

0042

**COPY**



March 31, 2004

Utah Coal Regulatory Program  
 Division of Oil, Gas and Mining  
 1594 West North Temple, Suite 121 0  
 Box 145801  
 Salt Lake City, Utah 84114-5801

*Handwritten:*  
 Mining  
 C/015/0009  
 Copy 2/015/0017  
 " C/045/0018 OK  
 " C/015/0009

**Re: Submittal of Annual Report for 2003, PacifiCorp, Trail Mountain Mine, C/015/009, Cottonwood Mine, C/015/019, Deer Creek Mine, C/015/018, Des-Bee-Dove, C/015/017, Emery County, Utah.**

PacifiCorp, by and through its wholly-owned subsidiary, Energy West Mining Company as mine operator, herewith submit the Annual Reports for 2003.

Please find enclosed two copies each of the General Section (all forms and activities of the above mines related to coal mining and reclamation monitoring during the 2003 year), Annual Hydrologic and Subsidence Reports for 2003.

If there are any questions or concerns please call Dennis Oakley at 687-4825.

Sincerely,

*Handwritten signature:*  
 Charles A. Semborski

Charles A. Semborski  
 Geology/Environmental Supervisor

cc: Doug Johnson  
 (File)

J:\Environmental\PERMITS\Annualreports\2003Annual\coverlet03.wpd

**RECEIVED**

**MAR 31 2004**

DIV. OF OIL, GAS & MINING

File in:

- Confidential
- Shelf
- Expandable

2003 Annual Report  
 Refer to Record No 0042 Date 03/31/2004  
 - 4/0150018 In Coming

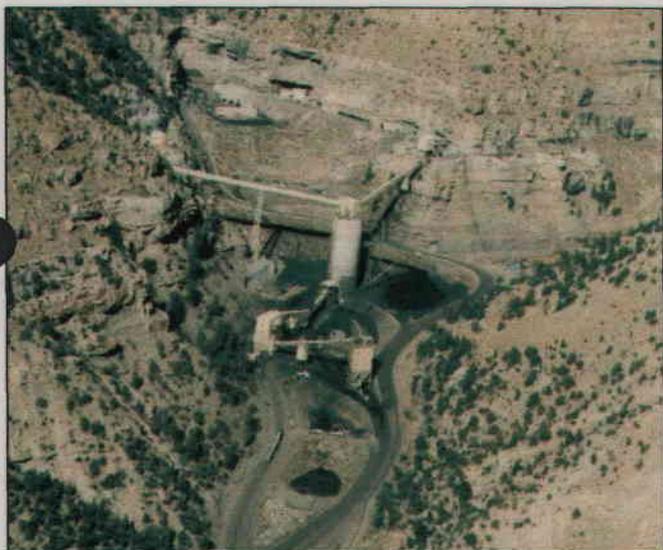
**Confidential**

Huntington Office:  
 (435) 687-9821  
 Fax (435) 687-2695  
 Purchasing Fax (435) 687-9092

Deer Creek Mine:  
 (435) 687-2317  
 Fax (435) 687-2285

# 2003 ANNUAL REPORT

*COTTONWOOD MINE C/015/019*



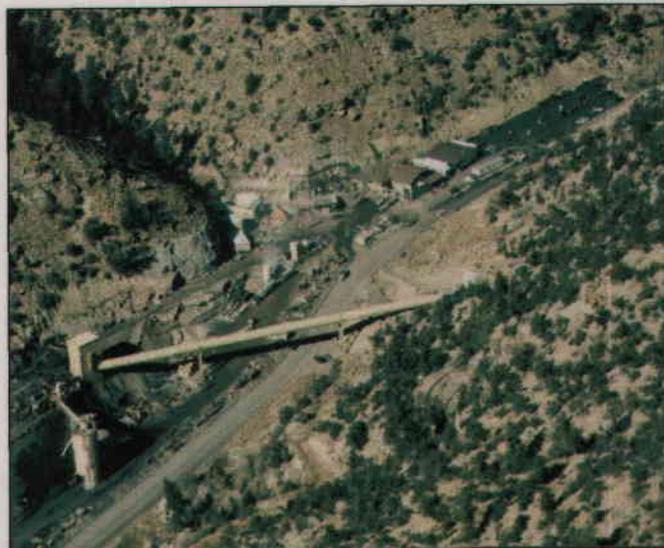
*DES-BEE-DOVE MINES C/015/017*



*DEER CREEK MINE C/015/018*



*TRAIL MOUNTAIN MINE C/015/009*



To enter text, click in the box and type your response. If a box already contains an entry select the entry and type the replacement. You can use the **tab** key to move from one field to the next. To select a check box, click in the box or type an x.

## GENERAL INFORMATION

Permitte Name	PacifiCorp
Mine Name	Cottonwood Mine
Operator Name (If other then permittee)	Energy West Mining Company
Permit Expiration Date	July 6, 2004 (Currently in cessation)
Permit Number	C/015/019
Authorized Representative Title	Chuck Semborski, Geology/Permitting Supervisor
Phone Number	(435) 687-9821
Fax Number	(435) 687-2695
E-mail Address	
Mailing Address	P. O Box 310 Huntington, Utah 84528
Designated Representative	Chuck Semborski, Geology/Permitting Supervisor
Resident Agent	Chuck Semborski, Geology/Permitting Supervisor
Resident Agent Mailing Address	P. O Box 310 Huntington, Utah 84528
Number of Binders Submitted	3

## IDENTIFICATION OF OTHER PERMITS

Identify other permits that are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expiration Date
MSHA Mine ID(s)	42-01211	Cottonwood Mine	None
MSHA Impoundment(s)	1211-UT-09-02052-02	North Sediment Pond	None
	1211-UT-09-02052-03	South Sediment Pond	None
NPDES/UPDES Permit(s)	UT0022896	Site 001, 003, 004, 005 consisting of	10/31/07
		mine discharge and sediment ponds	
PSD Permit(s) (Air)	DAQE-694-95	Issued 8/9/95, Includes Trail Mtn Mine	None
	DAQE-835-91	Issued 12/16/91, WRS	
<b>Other</b>			

**CERTIFIED REPORTS**

List the certified inspection reports as required by the rules and under the approved plan that must be periodically submitted to the Division. Specify whether the information is included as Appendix A to this report or currently on file with the Division.

Certified Reports:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On File	
Excess Spoil Piles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Refuse Piles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no discharge from sediment pond in 2003
<b>Other</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**REPORTING OF OTHER TECHNICAL DATA**

List other technical data and information as required under the approved plan, which must be periodically submitted to the Division. Specify whether the information is included as Appendix B to this report or currently on file with the Division.

Technical Data:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On file	
Climatological	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Included in separate Hydrologic Report
Subsidence Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Included in separate Subsidence Report
Vegetation Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to Appendix B
Raptor Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to Appendix B
Soils Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
First quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Second quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Third quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Fourth quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Geological / Geophysical	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Engineering	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Non Coal Waste / Abandoned Underground Equipment*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Other Data</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

\*Reminder: If equipment has been abandoned during 2003, an amendment must be submitted that includes a map showing its location, a description of what was abandoned, whether there were any hazardous or toxic materials and any revision to the PHC as necessary.





To enter text, click in the box and type your response. If a box already contains an entry select the entry and type the replacement. You can use the **tab** key to move from one field to the next. To select a check box, click in the box or type an *x*.

### GENERAL INFORMATION

Permitte Name	PacifiCorp
Mine Name	Des Bee Dove Mine
Operator Name (If other then permittee)	Energy West Mining Company
Permit Expiration Date	8/30/05 (Mine reclaimed in 2003)
Permit Number	C/015/017
Authorized Representative Title	Chuck Semborski, Geology/Permitting Supervisor
Phone Number	(435) 687-9821
Fax Number	(435) 687-2695
E-mail Address	
Mailing Address	P. O Box 310 Huntington, Utah 84528
Designated Representative	Chuck Semborski, Geology/Permitting Supervisor
Resident Agent	Chuck Semborski, Geology/Permitting Supervisor
Resident Agent Mailing Address	P. O Box 310 Huntington, Utah 84528
Number of Binders Submitted	4

### IDENTIFICATION OF OTHER PERMITS

Identify other permits that are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expiration Date
MSHA Mine ID(s)	None	Records abandond by MSHA March 27, 1987	
MSHA Impoundment(s)	None		
NPDES/UPDES Permit(s)	UTG040022	Site 001: Sediment Pond	4/30/08
PSD Permit(s) (Air)	N/A		
<b>Other</b>			

**CERTIFIED REPORTS**

List the certified inspection reports as required by the rules and under the approved plan that must be periodically submitted to the Division. Specify whether the information is included as Appendix A to this report or currently on file with the Division.

Certified Reports:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On File	
Excess Spoil Piles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Refuse Piles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sediment Pond: Site 001
<b>Other</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**REPORTING OF OTHER TECHNICAL DATA**

List other technical data and information as required under the approved plan, which must be periodically submitted to the Division. Specify whether the information is included as Appendix B to this report or currently on file with the Division.

Technical Data:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On file	
Climatological	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Included in separate Hydrologic Report
Subsidence Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Included in separate Subsidence Report
Vegetation Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to Appendix B
Raptor Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to Appendix B
Soils Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
First quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Second quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Third quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Fourth quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Geological / Geophysical	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Engineering	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Non Coal Waste / Abandoned Underground Equipment*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Other Data</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Reminder: If equipment has been abandoned during 2003, an amendment must be submitted that includes a map showing its location, a description of what was abandoned, whether there were any hazardous or toxic materials and any revision to the PHC as necessary.





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## GENERAL INFORMATION

Permitte Name	PacifiCorp
Mine Name	Deer Creek Mine
Operator Name (If other then permittee)	Energy West Mining Company
Permit Expiration Date	February 7, 2006
Permit Number	C/015/018
Authorized Representative Title	Chuck Semborski, Geology/Permitting Supervisor
Phone Number	(435) 687-9821
Fax Number	(435) 687-2695
E-mail Address	
Mailing Address	P. O Box 310 Huntington, Utah 84528
Designated Representative	Chuck Semborski, Geology/Permitting Supervisor
Resident Agent	Chuck Semborski, Geology/Permitting Supervisor
Resident Agent Mailing Address	P. O Box 310 Huntington, Utah 84528
Number of Binders Submitted	4

## IDENTIFICATION OF OTHER PERMITS

Identify other permits that are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expiration Date
MSHA Mine ID(s)	42-00121	Deer Creek Mine	None
MSHA Impoundment(s)	N/A		
NPDES/UPDES Permit(s)	UT0023604	Site 001: Sediment Pond Site 002: Mine Discharge	11/30/2007
PSD Permit(s) (Air)	DAQE-926-96	Issued 10/4/96, Mine Tipple	None
	DAQE-926-91	Issued 12/5/91, WRS	
<b>Other</b>			

**CERTIFIED REPORTS**

List the certified inspection reports as required by the rules and under the approved plan that must be periodically submitted to the Division. Specify whether the information is included as Appendix A to this report or currently on file with the Division.

Certified Reports:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On File	
Excess Spoil Piles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Refuse Piles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sediment Pond: Site 001
<b>Other</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Technical Data:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On file	
Climatological	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Included in separate Hydrologic Report
Subsidence Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Included in separate Subsidence Report
Vegetation Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to Appendix B
Raptor Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to Appendix B
Soils Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
First quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Second quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Third quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Fourth quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Geological / Geophysical	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Engineering	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Non Coal Waste / Abandoned Underground Equipment*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Other Data</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Reminder: If equipment has been abandoned during 2003, an amendment must be submitted that includes a map showing its location, a description of what was abandoned, whether there were any hazardous or toxic materials and any revision to the PHC as necessary.





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## GENERAL INFORMATION

Permitte Name	PacifiCorp
Mine Name	Trail Mountain Mine
Operator Name (If other then permittee)	Energy West Mining Company
Permit Expiration Date	February 7, 2006
Permit Number	C/015/009
Authorized Representative Title	Chuck Semborski, Geology/Permitting Supervisor
Phone Number	(435) 687-9821
Fax Number	(435) 687-2695
E-mail Address	
Mailing Address	P. O Box 310 Huntington, Utah 84528
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Resident Agent Mailing Address	P. O Box 310 Huntington, Utah 84528
Number of Binders Submitted	4

## IDENTIFICATION OF OTHER PERMITS

Identify other permits that are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expiration Date
MSHA Mine ID(s)	42-01211	Trail Mountain Mine	None
MSHA Impoundment(s)	None		
NPDES/UPDES Permit(s)	UT0023728	Site 001: Sediment Pond	12/31/2007
		Site 002: Mine Discharge	
PSD Permit(s) (Air)	DAQE-694-95	Issued 8/9/95	None
<b>Other</b>			

**CERTIFIED REPORTS**

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Certified Reports:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On File	
Excess Spoil Piles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Refuse Piles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sediment Pond: Site 001 - No discharge in 2003
<b>Other</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**REPORTING OF OTHER TECHNICAL DATA**

List other technical data and information as required under the approved plan, which must be periodically submitted to the Division. Specify whether the information is included as Appendix B to this report or currently on file with the Division.

Technical Data:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On file	
Climatological	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Included in separate Hydrologic Report
Subsidence Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Included in separate Subsidence Report
Vegetation Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to Appendix B
Raptor Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to Appendix B
Soils Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
First quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Second quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Third quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Fourth quarter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in separate Hydrologic Report
Geological / Geophysical	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Engineering	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Non Coal Waste / Abandoned Underground Equipment*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Other Data</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

\*Reminder: If equipment has been abandoned during 2003, an amendment must be submitted that includes a map showing its location, a description of what was abandoned, whether there were any hazardous or toxic materials and any revision to the PHC as necessary.





**APPENDIX A**

**Certified Reports**

Excess Spoil Piles  
Refuse Piles  
Impoundments

As required under R645-301-514

**CONTENTS**

<b>IMPOUNDMENT INSPECTION AND CERTIFIED REPORT</b>		<b>Page 1 of 2</b>	
<b>Permit Number</b>	ACT/015/019	<b>Report Date</b>	MARCH 28, 2003
<b>Mine Name</b>	Cottonwood/Wilberg		
<b>Company Name</b>	PacifiCorp		
<b>Impoundment Name...</b>	<b>North Pond</b>	<b>South Pond</b>	<b>Waste Rock Pond</b>
<b>Impoundment Number.</b>			
<b>UPDES Permit Number</b>		UT 0022896-003A	UT 0022896-005
<b>MSHA ID NUMBER.....</b>	1211-UT-09-01211-01	1211-UT-09-01211-02	

**IMPOUNDMENT INSPECTION**

<b>Inspection Date</b>	March 24, 2003
<b>Inspected By</b>	Rick Cullum/ John Christensen
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	1ST Quarter Inspection 2003

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

North Pond: No instabilities or weaknesses observed.

South Pond: No instabilities or weaknesses observed.

Waste Rock Site Pond: No instabilities observed.

<b>Required for an impoundment which functions as a SEDIMENTATION POND.</b>	<b>Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</b>			
		<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
	<b>60% Design Storage Capacity</b>	.34 A.F. at 7351.0 ft.	.19 A.F. at 7322.3 ft.	1.45 A.F. at 6761.5 ft.
	<b>100% Sediment Capacity</b>	.56 A.F. at 7354.83 ft.	.32 A.F. at 7325.33 ft.	2.42 A.F. at 6765.3 ft.
	<b>Principle and emergency spillway elevations.</b>			
		<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
	<b>Principal Spillway Elevation</b>	7354.83	7325.33	6766.3
	<b>Emergency Spillway Elevation</b>	7363.33	7334.2	6770.0

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
Water Elevation	7353.22	DRY	6761.57
Discharging	NO	NO	No
Inlet/Outlet Condition	Good	Good	Good
Slope conditions	Good	Good	Good

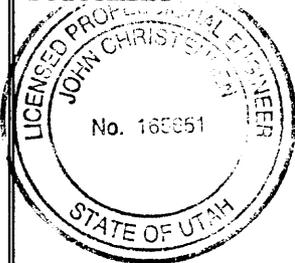
\*See "Hydrologic Monitoring Data" report submitted to DOGM quarterly for monitoring information.

**Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
Sediment Volume	0.18 AF	0.00 AF	1.04 AF
Remaining Sediment Storage Capacity	0.38 AF	0.32 AF	1.38 AF
Water Impounded	0.20 AF	0.0 AF	0.32 AF
Changes, Comments,	Pond is functioning Normally at this time.	Pond is functioning normally.	

NORTH AND SOUTH PONDS WERE CLEANED IN THE FOURTH QUARTER OF 2000. THE COTTONWOOD MINE WAS IDLED IN 2001, SO THE ONLY WATER THAT REPORTS TO THE PONDS IS RUN-OFF DURING A STORM EVENT. The south pond decant was replaced during the 1<sup>st</sup> quarter of 2003.

**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen

Date: 4/10/03

Signature: Richard Cullum

Date: 4-11-03

<b>IMPOUNDMENT INSPECTION AND CERTIFIED REPORT</b>		<b>Page 1 of 2</b>	
Permit Number	ACT/015/019	Report Date	June 27, 2003
Mine Name	Cottonwood/Wilberg		
Company Name	PacifiCorp		
Impoundment Name...	North Pond	South Pond	Waste Rock Pond
Impoundment Number.			
UPDES Permit Number		UT 0022896-003A	UT 0022896-005
MSHA ID NUMBER.....	1211-UT-09-01211-01	1211-UT-09-01211-02	

**IMPOUNDMENT INSPECTION**

Inspection Date	June 16, 2003
Inspected By	Rick Cullum/ John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	2nd Quarter Inspection 2003

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

North Pond: No instabilities or weaknesses observed.

South Pond: No instabilities or weaknesses observed.

Waste Rock Site Pond: No instabilities observed.

