

DHODAK FIELD: A CASE HISTORY OF FIRST AND THE LARGEST CONDENSATE DISCOVERY OF PAKISTAN

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Dhodak condensate and gas field is located in the rugged terrain of eastern Sulaiman Range, about 80 Km north of Dera Ghazi Khan in the Punjab province. The field was discovered in December, 1976 through the drilling of Dhodak well# 1 where condensate/ gas was tested in the Pab Sandstone of Cretaceous age. Sandstone of Lower Ranikot formation (Paleocene) was also proved to be hydrocarbon bearing during the course of further appraisal. Development and Production license was granted to Oil & Gas Development Corporation over an area of 41.92 square kilometers by the Government of Pakistan. To date, a total of eight wells have been drilled and seven wells are gas/ condensate producers. Recent volumetric estimates for total wet GIIP are 1076 BSCF and total recoverable reserves are 611 BSCF of gas and 40 MMSTB of condensate. Gas processing plant was set up near Dhodak which started production in December, 1994. Present average daily production of condensate, gas, and LPG is 2600 barrels, 42 MMSCFT, and 180 metric tons respectively. Production is constrained due to the processing capacity of the plant.

Exploration and drilling history, complexities of petrophysics, reservoir geology, and challenges of development planning of Dhodak field are presented. This paper also summarizes the reservoir management strategy developed on the basis of compositional modeling and history matching with special emphasis on problems related to condensate recovery in the clastic reservoirs of Pab and Lower Ranikot.