

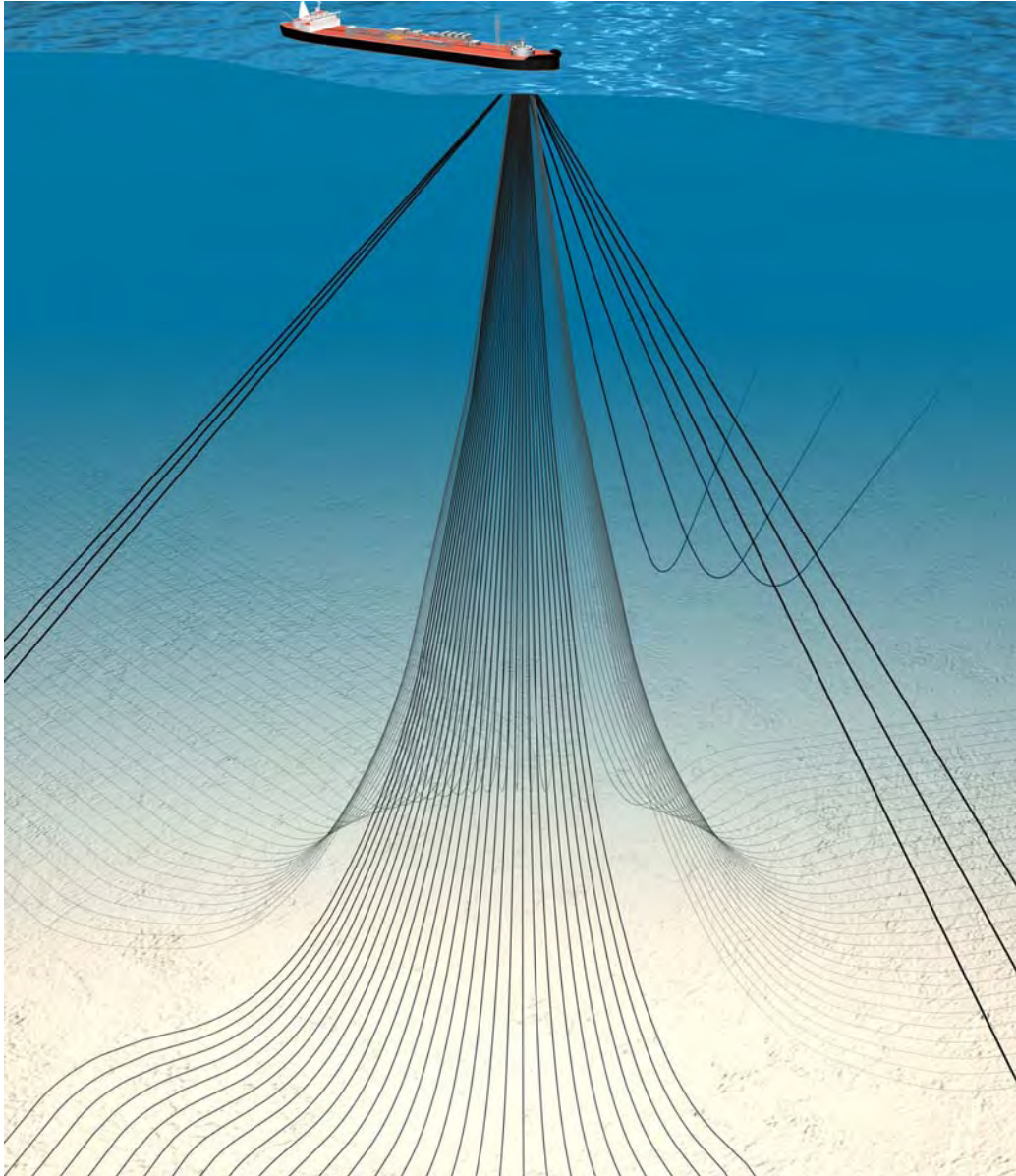
# Is DP an Option for DeepWater FPSOs?

