



INTEQ

Company : Lakes Oil N.L.

Well : Wombat-4

Interval : 1174.00 - 2322.31 meters

Created : 08/Nov/2009 7:16:09 AM



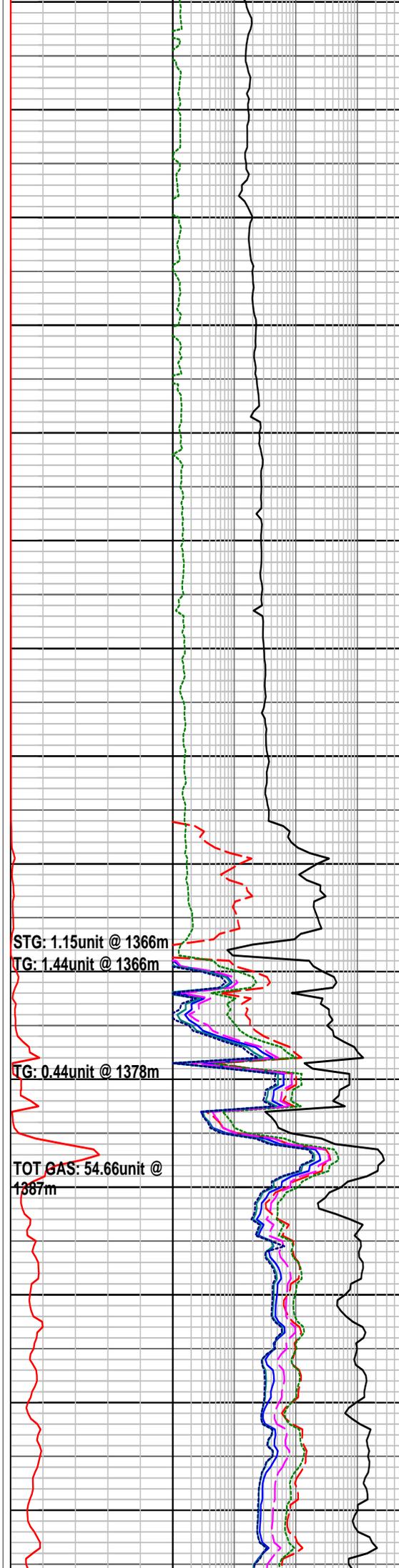
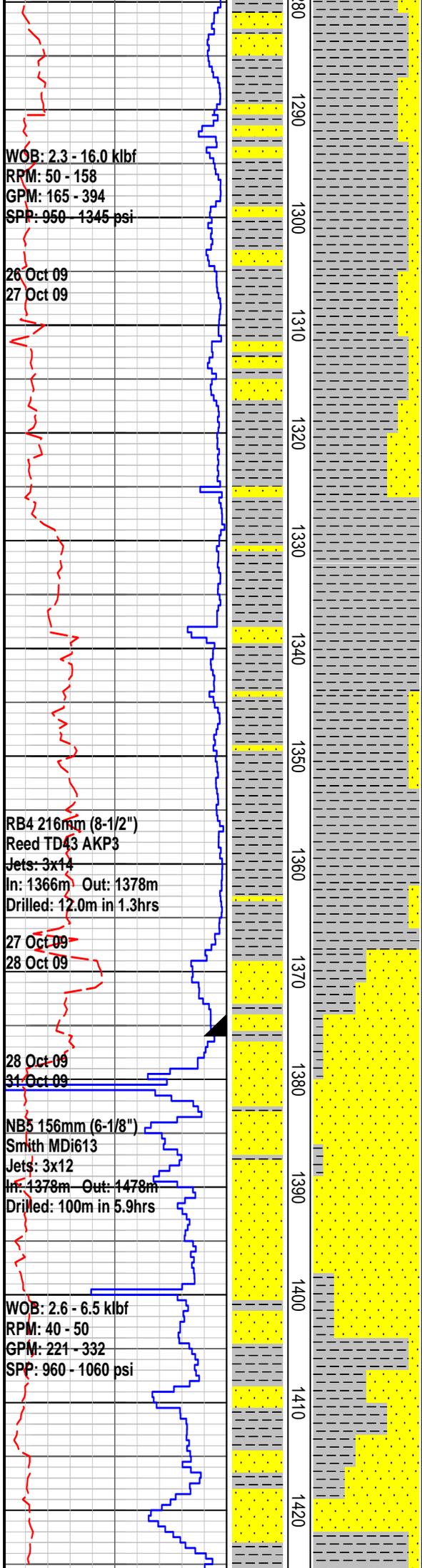
### FORMATION EVALUATION LOG

