



Company : Petro Tech Pty. Ltd

Well : Hazelwood-1

Interval : 213.00 - 7168.13 meters

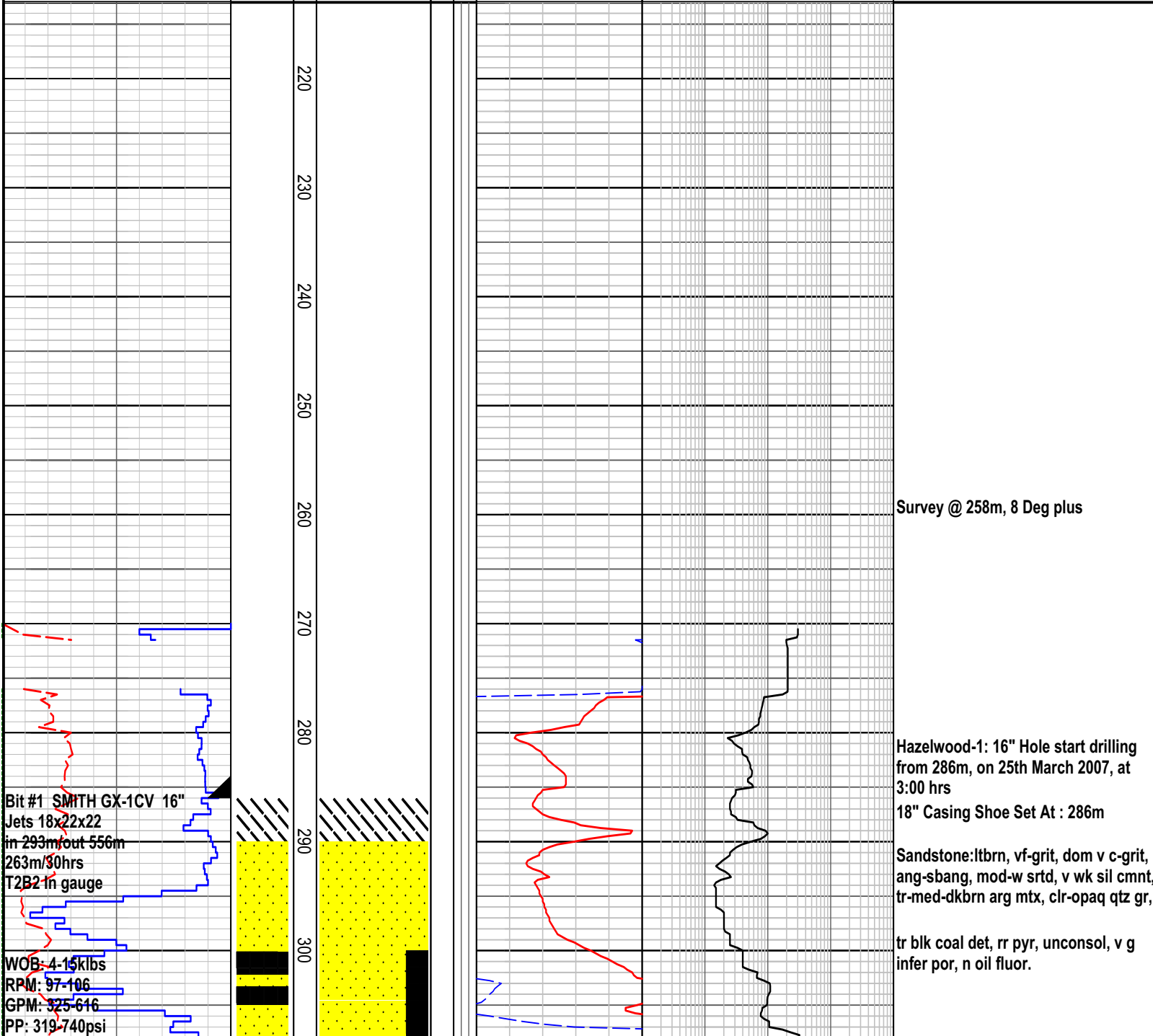
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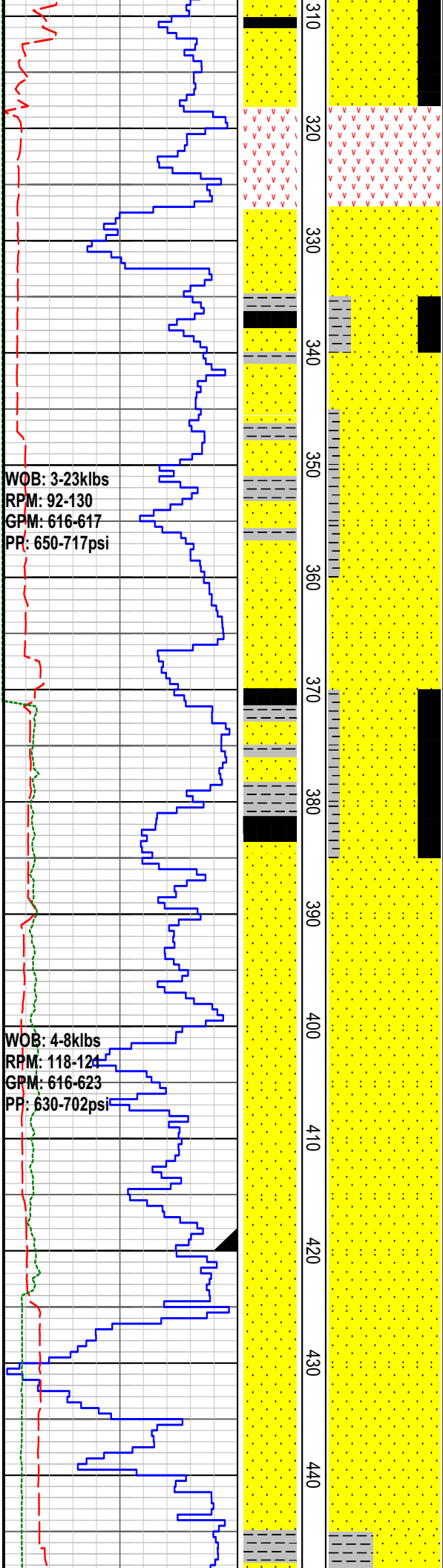


