



## U.S. Department of the Interior

Bureau of Land Management  
Kemmerer Field Office, Wyoming

July 2004

## Kemmerer Field Office Planning Area

# Coal Screening Summary Report



*It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.*

# **COAL SCREENING SUMMARY REPORT**

## **Kemmerer Field Office Planning Area**

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## ***EXECUTIVE SUMMARY***

This report reviews six sections of land located within the Bureau of Land Management's (BLM) Kemmerer Field Office Planning Area to determine the suitability of leasing these lands for coal development. The land reviewed is: Section 2, T16N, R118W; Section 24, T17N, R118W; and Sections 18, 20, 30, and 32, T17N, R117W all in Uinta County, Wyoming and hereinafter referred to in this document as the review area. The BLM controls both the surface and coal rights in all of these lands.

All lands in the review area were found acceptable for further consideration for coal leasing provided appropriate conditional requirements and mitigating measures are included in the lease conditions and stipulations. Such conditions or stipulations may relate to biological resource management, oil and gas development, existing utilities, and cultural resources management.



## **1.0 INTRODUCTION**

The Federal Coal Management Program established four major steps to be used in the identification of federal coal areas that are acceptable for further consideration for leasing. The four steps are 1) identification of coal development potential; 2) application of the coal unsuitability criteria; 3) multiple use conflict evaluation; and 4) surface owner consultation. Collectively, these steps are called the Coal Screening Process (43 Code of Federal Regulations [CFR] 3420.1-4) and are applied to the review area.

### **1.1 The Review Area**

This proposed coal leasing area is located in southwestern Wyoming, within the Kemmerer Planning Area, which is shown in Figure 1. The review area for this report consists of the following 6 sections of land in Uinta County, Wyoming (all of the Sixth Principle Meridian [P.M.]):

- Section 2, T16N, R118W
- Section 24, T17N, R118W
- Sections 18, 20, 30, and 32, T17N, R117W

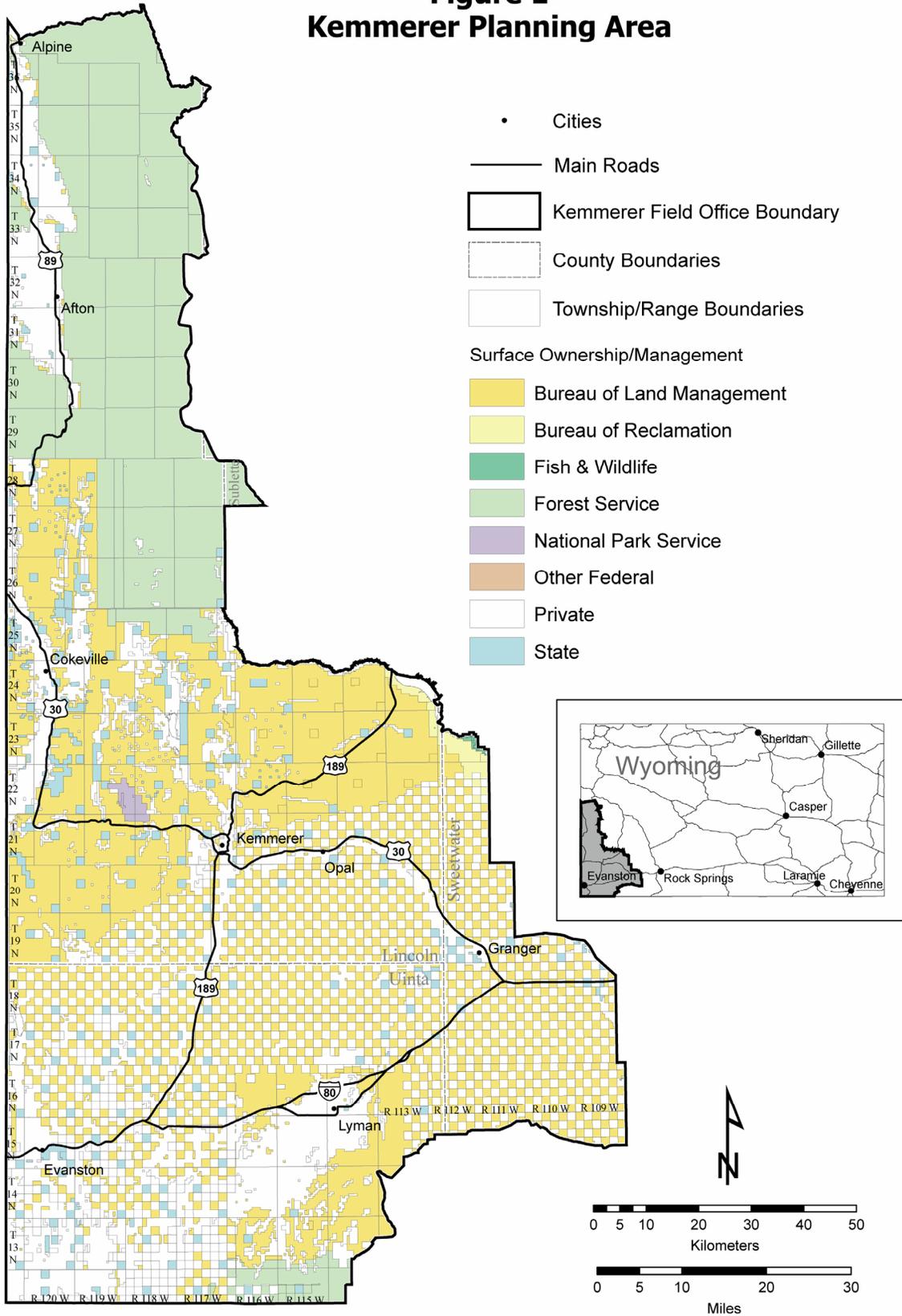
The area reviewed for federal coal leasing is shown on Figure 2, Review Area.

All six of these sections are shown on the Meadow Draw United States Geological Survey (USGS) 1:24000 scale quadrangle. The Meadow Draw quadrangle is located in northwestern Uinta County, Wyoming, approximately 14 air miles northeast of the town of Evanston, and 21 air miles southwest of the town of Kemmerer, Wyoming.

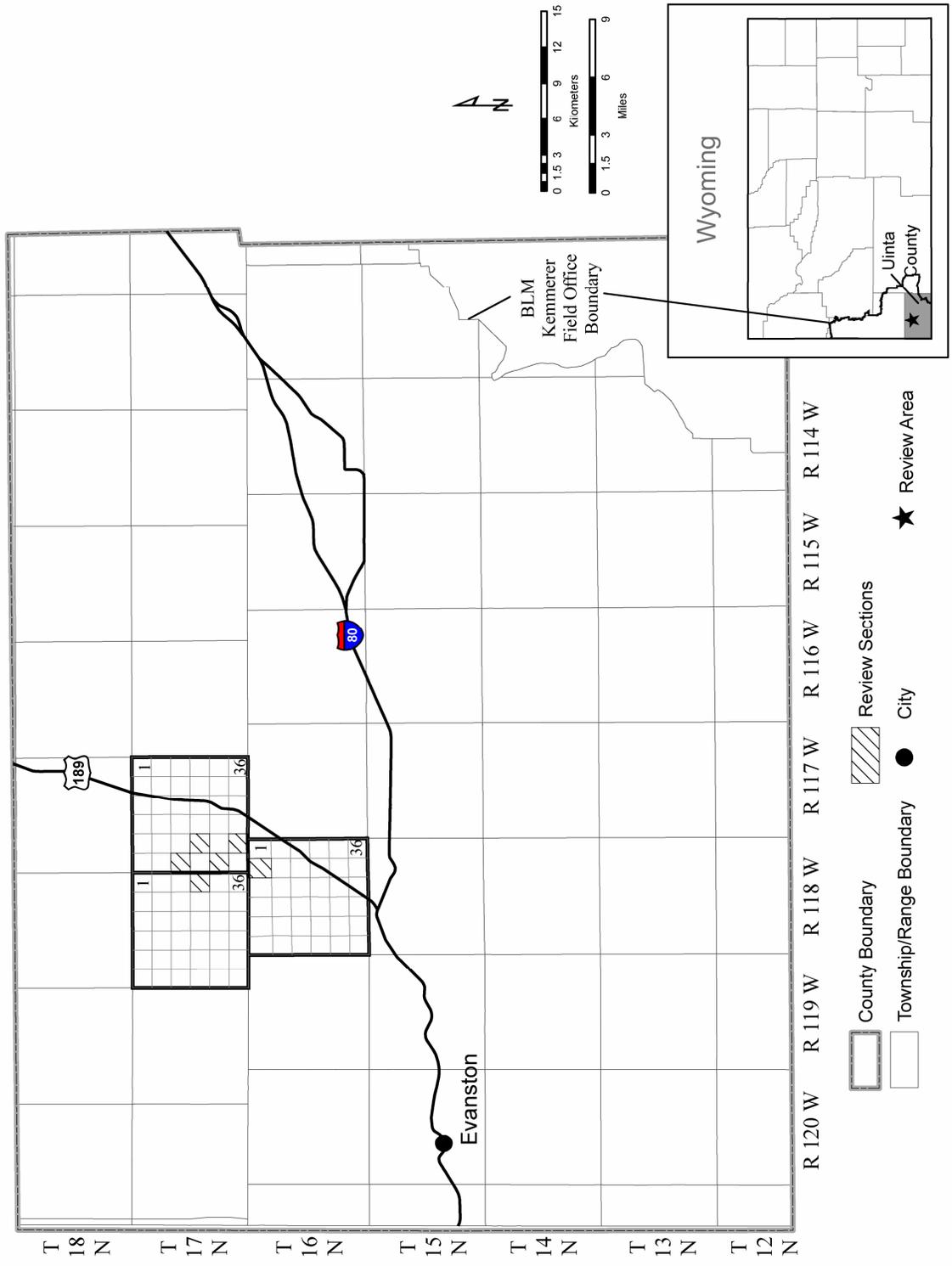
### **1.2 Purpose**

The purpose of this analysis is to apply the regulatory requirements of 43 CFR, subpart 3420 – competitive leasing. This subpart sets forth how the federal government will conduct leasing of federal coal. The objective of this subpart is to provide a leasing system involving land use planning and environmental documentation to provide for the development of federal coal in an orderly and timely manner, consistent with the Federal Coal Management Program, policies, environmental integrity, national energy needs, and related demands.

**Figure 1  
Kemmerer Planning Area**



**Figure 2  
Review Area**



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

### **1.3 Identification of Coal Development Potential**

Areas of known coal development potential include areas containing formations defined as high and moderate potential as identified by USGS Coal Resource Occurrence - Coal Development Potential (CRO-CDP) maps, as well as other areas identified by BLM Solid Minerals Branch as having coal development potential, or where other information suggests the presence of commercially developable coal. The CRO-CDP maps are based on USGS Circular 891, "Coal Resource Classification System of the U.S. Geological Survey" (Wood et al. 1983).

The CRO-CDP maps for the Meadow Draw 7.5 minute quadrangle were completed in 1979. The results of this process are summarized in this section. Detailed information can be found in the Coal Resource Occurrence and Coal Development Potential Maps of the Meadow Draw Quadrangle, Uinta County, Wyoming prepared for the USGS (Dames and Moore 1979).

High development potential coal for surface mining has a stripping ratio of 0 to 10 cubic yards of overburden per ton of coal. Moderate development potential coal for surface mining has a stripping ratio of 10 to 15 cubic yards of overburden per ton of coal. Areas of high and moderate coal development potential for conventional subsurface mining methods are defined as areas underlain by coal beds at depths ranging from 200 to 1,000 feet and 1,000 to 2,000 feet from the surface, respectively, where the coal beds are dipping at less than 15 degrees. Areas of high and moderate coal development potential for in situ development potential are defined as beds at depths ranging from 200 to 1,000 feet and 1,000 to 2,000 feet from the surface, respectively, where the coal beds are dipping at more than 15 degrees. Unknown Coal Development Potential is defined in the CRO-CDP for surface mining as having no known coal beds 5 feet or more in thickness within 200 feet of the surface, but coal bearing units are present in the area. For underground mining "Unknown Coal Development Potential" the area contains no known coal in beds 5 feet or thicker dipping at less than 15 degrees but coal bearing units are present in the area at a depth of less than 3,000 feet (Dames and Moore 1979).

