## DECEMBER 1985

## FINAL AMENDMENT/ ENVIRONMENTAL ASSESSMENT TO THE CHACO MANAGEMENT FRAMEWORK PLAN: MC KINLEY COUNTY COAL EXCHANGE PROPOSAL

# United States Department of the Interior 

BUREAU OF LAND MANAGEMENT<br>ALBUQUERQUE DISTRICT OFFICE

505 Marquette, N.W.

P.O. Box 6770

Albuquerque, New Mexico 87197-6770

Dear Public Land User:
Enclosed is the Final Plan Amendment/Environmental Assessment to the Chaco Management Framework Plan:McKinley County Coal Exchange Proposal for your review. This document evaluates the land-use planning and environmental impacts of exchanging 4,830 acres of Federal coal estate for 6,320 acres of Cerrillos Land Company coal estate and 4,893 acres of Cerrillos Land Company mineral estate. Also assessed is the coal that would come into Federal ownership for its suitability for further leasing consideration in the BLM's coal management program, and the No Action Alternative.
'
Any person who participated in the planning process and has an interest that is or may be adversely affected by approval of the Final Plan Amendment/ Environmental Assessment may file a written protest with the Director of the BLM within 45 days of the day the BLM publishes the Notice of Availability of the Final Plan Amendment/Environmental Assessment in the Federal Register.

The protest must contain the name, mailing address, telephone number, and interest of the person filing the protest; a statement of the issues being protested, raising only those issues that were submitted for the record during the planning process; a statement of the parts of the plan being protested; copies of all documents addressing the issues submitted during the planning process by the protesting party, or an indication of the date the issues were discussed for the record; and a concise statement explaining why the State Director's decision is believed to be wrong. Any protests should be sent to the Director of the BLiM at the following address:

> Department of the Interior
> Bureau of Land Manageinent
> 18 th and C Streets, NW
> Wasnington, D.C. 20240

The Director will render a prompt written decision on the protest, setting forth the reasons for the decision. The decision will be sent to the protesting party by certified mail and will be the final decision of the Department of the Interior.

If you wish simply to comment on this document you may submit comments for 45 days after the BLM publishes the Notice of Availability of the Final Plan Amendment/Environmental Assessment in the Federal Register. (This Notice would also contain a Notice of Realty Action.)

Comments should be sent to Paul Applegate, District Manager of the Albuquerque District Office, at the following address:

Albuquerque District Office (014)
P.O. Box 6770

Albuquerque, NM 87197-6770

All comments received during the comment period will be considered in the final decision process.

Protests and/or comments must be received by the close of business on Monday, February 3, 1936 to be considered in the final decision process.

For further information contact:
Mary Zuschlag, Team Leader Bureau of Land Management Albuquerque District Office P.D. Box 6770

Albuquerque, NM 87197-6770
Telephone: (505) 766-2117
FTS: 474-2117
Sincerely,


District Manager
Albuquerque District Office

## Enclosure

FINAL
AMENDMENT/ENVIRONMENTAL ASSESSMENT
TO THE
CHACO MANAGEMENT FRAMEWORK PLAN:
MCKINLEY COUNTY COAL EXCHANGE PROPOSAL MCKINLEY COUNTY, NEW MEXICO

Prepared By:

UNITED STATED
DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

Albuquerque District Office
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December, 1985

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## INTRODUCTION

PURPOSE OF AND NEED FOR AMENDMENT

In August of 1982, the Santa Fe Pacific Railroad company proposed to exchange some of their "checkerboard" private coal in Mckinley County, New Mexico, for "checkerboard" Bureau of Land Management (BLM) Federal coal (see Map 1 for General Location). As shown on Maps 2, 3 and 4, the private coal occurs in alternating sections with the Federal coal in a checkerboard pattern. This proposal includes the exchange of only the coal portion of the subsurface (mineral) estate, and would not affect the surface ownership. In addition, the mineral estate under 4,893 acres in portions of Chaco Culture National Historical Park and seven Chacoan outliers would be transferred to the Federal Government. On September 19, 1983, Santa Fe Pacific Railroad Company assigned all rights, title and interest in lands in McKinley County, New Mexico to Cerrillos Land Company, another member of the Santa Fe Southern Pacific Corporation family of companies. The Cerrillos Land Company will be referenced throughout this document.

All BLM resource management authorizations and actions, including applicant proposals, are required to conform with the BLM's existing land use plans (Title 43, Code of Federal Regulations (CFR), Subpart 1610.5-3). Because Cerrillos Land Company's proposed exchange was not provided for in BLM's Chaco Management Framework Plan (MFP), completed in 1981, the proposal is not in conformance with the Chaco MFP. In order for this exchange to be consistent with land use planning, the Chaco MFP must be amended to make the BLM coal lands available for exchange (see Appendix 1 for the lands decision resulting from this MFP Amendment), and to apply the four land use screens discussed below to those coal lands not already assessed in the Chaco MFP and to those coal lands where portions of the screens had not been applied.

THE AMENDMENT PROCESS
The MFP amendment process includes the following essential elements:

1. Public and interagency participation and coordination.
2. Collection and analysis of necessary additional data on the physical and socioeconomic characteristics of the area.
3. Preparation of a draft amendment outlining the BLM environmental and multiple-use analysis procedures including: a description of the Proposed Action and alternatives (including a No Action Alternative); analysis of all environmental and socioeconomic consequences of the Proposed Action and alternatives; initial determination of the BLM's Preferred Alternative; and other data or analyses required for the amendment.
4. A 30-day public comment period on the draft amendment. This comment period occurred from November 28, 1983 to December 28, 1983.
5. Preparation and release of this Final Amendment/Environmental Assessment, including responses to comments and document revisions.
6. Recommendation of the proposed plan amendment by the Albuquerque District Manager to the New Mexico State Director. If the State Director approves, a public notice of the amendment decision will be published, explaining how the existing Chaco MFP will be amended.
7. A 30-day protest period. Protests may be filed with the BLM Director for 30 days following the publication of the State Director's decision, in accordance with 43 CFR 161095-2. Protests will be answered by mail with the final decision of the Department of the Interior. The final decision will state whether the preparation of an EIS is necessary.
8. The Governor of New Mexico's" $60-\mathrm{day}$ consistency review period overlapping with the protest period. If inconsistencies are found between the amendment and state of local plans, policies, or programs, the Governor may recommend changes to the amendment. Any of the recommended changes not raised during the public participation process will be made available to the public for review. If any recommended changes are not incorporated into the amendment, the Governor will have 30 days to appeal in writing to the Director, who will publish the BLM's cesponse in the Federal Register (43 CFR 1610.3-2(e)).
9. Implementation of the amendment decision only after any public protests and the Governor's recommendations are resolved. The administrative actions required to implement the amendment decision are discussed in Chapter 6.

## COAL LAND USE SCREENS

Regulations pertaining to Federal coal leasing 43 CFR, 3420.1-4(e) require the application of four land use screens as a part of the BLM's land use planning. All Federal coal lands that are to be carried forward from land use planning into actual lease consideration, through this proposed exchange, must sucessfully pass through this screening process to be found suitable for this lease consideration.

Four screening processes are used in the suitability analysis in this amendment:

The first screening procedure is the coal development potential screen, in which only those areas with development potential may be identified as acceptable for further consideration for leasing.

The second screening procedure is the application of 20 unsuitability criteria (and related exemptions and exceptions) that are part of the BLM's coal management program ( 43 CFR 3461). These criteria are included in Appendix 6, and their application to the exchange lands is discussed in Chapter 4. (Definitions of the terms used in this chapter may be found in the Glossary.)

The Federal Register Notice concerning this document will not contain a Notice of Realty Action. The realty notice will not be published in the Federal Register until the Department of Justice Review is completed. In addition 2 public hearings will be held on this document on January 23, 1986 at 1:30 and 7:00 p.m. at:

The Classic Hotel
Registry Room
6815 Menaul Blvd. NE
Albuquerque, New Mexico
You are invited to submit commerts on all public interest factors of this exchange including the anti-trust consequences. All comments and copies of the hearing transcripts will be forwarded to the Department of Justice for review. The deadlines for protests and comments is February 3, 1986.

The third screening procedure involves multiple-use considerations that may result in land being found unsuitable because of special resource conditions. For example, a paleontological site significant because of its in-place value as an educational or research tool may be preserved by determining its location unsuitable for mining.

The fourth is the surface owner consultation process, whereby qualified surface owners whose lands overlie Federal coal deposits may express a preference for or against surface mining. Lands may be found unsuitable for further consideration for leasing if a significant number of owners have expressed a preference against coal mining by surface methods.

Any coal lands found unsuitable during these procedures would not be considered further for either exchange or possible competitive leasing, unless reanalyzed and found suitable as the result of a change in circumstances.


## MAP I

## CHACO OUTLIERS INCLUDED IN THE MCKINLEY EXCHANGE

october 1985



LEE RANCH TRACTS

* outlier sttes (Cerrillos)

1 PARK ADOITIONS (CERRILLOS)

$-\div z$

MAP 3
LANDS TO BE EXCHANGED
눈 Cerrillos Coal to BLM



CHAPTER 2
PLANNING ISSUES AND CRITERIA

## PLANNING ISSUES

In amending a Management Framework Plan, the data collection, analysis, and decisionmaking are focused on only the resource issue that was selected for detailed analysis which was economic factors. This issue was consolidated from BLM resource needs, public input, and appropriate requirements of law, regulation, and policy. Other resource issues were fully analyzed in the Final San Juan Coal EIS which is incorporated in this document by reference.

As the result of public input during initial discussions on this amendment, several issues were raised. Chapter 7 contains a more specific listing of these issues as expressed by the public and various governmental agencies.

The issues addressed in this amendment are:

1. The impacts of designating certain areas as suitable for further consideration for coal leasing.
2. The economic impacts that the transfer of coal interests out of Federal ownership would have, as well as the impacts of the transfer of Cerrillos Land Company coal interests into Federal ownership, and the impacts of transferring the mineral estate of seven Chacoan outliers and portions of Chaco Culture National Historical Park to Federal ownership.

PLANNING CRITERIA
The analysis and decisions for this amendment are based on the planning criteria presented below. Planning criteria are the standards, rules and measures which are used for data collection and alternative formulation and will be used as a guide when a final decision is made. These criteria have been derived from land use planning and coal development requirements, multiple use considerations, environmental and socioeconomic considerations, and public involvement.

1. Coordination of the Proposed Action and all alternatives with the land use plans, programs, issues and concerns of other Federal, state, and local governmental agencies and Indian tribes (Chapter 7).
2. Application of Criterion 7 of the unsuitability criteria ( 43 CFR 3420.1-4(e) and 3461) to the Cerrillos Land Company coal and BLM coal in the Lee Ranch East tract. Criterion 7 was the only one not applied in the second draft of the San Juan River Regional Coal EIS because the landowner refused to give permission to complete cultural resource surveys. The BLM obtained permission to complete a ten percent cultural resource survey in 1984. This application will determine the suitability of coal in the Lee Ranch East tract for leasing consideration.
3. The exchange must be consistent with the 12 points established by the Fee Exchange Policy for Leasable and Saleable Minerals (USDI BLM 1983) which requires that exchanges be in the public interest. These 12 points and an analysis of each point are located in Appendix 2.

Sections 206 and 209 of the Federal Land Policy and Management Act (FLPMA) also require that this exchange be in the public interest the exchange must be consistent with these sections (see Appendix 3).
4. Identification, analysis, and resolution of conflicts between the Proposed Action (exchange and suitability determination) and the Chaco MFP's land use decisions (USDI, BLM, 1981a) (Chapter 5).
5. Initiation of surface owner consultation procedures (Section 714 of the Surface Mining Control and Reclamation Act of 1977 and 43 CFR 3420.1 4(e)). Preliminary determinations will be made of qualified surface owners and their preference for or against surface mining.
6. The identification and analysis of values and resources that could be impacted by the Proposed Action and alternatives (43 CFR 3420.1-4(e)) (Chapter 5).
7. The results of public participation in the development of this planning amendment (Chapter 7).
8. The results of the Department of Justice review concerning the anti-trust aspects of this exchange.
9. A determination that the exchange of BLM coal for Cerrillos Land Company coal and the transfer of the mineral estate under 7 Chacoan Outliers, portions of Chaco Culture National Historical Park, and Chacra Mesa to the Federal Government are in the public interest ( 43 CFR 2200; and the Federal Land Policy and Management Act of 1976, Section 206, Appendix 3).

## CHAPTER 3

## THE PROPOSED ACTION AND ALTERNATIVES

Two levels of exchange are analyzed in this final amendment/ environmental assessment: 1) the final negotiated exchange between BLM and Cerrillos Land Company; and 2) the No Action Alternative. This analyses allows for comparison of impacts at all reasonable levels.

## PROPOSED ACTION

The proposed action is to exchange 4,830 acres of BLM coal estate for 6,320 acres of Cerrillos Land Company coal estate and 4,893 acres of Cerrillos Land Company mineral estate (see Appendix 4, the legal description for lands included in this exchange). In order for BLM to make lands available for exchange, transfer, and coal leasing, the September 1981 Chaco Management Framework Plan (MFP) must be amended (see Appendix 1 for the lands decision resulting from this MFP amendment). A new decision regarding land use would be added to the lands portion of the Chaco MFP making the coal estate available for exchange.

The Federal coal and Cerrillos Land Company coal being proposed for exchange is located in alternate sections (referred to as a checkerboard pattern) of three Federal competitive coal lease tracts (Lee Ranch West, Lee Ranch Middle and Lee Ranch East) analyzed in the Final San Juan River Regional Coal Environmental Impact Statement (USDI, BLM 1984) (see Map 1, 2, 3 and 4). The BLM will receive an estimated 67.8 million tons of recoverable coal with a 10.5:1 stripping ratio in the Lee Ranch West, Middle and East tracts, in exchange for 77.5 million tons with a $12.0: 1$ stripping ratio in the Lee Ranch West and Middle tracts being transferred to Cerrillos (see Maps 2, 3 and 4). The value of the BLM coal to be exchanged has been determined to be 44.2 million dollars, and the Cerrillos coal 49.6 million dollars. Although the value of the Cerrillos coal is 12.2 percent greater than the BLM coal, Cerrillos has agreed to exchange as if the two blocks are equal in value, eliminating the need for any monetary payment to equalize values. As part of the exchange, Cerrillos will provide drill hole data on the offered lands to the BLM, and will transfer existing surface owner consents to the eventual Federal lessee. In addition, SF Coal Company has entered into an agreement with the BLM to provide services to switch coal over the existing private rail spur for the Federal lessee, if the lessee cannot reach an agreement with the owners of the Rail Spur.

The proposal and analysis in this amendment apply to the exchange of BLM and Cerrillos coal estate within the three Lee Ranch tracts, and to the suitability determination of some of the Cerrillos coal. The surface estate and all non-coal minerals in the Lee Ranch tracts will remain under present ownership.

In addition to the coal estate in the Lee Ranch area, Cerrillos proposes to exchange 4,893 acres of mineral estate it holds in Chaco Culture National Historic Park and under seven Chacoan outliers. These archeological protection sites are: Toh-la-kai, Indian Creek, Bee Burrow, Upper Kin Klizhin, Kin Nizhoni, Haystack and Andrews Ranch (see Map 1). Cerrillos has not requested compensation for these lands, and their monetary value has not
been determined. Exchange of the Chaco Culture National Historic Park lands is being done under the provisions of Title $V$ of Public Law 96-550, which established the park. Public Law 96-550 provides that exchanges of private land for Federal land be given priority by the Secretary of Interior in any acquisition of private lands needed to forestall mineral development potentially harmful to the ruins in Chaco Canyon and the designated outliers(archeological protection sites). Upon completion of the exchange, the BLM will transfer the mineral estate in the park and its outliers to the appropriate surface management agency.

## NO ACTION ALTERNATIVE

Under this alternative, no exchange would occur. BLM and Cerrillos Land Company coal resources would remain in a checkerboard pattern within the three tracts (Lee Ranch West, Lee Ranch Middle and Lee Ranch East) (see Map 2).

PURPOSE AND NEED FOR THE MCKINLEY COUNTY COAL EXCHANGE PROPOSAL
The exchange would consolidate the checkerboard BLM and Cerrillos Land Company coal into blocks. One block would consist of BLM coal in the Lee Ranch East, Lee Ranch West and Lee Ranch Middle (northeastern arm) tracts. A second block would be Cerrillos Land Company's coal located in the Lee Ranch Middle (southwest arm) tract (see Map 3).

Consolidating coal ownership into blocks would promote the orderly development of coal by allowing for more logical and economical mining of both the Cerrillos and BLM coal resources (see Map 4). Mining costs would be reduced on both blocks of land, and potential environmental impacts caused by inefficient mining practices would be lessened.

Without the exchange, any Federal lessee wanting to achieve economies of scale by blocking up the existing checkerboard sections of coal would have to negotiate and purchase adjacent sections of private coal. Consolidation of the BLM coal through the McKinley County exchange would eliminate the need for such negotiations. It is believed that the offering of solid blocks of BLM coal would create more interest and competition in the bidding on the tracts created, and thus potentially a higher return to the Federal Government by the exchange. The block would also be more likely to be leased than a checkerboard offering.

In addition to the above, the exchange would enhance recovery of the coal resource because fewer boundary pillars would be necessary. The BLM would receive coal with a more favorable stripping ratio than it would relinquish. Considering the contiguous blocks of coal available and improved stripping ratio, it is likely the per-acre bonus bids received for any coal tracts offered would be larger than those received for the checkerboard coal the BLM now holds.

Transfer of the mineral estate underlying the National Historic Park and Chacoan protection sites (outliers) to the Federal Government will help to ensure that no mining or surface disturbance will occur. Public Law 96-550 prohibits any surface disturbance and authorizes the Secretary of the Interior to acquire interests in Chaco Culture National Historical Park and the outliers. Acquiring the mineral estate would help to unite the surface and subsurface estate under the same management agency.

