

Chapter X
CULTURAL RESOURCES, CLIMATE, LAND USE, AIR QUALITY

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Certain areas that are not the reclamation responsibility of Intermountain Power Agency under the exclusionary provisions of SMCRA will not be reclaimed.

If it is determined by Intermountain Power Agency or its successor that the mining plan is to be suspended and further production of coal from these facilities shall not take place, the reclamation plan as described in Chapter III shall be initiated in a timely manner following such decision and according to the reclamation schedule set forth in Section 3.3.

The public road currently in existence through the permit area will be retained during and following the mining and reclamation periods. A road has been present in Horse Canyon through the mine area since at least 1899 and presumably has been used by the public. Maps illustrating the existence of this road have been provided as Plates X-1 and X-2. As shown on Plate X-1, the road parallels the course of the Horse Canyon Creek through Sections 3 through 6, 8, and 9 of T. 16 S., R. 14 E.. The road crosses from the south side to the north side of the creek bed in the northern portion of Section 8. The road apparently drops into the creek bed in the northern portion of Section 9 and then continues up the drainage. The road appears to become a trail in the northwest portion of Section 3. The trail continues up the South Fork of Horse Canyon as illustrated on Plate X-2.

An alternative post-mining land use of Residential/Recreational was proposed by UEI for areas that were not reclaimed under the initial reclamation. The PMLU application can be found in Appendix X-4.

APPENDIX X-4

**Change In Post-Mining Land Use
PMLU**

Appendix X-4

Post Mining Land Use Change (PMLU)

1. Maps of a scale of 1"=125' feet showing the portions of the approved permit (ACT 007/013) to be affected by the proposed postmining land use change are included as Exhibits A-1 to A-4. The proposed postmining land use change area is for all lands in Horse Canyon not currently under Phase II reclamation. The total area for the proposed PMLU is approximately 16.18 acres.
2. A legal description to the nearest 1/4, 1/4, 1/4, 1/4 section (2.5 acre level of resolution) for the area proposed for a postmining land use change is included below:

Legal Description

Township 16 South, Range 14 East, SLB&M

Section 4

Portions Of: SW4NE4SW4SE4, SE4NE4SW4SE4, NE4NE4SW4SE4,
NW4NW4SE4SE4, SE4SE4NW4SE4, W2SW4NE4SE4,
NE4SW4NE4SE4, S2NW4NE4SE4, NE4NW4NE4SE4,
W2NE4NE4SE4, NE4NE4NE4SE4

Lot 9 S2SE4

Section 3

Portions Of: Lot 12 SW4, NW4SE4, SW4NE4
Lot 11 NW4NW4, S2SW4
Lot 6 NW4NE4
Lot 3 S2SE4

Total Acres = 16.18 acres more or less

TOTAL ACREAGE proposed for a Post Mine Land Use Change (PMLU) is 16.18 acres as detailed below:

<u>AREA</u>	<u>Map Location</u>	<u>Acres</u>
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# 2 Sediment Pond	Exhibit A-1	1.44
Buildings & Pad Area	Exhibit A-2	10.80
Fan and Manway Portal Pads	Exhibit A-3	2.83
Powder & Cap Magazine Area	Exhibit A-4	0.57
Water Tank Area	Exhibit A-4	<u>.54</u>
		16.18

- a. Once this application is determined administrative complete by the Division, a Public Notice will published in a local publication of general distribution. A copy of the proposed Public Notice has been attached as Exhibit B.
 - b. Once this application is determined administrative complete by the Division, a registered surveyor will construct a map depicting the boundary of the permit change tied to permanent survey points. This map will be a submitted to the Division prior to final approval.
3. The current approved Post Mining Land Use is for wildlife habitat, which was the apparent premining land use. This use is compatible with the surrounding land uses, which are also used primarily for wildlife habitat and, to a lesser extent, for livestock grazing. Sufficient land for significant crop land development does not exist, nor is there sufficient water for irrigation.

The reclamation plan, as described in the Horse Canyon Permit, is designed to achieve the post mining land use of wildlife habitat. Portions of Horse Canyon have been reclaimed and are currently approved for Phase II bond release. The proposed post mining land use change does not include these areas. Only areas that were excluded from the original reclamation and Phase II bond release are proposed for the PMLU change.

4. The proposed alternative post mining land use will be Residential/Recreational. The area proposed for the PMLU along with additional acreage will be donated to the Center for Mine Land Redevelopment and or the College of Eastern Utah. A good overview of the intended usage for the areas proposed for the PMLU change can be found at <http://www.utah.edu/uees/mlr/horsecanyon.html> and a copy is attached as Exhibit C.

The Center for Mine Land Redevelopment, who initiated the project, has handed the project off to the College of Eastern Utah, who will actually construct and run the facility. A science field camp for Utah universities at the Horse Canyon site will have access to additional extensive BLM land in the book Cliffs that can be used for

scientific study. The camp will be a place where students and researchers can come and stay while studying a variety of subjects, including geology, ecology, botany, and other natural sciences. In addition out-of-state universities have indicated that they would lease the facility for their use.

The final time line for completion of the project is currently unknown. It is anticipated that the project would begin with the refurbishment of the Office building and eventually include all the structures purposed to be left on site. The timing of total refurbishment depends on funding and needs. The project was implemented with a feasibility study in 2002. Included in the feasibility studies was a business plan which is still being refined. The Phase I Environmental Site Assessment prepared by Center for Mine Land Redevelopment was completed in January of 2003. Exhibit D is a Facility Assessments completed by the College of Eastern Utah which gives in some detail of their intended use for each of the facilities.

5. A list and description of the mining-related "improvements" which includes the buildings, structures, utilities, roads, and associated pads follows:

LIST OF Mining Related IMPROVEMENTS

The following is a list of the mining related improvements that will be donated to the College of Eastern Utah by UtahAmerican Energy, Inc.

A. Sedimentation Pond #2 and associated drainage structures:

Sedimentation Pond #2 is shown on Exhibit A-1, and encompasses approximately 1.44 acres. The ditches will channel any runoff containing from the building and portal pad areas into the sediment pond. The pond has only on rare occasions contained any measurable water, and has never recorded any water discharge.

On several occasions big game have been observed grazing in and adjacent to the pond. With the observation of Bighorn sheep, Antelope, and Deer grazing in and near the pond coupled with the abundance of tracks, it is evident that the pond is important to the big game that either live or migrate through Horse Canyon.

The pond is currently scheduled for demolition according to the Horse Canyon MRP. The change in the post mining land use (PMLU) would allow

the pond and various collection ditches to remain for continued use as sediment control, and for wildlife, which would be a higher and better use than would be demolition and reclamation. Since the pond will function the same for both the current post mining land use, and the proposed post mining land use, incorporating the pond into the PMLU is very practical and reasonable.

The likelihood that the pond would be used, post mining, for sediment control and wildlife use is extremely high since the pond is currently being used for those exact purposes. The pond is currently functioning the same as it will in the proposed post mining land use. Therefore, time of implementation is not an issue.

Leaving the pond as is in the PMLU would not present any known actual or probable hazards to the public health or safety. The pond is very shallow, design allows for a maximum depth of water of only two feet before reaching the principle spillway. In addition the pond has been constructed with an emergency spillway in the very unlikely event that the primary spillway becomes inoperable or inadequate.

Leaving the pond for future use is consistent with all known applicable land use policies and plans.

B. Pump House

The pump house and well are shown on Exhibit A-2, and encompass approximately .03 acres. Both are proposed to be retained for use in the PMLU.

The need for water will arise very early in the project. As can be seen from Page 3 of Exhibit D, it is proposed to leave the pump house for future use to supply water to all the buildings. As it is described in Exhibit D, the PMLU proposes to use of the pump house, well, and pumps, to pump water to a new underground 500 gallon fiber glass tank and then treat the water as it is being used.

Using the pump house, well, and pumps to supply water to the project is of higher and better use than to reclaim and remove the structures. The likely hood of the pump house, well and pump supplying the project with the needed water, augmented with Redden Spring water, is excellent. It is known

that during the operation of the Horse Canyon Mine, water pumped from the well located in the creek was used to supply the water needed for the facility which included showers for over 400 men.

With a change in the post mining land use, leaving the pumps, pump house, and well for future use is consistent with all known applicable land use policies and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

C. Office Building

The office building (110' x 30') shown on Exhibit A-2, will be used for office/classrooms and living area for security people. As can be seen from Exhibit D, plans are for the office building to be the first to be refurbished. The office building will be used for classes, offices, and to house security guards for the overall facility.

Currently the office building is scheduled for demolition, as required by the present post mining land use and the Horse Canyon MRP. It would be very practical and reasonable to change the PMLU to allow for refurbishing the office building for office/classrooms/living area use. Refurbishing and using the office building for office/classrooms/living areas would be a higher and better use than would be demolition and reclamation.

The likelihood that the office building be utilized for office/classrooms/living area is extremely high.

With a change in the post mining land use, leaving the office building for use post mining, is consistent with all known applicable land use policies and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

D. Bath House

The bath house (140' x 75') shown on Exhibit A-2, will be used for a community center. As can be seen from Exhibit D, the Bath House should be the second to be refurbished.

Currently the bath house is scheduled for demolition as required by the present post mining land use and the Horse Canyon MRP. It would be very

practical and reasonable to change the PMLU and refurbishing the bath house for use as a community center and as such use of the building would be of a higher and better use than would be demolition and reclamation.

The likelihood that the bath house be utilized as a community center is extremely high.

With a change in the post mining land use, leaving the bath house for use post mining, is consistent with all known applicable land use policies and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

E. Warehouse

The warehouse (200' x 55') shown on Exhibit A-2, will be used for storage for equipment and supplies.

Currently the warehouse is scheduled for demolition as required by the present post mining land use and the Horse Canyon MRP. It would be very practical and reasonable to change the PMLU and refurbishing the warehouse for use for storage and as such use of the building would be of a higher and better use than would be demolition and reclamation.

The likelihood that the warehouse be utilized for storage is extremely high.

With a change in the post mining land use, leaving the warehouse for use post mining, is consistent with all known applicable land use policies and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

F. Shop

The shop building (225' x 55') shown on Exhibit A-2 and Exhibit D, will be used primarily for mobile equipment storage.

Currently the shop building is scheduled for demolition as required by the present post mining land use and the Horse Canyon MRP. It would be very practical and reasonable to change the PMLU and refurbishing the shop building for use for equipment storage and as such use of the building would be of a higher and better use than would be demolition and

reclamation.

The likelihood that the shop building be utilized for equipment storage is extremely high.

