FORMATION EVALUATION LOG

Company : Lakes Oil N.L.
Well : Wombat-4
Interval : 277.00 - 1175.31 meters
Created : 25/Oct/2009 7:56:26 AM

BAKER HUGHES
INTEQ

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

| 10 | 20 | 30 | 40 | 50 |
%

BACKUP TOTAL GAS

| 60 | 70 | 80 | 90 | 100 |
%

CHROMATOGRAPH

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

REMARKS

WOB: 0.4 - 8.3 klbf
RPM: 80 - 100
SPP: 403 - 491 psi

RR2 216mm (8-1/2")
Reed NDO593
Jets: 3x14
In: 302m   Out: XXXXm
Drilled: XXXm in XXhrs

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

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

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

WOB: 1.4 - 9.0 klbf
RPM: 80 - 120
SPP: 165 - 598 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
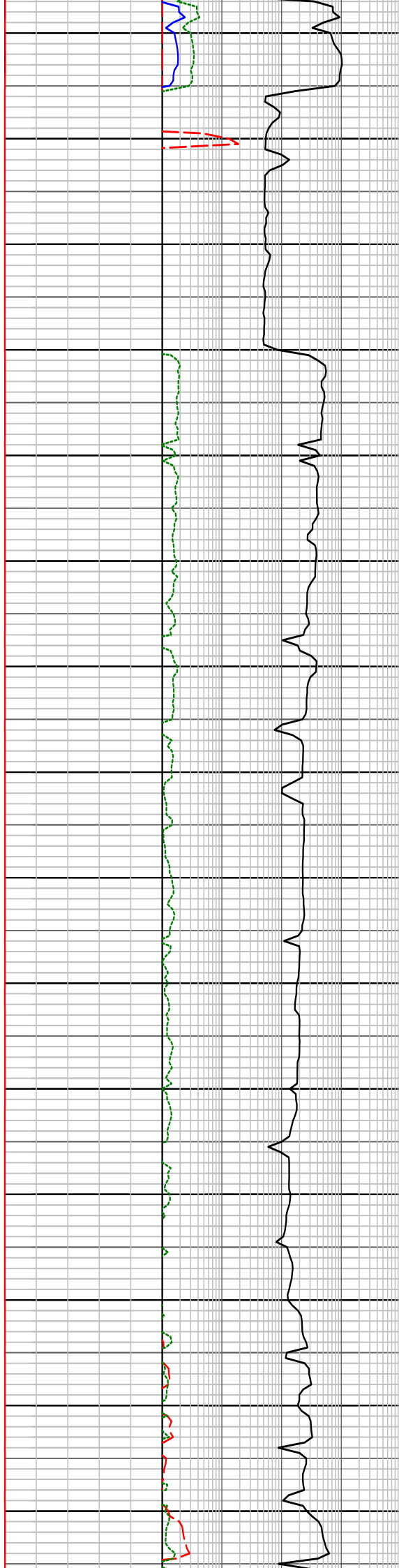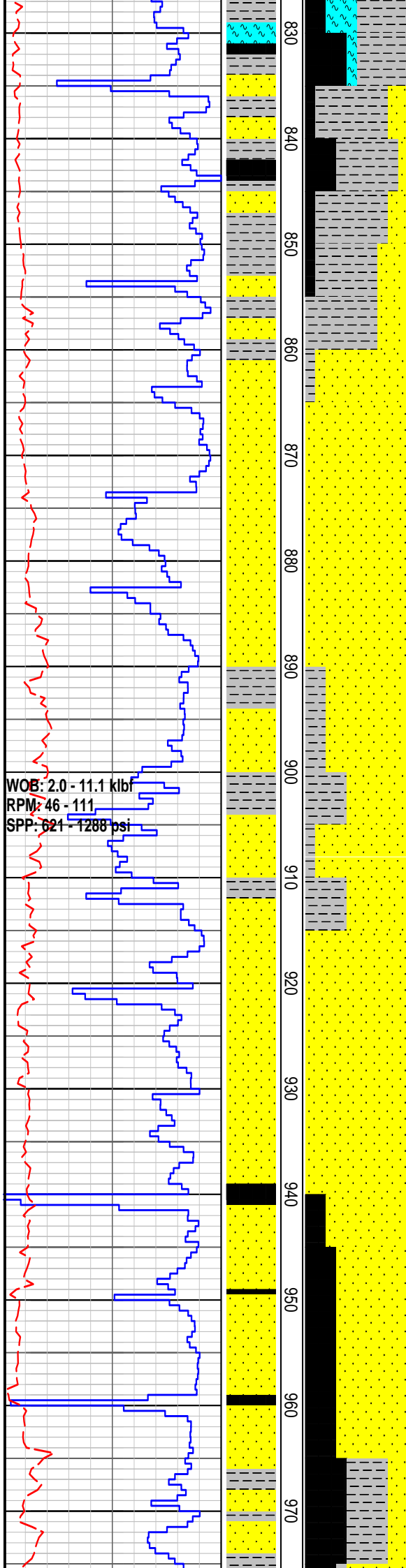
CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-mod strong calc cmt, abd bry, forams, shell frags, n-mod argill, rr v f-f qtz gr, tr gn glauc, p vis por, n fluor

