

**Application to Amend  
the  
East Mountain Logical Mining Unit**

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**LMU Amendment #4**

1. *To include 65.70 acres to modified federal coal lease UTU-06039, effective December 14, 2001.*
2. *To remove federal coal lease U-7653,*
3. *To remove state coal ML-22509, and*
4. *To remove LDS Church Fee Lands (T. 17 S. R. 7 E., Sec. 15 SE $\frac{1}{4}$  and Sec. 22 NE $\frac{1}{4}$ , 320 Acres)*

**By**

**PacifiCorp, an Oregon Corporation**

**c/o Interwest Mining Company**

**One Utah Center, Suite 2100**

**201 South Main Street**

**Salt Lake City, Utah 84140-0021**

**Revised August 30, 2002**

File in:

Confidential

Shelf

Expandable

Refer to Record No. 0063 Date 09032002

In C 0150018 2002 Incoming

For additional information

**COPY**

One Utah Center  
201 South Main, Suite 2100  
Salt Lake City, Utah 84140-0021  
(801) 220-4140 • FAX (801) 220-4725



A Subsidiary of PacifiCorp

**HAND DELIVERED**

September 3, 2002

Robert Lopez  
Chief, Branch of Minerals Adjudication  
United States Department of the Interior  
Bureau of Land Management  
Utah State Office  
324 South State, Suite 301  
Salt Lake City, Utah 84111-2303



**RE: Logical Mining Unit Amendment #4 (Revised August 30, 2002) to PacifiCorp's East Mountain LMU, Emery County, Utah**

*John King OK*

*9/15/018*

*Copy 9/15/019 (double-sided)*

Dear Bob:

This submittal is in response to a telephone conversation with Stan Perkes of your office a few weeks ago to: (1) formally address and document the deletion of the 320 acres of LDS fee lands from the referenced LMU, and (2) provide the required CERCLA certification for federal coal lease U-7653. Enclosed in triplicate is a revision to the 4<sup>th</sup> Amendment of the East Mountain LMU originally submitted on March 20, 2002 which provides supplemental information on the deletion of the LDS fee lands. Also, enclosed in triplicate is the CERCLA certification for federal coal lease U-7653.

Hopefully this will adequately address your concerns, meanwhile should have any questions or need any additional information, please feel free to contact me at 801-220-4612.

Sincerely,

Scott M. Child  
Manager, Lands and Regulatory Affairs

File in: *0150018 2002 In mining*

Refer to:

- Confidential
- Shelf
- Expandable

Date: *9/16/02* additional information

Enclosures

SMC\WEST\UTBLM2002-04.wpd

cc: D.W. Jense, B. King - Interwest w/copy encl.  
C. Pollastro, C. Semborski - EWMC w/copy encl.  
J. Kirkham - Stoel Rives w/copy encl.

**RECEIVED**

SEP 23 2002

DIVISION OF  
OIL, GAS AND MINING

PacifiCorp

**Application to Amend the East Mountain Logical Mining Unit**

**Amendment #4**

**1.0 Introduction**

On behalf of PacifiCorp, Interwest Mining Company hereby submits this amendment to the East Mountain Logical Mining Unit (LMU) to accomplish the following four (4) objectives:

- (1) To include 65.70 acres in accordance with Section 5 of Modified Coal Lease UTU-06039 dated effective December 14, 2001,
- (2) Remove federal coal lease U-7653 (411.6 acres),
- (3) Remove state coal lease ML-22509 (640 acres), and
- (4) Remove LDS Church Fee Lands (T17S, R7E, Sec. 15 SE¼ & Sec. 22 NE¼, 320 Ac.)

**2.0 Land and Lease Status**

With the proposed addition and deletions in this amendment, the total contiguous lands in the East Mountain LMU now total 20,170.95 acres. See Table 1 for the historical status of the LMU acreage.

<b>Table 1 Historical Status of East Mountain Logical Mining Unit</b>		
	<b>Description</b>	<b>Acres</b>
	Original LMU application submitted 12-23-86, inclusive of 22 federal leases, 1 state lease and various fee parcels.	23,645.11
	LMU Addendum #1 submitted 1-29-90 to include federal lease U-2810.	80.00
	Relinquishment of federal lease SL-050133 granted 3-9-93.	-80.00
	LMU Addendum #2 submitted 7-5-95 to include modified acreage to federal lease U-06039.	42.97
	Relinquished acres accepted by BLM effective 4-24-92.	-2,261.23
	LMU Addendum #3 to include modified acreage to federal lease U-06039 dated March 2, 1999.	50.00
<b>Subtotal</b>		<b>21,476.85</b>
<b>LMU Amendment #4</b>	Include modified acreage to federal lease U-06039 dated December 14, 2001.	65.70
	Remove federal coal lease U-7653	-411.60
	Remove state coal lease ML-22509	-640.00
	Remove LDS Fee Lands (T17S R7E, Sec. 15 SE¼, Sec. 22 NE¼)	-320.00
<b>Subtotal</b>		<b>20,170.95</b>
	Pending federal lease acreage relinquishments.	-5,705.66
<b>Total LMU Acreage</b>		<b>14,465.29</b>

The legal description for the four (4) lease areas impacting this amendment are as follows:

Legal Description	Subsurface Ownership	Surface Ownership
<u>Modified Federal Lease UTU-06039, Effective 12/14/01</u> T. 16 S., R. 7 E. SLB&M Section 19 Lots 2,3, W $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ 65.70 acres Lessee of Record: PacifiCorp	U.S. Department of the Interior Bureau of Land Management Utah State Office 324 South State Street Salt Lake City, Utah 84111-2303	U.S. Forest Service Manti-LaSal National Forest Price District 599 West Price River Drive Price, Utah 84501
<u>Federal Coal Lease U-7653</u> T. 16 S., R. 7 E. SLB&M Section 31 All 411.60 Acres Lessee of Record: Louisiana D. Brown Trust Sublessee of Record: PacifiCorp	U.S. Department of the Interior Bureau of Land Management Utah State Office 324 South State Street Salt Lake City, Utah 84111-2303	U.S. Forest Service Manti-LaSal National Forest Price District 599 West Price River Drive Price, Utah 84501
<u>State Coal Lease ML-22509</u> T. 16 S., R. 6 E. SLB&M Section 36 All 640.00 Acres Lessee of Record: PacifiCorp	State of Utah School and Institutional Trust Lands Administration 675 East 500 South, Suite 500 Salt Lake City, Utah 84102-2818	State of Utah School and Institutional Trust Lands Administration 675 East 500 South, Suite 500 Salt Lake City, Utah 84102-2818
<u>LDS Church Fee Land Lease</u> T. 17 S., R. 7 E. SLB&M Section 15 SE $\frac{1}{4}$ 160.00 Acres Section 22 NE $\frac{1}{4}$ <u>160.00 Acres</u> 320.00 Acres Lessee of Record: PacifiCorp	Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints 50 East North Temple, 12 <sup>th</sup> Floor Salt Lake City, Utah 84150	Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints 50 East North Temple, 12 <sup>th</sup> Floor Salt Lake City, Utah 84150

For the locations of the modified lease acreage being added and the three leases being removed from the East Mountain LMU, refer to Figure 1 showing the revised LMU configuration pursuant to this Amendment #4.

### 3.0 Geology and Mining

This amendment to the East Mountain LMU is necessitated to add the newly modified acreage to federal coal lease UTU-06039 and remove federal coal lease U-7653, state coal lease ML-22509, and a 320 acre parcel of fee lands owned by the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints (LDS Church).

Modified Coal Lease UTU-06039 - Upon PacifiCorp's acquisition of the Mill Fork state coal lease in April 1999 came the need to secure access through a small portion of unleased federal lands located in between the Deer Creek Mine and the Mill Fork state coal lease ML-48258. The lease modification adds an additional 65.70 acres to federal coal lease UTU-06039, thus providing (1) a contiguous land connection between the East Mountain LMU and the Mill Fork state coal lease, and (2) enables an underground access route from the Deer Creek Mine extending into the Mill Fork lease.

Federal Lease U-7653 and State Lease ML-22509 - The two referenced coal leases have long been a contiguous part of the East Mountain LMU and the Deer Creek Mine operation. The economical and safely accessible coal has been mined from both coal leases. Deteriorating mining conditions and poor coal quality (high ash) on the western half of federal coal lease U-7653 and the eastern portion of state coal lease ML-22509, together with increased displacement of the fault zones in adjacent federal coal lease U-47977 have prohibited any further mining in these leases. Based upon these adverse geologic conditions, faults, poor coal quality and economics Bureau of Land Management (BLM) concurrence was sought to seal and abandon this area of the mine which involved these two leases. BLM approval was granted September 24, 1999 together with the acknowledgment that maximum economic recovery of the coal had been achieved.

By letter dated December 6, 2001(copy attached), PacifiCorp has given notice to the Louisiana D. Brown 1992 Irrevocable Trust (lessee of record to federal lease U-7653) of its intent to terminate in its entirety that certain Coal Sublease dated January 11, 1973 by and between Carroll County Coal Company and Peabody Coal Company. (PacifiCorp was the sublessee of record through various assignments.)

By letter dated December 6, 2001 (copy attached), PacifiCorp has given notice to the State of Utah School and Institutional Trust Lands Administration of its intent to relinquish and surrender state coal lease ML-22509 in its entirety.

LDS Church Fee Land Lease (320 acre parcel) - This parcel of fee coal has been a contiguous part of the East Mountain LMU consisting of multiple seam mining from the Deer Creek Mine and Cottonwood/Wilberg Mine operations. All of the economical and safely accessible coal has been mined out from both coal seams within this fee parcel. On November 18, 1998, the LDS Church and PacifiCorp entered into a new Coal Lease and Sublease Agreement (copy attached) which extended the lease terms on other areas and relinquished this specific parcel of fee land from the prior lease agreement of December 30, 1970.

ADDENDUM #3 - ADD MODIFIED ACREAGE  
OF U-06039, 2-11-99, 50 ACRES

LMU AMENDMENT #4  
ADD MODIFIED ACREAGE  
OF U-06039, 12-14-01,  
65.70 ACRES

ADDENDUM #2  
ADD MODIFIED  
ACREAGE OF  
U-06039, 7-5-95,  
42.97 ACRES

ADDENDUM #1 - ADDED U-2810  
TO LMU, 1-29-90, 80 ACRES

LMU AMENDMENT #4  
REMOVE LEASES U-7653  
AND ML-22509 FROM  
LMU CONFIGURATION

T. 16 S.  
T. 17 S.

LMU AMENDMENT #4  
REMOVE LDS FEE LAND  
FROM LMU CONFIGURATION  
320 ACRES

AREA DELETED BY  
RELINQUISHMENT  
GRANTED 3-9-93  
80 ACRES

SCALE: 1"=1 MILE

LOGICAL MINING UNIT BOUNDARY  
CONTAINING 20,170.95 ACRES

\* FEDERAL ACREAGE, RELINQUISHED  
ACCEPTED 12-14-95

CAD FILE NAME/DISK#: USERS\KJL\DWGS\LMU.DWG

ENERGY WEST  
MINING COMPANY  
HUNTINGTON, UTAH 84528

PACIFICORP  
EAST MOUNTAIN COAL PROPERTY  
LMU CONFIGURATION

DRAWN BY: K. LARSEN

FIGURE 1

SCALE: 1"=1 MILE

DRAWING #:

DATE: DECEMBER 20, 2001

SHEET 1 OF 1

REV. \_\_\_\_\_



COPY

December 6, 2001

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Lincoln Reavis, Trustee  
Louisiana D. Brown 1992 Irrevocable Trust  
2000 Huntington Building  
925 Euclid Avenue  
Cleveland, Ohio 44115

Re: Notice of Termination --Coal Sublease – United States Coal Lease  
U-7653, Township 16 South, Range 7 East, Salt Lake Meridian,  
Utah, Section 31: All, Emery County, Utah

Dear Mr. Reavis:

By letter dated October 14, 1999 from Scott M. Child of Interwest Mining Company, you were notified of PacifiCorp's actions to permanently seal and abandon certain areas within the Deer Creek Mine. At that time you were provided with a copy of the letter from the United States Department of the Interior, Bureau of Land Management, Price Field Office, confirming that the proposed sealing and abandonment complied with the Mineral Leasing Act and that "maximum economic recovery of the Federal coal has been achieved for this area." A copy of Mr. Child's letter, together with its attachments, is enclosed for your convenience.

You are hereby notified in accordance with the provisions of paragraph eight of that certain Coal Sublease dated January 11, 1973 by and between Carroll County Coal Company and Peabody Coal Company that PacifiCorp, as the current sublessee under said Coal Sublease, intends to terminate and does hereby terminate said sublease ninety days from the date of your receipt of this notice.

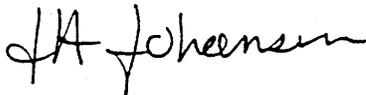
You should also be aware that upon the effective date of the termination of the Sublease of Lease U-7653, PacifiCorp intends to begin action to remove those lands from its existing BLM-approved Logical Mining Unit and from the "Permit Area" under the permit issued by the Utah Division of Oil, Gas and Mining.

Lincoln Reavis, Trustee  
December 6, 2001  
Page Two

COPY

Should you have any questions or concerns with regard to this matter, please feel free to contact Scott M. Child, Manager, Lands & Regulatory Affairs of Interwest Mining Company at (801) 220-4612.

Sincerely,



Judith A. Johansen  
Chief Executive Officer

Encs.

cc    Dee W. Jense (w/o encl)  
      Bob King (w/o encl)  
      Scott M. Child (w/o encl)  
      Carl Pollastro (w/o encl)  
      Chuck Semborski (w/o encl)  
      John S. Kirkham (w/o encl)

      Tom Dietrich (w/encl)  
      Peabody Coal Company  
      301 N. Memorial Drive  
      St. Louis, Missouri 63102-2401



December 6, 2001

COPY

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Stephen Boyden  
Director, State of Utah  
School and Institutional Trust  
Lands Administration  
675 East 500 South, Suite 500  
Salt Lake City, Utah 84102-2818

Re: Relinquishment of Lease  
State of Utah Mineral Lease ML-22509 B Coal

Dear Mr. Boyden:

PacifiCorp, as the lessee of record of Mineral Lease ML-22509 (Coal), in accordance with the provisions of Article XI. SURRENDER OR RELINQUISHMENT OF LEASE, does hereby relinquish said lease and surrender said lease for cancellation. As provided in Article XI., it is PacifiCorp's intent that this relinquishment shall be effective on the date of filing of this letter. The relinquishment applies to all of the lands in the lease, namely:

Township 16 South, Range 7 East, SLB&M

Section 36: All.

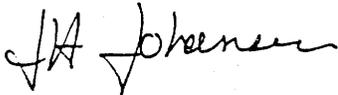
By letter dated October 13, 1999, Scott M. Child of Interwest Mining Company provided to James D. Cooper, Assistant Director - Minerals, a notification of the sealing project that effectively isolated this lease from any of the other active working areas in the mine. Attached to the letter to Mr. Cooper was a letter from the United States Department of the Interior, Bureau of Land Management, Price Field Office, indicating that with respect to the federal lands within the area to be sealed, the sealing and abandonment complied with the Mineral Leasing Act of 1920 and the BLM also found that maximum economic recovery of the federal coal has been achieved for the area. A copy of Mr. Child's letter, together with its attachments, is enclosed for your convenience. While we believe that this filing serves to satisfy the requirements of the last paragraph of Article XVII. EQUIPMENT OR FACILITIES TO REMAIN WITH THE LANDS, we are

COPY

by copy of this letter submitting the same information to the Director of the Division of Oil, Gas and Mining in order to allow for you to obtain such concurrence with respect to this issue as you may deem appropriate.

Should you have any questions or concerns with regard to this surrender and relinquishment, please feel free to contact Scott M. Child, Manager, Lands & Regulatory Affairs of Interwest Mining Company, at (801) 220-4612.

Sincerely,



Judith A. Johansen  
Chief Executive Officer

Encs.

cc: Lowell Braxton, Director, Div. of Oil, Gas and Mining (w/encl)  
Dee W. Jense (w/o encl)  
Bob King (w/o encl)  
Scott M. Child (w/o encl)  
Carl Pollastro (w/o encl)  
Chuck Semborski (w/o encl)  
John S. Kirkham (w/o encl)



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Price Field Office  
125 South 600 West  
Price, Utah 84501

COPY

3482  
SL-070645  
U-47977  
(UT-070)

Certified Mail--Return Receipt Requested  
Certificate No. Z 580 925 459

RECEIVED

SEP 28 1999

Interwest Mining SEP 24 1999

Mr. Steven E. Kochevar, P. E.  
Mine Planning Administrator  
Interwest Mining Company  
One Utah Center, Suite 2000  
Salt Lake City, Utah 84140-0200

Re: Notification of Sealing, 3<sup>rd</sup> North West Side Panel Block, Deer Creek Mine.

Dear Mr. Kochevar:

The Bureau of Land Management (BLM) received on August 6, 1999, a request from Interwest to seal mined-out areas in the subject mine. This notification of sealing follows and conforms with 43 CFR 3484.1(c)(7), abandonment of mining areas. The 3<sup>rd</sup> North West Side longwall block is located on Federal leases U-06039, U-7653, and U-47977.

Interwest proposes to construct permanent seals for the 9<sup>th</sup> through the 3<sup>rd</sup> West gateroads each at the tie in to the 3<sup>rd</sup> North B Mains. Interwest states this would isolate this mined-out longwall gob, reduce ventilation requirements and provide for dewatering of the area.

The BLM agrees with the proposal, as sealing of mined-out areas is a standard practice. Sealing off the west side of the 3<sup>rd</sup> North longwall gob area reduces the possibility for spontaneous combustion, eliminates worker inspections and exposure, provides controlled dewatering and reduces ventilation requirements.

We also agree that all recoverable coal has been extracted as per the approved resource recovery and protection plan, as modified. We note that all associated mining equipment has been removed and the area has been inspected by our personnel and representatives of the State of Utah Department of Health for verification and any environmental concerns.

