

## BOOK REVIEW

**ATLAS OF OXIDE ORES OF INDIA AND THEIR TEXTURES** by R.K. Sahoo.  
SSDN Publishers and Distributors, 5A, Sahini Mansion, Ansari Road, Daryaganj,  
New Delhi - 110 002, 2011, Pages: 518+xii. Price: Rs.4950.

This book describes the major Indian deposits of aluminium, chromium, iron, manganese, nickel, tin, tungsten, titanium and vanadium ores, radioactive and placer minerals including the deep sea manganese nodules of Central Indian Ocean Basin. It contains about 1200 photographs of oxide ores and their textures. The introductory chapter traces the use of ores and minerals through the ages and past civilizations, and also gives the definitions and classification of various ores. Besides, resources of oxide ores of India, production data and ranking of these resources vis-à-vis global resources are shown in few Tables. The author has used the IBM's Mineral Year Books as source of data for the statistics, and therefore it gives an authenticity to the information.

Chapters 2 to 10 depict the field photographs and photomicrographs (both thin sections and polished sections) of the oxide ores of aluminium (bauxite), chromite and nickel, iron, manganese, manganese nodule, placer minerals, radioactive minerals, tin & tungsten and vanadium. Chapters on bauxite, chromite and iron-ore are exhaustive. Each chapter comprises two parts, A and B; while Part-A offers introductory essay on the history of the use of the ores, distribution in the Indian States (with maps), tables that contain statistics on the resource, the formation of the ores and the like, Part-B forms the pictorial part of the atlas. The XRD patterns and the SEM photographs are provided for most of the oxide ores. The chapter on chromite includes details on peridotite-chromite layering and photomicrographs of platinum-group minerals associated with chromite ores. These photographs and photomicrographs can guide the research petrologists engaged in the study of platinum group minerals/elements. The section on manganese nodules treads a path unknown to many. All photographs/photomicrographs/figures are efficiently

described. Resolution of some photographs is not satisfactory. Many photographs are in grey tones indicating antiquity of the source of collection. The author has acknowledged the source for all photographs other than his own collections.

A welcome feature of this atlas is that the author has included plenty of photographs and photomicrographs of mineral occurrences of Orissa—a mineral-rich, but less documented part of India. Be it bauxite or iron-ore or chromite or platinum minerals, readers can't ask for more illustrations on their occurrences in Orissa. Photographs of Gorumahisani and Badampahad iron-ores arouse nostalgia, as we remember them since our student days. Illustrations on the occurrences in the other parts are also given due importance. That makes the atlas laden with information, exhaustive and fairly complete by itself.

The atlas is not free from shortcomings. The pie-diagram in page-5 has no explanation, and the size of the pie representing West Bengal's 10% of the total value raises doubt. Figure 1 showing the distribution of metallic minerals in India lacks objectivity due to the scale and type of index chosen for the map. Other maps too could have been presented better. Spelling errors mar readability at places. The author describes himself as 'Former Scientist', perhaps to indicate that he had no wherewithal for modern techniques such as digital photography/photomicrography or digitization technique for maps and line diagrams. Yet, this will in no way diminishes the technical contents of the atlas. It is strongly recommended for all educational and research institutions, mineral-based industries and Earth-science libraries.

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