Required for an impoundment which functions as a SEDIMENTATION POND.	Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.			
		<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
	60% Design Storage Capacity	.34 A.F. at 7351.0 ft.	.19 A.F. at 7322.3 ft.	1.45 A.F. at 6761.5 ft.
	100% Sediment Capacity	.56 A.F. at 7354.83 ft.	.32 A.F. at 7325.33 ft.	2.42 A.F. at 6765.3 ft.
	Principle and emergency spillway elevations.			
		<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
	Principal Spillway Elevation	7354.83	7325.33	6766.3
	Emergency Spillway Elevation	7363.33	7334.2	6770.0

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
Water Elevation	7351.37	DRY	DRY
Discharging	NO	NO	No
Inlet/Outlet Condition	Good	Good	Good
Slope conditions	Good	Good	Good

\*See "Hydrologic Monitoring Data" report submitted to DOGM quarterly for monitoring information.

**Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
Sediment Volume	0.16 AF	0.00 AF	1.04 AF
Remaining Sediment Storage Capacity	0.38 AF	0.32 AF	1.38 AF
Water Impounded	0.10 AF	0.0 AF	0.0 AF
Changes, Comments,	Pond is functioning Normally at this time.	Pond is functioning normally.	

NORTH AND SOUTH PONDS WERE CLEANED IN THE FOURTH QUARTER OF 2000. THE COTTONWOOD MINE WAS IDLED IN 2001, SO THE ONLY WATER THAT REPORTS TO THE PONDS IS RUN-OFF DURING A STORM EVENT. The south pond decant was replaced during the 1<sup>st</sup> quarter of 2003.

**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen Date: 7/14/03  
 Signature: Richard Culbert Date: 7-16-03

<b>IMPOUNDMENT INSPECTION AND CERTIFIED REPORT</b>		<b>Page 1 of 2</b>	
<b>Permit Number</b>	ACT/015/019	<b>Report Date</b>	SEPT. 29, 2003
<b>Mine Name</b>	Cottonwood/Wilberg		
<b>Company Name</b>	PacifiCorp		
<b>Impoundment Name...</b>	<b>North Pond</b>	<b>South Pond</b>	<b>Waste Rock Pond</b>
<b>Impoundment Number.</b>			
<b>UPDES Permit Number</b>		UT 0022896-003A	UT 0022896-005
<b>MSHA ID NUMBER.....</b>	1211-UT-09-01211-01	1211-UT-09-01211-02	

**IMPOUNDMENT INSPECTION**

<b>Inspection Date</b>	September 15, 2003
<b>Inspected By</b>	Rick Cullum/ John Christensen
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	3rd Quarter Inspection 2003

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

**North Pond:** No instabilities or weaknesses observed.

**South Pond:** No instabilities or weaknesses observed.

**Waste Rock Site Pond:** No instabilities observed.

Required for an impoundment which functions as a SEDIMENTATION POND.

Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
<b>60% Design Storage Capacity</b>	.34 A.F. at 7351.0 ft.	.19 A.F. at 7322.3 ft.	1.45 A.F. at 6761.5 ft.
<b>100% Sediment Capacity</b>	.56 A.F. at 7354.83 ft.	.32 A.F. at 7325.33 ft.	2.42 A.F. at 6765.3 ft.

Principle and emergency spillway elevations.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
<b>Principal Spillway Elevation</b>	7354.83	7325.33	6766.3
<b>Emergency Spillway Elevation</b>	7363.33	7334.2	6770.0

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
Water Elevation	7354.97	DRY	6762.12
Discharging	NO	NO	No
Inlet/Outlet Condition	Good	Good	Good
Slope conditions	Good	Good	Good

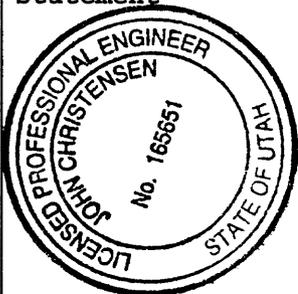
\*See "Hydrologic Monitoring Data" report submitted to DOGM quarterly for monitoring information.

**Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
Sediment Volume	0.16 AF	0.00 AF	1.04 AF
Remaining Sediment Storage Capacity	0.38 AF	0.32 AF	1.38 AF
Water Impounded	0.29 AF	0.0 AF	0.42 AF
Changes, Comments,	Pond is functioning Normally at this time.	Pond is functioning normally.	

THE COTTONWOOD MINE WAS IDLED IN 2001, SO THE ONLY WATER THAT REPORTS TO THE PONDS IS RUN-OFF DURING A STORM EVENT. The south pond decant was replaced during the 1<sup>st</sup> quarter of 2003. There was a small amount of water in both ponds.

**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen Date: 10/7/03  
 Signature: Richard Cullum Date: 10-8-03

<b>IMPOUNDMENT INSPECTION AND CERTIFIED REPORT</b>		<b>Page 1 of 2</b>	
Permit Number	ACT/015/019	Report Date	DEC. 19, 2003
Mine Name	Cottonwood/Wilberg		
Company Name	PacifiCorp		
Impoundment Name...	North Pond	South Pond	Waste Rock Pond
Impoundment Number.			
UPDES Permit Number		UT 0022896-003A	UT 0022896-005
MSHA ID NUMBER.....	1211-UT-09-01211-01	1211-UT-09-01211-02	

<b>IMPOUNDMENT INSPECTION</b>	
Inspection Date	DEC 9, 2003
Inspected By	Rick Cullum/ John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	4TH Quarter Inspection 2003

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

North Pond: No instabilities or weaknesses observed.

South Pond: No instabilities or weaknesses observed.

Waste Rock Site Pond: No instabilities observed.

Required for an impoundment which functions as a SEDIMENTATION POND.	Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.			
		<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
	60% Design Storage Capacity	.34 A.F. at 7351.0 ft.	.19 A.F. at 7322.3 ft.	1.45 A.F. at 6761.5 ft.
	100% Sediment Capacity	.56 A.F. at 7354.83 ft.	.32 A.F. at 7325.33 ft.	2.42 A.F. at 6765.3 ft.
	Principle and emergency spillway elevations.			
		<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
	Principal Spillway Elevation	7354.83	7325.33	6766.3
	Emergency Spillway Elevation	7363.33	7334.2	6770.0

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
Water Elevation	7353.37 TOP OF ICE	DRY	6761.37 TOP OF ICE
Discharging	NO	NO	No
Inlet/Outlet Condition	Good	Good	Good
Slope conditions	Good	Good	Good

\*See "Hydrologic Monitoring Data" report submitted to DOGM quarterly for monitoring information.

**Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

	<u>North Pond</u>	<u>South Pond</u>	<u>Waste Rock Pond</u>
Sediment Volume	0.16 AF	0.00 AF	1.04 AF
Remaining Sediment Storage Capacity	0.38 AF	0.32 AF	1.38 AF
Water Impounded	0.21 AF	0.0 AF	0.28 AF
Changes, Comments,	Pond is functioning Normally at this time. Pond was frozen.	Pond is functioning normally.	Pond frozen.

THE COTTONWOOD MINE WAS IDLED IN 2001, SO THE ONLY WATER THAT REPORTS TO THE PONDS IS RUN-OFF DURING A STORM EVENT. The south pond decant was replaced during the 1<sup>st</sup> quarter of 2003.

**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: \_\_\_\_\_  
Signature: \_\_\_\_\_

Date: 12/31/03  
Date: 1-5-04

Permit Number	ACT/015/017	Report Date	MARCH. 28, 2003
Mine Name	Des Bee Dove		
Company Name	Energy West Mining Company		
Impoundment Identification	Impoundment Name	Mine Site Pond	
	Impoundment Number		
	UPDES Permit Number	UT-0023591	
	MSHA ID Number		

**IMPOUNDMENT INSPECTION**

Inspection Date	3/24/03		
Inspected By	Rick Cullum/John Christensen		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	First Quarter 2003 Inspection		

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.  
There are no visible signs of weakness or instability.

Required for an impoundment which functions as a SEDIMENTATION POND.	Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.		
	60% Design Storage Capacity	1.2 A.F.	at 6756
	100% Sediment Capacity	2.0 A.F.	at 6757
	Principle and emergency spillway elevations.		
	Principle Spillway Elevation (F.A.S.L.):	6757.0	
	Emergency Spillway Elevation: (F.A.S.L.):	6771.8	

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities

associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

Water Elevation 6759.64  
 Discharging No  
 Inlet, Outlet Conditions Good  
 Slope conditions Good

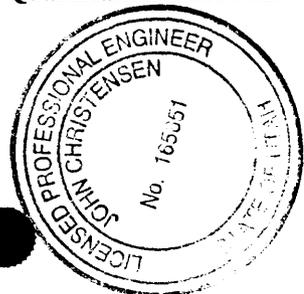
\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

**Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

Sediment Volume: 1.95  
 Remaining Sediment Storage Capacity: .05  
 Water Impoundment: 255 A.F.

Changes or Comments: The pond was partially cleaned in the 3<sup>rd</sup> Quarter of 2002.

**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen Date: 4/10/03  
 Signature: Richard Callahan Date: 4-11-03

<b>Permit Number</b>	ACT/015/017	<b>Report Date</b>	June 27, 2003
<b>Mine Name</b>	Des Bee Dove		
<b>Company Name</b>	Energy West Mining Company		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Mine Site Pond	
	<b>Impoundment Number</b>		
	<b>UPDES Permit Number</b>	UT-0023591	
	<b>MSHA ID Number</b>		

<b>IMPOUNDMENT INSPECTION</b>	
<b>Inspection Date</b>	June 16, 2003
<b>Inspected By</b>	Rick Cullum/John Christensen
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Second Quarter 2003 Inspection

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

There are no visible signs of weakness or instability.

Required for an impoundment which functions as a <b>SEDIMENTATION POND</b> .	Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.
	<b>60% Design Storage Capacity</b> 1.2 A.F. at 6756
	<b>100% Sediment Capacity</b> 2.0 A.F. at 6757
	Principle and emergency spillway elevations.
	<b>Principle Spillway Elevation (F.A.S.L.):</b> 6757.0
	<b>Emergency Spillway Elevation: (F.A.S.L.):</b> 6771.8

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities

associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

Water Elevation 6759.64  
 Discharging No  
 Inlet, Outlet Conditions Good  
 Slope conditions Good

\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

**Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

Sediment Volume: 1.95  
 Remaining Sediment Storage Capacity: .05  
 Water Impoundment: 255 A.F.

**Changes or Comments:** The pond was partially cleaned in the 3<sup>rd</sup> Quarter of 2002. The pond was dry at the time of the inspection.

**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: *John Christensen* Date: 7/16/03  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

<b>Permit Number</b>	ACT/015/017	<b>Report Date</b>	SEPT. 29, 2003
<b>Mine Name</b>	Des Bee Dove		
<b>Company Name</b>	Energy West Mining Company		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	<b>Mine Site Pond</b>	
	<b>Impoundment Number</b>		
	<b>UPDES Permit Number</b>	UT-0023591	
	<b>MSHA ID Number</b>		

<b>IMPOUNDMENT INSPECTION</b>	
<b>Inspection Date</b>	SEPT. 30, 2003
<b>Inspected By</b>	Rick Cullum/John Christensen
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Third Quarter 2003 Inspection

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

There are no visible signs of weakness or instability.

Required for an impoundment which functions as a <b>SEDIMENTATION POND.</b>	Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.
	<b>60% Design Storage Capacity</b> 1.2 A.F. at 6756
	<b>100% Sediment Capacity</b> 2.0 A.F. at 6757
	Principle and emergency spillway elevations.
	<b>Principle Spillway Elevation (F.A.S.L.):</b> 6757.0
	<b>Emergency Spillway Elevation: (F.A.S.L.):</b> 6771.8

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities

associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

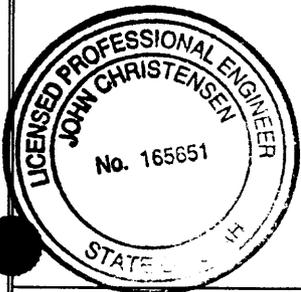
Water Elevation 6757.48  
 Discharging No  
 Inlet, Outlet Conditions Good  
 Slope conditions Good

\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

**Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

Sediment Volume: 2.58  
 Remaining Sediment Storage Capacity 0  
 Water Impoundment: 0.46 A.F.  
 Changes or Comments: The pond will be schedule to be cleaned.

**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen Date: 10/7/03

Signature: Richard Cullen Date: 10-8-03

<b>Permit Number</b>	ACT/015/017	<b>Report Date</b>	DEC. 19, 2003
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<b>Mine Name</b>	Des Bee Dove		
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<b>Company Name</b>	Energy West Mining Company		
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<b>Impoundment Identification</b>	<b>Impoundment Name</b>	<b>Mine Site Pond</b>	
	<b>Impoundment Number</b>		
	<b>UPDES Permit Number</b>	UT-0023591	
	<b>MSHA ID Number</b>		

**IMPOUNDMENT INSPECTION**

<b>Inspection Date</b>	DEC. 9, 2003		
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<b>Inspected By</b>	Rick Cullum/John Christensen		
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<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Fourth Quarter 2003 Inspection		
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1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

There are no visible signs of weakness or instability.

<p>Required for an impoundment which functions as a <b>SEDIMENTATION POND.</b></p>	<p>Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</p> <p><b>60% Design Storage Capacity</b>                      1.2 A.F. at 6756</p> <p><b>100% Sediment Capacity</b>                      2.0 A.F. at 6757</p> <hr/> <p>Principle and emergency spillway elevations.</p> <p><b>Principle Spillway Elevation (F.A.S.L.):</b>                      6757.0</p> <p><b>Emergency Spillway Elevation: (F.A.S.L.):</b>                      6771.8</p>		
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**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities



Permit Number	ACT/015/018	Report Date	MAR. 28, 2003
Mine Name	Deer Creek Mine		
Company Name	Energy West Mining		
Impoundment Identification	Impoundment Name	Mine Site Pond:	Waste Rock Pond:
	Impoundment Number		
	UPDES Permit Number	UT-0023604-001	
	MSHA ID Number	N/A	N/A

**IMPOUNDMENT INSPECTION**

Inspection Date	Mine Site:3/20/03	Waste Rock Pond:3/20/03
Inspected By	Rick Cullum / John Christensen	

Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	First Quarter 2003 Inspection
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1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Conditions, Comments Etc.	No hazards observed.	No hazards observed.

Required for an impoundment which functions as a SEDIMENTATION POND.	Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.									
	<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;"></th> <th style="width:35%; text-align: center;"><u>Mine Site Pond:</u></th> <th style="width:35%; text-align: center;"><u>Waste Rock Pond:</u></th> </tr> </thead> <tbody> <tr> <td>60% Design Storage Capacity</td> <td style="text-align: center;">1.87 A.F. at 7213.1 ft.</td> <td style="text-align: center;">.59 A.F. at 6312.7 ft.</td> </tr> <tr> <td>100% Sediment Capacity</td> <td style="text-align: center;">3.12 A.F. at 7216.0 ft.</td> <td style="text-align: center;">.98 A.F. at 6313.45 ft.</td> </tr> </tbody> </table>		<u>Mine Site Pond:</u>	<u>Waste Rock Pond:</u>	60% Design Storage Capacity	1.87 A.F. at 7213.1 ft.	.59 A.F. at 6312.7 ft.	100% Sediment Capacity	3.12 A.F. at 7216.0 ft.	.98 A.F. at 6313.45 ft.
	<u>Mine Site Pond:</u>	<u>Waste Rock Pond:</u>								
60% Design Storage Capacity	1.87 A.F. at 7213.1 ft.	.59 A.F. at 6312.7 ft.								
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	Principle and emergency spillway elevations.									
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	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>								
Principle Spillway Elevation (F.A.S.L.):	7218.64	6318.0								
Emergency Spillway Elevation	7232.03	6318.0								

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Water Elevation	7226.63	None
Discharging	Yes	Never
Inlet, Outlet, Spillway Conditions	Good	Good
Out slope Conditions	No Change	No Change

\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Sediment Volume	0 A.F.	None
Remaining Sediment Storage Capacity	3.12 A.F.	0.98 A.F.
Water impounded	8.85 A.F.	NONE

Changes, Comments, etc.	The pond was cleaned in the fourth quarter of 2002. Ice was still covering the pond.	No change from last Inspection.
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**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: *John Christensen*  
 Signature: *Richard Cullen*

Date: 4/10/03  
 Date: 4-11-03

Permit Number	ACT/015/018	Report Date	JUNE 28, 2003
Mine Name	Deer Creek Mine		
Company Name	Energy West Mining		
Impoundment Identification	Impoundment Name	Mine Site Pond:	Waste Rock Pond:
	Impoundment Number		
	UPDES Permit Number	UT-0023604-001	
	MSHA ID Number	N/A	N/A

**IMPOUNDMENT INSPECTION**

Inspection Date	Mine Site:6/23/03	Waste Rock Pond:6/23/03
Inspected By	Rick Cullum / John Christensen	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	2ND Quarter 2003 Inspection	

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Conditions, Comments Etc.	No hazards observed.	No hazards observed.

Required for an impoundment which functions as a SEDIMENTATION POND.	<p>Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;"></th> <th style="width:35%; text-align: center;"><u>Mine Site Pond:</u></th> <th style="width:35%; text-align: center;"><u>Waste Rock Pond:</u></th> </tr> </thead> <tbody> <tr> <td>60% Design Storage Capacity</td> <td style="text-align: center;">1.87 A.F. at 7213.1 ft.</td> <td style="text-align: center;">.59 A.F. at 6312.7 ft.</td> </tr> <tr> <td>100% Sediment Capacity</td> <td style="text-align: center;">3.12 A.F. at 7216.0 ft.</td> <td style="text-align: center;">.98 A.F. at 6313.45 ft.</td> </tr> </tbody> </table>		<u>Mine Site Pond:</u>	<u>Waste Rock Pond:</u>	60% Design Storage Capacity	1.87 A.F. at 7213.1 ft.	.59 A.F. at 6312.7 ft.	100% Sediment Capacity	3.12 A.F. at 7216.0 ft.	.98 A.F. at 6313.45 ft.
	<u>Mine Site Pond:</u>	<u>Waste Rock Pond:</u>								
60% Design Storage Capacity	1.87 A.F. at 7213.1 ft.	.59 A.F. at 6312.7 ft.								
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	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>								
Principle Spillway Elevation (F.A.S.L.):	7218.64	6318.0								
Emergency Spillway Elevation	7232.03	6318.0								

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Water Elevation	7221.27	None
Discharging	Yes	Never
Inlet, Outlet, Spillway Conditions	Good	Good
Out slope Conditions	No Change	No Change

\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Sediment Volume	.65 A.F.	None
Remaining Sediment Storage Capacity	2.47 A.F.	0.98 A.F.
Water impounded	5.05 A.F.	NONE
Changes, Comments, etc.	The pond was cleaned in the fourth quarter of 2002.	No change from last inspection.

