

Geological Magazine; Metamorphic Evolution of the Karimnagar Granulite Terrane, Eastern Dharwar Craton, South India; D. PRAKASH & I. N. SHARMA; “Appendix A1-A9”

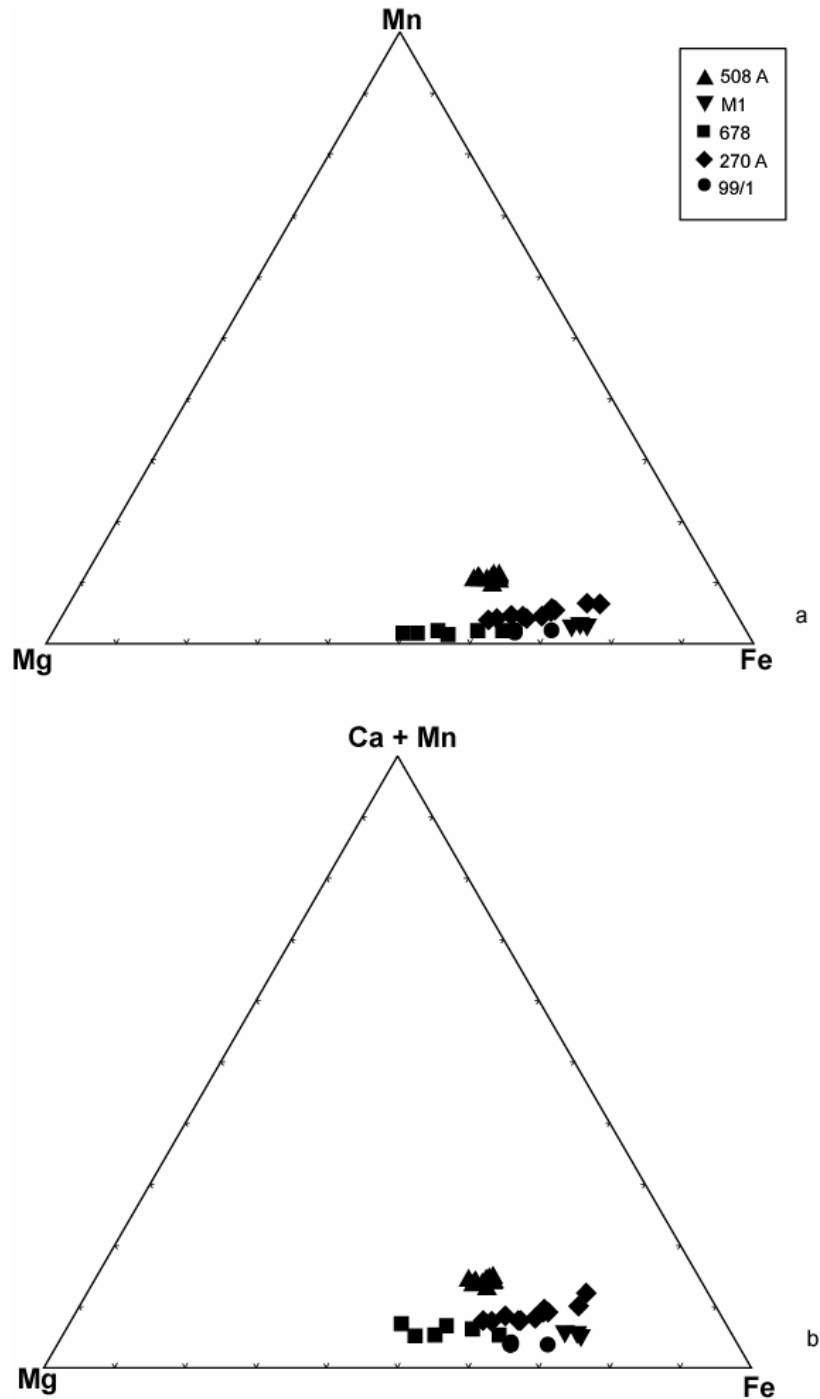


Figure A1. Triangular diagram showing the variation in (spessartine + grossular) – almandine – pyrope end member compositions in the garnets from garnet-cordierite gneisses.

