BAKER HUGHES
INTEQ

Company : Lakes Oil N.L.
Well : Wombat-4
Interval : -17.00 - 2510.66 meters
Created : 30/Nov/2009 2:23:25 AM

FORMATION EVALUATION LOG

RATE OF PENETRATION
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

INTERPRETED LITHOLOGY

MD meters 1:500

LITHOLOGY

CORE

OIL SHOWS

TOTAL GAS
TOTAL GAS
20 40 60 80 100
unit
BACKUP TOTAL GAS
280 460 640 820 1000
unit

CHROMATOGRAPH
Methane ppm 1 10000
Ethane ppm 1 10000
Propane ppm 1 10000
iso-Butane ppm 1 10000
n-Butane ppm 1 10000
iso-Pentane ppm 1 10000
n-Pentane ppm
10 100 1000 10000

REMARKS

-10 0 10 20 30 40 50 60 70

RB1 311mm (12-1/4")
Reed EHP 41KPR
Jets: 3x18
In: 16m Out: 302m
Drilled: 286m in 5.7hrs

17 Oct 09
18 Oct 09

All Depths are Recorded in Meter from RT

RT - GL: 3.65m

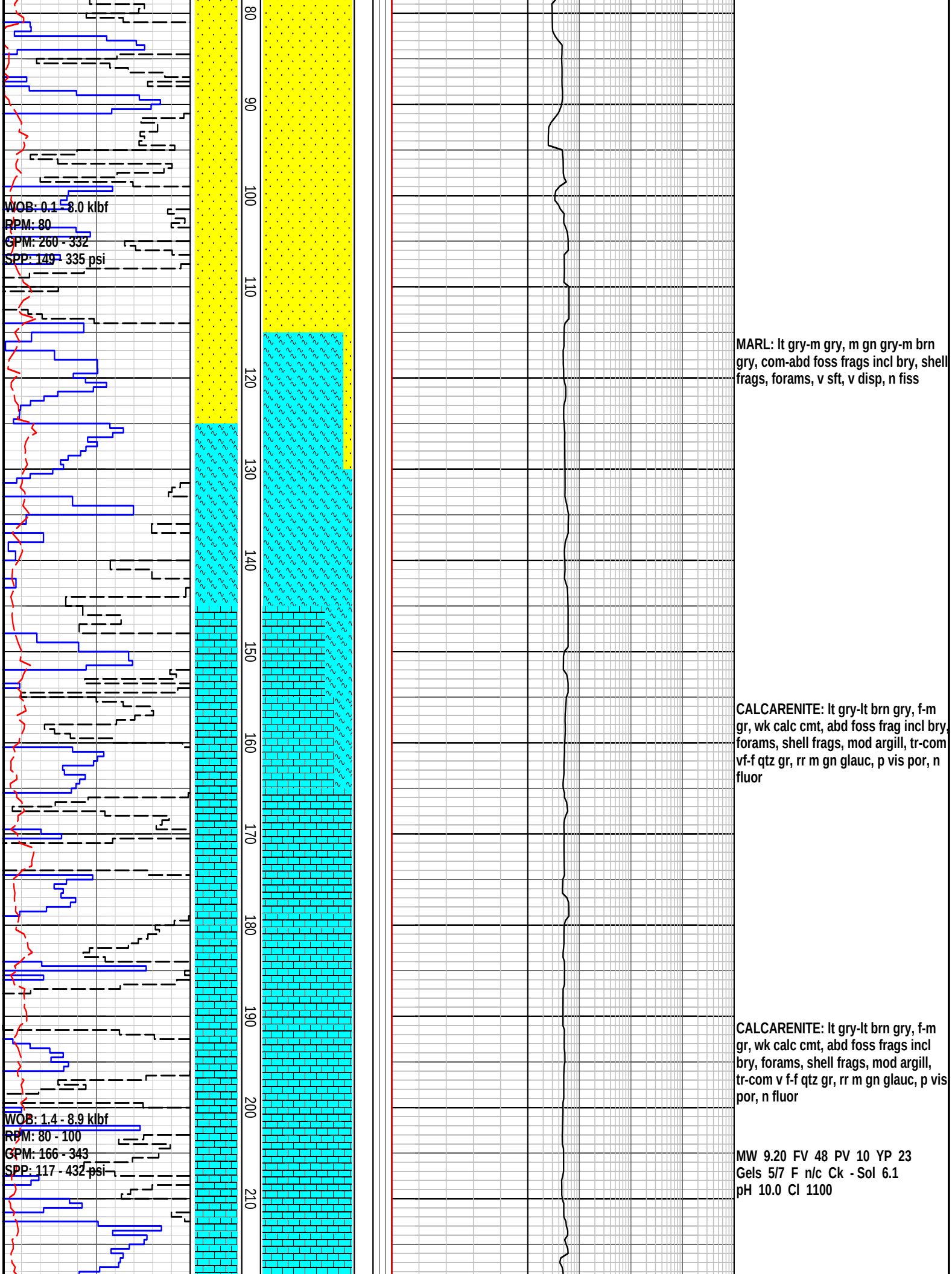
340mm (13-3/8") casing shoe at 15.65mMD

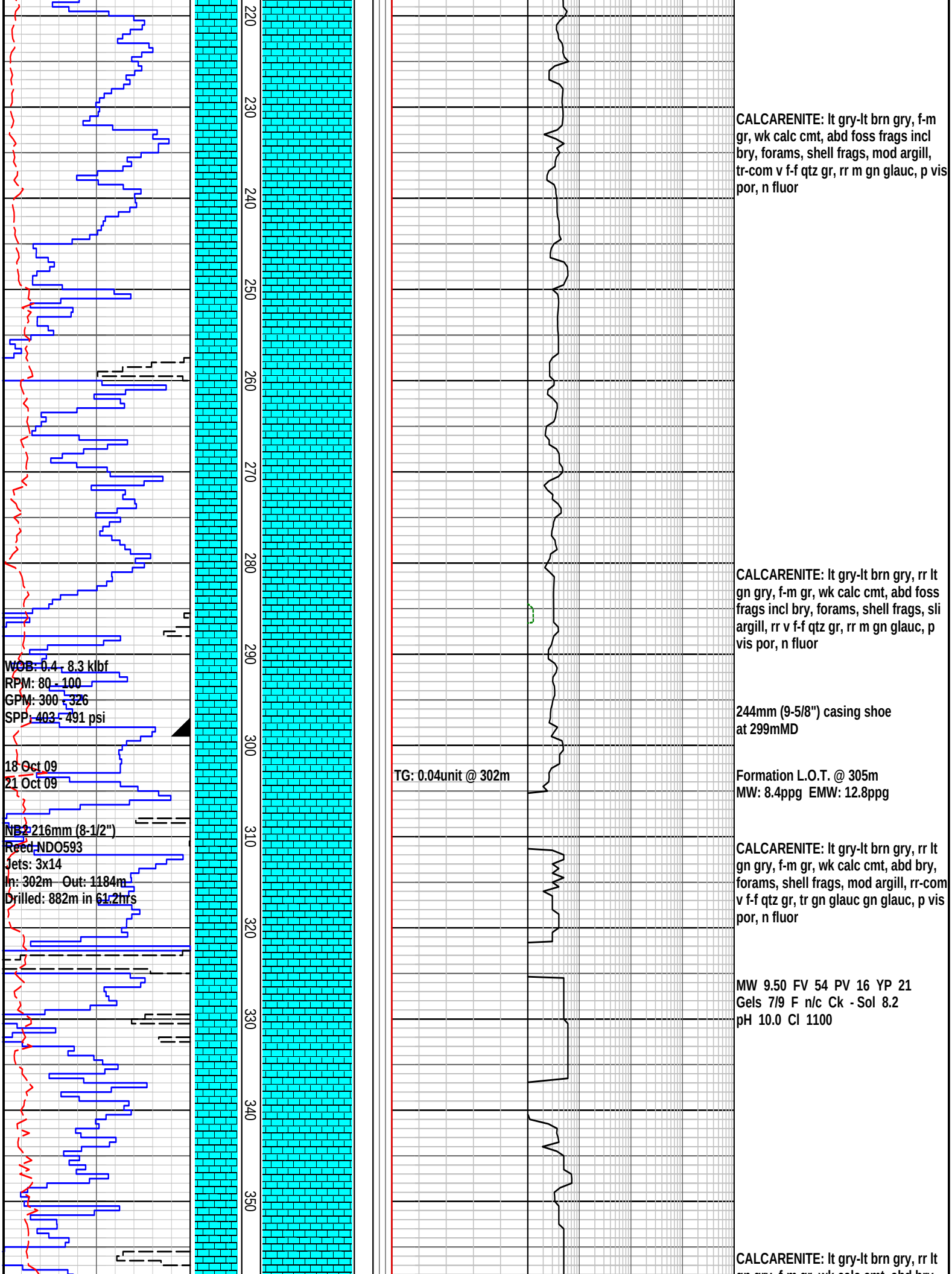
SANDSTONE: lt m yel or, v f-crs, dom m, sbang-rnd, pr srt, n cmt, tr yel or arg & slt mtrx, qtz, clr-mky qtz gr w/yel-brn Fe ox stn, tr blk c detr, uncons, v f por, n fluor

