



Company : Woodside Energy Limited

Well : Somerset-1

Interval : 500.00 - 2915.45 meters

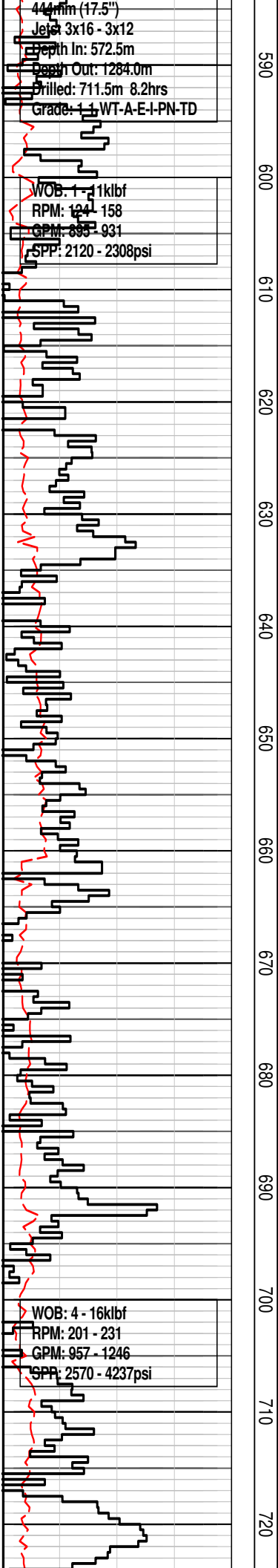
Created : 03/Nov/2009 5:55:14 AM



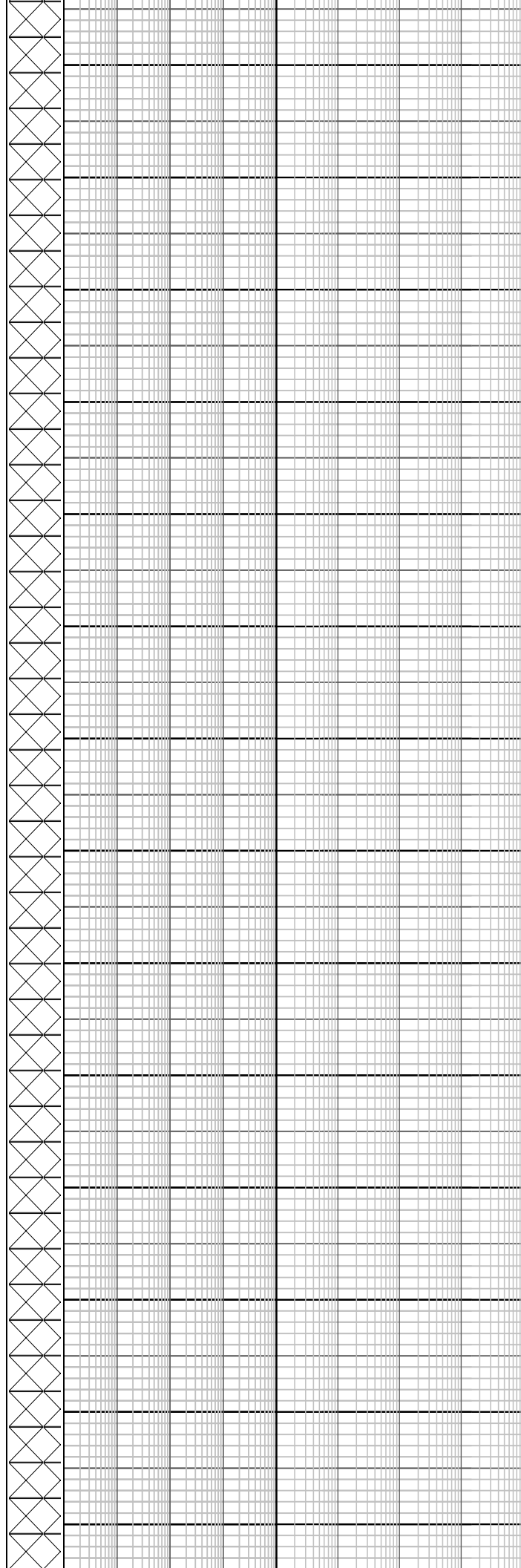
INTEQ

## FORMATION EVALUATION LOG

WOB (klbf)		MD meters 1:500	CORE	LITHOLOGY %	INTERPRETED LITHOLOGY	TOTAL GAS & RESISTIVITY		CHROMATOGRAPH		CALC	REMARKS
ROP (m/hr)						Total Gas (%)		Methane (%)		Calcite	
Gamma Ray (API)						Resistivity (Shallow)		Ethane (%)		Dolomite	
						Resistivity (Deep)		Propane (%)		OIL FLUORESCENCE	
						iso-Butane (%)		P F G			
						n-Butane (%)					
						iso-Pentane (%)					
						n-Pentane (%)					
<div>NB1 Varel 766R1 660mm (26") (36") H/Opener Jets: 3x20 Depth In: 524.5m Depth Out: 572.5m Drilled: 47.5m in 3.0hrs Grade: 1-1-0-0-0-0-0-TD</div> <div>WOB: 1 - 18klbf RPM: 24 - 70 GPM: 538 - 946 SPP: 45 - 1294psi</div> <div>19 Oct 2009 20 Oct 2009</div> <div>Smith Mill Tooth</div>		0								All depth measurements in meters referenced from Rotary Table (RT) RT = 21.5m Water depth (LAT) = 503.0m RT-Seabed = 524.5m MDRT	
		510									
		520									
		530									Somerset-1 spudded @ 11:30 hrs on 19 October 2009
		540				No return to gas system					Type: Hi Vis PHG & GG MW: 8.7ppg FV:200 PV:N/A Gel:N/A YP:N/A pH:N/A
		550									Drill with seawater and Hi-vis PHG & Guar Gum sweeps Returns to Seabed
		560				MWD (incl and azimuth only)					
		570									Set 762mm (30") x 508mm (20") casing shoe at 569.44mMDRT
		580									445mm (17-1/2") Section commenced @ 20:25 hrs on 20



590  
600  
610  
620  
630  
640  
650  
660  
670  
680  
690  
700  
710  
720



October 2009

Survey @ 599.08m Inc: 0.60, Azi: 121.19, TVD: 599.07m

Drill with seawater and Hi-vis PHG & Guar Gum sweeps  
Returns to Seabed

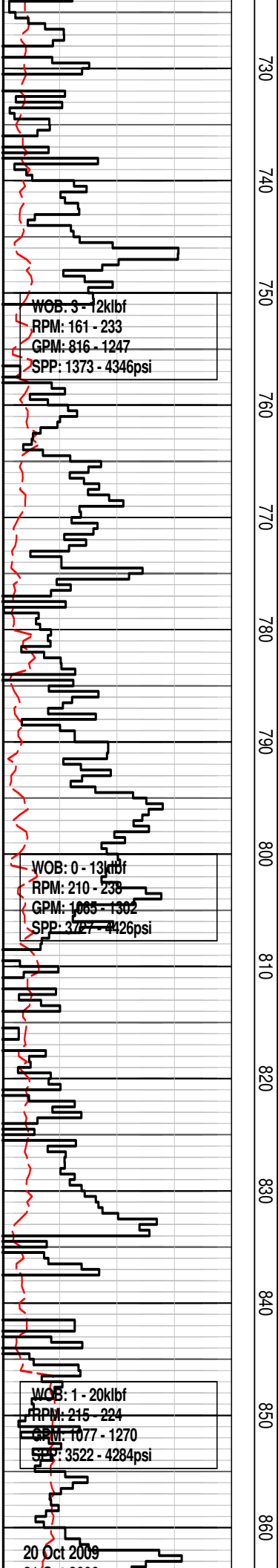
Survey @ 627.77m Inc: 0.58, Azi: 134.31, TVD: 627.76m

