DISCUSSION

PETROLOGY OF DYKES OF RAVIPADU, PRAKASAM PROVINCE, ANDHRA PRADESH by K. Rathna, K. Vijaya Kumar and J. Ratnakar. Jour. Geol. Soc. India, v.55, 2000, pp.399-412.

Prof. S. Viswanathan, 10, Bapuji Apartments, Rajendra Prasad Road, Dombivli (E), Mumbai - 421 201 comments:

While I do appreciate the geochemical data and analysis presented to understand the genetic aspects of the dykes, I have the following comments on the petrographic classification of the dykes:

1. But for the panidiomorphic lamprophyres, the rest of the textures are not uncommon in the Deccan basalt flows. The terms intergranular and intersertal are used to describe the grain size of the mineral phases and also the glass content of the mesostasis in the phyric as well as the aphyric basalts. Further, subophitic, ophitic and equigranular or microgabbroidal textures are also prevalent in the basalt flows. I am hence tempted to classify the dykes into the following classes:

   (a) Lamprophyres (sample nos. 6 to 9)
   (b) Olivine-bearing phyric dolerites (sample nos.10, 11 and 12)
   (c) Olivine-bearing aphyric dolerites (sample nos. 1, 2 and 3)
   (d) Olivine-free aphyric dolerites (sample nos. 4 and 5)

   In Kuno's diagram, Class 1 distinctly belongs to the field of alkali olivine basalt, Classes 2 and 3 to the transitional high-alumina basalts and Class 4 to the tholeiitic basalt.
2. An-content of plagioclase and basic optic constants of clino- and orthopyroxenes and amphibolites as well as the grain size values of the different silicate phases would surely provide due credence to the petrographic definition.
3. From the broad general chemistry, mineralogy and associated factors, I strongly feel that both the pluton and the associated dykes of Ravipadu are genetically related and perhaps only the processes of differentiation will have to be looked into in greater detail.

K. Rathna and K. Vijaya Kumar, School of Earth Sciences, SRTM University, Vishnupuri, Nanded - 431 606 and **J. Ratnakar**, Department of Geology, PG College of Science, Saifabad, Hyderabad - 500 004 reply:

We thank Prof. Viswanathan for his appreciative and useful comments on our paper.

1. We have no objection in accepting Prof. S. Viswanathan's classification, but without any genetic connotations.
2. Electron probe microanalysis of minerals is in progress.
3. Not only the processes of differentiation, but also the sources for the gabbros (ophitic-subophitic dykes) and porphyritic dykes are different. The gabbros have a source in the lower crust, whereas the porphyritic dykes are derived from mantle sources.