



SPARTAN 208

Up to 45 Ft Cantilever Capability

Rig Package is "Skid Off" & "Set Off" Capable

Water depths from 16 Ft to 250 Ft

Able to work in "Open Hole" Full MODU Class



Appendix B

Spartan Rig 208 Inventory

Rig Configuration	The Rig Package (drill floor, mud pumps, mud tanks, and mud process equipment) is assembled as individual modules that interconnect once installed on the cantilever beams and the main deck of the hull. These Modules can be "Set Off" onto the platform deck and operated in a "Platform Rig" mode completely autonomous from the Jack Up. The Cantilever Assembly with drill floor and pipe rack is also capable of "Skid Off" operation.
Drilling Vessel Description	Designed and constructed by Bethlehem Steel Corporation 1974 (Completely remanufactured as a Cantileverable Drilling Rig in December of 2008), the 250 ft. mat slot/cantilever SPARTAN 208 was originally built and re- classed in accordance with the rules of the American Bureau of Shipping and is classified as an A-1 Self-Elevating, Mobile Offshore Drilling Unit.
Dimensions	<p>Legs (three (3) each) 12' diameter, 312' long (322' incl. mat)</p> <p>Hull Dim..... 176' x 109' x 16'6"</p> <p>Mat Dim..... 170' x 210' x 10' w/2' skirt</p> <p>Hull/Drilling Slot..... 50' x 58' x 16'6"</p> <p>Mat Slot..... 90' x 87' x 10'</p>
Jacking System	Bethlehem, electro-hydraulic yoke and pin system.
Cantilever Beam Assy & Loading	800 Kips Hook & Setback, total. Capable of extending to 45 Ft beyond the Hull's stern transom. Full hook & Setback can be accommodated at 45 Ft extension with Platform bearing assistance or full skid off. The Load Chart is attached.
	<p>Pipe Rack Integrated into the Cantilever Assembly, 50' x 52'. Capable of supporting 500 kips.</p> <p>Skid Off Capable The entire Cantilever/Drill Floor assembly is designed to skid off the hull to access remote or extra large platform well bays.</p> <p>Drill Floor Capable of "Set Off" onto remote platform well bays.</p>
Skidding Systems	<p>Cantilever Assembly Two (2) "Articulated Claw" skid shoes each with a 14.5" x 36" stroke hydraulic ram rated for 3,500psi.</p> <p>Drill Floor Two (2) "Articulated Claw" skid shoes each with a 10" x 36" stroke hydraulic ram rated for 3,500psi.</p>

Design Operating Conditions	Maximum Water Depth (non-hurricane)	250'
	Maximum Water Depth (hurricane).....	200'
	Minimum Water Depth	22'
	Minimum Water Depth (Mat De-ballasted)	12'
	Workover Depth Capacity	25,000'
	Drilling Depth (Subject to Well Program)	15,000'

**Maximum Operating/
Environmental Conditions**

Normal Drilling

Variable Deck Load (Kips)	4,500
Drilling Load (Kips).....	4,500
Maximum Jacking Variable	2,400
Hook/Setback Load (Derrick Limited)	800
Wind Speed (Knots).....	100
Wave Height.....	35'

Hurricane Survival

Variable Load (Kips)	3,000
Wind Speed (Knots).....	100
Wave Height (Feet).....	50

Rig Storage Capacities

Weight of Material & Cement

Bulk Mud (Provided by Contractor).....	1,700 cu. ft.
Bulk Cement (Provided by Cementer)	3,900 cu. ft.
Sack Storage.....	3,000 sacks

Liquids

Drilling Mud – Active	1,500 bbls.
Drill Water	4,484 bbls.
Diesel Fuel	1,796 bbls.
Potable Water	472 bbls.

Cementing Unit/Cement System

The Cementing Unit, its cement bulk handling system and all associated equipment is for Operator's account. **Note: To be provided by Schlumberger**

Drawworks

Mid Continent 914, 1500 HP
 Parmac V-2000 brake installed on Drawworks with over riding clutch.
 One (1) make up cathead (Foster)
 One (1) break out cathead (Foster)
 Duramatic crown/floor protector, installed on Drawworks.
 Lebus grooving, split sleeves for 1-1/4" drill line.
 Two (2) G.E. 752 (Type) traction motors 1000 HP, factory frame (shunt) winding
 Partech - 2 speed transmission on top Partech right angle drive, coupled with Faulk 1050 couplings to traction motors (1000 HP).
 Right angle drive with air brakes and torque tube to drive rotary table.

Derrick RigCo 146 Ft "free standing" triples mast (Serial Number 136-800k-M-1525) with a static hook load of 800,000 pounds strung on 10 lines (Outfitted for TESCO Top Drive). Complete with Racking Board, Stabbing Board and Belly Board.

Stand Pipe Manifold, 4- 1/2" O.D. (10,000 psi test; 5,000 psi working) with dual stand pipes and rotary hoses.

