



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT

TAKE  
PRIDE IN  
AMERICA

IN REPLY REFER TO:

Moab District  
Price River/San Rafael Resource Area  
125 South 600 West  
P.O. Box 7004  
Price, Utah 84501

3410  
UTU-73753  
(UT-066)

## Memorandum

To: State Director, Utah (UT-923)

From: Office Manager

Subject: Amendment to Coal Exploration License, UTU-73753, Cyprus Plateau Mining Company

JUL 24 1996

*ACT 1007/038 #3  
Copy Letter to Joe Brown*

In accordance with your memorandum of April 10, 1996, we have reviewed the amended exploration plan for the subject exploration license, UTU-73753. This exploration plan amendment involves drilling a total of four additional drill holes on the Willow Creek North Tract. An onsite was completed and no major problems were identified with the drill hole locations. Attached is a copy of the environmental documentation, approved exploration plan, and BLM stipulations. We recommend approval of the amended exploration license based on the following conditions:

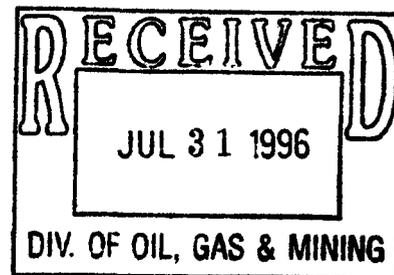
1. The bond amount should be set at \$10,000 per hole (4 holes) to cover plugging and abandonment. To cover the costs of reclamation, P96-25-3 and P96-30-4 should be \$2,000 per hole, P96-30-5 should be \$10,000, and P96-30-3 should be \$30,000. The total bond amount should be \$84,000 for the amended project. Cyprus Plateau met \$20,000 of their bonding obligations in 1995; therefore, the total amount needed to meet bonding obligations at this time would be \$64,000.
2. The attached Bureau of Land Management (BLM) stipulations will be followed.

If you have any questions, please contact Don Stephens (801-636-3608) of my staff.

*Don Stephens*

### 3 Attachments

1. BLM Environmental Documentation (22 pp.)
2. Approved Exploration Plan (18 pp.)
3. BLM Stipulations (7 pp.)



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APR 3 1996

Bureau of  
Land Management

EXPLORATION PLAN  
PROPOSED "WILLOW CREEK NORTH" TRACT  
UNLEASED FEDERAL COAL LAND  
CARBON COUNTY, UTAH  
BLM Surface

EXPLORATION PLAN APPROVED BY  
BUREAU OF LAND MANAGEMENT

Recommended By:

Don Stephen Gelesis 7/23/96  
Name & Title (Date)

Approved By:

Malcolm Johnson 7/24/96  
Area Manager (Date)

CYPRUS PLATEAU MINING CORPORATION

DECEMBER 1994

*Amended & Re-Submitted*

*March 1996*

RECEIVED  
BUREAU OF LAND MANAGEMENT  
APR 11 AM 10:15  
CARRUTHERS RIVER

## INTRODUCTION

This exploration Plan has been prepared by Cyprus Plateau Mining Corporation ("Cyprus" - a Delaware corporation) acting as operator and owner for this exploration project. The focus of the proposed exploration program is to explore the extent and mineability of potential coal resources adjacent to the existing leases controlled by Cyprus. It is our desire to commence drilling activities as soon as possible and complete all activities in one field season, however, drilling activities could spread over two drilling seasons.

The unleased federal land for which this exploration plan has been prepared is not contained within an approved permit area and therefore the format utilized follows that of 43 CFR, Subpart 3482 (12/31/92, edition) . The appropriate regulation is referenced and underlined and Cyprus/response follows. References to figures and maps are *italicized* for easy recognition. Changes and additions associated with the 1996 ammendment are made in the Timpani font form to be easily differentiated from the original.

Five copies of this plan are herewith submitted to the Utah State BLM office. One courtesy copy is also being forwarded to the Price Utah, BLM office.

The information contained in this exploration plan demonstrates that environmental protection and reclamation are integral parts of the proposed exploration program and that reclamation will progress as contemporaneously as practical with the exploration program. Sufficient information is provided in the exploration plan to substantiate the effectiveness of the proposed reclamation method.

3482.1(a) (3) Exploration plans shall contain all of the following:

3482.1(a)(3)(i) the name, address, and telephone number of the applicant, and, if applicable the operator/lessee of record.

**Applicant and Operator:**  
Cyprus Plateau Mining Corporation  
P.O. Drawer PMC  
Price, Utah 84501  
Telephone: (801) 637-2875

3482.1(a)(3)(ii) The name, address, and telephone number of the applicant who will be representation and be responsible for conducting the exploration.

John M. Mercier  
1232 West 1625 South  
Price, Utah 84501  
Telephone: (801) 637-4434

3482.1(a)(3)(iii) A narrative description of the proposed exploration area, cross-referenced to the map required under paragraph (a)(3)(viii) of this section, including applicable federal lease and license serial numbers; surface topography; geologic, surface water, and other physical features; vegetative cover; endangered or threatened species listed pursuant to the endangered Species Act of 1973 (16 U.S.C. 1531, et seq.); districts, sites, buildings, structures, or objects listed on, or eligible for listing on, the National Register of Historic Places; and known cultural or archeological resources located within the proposed exploration area.

**Narrative description of the proposed exploration area**

The proposed exploration area (proposed "Willow Creek North" Tract) is contiguous with existing Cyprus leases and lies north of the confluence of Willow Creek and the Price River and also includes land East of Willow Creek. The attached *Proposed 1996 Drill Sites & Access Map* shows boundaries of the area covered by this exploration plan which is the same area covered by a Lease by Application for the proposed "Willow Creek North" Tract and will be referred to as the "Willow Creek North" Tract throughout this application.

**Legal Description**

Legal description of the area of interest for this Exploration Plan is as follows:

Township 12 South, Range 9 East. Salt Lake Meridian Utah

Section 25; All  
Section 26; E $\frac{1}{2}$ E $\frac{1}{2}$

Township 12 South, Range 10 East. Salt Lake Meridian Utah

Section 28; S $\frac{1}{2}$ , NE $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ NW $\frac{1}{4}$   
Section 29; E $\frac{1}{2}$ SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , N $\frac{1}{2}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ SW $\frac{1}{4}$   
Section 30; N $\frac{1}{2}$ , SW $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$ , NE $\frac{1}{4}$ SE $\frac{1}{4}$

containing 2,299.46 acres, more or less.

The attached *Surface Ownership Map* shows location of lands within the proposed tract controlled by the two surface owners, BLM / USA and the Melvin Frandsen Trust.

