

**CYPRUS PLATEAU  
MINING CORPORATION**

A Cyprus Amax Company

Cyprus Plateau Mining Corporation  
Post Office Drawer PMC  
Price, Utah 84501  
(801) 637-2875

February 13, 1998

Pete Hess  
Utah Division of Oil, Gas and Mining  
451 East 400 North  
CEU Box 169  
Price, Utah 84501**RE: Notice of Intent to Conduct Minor Coal Exploration, Revision to Exploration Permit Application ACT/007/038-97G, Cyprus Plateau Mining Corporation, Willow Creek Mine, Carbon County, Utah**

Dear Mr. Hess:

Cyprus Plateau Mining Corporation (CPMC) intends on drilling coal exploration hole P98-29-2 adjacent to an existing hole (MC-120) drilled in the 1970's, and approximately 300 feet down the road from P97-29-1. Access and siting of drill hole P98-29-2 is already in-place due to prior drilling activities in the vicinity. The drill rig will use the existing pad constructed for MC-120 and access this site using the access road to MC-120, therefore no additional surface disturbance is expected.

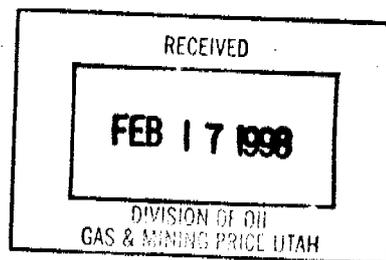
I have revised the text using the redline strikeout format which should make the review process somewhat easier. This approach was recommended by Mr Joe Helfrich during a meeting that took place at the PFO on February 10, 1998. He said that this approach would be the fastest and cleanest, whereby Division approval could be expected in a timely fashion. Approval would be greatly appreciated within the week, since the drillers will be completed with an existing hole by then. I am, also, only including an amended Figure 1 Map (Exploration Permit Application Location Map), since it is the only Map affected by this revision.

It is my understanding, after speaking with Mr. Wayne Western, that additional bonding for this hole would not be required, because it would be covered under the Division's 5 percent rule. I have further discussed this in the revision document.

If the Division needs additional information or has any questions, please do not hesitate to contact me at (435) 472-4741.

Sincerely,

Handwritten signature of Johnny Pappas.

Johnny Pappas  
Sr. Environmental EngineerFile: WCENV 2.5.2.9  
Chrono: JP980208.LTR

# APPLICATION FOR PERMIT PROCESSING

Permit Change  New Permit  Renewal  Transfer  Exploration  Bond Release

Permit Number: ACT/007/038

Title of Proposal: Revision to Exploration Permit Application ACT/007/038-97G to allow drilling of coal exploration hole P98-29-2.

Mine: Willow Creek Mine

Permittee: Cyprus Plateau Mining Corp.

Description, include reason for application and timing required to implement:

Geologic conditions encountered in-mine necessitate further exploratory drilling

Instructions: If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation specialist.

- Yes  No 1. Change in the size of the Permit Area? \_\_\_\_\_ acres Disturbed Area? \_\_\_\_\_ acres  increase  decrease.
- Yes  No 2. Is the application submitted as a result of a Division Order? DO # \_\_\_\_\_
- Yes  No 3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes  No 4. Does application include operations in hydrologic basins other than as currently approved?
- Yes  No 5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes  No 6. Does the application require or include public notice/publication?
- Yes  No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes  No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes  No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_
- Yes  No 10. Is the application submitted as a result of other laws or regulations or policies? Explain: \_\_\_\_\_
- Yes  No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes  No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2?)
- Yes  No 13. Does the application require or include collection and reporting of any baseline information?
- Yes  No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes  No 15. Does application require or include soil removal, storage or placement?
- Yes  No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes  No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes  No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes  No 19. Does the application require or include certified designs, maps, or calculations?
- Yes  No 20. Does the application require or include subsidence control or monitoring?
- Yes  No 21. Have reclamation costs for bonding been provided for?
- Yes  No 22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes  No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Attach 5 complete copies of the application.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein. (R645-301-123)

*Johnny Parks* - Johnny Parks - Sr. Env. Engineer - Feb 13, 98  
Signed - Name - Position - Date

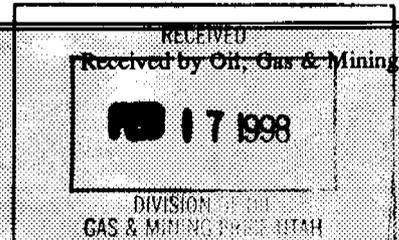
Subscribed and sworn to before me this 13 day of Feb., 1998.

*Kimberly Coleman*  
Notary Public



KIMBERLY COLEMAN  
NOTARY PUBLIC - STATE OF UTAH  
141 SOUTH 500 EAST  
PRICE, UTAH 84501  
COMM # 2-24-2001

My Commission Expires: Feb 24, 2001  
Attest: STATE OF UTAH COUNTY OF Carbon



ASSIGNED TRACKING NUMBER  
*9767*



**NOTICE OF INTENT TO CONDUCT  
MINOR COAL EXPLORATION  
Willow Creek Mine**

**Holes B354, B363, B11, B12, B311, B312, Crandall Canyon Shaft opening, and  
P97-29-1, and P98-29-2**

**Cyprus Plateau Mining Corporation**

**September 22, 1997  
(Revised October 20, 1997)  
(Revised February 12, 1998)**

This Notice of Intention to Conduct Minor Coal Exploration has been prepared by Cyprus Plateau Mining Corporation (a Delaware corporation) and submitted to the Utah State Division of Oil, Gas, and Mining for approval of a Minor Coal Exploration Permit to drill, survey and install 6 ground water monitoring wells, reopening the Crandall Canyon return air shaft to determine water depth, and drill coal exploration hole to investigate geology and hydrology. An additional coal exploration hole (P98-29-2) will be drilled adjacent to P97-29-1 to investigate the geology. The locations of the holes/wells and the Crandall shaft are shown on the attached Figure 1, Location Map. Detailed maps of the hole locations can be found on Figures 2 - 6.

