



INTEQ

Company : Lakes Oil N.L.

Well : Wombat-4

Interval : 0.00 - 2407.31 meters

Created : 09/Nov/2009 3:05:51 AM



### FORMATION EVALUATION LOG

RATE OF PENETRATION		MD meters 1:500	LITHOLOGY	CORE	OIL SHOWS	TOTAL GAS		CHROMATOGRAPH				REMARKS										
ROP (0-100m/hr)	Backup ROP (100-200m/hr)					unit	unit	1	1	1	1		1	1								
  						20   40   60   80   100	280   460   640   820   1000	Methane ppm	10000	Ethane ppm	10000	Propane ppm	10000	iso-Butane ppm	10000	n-Butane ppm	10000	iso-Pentane ppm	10000	n-Pentane ppm	10000	
<p>RB1 311mm (12-1/4")            Reed EHP 41KPR            Jets: 3x18            lh: 16m Out: 302m            Drilled: 286m in 5.7hrs</p> <p>17 Oct 09            18 Oct 09</p> <p>WOB: 0.1 - 8.0 klbf            RPM: 80</p>																						
<p>All Depths are Recorded in Meter from RT</p> <p>RT - GL: 3.65m</p> <p>340mm (13-3/8") casing shoe at 15.65mMD</p> <p>SANDSTONE: lt m yel or, v f-crs, dom m, sbang-rnd, pr srt, n cmt, tr yel or arg &amp; slt mtrx, qtz, clr-mky qtz gr w/yel-brn Fe ox stn, tr blk c detr, uncons, v f por, n fluor</p> <p>MW 8.60 FV 42</p> <p>SILTY CLAYSTONE: m gry, abd disp v f-v crs qtz sd gr, v sft, v disp, stky, n fiss</p> <p>SANDSTONE: lt gry, v f-v crs, dom m, sbang-rnd, dom rnd, pr srt, n cmt, com-abd m gry arg &amp; slt mtrx, quartzose w/clr-op qtz gr w/gry brn stn, com gry-blk &amp; brn cht lit, com crs clr detr, uncons, v gd inf por, n fluor</p>																						

GPM: 260 - 332

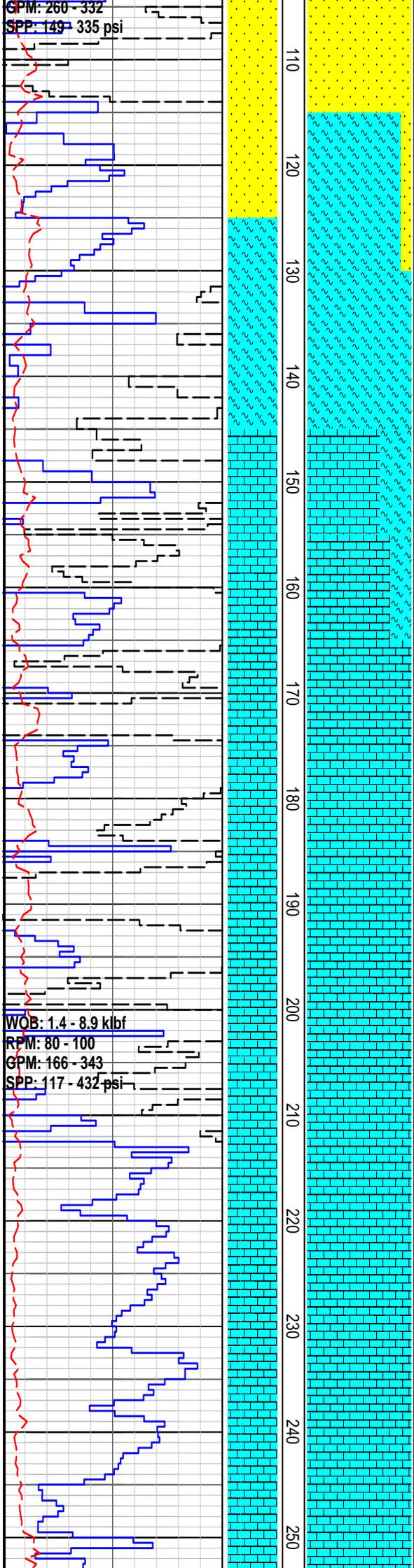
SPP: 149 - 335 psi

WOB: 1.4 - 8.9 kbf

RPM: 80 - 100

GPM: 166 - 343

SPP: 117 - 432 psi



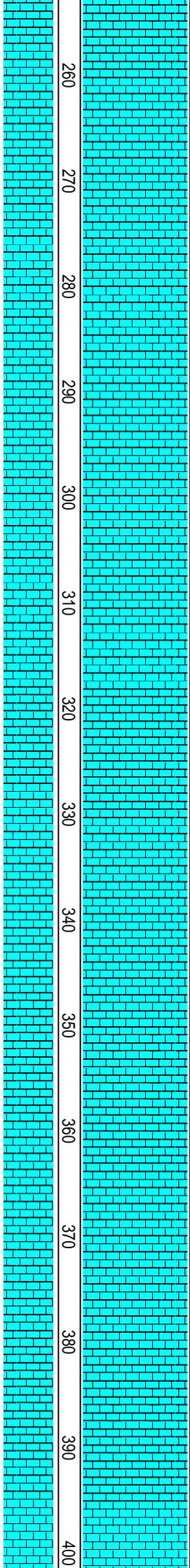
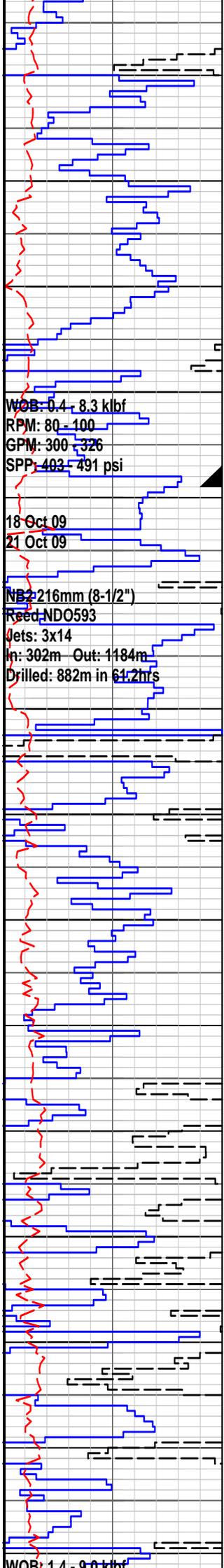
MARL: lt gry-m gry, m gn gry-m brn gry, com-abd foss frags incl bry, shell frags, forams, v sft, v disp, n fiss

CALCARENITE: lt gry-lt brn gry, f-m gr, wk calc cmt, abd foss frag incl bry, forams, shell frags, mod argill, tr-com vf-f qtz gr, rr m gn glauc, p vis por, n fluor

CALCARENITE: lt gry-lt brn gry, f-m gr, wk calc cmt, abd foss frags incl bry, forams, shell frags, mod argill, tr-com v f-f qtz gr, rr m gn glauc, p vis por, n fluor

MW 9.20 FV 48 PV 10 YP 23  
Gels 5/7 F n/c Ck - Sol 6.1  
pH 10.0 Cl 1100

CALCARENITE: lt gry-lt brn gry, f-m gr, wk calc cmt, abd foss frags incl bry, forams, shell frags, mod argill, tr-com v f-f qtz gr, rr m gn glauc, p vis por, n fluor