RATE OF PENETRATION		MD meters 1:500	LITHOLOGY	OIL SHOWS	TOTAL GAS	CHROMATOGRAPH				REMARKS
ROP (0-100m/hr)	Backup ROP (100-200m/hr)					1	Methane ppm	10000	1	
100   90   80   70   60   50   40   30   20   10	200   190   180   170   160   150   140   130   120   110				20   40   60   80   100	1	10000	10000	10000	
WOB (klb)					unit	1	10000	10000	10000	
5   10   15   20   25   30   35   40   45   50					BACKUP TOTAL GAS	1	10000	10000	10000	
					280   460   640   820   1000	1	10000	10000	10000	
					unit					
							10	100	1000	10000
		1180			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
		1190								MW 10.1 FV 48 PV 16 YP 24 Gels 4/6 F 8.0 Ck 1.0 Sol 8.3 pH 8.5 CI 20.0k
		1200								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
		1210								
		1220								
		1230								
		1240								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
		1250								MW 10.3 FV 47 PV 15 YP 29 Gels 7/9 F 7.8 Ck 2.0 Sol 9.2 pH 8.5 CI 17.0k
		1260								
		1270								COAL: v dk brn-dom blk, blk-sbconch frac, ea-sli sbvit lstr, sli-m argill, mod hd

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



CLAYSTONE: off wh-m brn, v slit & 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 & slit 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 slit & 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

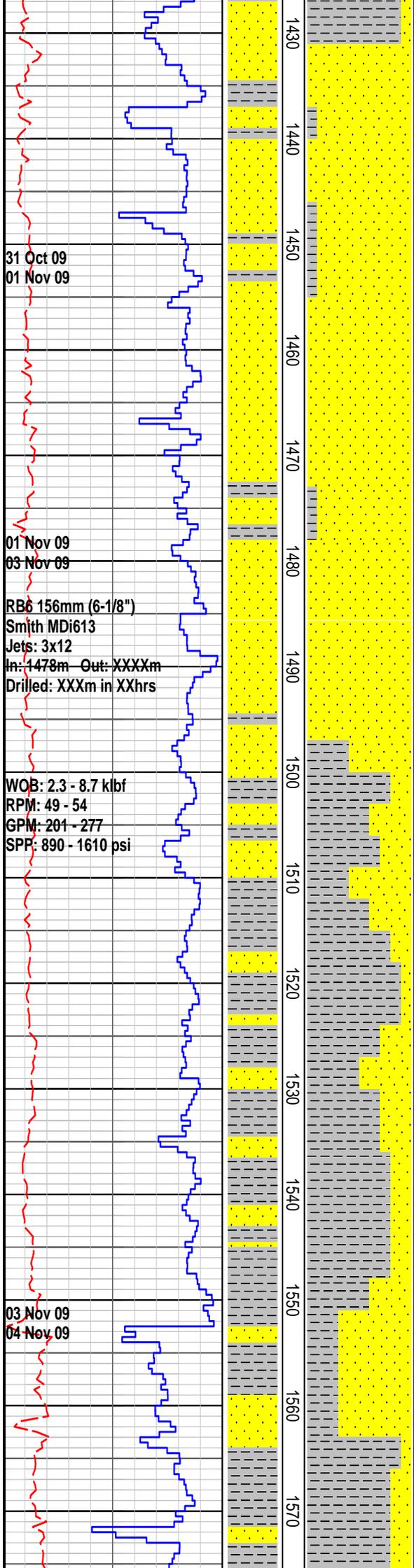
Run#1 HALS - BHC - PEX  
 1361 - 299m  
 GR to Surface