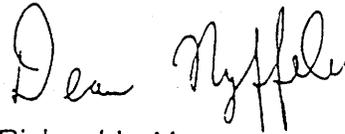
The BLM has determined that the proposed sealing and abandonment of the 3<sup>rd</sup> North west side panel block complies with the Mineral Leasing Act of 1920, as amended, the regulations at 43 CFR 3480, the lease terms and conditions, and maximum economic recovery of the Federal coal has been achieved for this area. Interwest's sealing proposal

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is approved as submitted (approved map attached), subject to any requirements of the Mine Health and Safety Administration.

If you have any questions, please contact Stephen Falk of my staff at (801) 636-3600.

Sincerely,



for Richard L. Manus  
Field Office Manager

Enclosure

Approved Mine Map

cc: UT-921, SD, Utah (w/encl.)  
Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114-5801 (w/encl.)

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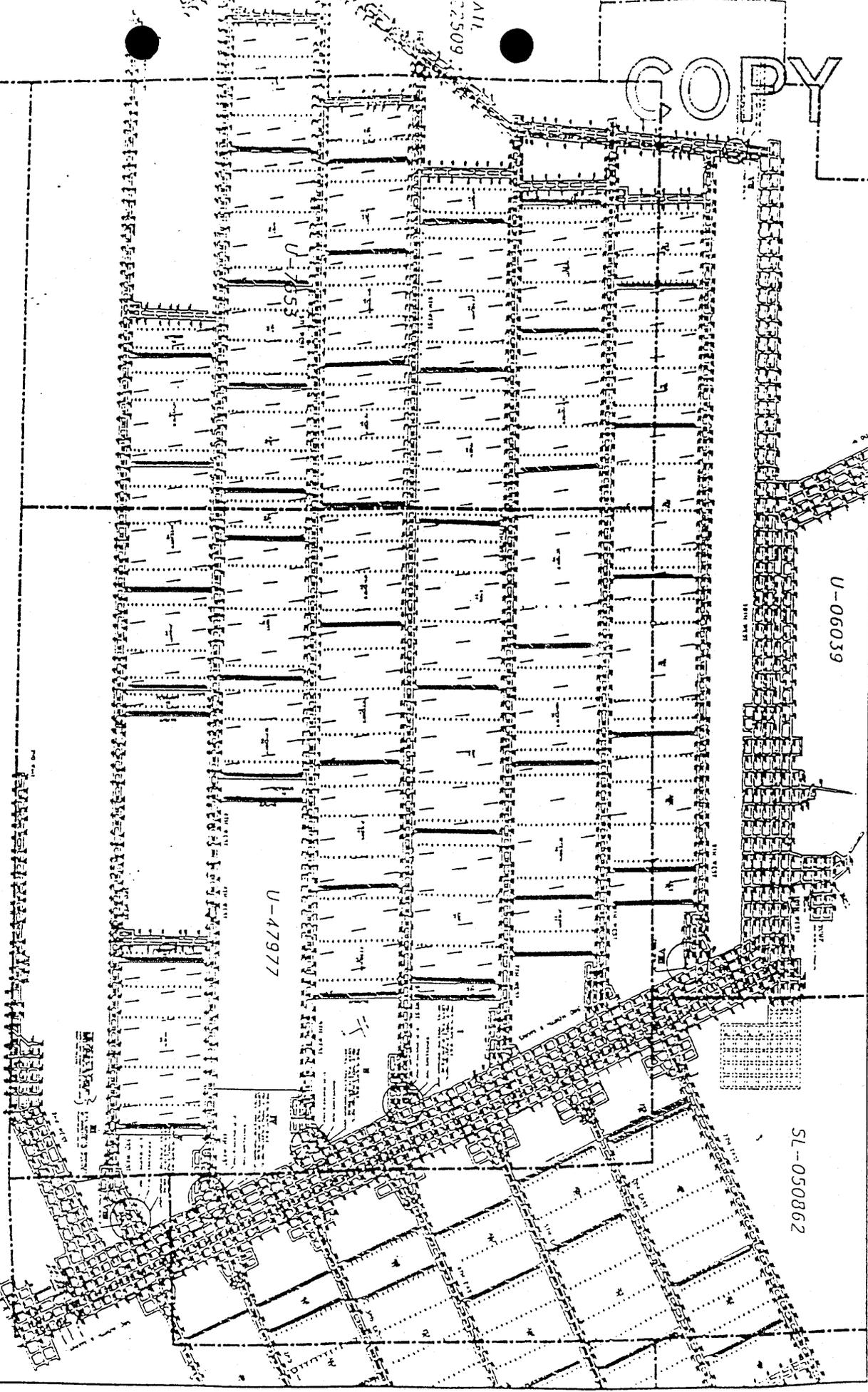
U-06039

SL-050862

A1L  
22509

U-065

U-47977



**APPROVED**

U-081 APPROVED: *Arthur W. Fell*

TITLE: *Maining Engineer*

N

ENERGY WEST MINING COMPANY	
DEER CREEK MINE ATTN WEST THROUGH GRID WEST SEALING PROJECT (DATED 8 2 99)	
DATE: AUGUST 5, 1999	SCALE: 1" = 500'
DRAWN BY: LOUIE TONG	CHECKED BY: [blank]
SHEET 1 OF 1	



August 2, 1999

A Subsidiary of PacifiCorp

Mr. Richard Manus  
District Area Manager  
Bureau of Land Management  
Moab District, Price River Resource Area  
125 South 600 West  
Price, Utah 84501

COPY

Subject: PROPOSED DEER CREEK MINE SEALING PROJECT; 3<sup>RD</sup> NORTH WEST SIDE PANEL BLOCK [9<sup>TH</sup> WEST THROUGH 3<sup>RD</sup> WEST GATE ROADS]

Dear Mr. Manus:

PacifiCorp, by and through its wholly-owned subsidiaries, Interwest Mining Company ("Interwest") as managing agent and Energy West Mining Company ("Energy West") as mine operator, hereby requests approval from the BLM authorized officer in accordance with 43 CFR 3484.1(c)(7) to permanently seal and abandon the portion of the Deer Creek Mine in the area comprising the 9<sup>th</sup> West through 3<sup>rd</sup> West gateroads, west of the 3<sup>rd</sup> North Mains, included within federal coal leases U-06039, U-47977, U-7653 and Utah State coal lease ML-22509. Please find attached a general arrangement drawing regarding proposed seal locations, construction, and sequence for the above referenced project.

PacifiCorp submits that the proposed sealing and abandonment is in compliance with the terms, conditions and stipulations of the referenced leases. In support of this project we submit that the following conditions have been fully satisfied:

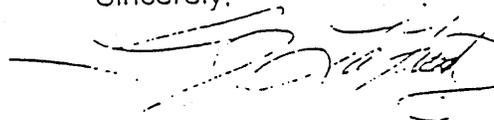
- (1) all practical and economical coal reserves have been mined from this area in accordance with the approved R2P2 and it's subsequent minor modifications,
- (2) all associated heavy mining equipment, machinery and materials have been removed from this area, and
- (3) a complete underground environmental audit (walk through) of this area was conducted on May 18, 1999 by representatives of the Utah BLM State Office, State of Utah Department of Health Division of Solid and Hazardous Waste, Energy West and Interwest.

This proposed sealing project is critical to the Deer Creek Mine's ventilation and mine de-watering systems. Your concurrence that the lease terms have been satisfied together with your approval to proceed with the placement of permanent seals as shown on the attached drawing is hereby requested.

Your immediate attention to this request is greatly appreciated, as we're hopeful to begin this sealing project during the month of September/October with completion prior to end-of-year 1999.

If you need additional information or have questions with regard to the above referenced matter, please feel free to call.

Sincerely,



For: Steven E. Kochevar, P.E.  
Mine Planning Administrator  
Interwest Mining Company

COPY

One (1) Enclosure

Enclosure #1: DEER CREEK MINE 9<sup>th</sup> WEST THROUGH 3<sup>rd</sup> WEST SEALING PROJECT [DATED 08/02/99].

cc: Doug Koza, BLM  
Dan Baker, IMC  
Steve Kochevar, IMC  
Scott Child, IMC  
Blake Webster, IMC  
Keith Sinsel, EWMC  
Jim Noyes, EWMC  
Carl Pollastro, EWMC  
Chuck Semborski, EWMC  
Lew Tonc, EWMC  
L.J. LaFrentz, EWMC

AFTER RECORDING PLEASE RETURN TO:  
RECORD AND RETURN TO:  
- Scott M. Child \_\_\_\_\_  
- PacifiCorp c/o Interwest Mining Company \_\_\_\_\_  
- One Utah Center, Suite 2000 \_\_\_\_\_  
- 201 South Main \_\_\_\_\_  
Salt Lake City, UT 84140-0020

COPY

SHORT FORM COAL LEASE AND SUBLEASE AGREEMENT

This Short Form Coal Lease and Sublease Agreement, dated effective beginning as of November 15, 1998, is between the CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS, a Utah corporation sole ("Lessor"), 50 East North Temple, 18th Floor, Salt Lake City, Utah 84150-0001, and PACIFICORP, an Oregon corporation ("Lessee"), 201 South Main, Suite 2300, Salt Lake City, Utah 84140.

RECITALS

A. Lessor is the owner of a 100-acre parcel of fee lands described on Exhibit A attached hereto ("Fee Property"), and three federal coal leases identified by number in said Exhibit A ("Federal Leases") covering the lands described on Exhibit A ("Federal Lease Lands"). A map depicting the Fee Property and the Federal Lease Lands is attached as Exhibit A-1.

B. Pursuant to a Coal Mining Lease dated December 30, 1970 ("Prior Lease"), a Short Form of which is recorded in Book 69, page 507, Records of Emery County, Utah, Cooperative Security Corporation, the predecessor in title of Lessor, leased the Fee Property and the Relinquished Fee Lands described in Recital D below and subleased the Federal Lease Lands and the Relinquished Federal Lease Lands described in Recital C below to Peabody Coal Company, the predecessor in title of Lessee as to the Prior Lease. The Prior Lease was extended beyond its expiration date of December 30, 1995 pursuant to an Agreement to Extend Lease between Lessor and Lessee executed December 20, 1995, as modified by subsequent letters extending the expiration date. The Prior Lease will terminate effective 11:59 p.m. (local time in Salt Lake City, Utah) on the day preceding the effective date of this Agreement as set forth in the heading hereof.

C. Pursuant to an Agreement between Lessor and Lessee dated September 12, 1996, as amended by Amendment dated NOVEMBER 12, 1998, a Relinquishment and Consent executed by Lessor has been filed by Lessee with the U.S. Bureau of Land Management ("BLM") whereby certain of the Federal Lease Lands, which are described on Exhibit A hereto as Relinquished Areas Pending Approval ("Relinquished Federal Lease Lands"), have been relinquished, subject to final approval by the BLM.

D. Lessee and Lessor have agreed that the fee lands described on Exhibit B attached hereto (the "Relinquished Fee Lands"), which were subject to the Prior Lease, are not to be made subject to this Agreement.

subsequent hereto affecting or pertaining to oil and gas or other minerals not covered by this Lease shall contain appropriate provisions to insure that all operations of Lessee under this Lease may be carried on without undue interference by any such parties or by Lessor. The rights of such subsequent lessees, their assignees and Lessor thereunder shall be junior and subordinate to those of Lessee hereunder in the event of any actual irreconcilable conflict or interference with Lessee's operations.

3. Term. The Agreement shall, unless terminated earlier as provided herein, terminate at 11:59 P.M., December 31, 2005, and may be extended for an additional ten years conditional upon agreement of the parties prior to the expiration of the initial term as to modifications proposed by Lessee and Lessor.

4. Assignment. Lessee shall not assign the Agreement or any interest held thereunder, or relinquish all or any portion of the Federal Lease Lands, without the prior written consent of Lessor, which consent shall not be unreasonably withheld. Subject to the foregoing, the Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns down the line.

5. Conduct of Other Activities by Lessor. Subject to the provisions of paragraph 2(b) above, Lessor may conduct activities, and grant rights to others to conduct activities, on the Fee Property with respect to exploration for and development and production of minerals other than coal, and with respect to other uses, to the extent that such utilization does not interfere with Lessee's operations hereunder.

6. Incorporation of Terms of the Agreement. The Agreement is incorporated herein by this reference and made a part hereof. Copies of the Agreement are in the possession of Lessor at c/o Natural Resources Section, 50 East North Temple, 12th Floor, Salt Lake City, Utah 84150-0001, and of Lessee at 201 South Main, Suite 2000, Salt Lake City, Utah 84140. The execution and recording of this document shall not limit, increase, or in any manner affect, any of the terms of the Agreement, or the rights, interests, or obligations of the parties thereto.

IN WITNESS WHEREOF, Lessee and Lessor have executed this SHORT FORM COAL LEASE AND SUBLEASE AGREEMENT effective as of the date first above written.

CORPORATION OF THE PRESIDING  
BISHOP OF THE CHURCH OF  
JESUS CHRIST OF LATTER-DAY SAINTS,  
a Utah corporation sole

PACIFICORP, an Oregon  
corporation

By:   
H. David Burton  
Presiding Bishop

By:   
Dan R. Baker  
Vice President

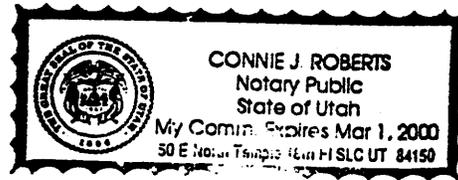
COPY

State of Utah )  
:  
County of Salt Lake )

This Short Form Coal Lease and Sublease Agreement was acknowledged before me on this 11-18 day of 11-18, 1998, by H. David Burton, as the Presiding Bishop of the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints, a Utah corporation sole, on behalf of the corporation.

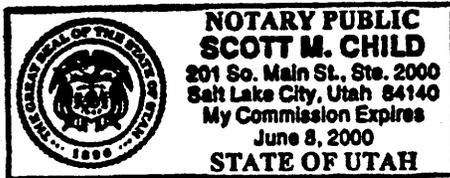
Connie J. Roberts  
Notary Public  
Residing at  
Salt Lake City Ut.

My Commission Expires: 3-1-2000



State of Utah )  
:  
County of Salt Lake )

This Short Form Coal Lease and Sublease Agreement was acknowledged before me on this 13<sup>th</sup> day of NOVEMBER, 1998, by Dan R. Baker, as the Vice President of PacifiCorp, an Oregon corporation, on behalf of the corporation.



Scott M. Child  
Notary Public  
Residing at  
201 So. Main St. SLC, UT.

My Commission Expires: 6-8-2000

EXHIBIT A

"PREMISES"

COPY

SHORT FORM COAL LEASE AND SUBLEASE AGREEMENT

Fee Property:

T. 17 S., R. 6 E., Salt Lake Meridian, Utah

Beginning at the Southeast corner of the NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 25; thence N 160 rods; thence W 116 rods, more or less, to the center line of Cottonwood Creek; thence in a Southerly direction along the center line of said Cottonwood Creek to a point 84 rods, more or less, W of the beginning; thence E 84 rods, more or less, to the point of beginning.

Containing 100 acres, more or less, of fee lands.

Federal Leases:

U-044025

U-083066

U-040151

Federal Lease Lands:

U-044025 - T. 17 S., R. 7 E., SLBM, Utah  
Sec. 27 NW $\frac{1}{4}$ NE $\frac{1}{4}$

40.00 Acres

U-083066 - T. 17 S., R. 6 E., SLBM  
Sec. 13 E $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$   
Sec. 24 E $\frac{1}{2}$ W $\frac{1}{2}$ , E $\frac{1}{2}$   
Sec. 25 N $\frac{1}{2}$ NE $\frac{1}{4}$

T. 17 S., R. 7 E., SLBM  
Sec. 17 SW $\frac{1}{4}$ , S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$   
Sec. 18 Lots 3 & 4, SE $\frac{1}{4}$   
Sec. 19 Lots 1-4, E $\frac{1}{2}$   
Sec. 20 W $\frac{1}{2}$ , W $\frac{1}{2}$ E $\frac{1}{2}$   
Sec. 29 N $\frac{1}{2}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ NE $\frac{1}{4}$   
Sec. 30 Lots 1-3, N $\frac{1}{2}$ NE $\frac{1}{4}$ ,  
SW $\frac{1}{4}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$

2,425.00 Acres

Relinquished Lands Pending Approval in U-083066

T. 17 S., R. 7 E., SLBM

Sec. 17 NW ¼ SE ¼,  
N ½ SW ¼ SE ¼

60.00 Acres

U-040151 - T. 17 S., R. 7 E., SLBM

Sec. 15 E ½ SW ¼, E ½ W ½ SW ¼  
Sec. 16 S ½ S ½ SW ¼, SW ¼ SW ¼ SE ¼  
Sec. 17 S ½ SE ¼ SE ¼  
Sec. 20 E ½ E ½  
Sec. 21 W ½  
W ½ W ½ W ½ NE ¼,  
W ½ W ½ NW ¼ SE ¼,  
S ½ SE ¼  
Sec. 22 NE ¼ NW ¼, E ½ NW ¼ NW ¼  
Sec. 27 N ½ NW ¼  
Sec. 28 E ½ NE ¼ NW ¼, N ½ NE ¼

1,020.00 Acres

Relinquished Lands Pending Approval in U-040151

T. 17 S., R. 7 E., SLBM

Sec. 15 W ½ W ½ SW ¼  
Sec. 16 N ½ S ½, SE ¼ SE ¼,  
E ½ SW ¼ SE ¼,  
NW ¼ SW ¼ SE ¼,  
N ½ S ½ SW ¼  
Sec. 17 NE ¼ SE ¼,  
N ½ SE ¼ SE ¼  
Sec. 21 E ½ NE ¼,  
E ½ W ½ NE ¼,  
NE ¼ SE ¼,  
E ½ NW ¼ SE ¼,  
E ½ W ½ W ½ NE ¼,  
E ½ W ½ NW ¼ SE ¼  
Sec. 22 W ½ NW ¼ NW ¼  
Sec. 28 NW ¼ NW ¼,  
W ½ NE ¼ NW ¼  
Sec. 29 NE ¼ NE ¼

