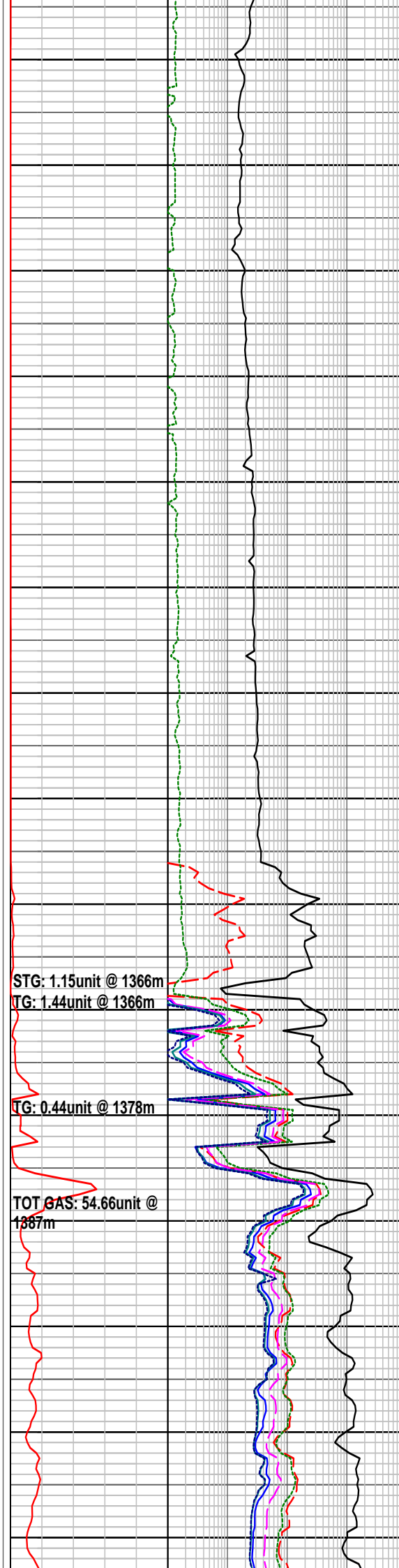
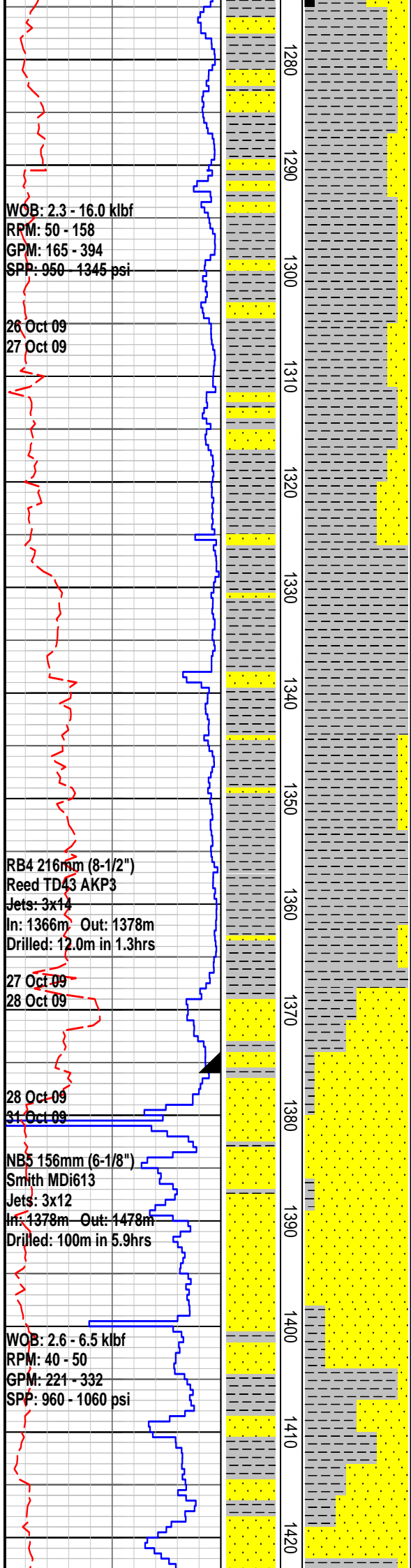




FORMATION EVALUATION LOG

RATE OF PENETRATION ROP (0-100m/hr) Backup ROP (100-200m/hr) WOB (klb)	INTERPRETED LITHOLOGY	MD meters	LITHOLOGY	CORE	OIL SHOWS	TOTAL GAS TOTAL GAS unit BACKUP TOTAL GAS unit	CHROMATOGRAPH				REMARKS
							1	Methane ppm	10000	1	
							1	Ethane ppm	10000	1	
							1	Propane ppm	10000	1	
							1	iso-Butane ppm	10000	1	
							1	n-Butane ppm	10000	1	
							1	iso-Pentane ppm	10000	1	
								n-Pentane ppm			
							10	100	1000	10000	
25 Oct 09 26 Oct 09 RB3 216mm (8-1/2") Reed HP219 Jets: 3x14 In: 1184m Out: 1366m Drilled: 182m in 35.9hrs WOB: 0.3 - 12.2 klbf RPM: 51 - 140 GPM: 144 - 332 SPP: 565 - 1357 psi		70 1180 1190 1200 1210 1220 1230 1240 1250 1260 1270				TG: 0.82unit @ 1184m					CLAYSTONE: wh-m brn, v slt & v aren i/p, kao i/p, sli-mod carb, tr blk c flks, tr micrmic, frm, v disp & washing f/spl, n fiss MW 10.1 FV 48 PV 16 YP 24 Gels 4/6 F 8.0 Ck 1.0 Sol 8.3 pH 8.5 Cl 20.0k SANDSTONE: v lt gry-lt brn gy, v f-v crs, dom m-crs, ang-sbrnd, v p srtd, mod sil cmt, com-abd wh-lt brn argill & slt mtrx, quartzose w/clr-op qtz gr, rr gn & blk cht lith, tr blk c detr, fri-mod hd, fr-gd inf por, no fluor CLAYSTONE: off wh-m brn, v slt & v aren, v kao i/p, sli carb, tr blk c flks, tr micrmic, frm-mod hd, v disp, n fiss MW 10.3 FV 47 PV 15 YP 29 Gels 7/9 F 7.8 Ck 2.0 Sol 9.2 pH 8.5 Cl 17.0k COAL: v dk brn-dom blk, blky-sbconch frac, ea-sli sbvit lstr, sli-m argill, mod hd