Format of this application is:

Each regulation for which there is a response has been underlined.

Each regulation which apparently does not apply to coal exploration is presented in smaller type, and is not followed by a response or underlined.

Each response is left justified.

Report is completed in WordPerfect Win 6.1.

#### **R645-200. Coal Exploration: Introduction.**

##### **R645-200-100. Scope.**

122. Minor Coal Exploration. Coal exploration during which 250 tons or less of coal will be removed will require Division review of a Notice of Intention to Conduct Minor Coal Exploration under the requirements of R645-201-200.

This application qualifies as minor coal exploration because less than 250 tons of coal will be removed.

##### **R645-200-200. Responsibilities**

210. It is the responsibility of any person seeking to conduct coal exploration under the State Program to comply with the requirements of R645-200 through R645-203.

It is the intent of Cyprus Plateau Mining Corporation to comply with the coal exploration rules of the Utah State Division of Oil Gas and Mining (R645-200 through R645-203).

#### **R645-201. Coal Exploration: Requirements for Exploration Approval.**

##### **R645-201-200. Notices of Intention to Conduct Minor Coal Exploration.**

R645-201-210. Notices of Intention to Conduct Minor Coal Exploration when 250 tons or less of coal will be removed will require Division review prior to conducting exploration.

Cyprus Plateau Mining Corporation and its agents will not proceed without receiving written approval of this permit application.

R645-201-220. Notices of Intention to Conduct Minor Coal Exploration will include:

221. The name, address and telephone number of the applicant seeking to explore:

Cyprus Plateau Mining Corporation  
P.O. Drawer 7007  
Price, Utah 84501-7007  
(435) 472-0475

222. The name, address and telephone number of the applicant's representative who will be present at, and responsible for conducting the exploration operations:

Johnny Pappas  
Cyprus Plateau Mining Corp.  
P.O. Drawer 7007  
Price, UT 84501-7007  
(435) 472-4741  
(435) 472-0475

223. A narrative and map describing the exploration area and indicating where exploration will occur:

**Narrative description of the proposed exploration area.**

The exploration holes/ground water monitoring wells are proposed to investigate coal depths, stratigraphy, ground water depth and water quality in conjunction with a revised Probable Hydrologic Consequences determination (PHC). The water encounter experienced in July, 1997 resulted in water that was not identified during the initial PHC. Mayo & Associates, LLC and Hansen, Allen & Luce, Inc. have been retained to assist in investigating the occurrence of water, sources of ground water, direction of flow, age, use, and disposal options. To revise the PHC additional information is needed from drill holes/monitoring wells, and from the Crandall Canyon shaft.

**Hole Descriptions:**

<i>Hole Number</i>	<i>Description</i>	<i>Purpose</i>
B354	Exploration hole/ground water monitoring well into old mine workings	Geology/hydrology
B363	Exploration hole/ground water monitoring well into old mine workings	Geology/hydrology
Crandall Shaft B311	Drill 8" dia. hole in shaft cap to monitor water Exploration hole/ground water monitoring well into old mine workings	Hydrology Geology/hydrology
B312	Exploration hole/ground water monitoring well into old mine workings	Geology/hydrology
P97-29-1	Exploration hole/ground water level	Geology/hydrology
<del>P98-29-2</del>	<del>Exploration hole/ground water level/thickness</del>	<del>Geology/Hydrology</del>
B11	Shallow ground water level, flow direction & quality	Geology/hydrology
B12	Shallow ground water level, flow direction & quality	Geology/hydrology

Refer to Figures 1 through 6 for detailed maps of the drill sites.

**Legal Land Description.**

Legal description of the area of interest for this Notice of Intent to Conduct Minor Coal Exploration is as follows:

*Drill Hole/Monitoring Well Locations*

<i>No.</i>	<i>Location</i>	<i>Land Ownership</i>
<b>Township 12 South, Range 9 East</b>		
B354	Section 35: SE $\frac{1}{4}$ NE $\frac{1}{4}$	West side of highway Fee
B363	Section 36 SW $\frac{1}{4}$ NW $\frac{1}{4}$	Barn Canyon Fee
Crandall Shaft	Section 28: SW $\frac{1}{4}$ SE $\frac{1}{4}$	Crandall Canyon Fee
<b>Township 12 South, Range 10 East</b>		
B311	Section 31: SW $\frac{1}{4}$ NW $\frac{1}{4}$	In-Mine Fee
B312	Section 31: SW $\frac{1}{4}$ NE $\frac{1}{4}$	In-Mine Fee
P97-29-1	Section 29: SE $\frac{1}{4}$ SW $\frac{1}{4}$	Willow Creek Canyon Fee
<b>Township 13<del>2</del> South, Range 9<del>10</del> East</b>		
<del>P98-29-2</del>	<del>Section 29: SE<math>\frac{1}{4}</math>SW<math>\frac{1}{4}</math></del>	<del>Willow Creek Canyon</del>
<b>Township 12 South, Range 10 East</b>		
B11	Section 1: SW $\frac{1}{4}$ NE $\frac{1}{4}$	Willow Creek Canyon Fee
B12	Section: 1 NE $\frac{1}{4}$ NE $\frac{1}{4}$	Willow Creek Canyon Fee

See Regional ownership Map 1 in the Willow Creek Mine MRP.

