CLAIMS

What is claimed is:

1. A wellbore servicing system comprising:

a work string comprising a coiled tubing string and a jointed tubing segment; and

an actuatable valve tool defining an axial flowbore and incorporated within the work string between the coiled tubing string and the jointed tubing segment, wherein the actuatable valve tool comprises:

a housing defining the axial flowbore; and

a sliding sleeve,

wherein the sliding sleeve is movably positioned within the housing via at least two seals such that there is a differential between the surfaces of the sliding sleeve exposed to the axial flowbore facing a first direction and the surfaces of the sliding sleeve exposed to the axial flowbore facing a second direction,

wherein the actuatable valve tool is transitionable from a first mode to a second mode, from the second mode to a third mode, and from the third mode to a fourth mode,

wherein the actuatable valve tool is configured to transition from the first mode to the second mode upon an application of pressure to the axial flowbore of at least a threshold pressure,

wherein the actuatable valve tool is configured to transition from the second mode to the third mode upon a dissipation of pressure from the axial flowbore to not more than the threshold pressure,

wherein, in the first mode, the actuatable valve tool is configured to allow fluid communication via the axial flowbore in a first direction and to disallow fluid communication via the axial flowbore in a second direction, and

wherein, in the second, and third modes, the actuatable valve tool is configured to allow fluid communication via the axial flowbore in both the first direction and the second direction.

2. The wellbore servicing system of claim 1, wherein the actuatable valve tool is transitionable from the fourth mode to the first mode.

3. The wellbore servicing system of claim 2,

wherein the actuatable valve tool is configured to transition from the third mode to the fourth mode upon an application of pressure to the axial flowbore of at least the threshold pressure, and

wherein the actuatable valve tool is configured to transition from the fourth mode to the first mode upon a dissipation of pressure from the axial flowbore to not more than the threshold pressure.

4. The wellbore servicing system of any of claims 1-3, wherein the actuatable valve tool comprises:

a housing defining the axial flowbore,

a sliding sleeve; and

a flapper valve,

wherein, when the flapper valve is in an activated state, the flapper valve is free to move between a closed position in which the flapper valve blocks the axial flowbore and an open position in which the flapper valve does not block the axial flowbore, and

wherein, when the flapper valve is in an inactivated state, the flapper valve is retained in the open position.

5. The wellbore servicing system of claim 4, wherein the sliding sleeve is movable from a first longitudinal position to a second longitudinal position, from the second longitudinal position to a third longitudinal position.

6. The wellbore servicing system of claim 5,

wherein, in the first position, the sliding sleeve does not interact with the flapper valve, and

wherein, in the second and third positions, the sliding sleeve retains the flapper valve in the open position.

7. The wellbore servicing system of any of claims 5-6, further comprising a transition system configured to control the longitudinal movement of the sliding sleeve.

8. The wellbore servicing system of claim 7, wherein the transition system comprises:

a j-slot; and

a lug, wherein the lug is disposed within at least a portion of the j-slot.

9. The wellbore servicing system of any of claims 5-8, further comprising a biasing member, wherein the biasing member is configured to bias the sliding sleeve in the second direction.

10. The wellbore servicing system of any of claims 5-9, where the sliding sleeve comprises a differential between the surfaces exposed to the axial flowbore facing the first direction and the surfaces exposed to the axial flowbore facing the second direction.

11. The wellbore servicing system of any of claims 1-10, wherein the wellbore servicing system further comprises a wellbore servicing tool incorporated within the work string at a location downhole from the actuatable valve tool.

12. A wellbore servicing method comprising:

disposing a wellbore servicing system comprising a work string and an actuatable valve tool in a wellbore, the work string comprising a coiled tubing string and a jointed tubing segment, the actuatable valve tool incorporated within the work string between the coiled tubing string and the jointed tubing segment and generally defining an axial flowbore,

wherein the actuatable valve tool comprises:

a housing defining the axial flowbore; and

a sliding sleeve,

wherein the sliding sleeve is movably positioned within the housing via at least two seals such that there is a differential between the surfaces of the sliding sleeve exposed to the axial flowbore facing a first direction and the surfaces of the sliding sleeve exposed to the axial flowbore facing a second direction,

