connecting the well to a surface BOP to be rated to a lower pressure. However, as the vertical depth of the well increases, the bore pressure may increase such that the pressure may overcome the rating of the riser which connects the well to the surface BOP. Accordingly, the ability to tieback a well (i.e., tieback a higher pressure riser within the lower pressure riser) with increased depth is desirable.

SUMMARY

[0004a] According to a first aspect, there is provided a device including a tieback connector, including: a locking mechanism configured to physically mate with a single terminal end of a casing string configured to be co-located within a riser string of an offshore platform, wherein the physical mating of the locking mechanism with the single terminal end of the casing string directly couples the tieback connector to the single terminal end of the casing string when the locking mechanism is engaged; and a sealing mechanism configured contact the single terminal end of the casing string to fluidly seal an area around the terminal end of the casing string, wherein the locking mechanism and the sealing mechanism are disposed at separate positions along a vertical orientation of the device.

[0004b] According to a second aspect, there is provided a system, including: a casing string configured to be disposed within a riser string and including a single terminal end; and a tieback connector configured to be coupled to the single terminal end of the casing string, wherein the tieback connecter includes: a locking mechanism configured to physically mate with the single terminal end of the casing string, wherein the physical mating of the locking mechanism with the single terminal end of the casing string directly couples the tieback connector to the single terminal end of the casing string when the locking mechanism is engaged; and a sealing mechanism configured to contact the single terminal end of the casing string to fluidly seal an area around the single terminal end of the casing string, wherein the locking mechanism and the sealing mechanism are disposed at separate positions along a vertical orientation of the tieback connector.

[0004c] According to a third aspect, there is provided a method, including: engaging a locking mechanism of a tieback connector to physically mate the locking mechanism with a single terminal end of a casing string internal to a riser to directly couple the tieback connector to the

single terminal end of the casing string when the locking mechanism is engaged; and engaging a sealing mechanism of the tieback connector to contact the single terminal end of the casing string to fluidly seal an area around the single terminal end of the casing string, wherein the locking mechanism and the sealing mechanism are disposed at separate positions along a vertical orientation of the device.

BRIEF DESCRIPTION OF DRAWINGS

[0005] FIG. 1 illustrates an example of an offshore platform having a riser coupled to a shut-in device (SID).

[0006] FIG. 2 illustrates a side view of a tieback connector in relation to the riser string and the SID of FIG. 1.

[0007] FIG. 3 illustrates a cross-sectional side view of an embodiment of the tieback connector illustrated in FIG. 2.

[0008] FIG. 4 illustrates a cross-sectional side view of a second embodiment of the tieback connector illustrated in FIG. 2.

[0009] FIG. 5 illustrates a cross-sectional side view of a third embodiment of the tieback connector illustrated in FIG. 2.

[0010] FIG. 6 illustrates a cross-sectional side view of a fourth embodiment of the tieback connector illustrated in FIG. 2.

[0011] FIG. 7 illustrates a flow chart of a first embodiment of connecting the tieback connector illustrated in FIG. 2.

[0012] FIG. 8 illustrates a flow chart of a second embodiment of connecting the tieback connector illustrated in FIG. 2.

DETAILED DESCRIPTION

[0013] One or more specific embodiments will be described below. In an effort to provide a concise description of these embodiments, all features of an actual implementation

CLAIMS

1. A device comprising a tieback connector, comprising:

a locking mechanism configured to physically mate with a single terminal end of a casing string configured to be co-located within a riser string of an offshore platform, wherein the physical mating of the locking mechanism with the single terminal end of the casing string directly couples the tieback connector to the single terminal end of the casing string when the locking mechanism is engaged; and

a sealing mechanism configured contact the single terminal end of the casing string to fluidly seal an area around the terminal end of the casing string, wherein the locking mechanism and the sealing mechanism are disposed at separate positions along a vertical orientation of the device.

2. The device of claim 1, wherein the locking mechanism comprises first locking features configured to interact with second locking features of the single terminal end of the casing string.

