عنوان مقاله:

Optimization of Hydraulic-Fracturing and Well-Spacing in a Tight Gas Reservoir

محل انتشار:

اولین کنگره مهندسی نفت ایران (سال: 1385)

تعداد صفحات اصل مقاله: 19

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خلاصه مقاله:

The goal of this study is to determine optimum well spacing-hydraulic fracture configuration in a dry gas reservoir, which is located in Canada offshore. This reservoir has fluvial dominated characteristic and is very heterogeneous in which some parts have 1md permeability and the permeability of other parts is almost zero. In this highly heterogeneous reservoir there is high risk of having a drilled well in zero permeability parts. So it was planned to check if it is beneficial to have less well and produce some of the fluid in place via hydraulic fractures considering the fact that a hydraulic fracture job is much cheaper than drilling a well. This accomplished with Eclipse100 reservoirm simulator that predicts reservoir performance with various well-spacing and hydraulic fracture configuration. There is not any data available about detail geological setting of the field, so a stochastic model was used for reservoir modelling and simulation. Reservoir behaviour with two different hydraulic fracture length and different well spacing was predicted and compared to find out the optimum well spacing, hydraulic fracture length and number of hydraulic fractures. The recovery factors with different scenarios were very close together and a net-present value calculation will introduce the best plan for this reservoir. The economic calculation of this project will be published in the near future.

کلمات کلیدی:

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