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



31 Oct 09  
01 Nov 09

01 Nov 09  
03 Nov 09

RB6 156mm (6-1/8")  
Smith MDi613  
Jets: 3x12  
In: 1478m - Out: XXXXm  
Drilled: XXXm in XXhrs

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

03 Nov 09  
04 Nov 09

TOT GAS: 120.20unit @ 1432m

TOT GAS: 153.29unit @ 1456m

TOT GAS: 96.09unit @ 1471m

TG: 802.43unit @ 1478m

TOT GAS: 75.97unit @ 1498m

TOT GAS: 122.64unit @ 1561m

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  
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

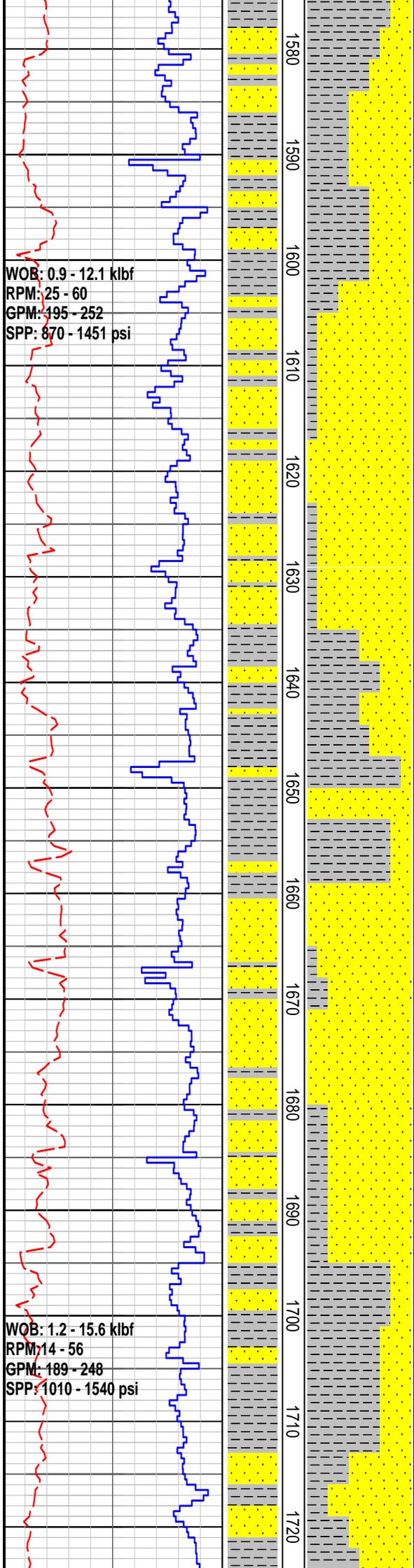
MW 9.8 FV 46 PV 15 YP 22  
Gels 5/7 F N/A Ck 28 Sol 7.8  
pH 9.5 Cl 18.0k