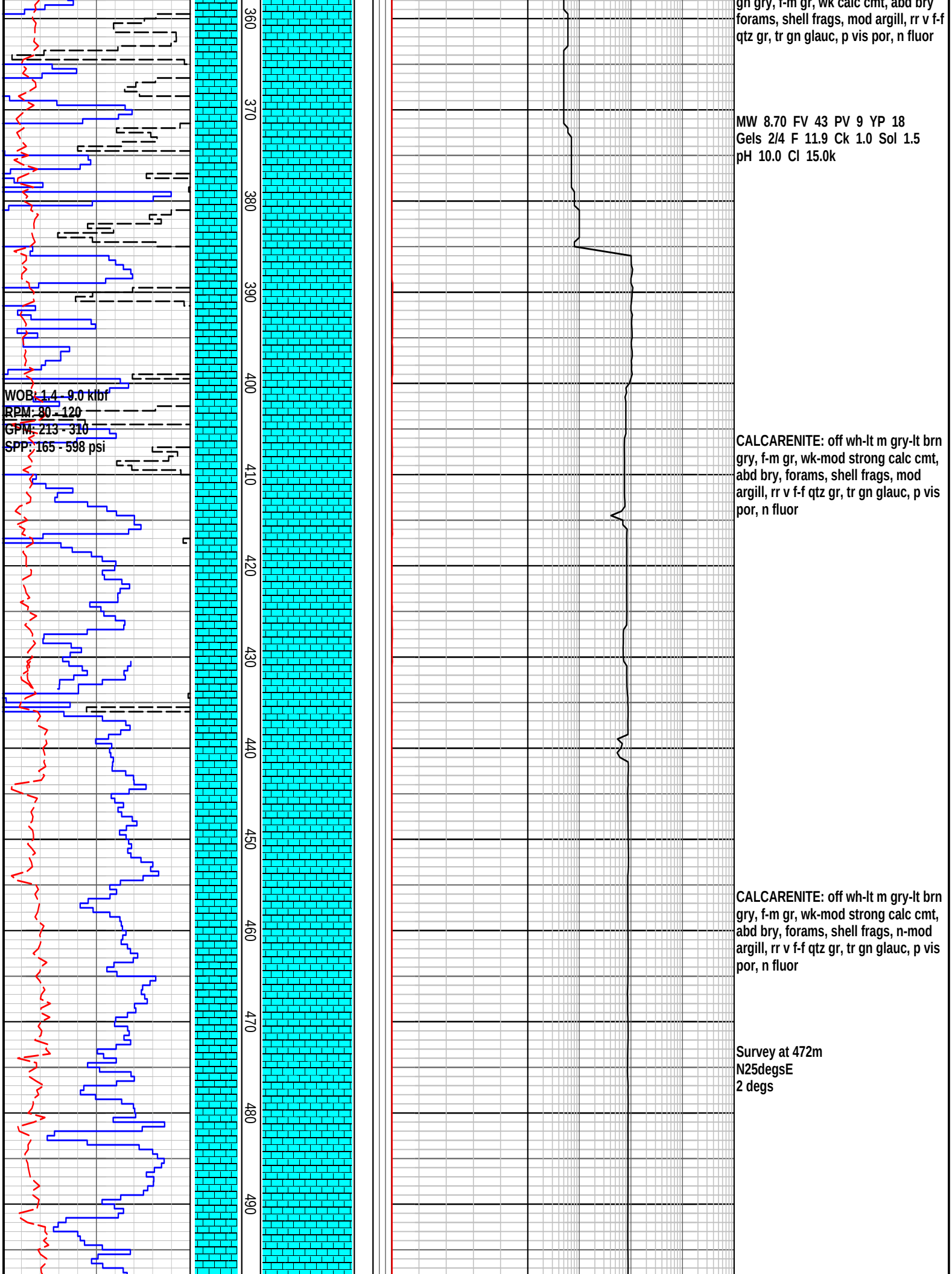
MW 8.60 FV 42

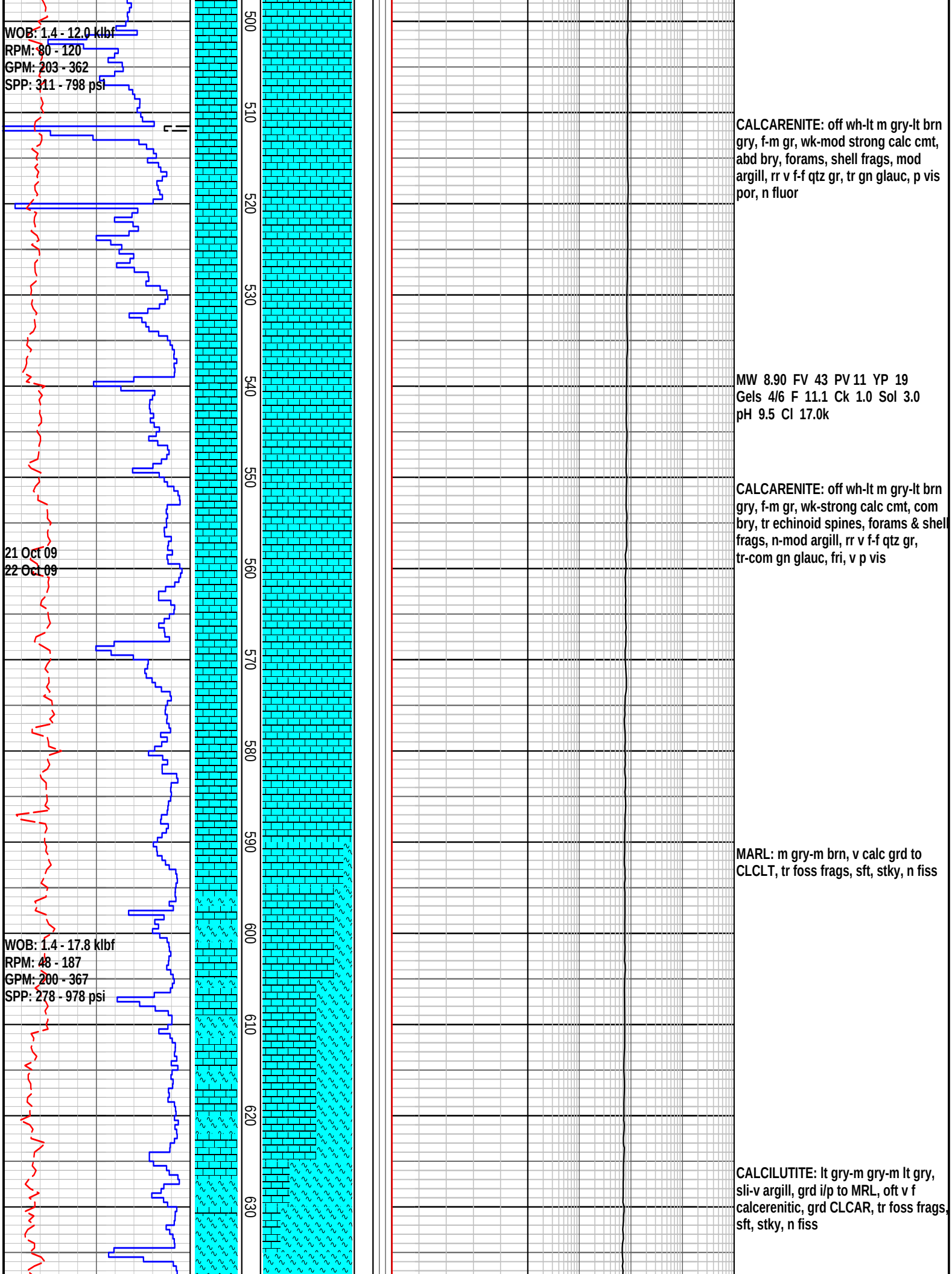
SILTY CLAYSTONE: m gry, abd disp v f-v crs qtz sd gr, v sft, v disp, stky, n fiss

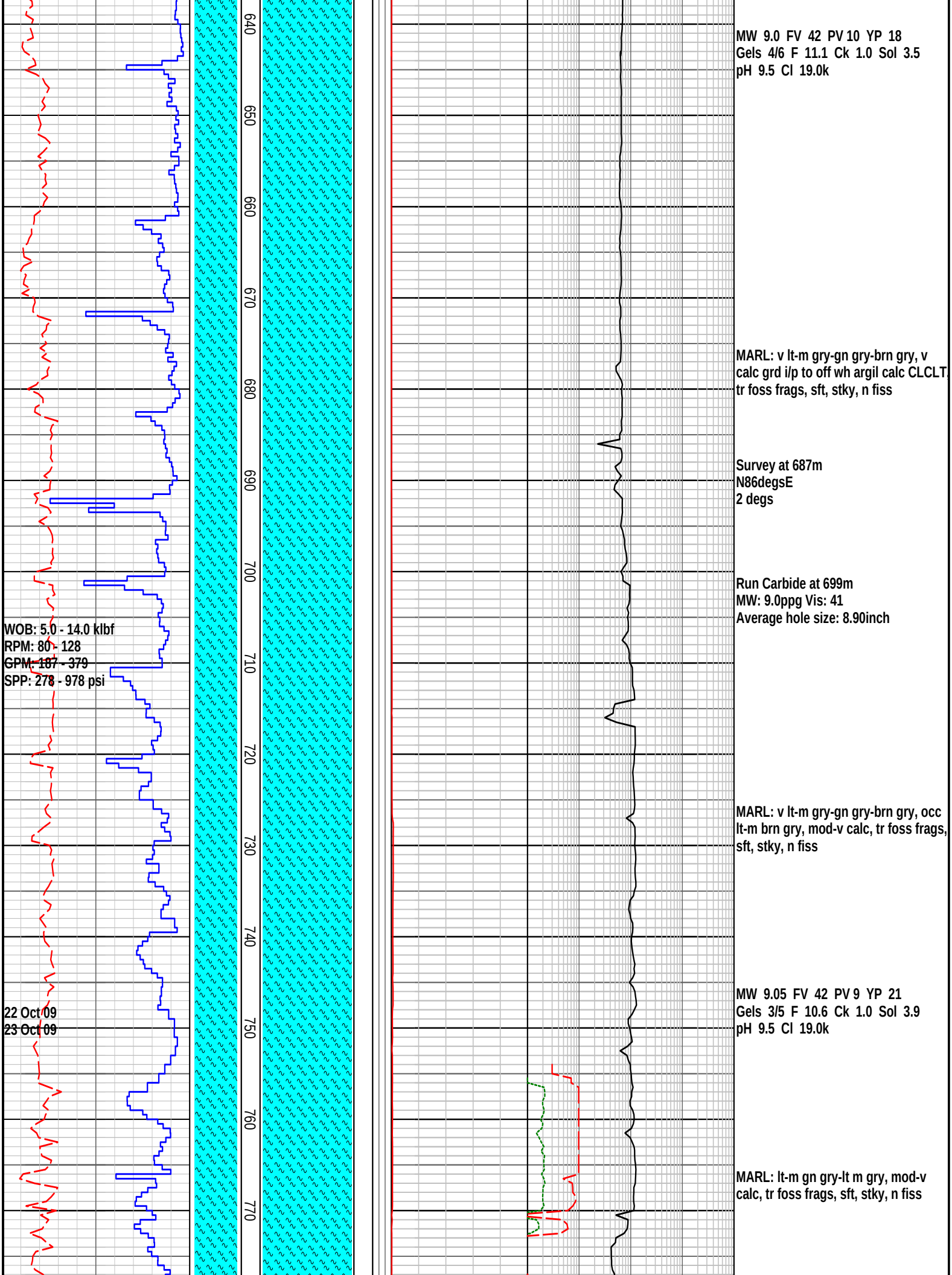
SANDSTONE: lt gry, v f-v crs, dom m, sbang-rnd, dom rnd, pr srt, n cmt, com-abd m gry arg & slt mtrx, quartzose w/clr-op qtz gr w/gry brn stn, com gry-blk & brn cht lit, com crs clr detr, uncons, v gd inf por, n fluor

