CLAIMS

What is claimed is:

1. A method for completing a wellbore in a subsurface formation, the method comprising:

providing a first base pipe and a second base pipe, with each base pipe comprising:

a tubular body having a first end, a second end and a bore there between forming a primary flow path; and

at least two transport conduits along an outer diameter for transporting fluids as a secondary flow path;

operatively connecting the second end of the first base pipe to the first end of the second base pipe by means of a coupling assembly, the coupling assembly comprising a manifold that receives respective transport conduits of the base pipes, and a flow port adjacent the manifold that places the primary flow path in fluid communication with the secondary flow path;

running the base pipes into the wellbore; and

causing fluid to travel between the primary and secondary flow paths.

2. The method of claim 1, wherein the tubular bodies comprise perforated base pipes.

3. The method of claim 2, wherein each of the base pipes comprises a series of perforated joints threadedly connected to form the primary flow path.

4. The method of claim 1, wherein the coupling assembly further comprises:

a load sleeve mechanically connected proximate to the first end of the second base pipe;

a torque sleeve mechanically connected proximate to the second end of the first base pipe; and

an intermediate coupling joint comprising a main tubular body defining a bore in fluid communication with the primary flow path, the main tubular body having a first end and a second end, wherein the first end is threadedly connected to the second end of the first base pipe, and the second end is threadedly connected to the first end of the second base pipe.

5. The method of claim 4, wherein:

the load sleeve and the torque sleeve each comprises:

a tubular body defining an inner bore therein in fluid communication with the primary flow path, and

transport conduits disposed longitudinally along the tubular body in fluid communication with the secondary flow path; and

the coupling joint further comprises:

a coaxial sleeve positioned around the tubular body, the sleeve forming an annual region between the tubular body and the sleeve, with the annular region defining the manifold, and the manifold placing the transport conduits of the load sleeve and of the torque sleeve in fluid communication.

6. The method of claim 5, wherein the flow port comprises (i) a through opening in the tubular body of the coupling joint, (ii) a through-opening in the second end of the first tubular body, (iii) a through-opening in the first end of the second tubular body, or (iv) combinations thereof.

7. The method of claim 1, wherein the tubular bodies comprise slotted pipes having a filter medium radially around the pipes and along a substantial portion of the pipes so as to form a sand screen.

8. The method of claim 7, wherein the filtering medium of each sand screen comprises a wire-wrapped screen, a slotted liner, a ceramic screen, a membrane screen, an expandable screen, a sintered metal screen, a wire-mesh screen, a shape memory polymer, or a pre-packed solid particle bed.

9. The method of claim 1, wherein each of the at least two transport conduits along the second base pipe extends substantially along the length of the second base pipe.

10. The method of claim 1, wherein each of the at least two transport conduits along the first base pipe extends substantially along the length of the first base pipe, but one of the at least two transport conduits has a nozzle intermediate the first and second ends of the first base pipe.

11. The method of claim 10, wherein:

the nozzle comprises a valve; and

the method further comprises adjusting the valve to increase or decrease fluid flow through the valve.

12. The method of claim 1, wherein at least one of the at least two transport conduits along the first base pipe has an outlet end intermediate the first and second ends of the first base pipe.

13. The method of claim 1, wherein the at least two transport conduits have different inner diameters.

14. The method of claim 1, further comprising:

producing hydrocarbon fluids through the base pipes of the first and second base pipes from at least one interval along the wellbore, wherein producing hydrocarbon fluids causes hydrocarbon fluids to travel from the secondary flow path to the primary flow path.

15. The method of claim 1, further comprising:

injecting a fluid through the base pipes and into the wellbore along at least one interval, wherein injecting the fluid causes fluids to travel from the primary flow path to the secondary flow path.

16. The method of claim 15, wherein the fluid comprises a gas, an aqueous solution, steam, diluent, solvent, fluid loss control material, viscosified gel, viscoelastic fluid, chelating agent, acid, or a chemical consolidation agent.

17. The method of claim 1, further comprising:

placing a plug into the wellbore downstream from the first and second base pipes.

