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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Price Field Office
125 South 600 West
Price, Utah 84501

3482

(UT-070)

Ark Land Company
c/o Canyon Fuel Co., LLC
Dugout Mines
PO Box 1029
Wellington, Utah 84542

NOV - 5 2003

NOV - 7 2003

Dear Mr. Stephenson:

Our decision is to grant an exploration plan (submitted 09/18/03) on Federal coal lease UTU-07064 to Ark Land Company Dugout Mine to access and drill seven coal exploration holes (A, B, C, D, E, F, G) subject to the following conditions:

- 1) The enclosed Bureau of Land Management (BLM) drilling stipulations will be followed.
- 2) Your current bonding is sufficient for this exploration plan.

If you have any questions regarding this matter, please contact Don Stephens of our staff at 435-636-3608.

Sincerely,

Patrick Gubbins
Field Manager

Enclosure

BLM Stipulations (3 pp)

cc: UT-92313, J. Kohler, Utah State Office (w/Enclosures)
UT-92413, R. Lopez, Utah State Office (w/oEnclosures)
Pamela Grubaugh-Littig (UDOGM) (w/Enclosures)
Division of Oil, Gas and Mining
1594 West North Temple Street
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Salt Lake City, Utah 84114-5801

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Canyon Fuel Company, LLC Pace Canyon Coal Exploration

Environmental Assessment UT-070-2003-55

October 2003

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DIV. OF OIL, GAS & MINING

Prepared By
USDI Bureau of Land Management
Price Field Office
Price, Utah

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Canyon Fuel Company, LLC
Pace Canyon Coal Exploration
Environmental Assessment UT-070-2003-55

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1.0 INTRODUCTION AND PURPOSE AND NEED

1.1 Purpose and Need

Ark Land Company (a subsidiary of Arch Coal, Inc.) on behalf of Canyon Fuel Company, LLC (CFC) has filed a Notice of Intention (NOI) to conduct coal exploration for the existing Dugout Canyon Mine in Carbon County, Utah. This exploration would be conducted in accordance with BLM Regulations 43 CFR Part 3482 and State of Utah Coal Mining Regulations, R645-200 through R645-203. The proposed exploration area covers federal lands overlying the Federal U-07064 coal lease. CFC proposes to complete up to seven exploration drill holes to evaluate the reserves and quality of coal seams within the Blackhawk Formation.

1.2 Authorizing Actions and Permits

1.2.1 Bureau of Land Management Land Use Plan Conformance The Proposed Action is subject to the Bureau of Land Management (BLM) Price Field Office Price River Management Framework Plan (MFP, 1984). The mineral objective decision (M-1) of the MFP pertaining to the replacement of current oil and gas with the production of other domestic energy minerals states:

"Allow and encourage development of those leaseable minerals known to occur within the planning area in accordance with current laws and regulations so as to aid in filling the local and national energy requirements."

1.2.2 Relationship with Other Statutes, Plans and Required Permits Various Federal, State, and local statutes, permits, easements and rights-of-way (ROW) may be required for actions associated with the proposed development. A UPDES Storm Water Permit consisting of a Stormwater Pollution Prevention Plan (SWPPP) would be required if the total disturbance exceeds one acre.

1.3 Issues Identified for Analysis

Environmental issues were identified for the Proposed Action utilizing an interdisciplinary process during a BLM scoping meeting. Issues associated with the natural resources, resource values, natural processes, and components of the human environment were derived during the meeting and were limited due to either minor or no additional disturbance resulting from the Proposed Action.

- Soils

- Vegetation
- Threatened, Endangered and Sensitive Species*
- Water Quality*
- Cultural Concerns*

1.4 Issues Considered and Dismissed

The following environmental elements were reviewed to determine the need to include them for analysis in this document. It has been determined that these elements would not be affected by the Proposed Action and will not be discussed further in the document:

- **Air Quality*** No effects have been identified.
- **Areas of Critical Environmental Concern (ACECs)*** No ACECs are present within the Proposed Action area.
- **Environmental Justice*** No minority or economically disadvantaged communities or populations have been identified which could be affected by the Proposed Action.
- **Hazardous and Solid Wastes*** Actions taken by CFC under the coal exploration program (CEP) in association with similar coal exploration actions taken, would be satisfactory to address this issue. Hazardous and solid wastes would be contained by berms being constructed around drill sites to contain any potential spills. All spills of polluting materials would be removed from the area and properly disposed in appropriate facilities. Refer to Appendix A.
- **Native American Religious Concerns*** No such concerns have been identified during cultural issue evaluation.
- **Non-native and Invasive Species*** No such concerns have been identified within the Proposed Action area.
- **Prime and Unique Farmlands*** No such areas exist within the Proposed Action area.
- **Native American Trust Resources** There are no Native American Trust Lands within the Proposed Area.
- **Rangeland Standards** The Fundamentals of Rangeland Health (43 CFR 4180) including watersheds, condition, and water quality have not been analyzed. The Proposed Action may affect these standards and guidelines or the livestock grazing.

However, the effect is expected to be temporary and minor.

- **Wild and Scenic Rivers*** No such designations exist within the area of the Proposed Action nor are there any rivers eligible for such designation in the area.
- **Wilderness*** No such designations exist within the area of the Proposed Action.
- **Floodplains*** No action will occur nor will any disturbance take place within a floodplain.
- **Wetlands and Riparian*** No wetland and/or riparian areas would be impacted as a result of the Proposed Project.

*Critical Elements of the Human Environment

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction

2.1.1 **Alternative A – No Action** The proposed coal exploration within this portion of the Pace Canyon area would not be granted and the action would not occur as described.

