

be constructed to carry the flow from each of the small drainages through the road sections. These small ditches will be protected with riprap and a typical section is shown on Figure 3-1.

Velocities were computed using the Manning's equation. The channel roughness coefficient, n , was estimated based on values for small mountain streams where the depth of flow is small when compared to the size of bed material. In Open-Channel Hydraulics, Chow suggested n values range from .040 to .070 for small, steep mountain streams with cobbles and boulders. Values were also determined from the paper Two Approaches for Estimation of Manning's n in Mountain Streams, by Weache, et al. at the Wyoming Water Research Center. Based on their method, n is estimated to range from .065 to .085. A value of .06 was used in all of the computation. It was felt that the turbulence would be very high since the average depth of flow would range from .5 feet to 1.0 feet and the riprap size would range from 1.0 feet to 2.0 feet.

While this value is higher than those typically used, (.035 - .045), it is felt justified because the depth of flow is much greater than the stone size and this is not the case for the Belina Haul Road drainages.

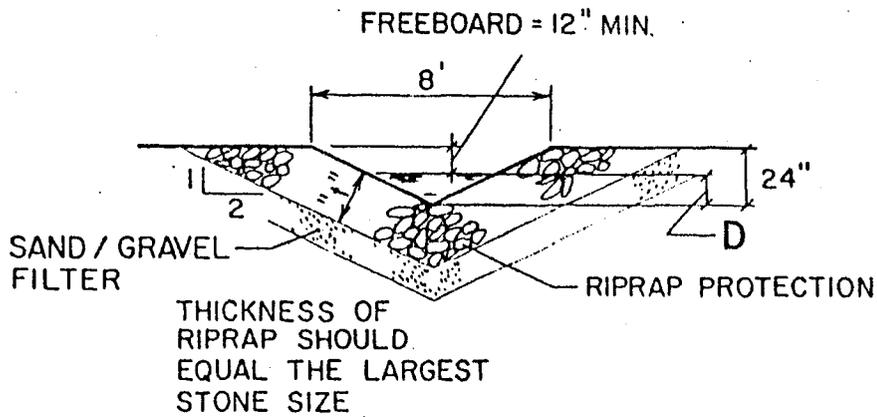
3.3.1 Small Drainages

Flows vary from 3.2 to 8.3 cfs for the five smallest drainages. The small "V" ditches were designed based on the maximum flow of 8.3 cfs. This will provide a conservative design and will standardize them making construction easier. The velocity will vary from about 4 feet per second for the 15 percent slope to about 10 ft/sec. on the steeper slope of 70 percent. Details for each of the crossings are shown on Figure 3-1.

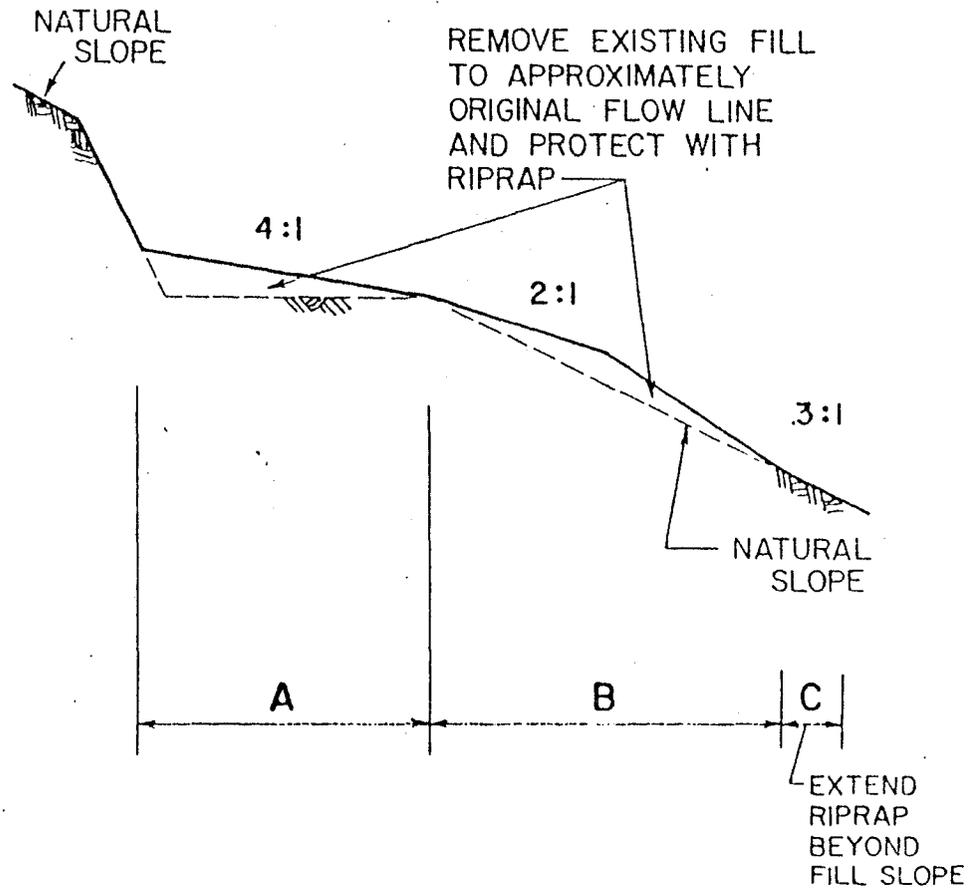
VALLEY CAMP OF UTAH
 BELINA HAUL ROAD RECLAMATION
 SMALL DRAINAGE
 HYDRAULIC DATA

Figure 3-1

25



TYPICAL "V" DITCH FOR SMALL DRAINAGES



TYPICAL STREAM CROSSING FOR SMALL DRAINAGES

**VALLEY CAMP OF UTAH
 BELINA HAUL ROAD RECLAMATION
 SMALL DRAINAGE
 HYDRAULIC DATA**

Figure 3-1a

AREA	DRAINAGE	CHANNEL SLOPE	Q in cfs.	*D Depth Ft.	VELOCITY Ft./Sec.	RIPRAP CLASS
*A	1	15%	6.7	.85	5	I
	2	15%	4.3	.70	4	I
	3	15%	3.2	.65	4	I
	5	15%	4.0	.70	4	I
	6	15%	8.3	.90	5	I
*B	1	63%	6.7	.65	9	II
	2	63%	4.3	.55	8	II
	3	55%	3.2	.50	7	II
	5	70%	4.0	.50	8	II
	6	70%	8.3	.70	10	II
*C	ALL					II

*SEE FIGURE 3-1
 FOR LOCATION

3.3.2 Bowl Crossing

Design of the channel for the Bowl Crossing drainage (Area 4) was done in a similar manner. The 100 year design flood is estimated at 44 cfs. It is proposed that a small overland flow channel be constructed through the rock fill after the soil fill has been removed, (See Section 4.3.1) which will have a bottom width of four feet. Figure 3-2 shows a typical section through the fill. The existing culvert will remain in place and will carry the smaller flows. The new overland flow channel will carry the flood flows for the more infrequent storms and also if the culvert should become clogged. The velocity in the new channel will vary from 8 ft/sec. across the rock fill where the slope is about 15 percent to 13 ft/sec. down the steeper natural slope. Details of the channel and hydraulic data are shown on Figure 3-2.

The design for Eccles Creek drainage is covered in Section 3.5.

