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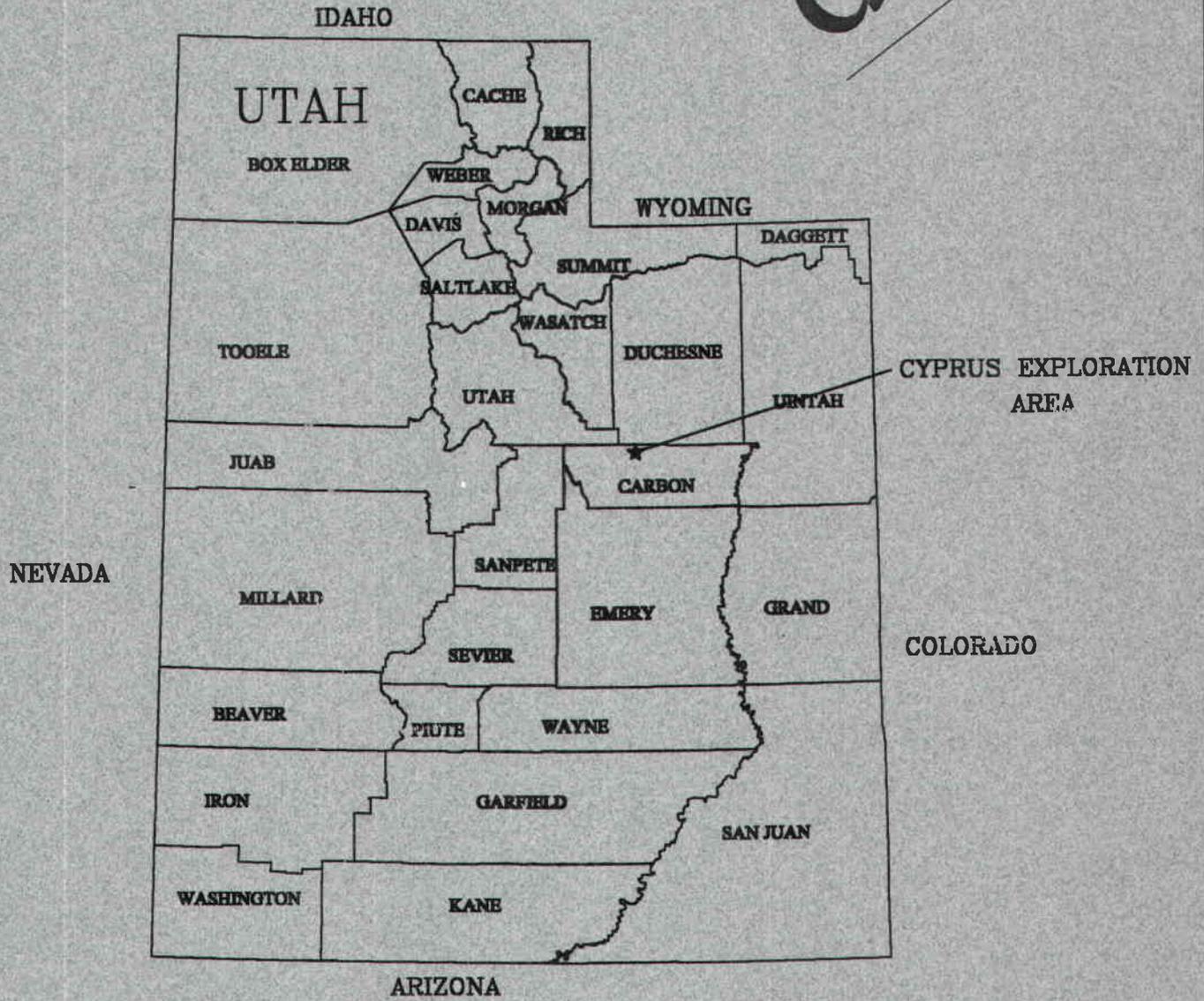
U.S. Department of the Interior
Bureau of Land Management
Moab District Office

SR / PR REC'D JUL 19 1999

JULY 1999

Environmental Assessment for
CYPRUS PLATEAU MINING CORPORATION
WILLOW CREEK MINE
1999 EXPLORATION PLAN

draft



COPY

0026

00 **ROUTING AND TRANSMIT.**

ate

7/20/99

TO: (Name, office symbol, room number, building, Agency/Post) Initials Date

1. Pamela Grubaugh-Littig
2. Div. of Oil, Gas, & Mining
3. 1594 West North Temple Suite 1210
4. P.O. Box 145801
5. SLC, Utah 84114-5801

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Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
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REMARKS

Hi Pam:
 Here's a draft
 copy of the EA for Cyprus
 Plateau's willow creek mine
 1999 Exploration plan.

Don

ACT/007/038 #2

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Date

FROM: (Name, org. symbol, Agency/Post)

Room No.—Bldg.

Don Stephens

453

Phone No. 636-3608

ENVIRONMENTAL ASSESSMENT
FOR
CYPRUS PLATEAU MINING CORPORATION
1999 EXPLORATION PLAN
FOR
ROADS AND DRILL SITES

RESPONSIBLE AGENCY

USDI, BUREAU OF LAND MANAGEMENT
PRICE FIELD OFFICE
125 SOUTH 600 WEST
PRICE, UTAH 84501

(435) 636-3600

JULY 1999

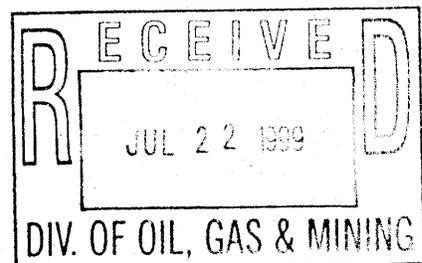


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ACRONYMS AND ABBREVIATIONS

AUM	animal unit month
BLM	Bureau of Land Management
CE-1	critical environment (County Zoning)
CPM	Cyprus Plateau Mining
dba	doing business as
DWR	Utah Division of Wildlife Resources
EIS	Environmental Industrial Services
ESA	Endangered Species Act
GVB	Gob Vent Borehole
KOP	Key Observation Point
kV	kilovolt
LBS	pounds (weight)
MFP	Management Framework Plan (BLM)
MG-1	mining & grazing (County Zoning)
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1986
NRHP	National Registry of Historic Places
NRCS	Natural Resource Conservation Service
ORV	off-road vehicle
PLS	pure live seed
PRWID	Price River Water Improvement District
R	Range
ROW	right-of-way
SCS	Soil Conservation Service
SLM	Salt Lake Meridian
SHPO	Utah State Historic Preservation Office
spp.	species
T	Township
TES	Threatened, Endangered and Sensitive (Species)
UP&L	Utah Power and Light
USDI	U.S. Department of the Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VRM	Visual Resource Management

GLOSSARY OF TERMS

Access	Passage to proposed site
Alternative (action)	An option to meeting the stated need
Archaeology	The science that investigates the history of peoples by the remains belonging to the earlier periods of existence.
Assessment(environmental)	An evaluation of existing resources and potential impacts to them from a proposed act or change to the environment.
Commitment (mitigation)	Obligation to a measure that would diminish the severity of an impact.
Community (biological)	A group of one or more populations of organisms that form a distinct ecological unit. Such a unit may be defined in terms of plants, animals or both.
Contrast	The effect of a striking difference in the form, line, color, or texture of an area being viewed.
Cultural resources	Any site or artifact associated with cultural activities.
Endangered species	Any species in danger of extinction throughout all or a significant portion of its range. This definition excludes species of insects that the Secretary of Interior determines to be pests and whose protection under the Endangered Species Act of 1973 would present an overwhelming and overriding risk to man.
Environment	The surrounding conditions, influences, or forces that affect or modify an organism or an ecological community and ultimately determine its form and survival
Ephemeral (streams)	Flowing in response only to direct precipitation, and whose channel is at all times above the water table, and restricted to streams that do not flow continuously for at least 30 days.

Erosion	The group of processes whereby earth or rock material is loosened or dissolved and removed from any part of the earth's surface.
Habitat	A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover and living space.
Hydrology	The science that relates to the water of the earth.
Impact	A modification in the status of the environment brought about by the proposed action.
Interdisciplinary team	A group of people with different training representing the physical sciences, social sciences and environmental design arts assembled to solve a problem or perform a task. The members of the team proceed to solution with frequent interaction so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions
Landscape	That which makes up the various attributes of land surface as a result of geologic activity and weathering, such as plateaus, mountains, plains and valleys.
Mitigation	To alleviate or render less intense or severe.
Perennial	A stream that flows continuously. Generally associated with a water table in the localities through which they flow.
Raptor	A bird of prey.
Right-of-way	Public lands authorized to be used or occupied pursuant to a right-of-way grant.
Riparian	Any area of land directly influenced by permanent water that has visible vegetation or physical characteristics reflective of permanent water influence. This can include streams, springs, seeps, wet meadows, aspen stands, and similar habitats.

Sensitive Species

Species, determined by a federal or state agency, to be concern for viability, as evidenced by a significant current or predicted downward trend in population or habitat.

Species

A group of individuals of common ancestry that closely resemble each other structurally and physiological and in nature interbreed producing fertile offspring.

Threatened species

Any plant or animal species likely to become endangered within the foreseeable future throughout all or a significant part of its range.

Visual Resource

Classification of landscape according to Management classes the kinds of structures and changes that (VRM) are acceptable to meet established visual goals (BLM).

CHAPTER I. INTRODUCTION

A. NEED FOR THE PROPOSED ACTION

Cyprus Plateau Mining Corporation (CPM), a Delaware corporation currently controls several coal leases in association with their Willow Creek Coal Mining Operation near Helper, Utah. CPM would like to conduct a drilling exploration program to further define coal reserves on the existing coal leases and to complete a number of holes/sites as gob vent boreholes (GVB's). These GVBs would facilitate the collection and controlled release of accumulated methane in the development "gob" or collapsing roof strata forming behind the retreating longwall face.

A total of ten drill sites are proposed for this 1999 exploration program including three sites for the 1999 gob vent borehole drilling program and seven sites for the exploratory coring program. Depending on the chosen mine plan and new ventilation requirements, some of the proposed sites, especially those relating to gob ventilation, may not be necessary. Additionally, each proposed gob vent bore hole site could house multiple holes to pull methane gas from the developing gob of the mined out D Seam. A total of nine or more GVB's could be drilled from the three proposed sites.

Of the seven exploration holes (or alternates) proposed, several might not be drilled during the 1999 season. New road construction would be required for the proposed exploration and gob vent borehole network. Several of the exploration sites may be completed later as gob vent boreholes.

On November 25, 1998, CPM experienced a mine fire in the tailgate section which resulted in the evacuation and sealing of the mine. CPM received emergency approval from the Bureau of Land Management, Price Field Office (BLM) to access and complete an emergency hole (W98-2c) into the mine gob or mine works to sample the mine atmosphere and, if necessary, inject liquid carbon dioxide to cool and smother the mine fire. Due to this action, a 1,600 foot road and a 100 foot by 120 foot drill pad was completed. Total disturbance because of this action was 1.38 acres.

B. LOCATION OF THE PROPOSED ACTION

The proposed drilling program is located in Carbon County, Utah, within T. 12 S. R. 9 E. and R. 10E., S.L.B. & M. PLATE I is a map of the general area of the proposed action. TABLE I-1 includes the legal description of the general area of the proposed exploration program.

TABLE I-1

LEGAL DESCRIPTION OF PROPOSED EXPLORATION PLAN

Federal Coal Lease UTU-73975

SE 1/4 of SE 1/4, Section 23, Township 12 South, Range 9 East
NE 1/4 of NE 1/4, Section 26, Township 12 South, Range 10 East
and all of Section 30, Township 12 South, Range 10 East
and the SW 1/4 of NW 1/4, Section 29, Township 12 South, Range 10 East
and the E 1/2 of NE 1/4 of SE 1/4, Section 29, Township 12 South, Range 10 East
and the W 1/2 of NW 1/4, Section 28, Township 12 South, Range 10 East

Federal Coal Lease U-0146345

SE 1/4 of NW 1/4, Section 33, Township 12 South, Range 10 East

C. AUTHORIZING ACTIONS AND PERMITS

Conformance with Existing Land Use Plans

The proposed exploration action is on federal coal reserves. Surface ownership within the proposed exploration area is made up of lands administered by the Bureau of Land Management (BLM) and private lands. Surface property ownership for all disturbed lands within the proposed project area is summarized in TABLE I-2. Property owners on adjacent undisturbed lands are shown on PLATE III-4. The exploration project is mainly located on land designated as CE-1 by the Carbon County Planning and Building Department.

A temporary or conditional use permit is required for construction with in areas above 7,000 feet. The actual drilling sites are mostly situated from 7,000 to 8,000 feet above sea level. Carbon County is presently evaluating the need for these permits for this project. A decision on this matter will be made shortly by the Carbon County Planning and Building Department.

TABLE I-2			
PROPERTY OWNERSHIP WITHIN THE DISTURBED AREA OF THE PROPOSED ACTION			
OWNERSHIP	PAD (Acres)	Road (Feet)	Road (Acres)
BETTINO	0.00	2,625	1.81
BLM	1.81	18,470	13.24
CYPRUS	0.00	300	.21
MELVIN FRANDBSEN TRUST	0.22	1,800	1.24
JENSEN	0.00	5,813	4.00
TOTAL	2.03	29,758	20.50
TOTAL ACREAGE OF PROPOSED ACTION			22.53 Acres

Permits

In addition to federal exploration license, CPM would be required to obtain a number of permits and approvals from federal, state and local agencies for this project. These permits and approvals are listed in TABLE I-3.

TABLE I-3

PERMITS AND OTHER LEGAL REQUIREMENTS

<u>Agency</u>	<u>Act or Regulation</u>	<u>Requirement</u>
Federal		
Bureau of Land Management	National Environmental Policy Act (NEPA) (40 CFR 1500)	Environmental Assessment Sundry Notices
	Federal Land Policy Act of 1976 (FLPMA)	Notice to proceed and consultation
	Mineral Leasing Act of 1920 (MLA)	Development and production of federal coal leases
Office of Surface Mining	Surface Mining Control & Reclamation Act of 1977 (SMCRA)	Review of operation procedures
Mine Safety and Health Administration	Coal Mine Health and Safety Act of 1969	Review of safety procedures
Fish and Wildlife Services	Endangered Species Act (ESA) Section 7	Provide biological opinion of wildlife and plants that are federally listed, and all feature of the Proposed Action that would affect such species.
Utah State		
Department of Natural Resources		
Division of Water Rights	Point of Diversion Change	
	Permit to Alter a Natural Channel	Consider issuance of permit for alteration of natural drainage
Utah State Historical Society	Consultation under Section 106 National Historic Preservation Act (NHPA) and State Antiquities Permit	Consult with BLM regarding NRHP eligibility of cultural resources, and affect of Proposed Action upon them, as well as mitigation for such historic properties
County		
Carbon	County Zoning Ordinances	Determine compliance with existing land designation
Private		
Private	Confirmation and review of encroachment	Obtain Easements

CHAPTER II. PROPOSED ACTION AND NO ACTION ALTERNATIVE

A. PROPOSED ACTION

1. Description of Proposed Action

The proposed action would be located approximately five miles north of Helper, Utah, in Carbon County. The proposed action is located on two federal coal leases: UTU-73975 and U-0146345, both of which are currently controlled by CPM. This proposed action includes the development/improvement of access roads, construction of well pads and the potential development of certain drill holes into (GVBs).

2. Site Access

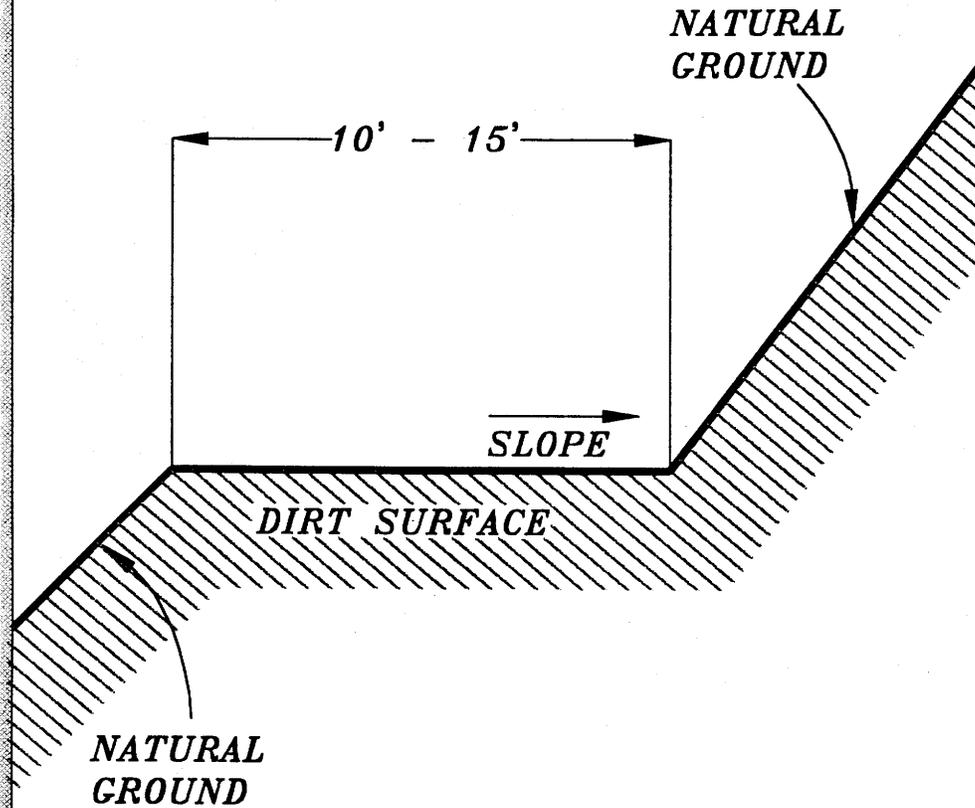
The proposed sites would be accessed from Willow Creek Canyon; either by Highway 191 onto the adjacent hillside and up Dry Creek Canyon, or onto the Matts Summit Cutoff Road to Highway 50 from Price River Canyon. Refer to PLATE II. In the latter case, access would turn south by dirt road from the cutoff road and cross BLM and private ground to the federal lease UTU-73973. TABLE I-1 contains the legal description of the drilling program.

3. Road and Well Pad Development

Approximately five miles of new road are proposed to be built during the 1999 to access new exploration areas and prepare for future vent borehole construction as shown on PLATE II. Only about one half mile of the new road would be associated with the 1999 GVB drilling above longwall panels D1 through D4. Lengthy portions (over two miles) of the new proposed roads are sited across generally flat BLM surface following previously existing road/tracks. See FIGURE II-1 for a typical road cross section. Other portions are projected to access the tops of narrow north-south trending ridges.

Portions of the proposed roads would angle down through alternating layers of sandstone and mudstone of the Price River Formation. Individual stratigraphic units are usually five to 20 feet thick and create a rugged slopes sparsely vegetated with conifers, grasses, brush and generally bare soils. On steeper slopes the construction process would involve a combination of track mounted excavator/hoe and large dozer. The track hoe would proceed down the hill prying and moving resistant blocks, logs and ledge material to the outside slope of the developing road. Significant efforts would be made to minimize debris and material loss down slope during construction by careful handling of materials. The dozer would be used to touch up the road surface or rip out resistant portions of the encountered strata. If necessary, a compressor and rock drill would be used to drill and shoot troublesome ledges.

FIGURE II-1



NOTE:

Road would ^{BE} reclaimed after completion of project.

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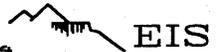
DATE: JULY 1999

Additional Map Information:

Materials for this map and information contained herein, can be obtained through E.I.E. on request.

PLATE NO.:
FIGURE II-1

ACAD REF:
Carbon/Cyprus_Areas/illustrations/Fig_II-1

DESIGNED BY:


21 N. Main St.
Helmer, UT 84926
(801) 472-9004 eis.q15@castlenet.com

The new access roads and GVB sites would need to be maintained until degassification activities have been completed. If necessary, drainage would be controlled by waterbars, culverts, or rock filled crossings. A gate on private ground would limit access to the GVB and exploratory wells and new GVB sites.

In the case of road building during the proposed project, the topsoil and the immediately underlying soil would be placed/pushed to the outside road berm. Large boulders or ledges encountered along the trend of the access road would either be avoided, if possible, or moved to the outside road berm. If unavoidable, roads driven through resistant sandstone ledges or large boulders would require drilling and blasting. Material loosened by the shot would be moved and utilized a roadbase material or placed on the outside berm of the developing road.

All proposed drill pads/sites would be constructed as small as practical to accommodate drilling equipment, multiple wellheads as determined and to afford an environmentally safe operation (see FIGURE II-2). Trees and scrubs around the periphery of the sites would be left to screen off the site and protect the site activity from public view where possible.

Proposed Site Location-Site designation nomenclature is "P" for "Proposed" drill hole site and "-G#" or "-E#" to distinguish whether the hole will be finished for a "Gob" vent borehole or an "Exploration" hole, respectively see (TABLE II-1). After the hole is completed, a permanent designation would be given to the hole.

