

## 1000HP ZJ40/2250-EZ (AC-VFD) Truck Mounted Drilling Rig

### *General Description*

- Hook load: 505,820 lbs, 250 US ton (2250KN) with 10 lines
- Mast type: 125' two section telescoping type that is raised using hydraulic cylinders
- Substructure type: Six leg foldable type, single section, swing up with screw jacks to secure in position, with rotary table base and setback base independent of each other
- Depth rating: 4 ½" Drill pipe: 13,300 ft (4000M), 5" DP 10,500 ft (3200M)
- Wind speed: No hook load & set back full of drill pipe: 68 mph (110 km/h)
- Rotary beam capacity: 505,820 lbs, 250 US ton (2250KN)
- Setback capacity: 269,770lbs, 135 US ton (1200KN)
- Rig floor height: 19.7 ft (6M)
- Clear height below rotary beams: 16 ft (4.9M)
- Rotary table size: 27.5"
- Drill line size: 1 ¼ in (32mm)
- Draw works: JC40DB 1000hp (735KW), with PZ40 disc brake system
- Catheads: 2 ea, Mounted in mast section, rated at 22,480 ft lbs straight pull
- Winches: 2 x hydraulic winches Model YJ3B and YJ5B for use on the rig floor area & 2 x air winches one at monkey board and one at end of cat walk
- Martin Decker RigSense 2.0 drilling instrumentation system
- Gaitronics rig site communications system
- Mathey wireline unit complete with Totco 8 and 16 degree survey equipment
- Operating temperature: -20°C to +55°C (cold weather or desert modifications on request)

### *Top Drive*

- TDS and drive unit: Tesco 250 HXI 700 (hydraulic) or 250 EMI 400 (electric) Top Drive system complete with electrical and hydraulic control systems, Guide rail, shipping containers, spares, tools and operation manuals

### *Main Transmission and Transfer Box*

- Allison 6 speed S6610HR, Rated at 710 hp, input speed 2500 rpm
- JJX140, Max rotary speed 2100rpm, max output torque 10,360 ft lbs with 1:1 ratio

### *Power Package*

- Carrier power 1 x Cat C-18, 630 hp (470 KW) @ 2100RPM, with water loss, low oil pressure, high water temperature and over speed protection, electrical-start
- Rig power and rating of generator sets: 3 x Cat 3512B 1200KW c/w 1500KVA generator

### *Electrical System*

- Power system 600v, 50 Hz for VFD drives. 400V 50 Hz for AC Motor control and 230v 50 Hz for solids control system, lighting and general power (60Hz system also available)

### *Mud Pumps*

- Mud Pumps: Qty 2 x 1000hp triplex pumps c/w liner wash, charge pumps, suction strainer, suction dampener and pulsation dampener also reset relief valves with integrated bleed off line. Each pump is powered by 1000hp AC motor

### *Drilling Control system*

- Stainless steel clad Drillers cabin with high tech PLC control system is utilized to give precise control of

the Variable Frequency Drives (VFD) to operate all rig functions

- Driller control system employs a drillers chair with two joysticks to control draw works hoisting and lowering, the second to apply and release the disc brakes
- The driller controls the major rig functions such as the Mud Pumps and the Top Drive via simple, user friendly touch screen terminal and switch panels mounted within easy reach of the driller
- Drillers cabin console also houses all other interface devices such as video system monitor, intercom system, instrumentation system, hydraulic weight indicator and stand pipe pressure gauges

### *BOP and Control system*

- Shenkai 13- $\frac{5}{8}$ " 5K Annular BOP, 13- $\frac{5}{8}$ " 10K Double Ram, Drilling Spool, 13- $\frac{5}{8}$ " 10K Single Ram. Ram blocks included. 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 10K. 3-1/16" X 10K Manual and Hydraulic valves. JY-70A Remote Choke panel. DSA. 2-1/16" 10K Non-return Valve. Complete with high pressure fire proof hydraulic hoses and hand wheels

### *Solids Control System*

- BBL capacity: 5 tank, 1695 BBL (270M<sup>3</sup>) system. One additional brake cooling water tank and trip tank are also included
- 3 each Brandt King Cobra Linear Shale Shakers with 3<sup>rd</sup> shaker incorporating 1 each Brandt King Cobra Mud Cleaner (16 x 4" de-silter cones rated for 1000GPM and 2 x 12" de-sander cones rated for 1000GPM)
- Qty 1 Ea Model Brandt DG-12 Vacuum Degasser with 5 hp, 50 hz, 230/460 volt, 3 phase, explosion proof electric motor rated for 1200 GPM complete with JP-12 Jet Pump Educator.
- Mix hopper: Qty 2 DN150 x Jet hoppers
- 16 total. 15 x HM-15, 20 hp (15KW) and 1 x 7 hp (5.5 KW)
- Poor Boy degasser: Qty 1- NQF1200/0.7
- Mud Guns: Qty 11- mud guns supplied
- Centrifugal pumps: Qty 2- 6 x 8 x 12 1/2" impeller, 100 hp (75KW) (de-silter, de-sander pumps)
- Centrifugal pumps: Qty 2- 6 x 8 x 13" impeller, 100 hp (75KW) (mix pumps)
- Centrifugal pumps: Qty 2- 6 x 8 x 13" impeller, 100 hp (75KW) (charge pump)
- Centrifugal pumps: Qty 2- 3 x 4 x 9" impeller, 15 hp (11KW) (water pump)
- Centrifugal pumps: Qty 2- Cooling pumps

### *Handling Tools and Equipment*

- Elevators, Bails, Slips, Manual tongs, Pipe spinner, Casing power tongs, Hydraulic unit, handling tool storage / transport skids, bit breakers etc.

### *Air System*

- 2 X Air compressors 50 hp (Sullair LH12-50) and air dryer system with reservoir in generator house as well as additional reservoir located on carrier

### *Rig Move*

- Max. Road speed (limited): 45km/h  
Max. Climbing gradient: 26%, Min. ground clearance: 311mm and Min. turning radius: 19.5m  
Approach/Departure Angle: 26°/18°

