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WHAT IS CLAIMED IS:

1. A flow control system for use in a subterranean well, the system comprising:

5 a flow chamber through which a fluid composition flows;
and

a plug which is released in response to an increase in a ratio of undesired fluid to desired fluid in the fluid composition.

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2. The system of claim 1, wherein the plug is released automatically in response to the increase in the ratio of undesired to desired fluid.

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3. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid causes degradation of a structure which supports the plug.

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4. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid causes corrosion of a structure which supports the plug.

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5. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid causes erosion of a structure which supports the plug.

6. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid causes breakage of a structure which supports the plug.

7. The system of claim 1, wherein the plug, when released, prevents flow through the flow chamber.

5 8. The system of claim 1, wherein the plug, when released, prevents flow from an inlet to an outlet of the flow chamber.

9. The system of claim 1, wherein the increase in the
10 ratio of undesired to desired fluid in the fluid composition results from an increase in water in the fluid composition.

10. The system of claim 1, wherein the increase in the
ratio of undesired to desired fluid in the fluid composition
15 results in an increase in a velocity of the fluid composition in the flow chamber.

11. The system of claim 1, wherein the increase in the
ratio of undesired to desired fluid in the fluid composition
20 results from an increase in gas in the fluid composition.

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12. A flow control system for use in a subterranean well, the system comprising:

a flow chamber through which a fluid composition flows;

5 a plug; and

a structure which supports the plug, but which releases the plug in response to degrading of the structure by the fluid composition.

10 13. The system of claim 12, wherein the structure is degraded in response to an increase in a ratio of undesired fluid to desired fluid in the fluid composition.

14. The system of claim 12, wherein the plug is
15 released automatically in response to the degrading of the structure.

15. The system of claim 12, wherein an increase in a ratio of undesired fluid to desired fluid in the fluid
20 composition causes erosion of the structure.

16. The system of claim 12, wherein an increase in a ratio of undesired fluid to desired fluid in the fluid composition causes corrosion of the structure.

25 17. The system of claim 12, wherein an increase in a ratio of undesired fluid to desired fluid in the fluid composition causes breakage of the structure.

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18. The system of claim 12, wherein the plug, when released, prevents flow through the flow chamber.

19. The system of claim 12, wherein the plug, when
5 released, prevents flow from an outlet of the flow chamber.

20. The system of claim 12, wherein the degrading of the structure results from an increase in water in the fluid composition.
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21. The system of claim 12, wherein the degrading of the structure results from an increase in a velocity of the fluid composition in the flow chamber.

22. The system of claim 12, wherein the degrading of the structure results from an increase in gas in the fluid composition.
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23. A flow control system for use in a subterranean well, the system comprising:

5 a flow chamber through which a fluid composition flows;
and

a plug which is released in response to an increase in a velocity of the fluid composition in the flow chamber.

10 24. The system of claim 23, wherein the plug is released automatically in response to the increase in the velocity of the fluid composition.

15 25. The system of claim 23, wherein the increase in velocity of the fluid composition causes erosion of a structure which supports the plug.

20 26. The system of claim 23, wherein the increase in velocity of the fluid composition causes corrosion of a structure which supports the plug.

27. The system of claim 23, wherein the increase in velocity of the fluid composition causes breakage of a structure which supports the plug.

25 28. The system of claim 23, wherein the increase in velocity of the fluid composition causes degradation of a structure which supports the plug.

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29. The system of claim 23, wherein the plug, when released, prevents flow through the flow chamber.

30. The system of claim 23, wherein the plug, when
5 released, prevents flow from an inlet to an outlet of the flow chamber.

31. The system of claim 23, wherein the increase in velocity of the fluid composition results from an increase
10 in water in the fluid composition.

32. The system of claim 23, wherein the increase in the velocity of the fluid composition results from an increase in a ratio of undesired fluid to desired fluid in
15 the fluid composition.

33. The system of claim 23, wherein the increase in velocity of the fluid composition results from an increase in gas in the fluid composition.