wherein the actuatable valve tool is configured in a first mode when the wellbore servicing system is disposed within the wellbore, wherein in the first mode, the actuatable valve tool allows downward fluid communication via the axial flowbore and disallows upward fluid communication via the axial flowbore;

making a first application of fluid pressure of at least a pressure threshold to the axial flowbore, wherein the first application of fluid pressure transitions the actuatable valve tool to a second mode in which the actuatable valve tool allows both upward and downward fluid communication;

allowing a first dissipation of fluid pressure applied to the axial flowbore to less than the pressure threshold, wherein allowing the first dissipation of fluid pressure transitions the actuatable valve tool to a third mode in which the actuatable valve tool allows both upward and downward fluid communication;

making a second application of fluid pressure of at least the pressure threshold to the axial flowbore, wherein the second application of fluid pressure transitions the

actuatable valve tool to a fourth mode in which the actuatable valve tool allows both upward and downward fluid communication;

allowing a second dissipation of fluid pressure applied to the axial flowbore to less than the pressure threshold, wherein allowing the fluid pressure applied to the axial flowbore to dissipate transitions the actuatable valve tool to the first mode.

13. The wellbore servicing method of claim 12, wherein making the first application of fluid pressure comprises downwardly communicating a fluid via the axial flowbore.

14. The wellbore servicing method of any of claims 12-13, wherein allowing the first dissipation of fluid pressure comprises upwardly communicating a fluid via the axial flowbore.

15. The wellbore servicing method of any of claims 12-14, wherein making the second application of fluid pressure comprises downwardly communicating a fluid via the axial flowbore.

16. The wellbore servicing method of any of claims 12-15, wherein making the second dissipation of fluid pressure comprises upwardly communicating a fluid via the axial flowbore.

17. A wellbore servicing method comprising:

disposing a wellbore servicing system in a wellbore, the wellbore servicing system comprising a work string and an actuatable valve tool, the work string comprising a coiled tubing string and a jointed tubing segment, the actuatable valve tool incorporated within the work string between the coiled tubing string and the jointed tubing segment and generally defining an axial flowbore, wherein the actuable valve tool comprises:

a housing defining the axial flowbore; and

a sliding sleeve,

wherein the sliding sleeve is movably positioned within the housing via at least two seals such that there is a differential between the surfaces of the sliding sleeve exposed to the axial flowbore facing a first direction and the surfaces of the sliding sleeve exposed to the axial flowbore facing a second direction, wherein during disposing the wellbore servicing system within the wellbore, the actuatable valve tool is configured so as to allow downward fluid communication via the axial flowbore and to disallow upward fluid communication via the axial flowbore;

reconfiguring the actuatable valve tool so as to allow downward and upward fluid communication via the axial flowbore, wherein reconfiguring the actuatable

valve tool comprises applying a fluid pressure of at least a pressure threshold to the axial flowbore, allowing a fluid pressure applied to the axial flowbore to dissipate to less than the pressure threshold, or combinations thereof;

reconfiguring the actuatable valve tool so as to allow downward fluid communication via the axial flowbore and to disallow upward fluid communication via the axial flowbore, wherein reconfiguring the actuatable valve tool comprises applying a fluid pressure of at least a pressure threshold to the axial flowbore, allowing a fluid pressure applied to the axial flowbore to dissipate to less than the pressure threshold, or combinations thereof; and

repositioning the wellbore servicing system.

18. The wellbore servicing method of claim 17, wherein reconfiguring the actuatable valve tool so as to allow downward and upward fluid communication via the axial flowbore comprises communicating a fluid downwardly via the axial flowbore.

19. The wellbore servicing method of claim 18, wherein the fluid is communicated into a subterranean formation zone at a rate and/or pressure sufficient to initiate and/or extend a perforation and/or fracture.

20. The wellbore servicing method of claim 18, wherein the fluid is a perforating fluid, a hydrajetting fluid, a fracturing fluid, an acidizing fluid, or combinations thereof.

21. The wellbore servicing method of any of claims 17-20, further comprising communicating a fluid upwardly through the axial flowbore.

