



3000hp Basic Drilling Rig
152' x 35' 1,500,000#

MAST

One (1) Cantilever Lo-Lift Beam Leg Drilling Mast with a minimum clear height of 152'-0" x 35'-0" wide base and a rated static hook load of 1,500,000# on twelve (12) lines strung to the traveling block per API 4E-4F Q1 Specifications. Mast is designed for 100 mph wind load with a full rack of pipe and 115 mph on a bare mast. In addition, the mast has a 1,500,000 lbs. casing capacity simultaneous with 900,000 lbs. setback capacity. Mast stem portal truss are designed affording excellent driller's view and is complete with raising sheaves, A-frames, and sling lines. Sling lines remain in back face of mast when not in use. Mast will accommodate a 35'-0" high drill floor and has full height straight ladder, from drill floor to crown. The mast will be provided with pad eyes for fixation of an intermediate tubing stabbing board at an intermediate level. (Intermediate Tubing Stabbing Board included.)

One (1) Hydraulic Snubbing System installed in A-frames allows driller to have full control of break-over during raising and lowering operations of mast. Wireline and truck snubbing is not required.

One (1) 750-Ton (14 Line) Crown Block with six (6) 60" minimum diameter cluster sheaves and (1) One 60" minimum diameter fast line assembly, all with tapered roller bearings and grooved for 1-1/2" diameter wireline. Cluster assembly is mounted on a crown frame which includes line guards, oak bumper blocks with expanded metal safety screen and pad eyes to accommodate two (2) 6-ton cat line sheaves, one (1) ten-ton core line sheave, one (1) for hanging the traveling block and one (1) for hanging air hoist. Crown safety platform for crown service with 3'-6" high handrails, checkered plate flooring and safety gate at ladder opening is included. Each sheave is lubricated by individual grease channels and zerks located on one end of the shaft.

One (1) Heavy Duty Racking Platform with a capacity for 260 stands of 5" drill pipe and 10 stands of 8" to 9-1/2" drill collars. Platform is complete with folding diving board, access catwalk and fold-up floor slab for driller's side. Platform is adjustable from 77'-0" to 87'-0" above drill floor. Handrails are 7'-0" high constructed of 2" square tubing with toe plates. Also includes a bracket at the platform with one (1) new Ingersoll Rand model BU7A or equal air winch for pulling back drill collars, complete with safety chains.

One (1) Set of Eight (8) Standpipe Clamps for dual 5" nominal diameter standpipes located on driller's side.

One (1) Air Hoist Sheave Unit 14" OD steel sheave grooved for 5/8" diameter wireline (or 1-1/2" manila rope) and mounted on bronze bushings. Swivel and shackle are included.

Two (2) Cat line Sheave Units 16" OD steel sheave grooved for 5/8" diameter wireline (or 1-1/2" manila rope) and mounted on bronze bushings. Swivel and shackle are included.

One (1) Coreline Sheave Unit 24" OD steel sheave grooved for 9/16" diameter wireline and mounted on roller bearings. Swivel and shackle are included.

One (1) Set of Leveling Equipment for leveling all four points of mast at floor elevation using hand pump, including one (1) 100-ton jack, 2" thick shim packs for each leg, and extra long A325 bolts. (Only one jack required).

Two (2) Tong Counterweights each having a capacity of two (2) tons and complete with water buckets, guide tracks, 8" snatch blocks, and wireline with swaged sockets.

Two (2) Cat line Booms 20'-0" long with 5,000# capacity each installed on both sides of mast, complete and including sheaves grooved for 5/8" line, safety latches and all necessary support and lift lines.



One (1) Mast Stand 12'-3" high to support crown while pinning racking board including oak block headrest.

Two (2) Mast Assembly Stands 6'-0" high to support mast bottom during assembly.

Support Material to mount deadline anchor in mast bottom section. (Dead line anchor to be furnished by others).

SUBSTRUCTURE

One (1) Lo-Lift Self-Elevating Substructure with a 35'-0" high x 40'-0" wide x approximately 40'-0" long drill floor. Drill floor is supported by 8'-0" wide x 6'-0" high x 41'-0" long welded box sub-bases on both sides. Cross tie members are included to hold sub-bases apart during assembly and erection. Structure is designed to accommodate an electric drawworks (1625-UE or equivalent). Drawworks and surrounding floor are raised to drilling position by use of drawworks power and mast raising lines.

No other rigging or wireline is required. Mast raising lines need only be moved from A-frame sheaves to sheaves on drill floor elevator to complete rigging for erection.

All bracing and support material while in erect position is included.

Welded Box Sub-Bases have built-in easy access window 2'-0" x 2'-0" on driller's side for air, water and BOP closing line entry. Mast and A-frame shoes are built into sub-bases. A-frames fold into sub-bases for transport with minimum transport height of 9'-6". A-frame spreader is required. A-frames are erected with gin pole truck, thereby eliminating the need for cranes on location. Front sub-base extensions may be removed while drilling.