INTEQ

### FORMATION EVALUATION LOG

RATE OF PENETRATION		MD meters :500	LITHOLOGY	CORE	OIL SHOWS	TOTAL GAS		CHROMATOGRAPH				REMARKS	
ROP (0-100m/hr)	Backup ROP (100-200m/hr)					1	10000	1	10000	1	10000		1
100   90   80   70   60   50   40   30   20   10	200   190   180   170   160   150   140   130   120   110					0.1   0.2   0.3   0.4   0.5	1	Methane ppm	10000	1	Ethane ppm	10000	
WOB (klb)						TOTAL GAS unit		1	Propane ppm	1	iso-Butane ppm	10000	
TORQUE AVG						BACKUP TOTAL GAS unit		1	n-Butane ppm	1	n-Pentane ppm	10000	
5   10   15   20   25   30   35   40   45   50	5   10   15   20   25   30   35   40   45   50					0.6   0.7   0.8   0.9   1	1	iso-Pentane ppm	10000		n-Pentane ppm	10000	





Coal: v dk brn-blk, irreg fract, ethy lstr, frm - hd.

Survey @ 319m, 12 Deg.  
 Basalt: (weathered), lt-med grngy-ltbrn, speckled, mic, weathered i/p-kaol, hd-v hd.

Sandstone:ltbrn, vf-vc, dom c, ang-sbrnd, mod srtd, v wk sil cmt, tr med-dkbrn argill mtx, clr-opaq qtz gr, tr blk coal det, unconsol, v g infer por, no oil fluor.

Sandstone:lt brn, vf-grit, dom v c, ang-sbang, mod srtd, v wk sil cmt, tr med-dk brn argill mtx, clr-opaq qtz gr, tr blk coal det, unconsol, v gd infer por, no oil fluor.

Claystone:lt-med gry-med brn,v carb i/p,occ v fine aren,v sft,v disp,non fiss.

Coal: v dk brn-blk,sli-mod argill,irregular fract,ea lust,frm-hd.

Sandstone: vlt gry-v lt brn gry,vf-grit, dom v c, ang-sbang, mod srtd, v wk sil cmt, tr med-dk brn argill mtx, clr-opaq qtz gr, tr blk coal det, tr crs mica flks, uncons,v gd infer

Survey @ 357m, 11 Deg.  
 Claystone: lt-med gry to med brn,v carb i/p,occ v fine aren,v sft,v disp,non fiss.

Sandstone:lt brn gry,vf-grit, dom v c, ang-sbang, mod srtd, v wk silca cmt, tr med-dk brn argill mtx, clr-opaq qtz gr, tr blk coal det, uncons,v gd infer por, no oil fluor.

Sandstone:lt brn gry,vf-grit, dom v c, ang-sbang, mod srtd, v wk silca cmt, tr-com med-dk brn argill mtx, clr-opaq qtz gr, tr blk coal det, uncons,v gd infer por, no oil fluor.

Sandstone:lt brn gry,vf-grit, dom v c, ang-sbang, mod srtd, v wk silca cmt, tr-com med-dk brn argill mtx, clr-opaq qtz gr, tr blk coal det, tr c mica flks, uncons,

Survey @ 414m, 9 Deg.

13 3/8" Casing Shoe Set At : 420m

Sandstone:lt brn gry,vf-grit, dom v c, ang-sbang, mod srtd, v wk silca cmt, tr-com med-dk brn argill mtx, clr-opaq qtz gr, tr org rd liths, com blk coal det tr c mica flks,uncons, v gd infer por, no oil fluor.

WOB: 4-10 klbs  
RPM: 118-158  
GPM: 480-585  
PP: 580-710psi

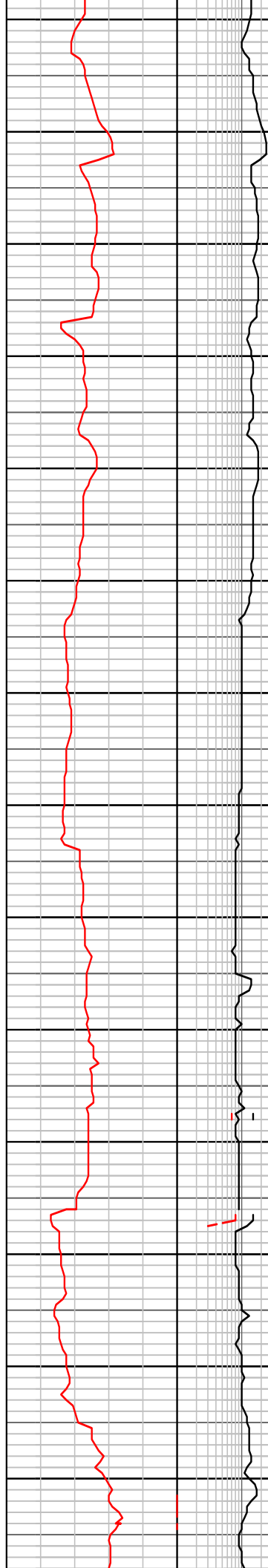
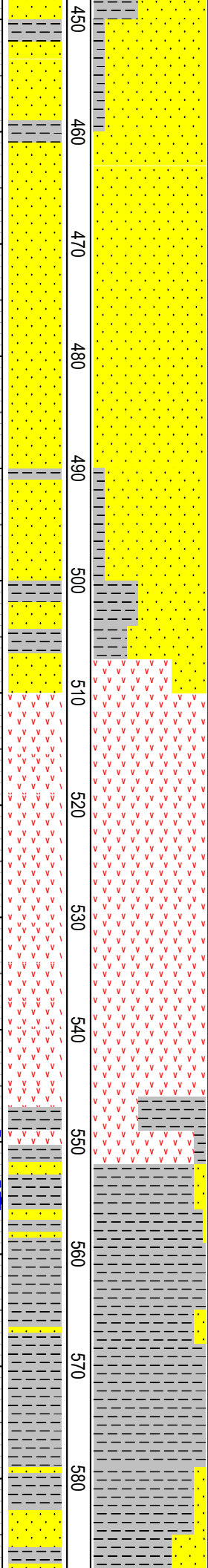
25/03/07

