## CLAIMS

1. A gravel pack zonal isolation apparatus, comprising:

a sand control device having an elongated base pipe extending from an upper end to a lower end; and

at least one packer assembly, each of the at least one packer assembly comprising:

an upper mechanically set packer having a sealing element;

a lower mechanically set packer having a sealing element;

a swellable packer element between the upper mechanically set packer and the lower mechanically set packer that swells over time in the presence of a fluid;

alternate flow channels along the base pipe to divert gravel pack slurry around the upper mechanically set packer, the swellable packer element, and the lower mechanically set packer; and

a manifold in fluid communication with the alternate flow channels, whereby the manifold commingles and redistributes flow among the alternate flow channels.

2. The apparatus of claim 1, wherein:

the sand control device further comprises a filter medium radially surrounding the base pipe along a substantial portion of the base pipe so as to form a sand screen; and

the swellable packer element is at least partially fabricated from an elastomeric material.

3. The apparatus of claim 2, wherein the swellable elastomeric packer element comprises a material that swells (i) in the presence of an aqueous liquid, (ii) in the presence of a hydrocarbon liquid, or (iii) combinations thereof.

4. The apparatus of claim 1, wherein:

the elongated base pipe comprises multiple joints of pipe connected end-to-end; and

at least one of the at least one packer assembly is placed along the joints of pipe proximate the upper end of the sand control device.

5. The apparatus of claim 1, wherein:

the elongated base pipe comprises multiple joints of pipe connected end-to-end; and

the gravel pack zonal isolation apparatus comprises an upper packer assembly and a lower packer assembly placed along the joints of pipe.

6. The apparatus of claim 1, wherein the elements for the first and second mechanically set packers are elastomeric cup-type elements.

7. The apparatus according to any of the preceding claims, used in a method for completing a wellbore, the wellbore having a lower end defining an open-hole portion, the method comprising:

running a gravel pack zonal isolation apparatus into the wellbore, the zonal isolation apparatus comprising:

a sand control device having an elongated base pipe; and

at least one packer assembly, each of the at least one packer assembly comprising:

a first mechanically set packer having an upper sealing element,

a second mechanically set packer having a lower sealing element,

a swellable packer element between the upper sealing element and the lower sealing element that swells over time in the presence of a fluid, and

one or more alternate flow channels between the basepipe and the sealing elements to divert gravel pack slurry around the first mechanically set packer element, the swellable packer element, and the second mechanically set packer element; and

a manifold in fluid communication with the alternate flow channels, whereby the manifold commingles and redistributes flow among the alternate flow channels;

positioning the zonal isolation apparatus in the open-hole portion of the wellbore such that a first of the at least one packer assembly is above or proximate the top of a selected subsurface interval;

setting the upper sealing element and the lower sealing element in each of the at least one packer assembly; and

injecting a gravel slurry into an annular region formed between the sand control device and the surrounding open-hole portion of the wellbore, providing that the gravel slurry travels through the one or more alternate flow channels and the manifold to allow the gravel slurry to bypass the first and second mechanically set packers and the intermediate swellable packer element in each of the at least one packer assembly so that the open-hole portion of the wellbore is gravel-packed above and below, but not between, the respective first and second mechanically set packers.

8. The method of claim 7, further comprising:

permitting fluids to contact the swellable packer element in at least one of the at least one packer assembly; and

wherein the swellable packer element comprises a material that swells (i) in the presence of an aqueous liquid, (ii) in the presence of a hydrocarbon liquid, or (iii) combinations thereof.

9. The method of claim 8, wherein:

the wellbore is completed for fluid production;

the open-hole portion of the wellbore passes through the selected subsurface interval and at least one more subsurface interval; and

the method further comprises producing production fluids from at least one of the subsurface intervals along the open-hole portion of the wellbore for a period of time.

10. The method of claim 9, wherein:

the selected subsurface interval is substantially saturated with an aqueous or gaseous fluid;

the first of the at least one packer assembly is positioned proximate the top of the interval substantially saturated with the aqueous or gaseous fluid; and

a second of the at least one packer assembly is set proximate a lower boundary of the interval substantially saturated with the aqueous or gaseous fluid.

11. The method of claim 10, wherein:

the at least one more subsurface interval comprises a lower interval below the interval substantially saturated with an aqueous or gaseous fluid; and

producing production fluids comprises producing production fluids from the lower interval.

12. The method of claim 11, further comprising:

running a tubular string into the wellbore and into the base pipe, the tubular string having a straddle packer at a lower end;

setting the straddle packer across the interval substantially saturated with the aqueous or gaseous fluid so as to seal off formation fluids from entering the wellbore from said interval; and

continuing to produce production fluids from the lower interval.

