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Improvement of Analysis Vertical Oil Exploration Wells (Case Study)

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Abstract : The old school of study, well testing reservoir engineers used the transient pressure analyses to get certain parameters and variable factors on the reservoir's physical properties, such as, (permeability-thickness). Recently, the difficulties facing the newly discovered areas are the convincing fact that the exploration and production (E&p) team should have sufficiently accurate and appropriate data to work with due to different sources of errors. The well-test analyst does the work without going through well-informed and reliable data from colleagues which may consequently cause immense environmental damage and unnecessary financial losses as well as opportunity losses to the project. In 2003, new potential oil field (Moga) face circulation problem well-22 was safely completed. However the high mud density had caused an extensive damage to the nearer well area which also distracted the hypothetical oil rate of flow that was not representive of the real reservoir characteristics This paper presents methods to analyze and interpret the production rate and pressure data of an oil field. Specifically for Well- 22 using the Deconvolution technique to enhance the transient pressure .Applying deconvolution to get the best range of certainty of results needed for the next subsequent operation. The range determined and analysis of skin factor range was reasonable.

Keywords : well testing, exploration, deconvolution, skin factor, un certainity
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