of the offshore platform. However, while increasing the waterplane area of an offshore platform may increase its stability (e.g., its ability to resist sway (lateral/side-to-side motion) and surge (longitudinal /front-and-back motion) imparted by maritime conditions), increasing the waterplane area of the offshore platform may also increase its susceptibility to heave (e.g., vertical/up-and-down motion). Solutions to address heave in the offshore platform and/or affecting components thereon are desirable.

## SUMMARY

**[0004a]** According to a first aspect, there is provided a system, including: a first structure configured to be coupled to a tubular string extending to a seafloor, wherein the first structure includes a drill floor; and a second structure configured to provide a lateral force to the first structure while allowing for vertical movement between the first structure and the second structure relative to the seafloor.

**[0004b]** According to a second aspect, there is provided a system, including: a first structure, including: a drill floor; one or more beams coupled to and disposed about the drill floor; and one or more upper beams coupled to the one or more beams; and a second structure disposed at least partially around the first structure, wherein the second structure contacts the first structure to provide a lateral force to the first structure while allowing for vertical movement between the first structure and the second structure while maintaining a predetermined distance between the first structure and a seafloor.

**[0004c]** According to a third aspect, there is provided a tangible, non-transitory computer-readable medium having computer executable code stored thereon, the computer executable code including instructions to cause a processor to: receive data related to operational characteristics of a portion of an actuation system, wherein the operational characteristics indicate tension or load on a line coupled to a first structure that moves vertically relative to a second structure laterally supporting the first structure; determine if the operational characteristics are acceptable; determine an adjustment value as a control signal when the operational characteristics are not determined to be acceptable; and transmit the control signal to control at least the portion of the actuation system to adjust the tension or load on the line to maintain a predetermined distance between the first structure and a seafloor while the first structure moves vertically relative to the second structure.

## BRIEF DESCRIPTION OF DRAWINGS

**[0005]** FIG. 1 illustrates an example of an offshore platform having a riser coupled to a blowout preventer (BOP), in accordance with an embodiment;

**[0006]** FIG. 2 illustrates a front view a first embodiment of a drilling rig as illustratively presented in FIG. 1, in accordance with an embodiment;

**[0007]** FIG. 3 illustrates a front view of the tripping apparatus of FIG. 2, in accordance with an embodiment;

**[0008]** FIG. 4 illustrates a front view a second embodiment of a drilling rig as illustratively presented in FIG. 1, in accordance with an embodiment;

**[0009]** FIG. 5 illustrates a block diagram of a computing system of FIG. 2, in accordance with an embodiment;

**[0010]** FIG. 6 illustrates an isometric view of a third embodiment of a drilling rig as illustratively presented in FIG. 1, in accordance with an embodiment;

**[0011]** FIG. 7 illustrates an side view of the third embodiment of a drilling rig of FIG. 6, in accordance with an embodiment; and

**[0012]** FIG. 8 illustrates a flow diagram of the actuation system of the drilling rig of FIGS. 6 and 7, in accordance with an embodiment.