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

VOLUME 1

INTRODUCTION SECTION

REPLACE ENTIRE SECTION

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November 3, 2005

Mine # C/015/0017
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Doc. Date 11-17-05
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Des-Bee-Dove Mine

Introduction

PacifiCorp owns and leases certain fee coal lands, together with assigned federal and state coal leases, and controls approximately 25,000 acres of contiguous minable property located in Emery County, Utah.

Geography, the area is known as East Mountain, a large, relatively flat plateau, containing two mineable coal seams.

Mining began as early as 1898 in the unnamed canyon where the Des Bee Dove Mine is located. The original mine workings, called the Griffith Mine, were limited in extent due to the rugged terrain and poor access. The Griffith workings were purchased in 1936 by two men, Edwards and Broderick, who fashioned a crude access road and mine until 1938.

Castle Valley Fuel Company purchased the Edwards and Broderick property in 1938. The LDS Church purchased coal lands adjacent to Castle Valley Fuel Company in 1938 and began their operations in that year.

The Church Mine operated under contract to a Mr. Killian of Orangeville until it was closed in 1943 due to World War II. Castle Valley Fuel Company continued to operate until 1947. The LDS Church purchased Castle Valley Fuel's operation in 1947 and combined operations to form Deseret Coal Company, a church welfare project. Deseret Coal Company continued operations until Utah Power & Light Company acquired it in 1972.

During mine operations, mining could take place from one or more of three main portals; Deseret, Beehive and Little Dove. Hence the name Des Bee Dove Mine. Mine personnel and coal handling facilities were combined to service all three portals. Location of the mine permit boundary is shown on Figure 1.

Two minable seams exist in the Des Bee Dove Mine area. Hiawatha (lower) Seam was mined through Deseret portal. Blind Canyon (upper) Seam was mined through Beehive and Little Dove portals.

On February 6th, 1987 the Des Bee Dove Mine was temporarily idled. On February 26,

Des-Bee-Dove Mine

1997, PacifiCorp submitted a Notice of Intent to reclaim the Des-Bee-Dove Mine. In 1999 PacifiCorp initiated final reclamation in a multi-faceted approach. The following list outlines the projects completed or scheduled:

Reclamation Completed or Scheduled Projects

- ✓ Surface Facility Demolition Project: Initiated and completed in the fall of 1999.
- ✓ Maple Gulch Remote Portals: Final reclamation completed in July 2000.
- ✓ Pumphouse Area: Final Reclamation completed in the fall of 2000.
- ✓ Tipple Valley Fill Removal Project: Excavation initiated in March 2001, project completed May 2001.
- ✓ Phase 1 Reclamation - Little Dove/Beehive Area: Completed May 2002.
- ✓ Phase 2 Reclamation - Deseret and Tipple Area: Completed June 2003.
- ✓ Phase 3 Reclamation - Sediment Pond: Scheduled for 2005.

Des-Bee-Dove Mine

Organization of the Mining Permit Application

The following volumes contain PacifiCorp's permit application for underground coal mining operations at the Des-Bee-Dove Coal Mine. The application is organized into a set of separate volumes as follows:

Volume 1

Introduction

Table of Contents

Part 1 - Legal , Financial, Compliance Information (refer to supplemental volume entitled "Supplemental Volume, Legal and Financial Information")

Part 2 - Environmental Resources

Volume 2

Part 3 - Mining Operation Plan (Historical Information)

Part 4 - Reclamation Plan (Historical Information)

Reclamation Plan Revised in Separate Projects/Phases:

Remote Portals: Maple Gulch Area (refer to Volume 2 Part 4 Appendix IX)

Pumphouse Area (refer to Volume 5 Appendix IV)

Phase 1 Little Dove/Beehive Mine Area (refer to separate binder Appendix XIV)

Phase 2 Deseret Mine, Bathhouse Area and Access Road (refer to separate binder Appendix XV)

Phase 3 Sediment Pond and Access Road (refer to separate binder Appendix XVI)

Volume 3

Maps and Drawings

Volume 4

Maps and Drawings

Des-Bee-Dove Mine

Volume 5

Appendices

- I Coal Lithologic Logs
- II Field Data for the Vegetation Reference Areas
- III Stability Analysis - Sedimentation Pond and Haul Road
- IV Pumphouse Reclamation Plan
- V Underground Development Waste Plan
- VI Blasting Plan
- VII Sedimentation Pond Criteria and Calculations
- VIII Sedimentation Pond Construction Drawings
- IX Photographs of Existing Facilities
- X Deseret Waste Dump Stability Analysis
- XI Slope Stability Analysis - Bathhouse Fill
- XII Hydrologic Procedures and Calculations for the Sedimentation and Surface Drainage Collection System
- XIII Subsidence Monitoring Plan
Supplemental Information (Permit Area Reduction October 2000)
- XIV Phase 1 Little Dove/Beehive Mine Area (refer to separate binder Appendix XIV)
- XV Phase 2 Deseret Mine, Bathhouse Area and Access Road (refer to separate binder Appendix XV)
- XVI Phase 3 Sediment Pond and Access Road (refer to separate binder Appendix XVI)

Volume 6

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- XVII Sedimentation Pond Access Road Plans and Written Text
- XVIII Haul Road Reclamation Study

Des-Bee-Dove Mine

Volume 8

Geology Section (C/015/017, C/015/018, C/015/019)

Volume 9

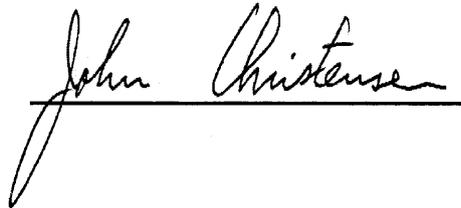
Hydrologic Section (C/015/017, C/015/018, C/015/019)

