PacifiCorp

COTTONWOOD MINE
C/015/019

DEER CREEK MINE
C/015/018

DES-BEE-DOVE MINES
C/015/017

TRAIL MOUNTAIN MINE
C/015/009

ENERGY WEST Mining Co.

ANNUAL HYDROLOGIC REPORT
2002

*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 (Mine currently in cessation)
Permit Number	C/015/019
Authorized Representative Title	Chuck Semborski, Geology/Permitting Supervisor
Phone Number	(435) 687-9821
Fax Number	
E-mail Address	
Mailing Address	P.O. Box 310, Huntington, Utah 84528
Resident Agent	Charles 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)	42-01211	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	
Other			

CERTIFIED REPORTS

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Certified Reports:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On File	
Excess Spoil Piles	☐	☒	☐	☐	
Refuse Piles	☒	☐	☐	☒	
Impoundments	☒	☐	☒	☐	no discharge from sediment pond in 2002
Other					
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	

REPORTING OF OTHER TECHNICAL DATA

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Technical Data:	Required		Included or on file with DOGM		Comments
	Yes	No	Included	On file	
Climatological	☐	☒	☒	☐	Included in separate Hydrologic Report
Subsidence Monitoring	☒	☐	☒	☐	Included in separate Subsidence Report
Vegetation Monitoring	☒	☐	☒	☐	Refer to Appendix B
Raptor Survey	☒	☐	☒	☐	Refer to Appendix B
Soils Monitoring	☐	☒	☐	☐	
Water Monitoring	☐	☐	☐	☐	
First quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Second quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Third quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Fourth quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Geological / Geophysical	☐	☒	☐	☐	
Engineering	☐	☒	☐	☐	
Non Coal Waste / Abandoned Underground Equipment*	☐	☒	☐	☐	
Other Data					
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	

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Legal / Financial Update	**Required**		**Included or on File with DOGM**		**Comments**
	Yes	No	Included	On file	
Department of Commerce, Annual Report Officers	☒	☐	☒	☐	refer to Appendix C
Other					
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	

MINE MAPS

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Map Number(s)	**Map Title/ Description**	**Confidential** Yes	No
None	See previous Annual Reports (mine is currently in cessation)	☒	☐
		☐	☐
		☐	☐
		☐	☐
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		☐	☐

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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	
E-mail Address	
Mailing Address	P.O. Box 310, Huntington, Utah 84528
Resident Agent	Charles Semborski, Geology/Permitting Supervisor
Resident Agent Mailing Address	P.O. Box 310, Huntington, Utah 84528
Number of Binders Submitted	4

IDENTIFICATION OF OTHER PERMITS

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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	11/30/2007
		Site 002: Mine Discharge	
PSD Permit(s) (Air)	DAQE-926-96	Issued 10/4/96, Mine Tipple	None
	DAQE-926-91	Issued 12/5/91, WRS	
Other			

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Excess Spoil Piles	☐	☒	☐	☐	
Refuse Piles	☒	☐	☐	☒	
Impoundments	☒	☐	☒	☐	Sediment Pond: Site 001
Other					
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	

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Vegetation Monitoring	☒	☐	☒	☐	Refer to Appendix B
Raptor Survey	☒	☐	☒	☐	Refer to Appendix B
Soils Monitoring	☐	☒	☐	☐	
Water Monitoring	☐	☐	☐	☐	
First quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Second quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Third quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Fourth quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Geological / Geophysical	☐	☒	☐	☐	
Engineering	☐	☒	☐	☐	
Non Coal Waste / Abandoned Underground Equipment*	☒	☐	☐	☒	
Other Data					
_____	☐	☐	☐	☐	
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_____	☐	☐	☐	☐	
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Other					
_____	☐	☐	☐	☐	_____
_____	☐	☐	☐	☐	_____
_____	☐	☐	☐	☐	_____

MINE MAPS

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Map Number(s)	**Map Title/ Description**	**Confidential** Yes	No
None	Deer Creek Mine Production Map (Current as of March, 2003)	☒	☐
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		☐	☐
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		☐	☐
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		☐	☐
		☐	☐

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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 currently in reclamation)
Permit Number	C/015/017
Authorized Representative Title	Chuck Semborski, Geology/Permitting Supervisor
Phone Number	(435) 687-9821
Fax Number	
E-mail Address	
Mailing Address	P.O. Box 310, Huntington, Utah 84528
Resident Agent	Charles 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	4/30/03
PSD Permit(s) (Air)	N/A		
Other			

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Excess Spoil Piles	☐	☒	☐	☐	
Refuse Piles	☒	☐	☐	☒	
Impoundments	☒	☐	☒	☐	Sediment Pond: Site 001
Other					
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	

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Vegetation Monitoring	☒	☐	☒	☐	Refer to Appendix B
Raptor Survey	☒	☐	☒	☐	Refer to Appendix B
Soils Monitoring	☐	☒	☐	☐	
Water Monitoring	☐	☐	☐	☐	Included in separate Hydrologic Report
First quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Second quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Third quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Fourth quarter	☒	☐	☒	☒	Included in separate Hydrologic Report
Geological / Geophysical	☐	☒	☐	☐	
Engineering	☐	☒	☐	☐	
Non Coal Waste / Abandoned Underground Equipment*	☐	☒	☐	☐	
Other Data					
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	

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Other					
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Map Number(s)	**Map Title/ Description**	**Confidential** Yes	No
None	See previous Annual Reports (mine is currently in reclamation)	☒	☐
		☐	☐
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		☐	☐
		☐	☐
		☐	☐
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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 21, 2005 (Mine is currently in cessation)
Permit Number	C/015/009
Authorized Representative Title	Chuck Semborski, Geology/Permitting Supervisor
Phone Number	(435) 687-9821
Fax Number	
E-mail Address	
Mailing Address	P.O. Box 310, Huntington, Utah 84528
Resident Agent	Charles Semborski, Geology/Permitting Supervisor
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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	11/30/02
		Site 002: Mine Discharge	
PSD Permit(s) (Air)	DAQE-694-95	Issued 8/9/95	None
Other			

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Excess Spoil Piles	☐	☒	☐	☐	
Refuse Piles	☒	☐	☐	☒	
Impoundments	☒	☐	☒	☐	No discharge of sediment pond in 2002
Other					
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	

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Engineering	☐	☒	☐	☐	
Non Coal Waste / Abandoned Underground Equipment*	☐	☒	☐	☐	
Other Data					
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	
_____	☐	☐	☐	☐	

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Map Number(s)	**Map Title/ Description**	**Confidential** Yes	No
None	See previous Annual Reports (mine is currently in cessation)	☒	☐
		☐	☐
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		☐	☐
		☐	☐
		☐	☐
		☐	☐

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Additional attachment to this report? **Yes** ☐ **No** ☒

APPENDIX A

Certified Reports

Excess Spoil Piles
Refuse Piles
Impoundments

As required under R645-301-514

CONTENTS

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/019	**Report Date**	DEC. 31, 2002
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	DEC. 18, 2002
Inspected By	Rick Cullum/ John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	4th Quarter Inspection 2002

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.

	North Pond	South Pond	Waste Rock Pond
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.

	North Pond	South Pond	Waste Rock Pond
Principal Spillway Elevation	7354.83	7325.33	6766.3
Emergency Spillway Elevation	7363.33	7334.2	6770.0

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

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.

	North Pond	South Pond	Waste Rock Pond
Water Elevation (Ice Elevation)	7353.57	7328.19	6761.87
Discharging	NO	NO	No
Inlet/Outlet Condition	Good	Good	Good
Slope conditions	Good	Good	Good

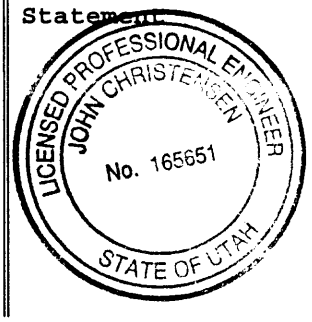
*See "Hydrologic Monitoring Data" report submitted to DOGM quarterly for monitoring information.

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.

	North Pond	South Pond	Waste Rock Pond
Sediment Volume	0.18 AF	0.05 AF	1.04 AF
Remaining Sediment Storage Capacity	0.38 AF	0.27 AF	1.38 AF
Water Impounded	0.23 AF	0.52 AF	0.36 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 PONDS WERE FROZEN AT THE TIME OF THE INSPECTIONS.

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:** 1/8/03

Signature: Richard Cullum **Date:** 1-9-03

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/019	**Report Date**	OCT. 7, 2002
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	SEPT. 26, 2002
Inspected By	Rick Cullum/ John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	3rd Quarter Inspection 2002

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.

	North Pond	South Pond	Waste Rock Pond
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.

	North Pond	South Pond	Waste Rock Pond
Principal Spillway Elevation	7354.83	7325.33	6766.3
Emergency Spillway Elevation	7363.33	7334.2	6770.0

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

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.

	North Pond	South Pond	Waste Rock Pond
Water Elevation	7353.97	7328.39	6763.07
Discharging	NO	NO	No
Inlet/Outlet Condition	Good	Good	Good
Slope conditions	Good	Good	Good

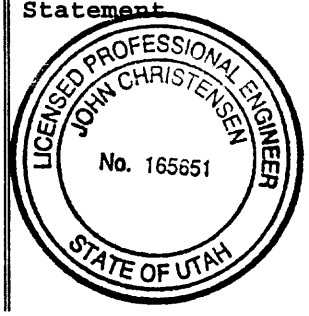
*See "Hydrologic Monitoring Data" report submitted to DOGM quarterly for monitoring information.

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.

	North Pond	South Pond	Waste Rock Pond
Sediment Volume	0.18 AF	0.05 AF	1.04 AF
Remaining Sediment Storage Capacity	0.38 AF	0.27 AF	1.38 AF
Water Impounded	0.25 AF	0.57 AF	0.72 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.

Qualification Statement



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Signature: John Christensen **Date:** 10/8/02

Signature: Richard Cullum **Date:** 10/15/02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/019	**Report Date**	JUNE 14, 2002
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 11, 2002
Inspected By	Rick Cullum/ John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	2nd Quarter Inspection 2002

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.

	North Pond	South Pond	Waste Rock Pond
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.

	North Pond	South Pond	Waste Rock Pond
Principal Spillway Elevation	7354.83	7325.33	6766.3
Emergency Spillway Elevation	7363.33	7334.2	6770.0

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

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.

	North Pond	South Pond	Waste Rock Pond
Water Elevation	7350.87	7324.94	Pond is dry
Discharging	NO	NO	No
Inlet/Outlet Condition	Good	Good	Good
Slope conditions	Good	Good	Good

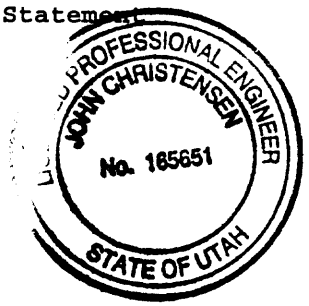
*See "Hydrologic Monitoring Data" report submitted to DOGM quarterly for monitoring information.

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.

	North Pond	South Pond	Waste Rock Pond
Sediment Volume	0.18 AF	0.05 AF	1.04 AF
Remaining Sediment Storage Capacity	0.38 AF	0.27 AF	1.38 AF
Water Impounded	0.04 AF	0.06 AF	0.00 AF
Changes, Comments,	Pond is functioning Normally at this time.	Pond is functioning normally.	Pond was dry at time of inspection

NORTH AND SOUTH PONDS WERE CLEANED IN THE FOURTH QUARTER OF 2000.

Qualification Statement



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Signature: John Christensen **Date:** 7/9/02

Signature: Richard Cullum **Date:** 7-9-02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/019	**Report Date**	June 11, 2002
Mine Name	Cottonwood/Wilberg		
Company Name	PacifiCorp		
Impoundment Identification	**Impoundment Name**	**COTTONWOOD CANYON** NORTH BASIN	SOUTH BASIN
	Impoundment Number		
	UPDES Permit Number	UT-0022896-002A	
	MSHA ID Number		

IMPOUNDMENT INSPECTION

Inspection Date	**JUNE 11, 2002**
Inspected By	Rick Cullum/ John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Second Quarter 2002 Inspection

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

No unstable or structural weaknesses found.

Required for an impoundment which functions as a SEDIMENTATION POND.

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

	North Basin	South Basin
60% Design Storage Capacity	0.028 A.F.	0.069 A.F.
100% Sediment Capacity	0.047 A.F.	0.115 A.F.

3. Principle and emergency spillway elevations.

	North Basin	South Basin
Principle Spillway Elevation (F.A.S.L.):	7230.5	7223.6
Emergency Spillway Elevation	7230.5	7223.6

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

4. 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.

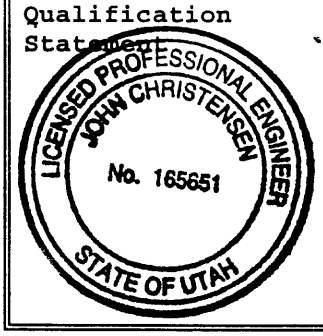
	North Basin	South Basin
Water Elevation	None	None
Discharging	No	No
Inlet, Outlet Conditions	Good	Good
Outslope Conditions	Good	Good

*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.

	North Basin	South Basin
Sediment Volume	0 A.F.	0 A.F.
Remaining Sediment Storage Capacity	0 A.F.	0 A.F.
Changes, Comments, etc.	BOTH BASINS WERE RECLAIMED IN MAY OF 2002.	

Qualification Statement



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Signature: John Christensen **Date:** 7/9/02

Signature: J. Richard Cullimore **Date:** 7-9-02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/019	**Report Date**	Mar. 27, 2002
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	Mar. 13, 2002
Inspected By	Rick Cullum/ John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	1st Quarter Inspection 2002

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.

	North Pond	South Pond	Waste Rock Pond
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.

	North Pond	South Pond	Waste Rock Pond
Principal Spillway Elevation	7354.83	7325.33	6766.3
Emergency Spillway Elevation	7363.33	7334.2	6770.0

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

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.

	North Pond	South Pond	Waste Rock Pond
Water Elevation	7352.29	7326.79	6760.55
Discharging	NO	NO	No
Inlet/Outlet Condition	Good	Good	Good
Slope conditions	Good	Good	Good

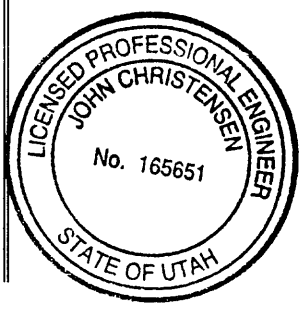
*See "Hydrologic Monitoring Data" report submitted to DOGM quarterly for monitoring information.

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.

	North Pond	South Pond	Waste Rock Pond
Sediment Volume	0.18 AF	0.05 AF	1.04 AF
Remaining Sediment Storage Capacity	0.38 AF	0.27 AF	1.38 AF
Water Impounded	0.12 AF	0.35 AF	0.04 AF
Changes, Comments,	Pond is functioning Normally at this time. Pond frozen.	Pond is functioning normally. Pond frozen.	Pond in functioning normally.

NORTH AND SOUTH PONDS WERE CLEANED IN THE FOURTH QUARTER OF 2000.

Qualification Statement



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Signature: John Christensen **Date:** 4/8/02

Signature: Richard Cullum **Date:** 4-8-02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/019	**Report Date**	Mar. 27, 2002
Mine Name	Cottonwood/Wilberg		
Company Name	PacifiCorp		
Impoundment Identification	**Impoundment Name**	**COTTONWOOD CANYON** NORTH BASIN SOUTH BASIN	
	Impoundment Number		
	UPDES Permit Number	UT-0022896-002A	
	MSHA ID Number		

IMPOUNDMENT INSPECTION

Inspection Date	**Mar. 13, 2002**
Inspected By	Rick Cullum/ John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	First Quarter 2002 Inspection

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

No unstable or structural weaknesses found.

Required for an impoundment which functions as a SEDIMENTATION POND.

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

	North Basin	South Basin
60% Design Storage Capacity	0.028 A.F.	0.069 A.F.
100% Sediment Capacity	0.047 A.F.	0.115 A.F.

3. **Principle and emergency spillway elevations.**

	North Basin	South Basin
Principle Spillway Elevation (F.A.S.L.):	7230.5	7223.6
Emergency Spillway Elevation	7230.5	7223.6

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

4. **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.

	North Basin	South Basin
Water Elevation	None	None
Discharging	No	No
Inlet, Outlet Conditions	Good	Good
Outslope Conditions	Good	Good

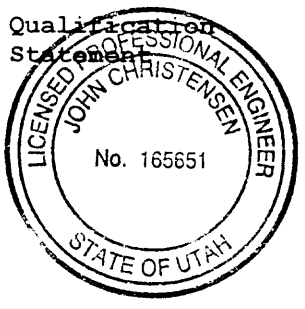
*See "Hydrologic Monitoring Data" report submitted quarterly to DOGM for monitoring information.

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.

	North Basin	South Basin
Sediment Volume	0 A.F.	0 A.F.
Remaining Sediment Storage Capacity	0 A.F.	0 A.F.

Changes, Comments, etc. BOTH BASINS WERE CLEANED IN THE THE 4TH QUARTER Of 2000. Both basins were dry at time of inspection.

Qualification Statement



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Signature: _____ **Date:** 4/8/02

Signature: Richard Cullum **Date:** 4-8-02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/018	**Report Date**	DEC. 30, 2002
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:** 12/18/02	**Waste Rock Pond:** 12/18/02
Inspected By	Rick Cullum / John Christensen	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Fourth Quarter 2002 Inspection	

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

	Mine Site Pond	Waste Rock Pond
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.