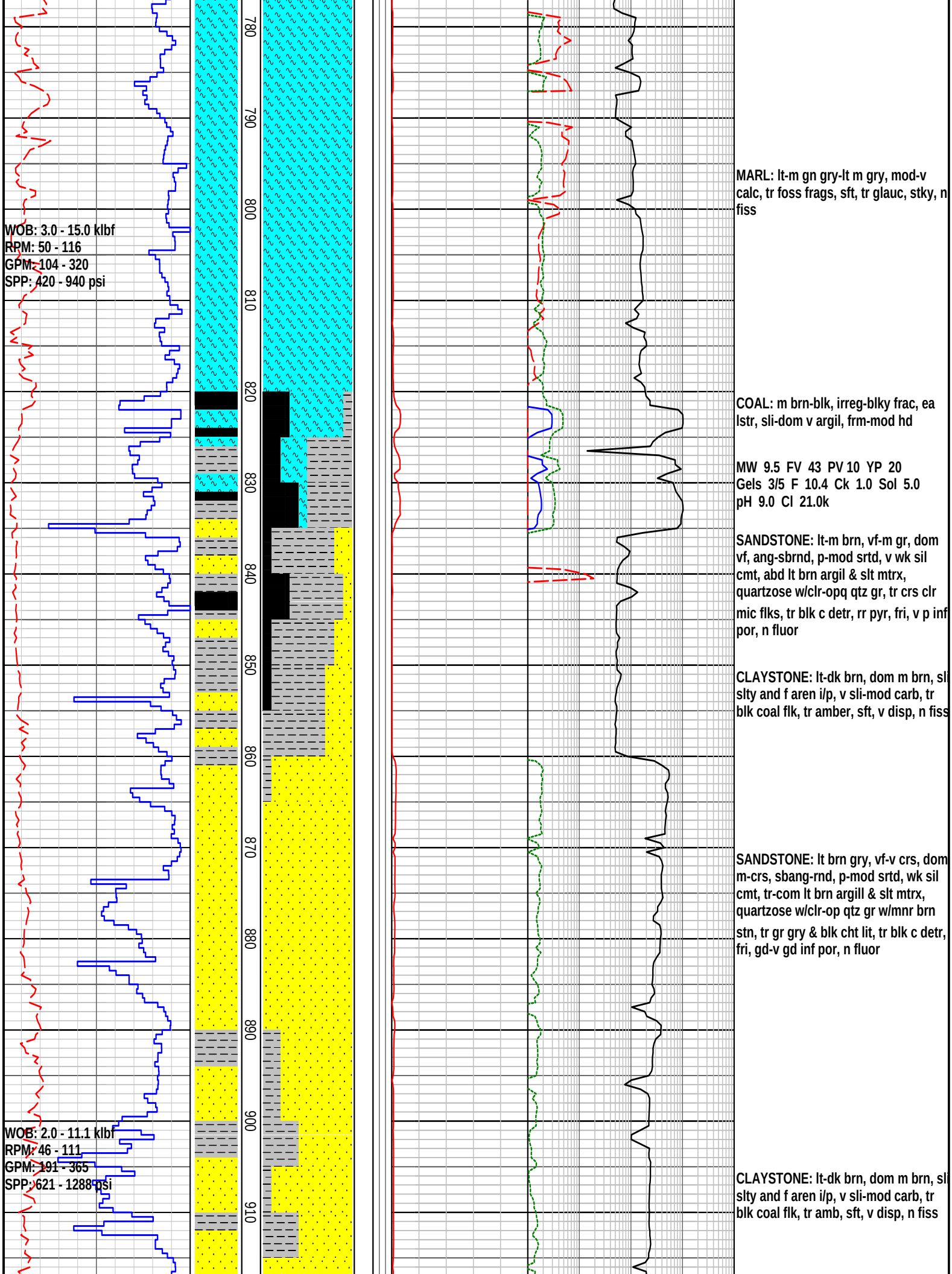

WOB: 0.1 - 8.0 klbf
RPM: 80
GPM: 260 - 332
SPP: 149 - 335 psi
WOB: 1.4 - 8.9 klbf
RPM: 80 - 100
GPM: 166 - 343
SPP: 117 - 432 psi
80
90
100
110
120
130
140
150
160
170
180
190
200
210
MARL: lt gry-m gry, m gn gry-m brn gry, com-abd foss frags incl bry, shell frags, forams, v sft, v disp, n fiss
CALCARENITE: 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


220
230
240
250
260
270
280
290
300
310
320
330
340
350
WOB: 0.4 - 8.3 klbf
RPM: 80 - 100
GPM: 300 - 326
SPP: 403 - 491 psi
18 Oct 09
21 Oct 09
NB2 216mm (8-1/2")
Reed NDO593
Jets: 3x14
In: 302m Out: 1184m
Drilled: 882m in 61.2hrs
TG: 0.04unit @ 302m
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
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-com 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


360
370
380
390
400
410
420
430
440
450
460
470
480
490
WOB: 1.4 - 9.0 klbf
RPM: 80 - 120
GPM: 213 - 310
SPP: 165 - 598 psi
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
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


WOB: 1.4 - 12.0 klbf
RPM: 80 - 120
GPM: 203 - 362
SPP: 311 - 798 psi
21 Oct 09
22 Oct 09
WOB: 1.4 - 17.8 klbf
RPM: 48 - 187
GPM: 200 - 367
SPP: 278 - 978 psi
500
510
520
530
540
550
560
570
580
590
600
610
620
630
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
CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-strong calc cmt, com bry, tr echinoid spines, forams & shell frags, n-mod argill, rr v f-f qtz gr, tr-com gn glauc, fri, v p vis
MARL: m gry-m brn, v calc grd to CLCLT, tr foss frags, sft, stky, n fiss
CALCILUTITE: lt gry-m gry-m lt gry, sli-v argill, grd i/p to MRL, oft v f calcerenitic, grd CLCAR, tr foss frags, sft, stky, n fiss


640
650
660
670
680
690
700
710
720
730
740
750
760
770
WOB: 5.0 - 14.0 klbf
RPM: 80 - 128
GPM: 187 - 379
SPP: 278 - 978 psi
22 Oct 09
23 Oct 09
MW 9.0 FV 42 PV 10 YP 18
Gels 4/6 F 11.1 Ck 1.0 Sol 3.5
pH 9.5 Cl 19.0k
MARL: v lt-m gry-gn gry-brn gry, v
calc grd i/p to off wh argil calc CLCLT
tr foss frags, sft, stky, n fiss
Survey at 687m
N86degsE
2 degs
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

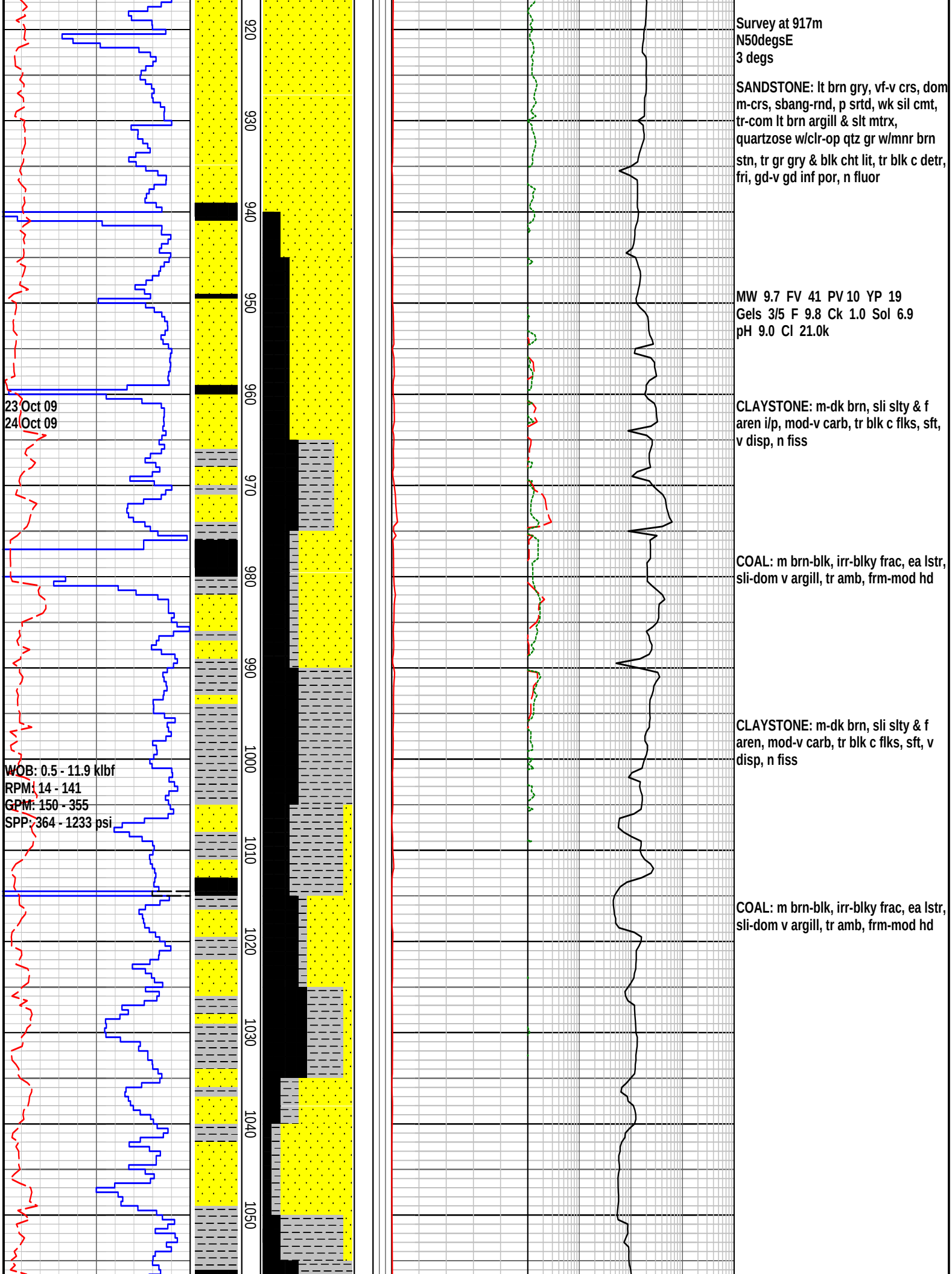
MW 9.5 FV 43 PV 10 YP 20 Gels 3/5 F 10.4 Ck 1.0 Sol 5.0 pH 9.0 Cl 21.0k