3. The device of claim 1, comprising a rod configured to engage into a first position in a central aperture region of the tieback connector to contact the single terminal end of the casing string.

4. The device of claim 3, wherein the rod is configured to disengage from the central aperture region of the tieback connector and to a second position within the tieback connector.

5. The device of claim 1, wherein the locking mechanism is disposed above the sealing mechanism along the vertical orientation of the tieback connector.

6. The device of claim 1, comprising a port configured to receive a hydraulic pressurized fluid.

7. The device of claim 6, comprising a path coupling the port to the locking mechanism, wherein the path flows the hydraulic pressurized fluid from the port to the locking mechanism to move the locking mechanism from a first position to a second position.

8. The device of claim 6, comprising a path coupling the port to the sealing mechanism, wherein the path flows the hydraulic pressurized fluid from the port to the sealing mechanism to move the sealing mechanism from a first position to a second position.

9. The device of claim 6, comprising:

a rod configured to engage into a first position in a central aperture region of the tieback connector to contact the single terminal end of the casing string; and

a path coupling the port to the rod, wherein the path flows the hydraulic pressurized fluid from the port to the rod to engage the rod into the first position.

10. The device of claim 1, wherein the locking mechanism is configured to apply tension to an inner string of the casing string or allow the inner string to hang freely along the vertical orientation of the tieback connector.

11. A system, comprising:

a casing string configured to be disposed within a riser string and comprising a single terminal end; and

a tieback connector configured to be coupled to the single terminal end of the casing string, wherein the tieback connecter comprises:

a locking mechanism configured to physically mate with the single terminal end of the casing string, wherein the physical mating of the locking mechanism with the single terminal end of the casing string directly couples the tieback connector to the single terminal end of the casing string when the locking mechanism is engaged; and

a sealing mechanism configured to contact the single terminal end of the casing string to fluidly seal an area around the single terminal end of the casing string, wherein the locking mechanism and the sealing mechanism are disposed at separate positions along a vertical orientation of the tieback connector.

12. The system of claim 11, wherein casing string comprises a plurality of pipe segments, wherein the single terminal end comprises an adapter coupled to at least one pipe segment of the plurality of segments.

13. The system of claim 11, wherein the locking mechanism comprises first locking features, wherein the single terminal end of the casing string comprises second locking features configured to interact with the first locking features.

14. The system of claim 13, wherein the second locking features extend for a first distance along the vertical orientation of the tieback connector that is greater than a second distance at which the first locking features extend along the vertical orientation of the tieback connector.

15. The system of claim 11, wherein the tieback connecter comprises a rod configured to engage into a first position in a central aperture region of the tieback connector to contact the single terminal end of the casing string with the rod.

16. The system of claim 11, wherein the sealing mechanism comprises a hydraulic packer, and wherein the single terminal end of the casing string comprises a plate configured to engage with the hydraulic packer to form a fluid seal.

17. The system of claim 11, wherein the single terminal end of the casing string comprises a chevron seal or a lip seal, and wherein the sealing mechanism comprises a plate configured to engage with the chevron seal or the lip seal to form a fluid seal.

18. The system of claim 11, comprising a second tieback connector disposed at a second terminal end of the casing string.

19. The system of claim 18, comprising a surface blowout preventer coupled to the second tieback connector.

20. A method, comprising:

engaging a locking mechanism of a tieback connector to physically mate the locking mechanism with a single terminal end of a casing string internal to a riser to directly couple the tieback connector to the single terminal end of the casing string when the locking mechanism is engaged; and

engaging a sealing mechanism of the tieback connector to contact the single terminal end of the casing string to fluidly seal an area around the single terminal end of the casing string, wherein the locking mechanism and the sealing mechanism are disposed at separate positions along a vertical orientation of the device.

21. The method of claim 20, comprising engaging a rod of the tieback connector in a first position in a central aperture region of the tieback connector to engage the single terminal end of the casing string with the rod.