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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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Salt Lake City, Utah 84180-1203
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June 13, 1991

Mr. Clark Johnson, Field Supervisor
U.S. Fish and Wildlife Services
Ecological Services
2060 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104-5110

Dear Mr. Johnson:

Re: Lease UTU-64263, Cyprus-Plateau Mining Company, Star Point Mine, ACT/007/006, Folder #2, Carbon County, Utah

Enclosed please find portions of the Environmental Assessment for the Cyprus-Plateau Mining Company Coal Lease Application UTU-64263, Castle Valley Ridge Tract, 1989.

Page 11 states that "Bald Eagles, and endangered species, are annual visitors in the region between November and March; however, no critical habitat has been identified within the tract. No other threatened, endangered or sensitive species are known to inhabit the tract."

If this statement is still current for this area, please sign, date, and return this letter. If these statements are not current, please send the Division a current species list of endangered or threatened plant or animal species which could potentially be in this area.

Thank you for your attention to this matter.

Sincerely,

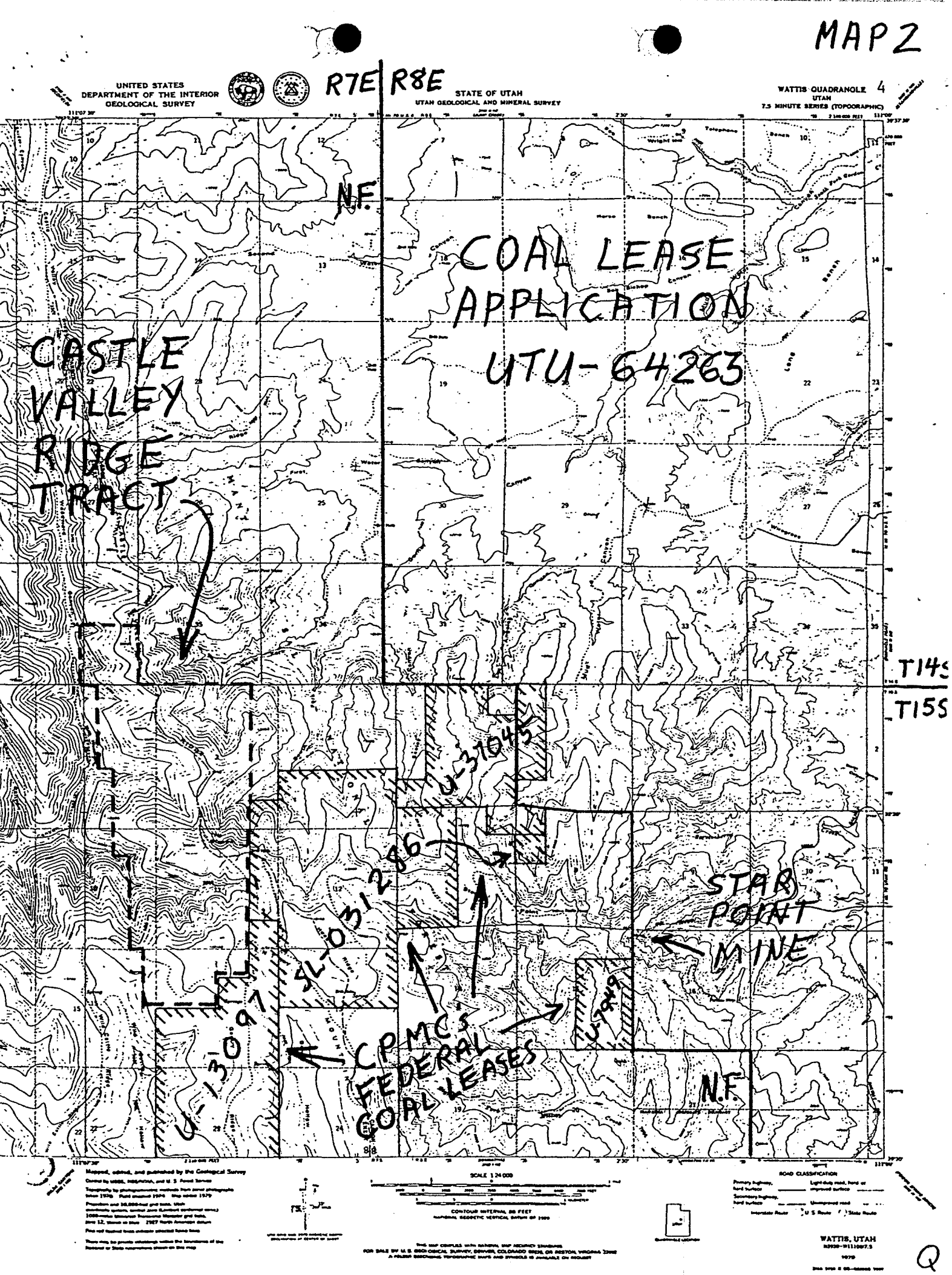
Pamela Grubaugh-Littig
Permit Supervisor