Des-Bee-Dove Mine

Certification

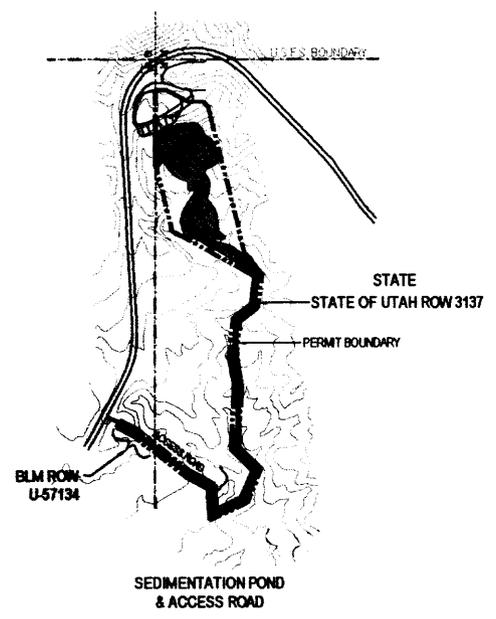
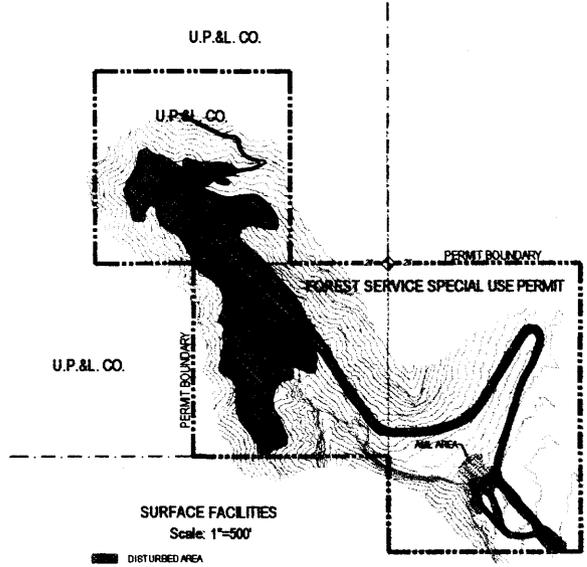
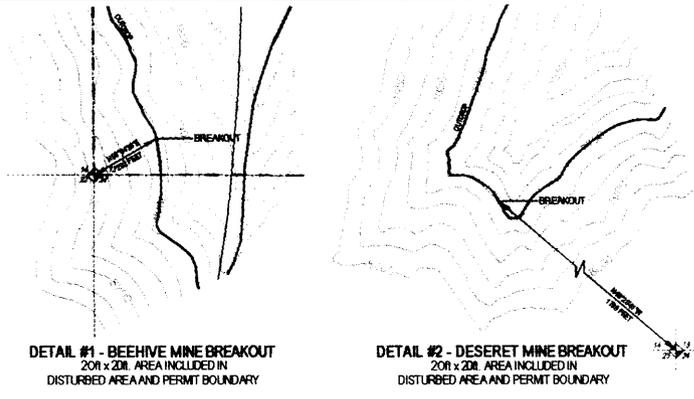
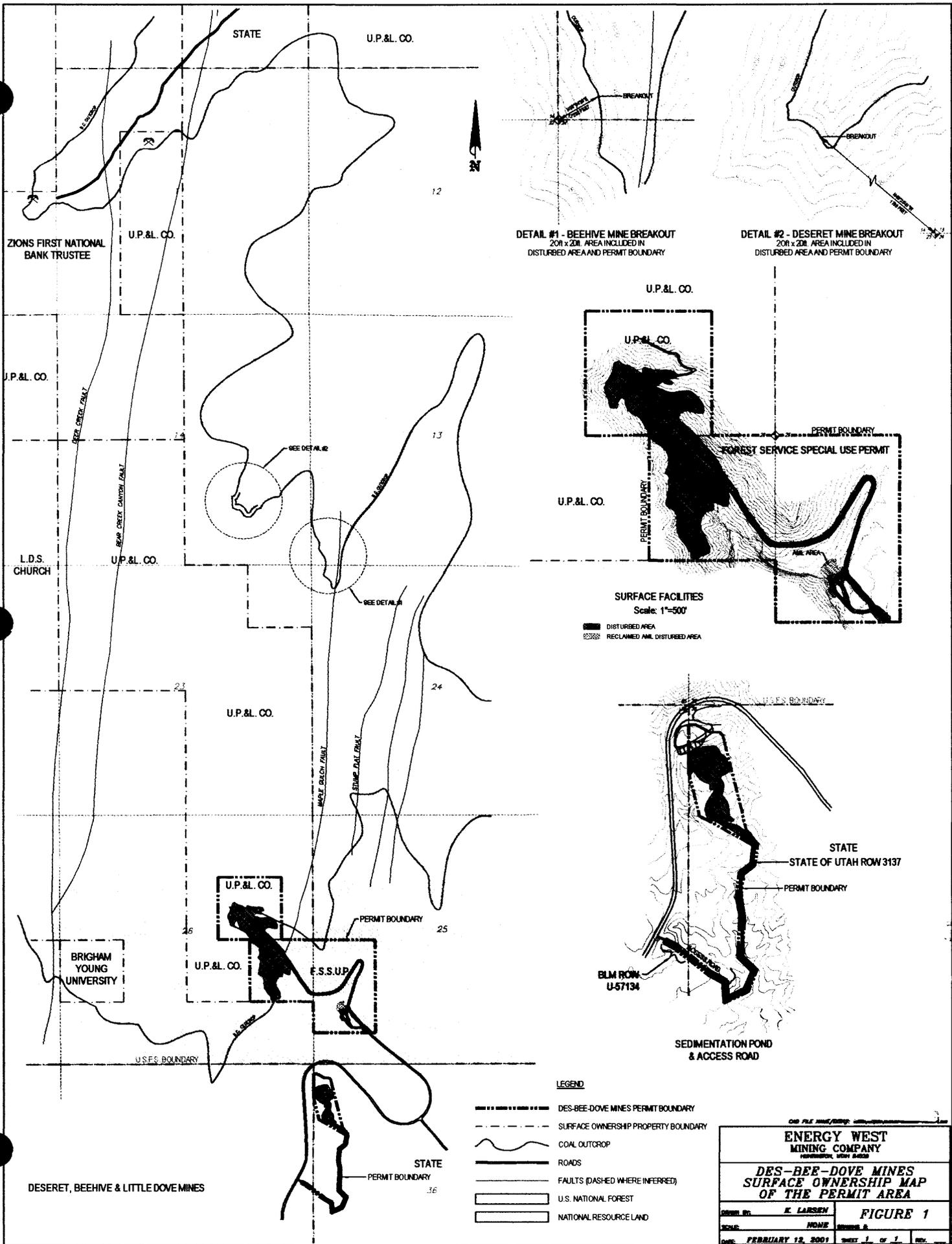
State of Utah)
 : ss.
County of Salt Lake)

Except a otherwise indicated thereon, all maps, plans, and cross-sections submitted with this application have been prepared under the supervision of John Christensen, a registered Professional Engineer of the State of Utah, who, to the best of his knowledge, hereby certifies to the correctness thereof.



