

0060

ACT/007/006 #2
Copy PAM

CASTLE VALLEY SPECIAL SERVICE DISTRICT

P.O. BOX 877
CASTLE DALE, UTAH 84513
TELEPHONE (801) 381-5333

April 23, 1993

DORR W. HANSON
Chairman
DARREL V. LEAMASTER
Manager

Utah Dept. of Natural Resources
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Cyprus Plateau Mining
Castle Valley Ridge Lease Application
UTU-64263

RECEIVED

APR 26 1993

DIVISION OF
OIL GAS & MINING

Gentlemen:

Pursuant to the Legal Notice published in the Emery County Progress March 9, 16, 23 and 30, 1993, we are herewith responding to and protesting the application of Cyprus Plateau Mining Corp. for a mining permit on the Castle Valley Ridge Federal Coal Lease UTU-64263. Our protest is based upon the expected impacts that their mining operation will have upon the quality and quantity of flow to our culinary water springs.

The Castle Valley Special Service District operates and maintains the Tie Fork springs (wells) near the existing and proposed mining operation. The water from these springs is used in the communities of Huntington, Cleveland and Elmo. Approximately 2,700 people (1,047 connections) rely on this water. These springs are a vital source of supply that we can not afford to lose.

The value of this water source is impossible to estimate. The attached table shows the historic flow patterns of the springs. They were developed and put into the system in December of 1982. Since that time they have flowed continuously for ever minute of every hour, of every day at about 85 gpm. They produce a lot of water!

The water from these springs is of excellent quality. It has met all of the MCL requirements of the Safe Drinking Water Act. Every water quality test we have taken on it has met the State and Federal Standards for drinking water. The only treatment it receives is chlorination. Chlorine is added strictly as a safety factor to control bacteria and virus contamination. Our past tests have never shown any bacteriological contamination. It is a great source not available to most locations in the United States and it is very inexpensive water for us to treat and provide to our customers.

Cyprus Plateau Mining
Castle Valley Ridge Lease Application
UTU-64263
Page 2

Our District has expended large sums of money to develop these springs and to install transmission lines to the springs. We don't want to see that investment lost. We have searched for other springs that could be developed as a replacement for the Tie Fork Springs. We have not been able to locate any suitable replacement. Again how can you put a replacement value on this type of a natural resource. We don't think that you can.

We believe that Cyprus Plateau Mining Corp. has already impacted the flow to these springs under their current mining permit #ACT/007/006. We know that they are presently pumping from 300 to 500 gpm of water out of their current mining area located about 10,500 feet from our springs. Our spring flow has been declining since June of 1991 and is currently at only 75 gpm, the lowest flow we have ever recorded.

Both Plateau and Castle Valley have spent large amounts of money trying to determine the recharge area, flow patterns, direction of flow movement to the springs, and the impacts mining will have upon these springs. The general conclusion that both reports reach is that the mining operation will impact the spring in terms of both quantity and quality.

As a part of this protest we include a copy of the report from S. Bryce Montgomery, Professional Geologists, dated March 26, 1993. It covers the adverse impacts we expect on the springs from the present mining operation and the new lease area.

Also included is a copy of our letter to Dr. Dianne Nielson, DOGM dated January 29, 1992. This letter was never considered by DOGM. We request that it be made a part of the protest and be acted upon since the comments still are important and pertinent.

Please note that in Plateau's Mining Permit in the Hydrology Section under the heading "Impact to Culinary Water Supplies" that they acknowledge a probable impact on the Tie Fork Spring (wells). They also point out that the long term impacts after water re-enters the mine working is unknown. They are concerned about quality impacts. We too are concerned about quality, but also very concerned about quantity. We are afraid that mine subsidence and plugging of the natural flow paths will alter the natural flow to the spring. We expect to see water finding its

Cyprus Plateau Mining
Castle Valley Ridge Lease Application
UTU-64263
Page 3

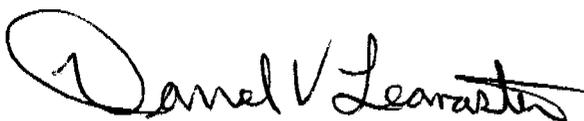
way through the abandoned mine workings, then permeating the Blackhawk formation and exiting high up the canyon walls. This condition was observed at the Co-Op Mining Company, Bear Canyon Mine, in the winter of 1990-1991 when they discharged water into the abandoned mine workings. With this scenario the flow to our spring would be lost.