## **2.0 AREAS OF COAL DEVELOPMENT POTENTIAL**

The review area is located within the Hams Fork coal region of western Wyoming. The USGS has divided this region into four coal fields: the Evanston, Greys River, Kemmerer, and McDougal. The review area lies in the Kemmerer field. This region is characterized by folded Paleozoic and Mesozoic rocks that were thrust eastward over folded Cretaceous rocks. The younger Cretaceous and Tertiary rock are resting unconformably on top of the folded and faulted older rocks. The coal seams follow these rocks and outcrop in long narrow belts bounded by thrust faults or by the flanks of eroded folds (Dames and Moore 1979).

Coal bearing formations of the region are the Bear River, Frontier, Evanston, and the Adaville. The coal in the review area is in the Adaville formation (Adaville 1, 1A, 1B, 2A, 2B, 3A, 3AR, 4A, 5, and 6 seams). Although a few of the coal seams in the Adaville can be traced for a considerable distance, most of these coal seams are lenticular and exhibit a splitting and coalescing nature (Dames and Moore 1979).

The CRO-CDP identifies the following areas (Sections 2.1 through 2.4) within the review area as having coal development potential.

### **2.1 For Surface Mining Methods**

- The W  $\frac{1}{2}$ , W  $\frac{1}{2}$ , of Section 20, T17N, R117W.
- The NE  $\frac{1}{4}$ , NE  $\frac{1}{4}$ , and the S  $\frac{1}{2}$ , NE  $\frac{1}{4}$ , Section 18, T17N, R117W.

### **2.2 For Conventional Underground Mining Methods**

- The W  $\frac{1}{2}$ , NW  $\frac{1}{4}$  and the NW  $\frac{1}{4}$ , SW  $\frac{1}{4}$  of Section 20, T17N, R117W.
- Lots 5, 6, 7, and 8 of Section 30, T17N, R117W.

### **2.3 For In Situ Underground Methods**

- The W  $\frac{1}{2}$ , W  $\frac{1}{2}$  of Section 30, T17N, R117W.
- The W  $\frac{1}{2}$ , NW  $\frac{1}{4}$  of Section 20, T17N, R117W.
- The S  $\frac{1}{2}$ , NE  $\frac{1}{4}$  and the NE  $\frac{1}{4}$ , NE  $\frac{1}{4}$ , of Section 18, T17N, R117W.
- The W  $\frac{1}{4}$  of Section 8, T17N, R117W.

The remaining portions of the six sections are areas not covered under the CRO-CDP definitions of coal development potential and include areas which contain no known coal beds. However, all of the Meadow Draw Quadrangle is included within the Kemmerer Known Recoverable Coal Resource Area as shown on the CRO-CDP mapping. The CRO-CDP map information of coal development potential is based on less than fifty Coal Test Holes in Sections 19, 30, and 31, T17 N, R117W. No test holes are shown in Section 2, T16N, R118W, Section 24, T17N, R118W; Sections 18, 20, and 32, T17N, R117W. Of the review area, only Section 30, T17N, R117W contains field test data. A further review of the CRO-CDP mapping shows all of Section 30 to possess substantial coal reserves.

The existence of developable coal reserves in Section 2, T16N, R118W, Section 24, T17N, R118W; Sections 18, 20, and 32, T17N, R117W can not be ruled out based on the information available in the CRO-CDP.

### **2.4 Historical Coal Leases and Mining Plans**

Current and historical coal leases and mining plans are additional evidence on developable coal reserves within the review area.

The SW  $\frac{1}{4}$ , NE  $\frac{1}{4}$ , NE  $\frac{1}{4}$ , the W  $\frac{1}{2}$ , SE  $\frac{1}{4}$ , NE  $\frac{1}{4}$ , the S  $\frac{1}{2}$ , NW  $\frac{1}{4}$ , NE  $\frac{1}{4}$ , the SW  $\frac{1}{4}$ , NE $\frac{1}{4}$ , the E  $\frac{1}{2}$ , SE  $\frac{1}{4}$ , NW  $\frac{1}{4}$ , NE  $\frac{1}{4}$ , NE  $\frac{1}{4}$ , SW  $\frac{1}{4}$ , the S  $\frac{1}{2}$ , NE  $\frac{1}{4}$ , SW  $\frac{1}{4}$ , the W  $\frac{1}{2}$ , SE  $\frac{1}{4}$ , the W  $\frac{1}{2}$ , E  $\frac{1}{2}$ , SE  $\frac{1}{4}$ , and the SE  $\frac{1}{4}$ , SW  $\frac{1}{4}$ , of Section 30, T17N, R117W of the Sixth P.M., are included in the current mining permit application WYW-159423. This application was submitted October 24, 2003

by Kiewit Mining Group, Inc. This 300 acre area is expected to include 16,500,000 tons of recoverable coal. Coal is expected to be mined by open pit methods over a period of 13 years in the lease area. The lease area covers the first 13 years of the expected mine life, a larger area in Section 31 would continue the mine for an additional period of time.

The South Haystack project was a previously proposed large surface mine in the same general area as the review area. A permit to mine, covering the following areas was approved by the Wyoming Department of Environmental Quality (DEQ) – Land Quality Division (Permit No. 570). Federal coal leases were obtained for development of the mine, covering the following areas:

- The N ½ and the SW ¼ of Section 2, T16N, R118W - WYW-060241
- The E ½, E ½, W ½, of Section 30, T17N, R117W – WYW-060241
- The S ½ of Section 18, T17N, R117W – WYW-060241

The South Haystack project was never developed and the Wyoming DEQ permit expired. The coal lease WYW-060241, was relinquished on March 10, 1992. Permit No. 570 is additional evidence that developable coal was thought to exist in those areas.

Based on past and current proposals, as well as the coal potential information presented in the previous sections, no portion of the review area can be eliminated from additional evaluation. Therefore, all of the review area will be considered to have an assumed coal development potential.

## **2.5 Description of Existing Land Use**

Historically, the lands considered in this screening have been used for livestock grazing and wildlife habitat. Past coal mining activities occurred in the Cumberland area, several miles north of the study area, in the early 1900s. The primary current land use within and adjacent to the review area is livestock grazing and wildlife use. Utilization of the grazing allotments in the area have generally been from late spring to late fall. According to Federal Coal Lease Application WYW-159423, the proposed application area has never been used for production of any cultivated crops nor has any mining activity occurred in the review area. No evidence was found that any portion of the review area has ever been used for production of any cultivated crops nor has any mining activity occurred in this area.

## **2.6 Coal Screening Steps**

The following three screening steps are applied to all of the 6 section areas.

1. Identifying areas that are unsuitable for coal development (43 CFR 3420.1-4 (e) (2), 43 CFR 3461);
2. Identifying areas that are unacceptable for coal development due to other multiple-use conflicts (43 CFR 3420.1-4(e) (3)); and
3. Identifying areas where a significant number of qualified surface owners have expressed a preference against surface mining (43 CFR 3420.1-4(e) (4)).

All federal coal areas not excluded by the screening process described in this section are determined to be acceptable for further consideration for coal leasing.

### **3.0 APPLICATION OF COAL UNSUITABILITY CRITERIA**

As required by 43 CFR 3461, the 20 coal unsuitability criterion were applied to all areas with coal development potential. Each criterion in 43 CFR 3461.1 of this title uses the phrase “shall be considered unsuitable” as shorthand for “shall be considered unsuitable for all or certain stipulated methods of coal mining involving surface coal mining operations,” as defined in 43 CFR 3400.0-5(mm).

Under 43 CFR 3461.1 some underground mining is exempt from the criteria. This regulation states that:

“(a) Federal lands with coal deposits that would be mined by underground mining methods shall not be assessed as unsuitable where there would be no surface coal mining operations, as defined in Section 3400.0-5 of this title, on any lease, if issued.

(b) Where underground mining will include surface operations and surface impacts on federal lands to which a criterion applies, the lands shall be assessed as unsuitable unless the surface management agency finds that a relevant exception or exemption applies.”

The following procedures are in accordance with the Mineral Leasing Act of 1920, the Federal Coal Leasing Amendments Act of 1976, the Federal Land Policy and Management Act (FLPMA) of 1976, the Surface Mining Control and Reclamation Act of 1977, the Federal Coal Management Program adopted by the Secretary of the Interior in June 1979, and other applicable federal regulations.

These criteria involve consideration of existing resource values such as scenic areas, natural and historic values, wildlife, floodplains, alluvial valley floors, etc. The purpose of this step is to identify areas with key features of environmental sensitivity that would make them unsuitable for coal mining, or for those operations and impacts associated with coal mining.

In the following sections, each of the twenty coal unsuitability criteria are discussed in turn. The regulation stating each criterion is listed, followed by the results of the review process.

#### **3.1 Criterion Number 1. Federal Land Systems**

**Criterion Number 1.** All federal lands included in the following land systems or categories shall be considered unsuitable: National Park System, National Wildlife Refuge System, National System of Trails, National Wilderness Preservation System, National Wild and Scenic Rivers System, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund, National Forests, and federal lands in incorporated cities, towns, and villages.

(2) Exceptions. (i) A lease may be issued within the boundaries of any National Forest if the Secretary finds no significant recreational, timber, economic, or other values which may be incompatible with the lease; and (A) surface operations and impacts are incident to an underground

coal mine, or (B) where the Secretary of Agriculture determines, with respect to lands which do not have significant forest cover within those National Forests west of the 100th Meridian, that surface mining may be in compliance with the Multiple-Use Sustained-Yield Act of 1960, the Federal Coal Leasing Amendments Act of 1976, and the Surface Mining Control and Reclamation Act of 1977.

(ii) A lease may be issued within the Custer National Forest with the consent of the United States Department of Agriculture as long as no surface coal mining operations are permitted.

(3) Exemptions. The application of this criterion to lands within the listed land systems and categories is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.

**Result of Criterion 1:** Consultation with the BLM, the surface management agency in the review area, review of topographical maps and Geographic Information System (GIS) databases, indicate that all lands within the review area are controlled by BLM. The BLM controls both the surface and coal rights within this area as shown in Figure 3, Federal Land Systems. No lands within the review area are part of the National Park System, the National Wildlife Refuge System, the National System of Trails, and the National Wild and Scenic Rivers System or in any of the listed federal land systems. No areas were determined to be unsuitable under this criterion.

### **3.2 Criterion Number 2. Rights-Of-Way and Easements**

(b)(1) **Criterion Number 2.** Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial, or other public purposes, on federally owned surface shall be considered unsuitable.

(2) Exceptions. A lease may be issued, and mining operations approved, in such areas if the surface management agency determines that:

(i) All or certain types of coal development (e.g., underground mining) will not interfere with the purpose of the right-of-way or easement; or

