# 2.0 PROPOSED ACTION AND ALTERNATIVES

## 2.1 Introduction

Under the lease-by-application regulations discussed in the previous chapter, the BLM must take action on the WRB lease application. If the action is the holding of a lease sale, and if the lease is acquired by the applicant and an LMU application is received and approved, enabling a new mine start, then the BLM action is a major federal action requiring the preparation of an EIS. As an alternative, the BLM action could be to reject the WRB lease application.

For the purpose of this EIS, the first alternative (i.e., the holding of a lease sale and the assumption that this would enable the formation of an LMU and the opening of a new mine) is termed the Proposed Action. The second alternative (i.e., the rejection of the lease application), is assumed to result in the expiration of the Rocky Butte lease and therefore no new mine start at this time. This alternative is defined for the purposes of this document as the No Action Alternative.

Section 2.3 of this chapter lists other alternatives which were considered during scoping for this EIS but were not analyzed in detail.

The lands included in the lease application are located as follows:

Township 48 North, Range 71 West, Campbell County, Wyoming

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|---|---|
| Section 5: | Lots 8, 9, 16 and 17 and S½ and NW¼ Lot 7 |
| Section 6: | Lot 8, E½ Lot 14, Lots 15, 16, E½ Lot 23 |
| Section 8: | Lot 4 |
| | Total Area: 393.04 acres, more or less |

This legal description and acreage are based on approved U.S. Department of the Interior BLM mineral plats on file at the Buffalo Area Office.

In order to avoid bypassing certain coal, the BLM has, as Option A to the Proposed Action, added the following lands to the WRB tract:

Township 48 North, Range 71 West, Campbell County, Wyoming

| | |
|---|---|
| Section 5: | NE¼ Lot 7 |
| Section 7: | E½ Lot 5 |

Township 49 North, Range 71 West, Campbell County, Wyoming

| | |
|---|---|
| Section 32: | Lot 9 |
| | Total Area: 70.36 acres, more or less |

The existing Rocky Butte lease contains 4909.98 acres. If NWR acquires the WRB lease and forms an LMU as proposed, there would be a total of 5303.02 acres of federal coal in the LMU (5373.38 acres with Option A).

The 393.04 acres in the lease application area contain approximately 50 million tons of recoverable coal. The area included in Option A contains about 9 million tons of recoverable coal. About 575 million tons of coal are contained in the Rocky Butte lease tract. Therefore, combining the WRB LBA area with the Rocky Butte lease brings the total recoverable coal in the LMU to about 625 million tons (634 million tons with Option A).

## 2.2 Description of Proposed Action

Under the Proposed Action, it is assumed that the WRB tract would be combined with the Rocky Butte lease into an LMU. The Proposed Action, including Option A, is the Preferred Alternative of the BLM.

A new mine would start production in 1995 according to NWR's plans. The mine layout and pit progression are illustrated on Figure 2-1. Table 2-1 summarizes the material handling sequence for the life of the mine. The mine plan calls for construction