2.1.2 **Alternative B – Proposed Action** The Proposed Action by CFC would be to drill three exploratory drill holes on BLM land, overlying Federal coal lease U-07064. Depending upon information gathered during this exploration project, an additional four holes could be drilled in this area. This information is needed to accurately locate structural control data on the Gilson Coal Seam. The Dugout Canyon Mine would use this information for determining the feasibility of a ventilation breakout. The Proposed Action can be seen on Plate 1 and 2. Past mining and logging activities have previously disturbed most of the project area. Drilling pads, erosion control structures, and mud pits would be constructed on sites prior to drilling activities. Drilling operations would be completed in the fall of 2003. The proposed drilling sites are in Carbon County, Utah. The specific exploration sites are shown in Table 1.

TABLE 1
Site Identification, Drilling Date, Surface/Mineral Rights,
and Locations/Sections

Hole ID	Year Drilled	Surface/Mineral Rights Status	Location of Drill Sites and Seismic Activity
A	2003	Federal/Federal	T. 13 S., R. 13 E., Section 30
B	2003	Federal/Federal	T. 13 S., R. 13 E., Section 30
C	2003	Federal/Federal	T. 13 S., R. 13 E., Section 30
D	2003	Federal/Federal	T. 13 S., R. 13 E., Section 30
E	2003	Federal/Federal	T. 13 S., R. 13 E., Section 30
F	2003	Federal/Federal	T. 13 S., R. 13 E., Section 30
G	2003	Federal/Federal	T. 13 S., R. 13 E., Section 30

An improved, gravel road through Clark's Valley, herein called the Clark Valley Road would be used to access the drill sites. From the Clark Valley road, a private dirt/gravel road (Pace Canyon Road) would be used to access the site. These two roads would provide the main access for all the drilling activities. All of the access roads in the project area are located on private surface lands. Erosion control structures, utilizing the State of Utah and BLM's Best Management Practices (BMPs) would be used in sensitive areas to prevent runoff erosion.

Sites A, C, and D are located along Pace Canyon Road. Site B is located along an abandoned segment of the Pace Canyon Road that may need some minor upgrading. Site E is located within a flat disturbed area immediately east of Pace Canyon Road. Site F is topographically above Pace Canyon Road further northward from the site. To drill site F approximately 165 feet of pre-existing road would need to be upgraded. Site G is also topographically above the Pace Canyon Road and approximately 80 feet of new road would need to be constructed.

The general method to be followed during the drill hole exploration, reclamation, and abandonment would be: 1) repair the roads where needed and prepare the drill site pad, 2) drill, log, and plug the exploration drill hole, 3) reclaim the drill site pad and access route. No blasting will be done for road building or repair. Repair of roads would include grading to fill rutted areas and hauling of gravel to fill rough areas on bedrock ledges. Road repair and drill site preparation and reclamation would be done with a dozer and a road grader. Equipment operators and geologists would use pickup trucks or SUVs for transportation.

Except for drill sites F and G, the sites are located on flat ground adjacent to the Pace Canyon Road and require minimal disturbance. Due to the small drill pad size, the Pace Canyon Road would still be adequate to handle the light traffic load in this area. Site F would require upgrading of a pre-existing road and some leveling for the drill site pad. Site G would require a short segment of new road. Shallow earthen pits may need to be dug to contain cuttings and drill fluids or serve to hold portable pits (livestock troughs). When mud pits cannot be constructed, livestock troughs would be used or the drilling mud, foam, and/or cuttings would be hauled off and disposed of properly.

Core drilling would involve one truck-mounted 1,000 foot rated core drill, one 3,000 gallon water truck, one supply and drill pipe trailer, three pickup trucks, a geophysical logging truck, and one covered trailer. The drilling procedure for the exploration holes would be either continuously core to total depth, rotary drilling and spot coring of selected zones, or a combination of both. Surface casing may be needed to segregate the unconsolidated material that overlies the Blackhawk Formation. The holes would be shallow and less than 100 feet each.

Water would be hauled from the Right Fork of Dugout Creek and/or Pace Creek to drill sites (Plate I). The supply trailer would carry drill steels, coring equipment, drilling additives, cutting and welding equipment, and other supplies. The drillers would use two pickup trucks for personnel, fuel, and supplies and the dirt contractor would use one pickup truck. The logging contractor would use a single axle one-ton rated truck. The company representative and geological consultant would also use pickup trucks or SUVs for transportation.

Earth excavation, if necessary would mostly be done for the drill sites using a dozer or backhoe and road grader. Excavation, if necessary, would include grubbing, removal and separate storage of the soil A horizon and, if needed, removal and separate storage of material below the soil A horizon to make a level drill site. The only material disposed of at the drill sites will be cuttings, possible core and any drilling foam and/or mud which would be placed in the mud pits.

The exploration drill holes would be plugged with a cement or cement/bentonite slurry to their full depth. The completion method includes pulling surface casing when possible; but when not possible, cutting it flush with the ground, then pumping the cement/bentonite slurry through the drill pipe starting at the bottom of the hole. Plugging would then be done in stages by tripping-out of the hole with each joint. The process would be repeated to the surface. The plugged hole would be flush with the ground surface. The BLM would be notified of when plugging will start. The potential for water pollution would be minimized by keeping pollutants away from the drill hole and in their containers. Materials used during drilling operations would be selected to be as non-polluting as possible. Berms would be constructed around the drill hole sites to contain any potential spills. All spills of polluting materials would be removed from the area and properly disposed of. See Appendix A for the Fuel/Oil Spill Plan.

All the drill holes may range from a nominal 3 3/16 inches to 10 inches in diameter, depending on the drilling method. The estimated depths of the proposed drill holes and other drill hole information is given in Table 2. Drill site acreage is estimated for a 70 foot by 70 foot pad. It is anticipated that the pads will be small in size and adjacent to the road. The road may serve as part of the drilling pad but road access would be maintained around the drilling rig. Access routes are estimated to be 14 feet wide. An estimated timetable for all exploration related activities is given in Table 3.