(ii) The right-of-way or easement was granted for mining purposes; or

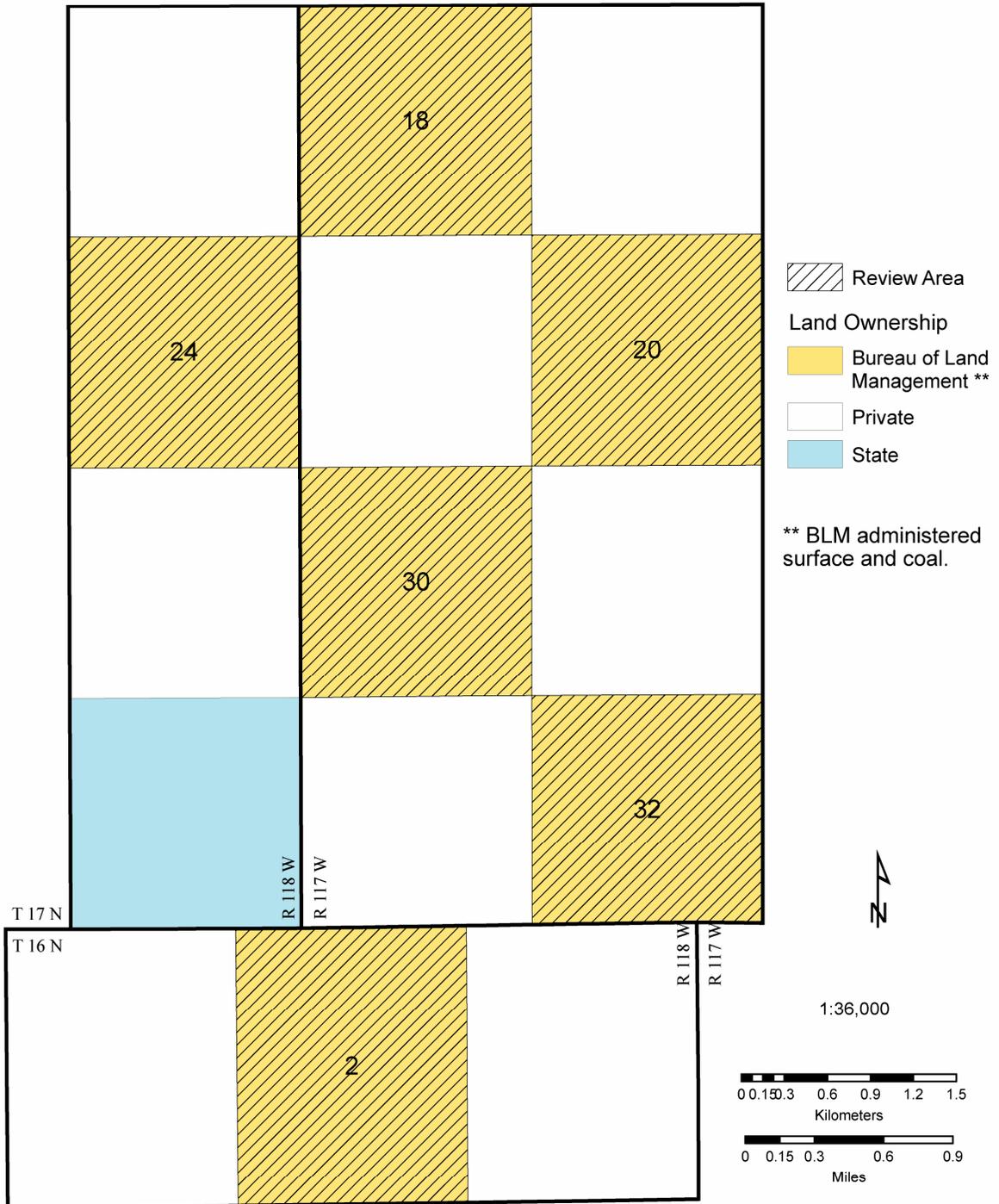
(iii) The right-of-way or easement was issued for a purpose for which it is not being used; or

(iv) The parties involved in the right-of-way or easement agree, in writing, that power lines or other utilities can be moved at the mining company's expense.

(v) It is impractical to exclude such areas due to the location of coal and method of mining and such areas or uses can be protected through appropriate stipulations.

(3) Exemptions. This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 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 issued.

**Figure 3  
Federal Land Systems**



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**Result of Criterion 2:** BLM GIS databases show no railroad, right-of-way, or easement areas within the review area with the exception of two known utilities. There is the Kern River Natural Gas Pipeline crosses Section 24, T17N, R118W and Section 18, T17N, R117W (See Figure 4, Pipelines and Powerlines). Also, there is an electrical utility line that runs north of the section line of Section 24, T17N, R118W and Sections 19 and 20, T17N, R118W (See Figure 4, Pipelines and Powerlines). It is common for utilities to follow the section line boundaries and it is possible that this powerline may be found to be along the section line boundary with a more exact survey location. If coal were to be leased in these areas, the mining methods selected would require the relocation or protection of these utilities at the mining company's expense.

No areas were determined to be unsuitable under this criterion.

### **3.3 Criterion Number 3. Dwellings, Roads, Cemeteries, Public Buildings**

**Criterion Number 3.** The terms used in this criterion are defined by the Office of Surface Mining Reclamation and Enforcement regulations at Chapter VII of Title 30 of the CFR. Federal lands affected by section 522(e) (4) and (5) of the Surface Mining Control and Reclamation Act of 1977 shall be considered unsuitable. This includes lands within 100 feet of the outside line of the right-of-way of a public road or within 100 feet of a cemetery, or within 300 feet of any public building, school, church, community or institutional building, or public park or within 300 feet of an occupied dwelling. Dwellings, roads, cemeteries, and public buildings are depicted on Figure 5.

(2) Exceptions. A lease may be issued for lands:

(i) Used as mine access roads or haulage roads that join the right-of-way for a public road;

(ii) For which the Office of Surface Mining Reclamation and Enforcement has issued a permit to have public roads relocated;

(iii) If, after public notice and opportunity for public hearing in the locality, a written finding is made by the authorized officer that the interests of the public and the landowners affected by mining within 100 feet of a public road will be protected;

(iv) For which owners of occupied dwellings have given written permission to mine within 300 feet of their buildings.

(3) Exemptions. The application of this criterion is subject to valid existing rights and does not apply to surface coal mining operations existing on August 3, 1977.

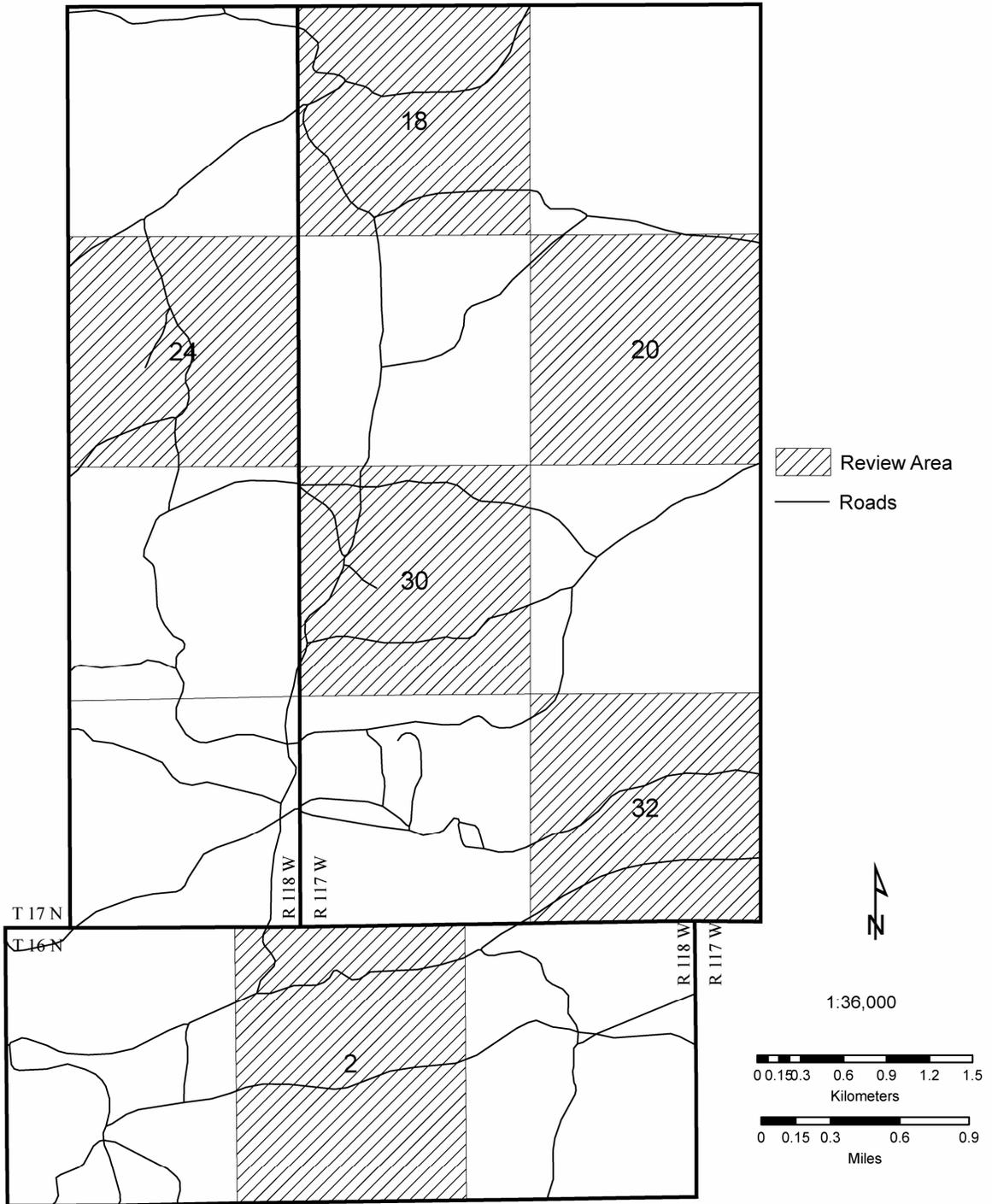
**Result of Criterion 3:** Review of topographical maps, GIS databases, and aerial photographs found no known schools, churches, community or institutional buildings, public parks, dwellings, cemeteries, or other public buildings in the review area. The topographical maps did show a number of trails or roadways in the review area. These appear to be undedicated and unimproved off-highway vehicle trails; however no public roads with a designated BLM, county, state, or federal number exist in the review area.

**Figure 4  
Pipelines and Powerlines**



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**Figure 5  
Dwellings, Roads, Cemeteries, and Public Buildings**



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Should any conflicts arise in the future with dwellings, roads, public buildings or cemeteries, it would be the responsibility of the lessee to show that conflicts between mining and those features, including the regulatory buffer distances described in the exceptions, would be adequately addressed and mitigated to the satisfaction of the lessee and the owner of the dwelling, road, public building or cemetery affected. No areas were determined to be unsuitable under this criterion.

### **3.4 Criterion Number 4. Wilderness Study Areas**

**Criterion Number 4.** Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the current Administration and Congress for possible wilderness designation. For any federal land which is to be leased or mined prior to completion of the wilderness inventory by the surface management agency, the environmental assessment or impact statement on the lease sale or mine plan shall consider whether the land possesses the characteristics of a wilderness study area. If the finding is affirmative, the land shall be considered unsuitable, unless issuance of noncompetitive coal leases and mining on leases is authorized under the Wilderness Act and the FLPMA of 1976.

(2) Exemption. The application of this criterion to lands for which the BLM is the surface management agency and lands in designated wilderness areas in National Forests is subject to valid existing rights.

**Result of Criterion 4:** Review of the BLM's GIS databases, review of topographical maps, and other publicly available GIS databases found no evidence of any wilderness study areas within the review area. No areas were determined to be unsuitable under this criterion.

### **3.5 Criterion Number 5. Visual Resources**

**Criterion Number 5.** Scenic federal lands designated by visual resource management analysis as Class I (an area of outstanding scenic quality or high visual sensitivity) but not currently on the National Register of Natural Landmarks shall be considered unsuitable.

(2) Exception. A lease may be issued if the surface management agency determines that surface coal mining operations will not significantly diminish or adversely affect the scenic quality of the designated area.

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 5:** Review of the BLM's GIS databases, topographical maps, other publicly available GIS databases, and aerial photographs found no conflicts with the review area. No designated Class I Visual Resource lands exist in the review area. No areas were determined to be unsuitable under this criterion.

### **3.6 Criterion Number 6. Scientific Studies**

**Criterion Number 6.** Federal lands under permit by the surface management agency, and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration or experiment, except where mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency gives written concurrence to all or certain methods of mining.

(2) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 6:** Review of the BLM's GIS databases and other publicly available GIS databases found no lands being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments within the review area. No areas were determined to be unsuitable under this criterion.