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS

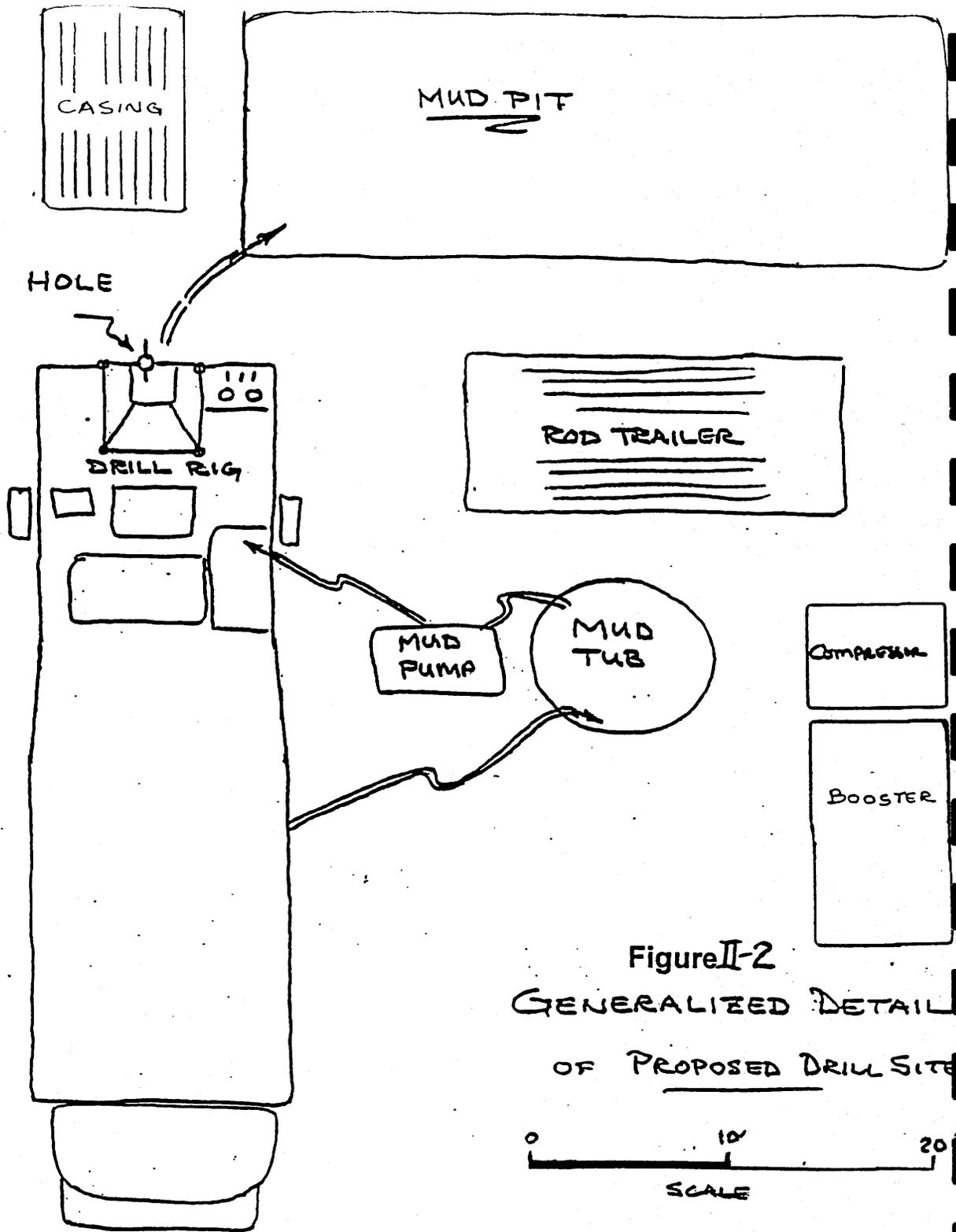


Figure II-2
GENERALIZED DETAIL
OF PROPOSED DRILL SITE

TABLE II-1 PROPOSED DRILL SITE LOCATIONS

<u>Site Designation</u> <u>Coal Lease</u>	<u>Type</u>	<u>Poss.</u> <u>Comp.</u>	<u>Approximate Legal Description</u>	<u>Surface</u> <u>Ownership</u>
P-G6 UTU-73975	GVB	3	NE 1/4 OF SW1/4, SEC.30, T12S, R10E	BLM
P-G9 UTU-73975	GVB	3	NE1/4, NE 1/4 OF SW1/4, SEC. 30, T12S, R10E	BLM
P-G10 UTU-73975	GVB	3	NW 1/4, NW 1/4 OF SE1/4, SEC. 30, T12S, R10E	BLM
P-E11a UTU-73975	Expl	Single	SW 1/4, OF NW1/4, Sec 29, T12S, R10E (may be finished later as a multi GVB)	BLM
P-E11b UTU-73975	Expl	Single	SW 1/4, OF NW1/4, Sec 29, T12S, R10E (may be finished later as a multi GVB)	BLM
P-E12a UTU-73975	Expl	Single	N1/2, NE1/4, OF NE1/4, Sec 26, T12S, R9E (may be redrilled later as a multi GVB)	BLM
P-E12b SL-071737	Expl	Single	S1/2, SE1/4, OF SE1/4, Sec 23, T12S, R9E (poss. alternative site after area is obtained thru lease modification)	BLM
P-E14 (angle) UTU-73975	Expl	Single	W1/2, SW 1/4, OF NW 1/4, Sec 28, T12S, R10E (Fed Coal Intercept-may be GVB site later)	FRANDSEN
P-E15 (angle) UTU-73975	Expl	Single	E1/2, NE1/4 OF SE1/4, Sec 29, T12S, R9E (may be finished alter as a multi GVB)	BLM
P-E16 U-0146345	Expl	Single	SE1/4,OF NW1/4, Sec33, T12S, R10E (may be redrilled later as a multi GVB)	BLM

Detail on Proposed Road and Well Pad Development

Site P-G6

This proposed sixth site is located above Panel D3 and would hold up to three new holes. This site has not been permitted but would have been covered in an archaeological sweep in both 1997 and 1998.

The new road would be about 10 to 12 feet wide with a berm on the downhill side. Up to three 8 to 9 inch holes could be completed from this location and spaced to penetrate the D Seam 400 feet both to the NW and SE and, perhaps, directly below the surface site. The pad would be about 100 feet by 50 feet and also contain a large mud pit on the down hill side. All holes would be about 2600 feet deep. Several moderate sized conifers may have to be knocked down to construct the road. A veneer of large scrubs and conifers would be left on the perimeter of the sites to protect the view shed.

Site P-G9

Located near the mid portion of Panel D4, this proposed site is about 400 feet down the east side of the Central Ridge and would house two new holes. This site would need to be permitted (archaeological sweeps and BLM inspections already complete by 6/1). About 1300 feet of new road would have to be built which would continue past the site about 400 feet and would also allow for a turn to access P-G10 to the SE. This road would also be used to access additional sites for the year 2000 drilling. The road would be about 12 feet wide and developed on a fairly gentle grade and little impact on open slope and scattered grasses and brush.

The drill pad would be constructed elongate to the hillside for about 100 feet and be roughly 45 feet wide. The mudpit would be located on the downslope side of the pad.

Site P-G10

Located above Panel D4, this proposed site would house up to three new holes. Archaeological sweeps and BLM inspections have been completed. About 400 feet of new road would have to be permitted and constructed. The new proposed road would sidehill along contour from near site P-G9 with minor environmental impact on the open to lightly timbered hillside. The pad should be about 100 feet by 45 feet in size.

Site P-E11 (a or b) The road would be about 10 to 12 feet wide with a berm built on the down hillside and would be constructed utilizing prudent engineering practices. A significant portion of the proposed road should be able to follow the route of an older road along the rim at the head of Skinny Canyon.

The site should be about 100 feet square and contain a large compartmentalized mud pit. When constructing the sites, a fringe of shrubs and trees would be left where possible to preserve the view.

Site P-E12 (a or b) Like Site P-E11, the new exploration site would require the construction of about 2 miles of new road including significant side hill road construction as well as the proposed site. The site should also be about 80 feet square and contain a large compartmentalized mud pit. A screen of shrubs and trees would be left on the perimeter of the drill pad.

This new road would allow access for the year 2000 GVB hole development in Panels D9 through D13 and would require significant amounts of sidehill work. The road would be ten or more feet wide with a berm built on the downhill side and would be constructed utilizing prudent engineering practices. As noted earlier, the sidehill work would be accomplished with track hoes and dozers. A significant portion of the proposed road should be able to follow the route of an older road along the rim at the head of Barn Canyon.

Site P-E14 The pad size would be about 100 by 70 feet. About 1600 feet of new road construction would be necessary to reach site P-E14. The access would cross the Willow Creek drainage near old hole MC-142 and angle up the hill to the south through oak brush and small conifers at roughly the dip of the strata on top of the Castle Gate Sandstone. Part of the access would reoccupy the older powerline trails/roads up from the Willow Creek stream crossing. A significant dry drainage would be crossed about 500 feet short of the site in which a 24 inch culvert would be installed. Water could be pumped to the site from Willow Creek. Stream crossing authorization and requirements would be obtained from the Utah Division of Water Rights. The actual pad site would be about 100 feet square. The site would later (two to five years) be used to house several GVBs.

Site P-E15 The pad size would be about 100 by 70 feet. Approximately, 1300 feet of new road would be necessary to extend the access from Site P-E14 to this location. Topsoil would be stored on the south end of the pad and protected from erosion by silt fences.

Site P-E16

About 1300 feet of road would have to be rebuilt to reach this location. Road width would be about ten feet. A tight turnaround could possibly be created about 200 feet down drainage from the proposed site. The initial core site would be about 50 by 80 feet in extent. There is a possibility that the site could house several GVBs in the future.

The mud pit will be constructed large enough to contain all of the drilling effluent and sediment produced from possible runoff with silt fences and bales. Top soil will be separated from other lower quality soil and pushed to the end of the site. The soil will be protected from erosion until the drill pad has been reclaimed.

4. Exploration Drilling

As noted earlier, a total of ten drill sites are proposed for this 1999 exploration program including three sites for the 1999 (GVB) drilling program and seven sites for the exploratory coring program. Depending on the chosen mine plan and new ventilation requirements, some of the proposed sites, especially those relating to gob ventilation, may not be necessary. Additionally, each proposed GVB hole site could house multiple holes to pull methane gas from the developing gob of the mined out D Seam. A total of nine or more GVB's could be drilled from the three proposed sites.

Seven exploration core holes (or alternates) are also proposed to gather samples and seam data in areas of added panels or proposed development. This surface exploration would replace previously planned underground horizontal exploration drilling and initiate the development of the surface road network necessary to support the future access of gob vent sites. Some of the exploration sites may be used to house GVB's when the exploration coring is finished.

All GVB's proposed could remain active for a moderate period of time (three to five years). After the initial reclamation (mudpits filled and pads reduced and stabilized), the GVB sites would be maintained until degassification activities are concluded.

The details on the proposed boreholes are as follows:

Details on Proposed Borehole Sites

Site P-G6 Access would be gained off the existing access road to hole 97-30-4 and require about 400 feet of new road and a new pad.

Site P-G9 Up to three holes completed from this location would be spaced to penetrate the D Seam; one angled approximately due west 400 feet, one directed southward about 200 feet, and one, perhaps, drilled vertically. The holes should be less than 2300 feet deep and drilled up to nine inches in diameter.

Site P-G10 The 8 to 9 inch holes could be spaced to penetrate the D Seam at several locations. One vertical and two up to about 400 feet to the W and SE of the surface site. The holes should be less than 2200 feet deep each.

Site P-G11(a or b) This site would be located either above Panel 8 (P-E11a-primary site) or Panel 7 (P-E11b-alternate site) in Section 29 and would be completed as an exploration hole. About 2 miles of new road as well as the proposed sites would need to be permitted. The new road would allow access for the 2000 GVB hole development in D6, D7, and D8 Panels and require some sidehill excavation to reach the ridge saddle where the drilling would take place.

This hole would partially replace earlier proposed underground horizontal exploration holes from the Mains and would explore the thickness of the D Seam benches, as well as the K and C Seams, roof and floor data, and gather quality samples. Most likely, the hole to be drilled in 1999 would be site P-E11a above Panel D-8.

The exploratory hole could be either completely wireline cored or rotary drilled and cased in the upper 1400 feet and completed by coring after setting an intermediate string of four inch casing. The estimated depth of the hole would be about 2700 feet.

The completed holes would most likely be re-entered and fully cemented after recovery of the intermediate casing. Depending on the mine plans and encountered coal bed methane, both sides could be re-occupied and drilled as a GVB within the next two years.

Site P-E12(a or b) This primary proposed site (E12a) is located on Section 26 above Panel D9 in the west block of D Seam panels. The upper portion of the hole would likely be rotary drilled and cased to about 1500 feet. At this point, the hole would be deepened to within 200 to 500 feet of the D Seam and four-inch temporary casing installed. The final portion of the hole would be completed with continuous core. Samples would be tested for gas and quality and the hole will be geophysically logged. A second (alternate) site (E12b) is located about 500 feet to the north of Site E12 (a) an open federal ground in Section 23. This site would be included in a proposed lease modification to be filed in 1999 and would not be drilled until after the modification was granted.

The corehole may be reamed out and completed as a GVB site after the coring portion is finished. If not, the hole would be fully cemented after recovery of the intermediate casing. Depending on ventilation requirements, both sites could be re-occupied within three years to drill and complete GVBs

The hole would partially replace earlier proposed underground horizontal exploration holes from the D SubMains and would be about 2800 feet deep. Data gathering in this area would fill in a significant void in drill hole spacing.

Site P-E14 This site is located in Section 28 on the east side of Willow Creek Canyon and north of Dry Canyon. The site would be situated on private surface (Melvin Frandsen Trust) and would be angle drilled to the east (about 40 to 45 degrees) to complete through the K, C and A Seams (Federal coal) and allow for the collecting of sample for quality and gas. Total depth of the hole would be about 2000 feet. Hole size would be from 3.5 inches to 2.0 inches in diameter. When completed in 1999, the core hole would be cemented from bottom to top.

Site P-E15 This exploratory site would be located on a moderately sloping hillside in Section 29 above and on the east side of Willow Creek and north of Dry Canyon. The site would be situated on BLM surface and would be angle drilled to the east to complete through the K, C and A Seams, collecting samples for quality and gas. The hole would be completed in Section 28. After drilling, the hole would be geophysically logged and then cemented. This hole would likely be drilled in year 2000 and could house multiple GVBs in the future. Water could be pumped to the site from Willow Creek. The hole would be about 2000 feet deep.

Site P-E16

Located in Section 33 on the south-trending fork of Dry Canyon between holes 98-33-4 and MC-117, this exploratory core hole would penetrate the K Seam in Panel K2 and the underlying A Seam to document thickness, quality, gas content, collect roof and floor samples. Before cementing, the hole would be geophysically logged.

Water would be delivered to the site by truck or pumped to the site from a central water tank serviced by a truck. The hole would be about 1,000 feet deep. There is a possibility that the site could house several GVB's in the future.

The estimated size of the drill holes would range from a maximum of 15 inches in diameter for upper casing (approximately 10 inches inside diameter), which would be installed to the top of the Castle Gate Sandstone, to a minimum of 6.5 inches diameter for the bottom portion of the holes. Most of the proposed GVBs should be finished to about eight to nine inches in diameter with the bottom portion uncased. The deepest hole should not exceed 2,900 feet.

For the exploratory core drilling, it is recommended that a truck mounted continuous core rig, (Longyear 44 or similar) be utilized. This rig would be capable of drilling angle holes. The upper portion of the holes, in some cases, could be rotary drilled and cased to speed the overall drilling process. Recovered core would be "N" series size (about two inches in diameter). The upper portion (through the Price River Formation) of all the holes, would have to be cased due to soft strata.

For the exploration core holes, the general diameter of the upper portion of the holes would be from 3.8 inches to 3.0 inches (HQ to NQ) while the lower portions of the holes would generally be completed to about 3.0 inches in diameter. Two of the deeper core holes may have the upper portions rotary drilled and cased with HQ rods before the final portion of the hole is completed by coring. No trenches or test pits are planned.

All exploratory drill holes would be grouted from as deep in the well as possible to the surface with a slurry of portland cement and bentonite. In the case of the retired degassification holes (GVBs), a plug may have to be set above the top of the cave before the cement and bentonite mix is pumped into the hole. The plugging material would be pumped, in lifts, from the bottom to the top.

If required by the authorized officer, casing would be set and cemented in the hole and suitable blowout prevention equipment would be installed. Previous experience drilling in the northern Book Cliffs Coal Field has not shown this to be necessary in unmined ground.

Adequate precautionary measures (such as berms, bales and/or silt fences) to prevent the escape of drilling materials into stream drainages would be incorporated into the site design. The potential for contamination of surface water will be minimized by the construction of mud pits of sufficient size to contain all effluent drilling materials and the placement of silt fencing. If mud pits are not adequate to handle all drilling fluids and cuttings, additional pits would be constructed or pit fluids pumped and hauled away.

Initial reclamation would take place by filling the mud pit as soon as fluids in the pit have evaporated. Later, after the hole is no longer useful, the pad would be reclaimed to the approximate original contour (AOC) then covered with the stockpiled topsoil, roughened and re-seeded. The hole would be cemented completely from the bottom to the collar after recovery of loose casings or whatever pipe can be pulled. Stored topsoil, at the side of the drill pad, would then be spread evenly over the drill pad, roughed and re-seeded. Roads constructed for this project would be reclaimed, roughed and re-seeded as determined by the BLM. The well sites would be stabilized through revegetation practices and by insuring that no drainage is uncontrolled.

In accordance with the revised stipulations of 43 CFR 3482.2 (b), all coal exploration drill holes (including gob vent boreholes would be:

- A. "Cemented from the total depth of the hole to the surface and
- B. The surface and the intermediate casing would be fully pressure grouted in the annulus from the bottom of the string to the surface. These measures would be taken to prevent intermixing of ground water. When the well is no longer needed, it would be plugged with portland cement and sealed.

None of the proposed drill holes would be considered for monitoring, surveillance or water monitoring wells at this time. The holes are slated to be either degassification wells or exploration holes as noted. Ventilation regulations would require weekly inspections while the GVBs are actively venting.

Drill and geophysical logs as well as representative core samples obtained from the proposed exploration program would be available for inspection or analysis by the authorized officer for one year. Typically all collected data including seam depth, thickness, quality analyses, geophysical logs, structure, geotechnical, drill core logs, strength test results, etc. would be copied and transferred to the appropriate personnel at the BLM offices for review and confidential storage, pursuant to 43 CFR 3485.1. Analyses of collected methane gasses would be made available to the BLM.

Equipment

A variety of equipment will be used during this drilling project including: One or more trackhoes, dozers, (equivalent in size to a D-8 or D-9), truck mounted drilling equipment (both rotary and wire line core), pipe trailers, boom trucks, compressors and boosters, light packs, large (3000 gallon or larger) water trucks, central water tank, fuel tanks, 4 X 4 trucks for transportation, cement mix plants and parts trailers. The gob vent borehole drilling may require up to: four rotary drill rigs (Failing 2500, GD 2000, or similar) to complete the required holes (up to 18) in the designated drilling activity window for both exploration plans. For the seven proposed exploration drilling activity window for both required: (likely Longyear 44 and smaller LF70 skid rigs.) All rigs should be capable of reaching depths of 2800 feet or greater.

Compressors and pneumatic drills may be necessary in some cases to build or extend roads into proposed sites.

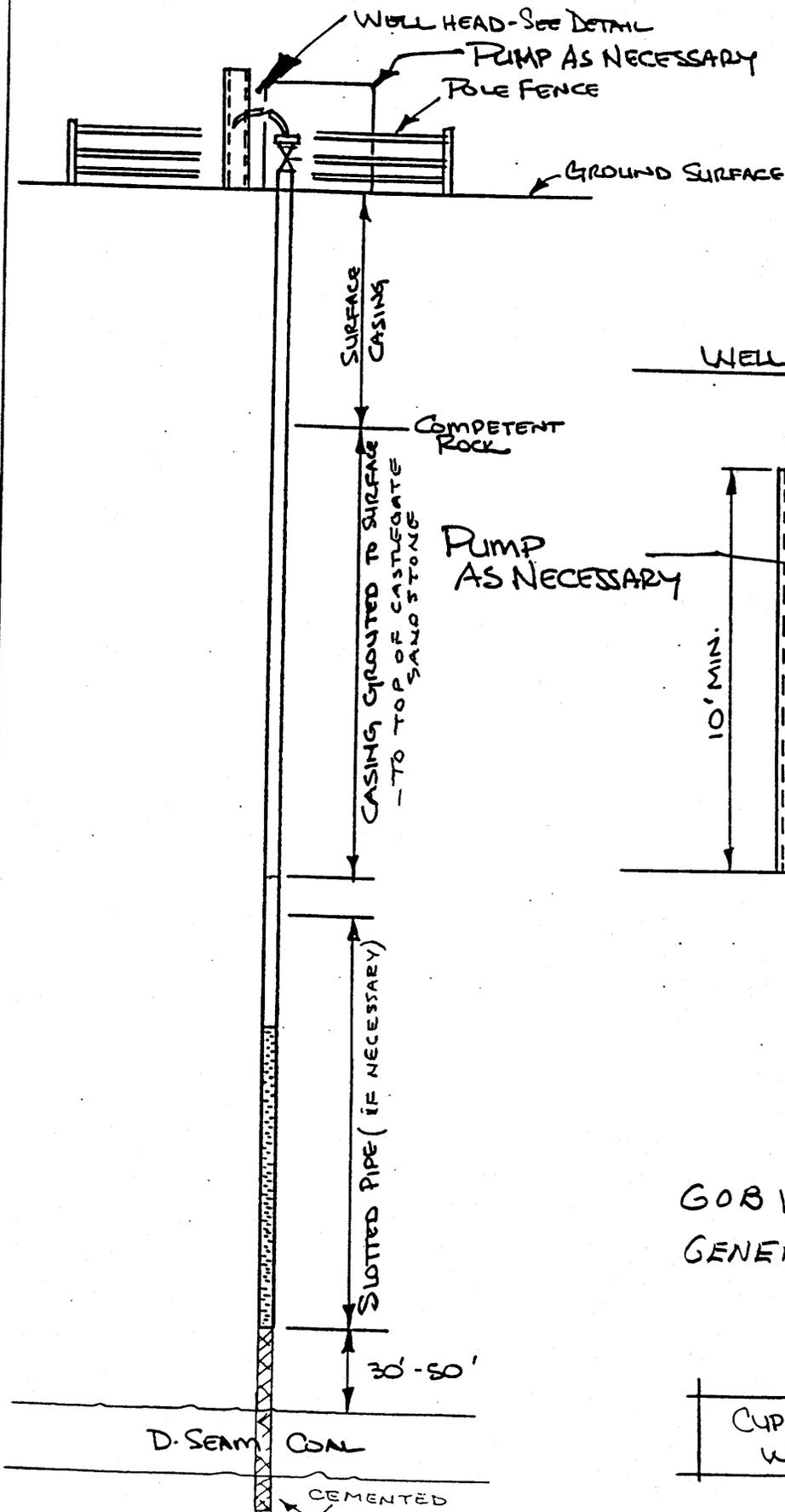
5. Gob Ventilation

To more effectively and safely ventilate the developing underground works, multiple gob vent boreholes sites have to be completed in each panel. By deviating multiple drill holes from each of the proposed sites P-G6, P-G9 and P-G10, surface impact can be minimized. Twenty-four hour operation would be required. General detail of the degassification (GVB) wellheads can be found as FIGURE II-3. Longwall startup is anticipated to resume sometime in September, 1999. (Attached PLATE IIB shows the location and detail of the 1999 Proposed Action Drilling Program).

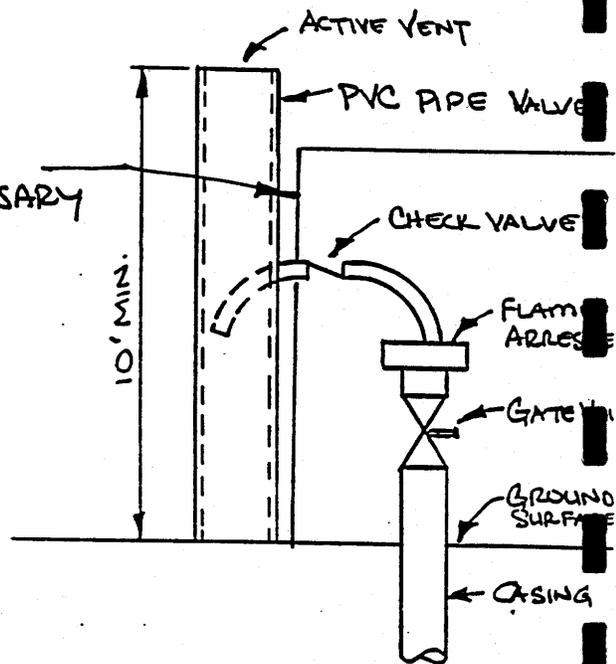
Seven Gob Vent Borehole sites not discussed here are covered in a separate exploration plan submittal. These other sites are numbered P-G1, P-G2, P-G3, P-G4, P-G5, P-G7, and P-G8. These sites have been previously approved and, in some cases, contain a completed drill but require approval for the completion of multiple vent holes for each site. The proposed sites detailed below are for the approval, site construction, and potential drilling of multiple gob vent or exploration holes and require an Environmental Assessment.

For drilling the GVBs, a truck mounted rotary rig would be utilized (Gardner-Denver 2000, Failing 2500, or similar). The holes would be rotary/hammer drilled through the coal seams of interest or to within 100 feet of key coal seams and then conventionally spot cored at a few sites. Generally, all the GVB holes would be drilled to the top of the Castle Gate Sandstone and cased to about ten inches ID. After casing the upper part of the holes, the drilling would continue to about 30 feet below the lowest seam of interest and then be geophysically logged. At this point, the holes would be either cemented up to about 30 feet above the D Seam or be selectively fractured to stimulate methane gas production until the longwall face approaches and then would be cemented above the D Seam. After the D Seam is mined around the hole, the developing gob would be partially vented up through the hole. Because of the number of proposed holes, several drill rigs may be used at the same time on the property.

GENERAL ARRANGEMENT



WELL HEAD DETAIL



GOB VENT BOREHOLE (GOB)
GENERAL ARRANGEMENT

FIGURE II-3

CYPRUS PLATEAU MINING CO.
WILLOW CREEK MINE

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



Ideally, water for the GVB drilling would be hauled to the rim location in Section 19, T12S, R10E, where the CO2 tanks and pumping station were previously sited, during the recent emergency mine fire, by 4X4 3000 to 5000 gallon water trucks. At this point, the water could be transferred to a large tank, and then piped down the ridge to the proposed drill sites by the existing steel gas line or plastic roll line to avoid the steep drill roads. Water for the exploratory core drilling would be hauled to the drill sites by 3000 gallon water trucks or pumped to the sites from nearby creeks through overland high pressure lines.