TABLE 2
Estimated Drilling Depths and Associated Disturbance

Drill Site	Total Depth (ft)	Disturbed Acreage		
		Drill Site	Access Route	Total
A	50	0.12	0.00	0.12
B	50	0.12	0.00	0.12
C	50	0.12	0.00	0.12
D	50	0.12	0.00	0.12
E	50	0.12	0.00	0.12
F	50	0.12	0.05	0.17
G	50	0.12	0.05	0.17
TOTAL	350	0.84	0.10	0.94

TABLE 3
Estimated Exploration Activities

Event	Week 1	Week 2	Week 3	Week 4
Prepare Access/Sites				
Core Drilling				
Reclamation				

The only coal removed during exploration activities would be cores. Assuming a core diameter of three inches and an average thickness of seven feet for the Gilson Seam, an estimated 85 pounds of coal would be removed.

Reclamation activities would closely follow the completion of each hole and be conducted in accordance with the applicable requirements set forth by the State of Utah Coal Mining Regulations (R645-202), the landowner, and the BLM. Upon completion of drilling activities at a given site, all debris, and drilling related equipment would be removed from the site. When the mud pit is sufficiently dry, it would be backfilled with stored subsoil material and compacted to minimize settling. A backhoe or a bulldozer would redistribute the subsoil and topsoil material on and around drill pads to achieve approximate original contour. Straw bales/silt fences would be removed to facilitate reclamation of the drill sites. Entire drill pad areas, excluding existing road surfaces that would be used as part of the pad, would be significantly roughened and reseeded shortly thereafter using the seed mix that has been approved for use by the UDOGM, and the BLM for reclamation. The suggested mix that has been approved is described in Table 4.

Shortly after the seeding of disturbed areas, the seed, in most cases, would be lightly buried and protected by raking the reseeded surface area. Based upon site-specific conditions, however, clean straw or hay mulch would be applied at the rate of 2,000 pounds per acre⁻¹, where warranted, to provide better protection from erosion.

The drill pad and access road reclamation procedure outlined above would apply only to those areas disturbed as a result of this exploration. Preexisting roads would be left in a condition equal to or better than that observed on CFC's entry into the area.

TABLE 4
Suggested Seed Mix

Common Name	Scientific Name	Pounds PLS Acre ⁻¹
Western wheatgrass	<i>Agropyron smithii</i>	2.00
Bluebunch wheatgrass	<i>Agropyron spicatum</i>	2.00
Indian ricegrass	<i>Oryzopsis hymenoides</i>	1.00
Intermediate wheatgrass	<i>Agropyron intermedium</i>	2.00
Fairway wheatgrass	<i>Agropyron cristatum</i>	1.00
Northern sweetvetch	<i>Hedysarum boreal</i>	1.00
Small barnet	<i>Sanguisorba minor</i>	1.00
Fourwing saltbrush	<i>Atriplex canescens</i>	1.00
Sandberg bluegrass	<i>Poa secunda*</i>	0.50
Pacific aster	<i>Aster chilensis-adscendens*</i>	0.25
TOTAL		11.75

*Included if available

3.0 AFFECTED ENVIRONMENT

3.1 General Setting

The exploration area is located in the Book Cliffs physiographic area. The elevation of the proposed exploration area is approximately 7,000 feet. The seven proposed drilling sites are mainly located on previously disturbed sites or on existing roads. This area has been heavily logged many years ago and again in the last five years. The primary vegetation types consist of mountain shrubs, sagebrush-grass, pinyon-juniper.

3.2 Soils

Soils in the project area have been mapped at the Order 3 intensity level by the Soil Conservation Service, (now the Natural Resource Conservation Service) (NRCS) as part of the Soil Survey of the Carbon Area, Utah, 1988. An on-site inspection and evaluation of the soil resources at each drill site was also conducted on September 24, 2003.

Soils - Drill hole locations A, B, C, D, E, and F are all on currently disturbed sites from previous mining and exploration activities and road construction. Only drill hole G would involve soils that are currently undisturbed.

Soil materials consist of stony and cobbly colluvium derived mostly from sandstone and siltstone. Coal is intermingled in the soils throughout the site. The texture of the soil matrix is generally loam but includes spots of silt loam and sandy loam.

The project area is located near the canyon bottom at the transition of soil map unit 96-Rock outcrop-Rubble and -Travessillia complex and soil map unit 21 - Croydon loam, 8 to 30 percent slopes as identified by the Natural Resources Conservation Service in the Soil Survey of the Carbon Area, Utah.

The short section of access road to drill hole G has soils that appear to be similar to the Datino soil series (loamy-skeletal, mixed, superactive, frigid Entic Haplustolls). The surface soil, to a depth of about 10 to 14 inches is very dark grayish-brown (moist) cobbly loam bordering on silt loam and very fine sandy loam. Subsoils are dark yellowish-brown (moist) very cobbly to very stony loam. The soils are well drained, permeability is moderate, and the hazard of erosion by water is moderate. They are neutral to moderately alkaline in reaction.

3.3 Vegetation

The Proposed Action lies within a previously disturbed section of Pace Canyon. The dominant vegetation consists of Pinyon pine, Rocky Mountain juniper, Utah juniper, and Bigtooth maple. Small amounts of Douglas-fir are starting to establish in the area. Dominant shrub vegetation consists of Big Sage Brush and Snowberry. Other shrubs located in isolated amounts consist of serviceberry, Oregon grape, red elderberry, and cliff-rose. Forbs consist mostly of the weed Houndstongue with some lesser amounts of fleabane daisy and penstemons scattered around the proposed area. Cheat grass and Indian rice grass make up the dominant grasses. (Refer to Appendix B for scientific name list)

3.4 Wildlife Resources and Threatened, Endangered, and Sensitive Species

A variety of wildlife and potential threatened, endangered, and sensitive (TES) species habitat does exist in the Proposed Action area. The Proposed Action would be in the Anthro/Range Creek game management Unit 11. Presently the game management objective for deer in this unit is 8,500 animals and at last count there were 4,300. Elk objective for this unit is 1,700 animals and at last count the elk were above objective at 1,950. Mule deer and elk critical summer range are present in the Proposed Action area (Plate 1). Raptor species most common in area include golden eagle, red-tailed hawk, and prairie falcon (Plate 1). There are no active nesting sites near the Proposed Action area.