WOB: 8-11 klbs  
RPM: 84-160  
GPM: 526-563  
PP: 637-717psi

WOB: 11-27 klbs  
RPM: 90-100  
GPM: 584-616  
PP: 670-700psi

26,29/03/07

Bit #2 REED PDC 12 1/4  
Jcs 7x12  
in 556m/out 1072 m  
516m/70.7hrs  
not reuseable



Sandstone:lt brn gry,vf-grit, dom v c, ang-sbang, mod srtd, v wk silica cmt, tr-com med-dk brn argill mtz, clr-opaq qtz gr, tr blk coal det, tr c mica flks, uncons,v gd infer por, v gd inf por, no oil fluor

Sandstone: ltbrn gy, vf-vc, dom c,ang-sbang, mod srtd, v wk sil cmt, tr-com med-dk brn argill mtz, clr-opaq qtz gr, tr or rd liths,com blk coal det, tr c mic flks,rr pyr,uncons, v gd infer por, no oil fluor.

Sandstone:lt brn gy, vf-c, dom f-med, ang-sbang, mod srtd, v wk sil cmt, tr-com med-dk brn argill mtz, clr-opaq qtz gr, tr or rd liths,com blk coal det, tr c mic flks, rr pyr, unco v gd infer por,no oil fluor.

Claystone: (weathered volcanics), off wh-org brn-brn,mottled txt, com vf-vc yel rd stained ang qtz grs, sft-mod hd, v disp, non fiss.

Claystone: (weathered volcanics), off wh-brick rd,mottled txt, tr vf-vc yel rd stained ang qtz grs, sft-mod hd, v disp, non fiss.

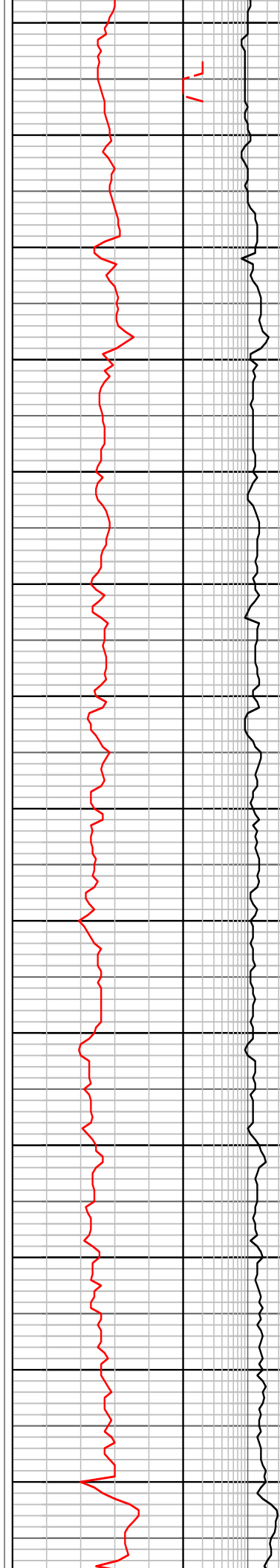
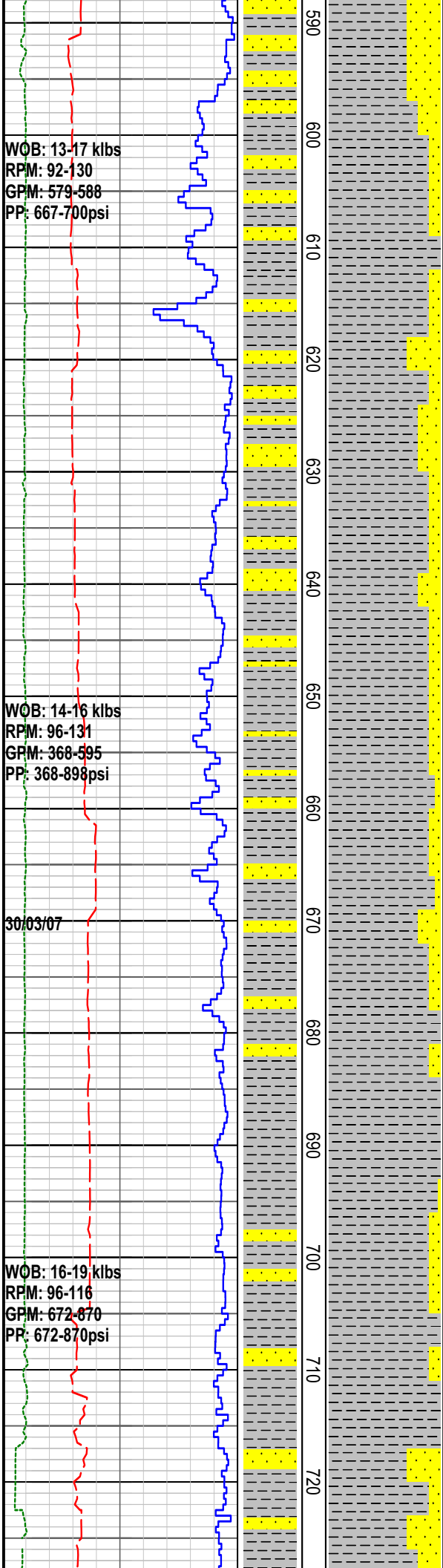
Claystone: (partially weathered volcanics), off wh-brick rd,mottled txt, cryptoxln-microxln,tr vf-vc yel rd stained ang qtz grs, sft-hd,non fiss.

