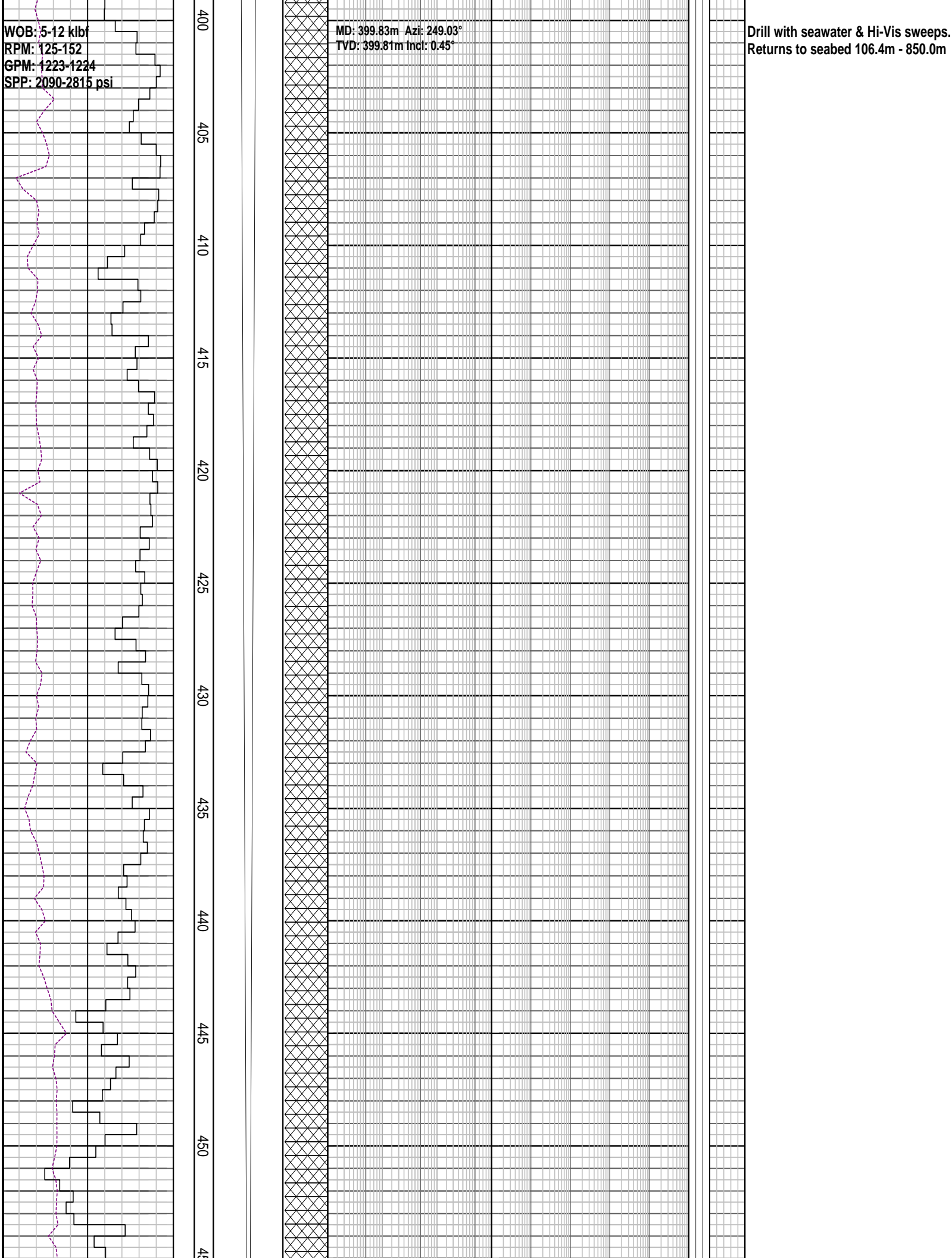


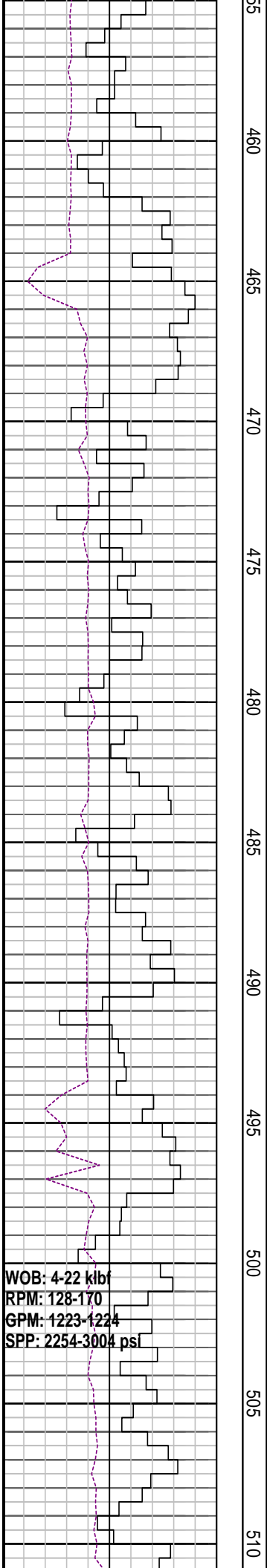
MD: 370.87m Azi: 246.56°  
TVD: 370.85m Incl: 0.36°

WOB: 5-12 klb  
RPM: 125-152  
GPM: 1223-1224  
SPP: 2090-2815 psi

MD: 399.83m Azi: 249.03°  
TVD: 399.81m Incl: 0.45°

Drill with seawater & Hi-Vis sweeps.  
Returns to seabed 106.4m - 850.0m





455  
460  
465  
470  
475  
480  
485  
490  
495  
500  
505  
510

MD: 458.61m Azi: 256.30°  
TVD: 458.59m Incl: 0.26°

MD: 488.50m Azi: 298.03°  
TVD: 488.48m Incl: 0.55°

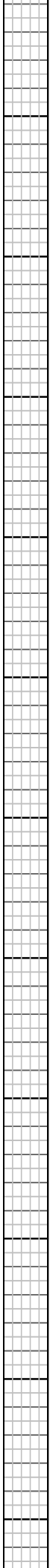
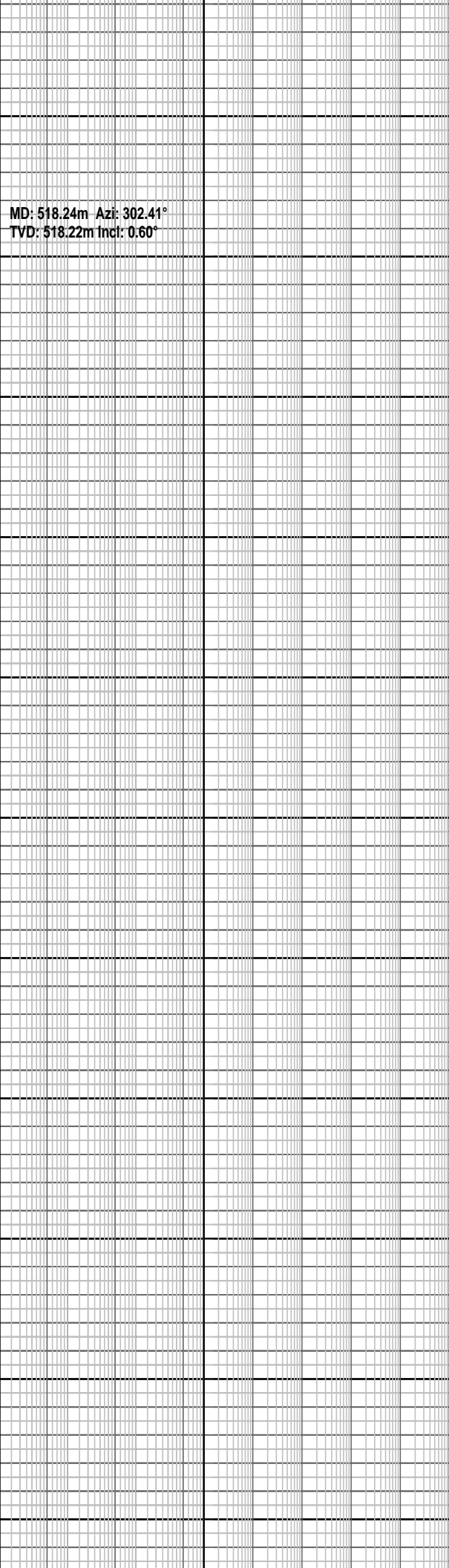
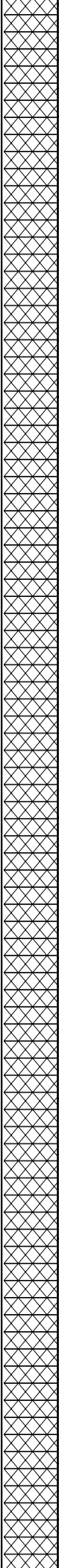
WOB: 4-22 kbf  
RPM: 128-170  
GPM: 1223-1224  
SPP: 2254-3004 psi

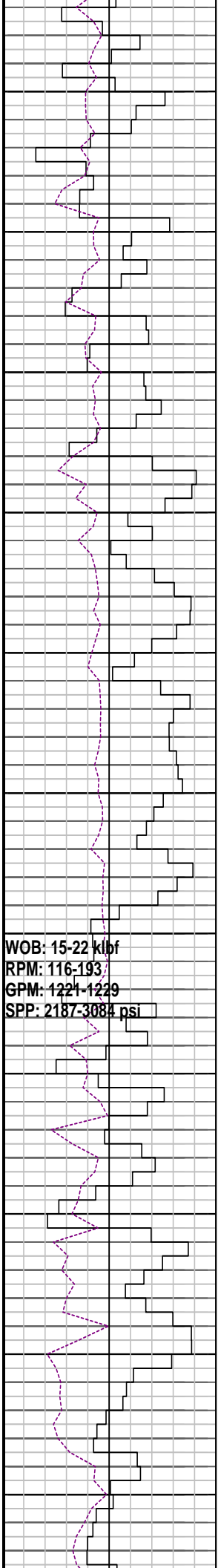
Drill with seawater & Hi-Vis sweeps.  
Returns to seabed 106.4m - 850.0m



515 520 525 530 535 540 545 550 555 560 565

MD: 518.24m Azi: 302.41°  
TVD: 518.22m Incl: 0.60°



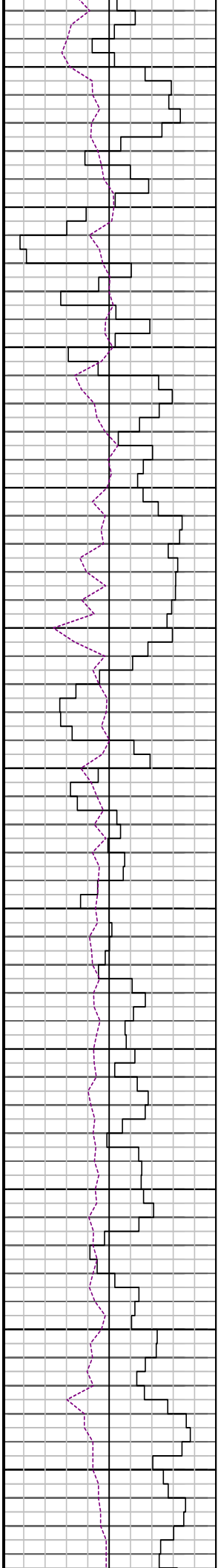


570  
575  
580  
585  
590  
595  
600  
605  
610  
615  
620

WOB: 15-22 klf  
RPM: 116-193  
GPM: 1221-1229  
SPP: 2187-3084 psi

MD: 607.51m Azi: 265.06°  
TVD: 607.48m Incl: 0.34°

Drill with seawater & Hi-Vis sweeps.  
Returns to seabed 106.4m - 850.0m



625

630

635

640

645

650

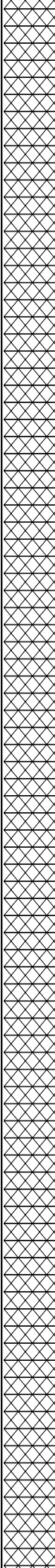
655

660

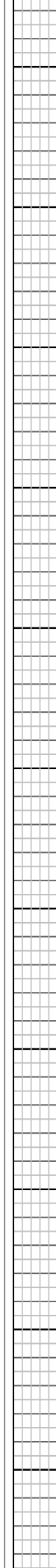
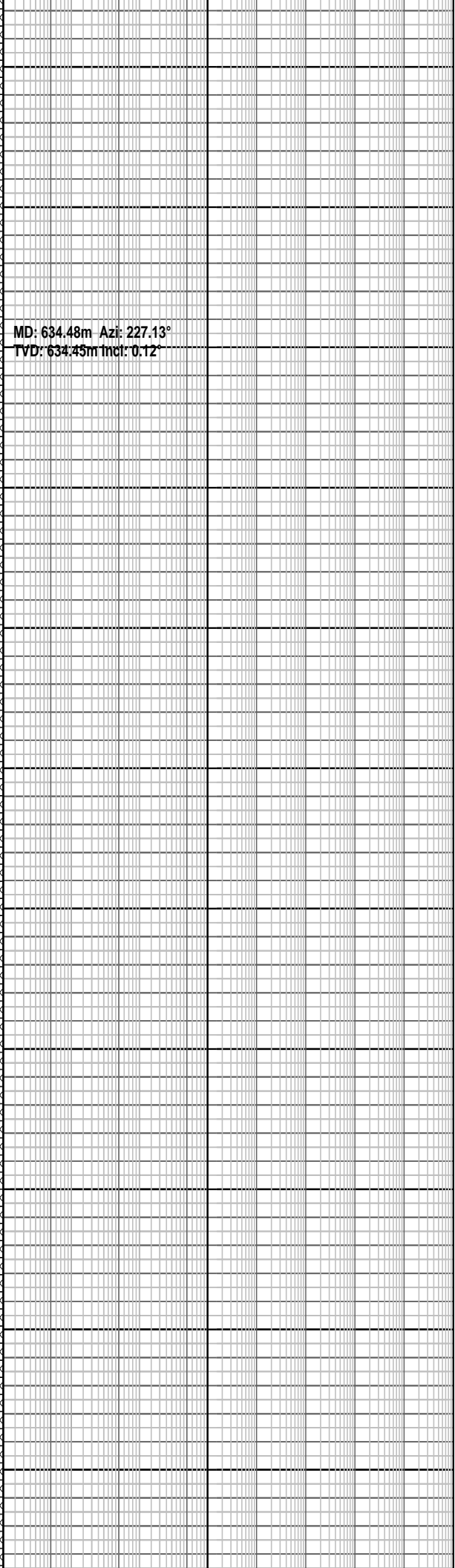
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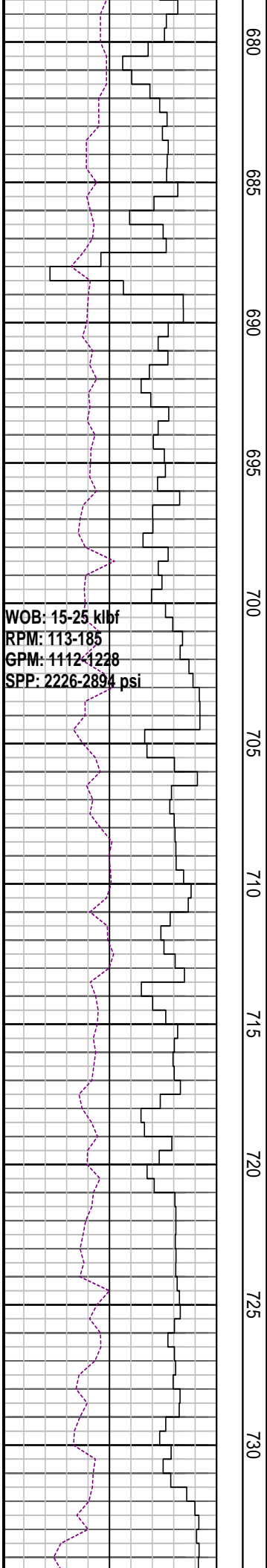
670

675

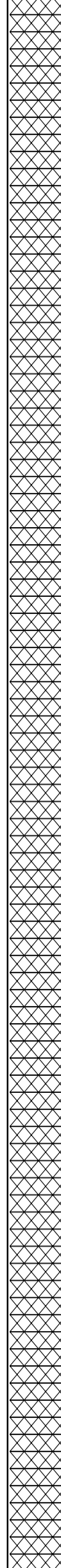


MD: 634.48m Azi: 227.13°  
TVD: 634.45m Incl: 0.12°





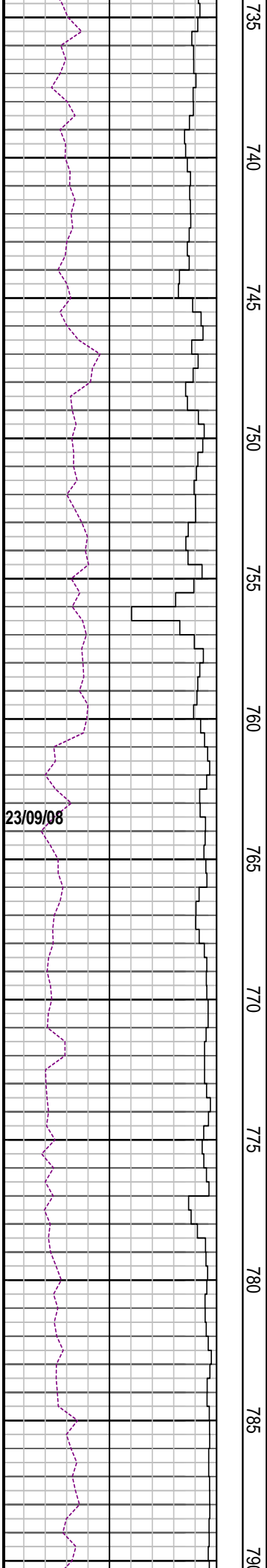
680  
685  
690  
695  
700  
705  
710  
715  
720  
725  
730



MD: 698.14m Azi: 181.9°  
TVD: 698.11m Incl: 0.30°

MD: 725.93m Azi: 188.82°  
TVD: 725.90m Incl: 1.97°

Drill with seawater & Hi-Vis sweeps.  
Returns to seabed 106.4m - 850.0m



MD: 755.72m Azi: 175.57°  
TVD: 755.76m Incl: 2.82°

MD: 785.01m Azi: 168.12°  
TVD: 784.94m Incl: 0.33°

WOB: 10-25 kbf  
RPM: 104-185  
GPM: 1091-1118  
SPP: 1924-2586psi

795  
800  
805  
810  
815  
820  
825  
830  
835  
840  
845

MD: 814.35m Azi: 171.73°  
TVD: 814.28m Incl: 0.20°

Set 340mm (13-3/8")  
casing shoe at 841.0 m

Drill with seawater & Hi-Vis sweeps.  
Returns to seabed 106.4m - 850.0m

16" Hole Section TD 850.0m

Drill with KCl/PHPA mud  
850.0m to Well TD

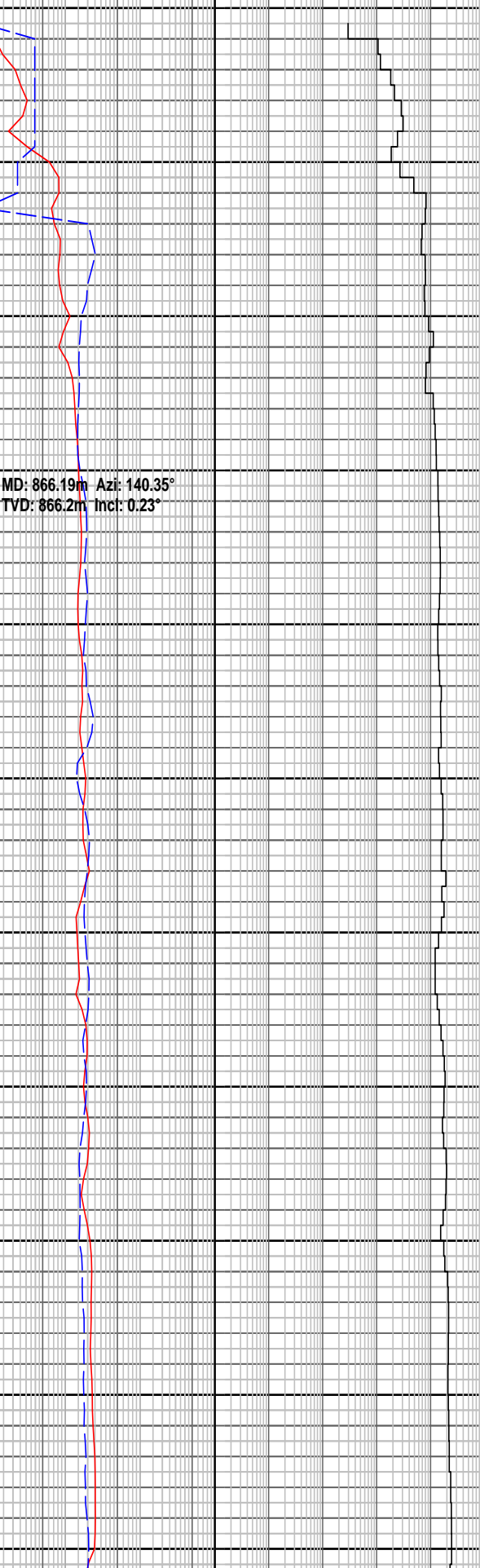
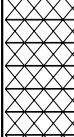
MW: 8.7 ppg	FV: 153
PV: 24	YP: 40
Gels: 10/12/12	pH: 9.0

24-26/09/08

NB3: 311mm (12-1/4")  
Make: Reed  
Type: PDC/RSR 616M-A10  
Jets: 3x13,3x14  
Depth In: 850.0m  
Depth Out: 2859.0m  
Drilled 2009.0m in 74.8hrs  
Grade: 3-4-RO-N-X-I-BT-PR

WOB: 5-25 klf  
RPM: 70-142  
CBM: 840-1110

850  
855  
860  
865  
870  
875  
880  
885  
890  
895  
900



MD: 866.19m Azi: 140.35°  
TVD: 866.2m Incl: 0.23°

LOT @ 853.0m with 8.8 ppg  
EMW: 15.06 ppg @ 900 psi

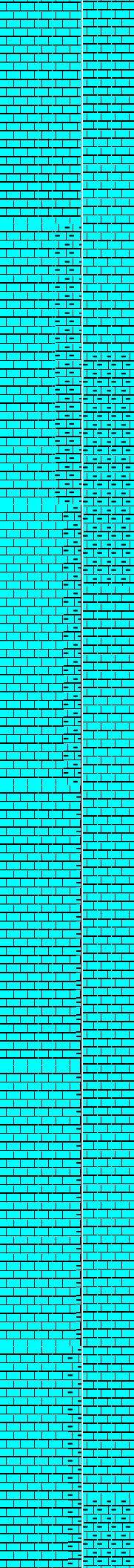
CALCULITE lt bl gy, mod sft, ang f  
gr slit par, wl srt, wk calc cmt, Ls md  
mtrx, p vis por

CALCARENITE: yel gy-lt olv gy,  
sbrndd blk, mod hd, f gr, trnsl sb ang  
cal

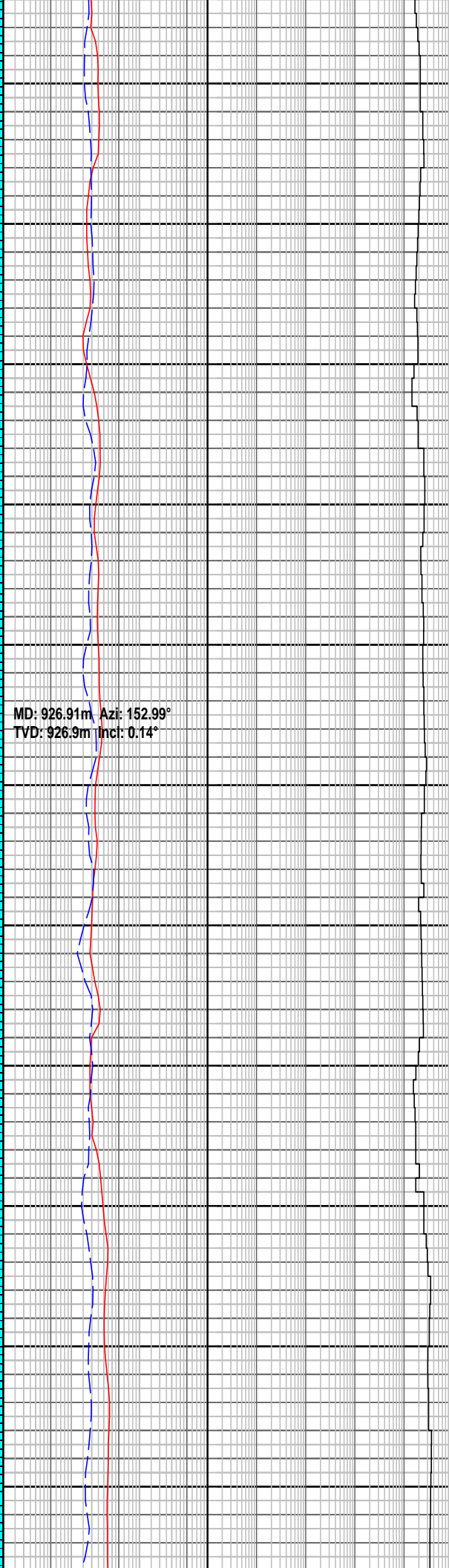
CALCULITE : lt bl gy, mod sft, ang f  
gr slit par, wl srt, wk calc cmt, Ls md  
mtrx, p vis por