One (1) Parallelogram Type Setback Support is pinned to the mast while mast is horizontal and raises with the mast. Setback support is designed to support 900,000# of racked pipe simultaneously with 1,500,000# casing load. Setback area is recessed 6" for wood and includes 6" oak flooring.

Rotary Beams are designed for 37-1/2" independent rotary drive set flush with floor.

Set of 1/4" Floor Plate and 3'-6" high handrails with toe plate for drill floor perimeter. All flooring, handrails and floor-mounted equipment are set in position at ground elevation and raised with the drill floor. The drawworks and the top of the Rotary are set flush with the floor.

One (1) V-Door Ramp and Combination Stair 6'-0" wide ramp is 1/2" plate down to 3'-6" catwalk elevation with framing continuing to the ground. Ramp has rails on both sides of 3" diameter pipe x 2'-0". Wide stair 2'-0" is on driller's side with welded serrated bar grating treads and fixed handrail on driller's side.

One (1) Set of Doghouse Supports on driller's side for 8'-0" wide x 20'-0" long doghouse.

One (1) Set BOP Trolley Beams

All Full Circle fabricated items will be properly cleaned, primed with one (1) coat of shop primer and finished with one (1) coat of enamel.

DRAWWORKS

Electric Drawworks with the following equipment:

- (3) New Amerimex 752 High Torque Motors
- 36" Diameter x 61" Main Drum with grooving 1 ½"
- 42VC1200 High and Low Clutch

Max Load Rating (14 lines) 1,500,000

Braking: Mounted directly to drum shaft

(2) W36-OM-500 Air applied, Water cooled (3) disc/ Spring applied, air cooled (2) disc combination brakes on the ends of the drum shaft brake on driller's side providing slowing, braking, and E-Stop.

(4) Caliper type disc brakes located directly on the main drum

(2) Rotary type hydraulic catheads, fully adjustable torque range:

*torque sensor mounting brackets (load cells optional)

*Make-up and Break-out: identical in construction-allows for interchangeability of units; eliminates need for additional spares; can accept either 3/8" chain or 9/16" cable

*Controlled with variable speed controls and maximum torque is remotely controlled from the driller's console *Single line pull is 10,000lbs at 3,000 psi - Hydraulic pressure

*Recommended HPU requirements 30-60GPM at 3,000psi

(1) Electric hydraulic power unit (HPU) to provide hydraulics to catheads: 60 hp, 37 gpm, 3000 psi (optional)

Adjustable crown and floor protection and emergency stop

Dual independent oil system for each bearing and chain.

Chain lubrication system is designed to maximize chain life by flooding oil onto each chain

Instrumentation:

1 Weight indicator; 2 Tong torque gauges; 1 Pump pressure gauge; 1 Electric torque gauge; 1 Automatic driller;

1 Crown & floor protection system

NOTE: The above controls are incorporated into stainless steel consoles.

(1) 1000 Gallon brake water closed loop cooling system with heat exchanger

(2) 2x3x13 centrifugal pumps and safety package - includes piping and wiring

POWER SYSTEM

(5) Caterpillar Diesel Engines 1365 KW Generators 1450 hp 600 volt 60hz. 3 phase mounted on oilfield skids suitable for tail board loading either end, covered roof with spark arrestor mufflers



SCR (SERIES-D/C SYSTEM)

5 x 5 BAY SCR system complete with A/C. auxiliary connections

RIG WIRING

New rig wiring with explosion proof fixtures within 100' ft of well bore.

RIG PIPING

All new piping hi and low pressure:

MUD PUMPS

Triplex Mud Pump 1600 HP, Forged Steel Fluid End Modules w/Quick-Change Caps / Hydril K-20 Pulsation Dampener, Shear Relief Valve, Pressure Gauge Oilfield Master Skid w/GE 752 DC Traction Motors, Rear Mounted charging pumps 5 x 6 "in x 11" in impellers with 50 hp electric motors :

ROTATING EQUIPMENT

37-1/2" Rotary Table, w/Split Master Bushing GE 752-1000hp. Hi-Torque D/C motor w/2 Speed Transmission. Master bushings and No. 3 insert bowl.

650-Ton Swivel,

- 5-1/4" Hex Kelly & Shuck
- 5-1/4" Hex Kelly Drive Bushing
- 10,000 PSI Upper Kelly Valve
- 4-1/2" Lower Kelly Valve

760-G-650 Ton Block/hook

- (2) 3-1/2" x 144" 500-Ton Elevator Links

ACCUMULATOR UNIT KOOMEY

KOOMEY Type 240-Gallon 8-Station Closing Unit w/20-11-Gallon Accumulator Bottles, Triplex Hydraulic Charging Pump 20 HP Electric Motor, (2) Air-Operated Pumps, Mounted in 11'6"W x 25'L House w/Fluorescent Lights, with dual remote control stations Skidded.

