0026

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt, Governor
Ted Stewart, Executive Director
Lowell P. Braxton, Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

February 19, 1998

Johnny Pappas, Senior Environmental Engineer
AMAX Coal Company
P.O. Drawer PMC
Price, Utah 84501

Re: Revised Minor Coal Exploration Permit, Cyprus Plateau Mining Company, Willow Creek Mine, ACT/007/038-97G, File #3, Carbon County, Utah

Dear Mr. Pappas:

The above referenced amendment is hereby approved effective ~~February 19, 1998~~. A stamped approved incorporated copy will be mailed to you from our Price Field Office.

If you have any questions please call.

Sincerely,

Joseph C. Helfrich

Joseph C. Helfrich
Permit Supervisor

cc: Ranvir Singh, OSM
Richard Manus, BLM
Mark Page, Water Rights
Dave Arlotti, DEQ
Bill Bates, DWR
David T. Terry, SITLA
Price Field Office
O:\007038.WIL\FINAL\APPROVAL.G-1

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

976-1

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 be 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 some what 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,

Johnny Pappas
Sr. Environmental Engineer

File: WCENV 2.5.2.9
Chrono: JP980208.LTR

RECEIVED
FEB 17 1998
DIVISION OF OIL
GAS & MINING PRICE UTAH

INCORPORATED
EFFECTIVE
FEB 19 1998
976
UTAH DIVISION OIL, GAS AND MINING
PRICE FIELD OFFICE

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 neccessitate 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?

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FEB 17 1998
DIVISION OF OIL GAS & MINING PRICE UTAH

■ **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 Pappas - Johnny Pappas 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

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

KIMBERLY COLEMAN
NOTARY PUBLIC - STATE of UTAH
141 SOUTH 500 EAST
PRICE, UTAH 84501
COMM. EXP. 2-24-2001

INCORPORATED
Received by Oil, Gas & Mining
EFFECTIVE
FEB 19 1998

UTAH DIVISION OF OIL, GAS AND MINING
PRICE FIELD OFFICE

ASSIGNED TRACKING NUMBER
976

Application for Permit Processing
Detailed Schedule of Changes to the MRP

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

Permit Number: ACT/007/038

Mine: Willow Creek Mine

Permittee: Cyprus Plateau Mining Corp.

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. Include page, section and drawing numbers as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	☒ REPLACE	☐ REMOVE	Due to pagination changes, it is necessary to replace entire document. Redline stikeout is provided to show what changes are applicable to revision.
☐ ADD	☒ REPLACE	☐ REMOVE	Figure 1 - Exploration Permit Application Location Map - Added new P98-29-2 Drill Hole
☐ ADD	☐ REPLACE	☐ REMOVE	
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Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340
(801) 359-3940 (Fax)

February 18, 1998

To: File

Thru: Joe Helfrich, Permit Supervisor-Compliance JH

From: Peter Hess, Reclamation Specialist III PH

RE: Revised Minor Coal Exploration Permit, Cyprus Plateau Mining Corporation, Willow Creek Mine, ACT/007/038-97G-1, Folder #2, Carbon County, Utah

SUMMARY:

Cyprus Plateau is requesting permit approval to drill a new exploration hole (P98-29-2) approximately 300 feet away from P97-29-1, which was drilled during the fall of 1997. Approval to drill P97-29-1 was granted by the Division on October 16, 1997.

Drill Hole P97-29-1 was accessed by utilizing a pre-SMCRA exploration road; (MC-120 was drilled by McCulloch Oil in the 1970's.) This same disturbance will be used to access P98-29-2; according to Mr. Johnny Pappas, the road was never reclaimed following the drilling of P97-29-1. The permittee is committed to do the reclamation of this road in the spring of 1998 using established and approved methods and mixes. The surface is fee ground, owned by Cyprus Western Coal Company, by lease from Blackhawk Coal Company.

TECHNICAL ANALYSIS:

Analysis:

This submittal, as received February 17, 1998, addresses the necessary requirements for a minor coal exploration approval as determined by the R645 regulations.

Findings:

The information provided in this minor coal exploration submittal is adequate to address the requirements of the R645 regulations.

CONCLUSION AND RECOMMENDATION:

It is recommended that this revision to ACT/007/038-97G-1 be approved so that Cyprus Plateau can proceed with the gathering of this vital geologic information.

sd

PERMIT TRACKING FORM

☒ Permit Amendment(INS) ☒ Exploration Permit(INS) ☐ N.O.V. (INS) ☐ D.O. ☐ Permit Transfer ☐ Incidental Boundary Change
☐ Permit Midterm (MT) ☐ Permit Renewal (PR) ☐ New Permit ☐ Significant Revision (SR) ☐ Bond Release (BR)

DATE RECEIVED 2-17-98	By: hand delivered PHH (initial)	PERMIT NUMBER	ACT/007/038
Title of Proposal: Notice to Conduct Coal Exploration		PERMIT CHANGE #	976-1
Description: Minor Coal Exploration		PERMITTEE	Cyprus Plateau
# Copies Required 5	# Copies Received 5	MINE NAME	W. Flow Creek
☐ PERMIT CHANGE APPLICATION SENT TO SLC		DATE:	LETTER TO PERMITTEE:

	DATE DUE	DATE DONE	LETTER TO PERMITTEE:
☐: 15 DAY INITIAL RESPONSE TO PERMIT CHANGE APPLICATION OR INITIAL COMPLETENESS REVIEW	3/15/98	2/19/98	2/19/98
☐ Notice of Affidavit of Publication (If change is a Significant Revision, New Permit or Permit Transfer)	DATE DUE:	DATE DONE	PUBLIC COMMENT RECEIVED:

PRICE REVIEW TRACKING	REVIEW DUE	REVIEW DONE	SLC REVIEW TRACKING	REVIEW DUE	REVIEW DONE
☐ Lead ☒ Generalist	3/1/98	2/18	☐ Lead		
☐ Administrative			☐ Administrative		
☐ Land Use/AQ			☐ Land Use/AQ		
☐ Biology			☐ Biology		
☒ Engineering PHH		2/18	☐ Engineering		
☐ Geology			☐ Geology		
☐ Soils			☐ Soils		
☐ Hydrology			☐ Hydrology		

TA Review Due	Date:	Permittee Response Due ☐ Stipulation ☐ Condition ☐ No Requirements	Date:	DIVISION DECISION LETTER ☐ APPROVE ☐ DENY
TA Review Done	Date:	Response Received	Date:	Date:

COORDINATED REVIEWS	PHONE CONTACT	SENT	DUE	RECEIVED
☐ OSMRE				
☐ US Forest Service				
☐ BLM				
☐ US FWS				
☐ US NPS				
☐ UT SHPO				
☐ UT DEQ				
☐ UT Water Rights				
☐ UT Wildlife Resources				
☐ UT SITLA				

ADDITIONAL TRACKING	Date:
PUBLIC HEARING	
LETTER FROM COMPLIANCE SUPER.	
AVS COMPLETED	
APPROVAL EFFECTIVE DATE	
APPROVED COPY TO FILE	
APPROVED COPY TO PERMITTEE	
APPROVED COPY TO PFO/SLC	
APPROVED COPY TO AGENCIES	
CHIA MODIFIED	
UPDATE MASTER TA DONE/NEEDED	

PRICE FIELD OFFICE COMMENTS:

SLC OFFICE COMMENTS:

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
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February 19, 1998

Johnny Pappas, Senior Environmental Engineer
AMAX Coal Company
P.O. Drawer PMC
Price, Utah 84501

Re: Revised Minor Coal Exploration Permit, Cyprus Plateau Mining Company, Willow Creek Mine, ACT/007/038-97C, File #3, Carbon County, Utah

Dear Mr. Pappas:

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If you have any questions please call.

Sincerely,

Joseph C. Helfrich
Permit Supervisor

cc: Ranvir Singh, OSM
Richard Manus, BLM
Mark Page, Water Rights
Dave Ariotti, DEQ
Bill Bates, DWR
David T. Terry, SITLA
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February 18, 1998

To: File

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From: Peter Hess, Reclamation Specialist III PH

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TECHNICAL ANALYSIS:

Analysis:

This submittal, as received February 17, 1998, addresses the necessary requirements for a minor coal exploration approval as determined by the R645 regulations.

Findings:

The information provided in this minor coal exploration submittal is adequate to address the requirements of the R645 regulations.

CONCLUSION AND RECOMMENDATION:

It is recommended that this revision to ACT/007/038-97G-1 be approved so that Cyprus Plateau can proceed with the gathering of this vital geologic information.

sd

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)

C:\wpdocs\willow\plans\wcexp.pln

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 thi

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R645-200.

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? The road to P97-29-1 has been reclaimed? and will now be re-disturbed

in

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.

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 of 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

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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:

Hole Number	*Description*	*Purpose*
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	Drill 8" dia. hole in shaft cap to monitor water	Hydrology
B311	Exploration hole/ground water monitoring well into old mine workings	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
P98-29-2	Expolaration hole/ground water level/thickness	Geology/Hydrology
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

No.	*Location*			*Land Ownership*
	Township 12 South, Range 9 East			
B354	Section 35:	SE¼NE¼	West side of highway	Fee
B363	Section 36	SW¼NW¼	Barn Canyon	Fee
Crandall Shaft	Section 28:	SW¼SE¼	Crandall Canyon	Fee
	Township 12 South, Range 10 East			
B311	Section 31:	SW¼NW¼	In-Mine	Fee
B312	Section 31:	SW¼NE¼	In-Mine	Fee
P97-29-1	Section 29:	SE¼SW¼	Willow Creek Canyon	Fee
	Township 12 South, Range 10 East			
P98-29-2	Section 29:	SE1/4SW1/4	Willow Creek Canyon	Fee
B11	Section 1:	SW¼NE¼	Willow Creek Canyon	Fee
B12	Section:1	NE¼NE¼	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 of 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)
Swainsons'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 199~~7~~8 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 of 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 of 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 occurance 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;

713.214. 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, R645-301through 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

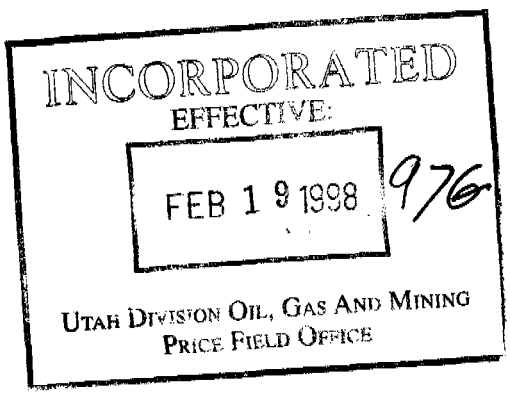
R645-202-244-300. Facilitate future coal mining and reclamation operations by the person conducting the exploration.