**Qualification  
Statement**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen  
Signature: Richard Cullum

Date: 7/11/03  
Date: 7-16-03



<b>IMPOUNDMENT INSPECTION AND CERTIFIED REPORT</b>		<b>Page 1 of 2</b>	
<b>Permit Number</b>	ACT/015/018	<b>Report Date</b>	SEPT. 29, 2003
<b>Mine Name</b>	Deer Creek Mine		
<b>Company Name</b>	Energy West Mining		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	<b>Mine Site Pond:</b>	<b>Waste Rock Pond:</b>
	<b>Impoundment Number</b>		
	<b>UPDES Permit Number</b>	UT-0023604-001	
	<b>MSHA ID Number</b>	N/A	N/A

**IMPOUNDMENT INSPECTION**

<b>Inspection Date</b>	<b>Mine Site:</b> 9/18/03	<b>Waste Rock Pond:</b> 6/23/03
<b>Inspected By</b>	Rick Cullum / John Christensen	

<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	3RD Quarter 2003 Inspection
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1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
<b>Conditions, Comments Etc.</b>	No hazards observed.	No hazards observed.

Required for an impoundment which functions as a SEDIMENTATION POND.	Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.		
		<u>Mine Site Pond:</u>	<u>Waste Rock Pond:</u>
	<b>60% Design Storage Capacity</b>	1.87 A.F. at 7213.1 ft.	.59 A.F. at 6312.7 ft.
	<b>100% Sediment Capacity</b>	3.12 A.F. at 7216.0 ft.	.98 A.F. at 6313.45 ft.
	Principle and emergency spillway elevations.		
		<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
	<b>Principle Spillway Elevation (F.A.S.L.):</b>	7218.64	6318.0
	<b>Emergency Spillway Elevation</b>	7232.03	6318.0

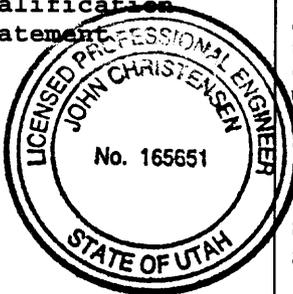
**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Water Elevation	7220.18	None
Discharging	Yes	Never
Inlet, Outlet, Spillway Conditions	Good	Good
Out slope Conditions	No Change	No Change

\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Sediment Volume	.97 A.F.	None
Remaining Sediment Storage Capacity	2.15 A.F.	0.98 A.F.
Water impounded A.F.	4.23 A.F.	
Changes, Comments, etc.	The pond was cleaned in the fourth quarter of 2002.	No change from last inspection.

**Qualification  
Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen  
 Signature: Richard Cullem

Date: 10/7/03  
 Date: 10-8-03

<b>IMPOUNDMENT INSPECTION AND CERTIFIED REPORT</b>		<b>Page 1 of 2</b>	
<b>Permit Number</b>	ACT/015/018	<b>Report Date</b>	DEC. 19, 2003
<b>Mine Name</b>	Deer Creek Mine		
<b>Company Name</b>	Energy West Mining		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	<b>Mine Site Pond:</b>	<b>Waste Rock Pond:</b>
	<b>Impoundment Number</b>		
	<b>UPDES Permit Number</b>	UT-0023604-001	
	<b>MSHA ID Number</b>	N/A	N/A

<b>IMPOUNDMENT INSPECTION</b>									
<b>Inspection Date</b>	<b>Mine Site:</b> 12/9/03	<b>Waste Rock Pond:</b> 12/9/03							
<b>Inspected By</b>	Rick Cullum / John Christensen								
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	4th Quarter 2003 Inspection								
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <table border="0" style="width:100%"> <tr> <td style="width:33%;"></td> <td style="width:33%; text-align:center"><u>Mine Site Pond</u></td> <td style="width:33%; text-align:center"><u>Waste Rock Pond</u></td> </tr> <tr> <td><b>Conditions, Comments Etc.</b></td> <td style="text-align:center">No hazards observed.</td> <td style="text-align:center">No hazards observed.</td> </tr> </table>					<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>	<b>Conditions, Comments Etc.</b>	No hazards observed.	No hazards observed.
	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>							
<b>Conditions, Comments Etc.</b>	No hazards observed.	No hazards observed.							

Required for an impoundment which functions as a SEDIMENTATION POND.	Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.		
		<u>Mine Site Pond:</u>	<u>Waste Rock Pond:</u>
	<b>60% Design Storage Capacity</b>	1.87 A.F. at 7213.1 ft.	.59 A.F. at 6312.7 ft.
	<b>100% Sediment Capacity</b>	3.12 A.F. at 7216.0 ft.	.98 A.F. at 6313.45 ft.
	Principle and emergency spillway elevations.		
		<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
	<b>Principle Spillway Elevation (F.A.S.L.):</b>	7218.64	6318.0
	<b>Emergency Spillway Elevation</b>	7232.03	6318.0

**Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Water Elevation	7222.66 top of ice	None
Discharging	Yes	Never
Inlet, Outlet, Spillway Conditions	Good	Good
Out slope Conditions	No Change	No Change

\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

	<u>Mine Site Pond</u>	<u>Waste Rock Pond</u>
Sediment Volume	.97 A.F.	None
Remaining Sediment Storage Capacity	2.15 A.F.	0.98 A.F.
Water impounded A.F.	5.63 A.F.	NONE

**Changes, Comments, etc.**

	The pond was cleaned in the fourth quarter of 2002. Pond was frozen At time of inspection.		No change from last inspection.
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**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability

Signature: John Christensen Date: 12/31/03  
 Signature: Richard Cullum Date: 1-5-04

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2	
Permit Number	ACT/015/009	Report Date	JUNE 28, 2003
Mine Name	Trail Mountain Mine		
Company Name	Energy West Mining Company		
Impoundment Identification	Impoundment Name	Trail Mountain Mine Pond:	
	Impoundment Number		
	UPDES Permit Number	UT-G04003-001	
	MSHA ID Number	N/A	
<b>IMPOUNDMENT INSPECTION</b>			
Inspection Date	June 16, 2003		
Inspected By	John Christensen / Rick Cullum/		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	2ND Quarter 2003 Inspection		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No unstable or structural weaknesses found.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</p> <p>60% Design Storage Capacity            0.282 A.F. at 7182</p> <p>100% Sediment Capacity                      0.47 A.F. at 7183.6</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation (F.A.S.L.):            7186.6</p> <p>Emergency Spillway Elevation:(F.A.S.L.):            7194.6</p>		
<p>4. Field Information. Provide current water elevation, whether pond is discharging, type and number of</p>			

samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Water Elevation 7182.23  
 Discharging No  
 Inlet, Outlet Conditions Good  
 Slope conditions Good

\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

5. Field Evaluation. Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

Sediment Volume 0.28 A.F.  
 Remaining Sediment Storage Capacity 0.19 A.F.  
 Water Impounded .14 A.F.

Changes, comments, etc. Mining has seized at Trail Mtn. Operations only  
 Storm run off will run into the pond.  
 There has been no changes to the pond or dam since the last inspection.

Qualification Statement



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen Date: 7/11/03  
 Signature: Richard Culbert Date: 7-16-03

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2	
Permit Number	ACT/015/009	Report Date	SEPT. 29, 2003
Mine Name	Trail Mountain Mine		
Company Name	Energy West Mining Company		
Impoundment Identification	Impoundment Name	Trail Mountain Mine Pond:	
	Impoundment Number		
	UPDES Permit Number	UT-G04003-001	
	MSHA ID Number	N/A	
<b>IMPOUNDMENT INSPECTION</b>			
Inspection Date	SEPT. 15, 2003		
Inspected By	John Christensen / Rick Cullum/		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	3RD Quarter 2003 Inspection		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No unstable or structural weaknesses found.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</p> <p>60% Design Storage Capacity            0.282 A.F. at 7182</p> <p>100% Sediment Capacity            0.47 A.F. at 7183.6</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation (F.A.S.L.):            7186.6</p> <p>Emergency Spillway Elevation: (F.A.S.L.):            7194.6</p>		
<p>4. Field Information. Provide current water elevation, whether pond is discharging, type and number of</p>			

samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

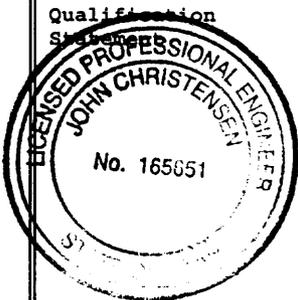
Water Elevation 7183.63  
 Discharging No  
 Inlet, Outlet Conditions Good  
 Slope conditions Good

\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

**5. Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

Sediment Volume 0.28 A.F.  
 Remaining Sediment Storage Capacity 0.19 A.F.  
 Water Impounded .19 A.F.

Changes, comments, etc. Mining has seized at Trail Mtn. Operations only  
 Storm run off will run into the pond.  
 There has been no changes to the pond or dam since the last inspection.



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen Date: 10/7/03  
 Signature: Richard Cullen Date: 10-8-03

<b>IMPOUNDMENT INSPECTION AND CERTIFIED REPORT</b>		<b>Page 1 of 2</b>	
<b>Permit Number</b>	ACT/015/009	<b>Report Date</b>	DEC. 19, 2003
<b>Mine Name</b>	Trail Mountain Mine		
<b>Company Name</b>	Energy West Mining Company		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Trail Mountain Mine Pond:	
	<b>Impoundment Number</b>		
	<b>UPDES Permit Number</b>	UT-G04003-001	
	<b>MSHA ID Number</b>	N/A	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	DEC. 9, 2003		
<b>Inspected By</b>	John Christensen / Rick Cullum/		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)		4TH Quarter 2003 Inspection	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No unstable or structural weaknesses found.</p>			
<p>Required for an impoundment which functions as a SEDIMENTATION POND.</p>	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</p> <p>60% Design Storage Capacity            0.282 A.F. at 7182</p> <p>100% Sediment Capacity            0.47 A.F. at 7183.6</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation (F.A.S.L.):            7186.6</p> <p>Emergency Spillway Elevation: (F.A.S.L.):            7194.6</p>		
<p>4. Field Information. Provide current water elevation, whether pond is discharging, type and number of</p>			

samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

**Water Elevation** 7182.73 TOP OF ICE  
**Discharging** No  
**Inlet, Outlet Conditions** Good  
**Slope conditions** Good

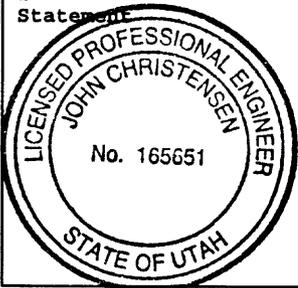
\*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

**5. Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

**Sediment Volume** 0.28 A.F.  
**Remaining Sediment Storage Capacity** 0.19 A.F.  
**Water Impounded** .02 A.F.

**Changes, comments, etc.** Mining has seized at Trail Mtn. Operations only  
 Storm run off will run into the pond.  
 The pond was frozen at the time of inspection.

**Qualification Statement**



I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John Christensen Date: 12/31/03  
 Signature: Richard Cullum Date: 1-5-04

**APPENDIX B**

**Reporting of Technical Data**

Including monitoring data, reports, maps, and other information  
As required under the approved plan or as required by the Division

In accordance with the requirement of R645-310-130 and R645-301-140

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**ENERGY WEST MINING COMPANY  
VEGETATION MONITORING  
2003**

VEGETATION MONITORING REPORTS  
FOR THE  
COTTONWOOD MINE  
COTTONWOOD CANYON  
DES-BEE-DOVE AREAS



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March 2004

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## INTRODUCTION

The following document addresses the results of vegetation monitoring of seeded areas for the year 2003. Listed below are the areas monitored and reported within this document.

### **Cottonwood Mine Area**

Old Fan Road  
Reference Area  
Storage Yard Slope  
Parking Lot Slope  
Road/Silo Pad Slope  
Tipple Area Slopes  
Sediment Pond Banks  
Ninth East Breakout  
Waste Rock (Old) Cell 1  
Waste Rock (Old) Cell 2  
Waste Rock (Old) Cell 3  
Waste Rock (Old) Cell 4  
Waste Rock (Old) Cell 5  
Waste Rock (Old) Cell 6  
Waste Rock (Old) Cell 7  
Waste Rock (Old) Berm 1  
Waste Rock (Old) Berm 2  
Waste Rock (Old) Berm 3  
Waste Rock (Old) Berm 4  
CTW Reference Area  
CTW Soil Pile (A,C)  
Waste Rock (New) Road Slopes  
Waste Rock (New) Topsoil Stockpiles  
Waste Rock (New) Subsoil Stockpiles  
Waste Rock (New) Sediment Pond Banks  
Refuse Berm 1991  
Refuse Berm 1994  
Refuse Berm 1996

### **Cottonwood Canyon**

Soil Piles  
Fan Portal Reclaimed Slope ('81)  
Fan Portal Reference Area  
Tube Conveyor  
Belt Portal 1996  
Portal (Diesel) 1996  
Reclaimed Slope '98 (Final)

### **Des-Bee-Dove Area**

Pumphouse (final)

## METHODS

Vegetation monitoring was conducted on revegetated sites for ENERGY WEST MINING COMPANY in the growing season of 2003. Quantitative and/or qualitative data were taken on each site, depending on the monitoring schedule. In other words, quantitative data sampling was not scheduled this year on some sites. Each data sheet will briefly describe the sample parameters specific to that site.

### QUALITATIVE DATA

Qualitative data were recorded on all sites. A qualitative data sheet for each site is included in this report and provides the following information: site name, general area, sample date, observers, slope, exposure, acreage, animal disturbance, erosion damage, cover, dominant plant species observed, and other pertinent notes.

When quantitative data were recorded, results are shown on these data sheets or reference to where the data is located.

#### Site Name

The site name that is given correlates with ENERGY WEST'S maps of the area and can be used for future reference and sampling.

#### Area

The "Area" on the data sheets is a reference to the general mine or property areas for quick reference and general use.

#### Date

Sample dates are also provided. All sample dates are within the 2003 growing season.

#### Workers

Lists of the names of the individuals who recorded the data.

## Exposure

Exposure was recorded on each site. Often the site had several different exposures. In those cases, "variable" was written for the exposure on the data sheet.

## Animal Disturbance

Values were given to the relative use by animal species at each site. The values and a brief explanation are given below.

- None - (or negligible), no animal use was observed.
- Slight - only little animal use was observed by droppings, tracks, or cropped vegetation.
- Moderate - a fair degree of use was observed, mostly by the cropped vegetation. Several inches of production still remained available for use by the animals.
- Severe - animal use had taken nearly all of the available current year's production.

## Erosion

Erosion of the area was also assessed by qualitative methods. Actual measurements, descriptive notes or values described below were given to each site.

- None - (or negligible) no erosion was observed.
- Slight - small erosion rills beginning, usually less than 2:1 (2 inches wide by 1 inches deep).
- Moderate - erosional rills and gullies from 2:1 to 4:2.
- Severe - erosional rills and gullies over to 4:2 were observed.

## Cover

Cover differences or notes may be given on the data sheet or references to the quantitative data.

## Dominant Plant Species Observed

Sometimes plant species that were observed, but were not encountered in the quadrats when sampling. Many of these species were recorded here. However, some of the species were also encountered in the quadrats. Therefore, for a list of all species on a given site, one should refer to both quantitative and qualitative data sheets.

## Notes

Site-specific, pertinent notes about each area were also taken i.e. identification of special considerations, areas of differential growth patterns, etc. Notes on specific methodologies on each site were also described here.

## Photographs

Color photographs were taken for each site and are included in this report for documentation.

## QUANTITATIVE DATA

### Cover and Composition

Cover estimates were made using ocular methods with randomly or regularly placed meter square quadrats. Total living cover, litter, rock and bareground were recorded. Cover by species was also recorded. Raw data summations were included in this report. They provide all means and standard deviations. Species composition was also assessed from the quadrats. Sample sizes were often kept consistent each year. Because these data are presented to observe only trends for revegetation success and soil stabilization, no attempt was made to achieve sample adequacy for each individual site.

### Woody Species Density

In some areas woody plant densities estimates were needed. Densities were recorded using the point-quarter distance method (Cotton and Curtis 1956). In the point-quarter method, random points were placed on the sample sites and measured into four quarters. The distances to the nearest woody plant species were then recorded in each quarter. The average point-to-individual distance was equal to the square root of the mean area per individual.

## RESULTS

To be consistent with previous years, data sheets for qualitative and quantitative (including raw data) sampling are included in this report. This gives the reviewer an overall view of the revegetation success of each area. For results of the above parameters, refer to the site-specific data sheets.

COTTONWOOD MINE AREA



ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Old Fan Road

AREA: Cottonwood Mine (1984)

DATE: September 23, 2003

WORKERS: P. Collins

SLOPE: 13-15 deg.

EXPOSURE: Variable

AREA: .8 acres

ANIMAL USE/DISTURBANCE: Heavy deer sign.

EROSION: Negligible

COVER: (no quantitative data this year).

