

# Songa Offshore AS



## Deepsea Delta

### **Modified Ocean Ranger design Column Stabilized Semi-Submersible Rig and Equipment Overview**

The Deepsea Delta is a “Ocean Ranger” design column stabilized, semi-submersible drilling unit, capable of operating in water depths up to 2,300 feet.

**EQUIPMENT SPECIFICATIONS**
**General**

**Rig:** DEEPSEA DELTA  
**Flag:** Norwegian  
**Owner:** Songa Offshore AS  
  
**Previous names:** Dyvi Delta and West Delta  
  
**Year Built:** 1981  
**Year Upgraded:** 1996  
**Design:** Modified / Ocean Ranger Semisubmersible  
**Builder:** Rauma Repola Oy, Pori Finland  
**Classification:** DnV + 1A1 Column Stabilized Unit

**Machinery**

**Main Power:** 4 x WARTSILA 18V200 3150 kW modified 04/03/02  
**Power Dist.:** 8 ASEA + 2 x ABB SCR units  
**Emerg. Power:** 1 x SACM AGO L6D SHR diesel, 1450 hp, driving a 1000 kW, 450 V AC  
 4 x ASEA propulsion motors, type MBEA  
**Propulsion:** 1000 M, squirrel cage motor, 2600 kWQ, 6 kV

**Drilling Equipment**

**Derrick:** Continental Emsco, 160 ft. high, 40 ft x 40 ft base, 1,250,000 lbs static hook load  
  
**Drawworks:** Oilwell E-3000  
  
**Rotary:** Continental Emsco T-4950, 730 mt (800 tons) static rating  
  
**Top Drive:** Maritime Hydraulics DDM 650-HY-B-13-CL-650  
**Crown Block:** Continental Emsco travelling block, 590 mt (650 tons) capacity  
**Pipe Handling:** Vertical: Maritime Hydraulic 3-arm fully mechanised system Maritime Hydraulic 1898 Iron Roughneck. Horizontal: MH- Pipe rack crane, feeding table and drill-floor mounted manipulator arm.  
  
**Access Basket:** MH Standard Access Basket MK-1 Type 46-1 "Cherry Picker" Cellar Deck/-

**Main Dimensions/Draft/Displacement**

**Length:** 122m (400 ft.)  
**Width:** 80m (262 ft.)  
**Height:** 41 m (134 ft.) to main deck  
  
**Available Deck Area:** 3 X 20m x 17m (1020 m<sup>2</sup>) pipe decks and 200 m<sup>2</sup> additional lay down area  
**Columns:** diameter 4 x 6 m (20 ft.) diameter + 4 stabilizing columns 5.2 m (17 ft. diameter)  
**Moonpool:** 20 m (65 ft.) x 6 m (20 ft.)  
**Pontoons:** 2 x 122 m (400 ft.) long x 19 m (62 ft.) wide x 7.5 m (24 ft.) length  
**Operating Draft:** 24.4 m (80 ft.)  
**Ocean Transit draft:** 8.5 m (28 ft.)  
**Survival Draft:** 21.8 m (71.5 ft.)  
**Operating Disp:** 43,521 mt  
**Ocean Transit Disp:** 27,498 mt

**Operating Parameters**

**Max Water Depth:** 700 m (2,300 ft.) with additional riser and mooring line  
  
**Max Drilling Depth:** 7600 m (25,000 ft)  
  
**Transit Speed:** 5 knots with own engines  
 Heave 4.3 m (14 ft.)  
**Drilling Capacity:** roll 2.5 degrees single amplitude  
 pitch 2.5 degrees single amplitude  
  
**Survival Criteria:** Max. wave height 30m (98 ft.)  
 Max. wind speed 55 m/s (106 knots)  
 current 1.2 m/s (2.2 knots)  
  
**Design Conditions:** -5 deg C ambient  
 --hull -20 deg C air (daily mean shall not be below -20 deg C)  
 -equipment -10-+35 deg C