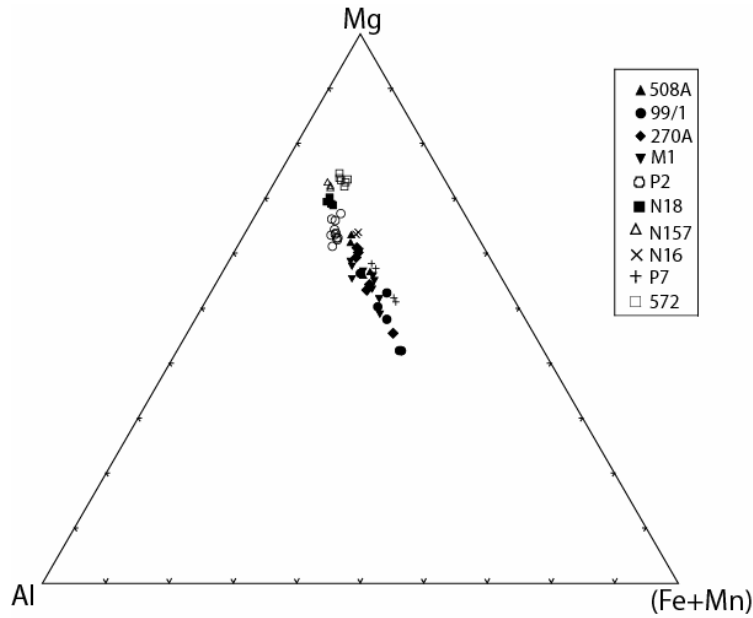


Figure A2. Triangular plot of biotites from different rock types in Mg-Al-(Fe+Mn). Sample nos. (508A, 99/1, 270A, M1), (P2, N18, N157) and (N16, P7, 572) represent compositions of garnet-cordierite gneisses, quartz-free sapphirine-spinel granulites and mafic granulites respectively.

