

**2D STRUCTURAL DELINEATION OF BALKASSAR
AREA AND PETROPHYSICAL ANALYSIS OF WELL;
BALKASSAR OXY-1, POTWAR BASIN, PAKISTAN**



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ABSTRACT

Seismic lines PBJ-3, Pbj-4, PBJ-5, PBJ-8, Pbj-9, and PBJ-10, obtained from Directorate General of Petroleum Concessions (DGPC), were shot by OGDCL in 1980 in the area of Balkassar (study area) which lies in the Central Potwar on the southern flank of Soan syncline. The already interpreted 2-D seismic lines were re-interpreted to reveal as clearly as possible the subsurface structure of the Balkassar anticline and to infer the possibility of hydrocarbon occurrence in deeper horizons of the sedimentary sequence. The well data of Balkassar Oxy # 1 was used to confirm the reflectors depth.

The interpretation includes the construction of time and depth contour maps, 3D surfaces of Chorgali, Sakesar, Patala, Tobra and Khewra horizons. Time contour maps of the reflectors were produced using two way time of the reflectors. Average velocities were used to find the depths of the formations for the seismic section.

The interpretation of geoseismic section showed that the area was structurally deformed due to salt decollement and compressional tectonic movements. Traps for hydrocarbons were developed in the anticlines as they truncated against the thrust fault. Salt probably moved into these anticlines due to compressional movements and a pop up structure was formed.

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