CLAYSTONE: off wh-m brn, v slt & v f aren, v kao i/p, sli carb, tr blk c flks, tr micrmic, rr pyr, frm-mod hd, v disp, n fiss

MW 10.35 FV 54 PV 20 YP 34
Gels 7/10 F 7.0 Ck 2.0 Sol 10.0
pH 8.5 Cl 18.0k

SANDSTONE: v lt gry-lt brn gy, v f-gt, dom m, ang-sbrnd, v p srtd, mod sil cmt, abd off wh-lt brn argill & slt mtrx, quartzose w/clr-op qtz gr, rr gn & blk cht lith, tr blk c detr, tr pyr, mod hd, fr inf por, no fluor

CLAYSTONE: off wh-m brn, dom lt brn, v slt & v f aren, v kao i/p, sli carb, tr blk c flks, tr micrmic, tr pyr, mod hd, v disp, sli sbfiss

Survey at 1354m
N60degSE
1.5 degs

CLAYSTONE: off wh-m gn gry-m brn gry, mod slty, tr vf off wh alt fspr gr, tr brn-blk carb spks, tr micrmic, sft, v disp, sli sbfiss

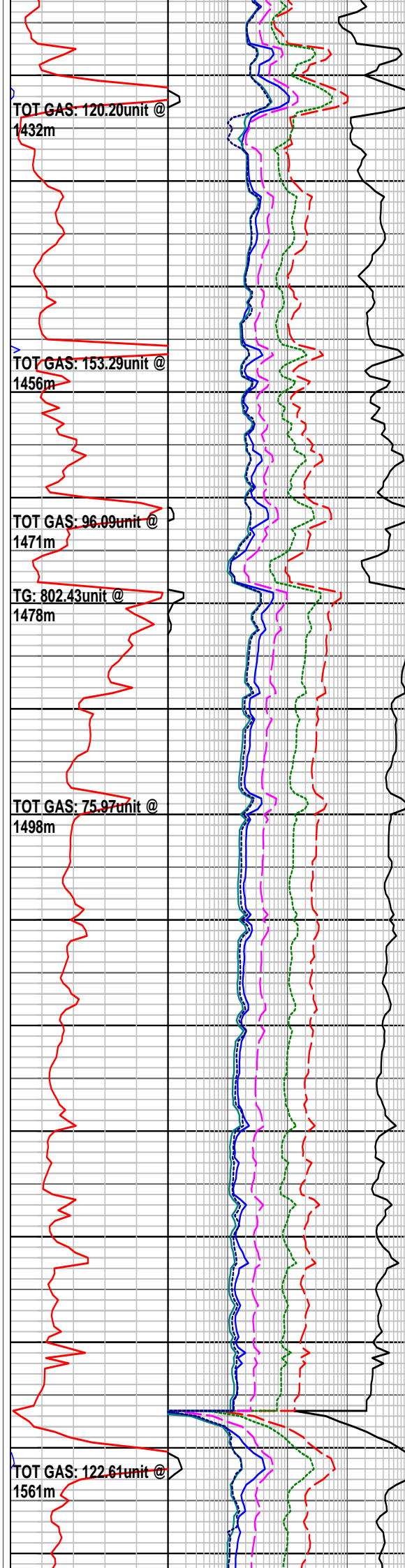
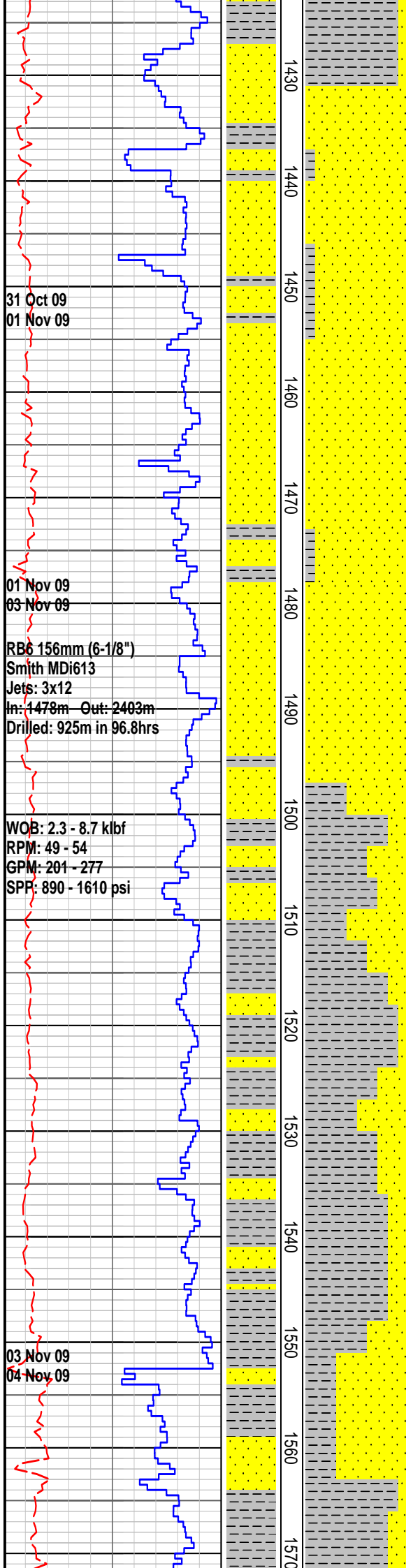
Run#1 HALS - BHC - PEX
1361 - 299m
GR to Surface