**Proposed Site Locations**

Site designation nomenclature "P96" for "Proposed" drill hole site. The P will be dropped when the hole is actually drilled. *Table 1* lists the proposed drill sites and their locations.

TABLE 1 PROPOSED 1996 DRILL SITE LOCATIONS

| <u>Site Designation</u> | <u>Approx. Legal Description</u>   |
|-------------------------|--|
| <i>P96-25-3</i>         | <i>SW<math>\frac{1}{4}</math>, NE<math>\frac{1}{4}</math> S25 T12S, R9E</i>  |
| <i>P96-30-3</i>         | <i>SE<math>\frac{1}{4}</math>, NE<math>\frac{1}{4}</math> S30 T12S, R10E</i> |
| <i>P96-30-4</i>         | <i>SW<math>\frac{1}{4}</math>, SW<math>\frac{1}{4}</math> S30 T12S, R10E</i> |
| <i>P96-30-5</i>         | <i>NE<math>\frac{1}{4}</math>, SW<math>\frac{1}{4}</math> S30 T12S, R10E</i> |

### **Surface Topography Features**

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 proposed tract. Elevations range from over 8,000 feet above sea level on the tops of the flat topped ridges to 6,000 feet above sea level in the bottom of the deepest canyon.

### **Geologic Features**

The lease tract lies within the Book Cliff Coal Field which contains minable coal only within the lower, Cretaceous Age, Blackhawk Formation (*Figure 1, Generalized Stratigraphic Column*).

Stratigraphic units present are, in ascending order, Mancos Shale, overlain by the deltaic and coastal plain sediments of the Blackhawk, Price River and North Horn Formations.

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 and 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 order, Panther, Storrs, Spring Canyon, Aberdeen, and Kenilworth and lower coastal plain coal seams.

The aggregate thickness of the Blackhawk formation in this area is 1,200 feet. The Blackhawk Formation is the primary coal-bearing formation within the area where thick and laterally extensive seams are closely associated with shoreline delta sandstone units.

Overlying the Blackhawk Formation is the lower Castlegate Sandstone (massive cliff-forming sandstones 200-250 feet thick) overlain by lenticular sandstone and mudstones of the Upper Castlegate which grade upwards into the North Horn Formation.

The North Horn Formation composed of lenticular sandstones and clay-rich mudstones is the uppermost unit present in the lease tract, and can only be seen on the extreme northeastern side of the tract.

Stratigraphic units in this part of the Book Cliff Coal Field typically dip 8° North Northeast. Evidence of faults within the "Willow Creek North" Tract is absent. There may be some minor faults but none large enough to seriously affect mine planning and presumably ground water hydrology.

### **Surface Water**

The Price River and Willow Creek are the only perennial streams in the area. The six smaller side canyons draining into Price River and Willow Creek are annual or ephemeral channels, only running in the Spring or in direct response to precipitation. A number of seeps and springs also occur along rock-soil interfaces, or along fracture/joint zones.

### **Vegetative Cover**

The surface of this area is predominantly covered with sage brush, grasses and occasional conifers.

### **National Register of Historical Places Listings**

No listed district, site, building, structure, or object is located within the proposed exploration area.

### **Archeological Resource Inventory**

A cultural and archaeological resource inventory of the proposed 1995 drill sites and access roads was completed on October 20, 1994 by Jackie A. Montgomery, consulting archeologist, with Abajo Archaeology. Results of the inventory were summarized in a report submitted to Mr. John Borla, Cyprus Plateau Mining Corporation, on October 23, 1994, and was attached to the original submittal as Exhibit A. Copies of the inventory were also forwarded to Price BLM (Miller) and, Utah State Historic Preservation Office (Dykman).

The cultural and archaeological resource inventory did not find any archaeological sites or isolated finds of artifacts. This inventory fulfills the compliance requirements of the National Historic Preservation Act of 1966 (amended), the National Environmental and Historic Preservation Act of 1971, the Archaeological Resources Protection Act of 1979, and the Utah Antiquities Act of 1973 (amended). A determination of "no effect" to historic sites was made by Abajo Archaeology as indicated by the following quote from page 3 of the report:

"Due to the absence of significant cultural or paleontological resources within the proposed project areas, a determination of "no effect" to historic properties is recommended for purposes of Section 106, 36 CFR 800."

A second Cultural and Archaeological resource inventory will be completed on the sites and roadways proposed to be constructed for the 1996 ammendment. The survey will be performed by a competent reputable archeologist and a report of results from the survey will be forwarded to the BLM, to be incorporated as a part of this ammendment, as soon as it becomes available.

### **Other Physical Features**

No significant physical features will be affected by the proposed drilling activities.

### **Soils**

All soils within both the proposed lease and Project areas have been surveyed by the USDA, Soil Conservation Service. The results of area soil surveys were published as the Soil Survey of Carbon Area, Utah (USDA-SCS, 6/88). The exploration area contains a number of different soils derived from sandstone, and shale parent material. A generalized soils map of the Lease Area is shown on *Figure 2 (Generalized Soils Map)*. Due to the rocky nature of the terrain, the soils are quite variable, with drainage, texture, reaction, and land-use generally site-specific as a result of weathering and the parent rock materials.

The Argic Cryoborolls-Pachic Cryoborolls-Cyric Paleborolls Association, is found mainly to the west of the Price River on the Wasatch Plateau. It is characteristic of the high mountain landform, with steep slopes, moderate to deep soil depths, and highly variable permeabilities. Only a small amount of this soil type is found within the exploration area to the east of the Price River. The association consists generally of 25 percent Argic Cryoborolls, 25 percent Pachic Cryoborolls, and 25 percent Cyric Paleborolls, with the remaining 25 percent consisting of varying amounts of Typic Cryoborolls, Cyric Pachic Paleborolls, Lithic Cryoborolls, Mollic Cryoborolls, and rock outcrop.

The Majority of the area is covered by the Typic Argiborolls-Lithic Argiborolls-Typic Haploborolls Association. This association is characterized by steep slopes, shallow to deep soil cover (10 inches to 36 inches), and reasonably well-drained soils. The association generally is composed of 35 percent Typic Argiborolls, 20 percent Lithic Argiborolls, and 20 percent Typic Haploborolls. The remaining 25 percent consists of Pachic Argiborolls, Argic Cryoborolls, and rock outcrop.

## Threatened or Endangered Species

There are no known threatened or endangered species within the "Willow Creek North" Tract.