CPM has various water rights in the general area, and temporary changes in the point of diversion would be obtained, when needed, from the State Engineer prior to the start up of the exploration program. Water would have to be procured either from Willow Creek or from the Willow Creek portal location. Communications during the season would be by cellular phone during the program. Stream crossing permits would be obtained where necessary.

Wooden fences would be constructed around the GVB sites as required by DOGM, after completion of drilling but before degassification is finished, to prevent wildlife or cattle from harm. Warning signs would be placed on the fences. The well sites would be in areas where very few people ever go, so there would be little danger of impacts to humans.

Methane compressors or vacuum pumps may or may not be installed to facilitate liberation or extraction from the boreholes. These pumps, if used, will likely use part of the methane gas to power themselves. Periodic maintenance and/or inspections would be required on a weekly or monthly basis as determined by MSHA.

6. Construction Schedule

The estimated timetable for the proposed exploration activities is TABLE II-2. Where wildlife would be sensitive to the drilling operations, the work would be curtailed or delayed until a reasonably deemed less stressful time. Some of the holes may be drilled next year as indicated in the hole descriptions. *The asterisks in the table indicate that some roadwork and drilling, which was covered by a prior approved application, will start before the EA for this exploration plan is completed. Activity noted in November on TABLE II-2 will require a request for extension or an amendment to the exploration plan if the slated drilling goals have not been reached by the end of October.*

TABLE II-2

TIMETABLE FOR PROPOSED 1999 EXPLORATION ACTIVITIES								
Timing	May	June	July	Aug	Sept	Oct	Nov	Dec
Road Work*	N/A	N/A	XXX	XXXX	XXXX	XXXX		N/A
Drilling*	N/A	N/A	XX	XXXX	XXXX	XXXX	XXXX	N/A
Initial Reclamation	N/A	N/A	N/A	X	X	XXX	XX	N/A

("X" stands for weeks)

Construction activities would start in August with the mobilization of heavy equipment. Work would begin on road and well pad development. Drilling operations would start as quickly as possible, but actual drilling will depend on the availability of drilling rigs. This is necessary to complete drilling before the November 1 critical winter habitat shutdown date. Interim or final reclamation of pads and/or roads could start as early as August. Reclamation would depend on the potential need of a site for future gob ventilation.

7. **Stablization, Maintenance, And Operation Plan**

Unless otherwise required, the topsoil and native vegetation at the drill sites would be removed, if present, and stockpiled for re-distribution during site reclamation. After the hole is abandoned and properly sealed, the pad area would be reshaped to approximate original contour and topsoil returned to the site for final reclamation. Stockpiled soil would be protected from erosion loss by containment berms or silt fencing if necessary. Soil loss off the drillsite would be controlled by berms, straw bales, or silt fences. If the topsoil is stockpiled for lengthy periods of time, the soils would be seeded with an approved seed mix.

Wind erosion is not anticipated to be a problem. Weathered rock and/or subsoils excavated from the mud pits would be stockpiled separately from the topsoil and would be used to backfill the mud pits after coring and plugging activities are complete. Drill cuttings would be contained and buried in the mud pit. Mud pits would not be backfilled until drilling fluids are pumped out or evaporated.

Reclaimed drill pads and roads constructed during this project would be seeded with the approved seed mix. The seed mix listed below on TABLE II-3 was previously provided by the BLM specifically for sites in this area.

In order to minimize watershed and erosion damage during wet or muddy periods, access to construction site would be restricted. Construction procedures would be consistent with those described within the Utah Nonpoint Source Best Management Plan for Hydrologic Modification. Where runoff and drainage controls would be required, they would be constructed to BLM and/or UDOGM standards. Culverts underneath the road would be installed at a grade no greater than 3 percent, with rip-rap armoring on the outflow. Where required, other flow control structures may include energy dissipaters and channel to sheet flow dispersion fans. As required, hydrological protection in the form of sediment and runoff controls would be installed below areas where construction of the road could impact any ephemeral drainages and/or Willow Creek with increased sediment loads. Straw bales would be installed in the established borrow ditch along all slopes in excess of 12 percent. Activities within all wash and gully areas would be limited, so as not to significantly impact the area.

A spill prevention control and countermeasure plan (SPCC plan) has been developed to protect the undisturbed drainages from accidental spills of oil or other petroleum products within the disturbed area. This plan (APPENDIX A) would be available for review at the site.

In the event of spills of petroleum based products during the construction of the proposed action, procedures outlined in the SPCC Plan would be followed. The BLM, as well as the Department of Environmental Quality, would be notified if the release meets the definition of a hazardous waste as defined in 40 CFR 261.

A complete cultural clearance of all areas has been completed. To maintain the cultural, historical and paleontological resource integrity of the area, construction crews and staff would be provided with instructional materials regarding the identification, value, legal protection, and treatment of these resources. If any cultural, archeological, or paleontological resources are discovered during construction or any operations associated with the proposed action, all activities would cease at the area of the manifestation. The authorized agency would then be contacted to evaluate the importance and potential of the site. Mitigation measures would, at that time, be made for the value of the resource site. Construction and/or maintenance crews would avoid the site until the resource potential has been determined.

Noise reduction and control measures for construction activities would include proper operation and maintenance of manufacturer-installed noise abatement equipment. During operational use, enforced speed limits would limit area wide noise impacts by reducing the need for Jake Brake application on descending grades along the proposed roads.

Vegetation removal necessitated by the proposed action would be confined to the ROW. Vegetation removed would be set aside during construction activities, and/or left in place upon completion of construction where possible. Vegetation removed would be limbed and lopped. This material would then be distributed over the disturbed or reclaimed area to increase solar protection for emerging vegetation. Reclamation or surface contouring to restore all disturbed areas would start upon completion of the project, or as specified by the BLM.

An awareness and appreciation of wildlife would be taught to all employees associated with the proposed action. All activities associated with the proposed action development would be coordinated to minimize impacts to all wildlife species. If active raptor nests are located within 0.5 miles of any portion of the proposed action, construction would not begin within that area until the young fledge or July 16. Construction would not occur upon critical deer and elk winter range until after May 15. Completion of all construction would occur on or before October 31.

TABLE II-3
SEED MIX

Shrubs

Pounds Per Acre

Symphoricarpus albus	1.0
Artemesia tridentata wyomingensis	0.5
Cercocarpus ledifolius	1.0

Forbs

Achillea millefolium	0.5
Balsamorhiza saggitata	0.5
Penstemon strictus	0.5

Grasses

Poa secunda	1.5
Bromus carinatus	1.5
Agropyron spicatum	1.5
A. smithii	1.5
A. trachycaulum	<u>1.5</u>

TOTAL

Pure Live Seed

11.5

8. Abandonment and Reclamation

If the decision was made to abandon the proposed action all surface structures left in-place would be dismantled and transported off-site. Any existing well bore would be physically plugged as previously described and as required by the BLM and Utah Division of Oil, Gas & Mining abandonment requirements. In accordance with the revised stipulations of 43 CFR 3482.2 (b), all coal exploration drill holes would be : (1) "cemented from the total depth of the hole to the surface and (2) the surface and the intermediate casing (if used) would be fully pressure grouted in from the bottom of the string to the surface." These measures would be taken to prevent intermixing of ground water. Details on encountered groundwater flow would be noted on appropriate forms for the BLM records.

If surface landowners choose, reclamation associated with the proposed exploration area would follow guidelines established by the BLM.

9. Potential Mitigation Area

Presently the sage grouse is on the sensitive species list in Utah. In order to mitigate operational impacts associated with the proposed action, sage grouse could be re-introduced into the Emma Park Area. This would help re-establish a stable population in this area.

B. NO ACTION ALTERNATIVE

Under the No Action Alternative, the current situation would be maintained and no road or drill hole development would be allowed. Crypus Plateau Mining would have to evaluate other means of geologic exploration and methane removal from their mining property.

CHAPTER III. AFFECTED ENVIRONMENT

A. INTRODUCTION

The affected resources that will be analyzed were identified through baseline studies completed at the site of the Proposed Action, through issues raised by the scoping process, and through consultation with numerous public agencies as requested by the administering agency (BLM Price Field Office). The description of all affected resources is in accordance with the provisions set out by the National Environmental Policy Act (NEPA) of 1969 and all subsequent regulations implementing that law.

The following resources have not been identified within the area of the Proposed Action and, therefore, will not be addressed in the discussion of associated on-site resources (Affected Resources).

Areas of Critical Environmental Concern and Special Management Areas

Native American Religious Concerns

Prime or Unique Farmlands (APPENDIX B)

Wild Horses

Wilderness Areas and Wilderness Study Areas

Environmental Justice

B. GENERAL SETTING

The area is located within the Colorado Plateau Physiographic Province. The High Plateaus of Utah and the Canyonlands meet along the Book Cliffs, into which Sulphur, Price, Barn, Hell and Willow Creek Canyons each cut. The proposed project area is characteristic of the mid-elevations of the province, consisting of deep, rugged canyons and high open plateaus. Characteristic vegetation transitions from sage-grassland on the high Emma Park plateau, to a mixed pinyon-juniper, oak and Douglas fir habitat in the canyons, listed above, which dissect the area. Elevations within the project area range from approximately 6,200 to 7,600 feet above sea level. The area is characterized by hot, dry summers and cold, moist winter (Lines et al, 1984). Precipitation within the area is approximately 14 inches annually, occurring mostly within the winter months (Lines et al, 1984).

C. AFFECTED RESOURCES

1. Soils

Soils located within the area have been classified in Soil Survey of Carbon Area, Utah, a Soil Conservation Service, now Natural Resource Conservation Service (NRCS) publication. This source provided the following data on soil resources within the area of the proposed project.

Eight soil types have been delineated within the immediate area of the proposed road & pad area in Emma Park and Price River Canyon and the proposed road in Indian Canyon (See PLATE III-1).

Along the proposed cliff base route in Indian Canyon, the Travessilla-Rock Outcrop-Gerst Complex and Rock Outcrop are predominant. Pathead-Curecanti Family Association, with small areas of Guben-Rock Outcrop and Doney Family-Podo Complex, are present within the canyon bottom and at the mouth of Sulphur Canyon. Along the cliffs in Hell Canyon, Guben-Rock Outcrop Complex is present, with a transition to Rabbitex-Doney Family-Midfork Family Complex as the canyon widens and slopes become less steep. Trag-Beje-Senchert Complex is found at the head of Sulphur Canyon in Emma Park.

Within Barn Canyon, Pathead Extremely Bouldery Fine Sandy Loam, 40-70 Percent Slopes is predominant, with Trag-Beje-Senchert Complex making up the majority of the soil present at the top of the canyon in Emma Park. A small area of Rabbitex Silt Loam, 15-50 Percent Slopes is present near the top of Barn Canyon. Travessilla-Rock Outcrop-Gerst Complex is present at the mouth of Barn Canyon as it opens into Price Canyon.

The soils found in the area are similar in a number of ways. All are moderate to highly erodible, moderately permeable, low in salt, and located on steep slopes (15 to 80 percent). Three of the soil types (Pathead-Curecanti Family Association, Podo-Rock Outcrop Complex, and Travessilla-Rock Outcrop-Gerst Complex) have a high potential for water erosion. Four of the soil types (Doney Family-Podo Complex, Pathead Extremely Bouldery Fine Sandy Loam, 40-70% Slopes, Rabbitex-Doney Family-Midfork Family Complex, Rabbitex Silt Loam, 15-50% Slopes, and Trag-Beje-Senchert Complex) have a moderate potential for water erosion. Guben-Rock Outcrop Complex has a slight potential for water erosion.

A table comparing the specific characteristics of each of the above soil types, as well as a negative determination by the NRCS for prime farmland, is shown in APPENDIX B.

2. Hydrology

Precipitation in the general area varies widely, from less than six inches in the low areas, to more than 40 inches along the top of the Wasatch Plateau. The Price River drainage area in the vicinity of the proposed project receives an average of 14 inches. Winter precipitation is primarily snow, resulting from frontal-type storms which move across the area, primarily from west to east. Snowpack is the principal source of late spring and early summer runoff in the area, with summer precipitation generally resulting from thunderstorms moving through the area from the south. These storms are usually localized, short-duration but high-intensity events.

The proposed area is located within the Price River drainage basin that feeds into the Colorado River. Sulphur Creek, a perennial stream receiving flows from seeps and springs in Emma Park, and Barn Canyon, an ephemeral drainage, both drain into the Price River. Runoff from snowmelt, occurring in the spring, and thunderstorms or cloudbursts occurring in the summer and early fall provide the greatest flows for both drainages. These storms can be very localized and of high-intensity, resulting in rapid runoff that causes erosion and periods of sediment loading into the downstream Price River. Recurrence intervals for peak flow within the Price River near the proposed project are as follows: Hells Canyon and Dry Canyon and the associated run off from the road & pads on the East of Willow Creek will drain into Willow Creek and subsequently the Price River.

<u>Recurrence (years)</u>	<u>Peak Flow (cfs)</u>
2	1,180
10	3,170
100	7,780

(From Lines et al, 1984)

Numerous water rights are located within the area of the proposed project. APPENDIX G contains a listing detailing ownership, source, and type, with the location of each water right shown on PLATE III-4.

Willow Creek, a perennial tributary of the Price River, is located within the area of the project along with several ephemeral drainages that empty the side canyons of Willow Creek Canyon. These drainages flow throughout the spring from snow melt and during summer storm events, seasonally increasing the flow of Willow Creek.

3. Cultural Resources

Between May 19 and 22, 1999, Montgomery Archaeological Consultants conducted a cultural resource inventory in the area of the proposed project (Montgomery 1999). This included a site specific inventory of eight drill sites and access routes, one staging area, and three block parcels. As a result, each one of the currently proposed drill sites were inventoried. The 1999 inventory built upon numerous other inventories that have been conducted in the area (Berge 1977; Davis 1994; Harden 1984; Hauck 1977; J. Montgomery 1994, 1996; K. Montgomery 1998a, 1998b, 1998c; Montgomery and Montgomery 1997). Copies of each of the above reports are on file at the BLM Price Field Office, Utah.

The actual inventory consisted of a 300 foot area around each drill site and a 100 foot wide corridor for each proposed access route. The block parcels were surveyed by the archaeologist performing an intensive survey inspecting ridge tops and crests, benches, and canyon bottoms.

One site is recorded in the area. This site, 42CB1178, is considered to be eligible for the National Register of Historic Places (NRHP) under Criterion D. It consists of an abandoned historic structure built partially into the hillside. The collapsed structure measures 15 by 15 feet and is constructed from wet laid sandstone blocks. No cultural materials were observed on the surface of the structure, however, there is potential for buried remains under the collapsed roof. This site is located along the northeast side of the proposed access route for drill location E-14 (T12S R10E S. 28 - NW, NE, NW). This site should be avoided by road construction activities. Based on avoidance, a determination of No Effect is recommended pursuant to Section 106, CFR 800 for this project.

4. Land Use

Land jurisdiction and ownership for the proposed project area consists of public and private land. Private and public land ownership and existing land uses in the area is shown on PLATE III-4. Area wide and lineal land uses surrounding the proposed action includes three paved roads; U.S. Highway 6 in Price Canyon, U.S. Highway 191 in Willow Creek Canyon and the Emma Park Road, and numerous unpaved private roads, Castle Gate facility, and numerous utility lines. To the south of the project site lies the town of Helper. To the north are the Wasatch Plateau and Roan Cliffs, both popular year-round recreation areas.

Dominant land uses in the area of the proposed action are limited due to restricted access upon private land. Current land uses include livestock grazing, hunting, and off-road vehicle (ORV) use. Wildlife viewing and scenic driving occurs on the nearby Emma Park Road and federal highways.

Grazing

The proposed drilling and associated roads would be partially located within the Price Canyon East Cattle Allotment and the Crandall Canyon Cattle Allotment (See PLATE III-4). The Price Canyon East Cattle Allotment, has a seasonal use of May 16 to November 15 for 108 head of cattle and a total of 353 AUMs (Jensen, 1996). The Crandall Canyon Cattle Allotment has a May 1 to October 31 seasonal use with 31 head of cattle and a total of 103 AUMs (Jensen, 1996).

The Kyune II Cattle Allotment has a June 1 to October 31 seasonal use for 155 head of cattle and a total of 382 AUMs (Jensen, 1996).

The Willow Creek Grazing Allotment has a March 1 to October 14 seasonal use and is divided into three suballotments: the first is 20 head of cattle at 33 AUMs, the second is 30 head of cattle at 165 AUMs and the third is 8 head of cattle at 14 AUMs.

Recreation

No developed or special recreation management areas exist within the actual area. Dispersed recreation activities, such as hunting, wildlife viewing and scenic driving, as well as non-restricted open ORV use occur throughout the area. Recreation opportunities within the project area are limited due to private access availability. The Price Canyon Recreation Area is a BLM operated campground and picnic area located near the rim of Price Canyon, approximately three miles east of the proposed action. Immediately past the campground is a scenic view area, providing a wide view of the upper portion of the area and other side canyons of Price Canyon.

The Price River and Willow Creek have not been evaluated for wild and scenic river designation. The Price River, though not qualifying for such a designation due to the amount of disturbance within the canyon (highways, railroad, utility lines, etc.), does have the potential to be classified as a recreational river.

U. S. Highway 191 is recognized as a scenic by-way by the State of Utah. Dispersed recreation activities, such as hunting, wildlife viewing, and scenic driving, as well as unrestricted upon ORV use occur throughout the area. Open recreational opportunities are limited due to the amount of private land and limited access within the area.

Willow Creek has not been evaluated for wild and scenic river designation. Although not qualifying for such a designation due to the amount of disturbance within the canyon (highways, utility lines, etc). Willow Creek does have the potential to be classified as a recreational river. Evaluation for such designation is on-going by the BLM.

Visual Resources

Maintenance of visual resources is a concern from nearby and distant viewing locations. This includes views from federal lands with visual resource values, recreation areas and a major transportation route. The project area surrounding Price Canyon and Willow Creek Canyon is currently managed as VRM Class III. This management class allows for visually dominant activities, requires adequate management and planning to reduce the impact where possible.

The project area is visible from the scenic view pull-out at the Price Canyon Recreation Area. The high plateau that makes up the project area is not readily visible from Price Canyon due to topography.

The existing Carbon-Spanish Fork Number One 138 kV line in Emma Park is visible from the Emma Park Road, though the point of departure for the existing route of the Carbon-Spanish Fork Number Two 138 kV tap or upper portion of Sulphur Canyon is not. The existing Barn Canyon powerline can be seen from Emma Park.

Views from U. S. Highway 191 within the narrow Willow Creek Canyon of the established access roads proposed for use, are noticeable. The CPM operations and U P & L power plant near the tie-in in the mouth of Willow Creek Canyon are extremely visible as well.

APPENDIX D contains a visual evaluation of the area and from the Price Canyon Recreation Area and the upper portion of Willow Creek Canyon.

5. Vegetation

Vegetative cover within the area of the proposed project is largely dependent on elevation and aspect. Acreage of the various vegetation types located within the proposed project (proposed pads, and access roads are shown in TABLE III-1. The location of general vegetational cover types appears on PLATE III-5.

A site-specific vegetation inventory was conducted within the area of the proposed action during the fall of 1996. A list of species identified during the inventory is shown in TABLE III-2. This list, though not comprehensive, is a good indication of what species inhabit the Indian Canyon and Price Canyon area.

A sagebrush-grass community is present at the proposed road intersection in Emma Park. This community is dominated by basin big sagebrush, (*Artemisia tridentata*) in the shrub layer with wheatgrass, (*Agropyron spp.*), dominating the grasses. Descending the canyons, the vegetation transcends to a mountain shrub-grass type in the canyon with the side slopes occupied by an oak brush cover. The mountain shrub-grass community is dominated by rubber rabbitbrush, (*Chrysothamnus nauseosus*), mountain snowberry, (*Symphoricarpus oreophilus*), basin big sagebrush, wheatgrass, and Indian rice grass, (*Oryzopsis hymenoides*). The dominate species in the oak brush community is gamble oak, (*Quercus gambelii*). Within the canyons, a narrow band of riparian vegetation, in association with the small perennial stream, has developed. Narrowleaf cottonwood, (*Populus angustifolia*), quaking aspen, (*Populus tremuloides*), and coyote willow, (*Salix exigua*), are some of the dominate riparian species where water is available through most of the summer.

TABLE III-1

VEGETATION ACREAGE WITHIN THE PROPOSED PROJECT AREA

<u>Vegetation Type</u>	<u>Acreege *</u>
Pinyon-Juniper	8.97
Sagebrush-Grass	8.43
Douglas Fir	4.83
Mountain Shrub14
Transitional Pinyon-Juniper07
Riparian07
TOTAL ACREAGE	22.51
Area of Previous Disturbance	1.38
TOTAL ACREAGE	23.89

* **Acreege based on a combination of ROW's for the drill and pads, a 30 foot ROW for the access roads.**

The southeast aspect of the canyons are covered with a pinyon-juniper community, with the northwest aspect covered with Douglas fir or transitional pinyon-juniper communities. Within the Douglas fir community, Douglas fir, (*Pseudotsuga menziesii*), dominates the canopy, in association with an understory of Rocky Mountain maple, (*Acer glabrum*), and mountain snowberry. (*Symphoricarpus oreophilus*). The pinyon-juniper community is dominated by pinyon pine, (*Pinus edulis*), and Utah juniper, (*Juniperus osteosperma*), while the transitional pinyon-juniper has these co-dominant species as well as a mixture of the plants found within the Douglas fir community.

Within Price Canyon and Willow Creek Canyon, the major vegetation type is a sparse pinyon-juniper community. Adjacent to the proposed ROW, is a narrow band of riparian vegetation. The riparian community bordering Willow Creek is heavily altered by the U.S. Highway, U P & L, PRWID and CPM facilities.

A sagebrush-grass cover is present at the intersecting point for the existing road on private land and the proposed new road. Isolated areas of aspen and oak brush are also present. Within the canyons, the predominant community is pinyon-juniper, with some cover dominated by Douglas fir. The mouth of the canyons have been altered by past and on-going disruptive activities. Current vegetation cover is a sagebrush-grass mix.

TABLE III-2

LIST OF PLANT SPECIES SAMPLED WITHIN THE SITE OF THE PROPOSED ACTION

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
<u>GRASSES</u>	
wheatgrass	<i>Agropyron spp.</i>
Indian rice grass	<i>Oryzopsis hymenoides</i>
Carex	<i>Carex spp.</i>
<u>FORBS</u>	
silver lupine	<i>Lupinus argenteus</i>
pussytoes	<i>Antenarria spp.</i>
wild geranium	<i>Geranium caespitosum</i>
horsetail	<i>Equisetum spp.</i>
Fendler's meadow rue	<i>Thalictrium fendleri</i>
branched solomons seal	<i>Smilacena racemosa</i>
Bilobe delphinium	<i>Delphinium nuttallianum</i>
desert trumpet	<i>Ipomopsis rubra</i>
Rocky Mountain clematis	<i>Clematis pseudo-alpina</i>
<u>SHRUBS</u>	
Oregon grape	<i>Berberis repens</i>
chokecherry	<i>Prunus virginiana</i>
rubber rabbitbrush	<i>Chrysothamnus nauseosus</i>
broom snakeweed	<i>Gutierrezia sarothrae</i>
willow	<i>Salix spp.</i>
mountain snowberry	<i>Symphoricarpus oreophilus</i>
basin big sagebrush	<i>Artemisia tridentata</i>
rose	<i>Rosa spp.</i>
squawbush	<i>Rhus trilobata</i>
<u>TREES</u>	
Utah juniper	<i>Juniperus osteosperma</i>
pinyon pine	<i>Pinus edulis</i>
Douglas fir	<i>Pseudotsuga menziesii</i>
gamble oak	<i>Quercus gambelii</i>
ponderosa pine	<i>Pinus ponderosa</i>
Rocky Mountain maple	<i>Acer glabrum</i>
bigtooth maple	<i>Acer grandidentatum</i>
narrowleaf cottonwood	<i>Populus angustifolia</i>
quaking aspen	<i>Populus tremuloides</i>

Special Status Plant Species

According to information within Utah Endangered, Threatened, and Sensitive Plant Field Guide, published by the USFS Intermountain Region, and correspondence with the BLM, no federally listed plants are known to occur within Carbon County. During the vegetation inventory, no threatened, endangered, or sensitive plants were identified. Canyon Sweet vetch Hedysarum occidentale And clay phacellia Phacelia argillacea listed as sensitive, could possibly be located within the proposed area. However, suitable habitat is not present within the area of potential disturbance.