The stipulations that are discussed in the Second Draft San Juan River Regional Coal EIS will apply to all coal included in a Federal coal tract (see Appendix 5). This includes the stipulations in the standard coal lease form.

INTERRELATIONSHIPS BETWEEN THE EXCHANGE AND OTHER PROJECTS IN THE REGION

The coal in the McKinley County Exchange is located in the San Juan River Federal Coal Production Region. The leasing and development of Federal coal in the San Juan River Federal Coal Production Region is proposed in the Final San Juan River Regional Coal Environmental Impact Statement (USDI, BLM 1984).

The construction of the Star Lake Railroad is a proposed project in the region of this proposed exchange, the analysis of which is contained in the Star Lake-Bisti Regional Coal Final Environmental Statement (USDI, BLM 1979). Both of these documents are available for reference at the BLM Albuquerque District Office ( 505 Marquette Avenue NW, Albuquerque, NM) and the Farmington Resource Area Office ( 900 La Plata Road, Farmington, NM), as well as at public and university libraries in both locations.

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## APPLICATION OF THE COAL LAND USE SCREENS

COAL LAND USE SCREENS
The coal lands in the Lee Ranch West, Middle and East tracts have been analyzed in the Chaco MFP Minerals Decision M-1.1 and the San Juan River Regional Coal Environmental Impact Statement (San Juan Coal EIS). The BLM applied four land use screens to these areas as required by the coal regulations ( 43 CFR $3420.1-4$ ). The purpose of these four screens is to identify areas which should be considered for coal leasing, and eliminate areas which have unacceptable environmental risks. This chapter summarizes the application of the four land use screens. The land use screen is listed first with the results of application of the screen to each of the affected tracts discussed afterwards.

1. Only those areas that have development potential may be identified as acceptable for further consideration for leasing.

The Chaco MFP and Chaco MFP amendment identified the Lee Ranch tracts as having coal development potential. In addition, there is an existing coal mine in the private portions of the Lee Ranch Middle Tract. Clearly these tracts have coal development potential.
2. The BLM will apply the unsuitability criteria ( 43 CFR 3461, see Appendix 6) to assess areas that are unsuitable for all or certain stipulated methods of coal mining.

All of the unsuitability criteria have previously been applied to the Lee Ranch West, Middle and East tracts, with the exception of Criterion 7 (Cultural Resources) which was not applied to the Lee Ranch East Tract until preparation of this Final Plan Amendment/Environmental Assessment. The results of applying all of the other criteria were included in the Chaco Management Framework Plan (MFP) and San Juan River Coal EIS.

Criterion 7 (Cultural Resources) was not applied to the Lee Ranch East Tract until now because the surface owner had refused permission for cultural resource surveys. The BLM obtained permission to survey the surface for cultural resources in 1984, and a 10 percent survey has now been completed. No sites listed on the National Register were located, therefore no areas are unsuitable under Criterion 7; the New Mexico State Historical Preservation Officer has concurred with this finding.

The 20 unsuitability criteria were applied to the Lee Ranch East and West Tracts and were found to have no effect on the suitability of these two tracts. There were 13 acres of powerline right-of-way (Criterion 2) located on the Lee Ranch East Tract and 2 powerlines totaling 43 acres on the West Tract; however, no areas were found unsuitable because the exception was applied and the powerlines would be moved. There were 412 acres of floodplains (Criterion 16) identified on the Lee Ranch West Tract; however, these floodplains posed no threat to life or property and as a result, no areas were found unsuitable.

The application of the unsuitability criteria to the Lee Ranch Middle Tract resulted in a finding of no effect for all criteria except Criteria 11 and 14. One ferruginous hawk nest is located on BLM-administered coal in the Lee Ranch Middle Tract. This coal is not proposed for exchange and will remain as BLM administered coal. A golden eagle nest was also located on the Lee Ranch Middle Tract. This nest is located on Cerrillos Land Company Coal that would be exchanged to the BLM. This area would be unsuitable unless the BLM and the U.S. Fish and Wildife Service concur that surface coal mining would not disturb the birds during the breeding season. An alternative would be that the BLM, with the concurrence of the U.S. Fish and Wildife Service, could determine that the nest could be moved.

The Lee Ranch Middle Tract had one powerline right-of-way totaling 13 acres (Criterion 2); however, the exception was applied and no area was found unsuitable. The powerline would be moved prior to coal mining. A summary of the application of the unsuitability criteria is located in Table 4-1.
3. Multiple land use decisions will be made which may eliminate coal deposits from further consideration for leasing to protect resource values of locally important or unique nature that are not included in the unsuitability criteria.

The BLM eliminated cultural resource sites and some sacred areas from consideration for coal leasing under this screen in the Chaco MFP; however, none of these types of sites occur on the Lee Ranch tracts.
4. The BLM must consult with all qualified surface owners whose lands overlie coal deposits to determine a preference for or against surface mining.

The BLM has consulted with the surface owners on the Lee Ranch Tracts. All surface owners have now indicated a preference for mining. In addition, the BLM has received initial surface owner consent on all coal lands that would be acquired in the exchange. Since this screen calls only for consultation, obtaining surface owner consent (required for leasing) therefore, exceeds the land use planning requirements (see Appendix 7). No lands were eliminated as a result of applying this screen (see Table 4-2 for a summary of surface owner consent).

AREAS UNSUITABLE FOR SURFACE COAL MINING

| Tract Name | Criterion Number | $\begin{aligned} & \text { Criterion } \\ & \text { Name } \end{aligned}$ | Acreage Unsuitable | Acreage Included in the Exchange |
| :---: | :---: | :---: | :---: | :---: |
| Cerrillos Land Company Coal |  |  |  |  |
| Lee Ranch West | None | None | None |  |
| Lee Ranch Middle | 11 | Eagle Nests (Golden Eagle) | 41 Acres | Yes |
| Lee Ranch East | None | None | None |  |
| BLM Coal |  |  |  |  |
| Lee Ranch West | None | None | None |  |
| Lee Ranch Middle | 14 | Species of <br> High Federal <br> Interest <br> erruginous Haw | 46 Acres | No |
| Lee Ranch East | None | None | None |  |

TABLE 4-2

RESULTS OF SURFACE OWNER CONSULTATION

| Location | $43$ <br> Surface <br> Owner | CFR 3400.0-5 (gg) Qualification Determination | Consent or Refusal Statusa/ |
| :---: | :---: | :---: | :---: |
| Cerrillos Land Company |  |  |  |
| Lee Ranch East Tract | Michael | Qualified | Approval granted |
| Lee Ranch West Tract | Fernandez Co. | Qualified | Approval granted |
| Lee Ranch Middle Tract | Fernandez Co. | Qualified | Approval granted |
| BLM Coal |  |  |  |
| Lee Ranch Middle | Fernandez Co. | Qualified | Approval granted |
| Lee Ranch West Tract | Federal |  | Not required |
|  | Fernandez Co. | Qualified | Approval granted |

Note: $\underline{a} /$ Refer to Appendices for legal descriptions.

## IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

Scope of Analysis
This chapter discusses only those impacts resulting directly from the Proposed Action and the No Action Alternative. The impacts analyzed are unavoidable, unmitigated impacts. The environmental impacts of mining the coal in a consolidated block would be essentially the same as those from mining the coal in a checkerboard pattern except for economic impacts. It is assumed that coal mining would occur in the exchange area regardless of whether or not the exchange takes place, so the impacts identified in this document are primarily related to designating certain areas as suitable for further consideration for leasing, transferring coal out of Federal ownership, transferring coal into Federal ownership, transferring the mineral estate of portions of Chaco Culture National Historic Park and seven Chacoan outliers to Federal ownership, and economic factors. Environmental impacts resulting from coal mining are not discussed in this document because they have been fully analyzed in the San Juan River Regional Coal Environmental Impact Statement (USDI, BLM 1984).

## AFFECTED ENVIRONMENT

Extensive resource information from the proposed exchange area has been presented in the site-specific analyses for the coal lease tracts (USDI, BLM 1982) and in the Final San Juan River Regional Coal EIS (USDI, BLM 1984). These documents are incorporated into this amendment by reference and provide a discussion of the affected environment.

RELATIONSHIP TO THE CHACO MANAGEMENT FRAMEWORK PLAN (MFP)
The Proposed Action includes two basic recommendations. The first is a recommendation to make BLM coal available for exchange with Cerrillos Land Company coal. The second recommendation is to modify Minerals Decision M-1.1 of the Chaco MFP.

No conflicts have been identified between the existing Chaco MFP decisions and the proposed exchange in this amendment with regard to making the specified BLM coal acreage available for exchange with the specified Cerrillos Land Company coal.

No conflicts have been identified between coal mining on the acreage being considered in the modification of the Chaco MFP Minerals Decision M-1.1 and any of the Chaco MFP multiple-use decisions for the following resources: paleontology, water resources, range, wildlife, cultural resources, visual resources, wilderness, forestry and recreation.

## IMPACTS OF THE PROPOSED ACTION

Both the BLM coal and the Cerrillos coal identified for exchange have been analyzed in the four land use screens discussed in Chapter 4. In summary, the only area that would be unsuitable for mining, if an exception cannot be applied, would be the golden eagle nest ( 41 acres) located on

Cerrillos coal in the Lee Ranch Middle Tract. This nest and buffer zone contain less than one percent of the coal involved in the exchange.

No unavoidable environmental impacts would occur to the following resources as a result of the proposed coal exchange: air quality, topography, mineral resources, paleontology, soils, reclamation potential, water resources (surface and underground), threatened and endangered plants and animals, cultural resources, visual resources, transportation, social factors, American Indian concerns, vegetation and livestock grazing, and land uses.

The environmental impacts of mining a checkerboard pattern of coal versus a blocked pattern would be the same for all resources except for economic factors. The impacts of mining the Lee Ranch West, Middle and East tracts have been fully analyzed (both cumulative and site-specific impacts) in the Final San Juan River Regional Coal EIS. The site-specific impacts of mining are included in Appendix 8 of this Final Plan Amendment/Environmental Assessment.

Under this exchange proposal, the BLM would have three blocks of coal land to offer for lease. A contiguous block of coal would be more economically attractive to potential lessees than the present checkerboard situation because it would allow more compact, efficient mining operations. The BLM expects that such a block would be leased at a higher bonus bid than a checkerboard offering. Additionally, the value of the Cerrillos coal that the Federal government would receive is approximately 12 percent greater than the coal to be exchanged out of Federal ownership.

In addition to the above impacts, the exchange would enhance recovery of the coal resource because fewer boundary pillars would be necessary, thereby increasing the value of the coal. The "before" exchange value of the checkerboard Federal coal in the Lee Ranch West, Middle and East tracts (see Map 2) is $\$ 78,040,000$. The "after" exchange value of the Federally blocked coal is $\$ 100,195,000$, which is an increase of $\$ 22,155,000$ or approximately 28 percent (see Map 4). The exchange would also generate an estimated $\$ 12,005,000$ increase in Federal income taxes and an estimated $\$ 115,000.00$ increase in state taxes.

The stripping ratio of the blocked tract would also be lower than the checkerboard tract, the before exchange strip ratio would be $12.12: 1$, the after exchange ratio would be $10.3: 1$. Considering the contiguous block of coal available and the improved stripping ratio, it is likely the per-acre bonus bids received for any coal tracts offered would be larger than those received for the checkerboard coal the BLM now holds. See Tables 5-1 and 5-2 for a comparison of the coal the BLM would receive versus the coal that the BLM would tranfer to Cerrillos Land Company. For detailed discussion about how the values of the Cerrillos coal and the BLM coal were calculated see Appendix 9.

Other items the United States would receive as a result of this exchange are all data (environmental and drill information) now held by the Cerrillos Land Company, access to SF Coal's rail spur, and surface owner consent on the Lee Ranch tracts. This exchange would enhance the economic factors which would improve the prospects of leasing the Lee Ranch tracts.

In addition to the coal being exchanged, the United States would acquire the mineral estate under 4,893 acres of Chaco Culture National Historic Park and seven Chacoan outliers. This would help to prevent any mineral development and would consolidate subsurface ownership under one management agency.

IMPACTS OF THE NO ACTION ALTERNATIVE
Under this alternative, no exchange would occur. BLM and Cerrillos Land Company coal would remain in a checkerboard pattern within the three tracts (Lee Ranch West, Lee Ranch Middle and Lee Ranch East). Mining could still occur in the exchange area; therefore, application of the four land use screens would be the same as identified for the Proposed Exchange Alternative.

Because mining could still occur in the area regardless of whether the exchange takes place, the environmental impacts under the No Action Alternative are the same as for the Proposed Action.

If the exchange does not take place, BLM coal would remain in a checkerboard pattern and no contiguous blocks of coal would be available to offer for lease. This situation would be less economically attractive to potential coal lessees because the area would be less compact and less efficient to mine. Additionally, the area would be less likely to be leased during a coal sale than if in a contiguous block.

In addition to the above impacts, recovery of the coal resource would be lower due to the need for additional boundary pillars. Overall, BLM would own less coal under this alternative and the stripping ratio would be higher than if the exchange took place. There would be no access to SF Coal's rail spur. It is also anticipated that the per-acre bonus bids received by BLM would be lower than those received if the coal tracts were offered in contiguous blocks.

Under the No Action Alternative, the Federal government would not receive 4,893 acres of reserved mineral estate in the Chaco Culture National Historic Park and certain outlying archaeological protection sites. Leaving this mineral estate in private ownership would prevent effective management of these areas.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES
No resources would be irreversibly or irretrievably committed by the transfer of coal involved in the proposed exchange or by acquisition of the mineral estate under portions of Chaco Culture National Historic Park and seven archeological protection sites.

FEDERAL COAL BEFORE AND AFTER THE EXCHANGE


## CHAPTER 6

## ADMINISTRATIVE ACTIONS REQUIRED FOR IMPLEMENTATION

Chapter 1 discusses the actions required during the MFP amendment process, including the BLM's coal program requirements for application of the four land use screens ( 43 CFR 3400). Chapter 2 and Appendix 1 discusses the lands program requirements that an exchange be in the public interest (43 CFR 2200). Once these requirements are satisfied, the planning amendment may be approved. However, other administrative actions are required before actual implementation of the exchange and development of the coal.

## EXCHANGE

If the amendment is approved, making Federal coal available for exchange as proposed in this Final Plan Amendment/Environmental Assessment, the primary steps to be completed to implement the decision include:

1. Class III cultural resources inventory ( 100 percent inventory) and compliance with the National Historic Preservation Act.
2. Final negotiation of the exact acreage, tonnage, and terms of an exchange of coal.
3. Issuance of a Notice of Realty Action (NORA) in the Federal Register and resolution of any protests. (The NORA will be issued concurrent with the Final Amendment/Environmental Assessment.)
4. Issuance of a patent to the Cerrillos Land Company for the Federal coal.
5. Submission of evidence of title for Cerrillos Land Company's coal and a quitclaim deed of conveyance to the United States.

COAL DEVELOPMENT
For the approximately 6,320 acres of Cerrillos Land Company coal already found suitable in Chaco MFP Minerals Decision M-1.1, the following steps would be involved if the exchange were consummated.

1. The acreage would continue to be included in the San Juan River Regional Coal Environmental Impact Statement. It is already included because the "worst case" analysis in the EIS covers the development of not only Federal coal, but concurrent impacts of development of privately-owned coal contained within Federal tract boundaries.
2. The newly acquired coal could be made available for leasing.
3. The coal could be leased as part of a competitive tract.
4. A mine plan would be developed for the Federal coal and an environmental analysis prepared.
5. The acreage could be mined.
6. The area would be reclaimed if mined.
7. The area would be returned to its original use.
8. If coal were not leased, it would remain undeveloped.

For development of the coal that would be placed under Federal ownership and BLM administration, Federal and state laws, regulations and requirements would apply. For development of the coal that would pass from BLM control into Cerrillos Land Company ownership, state laws, regulations and requirements would apply. The State of New Mexico's mine development regulations and requirements (Rule $80-1$ ) are as stringent as the regulatory procedures required in 30 CFR Chapter VII (Office of Surface Mining and Reclamation regulations).

COORDINATION, CONSISTENCY, AND PUBLIC PARTICIPATION

## COORDINATION

The following contacts have been made with other governmental agencies and the public concerning the proposed amendment.

1. A Federal Register notice announcing the initiation of the amendment process was published in Vol. 47, No. 228 (Friday, November 26, 1982), soliciting issues and concerns.
2. A news release was sent to local newspapers in November of 1982, asking interested parties to identify issues that should be addressed.
3. On' December 6, 1982, a letter was sent to nine governmental agencies and Indian tribes asking them to identify issues and concerns. These agencies and tribes were contacted because they have land use regulatory authority in the vicinity of the Proposed Action.
4. At the April 27,1983 public meeting of the San Juan River Regional Coal Team (RCT), the need for the amendment was presented and comments were received.
5. The Draft Plan Amendment/Environmental Assessment was available for public review and comment from November 28, 1983 until December 28, 1983; however, comments on the draft received after that date were accepted.
6. There was a public meeting to obtain comments on the draft document on December 20, 1983.
7. Two open house meetings were held on January 22, 1985 to discuss the proposed Chaco Exchange. This proposed exchange covered a smaller area than the proposal in this Final Plan Amendment/Environmental Assessment and was dropped from consideration in favor of the present exchange. The Federal Register Notice announcing this meeting and requesting comments was published December 31, 1984.
8. Two public meetings were held on October 17,1985 to obtain comments concerning the antitrust effects of this exchange. Written comments were accepted until October 26, 1985. These comments were sent to the Department of Justice for review. The Federal Register Notice announcing this meeting and requesting comments was published September 11, 1985.

CONSISTENCY WITH OTHER LOCAL POLICIES, PLANS, AND PROGRAMS
None of the Federal agencies, state agencies, or Indian Tribes notified of this planning amendment have identified any incompatibilities with their policies, plans or programs for lands in this area.

