

ENHANCEMENT OF FAULT DEFINITION BY USING FREQUENCY SPECTRAL DECOMPOSITION TECHNIQUE IN MARI GAS FIELD

Hamid Mushtaq¹, Farhan Ahmed Khan², and Muhammad Haneef²

¹*Mari Gas Company Ltd., Islamabad; hanidm@marigas.com.pk*

²*LMK Resources, Islamabad; fakhan@Imkr.com; mhaneef@Imkr.com*

In Mari field 3D seismic, conventional attribute methodologies on the full stack, broad-band data set showed an ambiguous fault definition. Then Frequency Spectral Decomposition has been applied on Mari 3D seismic data and generated attribute maps, which exhibited substantially more fidelity than full-bandwidth, conventional attributes. It has been found that fault definition is superior to conventional attributes. Optimal integration of Spectral Decomposition with other appropriate information yielded a more comprehensive understanding of the reservoir. Therefore, Frequency Spectral Decomposition is a new and better approach to squeezing out reservoir detail of fault definition from seismic data.