

Year Built: 2006

Rated Drilling Depth

5 in. Drill Pipe: 13,000-22,000 ft
(4,000-6,000m)
4-1/2 in. Drill Pipe: 14,750 – 23,000 ft
(4,500 m – 7,000 m)

Mast

Make: Bomco JJ450/46-K
Height and Type: 152 ft (46.5 m), Cantilever
Max. Hookload: 1,000,000 lbs (4,500 kN)

Drawworks

Make: Bomco JC-70DB7
Rated Input: 2,000 hp (1,470 kW)
Input Power: Two (2) 1,150 hp (845 kW) AC electric motors
Drilling Line: 1-1/2 in. (38 mm)

Traveling Equipment

Traveling Block: Bomco YC-450
Max. Load: 1,000,000 lbs (4,500 kN)
Swivel: Bomco SL450-5
Max. Load: 1,000,000 lbs (4,500 kN)

Substructure

Make: Bomco DZ450/10.5-X
Type: Swing Lift
Floor Height: 34.5 ft (10.5 m)
Clear Working Height: 29.5 ft (9 m)
Max. Rotary Load: 1,000,000 lbs (4,500 kN)
Setback Load: 495,000 lbs (2,200 kN)

Rotary Equipment

Top Drive: National Oilwell Varco TDS-11SA
Input Power: Two (2) 400 hp (298 kW) AC motors
Rotary Table: Bomco ZP 375Z 37-1/2 in. (952.5mm)
Input Power: One (1) 1,150 hp AC motor (845 kW)
Static Load Rating: 1,300,000 lbs

BOP System

Annular Preventer: One (1) 13-5/8 in. Hydril5,000 psi
One (1) 21-1/4 in. Hydril2,000 psi
Ram Preventers: One (1) Cameron Type “U”
13-5/8”-10M single ram preventer
One (1) Cameron Type “U”
13-5/8”-10M double ram preventer



Gensets

Engines: Four (4) Caterpillar 3512-C diesel engines. Each rated 1,476 hp (1,101 kW) @ 1,200 rpm.
Generators: Four (4) Kato 1,365 kW generators (1,950 KVA).
Plug-n-play capability to add one additional engine genset (optional).

Power Distribution

Gen. Control: M&I Electric system equipped with Woodward EGCP-2 / Woodward 2301D / Basler RSS125-12
VFD: Nine (9) inverters and five (5) Eaton variable frequency drives
MCC: 600 V, 480 V, 120 V

Mud Pumps

Pumps: Three (3) Bomco F-1600 triplex pumps, each rated 1,600 hp
Input Power: Each pump driven by two (2) 1,150 hp (845 kW) AC motors

Mud Handling/Solids Control

Mud System Capacity: 2,000 bbls (320 m³)
Shale Shakers: Three (3) Derrick FLC 2000 3-panel shakers; 560-900 gpmeach
Mud Cleaner: One (1) Derrick FLC 2000 Combination desander(1,500 gpm), desilter(1,600 gpm)
Degasser: Vacuum Degasser, 1,000 gpm (4 m³/min)



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Houston, TX 77042

Design Features (All main components conform to API specifications)

Mast & Substructure

- Mast and substructure raise and lower by raising lines using hoisting power generated from the drawworks.
- Mast is completely assembled at ground level.
- Torque tubes are integrated into the mast structure for the dissipation of torque generated by the top drive during operation.
- Substructure's slingshot design allows floor equipment to be installed in its lower position and swing up in place during the raising operation. Subsequently, it is all lowered simultaneously as the rig is lowered.
- Maximum package for transportation for either the mast or substructure is 44.3 feet in length x 10.5 feet in width x 8.5 feet in height. Maximum transportation load is the drawworks at 99,208 lbs (45 mT).