### **3.7 Criterion Number 7. National Register of Historic Places**

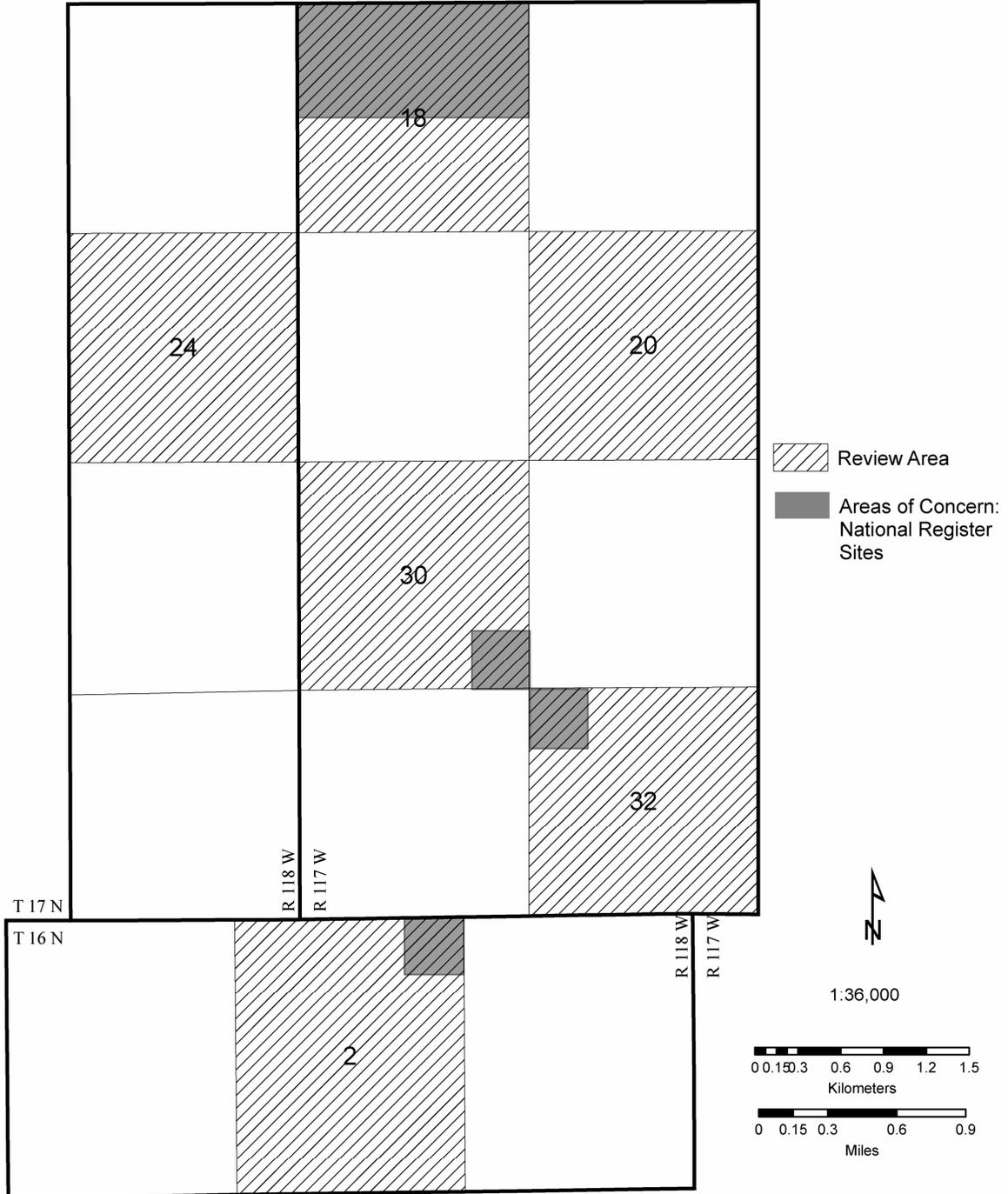
**Criterion Number 7.** All publicly or privately owned places which are included in the National Register of Historic Places (NRHP) shall be considered unsuitable. This shall include any areas that the surface management agency determines, after consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO), are necessary to protect the inherent values of the property that made it eligible for listing in the NRHP (Figure 6).

(2) Exceptions. All or certain stipulated methods of coal mining may be allowed if, after consultation with the Advisory Council on Historic Preservation and the SHPO, they are approved by the surface management agency, and where appropriate, the State or local agency with jurisdiction over the historic site.

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 7:** Review of the BLM's GIS databases, topographical maps, other publicly available GIS databases, aerial photographs and other materials found some conflicts with the review area. A review of GIS records from the BLM found no publicly or privately owned places included in the NRHP; however, there exist some conflicts with archeological sites eligible for listing on the register. Sites that are eligible for the NRHP are treated the same as NRHP-listed sites under the National Historic Preservation Act. The general location of these sites is shown in Figure 6. If any NRHP eligible property should be determined to exist in the future or any known archeological sites are within a lease area, any mining would be required to avoid the property unless the site could be mitigated by data recovery or other appropriate measures pursuant to 36 CFR 800. Appropriate

**Figure 6**  
**National Register of Historic Places**



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

buffer zones may be established by the BLM to protect NRHP-eligible properties following consultation with the SHPO. Data recovery measures would be implemented in the context of a NRHP District to maximize efficiency of data recovery effort. Areas affected by this criterion are listed in Table 1. No areas were determined to be unsuitable under this criterion.

**Table 1. National Register of Historic Places**

<i>Area</i>	<i>Potentially Affected Acres</i>	<i>Acres Not Affected</i>
Section 2, T16N, R118W, 6 <sup>th</sup> P.M.	48	718
Section 24, T17N, R118W, 6 <sup>th</sup> P.M.	0	640
Section 18, T117N, R117W, 6 <sup>th</sup> P.M.	320	320
Section 20, T117N, R117W, 6 <sup>th</sup> P.M.	0	640
Section 30, T117N, R117W, 6 <sup>th</sup> P.M.	40	600
Section 32, T117N, R117W, 6 <sup>th</sup> P.M.	39.5	592.5
<b>TOTAL</b>	<b>447.5</b>	<b>3,510.5</b>

### **3.8 Criterion Number 8. National Natural Landmarks**

**Criterion Number 8.** Federal lands designated as natural areas or as National Natural Landmarks shall be considered unsuitable.

(2) Exceptions. A lease may be issued and mining operation approved in an area or site if the surface management agency determines that:

(i) The use of appropriate stipulated mining technology will result in no significant adverse impact to the area or site; or

(ii) The mining of the coal resource under appropriate stipulations will enhance information recovery (e.g., paleontological sites).

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 8:** Review of the BLM's GIS databases, topographical maps, other publicly available GIS databases, and aerial photographs found no National Natural Landmarks or designated natural areas within or near the review area. No areas were determined to be unsuitable under this criterion.

### **3.9 Criterion Number 9. Federally Listed Endangered Species Habitat**

**Criterion Number 9.** Federally designated critical habitat for listed threatened or endangered plant and animal species, and habitat proposed to be designated as critical for listed threatened or endangered plant and animal species or species proposed for listing, and habitat for federal threatened or endangered species which is determined by the United States Fish and Wildlife Service (USFWS) and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

(2) Exception. A lease may be issued and mining operations approved if, after consultation with the USFWS, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.

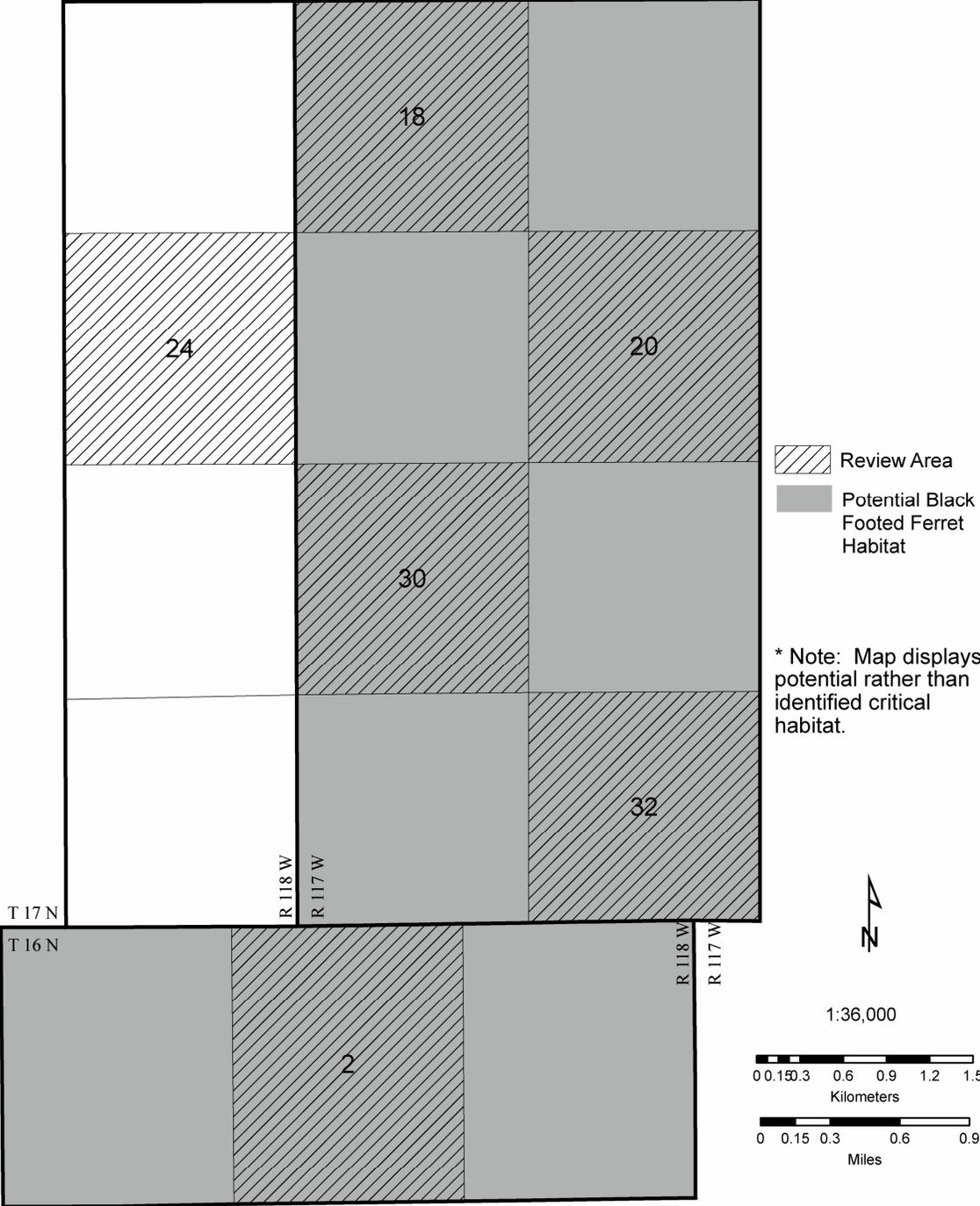
(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

**Result of Criterion 9:** One federally listed species that may occur in the review area is the black-footed ferret. Habitat for the endangered black-footed ferret consists primarily of lands containing prairie dog towns meeting certain criterion. Based on review of the BLM's GIS databases and other publicly available GIS databases, potential black-footed ferret habitat is shown in Figure 7.

According to the November 4, 2003 Federal Coal Lease Application WYW-159423, covering a portion of Section 30, T17N, R117W and a two mile buffer, in 1978-1979, the USFWS in conjunction with the BLM, completed extensive surveys on these prairie dog towns, as well as others on the surrounding area, to determine the presence of any black-footed ferrets. No living ferrets were found during the 1978-1979 surveys. In addition, according to the November 4, 2003 Federal Coal Lease Application, "Habitat for the endangered black-footed ferret consists primarily of prairie dog towns. Two white-tailed prairie dog towns exist within the Section 31 proposed permit area and another 15 prairie dog towns exist outside of the permit area within the two mile buffer area. In 1978-1979, the USFWS in conjunction with the BLM, completed extensive surveys on these prairie dog towns, as well as others on the surrounding area, to determine the presence of any black-footed ferrets. Several old black-footed ferret skulls were discovered off of the South Haystack Mine permit area during the 1978-1979 surveys. The USFWS was unable to locate any living ferrets or sign of living ferrets or to determine how old the ferret skulls were. No black-footed ferret sign or sightings were made by Intermountain Resources during the 2001 survey. In addition to the aforementioned surveys, TRC completed black-footed ferret surveys in 2001 on white-tailed prairie dog towns located several miles south of the study area. These surveys were completed for Orion Energy LLC's proposed wind energy project and no evidence of black-footed ferrets was found."

No habitat within the review area has been designated as critical; however, potential critical habitat is known to exist in the review area as shown in Figure 7 and Table 2.

**Figure 7  
Federally Listed Endangered Species Habitat\***



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

**Table 2. Federally Listed Endangered Species Habitat  
Part Potential Black-Footed Ferret Habitat**

<i>Area</i>	<i>Potentially Affected Acres</i>	<i>Acres Not Affected</i>
Section 2, T16N, R118W, 6 <sup>th</sup> P.M.	766	0
Section 24, T17N, R118W, 6 <sup>th</sup> P.M.	0	640
Section 18, T117N, R117W, 6 <sup>th</sup> P.M.	640	0
Section 20, T117N, R117W, 6 <sup>th</sup> P.M.	640	0
Section 30, T117N, R117W, 6 <sup>th</sup> P.M.	640	0
Section 32, T117N, R117W, 6 <sup>th</sup> P.M.	632	0
<b>TOTAL</b>	<b>3,318</b>	<b>640</b>

Field surveys for habitat of essential value, along with consultation with USFWS, will be conducted during any future coal leasing and reclamation permitting activity to provide sufficient information for the BLM to determine the existence or non existence of critical habitat. As a result of the leasing and reclamation permitting activity, other stipulations may be identified to the effect that the lessee may be required to develop mitigation measures or habitat improvement, development, or reclamation plans to the satisfaction of the BLM and USFWS. No areas were determined to be unsuitable under this criterion.

