

ATWOOD OSPREY



The ATWOOD OSPREY is a Friede & Goldman ExD Millennium design deepwater moored semisubmersible capable of drilling in up to 2,500 meters (8,200 ft.) of water and drilling depths to 9,750 meters (32,000 ft.). The ATWOOD OSPREY has accommodations for 200 persons, four 7,500 psi mud pumps, 1,000 ton active heave compensated drawworks, NOV TDS-100A top drive, offline pipe handling and a 18 ¾" 15 ksi BOP system with two (2) Hydril annulars and five (5) rams.

CHARACTERISTICS

Type Of Vessel	Deepwater, Moored Semisubmersible
Rig Design	F&G ExD Millennium
Water Depth	6,000 ft. / 8200 ft. (with preset mooring)
Drilling Depth	32,000
Year of Construction	2011
Variable Deck Load Operation	6,000 MT
Max Drilling Draft	65.6 ft. or 20 m (Operational drilling draft 17m/55.7')
Operating Displacement	49,750 MT (to be verified after incline)

PRINCIPAL DIMENSIONS

Length	74.4 m/244 ft.
Beam	74.4 m/244 ft.
Pontoon	108 m/354 ft.
Beam	66 ft./20.1 m
Depth	8.5 m/28 ft.
Baseline to Main Deck	36 m/118 ft.
Baseline to Pipe Rack	36 m/118 ft.
Baseline to Drill Floor	48.4 m/159 ft.

CAPACITIES

Liquid Mud Active & Reserve	15,950 bbls
Bulk Material	26,780 ft ³ plus 1,1663 ft ³ in cement day tank = 27,946 ft ³
Sack Storage	2,153 ft. ²
Drill Water	21,630 bbls
Fuel	8,890 bbls
Potable Water	10,900 bbls
Accommodations	200 persons



ATWOOD OSPREY

MOORING SYSTEM

Chain

12 x 3/4 inch grade RQ-4 flash butt welded stud link, 3,500 ft length, MBL 1,570 kips

Wire

24 x 3-5/8", 6x49, 6,000 ft length, MBL 1,609 kips; Additionally - Auxiliary four (4) Amclyde CTW362/52 triple combination traction winch/windlass includes twelve primary take up reels and twelve auxiliary wire take up reels. Traction winches rated to 623 kips at 51.7 fpm, 808 kips stall. Braking system is rated to the MBL of the wire. VFD controlled, 2 speed gearbox

Anchors

12 x 12 mt High Holding NG Stevpris (plus one spare)

Winch/Windlasses

Four (4) Amclyde CTW362/52 triple combination traction winch/windlass includes twelve primary take up reels and twelve auxiliary wire take up reels. Traction winches rated to 623 kips at 51.7 fpm, 808 kips stall. Braking system is rated to the MBL of the wire. VFD controlled, 2 speed gearbox.

DRILLING EQUIPMENT

Drawworks

NOV AHD 1000 Active Heave Drawworks System. Provides full motion compensation. 6 - GEB 22A3 air cooled AC motors 1,150 HP continuous 200% capacity parking/emergency braking in accordance with DNV-OS-E101 standards

Derrick

One (1) Loadmaster, 215' clear working height, 2,000,000 pounds API hook load with 14 lines, Max setback 1,000 short tons

Rotary Table

One (1) NOV model RST-60 1/2 with 60 1/2" opening, rated 45,000 ft-lb @ 5 rpm continuous, 15 rpm intermittent

Crown Block

Loadmaster 1,000 tons, 14 lines

Top Drive

NOV TDS-1000A, driven by GEB 20 AC motor, 63,000 foot pounds continuous torque, 96,000 foot pounds intermittent torque includes a PH 100 pipe handler and RBS-4 raised back-up system

