CLAIMS

1. A wellbore system, comprising:

an upper head;

a lower head coupled to the upper head by one or more fasteners, the one or more fasteners arranged axially along a bore extending through the upper head and the lower head;

a seal ring positioned within a seal pocket formed in the upper head and the lower head, the seal ring positioned to engage the upper head to form a first seal interface between the upper head and the seal ring;

a hanger arranged within the bore;

a packoff positioned between the hanger and the lower head; and

one or more lock screws to extend through the lower head and engage the packoff, the one or more lock screws to apply a downward force to the packoff to establish a second seal interface between the packoff and the seal ring and a third seal interface between the packoff and the hanger, wherein the first seal interface, the second seal interface, and the third seal interface are all metal-to-metal seals.

2. The wellbore system of claim 1, wherein the first seal interface comprises:

a first tapered surface of the upper head; and

a second tapered surface of the seal ring, wherein an axial force applied by the one or more fasteners is configured to drive the first tapered surface into the second tapered surface.

3. The wellbore system of claim 1, wherein the second seal interface comprises:

a first tapered surface of the seal ring; and

a second tapered surface of the packoff, wherein a radial force applied by the one or more lock screws is configured to drive the packoff in a downward direction to cause the first tapered surface to interact with the second tapered surface to deform one or more of the first tapered surface or the second tapered surface.

4. The wellbore system of claim 1, wherein the third seal interface comprises:

a first tapered surface of the packoff; and

a second tapered surface of the hanger, wherein a radial force applied by the one or more lock screws is configured to drive the packoff in a downward direction to cause the first tapered surface to interact with the second tapered surface to deform one or more of the first tapered surface or the second tapered surface.

5. The wellbore system of claim 1, further comprising:

a wiper arranged along the second seal interface.

6. The wellbore system of claim 1, wherein the packoff is positioned to extend across a coupling interface between the upper head and the lower head.

7. The wellbore system of claim 1, wherein the first seal interface comprises:

a sealing feature positioned along a tapered surface of the seal ring, the sealing feature extending away from the tapered surface.

8. The wellbore system of claim 1, wherein the second seal interface is set at approximately a same time as the third seal interface.

9. A sealing assembly, comprising:

a seal ring to be positioned within a seal pocket of a wellhead system;

a packoff to be positioned within a first bore of the wellhead system, the packoff to be radially inward of the seal ring; and

a hanger to be positioned within a second bore of the packoff, the hanger to be radially inward of the packoff;

wherein the packoff is configured to move in a downward direction responsive to an external mechanical force to form a first metal-to-metal seal between the seal ring and the packoff and to form a second metal-to-metal seal between the packoff and the hanger.

10. The sealing assembly of claim 9, where the packoff further comprises:

a tapered receptacle positioned to receive the external mechanical force, the external mechanical force to be applied in a radial direction, wherein an angle of the tapered receptacle converts at least a portion of the external mechanical force into a downward force.

11. The sealing assembly of claim 10, wherein the tapered receptacle is a continuous tapered receptacle about a circumference of the packoff.

12. The sealing assembly of claim 9, further comprising:

a wiper along an interface surface of the packoff.

13. The sealing assembly of claim 9, further comprising:

a hanger seal along an interface surface of the hanger.

14. The sealing assembly of claim 9, further comprising:

engagement features formed along the packoff, the engagement features to couple to a tool to position the packoff within the first bore.

15. The sealing assembly of claim 9, wherein the first metal-to-metal seal and the second metal-to-metal seal are both formed at substantially a same time.

16. A method, comprising:

providing a wellhead assembly including a seal ring, wherein a first seal interface with a metal-to-metal seal is formed between the seal ring and a component of the wellhead assembly;

installing the wellhead assembly at a well site;

landing a hanger and a packoff within a bore of the wellhead assembly; and

activating one or more lock screws to engage the packoff to cause a second seal interface with a metal-to-metal seal to form between the seal ring and the packoff and to cause a third seal interface with a metal-to-metal seal to form between the packoff and the hanger.

17. The method of claim 16, wherein the one or more lock screws drive the packoff in a downward direction.

18. The method of claim 16, wherein the component is an upper head of multi-bowl system, the method further comprising:

providing a lower head of the multi-bowl system;

positioning the seal ring within a seal pocket; and

coupling the upper head to the lower head.