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata*

*Atriplex confertifolia*

*Cercocarpus montanus*

*Chrysothamnus nauseosus*

*Eriogonum corymbosum*

*Gutierrezia sarothrae*

*Populus angustifolia*

*Ribes sp.*

*Salix exigua*

*Sambucus caerulea*

*Symphoricarpos oreophilus*

*Aster chilensis*

*Astragalus cicer*

*Cirsium sp.*

*Cynoglossum officinale*

*Linum lewisii*

*Machaeranthera canescens*

*Melilotus officinalis*

*Tragopogon dubius*  
*Viguiera multiflora*

*Bromus carinatus*  
*Elymus cinereus*  
*Elymus salinus*  
*Elymus spicatus*  
*Elymus junceus*  
*Elymus lanceolatus*  
*Stipa hymenoides*  
*Elymus smithii*  
*Elymus salinus*  
*Stipa hymenoides*

- NOTES:
- 1) We sampled for qualitative data in 2003.
  - 2) Revegetation site looked excellent.
  - 3) Cover, density and diversity looked very good.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Reference Area

AREA: Cottonwood Mine

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 36 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Minimal

EROSION: Negligible

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Abies concolor*

*Amelanchier utahensis*

*Artemisia spinescens*

*Artemisia tridentata*

*Atriplex confertifolia*

*Chrysothamnus depressus*

*Chrysothamnus nauseosus*

*Ephedra viridis*

*Eriogonum corymbosum*

*Gutierrezia sarothrae*

*Juniperus osteosperma*

*Pinus edulis*

*Pseudotsuga menziesii*

*Rosa woodsii*

*Symphoricarpos oreophilus*

*Hedysarum occidentale* var. *canone*

*Galium boreale*

*Leptodactylon watsonii*

*Elymus salinus*

*Stipa hymenoides*

NOTES: 1) Sampled for qualitative data in 2003  
2) No major disturbance has disrupted this site.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Storage Yard Slope

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 30 - 40 deg.

EXPOSURE: S & E

AREA: 1.3 acres

ANIMAL USE/DISTURBANCE:

EROSION: Mostly moderate.

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex confertifolia*  
*Chrysothamnus nauseosus*  
*Eriogonum corymbosum*  
*Tamarix chilensis*

*Aster chilensis*  
*Bassia hyssopifolia*  
*Halogeton glomeratus*  
*Penstemon palmeri*

*Bromus tectorum*  
*Elymus cinereus*  
*Elymus elymoides*  
*Elymus junceus*  
*Elymus lanceolatus*  
*Elymus smithii*  
*Stipa hymenoides*

NOTES:      1)      Sampled for qualitative data only.  
                 2)      Different exposures supported different species  
                 3)      Site mostly inactive except possibly for mine safety training in parking lot.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Parking Lot Slope

AREA: Cottonwood Mine

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 26 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE:

EROSION: Slight but controlled by rocks.

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Chrysothamnus nauseosus*

*Atriplex confertifolia*

*Eriogonum corymbosum*

*Aster chilensis*

*Agropyron cristatum*

*Elymus cinereus*

*Elymus lanceolatus*

*Elymus salinus*

*Elymus spicatus*

*Grindelia squarrosa*

*Stipa hymenoides*

NOTES:

- 1) Sampled for qualitative data.
- 2) Site is inactive.
- 3) Mostly weedy species because of erosion control measures (1/2-inch-plus rock cover) disturbed existing vegetation.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Road/Silo Pad Slope

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 35 deg.

EXPOSURE: SE

ACREAGE: 1.4 acre

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Moderate in a couple localized areas

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex confertifolia*  
*Chrysothamnus nauseosus*  
*Eriogonum corymbosum*

*Aster chilensis*  
*Halogeton glomeratus*  
*Penstemon palmeri*  
*Salsola pestifer*

*Elymus cinereus*  
*Elymus smithii*  
*Elymus spicatus*  
*Stipa hymenoides*

NOTES: 1) Some moderate erosion in some areas, but the site is inactive so there is no imminent danger to property or human safety (~).

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Tipple Area Slope

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 35 deg.

EXPOSURE: SW

AREA: .1 acre

ANIMAL USE/DISTURBANCE: None

EROSION: Slight

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex confertifolia*  
*Chrysothamnus nauseosus*  
*Eriogonum corymbosum*

*Aster chilensis*  
*Halogeton glomeratus*

*Elymus cinereus*  
*Elymus smithii*  
*Elymus junceus*  
*Sporobolus airoides*  
*Stipa hymenoides*

NOTES:

- 1) Inactive area.
- 2) Sampled for qualitative data only this year.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Sediment Pond Banks

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 35 deg.

EXPOSURE: Variable

AREA: .9 acre

ANIMAL USE/DISTURBANCE:

EROSION: Slight

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Chrysothamnus nauseosus*

*Eriogonum corymbosum*

*Salix exigua*

*Aster chilensis*

*Erigeron sp.*

*Grindelia squarrosa*

*Halogeton glomeratus*

*Machaeranthera canescens*

*Penstemon palmeri*

*Salsola pestifer*

*Agropyron cristatum*

*Bromus tectorum*

*Elymus cinereus*

*Elymus elymoides*

*Elymus hispidus*

*Elymus lanceolatus*

*Elymus salinus*

*Elymus smithii*

*Stipa hymenoides*

*Sporobolus airoides*

NOTES:

- 1) We sampled for qualitative data this year (2003).
- 2) Area was inactive.
- 3) Patchy vegetation growth patterns with some desirable and some weedy species. This is due to past erosion control, regular pond maintenance to clean-out, and fluctuating water levels in the ponds.
- 4) The cover looked good on pond areas that had not been disturbed.
- 5) There is very little water in the lower pond (~15 ft diameter water). The upper pond had quite a bit more water.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Ninth East Road Breakout Final 1999

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE: September 23, 2003

WORKERS: P. Collins, D. Collins

SLOPE: Variable

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE:

EROSION: Negligible, controlled well by plants

COVER: (see quantitative data)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata*

*Atriplex canescens*

*Aster chilensis*

*Cirsium sp.*

*Linum lewisii*

*Penstemon palmeri*

*Stipa pinnata*

*Elymus spicatus*

*Elymus lanceolatus*

*Elymus smithii*

*Poa pratensis*

*Stipa hymenoides*

- NOTES:
- 1) Qualitative and quantitative sampling was conducted this year. For cover estimates see follow summary spreadsheet. For density, see table below.
  - 2) The site looks very good this year.

- 3) Good shrub establishment.
- 4) Good diversity of forbs, shrubs and grasses.
- 5) Erosion is being controlled by roughed ground techniques.
- 6) Quantitative sampling was conducted by random techniques for cover, frequency and density (n=15 for both parameters).

<b>Woody Species Density</b>	
<b>Ninth East Breakout</b>	<b>No/Ac</b>
<i>Artemisia tridentata</i>	989.69
<i>Atriplex canescens</i>	120.69
<i>Atriplex confertifolia</i>	144.83
<i>Chrysothamnus nauseosus</i>	144.83
<i>Eriogonum corymbosum</i>	24.14
<i>Gutierrezia sarothrae</i>	24.14
<b>Total</b>	<b>1448.32</b>

## ENERGY WEST

Ninth East Road Breakout (Final 1999)

Cottonwood Mine (1988 Reveg Area)

Slope: Variable

Exposure: Variable

Sample Date: 23 Sept 2003

1.00 2.00 3.00 4.00 5.00 6.00

## SHRUBS

<i>Atriplex canescens</i>	0.00	0.00	0.00	0.00	7.00	0.00
<i>Artemisia tridentata</i>	5.00	5.00	0.00	0.00	0.00	5.00

## FORBS

<i>Aster chilensis</i>	5.00	10.00	10.00	15.00	5.00	15.00
<i>Linum lewisii</i>	0.00	0.00	10.00	20.00	8.00	0.00
<i>Penstemon palmeri</i>	0.00	0.00	5.00	0.00	0.00	0.00

## GRASSES

<i>Bromus carinatus</i>	0.00	0.00	0.00	0.00	0.00	0.00
<i>Elymus cinereus</i>	0.00	0.00	0.00	0.00	0.00	0.00
<i>Elymus lanceolatus</i>	0.00	0.00	15.00	0.00	20.00	30.00
<i>Elymus salinus</i>	0.00	5.00	0.00	0.00	0.00	0.00
<i>Elymus smithii</i>	20.00	0.00	0.00	0.00	0.00	0.00
<i>Elymus spicatus</i>	0.00	0.00	0.00	0.00	10.00	0.00
<i>Poa pratensis</i>	0.00	5.00	0.00	0.00	0.00	0.00
<i>Stipa hymenoides</i>	0.00	0.00	0.00	0.00	0.00	0.00

## COVER

Total Living Cover	30.00	25.00	40.00	35.00	50.00	50.00
Litter	5.00	5.00	5.00	10.00	5.00	5.00
Bareground	10.00	15.00	15.00	15.00	10.00	5.00
Rock	55.00	55.00	40.00	40.00	35.00	40.00

## % COMPOSITION

Shrubs	16.67	20.00	0.00	0.00	14.00	10.00
Forbs	16.67	40.00	62.50	100.00	26.00	30.00
Grasses	66.67	40.00	37.50	0.00	60.00	60.00

7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00
0.00	5.00	0.00	10.00	0.00	0.00	10.00	7.00	10.00
25.00	5.00	0.00	15.00	0.00	0.00	0.00	0.00	5.00
0.00	5.00	5.00	5.00	0.00	0.00	0.00	8.00	5.00
0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	25.00	10.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00
10.00	5.00	0.00	0.00	0.00	25.00	0.00	5.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	15.00	0.00	0.00	15.00	0.00	5.00
10.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	5.00	0.00	5.00	0.00
50.00	20.00	15.00	55.00	35.00	55.00	25.00	25.00	30.00
5.00	10.00	5.00	5.00	5.00	5.00	10.00	10.00	5.00
20.00	25.00	25.00	10.00	20.00	30.00	25.00	15.00	25.00
25.00	45.00	55.00	30.00	40.00	10.00	40.00	50.00	40.00
0.00	25.00	0.00	18.18	0.00	9.09	40.00	28.00	33.33
50.00	50.00	33.33	36.36	28.57	0.00	0.00	32.00	33.33
50.00	25.00	66.67	45.45	71.43	90.91	60.00	40.00	33.33

ENERGY WEST  
 Ninth East Road Breakout (Final 1999)  
 Cottonwood Mine (1988 Reveg Area)  
 Slope: Variable  
 Exposure: Variable  
 Sample Date: 23 Sept 2003

Mean	SDev	Freq	
<hr/>			
			SHRUBS
0.80	2.07	13.33	<i>Atriplex canescens</i>
3.80	3.94	53.33	<i>Artemisia tridentata</i>
			FORBS
7.33	7.27	66.67	<i>Aster chilensis</i>
4.40	5.40	53.33	<i>Linum lewisii</i>
1.00	2.71	13.33	<i>Penstemon palmeri</i>
			GRASSES
2.33	6.55	13.33	<i>Bromus carinatus</i>
0.67	2.49	6.67	<i>Elymus cinereus</i>
7.67	9.81	53.33	<i>Elymus lanceolatus</i>
0.33	1.25	6.67	<i>Elymus salinus</i>
4.00	6.63	33.33	<i>Elymus smithii</i>
2.00	4.00	20.00	<i>Elymus spicatus</i>
1.00	2.71	13.33	<i>Poa pratensis</i>
0.67	1.70	13.33	<i>Stipa hymenoides</i>
<hr/>			
			COVER
36.00	12.81		Total Living Cover
6.33	2.21		Litter
17.67	7.04		Bareground
40.00	11.69		Rock
<hr/>			
			% COMPOSITION
14.28	12.77		Shrubs
35.92	23.66		Forbs
49.80	21.24		Grasses

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Cell #1

AREA: Cottonwood Mine Old Waste Rock Area (1983 Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 0-1 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Slight to Moderate

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata*

*Atriplex canescens*

*Chrysothamnus nauseosus*

*Ephedra viridis*

*Gutierrezia sarothrae*

*Agropyron cristatum*

*Elymus lanceolatus*

*Elymus smithii*

*Hilaria jamesii*

- NOTES:
- 1) Sampled for qualitative data this year.
  - 2) When compared to previous years, the plants have suffered in this area due to drought conditions. But the site still looked fairly good considering the drought over the past several years (see below).
  - 3) At first Dennis Oakley and I thought we would sample for "final" bond release. Then I looked at the site and, because it was the 5<sup>th</sup> consecutive year of drought, the plants looked very dry and the grasses, difficult to identify. A more representative precipitation year would probably be better for final revegetation bond release sampling (~03).

- 4) However, this year's late rains helped the plants' seed production (compared to 2002).
- 5) Based on previous studies and scrutiny of data recorded, it is my opinion that it would be counter-productive to try and get cells and berms released at different times (or based on their respective reclamation dates). I tried separating and lumping the data several different ways to arrive at this conclusion. In other words, I think we should record the data and lump all the cells and berms together when the bond release sampling is conducted.
- 6) Some grasses seemed to have died out and broom snakeweed increased.
- 7) Species diversity and productivity seemed to have decreased as a result of the drought.
- 8) The woody species appeared heathy.
- 9) We did not see all the species that we normally see due to dying out or possible dormancy due to drought conditions..

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Cell #2

AREA: Cottonwood Mine Old Waste Rock Area (1984 Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 0-1 deg.

EXPOSURE: E

AREA: ~ 1 acre

ANIMAL USE/DISTURBANCE:

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*  
*Atriplex confertifolia*  
*Artemisia tridentata*  
*Bromus tectorum*  
*Gutierrezia sarothrae*

*Agropyron cristatum*  
*Elymus lanceolatus*  
*Elymus hispidus*  
*Elymus smithii*  
*Hilaria jamesii*  
*Stipa comata*  
*Stipa hymenoides*

NOTES: .

- 1) Sampled for qualitative data in 2003.
- 2) Same "Notes" in Cell 1.
- 3) Lot of cheatgrass this year.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Cell #3

AREA: Cottonwood Mine Old Waste Rock Area (1985 Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 0-1 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Slight

EROSION: Negligible

COVER: (see quantitative data)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*  
*Gutierrezia sarothrae*  
*Ephedra viridis*  
*Opuntia polyacantha*

*Agropyron cristatum*  
*Bromus tectorum*  
*Elymus lanceolatus*  
*Hilaria jamesii*  
*Stipa hymenoides*  
*Stipa comata*

NOTES:

- 1) Sampled for qualitative data in 2003.
- 2) Unlike previous years, there was lot of cheatgrass
- 3) Same "Notes" in Cell 1.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Cell #4

AREA: Cottonwood Mine Old Waste Rock Area ('86 Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 0 - 1 deg

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Moderate deer and rabbit use.

EROSION: negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Chrysothamnus nauseosus*

*Gutierrezia sarothrae*

*Atriplex canescens*

*Agropyron cristatum*

*Elymus smithii*

*Elymus lanceolatus*

*Hilaria jamesii*

*Stipa comata*

NOTES:

- 1) Sampled for qualitative data in 2003.
- 2) Site actually had much less cheatgrass than Cell 1-3.
- 3) Unlike Cells 1-3, grass species look good here. This is unusual when compared to previous years.
- 4) Galleta (warm season grass) seemed to be doing well.
- 5) Much fewer shrubs when compared to Cells 1-3.
- 6) Also unlike Cells 1-3, broom snakeweed was not as common.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Cell #5 '89 (Reseeded) 93

AREA: Cottonwood Mine Old Waste Rock Area (Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 0-1 deg

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Used by deer and rabbits mostly

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*  
*Gutierrezia sarothrae*

*Agropyron cristatum*  
*Bromus tectorum*  
*Elymus lanceolatus*  
*Elymus smithii*  
*Hordeum jubatum*  
*Stipa comata*

NOTES:

- 1) Sampled for qualitative data in 2003.
- 2) Cheatgrass was common this year.
- 3) See also "Notes" in Cell 1.
- 4) There were some bare spots as well as vegetated areas.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Cell #6 '89 (Reseeded) '93

AREA: Cottonwood Mine Waste Rock Area (Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 0-1 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Used extensively by deer and rabbits.

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*  
*Atriplex confertifolia*  
*Artemisia tridentata*  
*Chrysothamnus nauseosus*  
*Gutierrezia sarothrae*

*Halogeton glomeratus*

*Agropyron cristatum*  
*Bromus tectorum*  
*Elymus lanceolatus*  
*Elymus cinereus*  
*Elymus smithii*  
*Stipa comata*  
*Stipa hymenoides*

NOTES:

- 1) Sampled for qualitative data in 2003.
- 2) See also "Notes" in Cell 1.
- 3) Some of the bare spots (now dominated by halogeton) mentioned in previous years seemed larger, probably due to drought.
- 4) Site had good shrub establishment, but unlike previous years, it had more cheatgrass. There was less cheatgrass on the east ½ of plot.
- 5) The drought seemed to have taken a toll on this plot.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Cell #7 '92 Partial Cell #7 '93

AREA: Cottonwood Mine Old Waste Rock Area (Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 0 - 2 deg

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Slight

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*  
*Gutierrezia sarothrae*

*Agropyron cristatum*  
*Bromus tectorum*  
*Elymus lanceolatus*  
*Elymus smithii*  
*Stipa comata*

NOTES:

- 1) Sampled for qualitative data in 2003.
- 2) See "Notes" in Cell 1.
- 3) There were patches of cheatgrass and other areas with desirable species.
- 4) There was low shrub cover, but grass cover looked better than all previous cells except for Cell 4.
- 5) Overall the plot looked good.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Berm 1

AREA: Cottonwood Mine Old Waste Rock Area (1983 Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 1-20 deg.

EXPOSURE: S

ANIMAL USE/DISTURBANCE:

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*  
*Chrysothamnus nauseosus*  
*Gutierrezia sarothrae*  
*Ephedra viridis*

*Agropyron cristatum*  
*Bromus tectorum*  
*Elymus lanceolatus*  
*Stipa hymenoides*

NOTES:

- 1) Sampled for qualitative data in 2003.
- 2) The north half of the berm has more weedy species. The south half is better.
- 3) The drought seemed to have favored woody species dominance.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Berm 2

AREA: Cottonwood Mine Old Waste Rock Area (1984 Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 0-20 deg.

EXPOSURE: W & N

ANIMAL USE/DISTURBANCE: Slight

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata*  
*Atriplex confertifolia*  
*Atriplex canescens*  
*Chrysothamnus nauseosus*  
*Gutierrezia sarothrae*

*Agropyron cristatum*  
*Elymus lanceolatus*  
*Elymus smithii*  
*Stipa hymenoides*

NOTES:

- 1) Sampled for qualitative data in 2003.
- 2) The drought seemed to have favored woody species dominance.
- 3) Some disturbance by gas companies

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Berm 3

AREA: Cottonwood Mine Old Waste Rock Area (1985 Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 0-20 deg.