Drill with seawater and Hi-vis PHG & Guar Gum sweeps  
Returns to Seabed

Survey @ 684.35m Inc: 0.43, Azi: 117.87, TVD: 684.34m

Drill with seawater and Hi-vis PHG & Guar Gum sweeps  
Returns to Seabed

Survey @ 713.04m Inc: 0.54, Azi: 135.97, TVD: 713.02m

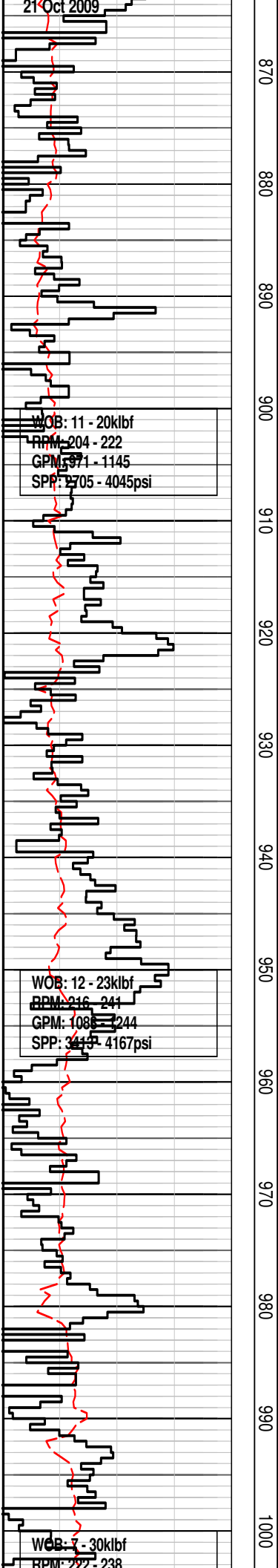


Drill with seawater and Hi-vis  
PHG & Guar Gum sweeps  
Returns to Seabed

Survey @ 799.04m Inc: 0.53, Azi:  
124.88, TVD: 799.02m

Type: Hi Vis PHG & GG  
MW: 8.7ppg FV:200  
PV:N/A Gel:N/A  
YP:N/A pH:9.5

Drill with seawater and Hi-vis  
PHG & Guar Gum sweeps  
Returns to Seabed

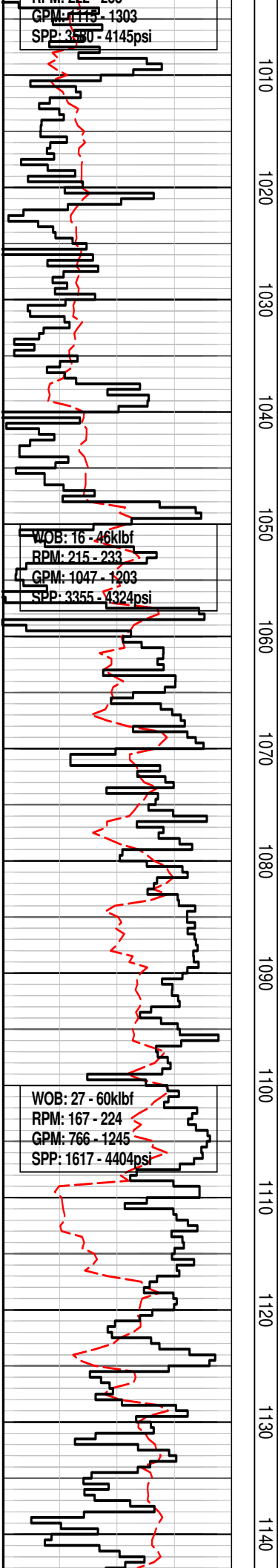


Drill with seawater and Hi-vis  
PHG & Guar Gum sweeps  
Returns to Seabed

Survey @ 972.34m Inc: 0.93, Azi:  
96.0, TVD: 972.30m

Drill with seawater and Hi-vis  
PHG & Guar Gum sweeps  
Returns to Seabed

Survey @ 1001.37m Inc: 0.92



Survey @ 1001.57m Inc: 0.92,  
Azi: 82.73, TVD: 1001.33m

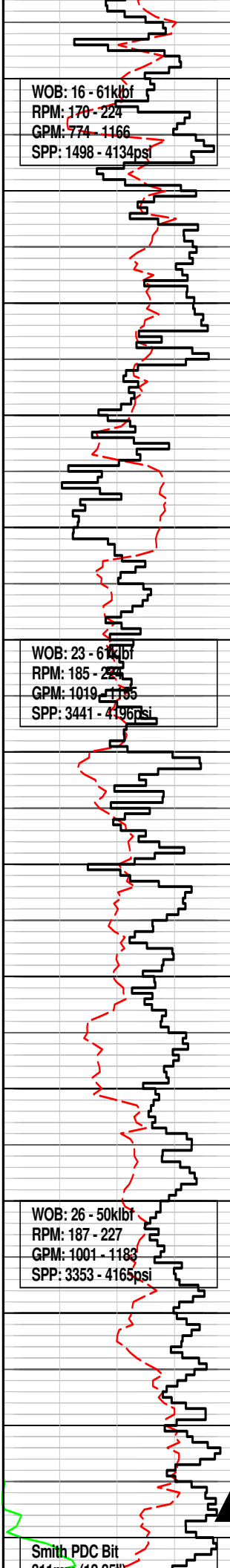
Drill with seawater and Hi-vis  
PHG & Guar Gum sweeps  
Returns to Seabed

Survey @ 1059.78m Inc: 0.97,  
Azi: 75.34, TVD: 1059.73m

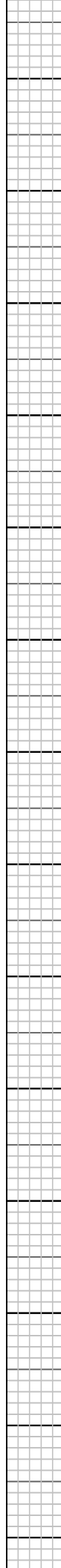
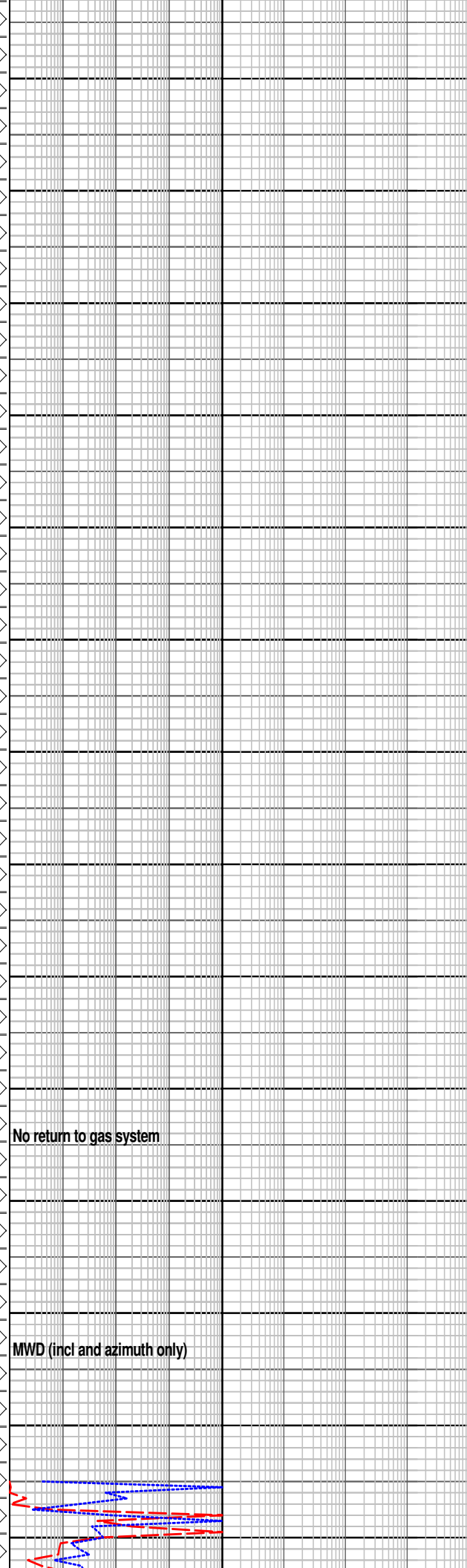
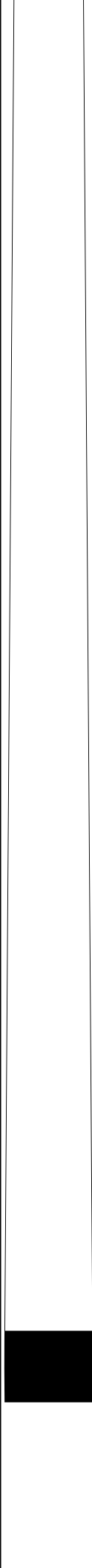
Survey @ 1090.08m Inc: 0.77,  
Azi: 49.47, TVD: 1090.03m