In accordance with the United States Fish and Wildlife Service's (USFWS) protocols, an inventory for the presence of threatened, endangered, and sensitive fauna and floral species was conducted on August 13, 14 and September 29, 2003. Loggerhead shrike, burrowing owl, Northern Goshawk, Despain footcactus, Wright fishhook cactus and Creutzfeldt cryptantha and Neo-tropical migratory birds were the sensitive species of concern within the area. A thorough search of all seven well sites and associated access roads did not reveal the presence of these species (Appendix C).

Mexican spotted owl (MSO) inventory work on the project area was conducted in 2001 and 2002 following USFWS protocol. Although some suitable habitat did exist within the project area, a thorough search did not reveal the presence of any Mexican spotted owls. The project area does not contain any designated critical habitat for MSO. Reviewing of the 97 and 2000 model did show some small areas with nesting/roosting potential. Dr. David Willey (Willey 2000) was contracted to evaluate MSO habitat in the area. Dr. Willey concluded that even though there were small areas that had potential for nesting/roosting, these areas were considered marginal for MSO.

3.5 Hydrology

The Proposed Action is located in Pace Canyon. Pace Creek at the Proposed Action area would be classified as an intermittent stream due to its past sporadic flow. Pace Creek is fed by springs located upstream. Presently, Pace Creek is not flowing near the project area. The continuing five-year drought has greatly reduced all surface flows in the area.

Ground water at the Dugout Canyon Mine, due to geologic conditions, consists mainly of perched water above the coal seams. This condition is found in other mines located in the Wasatch Plateau and Book Cliffs areas. This perched water at the Dugout Canyon Mine is in the Blackhawk Formation and is localized and not part of a regional aquifer.

3.6 Cultural Concerns

An archaeological inventory of the Proposed Action area was conducted by SENCO-PHENIX Archaeological Consulting Services in 2001. This site was also surveyed by AERC in 1980. Only one cultural site (historic coal loadout 42CB292) was located by AERC.

The area has been heavily logged since the original survey by AERC in 1980. The historic site has been extensively disturbed by heavy equipment. The foundation has been destroyed and the coal loadout has been collapsed and pushed into the bed of Pace Creek. The original Snow Mine rock-covered adit and stonewall are still on the other side of Pace Creek. There are also two 6' x 10' dugouts used as coal loadouts on the west side of the road. The integrity of the site has been basically destroyed. The site is not recommended for the NRHP (Senulis: 2001).

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Impact Associated with the Alternative A-No Action

Associated impacts identified with the No Action Alternative are derived from the inability to approve the CFC exploration wells. The action as proposed would need to be relocated and/or abandoned. CFC would need to establish some other means to facilitate the associated actions of exploration activities within the Pace Canyon area. There would be no direct impact to resources as a result of selecting this alternative.

4.2 Impacts Associated with Alternative B-Proposed Action

4.2.1 Analysis Assumptions For the purpose of analysis, several assumptions have been adopted. All relating provisions of the Price Field Office stipulations for minor coal exploration would be followed, as well as all agreements in place between CFC and the Price Field Office for field development and resource protection.

4.3 Soils

The total disturbance for all seven-drill holes is projected at .94 acres. Four of the seven drill holes would be located on existing roads that are presently being used or on old roads. Due to small drill pads required for this project, traffic would still remain on the Pace Canyon Road and would not require additional disturbance. This short-term disturbance, along with proposed erosion controls and with reclamation activities being completed this year, should have very little impact on the soils in the project area.

4.3.1 Mitigation Measures outlined in the Proposed Action to protect the soils and prevent erosion would be sufficient and no mitigation would be required

4.4 Vegetation

Impacts directly associated with the Proposed Action is estimated to be .94 acres, thus the impact would be minimal and temporary. Approximately 64 percent (0.60 acres) of the disturbance would be on previously disturbed sites or existing roads. Vegetation removed would consist mainly of sagebrush and grass. Approximately three small diameter, under three inches, Douglas-fir trees would also have to be removed. Revegetation of the site with the suggested seed mixture in Table 4 would result in a more diverse plant community. This seed mixture, as compared to natural revegetation, should generate a better and faster ground cover.

Drilling activities will be short lived and the disturbances reseeded as conditions become favorable.

4.4.1 **Mitigation** Due to the fact that the area will be reseeded the first available growing season and the site was previously heavily disturbed, no mitigation is warranted.

4.5 Wildlife Resources and Threatened, Endangered, and Sensitive Species

Impacts directly associated with the Proposed Action, due to the limited disturbance, would be minimal and temporary. The major impact associated with this action would be the disturbance of wildlife from the increased vehicle travel in the area. No active raptor nests, including Mexican spotted owls were located near the Proposed Action area and with exploration activities commencing after July 15, drilling activities should not have an impact on raptor nesting or deer and elk fawning and calving.

4.5.1 **Mitigation** In accordance with the requirements of the State of Utah Coal Mining Regulations (R645-200 through R645-203), UDOGM stipulations for "Minor Exploration", and the BLM, as well as the relatively small resource disturbance (.94 acres) associated with the Proposed Action, no mitigation would be required. These state regulations address environmental requirements associated with coal exploration and stipulates environmental data and reclamation activities necessary to obtain UDOGM approval. BLM guidelines require mitigation for disturbances in excess of 10 acres.