178mm (7") casing shoe
at 1376mMD

SANDSTONE: lt gry, vf-f, occ m, dom f, sbang-sbrnd, mod srtd, wk sil cmt, abd off wh argill & mtrx, abd alt fspr gr, com rd brn gry & gn, lith, tr qtz gr, tr c brn mic flk, tr v f blk carb detr, tr pyr, fri, v p vis por, no fluor

Formation L.O.T. @ 1382m
MW: 9.8ppg EMW: 13.1ppg

CLAYSTONE: off wh-m gn gry-m gry,



occ m brn gry, mod sity, tr v f on wr
alt fspr gr, tr brn-blk carb spks, tr
micrmic, frm, v disp, sli sbfiss

MW 10.0 FV 42 PV 10 YP 22
Gels 4/7 F N/A Ck 35.0 Sol 9.5
pH 9.5 CI 16.8k

SANDSTONE: lt gry-lt gn gry, v f-rr m,
dom f, dom f, sbang-sbrnd, mod srtd,
mod sil cmt, wk calc cmt i/p, abd off
wh argill mtrx, abd alt fspr gr & rd brn
gry & gn lith, 10% qtz gr, tr crs brn
mic flks, tr v f blk carb detr, tr pyr, fri,
v p vis por, no fluor

DST #1 1383m - 1478m
IF 15 min
ISI 90 min
FF 180 min
FSI 540 min
GTS 5 min into FF @ RTSM
Rec 140m gas cut rathole mud

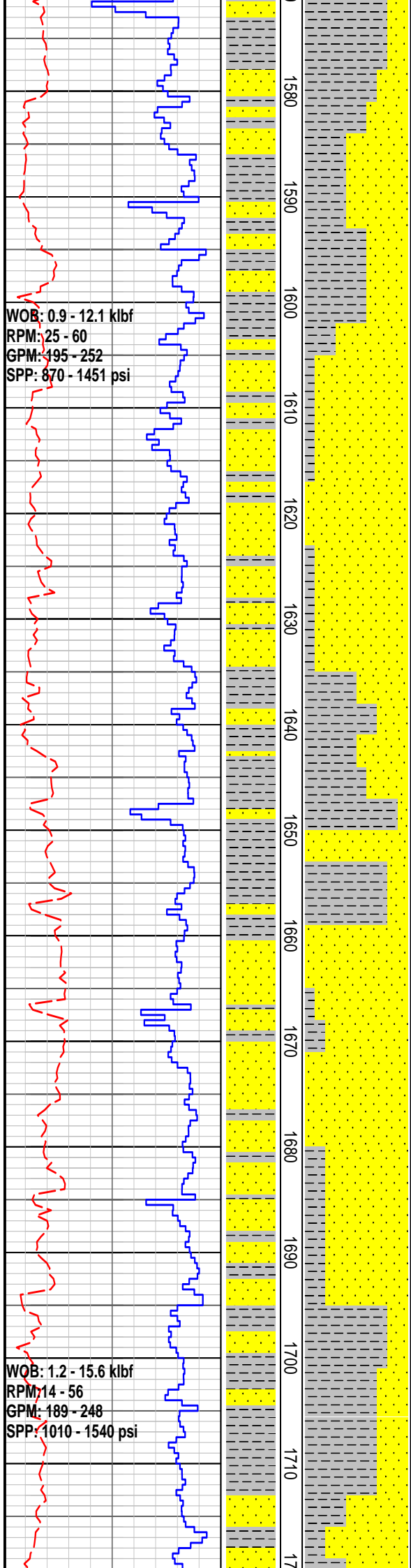
SANDSTONE: lt gn gry, v f-occ m,
dom f, sbang-sbrnd, mod srtd, mod si
cmt, wk calc cmt i/p, abd off wh argill
mtrx, abd alt fspr gr & rd brn gry & gn
lith, 10% qtz gr, tr crs brn mic flks, tr v
f blk carb detr, rr pyr, fria, v p vis por,
no fluor

CLAYSTONE: lt-m brn gry-m gry-occ
m gn gry, v slty i/p grdg to argill
SLTST, v f aren i/p, tr v f off wh alt
fspr gr, tr-com brn-blk carb spks, tr
micrmic, frm, v disp, sli sbfiss

MW 9.8 FV 46 PV 15 YP 22
Gels 5/7 F N/A Ck 28 Sol 7.8
pH 9.5 CI 18.0k

SANDSTONE: lt gn gry, v f-f, dom f,
sbang-sbrnd, mod srtd, mod sil cmt,
wk calc cmt i/p, abd off wh argill mtrx,
abd alt fspr gr & rd brn gry & gn lith,
com qtz gr, tr crs brn mic flks, tr v f
blk carb detr, tr calc lined frac, fria, no
vis por, no fluor

