

Rig M16

Programmable AC Electric (PACE®) 1000 HP Land Rig

- DRAWWORKS:** SJ Petroleum Machinery Co. JC40DB AC Electric Drawworks with an input rating of 1000 HP and driven by two (2) 800 HP AC motors. AC motors provide regenerative braking and the caliper disc brakes provide parking and emergency stop.
- POWER GENERATION:** Three (3) Caterpillar 3512 engines rated at 1,476 horsepower, each driving one (1) Kato 1365 KW generator, for a total of 4,428 horsepower. AC power generation, Variable Frequency Drive (VFD) and MCC unitized in a single house.
- MAST:** SJ Petroleum Machinery Co. 142' telescoping mast manufactured to API-4F specification. Static hook load of 550,000 lbs on 10 lines. Mast is raised and lowered utilizing hydraulic cylinders. Mast top section is scoped utilizing traveling block. Mast is transported as a single load and has integrated top drive rails (enables the top drive to travel in mast during rig move)
- SUBSTRUCTURE:** SJ Petroleum Machinery Co. hydraulically raised substructure with 22' floor height and 17.5' clear height under the rotary beams. Substructure is rated for 550,000 lbs rotary load simultaneous with a 350,000 lbs setback load.
- DRILLER'S CONTROL:** Climate Controlled driller's cabin provides integrated joystick control utilizing PLC technology. Touch screen controls provide state-of-the-art monitoring, control of rig equipment and drilling parameters.
- MUD PUMPS:** Two (2) HHF-1600 triplex mud pumps rated at 1600 HP 7500 PSI fluid ends. Each powered by one (1) 1500 HP AC motor.
- MUD TANKS:** Two (2) tank mud system total capacity approximately 1000 bbls.
- SOLIDS CONTROL:** Two (2) Swaco Mongoose shale shakers.
One (1) desander and One (1) desilter.
- WATER STORAGE:** One (1) 500 bbl water tank.
- FUEL STORAGE:** One (1) 15,000 gallon diesel tank
- TRAVELING BLOCK:** 275 ton traveling block
- TOP DRIVE / SWIVEL:** Canrig 6027 AC, 275 ton Top Drive system powered by a single 600 HP AC motor. Continuous torque rating of 30,000ft-lbs at 105 rpm.
- ROTARY TABLE:** 27-1/2" rotary table, independently driven by a hydraulic motor. Motor can be used for positioning tools, but not for drilling.
- ACCUMULATOR:** Seven (7) station accumulator unit, E-series style. Unit is manufactured in accordance with API 16D with 16 x 11 gal accumulator bottles.
- BLOWOUT PREVENTERS:** Annular: Hydral GK 11" x 5,000 psi (10M bottom flanged)
Double Ram: Cameron Type U 11" x 10,000 psi
Single Ram: Cameron Type U 11" x 10,000 psi
Choke Manifold: 4-1/16" x 10,000 psi
- DRILL PIPE:** As per contract
- ADDITIONAL EQUIPMENT:** Canrig Automated Catwalk
Iron Roughneck
20T BOP Handling System
Rotating Mousehole
Gas Buster
Vacuum Degasser
CCTV and Intercom System
Rig Walking System