Drill with seawater and Hi-vis  
PHG & Guar Gum sweeps  
Returns to Seabed

Survey @ 1117.31m Inc: 0.68,  
Azi: 45.03, TVD: 1117.26m



1150  
1160  
1170  
1180  
1190  
1200  
1210  
1220  
1230  
1240  
1250  
1260  
1270  
1280



Drill with seawater and Hi-vis  
PHG & Guar Gum sweeps  
Returns to Seabed

Survey @ 1203.66m Inc: 0.95,  
Azi: 60.78, TVD: 1203.60m

Drill with seawater and Hi-vis  
PHG & Guar Gum sweeps  
Returns to Seabed

Survey @ 1254.36m Inc: 0.22,  
Azi: 29.97, TVD: 1254.29m

Set 340mm (13 3/8") casing shoe  
at 1278.57mMDRT

Reached TD of 445mm (17-1/2")  
Section 1284mMDRT @ 00:00

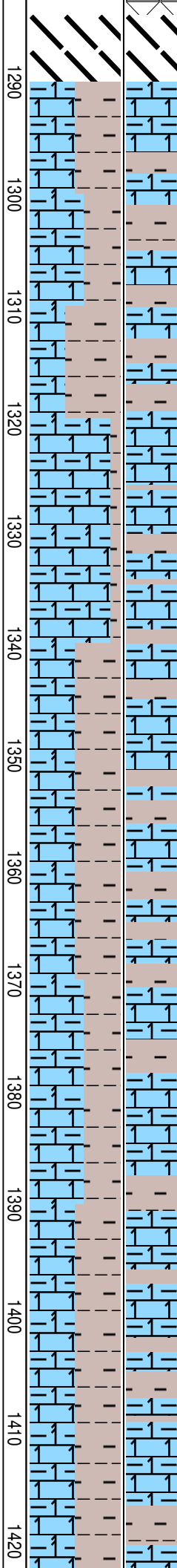


31 mm (1.25 in)  
Jets: 10x12  
Depth In: 1284.0m  
Depth Out: 2912.0m  
Drilled: 1628.0m in 42.4hrs  
Grade: 1-2-WT-S-X-I-CT-HF

WOB: 8 - 62klbf  
RPM: 58 - 223  
GPM: 690 - 1158  
SPP: 1827 - 4188psi

WOB: 15 - 54klbf  
RPM: 109 - 177  
GPM: 716 - 1060  
SPP: 2151 - 4186psi

WOB: 16 - 34klbf  
RPM: 161 - 174  
GPM: 1008 - 1063  
SPP: 3916 - 4244psi



Section to 1284mMDR1 @ 08:30  
hrs on 21 October 2009

**ARGILLACEOUS CALCISILTITE:**  
v lt olv gy, frm, sbblky-blky,  
20-30% arg, 5-10% dk slt & dk  
ficks

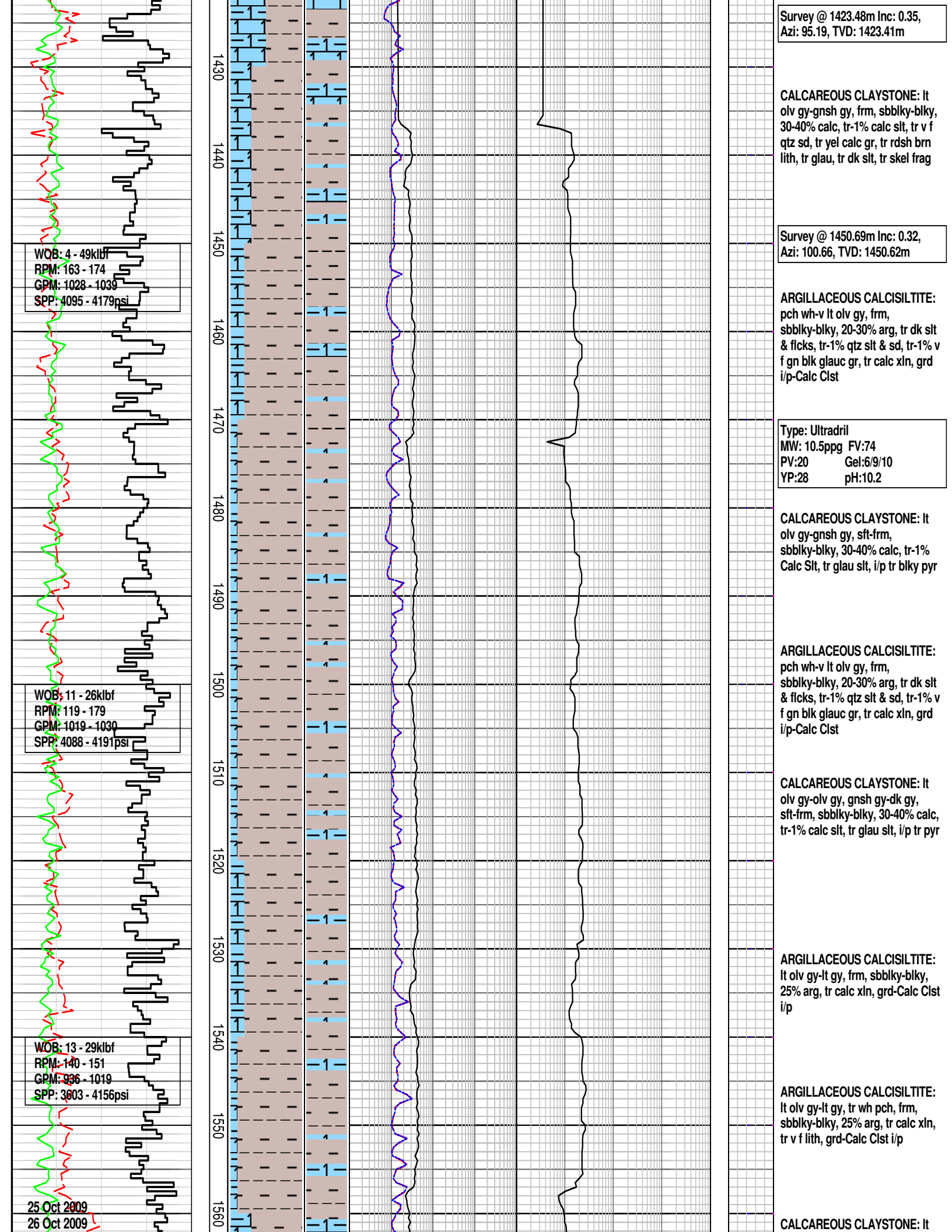
**CALCAREOUS CLAYSTONE:** lt  
olv gy-olv gy, frm, sbblky-blky,  
20-25% calc, tr-5% dk slt (Note:  
10% cmt contam)