Yes, we concur with this letter _____
Signature

Title_____ Date _____
U.S. Fish and Wildlife Service

SMW/jbe
Attachment
cc: Susan White
AT007006.004

MAP 2


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
R7E
R8E
STATE OF UTAH
UTAH GEOLOGICAL AND MINERAL SURVEY
WATTIS QUADRANGLE
UTAH
7.5 MINUTE SERIES (TOPOGRAPHIC)
4
N.F.
COAL LEASE
APPLICATION
UTU-64263
CASTLE
VALLEY
RIDGE
TRACT
T14S
T15S
U-31043
SL-031286
U-13097
U-73449
CPMC'S
FEDERAL
COAL LEASES
STAR
POINT
MINE
N.F.
SCALE 1:24 000
CONTOUR INTERVAL 80 FEET
ROAD CLASSIFICATION
WATTIS, UTAH

ENVIRONMENTAL ASSESSMENT

CYPRUS-PLATEAU MINING CORPORATION COAL LEASE APPLICATION UTU-64263
CASTLE VALLEY RIDGE TRACT
1989

USDA, FOREST SERVICE, MANTI-LASAL NATIONAL FOREST
USDI, BUREAU OF LAND MANAGEMENT, MOAB DISTRICT
CARBON AND EMERY COUNTIES, UTAH

Responsible Officials:

J.S. Tixier, Regional Forester
USDA, Forest Service
Intermountain Region
Federal Building
324 25th Street
Ogden, Utah 84401

James M. Parker, State Director
USDI, Bureau of Land Management
Utah State Office
324 South State, Suite 301
Salt Lake City, Utah 84111-2303

For Further Information Contact:

George A. Morris, Forest Supervisor
USDA - Forest Service
Manti-LaSal National Forest
599 West Price River Dr.
Price, Utah 84501

Gene Nodine, District Manager
USDI, Bureau of Land Management
Moab District
P.O. Box 970
Moab, Utah 84532

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I. INTRODUCTION

A. Purpose and Need for Action

On July 7, 1988, Cyprus-Plateau Mining Corporation submitted Coal Lease Application UTU-64263 to the Bureau of Land Management (BLM), Utah State Office. Cyprus-Plateau has indicated a need for the coal in their application to acquire a much needed recoverable reserve base; to be more competitive in marketing coal; to extend mine life so as to more favorably amortize the cost of equipment, portal facilities, and underground development; reduce production costs;..."and to maintain 42 additional employees for 17 years..."

Pursuant to 43 CFR 3425.3 an environmental assessment (EA) must be prepared in order for the BLM, who has jurisdiction over the coal resources, to process the application. The proposed lease tract, known as the Castle Valley Ridge (CVR) Tract, encompasses Federal lands within the Manti-LaSal National Forest, Price Ranger District. Since this proposed tract contains Federal minerals administered by the BLM and lands administered by the Forest Service (FS), an environmental analysis was conducted jointly between the two agencies. This EA will evaluate the proposed tract pursuant to the National Environmental Policy Act process and Coal Lease Unsuitability Criteria (43 CFR 3461) and will develop management requirements needed to mitigate impacts.

B. Authorizing Actions

This coal lease application was submitted and will be processed and evaluated under the following authorities: Minerals Leasing Act of 1920, as amended; National Environmental Policy Act of 1969 (NEPA); Multiple-Use Sustained Yield Act of 1960; Federal Land Policy and Management Act (FLPMA) of 1976; National Forest Management Act (NFMA) of 1976; Federal Coal Leasing Amendments Act (FCLAA) of 1976, as amended; Surface Mining Control and Reclamation Act (SMCRA) of 1977; Federal Regulations 43 CFR 3400 and the Manti-LaSal National Forest Land and Resource Management Plan (Forest Plan) and Final Environmental Impact Statement (FEIS) of 1986.

The lease application will be processed under the procedures set forth under Federal regulations 43 CFR 3425, Leasing on Application.