In addition to vegetation community mapping and identification and characterization of plant communities, research was conducted to evaluate the potential or presence of any Threatened, Endangered or Protected (T&E) plant species. T&E evaluations included consultations under the Utah Natural Heritage Program, discussions with local botanists with both the BLM and USDA-Forest Service, review of the original 1981 Price River Coal Company Vegetation Inventory, and reconnaissance level field surveys. Research indicated that while several T&E plants are known to occur in the Carbon County area, specific habitat preferences limit potential T&E occurrences within the proposed lease and Project areas to only one specie of potential concern, the Canyon Western Sweetvetch, Hedysarum occidentals var. canoe. The computer files of the Utah Natural Heritage Program show this specie as occurring in the upper reaches of Willow Creek several miles to the northeast of the site. The principal investigator for the recent vegetation inventories, who has worked extensively in this general area and is familiar with this species, has identified several small undocumented populations of Canyon Western Sweetvetch near Kenilworth but has never encountered this specie during field work on either the "Willow Creek North" Tract or the planned Willow Creek facilities area.

## Wildlife and Fish

Some of the predominate mammals which may occur in the general area include elk, deer, black bear, cougar, bobcat, coyote, badger, porcupine, snowshoe hare, golden mantled squirrel, Andy ground squirrel, red fox, gray fox, marmot, flying squirrel, and other species of small rodents.

Data from UDWR Fish and Wildlife information indicate the following birds may be found in the ecological zone:

|  |                                       |
|--|---------------------------------------|
| Golden Eagle (protected, common)   | Bald Eagle (endangered, rare)         |
| Prairie Falcon (protected, common)   |                                       |
| American Peregrine (endangered, rare)  |                                       |
| American Kestrel, (protected, summer resident)   |                                       |
| Goshawk (protected, uncommon)  |                                       |
| Sharp-shinned Hawk (protected, uncommon)   |                                       |
| Cooper's Hawk (protected, transient)   |                                       |
| Red-tailed Hawk (protected, common)  |                                       |
| Swainson's Hawk (protected, summer resident)   |                                       |
| Marsh Hawk (protected, common)   |                                       |
| Various species of owls (essentially all are protected and most show an abundance designation of common, summer resident, or transient)  |                                       |
| Blue Grouse (protected as a gamebird, common)  |                                       |
| Ruffed Grouse (protected as a gamebird, common)  |                                       |
| Sage Grouse (protected as a gamebird, common)  |                                       |
| California Quail (protected as a gamebird, common)   |                                       |
| Gambel's Quail (protected as a gamebird, common)   |                                       |
| Chukar (protected as a gamebird, common)   |                                       |
| Great Blue Heron (protected, abundance unknown)  |                                       |
| Various species of geese, ducks, teal scaups, mergansers, and widgeons (essentially all are protected as gamebirds and most show an abundance designation of either common, summer resident, or transient) |                                       |
| Bald Eagle (endangered, rare)  | American Peregrine (endangered, rare) |

A site specific raptor inventory was conducted by Bill Bates, Utah Division of Wildlife, and Ben Grimes, Cyprus-Plateau, on October 20th 1994. Six of the seven proposed drill sites and the area within

½ mile radius were surveyed. *There were no significant finds.* One very old nest, which apparently has not been used in years, was observed in the NW ¼ NW ¼ of section 36 within ½ mile of PRP-2, and a Raven or Redtailed Hawk nest was observed in SW ¼ of the SW ¼ of Section 29 within ½ mile of PRP-7. See Exhibit B for a copy of a letter report from the Utah Division of Wildlife on the survey. Site PRP-5 was not included in this survey but was surveyed in preparation for the 1994 exploration plan because of its proximity to Drill Hole 94-33-1.

A site specific raptor inventory will be conducted to cover the sites and roads proposed in this 1996 amendment.

With exception of an approximate 300 ft. long stretch of Willow Creek, which passes through the corner of "Willow Creek North" Tract in Section 29, perennial streams are not found within the Tract Boundaries and therefore fish were not observed. Access to Sites 5, 6 and 7 will require crossing Willow Creek on existing roadways where disturbance to the stream will be minimized. When required, a stream crossing permit will be obtained from the State Engineer.

Reptiles and amphibians of the area may include: boreal toad, leopard frog, northern sagebrush lizard, rocky mountain rubber boa, great basin gopher snake and great basin rattlesnake.

3482.1(a)(3)(iv) A narrative description of the methods to be used to conduct coal exploration, reclamation, and abandonment of operations including, but not limited to-

The proposed coal exploration program will utilize drilling and coring (either air/skid mobile or conventional truck-mounted), core sampling and testing, and down-hole geophysical logging of the open holes as the main methods of data collection. The attached *Proposed 1996 Drill Sites & Access Map* shows pad site locations and access road paths to be to be constructed. Cyprus has various water rights on Willow Creek and the Price River. Temporary changes in the points of diversion were obtained from the State Engineer prior to commencing drilling in 1995. These same points of diversion will be utilized for all of the drilling proposed by this 1996 amendment with exception of water obtained for P96-25-3 which will be procured from a pond controlled by Cyprus, as described below.

#### **Pad & Site Access Detail**

Proposed Site P96-25-3 is located along the old "Power Line Road" in Barn Canyon with approximate local state plane coordinates 2,180,57E 518516N, and surface elevation of 6745 ft. The pad will be located in the bottom of the drainage and is planned to be approximately 60 X 120 ft. Turn-around for water truck and rig-up trucks will be accomplished at previous site 95-25-2, which lies up canyon from the proposed site.

Access will be gained via the old "Power Line Road" which was re-habilitated during last years drilling. Construction of the pad will be accomplished with a D-8 bulldozer or smaller. Because the pad is located within 40-60 feet from the high tension power line, for which the original road was constructed, UP&L has been contacted and indicates that so long as the drill rig mast remains at least 10 feet away from the power lines there will be no safety hazard.

Water will be procured from a pond controlled by Cyprus located near the wash plant and will be hauled to the drill site in a water truck.

Drilling equipment proposed for this site is a truck mounted Gardner Denver 1500 or similar with associated ancillary equipment.

Proposed Site P96-30-3 is located in "Skinney Canyon" at approximate local state plane coordinates, 2,186,389E 519,062N and approximate surface elevation of 6,890 ft. The pad will be located in the bottom of the drainage near the confluence of another tributary drainage from the west, and is planned to be approximately 65 X 150 ft. Turn around for rig and water truck (if utilized) and parking for support vehicles, will be accommodated on the proposed pad.

