

## SUMMARY

Powder River Coal Company (PRCC) has applied to the Bureau of Land Management (BLM) for leases for federal coal adjacent to two existing surface coal mines operated by companies related to PRCC. One tract is adjacent and west of the North Antelope Mine, and the other is adjacent to and northwest of the Rochelle Mine. This Environmental Assessment has been prepared to assist the BLM in making a decision on the proposed lease, to provide a basis for public review, and to comply with the requirements of the National Environmental Policy Act.

Four alternatives were considered as follows:

- Alternative 1- Lease the coal as maintenance tracts for the two existing mines as applied for in the lease applications.
- Alternative 2- (Proposed Action) Lease the coal as maintenance tracts for the two existing mines, but only after (1) adjusting the boundaries to include additional coal that might be bypassed if not mined in conjunction with the tracts as applied for in the lease applications, and (2) combining the two tracts into one.
- Alternative 3- Lease the coal but with the assumption that someone other than PRCC is the successful bidder. Since there are no other adjacent operations, the successful bidder in this case would have to open a new, stand-alone mine. In order to make a sufficiently large contiguous block of coal to support a stand-alone mine, the two tracts under application would be combined and the combined tract would be adjusted to include additional coal as with Alternative 2.
- Alternative 4- Reject the lease application or defer leasing until some future date. This is termed the no action alternative.

Alternatives 1, 2 and 3 would each require a competitive bid process, with the coal rights going to the company or individual that submits the highest qualified bid for the property. The differences between leasing for a new mine and production maintenance tract leasing are primarily procedural. Maintenance tract lease sales are handled by the BLM state office while the Regional Coal Team (RCT) must review leases for new mining operations prior to the state office processing the applications.

Under Alternative 1, the two tracts would be mined by North Antelope Coal Company and Rochelle Coal Company in order to extend the lives of the respective mines. For the purposes of this Environmental Assessment, the North Antelope lease application tract and the Rochelle lease application tract are assumed to contain 120 and 150 million tons of recoverable coal, respectively. These values may change following completion of the BLM's geologic report. Mining plans on file with the Wyoming Department of Environmental Quality, Land Quality Division indicate that without this additional coal reserve, mining will end at the North

Antelope Mine in the year 2004 and at the Rochelle Mine in 2011. The reserves requested in the two lease applications would extend coal production at the North Antelope Mine by about 10 years to 2014 and at the Rochelle Mine by about 8 years to 2019 at the currently planned production rates of 12 million and 18 million tons per year, respectively. The acquisition of the requested leases would thereby serve to prolong the productive life of the existing PRCC mines and increase the economically mineable tonnages of the North Antelope and Rochelle mines.

This Environmental Assessment characterizes and quantifies the environmental impacts that would likely result from Alternative 1, leasing the two tracts as applied for by PRCC as production maintenance tracts for the two operating mines. Environmental impacts of Alternatives 2 through 4 are discussed in terms of comparisons with Alternative 1.

Under Alternative 1, coal would be recovered from beneath about 954 and 1,196 acres of land, respectively, adjacent to the existing North Antelope and Rochelle Mines. Associated disturbances for benching and flood control facilities during mining and highwall reduction during reclamation would bring the total disturbed area under Alternative 1 to about 1,300 and 1,450 acres at the North Antelope and Rochelle mines, respectively. This figure does not include approximately 2,300 and 5,040 acres slated to be disturbed and reclaimed at the existing North Antelope and Rochelle Mines, respectively, without the new lease application tracts.

The lands within and adjacent to the lease application tracts are currently used for livestock grazing, oil and gas production, occasional big-game hunting, and wildlife habitat. Baseline studies have been or are being conducted to collect the detailed data required for a permit to mine. These include hydrology and geology studies, soils and vegetation studies, cultural resource investigations, and wildlife inventories. These baseline studies cover a sufficient area around the tracts to accommodate possible changes in tract boundaries prior to the lease sale, to cover areas of incidental disturbance outside the coal removal limits, and to provide a buffer area around the mines for long-term monitoring of the effects of mining (e.g., on wildlife).

