Mobile Drilling Units of the World – Semi-Submersibles

**Emergency Power** 1 x GMC 12V71 turbo diesel 900hp driving 1 x Marathon 400kW ac generator

**OPERATING PARAMETERS**
- **Water Depth**: 2850ft (150 - 2850ft)
- **Maximum Drilling Depth**: 25000ft
- **Air Gap**: 37 - 48ft (16.065ft)
- **Transit Speed**: 4.5 knots
- **Survival Conditions**: Air gap: 48ft; wave: 85ft at 15 seconds; wind: 100 knots; current: 2.8 knots; heave: 10ft; pitch & roll: 10°
- **Drilling Conditions**: Air gap: 37ft; wave: 50ft at 12 seconds; wind: 70 knots; current: 2.8 knots; heave: 10ft; pitch & roll: 5°
- **Design Conditions**: 32° F

**DRILLING EQUIPMENT**
- **Derrick Services Inc**: 2 x 80 ton overhead crane
- **Regan KFDH**: 49½in, 500psi
- **Cameron**: 3½in od x 10,000psi with 2 x CIW adjustable and 2 x Rucker Shaffer back-up
- **Koomey hydraulic accumulator unit
- **Kongsberg Simrad subsea system**
- **Derrick Services Inc**: 2 x 80 ton overhead crane
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- **Koomey hydraulic accumulator unit
- **Kongsberg Simrad subsea system**

**DRAFT AND DISPLACEMENT**
- **Guaranteed DRAFT**: 42.71ft
- **Guaranteed Displacement**: 2,673 MTS

**OPERATING PARAMETERS**
- **Water Depth**: 2460ft

**Offrig Pioneer**

**GENERAL**
- **Name**: Offrig Pioneer
- **Flag**: Bahamas
- **Owner**: Offrig Drilling ASA
- **Manager**: Offrig Drilling ASA
- **Year Built**: 2008

**MACHINERY**
- **Propulsion**: 6 x Kaplan LIPS thruster, variable speed, fixed pitch

**OPERATING PARAMETERS**
- **Water Depth**: 2460ft
- **Maximum Drilling Depth**: 25000ft
- **Transit Speed**: 10 knots
- **Survival Conditions**: Wind: 51.5 m/s
- **Drilling Conditions**: Wind: 36 m/s
- **Design Conditions**: -20°C to +35°C air temperature

**DRILLING EQUIPMENT**
- **Derrick**: 580 ton
- **Drawworks**: National Oilwell AHD-500-4600
- **Rotary National Oilwell D-605
- **Top Drive National HPS-650-E-AC-SG
- **Handling National Oilwell, rotating vertical column HR-III
- **Riser Tensioners**: 4 x double unit, 427 ton
- **Guideline Tensioners**: 4 x constant tension winch, each 7.1 ton
- **Motion Compensators**: Active heave compensated drawworks

**CAPACITIES**
- **Variable Deck Load**: (4,942,000 lb) drilling; 1562 ton transit
- **Tubulars in Pipe Rack**: 8240ft

**SUBSEA SYSTEMS**
- **BOP Cameron 18¼in single stack; 4 x 18¼in 10,000psi Cameron U double ram preventer; 2 x Rucker Shaffer 21½in spherical
- **BOP Handling Derrick Services Inc**: 2 x 80 ton overhead crane
- **Control System**: Koomey hydraulic accumulator unit
- **Riser Details**: Vetco MRE-21in x 50ft
- **Diverters**: Regan KFDH 49½in, 500psi
- **TV System**: Kongsberg Simrad subsea system
- **Positioning**: Sonardyne acoustic position indicator
- **Choke and Kill**: Cameron 3½in x 10,000psi with 2 x CIW adjustable and 2 x power choke

**MOORING**
- **Winches**: 8 x Skagit ETW 300/44 double drum wildcat windlass
- **Wire/Chain**: 8 x 2500ft x 2½in diameter steel stud chain; 8 x 5500ft x 3in diameter wire rope
- **Anchors**: 6 x Bruce and 2 x Steyprius, 22,000 lb
- **CRANE/A**: 2 x SeaTrax 6024 with 120ft boom, 50 ton at 20ft, 10.2 ton at 125ft; 1 SeaTrax 6024 with 80ft boom
- **HELIDECK**: 5-61; 66ft diameter octagonal
- **MOONPOOL**: 80ft x 30ft
- **ACCOMMODATION**: 100 berths + 2-berth hospital
- **ADDITIONAL DATA**: 1. Natural heave period: 21 sec; natural pitch period 30 sec; natural roll period 34 sec. 2. Sewage treatment system: Omnipure 5100/5100ft³
- **Survival Draft**: 48ft; wave: 85ft at 15°
- **Water Depth**: 6560ft
- **Survival Conditions**: 5100/5100ft³