C. History, Tract Delineation and Potential Mining Scenario

The current lands defined in the tract being evaluated were originally nominated by Plateau Mining Company (PMC) as "Tract No. 20" under the old Energy Minerals Allocation Recommendation System (EMARS) lease sale procedure. Additional acreage was added and in 1981, Getty Mining Company, who then owned PMC, proposed the Castle Valley Ridge Tract under a Call for Expression of Interest for the Round Two Coal-System Leasing Effort of the Uinta-Southwestern Utah Coal Region. The tract was evaluated in the Forest Service 1980 Situation

Statement, a Site Specific Analysis approved in 1982 and in the Unita-Southwestern Utah Coal Region Round Two Final Environmental Impact Statement which was completed on October 7, 1983. The Round Two leasing effort evaluated 27 tracts in Utah and Colorado. The CVR Tract was one of 22 tracts recommended for competitive leasing under the preferred alternative (Alternative Two, High Level). Due to a re-evaluation and major changes in the Federal coal management program in 1984, the CVR tract was not offered for leasing.

In January of 1988, the Uinta-Southwestern Utah Coal Region was decertified and as a result, new coal leasing within the Region will be conducted under the Lease on Application Process set forth in Federal Regulations 43 CFR 3425. Coal Lease Application UTU-64263 was the second application submitted in the Region under this process since decertification of the Region.

Cyprus-Plateau Mining Corporation's (CPMC) 1988 application covered only the southern half of the CVR Tract evaluated in 1982. The Tract Delineation Team, consisting of personnel from the BLM and FS, evaluated the tract configuration as submitted in CPMC's 1988 application. Based on the uncertainty of existing geologic data, the team recommended in it's Tract Delineation Review Report of February 1, 1989, that an additional 161.63 acres be added to UTU-64263 pursuant to 43 CFR 3425.1-9 (see Appendix A for report).

The tract under application as modified is legally described as:

T. 14 S., R. 7 E., SLM, Utah
Sec. 34, lots 3 and 4, N2SE4;

161.63 acres.

T. 15 S., R. 7 E., SLM, Utah
Sec. 2, lots 2-7, and 10-12, SW4, W2SE4;
Sec. 3, lots 1, 2, and 7-10, E2SE4, E2W2SE4;
Sec. 10, E2E2, E2NW4NE4;
Sec. 11, W2, W2E2;
Sec. 14, NW4, NW4NE4;
Sec. 15, E2E2NE4;

1,825.83 acres.

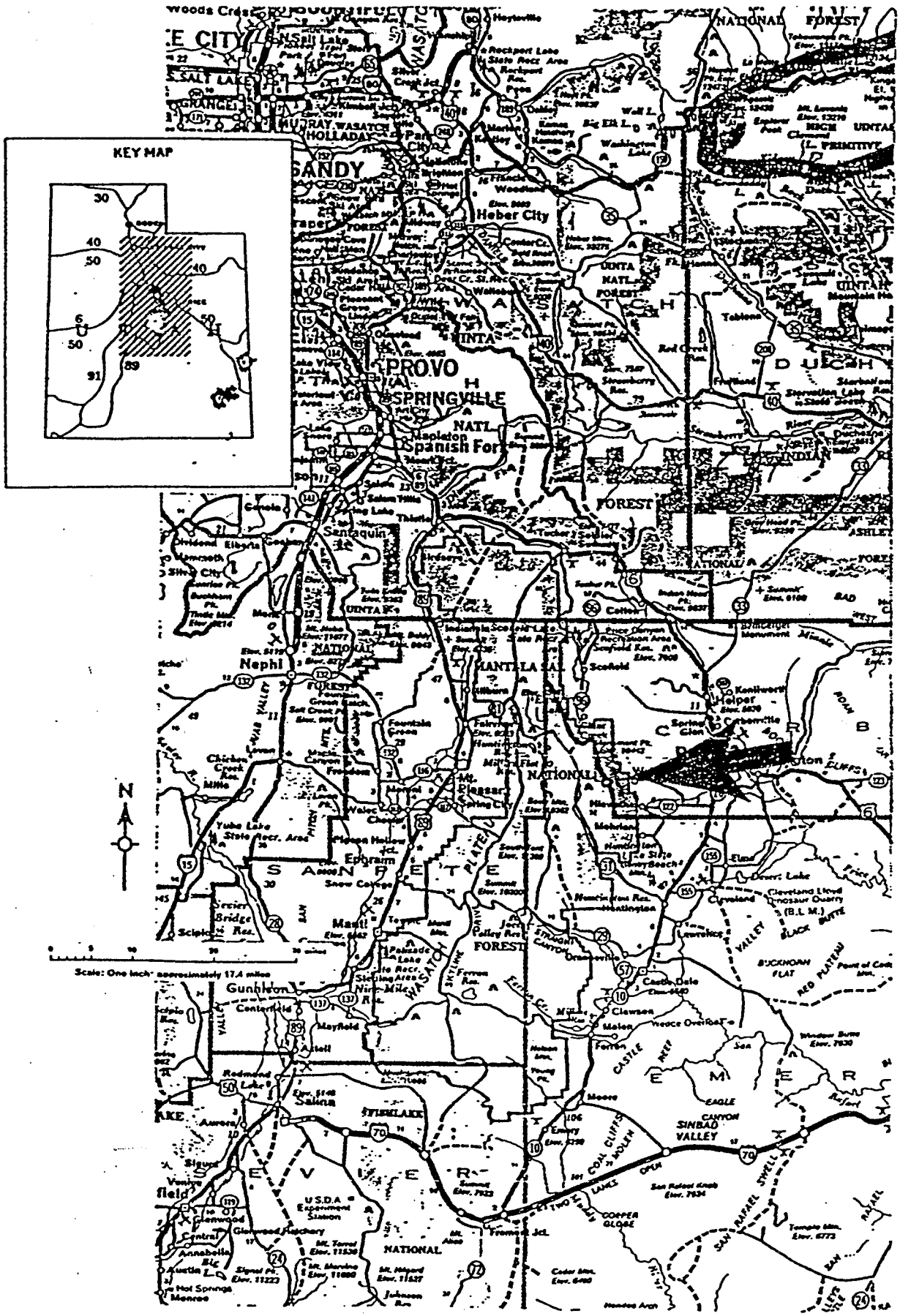
Total Acreage: 1,987.46 acres
Carbon and Emery Counties, Utah