No unique or irreplaceable environmental resources have been found during the baseline studies. The tracts are similar to surrounding areas. Soils and vegetation are similar to those on the adjacent North Antelope and Rochelle Mines. No unique or irreplaceable wildlife habitat features were found on or near the lease application properties. A plan is in place to mitigate any impacts to raptor nests. This plan must be updated every 5 years or whenever a significant change is proposed in the mining and reclamation plan. Playas and incised stream channels provide desirable wildlife habitat features and should be replaced in the reclaimed area (within regulatory constraints on reclamation design) if the tracts are mined. If the tracts are mined, water-level declines in the overburden, coal and shallow underburden aquifers will be extended approximately one mile further to the northwest and less than one mile further toward the north and west beyond the declines anticipated as a result of current mining at the North Antelope and Rochelle mines. Drawdowns in the overburden and shallow underburden aquifers do not extend as far as those in the coal. Modeling studies to predict the magnitude and extent of water-level declines in the Wyodak-Anderson coal aquifer for the current North Antelope and Rochelle mines show that these declines are within the limits predicted by the U.S. Geological Survey for all anticipated mining in the area. Studies to predict drawdowns will have to be revised to incorporate the new lease tracts, but simple extension of the predicted drawdown zones by the

widths of the proposed lease tracts indicates that even with the added tracts the drawdowns will remain within the predicted limits. The spoil aquifer which replaces the coal and overburden will cover a larger area if the two tracts are mined, and consequently water level recovery to steady-state conditions will be delayed.

Within the LBA tracts, 10 cultural resource sites were found which are eligible for registration in the National Register for Historic Places. Another 6 sites have unknown eligibility. In the Alternative 2 tract adjustment there are 4 sites, all ineligible for registration. Air quality will be affected to approximately its current level or less, but these effects will remain for several additional years. At times, air quality at the Rochelle Mine could actually improve since some of the Rochelle lease application area is closer to the facilities area (hence, shorter haul distances) than much of the current lease area. There are no areas on the tracts which are unsuitable for leasing according to 43 CFR 3461. Economic benefits will be realized from bonus bid and royalty payments, production taxes and fees, and maintaining present employment levels for ten additional years at the North Antelope Mine and about eight additional years at the Rochelle Mine under Alternative 1.

Alternative 2, leasing the coal as maintenance tracts for the existing mines after adjusting the boundaries to include additional coal to prevent its being bypassed, is the Proposed Action. This alternative would be the same as Alternative 1 except that approximately 40 million tons of recoverable coal underlying approximately 320 acres would be added to the North Antelope lease application area and about 60 million tons of coal under some 590 acres would be added to the Rochelle lease application area. The total recoverable coal reserves included in the new leases for both the North Antelope and Rochelle Mines would then total approximately 370 million tons under approximately 3,060 acres. The addition of areas required for overburden benching, flood control facilities during mining and highwall reduction during reclamation would result in additional disturbed areas of approximately 150 acres and 100 acres at the North Antelope and Rochelle lease application tracts, respectively. Alternative 2 with the additional coal reserves would increase the productive life of the North Antelope Mine by approximately 13 years and the Rochelle Mine by approximately 12 years. Air quality could be expected to be similar to Alternative 1 since the areas to be added are adjacent to the lease application areas discussed in Alternative 1. Ground-water drawdowns in the affected aquifers would be extended approximately one-quarter mile further to the west than under Alternative 1. Production taxes and royalties would be increased under Alternative 2 because an additional 40 million tons of coal would be recovered at the North Antelope Mine and an additional 60 million tons will be recovered at the Rochelle Mine. Employee payrolls and associated benefits would be maintained at present levels for a longer time period due to the added reserves.

