CLAIMS

What is claimed is:

1. A downhole sand control completion system, comprising:

a completion string extendable within a wellbore and including one or more sand control screen assemblies arranged about a base pipe, each sand control screen assembly including one or more sand screens positioned about the base pipe;

a shunt system positioned about an exterior of the base pipe to receive and redirect a gravel slurry flowing in an annulus defined between the completion string and a wellbore wall; and

a return tube positioned between the completion string and the wellbore wall and extending longitudinally along a portion of the completion string, the return tube defining a plurality of openings to receive a portion of a fluid in the annulus into the return tube to be conveyed into an interior of the base pipe via the return tube;

wherein the return tube comprises one or more jumper tubes that fluidly couples axially adjacent portions of the return tube, the one or more jumper tubes are configured to span the axial distance between axially adjacent sand screens.

2. The system of claim 1, wherein at least one of the one or more sand control screen assemblies further includes a flow control device that regulates a flow of another portion of the fluid into the interior of the base pipe via the one or more sand screens, and optionally, wherein the flow control device comprises an inflow control device, an autonomous inflow control device, or an inflow control valve.

3. The system of any of the preceding claims, wherein the return tube has a first end and a second end opposite the first end, and wherein the first end is positioned uphole from the one or more sand screens and the second end is positioned downhole from the one or more sand screens.

4. The system of any of the preceding claims, wherein the fluid comprises a carrier fluid from a gravel slurry and wherein the plurality of openings are sized to allow the carrier fluid to flow therethrough but prevent passage of particulate matter of a predetermined size included in the gravel slurry.

5. The system of any of the preceding claims, wherein the completion string includes a completion end and the return tube is fluidly coupled to the completion end at a return port defined in the base pipe, and optionally, further comprising an isolation sleeve positioned within

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the base pipe and movable between a closed position, where the isolation sleeve occludes the return port, and an open position, where the isolation sleeve is moved to expose the return port, and optionally, wherein the return tube terminates at an intermediate location between upper and lower ends of the completion string.

6. The system of any of the preceding claims, further comprising:

a sacrificial screen positioned about the base pipe at a completion end of the completion string, wherein the return tube feeds the portion of the fluid to the sacrificial screen; and

an isolation plug positioned within the base pipe and movable between a first position, where the portion of the fluid is able to circulate into the base pipe through the sacrificial screen, and a second position, where sacrificial screen is isolated.

7. The system of any of claims 1-6, wherein the return tube exhibits a cross-sectional shape selected from the group consisting of circular, polygonal, crescent, oval, ovoid, and any combination there, and optionally, wherein the return tube is positioned within a flow annulus defined between the one or more sand screens and the exterior of the base pipe.

8. The system of any of claims 1-6, wherein the return tube exhibits a cross-sectional shape selected from the group consisting of circular, polygonal, crescent, oval, ovoid, and any combination there, and optionally, wherein the shunt system and the return tube are positioned within a flow annulus defined between the one or more sand screens and an exterior of the base pipe.

9. The system of any of the preceding claims , further comprising a closure feature positioned within the return tube and operable to restrict fluid flow through the return tube, and optionally, wherein the closure feature comprises one of a swellable material and a valve.

10. A method, comprising:

introducing a gravel slurry into an annulus defined between a completion string and a wellbore wall, the completion string including one or more sand control screen assemblies arranged about a base pipe and each sand control screen assembly including one or more sand screens positioned about the base pipe;

receiving and redirecting a portion of the gravel slurry in a shunt system positioned about an exterior of the base pipe;

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drawing a portion of a fluid in the annulus into a return tube positioned about the exterior of the base pipe and extending longitudinally along a portion of the completion string, the return tube defining a plurality of openings to receive the portion of the fluid into the return tube;

flowing the portion of the fluid within the return tube; and

conveying the portion of the fluid from the return tube into an interior of the base pipe;

wherein the return tube comprises one or more jumper tubes that fluidly couples axially adjacent portions of the return tube, the one or more jumper tubes are configured to span the axial distance between axially adjacent sand screens.

11. The method of claim 10, wherein at least one of the one or more sand control screen assemblies further includes a flow control device, the method further comprising:

drawing a second portion of the fluid through the one or more sand screens and into the flow control device; and

regulating a flow of the second portion of the fluid into the interior of the base pipe with the flow control device.

12. The method of claims 10 or 11, wherein the fluid comprises a carrier fluid from a gravel slurry and the plurality of openings are sized to allow the carrier fluid to flow therethrough, the method further comprising preventing passage of particulate matter of the gravel slurry through the plurality of openings.

13. The method of any of claims 10-12, wherein the completion string includes a completion end and the return tube is fluidly coupled to the completion end at a return port defined in the base pipe and wherein conveying the portion of the fluid from the return tube into the interior of the base pipe comprises discharging the portion of the fluid into the interior via the return port, and optionally, wherein an isolation sleeve is positioned within the base pipe at the completion end, the method further comprising moving the isolation sleeve to a closed position and thereby occluding the return port and ceasing a flow of the portion of the fluid into the interior via the return tube.

14. The method of any of claims 10-13, wherein conveying the portion of the fluid from the return tube into the interior of the base pipe further comprises:

discharging the portion of the fluid from the return tube via one or more discharge ports defined in the return tube;

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drawing the portion of the fluid discharged from the return tube into a sacrificial screen positioned about the base pipe at a completion end of the completion string; and

regulating a flow of the portion of the fluid into the interior of the base pipe with an isolation plug positioned within the base pipe, and optionally, further comprising moving the isolation plug to within the base pipe and thereby isolating the sacrificial screen.

15. The method of any of claims 10-14, wherein the return tube includes a closure feature positioned therein, the method further comprising preventing fluid flow through the return tube with the closure feature.

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