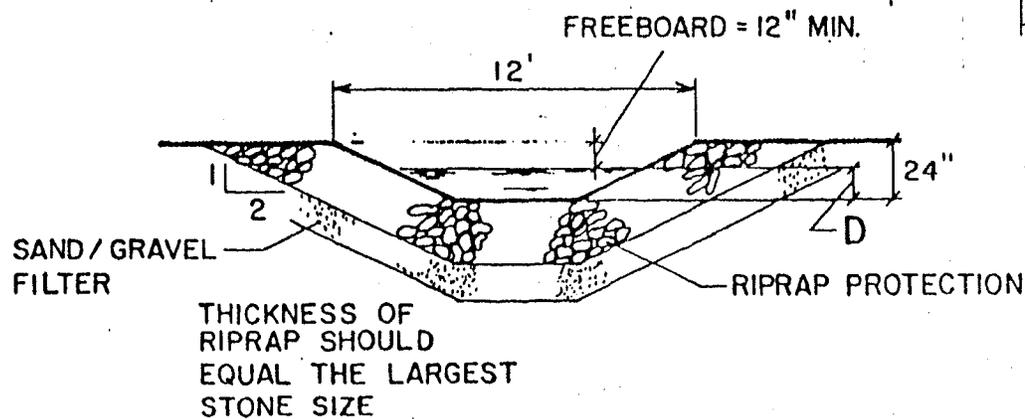
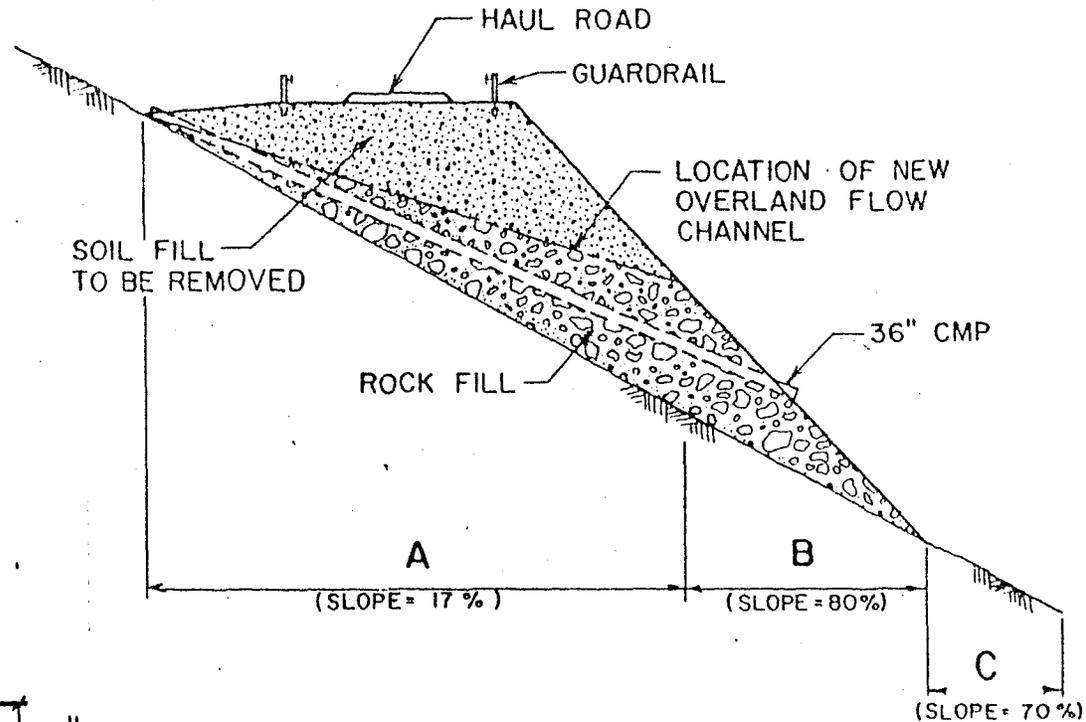
3.4 Riprap Design

Riprap sizing was selected based on the above velocities using USBR Engineering Monograph #25 and FHWA Hydraulic Engineering Circular #11. The d_{50} size is four inches on the flatter slopes (Class I) and is nine inches on the steeper slopes (Class II). Gradation for the different classes of riprap are shown in the Table 3.3.

**VALLEY CAMP OF UTAH
BELINA HAUL ROAD RECLAMATION
BOWL CROSSING
HYDRAULIC DATA**

Figure 3-2

AREA	D Depth Ft.	VELOCITY Ft./Sec.	RIPRAP CLASS
A	1.0	8	II
B	.70	13	II
C	.70	13	II



SECTION THRU BOWL CROSSING

TYPICAL DITCH
FOR BOWL CROSSING
DESIGN Q=44 cfs.

TABLE 3.3
RIPRAP DESIGN

<u>Class</u>	<u>Max.</u>	Size, In <u>d₅₀</u>	<u>Min.</u>
I	8	4	1 1/2
II	24	18	6
III	36	24	8

Riprap should be reasonably well graded from the maximum size down to the minimum. The concrete removed from the project will be used as part of the riprap protection and will be broken so as not to be larger than the d_{50} size and will not makeup more than 15 percent of the volume. The riprap will extend beyond the toe of the fill slopes a minimum of five feet to provide energy dissipation at the termination of the riprap channels, the energy dissipator will be small mounds of riprap approximately 18"-24" high to help spread the flows out and reduce erosion.

A filter blanket will be constructed and placed between the riprap and the native material. The filter will be constructed of a well-graded gravel with a minimum size of about 3/16" up to a maximum required by the riprap class and is shown below in Table 3.4.

TABLE 3.4
RIPRAP FILTER DESIGN

<u>RIPRAP CLASS</u>	<u>MAX, in</u>	<u>MIN, in</u>	<u>THICKNESS, in</u>
I	*		
II	4	3/16	9
III	6	3/16	9

*Not required; native material acceptable - -

3.4.1 Small Drainages

The existing native material appears to be sandy gravelly material based on field inspections. The gradation is estimated to be from 3 inches down to less than 1/8" with a d_{50} size of about 3/8". This material will meet the requirements for a filter material for the Class I riprap, since the d_{15} Riprap/ d_{85} Base is less than 5.

3.4.2 Bowl Crossing

Based on field observations and discussions with the mining operation people, it appears that the blast rock in the Bowl crossing fill has a maximum size of 18 inches to 36 inches. This would provide adequate protection based on the above velocities. If, when the soil fill is removed and the channel is constructed, it is determined that the actual blast rock is not large enough, additional riprap protection (Class III) will be provided.

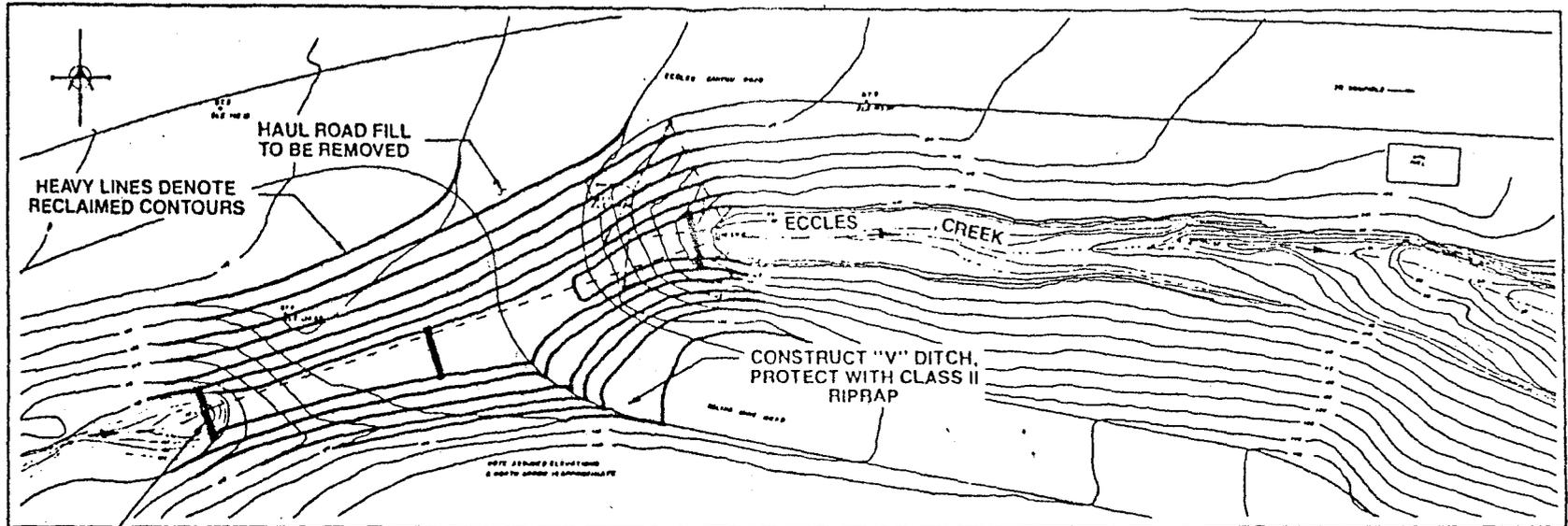
After excavating the soil fill at the Bowl Crossing the base material will be examined to determine if it meets the filter criteria. If it does not, a filter will be constructed meeting the gradation shown in Table 3-4.

3.5 Eccles Creek

The drainage above the Belina Haul in Eccles Creek is the largest with an area of 2,047 acres. The 100 year 24 hour storm is estimated to be about 378 cfs. The channel slope in this area is estimated to be 2 - 2.5 percent. This channel will have a low flow section with a width of 12 feet. The velocity for the 100 year storm will be approximately 6.6 feet per second with depth varying from about 1.5 feet in the floodway to 3.5 feet in the main channel. A Manning's n of .060 was used in computing the flow depth and velocities for Eccles Creek. Based on this velocity and depth of flow, the Class II (24 inch)

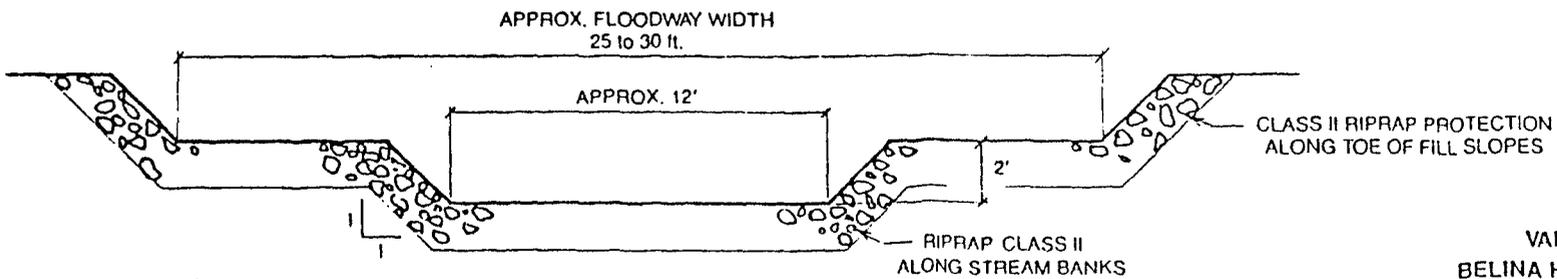
riprap will be required. The channel will be constructed with similar geometry to the recently reconstructed channel below the Belina Haul Road turnout. A typical section through this channel is shown in Figure 3-3. The design of this channel will be similar to the recently completed channel reconstruction just downstream. This will maintain continuity in the channel design. The channel will include several drop structures to maintain a reasonable stream gradient of 2.5 percent or less. These drop structures will be constructed of large rock so that they will maintain a natural appearance. Figure 3-3 shows a plan view of the proposed new alignment after the fill is removed.

