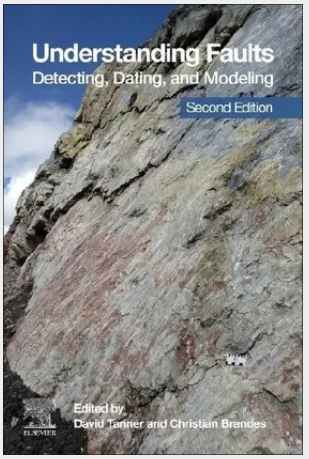
Tanner / Brandes

Understanding Faults

Detecting, Dating, and Modeling



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Understanding Faults: Detecting, Dating, and Modelling reveals the dynamic world of faults and earthquakes. It offers a single resource for analysing faults for a variety of applications, from hazard detection and earthquake processes to geophysical exploration. Chapters explore the intricate processes of fault detection, utilizing various methods to identify and characterize faults in different settings. Numerical modelling techniques are used to simulate fault behaviour and seismic activity, providing insights into fault dynamics and earthquake mechanisms. The book also closely examines faults under laboratory conditions, presenting analogue experiments that study fault growth and behaviour. The dating of fault movement sheds light on the timing of fault activity, providing crucial information for understanding seismic hazards and tectonic processes. Additionally, fault sealing mechanisms and their implications are examined, revealing how faults evolve and interact with their surrounding environment. A unique perspective is offered on faults in the context of the world's energy transition, by analysing the role of faults in energy-related exploration, such as geothermal energy. By inspecting faults from multiple angles, including geological, geophysical, and energy perspectives, the book provides a comprehensive understanding of fault systems and their significance in various domains.

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