## DEPARTMENT OF JUSTICE REVIEW

The antitrust aspects of this exchange are being reviewed by the Department of Justice. The BLM solicited public comment on these aspects of the exchange. A Federal Register Notice was published September 11, 1985, which outlined the exchange proposal and requested public comment, and announced a public meeting on the exchange proposal on October 17, 1985. This process is in compliance with the proposed rulemaking "Procedure for Exchange Involving Fee Federal Coal Deposits," which was published in the Federal Register on September 13, 1985. As a result of this request, 19 letters were received from the public and 23 individuals attended the public meeting. All letters and the transcripts of the meeting were transmitted to the Department of Justice for a 90 day review on November 6, 1985. A final decision will not be made on this exchange until the Department of Justice review is completed. The BLM will comply with the Department of Justice recommendations.

## COMMENT ANALYSIS

The BLM received no substantive oral comments, at the December 20, 1983 public meeting, on the Draft Planning Amendment/Environmental Assessment. There were 11 comment letters received on the Draft as a result of 150 documents being sent out.

A11 letters and oral presentations were reviewed to determine whether they met the required criterion for response (i.e., discussion of the adequacy of the draft document). Substantive comments, that is, those presenting new data or questioning facts or analyses, were fully evaluated and given responses which are printed after each letter. Comment letters, responses and changes to the Draft resulting from public comment are included in this Final Plan Amendment/Environmental Assessment.

## RECORD OF DECISION

This Final Plan Amendment/Environmental Assessment will be approved no earlier than 45 days after publication of Federal Register notice of availability of this document or after the Department of Justice review is completed, whichever occurs last. The approval or disapproval of this exchange will be documented in a Record of Decision (ROD) which will be available for public review. Approval or disapproval will be withheld on any portion of the plan amendment that is protested, until final action has been completed on the protest. Comments on this Final Plan Amendment/Environmental Assessment and Notice of Realty Action will be accepted during this 45-day period.

## PROTEST PROCEDURES

Any person who participated in the planning process and has an interest that is or may be adversely affected by approval of the Final Plan Amendment/Environmental Assessment may file a written protest with the Director of the BLM within 45 days of the day the BLM publishes the notice of availability of the Final Plan Amendment/Environmental Assessment in the Federal Register.

The protest must contain the name, mailing address, telephone number, and interest of the person filing the protest; a statement of the issues being protested, raising only those issues that were submitted for the record during the planning process; a statement of the parts of the plan being protested; copies of all documents addressing the issues submitted during the planning process by the protesting party, or an indication of the date the issues were discussed for the record; and a concise statement explaining why the State Director's decision is believed to be wrong. Any protests should be sent to the Director of the BLM at the following address:

> Department of the Interior Bureau of Land Management 18 th and C Streets, NW Washington, D.C. 20240

The Director will render a prompt written decision on the protest, setting forth the reasons for the decision. The decision will be sent to the protesting party by certified mail and will be the final decision of the Department of the Interior.

## COMMENT PROCEDURES

If you wish to comment on this document you may submit comments for 45 days after the BLM publishes the Notice of Availability of the Final in the Federal Register. (This notice would also contain a Notice of Realty Action.)

Comments should be sent to Paul Applegate, District Manager of the Albuquerque District at the following address:

Albuquerque District Office (014)
P.O. Box 6770

Albuquerque, NM 87197-6770
A11 comments received during the comment period will be considered in the decision process.

RESPONSES TO COMMENTS AND LETTERS
This section contains the public comments received by BLM on the Draft Amendment/Environmental Assessment for the McKinley County Coal Exchange. For each substantive comment, a BLM response is provided. No substantive comments were received at the public meeting held on December 20 , 1983; therefore, no comments or responses are listed.






Tract has been surveyed and the SHPO has concurred with the application of the
unsuitability criteria.





















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Window Rock, Arizona 86515 Paul E. Frye, Staff Attorney

Department of Justice

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 concerned with surface rights relating to coal mining


 B-1. The Bureau of Land Management currently has on file surface owner

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## (aว ) M, Mosfnoz Koy <br> Very truly yours,





 and the rates of other producers in the region. The result would be to place other
producers at the mercy of the railroad on freight rates while at the same time giving it
an unfair advantage of lower production costs. an unfair advantage of lower production costs.

 -8 861 Section 2(c) in 1920, when it passed FLPMA in 1976, adoped the Roncalio Amendment in Commodities Clause. Congress could not have intended that result when it had enacted





 B-2 Act of 1976 to obtain fair market value for federal in this draft amendment the BLM is ignoring the statutory requirement The Bureau of Land Management is required by the Federal Coal Leasing Amendments
Act of 1976 to obtain fair market value for federal coal. By ignoring competitive B-1 L Covered by this draft amendment and overion with the private coal.
 Company, P\&M has surface rights over much of the federal coal on the Lee Ranch possible interest of other bidders in the federal coal being considered for exchange if amendment/EA to the Chaco MFP analyzes. This draft amendment does not discuss the Corporation, is opposed to the proposed coal exchange between the Bureau of land The Pittsburg \& Midway Coal Mining Co., a wholly owned subsidiary of Gulf Oil
Corporation, is opposed to the proposed coal exchange between the Bureau of Land

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 be made only after the results of inventory are complete. Stipulations for intensive as part of the determination of eligibility process. Decisions regarding the appli-
 is to transferred into private ownership. It is my understanding that such an invenAct of 1966 as amended. Discussions and correspondence between this office and the
Bureau of Land Management over the past year have indicated that an intensive with the provisions of Sections 106 and $110(2)$ of the National Historic Preservation As noted on pages 18 and 24 of this document, the proposed coal exchange must comply
 Dear Mr. Applegate:
I have reviewed the Albuquerque, New Mexico 87107 Mr. L. Paul Applegate
District Manager, Bureau of Land Management
Albuquerque District Office
P.O. Box 6770 Mr. L. Paul Applegate







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## Alison Monroe


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delayed to include tracts formed from the exchange. or tribal surface; and that the First Round of San Juan Basin coal leasing be


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 .572 process was degun before FLPMA took effect. In fact work on the San Juan
Chaco MFP Jpdate for coal, which is the land use plan for this area, began in
1980 and thus should have complied with the regulations promulgated in 1979


 D-9 necessary. The Process on $p .1$ to $\angle$ of this EA onits any decision whether to



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 assure compliance with Section 106 of the National Historic Preservation Act.
The MOU will assure that the surface over Federal coal to be exchanged will be
 The BLM is proposing to enter into a Memorandum of Understanding (MOU) with Ranch tracts.


 dating to 8,00 years ago through. Sites located during the surveys range from an isolated Paleo-Indian point coal area identified for exchange has been surveyed. D-5. For the Cerrillos Land Company coal that would be exchanged, 44 percent
of the area has been surveyed. Ninety-seven percent of the BLM-administered describes the wildife habitat in this area. D-4. The Lee Ranch West, Middle and East tracts do not contain important elk
habitat. The wildife section in the San Juan River Regional EIS adequately environmental impacts of mining
summaries located in Appendix 8 .






 D-2. The environmental impacts of mining a consolidated block would be National Environmental Policy Act (NEPA) 40 CFR 1502.21.



 EIS for the Lee Ranch West, Middle and East tracts have been incorporated in

requirements were incorporated into the chacosan
Farmington RMP is being prepared, and the final plan will be available in
September 1987. RMP planning documents were included in the planning regulations. These
requirements were incorporated into the Chaco-San Juan land use plan. A 1979. Specific requirements providing for a transition from ongoing MFP's to D-1anning regulations ( 43 CFR 1601) were published in the Federal Register in D-9. The text has been revised. Economic Factors, for a more detailed discussion.
 to predict which companies may be interested in bidding on the newly formed D-8. At this time no lease sales have occurred. Therefore it is impossible exchange (see Map 4).
 Vecinos (1etter G), Chamb.
City of Grants (letter 0 ).
please see the letters from Los Herederos del Pueblo de San Mateo y Sus
Vecinos (letter G), Chamber of Commerce City of Grants (letter N), and the


2. THE PROPOSED EXCHANGE CONTRAVENES SECTION 37 OF THE MLLA OF 1920 must be disapproved. convey federal coal to a railroad is clearly contrary to the Section 2(c) prohibition and
 in the Coal Industry by the Department of Justice which concluded: Indeed, if the purpose to "divorce (rail] transportation rom production sored by the 1980 Report on Competition





 For the reasons outlined below the Mining and Reclamation Council of America (MARC) and
the National Coal Association (NCA) strongly object to the proposed coal exchange between

Dear Mr. Applegate:

 Aibuquerque, N.M. 87107 Bureau of Land Management
P. O. Box 6770
 WILLIAM W. LYoNs
Chaiman of the Board

use.
is completed, the rail agreement between SLM and Cerrillos would allow such The Lee Ranch spur is a private rail line, and Cerrillos Land Company is not
obligated to allow outside parties use of this spur. However, if the exchange


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 Act. BLM is adhering to the provisions of the Act through the planning E-4. A proposed exchange may be considered at any time, but may not be - $\varepsilon-\varepsilon$ asuodsəy วas $\cdot \varepsilon-\Xi$
 With respect to this proposed exchange not being authorized under FLPMA, the $\frac{\text { provided }}{\text { sections }} \frac{1 n}{206} \frac{\text { ections }}{\text { and } 209} \frac{1716}{\text { of FLPMA, }} \frac{\text { and }}{\text { see }}$ Appendix 3 . disposition



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Responses to Comment Letter "E".

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 National Coal Association

For the reasons set forth above MARC and NCA request that the proposed exchange be dismissed
and/or that further processing of the exchange be postponed until the concerns raised above exchanged through a competitive lease sale. stance has resulted in new interest of potential lessees in obtaining the coal to be the resultant loss of bonus bids and royalties, must determine whether this changed area. The potential availability of an economically viable transportation mode for coal
 5. A REQUEST FOR EXPRESSIONS OF INTEREST SHOULD BE SOLICITED PRIOR TO APPROVAL OF THIS
EXCHANGE. tions to be used by BLM in deciding whether to approve this and similar exchanges. be afforded the opportunitv to participate in the development of the guidelines and/or
 Secretary on October 14, 1983, they have not been published in the Federal Register for public quefstss $\forall$ ay be processed further until guidelines are developed for considering and processing coal Assuming arguedo that the proposed exchange is authorized under existing law, it should not 4. THE EXCHANGE CANNOT BE CONSIDERED PRIOR TO PUBLICATION, COMMENT ON, AND APPROVAL OF
GUIDELINES FOR PROCESSING EXCHANGES.


In regard to the stipulations to be attached to any federal coal lease
tracts formed as a result of this exchange, our comnients are the same as
those for the proposed competitive lease sale and PRLAs cenerally: as a
 this point snould not be obscured by acceptance of the Lee Ranch Exchange



bution of supply to meet most near-term needs for this fuel and the mining of coal at Lee Ranch seems to promise a substantial contri


 case basis; in several instances, coal exchances in other federal coal coal exchance should in no wise be construed as a blanket approval of coal
exchanges in general. Policy on such exchances is to be determined on a
situations
it is desirable that the BLI seek wherever possible to avoid such by the severe surface owner conflicts oresent on rany of the tracts and conflicts in any potential future coal extraction. The present plans
for coal leasinc cenerally in the San Juan Basin are oreatly complicated Alternative as the one to be adopted by the BL!! if this action proceeds,
on the grounds that this alternative would involve minimal surface owner improve manageability of the lands involved. We recomend the Second The Sierra Club Rio Grande Chapter has no problem with the idea of this
coal exchance and we concur in the El!'s assessment that it would creatly County Coal Exchance Proposal. Our comments are brief and they are
Thank you for the opportunity to comment on the Draft Amendment/
Environmental Assessment to the Chaco Manacement Framework Plan: Mckinley irr. A.pplecate,

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\begin{aligned}
& \text { Albuquerque, New Hexico } 87107 \text { } \\
& \text { Dear Mr. Applecate, }
\end{aligned}
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> Pr. L. Paul Applegate, District !:anacer
Bureau of Land Manacement, Albucuerque District
Albuquerque, New Mexico 87106
23 Decenber 1983


Rio Grande Chapter, Sierra Club




scrutiny and recourse to the legal descriptions of exchange lands in the text
was necessary before the maps in the EA could be understood.


 suffers from a similar lack of site specific information. more with the Second Coal DEIS that with this EA, but the latter document
suffers from a similar lack of site specific information.


 EIS. In that document and in this EA, there has been a notable lack in



 bare minimum the "Alternative Stipulations" itemized as an Appendix of the

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exchange are adequately analyzed in Chapter of this Final Plan
Amendment/Environmental Assessment, which does include all impacts that would
occur. F-3. The impacts of mining the Lee Ranch tracts was adequately analyzed in
the Final San Juan River Regional Coal EIS. The impacts of completing this
exchange are adequately analyzed in Chapter 5 of this Final Plan F-2. The BLM believes the Final San Juan River Regional Coal EIS adequately
covers the site-specific and cumulative impacts of mining the Lee Ranch tracts.
 required. The BLM is in the process of developing a final list of mitigating


Responses to Comment Letter "F".



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coal exchange on local residents.
 assessing the impacts on residents, of the local environment. Ine
lack of site specific information, in a wide range of subjects,
lat
 appears to have oeen made in the preparation of this EA. This is
 Though the heirs, and other residents of San Mateo live in the incluce tomn sites and gravesites and other areas used by the
incirs gen E ations ago.
 affecten by the coal exchange proposal, the current grants borde original grants, in some cases, extended beyond tne presently
listed boundaries. These original grant lands included areas
 The Heirs are an association of residents of the San Mateo, New
Mexico area who are neirs to the Ojo de san Mateo, Bartnolome
 San Mateo Area-related to the "Oraft Amendment//nvis ronmental
 Dear Mr. Applegate; L. Paul Applegate, Uistrict Manager
BLM, Albuquerque Uistrict
P. O. Box 6770
Albuquerque, NM 87107 L. Paul Applegate, vistrict Manager vecember 26, 1983 than other in the Basin. TThis coal exchange with its implications
$\mathrm{G}-5$
$\begin{aligned} & \text { for diverting coal development from the Bisti area is not } \\ & \text { considered in either the first or secona uraft }\end{aligned} \sqrt{ }$ IS on San Juan





enclosure
 ?


Arsenio salazar, Vice President Charlie Sandoval, Treasurer

Arturo Candelaria, President
Sincerely,
G-6 $\left[\begin{array}{l}\text { The EA is inadequate in the areas discussed, from the perspective } \\ \text { of the neirs. BLit should prepare and Environmental Impact } \\ \text { Statement, covering these points and tnose raised by other } \\ \text { conmentors, prior to the coal exchange decision. Failure to do so } \\ \text { would, in our view, voilate the National Environmental Policy Act } \\ \text { by failing to consider the interests of local residents affected } \\ \text { by a proposed federal action. }\end{array}\right.$
exchange.
reasons for BLM to prepare a full EIS on this proposed coal land been justified. This major scaling up of the coal potential of
the area, from both a regional and national perspective, are
 plans.

[^1] Responses to Comment Letter "G". G-1. Please refer to Chapter 7 of the Draft Amendment/Environmental





[^2]$$
\text { Impacts are described in Appendix } 8 \text {. }
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エ purchasing the lands known as the
Navajo Ranch Acreage（Title 16 Navajo
Tribal Code，Section 1）．
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the Navajo Tribe should be consulted regarding the erates that the Navajo Tribe is a qualified surface
orner of this acreage．As qualified surface owners， rights are held by Santa Fe Pacific Coal and the sur－ identified as Navajo Ranch Acreage，where the mineral The Proposed Action to exchange $4,476.30$ acres of land
to the excinange



Other Navajo qualified surface owners and Navajo
be
omments：
Coal Exchange Proposal，November 1983，and are providing the Tribe irave revieved the Draft Amendment／Environmental Assess－
Then

L．Paul Applegate，District Manager
Bureau of Land Management
Albuquerque District
P．O．Box 677 ？
Albuquerque，New Mexico 37107


December 27，1983








Fish and Wildiffe Violations Act of 1973 ，the Navajo Area Policy for Threatened
and Endangered Species Investigation，March 10,1983,
and Title 17, Navajo Tribal Code，Subchapter U．
рəコețosse st əタueчวxә puet






The Navajo Tribe Envission エวบากา Aname Onann Sincerely
The draft amendment makes reference to the Second Draft San Juan
River Regional Coal EIS (USDI, BLM 1983), the Navajo Tribe has
commented on the aforementioned document and express concern
regarding the lack of assessing all related impacts to the
proposed Federal coal development activities. Since the Navajo
Tribe is of the opinion that the second draft is inadequate in
addressing the concerns of the Navajo Tribe, further reference
in this draft amendment is difficult to accept.
EPC staff appreciates the opportunity to review and comment on
the draft amendment. We respectfully request that the concerns
of the Navajo people be appropriately address prior to any
Federal decision to proceed with the proposed land exchange.

EPC staff appreciates the opportunity to review and comment on
the draft amendment. We respectfully request that the concerns
of the Navajo people be appropriately address prior to any
addressing the concerns of the Navajo Tribe, further reference
in this draft amendment is difficult to accept. proposed Federal coal development activities. Since the Navajo commented on the aforementioned document and express concern The draft amendment makes reference to the Second Draft San Juan
River Regional Coal EIS (USDI, BLM 1983), the Navajo Tribe has Page

 H-4. The ferruginous hawk is not listed as either a threatened or endangered
species. The Navajo Area Policy for threatened and endangered species and $\mathrm{H}-3$. See Response $\mathrm{H}-1$. $\mathrm{H}-2$. The BLM has received surface owner consent for all coal lands in the Lee
Ranch Tracts to be acquired in this exchange.