MW 9.7 FV 39 PV 10 YP 17
Gels 3/4 F 9.0 Ck 1.0 Sol 7.3
pH 9.5 CI 12.0k



TOT GAS: 139.76unit @ 1585m

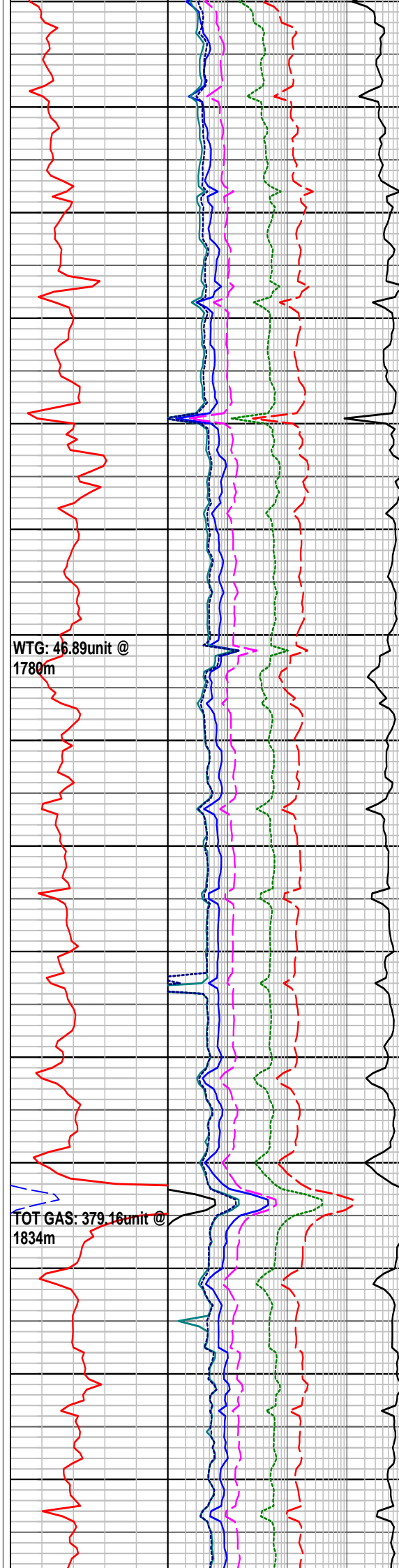
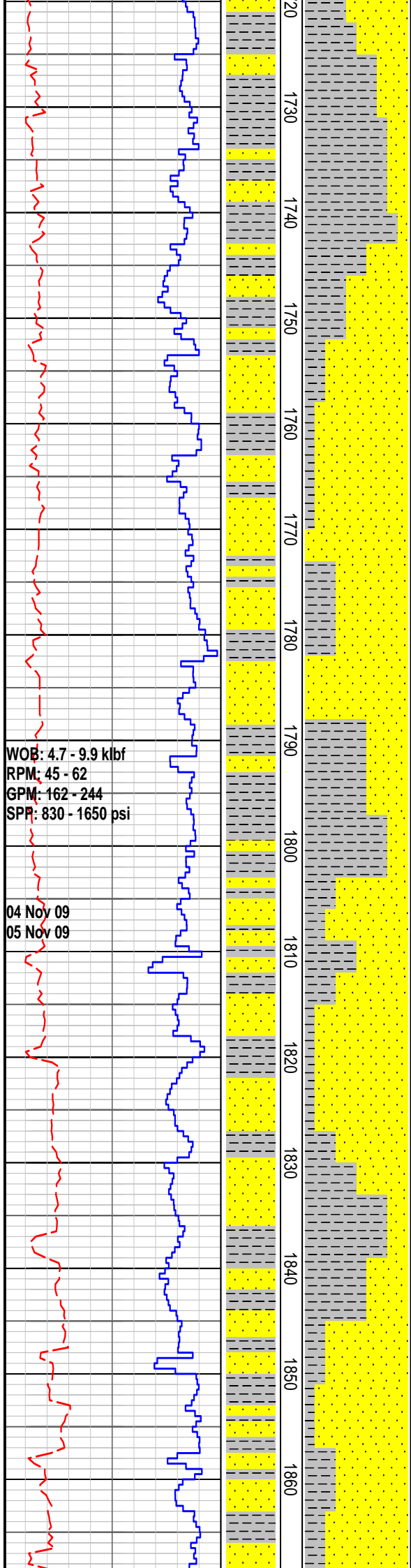
CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grdg to argill SLTST i/p, v f aren i/p, tr v f off wh alt fspr gr, tr-com brn-blk carb spks & c detr, tr micrmic, frm, v disp, sli sbfiss

SANDSTONE: lt gn gry, v f-m, dom m, sbang-sbrnd, mod srtd, mod sil cmt, wk calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr blk c detr, fria, no vis por, no fluor

SANDSTONE: lt gn gry, v f-m, dom f, sbang-sbrnd, mod srtd, mod sil cmt, mod-strong calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr blk c detr, rr calc infilled frac, fria, p vis por, no fluor

MW 9.75 FV 42 PV 13 YP 22
Gels 3/5 F 7.5 Ck 1.0 Sol 7.6
pH 9.5 Cl 10.5k

CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grdg to argill SLTST i/p, v f aren i/p, tr v f off wh alt fspr gr, tr-com brn-blk carb spks & c detr, tr micrmic, tr calc infilled frac, frm-mod hd, v disp, sli sbfiss



SANDSTONE: lt gn gry, v f-f, dom f, sbang-sbrnd, mod srted, mod sil cmt, mod-strong calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr blk c detr, rr calc infilled frac, fria, p vis por, no fluor