18. The method of claim 1, further comprising:

providing a packer assembly comprising:

at least one sealing element,

an inner mandrel, and

transport conduits extending substantially along the inner mandrel; and

operatively connecting the packer assembly to the first end of the first base pipe such that (i) the inner mandrel of the packer assembly is in fluid communication with the bores of the base pipes, and (ii) the transport conduit of the packer assembly are in fluid communication with the transport conduits of the base pipes;

and wherein the step of running the base pipes and connected joint assembly into the wellbore further comprises running the packer assembly into the wellbore; and

the method further comprises setting the at least one sealing element into engagement with the surrounding wellbore.

19. The method of claim 18, wherein:

the packer assembly comprises a mechanically set packer; and

setting the sealing element comprises setting the mechanically-set packer into engagement with the surrounding open-hole formation.

20. The method of claim 1, wherein the transport conduits of the load sleeve and the transport conduits of the torque sleeve each defines about six transport conduits placed within and radially around its corresponding tubular body.

21. The method of claim 1, wherein:

the coupling assembly further comprises an inflow control device adjacent an opening in the flow port; and

the method further comprises adjusting the inflow control device to increase or decrease fluid flow through the flow port.

22. The method of claim 21, wherein the inflow control device is controlled by a radio frequency signal, a mechanical shifting tool, or hydraulic pressure.

23. A joint assembly residing within a wellbore, comprising:

a first base pipe and a second base pipe connected in series, each base pipe comprising:

a tubular body having a first end, a second end and a bore there between forming a primary flow path for fluids; and

at least two transport conduits along an outer diameter configured to transport fluids as a secondary flow path; and

a coupling assembly operatively connecting the second end of the first base pipe to the second end of the first base pipe, wherein the coupling assembly comprises a manifold that places respective transport conduits of the base pipes in fluid communication, and a flow port adjacent the manifold that places the primary flow path in fluid communication with the secondary flow path along a portion of the wellbore.

24. The joint assembly of claim 23, wherein the coupling assembly comprises:

a load sleeve mechanically connected proximate to the first end of the second base pipe;

a torque sleeve mechanically connected proximate to the second end of the first base pipe; and

an intermediate coupling joint comprising a main tubular body defining a bore in fluid communication with the primary flow path, the main tubular body having a first end and a second end, wherein the first end is threadedly connected to the second end of the first base pipe, and the second end is threadedly connected to the first end of the second base pipe.

25. The joint assembly of claim 24, wherein:

the load sleeve and the torque sleeve each comprises:

a tubular body defining an inner bore therein in fluid communication with the primary flow path, and

transport conduits disposed longitudinally along the tubular body in fluid communication with the secondary flow path; and

the coupling joint further comprises:

a coaxial sleeve positioned around the tubular body, the sleeve forming an annual region between the tubular body and the sleeve, with the annular region defining the manifold, and the manifold placing the transport conduits of the load sleeve and of the torque sleeve in fluid communication.

26. The joint assembly of claim 25, wherein the flow port comprises (i) a through opening in the tubular body of the coupling joint, (ii) a through-opening in the second end of the first tubular body, (iii) a through-opening in the first end of the second tubular body, or (iv) combinations thereof.

27. The joint assembly of claim 26, wherein the tubular bodies comprise perforated base pipes.

28. The joint assembly of claim 26, wherein the base pipes comprise a series of joints threadedly connected to form the primary flow path.

29. The joint assembly of claim 26, wherein the tubular bodies comprise blank pipes having a filter medium radially around the pipes and along a substantial portion of the pipes so as to form a sand screen.

30. The joint assembly of claim 26, wherein the filtering medium of each sand screen comprises a wire-wrapped screen, a slotted liner, a ceramic screen, a membrane screen, an expandable screen, a sintered metal screen, a wire-mesh screen, a shape memory polymer, or a pre-packed solid particle bed.

31. The joint assembly of claim 26, wherein each of the at least two transport conduits along the second base pipe extends substantially along the length of the second base pipe.

32. The joint assembly of claim 26, wherein each of the at least two transport conduits along the first base pipe extends substantially along the length of the first base pipe, but one of the at least two transport conduits has a nozzle intermediate the first and second ends of the first base pipe.

33. The joint assembly of claim 32, wherein at least one of the at least two transport conduits along the first base pipe has an outlet end intermediate the first and second ends of the first base pipe.