**CALCARENITE:** lt gry-lt brn gry, rr lt gn gry, f-m gr, wk calc cmt, abd foss frags incl bry, forams, shell frags, sli argill, rr v f-f Qtz gr, rr m gn glauc, p vis por, n fluor

244mm (9-5/8") casing shoe at 299mMD

TG: 0.04unit @ 302m

Formation L.O.T. @ 305m  
 MW: 8.4ppg EMW: 12.8ppg

**CALCARENITE:** lt gry-lt brn gry, rr lt gn gry, f-m gr, wk calc cmt, abd bry, forams, shell frags, mod argill, rr-cm v f-f Qtz gr, tr gn glauc gn glauc, p vis por, n fluor

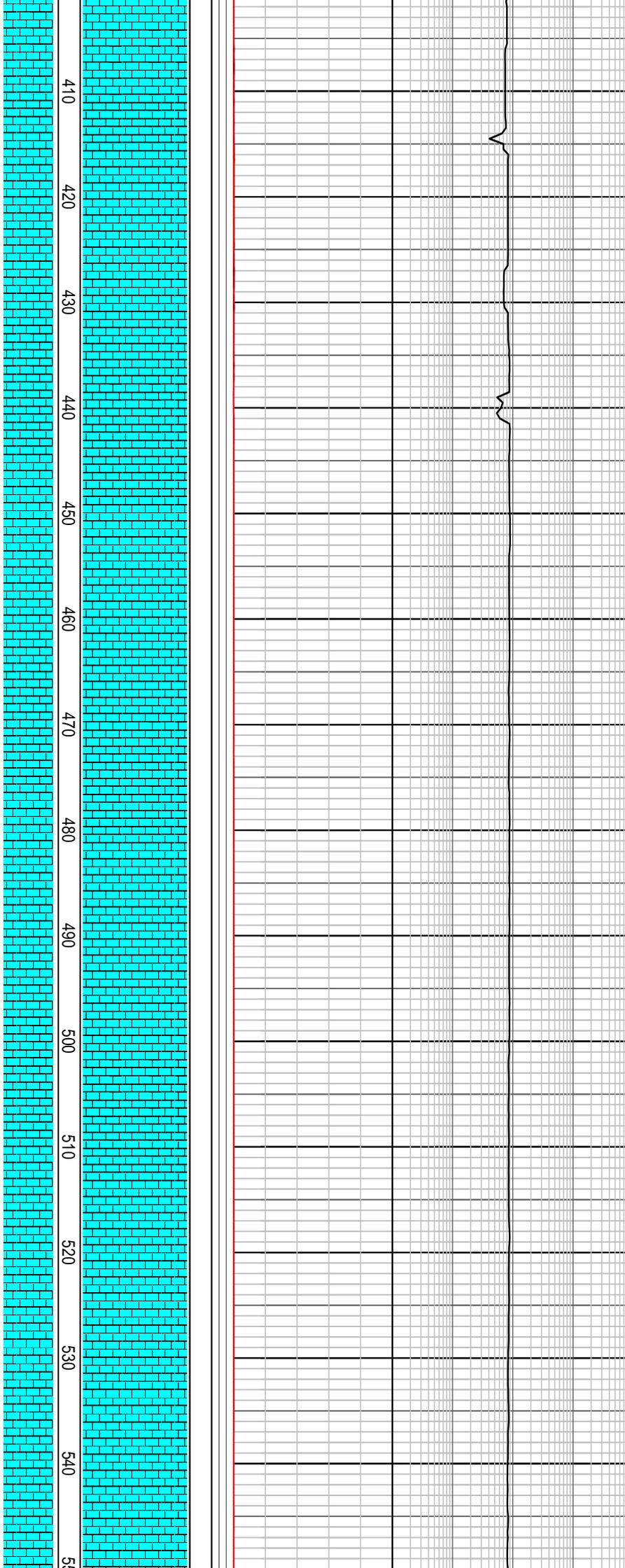
MW 9.50 FV 54 PV 16 YP 21  
 Gels 7/9 F n/c Ck - Sol 8.2  
 pH 10.0 Cl 1100

**CALCARENITE:** lt gry-lt brn gry, rr lt gn gry, f-m gr, wk calc cmt, abd bry, forams, shell frags, mod argill, rr v f-f Qtz gr, tr gn glauc, p vis por, n fluor

MW 8.70 FV 43 PV 9 YP 18  
 Gels 2/4 F 11.9 Ck 1.0 Sol 1.5  
 pH 10.0 Cl 15.0k

WOB: 1.4 - 12.0 klf  
RPM: 80 - 120  
GPM: 213 - 310  
SPP: 165 - 598 psi

WOB: 1.4 - 12.0 klf  
RPM: 80 - 120  
GPM: 203 - 362  
SPP: 311 - 798 psi



CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-mod strong calc cmt, abd bry, forams, shell frags, mod argill, rr v f-f qtz gr, tr gn glauc, p vis por, n fluor

CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-mod strong calc cmt, abd bry, forams, shell frags, n-mod argill, rr v f-f qtz gr, tr gn glauc, p vis por, n fluor

Survey at 472m  
N25degsE  
2 degs

CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-mod strong calc cmt, abd bry, forams, shell frags, mod argill, rr v f-f qtz gr, tr gn glauc, p vis por, n fluor

MW 8.90 FV 43 PV 11 YP 19  
Gels 4/6 F 11.1 Ck 1.0 Sol 3.0  
pH 9.5 Cl 17.0k

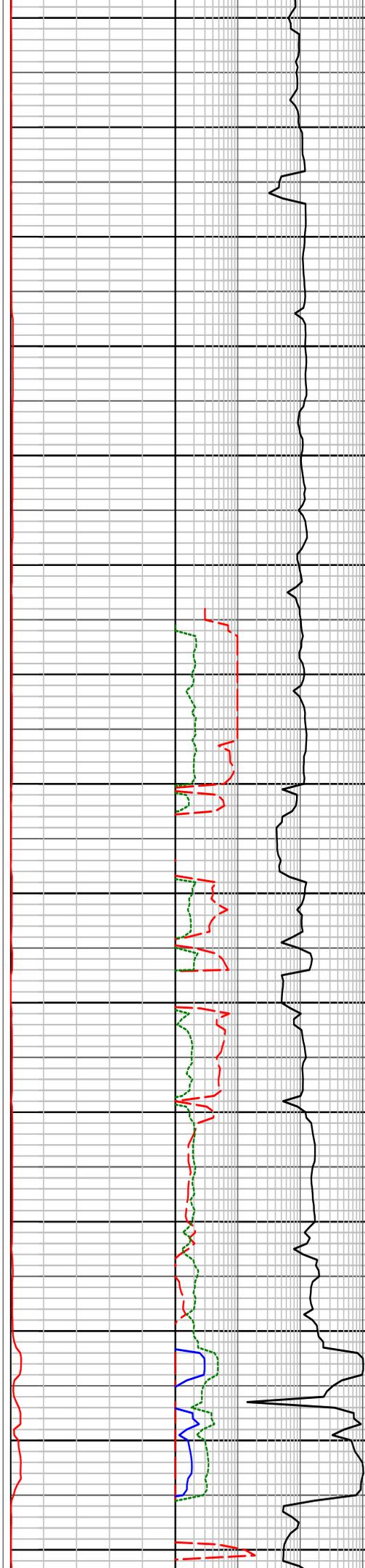
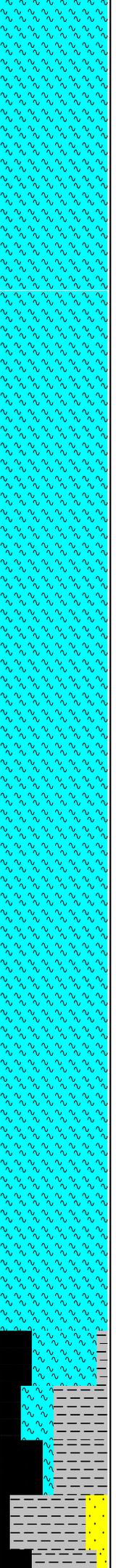


