CLAIMS

1. A method for providing a positive indication of wellhead member setting, comprising:

(a) providing at least one positive indicator assembly in the wellhead member, the indicator assembly having an indicator stem that moves from an extended to a retracted position;

(b) providing a communication line between the positive indicator assembly and a surface platform, the communication line having a first end at the surface platform and a second end at the positive indicator assembly;

(c) running the wellhead member on a running tool to a predetermined location within a wellhead;

(d) landing a downward facing shoulder of the wellhead member on an upward facing shoulder of the wellhead; then

(e) moving the indicator stem to the retracted position in response to contact of an end of the indicator stem with the upward facing shoulder of the wellhead; and

(f) transmitting an indication through the communication line that the indicator stem has moved to the retracted position.

2. The method of claim 1, wherein step (b) comprises:

venting fluid pressure in the communication line; and

detecting a resultant pressure drop in the communication line at the surface platform.

3. The method of claim 1, wherein:

step (a) comprises providing a landing and a setting positive indicator assembly, each having an indicator stem;

step (d) further comprises moving an actuation sleeve of the wellhead member axially downward to urge a locking member of the wellhead member radially outward into engagement with a profile in the wellhead; and

step (e) further comprises moving the indicator stem of the locking positive indicator assembly to the retracted position in response to contact of an end of the indicator stem with the actuation sleeve of the wellhead member.

4. The method of claim 1, wherein step (b) further comprises supplying fluid pressure to the communication flow line.

5. The method of claim 1, wherein when the indicator stem is in the extended position, the communication line is closed at the second end thereof.

6. The method of claim 1, wherein when the indicator stem is in the retracted position, the communication line is open at the second end thereof.

7. The method of claim 1, wherein the positive indicator assembly includes an annular indicator housing that surrounds a portion of the indicator stem and has a sealing surface, and wherein the indicator stem has a radially protruding shoulder that seals against the sealing surface of the indicator housing when the indicator stem is in the extended position, thereby closing the communication line.

8. The method of claim 7, wherein the positive indicator assembly includes a spring that contacts the indicator stem and pushes the indicator stem into the extended position so that the shoulder of the indicator stem seals against the sealing surface of the indicator housing.

9. A method for providing a positive indication of wellhead member setting, comprising:

(a) providing at least one positive indicator assembly in the wellhead member, the indicator assembly having an indicator stem that moves from an extended to a retracted position;

(b) providing a communication line between the positive indicator assembly and a surface platform, the communication line having a first end at the surface platform and a second end at the positive indicator assembly;

(c) running the wellhead member on a running tool to a predetermined location within a wellhead;

(d) moving an actuation sleeve of the wellhead member axially downward—to urge a locking member of the wellhead member radially outward into engagement with a profile in the wellhead; then

(e) causing the indicator stem to move to the retracted position in response to contact of an end of the indicator stem with the actuation sleeve; and

(f) transmitting an indication through the communication line that the indicator stem has moved to the retracted position.

10. The method of claim 9, wherein when the indicator stem is in the extended position, the communication line is closed at the second end thereof.

11. The method of claim 9, wherein when the indicator stem is in the retracted position, the communication line is open at the second end thereof.

12. The method of claim 9, wherein the positive indicator assembly includes an annular indicator housing that surrounds a portion of the indicator stem and has a sealing surface, and wherein the indicator stem has a radially protruding shoulder that seals against the sealing surface of the indicator housing when the indicator stem is in the extended position, thereby closing the communication line.

13. The method of claim 12, wherein the positive indicator assembly includes a spring that contacts the indicator stem and pushes the indicator stem into the extended position so that the shoulder of the indicator stem seals against the sealing surface of the indicator housing.

14. A method for providing a positive indication of wellhead member setting, comprising:

(a) providing at least one positive indicator assembly in the wellhead member, the indicator assembly having an indicator stem that moves from an extended to a retracted position;

(b) providing a communication line between the positive indicator assembly and a surface platform, the communication line having a first end at the surface platform and a second end at the positive indicator assembly;

(c) running the wellhead member on a running tool to a predetermined location within a wellhead;

(d) landing a downward facing shoulder of the wellhead member on an upward facing shoulder of the wellhead, and moving an actuation sleeve of the wellhead member axially downward to urge a locking member of the wellhead member radially outward into engagement with a profile in the wellhead; and

(e) moving the indicator stem of the landing positive indicator assembly to the retracted position in response to contact of an end of the indicator stem with the upward facing shoulder of the wellhead, and moving the indicator stem of the locking positive indicator assembly to the retracted position in response to contact of an end of the indicator stem with the actuation sleeve of the wellhead member, and

(f) transmitting an indication through the communication line that the indicator stem has moved to the retracted position.

15. The method of claim 14, wherein when the indicator stem is in the extended position, the communication line is closed at the second end thereof.

16. The method of claim 14, wherein when the indicator stem is in the retracted position, the communication line is open at the second end thereof.

17. The method of claim 14, wherein the positive indicator assembly includes an annular indicator housing that surrounds a portion of the indicator stem and has a sealing surface, and wherein the indicator stem has a radially protruding shoulder that seals against the sealing surface of the indicator housing when the indicator stem is in the extended position, thereby closing the communication line.

18. The method of claim 17, wherein the positive indicator assembly includes a spring that contacts the indicator stem and pushes the indicator stem into the extended position so that the shoulder of the indicator stem seals against the sealing surface of the indicator housing.