What is claimed is:

1. A flow control system for a well, comprising:

a primary safety valve for controlling flow from production tubing in the well, the primary safety valve including a first valve body, a first flapper, a first control line port for receiving control fluid pressure from a control line, and a first actuator operable to open the first flapper in response to the control fluid pressure;

a secondary safety valve independently disposable within and retrievable from the first valve body after the primary safety valve is installed with the production tubing downhole, the secondary safety valve including a second valve body, a second flapper, a second control line port for receiving control fluid pressure from the same control line as the primary safety valve when the secondary safety valve is disposed in the first valve body of the primary safety valve, and an actuator operable to open the second flapper in response to the control fluid pressure; and

a choke in fluid communication with the second control line port to delay a closing of the second flapper relative to a closing of the first flapper in response to a decrease in the control fluid pressure.

2. The flow control system of claim 1, further comprising:

a wall separating the first control line port from an interior of the first valve body;

a through-port from the first control line port to the interior of the first valve body; and

wherein the second control line port is automatically positioned in fluid communication with the first control line port via the through port when the secondary safety valve is disposed in the first valve body.

3. The flow control system of claim 2, wherein the wall is puncturable to form the through-port with the primary safety valve installed in the well prior to disposing the secondary safety valve within the primary safety valve.

4. The flow control system of claim 2, further comprising:

one or more sealing members for sealing between the second valve body and the first valve body in response to disposing the secondary safety valve within the primary safety valve, the one or more sealing members straddling the through port.

5. The flow control system of claim 1, wherein the choke is disposed on the second valve body inside the second control line port to establish the fluid communication of the choke with the second control line port.

6. The flow control system of claim 1, wherein the choke is disposed on the first valve body between the first control line port and the second control line port.

7. The flow control system of claim 1, wherein the primary safety valve is a tubing retrievable safety valve ("TRSV") and the secondary safety valve is a wireline retrievable safety valve ("WLRSV").

8. The flow control system of claim 1, further comprising:

a lock mandrel configured for coupling to the WLRSV for securing the WLRSV inside the TRSV when deployed into the first valve body of the WLRSV.

9. The flow control system of claim 1, wherein the secondary safety valve has a lower slam closure rating than the primary safety valve.

10. A flow control system for a well, comprising:

a tubing retrievable safety valve (TRSV) installed with a well completion to control flow from a production tubing, the tubing retrievable safety valve including a first valve body, a first flapper, a first control line port for receiving control fluid pressure from a control line, and a first actuator operable to open the first flapper in response to the control fluid pressure;

a wireline retrievable safety valve (WLRSV) retrievably deployable downhole into the valve body of the tubing retrievable safety valve, the wireline retrievable safety valve including a second valve body, a second flapper, a second control line port in fluid communication with the first control line port via a through port for receiving control fluid pressure from the same control line as the tubing retrievable safety valve, and an actuator operable to open the second flapper in response to the control fluid pressure;

a lock mandrel coupled to the WLRSV for securing the WLRSV inside the TRSV when deployed into the valve body of the WLRSV; and

a choke in fluid communication with the second control line port to delay a closing of the second flapper relative to a closing of the first flapper in response to a decrease in the control fluid pressure.

11. The flow control system of claim 10, wherein the choke is disposed on the second valve body within the second control line port to establish the fluid communication of the choke with the second control line port.

12. The flow control system of claim 10, wherein the choke is disposed on the first valve body within the first control line port to establish the fluid communication of the choke with the second control line port.

13. The flow control system of claim 10, wherein the WLRSV has a lower slam closure rating than the TRSV.

14. A method of controlling flow from a well, comprising:

flowing a well fluid through a primary safety valve and a secondary safety valve disposed within a valve body of the primary safety valve;

holding the primary safety valve open by supplying a control fluid from a control line through a first control line port;

holding the secondary safety valve open by supplying the control fluid from the same control line through a second control line port;

in response to detecting a shut-in event, closing the primary valve and the secondary valve by reducing a control line pressure to generate a backflow of the control fluid through the first and second control line ports to close the primary valve and the secondary valve; and

choking the backflow through the second control line port to delay the closing of the secondary safety valve relative to a closing of the primary safety valve.

15. The method of claim 14, further comprising:

initially flowing the well fluid through just the primary safety valve without the secondary safety valve disposed within the valve body of the primary safety valve; and

in response to detecting a leakage through the primary safety valve, subsequently installing the secondary safety valve within the valve body of the primary safety valve.

16. The method of claim 15, wherein detecting a leakage comprises detecting a leak rate exceeding 15 SCF/min of gas or 400 cc/min of liquid.

17. The method of claim 15, further comprising:

forming a through-port from the first control line port to an interior of the valve body of the primary safety valve; and

positioning the second control line port in fluid communication with the first control line port via the through-port when installing the secondary safety valve in the valve body of the primary safety valve.

18. The method of claim 17, wherein forming the through-port comprises puncturing a wall separating the first control line port from an interior of the valve body of the primary safety valve.

19. The method of claim 14, wherein flowing the well fluid through the primary safety valve and the secondary safety valve comprises producing oil or gas from a hydrocarbon-bearing formation.