WOB: 5.0 - 14.0 klbf  
RPM: 80 - 128  
GPM: 187 - 379  
SPP: 278 - 978 psi

22 Oct 09  
23 Oct 09

WOB: 3.0 - 15.0 klbf  
RPM: 50 - 116  
GPM: 104 - 320  
SPP: 420 - 940 psi

700  
710  
720  
730  
740  
750  
760  
770  
780  
790  
800  
810  
820  
830  
840



Run Carbide at 699m  
MW: 9.0ppg Vis: 41  
Average hole size: 8.90inch

MARL: v lt-m gry-gn gry-brn gry, occ  
lt-m brn gry, mod-v calc, tr foss frags,  
sft, stky, n fiss

MW 9.05 FV 42 PV 9 YP 21  
Gels 3/5 F 10.6 Ck 1.0 Sol 3.9  
pH 9.5 Cl 19.0k

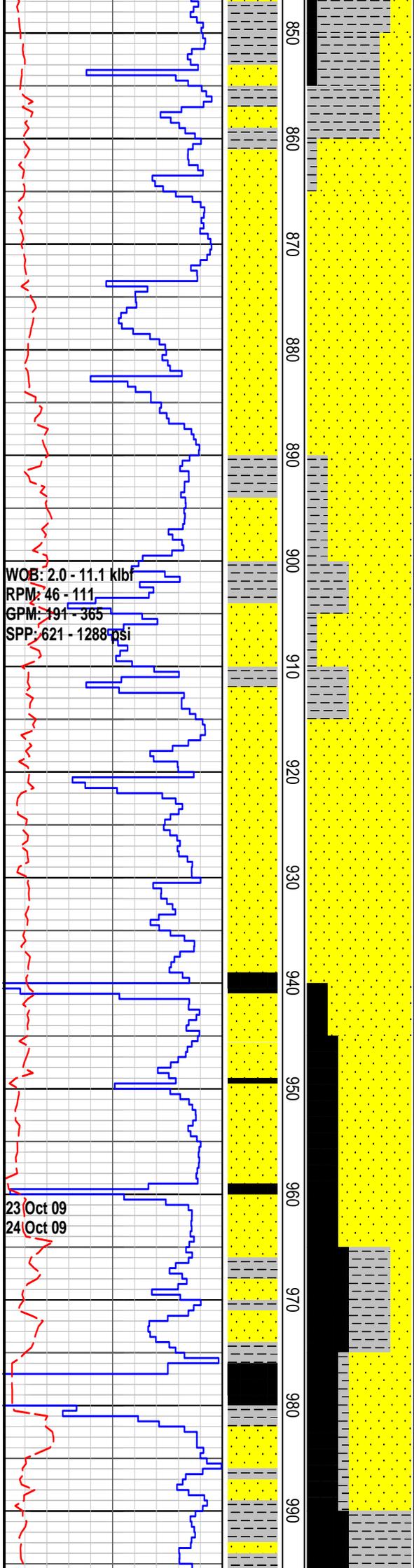
MARL: lt-m gn gry-lt m gry, mod-v  
calc, tr foss frags, sft, stky, n fiss

MARL: lt-m gn gry-lt m gry, mod-v  
calc, tr foss frags, sft, tr glauc, stky, n  
fiss

COAL: m brn-blk, irreg-blky frac, ea  
lstr, sli-dom v argil, frm-mod hd

MW 9.5 FV 43 PV 10 YP 20  
Gels 3/5 F 10.4 Ck 1.0 Sol 5.0  
pH 9.0 Cl 21.0k

SANDSTONE: lt-m brn, vf-m gr, dom  
vf, ang-sbrnd, p-mod srtd, v wk sil  
cmt, abd lt brn argil & slt mtrx,  
quartzose w/cr-opq qtz gr, tr crs clr  
mic flks, tr blk c detr, rr pyr, fri, v p inf  
por, n fluor



CLAYSTONE: lt-dk brn, dom m brn, slt sly and f aren i/p, v sli-mod carb, tr blk coal flk, tr amber, sft, v disp, n fiss

SANDSTONE: lt brn gry, vf-v crs, dom m-crs, sbang-rnd, p-mod srtd, wk sil cmt, tr-com lt brn argill & slt mtrx, quartzose w/cr-op qtz gr w/mnr brn stn, tr gr gry & blk cht lit, tr blk c detr, fri, gd-v gd inf por, n fluor

CLAYSTONE: lt-dk brn, dom m brn, slt sly and f aren i/p, v sli-mod carb, tr blk coal flk, tr amb, sft, v disp, n fiss

Survey at 917m  
 N50degsE  
 3 degs

SANDSTONE: lt brn gry, vf-v crs, dom m-crs, sbang-rnd, p srtd, wk sil cmt, tr-com lt brn argill & slt mtrx, quartzose w/cr-op qtz gr w/mnr brn stn, tr gr gry & blk cht lit, tr blk c detr, fri, gd-v gd inf por, n fluor

MW 9.7 FV 41 PV 10 YP 19  
 Gels 3/5 F 9.8 Ck 1.0 Sol 6.9  
 pH 9.0 Cl 21.0k

CLAYSTONE: m-dk brn, sli slty & f aren i/p, mod-v carb, tr blk c flks, sft, v disp, n fiss

COAL: m brn-blk, irr-blky frac, ea lstr, sli-dom v argill, tr amb, frm-mod hd

WOB: 0.5 - 11.9 klf  
RPM: 14 - 141  
GPM: 150 - 355  
SPP: 364 - 1233 psi

WOB: 0.5 - 9.1 klf  
RPM: 31 - 121  
GPM: 215 - 332  
SPP: 287 - 1234 psi

24 Oct 09  
25 Oct 09

1000  
1010  
1020  
1030  
1040  
1050  
1060  
1070  
1080  
1090  
1100  
1110  
1120  
1130  
1140

CLAYSTONE: m-dk brn, sli slty & i  
aren, mod-v carb, tr blk c flks, sft, v  
disp, n fiss