	Mine Site Pond:	Waste Rock Pond:
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.

Principle and emergency spillway elevations.

	Mine Site Pond	Waste Rock Pond
Principle Spillway Elevation (F.A.S.L.):	7218.64	6318.0
Emergency Spillway Elevation	7232.03	6318.0

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

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.

	Mine Site Pond	Waste Rock Pond
Water Elevation	7221.84	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.

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.

	Mine Site Pond	Waste Rock Pond
Sediment Volume	0 A.F.	None
Remaining Sediment Storage Capacity	3.12 A.F.	0.98 A.F.
Water impounded	6.15 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 **Date:** 1/8/03

Signature: Richard Cullum **Date:** 1/9/03

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/018	**Report Date**	OCT. 7, 2002
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:** 9/26/02	**Waste Rock Pond:** 9/26/02
Inspected By	Rick Cullum / John Christensen	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Third Quarter 2002 Inspection	

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

	Mine Site Pond	**Waste Rock Pond**
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.

	Mine Site Pond:	**Waste Rock Pond:**
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.

Principle and emergency spillway elevations.

	Mine Site Pond	**Waste Rock Pond**
Principle Spillway Elevation (F.A.S.L.):	7218.64	6318.0
Emergency Spillway Elevation	7232.03	6318.0

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

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.

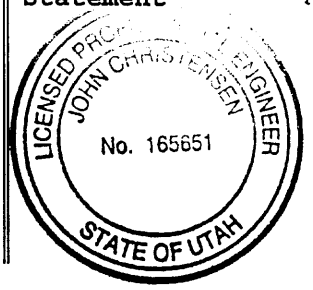
	Mine Site Pond	Waste Rock Pond
Water Elevation	7218.68	
Discharging	Yes	Never
Inlet, Outlet, Spillway Conditions	Good	Good
Out slope Conditions	No Change	No Change

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

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.

	Mine Site Pond	Waste Rock Pond
Sediment Volume	2.71 A.F.	None
Remaining Sediment Storage Capacity	0.41 A.F.	0.98 A.F.
Water impounded	1.66 A.F.	NONE
Changes, Comments, etc.	The pond was being decanted in preparation for cleaning.	No change from last Inspection.

Qualification Statement



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Signature: John Christensen **Date:** 10/8/02

Signature: Richard Cullimore **Date:** 10/15/02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/018	**Report Date**	JUNE 27, 2002
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:6/14/02**	**Waste Rock Pond:3/12/02**
Inspected By	Rick Cullum / John Christensen	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Second Quarter 2002 Inspection	

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

	Mine Site Pond	**Waste Rock Pond**
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.

	Mine Site Pond:	**Waste Rock Pond:**
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.

Principle and emergency spillway elevations.

	Mine Site Pond	**Waste Rock Pond**
Principle Spillway Elevation (F.A.S.L.):	7218.64	6318.0
Emergency Spillway Elevation	7232.03	6318.0

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

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.

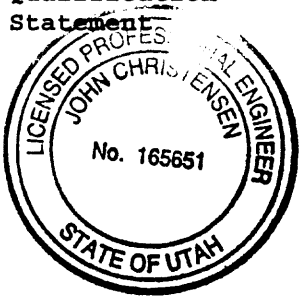
	Mine Site Pond	Waste Rock Pond
Water Elevation	7224.88	
Discharging	Yes	Never
Inlet, Outlet, Spillway Conditions	Good	Good
Out slope Conditions	No Change	No Change

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

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.

	Mine Site Pond	Waste Rock Pond
Sediment Volume	2.71 A.F.	None
Remaining Sediment Storage Capacity	0.41 A.F.	0.98 A.F.
Water impounded	2.49 A.F.	NONE
Changes, Comments, etc.	No changes from last inspection.	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 **Date:** 7/8/02

Signature: Richard Cullom **Date:**

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/018	**Report Date**	Mar. 27, 2002
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:3/12/02**	**Waste Rock Pond:3/12/02**
Inspected By	Rick Cullum / John Christensen	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	First Quarter 2002 Inspection	

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

	Mine Site Pond	Waste Rock Pond
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.

	Mine Site Pond:	Waste Rock Pond:
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.

Principle and emergency spillway elevations.

	Mine Site Pond	Waste Rock Pond
Principle Spillway Elevation (F.A.S.L.):	7218.64	6318.0
Emergency Spillway Elevation	7232.03	6318.0

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT | | Page 1 of 2

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.

	Mine Site Pond	Waste Rock Pond
Water Elevation	7221.35 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.

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.

	Mine Site Pond	Waste Rock Pond
Sediment Volume	1.68 A.F.	None
Remaining Sediment Storage Capacity	1.44 A.F.	0.98 A.F.
Water impounded	4.07 A.F.	NONE
Changes, Comments, etc.	No changes from last inspection.	No change from last Inspection

Qualification Statement

LICENSED PROFESSIONAL ENGINEER JOHN CHRISTENSEN No. 165651 STATE OF UTAH

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:** 4/8/02

Signature: Richard Cullimore **Date:** 4-8-02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/017	**Report Date**	DEC. 18, 2002
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	12/18/02
Inspected By	Rick Cullum/John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Fourth Quarter 2002 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

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

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

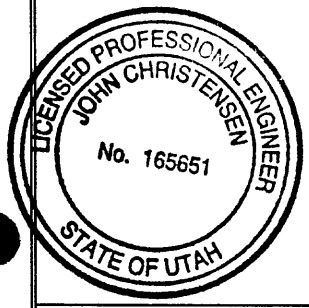
Water Elevation	6759.94 (ice level)
Discharging	No
Inlet, Outlet Conditions	Good
Slope conditions	Good

*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:	2.85 A.F.
Changes or Comments:	The pond was partially cleaned in the 3rd 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: _____ **Date:** 1/8/03

Signature: Richard Cullum **Date:** 1-9-03

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/017	**Report Date**	OCT. 7, 2002
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	9/26/02
Inspected By	Rick Cullum/John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Third Quarter 2002 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 outslopes of embankments, etc.

Water Elevation	6759.24
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:	2.05 A.F.

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

Qualification Statement

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

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:** 10/8/02

Signature: Richard Cullum **Date:** 10/15/02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/017	**Report Date**	June 11, 2002
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	6/11/02
Inspected By	Rick Cullum/John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Second Quarter 2002 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

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

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	0
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:	2.57
Remaining Sediment Storage Capacity:	0
Water Impoundment:	(0) A.F.

Changes or Comments: Pond was dry at time of inspection. The pond is scheduled to be cleaned in the 3rd Quarter of 2002.

Qualification Statement

LICENSED PROFESSIONAL ENGINEER JOHN CHRISTENSEN No. 165651 STATE OF UTAH

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:** 7/9/02

Signature: Richard Cullum **Date:** 7-9-02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/017	**Report Date**	Mar. 27, 2002
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	3/13/02
Inspected By	Rick Cullum/John Christensen
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	First Quarter 2002 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 outslopes of embankments, etc.

Water Elevation	6757.09
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: 2.57

Remaining Sediment Storage Capacity: 0

Water Impoundment: (0) A.F.

Changes or Comments: Pond was being drained at time of inspection and the remaining water was at south end of pond.

Qualification Statement

LICENSED PROFESSIONAL ENGINEER JOHN CHRISTENSEN No. 165651 STATE OF UTAH

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:** 1/8/02

Signature: Richard Cullum **Date:** 1-8-02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/009	**Report Date**	DEC. 30, 2002
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	

IMPOUNDMENT INSPECTION

Inspection Date	DEC. 18, 2002
Inspected By	John Christensen / Rick Cullum/
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Fourth Quarter 2002 Inspection

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

No unstable or structural weaknesses found.

Required for an impoundment which functions as a SEDIMENTATION POND.

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

60% Design Storage Capacity 0.282 A.F. at 7182

100% Sediment Capacity 0.47 A.F. at 7183.6

3. Principle and emergency spillway elevations.

Principle Spillway Elevation (F.A.S.L.): 7186.6

Emergency Spillway Elevation:(F.A.S.L.): 7194.6

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

4. 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	7182.83 (ice level)
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	.04 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

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

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:** 1/8/03

Signature Richard Cullum **Date:** 1-9-03

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/009	**Report Date**	OCT. 7, 2002
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	

IMPOUNDMENT INSPECTION

Inspection Date	SEPT. 26, 2002
Inspected By	John Christensen / Rick Cullum/
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Third Quarter 2002 Inspection

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

No unstable or structural weaknesses found.

Required for an impoundment which functions as a SEDIMENTATION POND.

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

60% Design Storage Capacity 0.282 A.F. at 7182

100% Sediment Capacity 0.47 A.F. at 7183.6

3. Principle and emergency spillway elevations.

Principle Spillway Elevation (F.A.S.L.): 7186.6

Emergency Spillway Elevation:(F.A.S.L.): 7194.6

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

4. 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	7183.83
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

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

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: _____ **Date:** 10/8/02

Signature: _____ **Date:** 10/15/02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/009	**Report Date**	June 11, 2002
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	

IMPOUNDMENT INSPECTION

Inspection Date	June 11, 2002
Inspected By	John Christensen / Rick Cullum/
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Second Quarter 2002 Inspection

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

No unstable or structural weaknesses found.

Required for an impoundment which functions as a SEDIMENTATION POND.

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

60% Design Storage Capacity 0.282 A.F. at 7182

100% Sediment Capacity 0.47 A.F. at 7183.6

3. Principle and emergency spillway elevations.

Principle Spillway Elevation (F.A.S.L.): 7186.6

Emergency Spillway Elevation:(F.A.S.L.): 7194.6

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

4. 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	7181.93
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	(0) A.F.
Changes, comments, etc.	Mining has seized at Trail Mtn. Operations only Storm run off will run into the pond.

Qualification Statement

LICENSED PROFESSIONAL ENGINEER JOHN CHRISTENSEN No. 165651 STATE OF UTAH

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:** 7/9/02

Signature: Richard Cullum **Date:** 7-10-02

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			Page 1 of 2
Permit Number	ACT/015/009	**Report Date**	Mar. 27, 2002
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	

IMPOUNDMENT INSPECTION

Inspection Date	Mar. 13, 2002
Inspected By	John Christensen / Rick Cullum/
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	First Quarter 2002 Inspection

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

No unstable or structural weaknesses found.

Required for an impoundment which functions as a SEDIMENTATION POND.

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

60% Design Storage Capacity 0.282 A.F. at 7182

100% Sediment Capacity 0.47 A.F. at 7183.6

3. **Principle and emergency spillway elevations.**

Principle Spillway Elevation (F.A.S.L.): 7186.6

Emergency Spillway Elevation: (F.A.S.L.): 7194.6

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		Page 1 of 2

4. **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	7183.90 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	0.15 A.F.
Changes, comments, etc.	Mining has seized at Trail Mtn. Operations only Storm run off will run into the pond.

Qualification Statement

LICENSED PROFESSIONAL ENGINEER JOHN CHRISTENSEN No. 165651 STATE OF UTAH

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:** 4/8/02

Signature: Richard Cullum **Date:** 4-8-02

APPENDIX B

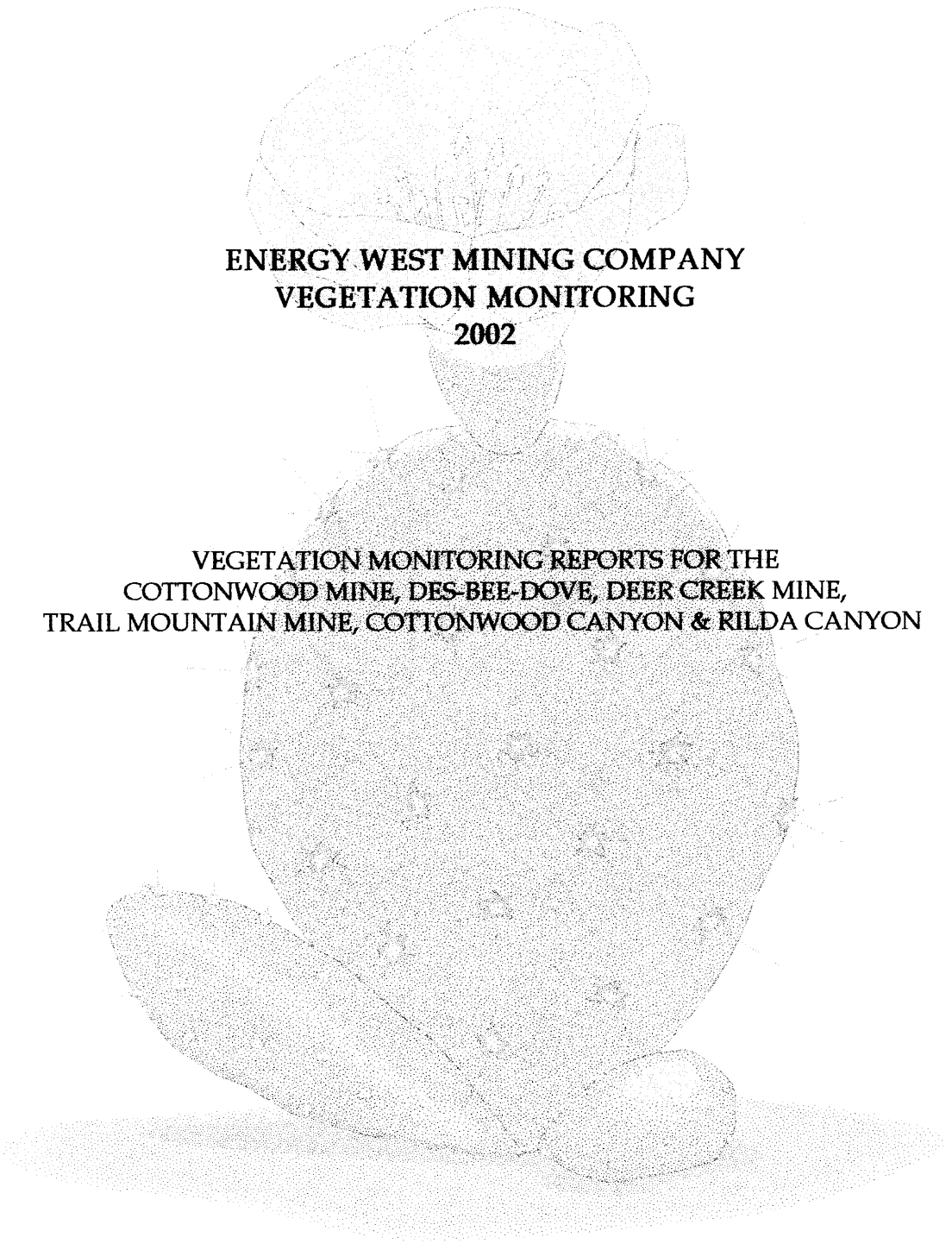
Reporting of Technical Data

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

CONTENTS

ENERGY WEST MINING COMPANY
VEGETATION MONITORING
2002



VEGETATION MONITORING REPORTS FOR THE
COTTONWOOD MINE, DES-BEE-DOVE, DEER CREEK MINE,
TRAIL MOUNTAIN MINE, COTTONWOOD CANYON & RILDA CANYON

Prepared by

MT. NEBO SCIENTIFIC, INC.
330 East 400 South, Suite 6
P.O. Box 337
Springville, Utah 84663
(801) 489-6937

Patrick D. Collins, Ph.D.

for

ENERGY WEST MINING COMPANY
P.O. Box 310
Huntington, Utah 84528

March 2003

TABLE OF CONTENTS

Des-Bee-Dove Area

Deer Creek Mine

Trail Mountain Mine

Rilda Canyon

INTRODUCTION

The following document addresses the results of vegetation monitoring of seeded areas for the year 2002. Listed below are the areas monitored and reported within this document.

Cottonwood Mine Area

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)

Deer Creek Mine

Reference Area, Mixed Conifer
Reference Area, Riparian
Reference Area, Pinyon-Juniper
C2 Conveyor (IU 132-190) 1993
Riparian Areas
Sediment Pond Dam
Temp. Sediment Basin
Roadside Areas
Gate Areas Slope
Fan Road Slopes
Refuse Pile and Berm
Rock Slide and Berm
Water Plant Slope
Pipeline
Deer Canyon

Waste Rock Site
Reference Area
Access Road Slopes
Phase I Berm
Phase I Diversion

Drain Field Reconst
Field Drains Dec. '97

Trail Mountain Mine

Reference Area
Sediment Pond Outslope
Parking Ext. 1996
Soil Pile

Rilda Canyon

Pad Area Slopes 1996
Roadway Slopes 1996
Topsoil Pile 1995
(some roadway slopes)

METHODS

Vegetation monitoring was conducted on revegetated sites for ENERGY WEST MINING COMPANY in the growing season of 2002. 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 2002 growing season.

Workers

Lists the names of the individuals who recorded the data.

Exposure

Exposure was recorded on each site. Often the site had several exposure differences. 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 (Cottom 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
2002

SITE NAME: Reference Area

AREA: Cottonwood Mine

DATE: September 9-14, 2002

WORKERS: P. Collins, D. Oakley

SLOPE: 36 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Minimal

EROSION: Negligible

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

Abies concolor
Amalanchier 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 2002.
2) No major disturbance has disrupted this site.
3) Natural slides occur in area.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Storage Yard Slope

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE:

WORKERS: P. Collins, D. 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

Aster chilensis
Halogeton glomeratus
Penstemon palmeri

Agropyron cristatum
Elymus cinereus
Elymus lanceolatus
Elymus smithii

NOTES:
1) Sampled for qualitative data only.
2) Different exposures supported different species. For example, the east exposures had a lot of Palmer penstemon and the north exposures had none.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Parking Lot Slope

AREA: Cottonwood Mine

DATE: September 9-14, 2002

WORKERS: P. Collins, D. 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 hispidus
Elymus salinus
Elymus spicatus
Grindelia squarrosa
Stipa hymenoides

NOTES:

1) Sampled for qualitative data.