Access will be gained via a newly constructed road extending from previous drill hole site 95-30-1 approximately 1,500 feet along the bottom of the drainage up to the proposed new site P96-30-3. A minor amount of rehabilitation, including re-opening the willow creek crossing, will have to be completed on the existing access to 95-30-1 before construction of the new road can commence. A D-8 bulldozer, or similar, together with a track mounted back hoe will be used to construct this road. Due to presence of multiple large 15 X 15 ft. sandstone boulders in the road path, drilling and blasting of the boulders will be required. The boulders will be drilled with a track mounted jack hammer, or similar, and a minimum charge will be used to crack the boulders. The broken pieces will then be moved with either the D-8 bulldozer or the back-hoe. Qualified personnel certified in handling explosives will be responsible for the blasting procedures.

Water will be procured from Willow Creek at the crossing site which is the same temporary point of diversion utilized during 1995 drilling. Water will either be hauled in a water truck or pumped through a temporary pipe line from Willow Creek to the drill site.

Drilling equipment planned for this site will be either a truck mounted Longyear 44, or similar, or a truck mounted Gardner Denver 1500, or similar.

When drilling and reclamation activities have been completed the Willow Creek Crossing will be closed at the creek to prevent vehicular access.

Proposed Site 96-30-4 is located on south end of the "Central Ridge" (local name given here for reference only) which forms the divide between Barn Canyon and the next two drainages east. This site is located at approximate local State Plane coordinates 2,182,941E 515970N, and 8350 ft. elevation on a relatively flat saddle near the ridge top. The pad is planned to be approximately 150 X 200 ft. to accommodate equipment required for a deep hole. Turn-around and parking for all vehicles, including water truck and drill rig will be accommodated at the drill site.

Access will be gained via a newly constructed road leading from previous drill site 95-30-2 extending approximately 2,000 feet south along, and immediately west of the ridge-top, to the proposed site 96-30-4.

Proposed Site P96-30-5 is also located on the "Central Ridge" as is P96-30-4 but is located off the East side of the ridge top at approximate local State Plane coordinates 2,184,945E 517,429N, approximate elevation 7,780 ft. The pad is planned to be 100 X 225 ft. situated as a terrace on a natural "flat spot" on a local ridge nose. Staging and parking of rig-up trucks and accessory equipment may be accommodated at the previous drill site 95-30-2 to alleviate the crowding which may occur at proposed site P96-30-5.

Access will be gained via a newly constructed road approximately 2,500 feet in length leading from the existing road, which provides access to site 95-30-2, down the east side of the ridge to the relatively flat "nose" on the local south-east trending "side ridge."

Road and pad construction for all sites P96-30-4&5 will be completed with a D-8 or similar Dozer. Drilling equipment planned for these sites is a truck mounted Gardner Denver 2000 rig, or similar, together with customary ancillary support equipment, detailed below in

response to 3482.1(a)(3)(iv)(A).

Water will be hauled from the point of diversion of "upper" Willow Creek that was used during the 1995 drilling program. An on-site storage tank is planned to insure an un-interrupted water supply to the rig.

3482.1(a)(3)(iv)(A) The types, sizes, numbers, capacity and uses of equipment for drilling and blasting, and the road or other access route construction:

#### **Equipment**

A variety of equipment is expected to be utilized during this drilling project. As indicated above, two or three different types of rigs will be required due to the varied settings, together with a variety of ancillary or support equipment. A geophysical logging truck and other service trucks will also be used at each site.

#### ***EQUIPMENT FOR P96-25-3 (BARN CANYON SITE)***

- One; D-8 bulldozer or similar
- One; rubber tired back-hoe
- One; truck mounted Gardner Denver 1500 or similar, or possibly a continuous core rig, Longyear 44 or similar.
- One; pipe truck
- One or two; compressors
- One or two; flat-bed/rig-up trucks
- Two; 4X4 ≈ 1,000 gal. water trucks, or a temporary pipe line along the road from Willow Creek to the drill pad
- Three or four; 4X4 pickup trucks
- One; geophysical logging truck

#### ***EQUIPMENT FOR P96-30-5 ("SKINNY CANYON" SITE)***

Same as for Barn Canyon Site except the rig may be skidded instead of hauled on a truck and water will likely be supplied by a 2" aluminum pipeline eliminating the need for water trucks. Space will likely preclude the use of a core/field office trailer. In addition hand held jack hammer, or similar, to drill short holes in large boulders during road construction, blasting equipment, and possibly a track mounted back-hoe.

#### ***EQUIPMENT FOR SITES P96-30-4&5 ("CENTRAL RIDGE" SITES)***

- One; tracked dozer D-8
- One; rubber-tired backhoe
- Several; four wheel drive pickup trucks
- One; truck-mounted drill rig (PortaDrill TKT, Gardner-Denver 2000 or similar)
- One or two; pipe trucks
- One; casing trailer
- Two; water trucks
- One; on-site water tank
- Two or three; skid mounted compressors

**Seed Mixtures**

The proposed drill sites and access routes are located on BLM and private land. The seed mix listed below on *Table 2* was provided by the BLM specifically for sites in this area.

Table 2

**Seed Mix**

| <b>SHRUBS</b>                     | <b>Pounds per Acre</b> |
|-----------------------------------|------------------------|
| Symphoricarpus albus              | 1.0                    |
| Artemesia tridentata wyomingensis | 0.5                    |
| Cercocarpus ledifolius            | 1.0                    |
| <b>FORBS</b>                      |                        |
| Achillea millefolium              | 0.5                    |
| Balsamorhiza saggitata            | 0.5                    |
| Penstemon strictus                | 0.5                    |
| <b>GRASSES</b>                    |                        |
| Poa secunda                       | 1.5                    |
| Bromus carinatus                  | 1.5                    |
| Agropyron spicatum                | 1.5                    |
| A. smithii                        | 1.5                    |
| A. trachycaulum                   | 1.5                    |
| <b>Total Pure Live Seed</b>       | <b>11.5</b>            |

3482.1(a)(3)(iv)(B) Excavated earth or debris disposal activities:

All soils excavated in any phase of the proposed exploration activities will be treated the same. Unless otherwise required, the topsoil and native vegetation at the drill sites will be removed, if present, and stockpiled for re-distribution during site reclamation. Topsoil will only be removed where required; generally where soils would be directly impacted at the drill site.

A competent and responsible person, knowledgeable about soils, will be on the site during excavation and reclamation in order to minimize environmental impacts and assure proper soil extraction (depth, etc.) and replacement. This person will be on the drill site during any type of excavation, construction, or reclamation. Methods used to extract topsoil from drill pad locations will be mechanical equipment such as a front-end loader, backhoe, medium to small dozer, or other method.