13. The method of claim 11, wherein:

the at least one more subsurface interval further comprises an upper interval above the interval substantially saturated with an aqueous or gaseous fluid, and

producing production fluids further comprises producing production fluids from the upper interval.

14. The method of claim 13, further comprising:

running a tubular string into the wellbore and into the base pipe, the tubular string having a straddle packer at a lower end;

setting the straddle packer across the interval substantially saturated with the aqueous or gaseous fluid so as to seal off formation fluids there from; and

continuing to produce production fluids from the upper and lower intervals.

15. The method of claim 14, wherein:

an upper end of the straddle packer is set adjacent the first packer assembly; and

a lower end of the straddle packer is set adjacent the second packer assembly.

16. The method of claim 9, wherein:

the at least one more subsurface interval comprises a lower interval;

the selected interval is an upper interval above the lower interval such that a first of the at least one packer assembly is proximate the top of the upper interval;

a second of the at least one packer assembly is set proximate a lower boundary of the upper interval;

producing production fluids comprises producing production fluids from the upper selected interval and from the lower interval until the upper interval produces an unacceptable percentage of water or hydrocarbon gas; and

the method further comprises:

running a tubular string into the wellbore and into the base pipe, the tubular string having a straddle packer at a lower end,

setting the straddle packer across the upper interval so as to seal off the production of formation fluids from the upper interval up the wellbore, and

continuing to produce production fluids from the lower selected interval.

17. The method of claim 16, wherein:

an upper end of the straddle packer is set adjacent the first packer assembly; and

a lower end of the straddle packer is set adjacent the second packer assembly.

18. The method of claim 9, wherein:

the at least one more subsurface interval comprises an upper interval;

the selected interval is a lower interval below the upper interval such that a first of the at least one packer assembly is above or proximate the top of the lower interval;

producing production fluids comprises producing production fluids from the upper interval and from the lower interval until the lower interval no longer produces economically viable volumes of hydrocarbons; and

the method further comprises:

running a working string into the wellbore and into the base pipe, the working string having a plug at a lower end of the working string,

setting the plug within the base pipe so as to seal off the production of formation fluids from the lower interval up the wellbore to the upper interval, and

continuing to produce production fluids from the upper interval.

19. The method of claim 18, wherein the plug is set adjacent the first of the at least one packer assembly.

20. The method of claim 18, wherein:

the at least one more subsurface interval further comprises an intermediate interval between the upper interval and the selected lower interval, with the intermediate interval being made up of a rock matrix that is substantially impermeable to fluid flow; and

(i) the first of the at least one packer assembly is positioned above the lower interval and along the intermediate interval, (ii) the plug is set above the lower interval and along the intermediate interval, or (iii) both.

21. The method of claim 9, wherein:

the selected subsurface interval is a lower interval that produces hydrocarbons;

the at least one more subsurface interval comprises (i) an upper interval above the selected lower interval, and (ii) an intermediate interval between the upper interval and the selected lower interval that is made up of a rock matrix that is substantially impermeable to fluid flow.

22. The method of claim 21, wherein:

the first of the at least one packer assembly is positioned proximate a bottom of the upper interval;

a second of the at least one packer assembly is positioned proximate a top of the upper interval; and

the method further comprises:

running a tubular string into the wellbore and into the base pipe, the tubular string having a straddle packer at a lower end,

setting the straddle packer across the upper interval so as to seal off the production of formation fluids from the upper interval into the wellbore, and

continuing to produce production fluids from the selected lower interval.

23. The method of claim 20, wherein:

the first of the at least one packer assembly is positioned (i) along the intermediate interval, or (ii) proximate the top of the selected lower interval;

the method further comprises:

running a working string into the wellbore and into the base pipe, the working string having a plug at a lower end of the working string, and

setting the plug within the base pipe so as to seal off the flow of formation fluids from the lower interval up the wellbore to the upper interval; and

continuing to produce production fluids from the upper interval.

24. The method of claim 9, further comprising:

injecting fluids into the at least one more subsurface interval.

What is claimed is:

1. A gravel pack zonal isolation apparatus, comprising: a sand control device having an elongated base pipe extending from an upper end to a lower end; and at least one packer assembly, each of the at least one packer assembly comprising: an upper mechanically set packer having a sealing element, a lower mechanically set packer having a sealing element, a swellable packer element between the upper mechanically set packer and the lower mechanically set packer that swells over time in the presence of a fluid, alternate flow channels along the base pipe to divert gravel pack slurry around the upper mechanically set packer, the swellable packer element, and the lower mechanically set packer, and a manifold in fluid communication with the alternate flow channels, whereby the manifold commingles and redistributes flow among the alternate flow channels.