A handwritten signature in cursive script that reads "John Christensen". The signature is written over a solid horizontal line.

John Christensen, P.E.
Professional Engineer
No. 165651



- LEGEND**
- DES-BEE-DOVE MINES PERMIT BOUNDARY
 - - - SURFACE OWNERSHIP PROPERTY BOUNDARY
 - ~ COAL OUTCROP
 - ROADS
 - - - FAULTS (DASHED WHERE INFERRED)
 - ▭ U.S. NATIONAL FOREST
 - ▭ NATIONAL RESOURCE LAND

ON FILE WITH BLM, U.S. GEOLOGICAL SURVEY

ENERGY WEST MINING COMPANY
MEMPHIS, MISSISSIPPI

DES-BEE-DOVE MINES SURFACE OWNERSHIP MAP OF THE PERMIT AREA

DRAWN BY: K. LARSEN	FIGURE 1
SCALE: NONE	REVISED BY: None
DATE: FEBRUARY 12, 2007	SHEET 1 OF 1

DESERET, BEEHIVE & LITTLE DOVE MINES

STATE

ZIONS FIRST NATIONAL BANK TRUSTEE

U.P.&L. CO.

U.P.&L. CO.

L.D.S. CHURCH

U.P.&L. CO.

U.P.&L. CO.

U.P.&L. CO.

U.P.&L. CO.

F.S.S.U.P.

BRIGHAM YOUNG UNIVERSITY

U.S.F.S. BOUNDARY

PERMIT BOUNDARY

MAPLE BRANCH FAULT

STUMP FLAT FAULT

BEAR CREEK CANYON FAULT

BEAR CREEK FAULT

SEE DETAIL #2

SEE DETAIL #1

DETAIL #1 - BEEHIVE MINE BREAKOUT
20ft x 20ft. AREA INCLUDED IN
DISTURBED AREA AND PERMIT BOUNDARY

DETAIL #2 - DESERET MINE BREAKOUT
20ft x 20ft. AREA INCLUDED IN
DISTURBED AREA AND PERMIT BOUNDARY

SURFACE FACILITIES
Scale: 1"=500'

- ▭ DISTURBED AREA
- ▨ RECLAIMED AML DISTURBED AREA

SEDIMENTATION POND & ACCESS ROAD

STATE OF UTAH ROW 3137

BLM ROW U-57134

PERMIT BOUNDARY

STATE

U.S.S. BOUNDARY

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

VOLUME 1

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(refer to supplemental volume entitled "Supplemental Volume, Legal and Financial Information")

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Volume 8

Geologic Section

Volume 9

Hydrologic Section

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

VOLUME 1 PART 1

**INSERT LEGAL AND FINANCIAL INFORMATION
REFERENCE SHEET**

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November 3, 2005

Des-Bee-Dove Mine

**PacifiCorp
Energy West Mining Company
DES-BEE-DOVE MINE
Legal and Financial Information**

This application for a mining and/or reclamation permit is submitted to the State of Utah, Department of Natural Resources, Division of Oil, Gas and Mining, in accordance with the Utah Coal Mining and Reclamation Act, Title 40, Chapter 10, U.C.A., 1953 (as amended); the applicable rules and regulations adopted thereunder; the Surface Mining Control & Reclamation Act of 1977, and applicable regulations adopted thereunder (30 CFR 770, et seq.), the Cooperative Agreement between the State of Utah and the United States Secretary of Interior, and other applicable laws and regulations.

R645-301-100 GENERAL CONTENTS

All Legal and Financial Information pertaining to the Des-Bee-Dove Mine is located in the Supplemental Volume entitled:

PacifiCorp Legal and Financial Volume

Cottonwood Mine C/015/19

Deer Creek Mine C/015/18

Des-Bee-Dove Mine C/015/017

Trail Mountain Mine C/015/009

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

**VOLUME 5
Appendix XIII**

ADD SUPPLEMENTAL INFORMATION

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DES-BEE-DOVE MINE

C/015/017

VOLUME 5

Appendix XIII

Supplemental Information

October, 2000, PacifiCorp submitted a minor amendment to the Des-Bee-Dove mining and reclamation plan. This purpose of this amendment was to reduce the size of the permit area from 2,665.84 acres to 154.86 acres. In reviewing the amendment, the Division of Oil, Gas and Mining requested that PacifiCorp supply information relating to the partial relinquishment of the permit area. The request included:

- Any subsidence-caused damage and mitigation information of relinquished portions of the permit area.
 - Documentation showing all subsidence monuments removed and all wells or bore holes cased, capped, sealed, backfilled, or approved for transfer.
 - Assessment of hydrology data relative to the impact projections contained within the PHC and CHIA.
 - Description of how the relinquished portions of the permit area has met the stated post mining land use and how it has met the surface owners/managers plan or programs.
-

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

VOLUME 5, APPENDIX XIII

**INSERT SUPPLEMENTAL INFORMATION
(PREVIOUSLY FROM VOLUME 1, PART 1, APPENDIX F)**

**HYDROLOGY INFORMATION
SUBSIDENCE INFORMATION
EXPLORATION DRILL SITE INFORMATION
LEASE RELINQUISHMENT INFORMATION**

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

SUPPLEMENTAL INFORMATION

**HYDROLOGY INFORMATION
SUBSIDENCE INFORMATION
EXPLORATION DRILL SITE INFORMATION
LEASE RELINQUISHMENT INFORMATION**

PacifiCorp

Energy West Mining Company

Hydrologic Information

INCORPORATED
NOV 26 2001
DIV OF OIL GAS & MINING

Hydrologic Information

According to the PHC and CHIA, projected hydrological impacts associated with the Des-Bee-Dove Mine are negligible. Raw data, though, is found in the 2000 Annual Hydrologic Report. Supportive information is found in the Supplemental Information for the Relinquishment of Federal Acreage, East Mountain Logical Unit, June 12, 1995 on pages 7 and 10-11.

