

天然气地球物理学

南海西部海域油气地球物理勘探中地震处理技术新进展

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摘要:

南海西部海域是中国海洋石油总公司油气勘探开发的主战场, 具有广阔的油气勘探前景。该区经历了从浅海陆架到深海海域, 由浅层到中深层的多层次、多领域、多区带及目标的油气勘探活动。近几年随着加大中深层勘探及研究的力度, 在地球物理勘探及地震资料采集与处理技术方面均取得了新的进展和突破。根据南海西部海域不同盆地油气地质特点及所表征的地球物理信息(主要为地震反射特征), 提出因地制宜, 在用好传统地震资料处理技术和方法的同时, 针对地质条件复杂的勘探新领域中的新问题, 不断创新地震数据处理技术及方法, 逐步完善配套一系列成熟的地震处理技术, 为开创南海北部油气勘探新局面、建立“海上大庆”提供技术支撑和技术保障。

关键词: LIFT去噪 能量补偿 速度分析 多次波 互均衡 叠前时间偏移

Progress of Seismic Data Processing Technology in Western South China Sea

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Abstract:

Western South China Sea is the main exploration and development field for CNOOC with great exploration potential. In nearly 40 years of exploration, it has experienced multi\|level, multi\|field, multi\|zone, and multi-objective exploration from shallow shelf to deep water. In recent years, with the increasing of exploration intensity in deep formation, we have made great breakthrough in geophysical exploration, seismic data acquisition and processing technology. According to geological features and the characteristic of the geophysical information in different basins of South China Sea, the paper proposes to make good use of traditional seismic data processing techniques and methodologies. At the same time, for the new problem in new field of complex geological conditions, we should create new seismic data processing techniques and methods constantly, form a series of ripe seismic data processing technology gradually, and provide technical support for oil and gas exploration in northern South China Sea setting up “Daqing Oilfield at the Sea”.

Keywords: LIFT de-noise Energy compensation Velocity analysis Multiple wave Cross-equalization Pre-stack time migration

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