700.00 Acres

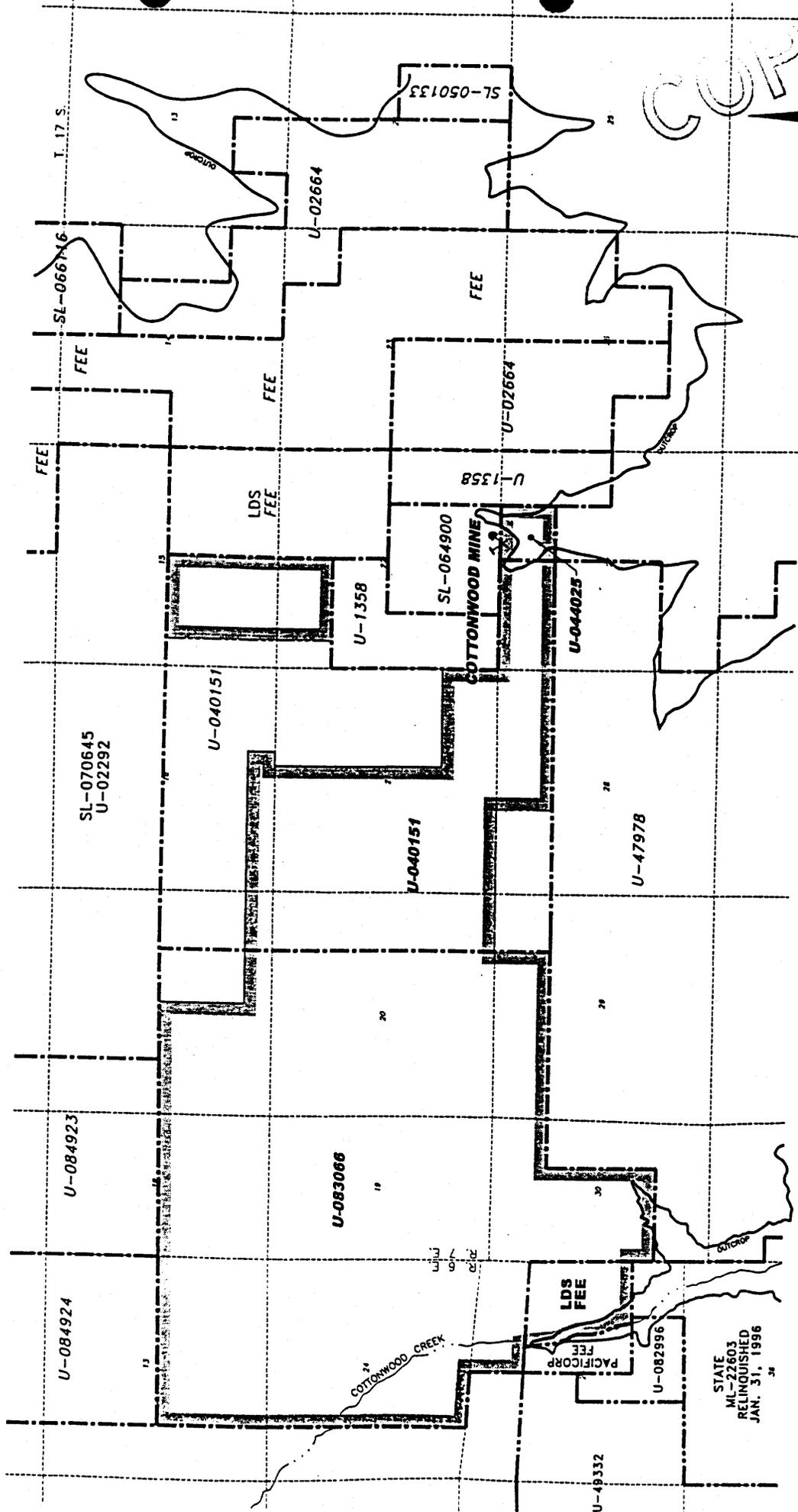
TOTAL FEDERAL COAL SUBLEASED:	4,245.00 Acres
(including 760.00 Acres relinquished pending BLM approval)	
TOTAL FEE COAL LEASED:	<u>100.00</u> Acres
COMBINED TOTAL:	<u>4,345.00</u> Acres

457 4 20 0 6021553

# EXHIBIT A-1 COAL LEASE AND SUBLEASE AGREEMENT

LESSOR: CORPORATION OF THE PRESIDING BISHOPRIC OF THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS  
LESSEE: PACIFICORP

EFFECTIVE DATE:



STATE  
ML-22603  
RELINQUISHED  
JAN. 31, 1996

- LEGEND**
- PACIFICORP EAST MOUNTAIN PROPERTY BOUNDARY
  - TRAIL MOUNTAIN MINE PROPERTY BOUNDARY
  - AREA OF LEASE AGREEMENT WITH L.D.S. CHURCH

COPY  
N  
NO SCALE  
USERS\KJL\CW\EXHA-1.DWG

EXHIBIT B

"RELINQUISHED AREAS"

SHORT FORM COAL LEASE AND SUBLEASE AGREEMENT

Relinquished Fee Lands:

T. 17 S., R. 7 E., SLBM, Utah

Section 15 SE $\frac{1}{4}$

Section 22 NE $\frac{1}{4}$

Sections 14 and 23: the area in the SW $\frac{1}{4}$  of Section 14 and the NW $\frac{1}{4}$  of Section 23 which is W of the N.-S. major fault which is located near the boundary of Sections 14 and 23.

Containing 390 acres, more or less, of fee lands.

E 351209 8 0251 P 460

**ENVIRONMENTAL AND CERCLA CERTIFICATION**

**Property/Project:** PacifiCorp's Federal Coal Sub Lease Termination Notice To Louisiana D. Brown Trust - Lessee of Record (Dated December 6, 2001)

**Date:** August 26, 2002

**Federal Lease(s)#:** U-7653

**Mine Name(s) MSHA ID #:** Deer Creek Mine ID# 42-00121

**Mine Section (if applicable):** N/A

**Coal Bed(s):** Blind Canyon Seam

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The Environmental Protection Agency promulgated final regulations to implement requirements established in Section 120(h) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by Superfund Amendments Reauthorization Act (SARA). Under section 120(h), whenever a Federal agency enters into any contract/agreement for the sale or transfer of public land/real property, and on which any hazardous substance was stored for one year or more, or known to have been released or disposed of, the contract (conveyance document) must include notice of the type and quantity of such hazardous substance, and the time at which such storage, release or disposal was originated. This final rulemaking became effective October 17, 1990.

Federal coal leases, if developed, result in the operator conducting mining operations on all or parts of the Federal lands. The lessee/operator, under appropriate circumstances, may utilize hazardous substances on the surface or underground on Federal lands. At the time of lease relinquishment or at the time of any sealing operation conducted by a Federal lessee, it is necessary for the lessee to inform the BLM and any other surface managing agency of any activities of a lessee that might be subject to CERCLA notification. This information will be utilized to satisfy the requirements under Section 120(h) of CERCLA as amended by SARA.

BLM requires the following information to the extent it is applicable to the Federal coal lease relinquishment area or any time that a mining operation seals an area. BLM will make the company proprietary information public only upon transfer or exchange of the relinquished lands.

**Explanation:**

Items 1-5 deal with hazardous substances and environmental issues. Item 6. is a CERCLA certification by an officer of the lessee.

**Required Information:**

1. A list of any hazardous substances as defined in SARA Title III Consolidated List (40 CFR 302.4) used on the lease (by date) or products that contain such substances. This shall include all hazardous substances and materials along with their Chemical Abstract Services Registry Numbers (CASRN), and petroleum based oil and other petroleum products that were used, stored or delivered to the lease. Quantities at this time are not necessary. This is for disclosure purposes only.

2. A copy of all reports of spills occurring on the lease or sealed area.

3. A copy of all reports submitted to the State of Utah listing any spill of petroleum based oil or other petroleum products on the lease exceeding 25 gallons or that cause a threat to human health or the environment.

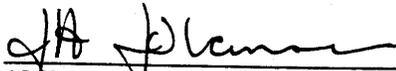
4. A mine map covering the lease showing the location, type and model of any equipment or machinery that is known to be remaining underground. (This does not include materials and supplies, and hand tools). For every piece of equipment that will be left underground upon lease relinquishment, please list the quantities of oil, batteries, or other fluids that are remaining, or could be remaining in the equipment.

5. A summary analysis of water quality reports showing whether or not the water quality has been affected by mining. The data that has been collected throughout the years should be the basis for this summary report. The UPDES/NPDES discharge permit requirements for the mine and copies of certifications or samples to show that these requirements have not been exceeded should be part of this analysis. The analysis should compare the water quality at the time of relinquishment with the water quality that existed prior to mining in the base line analysis. This shall be for all waters that are affected by mining. The company should list any mitigation that was done to alleviate any water quality concerns.

6. An officer of the lessee shall sign and submit a certificate in the form attached for each lease or portion thereof relinquished.

a. Based upon a complete search of all known records of the lessee(s), sublessee(s) and operator(s) (i) for the specified lease or portion thereof relinquished or sealed and (ii) for the operations conducted on the specified lease or portion thereof relinquished or sealed; and upon our knowledge of past operations, there have been **no** reportable quantities of **hazardous substances** (per 40 CFR 302.4) and Part 373 or **used oil** (per Utah State Management Rule R-315-15), deposited or released within the lease, either on the surface or underground that will harm human health and the environment with respect to any such substances remaining on the property.

b. Based upon a complete search of all known records for the lessee(s), sublessee(s) and operator(s) (i) for the specified lease or portion thereof relinquished or sealed and (ii) for the operations conducted on the specified lease or portion thereof relinquished or sealed; and upon our knowledge of past operations, there has been a release or disposal of a reportable quantity of **hazardous substance** (per 40 CFR 302.4) and Part 373 or **used oil** (per Utah State Management Rule R-315-15) on the surface of the lease or underground, and all remedial action necessary has been taken to protect human health and the environment with respect to any such substances remaining on the property. This shall be documented with sample analytical data from the remediation or removal process.

  
\_\_\_\_\_  
(Officer of the Lessee)

8-27-2002  
\_\_\_\_\_  
(Date)

**ENVIRONMENTAL AND CERCLA CERTIFICATION**

Page 3

**HAZARDOUS SUBSTANCE REPORT**

Property / Project: PacifiCorp's Federal Coal Sub Lease Termination - Louisiana D. Brown Trust Lessee of Record		Report Submittal Date: August 26, 2002	Lease(s) #: U-7653	Mine Name(s) and MSHA ID #: Deer Creek Mine ID# 42-00121	Mine Section (if applicable): N/A	Coal Bed(s): Blind Canyon Seam
Company Name	Product Name	Location	PC	Ingredients on SARA III, Table 302.4		
3M	A2 Cable Preparation Kit	DC, CT	7426	1,1,1 trichloroethane (71-55-6)		
3M	ScotchKote Electrical Coating	DC	633	Methyl ethyl ketone (78-93-3), Toluene (108-88-3)		
3M	Safety Walk Primer	TM	1876	Toluene (108-88-3), Acetone (67-64-1)		
Adalec-PLM	CK Electronic Parts Cleaner	DC	0	1,1,1 trichloroethane (71-55-6)		
Amoco Oil Company*	Kerosene	TM	12198	Xylene (1330-20-7), Naphthalene (91-20-3)		
Amrep*	Misty Gum Remover	DC	1630	Dichlorodifluoromethane (75-71-8)		
Amrep*	Misty Furniture Polish	DC, TM	6970	Methyl chloroform (71-55-6)		
Amrep*	Misty Sulfuric Drain Opener (Liquidate)	DC, CT	1404	Sulfuric acid (7664-93-9)		
Amrep*	Misty Vandallism Mark Remover	DC	6859	Toluene (108-88-3), MEK (78-93-3), 1,1,1 trichloroethane (108-88-3)		
Amrep*	Porcelain & Tile Cleaner	DC	11817	Phosphoric acid (7664-38-2)		
Amrep*	Misty Glycol Air Sanitizer	CT, TM	10364	Methylene chloride (75-09-2), Methyl Alcohol (67-56-1)		
Amrep*	Misty Mizer Odor Neutralizer	TM	11805	Methyl chloroform (71-55-6)		
Austin Powder Company	Rock Buster	TM	6507	Nitroglycerin (55-63-0)		
Borden	Battery Protector	DC	2357	Acetone (67-64-1), Toluene (108-88-3), Xylene (1330-20-7)		
Borden (Sherwin Williams)	Krylon Ind. Red Insulating Varnish	DC, TM	0	Toluene (108-88-3), Xylene (1330-20-7), Acetone (67-64-1), Ethylbenzene (100-41-4)		
Brody Chemical*	Disinfectant Spray	CT, TM	12195	Sodium nitrite (7632-00-0)		
Brody Chemical*	Foaming Germicidal Cleaner	CT	12196	Sodium nitrite (7632-00-0)		
Carroll Co.	Crete Seal Sealer	DC, CT, TM	7559	Xylene (1330-20-7)		
Carroll Co.*	Lime-Off Cleaner	DC, TM	11722	Phosphoric acid (7664-38-2)		
Carroll Co.*	Pretty Potty Toilet Cleaner	DC, CT, TM	762	Hydrochloric acid (7647-01-0)		
Carroll Co.*	Sul-Fury Drain Cleaner	CT, TM	764	Sulfuric acid (7664-93-9)		
Celitte Technik (Fosroc)	Lokset II Resin Cartridges	DC, CT, TM	11810	Styrene (100-42-5)		
Celitte Technik (Fosroc)	Tekfoam	DC	11769	Aluminum sulfate (10043-01-3)		
Century Chemicals	Classy Concentrated Solvent	DC, CT, TM	12215	Phosphoric acid (7664-38-2)		
Century Chemicals	Foam Brile	DC, CT, TM	12214	Hydrochloric acid (7647-01-0), Phosphoric acid (7664-38-2)		
Century Chemicals*	Amigo Porcelain Cleaner	CT	12213	Phosphoric acid (7664-38-2)		
Chemtronics	Electrowash Spray	DC	5573	Trichlorofluoromethane (75-69-4)		
Conoco Inc.	Power Tran Fluid	TM	11918	Zinc compound (7440-66-6 Zinc)		
Conoco Inc.	Tacna Rx #2	TM	0	Zinc compound (7440-66-6 Zinc)		
Colel	Durabak	TM	10146	Toluene (108-88-3), Methyl isocyanate (624-83-9)		
CRC	HD Degreaser (3096)	DC	4915	1,1,1 trichloroethane (71-55-6)		
CRC	Cable Cleaner (2070,2071,2073)	CT	2787	1,1,1 trichloroethane (71-55-6), Perchloroethylene (127-18-4)		
CRC	Leclra Clean Aerosol (2018)	CT, TM	752	1,1,1 trichloroethane (71-55-6)		
CRC	Cable Cleaner 2069	TM	5363	1,1,1 trichloroethane (71-55-6)		
CRC	Industrial Heavy Duty Degreaser	TM	1337	1,1,1 trichloroethane (71-55-6)		
Cronatron Welding Systems	Cronacast 211 Welding Rod	DC	8113	Nickel (7440-02-0), Copper (7440-50-8)		
Cronatron Welding Systems	Cronacast Eagle 1100	DC, CT, TM	12043	Copper (7440-50-8), Nickel (7440-02-0)		
Cronatron Welding Systems	Cronawear Eagle 7770	DC	8112	Chromium (7440-47-3), Nickel (7440-02-0)		
Cronatron Welding Systems	Cronaweld 321 Welding Rod	DC	8114	Nickel (7440-02-0), Chromium (7440-47-3)		
Cronatron Welding Systems	Cronaweld 333 Welding Rod	DC, TM	12045	Copper (7440-50-8), Chromium (7440-47-3), Nickel (7440-02-0)		