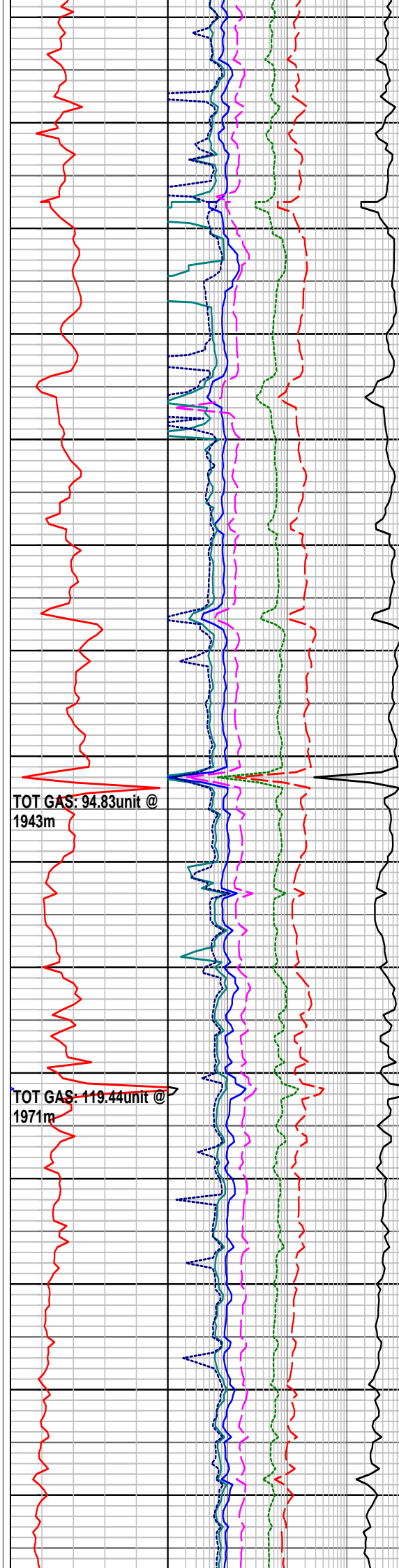
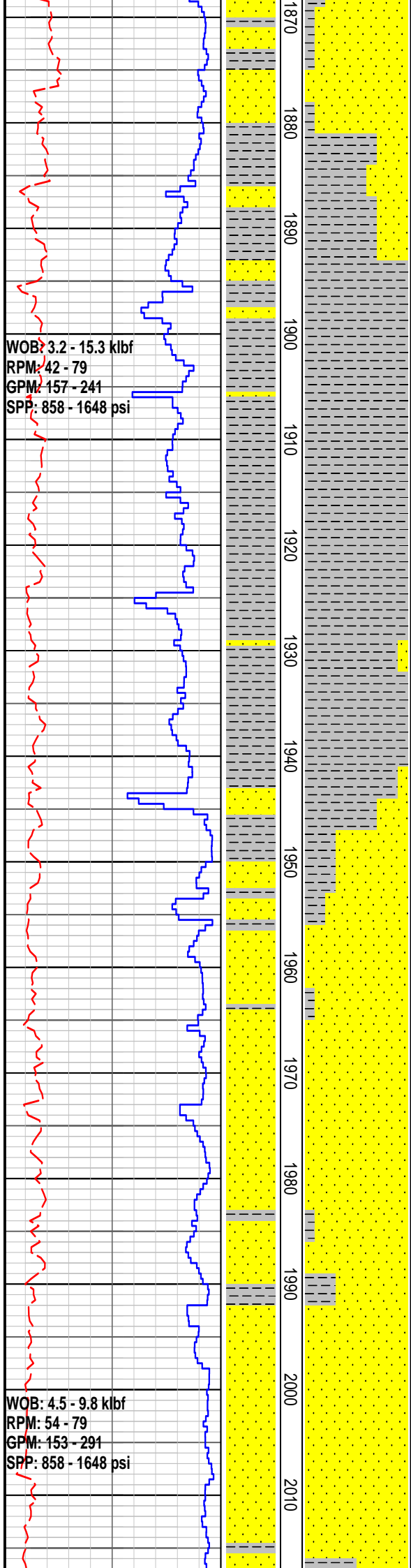
CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grd to argill SLTST i/p, v f aren i/p, tr v f off wh alt fspr gr, tr-com brn-blk carb spks & c detr, tr micrmic, rr calc infilled frac, frm-mod hd, v disp, sli sbfiss

Survey at 1768m
N340degsW
4 degs

CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grd to argill SLTST i/p, v f aren i/p, tr v f off wh alt fspr gr, tr brn-blk carb spks & c detr, tr micrmic, tr calc infilled frac, frm-mod hd, v disp, sbfiss

MW 9.9 FV 44 PV 14 YP 21
Gels 2/4 F 8.0 Ck 1.0 Sol 8.7
pH 9.5 Cl 10.0k

SANDSTONE: lt gn gry-m gn, v f-m, dom f, sbang-sbrnd, mod srted, mod sil cmt, mod calc cmt i/p, com-abd off wh-m gn argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr blk c detr, tr calc infilled frac, fria, fr vis por, no fluor



SANDSTONE: off wh-lt gn gry-lt pk, v f-f, dom f, sbang-sbrnd, mod srtd, strong sil cmt, mod calc cmt i/p, abd off wh-m gn argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, tr qtz gr, tr crs gn brn mic flks, tr blk c detr, tr calc infilled frac, hd, no vis por, no fluor