### **3.10 Criterion Number 10. State Listed Endangered Species Habitat**

**Criterion Number 10.** Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

(2) Exception. A lease may be issued and mining operations approved if, after consultation with the state, the surface management agency determines that the species will not be adversely affected by all or certain stipulated methods of coal mining.

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 10:** Review of the BLM’s GIS databases and other publicly available GIS databases, found no conflicts with the review area. Data from the Wyoming Natural Diversity Database has been requested, but has not yet been received. According to the most recent available data, no public lands within the review area have been found to be listed by the State of Wyoming as being critical or essential for any endangered or threatened species. Habitat of essential value for endangered species has been noted and is shown on Figure 7, Federally Listed Endangered Species Habitat.

No areas were determined to be unsuitable under this criterion; provided appropriate conditional requirements and mitigating measures are included in the lease conditions and stipulations.

### **3.11 Criterion Number 11. Bald and Golden Eagle Nest Sites**

**Criterion Number 11.** A bald or golden eagle nest or site on federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the USFWS.

(2) Exceptions. A lease may be issued if:

(i) It can be conditioned in such a way, either in manner or period of operation, that eagles will not be disturbed during breeding season; or

(ii) The surface management agency, with the concurrence of the USFWS, determines that the golden eagle nest(s) will be moved.

(iii) Buffer zones may be decreased if the surface management agency determines that the active eagle nests will not be adversely affected.

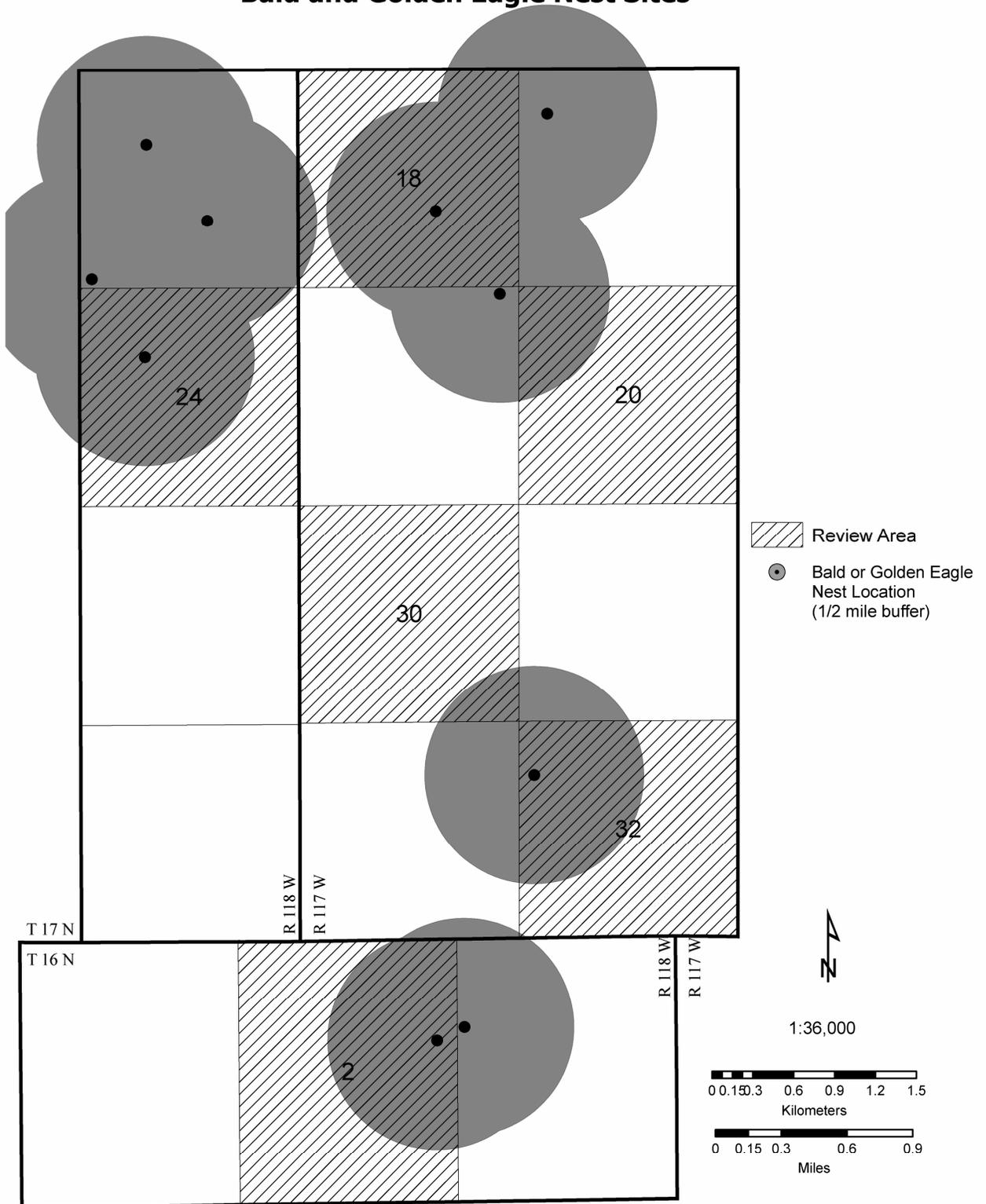
(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

**Result of Criterion 11:** Figure 8, Bald and Golden Eagle Nest Sites, shows nest sites known to exist within the review area based on review of the BLM's GIS databases and other publicly available GIS databases. There are 10 bald or golden eagle nests located in or near the review area. A ½ mile in radius buffer zone is included around each nest. All identified golden or bald eagle nests (10 nests) and the ½ mile buffer zones located within the review area would need to be avoided or mitigated in the leasing and mining process. An updated inventory of nest sites would be required prior to leasing. If the inventory reveals the presence of species affected by this criterion, the BLM would consult with the USFWS to determine if federal coal lands within the proposed area should be declared acceptable and if the mitigation could be applied.

Any leasing in these areas would be subject to the following conditions:

- Inventory and consultation with USFWS.
- No surface mining or surface operations in areas having an active nest or in the associated buffer zone (viable as determined by the USFWS).
- If exceptions are granted, no surface-disturbing activities will be permitted in such areas during breeding and nesting seasons.
- Should new nests become established on or within one mile of the lease area during the course of mining; the BLM will consult with the USFWS to determine mitigative measures that may be needed to protect nesting birds.

**Figure 8**  
**Bald and Golden Eagle Nest Sites**



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

Areas affected by this criterion are listed in Table 3. No areas were determined to be unsuitable under this criterion provided appropriate conditional requirements and mitigating measures are included in the lease conditions and stipulations.

**Table 3. Bald and Golden Eagle Nest Sites**

<i>Area</i>	<i>Potentially Affected Acres</i>	<i>Acres Not Affected</i>
Section 2, T16N, R118W, 6 <sup>th</sup> P.M.	305	461
Section 24, T17N, R118W, 6 <sup>th</sup> P.M.	384	256
Section 18, T117N, R117W, 6 <sup>th</sup> P.M.	488	152
Section 20, T117N, R117W, 6 <sup>th</sup> P.M.	107	533
Section 30, T117N, R117W, 6 <sup>th</sup> P.M.	39	601
Section 32, T117N, R117W, 6 <sup>th</sup> P.M.	234	398
<b>TOTAL</b>	<b>1,557</b>	<b>2,401</b>

### **3.12 Criterion Number 12. Bald and Golden Eagle Roosts**

**Criterion Number 12.** Bald and golden eagle roost and concentration areas on federal lands used during migration and wintering shall be considered unsuitable.

(2) Exception. A lease may be issued if the surface management agency determines that all or certain stipulated methods of coal mining can be conducted in such a way, and during such periods of time, to ensure that eagles shall not be adversely disturbed.

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 12:** No roosting or concentration areas are known to exist within the review area based on review of the BLM's GIS databases and other publicly available GIS databases. An updated inventory would be required prior to mine permitting to identify roosts. If the updated inventory revealed the presence of species or habitats affected by this criterion, the BLM would consult with the USFWS to determine if federal coal lands within the proposed area should be declared acceptable and if the mitigation could be applied. All bald and golden eagle roost areas and buffer zones (1/2 mile) would be avoided or mitigated.

Lands within the review area that are acceptable for further leasing consideration would require:

- Inventory and consultation with USFWS.
- The mine plan submitted by the lessee would show how coal mining can be conducted in such a way, and during such periods of time, as to ensure that eagles shall not be adversely affected.

No areas were determined to be unsuitable under this criterion.

### **3.13 Criterion Number 13. Falcon Cliff Nesting Sites**

**Criterion Number 13.** Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the USFWS.

(2) Exception. A lease may be issued where the surface management agency, after consultation with the USFWS, determines that all or certain stipulated methods of coal mining will not adversely affect the falcon habitat during the periods when such habitat is used by the falcons.

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 13:** No falcon cliff nesting sites are known to exist within the review area based on review of the BLM's GIS databases and other publicly available GIS databases. An updated inventory would be required prior to leasing to identify falcon cliff nesting sites. If the updated inventory revealed the presence of species or habitats affected by this criterion, the BLM would consult with the USFWS to determine if federal coal lands within the proposed area should be declared acceptable and if the mitigation could be applied. Any leases granted would need to be conditional on selection of appropriate mining and reclamation methods in the permitting process. Any leasing in these areas would require:

- Inventory and consultation with USFWS.
- No surface mining or surface operations in an area having an active or viable nest (viable as determined by the USFWS).
- If exceptions are granted, no surface disturbing activities will be permitted during breeding and nesting seasons.
- Should new nests become established on or within 1 mile of the lease area during the course of mining; the BLM will consult with the USFWS to determine mitigative measures that may be needed to protect nesting birds.

All falcon cliff nesting sites and buffer zones (½ mile) would be avoided or mitigated. No areas were determined to be unsuitable for further leasing consideration under this criterion.

### **3.14 Criterion Number 14. Migratory Bird Habitat**

**Criterion Number 14.** Federal lands which are high priority habitat for migratory bird species of high federal interest on a regional or national basis, as determined jointly by the surface management agency, State of Wyoming, and the USFWS, shall be considered unsuitable.

(2) Exception. A lease may be issued where the surface management agency, after consultation with the USFWS, determines that all or certain stipulated methods of coal mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species.

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 14:** No identified migratory bird habitat of high federal interest and buffer zones (½ mile) are known to exist within the review area based on review of the BLM's GIS databases and other publicly available GIS databases. An updated inventory would be required prior to leasing to identify migratory bird habitat. If the updated inventory revealed the presence of species or habitats affected by this criterion, the BLM would consult with the USFWS to determine if federal coal lands within the proposed area should be declared acceptable and if the mitigation could be applied. Any leasing in these areas would require:

- The lessee shall develop a habitat recovery and replacement plan for protection or enhancement of migratory bird (including ferruginous hawk) habitat in consultation with the BLM, Wyoming Department of Game and Fish, and USFWS. This plan may be submitted before or concurrently with the filing of the mine permit application package.

No areas were determined to be unsuitable for further leasing consideration under this criterion, provided appropriate conditional requirements and mitigating measures are included in the lease conditions and stipulations.

### **3.15 Criterion Number 15. Habitat for State High-Interest Wildlife and Plants**

**Criterion Number 15.** Federal lands which the surface management agency and the state jointly agree are habitat for resident species of fish, wildlife, and plants of high interest to the state and which are essential for maintaining these priority wildlife and plant species shall be considered unsuitable. Examples of such lands which serve a critical function for the species involved include:

- (i) Active dancing and strutting grounds for sage grouse, sharp-tailed grouse, and prairie chicken;
- (ii) Winter ranges crucial for deer, antelope, and elk;

(iii) Migration corridor for elk; and

(iv) Extremes of range for plant species.

A lease may be issued if, after consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.