Alternative 3, leasing the PRCC lease application tracts for a new stand-alone mine, would have different environmental and economic impacts than Alternatives 1 and 2. The total affected area would increase due to the need to construct a new facilities area, coal preparation and load-out plant, railroad spur and loop, access road, and out-of-pit stockpiles. This additional disturbed area could total 1,445 acres or more. Air quality under this alternative would be impacted by the cumulative effects of three adjacent mining operations and three coal crushing and load-out plants. Also, it is likely that annual production from three mines would exceed the production rates presently planned and permitted at the two existing mines. Royalty and production taxes would be approximately equal under Alternatives 2 and 3 since the amount of

coal mined would be the same, but the annual distribution of these revenues would most likely be different. Employment would increase under Alternative 3, as would property taxes due to the need to construct new facilities. The local towns have the ability to absorb the expected additional employees. The requirement to develop new facilities would increase the cost of producing the coal with a new stand-alone mine (Alternative 3). Therefore, the timing of coal production from a stand-alone mine would likely be farther in the future than if the coal is developed as maintenance tracts for the existing mines. As a result, taxes, royalties, employment and other economic benefits from producing the coal would be farther in the future with a higher cost and lower present value.

Alternative 4, the No Action Alternative, will keep the lease application tracts essentially as they now exist. Portions of both tracts will be disturbed by overburden benching and construction of flood control structures during mining and by highwall reduction during reclamation due to existing mine operations. Economic and employment benefits associated with the mining of the lease application tracts will be foregone. A possible option under Alternative 4 would be to simply postpone the lease sale, with the idea that an improving coal market will make the lease application tracts more attractive to bidders at some future date. The Clean Air Act mandates that Phase I listed utilities must decide before February 1993 whether they will switch to low-sulfur coal or install scrubbers in order to comply with sulfur emission standards. Availability of clean coal, such as is contained in Wyoming's Powder River Basin, may be a factor in this decision. If some companies are unable to lock in a long-term dependable supply of clean coal, that market potential for Powder River Basin coal may be delayed. PRCC's current plans call for the mines to enter the lease tracts as soon as possible after the tracts are permitted. Both mines have pits approaching the proposed lease application areas at present. A considerable delay in leasing the tracts would probably preclude their use as maintenance tracts for the existing mines, and under this option of Alternative 4, could dictate that the lease tracts be leased only for a stand-alone mine. Environmental impacts for Alternatives 3 and 4 would then be similar, although air quality impacts would be of smaller magnitude if the new stand-alone mine and the existing PRCC mines were not operated concurrently.

The following tabulation compares lease areas, tons of recoverable coal and disturbed areas for Alternatives 1 through 3.

	Added By LBA Process								
	Alternative 1			Alternative 2			Alternative 3		
	Lease Area (acres)	Coal (mmt)	Disturbed Area (acres)	Lease Area (acres)	Coal (mmt)	Disturbed Area (acres)	Lease Area (acres)	Coal (mmt)	Disturbed Area (acres)
Rochelle	1196	150	1450	1786	210	2186	NA	NA	NA
North Antelope	954	120	1300	1274	160	1524	NA	NA	NA
Totals	2150	270	2750	3060	370	3710	3060	370	5155

Since royalties are keyed to sales price, provisions are already in place for the federal government to benefit from increasing coal prices. In selecting alternatives, the BLM must

balance the risk that the lease will be mined at all, or at significantly higher cost against the hope that increasing coal prices will lead to higher bid prices and pursuant royalties and taxes for the tract. The opportunity to take advantage of higher coal prices in the future may be dependent on how quickly the coal can be brought to market once prices begin to rise. The leasing and permitting process typically takes several years to complete. Also, long-term contracts, which currently command higher prices than the spot market, are more easily obtained if an operator can show long-term reserves. A lack of reserves would make it difficult for an operator to commit to long-term coal supply contracts.