

# BLUEWHALE I SEMI-SUBMERSIBLE DRILLING RIG



'Bluewhale I' is an ultra deepwater drilling unit built by CIMC Raffles. It is able to operate in water depth of 3,658m, and drilling depth up to 15,250m. It is designed with dual hoisting tower and facilities with DP3 system and preliminary mooring position system. It will provide accommodation for 200 POB and can operate in 95% deepwater areas all over the world, including the Gulf of Mexico, West Africa, South Atlantic, Asia, Australia etc.





# BLUEWHALE I

## ULTRA DEEPWATER SEMI SUBMERSIBLE DRILLING UNIT

### GENERAL

Flag	: Liberia
Class	: DNV
Notation	: XA1 Column Stabilized Drilling Unit; DYNPOS AUTRO (DP3); POSMOOR ATA; CRANE; HELDK-SH; ECO; F-AM; DRILL; BWM-T

### MAIN DIMENSIONS/TECHNICAL DESCRIPTION

Weight (light ship)	: 43,725 tonnes
Displacement at Loadline	: 69,768 tonnes @ 24 m draft
Draft at Loadline	: 24 m
Hull Length	: 402 ft (123 m)
Hull Width	: 304 ft (93 m)
Moon Pool	: 44 m x 9 m
Transit Draft	: Draft 12.1 m; Displacement 51,379 t
Survival Draft and Airgap	: Draft 18 m; Displacement 61,477 t; Airgap 16.5 m

### STORAGE CAPACITIES

Fuel	: 5,346m <sup>3</sup>
Drilling Water	: 4,796m <sup>3</sup>
Potable Water	: 1,333m <sup>3</sup>
Active Liquid Mud	: 1,394m <sup>3</sup>
Mud Processing Tank	: 50m <sup>3</sup>
Brine Storage	: 1,105m <sup>3</sup>
Reserve Liquid Mud	: 1,694m <sup>3</sup>
Base Oil	: 641m <sup>3</sup>
Bulk Bentonite/Barite	: 504m <sup>3</sup> (432m <sup>3</sup> operating volume)
Bulk Cement	: 504m <sup>3</sup> (432m <sup>3</sup> operating volume)
Sack Storage	: 8,000 sacks

### PROPULSION/THRUSTERS

Thrusters	: Eight (8) Wartsila / FS3510 NU azimuth thrusters; 4.5 MW @ 720 rpm
Dynamic Positioning	: Kongsberg DP3 and Automatic Thruster Assist Position Reference: DGPS / GLONASS and HIPAP Acoustic with HAIN

### OPERATIONAL CAPABILITIES

Maximum Water Depth	: 12,000 ft (3,660 m)
Maximum Drilling Depth	: 50,000 ft (15,240 m)
Transit Speed	: Up to 10 knots; Self-propelled

### VARIABLE LOADING

Variable Load Capacity : Payload capacity of 15,700 tonnes at operating (24 m) and survival (18 m) drafts. Stability booklet for the various operational scenarios available upon

### POWER SUPPLY SYSTEMS

Rig Power Plant	: Eight (8) Wartsila Diesel Engines / 12V32; Max. continuous power 5,760 kW @ 720 rpm Eight (8) ABB AC generators / ABB-AMG 0900 LT10 LAE; Continuous power 5,530 kW @ 720 rpm; 11 kV output
Emergency Generator	: Two (2) of the main generators are assigned as emergency generators

### DERRICK AND SUBSTRUCTURE

Derrick/Mast	: NOV Cylinder Hoisting System (CHS) 1250/48 Base and Crown: 70 ft x 52 ft (21.4 m x 15.8 m) Maximum 2,800 kips (1,270 tonnes) each DC
Rotating System	: NOV / RT 755 rotary table; Max. opening of 75 ½"; Static load cap 2,750 kips; Vertical rotating load cap of 1,000 st @ 5 rpm; Max. cont. 45,000 ft-lbs
Maximum Setback Load	: Riser setback: 4,500 tonne Pipe setback: 1,800 tonne
Derrick Hoisting Equipment	: Two (2) hydraulic Cylinder Hoisting System (CHS) Towers; NOV- DHT 1250/48
Top Drive	: NOV electric TD - PS and SB; 2,500 kips; Test/working pressure of 7,500 psi; Reliance AC motor 2 x 1,340 hp; Max. continuous torque of 105,000 ft-lbs @ 130 rpm; Max. 275 rpm

### WELL CONTROL/SUBSEA EQUIPMENT

Primary BOP Stack	: Complete BOP stack; 18 ¾"; 15,000 psi;
Primary Lower Marine Riser Pkg.:	Hydraulic connector; Dril-Quip / DX10; 18 ¾"; 10,000 psi;
Secondary BOP Stack :	Hydraulic wellhead connector; Dril-Quip / DX-DW; 18 ¾"; 15,000 psi
Primary Marine Riser System :	Currently equipped for ≈ 10,000 ft water depth Marine riser and pup joints: NOV / FT-HB and HTHB; OD 21" / ID 19 ¼"
Diverter BOP :	NOV / 21-500-75-EXT; Max. bore size: 21 ¼"; 500 psi;
Choke and Kill Manifold Choke Manifold :	NOV; Min ID 3 1/16"; 15,000 psi;

### MOORING SYSTEM

Anchor Winches : Four (4) double drum (4 x 2) NOV-BLM / MW325 winches

### CRANES, HOIST AND MATERIAL HANDLING

Cranes : Two (2) Liebherr / MTC 6000-100 Lit deck cranes; 100 t @ 11.5 m  
Two (2) NOV / C2201PCE knuckle boom tubular handling cranes;  
NOV gantry crane for BOP handling; 600 t  
NOV gantry crane for XT handling; 120 t  
NOV gantry crane for Riser handling; 50 t

### HELICOPTER LANDING DECK

Dimensions	: Octagon shaped helideck; 83 ft diameter
Deck Load Capacity	: 15.6 tonne; UK CAP 437

### SAFETY EQUIPMENT

H2S monitoring system	: Autronica / GT 3000; 158 detection points
Combustible gas monitoring system	: Autronica / HC 2000; 176 detection points
Fire Fighting	: Two (2) firewater pumps; Shinko / RUP 250 M;
Survival Equipment	: Four (4) x 100 PAX Fassmer / CLX11.7 lifeboats; : 16 x 25 PAX Viking/25DK life rafts : Two(2) Fassmer/Frr 6.2 ID rescue boats

### ACCOMMODATION

Living Quarters	: 200 PAX capacity
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