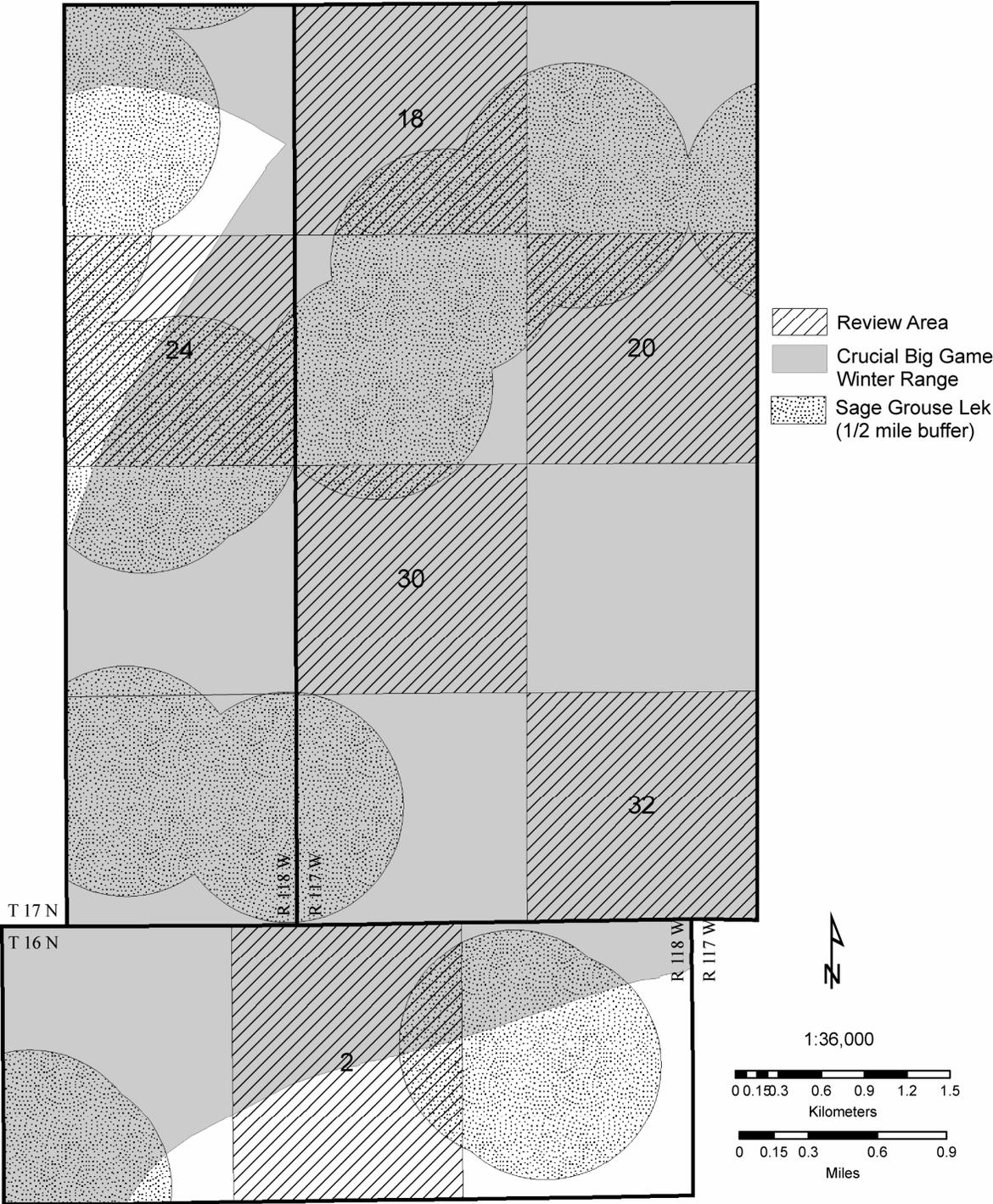
(2) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Leasing of wetland areas would conform to Executive Order 11990.

**Result of Criterion 15:** Based on review of the BLM's GIS databases and other publicly available GIS databases active dancing and strutting grounds (leks) from sage grouse, sharp tailed grouse, or prairie chicken known to exist in the review area are shown in Figure 9, Habitat for State High-Interest Wildlife and Plants. Figure 9 also shows the crucial big game winter range. This range covers much of the review area. No migration corridors for elk are known to exist in the review area. No extremes of range for plant species are known to exist in the review area. No burrowing owl nests are known to exist in the review area.

These areas would be considered available for leasing provided: 1) the lessee would submit a plan showing how significant long-term impacts on crucial big game winter range would be prevented under certain stipulated methods of mining (i.e., habitat recovery, limited surface occupancy); 2) if active dancing and strutting grounds (leks) from sage grouse, sharp tailed grouse, or prairie chicken are found in the future, the lessee would not disturb the area within 1/4 mile of the center of sage grouse strutting/nesting complexes with surface mining or surface mining support activities. Any proposals for surface facilities or activities within a 2-mile radius of the center of sage grouse strutting/nesting complexes would be subject to seasonal occupancy restrictions as determined by the BLM. No areas were determined to be unsuitable under this criterion. No big game winter range areas were declared unsuitable, but potential impacts to wildlife or their habitat are a consideration for leasing to proceed. Future environmental analysis of leasing will consider will consider the impacts to big game winter ranges based upon coal mining activity, and the impact at the time the coal mine would become active. Areas affected by this criterion are listed in Tables 4 and 5.

**Figure 9**  
**Habitat for State High-Interest Wildlife and Plants**



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

**Table 4. Habitat for State High-Interest Wildlife and Plants  
Crucial Big Game Winter Range**

<i>Area</i>	<i>Potentially Affected Acres</i>	<i>Acres Not Affected</i>
Section 2, T16N, R118W, 6 <sup>th</sup> P.M.	405	361
Section 24, T17N, R118W, 6 <sup>th</sup> P.M.	391	249
Section 18, T117N, R117W, 6 <sup>th</sup> P.M.	640	0
Section 20, T117N, R117W, 6 <sup>th</sup> P.M.	640	0
Section 30, T117N, R117W, 6 <sup>th</sup> P.M.	640	0
Section 32, T117N, R117W, 6 <sup>th</sup> P.M.	632	0
<b>TOTAL</b>	<b>3,348</b>	<b>610</b>

**Table 5. Habitat for State High-Interest Wildlife and Plants  
Sage Grouse Lek (1/2 Mile Buffer Assumed)**

<i>Area</i>	<i>Potentially Affected Acres</i>	<i>Acres Not Affected</i>
Section 2, T16N, R118W, 6 <sup>th</sup> P.M.	245	541
Section 24, T17N, R118W, 6 <sup>th</sup> P.M.	471	169
Section 18, T117N, R117W, 6 <sup>th</sup> P.M.	205	435
Section 20, T117N, R117W, 6 <sup>th</sup> P.M.	155	485
Section 30, T117N, R117W, 6 <sup>th</sup> P.M.	49	591
Section 32, T117N, R117W, 6 <sup>th</sup> P.M.	0	632
<b>TOTAL</b>	<b>1,125</b>	<b>3,153</b>

No areas were determined to be unsuitable for further leasing consideration under this criterion, provided appropriate conditional requirements and mitigating measures are included in the lease conditions and stipulations.

### **3.16 Criterion Number 16. Riverine, Coastal, and Special Floodplains**

**Criterion Number 16.** Federal lands in riverine, coastal, and special floodplains (100-year recurrence interval) on which the surface management agency determines that mining could not be undertaken without substantial threat of loss of life or property shall be considered unsuitable for all or certain stipulated methods of coal mining.

(2) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 16:** Based on review of the BLM's GIS databases, other publicly available GIS databases, review of topographical maps, aerial photographs and other materials, no riverine, costal or special floodplains exist in the review area. No areas were determined to be unsuitable under this criterion.

### **3.17      *Criterion Number 17. Municipal Watersheds***

**Criterion Number 17.** Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.

(2) Exception. A lease may be issued where the surface management agency in consultation with the municipality (incorporated entity) or the responsible governmental unit determines, as a result of studies, that all or certain stipulated methods of coal mining will not adversely affect the watershed to any significant degree.

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 17:** Based on review of the BLM's GIS databases and other publicly available GIS databases, no municipal watersheds exist in the review area. No areas were determined to be unsuitable under this criterion.

### **3.18      *Criterion Number 18. National Resource Waters***

**Criterion Number 18.** Federal lands with National Resource Waters, as identified by states in their water quality management plans, and a buffer zone of federal lands  $\frac{1}{4}$  mile from the outer edge of the far banks of the water, shall be unsuitable.

(2) Exception. The buffer zone may be eliminated or reduced in size where the surface management agency determines that it is not necessary to protect the National Resource Waters.

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 18:** Based on review of the BLM's GIS databases and other publicly available GIS databases, review of topographical maps, GIS databases, aerial photographs, and other materials, no National Resource Waters exist in the review area. No public land with National

Resource Waters, as identified by the state of Wyoming in its water quality management plan, exists in the review area. No areas were determined to be unsuitable under this criterion.

### **3.19 Criterion Number 19. Alluvial Valley Floors**

**Criterion Number 19.** Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley floors according to the definition in 3400.0-5(a) of this title, the standards in 30 CFR Part 822, the final alluvial valley floor guidelines of the Office of Surface Mining Reclamation and Enforcement when published, and approved state programs under the Surface Mining Control and Reclamation Act of 1977; where mining would interrupt, discontinue, or preclude farming, shall be considered unsuitable. Additionally, when mining federal land outside an alluvial valley floor would materially damage the quantity or quality of water in surface or underground water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

(2) Exemptions. This criterion does not apply to surface coal mining operations which produced coal in commercial quantities in the year proceeding August 3, 1977; or which had obtained a permit to conduct surface coal mining operations.

**Result of Criterion 19:** Based on review of topographical maps and guideline number 9 Alluvial Valley Floors from the Wyoming DEQ, no alluvial valley floors exist in the review area. Reviews of topographical mapping and aerial photographs show no evidence of perennial streams, large valley floors or agricultural uses that would indicate the presence of alluvial valley floors.

No areas were determined to be unsuitable under this criterion.

### **3.20 Criterion Number 20. State or Indian Tribe Criterion**

**Criterion Number 20.** Federal lands in a state to which is applicable a criterion (i) proposed by the state or Indian tribe located in the planning area, and (ii) adopted by rulemaking by the Secretary of the Interior, shall be considered unsuitable.

(2) Exceptions. A lease may be issued when:

(i) Such criterion is adopted by the Secretary less than 6 months prior to the publication of the draft comprehensive land use plan or land use analysis, plan, or supplement to a comprehensive land use plan, for the area in which such land is included, or

(ii) After consultation with the state or affected Indian tribe, the surface management agency determines that all or certain stipulated methods of coal mining will not adversely affect the value which the criterion would protect.

(3) Exemptions. This criterion does not apply to lands: To which the operator has made substantial legal and financial commitments prior to January 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 issued.

**Result of Criterion 20:** No areas were determined to be unsuitable under this criterion. Refer to Sections 4.3 and 4.6.

## **4.0 MULTIPLE LAND USE CONFLICT EVALUATION**

This step includes a review of those federal coal lands in consideration of other multiple use values (i.e., not concerned with the unsuitability criteria) and identifying any additional areas that would be unacceptable for coal mining or for those operations and impacts associated with coal mining. These following multiple use values were evaluated using multiple land use analysis. The goal is to determine if any areas with coal development potential are unacceptable for leasing based on the following uses not included in 43 CFR 3461.

### **4.1 Pipelines**

Based on review of the BLM's GIS databases and other publicly available GIS databases, review of topographical maps and aerial photographs, one pipeline was found to exist in the review area (refer to Section 3.2). This pipeline, the Kern River Natural Gas Pipeline crosses Section 24, T17N, R118W and Section 18, T17N, R117W (See Figure 4, Pipelines and Powerlines).

If coal were to be leased in these areas the mining methods permitted would require the relocation or protection of these utilities. No areas were determined to be unacceptable under this multiple use conflict.