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 cummulative activities that do not increase the existing bond by more that 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 excceds the 5 percent rule. In order to exceed the 5 percent rule, $597,460.00 of cummulative 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.~~



Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340
(801) 359-3940 (Fax)

October 3, 1997

To: File

Thru: Joe Helfrich, Permit Supervisor, Compliance

From: Peter Hess, Reclamation Specialist III PHH

RE: Minor Exploration Permit Request, Cyprus Plateau Mining Corporation, Willow Creek Mine, ACT/007/038-97G, Folder #2, Carbon County, Utah

SUMMARY:

Cyprus Plateau is requesting permit approval to drill seven exploration boreholes and cut a one foot diameter hole in the shaft cap of the Crandall Canyon return air shaft for the purpose of monitoring ground water elevation. Of the seven boreholes, six will be retained for water monitoring purposes.

1) P97-29-1 is for obtaining geologic information only and will be plugged. It will be drilled by re-establishing a pre-SMCRA exploration road (built to drill hole MC-120) and then constructing an additional 300 feet of new roadway. Cyprus is committed to reclaiming this pad and roadway to its pre-drilling condition. Sediment control will be maintained until vegetation has been re-established. Cyprus Plateau is the surface owner.

2,3) Holes B-311 and B-312 will be drilled underground in the "D" seam workings into the Kenilworth Mine.

4,5) Holes B-11 and B-12 are to be drilled within the Mine's disturbed area boundary and disturbance should be minimal.

6) Hole B-363 is to be drilled in Barn Canyon where surface ownership is Cyprus Plateau.

7) Hole B-354 is to be located approximately 1,650 feet up Canyon of the Willow Creek rail car loadout about 85 feet off of Utah Highway 50-6. Although the hole itself is outside of the UDOT right of way, access to this location must be obtained by constructing a 14 foot wide road through the DOT road shoulder for a distance of 80 feet. The permittee must obtain approval from the UDOT in order to do this. Cyprus-Amax owns the surface.

Cyprus' proposal to drill the hole in the cap of the Crandall Canyon return air shaft has been modified to cutting a hole in the concrete/steel reinforced cap. An inspection conducted on 10/1/97 reveals that there is no vent cap for methane bleedoff of this shaft prior to any work being conducted. As far as I can determine, there is no design for this cap. The shaft was exhausting this day, (no methanometer was available to determine CH4 concentration) as determined by several cracks along the edge of the seal. The permittee must work out with MSHA what safety precautions will be implemented if they intend to follow through with this boring.

TECHNICAL ANALYSIS:

Analysis:

This submittal, as received on September 22, 1997, addresses the majority of the requirements of the R645 regulations for this minor coal exploration with the exception of reclamation bonding.

Findings:

Information provided in the proposed amendment for this minor coal exploration is felt to be adequate with the exception of bonding for the following holes; B-311, B-312, B-11, B-12, B-363, and P97-29-1.

Information provided in the proposed amendment for this minor coal exploration is not adequate to address the R645 regulations for minor coal exploration for the Crandall Canyon return air shaft cap boring and for hole B-354.

CONCLUSION AND RECOMMENDATION:

Cyprus must address any safety precautions which MSHA mandates prior to receiving DOGM approval to bore the hole in the Crandall Canyon return air shaft cap.

Cyprus must receive approval from the Utah DOT prior to receiving DOGM approval to cut the road within the DOT right-of-way to hole B-354.

Cyprus must address the requirements for reclamation bonding of the boreholes.

It is recommended that, upon completion of the bonding requirements for all boreholes that Cyprus be allowed to proceed with the exploration holes designated as P97-29-1, B-311, B-312, B-11, B-12, and B-363.

sd

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340
(801) 359-3940 (Fax)

February 18, 1998

To: File

Thru: Joe Helfrich, Permit Supervisor-Compliance

From: Peter Hess, Reclamation Specialist III PH

RE: Revised Minor Coal Exploration Permit, Cyprus Plateau Mining Corporation, Willow Creek Mine, ACT/007/038-97G-1, Folder #2, Carbon County, Utah

SUMMARY:

Cyprus Plateau is requesting permit approval to drill a new exploration hole (P98-29-2) approximately 300 feet away from P97-29-1, which was drilled during the fall of 1997. Approval to drill P97-29-1 was granted by the Division on October 16, 1997.

Drill Hole P97-29-1 was accessed by utilizing a pre-SMCRA exploration road; (MC-120 was drilled by McCulloch Oil in the 1970's.) This same disturbance will be used to access P98-29-2; according to Mr. Johnny Pappas, the road was never reclaimed following the drilling of P97-29-1. The permittee is committed to do the reclamation of this road in the spring of 1998 using established and approved methods and mixes. The surface is fee ground, owned by Cyprus Western Coal Company, by lease from Blackhawk Coal Company.

TECHNICAL ANALYSIS:

Analysis:

This submittal, as received February 17, 1998, addresses the necessary requirements for a minor coal exploration approval as determined by the R645 regulations.