**ENVIRONMENTAL AND CERCLA CERTIFICATION**

**HAZARDOUS SUBSTANCE REPORT**

Property / Project: PacifiCorp's Federal Coal Sub Lease Termination - Louisiana D. Brown Trust Lessee of Record		Report Submittal Date: August 26, 2002	Location	PC	Ingredients on SARA III, Table 302.4
Lease(s) #: U-7653					
Mine Name(s) and MSHA ID #: Deer Creek Mine ID# 42-00121					
Mine Section (if applicable): N/A					
Coal Bed(s): Blind Canyon Seam					
Company Name	Product Name	Location	PC	Ingredients on SARA III, Table 302.4	
Cronatron Welding Systems	Cronaweld Eagle 3880	DC, TM	12045	Copper (7440-50-8), Chromium (7440-47-3), Nickel (7440-02-0)	
Cronatron Welding Systems	Spatter-Guard	DC, TM	12208	1,1,1 trichloroethane (71-55-6)	
Cronatron Welding Systems	Cronabrazz 30F	TM	81115	Lead (7439-92-1), Silver (7440-22-4), Copper (7440-50-8)	
Cronatron Welding Systems	Cronawear Eagle 7355	TM	81112	Chromium (7440-47-3), Nickel (7440-02-0)	
Cronatron Welding	Spatter Guard	TM	o	Trichloroethylene (79-01-6)	
Dayton Electric Mfg.	Dem Kote (Red Enamel)	DC	8733	Xylene (1330-20-7), Toluene (71-55-6), Acetone (67-64-1)	
DuPont	Delay Electric Detonators	TM	11886	Zinc (7440-66-6), Lead (7439-92-1)	
Dymon Inc.	Crete Sealer & Cure B-043	DC	o	Toluene (108-88-3)	
Dyno Nobel	Irecoal D 378	TM	o	Nitroglycerin (55-63-0)	
Eutectic Corporation	Chromcarb N6006	DC	2451	Chromium (7440-47-3)	
Eutectic Corporation	Eutectrode 280 Welding Rod	DC	12388	Copper (7440-50-8)	
Eutectic Corporation	Eutectrode 670 Welding Rod	DC	11802	Chromium (7440-47-3), Nickel (7440-02-0)	
Eutectic Corporation	Eutectrode 680 Welding Rod	DC	3064	Chromium (7440-47-3), Nickel (7440-02-0)	
Eutectic Corporation	Eutectrode N4	DC	12048	Chromium (7440-47-3), Nickel (7440-02-0)	
Eutectic Corporation	XHD 2222 Welding Rod	DC	12047	Chromium (7440-47-3), Nickel (7440-02-0)	
Eutectic Corporation	Xuper 2240 Welding Rod	DC, TM	2455	Nickel (7400-02-0), Copper (7400-50-8)	
Eutectic Corporation	Xuper 2255	DC	3064	Chromium (7440-47-3), Nickel (7440-02-0)	
Eutectic Corporation	Xuper 2480	DC	12387	Nickel (7400-02-0), Copper (7400-50-8)	
Eutectic Corporation	Xyron 244	DC	8739	Nickel (7400-02-0)	
Eutectic Corporation	AC 58 Arc Welding Electrodes	TM	2455	Nickel (7440-02-0), Copper (7440-50-8)	
Eutectic Corporation	Brazing Rod and Fluxes	TM	2455	Nickel (7440-02-0), Copper (7440-50-8)	
Eutectic Corporation	Brazing Rod and Fluxes	TM	7382	Nickel (7440-02-0)	
Fleetguard	Engine Coolant	TM	12818	Sodium nitrite (763-00-0)	
Gillette Medical Evaluation*	Liquid Paper Correction Fluid	DC, CT, TM	3720	1,1,1 trichloroethane (71-55-6)	
Gillette Medical Evaluation*	Liquid Paper Thinner	CT, TM	3721	1,1,1 trichloroethane (71-55-6)	
Goodyear Tire & Rubber	M750C Belt Cement (Toluene)	DC	11839	Toluene (108-88-3)	
Goodyear Tire & Rubber	M893C Belt Cement	DC	12188	Toluene (108-88-3)	
Goodyear Tire & Rubber	M920C Fabric Belt Cement	DC	11785	Toluene (108-88-3), Xylene (1330-20-7)	
Graphic Controls Corp.*	Recording Ink	DC	7867	Formaldehyde (50-00-0)	
Industrial Polychemical Ser.	Plastic Pipe Cement for PVC	DC, TM	924	MEK (78-93-3), Tetrahydrofuran (109-99-9), Cyclohexane (110-82-7)	
Kennametal	Resin Bits	DC, TM	11852	Chromium (7440-47-3), Nickel (7440-02-0)	
Locite Corp.	Permatex Anti-Seize	CT	1817	Copper (7440-50-8)	
Locite Corp.	Removable Threadlocker 242	CT	5472	Methanol (67-56-1)	
Lyn Distributing*	Restore Cleanser	DC	11854	Phosphoric acid (7664-38-2), Hydrofluoric acid (7664-39-3)	
MG Inc.	MG 5.18 Welding Rod	DC, TM	12221	Chromium (7440-47-3), Nickel (7440-02-0)	
MG Inc.	MG 506 Welding Rod	CT	12221	Chromium (7440-47-3), Nickel (7440-02-0)	
MG Inc.	MG 540 Welding Rod	CT	12221	Chromium (7440-47-3), Nickel (7440-02-0)	
Nassau Research Corp.	Brutus/ A Welding Rod	CT	9028	Chromium (7440-47-3), Nickel (7440-02-0)	
Nassau Research Corp.	Jupiter/B Welding Rod	CT	513	Chromium (7440-02-0)	
National ChemSearch	Aerolex Lubricant	DC, CT	2402	1,1,1 trichloroethane (71-55-6), Xylene (1330-20-7)	

**ENVIRONMENTAL AND CERCLA CERTIFICATION**

Page 5

**HAZARDOUS SUBSTANCE REPORT**

Property / Project: PacifiCorp's Federal Coal Sub Lease Termination - Louisiana D. Brown Trust Lessee of Record		Report Submittal Date: August 26, 2002	Lease(s) #: U-7653	Mine Name(s) and MSHA ID #: Deer Creek Mine ID# 42-00121	Mine Section (if applicable): N/A	Coal Bed(s): Blind Canyon Seam
Company Name	Product Name	Location	PC	Ingredients on SARA III, Table 302.4		
National ChemSearch	Lexite PS Aerosol	DC	1377	1,1,1 trichloroethane (71-55-6)		
National ChemSearch*	Deox	CT	11749	Hydrochloric acid (7647-01-0)		
National ChemSearch*	Scoot Toilet Bowl Cleaner	CT, TM	10201	Hydrochloric acid (7647-01-0)		
National ChemSearch*	Power Roter	TM	526	Sulfuric acid (7664-93-9)		
National ChemSearch*	Wii-Dew	TM	553	Chlorine (7782-50-5)		
National Draeger, Inc.	Air Current Detector Smoke Tubes	DC, TM	11831	Sulfuric acid (7664-93-9)		
Oxley Co.	PVC Primer Cleaner	TM	842	MEK (78-93-3), Acetone (67-64-1)		
O'Brien (ICI paints)	621-04	TM	0	Xylene (1330-20-7), Ethylbenzene (100-41-4)		
O'Brien Corporation*	Alkyd Floor Enamel 630-34 Gray	DC	8456	Chromium (7440-47-3), Xylene (1330-20-7)		
O'Brien Corporation*	Chocolate HD Gloss 312-57	DC	8456	Chromium (7440-47-3), Xylene (1330-20-7)		
O'Brien Corporation*	Alkyd Floor Enamel 630-91	CT	8456	Chromium (7440-47-3), Xylene (1330-20-7)		
O'Brien Corporation*	Red Blox-Rust Alkyd Primer 621-04	CT	8456	Chromium (7440-47-3), Xylene (1330-20-7)		
O'Brien Corporation*	Alkyd Floor & Deck En. 630-33	TM	8456	Chromium (7440-47-3), Xylene (1330-20-7)		
O'Brien Corporation*	Chocolate Gloss	TM	8456	Chromium (7440-47-3), Xylene (1330-20-7)		
Osborn	High Tech electronic cleaner	TM	4189	1,1,1 trichloroethane (71-55-6)		
Osborn Industries	Electrical Motor Cleaner 76207	DC	4167	1,1,1 trichloroethane (71-55-6), Perchloroethylene (127-18-4)		
Osborn Industries	Gear & Wire Lubricang 76200	DC	3933	1,1,1 trichloroethane (71-55-6)		
Overall Supply Co.*	Fresh Flush II Bowl Blocks	DC	0	1,1,1 trichloroethane (71-55-6)		
Overall Supply Co.*	Mighty Drain Sulfuric Drain Opener	DC	0	Sodium dodecylbenzenesulfonate (25155-30-0)		
Overall Supply Co.*	Urinal Blocks	DC	0	Sulfuric acid (7664-93-9)		
Packaging Services Co.	Crown Muriatic Acid	DC	0	Paradichlorobenzene (106-46-7)		
Packaging Services Co.*	Crown Lacquer Thinner	TM	0	Hydrochloric acid (7647-01-0)		
Para-Chem	C-60 PVC C-60 Primer	DC	12383	Toluene (108-88-3), MEK (78-93-3), Methanol (67-56-1)		
Para-Chem	Parabond PVC Pipe Cement	DC	12236	MEK (78-93-3), Cyclohexane (110-82-7)		
Power Service	Air Line Antifreeze	DC	6425	MEK (78-93-3), Tetrahydrofuran (109-99-9), Vinyl chloride (75-01-4)		
Puro Chemical*	Perfumed Deodorant Blocks	TM	2411	Methanol (67-56-1)		
Quaker State	SAE 10W-30 HDX Motor Oil	DC	7173	1,4 dichlorobenzene (106-46-7)		
Radiator Specialty Co.	Air Brake Anti-freeze & Rust Guard	DC	9480	Zinc (7440-66-9)		
Radiator Specialty Co.	Instant Starting Fluid	DC	9215	Methyl alcohol (67-56-1)		
Radiator Specialty Co.	Elect. Motor Contact & Brake Clin.	DC, TM	7787	Ethyl ether (60-29-7)		
Rivendale Chemical*	Weedestroy AM 40	TM	12252	1,1,1 trichloroethane (71-55-6), Perchloroethylene (127-18-4)		
Rust-Oleum	Overall Spray Paint (Assorted Colors)	DC, CT, TM	848	Dimethylamine (124-40-3)		
Seymour of Sycamore	Mine Marker, flour, red/orange	DC, CT, TM	6442	Toluene (108-88-3), Xylene (1330-20-7)		
Seymour of Sycamore, Inc.	Red Insulating Varnish	TM	0	Xylene (1330-20-7)		
Seymour of Sycamore, Inc.	Stripe Traffic Marker	DC, CT, TM	8620	Xylene (1330-20-7), Toluene (108-88-3), Ethylbenzene (100-41-4)		
Seymour of Sycamore, Inc.	Tool Crib Universal Belt Dressing	DC, TM	2198	Toluene (108-88-3), Xylene (1330-20-7), Acetone (67-64-1), Methyl isobutyl ketone (108-10-1)		
Seymour of Sycamore, Inc.	MRO Open Gear Lube	DC, CT	2045	Toluene (108-88-3)		
Sherwin Williams	Krylon Fluorescent Paint Red/Orange	TM	0	1,1,1 trichloroethane (71-55-6), Acetone (67-64-1)		
Spectrum Ind., Products	Base and Top Coat	DC	12249	Toluene (108-88-3) Dibutyl phthalate (84-74-2)		

**ENVIRONMENTAL AND CERCLA CERTIFICATION**  
Page 6

**HAZARDOUS SUBSTANCE REPORT**

Property / Project: PacifiCorp's Federal Coal Sub Lease Termination - Louisiana D. Brown Trust Lessee of Record				
Report Submittal Date: August 26, 2002				
Lease(s) #: U-7653				
Mine Name(s) and MSHA ID #: Deer Creek Mine ID# 42-00121				
Mine Section (if applicable): N/A				
Coal Bed(s): Blind Canyon Seam				
Company Name	Product Name	Location	PC	Ingredients on SARA III, Table 302.4
Sprayon Products	2001 Electric Cleaner & Lube Spray	DC	11873	1,1,1 trichloroethane (71-55-6)
Sprayon Products	Hi-Tech 747	DC, CT, TM	9968	1,1,1 trichloroethane (71-55-6), Tetrachloroethylene (79-01-6), Dichlorodifluoromethane (75-71-8)
Sprayon Products	2001 Electric Cleaner & Lube Spray	TM	11873	1,1,1 trichloroethane (71-55-6)
Sprayon Products	607 Belt Dressing	TM	0	Acetone (67-64-1)
Standard Batteries	Batteries, Lead Acid Electrolyte	DC, CT, TM	11398	Sulfuric acid (7664-93-9), Lead (7439-92-1), Antimony (7440-36-0), Arsenic (7440-38-2)
Technical Chemical Corp.	Johnsen's Starting Fluid	DC, TM	7221	Ethyl ether (60-29-7)
Texaco	Meropa 220	DC, TM	2376	Phosphorus (7723-14-0)
Texaco	Meropa 320	DC, TM	9233	Toluene (108-88-3)
Texaco	Novalex EP 000 Grease	DC	11	Lead (7439-92-1)
Texaco*	Unleaded Gas	DC, TM	2505	Toluene (108-88-3), Xylene (1330-20-7), Benzene (71-43-2), Ethylbenzene (100-41-4)
Thatcher Chemical Co.	Windshield Washer Fluid	TM	6805	Methanol (67-56-1)
Thatcher Chemical Co.*	Ferric Chloride Solution	CT	11879	Ferric chloride (7705-08-0)
UTP Welding Materials	Cast Iron 8 Welding Rod	DC	9126	Nickel (7440-02-0)
Valley Paint	Bloc out Flat Black	TM	0	Xylene (1330-20-7), Acetone (67-64-1)
W. W. Henry Co.	Multi-purpose Adhesive	TM	9258	Cyclohexane (110-82-7)
Whitaker Cable Co.	Battery Terminal Protectors	DC, TM	2357	Acetone (67-64-1), Toluene (108-88-3), Xylene (1330-20-7)
Zep Manufacturing	Zepreserve	TM	3289	1,1,1 trichloroethane (71-55-6)
Zynloyte	Speed E-Name!	TM	2217	MEK (78-93-3), Toluene (108-88-3), Xylene (1330-20-7)
* = Surface Products				
Note: In other SARA Title III Reporting, i.e. Tier II reports and TRI reports, these chemicals do not exceed reporting quantities.				
Note: This facility has not had a spill which exceeds the RQ				
CASRN are shown in parentheses in the ingredients column				

CERCLA CERTIFICATION

**Property/Project:** PacifiCorp's Federal Coal Sub Lease Termination Notice To Louisiana D. Brown Trust - Lessee of Record (Dated December 6, 2001)

**Date:** August 26, 2002

**Federal Lease(s)#:** U-7653

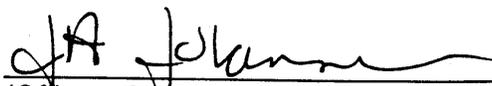
**Mine Name(s) MSHA ID #:** Deer Creek Mine ID# 42-00121

**Mine Section (if applicable):** N/A

**Coal Bed(s):** Blind Canyon Seam

a. Based upon a complete search of all known records of the lessee(s), sublessee(s) and operator(s) (i) for the specified lease or portion thereof relinquished or sealed and (ii) for the operations conducted on the specified lease or portion thereof relinquished or sealed; and upon our knowledge of past operations, there have been **no** reportable quantities of **hazardous substances** (per 40 CFR 302.4) and Part 373 or **used oil** (per Utah State Management Rule R-315-15), deposited or released within the lease, either on the surface or underground that will harm human health and the environment with respect to any such substances remaining on the property.

b. Based upon a complete search of all known records for the lessee(s), sublessee(s) and operator(s) (i) for the specified lease or portion thereof relinquished or sealed and (ii) for the operations conducted on the specified lease or portion thereof relinquished or sealed; and upon our knowledge of past operations, there has been a release or disposal of a reportable quantity of **hazardous substance** (per 40 CFR 302.4) and Part 373 or **used oil** (per Utah State Management Rule R-315-15) on the surface of the lease or underground, and all remedial action necessary has been taken to protect human health and the environment with respect to any such substances remaining on the property. This shall be documented with sample analytical data from the remediation or removal process.

  
\_\_\_\_\_  
(Officer of the Lessee)

8-27-2002  
\_\_\_\_\_  
(Date)

**PETROLEUM PRODUCT REPORT**

<b>Property/Project:</b> PacifiCorp's Federal Coal Sub Lease Termination - Louisiana D. Brown Trust Lessee of Record			
<b>Report Submittal Date:</b> August 26, 2002			
<b>Lease(s) #:</b> U-7653			
<b>Mine Name(s) and MSHA ID #:</b> Deer Creek Mine ID# 42-00121			
<b>Mine Section (if applicable):</b> N/A			
<b>Coal Bed(s):</b> Blind Canyon Seam			
<b>Oil or Petroleum Product Spilled</b>	<b>Date Spilled</b>	<b>Amount Spilled (If &gt;25 gallons)</b>	<b>Location Spilled (Cross-cut if known)</b>
NONE	NONE	NONE	NONE

ENVIRONMENTAL AND CERCLA CERTIFICATION

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EQUIPMENT REMAINING UNDERGROUND REPORT

Property / Project: PacifiCorp's Federal Coal Sub Lease Termination - Louisiana D. Brown Trust Lessee of Record

Report Submittal Date: August 26, 2002

Lease(s) #: U-7653

Mine Name(s) and MSHA ID #: Deer Creek Mine ID # 42-00121

Mine Section (if applicable): Refer to attached Figure #1

Coal Bed(s): Blind Canyon

Equipment Name & Model Number	Date Inspected	Fluid Types/Batteries and Amount	Final Location (Cross-cut if known)
NONE	5/18/99 <sup>1</sup>	NONE	NONE
<sup>1</sup> Deer Creek Mine 3rd north west side sealing. Underground environmental inspection with representatives from BLM-USO, State of Utah DNR-DOGMI, State of Utah DEQ - Division of Solid and Hazardous Waste, Energy West Mining Co. and Interwest Mining Co.			

**SUMMARY WATER ANALYSIS REPORT**

<b>Property/Project:</b> PacifiCorp's Federal Coal Sub Lease Termination - Louisiana D. Brown Trust Lessee of Record
<b>Report Submittal Date:</b> August 26, 2002
<b>Lease(s) #:</b> U-7653
<b>Mine Name(s) and MSHA ID #:</b> Deer Creek Mine ID# 42-00121
<b>Mine Section (if applicable):</b> N/A
<b>Coal Bed(s):</b> Blind Canyon Seam
See attached Summary Water Analysis Report for Lease Relinquishment - April 2000 Applicable also to Federal Coal Lease U-7653

# SUMMARY WATER ANALYSIS REPORT

DEER CREEK MINE

MSHA ID. 42-00121

COTTONWOOD MINE

MSHA ID. 42-001211

DES-BEE-DOVE COMPLEX

DESERET MSHA ID. 42-00988

BEEHIVE MSHA ID. 42-00082

LITTLE DOVE MSHA ID. 42-01393

## Lease Relinquishment: Phase I-III

### Attached Data:

#### Mine Discharge Water Quality Analysis:

PacifiCorp has conducted extensive research into interrelationships between the surface and groundwater hydrologic systems and the potential impacts associated with underground mining. Analysis included; seep and spring surveys, drainage surveys, baseline data collection, in-house and consultant hydrologic studies and government and non-government research projects. PacifiCorp initiated hydrologic monitoring related to mines of the East Mountain property, including; Deer Creek, Des-Bee-Dove, and Wilberg/Cottonwood mines in 1977. Monitoring of surface, intercepted, and discharged water conducted by PacifiCorp has been utilized to document quality and quantity characteristics of the hydrologic regime and was not conducted specifically to each coal lease (i.e. Federal/State/Fee).