Stockpiled soil will be protected from erosional loss by containment berms or silt fencing. Wind erosion is not anticipated to be a problem. If the topsoil pile is dry and deflating, it will be wet down. Weathered rock and/or subsoils excavated from the mud pits will be stockpiled separately from the topsoil and will be used to backfill the mudpits after coring and plugging activities are complete. Drill cuttings will be contained and buried in the mud pit. Mudpits will not be backfilled until drilling fluids are pumped out or evaporated.

Soil loss off the drill site will be controlled by berms, straw bales, or silt fences.

The sites and roads will be graded/reclaimed to approximate original contour and recovered with topsoil in a roughened and scarified state. Reclamation parameters of existing roads will be determined by BLM personnel. Drainage will be controlled to prevent runoff across exposed soils.

All debris and trash will be disposed of properly and in a timely manner. Location of disposal will be completely off the exploration area. Areas on the drill site which might be contaminated by fuels or toxic substances will be protected by ground tarps or other means. Contaminated soils will be removed from the sites and transported to an approved disposal facility.

3482.1(a)(3)(iv)(C)      The proposed method for plugging drill holes:

All drill holes will be grouted from bottom to the surface with a slurry of Portland cement and bentonite.

3482.1(a)(3)(iv)(D)      Estimated size and depth of drill holes, trenches and test pits:

The size of the bore-holes will range from ten inches in diameter for surface casing down to six inches . The deepest hole should not exceed 3,200 feet in depth.

No trenches or test pits are planned.

3482.1(a)(3)(iv)(E)      Plans for transfer and modification of exploration drill holes to be used as surveillance, monitoring, or water wells.

None of the holes proposed in the 1996 ammendment will be completed as monitor wells.

3482.1(a)(3)(v) An estimated timetable for conducting and completing each phase of the exploration, drilling and reclamation.

TABLE 3      TIMETABLE FOR PROPOSED 1996 EXPLORATION ACTIVITIES

| PHASE OF PROGRAM | July |   |   |   | August |   |   |   | Sept |   |   |   | October |   |   |   |
|------------------|------|---|---|---|--------|---|---|---|------|---|---|---|---------|---|---|---|
|                  | 1    | 2 | 3 | 4 | 1      | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1       | 2 | 3 | 4 |
| Drilling         | *    | * | * | * | *      | * | * | * | *    | * | * | * | *       | * | * | * |
| Reclamation      | *    | * | * | * | *      | * | * | * | *    | * | * | * | *       | * | * | * |

3482.1(a)(3)(vi) The estimated amounts of coal to be removed during exploration, a description of the method to be used to determine those amounts, and the proposed use of the coal removed.

Core is not planned to be removed during the proposed 1996 drilling program. However, if a continuous core rig is required to drill P96-30-3, it is possible that core may be taken from this hole. If core is taken from this hole, coal seams less than 5 feet in thickness will be cored along with the seams greater than 5 feet in thickness. It is estimated that a maximum total of 30 feet cumulative thickness of coal will be removed resulting in calculated coal to be removed is approximately 125 lbs.

Calculations for lbs. of coal:

$$(1.5^2 \text{in.}) \times \pi / 144 \times 30 \text{ ft.} = (\text{est. cubic ft. coal/hole})$$
$$\times 85 \text{ lbs./cu. ft.} = 125 \text{ lbs. coal } \square \text{ hole}$$

*Total for Program = 125 X 1 = 125 lbs of coal removed.*

The core sampled will be used for quality and geotechnical testing. The results of these tests will aid in thickness, seam geometry, coal quality determinations, mine planning and future exploration planning.

3482.1(a)(3)(vii) A description of the measures to be used during exploration for Federal coal to comply with the performance standards for exploration (3481.1(a) and applicable requirements of 30 CFR 815.15 or an approved state program.

3484.1(a)(2) The operator/lessee, if required by the authorized officer, shall set and cement casing in the hole and install suitable blowout prevention equipment when drilling on lands valuable or prospectively valuable for oil, gas, or geothermal resources.

If required by the authorized officer, casing will be set and cemented in the hole and suitable blowout prevention equipment will be installed.

3484.1(a)(3) All exploration drill holes must be capped with at least 5 feet of cement and plugged with a permanent plugging material that is unaffected by water and hydrocarbon gases and will prevent the migration of gases and water in the drill hole under normal hole pressures. For exploration holes drilled deeper than stripping limits the operator/lessee, using cement or other suitable plugging material approved by the authorized officer shall plug the hole through the thickness of the coal bed(s) or mineral deposits(s) and through aquifers for a distance of at least 50 feet above and below the coal bed(s) or mineral deposit(s) and aquifers, or to the bottom of the drill hole. A lesser cap or plug may be approved by the authorized officer. Exploration activities shall be managed to prevent water pollution and mixing of ground and surface waters and ensure the safety of people, livestock, and wildlife.

As noted above in 3482.1(a)(3)(iv)(C), this stipulation will be complied with if the drill hole is not to be completed as a water monitoring well site. The possibility of contamination of surface waters by drilling materials is low because of location. Adequate precautionary measures (such as berms, bales, and/or silt

fences) to prevent the escape of drilling materials into stream drainages will be incorporated into individual site designs. The potential for contamination of surface waters will be minimized by constructing waste pits of sufficient size to contain all effluent drilling materials. To prevent overflow, the waste pits will be pumped out and waste fluids will be disposed of properly. Waste pits will be lined if percolation of fluids through the walls into stream drainages appears possible.

In accordance with the revised stipulations of 43 CFR 3482.2(b), all coal exploration drill holes will be: 1.) "cemented from the total depth of the hole to the surface and, 2.) the surface and the intermediate casing (if used) will be fully pressure grouted in the annulus from the bottom of the string to the surface". These measures will be taken to prevent intermixing of ground water. Detail on encountered groundwater flow will be noted on appropriate form for the BLM records. When monitoring wells are no longer needed, they will be plugged with Portland cement and sealed.

3484.1(a)(4) The operator/lessee shall retain for one (1) year, unless a shorter time period is authorized by the authorized officer, all drill and geophysical logs and shall make such logs available for inspection or analysis by the authorized officer, if requested. The authorized officer, at his discretion, may require the operator/lessee to retain representative samples of drill cores for one (1) year. Confidentiality of such information will be accorded pursuant to the provisions of 3481.3 of this title.

Drill and geophysical logs as well as representative core samples obtained from the proposed exploration program will be available for inspection or analysis by the authorized officer for one year. An exception to the above will be those cores samples consumed during quality testing. Splits of the samples will be maintained by the testing labs. Typically all collected data including seam depth, thickness, quality, geophysical logs, structure, geotechnical, drilling logs, etc. have been copied and transferred to the appropriate personnel at the B.L.M. offices for review and confidential storage, pursuant to 43 CFR 3485.1.

