



Unit : Beacon Pacific
Type: : MW Semi Submersible Drilling Unit / GM4D
Class : DnV
Built : Under construction
Rig Operator : Bluewhale Offshore

Email : marketing@bluewhaleoffshore.com



Unit Specifications

Registered Name	Beacon Pacific
Rig Type	Column Stabilized Drilling Unit (midwater)
Unit/Design/Shape	GM4D - design by Global Maritime & CIMC Raffles
Unit Flag	Flag upon contract commitment
Unit Classification/ Notations	DNV GL: +1A1 Column Stabilized Drilling Unit (N); DRILL (N); DYNPOS-AUTRO; POSMOOR-ATA; HELIDK-SH (N); CRANE (N); EO; CLEAN; ICE-T; WINTERIZED BASIC IMO registration upon contract commitment
IMO Certification	IMO registration upon contract commitment
Year of Construction	Under construction. Completion in 2018 (tentative)
Construction Yard	Yantai CIMC Raffles Offshore Ltd
Type of Positioning System	DP3; ATA; or anchored

Main Dimensions/Technical Description

Weight (light ship)	28,417 tonne
Displacement at Loadline	45,727 tonne (@ 21 m draft)
Draft at Loadline	21 meters
Hull Length	107 m
Hull Width	74 m
Moon Pool	29.1 m x 7.4 m
Transit draft	10.1 m; Displacement 32,656 t
Survival draft and Airgap	19 m; Displacement 43,826 t; Airgap 15 m

Storage Capacities

Fuel	29,436 bbls (4,680 m ³)
Drilling Water	10,881 bbls (1,730 m ³)
Potable Water	3,774 bbls (600 m ³)
Active Liquid Mud	2,937 bbls (467 m ³)
Mud Processing Tank	340 bbls (54 m ³)
Reserve Liquid Mud	4,032 bbls (641 m ³)
Bulk Bentonite/Barite	12,819 ft ³ (363 m ³)
Bulk Cement	12,501 ft ³ (354 m ³)
Sack Storage	5,500 sacks
Pipe Rack & Riser Storage Area	Pipe racks area: 130 m ² Riser racks area: 165 m ²

Propulsion/Thrusters

Thrusters	Six (6) Rolls-Royce / UCC405 azimuth thrusters; Each with Siemens 6,120 hp motors
Dynamic Positioning	Kongsberg K-Pos system; Full DP/Dynpos-AUTRO; Posmoor ATA; DP 3

Operational Capabilities

Maximum Water Depth	3,900 ft (1,200 m)
Maximum Drilling Depth	26,250 ft (8,000 m)
Transit Speed	6 knots

Variable Deck Load Capacity

Variable Deck Load Capacity	Transit VDL capacity: 3,000 tonnes Drilling VDL capacity: 4,000 tonnes Survival VDL capacity: 4,000 tonnes
-----------------------------	--

Environmental Limits

Environmental Limits	Drilling Air gap below main deck: 13 m Maximum wave height (H _s): 8 m Maximum heave (double amplitude): 15.6 m Maximum pitch (double amplitude): 5.7 degrees Maximum roll (double amplitude): 7.3 degrees
----------------------	---

Mooring System

Anchor Winches & Anchors	Four (4) NOV-BLM / MV375 double drum winches; Each @ 630 kW; Rated pull of 384 t; Stalling pull 540 t Eight (8) Bridon / DBK2 SWR 96mm anchor lines; Each @ 750 m long; DNV Offshore E-301 Anchors not installed
--------------------------	---

Marine Loading Hoses

ML System	Two (2) NOV hose reel loading station; 7 each 4" liquid hoses and 2 each 5" hoses for powder/dry bulk; Each hose 60 m long
-----------	--

Cranes, Hoist And Material Handling

Cranes	Two (2) NOV / OC3500LCE lattice boom deck cranes; 80 t @ 7.8 m; Boom length 50 m One (1) NOV knuckle boom pipe handling crane; 13.3 to 24.2 t @ radius 4.3 to 26.6m One (1) NOV BOP / LMRP/ XT overhead gantry crane; 2 x 60 tonne plus 1 x 12 tonne One (1) NOV / WU101 rig floor man-riding winch in derrick; 150 kg capacity One (1) NOV / PM150-65 man-riding winch in moonpool; 150 kg capacity
--------	---

Helicopter Landing Deck

Dimensions	Octagonal shape helideck; 91 ft diameter
Deck Load Capacity	12.6 tonne; UK CAP 437
Refueling System	System by Helifuel AS; Two (2) portable tanks; 2 x 2,900 liters
Designed For Helicopter Type	S61N; S92A; AS332L2