For general location, please refer to Maps 1 and 2.

Pursuant to the Manti-LaSal National Forest Land and Resource Management Plan and Final Environmental Impact Statement (Forest Plan and FEIS), an initial analysis was conducted and it was determined that the tract is suitable for further consideration for coal leasing, subject to site-specific analysis and application of the coal lease unsuitability criteria.

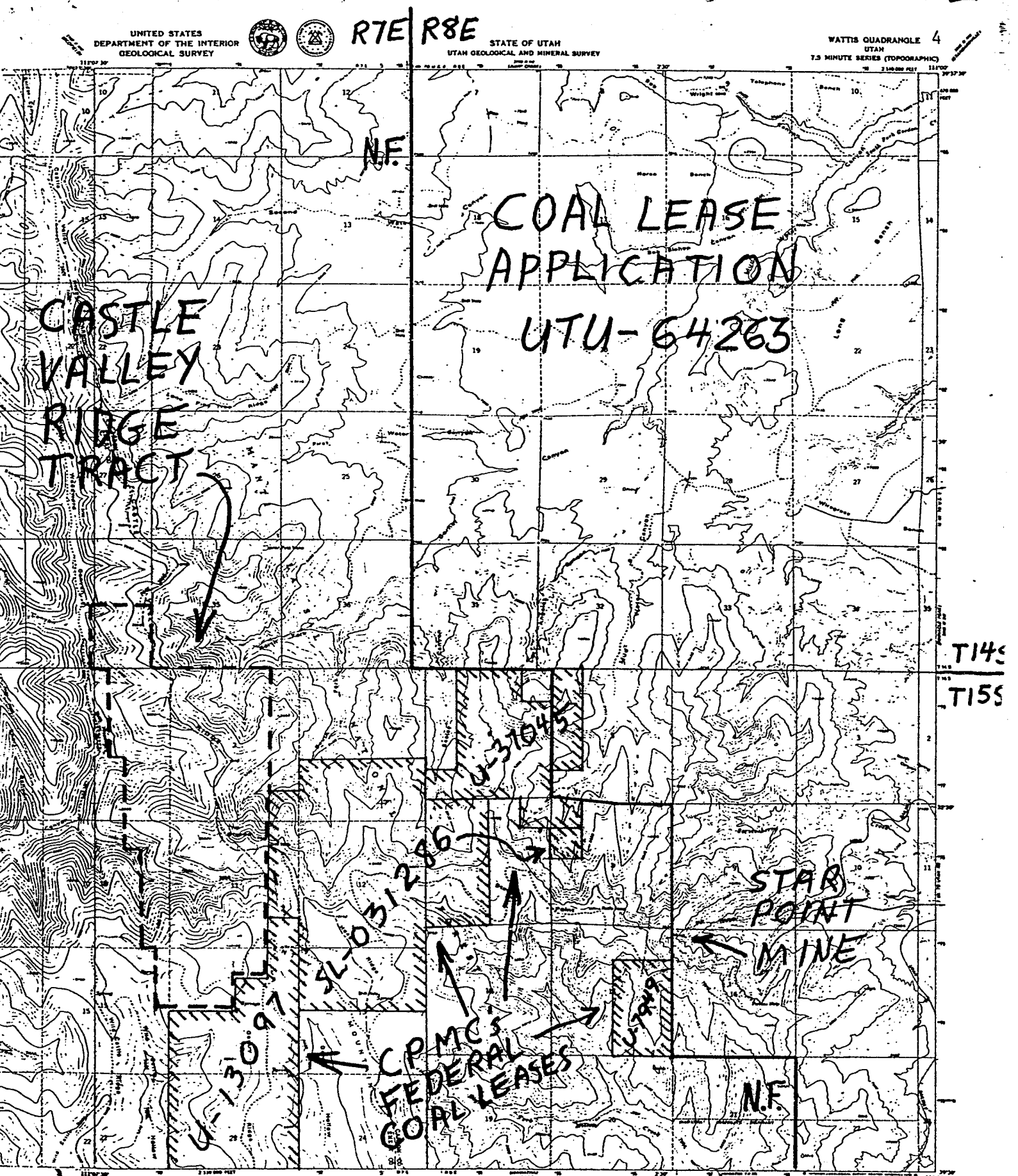
GENERAL LOCATION OF PROJECT

UTU-64263



MAP 1

MAP 2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U-7429
STAR
POINT
MINE
N.F.
SCALE 1:24 000
CONTOUR INTERVAL 80 FEET
ROAD CLASSIFICATION
WATTIS, UTAH

Q

It was also determined on 3/21/89, by the Forest Service, that there is sufficient information available to generally meet the Data Adequacy Standards for Federal Coal leasing adopted by the Uinta-Southwestern Utah Regional Coal Team and that it is consistent with the Manti-LaSal National Forest Land and Resource Management Plan.

The above information was provided to the Regional Coal Team and it was decided to proceed with further evaluation of the proposed tract as modified for leasing.

The Coal Lease Unsuitability Criteria (43 CFR 3461) have been applied to the tract and have been evaluated on a site-specific basis; no areas within the tract have been determined to be unsuitable for leasing.

The only existing coal lease holdings adjoining the tract include the applicant's leases in the Star Point Mine permit area which lies to the south and east of the tract. The Tract Delineation Team has determined that due to geologic conditions, the tract has potential economic access only from the existing mine workings in the applicant's leases to the south.

D. Public Issues, Management Concerns and Opportunities

General public comments were solicited by a news release, while specific public comments were solicited by letter dated 3/29/89 (see Public Involvement in Appendix B). Comments were received from the Utah Division of Wildlife Resources (DWR) and the Office of Surface Mining Reclamation and Enforcement (OSMRE). OSMRE has expressed a desire to participate in the NEPA process for the proposed tract. Their scoping comments, review of the final EA and participation in the upcoming public meeting have been invited. The issues addressed by the DWR have also been identified by the