

**STRUCTURAL VARIATION OF PUNJAB PLATFORM
USING INTEGRATED GEOPHYSICAL AND
GEOLOGICAL DATA, CENTRAL INDUS BASIN
PAKISTAN**



By

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ABSTRACT

Punjab platform is a monoclinial Eastern part of Central Indus basin gently dipping towards Sulaiman depression having no surface outcrops. This research contains structural variation in the Punjab platform area. For this research, scattered seismic lines from the Punjab platform have been selected available in the public domain. Due to the limited data available, only the northern and central portions of Punjab platform have been selected. After the interpretation of the seismic lines, time and depth sections have been prepared using the seismic and well data. Along with the allotted data, well data i.e. summary sheets of surrounding wells which were available in previous literature has also been used for the preparation of isopach maps and well to well correlations. Seven seismic lines including 954-FZP-05, 976-FZP-06, L-36-91-10, 812-DA-08, 845-LEA-107, 805-SK-26 and 916-YZM-05 have been interpreted. Interpretation of these lines show the presence of wedge shaped geometry in the study area. Due to the presence of Sargodha and Jacobabad highs in the eastern part of the study area, all the formations have been seen pinching out towards the East. While on the western side, the formations have greater thickness and are present deeper in the basin. Isopach maps of different ages in the study area have been prepared which show the depocenters for each age in the study area. Most of the wells present in the study area have been penetrated up to Cretaceous formations due to which the isopach maps of Cretaceous and younger formations have been prepared. Well to well correlations have been prepared which give accurate information about the surface and subsurface formations. Five well to well correlations have been prepared which cover almost all of the study area. As the wells that are correlated, usually lie at great distances, so many formations are pinched out in between the wells and it is not possible to correctly locate the position of pinch outs. To solve this problem the wells data was correlated with the available seismic lines. Seismic, isopach maps and well to well correlations all confirms that the study area is uplifted in the eastern side while the western side forms depression resulting in thick deposition of strata in the western part.

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