3484.1(a)(5) The operator/lessee may utilize exploration drill holes as surveillance wells for the purpose of monitoring the effects of subsequent operations on the quantity, quality, or pressure of groundwater or mine gases only with the written approval of the authorized officer, in consultation with the regulatory authority. The operator/lessee may convert exploration drill holes to water wells only after approval of the operator/lessee's written request by the authorized officer and the surface owner or authorized officer in consultation with the regulatory authority. All such approvals shall be accompanied by a corresponding transfer of responsibility for and liability including eventual plugging, reclamation, and abandonment. Nothing in this paragraph shall supersede or affect the applicability of any state law requirements for such a transfer, conversion, or utilization as a supply for domestic consumption.

Refer to response to 3482.1(a)(3)(iv)(E)

3482.1(a)(3)(viii) A map at a scale of 1:24,000 or larger showing the areas of land to be affected by the proposed exploration and reclamation. The map shall show existing roads, occupied dwellings, and pipelines; proposed location of trenches, roads, and other access routes and structures to be constructed; applicable federal lease and license boundaries; the location of land excavating to be conducted; coal exploratory holes to be drilled or altered; earth or debris-disposal areas; exiting bodies of surface water; and topographic and drainage features.

*Proposed "Willow Creek North" Tract / Proposed 1996 Drill Sites & Access Map* is attached to this application. The map is at a scale of 1:24,000 and contains the requested information (proposed drill hole locations, access routes, etc.).

3482.1(a)(3)(ix) The name and address of the owner of record of the surface land, if other than the United States. If the surface is owned by a person other than the applicant or if the federal coal is leased to a person other than the applicant, a description of the basis upon which the applicant claims the right to enter that land for the purpose of conducting exploration and reclamation.

Surface ownership for this exploration plan application is the US Government (Bureau of Land Management) with approximately 280 acres privately owned. The surface owners of record are:

Melvin Frandsen Trust  
506 So. 100 West  
American Fork, Ut 84003

USDI Bureau of Land Management (BLM)  
900 North 700 East  
Price, Utah 84501

No activity is planned on the Melvin Frandsen Trust Land for the 1996 amendment.

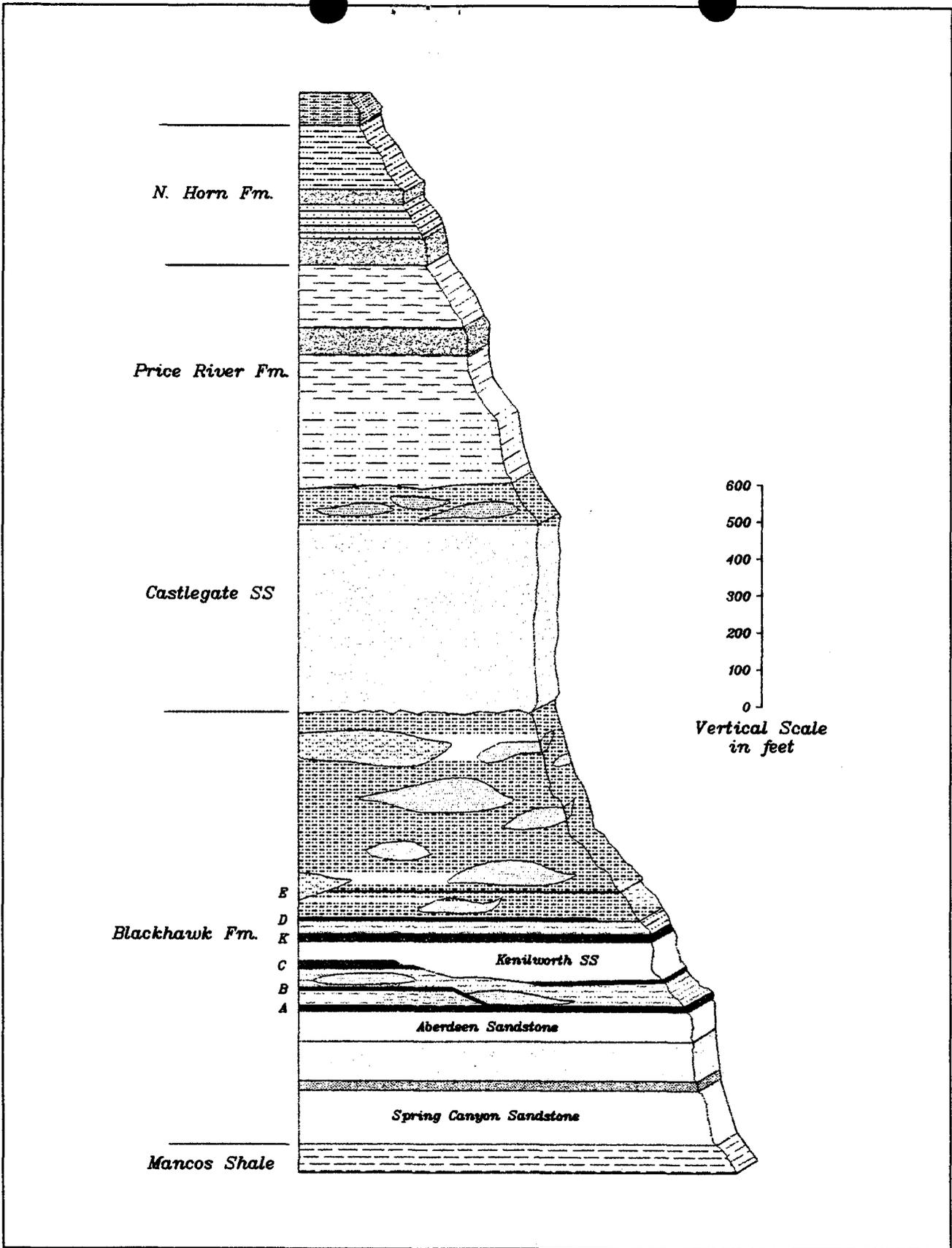
All lands on which drill pads and roads are to be constructed for execution of this exploration plan are owned by the BLM. There are three parcels of surface land which lie outside of the "Willow Creek North" Tract but which will be crossed, on existing roads, as access to certain drill sites. The first is owned by Cyprus Amax Minerals Co. and lies adjacent to the south of the "Willow Creek North" Tract in Barn Canyon which provides access to P96-25-3. The second is owned by Boyd Marsing located in Dry Canyon which provides access to PRP-5. A written agreement is already on file, from the 1994 Willow Creek Drill Program, for access to drill sites through the Marsing land. No activity is planned to cross the Marsing Land for the 1996 amendment.

