An Introduction to Applied and Environmental Geophysics, 2nd Edition
John M. Reynolds

DESCRIPTION

An Introduction to Applied and Environmental Geophysics, 2nd Edition, describes the rapidly developing field of near-surface geophysics. The book covers a range of applications including mineral, hydrocarbon and groundwater exploration, and emphasises the use of geophysics in civil engineering and in environmental investigations. Following on from the international popularity of the first edition, this new, revised, and much expanded edition contains additional case histories, and descriptions of geophysical techniques not previously included in such textbooks.

The level of mathematics and physics is deliberately kept to a minimum but is described qualitatively within the text. Relevant mathematical expressions are separated into boxes to supplement the text. The book is profusely illustrated with many figures, photographs and line drawings, many never previously published. Key source literature is provided in an extensive reference section; a list of web addresses for key organisations is also given in an appendix as a valuable additional resource.

- Covers new techniques such as Magnetic Resonance Sounding, Controlled-Source EM, shear-wave seismic refraction, and airborne gravity and EM techniques

- Now includes radioactivity surveying and more discussions of down-hole geophysical methods; hydrographic and Sub-Bottom Profiling surveying; and UneXploded Ordnance detection
Expanded to include more forensic, archaeological, glaciological, agricultural and bio-geophysical applications

• Includes more information on physio-chemical properties of geological, engineering and environmental materials

• Takes a fully global approach

• Companion website with additional resources available at www.wiley.com/go/reynolds/introduction2e

• Accessible core textbook for undergraduates as well as an ideal reference for industry professionals

The second edition is ideal for students wanting a broad introduction to the subject and is also designed for practising civil and geotechnical engineers, geologists, archaeologists and environmental scientists who need an overview of modern geophysical methods relevant to their discipline. While the first edition was the first textbook to provide such a comprehensive coverage of environmental geophysics, the second edition is even more far ranging in terms of techniques, applications and case histories.

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**ABOUT THE AUTHOR**


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**FEATURES**

• Covers new techniques including thermal imaging and radioactivity methods
• New section on case histories of multi-method environmental geophysical investigations

• Improved artwork quality and layout

• Greater discussion of survey design and standards in geophysical investigations

• Includes more marine geophysical and geotechnical case histories e.g. cable/pipe laying

• Includes examples of integrated case histories

• Includes more information of physio-chemical properties of geological, engineering and environmental materials

• Greater discussion of borehole techniques especially topography

• Companion website

• Takes a fully global approach

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