The only spring found within the Des-Bee-Dove Mine permit area is 82-51. This spring has shown no change due to mining. The spring fluctuates proportionately with precipitation. Table 29 in the 2000 Annual Hydrologic Report documents spring flow since 1983. Appendix H of this same report compares the spring flow of 82-51 and precipitation. The figure illustrates a close relationship of the two parameters. A copy of the table and figure is supplied below.

Underground mining in the Des-Bee-Dove Mine has never intercepted groundwater and, therefore, no water has ever been discharged from the portals into the ephemeral drainages. No surface water impacts due to mining has ever been reported within the Des-Bee-Dove permit area.

INCORPORATED
NOV 26 2001
DIV OF OIL GAS & MINING

Table 29: East Mountain Yearly Spring Discharge Variations (GPM)

July Flow Data

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Spring	30.5	26.6	26.1	17.5	10.2	12.0	6.4	4.1	2.0	4.0	8.6	7.5	7.5	5.5	8.5	6.8	5.0	3.3
Burnt Tree	642.3	427.9	390.5	309.7	217.0	217.4	78.5	130.8	176.0	116.8	369.9	46.2	599.3	309.0	235.0	413.0	309.0	107.0
Elk Spring	22.9	19.7	14.4	8.6	11.4	10.4	1.1	8.1	10.1	6.3	11.0	0.9	10.6	14.9	4.8	7.2	6.1	2.6
Sheba	89.0	48.0	39.1	31.6	69.0	60.0	5.0	13.0	21.0	13.6	51.0	6.0	76.2	36.7	42.9	83.2	30.0	20.0
Ted's Tub	79-2	9.1	9.7	5.5	4.0	2.1	2.7	3.9	2.4	2.3	7.5	1.7	2.6	2.0	2.1	2.1	2.2	1.9
	79-10	37.1	20.0	33.3	26.1	25.0	7.0	10.2	12.5	10.5	30.0	4.0	30.0	17.6	14.0	24.0	20.0	5.2
	79-15	42.9	26.1	18.2	14.6	12.7	2.9	3.0	5.0	4.1	20.7	2.0	33.3	11.0	13.6	18.3	15.0	6.3
	79-23	20.0	3.6	6.8	0.6	damp	dry	dry	damp	dry	damp	dry	no flow	dry	dry	0.2	dry	dry
	79-24	9.3	6.1	5.0	4.3	0.8	dry	dry	dry	dry	damp	dry	0.1	dry	dry	1.0	dry	dry
	79-26	20.7	20.0	10.9	8.7	3.3	0.3	dry	damp	damp	10.0	dry	10.0	0.8	5.0	7.9	2.7	1.4
	79-29	10.0	6.2	6.0	4.7	2.5	1.1	1.3	1.7	0.8	2.9	0.7	3.1	1.2	3.0	3.0	1.7	1.3
	79-32	3.3	3.1	2.7	1.3	1.0	0.5	damp	no flow	no flow	1.3	damp	1.0	0.6	1.0	2.2	1.0	0.4
	79-34	56.7	42.9	18.5	16.7	10.5	dry	dry	0.3	damp	13.0	dry	30.0	7.5	5.5	13.2	8.6	0.4
	79-35	15.0	10.5	10.5	7.8	6.3	dry	1.9	4.3	4.4	8.9	0.5	3.0	4.5	8.6	4.6	5.0	2.7
	79-38	10.9	9.2	4.7	3.6	8.3	1.1	7.8	6.5	2.3	6.4	0.5	10.0	7.5	4.0	7.5	5.0	4.0
	79-40	15.0	8.3	5.6	4.7	5.4	dry	dry	dry	dry	4.0	dry	2.0	0.5	1.4	2.0	1.7	dry
	80-41	10.9	15.0	5.8	4.1	3.9	dry	dry	dry	dry	4.0	dry	2.4	0.5	4.5	5.4	3.7	1.3
	80-43	24.0	20.0	6.6	3.1	1.8	dry	dry	dry	dry	2.7	dry	1.5	damp	damp	0.5	0.1	dry
	80-44	24.0	13.1	5.5	2.2	dry	dry	dry	dry	dry	1.4	dry	3.0	damp	0.2	0.5	0.1	0.5
	80-46	60.0	28.3	18.2	12.0	6.7	dry	dry	dry	dry	7.5	dry	5.0	damp	4.0	4.6	2.5	damp
	80-47	20.0	15.0	12.5	12.2	9.9	4.6	2.0	1.3	3.3	13.3	2.2	12.6	5.0	9.2	10.5	8.6	5.0
	82-51	10.0	5.9	3.8	2.6	damp	dry	dry	0.1	damp	3.2	damp	3.0	0.5	2.0	2.1	0.7	0.1
	82-52	80.0	48.0	32.1	23.3	21.5	2.6	1.3	1.0	1.0	16.7	2.0	15.0	7.0	12.0	12.0	12.0	3.4
	84-56	9.6	6.3	4.7	3.7	2.9	1.6	1.0	0.5	0.6	1.0	0.3	1.0	0.3	0.7	1.7	0.9	0.2
Totals	1254.3	839.5	687.0	530.2	421.3	425.5	115.4	188.4	244.7	170.0	595.0	74.5	862.2	432.6	379.9	633.5	441.6	167.0