In 1997, PacifiCorp contracted Mayo & Associates to conduct a comprehensive study of surface water and groundwater systems of East Mountain & Trail Mountain. The hydrology and hydrogeology of the PacifiCorp central Utah coal leases were evaluated by analyzing: 1) solute and isotopic compositions of surface waters and groundwaters, 2) surface water and groundwater discharge data, 3) piezometric data, and 4) geologic information. The result of the East/Trail mountain study combine with research on surrounding coal properties (Mayo & Associates and Brigham Young University) was the development of a

comprehensive understanding of the interrelationship between surface and groundwater systems of the Central Utah, Coal Field. The following is a brief description of the groundwater model:

#### Groundwater Model

The overall pattern of groundwater flow and surface water-groundwater interactions in the East Mountain area can be described by a fairly simple conceptual model involving both active and inactive groundwater flow regimes. Active regime groundwater flow systems contain abundant tritium (<sup>3</sup>H), have excellent hydraulic communication with the surface and thus are dependent on annual recharge events and are affected by short term climatic variability. Groundwater in these systems circulates shallowly and has short flow paths. The active regime includes alluvial groundwater, all of the Flagstaff Limestone, near-surface exposures of all other bedrock formations except, perhaps, the Mancos Shale. The "near surface" extends about 500 to 1,000 feet into cliff faces and is controlled by fracturing, weathering, and the surface exposures of fluvial channel sands. Further into the cliff faces the discontinuous character of the channel sands prevents active groundwater flow.

Inactive groundwater flow regimes contain old groundwater (i.e. 2,000 to 12,000 years), have very limited hydraulic communication with the surface and with other active groundwater flow systems, and are not influenced by either annual recharge events or short term climatic variability. Groundwater in these systems tends to occur in sandstone channels in the North Horn, Price River, and Blackhawk Formations which are not in direct hydraulic communication with the surface (i.e. greater than about 500 to 1,000 feet from cliff faces). These sandstone channels are vertically and horizontally isolated from each other and when encountered in mine workings are usually drained quickly. The blanket sands of the Star Point Sandstone are also largely in the inactive zone. For the most part, faults encountered in mine workings are part of the inactive regime.

To facilitate the understanding of the hydrologic systems of Central Utah, PacifiCorp refer to the following documents:

- ☞ ***Cottonwood, Deer Creek, Des-Bee-Dove Mine Reclamation Plans:  
Volume 9 - Hydrologic Section: Support Information:  
Investigation of Surface-Water and Groundwater Systems in the  
PacifiCorp Lease Area, East and Trail Mountains, Emery County,  
Utah:  
Probable Hydrologic Consequences of Coal Mining in the Trail  
Mountain LBA and Recommendations for Surface-Water and  
Groundwater Monitoring, Mayo & Associates, October 1997***



**MINE ID**  
**DEER CREEK MINE**  
**MSHA ID. 42-00121**

**UPDES Permit Data:**

Deer Creek Mine UPDES Permit: UT0023604  
 Mine Discharge - Site 002  
 Permit Modified May 1994 to include mine water discharge  
*Prior to the modification Deer Creek Mine water was discharge directly  
 to the Huntington Power Plant*  
 Permit Renewed on December 1, 1997  
 Permit Expires on November 30, 2002

**Permit Limitations (water discharged to Deer Creek Drainage):**

**Deer Creek Mine Water Discharge Site 002**

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Average 30 Day	30 Day	Day Maximum	Measurement Frequency	Sample Type
Flow, MGD	Report	NA	Report	Monthly	Measured
Total Suspend Solids, mg/l	25	35	70	Monthly	Measured
Total Iron, mg/l	NA	NA	1.0	Monthly	Measured
Oil & Grease, mg/l	NA	NA	10	Monthly	Measured
TDS, mg/l	800	NA	1000	Monthly	Measured
pH, Units	6.5 - 9.0			Monthly	Measured

**MINE ID,  
DEER CREEK MINE  
MSHA ID. 42-00121**

**Deer Creek Mine Water Discharge Site 002**

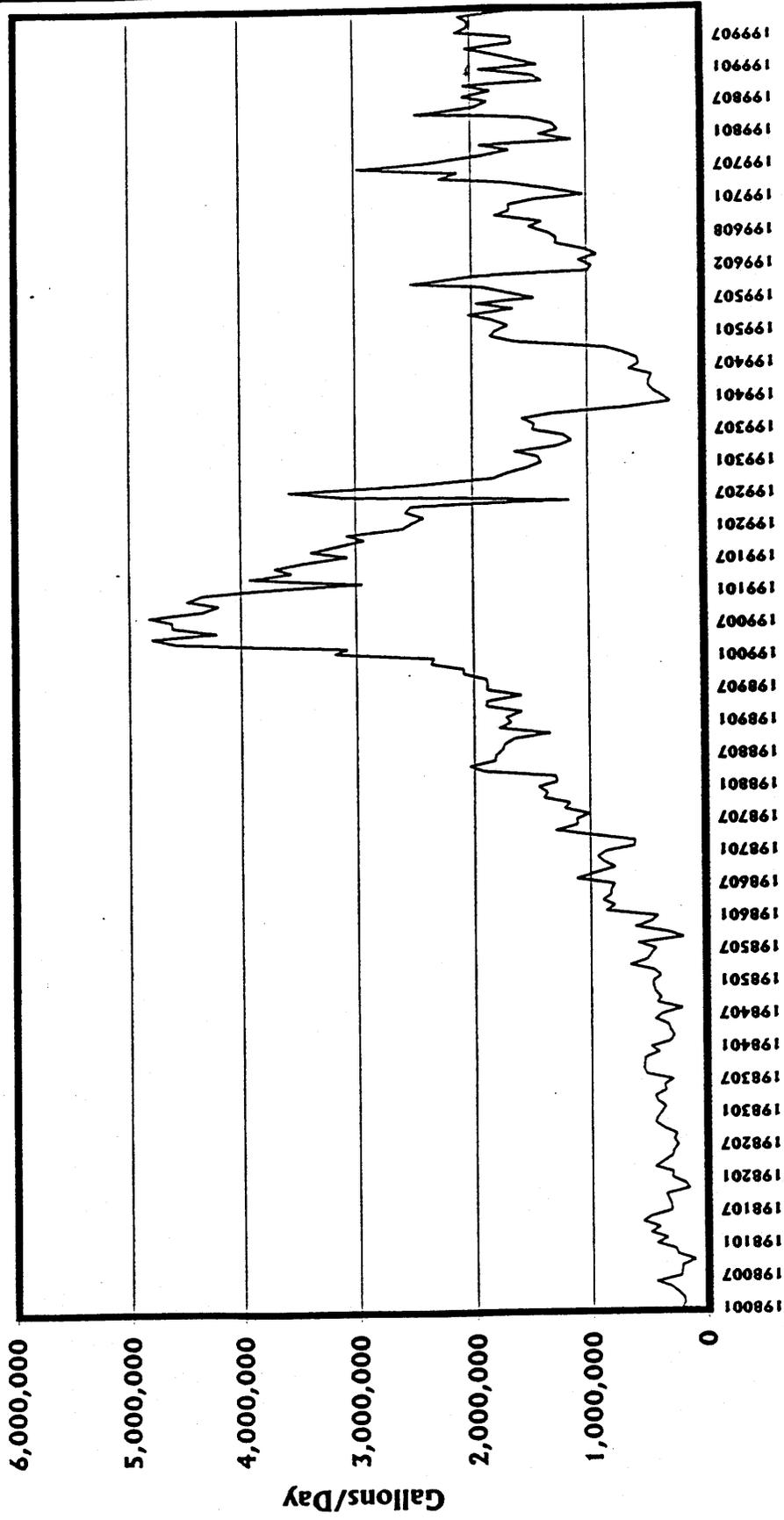
*Quantity*

**INSERT DEER CREEK QUANTITY GRAPH**

04/10/2000

Deer Creek Mine

# Deer Creek Mine Discharge



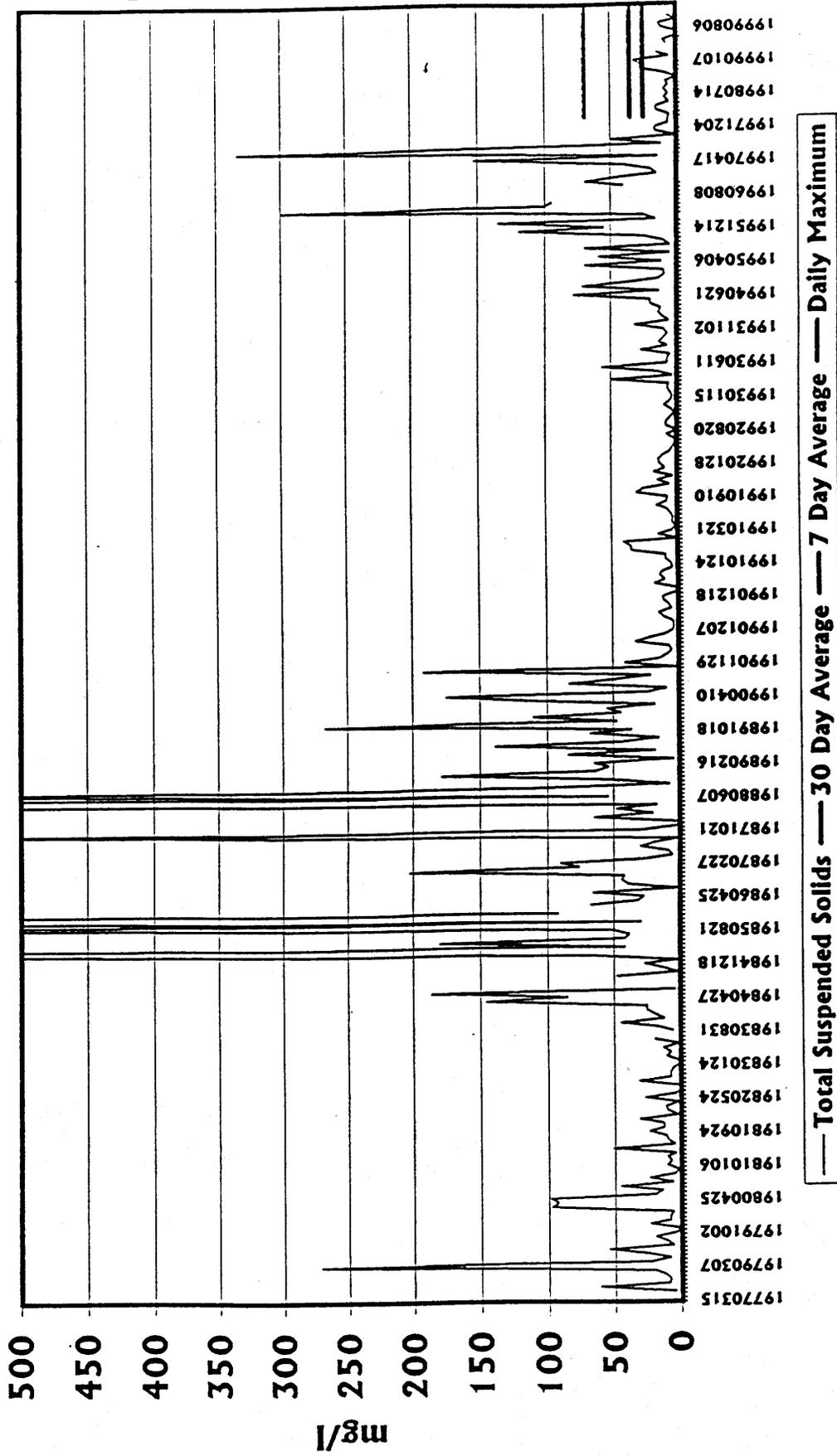
**MINE ID,  
DEER CREEK MINE  
MSHA ID. 42-00121  
Deer Creek Mine Water Discharge Site 002**

*Quality*

**INSERT DEER CREEK QUALITY GRAPH  
PARAMETER: TOTAL SUSPENDED SOLIDS**

# Deer Creek Mine Discharge

\* UPDES Limitations Applicable to Mine Discharge Diverted to Deer Creek



MINE ID  
DEER CREEK MINE  
MSHA ID. 42-00121

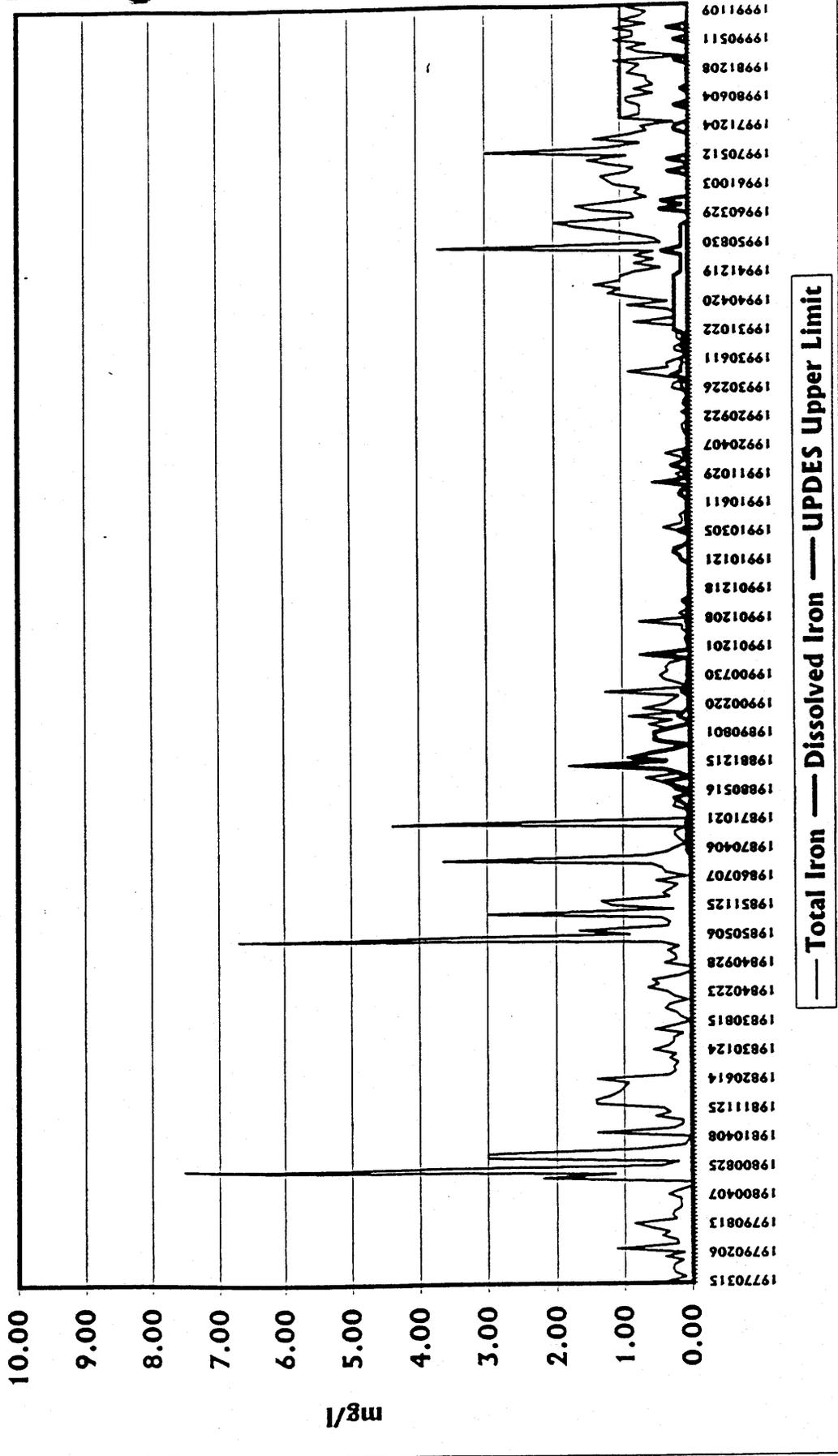
Deer Creek Mine Water Discharge Site 002

*Quality*

INSERT DEER CREEK QUALITY GRAPH  
PARAMETER: TOTAL IRON

# Deer Creek Mine Discharge

\* UPDES Limitations Applicable to Mine Discharge Diverted to Deer Creek



— Total Iron — Dissolved Iron — UPDES Upper Limit

MINE ID,  
DEER CREEK MINE  
MSHA ID. 42-00121

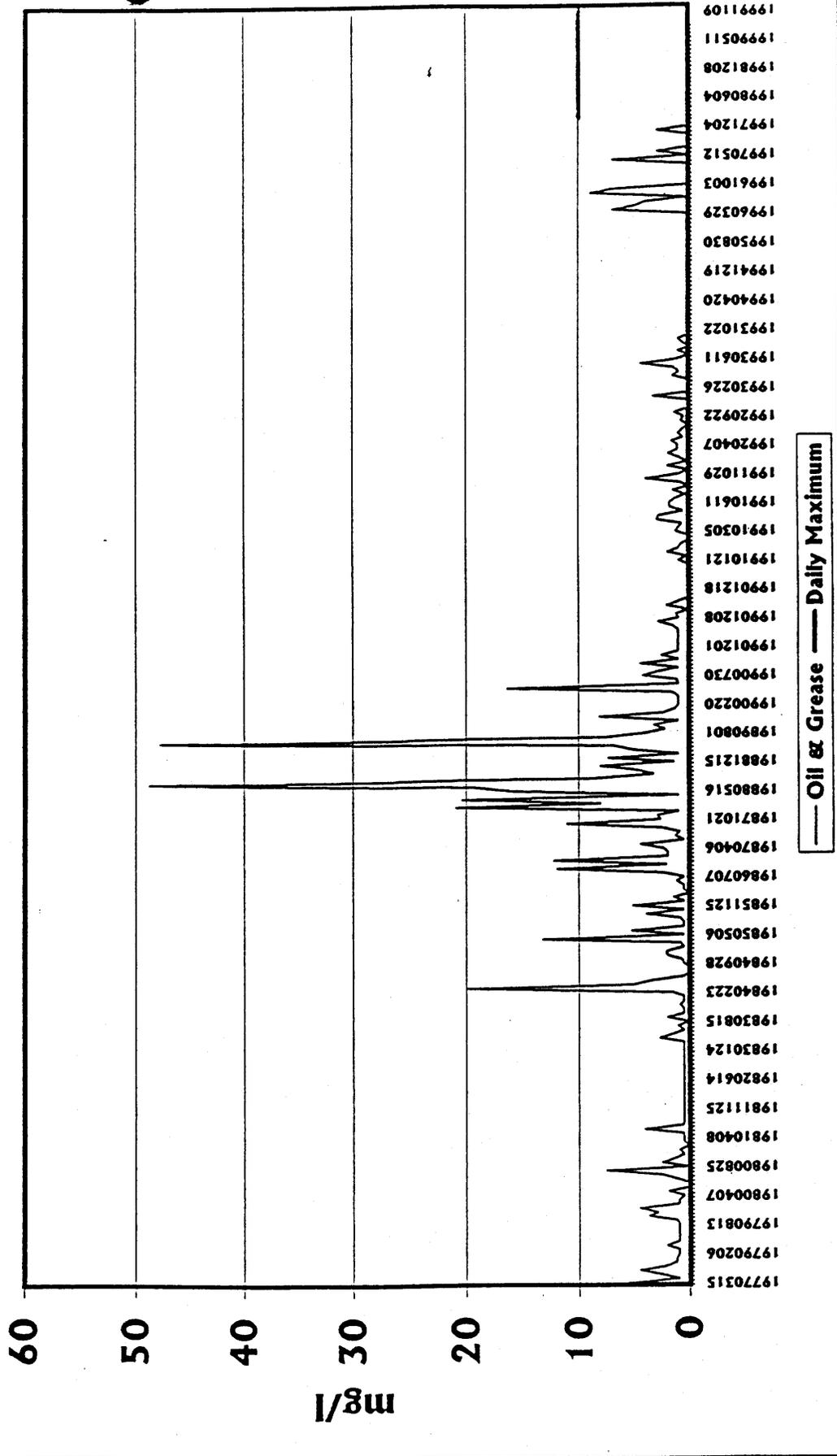
Deer Creek Mine Water Discharge Site 002