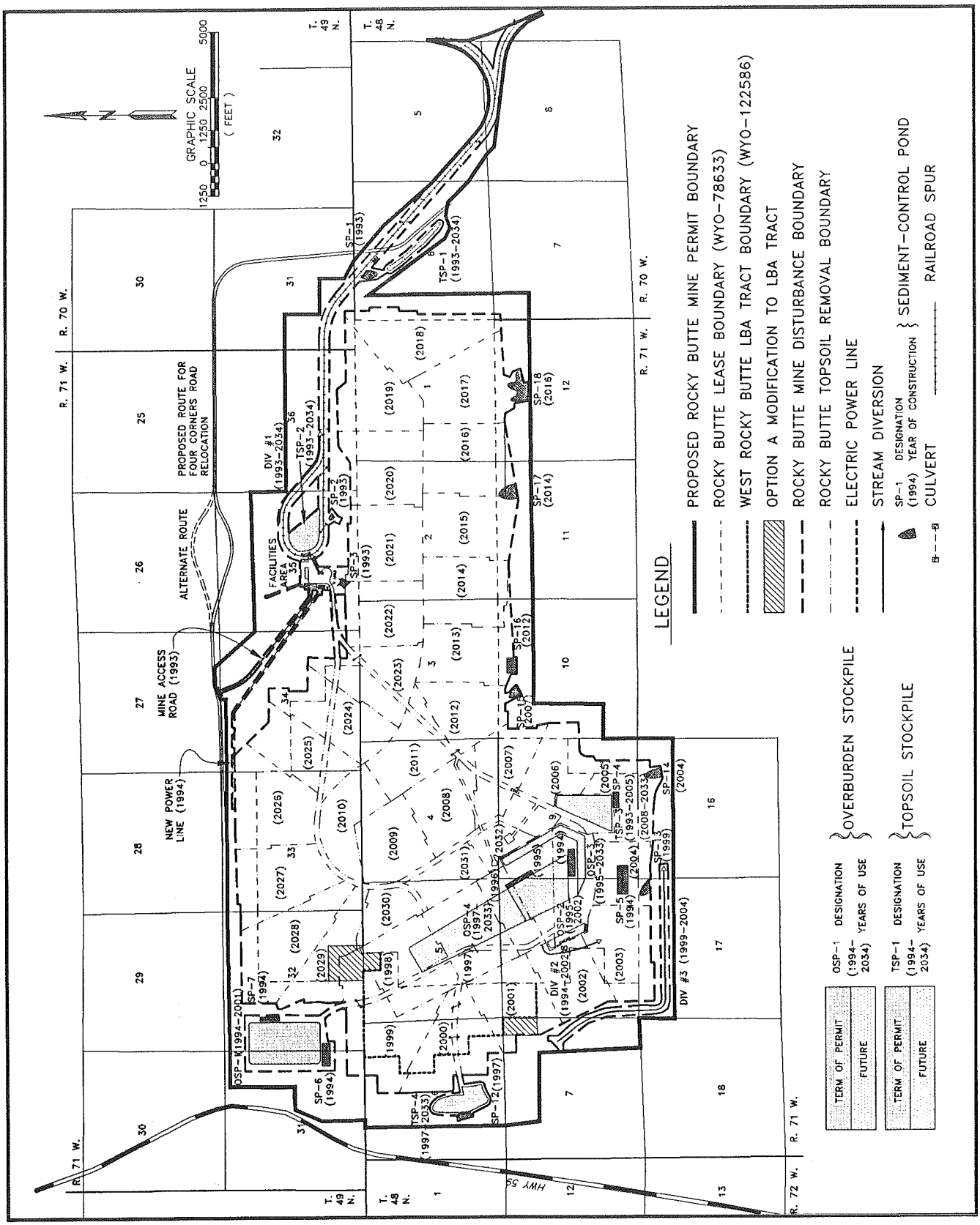


Figure 2-1. Rocky Butte Mine Layout and Pit Progression

coal from the WRB tract would be mined shortly after startup (approximately 30 million tons into the mine or within the first three years of coal production). In actuality, coal production rates would be dictated by market conditions. The production scenario reflected in Table 2-1 is believed to be a conservative case on which to base the impact analysis of Chapter 4.0.

NWR believes that adding the coal in the WRB tract provides enough low strip ratio, high quality, compliance coal to justify the development expense of mining coal west of a high-strip-ratio ridge which extends through Sections 32, 5 and 9 (Figure 2-1).

The mine plan would recover all federal coal in both the Rocky Butte tract and the WRB tract as described in the LBA. The final highwall is in close proximity to the initial box cut, facilitating final reclamation efforts by allowing the material from the box-cut stockpile to be transported to the final pit.

The overburden would be mined with a dragline, all-purpose shovels and trucks. Employment over the life of the mine would average about 400, including 200 operators, 120 laborers, and 80 administrative and professional staff. About 125 to 130 construction employees would be required during the first two years of operation. Employment needs would fluctuate over the mine life as a function of coal sales, overburden thickness and other variables. Typically, fluctuations in employment needs are handled by the use of temporary or contract workers and this is expected to be the case for the Rocky Butte Mine as well. It is not unusual for mines to contract all their topsoil stripping.

Support facilities for the Rocky Butte Coal Mine include an office; shop; warehouse; employee change facility; coal crushing, handling, and loadout facilities; and smaller facilities such as a power transmission network and solid waste disposal site (Figure 2-1).

The main office for the Rocky Butte Coal Mine will house mine operations, engineering, environmental, accounting, payroll, computer, safety and quality control departments. Additional structures in the complex include a diesel and gasoline fueling station for both large mobile mine equipment and mine pickup truck fleet. Mobile equipment and employee parking areas will be provided at the complex.

The coal crushing, handling, and loadout facilities will include the following: raw coal storage area, truck dump, primary crushers, sampling location, covered conveyors, coal storage facilities, and a train loadout facility (Figure 2-1). All facilities including the transportation facilities, are subject to final design pending the outcome of the lease sale and the mining permit application.

