

DEVELOPMENT OF NEW MULTI-DISCIPLINARY TECHNIQUES FOR MINERAL EXPLORATION IN SEVERAL AREAS OF THE WESTERN IBERIAN PENINSULA. (Edited by P. Gumiel, C. Anton-Pacheco and R. Campos). Pub. Especiales del Boletín Geológico Y Minero, Instituto Tecnológico GeoMinero, de España. (pp. 1-99 (1991).

NNRMS BULLETIN NO. 14-NATIONAL NATURAL RESOURCE MANAGEMENT SYSTEM. Department of Space, Government of India. (pp. 1-41, August 1991).

The aim of the EEC funded joint research and development programme undertaken (involving the collaboration of institutions in Spain, Portugal and U.K.) in several areas of the Western Iberian Peninsula was the development and application of new mineral exploration strategies and the establishment of a geological framework based on the interpretation of sophisticated geochemical and remote sensing data. The programme was of multidisciplinary nature and the ten chapters in the bulletin present the results of various techniques employed and deal with aspects like structural geology, geochemistry, remote sensing, geophysics, data integration/interpretation (contributing to the preparation of various thematic maps). The ultimate objective of the exercise was to provide new exploration targets in the Iberian Peninsula which forms a most prominent metallogenic province, in Europe.

A very interesting case history pertaining to La Codosera area demonstrates how an integration of data – geological, aero-radiometrical, gravity and remote sensing (LANDSAT TM) by using GIS (Geographic Information System) software, has assisted in gold exploration and helped in understanding structural controls of mineralisation, leading to development of exploration models linked to maps derived from satellite imagery. It is interesting to note that in the auriferous veins of the La Codosera area, gold is a lattice-bound constituent within sulphides (mainly arsenopyrite) and not in free condition – similar to some of the occurrences in the Dharwar Craton. This study illustrates how remote sensing data combined with good ground control can be utilised effectively in identifying mineral prospects.

The latest Bulletin (No. 14) of the NNRMS, Department of Space, gives us an idea of the capability developed in this country in the field of remote sensing. Starting with a short write-up on the completion of 3 years of service by IRS-IA, from which high quality images are obtained, the other features include land use maps in urban/rural development, soil resources, forest-cover mapping, ground water prospect, analysis of lineament, geoenvironment appreciation understanding the geological and structural features associated with uranium mineralisation, generation of geological information system and geostatistical modelling for mineral targetting, application of remote sensing techniques in the study of river migration, are detailed. A number of organisations are involved in the utilisation of remote sensing data and their short contributions are included in the Bulletin. The project 'Vasundhara' is a collaborative programme between GSI (AMSE) and Department of Space (RRSSC) for integration of geological data derived from various sources (satellite remote sensing, airborne geophysics, ground geology and geochemistry), by developing a versatile geological information system for the preparation of thematic maps on regional geology and mineral localisation, creation of digital database, and geostatistical modelling for mineral targetting. It would be of some service if a bulletin on the same lines as the one prepared for the Iberian Peninsula were to be compiled for certain mineralized areas in India.