CLAIMS

What is claimed is:

1. A completion section for a downhole completion assembly, comprising:

a base pipe that defines a central flow passage, one or more injection ports, and one or more production ports;

a fracturing assembly including:

a frac sleeve positioned within the central flow passage adjacent the one or more injection ports;

a sensor that detects a wireless signal;

a first frac actuator actuatable in response to the wireless signal to move the frac sleeve toward an open position where the one or more injection ports are exposed; and

a second frac actuator actuatable based on the wireless signal to move the frac sleeve to a closed position where the frac sleeve occludes the one or more injection ports; and

a production assembly axially offset from the fracturing assembly and including:

a production sleeve positioned within the central flow passage adjacent the one or more production ports; and

a production actuator actuatable based on the wireless signal to move the production sleeve to an open position where the one or more production ports are exposed.

2. The completion section of claim 1, wherein the wireless signal is selected from the group consisting of a magnetic field, an electromagnetic signal, a pressure signal, a temperature signal, an acoustic signal, a fluid flowrate signal, and any combination thereof and, optionally, wherein the sensor is selected from the group consisting of a magnetic sensor, an antenna, a pressure sensor, a temperature sensor, an acoustic sensor, a vibration sensor, a strain sensor, an accelerometer, a flow meter, and any combination thereof; or wherein the sensor is selected from the group consisting of a magnetic sensor, an antenna, a pressure sensor, a temperature sensor, an acoustic sensor, a vibration sensor, a strain sensor, an accelerometer, a flow meter, and any combination thereof.

3. The completion section of claim 1, wherein the wireless signal comprises a magnetic field generated by a magnetic projectile introduced into the central flow passage and, optionally, wherein actuation of the second frac actuator is triggered following expiration of a predetermined time period after detection of the wireless signal; or wherein actuation of the second frac actuator is triggered following expiration of a predetermined time period after detection of the wireless signal.

4. The completion section of claim 1, wherein actuation of the production actuator is triggered following expiration of a predetermined time period after detection of the wireless signal or upon detection of the additional wireless signal and, optionally, wherein the fracturing assembly further includes a closure sleeve positioned within the central flow passage axially adjacent the frac sleeve, and wherein actuation of the second frac actuator causes the closure sleeve to translate within the central flow passage and move the frac sleeve to the closed position; or, wherein the fracturing assembly further includes a closure sleeve positioned within the central flow passage axially adjacent the frac sleeve, and wherein actuation of the second frac actuator causes the closure sleeve to translate within the central flow passage and move the frac sleeve to the closed position.

5. The completion section of claim 1, further comprising an isolation device positioned within the central flow passage to isolate the fracturing assembly from downhole portions of the completion section when the frac sleeve is moved to the open position.

6. The completion section of claim 1, wherein the production assembly further includes a production sensor that detects the additional wireless signal to actuate the production actuator, the additional wireless signal being selected from the group consisting of a magnetic field, an electromagnetic signal, a pressure signal, a temperature signal, an acoustic signal, a fluid flowrate signal, and any combination thereof.

7. A method, comprising:

positioning a downhole completion within a wellbore, the downhole completion including at least one completion section that includes:

a base pipe that defines a central flow passage, one or more injection ports, and one or more production ports;

a fracturing assembly including a frac sleeve positioned within the central flow passage adjacent the one or more injection ports, a sensor, a first frac actuator, and a second frac actuator; and

a production assembly axially offset from the fracturing assembly and including a production sleeve positioned within the central flow passage adjacent the one or more production ports, and a production actuator;

detecting a wireless signal with the sensor;

actuating the first frac actuator in response to the wireless signal and thereby moving the frac sleeve toward an open position where the one or more injection ports are exposed;

actuating the second frac actuator based on the wireless signal and thereby moving the frac sleeve to a closed position where frac sleeve occludes the one or more injection ports; and

actuating the production actuator based on the wireless signal or in response to detection of an additional wireless signal to move the production sleeve to an open position where the one or more production ports are exposed.

8. The method of claim 7, wherein detecting the wireless signal with the sensor comprises:

introducing a magnetic projectile into the central flow passage; and

detecting a magnetic field generated by the magnetic projectile with the sensor.