Off Line Pipe Handling System

Dedicated offline make up area on the rig floor with necessary equipment required to make up and break out stands of drill pipe, casing and/or tubing simultaneously and independent of the main rotary. The system includes the following: (i) Dedicated NOV ST-120 hydraulic make up tool; (ii) Two (2) dedicated mouse holes; (iii) One (1) NOV model MHP-10-15,5X45 for 45' Tubulars; (iv) One (1) NOV model MHP-10-15,5X60 for 60 ft. tubulars with power elevation and centralizer; (v) Two (2) NOV Model HR-IV HydraRacker with 12.5 Te lift capacity. The system includes the following: (i) 312 stands of up to 5 7/8" triple range 3 drill pipe (total 40, 560 ft); (ii) 77 stands of 6 5/8" triple range 3 drill pipe (total 10,010 ft.); (iii) 8 stands of 8" triple range 2 drill collars (total 868 ft.); (iv) 7 stands of 10" triple range 2 drill collars (total 868 ft.); (v) 5 stands of 9 1/2" drill collars; (vi) 1 stand of bottom hole assembly (110 ft.); (vii) 63 stands of up to 13 3/8" casing (total 8,775 ft.); (viii) One (1) NOV Belly board for support of 312 stands of drill pipe; (ix) Cyber base controls for pipe handling equipment operated from driller's cabin

Derrick Access Basket

One (1) Elevated Access and Maintenance Basket

Drill Pipe

16,000 ft, range 3, S135, 5 1/2" OD, 21.9 lbs/foot, Tool joints are NKK 5 1/2" FH DSTJ connections with 7" OD x 4" ID, with Arco 300XT hardbanding; 4000' range 3, S135, 5-1/2" OD 24.7 lbs/foot, tool joints are NKK 5-1/2" FH DSTJ Connections with 7" OD x 4" ID, with Arco 300XT hard banding

Drill Collars

Drill Collars - 24 each 8" OD x 2-13/16" ID 6-5/8" Reg connections; 30 each 6-3/4" OD x 3" ID NC50 connections; 4 each 9-1/2" OD x 3" ID 7-5/8" Reg Connections

BOP EQUIPMENT

Diverter System

Hydril FS21X60, 500psi rated on pipe

Flex Joint BOP

18 3/4" with 21" class H Clip connection, 10 degree flex

Flex Joint Diverter

Hydril High Angle Diverter 11-8 500 psi WP

Riser Connector

Vetco HAR H-4 18 3/4" 10,000 psi

Annular BOP

Two (2) Hydril GX18 3/4" annulars, 10,000 psi

Ram Preventers

Two (2) Hydril 18 3/4" compact double MPL Rams 15,000 psi and one (1) Hydril 18 3/4" compact single MPL Ram 15,000 psi

Wellhead Connector

Vetco DWHD H-4 18 3/4" 15,000 psi

BOP Control Unit and MUX System

Hydril Multiplex BOP control system; Remote panels located in the Driller's Cabin and Toolpusher's office; Two (2) Hydril fully redundant multiplex control Pods; two (2) MUX hose reels with 9,500 ft of armored Mux umbilical cable; one (1) Hydraulic hot line reel designed for 9,500 ft of armored 1" supply hose; one (1) Hydril BOP Test Pump; one (1) MUX Pod test stand

Test stumps

Two (2) Vetco 18 3/4" 15,000 psi MSP stumps, one (1) is retractable

Choke & Kill Manifold

15,000 psi

RISER EQUIPMENT

Marine Riser

Eighty-eight (88) jts Aker Solutions Marine Riser Class H Clip Riser, 75 ft each, 21" OD 0.875" wall thickness, two (2) C&K lines, two (2) Hyd lines, one (1) Mud boost line

Riser Pip Joints

5', 15', 25', 50'

Slip Joints

Two (2) Aker Kvaerner Class H Clip Telescopic Joint Assembly, 21" OD Telescoping Joint x 60 ft stroke

Riser Tensioning System

Six (6) NOV Direct (In-line) Riser Tensioners, 50' stroke, 3,600 kip total capacity, one (1) NOV Tensioner control system with two (2) control panels located in the Drillers cabin and cellar deck