.. H., גəłłวา łuamuos of səsuodsəy
exchange as "anti-competitive" on a variety of legal grounds.

 support from State and local governments in New Mexico, and from private organiza-



unemp loyment. in the Grants-Milan-San Mateo area, an area currently suffering from high


analysis of the issues involved. possible effects of the proposed exchange, and for the fair and dispassionate November 28, 1983. First of all we wish to commend the staff of the BLIM comments on the Draft Amendment/Environmental Assessment to the Chaco Pianagement
Framework Plan: McKinley County Coal Exchange Proposal ("EA") published

Dear Mr. Applegate
Santa Fe
 Aibuquerque, New Mexico 87107 Bureau of Land Management, Albuquerque District

of the difficulty involved in establishing a value for Santa Fe's minerals, which



 More recently, when Congress created the Chaco Culture National Historic
Park in 1980 , it was receptive to Santa Fe's proposal that the Secretary of the

## pursued

land, but the Park Service felt that the exchange coul and the matter was not

 in-holdings within Grand Canyon National Park ( 11,000 acres) and Lake Mead its mineral estates. Shortly thereafter Santa Fe was approached by the Nationa
Park Service with respect to that agency's desire to acquire extensive Santa Fe


United States' holdings in the Petrified Forest National Park area and in the
establishment of Chaco Canyon National Monument. were effected with the National Park Service in connection with rounding out the

 500,000 acres of Santa Fe lands in the vicinity of the San Francisco Mountains
north of Flagstaff, Arizona, for approximately 150,000 acres of in-lieu lands.
 reservations. One of the first formal exchanges was completed in 1902 when Government goes back to its beginning years in the late 1880's, at which time


April 22, 1983 (copy attached).






The above summary of Santa Fe's long involvement of land exchanges
with the United States should demonstrate the absurdity of some of our competi-
tor's claams that the Mckinley County exchange was conceived by Santa Fe as an
"end run" of some kind around the Solicitor's decision in December 1982 which
barred railroad affiliated coal companies from holding federal coal leases.
Nevertheless, it is Santa Fe's view that, whatever the scope of Section 2 (c)
may be under the Mineral Leasing Act, it has no application to exchanges under
Section 206 of FLPMA.
In summary, the proposed McKinley County exchange is legal, pro-
competitive, and in the public interest. Please refer to the attached pages
for specific comments to the EA.
 exchanges for certain santa Fe mineral interests in former BLM wilderness


George G. Byers
Manager-Governmentăl Affairs
1,2
Very truly yours,


 suapp!q let?uziod who might otherwise bid on coal. Nevertheless, the
Section $2(\mathrm{c})$ could have a

 Ranch area. Santa Fe strongly disagrees with the current administra-


 Act. Both the Departments of the Interior and Justice now interpret Absen exchange, however, the prospects for mining of the sant a $e$ and
federal tracts in one operation are dim because of the current Absent exchange, however, the prospects for mining of the santa fe a $^{\text {and }}$ from mining the coal in acheckerboard pattern, unless the santa Fe The environmental impacts from mining the coal in consolidated blocks
created through exchange would be significantly less than impacts
 successful practice in other states) may be considered. mititgat ing measures, if necessary, to include nest relocation (a very areas should be retained in the exchange, since it has not been


 $\overline{\text { e!Jə7!」う K7!!!qeq!nsun ' } \varepsilon!\text { abed }}$ fashion.
such consent and archeological survey can be completed in a timely archaeological survey in the near future, Santra re requests that the
BLM consider reinstat ing the Lee Ranch East tract to the exchange, if

 Page 12, Partial Exchange Alternative II will always be a viable operation, even without the exchange. Mine. Mine facilities are now under construct ion and full product ion
Mrome the mine should begin by the middle of 1884 . The Lee RRanch Mine
from
will always be a viable operation, even without the exchange. would be left in place. SF Coal Corporation has entered into long
term contracts with two utilities to supply coal from the Lee Ranch
$\xrightarrow[\text { ~ }]{\stackrel{\top}{\infty}}$
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Surface mining permits issued by the State of New Mexico under Coal






tional surface-mineable coal which might be identified during the
geologic and economic evaluation process of the exchange.
 existing Chaco MFP decisions in any of the alternatives discussed in
the EA. Santa Fe assumes that this decision will also hold true if The EA notes that no conflicts have been identified between the Page 17, Relationship to the Chaco Management Framework Plan (MFP)
tained in the OEIS should be specifically incorporated by reference
into the final EA. the discussion of the environmental parameters for each tract con-
 The environmental impacts and cumulative impacts of mining in the would be wasted.
removal of the Santa Fe coal with the result that a valuable resource
would be wasted.
 ग!wouoja jafel «lan!feusazly -aw!z jo spo!sad pazesedas omz joł jo would not be conducive to resource conservation because of the need
to leave barriers between sections and at corners, and would result Mining only the alternate sections of land would be more costly, the result that Santa Fe coal and state coal leased to Santa fe very Without this exchange, therefore, severe restraints are placed on any
attempt to jointly develop the subject Santa Fe and federal coal with -saseal [poj [eJapay uo 6u!pp!q jo bu!plou wosy

 Justice would enforce Section 2(c) to bar any joint venture in which
Santa fe had a 30 percent or greater interest. U.S. Department of

Fe and the BLM dated December 1,1982 which required only that a quit
claim deed of conveyance be submitted to the United States by Santa Fe, the exchange is submission of a warranty deed of conveyance from
Santa Fe to the United States. This requirement for submission of a
warranty deed conflicts with the Agreement entered into between Santa
Fe and the BLM dated December 1 , 1982 which required only that a quit
claim deed of conveyance be submitted to the United States by Santa Fe. the exchange is submission of a warranty deed of conveyance from
Santa Fe to the United States. This requirement for submission of a
warranty deed conflicts with the Agreement entered into between Santa
Fe and the BLM dated December 1 , 1982 which required only that a quit
claim deed of conveyance be submitted to the United States by Santa Fe. Page 23, Federal Agencies General, Antitrust Division, before the Commission of Fair Market
Value Policy for Federal Coal Leasing. Mexico belongs. Also attached is a copy of the testimony delivered Coal Industry." These reports also contain a definitive discussion
of competition within the Southwestern Coal Market, to which New Department of Justice 1978 and 1980 reports on "Competition in the analyzed the proposed action with regard to compet ition. In addition Page 23, State Agencies The EA notes that the New Mexico Energy and Minerals Department has November 17, 1983 by Mr. William F. Baxter, Assistant Attorney Mexico belongs. Also attached is a copy of the testimony delivered
$=$ -
-
to be developed to their fullest potential and on a more timely basis
than if left as scattered, isolated tracts. larger, consolidated blocks of federal or Santa Fe coal. As part of
more desirable mining units, these State leases will be more likely prival. As a result of the exchange, they would be included in
for coal.
larger, consolidated blocks of federal or Santa fe coal. As part of from the exchange to State lands located adjacent to the federal and
private coal resources. The State lands in question have been leased The State C.ommissioner of Public Lands expressed concern about impacts
from the exchange to State lands located adjacent to the federal and than if left as scattered, isolated tracts.
is considering these differences, if any, in the process of its geologic
and economic evaluations of each tract to determine equal value.
These types of concerns were also addressed in the DEIS. characteristics, and reclamation potential that might exist in areas
where BLM and Santa Fe tracts proposed for exchange are located. BLM determination of differences in geologic hazards, overburden The U. S. Dffice of Surface Mining submitted comments asking for a
 şsänbas a」 ełues •u! Milan area developed the necessary infrastructure to handle increased
housing and community public services demands from the growth expected

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## 




Council on Historic Preservation and the State Historic
Preservation Office...... 43 C.F.R.S $3461.1(\mathrm{~g})(1)$.




 able for coal mining could include: lations pursuant to SMCRA, one category of property considered unsuit
 connection with its Lee Ranch permitting activities and the SHPO has
commented on the results. the New Mexico Coal Surfacemining Commission. As a matter of policy language is tracked word-for-word in Section 8-11 (b) of Rule $80-1$ of
the New Mexico Coal Surfacemining Commission. As a matter of policy, ing, but not limited to, data of State and local archeological, his-
torical, and cultural preservation agencies. Id. s 779.12 . This archeol
This description must be based on all available information, includ-
ing, listing on the National Register of Historic Places and known
 If a surface mining permit is applied for, the applicant must submit
centain minimum environmental resource information including the Id. S 776.12
archeological resources located within the proposed exploration area.
 proposed exploration area and a map, both of which refer to districts which more than 250 tons of coal is removed requires submission
additional information, including narrative description of the of the exploration activities. $\frac{\text { Id. }}{}$ S 776.11 . Exploration during
which more than 250 tons of coal requires a permit and a description of the practices proposed to be
followed to protect the environment from adverse impacts as a result exploration during which less than 250 tons of coal will be removed archeological, cultural and historic data. 3n C.F.R. S 771.23 . Coal Control and Reclamation Act (SMCRA) include descriptions of the
methodology and organization used to collect, record, and interp
 significant coal exploration could take place and no surface mining Under both federal coal mining and leasing statutes, therefore, no -
a . [S]imply because the Conpaso [Consol] Project involve
approved lease it does not necessarily follow




 only through substantial expenditures of more time and

 required for the entire


















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including the Divide tract, Lee Ranch East, Lee Ranch West and the


 resources, is proposed. Surveying should take place at the time each
 complete survey of all of the federal lands proposed to be exchanged


 papaau jof sajor LS Snid sajวe $745!a$ of pau!fuoj ajam for many years. The original proposal encompassed 40,000

 of the Mining Plan under SMCRA and the pertinent regulations

 each new seglment prior to commencement of mining in that sector
Id. at 677 .


 provide for subsequent "site-specific undertakings" which are the
incremental components of a long-range project and which must be

 The court also recognized that some projects may require ongoing
compliance with NHPA. In other words, stage-by-stage compliance (рaz7!wo Suot lefin) $9 L-\mathrm{GL9} 7 \mathrm{Fe} \cdot \mathrm{ddns}$. log lenoudde ueld butu!w which required prior complaince with. . NHPA is the 1978 which actuates that mining is the Assistant Secretary's

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I-13. The text has been revised appropriately. See revised Table l, Chapter
3. -TI-I asuodsay azs 'ZI-I I-11. This archeological survey on Federal lands to be transferred to
Cerrillos Land Company has been completed and concurred with by the syPo.
 Environmental Assessment. incorporate Cerrillos' socio-economic study by reference into this

 I-9. The bLM had no direct involvement nor control in the study of the
socio-economic effects on the Lee Ranch Mine included in Cerrillos' permit pax p̣nbaュ I-8. A quitclaim deed of conveyance will be required of Cerrillos Land
Company to complete the proposed exchange. A warranty deed will not be


 t-7. Surface mining permits issued by the State of New Mexico under Coal


 this Final Environmental Assessment. The other ferruginous hawk nest found Land Company Coal in Section $27, \mathrm{~T}$. $16 \mathrm{~N} ., \mathrm{R}$. $\mathrm{T}^{\text {W., will not be excluded from }}$ the exchange. See the discussion of unsuitability criteria in Chapter 4 of





 added to the Planning Criteria for this amendment/environmental assessment.


Ninibah M．Cahn，Impact Analyst，LR \＆R Section，ONLD，DOR
Files


Albuquerque，NM 87107
Sureau oi Land Management，Albuquerque District
P．．Sox 46770 －．？aul Applegate，District Manager
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（602）871－4530
The Navajo Tribe 86515
Division of Resources
proposed exchange area has been presented





 Surface Owner Consent: The fact that no positive response has been
received from surface owners on the Divide West tract should be
evaluated in a socio-cultural context The statement that "This appendices.
 October 29, 1983 (see attachments). These special stipulations should tetrads, asəuI spuet uetpui do aכejans uetpui 8utatonut saseat ite ut
 KTddns of a!
statement is made with regard to the twenty (20) unsuitability criteria beneficial and deleterious) on the immediately affected parties (surface
owner/users). On Page 13, Paragraph 2 of the text, the following Additionally, there is no consideration of socio-economic effects (both data we would find these tracts unsuitable, and have no basis on which could be applied by the Surface Management Agency. Without sufficient
data we would find these tracts unsuitable, and have no basis on which lnsufficient Data: Since there is no inventory data for the Divide
West and the Navajo Ranch tracts, we disagree that unsuitability tracts not listed in the "Competitive Leases" first draft of the ElS
 VIG $\Lambda q$ uodn pazase
 consents have already been obtained, but this is unclear in the
discussion on Page 5, ltem 4 .
 otherwise these areas would have been delineated as coal tracts
proposed for leasing earlier in the process.
 Coal Values: Coal lease tracts identified in the First Draft of the

 Surface owner consultation is listed as planning criterion but later on attempt to obtain surface owner consents (or deny the Tribe status as
a consentor).
 Coordination with lndian Tribes: ls listed as a planning criterion BLM used in applying the unsuitability criteria to these two coal areas


 the Bureau of Indian Affairs (BIA). This is because the Bureau of Land
Management (BLM) was unable to provide the BIA with sufficient data or

 and Divide West Acreage." "The 20 unsuitability criteria...have been applied to....Navajo Ranch Unsuitability Criteria: On Page 13, paragraphs 1 and 2 of the text, the
following statements and made: surface ownership need to be made very clear in the text and appendices proposed exchange is the "Divide West Tract" (lndian Trust Deeds) and
the "Navajo Ranch Acreage" (Navajo Tribal Land). These facts of Indian Land Status: From the information provided in the text it appears that

We have reviewed the subject amendment and would offer the following
comments:
Bureau of Land Management, Albuquerque District L. Paul Applegate, District Manager

Review of November 1983 "Draft Amendment/Environmental Assessment to
The Chaco Management Framework Plan: McKinley County Coal Exchange :1כ3rens REPLYTO NTM Navajo Area Director 2851: 2 \% 370






 Administrative Actions: The example of reducing compliance with the ¿8uب̦seat



 Rationale for Blocking-up Coal: The rationale of blocking up coal to avoidable by not consumating or pursuing the exchange

 nor oriol In fact, it is stated elsewhere that relocation would be
 ownership...social factors, and American Indian Concerns." This of the coal exchange and the trasfer of 160 surface acres to private American Indian Concerns: It is stated on Page 19 that, "No unavoidable
 assessment of paleontological resources as, has become standard of guidelines for treatment of paleontological resources based on the 1906
Antiquities Act. These guidelines briefly require similar levels of Paleontological Resources (Page 18): The Navajo Area Office is developing

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 Analyzing the effects upon Indian individuals and interests the inadequacy of these documents in: In the site-specific analysis for the coal lease tracts (USDI, BLM 1982)
and in the Second Draft San Juan River Regional Coal EIS (USDI, BLM 1983),
the Bureau of Indian Affiars has itself on record numerous times regarding
 relocation decisions and adjustments
Again, finding sufficient forage and
boundaries probably is impossible. A
is the acquisition of new lands in the
existing chapters to be affected. residential situation in the area. As more realistic commitment would
be to involve an applied social scientist as an impartial mediator in splitting up family units may be an impossibility given the cultural/ Staggering relocation schedules in areas and at the same time not participation. Tribe is not a valid surface occupant. On Trust lands these negotiations occupant user is in apparent conflict with the assertion that the Navajo
of this statement
purchase of new lands for the chapter is the only reasonable implication additional lands are attached to the chapter through purchase. Chapter
grazing rights are already at maximum capacity for the areas. Direct Relocation of Surface Occupants: On Page 33, relocation is discussed.
It may not be feasible to relocate occupants within chapters unless eaxe styz ut
 Criterion No. 7. The proximity of the proposed Navajo Ranch Exchange
 to Tribal sovereignty

The effect of leasing coal from underneath Tribal lands is a challenge served by the proposed exchange. This is particularly clear in the Indian Interests: An analysis of public comments and attempts to obtain
surface owner consents indicates that Indian interests may not be






 K-7. 43 CFR $3420.1-4$ regulations require consultation with all qualified
surface owners to determine a preference for or against surface mining. The
Divide West acreage is no longer included in the exchange.