2) Mostly weedy species because of erosion control measures (½-inch-plus rock cover) disturbed existing vegetation.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Road/Silo Pad Slope

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 35 deg.

EXPOSURE: SE

ACREAGE: 1.4 acre

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Moderate (see notes)

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

Atriplex confertifolia
Eriogonum corymbosum

Aster chilensis
Penstemon palmeri

Elymus cinereus
Elymus smithii
Elymus spicatus

NOTES:

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Tipple Area Slope

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 35 deg.

EXPOSURE: Variable

AREA: .1 acre

ANIMAL USE/DISTURBANCE: None

EROSION: Some moderate erosion on north side of the road.

COVER: (Cover not sampled this year) .

DOMINANT PLANT SPECIES OBSERVED:

Atriplex confertifolia
Chrysothamnus nauseosus
Eriogonum corymbosum

Aster chilensis
Halogeton glomeratus

Elymus smithii
Elymus junceus
Sporobolus airoides
Stipa hymenoides

NOTES:

1) Sampled for qualitative data only this year.

2) Area was still active constantly changing and therefore, unstable for plant growth. It's a difficult place for desirable spp. to become established.(~00).

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Sediment Pond Banks

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE: September 9-14, 2002

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
Grindelia squarrosa
Halogeton glomeratus
Machaeranthera canescens
Malcomia africana
Penstemon palmeri
Salsola pestifer

Agropyron cristatum
Bromus inermis
Elymus cinereus
Elymus elymoides
Elymus hispidus
Elymus lanceolatus
Elymus smithii
Elymus spicatus
Stipa hymenoides

NOTES:

1) We sampled for qualitative data this year.

2) Patchy vegetation growth patterns with some desirable and some weedy species. This is due to erosion control, regular pond maintenance to clean-out, and fluctuating water levels in the ponds. (~01).

3) The cover looked good on ponds that had not been disturbed.

7) Not near as many weedy species were present.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Ninth East Road Breakout Final 1999

AREA: Cottonwood Mine (1988 Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins, D. Collins

SLOPE: Variable

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE:

EROSION: Negligible, controlled well by plants

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

Artemisia tridentata
Atriplex canescens

Aster chilensis
Cirsium sp.
Linum lewisii
Penstemon palmeri
Stipa pinnata

Agropyron cristatum
Elymus spicatus
Elymus lanceolatus
Elymus smithii
Poa fendleriana
Stipa hymenoides

NOTES:
1) Qualitative sampling only this year.
2) There were lots of young (2 year old) sagebrush plants this year.
3) The site looks very good this year.
4) Good shrub establishment.

5) Good diversity of forbs, shrubs and grasses.

6) Erosion is being controlled by roughed ground techniques.

7) The lower 1/3 of the entire length of the reclaimed road had many more weeds and much fewer desirable species. It appeared that it did not receive seeds when it was seeded. I feel like because the poorer areas were on the "downhill" side of the road, the desirable species will more easily seed these portions of the road naturally.

8) The above was filling in considerably in 2002

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Cell #1

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

DATE: September 9-14, 2002

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) At first Dennis Oakley and I thought we would sample for "final" bond release and we planned it that way. Then we looked at the site and, because it was the 4th consecutive year of drought, the plants looked very dry. Furthermore, cover, productivity, and diversity appeared to be low compared to previous years.

3) 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 responsibility period has been completed.

4) Dennis and I then decided in a meeting to sample aggressively last year (2001) as though we may attempt bond release to see what the data reveal. If, in fact, we came up short on sample sizes it will not be too critical. We would then know how many samples to take in years 9 and 10 and whether or not we should receive final bond release.

5) All plots appeared to have more crested wheatgrass. This may be a result of climatic variations (drought).

6) There was some good precipitation a few days ago, but it appears it came too late to help with cover and production this year.

7) All the photographs of the cells were taken from west to east.

8) Grasses were small, dry and difficult to identify.

9) Cover, diversity, and production was low due to drought.

10) Grass species were in bad shape. Even the warm species grasses were dry and may not get green, flower and set seed this year.

11) Broom snakeweed appeared to be dying or severely stressed

12) 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
2002

SITE NAME: Cell #2

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

DATE: September 9-14, 2002

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
Gutierrezia sarothrae

Agropyron cristatum
Elymus lanceolatus
Elymus hispidus
Elymus smithii
Stipa hymenoides

NOTES: .

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Cell #3

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

DATE: September 9-14, 2002

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

Agropyron cristatum
Elymus lanceolatus
Hilaria jamesii
Stipa hymenoides
Stipa comata

NOTES:

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Cell #4

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

DATE: September 9-14, 2002

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
Cercocarpus montanus

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

NOTES:

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

3) Much fewer shrubs when compared to Cell 1-3.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

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

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

DATE: September 9-14, 2002

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
Elymus lanceolatus
Elymus smithii
Hordeum jubatum
Stipa comata

NOTES:

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

3) Some of the bare spots mentioned in previous years seemed larger, probably due to drought (~02).

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

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

AREA: Cottonwood Mine Waste Rock Area (Interim Reveg)

DATE: September 9-14, 2002

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

Agropyron cristatum
Elymus lanceolatus
Elymus cinereus
Elymus smithii
Stipa comata
Stipa hymenoides

NOTES:

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

3) Some of the bare spots mentioned in previous years seemed larger, probably due to drought (~02).

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

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

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

DATE: September 9-14, 2002

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
Artemisia tridentata
Ephedra viridis
Gutierrezia sarothrae

Agropyron cristatum
Elymus lanceolatus
Elymus smithii
Stipa comata
Stipa hymenoides

NOTES:

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Berm 1

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

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 1-20 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE:

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

Atriplex canescens
Gutierrezia sarothrae
Ephedra viridis

Malcomia africana

Elymus lanceolatus

NOTES:

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

3) Some of the berm has been disturbed by gas companies previously. This disturbed area is comprised mostly of weeds with some woody species. (~00, ~01).

4) The north half of the berm has more weedy species. The south half is better.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Berm 2

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

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 0-20 deg.

EXPOSURE: E & N

ANIMAL USE/DISTURBANCE:

EROSION: Negligible

COVER: (no quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

Artemisia tridentata
Atriplex confertifolia
Atriplex canescens
Chrysothamnus nauseosus

Agropyron cristatum
Elymus lanceolatus
Elymus smithii
Stipa hymenoides

NOTES:

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Berm 3

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

DATE: September 9-14, 2002

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
Elymus smithii
Elymus lanceolatus
Stipa comata
Stipa hymenoides

NOTES:

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

3) Lots of mature shrubs, less grass species.

4) Much more shrubs when compared to the Cells.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Berm 4

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

DATE: September 9-14, 2002

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

Agropyron cristatum
Elymus lanceolatus
Elymus smithii
Elymus spicatus
Stipa hymenoides

NOTES:

1) Sampled for qualitative data in 2002.

2) See "Notes" in Cell 1.

3) Lots of mature shrubs, less grass species.

4) Much more shrubs when compared to the Cells.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: CTW Reference Area

AREA: Cottonwood Mine Old Waste Rock Area

DATE: September 9-14, 2002

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 2002

2) Forbs (or all understory) virtually not seen. Drought had a big impact.

3) See raw data sheet notes (2001) for ideas about bond release and sample design.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

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

AREA: Cottonwood Mine

DATE: September 2-6, 2002

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

Halogeton glomeratus
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) Very dry plants probably due to the 4th year of drought conditions.

3) Pile A: Cover, density and diversity were in fair to good shape. Weeds were present but not common.

4) Pile C: Cover, density and diversity were in fair to good shape.

5) Although cover was fair, it consisted mostly of shrubs and grasses with only a few forbs.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Road Slopes

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

DATE: September 2-6, 2002

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

Penstemon palmeri

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 species diversity.

3) Site looked dry this year.

7) Some species were missing from sampling previous years.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Topsoil Stockpiles

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

DATE: September 2-6, 2002

WORKERS: P. Collins, D. 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

Malcomia africana
Penstemon palmeri
Penstemon sp.

Bromus carinatus
Bromus tectorum
Elymus cinereus
Elymus lanceolatus
Elymus salina
Elymus smithii
Elymus spicatus
Sporobolus airoides
Stipa hymenoides

NOTES:
1) Sampled qualitatively only this year.
2) Site was in very dry condition, probably due to drought 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
2002

SITE NAME: Subsoil Stockpiles

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

DATE: September 2-6, 2002

WORKERS: P. Collins, D. 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:

Atriplex confertifolia (c,s)
Atriplex gardneri(n)*
Eriogonum corymbosum (s)
Ceratoides lanata (s)

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

Elymus cinereus (s)
Elymus junceus (c,s)
Elymus lanceolatus (n,c,s)
Elymus smithii (n)

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. They were dominated by weedy species e.g. halogeton and other species like Gardner saltbush.(~00, ~01, ~02)).

4) The south end of the pile had more grasses and shrubs and much less erosion.

5) If we listed by total desirable cover, it would be north (worse) to south (best).

6) *Malcomia africana* is growing in the rills and helping curtail erosion.

7) Although some erosion, it did not appear that they were at risk of failure (~01).

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Sediment Pond Banks

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

DATE: September 2-6, 2002

WORKERS: P. Collins, D. 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
Gutierrezia sarothrae

Penstemon palmeri

Elymus lanceolatus
Elymus cinereus
Elymus smithii
Stipa hymenoides

NOTES:

1) Site looked good.

2) Sampled qualitatively this year.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

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

AREA: Cottonwood Mine

DATE: September 2-6, 2002

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**

Malcomia africana
Penstemon palmeri

Elymus cinereus
Elymus junceus
Elymus lanceolatus
Stipa hymenoides

NOTES:

1) Like last two 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) Berm 91 and 94 looked similar to each other.
7) Sampled qualitatively only this year.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

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

AREA: Cottonwood Mine

DATE: September 2-6, 2002

WORKERS: P. Collins, D. Collins

SLOPE: 25 deg.

EXPOSURE: South

ANIMAL USE/DISTURBANCE: None

EROSION: Slight erosion, on west side.

COVER: (see quantitative data sheets)

DOMINANT PLANT SPECIES OBSERVED:

Atriplex confertifolia
Atriplex canescens
Atriplex gardneri
Ceratoides lanata

Elymus lanceolatus
Hilaria jamesii
Sporobolus airoides

Woody Species Density

REFUSE BERM 94	*No/Ac*
Atriplex confertifolia	383.26
Atriplex canescens	2299.57
Atriplex gardneri	3066.09
Ceratoides lanata	9198.26
Eriogonum corymbosum	383.26
Total	15330.44

WOODY SPECIES DENSITY:

NOTES:

1) Qualitative and quantitative data were recorded this year.

2) Site seemed more diverse in shrub species this year.

ENERGY WEST
Refuse Berm ' 94 (Final) New Waste Rock
Cottonwood Mine
Slope: 25 deg
Exposure: South

Sample Date: 2- 6 Sept 02	1.00	2.00	3.00	4.00	5.00	6.00	7.00
SHRUBS							
Atriplex canescens	5.00	5.00	10.00	2.00	5.00	10.00	0.00
Atriplex confertifolia	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atriplex gardneri	0.00	0.00	5.00	3.00	10.00	10.00	0.00
Celatoides lanata	5.00	7.00	5.00	10.00	5.00	5.00	5.00
Eriogonum corymbosum	5.00	0.00	0.00	0.00	0.00	0.00	0.00
FORBS							
GRASSES							
Elymus cinereus	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Elymus lanceolatus	10.00	18.00	15.00	10.00	5.00	10.00	15.00
Stipa hymenoides	5.00	0.00	0.00	5.00	0.00	0.00	5.00
COVER							
Total Living Cover	30.00	30.00	35.00	30.00	25.00	35.00	25.00
Litter	10.00	5.00	10.00	5.00	10.00	10.00	15.00
Bareground	35.00	40.00	30.00	40.00	50.00	40.00	45.00
Rock	25.00	25.00	25.00	25.00	15.00	15.00	15.00
% COMPOSITION							
Shrubs	50.00	40.00	57.14	50.00	80.00	71.43	20.00
Forbs	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grasses	50.00	60.00	42.86	50.00	20.00	28.57	80.00

ENERGY WEST
Refuse Berm ' 94 (Final) New Waste Ro
Cottonwood Mine
Slope: 25 deg
Exposure: South
Sample Date: 2- 6 Sept 02

8.00	9.00	10.00	Mean	SDev	Freq	
						SHRUBS
0.00	5.00	7.00	4.90	3.36	80.00	*Atriplex canescens*
0.00	8.00	0.00	0.80	2.40	10.00	*Atriplex confertifolia*
0.00	7.00	0.00	3.50	4.01	50.00	*Atriplex gardneri*
15.00	0.00	8.00	6.50	3.75	90.00	*Celatoides lanata*
0.00	0.00	0.00	0.50	1.50	10.00	*Eriogonum corymbosum*
						FORBS
						GRASSES
10.00	0.00	0.00	1.00	3.00	10.00	*Elymus cinereus*
0.00	5.00	10.00	9.80	5.13	90.00	*Elymus lanceolatus*
0.00	0.00	0.00	1.50	2.29	30.00	*Stipa hymenoides*
						COVER
25.00	25.00	25.00	28.50	3.91		Total Living Cover
5.00	5.00	10.00	8.50	3.20		Litter
45.00	55.00	55.00	43.50	7.76		Bareground
25.00	15.00	10.00	19.50	5.68		Rock
						% COMPOSITION
60.00	80.00	60.00	56.86	17.44		Shrubs
0.00	0.00	0.00	0.00	0.00		Forbs
40.00	20.00	40.00	43.14	17.44		Grasses

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Refuse Berm (seeded 1996)

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

DATE: September 2-6, 2002

WORKERS: P. Collins, D. Collins

SLOPE: 28 deg.

EXPOSURE: S & E

ANIMAL USE/DISTURBANCE: No obvious disturbance

EROSION: Slight

COVER: (see quantitative data sheets)

DOMINANT PLANT SPECIES OBSERVED:

Atriplex canescens

Elymus junceus
Elymus lanceolatus

Woody Species Density

REFUSE BERM 96	*No/Ac*
Atriplex canescens	4356.50
Atriplex gardneri	111.71
Total	4468.21

NOTES:

1) Recorded quantitative and 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) Species diversity, however, was quite low and possibly less cover than in the '94 Berm.

ENERGY WEST
Refuse Berm ' 96 New Waste Rock
Cottonwood Mine
Slope: 28 deg
Exposure: South & East

Sample Date: 2- 6 Sept 02	1.00	2.00	3.00	4.00	5.00	6.00	7.00
SHRUBS							
Atriplex canescens	25.00	15.00	30.00	25.00	60.00	55.00	55.00
FORBS							
GRASSES							
Elymus junceus	0.00	0.00	0.00	5.00	0.00	0.00	0.00
Elymus lanceolatus	10.00	0.00	10.00	20.00	5.00	10.00	10.00
COVER							
Total Living Cover	35.00	15.00	40.00	50.00	65.00	65.00	65.00
Litter	20.00	15.00	25.00	10.00	10.00	10.00	5.00
Bareground	25.00	60.00	25.00	30.00	15.00	20.00	25.00
Rock	20.00	10.00	10.00	10.00	10.00	5.00	5.00
% COMPOSITION							
Shrubs	71.43	100.00	75.00	50.00	92.31	84.62	84.62
Forbs	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grasses	28.57	0.00	25.00	50.00	7.69	15.38	15.38

ENERGY WEST
Refuse Berm ' 96 New Waste Rock
Cottonwood Mine
Slope: 28 deg
Exposure: South & East
Sample Date: 2- 6 Sept 02

8.00	9.00	10.00	Mean	SDev	Freq	
						SHRUBS
20.00	1.00	15.00	30.10	18.95	100.00	*Atriplex canescens*
						FORBS
						GRASSES
0.00	0.00	0.00	0.50	1.50	10.00	*Elymus junceus*
0.00	0.00	5.00	7.00	6.00	70.00	*Elymus lanceolatus*
						COVER
20.00	1.00	20.00	37.60	22.11		Total Living Cover
5.00	4.00	20.00	12.40	6.92		Litter
70.00	85.00	50.00	40.50	22.85		Bareground
5.00	10.00	10.00	9.50	4.15		Rock
						% COMPOSITION
100.00	100.00	75.00	83.30	15.19		Shrubs
0.00	0.00	0.00	0.00	0.00		Forbs
0.00	0.00	25.00	16.70	15.19		Grasses

Cottonwood Mine - Reference Area

Cottonwood Mine - Storage Yard Slope

Cottonwood Mine - Parking Lot Slope

Cottonwood Mine - Road/Silo Pad Slope

Cottonwood Mine - Tipple Area Slopes

Cottonwood Mine - Sediment Pond Banks

Cottonwood Mine - Ninth East Breakout

Cottonwood Mine - Old Waste Rock Cell #1

Cottonwood Mine - Old Waste Rock Cell #2

Cottonwood Mine -Old Waste Rock Cell #3

Cottonwood Mine - Old Waste Rock Cell #4

Cottonwood Mine - Old Waste Rock Cell #5

Cottonwood Mine - Old Waste Rock Cell #6

Cottonwood Mine - Old Waste Rock Cell #7

Cottonwood Mine - Old Waste Rock Berm #1

Cottonwood Mine - Old Waste Rock Berm #2

Cottonwood Mine - Old Waste Rock Berm #3 (South West Exposure) 1 of 2

Cottonwood Mine - Old Waste Rock Berm #3 (South East Exposure) 2 of 2

Cottonwood Mine - Old Waste Rock Berm #4

Cottonwood Mine - CTW Reference Area

Cottonwood Mine - CTW Old Waste Rock Soil Pile A

Cottonwood Mine - CTW Old Waste Rock Soil Pile C

Cottonwood Mine - New Waste Rock Road Slopes

Cottonwood Mine - New Waste Rock Topsoil Stockpiles

Cottonwood Mine - New Waste Rock Subsoil Stockpiles

Cottonwood Mine - New Waste Rock Sediment Pond Banks

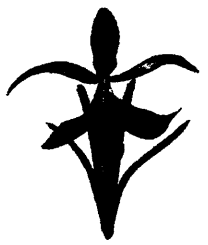
Cottonwood Mine - New Waste Rock - Refuse Berm 1991

Cottonwood Mine - New Waste Rock - Refuse Berm 1994

Cottonwood Mine - New Waste Rock - Refuse Berm 1996

Cottonwood Mine - New Waste Rock - Refuse Berm
Upper (1996) Middle (1994) Lower (1991)

COTTONWOOD CANYON AREA



ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Soil Piles

AREA: Cottonwood Fan Portal Area

DATE: September 2-6, 2002

WORKERS: P. Collins, D. Collins

SLOPE: 35 deg.

