

## ENGINEERING GEOLOGY



Second Edition

### By

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### Description

Every engineering structure, whether it's a building, bridge or road, is affected by the ground on which it is built. Geology is of fundamental importance when deciding on the location and design of all engineering works, and it is essential that engineers have a basic knowledge of the subject. Engineering Geology introduces the fundamentals of the discipline and ensures that engineers have a clear understanding of the processes at work, and how they will impact on what is to be built. Core areas such as stratigraphy, rock types, structures and geological processes are explained, and put in context. The basics of soil mechanics and the links between groundwater conditions and underlying geology are introduced. As well as the theoretical knowledge necessary, Professor Bell introduces the techniques that engineers will need to learn about and understand the geological conditions in which they intend to build. Site investigation techniques are detailed, and the risks and risk avoidance methods for dealing with different conditions are explained.

### Audience

Civil engineering, structural engineering, mining, water engineering students at undergraduate and post-graduate level. Professionals in the same disciplines.

### Contents

Rock types & stratigraphy; Geological structures; Surface processes; Groundwater conditions & supply; Description, properties & behaviours of soils & rocks; Geological materials used in construction; Site investigation; Geology, planning & development; Geology & construction

### Bibliographic & ordering Information

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**Groundwater Science and Policy**

An International Overview  
Quevauviller, Philippe (Ed.)  
2008, 648 p., Hardcover  
ISBN: 978-0-85404-294-4

About this book

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[Distribution rights](#)

## About this book

This scientific overview of key findings in groundwater management is set in the context of legislative milestones that have resulted from research and development. Highlighting the close relationship between policy requirements and scientific knowledge, the editor provides up-to-date information on the European Union's groundwater policy framework, complemented by discussions on integrating the results of research and development activities into policy implementation.

The first of its kind, this book is essentially a unique summary of outstanding research and development projects in the field of groundwater science. Readers get a wealth of knowledge and information from both scientific and political perspectives. Noteworthy examples of research projects that have contributed to both policy development and implementation are provided and analyzed.

**Written for:**

Professional, scholarly, researchers, consultants, and policy makers

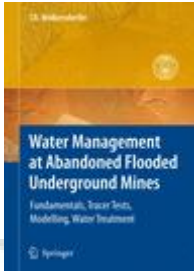
**Keywords:**

Management  
Pollution  
Prevention



CIMME

INGENIEROS DE MINAS,  
Y GEÓLOGOS DE  
MEXICO A.C.



**Water Management at Abandoned Flooded Underground Mines**

Fundamentals, Tracer Tests, Modelling, Water Treatment

**Wolkersdorfer**, Christian

2008, XX, 466 p. 125 illus., 124 in color., Hardcover

ISBN: 978-3-540-77330-6

About this book

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## About this book

Switching off the pumps of a mine is one of the last steps in the lifetime of a surface or underground mine. As the water in the open space raises, the water might become contaminated with different pollutants and eventually starts to flow in the open voids. This book addresses the processes related to mine abandonment from a hydrogeological perspective. After an introduction to the relevant hydrogeochemical processes the book gives detailed information about mine closure procedures. Based on in-situ measurements the hydrodynamic processes in a flooded mine are described and some of the mine closure flow models exemplified. As all investigations base on precise data, the book gives some key issues of monitoring and sampling, especially flow monitoring. Then the book shows some new methodologies for conducting tracer tests in flooded mines and gives some hints to passive mine water treatment. At the end 13 well investigated case studies of flooded underground mine and mine water tracer tests are described and interpreted from a hydrodynamic point of view.

**Written for:**

Libraries, institutes, researchers, scientists

**Keywords:**

hydrodynamics  
hydrogeology  
hydrology  
mining  
mining engineering

tracer tests