COAL: m brn-blk, irr-blky frac, ea lstr,  
sli-dom v argill, tr amb, frm-mod hd

COAL: m brn-blk, irr-blky frac, ea lstr,  
sli-dom v argill, tr amb, frm-mod hd

Survey at 1079m  
N88degsE  
3 degs

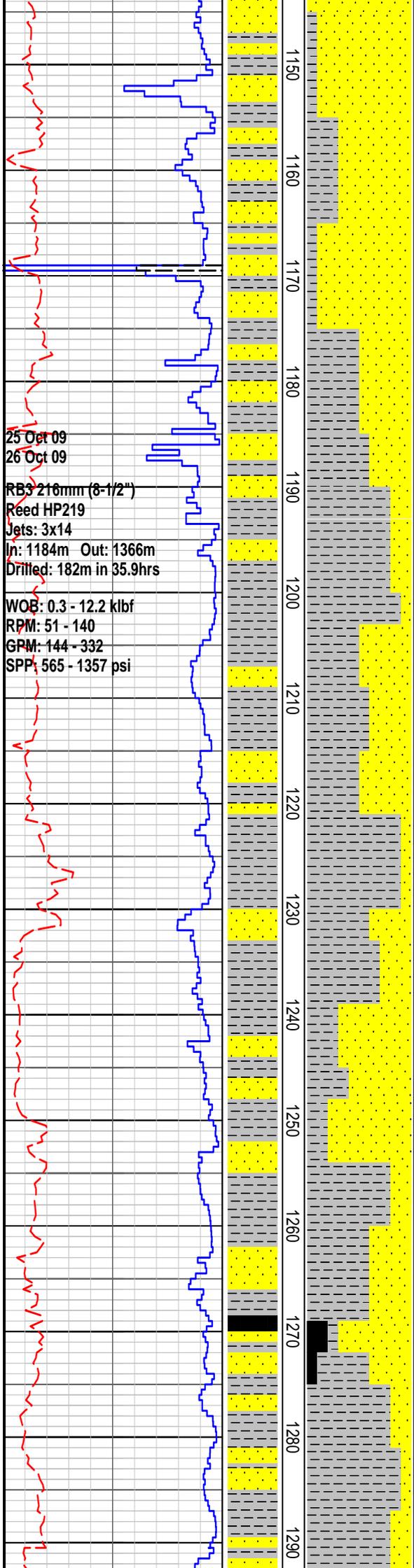
SANDSTONE: lt brn gry, vf-pbl, dom  
m-crs, sbang-rnd, v p srted, wk sil cmt,  
com lt brn argill & slt mtrx, qtz  
w/cr-op quartzose gr w/mnr or brn  
stn, tr gn gry & blk cht lith, tr-com blk  
c detr, fri, g inf por, n fluor

COAL: m brn-dom blk, irr-blky frac,  
ea-sbvit lstr, sli-v argill, tr amb, mod  
hd. The Coal has no natural fluor but  
gives a wk dull lt yel rn crsh cut fluor  
The amb has mod bri sol lt-m yel  
natural fluor and gives a wk v slo  
strmg lt yell cut fluor

MW 9.75 FV 42 PV 9 YP 20  
Gels 3/6 F 9.4 Ck 1.0 Sol 5.9  
pH 8.5 Cl 18.0k

MW 10.1 FV 47 PV 16 YP 23  
Gels 4/6 F 8.0 Ck 1.0 Sol 8.8  
pH 8.5 Cl 20.0k

SANDSTONE: v lt gry-lt brn gy, v f-gt,  
dom m-crs, ang-sbrnd, v p srted, wk sil  
cmt, com wh-lt brn argill & slt mtrx,  
quartzose w/cr-op qtz gr, tr gn gry  
& blk cht lith, tr-com blk c detr, fri, gd  
inf por, no fluor



TG: 0.82unit @ 1184m

CLAYSTONE: wh-m brn, v slit & 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  
 & slit 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 slit & 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,  
 blk-ly-sbconch frac, ea-sli sbvit lstr,  
 sli-m argill, mod hd

WOB: 2.3 - 16.0 kJbf  
RRM: 50 - 158  
GPM: 165 - 394  
SPP: 950 - 1345 psi

26 Oct 09  
27 Oct 09

RB4 216mm (8-1/2")  
Reed TD43 AKP3  
Jets: 3x14  
In: 1366m Out: 1378m  
Drilled: 12.0m in 1.3hrs

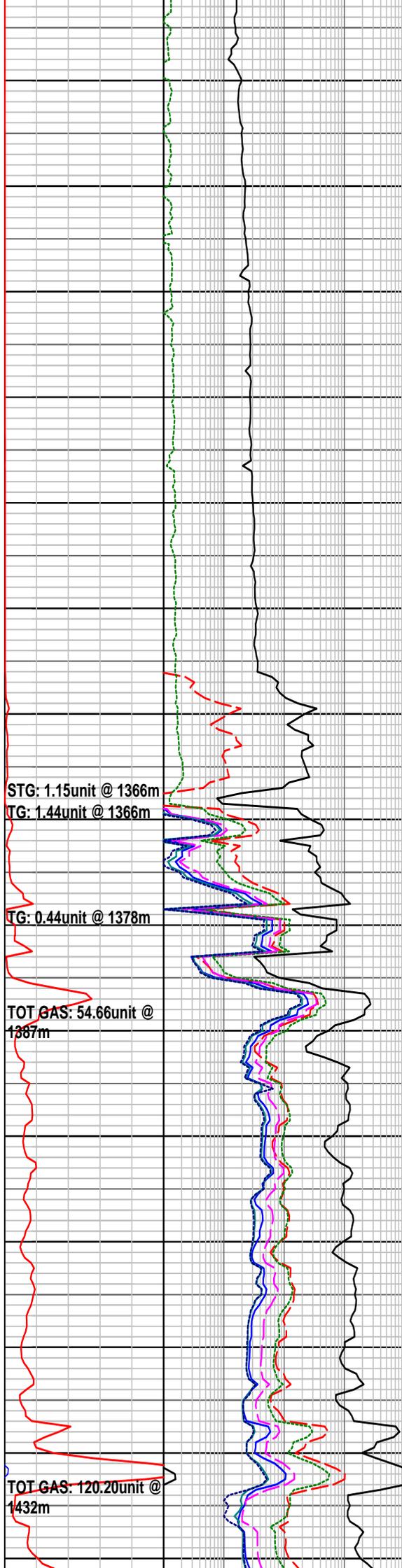
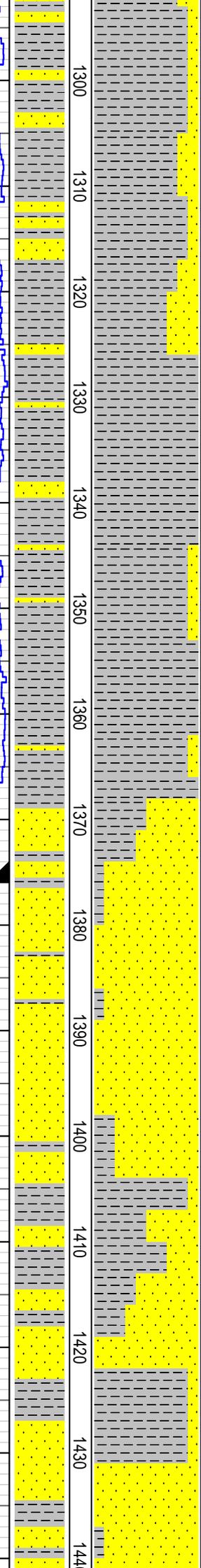
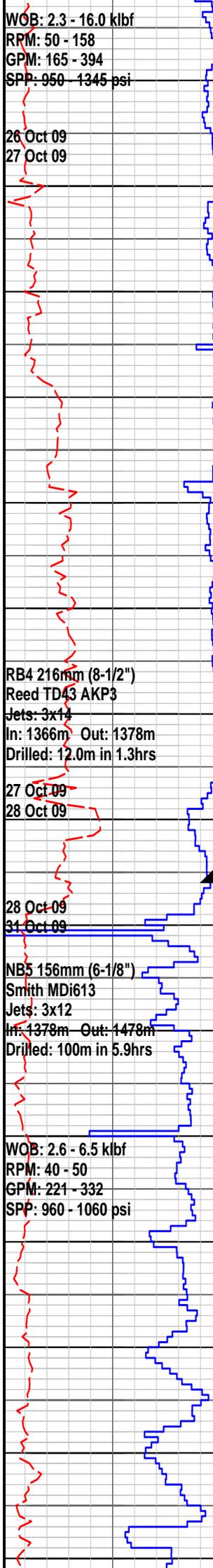
27 Oct 09  
28 Oct 09