With a change in the post mining land use, leaving the shop building for use post mining, is consistent with all known applicable land use policies and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

G. Associated pad, Chain link fence, and parking lot.

The office building, bath house, ware house, shop and connecting pads (10.8 acres) are currently enclosed within a chain link fence for security and are shown on Exhibit A-2. The fence will remain after the PMLU change to provide security for the proposed project.

The pad that currently surrounds the buildings will be left for use after the PMLU. The pad will be used for foot traffic between the various buildings.

The current parking lot will remain after the PMLU change for use in conjunction with the Horse Canyon project. The parking lot will provide adequate parking for instructors and students.

Currently the pad, chain link fence, and parking lot are scheduled for demolition as required by the present post mining land use and the Horse Canyon MRP. It would be very practical and reasonable to change the PMLU and refurbish the pad, chain link fence, and parking lot for future use. Any use would be of a higher and better use than would be demolition and reclamation.

The pad, chain link fence, and parking lot will all be used for purposes that they were originally designed for, and all are required for use at the new facility, thus the likely hood for utilization is extremely high.

Leaving the fence, pads, and parking lot for use post mining, is consistent with all known applicable land use policies and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

H. Portal Pad

The portal pad, located north and east of the buildings, is shown on Exhibit A-3. The pad is approximately 2.83 acres in size. The portal pad will be used as a corral to contain horses used for various classes.

Currently the portal pad is scheduled for re-contouring and reclamation as required by the present post mining land use and the Horse Canyon MRP. It would be very practical and reasonable to change the PMLU and allow the pad to be used for corrals. Use of the pads would be of a higher and better use than would be reclamation.

The likelihood that the pads be utilized is extremely high.

With a change in the post mining land use, leaving the portal pads for use post mining, is consistent with all known applicable land use policies and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

I. Powder Magazine

The powder magazine (25' x 25') shown on Exhibit A-4 and Exhibit D, will be used primarily for equipment storage. CEU has identified three mountain bike trails for use in conjunction with the Horse Canyon project. The powder magazine will be used for mountain bike storage as described in Exhibit D. The powder magazine is uniquely suitable for secure storage. It was constructed to securely store explosives. The powder magazine was constructed with a 12" concrete walls and a steel security door.

Currently the powder magazine is scheduled for demolition as required by the present post mining land use and the Horse Canyon MRP. It would be very practical and reasonable to change the PMLU and refurbishing the powder magazine for use for equipment storage and as such, use of the building would be of a higher and better use than would be demolition and reclamation.

The likelihood that the powder magazine be utilized for equipment storage is extremely high.

With a change in the post mining land use, leaving the powder magazine for use post mining, is consistent with all known applicable land use policies

and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

J. Cap Magazine

The cap magazine (15' x 8") shown on Exhibit A-4 and Exhibit D, will be used primarily for equipment storage. CEU has proposed to use the cap magazine to store a generator and fuel to be used in conjunction with the Horse Canyon project. The cap magazine is uniquely suitable for secure storage. It was constructed to securely store caps for use in explosives. The cap magazine was constructed with a 12" concrete walls and a steel security door.

Currently the cap magazine is scheduled for demolition as required by the present post mining land use and the Horse Canyon MRP. It would be very practical and reasonable to change the PMLU and refurbishing the cap magazine for use for equipment storage and as such, use of the building would be of a higher and better use than would be demolition and reclamation.

The likelihood that the cap magazine be utilized for equipment storage is extremely high.

With a change in the post mining land use, leaving the cap magazine for use post mining, is consistent with all known applicable land use policies and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

K. Water Tank

The steel water tank (375,000 gallons) and access road shown on Exhibit A-4, will be used primarily for water storage for fire suppression. The water tank is obviously suitable for storing water for fire fighting. It was constructed for use in supplying water underground for mining purposes. During mining, a water line was installed to pipe the water from the tank to the surface facilities for potential emergency use.

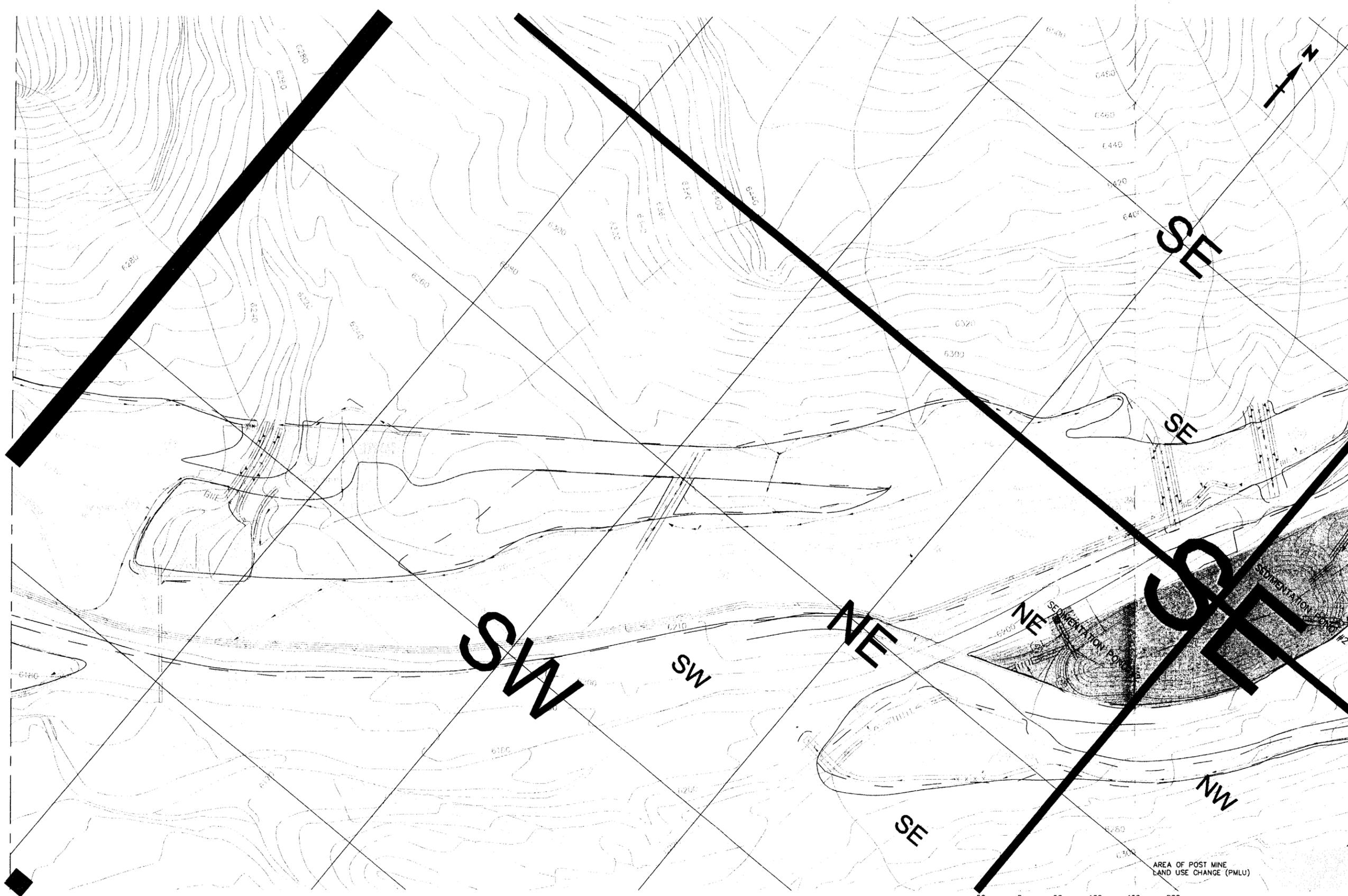
Currently the water tank and access road are scheduled for reclamation as required by the present post mining land use and the Horse Canyon MRP. It would be very practical and reasonable to change the PMLU and use the tank for an emergency supply of water, and as such, use of the water tank

would be of a higher and better use than would be demolition and reclamation. The likelihood that the water tank be utilized for emergency water storage is extremely high.

With a change in the post mining land use, leaving the water tank and access road for use post mining, is consistent with all known applicable land use policies and plans, and does not cause or contribute to violation of any known federal, local or Utah laws.

6. A DRAFT Memorandum of Agreement (MOA) found in Exhibit E, gives the land owners consent to the PMLU change proposed in this application. UtahAmerican Energy, Inc., owns all the lands, surface and underground, proposed for the PMLU change. UtahAmerican Energy, Inc., is applying for the PMLU change.
7. A letter from the Emery County Board of Commissioners pledging their cooperation and support is included in Exhibit C.
8. This PMLU application will be included in the Horse Canyon Permit ACT/007/013 as Appendix X-4.
9. A cover letter along with a notarized C1 and C2 forms have been submitted with the application. A proposed notice of publication is included in Exhibit B. Proof of publication will be included in Exhibit B after the required publications.

o



MATCH LINE SEE EXHIBIT A-1

NO	DATE	REVISION	BY	APP
1	6-13-03	AREAS FOR PMLU		
2	6-1-99	REVISED PER ADDITIONAL AS-BUILT WORK		
3	11-15-91	REVISED PER AS-BUILT		
4	11-30-90	REVISED PER TECH. REVIEW		



