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(54) Title: METHOD, SYSTEM, AND OPTIMIZATION TECHNIQUE TO IMPROVE OIL RESERVOIR RECOVERY IN THE WATER-ALTERNATING-GAS INJECTION PROCESS BY USING DOWNHOLE CONTROL VALVES (WAG-CV)

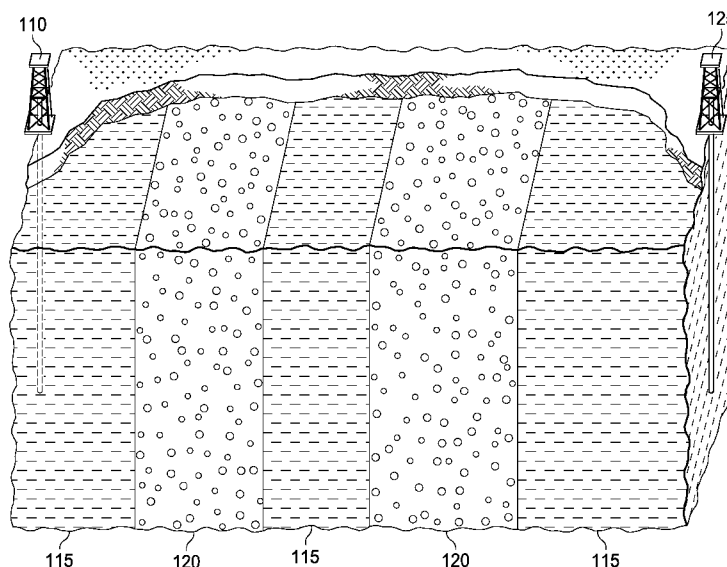


FIG. 1

(57) Abstract: A system for Water-Alternating-Gas (WAG) injection for Enhanced Oil Recovery (EOR) includes a mechanical well configured to enable multi-point selective injection for water and gas. The system further includes an optimization engine configured to calculate reservoir flow dynamics and selectively inject water and gas via the mechanical well according to reservoir flow dynamics.