6. Wildlife

Wildlife indigenous to the general area include amphibians, reptiles, birds and mammals. General wildlife use of the area is shown on PLATES III-6A, 6B, and 6C.

Amphibians-There are six species of amphibians known to occur within the general area of the Wasatch Plateau. These species are classified as common, but are limited to mesic areas (Dalton et al, 1990). These species could be present within the Willow Creek and Price River riparian areas, but their occurrence is not known. The pinyon-juniper and mountain shrub that make up most of the affected habitat are not considered important or limiting to their survival.

Reptiles-There are ten species of reptiles known to inhabit the region. The habitats encountered vary in value for these species, with some considered critical. The limited acreage of disturbance associated with the proposed project, however, is not considered a significant threat to these species due to the abundance of the pinyon-juniper and sagebrush-grass habitat throughout the area.

Birds-There are approximately 185 bird species that could possibly be either year long residents or frequent the site during portions of the year. The coniferous areas within the proposed project area could be potentially utilized by Northern goshawks (*Accipiter gentilis*), a tree nesting raptor. A ground inventory of potential habitat within the area was conducted in the summer of 1996. No goshawks or goshawk nests were located during that survey. Cliff nesting raptor inventories of the habitat areas surrounding Price Canyon and Willow Creek Canyon were conducted in the spring of 1999. (See APPENDIX E).

Specific habitat in Price Canyon that could be a limiting factor to any bird species has not been identified. A small upper portion of the proposed project would enter sage grouse nesting habitat. The riparian areas associated with Willow Creek and the Price River are of some importance to neotropical bird use, as well as potential tree nesting raptor habitat.

Emma Park is an area of potentially nesting and breeding habitat for sage grouse. (*Centrocercus urophasianus*). PLATE III-6A shows the established boundary of sage grouse nesting within Emma Park. A DWR aerial survey to identify potential nesting areas and breeding grounds, known as leks, was conducted in the spring of 1997.

Mammals-Ninety-two (92) species of mammals are known to exist in, or have the potential to inhabit the region. Of these species, mule deer (*Odocoileus hemionus*), and elk (*Cervus elaphus*) have been identified to be of significant importance within the project area. The project area lies within the Unit Area 32 of the DWR, utilized by the Range Creek mule deer and elk herd units. The optimal herd unit within this area is 6,000. The project area is situated within critical summer range, with portions of high priority winter range for mule deer, and in year long high priority range and winter high priority range for elk (See PLATES VII-A and VII-B). Many other mammal species utilize the varied habitats found within the area for cover and forage.

Special Status Wildlife Species-The area of the proposed project provides habitat that could be potentially used by bald eagles (*Haliaeetus leucocephalus*), a threatened species; ferruginous hawks (*Buteo regalis*), a candidate species; and peregrine falcons (*Falco peregrinus*), and black-footed ferret (*Mustela nigripes*), both endangered species. However, these federally listed species have not been identified or are known to occur within the immediate area of the proposed project.

7. Geology

The area is characterized as deeply incised "plateau topography" existing as flat-topped ridges elevated above the adjacent desert lands. This topography is the result of advanced erosion carving up a flat top "plateau" forming steep-walled canyons cutting into the federal leases. Elevations range from over 8,000 feet above sea level on the ridge tops to around 6,000 feet above sea level in the bottom of the deepest canyon.

The Mancos Shale forms the valley floor and lower slopes of the south-facing escarpment and is over 4,000 feet thick in the area. This unit contains the interfingering, eastward-thinning delta sandstones of the Lower Blackhawk Formation. Locally, the Blackhawk Formation is comprised of five shoreline deltaic cliff-forming sandstone members; in ascending geological order: The Panther, Storrs, Spring Canyon, Aberdeen, and Kenilworth Sandstones. See FIGURE III-1.

The aggregate thickness of the Blackhawk Formation in this area is 1,200 feet. The Blackhawk Formation is primary coal-bearing formation within the area where thick and laterally extensive seams are usually closely associated with shoreline delta sandstone units. The formational thickness from the top of the A Seam to the base of the Castle Gate Sandstone is about 950 feet.

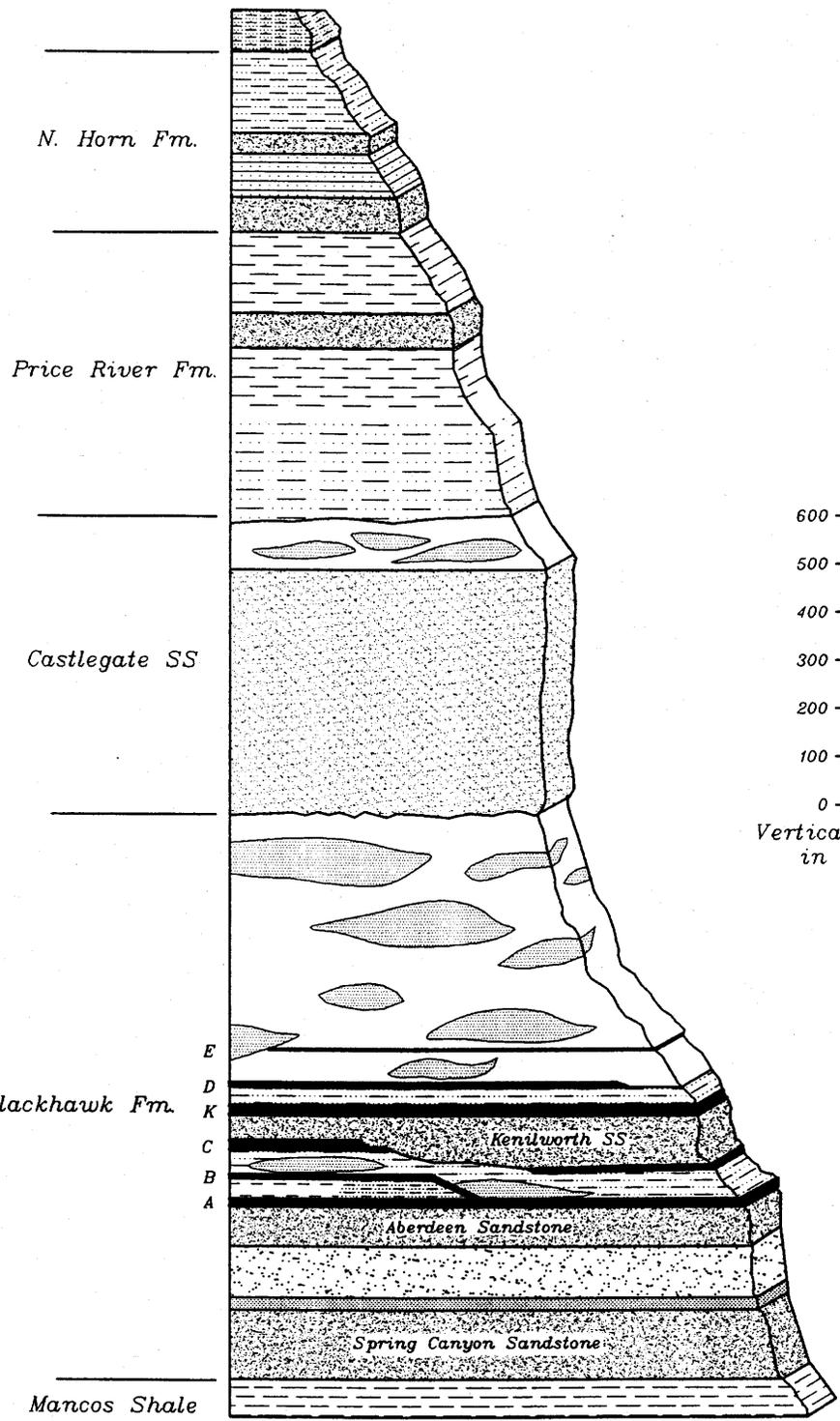
Overlying the Blackhawk Formation is the massive cliff-forming sandstones of the Castle Gate Sandstone (500-600 feet thick). This formation is, in turn, overlain by lenticular sandstone and clay-rich mudstones of the Price River Formation (600 feet thick).

The North Horn Formation, which is approximately 1500-2000 feet thick, is composed of lenticular sandstones and clay-rich to limey mudstones, is the uppermost unit present in the least tract, and can only be seen on the extreme northeastern side of the exploration area.

Stratigraphic units in this part of the Book Cliff Coal Field typically dip about eight degrees North to North-Northeast. No faults have even been identified within the Willow Creek Mine permit area.

8. Socioeconomics

As of July 1999, the unemployment rate for Carbon County was six percent, with a modest decline projected for the next ten years. Statistics and projections from the Utah Department of Employment show Carbon County has been and will continue to experience moderate economic growth and employment over the next 10 years. The local coal based industry is considered stable with the potential for increase, due the use of coal for electric generation in the area and the expansion of exportation (Hunting, 1997). Because of limited housing in both Carbon and Emery Counties, construction related employment has increased and should continue to increase with the demand for multi-home tracts (Hunting, 1997). This and the possible development of the nearby coalbed methane.



Project No.: 866-2200	Design By: K.CONRATH	Scale: AS SHOWN
File: STRAT.DWG	Drawn By: K.CONRATH	Date: JANUARY, 1995

CYPRUS Plateau Mining

TerraMatrix
Engineering & Environmental Services
1475 Pine Grove Road, P.O. Box 774018
Steamboat Springs, Colorado 80477

FIGURE II-4

GENERAL STRATIGRAPHIC COLUMN

CHAPTER IV-IMPACTS AND MITIGATION

I. INTRODUCTION

The following chapter will define the anticipated impacts relative to each resource. Quantify and qualify the impact and discuss proposed mitigation. The following TABLE IV-1 identifies the category, number of acres impacted and the type of impact relative to long-term (more than one year) or interim (less than one year).

The proposed action impacts for new roads and new drill pads were evaluated in this document. Impacts from existing roads were not included.

TABLE IV-1
AREAS OF IMPACT ASSOCIATED WITH THE PROPOSED ACTION

<u>Category</u>	<u>Area (acres)</u>	<u>Remarks</u>
Soils	≤ 22.51	All Disturbance-Salvaged During Construction
Vegetation	≤ 22.51	All Disturbance-Interim in Nature
Hydrology**	3.95	Potential Disturbance Near Willow Creek
Wildlife**	0.00	200 Meter Mule Deer
	0.00	800 Meter Elk
Stock Grazing	22.51	Limited Areas
Visual	N/A	Varies from U. S. Route 191 and the Emery Park Road & Pad Total
Construction-Interim	11.00	Reclaimed in one year
Life of Project	12.38	
Area Previously Disturbed	1.38	

1. Soils-Impacts

TABLE IV-2 shows the potential acreage of disturbance anticipated for each soil type with the construction of the action. The acreage calculated for the road and pad ROW and the total acreage of the access road ROW and eight Pad areas near the head of Barn & Hell Canyons plus the new road and two pads that would be constructed in the Willow Creek drainage. The potential impact on soils would be approximately 22 acres.

Within the proposed ROW, surface impact to soil resources at specific pad sites is approximately 2.03 acres. Impact to soils would occur where construction of a new access road would be constructed. Likewise, disturbance resulting from the access to and from the project on existing dirt roads could result in increased dust and potential soil loss as a result of wind and water erosion.

The additive impact of diminished vegetation cover could contribute to some soil erosion, especially to steep soils with high water erosion potential in the canyons heads. Since revegetation procedures described under the stabilization and maintenance plan would be implemented, no future impact to soils is anticipated pending completion of the proposed drilling program.

Table IV-3

ACREAGE OF SOIL TYPES IMPACTED BY THE PROPOSED ACTION

Soil Complex	Access Road	Pad Area
Cabba Family - Guben - Rock Outcrop Complex	0.26	0.11
Comodore - Datino Variant Complex	1.29	0.00
Guben - Rock Outcrop Complex	3.83	0.91
Midfork Family - Comodore Complex	3.51	0.45
Pathead Extremely Bouldery Fine Sandy Loam, 40-70% Slopes	2.46	0.41
Rabbitex Silt Loam, 15-50% Slopes	1.90	0.00
Trag - Beje - Senchert Complex	6.32	0.00
Unita Family-Podo Association	0.93	0.14
Totals	20.49	2.03

Soil impacts associated with access on existing dirt roads in the Emma Park area have not been analyzed. However, the development plan has indicated use restraints that should minimize these types of impacts.

Mitigation-The stabilization, maintenance, operation and plan described in Chapter II was designed to minimize impacts to soils resources within the project area. The plan calls for the stripping of all topsoils and safeguarding the topsoil through the life of the project. At which time, the topsoil would be redistributed in approximately the same depth and composition as what existed prior to disturbance.

On the pad areas, the upper 12 inches of soil would be stripped and stockpiled along the perimeter of the pad. The material would be utilized to form the berm which would contain potential run-off from the pad.

On all pads which would remain disturbed for more than one year, the soil/berms would be revegetated to minimize loss of soil through wind and/or weather erosion. On pads that are temporary (less than one year), the soil would be redistributed and seeded the first available season (October/November).

Access roads would be constructed in such a manner that all available top soil would be stripped utilizing a track hoe. The soil would be placed at the lower portion of the fill slope and covered with underlying subsoil/rock, etc. The process would be reversed upon reclamation resulting in the top soil redistributed over the reclaimed road cut on the surface. All disturbed areas not actively in use (road surfaces and pad surfaces) would be reseeded during the first available period following construction.

2. Hydrology Impacts

A small potential for sediment loading into Willow Creek and the Price River could occur from construction activities along the proposed roads and pads. There is also the possibility for adverse effects on the hydrology resulting from oil/diesel spills during construction. However, with the incorporation of sediment control below the proposed well pads and within all drainage areas, in this potential impact would be minimal.

No adverse effects are expected for sub-surface water within the proposed project area. No adverse effects are anticipated for the ephemeral drainages. Removal of the non-essential roads and pads would occur late in the year, when the channels are usually dry, and there would not be excessive vehicular traffic.

Mitigation-The stabilization and maintenance plan has incorporated all site specific recommendations as outlined in APPENDIX F for the stream alteration permit.

All road drainages would be constructed with controlled drainage outlets. Culverts would be installed at a minimum grade of three percent and not to exceed five percent. Both inlets and outlets would be armored to prevent end cutting and/or erosion on fill slopes.

Drainage ditches would be constructed to prevent ponding. Energy dissipators in the form of straw dikes, and or silt fences/gabions would be installed on all grades in excess of six percent to minimize down cutting.

Silt fences would be installed adjacent downhill to all disturbed sites that will not be revegetated. Where site specific conditions indicate, temporary sediment pond maybe constructed to prevent degradation of surface waterways (Willow Creek), which could be adversely impacted as a result of increased sediment loading as a result of construction.

3. Cultural Resources Impacts

As previously mentioned, a cultural resource inventory has been conducted by Montgomery Archaeological Consultants for the proposed area well locations and attendant access road corridors. One significant cultural site was identified as a result on this inventory. This site is located along the northeast side of the proposed access route for drill location E-14.

Site specific cultural resource inventories have not been conducted on the G-6, G-9, G-10, E11a, and E11b proposed well locations, and their associated access road corridors. However, block surveys of the areas in which these wells are located have been done. No cultural materials were located within the block surveys for these areas.

Montgomery Archeological Consultants did not find any cultural interests except for one site. Because of avoidance a recommendation of No Effect was given to this particular site. The proposed action should not have an impact on cultural resources.

Mitigation-If any cultural values are discovered during construction activities on any of the well locations or their ancillary facilities (i.e., roads and pipelines) subject to BLM authority, operations would be immediately suspended and the Area Manager, Price Field Office notified. The BLM Authorized Officer would evaluate the discovery and recommend mitigation measures which may be necessary to prevent the loss of significant cultural values.

Construction of the portion of the access road to the E-14 well location which comes near cultural site 42CB1178 would be subject to those mitigation measures deemed necessary by the Authorized Officer, in consultation with the SHPO, to prevent the loss of potentially significant cultural values.

4 Land Use Impacts

The following criteria were integrated to determine impacts to land use: (1) potential for nonconformance with existing land use plans (Price River MFP); (2) proximity to "sensitive" areas (i.e. critical wildlife habitat, potential raptor nest sites); (3) termination or modification of an existing land use or a land use incompatibility and (4) a general characterization of impact type (including duration, quantity and quality of the impact).

Impacts to land use would be localized in the immediate proposed project area during the one year construction time frame. For both safety and security reasons, public access to active areas of construction would be temporarily precluded during this period. However, the proposed development generally would not preclude any public use of the affected lands during the life of the project. (five years)

Grazing Impacts

Although construction of the proposed road and drill pads would occur within the seasonal use period of the Price Canyon East, Willow Creek and the Kyune II Cattle Allotments, grazing use would not be excluded. Due to the nature of the project and minimal disturbance of small isolated areas, grazing would not be effected and there would be no reduction of AUMs. Range management facilities (fences, wells, etc.) are not expected to be impacted.

Recreation Impacts

A temporal impact to recreation use and access could occur during the active construction period associated with the action. Access restriction would be limited to active areas of construction and not to the whole of the proposed project area. Since the majority of construction is proposed for the summer, restriction to hunting access in the fall is not anticipated. Impacts from construction traffic in the summer and fall to recreation activities, such as scenic driving and wildlife viewing, would occur.

Visual Resources Impacts

Because the proposed project area is potentially visible from a great distance, maintenance of visual resources is a concern from nearby and distant viewing locations.

A see/no see visual evaluation was completed from key observation points (KOP) surrounding the proposed action area. These evaluations are in APPENDIX D with photographs of the proposed project area from various points within each KOP.

Visual contrast from the Price Canyon Recreation Area would be apparent. A temporal impact associated with construction activity within the canyon would be visible from the highway from this site. Activities within Willow Creek Canyon, with the exception of the first 100 feet of the proposed access road, would not be visible from this KOP.

Visible impact within the project area would be minimal due to the proposed materials used (non-reflective hardware, etc.), distance from the KOP (See APPENDIX D), and combined impact of ongoing visual disturbances within the canyon (utility lines, highway, etc.). Overall, the lasting impact of the proposed action would be minimal.

Mitigation-No mitigation is anticipated for land use.

5. Vegetation Impacts

The total area of the combined proposed and existing road, and pad ROWs, comprise approximately 24 acres. Anticipated disturbance to vegetation within the ROW as a direct result of construction activities and operations could be as high as 23 acres. (See TABLE IV-3). In the pinyon-juniper, Douglas fir, and oak habitats, it may be necessary to remove some trees. Minimal impact to sagebrush-grass and mountain shrub habitats is expected. An associated impact to watershed values could occur due to erosion resulting from removal of vegetation. No additional impact to any habitat type is expected during the operation of the gas wells.

**TABLE IV-3
ACTUAL HABITAT DISTURBANCE ANTICIPATED BY CONSTRUCTION ACTIVITIES
ASSOCIATED WITH THE PROPOSED ACTION**

<u>Habitat Type</u>	<u>Disturbance (Acres)</u>
Pinyon-Juniper	11.50
Sagebrush-Grass	8.43
Douglas Fir	2.29
Mountain Shrub14
Transitional Pinyon-Juniper07
Riparian	<u>.07</u>
 *Area of Previously Disturbed	 1.38
TOTAL	23.88

Mitigation-The stabilization and rehabilitation plan describes in Chapter II the methodology and revegetation procedure and seed mixes proposed for both interim and final reclamation of the disturbed areas. No additional mitigation is recommended at this time.

6. Wildlife Impacts

The primary concerns relative to wildlife within the project area (proposed access roads and drill pads) are: (1) critical big game range, (2) sage grouse leks and nesting habitat, (3) raptor nesting, (4) displacement from habitat loss and (5) displacement through disruptive activity in association with operations.

Direct impacts would be limited to vegetation and habitat removal. The approximate direct acreage loss of potential habitat by vegetation type is shown in TABLE IV-3. Impacts of the proposed project would be limited to the approximate loss of 24 acres of habitat as a direct result of construction activities. TABLE IV-4 shows the wildlife habitat disturbance acreage. The actual loss of habitat within the ROW would be less, since actual vegetation removal would be site-specific. Proposed interim revegetation of habitat disturbance would minimize the impact, if not provide a benefit to wildlife during winter and year long use periods.

TABLE IV-4

WILDLIFE DISTURBANCE ACREAGE ASSOCIATED WITH PROPOSED ACTION

<u>Range Boundary</u>	<u>Direct</u>
Proposed ROW: Drill Pads & Roads	24
Mule Deer	
*Winter High Priority	0
Summer Critical	24
Elk	
*Winter High Priority	0
Yearlong High Priority	24
Totals	24

Area of potential impacts to sage grouse

Habitat Type	Sage/Grass
	Acres
Direct	7.71
Existing Access Road	
Disturbance	848.48
½ mile buffer	
Total Potential	
Habitat Impact	856.19

*No critical or high priority elk or deer winter range will be affected-(No disturbance buffer zones were calculated).

Indirect displacement impacts could result from noise related activities (equipment, well-drilling, etc.) during active periods of construction. However, displacement impacts associated with construction noise are largely avoided by the timing of construction activity outside of the established use periods and restriction of use during critical stress periods. The construction time frame would be initiated after the November 1 to May 15 seasonal use established for big-game winter range, and all work in the area would occur between Aug 16 and October 31 to avoid any impacts to sage grouse. Only a small portion of the project would be within deer and elk calving range or sage grouse nesting habit.

The Price River MFP establishes 10 acres as a threshold of significance for surface displacement impacts on big game winter range. In areas exceeding 10 acres, off-site mitigation of land use impacts is required. Displacement of resident deer and old herds within the area of the proposed line and adjacent 200 and 800 meter buffer zones would be limited to the time of construction in Willow Creek Canyon and Price Canyon. Minor impact to wintering big game (i.e. winter range displacement) would occur as a result of the proposed action.

Raptor buffer zones would not be impacted within Willow Creek and Price Canyon. Due to the timing of the proposed action, no impacts would be incurred to nesting raptors. Since no active nests have been identified, construction schedules would not need to be adjusted or postponed.

Mitigation-The loss of critical/high value big game habitat is considered less damaging in this area based on:

1. The range is not fully used to its capacity. It is estimated to be at >50 percent.
2. The relatively short duration of the project disturbance (5 years) with total reclamation of the site on cessation of operations.

The above appears that mitigation for big game habitat may be not warranted on this site specific basis. However, the loss of or disruption of sage grouse use areas in this area appears critical. The historic populations of sage grouse in all of South East Utah has declined dramatically over the last ten years. This decline can not be attributed to a single factor but is most likely the result of numerous conditions such as: extremely harsh winters, wet cold springs, increases in predation and man's intrusion into historic habitat. The net result in the Emma Park Area is that the population base is so low that given ideal conditions the population may not be able to rebound.

Mitigation-To offset the low sage grouse populations, CPM has agreed to fund a cooperative effort between UDWR, BLM and the private land owners. This would involve the re-introduction of 200 birds back into this historic range. Efforts are in progress to make arrangements with other western states to secure adequate numbers of birds for capture and release in the Emma Park Area. With the introduction of birds, it is hoped that a stable population of sage grouse can be maintained in this area

6. Geology Impacts

No direct impact to geology of the area would result from the proposed action, with the exception of lost coal due to the drilling.