Survey at 472m
N25degsE
2 degs

WOB: 1.4 - 12.0 klbf
RPM: 80 - 120
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

WOB: 1.4 - 17.8 klbf
RPM: 48 - 187
SPP: 278 - 978 psi
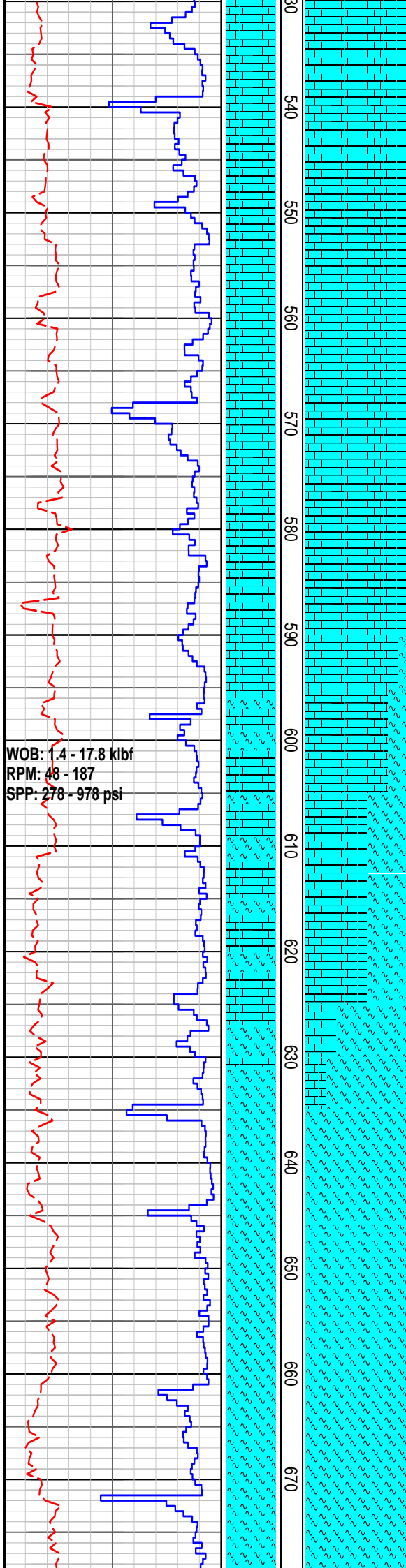
CALCARENITE: off wh-lt m gry-lt brn gry, f-m gr, wk-strong calc cmt, com bry, tr echinoid spines, forams & shell frags, n-mod argill, rr v f-f qtz gr, tr-com gn glauc, fri, v p vis

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

MARL: v lt-m gry-gn gry-brn gry, v calc grd i/p to off wh argil calc CLCLT

calc grd i/p to oh wh argil calc CLGST
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

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

MARL: v lt-m gry-gn gry-brn gry, occ
lt-m brn 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, stky, n fiss