22. The wellbore servicing method of any of claims 17-21, wherein repositioning the wellbore servicing system comprises repositioning at least a portion of the wellbore servicing system within the wellbore.

23. The wellbore servicing method of any of claims 17-22, wherein repositioning the wellbore servicing system comprises removing the wellbore servicing system from the wellbore.

24. A wellbore servicing system comprising:

a workstring comprising a coiled tubing string and a jointed tubing segment; and

an actuatable valve tool incorporated within the work string between the coiled tubing string and the jointed tubing segment comprising:

a housing defining the axial flowbore,

a flapper valve,

wherein, when the flapper valve is in an activated state, the flapper valve is free to move between a closed position in which the flapper valve

blocks the axial flowbore and an open position in which the flapper valve does not block the axial flowbore, and

wherein, when the flapper valve is in an inactivated state, the flapper valve is retained in the open position,

a sliding sleeve;

wherein the sliding sleeve is movably positioned within the housing via at least two seals such that there is a differential between the surfaces of the sliding sleeve exposed to the axial flowbore facing a first direction and the surfaces of the sliding sleeve exposed to the axial flowbore facing a second direction,

wherein, in a first position, the sliding sleeve does not interact with the flapper valve, and

wherein, in a second position and a third position, the sliding sleeve retains the flapper valve in the open position; and

a transition system configured to guide the sliding sleeve from the first position to the second position upon application of pressure to the axial flowbore of at least a threshold pressure, to guide the sliding sleeve from the second position to the third position upon a dissipation of pressure from the axial flowbore to not more than the threshold pressure, and to guide the sliding sleeve from the third position back to the second position upon application of pressure to the axial flowbore of at least a threshold pressure, and to guide the sleeve from the second position back to the first position upon a dissipation of pressure from the axial flowbore to not more than the threshold pressure, wherein the transition system comprises:

a j-slot; and

a lug, wherein the lug is disposed within a least a portion of the j-slot.

25. The wellbore servicing system of claim 24, wherein the wellbore servicing system further comprises a wellbore servicing tool incorporated within the work string at a location downhole from the actuatable valve tool.

26. The wellbore servicing system of claim 25, further comprising a biasing member, wherein the biasing member is configured to bias the sliding sleeve away from the second position.

CLAIMS

What is claimed is:

1. A wellbore servicing system comprising:

a work string comprising a coiled tubing string and a jointed tubing segment; and

an actuatable valve tool defining an axial flowbore and incorporated within the work string between the coiled tubing string and the jointed tubing segment, wherein the actuatable valve tool comprises:

a housing defining the axial flowbore; and

a sliding sleeve,

wherein the sliding sleeve is movably positioned within the housing via at least two seals such that there is a differential between the surfaces of the sliding sleeve exposed to the axial flowbore facing a first direction and the surfaces of the sliding sleeve exposed to the axial flowbore facing a second direction,

wherein the actuatable valve tool is transitionable from a first mode to a second mode, from the second mode to a third mode, and from the third mode to a fourth mode,

wherein the actuatable valve tool is configured to transition from the first mode to the second mode upon an application of pressure to the axial flowbore of at least a threshold pressure,

wherein the actuatable valve tool is configured to transition from the second mode to the third mode upon a dissipation of pressure from the axial flowbore to not more than the threshold pressure,

wherein, in the first mode, the actuatable valve tool is configured to allow fluid communication via the axial flowbore in the first direction and to disallow fluid communication via the axial flowbore in the second direction, and

wherein, in the second, and third modes, the actuatable valve tool is configured to allow fluid communication via the axial flowbore in both the first direction and the second direction.

2. The wellbore servicing system of claim 1, wherein the actuatable valve tool is transitionable from the fourth mode to the first mode.

3. The wellbore servicing system of claim 2,

wherein the actuatable valve tool is configured to transition from the third mode to the fourth mode upon an application of pressure to the axial flowbore of at least the threshold pressure, and

wherein the actuatable valve tool is configured to transition from the fourth mode to the first mode upon a dissipation of pressure from the axial flowbore to not more than the threshold pressure.

