CHAPTER VIII

SUMMARY AND CONCLUSION

The thesis area is nearly 391 square miles in size. It is characterized by Dharware, the Charnockite Series and pink granites.

The Dharware comprise pelitic, semipelitic, psammitic and calcareous members and granite gneisses. The pelites are represented by sillimanite gneiss, and spinel-bearing gneisses. Semipelites are characterized by garnetiferous biotite gneiss, garnet gneiss and biotite gneiss. Psammites are represented by magnetite quartzite.

The calcareous members are comprised of wollastonite-, diopside-, and forsterite-bearing members and their variants. The mineralogical assemblages of the pelitic members suggest that they have resulted from impure argillaceous sediments owing to sillimanite-almandine-orthoclase sub-facies regional metamorphism. Semipelites have also resulted due to similar grade of metamorphism.
on gritty impure argillaceous sediments. The peammites have resulted due to sillimanite grade of metamorphism of pure grits carrying little ferruginous, argillaceous and calcitic impurities. Calc-diopeide granulites and the forsterite-bearing marbles have formed due to sillimanite grade regional metamorphism of impure limestones and the wollastonite-bearing components have resulted due to contact metamorphism along the contacts of the members of Charnockite Series. Later, the high grade rocks were subjected to regressive changes owing to the intrusion of pink granites in the thesis area. Granite gneiss is essentially comprised of quartz and microcline-perthite with subordinate amount of oligoclase and garnet. It occurs associated with metasediments and sometimes carries xenoliths of country rocks. Its mineralogical and chemical characteristics suggest that it is a granite. Owing to subsequent metamorphism it has been converted to granite gneiss.

The Charnockite Series is represented by basic members and enderbites. The basic types occur as bands associated with enderbites. Enderbite is the most abundant member of the Charnockite Series. It occurs as distinct masses and bands. The members of the Charnockite Series carry xenoliths of country rocks and display contamination
along the contacts of calc-granulite. Adjacent to pink granite they display regressive changes. The basic members are converted to plagioclase amphibolite and enderbites are altered to dark grey acid gneisses varying in composition from granodiorite to granite.

Pink granites occur as distinct masses and bands amidst the older rocks. They are represented by adamellite and biotite granite. In places, pagmatic and splitic phases of granite are present. They carry xenoliths of country rocks. In places, granite displays contamination along the contacts with calcareous members. Sometimes adjacent to calcareous member, granite is desilicated and quartz-syenite occurs between granite and calcareous member. The field and petrological characteristics of pink granites suggest that they have resulted owing to consolidation of granitic magma which intruded into the older rocks.

The structural elements of the rock types of the thesis area suggest that they are folded as major synforms and antiforms whose axes run more or less from west-north-west. In places, they are overfolded. The minor structures are essentially parallel to the axes of major folds and display a similar plunge as that of the
axes of the major folds. The rocks are characterized by two sets of vertical joints. In places, they display sheet joints that follow the topography. Sometimes, the rocks are sheared.