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

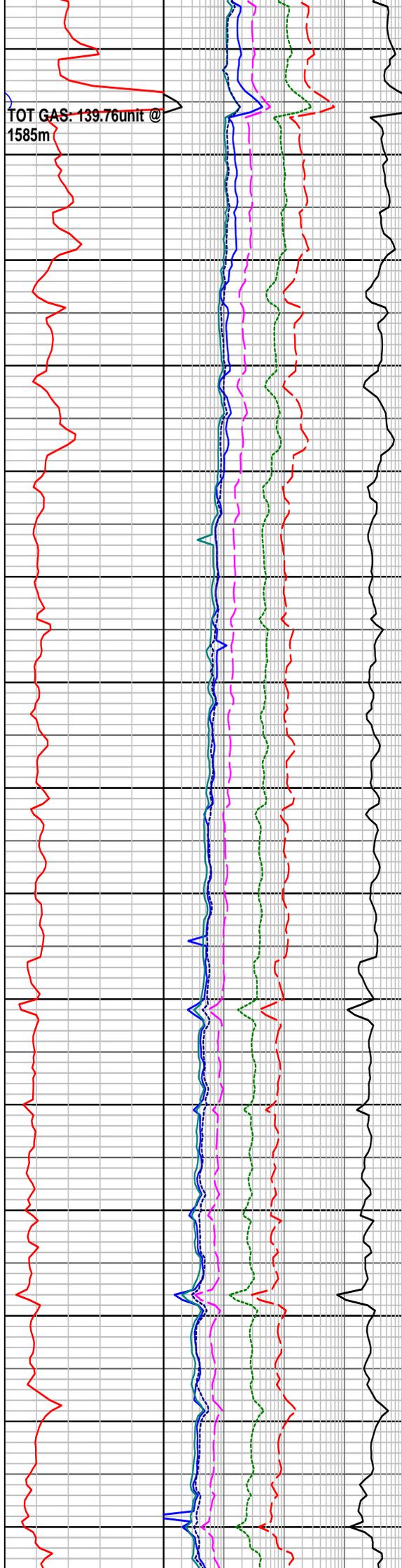
MW 9.7 FV 39 PV 10 YP 17  
Gels 3/4 F 9.0 Ck 1.0 Sol 7.3  
pH 9.5 Cl 12.0k

WOB: 0.9 - 12.1 klbf  
RPM: 25 - 60  
GPM: 495 - 252  
SPP: 870 - 1451 psi

WOB: 1.2 - 15.6 klbf  
RPM: 14 - 56  
GPM: 189 - 248  
SPP: 1010 - 1540 psi



TOT GAS: 139.76unit @ 1585m



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, frm, v disp, sli sbfiss

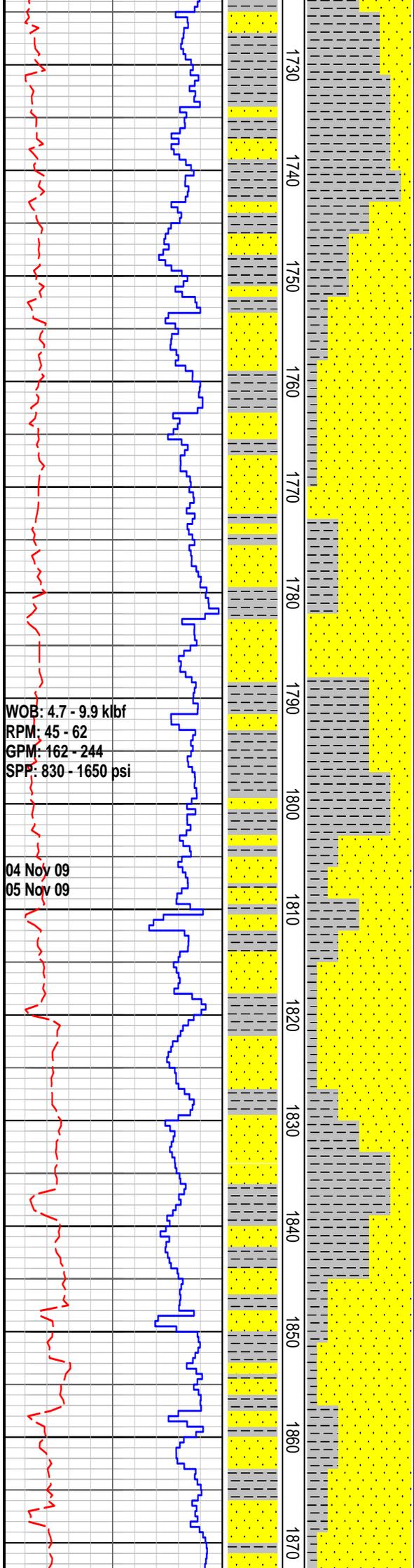
SANDSTONE: lt gn gry, v f-m, dom m, sbang-sbrnd, mod srtd, mod sil cmt, wk calc cmt i/p, abd off wh argill mtrx, abd alt fspr gr & rd brn gry & gn lith, com qtz gr, tr crs brn mic flks, tr blk c detr, fria, no vis por, no fluor

