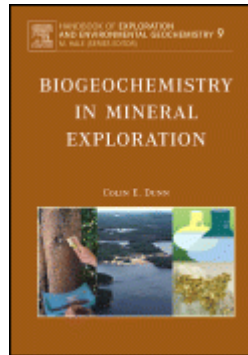


BIOGEOCHEMISTRY IN MINERAL EXPLORATION, 9



By

Colin Dunn, Consulting Geochemist, Sidney, British Columbia, Canada

Included in series

[Handbook of Exploration and Environmental Geochemistry.](#)

Description

Significant refinements of biogeochemical methods applied to mineral exploration have been made during more than twenty years since the last major publication on this technique. This innovative, practical and comprehensive text is designed as a field handbook and an office reference volume. It outlines the historical development of biogeochemical methods applied to mineral exploration, and provides details of what, how, why and when to collect samples from all major climatic environments with examples from around the world. Recent commercialization of sophisticated analytical technology permits immensely more insight into the multi-element composition of plants. In particular, precise determination of ultra-trace levels of "pathfinder" elements in dry tissues and recognition of element distribution patterns with respect to concealed mineralization. Data handling and interpretation are discussed in context of a wealth of previously unpublished information, including a section on plant mineralogy, much of which has been classified as confidential until recently. Data are provided on the biogeochemistry of more than 60 elements and, by case history examples, their roles discussed in assisting in the discovery of concealed mineral deposits. A look to the future includes the potential role of bacteria to provide new focus for mineral exploration. Analyses of samples from the controlled environment of Britain's Eden Project are presented on an accompanying CD as part of a database that includes, also, the potential role of the halogens to assist in mineral exploration. Data on this CD provide a "hands-on" approach for the reader to interrogate and personally assess real datasets from the burgeoning discipline of biogeochemical exploration.

Audience

Researchers and graduate students in geochemistry, Earth surface processes and geology

Contents

Preface.

1. Introduction.
2. Plant Function, Chemistry and Mineralogy
3. Field Guide 1: Climatic and Geographic Zones.
4. Field Guide 2: Sample Selection and Collection
5. Survey Design and Comparisons with Other Sample Media
6. Sample Preparation and Decomposition
7. Plant Analysis
8. The Eden Project – Source of a Biogeochemical Database
9. Biogeochemical Behaviour Of The Elements
10. Data Handling and Analysis
11. Case Histories
12. Exploration Geomicrobiology – The New Frontier
13. A Look to the Future

References

Bibliographic & ordering Information

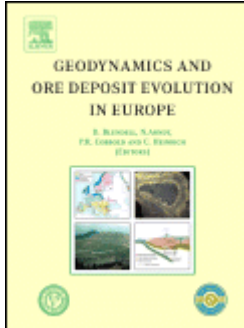
Hardbound, 480 pages, publication date: JUL-2007



COLEÇÃO DE MINAS,
METALOGOS DE

ISBN-13: 978-0-444-53074-5

GEODYNAMICS AND ORE DEPOSIT EVOLUTION IN EUROPE



Edited By

D. Blundell, University of London, Surrey, UK
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P.R. Cobbold, Geosciences-Rennes, Rennes, France
C. Heinrich, ETH Zentrum, Zurich, Switzerland

Audience

The global economic geology community, researchers in global tectonics and the role of fluids in the crust and upper mantle, minerals industry and economic geology researchers and advanced course students

Contents

Preface. Introduction. 1. Subduction, slab detachment and mineralization: the Neogene in the Apuseni Mountains and Carpathians (F. Neubauer, A. Lips et al.). 2. Hydrothermal ore deposits related to post-orogenic extensional magmatism and core complex formation: the Rhodope Massif of Bulgaria and Greece (P. Marchev, M. Kaiser-Rohrmeier, et al.). 3. Geochronology and geodynamics of Late Cretaceous magmatism and Cu-Au mineralization in the Panagyurishte region of the Apuseni-Banat-Timok-Srednogie belt, Bulgaria (A. van Quadt, R. Moritz, I. Peytcheva, C. Heinrich). 4. Transpressional tectonics, lower crust decoupling and intrusion of deep mafic sills: a model for the unusual metallogensis of SW Iberia (F. Tornos, C. Casquet, J. Relvas). 5. Late-Variscan mineralizing systems related to orogenic processes: the French Massif Central (V. Bouchot, P. Ledru, et al.). 6. Classification of VMS deposits: Lessons from the Uralides (R. Herrington, V. Maslennikov, et al.). 7. Extensional tectonics and the timing and formation of basin-hosted deposits in Europe (P. Muchez, W. Heijlen, et al.). 8. Precambrian geodynamics and ore formation: the Fennoscandian shield (P. Weihed, N. Arndt, et al.) 9. Processes of tectonism, magmatism and mineralization: lessons from Europe (D. Blundell, N. Arndt, et al.).

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Giant Metallic Deposits
Future Sources of Industrial Metals
Laznicka, Peter
2006, XIV, 732 p. 458 illus., Hardcover
ISBN: 978-3-540-33091-2

About this book

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[System requirements](#)

About this book

Metals in the earth's crust are very unevenly distributed and, traditionally, a small number of ore deposits, districts or countries have dominated the world supply and have influenced commodity prices. The importance of exceptionally large, or rich, deposits has greatly increased in the age of globalization when a small number of international corporations dominate the metals market, based on few very large ore deposits, practically anywhere in the world. Search for giant orebodies thus drives the exploration industry; not only the in-house teams of large internationals, but also hundreds of junior companies hoping to sell their significant discoveries to the "big boys".