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE:

EROSION: Negligible

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

Artemisia tridentata
Chrysothamnus nauseosus

Aster chilensis
Aster foliaceous
Penstemon palmeri

Elymus cinereus
Elymus lanceolatus
Elymus smithii
Elymus salinus
Elymus junceus

NOTES:

1) Recorded only qualitative data this year.

2) Sites looked excellent with good diversity.

3) Much of north pile has been removed. The remaining area has been reseeded (see photograph).

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Reclaimed Slope (old,'81)

AREA: Cottonwood Fan Portal Area

DATE: September 2-6, 2002

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
Chrysothamnus viscidifolius
Ephedra viridis
Gutierrezia sarathrae

Aster foliaceous

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
2002

SITE NAME: Reference Area

AREA: Cottonwood Fan Portal Area

DATE: September 2-6, 2002

WORKERS: P. Collins, D. Collins

SLOPE: 33 deg.

EXPOSURE: W

ANIMAL USE/DISTURBANCE: Slight to moderate

EROSION: Slight, natural patterns.

COVER:(see quantitative data)

DOMINANT PLANT SPECIES OBSERVED:

Amalanchier 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
2002

SITE NAME: CFP Tube Conveyor Area (1996 Seeding)

AREA: Trail Mtn. Mine/Cottonwood Fan Portal Area

DATE: September 2-6, 2002

WORKERS: P. Collins, D. 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
Cirsium sp.
Linum lewisii
Penstemon palmeri

Elymus spicatus
Elymus lanceolatus
Elymus cinereus
Elymus smithii

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) 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
2002

SITE NAME: Belt Portal ('96)

AREA: Cottonwood Fan Portal Area

DATE: September 2-6, 2002

WORKERS: P. Collins, D. Collins

SLOPE: Variable

EROSION: Negligble

EXPOSURE: SSW

ANIMAL USE/DISTURBANCE: Slight

COVER: (no quantitative data recorded)

DOMINANT PLANT SPECIES OBSERVED:

Artemisia tridentata
Chrysothamnus nauseosus
Rosa woodsii

Elymus cinereus
Elymus lanceolatus
Elymus salinus

NOTES:
1) Qualitative sampling done in 2002.
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
2002

SITE NAME: Portal Diesel ('96)

AREA: Cottonwood Fan Portal Area

DATE: September 2-6, 2002

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) 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.
2) Cover seemed higher this year.
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
2002

SITE NAME: Reclaimed Slope (Final) '98

AREA: Cottonwood Fan Portal Area

DATE: September 2-6, 2002

WORKERS: P. Collins, D. Collins

SLOPE: variable

EXPOSURE: SW

ANIMAL USE/DISTURBANCE: Slight

EROSION: Negligible

COVER: (see quantitative data)

DOMINANT PLANT SPECIES OBSERVED:

Aster chilensis
Aster glaucodes
Linum lewisii
Melilotus officinalis
Malcomia africana
Penstemon palmeri
Salsola pestifer

Agropyron cristatum
Elymus lanceolatus
Elymus junceus
Elymus cinereus
Elymus smithii
Elymus spicatus

NOTES:
1) Generally, the site looked good.

2) Road areas were rocky.

3) There were patches where diversity was high; other areas diversity was low.

5) We sampled quantitatively for cover (n=20) and woody species density (n=20).

6) There were areas that had lots of small sagebrush seedlings.

7) This was the 4th year of drought over the general area. This may have influenced the sampling results.

Woody Species Density

RECLAIMED SLOPE '98	*No/Ac*
Artemisia tridentata	206.64
Atriplex canescens	533.83
Chrysothamnus nauseosus	602.71
Gutierrezia sarothrae	34.44
Total	**1377.63**

ENERGY WEST
Reclaimed Slope '98 (Final)
Cottonwood Fan Portal Area
Slope: Variable
Exposure: S W

Sample Date: 2 - 6 Sept 02	1.00	2.00	3.00	4.00	5.00	6.00	7.00
SHRUBS							
Artemisia tridentata	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atriplex canescens	0.00	0.00	0.00	0.00	5.00	0.00	10.00
Chrysothamnus nauseosus	0.00	2.00	10.00	0.00	0.00	0.00	0.00
FORBS							
Artemisia drucunculus	0.00	0.00	0.00	0.00	0.00	0.00	5.00
Aster chilensis	0.00	0.00	2.00	5.00	5.00	0.00	5.00
Linum lewisii	0.00	0.00	0.00	0.00	5.00	0.00	0.00
Melilotus officinalis	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Penstemon palmeri	0.00	0.00	0.00	0.00	0.00	10.00	5.00
GRASSES							
Agropyron cristatum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bromus carinatus	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Elymus cinereus	0.00	0.00	0.00	0.00	0.00	0.00	5.00
Elymus junceus	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Elymus lanceolatus	0.00	0.00	0.00	0.00	5.00	0.00	0.00
Elymus smithii	0.00	0.00	0.00	0.00	5.00	0.00	0.00
Elymus spicatus	0.00	0.00	0.00	0.00	5.00	0.00	5.00
Elymus trachycaulus	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stipa hymenoides	25.00	3.00	3.00	5.00	0.00	10.00	0.00
COVER							
Total Living Cover	25.00	5.00	15.00	10.00	30.00	20.00	35.00
Litter	5.00	1.00	5.00	5.00	5.00	10.00	5.00
Bareground	20.00	70.00	10.00	55.00	40.00	50.00	35.00
Rock	50.00	24.00	70.00	30.00	25.00	20.00	25.00
% COMPOSITION							
Shrubs	0.00	40.00	66.67	0.00	16.67	0.00	28.57
Forbs	0.00	0.00	13.33	50.00	33.33	50.00	42.86
Grasses	100.00	60.00	20.00	50.00	50.00	50.00	28.57

8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00
1.00	2.00	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	10.00	5.00	1.00	0.00	0.00
0.00	0.00	3.00	2.00	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
4.00	3.00	7.00	0.00	0.00	0.00	*0.00*	3.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00
0.00	5.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
0.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00
15.00	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	0.00	0.00	30.00
0.00	2.00	0.00	0.00	0.00	0.00	5.00	0.00	25.00	0.00
10.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	20.00	*5.00*	30.00	0.00	0.00
0.00	8.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	20.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00
40.00	20.00	30.00	5.00	15.00	35.00	25.00	35.00	25.00	40.00
10.00	5.00	5.00	5.00	5.00	5.00	10.00	15.00	5.00	5.00
25.00	45.00	35.00	15.00	50.00	35.00	40.00	25.00	15.00	40.00
25.00	30.00	30.00	75.00	30.00	25.00	25.00	25.00	55.00	15.00
2.50	10.00	10.00	40.00	0.00	28.57	20.00	2.86	0.00	0.00
22.50	40.00	23.33	0.00	0.00	0.00	0.00	11.43	0.00	25.00
75.00	50.00	66.67	60.00	100.00	71.43	80.00	85.71	100.00	75.00

ENERGY WEST
Reclaimed Slope '98 (Final)
Cottonwood Fan Portal Area
Slope: Variable
Exposure: S W

18.00	19.00	20.00	Mean	SDev	Freq	Sample Date: 2 - 6 Sept 02
						SHRUBS
0.00	0.00	0.00	0.15	0.48	10.00	*Artemisia tridentata*
3.00	5.00	0.00	1.95	3.23	35.00	*Atriplex canescens*
0.00	0.00	2.00	0.95	2.27	25.00	*Chrysothamnus nauseosus*
						FORBS
0.00	0.00	0.00	0.25	1.09	5.00	*Artemisia drucunculus*
0.00	0.00	3.00	1.85	2.26	45.00	*Aster chilensis*
2.00	0.00	0.00	0.35	1.15	10.00	*Linum lewisii*
0.00	0.00	0.00	0.75	2.38	10.00	*Melilotus officinalis*
0.00	0.00	0.00	1.05	2.54	20.00	*Penstemon palmeri*
						GRASSES
0.00	0.00	0.00	0.75	3.27	5.00	*Agropyron cristatum*
0.00	0.00	0.00	0.75	3.27	5.00	*Bromus carinatus*
20.00	10.00	30.00	4.75	9.68	25.00	*Elymus cinereus*
0.00	0.00	0.00	1.60	5.49	15.00	*Elymus junceus*
0.00	0.00	0.00	1.00	2.55	15.00	*Elymus lanceolatus*
5.00	5.00	5.00	3.75	7.56	35.00	*Elymus smithii*
5.00	10.00	0.00	2.15	3.51	30.00	*Elymus spicatus*
0.00	0.00	0.00	0.25	1.09	5.00	*Elymus trachycaulus*
0.00	0.00	0.00	3.45	6.85	35.00	*Stipa hymenoides*
						COVER
35.00	30.00	40.00	25.75	10.99		Total Living Cover
10.00	10.00	10.00	6.80	3.17		Litter
25.00	20.00	25.00	33.75	14.99		Bareground
30.00	40.00	25.00	33.70	15.83		Rock
						% COMPOSITION
8.57	16.67	5.00	14.80	17.55		Shrubs
5.71	0.00	7.50	16.25	17.80		Forbs
85.71	83.33	87.50	68.95	22.18		Grasses

Cottonwood Canyon - Soil Pile (Removed) North

Cottonwood Canyon - Soil Pile (Not Removed) South

Cottonwood Canyon - Fan Portal Reclaimed Slope 1981

Cottonwood Canyon - Fan Portal Reference Area

Cottonwood Canyon - Tube Conveyor

Cottonwood Canyon - Belt Portal 1996

Cottonwood Canyon - Portal (Diesel) 1996

Cottonwood Canyon - Reclaimed Slope 1998 (Final)

DES-BEE-DOVE AREA

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Pumphouse (Final)

AREA: Des-Bee-Dove

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 2-14 deg.

EXPOSURE: N

ANIMAL USE/DISTURBANCE: Slight

EROSION: Negligible

COVER: (no quantitative data)

DOMINANT PLANT SPECIES OBSERVED: (see quantitative data)

Chrysothamnus nauseosus
Gutierrezia sarothrae

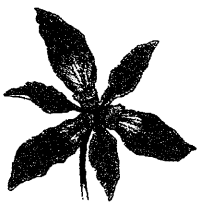
Malcomia africana
Salsola pestifer
Penstemon palmeri
Halogeton glomeratus
Sphraelcea coccinea
Artemisia ludoviciana

Elymus smithii
Stipa hymenoides
Elymus lanceolatus

NOTES:
1) Much fewer weedy species when compared to last year.
2) Not much perennial cover, but there were lots of seedlings.
3) The "slump area" had more desirable species when compared to last year, but the area had low diversity and cover.
4) Site looked fair to good especially considering it was so recently seeded.
5) The site had good "roughening" effect.
6) The photos won't show much cover because the seedlings were so small.

Des-Bee-Dove - Pumphouse (Final)

DEER CREEK AREA



ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Mixed Conifer Reference Area

AREA: Deer Creek

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 15-25 deg.

EXPOSURE: WSW

ANIMAL USE/DISTURBANCE: Used by wildlife, mostly deer sign.

EROSION: Normal

COVER: (Cover not sampled this year; qualitative estimate ~40%)

DOMINANT PLANT SPECIES OBSERVED:

Abies lasiocarpa
Amalanchier utahensis
Brickellia microphylla
Chrysothamnus depressus
Chrysothamnus viscidiflorus
Chrysothamnus nauseosus
*Eriogonum corymbosum**
Juniperus scopulorum
Mahonia repens
Pachystima myrsinites
Pinus edulis
Pseudotsuga menziesii
Symphoricarpos oreophilus

Aster foliaceous
Linum lewisii
Machaeranthera canescens
Castilleja sp.

*Elymus salinus**
*Elymus spicatus**
Poa fendleriana

NOTES: 1) Reference Area continues to look good.

2) Qualitative sampling this year.

3) Take access road behind (south) wooden water tank.

4) To locate, I found the SW t-post marking the area north of the adjacent drainage.

5) There was a good representation of Spruce/Fir/Grass, but it was mostly more open.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Riparian Reference Area

AREA: Deer Creek

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 2 - 3 deg.

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE: Moderate use

EROSION: Normal

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

Abies concolor
Acer negundo
Chrysothamnus nauseosus
Cornus sericea
Mahonia repens
Populus angustifolia
Rosa woodsii
Salix sp.

*Aster foliaceous**

Agrostis stolonifera
Dactylis glomerata
Elymus canadensis

NOTES:
1) Qualitative sampling this year.

2) To locate, find a t-post on the side of the road in a more open area. This was past a more coaly area approximately 200' down from "Temporary Storage Area" and it can be seen as one walks down the road. The t-post is 50 ft below the lower part of the "Roadside Area".

3) Site condition is very good.

4) Good representation of shrubs, forbs and grasses.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Pinyon-Juniper Reference Area

AREA: Deer Creek

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 28 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Used by wildlife, mostly deer and rabbit sign present.

EROSION: Normal

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

Amalanchier utahensis
Cercocarpus montanus
Chrysothamnus nauseosus
*Ephedra viridis**
Eriogonum corymbosum
*Juniperus osteosperma**
Juniperus scopulorum
*Pinus edulis**
Symphoricarpos oreophilus

Bromus carinatus
*Elymus salinus**
Stipa hymenoides

* Dominant species

NOTES:

1) Qualitative sampling this year.

2) Reference area continues to look good.

3) I met with C. Semborski and G. Davis in 1999 to help me locate the site. I used an aerial photograph to find the site, but I never did find t-posts marking it. So, I assumed it was above the "Permeter Boundary" marker. To get there I walked through more of a Mtn. Brush/PJ community to a more classic PJ area. The transition between the two appears to be where the Reference Area is on the photo. Calling it a PJ Reference area is satisfactory however.

4) There was a great deal of understory cover (shrub & grass) for a PJ community.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: C2 Conveyor (IU 132-190) '93

AREA: Deer Creek Mine

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 8 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible on flatter area, moderate on slopes

COVER: (no quantitative data this year)

DOMINANT PLANT SPECIES OBSERVED:

*Chrysothamnus nauseosus**+
*Cercocarpus ledifolius**
Ephedra viridis +
Eriogonum corymbosum +
Gutierrezia sarothrae +
*Yucca harrimaniae**+
*Artemisia tridentata**

Aster chilensis +*
*Halogeton glomeratus**

Elymus lanceolatus +
*Elymus cinereus**+
*Elymus smithii**
*Stipa hymenoides**+
Stipa comata +

NOTES: 1) Qualitative sampling only was done this year.

2) A sediment control area was recently constructed within the area.

3) Surrounding area looked very good. There has been a basin dug immediately in front of this area that catches water before it goes to the silt fences and vegetated area. Vegetation observed in this area is denoted by +.

4) Monitoring schedule by Energy West indicated to "check area behind belt line" We sampled this area too. Vegetation observed in this area is denoted by *. This area had lots of rock cover helping to control erosion.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Riparian Areas

AREA: Deer Creek Mine

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 1 to 5 deg.

EXPOSURE: Variable

AREA: < .5 acre

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible

COVER: (No quantitative data taken this year)

DOMINANT PLANT SPECIES OBSERVED:

Artemisia tridentata (N,S)
Chrysothamnus nauseosus (N)
Gutierrezia sarothrae (S)
Populus angustifolia (N,S)
Rosa woodsii (S)
Salix sp. (S)

Aster chilensis (N,S)
Cirsium sp. (S)
Tragopogon dubius (S)

Agropyron cristatum (S)
Elymus hispidus (N,S)
Elymus smithii (N)
Elymus spicatus (N,S)

N=observed in north riparian area.
S=observed in south riparian area.

NOTES:
1) Qualitative data only again this year.
2) The south area is across from the transfer site.
3) Areas had negligible weed growth.
4) To locate, there is an opening just north of the riparian area (0.4 mi. from coal storage road turn off) on the west side of the road. (200 ft south of opening).
5) Sites looked excellent, nearly weed free now.
6) North riparian area was dominated by intermediate wheatgrass. It had good cover but low species diversity.
7) The south riparian area also looked good and perhaps had higher diversity.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Sediment Pond Dam

AREA: Deer Creek Mine Area

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 1 - 25 deg.

EXPOSURE: Variable

AREA: < 2 acres

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible

COVER: (qualitative data only)

DOMINANT PLANT SPECIES OBSERVED:

Chrysothamnus nauseosus
Eriogonum corymbosum

Aster foliaceous
Astragalus cicer
Penstemon palmeri

Elymus smithii
Elymus cinereus
Elymus lanceolatus

NOTES: 1) Qualitative data only this year.