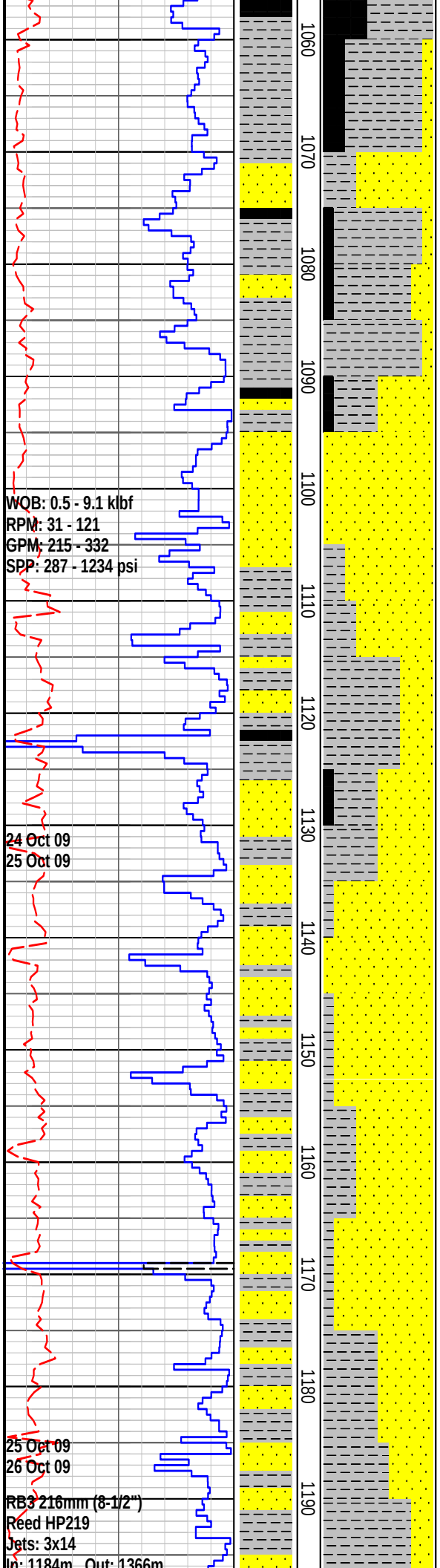
SANDSTONE: lt-m brn, vf-m gr, dom vf, ang-sbrnd, p-mod srtd, v wk sil cmt, abd lt brn argil & slt mtrx, quartzose w/clr-opq qtz gr, tr crs clr mic flks, tr blk c detr, rr pyr, fri, v p inf por, n fluor

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


920
930
940
950
960
970
980
990
1000
1010
1020
1030
1040
1050
23 Oct 09
24 Oct 09
WOB: 0.5 - 11.9 klbf
RPM: 14 - 141
GPM: 150 - 355
SPP: 364 - 1233 psi
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/clr-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
CLAYSTONE: m-dk brn, sli slty & f 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



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

24 Oct 09
25 Oct 09

25 Oct 09
26 Oct 09

RB3 216mm (8-1/2")
Reed HP219
Jets: 3x14
In: 1184m Out: 1366m

TG: 0.82unit @ 1184m

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 srtd, wk sil cmt, com lt brn argill & slt mtrx, qtz w/clr-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

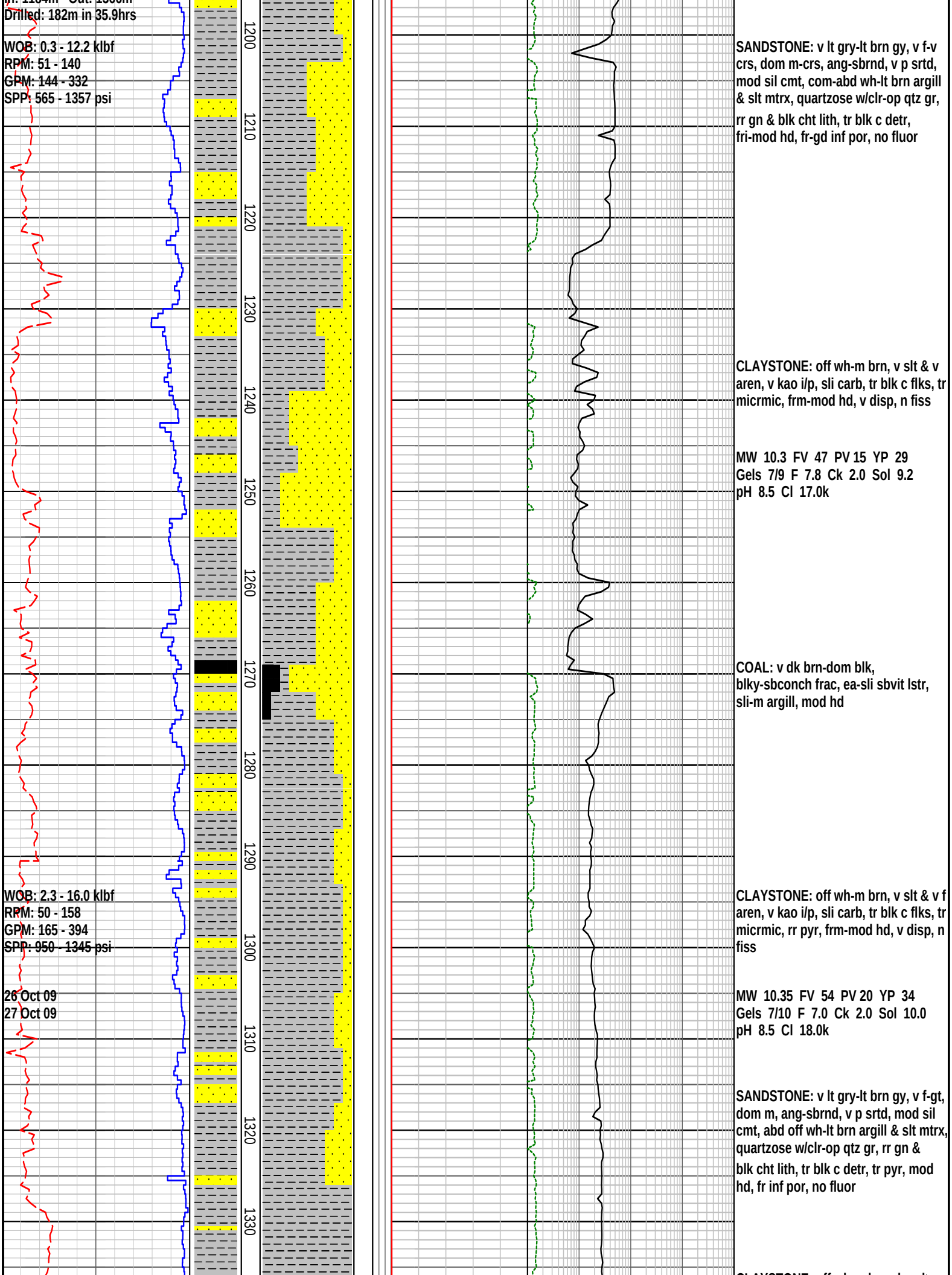
MW 9.75 FV 42 PV 9 YP 20
Gels 3/6 F 9.4 Ck 1.0 Sol 5.9
pH 8.5 Cl 18.0k