Auxiliary Equipment

Water Maker	Two (2) Sondex / SFD222-75; Each with a capacity of 75 tonne/day
Cargo Transfer Pumps	Two (2) fuel oil transfer pumps; Each delivering 60 m ³ /hr @ 6 bar Two (2) potable water transfer pumps; Each delivering 42 m ³ /h @ 6 bar Two (2) general SW service pumps; Each delivering 432 m ³ /h @ 12 bar

Derrick and Substructure

Derrick/Mast	NOV / Single Dynamic Bottle Neck (SDBN) [1 1/2 derrick]; Height of 63.7 m Base: 15 m x 16 m Crown: 6.1 m x 6.1 m Gross nominal capacity of 890 t; Static hook load of 680 t
Racking Platform	NOV fingerboard; Racking platform capacity of: 5 3/8" DP: 7,400 m 6 1/2" to 9 1/2" DC: 325 m
Maximum Setback Load	1,351 kips (613 tonnes)



Unit : Beacon Pacific
Type: : MW Semi Submersible Drilling Unit / GM4D
Class : DnV
Built : Under construction
Rig Operator : Bluewhale Offshore

Email : marketing@bluewhaleoffshore.com



Derrick and Substructure

Drawworks & Associated Eq.	NOV / AHD-750-5750-73.5-82-10.5 drawworks; Five (5) GE / 5GEB22A5 TEWAC 857 kW motors; Continuous power rating of 4,285 kW; 73.5" API 7K drum with 1 3/4" wire; Max. line pull (12 lines) @ 680 t
Derrick Hoisting Equipment	NOV / CBC-750 crown block and compensator system; Compensating load in hook 454 t; Crown block maximum capacity 681 t; Compensator stroke length 25 ft; AHC for CMC with cylinder stroke of 7,800 mm; Max push/pull force of 25 t @ 250 bar / 15 t @ 150 bar; Rated capacity of 680 t; 6 each 72" sheaves; grooved for 1 3/4" line size NOV / 750 travel block (7 x 72" - 1 3/4"); Rated capacity of 750 short ton; 7 sheaves
Rotating System	NOV / RST605-2G rotary table; Max. opening of 60 1/2"; Static load capacity of 907 t; Rotating load capacity of 680 t; 2-speed hydraulic; Max. continuous torque of 61 kNm
Top Drive	NOV / HPS-03 electric topdrive; 907 t; Test/working pressure of 7,500 psi; Two (2) ABB / HT motors; 2 x 746 kW; Max. continuous torque of 108 kNm

Power Supply Systems

Rig Power Plant	Six (6) Rolls Royce / B32:40V12ACD diesel engines; Max. continuous power 5,765 kW @ 720 rpm Six (6) Siemens / 1DK4143-8AM05-Z AC generators; Continuous power 6,150 kVA @ 720 rpm; 11 kV output
Compressed Air Systems	Two (2) Sperre / XA090 high pressure air compressors; Rated capacity of 100 m ³ /h; Working pressure of 30 bar; Electric prime mover; Continuous power of 20 kW Two (2) Tamrotor / TMS 235-11 EWNA FW rig air compressors; Rated capacity of 1,764 m ³ /h; Working pressure of 10 bar; Electric prime mover; Continuous power of 210 kW Two (2) Tamrotor / A 1500 low pressure bulk air compressors; Rated capacity of 1,764 m ³ /h; Working pressure of 10 bar; Electric prime mover; Continuous power of 210 kW Tamrotor air dryers with capacity to suit air compression system
Emergency Generator	Two (2) Rolls Royce / B32:40V12ACD diesel engines; Max. output 5,765 kW @ 720 rpm; air started; Max. angle of operation 25 degrees Two (2) Siemens / 1DK4143-8AM05-Z generators; Max. output 6,150 kVA @ 720 rpm

Drillstring Equipment

Tubulars	Detailed specification and inventory available upon request
Handling Tools	VBJ / BX4 drill pipe elevators; 680 t; 2 3/4" - 9 3/4" VBJ / BX4 drill collar elevators; 680 t; 2 3/4" - 9 3/4" VBJ / BX3 tubing elevators; 318 t; 9 3/4" - 20" VBJ / PS21 power DP slips; Max / Min 14" / 2 3/4" Bit Breakers up to 26" Hyratong / SW10-1 drillpipe spinner; Max / Min 9 3/4" / 3 1/2" Hyratong mud saver bucket; 2 3/4" - 6 3/4" Hydraulic CatHead; Max. linepull 20 - 147 kN Hyratong / MPT-200 and ARN/270 iron roughnecks; Max OD/Min OD 9 3/4" - 3 1/2"; Max. makeup torque of 140 kNm; Max. breakout torque of 200 kNm