Findings:

The information provided in this minor coal exploration submittal is adequate to address the requirements of the R645 regulations.

CONCLUSION AND RECOMMENDATION:

It is recommended that this revision to ACT/007/038-97G-1 be approved so that Cyprus Plateau can proceed with the gathering of this vital geologic information.

sd

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

October 17, 1997

Ben Grimes, Sr. Staff Project Engineer
Cyprus Plateau Mining
P.O. Drawer PMC
Price, Utah 84501

Re: Wells & Notice of Intent to Conduct Minor Coal Exploration, Cyprus Plateau Mining Corp., Willow Creek Mine, ACT/007/038-97G, File #2, Carbon County, Utah

Dear Mr. Grimes:

The referenced amendment is hereby approved effective October 16, 1997. A stamped approved incorporated copy is enclosed for insertion into your Mining and Reclamation plan. Once again thank you for the opportunity to discuss this proposal with our staff.

Sincerely,

Joseph C. Helfrich
Permit Supervisor

tat
Enclosure
cc: Ranvir Singh, OSM
Richard Manus, BLM
Mark Page, Water Rights, w/o
Dave Ariotti, DEQ, w/o
Bill Bates, DWR, w/o
David T. Terry, SITLA, w/o
Price Field Office
O:\007038.WIL\FINAL\APPROVAL.97G

Fax
Pete @ PFO

CYPRUS PLATEAU MINING CORPORATION
A Cyprus Amax Company

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

October 20, 1997

Mr. Peter Hess
Utah Department of Natural Resources
Division of Oil, Gas and Mining
451 East 400 North
CEU Box 169
Price, Utah 84501-2699

Dear Mr. Hess,

RE: EXPLORATION PERMIT APPLICATION ACT/007/038-97G REVISION

Attached is a revised copy of the text portion of the referenced application addressing details of cutting into the Crandall Canyon shaft cap and addressing bonding. In addition, copies of the UDOT permit to access well site B354, and monitoring well permit from the Utah State Engineer's office. Please note that the State Engineer's permit includes all six monitoring wells under one permit number.

Revised text is shown in redline format, text deleted is shown with strikeout. For your ease of review these revisions are on pages 4 and 20. No other changes were made, however the added text requires repagination of the text, therefore please replace the entire text. The maps included in the original application are still valid.

Please let me know if there is anything else we need to address.

Respectfully,

Ben Grimes
Sr. Staff Project Engineer

Attachments

File: WCENV 2.5.2.9
Chron: BG971008

ORIGINAL

UTAH DEPARTMENT OF TRANSPORTATION

PERMIT

T-226(6/97)
HIGHWAY RIGHT OF WAY
ENCROACHMENT
Region 4
District: Price

97-239-44
Date: 10/1/97

Application of: CYPRUS PLATEAU MINING **Phone:** 636-2227

By: BEN GRIMES **Title:** SR. STAFF PROJECT ENGR.

Address: PO BOX DRAWER 7007, PRICE UT 84501

is hereby granted, subject to UDOT's Regulations For The Accommodation of Utilities on Federal Aid and Non Federal-Aid Highway Right of Way, Regulations for the Control and Protection of State Highway Rights of Way, Standard Specifications for Road and Bridge Construction, Specifications for Excavation of State Highways, State Occupational Safety and Health Laws, Manual on Uniform Traffic Control Devices, Instructions to Flaggers, the approved plans, and any special limitations set forth herein, permission for the purpose of **MAKE A MINOR CUT IN WEST CUT SLOPE OF HWY 6 SHOULDER TO MAKE AN ACCESS ROAD TO MONITORING WELL SITE** within the right of way limits of Highway No. **6** Milepost No. **229.3** , in **CARBON** County, in the following locations: **APPRO. AT STATION 587+00. APPROX. 1.2 MILES NORTHWEST OF US-6 & 191 INTERSECTION. SEE ATTACHED DRAWINGS.**

Receipt of $20.00 permit fee is hereby acknowledged. The work permitted herewith shall commence **10/10/97** and shall be diligently prosecuted to completion. The work shall be completed and all disturbed surfaces or objects restored on or before **11/30/97**. In the event work is commenced under this permit and the permittee fails or refuses to complete the work, the Utah Department of Transportation may, at its election, fill in or otherwise correct any existing deficiencies at the expense of and subject to immediate payment by the permittee.

Permittee shall execute a bond in the minimum amount of **$0.00**, as determined by the Region Director/District Engineer, to insure faithful performance of the permittee's obligation. The bond shall remain in force for **three** years after completion of work.

Before work permitted herewith is commenced, the permittee shall notify Dale Stapley at 636-1402, permits officer, or **Dave Babcock 870-8772** , and commencement of said work is understood to indicate that the permittee will comply with all instructions and regulations of the Utah Department of Transportation (as listed above) with respect to performance of said work, and that he will properly control and warn the public of said work to prevent accident and shall indemnify and hold harmless the Utah Department of Transportation from all damages arising out of any and all operations performed under this Permit.

Permittee shall not perform any work on State Highway right of way beyond those areas of operations stipulated on this permit.