**OPERATING PARAMETERS**
- **Water Depth**: 6560ft

**Odebrecht Semisub TBN 1**

**GENERAL**
- **Name**: Odebrecht Semisub TBN 1
- **Owner**: Odebrecht Perfuracoes Ltda
- **Manager**: Odebrecht Perfuracoes Ltda
- **Year Built**: 2009

**MACHINERY**
- **Propulsion**: 6 x Kaplan LIPS thruster, variable speed, fixed pitch

**OPERATING PARAMETERS**
- **Water Depth**: 6560ft

**Offrig Innovator**

**GENERAL**
- **Name**: Offrig Innovator
- **Owner**: Offrig Drilling ASA
- **Manager**: Offrig Drilling ASA
- **Year Built**: 2008

**MACHINERY**
- **Propulsion**: 6 x Kaplan LIPS thruster, variable speed, fixed pitch

**OPERATING PARAMETERS**
- **Water Depth**: 6560ft

**Subsea Systems**
- **BOP Shaffer 18¼in; 1 x annular 10,000psi; 5 x NKT BOPs 15,000psi
- **BHP Handling**: 2 x 123 ton overhead crane, 246 ton moonpool skid, underhill guiding, bulkhead guiding
- **Control System**: Shaffer 3000psi pilot operated and Simrad acoustic emergency back-up
- **Riser Details**: Shaffer FT-E, 21in od; 2,000,000 lb dynamic load
- **Diverter**: Shaffer 21½in 500psi WP, full bore packing unit
- **Drillpipe TBA
- **Drillcollars TBA
- **TV System TBA

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Aban Abraham

GENERAL
Name Aban Abraham
Flag Bahamas
Owner Aban Offshore Ltd
Manager Aban Offshore Ltd
Previous Name(s) Pelerin; Pelerin Explorer; Peregrine III
Year Built 1976
Builder IHC Gusto NV, Schiedam, Netherlands
Design IHC Gusto Pelican class self-propelled ice strengthened DP drillship
Classification Drv + 1A1 deep sea drill vessel; ICE B, EO prop machinery

MAIN DIMENSIONS
Length 487.7ft (LOA) 449ft (LBP)
Breadth 88.5ft
Depth 41ft

DRAFT AND DISPLACEMENT
Operating Draft 24ft Summer draft (7.5m)
Transit Draft 24ft
Operating Displacement 16192ton (16,485mt)

MACHINERY
Main Power 5 x SACM @ 3400hp each; generator: 6000V, 3000kVA
Power Distribution Dc distribution: 8 x SCR 1780amp per bridge; Ac
distribution: 440V/220V 60Hz
Emergency Power 200hp/149kW engine
Propulsion 5 x Lips transverse tunnel thrusters (3 x forward and 2 x aft) with cp,
driven by 1750hp motors

OPERATING PARAMETERS
Water Depth 6600ft
Maximum Drilling Depth 25000ft
Transit Speed 11 knots approx
Drilling Conditions 8.2ft heave; 10 sec period
Design Conditions 15.75ft heave; 10 sec period

DRILLING EQUIPMENT
Derrick Pyramid 175 x 44 x 36ft; 1,330,000 lb
Drawworks National 1625 DE with 3000hp electric drive
Rotary National C-495, 49½in opening, electric drive, 800 ton
Top Drive Varco TDS-4S
 Travelling Block/hook: Supplied by Shaffer; swivel:
National
Handling BJ Varco – Vertical
Riser Tensioners 10 x IHC Gusto 80,000 lb; maximum stroke 3.75m
Motion Compensators Shaffer 600,000 lb 25ft stroke
Cementing Dowell including 5500psi and 10,000psi triplex pumps
Mud Pumps 3 x National 12-P-160, 7in x 12in triplex single acting and 1 x
National B-P-80, triplex booster pump

CAPACITIES
Variable Deck Load 7500ton (16,800,000 lb)
Tubulars in Pipe Rack 193 x 50 x 43ft, dual activity drilling derrick, 1000 ton main hook load;
Bulk Mud/Cement 21895/21895ft³
Liquid Mud 2918bbi (464m³) max
Sacks 5465sacks (250m³) approx
Drillwater 2540bbl
Potable Water 3836bbl (609m³)
Fuel Oil 13835bbl (2126m³)
Others Brine: 603bbl

SUBSEA SYSTEMS
BOP Cameron 16½in 10,000psi
BOP Handling Hydraulic unit of 100 ton; 2 x 200 ton carriage
Control System Cameron control system
Riser Details Cameron riser 18 S/in for 4400ft
Divertor Regan KFDS 20in 500psi assembly is installed
Drillpipe As required
Drillcollars As required
TV System Thompson-CSF with various cameras incl drill string
Positioning Nautonix ASK4003 RSSD Acoustics
Choke and Kill Cameron, 10,000psi

