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Matrix-Fracture Interface Cleanup Protocol for Tight Sandstone and Carbonate Reservoirs

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Summary: A novel approach to clean up the matric-fracture interface to improve oil and gas production

Description: Water blockage and precipitation of larger molecular weight hydrocarbon components at the matrix-fracture interface can decrease oil and gas production in tight sandstone and carbonate reservoirs. This invention is of a method to clean-up the matrix fracture interface to improve oil and gas production. The approach involves a protocol to inject a) carbon dioxide followed by surfactant, b) surfactant followed by carbon dioxide, c) carbon dioxide alone, or d) surfactant solution alone, into tight sandstone or carbonate reservoir producer well. Carbon dioxide and/or surfactants clean-up water blocks and larger molecule weight hydrocarbon components precipitated at the interface and also reduce oil viscosity at the fracture-matrix interface. The same procedure can be applied into injection well to improve injectivity.

Main Advantages of this Invention:

- Increases injectivity and production

Potential Areas of Application:

- Oil and Gas

ID number: 15007

Intellectual Property Status: US provisional application filed (62/048126).

Opportunity: We are seeking an exclusive or non-exclusive licensee for implementation of this technology.

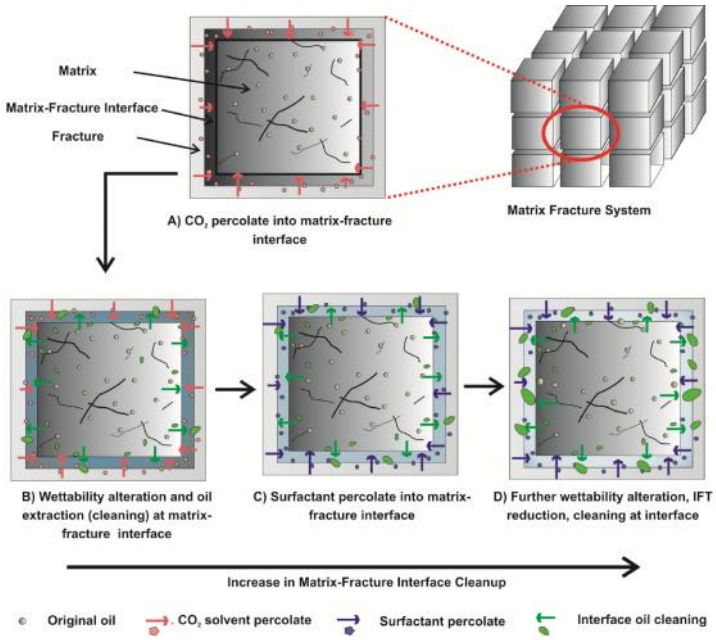

Fig. 1— Matrix-Fracture interface cleanup with CO_2 followed by anionic or non-ionic surfactant.

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