Claystone:(lightly metamorphosed), med gy-med grn gy,microxln txt i/p,slty, tr blk carb flecks,tr micmic,hd,sbfiss.

Sandstone:lt grn gy, vf, sbang-sbrnd,mod srtd, mod sil cmt, abdt wh argill mtz, abdt off wh altd felds grs, com grn gy & tr rd liths,tr f blk carb det,hd, no vis por,no oil fluor

Drilled 16" hole to 556m. POOH to run casing  
12.25" Hole drill from 556m  
Leak off test @ 424m MW 9.1 ppg,150 psi, EMW = 11.1 ppg

Sandstone:lt grn gy, slty-vf, sbang-sbrnd,mod srtd, mod-strg sil cmt, abdt wh argill mtz, abdt off wh



altd felds grs, com grn gy & tr rd liths, tr f blk carb det, hd, no vis por, no no oil fluor.

Claystone: med gn gy-med dk gy, sli-occ v slty, occ comm disp vf altd felds grs, tr blk carb flks & blk coal det, tr micmic, rr calc lined frac, mod hd, sbfiss.

Carbide Lag Checked @ 575m  
Ave hole size 13.8"

Claystone: med dk gry, occ med gn gy, sli-occ v slty, occ comm disp vf altd felds grs, tr blk carb flks & blk coal det, tr micmic, mod hd, sbfiss.

Sandstone: lt grn gy, slty-vf, sbang-sbrnd, mod srtd, strg sil cmt & wk calc cmt, abdt wh argill mtx - mtx supported, abdt off wh altd felds grs, com grn gy & tr rd liths, tr f blk ca hd, no vis por, no oil fluor.

Survey @ 601m, 2.0 Deg.

Claystone: med dk gry-med gn gy, sli-occ v slty, com disp vf altd felds grs i/p, tr blk carb flks, tr micmic, mod hd, sbfiss.

Claystone: med dk gry-med brn gy-med gn gy, sli-occ v slty, com disp vf altd felds grs i/p, tr blk carb flks, tr micmic, mod hd, sbfiss.

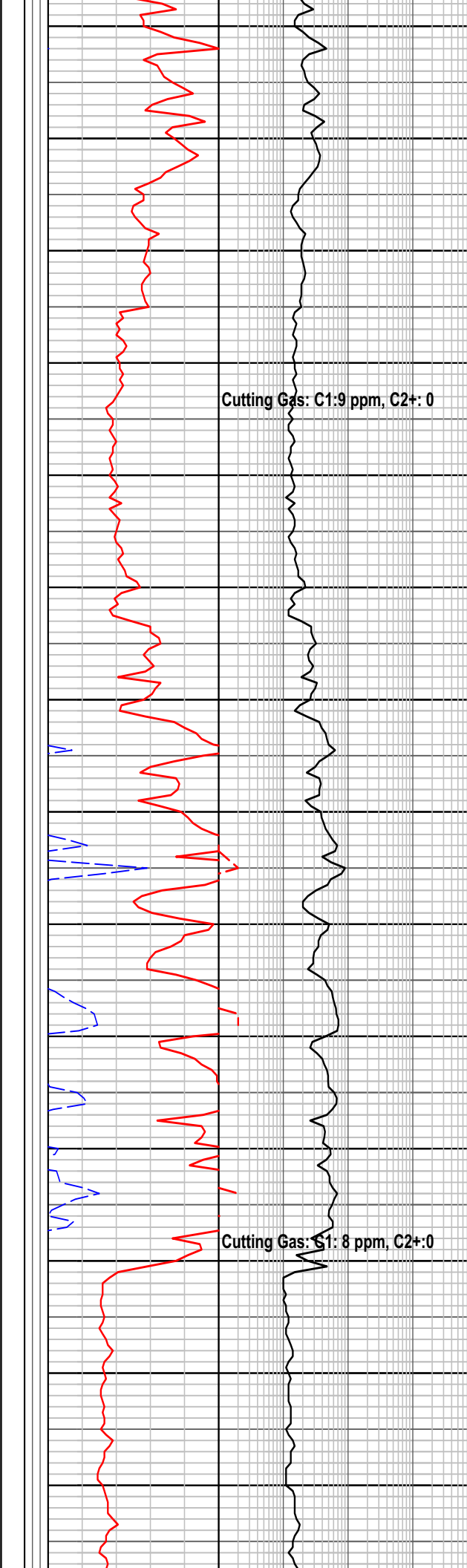
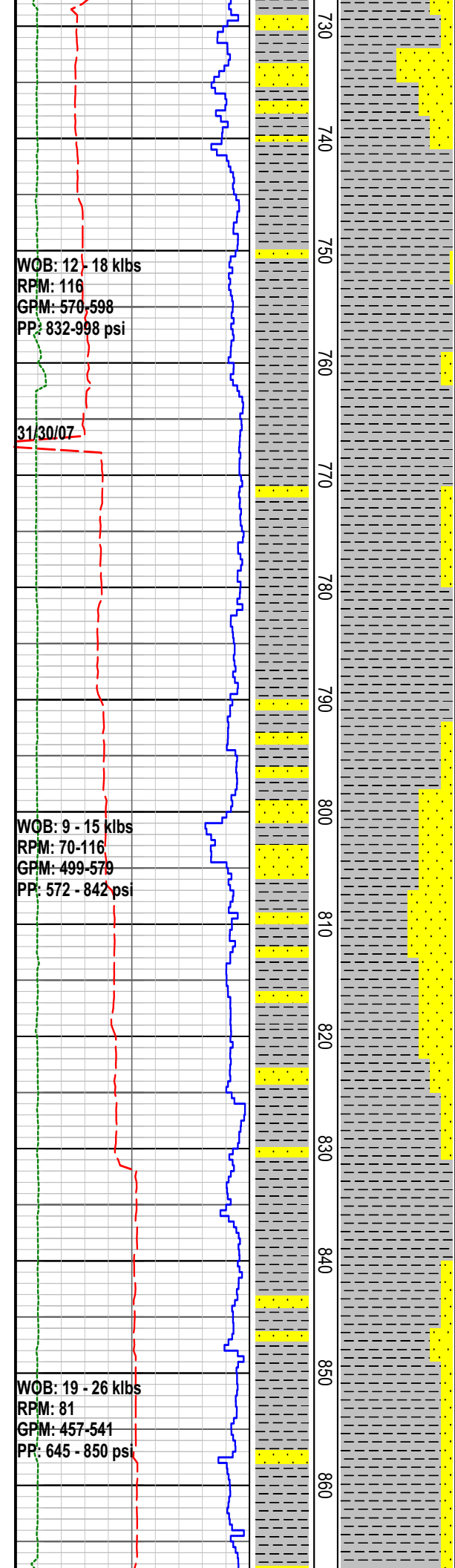
Sandstone: lt grn gy, slty-vf, sbang-sbrnd, mod srtd, strg sil cmt, abdt wh argill mtx - mtx supported, abdt off wh altd felds grs, com grn gy & tr rd liths, tr f blk carb det, tr cal lined frac, hd, no vis por, no oil fluor.