Over the past few years Plateau and our District have been discussing these problems as they relate to our springs. We had hoped to negotiate some settlement that would allow Plateau to continue their mining operation and protect or compensate us for our valuable water resource. The chance of reaching that settlement does not look promising at this time.

We have prepared and submitted an application to the Community Impact Board to ask for financial assistance to resolve this problem. It appears that the request may be denied or reduced in size so that it will not solve the problem, In the meantime the co-operative attitude that Plateau had in the past seems to have dissolved away. Ultimately, the mining company has to accept responsibility for the loss of this valuable water asset.

It is hoped that a fair and equitable settlement can be reached between all parties. However, it has a long way to go before any agreement is finalized. We will have to rely upon DOGM to insist that Plateau mitigate the loss of the springs with us. We request that you deny the application for the new lease until this agreement is reached.

Very truly yours,



Darrel V. Leamaster,
District Manager

TIE FORK SPRING AVERAGE MONTHLY FLOW (gpm)

YEAR	JAN AVG FLOW	FEB AVG FLOW	MAR AVG FLOW	APR AVG FLOW	MAY AVG FLOW	JUN AVG FLOW	JUL AVG FLOW	AUG AVG FLOW	SEP AVG FLOW	OCT AVG FLOW	NOV AVG FLOW	DEC AVG FLOW
1982												81
1983	80	80	80	80	80	80	82	83	84	85	85	84
1984	84	84	83	84	84	84	85	85	86	86	86	85
1985	85	85	84	85	85	85	85	85	86	87	86	85
1986	85	85	84	84	84	85	86	86	85	84	85	87
1987	85	85	86	85	86	86	86	85	84	89	85	83
1988	81	81	82	81	82	81	81	105	133	130	130*	115*
1989	104	106	104	102	101	101	99	98	98	97	96	96
1990	94	94	94	93	94	93	91	90	89	86	88	89
1991	88	89	88	89	88	89	86	86	86	85	85	84
1992	84	83	83	83	83	83	83	83	79	81	80	79
1993	78	77	75									

Note: * Meter Broken Amounts Estimated

March 26, 1993

Mr. Darrel V. Leamaster
District Manager
Castle Valley Special Service District
P. O. Box 877
Castle Dale, Utah 84513

RE: Proposed Plateau Mining Company coal mining expansion into Castle Valley Ridge Tract, located within the S/2 Sec. 26, S/2 Sec. 27, Secs. 34 and 35, T 14 S, R 7 E; Secs. 1, 2, 3, 10, 11, 14 and 15, T 15 S, R 7 E; SLB&M (Exploration License U-47194), and its potential impact on water supplies of the area.

Dear Darrel:

In response to your request of March 18, 1993, regarding the above referenced, I submit the following analysis and conclusions, to be submitted to the Utah Division of Oil, Gas and Mining.

From my previous studies of the subject region done for you, it is obvious that the proposed Plateau Mining Company expansion into the Castle Valley Ridge Tract will be within the graben (structural depression), dropped-down between the extensive Pleasant Valley fault on the west, about a mile west of the west edge of the Castle Valley Ridge Tract, and the Bear Canyon Fault which is about two miles east of the Pleasant Valley Fault. Subsidiary faults with much related jointing also exist within the graben bedrock segment.