I.D. Team and will be discussed as management concerns. DWR's and OSMRE's letters are included in Appendix B. Comments on the unsuitability criteria were also solicited from the Utah Division of State History and the U.S. Fish and Wildlife Service regarding Cultural Resources and Threatened and Endangered floral and faunal species respectively. Comments have been received from the Utah Division of State History (see Appendix B) and they have essentially identified no problems with leasing at this time and that any consultation for Section 106 purposes will be conducted at the time that future surface disturbing activities are proposed and fully surveyed for cultural resources. Although comments have been solicited from U.S. Fish and Wildlife Service (See Appendix B), no comments have been received to date.

1. Public Issues and Management Concerns

Underground mining and mining induced subsidence could result in changes to ground water and surface water flow on and adjacent to the undermined area. This could result in the alteration of soil moisture, vegetation and wildlife habitat on the surface, above and adjacent to the mined area. In addition, mining operations

could affect water quality of ground water in aquifers which lie within and below the mine workings. Operations could also affect water quality in drainages downstream of the facilities. The DWR and Forest Service are concerned that subsidence could decrease the flow or dry up springs which are used by wildlife for watering.

2. Opportunities

a. Leasing and production of coal reserves from the tract would result in increased rent and royalties paid to the Federal Government and will supplement State and Local Government revenues.

b. The coal reserves in the tract would be mined and made available for energy production and industrial use.

c. If the tract is mined through the existing Star Point Mine, the life of the mine would be extended approximately 5 years at their current rate of production by providing additional coal reserves.

E. Negative Declaration

The ID Team determined that this action, after mitigation, would cause no significant impacts on the following: prime or unique rangelands, wetlands, timberlands, or farmlands; floodplains; known cultural or paleontological resources; alluvial valley floors; known Threatened, Endangered, or Sensitive plant or animal species.