Utility requirements for the mine will include electric power, telephone and water. Power will be required to operate the dragline, shovels, and plant and office facilities. This power will be supplied by Tri-County Electric Association, which purchases wholesale power from the Basin Electric Power Cooperative, headquartered in Bismark, North Dakota. Energy requirements are expected to average up to four or five million kwh per month. Telephone service is provided by Mountain States Telephone and Telegraph.

The major water requirement is for dust control on haul roads. Water is also required for equipment washdown, drinking, showers in the change house, and sanitary purposes. Dust control water will be supplied from water collected in the pit, from sediment and wastewater treatment ponds, and, as necessary, from wells. Total water requirements for all uses at the mine are expected to average around 150 to 200 gallons per minute based on other mines in the region with similar production rates and disturbance schedules. Portions of the area to be mined contain extensive saturated sandstone bodies in the overburden. Dewatering of these sands during mining is expected to provide the required dust control and equipment washdown water. These sandstone bodies are most prevalent in the western half of the mine area. In the unlikely event that the overburden sands cannot provide all the water needed, a deep well will be drilled and completed in sandstone intervals several hundred feet below the base of the coal. Drinking water will be purchased from a bottled-water service.

There are 16 operating coal mines in Campbell County (Figure 2-2). These are, from north to south, the Buckskin, Rawhide, Eagle Butte, Dry Fork, Fort Union, Wyodak, Caballo, Belle Ayr, Caballo Rojo, Cordero, Coal Creek, Jacobs Ranch, Black Thunder, North Rochelle, Rochelle, and North Antelope Mines. The Clovis Point and adjoining East Gillette Mines are permitted but are currently inactive. Because of