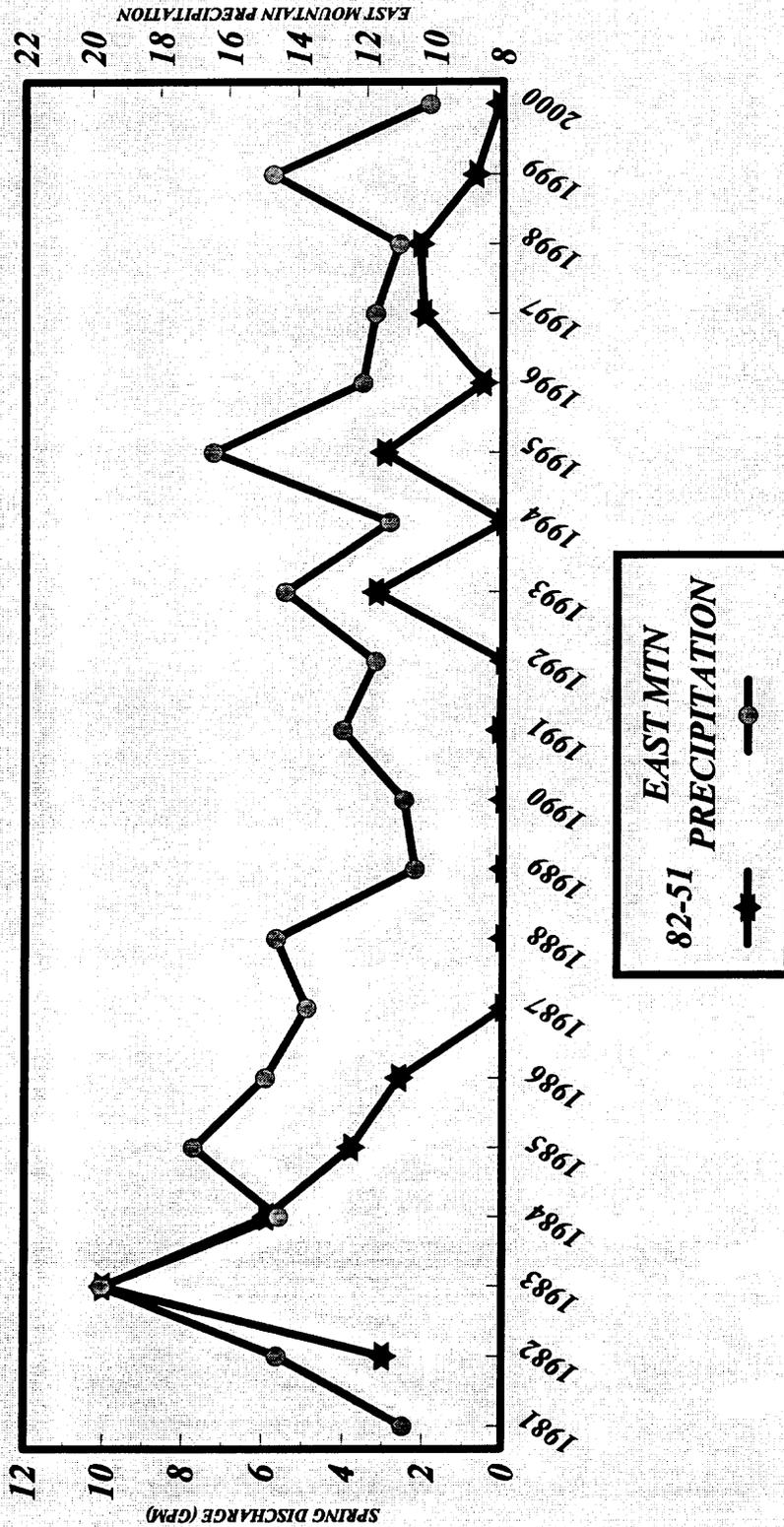
xx No measurement - utilized yearly comparison.

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EAST MOUNTAIN SPRINGS

Spring: 82-51 vs. Precipitation

PEAK FLOW (JULY) vs. EAST MOUNTAIN WEATHER STATION



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Subsidence Information

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Subsidence Information

The information presented in this section briefly describes full extraction mining under the Castle Gate sandstone escarpment followed by an analysis of predicted vs. observed subsidence in areas 7, 8, 9, and 13. The analysis data has been taken from the 2000 Annual Subsidence Monitoring Report East/Trail Mountain Properties, March 30, 2001.

Historically, full extraction pillar sections have been completed under the Des Bee Dove Castle Gate Sandstone Escarpment. Multiple seam mining (both Hiawatha and Blind Canyon coal seams) has occurred within these sections under the Castle Gate Sandstone Escarpment with no evidence of failure to the escarpment.

Des Bee Dove Mine room and pillar mining areas encountered numerous areas where burned coal and clinker beds surround the mine workings. Mining was projected and oriented to minimize extraction exposure and avoid creating further instabilities in the mining horizon.

In the East Mountain reserve, room and pillar mining has a lower total recovery percentage than longwall mining. Overall subsidence is substantially less than longwall mining (see Figure 4, refer to Part 4, Appendix VI).

Room and pillar extraction panels in the Des Bee Dove Mine were planned to average 300' wide. This relates to 60% less area being affected over time when compared to longwall mining. This helped to minimize possible surface and escarpment disturbance over time.

Room and pillar mining designs and layouts for the Des Bee Dove Mine were also planned so that possible surface disturbance due to full extraction areas did not encounter burned coal and associated clinker-bed instabilities. No damage occurred to the escarpment (except for minor cracking) due to full extraction room and pillar mining in the Des Bee Dove Mine.

Predicted vs. Observed Subsidence

A comparison between predicted and observed subsidence for various areas on PacifiCorp's property has been made using a method developed by the British National Coal Board (NCB). The NCB method utilizes graphs compiled from numerous field observations and takes into consideration the length and width of the mined-out area, thickness of coal extracted, and depth of cover. The method is claimed to be correct to $\pm 10\%$ in the majority of cases, assuming certain limiting conditions are met. The table below compares predicted maximum subsidence with observed subsidence for area 7, 8, 9, and 13 of the Des Bee Dove Mine. (Refer to 2000 Annual Subsidence Monitoring Report East/Trail Mountain Properties, March 30, 2001).

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Predicted vs. Observed Subsidence.

Area	Subsidence (feet)		
	Predicted	Observed	% Difference
Area #7 - Bee Hive 2 nd North off 8 th West	6.6	7.4	112
Area #8 - Bee Hive/Deseret Mines East and West Sections	6.8	4.8	71
Area #9 - Little Dove 1 st North	4.3	3.5	81
Area #13 - Des Bee Dove Southern Areas	2.0	1.8	90

Reference: 2000 Annual Subsidence Monitoring Report East/Trail Mountain Properties, March 30, 2001.