The third land parcel is owned by T.N. Jensen and lies immediately north of the "Willow Creek North" Tract, and provides access to P-96-30-4 & P96-30-5. A letter of permission to access will be secured before mobilization. That letter is now on file.

8432.1(a)(3)(x) Such other data as may be required by the authorized officer.

Other data that may be required will be made available as soon as possible upon the request of e BLM.

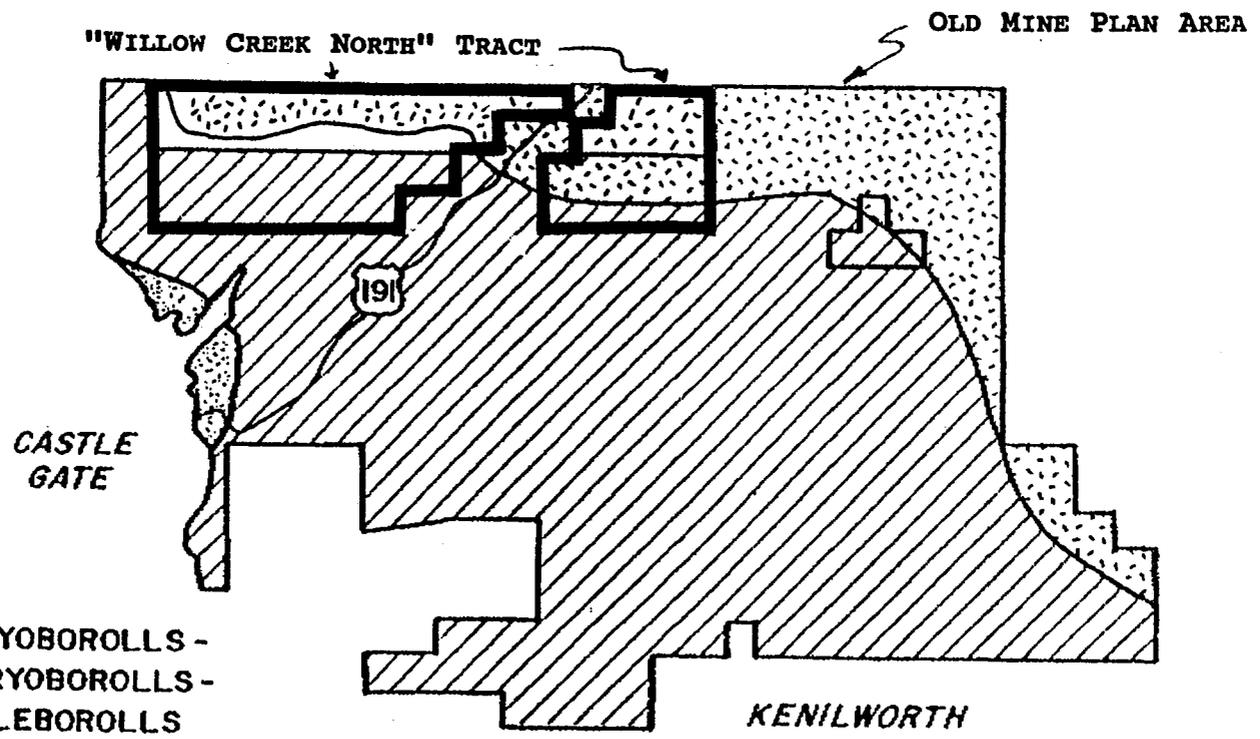
# Figures

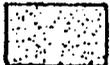


|                                   |                                |                    |
|-----------------------------------|--------------------------------|--------------------|
| Project No.:                      | Design By:<br>JERRY & Geo-Elmt | Scale:<br>AS NOTED |
| File:<br>D:\WCSURF\STRAT2.DWG     | Drawn By:<br>JERRY & Geo-Elmt  | Date:<br>3-22-98   |
| Modified<br>After<br>Randy Mattox | FIGURE-NO. 1                   |                    |