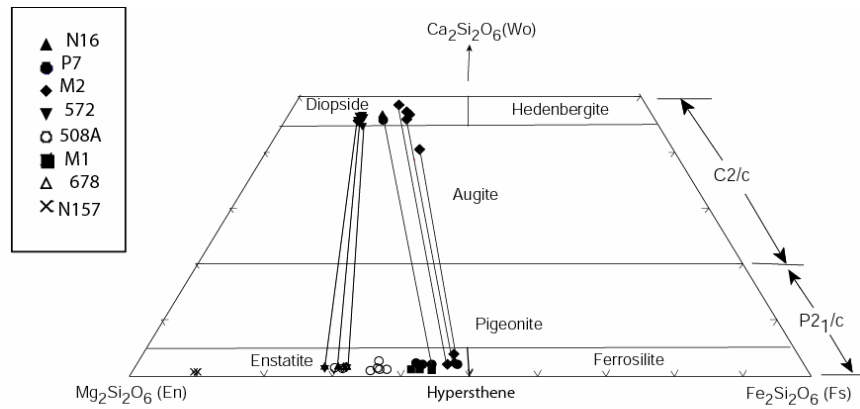
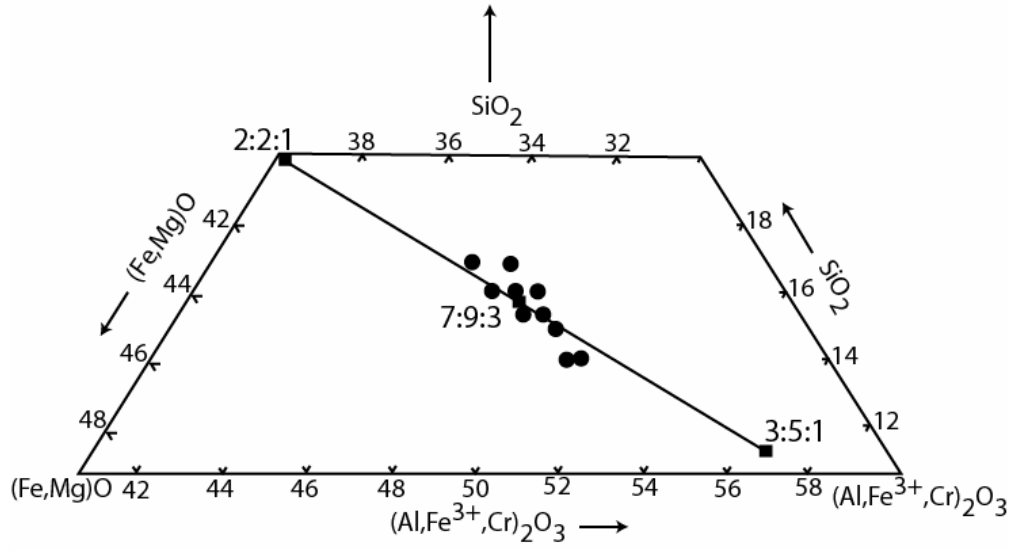
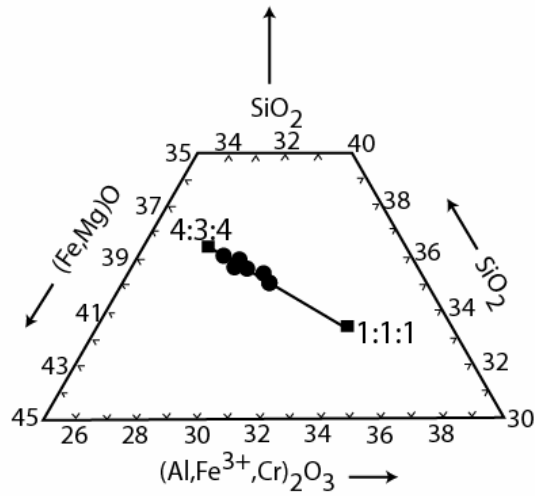


Figure A3. Analyzed ortho- and clinopyroxene from Karimnagar mafic granulites in the pyroxene quadrilateral. Tie lines represent the coexisting pairs of Opx and Cpx. Sample nos. (508A, 678 M1), (N157) and (N16, P7, M2, 572) represent compositions of garnet-cordierite gneisses, quartz-free sapphirine-spinel granulites and mafic granulites respectively.



(a)



(b)

Figure A4. A part of the system SiO_2 - $(\text{FeO}+\text{MgO})$ - $(\text{Al,Fe,Cr})_2\text{O}_3$ showing plots of the analysed sapphirines (a) and Kornerupine (b). Solid squares with numbers 2:2:1, 7:9:3, 3:5:1 and 4:3:4, 1:1:1, respectively, give molar ratios for the ternary compositions in the order $(\text{MgO} + \text{FeO}) + (\text{Al,Fe,Cr})_2\text{O}_3 + \text{SiO}_2$.

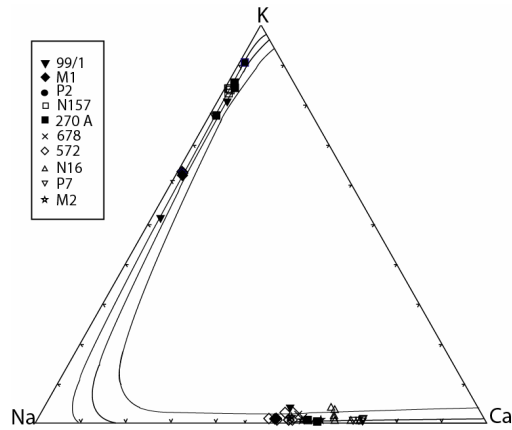


Figure A5. Triangular Or-Ab-An diagram showing plots of analysed alkali-feldspars and plagioclases. Coexisting feldspars are connected by tie lines. Solvus curves calculated at 9 kbar using the model of Fuhrman & Lindsley (1988) for 800 and 900 °C. Sample nos. (678, 99/1, 270A, M1), (P2, N157) and (N16, P7, 572, M2) represent compositions of garnet-cordierite gneisses, quartz-free sapphirine-spinel granulites and mafic granulites respectively.

