

Closed Loop Mud System - RMR Operating, LLC

Madera "25" Federal Com #5H Section 25, T26S, R34E Lea County, New Mexico

Design

Drilling mud will circulate through a closed system consisting of steel pits on the surface, mud pumps, piping on the surface to the rotating head and return piping from the bell nipple back to the steel pits. Solids will be removed from the mud in the steel pits using for the following equipment:

- 1. Two (2) shale shakers will be installed with 110-250 mesh screens. These shale shakers should remove solids down to 65 micron diameter. All returning drilling mud will flow across the shale shakers.
- 2. A 6T4 mud cleaner will be installed to further remove solids to the 25 micron level. Drilling mud will be circulated through the mud cleaner using a 5x6x12 75hp pump. This pump will generate the optimal pressure for the mud cleaner cones to process the solids.
- 3. A 518 centrifuge will pick up a portion of the effluent from the mud cleaner. The centrifuge will remove solids to the 10 micron level. The centrifuge will remove solids down to the 1 micron level after adding the dewatering unit, as discussed below.
- 4. A dewatering unit will add polymer to the flow stream entering the centrifuge to flocculate the solids. Flocculation increases the effective particle size of the solids enhancing the performance of the centrifuge to remove solids down to the 1 micron level.
- 5. Roll-off bins (20 cubic yards per bin) and rails will be installed next to the steel pits so that the solids removed from the shale shakers, mud cleaner and centrifuge fall directly into a bin. Once a bin is full it is picked up by a truck and hauled to disposal. An empty bin is moved under the solids control equipment along the rail so that the solids control equipment can operating continuously.

RMR Operating, LLC | 2515 McKinney Avenue, Suite 900, Dallas, TX 75201 | PH: 214-871-0400

Operation and Maintenance

Personnel dedicated exclusively to operating and maintaining the solids control equipment will be on site 24 hours per day while drilling. The solids control personnel will monitor the shale shakers, much cleaner, centrifuge, dewatering unit and all associated pumps and piping to make sure the equipment is functioning correctly. If equipment problems are identified, the solids control personnel will coordinate repair or replacement of the equipment. The solids control personnel will also monitor the level of solids in the roll-off bins and arrange for trucks to pick up the bins when they are filled.

Closure Plan

Cuttings and other solid will be hauled off to a permitted landfill according to OCD guidelines. Liquids will be re-used to the extent possible, but if liquids need to be disposed they will also be hauled to a permitted disposal facility. Liquids to be temporarily stored on site will be placed in 500 BBL "frac" tanks.

For the Madera "25" Federal Com #5H well, both solid water and liquid waste will be taken to the R360 Environmental Solutions LLC, "Halfway Facility" between Carlsbad and Hobbs, Mile Marker 66 on Carlsbad Hwy, Hobbs, NM, Facility Permit number NM1-0006.





RMR Operating, LLC Madera 25 Fed Com #5H SHL: 660ft FWL & 50ft FNL Sec. 25, T26S-R35E BHL: 660ft FWL & 330ft FSL Sec. 36, T26S-R35E V-Door East





1 inch = 100ft