

DEESEA STAVANGER

Semisubmersible Drilling Rig Ultra Deep Water and Harsh Environment

Owner: Odfjell Invest Ltd.

Manager: Odfjell Drilling

Design: Enhanced GVA 7500

Deepsea Stavanger, the new sixth generation deepwater and harsh environment semisubmersible, is under construction in South Korea and due for delivery in 2010. Its sister platform, Deepsea Atlantic, was delivered from yard in February 2009. Odfjell Invest Ltd. owns these state of the art, sixth generation, dynamic-positioned drilling units of enhanced GVA 7500 design. The units are designed for operations in harsh environments and water depths of up to 3,000 m. They are equipped with a full conventional mooring spread for operations in water depths from 70 to 500 metres.

The rigs meet the latest regulatory requirements of Norwegian NMD & PSA / UK HSE & NORSOK Technical Safety and Working Environment, and will have the following class designation:

+1A1 Column Stabilised Drilling Unit (N), DRILL (N), HELDK, CRANE, EO, DYNPOS AUTRO, POSMOOR ATA.



MAIN DIMENSIONS		
Dimensions upper hull:	90.0 m x 78.0 m	295.3 ft x 256.0 ft
Pontoon dimensions:	108.8 m x 10.2 m	357.0 ft x 33.5 ft
Pontoon no/width:	2 / 16.0 m	2 / 52.5 ft

GENERAL DATA		
Operating draft	23.0 m	75.5 ft
Air gap operation / survival	13.5 m / 17.5 m	44.3 ft / 57.4 ft
Operating displacement	55 122 mt	
Operating water depth	70 - 3,000 m	230 - 10,000 ft
Drilling depth	11,500 m	37,500 ft
Design temperatures From	-20° to +40° C	
Accommodation	158 persons in 1 and 2 bed cabins (128 on NCS)	

MATERIALS HANDLING	
Rig cranes	2 knuckle boom cranes, Port side SWL 100 t, STB side SWL 85 t
Loading stations	Hose reels on each side

MARINE SYSTEMS	
Generators	Total installed power 44MW (4 engine rooms, 2 & 4 split modus) PMS with full integration between marine and drilling systems
Power Distribution	690V motor consumers and drilling variable speed drives 440V LQ domestic consum-ers, 230V lighting and small power, 230V UPS distribution
Dynamic Positioning	IMO DP class 3 DP class 3 weather window - Beaufort 10
Posmoor ATA	8 anchors, 84 mm R5 chain Operation condition - Beaufort 10, survival condition - 100-year storm

CAPACITIES	
Variable deck loads	
Operating / survival / transit	7,500 mt
Pontoons:	
Fuel oil	3,100 m ³
Drill water	2,600 m ³
Base oil	600 m ³
Brine	1,100 m ³
Completion fluid	920 m ³
Clean drain	460 m ³
Columns:	
Bulk barite/bentonite	620 m ³
Bulk cement	280 m ³
Potable water	500 m ³
Liquid mud (WBM)	380 m ³
Liquid mud (OBM)	380 m ³
Lower deck:	
Oil based mud pits	400 m ³
Water based mud pits	400 m ³
Sacks	7,500 pce
Riser storage area	3,000 m



DRILLING SYSTEMS

The rig has a highly efficient state-of-the-art drilling system which includes a dual derrick with a main centre and an auxiliary work centre to facilitate simultaneous operations. The drilling system includes dual active heave compensating drawworks for increased performance, efficiency, safety and redundancy. The rig is equipped with a HPHT deep water BOP/MUX control system. A centre for integrated E-operations for transfer of realtime data to Onshore Support Centres (OSC) is incorporated.

- **Derrick** Dual derrick, 2,000,000 lbs, National Oilwell Varco 2 horizontal catwalks for improved pipe handling flexibility, setback for quadruple DP, setback for triple casing stands
- **Pipe handling** Dual pipehandling system on drill floor, Hydraracker HR-IV Both machines can reach all pipe racking positions and perform stand building
- **Drawworks** Main: Dual active heave comp, AC drive, 900 mt, National Oilwell Varco
Aux: Single active heave comp, AC drive, 450 mt, National Oilwell Varco
- **Top drive** 900 mt hookload, 2 AC motors, National Oilwell Varco - HPS 1000 -2E-AC-KT
- **BOP system** BOP 18-3/4" x 15,000 psi with MUX control system, Shaffer 6 ram BOP configuration, 2 shear rams with 22" x 5,000psi actuators. Separate 400mt BOP trolley and 2x 90mt overhead crane.
Separate x-mas tree trolley 100mt.
- **Riser Handling** 21" OD riser type "G", Shaffer
Horizontal riser catwalk to drilling centre
Direct cylinder riser tensioners, 1,450 mt total
Overhead crane 2x20mt for riser handling

DRILLING FLUID SYSTEMS

- **Mud pumps** 4 mud pumps, 2,200hp each, 7,500 psi, National Oilwell Varco
Mud mixing area on upper deck starboard
- **Shakers** 6 high capacity shakers, National Oilwell Varco - VSM 300

GREEN RIG FEATURES

- Enclosed derrick to prevent mud spill to clean areas
- Separate drilling area drainage
- Possibility to connect clean area to closed drain system
- Machinery area drain according to MARPOL
- Working areas enclosed and connected to closed drain system
- Sewage treatment plant according to MARPOL
- Prepared for cuttings reinjection system
- Waste management system implemented
- Low NOX emissions
- Closed loop BOP control system
- Electrical drawworks with power regeneration

CONTACT INFORMATION MOBILE OFFSHORE DRILLING UNITS

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