The velocity and depth were also computed for the average annual flow to evaluate the effects on fish passage, and are presented in Table 3.3. The average annual flow is estimated to be about 28 cfs. This flow was computed using the USGS report, "Methods for Estimating Peak Discharges and Flood Boundaries of Streams in Utah", WRI 83-4129. In addition to the average annual flow, depths and velocities were computed for several other flows.



RIPRAP DROP STRUCTURES
CLASS III (TYPICAL 3 PLACES)

ECCLES CREEK PLAN VIEW



TYPICAL SECTION THROUGH ECCLES CREEK

VALLEY CAMP OF UTAH
BELINA HAUL ROAD RECLAMATION
ECCLES CREEK CHANNEL DESIGN
PLAN AND SECTION

Figure 3-3

TABLE 3.3
ECCLES CREEK CHANNEL HYDRAULICS

<u>Discharge, cfs</u>	<u>Depth, Ft.</u>	<u>Velocity, Ft./Sec.</u>	<u>Channel Slope %</u>
15	.55	2.2	2.0
20	.65	2.5	2.0
28*	.80	2.8	2.0
30	.85	2.9	2.0

*Average annual flow

These are within the reported sustainable swimming speed for trout, which is two to six feet per second as reported in Fisheries Handbook, by Milo C. Bell, 1986. These velocities were not related to depth of flow in Milo C. Bell's report.

3.6 Concrete Ditch: Sta 71+00 to 82+00

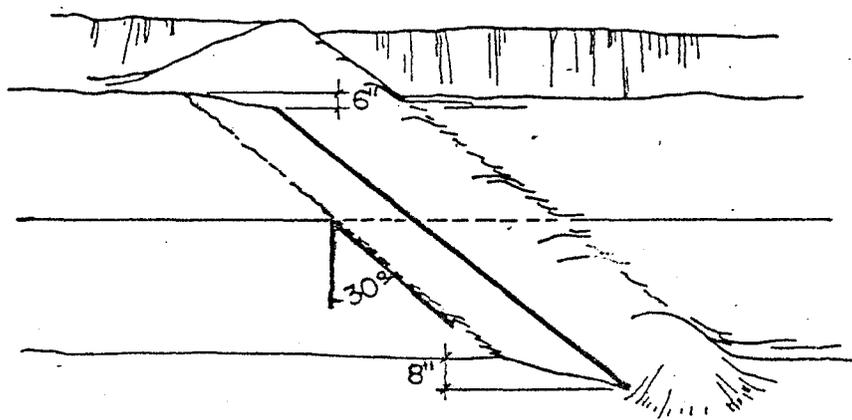
A riprap ditch will be constructed at the base of the cut slope from about Sta. 71+00 to Sta. 82+00 where the haul road intersects Eccles Creek as shown on Figure 2-7 and Figure 2-8. Class I riprap will be placed over the existing concrete ditch with a minimum depth of about 12 inches. The reclaimed back slope of the road surface will contain the design flows. The last 100 feet of this ditch has a slope of about 35 percent where it drops down into Eccles Creek. This reach will be constructed similar to those in Figure 3-1. The ditch will have side slopes of 2H:1V and be protected with Class II riprap.

3.7 Water Control Bars

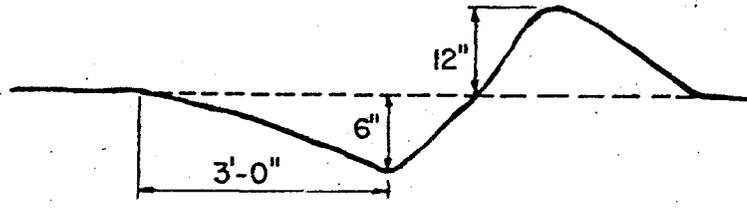
Water control bars will be constructed to reduce erosion of the recontoured haulroad. Figure 3-4 shows a typical waterbar. These structures will be spaced approximately 100 feet apart along the road. Waterbars will be placed more frequently if, during the final reclamation work it is determined they would be necessary to control runoff. Class I riprap protection will be included in the construction of the water control bars. The riprap will be placed at the point where the flow breaks over the edge of the old road bed.

VALLEY CAMP OF UTAH
BELINA HAUL ROAD RECLAMATION
TYPICAL WATERBAR
DETAILS

Figure 3-4



PLAN



SECTION

SECTION 4.0 - RECLAMATION PROCEDURES

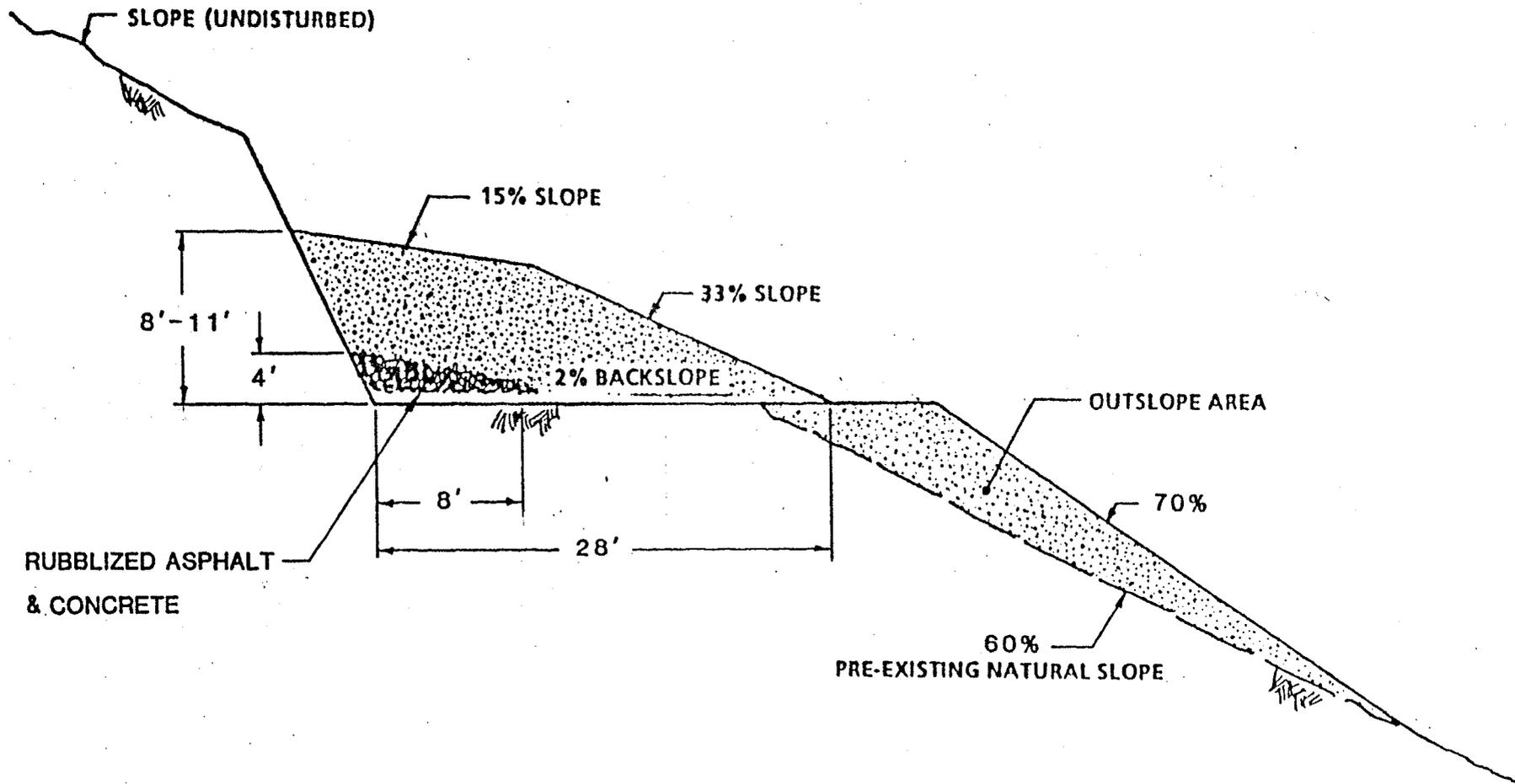
4.1 Road Surface Removal

Reclamation of the road will begin with the removal of the asphaltic concrete road surface and the Portland cement concrete lining of the water control ditch which is located at the toe of the road cut slope. A portion of the cement concrete ditch (from station 71+00 to station 82+00) will be left in place and backfilled with riprap, as discussed in Section 3.6. After the road surface is reclaimed and the recontoured surface sloped back towards the hill at approximately four percent, this water control structure will convey water to Eccles Creek. Leaving this portion of the concrete ditch in place will minimize infiltration to the fractured rock hillside, thereby lessening the chance of slope failure. This water control structure will be monitored for bond release for the same period as the rest of the reclamation. The cement concrete lining will be rubblized to eliminate any slippage surface when it and the asphaltic concrete and fill material are placed for disposal. The larger pieces of cement concrete will be salvaged and used as riprap if they meet the specifications for riprap discussed in Section 3.4.

