

## PARTIAL RECLAMATION BOND RELEASE IN WYOMING

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In January 1988, partial reclamation bond release was approved for some 935 acres of permanently reclaimed land at Kerr-McGee's Jacobs Ranch Mine in the Powder River Basin of Wyoming. This represents the largest area in Wyoming, if not the entire West, where reclaimed land has received partial bond release and has been returned to its premine grazing use. This approval by the Wyoming Department of Environmental Quality-Land Division (WDEQ-LQD) with the concurrence of the Office of Surface Mining Reclamation and Enforcement (OSMRE) and the United States Forest Service (USFS) reflects the success of the mine's reclamation program. The success has been demonstrated by annual studies which show that the reclaimed areas are more productive than the surrounding native rangeland and by the successful return of cattle grazing to these areas for four consecutive years. In fact, these reclaimed areas meet the regulatory criteria for final bond release except for completion of the mandatory ten year bonding period.

The Jacobs Ranch Mine is a surface coal mining operation of Kerr-McGee Coal Corporation located approximately 52 miles southeast of Gillette, Wyoming. The mine is a two-pit, truck-shovel operation, mining coal from three seams varying in thickness from thirty to seventy feet. The permit area encompasses approximately 5,000 acres of which some 1,200 acres have been permanently reclaimed. Prior to mining, the land use was rangeland and incidental wildlife habitat. Livestock grazing has continued on inactive portions of the mine site. After mining, the area will return to ranching with improved rangeland and improved water wells and stockpiles.

Up to five feet of topsoil and subsoil is removed with scrapers prior to overburden removal. The overburden is removed in forty-foot benches and trucked to the backfill areas where it is placed on the backfill lifts in the same sequence in which it was taken (i.e., top material to the top, and bottom material to the bottom). Any significant quantities of unsuitable backfill are placed on the lower backfill lifts. The Mine Plan provides for analysis of composite samples from the upper four feet of the top backfill lift to verify that no unsuitable materials are present prior to placing thirty inches of topsoil.

Once the topsoil is graded and ripped, the area is usually planted with a fast growing temporary cover such as oats to rapidly stabilize the area. This stubble mulch is usually less expensive and more effective than normal mulch for temporary erosion control. Permanent final revegetation is accomplished with a rangeland seed mix which includes eleven types of grasses and shrubs. Seed is applied at a rate of about eighteen pounds per acre, making an average in excess of 35 pure live seeds per square foot. After about three growing seasons, vegetation studies are conducted to determine whether grazing can be resumed and to define the grazing capacity of the area.

In response to Kerr-McGee's request for partial bond release, representatives of four state and federal agencies participated in the field inspection of the partial bond release area in the summer of 1987. Topsoil and subsoil depths in twenty-eight holes were measured. Soil texture and composition were analyzed over the area. A series of vegetation surveys and wildlife evaluations were also conducted by the agencies on the proposed bond release area. Positive results of their evaluations were the basis for approval of the partial bond release. Considering that the area presently meets the regulatory criteria for full bond release, it is anticipated that the final bond release will be approved at the expiration of the mandatory ten year bond holding period.