

# SUMMARY

## INTRODUCTION

This draft environmental impact statement analyzes the environmental impacts of the proposed competitive leasing of 22 federal surface minable coal lease tracts in the Powder River Coal Region. This is the second round of federal coal leasing in this region.

The Department of the Interior, through the Bureau of Land Management, periodically conducts competitive coal lease sales to ensure that adequate coal supplies are available to meet national long-term energy requirements and that adequate reserves are available to continue existing production. The Secretary of the Interior established a leasing level range of 1.2 to 4.85 billion tons of recoverable coal for this round of leasing in the Powder River Coal Region on April 29, 1983.

The Powder River Coal Region includes parts or all of Natrona, Converse, Johnson, Campbell, Sheridan, Crook, and Weston counties in Wyoming and Rosebud, Big Horn, and Powder River counties in Montana. Proposed federal coal leasing would occur primarily in Campbell County, Wyoming, and in Rosebud and Big Horn counties in Montana.

## RECOMMENDATION

The Bureau of Land Management recommends that Alternative 5 be selected as the preferred alternative. Analysis of the 17 tracts in this alternative indicates that 8 of the 17 would be maintenance tracts for the perpetuation of existing coal mining operations. Total recoverable tonnage from this alternative equals about 2.6 billion tons. That amount is well within the recommended leasing level range of 1.2 to 4.85 billion tons. With this alternative, impacts such as high population increase, water consumption, and air pollution associated with the proposed coal-fired generator in the Mud Springs tract would be avoided.

## ISSUES

Issues and alternatives were discussed and formulated by the Powder River Regional Coal Team in June 1983. No new alternatives or issues within the scope of this environmental impact

statement (EIS) were identified during the public scoping process, but existing issues were expanded, with concerns about specific areas or resource conflicts being raised. Major areas of concern or controversy raised during the public scoping period were reclamation and revegetation, air quality, water quality and quantity, population increases, socioeconomic impacts to Indian reservations, land use, and impacts to ranch operations, economics, and social values.

## ALTERNATIVES

Six alternatives are addressed in this EIS: the "no action" alternative and five alternatives with different leasing levels in which from 9 to 22 tracts would be offered in a proposed 1984 lease sale.

The leasing alternatives include various mitigation requirements, which are considered parts of the proposed federal actions under all alternatives.

The "no action" alternative would not offer federal coal for competitive leasing. Both coal-related activities and activities not related to coal would continue to occur within the region without new federal leasing. These activities include natural population growth, maintenance of existing industrial operations, and development of new operations where resources were previously committed. Taken together, these activities constitute the "baseline," which is a projection of overall development trends until the year 2000 without additional federal coal leasing.

Current energy-related industrial developments included in the baseline are listed in appendix B.

Alternative 2 proposes the leasing of 9 tracts, 3 in Wyoming and 6 maintenance tracts in Montana. A total of 997 million tons of recoverable coal reserves would be offered for sale.

Under Alternative 3, a total of 11 tracts would be offered for leasing—3 in Wyoming and 8 in Montana. The 11 tracts contain 1.384 billion tons of recoverable coal reserves. This alternative proposes leasing the Wyoming tracts included in Alternative 2, the Montana maintenance tracts, and 2 competitive tracts in Montana.

Alternative 4 proposes leasing 15 tracts, 6 in Wyoming and 9 in Montana. A total of 2.297 billion tons of recoverable coal reserves would be offered for sale.

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Alternative 5 would offer 17 tracts for competitive leasing, 8 in Wyoming and 9 in Montana. The 17 tracts contain a total of 2.605 billion tons of recoverable coal. The same number of Montana tracts would be offered as in Alternative 4; however, the Mud Springs tract in Alternative 4 was replaced in Alternative 5 by the Hanging Woman tract.

Alternative 6, the maximum alternative, proposes leasing 22 tracts, 11 in Wyoming and 11 in Montana. A total of 4.515 billion tons of recoverable coal would be offered for sale under this alternative.

## MAJOR CONCLUSIONS

### Overall Impacts

Analysis of the region indicates that new federal coal leasing would cause no significant impacts to the following resources under any alternative: climate, physiographic provinces, geologic structure, floodplains, threatened or endangered plant species, prime farmland, wilderness or wilderness study areas, recreation, areas of critical environmental concern, or wild and scenic rivers.

Resources that would incur one or more significant impacts are air quality; geology; topography, and minerals, water; vegetation; wildlife; visual; land use; economics; social values; and transportation facilities.

Impacts in Wyoming would be centered in the urbanized communities of Sheridan in Sheridan County and Gillette in Campbell County. Sheridan has been experiencing energy-related impacts due to coal mine development principally in Montana for the past 10 to 15 years. Similar impacts in Gillette have stemmed from coal and from oil and gas exploration and production in Campbell County and surrounding areas.

Impacts in Montana would be continued in the communities of Colstrip and Ashland. Additional impacts would occur on either side of the rural Decker area. Unlike Wyoming communities, the Montana communities, with the exception of Colstrip, have experienced very little growth over the past decade. Therefore, social and economic impacts caused by increased population would affect this subregion heavily. The Northern Cheyenne and Crow Indian reservations also could experience impacts.

All the alternatives, including the "no action" alternative, would further diversify the economic

base within the region. The trend is well established in Wyoming but would create a shift in economic base in Montana, where agriculture has contributed a significant part of the economic base.

