

## BOOK REVIEW

**ADVANCES IN PRECAMBRIAN OF CENTRAL INDIA** by Abhinaba Roy and D.M. Mohabey (Eds.), Gondwana Geological Magazine, Special Volume 7, 2003, 542p., Price: Rs.650/-

Central India is rapidly keeping pace with the geological advancements made in the other well known cratons of southern, eastern and western India. Each decade of progress has been marked by a landmark publication on the Precambrian of Central India. Geological Survey of India has led the way with symposium volumes (Spec. Publ. 3, 1981; 28, 1990; 10, 1995; 57, 2000 and Misc. Publ. 3, 1997). Geological Society of India also brought out a Memoir (31, 1995), and now the Gondwana Geological Society, Nagpur has updated the speedy progress of the current decade.

Precambrian of Central India consists of Bundelkhand and Bastar cratons with an intervening mobile belt called the Central Indian Tectonic Zone (CITZ) otherwise known as the Satpura mobile belt. The Eastern Ghats mobile belt bounds the Bastar craton in the east. Apart from volcano-sedimentary belts, orthogneisses, granitoids, charnockites and mafic dyke swarms, the two cratons are characterised by Proterozoic sedimentary basins of Vindhyan, Chhattisgarh, Bijawar, Gwalior and others. Crustal scale shear zones separate the cratons from the mobile belts. Recent finds of kimberlites and lamproites are a new attraction.

The present massive volume in large A4 size is divided into six sections, viz., Crustal evolution and structure (100 p), Stratigraphy (75 p), Petrology and Petrogenesis (170 p), Sedimentology and life (70 p), Mineralisation and exploration (70 p) and Mineral policy (25 p). Eighteen abstracts are appended at the end (30 p).

The editors Roy and Mohabey introduce the volume with a succinct summary of the papers. The first paper, the keynote address, by D.Mukhopadhyay and R. Srinivasan is a pithy overview of Dharwar craton, but is out of sync with the central theme of the symposium. S.K. Acharyya proposes a plate tectonic model for CITZ and traces its extensions into eastern India. L.K.Das and others synthesize the data from gravity, magnetics, DSS and MT for Central India. D.B.Yedekar and others as well as S.Sensharma and D.Mukhopadhyay describe the Dongargarh belt in terms of new stratigraphy and geochemical interpretation of tectonics. K.Shivkumar and others describe the geochemistry of Kotri-Dongargarh belt. Anindya Roy and Gargi Bhattacharya as well as N.K.Sahu and others describe the little known

Bilaspur-Raigarh belt occurring to the east of the well known Sausar belt. Deformation of Sausar belt has been described by S.Mohanty, as well as A.S. Khan and others. A.Roy and Hanuma Prasad describe the charnockite-mangerite suite from Ramakona-Katangi granulite belt bounding the Sausar belt. Chawada and Naik propose a revised stratigraphy for Sakoli belt, modifying the earlier schemes of Yedekar and others as well as Roy and others. R.K.Sriyavata and R.K.Singh differentiate three sets of dykes viz., amphibolite, dolerite and boninitic greenstones, as well as three types of basic volcanics viz. tholeiites, basaltic andesites and boninites from southern Bastar. M.E.A Mondal and M.F.Hussain describe the granodiorite-monzogranite suite surrounding the Bengal and Sonakhan belts. D.V.Subba Rao and others describe basic dykes of high Fe-tholeiite and komatiitic basalt composition around the Chhattisgarh basin. Uraniferous pegmatite leucosomes in Dubha granite within Chhotanagpur Gneiss Complex or CNGC (A.P.Dhurandhar and others) and granulites of Waidhan in CNGC (J.N.Solanki and others) are the other themes covered. T.K.Biswal brings out the nature of the shear zone between the Bastar craton and the Eastern Ghats mobile belt.

