

2D STRUCTURAL INTERPRETATION OF KHIPRO AREA, SOUTHERN INDUS BASIN, PAKISTAN



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ABSTRACT

This thesis is based on 2D seismic reflection data and well logs. The data is acquired from the area of Khipro, Southern Indus Basin (Sindh) of Pakistan, provided by the Landmark Resources (LMKR) with the permission of Directorate General of Petroleum Concession (DGPC). Six seismic sections having line numbers along with Base Map are 2000-KH-04, 2000-KH-08, 2000-KH-30, 2000-KH-35, 2000-KH-36 and 2000-KH-42. Out of these six seismic lines, five seismic lines; 2000-KH-04, 2000-KH-08, 2000-KH-30, 2000-KH-36 and 2000-KH-42 are dip lines. The remaining line, 2000-KH-35 is a strike line. Root mean square and interval velocities which were computed during processing are also provided with the seismic section at selected Common Depth Points (CDPS) and are used for the calculation of average velocities to convert the given time into depth.

Four reflectors were marked due to their prominent reflection on the seismic sections. The two way travel time structural map for each reflector has been drawn and depth contour map of probable reservoir has also been drawn by using velocity and one way travel time. Moreover, Cross Sections in time and depth domains have also been drawn. Normal faults exist in the area and the associated Horst and Graben structures are observed along with Negative Flower structure and step faults.

By using well log data, petrophysical evaluation of Siraj South-1 shows the characteristics of hydrocarbon bearing zone which confirms the results of the 2D seismic interpretation.

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