

**SOLUTIONS FOR OPERATIONAL AND ECONOMICAL CHALLENGES
OF CLOSED-LOOP DRILLING IN NEW MEXICO**

Kayli Clements*

MI SWACO

5950 North Course Dr.

Houston, TX 77081

Voice: 281-561-1446

Fax: 281-561-7240

kclements@miswaco.com

J.O. Pruett

MI SWACO

Denver, CO

Regulators in New Mexico have recently enacted Pit Rule 50 that will phase out the use of open pit, dump-and-dilute systems and drive operators in the region to replace it with fully closed-loop drilling systems. Many operators have expressed concerns about the change, suggesting that there are limited economical benefits and that the current technology available with these systems cannot meet the operational objectives or the strict environmental compliance outlined by the new rule. This paper will clarify the definition of the closed-loop system and the new innovative designs that provide answers to drilling challenges in New Mexico. It will also provide examples, through case histories, that drilling with these systems is cost effective, and in some cases, economically beneficial.

A new rule was introduced earlier this year by the Oil Conservation Division of the New Mexico regulatory authority that has opened up new possibilities for beneficial reuse that can be advantageous if used appropriately. Research into these options has shown that the resulting mud and cuttings can be used effectively on site as a product rather than disposed of as a waste, thus providing additional savings by reducing haul-off costs. The use of this closed-loop system can be viewed simply as a change in perspective and as a new approach to "best practices" that can be mastered through solutions-driven engineering. The objective is to show that closed-loop drilling can be a viable option, that this technology can be applied to maintain existing levels of production and ensure that New Mexico remains a desirable location for new development and exploration.

###