The proposed plan would call for eight to nine inch GVB drill holes and seven three inch exploration holes on federal land. It is assumed an estimated total of 20 feet of coal will be rotary drilled (ground up) for each GVB hole and 40 feet cumulative thickness of coal will be recovered for each core hole.

Calculation for lbs. of coal per hole based on the equation:

$$\pi r^2 L \quad \times \quad \text{coal density} \quad = \quad \text{weight of coal}$$

It is estimated that a total of 8,000 pounds of coal (about four tons) would be disturbed or removed during the program. The core sampled would be logged, desorbed, and analyzed for quality and/or perhaps tested for strength.

Total ground up coal in 9 GVB's	=	7,500 lbs
Total coal recovered from 7 coreholes	=	410 lbs

Mitigation-No mitigation is anticipated.

8. Socioeconomics

The construction of the proposed project would contribute to the 10 year upward mining trend identified by the Utah Department of Employment. A benefit to the Carbon-Emery area may come from an increase in employment that could result from the expansion of the CPM facility in 2000. The CPM facility, would require as many as 300 people to fill positions at the mine. Though most of the positions would most likely be filled by people transferring from the Star Point Mine, an unknown degree of additional employment opportunity would exist. These additional jobs would result in either direct mine employment and/or in the related service industry. The action would have long term impact on this potential employment source or the overall socioeconomic health of Carbon County.

The mine personnel could be put into the dangerous situation of working in an area of high methane. The wells proposed would vent methane to the surface by using the action. The methane problems would be reduced.

Mitigation-No mitigation is anticipated..

9. Cumulative and Associated Impact

Adjacent and proposed projects in the area include the expansion of the CPM operation, the development of the Castle Gate Coalbed Methane field in Emma Park, the logging currently under way in the Willow Creek drainages and the potential increase in vehicular traffic on U. S. Highway 6. Relative impacts of these existing and potential projects that need to be taken into consideration with this proposed action include those to current land use(s), visual/scenic qualities and wildlife. As in any project, there is a potential for the cumulative impact of the proposed action, in association with these on-going and potential projects, to be greater than the actual disturbance anticipated. However, by minimizing the visual impacts and direct land use impacts, as outlined in the proposed action, any additive impact to the area would be minor. Since the proposed action, unlike the described projects would not have the extensive displacement impacts associated with year-round use, any additional impact to wildlife resources would be minimal. Regardless, the potential for any cumulative impact should be assessed for future land use decisions that could occur in the area.

B. IMPACTS ASSOCIATED WITH NO ACTION ALTERNATIVE

Associated impacts identified with the No Action Alternative are derived from the inability to safely operate the mine, reducing the safety of mine personnel. If the mine is unable to solve the methane problem, there is a potential for lay-offs and facility closures could result if the methane solution is not found. Planned development for the facilities described, as well as future development would certainly be impacted. An unquantifiable negative impact to the socioeconomic condition of the Carbon-Emery area could result from the curtailed development.

No impacts to natural resources would occur.

CHAPTER V. CONSULTATION AND COORDINATION

A. Agencies, Organizations and Individuals Contacted

Numerous contacts with associated land use agencies, interest parties and individuals have been made during the course of this environmental assessment. The input from meetings, briefings, and conversations during the months of June 1996 through July 1999 has resulted in the completion of this document.

Public Government/Public Agencies

1. U. S. Department of Agriculture
 1. Natural Resource Conservation Service-Prime Farmland
2. U. S. Department of the Interior
 1. Bureau of Land Management-EA Coordination, Resource Analysis
 2. U. S. Fish and Wildlife Service-TES Species

State of Utah

1. Department of Natural Resources
 1. Division of Water Rights-Hydrology Issues
 2. Division of Wildlife Resources-Wildlife and Habitat Issues
2. Department of Employment-Socioeconomics
3. Utah Division of Wildlife

Local Governments and Organizations

1. Carbon County Recorder-Land Ownership
2. Carbon County Planning and Building Department-Zoning and Land Use

Industry and Business

1. Cyprus Plateau Mining; Price, UT-Mine Actions and Impact Analysis
- B. Dana Ballard, Wolf Computer Design; Price, UT-Maps
- C. Dan Guy, Blackhawk Engineering; Price, UT-Road Designs

B. List of Preparers

**CONSULTING INTERDISCIPLINARY TEAM-
ENVIRONMENTAL INDUSTRIAL SERVICES-(EIS);
HELPER, UTAH**

Tom Paluso	Project Manager	B.S. Civil Engineering M.S. Civil and Environmental Engineering
David Steed	Land Use, and Wildlife	B. S. Ecology
Mel Coonrod	Impact/Mitigation Soils, Land Use, Wildlife Vegetation, and Socioeconomics	B.S. Zoology M.S. Silviculture
Aaron Fergusson	Cultural Resources	B.A. Anthropology M.A. Anthropology
Carl East	Wildlife, Visual Resources	B. S. Wildlife Management
Kaila McDonald	Maps	A.S. Industrial Technology

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CHAPTER VII	APPENDICES
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APPENDIX B	CORRESPONDENCE WITH NRCS REGARDING PRIME FARMLAND CHARACTERISTICS OF SOILS
APPENDIX C	WATER RIGHTS
APPENDIX D	VISUAL RESOURCE EVALUATION
APPENDIX E	RAPTOR SURVEY 1999
APPENDIX F	STREAM ALTERATION PERMIT CORRESPONDENCE
APPENDIX G	CORRESPONDENCE WITH USFW REGARDING T&E SPECIES

APPENDIX A
SPILL PREVENTION CONTROL AND COUNTERMEASURE
PLAN (SPCC)

**SPILL PREVENTION CONTROL
AND COUNTERMEASURE PLAN**

FOR

**CYPRUS PLATEAU MINING CORPORATION
WILLOW CREEK MINE**

(SPCC) Plan
April 7, 1997

REVISED
March 25, 1999

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SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
FOR
CYPRUS PLATEAU MINING CORPORATION

This Spill Prevention Control and Countermeasure (SPCC) Plan sets forth the procedures, methods and equipment used to prevent the discharge of oil or oil products into navigable waters and adjoining shorelines. This SPCC Plan is designed to complement existing laws, regulations rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules.

This SPCC Plan will be implemented as herein described.

VERIFICATION AND AUTHORIZATION

As required in 40 CFR 112.3, this Spill Prevention, Control and Countermeasures Plan (SPCC Plan) must be reviewed by a Registered Professional Engineer. The stamp of the Professional Engineer certifies that the plan elements, including the compliance schedule, are in accordance with good engineering practices, and that the compliance schedule does not suggest any changes which would be contrary to good engineering practices. The signature of the Environmental Engineer certifies that management has knowledge of this SPCC Plan and agrees to make financial arrangements to ensure its implementation. The Environmental Engineer also certifies that he/she has notified and briefed the necessary operations personnel of the procedures required to implement this SPCC Plan. The Environmental Engineer assumes responsibility to ensure plan implementation and adherence to any compliance schedules.

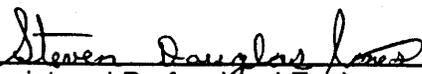
SIGNATURES



Cyprus Plateau Mining Corporation - Willow Creek Mine
Environmental Engineer

3/25/99

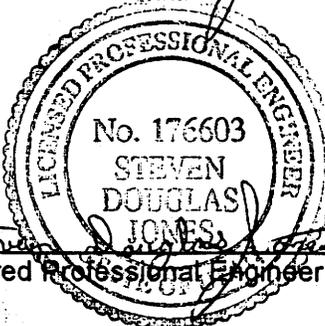
Date



Registered Professional Engineer

3/29/99

Date



Registered Professional Engineer Stamp

176603

Registration Number

REVIEWS AND REVISIONS

The Environmental Engineer shall review this SPCC Plan annually, and evaluate the document every three years to include more effective prevention technology as needed. Documentation of reviews shall be placed on file with this SPCC Plan in the Central File System at the mine site office building. The dates of reviews and revisions shall be listed below.

The SPCC Plan is readily available to EPA personnel for on-site review in the Central File System at the mine site office building during normal working hours.

Review and Revision Record

Original SPCC Implementation Date: April 15, 1997

<u>Review Date</u>	<u>Engineer</u>	<u>Date of Implementation</u>	<u>Environmental Engineer</u>
March 25, 1999	Steve Jones	March 25, 1999	Johnny Pappas

PART I

GENERAL INFORMATION

Facility: Cyprus Plateau Mining Corporation - Willow Creek Mine

Location: Carbon County. The mine is located approximately 4.0 miles north of Helper and 10 miles north west of Price. The mine is located on Utah State Route 191. The preparation plant is located adjacent to State Highway 6. Perennial streams are located adjacent to the mine properties. The Price River parallels the preparation plant facilities and Willow Creek parallels the mine facilities. Surface drainage from all storage tank locations is directed to sedimentation ponds where oil skimmer devices should prevent reportable quantity releases to the perennial stream channels.

Address: Cyprus Plateau Mining Corp., 847 NW Highway 191, Helper, Utah 84526

Facility: Coal mining with above ground storage tanks (used-oil, diesel, hydraulic oil, antifreeze, emulsion oil and flocculent chemicals.).

SPILLS

1.0 INTRODUCTION

Good operational procedures and equipment maintenance are the best insurance against a spill. Mine personnel must take immediate action if an accidental spill occurs. Response actions will vary based on the size of the spill and the type of material involved.

This SPCC Plan presents general information about above ground storage tanks and potential spills (Part I). Part II provides design and operating information related to spill prevention.

2.0 DEFINITIONS

2.1 Oil

Oil is defined as oil of any kind or in any form including, but not limited to petroleum, fuel oil sludge, oil refuse and oil mixed with wastes other than dredged spoil. (40 CFR 112.2)

2.2 Discharge

A discharge includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping of oil. Discharges of oil which are authorized by permits issued by regulatory agencies are not included. (40 CFR 112.2)

2.3 Spill Event

A spill event is a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities. (40 CFR 112.2)

2.4 Harmful Quantities

Discharge of oil is considered harmful if the release:

Violates applicable water quality standards or causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. (40 CFR 110.3)

2.5 Navigable Water

Navigable water includes: 1) interstate waters and wetlands; 2) all other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the degradation of which would affect interstate or foreign commerce. (40 CFR 110.1 and 112.2)

The Price River and Willow Creek are navigable waters in the vicinity of the Willow Creek Mine.

3.0 POTENTIAL SPILLS

Spills may occur as a result of equipment malfunction, human error, vandalism, corrosion or catastrophic failure. Oil storage in above ground tanks and barrel storage sites present the largest spill potential. Leaks from dispensers and lines account for other potential spill sources. Each of these areas are discussed below and identified in Figure 1.

3.1 Storage Tanks

Major spills may occur from tanks as a result of seam failures, fitting failures, vandalism, pump failures, foundation failures, accidental contact, and/or corrosion. Minor spills from tanks may be caused by overfilling, vandalism, and/or corrosion leaks.

Secondary Containment is provided for all above ground storage tanks containing petroleum based products.

The desired containment volume is the maximum quantity (ie., maximum volume of the largest tank in the containment plus the maximum amount of precipitation expected during a 24-hour period¹ for those tanks not under a roof.

3.2 Barrel Storage

Barrel storage sites are located on the mine property. These sites are located whereby releases are prevented from entering any water way.

3.3 Dispensers and Lines

Operator neglect, hose failure, or pump failure may result in spill during

¹The 24-hour precipitation for 100-year storm at this location is 2.80 inches.

the filling and dispensing from tanks. Corrosion, either internal or external, may cause line leaks. Improper preventative maintenance of equipment may result in unexpected hose failures.

3.4 Sediment Ponds

A substantial leak occurring outside of secondary containment combined with precipitation could possibly result in drainage to a sediment pond (Map 18B). For materials which are not soluble in water, a very small amount of material may potentially pass through the oil skimmer during a rapid rise in the pond water level. The volume of material bypassing the skimmer is not expected to approach the reportable quantity of 1,000 gallons.

4.0 SPILL CONTINGENCY AND REPORTING

The Spill Response Plan for the mine will be filed in the Central File System at the Mine Site Office Building, surface foremen's room, mine shop, and at the warehouse. This plan identifies responsible personnel (names and telephone numbers), and steps to be taken for immediate response, Federal and Utah State notifications, and clean up. **Appendix A** provides a summary of personnel responsibilities for spill response.

5.0 PLAN AMENDMENTS

Cyprus Plateau shall amend this SPCC Plan under the following circumstances:

- 1) The EPA Regional Administrator requests an amendment (Cyprus Plateau must submit a copy of the SPCC Plan with any reportable spill event);
- 2) A change in facility design, construction, operations, or maintenance has occurred which materially affects the potential for an oil spill; or
- 3) The review of this Plan, (conducted at least every three years), indicates that more effective, field-proven control technology will significantly reduce the likelihood of a spill event.

If EPA requests an amendment to the SPCC Plan, EPA will notify Cyprus Plateau by certified mail or by personal delivery. Cyprus Plateau may submit written comments, views, and arguments on the proposed amendment within 30 days from receipt of the notice. Upon review of any such submittal, EPA will

notify Cyprus Plateau of the required amendment or will rescind the notice. The amendment shall become part of this SPCC Plan within 30 days after such notice, but not later than six months after the amendment becomes part of this plan. A registered Professional Engineer will certify all amendments to this plan, except those proposed by the EPA.

PART II

DESIGN AND OPERATING INFORMATION

Map 18B shows the Willow Creek Mine surface facilities in the vicinity of the above ground storage tanks. The following sections describe current spill control equipment and procedures to prevent and respond to releases of oil at the mine.

1.0 FACILITY DRAINAGE

Surface runoff on mine property is controlled by a system of berms, lined and unlined ditches, culverts, and sediment ponds. Sediment ponds 001, 002, 011, 012a, and 012b provide additional containment and have oil skimmers which prevent the discharge of oil from the ponds.

2.0 STORAGE TANKS

Design and Construction

Tanks are constructed of carbon steel. The design and construction of these above ground storage tanks conform to the Uniform Fire Code of Article 79.105, and the Uniform Building Code.

Secondary Containment

Secondary containment systems consist of earthen, metal, or concrete containment structures for the petroleum storage tanks.

Secondary containment may or may not be provided for the flocculent tanks. The flocculent material may not consist of petroleum materials that would cause

it to be subject to SPCC requirements, however, due to the fact that the tanks contents may vary the tanks are included in this plan for Best Management Practices consideration. Two flocculent tanks are located within the coal preparation plant which would contain a portion of any spill from these tanks. Spills from the flocculent tanks that got outside of the building would be contained in sedimentation ponds 012a and 012b. Personnel are able to observe these tanks on a regular basis, any leakage would be readily apparent.

Additionally, the surface drainage from the facilities is controlled by berms, ditches (lined and unlined), and culverts, all of which drain into sediment ponds. The sediment ponds located below the active Willow Creek Mine facilities (Ponds 001, 002, 011, 012a and 012b) have oil skimmers which prevent the discharge of oil from the ponds. Pond discharges are regulated by the mine's UPDES Permit which is filed in the Central File System at the Mine Site Office Building. Discharge samples are collected for analysis during each discharge event. The ponds are also inspected quarterly by the Environmental Engineer and certified annually by a Professional Engineer as required by the Mining and Reclamation Permit under SMCRA.

3.0 SECURITY

Most tank locations are equipped with sufficient lighting to help with security and allow night time operations to be performed.

Employees are on the property 24 hours per day, 7 days per week, thereby providing it's own security needs.

4.0 INSPECTIONS AND MAINTENANCE

Cyprus-Plateau has developed procedures for inspections. These inspections cover all petroleum product storage and their secondary containment. An inspection form is included in **Appendix B**.

The inspections include inspection of tank shell, welds, rivets and bolts, foundations and supports. All above ground valves and pipelines are examined for the general condition of flange joints, expansion joints, valve glands and bodies, catch pan, pipeline supports, and condition of metal surfaces. The

containment structure is also inspected for structural integrity and containment condition.

As discussed earlier, sediment ponds are inspected quarterly by the Environmental Engineer as required by the Mining and Reclamation Permit under SMCRA.

5.0 PERSONNEL TRAINING

Management and employees directly responsible for maintenance of storage tanks are adequately trained in elements of this SPCC Plan. Other employees are familiarized with the elements of this SPCC Plan to minimize the number of human errors that cause oil spills. Training covers procedures for notification in the event of a spill, securing the area, containing leaked materials, product removal, and clean-up of the containment basins.

PART III SPILL COUNTERMEASURES

1.0 OIL SPILL COUNTERMEASURES

Ideally, the oil spill prevention measures would keep spills from occurring at the Willow Creek Mine site, however, spills still may occur. Small leaks and spills that are confined to small areas will be cleaned up as part of Willow Creek's ordinary operating procedure. In cases where a large leak has occurred but is confined to the Willow Creek Mine property, cleanup will proceed as follows.

Direct countermeasures outlined below have been designed to mitigate the possibility of oil reaching a waterway. Employees will undertake these countermeasures immediately when there is any danger of oil entering any waterway and in case of any large oil release.

1.1 Direct Countermeasures

In the case of a small spill, direct countermeasures include stopping the leak by plugging the leak and/or closing the valve. Make sure the spill is

totally contained. Cleanup should proceed as outlined under this Part in Section 1.3.3.

In the case of a spill of significant size, direct countermeasures include the necessary action to terminate the source of the flow of petroleum product. Dig a trench or dike, or do whatever else is necessary to confine the area of the spill or to stop it from entering a waterway. **Never** clear away spills with water! Instead, use appropriate oil-absorbent materials to prevent petroleum products from flowing into watercourses. Any other actions such as plugging floor drains, or placing absorbent materials around the spill to minimize environmental damage, will be taken. After this is accomplished, immediately initiate the reporting procedure described in Part IV. After the countermeasures and reporting functions have been accomplished, cleanup will begin in accordance with Section 1.2 under this Part.

1.2 Spill Cleanup Responsibility

In conjunction with the countermeasures in Section 1.1 above, and notification procedures in Part IV, cleanup must be initiated immediately following containment of a spill.

It is extremely important that oil be prevented from reaching streams, storm drains, drainage ditches, or any other place where water is flowing. Willow Creek personnel will exercise every available option to stop and contain the spill. In addition, Willow Creek personnel are required to anticipate and prevent water from flowing into the spill area which will make cleanup more difficult. Water can be diverted from the spill area using earthen berms and ditches.

1.3 Who to Contact for Cleanup

In the case of small spills (less than 25 gallons), the cleanup operation will be conducted by mine employees under the direction of the authorized person or direct supervisor.

In the case of significant spills (over 25 gallons), the Surface Foreman and the Environmental Engineer must be notified. The Environmental Engineer will notify the General Mine Manager. If the Environmental Engineer cannot be reached, contact the Manager of Technical Services

or designated representative. If these individuals are unavailable, contact the General Mine Manager directly. Otherwise, the Environmental Engineer will notify the General Mine Manager. If available operating personnel cannot contain the spill, the Environmental Engineer, Surface Manager, Manager of Technical Services, or General Mine Manager will call in outside contractors as described in Section 1.3.1 below.

1.3.1 Use of Contractors

Should company personnel be unable to contain the spill or perform the cleanup operation, the General Mine Manager, Manager of Technical Services, Environmental Engineer, Surface Manager or designated representative will hire outside contractors. Unauthorized site personnel must not notify contractors directly.

1.3.2 Cleanup Materials and Equipment

Absorbent material is available in the both the surface and mine warehouses in addition to that stored in the mine and surface shops. Absorbent booms are stored in the Mine Warehouse and Surface Warehouse.

In the event that additional absorbent material is needed, contact the Environmental Engineer and he will make arrangements through Pierce Oil or another distributor to obtain additional absorbent material. If a sediment pond needs skimming contact Pacific West at (801) 364-6630.

Committed Equipment for Cleanup

Willow Creek Mine operates 24 hours per day, 365 days per year. Rubber tire backhoes and loaders, crawler dozers, trackhoes, motor graders, and loaders common to the mining operation will be dispatched as needed for spill cleanup.

1.3.3 Clean-up Procedures

For spills on gravel or soil, it may be possible to absorb some of the liquid with absorptive material before removing the gravel or soil. All contaminated gravel or soil must be removed and discarded properly as described in Section 1.3.5 below.

Spills on solid surfaces may be collected with absorptive materials and then cleaned thoroughly with rags wetted with a non-hazardous solvent if needed. Sufficient quantities of absorbent material and other cleanup equipment will be maintained at various locations at the facility to accomplish cleanup.

If the spill is large, special cleanup efforts such as those provided by contractors may be necessary.

1.3.4 Oil Spill Containment Discharge of Water Procedure

Prior to draining or pumping any accumulated fluid from a containment area, verification of possible contamination will be conducted. A visual inspection of the accumulated water to determine whether or not a sheen is present will be considered sufficient verification that no contamination is present.

If a sheen is noted, collect the water and dispose as directed by the Environmental Department. If no sheen is observed, the water may be drained or pumped out of the containment area. All water must flow to sediment ponds unless specifically approved by the site Environmental Engineer in accordance with all laws and regulations.

1.3.5 Disposal of Cleanup Materials.

When cleaning up diesel or lubricating oil, all spent cleanup material such as rags, sorbents, blankets, booms, and etc., must be disposed of in accordance with Willow Creek's approved procedures. Only pre-approved locations shall be used to dispose of cleanup materials. Check with the Environmental Engineer prior to disposing of any cleanup materials.

PART IV REPORTING

1.0 REPORTING AN OIL SPILL

Proper reporting of spills is very critical and must be done carefully, accurately, and in a timely manner. All spills of 25 gallons or more are to be reported to the Environmental Engineer.

1.1 When to Report

A reportable oil spill is defined as: (1) any spill, leak, discharge or disposal of oil, grease, or other such petroleum product that enters or threatens to enter any river, stream, canal, sewer, drain, lake or pond, or (2) those spills in excess of 25 gallons. At any operation, any leakage or spillage of oil that is in danger of leaving or has left company property must be reported immediately (Utah Code R315-15-9) as described below in Section 1.2 of this Part.

1.2 How to Report and To Whom

1.2.1 In-House Verbal Reporting

After taking immediate action, the person discovering the spill must notify his/her supervisor, giving the information listed below. The supervisor will then notify the Environmental Engineer.

1. Name of the facility (company name);
2. The location of the spill, including type of terrain and nearest waters or drains and anticipated movement of spilled material;
3. Into what medium(s) was the spill released (land, water, and/or air);
4. The time and date the spill was first observed;
5. Existing weather conditions;
6. The device or activity involved when the spill occurred;
7. The cause of the spill;
8. The material spilled;
9. The estimated quantity of the spill and the quantity that is still remaining in container;

10. What actions have been taken to stop, contain and cleanup the spill; and,
11. The effectiveness of cleanup operations;
12. Report any health hazards and characteristics;
13. Location of any other hazardous materials near the spill site, if any;
14. Precautions that have been or are being taken;
15. Any injuries or problems as a result of the spill;
16. Who responded to spill;
17. Is help needed?

If the designated supervisor cannot be reached, call the Environmental Engineer directly. The Environmental Engineer will determine if it is a reportable spill or discharge as described in Section 1.1 of this Part. If it is determined to be reportable, the Environmental Engineer will report the event and information to the General Mine Manager as soon as possible.

The Environmental Engineer will notify the State agencies and if necessary the EPA concerning spills or releases as required. (See 1.2.3 below). Every effort possible should be made to notify the Environmental Engineer before any notification is made. In the event the environmental Engineer cannot be located, notify the Manager of Technical Services and the General Mine Manager who can make the proper notifications.

1.2.2 In-House Written Reporting

For reportable spills or releases of oil (oils, gasoline, diesel, etc.) outside of a containment area, a complete written report must be submitted to the Environmental Engineer as soon as possible (usually within 24 hours of the spill). This written report must address the same components listed above in Section 1.2.1, and any additional issues deemed important by operating personnel. The attached **spill reporting form (Appendix C)** has been designed to facilitate such written reporting of spills.