MW 9.0 Vis 7.0  
PV/YP 7/10 Gels 2/3  
Sol 4.6 Sd Tr Cl 3000

Sandstone: lt-med grn gy, slty-vf, sbang-sbrnd, mod srtd, strong sil cmt, abnt wh argill mtx-mtx suptd, abnt off wh alter felds grs, com grn gy and tr rd liths, tr f blk carb det, com calc ln fract, hd, n vis por, no oil fluor

Claystone: med-dk gry-med gn gy, sli-occ v slty, com disp vf altd felds grs i/p, tr blk carb flks, tr micmic, tr calc lined frac, hd, sbfiss.

Claystone: med-dk gry-med gn gy,



sli-v slty, com-abdt disp vt altd felds  
grs i/p, tr blk carb flks, tr micmic, tr  
calc lined frac,hd, sbfiss.

Sandstone: lt-med grn gy, slty-vf,  
sbang-sbrnd, mod srted, strng sil cmt,  
abdt wh argill mtx-mtx suptd, abdt off  
wh alter felds grs, com grn gy and tr  
rd liths, tr f blk carb det,  
tr calc lined frac, hd, no vis por, no oil  
flour.

Wiper trip @ 754m to casing shoe  
WTG =0.29 units

Claystone: med-dkgy-med grn gy,  
sli-occ v slty, com disper v f altrd  
felds gr i/p, tr blk carb flecks, tr  
micmic, tr calc ln fract, hd, sbfiss

MW 8.9 Vis 35  
PV/YP 7/3 Gels 1/2  
Sol 3.9 Sd Tr Cl 3000

Survey @ 742m, 1.5 Deg.

Claystone: med-dkgy-med grn gy,  
sli-occ v slty, com disper v f altrd  
felds gr i/p, tr blk carb flecks, tr  
micmic, tr calc ln fract, hd, sbfiss

