

*Figure 1A* Pore filling carbonate cement (? Dolomite) enclosing detrital quartz and feldspar grains. The unaltered state of the feldspar (C:10) suggests that the carbonate phase developed as an early cement acting to inhibit feldspar dissolution. Veilfin-1, 3405-10 m cuttings sample, transmitted light with cross nicol (100  $\mu\text{m}$  = 17.5 mm).



*Figure 1B* Replacement of labile grains by mixed layer (illite-smectite) clays (e.g. J:5). Veilfin-1, 3370-75 m cuttings sample, transmitted light with cross nicol (100  $\mu\text{m}$  = 17.5 mm).