Mud Pumps

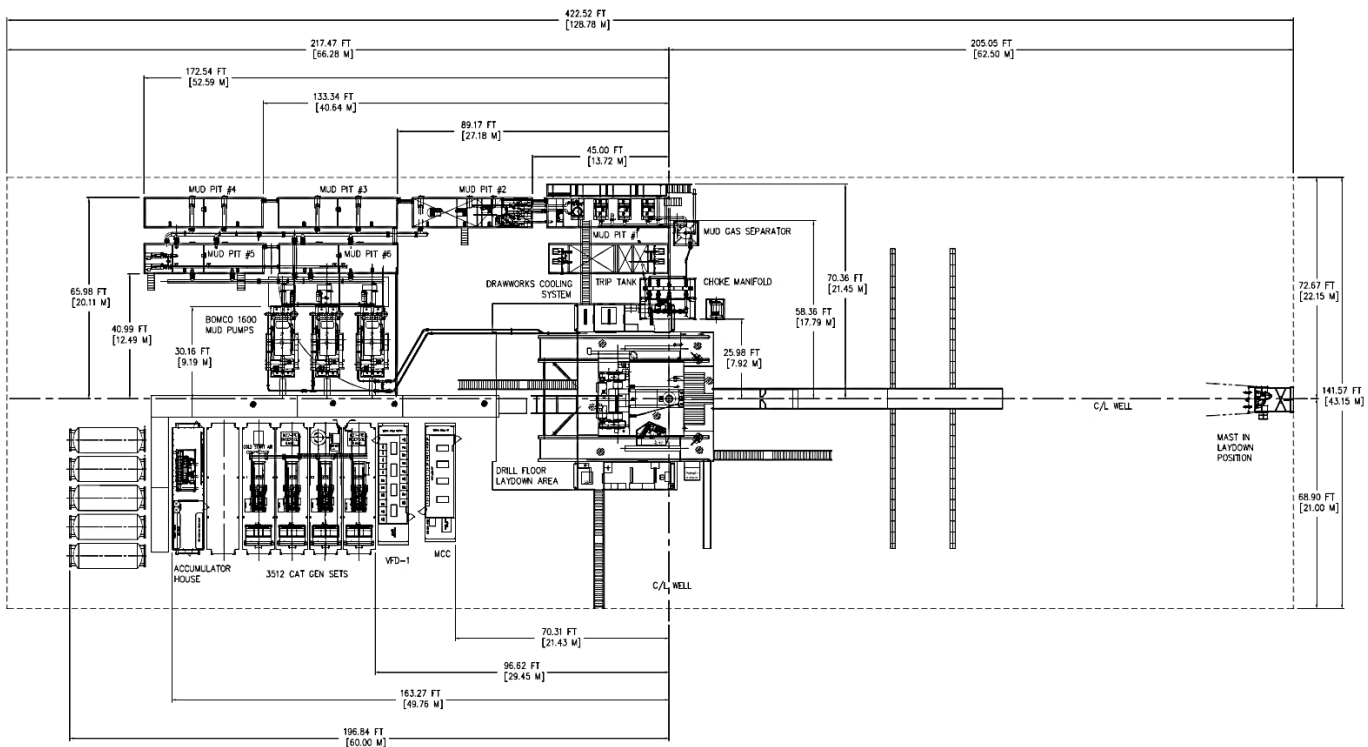
- Three Bomco F-1600 1600 HP triplex mud pump packages belt driven by two (2) 1,150 HP rated AC electric motors. During normal working conditions, two mud pumps are used. Third pump is optional and can be used for additional hydraulic horsepower output to satisfy well program requirements.

Drawworks

- Digital closed-loop controls and dynamic (regenerative) braking systems take full advantage of integrated automation during tripping operations and zero-speed hovering.
- Automatic driller capability.
- Drawworks features a simple mechanical transmission and reliable controls.
- Brake system is a combination of hydraulic disc brakes and dynamic regenerative braking.
- Motor, gearbox, drum, lubricating system and disc brake are installed on skid as one piece for ease of transportation.
- Digital control of drawworks parameters, such as hook speed, hook position, automatic drilling and dynamic braking. Drawworks' air and hydraulic systems controlled by the programmable logic controller (PLC) system in driller's console.

Controls

- Intelligent driller control uses advanced variable frequency drive (VFD) control technologies and integrated PLCs. Driller monitors and operates essential drilling functions from a driller's chair located on the rig floor.



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