2. The apparatus of claim 1, wherein: the sand control device further comprises a filter medium radially surrounding the base pipe along a substantial portion of the base pipe so as to form a sand screen; and the swellable packer element is at least partially fabricated from an elastomeric material.

3. The apparatus of claim 2, wherein the filter medium for the sand screen is a mesh or a wire screen.

4. The apparatus of claim 2, wherein the swellable elastomeric packer element comprises a material that swells (i) in the presence of an aqueous liquid, (ii) in the presence of a hydrocarbon liquid, or (iii) combinations thereof.

5. The apparatus of claim 2, wherein the swellable elastomeric packer element comprises a material that swells in the presence of an actuating chemical.

6. The apparatus of claim 1, wherein: the elongated base pipe comprises multiple joints of pipe connected end-to-end; and at least one of the at least one packer assembly is placed along the joints of pipe proximate the upper end of the sand control device.

7. The apparatus of claim 1, wherein: the elongated base pipe comprises multiple joints of pipe connected end-to-end; and the gravel pack zonal isolation apparatus comprises an upper packer assembly and a lower packer assembly placed along the joints of pipe.

8. The apparatus of claim 7, wherein the upper packer assembly and the lower packer assembly are spaced apart along the joints of pipe so as to straddle a selected subsurface interval within a wellbore.

9. The apparatus of claim 1, wherein the element for the first mechanically set packer and the element for the second mechanically set packer is each about 6 inches to 24 inches in length.

10. The apparatus of claim 9, wherein the elements for the first and second mechanically set packer elements are elastomeric cup-type elements.

11. The apparatus of claim 2, wherein the swellable elastomeric packer element is about 3 feet to about 40 feet in length.

12. A method for completing a wellbore, the wellbore having a lower end defining an open-hole portion, the method comprising: running a gravel pack zonal isolation apparatus into the wellbore, the zonal isolation apparatus comprising: a sand control device having an elongated base pipe; and at least one packer assembly, each of the at least one packer assembly comprising: a first mechanically set packer having an upper sealing element, a second mechanically set packer having a lower sealing element, a swellable packer element between the upper sealing element and the lower sealing element that swells over time in the presence of a fluid, one or more alternate flow channels between the base pipe and the sealing elements to divert gravel pack slurry around the first mechanically set packer element, the swellable packer element, and the second mechanically set packer element, and a manifold in fluid communication with the alternate flow channels, whereby the manifold commingles and redistributes flow among the alternate flow channels; positioning the zonal isolation apparatus in the open-hole portion of the wellbore such that a first of the at least one packer assembly is above or proximate the top of a selected subsurface interval; setting the upper sealing element and the lower sealing element in each of the at least one packer assembly; and injecting a gravel slurry into an annular region formed between the sand control device and the surrounding open-hole portion of the wellbore, providing that the gravel slurry travels through the one or more alternate flow channels and the manifold to allow the gravel slurry to bypass the first and second mechanically set packers and the intermediate swellable packer element in each of the at least one packer assembly so that the open-hole portion of the wellbore is gravel-packed above and below, but not between, the respective first and second mechanically set packers.

13. The method of claim 12 wherein: the sand control device further comprises a filter medium radially surrounding the base pipe along a substantial portion of the base pipe so as to form a sand screen; and the swellable packer element is at least partially fabricated from an elastomeric material.

14. The method of claim 13, wherein the filter medium for the sand screen is a mesh or a wire screen.

15. The method of claim 12, further comprising: permitting fluids to contact the swellable packer element in at least one of the at least one packer assembly; and wherein the swellable packer element comprises a material that swells (i) in the presence of an aqueous liquid, (ii) in the presence of a hydrocarbon liquid, or (iii) combinations thereof.

16. The method of claim 15, wherein: the wellbore is completed for fluid production; the open-hole portion of the wellbore passes through the selected subsurface interval and at least one more subsurface interval; and the method further comprises producing production fluids from at least one of the subsurface intervals along the open-hole portion of the wellbore for a period of time.

17. The method of claim 16, wherein: the selected subsurface interval is substantially saturated with an aqueous or gaseous fluid; the first of the at least one packer assembly is positioned proximate the top of the interval substantially saturated with the aqueous or gaseous fluid; and a second of the at least one packer assembly is set proximate a lower boundary of the interval substantially saturated with the aqueous or gaseous fluid.