34. The joint assembly of claim 26, further comprising:

a packer assembly comprising:

at least one sealing element,

an inner mandrel, and

transport conduits extending substantially along the inner mandrel; and

wherein the packer assembly is operatively connected to the first end of the first base pipe such that (i) the inner mandrel of the packer assembly is in fluid communication with the

bores of the base pipes, and (ii) the transport conduit of the packer assembly are in fluid communication with the transport conduits of the base pipes.

35. The joint assembly of claim 34, wherein the packer assembly comprises a mechanically set packer, a swellable packer, or a combination thereof.

36. The joint assembly of claim 26, wherein:

the coupling joint further comprises an inflow control device adjacent an opening in the flow port configured to increase or decrease fluid flow through the flow port.

37. The joint assembly of claim 26, wherein the flow port defines an inflow control device.

38. The joint assembly of claim 26, wherein:

opposing ends of the co-axial sleeve have respective shoulders that land on the load sleeve and the torque sleeve; and

the joint assembly further comprises sealing rings to provide a fluid seal of the annular region around the respective shoulders.

39. The joint assembly of claim 38, wherein:

the load sleeve is mechanically connected to the second base pipe by means of bolts;

the torque sleeve is mechanically connected to the first base pipe by means of bolts; and

the coaxial sleeve is mechanically connected to the main tubular body by means of bolts, such that the manifold is in fixed position.

AMENDED CLAIMS

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1. A method for completing a wellbore in a subsurface formation, the method comprising:

providing a first base pipe and a second base pipe, with each base pipe comprising:

a tubular body having a first end, a second end and a bore there between forming a primary flow path; and

at least two transport conduits along an outer diameter for transporting fluids as a secondary flow path;

operatively connecting the second end of the first base pipe to the first end of the second base pipe by means of a coupling assembly, the coupling assembly comprising a manifold that receives respective transport conduits of the base pipes, and a flow port adjacent the manifold that places the primary flow path in fluid communication with the secondary flow path;

running the base pipes into the wellbore; and

causing fluid to travel between the primary and secondary flow paths.

2. The method of claim 1, wherein the tubular bodies comprise perforated base pipes.

3. The method of claim 2, wherein each of the base pipes comprises a series of perforated joints threadedly connected to form the primary flow path.

4. The method of claim 1, wherein the coupling assembly further comprises:

a load sleeve mechanically connected proximate to the first end of the second base pipe;

a torque sleeve mechanically connected proximate to the second end of the first base pipe; and

an intermediate coupling joint comprising a main tubular body defining a bore in fluid communication with the primary flow path, the main tubular body having a first end and a second end, wherein the first end is threadedly connected to the second end of the first base pipe, and the second end is threadedly connected to the first end of the second base pipe.

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5. The method of claim 4, wherein:

the load sleeve and the torque sleeve each comprises:

a tubular body defining an inner bore therein in fluid communication with the primary flow path, and

transport conduits disposed longitudinally along the tubular body in fluid communication with the secondary flow path; and

the coupling joint further comprises:

a coaxial sleeve positioned around the tubular body, the sleeve forming an annual region between the tubular body and the sleeve, with the annular region defining the manifold, and the manifold placing the transport conduits of the load sleeve and of the torque sleeve in fluid communication.

6. The method of claim 5, wherein the flow port comprises (i) a through opening in the tubular body of the coupling joint, (ii) a through-opening in the second end of the first tubular body, (iii) a through-opening in the first end of the second tubular body, or (iv) combinations thereof.

7. The method of claim 1, wherein the tubular bodies comprise blank, perforated, or slotted pipes having a filter medium radially around the pipes and along a substantial portion of the pipes so as to form a sand screen.

8. The method of claim 7, wherein the filtering medium of each sand screen comprises a wire-wrapped screen, a slotted liner, a ceramic screen, a membrane screen, an expandable screen, a sintered metal screen, a wire-mesh screen, a shape memory polymer, or a pre-packed solid particle bed.

9. The method of claim 1, wherein each of the at least two transport conduits along the second base pipe extends substantially along the length of the second base pipe.