28 Oct 09  
31 Oct 09

NB5 156mm (6-1/8")  
Smith MDi613  
Jets: 3x12  
In: 1378m Out: 1478m  
Drilled: 100m in 5.9hrs

WOB: 2.6 - 6.5 kJbf  
RPM: 40 - 50  
GPM: 221 - 332  
SPP: 960 - 1060 psi

1300  
1310  
1320  
1330  
1340  
1350  
1360  
1370  
1380  
1390  
1400  
1410  
1420  
1430  
1440



STG: 1.15unit @ 1366m  
TG: 1.44unit @ 1366m

TG: 0.44unit @ 1378m

TOT GAS: 54.66unit @ 1387m

TOT GAS: 120.20unit @ 1432m

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 srted, 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

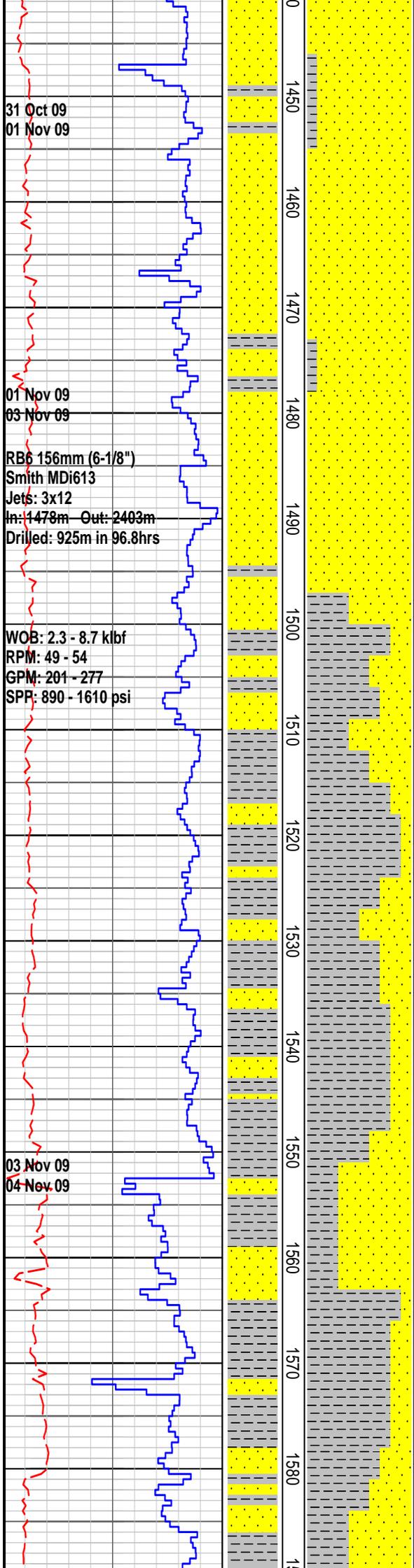
178mm (7") casing shoe  
at 1376mMD

SANDSTONE: lt gry, vf-f, occ m, dom f, sbang-sbrnd, mod srted, 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 slty, tr v f off wh 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 Cl 16.8k



31 Oct 09  
01 Nov 09

01 Nov 09  
03 Nov 09

RB6 156mm (6-1/8")  
Smith MDi613  
Jets: 3x12  
In: 1478m Out: 2403m  
Drilled: 925m in 96.8hrs

WOB: 2.3 - 8.7 kbf  
RPM: 49 - 54  
GPM: 201 - 277  
SPP: 890 - 1610 psi

03 Nov 09  
04 Nov 09

TOT GAS: 153.29unit @  
1456m

TOT GAS: 96.09unit @  
1471m

TG: 802.43unit @  
1478m

TOT GAS: 75.97unit @  
1498m

TOT GAS: 122.61unit @  
1561m

TOT GAS: 139.76unit @  
1585m

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 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, rr pyr, fria, v p vis por, no fluor

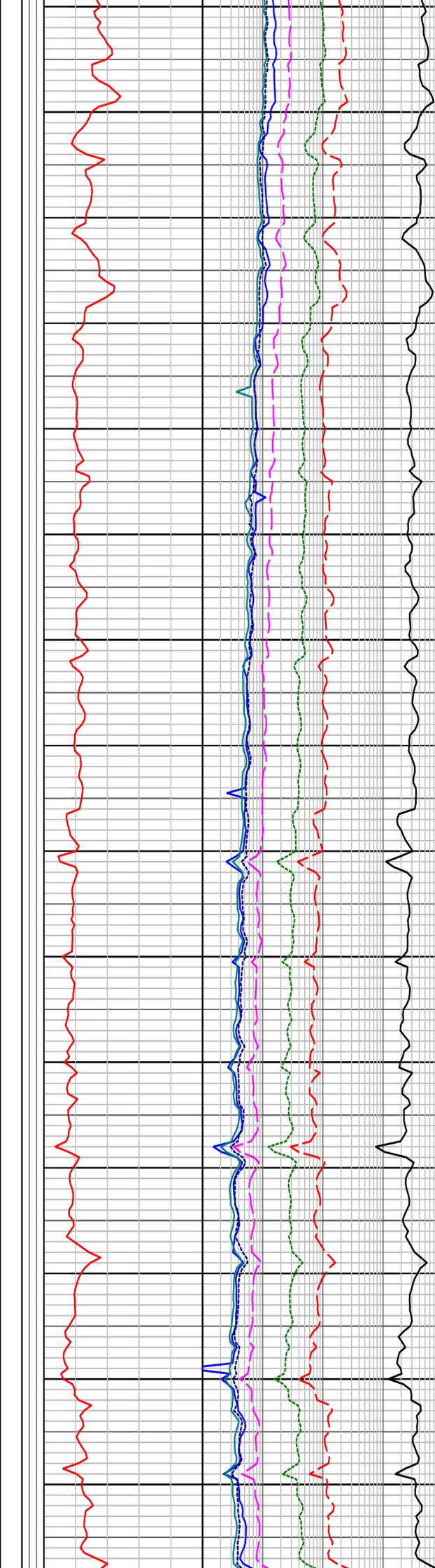
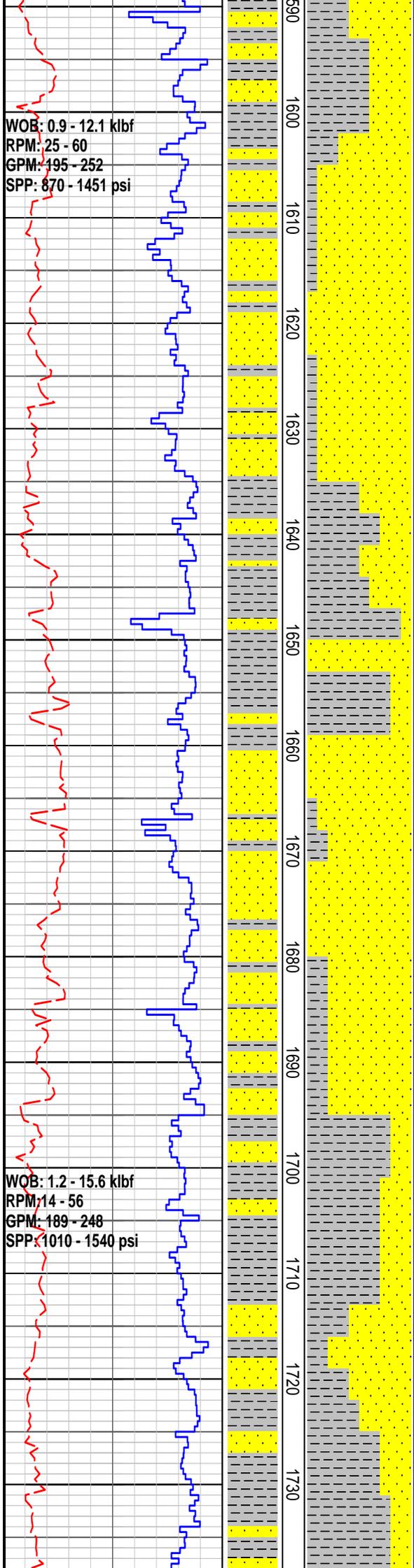
CLAYSTONE: lt-m brn gry-m gry-occ m gn gry, v slty i/p grdg to argill SLTST, v f aren i/p, tr v f off wh alt fspr gr, tr-com brn-blk carb spks, tr micrmic, frm, v disp, sli sbfiss

