PROSPECT EVALUATION FOR PETROLEUM HYDROCARBON EXPLORATION USING GEOLOGICAL, GEOPHYSICAL AND WELL LOG DATA OF KANDRA AREA, MIDDLE INDUS BASIN, SINDH, PAKISTAN

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ABBREVIATIONS

LLD	Laterolog Deep
LLS	Laterolog Shallow
MSFL	Micro Spherically Focused Log
NMO	Normal Move Out
DMO	Dip Move Out
SP	Spontaneous Potential
Api	American Petroleum Institute
Vshale	Volume of Shale
GR	Gamma Ray
NMR	Nuclear Magnetic Resonance
H_z	Hertz
M/sec	Meters per second
S_h	Saturation of Hydrocarbon
S_w	Saturation of Water
R_w	Resistivity of Water
%	Percentage

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ABSTRACT

For the purpose of study of the area Kandra, five migrated seismic lines KDR89-01, KDR89-02, KDR89-03, KDR89-04, and KDR89-05 were acquired from Land Mark Resources by the permission of Directorate General Petroleum Concession (DGPC). The obtained data were consisting of two strike lines whereas one Strike line in North-East direction and other one in North-South direction. The remaining three seismic lines were dip lines in East-West direction. The acquired data also contains well log data. In this investigation petrophysical analysis and seismic data interpretation had been done.

Depth contour maps were generated with the help of marking of horizons and identification of faults on top of each prospective formation from which the knowledge about the tectonic activities and subsurface structures in the study area were calculated. Velocity contour maps were also generated on top of every prospective horizon.

Petrophysical analysis consisted of calculation of porosity, volume of shale, saturation of water and hydrocarbon by using log data of Kandra-01. Potential hydrocarbon reserves were estimated by using information of porosity, saturation of water/hydrocarbon and volume factor of reservoirs formation.