4.6 Hydrology

Potential affects of this action would be 1) increased sediment loading to Pace Canyon Creek by runoff of disturbed soils, 2) introduction of pollutants into alluvial ground water through boreholes, and 3) contamination of ground or surface water from spills. The proponent, in their Coal Exploration Plan submitted to the BLM, would protect surface waters with the Fuel/Oil Spill Plan (Appendix A). This plan address measures to be taken if a spill were to occur. Methods employed to control runoff such as, berms, silt fences, and pond lining would also minimize the potential for surface water contamination. The potential for ground water contamination, due to the shallow depth of the drill holes would be minimized with proper completion and plugging of the drill holes as outlined in the Proposed Action section.

4.6.1 **Mitigation** The application of BMP's such as, silt fences and berms during construction would help minimize sediment loading to Pace Canyon Creek. Implementation of the Spill Plan and proper cementation of the drill holes would be sufficient to prevent surface and ground water impacts and thereby, making mitigation unnecessary.

4.7 Cultural Concerns

Impacts associated with the Proposed Action would not have an affect on the existing historic site. The loadout remains of the old Snow Mine are basically destroyed according to Senulis: 2001. The remaining two dugouts on the west side of Pace Creek would not be disturbed by drilling activities and the remaining old portal adits are located on the other side of Pace Creek away from all activities.

4.7.1 Mitigation Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the operator, or any person working on his behalf, on public land is to be immediately reported to the Price BLM Office. The operator will suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Price BLM office. An evaluation of the discovery will be made by the BLM to determine appropriate actions to prevent the loss of significant cultural or scientific values. The operator is responsible for the cost of evaluation of any site found during construction. The BLM will determine what mitigation is necessary.

5.0 CUMULATIVE IMPACTS

5.1 Cumulative Impacts Associated with the Proposed Action

Activities proposed in the immediate area above CFC's Dugout Canyon Mine are six methane degasification holes. Total disturbance from these drill holes and associated roads is 3.01 acres. These holes would help to reduce methane concentrations in the mine thereby, making mining operations safer. All holes would be located on private property. Depending upon the results of this Proposed Action, the proponent may develop ventilation facilities in Pace Canyon. The extent of these facilities could vary from new portals to a new ventilation fan. Total disturbance is estimated to be less than .5 acres and most likely would be located on one of the seven proposed drill sites covered by this EA.

Other activities within the area include cattle grazing, logging and operations associated with the running the Dugout Canyon Mine. Logging activities over several decades have disturbed large tracts of lands. No other cumulative or residual impacts would be anticipated. Refer to Appendix D for a list of environmental safeguards associated with this EA.

6.0 CONSULTATION AND COORDINATION

6.1 Interdisciplinary Team (Bureau of Land Management)

- Don Stephens, Geologist Project Manager
- Kerry Flood, Hydrologist Hydrology
- Brad Higdon, NEPA Coordinator NEPA Development
- Mark Mackiewicz, Realty Specialist/Soils Soils
- Blaine Miller, Archaeologist Cultural Resources
- David Mills, Wildlife Biologist Wildlife Resources
- Karl Ivory, Range Management Specialist Grazing

6.2 List of Preparers

6.2.1 EIS Environmental and Engineering Consulting; Helper, Utah

Tom Paluso	Project Manager and Resource Coordinator B.S. Engineering M.S. Civil/Environmental Engineering
Melvin Coonrod	Wildlife B.S. Ecology B.S. Chemistry and Invertebrate Zoology M.S. Silviculture
Dave Basinger	Vegetation and Wildlife B.S. Botany
Rick Richey	GIS/AutoCad Mapping A.D. Graphic Design
Dan Larsen	Soils B.S. Conservation of Natural Resources M.S. Soil Science

6.2.2 SENCO-PHENIX; Price, Utah - Assessment of Cultural Resources

- John Senulis, Archaeologist

6.2.3 MT. NEBO SCIENTIFIC; Springville, Utah - Assessment of Threatened, Endangered and Sensitive Species

- Patrick Collins, Owner, Ph. D.

6.3 Agencies, Organizations and Individuals Contacted

Contacts with the associated land use agencies, interested parties, and individuals have been made during the course of this EA. The input from meetings, briefings, and conversations has resulted in the completion of this document. A list of specific individuals contacted is listed under references.

6.3.1 Federal Government/Agencies

- U.S. Department of Agriculture
 - Natural Resource Conservation Service - Soil Resources and Prime and Unique Farmlands
- U.S. Department of the Interior
 - U.S. Fish and Wildlife Service - Assessment of Raptor and Threatened and Endangered Species

6.3.2 State of Utah

- Department of Natural Resources
 - Division of Wildlife - Assessment of Wildlife and Habitat Resources

6.3.3 Industry and Business

- Vicky Miller, Environmental Specialist:
 - Canyon Fuel Company
- Mike Stevenson, Senior Geologist:
 - ArkLand Company

6.4 References

Wiley, David. 2000. Surveys for Mexican Spotted Owls within Breeding Habitat Predicted by GIS on the Tavaputs Plateau and in Desolation Canyon- Final Report. UDWR. 16 pp.

APPENDIX A

FUEL/OIL SPILL PLAN

Fuel/Oil Spill Plan

The following steps will be taken during the project in the event of a fuel, oil, or other spill of hazardous or toxic material.

1. The drill rig will be inspected for oil leaks before being brought into the project area. Any leaks will be repaired and the equipment thoroughly cleaned.
2. An impermeable layer (tarp or other liner) will be placed under the rig and any pooled material will be soaked up with absorbent pads, placed in plastic bags, and removed from the site.
3. Contaminated soil will be isolated and removed from the site.
4. Any contaminated soil will be hauled to a certified waste disposal site.
5. If removal of contaminated soil occurs, the area of removal will be reclaimed and reseeded as per other permitted drill site locations.