The asphaltic concrete will then be broken and will be placed against the toe of the cut slope over the previously placed broken Portland cement concrete. The asphaltic concrete will be piled approximately four feet deep adjacent to the cut slope and graded to ground level seven to eight feet out from the toe of the slope (Figure 4-1). There are approximately 3,500 in place cubic yards of asphaltic concrete to dispose of. To insure a competent fill and prevent piping, the asphaltic concrete will be placed in an engineered manner and compacted. The asphalt will be broken by ripping it with the

VALLEY CAMP OF UTAH
BELINA HAUL ROAD RECLAMATION
TYPICAL CROSS SECTION - STABLE FILL
FINAL CONTOURED SURFACE

Figure 4-1
(NOT TO SCALE)



scarifiers on a motor grader or equivalent machine. The scarifiers are approximately 17-20 inches apart. It is expected, therefore, that their use will create pieces of asphalt less than two-feet square. If necessary a dozer will be walked over the ripped asphalt to further reduce the size. The rubblized asphalt will then be bladed to the toe of the cut slope by a motor grader or equivalent equipment. The asphalt will be compacted in one foot lifts. Once the asphaltic concrete surface has been removed, the gravel road base material will be ripped or disked to eliminate compaction and to promote water infiltration and root penetration.

After the asphalt is placed and compacted it will be covered with soil removed from the out slope fill portions of the road, to a sufficient depth to prevent it from being exposed to the atmosphere. The surface of the replaced soil will be contoured as shown in Figure 4-1 to reestablish a drainage pattern similar to that which was present prior to mining.

4.2 Corrugated Metal Pipe Removal

Seven of the eight corrugated metal pipe (CMP) culverts buried in the Belina haul road will be removed during reclamation. These channels, which include Eccles Creek, will be cleared of fill material, recontoured and riprapped as necessary to prevent excessive erosion. The riprap material will consist of large competent rock and/or broken pieces of cement concrete as discussed in Section 3.4 of this report. The removed CMP will be salvaged if possible, or disposed of in a section of the underground mine workings as detailed in Section 784.13 of Valley Camp's approved Mining and Reclamation Plan Permit Number UT0013.

The remaining CMP is the large culvert through the fill in the Bowl. As agreed to during a site visit with UDOGM personnel, this CMP will be left in place unplugged. The reconstruction of a channel through the fill will provide a significant overflow safety factor in the unlikely event that the CMP would become dammed or plugged.

4.3 Recontouring

The recontoured areas will be developed by placing soil material excavated from two major fill areas (the Bowl crossing and the Eccles Creek crossing) on the "cut" portions of the road against the cut slopes as buttress fills. Additionally, portions of the road outslope fill areas are considered to be of questionable stability and will therefore also be excavated and placed in the buttress fills. Approximately 30,000 to 35,000 cubic yards of material will be excavated and placed during this recontouring effort. Drainage crossovers will be constructed across this recontoured surface to shorten the slope length and prevent excessive erosion (refer to Section 3.6 for details). These cutouts or crossovers will be riprapped to prevent the development of rills and gullies.

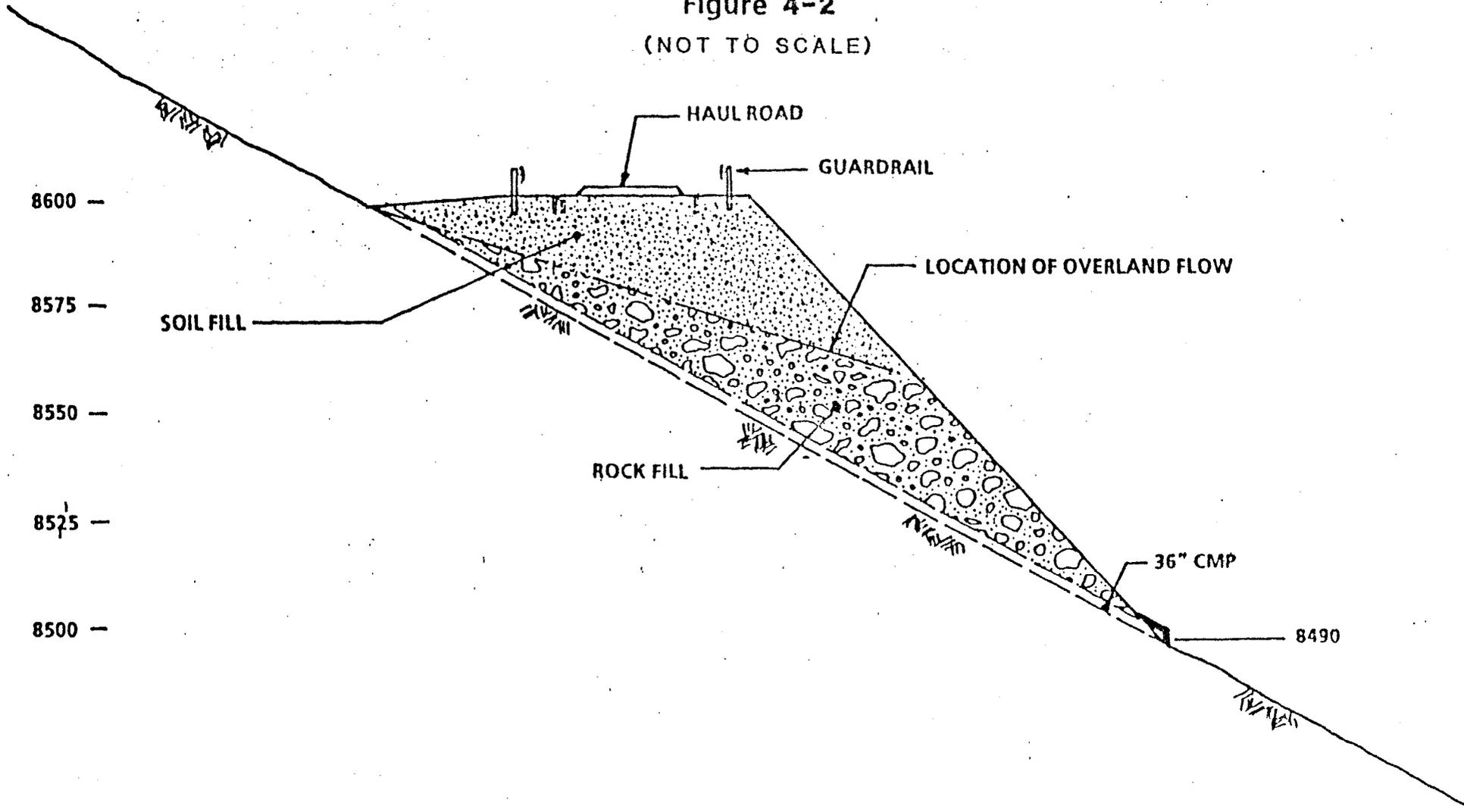
The reclaimed surface of the haul road will in most cases, slope to the outside. In some cases, however, it will slope back to the hill. Approximately the first 1,100 feet of the road, (from station 82+00 to station 71+00 on the CEI, 9/83 drawings) has a very steep outslope (approaching 120 percent) toward Eccles Crèek. To keep water off of the face of this area and protect Eccles Creek the recontoured surface will pitch into the hill at approximately four percent (Figure 2.8). Runoff will be collected in a riprapped ditch constructed at the base of the road cut slope and will be conveyed down the hill and released to Eccles Creek approximately at the haul road/creek junction. The design of this ditch is addressed in Section 3.5 of this report.

4.3.1 Bowl Crossing

The largest fill is located near the midpoint of the haul road. It consists of blast rock on the bottom and soil on the top. The soil portion (approximately 15,000 yd³) will be excavated and an overland channel will be developed through the remaining rock. The CMP will be left in place unplugged. This new drainage will be a permanent

VALLEY CAMP OF UTAH
BELINA HAUL ROAD RECLAMATION
THE BOWL CROSSING

Figure 4-2
(NOT TO SCALE)



structure constructed from competent rock which meets riprap specifications. In addition, energy dissipaters will be utilized, if necessary, to control the flow of water until it reaches the natural drainage channel. Figure 4.2 is a cross section showing the present road surface, fill slopes, and the projected location of the overland flow channel.

4.3.2 Eccles Creek Crossing

The second major fill is located at the intersection of the Belina Haul Road and the Eccles Canyon Road. This fill consists primarily of blast rock from the development of the first section of the haul road and is covered with soil. Again, only the soil portion will be removed. The remaining rock will be used as riprap for the rehabilitation of Eccles Creek, provided it meets riprap specifications. Any unused rock will be disposed of as discussed in Section 784.13 of Valley Camp's approved mining and reclamation plan (UT 0013). The corrugated metal pipe will be removed and disposed of similarly. These activities will allow Eccles Creek to return to its natural channel.