2) The top areas have a fair representation of desirable species in one area. Another area on the top has been graded and is now a parking area with a turn-about. It is stable.

3) There were more shrub species this year and better diversity.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Temp. Sediment Basin

AREA: Deer Creek Mine Area

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 1-2 deg.

EXPOSURE: Variable

AREA: < 1 acre.

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible

COVER: (qualitative data only)

DOMINANT PLANT SPECIES OBSERVED:

Chrysothamnus nauseosus
Populus angustifolia

Aster chilensis
Astragalus cicer
Medicago sativa

Elymus cinereus
Elymus smithii
Elymus lanceolatus

NOTES:

1) There was a good representation of desirable species and almost no weedy species.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Roadside Areas

AREA: Deer Creek (1990 Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 5 deg.

EXPOSURE: NE

AREA: < 1 acre

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible.

COVER: (qualitative data only)

DOMINANT PLANT SPECIES OBSERVED:
Aster chilensis
Grindelia squarrosa
Chrysothamnus nauseosus
Populus angustifolia

Artemisia dracunculus
Astragalus cicer
Machaeranthera canescens
Medicago sativa
Tragopogon dubius

Bromus carinatus
Elymus smithii
Elymus lanceolatus (dominated on the west side of road)
Elymus cinereus (observed on both sides, but dominated on the east side of road)
Stipa hymenoides

NOTES:
1) Qualitative data sampled.
2) Cover was very good.
3) Dominated by grasses, mostly Gt. Basin wildrye.
4) Good diversity of grasses.
5) Very few weedy species.
6) Sampled both sides of the road.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Gate Area Slope

AREA: Deer Creek (1990 Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 20 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Some erosion, but stable

COVER: (qualitative data only)

DOMINANT PLANT SPECIES OBSERVED:
Chrysothamnus nauseosus

*Elymus cinereus**
Elymus lanceolatus
Elymus smithii
Stipa hymenoides

NOTES: 1) Qualitative data only recorded this year. Site looked in good condition considering the slope angle.

2) Site had very good vegetative cover and good grass diversity. Grasses dominate the site.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Fan Road Slopes

AREA: Deer Creek (1989 Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: Variable

EXPOSURE: Variable

AREA: 1.1 acres

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Slight (see below)

COVER: (qualitative only this year)

DOMINANT PLANT SPECIES OBSERVED:

Chrysothamnus nauseosus
Eriogonum corymbosum

Aster chilensis
Cirsium sp.
Halogeton glomeratus
Medicago sative
Penstemon palmeri

*Elymus smithii**
*Elymus cinereus**
Hordeum jubatum
Poa pratensis
Stipa hymenoides

NOTES:
1) Area was dryer this year possibly due to ongoing drought.

2) There were very few woody species here.

3) By the way the map looked, we considered everything on the south side of road (right as you walk up) the Fan Road Slopes.

4) Qualitative data only recorded this year.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Refuse Pile & Berm

AREA: Deer Creek (1988 Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 27 deg.

EXPOSURE: NE 300 deg.

AREA: 4.0 acres

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible in most areas.

COVER: (qualitative data only this year)

DOMINANT PLANT SPECIES OBSERVED:

Chrysothamnus nauseosus
Eriogonum corymbosum

Aster chilensis
Halogeton glomeratus
Penstemon palmeri

Agropyron cristatum
Bromus inermis
Elymus lanceolatus
Elymus spicatus
Elymus salinus
Elymus cinereus
Stipa hymenoides

NOTES:

1) Qualitative sampling only was done this year.

2) Site looked good.

3) Refuse pile vegetation was considered fair to good for cover and diversity. There was a good representation of forbs and grasses on both exposures. The dominants were rubber rabbitbrush, Palmer penstemon, bluebunch wheatgrass and aster.

4) The berm was dominated by rubber rabbitbrush and bluebunch wheatgrass.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Rock Slide and Berm

AREA: Deer Creek

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 53+ deg.

EXPOSURE: W

AREA: .5 acre

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Mostly minor

COVER: (Qualitative data only)

DOMINANT PLANT SPECIES OBSERVED:

Chrysothamnus nauseosus
Eriogonum corymbosum

Aster chilensis
Halogeton glomeratus

Elymus lanceolatus
Elymus cinereus
Elymus spicatus
Elymus salinus

NOTES:

1) Methods: Qualitative data only this year.

2) Areas appear stable.

3) No large erosional rills.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Water Plant Slope

AREA: Deer Creek (1988 Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 38 deg.

EXPOSURE: NE

ANIMAL USE/DISTURBANCE:

EROSION: Mostly slight. One re-seeded area had moderate erosion (~02).

DOMINANT PLANT SPECIES OBSERVED:

Chrysothamnus nauseosus
Eriogonum corymbosum
Rosa woodsii

*Aster chilensis**
Machaeranthera grindelioides
Penstemon palmeri

Bromus carinatus
*Elymus cinereus**
Elymus smithii
*Elymus spicatus**
Elymus elymoides

NOTES:

1) We sampled qualitatively this year.

2) Cover was less, maybe due to dry year.

3) Map showed this slope to be on the left as you walk uphill. The slope on the right were considered Fan Road Slopes.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Pipeline

AREA: Deer Creek (1986 Reveg. Area)

DATE: September 11-14, 2002

WORKERS: P. Collins

SLOPE: 5 - 30 deg.

EXPOSURE: Variable

AREA: 3.5 acre

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible

COVER: (Cover not sampled this year; qualitative data only)

DOMINANT PLANT SPECIES OBSERVED:

Amalanchier utahensis
Artemisia tridentata
Atriplex canescens
Atriplex confertifolia
Chrysothamnus nauseosus
Clematis columbiana
Eriogonum corymbosum
Juniperus osteosperma
Juniperus scopulorum
Pinus edulis
Populus angustifolia
Rhus simplicifolia
Rosa woodsii
Salix sp.
Tamarix chinensis

Aster chilensis
Aster foliaceous
Castilleja sp.
Grindelia squarrosa

Machaeranthera canescens
Melilotus officinalis
Penstemon palmeri

Agropyron cristatum
Bromus tectorum
Elymus lanceolatus
Elymus cinereus
Elymus smithii
Elymus spicatus
Sporobolus airoides
Stipa hymenoides

NOTES:

1) Qualitative sampling only was done this year.

2) Most of the area was in excellent shape.

3) Road grading inevitably disturbs some species.

4) Most plants looked dry, but this was the 4th drought year in the area.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Deer Canyon

AREA: Deer Creek (1986 Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 15-20 deg.

EXPOSURE: E

AREA: 0.1 acre

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible

COVER: (qualitative data only this year)

DOMINANT PLANT SPECIES OBSERVED:

Cercocarpus ledifolius
Chrysothamnus nauseosus

Aster chilensis
Cirsium sp.
Penstemon palmeri

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

NOTES:
1) Qualitative sampling only was done this year.
2) Site had excellent and fair diversity.
3) It was dominated by grasses with a fair representation of rubber rabbitbrush.
4) Rocks were enhancing erosion control.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Reference Area (Atriplex)

AREA: Deer Creek Waste Rock

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 10-20 deg

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE: Moderate

EROSION: Negligible

COVER: (qualitative data only)

DOMINANT PLANT SPECIES OBSERVED:

Atriplex gardneri (very dry, lacked leaves)
Atriplex confertifolia
Chrysothamnus nauseosus
Artemisia nova
Eriogonum corymbosum

Stipa hymenoides

NOTES: 1) Qualitative sampling this year.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Access Road Slopes

AREA: Deer Creek Waste Rock Site (1989 Interim Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 20 - 25 deg.

EXPOSURE: Variable

AREA: Part of 5 acres

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Erosion repair work has been accomplished. Erosion was slight to negligible in most areas.

COVER: (no quantitative data recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

Fill Slopes

Artemisia tridentata
Atriplex confertifolia
Atriplex canescens
Ceratoides lanata
Chrysothamnus nauseosus
Eriogonum corymbosum
Juniperus osteosperma
Yucca harrimaniae

Penstemon palmeri

Elymus cinereus
Elymus lanceolatus
Elymus smithii
Stipa hymenoides

. Cut Slopes

Artemisia tridentata
Atriplex canescens
Atriplex confertifolia
Atriplex gardneri
Chrysothamnus nauseosus
Eriogonum corymbosum

Halogeton glomeratus

NOTES: 1) Qualitative sampling only was done this year

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Phase I Berm

AREA: Deer Creek Waste Rock Site (1989 Final Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 0-29 deg.

EXPOSURE: Variable

AREA: 4 Acres

ANIMAL USE/DISTURBANCE: Slight

EROSION: Minor on slopes. No repair needed yet.

COVER: (No quantitative data recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

Atriplex gardneri
Atriplex canescens
Atriplex corrugata
Chrysothamnus nauseosus
Sarcobatus vermiculatus

Malcomia africana
Penstemon palmeri

Agropyron cristatum
Elymus cinereus
Elymus lanceolatus
Elymus salinus

NOTES: 1) Qualitative sampling only was done this year.

2) This was the 4th drought year in the area.

3) The side slopes were mostly in fair to good condition.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Phase I Diversion

AREA: Deer Creek Waste Rock Site (1989 Final Reveg. Area)

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 5 deg.

EXPOSURE: Variable

AREA: 4 acres

ANIMAL USE/DISTURBANCE: Negligible.

EROSION: Negligible

COVER: (no quantitative data this year)

DOMINANT PLANT SPECIES OBSERVED:

Atriplex gardneri
Artemisia tridentata
Chrysothamnus nauseosus
Sarcobatus vermiculatus

Penstemon palmeri

Agropyron cristatum
Sporobolus airoides
Elymus lanceolatus
Elymus cinereus
Stipa hymenoides

NOTES: 1) Site looks good overall, even though this was the 4th drought year in the area.

2) Added for future reference: *In 2001, I called Dennis Oakley and Chuck Semborski about sampling this for bond release as planned previously. I wanted to ascertain which areas should be concentrated on for bond release. I spoke with Chuck and then visited him about this. When he looked at the engineer's drawings of this area, they showed that the berms would be re-disturbed and used as a cover source once the waste site was filled to capacity. This was not straightforward to us because the monitoring schedule calls the site "Final Reveg. 1989". This was confusing to me because "Phase I" suggested that there are more phases. At any rate, we decided that sampling as intensive as is necessary for bond release would not be necessary until it is used for cover.*

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITTATIVE/QUALITATIVE NOTES
2002

SITE NAME: Drain Field (Reconstruction '97)

AREA: Deer Creek

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 2 - 3 deg.

EXPOSURE: N

ANIMAL USE/DISTURBANCE: Used by wildlife

EROSION: Negligible

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

Chrysothamnus nauseosus

Aster chilensis
Astragalus cicer
Cirsium sp.
Medicago sativa
Penstemon palmeri
Xanthium pennsylvanica

Bromus tectorum
Elymus cinereus
Elymus lanceolatus
Elymus spicatus
Elymus smithii
Stipa hymenoides

NOTES:
1) Qualitative sampling this year.

2) To locate it, it is 0.5 miles south of northern riparian area (only back side of conveyor).

3) Site had excellent cover, mostly grasses.

4) Grasses dominated site. Gt. Basin wildrye was more dominant in some areas, other areas were dominated by other wheatgrasses (that's different from last year).

Deer Creek Mine - Reference Area - Mixed Conifer

Deer Creek Mine - Reference Area - Riparian

Deer Creek Mine - Reference Area - Pinyon-Juniper

Deer Creek Mine - C2 Conveyor (IU 132-190) 1993

Deer Creek Mine - C2 Conveyor (IU 132-190) 1993 Behind Belt

Deer Creek Mine - Riparian Areas (South)

Deer Creek Mine - Riparian Areas (North)

Deer Creek Mine - Sediment Pond Dam

Deer Creek Mine - Temp. Sediment Basin

Deer Creek Mine - Roadside Areas

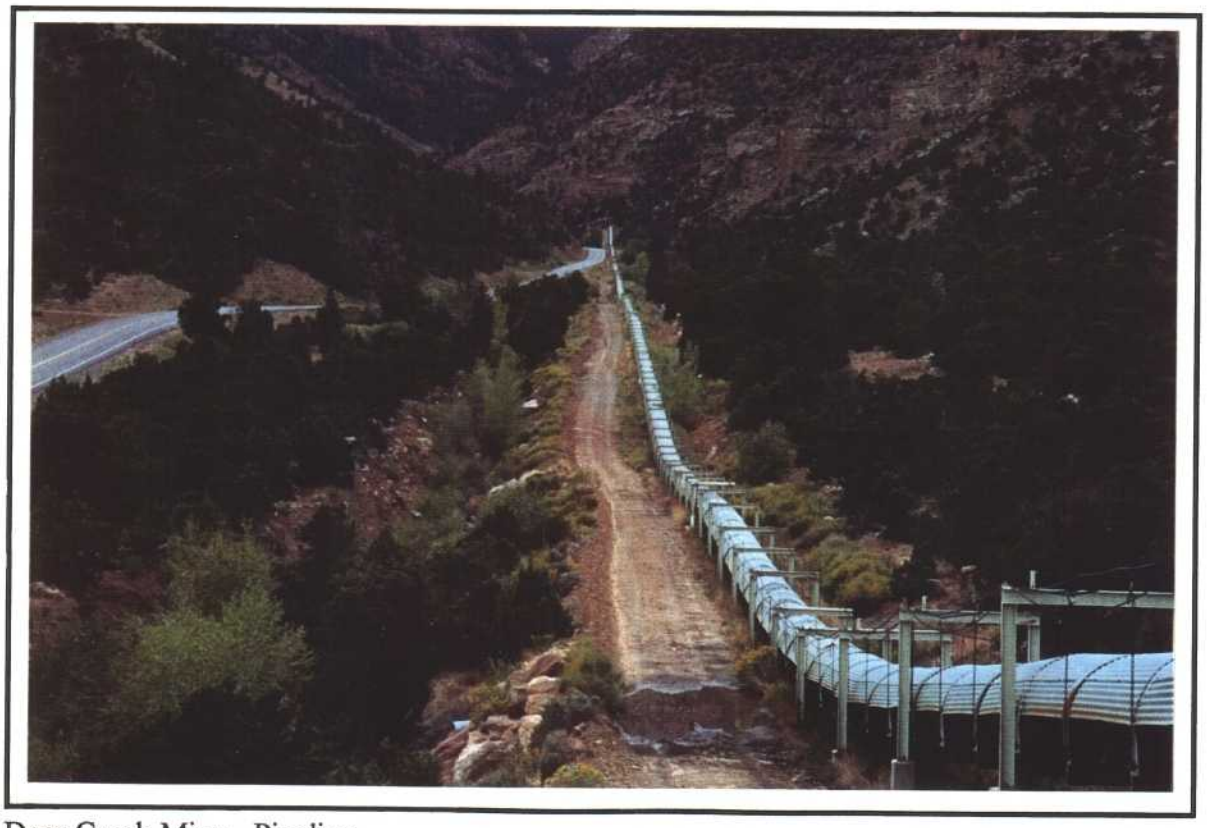
Deer Creek Mine - Gate Areas Slope

Deer Creek Mine - Fan Road Slope

Deer Creek Mine - Refuse Pile and Berm

Deer Creek Mine - Rock Slide and Berm

Deer Creek Mine - Water Plant Slope



Deer Creek Mine - Pipeline

Deer Creek Mine - Deer Canyon

Deer Creek Mine - Waste Rock Site - Atriplex Reference Area

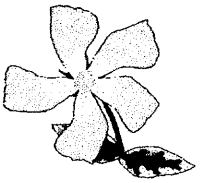
Deer Creek Mine -Waste Rock Site - Access Road Slopes

Deer Creek Mine - Waste Rock Site - Phase I Berm

Deer Creek Mine - Waste Rock Site - Phase I Diversion

Deer Creek Mine - Drain Field Reconstruction - Field Drains December 1997

TRAIL MOUNTAIN MINE AREA



ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Reference Area (Grassland/Shrub)

AREA: Trail Mountain Mine

DATE: September 2-6, 2002

WORKERS: P. Collins, D. Collins

EXPOSURE: W

ANIMAL USE/DISTURBANCE: Yes, normal conditions

EROSION: Negligible

COVER: (No quantitative data recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

Amalanchier utahensis
Atriplex confertifolia
Chrysothamnus nauseosus
Ephedra viridis
Eriogonum corymbosum
Juniperus osteosperma

Achillea millefolium
Aster foliaceus
Astragalus spp.
Penstemon spp.
Lomatium nuttallii

*Elymus salinus**
Stipa hymenoides

NOTES:
1) Recorded qualitative data only.
2) Found one old lath and some with old red flags for markers.
3) Site looked excellent.
4) Recorded data observing from the toe of cut slope.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Sediment Pond Outslope

AREA: Trail Mountain Mine Area

DATE: September 2-6, 2002

WORKERS: P. Collins, D. Collins

SLOPE: 25 deg.

EXPOSURE: E&S

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible to Slight

COVER: (no quantitative data recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

Atriplex canescens
Atriplex confertifolia
Artemisia tridentata
Brickelia microphylla
Gutierrezia sarothrae

Aster foliaceus
Halogeton glomeratus

Agropyron cristatum
Elymus cinereus

NOTES:

1) Qualitative sampling only was done this year.

2) Very dry plants (look dead) probably due to the 4th year of drought conditions. (I don't believe they are dead, maybe dormant).

2) The north side of the outslope was dominated by halogeton and almost no desirable species in 2001 (~01). Chuck Semborski and Dennis Oakley told me to make observations again in 2002 to see if things have changed. The slope is mostly bare this year (~02).