APPENDIX B

COMMON/SCIENTIFIC NAMES

Common Name	Scientific Name
Big Sage brush	<i>Artemisia tridentate</i>
Bigtooth maple	<i>Acer Grandidentatum</i>
Bluebunch wheatgrass	<i>Agropyron spicatum</i>
Burrowing owl	<i>Athene cunicularia</i>
Cheat grass	<i>Bromus tectorum</i>
Cliff rose	<i>Purshia mexicana</i>
Creutzfeldt cryptantha	<i>Cryptantha creutzfeldtii</i>
Despain footcactus	<i>Pediocactus Despainii</i>
Douglas fir	<i>Pseudotsuga menziesii</i>
Elk	<i>Cervus canadensis</i>
Fairway wheatgrass	<i>Agropyron cristatum</i>
Fleabane daisy	<i>Erigeron spp.</i>
Fourwing saltbrush	<i>Atriplex canescens</i>
Golden eagle	<i>Aquila shrysaetos</i>
Houndstongue	<i>Cynoglossum officinale</i>
Indian ricegrass	<i>Oryzopsis hymenoides</i>
Intermediate wheatgrass	<i>Agropyron intermedium</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Mexican spotted owl	<i>Strix occidentalis lucida</i>
Mule deer	<i>Odocoileus hemionus</i>
Northern goshawk	<i>Accipiter gentelis</i>
Northern sweetvetch	<i>Hedysarum boreal</i>
Oregon grape	<i>Mahonia repens</i>
Pacific aster	<i>Aster chilensis-adscendens</i>
Penstemons	<i>Penstemon Species</i>
Pinyon pine	<i>Pinus edulis</i>
Prairie falcon	<i>Falco mexicanus</i>
Red elderberry	<i>Sambucus racemosa</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Rocky Mountain juniper	<i>Juniperous Scopulorum</i>
Sandberg bluegrass	<i>Poa secunda</i>
Serviceberry	<i>Amelanchier alnifolia</i>
Small barnet	<i>Sanguisorba minor</i>
Snowberry	<i>Symphoricarpus oreophilus</i>
Utah juniper	<i>Juniperous osteosperma</i>
Western wheatgrass	<i>Agropyron smithii</i>
Wright fishhook cactus	<i>Sclerocactus wrightiae</i>

APPENDIX C

**CANYON FUEL COMPANY
2003 THREATENED, ENDANGERED &
SENSITIVE SPECIES INVENTORY**

**CANYON FUEL
PACE CANYON COAL EXPLORATION
CARBON COUNTY, UTAH**

**THREATENED, ENDANGERED,
AND SENSITIVE FONA SPECIES
INVENTORY REPORT**

**CONDUCTED
SEPTEMBER 2003**

**BY
EIS ENVIRONMENTAL
AND ENGINEERING
CONSULTING**

**31 NORTH MAIN STREET
HELPER, UTAH 84526
(435) 472-3814
FAX - (435) 472-8780**

Introduction

Canyon Fuel Company has contracted EIS Environmental & Engineering Consulting to conduct inventories for their 2003 Pace Canyon coal exploration program. The exploration area is located in Eastern Utah approximately 15 miles northeast of Wellington in Pace Canyon. The proposed action lies within a previously disturbed section of Pace Canyon.

The proposed drill site and associated activities are required to be surveyed for a variety of threatened, endangered, and sensitive (TES) animal species. Several TES species have been identified by the BLM through past studies as occurring, or potentially occurring within the Pace Canyon area. Using established protocols, qualified Field Biologists of EIS conducted inventories for the following proposed Threatened and Endangered Species, loggerhead shrike (*Lanius ludovicianus*), Bald Eagle (*Haliaeetus leucocephalus*), and neo tropical birds at all areas of concern within the project area. The inventory for this exploration program was conducted September 29th 2003.

Methodology

Loggerhead shrike (*Lanius ludovicianus*)

Loggerhead shrike are generally found in areas which consist of a semi-open area of scattered, mature pinyon-juniper where they could nest in close proximity to sparsely vegetated areas in which they could hunt. Because of the close proximity of the drill sites the area was surveyed as one large site. A total time of 60-90 minutes were spent walking over of the site, using binoculars to note Shrike activity, as well as any other species activity. For inventory purposes, a buffer area (approximately 100 yards) around the site was surveyed

Bald Eagle (*Haliaeetus leucocephalus*)

During the breeding season bald eagles are closely associated with water, along coasts, lakeshores, and/or riverbanks. During the winter bald eagles tend to concentrate wherever food is available. This usually means open water where fish and waterfowl can be caught. They also winter on more upland areas feeding on small mammals and deer carrion. At winter areas, bald eagles commonly roost in large groups in protected areas.

Neo Tropical Birds

More than 300 different species of birds migrated from central and south America every year to mate and raise their young in Canada or the United States. With that many species of birds migrating, nesting sites could be found in many different locations from cities and farms to mountains and deserts. In July of 2000 the Neotropical Migratory Bird Conservation Act was passed by congress protecting habitat for migratory birds in the US, Canada, Mexico, Central America, and South America.

Results

Loggerhead shrike (*Lanius ludovicianus*)

A thorough search of all the drill site and associated areas did not reveal the presence of loggerhead shrike

Bald eagle (*Haliaeetus leucocephalus*)

A thorough search of the drill site and associated areas did not reveal the presence of Bald Eagles. Though this species does occur as an infrequent winter visitor in the area. The affected area does not contain preferred nesting sites for the bald eagle.

Neo-Tropical Birds

Neo Tropical Birds and their habitat are located within the project boundaries. A thorough search of the drill site and associated areas did not reveal the presence of nests.

Individuals who participated in this survey include;

David Basinger, EIS: Environmental & Engineering Consulting

Tom Paluso, EIS: Environmental & Engineering Consulting

I believe the information included in this document to be true and accurate.



