

NEWS AND NOTES

National Seminar on Orissa's Mineral, Environment and Geosciences Assessment – 2011 (OMEGA–2011) and Golden Jubilee of Geological Survey of India, Orissa — M. Mohanty and K.C. Sahoo (Email: manoranjnmoha@gmail.com)

Commemorating the Golden Jubilee of the establishment of Orissa State Unit of the Geological Survey of India (GSI), a two-day national seminar, "Orissa's Mineral, Environment and Geosciences Assessment, 2011" (OMEGA–2011) was organized at NALCO auditorium, Bhubaneswar during 11th and 12th August, 2011. Dr. S.B. Ray, Organizing Secretary, welcomed the dignitaries and fondly remembered the contributions of the doyens of GSI in Orissa geology. He reiterated the recent government policy of executing projects in PPP mode and lauded the support from private sector. He also invited every stake holder to put forward their vision which GSI can take up in its effort towards nation building. Dr. H. Sarvothaman, Dy. DG, State Unit and Chairman of the seminar, highlighted the importance of Orissa geology and called upon economists and exploration geoscientists to unearth the hidden economical capital in the rich mineral belts of Orissa. Dr. S. Madabhushi, Dy.DG, Eastern Region, citing *Upanishads* and *Arthashastra* explained the underlying principles of mineral sector and its contribution to economic growth. He gave a brief account of GSI's achievements in the development of mineral industry in the state. Shri B.L. Bagra, Chairman, NALCO, reiterated the important role played by the geoscientists in strengthening the national economy. Shri Manoj Ahuja, Secretary, Dept. of Steel and Mines, Government of Orissa, emphasized the hard work of geoscientists in generation of baseline database. Dr. Prabhash Pande, Additional DG, GSI, quoted Planning Commission's target of enhancing the revenue share of mineral industry from the present 2.5% to 9%, which cannot be achieved without the efforts of GSI. He highlighted the recent trend of dissemination of information by GSI portal, for which it has received two national awards. Inaugurating the seminar

Shri A. Sundarmoorthy, Director General, GSI, gave a brief outline of GSI's efforts in strengthening State Units by recruiting large number of geoscientists. He elaborated the recent activities of GSI like National Geochemical Mapping (NGCM) and plans for carrying out multi-sensor survey. He also explained the plan of establishing field training centers in each state to cater to the needs of regional stake holders and universities. Lauding the work carried out by Orissa State Unit, he hinted that emphasis is given in XII plan towards high-cost commodities like gold and platinum group of minerals. Sri C.R. Maharana, Director, proposed vote of thanks.

The inaugural session was followed by a special session dedicated to the reminiscences of the work carried out in Orissa during the last fifty years. Dr. H. Sarvothaman gave a detailed account of GSI's activity in Orissa paying rich homage to the valuable contributions of doyens like H.W. Voysey, G.B. Greenough, Valentine Ball, Thomas Oldham, J.G. Medlicott, W.T. Blandford, W. Theobald, P.N. Bose, H.C. Jones, A.K. Dey, P.K. Ghosh, M.S. Krishnan and V.S. Krishnaswamy till the establishment of a full-fledged office at Bhubaneswar in 1961. He also remembered stalwarts from Orissa state unit who have contributed immensely to the geology of the state like Dr. P.K. Chatterjee, the first Director of State Unit Orissa, S.Narayanswamy, M.R. Subramaniam, J. Swaminathan, P.K. Banerjee and others. Retired officers of GSI, viz. Shri B.K. Jena, P. Balkrishnan, Dr. L.K. Das, Dr. K. Srinivaschari reminisced their varied field experiences and Shri B.K. Mohanty, Retd. Director, DGM, Orissa fondly recollected his association with field geologists of GSI. He emphasized that the discovery of East Coast bauxite by officers of State unit, GSI, is the biggest achievement in last fifty years.

The seminar was attended by 225

delegates including retired and serving GSI officers working in various parts of the country, scientists of IMMT, Bhubaneswar, Atomic Mineral Directorate, CGWB, NGRI, Engineering India Limited, Indian Rare Earths Ltd., NALCO, Institute of Physics, State CGM, State Ground Water Research and Survey, Chilka Development Authority and academicians from IIT, Mumbai and Bhubaneswar, ISM, Dhanbad; NIT, Rourkela; Osmania University, Utkal University, public sector companies and mining industries. 74 deliberations were made in five technical sessions held simultaneously in two adjacent halls. It covered 15 themes related to Orissa geology like field geology, petrology, petrochemistry and isotope geology, geophysical exploration and subsurface geology, geochemical prospecting, exploration and mining, process mineralogy, mineral economics, sustainable development of mineral industry, engineering geology, coastal and marine geology, groundwater resources, geo-hazard mitigation, remote sensing and GIS application.