3) The boulder area was dominated by aster, while the other areas were dominated by grasses.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Parking Lot Extension ('96)

AREA: Trail Mountain Mine Area

DATE: September 2-6, 2002

WORKERS: P. Collins, D. Collins

SLOPE: 20 deg.

EXPOSURE: NW

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Slight

COVER: (no quantitative data recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

Aster foliaceus
Astragalus cicer

*Elymus cinereus**
Elymus lanceolatus
Elymus smithii

* dominant species

NOTES:

1) Qualitative sampling only was done this year.

2) Silt fences remain in good condition.

3) Site looks good

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Soil Pile

AREA: Trail Mountain Mine Area

DATE: September 2-6, 2002

WORKERS: P. Collins

SLOPE: 35 deg.

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE: Negligible

EROSION: Negligible

COVER: (no quantitative data recorded this year)

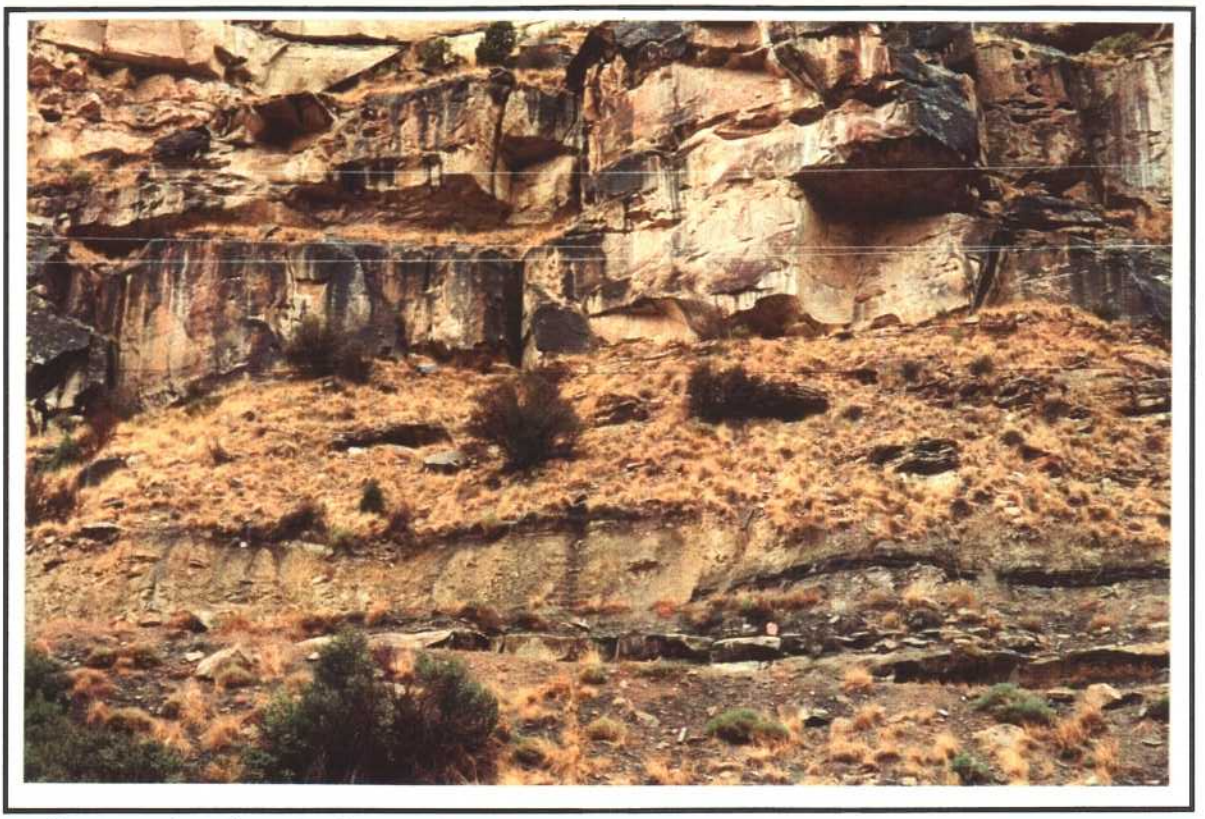
DOMINANT PLANT SPECIES OBSERVED:

Chrysothamnus nauseosus

Apocynum cannabinum
Aster glaucodes

Elymus cinereus
Elymus smithii
Elymus lanceolatus
Stipa hymenoides

NOTES:
1) Qualitative sampling only was done this year.
2) Site had good cover comprising mostly of grasses
3) Diversity was fair..



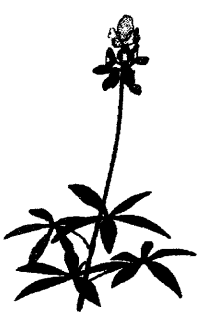
Trail Mountain Mine - Reference Area

Trail Mountain Mine - Sediment Pond Outslope

Trail Mountain Mine - Parking Ext. 1996

Trail Mountain Mine - Soil Pile

RILDA CANYON AREA



ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Pad Area Slopes (96)

AREA: Rilda Canyon

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 20-30 deg.

EXPOSURE: Variable

ANIMAL USE/DISTURBANCE: Slight

EROSION: Minimal

COVER: (no quantitative data were recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

Artemisia tridentata
Chrysothamnus nauseosus
Rosa woodsii

Astragalus cicer
Circium sp.
Cynoglossum officiniale
Melilotus officinalis

*Elymus cinereus**
Elymus smithii
Elymus lanceolatus

NOTES:

1) Qualitative sampling only was done this year.
2) Most slopes looked good, but there were some bare areas
3) There were some rather small areas dominated by yellow sweetclover.
4) Grasses mostly dominated the area, some by thickspike wheatgrass.
5) While sampling it was raining hard. Identifications were difficult.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Topsoil Pile (Roadway Slopes on separate sheet)

AREA: Rilda Canyon

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 30 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Heavily grazed

EROSION: Slight

COVER: (Cover not sampled this year)

DOMINANT PLANT SPECIES OBSERVED:

Artemisia tridentata
Gutierrezia sarothrae
Rosa woodsii
Populus tremuloides

Melilotus officinalis
Astragalus cicer
Cynoglossum officinale
Penstemon palmeri

Elymus lanceolatus
Elymus smithii
Elymus cinereus

NOTES:

1) Qualitative sampling only was done.

2) Few forbs were present this year.

3) Living cover was lower this year; may be due to 4th year of drought.

ENERGY WEST MINING COMPANY
QUALITATIVE SAMPLING DATA SHEET AND
QUANTITATIVE/QUALITATIVE NOTES
2002

SITE NAME: Roadway Slopes

AREA: Rilda Canyon

DATE: September 9-14, 2002

WORKERS: P. Collins

SLOPE: 10-20 deg.

EXPOSURE: E

ANIMAL USE/DISTURBANCE: Heavily grazed

EROSION: Negligible

COVER: (No quantitative data were recorded this year)

DOMINANT PLANT SPECIES OBSERVED:

Populus tremuloides
Rosa woodsii

*Astragalus cicer**
Medicago sativa
Penstemon eatonii

*Elymus lanceolatus**
Elymus smithii
Elymus cinereus

NOTES:

1) Qualitative sampling only was done this year.

2) The drought has had an effect on the cover and diversity seen.

3) Mostly grasses were visible this year.

4) Some areas were disturbed and reseeded in 2002. These area were located on the back side of the fence and around the pad area.

Rilda Canyon - Pad Area Slopes 1996

Rilda Canyon - Topsoil Pile and Roadway 1995

Rilda Canyon - Roadway Slopes

Map(s) is kept with this report located in the Public Information Center of our Salt Lake City office.

2002 RAPTORS

DRAWING # KS1698D

DRAWING # KS1650D

DRAWING # KS1689D

DRAWING #CM-10388-DS 1 OF 2

DRAWING # CM-10388-DS 2 OF 2

DRAWING # DS1693D

DRAWING # CM-10673-DR

DRAWING # CM-10673-DR

DRAWING # TMS1694D

CM-10778-DR

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

DIRECTORS AND OFFICERS OF SCOTTISH POWER, PLC
(As of February, 2003)

The directors and officers of Scottish Power, plc are as follows:

Name	Position	Address and Telephone Number	Date Elected
Ian Simon MacGregor Russell	Director (Executive); Chief Executive	71 Braid Avenue Edinburgh, Lothian, EH10 6ED, Scotland	2/19/99
Charles Andrew Berry	Director (Executive)	"Beaumont" 5 Grange Road Bearsden, GLASGOW G61 3PL, Scotland	4/1/99
David Thomas Nish	Director (Executive); Finance Director	Kinnoul Lochwinnoch Road Kilmacolm, PA13 4DZ Scotland	12/13/99
Charles Miller Smith	Director (Non Executive); Chairman	60 Chester Row Belgravia, London SW1W 8JP	8/1/99
Mrs. Mair Barnes	Director (Non Executive)	Ashe Ingen Court Bridstow, Ross on Wye Herefordshire HR9 6QA, ENGLAND	3/29/99
Sir Peter Lewis Gregson GCB	Director (Senior Independent Non Executive Director)	36A Elwill Way Beckenham, Kent BR3 6RZ, ENGLAND	3/29/99
Nolan Eldon Karras	Director (Non Executive)	4096 South 2275 West Roy, Utah 84067	11/30/99
Ewen Cameron Stewart Macpherson	Director (Non Executive)	61 Holland Park Mews London W11 3SS, ENGLAND	3/29/99
Philip Joseph Carroll jrn.	Director (Non Executive)	29 Smithcliffs Road Laguna Beach, CA 92651	1/15/02
Euan Baird	Director (Non Executive)	131 East 66th Street New York, NY 10021	1/8/01
Nicholas Charles Rose	Director (Non Executive)	Blackhall Barns, 1 Woodland Rise Sevenoaks, Kent, TN15 0HZ, England	2/19/03

DIRECTORS AND OFFICERS OF SCOTTISH POWER NA1, LIMITED
(As of May, 2002)

The directors and officers of Scottish Power NA1, Limited are as follows:

Name	Position	Address and Telephone Number	Date Elected
Andrew Ross Mitchell	Executive Director	1 Atlantic Quay Glasgow, Scotland G2 8SP	11/25/98
David Thomas Nish	Executive Director	1 Atlantic Quay Glasgow, Scotland G2 8SP	11/25/98
Ian Simon MacGregor Russell	Executive Director	1 Atlantic Quay Glasgow, Scotland G2 8SP	12/1/98
Rupert James Stanley	Executive Director	1 Atlantic Quay Glasgow, Scotland G2 8SP	11/25/98

DIRECTORS AND OFFICERS OF SCOTTISH POWER NA2, LIMITED
(As of May, 2002)

The directors and officers of Scottish Power NA2, Limited are as follows:

Name	Position	Address and Telephone Number	Date Elected
Andrew Ross Mitchell	Executive Director	1 Atlantic Quay Glasgow, Scotland G2 8SP	11/25/98
David Thomas Nish	Executive Director	1 Atlantic Quay Glasgow, Scotland G2 8SP	11/25/98
Ian Simon MacGregor Russell	Executive Director	1 Atlantic Quay Glasgow, Scotland G2 8SP	12/1/98
Rupert James Stanley	Executive Director	1 Atlantic Quay Glasgow, Scotland G2 8SP	11/25/98

OFFICERS OF PACIFICORP HOLDINGS, INC.
(As of May, 2002)

The officers of PacifiCorp Holdings, Inc. are as follows:

Name	Position	Address and Telephone Number	Date Elected to Current Position
Bruce N. Williams	President and Treasurer	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5000	4-1-02
Andrew P. Haller	Senior Vice President, General Counsel and Secretary	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	4-1-02
Jeffery B. Erb	Assistant Secretary	825 NE Multnomah, Suite 1800 Portland, Oregon 97232 (503) 813-5000	4-1-02
Larry O. Martin	Assistant Secretary	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5000	4-1-02
Tanya S. Sacks	Assistant Treasurer	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5000	4-1-02

DIRECTORS OF PACIFICORP HOLDINGS, INC.
(As of October, 2002)

The directors of PacifiCorp Holdings, Inc. are as follows:

Name	Position	Address and Telephone Number	Date Elected to Current Position
Ian M. Russell	Director	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	7-1-02
David T. Nish	Director	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	7-1-02
James R. Stanley	Director	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	7-1-02
Andrew P. Haller	Director	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	7-1-02

OFFICERS OF PACIFICORP
(As of January, 2003)

The officers of PacifiCorp are as follows:

Name	Position	Address and Telephone Number	Date Elected to Current Position
Judith A. Johansen	President and Chief Executive Officer	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	6-4-01
Richard D. Peach	Chief Financial Officer	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	1-1-03
William D. Landels	Executive Vice President	201 South Main, Suite 2300 Salt Lake City, Utah 84140 (801) 220-4140	11-29-99
Andrew N. MacRitchie	Executive Vice President	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	6-4-01
Matthew R. Wright	Executive Vice President	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	1-1-02
Andrew P. Haller	Senior Vice President, General Counsel and Corporate Secretary	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	6-4-01
Donald A. Furman	Senior Vice President	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	7-2-01
Michael J. Pittman	Senior Vice President	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	5-19-93
A. Richard Walje	Senior Vice President	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	6-4-01
Robert A. Klein	Senior Vice President	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	8-6-01
Barry G. Cunningham	Senior Vice President	201 South Main, Suite 2300 Salt Lake City, Utah 84140 (801) 220-4140	2-11-02

OFFICERS OF PACIFICORP
(As of January, 2003)

The officers of PacifiCorp are as follows:

Robert A. Moir	Senior Vice President	825 NE Multnomah, Suite1600 Portland, Oregon 97232 (503) 813-5000	2-11-02
Jeffery K. Larsen	Vice President	201 South Main, Suite 2300 Salt Lake City, Utah 84111 (801) 220-4907	8-22-02
Donald D. Larson (Doug)	Vice President	201 South Main, Suite 2300 Salt Lake City, Utah 84140 (801) 220-2190	7-2-01
Ernest E. Wessman	Vice President	201 South Main, Suite 2100 Salt Lake City, Utah 84140 (801) 220-4140	5-19-93
Stan K. Watters	Vice President	825 NE Multnomah, Suite 600 Portland, Oregon 97232 (503) 813-5000	8-6-01
Bruce N. Williams	Treasurer	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5000	2-16-00
Tanya S. Sacks	Assistant Treasurer	825 NE Multnomah, Suite 1900 Portland, OR 97232 (503) 813-5660	6-4-01
Michael G. Jenkins	Assistant Secretary	201 South Main, Suite 2100 Salt Lake City, Utah 84140 (801) 220-2233	6-4-01
Alexander D. Tait	Assistant Secretary	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	6-4-01
Larry O. Martin	Assistant Secretary	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5000	6-4-01
Jeffery B. Erb	Assistant Secretary	825 NE Multnomah, Suite 1800 Portland, Oregon 97232 (503) 813-5000	3-13-02

DIRECTORS OF PACIFICORP
(As of May, 2002)

The directors of PacifiCorp are as follows:

Name	Position	Address and Telephone Number	Date Elected to Current Position
Ian M. Russell	Director (Chair)	One Atlantic Quay Glasgow, Scotland G28FP UK (503) 813-5000 (US Phone)	1-1-02
Judith A. Johansen	Director	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	12-01-00
Nolan E. Karras (outside)	Director	4096 S. 2275 W. Roy, Utah 84067	2-17-93
William D. Landels	Director	201 South Main, Suite 2300 Salt Lake City, Utah 84140 (801) 220-4140	11-29-99
Andrew N. MacRitchie	Director	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	5-15-00
Michael J. Pittman	Director	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	5-15-00
A. Richard Walje	Director	825 NE Multnomah, Suite 2000 Portland, OR 97232 (503) 813-5000	7-2-01
Matthew R. Wright	Director	825 NE Multnomah, Suite 2000 Portland, OR 97232 (5030 813-5000	7-2-01
Barry G. Cunningham	Director	201 South Main, Suite 2300 Salt Lake City, Utah 84140 (801) 220-4140	4-18-02

OFFICERS OF INTERWEST MINING COMPANY
(As of October, 2002)

The officers of Interwest Mining Company are as follows:

Name	Position	Address and Telephone Number	Date Elected
Dee W. Jense	President	201 S. Main, #2100 Salt Lake City, Utah 84140 (801) 220-4140	10/16/00
Robert P. King	Vice President	201 South Main, #2100 Salt Lake City, Utah 84140 (801) 220-4590	2/01/01
Andrew P. Haller	Secretary Senior Vice President General Counsel	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	2/01/01
Jeffery B. Erb	Assistant Secretary	825 NE Multnomah, # 1800 Portland, Oregon 97232 (503) 813-5000	10/01/02
Larry O. Martin	Assistant Secretary	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5000	2/01/01
Bruce N. Williams	Treasurer	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5000	10/16/00
Tanya S. Sacks	Assistant Treasurer	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5660	2/01/01

DIRECTORS OF INTERWEST MINING COMPANY
(As of October, 2002)

The directors of Interwest Mining Company are as follows:

Name	Position	Address and Telephone Number	Date Elected
Dee W. Jense	Director	201 S. Main, #2100 Salt Lake City, Utah 84140 (801) 220-4140	11/15/99
Robert P. King	Director	201 S. Main, #2100 Salt Lake City, Utah 84140 (801) 220-4590	10/16/00

DIRECTORS OF ENERGY WEST MINING COMPANY
(As of October, 2002)

The directors of Energy West Mining Company are as follows:

Name	Position	Address and Telephone Number	Date Elected
Dee W. Jense	Director	201 S. Main, #2100 Salt Lake City, Utah 84140 (801) 220-4140	8/11/93
Robert P. King	Director	201 S. Main, #2100 Salt Lake City, Utah 84140 (801) 220-4590	7/9/99

SCOTTISH POWER PLC

SUMMARY OF OFFICERS AND DIRECTORS

Name	Election Date	Departure Date
Ian Simon MacGregor Russell	04-94 (2-99)	Current
Robert G. Miller	08-94	06-01
Kenneth L. Vowles	09-94	03-02
John Parnaby	09-94	07-01
Sir Ian Robinson	03-95	05-01
Ewen Cameron Stewart Mcpherson	09-96 (3-99)	Current
Sir Peter Lewis Gregson	12-96 (3-99)	Current
Mair Barnes	04-99 (3-99)	Current
Charles Miller Smith	08-99	Current
Alan V. Richardson	11-99	01-01
Nolan E. Karras	11-99	Current
Keith R. McKennon	11-99	07-01
David Thomas Nish	12-99	Current
Charles Andrew Berry	05-00 (4-99)	Current
Allan Leslie Leighton	08-01	06-02
Euan Baird	08-01	Current
Philip Joseph Carroll Jnr.	01-02	Current
Nick Rose	02-20-03	Current

SCOTTISH POWER NA1, LIMITED

SUMMARY OF OFFICERS AND DIRECTORS

Name	Election Date	Departure Date
David Thomas Nish	11-98	Current
Andrew Ross Mitchell	11-98	Current
Rupert James Stanley	11-98	Current
Ian Simon MacGregor Russell	12-98	Current

SCOTTISH POWER NA2, LIMITED

SUMMARY OF OFFICERS AND DIRECTORS

Name	Election Date	Departure Date
David Thomas Nish	11-98	Current
Andrew Ross Mitchell	11-98	Current
Rupert James Stanley	11-98	Current
Ian Simon MacGregor Russell	12-98	Current

PACIFICORP HOLDINGS, INC.

