

**2D SEISMIC DATA INTERPRETATION AND
RESERVOIR ANALYSIS OF BADIN BLOCK USING
SYNTHETIC SEISMOGRAM AND PETROPHYSICAL
ANALYSIS**



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2013

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A thesis submitted to Bahria University, Islamabad in partial fulfillment
of the requirement of the degree of M.S in Geophysics

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ABSTRACT

This dissertation presents the 2D seismic interpretation of Badin area in Lower Indus basin, which is located in the southwestern periphery of the Indian plate. The key objective of this project is to delineate the subsurface geometry with the help of different seismic techniques in order to understand the petroleum system of the concerned area. Main emphasize is on the interpretation methodology adopted in order to illustrate the horizons and faults. Beside this time and depth contour maps are generated along with petrophysical analysis and reserve estimation. As the study area tectonically present in extensional regime, accordingly dominated by horst and graben structures. Grabens are of immense exploratory importance as it believed to be the kitchen area of hydrocarbon generation, whereas the faults are important in different aspects, of which the foremost is trap formation and further it facilitate in hydrocarbon migration from source to reservoir. Study area holds all the major elements of petroleum system verified by a number of oil and gas discoveries; however some seismic reflectors were not distinctive. It was realized that to interpret these horizons and to improve seismic resolution, a denser seismic grid most likely 3D seismic is required. Thus, interpretation of these horizons should be left for future study.

ACKNOWLEDGEMENTS

I would like to express my gratitude to all those who gave me the courage to complete this research work. I would like to express my sincere gratitude to my supervisor Mr. Muhammad Fahad Mehmood, (Lecturer E&ES), for his guidance, supervision and encouragement. I am also thankful to my co-supervisor Mr. Muhammad Raiees Amjad, (Lecturer E&ES) for his guidance and cooperation during this research work.

I would like to pay tributes to my parents and other family members for their prayers and unsurpassed wishes. Without their encouragement and cooperation it would have been impossible for me to finalize this research work.

I am deeply indebted to my friend Mr. Aamir Buriro for his continuous support. I would also like to thank Mr. Yasir Zeb (ENI) and Mr. Zubair Sarwar (Premier Oil) for their guidance to initiate this research work and Dr. Muhammad Zafar (HOD) for his endless support throughout my degree.

Lastly, I owe special thanks to Prof. Dr. Tahseenullah Khan who critically reviewed this research work and endowed me with his precious time. I was fortunate to have his competent and devoted guidance which helped me to convert my thesis draft into the present manuscript.

CONTENTS

	Page
ABSTRACT	i
ACKNOWLEDGEMENTS	ii
FIGURES	vii
TABLES	viii
ABBREVIATIONS	ix

CHAPTER 1

INTRODUCTION

1.1	Location of thesis area	1
1.2	Exploration history and previous investigation	3
1.3	Review of literature	3
1.4	Objectives of the study	4
1.5	Data required	4
1.6	Methodology	5
1.7	Phase 1	5
1.7.1	Interpretation	5
1.8	Phase 2	6
1.8.1	Petrophysical analysis	6
1.9	Phase 3	6
1.9.1	Synthetic seismogram	6
1.10	Base map	8

CHAPTER 2

REGIONAL TECTONIC SETTINGS OF STUDY AREA

2.1	Tectonic history	9
2.2	Pre-Rift phase	9
2.3	Syn-Rift phases	9
2.3.1	Phase 1: Rifting during the Late Jurassic and Early Cretaceous	9
2.3.2	Phase 2: Shear modification reactivation during Middle Cretaceous	10
2.3.3	Sub-phase: Paleocene ophiolite emplacement	10

2.4	Post-Rift phase	11
2.4.1	Late Tertiary inversion	11
2.5	Structural setting	11

CHAPTER 3

STRATIGRAPHY OF THE STUDY AREA

3.1	Overview	14
3.2	Major unconformities in study area and their development history	14
3.3	Stratigraphy and depositional pattern	15
3.4	Jurassic age	15
3.4.1	Chiltan Formation	15
3.4.2	Depositional pattern at Jurassic time	15
3.5	Cretaceous age	15
3.5.1	Sembar Formation	15
3.5.2	Lower Goru Formation and the upper Goru Formation	15
3.5.3	Parh Formation and Mughal Kot Formation	16
3.5.4	Pab Formation	16
3.5.5	Depositional pattern at Cretaceous time	16
3.6	Tertiary age	17
3.6.1	Ranikot Formation	17
3.6.2	Laki and Kirther formations	17
3.6.3	Depositional pattern at Tertiary time	17