MW 9.8 FV 46 PV 15 YP 22  
Gels 5/7 F N/A Ck 28 Sol 7.8  
pH 9.5 Cl 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 Cl 12.0k

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

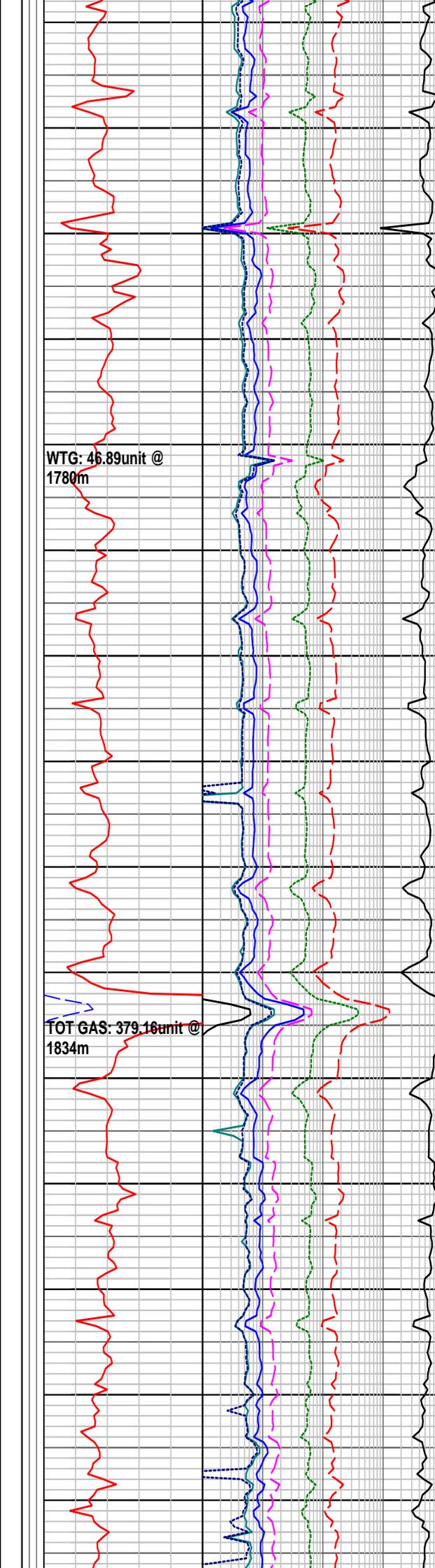
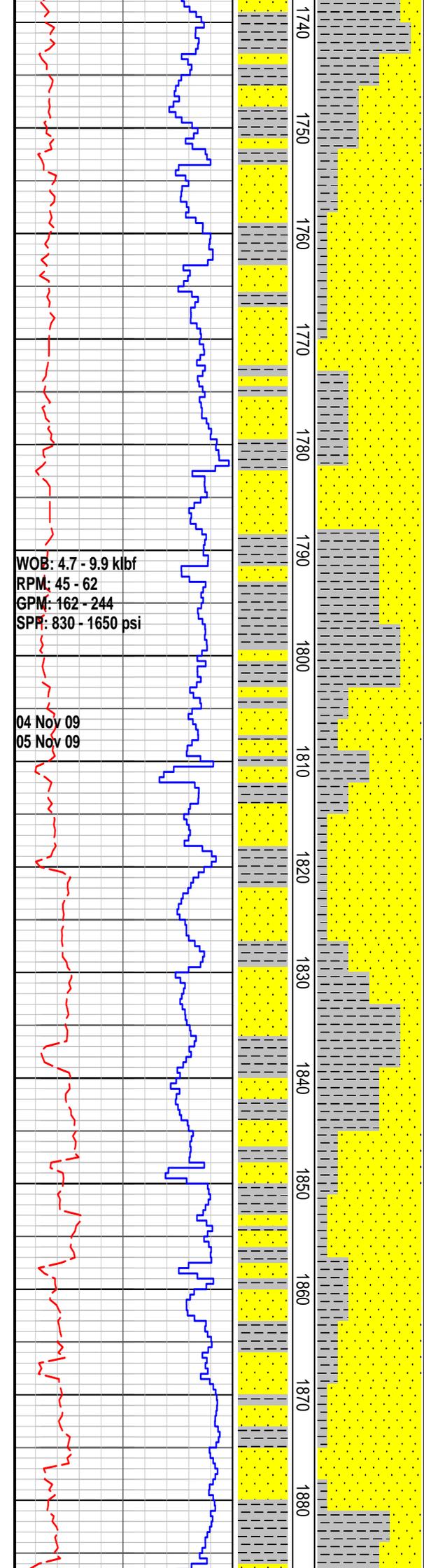
**SANDSTONE:** lt gn gry, v f-m, dom m,  
 sbang-sbrnd, mod srtd, mod sil cmt,  
 wk calc cmt i/p, abd off wh argill mtrx,  
 abd alt fspr gr & rd brn gry & gn lith,  
 com qtz gr, tr crs brn mic flks, tr blk c  
 detr, fria, no vis por, no fluor

**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 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



CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v silty 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 micmic, rr calc infilled frac, frm-mod hd, v disp, sli sbfiss

