عنوان مقاله:

Effect of Applying De-Convolution Method in Well Test Analysis of Naturally Fractured Reservoirs

محل انتشار:

اولین کنفرانس و نمایشگاه تخصصی نفت (سال: 1392)

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خلاصه مقاله:

There is a lag time before the reservoir starts contributing through the sand face when a well is opened for production. The sand face flow rate does not go to zero instantaneously as the well is shut in. During this time lag the flow rate is called well bore storage for a production and shut in period. Distinguishing the end of well bore is one of the most significant challenges in well test analysis. De-convolution which is the conversion of a variable rate distorted pressure profile in to the pressure profile for an equivalent constant rated production sequence can be used to this job. Beta De-convolution method has been applied in one Iranian naturally fractured reservoir to predict the end of well bore storage. The pressure data were best matched with a dual porosity model. The pressure data were analyzed for two cases of not using the beta de-convolution method as well as for the case of using this approach to eliminate the distorted pressure data. The results show that the calculated well bore storage coefficient, permeability, interaction coefficient, storativity ratio and skin factor for the second case has about 185%, 10%,-11%, -15% and -7 % difference with the case of not using this approach

کلمات کلیدی:

Well bore storage, Lag time, De-Convolution, Well test analysis

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