SUMMARY OF OFFICERS

Name	Election Date	Departure Date
Ian M. Russell	06-02	Current
David T. Nish	06-02	Current
James Stanley	06-02	Current
Bruce N. Williams	04-02	Current (Resigned President 6-28-02)
Andrew P. Haller	04-02 (Asst. Gen. Counsel 6-28-02)	Current (Resigned Gen Counsel 6-28-02)
Jeffery B. Erb	04-02 (Asst. Secretary 6-28-02)	Current
Larry O. Martin	04-02	Current
Tanya S. Sacks	04-02	Current

PACIFICORP HOLDINGS, INC.

SUMMARY OF DIRECTORS

Name	Election Date	Departure Date
Bruce N. Williams	04-02	07-02
Ian M. Russell	07-02	Current
David T. Nish	07-02	Current
James R. Stanley	07-02	Current
Andre P. Haller	07-02	Current

PACIFICORP

SUMMARY OF OFFICERS

Name	Election Date	Departure Date
John M. Schweitzer	07-84	05-00
Sally A. Nofziger	01-84	05-99
Verl R. Topham	05-94	05-99
William C. Brauer	02-92	07-99
Dan R. Baker	02-94	10-99
Donald A. Bloodworth		10-99
Daniel L. Spalding	02-92	10-99
Dennis P. Steinberg	05-94	11-99
John A. Bohling	02-93	11-99
William E. Peressini	01-94	01-00
Keith R. McKennon	02-94	08-01
John F. Fryer	02-95	10-00
Richard D. Westerberg	05-95	01-00
Henry H. Hewitt	07-99	02-00
Richard T. O'Brien	08-95	02-00
Lenore M. Martin	07-87 06-01	05-00 Current
Brian D. Sickels	02-97	05-00
Thomas J. Imerson	11-90	06-00
Marsha E. Carrol		08-00

Paul G. Lorenzini	05-94	09-00
Michael J. Pittman	05-93	Current
Ernest E. Wessman	05-93	Current
Anne E. Eakin	02-97	07-01
Donald A. Furman	05-97 (2-97)	Current
Timothy E. Meier	09-97	03-01
Michael G. Jenkins	05-98 (06-01)	Current
Robert R. Dalley	08-98	12-00
A. Richard Walje	11-98	Current
Barry G. Cunningham	05-99	Current
Craig N. Longfield	05-99	02-01
C. Alex Miller	08-99 (11-99)	02-01
Sir Ian Robinson	11-99	01-01 (Chairman of Board)
Alan V. Richardson	11-99	12-01
William D. Landels	11-99	Current
Karen K. Clark	01-00	05-00 (09-01)
Bruce N. Williams	02-00 (08-90)	Current
Terry F. Hudgens	04-00	06-01
Andrew N. MacRitchie	05-00	Current
Robert A. Moir	05-00	Current
Matthew R. Wright	05-00	Current
Andrew P. Haller	12-00	Current
Judith A. Johansen	12-00 (01-00)	Current

Alexander D. Tait	06-01	Current
Tanya S. Sacks	06-01	Current
Donald (Doug) D. Larsen	07-01	Current
Stan K. Watters	08-01	Current
Robert A. Klein	08-01	Current
Geoffrey (Jeff) O. Huggins	10-01	08-12-02
Jeffery B. Erb	03-02	Current
Jeffery K. Larsen	08-22-2002	Current
Richard D. Peach	1-1-2003	Current

PACIFICORP

SUMMARY OF DIRECTORS

Name	Election Date	Departure Date
Don M. Wheeler	01-89	02-99
W. Charles Armstrong	11-96	11-99
C. Todd Conover	08-91	11-99
Kathern Braun Lewis	11-94	11-99
Alan K. Simpson	01-97	11-99
Verl R. Topham	05-94	11-99
Nancy Wilgenbusch	10-86	11-99
Peter I. Wold	05-95	11-99
Richard T. O'Brien		02-00
Keith R. McKennon	11-90	08-01
Nolan E. Karras	02-93	Current
Robert G. Miller	08-94	08-01
Sir Ian Robinson	11-99	01-01
Alan V. Richardson	11-99	12-01
William D. Landels	11-99	Current
Ian Simon MacGregor Russell	11-99 01-02	6-01 Current
Kenneth L. Vowles	11-99	03-02
Karen K. Clark	01-00	09-01
Judith A. Johansen	12-00 (01-00)	Current

Terry F. Hudgens	05-00	06-01
Andrew N. MacRitchie	05-00	Current
Timothy E. Meier	05-00	03-01
Michael J. Pittman	05-00	Current
A. Richard Walje	07-01	Current
Matthew R. Wright	07-01	Current
Barry C. Cunningham	04-02	Current

INTERWEST MINING COMPANY

SUMMARY OF OFFICERS

Name	Election Date	Departure Date
Dee W. Jense	10-16-00	Current
Bruce N. Williams	10-16-00	Current
Robert P. King	02-01	Current
Andrew P. Haller	02-01	Current
Larry O. Martin	02-01	Current
Tanya S. Sacks	02-01	Current
Jeffrey B. Erb	10-02	Current

INTERWEST MINING COMPANY

SUMMARY OF DIRECTORS

Name	Election Date	Departure Date
Dee W. Jense	11-15-99	Current
Robert P. King	10-16-00	Current
Judith A. Johansen	09-01	10-02

ENERGY WEST MINING COMPANY

SUMMARY OF OFFICERS

Name	Election Date	Departure Date
Bruce N. Williams	12-92	Current
Dee W. Jense	10-00	Current
Robert R. Dalley	10-00	02-01
George C. Schreck	10-00	02-01
Robert P. King	02-01	Current
Andrew P. Haller	02-01	Current
Larry O. Martin	02-01	Current
Tanya S. Sacks	02-01	Current
Jeffrey B. Erb	10-02	Current

ENERGY WEST MINING COMPANY

SUMMARY OF DIRECTORS

Name	Election Date	Departure Date
Dee W. Jense	08-93	Current
Robert P. King	07-99	Current
Terry F. Hudgens	10-00	09-01
Judith A. Johansen	09-01	10-02

GLENROCK COAL COMPANY

SUMMARY OF OFFICERS

Name	Election Date	Departure Date
Dee W. Jense	01-92 (10-16-00)	Current
Sally A. Nofziger	01-92	05-99
Bruce N. Williams	01-92	Current
Larry O. Martin	01-92 (02-01)	Current
Dexter E. Martin	08-93	06-00
John F. Fryer	03-97	10-00
Michael T. Winslow	07-99	10-00
Robert P. King	02-01	Current
Andrew P. Haller	02-01	Current
Tanya S. Sacks	02-01	Current
Jeffrey B. Erb	10-02	Current

GLENROCK COAL COMPANY

SUMMARY OF DIRECTORS

Name	Election Date	Departure Date
Dee W. Jense	08-93	Current
Robert P. King	07-99	Current
Ernest E. Wessman	10-00	10-02

TRAPPER MINING COMPANY

SUMMARY OF OFFICERS

Name	Election Date	Departure Date
W. Gordon Peters	10-93	Current
William W. Arnett	12-97	Current
James W. Mattern	07-01	Current
Kathy L. Innes	07-01	Current

TRAPPER MINING COMPANY

SUMMARY OF DIRECTORS

Name	Election Date	Departure Date
William W. Arnett	12-97	Current
Gary W. Harper	12-97	Current
Glen D. Reeves	12-97	Current
Harold J. Thompson	12-97	Current
Lloyd E. Barling	12-97	04-02
Bernard Fehringer	12-97	Current
Neil L. Getzelman	12-97	Current
Ralph Mullinix	10-98	Current
Brian Moech	05-99	Current
Dee W. Jense	04-00	Current

CENTRALIA MINING COMPANY

SUMMARY OF OFFICERS

Name	Election Date	Departure Date
Bruce N. Williams	12-92	Current
Dee W. Jense	10-16-00	Current
Robert P. King	02-01	Current
Andrew P. Haller	02-01	Current
Larry O. Martin	02-01	Current
Tanya S. Sacks	02-01	Current
Jeffrey B. Erb	10-02	Current

CENTRALIA MINING COMPANY

SUMMARY OF DIRECTORS

Name	Election Date	Departure Date
Dee W. Jense	08-93	Current
Robert P. King	07-99	Current
Ernest E. Wessman	10-16-00	10-02

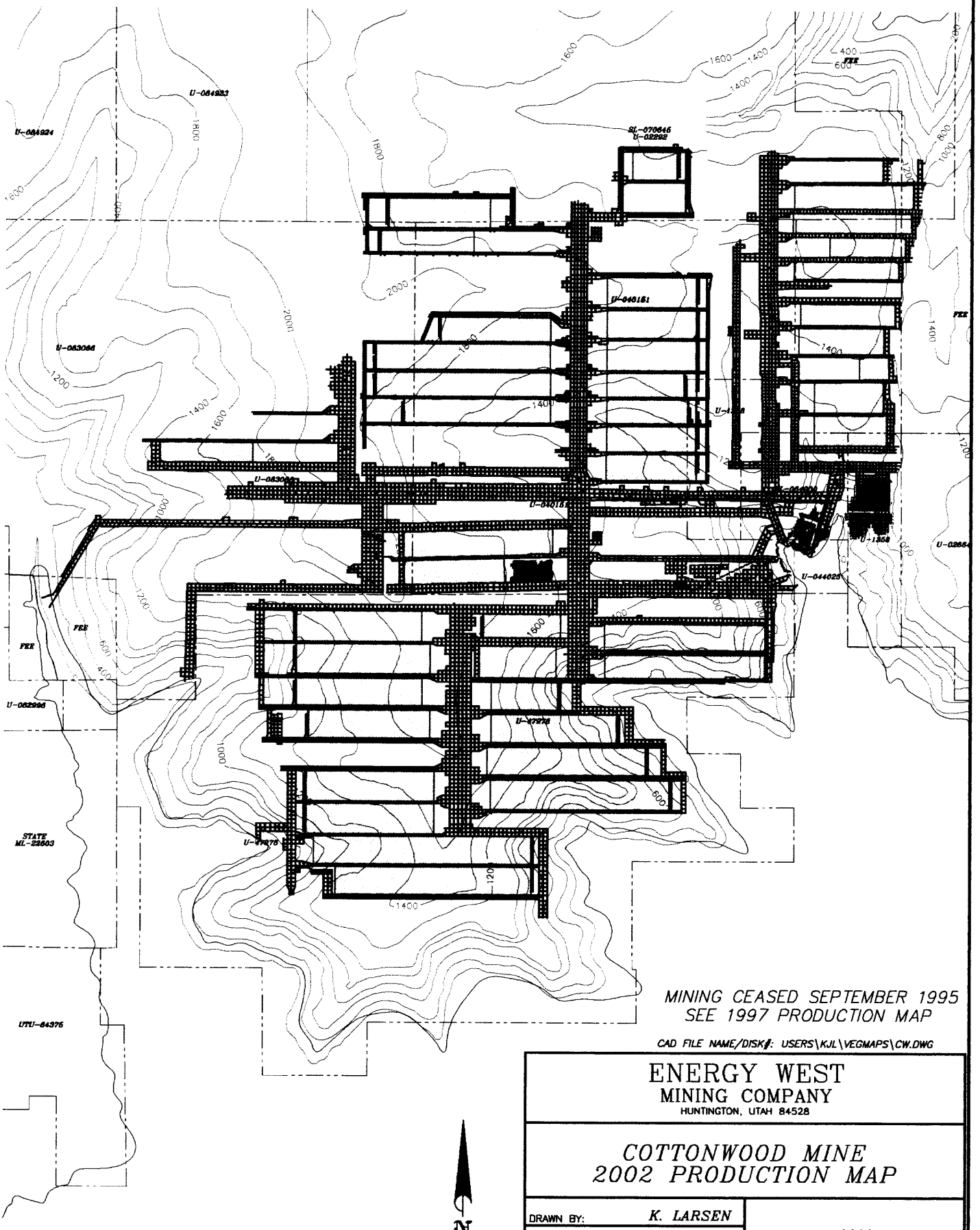
APPENDIX D

Mine Maps

As required under R645-302-525-270

CONTENTS

2002 RAPTORS



MINING CEASED SEPTEMBER 1995
SEE 1997 PRODUCTION MAP

CAD FILE NAME/DISK#: USERS\KJL\VEGMAPS\CW.DWG

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

COTTONWOOD MINE
2002 PRODUCTION MAP

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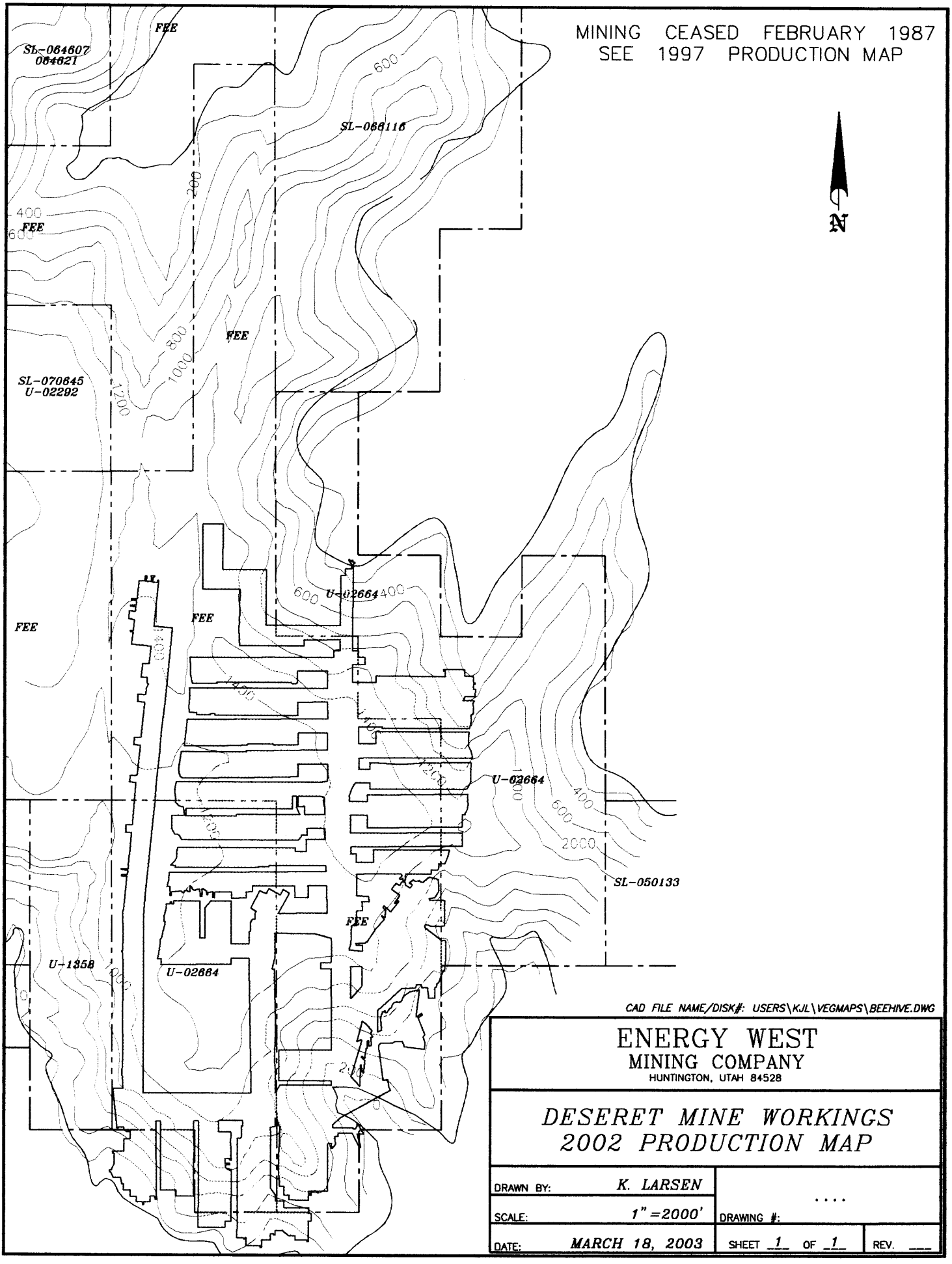
SCALE:	NONE	DRAWING #:	....
DATE:	MARCH 18, 2003	SHEET 1 OF 1	REV. ___