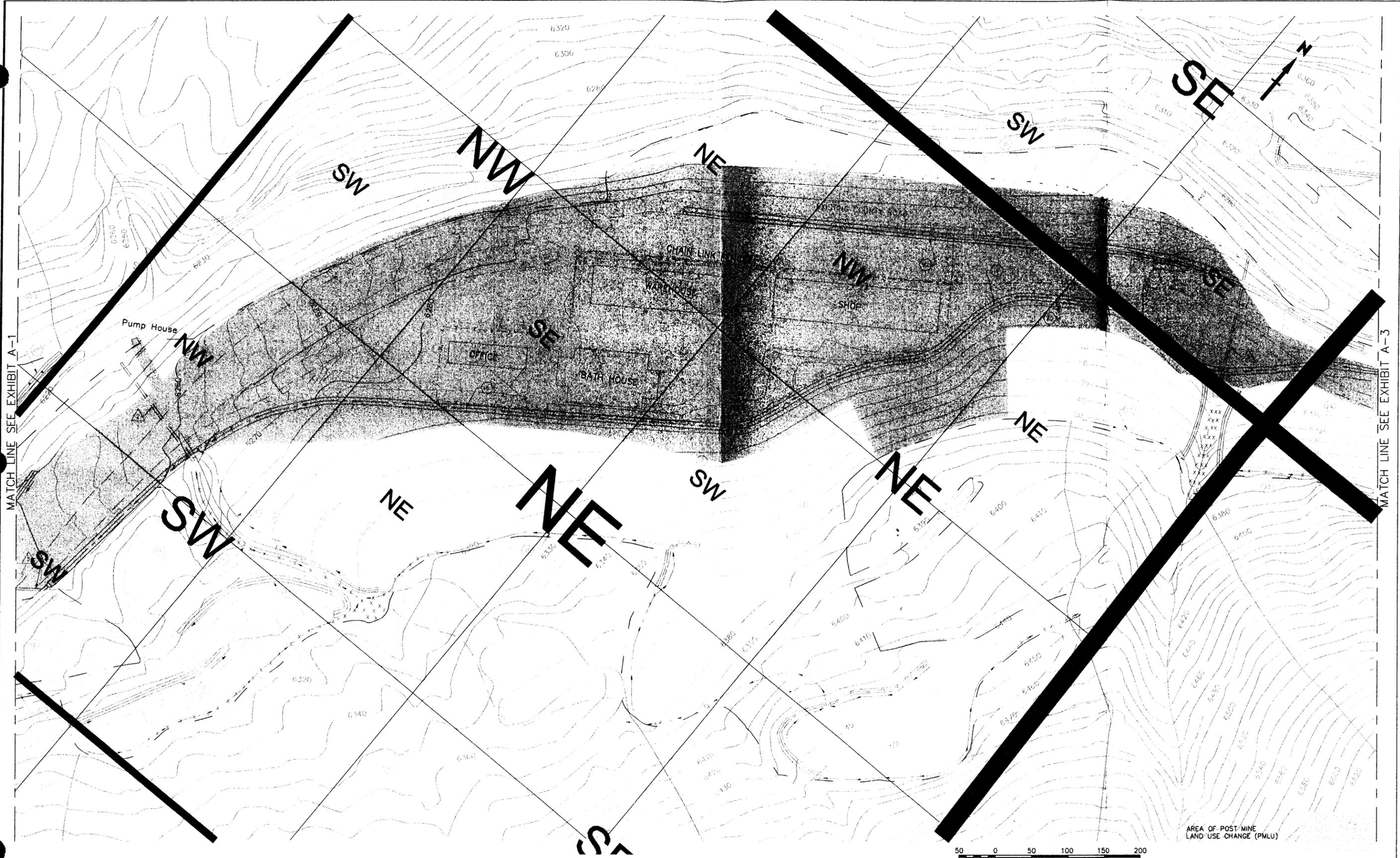
- FOR LEGEND SEE PLATE W-3, VOL. 3.
- TOPO BASED ON 1985 AERIAL PHOTO BY INTER MOUNTAIN TECHNICAL SERVICES, INC. OF GRAND JUNCTION, COLORADO.
- DATUM IS 1929 SEA LEVEL.
- COORDINATE SYSTEM IS KAISER STEEL LOCAL.
- INTERIM AND FINAL RECLAMATION TOPOGRAPHY DESIGNED AND DEVELOPED BY IOF KAISER ENGINEERS, INC., 1990-1991.
- COMPLIANCE TOPOGRAPHY DESIGN AND DEVELOPMENT MODIFIED AND PREPARED BY EARTHFAK ENGINEERING, INC.

SCALE:	DATE
As Shown	
DESIGNED BY: J. MAHER	7-30-90
DRAWN BY: K.M. NEMATI	10-30-91
CHECKED BY:	
APPROVED BY:	
BASE MAP:	

UTAHAMERICAN ENERGY, INC.
 P.O. BOX 986, PRICE, UTAH 84501

EarthFax Engineering, Inc.
 Engineers/Scientists

EXHIBIT A-1
 AREA FOR POST MINING LAND USE CHANGE
 HORSE CANYON MINE



MATCH LINE SEE EXHIBIT A-1

MATCH LINE SEE EXHIBIT A-3

AREA OF POST-MINE
LAND USE CHANGE (PMLU)



NO	DATE	REVISION
1	8-13-93	AREA FOR (PMLU)
2	6-1-98	REVISED PER ADDITIONAL AS-BUILT WORK
3	11-15-91	REVISED PER AS-BUILT
4	11-30-90	REVISED PER TECH. REVIEW



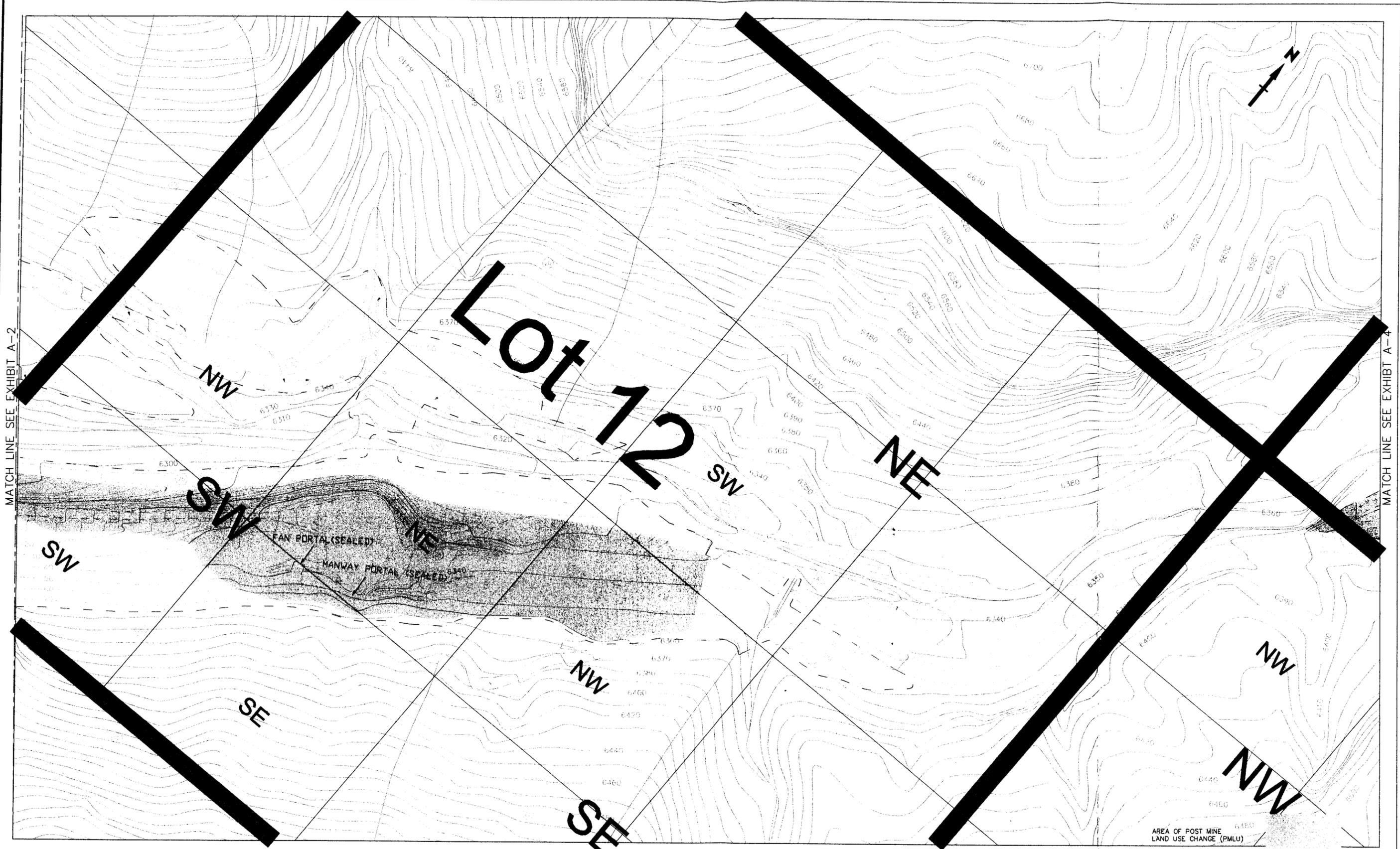
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- DATUM IS 1929 SEA LEVEL.
- COORDINATE SYSTEM IS KAISER STEEL LOCAL.
- INTERIM AND FINAL RECLAMATION TOPOGRAPHY DESIGNED AND DEVELOPED BY ICF KAISER ENGINEERS, INC., 1990-1991.
- COMPLIANCE TOPOGRAPHY DESIGN AND DEVELOPMENT MODIFIED AND PREPARED BY EARTHFAK ENGINEERING, INC.

SCALE: AS SHOWN	DATE
DESIGNED BY: J. MAHER	7-30-90
DRAWN BY: K.M. NEMATI	10-30-91
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	
BASE MAP:	

UTAHAMERICAN ENERGY, INC.
P.O. BOX 986, PRICE, UTAH 84501

EarthFak Engineering, Inc.
Engineers/Scientists

EXHIBIT A-2
AREA FOR POST MINING LAND USE CHANGE
HORSE CANYON MINE



MATCH LINE SEE EXHIBIT A-2

MATCH LINE SEE EXHIBIT A-4

Lot 12

NW

SW

NE

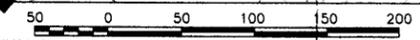
NW

SE

SE

FAN PORTAL (SEALED)
MANWAY PORTAL (SEALED)

AREA OF POST MINE
LAND USE CHANGE (PMLU)



NO	DATE	REVISION	BY	APP
4	6-15-03	PMLU AREAS		
3	6-1-99	REVISED PER ADDITIONAL AS-BUILT WORK		
2	11-15-91	REVISED PER AS-BUILT		
1	11-30-90	REVISED PER TECH. REVIEW		