If permittee fails to comply with Utah Department of Transportation regulations, specifications, or instructions pertinent to this permit, the Region Director/District Engineer or his duly authorized representative, may by verbal order, suspend the work until the violation is corrected. If permittee fails or refuses to comply promptly, the Region Director/District Engineer or his authorized representative may issue a written order stopping all or any part of the work. When satisfactory corrective action is taken, an order permitting resumption of work may be issued.

Special Limitations: This agreement and/or permit is UDOT approval only. You are responsible to obtain clearances from railroads, private property owners, and the local jurisdiction that you are working within. Warning signs and traffic control required as per MUTCD. Flaggers required if moving traffic out of traffic lane. Check for other utilities in the area prior to excavation. If a suspected historic, archeological, or paleontological item or site is encounted, construction shall be immediately stoped and UDOT notified. Contractor responsible for repairing and/or restoring any portion of the roadway damaged during construction. ROADWAY TO BE SIGNED "PRIVATE - NO TRESPASSING". RESTORE FENCE UPON COMPLETION.

Sue Applegate
(Signature of Permittee)

Approved By: Dale Stapley
for (Region Director/District Engineer)

Maintenance Station No. 435 Dave Babcock 870-8772

Form T-223

UTAH DEPARTMENT OF TRANSPORTATION

Application for Right of Way Encroachment Permit

(WORK CANNOT BEGIN UNTIL PERMIT IS APPROVED)

Date 10-1, 1997

To: District Director
UTAH DEPARTMENT OF TRANSPORTATION

*(1) Application is hereby made by: CYPRUS PLATEAU MINING CORP.
*(2) Address: P.O. DRAWER 7007 Tel. No. 636-2227
*(3) for permission to do the following: MAKE A MINOR CUT IN WEST CUT SLOPE OF HIGHWAY 50/6 SHOULDER TO MAKE AN ACCESS ROAD TO A PROPOSED MONITORING WELL SITE. WELL SITE IS OUTSIDE OF HIGHWAY R-O-W ON PRIVATE PROPERTY HELD BY CYPRUS. TEMPORARY ACCESS ONLY
*(4) Location: APPROXIMATELY AT STATION 587+00. APPROX 1.2 MILES NORTH WEST OF HIGHWAY 50/6 AND 191 INTERSECTION. SEE DRAWINGS ATTACHED.

City NW OF HELPER County CARBON Highway No. 50/6
Milepost 229.3 in accordance with the attached plan *(5)

*(6) Construction will begin on or about OCT 10, 1997.
and will be completed on or before NOV 30, 1997.

New underground utility installations crossing highway must be placed by boring. If boring is impossible due to unusual circumstances such as soil conditions, existing utilities, etc., a request for an exception may be made to the District Director and the following information provided:

a. Type of pavement ______
b. Excavation will be ______ feet long by ______ feet wide and ______ feet deep.
c. A bond in the amount of $ ______ has been posted with ______ Tel. No. ______ to run for a term of three [3] years after completion of work to guarantee satisfactory performance.

If this permit is granted, we agree to comply with all conditions, restrictions and regulations contained in the UDOT Policy 08-87 "Accommodation of Utilities on Federal-Aid and Non Federal-Aid Highway Right of Way", and "Special Limitations" required by the District Director or his duly authorized representative.

CYPRUS PLATEAU MINING CORP
Owner

[signature]
Signature

SR STAFF PROJECT ENGINEER
Title

*Refer to Instructions on back

==

To be filled in by the District Director:
Permit _____ should _____ should not be granted.
Special Limitations ______

______
District Traffic Engineer

______
District Director

SP AR0069

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Robert L. Morgan
State Engineer

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RIGHTS

Southeastern Area
453 South Carbon Avenue
PO Box 718
Price, Utah 84501-0718
801-637-1303
801-637-7937 (Fax)

October 7, 1997

Cyprus Plateau Mining Corporation
Attn: Ben Grimes
P.O. Drawer PMC
Price, Utah 84501

Dear Mr. Grimes: Re: Monitor Well 97-91-001-M

Reference is made to your request to drill 6 monitor wells. The anticipated completion depths are to exceed the minimum regulated and reporting monitor well depth of 30 feet.

The specifications outlined in your monitor request dated October 6, 1997, meet the State Engineer's requirements, and permission is hereby granted to complete the well in accordance with those specifications and the following provisions:

1) Small diameter casing is to be used in the construction of the wells and no more water is to be diverted than is necessary to determine the quality of the ground water by obtaining representative samples as required by the project.
2) The wells must be drilled by a currently licensed Utah driller and must be drilled in a manner consistent with the recommended construction standards cited in the Utah State Administrative Rules for Well Drillers.
3) The enclosed Driller (Start) card must be given to the licensed driller for his submittal prior to commencing well construction. The second portion of the card is the Applicant Card. It is YOUR RESPONSIBILITY to sign and return upon final well completion.
4) If complete information is not available in the initial application, it is the APPLICANT'S RESPONSIBILITY to provide, upon completion, descriptive locations of the wells referenced by course and distance from established section corners, i.e. North 565 feet and West 1096 feet from the SE Corner of Section 35, T2S, R5W, SLB&M.
5) At such time as the wells are no longer utilized to monitor ground water, and the intent of the project is terminated, the wells must be temporarily or permanently abandoned in a manner consistent with the Administrative Rules.

This is your authorization to have a licensed Utah driller proceed with your monitoring well project. Note that the expiration date for the provisions is April 7, 1998.