 Indians are involved in areas where coal leasing would occur TEnptィTput ou aəuts uoţeftnsuov ut fsisse of paxtnbad aq titm tauuosdad


 unsuitability criteria on these areas is no longer required





[^3]- pastnai uәaq aney sdem әчı 'ऽT-y responses are included in this final environmental assessment.
 k-13. No Indian surface which is coal leaseable is included in the exchange; from consideration. K-12. No relocation of Indian occupants will be required as a result of this
exchange because the coal leasable lands with Indian -11. The proposed exchange no longer includes any Indian surface that would
be leased for coal. $\cdot \dagger-x$ asuodsay zas 0 ot-x


$4710 \& 725$

[^4]could be used to process the coal． the





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the transfer of coal interests by exchange to Santa Fe consider the policy of the commodities clause，it should be adequate to note that precedents establish that the commodities clause does not bar $\$ 1$, Oct．17，1978， 92 Stat．1393．Whatever duty the Secretary may have to




 ino u！quəunbie＂əsne $\mathrm{I}^{2}$ sə！ attached hereto and are submitted for the record letter of May 26，1982，to Senator Melcher with regard to these issues are September 29，1982，to the Comptroller General and Deputy Solicitor Tidewell＇s and related companies and that Section 2（c）does not bar such companies from and Section 206（a）of FLPMA clearly provide the Secretary of the Interior authorit
to dispose of coal and other leasable minerals through exchange to railroads


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 coal draft environmental impact statement and have been repeated in other forums not all coal companies in the coal industry，has made statements in opposition
to our proposed McKinley County Coal Exchange．NCA＇s objections were made to
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 - suolzerado s7! dot steraulw 10 'a6erof under NCA's arguments, such entities would always enjoy an alleged "unfair competi-
tive advantage" over an entity that was totally dependent on federal timber,
 position should be obvious, because Section 206 was specifically designed by
Congress to produce better land management patterns for both non-federal landand wanted federal lands to block up its operations. The absurdity of this accepted, there would never be a FLPMA exchange with any individual or company
that had its own private holdings (whether timberland, rangeland, or minerals) exchange responsibilities under Section 206 of FLPMA. If NCA's argument were of their operations, and so forth. Congress did not require the Secretary to costs depending on their capitalization, the nature of their assets, the efficiency would produce much mischief. There is al ready great disparity in the competitive
advantages of companies in the coal industry. Companies have different basic The argument that the exchange would give Santa Fe an "unfair competitive
advantage" has a number of basic defects and, if carried to its logical extreme,
their profitability. bottom line financially just as similar costs incurred by its competitors affect getting this coal free. It will have to pay lease rentals and a royalty to Atlantic \& Pacific Railroad. Santa Fe has carried these "sunk" costs since
before the turn of the century. Secondly, SF Coal Corporation will not be not getting free ride. it is giving equal value. The coanchand is coal it purchased along with its purchase of the bankrupt could have mined itself or leased to others for royalty payments. Santa Fe is or 8 percent royalty for underground mined coal. In the first place, Santa Fe Santa Fe believes it is wrong to conclude that Santa Fe or SF Coal
will have an unfair advantage over other coal companies that lease federal
coal and consequently may pay a $121 / 2$ percent royalty for surface mined coal


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SF Coal Corporation would have an unfair advantage in lower production

## Statement

contains a detailed case study of the state of competition in the Southwest coal Department of Justice's 1978 report on Competition in the Coal Industry which statement on this issue recently presented by Santa Fe Mining, Inc. before the one market in which Santa Fe coal competes), we include for the record (1) the companies would unfairly "dominate" coal development in the Southwest Coal Market




the customers. Most of these customers are utilities with the end result being
that if any coal company can sell coal cheaper, then individual citizens will
 and can hardly be characterized as unfair. Indeed, it is the essence of competition
Each must still compete to keep mining costs and other costs as low as possible in acquisition, royalty, or other costs, this fosters rather than hinders competition


 or Indian coal. Nor has Arch Mineral Corporation, the most vocal opponent of


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In conclusion, the NCA's objections, although couched in terms of
"policy" objections, really come down to objections to the stiffer competition
it foresees for its member companies from the lee Ranch Mine. The policy of
the Federal Government, however, should be to promote and protect competition,
not to protect the positions of individual competitors already in the coal
industry. The FLPMA Section 206 exchange authority offers BLM an important
land management tool. A valuable by-product of the exercise of this authority
in the McKinley County exchange will be enhanced competition in the coal industry
through the development of more efficient logical mining units for both Santa Fe
and the Federal Government. * * *
This statement seems to be more an argument in favor of the exchange
than one against it. The fact of the matter is that the San Juan River Regional
coal lease sale has been postponed, for reasons unrelated to the exchange, and
in the meantime the exchange proposal will have been thoroughly and comprehensively
examined and analyzed to ensure that the United States receives equal value and
that the exchange is in the public interest. exchanges as an alternate and preferable way to develop coal in the
San Juan Basin. The BLM should postpone the competitive coal lease sale to allow time
to adequately study the exchange proposal, and to consider coal 4. The BLM sh
1983, statement of Assistant Attorney General William F. Baxter before the
Commission on Fair Market Value for Federal Coal Leasing. market power over the transportation of coal essential to engage in the kind of Department of Justice's 1980 report on Competition in the Coal Industry which Coal Leasing by ATSF Assistant Vice President John A. Grygiel, and (2) the such unequal treatment, but ATSF would have to act contrary to its best
economic interests. We include for the record (1) the statement on this issue absolutely no evidence of any such favoritism. Not only do the laws prohibit



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 I believe the exchange will expedite the produciton and sale of coal from New Mexico
thereby creating a significant economic gain for the state.

 on any of this acreage this alternative. It is my understanding that surface owner consent problems do not exist
 located in a checkerboard pattern in the western portion of the Lee Ranch west tract, and eastern portion of the Lee Ranch west tract, and the western portion of the Lee Ranch
middle tract. The Santa Fe Pacific Coal underlying approximately 9,040 acres and BL.M coal underlying approximately 4,475 acres located in a checkerboard pattern in the I recommend that the BLM proceed according to the plan described under
alternative number 2, which as I understand it, would make available for exchange the
which sufrace owner consent now esixts. phould accept coal for which surface owner concent has not been obtained for coal for particularly with respect to the lack of surface owner consent on the lands Janta fe had the difficulties that you have encountered on some of the proposed exchange acreage, I have reviewed the draft amendment/environmental assessment to the Chaco
Management Frameworks Plan which you distributed on November 28th. I am aware of


I still strongly support the proposed exchange for the same reasons as stated in that
letter. for your convenience. containing coal reserves in the southern San Juan Basin. A copy of that letter is enclosed
 Dear Mr. Lusher: P.O. Box 1449
Santa Fe, NM 87501 US Department of Interior
New Mexico State Office
P.O. Box 1449 Bur Department of Interior
Uew Mexico State Office Mr. Charles W. Lusher, State Director £861 '91 дәqшәวəロ tosl8 ojixin man ta vinvs IS vWחZzilnow viz vi
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Executive Vice-President Jean Fisher " $\because$

Sincerely
 The mining of coal in the area will result in very signifi-
cant and sorely needed positive effects on the economy of the
entire area.



 Bureau of Land Management
3550 Pan American Fwy., N.E.
Albuquerque, NM $87107^{\prime}$
Gentlemen:

December 20, 1983
Etmatous cava otos

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\text { P.O. Box } 297
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> Veyy truly yours．
Mayor Thank you for your cooperation It seems most feasible for all parties concerned to make the exchange
and would help the economic base of the local communities． The City of Grants would like to express its support for the proposed
exchange of coal properties with Santa Fe Coal Industries．

> Dear Mr．Applegate

Aibuquerque，NM 87107
SUBJECT：Draft Enviro
Land Management
P．O．Box 6770
Aibuquerque，NM District Manager
United States Bureau of Paul Applegate
District Manager

December 20， 1983

 Subject：mekinley County coal Jxchance בrooosal LCILE OOTXOK nön＇arbuarunuts ？urovu o£ Lanc ．．anagoment，Albuavernue Visirict くな．イフ7 ó

December 15， 1933 3939 Rio Grande slvdí 3939 Rio Grance 3lvd．，N．iri it5

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cc:
Regional Director, FWS, Habitat Resources, Albuquerque, New Mexico
The opportunity to provide comments is appreciated,
occurs or the tracts are leased during the first or second round leasing
the FWS will continue to offer mine planning assistance.
 lease stipulations (as presented in the San Juan Regional Coal EIS) will for Federally listed threatened or endangered species were addressed in
recent informal consultations with the Fish and Wildlife Service. No
species were found to be affected by the proposed action. Committed $\frac{\text { Page } 18 \text {. Resource Lmpacts as a result of Regulatory Differences. Concern }}{\text { for Federally listed threatened or endangered species were addressed in }}$
golden eagle nest located in Section 27 of $T 16 N R T N$ is number 43 ; and numbers would be helpful. Needed corrections or additions are underlined
The ferruginous hawk nest in Section 29 of T1BN RIIW is number 44 ; the located in the exchange areas. References to BLM FivS nest reference
numbers would be helpful. Needed corrections or additions are under
$\frac{\text { Page 13. Unsuitability Criteria. Some additions and corrections are needed }}{\text { in reference to the two ferruginous hawk and one golden eagle nests }}$

We have reviewed the draft document and have the following comments to submit Coal Exchange Proposal (Charles Luscher's $11 / 28 / 83$
memorandum) (BLM) Draft Amendment/Environnental Assessment to the
Chaco Management Eramework Plan: McKinley County, Acting Field Supervisor, FWS, Ecological Services,
Albuquerque, New Mexico
District Manager, Bureau of Land Management
Albuquerque, New Mexico
Me:morandum
To:

Albuquerque, New Mexico 87196
Eculogical Services, USFWS
Post Office Box 4487

0















 : rapets -sw reac Attention: Betty Sladel:, Team Leader LOTL8 WN "ənixonibncty Bureau of Land danagement
Albuguerque District office
P.0. Box 6770



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## APPENDIX 1

## LANDS DECISION RESULTING FROM THIS MFP AMENDMENT

## DECISION

Make approximately 4,830 acres of Federal (BLM) coal available for exchange for approximately 6,320 acres private (Cerrillos Land Company) coal. Any coal exchange consummated under this decision will be done on the basis of equal coal values.

REASON
This coal exchange would allow for a more logical and economical development of both private and Federal coal resources. Offering solid blocks of Federal coal would make the tracts more attractive to industry, creating more interest and competition in the bidding, and enhancing the value of the lands.

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## APPENDIX 2

## PUBLIC INTEREST ASPECTS OF THE EXCHANGE

The BLM has established a Fee Exchange Policy for Leasable and Saleable Minerals (September 26, 1983). An appraisal is not the appropriate vehicle for identifying these public interest issues (the EA record of decision is that vehicle). Nonetheless, the 12 points established by this Bureau policy are briefly addressed here.

The policy states: "An exchange of minerals is in the public interest if:"
"1. The exchange would consolidate Federal holdings into a logical mining unit(s)." Blocking Federal checkerboard lands creates logical mining units.
"2. The exchange would consolidate non-Federal holdings into a logical mining unit(s)." Fee coal combined with Federal checkerboard coal proposed for exchange will consolidate holdings into logical mining units.
"3. The exchange would serve a national resource management or protection need." The exchange will allow the U.S. to gain control of fee mineral estate holdings in the Chaco Cultural National Historic Park.
"4. The exchange would simplify jurisdiction and allow Federal land use planning efforts to be confined to an area in which the United States controls the mineral development." Blocked tracts greatly simplify jurisdictional problems, potential trespass, lease management, etc., and allow consolidated planning efforts on the blocked areas.
"5. The exchange would reunite Federal surface and subsurface estates." The Federal surface and subsurface estates would be reunited in the Chaco Culture National Historical Park and some of the Chacoan outliers.
"6. The exchange would eliminate isolated tracts and checkerboard patterns of Federal minerals." The purpose of the exchange is to eliminate checkerboard holdings of Federal coal in the Lee Ranch area.
"7. The exchange would achieve a management goal without using appropriated funds to pay for the resources needed by the United States." BLM negotiations have eliminated any monetary equalization payments.
"8. The exchange would meet needs of State and local people." The exchange is supported by the Governor of New Mexico and other governmental and private groups.
"9. The non-Federal lands to be received in the exchange would serve the public better in public ownership than the minerals to be transferred in the exchange." Blocking tracts allows the U.S. to offer sizable coal tracts for sale to the public.
"10. The exchange would enhance competitive bidding for the Federal minerals." The evaluations show considerable enhancement in the estimated value of the blocked tracts. Several companies have expressed interest in bidding on the blocked lands.
"11. The potential revenue from a lease or sale of the Federal minerals consolidated by the exchange would be greater than the potential revenue from a lease or sale of the minerals in Federal ownership prior to the exchange." The evaluation clearly shows a potential $\$ 22,155,000.00$ increase in net present value revenue.
"12. The exchange does not involve a transfer of a fee interest in Federal minerals for a less than fee interest (e.g., conservation or scenic easements) in non-Federal lands. If a less than fee interest in non-Federal lands is all that is needed, a fee exchange shall be followed by a competitive bidding, or a modified competitive bidding, sale of the unneeded interests as the situation dictates." Fee coal interest is exchanged for Federal coal. No other commodities or surface resources are involved.

## EXCHANGES

43 USC 1716.

Non-Federal lands.

Sec. 206. (a) A tract of public land or interests therein may be disposed of by exchange by the Secretary under this Act and a tract of land or interests therein within the National Forest System may be disposed of by exchange by the Secretary of Agriculture under applicable law where the Secretary concerned determines that the public interest will be well served by making that exchange: Provided, That when considering public interest the Secretary concerned shall give full consideration to better Federal land management and the needs of State and local people, including needs for lands for the economy, comınunity expansion, recreation areas, food, fiber, minerals, and fish and wildlife and the Secretary concerned finds that the values and the objectives which Federal lands or interests to be conveyed may serve if retained in Federal ownership are not more than the values of the non-Federal lands or interests and the public objectives they could serve if acquired.
(b) In exercising the exchange authority granted by subsection (a) or by section 205 (a) of this Act, the Secretary may accept title to any non-Federal land or interests therein in exchange for such land, or interests therein which he finds proper for transfer out of Federal ownership and which are located in the same State as the non-Federal land or interest to be acquired. For the purposes of this subsection, unsurveyed school sections which, upon survey by the Secretary, would become State lands, shall be considered as "non-Federal lands". The values of the lands exchanged by the Secretary under this Act and by the Secretary of Agriculture under applicable law relating to lands within the National Forest System either shall be equal, or if they are not equal, the values shall be equalized by the payment of money to the grantor or to the Secretary concerned as the circumstances require so long as payment does not exceed 25 per centum of the total value of the lands or interests transferred out of Federal ownership. The Secretary concerned shall try to reduce the amount of the payment of money to as small an amount as possible.
(c) Lands acquired by exchange under this section by the Secretary which are within the boundaries of the National Forest System may be transferred to the Secretary of Agriculture and shall then become National Forest System lands and subject to all the laws, rules, and regulations applicable to the National Forest System. Lands acquired by exchange by the Secretary under this section which are within the boundaries of National Park, Wildlife Refuge, Wild and Scenic Rivers, Trails, or any other System established by Act of Congress may be transferred to the appropriate agency head for administration as part of such System and in accordance with the laws, rules, and regulations applicable to such System.

Sec. 209. (a) All conveyances of title issued by the Secretary, except those involving land exchanges provided for in section 206, shall reserve to the United States all minerals in the lands, together with the right to prospect for, mine, and remove the minerals under applicable law and such regulations as the Secretary may prescribe, except that if the Secretary makes the findings specified in subsection (b) of this section, the minerals may then be conveyed together with the surface to the prospective surface owner as provided in subsection (b).
(b) (1) The Secretary, after consultation with the appropriate department or agency head, may convey mineral interests owned by the United States where the surface is or will be in non-Federal ownership, regardless of which Federal entity may have administered the surface, if he finds (1) that there are no known mineral values in the land, or (2) that the reservation of the mineral rights in the United States is interfering with or precluding appropriate nonmineral development of the land and that such development is a more beneficial use of the land than mineral development.
(2) Conveyance of mineral interests pursuant to this section shall be made only to the existing or proposed record owner of the surface, upon payment of administrative costs and the fair market value of the interests being conveyed.
(3) Before considering an application for conveyance of mineral interests pursuant to this section-
(i) the Secretary shall require the deposit by the applicant of a sum of money which he deems sufficient to cover administrative costs including, but not limited to, costs of conducting an exploratory program to determine the character of the mineral deposits in the land, evaluating the data obtained under the exploratory program to determine the fair market value of the mineral interests to be conveyed, and preparing and issuing the documents of conveyance : Provided. That, if the administrative costs exceed the deposit, the applicant shall pay the outstanding amount; and, if the deposit exceeds the administrative costs, the applicant shall be given a credit for or refund of the excess; or
(ii) the applicant, with the consent of the Secretary, shall have conducted, and submitted to the Secretary the results of, such an exploratory program, in accordance with standards promulgated by the Secretary.
(4) Moneys paid to the Secretary for administrative costs pursuant to this subsection shall be paid to the agency which rendered the service and deposited to the appropriation then current. costs.

## APPENDIX 4

LEGAL DESCRIPTION FOR LANDS INCLUDED IN THE PROPOSED EXCHANGE
Cerrillos Land Company Coal Lands Offered to the United States Acres
Township 15 North, Range 6 West
Sec. 19: Lots 1-4, SE 1/4 SE 1/4 154.38
$\begin{array}{ll}\text { Sec. 29: Lots } 1-8, \text { W } 1 / 2 \mathrm{E} 1 / 2 \text {, W } 1 / 2 & \frac{694.40}{848.78} \\ \text { Subtotal }\end{array}$
Township 15 North, Range 7 West
Sec. 3: A11 634.58
$\begin{array}{ll}\text { Sec. 9: NE 1/4 } & 160.00\end{array}$
Sec. 11: W 1/2
Subtotal
$\frac{320.00}{1,114.58}$
Township 15 North, Range 8 West
Sec. 5: Lots 3 and 4, S $1 / 2$ NW $1 / 4$, S $1 / 2480.92$
Sec. 7: Lot 1, NE $1 / 4, \mathrm{E} 1 / 2 \mathrm{NW} 1 / 4$, N $1 / 2$ SE $1 / 4$, SE $1 / 4$ SE $1 / 4 \quad 400.25$
Sec. 17: NE $1 / 4$ NE $1 / 4$, W $1 / 2$ NE $1 / 4$, NW $1 / 4$, E $1 / 2$ SW $1 / 4$, NW $1 / 4$ SW $1 / 4$, SE $1 / 4$ SE $1 / 4$, W $1 / 2$ SE $1 / 4$ Subtotal:
$\frac{520.00}{1,401.17}$
Township 16 North, Range 7 West
Sec. 23: S $1 / 2$ SW $1 / 4$, SW $1 / 4$ SE $1 / 4 \quad 120.00$
Sec. 27: Lots $1-8$, NE $1 / 4$, NE $1 / 4$ NW $1 / 4$, S $1 / 2 \mathrm{NW} 1 / 4, \mathrm{~N} 1 / 2 \mathrm{~S} 1 / 2$
675.64

Sec. 33: E $1 / 2 \mathrm{NE} 1 / 4$, NE $1 / 4$ SE $1 / 4 \quad 120.00$
Sec. 35: W 1/2 NW $1 / 4$, SW $1 / 4$, W $1 / 2$ SE $1 / 4$ Subtotal
$\frac{320.00}{, 235.64}$
Township 16 North, Range 8 West
$\begin{array}{lll}\text { Sec. 21: All } & 640.00\end{array}$
Sec. 29: All 640.00
Sec. 31: E $1 / 2$, SE $1 / 4 \mathrm{NW} 1 / 4$, E $1 / 2$ SW $1 / 4$
Subtotal
$\begin{array}{r}440.00 \\ \hline 1,720.00\end{array}$
Total:
6,320.17
United States Coal Lands Proposed for Exchange to Cerrillos Land Co.
Township 15 North, Range 7 West

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Sec. 18: Lots 1-4, E 1/2, E 1/2 W 1/2
    637.76
Sec. 20: All 640.00
Sec. 22: Lots 1 and 5, NE 1/4, E 1/2 NW 1/4 275.01
Sec. 28: NE 1/4 NE 1/4, W 1/2 NE 1/4, NW 1/4,
    N 1/2 SW 1/4
    360.00
Sec. 30: Lots 1-4, E 1/2, E 1/2 W 1/2
    Subtotal
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## APPENDIX 4 (Con't)

Township 15 North, Range 8 West
Sec. 22: SE $1 / 4 \mathrm{NE} 1 / 4$, S $1 / 2 \quad 360.00$
Sec. 24: A11 640.00
Sec. 26: A11
Sec. 28: E 1/2 NE 1/4, SE $1 / 4$ SW 1/4, SE $1 / 4$
640.00

Sec. 34: N 1/2, NE 1/4 SE 1/4
Subtotal
280.00

Total:
4,830.85

## CHACOAN OUTLIERS AND CHACO CULTURE NATIONAL HISTORICAL PARK MINERAL ESTATE

## Park Additions

Southern Addition (02-129)

Township 21 North, Range 11 West
Sec. 21: Al1 640.00
Sec. 22: All 640.00
Sec. 23: A11
640.00

Sec. 25: A11
640.00

Sec. 26: NE 1/4
160.00

Northern Addition (02-116)
Township 21 North, Range 10 West
Sec. 9: All
640.00

Chacra Mesa

Township 21 North, Range 10 West (02-113)
Sec. 33: That portion within the E $1 / 2$ of Sec .33 lying north and east from the $6,400^{\prime}$, mean sea level elevation, contour line.

