

## 450HP ZJ15CZ Truck Mounted Mechanical Workover/Drilling Rig

### General Description

- Hook load rating: 250,000 lbs, 125 US ton (1120KN)
- Mast type: 101' (31m) two section telescoping type that is raised using hydraulic cylinders
- Substructure type: 8 x telescopic legs, with rotary table base and setback base independent of each other
- Depth Rating: 5" drill pipe 3,937ft (1200m), 4- $\frac{1}{2}$ " drill pipe: 4,920ft (1500 m), (2 7/8 DP): 15,000 ft (4571m) 2 7/8 tubing 18,000 ft (5486m)
- Wind speed: No hook load & set back full of drill pipe: 68 mph (110 km/h)
- Rotary beam capacity: 300,000 lbs, 150 US ton (1120KN)
- Setback capacity: 130,000 lbs, 65 US ton (578KN)
- Rig floor height: 14.8ft (4.5M)
- Clear height below rotary beams: 11.5ft (3.5M)
- Rotary table size: 17.5" (444.5mm) rated RPM 250rpm
- Drill line size: 1in (26mm)
- Draw works: JC21/11 450hp, disc brake with WCB224 auxiliary brake, Includes sand line drum with 4,757ft of 9/16 cable ( 14.5mm line - 1450m)
- Catheads: 2 ea Y15160, Mounted in mast section, 11,240ft lbs make up single line pull force and 22,480 ft lbs breakout single line pull force, stroke length 6ft
- Winches: 1 hydraulic winch 5ton , Model YJ5B
- Crown saver: pneumatic Crown-o-matic system
- Swivel and Kelly: Max static hook load 252,910 lbs 126 US ton (1125KN) complete with forward and reverse function air spinner
- Operating temperature: -20°C to +55°C (cold weather or desert modifications on request)

### Power Package Rig and Carrier

- 1 x Cat C15, 475 hp (350KW) @ 2100RPM, with water loss, low oil pressure, high water temperature and over speed protection, electrical-start

### Main Transmission

- Allison 6 speed 5610HR, six forward speeds, one reverse

### Rig Electrical Power System

- 1 x Cat C15, 475 hp (350KW) @ 2100RPM, with water loss, low oil pressure, high water temperature and over speed protection, electrical-start, for main unit
- Lighting fixtures are rated for service in classified areas as per API RP 505 for rig system

### Control System

- Driller's house is mounted beside the substructure, which wall is made of stainless steel
- Driller's console panel is furnished with other interface devices such as instrumentation system, hydraulic weight indicator and stand pipe pressure gauges

### Mud Pumps

- Mud Pumps: Qty 2 x F-500hp (372KW) triplex pump c/w liner wash and charge pump, Suction strainer, dampener and pulsation dampener, reset relief valves with integrated bleed and relief valve line.

### BOP and Control system

- 11" 3K Annular BOP, 11" 3K Double Ram (Blind Type Lower, 5" pipe upper), Drilling Spool, BOP Test Pump, (air powered) with hoses and chart recorder. BOP Test Base. BOP Stack Lifting device. Transport Skid. BOP

Control Unit. BOP Control Unit remote Panel, (For Drill floor) Transport Skid for above control units. Choke and Kill Manifold 3-1/16" X 3K. 3-1/16" X 3K Manual and Hydraulic valves. Remote Choke panel. Non-return Valve. All high pressure fire proof hydraulic hoses, hand wheels etc. Stack up height = 73.6" (1.87m)

### *Solid Control System*

- Total capacity: 690 BBL (110m<sup>3</sup>)
- Tanks: 2 tank system to include built in trip tank
- Shakers: Qty 2 Ea, with 1 De-silter / De-sander Combo installed over 2<sup>nd</sup> shaker
- Mix hopper: Qty 1 DN150 x Jet Mixing hopper
- Agitators: 6 Ea. 11kw
- Mud Guns: Qty 6- mud guns supplied
- Poor Boy degasser: Qty 1 Ea NQF800
- Centrifugal pumps: Qty 1 - SB6"x8"x12½", 75 hp (55KW) (mix pump)
- Centrifugal pumps: Qty 1- SB6"x8"x12½", 75 hp (55KW) (charge pump)
- Centrifugal pumps: Qty 1- SB3"x4"x9" 15 hp (11KW) (trip pump)
- Centrifugal pumps: Qty 2- SB6"X8"-12½"(De-silter / De-sander pump)

### *Handling Tools and Equipment*

- Drill pipe and casing elevators, Bails, Slips for drill pipe and casing, Manual drill pipe and casing tongs, Pipe spinner, Casing power tong, Hydraulic unit, Swivel/Kelly unit with drive bushings, rotary table bushings and inserts, pipe racks, bit breakers

### *Air System*

- Air compressor is driven by the carrier engine; air receiver is mounted in the carrier chassis. All air hard and flexible air lines as well as control valves and quick connect fittings are supplied

### *Hydraulic System*

- Max. System pressure 2060psi (14MPa)
- All hoses, hard line, fittings and valves to connect and control all hydraulic functions
- Remote hydraulic panel to allow operator to raise, telescope and latch (and the reverse) from a safe distance
- The hydraulic station for Disk brake is mounted in the Driller's house

### *High pressure manifold*

- Max. System pressure 5000psi (35MPa)

### *Auxiliary Tanks*

- Water tank: 255 bbl (40 M<sup>3</sup>) including 2 x pumps(5.5KW), 1 x pumps(7.5KW)for fire fighting
- Diesel Fuel tank: 185 bbl (30 M<sup>3</sup>) fuel tank and 32 bbl (5 M<sup>3</sup>) day tank, complete with pumps, filtration and distribution system

### *Auxiliary Components*

- Tools and Spares Warehouse with A/C unit
- Workshop, split for electrical and mechanical repairs with A/C unit

### *Rig Move*

- Max. rated speed: 45 kph (28mph)
- Max climb gradient: 32%
- Gross weight of carrier 52T (114,640 lbs)
- Dimensions of carrier: 60' x 9.3' x 14.1'
- Turning radius = 15.8m

Technical Drawing

