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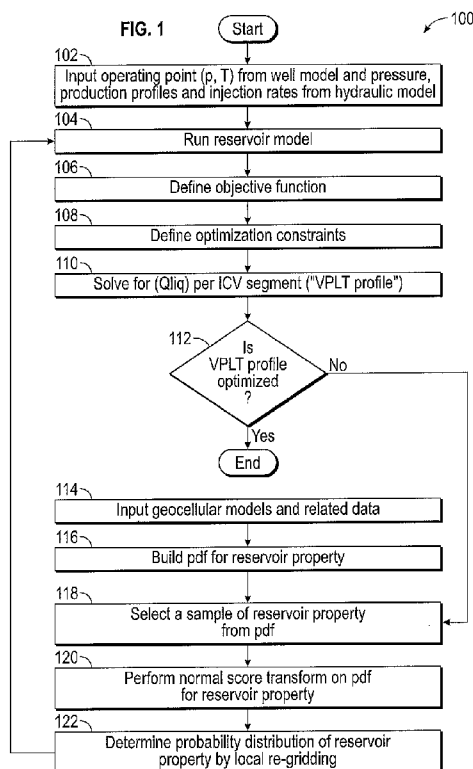
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(54) Title: CREATING VIRTUAL PRODUCTION LOGGING TOOL PROFILES FOR IMPROVED HISTORY MATCHING



(57) Abstract: Systems and methods for creating virtual production logging tool profiles for improved history matching and proactive control of smart wells. In preferred embodiments, a probability density function (pdf) is built for a reservoir property, a sample of the reservoir is selected from the pdf, a normal score transform is performed using the sample, a probability distribution of the reservoir is determined by re-gridding, a model is run to generate a water cut and liquid rate profile (Qliq), and a liquid rate profile is solved for each inflow control device. A faster and more accurate system and method is disclosed to determine a liquid rate profile for a reservoir model.

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