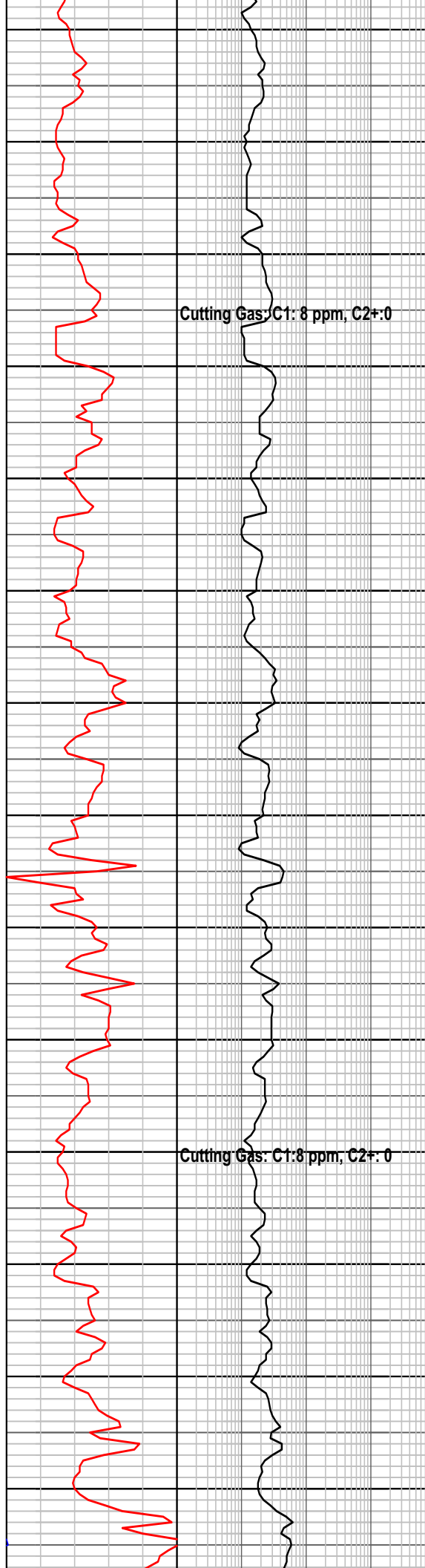
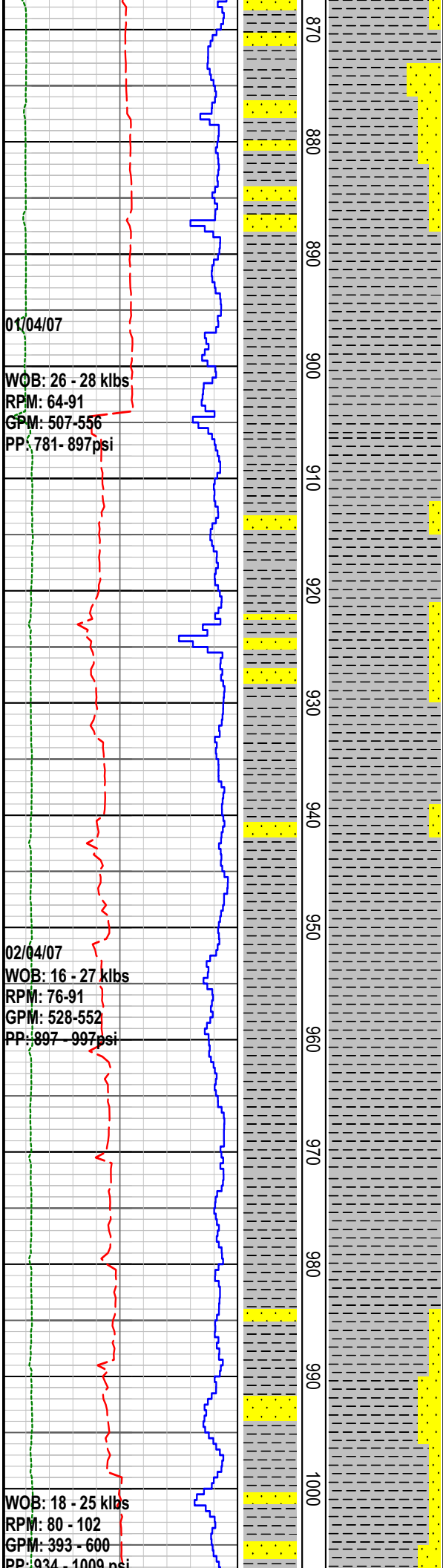
Sandstone: med grn gy, slty-vf,  
sbang-sbrnd, mod srted, strng sil cmt,  
abdt wh argill mtx-mtx suptd, abdt off  
wh alter felds grs, com grn gy and tr  
rd liths, tr f blk carb det,  
com calc lined frac, v hd, no vis por,  
no oil flour.

Claystone: med-dkgy-med grn gy,  
sli-occ v slty, com dispered v f altrd  
felds gr i/p, tr blk carb flecks, tr-com  
micmic, tr calc ln fract, hd, sbfiss.

Sandstone: med grn gy, slty-vf,  
sbang-sbrnd, mod srted, strng sil cmt,  
abdt wh argill & slty mtx, abdt off wh  
alter felds grs, com grn gy & tr rd  
liths, tr f blk carb det,  
com calc lined frac, v hd, no vis por,  
no oil flour.  
change out shaker screen - moved  
gas trap to running shaker possam  
belly.

Claystone: med-dkgy-med grn gy,  
sli-v slty, com dispered v f altrd felds  
gr i/p, tr blk carb flecks, tr-com  
micmic, tr calc ln fract, hd, sbfiss.

Sandstone: med grn gy, slty-vf,  
sbang-sbrnd, mod srted, strng sil cmt,  
abdt wh & gy argill & slt mtx, abdt off  
wh alter felds grs, com grn gy & tr rd  
liths. tr f blk carb det.



no oil floor.

Claystone: med dkgy-occ med grn gy, sli-v slty, com dispered vf altrd felds gr i/p, tr blk carb flecks, tr-com micmic, tr calc ln fract, hd, sbfiss.

Sandstone: med gy-med grn gy, slty-vf, sbang-sbrnd, mod srtd, strng sil cmt, abdt wh & gy argill & slit mtx, abdt off wh alter felds grs, com grn gy & tr rd liths, tr f blk carb det

com calc lined frac, v hd, no vis por, no oil floor.

MW 8.85 Vis 29  
 PV/YP 3/2 Gels 1/1  
 Sol 3.6 Sd Tr Cl 2500

@904m, Wiper trip to shoe. WTG= 0.23units

Claystone: med dkgy-occ med grn gy, sli-v slty, com dispered vf altrd felds gr i/p, tr blk carb flecks, tr-com micmic, tr calc ln fract, hd, sbfiss.

Carbide Lag Checked @ 923m  
 Ave hole size 12.9"

Sandstone: med gy-med grn gy, slty-vf, sbang-sbrnd, mod srtd, strng sil cmt, abdt wh & gy argill & slit mtx, abdt off wh alter felds grs, com grn gy & tr rd liths, tr f blk carb det

com calc lined frac, v hd, no vis por, no oil floor.

Claystone: med dkgy-occ med grn gy-med brn gy, sli-v slty, com dispered vf altrd felds grs i/p, tr blk carb flecks, tr-com micmic, tr calc ln fract, hd, sbfiss.