Keeping in mind the huge resource potential of the state and the surge in investment in the mineral sector, the first two technical sessions (24 papers) were devoted to new mineral find and resource augmentation in iron, manganese, chromite, uranium, coal and PGE. An additional resource of 72.09 million tonnes (+55% Fe, UNFC:332) in Barhaindupur, Chandiposhi, Pureibahal and Ghoraburhani blocks in Bonai-Kendujhar belt was highlighted by S.K. Jena, P.K. Jena, S.P. Bhutia and C.R. Maharana. In the Bangur leasehold area of Orissa Mining Corporation Ltd, a hitherto unknown potential PGE bearing breccia zone (450 m x 12 m) containing average 3.89 ppm Pt-rich total PGE was reported by K.C. Sahoo, M. Mohanty, P. Sahoo and others. Subsequent to the discovery of a thick coal zone in central Talchir basin, a

total resource of 5 billion tonnes of power grade coal has been assessed by B.K. Chakraborty and D. Bhattacharya. Officers from AMD presented two papers depicting uranium mineralization potential in Mahagiri and Mankarchua quartzites. Analyzing the regional Bouguer gravity anomalies of Singhbhum craton, J.V. Rama Rao suggested the mineral potential of new areas showing similar patterns as of the known mineralized belts.

The third session covering basic geology got the highest contribution in the form of 22 papers covering the Singhbhum craton, Eastern Ghat Mobile Belt (EGMB) and the marginal zone. Initiating the session, Prof. Leelanandam in a brainstorming deliberation, summarized the present state of knowledge in EGMB highlighting the importance of anorthosites and alkaline complexes in probing Proterozoic mantle sources. Prof. T.K. Biswal deliberated on the tectonic implications of Mesoproterozoic Lakhna dyke swarm (1450 ± 22 Ma) in Bastar craton. Prof. S. Mohanty presented an enticing lecture on amalgamation of continents into a super continental block "SIWA" comprising Dharwar-Bastar-Singhbhum craton of India, Yilgran craton of western Australia and the Nappier complex of East Antarctica during the Proterozoic period. The tectonic significance of the marginal zones of the craton and mobile belts has attracted worldwide attention with modern geological input. This is highlighted in three separate papers by J.K. Nanda, M. Mohanty, S.N. Mahapatra and A.K. Tripathy. Prof. S. Acharya gave

an account of the deposition of BIF in Singhbhum craton and their correlation in time and space. Structural interpretation of BIF vis-à-vis iron ore localization in Bonai-Kendujhar and Daitary belts were dealt by J.P. Mahakul, Prof. D. Beura and C.R. Dash. The geology of the Badampahar-Gorumahisani schist belt was deliberated upon by the young officers of GSI. In an interesting presentation, R. Rath of EIL touched upon the scope and technique of underground rock cavern storage system for crude oil.

The fourth technical session dedicated to hydrogeology, groundwater pollution, coastal and marine sciences attracted 20 presentations. Prof. M. Mohanty elucidated the changing pattern of deltas in response to global climatic variations. Prof. N.K. Mahalik presented a geological model deciphering development of coastal tract of Orissa. B.M. Faruque and Dr. S.K. Mitra touched upon the coastal processes and morphometry of continental shelf margin and upper continental slope of Chilka-Puri coast, A.K. Mishra and P.C. Dash elaborated Quaternary depositional patterns and recent coastal processes operative in Orissa. Prof. H.K. Sahoo, S.K. Mahapatra and D.P. Pati stressed upon the groundwater resources of the state and its sustainability. In the last technical session (6 presentations), the reclamation methods adopted by various exploiting agencies like NALCO and Sarda Mines Ltd. were presented by K.S. Sreedhara and A.K. Gupta. Regional Geochemical mapping programme in the state, ambitiously pursued by GSI, in recent

years was portrayed by S.N. Mohanty, P.K. Das and others. Sri A.K. Swain shared his experiences through video clips during the maiden Indian expedition to South Pole.

Summing up the proceedings, a discussion on Vision 2025 for the state was presented by mining industry representatives, retired GSI scientists, and eminent scientists from research institutes and professors from Universities. Prof. T.K. Biswal, IIT, Mumbai pleaded for bringing out a publication of selected papers of the seminar in the journal of repute. Dr. B.K. Mohapatra, Chief Scientist, Bhubaneswar suggested remapping of BIF in view of economic feasibility of lower grade of iron ore, mapping manganese ore varieties separately, search for placer minerals and exploring new source of aluminium ect. Dr. R.C. Mohanty representing the mining industry wanted that GSI should reassess leasehold areas of mineralized belts at lower cut-off and greater depth.

Several publications were released on this occasion like "Abstract and Souvenir Volume" of OMEGA 2011, proceedings volume (soft copy) of the seminar; Geological Map of Orissa on 1:0.5 million scale with brochure, Miscellaneous Publication No. 30 containing information on mineral database of the region and a pamphlet on Orissa's mineral wealth. In the panel discussion, the road map for geological investigations to be carried out in near future in Orissa was laid out keeping in sight the rich mineral potential of the state.