4. The wellbore servicing system of any of claims 1-3, wherein the actuatable valve tool further comprises:

a flapper valve,

wherein, when the flapper valve is in an activated state, the flapper valve is free to move between a closed position in which the flapper valve blocks the axial flowbore and an open position in which the flapper valve does not block the axial flowbore, and

wherein, when the flapper valve is in an inactivated state, the flapper valve is retained in the open position.

5. The wellbore servicing system of claim 4, wherein the sliding sleeve is movable from a first longitudinal position to a second longitudinal position, from the second longitudinal position to a third longitudinal position.

6. The wellbore servicing system of claim 5,

wherein, in the first position, the sliding sleeve does not interact with the flapper valve, and

wherein, in the second and third positions, the sliding sleeve retains the flapper valve in the open position.

7. The wellbore servicing system of any of claims 5-6, further comprising a transition system configured to control the longitudinal movement of the sliding sleeve.

8. The wellbore servicing system of claim 7, wherein the transition system comprises:

a j-slot; and

a lug, wherein the lug is disposed within at least a portion of the j-slot.

9. The wellbore servicing system of any of claims 5-8, further comprising a biasing member, wherein the biasing member is configured to bias the sliding sleeve in the second direction.

10. The wellbore servicing system of any of claims 1-9, wherein the wellbore servicing system further comprises a wellbore servicing tool incorporated within the work string at a location downhole from the actuatable valve tool.

11. A wellbore servicing method comprising:

disposing a wellbore servicing system comprising a work string and an actuatable valve tool in a wellbore, the work string comprising a coiled tubing string and a jointed

tubing segment, the actuatable valve tool incorporated within the work string between the coiled tubing string and the jointed tubing segment and generally defining an axial flowbore,

wherein the actuatable valve tool comprises:

a housing defining the axial flowbore; and

a sliding sleeve,

wherein the sliding sleeve is movably positioned within the housing via at least two seals such that there is a differential between the surfaces of the sliding sleeve exposed to the axial flowbore facing a first direction and the surfaces of the sliding sleeve exposed to the axial flowbore facing a second direction,

wherein the actuatable valve tool is configured in a first mode when the wellbore servicing system is disposed within the wellbore, wherein in the first mode, the actuatable valve tool allows downward fluid communication via the axial flowbore and disallows upward fluid communication via the axial flowbore;

making a first application of fluid pressure of at least a pressure threshold to the axial flowbore, wherein the first application of fluid pressure transitions the actuatable valve tool to a second mode in which the actuatable valve tool allows both upward and downward fluid communication;

allowing a first dissipation of fluid pressure applied to the axial flowbore to less than the pressure threshold, wherein allowing the first dissipation of fluid pressure transitions the actuatable valve tool to a third mode in which the actuatable valve tool allows both upward and downward fluid communication;

making a second application of fluid pressure of at least the pressure threshold to the axial flowbore, wherein the second application of fluid pressure transitions the actuatable valve tool to a fourth mode in which the actuatable valve tool allows both upward and downward fluid communication;

allowing a second dissipation of fluid pressure applied to the axial flowbore to less than the pressure threshold, wherein allowing the fluid pressure applied to the axial flowbore to dissipate transitions the actuatable valve tool to the first mode.

12. The wellbore servicing method of claim 11, wherein making the first application of fluid pressure comprises downwardly communicating a fluid via the axial flowbore.

13. The wellbore servicing method of any of claims 11-12, wherein allowing the first dissipation of fluid pressure comprises upwardly communicating a fluid via the axial flowbore.

14. The wellbore servicing method of any of claims 11-13, wherein making the second application of fluid pressure comprises downwardly communicating a fluid via the axial flowbore.

15. The wellbore servicing method of any of claims 11-14, wherein making the second dissipation of fluid pressure comprises upwardly communicating a fluid via the axial flowbore.