**224. A statement of the period of intended exploration; and**

It is intended that exploration will commence in late September, or as soon as written approval of this application is received by Cyprus Plateau Mining Corporation, and proceed for approximately six weeks at the sites. Reclamation activities may extend beyond the active exploration (drilling) phase but will be completed in the 1997 season. Drill Hole P98-29-2 will be drilled during the later part of February or first part of March 1998. It will take about one to two weeks to complete the hole. Reclamation of the site will be completed in the Spring of 1998.

**225. A description of the method of exploration to be used, the amount of coal to be removed and the practices that will be followed to protect the area from adverse impacts of the exploration activities and to reclaim the area in accordance with the applicable requirements of R645-202.**

### **Method of Exploration**

Exploration drilling may involve a combination of rotary drilling (or full-hole diamond plug drilling), or continuous wireline coring. Surface casings may be required to protect the well pipes as necessary. PVC or steel well pipes will be set at all holes except Crandall Canyon shaft, and P97-29-1. Surface seals will be placed according to the Utah State Engineer's requirements to prevent intermingling of ground waters with surface water.

All ground water monitoring wells will be permitted through the Utah State Engineer, and will be completed under the direction of a certified well driller.

The drilling equipment required for the drill sites will be a truck or trailer-mounted wire line drilling rig (Longyear 44 or LF-70), truck mounted top drive air rig; a water truck/pipe trailer, a power pack with lights, mud pump and tub, and possibly a parts car. Equipment used to clear the drill pads for holes B354, B363, and P97-29-1 will include but not be limited to: a D-8 or similar track type dozer, a rubber tired backhoe or a crawler type backhoe. Drill Hole P98-29-2 will be installed on the old MC-120 drill hole site, drilled in the 1970's and used as a staging area for drill hole P97-29-1, therefore not creating any additional disturbance. The Crandall Canyon shaft cap will be accessed using the existing permitted roadways. The shaft cap will be penetrated using a small concrete cutting machine weighing about 70 pounds to prevent collapse of the cap. Concrete cutting will be done using a round hole saw attached to the cutting machine. A dam will be constructed using sand bags, and the dam will be flooded with water or water mud mix to prevent sparks from igniting possible methane gas accumulations inside the cap. This project will be done in conjunction with MSHA approvals. Mehtanometers will be used to detect gas at the edges of the cap, and during concrete cutting operations. Final sealing of the hole in the cap will be done according to the MSHA permit, and DOGM requirements. We plan to seal the hole by using a basket devise inside the cap bottom and pouring a concrete plug in the hole. Site B11 is located on previously disturbed land west of the CPMC field office adjacent to Highway 191. Site B12 will be located adjacent to the overland conveyor and the mine access road on previously disturbed land. Access by personnel to the drill sites will be by pick up trucks or similar vehicles.

### **Amount of Coal to be removed.**

Drill core or other strata is expected to be recovered during the program as necessary. The amount of coal removed will be less than 250 tons.

### **Practices that will be followed to protect the area from adverse impacts.**

The drill pads for holes B354, B363, and P97-29-1, and P98-29-2 will be kept as small and compact as practical to accommodate the drill rig and necessary equipment. The drill sites at holes B11, and B12 are located on previously disturbed areas, but will be kept as small and compact as practical. Mud pits, approximately 12 feet square by 8 feet deep, will contain the drilling medium, sediment produced from drilling, and all effluent drilling materials; preventing them from contaminating the surrounding surface water and ground water (see Figure "Generalized Detail of Proposed Drill Site" in the appendix). Site drainage will be controlled by berms, bales, and/or silt fencing. If air drill rigs are used no mud pits will be necessary. In-mine holes will be completed with drill rigs and equipment meeting MSHA requirements.

### **R645-202. Coal Exploration: Compliance Duties.**

#### **R645-202-100. Required Documents.**

Each person who conducts coal exploration which substantially disturbs the natural land surface will while in the exploration area, have available a copy of the Notice of Intention to Conduct Minor Coal Exploration or Approved Major Coal Exploration Permit for review by an authorized representative of the Division upon request.

Copies of the approved Notice of Intention to Conduct Minor Coal Exploration will be distributed to the Drillers, Geologists, and any other agents of the company, and they will be available on-site for review by an authorized representative of the Division upon request.

#### **R645-202-200. Performance Standards.**

210. All coal exploration and reclamation operations which substantially disturb the natural land surface or which remove more than 250 tons of coal will be conducted in accordance with the coal exploration requirements of the State Program, and any conditions on approval for exploration and reclamation imposed by the Division.

Core samples are expected to be recovered during the program as necessary and the exploration activities will not substantially disturb the natural land surface. However, Cyprus Plateau Mining Corporation will reclaim the road to holes B354, and P97-29-1, and P98-29-2 by backfilling cuts, removing fills and by obliterating the roads and seeding the area. No new roads are required for holes B363, Crandall Canyon shaft, B11, and B12. The drill pads will be reclaimed by backfilling

the mud pits, redistributing any soils moved during construction activities, scarifying and seeding. Any minor drainages affected by removing vegetation and construction activities will be reshaped. The seed mix to be used is the permanent seed mixture (upland) as shown on table 5.3-2, page 5.3-7, volume 3 of the Willow Creek Mining and Reclamation Permit.

220. Any person who conducts any coal exploration in violation of the State Program will be subject to the provisions of 40-10-20 of the Act and the applicable inspection and enforcement provisions of the R645 Rules.

Cyprus Plateau Mining Corporation will not conduct coal exploration in violation of the State Program.