GRM: 840-1110  
SPP: 1675-2470 psi

905  
910  
915  
920  
925  
930  
935  
940  
945  
950  
955



MD: 926.91m Azi: 152.99°  
TVD: 926.9m Incl: 0.14°

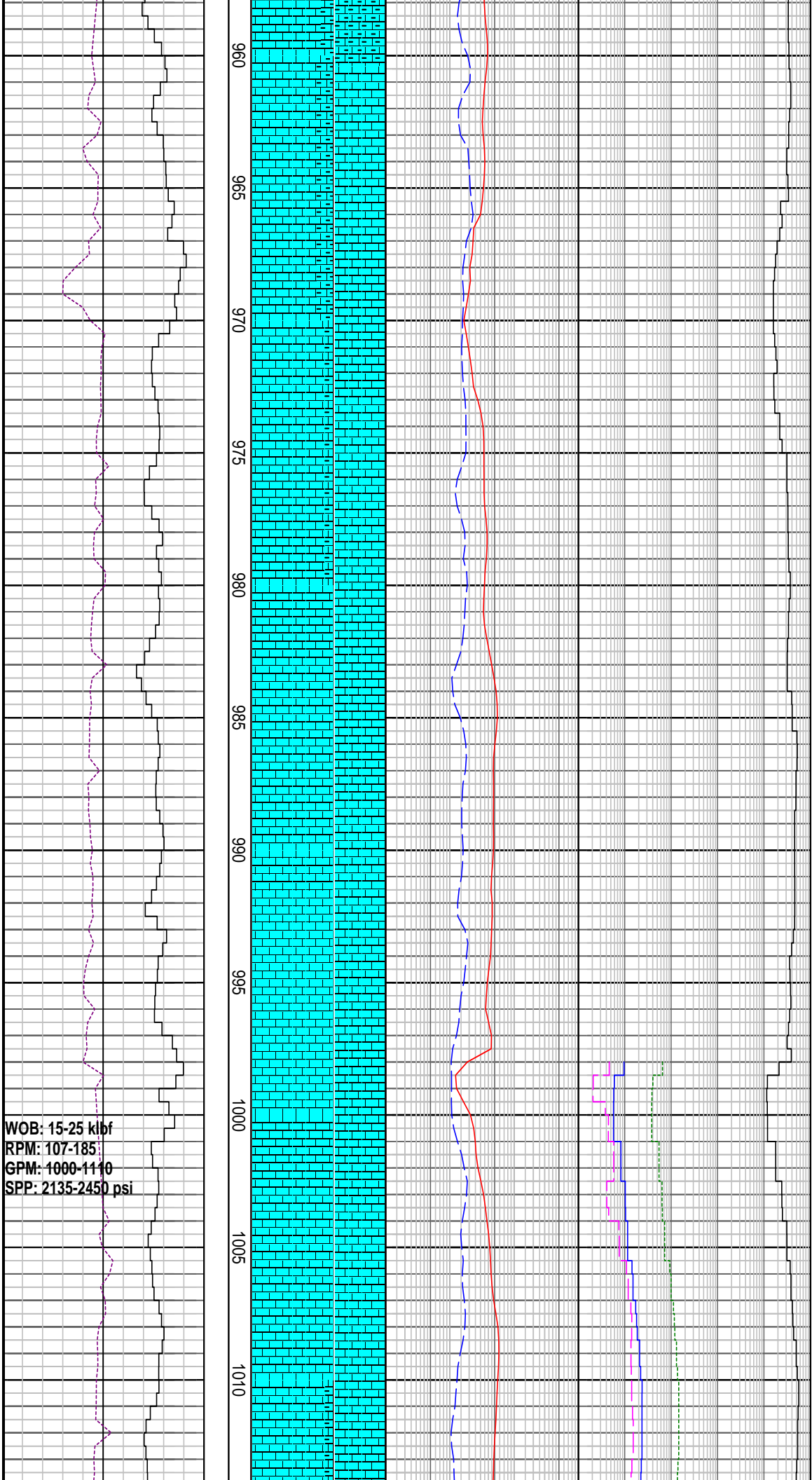


**CALCARENITE** : yel gy-lt olv gy,  
sbrndd-blky, mod hd, f gr, trnsl sb  
ang

**CALCULITITE** lt bl gy, mod sft, ang f  
gr slt par, wl srt, wk calc cmt, Ls md  
mtrx, p vis por

**CALCULITITE** lt bl gy, mod sft, ang f  
gr slt par, wl srt, wk calc cmt, Ls md  
mtrx, p vis por





WOB: 15-25 klbf  
 RPM: 107-185  
 GPM: 1000-1140  
 SPP: 2135-2450 psi

**CALCULITITE** lt bl gy, mod sft, ang f  
 gr slit par, wl srt, wk calc cmt, Ls md  
 mtrx, p vis por

**CALCARENITE** : yel gy-lt olv gy,  
 sbrndd-blky, mod hd, f gr, trnsl sb  
 ang calc, calc cmt

**CALCULITITE** lt bl gy, mod sft, ang f  
 gr slit par, wl srt, wk calc cmt, Ls md  
 mtrx, p vis por

MW: 8.8 ppg	FV: 70
PV: 16	YP:36
Gels: 13/20/23	pH: 8.5

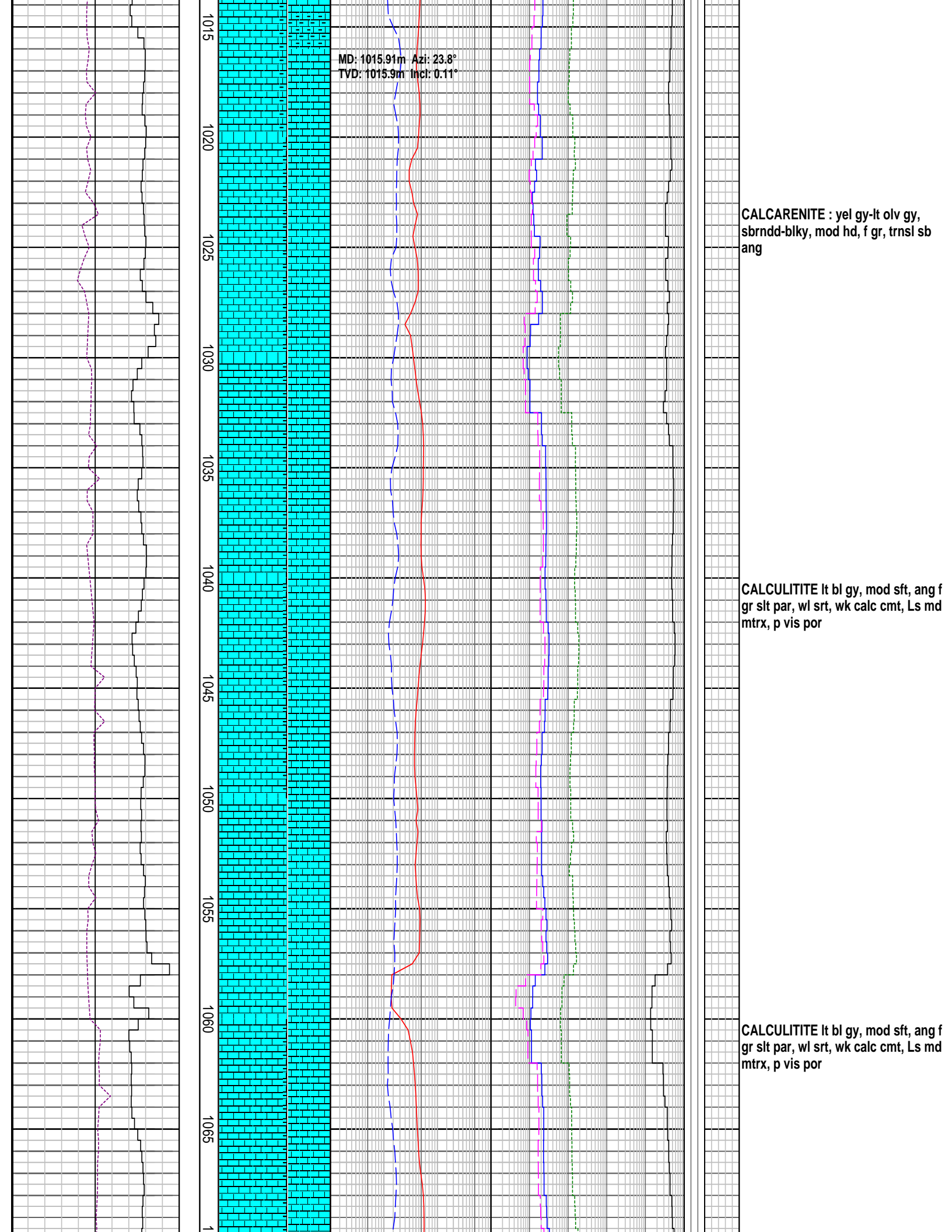
1015  
1020  
1025  
1030  
1035  
1040  
1045  
1050  
1055  
1060  
1065  
1

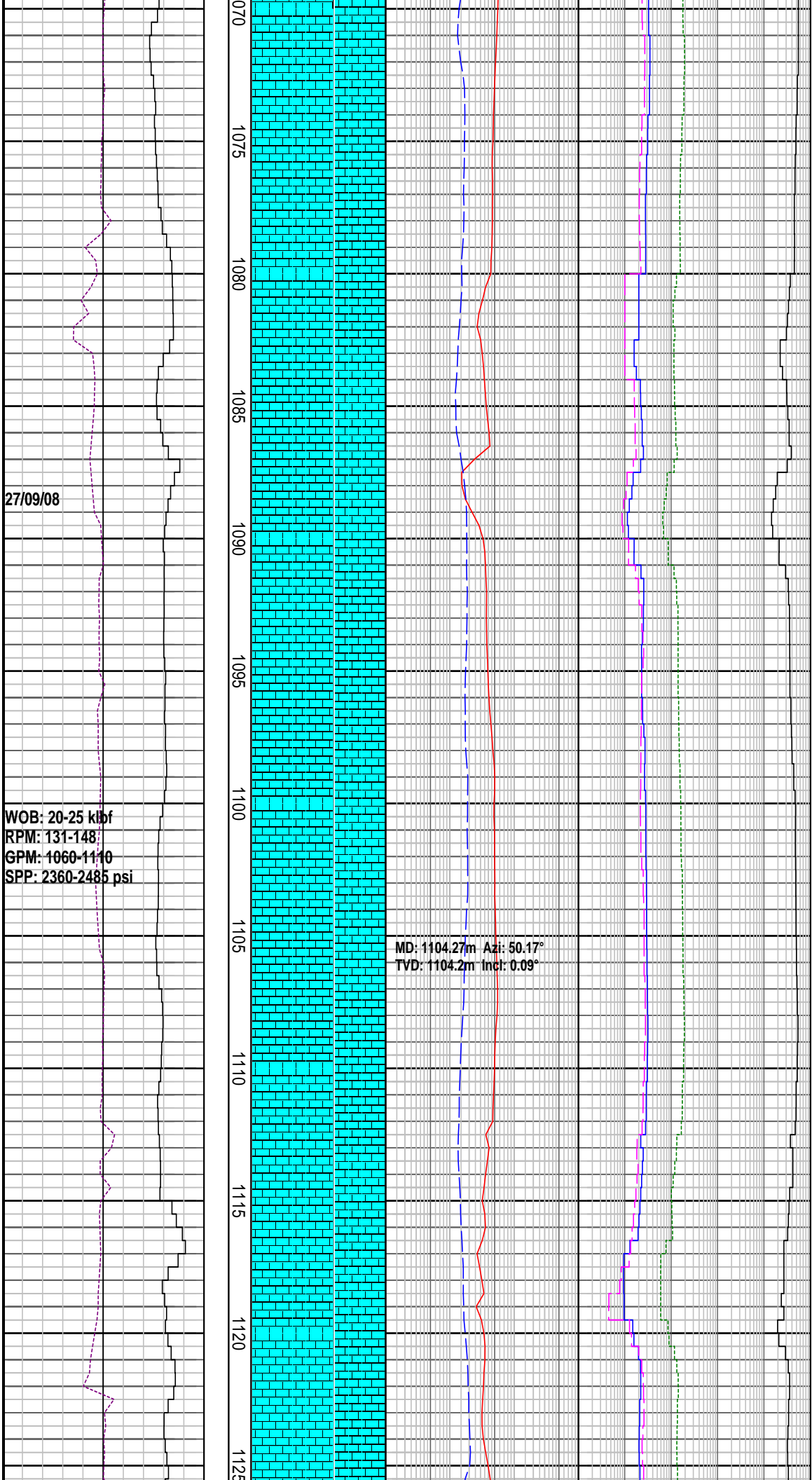
MD: 1015.91m Azi: 23.8°  
TVD: 1015.9m Incl: 0.11°

CALCARENITE : yel gy-lt olv gy,  
sbrndd-blky, mod hd, f gr, trnsl sb  
ang

CALCULITITE lt bl gy, mod sft, ang f  
gr slt par, wl srt, wk calc cmt, Ls md  
mtrx, p vis por

CALCULITITE lt bl gy, mod sft, ang f  
gr slt par, wl srt, wk calc cmt, Ls md  
mtrx, p vis por





27/09/08

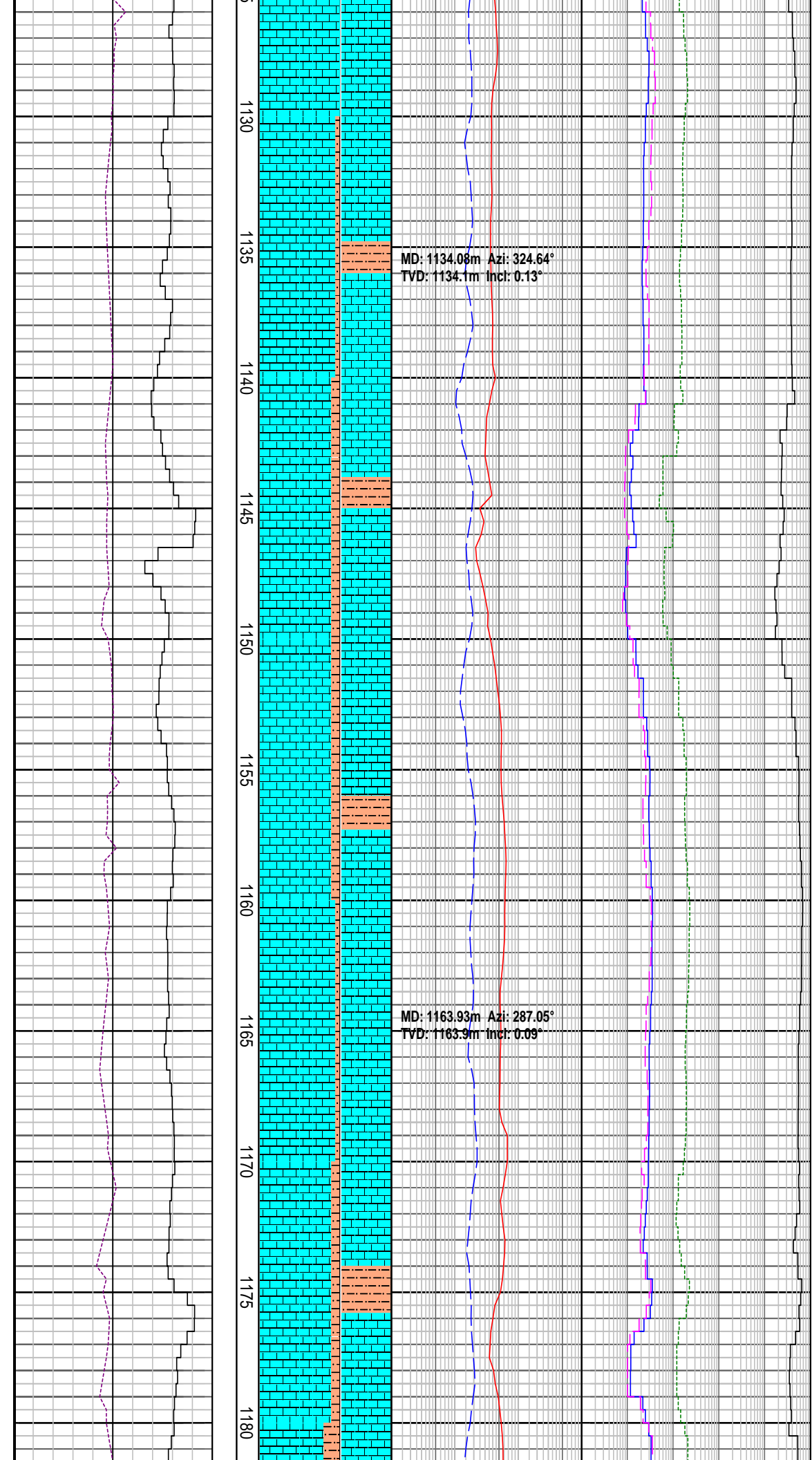
WOB: 20-25 klbf  
RPM: 131-148  
GPM: 1060-1110  
SPP: 2360-2485 psi

MD: 1104.27m Azi: 50.17°  
TVD: 1104.2m Incl: 0.09°

**CALCULITITE** It bl gy-olv gy, sft-mod  
sft, blk, ang f gr slit par, calc cmt,  
com calcs slit, lam silty

**CALCARENITE** : It olv gy-m gy,  
sbrndd-blky, mod hd, f gr, mod srt,  
trnsi sb ang

**CALCULITITE** It bl gy-olv gy, sft-mod  
sft, mod hd, frm i/p, sbbkly-blky, silty  
md, wll srt, com calcs slit, lam, pr inf  
por

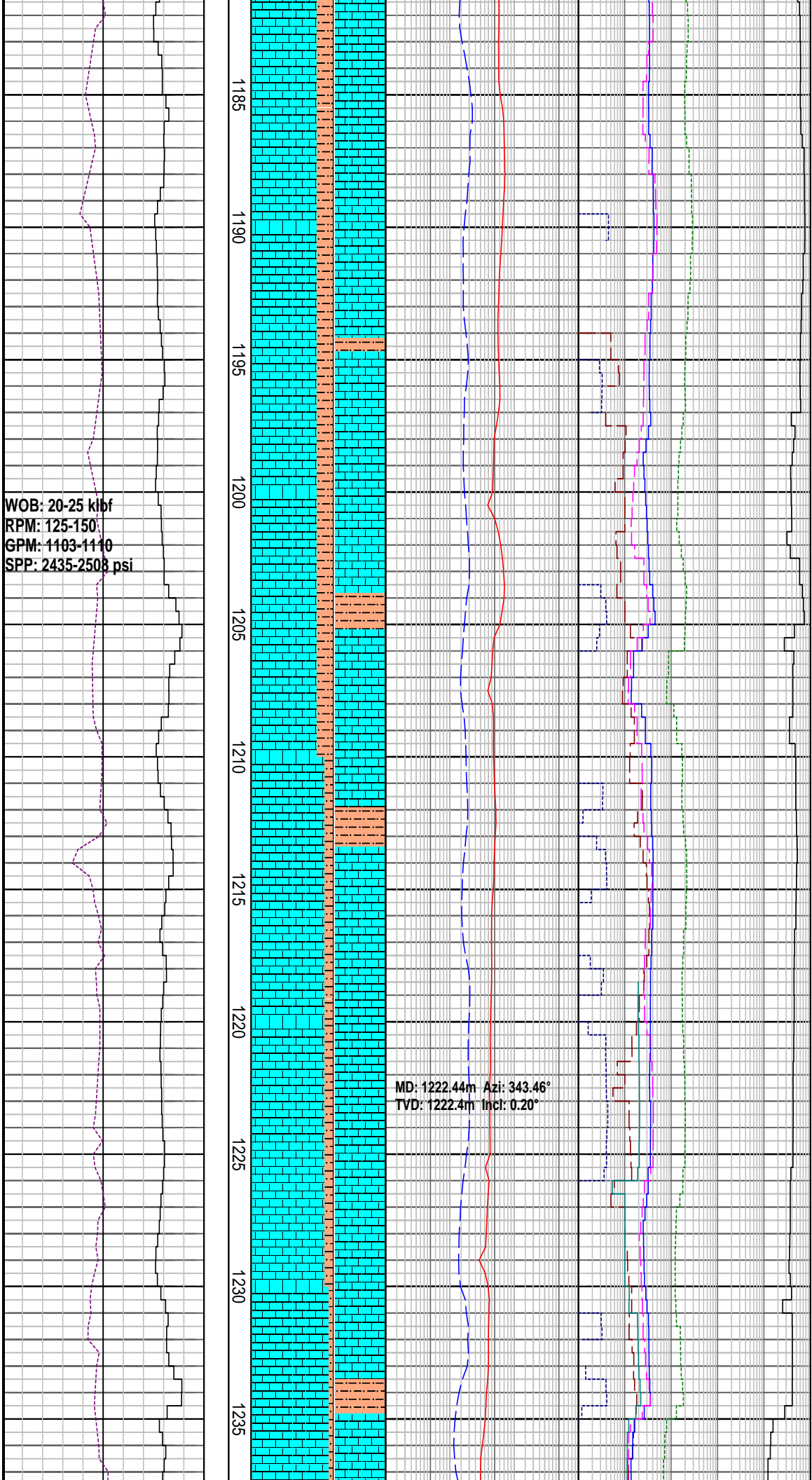


**CALCULITITE** lt bl gy-olv gy, sft-mod sft, mod hd, frm i/p, sbbkly-blky, silty md, wll srt, com cals slt, lam, pr inf por, tr SLTST

**SILTSTONE:** lt brn-dk brn, frm-mod hd, blky, mod calc

**CALCULITITE** lt bl gy-olv gy, sft-mod sft, mod hd, frm i/p, sbbkly-blky, silty md, wll srt, com cals slt, lam, pr inf por

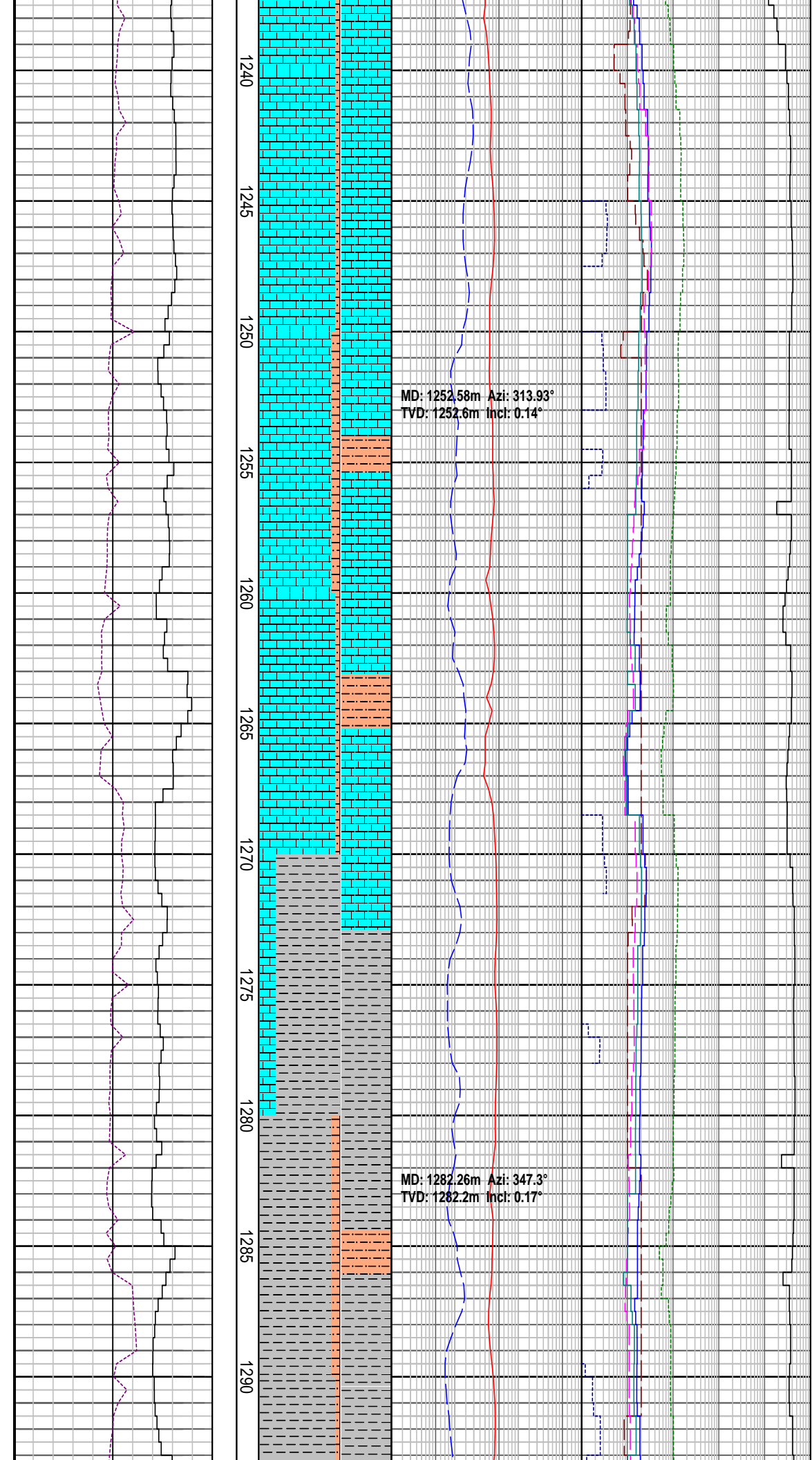
**SILTSTONE:** lt brn-dk brn, frm-mod hd, blky, mod calc