10. The method of claim 1, wherein each of the at least two transport conduits along the first base pipe extends substantially along the length of the first base pipe, but one of the at least two transport conduits has a nozzle intermediate the first and second ends of the first base pipe.

11. The method of claim 10, wherein:

the nozzle comprises a valve; and

the method further comprises adjusting the valve to increase or decrease fluid flow through the valve.

12. The method of claim 1, wherein at least one of the at least two transport conduits along the first base pipe has an outlet end intermediate the first and second ends of the first base pipe.

13. The method of claim 1, wherein the at least two transport conduits have different inner diameters.

14. The method of claim 1, further comprising:

producing hydrocarbon fluids through the base pipes of the first and second base pipes from at least one interval along the wellbore, wherein producing hydrocarbon fluids causes hydrocarbon fluids to travel from the secondary flow path to the primary flow path.

15. The method of claim 1, further comprising:

injecting a fluid through the base pipes and into the wellbore along at least one interval, wherein injecting the fluid causes fluids to travel from the primary flow path to the secondary flow path.

16. The method of claim 15, wherein the fluid comprises a gas, an aqueous solution, steam, diluent, solvent, fluid loss control material, viscosified gel, viscoelastic fluid, chelating agent, acid, or a chemical consolidation agent.

17. The method of claim 1, further comprising:

placing a plug into the wellbore downstream from the first and second base pipes.

18. The method of claim 1, further comprising:

providing a packer assembly comprising:

at least one sealing element,

an inner mandrel, and

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transport conduits extending substantially along the inner mandrel; and

operatively connecting the packer assembly to the first end of the first base pipe such that (i) the inner mandrel of the packer assembly is in fluid communication with the bores of the base pipes, and (ii) the transport conduit of the packer assembly are in fluid communication with the transport conduits of the base pipes;

and wherein the step of running the base pipes and connected joint assembly into the wellbore further comprises running the packer assembly into the wellbore; and

the method further comprises setting the at least one sealing element into engagement with the surrounding wellbore.

19. The method of claim 18, wherein:

the packer assembly comprises a mechanically set packer; and

setting the sealing element comprises setting the mechanically-set packer into engagement with the surrounding open-hole formation.

20. The method of claim 1, wherein the transport conduits of the load sleeve and the transport conduits of the torque sleeve each defines about six transport conduits placed within and radially around its corresponding tubular body.

21. The method of claim 1, wherein:

the coupling assembly further comprises an inflow control device adjacent an opening in the flow port; and

the method further comprises adjusting the inflow control device to increase or decrease fluid flow through the flow port.

22. The method of claim 21, wherein the inflow control device is controlled by a radio frequency signal, a mechanical shifting tool, or hydraulic pressure.

23. A joint assembly residing within a wellbore, comprising:

a first base pipe and a second base pipe connected in series, each base pipe comprising:

a tubular body having a first end, a second end and a bore there between forming a primary flow path for fluids; and

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at least two transport conduits along an outer diameter configured to transport fluids as a secondary flow path; and

a coupling assembly operatively connecting the second end of the first base pipe to the first end of the second base pipe, wherein the coupling assembly comprises a manifold that places respective transport conduits of the base pipes in fluid communication, and a flow port adjacent the manifold that places the primary flow path in fluid communication with the secondary flow path along a portion of the wellbore.

24. The joint assembly of claim 23, wherein the coupling assembly comprises:

a load sleeve mechanically connected proximate to the first end of the second base pipe;

a torque sleeve mechanically connected proximate to the second end of the first base pipe; and

an intermediate coupling joint comprising a main tubular body defining a bore in fluid communication with the primary flow path, the main tubular body having a first end and a second end, wherein the first end is threadedly connected to the second end of the first base pipe, and the second end is threadedly connected to the first end of the second base pipe.

25. The joint assembly of claim 24, wherein:

the load sleeve and the torque sleeve each comprises:

a tubular body defining an inner bore therein in fluid communication with the primary flow path, and

transport conduits disposed longitudinally along the tubular body in fluid communication with the secondary flow path; and

the coupling joint further comprises:

a coaxial sleeve positioned around the tubular body, the sleeve forming an annual region between the tubular body and the sleeve, with the annular region defining the manifold, and the manifold placing the transport conduits of the load sleeve and of the torque sleeve in fluid communication.

