



# "MAJESTIC" ABS CLASSED POSTED DRILLING BARGE

## **KEY DIMENSIONS**

Barge Length: 232 feet
Barge Width: 70 feet
Barge Depth: 14 feet
Posted Deck 14 feet

Barge Draft: 7' 6" normal operating condition

RKB to Barge Deck 39'
Transit Height: 68'
Drill Slot: 30' X 26'

• Working Depth: 6 feet light ship up to 24 feet protected water

## **PARTICULARS**

- New Build 2011, Marco Polo Shipyard, Batam.
- ABS Class A1, Maltese Cross
- Meets International SOLAS Regulations, 1998 LSA Code
- Meets Load Line International Convention
- Meets International Prevention of Pollution Protocol, 1978
- API, AWS 1 standards

# **CAPACITIES**

• Accommodations: 120 Men

14 ballast tanks Ballast tanks: Potable water: 2140 barrels 3247 barrels Fuel Oil: Pollution tank: 96 barrels Liquid mud 3500 barrels Process tank: 641 barrels Slug Tank 156 barrels Trip Tank 54 barrels - split

• Bulk tanks: 4800 cubic feet (4 tanks)

• Drill Water 2727 barrels

#### DRAWWORKS

- Model DNS 3600 American Block, Houston, Texas
- Input rating 3600HP, 40" x 60" drum
- 3600HP rated. On 14 lines 1.6MM lbs
- 1 ¾ Drill line grooved
- Single speed Gear Box with AGMA 11Q rating and external lubrication system
- Two (2) each ABS approved 1800HP electric AC Motors with 20HP Blowers
- Fail Safe Caliper Parking Brake and air cooled Discs
- AC Motor dynamic Braking
- Hydraulic Catheads single line pull 31,000lbs. 155,000 foot/lbs with 5 foot tong
- Hydraulic Unit for Brakes and catheads
- Drawworks Control Package
  - o Drawworks and major equipment will all be joystick-controlled
  - Digital read-out will be provided for Standpipe pressure, rotary speed, rotary torque, pump strokes, automatic driller, WOB, ROP, Hook Loads, E-Stop, Master CPU, Up to 10 different Operating Screens

# TOP DRIVE SYSTEM

- Global Drilling Support GDS Top Drive with 850 ton Load Path
- 3.82 inch Fluid Path
- Continuous torque rating of minimum 52,000 foot lbs @ 100 rpm
- Manufactured under API8C
- Complete with local control, torque rails, TDSU supply cables, Hanger, reaction assembly
- Upper and lower control valves, 3 ½ DP kit, interface, anti-collision feature, monitor system.
- 7:1 Gear Ratio with GE B 20 AC Drive Motor 1200HP
- 500 ton x 144" elevator bails

### ROTARY DRIVE SYSTEM

- B375 37.5 inch Independent Drive (AC) Rotary Table complete with Nos. 1, 2 and 3 Bowls
- Complete with Master Bushings and all split (API) Bushings
- Driven by 600VAC x 800KW electric motor Model YJ13N1
- Two shift gear box and couplings, clutch and inertia brake

# MAST AND TRAVELING EQUIPMENT

- Cantilever Mast 156 feet clear height x 30 feet wide base.
- Static Hook Load capacity of 2,000,000 lbs (1,000 short tons)
  - o 16 line capability with Mast leveling jacks
  - o Racking capacity 320 stands 5" drill pipe, 10 stands 8" Collars, 4 stands 10" Collars
  - o Racking board has adjustable diving board, fold-up fingers, and 1500lb pull-back winch
  - o SALA Block, safety chains for fingers and 86" safety perimeter frame
  - o Model C Casing stabbing board complete with 20' of vertical travel, girt adapter brackets, adjustable hinged working platform, belly band and pad.
  - o SALA block, one 9/16 escape line. All steel components will have hot dip galvanized finish.
  - o All Mast and components to API 4F, 3<sup>rd</sup> Edition
  - o One (1) each Ingersoll Rand Model BU7APTAB air hoist with 25' control hose and pendant.
  - One Crown Block manufactured by DDE 7 x 60" sheaves and 60" fastline grooved for 1 3/4" drilling line. API 4F and 8C

