Figure Captions (contd.)

Fig. 3. A replot of Ito and Kennedy's (1971) data (fig. 3) on density of experimental charges at 1200°C and various pressures. The data points are shown with a size representing an uncertainty of ± .01 in density. Possible errors are due to measurement using very small samples, and the estimated porosity (Ito and Kennedy, 1971) and unknown permeability of the samples. Additional errors may have resulted from the necessity to grind off the outer iron-enriched layers of the sample (Ito and Kennedy, 1970) and from partial melting (the solidus lies below 1200°C at <15kb). The maximum observed difference between nominally identical runs (1200°C ~12kb)is also illustrated.

Fig. 4. Comparison of extrapolation to lower temperatures of phase boundaries between eclogite, garnet granulite and gabbroic mineral assemblages as advocated by Ringwood and Green (1966), Green and Ringwood (1967a) (dashed lines and vertically and horizontally shaded fields labelled G. & R.) with the extrapolations advocated by Ito and Kennedy (1971) (stippled fields, lines labelled I. & K.). The numbered crosses at 1100°C mark the disappearance of plagioclase in the compositions 1-10 of fig. 2. According to the arguments of Ito and Kennedy (1971) lines at 20 bars/°C could be drawn through each of these points to extrapolate the disappearance of plagioclase to lower

temperatures - such a line for quartz tholeiite B composition (2) would be coincident with the garnet granulite → plagioclase eclogite boundary of Ito and Kennedy (1971) (or garnet granulite → eclogite boundary for composition of column 2, Table 1) if these are also extrapolated at 20 bars/^{o}C. The light dashed line labelled I & K is the line taken from Ito and Kennedy's own fig. 4 marking the low pressure boundary of their plagioclase eclogite field. Ito and Kennedy (1971) drew this line at 18 bars/^{o}C without justifying this by either experiment or argument. If indeed it is argued that this boundary is more complex than the plagioclase-out boundary for NM5 and thus Ito and Kennedy's arguments for a 20 bar/^{o}C slope are not acceptable, then it must be admitted that the only evidence on the slope of this boundary is that it lies within the experimental limits of our quartz tholeiite B data, i.e. between 18 and 36 bars/^{o}C.