

The "PACIFIC KHAM SIN" is an upgraded Dual Load Path Samsung 12,000 design dynamically-positioned Dual Gradient capable drillship, able to operate in moderate environments and water depths up to 3,657 m (12,000 ft) using 18¾" BOP and 21" OD marine drilling riser, adapted for single and dual gradient drilling.



PACIFIC KHAM SIN UDW Drillship

GENERAL

Flag:	Liberia
Owner:	Pacific Drilling V Ltd.
Year built:	2013
Design:	Samsung 12000 Double Hull
Builder:	Samsung Heavy Industries, South Korea
Classification:	ABS Classed: A1, Drillship, AMS, ACCU, DPS-3, EFP-AM

OPERATING PARAMETERS

Maximum transit speed:	11.5 knots	
Operating conditions:	Wave: 19 ft	Wind: 50 knots
Station-keeping conditions:	Wave: 28 ft	Wind: 60 knots
Storm conditions:	Wave: 47 ft	Wind: 100 knots
Water depth:	Equipped: 10,000 ft (3,048 m)	Maximum: 12,000 ft (3,657 m)
Drilling depth:	Equipped: 35,000 ft (10,668 m)	Maximum: 40,000 ft (12,186 m)

MAIN DIMENSIONS / CAPACITIES

Length:	748 ft	228 m
Breadth:	137 ft	42 m
Depth:	62 ft	19 m
Transit draft:	28 ft	8.5 m
Operating draft:	39 ft	12 m
Maximum load displacement:	105,800 ST	96,000 MT
Variable deck load – Operating:	24,250 ST	22,000 MT
Variable deck load – Transit:	18,740 ST	17,000 MT
Variable deck load – Survival:	24,250 ST	22,000 MT
Brine / sea water:	4,000 bbls	640 m ³
Brine:	15,700 bbls	2,500 m ³
Base oil:	6,200 bbls	1,000 m ³
Active mud:	6,600 bbls	1,065 m ³
Reserve mud:	12,400 bbls	2,000 m ³
Reserve / riser fluid mud:	6,200 bbls	1,000 m ³
Waste mud:	3,100 bbls	500 m ³
Sacks:	10,000 sacks	-
Drill water:	15,700 bbls	2,500 m ³
Potable water:	8,100 bbls	1,300 m ³
Diesel:	46,500 bbls	7,400 m ³
Pipe racks:	Storage for 3,000 MT of drill pipe and casing	
Riser storage:	Storage for 131 joints of 90 ft length, 21" outside diameter riser with 54" buoyancy	
Well test area:	Storage area aft designed for up to 2,500 MT of well test equipment	
Helideck:	22.2 x 22.2 octagonal, rated for Sikorsky S61N or S92	
ROV:	ROV deployed over side, space for one port and one starboard full spreads	
Moonpool:	84 ft x 41 ft (25.6 m x 12.5 m)	
Accommodation:	200 berths, 20 x 1 person and 90 x 2 persons rooms	
Burner boom:	1 Each 80 ft Swan neck burner boom installed on aft ship, ship will weather vane	

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UDW Drillship



MACHINERY

Main power:	HIMSEN engines 6 x 8,000 KW at 720 RPM, Tier 2 compliant, each driving 1 x 7,760 kW 11kV ABB generators
Power distribution:	11 kV, 440 V, 60 Hz, 3-Phase Drilling Drive System
Emergency power:	6 Main engines are equipped for emergency duties
Cranage:	4 x 85 MT electro-hydraulic knuckle-boom cranes at 18 m (59 ft) radius 1 x 9 MT electro-hydraulic tubular handler at 22.3 m (73 ft) radius on forward pipe deck

STATION-KEEPING

Positioning:	Kongsberg DYNPOS AUTRO System for DP-3 Operations
Propulsion:	6 x 4,500 kW variable speed AC drives
Thrusters:	6 x Rolls Royce Aquamaster fixed pitch Azimuthing in water removable thrusters
Reference system:	Dual redundant DGPS or equivalent; Dual HiPAP hydro acoustic position reference system

DRILLING EQUIPMENT

Derrick:	Dual load path main 1,250 ST auxiliary 1,000 ST, maximum combined load 1,750 ST 210 ft x 60 ft x 80 ft derrick to handle 135 ft-tubular. Crown block with 9 each 72" sheaves Racking board capable of racking 3 1/2" DP up to 20" casing.
Draw-works:	2 x NOV Active Heave Drawwork, 2,500 kips single speed gear driven by 6 x 1150 HP AC motors with 2 1/8" line
Rotary:	1 x NOV RST 755 (75-1/2") hydraulic (Main); 1 x NOV RST 605 (60-1/2") hydraulic (Auxiliary)
Top drive:	2 x NOV TDX-1250, 1,250 ST hoisting, 1,200 ST rotating, torque 90,740 ft.lbs
Travelling block:	2 x NOV 2,500 kips, 8 x 72" sheaves
Mud pumps:	4 x NOV 14-P-220, 7,500 psi
HP brine - DGD pumps:	3 x NOV 14-P-220, 7,500 psi
Cementing unit:	Third Party Services – Schlumberger CPS-977, remote control, LAS
Shale shakers:	7 each NOV Multi size Triple Deck shale shaker
Degasser:	2 x Brandt DG-12 vacuum degasser
Centrifuges:	Space available for 2 x Brandt HS 2172 centrifuges
Drill-pipe:	10,000 ft 6.5/8" Casing landing string with 6.5/8" FH-45° taper connections, V-150, 1.093" Wall 10,000 ft 6.5/8" Drill string with 6.5/8" FH connections S-135, 0.625" Wall Thickness 10,000 ft 6.5/8" Drill string with 6.5/8" FH connections S-135, 0.522" Wall Thickness 10,000 ft 6.5/8" Drill string with 6.5/8" FH connections S-135, 0.362" Wall Thickness 10,000 ft 5.7/8" Drill string with 585 Turbotorque connections, S-135, 0.361" Wall Thickness 3,500 ft 4.1/2" Drill string with XT43 connections, S-135, 0.430" Wall Thickness
Drill-collars / HWDP:	12 x 9 1/2", 30 x 8 1/4", 30 x 6 3/4" / 34 x 6.5/8" HWDP, 40 x 5.7/8" HWDP
Pipe handling:	Outfitted to facilitate offline tubular handling with system consisting of: 2 x Hydra-Racker System HR-IV (for 3.1/2" to 20" tubulars) 2 x Hydratong MPT-200 (for 3.1/2" to 9.3/4" tool-joints)

SUBSEA SYSTEMS

Note:	2 each complete BOPs installed.
BOP – 2 each:	6 Ram cavities: 2 x NOV-Shaffer NXT 18 3/4" 15k triple; GE-Vetco SHD H4 18 3/4" 15k wellhead connector
LMRP – 2 each:	2 x NOV-Shaffer 18 3/4" 10k annular; GE-Vetco ExF H4 18 3/4" 15k High Angle Release LMRP connector
BOP / Xmas tree handling:	1 x BOP trolley with skid rated 540 tons; 2 x 240 Ton BOP gantry crane with dual lifting hoists 2 x X-mas tree skids rated 120 tons Rails for 1 x multi purpose hang off cart rated 1,000 tons, with 13 m clearance for Xmas trees
Control system:	NOV-Shaffer 6 th Gen. Multiplex Control System suitable for 12,000 ft
Riser details:	NOV-Shaffer 21" OD, 90 ft Class H 3 1/2 M lbs couplings & 15k 4.1/2" ID C&K lines – 10,000 ft; 54" buoyancy
Riser gantry crane:	One riser gantry crane with 2 x 27.5 MT hoist
Choke & kill:	3.1/16" x 15k C&K Manifold H2S Service
Diverter:	NOV-Shaffer 21 1/4", 500 psi CSO for 75.1/2" rotary table
Riser tensioner:	8 x Dual Wireline 225 kips with 50 ft stroke