



ENERGY EDGE

Jack Up Rig and Equipment Overview

RIG SPECIFICATIONS

GENERAL

Rig: Energy Edge

Flag: Liberia

Owner: Energy Edge Ltd

Year Built: 2019

Builder: Shanghai Waigaoqiao Shipyard (SWS) Company Limited, China

Design: GustoMSC CJ50-X120-G, self-elevating cantilever jackup

Classification: ABS ⓧ A1 Self Elevating Drilling Unit

Accommodation: 150 beds +2 beds in sickbay

MACHINERY

Main Power: 3 x Caterpillar 3516C HD 2,150 bhp (1,600 bkW) and 2 x Caterpillar C175 2,490 bhp (1,850 bkW) diesel engines; 5 x ABB AMG 0500LN6DAP generator sets, 690V, 60 Hz, 2287 kVA (3 x 1,543 kW and 2 x 1,830 kW)

Power Distribution: GustoMSC-Siemens variable frequency drive power management system, 690V/480V motor control centers

Emergency Power: Cummins CCFU900-E with marine generator, 910kW/1,125 kVA, 480 VAC

DRILLING EQUIPMENT

Derrick: NOV 170 ft x 40 ft x 42 ft; 2,100,000 lbs maximum rated static hook load with 14 lines; Crown Block – NOV 1,050 ton with 6 x 72" diameter cluster sheaves, 2 x 72" diameter fastline sheaves and 2 x 72" diameter deadline sheaves, all sheaves grooved for 2" wireline

Drawworks: NOV automated ADS-10Q, 5,600 hp driven by 4 x DM27A HN A 1,150 hp AC induction motors; NOV water/air cooled multi-plate, fail safe disc brake system

Rotary: NOV RST 49-1/2" hydraulic operated rotary support table with dynamic slip ring, 49-1/2" opening, with up to 15 rpm intermittent rotary speed

Top Drive: NOV TDX-1000, driven by 2 x Balder 1,150 hp AC induction motor with up to 91,000 ft-lbf continuous drilling torque, PH-203 pipe handler

Traveling Block: NOV Dresco 772TB-1000-8C with 7 x 72" sheaves grooved for 2" wireline, 1,000 ton capacity

Pipe Handling: NOV ST-160 Iron Roughneck; PS-30 Power Slips; BX Hydraulic Elevator; NOV PRS-4i "Foxhole" Pipe Racking System with off-line drill pipe/drill collar stand building system; NOV CWS-P20-45 Pipehandling Catwalk Shuttle

Cementing: Schlumberger CPS679 15,000 psi WP recirculating cement mixing unit with CBS 393 mixing tank system

Mud Pumps: 3 x NOV 14-P-220, 2,200 hp each; 7,500 psi WP each with 2 x Matco A7520 7,500 psi WP pulsation dampeners

MUD SYSTEM

Return Mud Treatment System: 1 x Flo-line Primer II Gumbo unit; 4 x Derrick Triple Hyperpool shale shaker unit with flow control divider; 1 x Derrick Hyperpool mud cleaner; 1 x Derrick Vacu-Flo 1200 degasser; 1 x 60" Brandt mud/gas separator with liquid seal monitoring system

Mud Mixing System: Two independent mud mixing systems each system consisting of 1 x 105 ft³ surge tank with feeder and dust collector mounted over 1 x mud mix hopper and 1 x NOV Big Bag Units over 1 x mud mix hopper; 1 x NOV ProCut Sack Cutting unit shared by both systems

Mud Tank System: Total usable volume – 6,804 bbls; two independent mud systems each consisting of 4 mud tank compartments – 3,402 bbls; 5 mud processing tanks - 176 bbls; 2 x 133 bbl slug tanks; 2 x 24 bbl trip tanks; 1 x 7 bbl stripping tank (total active liquid capacity – 7,503 bbls)

Additional Mud Tank Capacity: Total volume – 2,830 bbls (not currently set-up)

Other Tank Volumes: Drill Water - 14,920 bbls; Base Oil - 1,878 bbls; Potable Water – 3,480 bbls; Fuel Oil – 4,124 bbls; Completion Brine – 2,330 bbls; Total Pre-load – 94,300 bbls