1.2.3 Reporting to State and Federal Agencies

The Environmental Engineer or designated representative will execute all reporting to the agencies under the direction of the General Mine Manager. The Environmental Engineer or designated representative will do the following:

1. Report immediately any "reportable" (25 gallons or more) oil spill to the State, as well as any spill that enters or threatens to enter any river, stream, canal, sewer, drain, lake or pond to the U.S. Coast Guard National Response Center (NRC) and to the State.

2. Make necessary written reports to the State, National Response Center and other agencies as required. The National Response Center typically does not require a written report of the spill, although one may be requested in certain situations. Verbal notification to the agencies must be made as soon as possible, but not later than after the first working day after the release. In case the Environmental Engineer or designated representative cannot be contacted by the end of the first working day after the release, the verbal report must be made by the General Manager or designated representative, giving the data listed in Section 1.2.1. In Utah, reporting procedures are as follows:

(1) Any spill of oil which enters directly into water or has the potential to do so requires immediate verbal notification. "Immediate" has been defined for this situation as "as soon as possible" after the release. The verbal notification may be made by calling:

COMPREHENSIVE EMERGENCY MANAGEMENT
State Office Building, Room 110, Salt Lake City, UT 84158-0136
(801) 584-3400 (during business hours) (801) 538-3400 (24-hour emergency number)

and

DIVISION OF ENVIRONMENTAL RESPONSE AND REMEDIATION
Utah Department of Environmental Quality
(801) 536-4100

and

DIVISION OF WATER QUALITY
Utah Department of Environmental Quality
(801) 538-6146

and

NATIONAL RESPONSE CENTER
The National Response Center (NRC)
1-800-424-8802

and

DIVISION OF OIL, GAS AND MINING
Utah Department of Natural Resources
(801) 538-5340 or (435) 613-5828

and

CARBON COUNTY LOCAL EMERGENCY PLANNING COMMITTEE
Emergency Management Committee
(435) 637-4700 ext. 290

During these calls, the state, federal or local agencies will determine whether a follow-up written report is required. If required, this report will be due within fourteen (14) calendar days of the release. The required components of the written report will be discussed during the verbal notification. If required, this written report would go to the following as directed:

Comprehensive Emergency Management
State Office Building, Room 110
Salt Lake City, Utah 84158-0136

Utah Department of Environmental Quality
Division of Environmental Response and Remediation
168 North 1950 West, First Floor
Salt Lake City, Utah 84116

Utah Department of Environmental Quality, Division of Water Quality
PO Box 144870, 288 North 1460 West
Salt Lake City, Utah 84116

Utah Department of Natural Resources, Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

(2) Releases of oil which do not enter directly into water and do not have the potential to do so must be dealt with in the following manner. A release of **25 gallons or greater** of oil requires verbal notification by the end of the first working day after the release. This notification should be made by the Environmental Engineer or a designated representative.

DIVISION OF ENVIRONMENTAL RESPONSE AND REMEDIATION
Utah Department of Environmental Quality
(801) 536-4100

DIVISION OF OIL, GAS AND MINING
Utah Department of Natural Resources
(801) 538-5340 or (435) 613-5828

All releases which fall into this category may require a written follow-up report depending on the Division of Environmental Response and Remediation's direction. The required components of the written report will be discussed during the verbal notification. If required, this written report would go to the following as directed:

**Utah Department of Environmental Quality
Division of Environmental Response and Remediation
168 North 1950 West, First Floor
Salt Lake City, Utah 84116**

(3) Releases of oil greater than 1,000 gallons requires additional notification to the EPA Regional Director. This is done by the Environmental Engineer or a designated representative.

**United States EPA, Region VIII
Denver Place, 999 18th Street, Suite 500
Denver, Colorado 80202-2466
(303) 293-1603**

All releases which fall into this category require a written follow-up report, due within sixty (60) calendar days of the release. The required components of the written report should be discussed during the verbal notification.

APPENDIX A

Personnel Responsibilities for Spill Response

PERSONNEL RESPONSIBILITIES FOR SPILL RESPONSE

Personnel responsibilities in the event of a spill are summarized below along with CPMC's call list.

<u>Name</u>	<u>Title</u>	<u>Work</u>	<u>Site Extension</u>	<u>Home</u>
John Boylen	Gen. Mine Manager	472-4745	745	613-0512
John Borla	Mgr. Tech. Services	472-4744	744	472-5297
Johnny Pappas	Environmental Eng.	472-4741	741	637-1797
Mike Kelley	Surface Manager	472-3310	1	637-9359
Boyd Greenhalgh	Surface Foreman	472-3310	3	637-5747
Jerry Price	Maintenance Foremn	472-4771	771	472-5813
Bart Braby	Warehouse Super.	472-4768	768	637-2434

SPILL COUNTERMEASURES

- Terminate source of flow - plugging and/or closing valve
- Confine release - berming, trenching, plugging floor and storm drains.
- Prevent from entering waterway.
- Notify Supervisor.
- Clean-up - Absorb liquid with absorptive material before removing contaminated soil and other media.
- Disposal - Dispose of absorbent material and contaminated media only after conferring with Environmental Engineer.
- Report - Document spill, clean-up activities, identify cause and determine remedial action.

APPENDIX B
Inspection Form

Spill Prevention Control and Countermeasure Plan Inspection Form

Containment Area	Tank	Structure Leaks	Piping Leaks	Containment Condition	Date	Inspected By
West End of Mine Shop Building	Diesel					
	Diesel					
East End of Mine Shop Building	Used Oil #1					
	Used Oil #2					
Northwest of Mine Warehouse	Crude Oil Tank #1					
	Crude Oil Tank #2					
	Crude Oil Tank #3					
Inside of Mine Shop Building	Emulsion Oil					
	Lubrication #1 @ 275 gal					
	Lubrication #2 @ 1000 gal					
	Lubrication #3 @ 275 gal					
	Lubrication #4 @ 275 gal					
	Lubrication #5 @ 475 gal					
West of The Clean Coal Transfer Building	Diesel #1					
	Diesel #2					
	Gasoline					

Inside Prep Plant	*Cat-ion				No Containment Inside building	
	*An-ion				No Containment Inside building	
Adjacent to Train Loadout	*Antifreeze					
East Side of Prep Plant Sub. Station	Used Oil					
Mine Site Pump House	Diesel					
Behind Mine Site Warehouse	Can & Drum Storage					
Containment Area	Tank	Structure Leaks	Piping Leaks	Containment Condition	Date	Inspected By

*Tanks not oil tanks, but are included for best management practice only.

APPENDIX C
Spill Reporting Form

Willow Creek Mine Site SPILL REPORTING FORM

1. Date of spill _____
 2. Person(s) to discover spill _____
 3. Location of spill, including type of terrain and nearest waters or drains _____

 4. Time spill first observed _____
 5. Existing weather conditions _____
 6. Device or activity involved when the spill occurred _____

 7. Cause of spill _____

 8. Material spilled _____
 9. Estimated quantity of spill (gallons) _____
 10. Persons and/or agencies notified _____

 11. When and what action was taken for countermeasures, control and cleanup _____

 12. Effectiveness of cleanup operations _____

- Date: _____ Person completing report _____ Title _____

**Figure 1
Maximum Potential Spills**

Containment Area	Tank	Quantity in Gallons	Fill Rate gal/min	Containment in Gallons
West End of Mine Shop Building	Diesel	6,000	250	8,900 Concrete
	Diesel	3,000	250	
East End of Mine Shop Building	Used Oil #1	1,500	100	1,282 Concrete and overflow enters shop
	Used Oil #2	1,500	100	
Northwest of Mine Warehouse	Crude Oil Tank #1	16,800	650	28,000 Concrete
	Crude Oil Tank #2	16,800	650	
	Crude Oil Tank #3	16,800	650	
Inside of Mine Shop Building	Emulsion Oil	1,000	75	1,152 Concrete
	Lubrication #1 @ 275 gal	275	50	1,375 Concrete
	Lubrication #2 @ 1000 gal	1,000	50	
	Lubrication #3 @ 275 gal	275	50	
	Lubrication #4 @ 275 gal	275	50	
	Lubrication #5 @ 475 gal	475	50	
West of The Clean Coal Transfer Building	Diesel #1	10,000	250	27,983 Concrete
	Diesel #2	8,000	250	
	Gasoline	4,000	250	
Inside Prep Plant	*Cat-ion	3,000	50	No Containment Inside Building
	*An-ion	10,000	150	No Containment Inside Building
Adjacent to Train Loadout	*Antifreeze	10,000	250	15,428 Concrete
East Side of Prep Plant Sub. Station	Used Oil	500	N/A	900 Metal

Mine Site Pump House	Diesel	300	25	300 Metal Inside Building
Behind Mine Site Warehouse	Can & Drum Storage		N/A	4,488 Concrete

* Tanks not oil tanks, but are included for best management practices only.

APPENDIX B
CORRESPONDENCE WITH NRCS REGARDING PRIME
FARMLAND CHARACTERISTICS OF SOILS



350 North 400 East
Price, Utah 84501
801-637-0041

DATE: July 9, 1999

FILE CODE: 290-11-11-5

SUBJECT: PRIME FARMLAND DETERMINATIONS

TO: EIS
31 North Main St
Helper, UT 84526

RE: Cyprus Plateau Mining – Willow Creek Mine

After site investigation, the Natural Resources Conservation Service has determined that no prime farmland or farmland of statewide importance occurs at the proposed drill hole sites because of steepness of slope, (erodibility factor) K x percent slope is greater than 2. Also these soils have more than 10 percent of the surface consisting of rock fragments.

Location map is enclosed.

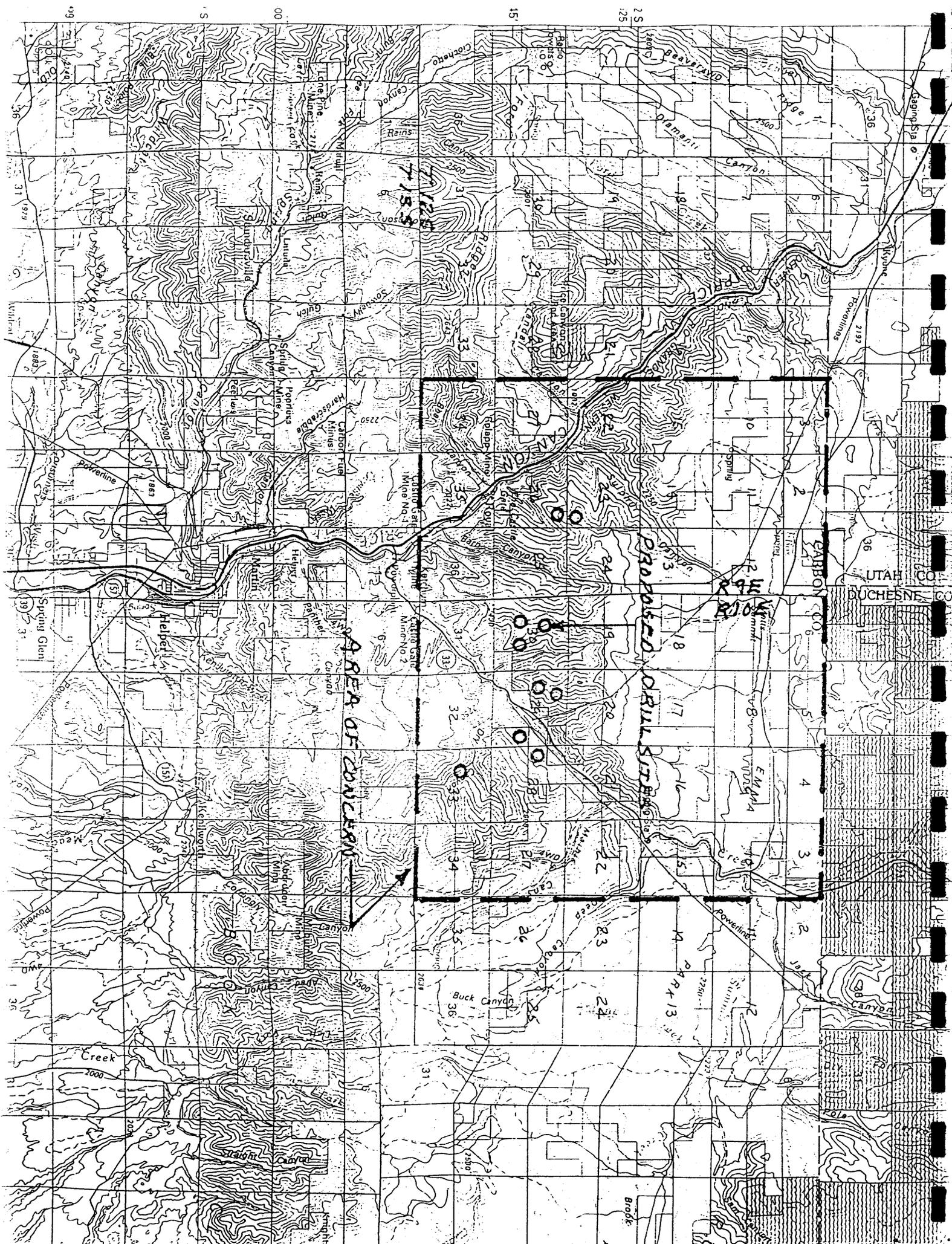
Remarks: The site in Dry Canyon may have alluvial soils if it is located in the bottom of the narrow canyon. The only major areas of alluvial soils are along Willow Creek.

A handwritten signature in cursive script that reads "Leland Sasser".

Leland Sasser
Soil Scientist

Attachment

cc: William Broderson, State Soil Scientist, NRCS, UT



AREA OF CONCERN

PROPOSED ORILL STREET

RICKS

CARBON CO.

UTAH CO. DUCHESE CO.

EMMA

PAR 13

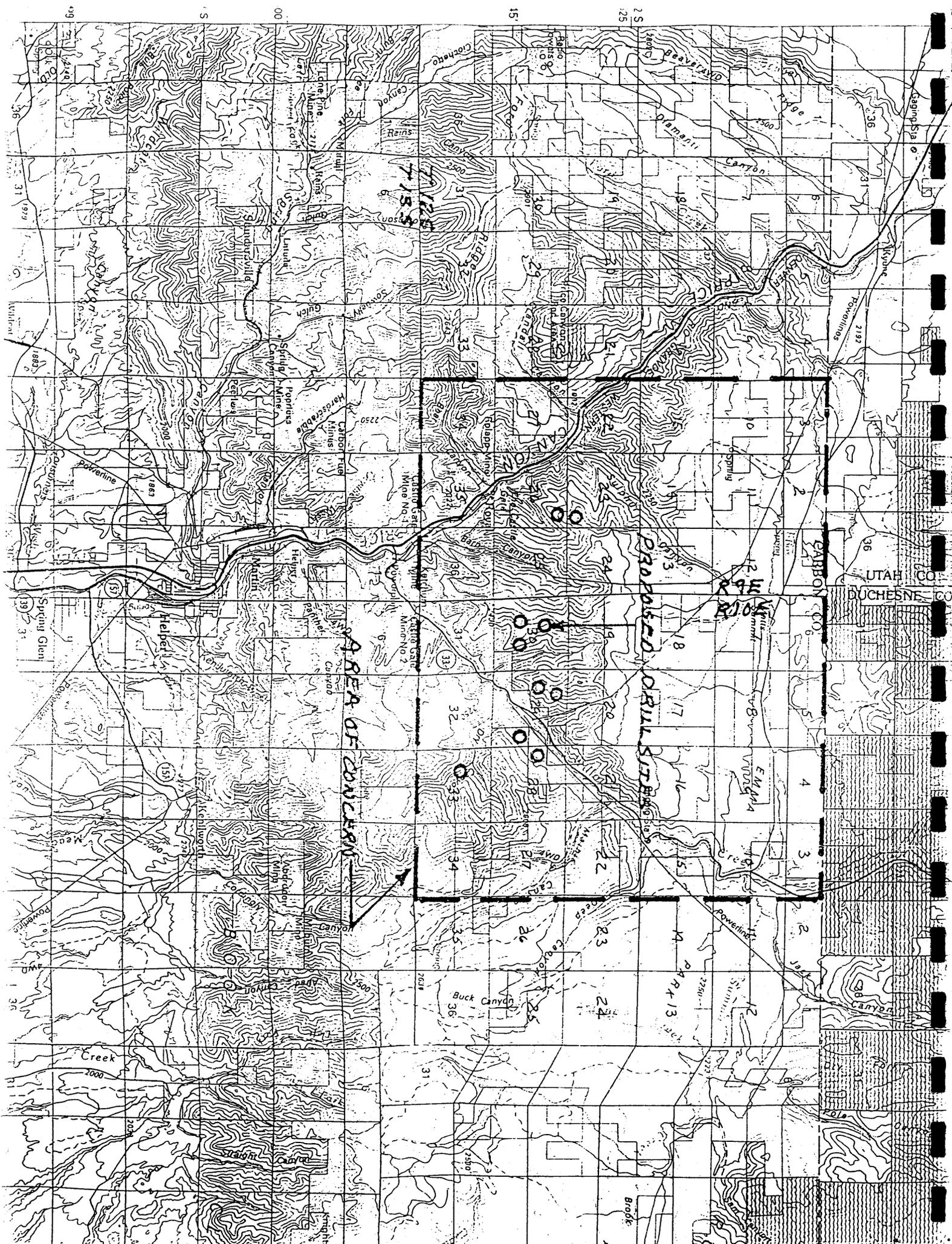
Buck Canyon

CANYON

Creek

Staircase

Brook



APPENDIX B

PROPERTIES OF SOILS LOCATED WITHIN THE AREA OF THE PROPOSED ACTION

<u>Permeability Name</u>	<u>Water Erosion</u>	<u>Depth</u>	<u>Slope</u>	<u>Inches/Hour</u>	<u>Potential</u>	<u>Salinity mmhos/cm</u>
Cabba Family-Guben-Rock Outcrop Complex:						
50% Cabba		Shallow	40-70%	0.6-2.0	High	<2
20% Guben		Very Deep	40-75%	0.6-6.0	High	<2
15% Rock						
15% Other						
Comodore-Datino Variant Complex:						
50% Comodore		Shallow	50-60%	2.0-6.0	High	<2
35% Datino		Very Deep	40-60%	0.6-2.0	High	<2
Guben-Rock Outcrop Complex:						
55% Guben		Very Deep	50-80%	0.6-6.0	Slight	<2
20% Rock						
25% Other						
Midfork Family-Comodore Complex:						
50% Midfork		Very Deep	50-70%	0.6-2.0	High	<2
20% Comodore		Shallow	50-70%	0.6-2.0	High	<2
30% Other						
Pathead Extremely Boulderly Fine Sandy Loam, 40-70% Slopes:						
75% Pathead		Moderate	40-70%	0.6-6.0	Moderate	<2
15% Perma			60-80%			
10% Comodore						
Rabbitex Silt Loam, 15-50% Slopes:						
70% Rabbitex		Deep	15-50%	0.6-2.0	Moderate	<2
20% Other						
10% Datino						
Trag-Beje-Senchert Complex:						
45% Trag		Very Deep	3-30%	0.6-2.0	Moderate	<2
15% Beje		Shallow	3-15%	0.6-2.0	Slight	<2
15% Senchert		Moderate	3-15%	0.6-2.0	Moderate	<2
25% Other						
Unita Family-Podo Association:						
50% Unita		Deep	40-70%	0.2-6.0	High	<2
20% Podo		Shallow	30-50%	2.0-6.0	High	<2

**APPENDIX C
WATER RIGHTS**

APPENDIX C

WATER RIGHTS TABLE

<u>WATER RIGHT #</u>	<u>OWNER</u>	<u>SOURCE</u>	<u>USE</u>
91-224	Pacificorp	Price River	Other
91-324	Cyprus Western Coal Co.	UGW-Tunnel	Stockwatering Other
91-341	Price City	Price River	Power
91-342	Pacificorp	Price River	Power
91-344	Pacificorp	Price River	Other
91-356	Pacificorp	Price River	Stockwatering
91-564	Marsing, Orson L.	Willow Creek	Other
91-766	Pacificorp	Price River	Other
91-1263	Moynier, Pierre (Jr.)	Unnamed Spring	
91-1264	Moynier, Pierre (Jr.)	Unnamed Spring	
91-1309	Moynier Paul	Unnamed Spring	
91-1312	Moynier Paul	Unnamed Spring	Domestic
91-1313	Moynier Paul	Unnamed Spring	
91-1314	Moynier Paul	Unnamed Spring	
91-1315	Moynier Paul	Unnamed Spring	
91-1316	Moynier Paul	Unnamed Spring	
91-1812	Pacificorp	Price River	Power
91-1813	Pacificorp	Price River	Power
91-1814	Pacificorp	Price River	Power
91-1843	Marsing, Boyd L.	Unnamed Spring	
91-1845	Marsing, Boyd L.	Sulphur Canyon Creek	
91-1855	USA BLM	Unnamed Spring	Stockwatering
91-1856	USA BLM	Unnamed Spring	Stockwatering
91-1982	Moynier, Paul	Unnamed Spring	
91-2143	USA BLM	Price River	
91-2194	Jones, Dick K. & Jones Annalee	Price River	Stockwatering
91-2388	USA BLM	Willow Creek	Stockwatering
91-2389	USA BLM	Price River	Stockwatering
91-2529	State of Utah	Willow Creek	Stockwatering

91-3013	Cyprus Western Coal Co.	Price River	Domestic
91-3375	O'Berto, John	Willow Creek	Other
91-3467	Jones, Dick K. & Jones Annalee	Price River	Stockwatering
91-3468	Jones, Dick K. & Jones Annalee	Price River	Stockwatering
91-3584	Cyprus Western Coal Co.	Price River	Stockwatering
91-3593	Cyprus Western Coal Co.	Castle Gate Mine Tunnel #2	Domestic
91-3594	Cyprus Western Coal Co.	Castle Gate Mine Tunnel #3	
91-3595	White Oak Mining and Construction Co.	O'Connor Mine Tunnel #1	Other
91-3597	Cyprus Western Coal Co.	Willow Creek	Stockwatering
91-3598	Cyprus Western Coal Co.	Willow Creek	
91-4133	Cyprus Western Coal Co.	UGW Tunnel Castle Gate #1	
91-4134	Cyprus Western Coal Co.	UGW Tunnel Castle Gate	
91-4642	USA BLM	Sulphur Canyon Creek	Stockwatering
91-4645	USA BLM	Unnamed Ephemeral Draw	Other
91-4749	USA BLM	Unnamed Tributary	Stockwatering
91-4766	USA BLM	Unnamed Tributary	Stockwatering to Willow Creek
91-4778	USA BLM	Price River	Other
91-4823	Price River Water Improvement District	Underground Wells	Stockwatering to Sulphur Canyon Creek
a20268	Cyprus Western Coal Co.	Price River	Other
t19364	Cyprus Western Coal Co.	Price River & Willow Creek	Municipal
120009	Cyprus Western Coal Co.	Price River & Willow Creek	Domestic
120217	Cyprus Western Coal Co.	Price River & Willow Creek	Other
121288	Cyprus Western Coal Co.	Price River & Willow Creek	Other
122409	Cyprus Western Coal Co.	Price River & Willow Creek	Other
123503	Cyprus Western Coal Co.	Price River & Willow Creek	Other

APPENDIX D
VISUAL RESOURCES EVALUATION



FIGURE 1. View of Proposed Action Area Looking Southeast - From Price River Recreation Area Scenic Overlook (KOP 1)



FIGURE 2. View of Dry Canyon Access Road - No See



FIGURE 3. View from Willow Creek Highway - Looking West/Down-Canyon Towards Proposed Access Road (KOP 2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 7-9-99

District Price Falls

Resource Area Price River

Activity (program) Gas Wells & Road

SECTION A. PROJECT INFORMATION

1. Project Name

Cypress Plateau Drilling

4. Location

Township 12S

Range 9E

Section 23 & 26

5. Location Sketch



2. Key Observation Point

Price River Resource Service Overlook

3. VRM Class

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Mountains	Spice fir, areas of sage brush Oak park	NONE
LINE	Horizontal & Diagonal mixture	Rough/broken	
COLOR	Dark Green -> Beige predominantly dark green	Dark Green	
TEXTURE	Coarse due to topography & vegetation	Coarse	

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Well pads & Roads	Removal/Selective thinning	flat well pad angular pump equipment
LINE	Horizontal & Diagonal Mixture		vertical & horizontal some diagonal
COLOR	Dependant upon substrates Most likely beige due to cutfill		Dependant upon BLM stimulation
TEXTURE	Smooth		Smooth

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) 3. Additional mitigating measures recommended <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
	LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
Form		✓					✓			✓			Evaluator's Names Carl East David Steed Date 7/9/99
Line		✓						✓		✓			
Color			✓					✓			✓		
Texture			✓					✓			✓		

All Roads and E12B and E12B only

Roads are more noticeable sites E12B and E12A strong to moderate, not well screened by topo. and veg

SECTION D. (Continued)

Comments from item 2.

