



# F&G's Rigs Under Construction

F&G currently have twenty (20) rigs under construction:

Four (4) 3050m ExD Semi at Jurong, Singapore

One (1) 2000m Millennium Semi at Yantai, China

One (1) 2400m Millennium Semi at Yantai, Singapore

Four (4) JU-2000E Jack-ups at Dalian, China

Two (2) Mod II Jack-ups at Dalian, China

Two (2) Super M2 Jack-ups at MIS, Sharjah

Two (2) Super M2 Jack-ups at QGM, Sharjah

Four (4) Super M2 Jack-ups at Yantai, China

Major Completion Design, Noble Bingo 9000 DP-3 Semisubmersible

Major Upgrade, COSL Kurilskaya



# F&G Jack-Up Comparison

## SUPER M2

Water depth 300 ft  
Max wave height - 50 ft  
Wind velocity - 100 knots

## JU-2000E

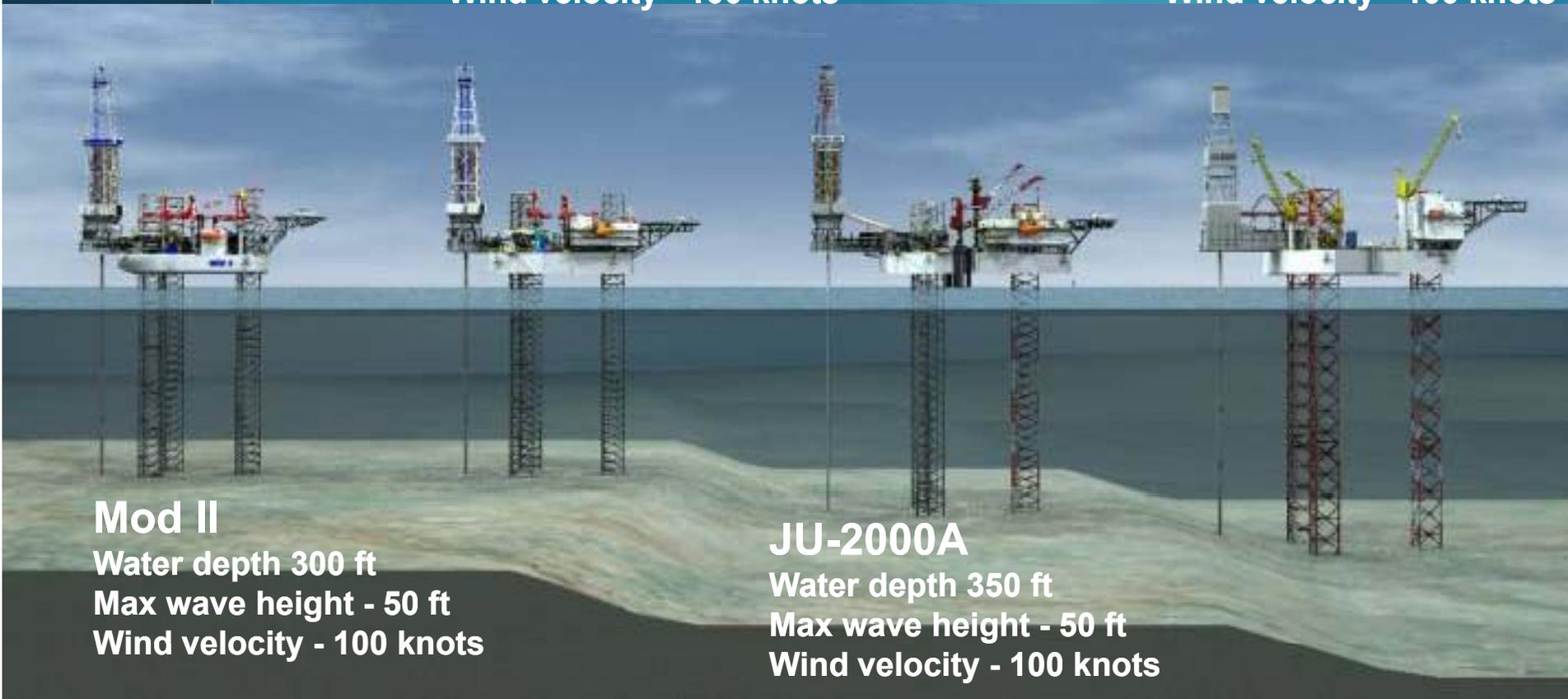
Water depth - 400 ft  
Max wave height - 50 ft  
Wind velocity - 100 knots