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

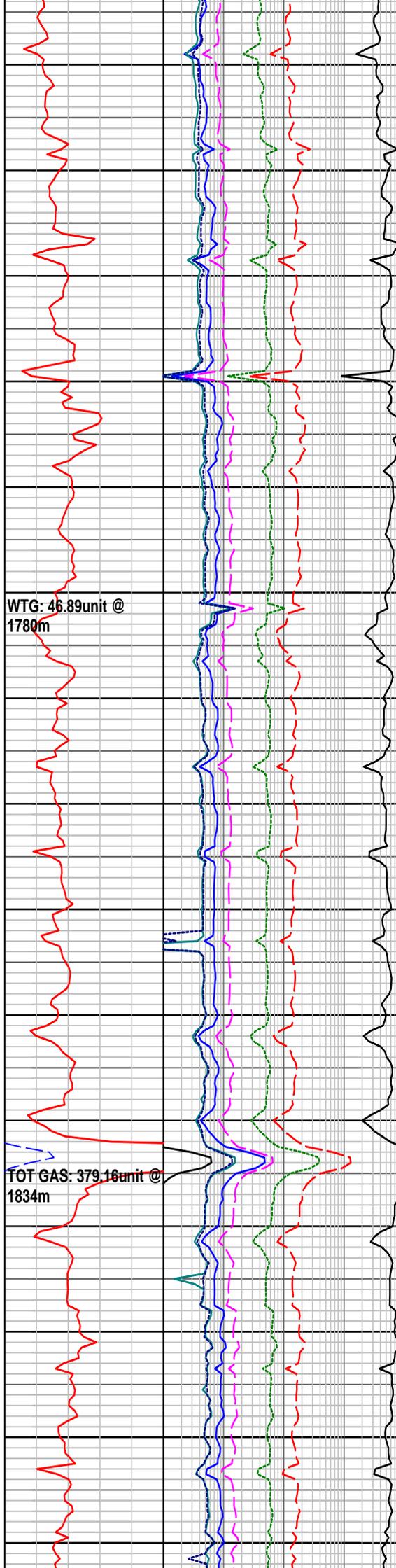
CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v slty grd to argill SLTST i/p, v f aren i/p, tr v f off wh alt fspr gr, tr-com brn-blk carb spks & c detr, tr micrmic, tr calc infilled frac, frm-mod hd, v disp, sli sbfiss

SANDSTONE: lt gn gry, v f-f, dom f, sbang-sbrnd, mod srtd, mod sil cmt



WOB: 4.7 - 9.9 kbf  
 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

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 micmic, rr calc infilled frac, frm-mod hd, v disp, sli sbfiss