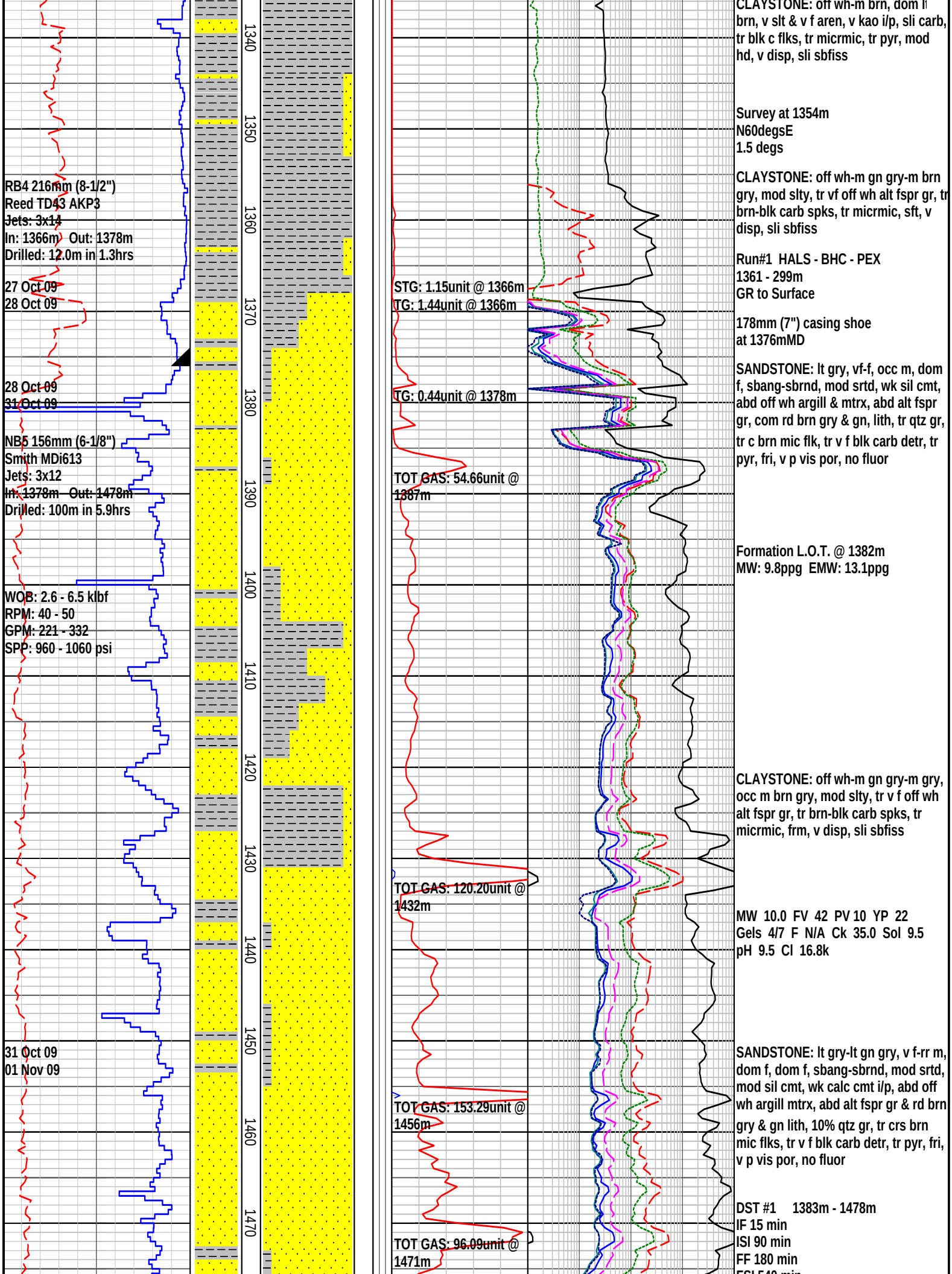
MW 10.1 FV 47 PV 16 YP 23
Gels 4/6 F 8.0 Ck 1.0 Sol 8.8
pH 8.5 Cl 20.0k

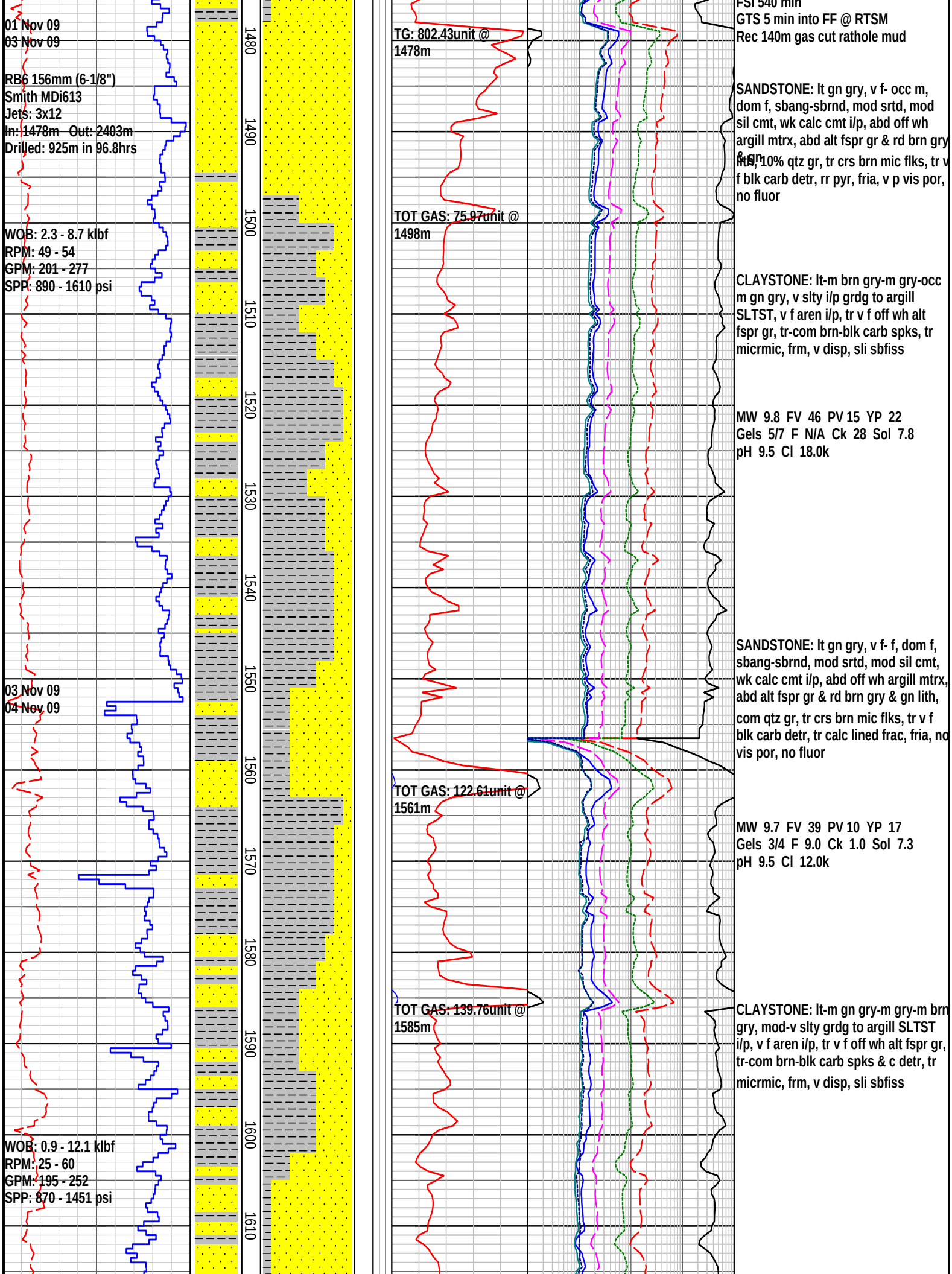
SANDSTONE: v lt gry-lt brn gy, v f-gt, dom m-crs, ang-sbrnd, v p srtd, wk sil cmt, com wh-lt brn argill & slt mtrx, quartzose w/clr-op qtz gr, tr gn gry & blk cht lith, tr-com blk c detr, fri, gd inf por, no fluor

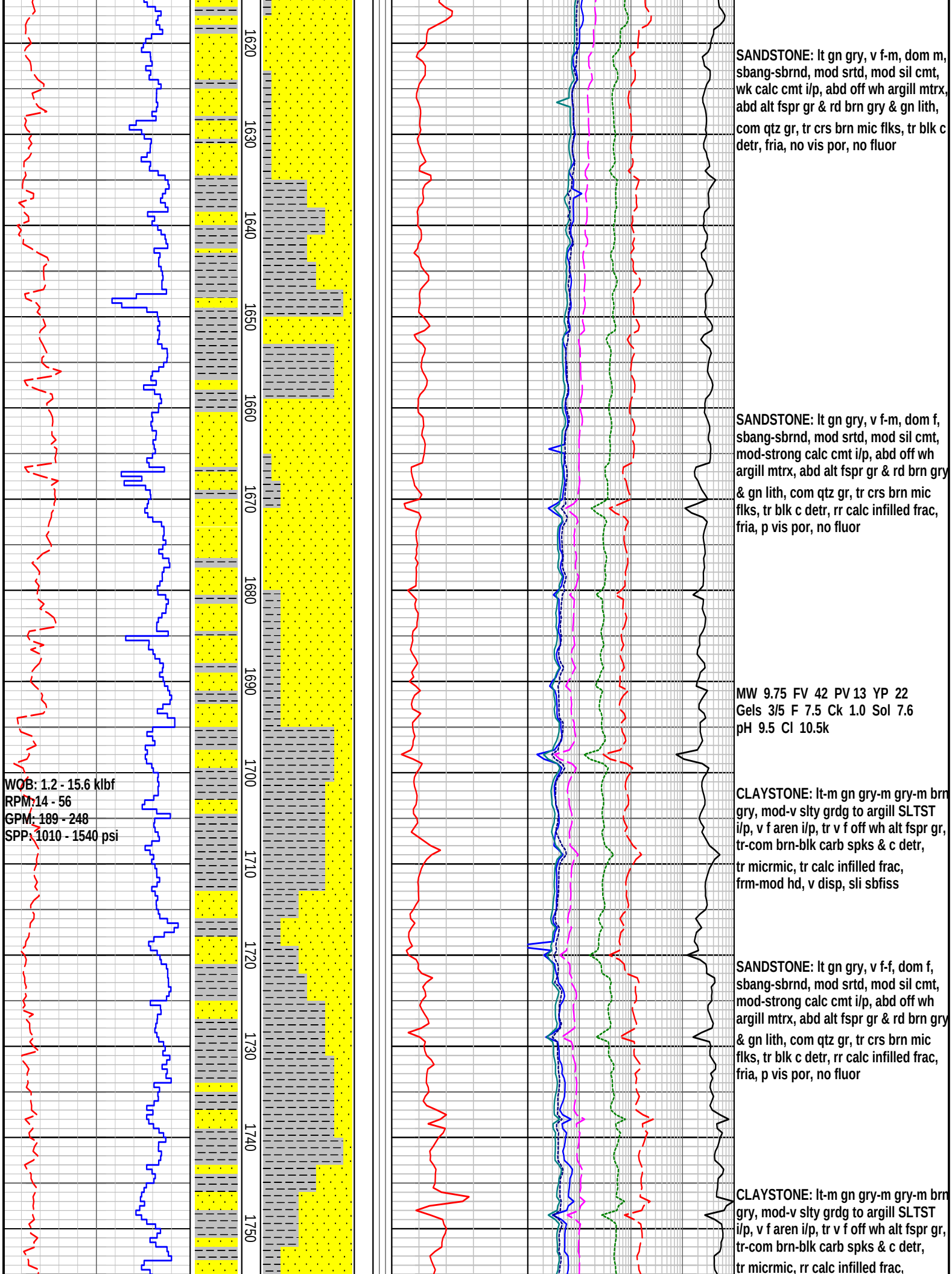
CLAYSTONE: wh-m brn, v slt & v aren i/p, kao i/p, sli-mod carb, tr blk c flks, tr micrmic, frm, v disp & washing f/spl, n fiss