*Plateau Mining*

**Generalized Stratigraphic  
Section  
Willow Creek Area**

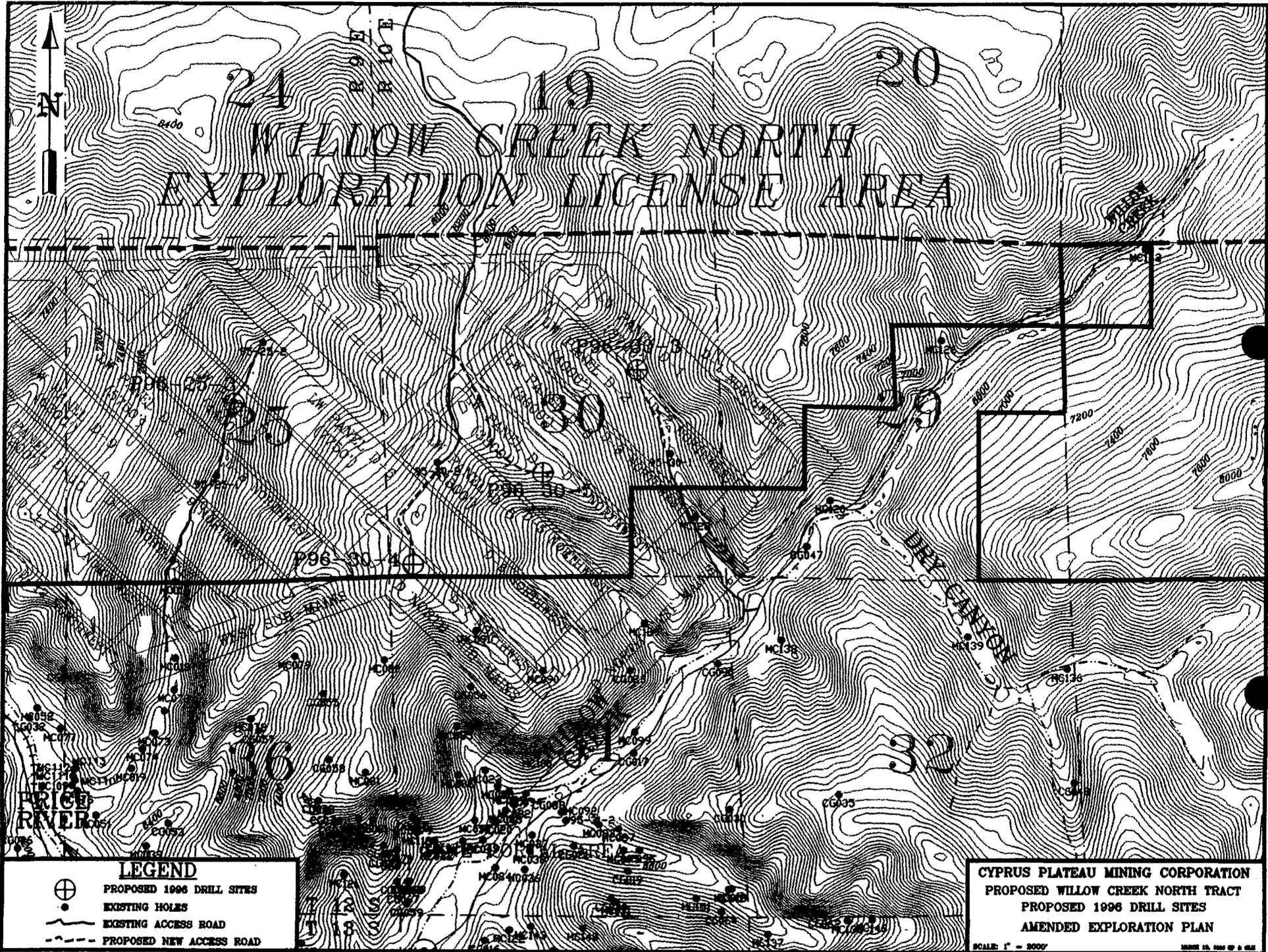


- 
 ARGIC CRYOBOROLLS-  
 PACHIC CRYOBOROLLS-  
 CRYIC PALEBOROLLS  
 ASSOCIATION
  
- 
 TYPICAL ARGIBOROLLS-  
 LITHIC ARGIBOROLLS-  
 TYPICAL HAPLOBOROLLS  
 ASSOCIATION
  
- 
 BADLAND - ROCKLAND  
 ASSOCIATION

GENERALIZED SOILS MAP

FIGURE 2

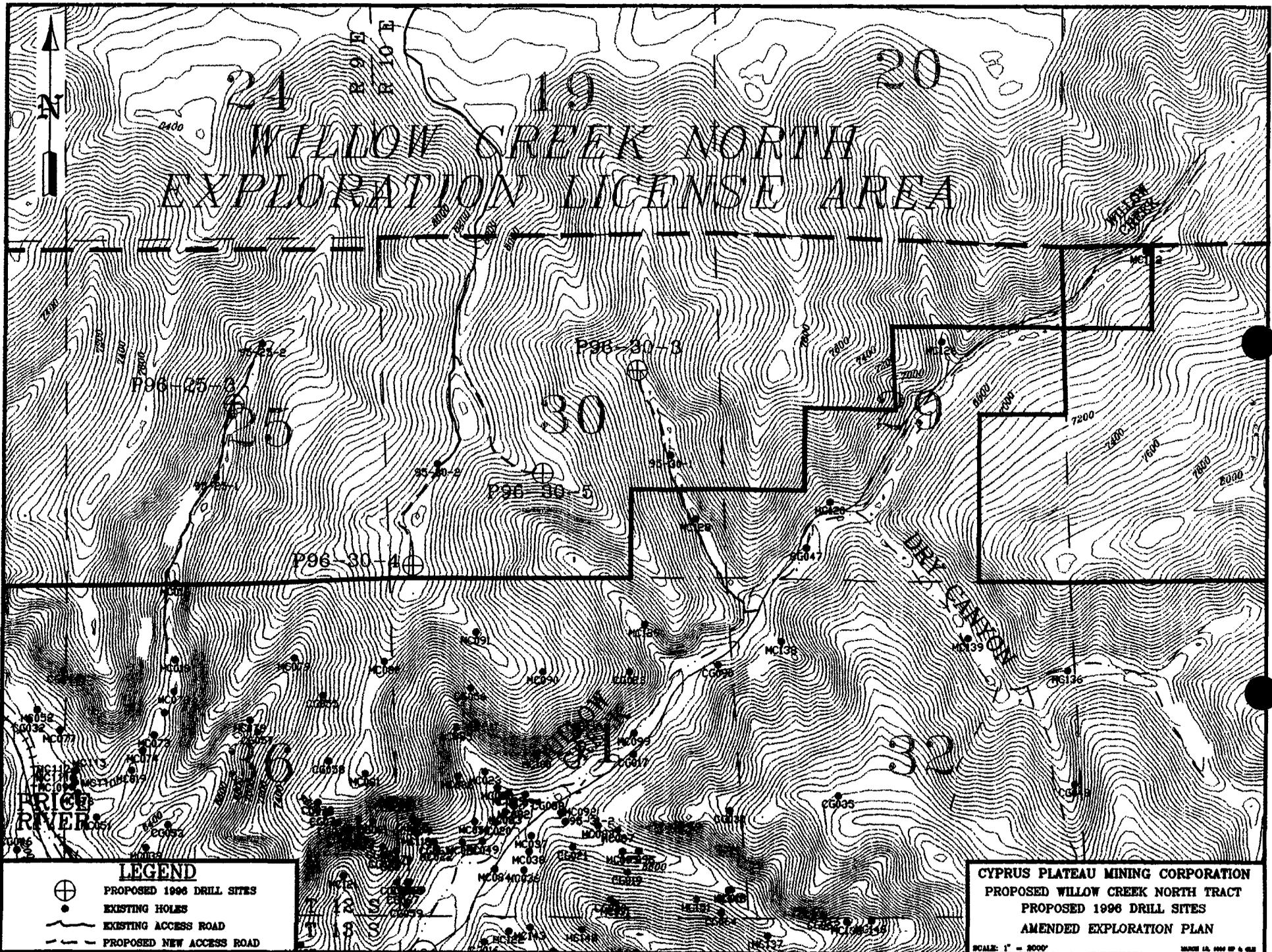
# Maps



**LEGEND**

- ⊕ PROPOSED 1996 DRILL SITES
- EXISTING HOLES
- EXISTING ACCESS ROAD
- - - PROPOSED NEW ACCESS ROAD

CYPRUS PLATEAU MINING CORPORATION  
 PROPOSED WILLOW CREEK NORTH TRACT  
 PROPOSED 1996 DRILL SITES  
 AMENDED EXPLORATION PLAN



**LEGEND**

- ⊕ PROPOSED 1996 DRILL SITES
- EXISTING HOLES
- EXISTING ACCESS ROAD
- - - PROPOSED NEW ACCESS ROAD

CYPRUS PLATEAU MINING CORPORATION  
 PROPOSED WILLOW CREEK NORTH TRACT  
 PROPOSED 1996 DRILL SITES  
 AMENDED EXPLORATION PLAN

SCALE: 1" = 2000'

MARCH 12, 1996 BY G. G. H.