Mud Pumps

Two (2) JN-TFI- 1,600HP triplex single acting mud pumps each powered by two (2) 1,000 HP, (Shunt) belt driven electric motors.

Each pump is equipped with:

Super charge centrifugal pump (2500SB6x5-12) 50HP, 1750RPM, 780 gpm

12" flanged manifold with 6" intake for charge pump and 5" outtake and Pulsation Dampeners

Rod Oiler & Washer Pumps

12" stroke, Liners from 7" to 5", 120SPM, 738 gpm displacement @ 5000psi max pressure

To be fully dressed with conventional liners and sizes to customer specified sizes.

Note: Spartan Offshore will provide one (1) size liner for mud pumps. Operator to designate size prior to rig mobilization. The pumps shall be operated at a maximum of 85% of manufacturer's stroke and pressure rating when operating on a continuous basis.

Rotary

JN, 37.5" (TFIZP375-37 1/2) minimum bore driven by Drawworks power.

One (1) Varco kelly (pin drive) bushing complete with assembly for 5-1/4" Hex kelly with guide skirt.

One (1) master bushing & split bowl

Top Drive

Rental TESCO hydraulically driven 500 ton Top Drive drilling unit powered by its own diesel driven hydraulic power pack provided on an as-needed basis.

Mud Processing System

Unit has self contained mud system and engineered for excellent mud control. Each Tank is 8' deep with top equalization between the compartments. Piping allows multiple suction alignments between each pump for maximum redundancy. Total of 1,515 barrels liquid mud (excluding trip tank).

One (1) 326 bbl. Tank (settling pit/sand trap, shaker pit, mud cleaner pit & degasser pit.

One (1) 266 bbl, Reserve Tank.

One (1) 155 bbl, Reserve Tank.

One (1) 626 bbl, Active Tank.

Two (2) 71 bbl, Slugging Pits

One (1) 75 bbl, Trip Tank

One (1) Burgess Model 1000 Degasser (1000 gpm. flow rate) 20 h.p.

Two (2) Fluid System Model linear cascade shakers, 4 panels

Two (2) 50HP 5" X 6" w/11 impellers MM (or equal) electrical centrifugal pumps (transfer pumps) w/ mechanical seals.

Two (2) 75 HP 6x5x14 w/11 impeller (Hopper/Desander/Desilter)

One (1) 75 HP 6x5x14 w/10.5 impeller (Degasser feed pump)

Two (2) Mud Mix Hoppers.

One (1) Surge Tank for mixing mud and chemicals.

One (1) Swaco 4 panel Mud Cleaner, W/ Desander 2 cone (2x12); Desilter 14 cone

Five (5) Agitators, dual paddle agitators for 8' tanks as per below

Two (2) 10HP

One (1) 15HP

Two (2) 20 HP

Traveling/Handling Equip.

Block/Hook

McKissick 400 Ton Hook/Block (Combo), with five (5) 42' sheaves grooved for 1.25" wire rope.

Swivel

National Model 1324, 500 Ton, with 6-5/8" API regular left hand pin, down.

Mouse Hole

Rat Hole, 8" x 32'

Kelly

One (1), 5-1/4" Hex Kelly with 6-5/8" regular API LH box thread 40' long with 4-1/2" IF bottom connection (with pin drive bushing).

Kelly Hose

Two (2) Kelly/Rotary hoses, 5,000 psi working pressure, 7,500 test, with 3.5"x 75' w/ 4" connections.

Kelly Valve

One (1) OMSCO upper kelly valve, 6-5/8" 5,000 lbs. test pressure, single piece valve.

Air Tuggers

Two (2) Ingersoll Rand or equal, 25T units for BOP handling.

One (1) Ingersoll Rand or equal, Man Rider unit.

Two (2) KU5000 double drum hoists for the Texas Deck.

Two (2) Ingersoll Rand or equal, 5KU units for BOP Handling.

Handling Tools

One (1) set Web Wilson bails, 2-3/4" x 108" long, 350-ton or equivalent.

One (1) set DU long slips.

One (1) set of J29 Spinner Hawks tongs for 5" drill pipe.

One (1) set Shorty Type "C" tongs for 5" Drill Pipe w/ jaws.

Two (2) sets GG 350T elevators for 5" Drill Pipe.

One (1) set each, Drill Collar Clamps for 6" Collars and for 8" Collars.