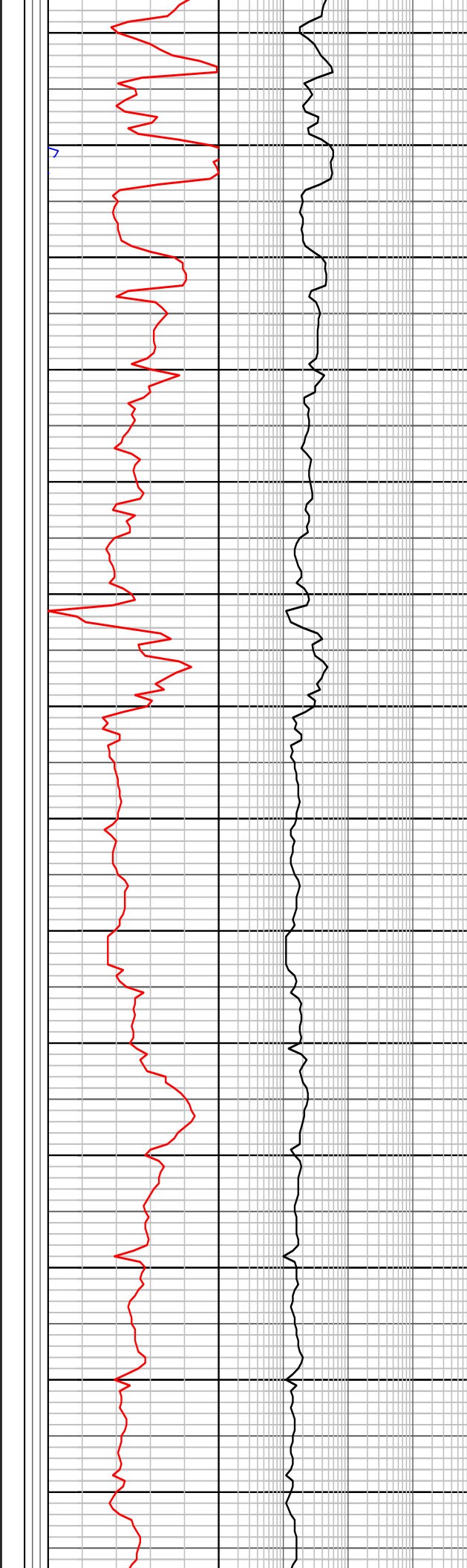
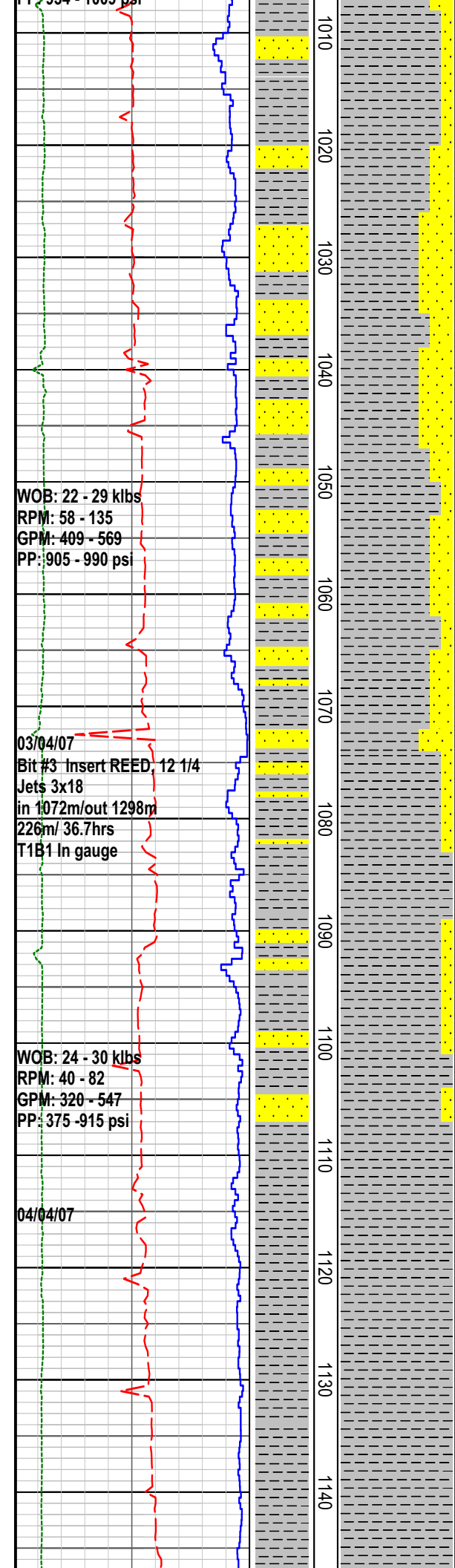
@947m, rig power Failure - restarted generator.

MW 8.85 Vis 29  
 PV/YP 2/2 Gels 1/1  
 Sol 3.5 Sd Tr Cl 1800

Claystone: med dkgy-occ med grn gy, sli-v slty, com dispered vf altrd felds gr i/p, tr blk carb flecks, tr-com micmic, com calc ln fract, hd, sbfiss.

Claystone: med dkgy-occ med grn gy, sli-v slty, com dispered vf altrd felds gr i/p, tr blk carb flecks, tr-com micmic, tr calc ln fract, hd, sbfiss.

Sandstone: med gy-med grn gy, slty-vf, sbang-sbrnd, mod srtd, strng sil cmt, abdt wh & gy argill & slit mtx, abdt off wh alter felds grs, com grn gy



about on wh alter felds grs, com grn gy, & tr rd liths, tr f blk carb det

com calc lined frac, v hd, no vis por, no oil fluor.

Sandstone: med gy-med grn gy, slty-vf subang-surnd, mod srted, strng sil cmnt, abdt wh and med gy argill and silt mtx, abdt off wh atrd felds gr, comm grn gy, tr rd liths,

tr vf blk carb det, tr calc ln fract, v hd, n vis por, no oil fluor

Survey@1033m,4.25 Deg. AZI: E10S

Claystone: med dkgy-med grn gy-rrly med brn gy, sli-v slty, com disperd vf altrd felds gr i/p, tr blk carb flecks, tr-com micmic, tr calc ln fract, hd, sbfiss.