EXPOSURE: NE & SW

ANIMAL USE/DISTURBANCE:

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata*

*Atriplex canescens*

*Cercocarpus montanus*

*Chrysothamnus nauseosus*

*Gutierrezia sarothrae*

*Machaeranthera canescens*

*Agropyron cristatum*

*Bromus tectorum*

*Elymus smithii*

*Elymus lanceolatus*

*Stipa comata*

*Stipa hymenoides*

NOTES:

- 1) Sampled for qualitative data in 2003.
- 2) The drought seemed to have favored woody species dominance.
- 3) Lots of mature shrubs, less grass species.
- 4) Much more shrubs when compared to the Cells.
- 5) Shrub cover was high. Seed production of fourwing saltbush was high too.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Berm 4

AREA: Cottonwood Mine Old Waste Rock Area ('86 Interim Reveg)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 28 deg.

EXPOSURE: N, E

ANIMAL USE/DISTURBANCE:

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*

*Chrysothamnus nauseosus*

*Gutierrezia sarothrae*

*Ephedra viridis*

*Elymus lanceolatus*

*Elymus smithii*

*Stipa hymenoides*

NOTES:

- 1) Sampled for qualitative data in 2003.
- 2) The drought seemed to have favored woody species dominance.
- 3) Lots of mature shrubs present; grass species looked good.
- 4) This berm looked good with only few weedy species.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: CTW Reference Area

AREA: Cottonwood Mine Old Waste Rock Area

DATE: October 13-18, 2003

WORKERS: P. Collins, D. Collins

SLOPE: 1 - 5 deg

EXPOSURE: E

ANIMAL USE/DISTURBANCE:

EROSION: Slight, normal

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Cercocarpus montanus*

*Ephedra viridis*

*Juniperus osteosperma*

*Opuntia polyacantha*

*Pinus edulis*

*Yucca harrimaniae*

NOTES:

- 1) Qualitative data taken in 2003.
- 2) Forbs (or all understory) virtually not seen. Drought had a big impact.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: CTW Soil Pile (A,C) '94

AREA: Cottonwood Mine

DATE: October 13-18, 2003

WORKERS: P. Collins, D. Collins

SLOPE: 25 deg.

EXPOSURE: South

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

Soil Pile A (South Pile, west of Cells 1 & 2)

*Atriplex canescens*

*Chrysothamnus nauseosus*

*Gutierrezia sarothrae*

*Machaeranthera canescens*

*Agropyron cristatum*

*Elymus junceus*

*Elymus lanceolatus*

*Elymus smithii*

*Elymus cinereus*

*Stipa hymenoides*

Soil Pile B (mostly removed)

Soil Pile C (North Pile, east of Reference Area)

*Artemisia tridentata*

*Atriplex canescens*

*Atriplex gardneri*

*Chrysothamnus nauseosus*

*Gutierrezia sarothrae*

*Halogeton glomeratus*

*Penstemon palmeri*

*Agropyron cristatum*  
*Elymus smithii*  
*Elymus lanceolatus*  
*Sporobolus airoides*

NOTES:

- 1) Only qualitative data taken this year.
- 2) Piles looked good considering the drought conditions.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Road Slopes

AREA: Cottonwood Mine New Waste Rock Area (1990 Interim)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: Variable

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata*

*Atriplex confertifolia*

*Ceratoides lanata*

*Chrysothamnus nauseosus*

*Ephedra viridis*

*Pinus edulis*

*Yucca harrimaniae*

*Penstemon palmeri*

*Bromus tectorum*

*Elymus lanceolatus*

*Elymus cinereus*

*Elymus spicatus*

*Sporobolus airoides*

*Stipa hymenoides*

- NOTES: 1) Qualitative data only. Most of the plant species were desirable ones.  
2) Good cover and species diversity.  
3) Site looked dry this year.  
4) Some species were missing from sampling previous years.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Topsoil Stockpiles

AREA: Cottonwood Mine New Waste Rock Area (1990 Interim)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: Variable

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata*

*Atriplex canescens*

*Atriplex confertifolia*

*Ceratoides lanata*

*Juniperus osteosperma*

*Halogeton glomeratus*

*Penstemon palmeri*

*Bromus tectorum*

*Elymus cinereus*

*Elymus lanceolatus*

*Elymus salina*

*Elymus smithii*

*Sporobolus airoides*

- NOTES: 1) Sampled qualitatively only this year.  
2) Site was in a drought, but didn't look bad this year.  
3) Some species may not have shown well this year.  
4) Majority of site looked very good.  
5) Species diversity still looked good.  
6) All 3 piles looked good.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Subsoil Stockpiles

AREA: Cottonwood Mine New Waste Rock Area (1990 Interim)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: Variable

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE:

EROSION: Slight to moderate (see notes below)

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata* (n, c)  
*Atriplex canescens* (c,s)  
*Atriplex confertifolia* (c,s)  
*Atriplex gardneri*\*(n,c,s)  
*Eriogonum corymbosum* (s)  
*Ceratoides lanata* (n,c,s)  
*Chrysothamnus nauseosus* (n)  
*Ephedra viridis* (n)

*Halogeton glomeratus* (n,c,s)  
*Penstemon palmeri* (n,c,s)

*Elymus cinereus* (s)  
*Elymus junceus* ©)  
*Elymus lanceolatus* (n,c)

Section of pile observed: n=north; c=central; s=south

NOTES:

- 1) Qualitative data taken his year.
- 2) Not much cover on the bottom of all slopes.
- 3) Moderate erosion on all sections of slopes, but mostly north and south.(~00, ~01, ~02, ~03).

- 4) If we listed by total desirable cover, it would be north (worse) to south (best).
- 5) *Malcomia africana* and *Halogeton glomeratus* seem to be decreasing.
- 6) Although some erosion, it did not appear that they were at risk of failure.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Sediment Pond Banks

AREA: Cottonwood Mine New Waste Rock Area (1990 Interim)

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: Variable

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE: Slight

EROSION: Negligible

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia nova*

*Artemisia tridentata*

*Atriplex canescens*

*Atriplex confertifolia*

*Ceratoides lanata*

*Chrysothamnus nauseosus*

*Gutierrezia sarothrae*

*Penstemon palmeri*

*Elymus lanceolatus*

*Elymus cinereus*

*Elymus smithii*

*Sporobolus airoides*

*Stipa hymenoides*

NOTES:

- 1) Site looked good. Possibly a little less cover due to drought conditions.
- 2) Sampled qualitatively this year.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Refuse Berm '91 (Final) - New Waste Rock Site

AREA: Cottonwood Mine

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 28 deg.

EXPOSURE: S.

ANIMAL USE/DISTURBANCE: Slight

EROSION: Mostly "Slight", but moderate in a couple of areas.

COVER: (no quantitative data this year)

DOMINANT PLANT SPECIES OBSERVED:

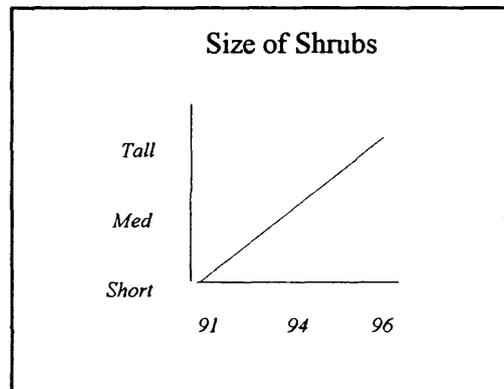
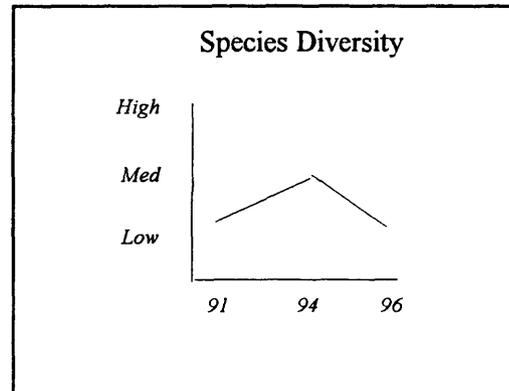
*Atriplex canescens*  
*Atriplex confertifolia*  
*Ceratoides lanata\**

*Halogeton glomeratus*

*Elymus cinereus*  
*Elymus junceus*  
*Elymus lanceolatus*  
*Stipa hymenoides*

NOTES:

- 1) Like the last few years, even though Berm '96 is the most recent revegetation accomplished, the shrubs appear more mature and the cover is greater than the '91 and '94 Berms.
- 2) Site looks good.
- 3) There were some grasses, but mostly shrubs present.
- 4) Species diversity was low.
- 5) Dominate shrub species was winterfat by far. Plants were small and had low productivity.
- 6) Sampled qualitatively only this year.



ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Refuse Berm '94 (Final) - New Waste Rock Site

AREA: Cottonwood Mine

DATE: October 13-18, 2003

WORKERS: P. Collins, D. Collins

SLOPE: 25 deg.

EXPOSURE: South

ANIMAL USE/DISTURBANCE: None

EROSION: Slight erosion, on west side.

COVER: (no quantitative data recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex confertifolia*

*Atriplex canescens*

*Atriplex gardneri*

*Ceratoides lanata*

*Elymus lanceolatus*

*Hilaria jamesii*

*Sporobolus airoides*

NOTES:

- 1) Qualitative data only were recorded this year.
- 2) Site seemed more diverse in shrub species this year.
- 3) Good diversity.
- 4) Fair cover.
- 5) Dominated by saltbush and winterfat
- 6) See graphs on Refuse Berm '91

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Refuse Berm (seeded 1996)

AREA: Cottonwood Mine New Waste Rock Area (1990 Interim)

DATE: October 13-18, 2003

WORKERS: P. Collins, D Collins

SLOPE: 28 deg.

EXPOSURE: S & E

ANIMAL USE/DISTURBANCE: No obvious disturbance

EROSION: Slight

COVER: (no quantitative data recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*  
*Atriplex confertifolia*

*Elymus junceus*  
*Elymus lanceolatus*  
*Sporobolus airoides*

- NOTES:
- 1) Recorded qualitative data this year.
  - 2) There were large mature shrubs in this area.
  - 3) There were areas that had good cover, whereas other areas were rather sparse.
  - 4) The site was dominated by fourwing saltbush and thickspike wheatgrass.
  - 5) See graphs on Refuse Berm '91.

COTTONWOOD CANYON AREA



ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Soil Piles

AREA: Cottonwood Fan Portal Area

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 35 deg.

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE:

EROSION: Negligible

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata* (s)

*Atriplex canescens* (n)

*Chrysothamnus nauseosus* (s,n)

*Achillea millefolium* (n)

*Aster chilensis* (s)

*Aster foliaceus* (s)

*Descurainia pinnata* (s)

*Linum lewisii* (s)

*Bromus tectorum* (n)

*Elymus cinereus* (s)

*Elymus lanceolatus* (n)

*Elymus smithii* (s,n)

*Elymus junceus* (s)

*Stipa hymenoides* (n)

(s) = occurred on south pile; (n) = occurred on north pile.

- NOTES:
- 1) Recorded only qualitative data this year.
  - 2) In 2002, soil material from the topsoil pile was used to reclaim the 2 sediment ponds historical used at the CFP area. The area was then re-seeded in late summer or early fall 2002.
  - 3) Much of north pile has been removed. The remaining area has been reseeded (see photograph).
  - 4) There was a low occurrence of forbs and shrubs

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Reclaimed Slope (old, '81)

AREA: Cottonwood Fan Portal Area

DATE: October 13-18, 2003

WORKERS: P. Collins, D. Collins

SLOPE: 35-41 deg.

EXPOSURE: W

ANIMAL USE/DISTURBANCE: Slight to moderate

EROSION: Minor erosion near roadside

COVER: (see quantitative data)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata*  
*Atriplex canescens*  
*Atriplex confertifolia*  
*Ceratoides lanata*  
*Chrysothamnus nauseosus*  
*Ephedra viridis*  
*Gutierrezia sarothrae*

*Aster foliaceus*

*Agropyron cristatum*  
*Bromus carinatus*  
*Elymus lanceolatus*  
*Elymus salinus*  
*Elymus smithii*  
*Elymus junceus*  
*Elymus cinereus*  
*Poa pratensis*

NOTES:

- 1) Slope is in excellent condition.
- 2) Qualitative sampling only this year.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Reference Area

AREA: Cottonwood Fan Portal Area

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 33 deg.

EXPOSURE: W

ANIMAL USE/DISTURBANCE: Slight to moderate

EROSION: Slight, natural patterns.

COVER:(see quantitative data)

DOMINANT PLANT SPECIES OBSERVED:

*Amelanchier utahensis*  
*Atriplex confertifolia*  
*Chrysothamnus nauseosus*  
*Eriogonum corymbosum*  
*Ephedra viridis*  
*Juniperus osteosperma*  
*Pinus edulis*

*Stanleya pinnata*  
*Machaeranthera canescens*

*Elymus salinus*  
*Stipa hymenoides*

NOTES:

- 1) This Reference Area still in good shape, but destructive results of a large storm event a few years ago.
- 2) Qualitative data only were taken this year.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: CFP Tube Conveyor Area (1996 Seeding)

AREA: Trail Mtn. Mine/Cottonwood Fan Portal Area

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: 28 deg.

EXPOSURE: W, N, S.

ANIMAL USE/DISTURBANCE: None

EROSION: Negligible. Rocks in area seem to be greatly enhancing erosion control.

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*  
*Atriplex confertifolia*  
*Artemisia tridentata*  
*Chrysothamnus nauseosus*

*Aster foliaceus*  
*Linum lewisii*  
*Penstemon palmeri*

*Dactylis glomeratus*  
*Elymus spicatus*  
*Elymus lanceolatus*  
*Elymus cinereus*  
*Elymus smithii*  
*Stipa hymenoides*

- NOTES:
- 1) We sampled qualitative data this year.
  - 2) This year in this area we saw no yellow sweetclover.
  - 3) In 1997 the area was dominated by yellow sweetclover, whereas in 1998 we didn't see much of it. There was a lot again in 1999 and 2000. In 2001 there were many more desirable species and very little sweetclover. In 2002 we saw no yellow

sweetclover and the fourwing saltbush looked much larger and mature. More shrubs were also present.

- 4) Again, no yellow sweetclover in 2003
- 5) Even though it was not seeded that long ago, the site was in excellent condition.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Belt Portal ('96)

AREA: Cottonwood Fan Portal Area

DATE: October 13-18, 2003

WORKERS: P. Collins, D. Collins

SLOPE: Variable

EROSION: Negligible

EXPOSURE: SSW

ANIMAL USE/DISTURBANCE: Slight

COVER: (no quantitative data recorded)

DOMINANT PLANT SPECIES OBSERVED:

*Artemisia tridentata*  
*Chrysothamnus nauseosus*  
*Rosa woodsii*

*Penstemon palmeri*

*Elymus cinereus*  
*Elymus lanceolatus*  
*Elymus salinus*

- NOTES: 1) Qualitative sampling done in 2003.
- 2) Site looked very good.
- 3) Most of the area was dominated by Gt. Basin Wildrye.
- 4) Large boulders greatly enhanced erosion control.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Portal Diesel ('96)

AREA: Cottonwood Fan Portal Area

DATE: October 13-18, 2003

WORKERS: P. Collins, D. Collins

SLOPE: 43 deg.

EXPOSURE: SW

ANIMAL USE/DISTURBANCE: Slight

EROSION: Negligible

COVER: (no quantitative data recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

*Chrysothamnus nauseosus*

*Astragalus cicer*

*Aster foliaceus*

*Elymus cinereus*

*Elymus smithii*

*Elymus lanceolatus*

*Elymus spicatus*

*Stipa hymenoides*

NOTES:

- 1) Quantitative data only in 2003.
- 2) Cover looked good.
- 3) Site looked very good.
- 4) Site was dominated by grasses with some forbs and shrubs.

ENERGY WEST MINING COMPANY  
QUALITATIVE SAMPLING DATA SHEET AND  
QUANTITATIVE/QUALITATIVE NOTES  
2003

SITE NAME: Reclaimed Slope (Final) '98

AREA: Cottonwood Fan Portal Area

DATE: October 13-18, 2003

WORKERS: P. Collins

SLOPE: variable

EXPOSURE: SW

ANIMAL USE/DISTURBANCE: Slight

EROSION: Negligible

COVER: (see quantitative data)

DOMINANT PLANT SPECIES OBSERVED:

*Atriplex canescens*  
*Chrysothamnus nauseosus*

*Aster chilensis*  
*Aster glaucodes*  
*Linum lewisii*  
*Penstemon palmeri*

*Elymus lanceolatus*  
*Elymus junceus*  
*Elymus cinereus*  
*Elymus smithii*  
*Elymus spicatus*  
*Stipa hymenoides*

- NOTES:
- 1) Sample quantitatively this year.
  - 2) Generally, the site looked dry, but good with fewer weeds.
  - 3) Road areas were rocky.
  - 4) Fair diversity.
  - 5) Shrubs were beginning to show up more.
  - 6) Good grass cover.

DES-BEE-DOVE AREA



ENERGY WEST MINING COMPANY  
 QUALITATIVE SAMPLING DATA SHEET AND  
 QUANTITATIVE/QUALITATIVE NOTES  
 2003

SITE NAME: Pumphouse (Final)

AREA: Des-Bee-Dove

DATE: September 23, 2003

WORKERS: P. Collins

SLOPE: 2-14 deg.