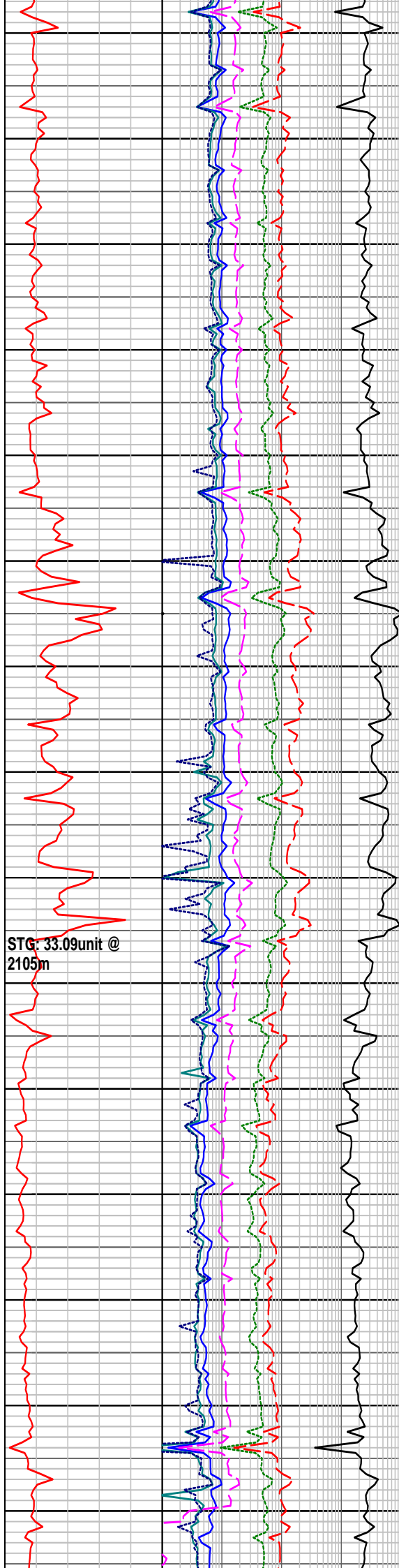
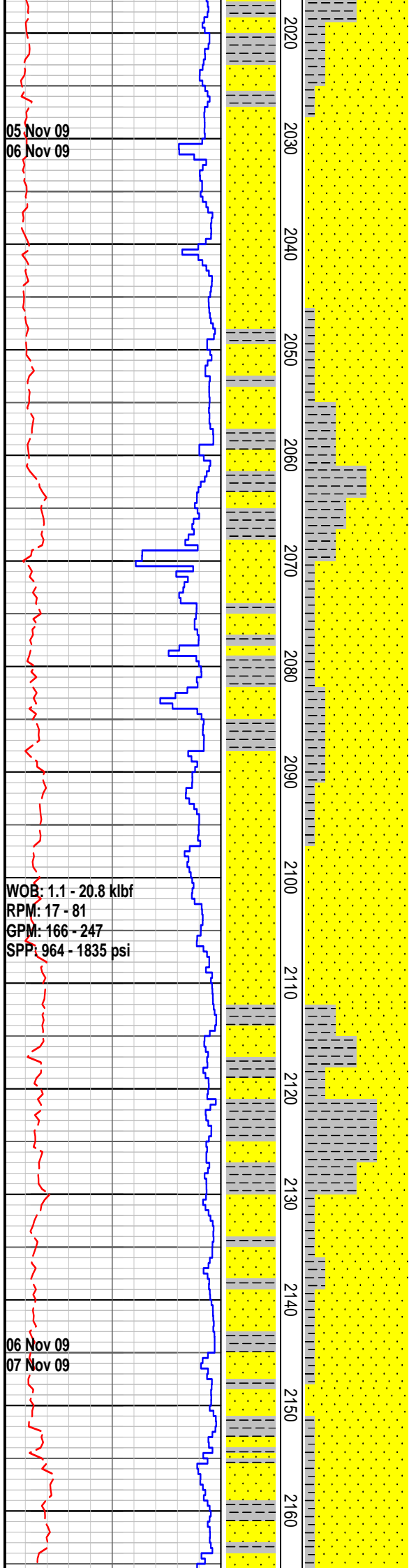
CLAYSTONE: lt-m gn gry, occ m gn gry-m brn gry, mod-v slty grd to argill SLTST i/p, v f aren i/p, tr-com v f off wh alt fspr gr, tr brn-blk carb spks & c detr i/p, tr-com micrmic, rr calc infilled frac, mod hd, v disp, sbfiss

MW 10.0 FV 41 PV 12 YP 18
Gels 3/4 F 8.5 Ck 1.0 Sol 9.6
pH 9.0 CI 10.0k

SANDSTONE: off wh-lt gn gry, v f-m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, mod calc cmt i/p, abd off wh-occ pk argill mtrx, abd wh & occ pk fspr gr, com gn rd brn gry & blk lith, tr qtz gr, tr crs gn brn mic flks, tr blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor

CLAYSTONE: lt-m gry-occ m brn gry, mod-v slty, v f aren i/p, tr-com v f off wh alt fspr gr, tr -com brn-blk carb spks & c detr, tr-com micrmic, tr calc & rd min infilled frac, com slick, mod hd, v disp, sbfiss

MW 9.8 FV 39 PV 13 YP 14
Gels 2/4 F 11.5 Ck 1.0 Sol 8.3
pH 8.5 CI 10.0k



SANDSTONE: off wh-lt gn gry-lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & occ pk fspr gr, com gn rd brn gry & blk lith, 10% qtz gr, tr gn brn mic flks, rr blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor

CLAYSTONE: m gn gry-m gry-m brn gry, mod-v slty, v f aren i/p, tr-com v f off wh alt fspr gr, tr -com brn-blk carb spks & c detr, com micrmic, tr calc & rd min infilled frac, com slick, mod hd, v disp, sbfiss

