



Offshore Equipment


**DISCOVERER
534 DRILLING
SHIP**



DISCOVERER 534 DRILLING SHIP

1. Profile

Discoverer 534 is a self-propelled dynamic positioning drilling ship, using 18-3/4" 10000 psi BOP and 21" riser, operating under moderate sea conditions up to 7000 ft (2134m) depth.

Rig Type	Other deepwater ship	
Design	Sonat Offshore Discoverer Class, self-propelled dynamically positioned drillship	
Construction(ship vessel only)	Mitsui Engineering & Shipbuilding Ltd., Osaka, Japan	
Construction time	1975/1991/1996	
Classification	ABS + A1 EM drilling unit, AMS Drilling unit, SOLAS- 1974, USCG IMO MODU	
Nationality	Panama	



Riser decks (front)



Drilling deck (rear)

2. Main specification

Discoverer 534 main specification	
Accommodation	136 people (LW3-1-1 147people during operating time)
Helipad	S61; 90 ft x 92 ft; 2000 gallons refueling system
Moon pool size	Diameter 7m; Height 9.75m
Positioning mode	Dynamic Positioning (DGPS positioning system 2 sets and sonar positioning system 1 set)
Maximum drilling depth	26000 ft / 7925m
Maximum drilling water depth	7000ft / 2134m (minimum operating water depth:244m)
Operating condition	Wave height: 25ft; Wind Intensity: 50 knot
Storm condition	Wave height: 90ft; Wind Intensity: 100 knot
Length X width X height	534 ft(163m) X 87 ft (27m) X 32 ft (10m)
Self-propelled speed	7 knot (3.6m/s) --Historical average speed
Operation draft / Displacement	7.54m / 22885mt
Operation bushing elevation	14m
Drilling variable load	3000-4000mt (Depends on the positioning requirements, sea conditions, etc.)
Total variable load	9236 st / 8381 mt

3. Main drilling equipment

Discoverer 534 Main drilling equipment	
Derrick	Pyramid 170 x 46 x 54 ft; 600 mt nominal
Winch	National 1625-DE 3000 HP
Drill string compensator	Varco Shaffer, 600klbs, 7.6m
Top drive	Varco TDS-4S, 650 st
Rotary table	National C-495 with 49 1/2 in opening
Mud pump	3 x National 12-P-160 triplex pumps
Vibrating screen	6 x Brandt dual tandem; 5 Brandt LCM shakers
Desander	Hydrocyclone Cones w/ (20) 4in cones
Blowout preventer	2 x Shaffer 18 3/4 in 10000 psi double rams; Shaffer 18 3/4, 5000 psi annular preventer
LMRP	Shaffer 18 3/4 in, 5000 psi annular; Vetco HAR-H4
Shunt	Regan KFDS w/14in outlets, 500psi, 24-1/4" ID
Control system	Shaffer multiplex system
Riser	Vetco 21 in OD, 75 foot joints
Riser tensioner	16 x 100 kips, 12-1/2 ft Stroke
Cementing pump	BJ Services, SCP 40752 / RAM mixing, 10000psi

4. Material storage capacity

Discoverer 534 Material storage capacity	
Fuel	2680m ³
Water	225m ³ domestic water + 1974m ³ drilling water +2320m ³ sewage
Mud activity pool	1874 bbls
Mud disposal system	Mixing tank 115 bbls; Little pool 42 bbls; Deoxy pool 195 bbls; Desilter pool 48 bbls; Grit chamber 220 bbls; Measuring tank 50 bbls;
Mud reserve pool	2936 bbls
Soil powder	6000 ft ³
Barite	6000 ft ³
Cement	4 tank, total 4800 ft ³
Bulk warehouse	100 MT
Drilling deck	82 ft x 27 ft x 2 (Portside & Starboard)
Deck load capacity	2.44 mt / m ² + 1.22 mt / m ²
Riser deck	71 ft x 32 ft x 2 (Portside & Starboard)
Deck load capacity	3.05 mt / m ² + 1.22 mt / m ²
Ballast Water	3114 m ³

