PETROPHYSICAL ANALYSIS OF MISSA KESWAL WELL-04, UPPER INDUS BASIN PAKISTAN

A thesis submitted to Bahria University, Islamabad in partial fulfillment of the requirement for the degree of B.S in Geology

MUZAHIR ALI

TANVEER ALI

HASSAN ALI

Department of Earth and Environmental Sciences
Bahria University, Islamabad

2013

CONTENTS

ABSTRACT

The Missa keswal field was discovered in June 1991 and came on regular production from December 1992. The Missa keswal well 04 was drilled in 1994.The latitude and longitude of the area are 33 12' 0" North, 73 22' 0" East. The main purpose of the study is to evaluate hydrocarbon potential of a well named Missa Keswal-04, Upper Indus Basin, Pakistan. This progress is achieved by using complete suite of wire line logs and available well data. The reservoir zone has been evaluated for the hydrocarbon potential in detail using set of equations. The methodology adopted to accomplish this task includes; the measurements for the Shale volume by using Gamma Ray Log, Porosity by Sonic Log, Resistivity of water by using R_w method, Saturation of water in the zone of reservoir and Hydrocarbon saturation using Archie equation. The results for the dissertation has been displayed in the form of excel sheets and graphs for the better approach towards the task. The results have been shown that the Chorgali limestone contains 5% average porosity, 52% average shale volume and water saturation is 69% and Hydrocarbon saturation which is 31%. The Missa Keswal well-04 well failed in producing oil and gas because of underlying stratigraphy. The probable reason, for failure of this well has been drilled on limb of the anticline where the water saturation is high relative to hydrocarbon.