CLAIMS

What is claimed is:

1. A structure-supported Jackup system, comprising:

a main deck structure;

a plurality of legs movably coupled with the main deck structure;

a cantilever disposed upon the main deck structure;

a derrick disposed upon the cantilever; wherein the main deck structure, the plurality of legs, the cantilever and the derrick form a Jackup drilling unit;

two or more support base structures disposed on seabed; and

a plurality of movable supports, wherein each of the plurality of movable supports is securely coupled with either the main deck structure or one of the two or more support base structure;

so that during the process of the structure-supported Jackup system is being assembled, the plurality of movable supports is being moved to a position between the main deck structure and the two or more support base structures while the plurality of legs provide support for the Jackup drilling unit, and when the structure-supported Jackup system is assembled, the two or more support base structures provide support for the Jackup drilling unit via the movable supports, and the plurality of legs are retracted into a position out of water.

2. The structure-supported Jackup system of claim 1, wherein the support base structure is an ice resistant structure.

3. The structure-supported Jackup system of claim 2, wherein the ice resistant structure is a caisson.

4. The structure-supported Jackup system of claim 1, wherein the movable supports are securely coupled to the support base structure.

5. The structure-supported Jackup system of claim 1, wherein the movable supports are securely coupled to the main deck structure and extend from the main deck structure to a location near the top of the support base structure.

6. The structure-supported Jackup system of claim 1, wherein the two or more support base structures are interconnected to form an integrated base structure.

7. A process for assembling a structure-supported Jackup system, said process comprising:

providing two or more support base structures disposed on seabed, wherein the two or more support base structures are aligned in two opposite sides;

moving a Jackup drilling unit into a position between the two opposite sides of the two or more support base structures, wherein the Jackup drilling unit comprises

a main deck structure;

a plurality of legs movably coupled with the main deck structure;

a cantilever disposed upon the main deck structure; and

a derrick disposed upon the cantilever;

lowering the plurality of legs into the seabed;

lifting the Jackup drilling unit out of the water using the plurality of legs;

providing a movable support between the support base structure and the main deck structure so that the movable support provides support to the Jackup drilling unit; and

retracting the plurality of legs out of water.

8. The process of claim 7, wherein the support base structure is an ice resistant structure.

9. The process of claim 8, wherein the ice resistant structure is a caisson.

10. The process of claim 7, wherein the movable supports are securely coupled to the support base structure.

11. The process of claim 7, wherein the movable supports are securely coupled to the main deck structure and extend from the main deck structure to the top of the support base structure.

12. The process of claim 7 wherein the support base structures are interconnected to form an integrated base structure.

CLAIMS

1. A structure-supported jackup system, comprising:

a main deck structure;

a plurality of legs movably coupled with the main deck structure;

a cantilever disposed upon the main deck structure;

a derrick disposed upon the cantilever;

wherein the main deck structure, the plurality of legs, the cantilever and the derrick form a jackup drilling unit;

two or more support base structures disposed on seabed; and

a plurality of movable supports, wherein each of the plurality of movable supports is securely coupled with the main deck structure;

so that during a process of the structure-supported jackup system is being assembled, the plurality of movable supports extend from the main deck structure to top of the two or more support base structures while the plurality of legs provide support for the jackup drilling unit, and after the structure-supported jackup system is assembled, the two or more support base structures provide support for the jackup drilling unit via the movable supports, and the plurality of legs are retracted into a position out of water.

2. The structure-supported jackup system of claim 1, wherein the support base structures are an ice resistant structure.

3. structure-supported jackup system of claim 2, wherein the ice resistant structures are a caisson.

4. The structure-supported jackup system of claim 1, wherein the two or more support base structures are interconnected to form an integrated base structure.

5. A process for assembling a structure-supported jackup system, said process comprising:

providing two or more support base structures disposed on seabed, wherein the two or more support base structures are aligned in two opposite sides;

moving a jackup drilling unit into a position between the two opposite sides of the two or more support base structures, wherein the jackup drilling unit comprises a main deck structure;

a plurality of legs movably coupled with the main deck structure;

a cantilever disposed upon the main deck structure; and

a derrick disposed upon the cantilever;

lowering the plurality of legs into the seabed;

lifting the jackup drilling unit out of the water using the plurality of legs;

providing a movable support securely coupled with the main deck structure and extending from the main deck structure to the top of two or more support base structure; and

retracting the plurality of legs out of water.

6. The process of claim 5, wherein the support base structures are an ice resistant structure.

7. The process of claim 6, wherein the ice resistant structures are a caisson.

8. The process of claim 5 wherein the support base structures are interconnected to form an integrated base structure.