

## EXPLORATION AND EXPLOITATION OF GOLD RESOURCES OF INDIA

A National Workshop on Exploration and Exploitation of Gold Resources of India was jointly organised by the Geological Society of India and National Geophysical Research Institute at Hyderabad from 2nd to 4th December 1996. The main objective of the workshop was to bring together all those who are interested in exploration and exploitation of gold in India.

The welcome address by Dr. H. K. Gupta, Director, N.G.R.I. was the curtain raiser for the workshop. The Inaugural address was delivered by Dr. Raja Ramanna, Director, National Institute of Advanced Studies. He emphasised the need for joint cooperative effort in Science.

Dr. B. P. Radhakrishna, President, Geological Society of India in his address referred to 4000 years of Indian culture with numerous references to gold mining which had lured foreigners from distant lands to invade India and loot its treasures. He traced the early history of gold mining with particular reference to extensive exploration effort in Karnataka. He emphasised that with the depletion of gold in Kolar, the necessity had arisen for concentrating on the large number of smaller deposits which were awaiting development. He referred to the negative impact of gold control which had retarded the growth of the gold mining industry. The new liberalisation policy should revive interest. He brought to the fore the poor performance in the field of exploration and exploitation, lack of standardisation of analytical procedure, delay in furnishing analytical results by labs, non-availability of geological maps, restriction in supply of toposheets, premature publication of results, absence of clear official policy and apathy at all levels.

The workshop was broadly divided into five working sessions of which three were devoted to exploration in the different States of the Indian union, one session on sampling, analysis and genesis, and one on exploitation, policy and economics. New areas of gold mineralisation in the Ramandurg Range of Sandur Schist Belt and Chitradurga Schist Belt were highlighted. Status of exploration in Gadag, Kolar and Hutti Gold Fields formed the other useful presentations.

Reports from Andhra Pradesh, Tamilnadu and Kerala focused on gold deposits which needed intensive exploration effort with a view to bringing them to the stage of production. Of the various areas investigated in recent years, the Jonnagiri Schist Belt of Andhra Pradesh appeared to be full of promise. The gold in laterites of Nilambur valley of Kerala kindled lot of interest.

The status reports presented on the gold prospects of M.P., Rajasthan, Bihar, Orissa and West Bengal brought out the existence of favourable geological set up for the discovery of economically significant deposits.

Gold mineralisation in Kolar Gold Field, geochemistry and genesis of Ajjanahalli gold occurrence and fluid inclusion studies on gold bearing zones as an exploration tool were some of the topics discussed in the session on genesis.

Problems faced by the Gold mining industry in India were focused in several contributions. There was some loud thinking on matters pertaining to policy.

The concluding session was presided over by Dr. Hari Narain. In his valedictory address Dr. S. K. Acharyya, Director General, Geological Survey of India reviewed the status of exploration work carried out by the Geological Survey of India in the country.

The panel discussion at the end brought out the following significant points.

1. The need for standardisation of sampling and analytical procedure.
2. The exploitation agencies should invest increasing new laboratory facilities for very low levels of gold detection.
3. Geological maps of all greenstone belts on larger scales to be made available by the GSI. Quick publication of geological maps and reports by the GSI is an important requisite.
4. Need for accelerated investigation in all Late Archaean greenstone belts by regional mapping on 1:25,000 scale, large scale mapping on 1:10,000 scale and grid-pattern sampling of soil and lithounits for locating geochemical anomalies. For a developing country with resource crunch, it is necessary to avoid duplication of efforts and encourage private investment.
5. Need for greater R & D in exploration and exploitation of gold resources and in metallurgical processes.
6. Avoidance of premature announcement of results of investigation and to aim at providing well substantiated resource and reserve data.
7. Detailed exploration work involving geophysical methods and deep drilling should be undertaken by exploiting agencies.
8. Time frame for grant of prospecting licences to be fixed and investment by private companies for speedy exploration and exploitation to be encouraged.
9. Development of smaller prospects employing local labour and pooling of ore from several prospects for a central beneficiation plant.
10. Care to be taken to achieve zero level pollution.

*Bangalore*

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### ETHICS IN THE GEOSCIENCES

The Geological Society of America is holding a Presidential Conference between 15-21 July 1997 on "Ethics in the Geosciences".

The primary goals of the 1997 Conference are: (1) to promote a dialogue within the geosciences community on ethical issues - issues that are not currently a part of the geoscientist's typical education or professional experience; and (2) to develop a framework for assembly and dissemination of information on ethical issues within the geoscience community. Discussion will focus on: identification of the types of ethical systems; cultural controls on ethical behaviour (conflict of ethical systems); case histories of ethics violations or perceived violations; professional certification, licensing, registration, and enforcement as applied to an ethical framework; legal protection associated with enforcement; existing codes of ethics from various professional societies and organizations; and means of instituting and fostering ethical behaviour.

Anticipated results of this conference are: establishment of increased and productive communication between geoscientists and behavioural scientists; creation of a focus on ethical issues and concepts that can be readily disseminated to the geoscience community; identification of methods for fostering and promoting ethical practices; development of an agenda for follow-up and future action; preparation of guidelines for developing a uniform code of ethics for consideration and adoption by the geoscience community.