Record Nr. UNINA9910574052203321 Autore Trofimov Vladimir L. Titolo Oil and Gas Reservoir Prospecting and Exploration: High-Resolution Seismic (HRS) techniques and technology / / by Vladimir L. Trofimov, Fanil F. Khaziev, Alisa V. Trofimova Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2022 3-030-84389-0 ISBN Edizione [1st ed. 2022.] Descrizione fisica 1 online resource (434 pages) Disciplina 622.1592 Soggetti Geology Engineering geology Geotechnical engineering Geoengineering Geotechnical Engineering and Applied Earth Sciences Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Chapter 1-Introduction -- Chapter 2-Seismic modeling of wave field Nota di contenuto dynamic parameters -- Chapter 3-Methods for solving inverse dynamic seismic problems -- Chapter 4-Processing and automated interpretation of well logging data -- Chapter 5-Elastic wave velocity and gradient fields for heterogeneous geological media -- Chapter 6-Determination of statistical dependencies between geological and geophysical characteristics of the real subsurface environment --Chapter 7-Detailed interpretation of high-resolution seismic data in various seismic and geological conditions -- Chapter 8-Examples of HRS-Geo technology used in other regions -- Chapter 9-Conclusion. . Sommario/riassunto This book discusses topical issues of detailed seismic data interpretation using high-resolution seismic (HRS) techniques, which are based on the numerical method developed by the authors for solving the inverse dynamic seismic problem (IDSP). The authors highlight the range of issues related to the development and

application of HRS-Geo technologies on a variety of seismic data, and analyze a significant amount of practical material in various seismic

and geological conditions. This analysis allows for the accurate estimation of geological indicators in sediments that are most important for the prediction and exploration of oil and gas deposits, including lithological composition, reservoir properties, and the nature and degree of reservoir rock saturation with fluids. The book is intended for professionals involved in seismic data processing and geological interpretation, students of geophysical and geological specialties, graduate students of these specializations.