230. Operational Standards.

231. Habitats of unique or unusually high value for fish, wildlife, and other related environmental values and critical habitats of threatened or endangered species identified pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) Will not be disturbed during coal exploration.

#### **Threatened or Endangered Species.**

There are no known threatened or endangered species within the designated area of exploration.

#### **Quoting from the Willow Creek MRP,**

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 and discussions with local botanists of both the BLM and USDA-Forest Service. The original 1981 Price River Coal Company Vegetation Inventory was reviewed, and reconnaissance level field surveys were also completed. 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 occidentale var. canone. 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 mine 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 (Federal Lease UTU-73975) or the planned Willow Creek facility's 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)  
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 game bird, common)  
Ruffed Grouse (protected as a game bird, common)  
Sage Grouse (protected as a game bird, common)  
California Quail (protected as a game bird, common)  
Gambel's Quail (protected as a game bird, common)  
Chukar (protected as a game bird, common)  
Great Blue Heron (protected, abundance unknown)  
Various species of geese, ducks, teal scalps, mergansers, and widgeons (essentially all are protected as game birds and most show an abundance designation of either common, summer resident, or transient).

A raptor inventory was conducted in the spring of 1997 and no active nest sites were found. A Goshawk inventory was conducted June 1996 in the general areas by E.I.S. This inventory was conducted in conjunction with Environmental Assessment No. UT-066-97-24, Environmental Assessment for dba 138 kV Carbon-Spanish Fork Number 2 Transmission Line re-route Right-of-Way application UTU-74309, May 1997. No Goshawks were observed. Since Goshawk nesting activity was not documented and the nesting season would be over for 1997, it is highly unlikely that any Goshawks are present in the exploration area.

The Price River and Willow Creek are the only perennial streams or bodies of water capable of supporting fish within or near the exploration area. Access to the drill site will not cross or enter the waters of Willow Creek. Drilling water will be picked up from the Willow Creek portal water facilities for the project. Less than 10,000 gallons of water per hole are expected to be used

during the project, or from Willow Creek under permit from the Utah 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.

Since all of the drill sites are very near major highways, and active mining areas wildlife are either not present or have adjusted to the activity and there will be no disturbance to them.

232. All roads or other transportation facilities used for coal exploration will comply with the applicable provisions of R645-301-358, R645-301-512.250, R645-301-526.200, R645-301-527.100, R645-301-527.230, R645-301-534.100 through R645-301-534.300, R645-301-742.420, R645-301-752.200, and R645-301-762.

Access to drill site B354 will be made by making a short 80 cut in the shoulder of Highway 50/6 and clearing rocks from the old highway grade for approximately 150 feet to the drill site. The road will be a single two track road. Access to drill site B363 will be on an existing road in Barn Canyon, no new disturbance will be required; this site can be seen on Figure 3. Access to the Crandall Canyon shaft site will be on the existing permitted road and on the permitted operations area for the shaft site; no new disturbance will be required; this site can be seen on Figure 4. Access to drill site P97-29-1 will be by reopening a drill road originally constructed in the 1970's to drill exploration hole MC-120, and then constructing an extension of this road for approximately 300 feet to the drill site; this site can be seen on Figure 5. Access to drill site P98-29-2 will be via access used for drilling of old drill hole MC-120 which was reopened for drill hole P97-29-1. Access to holes B11 and B12 will be on currently permitted land in the Willow Creek operations area as shown on Figure 6.

Only minor drainages are crossed by access roads as shown on the attached figures. Silt fencing will be used in small drainages on the lower side of the roads to prevent road drainage sediment from entering Willow Creek, and the Price River. These silt fences will be located in the field during road construction, and will remain in place until reclamation is complete and vegetation is reestablished. No culverts are anticipated since major drainages are not crossed by the roads.

R645-301-358. Protection of Fish, Wildlife, and Related Environmental Values. The operator will, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts on fish, wildlife, and related environmental values and will achieve enhancement of such resources where practicable.

Cyprus Plateau Mining Corporation will to the extent possible, minimize disturbances and adverse impacts to fish, wildlife, and related environmental values. See response to R645-202-231 above.

R645-301-512.250 Primary Roads. The professional engineer will certify the design and construction or reconstruction of primary roads as meeting the requirements of R645-301-534.200 and R645-301-742.420.

Primary roads will not be constructed during this project per definition in R645-301-527.120-123.

R645-301-526.200. The plan must classify each road.

The access roads to be used are pre-existing except for short roads to sites B354, and P97-29-1 as shown on Figures 2, and 5.

R645-301-527.230. A maintenance plan describing how roads will be maintained throughout their life to meet the design standards throughout their use.

The roads will be graded prior to and during the exploration activities as needed. The roads will also be watered if needed to control dust caused by travel.

R645-301-534.100. Roads will be located, designed, constructed, reconstructed, used, maintained, and reclaimed so as to:

534.110. Prevent or control damage to public or private property;

Maintenance of the access roads will be minor. The roads are located on land owned by Cyprus Plateau Mining Corporation. No private property or public lands are involved in this exploration program except for a short section of road on UDOT property at hole B354.

534.120. Use non-acid-forming or non toxic-forming substances in road surfacing;

The roads will not be surfaced.

534.130. Have, at a minimum, a static safety factor of 1.3 for all embankments.

The existing roads, including that for P98-29-2, have been in place for many years, so new construction would not be needed. The temporary short access roads to sites B354, and P97-29-1 will be in cut and will be stable for the short intended time of use.

534.140. Have a schedule and plan to remove and reclaim each road that would not be retained under an approved postmining land use.