The rock strata within this graben are dipping moderately to the south in the direction of the artesian wells now producing culinary water for the Castle Valley Special Service District, from the Star Point Sandstone, at a location immediately east of the junction of Wild Cattle Hollow and Gentry Hollow, within Tie Fork, the lower Tie Fork springs being considered for development as a supplemental culinary water supply, and the main wild cattle Hollow and Tie Fork streams.

The supply for these springs, flowing wells, and base-flows of the streams is ground water that is recharged from a part of the precipitation on the high Castle Valley Ridge, Gentry Mountain, and Wild Cattle Ridge. This occurs via infiltration through faults, joints, fractures, bedding planes, and intergranular, interconnected pore space within sandstone, limestone and conglomerate beds.

Since the coal beds being mined in the existing workings,

and sought to be mined within the Castle Ridge tract exist within the Blackhawk Formation which in part contains either moving or stored ground water that reaches the principal aquifer formation of the Star Point Sandstone, the ground water intercepted or contaminated by the mining operations will adversely impact the existing water rights located down-gradient. The general ground water gradient is southward like the bedding dips.

Thus, the existing mining operations and the proposed Castle Valley Ridge mining operations of the Plateau Mining Company have and will further adversely impact the flowing wells, springs in Wild Hollow, Gentry Hollow and Tie Fork, which contribute to the culinary supplies and the base-flows of streams in these drainages. Ground water intercepted by the mining operations and that is moved eastward into surface drainages away from and out of the drainages of Huntington Creek, is depleting water rights within the Huntington Creek drainage. The potential exists for contaminants from mining operations getting into the remaining ground and surface waters of the Huntington Creek drainage and degrading them.

Since the recharge to the lower Tie Fork Spring appears to be coming from the Pleasant Valley Fault and rock formations on its west, upthrown-side within Wild Cattle Ridge, there appears to be minimal risk of an adverse impact to this spring from the existing and proposed Castle Valley Ridge Mining by the Plateau Mining Company. Further data gathered later on this spring may justify an adjustment to this conclusion for the present time.

The adverse impacts which will occur on ground water and streamflows in the Huntington Creek drainage by Plateau Mining Company operations, would extend well beyond the time of on-going mining because of changes in groundwater flow paths from rock subsidence over mined-out areas, and from the long-term discharge of ground water out of the natural drainage as it existed prior to mining.

Because of the Star Point Sandstone being down-dropped within the graben between the Pleasant Valley and Bear Canyon Faults, the Tie Fork Canyon does not intersect nor truncate this formation, through that stretch of the canyon, thus ground water is able to flow uninterrupted southward within this formation, from the Plateau Mining Company area to its discharge points at the Birch Springs and Big Bear Canyon Springs. Therefore, over-time the Plateau Mining Company operations will also adversely affect the groundwater storage and flow supplying these springs and the contribution of groundwater spillage to the base-flow of Huntington Creek in this vicinity.

Sincerely,

A handwritten signature in cursive script that reads "S. Bryce Montgomery". The signature is written in black ink and is positioned above the typed name.

S. Bryce Montgomery
Professional Geologist
3512 South 100 East
Bountiful, Utah 84010

Telephone 295-8592



CASTLE VALLEY SPECIAL SERVICE DISTRICT

P.O. BOX 877
CASTLE DALE, UTAH 84513
TELEPHONE (801) 381-5333

January 29, 1992

DORR W. HANSON
Chairman
DARREL V. LEAMASTER
Manager

Dr. Dianne Nielson, Director
Utah Dept. of Natural Resources
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Cyprus Plateau Mining
Permit Renewal and Addition
of Castle Valley Ridge Lease

Dear Dr Nielson:

The Cyprus Plateau Mining Corporation recently published a public notice to renew their Mining Permit number ACT/007/006. We believe that we will be affected by that permit and would like to offer comments on the application. We were not able to submit our comments prior to the advertised date of Jan 27, 1992, but trust that they can still be considered.