In three of the four Des Bee Dove Mine areas subsidence is less than the maximum predicted by the NCB model. The observed subsidence shown here represents the actual maximum subsidence for the particular geologic conditions. In the Area #7, greater than expected subsidence was observed. Chain pillars or barriers between sections are probably crushing so that strata above the workings cave as it would if a wider zone had been mined.

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Exploration Drill Site Information

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CM-5 DAILY DRILLING REPORTS

June 19, '77 9:00 AM: moved back on site; hole clean to bottom - 180'; hole to be cased with 60' of 6" casing

12:00 Noon: getting ready to case hole: doing maintenance on rig; need a load of water

6:00 PM: reamed hole to 7½" to 60'; set 6" I.D. casing

7:00 PM: started drilling with a 5 7/8" bit (toothed bit); to put hammer on when parts arrive

June 20 9:00 AM: to depth of 320'; injecting a light soap because of water in hole; new buttons for hammer to be in Wednesday

12:00 Noon: to 350' no problems; good return

June 21 4:00 PM: to 875'; no problems; good return; still on button bit

8:00 PM: to 960'; no problems; good return; still on button bit

June 22 4:00 PM: to 1200'; hit thin coal seam at 1180' which gives good correlation with CM-1; still have circulation

June 23 9:00 AM: to depth of 1365'; tripping for new bit

4:00 PM: to depth of 1550'; nearing time to bottom hole; lost circulation at 1465' in coal

June 24 2:00 AM: finished probing drill hole; Bird Canyon seam 5.0' coal, 2.0' split, 8.6' coal; Hiawatha seam 9.7' coal; hole caved at 400' and only were able to run density and resistivity in lower part of hole

12:00 Noon: Boyles left site; to return on Sunday to cement and move

June 26 12:00 Noon: Boyles running pipe into hole to cement

4:00 PM: cement job completed; start to move to EM-6

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UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Manti-LaSal National Forest
Ferron, Utah 84523

SL-050133

2820

November 7, 1977



Mr. Allen L. Vance
U.S. Geological Survey-Conservation Division
Office of the Area Mining Supervisor
8426 Federal Building
125 South State Street
Salt Lake City, Utah 84138

Dear Allen:

The following sites from Utah Power and Light's 1977 drilling program on East Mountain have been inspected by Arden Taylor and myself:

- | | |
|------|---------------------------------|
| EM-2 | EM-11c |
| EM-3 | EM-12c |
| EM-6 | CM-3 |
| EM-9 | CM-6, pad built, never drilled. |

All sites were clean of trash and debris, put to contour, and seeded. Utah Power and Light and Arden Taylor are to be commended for the diligence exercised in site preparation, use, and rehabilitation. The harrowing of the sites before and after seeding is especially appreciated.

Final clearance of these sites is conditional on successful reestablishment of vegetation.

Sincerely,

Robert M. Wilson

ROBERT M. WILSON
Geologist

cc: Arden Taylor

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COAL EXPLORATION DRILLING SUMMARY SHEET

DATE: 10/15/81

COMPANY: Utah Power & Light

LEASE OR EXPLORATION LICENSE NUMBER: SL-050133

HOLE NUMBER: CM-7

TOTAL DEPTH: 825'

ATTRIBUTES:

HOLE SIZE	DEPTH	CASING SIZE
<u>8"</u>	<u>0-40'</u>	<u>7 3/4"</u>
<u>6"</u>	<u>40-825'</u>	<u>-</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

NUMBER OF SACKS CEMENT USED? 85

NUMBER OF SACKS BENTONITE USED? 2

OTHER?

HOLE PLUGGED TO SURFACE? yes

TIME SPENT: 5 hrs SURFACE CASING: Cement up through casing

PLUGGING:

WITNESSED BY: Tim Abing

GENERAL COMMENTS: Drill hole not core but just logged

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Lease Relinquishment Information

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Moab District
P. O. Box 970
Moab, Utah 84532

3452

SL-050133 et al
(U-065c)

INCORPORATED

NOV 20 1992

DIV OF BLM

Memorandum

JUL 20 1992

To: State Director, Utah (U-942)

From: Assistant District Manager, Mineral Resources

Subject: Relinquishments of Federal Coal Leases, PacifiCorp and Malcolm N. McKinnon Trust

We have been asked by memorandum from your office dated May 19, 1992, to review the subject relinquishments to determine that this action will not impair the public interest and that all obligations of the lessee under the regulations and the terms of the lease have been met.

PacifiCorp, as lessee of record, proposes to relinquish Federal coal lease SL-050133 in total, and portions of leases SL-066116, SL-064607-064621, U-02664, U-1358, U-47978, U-47979, and U-024319. Also, PacifiCorp, as sublessee, plans to relinquish portions of Federal coal lease SL-070645-U-02292 with the consent of the lessee, Malcolm N. McKinnon Trust.

The relinquishments were reviewed with regard to the Bureau of Land Management's jurisdiction over coal operations on Federal leases. There are no mine surface facilities, portals, or structures located on the areas to be relinquished. To the best of our knowledge, all known exploration drill holes have been plugged and reclaimed. No recoverable coal remains in the areas to be relinquished. The coal resources are either mined out, burned, or unminable. The unminable coal is in small isolated areas where faults and other geologic features have cut off physical and economical access. Also, coal production from these areas has been accounted for and reported to Minerals Management Service for royalty payment. Having made these determinations, we find that the relinquishments would not impair the public interest, as conservation of the coal resources has been achieved. The terms and conditions of the lease have been met for those items that are under our jurisdiction. Therefore, we have no objections to the relinquishments.

With regard to the lease bond for Federal coal lease SL-050133, we have no objections to the termination of this \$5000 bond as no liabilities remain. We will send bond recommendations for all of PacifiCorp's Federal coal leases under separate cover.

If you have any questions, please call Gary Johnson, Chief -
Price Coal Office, at 637-4584.

