

## ABSTRACT

Qadirpur Block is located in Sind Province within Central Indus Basin and it is bounded in north by Sargodha high, in the east by Indian Shield, in west by marginal zone of Indian Plate and in south by Sukkar Rift and this concession area is operated by OGDCL. Area is approximately 820 sq. kilometers and falls within the latitude of 27° 55' to 28° 09' N and longitude 69° 11' to 69° 31' E. Until today about 25 wells have been drilled for extensive development of the field. Sui Main Limestone is the main producer of gas in Qadirpur Gas-field area; hence most of the wells were bottomed up to this Formation. The main purpose of this thesis is to evaluate the structural hydrocarbon potential using seismic and well log data. Interpretive results of time contour map indicate that most of the prospect zones are in the southwest direction at Sui Main Limestone level. Results also revealed that prospect zones tend to become thin in the northeast, while it becomes thick in the southwest. Petrophysical analysis has been carried out to delineate the source, reservoir and seal formations and calculate their hydrocarbon potential. Attribute analysis study was also done to know the different characteristics of the study area. Finally seismic inversion was done which confirms the results of interpretation study.

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