The Castle Valley Special Service District operates and maintains the culinary water system for the communities of Huntington, Cleveland and Elmo. One of the sources of water for these communities is the springs or wells located in Tie Fork Canyon. We have expended considerable amounts of money for the development and transmission lines to these wells. These wells are an important part of our water supply and we are vitally concerned with their future quality and quantity of flow.

We wish to point out that Cypress Plateau Mining Corp. (CPMC) has been very open and co-operative with us in the past. We have worked with them on sampling and flow measurements. As indicated within the permit, they have deeded exploration hole 85-35 to Huntington City as a supplement to our other well sources. This was developed but unfortunately we were never able to utilize the water in our system because of loss of water from the hole and because the turbidity never dropped below the 1.0 NTU limit set by the State Health Dept. Standards.

We would also like to compliment CPMC on their extensive effort to study and determine the hydrology in the area. We realize that this has been a very time consuming and costly effort. In general we agree with the conclusions that they have reached concerning the sources of our springs and the possible impacts that mining may have on them.

Cyprus Plateau Mining
Permit Renewal and Addition
of Castle Valley Ridge Lease
January 29, 1992
Page 2

As pointed out in their permit, there are many unanswered questions concerning the hydrology and the impacts that mining and subsidence may have on our springs. We quote from the Hydrology section of the permit:

1. Page 700-4 - The areal extent of each individual perched aquifer system is difficult to define. This is especially true when considering the influence of structure such as faulting on the ground water system. Other natural occurrences such as the presence of irregular small sandstone channels make the analysis of local aquifers difficult.
2. Page 700-11 - The presence of numerous hidden fractures, and faults found within the overall perched aquifer system makes the identification of water flowpaths nearly impossible. Similarly it would be nearly impossible to quantify the elevation of the piezometric surface for all of the localized perched aquifer systems which exist within or adjacent to the mine permit area.
- 3 Page 700-15 - Within the southern end of Gentry Ridge (the downdip end) the regional aquifer system is expected to be encountered in the lower coal bearing interval of the Blackhawk formation. Within the northern portions of Gentry Ridge (the updip end) the regional aquifer system may be encountered in the lower coal bearing interval of the Blackhawk Formation or similar to the east side of the Bear Canyon Graben, the regional water table may lie within the Star Point Sandstone.
4. Page 700-25 - Huntington City wells 86-35-3 were drilled by in the vicinity of several small springs at the approximate location where the eastern boundary fault of the Pleasant Valley Graben crosses Tie Fork Canyon. It is possible that these wells were drilled in either the breccia zone of the eastern boundary fault of the graben, or slightly updip where they intercepted an open fracture zone in a sandstone unit. The depths to which these wells were drilled or at which the flowing water was encountered is unknown. It is believed that water from wells 86-35-2 and 86-35-3 originates from the Star Point Sandstone due to water quality similarities with well 85-35-1.
5. Page 700-25 & 28 - Seepage Down Fault Planes. Some ground water is discharged from upper perched aquifer systems to lower perched aquifer systems or to the regional aquifer system down the breccia zone of fault planes. It is impossible to identify exact locations where this might be occurring or to quantify the rate of seepage downward along a fault plane.

Cyprus Plateau Mining
Permit Renewal and Addition
of Castle Valley Ridge Lease
January 29, 1992
Page 3

In some locations however the faults may be open along short segments of the shale interface allowing discharge down the fault into a lower perched or deeper regional aquifer systems. Springs have been found at various elevations along faults in the perched systems of the upper Price River - North Horn Formations. The presence of these springs indicates that the hydraulic flowpath along joints, fractures and faults is extremely complex and only generalized statements as to the hydraulic conductance of perched ground water systems can be made. Recharge to the Huntington City wells appears to be driven mainly by this type of fault relationship wherein recharge water originates from the perched system of the Price River - North Horn Formations. It is also possible that some recharge to these wells may be coming from the regional aquifer. Further identification of the regional water table and the source of water driving the Huntington City wells will be made by CPMC and other neighboring mines as mining progresses in the Gentry Ridge and other local areas.

