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- (54) **Title:** METHODS AND SYSTEMS FOR GAS LIFT RATE MANAGEMENT

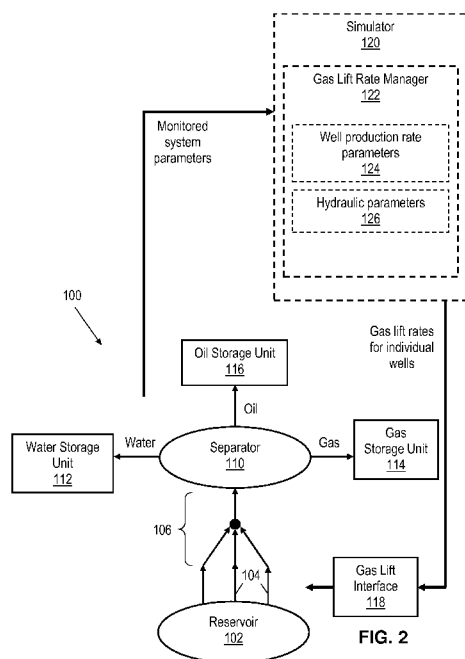


FIG. 2

(57) **Abstract:** A disclosed method for gas lift rate management includes collecting production system data. The method also includes performing a simulation based on the collected data, a fluid model, and a fully-coupled set of equations. The method also includes expediting convergence of a solution for the simulation by selecting well production rates and adjusting gas lift rates. The method also includes storing the gas lift rates determined for the solution for use with gas lift operations of the production system. A disclosed gas lift rate management system includes a memory having a gas lift rate management module and one or more processors coupled to the memory. The gas lift rate management module, when executed, causes the one or more processors to: perform a production system simulation based on a fluid model and a fully-coupled set of equations; expedite convergence of a solution for the production system simulation by selecting well production rates and adjusting gas lift rates; and store the gas lift rates determined for the solution for use with gas lift operations of the production system.



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