## Mod II

Water depth 300 ft  
Max wave height - 50 ft  
Wind velocity - 100 knots

## JU-2000A

Water depth 350 ft  
Max wave height - 50 ft  
Wind velocity - 100 knots



# Millennium DP2

## 2000m WD

Semisubmersible Design





# General Description

The Millennium is a 5th generation semi-submersible drilling unit designed by F&G. The configuration consists of twin-hull pontoons with four (4) corner columns which support the upper deck and provide operating stability. It is an advanced design for 6560ft. (2000m) water depth for operations in Offshore Brazil. Station keeping is accomplished with a dynamically positioned DPS-2 system. Two (2) wire rope winches are provided forward for harbor mooring.



# Principal Dimensions

	<u>Feet</u>	<u>Meters</u>
Length Overall	345	105.2
Beam Overall	277	84.45
Pontoon Length	345	105.2
Pontoon Beam	59.7	18.2
Pontoon Depth	25	7.62
Column Dimensions	50x45	15x14
Upper Hull Length	225	68.6
Upper Hull Beam	220	67.07
Upper Hull Depth	26.5	8.1
Moon Pool Dimensions	25x70	8x21

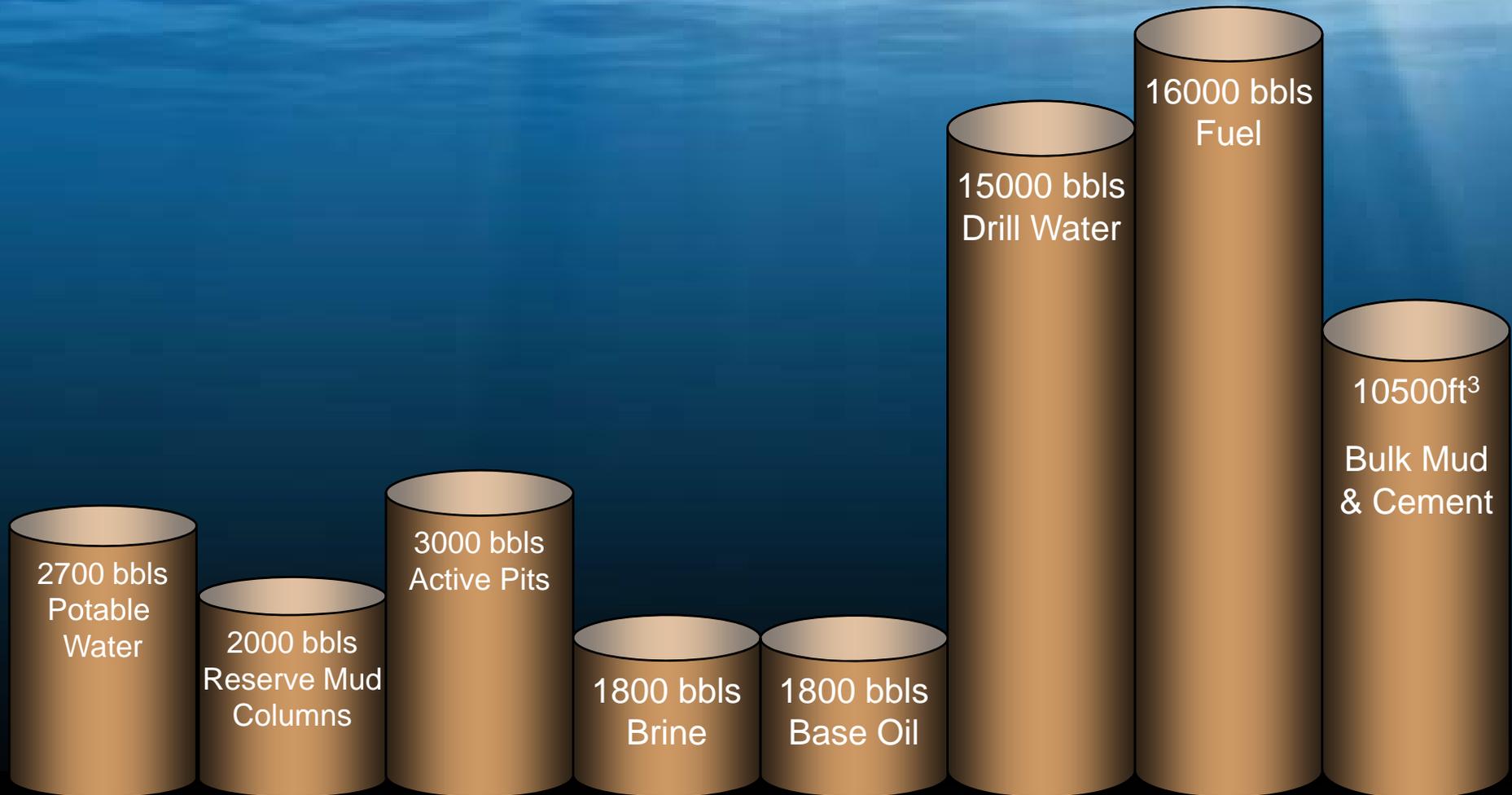


# Millennium Design Capacities

Operational Variable Deck Load	6300 mt @ 55ft.
Survival Variable Deck Load	6300 mt @ 50ft.
Transit Variable Deck Load	4600 mt @ 24ft.
Operating Wave Height	40 ft.
Operating Wind Speed	70 kts.
Survival Wave Height	70 ft.
Survival Wind Speed	100 kts.
Displacement (Lt)	
Drilling .....	36,045
Survival .....	34,778
Transit .....	25,700