The access roads to sites B354, and P97-29-1, and P98-29-2 will be reclaimed during the 1997 fall season. The pre-existing drill road to old drill hole MC-120 and P98-29-2 will be reclaimed in a similar fashion as the access road to P97-29-1 to the pre-existing condition before our project. Reclamation of the roads will consist of obliterating any cuts, scarifying the road surface on pre-existing roads and seeding. The silt fences will remain in place until reclamation is complete and vegetation has been reestablished.

534.150. Control or prevent erosion, siltation and the air pollution attendant to erosion by vegetating or otherwise stabilizing all exposed surfaces in accordance with current, prudent engineering practices.

Erosion control measures will be taken, including diverting overland flows around the roads and drill pads where necessary, constructing berms, installing silt fences, and other measures as required.

534.200. To ensure environmental protection and safety appropriate for their planned duration and use, including consideration of the type and size of equipment used, the design and reconstruction of roads will incorporate appropriate limits for grade, width, surface materials, and any necessary design criteria established by the Division.

The existing roads are sufficient for mobilization of drill and construction equipment. Existing roads are generally less than 15 feet wide and composed of compacted sands and gravel. The existing road to site B363 will remain after drilling. As necessary, berms will be used to divert flows that would cause erosion or other problems.

R645-202-233. Topsoil will be separately removed, stored, and redistributed on areas disturbed by coal exploration activities as necessary to assure successful revegetation or as required by the Division.

All existing roads exist or will be located on disturbed areas except the new road extension at site P97-29-1. It is impractical to salvage topsoil at site P97-29-1, and it would create additional disturbance to salvage topsoil separately. Therefore, the road will be made by sidecast where the soils will be readily available for reclamation. Since the roads and drill pads at sites B354, and B363, and P98-29-2 are on pre-existing disturbed areas no topsoil was salvaged, however, CPMC will to the extent possible salvage soils that are valuable and usable as topsoil substitutes for reclamation. Drill sites B11, B12 are on existing disturbed areas associated with the Willow Creek Mine where the topsoil has been salvaged as addressed in the Willow Creek MRP. Based on current vegetative cover, the roads and pads should adequately revegetate after our exploration project.

R645-202-234. Diversions of overland flows and ephemeral, perennial, or intermittent streams will be made in accordance with R645-301-742.300.

It is anticipated that no major diversions will be necessary for the duration of this project. Minor diversions may be necessary to control erosion or divert flows away from the roads or drill pads. If it becomes necessary, diversions of overland flows will be made in accordance with R645-301-742.300. Water bars, ditches and/or culverts will be used if needed to control overland flow.

R645-202-235. Coal exploration will be conducted in a manner which minimizes disturbance of the prevailing hydrologic balance in accordance with R645-301-356.300 through R645-301-356.400, R645-301-512.240, R645-301-513.200, R645-301-514.300, R645-301-515.200, R645-301-533.100 through R645-301-533.600, R645-301-731.100 through R645-301-731.522, R645-301-731.800, R645-301-733.220, through R645-301-

733.240, R645-301-742.200 through R645-301-742.300, R645-301-743, and R645-301-763. The Division may specify additional measures which will be adopted by the person engaged in coal exploration.

- 356.300. Siltation structures will be maintained until removal is authorized by the Division and the disturbed area has been stabilized and revegetated. In no case will the structure be removed sooner than two years after the last augmented seeding.
- 356.400 When a siltation structure is removed, the land on which the siltation structure was located will be revegetated in accordance with the reclamation plan and R645-301-353 through R645-301-357.

Minor siltation structures such as silt fences, straw bales or berms will be used to control erosion after drilling is completed, if reclamation is delayed beyond the period immediately after drilling, (i.e. if adverse weather conditions prevent reclamation from taking place before the close of the drilling season) or if it is needed.

- 512.240. Impoundments. The professional engineer will use current, prudent, engineering practices and will be experienced in the design and construction of impoundments and certify the design of the impoundment according to R645-301-743.
- 513.200. Impoundments and sedimentation ponds meeting the size of other qualifying criteria of MSHA, 30 CFR 77.216 (a) will comply with the requirements of MSHA, 30 CFR 77.216 (see R645-301-533.600, R645-301-742.222, and R645-301-742.223).
- 514.300. Impoundments.
- 515.200 Impoundment Hazards. The permit application will incorporate a description of notification when potential impoundment hazards exist. The requirements for the description are: If any examination or inspection discloses that a potential hazard exists, the person who examined the impoundment will promptly inform the Division of the finding and of the emergency procedures formulated for public protection and remedial formulated for public protection and remedial action. If adequate procedures cannot be formulated or implemented, the Division will be notified immediately. The division will then notify the appropriate agencies that other emergency procedures are required to protect the public.
- 533.100. An impoundment meeting the size or other criteria of 30 CFR 77.216(a) or located where failure would be expected to cause loss of life or serious property damage will have a minimum static safety factor of 1.5 for a normal pool with steady state seepage saturation conditions and a seismic safety factor of at least 1.2. Impoundments not meeting the size or other criteria of 30 CFR 77.216(a), except

for coal mine waste impounding structure, and located where failure would not be expected to cause loss of life or serious property damage will have a minimum static safety factor of 1.3 for normal pool with steady state seepage saturation conditions or meet the requirements of R645-301-733.210.

533.200. Foundation for temporary and permanent impoundments must be designed so that:

533.210. Foundation and abutments for the impounding structure will be stable under all conditions of construction and operation of the impoundment. Sufficient foundation investigations and laboratory testing will be performed in order to determine the design requirements for foundation stability; and

533.220. All vegetative and organic materials will be removed and foundations excavated and prepared to resist failure. Cutoff trenches will be installed if necessary to ensure stability.

