NOTES

GROUP DISCUSSION ON GOLD EXPLORATION AND MINING IN KARNATAKA

The Geological Society of India had arranged a group discussion on ‘Gold Exploration and Mining in Karnataka’ to synchronise with its 32nd Annual General Meeting on 10th August, 1991 at Bangalore. There were two sessions which were devoted to, (1) a discussion on ‘Exploration for Gold in Hutt Gold Fields and Action Plan for Development of Mines’, and (2) Exploration in Gadag Gold Fields and other important deposits in Karnataka and Action Plan for Mine Development,

Dr. B. P. Radhakrishna in his welcome address stressed the importance of gold as a readily convertible commodity and the imperative need for increasing production. He also emphasised the necessity for opening of small mines with a low capital outlay which could be developed by stages to large scale operations.

The group discussion was inaugurated by Sri. J. P. Sharma, Chairman and Managing Director of The Hutt Gold Mines Co. Ltd. He stressed the need for intensifying exploration both in known areas and especially in unknown areas where favourable environment and setting exist. He mentioned the importance of iron formations as host rocks for gold, drawing a comparison with some of the Brazil deposits which he recently visited.

Dr. M. N. Balasubrahmanyan, Senior Deputy Director-General, Southern Region, Geological Survey of India who chaired the session said there were a number of prospects in the country which appeared small but yet had every potential of becoming viable. He felt that small-scale mining operations should be encouraged taking advantage of technological advances like heap-leaching.

Dr. K. R. Raghunandan Director-in-Charge, Operations, Karnataka and Goa, Geological Survey of India, gave a brief introduction regarding exploration efforts at Hutt and Gadag. He indicated that as a result of exploration in Karnataka about 10.5 million tonnes of drill indicated reserves with an average of 3 g/t gold (Au) down to a depth of about 100 m are estimated to be available. The important deposits explored include Mallappakonda, Chigargunta in Kolar schist belt; Uti-Wandallli in Hutt gold fields; Kempinkote (Nuggihalli schist belt) and Ajjanahalli (Chitradurga schist belt).

Hutti Gold Field

Sri U. S. Reddy and Sri N. Devaraj of the Geological Survey of India presented the geology, structure, nature and controls of gold mineralisation in Hutt-Maski schist belt. The gold Mineralisation was structurally controlled and of epigenetic type. Exploration has shown Uti block to be promising with +4 g/t Au. Wandallli was another prospect where gold content ranged from 2.75 to 7.5 g/t.

Dr. K. K. Raju, Chief Geologist, The Hutt Gold Mines Co. Ltd., described the eight parallel auriferous lodes established within the leasehold area of the
company and the nature of the plunging ore-shoots. Sri M. Kesavan, Mining Engineer, gave details of the programmed plan for the next ten years aiming at the stepping up of mine production from the present level of 700 TPD to 1600 TPD by the year 2002.

**Gadag Gold Field**

Sri C. Chakrabarti, Geological Survey of India, gave an account of the geology and controls of gold mineralisation in Gadag gold field. The various lode systems and the potentiality of different blocks were described and it was mentioned that Sangli (Temple East Lode with +4.0 g/t Au over widths of 1.80 to 3.4 m) and Mysore Mine blocks (1.17 to 4.3 g/t Au) were more promising from the point of view of immediate exploitation.

**Kempinkote**

Sri B. V. Ganesh, Geological Survey of India, described Kempinkote prospect in the Nuggihalli schist belt, where gold mineralisation is restricted to silicified amphibolite close to its contact with talc-tremolite schist. The western zone has shown 4.10 g/t Au over 9 m width. Averaged over a width of 49 m the grade came down to 1.2 g/t.

**Ajjanahalli**

Sri K. Prabhakara, Geological Survey of India, gave an account of the Ajjanahalli prospect in Chitradurga schist belt where Au mineralisation is associated with sulphide facies of iron formation. The mineralisation is of structurally controlled epigenetic type with gold occurring as very fine-grains in arsenopyrite. About 1/3rd of the reserve established was oxidised ore averaging 3 to 4 g/t Au and it was felt that initial mining operations be confined to this sector. The full potentiality of this deposit is yet to be established.

**Regional Geochemical Survey**

Sri N. Rajendran, Geological Survey of India, stated that based on regional geochemical surveys by stream sediment sampling the auriferous character of a tract extending for 20 km from Medikeripura to Honnemundi via Gonuru, G.R. Halli and C.K. Halli was established. The panning has indicated gold grains up to 0.8 mm size and more than 1 ppm Au in the area between Gonuru and G.R. Halli. The area was deserving of further detailed exploration.

Sri T. S. S. Murthy, Director, Geological Survey of India, while summing up, brought out that theoretically about 2500 tonnes of gold reserves may be expected in the 30,000 sq km of greenstones in Karnataka. As the production from Kolar, Hutti gold mines and alluvial gold already accounted for half of these expected reserve, it is likely that one has to look for a series of smaller prospects.

**An Action Plan for Gadag**

Sri R. H. Sawkar, Executive Director, The Hutti Gold Mines Co. Ltd., presented an action plan for development of Gadag gold fields. He elaborated the plans for a cooperative venture for gold mining and the economics of such projects. According to him, participation by workers in a self-supporting venture was a feasible proposition.
Sri L. C. Curtis (former Agent and General Manager, The Hutti Gold Mines Co. Ltd.) emphasised the need for developing small prospects. He was of the opinion that five mines could be planned in Gadag area to produce about 2500 TPD.

There was lively discussions following the presentation of papers. It was emphasised that besides focussing attention on greenstone belts, other environments such as palaeo-placers including conglomerate and greywacke-turbidite horizons should receive attention. Some of the younger granitoids at the greenstone belt margins should be explored for gold. The abrupt termination of the Hutti lodges as indicated in the map presented raised certain interesting observations. Dr. Radha-krisna stressed the need for detailed surface and subsurface mapping of this section. It was felt that one of the existing drives should be extended to ascertain the southerly continuation of the system of parallel lodges at Hutti. There was general agreement on the plan of developing a number of small mines as that would result in rapid development of the properties. The information gained could be utilised to plan for higher production and development of large mines.

Dr. M. N. Balasubrahmanyan wound up the debate commending the action plan as proposed by Sri. Sawkar and Mr. Curtis. He felt a rethinking about many aspects of gold exploration and exploitation was needed.

Geological Survey of India

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‘NEHRU CENTENARY MUSEUM OF EARTH SCIENCE’
NEYVELI

In our July issue of the Journal (Vol, 38, No. 1, p. 107) we had carried a news item extracted from our sister journal ‘UJRA’ of the opening of a Earth Science and Coal Museum at Ranchi. Dr. K. N. Prasad, a Fellow of the Society, and a former Director of the Geological Survey of India has drawn our attention to the fact that the first ever Earth Science Museum was the one set up at Neyveli under the Neyveli Lignite Corporation. This appears to have come into existence in 1988. We find from the guide book kindly forwarded to us by Dr. Prasad that the Museum has a comprehensive coverage and gives a epitomized picture of earth’s resources, evolution of life and other aspects relating to the existence of coal, lignite and groundwater. We wish similar museums are set up in all State capitals, laying particular emphasis on the natural resources of the region. There is urgent need to educate the young of the importance of Earth Science as a branch of knowledge primarily concerned with the welfare of man. —(Ed.)