David Basinger

Botanist/TES Specialist

EIS: Environmental & Engineering Consulting



MT NEBO SCIENTIFIC, INC.
research & consulting

October 2, 2003

Vicky Miller
CANYON FUEL COMPANY
Dugout Mine
P.O. Box 1029
Wellington, Utah 8454

Vegetation Studies - Pace Canyon Update

Dear Ms. Miller

This letter is intended to provide you with an update on the vegetation sampling in Pace Canyon. Quantitative and qualitative sampling was conducted in the area August 13-14, 2003. The sampling was performed in an area that you outlined on a map and has been proposed for future drilling activities. This area has been previously disturbed by historical mining activities, therefore, I called the plant community "Previously Disturbed Pinyon-Juniper". Additionally, another undisturbed native plant community adjacent to the previously disturbed area was also sampled to serve as a "Reference Area" or an area chosen for comparison (or to represent) future standards of revegetation success following final reclamation.

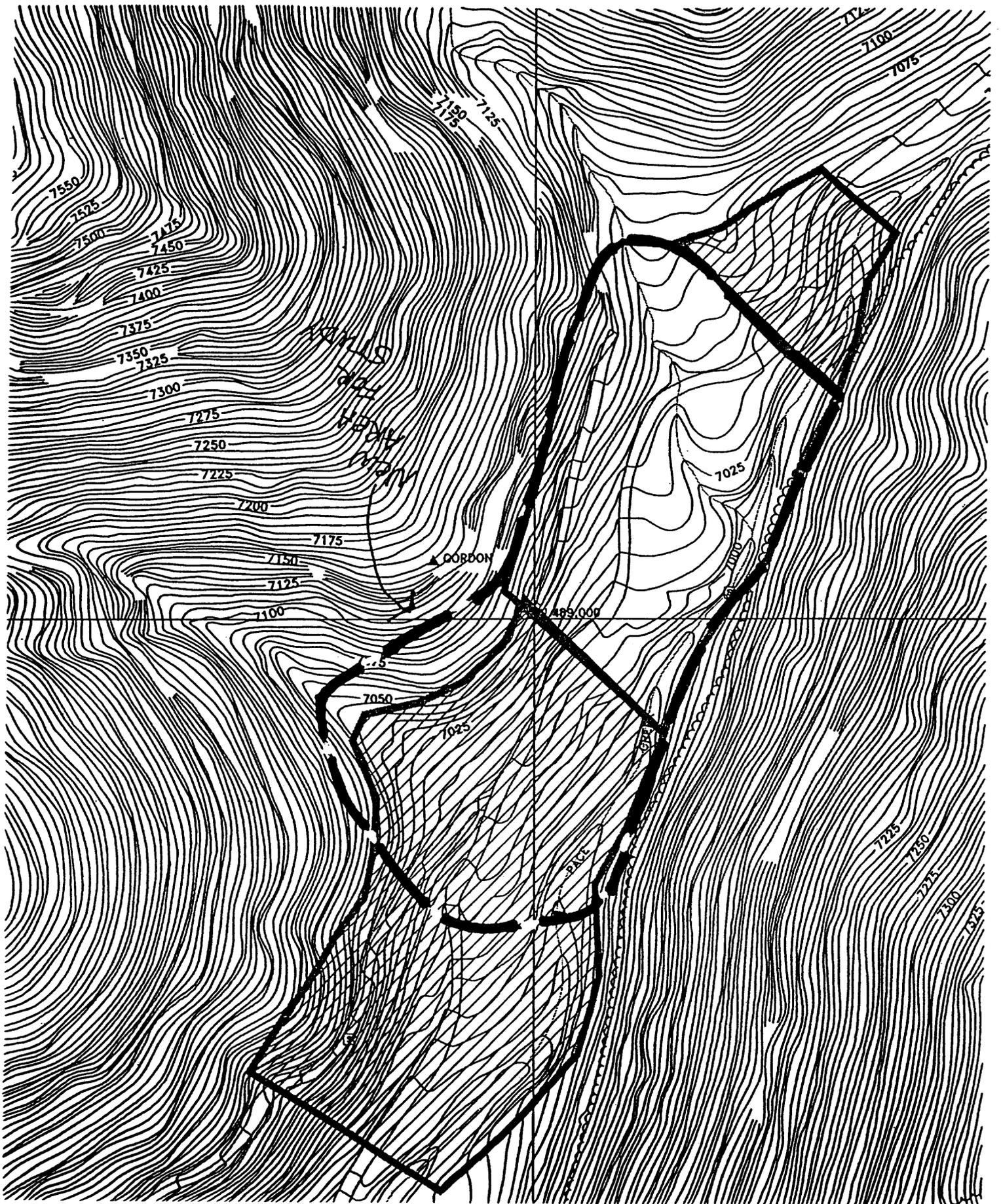
No threatened, endangered or otherwise sensitive plant species were found in the Previously Disturbed Pinyon-Juniper community.

The raw data from the vegetation sampling mentioned above is currently being processed and summarized. A final report will be prepared in the near future.

Please call if you have questions or comments.