Additional Mitigating Measures (See item 3)

PROS
Use Natural Depressions where possible on E12A and E12B Well pads, minimize fill on large cuts, place within vegetated areas to screen. Follow BLM strips for non-reflective color - probably dark green, and pad/equipment orientation.

ROADS
Difficult due to topography and basic needs of road construction. Use vegetation as screen when possible, and avoid steep/bare side slopes (where possible). If gravels are used, avoid light color material.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 7-13-99

District Price Field

Resource Area Price River

Activity (program) Gas Wells Flowback

DF16

SECTION A. PROJECT INFORMATION

1. Project Name Cyprus Plateau Drilling Program	4. Location Township 12S Range 10E Section 33	5. Location Sketch 
2. Key Observation Point Dry Canyon U.S. Hwy 191		
3. VRM Class		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Mountains	Spruce fir, areas of sage brush & oak brush	NONE
LINE	Horizontal & Diagonal Mixture	Rough Broken	↓
COLOR	Dark green	Dark Green	
TEXTURE	Coarse due to topography & vegetation	Coarse	

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	NO Contrast		
LINE			
COLOR			
TEXTURE			

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
	LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					3. Additional mitigating measures recommended <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
Form				✓				✓				✓	Evaluator's Names Carl East Aaron Fergusson	Date 7-13-99
Line				✓				✓				✓		
Color				✓				✓				✓		
Texture				✓				✓				✓		

SECTION D. (Continued)

Comments from item 2.

Additional Mitigating Measures (See item 3)

SECTION D. (Continued)

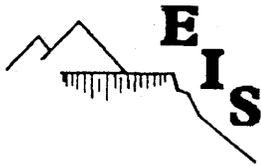
Comments from item 2.

Additional Mitigating Measures (See item 3)

Road, Difficult due to topography & basic needs of road construction. Use vegetation as screening where possible and avoid steep/bare side slopes where possible. If gravels are used avoid light color material.

Well, Use a color scheme for painting the well to blend in with surrounding vegetation and according to BIM stipulations.

APPENDIX F
STREAM ALTERATION PERMIT CORRESPONDENCE



ENVIRONMENTAL INDUSTRIAL SERVICES

435-472-3814 • 800-641-2927 • FAX 435-472-8780 • EIS@CASTLENET.COM • 31 NORTH MAIN STREET HELPER, UTAH 84526

June 25, 1999

Mr. Mark Paige
Division of Water Rights
453 South Carbon Avenue
Price, Utah 84501

RE: Joint Permit Application Form
Cyprus Plateau Mining Corporation
Willow Creek Mine

Dear Mark:

Attached please find the completed Willow Creek stream crossing permit for Cyprus Plateau Mining (CPM). Environment Industrial Services (EIS) is handling this application for CPM. If you have any questions or concerns please direct them to me. I can be reach at (435) 472-3814.

I appreciated you help on this project.

Sincerely,

Tom Paluso
Project Manager

cc Johnny Pappas

JOINT PERMIT APPLICATION FORM

U.S. ARMY CORPS OF ENGINEERS - FOR SECTIONS 404 AND 10
UTAH STATE ENGINEER'S OFFICE - FOR NATURAL STREAM CHANNELS

Application Number _____ / _____

(Assigned by):

Corps _____

State Engineer _____

Applicant's Name (Last, First M.I.) Cyprus Plateau Mining Corporation - Willow Creek Mine	Authorized Agent Johnny Pappas	Telephone Number and Area Code (435) 472-4741
--	-----------------------------------	--

Applicant's Address (Street, RFD, Box Number, City, State, Zip)
847 NW HWY 191
Helper, Utah 84526

PROJECT LOCATION

Quarter Section(s) SW 1/4	Section 21	Township 12 S	Range 10 E	Base & Meridian SLB&M
------------------------------	---------------	------------------	---------------	--------------------------

County Carbon	Watercourse to be altered Willow Creek	Check one: _____ Within City Limits <input checked="" type="checkbox"/> Outside City Limits List town or nearest town: Helper
------------------	---	--

Project location or address: Approximately 2.6 miles northeast of Cyprus Plateau's Willow Creek Mine on State Highway 33/U.S. Highway 191.

Brief description of project:

The purpose of this project is to re-open an existing power line access/exploration road. This road will provide access to two new exploration drill holes.

Purpose (justification) of project:

These exploration drill holes are necessary to evaluate existing reserves and determine proper mine planning. This road will provide access to these two holes during the life of the mine. The two drill holes, in two to five years, may be used as methane drainage holes.

Is this a single and complete project or is it part of a larger project, continuing project, or other related activities? If so, please describe the larger project or other related activities.

This stream crossing will be used only for these two exploration drill holes.

If project includes the discharge of dredged or fill material into a watercourse or wetland: NA

Cubic yards of material:

Acreage or square footage of waters of the United States, including wetlands, affected by the project:

Source and type of fill material:

Alternatives (other ways to accomplish the project purpose):

Coal quality and methane content information is required from this location. Due to the steep terrain in this area, it is not possible to access this site without crossing Willow Creek.

COMPLETE names and addresses of adjacent property owners (immediately upstream and downstream) or other individuals who may be affected by this project:

Dennis Bottino et. al.
69 B Street
Helper, Utah 84526-1214

List other authorizations required by Federal, state or local governments (i.e. : National Flood Insurance Program), and the status of those authorizations.

NA

Estimated starting date of project: July/August, 1999

Estimated completion date: November 1999

(If project has already been partially or totally completed, indicate date of work. Indicate existing work on drawings).

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities or am acting as the duly authorized agent of the applicant.

Signature of Applicant

Tom Paluso

Date

6/25/99

I hereby certify that Tom Paluso is acting as my agent for this project.

Agent's address and telephone number:

EIS 32 North Main Street, Helper, Utah 84526-1214

Phone (435) 472-3814

INSTRUCTIONS

Applications which do not include the following will not be processed.

For a complete application, you **MUST** include the following on 11 X 17 or smaller paper (for large projects, multiple sheets with a key may be used). Clear, hand-drawn plans approximately to scale are acceptable.

1. An accurate location map (USGS quadrangle map preferred)
2. A plan view of the proposed activity (as seen from above) including dimensions of work.
3. A cross-section view of the proposed activity (may use typical cross-section for large projects) including dimensions.
4. For projects which include wetlands, an accurate wetland delineation must be prepared in accordance with the current method required by the Corps.

PROJECT LOCATION

SHEET NO. 1

Exploration Road Re-Opening
Willow Creek Mine (Near Helper)

Section 21, T 12 S, R 10 E
UTAH

Additional Map Information:

Metadata can be obtained through E.I.S. Base map and some additional information provided by Cyprus Willow Creek Mine.

CLIENT:

Willow Creek Mine

ACAD REF:

Cyprus/Willow Creek/EIS/Sheet No. 1

SCALE:

0 100 200 300 400 500 600 700 800 900 1000

DATE:

JUNE 1999

Warning Notice:

Although every effort has been made to provide accurate data, E.I.S. and its contractors bear no responsibility for the veracity of the data. Some information contained herein is the sole property of E.I.S. and may not be reproduced without consent.

DESIGNED BY:

21 N. Main St.,
Helper, UT 84636

(801) 773-2614

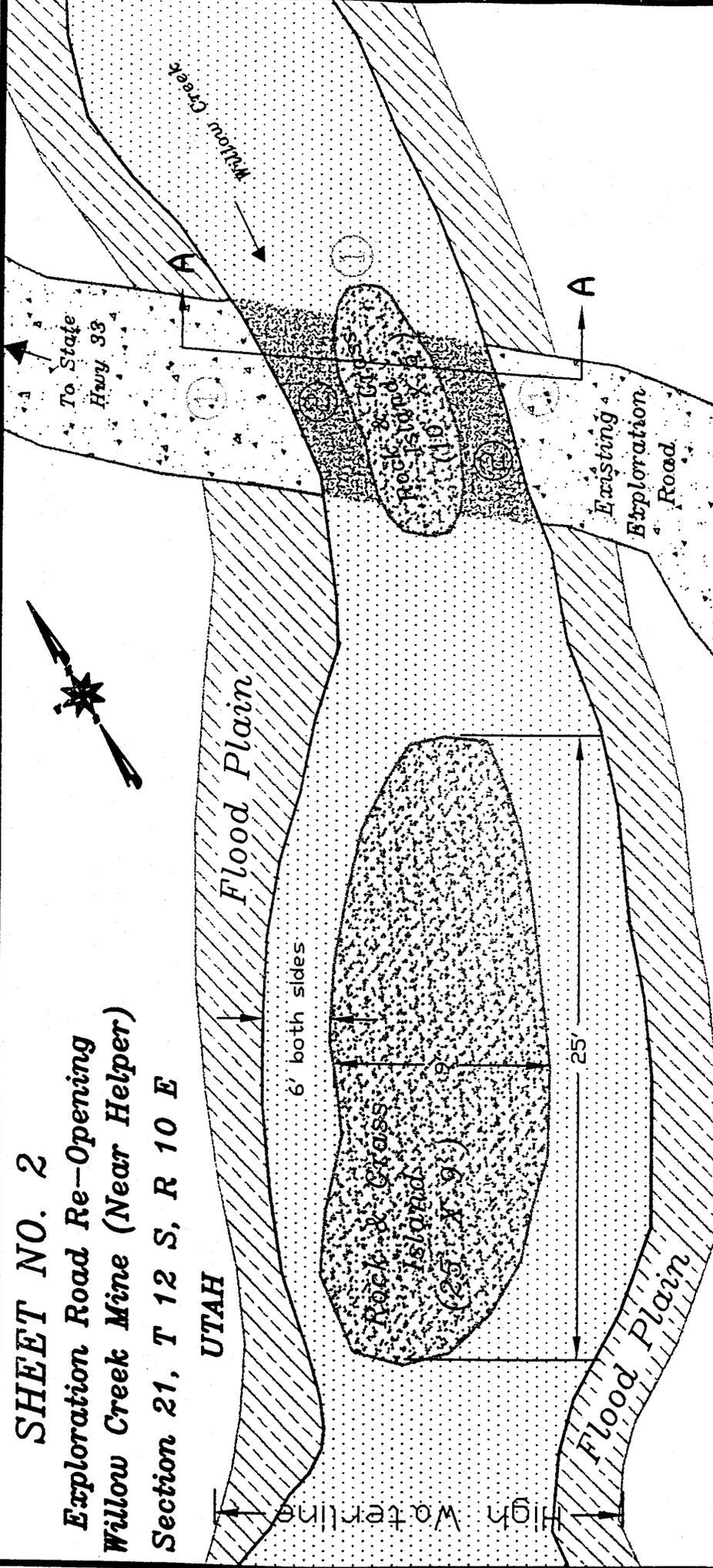
EIS / Draftsperson: E. McDonald
eis.globeconsult.com

SHEET NO. 2

Exploration Road Re-Opening
Willow Creek Mine (Near Helper)

Section 21, T 12 S, R 10 E

UTAH



CLIENT:
Willow Creek Mine

DATE: JUNE 1999
ACAD REF: Cyprus_Amaz/GIS/Stream_sting/Sheet_2

DESIGNED BY:
31 N. Main St., Helper, UT 84526
(801)472-3814
GIS / Draftsperson: K. McDonald
eis.gis@castlenet.com

Warning Terms:
Although every effort has been made to provide accurate data, E.I.S. and its contractors bear no responsibility for the veracity of the data. Some information contained herein is the sole property of E.I.S. and may not be reproduced without consent.

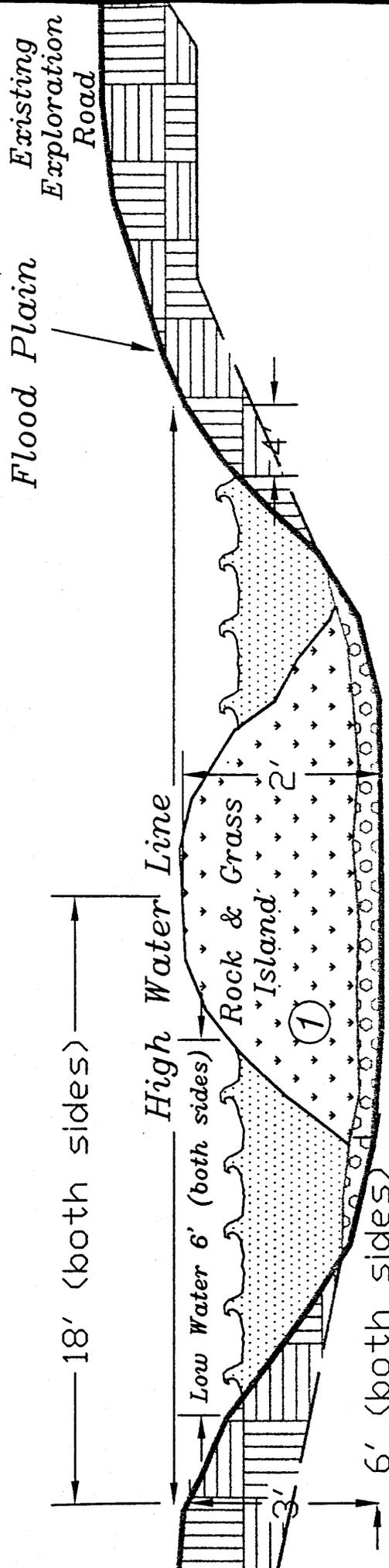
- ① Remove island and flatten side slopes to allow drilling rig to cross stream.
- ② Install bottom rock if necessary. this will allow vehicles to pass.

Additional Map Information:
Metadata can be obtained through E.I.S. Base map and some additional information provided by Cyprus Willow Creek Mine.

SHEET NO. 3

**Exploration Road Re-Opening
Willow Creek Mine (Near Helper)
Section 21, T 12 S, R 10 E
UTAH**

**Cross - Section A-A
(See Sheet No. 2)**



- ① Remove Island and flatten side slopes to allow drilling rig to cross stream.
- ② Install bottom rock if necessary, this will allow vehicles to pass.

Additional Map Information:
Metadata can be obtained through E.I.S. Base map and some additional information provided by Cyprus Willow Creek Mine.

CLIENT:
Willow Creek Mine

SCALE:
Not drawn to Scale

Warning Terms:
Although every effort has been made to provide accurate data, E.I.S. and its contractors bear no responsibility for the veracity of the data. Some information contained herein is the sole property of E.I.S. and may not be reproduced without consent.

DATE:
JUNE 1999

ACAD REF:
Cyprus_Amaz/GIS/Stream_sting/Sheet_3

DESIGNED BY:
31 N. Main St.
Helper, UT 84526
(801)472-3814
EIS
GIS / Draftsperson: K. McDonald
eis.gis@castlernet.com

**APPENDIX G
CORRESPONDENCE WITH USFW
REGARDING T&E SPECIES**



United States Department of the Interior
FISH AND WILDLIFE SERVICE

UTAH FIELD OFFICE
LINCOLN PLAZA
145 EAST 1300 SOUTH, SUITE 404
SALT LAKE CITY, UTAH 84115



In Reply Refer To

(CO/KS/NE/UT)

July 7, 1999

Mr. Dave Mills
Bureau of Land Management
125 South 600 West
Price, Utah 84501

RE: Wildlife/Plant/Habitat Concerns for Cyprus Plateau Mining - Willow Creek Mine, Carbon County, Utah

Dear Mr. Mills:

We received Environmental Industrial Services' request for wildlife, plant, and habitat information, including endangered and threatened species in the area of influence of your proposed action which involves a ten hole exploration program at the Willow Creek Mine. Below is a list of threatened (T), endangered (E), and candidate (C) species that may occur within the area of influence of your proposed action. While candidate species have no legal protection under the Endangered Species Act (ESA), we ask that you try to avoid them if they are found in the area.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Bald Eagle ¹	<i>Haliaeetus leucocephalus</i>	T
Colorado Pikeminnow ²	<i>Ptychocheilus lucius</i>	E
Peregrine Falcon ³	<i>Falco peregrinus</i>	E
Graham Beardtongue	<i>Penstemon grahamii</i>	C

Only a Federal agency can enter into formal ESA section 7 consultation with the Service. A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment by giving written notice to the Service of such a designation. The ultimate responsibility for compliance with ESA section 7, however, remains with the Federal agency.

The proposed action should be reviewed and a determination made if the action would affect any listed species or their critical habitat. A determination should also be made as whether or not the action is likely to jeopardize the continued existence of proposed species or result in the destruction or an adverse modification of any critical habitat proposed for such species. If the determination is

¹ Wintering populations (only four known nesting pairs in Utah).

² Critical habitat designated in this county.

³ Nests in this county of Utah.

"may affect" for listed species, you must request in writing formal consultation from the Field Supervisor, at the address given above. In addition, if you determine that the proposed action is likely to jeopardize the continued existence of proposed species or result in the destruction or adverse modification of proposed critical habitat, you must confer with this office. At that time, you should provide this office a copy of the biological assessment and any other relevant information that assisted you in reaching your conclusion.

Your attention is also directed to Section 7(d) of the ESA, as amended, which underscores the requirement that the Federal agency or the applicant shall not make any irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable and prudent alternatives regarding their actions on any endangered or threatened species.

In addition, provisions of the ESA, Eagle Protection Act, and the Migratory Bird Treaty Act afford protection to migratory birds, including raptors. Pre-project surveys should be conducted to determine locations of active and inactive raptor nest sites and allow accurate assessments of potential direct, indirect, and cumulative impacts in the Environmental Assessment. In an effort to provide reasonable protection for breeding raptors, we generally recommend that surface occupancy not occur within a mile of threatened and endangered raptor species or one-half-mile of other raptor nests during their crucial nesting seasons. The raptor nesting season in Utah generally occurs between January and August, varying dependent on locality, species, and individual breeding pairs. Inactive nests are also considered important since not all raptor pairs breed every year or utilize the same nest within a territory. For the life of the project, we recommend annual surveys of nest sites to allow modifications of project construction and operations as needed to ensure successful reproduction by raptors.

The Service recommends use of the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances (Romin and Muck, May 1999) to ensure that adverse impacts to raptors and their habitat are avoided. Application of these Guidelines in project planning will provide full compliance with environmental laws regarding raptor protection.

If we can be of further assistance or if you have any questions, please feel free to contact Laura Romin, Wildlife Biologist, of our office at (801)524-5001 extension 142.

Sincerely,

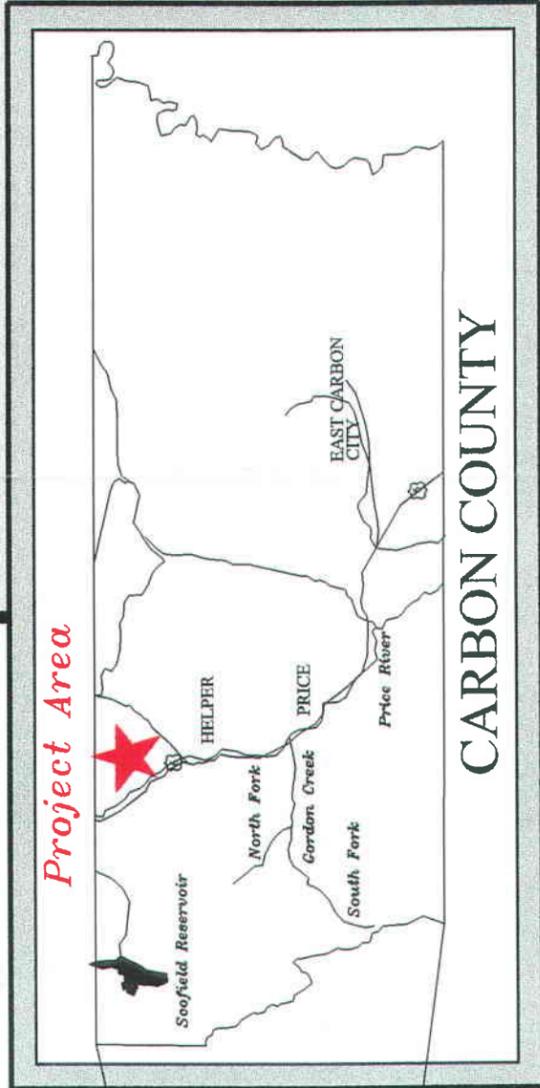
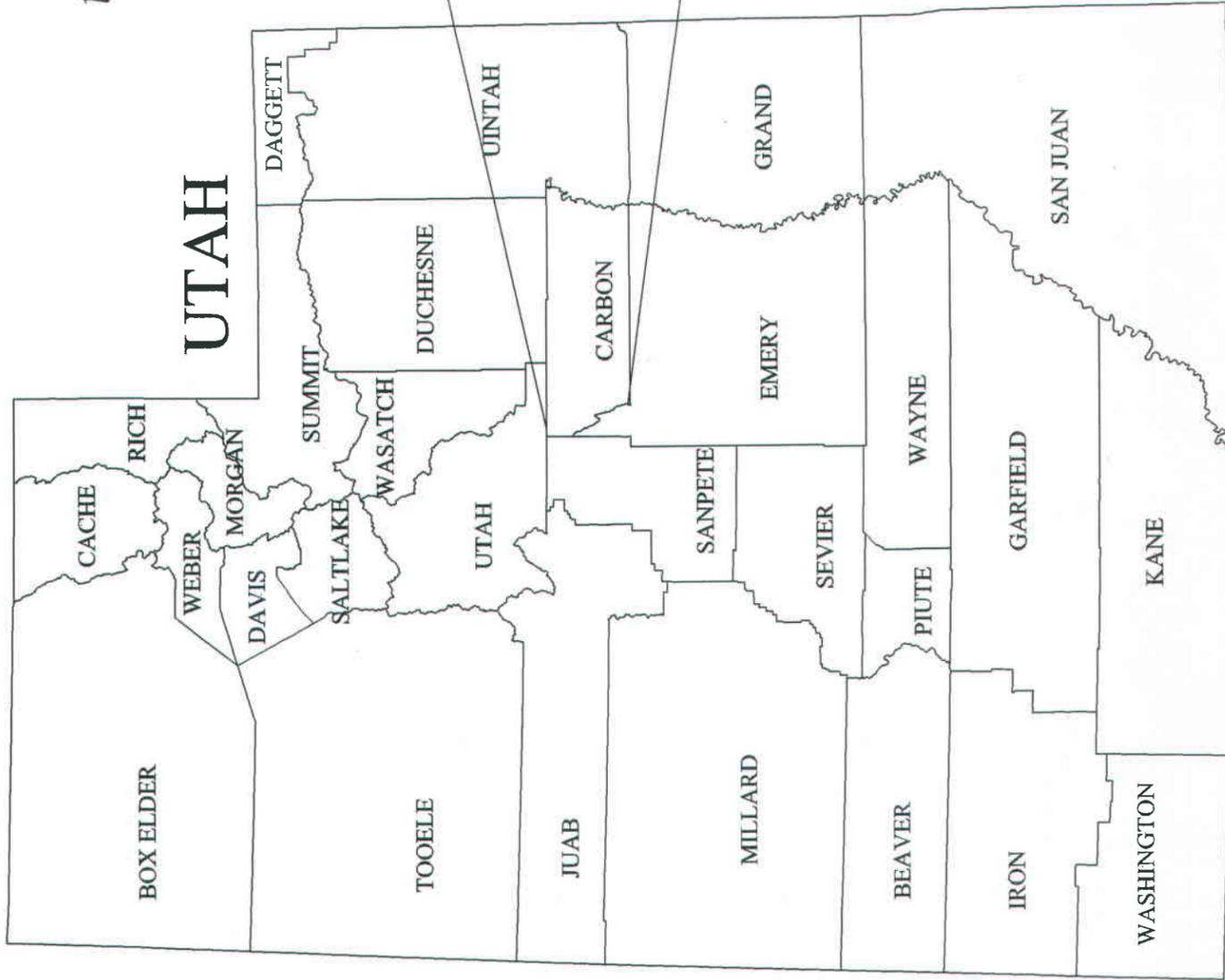
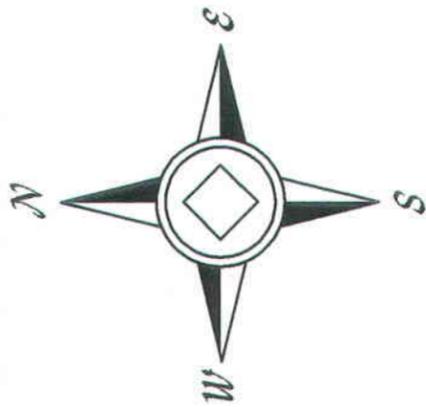


for Reed E. Harris
Field Supervisor

cc: Mr. Tom Paluso, Project Manager, Environmental Industrial Services, 31 North Main Street, Helper, Utah 84526

GENERAL LOCATION MAP PLATE I

Carbon County, Utah
T 12, 13 S ; R 9, 10 E



CLIENT: **CYPRUS PLATEAU MINING**

DATE: JUNE 1999

Additional Map Information:
Metadata for this map and information contained herein, can be obtained through E.I.S. on request.

