whose reflections appear on the diffraction traces of samples heated above 450°C (Fig.2B,h,k,l).

The dependence of the montmorillonite-chlorite transformation on pressure can be traced by the appearance of the quartz reflexes on the diffractometer traces, for release of silica from the montmorillonite structure is the first sign of its destruction. The content of quartz in the charge increases with chlorite content. At high

Fig.5

pressures, as shown by the diffractograms, the process of formation of chlorite is intensified.

At a temperature of 600-700°C and P_{H_2O}= 800 - 2000 kg/cm^2, high temperature minerals, cordierite and talc, are formed. Their reflections are marked on the diffraction traces (Fig.2B, k,l). Talc forms from palygorskite at a higher temperature than from sepiolite (600°C). In the case of palygorskite three intermediate phases form in the course of