Nitrogen

One (1) Air Products Nitrogen Generator for low pressure application only

MUD SYSTEM

Mud Pumps

Four (4) x Lewco mud pumps model W-2215 triplex, 7,500 psi

Shale Shakers

Six (6) x Derrick Dual Pool Model 628 shale shakers

Degasser

Three (3) x Burgess Magna-Vac Model 1500 degasser, 1,000 gpm each

Mud Gas Separator

One (1) x Mud Gas Separator (Poorboy) 48" diameter x 17'

Gumbo Box

One (1) x Derrick Flo-Line Primer II, with gumbo chain scalper unit

Agitators

Sixteen (16) x Brandt agitators

Mud Guns

Sixteen (16) x Venturi type mud guns

POWER SYSTEM

Main AC Electrical System

11 kVAC distribution system for all AC rig pwr Generators - four (4) x ABB model AMG 0710LT08 LSE, 6,000 kVA, 60 HZ, Diesel Engines - four (4) x Caterpillar C280-16, output 4,800 kW each, at 900 rpm

Emergency AC Electrical System

Generator one (1) x Kato 1,250 kW 480 VAC, at 1,200 rpm generator with independent motor control center for essential services; Engine one (1) x Caterpillar 3516B direct injection, turbo-charged, after-cooled, marine generator set.

AUXILIARY EQUIPMENT

Cranes

Two (2) Seatrax Series 108 Model S10832, 170 ft booms, 230 kips at 82 ft static

Riser Gantry Crane

for handling drilling riser equipped with 2 x 25T main hooks and a 2 x 20T auxiliary hook

Tubular Gantry Crane

for handling drilling tubulars, equipped with 2 x 10T main hooks with provision to change out hooks to 8T magnets

Riser Transportation

One (1) 50 tonne Riser Catwalk Machine is provided to transport riser equipment from the Riser Gantry Crane

BOP Transporter

One (1) 425T transporter to handle and test the BOP Stack in one piece. Travel is from the BOP storage position to well center

BOP Gantry Crane

One (1) 250T Crane to move the BOP and LMRP from their main deck storage and test carts to the BOP transporter

BOP Underhull Guidance System

One (1) BOP underhull guidance system to stabilize and guide the BOP stack while raising or lowering it through the splash zone

Subsea Tree Handling System

One (1) x Transporter to move trees from storage to under the rotary. Rated capacity 100 MT

Lifeboats

6 x 70 person capacity, totally enclosed motor propelled survival craft (TEMPSC)

Rapid Deploy Rescue Craft

One (1) x Norsafe 6.55 meter MAKO 655 Diesel Jet maximum capacity six (6) persons

Extinguishers

One (1) x lot portable as per USCG/Petroleum (Submerged Lands) act requirements

Fixed Fire System

water mist extinguishing system

Gas Detection System

Kongsberg addressable system integrated into the Vessel Management System with H2S and LEL sensors

Fire Detection System

Kongsberg addressable system integrated into the Vessel Management System with a mix of smoke, rate of rise, UV (heat) and manual call points

Hole Position Indicator

Kongsberg HiPap - Acoustic Positioning System complete with differential tilt transponder

Drilling Instrumentation/Control

One (1) NOV Drillers Control Cabin w/ three (3) operators stations / chairs w/safety glass & guards. Drilling control & data acquisition /monitoring system:

Mud pump control system

Drilling data hub monitoring

Mud pit data monitoring

C & K Manifold Instrumentation

CCTV system - HERNES color cameras and monitors

Helideck

Steel 83' x 83' octagon rated for 14.6T, designed to accommodate an EH-101 helicopter in accordance with CAP 437 design parameters.

Water Distillation Unit

Three (3) Alfa-Laval Desalination Unit Model Dolphin 70 with booster heater, 19,800 gpd each

Oily Water separator

One (1) Coffin ULTRA-SEP US-5000 with monitor and strip chart to comply with 15ppm discharge requirements

Sewage treatment

Two (2) Orca 11A-165 sewage treatment units with 150 man capacity per unit complying with MARPOL and USCG requirements