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

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

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

WOB: 2.0 - 11.1 klbf
RPM: 46 - 111
SPP: 621 - 1288 psi

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, sl 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, sl slty and f aren i/p, v sli-mod carb, tr blk coal flk, tr amber, 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/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: m-dk brn, sli slty & f aren i/p, mod-v carb, tr blk c flks, sft, v disp, n fiss
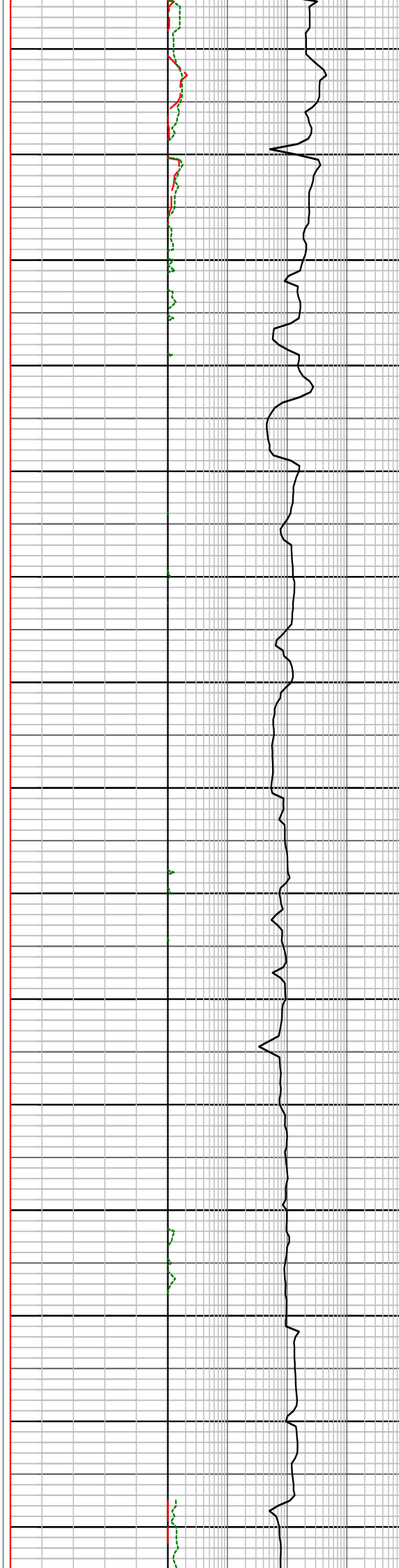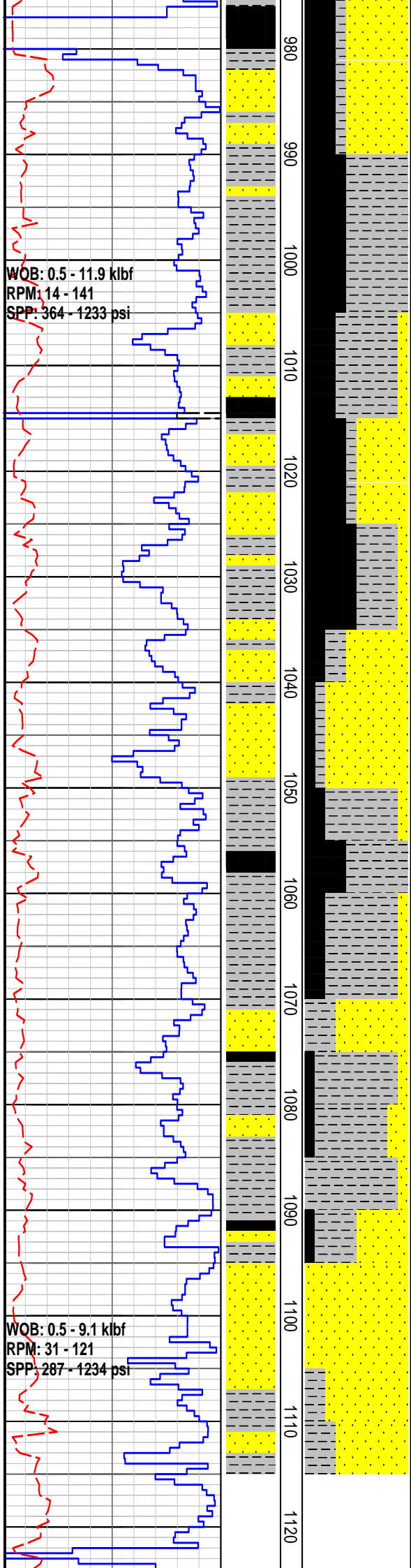
COAL: m brn-blk, irr-blky frac, ea lstr, sli-dom v argill, tr amb, frm-mod hd