*Quality*

INSERT DEER CREEK QUALITY GRAPH  
PARAMETER: OIL & GREASE

# Deer Creek Mine Discharge

\* UPDES Limitations Applicable to Mine Discharge Diverted to Deer Creek



— Oil & Grease — Daily Maximum

**MINE ID,  
DEER CREEK MINE  
MSHA ID. 42-00121**

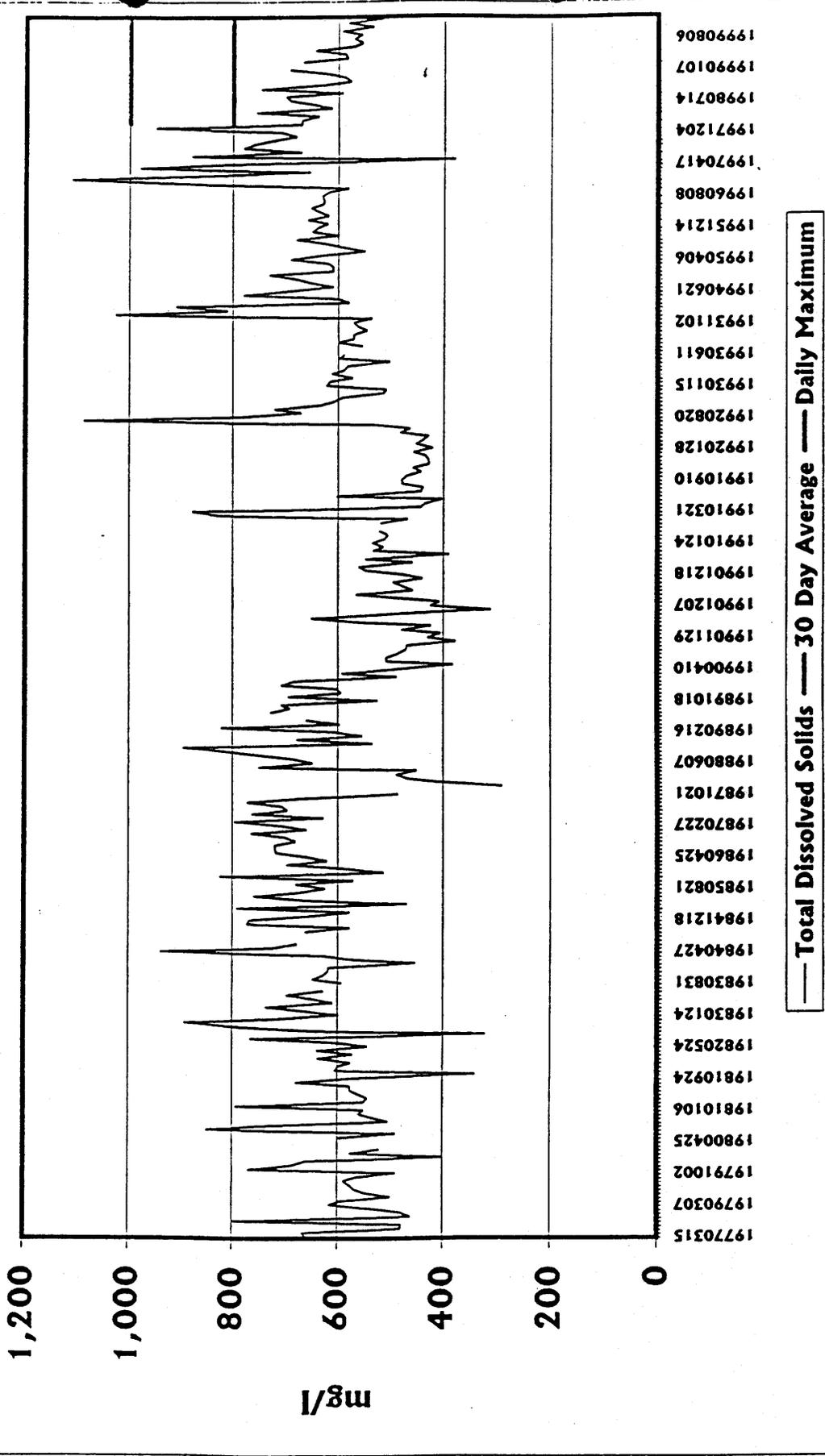
**Deer Creek Mine Water Discharge Site 002**

***Quality***

**INSERT DEER CREEK QUALITY GRAPH  
PARAMETER: TOTAL DISSOLVED SOLIDS**

# Deer Creek Mine Discharge

\* UPDES Limitations Applicable to Mine Discharge Diverted to Deer Creek



**MINE ID,  
DEER CREEK MINE  
MSHA ID. 42-00121**

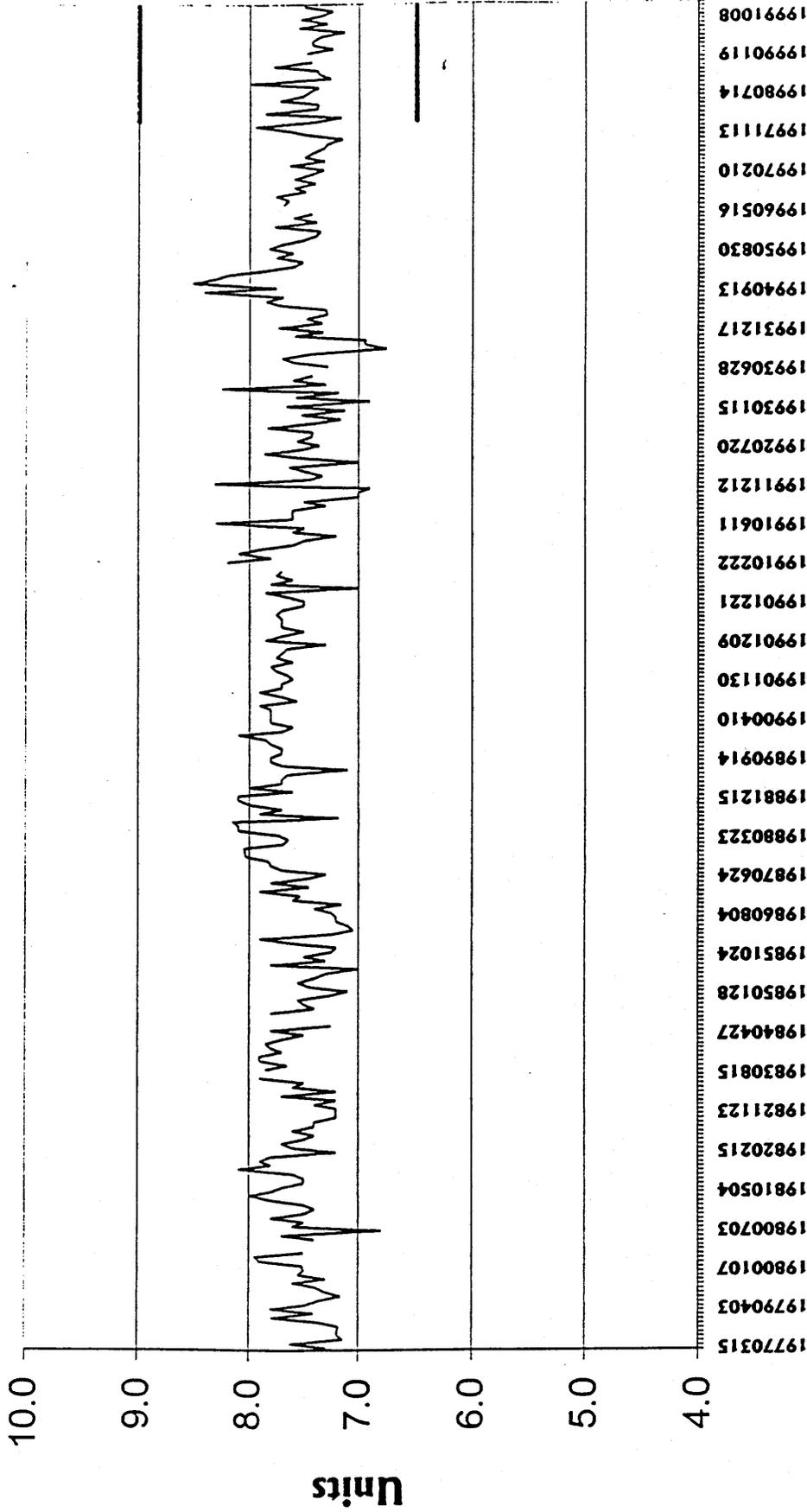
**Deer Creek Mine Water Discharge Site 002**

*Quality*

**INSERT DEER CREEK QUALITY GRAPH  
PARAMETER: pH**

# Deer Creek Mine Discharge

\* UPDES Limitations Applicable to Mine Discharge Diverted to Deer Creek



— pH — UPDES Lower Limit — UPDES Upper Limit

**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

**UPDES Permit Data:**

Cottonwood Mine UPDES Permit: UT0022896  
 Mine Discharge - Site 001 (Permit Issued November 1980)  
 Mine Discharge - Site 004 (Permit Issued January 1983)  
 Permit Renewed on November 1, 1997  
 Permit Expires on October 31, 2002

*Permit Limitations Site 001 - water discharged to Grimes Wash*  
*Site 004 - water discharged to Miller Canyon*

**Cottonwood Mine Water Discharge Site 001 & 004**

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Average 30 - Day	Average 7 - Day	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD	Report	NA	Report	Monthly	Measured
Total Suspend Solids, mg/l	25	35	70	Monthly	Measured
Total Iron, mg/l	NA	NA	1.0	Monthly	Measured
Oil & Grease, mg/l	NA	NA	10	Monthly	Measured
TDS, mg/l	NA	NA	1000	Monthly	Measured
pH, Units	6.5 - 9.0			Monthly	Measured

**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

Cottonwood Mine Water Discharge Site 001

*Quantity*

**INSERT COTTONWOOD MINE**  
**@ GRIMES WASH QUANTITY GRAPH**



**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

Cottonwood Mine Water Discharge Site 001

*Quality*

**INSERT COTTONWOOD MINE**  
**@ GRIMES WASH**  
**QUALITY GRAPH**  
**PARAMETER: TOTAL SUSPENDED SOLIDS**



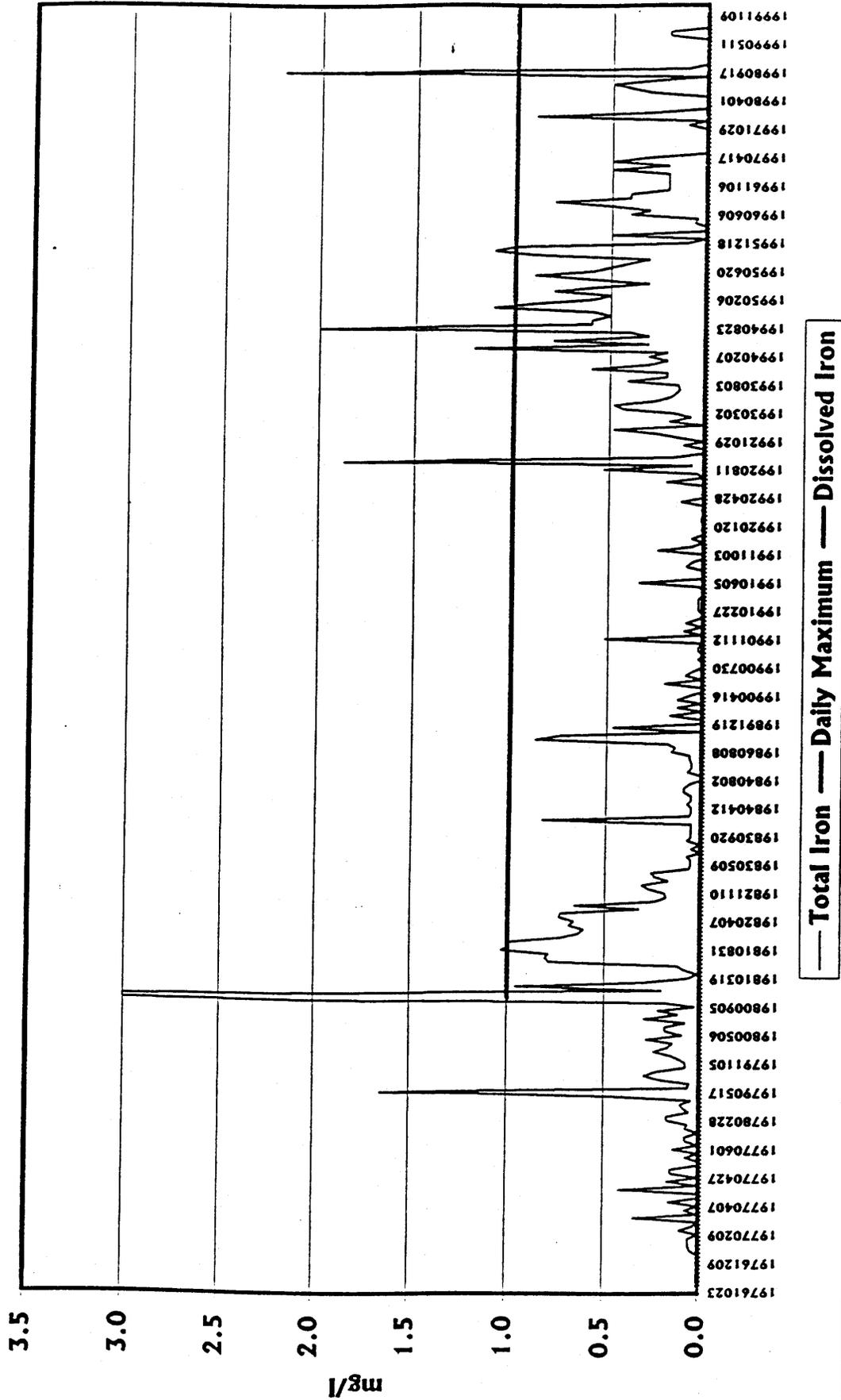
**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

Cottonwood Mine Water Discharge Site 001

*Quality*

**INSERT COTTONWOOD MINE**  
**@ GRIMES WASH**  
**QUALITY GRAPH**  
**PARAMETER: TOTAL IRON**

# Cottonwood Mine Discharge @ Grimes Wash



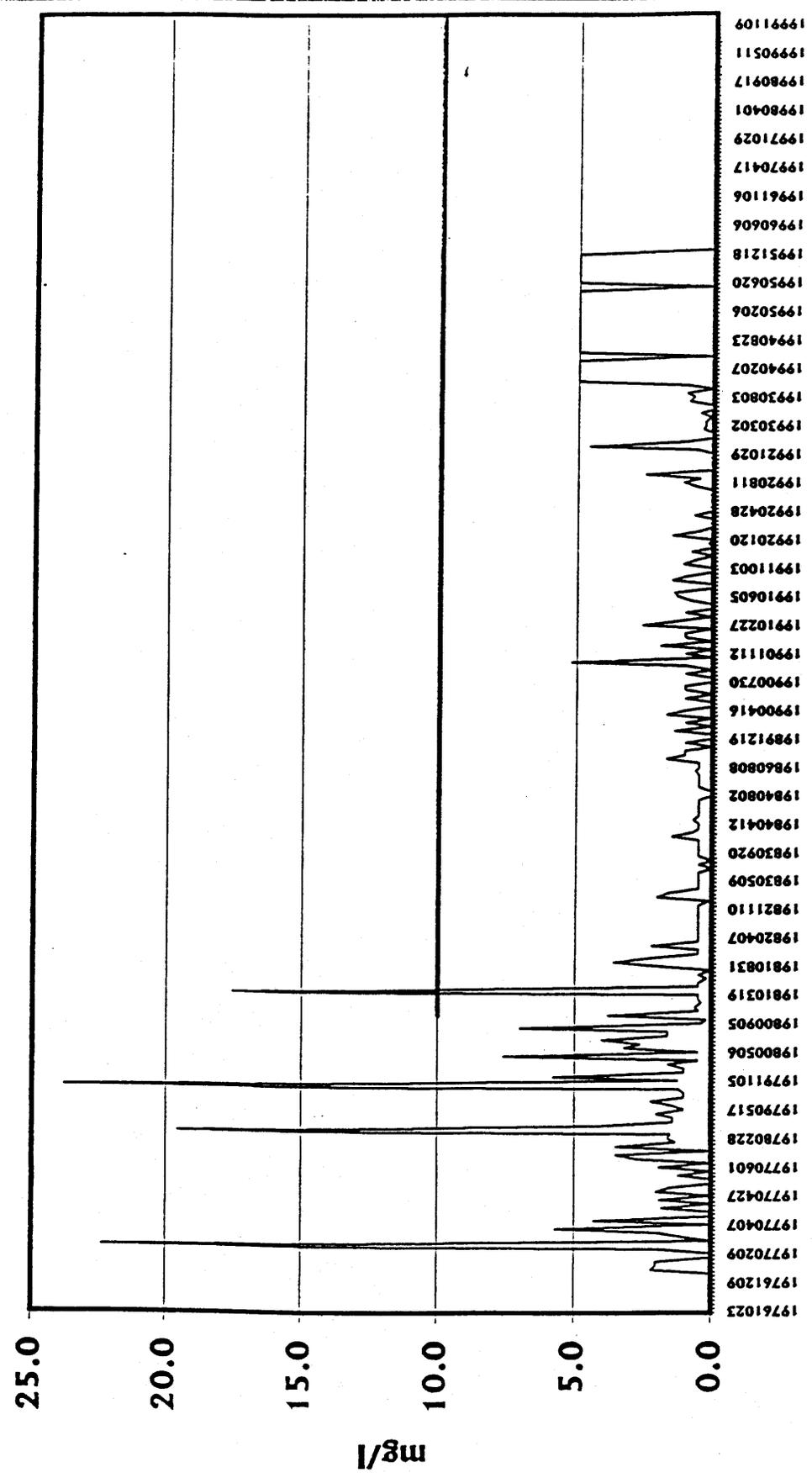
**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