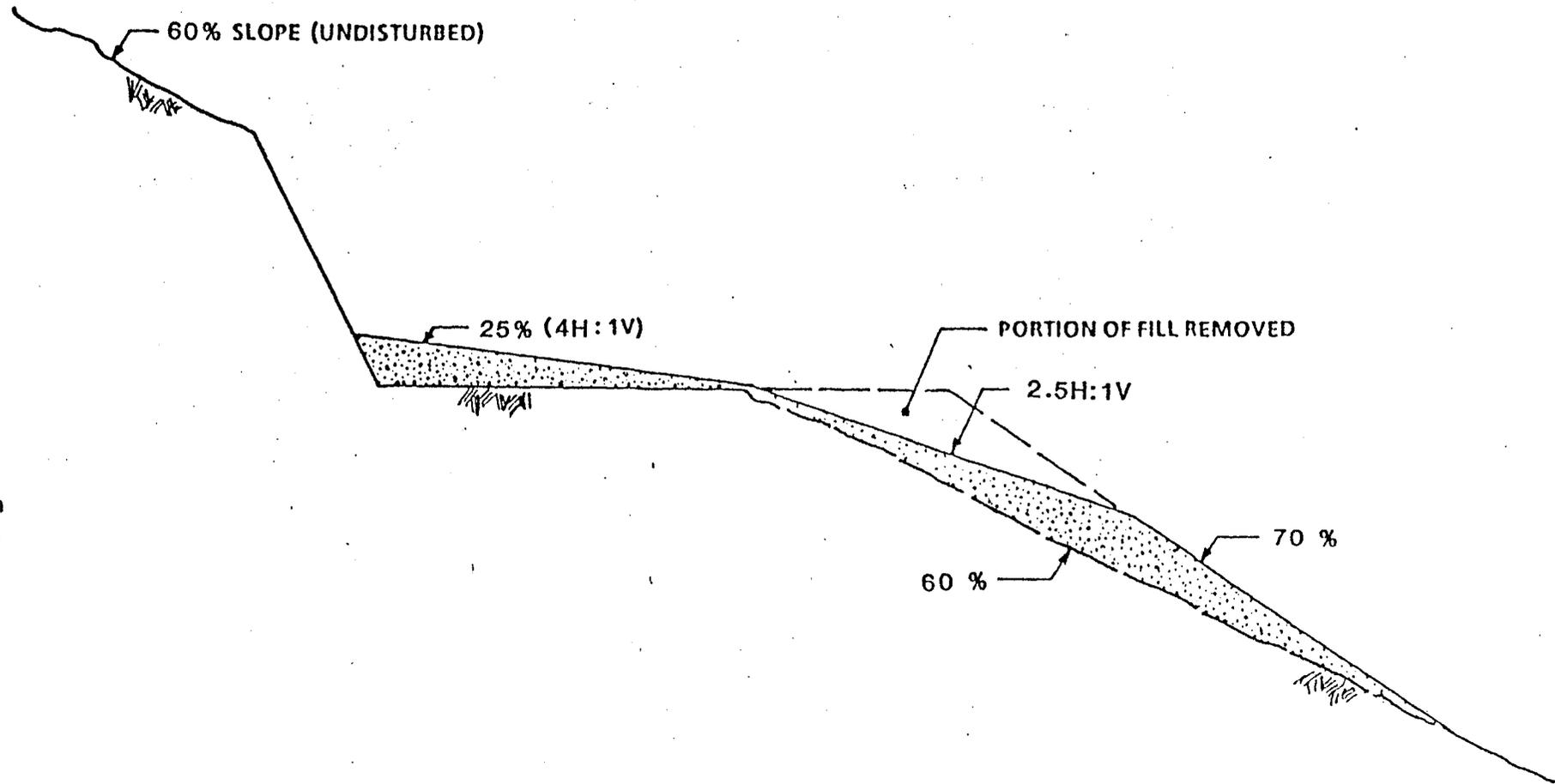
4.3.3 Unstable Fill Slopes

The third area from which backfill material will be obtained is from the portions of the outslope road fills that have been determined to be potentially unstable (Table 2.1). A sufficient quantity of fill will be removed from each of these fill slopes to reduce the potential of the slope failing. To initiate reclamation of these fill slopes, the guard rails will be removed and the support post and metal rails will be salvaged or disposed of.

The excavated material (Figure 4.3) will be removed using a backhoe or a similar machine to reach down the slope to retrieve material. As a result of this operation, the road edge will be cut back toward the

VALLEY CAMP OF UTAH
BELINA HAUL ROAD RECLAMATION
TYPICAL CROSS SECTION - UNSTABLE FILL
FINAL CONTOURED SURFACE

Figure 4-3
(NOT TO SCALE)



toe of the cut slope ten to fifteen feet. With the removal of this material the final surface will have an approximate slope of 2.5H:1V. The excavated material will be placed on the remaining road surface thereby creating an outslope of approximately 4H:1V.

The quantity of fill material estimated to be removed from the various sources and the estimate of the storage capacity that can be developed from utilizing the road surface is given in Table 4.1.

TABLE 4.1
 VALLEY CAMP OF UTAH
 BELINA HAUL ROAD RECLAMATION
SOIL DISPOSAL VOLUMETRICS

Fill Material To Remove:

o Eccles Creek Fill	4,000 yd ³ <u>+</u>
o The Bowl Crossing Fill	15,000 yd ³ <u>+</u>
o Haul Road Outslopes	6,000 yd ³ <u>+</u>
o Remaining CMP Removal	1,500 yd ³ <u>+</u>
o Asphaltic Concrete and Broken Cement Concrete	<u>5,000 yd³<u>+</u></u>
GRAND TOTAL	<u>31,500 yd³<u>+</u></u>

Storage Capacity:

o Haul Road with Stable Outslopes (3,470 feet)	25,000 yd ³ <u>+</u>
o Haul Road with Portion of Outslopes Removed (2,780 feet)	6,000 yd ³ <u>+</u>
o Backslope Section of Road (1,250 feet)	3,000 yd ³ <u>+</u>
GRAND TOTAL	<u>34,000 yd³<u>+</u></u>

4.4 Topsoiling

During the construction of the haul road the overlaying topsoil and subsoils were excavated and stockpiled where possible, sidecast or used as fill. During the reclamation of the haul road some of the material which was sidecast and/or used for fill material will be excavated and used to recontour the road. The suitability of this material as a growth medium is evidenced by the vegetation currently growing on it and in fact very similar material has already been approved for use as topsoil at this mine by the Utah Division of Oil Gas and Mining. Prior to using this material as topsoil however, it will be analyzed for pH, texture, electrical conductivity, calcium, magnesium, sodium, organic matter, phosphorous and potassium. Because this material is a mixture of topsoil and subsoil and because no segregated topsoil stockpiles exist at this mine "topsoil" will not be placed on the regraded surface.

4.5 Seed Bed Preparation

The soil removed from the large fills will be replaced using dozers and scrapers. Soil removal from the potentially unstable outcrops will be accomplished using a backhoe or similar equipment. The soil replaced by scrapers and dozers will be scarified to a depth sufficient to allow root penetration whereas the soil placed by the backhoe will not require loosening since it will be subject only to limited packing. The final recontoured surface will then be disked or tracked on the contour prior to seeding.

4.6 Seeding

Seeding will follow the procedures and seed mixes outlined in Valley Camp's approved Mining and Reclamation plan, Permit Number UT 0013.

Areas of the haul road out slopes and cut slopes which will not be disturbed by reclamation activities will be subjected to a statistically valid vegetation survey at the time to determine the adequacy of the existing vegetation when compared to reference areas identified in Mining Permit Number UT-0013. If it is determined necessary, these undisturbed areas will be interseeded or interplanted with shrubs.

4.7 Fertilizing

A chemical analysis will be performed on samples of the soil which will indicate the nutrients and amounts necessary for proper plant growth. Fertilizer will be applied either just prior to or immediately following seeding.

4.8 Mulching

Mulch will be applied at approximately 2,000 pounds per acre, depending on the material of choice, and will follow application of the seed and fertilizer. The mulch will be straw or any of the other commonly used mulch materials. At the time of reclamation, where it is deemed necessary, a tackifying agent or some other means will be used to hold the mulch in place.

4.9 Erosion Control and Maintenance

During reclamation activities, interim erosion control measures such as filter fabric and straw bales will be used to control water flow. Once a drainage channel is established, these interim structures will be removed and the disturbed areas will be seeded, fertilized and mulched. At the conclusion of reclamation activities, runoff will be slowed by the proper placing of straw bales, filter fabric fences, riprap or mulch, in potential

problem areas. If runoff channels develop in excess of nine inches, the most applicable erosion control technique will be selected. For example, small erosion channels will be blocked with a filter fabric fence, a straw bale or some other material to slow the water and allow vegetation to establish.

4.10 Revegetation

The revegetated area will be monitored closely to ensure that a diverse, permanent vegetation cover capable of self-regeneration is developed. Revegetation success of the newly reclaimed haul road areas will be determined by following the techniques developed in Section 817.116 of Valley Camp's approved mining and reclamation plan, Permit Number UT-0013.