6. Page 700-34 - Some recharge to lower systems does occur downward along the fault planes, where faults are found to be open for short segments along the shale interface.

Recharge to the fault systems at times may occur as a combination of direct seepage from snowmelt down a given fault plane as well as from formational ground water moving downdip along a sandstone shale interface. Recharge from the formation occurs as ground water moves toward the fault through more permeable sandstone units and/or joint systems.

7. Page 700-63 & 64 - The hydrologic impacts caused by the deformation of geologic formations due to subsidence is difficult to predict. Deformation of the strata may impact the flowrate, and possibly the location of springs in certain areas

An understanding of the impacts resulting from subsidence to the ground water system of the perched aquifer of the Price River and North Horn formations is in its infant stages. Understanding of subsidence impacts on ground water in general is not well understood.

The more significant impact that could result to the perched aquifer system of the Price River - North Horn Formation from subsidence, could occur to fault related springs. Subsidence which intersects faults could result in a step wise movement of the fault thereby affecting the conduit system which feeds the fault related springs.

Cyprus Plateau Mining
Permit Renewal and Addition
of Castle Valley Ridge Lease
January 29, 1992
Page 4

8. Page 700-70 - The elevation of the regional water table on the west side of the Bear Canyon graben, in the horst of Gentry Ridge, and its position relative to the Blackhawk - Star Point formations has not been fully determined. It is anticipated however based upon preliminary projections that mining will penetrate the regional aquifer system (at a minimum) toward the southern (downdip) end of Gentry Ridge and may encounter the regional aquifer system more toward the northern or updip end of the ridge.

9. Page 700-71 - If the primary conduit system of these faults is not intercepted by the mine, and if recharge for these wells occurs mainly from the Price River - North Horn Formations, the mine should not impact these wells unless subsidence is found to affect the conduit system at the fault.

The quantity of ground water inflow into the mine beneath gentry Ridge and therefore, the magnitude of potential impact is difficult to predict.

All of these statements do point out that a certain amount of uncertainty about our springs and how they will be impacted does exist. We do not believe that anyone can say for certain that we will not be affected. The exact recharge method to our springs, if it be from the regional aquifer, perched aquifer, fault conduit movement or etc. is not known.

Therefore, we would request that CPMC be required to enter into an agreement with Castle Valley Special Service District to stipulate what would be done to mitigate the loss of this spring if it is interfered with. The exact details of this agreement would have to be resolved between us and CPMC. This would be similar to agreements that have been reached with other mining companies in the area. It would leave us and our citizens in Huntington, Cleveland and Elmo with some assurances that our water supply would not be lost without some replacement or compensation.

We would request that DOGM insist that this agreement be reached before the permit is issued.

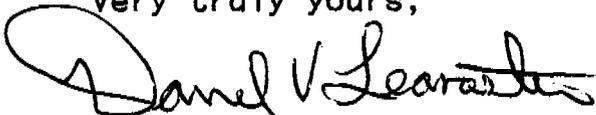
On additional area of concern that we have is discussed on page 700-72 of the permit. CPMC proposes to pump, filter and re-inject mine water into the faults found in the graben crossing tunnels.

Cyprus Plateau Mining
Permit Renewal and Addition
of Castle Valley Ridge Lease
January 29, 1992
Page 5

Water injected into these faults may have a direct impact upon our Bear Canyon Springs or even possibly on our Tie Fork Springs. If the quality of water injected is good, then this could be positive impact to increase the spring flow rates. On the other hand, if the water quality does not meet drinking water standards, then our spring could be negatively impacted. We believe that this item will need additional study.

We believe that the above concerns do justify additional study. We also feel that an agreement needs to be reached between our District and CPMC before the permit is renewed. CPMC statements indicate that a problem could exist. If mining does proceed, they could affect the spring without any guarantees or protection for us.

Very truly yours,



Darrel V. Leamaster, P.E.
District Manager

cc: Gayle Smith, Dept Environmental Quality
Ben Grimes, CPMC