



ENERGY EMBRACER

Jack Up Rig and Equipment Overview

RIG SPECIFICATIONS

GENERAL

Rig: Energy Embracer
Flag: Liberia
Owner: Energy Embracer Ltd
Year Built: 2018
Builder: Shanghai Waigaoqiao Shipyard (SWS) Company Limited, China
Design: GustoMSC CJ46-X100-D, self-elevating cantilever jack-up
Classification: ABS \boxtimes A1 Self Elevating Drilling Unit
Accommodation: 140 beds + 2 beds in sickbay

MACHINERY

Main Power: 5 x Caterpillar 3516C HD 2150 bhp (1,600 bkw) diesel engines.
5 x Hyundai Ideal generator sets, 690V, 60 Hz, 1,534 kW each; 2287 kVA
Power Distribution: ABB variable frequency drive power management system, 690V/480V motor control centers
Emergency Power: Cummins CCFU900-E with marine generator, 1,370 kW; 1125 kVA; 480VAC.

DRILLING EQUIPMENT

Derrick: NOV 170 ft x 35 ft x 40 ft; 1,500,000lbs maximum rated static hook load with 14 lines; Crown Block – NOV 750 ton with 6 x 60" diameter cluster sheaves, 2 x 60" diameter fast line sheaves and 2 x 60" diameter deadline sheaves, all sheaves grooved for 1-5/8" wireline.
Drawworks: NOV automated ADS-10T, 3,200 hp driven by 3 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 TDS-8SA, driven by 1 x GE GEB-20 1,150 hp AC induction motor with 62,500 ft-lbf continuous drilling torque @ 95 rpm, PH-100 pipe handler
Traveling Block: NOV Drecto 760TB-750-8C with 7 x 60" sheaves grooved for 1-5/8" wireline, 750-ton capacity
Pipe Handling: NOV ST-120 Iron Roughneck; PS-30 Power Slips; BX Hydraulic Elevator; NOV PRS-8i "Foxhole" Pipe Racking System with off-line drill pipe/drill collar stand building system; NOV CWS-P Pipe handling Catwalk Shuttle
Cementing: Schlumberger CPS361 15,000 psi WP recirculating cement mixing unit with CBS 355 mixing tank system
Mud Pumps: 3 x NOV 14-P-220, 2,200 hp each; 7,500 psi WP each with 2 x Mattco A7520 7,500 psi WP pulsation dampeners each

MUD SYSTEM

Return Mud Treatment System: 1 x Derrick Flo-line Primer II unit; 4 x Derrick Triple Hyperpool shale shaker unit with flow control divider; 1 x Derrick 3 - 10" cone in-line Hydrocyclone Desander, 1 x Derrick 20 - 4" cone in-line Desilter; 1 x Derrick Vacu-Flo 1200 degasser; 1 x 48" Brandt mud/gas separator
Mud Mixing System: 2 x 105 ft³ surge tanks, surge tank feeder and cyclone dust collector mounted over 2 x venturi mud mixers with hoppers; 1 x NOV Big Bag Unit on main deck feeding mud hopper below deck
Mud Tank System: Usable volume – 4428 (4,014 (Pits 1-8), 150 bbls (Mud Process pits), 264 (Slug pits))
Other Tank Volumes: Drill Water - 22,325 bbls; Base Oil – 1,250 bbls; Potable Water – 3,675 bbls; Fuel Oil – 3,645 bbls; Completion Brine – 1,250 bbls; Total Pre-load – 70,440 bbls
Bulk Mud/Cement Storage Volumes: Total Volume – 14,800 ft³; consisting of 4 x 1,850 ft³ bulk barite P-tanks – 7,400 ft³ total and 4 x 1,850 ft³ bulk cement P-tanks – 7,400 ft³ total
Sack Room Storage: 5,000 sacks

MAIN DIMENSIONS/ DRAFT/DISPLACEMENT

Length: 214 ft; **Breadth:** 203.4 ft; **Hull Depth:** 26.2 ft
Legs: 3 x 503.3 ft with 45.3 ft diameter spud cans; leg below hull - 440 ft
Cantilever: 70 ft lateral; 20 ft transverse / side (70' x 40' total cantilever envelope)
Transit Draft: 16.4 ft load line
Transit Displacement: 30,464 kips

OPERATING PARAMETERS

Max Water Depth: 375 ft
Max Drilling Depth: 30,000 ft
Survival Conditions: Wind - 100 knots; waves - 45 ft; period - 15.0 sec @ 375 ft WD and 15 ft of leg penetration with max elevated weight of 24,230 kips

CAPACITIES

Variable Load: 7,714 kips drilling (includes combined cantilever load)
5,289 kips jacking (includes combined cantilever load)
5,289 kips afloat (includes combined cantilever load)
Total Cantilever Variable Load Capacity: 2,268 kips
Drilling Load Capacities: static hook load with top drive: 1,500,000 lbs; rotary: 1,500,000 lbs; rig floor setback: 1,120,000 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 ram preventers.
21-1/4" BOP system: 1 x 21 1/4" 2000 psi BOMCO/Cansco spherical BOP
2 x 20-3/4" 3000 psi BOMCO/Cansco single ram preventers

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 12" Nominal ID 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: 150 mt handling system consisting of 2 x 75 mt air operated chain hoists

TUBULARS

Drill Pipe: 18,000 ft x 5-1/2", 27.88 lb/ft, Grade HS3 125, Delta 576 conn.
4,500 ft x 4", 17.47 lb/ft, Grade G105, Delta 391 conn.
4,500 ft x 2 7/8" 10.4 lbs/ft Grade G105 conn.
Hevi-wate Drill Pipe: 30 joints x 6 5/8" 74.23 lbs/ft. 30 joints x 51/2" 61.55 lbs/ft
Drill Collars: 9 joints x 9-1/2"; 18 joints x 8-1/4"; 18 joints x 6-1/2"; 18 joints x 4-3/4"

ADDITIONAL EQUIPMENT

Craneage: 3 x Favelle Favco Model 7.5/10K pedestal crane (port side, port aft and starboard) with 135 ft (41.2 mtr) boom, 50 mt capacity (onboard) @ 32.8 ft (10 mtr) radius and 25 mt capacity (offboard) @ 32.8 ft (10 mt) radius with 30 knot wind speed and 1.5 mtr sig. wave height; 1 x knuckle boom crane (cantilever pipe deck), 12 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 896 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; steel octagonal shape, 72.8 ft diameter (D-value) CAP 437 compliant
Lifeboats/Life Rafts: 3 x 60-man lifeboats, SOLAS approved; 6 x 20 man life rafts, SOLAS approved
Conductor Pipe Tensioning System: TSC; 225 mt (tension capacity); 4 lift points; 14" (350mm)