Cottonwood Mine Water Discharge Site 001

*Quality*

**INSERT COTTONWOOD MINE**  
**@ GRIMES WASH**  
**QUALITY GRAPH**  
**PARAMETER: OIL & GREASE**

# Cottonwood Mine Discharge @ Grimes Wash



— Oil & Grease — Daily Maximum

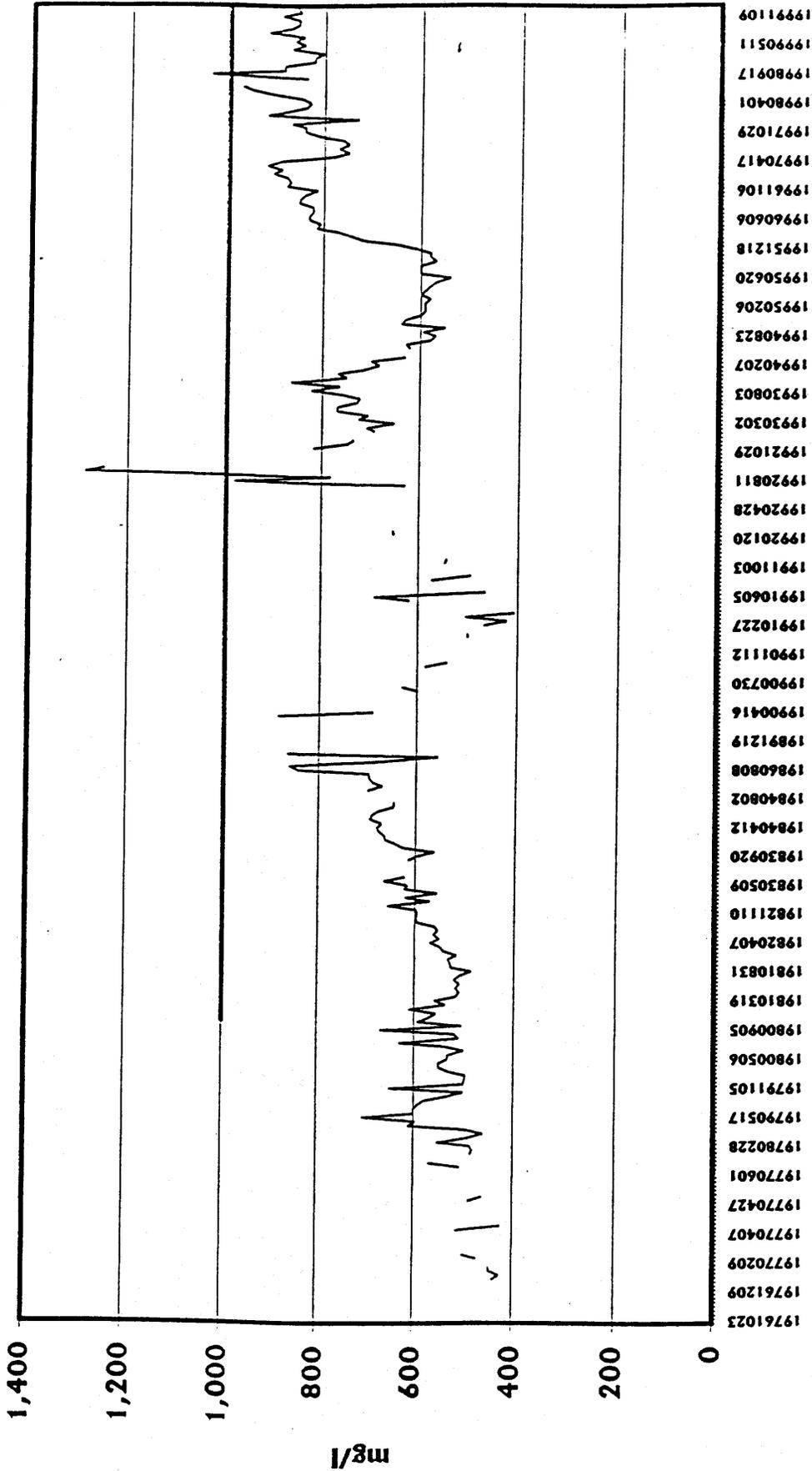
**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

Cottonwood Mine Water Discharge Site 001

*Quality*

**INSERT COTTONWOOD MINE**  
**@ GRIMES WASH**  
**QUALITY GRAPH**  
**PARAMETER: TOTAL DISSOLVED SOLIDS**

# Cottonwood Mine Discharge @ Grimes Wash



— Total Dissolved Solids — Daily Maximum

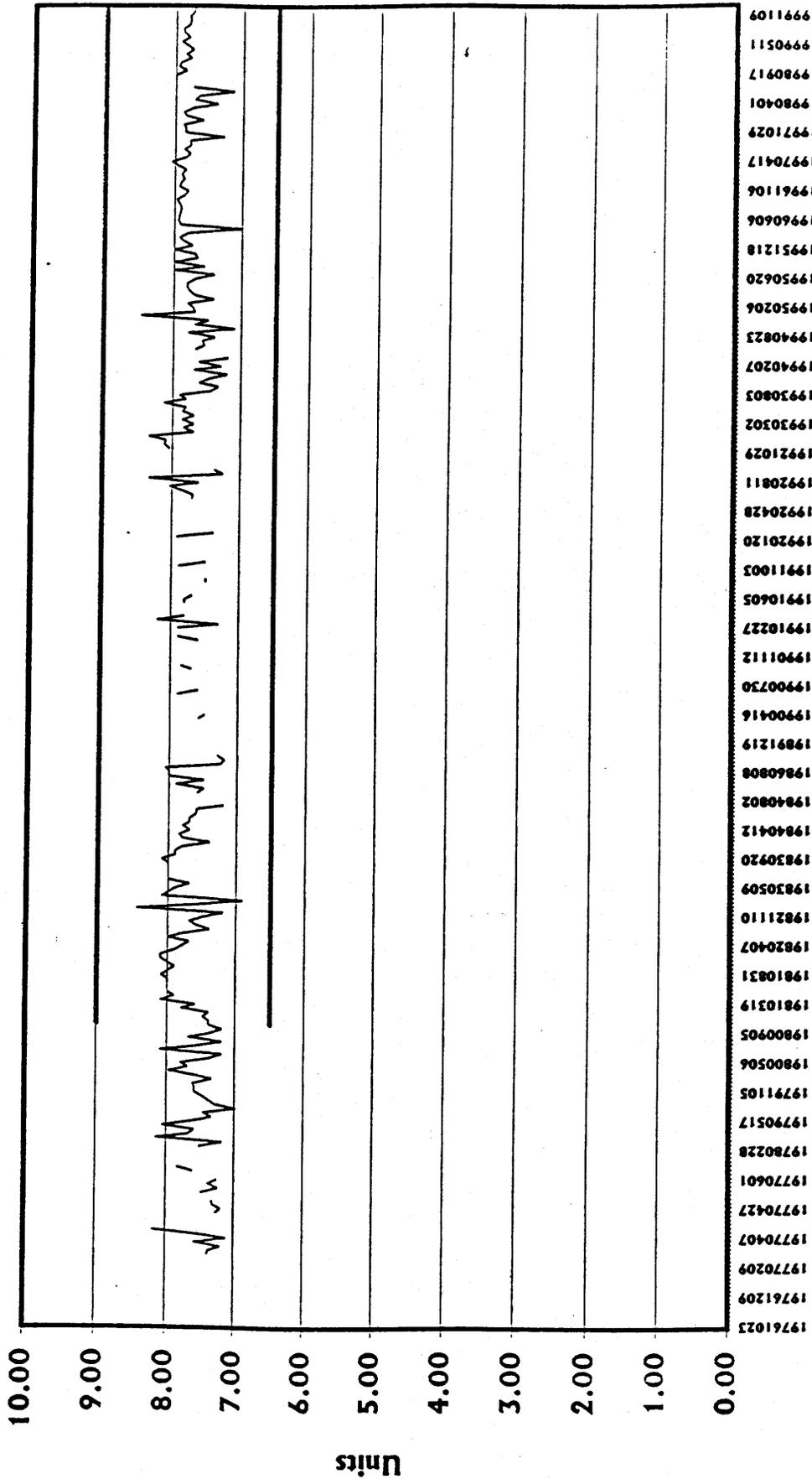
**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

Cottonwood Mine Water Discharge Site 001

*Quality*

**INSERT COTTONWOOD MINE**  
**@ GRIMES WASH**  
**QUALITY GRAPH**  
**PARAMETER: Ph**

# Cottonwood Mine Discharge @ Grimes Wash



— pH — Lower Limit — Upper Limit

**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

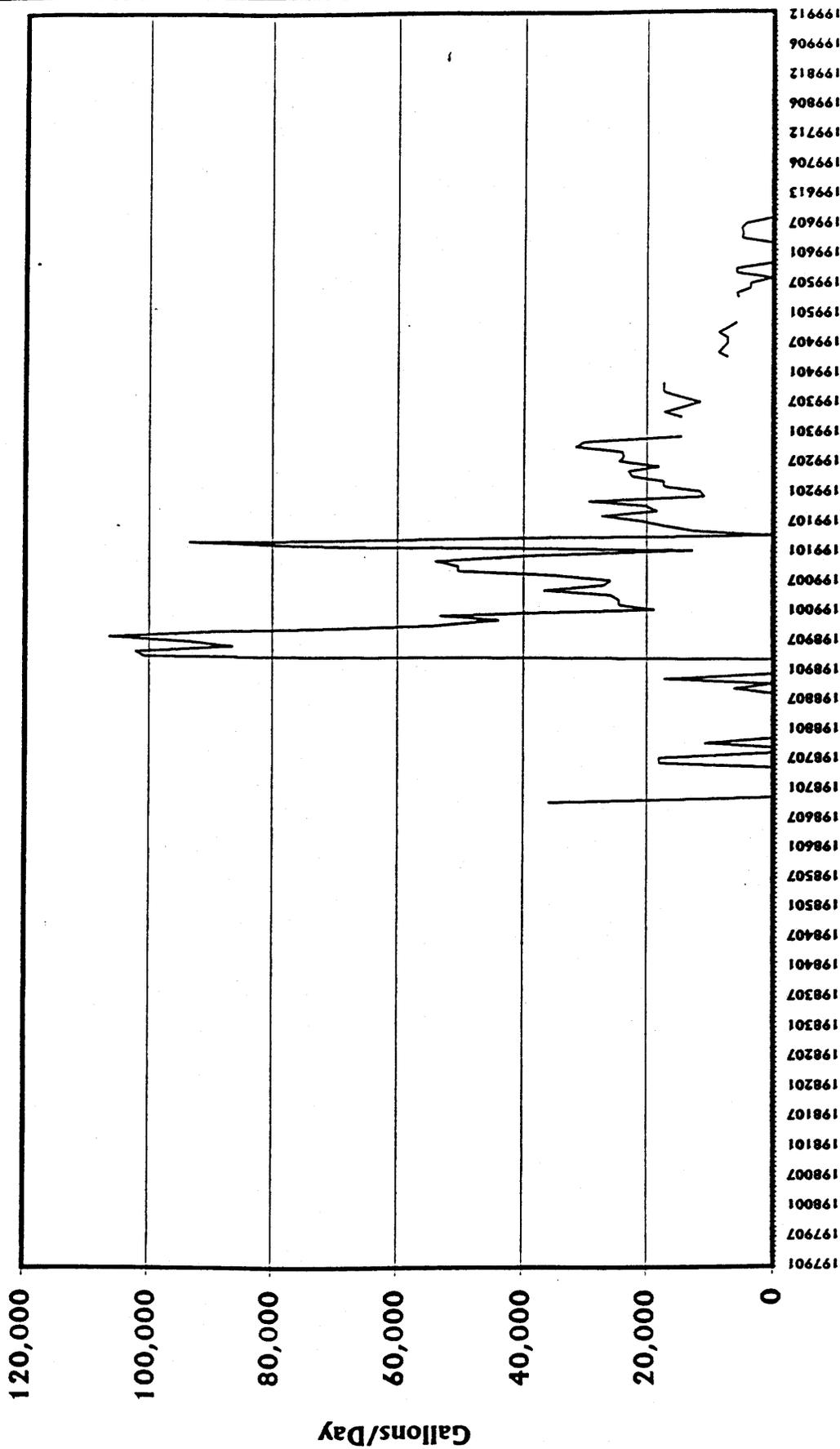
Cottonwood Mine Water Discharge Site 004

*Quantity*

**INSERT COTTONWOOD MINE**  
**@ MILLER CANYON QUANTITY GRAPH**

# Cottonwood Mine Discharge @ Miller Canyon

\* Data Gaps Represent Times Of No Flow



**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

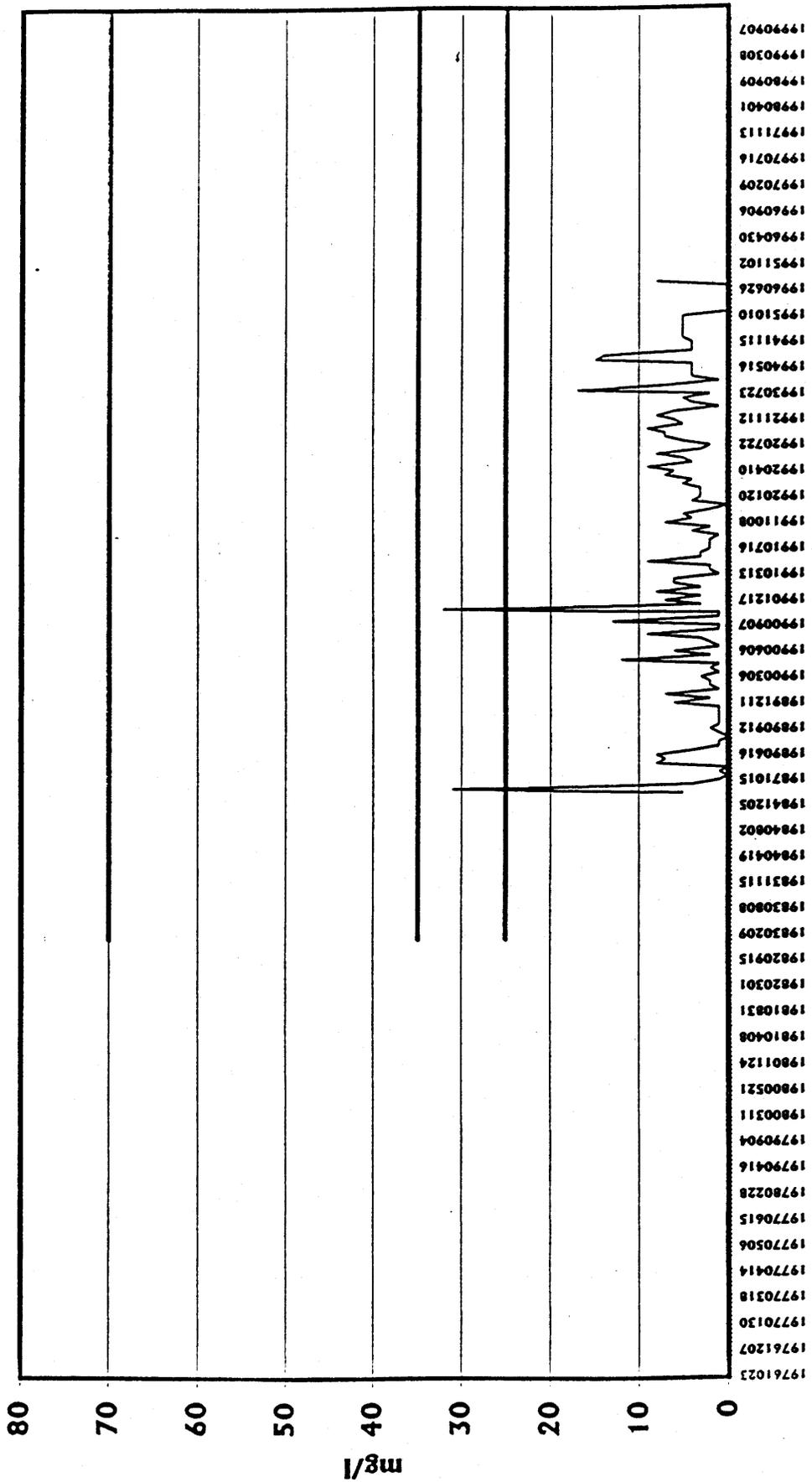
Cottonwood Mine Water Discharge Site 004