16. A wellbore servicing method comprising:

disposing a wellbore servicing system in a wellbore, the wellbore servicing system comprising a work string and an actuatable valve tool, the work string comprising a coiled tubing string and a jointed tubing segment, the actuatable valve tool incorporated within the work string between the coiled tubing string and the jointed tubing segment and generally defining an axial flowbore, wherein the actuable valve tool comprises:

a housing defining the axial flowbore; and

a sliding sleeve,

wherein the sliding sleeve is movably positioned within the housing via at least two seals such that there is a differential between the surfaces of the sliding sleeve exposed to the axial flowbore facing a first direction and the surfaces of the sliding sleeve exposed to the axial flowbore facing a second direction, wherein during disposing the wellbore servicing system within the wellbore, the actuatable valve tool is configured so as to allow downward fluid communication via the axial flowbore and to disallow upward fluid communication via the axial flowbore;

reconfiguring the actuatable valve tool so as to allow downward and upward fluid communication via the axial flowbore, wherein reconfiguring the actuatable valve tool comprises applying a fluid pressure of at least a pressure threshold to the axial flowbore, allowing a fluid pressure applied to the axial flowbore to dissipate to less than the pressure threshold, or combinations thereof;

reconfiguring the actuatable valve tool so as to allow downward fluid communication via the axial flowbore and to disallow upward fluid communication via the axial flowbore, wherein reconfiguring the actuatable valve tool comprises applying a fluid pressure of at least a pressure threshold to the axial flowbore, allowing a fluid pressure applied to the axial flowbore to dissipate to less than the pressure threshold, or combinations thereof; and

repositioning the wellbore servicing system.

17. The wellbore servicing method of claim 16, wherein reconfiguring the actuatable valve tool so as to allow downward and upward fluid communication via the axial flowbore comprises communicating a fluid downwardly via the axial flowbore.

18. The wellbore servicing method of claim 17, wherein the fluid is communicated into a subterranean formation zone at a rate and/or pressure sufficient to initiate and/or extend a perforation and/or fracture.

19. The wellbore servicing method of claim 17, wherein the fluid is a perforating fluid, a hydrajetting fluid, a fracturing fluid, an acidizing fluid, or combinations thereof.

20. The wellbore servicing method of any of claims 16-19, further comprising communicating a fluid upwardly through the axial flowbore.

21. The wellbore servicing method of any of claims 16-20, wherein repositioning the wellbore servicing system comprises repositioning at least a portion of the wellbore servicing system within the wellbore.

22. The wellbore servicing method of any of claims 16-21, wherein repositioning the wellbore servicing system comprises removing the wellbore servicing system from the wellbore.

23. A wellbore servicing system comprising:

a workstring comprising a coiled tubing string and a jointed tubing segment; and

an actuatable valve tool incorporated within the work string between the coiled tubing string and the jointed tubing segment comprising:

a housing defining the axial flowbore,

a flapper valve,

wherein, when the flapper valve is in an activated state, the flapper valve is free to move between a closed position in which the flapper valve blocks the axial flowbore and an open position in which the flapper valve does not block the axial flowbore, and

wherein, when the flapper valve is in an inactivated state, the flapper valve is retained in the open position,

a sliding sleeve;

wherein the sliding sleeve is movably positioned within the housing via at least two seals such that there is a differential between the surfaces of the sliding sleeve exposed to the axial flowbore facing a first direction and the surfaces of the sliding sleeve exposed to the axial flowbore facing a second direction,

wherein, in a first position, the sliding sleeve does not interact with the flapper valve, and

wherein, in a second position and a third position, the sliding sleeve retains the flapper valve in the open position; and

a transition system configured to guide the sliding sleeve from the first position to the second position upon application of pressure to the axial flowbore of at least a threshold pressure, to guide the sliding sleeve from the second position to the third position upon a dissipation of pressure from the axial flowbore to not more than the threshold pressure, and to guide the sliding sleeve from the third position back to the second position upon application of pressure to the axial flowbore of at least a threshold pressure, and to guide the sleeve from the second position back to the first position upon a dissipation of pressure from the axial flowbore to not more than the threshold pressure, wherein the transition system comprises:

a j-slot; and

a lug, wherein the lug is disposed within a least a portion of the j-slot.

24. The wellbore servicing system of claim 23, wherein the wellbore servicing system further comprises a wellbore servicing tool incorporated within the work string at a location downhole from the actuatable valve tool.

25. The wellbore servicing system of claim 24, further comprising a biasing member, wherein the biasing member is configured to bias the sliding sleeve away from the second position.