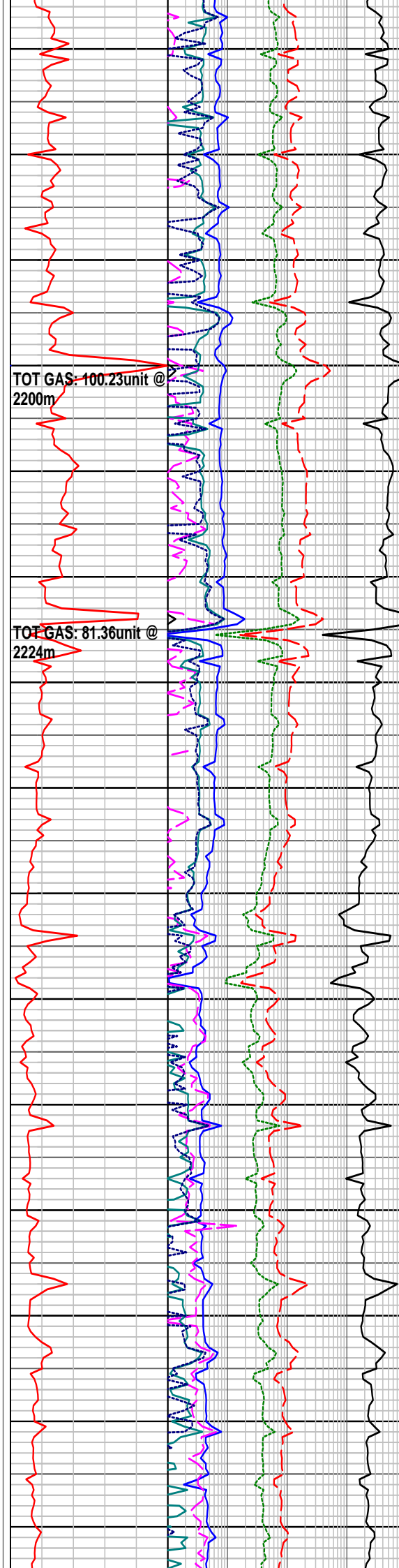
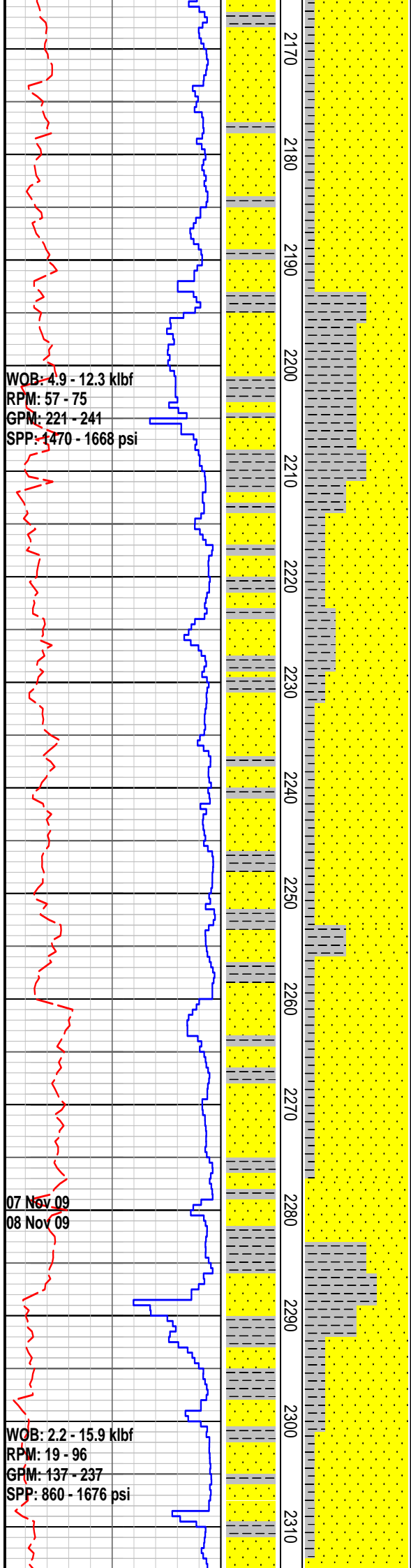
SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, 10% qtz gr, tr gn brn mic flks, com-abd blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor. The COAL has no fluor but gives a mod brt slow stmg-crush milky wh cut fluor

Survey at 2105m
12 degs

CLAYSTONE: m gry, occ m gn gry-m brn gry, mod-v slty, v f aren i/p, tr-com v f off wh alt fspr gr, com brn-blk carb spks & c detr, com micrmic, tr calc infilled frac, com slick, mod hd, v disp, sbfiss

MW 9.4 FV 34 PV 7 YP 14
Gels 3/7 F 25.6 Ck 2.0 Sol 5.6
pH 8.3 Cl 7.0k

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, 10% qtz gr, tr gn brn mic flks, com-abd blk c detr, com calc & rd min vn, hd, no vis intgran por, no fluor



fluor

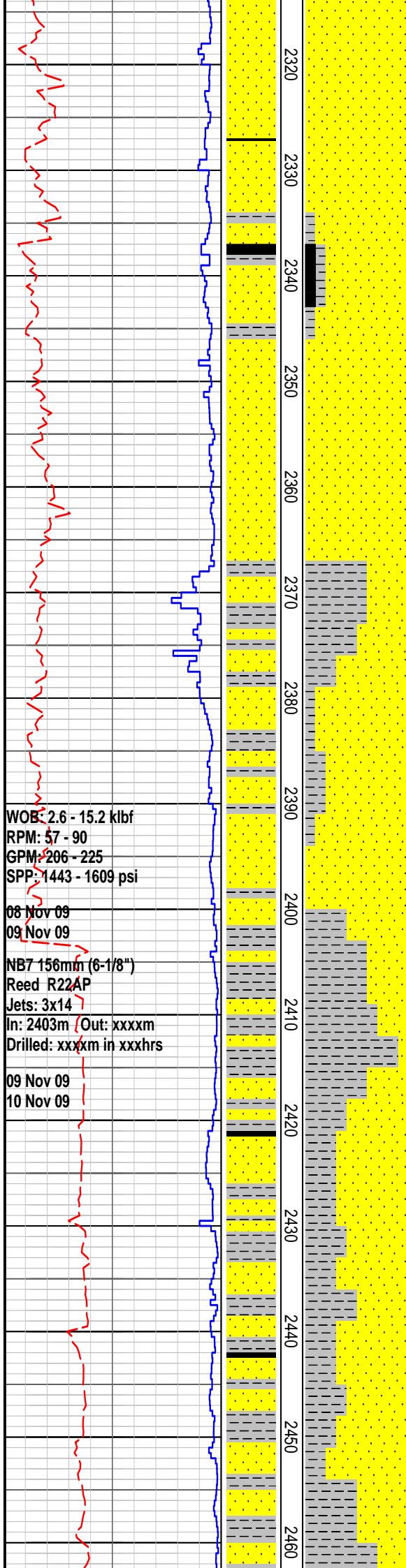
SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, com qtz gr, tr gn brn mic flks, com-abd blk c detr, com calc & rd min vn, hd, no vis intgran por, no fluor