Sincerely,

FOR Mark P. Page
Regional Engineer

DIVISION OF WATER RIGHTS
REQUEST FOR PROVISIONAL/MONITOR WELL CONSTRUCTION
(for wells deeper than 30 feet)

Well Type (check one): Provisional ( ) Monitor (X)

Applicants Name: CYPRUS PLATEAU MINING CORP.

Mailing Address: P.O. DRAWER PMC

PRICE, UT 84501

Contact Person: BEN GRIMES Phone: 636-2227

Proposed Start Date: Oct 15, 1997 Anticipated Completion Date: Nov 30, 1997

Well Drillers License No: 608 Proposed No. of Wells: 6

PROPOSED LOCATION OF WELLS: County: CARBON

NO./SO. DISTANCE (feet)	EAST/WEST DISTANCE (feet)	SECTION CORNER	SECTION	TOWNSHIP	RANGE	BASE	DIAMETER (inches)	DEPTH (feet)
S1700	W1600	NE	35	12S	9E	SL	3	800
S1600	E1600	NW	36	12S	9E	SL	3	600
S800	E100	N4	31	12S	10E	SL	3	85
S240	E450	NE	31	12S	10E	SL	3	85
S1450	W1320	NE	1	13S	9E	SL	3	150
S950	W500	NE	1	13S	9E	SL	3	150

Use back of form or additional paper if more room is needed

EXPLANATORY: SIX NEW GROUNDWATER MONITORING WELLS ARE NEEDED TO STUDY AND DETERMINE WATER OCCURANCE AND QUALITY IN THE WILLOW CREEK MINE AREA. TWO WELLS IN SECTION 1, T13S, R9E ARE SHALLOW ALLUVIAL WELLS; TWO WELLS IN SECTION 31, T12S, R10E ARE IN OLD MINED OUT AREAS; ONE WELL IN SECTION 36, T12S, R9E IS IN OLD MINED OUT AREA, AND ONE WELL IN SECTION 35, T12S, R9E IS IN OLD MINED OUT AREA.

Signature of Applicant

10-6-97
Date

FOR OFFICE USE ONLY

Date of Request: _____ *Approval Date:* _____

Approved by: _____ *Provisional/Monitor Well No.* _____

Water Right Number (if available): _____

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

Cyprus Plateau Mining Corporation

September 22, 1997
(Revised October 20, 1997)

C:\wpdocs\willow\plans\wcexp.pln

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 drilling one coal exploration hole to investigate geology and hydrology. 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 of 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
(801)637-2875

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

Ben Grimes
Cyprus Plateau Mining Corp.
P.O. Drawer 7007
Price, UT 84501-7007
(801) 636-2227
(801) 637-2875

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:

Hole Number	*Description*	*Purpose*
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	Drill 8" dia. hole in shaft cap to monitor water	Hydrology
B311	Exploration hole/ground water monitoring well into old mine workings	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
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

No.	*Location*			*Land Ownership*
	Township 12 South, Range 9 East			
B354	Section 35:	SE¼NE¼	West side of highway	Fee
B363	Section 36	SW¼NW¼	Barn Canyon	Fee
Crandall Shaft	Section 28:	SW¼SE¼	Crandall Canyon	Fee
	Township 12 South, Range 10 East			
B311	Section 31:	SW¼NW¼	In-Mine	Fee
B312	Section 31:	SW¼NE¼	In-Mine	Fee
P97-29-1	Section 29:	SE¼SW¼	Willow Creek Canyon	Fee
	Township 13 South, Range 9 East			
B11	Section 1:	SW¼NE¼	Willow Creek Canyon	Fee
B12	Section:1	NE¼NE¼	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.

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. The Crandall Canyon shaft cap will be accessed using the existing permitted roadways. ~~by placing a soil ramp up to the top of the shaft cap; the ramp will be approximately 4 feet high at the shaft and 20 feet long to ramp up to the cap~~. 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 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 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 of 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)
Swainsons'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 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 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 will be reclaimed during the 1997 fall season. The pre-existing drill road to old drill hole MC-120 will be reclaimed 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 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 of 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 will be plugged from top to bottom 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 of 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 occurance 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;

713.214. 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, R645-301through 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 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). 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. 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.

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340
(801) 359-3940 (Fax)

October 3, 1997

To: File

Thru: Joe Helfrich, Permit Supervisor, Compliance

From: Peter Hess, Reclamation Specialist III PH

RE: Minor Exploration Permit Request, Cyprus Plateau Mining Corporation, Willow Creek Mine, ACT/007/038-97G, Folder #2, Carbon County, Utah

SUMMARY:

Cyprus Plateau is requesting permit approval to drill seven exploration boreholes and cut a one foot diameter hole in the shaft cap of the Crandall Canyon return air shaft for the purpose of monitoring ground water elevation. Of the seven boreholes, six will be retained for water monitoring purposes.

1) P97-29-1 is for obtaining geologic information only and will be plugged. It will be drilled by re-establishing a pre-SMCRA exploration road (built to drill hole MC-120) and then constructing an additional 300 feet of new roadway. Cyprus is committed to reclaiming this pad and roadway to its pre-drilling condition. Sediment control will be maintained until vegetation has been re-established. Cyprus Plateau is the surface owner.

2,3) Holes B-311 and B-312 will be drilled underground in the "D" seam workings into the Kenilworth Mine.