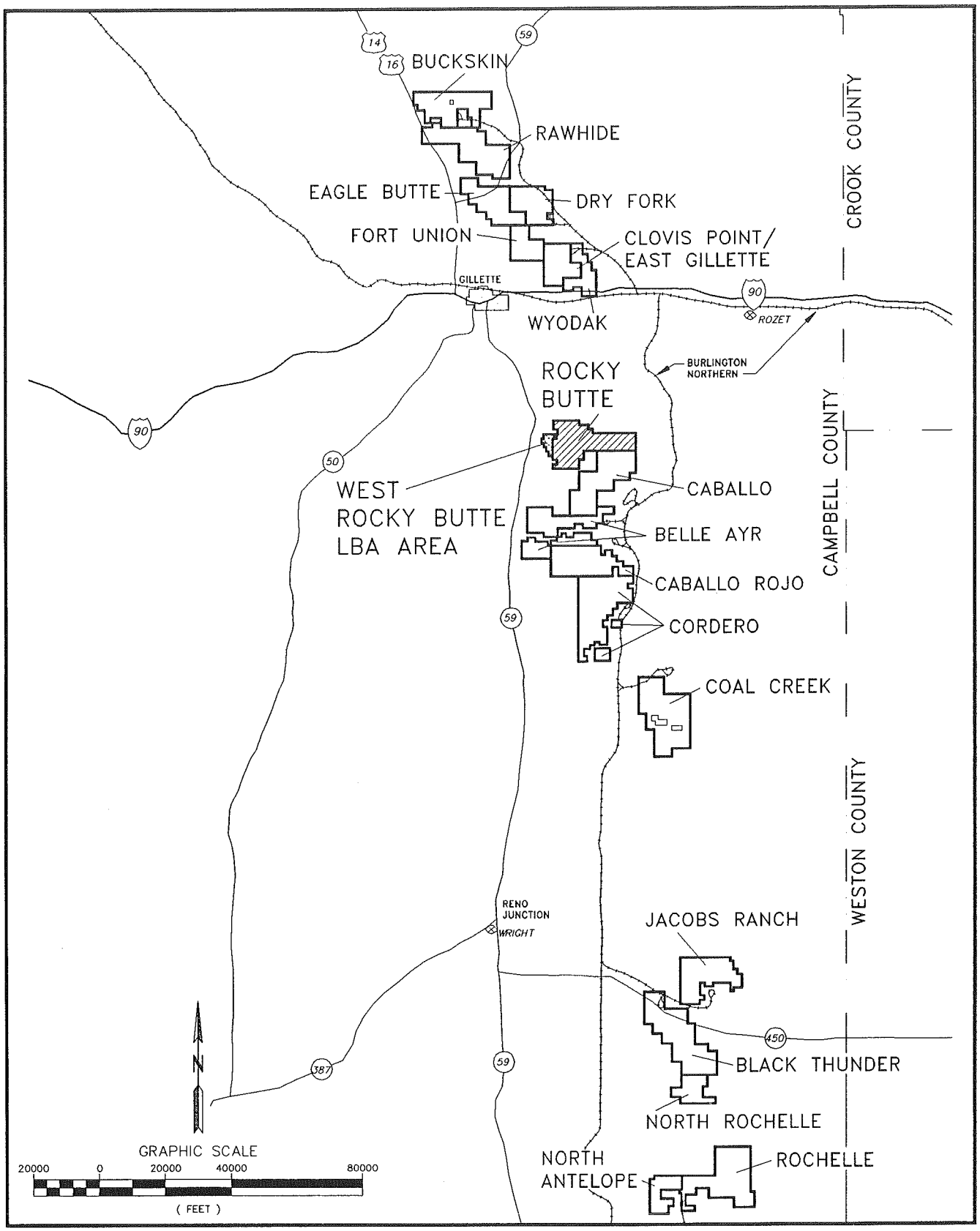


Figure 2-2. Locations of Coal Mines and Transportation Facilities in Campbell County, Wyoming

the proximity of these other mines, this EIS includes an evaluation of cumulative impacts as well as those which result from the Rocky Butte Mine alone. The Rocky Butte Mine would be contiguous with a group of four existing mines in a strip of land located along the coal outcrop south of Gillette. These four mines are (1) Caballo Mine, operated by The Carter Mining Company, a division of Exxon Coal USA; (2) Belle Ayr Mine, operated by Amax Coal Company; (3) Caballo Rojo, operated by Caballo Rojo, Inc. (owned by Marigold Land Co.; and (4) Cordero, operated by Cordero Mining Company, a division of the Sun Company. A fifth mine, Coal Creek, operated by Thunder Basin Coal Company, a subsidiary of Arco Coal, is located a short distance southeast of the Cordero Mine. This EIS addresses regional impacts of all the mines in the county in a general way, and more detailed cumulative environmental impacts are addressed for this cluster of mines between the Rocky Butte and Coal Creek mines. The cumulative ground-water impact analysis in this EIS extends northward to include the Wyodak Mine.

## 2.3 No Action Alternative

The primary alternative to the Proposed Action is the No Action Alternative. Under this alternative, the West Rocky Butte lease would not be issued, and the Rocky Butte lease would be terminated on February 1, 1993. For the purposes of this analysis, the No Action Alternative assumes that the coal would never be mined. This enables a comparison of the economic and socioeconomic impacts of mining the coal on the Rocky Butte and West Rocky Butte tracts versus no disturbance of the area. This is an assumption for the purposes of analysis, and does not preclude the reality that a tract could be delineated, leased and mined in this area in the future, which is discussed in Section 2.4, Alternatives Considered But Not Analyzed In Detail.

## 2.4 Alternatives Considered But Not Analyzed in Detail

In addition to the two principal alternatives described in Sections 2.2 and 2.3, a number of other alternatives were considered. None of the other alternatives are evaluated in detail in this EIS because (1) the environmental impacts of the other alternatives would be within the range of the impacts described for the two principal alternatives, or (2) the alternatives are considered unreasonable, impractical or outside the scope of this EIS. The other alternatives considered but not analyzed in detail are listed below, together with reasons why they were not analyzed in detail.

One alternative would be to revise the mine plan to bring the coal production rate more into line with coal demand forecasts (see Section 1.4). During at least the early years of mining the coal production rates would be less than the 8 to 16 million tons per year reflected in Table 2-1. This is an important alternative from the standpoint of the economic evaluation of the coal reserve which, together with a geologic evaluation and this NEPA evaluation, are tasks which BLM must perform if a lease sale is to be held. However, a slower coal production rate would not change the total impacts of mining (e.g., disturbed area, aquifers affected, overburden removed and replaced, etc.) and would reduce certain cumulative impacts that result from simultaneously-occurring operations. For example, cumulative employment impacts would be lessened if the Rocky Butte Mine reaches its peak employment after the Dry Fork Mine expansion and Black Hills Power and Light power plant construction project are complete (see Section 6.17.2). Cumulative air quality impacts would be reduced if the Rocky Butte Mine reaches its peak production rate after the nearby mines (Caballo, Belle Ayr, and Caballo Rojo) have passed their peak production rates. From strictly an environmental impact standpoint the production rates assumed for the Proposed Action are therefore believed to be conservative. The mine plan in this EIS would also be consistent with NWR's permit applications being prepared for submittal to Wyoming DEQ and OSM. Therefore, the mine plan described in Section 2.2 is appropriate for this EIS. Because BLM is required to maximize the economic return to the federal government from a lease sale, and because a different mine plan might result in a higher valuation for the WRB coal reserve, the hypothetical mine plan used by BLM to evaluate the coal reserve prior to a lease sale may be different from the one used in this EIS to evaluate environmental impacts. Because the environmental and employment impacts of a mine plan designed to maximize the economic value of the coal reserve would be less than or equal to those that would result from the optimistic mine plan described in this EIS, the alternative of changing the mine plan to

