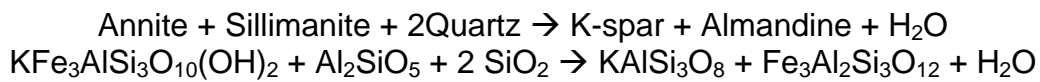


PROBLEM SET #8

Given the reaction:



and the figure attached at the end of this problem set, answer the following questions.

- 1). Where is the boundary for the end-member reaction? (Mark it on the diagram.)
- 2). Label the fields for the conditions in question 1.
- 3). Label where the slope of this line is positive, negative and infinite. Why does the slope change with pressure?
- 4). Write the equation for K for the ideal situation (In terms of mole fractions).
- 5). Assume that all of the phases are pure except biotite and garnet.
 - a). At 5 kbar and 710 °C, which is more dilute, the biotite or the garnet?
 - b). What about at 2 kbar and 540 °C?

FIGURE:

