ELEMENTAL DISTRIBUTIONS IN SURFICIAL SEDIMENTS AND POTENTIAL OFFSHORE MINERAL RESOURCES FROM THE WESTERN CONTINENTAL MARGIN OF INDIA, (1994), by A.L. Paropkari and others. Technical Report No.NIO/TR-4/94, National Institute of Oceanography, Dona Paula, Goa. pp.28.

The publication reviewed has incorporated a large data set for sediments of the western continental margin of India. This report is the culmination of the National Institute of Oceanography's project entitled "Geochemistry of sediments of the continental margins of India and deep sea regions" that began in 1976. More than 600 samples of surficial sediments from water depths of 17 m to ca. 2000 m on the western continental margin have been analysed for $CaCO_3$, organic carbon, P, Al, Fe, Ti, Mn, Ni, Cu and Zn. The data have been presented as spatial distribution maps.

The report comprises two parts. The first gives a brief description of the spatial distribution patterns of the parameters investigated. The second discusses the potential offshore mineral resources of the area. The authors have indicated target areas for future exploration and have recommended exploration strategies. Two appendices give the bibliography and the distribution maps (in colour).

The investigations have, to a large extent, succeeded in identifying the origin, and the factors governing the pathways and distribution patterns of the parameters studied, and in understanding the processes that affect elemental concentrations in sediments and in demarcating areas of metal enrichment.

The authors could have taken care of the following:

Having run reference standards, they could have mentioned how well their 'obtained' values agreed with "published" ones (in terms of coefficient of variation);

As 'raw' data have been used, elemental distribution maps bear significant resemblances with one another; $CaCO_3$ content swamps the distribution patterns of most other parameters. Data on carbonate-free basis, for instance, would have given new insights. Also metal/Al and/or metal/Fe ratio distribution patterns would have been useful;

There are distinct differences in the sedimentation pattern of the northern and southern parts of the western continental shelf. However, the authors have not been able to bring out any;

The influence of the Indus, Narmada and Tapati rivers on sedimentation on the western continental margin of India is now well known. But, this is not brought out nor referred to by the authors;

Authors mention of authigenic Fe-hydroxides and Mn-oxyhydroxides in nearshore regions and their scavenging of trace metals. Nearshore areas being characterised by high terrigenous sedimentation rates (and by reducing conditions in certain areas), this interpretation is questionable. Manganese is a redox-sensitive element. Its relationship with areas of anoxic conditions has not been brought out;

The authors attribute the higher trace elemental contents of the slope off Mangalore-Cochin to two different sources - direct deposition (of sediment) on to the slope during the Pleistocene period of low sea level (on p.7) and influence of upwelling (on p.6);

The authors could have endeavoured to avoid spelling mistakes (eg., p.1 - discription; p.10 - pelletiodes) and other mistakes (eg. p.4 - southwestern tip of India; p.5 - few smal l pockets; p.7 - Higher concentration of .... points out to; p.11 ..... as far as eventual exploration is concerned) and

Figure numbers are missing on elemental distribution maps.

In spite of these deficiencies, I must emphasise that the authors have done a commendable job of the report, in content as well as get-up. It should serve as a ready reference to all those interested in the geology/geochemistry of continental margins.

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GEOCHRONOLOGY OF THE PRECAMBRIAN ROCKS FROM RAJASTHAN AND NORTHEASTERN GUJARAT, (1992), By C. Anjaneya Sastry, Special Publication No. 25, Geol. Surv. India., pp. 96; Price Rs. 82.00; $. 30

The Aravalli-Delhi belt of Rajasthan and NE Gujarat is one of the important Precambrian belts of India. The stratigraphic position of this important belt and its major components has remained in doubt for a considerable time. The present publication of the Geological Survey of India presents a generalised stratigraphy based on isotopic data which could form the basis of future studies.

The recognition of (1) an older Bhilwara Supergroup (3000-2500 m.y.), (2) migmatites of the Sarda Dome as part of the basement, (3) fixing the age of the Berach granite at 2500 m.y. marking the Archaean-Proterozoic boundary are some of the Archaean events. The rest succeeding Aravalli Supergroup is assigned an age of 2000-1900 m.y. based on the syntectonic Darwal granite. Delhi Supergroup rocks fall within the age group of 1700-850 m.y. Two distinct events are recognised within the Delhi's, an older, between 1700-1500 m.y. restricted to NE Rajasthan and the other forming the Aravalli range at 850 m.y. This 850 m.y. event appears to be widespread. The Vindhyan and Marwar Supergroup rocks form the youngest Proterozoic cover. Their age relation however, are not clear.

A useful discussion of the present status of the geology of the region, with special emphasis on stratigraphic problems awaiting solution is furnished. A fuller discussion of the geochronological data is presented later. Table. 6 summarizes the Rb-Sr age of the granite from the belt. Appendix I tabulates all the available age data from Rajasthan and NE Gujarat, and Appendex II furnishes field data, analytical procedures, petrography and geochemistry of the analysed samples.

Review papers of this kind summarizing the information upto the time of review, are of distinct service, focusing attention on key areas for further research. Review of existing data, outlining of the problems awaiting solution with suggetions for future work are all presented with clarity. The author of the special publication has to be complemented