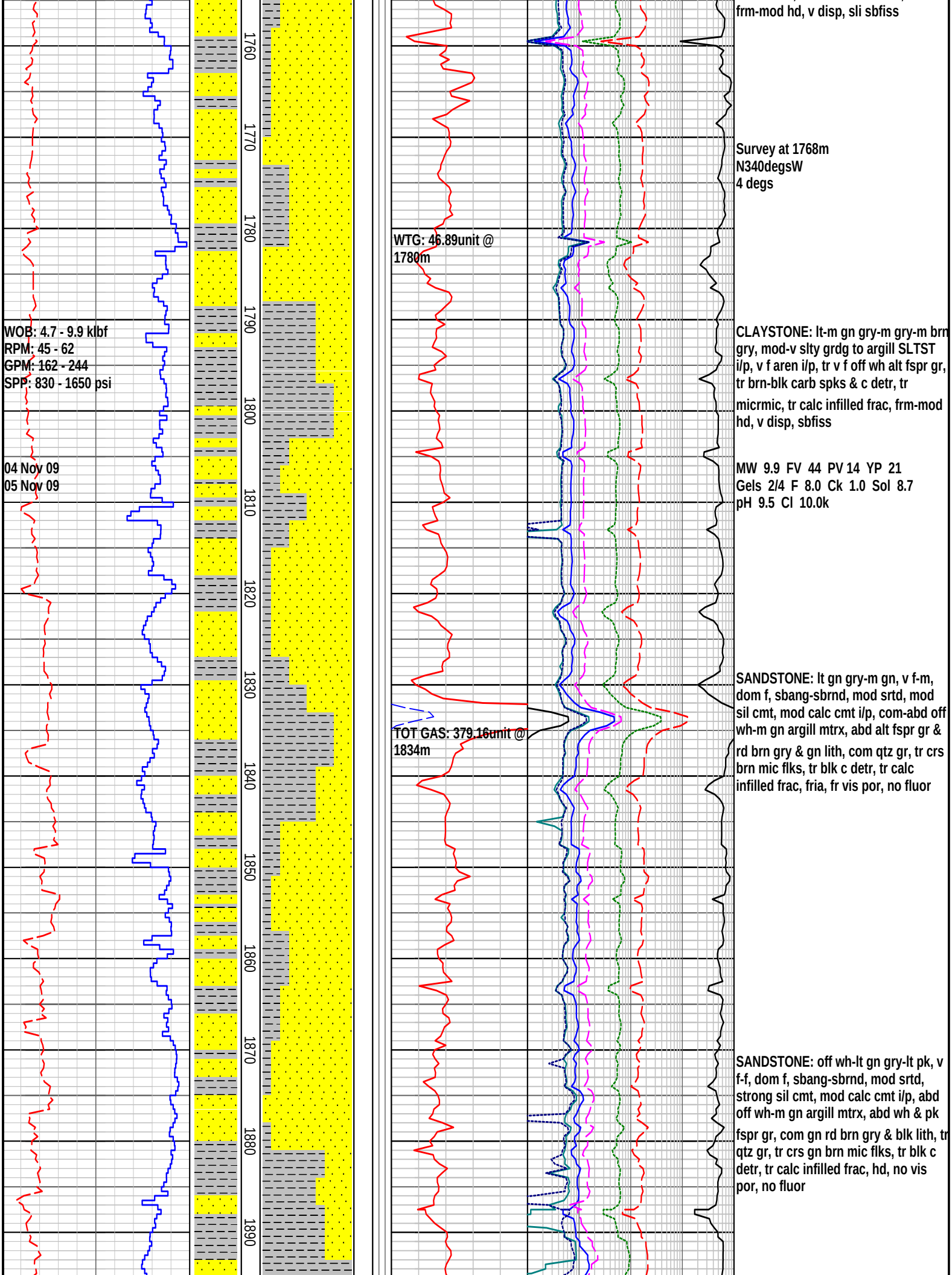
MW 10.1 FV 48 PV 16 YP 24
Gels 4/6 F 8.0 Ck 1.0 Sol 8.3
pH 8.5 Cl 20.0k

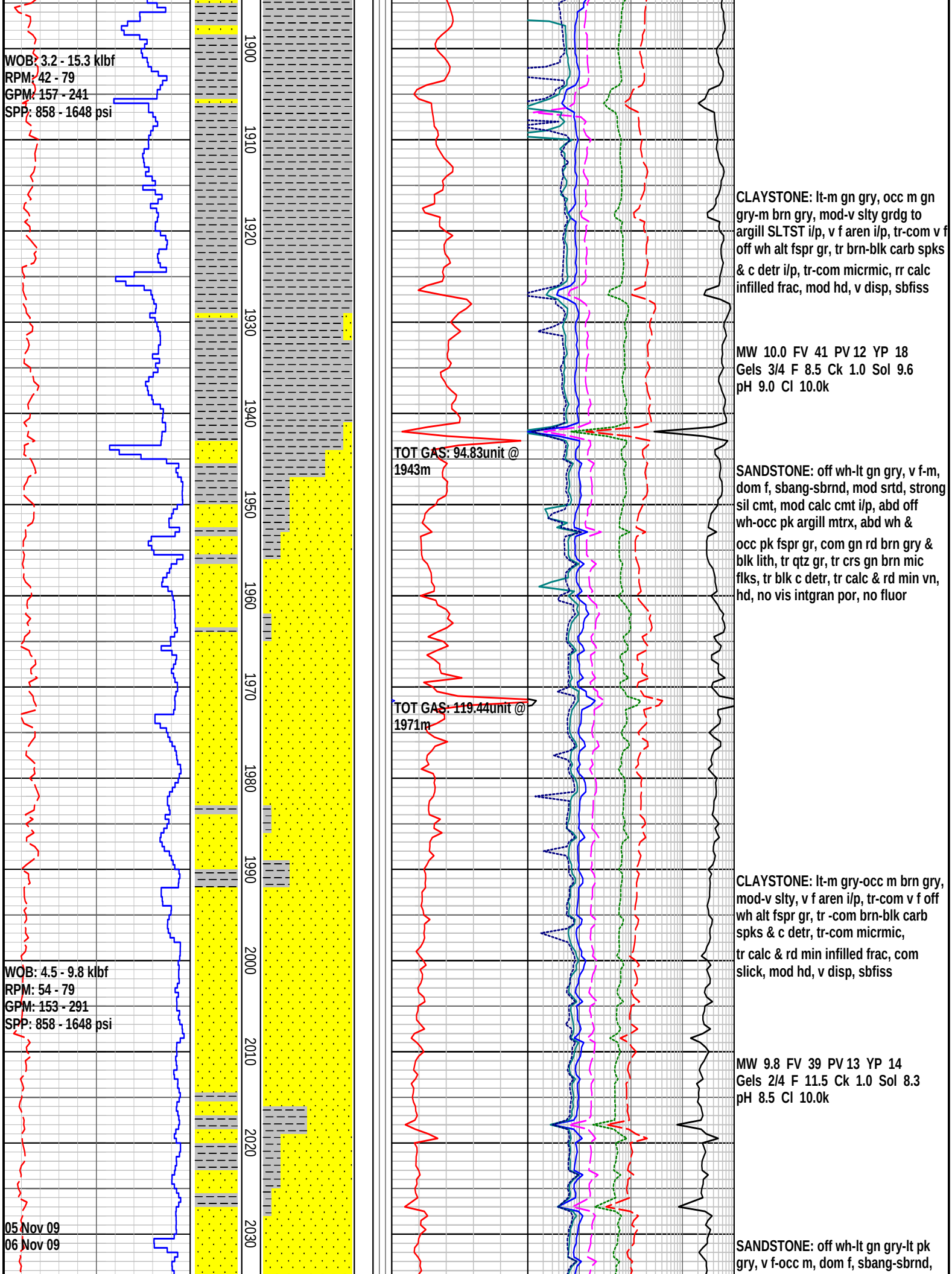

In: 1184m Out: 1366m
Drilled: 182m in 35.9hrs
WOB: 0.3 - 12.2 klbf
RPM: 51 - 140
GPM: 144 - 332
SPP: 565 - 1357 psi
1200
1210
1220
1230
1240
1250
1260
1270
1280
1290
1300
1310
1320
1330
SANDSTONE: v lt gry-lt brn gy, v f-v crs, dom m-crs, ang-sbrnd, v p srtd, mod sil cmt, com-abd wh-lt brn argill & slt 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
WOB: 2.3 - 16.0 klbf
RPM: 50 - 158
GPM: 165 - 394
SPP: 950 - 1345 psi
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
26 Oct 09
27 Oct 09
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