**ARGILLACEOUS CALCISILTITE:**  
v lt olv gy, frm, sbblky-blky,  
30-40% arg, tr dk slt & ficks, tr  
calc xln

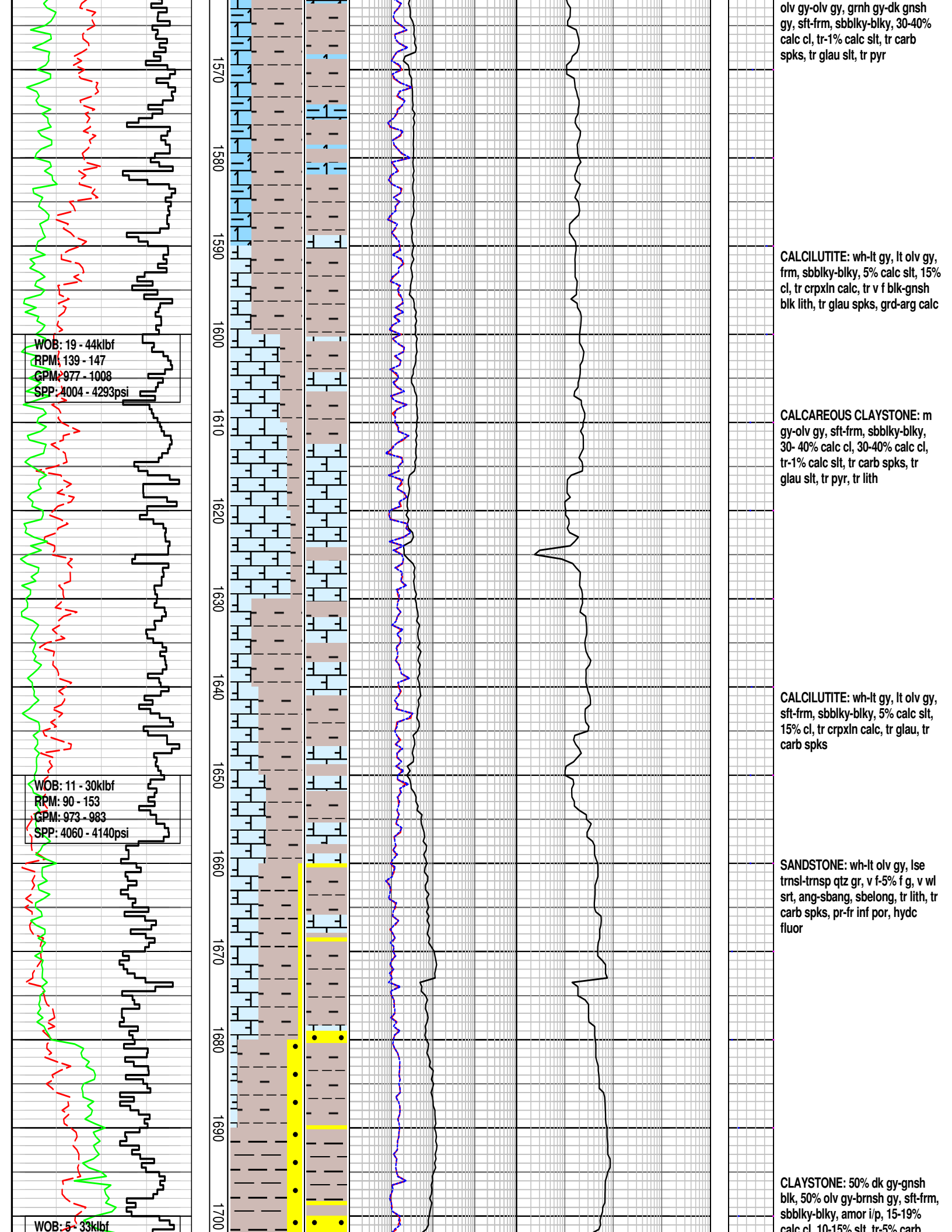
**CALCAREOUS CLAYSTONE:** lt  
olv gy-gnsh gy, frm, sbblky-blky,  
20-30% calc, tr calc slt, tr dk slt

Survey @ 1395.50m Inc: 0.44,  
Azi: 87.23, TVD: 1395.43m

**ARGILLACEOUS CALCISILTITE:**  
pch wh-v lt olv gy, frm,  
sbblky-blky, 20-30% arg, tr dk slt  
& ficks, tr-1% qtz slt & sd, tr-1% v  
f blk glau gr, tr calc xln, gr  
i/p-Calc Cst







RPM: 131 - 144  
GPM: 937 - 977  
SPP: 3848 - 4186psi

WOB: 11 - 32klbf  
RPM: 126 - 156  
GPM: 954 - 985  
SPP: 4074 - 4218psi

WOB: 13 - 34klbf  
RPM: 140 - 155  
GPM: 955 - 983  
SPP: 3458 - 4399psi

1710  
1720  
1730  
1740  
1750  
1760  
1770  
1780  
1790  
1800  
1810  
1820  
1830  
1840

Calc cl, 10-15% slt, tr 5% carb  
spks, tr glau, tr pyr, tr lith, grd  
i/p-Slt Clst

SANDSTONE: wh-lt olv gy, gnsh  
gy i/p, pred lse, trns-trnsp qtz gr,  
v f -10% f gr, v wl-wl srt, ang-sb  
ang, sbelong, 5-10% arg mtrx i/p  
wshg ot & dis, tr-5% pyr, hd cmt  
agg, tr calc cmt, tr lith, tr carb  
spks, tr-5% glau, fr inf por, n  
hydc flour

Survey @ 1739.63m Inc: 0.22,  
Azi: 152.34, TVD: 1739.55m

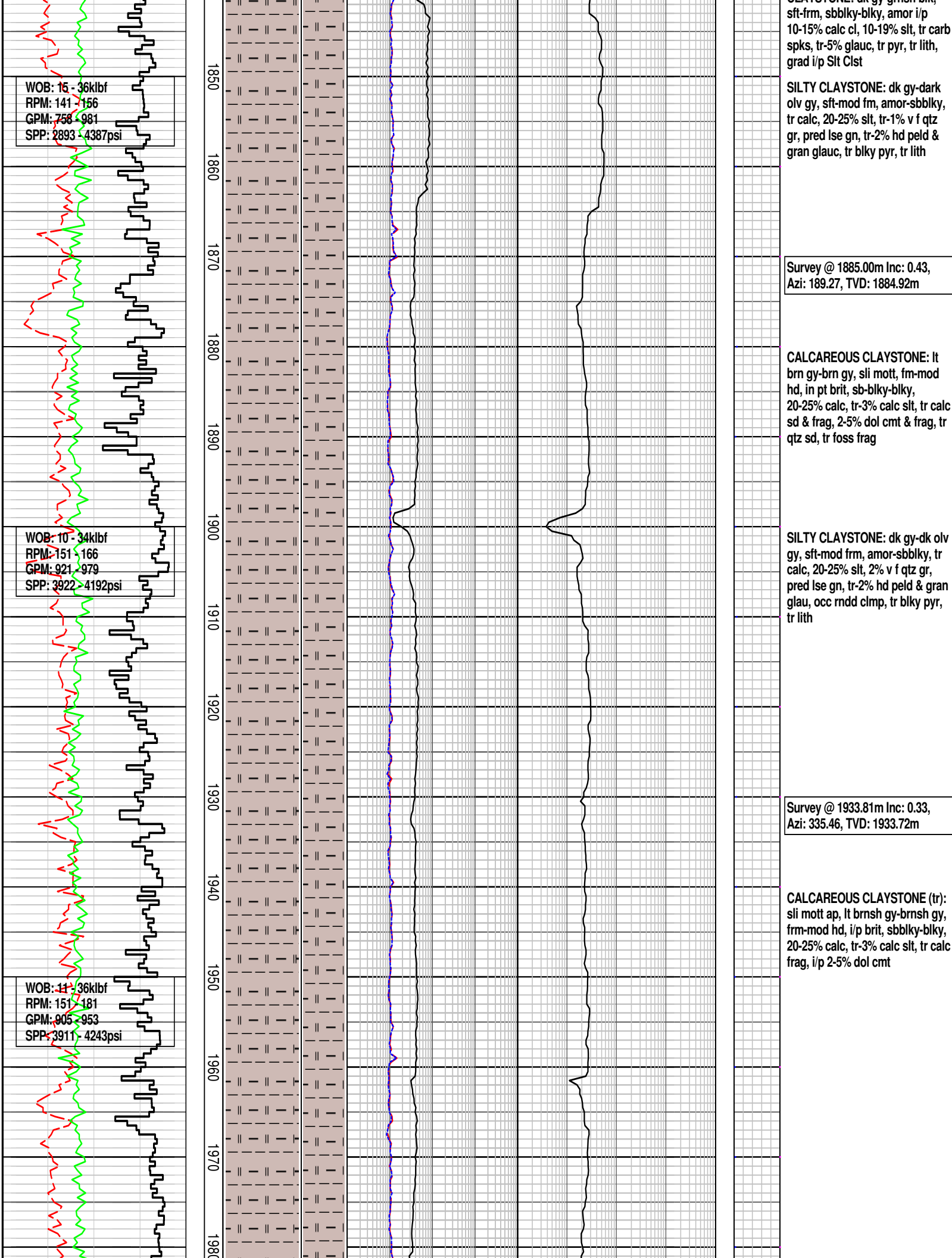
CLAYSTONE: dk gy-olv blk,  
sft frm, sbblky-blky, amor i/p,  
10-15% calc cl, 10-15% slt, tr carb  
spks, tr-5% glau, tr pyr, tr lith,  
grd i/p-Slt Clst