CALCULITITE lt bl gy-olv gy, sft-mod sft, mod hd, frm i/p, sbbky-blky, silty md, wll srt, com calcs slt, com lam, pr inf por

SILTSTONE lt brn-dk brn, frm-mod hd, blky, mod calc

CALCULITITE lt bl gy-olv gy, sft-mod sft, mod hd, frm i/p, sbbky-blky, silty md, wll srt, com calcs slt, comm lam, pr inf por



**CALCULITITE:** lt gy-med gy, lt bl gy-olv gy, sft-mod sft, amorp, frm i/p, sbbky-blky, disp i/p, silty md, wll srt, com lam, pr inf por

**SILTSTONE:** m gy-grnsh gy, frm-hd, blky, arg mod calc, tr dk gr-blk vf-med sbrndd glau

**CALCAREOUS CLAYSTONE:** dk gy-olv gy, sft-mod frm, sbbky-blky, sli slty, mod-hi calc, tr mic flks

MD: 1252.58m Azi: 313.93°  
TVD: 1252.6m Incl: 0.14°

MD: 1282.26m Azi: 347.3°  
TVD: 1282.2m Incl: 0.17°

WOB: 17-30 klbf  
RPM: 127-150  
GPM: 1097-1113  
SPP: 2500-2581 psi

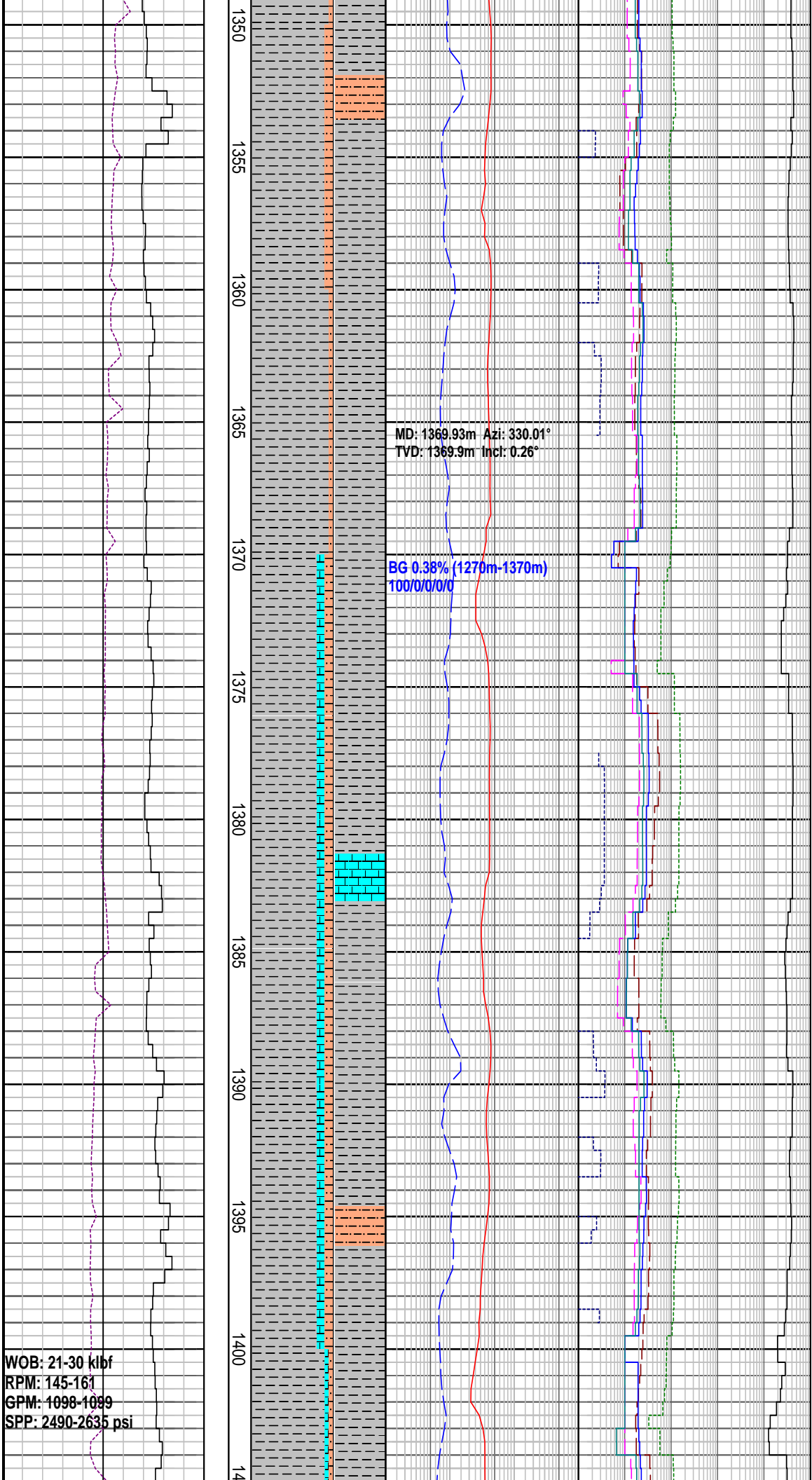
1295  
1300  
1305  
1310  
1315  
1320  
1325  
1330  
1335  
1340  
1345

MD: 1310.49m Azi: 334.37°  
TVD: 1310.47m Incl: 0.32°

SILTSTONE: m gy-grnsh gy, frm-hd, blky, arg mod calc

CALCAREOUS CLAYSTONE: dk gy-dk olv gy, sft-mod frm, sbblky-blky, sli slty, mod-hi calc, tr mic flks, grdg to Clcit

CALCAREOUS CLAYSTONE: dk gy-dk olv gy, sft-mod frm, sbblky-blky, sli slty, mod-hi calc, tr mic flks, grdg to Clcit



SILTSTONE: m gy-gn gy, frm-hd, blk, arg mod calc

CALCAREOUS CLAYSTONE: dk gy-dk olv gy, sft-mod frm, sbbky-blky, sli slty, mod-hi calc, tr mic flks, grdg to Clcit

LIMESTONE: clr hd xln cal wh-gy sft amor LS

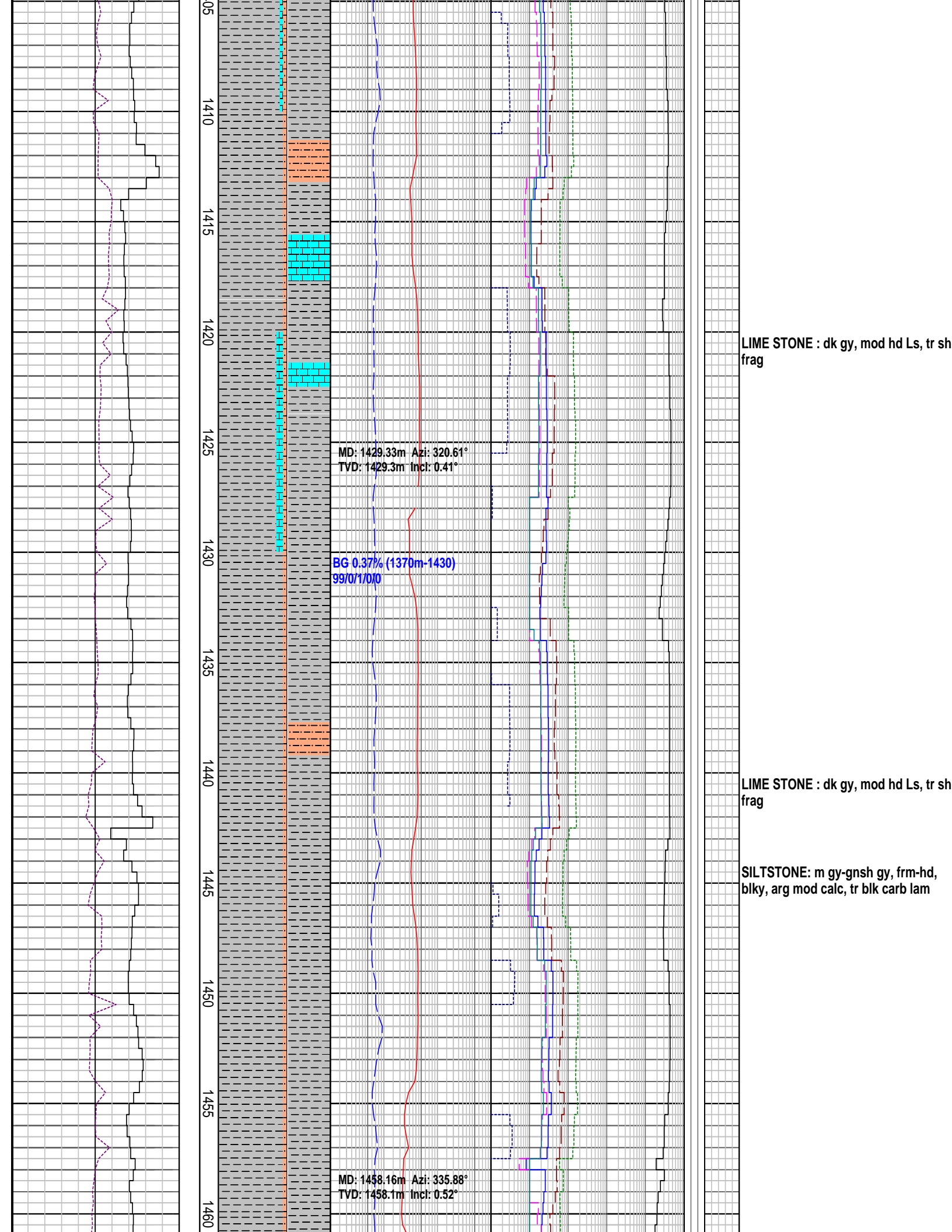
CALCAREOUS CLAYSTONE: dk gy-dk olv gy, sft-mod frm, sbbky-blky, sli slty, mod-hi calc, tr mic flks, grdg to Clcit

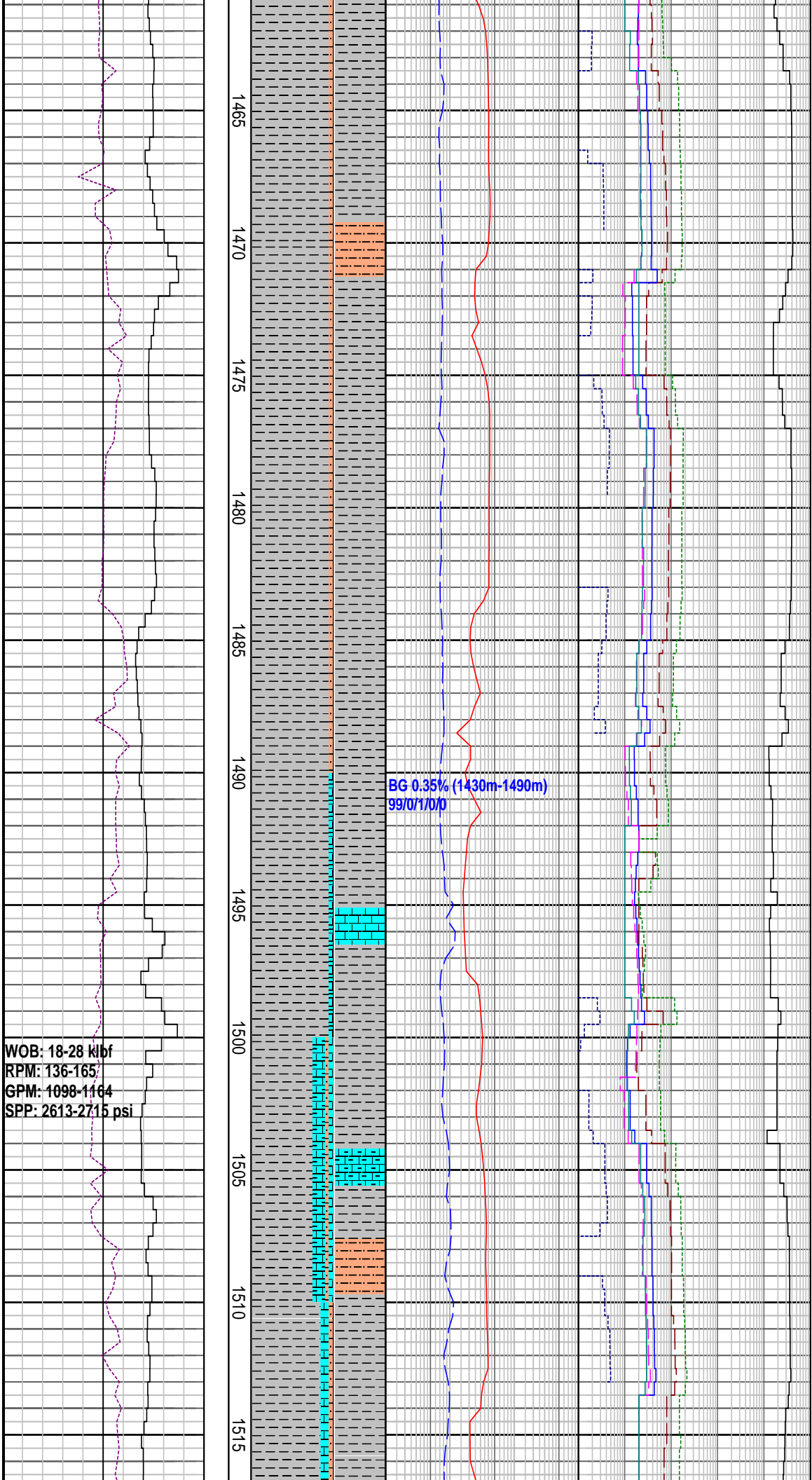
MD: 1369.93m Azi: 330.01°  
TVD: 1369.9m Incl: 0.26°

BG 0.38% (1270m-1370m)  
100/0/0/0/0

WOB: 21-30 klbf  
RPM: 145-161  
GPM: 1098-1099  
SPP: 2490-2635 psi



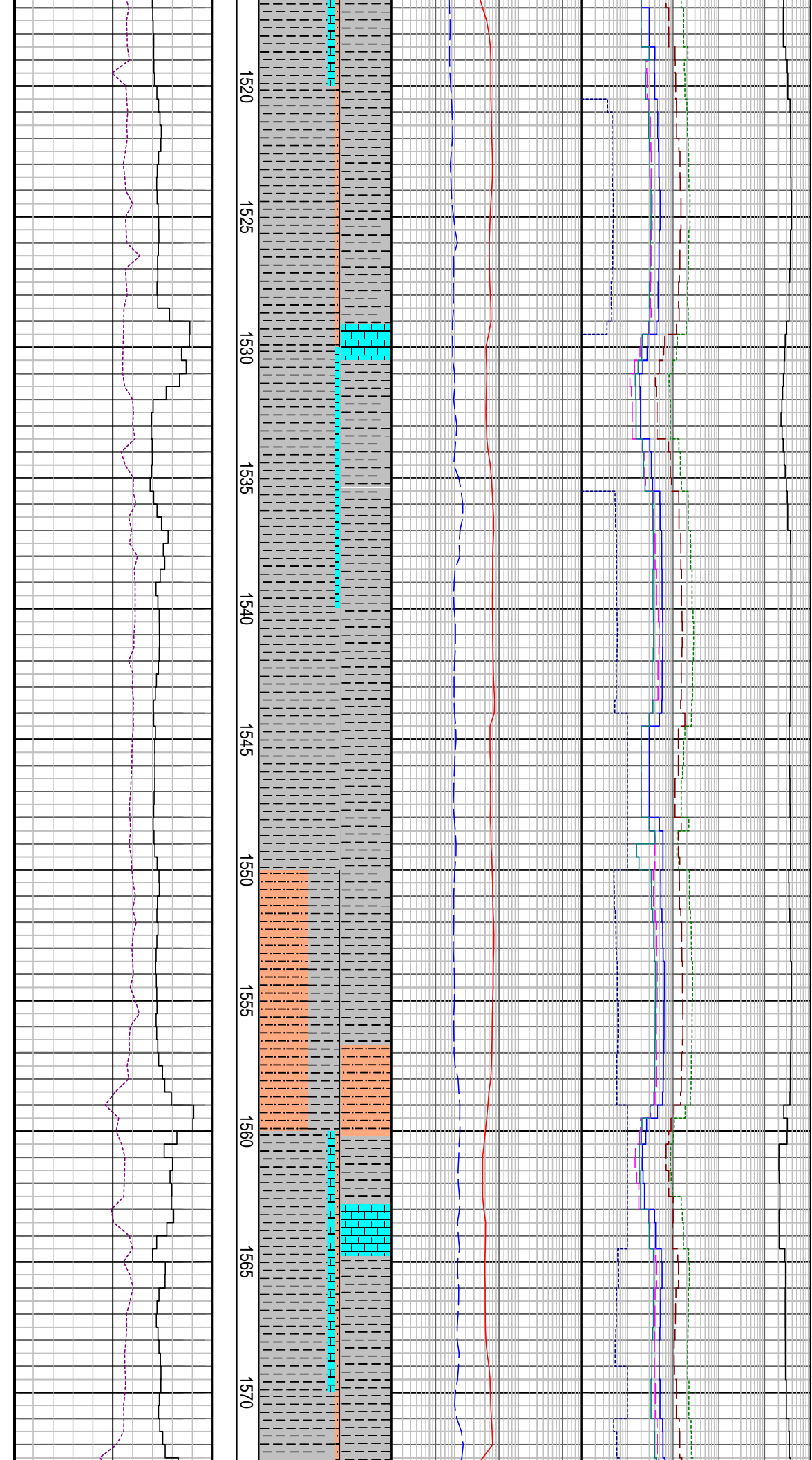




**CALCAREOUS CLAYSTONE:** dk gy-dk olv gy, sft-mod frm, sbbky-blky, sli slty, mod-hi calc, tr mic flks, grdg to Clcit

**CALCARENITE:** yel gy-lt olv gy, sbrndd-blky, mod hd, f gr, trnsl sb ang

**LIME STONE:** dk gy, mod hd Ls, tr sh frag

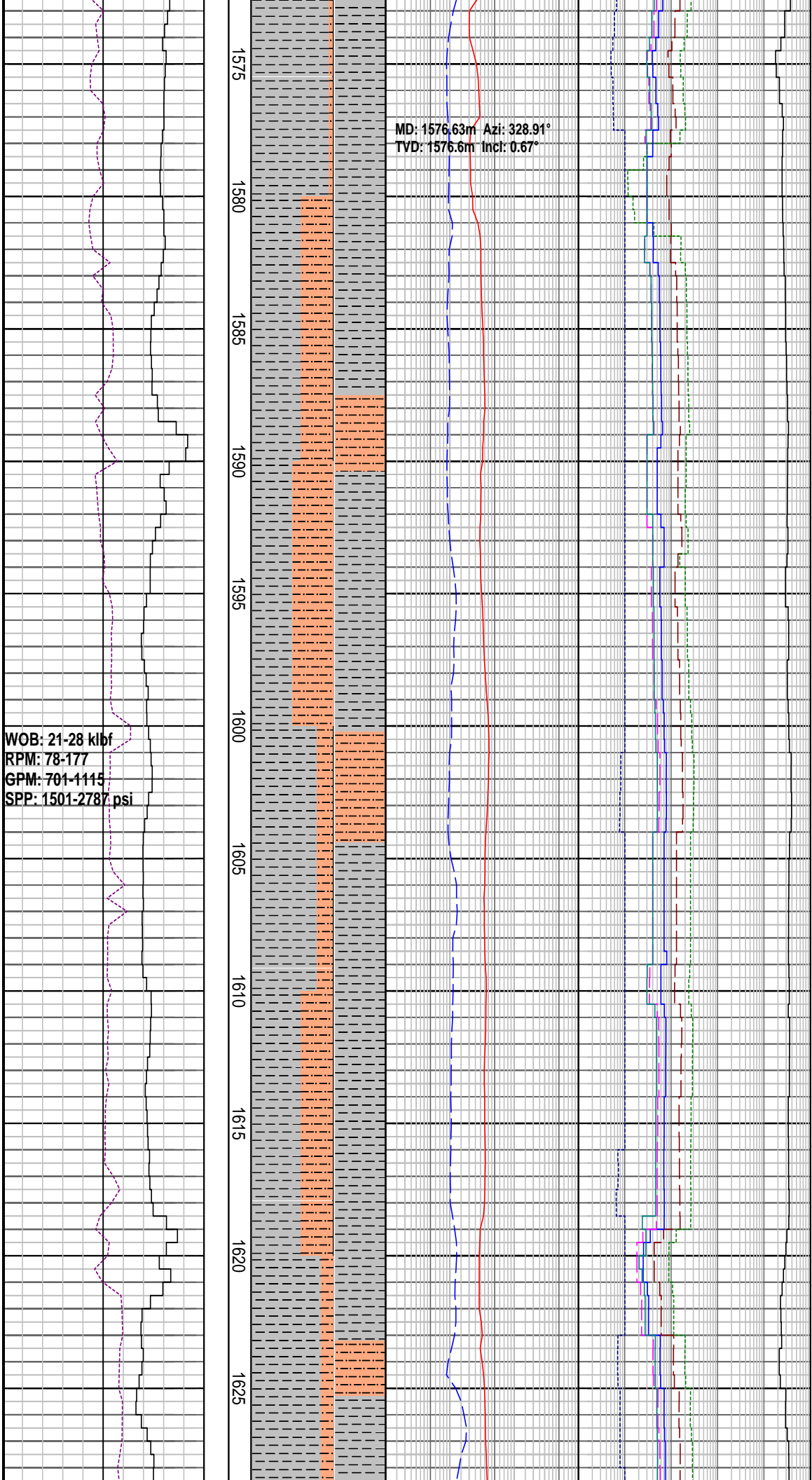


**LIME STONE :** gy yel, mod hd Ls, xln calc mnr wh sft amor Ls, tr shl frag

**CALCAREOUS CLAYSTONE:** dk gy-dk olv gy, sft-mod frm, sbblky-blky, sli slty, mod-hi calc, tr mic flks, grdgd to ClcIt

**SILTSTONE:** m gy-gnsh gy, frm-hd, blky, arg mod calc, tr blk carb lam

MW: 9.0 ppg	FV: 53
PV: 19	YP: 32
Gels: 14/24/29	pH: 8.5



MD: 1576.63m Azi: 328.91°  
TVD: 1576.6m Incl: 0.67°

WOB: 21-28 kbf  
RPM: 78-177  
GPM: 701-1115  
SPP: 1501-2787 psi

SILTSTONE: m gy-gnsh gy, frm-hd, blky, arg mod calc, tr blk carb lam

CALCAREOUS CLAYSTONE: dk gy-dk olv gy, sft-mod frm, sbblky-blky, sli slty, mod-hi calc, tr mic filks, grdg to ClcIt

SILTSTONE: m gy-gnsh gy, frm-hd, blky, arg mod calc, tr blk carb lam

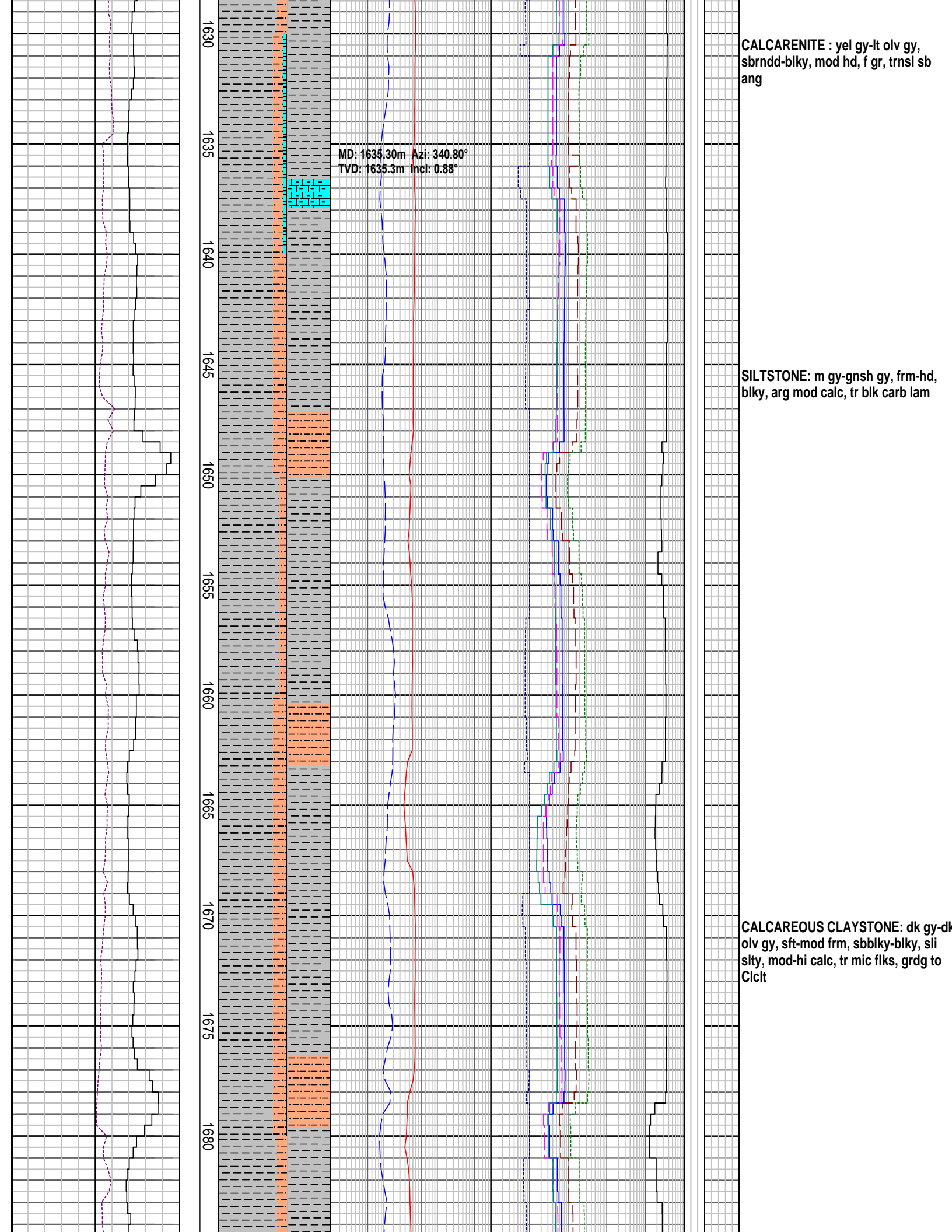
1630  
1635  
1640  
1645  
1650  
1655  
1660  
1665  
1670  
1675  
1680

