Leveraging its experience in ultra-deep water and its Turret Mooring System expertise for harsh environments, SBM Offshore sets new industry records with Turritella - a state-of-the-art FPSO:

- Deepest production unit ever installed
- World’s deepest FPSO at 2,900m
- First disconnectable system with Steel Lazy Wave Risers (SLWR)

In the event of a hurricane, the disconnectable turret enables the FPSO to quickly disconnect and safely sail away.

Turritella is SBM Offshore’s first FPSO in the Gulf of Mexico. The initial lease and operate contract is for 10 years, with extension options up to a total of 20 years.

**FPSO Specifications**

Turritella is an SBM Offshore Generation 2 design with a total fluid daily design capacity of 60,000 bopd and 15 MMscfd of gas treatment and export. The Suezmax hull can store 800,000 bopd and total topsides weight is over 7,500 tons.

**FPSO Partners:** SBM Offshore (55%), Mitsubishi Corporation (30%) and Nippon Yusen Kabushiki Kaisha (15%) are partners in the joint venture companies incorporated for the purpose of owning and operating the FPSO Turritella. SBM Offshore operates the FPSO on behalf of the JV Partners.
What’s next?

SBM Offshore is forging ahead to fill the remaining technology gaps in the industry for deepwater and HP/HT conditions – Lower Tertiary reservoirs typically have pressures of up to and in excess of 1,400 bar (20,000 psi). SBM Offshore has developed two new technologies which will enable the Gulf of Mexico to become a cost-effective reality by enabling larger disconnectable FPSOs for full field developments:

1. The MoorSpar™ allows a disconnectable turret to accommodate more steel risers and umbilicals for full field developments.

2. The Very High Pressure (VHP) Fluid Swivel allows water/or gas reinjection at pressures of 1,000 bar – well above the current industry swivels limits of 520 bar.

A number of industry firsts for Turritella draw on new and enhanced existing technologies to increase productivity, efficiency and safety levels for the FPSO.

• A key necessity for the FPSO is to be able to face the severe meteorological conditions of the GoM. SBM Offshore, in close collaboration with Shell, developed for Stones the world’s largest disconnectable buoy (Buoyant Turret Mooring), complete with several new components needed to enable the massive buoy to be safely connected and disconnected.

• This disconnectable capability also allows the FPSO to quickly resume production once the hurricane has passed the location; optimizing productivity.

• The FPSO is unique and a breakthrough technology for riser configuration with the design of this system featuring the first use of Steel Lazy Wave Risers (SLWR) with a disconnectable buoy.

• Another innovative feature developed for this project is the possibility to readjust each mooring line tension without any device installed on the FPSO. It pioneers the use of an In-line Mooring Connector (ILMC), which gives direct access to the mooring line for re-tension purposes. This feature allows more flexibility when the need arises to adjust the tension of mooring lines, including the early phase of the system installation.

SBM Offshore was honored with a prestigious Spotlight on New Technology award for its Stones FPSO Turret Mooring System (TMS) at the 2017 Offshore Technology Conference (OTC).

The FPSO’s innovative TMS incorporates a series of enabling technologies by SBM Offshore to become the deepest mooring system of any floating production unit and the first disconnectable TMS to support steel risers. These new technologies will facilitate future developments in ultra-deep water, and high pressure, high temperature reservoirs.

With more than 60 years of innovation, SBM Offshore contributes towards unlocking the Gulf of Mexico’s “Lower Tertiary” reservoirs.