**Capacities**

**VDL - Operating:** 3,700 mt  
**VDL -Storm:** 3,700 mt  
**VDL - Ocean Transit:** 2,000 mt

**EQUIPMENT SPECIFICATIONS**
**Drilling Equipment (continued)**

<b>Motion Compensator:</b>	Maritime Hydraulic DCS Angle top mounted compensator. 226 tons compensating load - 7.6 m ( 25 ft.) Travel
<b>Cementing Unit:</b>	Halliburton Twin HT-400 15000 psi unit (third party)
<b>Mud Pumps:</b>	3 X Oilwell A1700-PT, 7 1/2" x 12" triplex
<b>Shale Shakers:</b>	5 ea in Thule VSM 100
<b>Degasser:</b>	Wellco series 5200, 1300 gpm and Smedvig Technology MGS w/16 ft. seal tank and 10" ventline.
<b>Centrifuge:</b>	2 ea. Drexel HS-3000 el -drive

**Capacities (continued)**

<b>Liquid Mud:</b>	750 m <sup>3</sup> (6285 bbls) whereof 413 m <sup>3</sup> in column tank
<b>Bulk Mud:</b>	625 m <sup>3</sup> (22068 cu ft)
<b>Bulk Cement:</b>	625 m <sup>3</sup> (22068 cu ft)
<b>Sack Material:</b>	8,200 sacks
<b>Drillwater:</b>	800 m <sup>3</sup> (6704 bbls)
<b>Potable Water:</b>	230 m <sup>3</sup> (1928 bbls)
<b>Fuel Oil:</b>	1,800 m <sup>3</sup> (15084 bbls)
<b>Brine:</b>	500 m <sup>3</sup> (4190 bbls whereof 413 m <sup>3</sup> in column tank
<b>Base Oil:</b>	800 m <sup>3</sup> (6704 bbls)

**Mooring**

<b>Winches:</b>	12 x Pusnes type CWMS
<b>Anchor Wire/Chain:</b>	500 m (1650 ft.) x 3 1/4" chain + 1700 m (5600 ft.) x 3 1/2" wire
<b>Anchors:</b>	12 x 15 mt Stevpris Mk5
<b>Positioning:</b>	Simrad HPR 410 system

**Subsea Systems**

<b>BOP:</b>	Hydril 18 3/4" 15,000 psi trimmed for H2S service
<b>Diverter System:</b>	Hughes KFDS 500 psi diverter system
<b>BOP Control :</b>	Cameron hydraulic subsea BOP system
<b>Choke/Kill Manifold:</b>	Cameron 15,000 psi, gate vales with hydraulically operated valves (choke manifold)
<b>Riser size/Make:</b>	28 x 15.2 m (50 ft) joints Vetco MR6-C, plus five pup joints
<b>Prepared with:</b>	x-mas tree skidding system on cellar deck, can run x-mas tree and BOP in one run
<b>Riser Tensioners:</b>	8 x 36 mt. (80,000 lbs) Rucker Shaffer, 15 m (50 ft.) travel
<b>Guideline Tensioner:</b>	4 x 7 mt (16,000 lbs) Rucker Shaffer, 12 m (40 ft.) travel
<b>Pod Tensioner:</b>	2 x 7 (16,000 lbs) Rucker Shaffer, 12 m (40 ft.) travel
<b>Underwater TV System:</b>	Sub Sea Systems Inc.

**Other**

<b>Accommodation:</b>	Quarters for 100 person in 2 man Cabins
<b>Cranage:</b>	1 x Liebherr 65/50/15 mt., 27/37/50 m. radius, 1 x Liebherr 50/18/015 mt., 20/46/51/ m. radius
<b>Helideck:</b>	For Sikorsky S-61N helicopters & Sikorski S-92
<b>Navigation Equipment</b>	Kelvin Hughes radar plant
<b>Communications equipment:</b>	Scanti doble GMDSS radio system, incl DCS Inmarsat C + Telex, Ericson MD 110 Automatic Telephone Spector, Lumenex ACC 100 PA
<b>Lifesaving Equipment:</b>	4 Schat Harding lifeboats (200% capacity)
<b>MOB (Pick Up) Boat:</b>	Norsafe 7.5m, 230 Hp.

## **EQUIPMENT SPECIFICATIONS**

These specifications are intended for general reference purposes only as the actual equipment and specifications may vary based upon subsequent changes, the contract situation and customer needs.