EXPOSURE: N

ANIMAL USE/DISTURBANCE: Slight

EROSION: Negligible

COVER: (see quantitative data)

DOMINANT PLANT SPECIES OBSERVED: (see also quantitative data)

*Chrysothamnus nauseosus*

*Gutierrezia sarothrae*

*Malcomia africana*

*Salsola pestifer*

*Penstemon palmeri*

*Halogeton glomeratus*

*Elymus smithii*

*Stipa hymenoides*

*Elymus lanceolatus*

<b>Woody Species Density</b>	
DBD Pumphouse	No/Ac
<i>Artemisia tridentata</i>	102.80
<i>Atriplex confertifolia</i>	46.73
<i>Ceratoides lanata</i>	37.38
<i>Chrysothamnus nauseosus</i>	186.90
<i>Gutierrezia sarothrae</i>	186.90
<b>Total</b>	<b>560.70</b>

- 1) Patches of weedy species and patches of desirable species.
- 2) Lots of halogeton and also desirable species.
- 3) Diversity looked "fair to good".
- 4) Recorded quantitative data for cover, frequency, and density (n=15 for each).
- 5) Quant. data recording also included the road area.
- 6) For cover estimates, refer to attached spreadsheet.
- 7) For density, refer to table above.

ENERGY WEST  
 Pumphouse (Final)  
 Des-Bee-Dove Mine  
 Slope: 2-14 deg  
 Exposure: North

Sample Date: 23 Sept 2003                    1.00            2.00            3.00            4.00            5.00            6.00

SHRUBS

<i>Artemisia tridentata</i>	0.00	0.00	0.00	0.00	0.00	0.00
<i>Chrysothamnus nauseosus</i>	0.00	0.00	0.00	0.00	25.00	55.00
<i>Gutierrezia sarothrae</i>	0.00	0.00	0.00	0.00	0.00	0.00

FORBS

<i>Halogeton glomeratus</i>	0.00	0.00	0.00	35.00	0.00	0.00
<i>Malcomia africana</i>	0.00	0.00	5.00	0.00	0.00	0.00
<i>Penstemon palmeri</i>	30.00	15.00	0.00	0.00	5.00	0.00

GRASSES

<i>Bromus tectorum</i>	0.00	0.00	0.00	0.00	0.00	0.00
<i>Elymus salinus</i>	0.00	10.00	0.00	0.00	0.00	0.00
<i>Elymus smithii</i>	0.00	10.00	15.00	10.00	0.00	0.00
<i>Elymus spicatus</i>	0.00	0.00	0.00	0.00	0.00	0.00
<i>Stipa hymenoides</i>	0.00	0.00	5.00	0.00	5.00	0.00

COVER

Total Living Cover	30.00	35.00	25.00	45.00	35.00	55.00
Litter	5.00	5.00	5.00	5.00	5.00	40.00
Bareground	60.00	5.00	10.00	35.00	15.00	3.00
Rock	5.00	55.00	60.00	15.00	45.00	2.00

% COMPOSITION

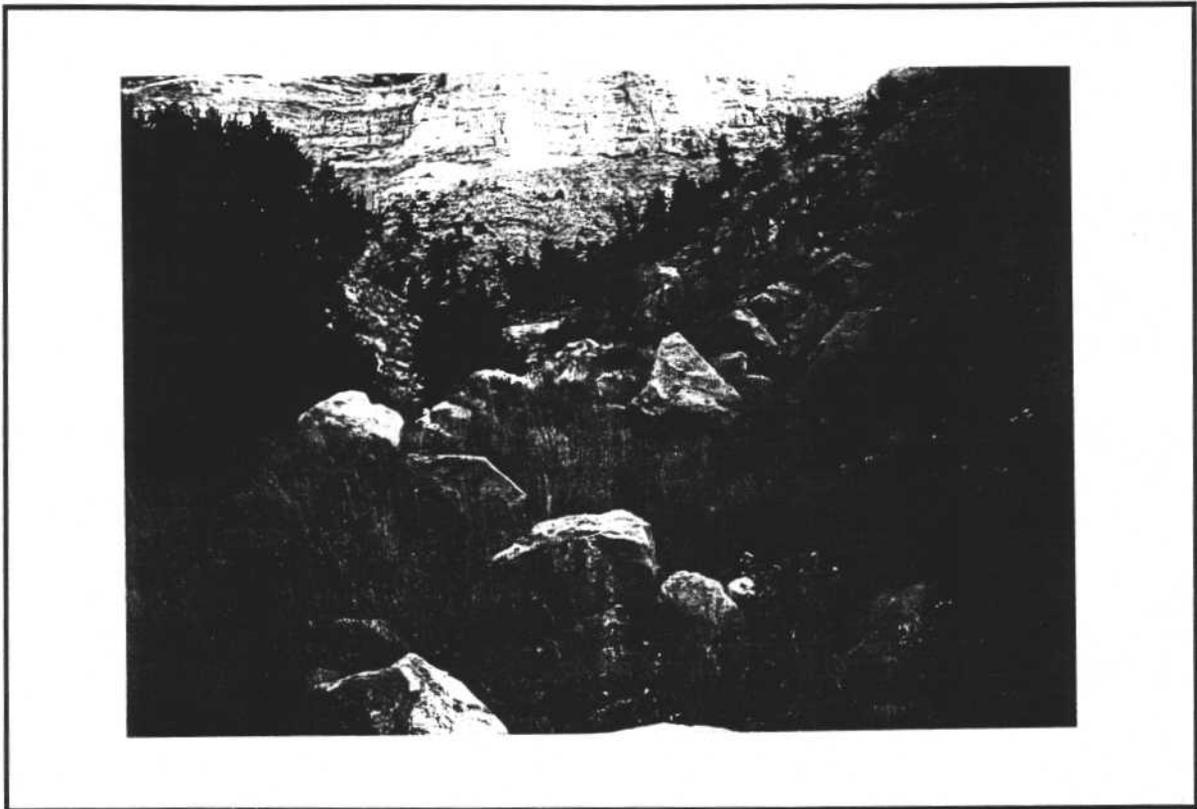
Shrubs	0.00	0.00	0.00	0.00	71.43	100.00
Forbs	100.00	42.86	20.00	77.78	14.29	0.00
Grasses	0.00	57.14	80.00	22.22	14.29	0.00

7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
0.00	0.00	5.00	0.00	0.00	0.00	5.00	0.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00
5.00	0.00	5.00	0.00	0.00	0.00	20.00	2.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00
5.00	15.00	10.00	15.00	10.00	10.00	5.00	20.00	5.00
0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	5.00	0.00	5.00	0.00	0.00	0.00	0.00	5.00
0.00	0.00	0.00	5.00	0.00	0.00	0.00	3.00	0.00
5.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00
20.00	25.00	25.00	25.00	10.00	25.00	35.00	25.00	20.00
5.00	5.00	5.00	10.00	5.00	5.00	5.00	5.00	25.00
20.00	20.00	20.00	10.00	80.00	25.00	15.00	15.00	25.00
55.00	50.00	50.00	55.00	5.00	45.00	45.00	55.00	30.00
25.00	0.00	20.00	0.00	0.00	40.00	14.29	0.00	25.00
50.00	60.00	60.00	60.00	100.00	40.00	85.71	88.00	50.00
25.00	40.00	20.00	40.00	0.00	20.00	0.00	12.00	25.00

ENERGY WEST  
 Pumphose (Final)  
 Des-Bee-Dove Mine  
 Slope: 2-14 deg  
 Exposure: North  
 Sample Date: 23 Sept 2003

Mean	SDev	Freq	
<hr/>			
			SHRUBS
1.00	2.00	20.00	<i>Artemisia tridentata</i>
5.33	14.66	13.33	<i>Chrysothamnus nauseosus</i>
1.00	2.71	13.33	<i>Gutierrezia sarthrae</i>
			FORBS
4.80	9.52	10.00	<i>Halogeton glomeratus</i>
0.67	1.70	13.33	<i>Malcomia africana</i>
9.67	8.06	80.00	<i>Penstemon palmeri</i>
			GRASSES
0.67	1.70	13.33	<i>Bromus tectorum</i>
0.67	2.49	6.67	<i>Elymus salinus</i>
3.33	4.71	40.00	<i>Elymus smithii</i>
0.53	1.41	13.33	<i>Elymus spicatus</i>
1.33	2.21	26.67	<i>Stipa hymenoides</i>
			COVER
29.00	10.52		Total Living Cover
9.00	9.70		Litter
23.87	20.07		Bareground
38.13	20.23		Rock
<hr/>			
			% COMPOSITION
19.71	29.13		Shrubs
56.58	29.40		Forbs
23.71	22.10		Grasses
<hr/>			

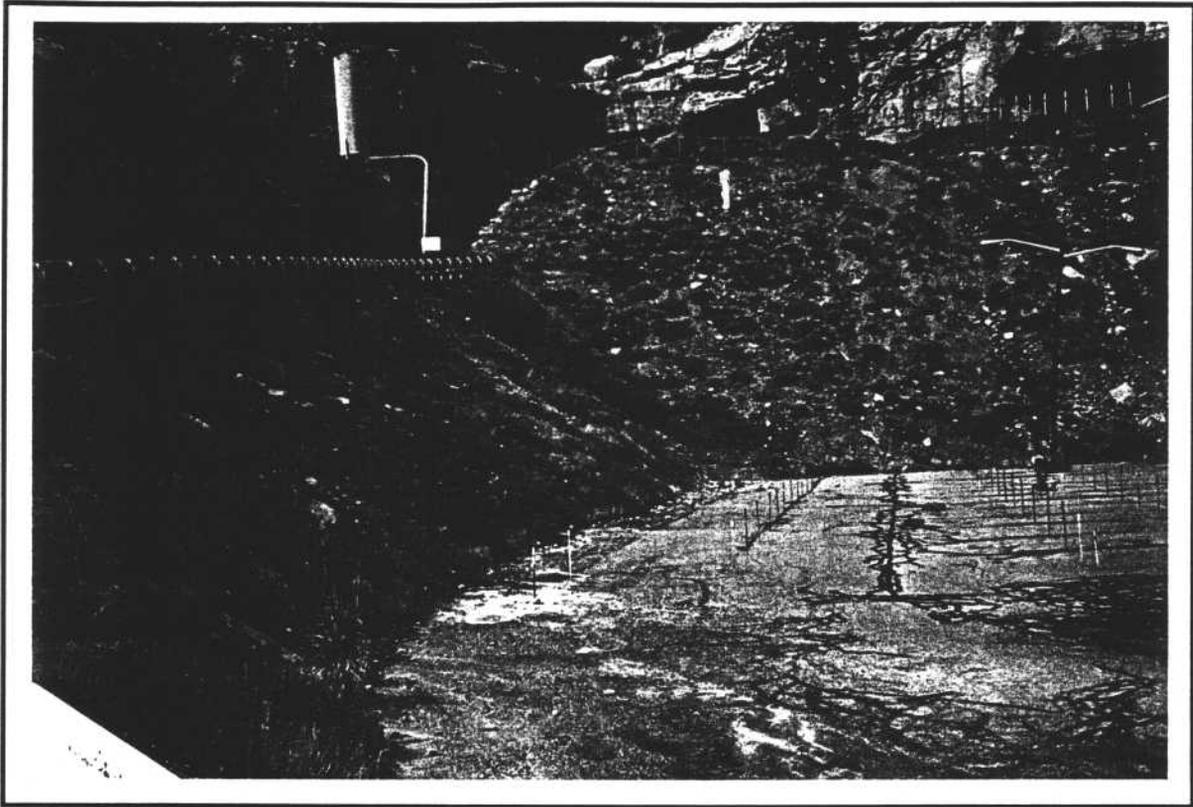
**COLOR PHOTOGRAPHS  
of the  
SAMPLE AREAS**



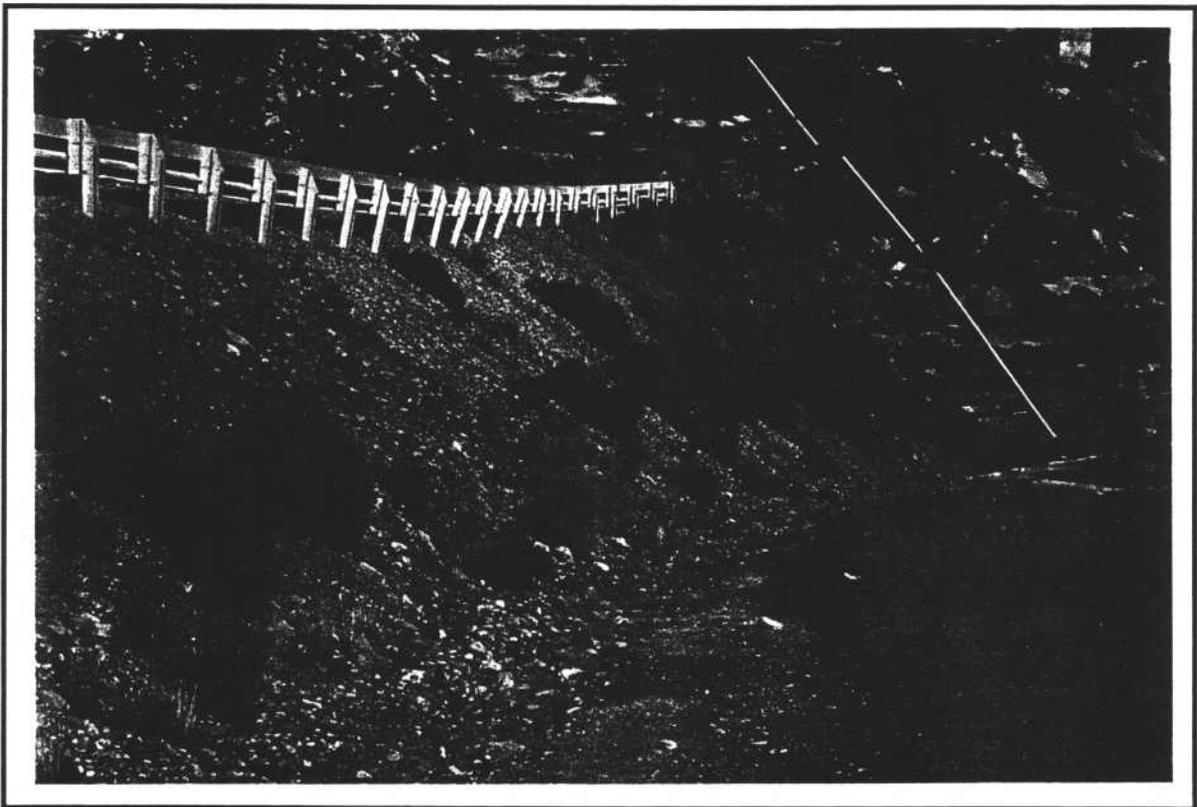
Cottonwood Mine Area - Old Fan Road (photo from 2001)