S. Paul and P.P. Chakraborty document the variations in cross-stratification style from two siliciclastic successions of Vindhyan and Chattisgarh basins. S.Banerjee and S.Jeevankumar interpret the facies change and palaeogeography of Semri Group in Vindhyan basin.

S. Kumar in his keynote paper discusses the significance of life in Vindhyan times. P.K.Maithy describes the evidences of Precambrian life in Central India. A.K.Moitra makes a plea for search for metazoa in Chhattisgarh basin. K.G. Kulkarni and V.D. Borkar analyse the significance of trace fossils in Central Indian basins. V.C. Tewari enumerates the biostratigraphy of the Vindhyan in Central India and the Lesser Himalaya.

K.G. Bhoskar and others report the first find in India of platinoids in hydrothermal quartz veins from Sakoli belt. V.J. Katti and V.P. Saxena describe the uranium occurrences in the migmatites and metasediments of Sarguja. The mineralogy of manganese over from Sausar belt is described by D.R. Kanungo and A.S. Khan. Exploration efforts in the extensions of the well known Malanjkhand copper deposit

are outlined by M.K.Devarajan and A.S.Khan. Copper mineralization in the Vindhyan sandstones of Bhadugaon is described by V.K. Khadse and others.

Anindya Roy and others devise geochemical screens for differentiating weathered kimberlites/lamproites from weathered lamproites/alkaline ultramafics in Chhattisgarh. Termite mounds are emphasized as additional tools in the subsurface exploration for unconformity-related uranium deposits from Chattisgarh, by M.Agarwal and others.

The section on Mineral Policy is not directly related to the theme of the symposium, but provides new perspectives of mineral policy, legislation and classification of national mineral inventory in the changed scenario of liberalization in the Indian mineral sector. There are also a few more papers which do not fit the theme of the symposium, but have found a place in this volume. These include gravity studies and sapphirine granulites from western India, Fourier analysis of folds, mineral equilibria, oxygen isotope studies and overview of analytical techniques in geochemistry.

The volume is well organized with an attractive cover page. The most outstanding quality of the volume is the overall good quality of papers packed with new information, as well as its prompt and timely release coinciding with the symposium. The editors deserve our kudos for this magnificent effort. However, the pressure of deadlines to release the volume during the symposium is manifest in editorial errors and poor quality of majority of the figures and photographs. The quality of printing paper is also below par, which has not helped matters either. But none of these deficiencies will diminish the durable value of this publication, which marks a milestone in the annals of Precambrian geology, because the substance endures even if the packaging does not.

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## ANNOUNCEMENT

**SIXTH INTERNATIONAL CONFERENCE ON PETROLEUM GEOCHEMISTRY AND EXPLORATION IN THE AFRO-ASIAN REGION (AAPG - 2004):** This Conference is scheduled to be held at Beijing, China during 12-14 October, 2004. Following topics are to be covered in the conference: Biotransformation of organic matter; Petroleum geochemistry and exploration in the frontier of Asia and Africa; Source Rocks in the lacustrine, delta, and coal measures; Immature; coal derived and other unconventional oils; Petroleum in the evaporate basin; Biogenesis natural gases; Geochemistry and exploration of heavy oils; Molecular and isotopic indicators; Geochemistry of the mixed oils from different sources; Oil/gas migration; Reservoir geochemistry; Bio and physical alteration of petroleum; Late formation of petroleum pertained to Himalayan Orogen; Novel geochemical technologies in petroleum geochemistry and exploration and Geochemistry digital modelling. For further details, please contact: Conference Secretariat of AAAPG-2004, Post Box 910, No.20, Xueyuan Road, Haidian District, Beijing 100083, China. **Phone:** (+8610) 62097451, 62098619; **Fax:** (+8610) 62098619; **Email:** aaapg2004@petrochina.com

○ We regret very much to record the passing away of Dr. S.N.P. Srivastava, formerly of the Geological Survey of India on 16 October, 2003 at Chennai.