

3-D seismic benefits from exploration through development: an Exxon perspective

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Exxon has participated in over 370 3-D seismic surveys in 13 countries since the late-1970's. From the western margin of the Pacific Basin, Malaysia, Australia and China are included in our worldwide distribution of experience which is led by western Europe, the Gulf of Mexico and Canada. These surveys have added significant value to our upstream operations and we consider 3-D seismic to be the single most important technology to ensure effective and cost-efficient exploration and development of our oil and gas fields. Exxon is applying 3-D seismic technology in established exploration trends, the early phases of field delineation, development decision making, as well as field exploitation. Through a series of Exxon case studies including the Seligi Field in the Malay Basin, the Tern Field in the North

Sea and the Ram/Powell Discovery and Grand Isle 16 Field in the Gulf of Mexico, this paper demonstrates that 3-D seismic surveys are proving to be excellent investments to help identify and evaluate quality new exploration opportunities, provide critical information about whether new discoveries can be economically developed and optimize ongoing projects. Our use of 3-D seismic surveys has led to the addition of new reserves, drilling fewer dry or marginal exploration wells and optimization of the number and placement of delineation, development and secondary recovery wells. These benefits are a result of superior structural definition, more detailed reservoir descriptions, reservoir fluid content characterizations and quantitative interpretation methods.