**Arun Duggal**

**FMC SOFEC Floating Systems, Inc.**

**25 September, 2002**

# Conventionally Moored FPSOs for Ultra DeepWater



- **Uses conventional turret-mooring technology**
- **Weathervaning ability provides efficient stationkeeping**
  - **Wire/Chain: 7 – 10% WD**
  - **Polyester: 3 – 5% WD**
- **Readily adapts to ultra deepwater riser systems**
- **Low maintenance/ Low OPEX**

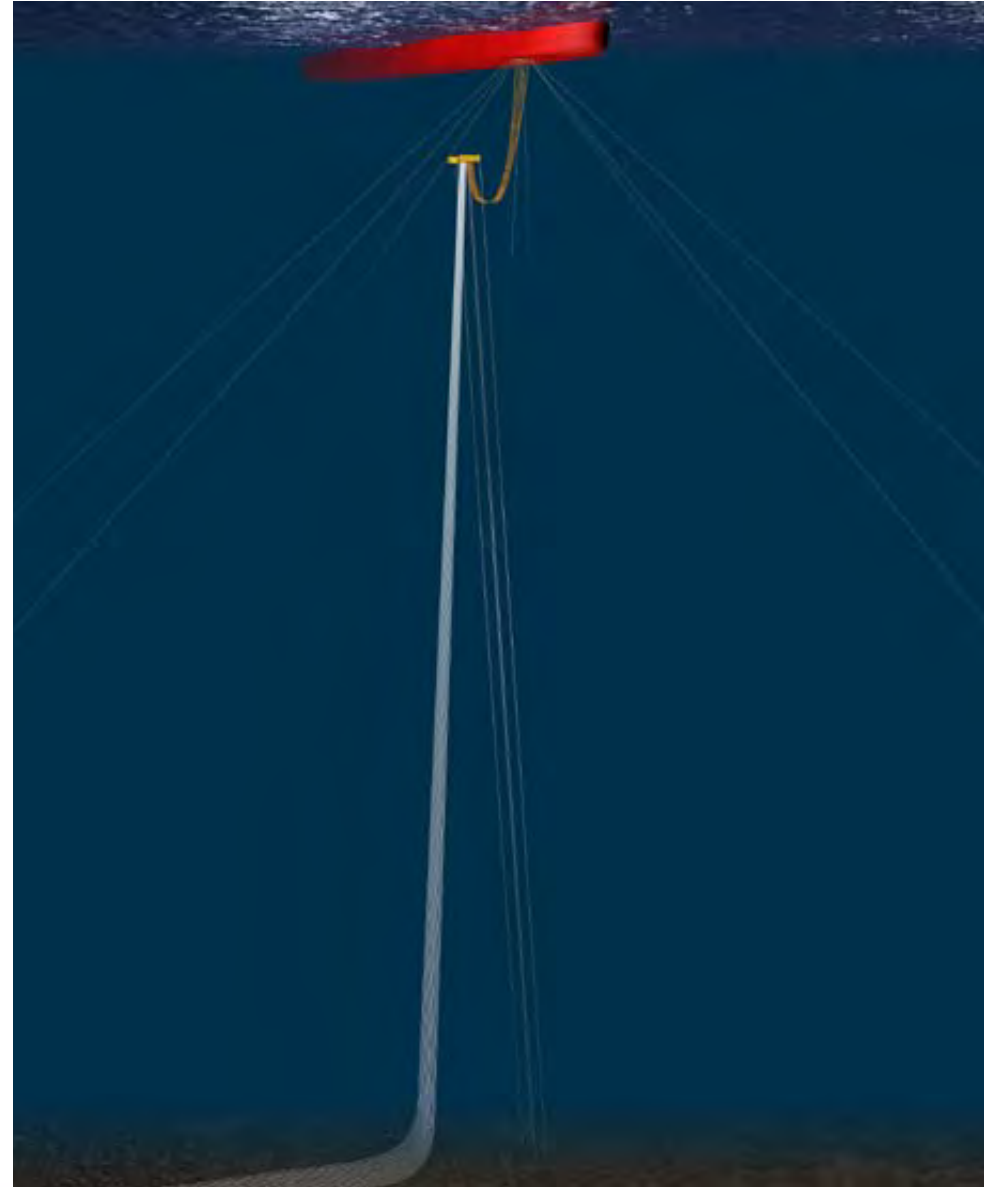
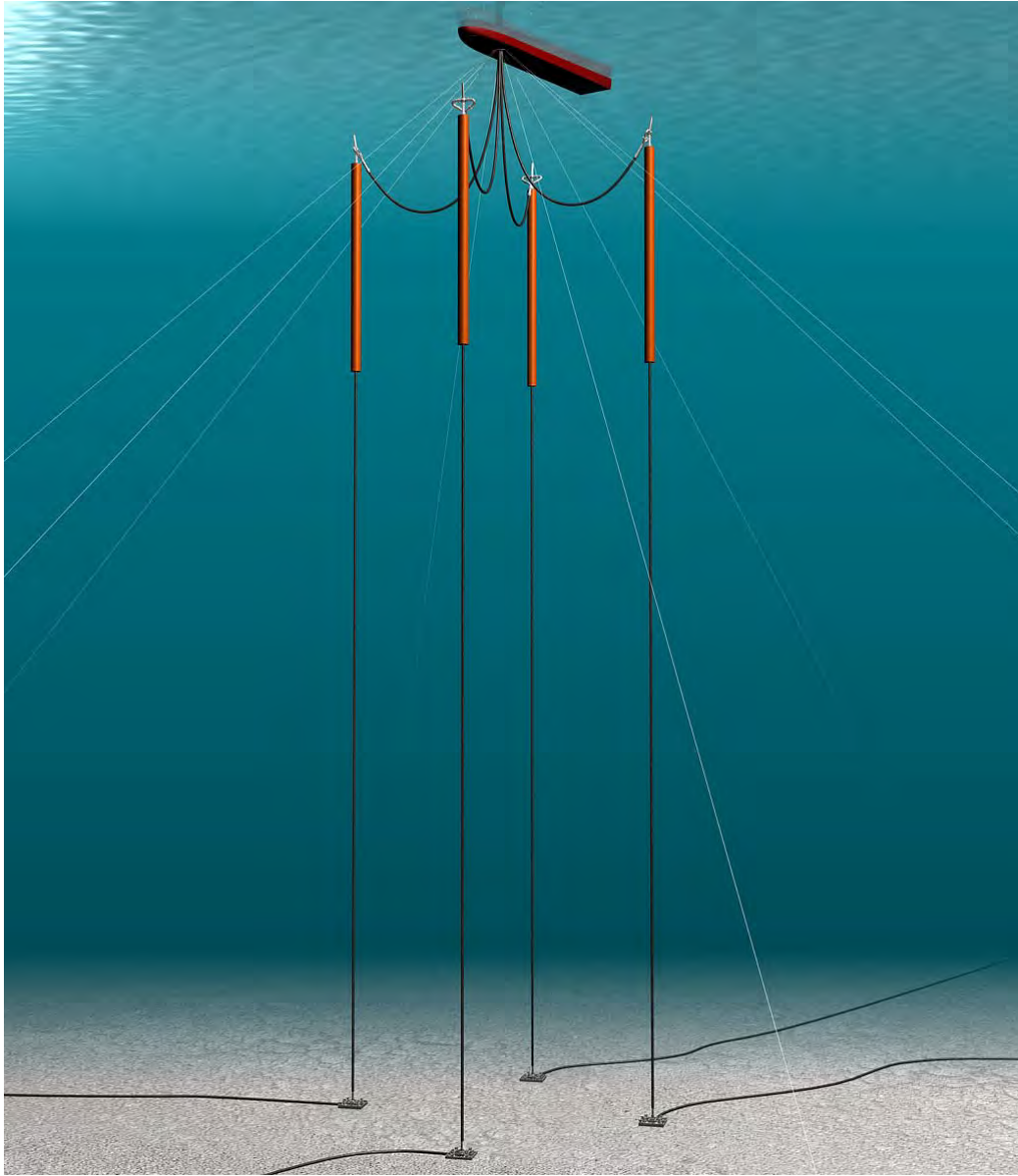
# DP Drill Ships for 10,000 feet



