

# ATWOOD AURORA



The ATWOOD AURORA is a Letourneau Super 116E Class Ultra-Premium Jack-up drilling unit and is rated to work in up to 350 feet of water. Attributes of the rig include a 72 feet cantilever, accommodations for 110, three 2,215 horsepower mud pumps, 7,500 psi high pressure mud system, a Cameron 18-3/4 inch x 15,000 PSI BOP, 5,986 kips variable deck load, derrick and associated traveling equipment rated to 1,500 kip, and offline drill string make-up capability.

## CHARACTERISTICS

Type Of Vessel	LeTourneau Super 116E Independent Leg JackUp
Water Depth	350 ft. nominal rating (Additional leg length may be added for increased water depth rating without additional strengthening of existing legs, jack houses or jacking system)
Minimum Draft	15ft. 5 in.
Jacking	Rack/Pinion
Drilling Depth	30,000 ft.
Classification	ABS A1-Self Elevating Mobile Offshore Drilling Unit
Country of Registry	Marshall Islands
Construction	Delivered 2008

## PRINCIPAL DIMENSIONS

Hull Length	243 ft.
Hull Breadth	206 ft.
Hull Depth	26 ft.
Leg Length	477 ft.
Spud Can	1,585 sq. ft.

## CANTILEVER

Reach	72 ft. from transom
Transverse Travel	15 ft. either side CL
Min Drilling	19.6 ft. aft of transom
Load Capacity	1,670 kips on CL @ 70 ft. 2,330 kips on CL @ 60 ft. 2750 kips on CL @ 58 ft. or less

Note: The above load chart is for the sum of set back, rotary tension off substructure, hook load, and conductor tension

## CAPACITIES

Fuel	1,995 bbls.
Drill Water	13,957 bbls.
Potable Water	1,659 bbls.
Liquid Mud	5,056 bbls.
Base Oil	1,068 bbls.
Bulk Tanks	12,200 cu. ft.
Sack Storage	5,000 sacks
(Operating)	5,986 Kips
(Survival/Severe Storm)	3,824 kips
(Afloat)	3,824 kips
Pre-Load	49,772 bbls.
Accommodations	110 persons (plus 2 bed sick bay)



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## POWER SYSTEM

### Diesel Engines

Five (5) Caterpillar Model 3516BHD, 2,150HP @ 1200 RPM, total of 10,750 HP

### Generators

Five (5) KATO, 600 VAC, 1500 KW, 2500 KVA

### Emergency Generator

One (1) Caterpillar Model 3512; 1478 BHP, 1,050KW, 1,950 KVA with Caterpillar Model SR4 Generator

### Power Distribution System

600V for Generator SCR/VFD drive switchboards

## DRILLING EQUIPMENT

### Rating

Nominally rated for 30,000 ft. + well depth with 750 ton drilling system

### Derrick

35 x 35 ft. base with a 7.5 ft. off-center rotary; 1,500,000 lbs. Static Hook Load with 850 kips setback with room for at least 30,000 ft. plus of drilling pipe and/or tubing simultaneously

### Crown Block

750 tons

### Drawworks

4500 HP AC drawworks with regenerative AC braking (primary); Eaton (or equivalent) disk brakes (secondary) and disk parking Brake with three 1,500 HP each AC motor, Lewco Model LDW 1500 K Direct Gear Drive

### Top Drive

Varco TDS 8SA, (or equivalent) with GE A20 AC motor, rated at 1,200HP continuous, 1,500HP intermittent with VFD variable speed AC motor drive. Continuous drilling torque 65,500 foot pounds @ 100RPM and 100,000 max break-out torque foot pounds

### Rotary

49½" with hydraulic drive

### Traveling Block

750 ton with Sheaves for 1¾" Wireline

### Auto Driller

Energy Management System automatically controls dynamic braking

### High Torque Make Up/Breakout

Two (2) Hydraulic Cathead

### Power Slips

One (1) hydraulic or air power slip

### Hydraulic Elevators

One (1) set hydraulically actuated

### Spin/Torque Hydraulic Tool

NOV ST-80 (or equivalent)

### Drive Pipe Tension System

Limited to sling rating, currently 280,000 lbs.