The Coal Lease Unsuitability Criteria (Federal Regulations 43 CFR 3461) have been applied on a site-specific basis and no areas within the tract have been determined to be unsuitable for leasing.

II. ALTERNATIVES

A. Alternative One - No Action

Consideration of the "No Action" alternative is required by Federal regulations contained at 43 CFR 1502.14(d). If the course of this alternative were adopted, this tract would be eliminated from further leasing consideration and the application would be denied. The coal resource would not be developed and the site-specific environment of the subject area would in no way be affected.

B. Alternative Two - Offer the Tract for Leasing with Application of Management Requirements

Under this alternative, the tract would be offered for competitive leasing subject to standard and special lease stipulations. The

boundaries of the tract would remain unchanged from the configuration submitted in CPMC's applications as modified by the Tract Delineation Review Report which lie totally within the tract boundary as identified and evaluated in the Round Two leasing effort.

The required mitigations which are attached as Appendix C will be included in the lease as special stipulations in addition to standard BLM lease stipulations. They are consistent with the Forest Plan and require necessary special measures for protection of and/or coordination with the affected resources and mitigation of impacts.

III. AFFECTED/EXISTING ENVIRONMENT

The affected environment of the subject area has been generally described in numerous environmental documents and resource reports prepared for coal leasing, exploration and development in this and surrounding areas. These documents are listed for reference in Section VI, Selected Tiering and Reference Documents. There are several resources on the lease for which concerns were identified. These resources are essentially unique to the proposal and are evaluated in this document.

A. Topography/Physiography/Geology

The Wasatch Plateau lies within the Basin and Range-Colorado Plateau Transition Physiographic Province. The east flank rises almost 3,000 feet above Castle Valley. The upper 1,500 to 2,000 feet of this rise is a near vertical erosional escarpment or cliff. The sedimentary rock layers dip gently to the northwest throughout the central and eastern portions of the plateau. The plateau top is dissected by north-south trending fault zones which form north-south trending ridges and canyons.

Along the west flank of the plateau, the rock layers bend downward, dipping steeply to the west, and form the west flank. The west flank slope is controlled by the dip of the rock layers and is not as steep and abrupt as the east flank. This monoclinal fold of the rock layers is known as the Wasatch Monocline. Both the east and west flanks are deeply incised by east-west trending drainages and their canyons. North-south trending normal faults and extensive fault zones are common.

The tract area is located within the east-central portion of the Wasatch Plateau. Elevations range from approximately 8,800 to 10,100 feet above mean sea level. The southern portion of the lease is situated along the flat-lying northern portion of Gentry Mountain and is separated from the narrow, north-south trending Castle Valley Ridge to the north by a drop in elevation near mid-tract known as The Steeps. More than half of the tract has slopes that exceed 50%.

Rock formations exposed on the tract, in ascending order, are Mancos Shale, Blackhawk Formation, Price River Formation and North Horn Formation. These formations range in age from Cretaceous to Tertiary.

The coal seams of interest on the tract occur within the lower 150 feet of the Blackhawk Formation. There are numerous coal seams within the Blackhawk; however, only three coal seams (Wattis, Third, and Hiawatha) are continuous across the tract and obtain a thickness of four feet or greater. Of these three seams, only the Wattis is known to be minable. It may be possible to recover a small portion of the Third bed; however, this will have to be determined at a later time.

Outcrops of coal occur along the west edge of the tract which is the east side of Nuck Woodward Canyon and the head of Little Nuck Canyon, the northeast end of the tract at the head of North Fork of Corner Canyon and the east side of the tract at the head of South Fork of Corner Canyon. A 500-foot burn zone was used around all outcrops. Two major faults adjacent to the tract's east and west boundaries are constraints to mining. The strata on the tract dips approximately 3 degrees to the south-southwest. The overburden thins to the north of the tract. The apparent rank is high-volatile B bituminous coal. The preliminary recoverable reserve base for the Wattis seam is estimated by BLM to be 7,730,000 tons.

The tract has limited access based on faulting and economic value due to the relatively small amount of reserves present; therefore, only one mining scenario is considered practical. Access will be from CPMC's underground workings planned for U-13097 which lie within the Star Point Mine permit area adjacent to the southern and eastern boundaries of the tract. No additional surface facilities other than the possibility of ventilation breakouts should be needed since the Star Point #2 Mine facility will handle the additional tonnage that would be produced.

