

MAERSK GUARDIAN



Harsh environment jack-up
Capabilities for subsea handling
HP/HT drilling



MAERSK GUARDIAN

2011 Refurbishment features

CRANES

A new NOV OC 2500L-DH crane with 27 t capacity installed at starboard side.

NEW DRILLERS CABIN.

New Drillers Cabin installed incl. new instrumentation. Digital HMI system.

TEXAS DECK

Completely new Texas Deck installed.

BOP

- New BOP cranes installed, 4 x 50 t
- New foldable decks installed on port and starboard side.
- New 18 3/4" 15,000 psi BOP
- New BOP Control Unit

LIFEBOATS AND MOB BOAT

- New Nadiro hooks installed on all 4 lifeboats.
- New MOB boat installed.

ACCOMMODATION

B-deck upgraded, new interior and heating installed in bathrooms.

MAERSK GUARDIAN

TYPE

Hitachi, ultra harsh environment jack-up drilling rig

BUILT

Hitachi, 1986

CLASS

Lloyd's Register of Shipping

FLAG

Singapore

Thoroughly modernised in 2011 **MAERSK GUARDIAN** is one of the ultra harsh environment jack-ups in Maersk Drilling's fleet. The rig is fully equipped for high pressure/high temperature

drilling (HP/HT) and is designed for year-round operation in the North Sea, in water depths up to 107 m (350 ft) with an available leg length below hull of 132 m (435 ft).

THE MAIN FEATURES OF THE MAERSK GUARDIAN INCLUDE:

- Fully equipped for HP/HT operations
- 15,000 psi BOP system – 18¾"
- Fully integrated pipe transfer and handling system
- 16.8 m (55 ft) cantilever extension capability
- Mechanised operation on drill floor



MAIN PARTICULARS

DIMENSIONS	IMPERIAL	METRIC
Length overall	277 ft	84 m
Width overall	295 ft	90 m
Depth	31 ft	9.4 m
Length of legs	515 ft	157 m
Cantilever – max. reach: aft of stern	55 ft	16.8 m
transverse (STB/PS)	11 ft / 12 ft (15 ft / 15 ft if upg.)	3.3 m / 3.6 m (4.57 m / 4.57 m if upg.)
Draught	15.7 ft	4.8 m

WEATHER/DESIGN CRITERIA	IMPERIAL	METRIC
Water depth	350 ft	107 m
Wind speed	87 knots	45 m/sec
Penetration	16.4 ft	5 m
Wave height	98.4 ft	30 m
Current (surface)	1,5 knots	0.8 m/sec
Air gap	68.8 ft	21 m

PARTICULARS	IMPERIAL	METRIC
Rated drilling depth	25,000 ft	7,620 m
Hook load static w/top drive	1,000,000 lb	453,600 kg
Rotary load	900,000 lb	408,240 kg
Setback load	600,000 lb	272,160 kg
Variable load (incl. hook load)	5,000 t	5,000 t
Derrick, beam leg type	160 ft x 30 ft x 30 ft	49 m x 9 m x 9 m
Jacking speed	1.5 ft/min	0.46 m/min
Drill water capacity	21,157 bbl	3,362 m ³
Fuel oil capacity	4,335 bbl	690 m ³
Nontoxic oil capacity	1,849 bbl	294 m ³
Brine	1,448 bbl	230 m ³
Potable water capacity	3,048 bbl	485 m ³
Liquid mud	2,500 bbl	400 m ³
Liquid mud reserve pit	3,412 bbl	546 m ³
Bulk cement capacity	5,400 ft ³	153 m ³
Bulk mud capacity	8,100 ft ³	230 m ³
Accommodation	100 persons	100 persons



DRAWWORKS

National 1320-UE 2,000 hp driven by two GE 752 DC motors with Wichita brake system.

TRAVELLING EQUIPMENT

National 500 t crown block with 5 x 60" sheaves and one 78" sheave grooved for 1½" wireline. One 84" sheave for fast line. National 660G 500 t travelling block and hook, 6 x 60" sheaves grooved for 1½" wireline.

TOP DRIVE AND PIPE HANDLING

Varco TDS-4S top drive system with PH85 pipe handler, complete with a GE 752 DC motor, 1,100 hp, max. 250 rpm. Capacity 500 t.
Varco PRS 8i pipe racking machine. Range 2⅞" - 9¾". Max. lift 10 t.
Varco pipe pick-up/lay-down machine (PL 5). Range 3 ½" – 20" consisting of pipe deck machine, pipe conveyor and pipe transfer machine.
Varco fully interlocked zone management system (ZMS).