### **4.2 Oil and Gas Development**

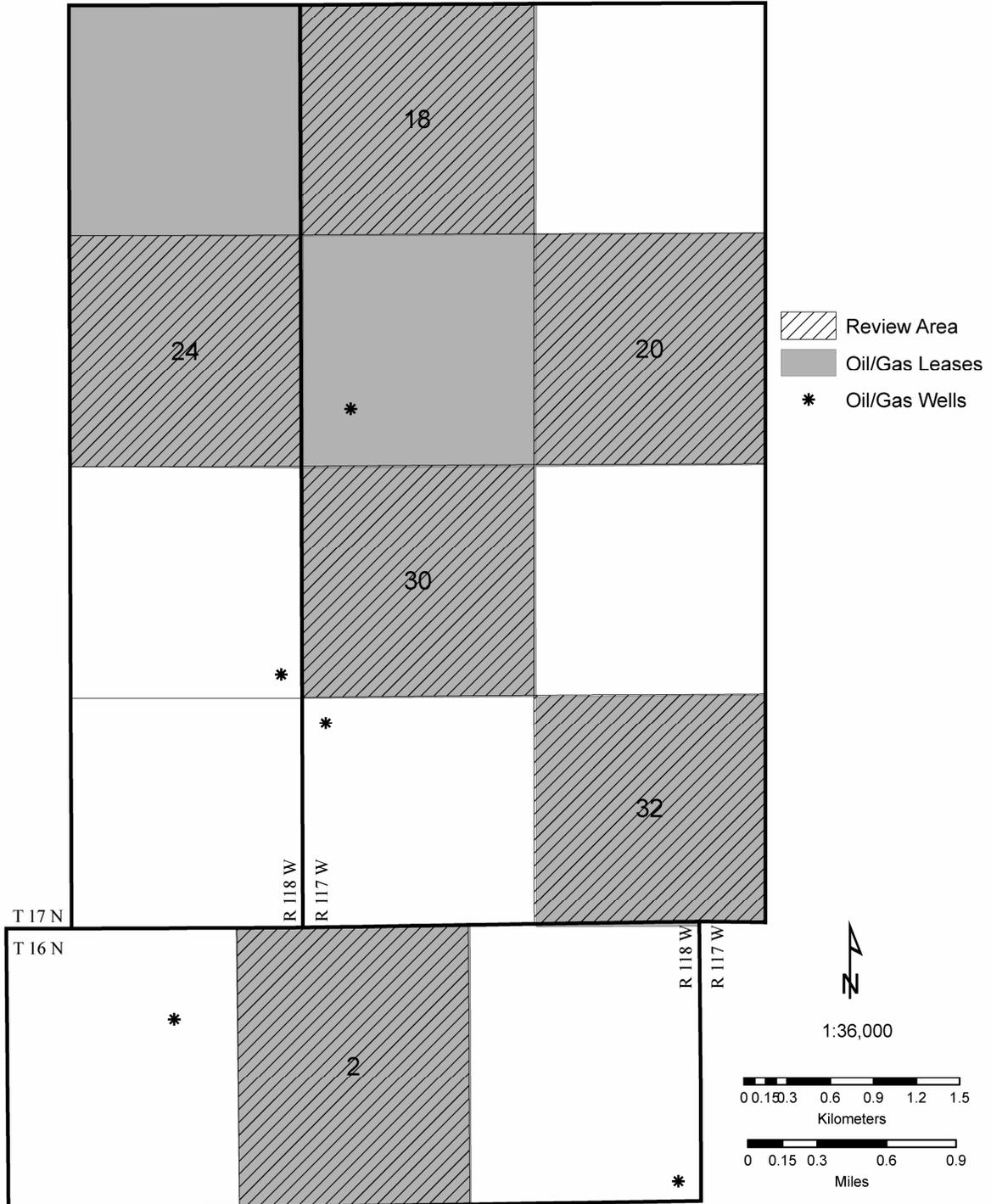
The review area has been used for oil and gas production. Based on review of the BLM's GIS databases oil and gas leases exist on all of the review area as is shown in Figure 10, Oil and Gas Development. Coalbed methane development has also been taking place in the region. There are no oil and gas wells currently on the review area; however, as depicted on Figure 10, there are at least 5 oil and gas wells in adjoining lands. No collection system has been developed to the review area; therefore, these wells are likely not currently producing. Should any conflicts arise in the future with future oil and gas wells, it would be the responsibility of the lessee to show that conflicts between mining and those features, including the regulatory buffer distances, would be adequately addressed and mitigated to the satisfaction of the lessee and the owner of the oil and gas well affected.

No areas were determined to be unacceptable under this multiple use conflict. Conflicts could arise where federal oil and gas leases overlap federal coal leases. To allow for full development of both resources, lease clauses/stipulations should be inserted into the coal leases to resolve any conflicts that might arise between oil and gas development and coal development.

### **4.3 Archeological Areas**

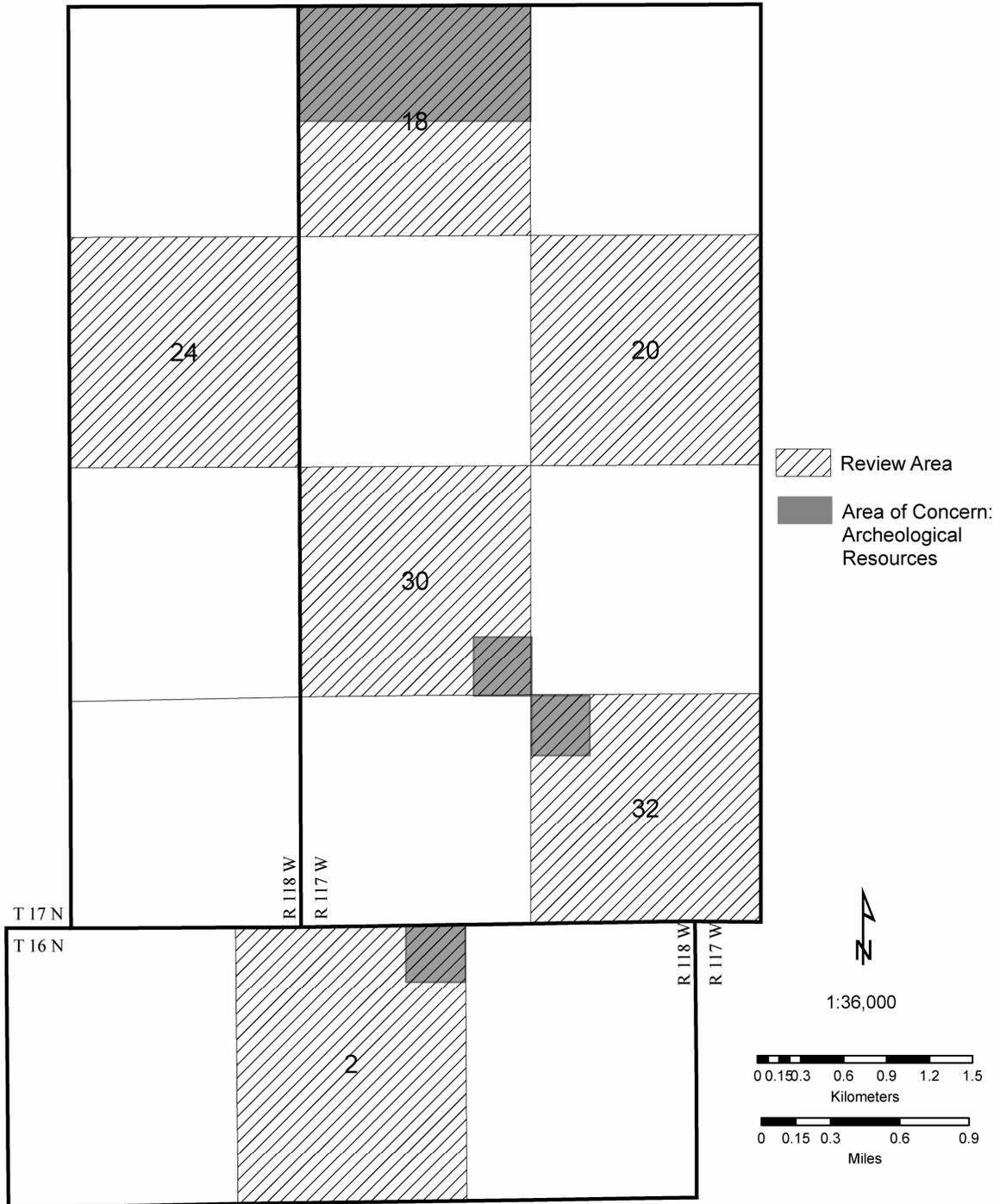
Known areas of concern for archeological resources are shown in Figure 11, Archeological Areas. These areas were determined by review of the BLM's GIS databases and discussions with BLM. All NRHP-eligible resources (refer to Section 3.7) found on a lease would be mitigated by avoidance, documentation, excavation, or other mitigation as determined by BLM to enhance or protect the

**Figure 10**  
**Oil and Gas Development**



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

**Figure 11  
Archeological Areas**



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

cultural resource values. Surveys for cultural resources, in compliance with Section 106 of the National Historic Preservation Act, would be done during the activity planning stage of the coal leasing process. Areas affected by this multiple use analysis are listed in Table 6.

**Table 6. Archeological Areas**

<i>Area</i>	<i>Potentially Affected Acres</i>	<i>Acres Not Affected</i>
Section 2, T16N, R118W, 6 <sup>th</sup> P.M.	48	718
Section 24, T17N, R118W, 6 <sup>th</sup> P.M.	0	640
Section 18, T117N, R117W, 6 <sup>th</sup> P.M.	320	320
Section 20, T117N, R117W, 6 <sup>th</sup> P.M.	0	640
Section 30, T117N, R117W, 6 <sup>th</sup> P.M.	40	600
Section 32, T117N, R117W, 6 <sup>th</sup> P.M.	39.5	592.5
<b>TOTAL</b>	<b>447.5</b>	<b>3,510.5</b>

No areas were determined to be unacceptable under this multiple use conflict.

#### **4.4 Wetlands**

A complete wetlands inventory within the review area has not been completed, but the location of known wetlands within the review area has been illustrated using GIS data. The location of known wetlands is shown in Figure 12, Wetlands. Due to the small size and scattered nature of these wetlands, they would not affect the leaseability of the lands. All jurisdictional wetlands (identified in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual) found on a lease area would be avoided or otherwise mitigated as determined by the mine permitting process, and as necessary, by Section 404 of the Clean Water Act permitting process. No areas were determined to be unacceptable under this multiple use conflict.

#### **4.5 Other BLM Activities**

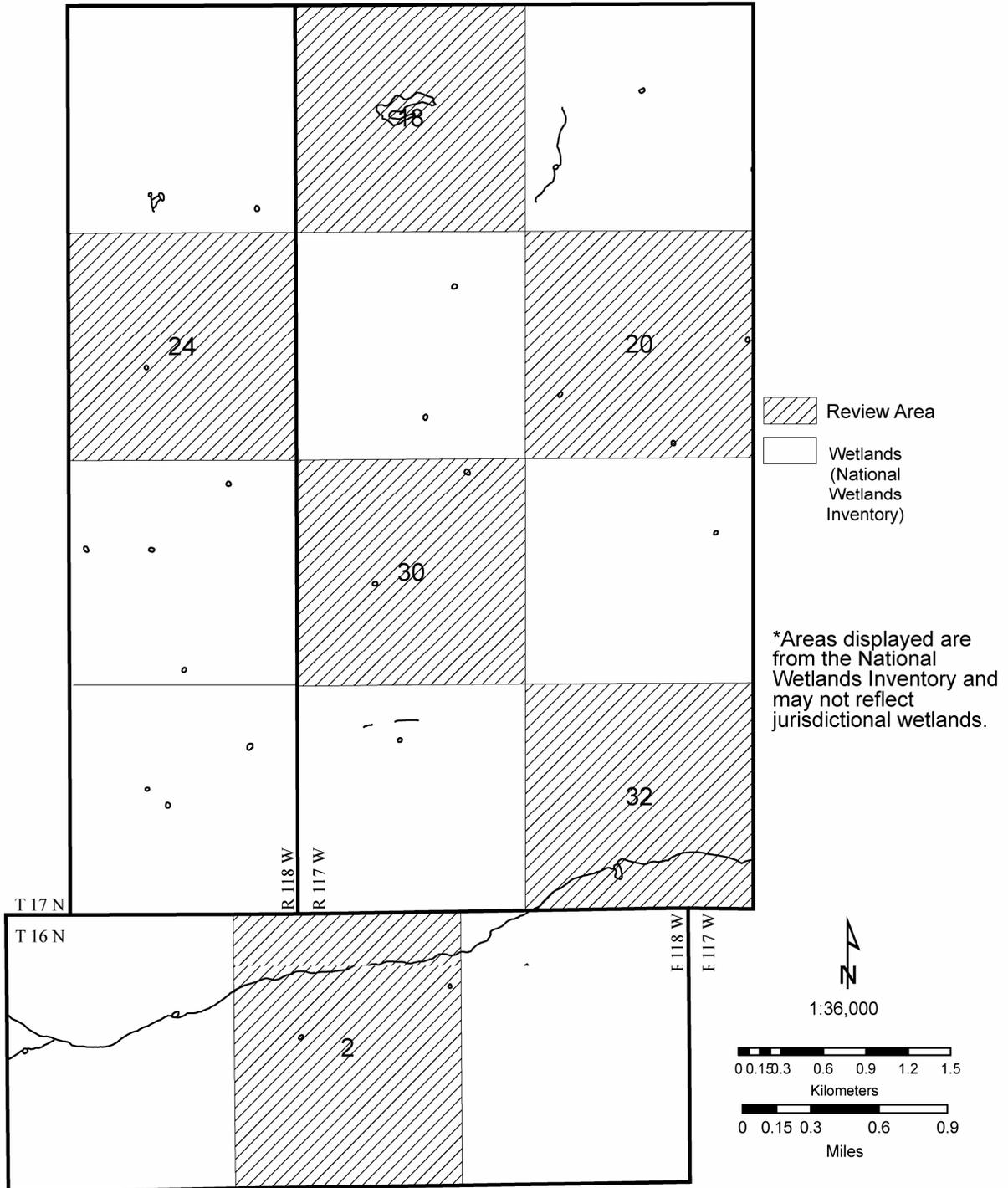
Surface mining of coal is an exclusive surface use of the land in the active mining area and cannot co exist with other uses, such as grazing, wind farming or hunting or gathering licenses. Based on review of the BLM's GIS databases, no other BLM activities were found to exist in the review area except for grazing leases. While these uses would be affected by surface mining operations the effects appear to be small and could be mitigated. No areas were determined to be unacceptable under this multiple use conflict.