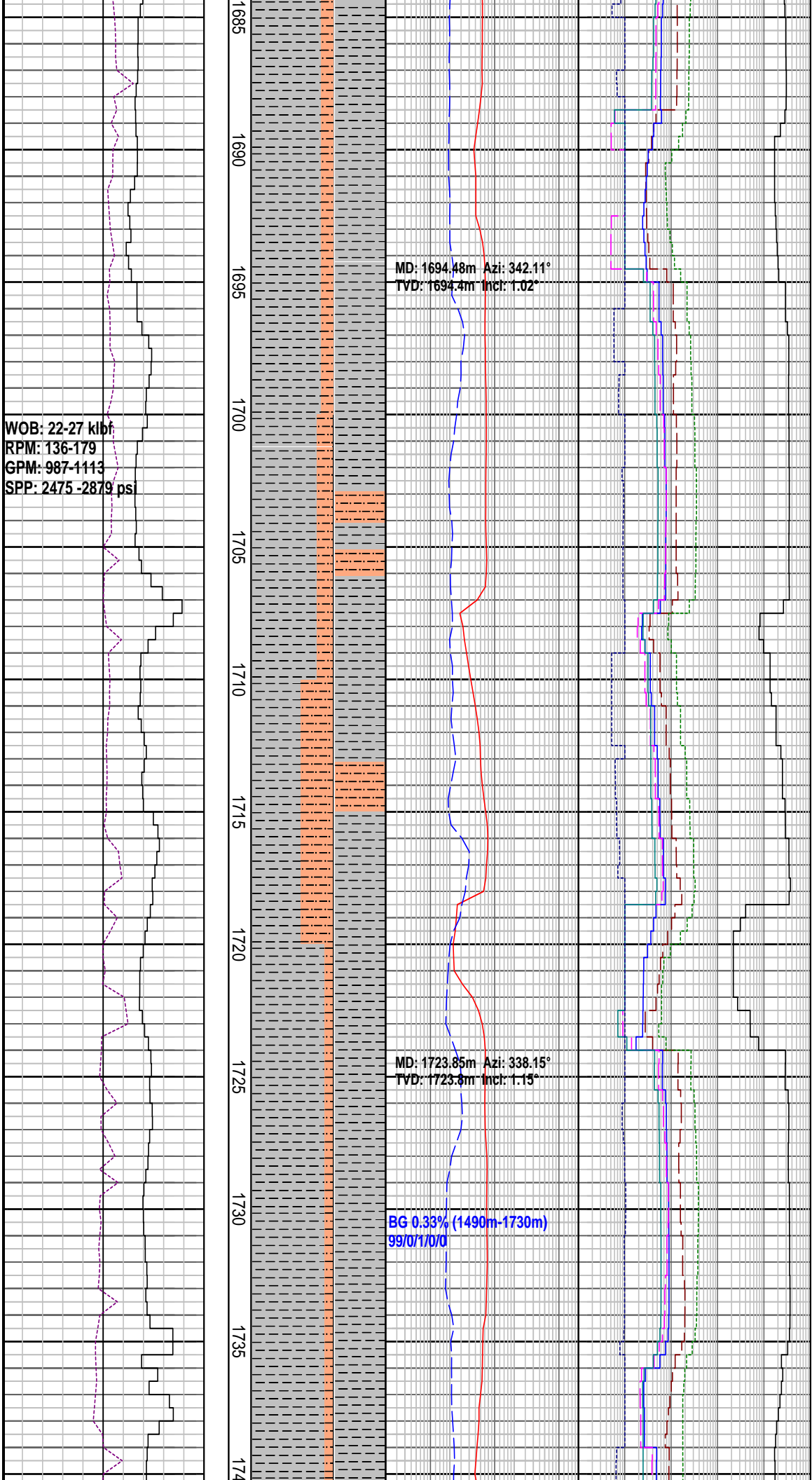
MD: 1635.30m Azi: 340.80°  
TVD: 1635.3m Incl: 0.88°

**CALCARENITE** : yel gy-lt olv gy,  
sbrndd-blky, mod hd, f gr, trnsl sb  
ang

**SILTSTONE**: m gy-gnsh gy, frm-hd,  
blky, arg mod calc, tr blk carb lam

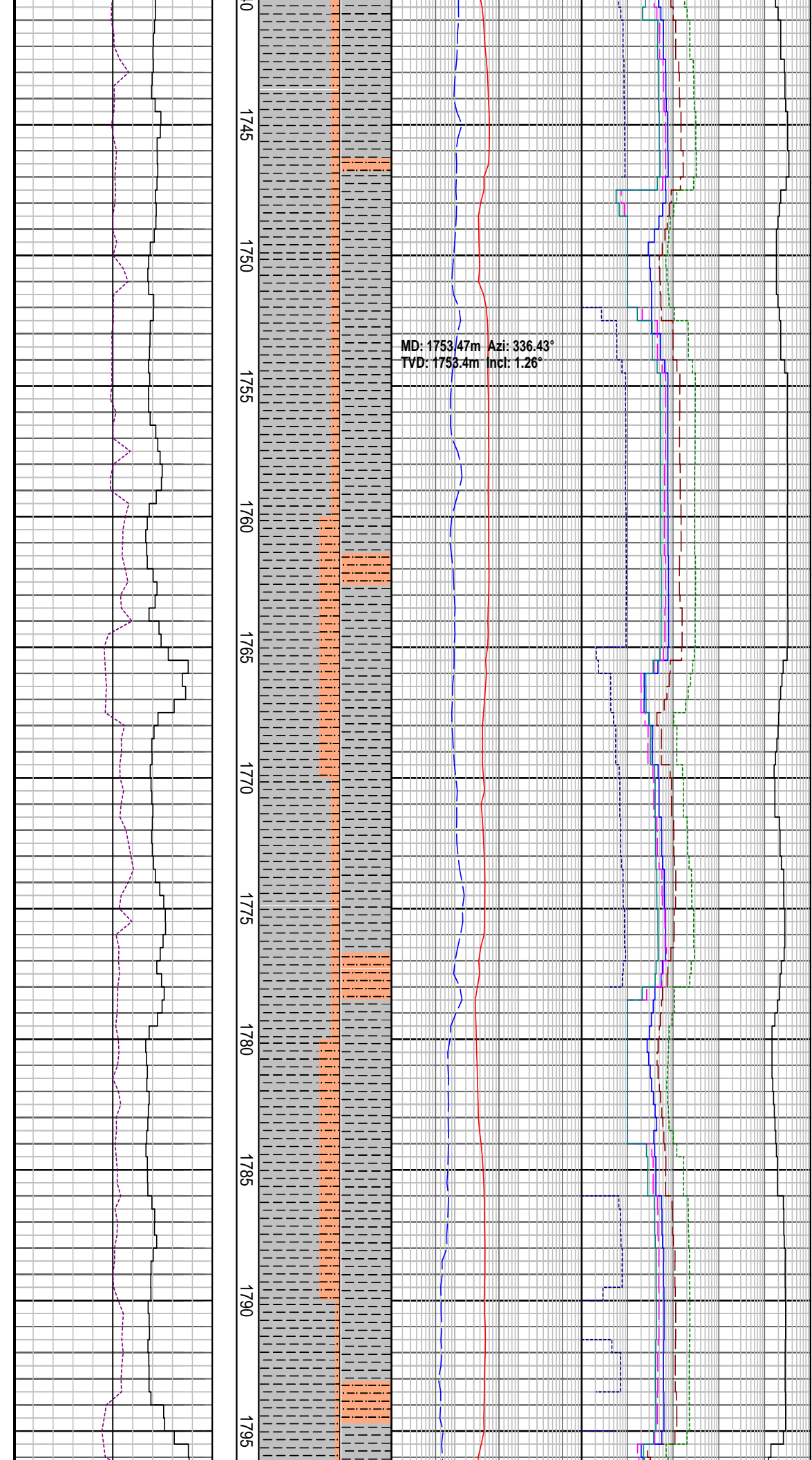
**CALCAREOUS CLAYSTONE**: dk gy-dk  
olv gy, sft-mod frm, sbblky-blky, sli  
silty, mod-hi calc, tr mic flks, grdg to  
ClcIt





**SILTSTONE:** m gy-gnsh gy, frm-hd, blky, arg mod calc, tr blk carb lam

**CALCAREOUS CLAYSTONE:** m lt gy-m gy, sft-mod frm, sbblky-blky, sli slty, mod-hi calc, tr mic flks, com grdg to clcIt



MD: 1753.47m Azi: 336.43°  
TVD: 1753.4m Incl: 1.26°

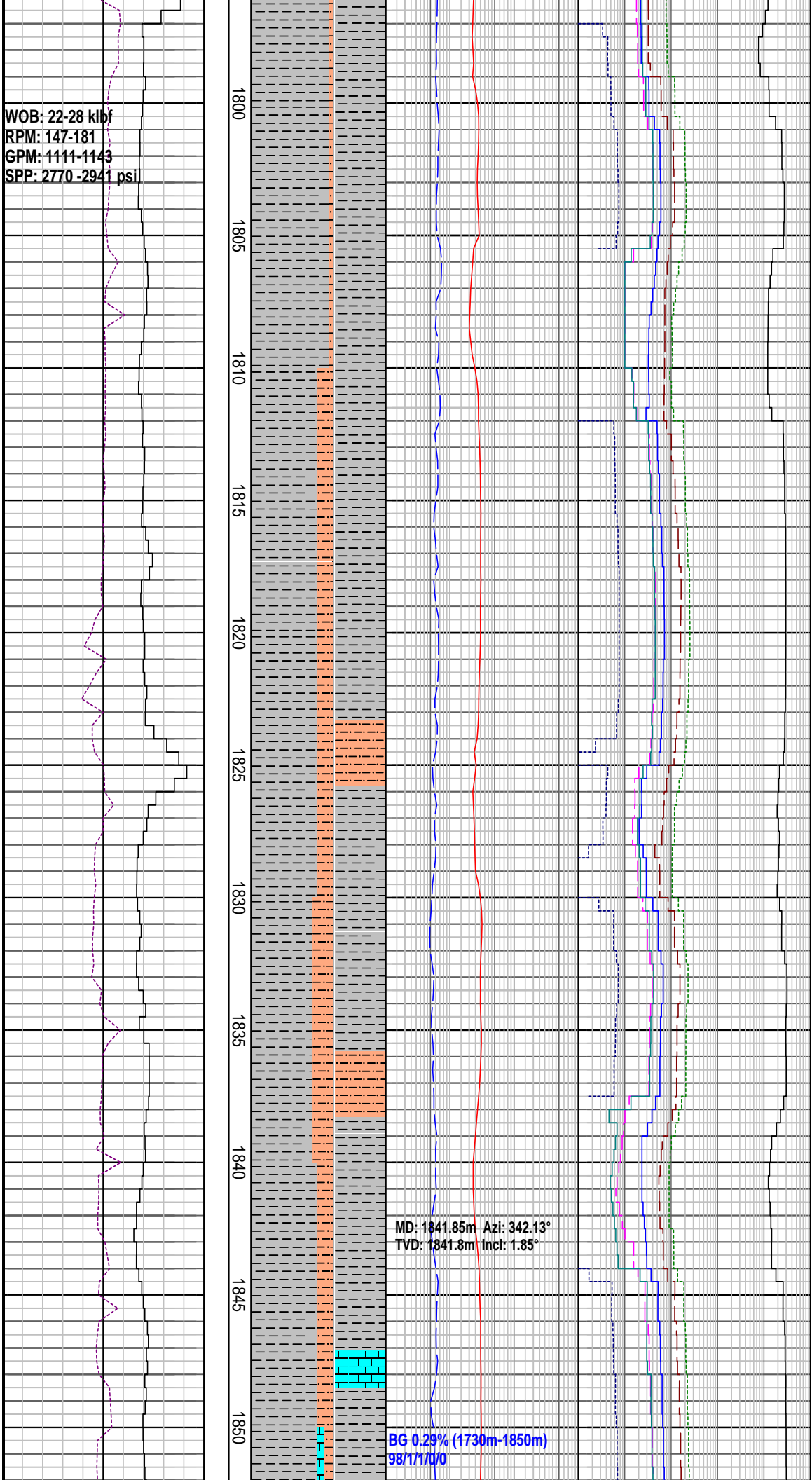
**SILTSTONE:** m gy-gnsh gy, frm-hd, blky, arg mod calc, tr blk carb lam, tr pyr

**SILTSTONE:** m gy-gnsh gy, frm-hd, blky, arg mod calc, tr blk carb lam, tr pyr

**CALCAREOUS CLAYSTONE:** m lt gy-m gy, sft-mod frm, sbblky-blky, sli slty, mod-hi calc, tr mic flks, com grdg to clclt

WOB: 22-28 kbf  
RPM: 147-181  
GPM: 1111-1143  
SPP: 2770 -2941 psi

MW: 9.1 ppg      FV: 57  
PV: 15            YP:32  
Gels: 13/22/26    pH: 8.5



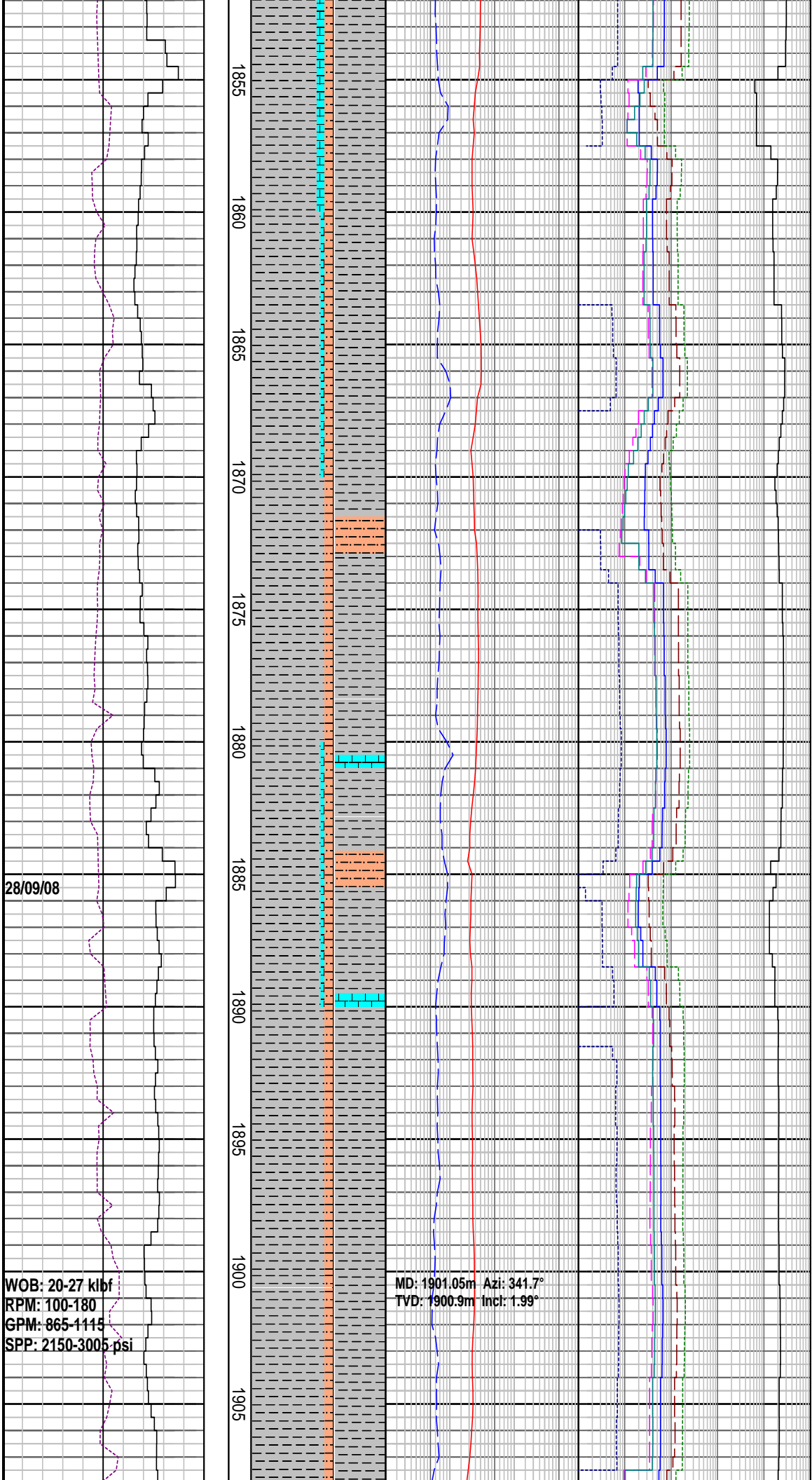
SILTSTONE: m gy-gnsh gy, frm-hd, blk, arg mod calc, tr blk carb lam

SILTSTONE: m gy-gnsh gy, frm-hd, blk, arg mod calc, tr blk carb lam

MD: 1841.85m Azi: 342.13°  
TVD: 1841.8m Incl: 1.85°

BG 0.29% (1730m-1850m)  
98/1/1/0/0





**CALCARENITE:** wh pl gy-gnsh gy, sbbly, sft frm-amor hd, f gr, mod srt, opq sbang-sbrndd cak, tr com gr f-med gr glau, pr inf por

**CALCAREOUS CLAYSTONE:** m lt gy-m gy, mod frm, sbbly-blky, sli sly, tr carb flks, mod-hi calc, com grdg to clct, tr foam

**CALCARENITE:** wh pl gy-gnsh gy, sbbly, sft frm-amor hd, f gr, mod srt, opq sbang-sbrndd cak, tr com gr f-med gr glau, pr inf por

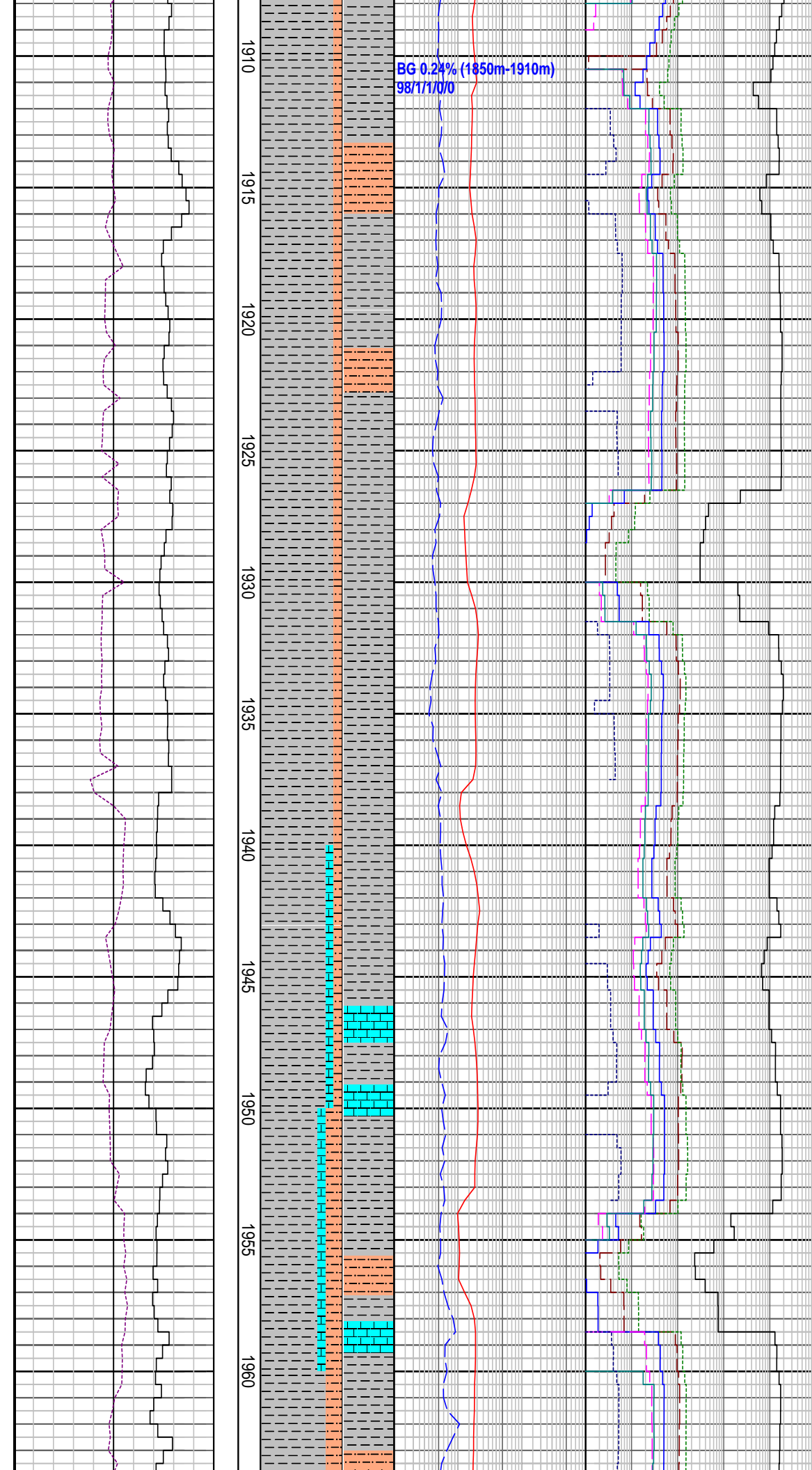
**CALCAREOUS CLAYSTONE:** med lt gy-brn gy, mod frm, sbbly-blky, sli sly, tr mic flks, tr carb flks, mod-hi calc, grdg to clct, tr foam

