CLAIMS

What is claimed is:

1. An orientation indicating device, comprising:

a housing defining a first flow channel and being arrangeable within a wellbore tubular;

an orientor rotatably arranged within the housing and defining a second flow channel in fluid communication with the first flow channel; and

an eccentric weight arranged within the orientor and having a center of mass radially offset from a rotational axis of the orientor, the eccentric weight being configured to maintain the orientor pointing in one direction as the housing and the wellbore tubular are rotated,

wherein, as the housing rotates, the first and second flow channels become progressively aligned or misaligned.

2. The device of claim 1, further comprising:

an upper sealing device arranged at an uphole end of the housing; and

a lower sealing device arranged at a downhole end of the housing, the upper and lower sealing devices being configured to sealingly engage an inner wall of the wellbore tubular.

3. The device of claim 2, wherein at least one of the upper and lower sealing devices is a wiper plug that provides a one or more wipers configured to engage the inner wall of the wellbore tubular.

4. The device of claim 1, further comprising one or more securing devices that secure the housing to the wellbore tubular at least one of axially and rotationally.

5. The device of claim 4, wherein the one or more securing devices comprises:

a tab securable to the housing; and

a releasable device that secures the tab to the wellbore tubular.

6. The device of claim 1, further comprising:

a thrust bearing configured to secure the orientor against axial loads within the housing; and

at least one radial bearing configured to allow the orientor to rotate about the rotational axis with respect to the housing.

7. The device of claim 1, wherein a cross-sectional shape of the first and second flow channels is at least one of circular, arcuate, polygonal, or any combination thereof.

8. The device of claim 1, wherein a downhole end of the housing has a plurality of teeth defined thereon.

9. A well system, comprising:

a wellbore tubular extendable within a wellbore and having a downhole structure coupled thereto;

an orientation indicating device arranged within the wellbore tubular and comprising :

a housing defining a first flow channel and being azimuthally aligned with the downhole structure;

an orientor rotatably arranged within the housing and defining a second flow channel in fluid communication with the first flow channel; and

an eccentric weight arranged within the orientor and having a center of mass radially offset from a rotational axis of the orientor such that the eccentric weight maintains the orientor pointing to a high side of the wellbore,

wherein a fluid is circulated through the wellbore tubular and the orientation indicating device as the wellbore tubular is rotated within the wellbore, and

wherein, as the wellbore tubular rotates, the first and second flow channels become progressively aligned or misaligned and thereby generate a pressure differential across the orientation indicating device that can be measured to determine whether the downhole structure is moved to a desired angular orientation within the wellbore.

10. The well system of claim 9, wherein the downhole structure is at least one of a window, a latch coupling, and an alignment tool.

11. The well system of claim 9, wherein the desired angular orientation is the high side of the wellbore.

12. The well system of claim 9, wherein the orientation indicating device further comprises:

an upper sealing device arranged at an uphole end of the housing; and a lower sealing device arranged at a downhole end of the housing, the upper and lower sealing devices being configured to sealingly engage an inner wall of the wellbore tubular.

13. The well system of claim 12, further comprising a latch profile arranged on the wellbore tubular, wherein the orientation indicating device is arranged such that the latch profile axially interposes the upper and lower sealing devices.

14. The well system of claim 9, wherein a decrease in the pressure differential across the device is an indication that the desired angular orientation has been achieved.

15. The well system of claim 9, wherein an increase in the pressure differential across the device is an indication that the desired angular orientation has been achieved.

16. A method, comprising:

introducing a wellbore tubular into a wellbore, the wellbore tubular having a downhole structure coupled thereto and an orientation indicating device arranged within the wellbore tubular, the orientation indicating device having a housing defining a first flow channel, an orientor rotatably arranged within the housing and defining a second flow channel in fluid communication with the first flow channel, and an eccentric weight arranged within the orientor and having a center of mass radially offset from a rotational axis of the orientor;

maintaining the orientor pointing to a predetermined orientation of the wellbore as the eccentric weight is acted upon by gravitational forces;

circulating a fluid through the wellbore tubular and the orientation indicating device;

measuring a pressure differential generated across the orientation indicating device while circulating the fluid;

rotating the wellbore tubular within the wellbore while circulating the fluid and thereby progressively aligning or misaligning the first and second flow channels; and

measuring a change in the pressure differential across the orientation indicating device as the wellbore tubular is rotated and thereby

determining if the downhole structure is moved to a desired angular orientation within the wellbore.

17. The method of claim 16, wherein introducing the wellbore tubular into the wellbore is preceded by azimuthally measuring or aligning the orientation indicating device with the downhole structure.

18. The method of claim 16, wherein measuring the change in the pressure differential across the orientation indicating device comprises detecting a decrease in the pressure differential to indicate that the downhole structure has moved to the desired angular orientation within the wellbore.

19. The method of claim 16, wherein measuring the change in the pressure differential across the orientation indicating device comprises detecting an increase in the pressure differential to indicate that the downhole structure has moved to the desired angular orientation within the wellbore.

20. The method of claim 16, further comprising:

pumping a cement slurry through the orientation indicating device for a cementing operation in the wellbore;

releasing the orientation indicating device from engagement with the wellbore tubular with one or more cement wiper plugs;

advancing the orientation indicating device to a bottom of the wellbore; and

drilling through the orientation indicating device following the cementing operation.

21. The method of claim 16, wherein the orientation indicating device further comprises an upper sealing device arranged at an uphole end of the housing and a lower sealing device arranged at a downhole end of the housing, the method further comprising :

arranging the orientation indicating device within the wellbore tubular such that the upper and lower sealing devices axially encompass a latch profile provided on an inner wall of the wellbore tubular; and

engaging the inner wall of the wellbore tubular with the upper and lower sealing devices.