3-D SEISMIC BENEFITS FROM EXPLORATION THROUGH DEVELOPMENT: AN EXXON PERSPECTIVE

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ABSTRACT

Exxon has participated in over 370 3-D seismic surveys in 13 countries since the late-1970s. The worldwide distribution of our experience 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 the 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. Our use of 3-D seismic surveys has led to the addition of new reserves, drilling of 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.

Although 3-D seismic surveys are expensive, when balanced against potential investments in non-productive acreage, a costly dry hole or two, a misplaced platform, incorrect assumptions on reservoir extent and geometry, or maybe even premature field abandonment - 3-D seismic surveys in most areas are money well spent.