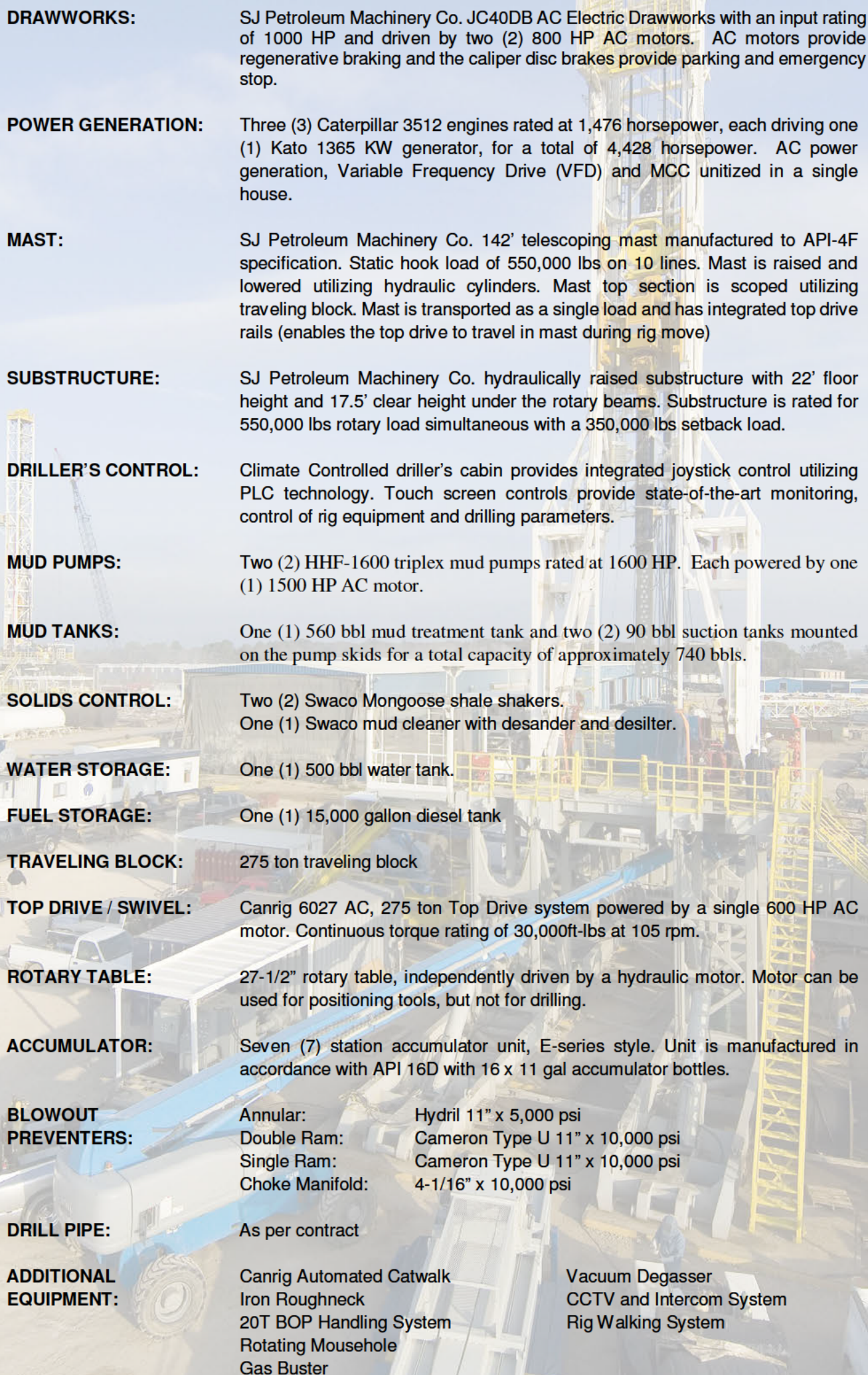
Rig M-37

Programmable AC Electric 1000 HP Land Rig

DRAWWORKS:	SJ Petroleum Machinery Co. JC40DB AC Electric Drawworks with an input rating of 1000 HP and 550,000 lbs hoisting capacity with 10 lines driven by two (2) 800 HP AC motors. AC Motors provide regenerative braking and the caliper disc brakes provide parking and emergency stop.	
POWER GENERATION:	Three (3) Caterpillar 3512C engines rated at 1,476 horsepower, each driving one (1) Kato 1365 KW generator, for a total of 4,428 horsepower. ABB ACS 800 MutliDrive System.	
MAST:	Loadmaster/SJ Petro BE550 142 ft telescoping mast. Maximum rated static hook load of 550,000 lbs on 10 lines. Mast is raised and lowered utilizing hydraulic cylinders and the top section is scoped utilizing the traveling block. Mast is transported as a single load and has integrated top drive rails (enables traveling block and top drive to travel in mast during rig move).	
SUBSTRUCTURE:	Loadmaster/SJ Petro BE550 hydraulically raised substructure with 22 ft floor height and 17.5 ft clear height under the rotary beams. Maximum rated casing load of 550,000 lbs simultaneous with 300,000 lbs setback load.	
MUD PUMPS:	Two (2) HHF-1600 triplex mud pumps rated at 1600 HP. Each powered by one (1) 1500 HP AC motor.	
MUD TANKS:	Two (2) tank mud system total capacity approximately 1000 bbls.	
SOLIDS CONTROL:	Two (2) Swaco Mongoose shale shakers. One (1) Brandt desander and desilter.	
WATER STORAGE:	One (1) 500 bbl water tank.	
FUEL STORAGE:	One (1) 15,000 gallon diesel tank.	
TRAVELING BLOCK:	Traveling block rated at 275 tons.	
TOP DRIVE / SWIVEL:	Canrig 6027 AC, 275 ton Top Drive system powered by a single 600 HP AC motor. Continuous torque rating of 30,000ft-lbs at 105 rpm.	
ROTARY TABLE:	SJ Petroleum Machinery Co. 27-1/2" rotary table driven by a hydraulic Motor. Can be used for positioning tools but not for drilling.	
ACCUMULATOR:	Consolidated Pressure Control seven (7) station, E-series style, API 16D BOP controls system with 16 x 11 gallon accumulator bottles.	
BLOWOUT PREVENTERS:	Annular:	Hydril GK 11" x 5,000 psi
	Double Ram:	Cameron Type U 11" x 10,000 psi
	Choke Manifold:	4-1/16" x 3-1/16" 10,000 psi
TUBULARS:	As required by contract.	
ADDITIONAL EQUIPMENT:	Varco ST-80 Iron Roughneck CCTV/Intercom System 20 Ton BOP Handling System	Canrig Automated Catwalk Vacuum Degasser Rotating Mousehole