9. The method of claim 7, wherein actuating the second frac actuator based on the wireless signal comprises triggering actuation of the second frac actuator upon an expiration of a predetermined time period after detection of the wireless signal and, optionally, wherein actuating the production actuator comprises triggering actuation of the production actuator upon an expiration of a predetermined time period after detection of the wireless signal or the additional wireless signal; or, wherein actuating the production actuator comprises triggering actuation of the production actuator upon an expiration of a predetermined time period after detection of the wireless signal or the additional wireless signal.

10. The method of claim 7, further comprising isolating the fracturing assembly from downhole portions of the completion section with an isolation device positioned within the central flow passage.

11. The method of claim 7, wherein the fracturing assembly further includes a closure sleeve positioned within the central flow passage axially adjacent the frac sleeve, and wherein

actuating the second frac actuator comprises causing the closure sleeve to translate within the central flow passage and move the frac sleeve to the closed position and, optionally, wherein the production assembly further includes a production sensor, the method further comprising: detecting the additional wireless signal with the production sensor; and actuating the production actuator in response to the additional wireless signal and thereby moving the production sleeve to the open position; or

wherein the production assembly further includes a production sensor, the method further comprising:

detecting the additional wireless signal with the production sensor; and

actuating the production actuator in response to the additional wireless signal and thereby moving the production sleeve to the open position.

12. A completion section for a downhole completion assembly, comprising:

a base pipe that defines a central flow passage, one or more injection ports, and one or more production ports;

a fracturing assembly including:

a frac sleeve positioned within the central flow passage adjacent the one or more injection ports;

a first sensor that detects a first wireless signal;

a first frac actuator actuatable in response to the first wireless signal to move the frac sleeve toward an open position where the one or more injection ports are exposed;

a second sensor that detects a second wireless signal; and

a second frac actuator actuatable in response to the second wireless signal to move the frac sleeve to a closed position where the frac sleeve occludes the one or more injection ports; and

a production assembly axially offset from the fracturing assembly and including:

a production sleeve positioned within the central flow passage adjacent the one or more production ports; and

a production actuator actuatable based on one of the first wireless signal, the second wireless signal, or a third wireless signal to move the production sleeve to an open position where the one or more production ports are exposed; and, optionally,

wherein the first, second, and third wireless signals are selected from the group consisting of a magnetic field, an electromagnetic signal, a pressure signal, a temperature signal, an acoustic signal, a fluid flowrate signal, and any combination thereof; and, optionally,

wherein actuation of the production actuator is triggered following expiration of a predetermined time period after detection of the first wireless signal or the second wireless signal; and, optionally,

wherein the production assembly further includes a production sensor that detects the third wireless signal to actuate the production actuator.

13. A method, comprising:

positioning a downhole completion within a wellbore, the downhole completion including at least one completion section that includes:

a base pipe that defines a central flow passage, one or more injection ports, and one or more production ports;

a fracturing assembly including a frac sleeve positioned within the central flow passage adjacent the one or more injection ports, a first sensor, a first frac actuator, a second sensor, and a second frac actuator; and

a production assembly axially offset from the fracturing assembly and including a production sleeve positioned within the central flow passage adjacent the one or more production ports, and a production actuator;

detecting a first wireless signal with the first sensor and actuating the first frac actuator in response to the first wireless signal to move the frac sleeve toward an open position where the one or more injection ports are exposed;

detecting a second wireless signal with the second sensor and actuating the second frac actuator in response to the second wireless signal to move the frac sleeve to a closed position where frac sleeve occludes the one or more injection ports; and

actuating the production actuator based on one of the first wireless signal, the second wireless signal, or in response to detection of a third wireless signal to move the production sleeve to an open position where the one or more production ports are exposed.

14. The method of claim 13, wherein the first, second, and third wireless signals are selected from the group consisting of a magnetic field, an electromagnetic signal, a pressure

signal, a temperature signal, an acoustic signal, a fluid flowrate signal, and any combination thereof and, optionally, wherein actuating the production actuator comprises triggering actuation of the production actuator upon an expiration of a predetermined time period after detection of the first wireless signal or the second wireless signal; or wherein actuating the production actuator comprises triggering actuation of the production actuator upon an expiration of a predetermined time period after detection of the first wireless signal or the second wireless signal.

15. The method of claim 13, wherein the production assembly further includes a production sensor, the method further comprising:

detecting the third wireless signal with the production sensor; and

actuating the production actuator in response to the third wireless signal and thereby moving the production sleeve to the open position.