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ACQUISITION OF SEISMIC DATA IN A CONSERVANCY AREA - SHOMPOLE CONSERVANCY IN MAGADI REGION, KENYA

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Abstract

Visible surface features such as oil seeps, natural gas seeps, pockmarks (underwater craters caused by escaping gas) provide basic evidence of hydrocarbon generation (be it shallow or deep in the Earth). However, most exploration depends on highly sophisticated technology to detect and determine the extent of these deposits using exploration geophysics. Areas thought to contain hydrocarbons are initially subjected to a gravity survey, magnetic survey, passive seismic or regional seismic reflection surveys to detect large-scale features of the sub-surface geology. Features of interest (known as leads) are subjected to more detailed seismic surveys which work on the principle of the time it takes for reflected sound waves to travel through matter (rock) of varying densities and using the process of depth conversion to create a profile of the substructure. Finally, when a prospect has been identified and evaluated and passes the oil company's selection criteria an exploration well is drilled in an attempt to conclusively determine the presence or absence of oil or gas.

Keywords and phrases: acquisition of seismic data.