

## New Data on Kimberlite and Related Rocks of India

The following papers relating to geochemistry of kimberlites and related rocks from the Dharwar craton, India, recently published (2009) should prove to be of interest to our readers:

### 1

Petrogenesis of the Mesoproterozoic Lamproites from Krishna Valley, Eastern Dharwar Craton, Southern India by N.V. Chalapathi Rao, G. Kamde, H.S. Kale, A. Dongre (2009). Precambrian Research, online version.

The study illustrates that lithospheric thickness and attendant metasomatism has played a significant role in influencing the petrology and geochemistry of co-spatial lamproites and kimberlites

### 2

Petrology and geochemistry of diamondiferous Mesoproterozoic kimberlites from Wajrakarur Kimberlite field, Eastern Dharwar craton, southern India: genesis and constraints on mantle source regions by N.V. Chalapathi Rao and Rajesh K. Srivastava (2009). Contrib. Mineral. Petrol., v.157, pp.245-265.

The petrology and geochemistry of kimberlites from the Wajrakarur region are reported. The forward as well as inverse modelling of REE necessitate a dominantly lithospheric, and not asthenospheric, mantle source region for the kimberlites.

### 3

A new find of boninite dyke from the Palaeoproterozoic Dongargarh Supergroup: Inference for a fossil subduction zone in the Archaean of the Bastar craton, Central India by N.V. Chalapathi Rao and Rajesh K. Srivastava (2009). N. Jb. Miner. Abh, v.186/3, pp.271-282.

The boninite is high Ca variety and displays distinct geochemical traits compared to boninites from the Bastar craton.. Based on geochemistry it is inferred to have been derived from a primary magma and shares geochemical characteristics of modern as well as Archaean boninites. A two stage model involving refractory mantle as well as fluids derived from subducted sediments is invoked for the petrogenesis of this rock.

### 4

Mineralogy and Geochemistry of Kimberlites NK-2 and KK-6, Narayanpet Kimberlite Field, Eastern Dharwar Craton, Southern India: Evidence for a transitional Kimberlite signature by N.V. Chalapathi Rao and A.N. Dongre (2009). The Canadian Mineralogist, v.47, pp.1117-1135.

The petrological and geochemical characteristics of these kimberlite are indicated to overlap both Group-I and Group-II kimberlites and are similar in this aspect to those of the transitional kimberlites from South Africa. Geochemical modelling suggest that these are products of a greater degree of partial melts involving mixed source of Group-I and Group-II kimberlites in the mantle with plume as well as subduction related signatures.

### 5

Petrology, geochemistry and genesis of newly discovered Mesoproterozoic highly magnesian, calcite-rich kimberlites from Siddanapalli, Eastern Dharwar Craton, Southern India: products of subduction related magmatic source by N.V. Chalapathi Rao, A. Dongre, G. Kamde, Rajesh K. Srivastava, M. Sridhar, F.V. Kaminsky (2009). Miner. Petrol. Online version.

The Siddanapalli kimberlites constitute a newly discovered cluster of dykes occurring in the Gadwal granite greenstone belt. The unusual geochemistry of the kimberlites of Siddanapalli compared to other kimberlites of EDC is explained by a combination of factors involving higher degree of partial melting, involvement of subducted component in their mantle source region and previous extraction of boninitic magmas from their geological domain.