26. The joint assembly of claim 25, wherein the flow port comprises (i) a through opening in the tubular body of the coupling joint, (ii) a through-opening in the second end of the first

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tubular body, (iii) a through-opening in the first end of the second tubular body, or (iv) combinations thereof.

27. The joint assembly of claim 26, wherein the tubular bodies comprise perforated base pipes.

28. The joint assembly of claim 26, wherein the base pipes comprises a series of joints threadedly connected to form the primary flow path.

29. The joint assembly of claim 26, wherein the tubular bodies comprise blank, perforated, or slotted pipes having a filter medium radially around the pipes and along a substantial portion of the pipes so as to form a sand screen.

30. The joint assembly of claim 26, wherein the filtering medium of each sand screen comprises a wire-wrapped screen, a slotted liner, a ceramic screen, a membrane screen, an expandable screen, a sintered metal screen, a wire-mesh screen, a shape memory polymer, or a pre-packed solid particle bed.

31. The joint assembly of claim 26, wherein each of the at least two transport conduits along the second base pipe extends substantially along the length of the second base pipe.

32. The joint assembly of claim 26, wherein each of the at least two transport conduits along the first base pipe extends substantially along the length of the first base pipe, but one of the at least two transport conduits has a nozzle intermediate the first and second ends of the first base pipe.

33. The joint assembly of claim 32, wherein at least one of the at least two transport conduits along the first base pipe has an outlet end intermediate the first and second ends of the first base pipe.

34. The joint assembly of claim 26, further comprising:

a packer assembly comprising:

at least one sealing element,

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an inner mandrel, and

transport conduits extending substantially along the inner mandrel; and

wherein the packer assembly is operatively connected to the first end of the first base pipe such that (i) the inner mandrel of the packer assembly is in fluid communication with the bores of the base pipes, and (ii) the transport conduit of the packer assembly are in fluid communication with the transport conduits of the base pipes.

35. The joint assembly of claim 34, wherein the packer assembly comprises a mechanically set packer, a swellable packer, or a combination thereof.

36. The joint assembly of claim 26, wherein:

the coupling joint further comprises an inflow control device adjacent an opening in the flow port configured to increase or decrease fluid flow through the flow port.

37. The joint assembly of claim 26, wherein the flow port defines an inflow control device.

38. The joint assembly of claim 26, wherein:

opposing ends of the co-axial sleeve have respective shoulders that land on the load sleeve and the torque sleeve; and

the joint assembly further comprises sealing rings to provide a fluid seal of the annular region around the respective shoulders.

39. The joint assembly of claim 38, wherein:

the load sleeve is mechanically connected to the second base pipe by means of bolts;

the torque sleeve is mechanically connected to the first base pipe by means of bolts; and

the coaxial sleeve is mechanically connected to the main tubular body by means of bolts, such that the manifold is in fixed position.

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CLAIMS

1. A method for completing a wellbore in a subsurface formation, the method comprising:

providing a first base pipe and a second base pipe, with each base pipe comprising:

a tubular body having a first end, a second end and a bore therebetween forming a primary flow path; and

at least two transport conduits along an outer diameter for transporting fluids as a secondary flow path;

operatively connecting the second end of the first base pipe to the first end of the second base pipe by means of a coupling assembly, the coupling assembly comprising a manifold that receives respective transport conduits of the base pipes, and a flow port adjacent the manifold that places the primary flow path in fluid communication with the secondary flow path;

running the base pipes into the wellbore; and

causing fluid to travel between the primary and secondary flow paths.

2. The method of claim 1, wherein the tubular bodies comprise perforated base pipes

wherein, optionally, each of the base pipes comprises a series of perforated joints threadedly connected to form the primary flow path.

3. The method of claim 1, wherein the coupling assembly further comprises:

a load sleeve mechanically connected proximate to the first end of the second base pipe;

a torque sleeve mechanically connected proximate to the second end of the first base pipe; and

an intermediate coupling joint comprising a main tubular body defining a bore in fluid communication with the primary flow path, the main tubular body having a first end and a second end, wherein the first end is threadedly

connected to the second end of the first base pipe, and the second end is threadedly connected to the first end of the second base pipe.

