

Seismic Attribute Modeling and Inversion for Ninilchik Field, Cook Inlet, Alaska

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The Ninilchik field has produced approximately 100 BCF of gas from a doubly-plunging, fault-partition anticline. The reservoir interval is comprised of Pliocene and Miocene age inter-bedded sand, silt, mud and coal deposited in a fluvial environment and often sub-seismic resolution. The objective of this study is to extract Direct Hydrocarbon Indicators (DHI) from seismic data to help the asset team to plan the infill wells. The workflow of this study includes: well log modeling, a seismic data quality assessment, angle gather generation, synthetic traces generation and analysis, AVO intercept and gradient analysis, seismic pre-stack and post-stack inversion