

**Petrophysical analysis of Nandpur area, middle Indus basin,
Pakistan**



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**PETROPHYSICAL ANALYSIS OF NANDPUR AREA,
MIDDLE INDUS BASIN, PAKISTAN**



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of the requirement for the degree of B.S in Geophysics

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We would like to dedicate this dissertation to our parents whom prayers and support was
always there for us

ABSTRACT

The present study pertains to the modeling of the productive zones from the well log data. This was carried out by using well log data of Nandpur-02 provided by the Earth Sciences Department of Bahria University Islamabad. The Nandpur Gas field was acquired by OGDCL. The area lies in the Middle Indus basin and the two reservoirs are encountered during the study of well Nandpur-02. The gas, which has accumulated in different Cretaceous and Jurassic formations, has a very high Nitrogen gas (N₂) content. In Petrophysical studies first of all Reservoir zones were identified and the petrophysical properties including volume of shale, porosity (density, neutron, average and effective porosities), Net-pay calculation after application of cut-off, resistivity of water, water saturation, hydrocarbon saturation. During petrophysical interpretation different cross plots were constructed of three zones. According to the petrophysical analysis results, zone 1 is water saturated, while the average values of hydrocarbon saturation in zone 2 is 65% and in zone 3 is 61%. On the basis of these results it can be stated that zone 2 and 3 have good hydrocarbon potential.

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CONTENTS

	Page
ABSTRACT	i
ACKNOWLEDGEMENT	ii
FIGURES	vi
TABLES	vii
CHAPTER 1	
INTRODUCTION	
1.1 Introduction to the Study Area	1
1.2 Exploration History of Study Area	2
1.3 Objectives and Methodology	3
1.4 Data Acquired	4
CHAPTER 2	
REGIONAL TECTONICS OF THE STUDY AREA	
2.1 Regional Tectonic Setting	5
CHAPTER 3	
STRATIGRAPHY OF MIDDLE INDUS BASIN	
3.1 Stratigraphy of Middle Indus Basin	8
3.2 Stratigraphy of the Study Area	10
3.2.1 Kingriali Formation	10
3.2.2 Datta Formation	10
3.2.3 Shinawari Formation	10
3.2.4 Samana Suk Formation	10
3.2.5 Chichali Formation	11
3.2.6 Lumshiwai Formation	11
3.2.7 Ranikot Formation	11
3.2.8 Dungan Formation	12
3.2.9 Nammal Formation	12

	Page
3.2.10 Sakesar Formation	12
3.2.11 Chinji Formation	13
3.2.12 Nagri Formation	13

CHAPTER 4

PETROPHYSICAL INTERPRETATION

4.1 Petrophysics	15
4.2 Data used	15
4.3 Functions of logs	15
4.3.1 Gamma Ray	15
4.3.2 Porosity	16
4.3.2.1 Neutron Log	16
4.3.2.2 Sonic Log	16
4.3.3 Resistivity	17
4.3.4 Caliper Log	17
4.4 Petrophysical Interpretation	18
4.5 Petrophysical interpretation of Nandpur-02 (Zone 1)	19
4.5.1 Determination of volume of shale (V_s)	20
4.5.2 Calculation of porosity	22
4.5.2.1 Density porosity (ϕ_D)	22
4.5.2.2 Neutron porosity	22
4.5.2.3 Average porosity	23
4.5.2.4 Effective porosity	25
4.5.3 Water saturation (S_w)	27
4.5.4 Hydrocarbon saturation (S_{hc})	32
4.6 Petrophysical interpretation of Nandpur-02 (Zone 2)	33
4.7 Petrophysical interpretation of Nandpur-02 (Zone 3)	39
4.8 Netpay Hydrocarbon Saturation (zone 2)	46

	Page
4.9 Netpay Hydrocarbon Saturation (zone 3)	47
CONCLUSIONS	48
REFERENCES	49

FIGURES

	Page
Figure 1.1 Central Indus basin and the subdivisions into petroleum zone.	2
Figure 2.1 Tectonic Map of Pakistan.	7
Figure 4.1 Work flow diagram.	18
Figure 4.2 Log curves of Zone 1	19
Figure 4.3 Depth vs Shale volume of Nandpur-02 (zone 1).	21
Figure 4.4 Correction chart for obtaining porosity for Limestone.	23
Figure 4.5 Depth vs Average porosity of Nandpur-02 (zone 1)	24
Figure 4.6 Depth vs Effective porosity of Nandpur-02 (zone 1)	26
Figure 4.7 Schlumberger Gen-9 cross plot.	28
Figure 4.8 Schlumberger SP-1 cross plot.	29
Figure 4.9 Schlumberger SP-2 cross plot.	30
Figure 4.10 Depth vs Water Saturation of Nandpur-02 (zone 1)	31
Figure 4.11 Depth vs Hydrocarbon Saturation of Nandpur-02(zone 1)	32
Figure 4.12 Log curves of zone 2	33
Figure 4.13 Depth vs Shale volume of Nandpur-02 (zone 2)	34
Figure 4.14 Depth vs Average porosity of Nandpur-02 (zone 2)	35
Figure 4.15 Depth vs Effective porosity of Nandpur-02 (zone 2)	36
Figure 4.16 Depth vs Water Saturation of Nandpur-02 (zone 2)	37
Figure 4.17 Depth vs Hydrocarbon Saturation of Nandpur-02 (zone 2)	38
Figure 4.18 Log curves of zone 3	39
Figure 4.19 Depth vs Shale volume of Nandpur-02 (zone 3)	40
Figure 4.20 Depth vs Average Porosity of Nandpur-02 (zone 3)	41
Figure 4.21 Depth vs Effective Porosity of Nandpur-02 (zone 3)	42
Figure 4.22 Depth vs Water Saturation of Nandpur-02 (zone 3)	43
Figure 4.23 Depth vs Hydrocarbon Saturation of Nandpur-02 (zone 3)	44
Figure 4.24 Depth vs Netpay Hydrocarbon saturation of Nandpur-2 (zone 2)	46
Figure 4.25 Depth vs Netpay Hydrocarbon saturation of Nandpur-2 (zone 3)	47

TABLES

	Page
Table 3.1 Stratigraphy of the Middle Indus Basin	9
Table 3.2 Stratigraphic sequence of study area	14
Table 4.1 Summation table of three zones of Nandpur-2	45
Table 4.2 Net pay of two zones of Nandpur-2	47