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

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

1130
1140
1150
1160
1170
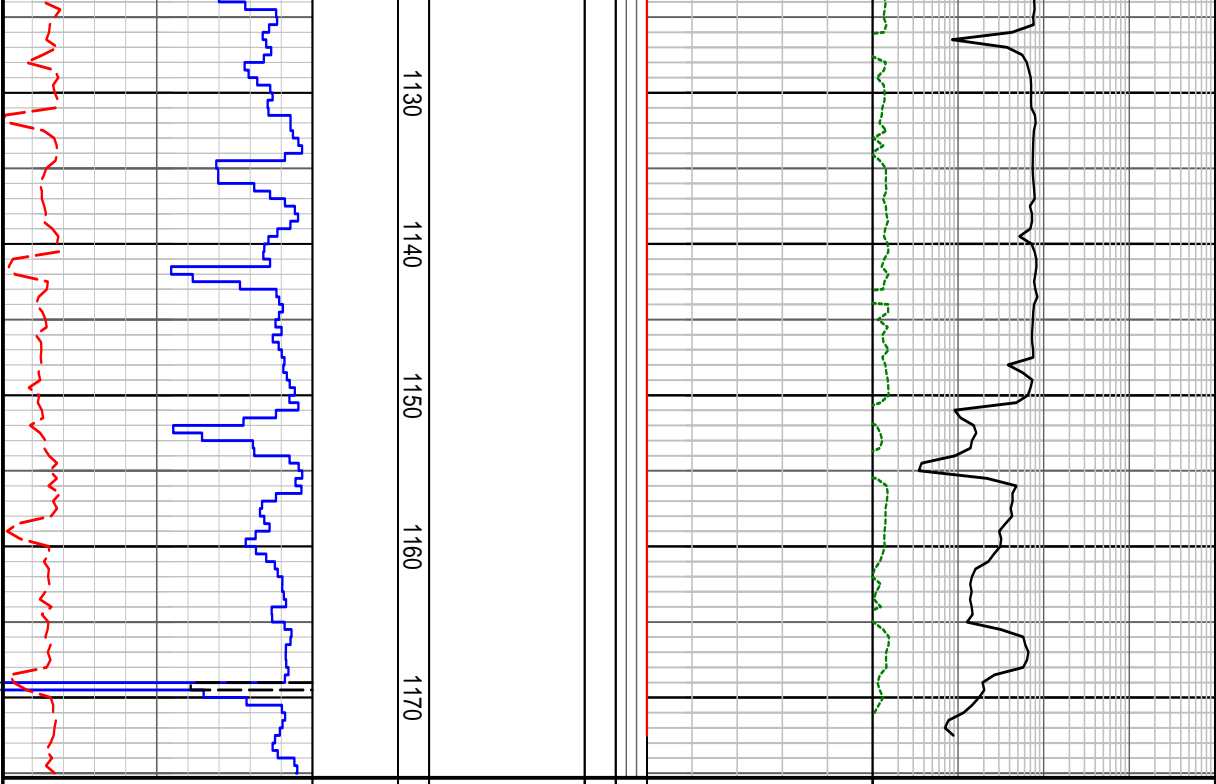
FORMATION EVALUATION LOG

RATE OF PENETRATION				TOTAL GAS	CHROMATOGRAPH	REMARKS

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

10	20	30	40	50
%

BACKUP TOTAL GAS

60	70	80	90	100
%

1	Methane ppm	10000
1	Ethane ppm	10000
1	Propane ppm	10000
1	iso-Butane ppm	10000
1	n-Butane ppm	10000
1	iso-Pentane ppm	10000
	n-Pentane ppm	

10	100	1000	10000