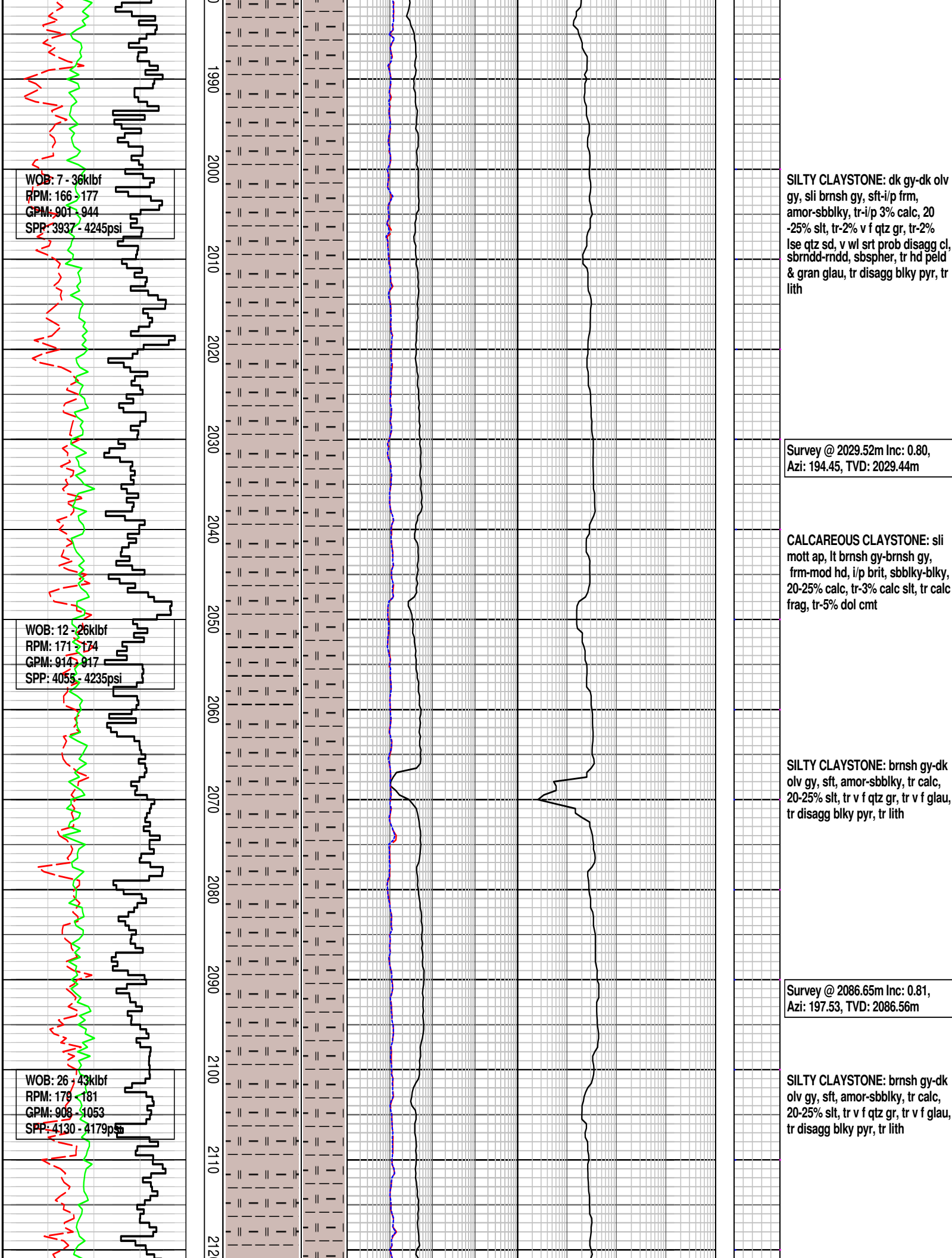
CLAYSTONE: dk gy-olv blk,  
sft frm, sbblky-blky, amor i/p,  
10-15% calc cl, 10-19% slt, tr carb  
spks, tr-5% glau, tr pyr, tr-5% lt  
olv gy-dsky yelsh brn strng calc  
frag that are ang  
i/p, tr lith, grad i/p-Slt Clst

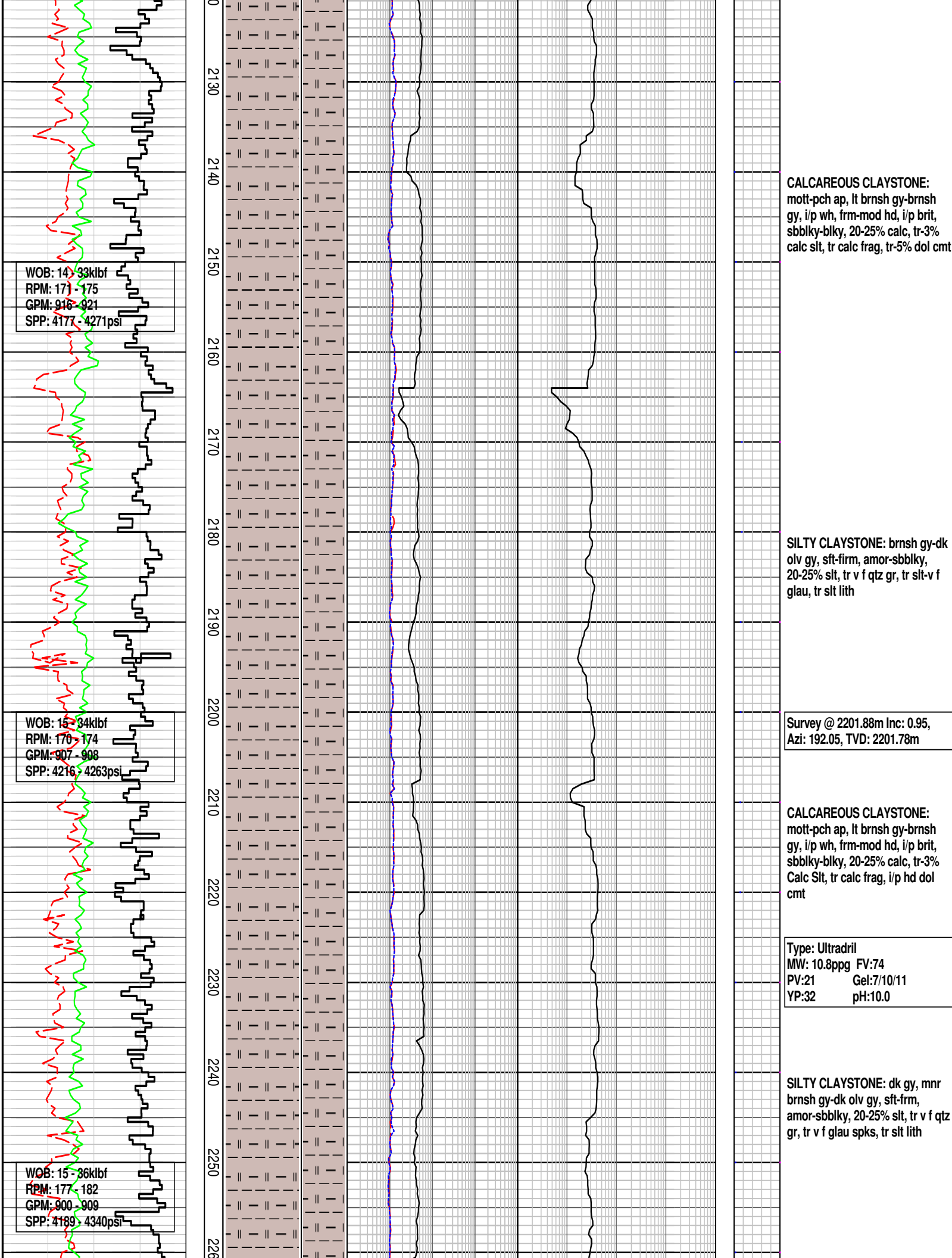
ARGILLACEOUS CALCILUTITE:  
lt olv gy-olv gy, pred sft frm, tr hd  
& ang, pred sbblky-blky 30-35%  
cl, 5-10% calc slt, crpxln calc, tr  
glau, tr pyr, grd-Calc Clst i/p

