

# MTR 1

## Tender Assist Drilling Unit

Drilling – Short Description



### DESIGN SPECIFICATIONS

|                                 |                                       |
|---------------------------------|---------------------------------------|
| <b>Rig Design:</b>              | Self Erecting Tender Barge            |
| <b>Built:</b>                   | MARATHON LE TOURNEAU, Singapore, 1978 |
| <b>Class:</b>                   | ABS – +A1 Barge                       |
| <b>Upgraded:</b>                | 1998                                  |
| <b>Certification:</b>           | MODU Code, IOPP, Load line, Radio     |
| <b>Maximum Water Depth:</b>     | 100/180 m (600 ft Pre – laid Mooring) |
| <b>Minimum Water Depth:</b>     | 10 m (30 ft)                          |
| <b>Drilling Capacity:</b>       | 20,000 ft (6,100 m w/ 5" DP)          |
| <b>Dimensions:</b>              |                                       |
| Length overall:                 | 91.44 m (300 ft)                      |
| Width overall:                  | 26.52 m (87 ft)                       |
| Hull width only (beam molded):  | 21.34 m (70 ft)                       |
| Height (depth molded):          | 10.52 m (34.5 ft)                     |
| Gross Tonnage:                  | 5,309 MT (5,852 tons)                 |
| Load line displacement:         | 10,696 MT                             |
| <b>Helicopter Deck:</b>         | Designed f/ Skiers S-61               |
| <b>Quarters/ Accommodation:</b> | 112 Persons                           |

### CAPACITIES

|                            |   |
|----------------------------|---|
| Bulk Mud & Cement Storage: | 144 + 144 m <sup>3</sup> (10,170 cu ft) |
| Sack Storage:              | 147 M T (162 tons) / 2,940 sacks        |
| Drilling Water Storage:    | 1,650 m <sup>3</sup> (10,378 bbls)      |
| Fresh Water:               | 278 m <sup>3</sup> (1,749 bbls)         |
| Fuel Oil:                  | 212 m <sup>3</sup> (1,333 bbls)         |
| Liquid Mud:                | 436 m <sup>3</sup> (2,742 bbls)         |
| Brine:                     | 360m <sup>3</sup> (2,264 bbls)          |

**Total simultaneous pay load: 5,500 MT (VDL)**

| Environ. Limits of Operation | Operating | Rig Up/Dn |
|------------------------------|-----------|-----------|
|------------------------------|-----------|-----------|

|                                |       |     |
|--------------------------------|-------|-----|
| Vertical motion – widow maker  | 2.5 m | N/a |
| Vertical motion – tip of crane | N/a   | 1 m |

|                          |           |           |
|--------------------------|-----------|-----------|
| Other – wind velocity    | 35 Knots  | 20 Knots  |
| Other – current velocity | 2.5 Knots | 2.5 Knots |
| Other – wave height      | 2 m       | 1.5 m     |
| Other – wave period      | Up to 11s | Up to 10s |

### MAJOR TENDER EQUIPMENT

**Engine:** CATERPILLAR: 4 x 3516, 1,650 Hp – 1,200 rpm  
**Generators:** CATERPILLAR: 4 x AC generators, 2,500 KVA / 2,000 KW 600V, 60 Hz. TYPE SR4 2150 KVA  
**Emergency Gen:** Caterpillar D 398 1,200 rpm, Power GE 5 ATI 8307 50414, 625 KVA – 500kw – 450V – 60 Hz  
**SCR:** 6 x GE 394 x 05 - 06 Input 600V -816A, Output 750V DC 850A  
**Mud Pumps:** 3 x NATIONAL 10-P-130 triplex pumps, 1,300 Hp each, driven by 2 x GE 752 DC motors.  
**Mud Pits:** (6 ea): 2x Active Pits (108m<sup>3</sup>) + 3x Reserve Pits (305m<sup>3</sup>) - 1x Pill Tank (22m<sup>3</sup>).  
**Brine Pits:** (4ea) 1x Active Pit (50m<sup>3</sup>) + 3x Reserve (314m<sup>3</sup>).  
**Cranes:** 1x FAVCO PC200 rated at 125 T @ 23 m (75')  
 1x AMERICAN HOIST (AM) 160 rated at 25 T @ 7.6 m (25').  
**Anchoring System:** 4 x SKAGIT DMX-100SXS double drum anchor windlasses - 8 x 2" wire 1,036 m (3,400 ft) anchors lines  
**Anchor:** 8 x DANFORTH/DELTA FLIPPER, (10 tons)

### DERRICK SET : DS 24

**MTR -1** derrick-set (DS 24). The tender is able to erect the DS 24 with its own main crane on platform beams up to 27.43m (90 ft) above M.S.L.

The DS 24 is supported by the skid beams of the platform deck which could be either perpendicular or parallel to the tender axes.

- Distance between skid beams: 11.88 to 15.85m (39 to 52 ft).

- Lateral displacement: 3.35m (11 ft) from centerline of skid beams

The DS 24 is Pride Foramer design, built in 1998 by SSE in Johor Bahru (Malaysia).

**Number of lifts:** 32 (Main)  
**Heaviest lift:** 97 MT

### MAJOR DERRICK SET EQUIPMENT

**Drawworks:** NATIONAL 1320 UE, 2,000 Hp, 2 X GE 752 DC motors and BAYLOR ELMAGO 7040 auxiliary brake.

**SCR (DS 24) :** 3 x CEGELCE, 600V – 60Hz 750V DC

**Drilling Instrumentation:** CARREL

**Derrick:** DRECO, 152' high, 30' x 30' base, 1,000,000 lbs Static Hook Load (SHL) w/ 12 lines, 450 T (500 tons) hook load + 250 T (275 tons) setback.

**Rotary:** NATIONAL C 375, 37 ½", rated at 590 T (650 tons), driven by DC motors. 1 x GE 752

**Traveling Block:** NATIONAL 660 G500, 450 T (500 tons) rated, w/ six (6) 60" sheaves grooved for 1 3/8" drilling line (6x19 IWRC).

**Crown block:** DRECO, 529 T (583 tons) rated w/ seven (7) 60" sheaves grooved for 1 3/8" drilling line.

**Top drive:** VARCO TDS-3H.. 450 T (500 tons) capacities, 1,000 Hp continuous output power, 31,000 ft/lbs max. 1,250 HP (HIGH TORQUE MOTOR)

**Drilling Depth:** 20,000 ft

**Drill Pipe:** as per requirement.

**BOP:** 21 ¼" – 2K BOP stack:

1x HYDRIL type MSP, 21 ¼" – 2,000 psi WP bag preventer

1x CAMERON type U, 21 ¼" – 2,000 psi WP double rams

**BOP:** 13 3/8" – 10K BOP stack:

1x HYDRIL type GK, 13 3/8", 5,000 psi WP bag preventer

2x CAMERON type U, 13 3/8", 10,000 psi WP double rams

**BOP Control:** KOOMEY BOP control unit w/ two (2) independent sources of energy (air & electricity).

**Diverter System:** REGAN KFL, 30", 2,000 psi WP.(optional)

**Choke Manifold:** 3 1/16" - 10,000 psi.

**Mud Treatment**

**Equipment:** Cascade S. Shakers + 4 x Swaco (BEM-600)

**Desilter:** 2 x Brandt Model SE 12 Cap 1,200 GPM