Gary Johnson
for
ADM

cc:
DM, Moab (U-065)
SD, Utah (U-921)

SFalk:sf:ks: 07/13/92 WP PACIFIC.REL

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United States
Department of
Agriculture

Forest
Service

Manti-La Sal
National Forest

599 West Price River Dr.
Price, Utah 84501

Reply to: 2820

Date: June 21, 1993

Lowell Braxton
State of Utah Department of Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

ACT/015/017 #
Copy FAM

RE: Lease SL-050133 Relinquishment, PacifiCorp, Des-Bee-Dove Mine, ACT/015/017,
Folder #2, Emery County, Utah

Dear Mr. Braxton:

We have no objection to removing the area formerly included as Federal Coal Lease SL-050133 from the permit area for the Des-Bee-Dove Mine. This area was not mined, therefore, there is no need to retain this area within the permit area for the purpose of monitoring or mitigating the effects of mining.

If you have any questions, contact us at the Forest Supervisor's Office in Price, Utah.

Sincerely,

George A. Morris
for

GEORGE A. MORRIS
Forest Supervisor

cc: D-2
Roger Zortman, BLM Moab District

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RECEIVED

JUN 27 1993

DIVISION OF
OIL GAS & MINING



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

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

355 West North Temple
 3 Triad Center, Suite 350
 Salt Lake City, Utah 84180-1203
 801-538-5340
 801-359-3940 (Fax)
 801-538-5319 (TDD)

July 8, 1993

Mr. Val Payne
 Senior Environmental Engineer
 PacifiCorp
 P.O. Box 1005
 Huntington, Utah 84528

Dear Mr. Payne:

Re: Lease Relinquishment (SL-050133), PacifiCorp, Des-Bee-Dove Mine, ACT/015/017, Folder #2, Emery County, Utah

Federal Coal Lease SL-050133 was relinquished by the BLM on March 9, 1993. Letter dated June 21, 1993, from Mr. George Morris, Forest Service, to Mr. Lowell Braxton, stated that there is no need to retain this area within the permit area for the purpose of monitoring or mitigating the effects of mining (see attached). Therefore, the permit area for the Des-Bee-Dove Mine may be adjusted to remove SL-050133 lease area from the permit area. Due to the fact that this lease has not been mined to date (i.e. no subsurface disturbance), this permit change can be processed as an amendment.

If you have any questions, please call me.

Sincerely,

ROUTE

Pamela Grubaugh-Littig
 Pamela Grubaugh-Littig
 Permit Supervisor

GUY DAVIS
 VAL PRONE

Enclosure
 cc: LBraxton
 BMalencik

cc: S. KOCHNAR
 B. WEBSTER
 S. CHILD

INCORPORATED

NOV 26 2001

DIV OF OIL GAS & MINING

JERRY POLLOCK
 DIETRA WASHINGTON
Karl Housheer

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

VOLUME 1 PART 2

**ARCHEOLOGICAL SURVEY DATA
PAGES 2-1 THROUGH 2-133**

ADD REFERENCE SHEET

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PACIFICORP

DES-BEE-DOVE MINE

Volume 1: Part 2

Environmental Resource Information

Archaeological Survey Information

Paper 22

Pages 2-1 through 2-132 has been moved to the Confidential and Private Information Volume, General Tab on 9/2005

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

VOLUME 2, PART 4

**APPENDIX IX,
MAPLE GULCH PORTAL RECLAMATION PLAN**

REPLACE PAGES 6-7

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Standards for success: A reference area will be located adjacent to the reclaimed portals. Cover and diversity of the reclaimed portal areas will be compared to the reference areas.

The line intercept or ocular estimation methods will be used to measure cover and species composition. As per the Division's recommendations, the shrub density standard is set at zero (0). Any shrub or woody species found on the site will be recorded by species and numbers and reported in the annual report. The standards for success to be applied for ground cover on the reclaimed areas will be at least equal to 90% (with a 90% confidence level) to that of the respective reference area at the time of bond release.

At the time of bond release, similarity between the reclaimed area and corresponding reference area will compare life forms and/or species present in each community by the use of a similarity index. Indices of similarity provide the means of mathematically comparing the plant communities in the two areas. One of the three indices, or a combination thereof, found in the Vegetation Guidelines, Appendix B will be used to determine the similarity between the reclaimed and reference area. If another index is used, or combination thereof, Division approval will be required. Similarity will be determined successful when the index value is at least 70% of the reference area.

Protection of Fish and Wildlife

Fish and wildlife information is provided on Part 2, pages 191 through 219 in Volume 2 of the Des-Bee-Dove MRP.

Enhancement activities at the Maple Gulch breakouts will not have any significant impact on wildlife resources. Due to limited surface exposure and steep terrain, wildlife potential is minimal.

During the initial on-site conducted on April 27, 2000, the portals openings were inspected for evidence of bat habitation. No direct or indirect evidence was identified. The portals were inspected again prior to commencing reclamation, (Beehive Portal: July 12-14, 2000, Deseret Portal: July 17, 2000), with no evidence detected.

A raptor survey of the Maple Gulch area was conducted on May 22, 2000. Two nests were located within the ½ mile radial buffer zone of the breakout area; one active nest and one inactive nest. To mitigate any potential impacts to the raptors, Energy West conducted the reclamation of the remote portals according to the following schedule:

<u>Mine Portal</u>	<u>Reclamation Schedule</u>	<u>Distance From Active Raptor Nest</u>
Beehive Portal	July 12 - 14, 2000	No active nest within ½ mile radial buffer zone
Deseret Portal	July 17, 2000	Active nest within ½ mile radial buffer zone reclamation activities commenced after seasonal buffer time period.

R645-301-400: Land Use and Air Quality

Post-mining land use for the Des-Bee-Dove Mine is grazing and wildlife. Given the fact that the portals are located on steep (nearly vertical) rock outcrops, this area is only considered for wildlife. It is highly unlikely that cattle could access the steep ledges in and around the portal areas. Recent site visits found no signs of any cattle grazing in the immediate area.

R645-301-500: Engineering

As stated earlier, the remote portals were developed for ventilation and emergency escape ways in 1980. Both breakouts were temporarily sealed after the Beehive mine fire in December 1983. The portals were reopened in 1984 for exploration purposes after the mine fire. The portals were subsequently permanently sealed (MSHA approved) in 1986.