SANDSTONE: lt gy, trns-trnsl  
qtz gr, lse, v f-tr f gr, sbang-rndd,  
v wl-wl srt, arg mtrx i/p, tr slt, tr  
lith, tr glau, tr pyr, fr-p inf por, n  
hydc fluor

CLAYSTONE: dk gy-arnsh blk







2130 2140 2150 2160 2170 2180 2190 2200 2210 2220 2230 2240 2250 2260

WOB: 14-33klbf  
RPM: 171-175  
GPM: 916-921  
SPP: 4177-4271psi

WOB: 15-34klbf  
RPM: 170-174  
GPM: 907-908  
SPP: 4216-4263psi

WOB: 15-36klbf  
RPM: 177-182  
GPM: 900-909  
SPP: 4189-4340psi

**CALCAREOUS CLAYSTONE:**  
mott-pch ap, lt brnsh gy-brnsh  
gy, i/p wh, frm-mod hd, i/p brit,  
sbbly-blky, 20-25% calc, tr-3%  
calc slit, tr calc frag, tr-5% dol cmt

**SILTY CLAYSTONE:** brnsh gy-dk  
olv gy, sft-firm, amor-sbbly,  
20-25% slit, tr v f qtz gr, tr slit-v f  
glau, tr slit lith

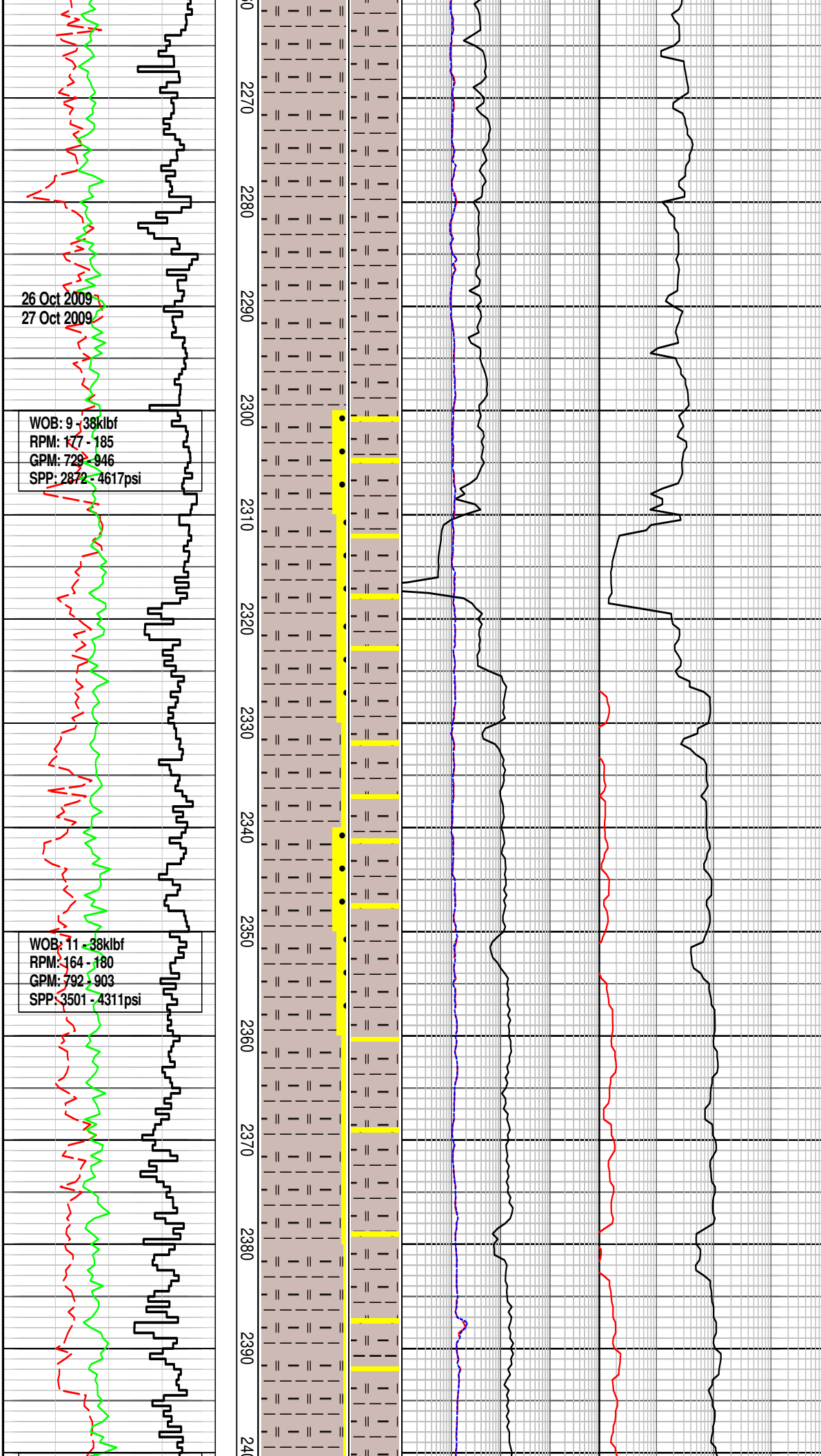
Survey @ 2201.88m Inc: 0.95,  
Azi: 192.05, TVD: 2201.78m

**CALCAREOUS CLAYSTONE:**  
mott-pch ap, lt brnsh gy-brnsh  
gy, i/p wh, frm-mod hd, i/p brit,  
sbbly-blky, 20-25% calc, tr-3%  
Calc Slit, tr calc frag, i/p hd dol  
cmt

Type: Ultradril  
MW: 10.8ppg FV:74  
PV:21 Gel:7/10/11  
YP:32 pH:10.0

**SILTY CLAYSTONE:** dk gy, mnr  
brnsh gy-dk olv gy, sft-firm,  
amor-sbbly, 20-25% slit, tr v f qtz  
gr, tr v f glau spks, tr slit lith





26 Oct 2009  
27 Oct 2009

WOB: 9 - 38klbf  
RPM: 177 - 185  
GPM: 729 - 846  
SPP: 2872 - 4617psi

WOB: 11 - 38klbf  
RPM: 164 - 180  
GPM: 792 - 903  
SPP: 3501 - 4311psi

SILTY CLAYSTONE: dk gy,  
sft-frm, amor-sbblky, 20-25% slt,  
tr v f qtz gr, tr v f glau spks, tr slt  
lith, tr brk wh calc foss frag

Survey @ 2288.48m Inc: 0.99,  
Azi: 182.79, TVD: 2288.37m

SANDSTONE: lt gy, trnsp-trnsl  
qtz gr, lse, v f-f gr, sbang-rnnd,  
sbelong-sbspher, v wl-wl srt, arg  
mtrx i/p, tr-5% slt, tr lith, tr glau,  
tr pyr, fr-p inf por, n hydc fluor

Changed shaker screens and  
adjusted gastrap

Survey @ 2316.76m Inc: 1.04,  
Azi: 183.07, TVD: 2316.63m

SILTY CLAYSTONE: dk gy-olv  
blk, brnsh gy i/p, sft-frm,  
amor-sbblky, 20-25% slt, tr-5% v f  
qtz gr, tr v f glau spks, tr slt lith,  
tr brk wh calc foss frag

