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### Using pressure test data to predict the product zone of shale gas horizontal well

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Most shale gas reservoirs are developed by fractured horizontal wells. To evaluate the performance the fracture or monitor the well production, it is important to find the product zone alone the well. In this paper, a novel method using pressure test is introduced. By matching the pressure test data, product zone will be indicated.

In this method, the numerical model of fractured horizontal well is established, which consider the impact of product zone on production. Based on this model, a series of typical curves are drawn. Product zone will be predicted by matching the pressure test data. It is more convenient to use this method than others, such as well logging etc. It costs less money and time to process.

Along the fractured horizontal well, the different location of product zone will show different figure in pressure test curves, so as the rate. In this paper, the relationship between the location and rate is discussed. The result shows that the multiple solutions of the model make the prediction complex. It is important to interpret the test date with geological information of the well.

For the deep, long and multistage fracturing horizontal well in shale gas reservoir, the method using pressure test data to predict the pay zone location is efficient. With the advantage of the cost, it will make the performance monitor continually. And the performance dynamic analysis can be more accurate.

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