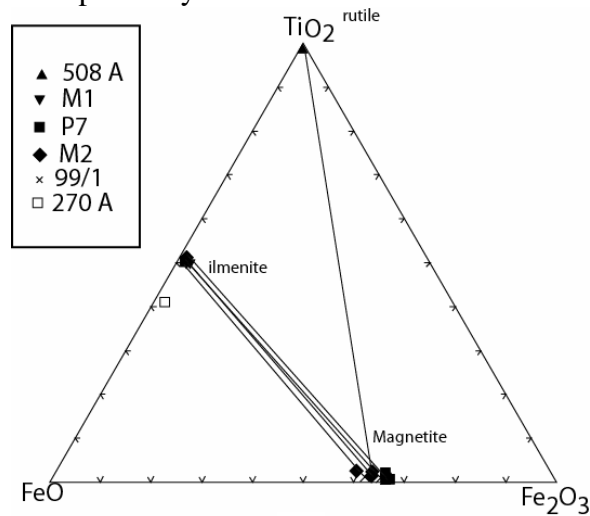


Figure A6. Triangular TiO_2 -FeO- Fe_2O_3 diagram showing plots of analysed rutiles, ilmenites and magnetites. Coexisting phases are connected by tie lines. Sample nos. (508A, 99/1, 270A, M1) and (P7, M2) represent compositions of garnet-cordierite gneisses and mafic granulites respectively.

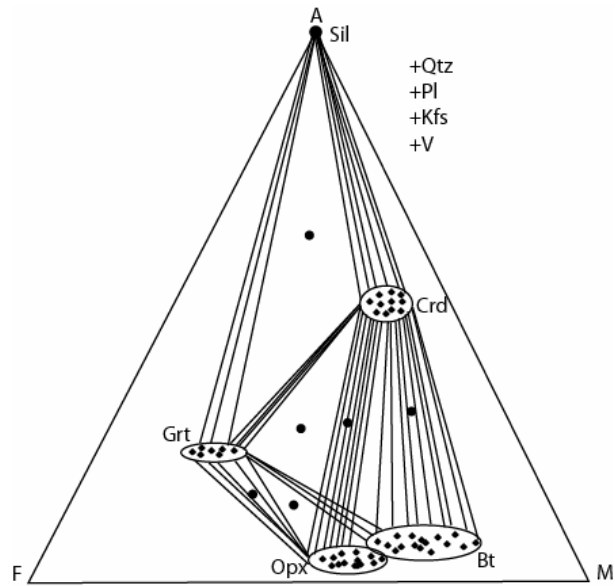


Figure A7. AFM projection from K-feldspar and plots of analysed minerals from the orthopyroxene-cordierite±garnet gneisses shown by small filled diamonds. Large filled circles indicate the observed mineral assemblages of orthopyroxene-cordierite±garnet gneisses, garnet-cordierite-sillimanite gneisses and charnockites.