4,5) Holes B-11 and B-12 are to be drilled within the Mine's disturbed area boundary and disturbance should be minimal.

6) Hole B-363 is to be drilled in Barn Canyon where surface ownership is Cyprus Plateau.

7) Hole B-354 is to be located approximately 1,650 feet up Canyon of the Willow Creek rail car loadout about 85 feet off of Utah Highway 50-6. Although the hole itself is outside of the UDOT right of way, access to this location must be obtained by constructing a 14 foot wide road through the DOT road shoulder for a distance of 80 feet. The permittee must obtain approval from the UDOT in order to do this. Cyprus-Amax owns the surface.

Cyprus' proposal to drill the hole in the cap of the Crandall Canyon return air shaft has been modified to cutting a hole in the concrete/steel reinforced cap. An inspection conducted on 10/1/97 reveals that there is no vent cap for methane bleedoff of this shaft prior to any work being conducted. As far as I can determine, there is no design for this cap. The shaft was exhausting this day, (no methanometer was available to determine CH4 concentration) as determined by several cracks along the edge of the seal. The permittee must work out with MSHA what safety precautions will be implemented if they intend to follow through with this boring.

TECHNICAL ANALYSIS:

Analysis:

This submittal, as received on September 22, 1997, addresses the majority of the requirements of the R645 regulations for this minor coal exploration with the exception of reclamation bonding.

Findings:

Information provided in the proposed amendment for this minor coal exploration is felt to be adequate with the exception of bonding for the following holes; B-311, B-312, B-11, B-12, B-363, and P97-29-1.

Information provided in the proposed amendment for this minor coal exploration is not adequate to address the R645 regulations for minor coal exploration for the Crandall Canyon return air shaft cap boring and for hole B-354.

CONCLUSION AND RECOMMENDATION:

Cyprus must address any safety precautions which MSHA mandates prior to receiving DOGM approval to bore the hole in the Crandall Canyon return air shaft cap.

Cyprus must receive approval from the Utah DOT prior to receiving DOGM approval to cut the road within the DOT right-of-way to hole B-354.

Cyprus must address the requirements for reclamation bonding of the boreholes.

It is recommended that, upon completion of the bonding requirements for all boreholes that Cyprus be allowed to proceed with the exploration holes designated as P97-29-1, B-311, B-312, B-11, B-12, and B-363.

sd

Need C1, C2 forms + go ahead from UDOT + MSHA tips (Crandall Cyn)

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

ACT/007/038 - 97G

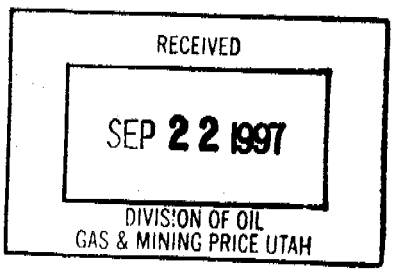
9-22-97

Darrow - Joe,
This is the submittal I spoke of. Bottom of Page 2 states that info obtained from these holes is necessary to revise the PHC. A revised PHC was part of the abatement requirements for NOV 97-46-5-1 which is due to have the DOGM review completed by 10/4. You & Joe discuss - Let me know
Pete

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

97 G



Cyprus Plateau Mining Corporation

September 22, 1997

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 drilling one coal exploration hole to investigate geology and hydrology. 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 of 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
(801)637-2875

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

Ben Grimes
Cyprus Plateau Mining Corp.
P.O. Drawer 7007
Price, UT 84501-7007
(801) 636-2227
(801) 637-2875

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:

Hole Number	*Description*	*Purpose*
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	Drill 8" dia. hole in shaft cap to monitor water	Hydrology
B311	Exploration hole/ground water monitoring well into old mine workings	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
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

No.	*Location*			*Land Ownership*
	Township 12 South, Range 9 East			
B354	Section 35:	SE¼NE¼	West side of highway	Fee
B363	Section 36	SW¼NW¼	Barn Canyon	Fee
Crandall Shaft	Section 28:	SW¼SE¼	Crandall Canyon	Fee
	Township 12 South, Range 10 East			
B311	Section 31:	SW¼NW¼	In-Mine	Fee
B312	Section 31:	SW¼NE¼	In-Mine	Fee
P97-29-1	Section 29:	SE¼SW¼	Willow Creek Canyon	Fee
	Township 13 South, Range 9 East			
B11	Section 1:	SW¼NE¼	Willow Creek Canyon	Fee
B12	Section:1	NE¼NE¼	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.

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. The Crandall Canyon shaft cap will be accessed by placing a soil ramp up to the top of the shaft cap; the ramp will be approximately 4 feet high at the shaft and 20 feet long to ramp up to the cap. 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 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 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 of 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)
Swainsons'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.

Utah DOT

Access to drill site B354 will be made by making a short 80 foot 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 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 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 will be reclaimed during the 1997 fall season. The pre-existing drill road to old drill hole MC-120 will be reclaimed 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 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 of 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 will be plugged from top to bottom 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 of 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 occurance 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;

713.214. 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, R645-301through 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 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). 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.