ROTARY TABLE

National C-495, 49 ½" rotary table with hydraulic drive. Note: Hydraulic motor not for drilling.

MUD PUMPS

Three National 12P 160, triplex pumps, each driven by two GE 752 DC motors. Rating 1,600 hp, max. liner size 7 ¼", stroke length 12", speed 120 spm. Rated for 5,000 psi.

CEMENTING EQUIPMENT

Halliburton HCS 250, 25 bbl cementing unit. On free placement agreement.

WELL CONTROL EQUIPMENT

18 ¾" 15,000 psi BOP – consisting of one Shaffer 10,000 psi annular preventer, one Shaffer 15,000 psi single ram preventer, one Shaffer double ram including one shear ram preventer Reagan diverter system type KFDJ 500 psi.

MUD RETURN SYSTEM

Four Thule VSM 300 double deck shale shakers. Wellco 5200 vacuum degasser. Mud gas separator, 20 bbl capacity equipped with 10" vent line. 24" / 5,5 m (18 ft) dip tube downstream of mud gas separator.

DRIVE PIPE SUPPORT DECK

Texas deck for conductor support 15.7 x 8.5 m, 2 pieces able to skid with up to 65 t for installation of subsea equipment. For sizes 24", 26" to 30".

TENSIONER SYSTEM

Four hydraulic cylinders each with 75 t capacity capable of providing tension in the conductor in all positions inside the cantilever well pattern. Complete with accumulator bank providing continuous tension.

DRILLING INSTRUMENTATION

APPLY drilling control system with multi-parameter, alarm settings and rig sense. Digital Hml system.

POWER SUPPLY

Five Caterpillar 3516 DITA air-start diesel driven engines, 1,231 kW, each with one GE GTA 30 1,560 kVA AC generator, 1,200 rpm, 600 volts and 60 Hz.
One Caterpillar 3508 DITA diesel engine with one 480 kW AC emergency generator.

SCR SYSTEM

Hill Graham SCR system with two dual DC drive units and three single DC drive units with Sace Megamax main breaker protection.

CRANES

One NOV OC 3000 68 t@18 m. One NOV OC 2500L – DH 27 t capacity. One NOV OC 2500 45 t@15.5 m.

HELICOPTER DECK

25 m (83 ft) diameter helicopter deck suitable for Sikorsky S-61N helicopter and EH101 and S-92.