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WHAT IS CLAIMED IS:

1. A flow control system for use in a subterranean well, the system comprising:

a flow chamber through which a fluid composition flows;
and

a plug supported by a support structure,

wherein the support structure comprises a material which degrades via at least one of corrosion and erosion, thereby releasing the plug from the support structure into the flow chamber,

wherein rotational movement of the plug relative to the support structure increases in response to an increase in a ratio of undesired fluid to desired fluid in the fluid composition, and

wherein the increased rotational movement of the plug increases a rate of degradation of the support structure.

2. The system of claim 1, wherein the plug is released automatically in response to the increase in the ratio of undesired to desired fluid.

3. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid causes the degradation of the support structure.

4. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid causes the corrosion of the support structure.

5. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid causes the erosion of the support structure.

6. The system of claim 1, wherein the plug, when released, prevents flow through the flow chamber.

7. The system of claim 1, wherein the plug, when released, prevents flow from an inlet to an outlet of the flow chamber.

8. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid in the fluid composition results from an increase in water in the fluid composition.

9. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid in the fluid composition results in an increase in a velocity of the fluid composition in the flow chamber.

10. The system of claim 1, wherein the increase in the ratio of undesired to desired fluid in the fluid composition results from an increase in gas in the fluid composition.

11. A flow control system for use in a subterranean well, the system comprising:

a flow passage through which a fluid composition flows;

a flow chamber;

a bypass passage;

a plug comprising a ball; and

a structure which supports the plug, but which releases the plug in response to degrading of the structure by the fluid composition,

wherein an amount of the fluid composition that flows through the bypass passage decreases in response to an increase in a ratio of undesired fluid to desired fluid in the fluid composition, and an amount of the fluid composition that

flows through the flow chamber increases in response to the increase in the ratio,

and wherein a rate of degradation of the structure is increased in response to the increased flow through the flow chamber.

12. The system of claim 11, wherein the plug is released automatically in response to the degrading of the structure.

13. The system of claim 11, wherein the degradation includes erosion of the structure.

14. The system of claim 11, wherein the degradation includes corrosion of the structure.

15. The system of claim 11, wherein the degradation causes breakage of the structure.

16. The system of claim 11, wherein the plug, when released, prevents flow through the flow chamber.

17. The system of claim 11, wherein the plug, when released, prevents flow through the flow chamber and the bypass passage.

18. The system of claim 11, wherein the degrading of the structure results from an increase in water in the fluid composition.

19. The system of claim 11, wherein the degrading of the structure results from an increase in a velocity of the fluid composition in the flow passage.

20. The system of claim 11, wherein the degrading of the

structure results from an increase in gas in the fluid composition.

21. A flow control system for use in a subterranean well, the system comprising:

a vortex chamber through which a fluid composition flows from an earth formation into an interior of a tubular string; and

a plug which is released from a support structure in response to an increase in a rotational velocity of the fluid composition in the vortex chamber, wherein the increase in the rotational velocity of the fluid composition results from an increase in a ratio of undesired fluid to desired fluid in the fluid composition, and wherein the increase in rotational velocity of the fluid composition increases a rate of degradation of the support structure.

22. The system of claim 21, wherein the plug is released automatically in response to the increase in the rotational velocity of the fluid composition.

23. The system of claim 21, wherein the degradation includes erosion of the support structure.

24. The system of claim 21, wherein the degradation includes corrosion of the support structure.

25. The system of claim 21, wherein the degradation includes breakage of the support structure.

26. The system of claim 21, wherein the plug, when released, prevents flow through the vortex chamber.

27. The system of claim 21, wherein the plug, when

released, prevents flow from an inlet to an outlet of the vortex chamber.

28. The system of claim 21, wherein the increase in the ratio of undesired fluid to desired fluid in the fluid composition results from an increase in water in the fluid composition.

29. The system of claim 21, wherein the increase in the ratio of undesired fluid to desired fluid in the fluid composition results from an increase in gas in the fluid composition.