- One 1,000 short ton Travelling Block: manufactured DDE. Eight (8) x 60" diameter sheaves grooved for 1 5/8 drill line. Connects to Top Drive via Becket. API 8C.
- One Hercules anchor dressed for 1 3/4" drill line and including tie down studs for substructure including E-80 sensator and EB weight indicator. 150,000lb deadline load. API 8C

#### **CRANES**

### PRIMARY CRANE

- Seacrane Marine Crane Model K55 with 100 foot Boom
- Rated at 60 short tons at 25'
- Independent diesel drive with Tier III Engine (Emission approved)
- 8 Lines 25 feet/minute 4 Lines 50 feet/minute
- API2C-0053 (6<sup>th</sup> Edition)
- IMO/ABS approved
- Cranes complete with Load Indicator, Radius Indicator and anti-two Block devices

### SECONDARY CRANE

- Seacrane Model K35 with 100 foot Boom
- Rated at 40 short tons at 25'
- Independent diesel drive with Tier III Engine (Emission approved)
- 8 Lines 45 feet/minute Auxiliary 153 feet/minute
- API2C-0053 (6<sup>th</sup> Edition)
- IMO/ABS approved
- Cranes complete with Load Indicator, Radius Indicator and anti-two Block devices

# MUD PUMPS (THREE)

- Three each Model WS-2200HP QUADRAPLEX MUD PUMPS as follows:
- Each pump is rated at 3400 psi @ 145 strokes with 1109 gpm and 7.5 inch liners.
- Further, 7500 psi @ 145 strokes with 315 gpm and 4 inch liners.
- State of the art "Quatro" design approximately 30% additional volume than standard Triplex pumps.
- Fabricated precision frames hot rolled plate with machined runners.
- Machined cast alloy steel crossheads (not cast iron as standard)
- Precision pinion and bull gear double helical gears Brown & Sharpe external lube pump
- Single piece forged fluid ends 7500 psi front entry for quick piston change
- Heavy duty suction manifold and forged, machined discharge manifold with two (2) Pulsation Dampeners (7500 psi)
- Liner rinse pump and jib mounted for liner handling
- Each pump driven by two (2) GE, rear-mounted, ATEX Certified AC Drilling Motors with blower ventilation. 1150HP continuous rating each Motor.
- Chain lubrication system included.
- Pumps specifically designed to minimize the industry issues of bending moments in Crankshafts
  combated by minimal distances of main bearings to cams to eliminate stress concentration or point
  loadings, easy module replacement in the field with high quality of discharge pressure and smooth
  flow.

## LIQUID MUD SYSTEM

- 4,200 barrel total system
- Process tank 641 BBLS

- Three (3) each Derrick Model 626 Dual Pool High "G" Shale Shakers with scalping decks and automated screen tensioning, Deck adjustment 1-7 degrees, low weir feed, explosion-proof motors (Super G Model SG3X)
- One (1) each Derrick Model 616 Dual Pool High "G" Shale Shaker dressed as Mud Cleaner with 3 x 10" DeSander Cones and 20 each x 4" DeSilter Cones and automated screen tensioning, Deck adjustment 1-7 degrees, low weir feed, explosion-proof motors (Super G Model SG3X)
- One (1) Derrick Vacu-Flow Model 1200. Rated at 1200 GPM on Venturi and Eductor
- One Model 28/258 variable speed drive Flo-Line Primer (Gumbo Box) with by-pass assembly, self-cleaning brush and explosion-proof electrics
- One each Derrick five (5) way Flow Divider with 5 internal discharge chambers, four sluice gates and two piece cover with gasket.
- Mud Agitators as follows: Active and reserve Tanks 11 each x 25HP Derrick Model DE-AG-25V Vertical Agitators 44" canted Impellors. Trip Tanks fitted with Two (2) each Derrick Model DE-AG-7,5V (7.5HP) Agitators with 32" canted Impellors. One (1) each Derrick Model DE-AG-5V (5HP) Agitator. All motors are explosion proof.
- Three (3) Centrifugal Pumps dedicated for Mud Mixing. Mission Magnum mechanical seal pumps, 6 x 5 x 14" Housing fitted with 11" impellors. Pumps are skidded horizontally with 100HP x 1800RPM explosion-proof motors with premium bearings.
- Three (3) Centrifugal Pumps dedicated to DeSander, DeSilter and DeGasser. Mission Magnum 6 x 8 x 11" Housing fitted with 11" impellors. Mechanical seal pumps, premium bearings, greased lubrication with 100HP explosion proof x 1800 RPM motors, 230/460/480VAC
- Two (2) each Trip Tank (50bbl) Pumps. Mission Magnum 3 x 4 x 13" Housing, skidded and unitized with 30HP x 1800 RPM explosion proof motors rated at 500 GPM @ 130 TDH.
- NOTE: One Shale Shaker will be piped in the system to allow for "Off Line Mud Processing" independent of on-going Operations.