PLATE NO.: PLATE I

ACAD REF: Carbon/Cyprus_Amaz/Bass/Plate_I

DESIGNED BY:  EIS

21 N. Main St.
Heber, UT 84526
(801) 472-9914
eis.qjs@castlenet.com

PROPOSED ACTION LOCATION PLATE II

Carbon County, Utah
T 12, 13 S ; R 9, 10 E

LEGEND:

- Water: Stream.
- Existing Road.
- Proposed Action: Road.
- Proposed Action: Drill Site.
- Powerline.
- Indicates a drill hole angle.
- Pre-approved Drill site.



Scale:
1000' 0' 2000' 4000'

Printing Scale: 1" = 2800 ft.

CLIENT: **CYPRUS PLATON LINDING**

DATE: JUNE 1999

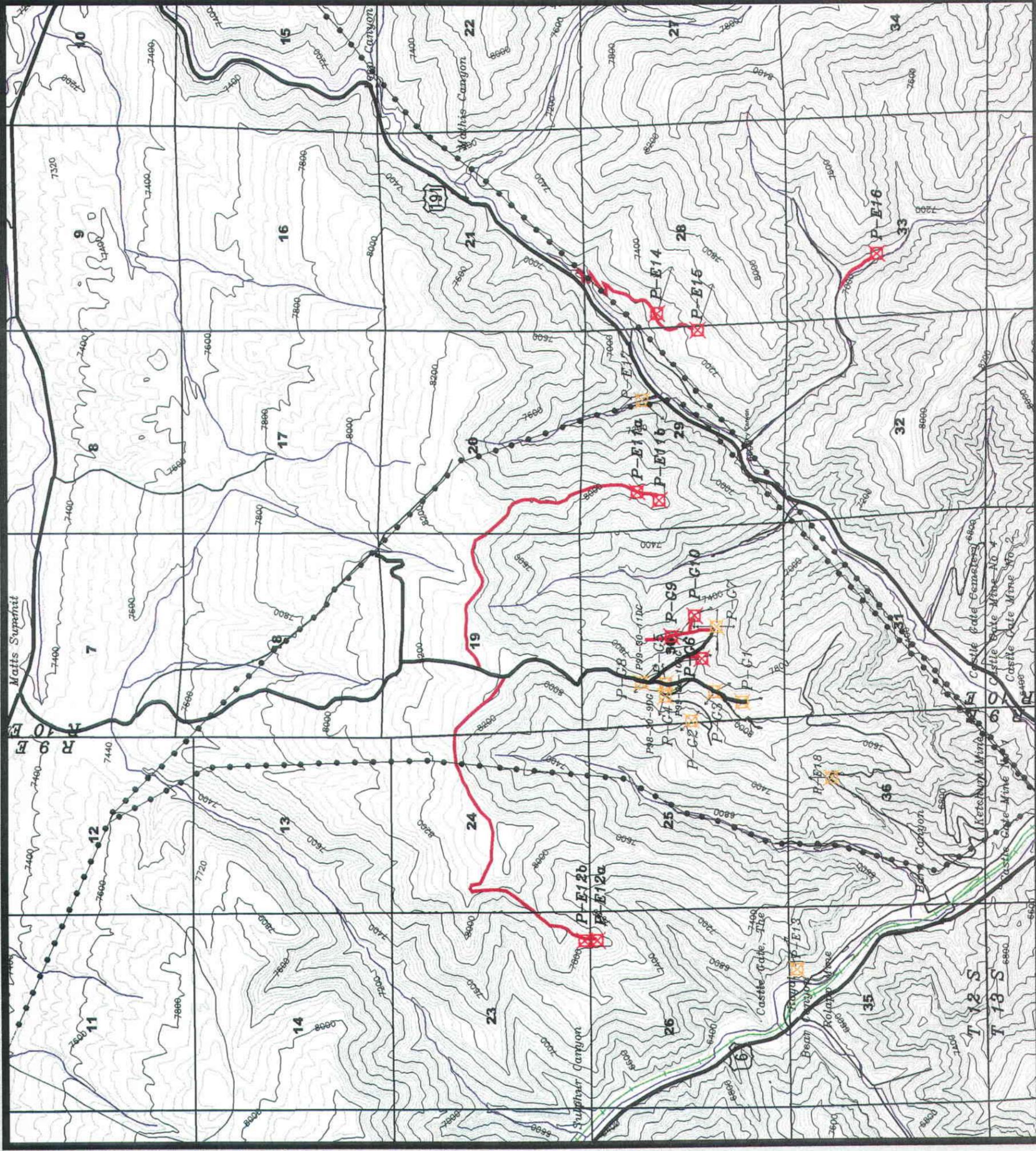
Additional Map Information:
Metadata for this map and information contained herein, can be obtained through E.I.S. on request. Base map and some additional information, provided by Cyprus-Amaz Mapping and Drafting Department.

PLATE NO.:
PLATE II

ACAD REF:
Carbon/Cyprus_Amaz/Base/Plate_II

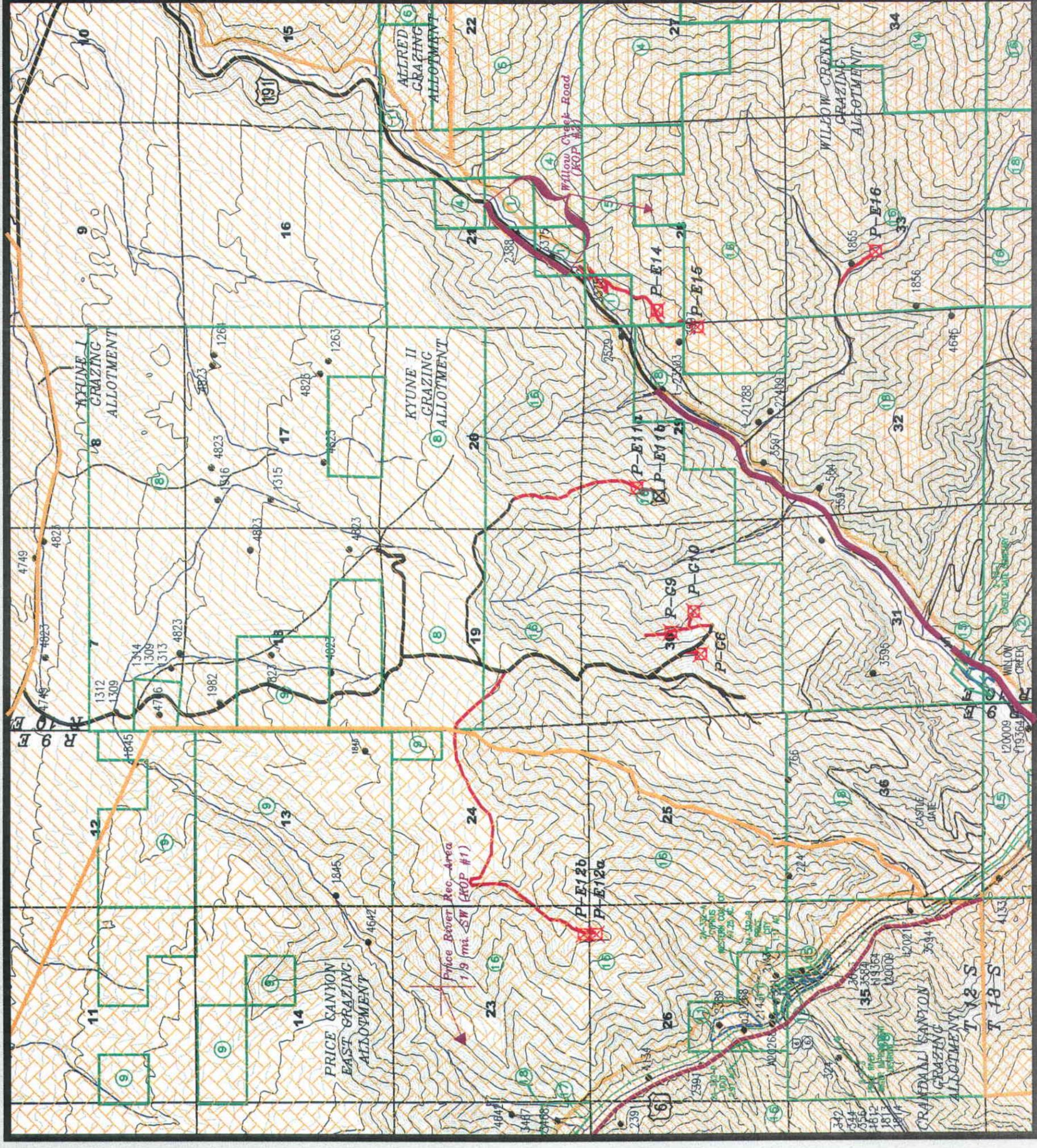
DESIGNED BY:
EIS

Shi N. Mann Sr.
Hesper, UT 81526
(801) 472-4511
eis.djs@castlenet.com



LANDUSE AND OWNERSHIP PLATE III-4

Carbon County, Utah
T 12, 13 S ; R 9, 10 E



LEGEND:

- Water Rights: ● 4133
 - Grazing Allotments: [Orange line]
 - Ownership Boundaries: [Green line]
 - Key Observation Points (KOP): [Red line]
 - Proposed Action: Road: [Red line with cross-ticks]
 - Proposed Action: Drill Site: [Red square with cross]
- Property Ownership:**
- ① DENNIS BETTINO et al.
 - ② CARBON COUNTY
 - ③ JUDSON D. CRITCHLOW et al.
 - ④ MARY FRANDSEN TRUST
 - ⑤ MELVIN FRANDSEN TRUST
 - ⑥ MARY LANGE TRUST
 - ⑦ JOHN AND OLENA MARCHELLO
 - ⑧ JAMES T., JERRY J. AND DIX JENSEN
 - ⑨ PARK VENTURES
 - ⑩ HARRY C. AND ALDA M. EDWARDS
 - ⑪ PRICE RIVER WATER IMPROVEMENT DISTRICT
 - ⑫ ARNOLD MATHIS et al. TRUST 3/8
 - ⑬ WALLACE MATHIS et al. 3/8
 - ⑭ LOIS CRITCHLOW et al. TRUST 1/4
 - ⑮ MATHIS LAND INC.
 - ⑯ WALLACE AND GLADYS M. MATHIS TRUST
 - ⑰ PACIFICORP
 - ⑱ USA-BLM
 - ⑲ UTAH DEPARTMENT OF TRANSPORTATION
 - ⑲ CYPRUS PLATEAU MINING CORP.
 - ⑲ PRICE CITY

Scale: 1000' 0" 2000' 4000'

Printing Scale: 1" = 2800 ft.

CLIENT: **CYPRUS PLATEAU MINING**

DATE: JUNE 1999

PLATE NO.: PLATE III-4

ACAD REF.: Carbon/Cyprus_Amaz/Landuse/Plate_III-4

DESIGNED BY: **EIS**

Additional Map Information:
Metadata for this map and information contained herein, can be obtained through E.I.S. on request. Base map provided by Cyprus Plateau. Additional information Blackhawk Eng. and Earthfax Eng.

21 N. Main St.
Heber, UT 84526
(800) 472-2884
eis@eis@castlenet.com

VEGETATION PLATE III-5

Carbon County, Utah
T 12, 13 S ; R 9, 10 E

LEGEND:

Water: Stream:
Existing Road:
Proposed Action: Road:
Proposed Action: Drill Site:
Powerline:

Vegetation Types:

Aspen
Douglas Fir
Mountain Shrub
Oak Brush

Pinyon Juniper
Sage Grass
Transition Pinyon Juniper

Riparian



Scale:
1000' 0' 2000' 4000'

Printing Scale: 1" = 2800 ft.

CLIENT:



PLATE NO.:

Plate III-5

ACAD REF:

Carbon/Cyprus_Amaz/Vegetation/Plate_III-5

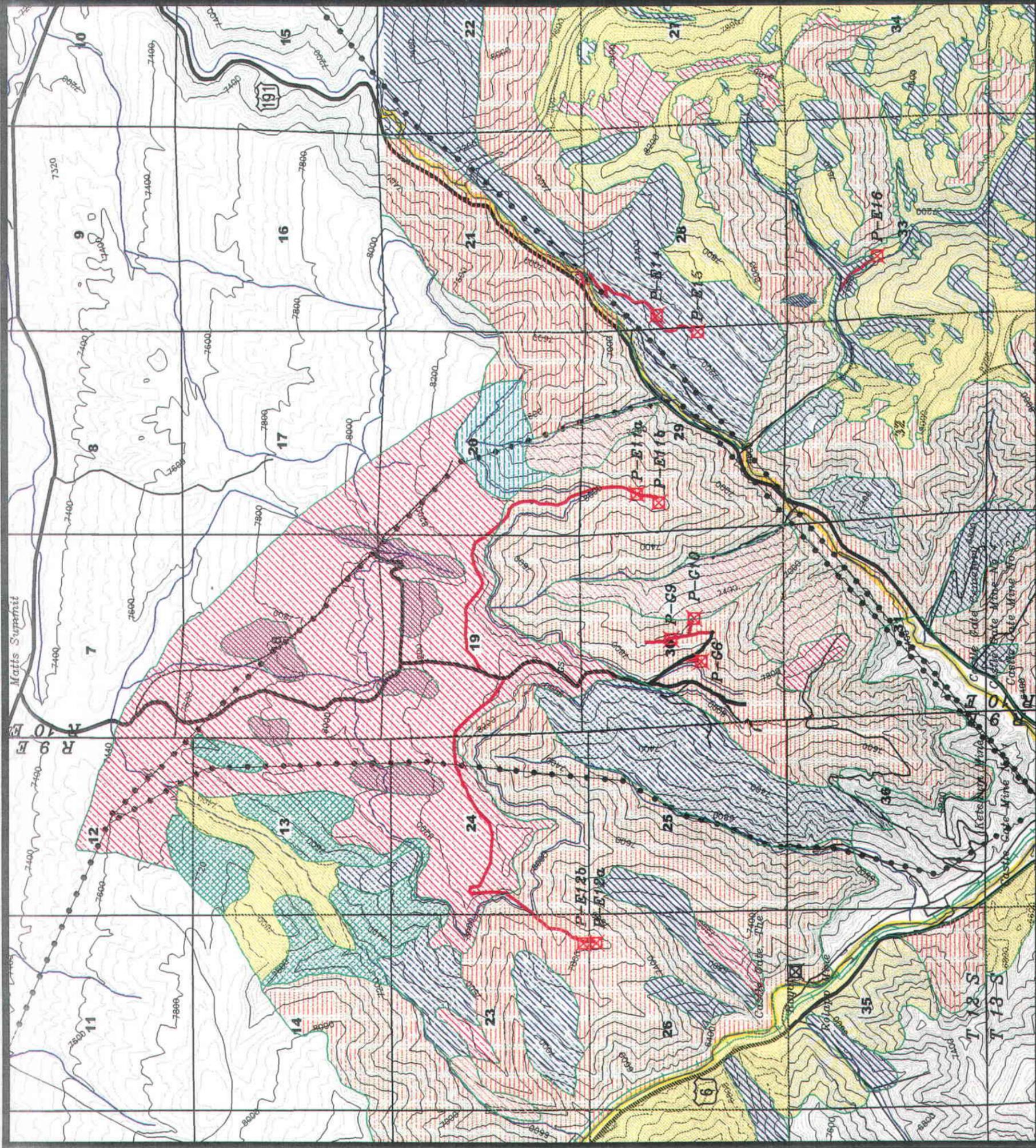
DATE: JULY 1999

DESIGNED BY:



31 N. Main St.
Helper, UT 84526
(800) 472-2514
eis.dls@castlenet.com

Additional Map Information:
Metadata for this map and information
contained herein, can be obtained through
E.I.S. on request. Base map provided by
Cyprus Plateau. Some information provided
by Blackhawk Eng. and EarthFas.



WILDLIFE: DEER

PLATE III-6B

Carbon County, Utah
T 12, 13 S ; R 9, 10 E

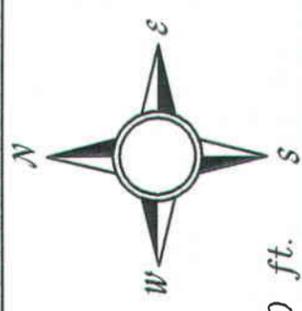
LEGEND:

- Proposed Action: Road: 
- Proposed Action: Drill Site: 
- Water: Stream: 
- Existing Road: 

DEER USE AREAS:



- DEER WINTER - HIGH PRIORITY:
- DEER SUMMER - HIGH PRIORITY:
- DEER SUMMER - CRITICAL:



Scale:

Printing Scale: 1" = 2800 ft.

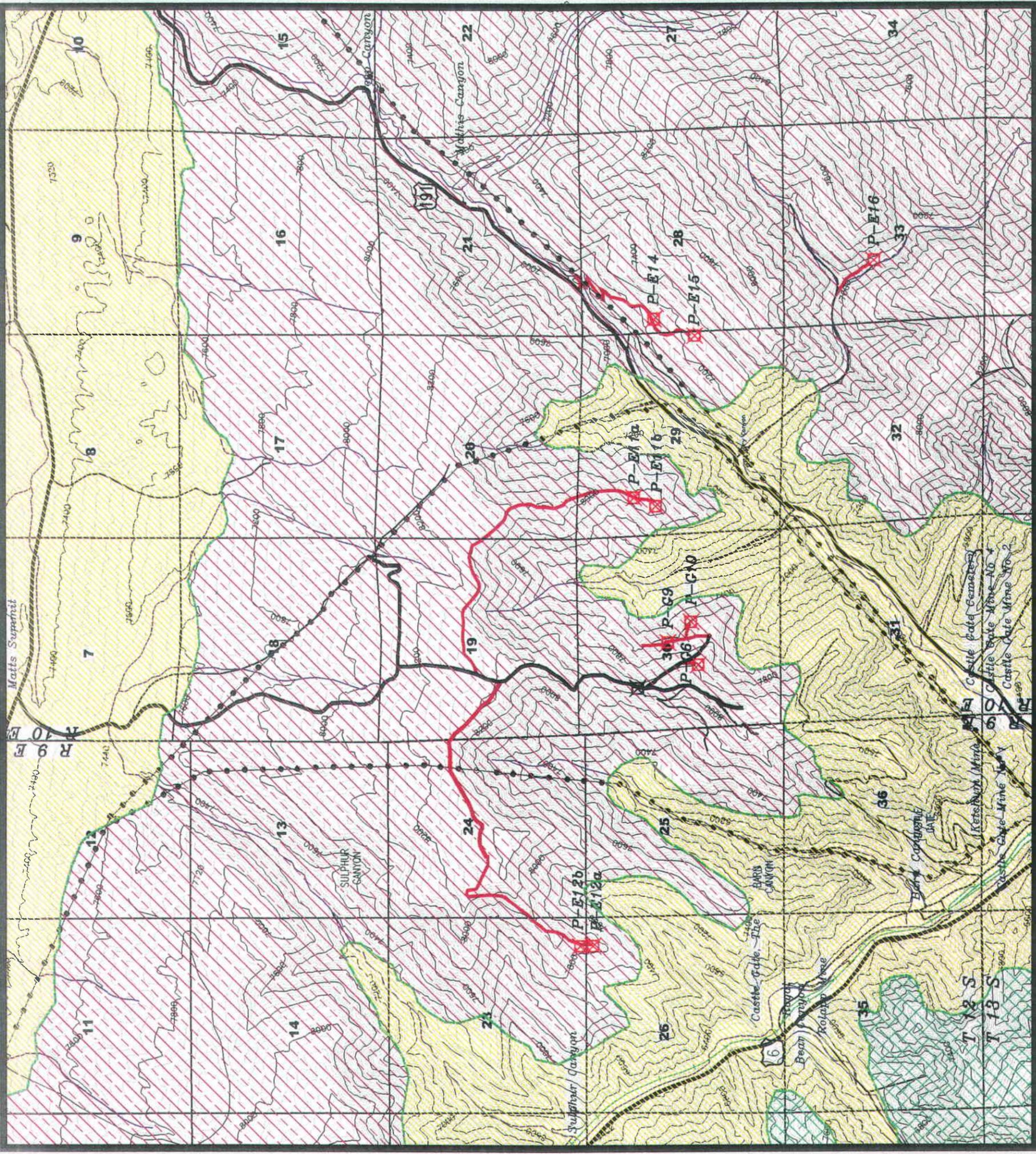
CLIENT:  **CYPRUS PLATEAU MINING**

DATE: JUNE 1999

Additional Map Information:
Metadata for this map and information contained herein, can be obtained through E.I.S. on request. Base map provided by Cyprus Plateau. Some additional information provided by Blackhawk Eng.

PLATE NO.: PLATE III-6b
ACAD REF.: Carbon/Cyprus_Amaz/Wildlife/Plate_III-6b

DESIGNED BY:  **EIS**
K. N. Man &
Hesper, UT 81926
(801) 472-9811
eis.qls@castlenet.com



WILDLIFE: ELK PLATE III-6C

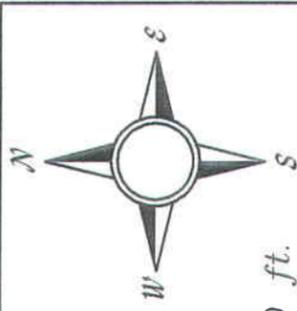
Carbon County, Utah
T 12, 13 S ; R 9, 10 E

LEGEND:

- Proposed Action: Road: 
- Proposed Action: Drill Site: 
- Water: Stream: 
- Existing Road: 

ELK USE AREAS:

- ELK WINTER - CRUCIAL: 
- ELK WINTER - HIGH PRIORITY: 
- ELK WINTER - SUBSTANTIAL: 
- ELK YEARLONG - CRITICAL: 
- ELK YEARLONG - HIGH PRIORITY: 



Scale:
1000' 0' 2000' 4000'

Printing Scale: 1" = 2800 ft.

CLIENT: **CYPRUS PLATEAU MINING**

DATE: JUNE 1999

PLATE NO.: PLATE II-A
ACAD REF.: Carbon/Cyprus_Areas/Wildlife/Plate_III-6c

DESIGNED BY:  **EIS**
N. Man. Sr.
Haber, III, EIS/26
C803-472-5811 e15.eis@cablenet.com