B. Hydrology and Climate

Annual precipitation from an area of comparable aspect, elevation and dominant vegetation was found to be 28 inches. A station summary of 12 years of record, illustrated that only 2.93 inches, or 10.4 percent, of the total average precipitation falls during the July through August growing season (Straight Canyon Barometer Watershed). Rainfall during the summer months often occurs in the form of intense thunderstorms. The nature of these storms can generate substantial surface runoff, possibly creating a significant increase in erosion rates, depending on soil type, plant basal area, slope, storm intensity, and duration. The freeze-free season of Castle Valley Ridge is 0-40 days. Average temperatures range from a minimum of 8 degrees in January to a maximum of 82 degrees Fahrenheit in July.

The Castle Valley Ridge Coal Tract is located on Castle Valley Ridge which forms the drainage divide between the Huntington Canyon and Price River Watersheds. Huntington Creek is tributary through the San Rafael and Green Rivers to the Colorado River. The Price River is tributary to the Colorado River through the Green River. Four stream channels drain the west side of the tract into Nuck Woodward Canyon which then drains to the south and west into Huntington Creek. The east side of the tract is drained by the North and South Forks of Corner Canyon which flow through Gordon Creek to the Price River. The southern tip of the tract is drained by Wild Cattle Hollow and Gentry

Hollow which flow to Tie Fork then into Huntington Creek. Data indicates that the South Fork of Corner Canyon and Little Park Creek are perennial. Little Park Creek is the southernmost drainage which drains the west side of the tract. Both drainages are fed by springs which emerge from within the tract boundary. The remaining drainages within the tract are intermittent, however, some short reaches are perennial immediately below springs.

Beneficial use standards for waters on and near the tract are 1c, 3a and 4 (Standards for Quality of Water for the State of Utah, 1987). All waters within the outer boundaries of National Forests are considered to be antidegredation segments for water quality. Category 1c is protected for domestic purposes with prior treatment by standard complete treatment processes as required by the Utah Department of Health. Category 3a is protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain. Category 4 is protected for agricultural uses including irrigation of crops and stock watering.

Continuous stream flow records are not available for any of the streams that drain the tract. Seiler and Baskin (1988) completed a study of the hydrology of the Castle Valley Ridge and Alkali Creek Coal-Lease Tracts and the potential effects of coal mining (U.S. Geological Survey Water Resources Investigation Report 87-4186). Since continuous streamflow records are not available for any of the drainages on the tract, Seiler and Baskin (1988) computed the flows in the South Fork of Corner Canyon using regression equations. They estimated the 10-year peak flow to be 60 cubic feet per second and the average flow to be 0.74 cubic feet per second at it's confluence with the North Fork. Seiler and Baskin report that the predominant chemical constituents of water sampled from this location in the South Fork are magnesium, calcium, bicarbonate and sulfate. The water quality changes from high flows (snowmelt runoff) in the spring to low flows in late summer and fall when springs contribute a greater percentage of the flow. As streamflow decreases, the concentration of major ions and the proportion of magnesium and sulfate increases. Examination of data presented by CPMC in the application shows that flow in Little Park Creek exhibits similar characteristics. CPMC's data (1980-1987) show that Total Dissolved Solids (TDS) concentrations in the South Fork of Corner Canyon, measured just above the confluence with the North Fork, range from 445 mg/l to 1,400 mg/l with an average concentration of 648 mg/l. CPMC's data for Little Park Creek sampled just above the confluence with Nuck Woodward Creek in September of 1987 and June of 1988 showed a TDS concentration of 280 mg/l and 258 mg/l respectively. For parameters which have been tested, water quality is generally consistent with numeric standards for the beneficial uses. Phosphate is an exception. The values for phosphate on this tract and the Wasatch Plateau often exceed the standard for cold water fish (3a). The phosphates are believed to be naturally occurring.

Twelve springs have been mapped within or directly adjacent to the tract boundary by CPMC and Seiler and Baskin (1988). Ten of these springs issue from the Star Point Sandstone or Blackhawk Formation. One issues from the Price River Formation and the remaining spring

issues from the Castlegate Sandstone at the contact with the Blackhawk Formation. Four of the springs within the tract have been developed for livestock and wildlife watering. There is one small stockpond.

Water samples from 17 springs in the area were analyzed. The predominant ions in water from springs in the North Horn Formation, Castlegate Sandstone and Price River Formation are calcium and bicarbonate. The predominant ions in water from the Blackhawk Formation are calcium, bicarbonate and magnesium. The predominant ions in water from the Star Point Sandstone are calcium, bicarbonate, magnesium and sulfate. TDS concentrations were highest in springs from the Star Point Sandstone, ranging from 383 to 579 mg/l (Seiler and Baskin, 1988).

