

DISCUSSION

THE TOKPAL CRATER-FACIES KIMBERLITE SYSTEM, CHHATTISGARH, INDIA: RECONNAISSANCE PETROGRAPHY AND GEOCHEMISTRY by Bernd Lehmann, Datta Mainkar and Boris Belytsky. Jour. Geol. Soc. India, v.68, 2006, pp.9-18.

Kamlesh Kumar, Atomic Minerals Directorate for Exploration and Research, Central Region, AMD Complex, Civil Lines, Nagpur – 440 001 comments:

I appreciate and congratulate the authors for their extensive and significant contributions towards petrography and geochemistry of Tokapal crater-facies kimberlite system of Indravati Basin which was an enigma for long period. In this paper under the sub-heading 'Geological Situation' a few questions which need attention here are as follows:

1. *Age of the Indravati Basin*: The authors have assigned stratigraphic age of Indravati Basin as 'Late Proterozoic' and Tokapal kimberlite system around 1100 Ma. This kimberlite system is sandwiched between Kanger Limestone and Jagdalpur Formation and having xenoliths of arenite and shale of Tirathgarh and or Cherakur Formation of Indravati Group. It indicates that this kimberlite system (1100 Ma) is certainly post-Kanger Limestone Formation, then the age of Indravati Basin should be older than 1100 Ma i.e. Middle Proterozoic (Mesoproterozoic) rather than 'Late Proterozoic'.
2. *Supergroup Status for Sediments of Indravati Basin*: The authors have mentioned rocks of this basin as Indravati Supergroup. The chemoclastic platformal sedimentary sequences of this basin are classified under four formations viz. Tirathgarh, Cherakur, Kanger and Jagdalpur. These formations exhibit conformable and transitional nature of their lithological contacts. There may be slight break in sedimentation due to post-Kanger kimberlite activities in Tokapal area. Evidences

are not enough to support this break in sedimentation in other parts of Indravati Basin except Tokapal area. Therefore as per present understanding it is more appropriate to use Indravati Group rather than 'Supergroup'.

3. *Thickness of Formations*: As per Ramakrishnan (1987) thickness of Tirathgarh, Kanger Limestone and Jagdalpur Formations is 50-60 m, 150-200 m and 200-250 m respectively. However, it is mentioned as 150-200 m, 50-60 m and 150 m respectively in the paper, which may please be rectified.

Bernd Lehmann, Institute of Mineralogy and Mineral Resources, Technical University of Clausthal, Clausthal-Zellerfeld, Germany; **Email**: lehmann@min.tu-clausthal.de, replies:

We welcome the comments by Dr. Kumar who points to some formal shortcomings and mistakes in our presentation of the geological setting of the Tokapal kimberlite system. We agree that an age of 1100 Ma should be labeled as 'Mesoproterozoic', and that the sedimentary cover sequence of the Indravati Basin is better characterized as "Indravati Group", instead of Supergroup. Also, our quotes for the stratigraphic thickness of the Tirathgarh, Kanger Limestone and Jagdalpur Formations were evidently wrong.

We hope that these weak points did not distract too much from our main message regarding the petrography and geochemistry of the remarkable Tokapal system. The current age constraints for the kimberlite volcanism in the Indravati Basin are very poor, and robust radiometric dating is still pending.

MAGNETIC SPHERULES WITH METALLIC SHINE IN THE RECENT ALLUVIUM OF RAJASTHAN by B.S. Paliwal. Jour. Geol. Soc. India, 2006, v.67(6), pp.709-714.

Robin Westerman, Institute of Petroleum Engineering, Heriot-Watt University, Edinburgh EH14 4AS, UK; **Email**: Robin.Westerman@pet.hw.ac.uk comments:

Has the author considered the possibility that the

spherules he describes are lateritic pisoliths? I know that is less exciting than volcanic origin – unless you get excited by soil processes. Red sandy loam might be a sub-lateritic soil type.

Their shiny look reminds me of the manganiferous