### POWER GENERATION

- Three (3) each Electro Motive Diesel (EMD) Model 16-645 E9 Diesel Engines
- Rated at 3070 HP and 2100KW each (9210HP/6300KW)
- Turbo-charged engines running @ 900 RPM
- Engines and Generators all ABS-approved and ABS FAT witnessed
- One Caterpillar 3508 Emergency Generator rated at 1020 hp/760kW at 1800 RPM
- Including: Fresh water pumps, Lubricating pumps, fuel pumps, fuel filters, UG Actuators, Overspeed tripping devices, Turbo-charge soak-back pumps.
- Further, all engines fitted with Austart turbine air starters, Independent RACOR diesel fuel centrifuge systems and Spinner 11 Oil Centrifuge systems to clean oil during operation.
- Fitted with Young Touchstone Horizontal-mount Radiators
- Local Control Panel for Oil Pressure, (2) Fuel pressure, Air pressure, Water pressure (2), engine hours and RPM
- Vector covers and hospital-grade Silencers fitted on engines
- Touch Screen Alarm Panel mounted in VFD house area for low lubricating pressure, Hot water and Lube oil, Low water and Lube oil, High crankcase pressure, engine over speed, Magnetic Pick-up failure, Low turbo-charger pressure, horn and strobe lights fitted.
- Generators: EMD Model AB-20-6, single bearing, ABS-approved, rated @ 2100KW @ 900RPM
- 600VAC, 60HZ, 3 Phase, PF 0.8
- ABS-approved and MARPOL Annex V1 emissions.

### POWER MANAGEMENT

- One INTEGRATED DRIVE SYSTEMS 3 x 6 x 3,000HP VFD Power System.
- System designed to conform to API RP500 guidelines

- Three (3) Digital engine control cubicles with Woodward EGCP-3 programmable Control Modules
- Two (2) each Feeder breaker Cubicles NEMA 1
- Three (3) each VFD DC Rectifier Bridge Cubicles
- Two (2) Brake resistors
- Two (2) each VFD AC 1800/2250HP for motor speed regulation, keypads, current limit for Draworks.
- Three (3) each 2200HP AC VFD Cubicles for Mud Pumps
- System complete with Auto Driller and HMI for WOB, ROP, Hook Load, Rotary Torque, Block Control, Crown and Floor Limits, and Savers
- VFD House is fully air conditioned with sixty (60) tons of A/C

## **RIG AIR SYSTEM**

- Three (3) Each Quincy Model QSI-370i 100 hp 361 ACFM @ 125 psi Screw type Compressors
- Compressors are totally enclosed for sound attenuation.
- One (1) Each Quincy Model # QPNC-750 750 CFM air dryer refrigerated system
- One (1) Each Reducing station for bulk air
- One (1) each Quincy Model DS350 Simplex Reciprocating Air Compressor powered by a Lister Diesel engine rated at 33.4 ACFM at 175PSIG. (Cold Start Compressor)
- Note: All Compressors have ABS-approved receivers and Statement of fact from ABS during FAT.