One (1) Drill Collar Slips, 6" and one (1) 8"

Wire Line & Survey	<p>One (1) Mathey Survey/Wire Line unit, 25,000ft of .092 wire.</p> <p>One (1) Go Devil Survey Kit, for use with Wire Line.</p>
Hydraulic Power Pack	<p>One (1) 50 hp hydraulic unit.</p>
Power Generation & Distribution	<p>Hull (Ship's Service)</p> <p>Two (2) each EMD 12-567 diesel engines each driving a 750 KW x 480 volt generator.</p> <p>One (1) 150 KW auxiliary generator powered by a Lister diesel engine.</p> <p>One (1) each 480/120 volt distribution panel.</p> <p>Rig Package</p> <p>Four (4) each Caterpillar C-27 diesel engines each driving an 850 KW x 600 volt generator.</p> <p>One (1) each 600 volt, 4 bridge SCR with generator controls and synchronization.</p> <p>One (1) each 480/120 volt distribution panel.</p>
Instrumentation	<p>Weight indicator</p> <p>Driller's console</p> <p>Tong torque indicator</p> <p>Pump pressure gauge</p> <p>Pump strokes</p> <p>Gain/loss indicator</p> <p>Air purge</p> <p>Type EB, Deadline anchor</p>
BOP Equipment	<p>All have H₂S trim</p> <p>Diverter</p> <p>21-1/4" with hydraulic control valves & over board lines 2000 psi. (Over board lines to be recharged per Contract provisions)</p> <p>Annular</p> <p>13 5/8" Shaffer; 5,000 psi</p> <p>Single</p> <p>13-5/8" Cameron Type "U"; 10,000 psi</p> <p>Double</p> <p>13-5/8" Cameron Type "U"; 10,000 psi, equipped with one (1) pair of booster bonnets for shear rams.</p> <p>Gate Valves</p> <p>Two (2) 3-1/16" or 4-1/16" Cameron Type "F"; 10,000 psi</p> <p>Gate Valves</p> <p>Two (2) 3-1/16" or 4-1/16" Cameron HCR; 10,000 psi</p> <p>Accumulator</p> <p>Koomey (or similar), 280 gallon, 7 station, 3,000 psi; BOP closing unit with two (2) remote control stations</p> <p>Hydraulic Choke</p> <p>Swaco Adjustable "Super" Choke</p> <p>Actuator Hoses</p> <p>Fourteen (14) 1" x 50'; 5,000 psi stainless flex hoses</p>

Choke and Kill Manifold

Skid mounted 10,000 PSI working pressure 3-1/16" choke manifold to a 48" vertical gas buster and one (1) manual adjusting choke valve and one (1) hydraulic adjusting choke valve.

Choke and Kill Hoses

One (1) Choke & One (1) Kill Line 3" SS Armored w/ 3-1/16 10M flanges x 45'

Chicksan Loops

Three (3) 2" 15M, Code Red Chicksan swings

TIW Valves

Three (3) TIW Valves 4-1/2" IF

Inside BOP

Two (2) Inside BOP 4-1/2" IF

Texas Deck

One (1) hanging type, suspended from Drillfloor, BOP work platform

Note: Contractor will provide the initial size rams for Contractor supplied drill pipe and one (1) set of shear rams. All replacement BOP rubber goods shall be recharged per Contract.

Quarters

54 Persons Total - 48-person air-conditioned quarters complete with galley, mess hall, recreation room, hospital room, bath facilities, change room, laundry and state rooms and office for Rig Manager and Operator's representatives, w/ additional 6 personnel in separate USCG approved modular quarters building.

Heliport

60' x 60' designed for Sikorsky S-61 loading.

Cranes

One (1) Unit 650 with 100' boom, rated at 35 tons at 25 feet, max load 98,360

One (1) American Aero, OM 450 with 100' boom rated at 30 tons at 25 feet, max load 45,400

One (1) EBI, C60-80 at 30', max load 30,083

Life Saving & Fire Protection

Two (2) 28 Person Life Boats

Four (4) 28 Person Davit Launched, Inflatable Life Rafts

All other United States Coast Guard (USCG) required personal floatation devices, work vests, ring buoys, smoke and light signals on board.

Weather Instrumentation

Wind speed

Barometer

Wind Direction

Tubulars/Drill String**Drill Pipe**

12,000 ft of S-135 x 5", "Premium" drill pipe. All other tubulars are for Operator's account.

BHA

Nine (9) 8" Drill Collars with 6-6/8" Reg. connections.

Nine (9) 6.5" Drill Collars with 4.5" XH connections.

Thirty (30) Joints of 5" HW Drill Pipe with 4.5" IF connections.

Subs

One (1) 7-5/8" reg. Box to 6-5/8" Bit Sub, bored for float.

One (1) 6-5/8" reg. Box to 6-5/8" reg. Box, bored for float.

One (1) 7-5/8" reg. Box to 4-1/2" XO Box bit sub, bored for float.

One (1) 6-5/8" reg. Box to 4-1/2" XO Box bit sub, bored for float.

One (1) 6-5/8" reg. Pin to 4-1/2" IF Box, X-over sub.

One (1) 4-1/2" XO to 4-1/2" IF Box, X-over sub.

One (1) 4-1/2" IF "Side Door" sub with 1502 FM union half.

One (1) 4-1/2" IF "Pump In" sub with 1502 FM union half.

Inspection

All Drill String components are inspected in accordance to T.H. Hill Ds1-3rd Edition standards.

Satellite Communications

Communications provided by Broadpoint including "Direct TV" service (No Porno) in the Company Man and Tool Pusher State Rooms, the Recreation Room and Rig Office.

Rig Communication System

24-station, Gai-tronics inter-rig system and VHF marine radio.