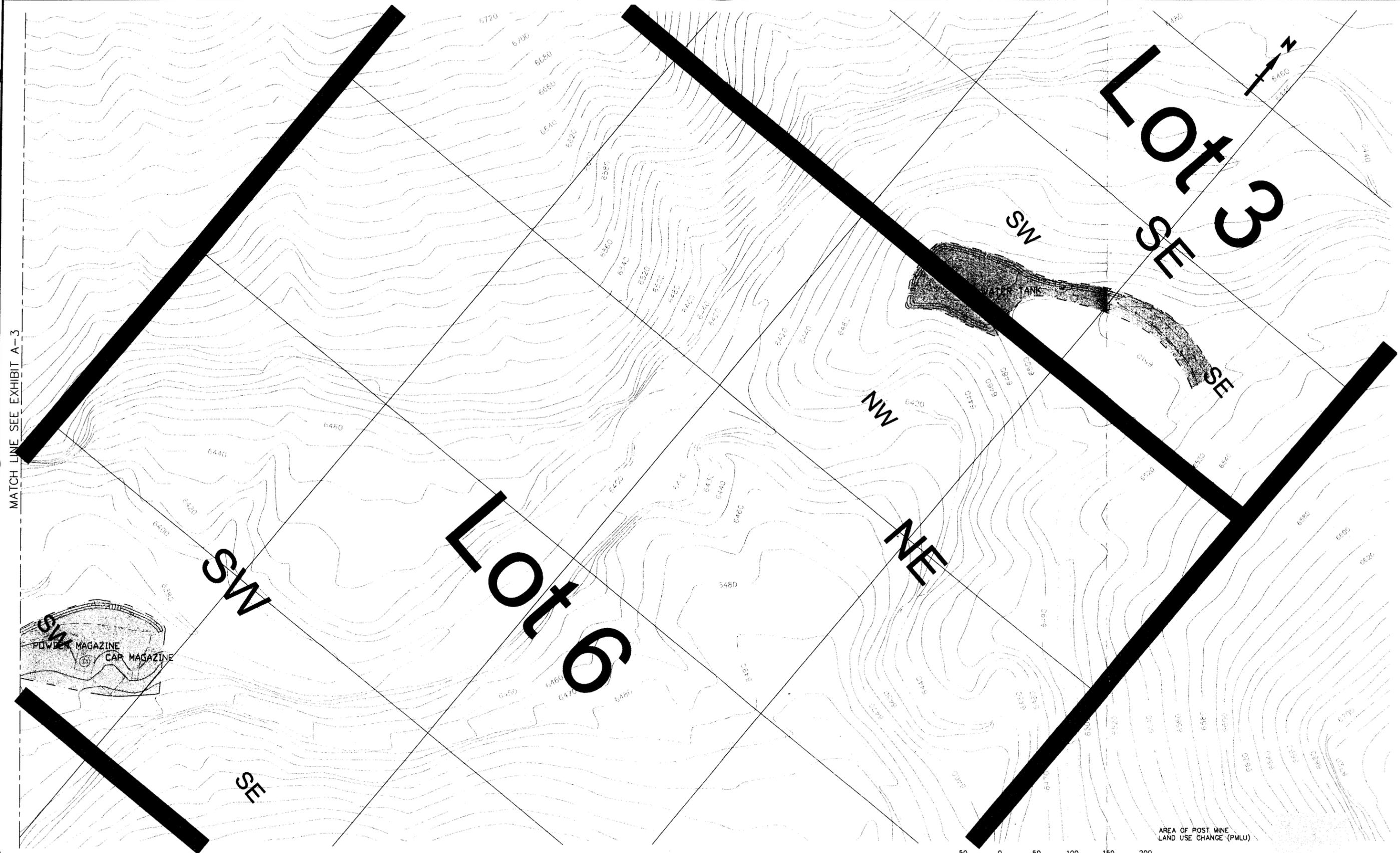
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 3. DATUM IS 1929 SEA LEVEL.
 4. COORDINATE SYSTEM IS KAISER STEEL LOCAL.
 5. INTERIM AND FINAL RECLAMATION TOPOGRAPHY DESIGNED AND DEVELOPED BY ICF KAISER ENGINEERS, INC., 1990-1991.
 6. COMPLIANCE TOPOGRAPHY DESIGN AND DEVELOPMENT MODIFIED AND PREPARED BY EARTHFAK ENGINEERING, INC.

SCALE:	AS SHOWN	DATE
DESIGNED BY:	J. MAHER	7-30-90
DRAWN BY:	K.M. NEMATI	10-30-91
CHECKED BY:		
APPROVED BY:		
DATE:		

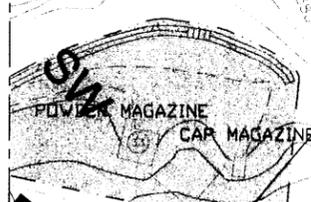
UTAHAMERICAN ENERGY, INC.
 P.O. BOX 986, PRICE, UTAH 84501

EarthFak Engineering, Inc.
 Engineers/Scientists

EXHIBIT A-3
 AREA FOR POST MINE LAND USE CHANGE
 HORSE CANYON MINE



MATCH LINE SEE EXHIBIT A-3



NO	DATE	REVISION	BY	APP
1	8-18-03	AREA FOR (PMLU)		
2	8-1-99	REVISED PER ADDITIONAL AS-BUILT WORK		
3	11-15-91	REVISED PER AS-BUILT		
4	11-30-90	REVISED PER TECH. REVIEW		



1. FOR LEGEND SEE PLATE M-3, VOL. 3
 2. TOPO BASED ON 1985 AERIAL PHOTO BY INTER MOUNTAIN TECHNICAL SERVICES, INC. OF GRAND JUNCTION, COLORADO.
 3. DATUM IS 1929 SEA LEVEL.
 4. COORDINATE SYSTEM IS KAISER STEEL LOCAL.
 5. INTERIM AND FINAL RECLAMATION TOPOGRAPHY DESIGNED AND DEVELOPED BY ICF KAISER ENGINEERS, INC., 1990-1991.
 6. COMPLIANCE TOPOGRAPHY DESIGN AND DEVELOPMENT MODIFIED AND PREPARED BY EARTHFAK ENGINEERING, INC.

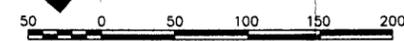
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DESIGNED BY:	J. MAHER	7-30-90
DRAWN BY:	K.M. NEMATI	10-30-91
CHECKED BY:		
APPROVED BY:		
DATE:		
BASE MAP:		

UTAHAMERICAN ENERGY, INC.
 P.O. BOX 986, PRICE, UTAH 84501

EarthFak Engineering, Inc.
 1224 S. UNION PARK AVE.
 SALT LAKE CITY, UTAH 84017

EXHIBIT A-4
 AREA FOR POST MINING LAND USE CHANGE
 HORSE CANYON MINE

AREA OF POST MINE
 LAND USE CHANGE (PMLU)



Public Notice

Application for Post Mining Land Use Change
Horse Canyon Mine
UtahAmerican Energy, Inc.
Permit ACT/007/013

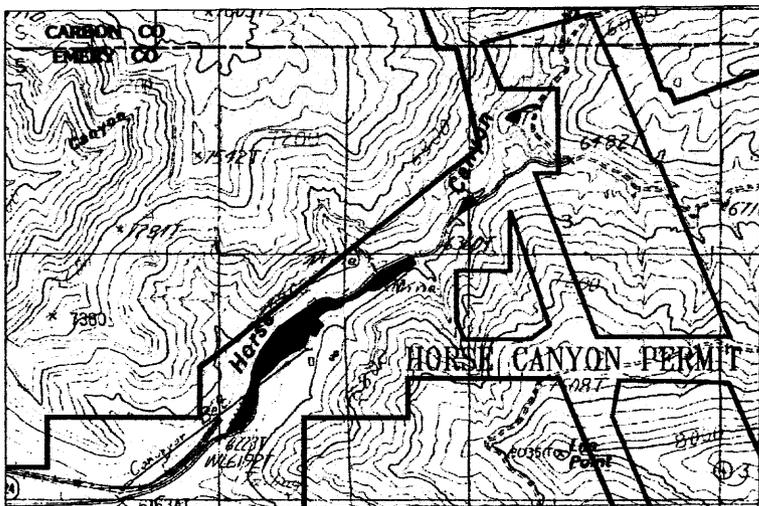
Notice is hereby given that UtahAmerican Energy, Inc., P.O. Box 986, Price, Utah 84501 has filed an administrative complete application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining pursuant to R645-301-400 for a Post Mining Land Use Change (PMLU) for portions of Permit ACT/007/013. The Post Mining Land Use Change applies to 16.18 acres of disturbed lands. The proposed post mine land use change will be from Grazing to Residential/Recreational. Lands are proposed for donation to the College of Eastern Utah. The portion of the permit that is affected is located in Carbon County, Utah and is contained in the following:

Township 16 South, Range 14 East, SLB&M

Section 4: SW4NE4SW4SE4, SE4NE4SW4SE4, NE4NE4SW4SE4, NW4NW4SE4SE4, SE4SE4NW4SE4, W2SW4NE4SE4, NE4SW4NE4SE4, S2NW4NE4SE4, NE4NW4NE4SE4, W2NE4NE4SE4, NE4NE4NE4SE4, Lot 9 S2SE4

Section 3: Lot 12 SW4, NW4SE4, SW4NE4
Lot 11 NW4NW4, S2SW4
Lot 6 NW4NE4
Lot 3 S2SE4

Comprising 16.18 acres more or less.



The permit area is shown on the Lila Point U. S. Geological Survey 7.5- minute map.

The Utah Division of Oil, Gas and Mining will now evaluate the proposal to determine whether it meets all the criteria of the Permanent Program Performance Standards according to the requirements of the Utah Coal Mining Rules.

Written comments, objections and requests for information conferences on this proposal may be addressed to:

Utah Coal Program
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Closing date for submission of such comments, objections and requests for public hearing or information conference on the proposal must be submitted by _____.

Published in the Sun Advocate _____, _____, and _____, 2003



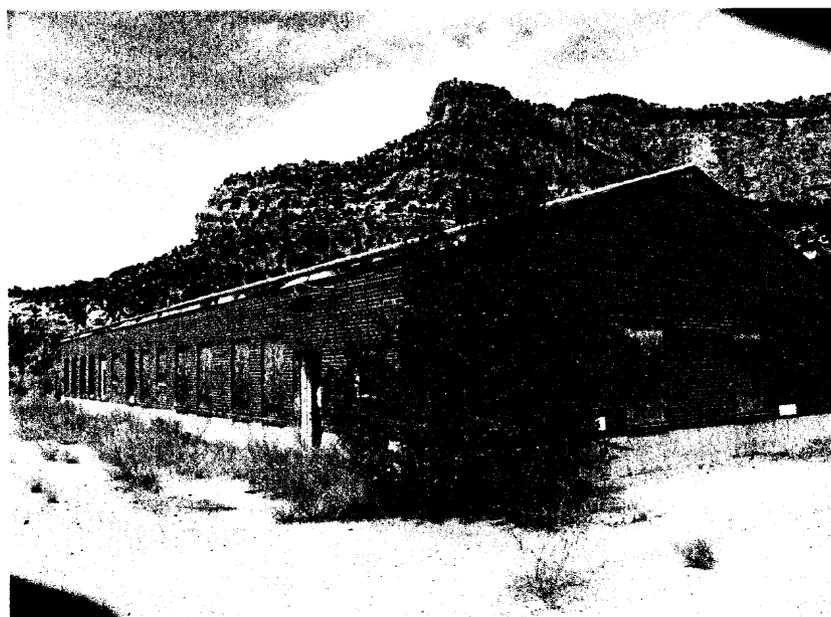
PROJECT AREA

The Horse Canyon Mine is located a few miles south of the city of Price in Emery County, Utah. The project will have a positive economic impact on Carbon and Emery Counties and the College of Eastern Utah through construction activities, increased scientific activity, positive news features and general publicity, potentially increased tourism, and direct revenues from the facility.