### BLOW OUT PREVENTION SYSTEM

- One (1) CPC (Consolidated Pressure Control) Accumulator System as follows:
  - o 675 gallon steel reservoir Tank
  - o 36 each x 15 gallon x 3000 psi Top Loading Bladder type accumulator bottles
  - o The system is a 10 station system
  - One (1) CPC type T40 Triplex Pump with 60HP explosion proof motor and six (6) hydropneumatic pumps @ 40:1 ratio.
  - o One (1) Drillers Siemens Touch Screen for control with numerous BOP configurations.
  - o Two (2) Siemens Touch Screen Control Panels for Toolpusher office and "Get Away" screen designed for emergency use.
  - o System fitted with all alarms Low hydraulic oil, Low Manifold pressure, UPS alarm, Low Air, Motor running, Communication Loss and Horn.
  - o System will be totally enclosed for weather protection
  - o System is in complete compliance with API16D and facility is API licensed.
- One Shaffer style Annular Preventer 10M working pressure with 15M flange bottom connection and 10M top studded connection
- One Cameron Style "U" Double Preventer 13 5/8 x 15M working pressure with 15M flange connections and
- 4 1/16 15K side outlets
- One Cameron Style "U" Single Preventer 13 5/8 x 15M working pressure with 15M flange connections and
- 4 1/16" 15K side connection
- Rams fitted as 5" drill pipe and blind
- BOPS are all H2S service
- Two (2) each 3" ID x 40' long stainless steel armor covered choke and kill hoses with 4 1/16" 15K flanged ends BX155
- Choke and kill manifold 4 1/16" X 15M working pressure
- Manifold equipped with operating panel for electric chokes and control from Driller's touch-screen.
- Rig fitted with 2 x 50 Metric tonnes BOP Handling Cranes.

# WATER MAKER/ANCILLARY

- One (1) Tasman Sea Model S45 Reverse Osmosis Water maker rated at 11,880 gallons per day
  including feed/backwash pump, media filter, two (2) Cartridge Filters, Hydro-cyclone filter, Triplex
  Pump, PLC fully integrated, and UV Sterilizer/Purifier Unit
- Two (2) Potable Water Pressure System designed for 100 gpm @ 260 feet with a WF-360 x 119
- One (1) Sanitary Water Pressure System designed for 100 gpm @ 260 feet with a WF-360 x 119 gallon ASME Coded Tank, pressure switches, relief valves
- One ALFA LAVAL Model MAB-104 Fuel Centrifuge Unit rated @ 396 gph diesel fuel
- One Model JOWA-1 Oily Water Separator 4.4gpm with stainless steel ASI 316L tanks
- One (1) Owens KleenTank Marine Sanitation Unit. IMO and USCG approved.
- One (1) Electrical Fire Pump Burks 3 x 4 x 75HP ABS approved. 750 gpm @ 220 feet
- Two (2) Bilge Pumps Burks 3 x 4 x 75 HP, ABS approved. 750 GPM @ 220 feet.
- One (1) Saltwater pump Burks 3 x 4 x 75HP. ABS approved. 750GPM @ 220 feet.
- One (1) Drill Water Pump Burks 3 x 4 x 75HP. ABS approved. 750 GPM @ 220 feet.
- Two (2) Fuel Transfer Pumps Burks 15HP x 1.5 rated 100 GPM @ 260 feet
- One (1) Dirty Oil pump = Viking Model As-4195 ABS approved. 35 GPM @ 131 feet
- Two (2) Hot Water Circulating Pumps Burks Model GNB9A-11/2. Rated 100 GPM @ 260 feet

## DRILLING/HANDLING TOOLS

- AOT Type HT-65 Manual Drilling Tongs, complete with lugs up to 14 3/8" and safety handles.
- Two (2) each 0 to 20,000 lbs tong torque gauges with hose and sensator
- Two (2) each 5" drill pipe GG x 350 ton Elevators
- One (1) Spin master 950 Hydraulic pipe spinner with independent Hydraulic unit sized to accommodate 3 ½" to 9 1.2: OD pipe
- One (1) Pragma Model 120-025 Iron Roughneck complete with separate HPU Unit
- Twisterspin HPU 40 hp @ 6000 VAC 3 phase unit set @ 4000 psi
- Forum Model 19000-PM Rotating Mouse Hole with hanger and #3 bowl

### **TUBULARS**

- Drill Pipe 25,000 feet of S-135 new Drill Pipe. 19.50 lbs/foot, 6 5/8" OD tool joints with NC 50 connections both ends
- Heviwate Drill Pipe 30 each 5" 49#/ft Drilco-style HeviWate with NC 50 connections
- Drill collars 15 each x 6 3/4" x 2 13/16" ID x spiral collars with NC50 connections
- Drill collars 10 each x 8" x 2 13/16" ID x spiral collars with NC 50 connections
- 2 each NC50 inside I-BOP valves with releasing tool
- 3 each NC50 one piece lower kelly valves
- 8 each NC50 throw away subs
- 6 each 6 5/8" reg pin lift subs for 8" drill collars
- 12 each NC50 lift subs for 6 3/4" drill collars
- 3 each 6 5/8" reg x 7 5/8" reg bit subs
- 4 each 6 5/8" reg x 6 5/8" reg bit subs
- 4 each 6 5/8" reg x NC50 bit subs
- 4 each 4 ½" reg x NC50 bit subs
- 4 each 6 5/8" reg pin x NC50 box bottleneck crossover subs