Township 20 North, Range 10 West (02-106)
Sec. 3: That portion within the northeast quarter of Sec. 3 lying northeasterly from the $6,400^{\prime}$, mean sea level elevation, contour line.

Sec. 12: That portion within the northern $1 / 2$ and southeastern $1 / 4$ of Sec. 12 which lies northeasterly from the 6,400', mean sea level elevation, contour line. 192.40

Subtotal

Total

## Outlying Archaeological Protection Sites

## Toh-la-kai

Township 17 North, Range 18 West
Sec. 33: SW $1 / 4$ SE $1 / 4$ SE $1 / 4$
Indian Creek
Township 20 North, Range 13 West
Sec. 7: S 1/2 NW 1/4, W 1/2 SW 1/4 NE 1/4 100.00
Bee Burrow
Township 19 North, Range 11 West $\begin{array}{lll}\text { Sec. 29: SW 1/4 SE 1/4 } & 40.00\end{array}$

Upper Kin Klizhin
Township 20 North, Range 11 West
Sec. 22: NE $1 / 4 \mathrm{NE} \mathrm{1/4} 40.00$
Sec. 23: W 1/2 NW $1 / 4 \mathrm{NW} 1 / 4 \quad 20.00$
Kin Nizhoni
Township 13 North, Range 9 West
260.08

Sec. 9, that portion of the E $1 / 2$ which lies north of the Ambrosia Lake Road right-of-way; and the easterly 360 feet of the $E 1 / 2 \mathrm{~W} 1 / 2$ which lies north of the Ambrosia Lake Road right-of-way.

Haystack
Township 13 North, Range 10 West
Sec. 21: E $1 / 2 \mathrm{~W} 1 / 2 \mathrm{NE} 1 / 4 \mathrm{SE} 1 / 4$, E $1 / 2 \mathrm{NE} 1 / 4 \mathrm{SE} 1 / 4$, E $1 / 2 \mathrm{SW} 1 / 4 \mathrm{SE} 1 / 4 \mathrm{NE} 1 / 4$, SE $1 / 4 \mathrm{SE} 1 / 4 \mathrm{NE} 1 / 4 \quad 45.00$

Andrews Ranch
Township 14 North, Range 11 West
Sec. 33: All
Subtotal
Total Acreage in Chaco Park and Outliers


The development of federal coal resources must be carried out in compliance with exiting federal and state laws and regulations. All mining would be done in accordance with all statutory and regulatory minimums, including the requirements in the standard coal lease form (Appendix I-1).

Special stipulations have been developed for the PRLAs (Appendix I-2) Stipulations required for each PRLA are available for public review in the Albuquerque District and Farmington Resources Area offices. These or similar stipulations will be adopted by BIM (and BIA were appropriate) for the competitive lease tracts. Monitoring will be by the OSM, BLM, BIA or the state as appropriate. Uncorrected or persistent violations of lease terms may result in an action to cancel the lease. A detailed monitoring plan will be determined during mine plan development. The following major requirements under these standard measures and committed special stipulations include the following protective measures.

## Reclamation

Before mining will be allowed, each lessee will have to show that reclamation of the lands to its pre-mining productivity is economically and technically feasible. This requires the lessee to show how he intends to carry out revegetation and to submit studies and information showing that revegetation to a pre-mining level can be successful on the particular lease. Extensive bonding is required from the lessee and is not released until reclamation success is proven. The lessee does not have to show absolute certainty of success, but must show that success is likely.

## Cultural Resources

The standard lease form requires intensive cultural resource inventory as part of mine plan development (Section 31 (a)). Before the lessee conducts any surface disturbance activities on the lease, he must at his expense do a complete intensive cultural resources survey (Class III 100 percent on-theground survey) on federal lands or lands overlying federal coal of the entire area to be disturbed using the services of a qualified professional cultural resource specialist.

Following intensive cultural resource inventory, sites will be evaluated, and determinations of National Register eligibility will be made by the office of Surface Mining in consultation with and concurrence of the BLM or BIA and the State Historic Preservation Officer. The Office of Surface Mining, under consultation and concurrence with the State Historic Preservation Officer, Bureau of Land Management, and Bureau of Indian Affairs (if BIA-administered lands are involved) will identify effects and appropriate measures to be taken for mitigation of effects on sites which have been determined eligible for the National Register.

Section $31(a)$ of the standard lease form is interpreted to provide for in-place preservation of sites (including buried sites found during mining) which may be determined eligible for the National Register when such in-place preservation is determined by the regulatory authorities, in consultation with the SHPO, to constitute appropriate mitigation of adverse effect.

Surface coal mining operations on the identified sites which do no require in-place preservation will be allowed after the lessee carries out measures to avoid adverse effects to the sites in accordance with the plan approved by the Office of Surface Mining with concurrence from the Bureau of Land Management, Bureau of Indian Affairs and the State Historic Preservation Officer.

If any cultural resources are discovered during the mining, the lessee is required to halt operations until the resource has been examined.

Lessees of the following tracts, Kimbeto \#l, Kimbeto \#2, Gallo Wash \#l, Gallo Wash \#2, Hospah \#l, Hospah \#2, Bisti \#4, Crownpoint Northeast, Crownoint East ( $\mathrm{HC} / \mathrm{LC}$ ) shall take the following actions to protect the stability of standing walls of ruins within the Chaco Culture National Historical Park and the detached portions of the park:

1. A monitoring program approved by the New Mexico Mining and Minerals Division with concurrence from BLM under consultation with the National Park Service will be establish to monitor the affects of blasting or other related mining activities on the stability of the ruins.
2. Coordination with the National Park Service will be undertaken conceming any changes that would affect site condition. This may include restriction for any damage that can be demonstrated.

Standing walls at Site LA 44728 will be stablilized to standards specified by the Bureau of Indian Affairs, at the expense of the lessee of the Crownpoint Northeast Tract and prior to any activity which might damage the structure.

During mining this site will be included in a monitoring program to monitor the affects of blasting and other mining related activity, and coordination with the Bureau of Indian Affairs will be undertaken concerming any changes that would affect site condition. This may include restriction for any damage that can be demonstrated.

LA 44728 is a small, but very well preserved Chacoan structure which is believed to have been built as a shrine. It is an outstandinp example of a specialized form of twelfth century Anasazi architecture and warrants preservation for future generations.

Ethnographic studies shall be completed at mine plan to ensure that properties of possible associated cultural values to regional cultural groups are identified. Such properties should include those sites protected under the American Indian Religious Freedom Act, human burial sites, and any sites of particular historic value to the development of the cultural groups concerned. Following identification of such properties, appropriate mitigation measures approved by the Bureau of Land Management and/or the Bureau of Indian Affairs and under consultation with the State Historic Preservation Officer shall be established and implemented.

## Paleontological Resources

Before the lessee conducts any surface disturbance activities on the lease, he must assure that a complete paleontological survey and inventory has been accomplished on federal lands or lands overlying federal coal of the entire area to be disturbed using the services of a qualified paleontological resource specialist, approved by the designated BIM official. Upon completion of this procedure, the paleontological sites will be evaluated and determinations made of their potential significance and disposition as specified in the base stipulations attached at the mine plan stage. All costs associated with loss of production, equipment down-time, and excavation will be born by the lessee.

## Gravesites

Fach lessee is required to survey the lease and interview local residents for information on gravesites and to avoid mining within 100 feet of a gravesite unless the gravesite is lawfully relocated. This is in addition to the SMCRA requirements on cemetaries.

Residences
Each occupied dwelling will be protected from mining by a 300-foot buffer zone unless the owner of the dwelling gives permission to mine closer.

## Water Resources

The lessee shall protect the physical and legal availability of existing water sources in the lease application area. Any water removed or contaminated due to coal mining operations shall be replaced by the lessee. Although replacement water need not be identical to the original water source, it shall be of equal quality and quantity or better. This is in accordance with New Mexico water law and the State Engineers office who make all water allocation determinations.

## Sacred Sites

Each proposed lease contains a notification procedure to allow an opportunity for mitigation of adverse affects on sacred sites. For this purpose, the lease will include a requirement that the lessee give notice of pending mining to the Navajo Tribe, the Tribal Chapter in which the mining is located, and the Navajo Medicineman's Association.

## Wildlife

The lessee is required to include wildife mitigation in the mine plan, avoid or otherwise protect raptor nests, and conduct surveys to locate Federal and State threatened and endangered species.

The lessee shall conduct a detailed survey for migratory bird species of High Federal Interest on areas that will be disturbed by surface coal mining. The BLM shall approve the survey. The survey shall be completed before the lessee applies for a permit under the Surface Mining Control and Reclamation Act. The nest and a buffer zone will be preserved from surface disturbance unless the surface management agency and the Fish and Wildlife concur that surface coal mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species. The lease application area has not been completely surveyed for migratory birds of High Federal Interest. Survevs at, mine nlan stame woillit he neressam to locat.e new nestis.

Surveys for federal or state threatened or endangered species will be conducted prior to surface disturbance. These surveys will be required as comintted stipulations for PRLAs as well as new leases. If endangered species are located, ASM or the surface managing agency (BLM or BIA) will re-initiate formal consultation with the FWS as required by the Endangered Species Act of 1973. Appendix D provides background information for compliance with the Endangered Species Act of 1973. If formal Section 7 consultation is inftiated, the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effort of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would avoid jeopardizing the continued existence of any endangered or threatened species or adversely modifying or destroying the critical habitat of such species. Section 7 consultation may advise surface management or permitting agencies to alter lease boundaries, preclude surface mining, or change mining practices.

One Hundred percent surveys for Mesa Verde cactus and black-footed ferrets will be done at the mine plan stage. Also, if surface disturbance is delayed for two years or more beyond the mine plan stage, then a one hundred percent survey for ferrets will be done one year prior to surface disturbance.

## Vegetation

Surveys will be conducted to locate federal and state threatened and endangered plant species.

## Wilderness Study Areas

Each lease will bar the lessee from surface coal mining operations in a Wilderness Study Area until the Congress decides upon the status of the land and requires all operations to be consistent with any Congressional decision on the lands.

## Surface Owners

Each qualified surface owner with a patent containing a reservation of coal for the United States is generally entitled to protection before coal is surface mined. The protection consists of imposing on the lessee the obligation to receive the qualified surface owner's consent and to post $a$ bond to compensate the owner for damages to crops, improvements, and forage.

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Wildife Service. determines that all or certain atupulated methods of casl mining will not advareely affect the falcon habitst during the periods when auch habitat is used by the falcons.
(3) Exemptions. Thla criterion doee not epply to lende: to whict the operator made suberantial logel and finencis 1 commitmente prior to Januery 4, 1977; on which aurfece cosl miang operations were being conducted on Auguat 3, 1977; or which include operations on which a permit hee been seaued.
(n)(1) Criterion Number 14. Federal lands which are high pronty habitat for migtatory bird apecies of high Federal interest on a regional or national basis. as determined jointly by the surface management agency and the Fish and Wildile Service, aball be considered unsunable.
(2) Exception. A lease may be issued where the surface management agency. after consulation with the Fish and Wildlife Service. determines that all or certain stipulated methods of coal mining will not adversely affect the migratory bird habitat dunng the periods when such habital is used by the species.
(3) Exemptiona. Thle criterion does not epply to lande: to which the operotor made aubstantiel losel and finencial commitmente prior io Januery 4, 1977; on which aurface coel mining operations were being conducted on Aucust 3, 1977; or which include operstione on which. pormit hea been tosued.
(o)(1) Criterion Number 15. Federa! lands which the suriace management agency and the state jointly agree are fish and wildlife habitat for resident species of high intarest to the state and which are essential for maintaining these pronity wildifa species shall be considered unsuitable. Examplee of such lands which serve a critical function for the apecies involvad include:
(i) Acuve dancing and atrutting grounds for $3 s$ ge grouse, sharp-tailed grouse and prarrie chicken:
(ii) Winter ranges most critical for deer. antelope. and alk: and
(iii) Migration corridors for elk. A lase may be issued if. after conaultation with the state, the surface management agency determines that all or certain atipulated methods of coal mining will not have a significant longterm impact on the specisa being protected.
(2) Exemptions. Thia criterion doea not apply to iands: to which the operator made substantial legal and financial commutments pror to lanuery 4. 1977; on which surface coal mining operations were being conducted on August 3. 1977; or which include operations on which a permit has been teaued.
( $p$ )(1) Criterion Number 16. Federal lands in tiverine, coestel and apeciel Hoodplains ( 100 -y ear recurrence incerval) on which the surface menegement agency determines thet maning could not be undertaken without
substanisal threat of loses of llfe or property sball be considered unsulteble for eli or certain atipulated methode of coal mining.

121 Examptions. This critarion does not apply to lands: tc which the operetor made substantial legal and financial commitmerits pror to Jenuary 4. 1977: on which surieca cosl munizg operetiona were being conducted on August 3. 1877; or which include oparatione on which permit has been issued.
(q)(1) Criarion Number 17. Federal lands which have been commilted by the surface management agency to use as municipal watersheds ahall be considered unsuitabia.
(2) Enception. A lesse may be lasued where the aurface management atency in consultation with the mualcipallty (Incorporated entity) or the responalble governmental unit determines, ea governmentel uart determines, ase
result of studiea, that all or certain etipulated methods of cool mining will not edvereeiy affect the watershed to eny shgufficant decree.
(3) Examptions. This critarion does not epply to lands: to which the operator made subsiantial legal and Inancial commitments prior to jenuary 4. 1977; on which surface coal mining operations were being conducted on Ausuat 3, 1077; or which include operations on which a permit has been lasued.
(r)(1) Critarion Number 10. Faderal lands with Netional Resource Waters. as identified by states ta their water quality management plana, and a buffer sone of Federal lands to mile from the outer edge of the far beake of the water. shall be unsuitable.
(2) Exception. Tha buffer zone may be eliminated or reduced in sive whers the surface management agency detarmines that lt lo not neceseary to protect the National Resource Waters.
(3) Exemptions. This criterion does not apply to lands: 10 which the operator made subutantial legal and financial commiumente pros to lenuary 4. 1977; on which surfece coal mining operetions were being conductad on August 3. 1877: or which include operations on which a percuit has been issued.
(s)(1) Criterion Number 12 Federal lande ideotified by the surfaca manapament agancy. in consultation with the slase in which they are located. as alluvial velley hoori according to the definution in $\$ 34000-5$ (a) of this tille. the standards in 30 CFR Part 822 . the final slluvial valley foor guidalisen of the Office of Surface Minins Reclamation and Enforcement when published, and approved state programs under tha Surface Mining Control and Reclamation Act of 1977, whare mining wouid intartupt discontinue. or preclude farming, shell be considered unsuitable. Addicionally, whan mining Fedaral land outsida an alluvial vailey hoor would matenally damage the quantity or quality of weter in surfece or underground water ayetams thet would
supply alluvial vallay foors. the land shali be considered unsuitabla.
(2) Exemptions. Thil criterion does not apply to surface coal muning operstions which produced cosel to commercia! quantities in the yaer preceding August 3.1977. or which hed obtainad a permit to conduct surface coal mining operations.
(1)(1) Criterion Number 20. Faderal lsnds in astate to which is applicable a artenon [i] proposed by that stata, and (ii) adopted by rulemaking by the Secretary, shall be considered unsuitable.
(2) Exceptions. A leasa may be issued when:
(i) Such criterion is adoptad by tha Secretary less then 0 monthe prior in the publication of the draft comprehensive land use plan or iend use anelysis, plan or supplement to a comprehensive land use plan, for the area th which such land la included. or
(ii) After consultation with the stata. the surface management agency determines that all or certain atipulated mathode of coal mining will not adversely affect the value which the criterion would protect
(3) Exemptions. This criterion does not apply to lsnds: to which the operator made substantial legal and financial commiments pror to January 4. 1877; on which surface coal mining operations were baing conducted on August 3.1977 : or which include operations on which e permit has been lasued

[^5](4)(i) While preparing a
comprehensive land use plan or land use analysis, the Bureau of Land Management shall consult with all surface owners who meet the criteria in paragraphs (gg)(1) and (2) of § 3400.0-5 of this title, and whose lands overlie coal deposits, to determine preference for or against mining by other than underground mining techniques.
(ii) For the purposes of this paragraph, any surface owner who has previously granted written consent to any party to mine by other than underground mining techniques shall be deemed to have expressed a preference in favor of mining. Where a significant number of surface owners in an area have
expressed a preference against mining those deposits by other than underground mining techniques, that area shall be considered acceptable for further consideration only for development by underground mining techniques. In addition, the area may be considered acceptable for further consideration for leasing for development by other than underground techniques if there are no acceptable alternative areas available to meet the regional leasing levels.
(iii) An area eliminated from further consideration by this subsection may be considered acceptable for further consideration for leasing for mining by other than underground mining techniques if:
(A) The number of surface owners who have expressed their preference against mining by other than underground techniques is reduced below a significant number because such surface owners have given written consent for such mining or have transferred ownership to unqualified surface owners; and
(B) The land use plan is amended accordingly.

