

*2D Seismic Interpretation of Seismic Lines in  
Khushalgarh Area, Kohat Basin, Pakistan*



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*(2007-2011)*

## ABSTRACT

This dissertation presents the 2D seismic interpretation of Khushalgarh area in Kohat Plateau, which is located in the northwestern apex of the southern deformed fold and thrust belt.

The key objective of this study is to delineate the subsurface geometry in order to understand the petroleum system of the concerned area by using different seismic processing and interpretation techniques. Main emphasize is on the interpretation methodology adopted in order to illustrate the horizons and faults. Beside this different maps are generated including time and depth contour maps.

Seismic expression of four seismic lines of the study area (latitudes  $33^{\circ}28'52''$  N and longitudes  $71^{\circ}53'50''$  E) reveals that it needs more investigation over the Recent to Eocene time span with regard to the structural changes occurring within different parts of the region. Special emphasis has been made on the E-W structural trend with tight anticlines and wider synclines in the East of Kohat. As well as it also indicates that the Kohat and Kuldana Formations are the only representatives of the Middle Eocene in the Kohat Basin. The geologically folded structure seems to be an E-W directed plunged antiformal peak having the Khushalgarh area in the centre with a high elevated area.

## ACKNOWLEDGEMENT

I would like to acknowledge the following for their support and assistance with this dissertation.

First and foremost praise is to Allah, whom with His willing giving me the strength to complete this thesis without any difficulties.

I am deeply indebted to my supervisor *Sir Yasir Zaib* (Dewan Petroleum) whose help, motivation, suggestions and encouragement helped me all the time. It is due to his assistance, who inspite of being extra ordinary busy with his duties took time out to support me in completion of this thesis.

I warmly thank to *Sir Munsif Channa* (OGDCL), *Sir Awais* (OGDCL), and *Sir Shamshad* (OGDCL) who gave me untiring help during my difficult moments.

I would like to express my gratitude to my supervisor *Sir Aamir Malik* for his continuous support. His extensive discussions around my work have been very helpful for this dissertation.

I would also like to thank our Head of Department *Dr. Muhammad Zafar* who gave me an opportunity to get practical exposure in the field of Oil and Gas.

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## **CHAPTER # 1**

### **INTRODUCTION**