INFRACAMBRIAN PROSPECTS EVALUATION OF FORT-ABBAS AREA, PUNJAB PLATFORM, MIDDLE INDUS BASIN, PAKISTAN

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ABSTRACT

The main objective is to evaluate prospect for infracambrian in Fort Abbas area. Migrated seismic lines 944-FABS-39, 944-FABS-40, 944-FABS-41, 944-FABS-44, 931-FABS-11, of Fort Abbas area Punjab Platform were obtained from Directorate General of Petroleum Concessions (DGPC) for seismic interpretation and Well Logs of well Bijnot-01 were obtained for petrophysical evaluation. Most seismic lines are oriented NW-SE of the Central Indus basin except for the seismic line 931-FABS-11 & 94-FABS-44 which is oriented NE-SW. The information we required was given within the time section, which was helpful in the conversion of the time section into depth section. These calculations helped in subsurface interpretation of the area, which was the basic purpose of this project four reflectors were marked with Top Samanasuk, Top Cambrian, Top Infracambrian, and Top Basement formation. Fault was marked, and then time contour maps were generated. After that time sections were converted into depth sections with the help of average velocity and finally depth contour maps were generated, this helped to know the basic mechanism of the tectonic movement in the area. The major cause has been the Normal Fault in the area that evoked from the basement rock and form horst and graben structure. Hydrocarbon traps were most possibly developed in the Horst &graben structure and are the prospective zones for hydrocarbon accumulation of the Fort Abbas area.

Petrophysical evaluation of well Bijnot-01 was carried out to highlight the reservoir area which included the selection of zone of interest followed by Log interpretation. The volume of shale, porosity was interpreted. On the basis of Petrophysical Evaluation it was noted that clastic reservoir Jodhpur sandstone have good shows of heavy oil and the reservoir of Cambrian (Khewra Sandstone) bore good porosity and have good shows of oil but the problem was the placement of well from where well cannot flow with economic value. The source rock distribution problem also exists in the area, so all these conditions make the well very uneconomical so it was abandoned.

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