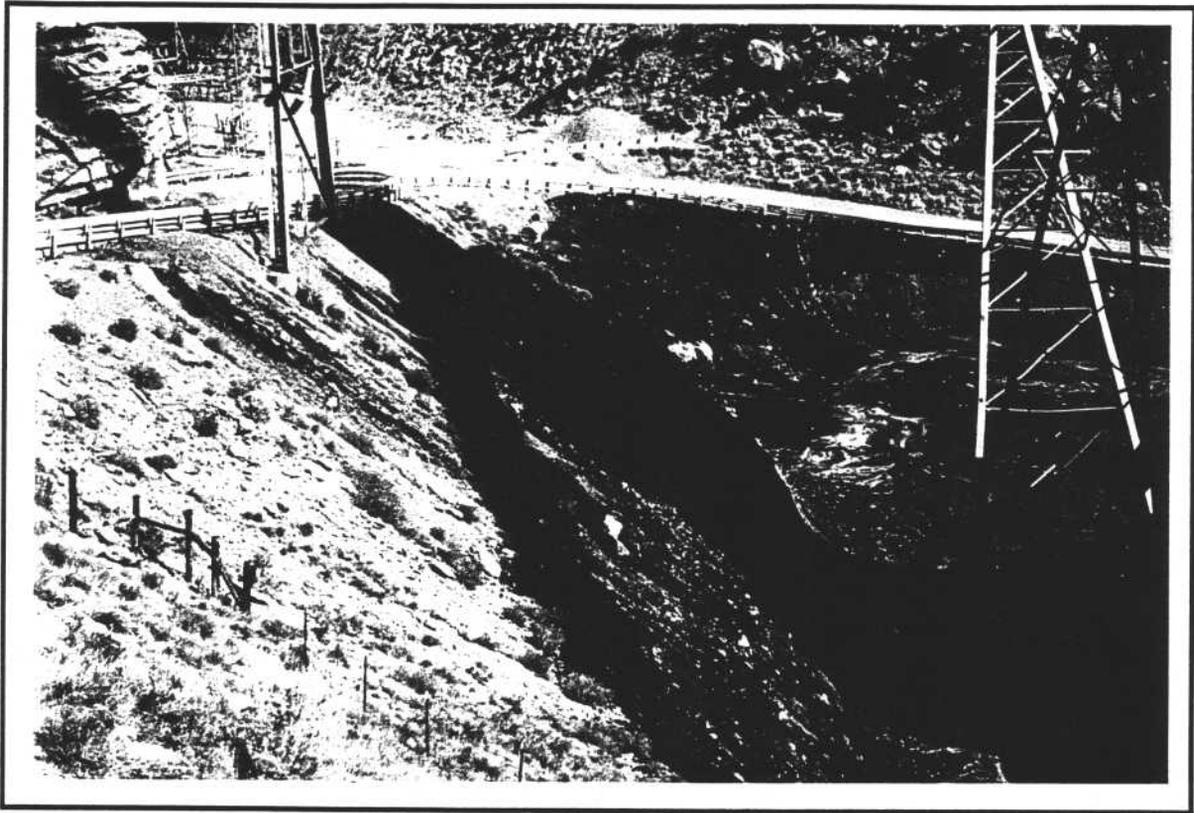
Cottonwood Mine Area - Reference Area



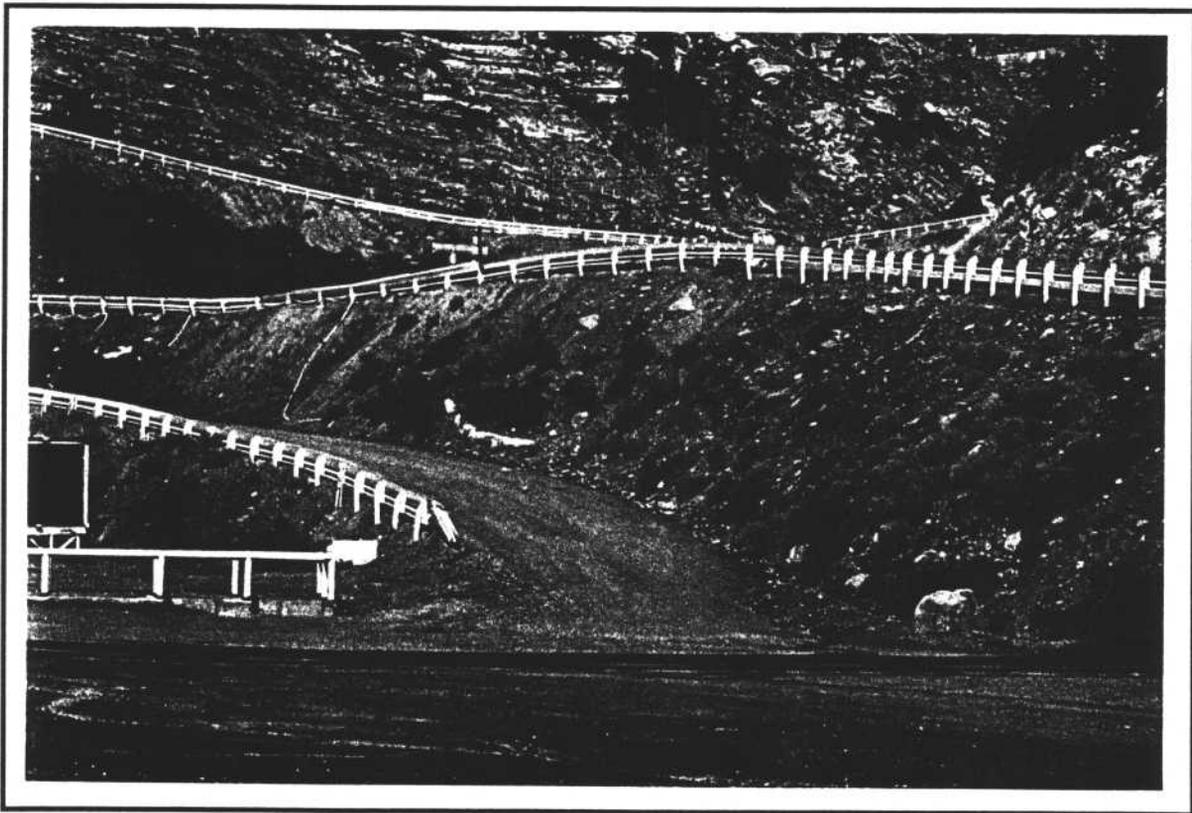
Cottonwood Mine Area - Storage Yard Slopes



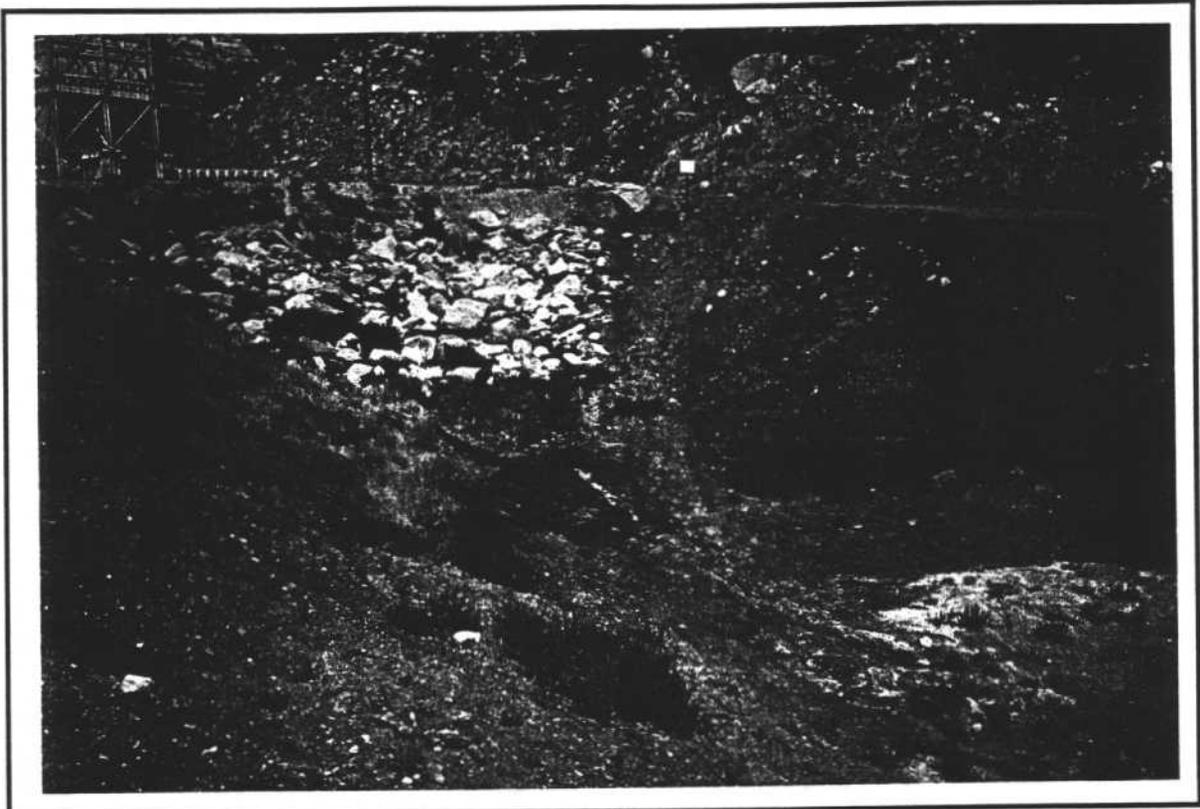
Cottonwood Mine Area - Parking Lot Slope



Cottonwood Mine Area - Road Silo Pad Slope



Cottonwood Mine Area - Tipple Area Slopes



Cottonwood Mine Area - Sediment Pond Banks



Cottonwood Mine Area - Ninth East Breakout



Cottonwood Mine Area - Old Waste Rock Site, Cell 1



Cottonwood Mine Area - Old Waste Rock Site, Cell 2



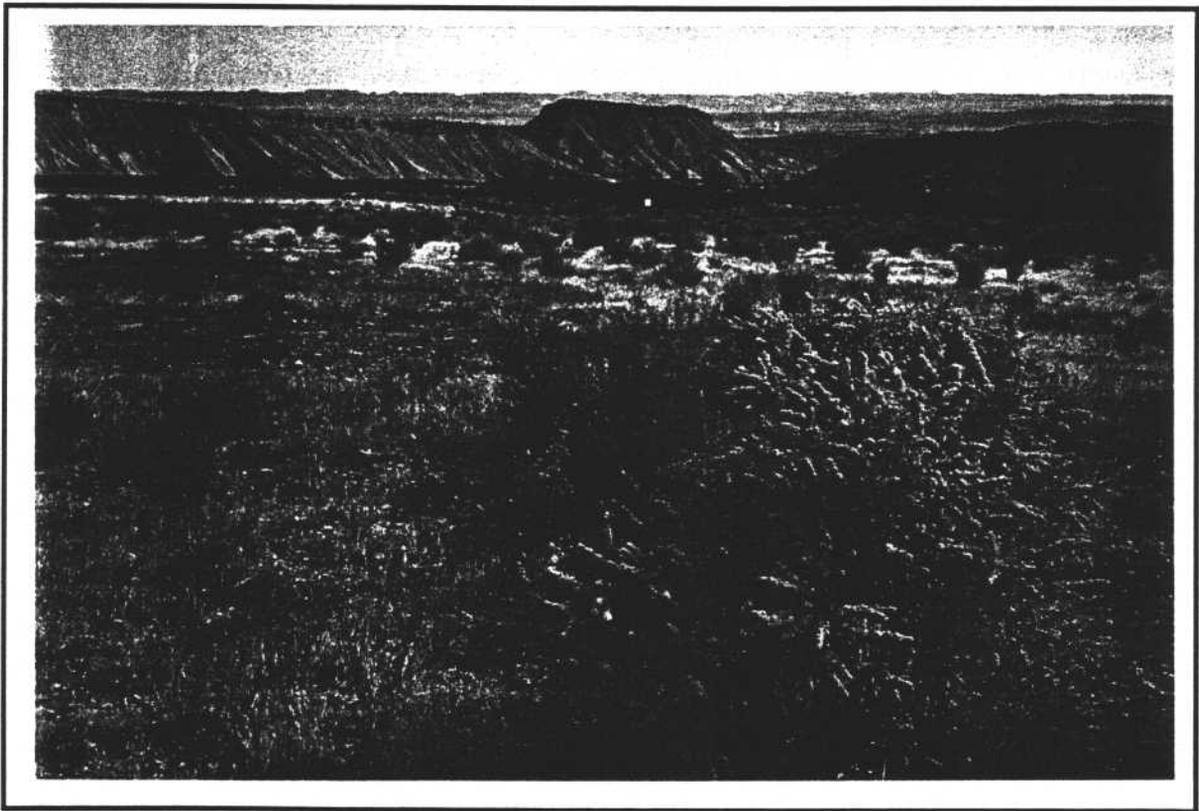
Cottonwood Mine Area - Old Waste Rock Site, Cell 3



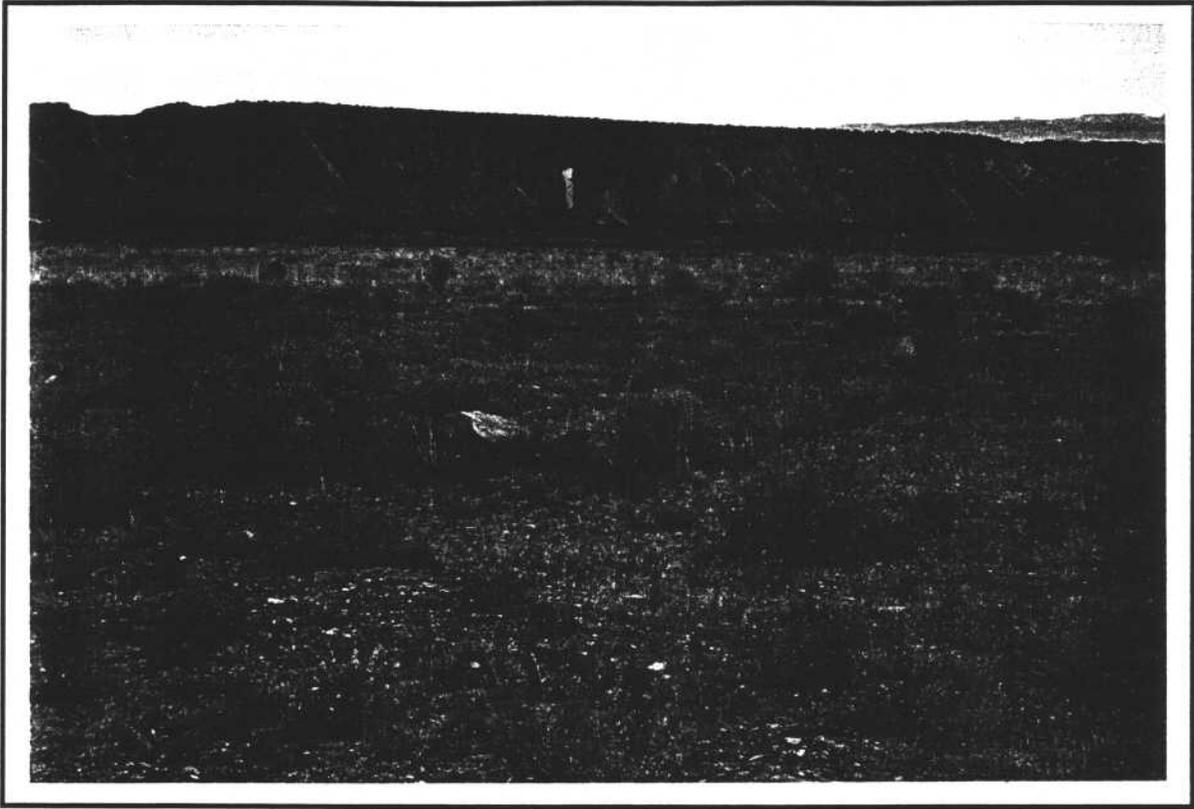
Cottonwood Mine Area - Old Waste Rock Site, Cell 4



Cottonwood Mine Area - Old Waste Rock Site, Cell 5



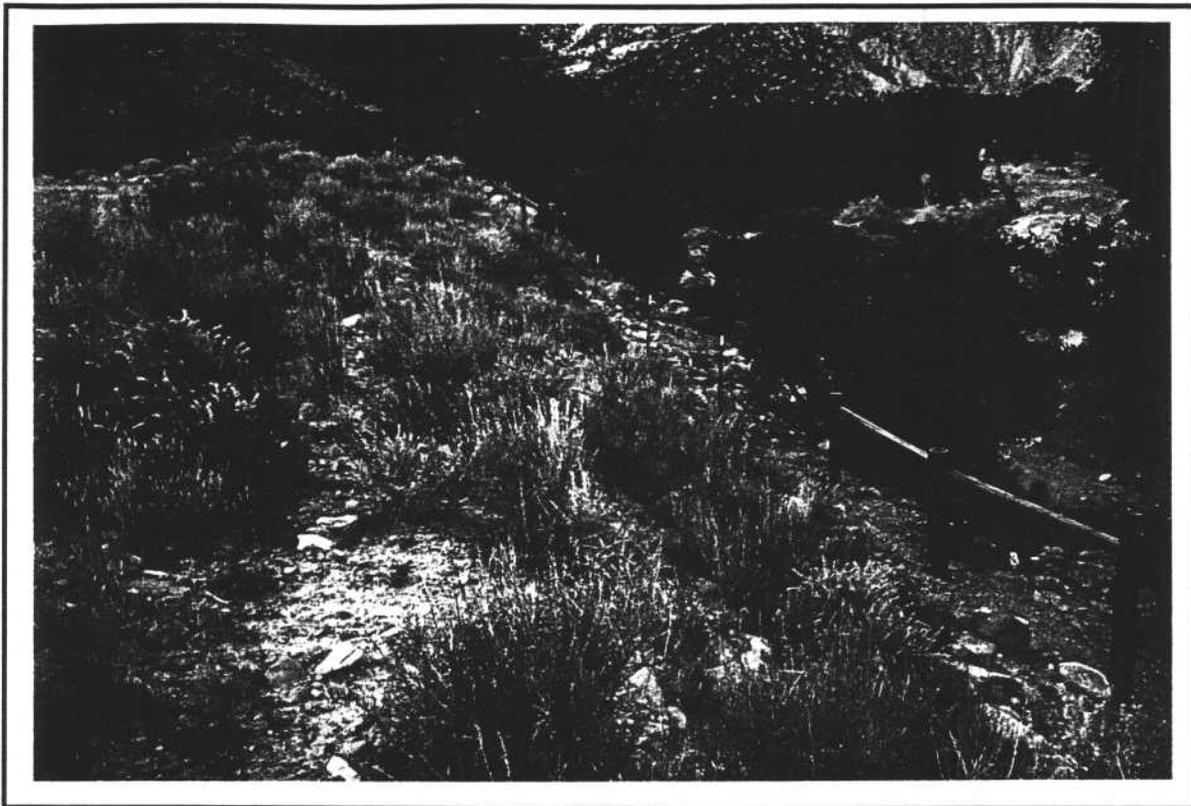
Cottonwood Mine Area - Old Waste Rock Site, Cell 6



Cottonwood Mine Area - Old Waste Rock Site, Cell 7



Cottonwood Mine Area - Old Waste Rock Site, Berm 1



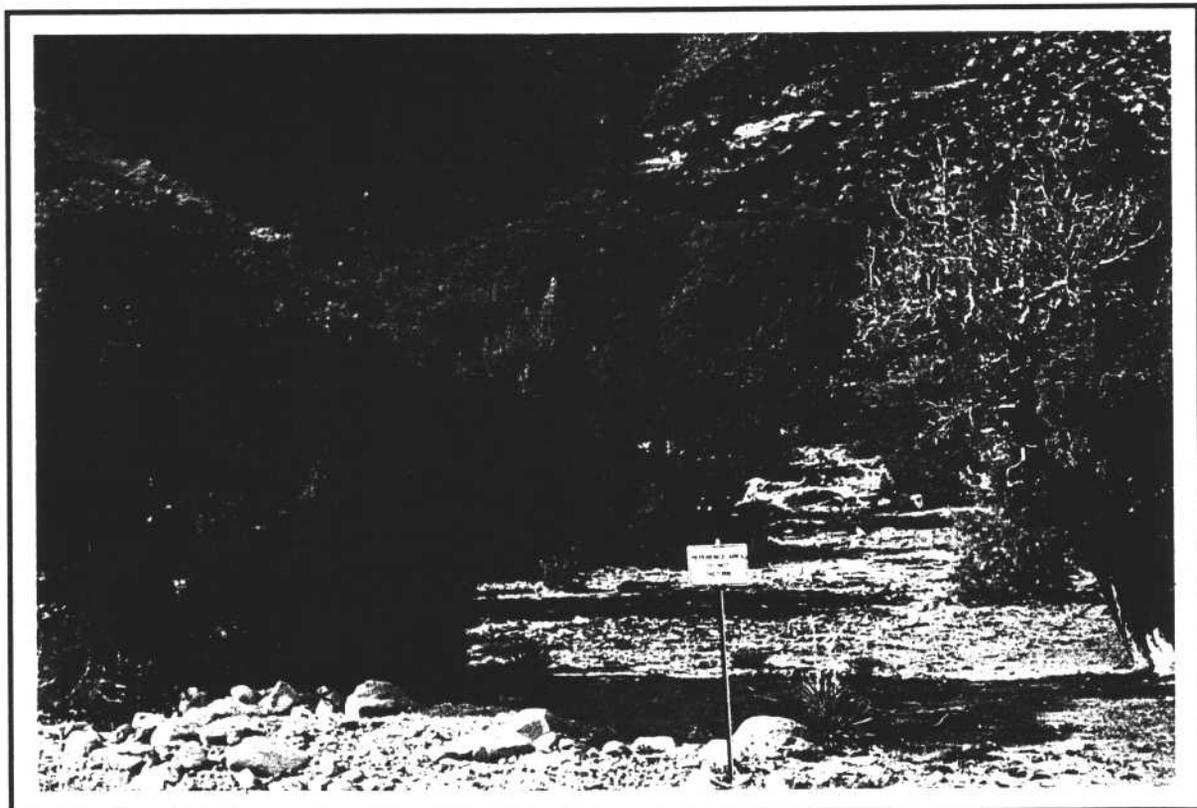
Cottonwood Mine Area - Old Waste Rock Site, Berm 2