The Horse Canyon mine was a coal mine operated for years by U.S. Steel, Geneva Steel, and most recently by UtahAmerican Energy, Inc. (UtahAmerican). The operator has now permanently closed the mine, and is in the process of permitting a new mine east of Horse Canyon. Four principal buildings are located on 3-4 acres of the mine property at the mouth of Horse Canyon: a large warehouse building, a corrugated metal shop building, a bathhouse, and an office building. The brick buildings appear to be structurally sound. No utilities are currently in use on the site, although potable water is locally available from a well. A water tank is located about a mile up the canyon from the buildings. UtahAmerican has agreed to donate the buildings and the property under and surrounding the buildings to the College of Eastern Utah, and they will assist in securing utilities into the property.



PROJECT DESCRIPTION



Horse Canyon is a stunningly beautiful canyon rising into the spectacular Book Cliffs of Utah. A science field camp for Utah universities at the Horse Canyon site will have access to extensive BLM land in the Book Cliffs that can be used for scientific study. In addition, several world-class dinosaur fossil localities are located within a 25-mile radius of Horse Canyon. The camp will be a place where students and researchers can come and stay while studying a variety of subjects, including geology, ecology, botany, biology, and other natural sciences. Other, unrelated, disciplines, such as art, psychology – the list is almost endless – could also use the facility for retreats and training. Workshops and short courses could be held at the camp. In addition, out-of-state universities have indicated that they would lease the facility for their use. The Book Cliffs area is

ideal for geology studies because it is the uppermost step of the Grand Staircase, one of the most dramatic geological features in the world. It is within easy driving distance of Moab, Canyonlands National Park, Arches National Park, Capitol Reef National Park, the San Rafael Swell, the LaSalle Mountains, and many other world-class geological features. Several of the world's best dinosaur fossil localities are within a short radius of Horse

Canyon, and the shop building with a high ceiling and overhead hoists would be an ideal facility to re-assemble dinosaur skeletons. Ecologists and other scientists will find a similar wealth and diversity of natural subjects there to study. Graduate students doing research for a Master's Degree or Doctorate could use the facility as a field base. Utah high schools might also organize field trips around the camp and it may be leased by private organizations, as well.

PROJECT SUPPORTERS

The Center for Mine Land Redevelopment wishes to express its deep appreciation to Utah American Energy, who has graciously agreed to donate the land, the Economic Development Administration who has funded the project, the faculty and staff of the College of Eastern Utah and the University of Utah, the County Commissions of Emery and Carbon Counties, Andalex, Canyon Fuels, Interwest, Kennecott Utah Copper, and all the others without whose support this project would not be possible.

PROJECT INFORMATION

If you are interested in obtaining additional information on the project or would like to become a project supporter, please contact the following:

Dr. Jack Hamilton, Co-Director
jack.hamilton@utah.edu
Center for Mine Land Redevelopment
1495 East 100 South, Room 138
Salt Lake City, Utah 84112
(801) 581-6348
(801) 581-5440 FAX

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Center for Mine Land Redevelopment • Salt Lake City, UT 84112-9363
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Last Updated: Thursday, August 15, 2002



**EMERY
COUNTY****Board of Commissioners**

Ira W. Hatch • Randy G. Johnson • Drew Sitterud
95 East Main Street • P.O. Box 629 • Castle Dale, Utah 84513

May 14, 2002

Mr. Jack Hamilton
Utah Engineering Experiment Station
1495 East 100 South, Rm. 138
Salt Lake City, UT 84112

Dear Mr. Hamilton:

The Emery County Board of Commissioners will support and cooperate with the University of Utah on their Horse Canyon project which is located in Emery County. The county has pledged \$1,500.00 in matching funds for this project, which will be available upon request of the university.

Sincerely,



Drew Sitterud, Commissioner
EMERY COUNTY, STATE OF UTAH

Horse Canyon Project History

Horse Canyon is a stunningly beautiful canyon rising into the spectacular Book Cliffs of Utah. Late in 2000, the Center for Mine Land Redevelopment (the Center) became aware of the Horse Canyon Mine, located a few miles south of the city of Price in Section 4, T16S - R14E, Carbon County, Utah. The location of the mine and other national parks and natural attractions in Utah is shown on Figure I-1. The Horse Canyon mine was a coal mine operated for years by Geneva Steel, and most recently by UtahAmerican Energy, Inc. (UtahAmerican). The mine is now permanently closed, and UtahAmerican is in the process of permitting a new mine, the Lila Mine, just to the east of Horse Canyon. Four principal buildings are located on 3-4 acres of the mine property at the mouth of Horse Canyon: a large brick warehouse building, a shop building that is half brick, half corrugated metal, a brick bathhouse, and a brick office building. The brick buildings were constructed to withstand a potential bomb attack during WWII. No utilities are currently available on the site. A water tank is located about a mile up the canyon from the buildings that was fed by a persistent nearby spring. Utah American must remove or otherwise deal with the now-abandoned buildings in order to complete its obligations for reclamation on the property and obtain release of its reclamation bond.

The Center learned of the Horse Canyon site in 2000. Jack Hamilton, Gene Carr, Terry Chatwin, and Mike Nelson, all from the University of Utah, made an initial visit to the site. Mr. Mel Conrood, a local consultant for UtahAmerican, met the group and showed them around the site. The Center for examined the Horse Canyon site to determine if it was a good candidate for redevelopment. They ruled out industrial redevelopment, since a parcel of land at the former Sunnyside Mine, north of Horse Canyon and south of Price, was previously designated and zoned as an industrial development zone, and is yet to be utilized for that purpose.

Because of the incredible natural beauty of the location, the Center believed that any redevelopment scenario should take advantage of the natural setting and should not, in any way, impair the environment. It appeared that the site was ideal for natural studies, including, but not limited to, geology, paleontology, botany, wildlife management, ecology, archeology, and other scientific subjects. It would also be an exceptional location for artists, photographers, writers, poets, and those seeking a quiet and scenic retreat for study or meditation. Moreover, Horse Canyon is centrally located within a half-day's drive of some of the most fantastic natural wonders in the United States. Those include Moab, Arches and Canyonlands National Parks, Lake Powell, the San Rafael Swell, the La Sal Mountains, the Wasatch Plateau, the Colorado and Green Rivers, and many others. The College of Eastern Utah (CEU) is located in Price, just 30 miles from Horse Canyon. They were contacted to determine if they would be interested in pursuing the development of a field camp, or campus, located in Horse Canyon, to take advantage of the unique potential of that location.

UtahAmerican initially indicated that they would be willing to donate approximately 900 acres of land, located mostly within the canyon, plus the four buildings located on the site. The four buildings include a shop building, a warehouse, a bathhouse, and an office

building. Other structures on the site included two explosives magazine buildings, a fan-house and portal area, a water tank, and some small buildings. The disposition of these other buildings was not determined at that time. Some of them will likely be removed in order to comply with Division of Oil Gas and Mining regulations for closure with an alternative post-mining land use. UtahAmerican later amended their offer to include an additional area of approximately 400 acres located near the mouth of the canyon. The total acreage now is approximately 1200 acres.

CEU personnel that were contacted to discuss the offer included Dr. Ryan Thomas, President, Dr. Chuck Foust, Vice-President for Academic Affairs, Dr. Michael King, Dean of Arts and Sciences, and Brad King, VP of Institutional Advancement & Auxiliaries, Dr. Don Burge, the Director of the Prehistoric Museum in Price, Carbon County Commissioner Mike Milovich, Emery County Commissioner Drew Sitterud, Association of Governments Director Bill Howell, and others were also contacted. The universal consensus was that such a facility would be an asset to the community and to CEU, and would promote economic development in the two counties. I would be critical, however, to create a plan for the development and management of the facility that would make it sustainable and financially independent in its various activities.

The Center for Mine Land Redevelopment approached the Economic Development Administration (EDA) in 2001 to determine if a feasibility study for the Horse Canyon Project would meet their criteria for funding. Subsequently, a proposal was written and funded by the EDA in August 2002 to develop a 1-year feasibility study.

The goal of this feasibility study is to investigate ways to create a center for natural studies, perhaps to be called the "Horse Canyon Center," or the "Horse Canyon Institute," on the property. The prime consideration is for the center to be self-sustaining. In other words, funding for operations at the site must come from the site's activities. Capital expenditures may be funded on a one-time basis from various grants and other sources. The study includes an evaluation of existing buildings, building restoration versus new construction, legal aspects of the property transfer, environmental considerations, a community relations plan, and a business plan to be used to develop an approach for site development. It is intended that the feasibility study and the work that goes into it will facilitate the acquisition of the Horse Canyon site by the College of Eastern Utah and will help in the creation of the planned center.

FACILITIES ASSESMENT Horse Canyon Property

This assessment is organized in the following manner:

- I. Structures including mine portals, shot and cap magazines and buildings.
- II. Electrical
- III. Telephone
- IV. Potable Water
- V. Sewage
- VI. Security
- VII. Fire Protection
- VIII. Recreational trails and roads
- IX. Financials for immediate needs

The assessment addresses the present state of the facilities as well as estimates to bring these facilities up to code without "gilding the lily." Total cost estimates are \$810K low and \$1,211K high including an infrastructure up-grade.

I. Structures:

A. Buildings:

There are at present four buildings consisting of the old mine office, the bath house, the warehouse, and the shop area. Each of these buildings will be addressed individually. All are of double brick construction with good insulating properties except the high bay area in the shop building. Temperatures inside are in the low 70's when the outside temperature is in the mid 90's lowering the need for air conditioning tonnage to a manageable level.

1. Old Mine Office Building (Photo 1 or P-1): This building shows the most potential to be brought up to code in the fastest possible manner. It can serve as a office/classrooms/living area for security people. The roof in the North West (NW) room needs to be fixed. About 40 ft² of roofing material will be needed. Heating of this building which is about 7000 ft² will be divided into four zones, each with a 100KBTU furnace and 4 tons of air conditioning. This will facilitate two 1200 ft² apartments to be built for two married students who will act as security guards for the overall facility. It will also give separate heating and cooling systems to classrooms on either side of the existing hall down the middle of the building. Bathroom fixtures are in excellent shape in this building and can just be cleaned up. Existing galvanized pipe will be replaced with copper potable water lines. Plumbing costs are estimated based on keeping the present cast iron drain lines, which look in good shape, or replacing the entire sewage system with ABS plastic. It also includes making one of the common toilets ADA qualified. One set of washer/dryers, two dishwashers, two refrigerators, and two stoves are included in the cost estimate for the two apartments. The student couples who act as security guards will be furnishing their own furniture or Deseret Industries will be used to get apartment furnishings. Existing conduit for electrical circuits will be used but new wire, some light fixtures, new duplex receptacles and switches, along with new breaker panels will be

used. Some wall relocation along with a drop ceiling in all areas will also be included in the cost estimate. Steam tunnels will be used for heating ducts; air conditioning ducts will be installed between the present ceiling and the new drop ceiling. All new windows will be needed to replace those vandalized and a fire sprinkler system installed throughout the building.

