CLAIMS

1. A method of determining a location of an influx into a target wellbore, the method comprising:

measuring microseismic activity in a relief wellbore, thereby detecting at least one microseismic event in an earth formation penetrated by the relief wellbore; and

determining the location of the influx into the target wellbore, based on the detected at least one microseismic event,

wherein the at least one microseismic event is produced in response to at least the influx into the target wellbore.

2. The method of claim 1, wherein the measuring is performed with at least one microseismic sensor positioned in the relief wellbore.

3. The method of claim 2, wherein the microseismic sensor comprises a geophone.

4. The method of any one of the preceding claims, wherein the measuring comprises detecting optical scattering in an optical waveguide positioned in the relief wellbore.

5. The method of claim 4, wherein the optical waveguide is positioned in a drill string.

6. The method of any one of the preceding claims, further comprising establishing fluid communication between the relief and target wellbores after determining the location of the influx.

7. The method of any one of the preceding claims, wherein the location of the influx is at an open hole portion of the target wellbore.

8. A microseismic ranging system for use with a subterranean well to determine a location of an influx into a target wellbore, the microseismic ranging system comprising:

at least one microseismic sensor positioned in a relief wellbore that penetrates an earth formation, wherein the microseismic sensor detects at least one microseismic event in the earth formation, the microseismic event being caused by the influx into the target wellbore and

a processor configured to determine the location of the influx into the target wellbore based on the detected at least one microseismic event.

9. The system of claim 8, wherein the at least one microseismic sensor comprises a geophone.

10. The system of claim 8, wherein the at least one microseismic sensor comprises an optical waveguide.

11. The system of claim 10, wherein the optical waveguide is positioned within a drill string.

12. The system of claim 10 or 11, further comprising an optical interrogator that measures scattering in the optical waveguide.

13. The system of any one of claims 8 to 12, wherein the influx is at an open hole portion of the target wellbore.

14. A method of determining a location of an influx into a target wellbore, the method comprising:

providing an optical waveguide in a relief wellbore,

measuring optical scattering in the optical waveguide, thereby detecting at least one microseismic event in an earth formation penetrated by the relief wellbore; and

determining the location of the influx into the target wellbore, based on the detected at least one microseismic event,

wherein the at least one microseismic event is produced in response to at least the influx into the target wellbore.

15. The method of claim 14, wherein the at least one microseismic event is caused by a change in stress distribution in the formation.

16. The method of claim 14 or 15, wherein the microseismic event is caused by a change in reservoir volume in the formation.

17. The method of any one of claims 14 to 16, further comprising establishing fluid communication between the relief and target wellbores after determining the location of the influx.

18. The method of any one of claims 14 to 17, wherein the location of the influx is at an open hole portion of the target wellbore.