



GEODRILL Drilling Rig

2,000 HP AC Variable Frequency Drive Land Drilling

Year Built: 2010

Rated Drilling Depth

5 in. Drill Pipe: (4000 – 6000 m)

4-1/2 in. Drill Pipe: (4500 – 7000 m)

Mast

Make: HOUNGHUA (HH), K type

Height: 45.72 m

Max. Hookload: 4500 kn (1,000,000 lbs)

Racking Capacity: 5 in Drill Pipe, 28m-Stand, 250 Stands, Including --
Drill Collar, 7000 m

Drawwork

Make: HOUNGHUA (HH), JC70DB-01

Maximum Input: 2,969 HP (2000 kW)

Continues Input: 2,300 HP (1,715 kW)

Input Power: Two (2) 1,341 HP VVVF Motors

Drilling Line: 1-1/2 in. (38 mm)

Travelling Equipment

Travelling Block: HOUNGHUA (HH), YC450

Max. Load: 4500 kn (1,000,000 lbs)

Substructure

Make, Type: HOUNGHUA (HH)

Rig Floor Height: 9 m

Clear Working Height: 7.6 m

Setback Load: 2200 kn (500,000 lbs)

Rotary Equipment

Top Drive: NOV, TDS- 11SH

Max. Load: 4500 kn (1,000,000 lbs)

Input Power: Two (2) AC drilling motors, each
rated 400 HP (597 kW)

Rotary Table: HOUNGHUA (HH), ZP375

Size: 37-1/2 in. (952 mm)

Input Power: 804 HP (600 kW)

Static Load Rating: 5850 kn, (1,300,000 lbs)

BOP System

Annular Preventer: Shanghai Shenkai 21-1/4 in. 2K Diverter
Shanghai Shenkai 13-5/8 in. 5K annular

Ram Preventers: Shanghai Shenkai 13-5/8 in. 10K double
ram
Shanghai Shenkai 13-5/8 in. 10K single ram



Gensets

Engines: Four (4) Caterpillar 3512-B 1,609 hp

(1200 kW) @ 1,200 rpm each

Generators: Two (2) CAT00C15ACY00191;
320 kW (400 kVA) each

Power Distribution

Gen. Control: Chengdu Hongtian-Electric Drive
System with ABB Variable AC

Drive, (4) Gen.Control Cabinet

VFD: (2) ABB rectifying system, (6) ABB
inverter devices, converters

MCC: (8) 600 VAC (14) 400 VAC

Mud Pumps

Pumps: Three (3) HOUNGHUA HHF-1600
each rated 1,600 HP (1,193 kw)

Input Power Each pump driven by one (1)
1,609 HP AC motors

Mud Handling/Solids Control

Total Mud Volume: 417.3 m3 (2624 bbls)

Shale Shakers: Three (3) Derrick FLC-2000, 3-panel
Derrick / 3-Cone Vertical (1500 gpm)

Desilter: Derrick Buffalo/ 16- Cone (1120 gpm)

