Claims:

1. A method comprising:

disposing a device into a borehole in proximity to a subterranean formation where a filter cake has been formed adjacent thereto, the device comprising a support structure and a shape-memory article disposed at the support structure, the shape-memory article comprising a shape-memory polymer, wherein the device is disposed when the shape-memory article is in a compacted shape, the method characterized by:

exposing the shape-memory article to a fluid system to cause the shape-memory article to expand and conform to a surface of the borehole;

exposing the filter cake to the fluid system; and

removing the filter cake with the fluid system;

wherein the fluid system comprises, based on the total weight of the fluid system:

(i) 2 to 40 wt.% of a chelating agent, wherein the chelating agent comprises at least one of sodium ethylenediaminetetraacetic acid, disodium ethylenediaminetetraacetic acid, diammonium ethylenediaminetetraacetic acid, tetraammonium ethylenediaminetetraacetic acid, trisodium dicarboxymethyl alaninate, pentasodium diethylene-triaminepentaacetate, or trisodium N-(hydroxyethyl)-ethylenediaminetriacetate;

(ii) 1 to 20 wt.% of an activator, wherein the activator comprises at least one of butanol, isobutanol, or butoxytriglycol;

(iii) 0.01 to 3 wt.% of a non-emulsifier, wherein the non-emulsifier is a combination comprising two or more of methanol, ethanol, isopropanol, 2-ethyl hexanol, polyethylene glycol, or aromatic naphtha; and

(iv) 30 to 90 wt.% of water or a brine;

wherein the filter cake is removed after the shape-memory article has expanded and conformed to the surface of the borehole.

2. The method of claim 1, wherein the filter cake is a water-based filter cake.

3. The method of claim 1, wherein the fluid system further comprises a surfactant that is compositionally different from the non-emulsifier, and the surfactant comprises at least one of a non-ionic surfactant, an anionic surfactant, a cationic surfactant, or an amphoteric surfactant, and the surfactant is present in an amount of 1 to 25 wt.% based on the total weight of the fluid system.

4. The method of claim 1, where the fluid system further comprises a viscosifier, the viscosifier comprising at least one of a hydratable polysaccharide, xanthan gum,

cellulose, a cellulose derivative, a viscoelastic surfactant, a polyacrylamide, a polyacrylate, diallyldimethylammonium chloride, a urea thixotrope, or an amide ester thixotrope.

5. The method of claim 1, where the fluid system further comprises 1 to 3 wt.% of a corrosion inhibitor based on the total weight of the fluid system, wherein the corrosion inhibitor comprises at least one of a quaternary ammonium compound, a sulfur compound, thiourea, formaldehyde, 1-phenylethanone, a thio-alcohol, an alkylpyridine benzyl chloride quaternary, acetophenone, an aldehyde, or a phosphate.

6. The method of claim 1, wherein the fluid system further comprises 5 to 25 wt.% of an acid component comprising an acid, an acid precursor, or a combination thereof.

7. The method of claim 1, wherein the shape-memory article has a porous structure, and the method further comprises flowing a fluid through the shape-memory article.

8. The method of claim 1, wherein the filter cake is removed at least two hours after the shape-memory article has expanded and conformed to the surface of the borehole.

9. A fluid system for expanding a shape-memory article and removing a filter cake after the shape-memory article is expanded and conformed to a surface of a borehole, the fluid system characterized in that the fluid system comprises, based on the total weight of the fluid system,

(i) 2 to 20 wt.% of a chelating agent, wherein the chelating agent comprises at least one of sodium ethylenediaminetetraacetic acid, disodium ethylenediaminetetraacetic acid, diammonium ethylenediaminetetraacetic acid, tetraammonium ethylenediaminetetraacetic acid, trisodium dicarboxymethyl alaninate, pentasodium diethylene-triaminepentaacetate, or trisodium N-(hydroxyethyl)-ethylenediaminetriacetate;

(ii) 1 to 20 wt.% of an activator, wherein the activator comprises at least one of butanol, isobutanol, or butoxytriglycol;

(iii) 0.01 to 3 wt.% of a non-emulsifier, wherein the non-emulsifier is a combination comprising two or more of methanol, ethanol, isopropanol, 2-ethyl hexanol, polyethylene glycol, or aromatic naphtha;

(iv) 30 to 90 wt.% of a brine; and

(v) 0.5 to 3 wt.% of a corrosion inhibitor, wherein the corrosion inhibitor comprises at least one of a quaternary ammonium compound, a sulfur compound, thiourea, formaldehyde, 1-phenylethanone, a thio-alcohol, an alkylpyridine benzyl chloride quaternary, acetophenone, an aldehyde, or a phosphate.

10. A fluid system for expanding a shape-memory article and removing a filter

cake after the shape-memory article is expanded and conformed to a surface of a borehole, the fluid system characterized in that the fluid system comprises, based on the total weight of the fluid system:

(i) 5 to 25 wt.% of an acid component comprising an acid, an acid precursor, or a combination of the acid and the acid precursor, and 10 to 40 wt.% of a chelating agent, wherein the chelating agent comprises at least one of sodium ethylenediaminetetraacetic acid, disodium ethylenediaminetetraacetic acid, diammonium ethylenediaminetetraacetic acid, tetraammonium ethylenediaminetetraacetic acid, trisodium dicarboxymethyl alaninate, pentasodium diethylene-triaminepentaacetate, or trisodium N-(hydroxyethyl)-ethylenediaminetriacetate;

(ii) 1 to 20 wt.% of an activator, wherein the activator comprises at least one of butanol, isobutanol, or butoxytriglycol;

(iii) 0.01 to 3 wt.% of a non-emulsifier, wherein the non-emulsifier is a combination comprising two or more of methanol, ethanol, isopropanol, 2-ethyl hexanol, polyethylene glycol, or aromatic naphtha;

(iv) 30 to 90 wt.% of water or a brine; and

(v) 0.5 to 3 wt.% of a corrosion inhibitor, wherein the corrosion inhibitor comprises at least one of a quaternary ammonium compound, a sulfur compound, thiourea, formaldehyde, 1-phenylethanone, a thio-alcohol, an alkylpyridine benzyl chloride quaternary, acetophenone, an aldehyde, or a phosphate.