The exterior of this building is in excellent shape and needs only new fascia boards and new gutters. No settling has been noted and no tuck pointing appears necessary.

2. Change House/Shower Building (P-2): This building is on a line with the old mine office building and is located to the NE of the office building. This building could serve as the community center of the facility. As such, it should be considered as the second building to be renovated and brought up to code. Old conduct is in good shape and needs new wire along with the respective breaker boxes. New toilet facilities are needed to segregate men and women's showers/facilities. Modesty panels will be needed between showers to give each person a sense of privacy. This will mean installing a new 5 toilet area with 10 showers for either gender. A 6th toilet will be designed to accommodate an ADA person, along with a private shower for these individuals. The main room will be equipped with two basketball hoops (portable to start with) along with eye bolts in the walls for a volley ball net. Rooms in the SE wing will be devoted to a towel room, locker room and so forth and two of the rooms partitioned to meet men and woman's needs. The other big room is where the miners stored their personal belongings by placing them in a basket and hanging them from the top of the room. This room could conceivably become a game room for playing board games, card games or so forth. Rooms will be heated as in the case of the mine office building (4 each systems with two being used for the basketball room) and extensive re-plumbing. Again, 4 electrical panels will be scheduled for this area. Some roof damage exists, about 144 ft² (P-3)

The outside of this building needs all new windows and glass brick windows in the shower area (P-4). New steel outer doors equipped with the ASSA locking system need to be installed. A fire sprinkler system should be installed as well.

NOTE: Once construction is begun on this facility, the infrastructure needs to be expanded. It is at this point when a 3-phase line will be brought in from the existing 46KVA line between Columbia and Green River substations and a larger reverse osmosis water purification system will need to be installed along with a 1000 gal potable water tank for the reverse osmosis system to feed into. If money were available, installation of a self composting septic system could also be installed to make sewage disposal ecologically compliant.

3. Ware House Building: This building can become the area where dinosaur bones are stored from various digs throughout the area . Extensive storage shelves exist in this building and need to remain in place (P-5). The old shipping and fire doors between rooms can be left in place. Existing conduit is to be used to rewire the facility. Similar HVAC (Heating, ventilation and cooling) as described above for the other

buildings will be needed with the old steam heaters in the ceiling being removed. Again, four furnaces can be used to zone heat/cool the rooms of the facility. We envision that during the winter months, this facility can be winterized with the heat and water shut off. Again, in the SW room of this building about 144 ft² of roof needs replacing. Two toilets need to be renovated, but the fixtures are in excellent shape and have not been vandalized. One of these toilets should be suitable for ADA people. A fire sprinkler system also needs to be installed. Windows need replacing as well and can be aluminum framed thermopane.

This building is the only building that needs tuck pointing of one corner of the building. This is the SE corner (P-6). Additionally, the loading platform needs extensive concrete work and a ramp placed at both ends for those who use wheel chairs. Double steel doors replace three out of six warehouse loading doors on the SE side.

4. Shop Building: The old grease pits will be filled by the deeding agency. All other parts of this facility need to remain as is. Conduit will be reused for wiring. New garage door openers need to be used on the four main doors (P-7). Window glass needs replacing, but for the most part, the window sashes are fine. Gas fired heaters will be used in the high bay area to heat the facility for assembly of dinosaurs. We propose that a rapid intervention vehicle for fighting grass fires be stored in this area as well as snow equipment and snow recreational equipment. This will also eventually house reverse osmosis water purification for the entire facility with the mine being the source for raw water. We anticipate running the usual electrical power to this building along with two bathrooms, one for each gender and with two stalls per bathroom; again, toilet in each bathroom being set up for ADA people. No air conditioning is planned for this facility except for the office areas. This will necessitate one 4 ton AC unit and the usual 100K BTU furnace.

5. Pump House (P-9): The pump is still in place over the spring located on the NW side of the road. The spring needs to be tested and the water treated if need be. The spring is rumored to have a flow of 8 – 10 gal/min. Leave the house as it is, store the water in a underground 500 gal fiber glass tank, and treat the water as it is used in the mine office building. A new water line needs to be run from this pump house to the old mine office building. If for some reason this well is dry, Redden spring is available for our use as is water in the mine.

6. Cap and Powder houses: Presently scheduled for deomolition. Recommend they be kept intact. The cap house (the smaller of the two houses) can be used to house the Diesel powered motor generator set along with the fuel tank. A prestressed concrete roof will replace the present board roof and will be removable should the need arise to replace the motor generator set. The powder house will be used to store mountain bikes for three mountain bike trails in concept and likewise will have a pre-stressed roof added. One trail will be named the Lila point trail (to Lila point); the trail up South Fork the Sam Gilson Trail and will go up Little Horse Canyon; and the third trail will be the Water Tank Trail and will lead to either North or South Fork Canyons. All trails are for intermediate mountain bikers though beginners can use the Sam Gilson Trail until tired.

7. Mine Portals: Scheduled for demolition. Recommend they be retained. We have a mine rescue course at the College of Eastern Utah. It would be realistic training for mine rescue teams to fill this portal with artificial smoke about 300 feet from the portal. A variance from MSHA would be necessary for this to occur and to open the mine for this training. Additionally, we need the main portal and the manway in place to tap into the mine water for a good supply of potable water for the reverse osmosis system eventually envisioned for this site (see the area under potable water for how this would be accomplished).

II. Electrical

A. Existing Power Lines: There is a 46KVA line running a mile from this facility, three phase, between the Columbia, UT, substation (P-10) and a substation just north of GreenRiver. The problem is Utah Power and Light (UP&L) doesn't recognize the existence of this line and instead is cognizant only of a single phase, 240 volt line running up to a cell phone tower owned by Verizon cell phone. The cost of new construction for a three phase, 240 volt line with requisite transformers at the Horse Canyon end of the line is \$80K/mile with 7 miles needed.

B. Meeting Power Needs: We propose to install a Diesel powered motor generator set of 100KVA in the cap house to meet the emergency electrical needs of the entire facility when built but just the power needs of the mine office building initially. Trenching for the conduit will be done by The College of Eastern Utah heavy equipment program people with installation of the wire done by a master electrician and journeyman electrician on the faculty. The feed will enter the facility through the Shop building and enter the utility tunnel at this point leading to the main mine building. It will then go from a main breaker box housing 4 - 225 amp main breakers to the 4 - 225 amp switch panels. This should insure sufficient breakers for future use; each breaker box has room for 42 single circuits.

Once the Change/Shower House comes on line, a substation will be constructed to meet the power requirements of the entire facility. We anticipate that by this time the mine in Lila Canyon will have opened and we can cost share the expense of the 3 phase line construction. The motor generator set will be used for emergencies only at this point. We are told that the presence of this motor generator set will give us an "edge" in negotiating power rates with UP&L (perhaps this is anecdotal?). The cost per ton of Lila point coal is low (about \$17/ton) due to high sulfur. The coal market is "soft" for Utah coal of this quality and hence the mine may not open for several more years until a better economic climate is reached. We cannot depend on the opening of this mine to meet our power needs.

III. Telephone & Internet

A. Present Situation: The old telephone cable is in place, but needs to be located. Emery Telephone indicates the old cable may not be useable due to water penetrating the insulation of the cable.

B. Overcoming the Present Situation: We propose to use cell phones at the opening of the old mine office for both internet, fax and voice. We anticipate by the time the Change/ Shower facility opens, we will use the telephone line brought in for the new mine at Lila point. The limitation to phone lines being installed is if the Lila point mine never opens. Cell phones will remain a viable option just in case the mine never makes it off the ground.

IV. Potable Water

A. Present Situation: There is no potable water in the facility. All water supply lines are dry. When Horse Canyon mine was running, potable water was hauled to the facility. Water for flushing of toilets and so forth, was pumped from the spring to the NW of the road as well as water stored in a 500,000 gal water tank. This tank is dry at the present. Two springs however, are located on the property and can be tapped for water if treated. The Redden spring, located off the road to Lila point, will be shared with the Lila Canyon mine if it ever goes into production until water in the mine is found. Then the output of this spring will be turned over to us completely. And the spring to the NW of the road where the present pump house is located. Both springs flow at about 8 – 10 gal/min.

B. Immediate Needs: We propose to use the output from the present well to the NW of the road to furnish all water needs for just the old mine office. This will necessitate running a 1-1/2 inch plastic line underground from the pump house to an underground 500 gal fiber glass tank, then through a water treatment plant furnished by Culligan and into a 85 gal bladder tank. This will furnish more than enough potable water for cooking, dish-washing, showering and drinking by both families and permanent party staff. A second system will be used for the flushing of toilets with water from the spring that has had its pH lowered, a sediment filter and softened.

C. Future Supply: We intend to use mine water to supply water for fire fighting needs and for potable water. This will mean going into the old mine workings until water is found and tapping into this supply. A variance from MSHA will be necessary to do this but if the mine tunnel is used for mine rescue classes, we can put a man door at the end of the 300 ft of open tunnel and once a month send mine rescue crews into this area behind the barrier to check on the water supply. The Culligan system will be enlarged to furnish water to all buildings using the output of the mine water. Mine water will also be piped up to the 500K gal water tank for the purposes of fire fighting and charging the sprinkler lines should that need arise.

V. Sewage

A. Present Situation: The original facility had a 50K gal holding tank for sewage located SW of the mine office. This tank has been removed in the reclamation and the sewage lines terminated somewhere near the location of this tank.

B. Immediate Needs: We propose to install a septic system consisting of a holding tank and a leach field. This will serve the entire facility once it gets up and running. There is a ravine running to the SW of the buildings that could be used for the leech field. Included in the cost estimates for the septic system would be the percolation tests needed to support the size of the leech field.

C. Future Needs: We intend to support this site as a model for future ecological and environmental uses and studies. As part of this, we intend to eventually install a self composting waste treatment facility similar to the ones used by the Colorado Department of Transportation in Glenwood Canyon along Interstate 70. These toilet facilities, while expensive initially, are self-composting with the compost being used to support the vegetation surrounding the facilities.

VI. Security Issues

A. Present Situation: A chain link fence without barbed tape is used to secure the four buildings. The powder and cap magazines are not secured nor is the pump house. The mine openings are sealed about 30 – 50 feet back in the tunnel with dirt being compacted from the barrier to the front of the portals (2 portals are sealed in this fashion. One portal to the NW has been sealed by dumping large rocks over its location). Vandalism has occurred just in the past few weeks with all the glass brick being shot out of the Change/Shower House and most of the windows and doors being broken, both glass and shashes. In short, there is no security and in one building, evidence of an attempt to start a fire using coal and charcoal fluid was found in just one week of visits.