#### **4.6 Native American Sensitive Sites**

Based on review of the BLM's GIS databases and BLM data, the Eastern Shoshone and Ute Indian Tribes have expressed concern that areas of interest to them for religious or spiritual reasons may be within the review area.

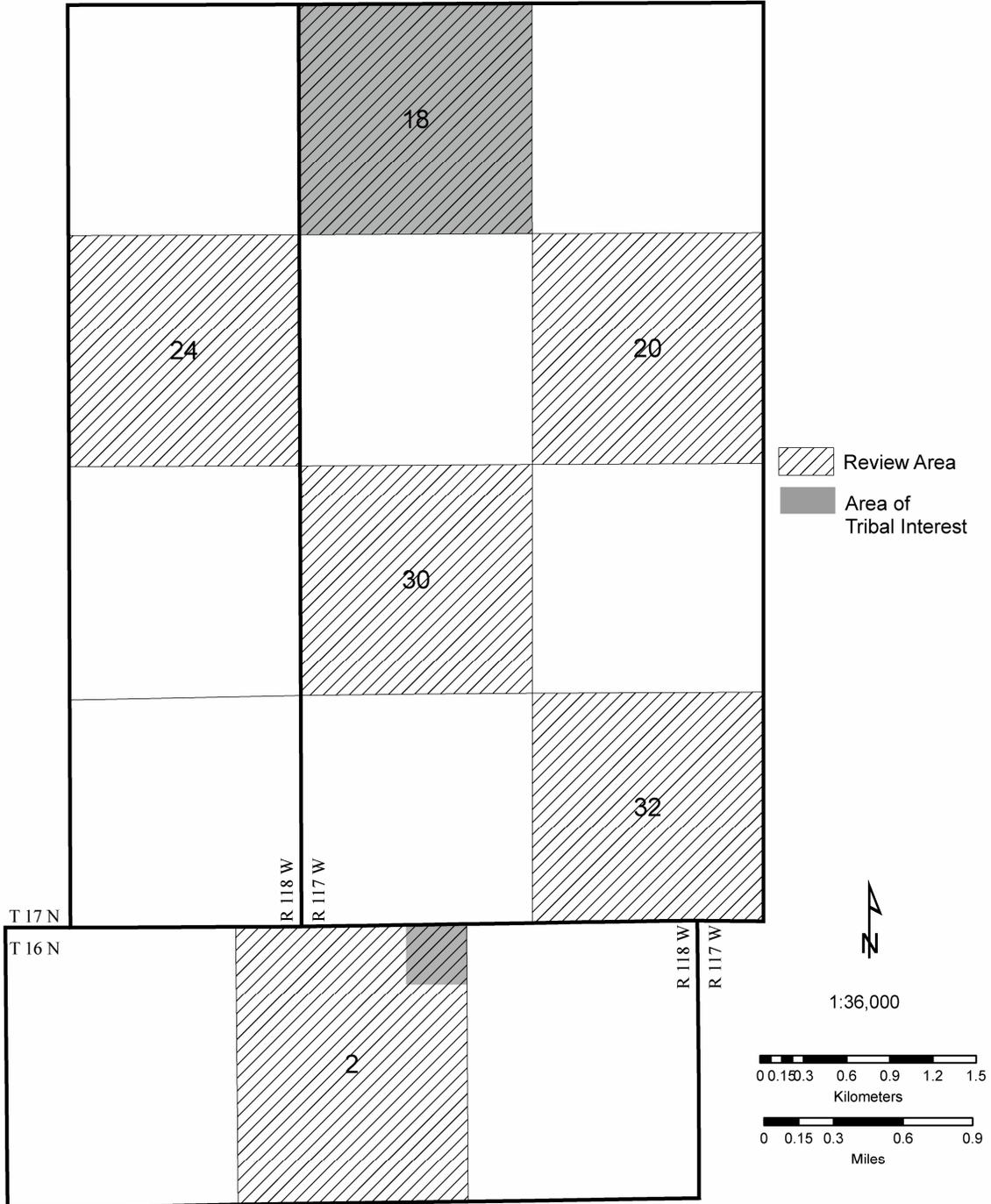
The primary area of concern (Section 18, T17N, R117W) is shown in Figure 13, State or Indian Tribe Concerns. No areas were determined to be unacceptable under this multiple use conflict.

**Figure 12  
Wetlands\***



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

**Figure 13**  
**State or Indian Tribe Concerns**



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

## **4.7 Visual Resources**

Based on review of the BLM's GIS databases, other publicly available GIS databases, review of topographical maps, and aerial photographs, no Visual Resource Management (VRM) Class I, Class II or Class III visual resources were found to exist in the review area. The review area is in a VRM Class IV. The Class IV objectives are: "The objective of this class is to provide for management activities which require major modification of the existing landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of the viewer's attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and by repeating the basic elements." These requirements may be addressed in the lease and mining permitting process. No areas were determined to be unacceptable under this multiple use conflict.

## **4.8 Paleontological Features**

A review of the BLM's GIS databases and other publicly available GIS databases finds no listing of fossils of scientific significance in the review area. Federal Coal Lease Application WYW-159423, the Haystack lease application, reports that field and literature reviews of that proposed project area (Section 30, T17N, R117W) did not document the presence of fossils of scientific significance in the Adaville or Evanston formations. If paleontologic resources of suspected scientific significance are encountered during surface disturbing activities, those activities would be redirected until the BLM has evaluated the discovery. No areas were determined to be unacceptable under this multiple use conflict.

## **4.9 BLM Sensitive Species**

Based on GIS databases and BLM information, it is known that the sage grouse and the white-tailed prairie dog exist in the review area. It is possible that other BLM sensitive species may exist in the review area. Review of the BLM's GIS databases and other publicly available GIS databases finds no documented evidence of these other species at this time; however, this is not sufficient evidence of the absence of these species. Additional field studies will be required to determine the presence or absence of these species. No areas were determined to be unacceptable under this multiple use conflict.

## **4.10 National Land Systems**

Based on GIS databases and BLM information, there is no reason to believe that mining activities in the review area would pose a risk of negatively affecting the air and water quality; wetlands, riparian areas and sole-source aquifers of units of the National Park System, the National Wildlife Refuge System, the National System of Trails, and the National Wild and Scenic Rivers System. No units of these systems exist within or near the review area.

## **5.0 SURFACE OWNER CONSULTATION**

Section 714 of the Surface Mining Control and Reclamation Act and 43 CFR 3420(e)(4), require BLM to consult with certain qualified owners of split estate lands (i.e., private surface ownership over federally owned coal) when surface mining of the federal coal is being considered. This step does not apply to areas where only subsurface mining methods are concerned. It involves only those split estate lands within competitive federal coal areas proposed for development by surface mining methods.

There is no split ownership within the review area, therefore no conflicts exist which would require consultation under this section.

## **6.0 SUMMARY**

All lands within the review area are acceptable for further consideration for leasing, subject to the following conditional requirements or mitigating measures.

**Cultural resource management:** In order to preserve sites having archeological or Indian Tribe cultural concerns located in the N ½ of Section 18, T17N, R117W, the SE ¼, SE ¼ of Section 30, T17N, R117W, NW ¼, NW ¼ of Section 32, T17N, R117W and Lot 1 of Section 2, T16N, R118W any mining activities in these areas would require consultation with the tribes known to have inhabited those lands and treatment of known sites prior to disturbance.

**Existing utility right-of-ways:** Existing utilities and utility right-of-ways will be relocated at the mining company's expense, or protected from damage by the mining activities. Any unforeseen conflicts in the review area will be identified and resolved during the coal leasing process or during development of mining and reclamation plans.

**Oil and gas management:** Conflicts could arise where federal oil and gas leases overlap federal coal areas open to consideration of coal development and leasing. To allow for development of both resources appropriate coal lease, or future oil and gas lease, conditions will be required to resolve any conflicts.

**Biological resource management:** All federal coal lands that are open to consideration of leasing and development will be subject to continued field investigations, studies and evaluations to determine if certain methods of coal mining can occur without having a long term adverse effect on select wildlife, and especially on threatened and endangered species. This includes but is not limited to: surveying any areas proposed to be leased to determine if they may support a BLM sensitive or state or federally listed endangered species. If any such species are found to exist, such lands would be acceptable for further consideration for leasing only with a provision that appropriate mitigation measures will be developed that will protect the long term interests of the species and habitats involved. Prior to leasing, surveys will be completed for bald and golden eagle roosts and nests, falcon cliff nesting sites, and birds protected under the Migratory Bird Treaty Act and of high federal interest. As necessary, a biological assessment will be prepared in conjunction with the environmental impact statement or environmental assessment that is prepared prior to issuing a Federal Coal Lease. As a result of the biological assessment, environmental impact statement, or environmental assessment, other stipulations may be identified to the effect that the lessee would be

required to develop mitigation measures or habitat improvement, development, or reclamation plans to the satisfaction of the BLM and USFWS. Mitigation measures may include, but are not limited to, such things as seasonal operations in some areas, buffer zones around occupied eagle or falcon nests, habitat improvement or development, special reclamation measures or other appropriate measures for long term habitat protection. Mitigative measures will be combined with appropriate mining methods to manage the potential adverse effects of mining in critical big game winter range.

Sage grouse habitat areas will be open to coal development with stipulations and mitigation requirements for habitat maintenance and improvement. Exploration activities and ancillary facilities will be allowed provided that the surface disturbing activities related to exploration and ancillary facility development will either avoid the lek area and the appropriate buffer zones or require appropriate mitigation measures.

## **7.0 REFERENCES**

- Dames and Moore. 1979. Open File Report 79-1018. Coal Resource Occurrence and Coal Development Potential Maps of the Meadow Draw Quadrangle Uinta County, Wyoming. Prepared for U.S. Department of the Interior Geologic Survey.
- Wood, G.H., Jr., T.M. Kehn, M.D. Carter, and W.C. Culbertson. 1983. Coal Resource Classification System of the U.S. Geological Survey. USGS Circular 891.

## ***ACRONYMS AND ABBREVIATIONS***

BLM	Bureau of Land Management
CFR	Code of Federal Regulations
CRO-CDP	Coal Resource Occurrence – Coal Development Potential
DEQ	Department of Environmental Quality
FLPMA	Federal Land Policy and Management Act
GIS	Geographic Information System
NRHP	National Register of Historic Places
P.M.	Principle Meridian
SHPO	State Historical Preservation Office
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VRM	Visual Resource Management