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, com qtz gr, tr gn brn mic flks, com-abd blk c detr, com calc & rd min vn, hd, no vis intgran por, no fluor

Survey at 2235m
N340degSW
18.50 degs

CLAYSTONE: m gry-m gn gry, mod-v slty, v f aren i/p, tr-com v f off wh alt fspr gr, tr brn-blk carb spks & c detr, com micrmic, tr calc & rd min infilled frac, com slick, hd, v disp, sbfiss

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-rr m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, com qtz gr, tr-com blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor



TOT GAS: 80.15unit @
2327m

TG: 51.33unit @ 2403m

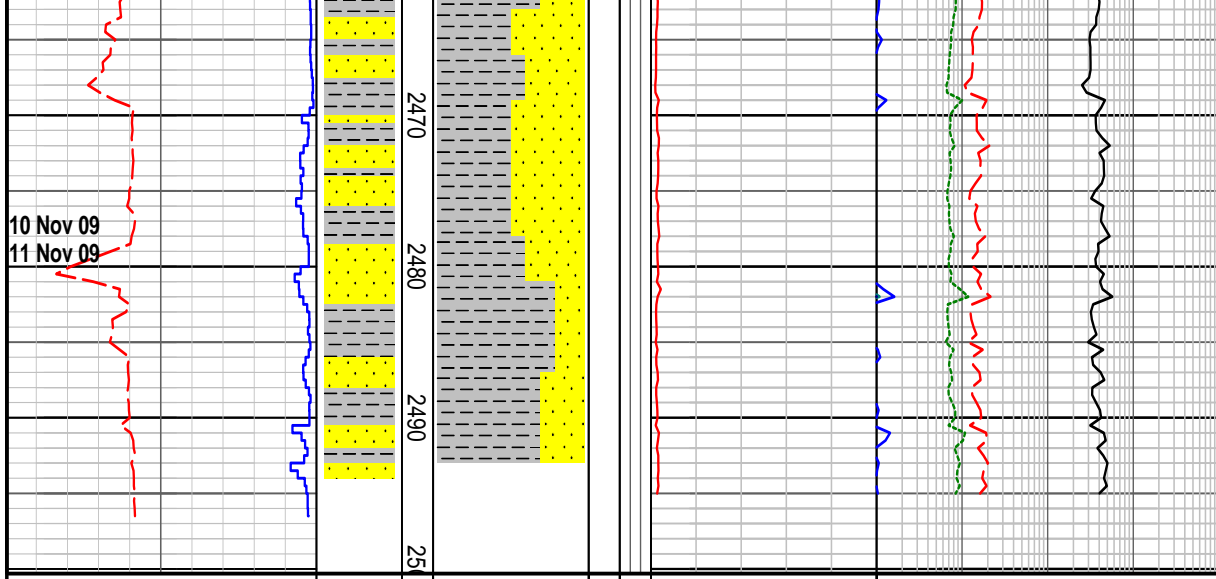
COAL: blk, ea-vit, plty frac, sli argill, hd, brit. The c has no natural fluor but gives a mod brt slow stmg-crush mky wh cut fluor

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-rr m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, com qtz gr, abd blk c detr, tr calc & rd min vn, hd, no vis intgran por, no fluor

CLAYSTONE: m-dk gn gry-m gn gry-m brn gry, mod-v slty-grd to SLTST, tr-abd v f off wh alt fspr gr, com-abd dk brn-blk carb spks & c detr, com micrmic, com slick, mod hd v disp, sbfiss

SANDSTONE: off wh-lt gn gry, v f-rr m, dom f, sbang-sbrnd, mod srtd, strong sil cmt, strong calc cmt i/p, abd off wh argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, tr-com qtz gr, tr blk c detr, tr calc vn, hd, no vis intgran por, no fluor

CLAYSTONE: m-dk gn gry-m gn gry-m brn gry, mod-v slty-grd to SLTST, tr-abd v f off wh alt fspr gr, com-abd dk brn-blk carb spks & c detr, com micrmic, com slick, mod hd v disp, sbfiss w/tr COAL: v dk brn-blk, ea-vit, blk-dom plty frac-slick, sli argill i/p, hd, brit
The COAL has no fluor but gives a mod bri slow strmg-crush mlky wh cut fluor



SANDSTONE: off wh-lt gn gry, v f-rr m, dom f, sbang-sbrnd, mod srtd, v strong sil cmt, mod calc cmt i/p, abd off wh argill mtrx, abd wh fspr gr, com gn rd brn gry & blk lith, tr-com qtz gr, tr blk c detr, tr calc vn, hd, no vis intgran por, no fluor w/tr COAL: v dk brn-blk, ea-vit, blk-dom pty frac-slick, sli arg

FORMATION EVALUATION LOG

RATE OF PENETRATION										REMARKS
ROP (0-100m/hr)										
100	90	80	70	60	50	40	30	20	10	
Backup ROP (100-200m/hr)										
200	190	180	170	160	150	140	130	120	110	
WOB (klb)										
5	10	15	20	25	30	35	40	45	50	