Subpart 3427-Split Estate Leasing
§ 3427.0-1 Purpose.
The purpose of this subpart is to set out the protection that shall be afforded qualified surface owners of split estate lands ( 43 CFR 3400.0-5) and the requirements for submission of evidence of written surface owner consent from qualified surface owners of split estate lands.

## 83427.0-3 Authorty.

(a) These regulations are issued under the authority of the sta?utes cited in \& 3400.0-3 of this title.
(b) These regulations primarily implement section 714 of the Surface Mining Con:rol and Reclamation Act of 1977 (30 U.S.C. 1304), as construed in Sulicitor's Opinion M-36909, 86 I.D. 28 (1979)

## 8327.0-7 Scope.

The surface owner consent prowisions of the Surface Mining Controi and Reclamation Aci do not apply:
(a) to preference right lease applications: and
(b) if the split estate coal is to be mined by underground mining echniques. (43 CFR 3500.0-5.)
§ 3427.1 Deposits subject to consent. - On split estate lands (43 CFR 3400.0$5(\mathrm{kk})$ ) where the surface is owned by a pualified surface owner, coal deposits That will be mined by other than underground mining techniques shall not be included in a lease sale without evidence of written consent from the qualified surface owner (43 CFR 3400.0$5(\mathrm{gg})$ ) allowing entry and commencement of surface mining operations.
§ 3427.2 Procedures.
(a)(1) Each written consent or evidence of written consent shall be filed with the appropriate Bureau of Land Management State Office ( 43 CFR Subpart 1821). For lands offered for lease sale pursuant to subpart 3420 of this title, consents or written evidence thereof shall be filed on or before a date prior to the lease sale specified in a notice published in the Federal Register. For lands offered for lease sale pursuant to subpart 3425 of this title, consents or written evidence thereof shall be filed prior to the posting of the lease sale notice.
(2) Statement of refusal to consent shall be filed with the appropriate Bureau of Land Management State Office, but such slatement shall be a ccepted for filing only during activity planning.
(b) Written consent, evidence of written consent, or statement of refusal to consent may be filed by any private person or persons with a polential interest in the lease sale of split estate lands.
(c) Such filing shall, at a minimum, contain the present legal address of the qualified surface owner, and the name, ownership, interest, if any, and legal address of the party making the filing. and if it is a writien consent or evidence thereof, a copy of the written consent or evidence thereof.
(d) The authorized officer shall verify that the written consent or evidence of such consent meets all of the following requirements, and that the statement of refusal to consent meets the requirements of paragraphs (d)(2) and (3) of this section:
(1) The right to enter and commence mining is transferable to whoever makes the successful bid in a lease sale for a tract which includes the lands to which the consent applies. A written consent shall be considered transferable only if it provides that after the lease sale for the tract to which the consent applies:
(i) The successful bidder shall assume all rights and obligations of the holder of the consent, including the obligation to make all payments to the grantor of the consent and to reimburse the holder of the consent for all money previously paid to the grantor under the consent contract: and
(ii) Neither the holder nor the grantor of the consent has any right under the consent contract to prevent the successful bidder from assuming the rights and obligations of the holder of the consent by imposing additional costs or conditions or otherwise;
(2) The named surface owner is a qualified surface owner as defined in § $3400.0-5(\mathrm{gg})$ of this title; and
(3) The title for all split estate lands described in the filing is held by the named qualified surface owners.
(e) Upon receipt of a filing from anyone other than the named qualified surface owner, the authorized officer shall contact the named qualified surface owner and request his confirmation in writing that the filed, written consent or evidence thereof to enter and commence mining has been granted, and that the filing fully discloses all of the terms of the vritten consent, or that the refusal to consent is accurate.
( 1 ) The applicable conditions of naragraphs (d) and (e) of this section shall be met prior to the lease sale for lands to which the consents apply
(g) The authorized officer shall in all sases notify the person or persons filing the written consent, evidence of written consent, or statement of refusal to consent of the results of the review of the filing, including any request for additional information needed to satisfy the requirements of this subpart in cases where insufficient information was supplied with the original filing.
(h) The purchase price of any applicable written consent from a qualified surface owner submitted and verified prior to posting of the notice of lease sale shall be included with the description of the tract(s) in the notice of lease sale, and the other terms of the consent shall be included in the detailed
statement of the sale for the tract(s).
Any consent filed after posting of the notice of lease sale shall be placed in the official file for the lease tract(s) to which the consent applies and shall be available for inspection by the public in the appropriate Bureau of Land Management State office (43 CFR Subpart 1821).
(i) Any statement of refusal to consent shall be treated as controlling until the activity planning cycle that includes the area covered by the refusal to consent is repeated or the surface estate is sold. When an activity planning cycle is initiated, the qualified surface owner shall be notified that his her prior statement of refusal has expired and shall be given the opportunity io submit another statement.
(j) If the surface owner fails to provide evidence of qualifications in response to surface owner consultation or to a written request for such evidence and if the authorized officer is unable to independently determine whether or not the surface owner is qualified, the authorized officer shall presume that the surface owner is unqualified. The authorized officer shall notify the surface owner in writing of this determination and shall provide the surface owner an opportunity to appeal the determination.

## APPENDIX 8

## SITE SPECIFIC TRACT SUMMARIES

The coal tonnage figures in these site specific summaries may not correspond with the current tonnage figure. The tonnage figures in this Final Plan Amendment/Environmental Assessment are correct, because additional drilling has occurred on the Lee Ranch Tracts and the tonnage figures were refined accordingly.

The cultural resource sections of the site specific tracts summaries are not current because additional cultural resource inventories were completed after Final San Juan River Coal EIS was published. The updated cultural resource sections are presented below and completely supersede the cultural resource section in the tract summaries.

## LEE RANCH EAST TRACT

Ten cultural resource sites have been recorded during a ten percent sample survey of the tract.

## LEE RANCH MIDDLE TRACT

Approximately 74 percent of the surface overlying Federal coal has been inventoried for cultural resources. Twenty-seven sites were recorded during the inventories. Ninety-seven percent of the coal lands that would be exchanged to Cerrillos have been inventoried.

LEE RANCH WEST TRACT
Approximately 47 percent of the surface overlying Federal coal has been inventoried for cultural resources. Forty-two sites were recorded during the inventories. It was also determined that no Chacoan road segments exist on this tract.

LEE RANCH EAST TRACT
MIXED OWNERSHIP - SURFACE MINE
The Lee Ranch Fast Tract, approximately 1,817 acres in size, is located 30 miles nor theast of Grants, New Mexico. The total 1,817 acres of land surface are private. The acreages for the coal reserves are 969 acres unleased Federal, and 848 acres for private.

The tract contains mineable reserves of unleased Federal at 16.0 million tons with the tract total of 38.0 million tons. The recoverable reserves tonnage of unleased Federal is 14.0 million tons with the tract total of 33.0 million tons. The expected production rate would be 800,000 tons per year for a projected mine life of 40 years. Total expected revenue from federal coal within the tract is $\$ 272$ million with an expected federal royalty value of $\$ 34$ miliion for the life of the mine. Approximately 24 surface acres would be disturbed annually. Surface disturbance over the life of the mine would total 969 acres.

Approximately 60 employees would be needed to mine the reserves. The mining activities would require approximately 38 acre feet/year of water from deep wells for reclamation and dust control.

Surface disturbance on this tract would increase erosion, soil contamination, changing soil characteristics and possible loss or destruction of suitable soils which may occur during overburden removal, stockpiling, and reclamation.

Ground water impacts include the following:
a. Destruction of stratified nature of Menefee formation (Cleary Coal Member) and all confining layers above the Point Lookout Sandstone. These would be replaced with crumbled shale and sandstone rubble having a greater porosity than the original stratified material. This may result in upward leakage of water from the underlying Point Lookout Sandstone, which may contain water of a much greater salinity than the water in the Menefee formation at some locations.
b. The coal deposits of this area are also the major aquifers tapped by wells in the area. Offsite reduction of spring and well yields, lowering of water levels, and changes in water quality in wells tapping the Menefee formation and Point Lookout Sandstone would result.
c. One flowing well and two springs exist within the tract. If these are located in areas to be mined they would be destroyed.

The paleontological resource shows no survey data for this tract. However, l,019 total acres would be disturbed.

Impacts to the range resources would involve the temporary loss of 255 AUM's of native forage over the life of the mine.

As for any recreational impacts, surface mining activities on Lee Ranch East could disrupt the Continental Divide National Scenic Trail location.

No cultural resources are known to have been recorded. However, fourteen sections have been inventoried for cultural resources within or adjacent to the Lee Ranch tracts. If similar site densities occur in the parcels of this tract it is predicted there may be between 10 and 35 sites.

LEE RANCH MIDDLE TRACT<br>MIXED OWNERSHIP - SURFACE MINE

The Lee Ranch Middle Tract, approximately 14,384 acres in size, is located 25 miles Nor thwest of Grants, New Mexico. Of the total 14, 384 acres for land surface 1,120 acres are State and 13,264 acres are private. The acreages for the coal reserves are 4,744 acres unleased Federal, 1,120 acres for State and 8,520 acres for private.

The tract contains mineable reserves of unleased Federal at 86.0 million tons with the tract total of 240.0 million tons. The recoverable reserves tonnage of unleased Federal is 73.0 million tons with the tract total of 204.0 million tons. The expected production rate would be 5.1 million tons per year for a projected mine life of 40 years. Total expected revenue from federal coal within the tract is $\$ 1,469 \mathrm{million}$ with an expected federal royalty value of $\$ 182.5$ million for the life of the mine. Approximately 148 surface acres would be disturbed annually. Surface disturbance over the life of the mine would total 5,904 acres.

Approximately 382 employees would be needed to mine the reserves. The mining activities would require approximately 1,000 acre feet/year of water from deep wells for reclamation and dust control.

Surface disturbance on this tract would increase erosion, soil contamination, changing soil characteristics and possible loss or destruction of suitable soils which may occur during overburden removal, stockpiling, and reclamation.

The air quality impacts show the estimated maximum off-site total suspended particulates (TSP) would be 29 micrograns per cubic meter ( $\mathrm{ug} / \mathrm{m} 3$ ). Background air quality $\frac{1 n}{3}$ the area is estimated at $\left(30 \mathrm{ug} / \mathrm{m}^{3}\right)$. This would give a total of $59 \mathrm{ug} / \mathrm{m}^{3}$ compared to the annual New Mexico standard of 60 $\mathrm{ug} / \mathrm{m}^{3}$. The Lee Ranch Mine currently has a PSD exemption fram the Enviromental Protection Agency because of emission control measures that will be completed.

Ground water impacts include the following:
a. Destruction of stratified nature of Menefee formation (Cleary Coal Member) and all confining layers above the Point Lookout Sandstone. These would be replaced with crumbled shale and sandstone rubble having a greater porosity than the original stratified material. This may result in upward leakage of water from the underlying Point Lookout Sandstone, which may contain water of a much greater salinity than the water in the Menefee formation at some location.
b. The coal deposits of this area are also the major aquifers tapped by stock wells in the area. Offsite reduction of well yields, lowering of water levels, and changes in water quality in wells tapping the Menefee formation and Point Lookout Sandstone would result.
c. Offsite reduction of spring yields and water quality would occur.
d. 5 wells ( 4 flow ) and approximately 10 springs exist within the tract. If these are located in areas to be mined they would be destroyed.

The paleontological resource impacts show that there are two recorded fossil sites known in the study area. One of these sites is considered to be significant. It is located in the NW1/4SE1/4NE1/4 of Section 35:
T. 15 N., R. 8 W. This site contains a diverse and well preserved assemblage of plant fossils of the Menefee formation. There is approximately 6,104 total acres that would be disturbed.

Impacts to the range resources would involve the temporary loss of 1,606 AUM's of native forage over the life of the mine.

The cultural resource impacts indicate six sites that have been recorded within the tract parcels containing Federal coal. Fourteen sections have been inventoried for cultural resources within or adjacent to the Lee Ranch tracts. If similar densities occur in the parcels containing Federal coal of this tract it is predicted there may be between 32 and 43 sites.

As for any recreational impacts, surface mining activities on Lee Ranch Middle could disrupt the Continental Divide National Scenic Trail location.

## LEE RANCH WEST TRACT MLXED OWNERSHIP - SURFACE MINE

The Lee Ranch West Tract, approximately 13,051 acres in size, is located 30 miles Northwest of Grants, New Mexico. Of the total 13,051 acres for land surface 160 acres are unleased Federal, 1,120 acres are State and 11,771 acres are private. The acreages for the coal reserves are 5,770 acres unleased Federal, 1,120 acres for State and 6,161 acres for private.

The tract contains mineable reserves of unleased Federal at 101.0 million tons with the tract total of 238.0 million tons. The recoverable
reserves tonnage of unleased Federal is 86.0 million tons with the tract total of 202.0 million tons. The expected production rate would be 5.0 million tons per year for a projected mine life of 25 years. Total expected revenue from federal coal within the tract is $\$ 1,717$ million with an expected federal royalty value of $\$ 214.625$ million for the life of the mine. Approximately 188 surface acres would be disturbed annually. Surface disturbance over the life of the mine would total 7,539 acres.

Approximately 375 employees would be needed to mine the reserves. The mining activities would require approximately l,000 acre feet/year of water from deep wells for reclamation and dust control.

Surface disturbance on this tract would increase erosion, soil contamination, changing soil characteristics and possible loss or destruction of suitable soils which may occur during overburden removal, stockpiling, and reclamation.

The air quality impacts show the estimated maximum off-site total suspended particulates (TSP) would be 29 micrograms per cubic meter ( $\mathrm{ug} / \mathrm{m} 3$ ). Background air quality in the area is estimated at ( $30 \mathrm{ug} / \mathrm{m} 3$ ). This would give a total of $59 \mathrm{ug} / \mathrm{m} 3$ compared to the anmal New Mexico standard of 60 $\mathrm{ug} / \mathrm{m}^{3}$. The air quality could exceed the annual New Mexico standard if operational procedures are not instituted.

The ground water impacts include the following:
a. Destruction of stratified nature of Menefee formation (Cleary Coal Member) and all confining layers above the Point Lookout Sandstone. These would be replaced with crumbled shale and sandstone rubble having a greater porosity than the original stratified material. This may result in upward leakage of water from the underlying Point Lookout Sandstone, which may contain water of a much greater salinity than the water in the Menefee formation at some locations.
b. The coal deposits of this area are also the major aquifers tapped by stock wells in the area. Offsite reduction of well yields, lowering of water levels, and changes in water quality in wells tapping the Menefee formation and Point Lookout Sandstone would result.
c. Offsite reduction of spring yields and water quality would occur.
d. Three wells exist within the tract; one of these is a flowing well. If these are located in areas to be mined they would be destroyed.

The paleontological resource 1mpacts show that there are two recorded fossil sites known in the study area. One of these sites is considered to be significant. It is located in the NW1/4SEl/4NE1/4 of Section 35:
T. 15 N., R. 8 W . This site contains a diverse and well preserved assemblage of plant fossils of the Menefee formation. There are approximately 7,739 total acres that would be disturbed.

Impacts to the range resources would involve the loss of 1935 AUM's of native forage over the life of the mine.

## APPENDIX 8 (Cont'd)

The cultural resource impacts indicate twenty seven sites have been recorded within the tract parcels containing Federal coal. Also recorded are several segements of the Chacoan Roadway system. Fourteen sections have been inventoried for cultural resources within or adjacent to the Lee Ranch tracts. If similar site densities occur in the parcels containing Federal coal of this tract it is predicted there may be between 70 and 100 sites.

As for any recreational impacts, surface mining on lee Ranch West could disrupt the Continental Divide National Scenic Trail location.

METHODOLOGY FOR CALCULATING CERRILLOS LAND COMPANY AND BLM COAL VALUES
I. Geologic Summary

For purposes of geologic evaluation, the coal lands in the Lee Ranch area were divided into three tracts. The Lee Ranch East, Middle, and West Coal Exchange tracts are located in Townships 15 and 16 North, Ranges 6,7, and 8 West, New Mexico Principle Meridian, McKinley County, New Mexico. The tracts lie some 27 miles northeast of Grants, New Mexico, along the southern rim of the San Juan Basin. Surface recoverable coal underlying the tracts is within the lower part of the Upper Cretaceous Menefee Formation.

The complete geologic reports on these tracts contain the strippable coal reserve base tonnage calculated by BLM staff geologists from drill hole data provided by Cerrillos Land Company. Drilling on Federal lands to be traded to Cerrillos, averaging four drill holes per section, was done under a cooperative agreement between Cerillos Land Company, BLM and Minerals Management Service (MMS). Cerrillos paid for the drilling and provided other support, i.e. surveying, under the general direction of BLM and MMS.

The minable boundaries of the Lee Ranch tracts are roughly defined by the 20 foot overburden contour line on the stratigraphically lowest minable coal seam (near the outcrop), and the 15 to 1 stripping ratio contour line (defined as: 15 feet of overburden plus interburden for every one foot of strippable coal along the contour) where the coal thins or becomes too deep to economically mine. The actual tract boundaries are drawn along aliquot portions of sections no smaller than 40 acres or a lot. Lots and 40 -acre aliquot portions of sections which are partitioned by the 20 foot overburden line or the 15 to 1 stripping ratio contour line are included in the tracts.