## Transocean Discoverer Enterprise

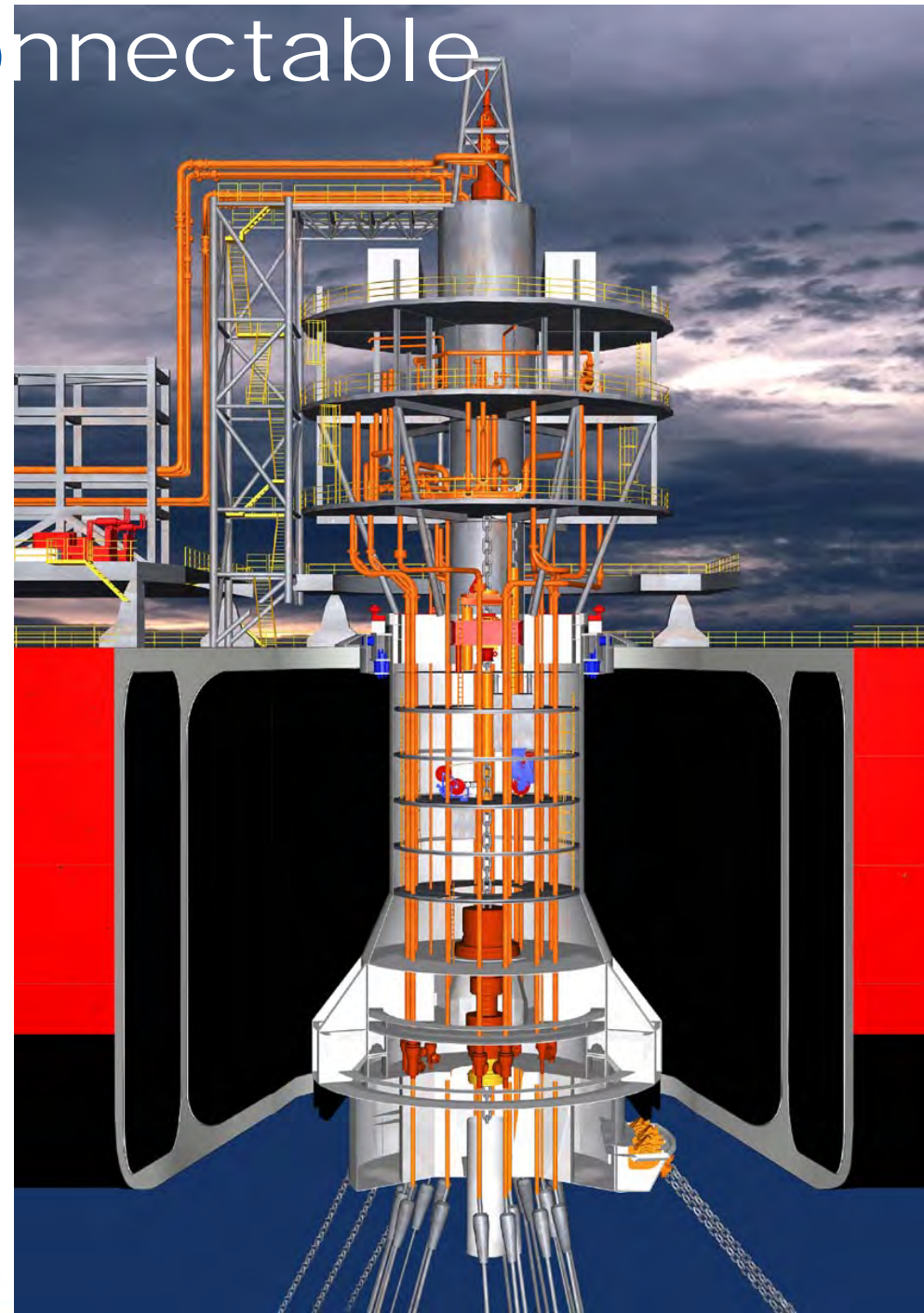
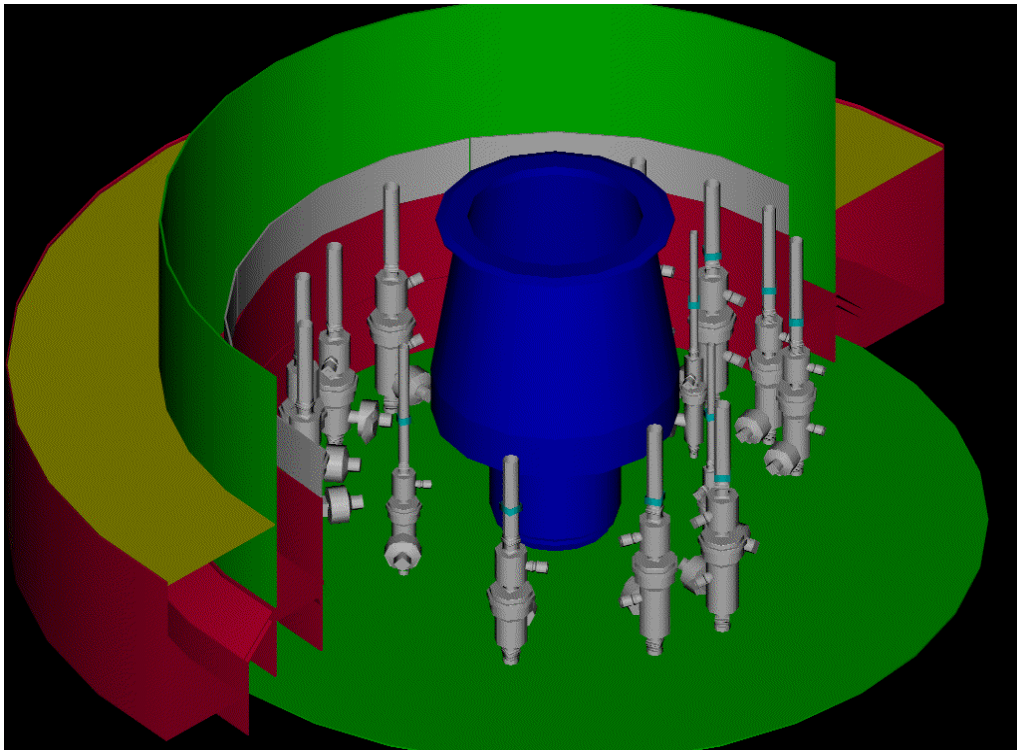
- Displacement = 100,000 MT; LxBxD: 835x125x64 feet
- Designed to stay on station for hurricane environments

# DeepWater Riser Systems for FPSOs



# High Capacity, Disconnectable Turret Systems

**Terra Nova FPSO, Grand Banks**



# Summary: DP FPSOs

## Advantages:

- Utilizes Conventional Offshore Technology
- Adapts to Ultra-Deepwater
  - No anchor leg system
  - No interference with equipment on seabed
  - Deepwater allows large offsets – easier control
- Candidate for an Early Production System
- Disconnectability allows for Easy Evacuation during Hurricanes

## Issues:

- Stationkeeping Reliability
  - Power generation system
  - Thrusters
  - Control system
  - Operators
- Maintenance
- Life of Field Costs