B.O.P.S.

(1) ea. Annular Shaffer Type BOP. 13-5/8" in. with studded top with 5000 psi BX-160 ring groove and flanged bottom with 10000 psi flange with BX-159 ring groove.

(1) ea. Double Ram 10000 psi Shaffer Type 13-5/8" in BOP flanged top and bottom with BX-159 ring grooves complete with (2) 4- 1/16" in. 10000 psi flanged outlets with BX-155 ring grooves.

(1) ea. Single Ram 10000 psi Shaffer Type 13-5/8" in. BOP flanged top and bottom with BX-159 ring grooves complete with (1) 4- 1/16" in. 10000 psi flanged outlet with BX-155 RING GROOVES.

CHOKE MANIFOLD

Cameron Type, 10,000 PSI 3-1/16" in. choke manifold with (2) hydraulic choke with operator Control panel, (1) manual chokes, complete with 5000 PSI buffer manifold. Complete with test charts;

SOLIDS CONTROL EQUIPMENT: (6 TANK SYSTEM) 3 RESERVE TANKS 1 SHAKER TANK, 2 SUCTION TANKS

- (2) ea. 8'H x 10'W x 40'L 450-Barrel Crimped-Steel Mud Suction Tank w/4'L Covered Porch Extension, (3) Compartments, Slant Bottom, Internal Plumbing, (2) New Mission Magnum 8" x 6" Centrifugal Pumps 100 HP Electric Motors (3) 20 HP Mud Agitators, grating Tank Covers, Top-Mounted Walkways, Stairs, Safety Rails, oil field Skid (New)
- (3) ea. 8'H x 10'W x 40'L 450-Barrel Crimped-Steel Mud Volume Tank w/ (3) Compartments, Slant Bottom, Internal Plumbing, (2) 20 HP Mud Agitators, grating Tank Covers, Top-Mounted Walkways, Stairs, Safety Rails, Oil field skid
- (1) ea. 8'H x 10'W x 40'L 425-Barrel Crimped-Steel Mud Shaker Tank w/11'L Covered Porch Extension, (3) Compartments, Slant Bottom, Internal Plumbing, (2) New Mission Magnum 8" x 6" Centrifugal Pumps 100 HP Electric Motors (2) 20 HP Mud Agitators, grating Tank Covers, Top-Mounted Walkways, Stairs, Safety Rails, oil field skid
- (3) Linear Motion Shale Shakers (New)
- (1) 3 X 10" Cone De-sander 1500 gallon capacity with 6 X 8 X 100 hp electric motors 480 volt 60hz 3 phase.
- (1) 20 X 4" Cone De-silter with 6 X 8 X 100 hp electric motor 480 volt x 60 hz 3 phase.
- (1) Vacuum Degasser, Skidded with 10 hp electric motor 480 volt x 60 hz 3 phase

RIG HOUSES

- (1) 8'ft.W x 20'L Top Doghouse w/Round Top, 4'L Porch Extension, Insulated w/Knowledge Box, Lockers, Bench Storage, Cabinets, Parts Bins, Skidded.
- (1) 8'ft.W x 35'L Change/Parts House w/Round Top, Bench Storage, Cabinets,
- (1) 10'W x 40'L Steel Mud House Fluorescent Lights, Skidded
- (1)10'W x 30'L Air Compressor House, w/ Parts House on One End Skidded
- (2) ea. Screw type air compressors complete with air driers 50 hp 480 x 60 hz x 3 phase
- (1) ea. Cold start compressor Diesel engine driven electric starting.

WATER/FUEL TANKS

- (1) ea. 500-Barrel Potable Water Tank with (2) ea.2 x 3" x 10 hp. transfer pumps Skidded
- (1) ea. 500 bbl Diesel Tank with (2) ea.1.5 x 2"x 5 hp. Electric Fuel Transfer Pumps, Skidded

AUXILIARY EQUIPMENT

- (2) each- 10,000lb Air Hoist
- (1) each- 4,000lb Air Hoist
- (1) each 2500 lb man rider air hoist
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36" in." H x 4'6"W x 36'L 2-Section Steel Catwalk w/Steps

2'H x 8'W x 20'L Junk Box, Skidded (New)

25,000' Hydraulic/Electric Wire line Measuring Unit w/.092" Line &

Counter Wire line Guide w/ (6) Rollers (New)

7500' 1-3/4" Drilling wire Line Spool (New).

DRILL WATCH SYSTEM

Drill watch-Mud watch system or equivalent (New)

TOP DRIVE

VARCO TDS- 4 OR EQUIVALENT