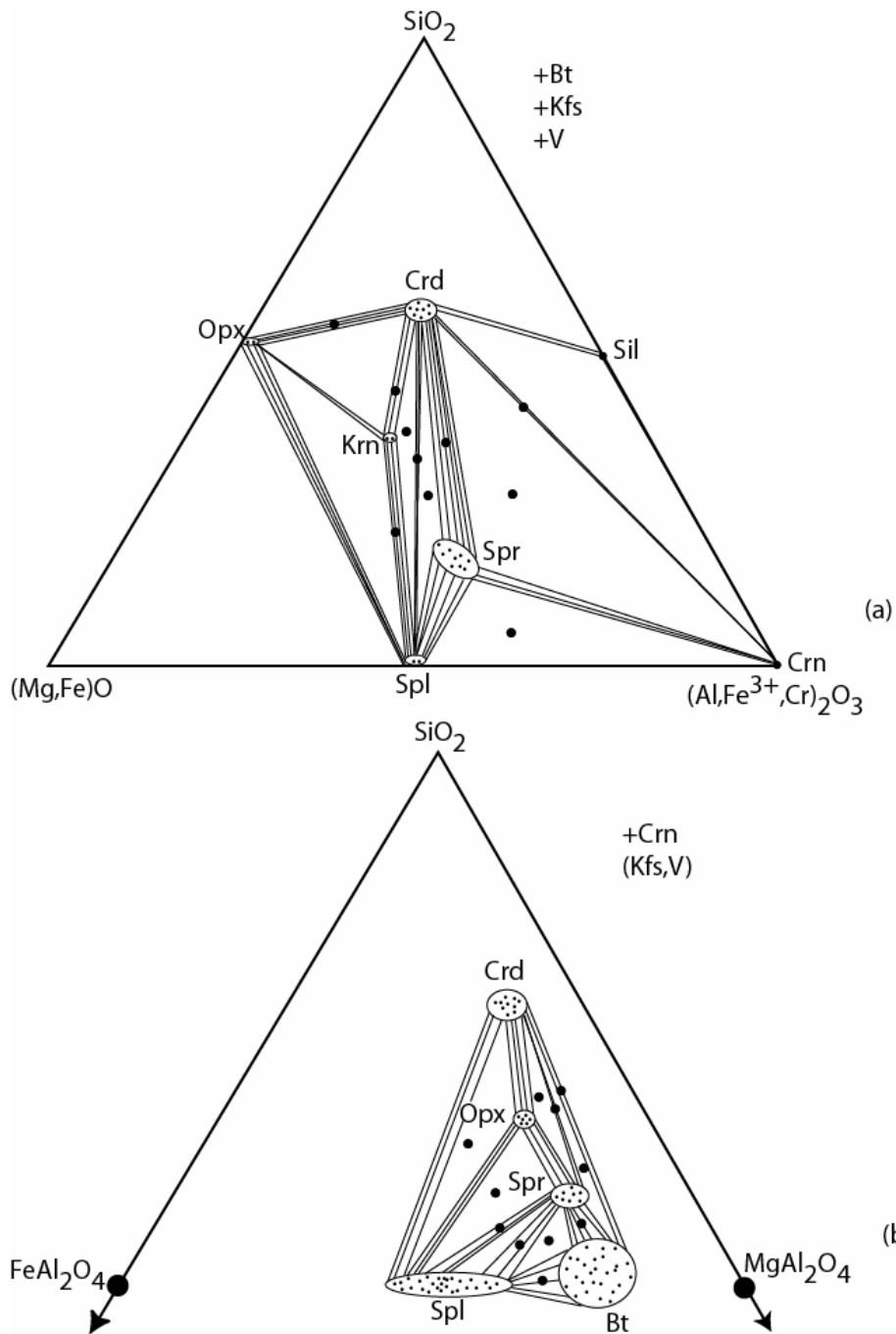


Figure A8. (a) Triangular SiO_2 - $(\text{Mg,Fe})\text{O}$ - $(\text{Al,Cr,Fe}^{3+})_2\text{O}_3$ diagram shows phase relations in the quartz-free sapphirine - spinel - corundum - cordierite - orthopyroxene \pm kornerupine -bearing rocks. Dots in stippled fields indicate mineral compositions. Large filled circles display observed mineral assemblages of the corona.