CHAPTER 4

PETROLEUM SYSTEM OF THE BADIN BLOCK

4.1	Petroleum system elements	20
4.2	Badin petroleum system	20
4.3	Source rock	21
4.4	Reservoir rock	21
4.5	Seal rock	21
4.6	Traps	23
4.7	Migration pathways	23
4.8	Overburden rocks	23

4.9	Reservoir type and fluids in Badin area	23
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CHAPTER 5

SEISMIC METHODS

5.1	Seismic methods basic principle	24
5.2	Seismic investigation approach	24
5.3	Acquisition	25
5.4	Processing	25
5.4.1	Demultiplexing	25
5.4.2	Geometry definition	26
5.4.3	Trace editing	26
5.4.4	Datum static correction	26
5.4.5	Deconvolution	26
5.4.6	CDP sorting	27
5.4.7	Velocity analysis	27
5.4.8	Normal moveout	27
5.4.9	Stacking	27
5.4.10	Muting	27
5.4.11	Filtering	28
5.4.12	Migration	28
5.4.13	Data presentation and storage	28
5.5	Interpretation	29
5.5.1	Structural and stratigraphic analysis	29

CHAPTER 6

INTERPRETATION OF ASSIGNED SEISMIC LINES OF BADIN BLOCK

6.1	Overview	30
6.2	Well to seismic correlation	30
6.3	Horizon interpretation	30
6.4	Fault interpretation	31
6.5	Seismic lines	31
6.5.1	Interpreted seismic lines	32
6.6	Mapping	41

6.6.1	Time contour maps	41
6.6.2	Depth contour maps	41
6.6.3	Time maps	42
6.6.4	Depth maps	48
6.7	Time cross section	53
6.8	Depth cross sections	53
6.9	Petrophysical analysis	55
6.10	Reserves estimation	57
	CONCLUSIONS	60
	REFERENCES	61
	INTERNET LINKS	63

FIGURES

	Page	
Figure 1.1	Satellite imagery showing Badin block.	1
Figure 1.2	Location map of Badin block.	2
Figure 1.3	Flowchart showing the steps included in the methodology for the proposed research work.	7
Figure 1.4	Base map of the study area showing the orientation of seismic lines and location of well Doti-01.	8
Figure 2.1	Regional tectonic map of Pakistan.	12
Figure 2.2	Tectonic map of Southern Indus Basin.	13
Figure 5.1	Seismic investigation approach.	24
Figure 5.2	Demultiplexing process.	25
Figure 5.3	Seismic processing flowchart.	28
Figure 6.1	Interpreted seismic line PK94-1804.	32
Figure 6.2	Interpreted seismic line PK92-1692.	34
Figure 6.3	Interpreted seismic line PK92-1696.	35
Figure 6.4	Interpreted seismic line PK92-1698.	36
Figure 6.5	Interpreted seismic line PK92-1686.	38
Figure 6.6	Interpreted seismic line PK94-1800.	39
Figure 6.7	Interpreted seismic line PK94-1807.	40
Figure 6.8	Time depth plot of Keyhole-01.	41
Figure 6.9	TWT contour map of top Ranikot Formation.	43
Figure 6.10	TWT contour map of top B- sand.	44
Figure 6.11	TWT contour map of top Basal sand.	46
Figure 6.12	TWT contour map of top Middle sand.	47
Figure 6.13	Depth contour map of top Ranikot Formation.	49
Figure 6.14	Depth contour map of top B-sand.	50
Figure 6.15	Depth contour map of top Basal sand.	51
Figure 6.16	Depth contour map of top Middle sand.	52
Figure 6.17	Time cross section of line PK94-1804.	53
Figure 6.18	East west depth cross section map along line PK94-1804.	54
Figure 6.19	North south depth cross section map along line PK94-1807.	54
Figure 6.20	Interpreted logs of well Keyhole-01 (B sand).	56
Figure 6.21	P10 and P90 model for reserves estimation.	57

TABLES

	Page
Table 1.1 Seismic lines and well logs.	5
Table 3.1 Generalized stratigraphic sequence of Southern Indus Basin.	18
Table 3.2 Borehole stratigraphy of well Keyhole-01.	19
Table 4.1 Lower Goru stratigraphic summary for the Lower-Middle Indus Basin.	22
Table 6.1 Water and Hydrocarbon saturation values at different intervals.	55
Table 6.2 Gross volume and polygon area for P10 and P90 model.	58
Table 6.3 Input parameters for reserves estimation.	58
Table 6.4 Summary of the calculated reserves.	59

ABBREVIATIONS

BOPD	Barrels of Oil per day.
MMSCFD	Million Standard Cubic Feet per day.
BWPD	Barrels of Water per day.
GRV	Gross Rock Volume.
TCF	Trillion Cubic Feet.
API	American Petroleum Institute
MMboe	Million Barrels of Oil Equivalent
BCF	Billion cubic feet