Sandstone: med gy-med grn gy, slty-vf sbang-sbrnd, mod srted, strng sil cmt, abdt wh & med dk gy argill & silt mtx, abdt off wh atrd felds grs, com grn gy & tr rd liths,

tr vf blk carb det, tr calc ln fract, v hd, n vis por, no oil fluor.

Claystone: med dkgy-med grn gy,sli-oftn v slty, com disperd vf altrd felds gr i/p, tr blk carb flecks, tr-com micmic, tr calc ln fract, hd, sbfiss.

At 1072m Trip Gas: 0.23 Unit

Sandstone: med grn-med grn gy,vf,sbrnd, wl srted, strng sil cmt, sil mtx, abdt atrd felds grs, com grn gy & tr rd liths,v hd,no vis por, no oil fluor.

Carbide Lag Checked @ 1091m  
Ave hole size 14.9"

Claystone: med grn gy,occ med gy-med brn gy, mod slty i/p, tr-com micmic, tr calc ln fract, hd, sbfiss.

Sandstone: med grngy, slty-vf, sbrnd, mod-w srted, strng sil cmt, abdt lt grngy sil mtx, abdt alt felds gr, com grn gy and tr rd liths, tr blk carb flecks, hd-v hd, n vis por, no oil fluor.

MW 9.2 Vis 46  
PV/YP 16/21 Gels 3/5  
Sol 6.1 Sd Tr Cl 1100

Claystone: med grn gy,occ med gy-med brn gy, mod slty i/p, tr-com micmic, tr calc ln fract, hd, sbfiss.

Claystone: med-dk grn gy-med gy,occ med brn gy, mod slty i/p, tr vf altd felds i/p, tr vf blk carb flecks, tr-com micmic, tr calc ln fract, hd, sbfiss.

Sandstone: off wh-lt brn-med grn gy, slty-vf, sbrnd, mod-w srted, strng sil

WOB: 28 - 32 klbs  
RPM: 85 - 95  
GPM: 538-572  
PP: 965 - 1012 psi

05/04/07  
WOB: 29 - 31 klbs  
RPM: 74 - 83  
GPM: 531 - 548  
PP: 1035 - 1091psi

WOB: 28 - 35 klbs  
RPM: 61 - 81  
GPM: 535 - 546  
PP: 1043 - 1133psi

06/04/07

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

Cutting Gas: C1:7 ppm, C2+: 0

Cutting Gas: C1:6.9 ppm, C2+: 0

cmt, abdt lt grn gy sil mtx, abdt altd felds grs, com grn gy & tr rd liths, tr blk carb flecks, tr calc

In fract, hd-v hd, no vis por, no oil fluor.

Claystone: lt-dk grn gy-med gy, occ med brn gy, mod slty i/p, tr vf altd felds i/p, tr vf blk carb flecks, tr-com micmic, tr calc In fract, hd, sbfiss.

Claystone: med-dk grn gy -med gy, occ med brn gy, mod slty i/p, tr vf altd felds i/p, tr vf blk carb flecks, tr-com micmic, tr calc In fract, hd, sbfiss.

MW 9.3 Vis 44  
PV/YP 14/23 Gels 4/6  
Sol 6.8 Sd Tr Cl 1100

Claystone: lt-dk grn gy-med gy, occ med brn gy, mod slty i/p, tr vf altd felds i/p, tr vf blk carb flecks, tr-com micmic, tr calc In fract, hd, sbfiss.

Claystone: med-dk gn gy- med gy- dk brn gy, mod slty i/p, tr vf altd felds i/p, tr vf blk carb flecks, tr-com micmic, tr calc In fract, hd, sbfiss.

Claystone: lt-dk grn gy-med gy, v slty i/p, tr vf altd felds i/p, tr vf blk carb flecks, tr-com micmic, rr calc In fract, hd, sbfiss.

Sandstone: med grn gy, slty-vf, sbrnd mod-w srtd, strng sil cmt, abdt grn gy sil mtx, abdt altd felds grs, com grn gy & tr rd liths, tr blk carb flecks, rr calc In fract, v hd, no vis por, no oil fluor.

MW 9.35 Vis 45  
PV/YP 15/20 Gels 4/6  
Sol 7.1 Sd Tr Cl 1100

Claystone: med-dk gn gy- med gy- dk brn gy, mod slty i/p, tr vf altd felds i/p, tr vf blk carb flecks, tr-com micmic, tr calc In fract, hd, sbfiss.

Claystone: lt-dk gn gy - med gy- med brn gy, non - occ slty i/p, tr vf altd felds i/p, tr vf blk carb flecks i/p, com micmic, rr calc In fract, hd, sbfiss.

Carbide Lag Checked @ 1288m  
Ave hole size 15.2"  
Survey @ 1286m 15 Deg S25E



Survey @ 1298m, 15 Deg, 029L  
Sandstone: lt-med grn  
gy, silty-vf, sbrnd, mod-wl srtd, strng sil  
cmt, tr wk calc cmt, abdt gn gy sil mtx,  
abdt atrd felds grs, com grn gy & tr rd  
liths,  
tr blk carb flks, rr calc ln frac, v hd, no  
vis por, no oil fluor.

12.25" Hole TD 1298m. Reached on  
7th April 2007 at 15:00 hrs.

WTG=0.67 units

WOB: 28-33klbs  
RPM: 70-84  
GPM: 533-551  
PP: 999-1230psi

67:904 RED PDC 12 1/4

Jets 5x14  
in 1298m/out XXXX m  
XXXm/XX.Xhrs  
TXBX In gauge

1290  
1300  
1310  
1320  
1330  
1340  
1350  
1360  
1370  
1380  
1390  
1400  
1410  
1420