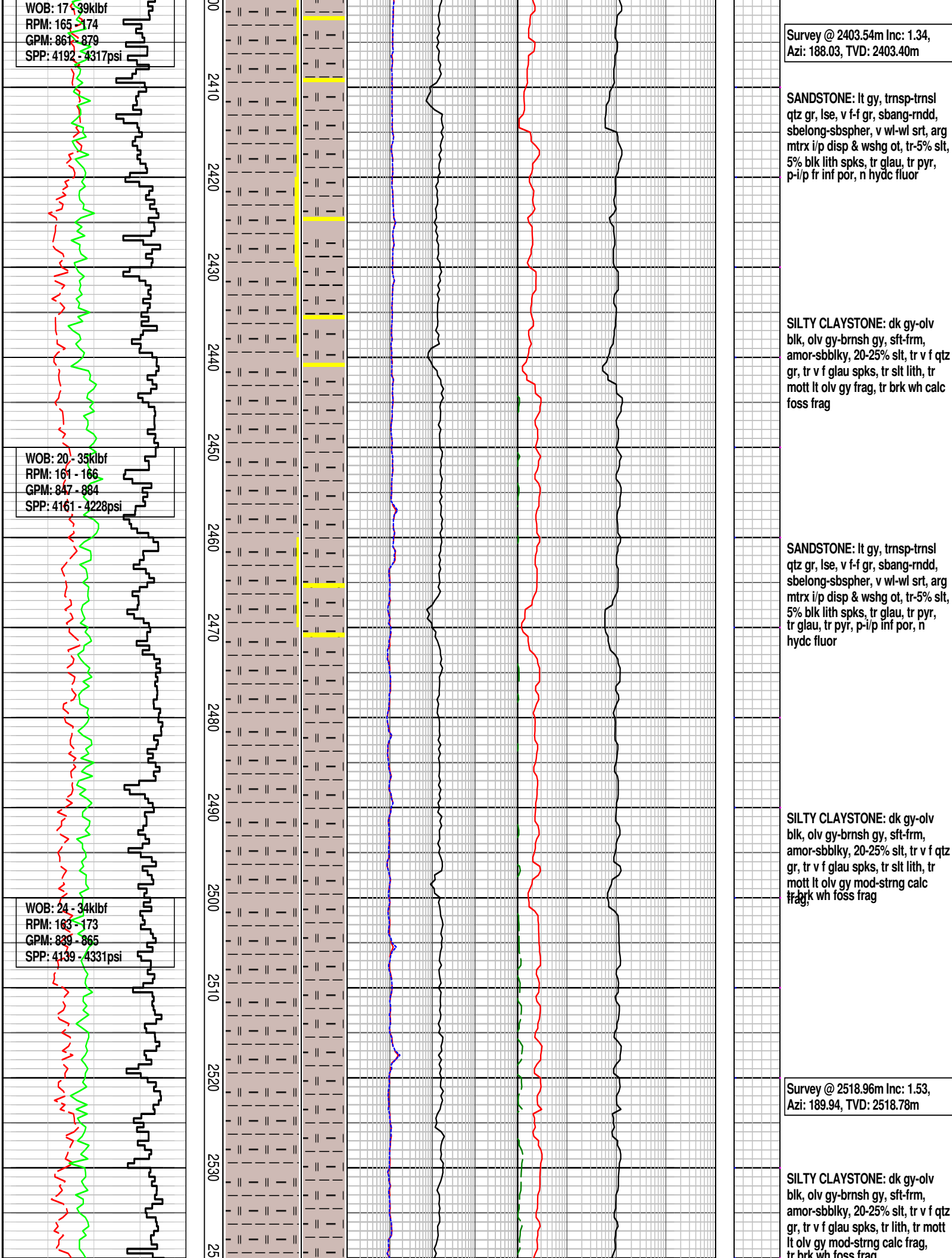
Survey @ 2345.02m Inc: 1.11,  
Azi: 183.02, TVD: 2344.89m

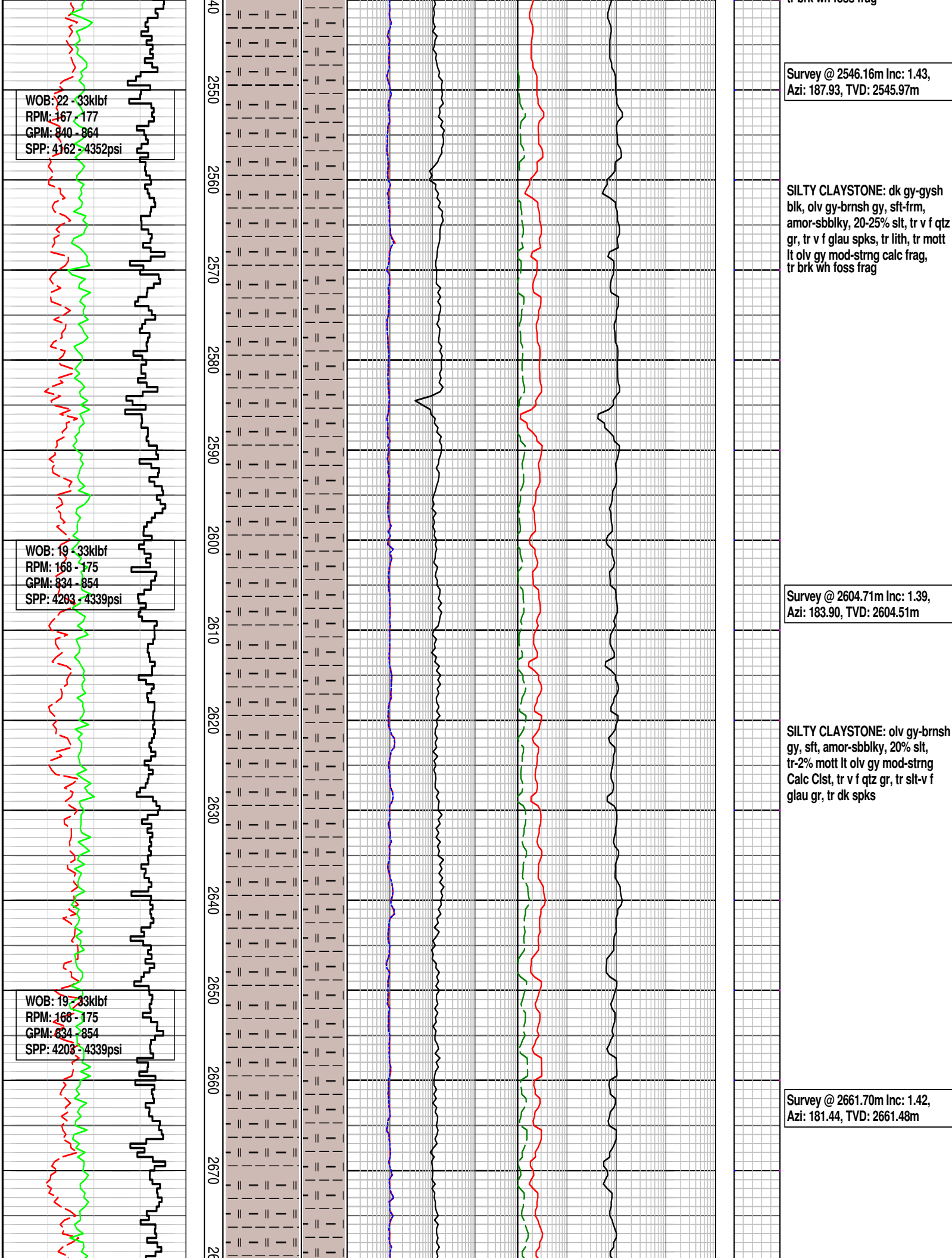
SANDSTONE: lt gy, trnsp-trnsl  
qtz gr, lse, v f-f gr, sbang-rnnd,  
sbelong-sbspher, v wl-wl srt, arg  
mtrx i/p disp & wshg ot, tr-5% slt,  
5% blk lit spks, tr glauc,  
tr pyr, fr-p inf por, n hydc fluor