18. The method of claim 17, wherein: the at least one more subsurface interval comprises a lower interval below the interval substantially saturated with an aqueous or gaseous fluid; and producing production fluids comprises producing production fluids from the lower interval.

19. The method of claim 18, further comprising: running a tubular string into the wellbore and into the base pipe, the tubular string having a straddle packer at a lower end; setting the straddle packer across the interval substantially saturated with the aqueous or gaseous fluid so as to seal off

formation fluids from entering the wellbore from said interval; and continuing to produce production fluids from the lower interval.

20. The method of claim 18, wherein: the at least one more subsurface interval further comprises an upper interval above the interval substantially saturated with an aqueous or gaseous fluid, and producing production fluids further comprises producing production fluids from the upper interval.

21. The method of claim 20, further comprising: running a tubular string into the wellbore and into the base pipe, the tubular string having a straddle packer at a lower end; setting the straddle packer across the interval substantially saturated with the aqueous or gaseous fluid so as to seal off formation fluids there from; and continuing to produce production fluids from the upper and lower intervals.

22. The method of claim 21, wherein: an upper end of the straddle packer is set adjacent the first packer assembly; and a lower end of the straddle packer is set adjacent the second packer assembly.

23. The method of claim 16, wherein: the at least one more subsurface interval comprises a lower interval; the selected interval is an upper interval above the lower interval such that a first of the at least one packer assembly is proximate the top of the upper interval; a second of the at least one packer assembly is set proximate a lower boundary of the upper interval; producing production fluids comprises producing production fluids from the upper selected interval and from the lower interval until the upper interval produces an unacceptable percentage of water or hydrocarbon gas; and the method further comprises: running a tubular string into the wellbore and into the base pipe, the tubular string having a straddle packer at a lower end, setting the straddle packer across the upper interval so as to seal off the production of formation fluids from the upper interval up the wellbore, and continuing to produce production fluids from the lower selected interval.

24. The method of claim 23, wherein: an upper end of the straddle packer is set adjacent the first packer assembly; and a lower end of the straddle packer is set adjacent the second packer assembly.

25. The method of claim 16, wherein: the at least one more subsurface interval comprises an upper interval; the selected interval is a lower interval below the upper interval such that a first of the at least one packer assembly is above or proximate the top of the lower interval; producing production fluids comprises producing production fluids from the upper interval and from the lower interval until the lower interval no longer produces economically viable volumes of hydrocarbons; and the method further comprises: running a working string into the wellbore and into the base pipe, the working string having a plug at a lower end of the working string, setting the plug within the base pipe so as to seal off the production of formation fluids from the lower interval up the wellbore to the upper interval, and continuing to produce production fluids from the upper interval.

26. The method of claim 25, wherein the plug is set adjacent the first of the at least one packer assembly.

27. The method of claim 25, wherein the elongated base pipe comprises multiple joints of pipe connected end-to-end.

28. The method of claim 25, wherein: the at least one more subsurface interval further comprises an intermediate interval between the upper interval and the selected lower interval, with the intermediate interval being made up of a rock matrix that is substantially impermeable to fluid flow; and (i) the first of the at least one packer assembly is positioned above the lower interval and along the intermediate interval, (ii) the plug is set above the lower interval and along the intermediate interval, or (iii) both.

29. The method of claim 16, wherein: the selected subsurface interval is a lower interval that produces hydrocarbons; the at least one more subsurface interval comprises (i) an upper interval above the selected lower interval, and (ii) an intermediate interval between the upper interval and the selected lower interval that is made up of a rock matrix that is substantially impermeable to fluid flow.

30. The method of claim 29, wherein: the first of the at least one packer assembly is positioned proximate a bottom of the upper interval; a second of the at least one packer assembly is positioned proximate a top of the upper interval; and the method further comprises: running a tubular string into the wellbore and into the base pipe, the tubular string having a straddle packer at a lower end, setting the straddle packer across the upper interval so as to seal off the production of formation fluids from the upper interval into the wellbore, and continuing to produce production fluids from the selected lower interval.

31. The method of claim 28, wherein: the first of the at least one packer assembly is positioned (i) along the intermediate interval, or (ii) proximate the top of the selected lower interval; the method further comprises: running a working string into the wellbore and into the base pipe, the working string having a plug at a lower end of the working string, and setting the plug within the base pipe so as to seal off the flow of formation fluids from the lower interval up the wellbore to the upper interval; and continuing to produce production fluids from the upper interval.

32. The method of claim 16, further comprising: injecting fluids into the at least one more subsurface interval.