### Drilling Instrumentation

Provides full overview of drilling process with all field sensors and calculates and monitors all associated parameters. Complete with Drillers Command Module with two (2) operator stations with control chairs

### Offline Makeup

Dedicated offline make-up area forward of rig floor complete with one (1) dedicated mouse hole, dedicated ST-80 make-up tool, pipe handling/elevator system, catwalk dolly with pipe lifting platform and X-Y bridge crane racker covering offline make-up area and setback.

## MUD SYSTEM

Able to mix and circulate three (3) separately stored mud systems simultaneously. The storage tanks for brine and OBM feed stock are accounted for separately.

Three (3) LEWCO Model 2215 2,200HP triplex mud pumps each with two (2) GE752 1,100HP top mounted motors and belt drive configuration. Each pump is fitted with dual L20-7500 Lewco high pressure dampeners. Fluid ends rated for 7,500 psi W.P.

Four (4) 6x8 mud charging pumps driven by 100 HP electric motors

One (1) Dual Cartridge (two motorized chains) gumbo box

Five (5) Cascading linear motion Shale Shakers (each rated 400 to 600 GPM)

One (1) Brandt LCM-3D/CMC(24/3) Linear motion mud conditioner (or equivalent)

Two (2) Vacuum Degassers with Jet Pump Eductor

Two (2) Vortex Ventures "Lobestar" shear/mix Model VVE4-6S/D (or equivalent)

One (1) 4 ft diameter by 20 ft 8" high vertical Mud Gas Separator with 10" vent line

### Liquid Mud Tanks

Four (4) Active/Reserve Pits; two (2) mud/brine pits; one (1) brine pit; three (3) slug/premix pits; two (2) 40 bbls. Capacity trip tanks

## DRILL STRING

15,000 ft. 5½" 21.90 lbs/ft grade S-135 with DSTJ double shouldered connections

30 jts. 5 ½" Hevi-Wate

24 jts. 8 ¼" OD spiral Drill Collars, 6 5/8" Reg. with zip lift

30 jts. 7" OD spiral Drill Collars, NC-50 connections with zip lift

## BOP EQUIPMENT

all API 16A H2S rated

### Diverter System

One (1) 49½" 500 psi WP fixed ABB Vetco KFDJ diverter system with 14" lines running port/stb with 24" and 32" risers

### High Pressure BOP Stack (18¾", 15,000 psi WP)

One (1) 18¾" 10,000 psi WP Spherical annular BOP

Two (2) 18¾" 15,000 psi CIW Type "TL" Double ram BOPs

Two (2) 3-1/16" 15,000 psi hydraulic double acting fail safe and two (2) hydraulic double acting 3 1/16" 15,000 psi kill/choke valves

### Choke-Kill Manifold

3 1/16" 15,000 psi WP with two (2) remote and two (2) manual chokes

## AUXILIARY EQUIPMENT

### Heliport

Designed for S61 and S92 Helicopter and designed to CAP 437 regulations

### Cranes

One (1) LeTourneau 220 SS with 140 ft boom rated at 75 tons SWL at 32 ft boom

radius and two (2) LeTourneau 120 SS cranes with 120 ft booms rated at 41.6 tons SWL with 32 ft boom radius

### Air Hoists

Nine (9) total

### Watermaker

One (1) waste heat type unit rated at 19,800 total GPD

### Air Compressors

Three (3), 125 PSI, each rated at 500 CFM

### Fire/Gas Detection System

Total Safety system for fire, combustible and H2S gas

### Sewage Treatment

One (1) sewage treatment system rated for 110 person crew complement

### Lifeboats

Four (4) Shat-Harding, 60 person enclosed, self-propelled davit launched lifeboats (or equivalent)

### Liferafts

Six (6) 25 person inflatable liferafts

### Rescue Boat

One (1) Schat Harding Mob 17 crane deployed