The Des-Bee-Dove mine complex is separated from the greater East Mountain property by the Deer Creek fault. The fault is an effective aquiclude, preventing groundwater migration. As a result of the Deer Creek fault, the Des-Bee-Dove mine complex was dry and water resources for dust suppression and culinary use were supplied from outside sources. Portal seals at Maple Gulch did not require hydrologic drains.

Non-Coal Waste: The area was inspected for non-coal waste. All waste materials associated with the portals and enhancement activities were removed from the site and disposed at an approved landfill. The portal liner at the Beehive breakout was removed to the extent possible and disposed of inside the portal (refer to photos in Attachment 3 and portal cross sections in Attachment 4).

Coal Waste: During development of the site, all coal material (including fines and lump) were brought back into the mine. Some coal material can be found in the drainage due to natural erosion of the coal outcrop area.

Backfilling and grading was conducted utilizing native material adjacent to and above the portal breakouts. Prior to backfilling, Energy West filled the void with aerated concrete blocks to reduce the amount of fill required from the adjacent area. The aerated concrete blocks were supplied by Omega Transworld, Ltd of Price, Utah and are approved by the Mine Health Safety Administration for underground ventilation construction. The blocks consist of aggregate and Portland Cement (Type III) with a compressive strength of approximately 100 psi. Equipment and labor necessary

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

VOLUME 2, PART 4

**APPENDIX IX,
MAPLE GULCH RECLAMATION PLAN,
MAPS SECTION**

ADD REFERENCE SHEET

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November 3, 2005

**Des-Bee-Dove Mine
ACT/015/017**

Volume 2 Part 4: Appendix IX

Attachment 1

**Raptor Map - 2000 Survey has been moved to
the Confidential and Private Information
Volume**

June 7, 2000

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

**PRIVATE AND CONFIDENTIAL
VOLUME**

DES BEE DOVE TAB

**ADD REFERENCE SHEET FOR RAPTOR MAP FROM
APPENDIX IX,
MAPLE GULCH RECLAMATION PLAN,
MAPS SECTION**

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

**CONFIDENTIAL AND PRIVATE
VOLUME**

**APPENDIX IX
MAPLE GULCH PORTAL RECLAMATION PLAN
ATTACHMENT 1**

**FROM VOLUME 2, PART 4, APPENDIX IX, MAPLE
GULCH PORTAL RECLAMATION PLAN**

JUNE 7, 2000

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

VOLUME 3

**RELOCATE MAP 2-17B RAPTOR NESTING
LOCATIONS AND HABITAT MAP TO CONFIDENTIAL
AND PRIVATE VOLUME AND ADD REFERENCE
SHEET**

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November 3, 2005

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

VOLUME 3

**MAP 2-17B
RAPTOR NESTING LOCATIONS AND HABITAT MAP**

**REFER TO PACIFICORP CONFIDENTIAL AND
PRIVATE VOLUME**

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

**CONFIDENTIAL AND PRIVATE
VOLUME**

**MAP 2-17B
RAPTOR NESTING LOCATIONS AND HABITAT MAP**

ADD REFERENCE SHEET

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

**CONFIDENTIAL AND PRIVATE
VOLUME**

**MAP 2-17B
RAPTOR NESTING LOCATIONS AND HABITAT MAP**

FROM VOLUME 3

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

**VOLUME 5
APPENDICES**

REPLACE ENTIRE SECTION

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November 3, 2005

Volume 5

Appendices

- I Coal Lithologic Logs
- II Field Data for the Vegetation Reference Areas
- III Stability Analysis - Sedimentation Pond and Haul Road
- IV Pumphouse Reclamation Plan
- V Underground Development Waste Plan
- VI Blasting Plan
- VII Sedimentation Pond Criteria and Calculations
- VIII Sedimentation Pond Construction Drawings
- IX Photographs of Existing Facilities
- X Deseret Waste Dump Stability Analysis
- XI Slope Stability Analysis - Bathhouse Fill
- XII Hydrologic Procedures and Calculations for the Sedimentation and Surface Drainage Collection System
- XIII Subsidence Monitoring Plan
Supplemental Information (Permit Area Reduction October 2000)
- XIV Phase 1 Little Dove/Beehive Mine Area (refer to separate binder Appendix XIV)
- XV Phase 2 Deseret Mine, Bathhouse Area and Access Road (refer to separate binder Appendix XV)
- XVI Phase 3 Sediment Pond and Access Road (refer to separate binder Appendix XVI)

**DES-BEE-DOVE MINE
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**VOLUME 5
APPENDIX IV**

PUMPHOUSE RECLAMATION PLAN

APPENDIX A

ADD REFERENCE SHEET

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PUMPHOUSE AREA RECLAMATION PLAN

ACT/015/017

Appendix A

Raptor Survey Results and Nest Location Map

This Map is has been moved to the Confidential and Private Information Volume

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**CONFIDENTIAL AND PRIVATE
INFORMATION**

DES BEE DOVE TAB

**ADD REFERENCE SHEET FOR RAPTOR SURVEY AND
RAPTOR LOCATION MAP FROM VOLUME 5,
APPENDIX IV, PUMPHOUSE RECLAMATION PLAN**

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**CONFIDENTIAL AND PRIVATE
VOLUME**

RAPTOR SURVEY AND LOCATION MAP

**FROM VOLUME 5, APPENDIX IV, PUMPHOUSE
RECLAMATION PLAN**

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Appendix A

Raptor Survey Results and Nest Location Map
From Volume 5, Appendix IV, R645-301-300

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APPENDICES CONTINUED**

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Appendices Continued

- XVII Sedimentation Pond Access Road Plans and Written Text
- XVIII Haul Road Reclamation Study

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APPENDIX XVII

Sedimentation Pond Access Road Plans and Written Text

- 5-8 Sediment Pond Access Road/Plan & Profile (Drawing CS806D - 3 sheets)
- 5-9 Sediment Pond Access Road Cross-Sections (Drawing CS805E - 2 sheets)

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APPENDIX XVIII

Haul Road Reclamation Study