Well Control/Subsea Equipment

Lower Riser Diverter Assembly	Vetco / EXF HAR H4 hydraulic connector; 18 3/4" Oilstates flex joint/riser adaptor; 21"; Max. deflection 15° NOV / Shaffer FT-E riser adaptor; 18 3/4"
Primary BOP Stack	NOV / Shaffer NXT; 18 3/4", 15,000 psi Vetco / Super HD - H4 hydraulic wellhead connector; 18 3/4"; w/ 27" inserts; Ram type preventers Five (5) NOV / Shaffer NXT preventers; 18 3/4"; 15,000 psi; 1 double and 1 tripple; Ram locks 22"; PosLock and UltraLock 2B
Primary Lower Marine Riser Pkg.	Vetco / EXF HAR H4 hydraulic connector; 18 3/4"; 10,000 psi; Hot tap for underwater intervention NOV / Shaffer Wedge Cover Spherical BOP; annular type preventer (LMRP); 18 3/4"; 10,000 psi Oilstates flex joint; 21"; Max deflection 15° NOV / Shaffer FT-E riser adapter; 18 3/4" Flex loop type connections to riser
Primary Marine Riser System	NOV / Shaffer FT-E marine riser joints; OD 21"; ID 19 3/4"; 50 ft joints; X-80 grade pipe material X-80; Min. yield strength of 75,000 psi; Rated for 1,500 m waterdepth; Six (6) bolt connections w/ tread inserts NOV / Shaffer FT-E telescopic joint; ID 21"; 5 aux. lines; Remote operated; Goosenecks; 50 ft stroke; Double seals; Onboard spare; Rotating support ring for riser tensioners with 8 connection points Oilstates / Diverter 2 Flex Joint API 21-2M FT-E; 21"; Max. deflection 15°; PCG-NOV 1000 ton marine riser spider; 60.5" PCG-NOV 1000 ton marine riser gimbal; 60.5" Hydraulic (2) and mechanical (1) riser handling tools NOV / Shaffer FT-E riser test tools
Diverter BOP	Shaffer/Oilstates / NOV 21-500-60; Max. bore size 59"; Working pressure of 500 psi; Five (5) diverter outlets; Outlet OD 16" x 3 and 8" and 6"; Insert packer ID 21 1/4"; For installation in fixed bell nipple
Subsea Support System	Eight (8) NOV riser tensioners; Each @ 54 t; Max. stroke 3,810 mm; 2" wireline; 50 ft line travel Four (4) NOV guideline systems; Capacity each tensioner 7.5 t; Max. stroke 3,050 mm; 3/4" wireline; 40 ft line travel; 550 m line storage drums Two (2) NOV pod line tensioners; Each @ 12 t; Max. stroke 3,050 mm; 1 3/16" wireline; 40 ft line travel
BOP Control System	PCG / NOV surface accumulator unit; 791 USG; 3000 psi Two (2) NOV / Triplex accumulator hydraulic pumps; Each with 75 hp electric motor; 30 USG/min @ min. operating pressure 3000 psi
Subsea Control System	Two (2) DDI hose reels; Max. storage length 1,200 m; Air motor drive Two (2) pod hoses; Each 900 m long; OD 5"
Choke and Kill Manifold	Anson; Min. ID: 3 1/6"; Max. working pressure 15,000 psi; H ₂ S service

Mud System/Bulk System

High Pressure Mud System	Three (3) NOV / 14-P-220 triplex mud pumps; Liner size 5" - 9"; Each with 2 AC motors; Continuous power rating per motor of 2,200 hp; Max. working pressure of 7,500 psi
Low Pressure Mud System	Five (5) Brandt / VSM 300 shale shakers



Unit : Beacon Pacific
Type: : MW Semi Submersible Drilling Unit / GM4D
Class : DnV
Built : Under construction
Rig Operator : Bluewhale Offshore

Email : marketing@bluewhaleoffshore.com



Mud System/Bulk System

Bulk System Three (3) NOV barite/bentonite silos; Capacities of 178 m³ / 92 m³ / 92 m³; 6 bar
 Two (2) NOV cement silos; Each with a capacity of 178 m³; 6 bar;
 Two (2) NOV surge tanks for barite/bentonite; Each with capacity of 5 m³; 5.5 bar
 One (1) BHI surge tank for cement; 2.5 m³; 6.5 bar
 All silos and tanks equipped with NOV / VC3500 load cells