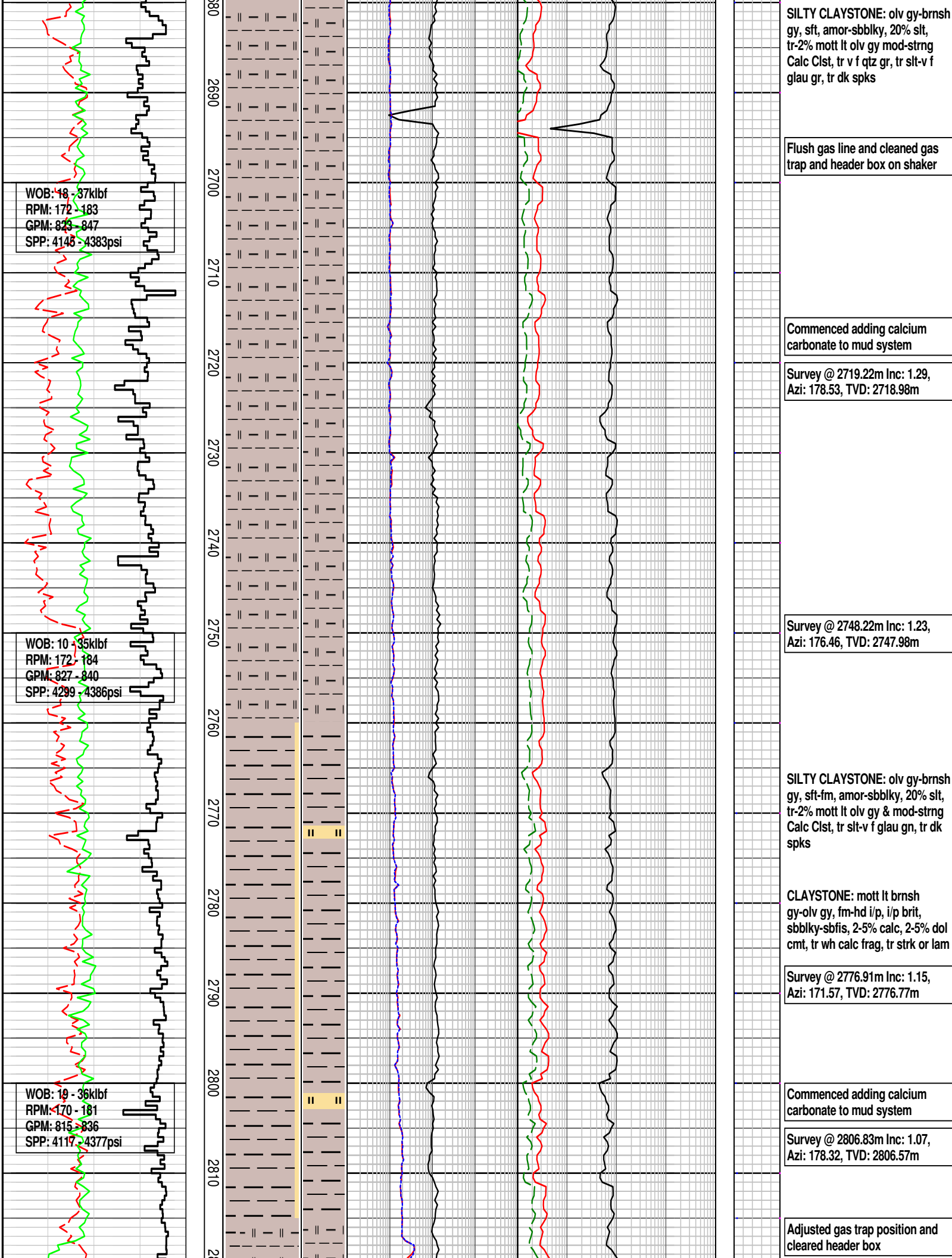
Survey @ 2374.64m Inc: 1.29,  
Azi: 186.60, TVD: 2374.50m

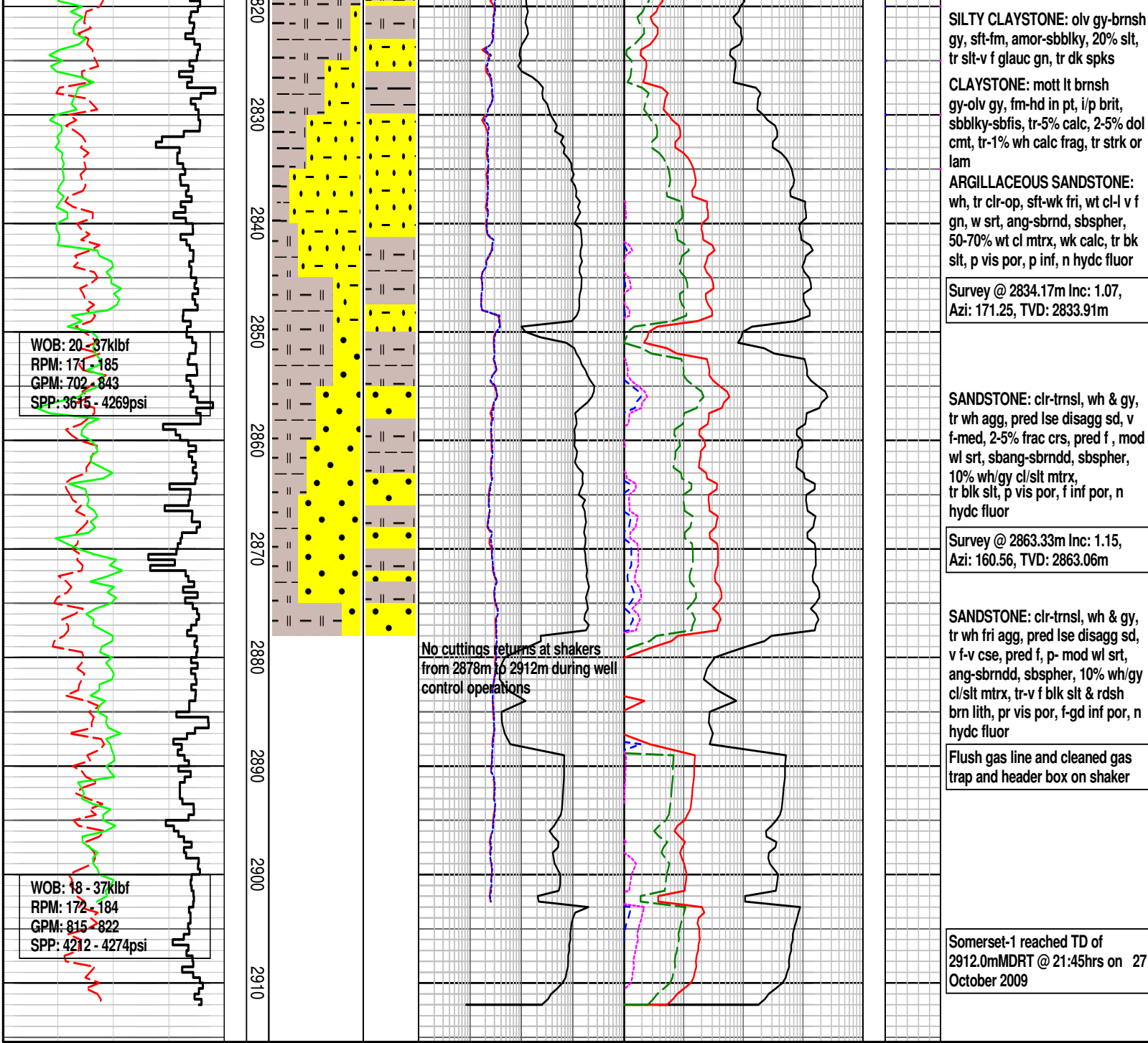
SILTY CLAYSTONE: dk gy-olv  
blk, olv gy-brnsh gy, sft-frm,  
amor-sbblky, 20-25% slt, tr v f qtz  
gr, tr v f glau spks, tr slt lith, tr  
mott lt olv gy frag, tr brk wh calc  
foss frag











FORMATION EVALUATION LOG											
<div>WOB (klbf)</div> <div>ROP (m/hr)</div> <div>Gamma Ray (API)</div>		MD meters 1:500	CORE	LITHOLOGY %	INTERPRETED LITHOLOGY	TOTAL GAS & RESISTIVITY		CHROMATOGRAPH		CALC	REMARKS
						Total Gas (%)		Methane (%)			
						Resistivity (Shallow)		Ethane (%)			
						Resistivity (Deep)		Propane (%)			