

One (1) ea. **NOV** Desander type “DSN10002H, 2 CONE”, 2 Cyclone, 4" Inlet, 1000 GPM.

6.2.2.3. DESILTER:

One (1) ea. **NOV** type “DSL1000204C”, 20 Cyclone, 4" Inlet, 1000 GPM.

6.2.3. MUD MIXING SYSTEM:

The Mud Mixing System consists of mud mixing pumps, injection hoppers, suction and discharge manifolds as per following:

Two (2) ea. mixing mud hoppers, with with access to any mud tank, independent discharge line and bottom mud gun in each tank.

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- 6" Mixing Funnels.
- Two (2) ea. **HALOC** 8" x 6" x 14" Centrifugal Pumps sets for circulating, processing drilling fluid and mud pump charging system must be equipped with 75 HP Electric Motor Explosion-Proof – 480 Volt 1750 RPM, 60 HZ, 3 phase and.

6.2.4. OTHER MUD EQUIPMENT:

- One (1) ea. Laboratory on mud tank with working stand, sink, water loss, densimeter, air 120 psi, water, 127 v power etc. The mud laboratory is set with a complete mud measuring apparatus.

6.3. BOPs HOIST UNIT:

One (1) set of two ea. Manual hoist for BOP movement model “-----” (2 x 20) ton Capacity and 5.5 m. lift, Hang on Substructure beams.

7. POWER GENERATION:

7.1. MAIN GENERATORS:

Four (4) set AC Engine/Generators sets especially made for desert transport operations including:

- Four (4) set **KATO** model “1030-680361111”, 1030KW- 1200 RPM-1240 AMP, 60Hz, Driven by;
- Four (4) set **Caterpillar** Engine Model D-398 DI-TA, 540 Kw. 1000 RPM.

7.2. SCR DRIVE SYSTEM AND GENERATOR CONTROLS:

The system consists of four (4) ea. Bays.

7.2.1. SCR GENERAL DESCRIPTION:

- Manufacturer **ROSS HILL**
- Type 1200
- Voltage 600 VAC
- Frequency 60Hz

7.2.2. CIRCUIT BREAKER SECTION:

One (1) ea. 800 AMP frame Circuit Breaker of stationary type, Molded case.

7.3. GROUNDING SYSTEM:

Per IEEE and API Standards.

7.4. LIGHTING SYSTEM:

Heavy duty vapor tight explosion proof and weatherproof fluorescent and mercury vapor lighting system, using lighting fixtures for use with a land rig with related equipment as shown. All lights within 10 ft. of well center shall be explosion proof.

Lighting Fixtures to operate from 120 volts, 1 phase, 60 Hz. Power and meet or exceed American Petroleum Institute (API) specifications RP-500. Each fixture to have a Class 1 Division 1 rated plug and receptacle disconnect to allow safe and easy removal of any fixture for service or movement to another location day or night without interruption of any power of illumination.

7.5. GRASS HOPPER & CABLE TRAYS:

One (1) Lot Electrical cable/service trays to accommodate air, fuel, water and electrical cable. Top of trays covered to provide walkway. One (1) Grass Hopper skid assembly complete.

7.6. HPU:

One (1) ea. **Q-SINE** Electric/Hydraulic unit consist of:

- One (1) ea. Diesel engine **General Motors**, type GM-741,
- Industrial motor **BLADOR** type CM3548,
- Two (2) ea. Electrical motor **WGE** 460 volts, 60 Hz.
- Two hydraulic pumps,

8. Hydraulic reservoir, sight glass, thermometer, low/high level alarm, aux. connection, pressure gauges, filters and cooling radiator. Electrical enclosures are explosion proof.

9. AIR SYSTEM:

9.1. AIR COMPRESSORS:

(2) ea. **QUINCY** Rotary screw compressor

- Type QSI-245
- Working pressure (max) 150 psi (10 bar)
- Volume flow 243 acfm each
- Emergency Stop button
- CSA/UL Wye Delta Starter 480 VAC

9.2. AIR DRYER:

One (1) ea. **VAN AIR**, Model RD-250.

9.3. DIESEL DRIVEN COLD START AIR COMPRESSOR:

One (1) ea. **QUINCY** Air compressor two-stage cold start compressor model QSI-390, 150 psi, (29.5 to 64) CFM (Range) with constant speed control, inlet filter, intercooler and relief valve.

9.4. AIR RECEIVER:

Two (2) ea. **MANCHESTER** Air receivers, 240 gal. each on air compressor skid with pressure relief valve, gauge and piping.

10. INSTRUMENTATION AND DATA ACQUISITION:

- Drillers Control Console,
- Hook Load (incl. recorder), Type Martin Decker, 7 pen,
- RIG WATCH by **EPOCH WELL SERVICES INC**,
- Pump pressure Martin Decker 0-5000 psi,
- Choke manifold pressure Martin Decker 0-5000 psi,
- Rotary table torque Martin Decker type FA9-2,
- Make-up torque Martin Decker 0 – 2,500 kg,
- Pump stroke Incorporated in tank monitoring system
- One (1) set Deviation survey double recorder 2 unit x 8 degree, 1 x 16 degree Complete assy. With overshoot and sinker bar, for 8", 6-1/2", and 4-3/4" drill collars.

11. WATER AND FUEL TANKS:

One (1) ea. Water Tank.

One (1) ea. Fuel Tank.