Sincerely,

Patrick D. Collins, Ph.D.
Biologist/Environmental Consultant



APPENDIX D

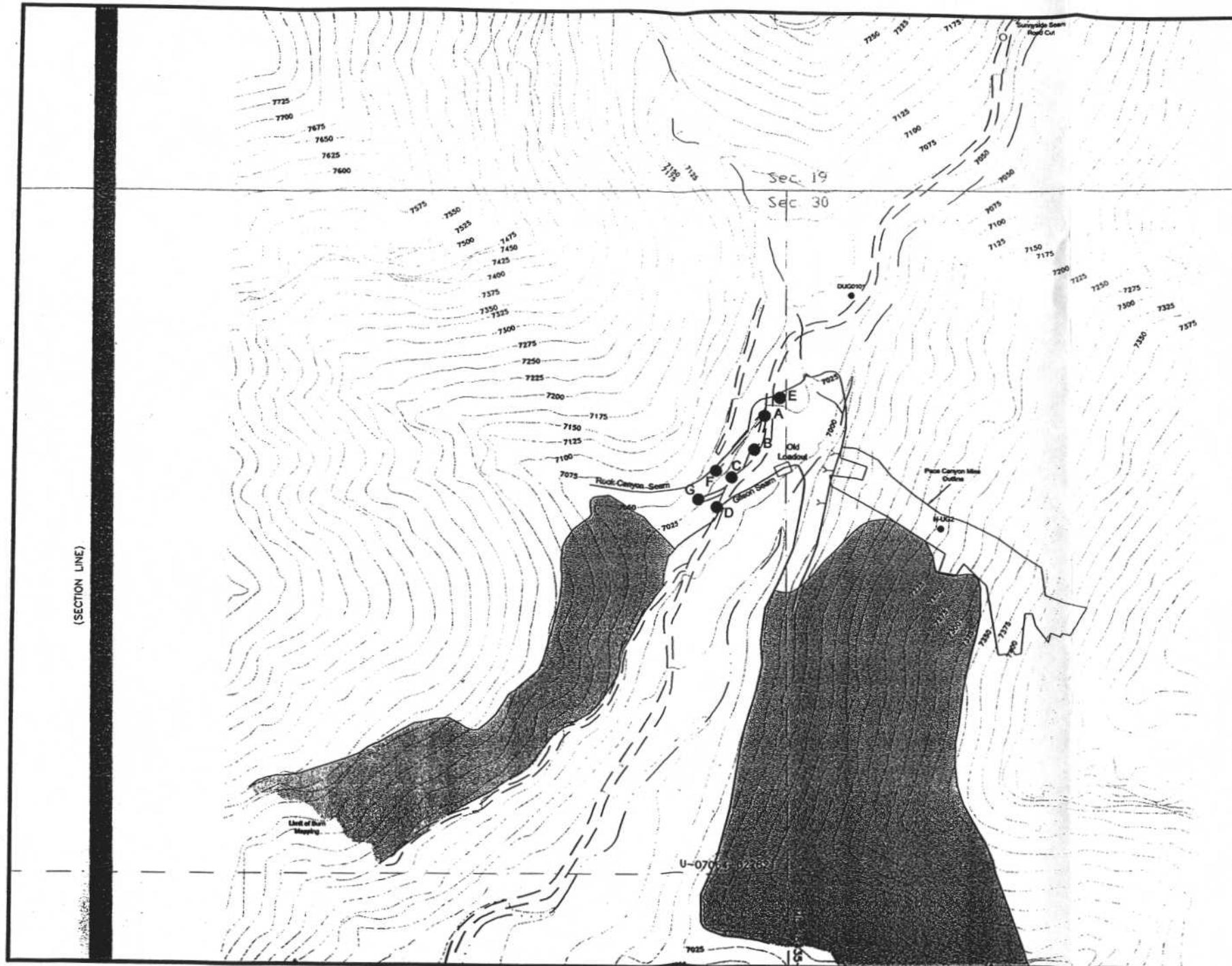
ENVIRONMENTAL SAFEGUARDS

ENVIRONMENTAL SAFEGUARDS

- State of Utah and Bureau of Land Management's Best Management Practices (BMPs) for erosion control is suggested.
- Fuel/Oil Spill Plan referenced in the Coal Exploration Plan would be followed.
- Drill pits located near streams would be lined or livestock troughs would be used.
- Drill holes would be cemented and flush with surface.
- Mud pits would be backfilled and reclaimed.

PLATE I

PROPOSED ACTION PACE CANYON
EXPLORATION PROJECT



EXPLANATION:

- Proposed Exploration Drill Holes
- Lease Boundary
- Existing Roads
- - - Existing Road--Requires Upgrade
- New Constructed Road
- Burn
- Rock Canyon/Gilson Seam Burn Limit
- Rock Canyon/Gilson Seam Burn Limit (Projected)
- Rock Canyon Seam Outcrop/Subcrop
- Rock Canyon Seam Outcrop/Subcrop (Projected)
- Gilson Seam Outcrop/Subcrop
- Gilson Seam Outcrop/Subcrop (Projected)

1000' 0' 2000'

T13S, R12&13E

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DESIGNED BY: T. Paluso
DRAWN BY: Wild West Drafting & Design
Rick Richey
ACAD: DUGOUT/CANYONFUEL/PLATE2

CLIENT:
CANYON FUEL
PACE CANYON
DATE:
October 2003

MAP TITLE: PLATE II
EXPANDED SCALE
PROPOSED ACTION
PACE CANYON
COAL EXPLORATION
PROJECT

Environmental Industrial Services
22 North Main Street, Suite 2000
Cody, WY 82401
406.476.0044
eis@eis.com
Environmental & Engineering Consulting

LEGEND

- DEER
- HIGH WINTER
- DEER - CRITICAL SUMMER
- ELK CRITICAL SUMMER
- ELK
- HIGH WINTER

- GOLDEN EAGLE
- PRAIRIE FALCON
- RED-TAILED HAWK
- RAVEN
- UNKNOWN
- TENDED
- NOT FOUND
- ACTIVE
- INACTIVE
- NS NOT SURVEYED
- WATER LOCATIONS
- PROPOSED 2003 EXPLORATION
- DRILL HOLES

- PACE CANYON ALLOTMENT
- LEASE BOUNDARY
- SURFACE OWNERSHIP
- PROPOSED ROAD
- EXISTING ROAD

1000' 0' 2000'
 TISS, R12&13E

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DESIGNED BY: T. Palumbo
 DRAWN BY: Wild West Drafting & Design, Rick Richey
 ACAD: DDOGOUT/CANYONFUEL/BUSEMAP

CLIENT: CANYON FUEL, PACE CANYON
 DATE: October 2003

MAP TITLE: PLATE I
 PROPOSED ACTION
 PACE CANYON
 COAL EXPLORATION
 PROJECT

