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WHAT IS CLAIMED IS:

1. A method, comprising:

5 applying a magnetic field to a well screen, thereby
varying sizes of pores via which fluid flows through the
well screen.

10 2. The method of claim 1, wherein the pores are
formed in a magnetic shape memory material of the well
screen.

3. The method of claim 1, wherein the magnetic field
is applied to the well screen in a well.

15 4. The method of claim 1, wherein the magnetic field
is applied to the well screen prior to installation of the
well screen in a well.

20 5. The method of claim 1, wherein a substance is
released from the pores in response to applying the magnetic
field.

25 6. The method of claim 5, wherein the substance
comprises a well treatment.

7. The method of claim 5, wherein the substance
blocks flow through the pores prior to being released.

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8. The method of claim 5, wherein the substance is released by being dissolved.

9. The method of claim 5, wherein the substance is released by being dispersed.

10. The method of claim 1, wherein applying the magnetic field to the well screen increases the sizes of the pores, after the well screen is installed in a wellbore.

11. The method of claim 1, wherein applying the magnetic field to the well screen decreases the sizes of the pores, after the well screen is installed in a wellbore.

12. The method of claim 1, wherein applying the magnetic field to the well screen comprises alternately increasing and decreasing the sizes of the pores.

13. The method of claim 12, wherein the fluid flows in one direction through the well screen when the sizes of the pores are increased, and the fluid flows in an opposite direction through the well screen when the sizes of the pores are decreased.

14. The method of claim 1, wherein applying the magnetic field closes the pores, thereby preventing flow of the fluid through the pores.

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15. The method of claim 1, wherein applying the magnetic field opens the pores, thereby permitting flow of the fluid through the pores.

5 16. The method of claim 1, wherein applying the magnetic field comprises orienting the magnetic field orthogonal to another magnetic field previously applied to the well screen.

10 17. The method of claim 1, wherein applying the magnetic field comprises orienting the magnetic field orthogonal to another magnetic field previously applied to the well screen.

15 18. The method of claim 1, wherein applying the magnetic field comprises variably restricting flow of the fluid through the well screen.

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19. A well screen, comprising:

a magnetic shape memory material having a dimension which changes in response to application of a magnetic field, and

5 wherein restriction to flow through the well screen varies in response to the change in dimension of the magnetic shape memory material.

10 20. The well screen of claim 19, wherein fluid which flows through the well screen flows through pores of the magnetic shape memory material.

15 21. The well screen of claim 20, further comprising a substance in the pores.

22. The well screen of claim 21, wherein the substance comprises a well treatment.

20 23. The well screen of claim 21, wherein the substance blocks flow through the pores.

24. The well screen of claim 21, wherein the substance is dissolvable in a well.

25 25. The well screen of claim 21, wherein the substance is dispersible in a well.

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26. The well screen of claim 19, wherein the dimension is a pore size of the magnetic shape memory material, and wherein application of the magnetic field to the well screen increases the pore size.

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27. The well screen of claim 19, wherein the size is a pore size of the magnetic shape memory material, and wherein application of the magnetic field to the well screen decreases the pore size.

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28. The well screen of claim 19, wherein the size is a pore size of the magnetic shape memory material, and wherein application of the magnetic field to the well screen alternately increases and decreases the pore size.

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CLAIMS

1. A method, comprising:

applying a magnetic field to a well screen, thereby varying sizes of pores via which fluid flows through the well screen, wherein the sizes of the pores are varied from first pore sizes to second pore sizes, and the second pore sizes are retained when the magnetic field is no longer applied to the well screen, and wherein a substance is released from the pores in response to the applying the magnetic field.

2. The method of claim 1, wherein the substance comprises a well treatment substance.

3. The method of claim 1, wherein the substance blocks flow through the pores prior to being released.

4. The method of claim 1, wherein the substance is released by being dissolved.

5. The method of claim 1, wherein the substance is released by being dispersed.

6. A well screen, comprising:

a magnetic shape memory material having a plurality of pores, wherein each of the pores have a dimension which changes in response to application of a magnetic field, wherein the dimension changes from a first dimension to a second dimension, wherein the second dimension is retained when the magnetic field is no longer applied to the material, wherein fluid which flows through the well screen flows through the pores of the magnetic shape memory material, and wherein restriction to flow through the well screen varies in response to the change in the dimension; and the magnetic shape memory material having a well treatment substance in the pores.

7. The well screen of claim 6, wherein the substance blocks flow through the pores.

8. The well screen of claim 6, wherein the substance is dissolvable in a well.

9. The well screen of claim 6, wherein the substance is dispersible in a well.