Three categories of in-place coal have been calculated for the tracts: strippable reserve-base, strippable resources, and underground reserve base. Strippable reserve base coal tonnage is only calculated for areas between the 20 foot overburden line and the 15 to 1 stripping ratio contour line. Table 9-1 presents the strippable reserve base and recoverable coal reserves used in the evaluation. An area must be underlain by at least one correlatable qualifying coal seam (greater than or equal to 2.3 feet thick) in order to have a strippable reserve base calculated for the area. Provided there is a qualifying coal seam underlying an area, thinner correlatable coal seams (1.5 to 2.3 feet thick) may also contribute to the strippable reserve base figures. All such thinner correlatable coal seams lying above a qualifying seam will contribute to the strippable reserve base. Those thinner correlatable coal seams lying below the lowest qualifying coal seam will only contribute to the reserve base if the interburden between the qualifying coal seam and the underlying thinner seam is less than or equal to five times the thickness of the thinner coal seam.

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## APPENDIX 9 (Con't)

Coal tonnages have been calculated on a seam by seam and section by section basis in these tracts. Isopach maps have been constructed for each coal seam. Areas between isopachs have been planimetered for all exchange lands, and for non-exchange lands in the Lee Ranch East and West tracts. Within the Lee Ranch Middle tract for non-exchange lands, average thicknesses for each seam have been determined on a partial section basis (one thickness value for that portion of the section with a stripping ratio less than 15 to 1 , and one thickness value for that portion of the section with a stripping ratio of more than 15 to 1). These portions of the non-exchange sections divided by the 15 to 1 stripping ratio have then been planimetered in the Lee Ranch Middle tract. Planimetered acreages have then been multiplied by the appropriate thickness value and by a conversion factor ( 1,850 tons/acre-foot) to obtain tons of coal in place. The base map used for all determinations in the Lee Ranch tracts is a composite of USGS 7 1/2-minute quadrangle maps.

High sulfur content in certain areas of the Lee Ranch West tract forced a re-evaluation of that tract. The revised geologic report resulted in the dropping of the Red seam in two Cerrillos sections. Approximately 6.6 million tons of greater than 1 percent sulfur were not included in the reserve base. This coal, however, is transferred to the United States as part of the exchange. The remaining qualifying coal seams in these two sections were re-evaluated using the above criteria.

## II. Economic Evaluation

## A. Approach to Value

There are three major methods used to determine the value of real estate. These are the cost approach, the market data approach and the income approach.

The cost approach involves estimating the replacement or reproduction cost of the property. This method is not generally considered to be valid for the valuation of mineral resources and was not used for this study.

The market data approach involves the comparison of the appraised property with recent sales of similar properties. This is generally considered the most direct and accurate method of estimating value. However, due to the scarcity of Federal coal lease sales in the region for over 10 years, comparable sales data is lacking. Sales of state and private coal leases do exist, but in most of these cases reserves have not been delineated with the same degree of accuracy as Federal coal holdings, which makes valid comparisons difficult. A limited number of assignments of Federal coal leases are on record, but these transactions are not comparable within the meaning of the Uniform Appraisal Standards since they do not represent exchanges of the fee interest. Another problem encountered when considering the market data approach is the checkerboard nature of the offered and selected lands. The UAS requires that previously leased properties used as comparables be physically and economically similar. Sales of other checkerboard lands (i.e., similar) are sparse. It was determined that because of the inter-mingling of

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the tracts, and the scarcity of comparable sales data, that adjustments could not be made with a sufficient degree of accuracy to truly reflect the difference of value between the parcels.

The income approach is based on an estimate of a property's productivity under typical management, a conversion of the yields into gross and net income, and capitalization of this net income at the current market rate of interest. This method was chosen for this valuation because sufficient data is available to make a reasonable estimate of earnings, including cost and operating data from the Lee Ranch mine which is currently being developed on a portion of the subject lands. This approach is also a credible technique for providing an economic measure of what each party to the exchange is bringing to the negotiating table.

## B. Valuation Procedure and Assumptions

The scenario used to model the income streams for the subject lands involves Cerrillos continuing to mine according to their current plan, and the Federal lands coming into production at some time in the future when increased demand warrants the opening of a new mine. The present value of the bonus and royalty for each property developed as a logical mining unit was determined. The share of the present value attributable to the exchanged coal was then factored out using ratio of the exchanged tonnage to the total tonnage of coal in the mining unit. The steps used in performing the analysis are detailed in the following sections.

1. Future Production

Estimates of future production are needed to determine the year in which the Federal coal could go into production, and the annual production levels in the following years. In 1983 New Mexico's 19.8 million tons of San Juan Basin coal production (New Mexico Energy and Minerals Department 1984) represented about 64 percent of the 31.1 million tons total production for the Four Corners supply region (DRI, 1985). It is assumed that New Mexico coal mines will continue to maintain this share of the market served by the supply region. Data Resources, Inc. has forecast production from the Four Corners supply region as follows:

| Year | (millions of tons) |
| :---: | :---: |
|  |  |
| 1985 | 33.7 |
| 1990 | 35.9 |
| 1995 | 37.9 |
| 2000 | 44.3 |
|  | (Source: DRI, 1984, Table II-15) |

In DRI's forecast the amounts by which future New Mexico San Juan Basin coal output would exceed 1985 production are:


Spare capacity at the Lee Ranch mine that currently operates in the exchange area could cover the increase output "demanded" from New Mexico's San Juan Basin through 1995. Beginning in 1995 the forecasts indicate that production requirements are sufficient for an additional mine producing approximately 2 million tons per year, increasing to 5 million tons before 2000.

We have assumed that a lessee of the Federal coal in the Lee Ranch area would capture all, or a significant share, of this production. This assumption is reasonable in light of the fact that these parcels are among the most attractive that the Federal government has to offer in the San Juan Basin in terms of reserves, few environmental problems, access to existing rail lines and surface owner consent. Based on the above findings and assumptions, we have modeled the mine on the Federal lands to begin production in 1995 at a rate of 2 million tons per year, increasing by 1 million tons per year through 1988 when a maximum production rate of 5 million tons per year is achieved. The maximum production rate is based on studies which indicate that there would be little, if any, economies of scale above 5 million tons per year under conditions typical of the San Juan Basin (New Mexico Energy Research and Development Institute, 1983). Production is assumed to continue at this rate until 2022, when the deposit is exhausted.

## 2. Coal Prices

Estimates of current and future coal prices are needed to calculate future cash flows for the subject properties. The current coal price, used in the analysis of the Cerrillos property, was set at $\$ 25.00$ per ton. This price was based on the prevailing western spot coal price for 1984 (Coal Week, McGraw-Hill) and a cost study of individual mines in the San Juan and Raton Basins conducted by Boulder Exploration Group (New Mexico Energy Research and Development Institute, 1983).

It is assumed that coal produced from the Federal properties will command a price close to that received for the Cerrillos coal due to the similar coal quality and production and transportation costs for the two properties. An adjustment has been made for the Federal coal price to account for the later start up date of the Federal property. The adjustment reflects the real price increase due to resource depletion and productivity changes over time. Studies conducted by Data Resources, Inc., indicate a 17.25 percent price increase from 1985 to 1995 for Four Corners Region coal. Applying this factor to the $\$ 25.00$ per ton 1985 price yields a price of $\$ 29.31$ per ton in 1995 which is used in the cash flow model for the Federal property.

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3. Capital Costs, Operating Costs and Mining Sequence

The Electric Power Research Institute (EPRI) surface mine model was used to generate capital cost schedules required to bring the Cerrillos and Federal properties to their full production levels. More information and copies of the user guides for the EPRI model may be obtained from 3412 Hillview Avenue, Palo Alto, CA 94304. The costs generated by the model were compared to Cerrillos' actual capital expenditures to verify accuracy of the calculations. The model was then used to calculate the operating costs associated with each section of coal in the exchange area. The mining of the sections in each property was scheduled so that mining would proceed from the lowest cost to the highest cost sections. In a few instances, a schedule based on costs alone resulted in inefficient sequencing of sections, and professional judgment was used to develop a more reasonable schedule. A Lotus 123 program was written to assist in the scheduling of the sections, and to calculate the annual operating costs for the properties. This was necessary because in some years more than one section of coal is mined. More detailed descriptions of the computer models are given in the following two sections.

## C. EPRI Model - Modification

The EPRI coal mining cost models represent a computerized process engineering approach to the analysis of production costs and mining requirements of either surface or underground mining projects. The models estimate all capital and operating costs typically associated with the preproduction and production phases of a coal mining project, and may be applied either to existing mines or to proposed mine openings.

The Coal Mining Cost Model (MOD-3) is the latest version released in 1984. John Broderick, of the Washington Office, obtained an advanced copy of the fortran source code of this model and modified it to execute on a MS/PC DOS computer. IBM PC and PC-XT computers were used to run the EPRI Model to evaluate the exchange properties, the existing checkerboard coal configuration and the proposed block tracts of coal after exchange.

The discounted cash flow analysis component of the model solves for the coal value/ton (i.e., production cost/ton F.O.B. mine) or conversely predicts the rate of return on equity when sales revenue/ton is known. Two major financial options allow for the solution of costs in terms of constant or escalating dollars, and in terms of point value or uncertainty estimates. The uncertainty analysis procedure uses a Monte Carlo simulation technique for estimating cost results in terms of frequency distributions. Only the point value estimate was used for the exchange evaluation.

The model has been designed for use by a variety of technical disciplines ranging from resource planners to mining practitioners. The input parameters have, therefore, been structured to reflect varying degrees of familiarity with mining and cost analysis procedures.

Three levels of input parameters are used in the cost models, required, default, and override categories. The required category identifies the minimum information required to initiate a model run. This category includes
basic parameter information describing the physical, operating, and financial aspects of the project. The default category includes more detail or technical parameters which are assigned default values by the model. The override category lists those costs and other values calculated by the model, which may also be input by a model user when detail project information is available

MOD-3 allows for great flexibility in simulating the effects of mining techniques and financial condition. The version incorporates the substantial 1981 tax law changes and updates the data base to mid-1981 values. Input parameter adjust the data base to 1984/85 values.

The Southwest Regional Evaluation Team (SRET) modified the EPRI model default values for several constants. Labor costs for the open pit (truck/shovel) mining operation, supply costs, capital costs, and overburden and coal densities (Appendix 4) were changed to more closely approximate true costs and densities associated with coal development in the San Juan Basin and, specifically, SF Coal Corporation's Lee Ranch mine.
D. Discounted Cash Flow (DCF) Model

Mining cost, capital expenditure, depreciation, amortization and loan interest and principal payment estimates generated in the EPRI surface mining model come together in EPRI's Cash Flow Summary (Table VIII). The Cash Flow Table creates an easy-to-follow spreadsheet to calculate after tax annual net cash flows given a particular selling price of coal and the EPRI financial estimates.

Small adjustments in the price of coal or other economic factors are not easily changed in the EPRI model. In order to allow easy data calculations, an IBM PC-XT generated spreadsheet was developed in-house using Lotus 123 TM , a computer software package by Lotus Development Corporation. This Lotus spreadsheet provided the authors of this report the opportunity to examine in detail the calculations used by EPRI's cost modelling and how EPRI then calculates its Cash Flow Summary. During our evaluation several inconsistancies in the Cash Flow Table calculations became apparent. Cash Flow Table as written in the EPRI (MOD-3) program does not calculate loan interest and principal payments correctly. EPRI contains serious errors in the methods used to calculate Tax Loss Carried Forward and Addback of Noncash Costs.

For its loan interest and principal payments, EPRI sums all the capital expenditures (EPRI lines 125 to 132) for each year. During the four preproduction years, each year's total annual capital expenditure (line 133) is funded 50 percent from equity and 50 percent from loans (line 135). EPRI MOD- carries forward the first preproduction year's amount funded from loans (line 135) plus the interest on that amount for a period of 5 years. Likewise, the second preproduction year's principal and an interest amount calculated for a 4 year period is brought forward. The third preproduction year's principal and interest is carried forward the same way. For the fourth and last preproduction year, EPRI carried forward only the principal without any compensation for interest.

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To develop the property and construct necessary facilities, loan funds for each preproduction year must be borrowed at the beginning of the year. By the end of each year, the principal and a year's interest are due. This principal and interest plus the next year's principal must be borrowed at the beginning of the next year. At the end of the 4 year preproduction period, the total sum of principal and interest is due. Using an 8 year loan payback period, this amount is scheduled for payback over a uniform series of end-of-year payments. The in-house spreadsheet calculates the annual payment and the loan interest and principal.

EPRI's calculations of tax loss carried forward (TLCF) represent a running total of all TLCF, not just that portion of the total TLCF which can be used in a given year. The methods used by EPRI to calculate this cause an overage in the amount of TLCF in the addback of the non cash costs (ABNCC).

Our in-house Lotus spreadsheet corrects the EPRI errors. It is based on Franklin J. Stermole, Economic Evaluation and Investment Decision Methods (1974). Stermole devotes his Chapter 8 to income tax, cash flow and discounted cash flow rate of return. The in-house spreadsheet follows Stermole's methods.

The spreadsheet calculates Net Cash Inflow from Operations using the concept "Net Cash Flow $=$ Net Profit + Depreciation + Depletion + Amortization + Deferred Deductions." During the development of the spreadsheet, several methods of calculating cash flow were compared in side-by-side evaluations to ensure that the correct spreadsheet formulas were used.

The spreadsheet offers further advances over EPRI's Cash Flow Table.
Lotus ${ }^{T M}$ allows the direct discounting of the annual net cash flows plus the calculation of internal rate of return for that same series.
VII. Appraisal
A. Equal Value of Exchanged Coal

The values of the tracts to be exchanged are determined through the income approach. The summation of each year's annual cash flow is discounted at 10 percent to the 1984 base year. A tract's value is composed of this discounted cash flow plus the discounted sums of the effective royalties (the Government effectively keeps all its royalties and private owners keep only the after tax share). Appendix 6 contains the EPRI reports and the Lotus spreadsheets used to value the coal.

All the checkerboard Federal lands in the Lee Ranch area meeting the established stripping ratio limits were evaluated using costs generated by the EPRI model and the Lotus 123 model based on EPRI's Cash Flow Table.

The discounted annual cash flows and royalties were then proportioned (proportion of Federal coal to be exchanged over the total qualifying Federal coal in the Lee Ranch area) by tonnage. As 56.64 percent of the total Federal coal is to be exchanged, the value of the Federal coal to be exchanged is:

$$
\begin{aligned}
& \text { discounted } \\
& \text { annual cash flow: } \begin{aligned}
\$ 24,675,000(.5664) & =\$ 13,976,000 \\
\text { discounted royalties: } & \underline{53,365,000}(.5664)=30,226,000 \\
& \$ 78,040,000(.5664)=\$ 44,202,000
\end{aligned}
\end{aligned}
$$

The Cerrillos offered lands were evaluated similarly. EPRI was used as a cost model and the Lotus model provided the discounted after tax sums of annual cash flow and royalties. Royalties paid on State of New Mexico coal leases were subtracted from the total royalty stream. Because royalties paid to a corporation are taxable, Cerrillos' discounted royalties were further reduced by 46 percent to account for Federal income tax and 7.2 percent for State of New Mexico income tax (total of 53.2 percent). This represents a slight over estimation of tax on royalty because State tax offsets Federal tax to a certain extent. The value of the Cerrillos offered lands is $\$ 49,574,000.00$ (calculations presented in Appendix 6).

The value of the Federal coal to be exchanged is less than the offered Cerrillos coal. However, the value of the Cerrillos coal is only 12.2 percent greater than the Federal coal. BLM negotiations with Cerrillos has eliminated the need for any money equalization payment to equalize the values. Cerrillos agreed to exchange as if the two blocks are equal in value.

## B. Value of Federal Coal Before and After Exchange

The total value of all the checkerboard Federal coal is
$\$ 78,040,000.00$. This "before exchange" value was compared to the "after exchange" situation. The "after exchange" discounted annual net cash flow is $\$ 47,301,000.00$. The discounted royalties amount to $\$ 52,894,000.00$. The total "after exchange" value is $\$ 100,195,000.00$, an increase of $\$ 22,155,000.00$ over the before case. The exchange also generates an estimated $\$ 12,005,000.00$ increase in Federal income taxes and an estimated $\$ 115,000.00$ increase in State taxes.

## GLOSSARY

BLM COAL. As defined in this amendment, the subsurface (coal) estate owned by the Federal Government and administered by the Bureau of Land Management.

EXCEPTIONS. Specific conditions that, if met, can reverse the unsuitability determination for an area of land to be surface mined. (Refer to "Unsuitability Criteria" below, and to Appendix 6 for examples.)

EXEMPTIONS. Specific situations that, if existing before the application of the unsuitability criteria to an area of land, can reverse the area's unsuitability determination for surface mining. (Refer to "Unsuitability Criteria" below, to Appendix 6 for examples.)

PLANNING CRITERIA. Standards chosen for use in the land use planning amendment process. These standards guide data collection, the selection of alternatives, impacts analysis, and decisionmaking. They help to ensure that unecessary data collection and analyses are avoided.

SUITABILITY ASSESSMENT. Refers to (1) the surface owner consultation process; (2) the analysis of multiple-use consideration that may result in land being found unacceptable for leasing because of special resource conditions; and (3) the analysis that applies the 20 unsuitability criteria, exemptions, and exceptions. All Federal coal lands considered for leasing must have been found suitable under all three procedures during the land use planning process [43 CFR 3420.1-4(e)].

SURFACE OWNER CONSULTATION. A requirement of the coal unsuitability assessment conducted during land use planning ( 43 CFR 3420.1-4), wherein qualified surface owners whose lands overlie Federal coal deposits may express a preference for or against surface mining on their lands. Lands may be found unsuitable for surface mining if a significant number of surface owners have expressed a preference against it.

TRACT. An area delineated after land use planning has found all Federal coal within its boundaries to be suitable for further leasing consideration. Tracts are used as potential leasing units during environmental impact analysis.

UNSUITABILITY CRITERIA. Twenty specific standards set forth in Federal coal regulations (Title 43, Code of Federal Regulations, Subpart 3461). Certain areas of Federal coal can be rendered unsuitable for all or certain methods of surface coal mining if the mining would destroy or damage resources listed in the criteria. An unsuitability determination under the criteria can be reversed by application of the exceptions and exemptions to the criteria. Refer to Appendix 6 for a listing of these criteria, their exceptions and exemptions.

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