Bulk Mud/Cement Storage Volumes: Total Volume – 17,660 ft³; consisting of 5 x 1,766 ft³ bulk barite P-tanks – 8,830 ft³ total and 5 x 1,766 ft³ bulk cement P-tanks – 8,830 ft³ total; sack storage – 5,000 sacks

MAIN DIMENSIONS/ DRAFT/DISPLACEMENT

Length: 229.6 ft

Breadth: 223 ft

Hull Depth: 31 ft

Legs: 3 x 541.3 ft with 49.5 ft diameter spud cans; leg below hull - 471 ft

Cantilever: 80 ft lateral; 25 ft transverse each side

Transit Draft: 19.6 ft load line

Transit Displacement: 49,280 kips

OPERATING PARAMETERS

Max Water Depth: 400 ft

Max Drilling Depth: 30,000 ft

Survival Conditions: Wind - 100 knots; waves - 60 ft; period - 15.6 sec @ 400 ft WD and 10 ft of leg penetration with max elevated weight of 32,200 kips

CAPACITIES

Variable Deck Load: 13,664 kips (incl combined cantilever load); 8,000 kips afloat; 10,664 kips drilling (excluding combined cantilever)

Total Cantilever Variable Load Capacity: 3,000 kips

Drilling Load Capacities: static hook load with top drive: 2,100,000 lbs;

rotary: 2,000,000 lbs; rig floor setback: 1,000,000 lbs

BOP & CHOKE MANIFOLD SYSTEMS

18-3/4" BOP system: 1 x 18-3/4" 10,000 psi NOV Shaffer Spherical BOP;

2 x 18-3/4" 15,000 psi NOV Shaffer NXT-M double hydraulic operated ram preventers

21 1/4" Annular 1 x 21 1/4" 2,000 psi annular type preventer BOMCO, Cansco.

20 3/4" Single ram type preventer, 2 x 20 3/4" 3,000 psi single ram preventers, BOMCO Cansco RX stud x flange.

Choke and Kill Manifold: NOV Shaffer 3-1/16" 15,000 psi H2S trim with

2 x hydraulic actuated automatic chokes and 2 x manual chokes

Diverter: Vetco Gray KFDJ, 500 psi with 14" OD port/stbd overboard lines

Control System: NOV Koomey BOP and diverter hydraulic control system consisting of 750 gal accumulator reservoir capacity, 11 station BOP manifold with 20 x 15-gallon 3,000 psi bottles for BOP functions and independent diverter control manifold with 6 x 15-gallon 3,000 psi bottles for all diverter functions

BOP Handling: 250 mt trolley beam system with 2 x 125 mt air operated chain hoists

TUBULARS

Drill Pipe: 26,000 ft x 5 1/2", 24.7 lb/ft, Grade HS³-125, Delta connection

7,250 ft X 4", 15.7 lb/ft, Grade G-105, Delta connection

3,000 ft x 2 7/8", 10.4 lb/ft, Grade G-105, HI-TORQUE connection

Heavy Weight Drill Pipe: 50 joints x 6 5/8"; 40 joints x 5 1/2"

Drill Collars: 9 joints x 9 1/2"; 21 joints x 8 1/4" 18 joints x 6 1/2"; 18 joints x 4 3/4"

ADDITIONAL EQUIPMENT

Craneage: 3 x TSC Model P18 pedestal crane (port side, port aft and starboard) with 140 ft boom, 75 mt capacity (onboard) @ 50 ft (15.2 mtr) radius and 65.4 mt capacity (offboard) @ 30 ft (9.1 mt) radius with 30 knot wind speed and 2 mtr sig. wave height; 1 x knuckle boom crane (cantilever pipe deck), 9 mt capacity (max) and 3.2 mt capacity with gripper head (2-7/8" to 20" pipe sizes)

Jacking System: GustoMSC rack & pinion system with 18 x 1,300 kips (max) elevating units per leg; jacking speed: 1.5 ft/min (hull lifting), 2.2 ft/min (leg lifting)

Helideck: S-61N/S-92N, Super Puma EC225 rated; steel octagonal shape,

72.8 ft diameter (D-value) CAP 437 compliant

Lifeboats/Life Rafts: 4 x 75-man lifeboats, SOLAS approved; 6 x 32-man life rafts,

SOLAS approved

Conductor Pipe Tensioning System: TSC; 225 mt (tension capacity); 4 lift points;

14" (350mm) (stroke). Secondary retention system 250 ton.