Ground water movement, both volume and direction, is controlled by geologic conditions and structure. Lithology, faulting, jointing and dip of the rock layers influence ground water movement and recharge. The Star Point Sandstone and lower Blackhawk Formation form a localized aquifer as indicated by the number of springs which flow from these units. Perched aquifers also occur in the discontinuous sandstone lenses of the upper Blackhawk Formation and other overlying formations. Recharge occurs at the higher elevations from snowmelt and runoff. Water infiltrates the ground water regime through porous rock, joints and faults. The dip of the rock layers is approximately 3 degrees to the southwest. The water flows down-dip until it encounters faults or joints and is diverted to lower units or is trapped in discontinuous perched sandstone lenses. Flow in the Blackhawk-Star Point aquifer is probably controlled by Bear Canyon fault (Seiler and Baskin, 1988). Faults probably form major conduits for water flow especially where downward flow is impeded by shales. This is indicated by the close correlation between spring and fault locations. The flow of water in the faults is probably to the south as indicated by the emergence of springs along the north slopes of drainages at fault locations.

C. Soils

Several soils reports are available for this area. It was mapped at the Order 4 intensity level in the Land Systems Inventory of the Ferron-Price Planning Unit by Dale Rapin, 1977. This inventory designates four land-type associations present in the area. They are land-type associations A, J, M, and N. Reference should also be made to two reports by Jim Iaquinta. These are: (1) "Soil Resource Evaluation for Getty Oil Coal Exploration Proposed on Castle Valley Ridge", 12/15/80, and (2) a supplement to the preceding report, 2/9/81. The soils on the steep slopes are sensitive to disturbance but would not be considered "unreclaimable".

Natural soil erosion rates are quite high on the west facing steep slopes, however, the erosion rates have not been calculated. This would need to be done prior to disturbance if they were identified in a plan of operations. There are few limitations for activities on soils at the south end of the lease tract (Unit A on the land-type association map), but the northern 3/4 of the tract is limited by steep slopes and sensitive soils.

D. Range and Wildlife

The tract is within two cattle allotments. There are 1,440 head that graze the Gentry Mountain C&H Allotment to the south from approximately June 27 to September 30; while 246 head that graze the Castle Valley Ridge C&H Allotment to the north from June 21 to September 30.

The general area is heavily used for calving by elk. Elk use the area in the spring and early summer and then again in the late fall. It is important to the productivity of the elk herd to have areas such as Castle Valley Ridge where they find seclusion (undisturbed by man) for calving and during the early part of the young calf's life. Some studies have shown that a cow will return to the same vicinity to drop her calf when she has been successful in past years in raising her young. This accounts for the heavy calving use we find in some areas such as the Castle Valley Ridge area.

The diversity of vegetative types on the lease tract supports a diverse wildlife population. Besides deer and elk, other game and furbearing species include: black bear, cougar, bobcat, badger, coyote, snowshoe hare, and occasionally moose have been seen. Avifauna of the area may include several species of raptors, jay and sparrow. Because of the diversity of habitat components, there are many small mammals and songbirds found on the lease which are too numerous to list in detail in this report.

There are no fisheries within the tract. Surface water from the tract does drain into Huntington Creek which is considered a valuable fishery. Bald eagles, an endangered species, are annual visitors in the region between November and March, however, no critical habitat has been identified within the tract. No other Threatened, Endangered or Sensitive species are known to inhabit the tract.

E. Vegetation

Trees such as Douglas fir, Englemann spruce, Subalpine fir and some White fir are scattered throughout the tract area, but are mostly found in stands occurring on the north and east facing slopes. Quaking aspen are found mostly on the more gentle slopes and somewhat wetter sites on the south and west slopes. Mountainbrush types occur on the dryer exposed slopes and are mostly dominated by mountain sagebrush, oakbrush, snowberry, serviceberry and some mahogany. A grass type occurs on the tops of the high ridges and windy upper slopes of the area. The dominant species are Salina wild ryegrass and western wheatgrass. There are several plant communities within each of the broad vegetative zones occuring in the tract. These are: Douglas fir - snowberry - carex; White fir - common juniper - bluegrass; Englemann spruce - Alpine fir - wild gooseberry; Aspen - snowberry - slender wheatgrass; Aspen - Oregon grape - bluegrass; big mountain sagebrush - western wheatgrass; mixed mountainbrush - slender wheatgrass; Salina wildrye - Coltons locoweed; Salina wildrye - low rabbitbrush types. Other types or phases of the above types do occur within this area. Each of these vegetative types and phases have