4. The method of claim 3, wherein:

the load sleeve and the torque sleeve each comprises:

a tubular body defining an inner bore therein in fluid communication with the primary flow path, and

transport conduits disposed longitudinally along the tubular body in fluid communication with the secondary flow path; and

the coupling joint further comprises:

a coaxial sleeve positioned around the tubular body, the sleeve forming an annular region between the tubular body and the sleeve, with the annular region defining the manifold, and the manifold placing the transport conduits of the load sleeve and of the torque sleeve in fluid communication.

5. The method of claim 4, wherein the flow port comprises (i) a through opening in the tubular body of the coupling joint, (ii) a through-opening in the second end of the first tubular body, (iii) a through-opening in the first end of the second tubular body, or (iv) combinations thereof.

6. The method of claim 1, wherein the tubular bodies comprise blank, perforated or slotted pipes having a filter medium radially around the pipes and along a substantial portion of the pipes so as to form a sand screen and wherein the filtering medium of each sand screen, optionally, comprises a wire-wrapped screen, a slotted liner, a ceramic screen, a membrane screen, an expandable screen, a sintered metal screen, a wire-mesh screen, a shape memory polymer, or a pre-packed solid particle bed.

7. The method of claim 1, wherein each of the at least two transport conduits along the second base pipe extends substantially along the length of the second base pipe.

8. The method of claim 1, wherein each of the at least two transport conduits along the first base pipe extends substantially along the length of the first base pipe, but one of the at least two transport conduits has a nozzle intermediate the first and second ends of the first base pipe.

9. The method of claim 8, wherein:

the nozzle comprises a valve; and

the method further comprises adjusting the valve to increase or decrease fluid flow through the valve.

10. The method of claim 1, wherein at least one of the at least two transport conduits along the first base pipe has an outlet end intermediate the first and second ends of the first base pipe and wherein the at least two transport conduits, optionally, have different inner diameters.

11. The method of claim 1, further comprising:

producing hydrocarbon fluids through the base pipes of the first and second base pipes from at least one interval along the wellbore, wherein producing hydrocarbon fluids causes hydrocarbon fluids to travel from the secondary flow path to the primary flow path.

12. The method of claim 1, further comprising:

injecting a fluid through the base pipes and into the wellbore along at least one interval, wherein injecting the fluid causes fluids to travel from the primary flow path to the secondary flow path and the fluid, optionally, comprises a gas, an aqueous solution, steam, diluent, solvent, fluid loss control material, viscosified gel, viscoelastic fluid, chelating agent, acid, or a chemical consolidation agent.

13. The method of any one of the preceding claims, further comprising:

placing a plug into the wellbore downstream from the first and second base pipes.

14. The method of any one of the preceding claims, further comprising:

providing a packer assembly comprising:

at least one sealing element,

an inner mandrel, and

transport conduits extending substantially along the inner mandrel; and

operatively connecting the packer assembly to the first end of the first base pipe such that (i) the inner mandrel of the packer assembly is in fluid communication with the bores of the base pipes, and (ii) the transport conduits of the packer assembly are in fluid communication with the transport conduits of the base pipes;

and wherein the step of running the base pipes and connected joint assembly into the wellbore further comprises running the packer assembly into the wellbore; and

the method further comprises setting the at least one sealing element into engagement with the surrounding wellbore.

15. The method of claim 14, wherein:

the packer assembly comprises a mechanically set packer; and

setting the sealing element comprises setting the mechanically-set packer into engagement with the surrounding open-hole formation.

16. The method of claim 1, wherein the transport conduits of the load sleeve and the transport conduits of the torque sleeve each defines about six transport conduits placed within and radially around its corresponding tubular body.

17. The method of claim 1, wherein:

the coupling assembly further comprises an inflow control device adjacent an opening in the flow port; and

the method further comprises adjusting the inflow control device to increase or decrease fluid flow through the flow port; and wherein, optionally, the

inflow control device is controlled by a radio frequency signal, a mechanical shifting tool, or hydraulic pressure.