# **AUXILLIARY EQUIPMENT**

- One (1) Mathey Model RET Wireline Unit with 15 HP motor and 25,000 feet 0.092 wire including one lot of spares
- Three (3) each 5 Star 48" Bug Blowers
- One (1) Diesel Driven back-up Fire Pump. Bombas Azcue 350 gpm @ 220 feet head 50HP x 3000 rpm diesel engine air cooled and electric start
- Rig fitted with 14 each Model QJ-5 pneumatic winches in various locations. Rated at 5 st.
- Rig Floor fitted with Man Rider winch
- Four (4) 1200 Ft3 Bulk Tanks fitted to starboard side of Rig. Certified and tested
- One (1) Four Zone Water Mist System for Engine Room complete with Fire Alarm Panel, smoke detectors, flame detectors. System ABS approved
- One CO2 system for VFD House and paint Locker ABS approved

## **ACCOMODATIONS**

- Rig is fitted with accommodation module (expandable) for 120 Men
- Fully air conditioned with Heliport capable of S61 or equivalent heliport fitted with transponder heli-beacon.
- Private accommodation for Company Representative, Toolpusher and Engineer office.
- Accommodation provides Media Room with large screen satellite TV.
- Accommodation fitted with Radio Room complete with Furuno Marine VHF, 10 each Marine
  Walkie Talkie radios with Chargers, 2 each GMDSS SART Units (Search and Rescue), One (1) each
  EPIRB Unit, One Navtex Transceiver and One (1) Furuno Model 16-SSAS Inmarsat Unit for Global
  communication.
- Accommodation provides both Senior (seating for 8) and Junior (seating for 30) Mess/Galleys.
- Hospital with easy access/egress to Heliport.
- Giatronics Indoor and Outdoor Public Address and Alarm system.
- Driller's talkback system will be provided on Floor.
- 6 station CCTV system will be installed for security and operational monitoring.
- Security Provisions as required

## SAFETY EQUIPMENT

- New towing bridles
- Heliport foam fire fighting system complete with SOLAS-approved FF Suit and Monitor.
- 8 x 25 man inflatable Life Rafts
- Fire blankets
- Mast escape device/safety harness and assists
- Confined Space Entry Kit with Tripod
- Environmental Spill Kits (2)
- H2S and Combustible Gas Monitoring at drill floor, flo-line, shakers and active mud pit
- 2 portable gas detectors-4 gas detector (LEL/H2S/CO2 and O2) with calibration kits and cases.
- 6 each Self Contained Breathing apparatus
- Smoke detection system with alarm panels for accommodation.
- Thermal Detectors in Engine Room, Emergency Generator Room, Galley, Laundry.
- CO2 System fitted to Paint Locker
- CO2 fitted to VFD House
- Water Mist System fitted in Engine Room
- Shower Stations at Mud Pits, Shakers, Rig Floor and Mud Mix Area
- Eye Wash Stations at Mud Pits, Shakers, Rig Floor and Mud Mix Area.
- Type 1 USCG-approved Life Jackets 165 each

- Sala Blocks, Lanyards, Belts, Harnesses for fall protection.
- All Fire Hoses, Extinguishers, wrenches, Two (2) each Fire Fighting Suits for Fire Teams.
- Overheat Galley Hood System for both Junior and Senior Galleys.
- Radio Room Notification Panel with Annunciator Panel at Drillers Console.
- Three (3) Portable axial blowers for Ventilation.
- Two (2) MSDS Stations for Rig
- One (1) Lock Out-Tag Out Electrical Hazard System
- PPE equipment includes: hard hats, safety glasses, Face Shields, Gloves, Respirators, ear plugs, PPE Boxes (5) Chemical aprons, eye glass cleaning stations, Life Jacket boxes, static-free electrical pole, electrical-insulated matting for VFD House

Note: Owner reserves the right to change Manufacturer of certain items of capital equipment dependent upon delivery schedules. Ratings however, will remain constant.