28/09/08

WOB: 20-27 klbf  
 RPM: 100-180  
 GPM: 865-1115  
 SPP: 2150-3005 psi

MD: 1901.05m Azi: 341.7°  
 TVD: 1900.9m Incl: 1.99°

1855  
1860  
1865  
1870  
1875  
1880  
1885  
1890  
1895  
1900  
1905

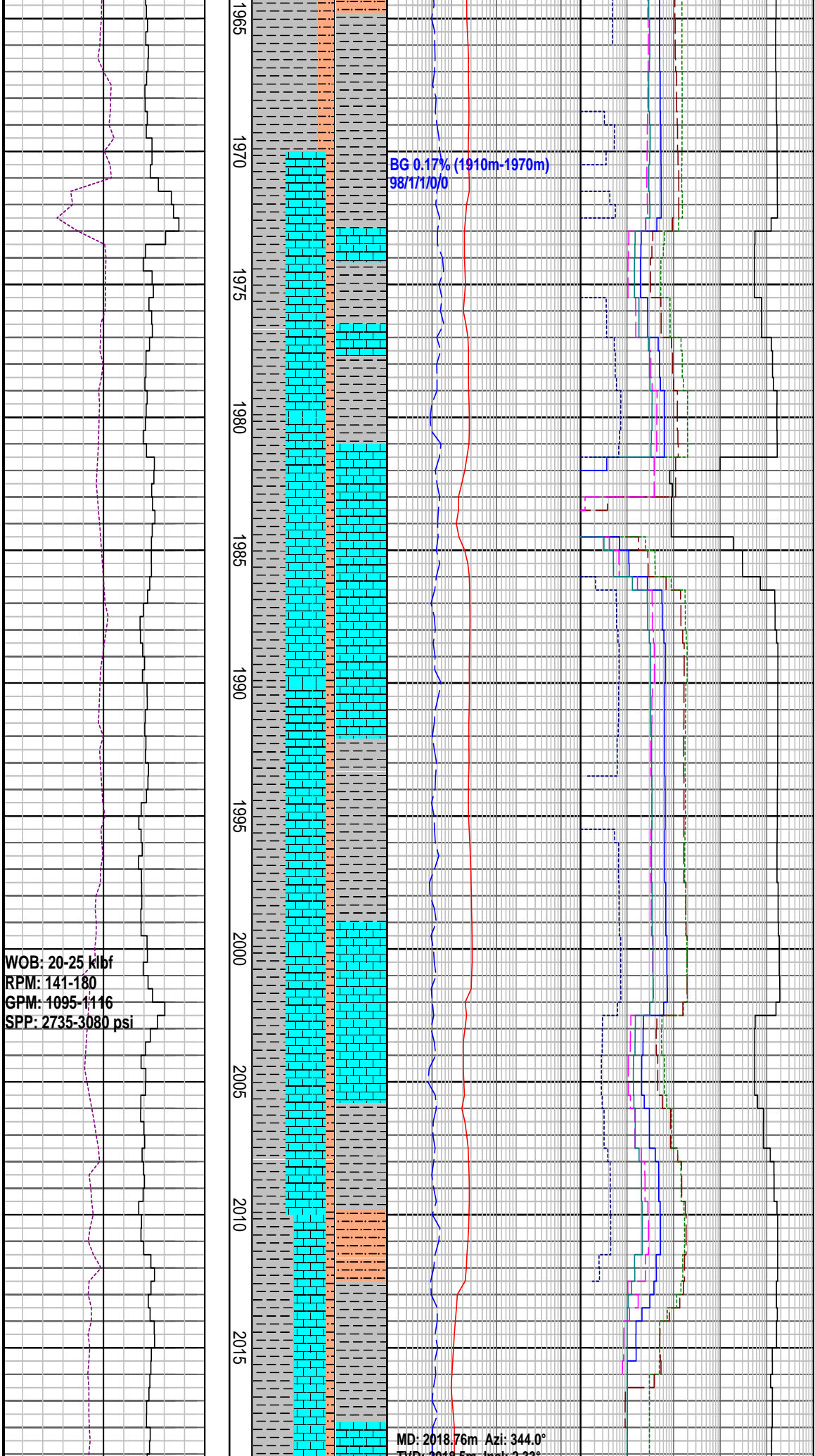


calc, gray to black, tr foam

**SILTSTONE:** m gy-gnsh gy, frm-hd, blky, arg mod-hi calc, tr blk carb lam, tr pyr

**CALCARENITE:** lt olv-gy, gnsh gy, sbblky agg, mod hd, v f gr, mod srt, semi trnsl-opq, sbang cal, cal cmt, pr inf por

**SILTSTONE:** m gy-grnsh gy, frm-hd, blky arg, mod-hi calc, tr blk carb lam, tr pyr



BG 0.17% (1910m-1970m)  
98/1170/0

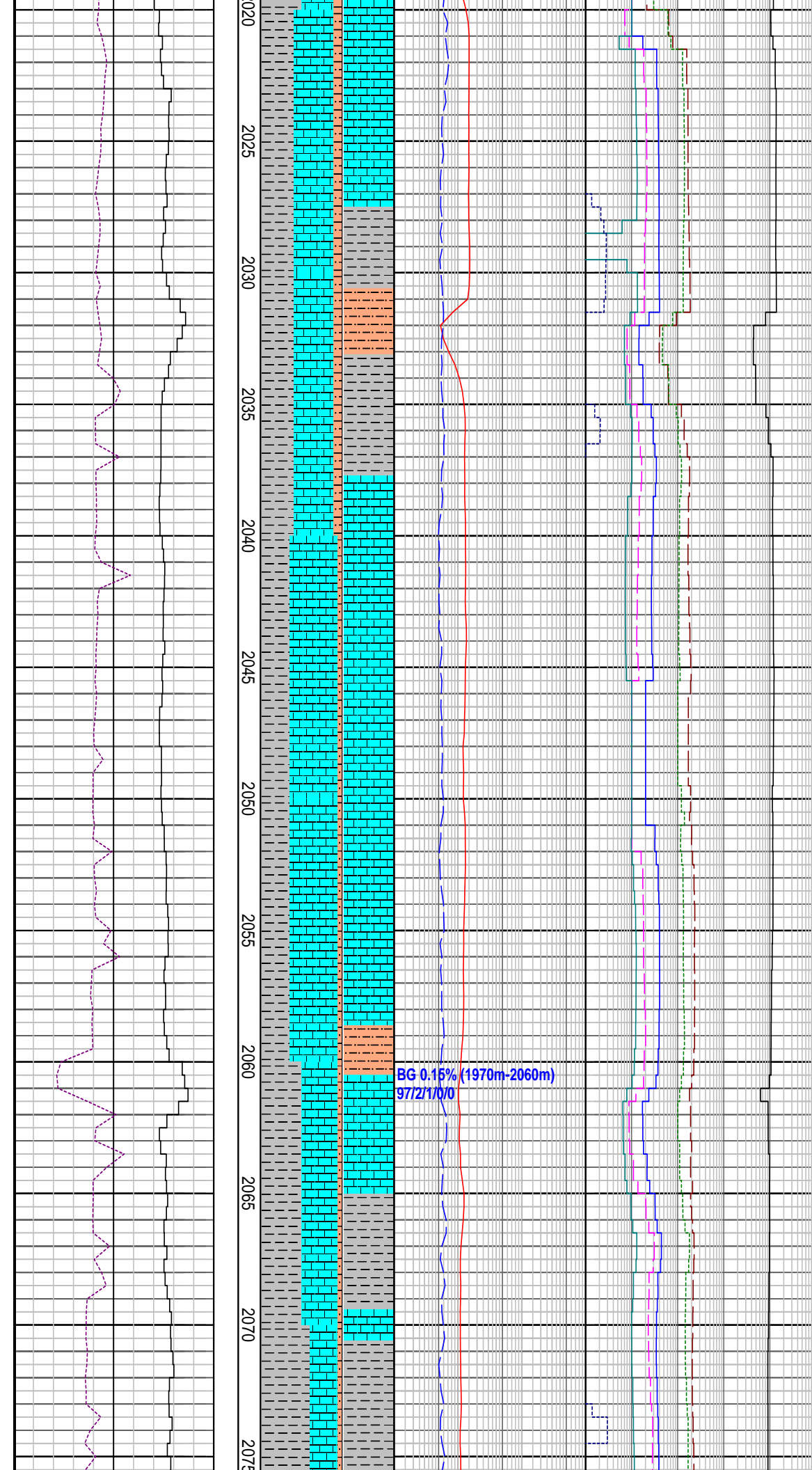
WOB: 20-25 kbf  
RPM: 141-180  
GPM: 1095-1116  
SPP: 2735-3080 psi

MD: 2018.76m Azi: 344.0°  
TVD: 2018.5m Incl: 2.33°

CALCULITITE: lt olv gy-lt gy, sft frm, sbbkly, com cal slit

CLAYSTONE: m lt gy-m gy, mod frm, sbbkly-blky, tr mic, tr carb flks, mod-hi calc i/p, tr foam

MW: 9.3 ppg	FV: 55
PV: 16	YP: 33
Gels: 13/26/29	pH: 8.5



**CALCULITITE:** lt olv gy-lt gy, sft frm, sbbiky, com cal slt

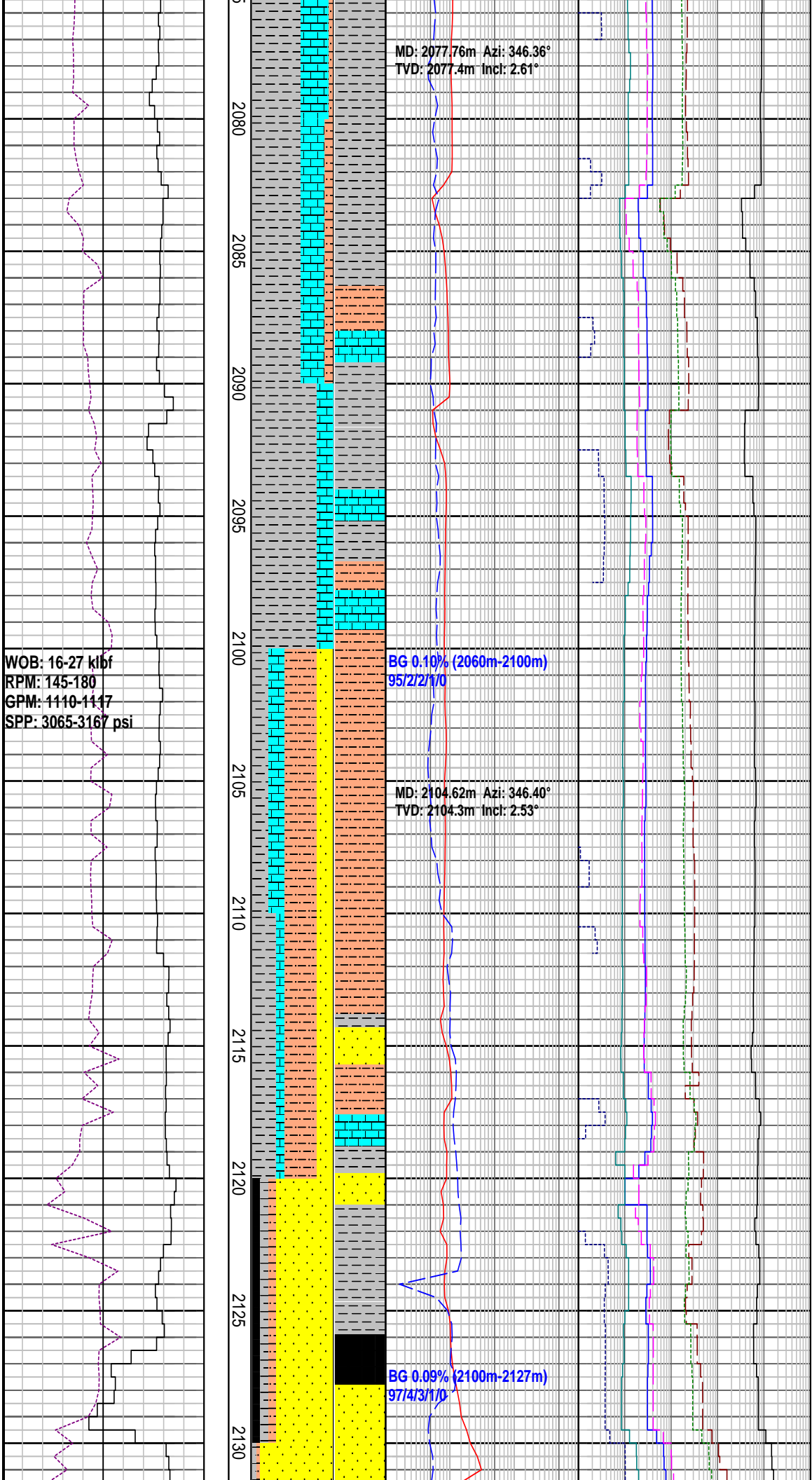
**SILTSTONE:** m gy-gnsh gy, sft i/p, frm-hd, blk, arg mod-hi calc, tr blk carb lam

**CLAYSTONE :** m lt gy-m gy, mod frm, sbbiky-blky, sli slt, tr mic flks, tr carb flks, mod-hi calc, tr blk carb lam

**CALCULITITE:** lt olv gy-lt gy, sft frm, sbbiky, com cal slt

**SILTSTONE:** m gy-gnsh gy, frm-hd, blk, arg, mod-hi calc, tr blk carb lam

**CLAYSTONE:** m lt gy-m gy, mod frm, sbbiky-blky, sli slty, tr mic, tr carb flks, mod-hi calc i/p, grdg to Clct, tr foam



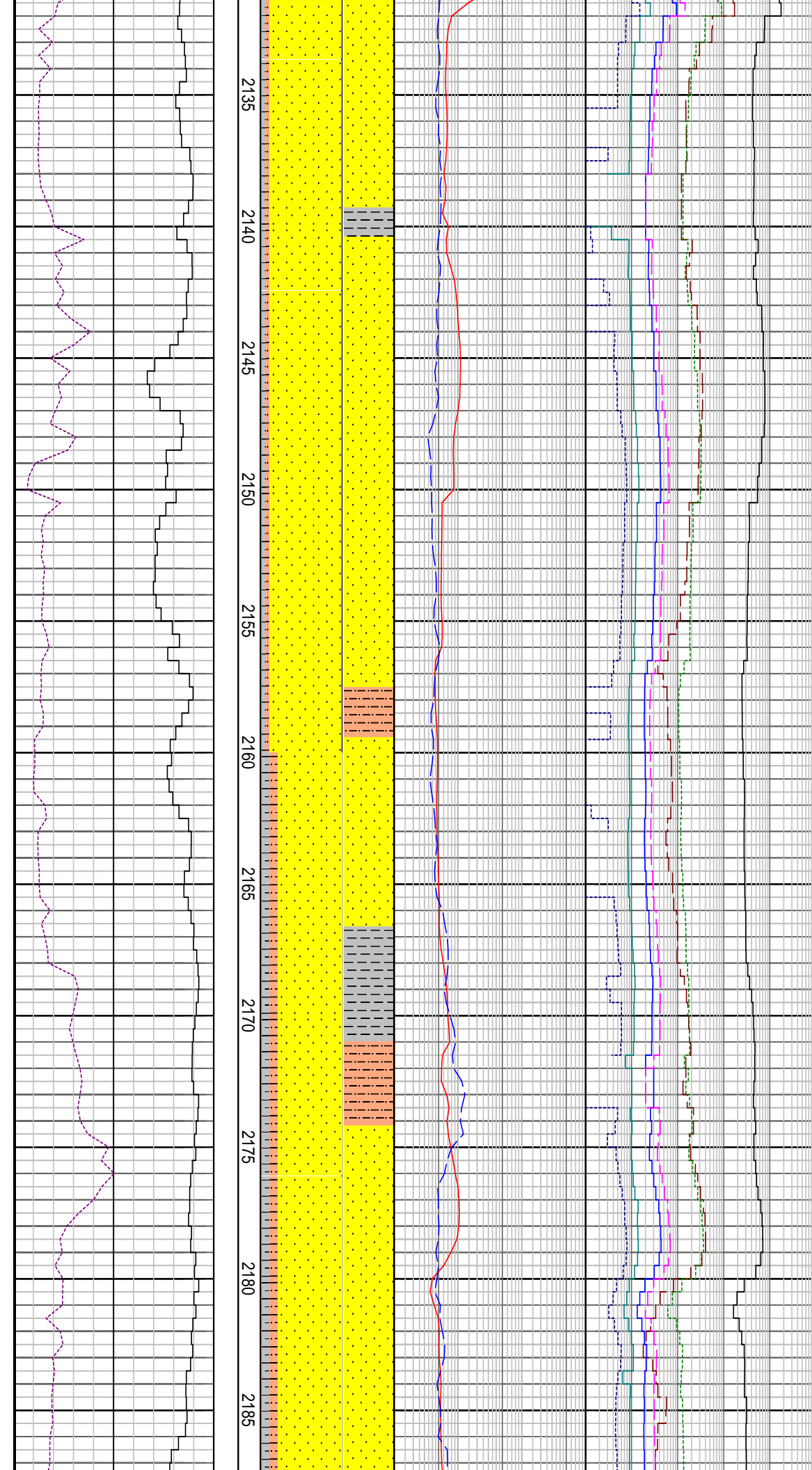
CLAYSTONE: m lt gy-m gy, mod frm, sbbky-blky, sli slty, tr mic, tr carb flks, mod-hi calc i/p, grdg to Clct, tr foam

SILTSTONE: m gy-gnsh gy, frm-hd, blk, arg, mod-hi calc, tr blk carb lam

GLAUCONITIC SANDSTONE: wh-lt gy, gnsh gy, frm-hd, blk, v f-m, mod srt, sbsng qtz, com dk gr f-m gr, sbang-wl rndd galu in frm-hd slty mtrx w/calc cmt, pr vis por, com lse glau gr

COAL : dk brn-blk, mod hd-hd, ang, planar-conch frac

SANDSTONE: wh-lt gy, yelsh gy-mod vel lse occ ang f gr m-crs granule



yel, lsc, occ agg, f gr, m-crs granule  
 mod-wl srt, sbrnrd-rnrd, sbsph,  
 trnsl-fros qtz, broken i/p, tr lse  
 f-granule pyr, tr pyr qtz

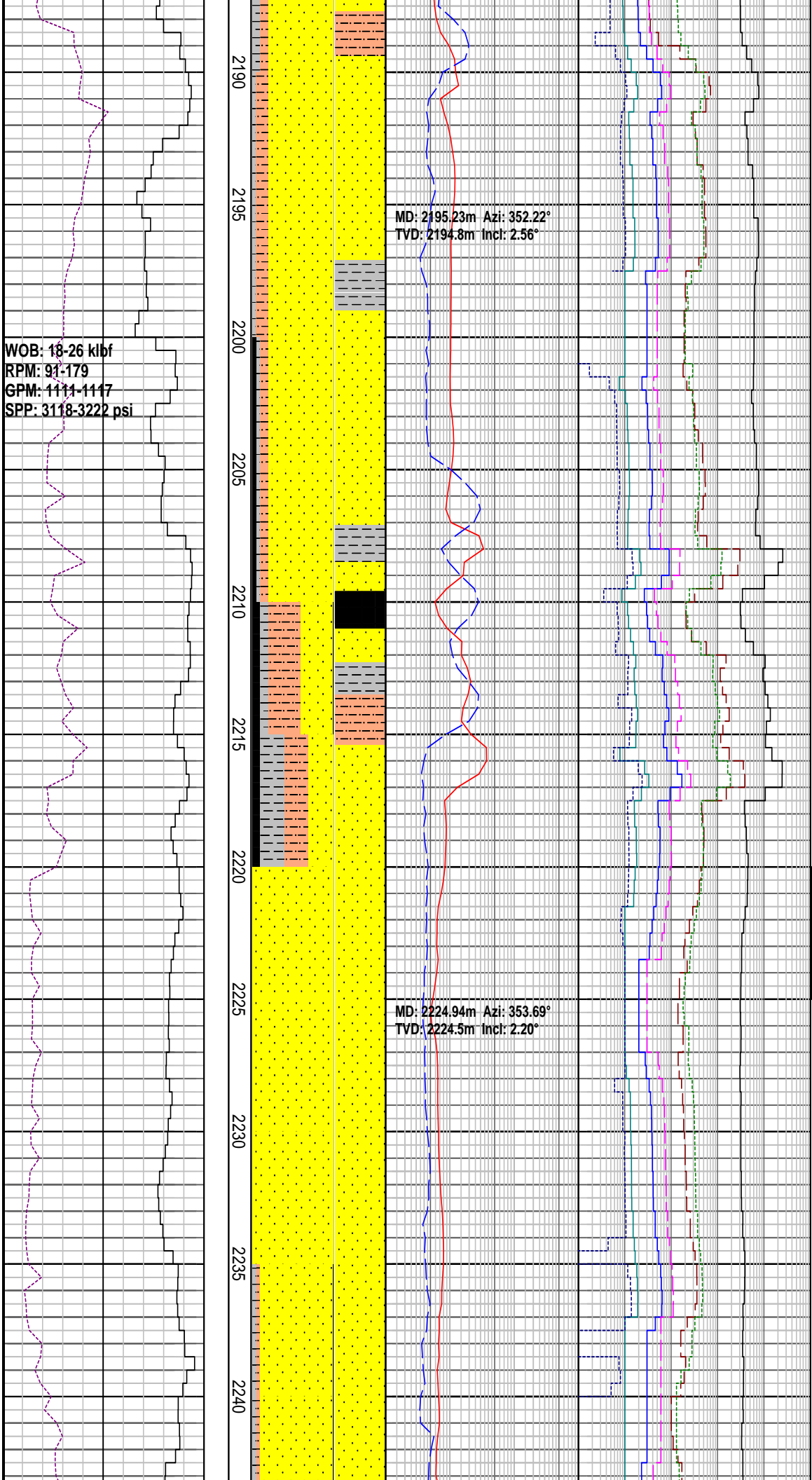
**CLAYSTONE:** lt-m gy, mod frm-hd,  
 sbblky-blky, tr carb flks, tr mic flks,  
 mod calc

**SANDSTONE:** wh-lt gy, lse, occ agg, f  
 gr, m-crs granule, mod-wl srt,  
 sbrnrd-rnrd, sbsph, trnsl-fros qtz,  
 broken i/p, tr pyr qtz

**SILTSTONE:** mod brn-olv gy, frm-hd,  
 blky, arg, n calc

**CLAYSTONE:** lt-m gy, mod frm-hd,  
 sbblky-blky, tr carb flks, tr mic flks,  
 mod calc

**SANDSTONE:** wh-lt gy, yelsh gy-mod  
 yel, lse, occ agg, f gr, m-crs granule,  
 mod-wl srt, sbrnrd-rnrd, sbsph,  
 trnsl-fros qtz, broken i/p, tr pyr qtz



SILTSTONE: mod brn-olv gy, frm-hd, blk, arg, n calc

CLAYSTONE: lt-m gy, mod frm-hd, sbbkly-blky, tr carb flks, tr mic flks, mod calc

SANDSTONE: wh-lt gy, yelsh gy-mod yel, lse, occ agg, f gr, m-crs granule, mod-wl srt, sbrnrd-rnrd, sbsph, trnsl-fros qtz, broken i/p, tr lse f-granule pyr, tr pyr qtz

COAL : dk brn-blk, mod hd-hd, ang, planar-conch frac

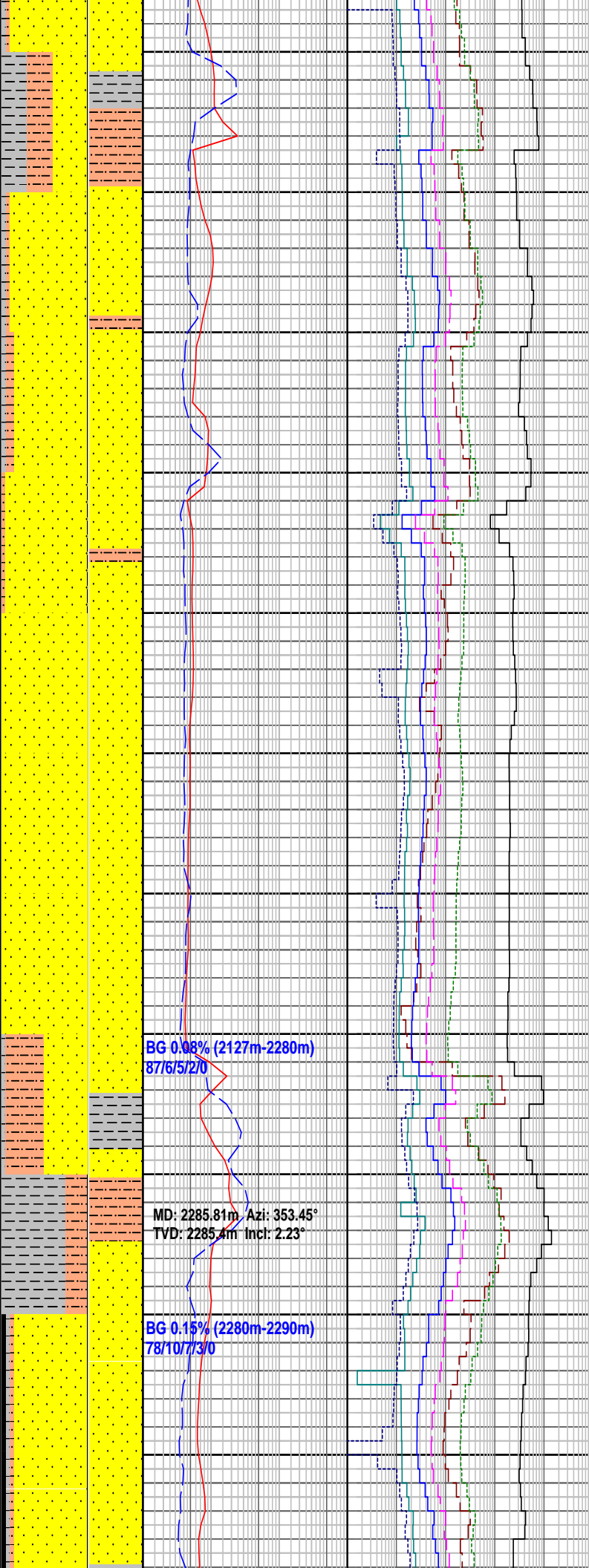
SILTSTONE: mod olv brn-dk gy, frm-hd, arg-carb, n calc

SANDSTONE: wh-lt gy, yelsh gy-mod yel, lse, occ agg, f gr, m-crs granule, mod-wl srt, sbrnrd-rnrd, sbsph, trnsl-fros qtz, broken i/p, tr pyr

SHOWS (2220m-2225m): Tr mod brt yel-gr patchy fluor from vis blk liquid bitumen in silty vf sst. Very fast strmg brt grnsh wh cut fluor. Wide spotty bright gr-yel fluor resi ring, pl brn vis residue.