?'s on ACT/007/038 - [redacted] 97G

1) 97[redacted]H amendment to permit Barn Canyon Exploration hole "P97-36-1"

Talked to Ben 3 P.M. on 9/22

Never received a comment from the BLM

2) Now, as of 9/22/97, Cyprus wants to permit another exploration hole in Barn Canyon, B 363, (to be used as exploration hole and a water monitoring hole). Why? How do locations of P97-36-1 & B363 compare? — They don't 2 different holes

3) Re opening of Crandall Canyon air shaft

safety belts on all workmen?

a) No safety precautions are discussed i.e., penetration of a concrete/steel cap over a shaft that may have an accumulation of methane

Crandall Shaft

Is there such a thing as a non-sparking bit? Is there a vent pipe in the cap? Is the cap of sufficient strength to support rig & associated equipment? Will certified mine foreman be on duty?

GVW of Drill Rig + associated machinery

Is MSHA aware of Cyprus-Plateau's Plans

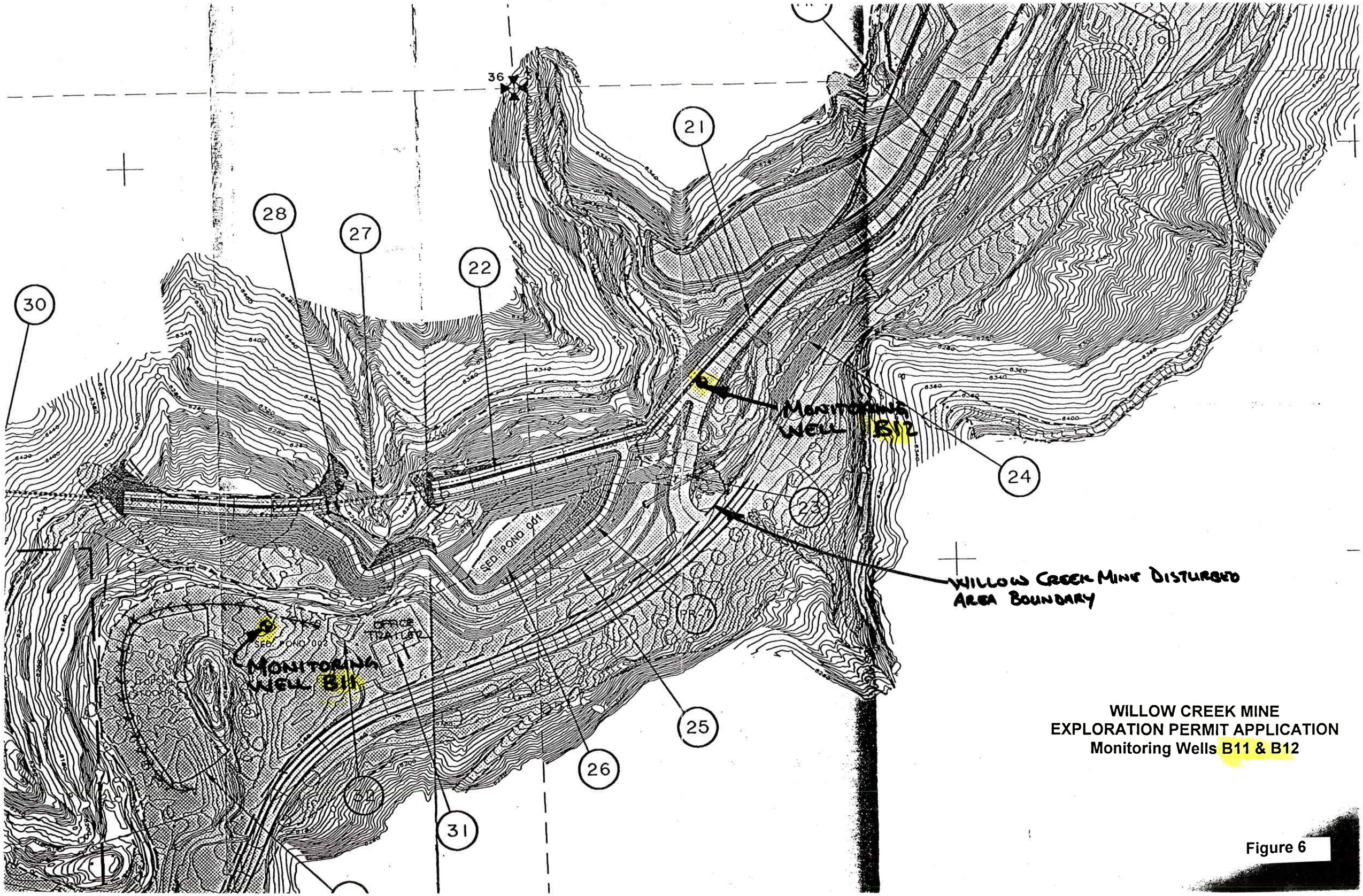
4) Monitoring Well B-354
for exploration & ground water
monitoring into old workings

Page 8 of 8

"a short 80 (foot?) cut in the shoulder of Highway 50/6. Has UDOT been notified and do you have approval to do so from District 4?

5) P 97-29-1 is 300' past MC-120
Reopen old road + then extend 300'
on Fee Ground - who owns surface?

6) Holes B-11 } Inside WC disturbed
B-12 } area boundary
B-311 } Underground
B-312 } Holes (Jm-Mine)



WILLOW CREEK MINE
EXPLORATION PERMIT APPLICATION
Monitoring Wells B11 & B12

Figure 6