Degasser: Vacu-Flo: 1200 gpm



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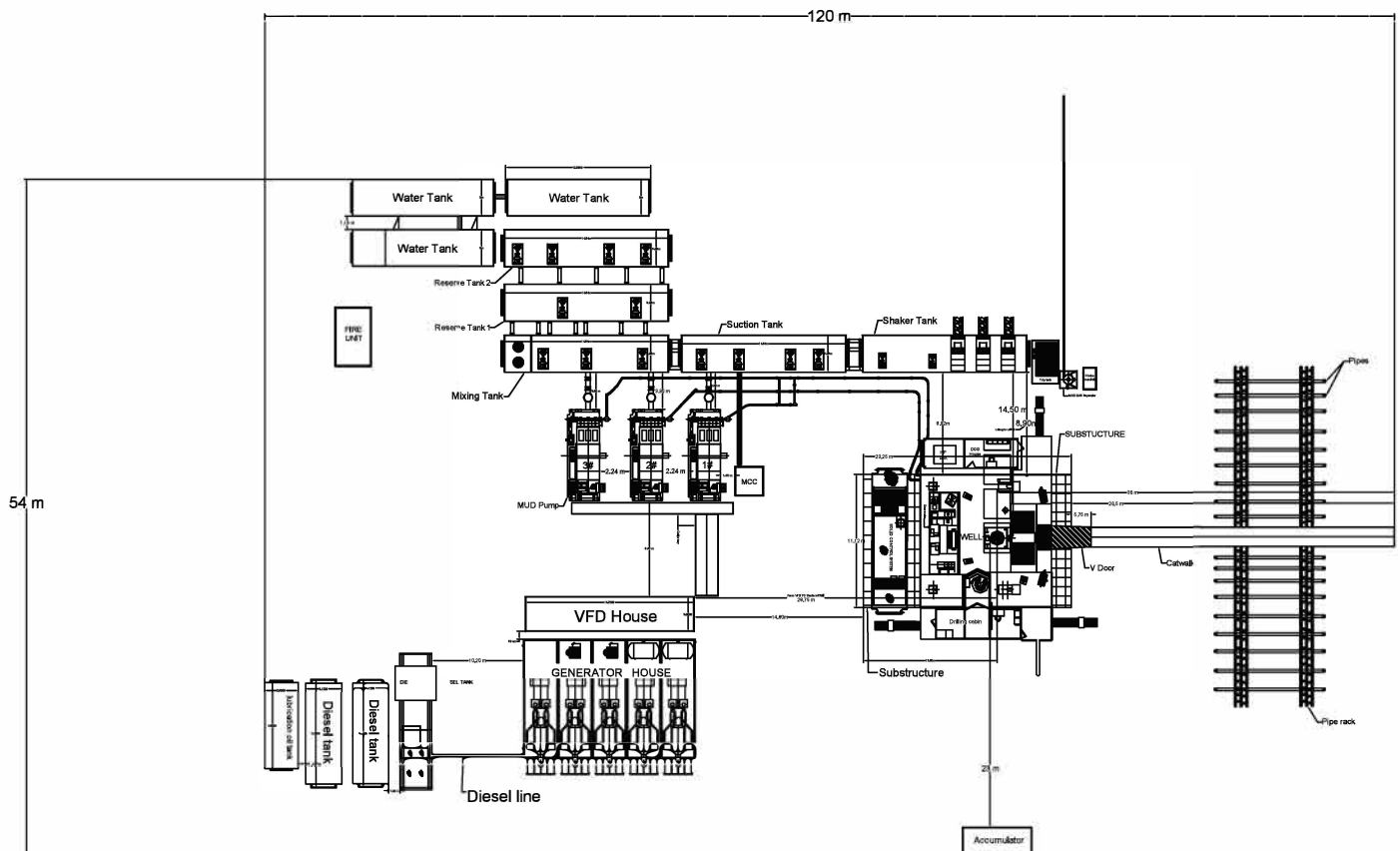
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Design Features (All main components conform to API specifications)

- A fully automated drilling system featuring fuel-efficient Ac technology and variable frequency drive, substantially automating the drilling process and enhancing power delivery
- Engines and drawworks used to raise both the mast and the substructure to the vertical position.
- A " plug and play " adaptability, allowing the operator to quickly and easily customize the rig's individual equipment to the specifics of the drilling program.
- Mast designed for maximum wind speed of 87 mph with pipe racked and 115 mph without.
- Substructure simultaneous casing load of 1,000,000 lbs. and setback 500,000 lbs.
- Substructure 30 ft. high drill floor that allows 25 ft. working height from the ground to the bottom of the rotary beams.
- A new mud system design, allowing easy cleaning, efficient mud processing in variable conditions, and flexible equipment additions for specific well programs.

Rig Plot Plan



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