SANDSTONE: wh-lt gy, yelsh gy, lse, occ agg, f gr, m-crs granule, mod-wl srt, sbrnrd-rnrd, sbsph, trnsl-fros qtz broken i/p, tr pyr qtz

2245  
2250  
2255  
2260  
2265  
2270  
2275  
2280  
2285  
2290  
2295



BG 0.88% (2127m-2280m)  
87/6/5/2/0

MD: 2285.81m Azi: 353.45°  
TVD: 2285.4m Incl: 2.23°

BG 0.15% (2280m-2290m)  
78/10/7/3/0

SILTSTONE: mod olv brn-dk gy,  
frm-hd, arg-carb, n calc

SANDSTONE: wh-lt gy, yelsh gy-mod  
yel, lse, occ agg, f gr, m-crs granule,  
mod-wl srt, sbrnrd-rndd, sbsph,  
trnsl-fros qtz, broken i/p, tr pyr qtz

MW: 9.3 ppg	FV: 82
PV: 23	YP: 38
Gels: 11/19/25	pH: 8.5

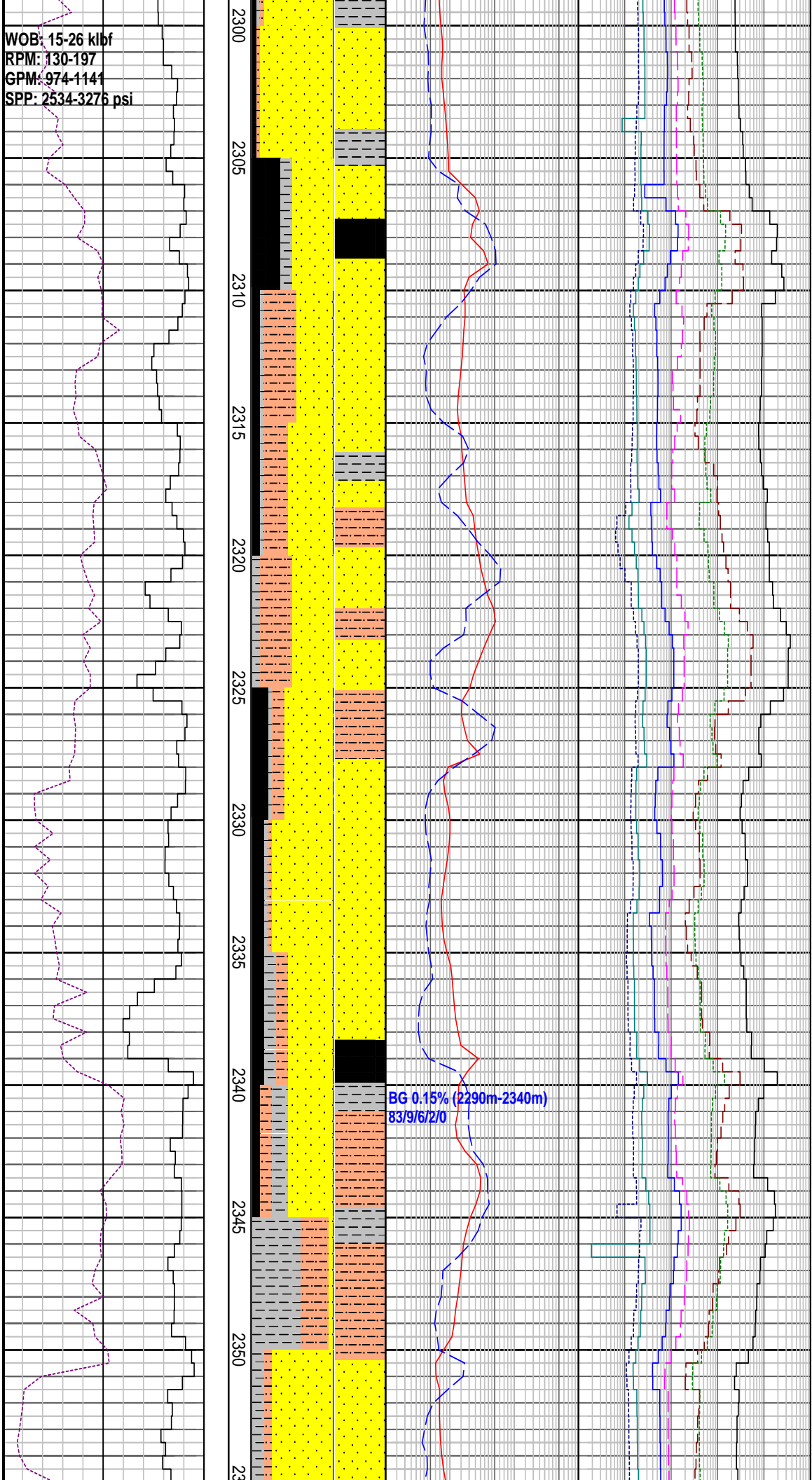
CLAYSTONE: lt-m gy, mod frm-hd,  
sbbkly-blky, tr carb flks, tr mic flks,  
mod calc

SILTSTONE: mod brn-olv gy, frm-hd,  
blky, arg, n calc

SANDSTONE: wh-lt gy, lse,  
crs-granule, mod-wl srt, sbrnrd-rndd,  
sbsph trnsl-fros qtz, broken i/p



WOB: 15-26 klbf  
RPM: 130-197  
GPM: 974-1144  
SPP: 2534-3276 psi



sbsph, trnsl-fros qtz, broken i/p

COAL : dk brn-blk, hd, ang, planar-conch frac

SANDSTONE: wh-lt gy, lse, m-crs, mod-wl srt, sbrn-dd-rn-dd, sbsph, trnsl-fros qtz, broken i/p

SILTSTONE: mod olv brn-dk gy, frm-hd, blk, arg-carb, n calc

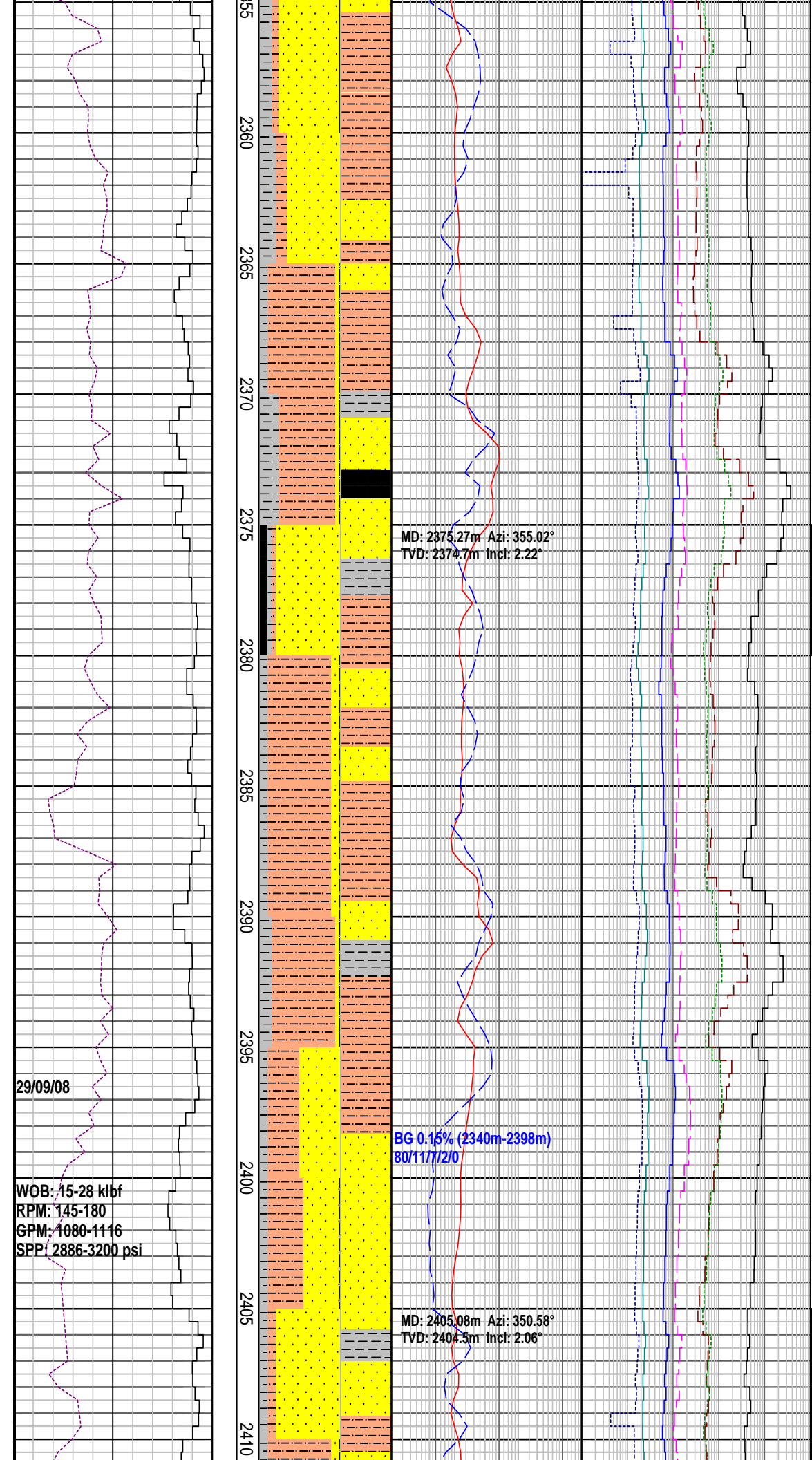
SANDSTONE: wh-lt gy, lse, m-crs, mod-wl srt, sbrn-dd-rn-dd, sbsph, trnsl-fros qtz, broken i/p

COAL : dk brn-blk, hd, ang, planar-conch frac

CLAYSTONE: lt gy- m gy, mod frm, sbblk- blk, sli slit, tr mic, tr carb flks, mod calc

SILTSTONE: mod olv brn-dk gy, frm-hd, blk, arg-carb, n calc

SANDSTONE: wh-lt gy, lse, m-crs, mod-wl srt, sbrn-dd-rn-dd, sbsph, trnsl-fros qtz, broken i/p



sbsph, trnsi-fros qtz, broken i/p

SANDSTONE: wh-lt gy, lse, m-crs, mod-wl srt, sbrndd-rndd, sbsph, trnsi-fros qtz, broken i/p

SILTSTONE: mod olv brn-dk gy, frm-hd, blk, arg-carb, n calc

MW: 9.5 ppg	FV: 58
PV: 18	YP: 31
Gels: 12/20/23	pH: 8.5

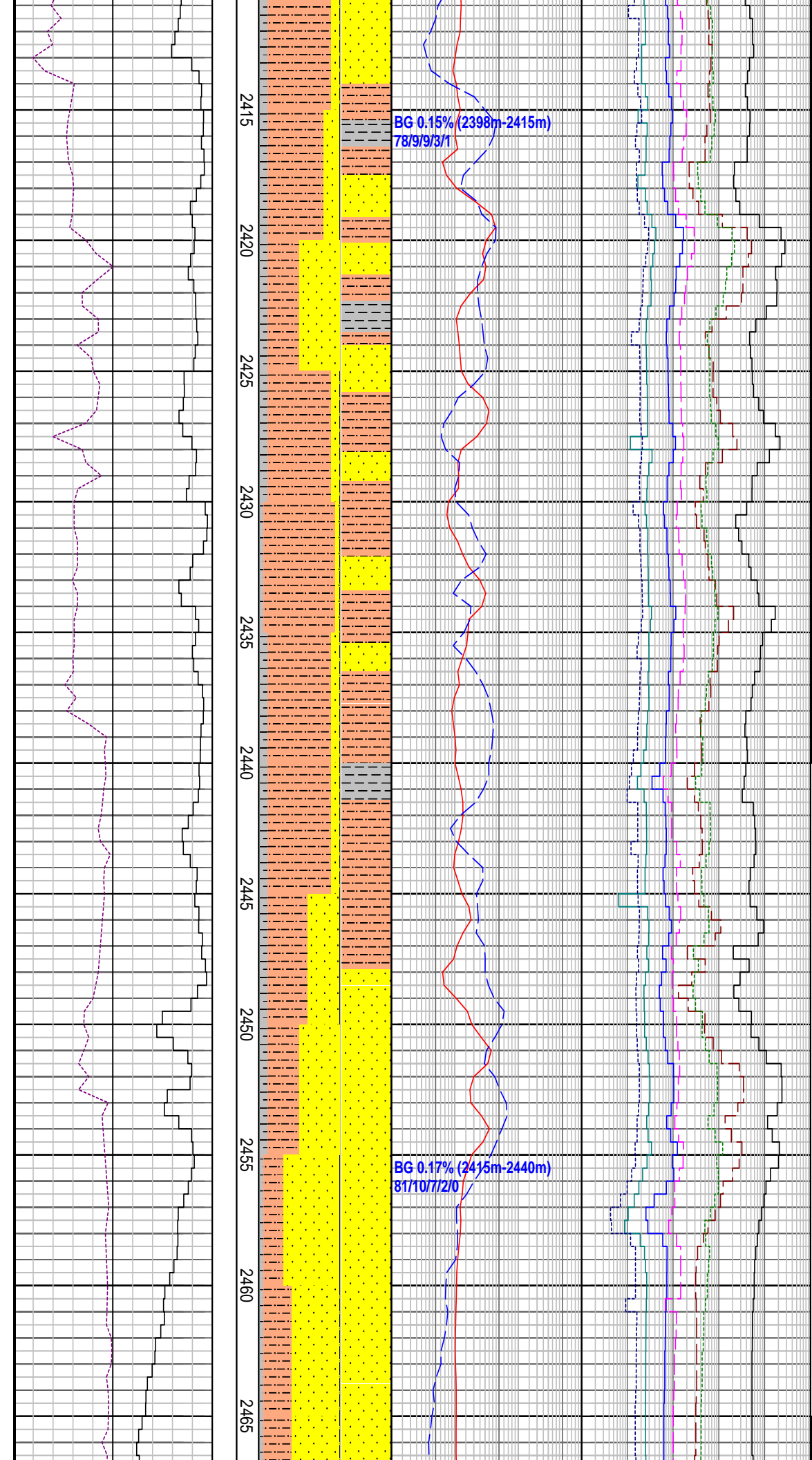
SANDSTONE: gysh yel-mod olv brn, agg v f sd, wl srt, with wh-lt gy, lse, m-crs-granule, mod srt, sbrndd-rndd, sbsph trnsi-fros qtz, broken i/p

SHOWS (2375m-2380m): Tr mod brt gr-yel pinpoint fluor in sltst. Slow blooming dull bl-wh cut fluor. pl bl-gr mod wide spotty fluor residual ring, nil vis residue.

SILTSTONE: mod olv brn-dk gy, frm-hd, blk, arg-carb, n calc

SANDSTONE: lt-m gy lse f lower-crs lower, dom m sd, pr srt, sbang-sbrndd, clr-frs qtz, tr xln pyr, tr qtz granules, tr brn gy v f hd sltst, tr calc m sst. tr qtz granules, tr calc m sst, tr xln pyr

SHOWS (2405m-2440m): Tr (2% at 2430m) dull to mod brt pinkish yel pinpoint fluor in slyst. Slow (fast at 2425m) blooming dull to mod brt bl-wh cut fluor. Thin dull to mod brt bl-wh fluor resid ring, ni vis residue.



2415  
2420  
2425  
2430  
2435  
2440  
2445  
2450  
2455  
2460  
2465

BG 0.15% (2398m-2415m)  
78/9/9/3/1

BG 0.17% (2415m-2440m)  
81/10/7/2/0

SANDSTONE: lt-m gy lse f lower-crs  
lower, dom m sd, pr-mod srt,  
sbang-sbrndd clr-frs qtz,

SILTSTONE: mod olv brn-dk gy,  
frm-hd i/p, blk, arg, glau i/p, n calc

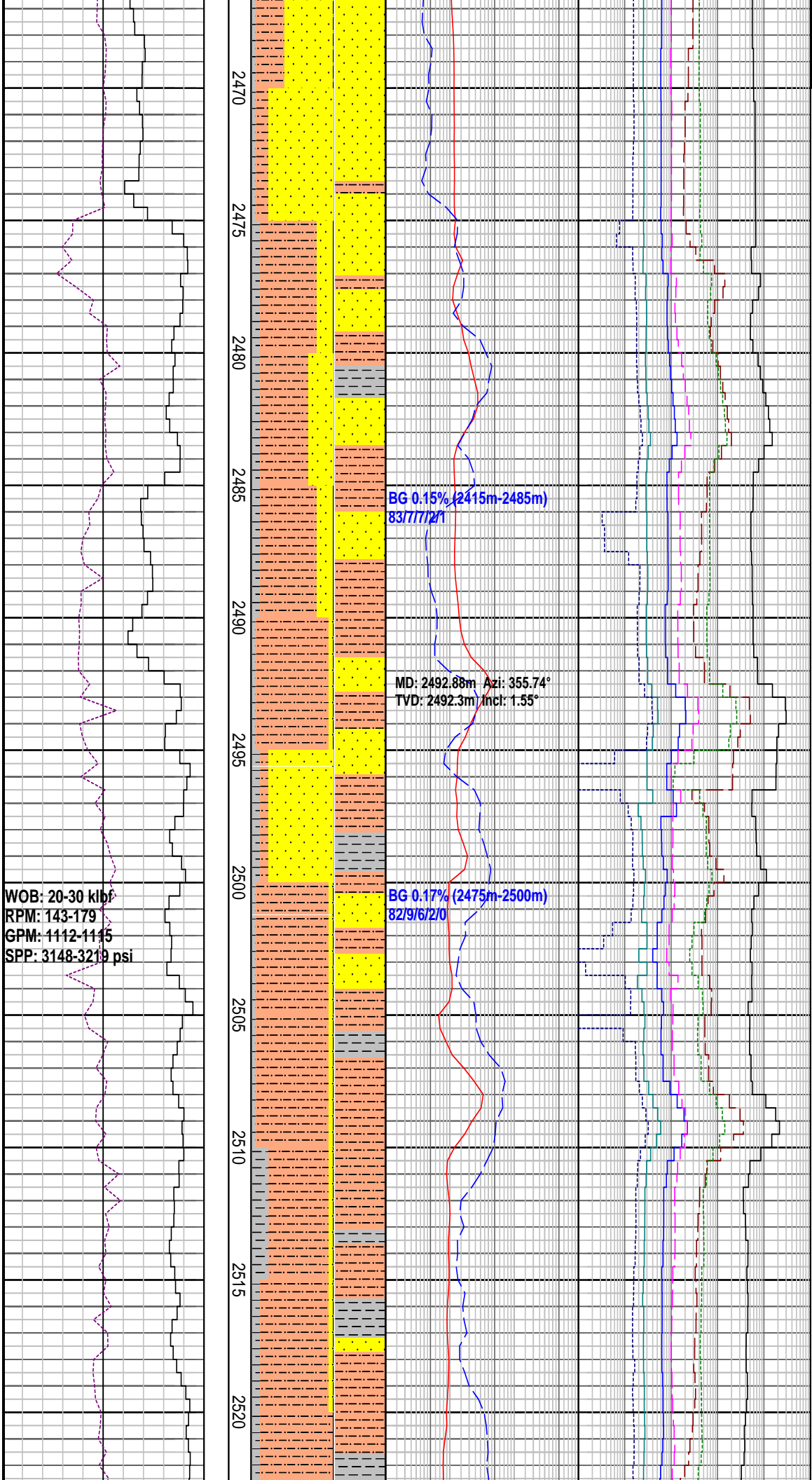
SANDSTONE: lt-m gy lse f lower-crs  
lower, dom m sd, pr-mod srt,  
sbang-sbrndd clr-frs qtz, tr qtz  
granules, tr calc m sst, tr xln pyr

MW: 9.5 ppg	FV: 53
PV: 17	YP: 30
Gels: 11/22/26	pH: 8.5

SILTSTONE: mod olv brn-m gy,  
frm-mod hd, blk, arg-carb calc, tr mic  
flks, tr carb lam, n calc

SANDSTONE: lt-m gy lse f lower-crs  
lower, dom m sd, pr-mod srt,  
sbang-sbrndd clr-frs qtz, tr qtz  
granules, tr calc m sst, tr xln pyr

SANDSTONE: wh-lt gy, lse, f-crs, tr  
granule, dom m wl srt, sbrndd-rndd,



sbsph trnsp-fros qtz, in places broken, com sft wh-lt gy amor n calc rock flour, tr pyr clus cmt gr  
**SHOWS (2465m-2470m):** tr 2% dull yel org pinpoint fluor in sltst, mod fast blooming dull bl-wh cut fluor, Thin dull to mod brt bl-wh fluor resid ring.

**SILTSTONE:** mod olv brn-m gy, frm-mod hd, blkly, arg-carb n calc, tr mic flks, tr carb lam

**SANDSTONE:** lt-m brnsh gy, frm-mod hd, v f lower-upper sst, wl srt sbang qtz, tr mic slty mtrx, com carb lam, with mnv lse v f-m sd, tr qtz granules

**CLAYSTONE:** lt gy- m gy, sft-mod frm disp i/p, sbbkly-blky, sli slty, tr mic flks, tr carb flks, mod calc

**SILTSTONE:** mod olv brn-m gy, frm-mod hd, blkly, arg-carb, tr coal frag, n calc, com pl-gy frm sli sandy

MD: 2522.59m Azi: 344.40°  
TVD: 2522.0m Incl: 1.29°

SHOWS (2535m-2540m): tr brt  
grsh-vel pinpoint fluor in  
SANDSTONE: lt-m brnsh gy, frm-mod  
calcareous clyst, slow blooming  
hd, v f-f, wl srt, sbrndd-rnnd, mod srt,  
mod brt bl-wh cut fluor, thin dull  
tr mic slty mtrx, com carb lam, a calc,  
bl-wh fluor residual ring, nil vis  
residue, tr xln pyr

SANDSTONE: lt-m brnsh gy, frm-mod  
hd, v f lower-upper sst, wl srt sbang  
qtz, tr mic in slty mtrx, wkly cmt,  
mod srt, com carb lam, with mnr lse v  
f-m sd, tr xln pyr

SANDSTONE: lt-m brnsh gy, frm-mod  
hd, v f lower-upper sst, wl srt sbang  
qtz, tr mic in slty mtrx, wkly cmt, mod  
srt, com carb lam, with mnr lse v f-m  
sd, tr xln pyr

SHOWS (2545m-2550m): tr brt  
gr-wh pinpoint fluor in coal(resin),  
slow blooming mod brt bl-wh cut  
fluor, wide brt bl-gr fluor residual  
ring, nil vis residue.