*Quality*

**INSERT COTTONWOOD MINE**  
**@ MILLER CANYON**  
**QUALITY GRAPH**  
**PARAMETER: TOTAL SUSPENDED SOLIDS**

# Cottonwood Mine Discharge @ Miller Canyon

\* Data Gaps Represent Times Of No Flow



— Total Suspended Solids — 30 Day Average — 7 Day Average — Daily Maximum

**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

Cottonwood Mine Water Discharge Site 004

*Quality*

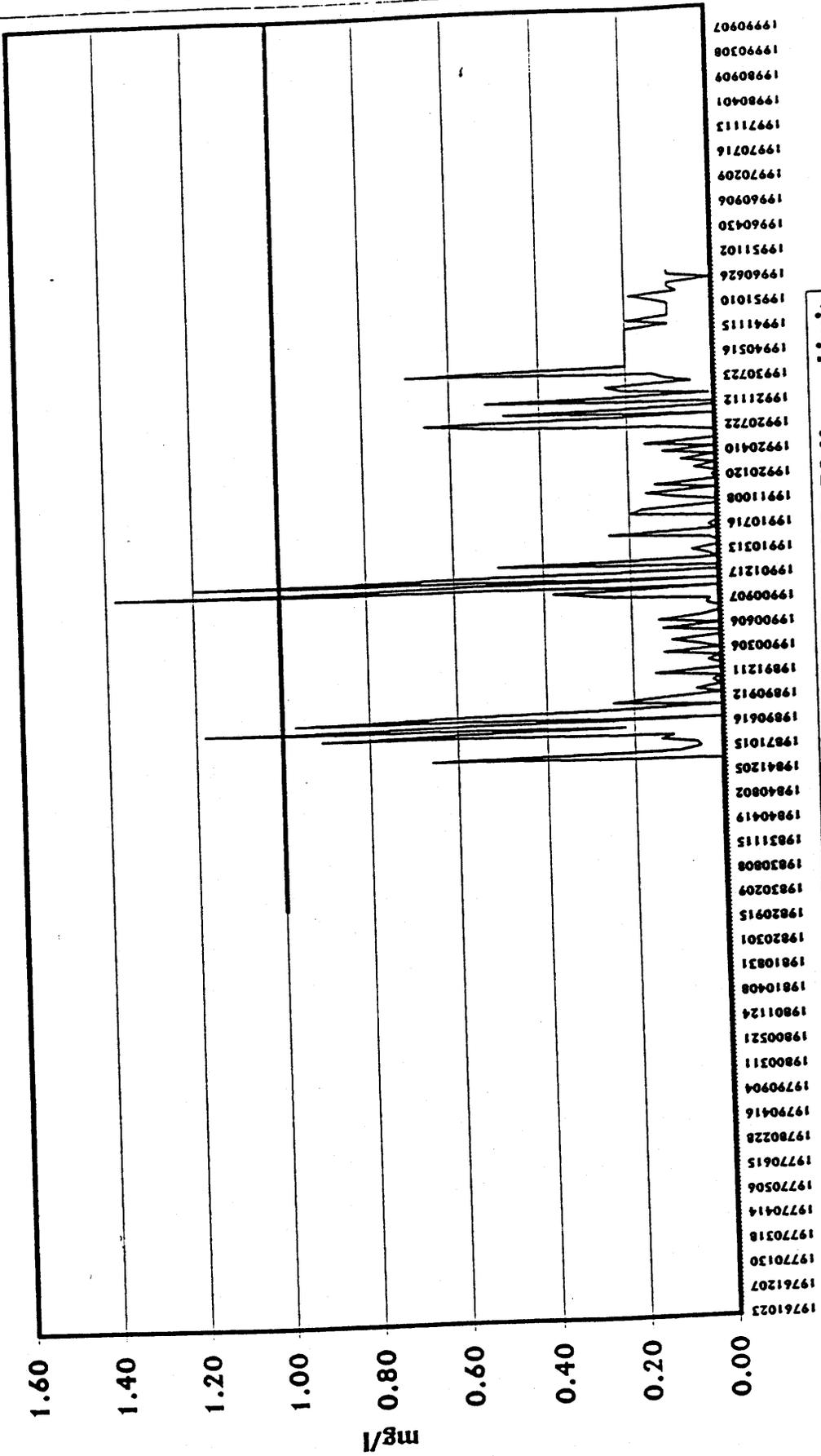
**INSERT COTTONWOOD MINE**  
**@ MILLER CANYON**  
**QUALITY GRAPH**  
**PARAMETER: TOTAL IRON**

04/07/2000

Cottonwood Mine

# Cottonwood Mine Discharge @ Miller Canyon

\* Data Gaps Represent Times Of No Flow



— Total Iron — Dissolved Iron — UPDES Upper Limit

**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

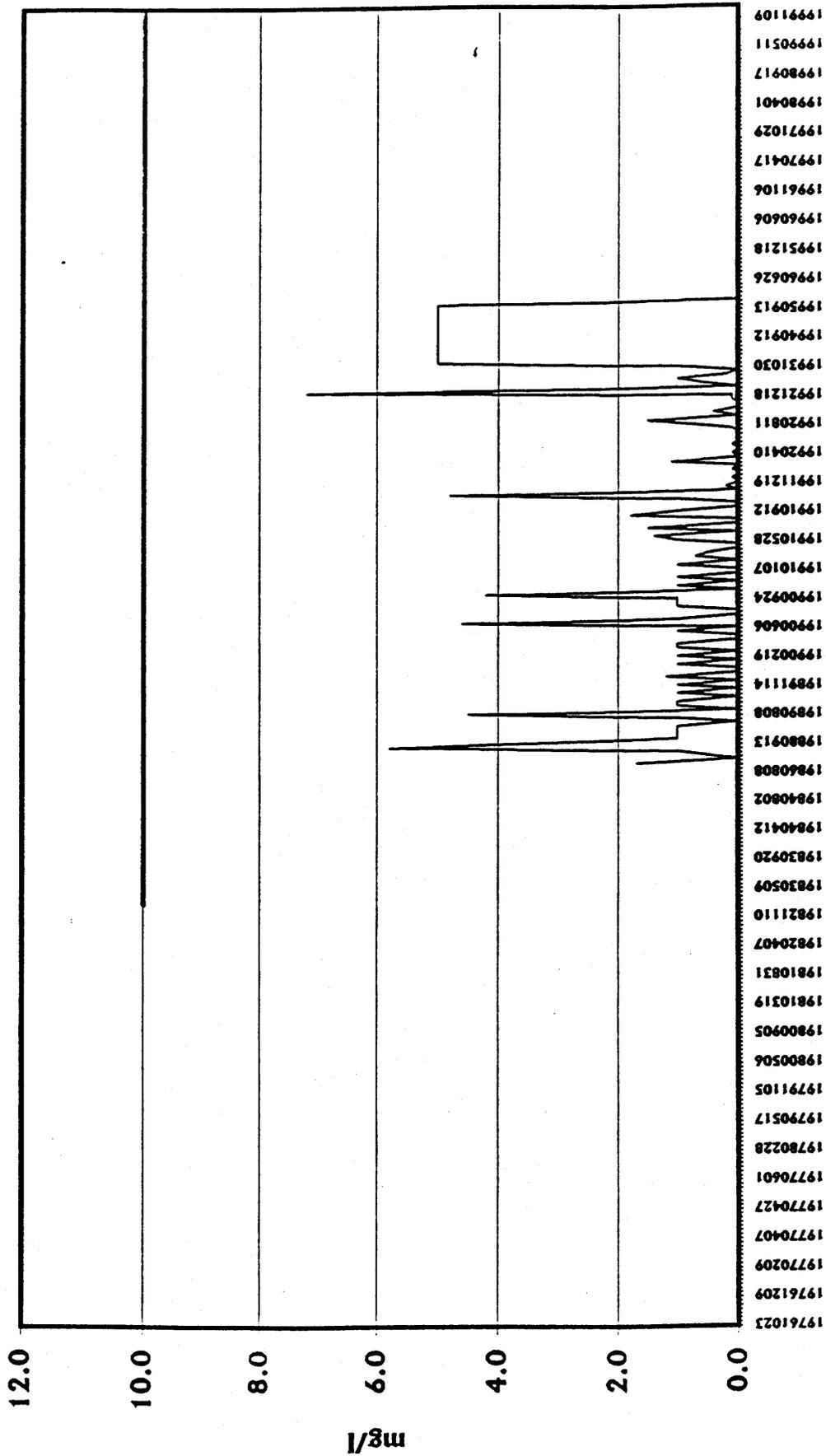
Cottonwood Mine Water Discharge Site 004

*Quality*

**INSERT COTTONWOOD MINE**  
**@ MILLER CANYON**  
**QUALITY GRAPH**  
**PARAMETER: OIL & GREASE**

### Cottonwood Mine Discharge @ Miller Canyon

\* Data Gaps Represent Times Of No Flow



— Oil & Grease — Daily Maximum

**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

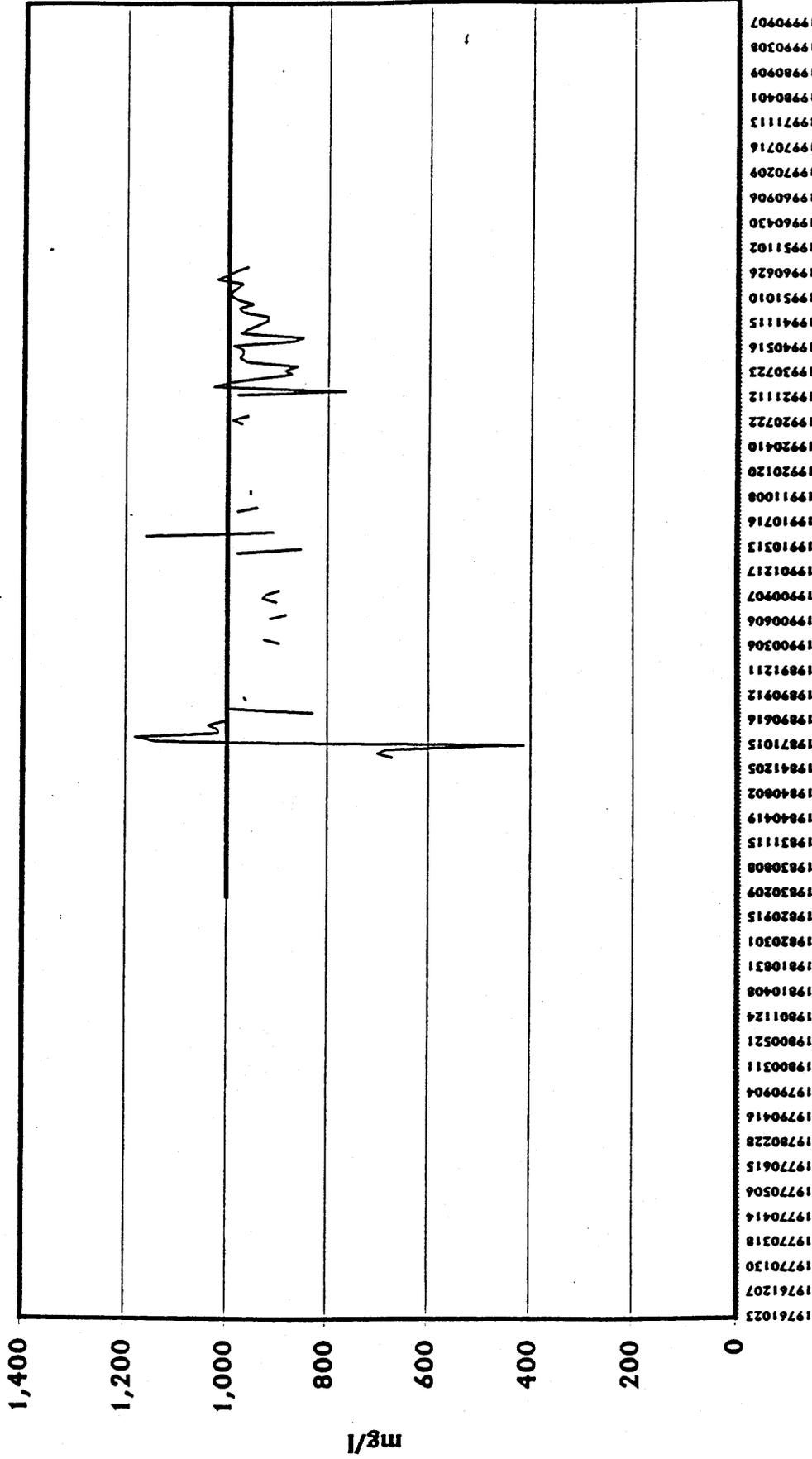
Cottonwood Mine Water Discharge Site 004

*Quality*

**INSERT COTTONWOOD MINE**  
**@ MILLER CANYON**  
**QUALITY GRAPH**  
**PARAMETER: TOTAL DISSOLVED SOLIDS**

# Cottonwood Mine Discharge @ Miller Canyon

\* Data Gaps Represent Times Of No Flow



— Total Dissolved Solids — Daily Maximum

**MINE ID**  
**COTTONWOOD MINE**  
**MSHA ID. 42-01944**

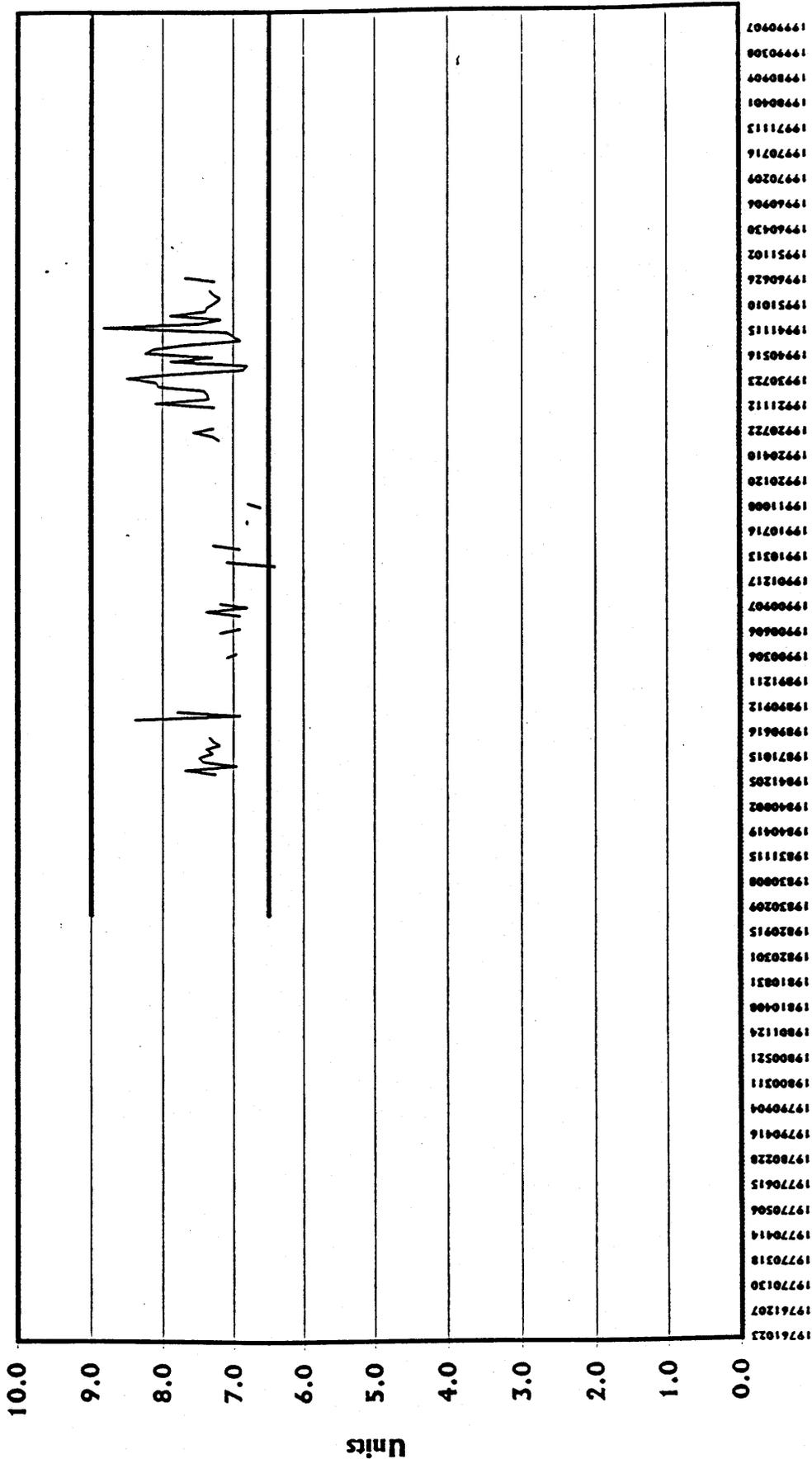
Cottonwood Mine Water Discharge Site 004

*Quality*

**INSERT COTTONWOOD MINE**  
**@ MILLER CANYON**  
**QUALITY GRAPH**  
**PARAMETER: Ph**

# Cottonwood Mine Discharge @ Miller Canyon

\* Data Gaps Represent Times Of No Flow



— pH — UPDES Lower Limit — UPDES upper Limit

## MINE ID

### DES-BEE-DOVE COMPLEX

DESERET MINE MSHA ID. 42-00988

BEEHIVE MINE MSHA ID. 42-00082

LITTLE DOVE MINE MSHA ID. 42-01393

### *Quantity & Quality Data*

Des-Bee-Dove complex did not intercept groundwater, no quantity or quality data available.  
Water for dust suppression and culinary purposes was supplied from outside sources.