4.11 Reclamation Costs

Reclamation costs are summarized by task for the purpose of bonding costs. These cost estimates are made with the knowledge that the efficiency of workers and machinery may far exceed the normal rate because of the very limited work space, and the difficulty in scheduling of crews. The reclamation cost estimates are given in Table 4.2.

TABLE 4.2
RECLAMATION COST ESTIMATES

Remove Concrete and Asphaltic Concrete:		
Rip Portland Cement Concrete and Breakup Asphaltic Concrete	\$	3,500
Remove and Place Asphaltic Concrete (40 hrs. @ \$87.50/hr.)		2,800
Compact Asphaltic Concrete		1,600
Break and Remove Concrete Ditch		6,500
Rip/Scarify Road Base Material (65 acres) (8 hrs. @ \$75.00/hr.)		600
Remove corrugated Metal Pipes		8,000
Remove and Dispose Guard Rails, Posts, and Signs		5,800
Remove and Place Fill Material:		
20,000 yd ³ (Intersecting Drainage Fills)		50,000
7,000 yd ³ (Road Outslope Fills) (80 hrs. @ \$100/hr.)		8,000
Recontour Road Surface:		
10.0 Acres ± (80 hrs. @ \$100.00/hr.)		8,000
Construct Riprap Drainage Channels:		
8 each (@ 200 feet each)		32,000
Redistribute Topsoil Substitute (10 Acres x 6" Deep):		
8,100 yd ³ ± (@\$2.50/yd.)		20,000
Seedbed Preparation (Scarification, Disking, Harrowing)		1,000
Fertilizing, Seeding, and Mulching:		
Seed: (10 acres @ 24.0 lbs/acre @ \$15.00/P.L.S. lb.)	\$3,600	
Fertilizer: (10.0 acres @ \$425.00/acre)	\$4,250	
Mulching: (10.0 acres @ \$500.000/acre)	\$5,000	
Equipment and Labor:	<u>\$2,000</u>	
Total		14,850
Monitoring		<u>1,000</u>
TOTAL		<u>\$163,650</u>
10% Mobilization and Demobilization		16,365
15% Profit and Administration		24,548
Maintenance-10 Acres @ \$100.00/ac/yr.		<u>1,000</u>
TOTAL BONDING COST		<u>\$205,563</u>



MORRISON-KNUDSEN ENGINEERS, INC.
A MORRISON KNUDSEN COMPANY

WESTERN REGION OFFICE
MINERALS AND ENVIRONMENTAL DIVISION
720 PARK BLVD./P.O. BOX 79
BOISE, IDAHO U.S.A. 83707
PHONE: (208) 386-5000. TELEX: 368439

Last Revised, July 1989
RECLAMATION AGREEMENT

1007
1/11/90

Permit Number ACT/007/001
Date Permit Issued 8-24-84
Effective Date of Agreement 11-30-89

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
(801) 538-5340

COAL RECLAMATION AGREEMENT
--oo0oo--

For the purposes of this RECLAMATION AGREEMENT the terms below are defined as follows:

"PERMIT" (Mine Permit No.) ACT/007/001 (County) Carbon

"MINE" (Name of Mine) Belina Complex

"OPERATOR" (Company or Name) Valley Camp of Utah, Inc.
(Address) Scofield Route
Helper, Utah 84526

"OPERATOR'S REGISTERED AGENT" (Name) W. L. Wright, President & Chief Operating Officer
(Address) Scofield Route
Helper, Utah 84526
(Phone) (801) 448-9456

"COMPANY OFFICERS": James L. Litman, Vice President & Chief Executive Officer

"BOND TYPE" (Form of Bond) Performance

"BOND" (Bond Amount-Dollars) 2.3 Million
(Year-Dollars) 1989

INSTITUTION (Bank or Agency) FEDERAL INSURANCE COMPANY
POLICY OR ACCOUNT NUMBER 8099-56-50

"LIABILITY INSURANCE" (Exp.) (Insurance Company) The Home Indemnity Company

"STATE": Utah (Department of Natural Resources)
"DIVISION": Division of Oil, Gas and Mining
"DIVISION DIRECTOR": Dianne R. Nielson

EXHIBITS:

		Revision Dates		
"SURFACE DISTURBANCE"	Exhibit "A"	_____	_____	_____
"BONDING AGREEMENT"	Exhibit "B"	_____	_____	_____
"LIABILITY INSURANCE"	Exhibit "C"	_____	_____	_____
"STIPULATION TO CHANGE BOND"	Exhibit "D"	_____	_____	_____

RECLAMATION AGREEMENT

This RECLAMATION AGREEMENT (hereinafter referred to as "Agreement") is entered into by the Operator.

WHEREAS, on 8-24, 1984, the Division approved the Permit Application Package, hereinafter "PAP", submitted by Valley Camp of Utah, Inc., hereinafter "Operator"; and

WHEREAS, prior to issuance of a permit to conduct mining and reclamation operations on the property described in the PAP, hereinafter "Property", the Operator is obligated by Title 40-10-1, et seq., Utah Code Annotated (1953, as amended), hereinafter "Act", to file with the Division a bond ensuring the performance of the reclamation obligations in the manner and by the standards set forth in the PAP, the Act, and the State of Utah Division of Oil, Gas and Mining Rules pertaining to Coal Mining and Reclamation Activities, hereinafter "Rules"; and

WHEREAS, the Operator is ready and willing to file the bond in the amount and in a form acceptable to the Division and to perform all obligations imposed by the Division relating to the reclamation of the Property; and

WHEREAS, the Division is ready and willing to issue the subject a mining and reclamation permit upon acceptance and approval of the bond.

NOW, THEREFORE, the Division and the Operator agree as follows:

1. The provisions of the Act and the Rules are incorporated by reference herein and hereby made a part of this Agreement. Provisions of the Act or Rules shall supercede conflicting provisions of this Agreement.

RECLAMATION AGREEMENT

2. The Operator shall provide a legal description of the property including the number of acres approved by the Division to be disturbed by surface mining and reclamation operations during the permit period. The description is attached as Exhibit "A", and is incorporated by reference and shall be referred to as the "Surface Disturbance".
3. The Operator shall provide a bond to the Division in the form and amount acceptable to the Division ensuring the performance of the reclamation obligations in the manner and by the standards set forth in the PAP, the Act and the Rules. Said bond is attached as Exhibit "B" and is incorporated by reference.
4. The Operator shall maintain in full force and effect the public liability insurance policy submitted as part of the permit application. The Division shall be listed as an additional insured on said policy.
5. In the event that the Surface Disturbance is increased through expansion of the coal mining and reclamation operations or decreased through partial reclamation, the Division shall adjust the bond as appropriate.
6. The Operator does hereby jointly and severally agree to indemnify and hold harmless the State of Utah and the Division from any claim, demand, liability, cost, charge, or suit initiated by a third party as a result of the Operator or Operator's agent or employees failure to abide by the terms and conditions of the approved PAP and this Agreement.

RECLAMATION AGREEMENT

7. The terms and conditions of this Agreement are non-cancellable until such time as the Operator has satisfactorily, as determined by the Division, reclaimed the Surface Disturbance in accordance with the approved PAP, the Act, and the Rules. Notwithstanding the above, the Division may direct, or the Operator may request and the Division may approve, a modification to this Agreement.
8. The Operator may, at any time, submit a request to the Division to substitute the bonding method. The Division may approve the substitution if the bond meets the requirements of the Act and the Rules, but no bond shall be released until the Division has approved and accepted the replacement bond.
9. Any revision in the Surface Disturbance, the bond amount, the bond type, the liability insurance amount coverage, and/or the liability insurance company, or other revisions affecting the terms and conditions of this Agreement shall be submitted on the form entitled "Stipulation to Revise Reclamation Agreement" and shall be attached hereto as Exhibit "D".
10. This Agreement shall be governed and construed in accordance with the laws of the State. The Operator shall be liable for all costs required to comply with this agreement, including any attorney fees.
11. Any breach of the provisions of this Agreement, the Act, the Rules, or the PAP may, at the discretion of the Division, result in an order to cease coal mining and reclamation operations, revocation of the Operator's permit to conduct coal mining and reclamation operations and/or forfeiture of the bond.

RECLAMATION AGREEMENT

12. In the event of forfeiture, the Operator shall be liable for additional costs in excess of the bond amount which are required to comply with this Agreement. Any excess monies resulting from the forfeiture of the bond amount upon compliance with this contract shall be refunded to the appropriate party.

13. Each signatory below represents that he/she is authorized to execute this Agreement on behalf of the named party. Proof of such authorization is provided on a form acceptable to the Division and is attached hereto.

SO AGREED this 17th day of December, 19 89

STATE OF UTAH:

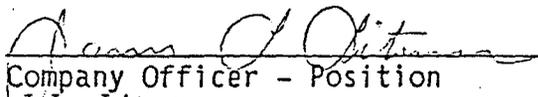


Dianne R. Nielson, Director
Division of Oil, Gas and Mining

OPERATOR:



Company Officer - Position
Walter L. Wright, President & COO



Company Officer - Position
J.L. Litman
Vice Chairman & CEO

NOTE: An Affidavit of Qualification must be completed and attached to this form for each authorized agent or officer. Where one signs by virtue of Power of Attorney for a company, such Power of Attorney must be filed with this Agreement. If the principal is a corporation, the Agreement shall be executed by its duly authorized officer.