COAL: dk brn-blk, hackly-conc frac

SANDSTONE: lt-m brnsh gy, frm-mod  
hd, v f lower-upper sst, wl srt sbang  
qtz, tr mic in slty mtrx, wkly cmt, com  
carb lam

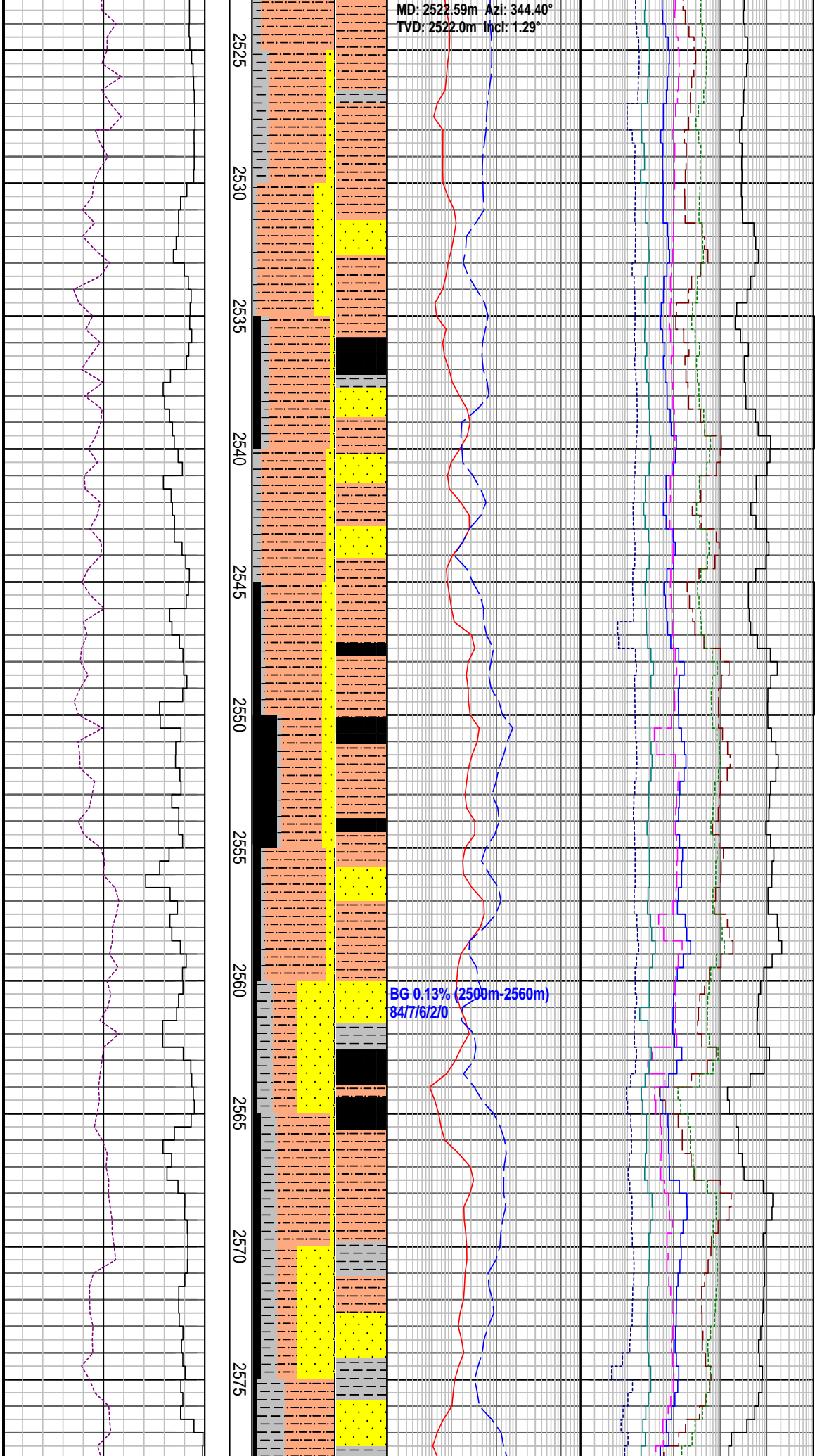
MW: 9.5 ppg	FV: 58
PV: 19	YP: 31
Gels: 12/24/29	pH: 8.5

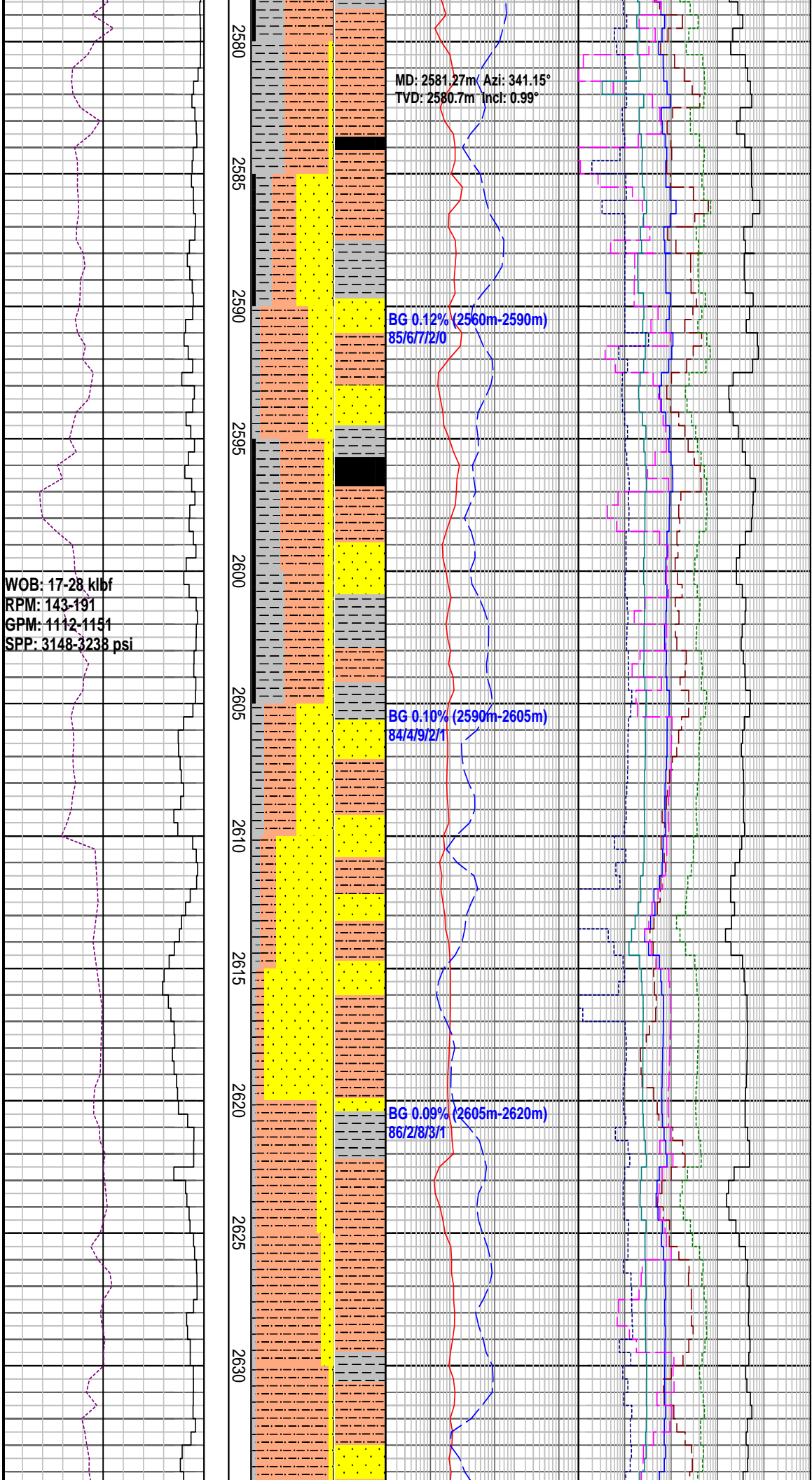
BG 0.13% (2500m-2560m)  
84776/270

COAL: dk brn-blk, frm, hackly-conch  
frag

CLAYSTONE: lt gy- m gy, sft-mod frm  
disp i/p, sbbly-blky, sli slty, tr mic  
flks, tr carb flks, mod calc

SILTSTONE: mod olv brn-m gy,  
frm-mod hd, blkv, arg-carb, tr coa





frag, n calc, com pl-gy frm sli sandy sltst, tr mic flks, tr carb lam

COAL: dk brn-blk, frm, hackly-conch frag

CLAYSTONE: lt gy- m gy, sft-mod frm, disp i/p, sbbkly-blky, sli sity, tr mic flks, tr carb flks, mod calc

COAL: dk brn-blk, frm, hackly-conch frag

CLAYSTONE : lt-m gy, sft-mod frm, sbbkly-blky, sli sity, tr mic flks, tr carb flks, mod calc

SANDSTONE: wh-v lt gy, pred lse with occ agg, m-crs with mntr granule, mod-wl srt, sbang-sbrndd clr-fros qtz, tr pyr, tr musc flks, tr coal

SANDSTONE: v lt gy-m brnsh gy, frm-mod hd, v f lower-upper sd, f sst i/p, wl srt sb ang qtz, tr mic in slty mtrx, wk sil cmt, com carb lam, with com lse v f-f sd, mod srt, sbrndd, tr pyr granules

SILTSTONE: mod olv brn-mod gy, frm-hd, arg-carb, n calc, tr coal frag, mntr pyr, tr sst, tr mic, tr com pl gy frm sli sandy sltst, tr mic flks, tr carb lam

MW: 9.4 ppg	FV: 57
PV: 17	YP:32
Gels: 13/26/30	pH: 8.5

SANDSTONE: v lt gy-m brnsh gy, frm-mod hd, v f lower-upper sd, f sst i/p, wl srt sb ang qtz, tr mic in slty

30/09/08

2635  
2640  
2645  
2650  
2655  
2660  
2665  
2670  
2675  
2680  
2685  
2690

MD: 2640.45m Azi: 345.58°  
TVD: 2639.8m Incl: 0.83°

MD: 2670.17m Azi: 343.58°  
TVD: 2669.6m Incl: 0.61°

BG 0.11% (2620m-2675m)  
85/3/9/3/0

mtrx, wk sil cmt, com carb lam, with com lse v f-f sd, mod srt, sbrndd, tr pyr granules

SILTSTONE: mod olv brn-mod gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr sst, tr mic, tr com pl gy frm sli sandy sltst, tr mic flks, tr carb lam

SANDSTONE: v lt gy-m brnsh gy, frm-mod hd, v f lower-upper sd, f sst i/p, wl srt sb ang qtz, tr mic in slty mtrx, wk sil cmt, com carb lam

SILTSTONE: mod olv brn-mod gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr sst, tr mic, tr com pl gy frm sli sandy sltst, tr mic flks, tr carb lam

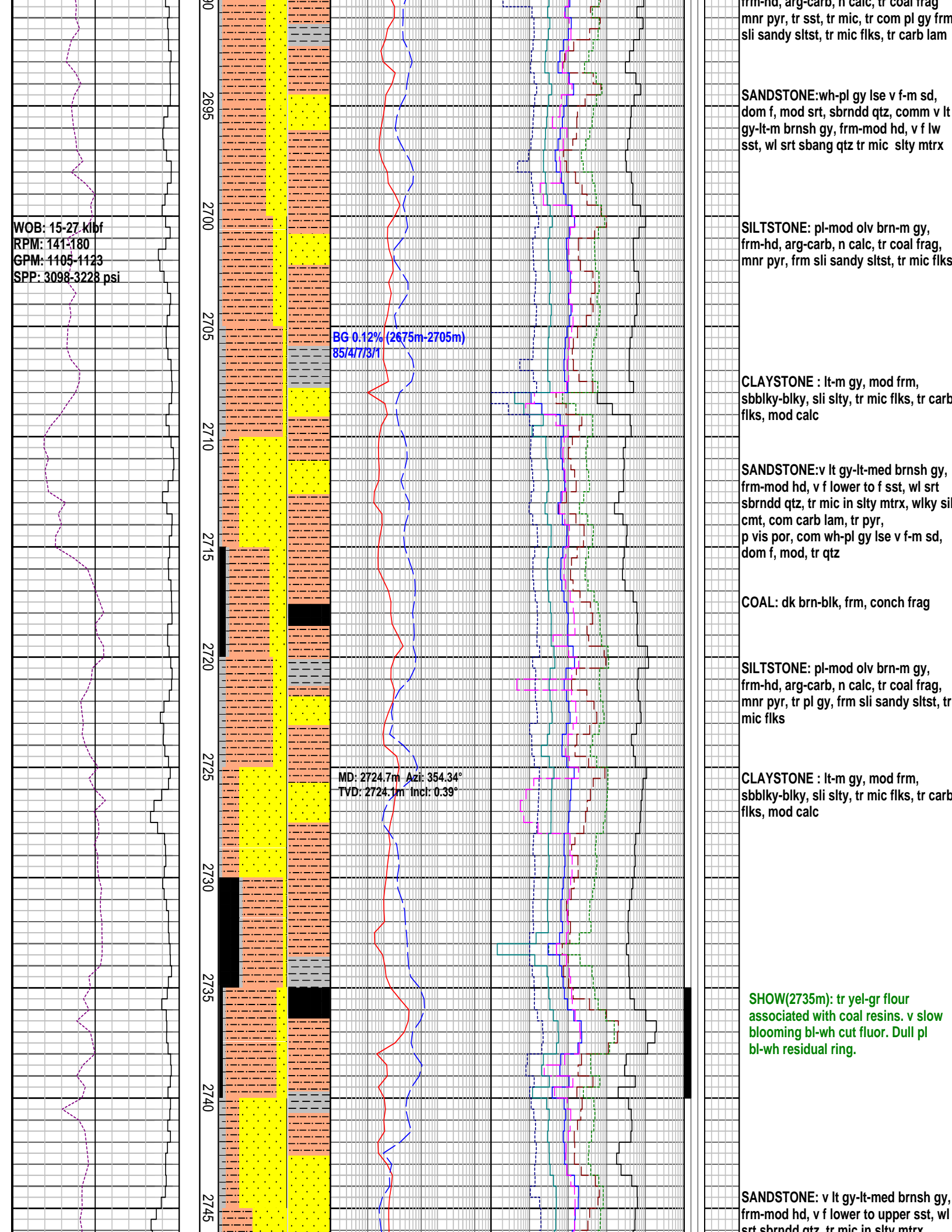
CLAYSTONE : lt-m gy, sft-mod frm, sbbkly-blky, sli slty, tr mic flks, tr carb flks, mod calc

SANDSTONE: lt gy-m brnsh gy, frm-mod hd, v f lower-upper sd, f sst i/p, wl srt sb ang qtz, tr mic in slty mtrx, wk sil cmt, com carb lam, with com lse v f-f sd, mod srt, sbrndd, tr pyr granules

SILTSTONE: mod olv brn-mod gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr sst, tr mic, tr com pl gy frm sli sandy sltst, tr mic flks, tr carb lam

CLAYSTONE : lt-m gy, sft-mod frm, sbbkly-blky, sli slty, tr mic flks, tr carb flks, mod calc

SILTSTONE: mod olv brn-mod gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr sst, tr mic, tr com pl gy frm sli sandy sltst, tr mic flks, tr carb lam



WOB: 15-27 klbf  
 RPM: 141-180  
 GPM: 1105-1123  
 SPP: 3098-3228 psi

BG 0.12% (2675m-2705m)  
 85/47/3/1

MD: 2724.7m Azi: 354.34°  
 TVD: 2724.1m Incl: 0.39°

frm-hd, arg-carb, n calc, tr coal frag  
 mnr pyr, tr sst, tr mic, tr com pl gy frm  
 sli sandy sltst, tr mic flks, tr carb lam

SANDSTONE: wh-pl gy lse v f-m sd,  
 dom f, mod srt, sbrndd qtz, comm v lt  
 gy-lt-m brnsh gy, frm-mod hd, v f lw  
 sst, wl srt sbang qtz tr mic slty mtrx

SILTSTONE: pl-mod olv brn-m gy,  
 frm-hd, arg-carb, n calc, tr coal frag,  
 mnr pyr, frm sli sandy sltst, tr mic flks

CLAYSTONE : lt-m gy, mod frm,  
 sbblky-blky, sli slty, tr mic flks, tr carb  
 flks, mod calc

SANDSTONE: v lt gy-lt-med brnsh gy,  
 frm-mod hd, v f lower to f sst, wl srt  
 sbrndd qtz, tr mic in slty mtrx, wlky sil  
 cmt, com carb lam, tr pyr,  
 p vis por, com wh-pl gy lse v f-m sd,  
 dom f, mod, tr qtz

COAL: dk brn-blk, frm, conch frag

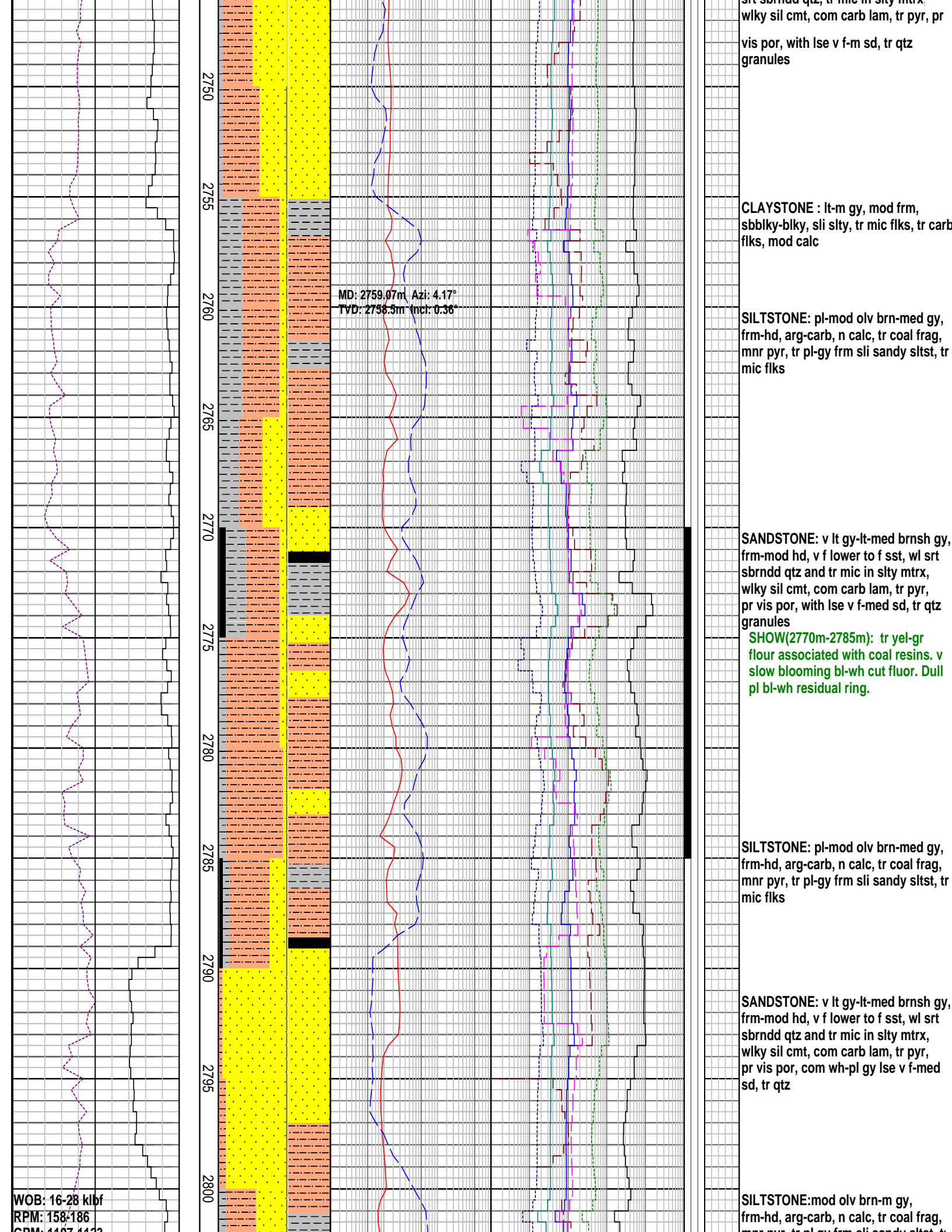
SILTSTONE: pl-mod olv brn-m gy,  
 frm-hd, arg-carb, n calc, tr coal frag,  
 mnr pyr, tr pl gy, frm sli sandy sltst, tr  
 mic flks

CLAYSTONE : lt-m gy, mod frm,  
 sbblky-blky, sli slty, tr mic flks, tr carb  
 flks, mod calc

SHOW(2735m): tr yel-gr flour  
 associated with coal resins. v slow  
 blooming bl-wh cut fluor. Dull pl  
 bl-wh residual ring.

SANDSTONE: v lt gy-lt-med brnsh gy,  
 frm-mod hd, v f lower to upper sst, wl  
 srt sbrndd qtz, tr mic in slty mtrx





2750  
2755  
2760  
2765  
2770  
2775  
2780  
2785  
2790  
2795  
2800

MD: 2759.07m Azi: 4.17°  
TVD: 2756.5m Incl: 0.36°

SILTSTONE: pl-mod olv brn-med gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr pl-gy frm sli sandy sltst, tr mic flks

CLAYSTONE : lt-m gy, mod frm, sbbkly-blky, sli slty, tr mic flks, tr carb flks, mod calc

SILTSTONE: pl-mod olv brn-med gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr pl-gy frm sli sandy sltst, tr mic flks

SANDSTONE: v lt gy-lt-med brnsh gy, frm-mod hd, v f lower to f sst, wl srt sbrndd qtz and tr mic in slty mtrx, wkly sil cmt, com carb lam, tr pyr, pr vis por, with lse v f-med sd, tr qtz granules

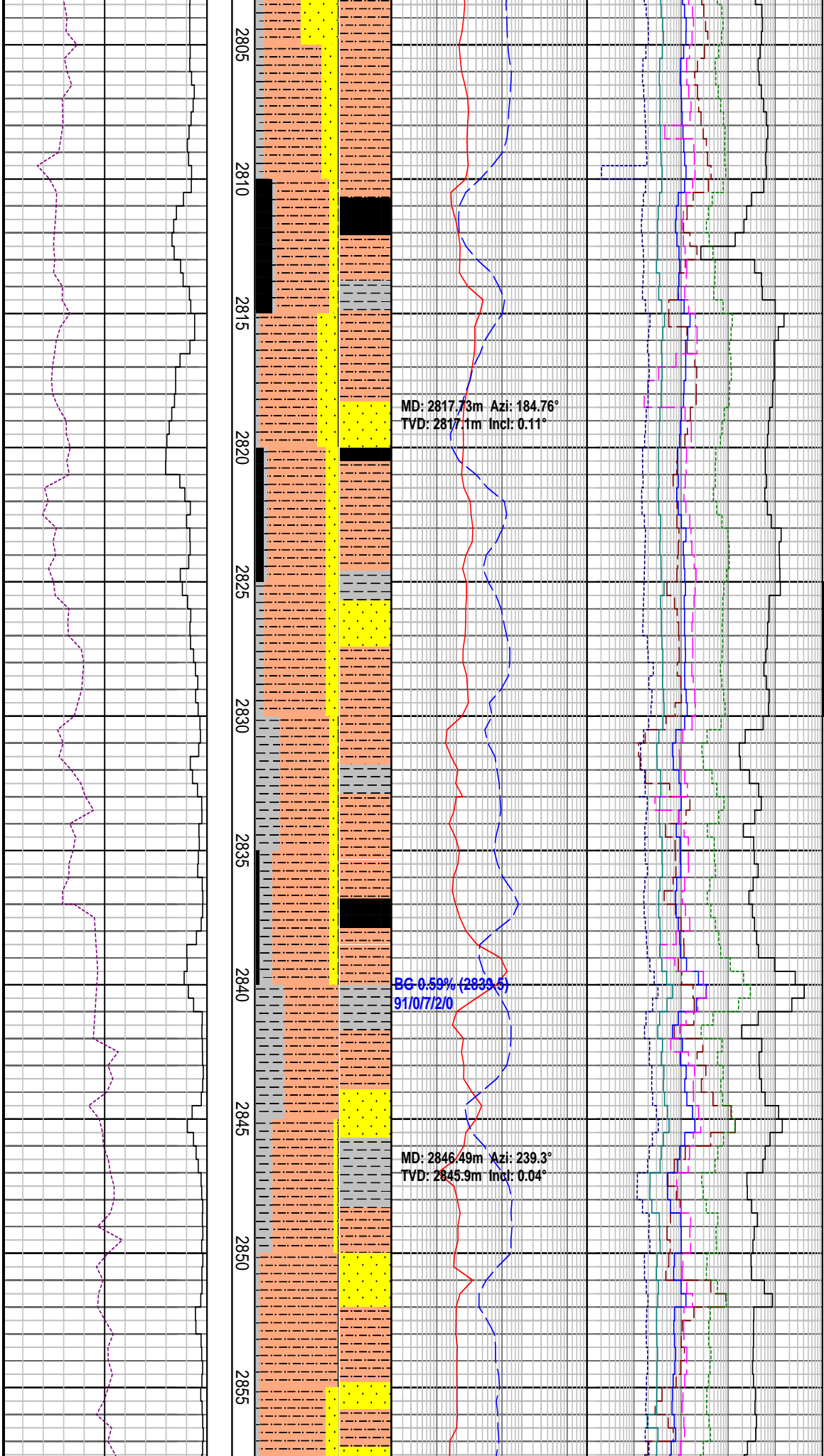
SHOW(2770m-2785m): tr yel-gr flour associated with coal resins. v slow blooming bl-wh cut fluor. Dull pl bl-wh residual ring.

SILTSTONE: pl-mod olv brn-med gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr pl-gy frm sli sandy sltst, tr mic flks

SANDSTONE: v lt gy-lt-med brnsh gy, frm-mod hd, v f lower to f sst, wl srt sbrndd qtz and tr mic in slty mtrx, wkly sil cmt, com carb lam, tr pyr, pr vis por, com wh-pl gy lse v f-med sd, tr qtz

SILTSTONE: mod olv brn-m gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr pl-gy frm sli sandy sltst, tr mic flks

WOB: 16-28 klbf  
RPM: 158-186  
GPM: 4407-4432



mnr pyr, tr pl gy frm sli sandy sltst, tr mic flks, tr carb lam

COAL: dk brn-blk, ang, hackly-conch frac, dull-brt banded

SILTSTONE: mod olv brn-m gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr pl gy frm sli sandy sltst, tr mic flks, tr carb lam

COAL: dk brn-blk, ang, hackly-conch frac, dull-brt banded

SILTSTONE: pl-mod olv brn-m gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr pl gy, frm sli sandy sltst, tr mic flks

SANDSTONE: v lt gy, lse, v f-f m sd, dom f, mod srt, sbrndd-sbang, 10% agg yel gy sil cmt, tr p, tr coal

SHOWS (2825m-2830m): tr yel-gr pinpoint fluor in coal(resin), v slow blooming bl-wh cut fluor, bl-wh fluor residual ring, nil vis residue.