# Millennium Liquid Variable





# Millennium Design Features

Increased VDL

DPS-2 Classification

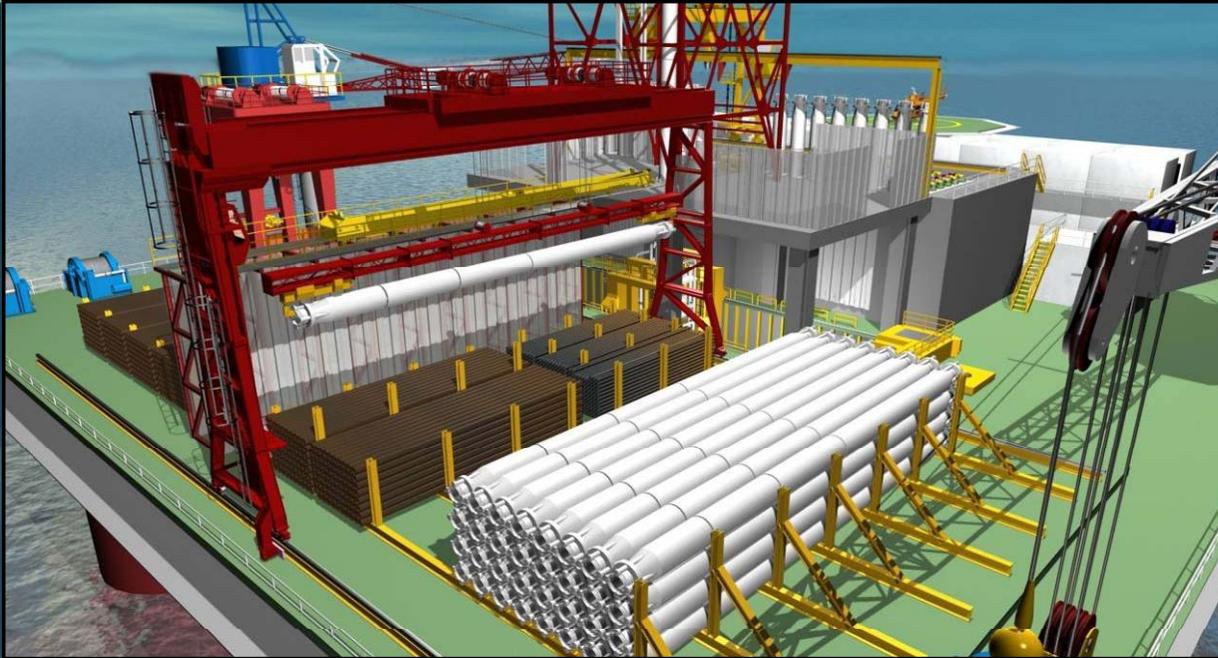
Enhanced Moonpool Functionality

Enhanced Mud Storage





# Horizontal Riser Storage

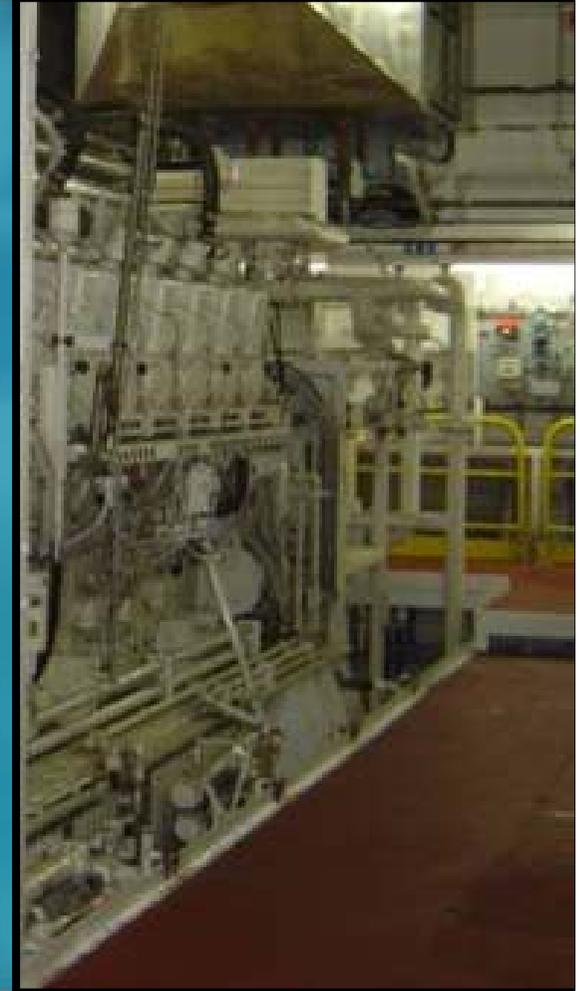


More available deck space  
Faster and safer riser handling  
Less man power required  
Lowers VCG for increased deck load



# Dynamic Positioning (optional)

- DPS 2+ providing for increased vessel safety
- Eight 2425 kW thrusters 360 degree fixed pitch variable speed azimuthing
- Two engine rooms, 3 engines per room, Caterpillar 3616 @ 4400 kW each
- Combined 10 year GOM winter storm & 10 year eddy current.
- ABS class AMS
- DP Assist





# Drilling Equipment & Systems

Derrick - 2,000,000 lbs, 14.2m x 15.8m base

Drawworks – one 6,000 hp

Rotary Table – 60 ½ in.

Crown mounted compensator – 800 kips w/ 25 ft. Stroke, 2,000 kips static load

Traveling Block – 1,000 st capacity w/ 72 in. Sheaves

Top Drive – 1,000st w/ two 1150hp AC motors

Four TRIPLEX 2200hp mud pumps at 7500 psi

BOP Stack – 18 ¾ in. x 15,000 psi

Tension Capacity – 10x250, 2,500 kips



# Station Keeping

**Mooring System**

**2 Harbor Winches**

**Wire rope**

**3" x 1650 ft**

**Dynamic Positioning**

**DPS-2**

**Thrusters**

**8 x 3250 hp**