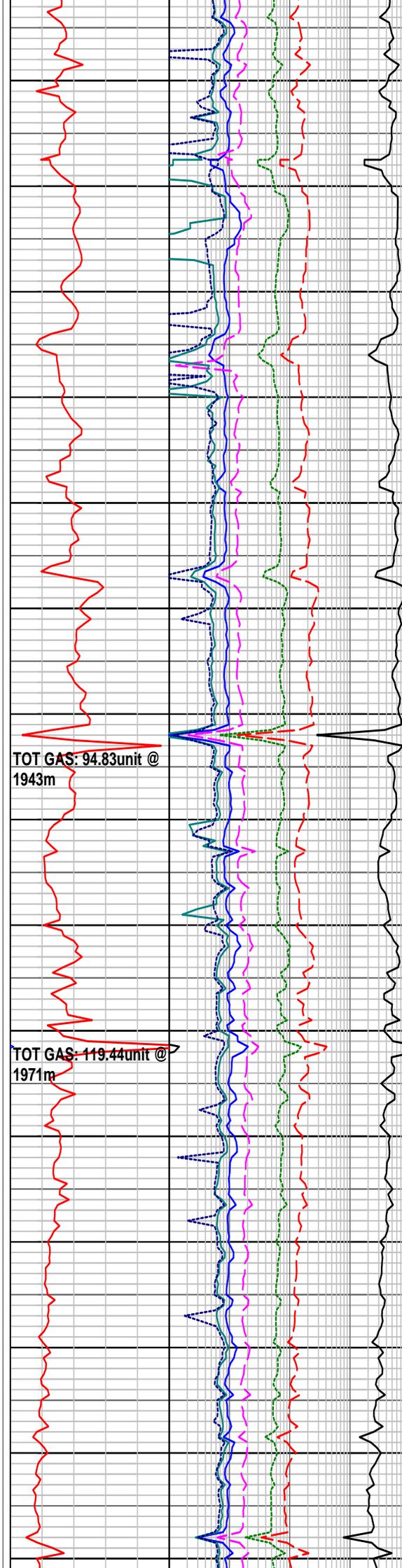
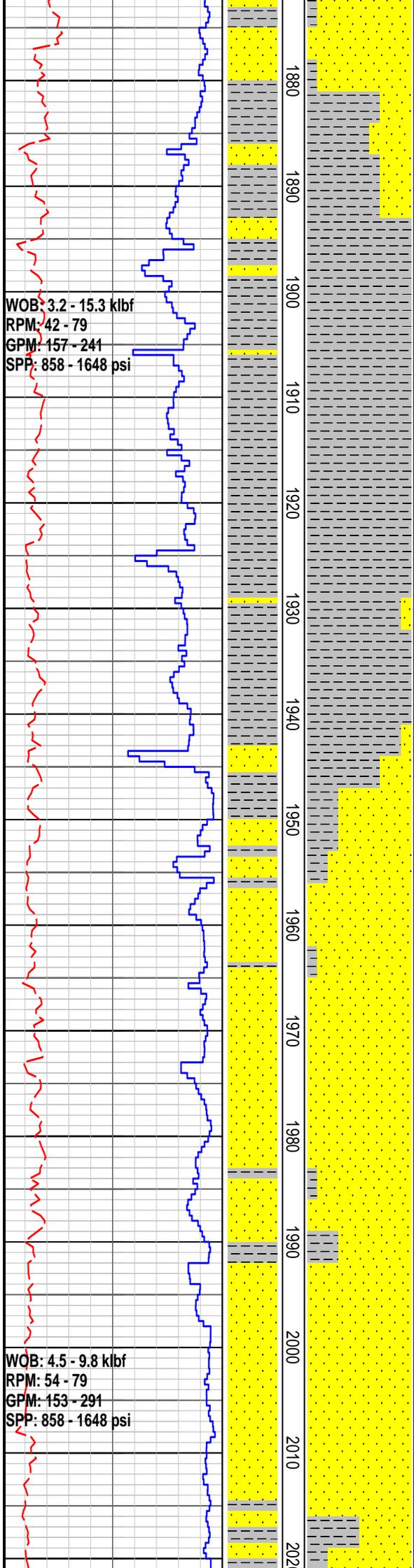
Survey at 1768m  
 N340degsW  
 4 degs

CLAYSTONE: lt-m gn gry-m gry-m brn gry, mod-v 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 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 srted, mod si 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 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

05 Nov 09  
06 Nov 09

WOB: 1.1 - 20.8 klbf  
RPM: 17 - 81  
GPM: 166 - 247  
SPP: 964 - 1835 psi

06 Nov 09  
07 Nov 09

2030  
2040  
2050  
2060  
2070  
2080  
2090  
2100  
2110  
2120  
2130  
2140  
2150  
2160  
2

STG: 33.09unit @  
2105m

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

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

2170  
2180  
2190  
2200  
2210  
2220  
2230  
2240  
2250  
2260  
2270  
2280  
2290  
2300  
2310

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

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

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

