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(71) Applicant *(for all designated States except US)*: **HALLIBURTON ENERGY SERVICES, INC.** [US/US]; 10200 Bellaire Blvd., Houston, TX 77072 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **GRECI, Stephen** [US/US]; 4416 San Mateo Lane, Mckinney, TX 75070 (US).

(74) Agent: **SCHROEDER, Peter, V.**; Booth Albanesi Shroeder LLC, 1601 Elm St. Suite 1950, Dallas, TX 75201 (US).

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(54) Title: AUTONOMOUS FLUID CONTROL DEVICE HAVING A RECIPROCATING VALVE FOR DOWNHOLE FLUID SELECTION

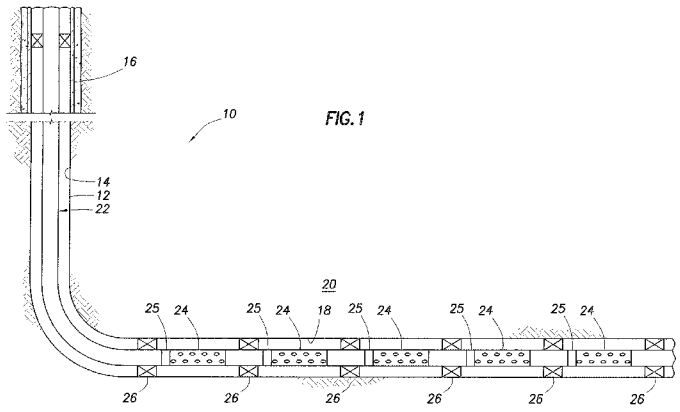


FIG. 1

(57) Abstract: An apparatus and method autonomously controls fluid flow in a subterranean well, as the fluid changes in a characteristic, such as viscosity, over time. An autonomous reciprocating member has a fluid flow passageway there through and a primary outlet and at least one secondary outlet. A flow restrictor, such as a viscosity dependent choke or screen, is positioned to restrict fluid flow through the primary outlet. A vortex chamber is positioned adjacent the reciprocating member. The reciprocating member moves between a first position where fluid flow is directed primarily through the primary outlet of the reciprocating member and into the primary inlet of the vortex assembly, and a second position where fluid flow is directed primarily through the at least one secondary outlet of the reciprocating member and into the at least one secondary inlet of the vortex assembly. The movement of the reciprocating member alters the fluid flow pattern in the adjacent vortex chamber.