(b) A projection from corundum and K-feldspar on the SiO_2 - FeAl_2O_4 - MgAl_2O_4 plane showing the phase relations in the quartz-free rocks. Dots in stippled fields indicate mineral composition. Large filled circles display observed mineral assemblages of the corona.

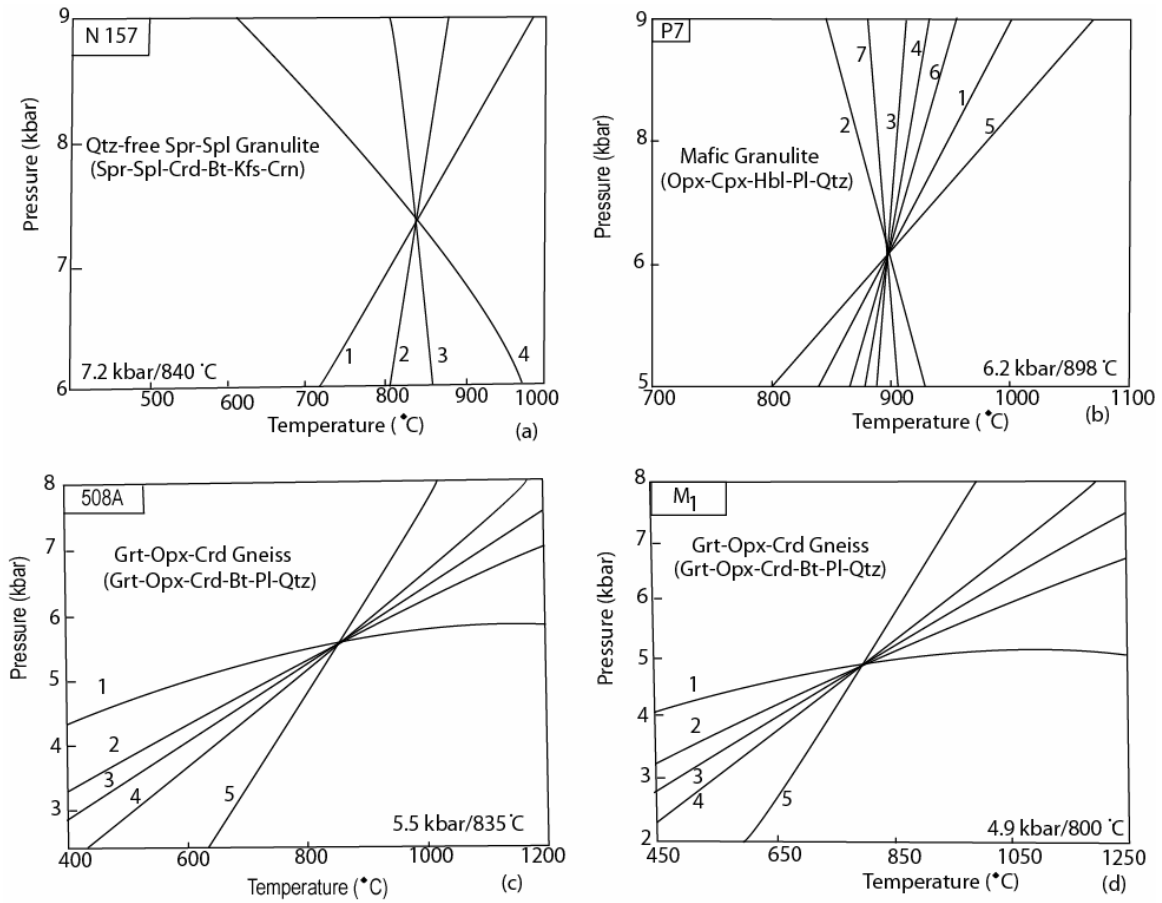


Figure A9. Estimation of pressure and temperature conditions using TWQ (version 2.32) program. The specific equilibria are listed in Table A9 at <http://journals.cambridge.org/geo>.