EXHIBIT "A"
SURFACE DISTURBANCE
LEGAL DESCRIPTION

SURFACE DISTURBANCE

--oo00oo--

In accordance with the RECLAMATION AGREEMENT, the OPERATOR intends to conduct coal mining and reclamation activities on or within the surface DISTURBANCE as described hereunder:

Total acres of SURFACE DISTURBANCE 79

Legal Description of SURFACE DISTURBANCE:

T.13S., R.7E., SLB&M

Parts of Section 8, 9, 17, 16, 19 & 30

EXHIBIT "B"
BONDING AGREEMENT

Surety Bond

Last Revised, July 1989
Exhibit "B" - BONDING AGREEMENT
SURETY BOND

Permit Number ACT/007/001
Expiration Date _____

(FEDERAL COAL)
SURETY BOND
--oo00oo--

THIS SURETY BOND entered into and by and between the undersigned OPERATOR, and SURETY COMPANY, hereby jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns unto the State of Utah, Division of Oil, Gas and Mining, and, the U.S. Department of Interior, Office of Surface Mining Reclamation and Enforcement (OSMRE) in the penal sum of (\$ 2,300,000.00 *) (Surety Bond Amount) for the timely performance of reclamation responsibilities of the surface disturbance described in Exhibit "A" of this Reclamation Agreement.

This SURETY BOND shall remain in effect until all applicable rules and the OPERATOR's reclamation obligation have been met and released by the Division of Oil, Gas and Mining.

Terms for release or adjustment of this BOND are as written and agreed to by the DIVISION and the OPERATOR in the RECLAMATION AGREEMENT incorporated by reference herein, to which this SURETY AGREEMENT has been attached as Exhibit "B".

* Bond Number 8099-56-50

Last Revised, July 1989
Exhibit "B" - BONDING AGREEMENT
SURETY BOND

So agreed this 17th day of November, 19 89.

FOR THE OPERATOR:

Valley Camp of Utah, Inc.
Operator (Company)

Walter L. Wright
Company Officer - Position
Walter L. Wright, President & COO

FOR THE SURETY COMPANY:

Federal Insurance Company
Surety (Company)

John Mustard
Company Officer - Position Attorney-in-Fact

ACCEPTED BY THE STATE OF UTAH:

James P. Melser
Director - Division of Oil, Gas and Mining

NOTE: An Affidavit of Qualification must be completed and attached to this form for each authorized agent or officer. Where one signs by virtue of Power of Attorney for a company, such Power of Attorney must be filed with this Agreement. If the principal is a corporation, the Agreement shall be executed by its duly authorized officer.



CHUBB GROUP of Insurance Companies

15 Mountain View Road, Warren, NJ 07060

COMPANY

RIDER to be attached to and form a part of
Bond No. 8099-56-50 wherein
FEDERAL INSURANCE COMPANY
is named as Surety, on behalf of
Valley Camp of Utah, Inc.
as Principal, in favor of State of Utah, Div. of Oil, Gas and Mining, and
U. S. Dept. of the Interior, Office of Surface Mining
in the sum of \$1,521,000.00
dated 6/29/84 effective 6/29/84

IT IS HEREBY UNDERSTOOD AND AGREED that effective the 17th day of November, 1989
the penalty of this bond is increased
from One Million, Five Hundred Twenty One Thousand and 00/100 (\$1,521,000.00)
to Two Million, Three Hundred Thousand and 00/100 (\$2,300,000.00)
as to losses occurring after the 17th day of November, 1989

Provided, however, that the liability of the Principal and Surety hereon shall not be cumulative or in any event
exceed the larger amount referred to herein.

The attached bond shall be subject to all its agreements, limitations and conditions except as herein expressly
modified.

Signed, sealed and dated this 14th day of November, 1989

Valley Camp of Utah, Inc.

By: Walter L. WRIGHT (Principal)

Federal Insurance Company:

By: Mary Elizabeth Hammock
Mary Elizabeth Hammock, Attorney-in-Fact

ACCEPTED
By: [Signature] (Obligee)

POWER OF ATTORNEY

Know all Men by these Presents, That the FEDERAL INSURANCE COMPANY, 15 Mountain View Road, Warren, New Jersey, a New Jersey Corporation, has constituted and appointed, and does hereby constitute and appoint John W. Hunt, Ronald W. Brown, Mary Elizabeth Hammock, Muriel L. Hoh, M. Joan Norville of Winston Salem, North Carolina and Thomas W. Burke and Teresa T. Gwyn of Charlotte, North Carolina-----

each its true and lawful Attorney-in-Fact to execute under such designation in its name and to affix its corporate seal to and deliver for and on its behalf as surety thereon or otherwise, bonds of any of the following classes, to-wit:

- 1. Bonds and Undertakings filed in any suit, matter or proceeding in any Court, or filed with any Sheriff or Magistrate, for the doing or not doing of anything specified in such Bond or Undertaking.
2. Surety bonds to the United States of America or any agency thereof, including those required or permitted under the laws or regulations relating to Customs or Internal Revenue; License and Permit Bonds or other indemnity bonds under the laws, ordinances or regulations of any State, City, Town, Village, Board or other body or organization, public or private; bonds to Transportation Companies, Lost Instrument bonds; Lease bonds, Workers' Compensation bonds, Miscellaneous Surety bonds and bonds on behalf of Notaries Public, Sheriffs, Deputy Sheriffs and similar public officials.
3. Bonds on behalf of contractors in connection with bids, proposals or contracts.

In Witness Whereof, the said FEDERAL INSURANCE COMPANY has, pursuant to its By-Laws, caused these presents to be signed by its Assistant Vice-President and Assistant Secretary and its corporate seal to be hereto affixed this 1st day of January 19 86

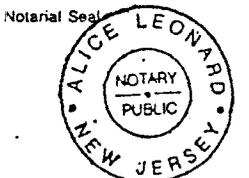


Richard D. O'Connor
Assistant Secretary

FEDERAL INSURANCE COMPANY
By George McClellan
Assistant Vice-President

STATE OF NEW JERSEY
County of Somerset } ss.

On this 1st day of January 19 86, before me personally came Richard D. O'Connor to me known and by me known to be Assistant Secretary of the FEDERAL INSURANCE COMPANY, the corporation described in and which executed the foregoing Power of Attorney, and the said Richard D. O'Connor being by me duly sworn, did depose and say that he is Assistant Secretary of the FEDERAL INSURANCE COMPANY and knows the corporate seal thereof; that the seal affixed to the foregoing Power of Attorney is such corporate seal and was thereto affixed by authority of the By-Laws of said Company, and that he signed said Power of Attorney as Assistant Secretary of said Company by like authority; and that he is acquainted with George McClellan and knows him to be the Assistant Vice-President of said Company, and that the signature of said George McClellan subscribed to said Power of Attorney is in the genuine handwriting of said George McClellan and was thereto subscribed by authority of said By-Laws and in deponent's presence.



Alice Leonard
Notary Public

STATE OF NEW JERSEY
County of Somerset } ss.

CERTIFICATION
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires June 28, 1988

I, the undersigned, Assistant Secretary of the FEDERAL INSURANCE COMPANY, do hereby certify that the following is a true excerpt from the By-Laws of the said Company as adopted by its Board of Directors on March 11, 1953 and most recently amended March 11, 1983 and that this By-Law is in full force and effect.

"ARTICLE XVIII.

Section 2. All bonds, undertakings, contracts and other instruments other than as above for and on behalf of the Company which it is authorized by law or its charter to execute, may and shall be executed in the name and on behalf of the Company either by the Chairman or the Vice-Chairman or the President or a Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations, except that any one or more officers or attorneys-in-fact designated in any resolution of the Board of Directors or the Executive Committee, or in any power of attorney executed as provided for in Section 3 below, may execute any such bond, undertaking or other obligation as provided in such resolution or power of attorney.

Section 3. All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the Vice-Chairman or the President or a Vice-President or an Assistant Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed."

I further certify that said FEDERAL INSURANCE COMPANY is duly licensed to transact fidelity and surety business in each of the States of the United States of America, District of Columbia, Puerto Rico, and each of the Provinces of Canada with the exception of Prince Edward Island; and is also duly licensed to become sole surety on bonds, undertakings, etc., permitted or required by law.

I, the undersigned Assistant Secretary of FEDERAL INSURANCE COMPANY, do hereby certify that the foregoing Power of Attorney is in full force and effect.

Given under my hand and the seal of said Company at Warren, N.J., this 14th day of November 19 89



Assistant Secretary

EXHIBIT "C"
LIABILITY INSURANCE

Revised November, 1987.