533.300. Slope protection will be provided to protect against surface erosion at the site and protect against sudden drawdown.

533.400. Faces of embankments and surrounding areas will be vegetated except that faces where water is impounded may be riprapped or otherwise stabilized in accordance with accepted design practices.

533.500. The vertical portion of any remaining highwall will be located far enough below the low-water line along the full extent of highwall to provide adequate safety and access for the proposed water users.

533.600. Impoundments meeting the criteria of MSHA, 30 CFR 77.216(a) will comply with the requirements of MSHA, 30 CFR 77.216 and R645-301-512.240, R645-301-514.300, R645-301-515.200, R645-301-533.100 through R645-301-533.600, R645-301-733.220 through R645-301-733.224, and R645-301-743. The plan required to be submitted to the District Manager of MSHA under 30 CFR 77.216 will also be submitted to the Division as part of the permit application.

Not applicable because impoundments, as managed under these regulations, will not be constructed for this exploration project.

731.100. Hydrologic-Balance Protection.

731.110. Groundwater Protection. In order to protect the hydrologic balance, coal mining and reclamation operations will be conducted according to the plan approved under R634-301-731 and the following:

- 731.111. Groundwater quality will be protected by handling earth materials and runoff in a manner that minimizes acidic, toxic or other harmful infiltration to groundwater systems and by managing excavations and other disturbances to prevent or control the discharge of pollutants into the groundwater;

Ground water quality will be protected by handling earth materials and runoff from the drilling activities in a manner that minimizes acidic, toxic, and other harmful materials; infiltration by impounding the drill water in an open air pit allowing maximum evaporation and thus, diminishing the chance of infiltrating into ground water systems. Drill hole P97-29-1 and P98-29-2 will be plugged from top to bottom by a licensed driller after exploration activities to prevent infiltration of surface water into the ground. Holes B354, B363, B11, B12, B311, and B312 will be completed as ground water monitoring wells and will be plugged after their use is over at either the end of mine life or when no longer needed.

- 731.112. For the purposes of Surface coal mining and reclamation activities ground water quantity will be protected by handling earth materials and runoff in a manner that will restore approximate premining recharge capacity of the reclaimed area as a whole, excluding coal mine waste disposal areas and fills, so as to allow the movement of water to the ground water system.

Not applicable because this exploration project will not include surface coal mining.

- 731.120. Surface Water Protection. In order to protect the hydrologic balance, coal mining and reclamation operations will be conducted according to the plan approved under R645-301-731 and the following:

- 731.121. Surface water quality will be protected by handling earth materials, ground water discharges and runoff in a manner that minimizes the formation of acidic or toxic drainage; prevents, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow outside the permit area; and, otherwise prevent water pollution. If drainage control, restabilization and revegetation of disturbed areas, diversion of runoff, mulching or other reclamation and remedial practices are not adequate to meet the requirements of R645-301-731.100 through R645-301-731.522, R645-301-731.800 and R645-301-751, the operator will use and maintain the necessary water treatment facilities or water quality controls; and

- 731.122. Surface water quantity and flow rates will be protected by handling earth materials and runoff approved under R645-301-731.

Surface water quality will be protected from acid forming runoff and surface water will be protected by capturing all drilling fluids in a mud pit where evaporation will decrease the volume of fluids and the balance will be contained in the pit and the very near surface strata. The mud

pits will be built in a manner that will ensure protection against pollution of surface water. Discussions of roads and drill pads runoff have been presented previously.

**731.200. Water Monitoring.**

**731.210. Ground Water Monitoring. Ground water monitoring will be conducted according to the plan approved under R645-301-731.200 and the following:**

The monitoring wells intended for holes B354, B363, B11, B12, B311, and B312 are to help identify ground water occurrence in old abandoned mines, and in the Willow Creek alluvium. The wells are necessary to address the Divisions' mandate to revise the Willow Creek Mine PHC. Monitoring of ground water in the wells will initially be done as the wells are completed. A formal PHC revision will be made and a permanent monitoring plan for the wells will be included.

**731.211.** The permit application will include a ground water monitoring plan based upon the PHC determination required under R645-301-728 and the analysis of all baseline hydrologic, geologic and other information in the permit application. The plan will provide for the monitoring of parameters that relate to the suitability of the ground water for current and approved postmining land uses and to the objectives for protection of the hydrologic balance set forth in R645-301-731. It will identify the quantity and quality parameters to be monitored, sampling frequency and site locations. It will describe how these data may be used to determine the impacts of the operation upon the hydrologic balance. At a minimum, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron, total manganese and water levels will be monitored;

**731.212.** Ground water will be monitored and data will be submitted at least every three months for each monitoring location. Monitoring submittals will include analytical results from each sample taken during the approved reporting period. When the analyses of any ground water sample indicates noncompliance with the permit conditions, then the operator will promptly notify the Division and immediately take the actions provided for in R645-300-145 and R645-301-731;

**731.213.** If an applicant can demonstrate by the use of the PHC determination and other available information that a particular water bearing stratum in the proposed permit and adjacent areas is not one which serves as an aquifer which significantly ensures the hydrologic balance within the cumulative impact area, then monitoring of that stratum may be waived by the Division;

**731.214.** Ground water monitoring will proceed through mining and continue during reclamation until bond release. Consistent with the procedures of R645-303-220 through R645-303-228 the Division may modify the monitoring requirements including the parameters covered and the sampling frequency if the operator

demonstrates, using the monitoring data obtained under R645-301-731.214 that:

- 713.214.1 The coal mining and reclamation operation has minimized disturbance to the prevailing hydrologic balance in the permit and adjacent areas and prevented material damage to the hydrologic balance outside the permit area; water quantity and quality are suitable to support approved postmining land uses and the surface coal mining and reclamation activity has protected or replaced the water rights of other users; or
- 713.214.2. Monitoring is no longer necessary to achieve the purposes set forth in the monitoring plan approved under R645-301-731.211.
- 731.215. Equipment, structures and other devices used in conjunction with monitoring the quality and quantity of ground water on-site and off-site will be properly installed, maintained and operated and will be removed by the operator when no longer needed.
- 713.220. Surface Water Monitoring. Surface water monitoring will be conducted according to the plan approved under R645-301-731.220 and the following:
- 731.221. The permit application will include a surface water monitoring plan based upon the PHC determination required under R645-301-728 and the analysis of all baseline hydrologic, geologic and other information in the permit application. The plan will provide for the monitoring of parameters that relate to the suitability of the surface water for current and approved postmining land uses and to set forth in R645-301-731 as well as the effluent limitations found in R645-301-751;
- 731.222. The plan will identify the surface water quantity and quality parameters to be monitored, sampling frequency and site locations. It will describe how these data may be used to determine the impacts of the operation upon the hydrologic balance:

Regulation's 731.210 through 731.222 are not applicable to this coal exploration application.

- 731.800. Water Rights and Replacement. Any person who conducts surface coal mining and reclamation activities will replace the water supply of an owner of interest in real property who obtains all or part of his or her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source, where the water supply has been adversely impacted by contamination, diminution, or interruption proximately resulting from the surface mining activities. Baseline hydrologic information required in R645-301-624.100 through R645-301-624.200, R645-301-625, R645-301-626, R645-301-723 through R645-301-724.300, R645-301-724.500, R645-301-725 through R645-301-731, and R645-

301-031.210 through R645-301-731.223 will be used to determine the extent of the impact of mining upon ground water and surface water.

Regulation 731.800 is not applicable to this coal exploration application.

742.200. Siltation Structures.

742.210. General Requirements.

742.211. Additional contributions of suspended solids and sediment to streamflow of runoff outside the permit area will be prevented to the extent possible using the best technology currently available.

742.212. Siltation structures for an are will be constructed before beginning any coal mining and reclamation operations in that area and, upon construction, will be certified by a qualified registered professional engineer to be constructed as designed and as approved in the reclamation plan.

742.213. Any siltation structures which impounds water will be designed, constructed and maintained in accordance with R645-301-512.240, R645-301-514.300, R645-301-515.200, R645-301-533.100 through R645-301-533.600, R645-301 through R645-301-733.224, and R645-301-743.

742.214. For the purposes of Underground coal mining and reclamation activities, any point-source discharge of water from underground workings to surface waters which does not meet the effluent limitations of R645-301-751 will be passed through siltation structure before leaving the permit area.

Construction of siltation structure has been discussed previously.

742.220. Sedimentation Ponds.

742.221. Sedimentation ponds, when used, will:

742.221.1. Be used individually or in series;

742.221.2. Be located as near a possible to the disturbed area and out off perennial streams unless approved by the Division; and

742.221.3. Be designed, constructed, and maintained to:

742.221.31. Provide adequate sediment storage volume;

- 742.221.32. Provide adequate detention time to allow the effluent from the ponds to meet Utah and federal effluent limitations;
- 742.221.33. Contain or treat the 10-year, 24-hour precipitation event ("design event") unless a lesser design event is approved by the Division based on terrain, climate, or other site-specific conditions and on a demonstration by the operator that the effluent limitations of R645-301-751 will be met;
- 742.221.34. Provide a nonclogging dewatering device adequate to maintain the detention time required under R645-301-742.221.32.
- 742.221.35. Minimize, to the extent possible, short circuiting;
- 742.221.36. Provide periodic sediment removal sufficient to maintain adequate volume for the design event;
- 742.221.37. Ensure against excessive settlement;
- 742.221.38. Be free of sod, large roots, frozen soil, and acid or toxic forming coal processing waste; and
- 742.221.39. Be compacted properly.
- 742.222. Sedimentation ponds meeting the size or other qualifying criteria of the MSHA, 30 CFR 77.216(a) will comply with all the requirements of that section, and will have a single spillway or principal and emergency spillways that in combination will safely pass a 100-year, 6-hour precipitation event or greater event as demonstrated to be necessary by the Division.
- 742.223. Sedimentation ponds not meeting the size or other qualifying criteria of the MSHA, 30 CFR 77.216(a) will provide a combination of principal and emergency spillways that will safely discharge a 25-year, 6-hour precipitation event or greater event as demonstrated to be needed by the division. Such ponds may use a single open channel spillway if the spillway is:
  - 742.223.1. Of nonerodible construction and designed to carry sustained flows; or
  - 742.223.2. Earth or grass lined and designed to carry short-term infrequent flows at non-erosive velocities where sustained flows are not expected.
- 742.224. In lieu of meeting the requirements of R645-301-742.223.1 and 742.223.2 the Division may approve a sedimentation pond that relies primarily on storage to control the runoff from the design precipitation event when it is demonstrated by

the operator and certified by a qualified registered professional engineer in accordance with R645-201-512.200 that the sedimentation pond will safely control the design precipitation event. The water will be removed from the pond in accordance with current, prudent, engineering practices and any Sediment pond so used will not be located where failure would be expected to cause loss of life or serious property damage.