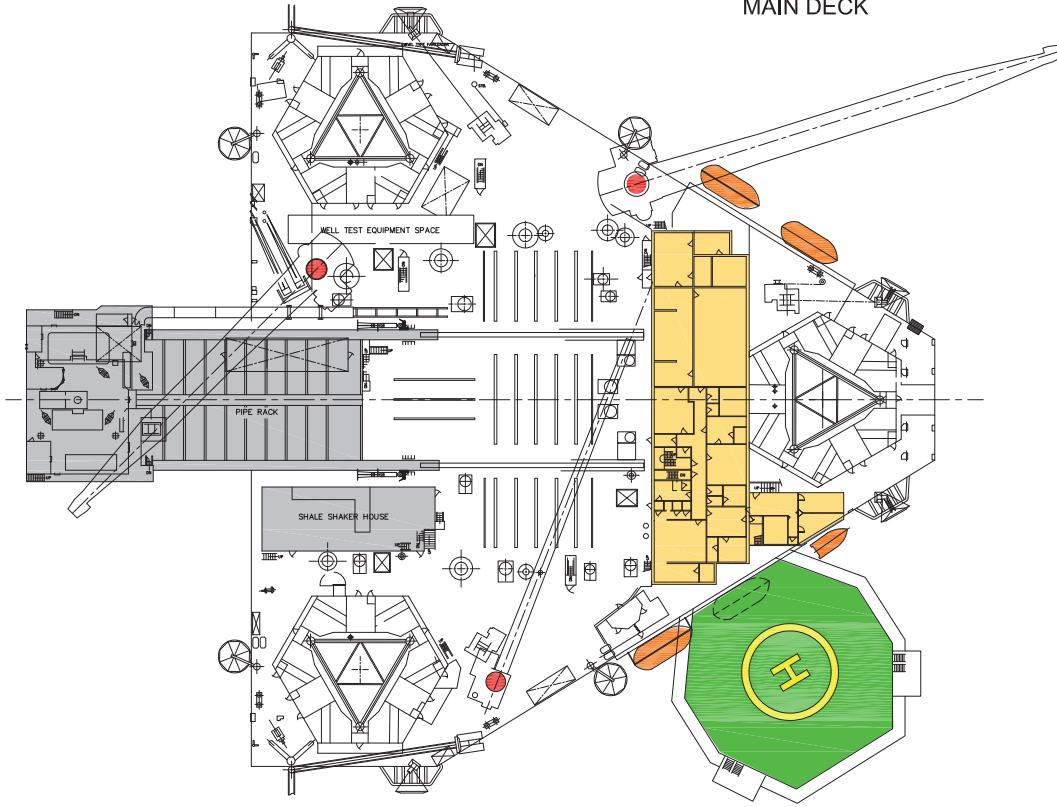
SAFETY EQUIPMENT

Lifesaving and fire fighting equipment in accordance with Danish Maritime Authority and U.K. DOE/DOT, draft of IMO MODU code 1989. The rig holds a vessel specific safety case which has been approved by HSE UK.

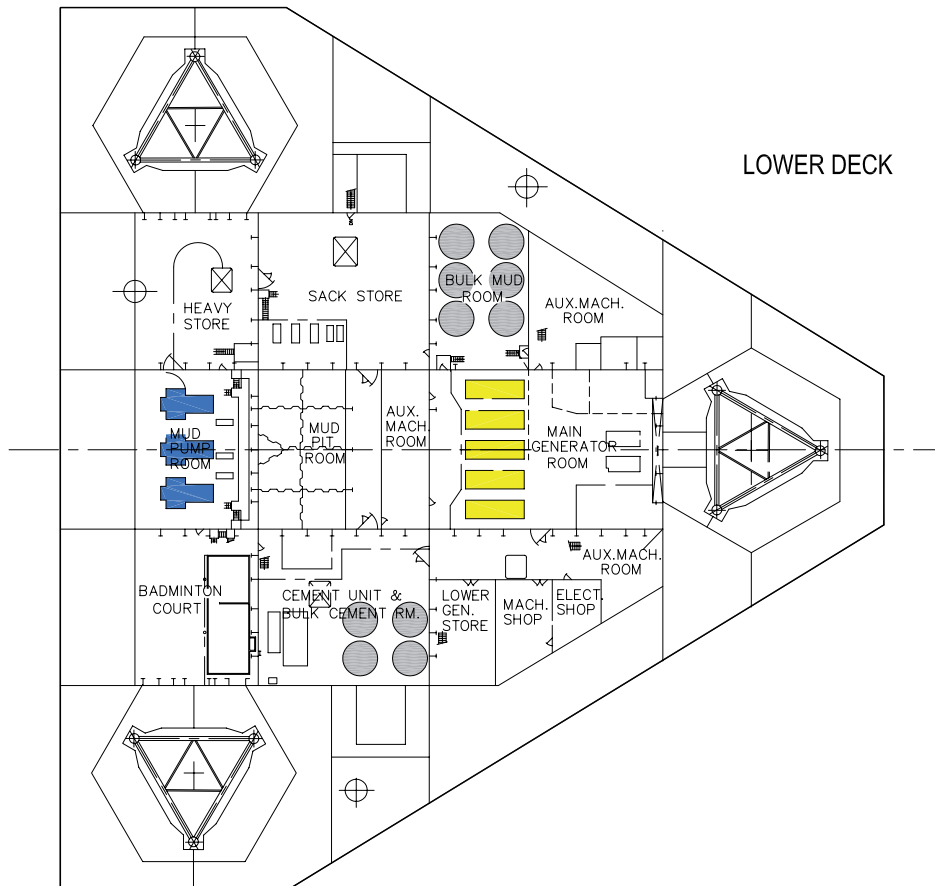
ACCOMMODATION

100 persons in 6 one-man rooms and 47 two-man rooms with full facilities. 9 offices and three recreation rooms.