RECEIVED
JAN 22 1988

CERTIFICATE OF LIABILITY INSURANCE

Issued to:

State of Utah

Department of Natural Resources

Division of Oil, Gas and Mining

--00000--

DIVISION OF
OIL, GAS & MINING

THIS IS TO CERTIFY THAT:

The Home Indemnity Company

(Name of Insurance Company)

P.O. Box 5160

Manchester, NH 03103

(Home Office Address of Insurance Company)

HAS ISSUED TO:

Valley Camp of Utah, Inc.*

(Name of Permit Applicant)

*Please refer to Item 13 of the Named Insured Endorsement on the policy

Valley Camp of Utah, Inc.

(Mine Name)

ACT/007/001

(Permit Number)

CERTIFICATE OF INSURANCE:

GL 99 48 43

(Policy Number)

April 1, 1987

(Effective Date)

UNDER THE FOLLOWING TERMS AND CONDITIONS:

As Per UMC/SMC Part 800.60 Terms and Conditions for Liability Insurance;

- A. The Division shall require the applicant to submit as part of its permit application a certificate issued by an insurance company authorized to do business in the state of Utah certifying that the applicant has a public liability insurance policy in force for the surface coal mining and reclamation operations for which the permit is sought. Such policy shall provide for personal injury and property damage protection in an amount adequate to compensate any persons injured or property damaged as a result of the surface coal mining and reclamation operations, including the use of explosives and who are entitled to compensation under the applicable provisions of state law. Minimum insurance coverage for bodily injury and property damage shall be \$300,000 for each occurrence and \$500,000 aggregate.
- B. The policy shall be maintained in full force during the life of the permit or any renewal thereof, including the liability period necessary to complete all reclamation operations under this chapter.

EXHIBIT "D"
STIPULATION TO REVISE RECLAMATION
AGREEMENT

Permit Number ACT/007/001
Expiration Date _____

COAL
STIPULATION TO REVISE RECLAMATION AGREEMENT
--oO00oO--

This STIPULATION TO REVISE RECLAMATION AGREEMENT entered into by and between the OPERATOR and DIVISION incorporates the following revisions or changes to the RECLAMATION AGREEMENT: (Identify and Describe Revisions Below)

The attached rider increases the existing bond amount.

In accordance with this STIPULATION TO REVISE RECLAMATION AGREEMENT, the following Exhibits have been replaced by the OPERATOR and are approved by the DIVISION:

Replace the RECLAMATION AGREEMENT in its entirety.

Replace Exhibit "A" - SURFACE DISTURBANCE.

Replace Exhibit "B" - BONDING AGREEMENT.

Replace Exhibit "C" - LIABILITY INSURANCE.

The BONDING amount is revised from (\$ 1,521,000) to (\$ 2,300,000).

The SURFACE DISTURBANCE is revised from _____ acres to _____ acres.

The EXPIRATION DATE is revised from _____ to _____.

SO AGREED THIS 17th DAY OF November, 19 89.

FOR THE STATE OF UTAH:

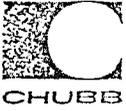
Doraine R. Nelson
Director, Division of Oil, Gas and Mining

FOR THE OPERATOR:

Walter L. Wright
Company Officer - Position
Walter L. Wright, President & COO

J.L. Litman
Company Officer - Position
J.L. Litman
Vice Chairman & CEO

NOTE: An Affidavit of Qualification must be completed and attached to this form for each authorized agent or officer. Where one signs by virtue of Power of Attorney for a company, such Power of Attorney must be filed with this Agreement. If the principal is a corporation, the Agreement shall be executed by its duly authorized officer.



CHUBB GROUP of Insurance Companies

15 Mountain View Road, Warren, NJ 07060

COMPANY

RIDER to be attached to and form a part of
Bond No. 8099-56-50 wherein
FEDERAL INSURANCE COMPANY
is named as Surety, on behalf of
Valley Camp of Utah, Inc.
as Principal, in favor of State of Utah, Div. of Oil, Gas and Mining, and
U. S. Dept. of the Interior, Office of Surface Mining
in the sum of \$1,521,000.00
dated 6/29/84 effective 6/29/84

IT IS HEREBY UNDERSTOOD AND AGREED that effective the 17th day of November, 1989
the penalty of this bond is increased
from One Million, Five Hundred Twenty One Thousand and 00/100 (\$1,521,000.00)
to Two Million, Three Hundred Thousand and 00/100 (\$2,300,000.00)
as to losses occurring after the 17th day of November, 1989

Provided, however, that the liability of the Principal and Surety hereon shall not be cumulative or in any event
exceed the larger amount referred to herein.

The attached bond shall be subject to all its agreements, limitations and conditions except as herein express-
ly modified.

Signed, sealed and dated this 14th day of November, 19 89

Valley Camp of Utah, Inc.

By: Walter L. WRIGHT (Principal)

Federal Insurance Company:

By: Mary Elizabeth Hammock
Mary Elizabeth Hammock, Attorney-in-Fact

ACCEPTED

By: Dianne P. Nelson (Obligee)

POWER OF ATTORNEY

Know all Men by these Presents, That the FEDERAL INSURANCE COMPANY, 15 Mountain View Road, Warren, New Jersey, a New Jersey Corporation, has constituted and appointed, and does hereby constitute and appoint John W. Hunt, Ronald W. Brown, Mary Elizabeth Hammock, Muriel L. Hoh, M. Joan Norville of Winston Salem, North Carolina and Thomas W. Burke and Teresa T. Gwyn of Charlotte, North Carolina-----

each its true and lawful Attorney-in-Fact to execute under such designation in its name and to affix its corporate seal to and deliver for and on its behalf as surety thereon or otherwise, bonds of any of the following classes, to-wit:

- 1. Bonds and Undertakings filed in any suit, matter or proceeding in any Court, or filed with any Sheriff or Magistrate, for the doing or not doing of anything specified in such Bond or Undertaking.
2. Surety bonds to the United States of America or any agency thereof, including those required or permitted under the laws or regulations relating to Customs or Internal Revenue; License and Permit Bonds or other indemnity bonds under the laws, ordinances or regulations of any State, City, Town, Village, Board or other body or organization, public or private; bonds to Transportation Companies, Lost Instrument bonds; Lease bonds, Workers' Compensation bonds, Miscellaneous Surety bonds and bonds on behalf of Notaries Public, Sheriffs, Deputy Sheriffs and similar public officials.
3. Bonds on behalf of contractors in connection with bids, proposals or contracts.

In Witness Whereof, the said FEDERAL INSURANCE COMPANY has, pursuant to its By-Laws, caused these presents to be signed by its Assistant Vice-President and Assistant Secretary and its corporate seal to be hereto affixed this 1st day of January 19 86

Corporate Seal
Richard D. O'Connor
Assistant Secretary

FEDERAL INSURANCE COMPANY
By
George McClellan
Assistant Vice-President

STATE OF NEW JERSEY
County of Somerset } ss.

On this 1st day of January 19 86, before me personally came Richard D. O'Connor to me known and by me known to be Assistant Secretary of the FEDERAL INSURANCE COMPANY, the corporation described in and which executed the foregoing Power of Attorney, and the said Richard D. O'Connor being by me duly sworn, did depose and say that he is Assistant Secretary of the FEDERAL INSURANCE COMPANY and knows the corporate seal thereof; that the seal affixed to the foregoing Power of Attorney is such corporate seal and was thereto affixed by authority of the By-Laws of said Company, and that he signed said Power of Attorney as Assistant Secretary of said Company by like authority; and that he is acquainted with George McClellan and knows him to be the Assistant Vice-President of said Company, and that the signature of said George McClellan subscribed to said Power of Attorney is in the genuine handwriting of said George McClellan and was thereto subscribed by authority of said By-Laws and in deponent's presence.

Notarial Seal
ALICE LEONARD
NOTARY PUBLIC
NEW JERSEY

Acknowledged and Sworn to before me on the date above written.
Alice Leonard
ALICE LEONARD
Notary Public
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires June 28, 1988

STATE OF NEW JERSEY
County of Somerset } ss.

I, the undersigned, Assistant Secretary of the FEDERAL INSURANCE COMPANY, do hereby certify that the following is a true excerpt from the By-Laws of the said Company as adopted by its Board of Directors on March 11, 1953 and most recently amended March 11, 1983 and that this By-Law is in full force and effect.

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Section 2. All bonds, undertakings, contracts and other instruments other than as above for and on behalf of the Company which it is authorized by law or its charter to execute, may and shall be executed in the name and on behalf of the Company either by the Chairman or the Vice-Chairman or the President or a Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations, except that any one or more officers or attorneys-in-fact designated in any resolution of the Board of Directors or the Executive Committee, or in any power of attorney executed as provided for in Section 3 below, may execute any such bond, undertaking or other obligation as provided in such resolution or power of attorney.

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I further certify that said FEDERAL INSURANCE COMPANY is duly licensed to transact fidelity and surety business in each of the States of the United States of America, District of Columbia, Puerto Rico, and each of the Provinces of Canada with the exception of Prince Edward Island; and is also duly licensed to become sole surety on bonds, undertakings, etc., permitted or required by law.

I, the undersigned Assistant Secretary of FEDERAL INSURANCE COMPANY, do hereby certify that the foregoing Power of Attorney is in full force and effect.

Given under my hand and the seal of said Company at Warren, N.J., this 14th day of November 19 89

Corporate Seal
Assistant Secretary

AFFIDAVITS OF QUALIFICATION