Casing/Cementing Equipment

Casing Equipment Casing equipment mobilized as per contract agreement
Cementing Equipment Baker Hughes International / Electric Seahawk AC 1600 HP; Max. working pressure 15,000 psi; Max. flowrate 4.2 bbls/min @ 5,000 psi; 90 ft³ surge tank

Instrumentation/Communication

Drilling Instrumentation NOV weight indicators; 2 each
 NOV standpipe pressure Gauge; 0 - 7,500 psi
 NOV choke manifold pressure gauge; 4 each; 0 - 15,000 psi
 NOV rotary speed tachometer; 0 - 15 rpm
 NOV rotary torque indicator; Max. torque 60 kNm
 NOV motion compensator instrumentation and hook position indicator
 NOV pump stroke counters; One pump stroke indicator and one cumulative counter
 NOV tong torque indicator; 0 - 150 kNm with 1 meter arm
 NOV pit volume totalizer; Floats in active mud tanks; Floats in reserve mud tanks; Floats in mud processing tanks; Loss/gain indicator; Alarm (audio and visual)
 NOV mud flow indicator; High/low alarm (audio and visual); 2 off sensors in flowline adjacent to diverter housing
 NOV trip tank indicator; Chart recorder; Alarm
 DNH General Alarm system
 NOV Automatic Driller; NOV/ ROP auto
Rig Communication System Telephone System: 242 stations in total; FHF / Ex Resist and FHF / W Resist; Alcatel / 4019 and 4039
 NOR Electronic public address system (PAGA)
 Drillers' Talkback: Four (4) Phoneteck / 2067 and 2092 stations; Explosion proof
 Hand-held VHF Radios: Motorola / GP340Ex; 6 sets
Environmental Instrumentation Kongsberg / HMS-200 system with recorder for Temperature; Barometric pressure; Humidity; Wind speed and direction
MODU Specific Instrumentation Roll/Pitch/Heave: Kongsberg / K-pos OS + HMS with recorder
 Gyro Compass: Kongsberg / Navitwin IV
 Echo Sounder: Kongsberg / GDS 102 with recorder
 Weather Facsimile: Furuno / Fax-408 with recorder
 X-band Radar: Kongsberg; 2 each; Bandwidth 2.4 GHz
 S-band Radar: Kongsberg; Bandwidth 3.5 Ghz

Instrumentation/Communication

Radio Equipment SSB Transceiver: Three (3) Furuno / FS-2575; 120 - 960 W; 1605 kHz to 27500 kHz; Synthesized
 EPIRB: Two (2) Jotron/ Tron 40S
 VHF Radio Telephone: Three (3) Jotron / TR-20
 GMDSS; 2 W; 21 channels
 VHF Radio Transceiver: Three (3) Furuno / FM-8900S; 25 W
 Radio Beacon Transmitter: Two (2) Jotron / AIS-SART; 1W
 Aeronautical VHF Transceiver: Two (2) ICOM / IC-A210; 8W; 118 MHz - 137 MHz; Synthesized
 Watch Receiver: Furuno / NX7001
 Satellite Communication System: Furuno / Felcom-500; Inmarsat C; Facsimile link; Inmarsat Fleetbroadband; Telex link; Other capabilities
 VSAT system

Production Test Equipment

Burner Boom Two (2) Dalian TSC horizontal burner booms; Each 100 ft long; Max. wind speed (operation) 36 m/s; Burner platform size: 3,1 m x 3,1 m

Workover Tools

Workover Tools As per contract agreement

Accommodation

Offices Company Rep office @ A deck AFT
 Contractor Rep @ drill floor (with unrestricted view of drill floor)
Living Quarters 130 PAX capacity; All single occupancy cabins

Safety Equipment

Gas/Fire/Smoke Detection H₂S monitoring system: Kongsberg / K-safe
 Combustible gas monitoring system: Kongsberg / K-safe
 Two (2) portable H₂S detectors: Honeywell / GasAlert Quattro
 Two (2) explosimeters: Honeywell / GasAlert Quattro
Fire Fighting Two (2) firewater pumps; Allweiler / RVP250M; Single stage vertical centrifugal; 2 x 430 m³/h
 Four (4) Norsafe / GES50 MKIII Free Fall lifeboats; Each with 70 PAX capacity
 Eight (8) Viking / 35 DK-RS liferafts; Each with a capacity of 35 PAX
 Norsafe / Mako 655-R002 FRC / MOB; Water-jet propulsion
Survival Equipment

Pollution Prevention Equipment

Sewage Treatment EVAC / MBR vacuum system; In compliance with IMO MEPC159(55) and US Coast Guard regulations
Oily Water Separator JOWA / 3Sep OWS; 5 m³/h

Reviewer's Notes:

