

SAGADRIL-2



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Sagadril 2 (Ex-Hakuryu-VII) is a Mitsubishi MD T76J-VII self-elevating cantilever jackup drilling rig, jointly designed by Japan Drilling Co., Ltd. and Mitsubishi Heavy Industries and commissioned in March 1981 at MHI's Hiroshima shipyard.

The rugged design permits operations in water depths of up to 300 feet while drilling to a rated drilling depth of 20,000 feet.

The cantilever provides a drilling envelope extending from 10 ft to 45 ft aft of the stern and 12 ft either side of the rig's centerline enabling the rig to access multiple wells on platforms without having to relocate.

The spud cans can be fully retracted into the hull allowing easy loading onto dry transport vessels for safer and quicker mobilization.

Cantilever capacity was extended to 45 ft outreach from 40 ft in 2000.

DESIGN:

Mitsubishi MD T76J-VII self-elevating cantilever jackup drilling rig with three triangular trussed independent legs.

CLASSIFICATIONS HELD:

Class NK (Nippon Kaiji Kyokai); NS* Self-elevating Drilling Unit.

MAIN DIMENSIONS:

Length (molded).....	193.57' (59 m)
Breadth (molded).....	183.72' (56 m)
Hull Depth.....	21.58' (6.59 m)
Leg Length.....	421.2' (128.38 m)
Usable Leg Length (below hull).....	360' (109.68 m)
Spud Can Area.....	802 ft ² (74.5 m ²)
Cantilever Capacity.....	45' x 24'
Drilling Envelope.....	35' x 24'
Gross tonnage.....	6,060 tons
Helideck rating.....	for SIKORSKY S61N

DESIGN CRITERIA:

Max. operating water depth ... 300' with 30' air gap & 25' penetration
Max. rated drilling depth with 5" or 5 1/2" drill pipe..... 20,000'

STORAGE CAPACITIES:

Fuel oil.....	2,516 bbls (400 m3)
Drill water.....	4,497 bbls (715 m3)
Potable water.....	1,679 bbls (267 m3)
Liquid mud.....	2,145 bbls (341 m3)
Bulk mud.....	4,660 ft ³ (132 m3)
Bulk cement.....	4,660 ft ³ (132 m3)
Sack storage.....	5,000 sacks

MAXIMUM GROSS VARIABLE LOAD:

While Drilling (including 450 tonnes setback and hook load)	2,650 tonnes at 25' extension 2,200 tonnes at 45' extension
Jacking or Towing	1,200 tonnes

ACCOMMODATION:

Three floors of air conditioned cabins for **100 personnel**.

POWER EQUIPMENT:

Main Engines:	Four Niigata diesel 12V22AX engines, 1,865 hp (1,891 PS) x 1,200 rpm.
Main Generators:	Four Mitsubishi Electric CFC generators, 1,857 KVA at 1,200 rpm, AC 600V, 60 Hz.
Emergency Use:	One Niigata diesel 6L20AX engine, 592 hp (600 PS) at 900 rpm and one Mitsubishi CFC 500 KVA at 900 rpm, AC 450V, 60 Hz generator.

MOORING SYSTEM:

Anchors:	Four 4 tonnes Moorfast type anchors.
Anchor Wire:	Four 11/2" x 2,131' wire anchor lines.
Anchor Windlasses:	Four Mitsubishi AC motor driven, Maximum pull 40 tonnes x 4 m/min. (low gear), 10 tonnes x 18.6 m/min. (high gear).

DRILLING EQUIPMENT:

Drawworks:	National 1320-UE, fitted with an Elmagco 7838 eddy current brake, powered by two 800 hp DC motors with MD/Totco.satellite Driller.
Derrick:	Emsco-Mitsubishi, 157.5' high with 30 ft x 30 ft base, 1,000kips maximum rated static hook load

Crown Block: Continental Emsco-Mitsubishi, 1,000 kips capacity, 7 x 60" sheaves for 13/8" drilling line. Fitted with a Martin Decker load cell.

Travelling Block: National type 650G500 block with unitized hook, 1,000 kips capacity, 6 x 50" sheaves for 13/8" drilling line.

Top Drive: Varco TDS-4H, 45,500 ft/lbs continuous torque at 110 rpm and 29,100 ft/lbs continuous torque at 175 rpm with soft torque system Mark II.

Swivel: National P-500, 1,000 kips capacity.

Rotary Table: Continental-Emsco T-3750, driven by one Mitsubishi Electric 800 hp DC motor.

BOP & DIVERTER EQUIPMENT:

BOPs & Diverter One 30" x 1,000 psi Shaffer diverter.
One 21-1/4" x 2,000 psi Shaffer annular.
Two 21-1/4" x 2,000 psi CIW U single ram.
One 13-5/8" x 5,000 psi Hydril GK annular.
Two 13-5/8" x 10,000 psi CIW U single ram.
One 13-5/8" x 10,000 psi CIW U double rams.

BOP Control System: Model T-40270-3S Koomey accumulator unit with GERC-9 auxiliary control panel and three Model BOP-D-01 Rigserv remote Control Panels (Driller's Cabin, Toolpusher's Office & outside radio room)

BOP Crane: 40 tonnes (20 ton + 20 ton) Double Hook BOP Crane.

MUD PUMP & CIRCULATION EQUIPMENT:

Mud Pumps: Two National 12-P-160 triplex, each driven by two Mitsubishi Electric 800 hp DC motors.

Shale Shakers: Three Derrick Dual Pool 626. One Derrick FLC-2000

Desander One Pioneer Model S3-12, 1,500gpm capacity

Desilter: One Pioneer Model T-16-4, 800 gpm capacity (Maximum)

Mud Cleaner One Brandt type ALT1000, 1,200gpm capacity (Maximum).

Centrifuge: One Swaco Model 518

One Derrick DE-1000

Degassers: One Derrick Invacu-Flow TM-1000 Vacuum Degasser

OTHER EQUIPMENT:

Cementing Unit: Lease item.

Cranes: Two OBE Machinery and Engineering Co., Model OED-360, capacity 30 tonnes at 39' (11.9 m)

Water Maker: Two Alfa Laval ORCA-50, 50 tonnes/day* per unit

Anti-pollution Equip.: One Ompipure Model 12MX sewage treatment unit
One Turbulo Bilgewater Separator/ Type MPB-5, oily water separator