MOORING
Anchors 2 x bow for shallow water inshore anchoring
CRANAGE 2 x AmClyde 20000, 35.7 ton at 30ft
HELIDECK 5-61ft, 62ft diameter
MOONPOOL 24ft x 27ft

DIVING SPREAD
ROV diving pool for third party
ACCOMMODATION
114 berths

Belford Dolphin

GENERAL
Name Belford Dolphin
Flag Singapore
Owner Belford Dolphin Drilling Pte Ltd
Manager Dolphin Drilling Ltd
Previous Name(s) NAVIS Explorer 1
Year Built 2000
Builder Samsung Heavy Industries, Kyungnam, South Korea
Design Hitae ASALMG Marin Sea Prince, self-propelled, DP Class 3 drillship
Classification Drv+1A1, Drilling Vessel, HELDK-SH, EO, DYNPOS AUTRO,
ICS, LCS, (DIS), F-M, Oil Storage Vessel (N), Drill (N), Crane

MAIN DIMENSIONS
Length 672ft (204.8m)
Breadth 131ft (39.9m)
Depth 64ft

DRAFT AND DISPLACEMENT
Transit Draft 27ft (min 8.0m moulded)
Operating Draft 05000ton (at 12.0m draft)

MACHINERY
Main Power 6 x B&W 16V32/40, 7200kW each; 6 x generator set, 6700kW each
 Operating Displacement 65000ton (at 12.0m draft)

OPERATING PARAMETERS
Water Depth 10000ft (3048m)
Maximum Drilling Depth 39370ft (12,000m)
Transit Speed 10 knots (approx)
Survival Conditions 100 year sea state North Atlantic
Drilling Conditions Maximum heave 9.84-16.5ft (3-5m) (amplitude) dependent
on heave period
Design Conditions North Atlantic

DRILLING EQUIPMENT
Derrick 193 x 50 x 43ft, dual activity drilling derrick, 1000 ton main hook load;
100 ton secondary hook load; 2 x crown block
### Atwood Aurora

**GENERAL**
- **Name:** Atwood Aurora
- **Owner:** Atwood Oceanics Pacific Ltd
- **Manager:** Atwood Oceanics Inc
- **Year Built:** 2008
- **Builder:** Keppel FELS, Singapore

**SUBSEA SYSTEMS**
- BOP: 2 x Upsetrom MRL-375, 37½in; 1 x Upsetrom TFM-38E, 2300hp
- Mud Pumps: 1 x Upsetrom 3-PN 1600 duplex, 1600hp; 2 x Continental Emsco TD-320/43R, 144.5ft; 286 ton

**DRILLING EQUIPMENT**
- Derrick: 2 x 13 5/8in; 1 x 13 5/8in Upsetrom VH 5000psi
- Rotary: 1 x Upsetrom DF; 1 x Upsetrom VH 2300hp
- Power Distribution: 600V switchboard with 6 x NOI Ross-Hill 2200amp drive bays

**ACCOMMODATION**
- 90 berths + 2 Hospital

### Atwood Beacon

**GENERAL**
- **Name:** Atwood Beacon
- **Owner:** Atwood Oceanics Pacific Ltd
- **Builder:** Keppel FELS, Singapore

**SUBSEA SYSTEMS**
- BOP: 2 x 18¾in Cameron 10,000psi wp single ram BOP, H2S service; 1 x Shaffer 5000psi wp 18¾in spherical BOP, H2S service
- Control System: Koomey electric/hydraulic control unit

**MOORING**
- 2 x National Oilwell 100ft x 25 ton; 1 National Oilwell 100ft x 25 ton

**DRILLING EQUIPMENT**
- Derrick: 160 x 36 x 36ft, 1,500,000 lb static hook load with 850,000 lb setback with room for 24,831ft of 5 7/8in drillpipe (upgradable to 35,000ft);

### Parameters
- **Atwood Aurora**
  - **Water Depth:** 350ft
- **Atwood Beacon**
  - **Water Depth:** 400ft (18ft min)

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**For SMR or similar text:**

**MOORING**
- Winches: 4 x 3000lb Vicinay
- Anchor winches: 2 National Oilwell 800ton; 1 National Oilwell 1000ton
- Control System: Koomey electric/hydraulic control unit

**ADDITIONAL DATA**

**ACCOMMODATION**
- 82 berths + 4-berth hospital

**MOORING**
- Anchors: 2 x 84in fast line sheave/1 each 60in dead line sheave, all grooved for 1 5/8in wire rope
- Drawworks: NOI Emsco C3 type II 3300hp with 3 x GE 752 High Torque 1100hp motor; Dynamic Regenerative braking, 1 x 36in hydraulic disc brake, 1 x Baylor 9560 eddy current brake