Geological characteristics of giant metallic deposits and their setting and the politico-economic constraints of access to and exploitation in prospective areas have been a "hot topic" in the past fifteen years, but the knowledge generated and published has been one-sided, scattered and fragmented. This is the first comprehensive book on the subject that provides body of solid facts rather than rapidly changing theories, written by author of the Empirical Metallogeny book series and founder of the Data Metallogenica visual knowledge system on mineral deposits of the world, who has had an almost 40 years long international academic and industrial experience. The book will provide abundant material for comparative research in metallogeny, practical information for the explorationists as to where to look for the "elephants", and some inspiration for commodity investors.

Written for:

Institutes, libraries, scientists, researchers, exploration companies

Keywords:

Economic geology
global metals resources
metallogeny
mineral economics
ore deposits



Mineral Deposit Research: Meeting the Global Challenge
Proceedings of the Eighth Biennial SGA Meeting, Beijing, China, 18 -
21 August 2005
Mao, Jingwen; Bierlein, Frank P. (Eds.)
2005, XX, 1580 p. 800 illus., Hardcover
ISBN: 978-3-540-27945-7

About this book

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About this book

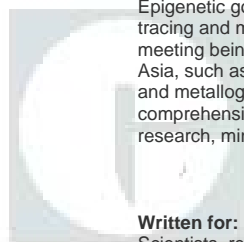
The proceedings volume (incl. CD-ROM) is a compilation of approximately 400 extended abstracts (up to 4 pages long) of presentations given at the 8th Biennial SGA Meeting. The papers are grouped according to the thematic sessions within which they were presented, including Tectonics, lithospheric, and deep mantle controls on global metallogenic provinces and giant ore deposits; Base and precious metal mineralization in sediments during basin evolution; Metallogeny and exploration of uranium deposits; Magmas and base-metal ore deposits; Epigenetic gold systems; Submarine ore systems and ancient analogues; Understanding ore systems through precise geochronology, isotope tracing and microgeochemistry; Geology and economics of non-metallic resources; Conceptual targeting of mineral deposits. Due to the meeting being held in Beijing, the conference and proceedings volume also feature thematic sessions that focus on specific regions throughout Asia, such as Mesozoic to recent geodynamics and metallogeny of eastern Asia; Metallogeny of the Tethys-Himalayan Orogen; Geodynamics and metallogeny of the Altiid Orogen; and Exploration, Discovery, and Mine Developments in China. As such, the volume represents a comprehensive summary of cutting-edge developments across a wide range of subject matters that are of extreme relevance to the global research, mining and exploration community.

Written for:

Scientists, researchers, libraries, professionals, lecturers

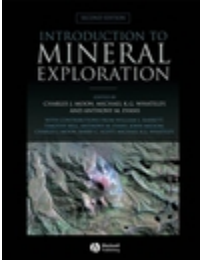
Keywords:

Economic geology
metallogenic processes
ore deposits research and exploration



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COLEGIO DE INGENIEROS DE MINAS,
METALURGISTAS Y GEÓLOGOS DE
MÉXICO A.C.



Introduction to Mineral Exploration, 2nd Edition

Charles Moon (Editor), Michael Whateley (Editor), Anthony M. Evans (Editor)

ISBN: 978-1-4051-1317-5

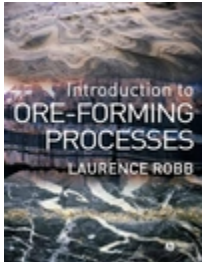
Paperback

496 pages

January 2006, Wiley-Blackwell

This new, up dated edition of *Introduction to Mineral Exploration* provides a comprehensive overview of all aspects of mineral exploration.

- Covers not only the nature of mineral exploration but also considers other factors essential to successful exploration, from target evaluation to feasibility studies for extraction and production.
- Includes six detailed case studies, selected for the range of different problems and considerations they present to the mineral explorationist.
- Features new chapters on handling mineral exploration data and a new case study on the exploration for diamonds.
- Essential reading for upper level undergraduates studying ore geology, mineral exploration, mining geology, coal exploration, and industrial minerals, as well as professional geologists.



Introduction to Ore-Forming Processes

Laurence Robb

ISBN: 978-0-632-06378-9

Paperback

384 pages

April 2004, Wiley-Blackwell

Introduction to Ore-Forming Processes is the first senior undergraduate – postgraduate textbook to focus specifically on the multiplicity of geological processes that result in the formation of mineral deposits.

- Opens with an overview of magmatic ore-forming processes
- Moves systematically through hydrothermal and sedimentary metallogenic environments, covering as it does the entire gamut of mineral deposit types, including the fossil fuels and supergene ores
- The final chapter relates metallogeny to global tectonics by examining the distribution of mineral deposits in space and time
- Boxed examples of world famous ore deposits are featured throughout providing context and relevance to the process-oriented descriptions of ore genesis
- Brings the discipline of economic geology back into the realm of conventional mainstream earth science by emphasizing the fact that mineral deposits are simply one of the many natural wonders of geological process and evolution.



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