18. A joint assembly residing within a wellbore, comprising:

a first base pipe and a second base pipe connected in series, each base pipe comprising:

a tubular body having a first end, a second end and a bore there between forming a primary flow path for fluids; and

at least two transport conduits along an outer diameter configured to transport fluids as a secondary flow path; and

a coupling assembly operatively connecting the second end of the first base pipe to the first end of the second base pipe, wherein the coupling assembly comprises a manifold that places respective transport conduits of the base pipes in fluid communication, and a flow port adjacent the manifold that places the primary flow path in fluid communication with the secondary flow path along a portion of the wellbore.

19. The joint assembly of claim 18, wherein the coupling assembly comprises:

a load sleeve mechanically connected proximate to the first end of the second base pipe;

a torque sleeve mechanically connected proximate to the second end of the first base pipe; and

an intermediate coupling joint comprising a main tubular body defining a bore in fluid communication with the primary flow path, the main tubular body having a first end and a second end, wherein the first end is threadedly connected to the second end of the first base pipe, and the second end is threadedly connected to the first end of the second base pipe.

20. The joint assembly of claim 19, wherein:

the load sleeve and the torque sleeve each comprises:

a tubular body defining an inner bore therein in fluid communication with the primary flow path, and

transport conduits disposed longitudinally along the tubular body in fluid communication with the secondary flow path; and

the coupling joint further comprises:

a coaxial sleeve positioned around the tubular body, the sleeve forming an annular region between the tubular body and the sleeve, with the annular region defining the manifold, and the manifold placing the transport conduits of the load sleeve and of the torque sleeve in fluid communication.

21. The joint assembly of claim 20, wherein the flow port comprises (i) a through opening in the tubular body of the coupling joint, (ii) a through-opening in the second end of the first tubular body, (iii) a through-opening in the first end of the second tubular body, or (iv) combinations thereof.

22. The joint assembly of claim 21, wherein the tubular bodies comprise perforated base pipes.

23. The joint assembly of claim 21, wherein the base pipes comprise a series of joints threadedly connected to form the primary flow path.

24. The joint assembly of claim 21, wherein the tubular bodies comprise blank, perforated or slotted pipes having a filter medium radially around the pipes and along a substantial portion of the pipes so as to form a sand screen and wherein the filtering medium of each sand screen, optionally, comprises a wire-wrapped screen, a slotted liner, a ceramic screen, a membrane screen, an expandable screen, a sintered metal screen, a wire-mesh screen, a shape memory polymer, or a pre-packed solid particle bed.

25. The joint assembly of claim 21, wherein each of the at least two transport conduits along the second base pipe extends substantially along the length of the second base pipe.

26. The joint assembly of claim 21, wherein each of the at least two transport conduits along the first base pipe extends substantially along the length of the first base pipe, but one of the at least two transport conduits has a nozzle intermediate the first and second ends of the first base pipe.

27. The joint assembly of claim 26, wherein at least one of the at least two transport conduits along the first base pipe has an outlet end intermediate the first and second ends of the first base pipe.

28. The joint assembly of claim 21, further comprising:

a packer assembly comprising:

at least one sealing element,

an inner mandrel, and

transport conduits extending substantially along the inner mandrel; and

wherein the packer assembly is operatively connected to the first end of the first base pipe such that (i) the inner mandrel of the packer assembly is in fluid communication with the bores of the base pipes, and (ii) the transport conduits of the packer assembly are in fluid communication with the transport conduits of the base pipes.

29. The joint assembly of claim 28, wherein the packer assembly comprises a mechanically set packer, a swellable packer, or a combination thereof.

30. The joint assembly of claim 21, wherein:

the coupling joint further comprises an inflow control device adjacent an opening in the flow port configured to increase or decrease fluid flow through the flow port.

31. The joint assembly of claim 21, wherein the flow port defines an inflow control device.

32. The joint assembly of claim 21, wherein:

opposing ends of the co-axial sleeve have respective shoulders that land on the load sleeve and the torque sleeve; and

the joint assembly further comprises sealing rings to provide a fluid seal of the annular region around the respective shoulders.

33. The joint assembly of claim 32, wherein:

the load sleeve is mechanically connected to the second base pipe by means of bolts;

the torque sleeve is mechanically connected to the first base pipe by means of bolts; and

the coaxial sleeve is mechanically connected to the main tubular body by means of bolts, such that the manifold is in fixed position.