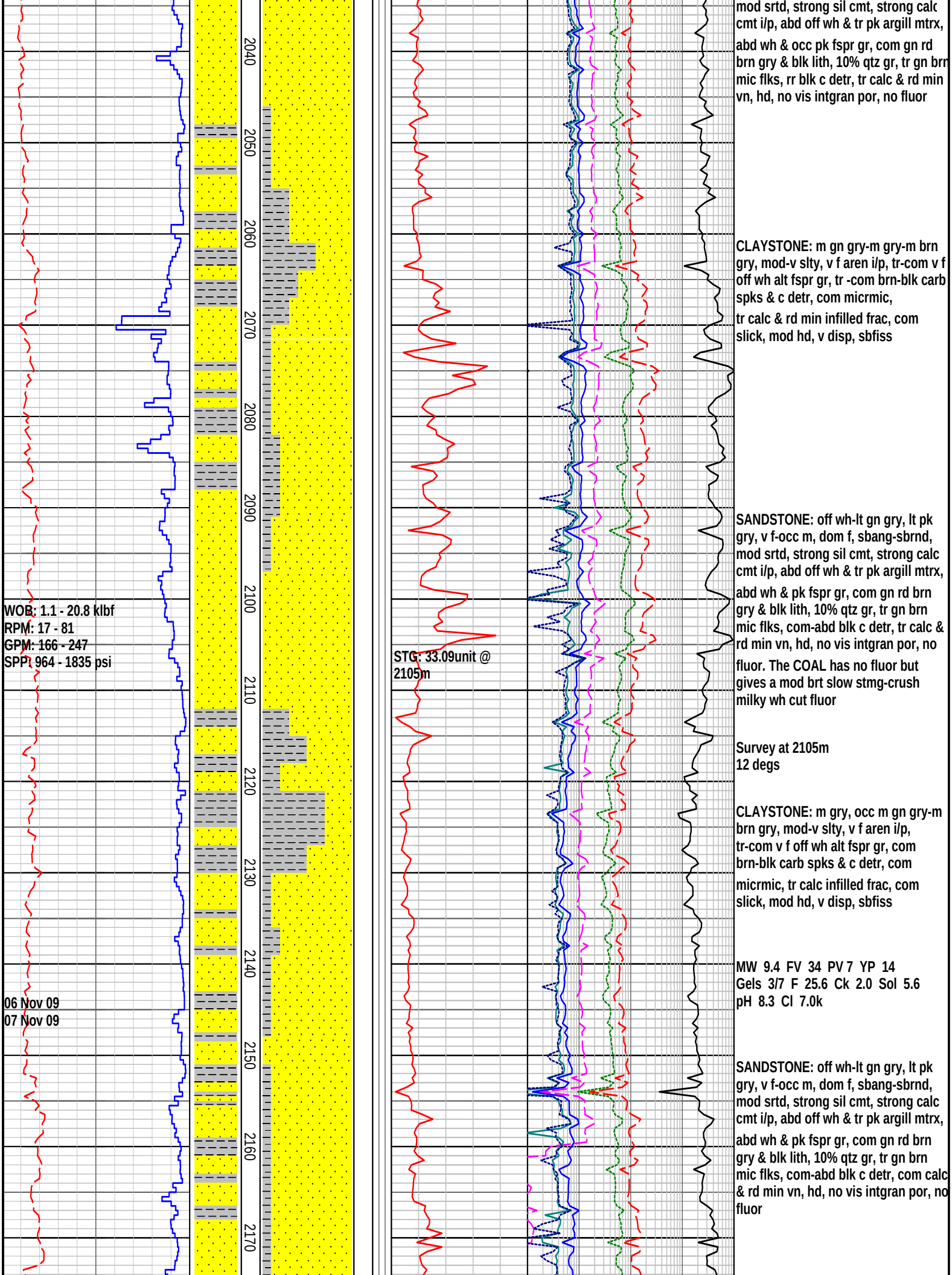

1340
1350
1360
1370
1380
1390
1400
1410
1420
1430
1440
1450
1460
1470
RB4 216mm (8-1/2")
Reed TD43 AKP3
Jets: 3x14
In: 1366m Out: 1378m
Drilled: 12.0m in 1.3hrs
27 Oct 09
28 Oct 09
28 Oct 09
31 Oct 09
NB5 156mm (6-1/8")
Smith MDi613
Jets: 3x12
In: 1378m Out: 1478m
Drilled: 100m in 5.9hrs
WOB: 2.6 - 6.5 klbf
RPM: 40 - 50
GPM: 221 - 332
SPP: 960 - 1060 psi
31 Oct 09
01 Nov 09
STG: 1.15unit @ 1366m
TG: 1.44unit @ 1366m
TG: 0.44unit @ 1378m
TOT GAS: 54.66unit @ 1387m
TOT GAS: 120.20unit @ 1432m
TOT GAS: 153.29unit @ 1456m
TOT GAS: 96.09unit @ 1471m
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 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
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

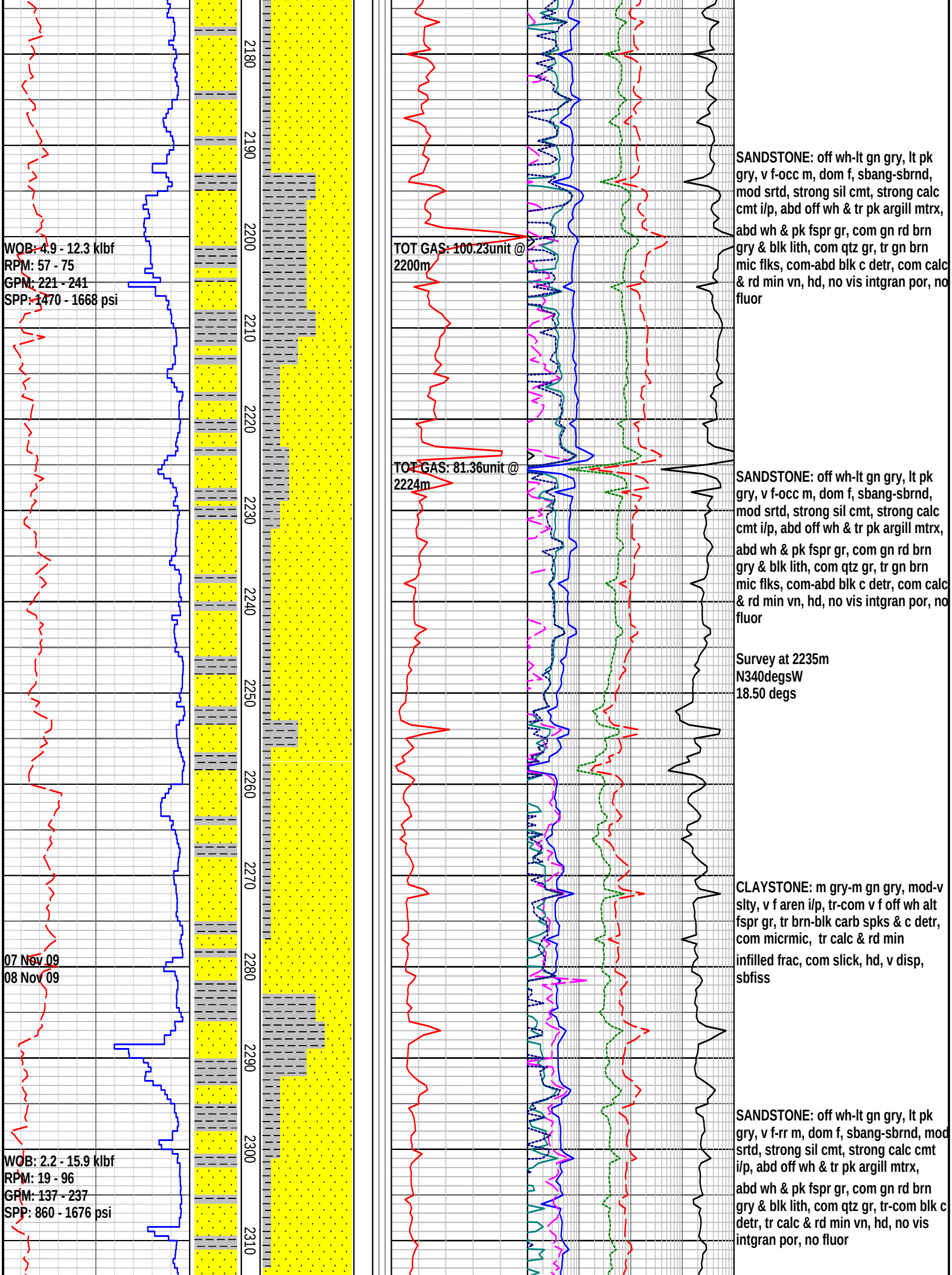

01 Nov 09
03 Nov 09
RB6 156mm (6-1/8")
Smith MDi613
Jets: 3x12
In: 1478m Out: 2403m
Drilled: 925m in 96.8hrs
WOB: 2.3 - 8.7 klbf
RPM: 49 - 54
GPM: 201 - 277
SPP: 890 - 1610 psi
03 Nov 09
04 Nov 09
WOB: 0.9 - 12.1 klbf
RPM: 25 - 60
GPM: 195 - 252
SPP: 870 - 1451 psi
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
1610
TG: 802.43unit @ 1478m
TOT GAS: 75.97unit @ 1498m
TOT GAS: 122.61unit @ 1561m
TOT GAS: 139.76unit @ 1585m
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, com 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