Coal leasing in Sheridan County would help relieve the impact to Sheridan caused by miners working in Montana and living in Sheridan. Development of new coal mines in Sheridan County would provide a source of revenue to offset coal-related impacts from out-of-state mining.

### Geology and Other Minerals

Coal, oil and gas, and uranium exist in economic quantities within the region. Uranium activities have declined since 1980 and have presented very few conflicts to coal development. Coal production generally does not interfere with extraction of oil and gas. However, as exploration and development of the two resources expand, individual conflicts do occur. These conflicts are lessened by thorough land use planning constraints that minimize chances for the conflict to occur. The BLM's strategy has been not to develop regulations on this issue but to maintain sufficient flexibility in administration to allow industry representatives to resolve the conflicts themselves.

### Water Resources

The impacts on water resources resulting from new federal leasing would be very small regionally. The loss of shallow aquifers would extend over more than 400,000 acres by 1990 under Alternative 5. Water from shallow aquifers generally is of poor quality, with dissolved solids ranging from 3,000 to 5,000 milligrams per liter, although water more suitable for human use is available. Increased costs for new well construction and greater pumping lifts are associated with the loss of shallow aquifers.

### Air Quality

Air pollution from mining and indirect development would be local and would not significantly affect air quality except in the vicinity of coal lease tracts. No federal air quality standards would be violated under any of the alternatives. State standards might be violated or marginally

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violated on or near the Thunder Basin National Grassland in Wyoming and in the Decker area of Montana. Significant impact to the Class I air quality area on the Northern Cheyenne Indian Reservation has not been forecast.

### Soils, Vegetation, and Reclamation

Soils in the area are often shallow, although slopes are generally gradual on a rolling type terrain. Reclamation potential is good, and reclamation would be successful, although it might require intense and costly management on particular areas.

### Wildlife

Leasing and development of federal coal would create major impacts on local populations of wildlife, but minor effects on regional populations. Antelope would be affected most heavily in the area around Gillette, Wyoming, where existing mining operations are restricting animal movement and disturbing habitat. Impacts to mule deer would not be significant regionally. Populations of sharp-tailed grouse and sage grouse would be affected locally.

### Cultural Resources

Federal and state regulations protect cultural resources. Historic and architectural resources on private land might not be protected unless steps are taken by local governments or private citizens.

### Land Use

Lands within this region are administered and controlled by a variety of governmental jurisdictions, each of which exercises a different level of land use planning, development, and control of the use of resources. About 85% of the region's ownership is "split estate"; that is, private surface ownership with federally controlled minerals.

Land use patterns are expected to shift from agriculture toward mining and urbanization, without new federal coal leasing, and implementation of the preferred alternative would influence this very little. Thirty-seven landowners not related to

energy who operate within the boundaries of tracts would be affected. Documented analysis (Moore 1983) suggests that land values of farms and ranches have been enhanced by coal mines in the vicinity.

### Transportation Facilities

Wyoming has adequate highway capacity to handle the increase in traffic volume that would result from the alternatives. Required maintenance would be expected to fall behind because of increased use by maximum weight vehicles.

Montana's highway system is adequate in the Colstrip area but would require major upgrading in the Ashland and Decker areas. Highways of major concern include U.S. Highway 212 from Crow Agency to Ashland, and Montana secondary road 314 from U.S. 212 to Decker.

Railroad traffic would increase by 50 unit trains per day on the main line leaving the region. This traffic would be divided among the three rail lines. Forty-five miles of new rail spur line would be constructed.

### Sociology and Economics

Increases in population are expected with or without new federal coal leasing. The fiscal impact to communities in Wyoming would be significant but could be beneficial in Sheridan's case. Impacts to Montana communities would be significant, and increases in Northern Cheyenne and Crow Indian reservation populations would be expected. Most of these impacts could be mitigated, but only through strong commitment and assistance from both federal and state governments.

## UNAVOIDABLE COMMITMENTS

Coal included in Alternatives 2 through 6 (up to 4.5 billion tons) would be consumed if developed; therefore, it would not be available for later use.

Existing soil profiles and natural plant communities would be destroyed on between 20,000 and more than 100,000 acres, depending on which leasing alternative was selected. Mining would impair or destroy 275 to 425 wells and 25 to 49 springs, and shallow aquifers would be impaired

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at the magnitude of 20,000 to 100,000 acres, depending on the alternative selected.

Construction of 5 to 65 miles of new rail spur would be required under the leasing alternatives. Mining under the leasing alternatives would destroy 20,000 to 100,000 acres of wildlife habitat in the short term; wildlife habitat diversity would be lost at the same rate for the short term; and loss of topographic diversity would cause irreversible loss of cover for wildlife.

If one of the leasing alternatives was selected, mining would bring about the salvage of identified cultural sites; however, these sites, once mined, would not be available for future study, when advanced techniques might be developed. Visual resources would be unavoidably altered by dominance of the landscape by mining activities and structures. Irreversible impacts to the landscape character would be the rounding and smoothing of rugged topographic areas.

Air quality would be unavoidably impaired by the generation of fugitive dust produced by surface mining if a leasing alternative was selected, and increased rail traffic would cause an increased delay for automobile traffic at at-grade crossings.

Increases in regional population would be unavoidable under the leasing alternatives, with the amount of increase dependent on the alternative selected. Impacts due to population increases would increase proportionately.

Adverse effects on social structure such as transience, impersonalization, social fragmentation, and conflicts between new and longtime residents would occur at a level dependent on the population change related to the leasing alternative selected.