B. Immediate Needs: A locked gate needs to be placed immediately in front of the north end of the bridge. A sign must be erected indicating who to call for permission to enter the facility. Additionally, the area must be posted as “No Hunting” to try and preserve what is left. Barbed tape must be placed over the existing chain link fence to keep people from entering the facility by climbing over the fence. The existing gates must be strengthened as well. The rancher who uses this road should be given the key to the lock to insure his easy access. We need to put a permanent caretaker on this facility. We suggest that this be two young married couples who are deputized to make arrests if need be. These can be student couples who are in the Criminal Justice Course of study. They would be given free room and utilities to stay in the mine office building once it is completed. Each would have a 1200 ft² living area to include kitchen. While this mine office building is being fixed up we doubt that vandalism will occur. It is only after the new facility is completed that such a permanent party be inserted.

C. Future Needs: We recommend that student married couples continue to be selected to be in charge of this facility, deputized and armed if necessary, to keep people off the property. Hunting groups would be allowed to traverse the property to get to their

hunting locations off CEU or State property. Violations would be addressed by the resident couples calling the Emery Sheriff's department. Only in emergency would our people use firearms and then only in self defense.

VII. Fire Protection

A. Present Situation: Nothing. Old fire hydrants exist in the area of the four buildings, but they are not hooked up nor are they functional.

B. Immediate Needs: Invite the BLM/Forrest service to locate a rapid intervention vehicle in the shop building in case of grass fires in this area. Make certain that the mine office building has a sprinkler system installed when completed. Close the valve on the 500K gal water tank and let it begin to fill and run a 4 inch line from this tank to the building locations as the water source for fire protection water. Install the necessary pumps to charge the sprinkler system in the mine office building. These pumps can be located in the mine shop area or in the utility tunnels of the mine office building.

C. Future Needs: Make certain the 500K gal tank is full of mine water to feed the sprinkler systems if needed. Also make certain that all buildings are equipped with sprinkler systems for fire suppression. If money permits, purchase a rapid intervention fire truck with a 500 gal water tank to extinguish grass fires in the canyon.

VIII Recreational Roads and Trails

A. Present Situation: The main road from Columbia to Horse Canyon belongs to Emery County as does the bridge over the creek at Horse Canyon. This road is in very good shape. The road coming in from US 6/191 is not in as good a shape and would need resurfacing in the near future. Roads and trails in the property are graded and fairly smooth for a passenger vehicles, though some roads eventually disintegrate into four wheel drive roads. There is the possibility of creating three mountain biking trails in this area off the main road. One would go to Lila point and will be named the Lila point trail; one to South Fork called the Sam Gilson trail; and one named the Water Tank trail leading to either North or South Fork Canyons.

B. Present Needs: None. The roads into and on the property are in very good shape. Leave them alone.

IX Financial Data for Immediate Needs

The financial estimates are found in the spread sheet listed as attachment 1. We recommend that all infrastructure needs be funded as well as the mine office building. Funding the mine office building renovation will allow two young married couples to act as guardians of the facilities. The infrastructure items are needed whether portable office units are used or renovation is completed. The costs are estimates and actual costs may exceed those listed by as much as 2 times. The low cost estimates are those for work being done by elder hostel people or the faculty and staff of the College of Eastern Utah.

ACKNOWLEDGEMENTS:

We express our appreciation to those who have contributed to this facility assessment.

Mr. Alan Childs and Mr. Larry Johnson/Talon engineering

Mr. Jay Marshall/Utah American Energy Co.

Mr. Val Johnson, Johnson Heating and Air Conditioning

Mr. Kevin Hussey, Hussy plumbing

Culligan Soft Water

Emery Telephone

Utah Power and Light

Amerigas

Attachment 1: Spreadsheet listing cost estimates.

REV: 6-06-03

Cost Estimates for Facilities Assessment
Horse Canyon Mine Facility
All dollars in thousands
Items Prioritized for Funding

I. Infrastructure Needs

Sewage Disposal

Septic System- 5000 gal holding tank, percolation studies, leech field installation; suitable for 100 people; 6 inch ABS drain line installed to utility tunnel in old mine office building	Low	High
	7.5	10
Total	7.5	10

Potable water Source: 70 - 100 gal/day

Twin Tower Water Softner	1.8	2
Injection Pump	0.5	0.5
Residential reverse Osmosis system	0.75	1
500 gal holding tank	0.4	0.6
85 gal bladder tank	0.8	1
Total	4.25	5.1

Grey water treatment for flushing toilets

Refurbish pump House and well	5	7.5
Run 1-1/2 inch ABS line burried from pump house to old mine office	1	2
500 Gal holding tank	0.4	0.6
100 gal bladder tank	1	1.5
Sedimentation filter	0.9	1.2
Total	8.3	12.8

Electrical Power

Motor generator set; turn key 100KW	25	35
*optional run 1 mile 3 phase line	80	90
Run conduct to main office building	1.5	3
Pre-cast roofs for cap and powder building	5	10
2000 gal diesel fuel tank	5	7.5
Fuel costs/yr	3	8
Total	36.5	65.5

Telephone (4 options)

Fiber optic cable	250	260
Burried copper wire-50 pair	250	260
Radio-24 dial tones	65	70
Verizon cell phones-8 phones/yr charge	5	8

Security

Gate at road	1.5	2
Barbed Tape on top of fence, fence repairs	10	15
Total	11.5	17

Total Infrastructure	68.05	118.4
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Cost Estimates for Facilities Assessment
Horse Canyon Mine Facility
All dollars in thousands
Items Prioritized for Funding

II. MINE OFFICE BUILDING

Plumbing

Use existing cast iron drain pipe/replace with ABS	0	10
Replace galvanized steel pipe with copper-potable	8	10
Grey water lines for toilet flushing	4	6
2-ADA toilets	2	4
2-restrooms, 1 ea gender. 4 stools/4 urinals mens; 6 stools womans	7.5	12
Total	21.5	42

Electrical

Replace wire using existing conduit	15	20
Duplex recepticals, switches, misc. parts	1	1.25
Breaker boxes 225 amps, 42 circuits	0.5	0.75
Main breaker for facility	0.75	1.5
Total	17.25	23.5

Roofing

Fix roof	1	2
Gutters, fascia boards	1.5	2.5
Total	2.5	4.5

Heating

1000 gal propane tank, yearly rent	0.005	0.005
Filling once a year	0.8	1
Furnaces, AC, sheet metal	25	35
Total	25.805	36.005

Interior modifications

Fix up two 1200 ft^2 apartments	40	50
New windows	10	15
New steel doors	4	6
Appliances for apts	6	7
Drop Ceiling	7.5	10
Sprinkler system and fire protection	10	15
Paint	1	1.5
New light fixtures-where necessary	3	5
Total	81.5	109.5

Exterior modifications

Cement work	1	2
Clean up	1	2
Total	2	4

Total for building: 150.555 219.505

Cost Estimates for Facilities Assessment
 Horse Canyon Mine Facility
 All dollars in thousands
 Items Prioritized for Funding
III. Change/Shower House

Plumbing		
2-15 stall shower areas	10	20
6- ADA toilets	3	4
4-restrooms, 2 ea gender 5 stools and urinals in mens room and 10 stools in women's	15	25
Grey water plumbing	2	3
Use existing drain lines/replace with ABS	0	10
2 ea gas fired 250 gal water heaters	6	10
Total	36	72
Electrical		
Replace wiring using existing conduit	15	20
Duplex recepticals, switches	1	1.5
Breaker Boxes, 225 amp, 42 breakers	0.5	0.75
Main breaker for facility	1.5	2.5
Total	18	24.75
Roofing		
Fix roof	1	2
New gutters, fascia boards	1.5	2.5
Total	2.5	4.5
Heating		
4-furnaces & AC, sheet metal	25	35
Total	25	35
Interior modifications		
Modify walls	20	25
Replace glass brick in shower room area	6	8
Replace windows	10	15
New steel doors and frames; ASSA locks	4	6
Sprinkler system for fire protection	10	15
Paint	1	1.5
Drop ceilings in office areas	5	8
Total	56	78.5
Exterior Modifications		
Cement work	3	5
Clean Up	1	2
Total	4	7
Total for building:	141.5	221.75

Cost Estimates for Facilities Assessment
 Horse Canyon Mine Facility
 All dollars in thousands
 Items Prioritized for Funding
IV. Ware House

Plumbing

4- restrooms, 2 ea gender, 2 stools;2 urinals for men's; 4 stools womens	15	25
2- ADA toilets, one per gender	1	1.5
Grey Water plumbing	2.5	3
Use existing drain line/replace with ABS	0	10
Total	18.5	39.5

Electrical

Replace wiring using existing conduit	15	20
Duplexe Recepticals, Switches, misc	1.5	2
Breaker boxes, 225 amp, 42 breakers, 4 ea	0.5	1
Main breaker for the facility	1.5	2.5
Total	18.5	25.5

Roofing

Fix roof	1	2
New fascia	1	1.5
New Gutters	0.5	1
Total	2.5	4.5

Heating

2 furnaces/AC	10	15
Ceiling heaters for high bays	1.5	2
Total	11.5	17

Interior modifications

Modify walls	10	15
Replace windows	2	2.5
Steel doors and frames	7.5	10
Sprinkler system and fire detection	10	15
Paint	1	1.5
Drop ceilings in office areas	5	8
Total	35.5	52

Exterior modifications

Cement work	10	25
Clean up	1	2
Total	11	27

	97.5	165.5
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Cost Estimates for Facilities Assessment
Horse Canyon Mine Facility
All dollars in thousands
Items Prioritized for Funding
V. Shop Building

Plumbing

2 restrooms, one each for each gender; 3 stools-3urinals mens; 4 stools women's	5	7.5
ADA toilets, one each gender	1	1.5
Grey water plumbing	1	1.5
Use existing cast iron drains/replace with ABS	0	5
Total	7	15.5

Electrical

4-225 amp, 42 circuit breaker boxes	0.5	1
Replace wiring using existing conduit	20	25
Duplex recepticals, Switches, misc	2	2.5
Main breaker for facility	1.5	2.5
Total	24	31

Roofing

Nothing seems to be in need/just in case something overlooked	0	2
Total	0	2

Heating

7-high bay gas heaters	3.5	4
1 furnace/AC	5	7.5
Total	8.5	11.5

Interior modifications

Replace glass windows where needed	2.5	3
4-garage door openers	8	10
2 new big bay doors	5	7.5
Modify walls	5	10
Paint	2	2.5
Fire protection system	10	15
Drop ceilings in office area	7.5	10
Total	40	58

Exterior modifications

Concrete work	10	15
Clean up	3	5
Total	13	20

Total for building 92.5 138

VI. Mine Portals

Permitting

Open the portals and breach the seal	10	15
New wall 300 ft back w/man door	10	15
Security gates on portals	2	3
Total	20	33

Grand total for facility modifications 570.105 896.155

Cost Estimates for Facilities Assessment
Horse Canyon Mine Facility
All dollars in thousands
Items Prioritized for Funding

VII. Infrastructure Up-grades Made During Change House Upgrade

Potable Water

Reverse Osmosis Plant-Locate in Shop area	150	200
1000 gal water storage tank, fiber glass	10	15
Total	160	215

Electrical Power

Run 1 mile of new construction from existing 46KVA line	80	100
Total	80	100

Total for infrastructure up-grades 240 315

Revision: 6-06-03

Grand Total for all costs associated with this campus: 810.105 1211.155

Exhibit E *DRAFT*

MEMORANDUM OF AGREEMENT

Between the College of Eastern Utah ("CEU") and UtahAmerican Energy, Inc. ("UEI"). UEI owns the Horse Canyon Property and related facilities located near Columbia, Utah, in Emery County. UEI desires to donate, and CEU desires to receive, portions of this property.

