CLAIMS

1 A flow control arrangement comprising:

a housing defining one or more openings therein;

a valve structure alignable and misalignable with the one or more openings in the housing; and

one or more plugs, one each in one or more of the one or more openings, each plug being reducible by one or more of exposure to downhole fluids and applied dissolution fluids.

2 A flow control arrangement as claimed in claim 1 wherein the valve structure is a sliding sleeve.

3 A flow control arrangement as claimed in claim 1 wherein the valve structure includes one or more ports.

4 A flow control arrangement as claimed in claim 1 wherein one or more plugs comprise a material reducible upon exposure to natural downhole fluids.

5 A flow control arrangement as claimed in claim 1 wherein one or more plugs comprise a material reducible upon exposure to introduced downhole fluids.

6 A flow control arrangement as claimed in claim 5 wherein the introduced downhole fluids include acid.

7 A flow control arrangement as claimed in claim 1 wherein the one or more plugs is a natural material.

8 A flow control arrangement as claimed in claim 7 wherein the natural material is limestone.

9 A flow control arrangement as claimed in claim 1 wherein the one or more plugs is a metal.

10 A flow control arrangement as claimed in claim 9 wherein the metal is an easily dissolvable metal.

11 A flow control arrangement as claimed in claim 1 wherein the one or more plugs is a dissolvable high strength material.

12 A flow control arrangement as claimed in claim 11 wherein the material is a substantially-continuous, cellular nanomatrix comprising a nanomatrix material;

a plurality of dispersed particles comprising a particle core material that comprises Mg, Al, Zn or Mn, or a combination thereof, dispersed in the cellular nanomatrix; and

a solid state bond layer extending throughout the cellular nanomatrix between the dispersed particles.

13 A flow control arrangement as claimed in claim 1 wherein the plug is a polymeric material.

14 A method for carrying out a series of downhole operations with a reduced number of mechanical intervention runs comprising:

running the arrangement of claim 1 to a target depth;

carrying out a downhole operation requiring the housing be radially permeability fluid restricted;

reducing the plug;

carrying out a downhole operation requiring fluid pressure communication through the one or more openings; and

mechanically intervening to close the valve structure thereby rendering the one or more openings of the arrangement radially impermeable.

15 A method as claimed in claim 14 wherein the carrying out a downhole operation with the housing radially fluid restricted is setting a packer.

16 A method as claimed in claim 14 wherein the reducing is completely dissolving.

17 A method as claimed in claim 14 wherein the carrying out a downhole operation requiring fluid pressure communication through the one or more openings is fracing.

18 A method as claimed in claim 14 wherein the mechanical intervening is shifting a sleeve.

The invention claimed is:

1. A flow control arrangement comprising:

a housing defining one or more openings therein;

a valve structure alignable and misalignable with the one or more openings in the housing; and

one or more plugs, one plug in at least one of the one or more openings, each plug being dissolvable by exposure to one or more of downhole fluids and applied dissolution fluids, wherein the one or more plugs includes a substantially-continuous, cellular nanomatrix comprising a nanomatrix material, a plurality of dispersed particles comprising a particle core material that comprises Mg, Al, Zn or Mn, or a combination thereof, dispersed in the cellular nanomatrix, and a solid state bond layer extending throughout the cellular nanomatrix between the dispersed particles.

2. A flow control arrangement as claimed in claim 1 wherein the valve structure is a sliding sleeve.

3. A flow control arrangement as claimed in claim 1 wherein the valve structure includes one or more ports.

4. A flow control arrangement as claimed in claim 1 wherein one or more plugs comprise a material reducible upon exposure to natural downhole fluids.

5. A flow control arrangement as claimed in claim 1 wherein one or more plugs comprise a material reducible upon exposure to introduced downhole fluids.

6. A flow control arrangement as claimed in claim 5 wherein the introduced downhole fluids include acid.

7. A method for carrying out a series of downhole operations with a reduced number of mechanical intervention runs comprising:

running the arrangement of claim 1 to a target depth;

carrying out a first downhole operation requiring fluid permeability of the housing be restricted radially;

dissolving the plug;

carrying out a second downhole operation requiring fluid pressure communication through the one or more openings; and

mechanically intervening to close the valve structure thereby rendering the one or more openings of the arrangement radially impermeable.

8. A method as claimed in claim 7 wherein the carrying out a first downhole operation with the housing radially fluid restricted is setting a packer.

9. A method as claimed in claim 7 wherein the carrying out a second downhole operation requiring fluid pressure communication through the one or more openings is fracing.

10. A method as claimed in claim 7 wherein the valve structure is a sliding sleeve, and wherein the mechanical intervening is shifting the sliding sleeve.