CAD FILE NAME/DISK#: USERS\KJL\VEGMAPS\BEEHIVE.DWG

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

DESERET MINE WORKINGS
2002 PRODUCTION MAP

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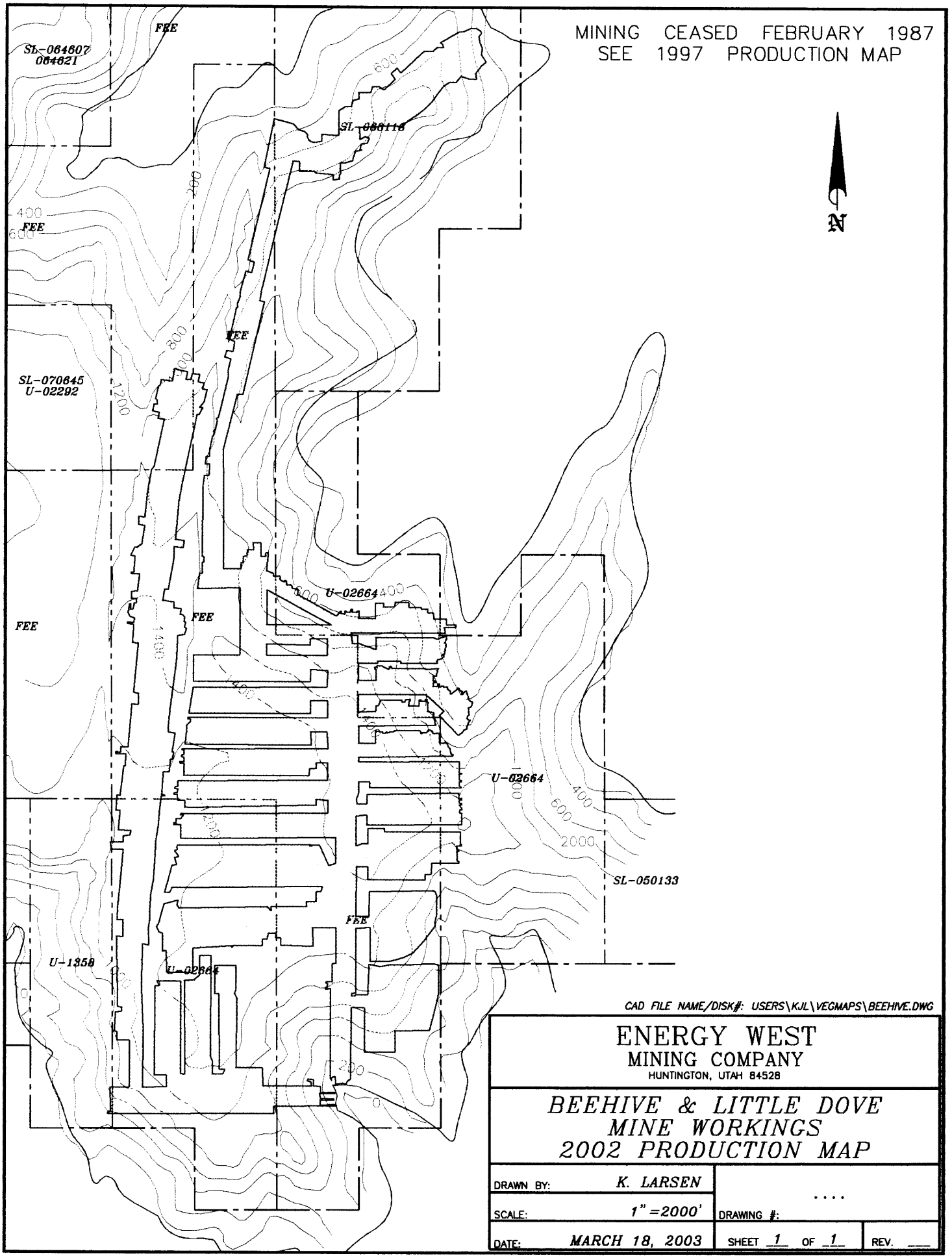
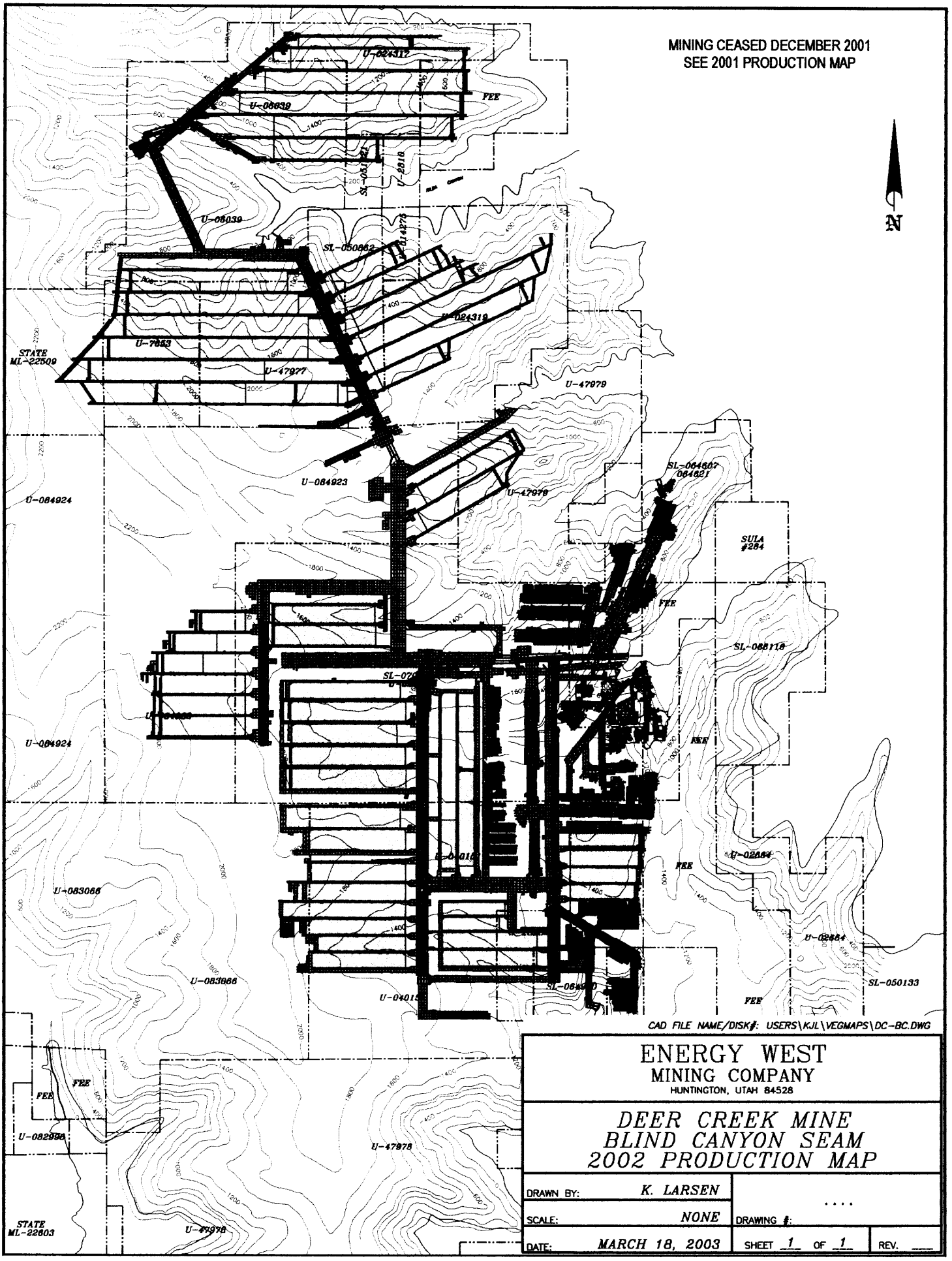
DATE:	MARCH 18, 2003	SHEET 1 OF 1	REV. ___


MINING CEASED FEBRUARY 1987
SEE 1997 PRODUCTION MAP
N
FEE
SL-064607
064621
SL-066118
FEE
SL-070645
U-02292
FEE
FEE
U-02664
FEE
U-02664
SL-050133
FEE
U-1358
U-02664
CAD FILE NAME/DISK#: USERS\KJL\VEGMAPS\BEEHIVE.DWG
ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528
BEEHIVE & LITTLE DOVE
MINE WORKINGS
2002 PRODUCTION MAP
DRAWN BY: K. LARSEN
SCALE: 1" =2000'
DRAWING #: ....
DATE: MARCH 18, 2003
SHEET 1 OF 1
REV. ___

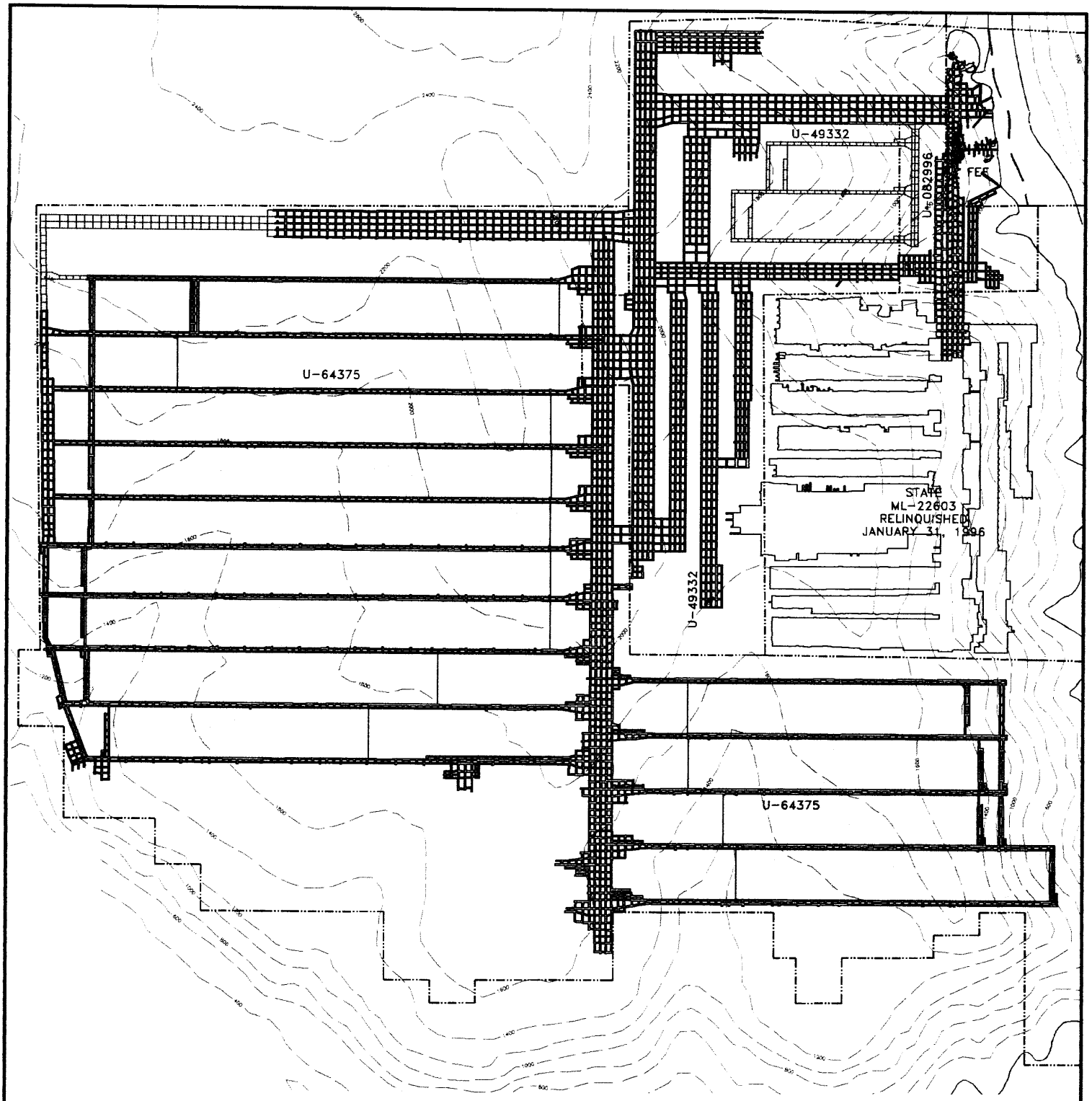


CAD FILE NAME/DISK#: USERS\KJL\VEGMAPS\DC-BC.DWG

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

DEER CREEK MINE
BLIND CANYON SEAM
2002 PRODUCTION MAP

DRAWN BY:	K. LARSEN		
SCALE:	NONE	DRAWING #:	....
DATE:	MARCH 18, 2003	SHEET 1 OF 1	REV. ___



MINING CEASED MARCH 2001
SEE 2001 PRODUCTION MAP

CAD FILE NAME/DISK#: USERS\KJL\VEGMAPS\TMANNUAL-2002.DWG

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

TRAIL MOUNTAIN MINE
2002 PRODUCTION MAP

DRAWN BY:	*K. LARSEN*		
SCALE:	*1" =2000'*	DRAWING #:	.....
DATE:	*MARCH 18, 2003*	SHEET 1 OF 1	REV. ___

I, JOHN CHRISTENSEN BEING A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF UTAH, DO HEREBY CERTIFY THAT THE INFORMATION CONTAINED ON THIS DRAWING IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

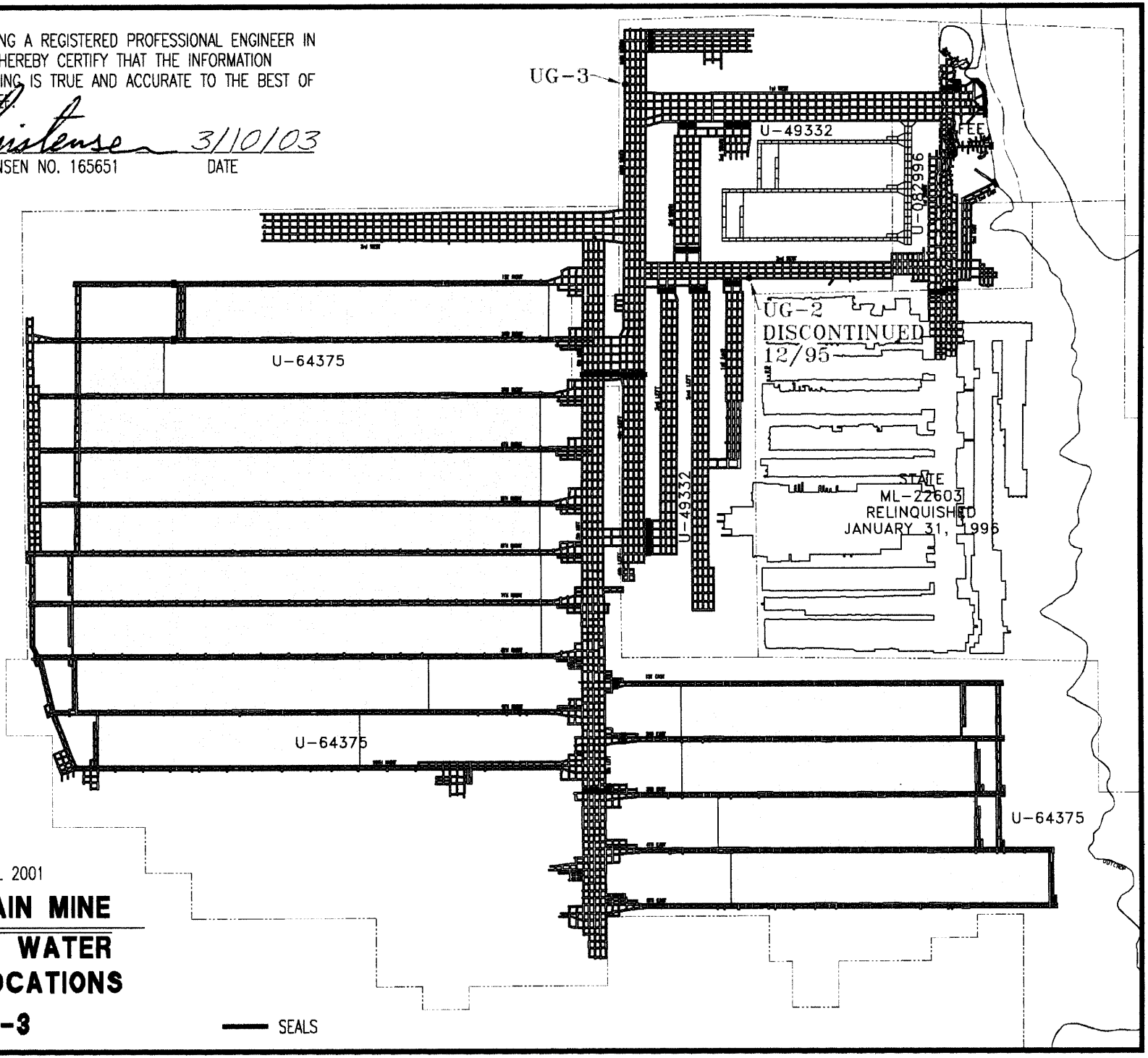
John Christensen 3/10/03

JOHN CHRISTENSEN NO. 165651 DATE

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

N

SCALE: 1"=2000'



MINE SEALED APRIL 2001

TRAIL MOUNTAIN MINE

UNDERGROUND WATER MONITORING LOCATIONS

PLATE 7-3

SEALS