Hydrocarbon Potential in and Around Peshawar Basin, Khyber Pakhtunkhawa, Pakistan

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The margins of Peshawar basin and its surroundings have become the possible target of all types of the hydrocarbon reserves. In the present work, the geophysical and geological studies indicates presence of all kind of minerals and the huge reservoirs of oil and gas up to the depth of 2 to 5 km. The relationships between the sensitivity of surface recorded seismic data to various geological and engineering parameters characterizing five types of unconventional hydrocarbon resources are addressed. Specifically, seismic properties that may be extracted by the analysis of conventional 2D seismic data are identified and correlated with several geologic and engineering parameters that may characterize the productive capability of the unconventional resources. Examples for the seismic response to the various (heavy oil, tight gas sands, and gas and oil producing resource shales) resource types are discussed. From these observations, we conclude that seismic characterization will likely require high quality 3D seismic data to provide a structural and stratigraphic context of the subsurface. The inexhaustible reserves of Limestone have been discovered in the study area. The exploration and excavation of minerals would usher in a new era of development and prosperity in the tribal areas and would generate the job opportunities for the locals.