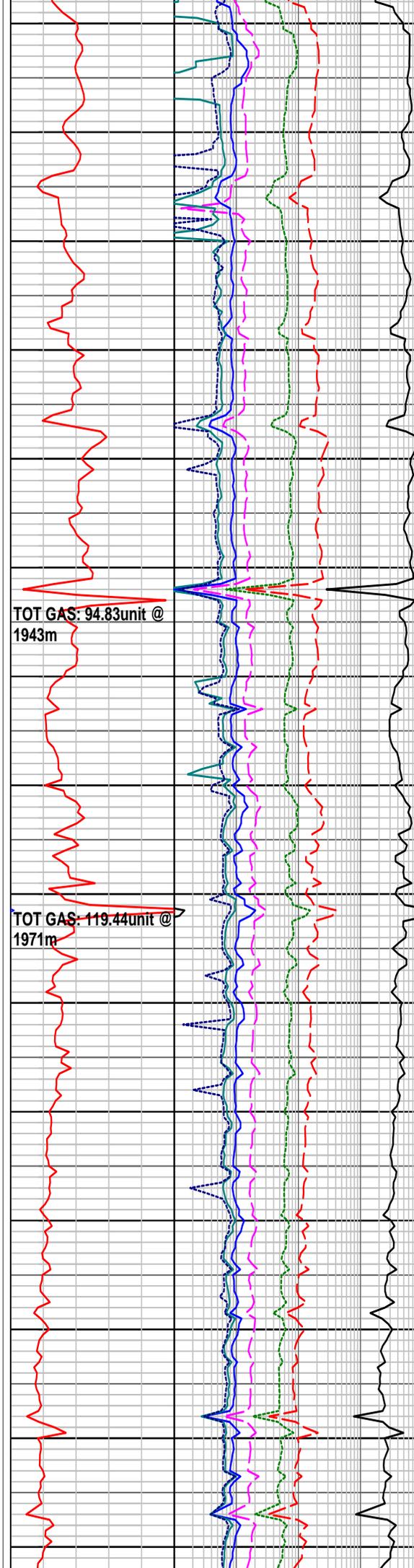
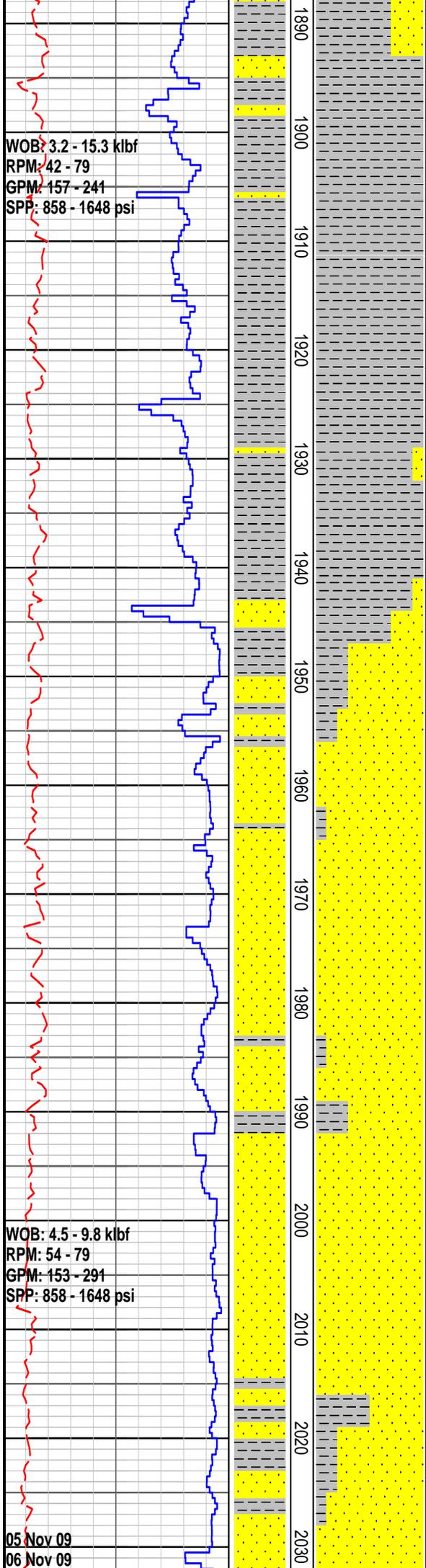
Survey at 1768m  
 N340degsW  
 4 degs

CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v silty 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 micmic, 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 srtd, 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 micmic, rr calc infilled frac, mod hd, v disp, sbfiss

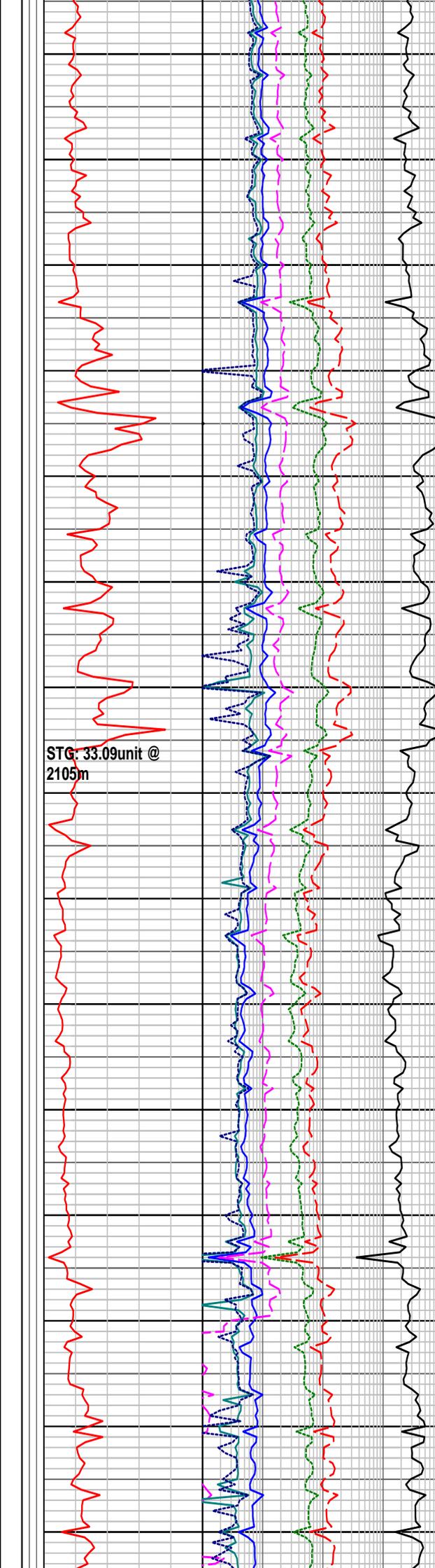
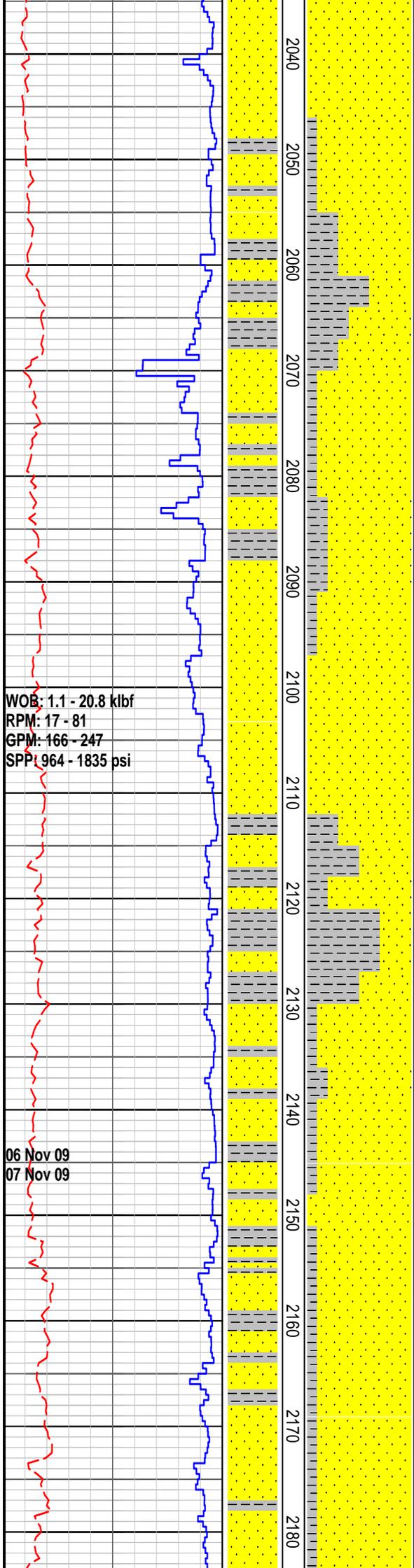
MW 10.0 FV 41 PV 12 YP 18  
 Gels 3/4 F 8.5 Ck 1.0 Sol 9.6  
 pH 9.0 CI 10.0k