reflect a slower coal production rate was not evaluated in detail in this EIS.

Another alternative considered was a mine plan that would result from a different boundary delineation for the WRB tract. Several possible tract configurations were considered by BLM with the goal being to make the LBA area as attractive as possible to potential bidders while minimizing the risk of bypassing federal coal that would then become economically unrecoverable. Constraints on tract boundaries include the presence of housing developments and Highway 59 as well as thickening overburden toward the west, thickening overburden and a coal split toward the north, fee coal and thickening overburden toward the south, and the existing Rocky Butte lease toward the east. After considering the coal reserve data, overburden thickness and other site constraints, BLM modified the WRB tract to include the Option A area described in Section 2.1. No other tract configuration was analyzed in this EIS because BLM believes the revised tract with Option A is the most desirable configuration. Also, the LBA tract under any reasonable configuration would comprise a relatively small portion of the resulting LMU, meaning that minor revisions to the WRB tract would not appreciably alter the overall mining impacts for this project. Therefore this alternative (different tract configuration) was not analyzed in detail in this EIS.

One alternative that was considered, as it has been for all pending LBA's in the region, was the leasing of the WRB tract for a stand-alone mine. This alternative was not analyzed in detail because the WRB coal reserve (50 million tons, or 59 million tons with Option A) is an insufficient coal reserve on which to base the capital investment required to construct a new mine. While the tract boundaries might be adjusted to include enough coal to justify a stand-alone mine, the constraints listed above for the previous alternative (thickening overburden toward the west and the presence of surface developments) would probably make the coal unattractive to potential bidders in today's market.

Another alternative considered was delaying the lease sale. This would result in the expiration of the Rocky Butte lease. This alternative was not analyzed in detail because its effects could be similar to either of the two principal alternatives. If this alternative resulted in the Rocky Butte and West Rocky Butte tracts' never being mined, the effects of this alternative would be similar to the No Action Alternative. Baseline environmental conditions would continue to exist, and the socioeconomic benefits of the Rocky Butte Mine, would not be realized. This alternative could also result in a delay in the opening of the Rocky Butte Mine under the assumption that the current lease would expire and the tract would be leased again at some future date. Under this scenario the environmental consequences of this alternative would be similar to those for the Proposed Action, except that the cumulative effects could be less if there were no overlapping activities such as the planned expansions at the Dry Fork Mine and Wyodak power plant, and if the adjacent mines were past their years of peak production. The socioeconomic impacts would be delayed. Royalty income could change favorably or unfavorably depending on the price of coal at the time the mine started production. One socioeconomic benefit of this alternative would be the potential for a bonus bid if the tract is released. Based on current market projections, the BLM estimates that there would not be interest in leasing the Rocky Butte lease for a new mine start until sometime between the years 2010 and 2020. The environmental consequences of this alternative would be expected to be within the range of those for the two principal alternatives, and an analysis of environmental and socioeconomic impacts of actions projected to occur that far in the future would have to be very speculative regarding coal prices, mine plan, and even mining technology. Therefore, this alternative was not analyzed in detail.

Another alternative might be the use of different mining technologies. This alternative was briefly considered but was not found to be reasonable. NWR proposes to use a technology which has been successfully and profitably employed by coal operators in the Powder River Basin since the early 1980's and by NWR's parent, Western Energy Company, at a surface coal mine in the northern Powder River Basin since the late 1960's. This basic technology is widely accepted, has resulted in the production of coal which meets contract or other market-place requirements, and would be employed at the mine over the next 40 years. This alternative was not evaluated in detail in this EIS because there are no known alternative mining technologies applicable to the site.

## 2.5 Comparison of Alternatives

Table 4-1 in Chapter 4 of this EIS presents a summary of impacts for the two primary alternatives evaluated.