It is the intent of the parties to this Memorandum of Agreement to recite the agreement which they have reached in connection with the donation of portions of the Horse Canyon Property (the "Donated Property"). Details of the transfer are included in the "SALE TRANSFER AND ASSIGNMENT AGREEMENT".

The legal description of the Donated Property is attached as Exhibit A. Exhibit A shows both the Donated Property and property being retained by UEI. Exhibit C is a map depicting the Donated Property. The Donated Property is shown as the red hatched area on Exhibit C.

The Donated Property includes the Water rights described in Exhibit B.

A list of the various surface facilities included in the Donated Property are included in Exhibit E.

UEI will complete the work listed in Exhibit D prior to the final disposition of the Donated Property. The work in Exhibit D is required by the Division of Oil, Gas and Mining ("DOGM").

UEI will submit the appropriate application to change the Post Mine Land use from Wildlife to Residential/Recreation.

UEI will apply for Phase III bond release for all the donated properties. Phase III bond release will come in two stages. The first stage will be for the facility areas in and around the structures listed in Exhibit E. The Bond release application will be filed immediately following DOGM's approval of the Post Mine Land Use change. The second stage will be bond release for all reclaimed areas currently under Phase II reclamation and will be filed immediately following the vegetation inventory in the spring of 2004.

As per DOGM's request, UEI is making CEU aware that the buildings included in the donation are over 50 years old and may be of some interest to the State Historical Preservation Office ("SHIPO"). CEU is encouraged to contact SHIPO prior to demolishing or rehabilitating the buildings.

Dated this _____ day of _____, 2003

College of Eastern Utah

By _____
Dr. Ryan Thomas
President

UtahAmerican Energy, Inc.

By _____
Clyde I. Borrell
President

Exhibit A

**College of Eastern Utah
Horse Canyon Project**

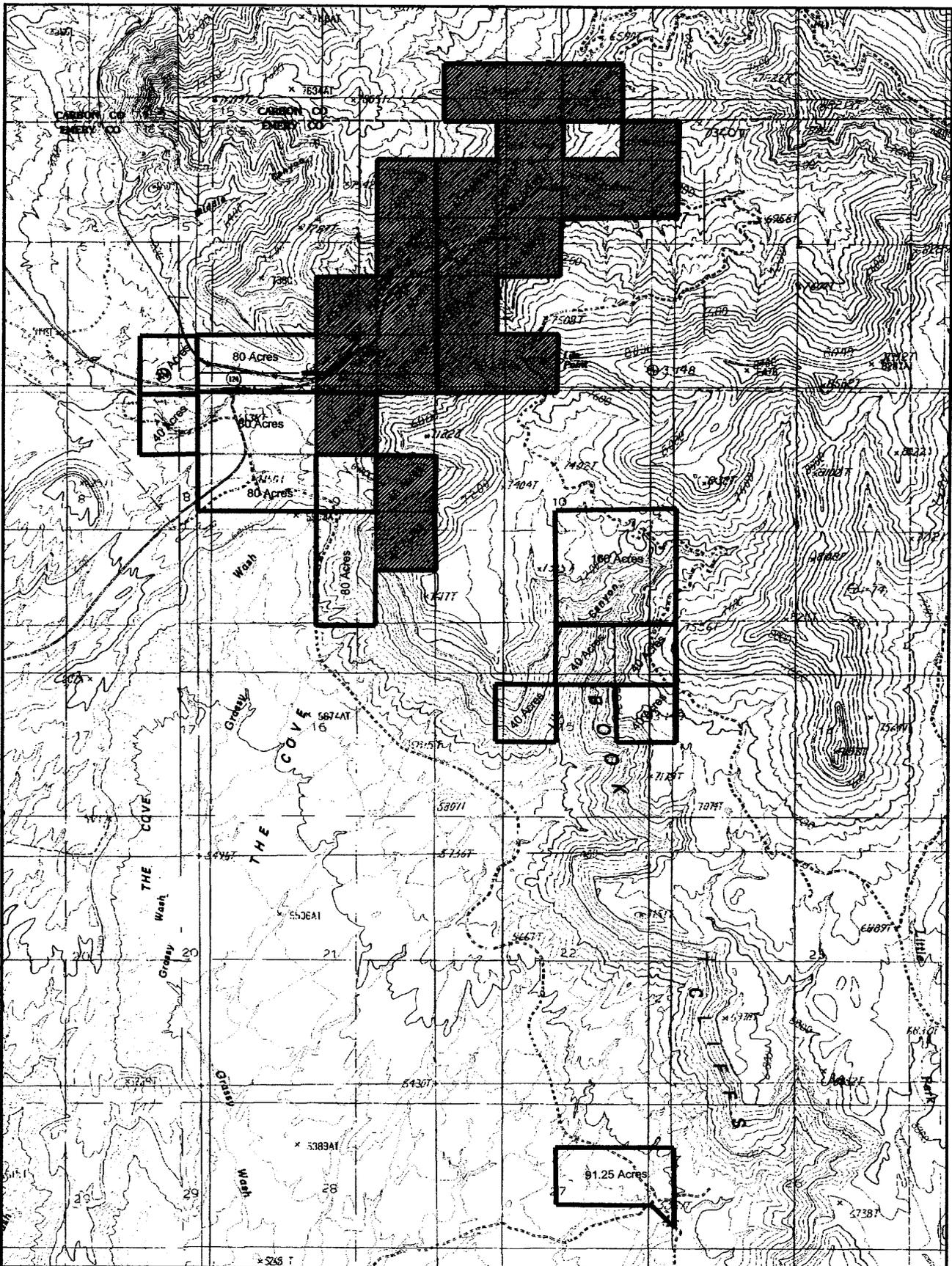
Legal Description		UEI to Retain Ownership		Donate to State College of Eastern Utah	
Section		Description	Acres	Description	Acres
T.16S R.14E Emery County Fee Surface	3			Lots 1,3,7,8,11	176.13
	4	S2SW4	80	NW4SE4, SE4SE4	80
	5	SE4SE4	40		
	9	S2NW4, W2SE4	160	NW4NE4, SE4NE4, NE4SE4	120
	10	SE4	160		
	15	SE4NW4, N2NE4, SE4NE4	160		
T.15S R.14E Carbon County Fee Surface	33			S2SE4	80
	34			SW4SW4	40
T.16S R.14E Emery County Fee Simple	3			Lots 5, 6, 12, NW4SW4, S2SW4	240
	4			Lots 8, 9, NE4SE4, SW4SE4	160
	8	NE4NE4	40		
	9	N2NW4	80		
T.16S R.14E Emery County Fee Simple	15	S2NE4, ALSO, Beginning at the NE corner of the NW4SE4, and running thence W 1000 feet; thence SE'y to a point 500 feet S of beginning; thence N 500 feet to beginning	91.25		
TOTAL			811.25		896.13

EXHIBIT B

DESCRIPTION OF TRANSFERRED WATER RIGHTS

- (1) Water User's Claim 91-183: Certificate of Appropriation of Water No. 4592, Application No. 20888, Water Users Claim 91-183, dated August 30, 1952, recorded in Book C of Water Rights at Page 259 in the office of the Emery County Recorder, United States Steel Company, appropriator, appropriating eighty thousandths second feet (.08 cfs) from Horse Canyon Creek, Emery County, Utah, for the period from January 1 to December 31, inclusive, for mining purposes, for diversion and use as set forth in the Deed.
- (2) Water Right No. 91-4959 (A67591), to appropriate 5.0 acre-feet of water from Redden Spring, located at a point South 2145 feet and West 330 feet from the NE Corner of Section 3, T16S, R14E, SLBM.

The Purchaser will have the right to use any water not needed by the Seller for mining purposes or water replacement uses.



LEGEND:

US to Retain 

Proposed Development 

REVISIONS

NO.	DATE	BY
1	2/17/2003	RJM


 SCALE:
 1000' 0' 2000'


Exhibit C
 DATE: April 3, 2002 REVISION BY: UIC
 DRAWN BY: AS SHOWN PROJECT:

Exhibit D

Outline of Work

I Facility Area:

- 1) Cover all window and door openings with 3/8" plywood.
 - A) Office
 - B) Bath House
 - C) Warehouse
 - D) Windows only on Shop
- 2) Retain one door opening in each building, preferable in the rear away from traffic. Does not apply to the shop building.
- 3) Install simple lock on the retained doors.
- 4) Fill in all grease sumps and underground passage openings in the shop building with sand/gravel material.

II Portal Area:

- 1) Remove and dispose of temporary metal fan housing.
- 2) Remove both concrete head collars at ground level.
- 3) Cover remaining concrete with a minimum of 3' of cover material obtained from the existing pad keeping pad as flat as practical.
- 4) Backfill underground rock dust bin.

NOTE: a) All concrete and metal must be disposed of in an approved disposal site for noncoal waste. Metal may be salvaged.

b) All efforts must be made to minimize disturbance of vegetation and soil.

c) Anticipated start date 15 July 03.

Exhibit E

LIST OF FACILITIES

The following is a list of facilities that will be donated to the College of Eastern Utah by UtahAmerican Energy, Inc.

- 1) Sedimentation Pond #2 (including associated drainage features)
- 2) Pump House
- 3) Office Building
- 4) Bath House
- 5) Warehouse
- 6) Shop
- 7) Chain Link Fence
- 8) Building pads
- 9) Parking Lot
- 10) Powder Magazine
- 11) Cap Magazine
- 12) Water Tank
- 13) Portal Pad