742.225. An exception to the sediment pond location guidance in R645-301-742.224 may be allowed:

742.225.1. In the case of a sedimentation pond meeting the size or other criteria of 30 CFR 77.216(a), if the pond is designed to control the precipitation of the probable maximum precipitation of a 6 hour event or greater event if specified by the Division; or 30 CFR 816.46 (c) (2) (ii) (A))

742.225.2. In the case of a sedimentation pond not meeting the size or other criteria of 30 CFR 77.216 (a), if the pond is designed to control the precipitation of a 100-year 6-hour event or greater event if demonstrated to be needed by the Division.

742.230. Other Treatment Facilities.

742.231. Other treatment facilities will be designed to treat the 10-year, 24-hour precipitation event unless a lesser design event is approved by the Division based on terrain, climate, other site-specific conditions and a demonstration by the operator that the effluent limitations of R645-301-751 will be met.

742.232. Other treatment facilities will be designed in accordance with the applicable requirements of R645-30-1742.220.

742.240. Exemptions. Exemptions to the requirements of R645-301-742.200 and R645-301-763 may be granted if the disturbed drainage area within the total disturbed area is small and the operator demonstrates that siltation structures and alternate sediment control measures are not necessary for drainage from the disturbed areas to meet the Effluent limitations under R645-301-751 or the applicable Utah and federal water quality standards for the receiving waters.

Regulation's 742.200 through 7420 are not applicable to this coal exploration project.

742.300. Diversions.

Addressed previously.

763. Siltation Structures.

763.100. Siltation Structures will be maintained until removal is authorized by the Division and the disturbed area has been stabilized and revegetated. In no case will the structure be removed sooner than two years after the last augmented seeding.

763.200. When the siltation structure is removed, the land on which the siltation structure was located will be regarded and revegetated in accordance with the reclamation plan and R645-301-358, R645-301.356, and R645-301-357. Sedimentation ponds approved by the Division for retention as permanent impoundments may be exempted from this requirement.

Alternate sediment control measures would consist of using straw bails and silt fences as temporary siltation structures, and by using berms to divert water to siltation structures if needed.

R645-202-236. Acid- or toxic-forming materials will be handled and disposed of in accordance with R645-301-731.110, R645-301-731.300, and R645-301-553.260. The Division may specify additional measures which will be adopted by the person engaged in coal exploration.

Acid-forming or toxic-forming materials will not be used on this project. Drill cuttings will be contained and buried in the mud pits. If fresh core is collected, it will be taken off site. Also, see response to 731.110 above. Fuel spill contamination will be contained, collected and disposed of, off property, in an approved manner.

R645-202-240. Reclamation Standards.

R645-202-241. If excavations, artificially flat areas, or embankments are created during exploration, these areas will be returned to the approximate original contour promptly after such features are no longer needed for coal exploration.

R645-202-242. All areas disturbed by coal exploration activities will be revegetated in a manner that encourages prompt revegetation and recovery of a diverse, effective, and permanent vegetative cover. Revegetation will be accomplished in accordance with the following:

R645-202-242.100. All areas disturbed by coal exploration activities will be seeded or planted to the same seasonal variety native to the areas disturbed. If the land use of the exploration area is intensive agriculture, planting of the crops normally grown will meet the requirements of R645-202-242.100; and

R645-202-242.200. The vegetative cover will be capable of stabilizing the soil surface from erosion.

The exploration sites will have trash and debris removed and the mud pits will be backfilled upon completion of exploration activities. The drill pads will be returned to the approximate original contour, scarified, and re-seeded with the seed mix shown on Table 5.3-2 in the Willow Creek MRP. Existing roads will be returned to a condition equal to or better than their condition prior to commencement of the exploration activities. Seeding of the rehabilitated drill pads and access roads will be accomplished in the first season following completion of the exploration program.

R645-202-243. Each exploration hole, borehole, well, or other exposed underground opening created during exploration will be reclaimed in accordance with R645-301-529, R645-301-551, R645-301-631, R645-301-738, and R645-301-765.

Upon completion of the drill hole P97-29-1 and P98-29-2, and when all possible geologic, geophysical, and hydrologic information has been gathered, the hole will be cemented from bottom to the collar of the hole (total depth) by a licensed driller. This will be the last task that the drillers will perform before the drill equipment is moved from the pad. As discussed previously the other holes will be completed as ground water monitoring wells. Reclamation of roads and drill pads has been addressed previously.

R645-202-244. All facilities and equipment will be promptly removed from the exploration area when they are no longer needed for exploration, except for those facilities and equipment that the Division determines may remain to:

R645-202-244.100. Provide additional environmental data;

R645-202-244-200. Reduce or control the on-site and off-site effects of the exploration activities; or

R645-202-244-300. Facilitate future coal mining and reclamation operations by the person conducting the exploration.

All equipment will be promptly removed from the exploration area upon completion of drilling and reclamation will be conducted as described in response to 240-242.200 above.

## **Bonding**

~~Since the Willow Creek Mine reclamation bond includes double coverage of the preparation plant area we do not believe it is necessary at this time to revise the bond for this exploration plan. It is my understanding that the Division does not require bond revisions for cumulative activities that do not increase the existing bond by more than 5 percent. Therefore, the existing \$11,949,205.00 is sufficient to cover this exploration activity. Thus far, the only approved revision to the Willow Creek Mine Permit that would apply to the 5 percent rule is the \$49,537.00 for the Clean Coal Pile Expansion. The proposed activity will not add significantly to that already accrued against~~

the bond to where it exceeds the 5 percent rule. In order to exceed the 5 percent rule, \$597,460.00 of cumulative increases will have to be proposed and approved. We do not know at this time which exploration holes will be left as permanent monitoring wells; the PHC revision being made at this time will determine which holes will remain as monitoring wells. When application is made to revise the bond to eliminate the double coverage we will adjust the bond estimate to cover the monitoring wells that remain as permanent monitoring wells.