COAL: dk brn-blk, ang, hackly-conch frac, dull-brt banded

CLAYSTONE : lt-m gy, mod frm, sbblky-blky, sli slty, tr mic flks, tr carb flks, tr carb flks, mod calc

SANDSTONE: v lt-gy-lt-m brnsh gy, frm-mod hd, v f lower-upper sst, wl srt, sbang-sbrndd qrtz and tr mic in slty mtr, wlky sil cmt, com carb lam with mnr lse v f-med sd

SILTSTONE: mod olv brn-m gy, frm-hd, arg-carb, n calc, tr coal frag, mnr pyr, tr pl gy frm sli sandy sltst, tr mic flks, tr carb lam

NB4: 311mm (12-1/4")  
 Make: Reed  
 Type: PDC/RSR 816M-A1  
 Jets: 8x13  
 Depth In: 2859.0m  
 Depth Out: xxxx  
 Drilled :xxxxxxx  
 Grade: XXXXXXXX

03/10/08

WOB: 15-27 klf  
 RPM: 95-188  
 GPM: 1038-1149  
 SPP: 2912-3178 psi

2860  
2865  
2870  
2875  
2880  
2885  
2890  
2895  
2900  
2905  
2910

BG 0.13% (2800m-2859m)  
 85/2/9/3/1  
 MD: 2859.00m Azi: 239.30°  
 TVD: 2858.4m Incl: 0.04°

MD: 2878.15m Azi: 323.43°  
 TVD: 2877.5m Incl: 0.10°

BG 0.09% (2859m-2885m)  
 84/7/7/2/0

BG 0.09% (2885m-2895m)  
 81/7/9/2/1

BG 0.09% (2895m-2905m)  
 88/5/6/1/0

FMG 0.64% (2909m)  
 84/8/6/2/0

BG 0.15% (2905m-2910m)

Bit Trip @2859.0m

MW: 9.8 ppg	FV: 54
PV: 15	YP: 29
Gels: 11/19/27	pH: 8.5

SANDSTONE wh-pl gy f-m agg, mod srt, sbang-sbrndd qtz in mnr sil mtrx, mnr sil cmt, frm-hd, tr carb frag, nil vis por, with abun lse f-m mod srt sbrndd qtz gr, tr calc frag, tr lse

SANDSTONE: v lt-gy-lt-m brnsh gy, frm-mod hd, v f lower-upper sst, opq v crs qtz, wl srt, sbang-sbrndd qtz and tr mic in slty mtrx, wlky sil cmt, tr coal

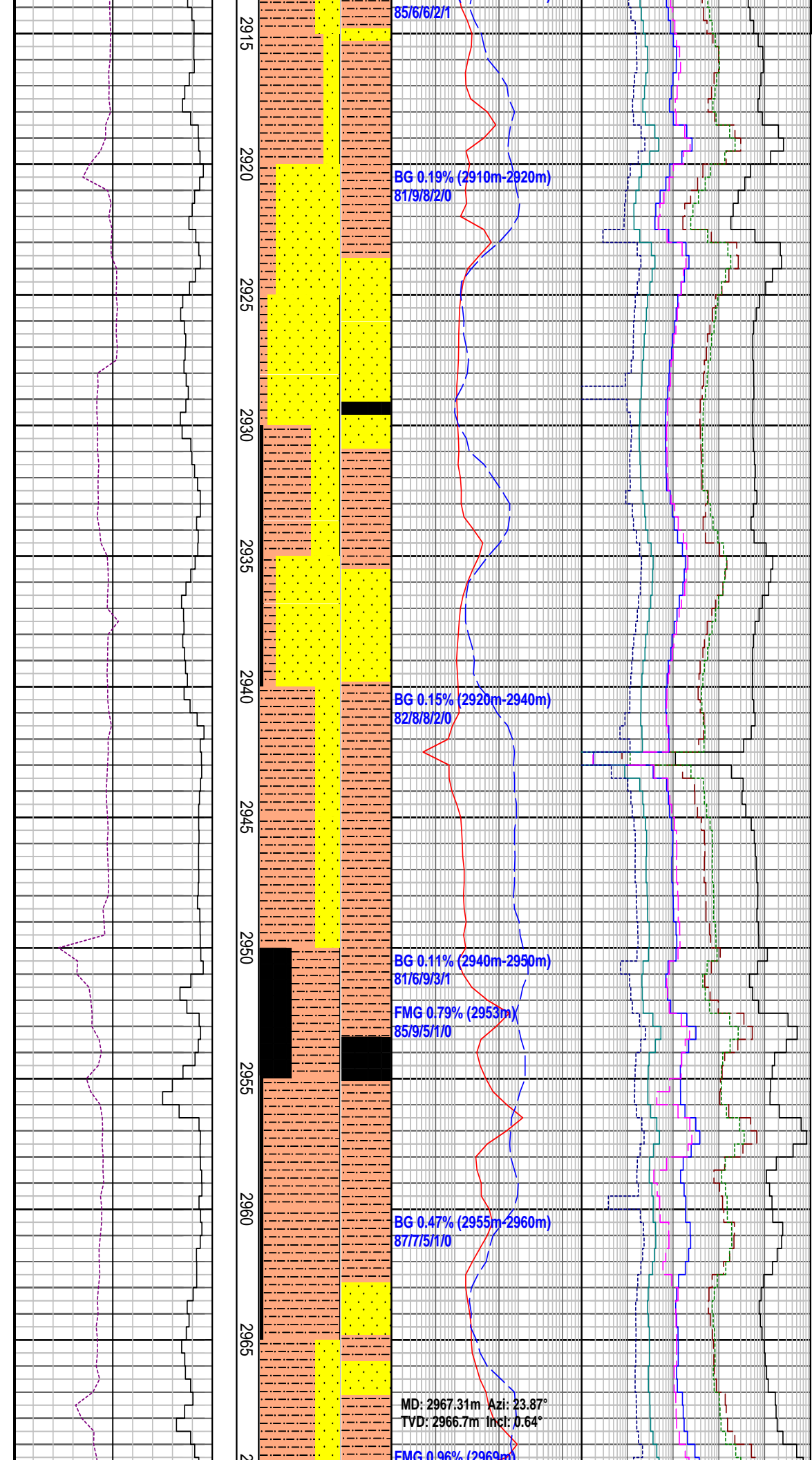
SANDSTONE: wh-pl gy agg, v f-f, wl srt sbrndd qtz gr, tr fspr, tr musc flks, tr py cry, with com wh-pl gy m sst agg, wl srt, sbang-sbrndd qtz in com slty mtrx, mnr sil cmt,

SILTSTONE: mod olv brn-m gy, frm-hd, arg-carb, n calc, tr coal frag, tr pl gy frm sli sandy sltst, tr mic flks, tr carb lam, tr pyr with galu

SANDSTONE: lse m-granule dom m upper mod srt sbrndd qtz gr, tr musc flks, tr calc frag, tr pyr cry, with mnr wh-pl gy-yelsh gy f-crs agg, mod srt, sbang-sbrndd qtz in mnr slty mtrx, tr pyr cmt, tr carb frag, nil vis por.

COAL: dk brn-blk, frm, blk, conch frac

SANDSTONE: lse m-granule dom m upper mod srt sbrndd qtz gr, tr musc



flks, tr calc frag, tr pyr cry, with mni wh-pl gy-yelsh gy f-crs agg, mod srt, sbang-sbrndd qtz in mnr slty mtrx tr pyr cmt, tr carb frag, nil vis por.

**SHOWS (2910m-2915m):** tr dull grsh-yel pinpoint fluor in silty vf sst, slow blooming mod brt bl-wh cut fluor, mod thick brt-wh fluor residual ring, nil vis residue.

**SANDSTONE:** lse f-m dom f upper-m lower wl srt sbrndd qtz gr, tr fspr, tr musc flks, tr py cry, with com wh-pl gy m sst agg, wl srt, sbang-sbrndd qtz in om slty mtrx, mnr sil cmt,

**SILTSTONE:** lt brn-m brnsh gy, frm-hd mod hd i/p, arg-carb, n calc, mnr pyr, tr pl gy frm sli sandy stst, tr mic flks

**SANDSTONE:** lse f-m dom f upper-m lower wl srt sbrndd qtz gr, tr fspr, tr musc flks, tr py cry, with com wh-pl gy m sst agg, wl srt, sbang-sbrndd qtz in com slty mtrx, mnr sil cmt,

fri-frm, tr carb frag, pr vis por, mnr sft wh rock flour

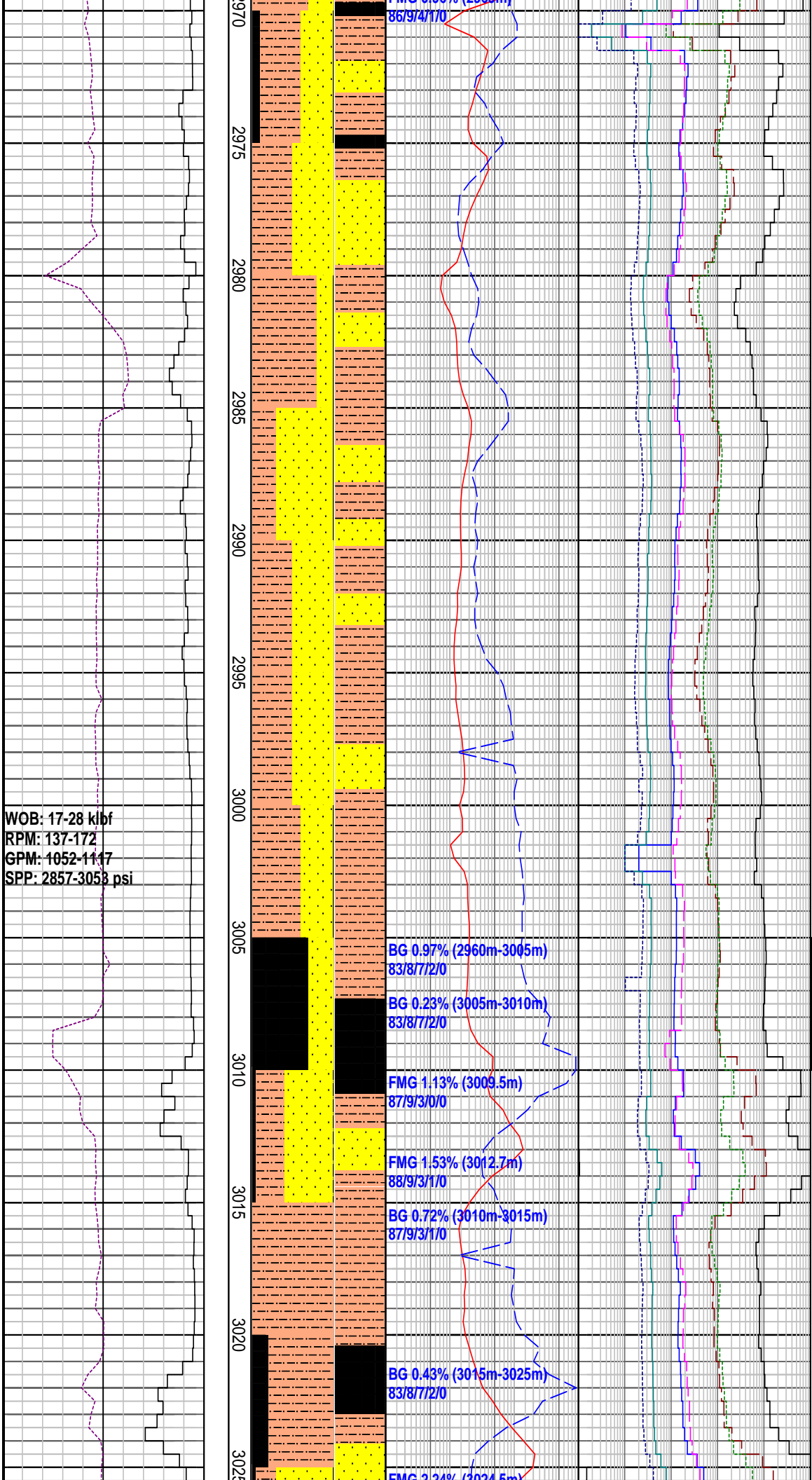
MW: 10.5 ppg	FV: 56
PV: 14	YP: 37
Gels: 14/21/27	pH: 8.5

**COAL :** blk, frm-hd, brt bnnd, conc-planar frac

**SILTSTONE:** lt-mod olv brn-m gy, frm-hd, arg-carb, n calc, com pl gy frm stly sandy sst, tr mic flks

**SANDSTONE:** lse f-m dom f upper-m lower wl srt sbrndd qtz gr, tr fspr, tr musc flks, tr py cry, with com wh-pl gy m sst agg, wl srt, sbang-sbrndd qtz in com slty mtrx, mnr sil cmt,

fri-frm, tr carb frag, pr vis por, mnr sft wh rock flour



WOB: 17-28 klbf  
 RPM: 137-172  
 GPM: 1052-1117  
 SPP: 2857-3053 psi

SILTSTONE: dkgy-brn gy,m brn gy,  
 frm-hd, mod hd i/p, blk, n calc, mn  
 pyr, tr mic flks, grdg to sst

SANDSTONE: wh-pl gy agg, v f-f, w  
 srt sbrndd qtz gr, tr fspr, tr musc flks,  
 tr py cry, with com wh-pl gy m sst  
 agg, wl srt, sbang-sbrndd qtz in com  
 slty mtrx, mn sil cmt

SANDSTONE: wh-pl gy agg, v f-f, w  
 srt sbrndd qtz gr, tr fspr, tr musc flks,  
 tr py cry, with com wh-pl gy m sst  
 agg, wl srt, sbang-sbrndd qtz in com  
 slty mtrx, mn sil cmt

SHOWS (3005m-3010m): tr mod brt  
 yel pinpoint fluor in sltst and coal  
 mod fast blooming mod brt bl-wh  
 cut fluor thin-wide mod brt-brt  
 gr-bl fluor residual ring, nil vis  
 residual

COAL : blk, frm-hd, brt bnnd,  
 conc-planar frac

SILTSTONE: dkgy-brn gy,m brn gy,  
 frm-hd, mod hd i/p, blk, n calc, mn  
 pyr, tr mic flks, grdg to sst

COAL : blk, frm-hd, brt bnnd,  
 conc-planar frac

SANDSTONE: wh-pl gy agg, v f-f, w

3030  
3035  
3040  
3045  
3050  
3055  
3060  
3065  
3070  
3075  
3080

FMG 2.24% (3024.5m)  
88/8/3/1

MD: 3026.35m Azi: 313.37°  
TVD: 3025.7m Incl: 0.92°

FMG 1.95% (3030.5m)  
87/9/3/1

FMG 1.32% (3051.5m)  
86/9/4/1

MD: 3055.49m Azi: 300.00°  
TVD: 3054.9m Incl: 0.95°

SANDSTONE: wh-pl gy agg, v f-f, w  
srt sbrndd qtz gr, tr fspr, tr musc flks,  
tr pyr cry, with mnr wh-pl gy m sst  
agg, wl srt, sbang-sbrndd qtz in com  
silty mtrx, mnr sil cmt

COAL : blk, frm-hd, brt bnnd,  
conc-planar frac

SANDSTONE: wh-pl gy agg, v f-f, wl  
srt sbrndd qtz gr, tr fspr, tr musc flks,  
tr pyr cry, with mnr wh-pl gy m sst  
agg, wl srt, sbang-sbrndd qtz com  
silty mtrx, mnr sil cmt, tr carb

COAL : blk, frm-hd, brt bnnd,  
conc-planar frac

SILTSTONE: dk brn-brn blk, frm-hd  
blkly, argi to carb, tr c seg, mnr pyr

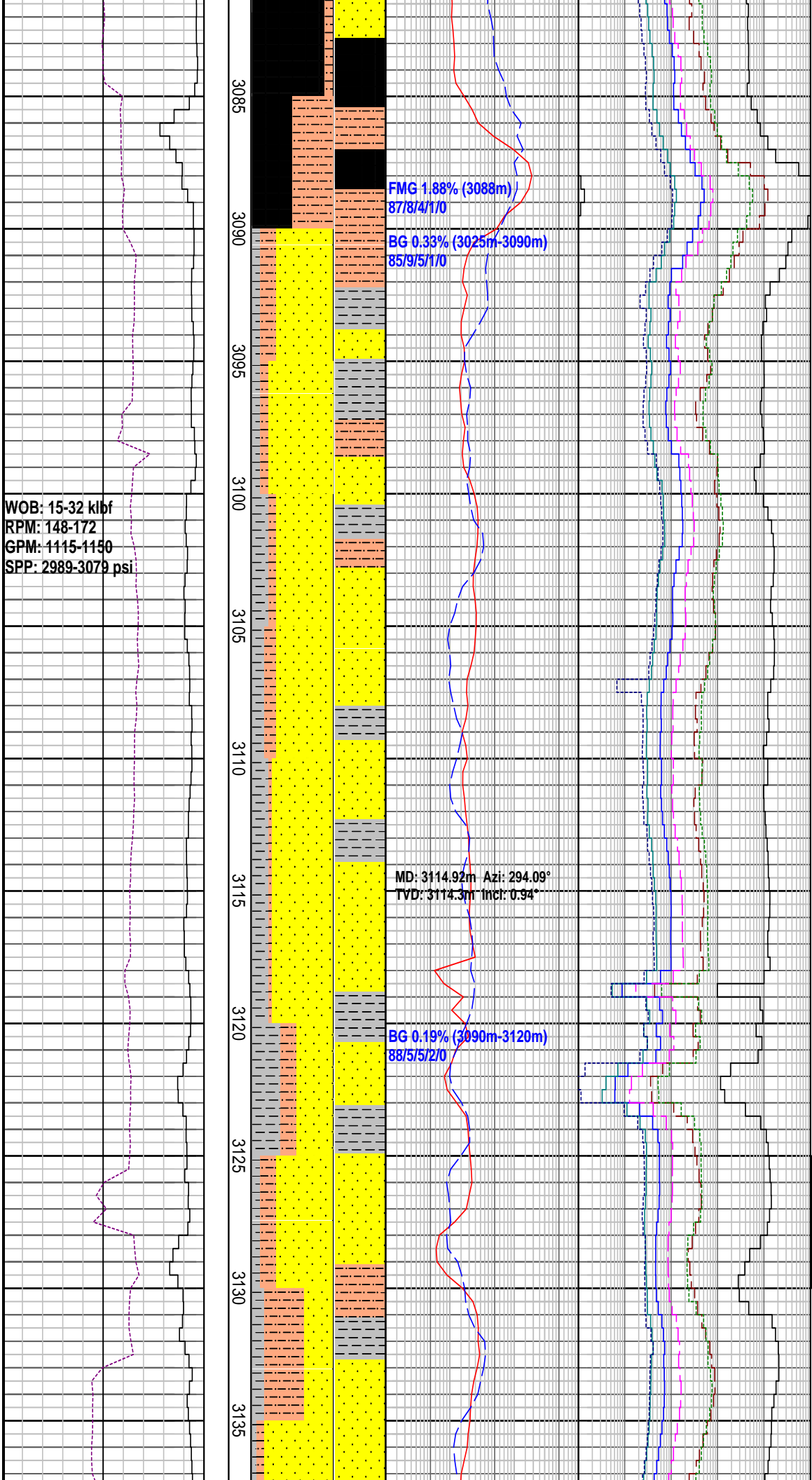
SILTSTONE: dk brn-brn blk, frm-hd  
blkly, argi to carb, n calc, tr c seg, mn  
pyr

SANDSTONE: wh-pl gy agg, v f-f, wl  
srt sbrndd qtz gr, tr fspr, tr musc flks,  
tr pyr cry, with mnr wh-pl gy m sst  
agg, wl srt, sbang-sbrndd carb mtrx,  
mod to hd Dol cmt, tr coal

SHOWS (3065m-3070m): 5% v dull  
grsh yel pinpoint fluor in f sst v  
slow blooming v dull bl wh cut  
fluor, thin dull bl wh fluor residual  
ring, nil vis residue

MW: 10.0 ppg	FV: 48
PV: 19	YP: 36
Gels: 12/21/26	pH: 9.0

COAL : blk, frm-hd, brt bnnd,  
conc-planar frac



SILTSTONE: dk brn-brn blk, frm-hd, blkly, argi to carb, n calc, tr c seg, mnr pyr

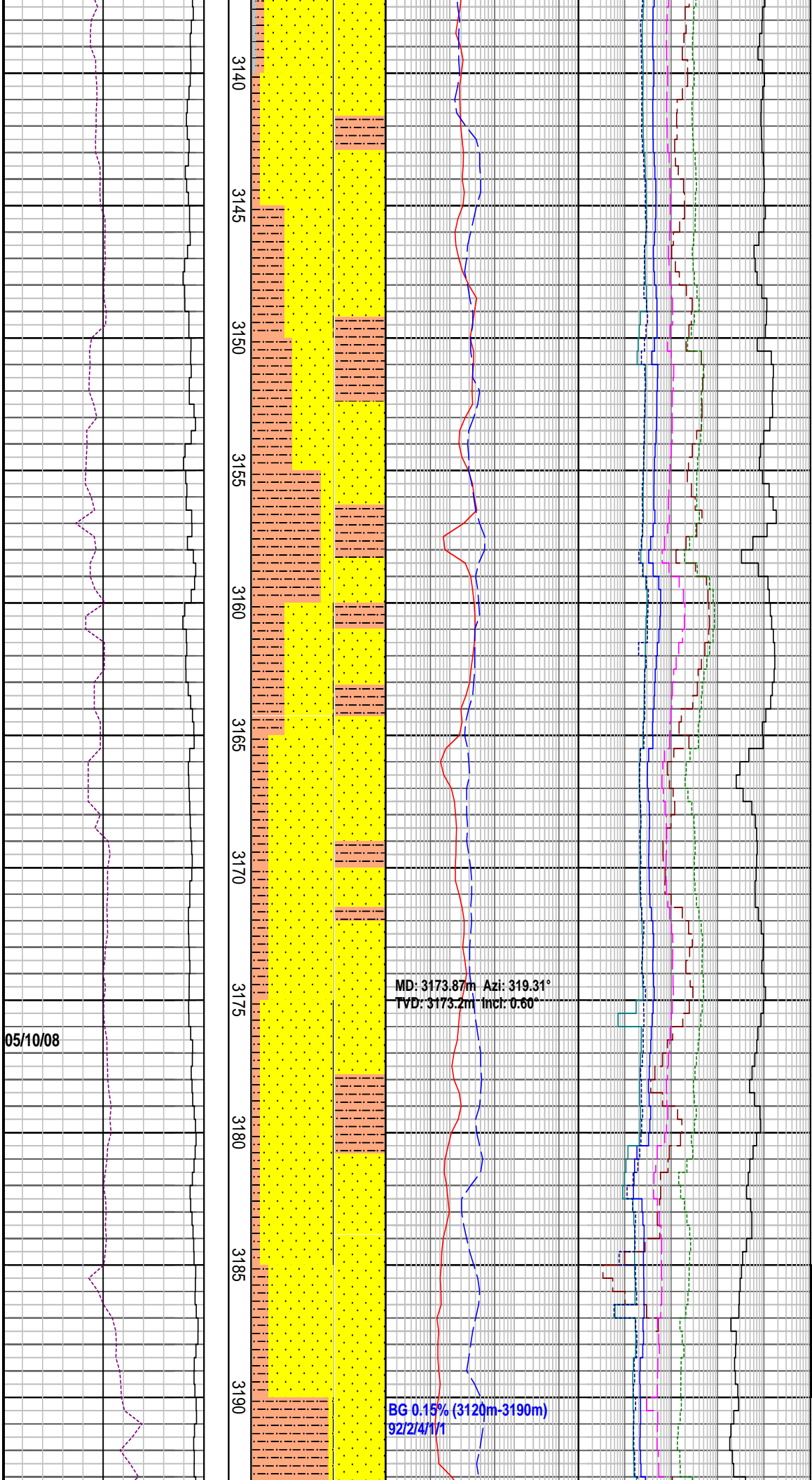
CLAYSTONE: lt-m gy, mod sft, sbblky-blky, sli sil, tr mic flks, tr carb flks, mod calc

CLAYSTONE: lt-m gy, mod sft, sbblky-blky, sli sil, tr mic flks, tr carb flks, mod calc

CLAYSTONE: lt-m gy, mod sft, sbblky-blky, sli sil, tr mic flks, tr carb flks, mod calc

SANDSTONE: lse f-granule dom crs (upper) mod srt sbrndd qtz gr, tr flds, tr musc flks, tr pyr cry, wh-pl gy f-m sst agg, wl srt, sbang-sbrndd qtz in com slty carb mtrx, mod cmt, tr pyr cmt, tr carb frag, pr vis por, mnr sft wh rock flour inf to be sst, tr coal

SHOWS (3125m-3130m):tr v dull grsh yel pinpoint fluor in f sltst v slow blooming v dull bl wh cut fluor, thin mod brt bl wh fluor residual ring, nil vis residue



SANDSTONE:lse f-granule dom crs pr srt sbang qtz gr, tr flds, tr musc flks, rr wh-pl gy f-m sst agg, mod srtd, subang-sbrndd qtz in com slty carb mtrx, mod sil cmt

SANDSTONE:lse f-granule dom crs (lower) pr srt sbang qtz gr, tr flds, tr musc flks, rr wh-pl gy f-m sst agg, mod srtd, subang-sbrndd qtz in com slty carb mtrx, mod sil cmt, fri-frm, tr carb frag, pr vis por, mod abund sft wh rock flour inf- from sst, tr coal.

SILTSTONE: dk brn-brnsh blk, frm-hd, blk, arg-carb, tr v f sd i/p, tr coal frag, tr pyr clay

MW: 10.0 ppg	FV: 49
PV: 19	YP:39
Gels: 14/23/29	pH: 9.0

SANDSTONE:wh-lt gy, m gy, lse f-granule dom crs (lower) pr srt sbang qtz gr, tr crs gr, tr flds, tr musc flks, rr wh-pl gy f-m sst agg, mod srtd,

subang-sbrndd qtz in com slty carb mtrx, mod sil cmt, fri-frm, tr carb frag, pr vis por, mod abund sft wh rock flour inf- from sst, tr coal.

MD: 3173.87m Azi: 319.31°  
TVD: 3173.2m Incl: 0.60°

05/10/08

SILTSTONE: dk brn-brnsh blk, frm-hd, blk, arg-carb, tr v f sd i/p, tr coal frag, tr pyr clay

SANDSTONE:wh-lt gy, m gy, lse f-granule dom crs (lower) pr srt sbang qtz gr, tr crs gr, tr flds, tr musc flks, rr wh-pl gy f-m sst agg, mod srtd, sbang-sbrndd qtz in com slty carb mtrx, mod sil cmt, fri-frm, tr carb frag, pr vis por, mod abnd sft wh rock flour inf- from sst, tr coal.

SHOWS (3185m-3190m):5% brt grsh yel pinpoint fluor in f siltstone Slow blooming mod brt bl wh cut

BG 0.15% (3120m-3190m)  
927274/1/1