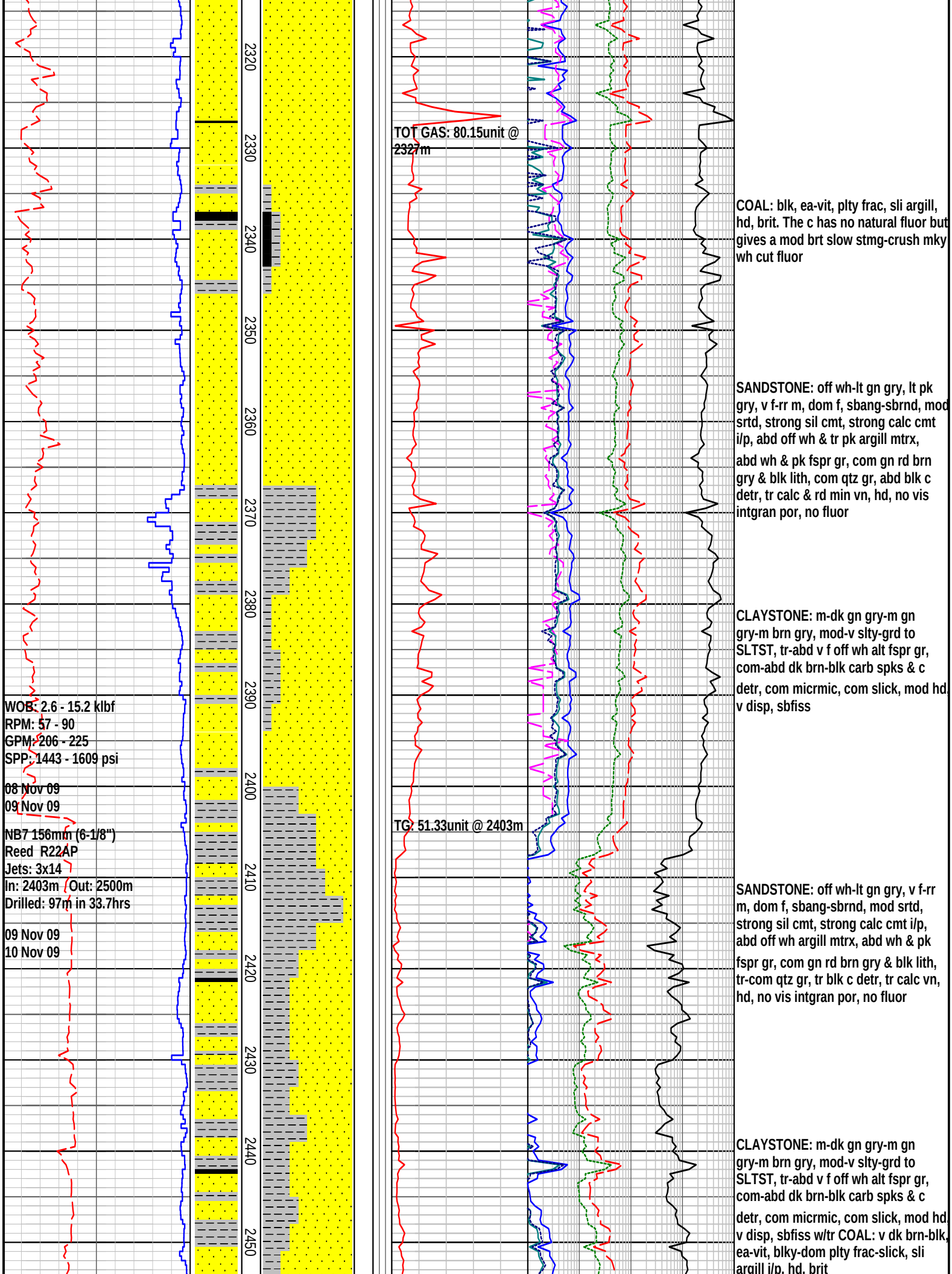

1620
1630
1640
1650
1660
1670
1680
1690
1700
1710
1720
1730
1740
1750
WOB: 1.2 - 15.6 klbf
RPM:14 - 56
GPM: 189 - 248
SPP: 1010 - 1540 psi
SANDSTONE: lt gn gry, v f-m, dom m, sbang-sbrnd, mod srtd, mod sil cmt, wk calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, 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 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, rr calc infilled frac,

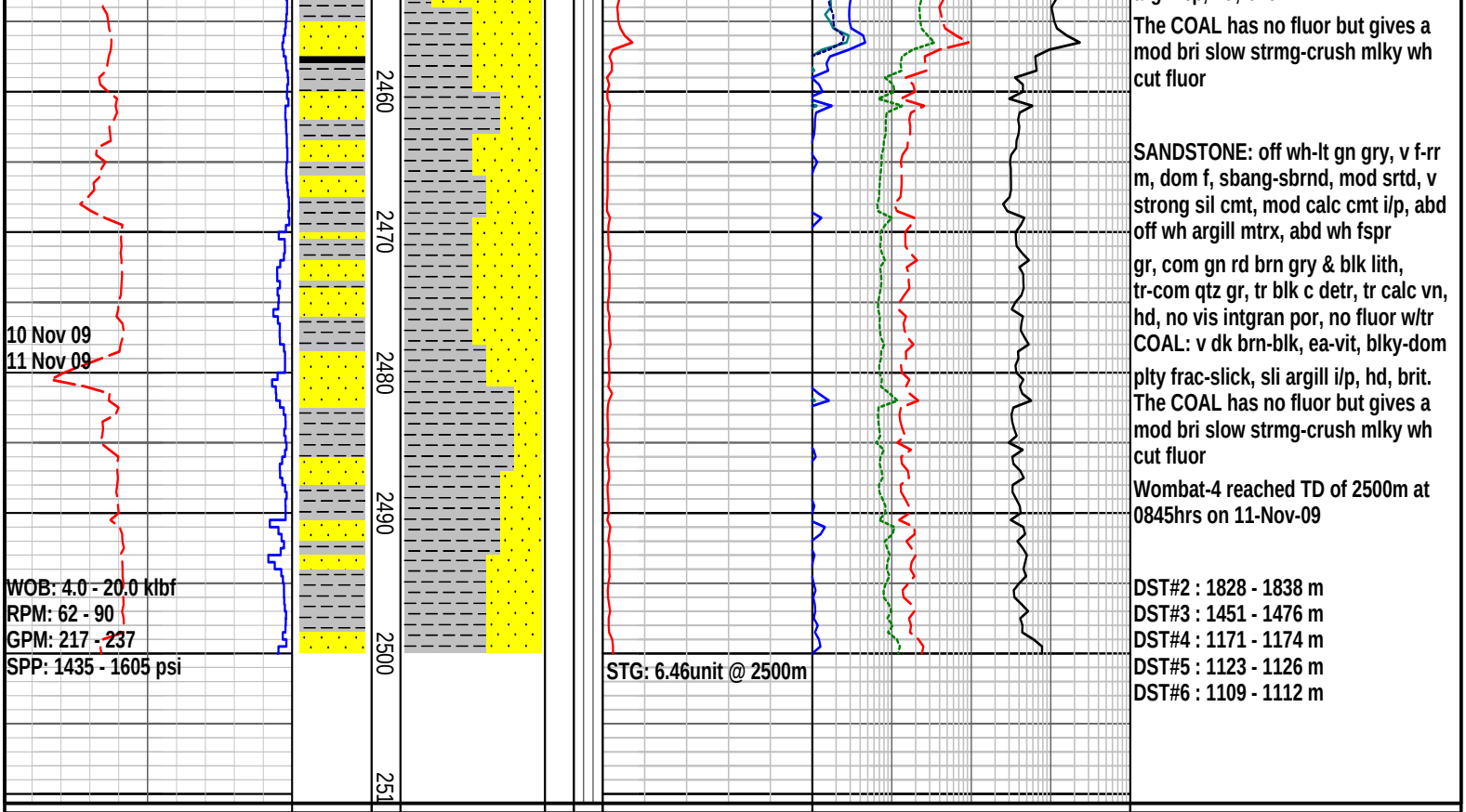

1760
1770
1780
1790
1800
1810
1820
1830
1840
1850
1860
1870
1880
1890
WOB: 4.7 - 9.9 klbf
RPM: 45 - 62
GPM: 162 - 244
SPP: 830 - 1650 psi
04 Nov 09
05 Nov 09
WTG: 46.89unit @ 1780m
TOT GAS: 379.16unit @ 1834m
frm-mod hd, v disp, sli sbfiss
Survey at 1768m
N340degsW
4 degs
CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grdg 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 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


WOB: 3.2 - 15.3 klbf
RPM: 42 - 79
GPM: 157 - 241
SPP: 858 - 1648 psi
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
2030
TOT GAS: 94.83unit @ 1943m
TOT GAS: 119.44unit @ 1971m
WOB: 4.5 - 9.8 klbf
RPM: 54 - 79
GPM: 153 - 291
SPP: 858 - 1648 psi
05 Nov 09
06 Nov 09
CLAYSTONE: lt-m gn gry, occ m gn gry-m brn gry, mod-v slty grdg 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 Cl 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 Cl 10.0k
SANDSTONE: off wh-lt gn gry-lt pk gry, v f-occ m, dom f, sbang-sbrnd,


2040
2050
2060
2070
2080
2090
2100
2110
2120
2130
2140
2150
2160
2170
WOB: 1.1 - 20.8 klbf
RPM: 17 - 81
GPM: 166 - 247
SPP: 964 - 1835 psi
06 Nov 09
07 Nov 09
STG: 33.09unit @ 2105m
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


2180
2190
2200
2210
2220
2230
2240
2250
2260
2270
2280
2290
2300
2310
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
TOT GAS: 100.23unit @ 2200m
TOT GAS: 81.36unit @ 2224m
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


2320
2330
2340
2350
2360
2370
2380
2390
2400
2410
2420
2430
2440
2450
TOT GAS: 80.15unit @ 2327m
TG: 51.33unit @ 2403m
WOB: 2.6 - 15.2 klbf
RPM: 57 - 90
GPM: 206 - 225
SPP: 1443 - 1609 psi
08 Nov 09
09 Nov 09
NB7 156mm (6-1/8")
Reed R22AP
Jets: 3x14
In: 2403m Out: 2500m
Drilled: 97m in 33.7hrs
09 Nov 09
10 Nov 09
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, blky-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, blky-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

Wombat-4 reached TD of 2500m at 0845hrs on 11-Nov-09

DST#2 : 1828 - 1838 m
DST#3 : 1451 - 1476 m
DST#4 : 1171 - 1174 m
DST#5 : 1123 - 1126 m
DST#6 : 1109 - 1112 m

FORMATION EVALUATION LOG

RATE OF PENETRATION

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

INTERPRETED LITHOLOGY

MD meters 1:500

LITHOLOGY

CORE

OIL SHOWS

TOTAL GAS

TOTAL GAS
20 40 60 80 100
unit
BACKUP TOTAL GAS
280 460 640 820 1000
unit

CHROMATOGRAPH

Methane ppm 1 10000
Ethane ppm 1 10000
Propane ppm 1 10000
iso-Butane ppm 1 10000
n-Butane ppm 1 10000
iso-Pentane ppm 1 10000
n-Pentane ppm
10 100 1000 10000

REMARKS