Rig M44

Programmable AC Electric (PACE®) 1000 HP Land Rig



DRAWWORKS:	SJ Petroleum Machinery Co. JC40DB AC Electric Drawworks with an input rating of 1000 HP and driven by two (2) 800 HP AC motors. AC motors provide regenerative braking and the caliper disc brakes provide parking and emergency stop.	
POWER GENERATION:	Three (3) Caterpillar 3512 engines rated at 1,476 horsepower, each driving one (1) Kato 1365 KW generator, for a total of 4,428 horsepower. AC power generation, Variable Frequency Drive (VFD) and MCC unitized in a single house.	
MAST:	SJ Petroleum Machinery Co. 142' telescoping mast manufactured to API-4F specification. Static hook load of 550,000 lbs on 10 lines. Mast is raised and lowered utilizing hydraulic cylinders. Mast top section is scoped utilizing traveling block. Mast is transported as a single load and has integrated top drive rails (enables the top drive to travel in mast during rig move)	
SUBSTRUCTURE:	SJ Petroleum Machinery Co. hydraulically raised substructure with 22' floor height and 17.5' clear height under the rotary beams. Substructure is rated for 550,000 lbs rotary load simultaneous with a 350,000 lbs setback load.	
DRILLER'S CONTROL:	Climate Controlled driller's cabin provides integrated joystick control utilizing PLC technology. Touch screen controls provide state-of-the-art monitoring, control of rig equipment and drilling parameters.	
MUD PUMPS:	Two (2) HHF-1600 triplex mud pumps rated at 1600 HP. Each powered by one (1) 1500 HP AC motor.	
MUD TANKS:	One (1) 560 bbl mud treatment tank and two (2) 90 bbl suction tanks mounted on the pump skids for a total capacity of approximately 740 bbls.	
SOLIDS CONTROL:	Two (2) Swaco Mongoose shale shakers. One (1) Swaco mud cleaner with desander and desilter.	
WATER STORAGE:	One (1) 500 bbl water tank.	
FUEL STORAGE:	One (1) 15,000 gallon diesel tank	
TRAVELING BLOCK:	275 ton traveling block	
TOP DRIVE / SWIVEL:	Canrig 6027 AC, 275 ton Top Drive system powered by a single 600 HP AC motor. Continuous torque rating of 30,000ft-lbs at 105 rpm.	
ROTARY TABLE:	27-1/2" rotary table, independently driven by a hydraulic motor. Motor can be used for positioning tools, but not for drilling.	
ACCUMULATOR:	Seven (7) station accumulator unit, E-series style. Unit is manufactured in accordance with API 16D with 16 x 11 gal accumulator bottles.	
BLOWOUT PREVENTERS:	Annular:	Hydril 11" x 5,000 psi
	Double Ram:	Cameron Type U 11" x 10,000 psi
	Single Ram:	Cameron Type U 11" x 10,000 psi
	Choke Manifold:	4-1/16" x 10,000 psi
DRILL PIPE:	As per contract	
ADDITIONAL EQUIPMENT:	Canrig Automated Catwalk Iron Roughneck 20T BOP Handling System Rotating Mousehole Gas Buster	Vacuum Degasser CCTV and Intercom System Rig Walking System

Note: Specific equipment manufacturers and models may be subject to change.