Cottonwood Mine Area - Old Waste Rock Site, Berm 3



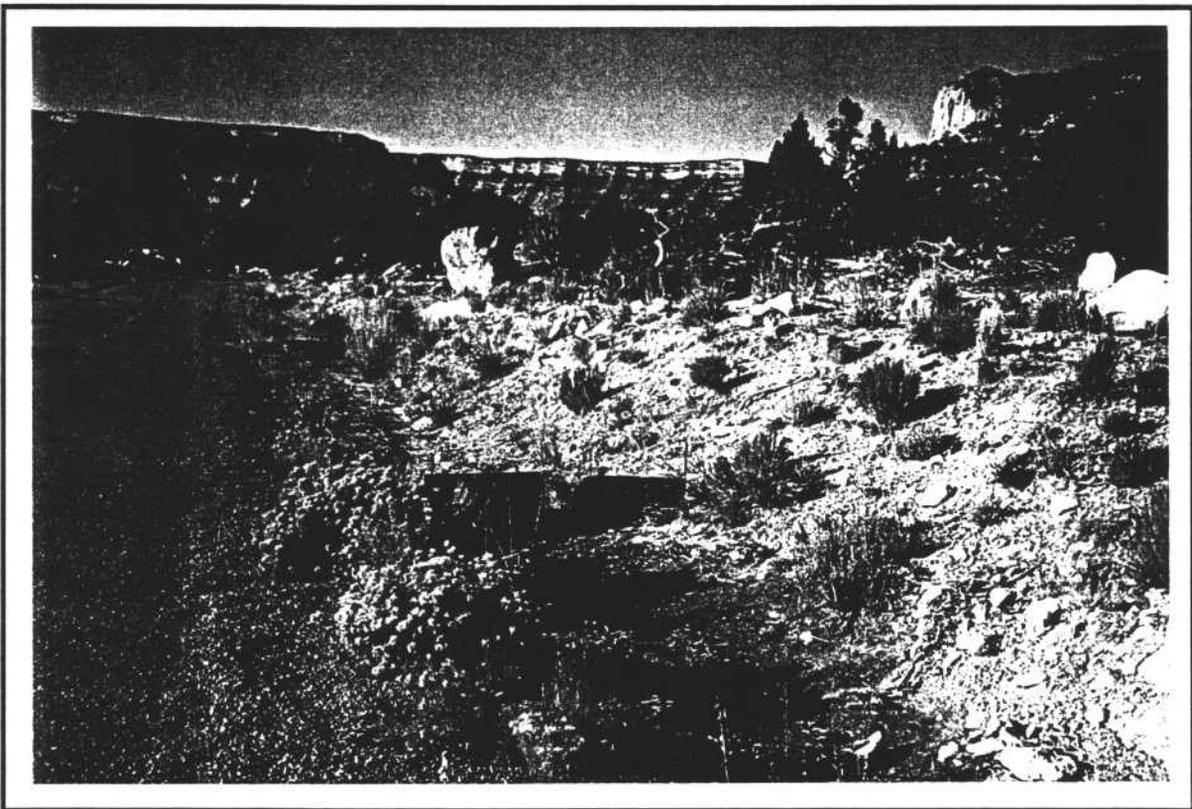
Cottonwood Mine Area - Old Waste Rock Site, Berm 4



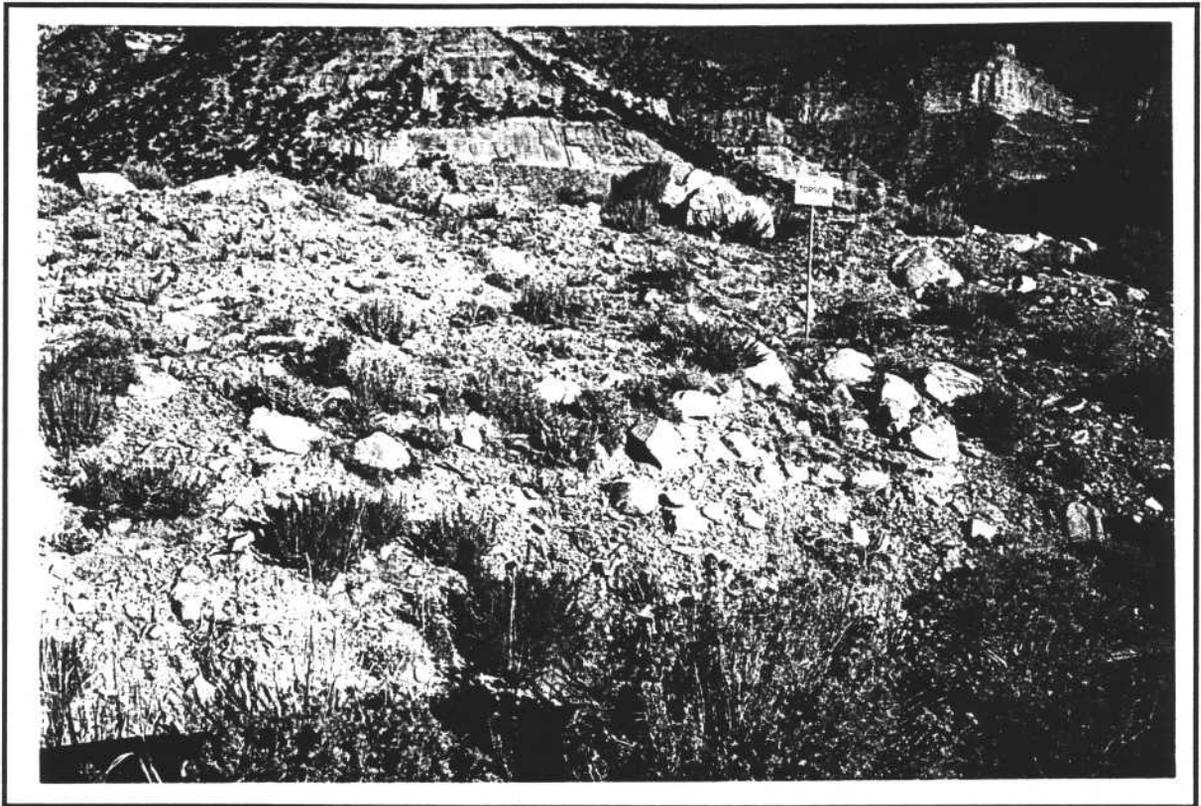
Cottonwood Mine Area - Old Waste Rock Site, CTW Reference Area



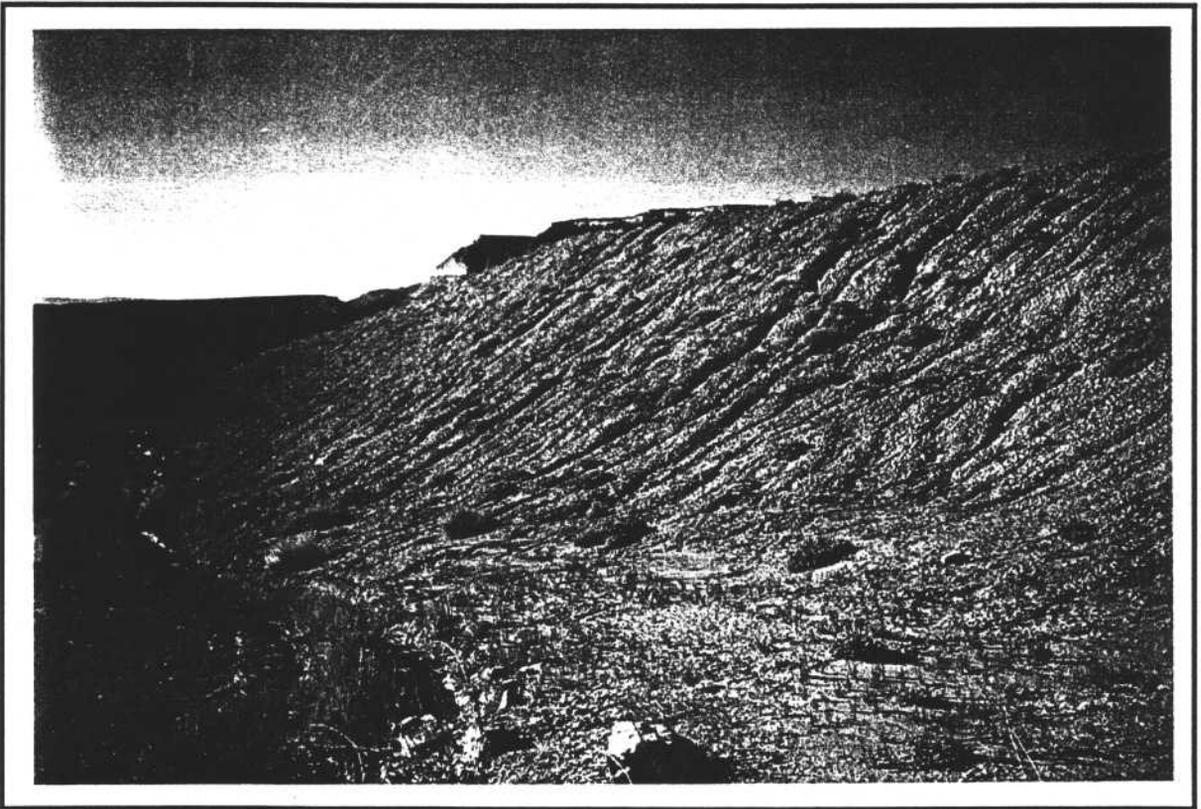
Cottonwood Mine Area - Old Waste Rock Site, CTW Soil Pile (A, C)



Cottonwood Mine Area - New Waste Rock Site, Road Slopes



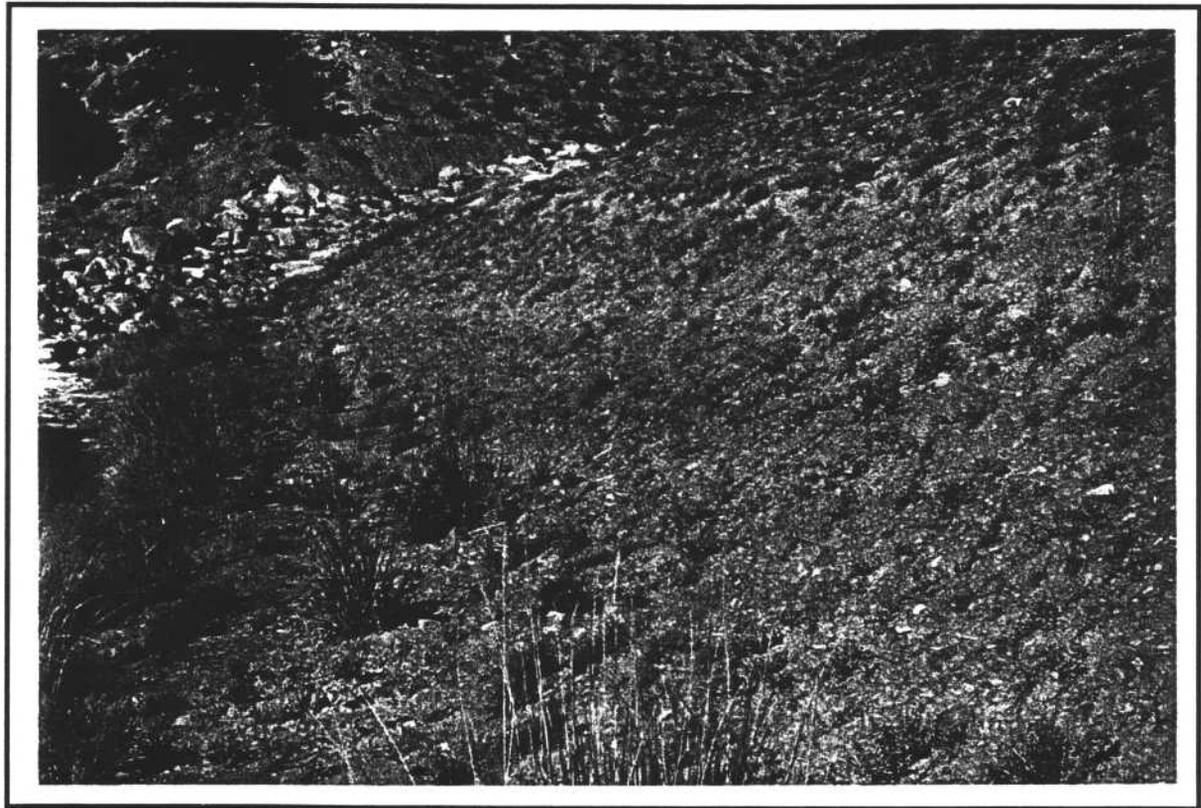
Cottonwood Mine Area - New Waste Rock Site, Topsoil Stockpiles



Cottonwood Mine Area - New Waste Rock Site, Subsoil Stockpiles



Cottonwood Mine Area - New Waste Rock Site, Sediment Pond Banks



Cottonwood Mine Area - New Waste Rock Site, Refuse Berm 1991



Cottonwood Mine Area - New Waste Rock Site, Refuse Berm 1994



Cottonwood Mine Area - New Waste Rock Site, Refuse Berm 1996



Cottonwood Canyon Area - Soil Pile (north)



Cottonwood Canyon Area - Fan Portal, Reclaimed Slope 1981



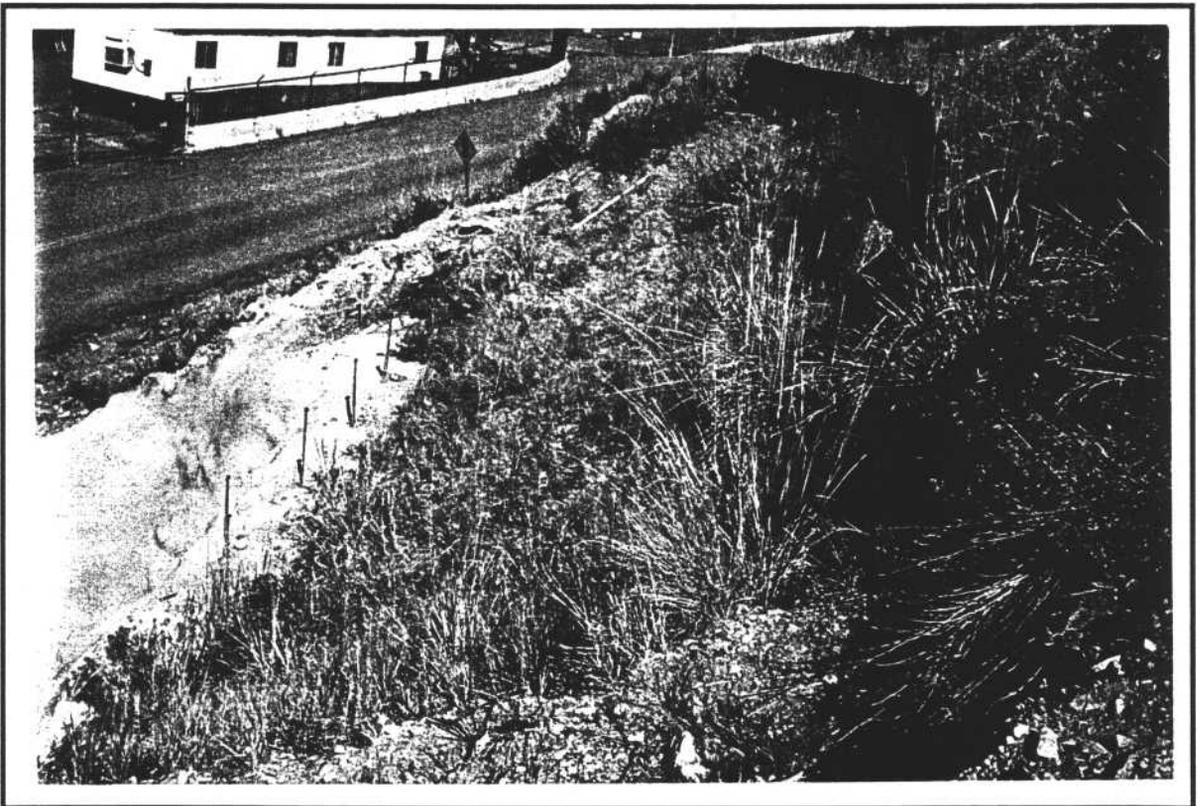
Cottonwood Canyon Area - Fan Portal Reference Area



Cottonwood Canyon Area - Tube Conveyor



Cottonwood Canyon Area - Belt Portal 1996



Cottonwood Canyon Area - Portal (Diesel) 1996



Cottonwood Canyon Area - Reclaimed Slope 1998



Des-Bee-Dove Area - Pumphouse

**APPENDIX C**

**Legal Financial, Compliance and Related Information**

Annual Report of Officers  
As submitted to the Utah Department of Commerce

Other change in ownership and control information  
As required under R645-301-110

**CONTENTS**

**APPENDIX D**

**Mine Maps**

As required under R645-302-525-270

**CONTENTS**



APPENDIX E

Other Information

In accordance with the requirements of R645-301 and R645-302

CONTENTS

File in:

- Confidential
- Shelf
- Expandable

Refer to Record No. 2042 Date 03312004

In Cl 0150018 Succession

For additional information

*2003 Annual Report*