

JASPER DRILLING PTE LTD



JASPER EXPLORER

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The JASPER EXPLORER is an Enhanced Pelican Class DP2 Drillship capable of operating in 5,000 ft. of water, drilling depths of up to 25,000 ft. and has accommodations for 139 personnel. The unit is equipped with Cyberbase Drilling Cabin, Varco TDS4H Top Drive and three (3) mud pumps National 12P160. The BOP stack is an 18 ¾" 10,000 psi which includes four (4) rams and two (2) annulars controlled by Cameron MUX III system.

Majority of the top side equipment including the Derrick, Crown Mounted Motion Compensator and Riser Tensioning System were replaced during the upgrading project in 2009. Rig Floor utilities were fitted with new Pipe Handling, Iron Roughneck, Manipulator Arms and Cherry Pickers for upgraded safety and performance capabilities.

General and Main Dimension

| | |
|-------------------------|--|
| Type | DP2 Drillship |
| Registry | Singapore |
| Upgraded | 2009 |
| Design | Upgraded Pelican Class |
| Class | DNV – DYNPOS ATR |
| Length o.a. | 165.30 m |
| Beam, Main Deck | 29.75 m |
| Hull Depth | 12.50 m |
| Summer Draft | 7.50 m (Excluding Thrusters) 11.40 m (Including Thrusters) |
| Displacement, Summer | 20,141 mt |
| Displacement, Lightship | 11,787 mt |
| Variable Load | 8,354 mt |
| Water Depth | 5,000 ft. |
| Drilling Depth | 25,000 ft. |
| Transit Speed | 9 knots |
| Estimated Fuel Cons: | Transit: 25 m ³ / day DP mode: 45 m ³ / day |
| Helideck | Suitable for Sikorsky S-92 or Similar; CAP 437 |
| Accommodation | Fully air-conditioned for 139 persons with galley, messes recreation rooms, offices and hospital |



Note: All specifications are subject to change in our attempt on continual improvements.

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Storage Capacity

| | | | |
|--------------------------|--|---------------|----------------------------|
| Riser Storage | 90 Joints of 50' length (900 mt equivalent) | Pipe Racks | 380 mt |
| Tubular Storage in holds | 1,140 mt | Sacks | 10,000 sacks |
| Liquid Active | 105 m ³ | Fuel | 3,325 m ³ (90%) |
| Liquid Reserve | 443 m ³ | Drill Water | 2,297 m ³ |
| Bulk Cement | 255 m ³ | Potable Water | 487 m ³ |
| Bulk Mud | 255 m ³ | Brine: | 513 m ³ |
| | | Base Oil: | 476 m ³ |

Drilling Equipment

| | | | |
|-----------------------|--|-----------------------------|---|
| Derrick | AKMH-Pyramid, height 180' Base 52' x 52'. Gross loading capacity 1,5m lbs | Hydraulic Cathead | Aker Kvaerner, pneumatic controlled MK-1. Operating pull 140N, lug pull force 140N |
| Crown Block | Aker-Kvaerner design 8 x 60" dia sheaves. Grooved for 1 ½ line. | Pipe Handling System | Patriot Knuckle Boom Crane, model PKM 1300T Max outreach 25 meters |
| Travelling Block | National 60" with 1 ½ line sheaves | Drill Floor Manipulated Arm | Patriot design with 4.5m of telescopic reach. Pipe sizes, 3 ½" to 50" |
| Heave Compensator | Aker-Kvaerner Drill String Compensator Type 270/25 with 25' Stroke and 1,300 kips load capacity | Riser Tensioners | NOV 4 x Dual 200 kips ea. total 1600 kips |
| Top Drive | Varco TDS 4H | Stand Pipe Manifold | 5" x 3 1/16" Fill up/bleed- offline outlet; 2ea Outlet (Total), 5,000 psi WP |
| Rotary Table | National 49 ½" | Cementing Manifold | 3" ID, 10,000 psi WP |
| Drawworks | National 1625 fitted with disk Brake DBS-3000 | Mud Pumps | Three National 12-P-160. 5,000 psi WP fluid end. |
| Hydraulic Roughneck 1 | Aker Kvaerner MH-1899, make up torque 135Nm. Break up torque 169Nm (Rotary Center) | Shale Shakers | 4 x BEM MI-Swaco Shakers |
| Hydraulic Roughneck 2 | NOV ST-120, make up torque 135Nm. Break up torque 162Nm (Offline Stand Building & Rotary Center) | Desander | 16 cones and 3 cones |
| | | Mud/Gas Separator | Swaco Poor Boy |
| | | Degasser | Swaco CD-1400 |

Riser and Well Control Equipment

| | | | |
|--------------------|---|-----------------------|---|
| BOP Stack | 2 x Cameron "U" 18 3/4" 10,000 psi double ram preventers, H2S trimmed | Slip Joint | Cameron Dual Packer 55' stroke |
| Wellhead Connector | Drill quip DX 15 Wellhead connector | Marine Riser | 3500' Vetco MR6-C plus 2000' Vetco HMF-E Riser |
| Riser Connector | Cameron Model 70 Collet Connector. | Ball Joint | Regan DR1 |
| LMRP | 2 x Hydril 5,000 psi annular H2S trimmed | BOP Control | Cameron BOP Mux Control system. Mark 3 Pods |
| Diverter | Regan Type KFDS, nominal dia. 24" | Choke & Kill Manifold | 3 1/16" Manifold 10,000 psi W.P. with 2 Auto chokes & 1 manual adjustable choke |

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Cranes

| | | | |
|--------------------|-----------------------|----------------------|---|
| Riser Gantry Crane | Patriot, capacity 30T | Aft Crane | 1 x 25 tons capacity |
| Port Crane | 1 x 110 tons capacity | Pipe Handling System | Patriot Knuckle Boom Crane, model PKM 1300T |
| Stbd Crane | 1 x 40 tons capacity | | Max outreach 25 meters |

Power Plant and Station Keeping

| | | | |
|-------------------|---|-----------------------|---|
| Power Plant | Five Wärtsilä W12 V32 engines ea. 5,100 kw at 720 rpm. Five Siemens alternators 4,600 kW ea. with 60 Hz and 6000V | Thrusters and Heading | Five Lips tunnel thrusters (2 aft and 3 forward) ea. 1,350 kW Two Azimuth Thrusters (1 Stbd Forward and 1 Port aft) |
| SCR System | 4 Siemens SCR's at 1,250 AMP and 750 V DC 6 Siemens SCR's at 1,050 AMP and 750 V DC | DP Control System | Kongsberg-Simrad system for DP-2 operations, and CJoy |
| Propulsion System | Four AC motors connected to two Lips FPP delivering total 7,000 hp continuous | DP Ref. System | Dual redundant DGPS or equivalent; dual HiPAP system |



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