

# ATWOOD SOUTHERN CROSS



## CHARACTERISTICS

Type of Vessel	Semisubmersible
Water Depth	2,000 ft.
Drilling Depth	20,000 ft.
Year of Construction	1976
Years of Upgrade	1997
Variable Load	2,500 ST
Drilling Draft	48 ft.
Operating Displacement	18,107 ST

## PRINCIPAL DIMENSIONS

Length	260 ft.
Beam	158 ft.
Hulls (2)	
Beam	40 ft.
Depth	21.75 ft.
Baseline to Main Deck	81.75 ft.
Baseline to Pipe Rack	95.75 ft.
Baseline to Drill Floor	116.75 ft.

## CAPACITIES

Liquid Mud	
Active & Reserve	1,791 bbls.
Bulk Material	9,420 cu. ft.
Sack Storage	2,108 sacks
Drill Water	6,455 bbls.
Fuel	4,956 bbls.
Potable Water	1,739 bbls.
Accommodations	100 persons (plus 4 bed sick bay)

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## MOORING SYSTEM

**Anchor Winches** – Four (4) Skagit model DMW 250 double drum wire rope winches and four (4) Skagit model WMD 32 double wildcat chain mooring windlasses

**Anchor Wire** – Eight (8) 2 ½” x 3,000’ 6 x 36 galv. EEIP grade

**Anchor Chain** – Eight (8) 3,500’ lengths of 2 1/8” K4 grade

**Anchors** – Eight (8) 7 tonnes Stevpris primary anchors plus one spare

## DRILLING EQUIPMENT

**Drawworks** – Oilwell E-2000HP driven by two (2) GE-752 DC motors with Elmago 7838 electric brake

**Derrick** – Lee C. Moore mast with 1,000,000 lb hook load capacity, 182’ height

**Motion Compensator** – Rucker Shaffer model DSC-18-400 with 18’ stroke and 400,000 lbs capacity

**Rotary Table** – National C-495 driven by GE-752 DC motor

**Crown Block** – Woollayer 500 ton with seven (7) 60” sheaves for 1 3/8” line

**Traveling Block** – National Oilwell 500 ton

**Top Drive** – National Oilwell PS2 500/500

**Spinning Wrench** – Varco SSW40

**Raised Backup System** – Varco RBS-3

**Iron Roughneck** – National Oilwell Varco ST-80 Iron Roughneck. Can make or break tool connections from ¼” to ¾”

**Drill Pipe** – 14,000’ 5” Grade S-135 19.50 lb with NC-50 connections.

Range 2 internally coated and thirty (30) joints

5” heavy wall drill pipe.

**Drill Collars** – Six 9 ½” OD x 2 13/16” ID x 30’ long spiral collars with NC50 connections, twenty-three (23) 8 ¼” OD x 2 13/16” ID x 30’ long spiral collars with 6 5/8” API Reg connections; nine (9) 9 ½” x 30’ long collars with 7 5/8” Reg connections.

## BOP EQUIPMENT

**Choke-Kill Manifold** – 3 1/16” 10,000 PSI WP

**Diverter System** - Regan KFDJ Fixed Diverter with two (2) 12” lines

**Ball Joint** – One (1) Regan Ball Joint, One (1) OSI Flex Joint

**Riser Connector** – Vetco H-4

**Annular BOP's** - Two (2) Hydril Model “GL” 18 ¾”, 5,000 PSI WP

**Ram Preventers** – Two (2) Cameron Type Double “U” – 18-3/4” 10,000 psi wp Well Head Connector – Vetco 18-3/4”

**Wellhead Connector** – Vetco H-4 Connector 18 ¾”, 10,000 PSI WP

**BOP Control Unit** – Shaffer-Koomey Model 24300 3S hydraulic power unit c/w 400 gallon reservoir

**Marine Riser** – Thirty (30) joints, 21” OD x 50’ long x ½” wall and ten (10) joints 21” OD x 50’ long x 5/8” wall all with Vetco MR6-C connectors and integral choke and kill lines; twenty-one (21) joints come with buoyant material

**Riser Pup Joints** – Five (5), ten (10), fifteen (15), twenty (20), thirty (30), and forty (40) feet long with Vetco MR6-C connections.

**Slip Joints** - One (1) Regan KFDG 45’ stroke; one (1) Vetco 55’ stroke

**Riser Tensioning Units** – Eight (8) each Western Gear and two (2) Rucker Shaffer riser tensioners with 50’ line travel; maximum single line load capacity of 80,000 lb. tension; total riser tensioning capacity on 10 lines 800,000 lbs.

**Guideline Tensioning Units** - Four (4) Western Gear and two (2) Rucker Shaffer single line with 40’ line travel and maximum line load capacity of 16,000 lbs. each

## MUD SYSTEM

**Mud Pumps** – Two (2) Oilwell A-1700PT triplex each driven by two (2) GE-752DC motors

**Mud Charging Pumps** – Two (2) 6” x 8” centrifugal with 100HP electric motors

**Mud Mixing Pumps** – Three (3) 6” x 8” centrifugal with 100HP electric motors

**Shaleshaker** – Four (4) Varco Brandt VSM-300

**Desilter/Mud Cleaner** – Varco Brandt 24-0, installed above one of the VSM-300 Shakers

**Gumbo Box** – One (1) Brandt Model 173235249

**Degasser** – One (1) Varco Brandt Model DG-10 c/w with IR D255 Vacuum Pump and One (1) 50 HP 8 x 6 Centrifugal Pump

## POWER SYSTEM

**AC Generator** – Three (3) EMD MD-16E-8 diesel engines 1950HP each driving EMD 1,080 KW AC generators; one (1) EMD MD-12E-8 diesel engine 1,500 HP driving EMD 1,050 KW

**Emergency Generator** – One (1) Caterpillar D398 diesel engine driving GE 600 KW AC 600V generator

**Power Distribution** – Five (5) Tech Power Control 2,000 amp SCR power conversion modules for DC power distribution, plus two (2) 1,000 KVA transformers, 600 volt AC to 480 volt AC

## AUXILIARY EQUIPMENT

**Cranes** – One (1) Linkbelt API 238A Crane with 120’ boom, rated at 40,000 lbs at 30 feet radius (dynamic). One (1) Manitex Sea Crane ML4800

with 120’ boom, rated at 60,000 lbs 30 feet radius

**Safety** – Two (2) Survival System International Model CA-5400 Fifty (50) person capsules. Four (4) twenty-five (25) person RFD inflatable life rafts.

**Vessel Positioning Reference System** – Kongsberg HPR410D Acoustic Underwater Positioning System for Drilling Application

**Drilling Recorder** – M/D Totco Rigsense V 2.0

**Ballast Control System** – Electronic control board including 40 tank digital monitoring system

**Heliport** – Designed to accommodate Sikorsky S-61N helicopter

**Communication System** – VHF, SSB, Nera Satellite – Fleet 77 Phone/Fax, GMDSS

**Distillation Units** – Alfa-Laval distillation unit rated at 12,400 GPD (DPU-36-C100)

**Sewage Treatment System** – Two (2) Omni-Pure Model 12MX