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 micmic, 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



mod srted, 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 srted, 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 c has no fluor but gives a mod brt slow stmg-crush milky wh cu 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 srted, 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

WOB: 4.9 - 12.3 klbf  
RPM: 57 - 75  
GPM: 221 - 241  
SPP: 1470 - 1668 psi

07 Nov 09  
08 Nov 09

WOB: 2.2 - 15.9 klbf  
RPM: 19 - 96  
GPM: 137 - 237  
SPP: 860 - 1676 psi

2190  
2200  
2210  
2220  
2230  
2240  
2250  
2260  
2270  
2280  
2290  
2300  
2310  
2320  
2330

TOT GAS: 100.23unit @  
2200m

TOT GAS: 81.36unit @  
2224m

TOT GAS: 80.15unit @  
2327m

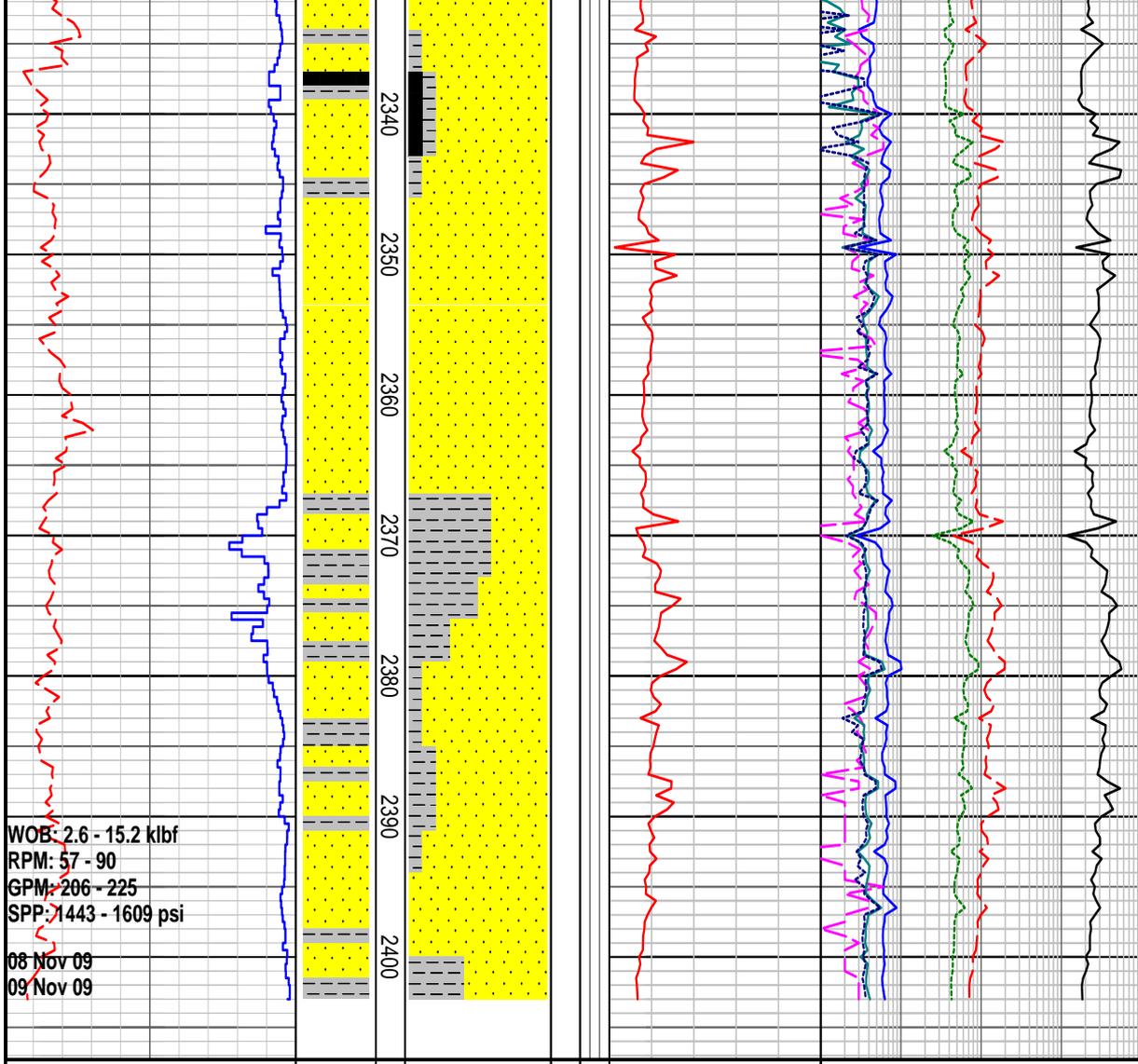
SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srted, strong sil cmt, strong calc cmt i/p, abd off wh & tr pk argill mtrx, abd wh & pk fspr gr, com gn rd brn gry & blk lith, com qtz gr, tr gn brn mic flks, com-abd blk c detr, com calc & rd min vn, hd, no vis intgran por, no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

SANDSTONE: off wh-lt gn gry, lt pk gry, v f-occ m, dom f, sbang-sbrnd, mod srted, 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 srted, 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



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

WOB: 2.6 - 15.2 klbf  
 RPM: 57 - 90  
 GPM: 206 - 225  
 SPP: 1443 - 1609 psi  
 08 Nov 09  
 09 Nov 09

**FORMATION EVALUATION LOG**

RATE OF PENETRATION		MD meters 1:500	LITHOLOGY	OIL SHOWS CORE	TOTAL GAS	CHROMATOGRAPH				REMARKS
ROP (0-100m/hr)	WOB (klb)					1	Methane ppm	10000	1	
100   90   80   70   60   50   40   30   20   10	5   10   15   20   25   30   35   40   45   50				20   40   60   80   100 unit	1	Propane ppm	10000		
Backup ROP (100-200m/hr)					280   460   640   820   1000 unit	1	iso-Butane ppm	10000		
						1	n-Butane ppm	10000		
						1	iso-Pentane ppm	10000		
							n-Pentane ppm	10000		
							10   100   1000   10000			