MAIN DECK



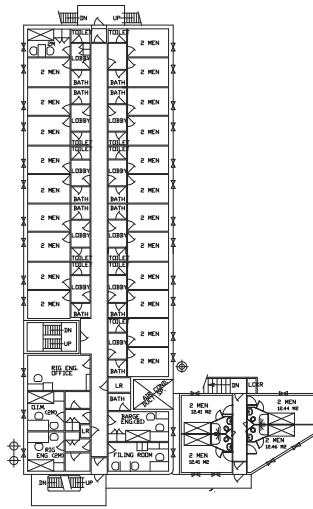
LOWER DECK



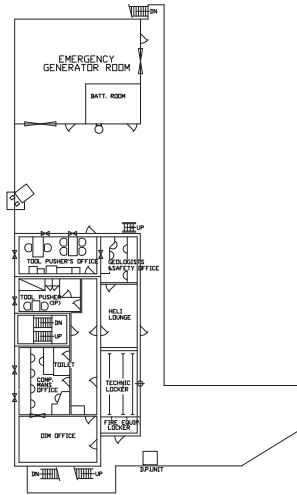
A-DECK



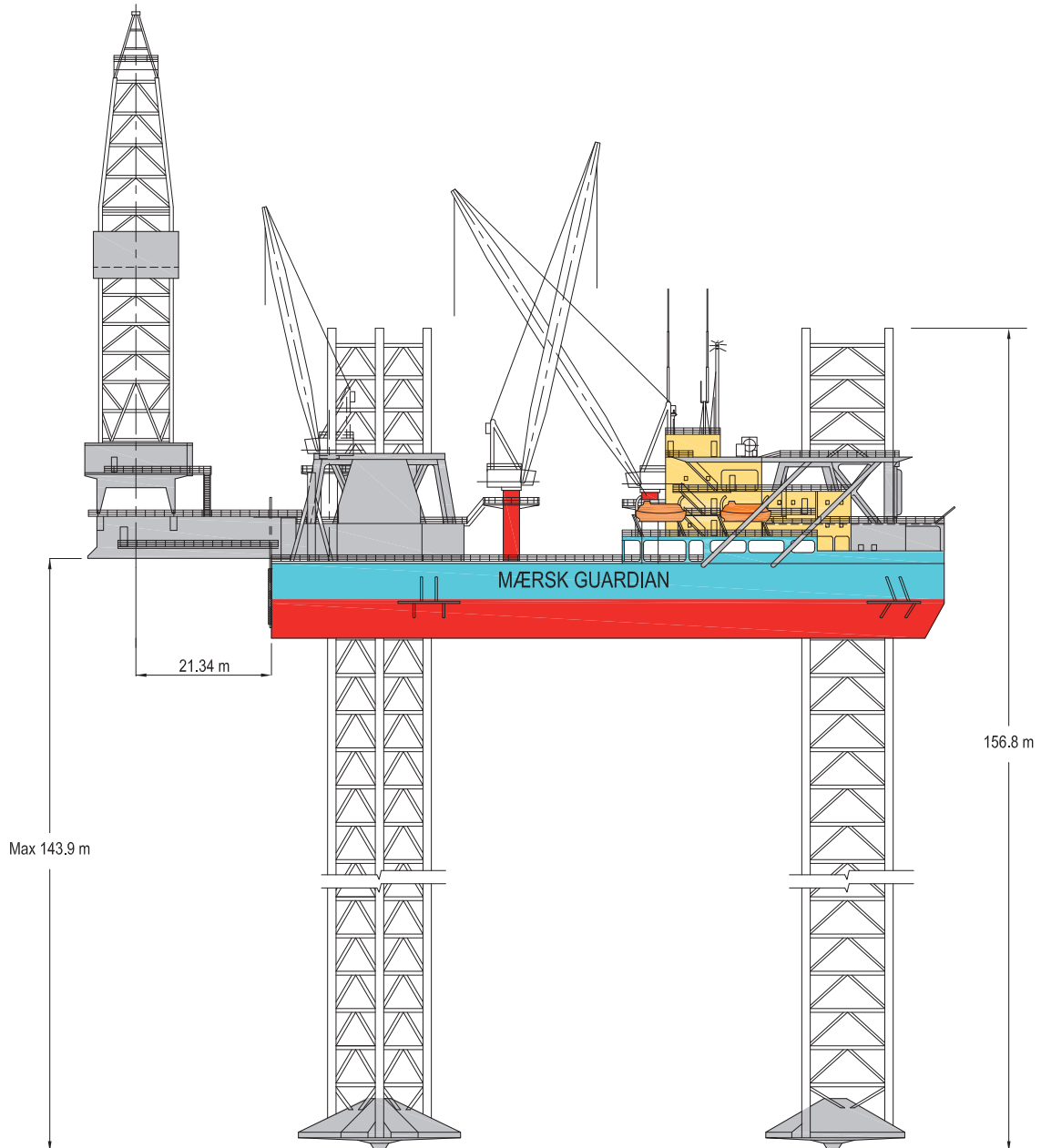
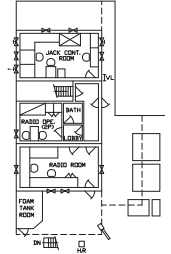
B-DECK



C-DECK



D-DECK



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