

0010



Soldier Creek Coal Company
HIDDEN VALLEY MINE

Telephone 801 - 637-4429

P.O. Box AS
Price, Utah 84501

August 19, 1980

Mr. James W. Smith, Jr.
Coordinator of Mined Land Development
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: Interim Program Regulations
Hidden Valley Mine
ACT/015/022

Dear Mr. Smith:

Enclosed please find specific comments addressing the Division's February 4, 1980, memorandum. This information should be adequate to eliminate the stipulations currently applied to our interim regulatory program. A copy of the February 4 memorandum is enclosed.

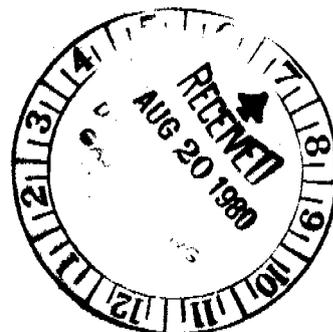
Prompt approval of the interim program would be appreciated. If you should have any questions, please feel free to call.

Sincerely,

SOLDIER CREEK COAL COMPANY
Hidden Valley Mine

J. T. Paluso
Project Engineer

JTP/kbb
Enclosure





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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

MEMORANDUM

TO: Ronald W. Daniels, Coordinator of Mined Land Development

FROM: K. Michael Thompson, Engineering Geologist

SUBJECT: Soldier Creek Coal Company
Proposed Hidden Valley Mine
Emery County, Utah
ACT/015/022

DATE: February 4, 1980

The staff has reviewed the Mining and Reclamation Plan and amendments submitted by Soldier Creek Coal Company for the proposed Hidden Valley Mine. The staff feels that certain items are either unclear or deficient; however, we feel that tentative approval may be issued with stipulations given so that these items are answered prior to development.

Items in need of clarification or deficient items are as follows:

A. Mine Plan

1. An amendment is needed stating which seam(s) will be mined and how mining development will progress, along with proposed time frames.

B. Subsidence Control and Monitoring Plan

1. Clarification is needed on why the estimate for the angle of draw for subsidence of 25 degrees from the vertical was used in determining the subsidence buffer zone for Ivie Creek.

2. No monitoring points are indicated within the area to be subsided. A narrative is required describing the proposed subsidence control and monitoring plan, as well as the location of the monitoring points within the mine plan area.

C. Sediment Pond Design

1. Details concerning the decant structures, seepage collars, oil skimmers, trash racks, keyway cuts for embankments, etc. have not yet been submitted. This information is required.

D. Refuse Disposal Plan Topsoil Protection

1. Pre-mining and post-mining profiles of the refuse disposal areas should be submitted.

2. The following applies not only to the refuse disposal area, but also to all of the disturbed areas. Unless it is demonstrated by the applicant that alternative topsoil and surficial material is available; the borrow area is included in the permit application; and insufficient topsoil and unconsolidated surface material is available on-site; the material must be removed, segregated, stockpiled and protected. Using the material for fill, or berms, etc. at the discretion of the operator can not be permitted. However, if it is demonstrated by the operator that the amount of topsoil and unconsolidated surficial material necessary for reclamation is stockpiled as required, the excess unconsolidated surficial material may possibly be utilized as proposed.

E. The following are specific comments to the December 21, 1979 amendment:

1. Page 4 - Item 7.A. The reply does not adequately answer the question. More specific information regarding the amount and depth of material to be removed is needed.

2. Page 4 - Item 7.B. The reply lacks detail of the proposed deposition and stabilization of the stockpiles.

3. Pages 7 to 9 - Item 7.F. The reply does not adequately demonstrate the amount of surficial material present (or not present) and does not demonstrate the revegetation potential (or lack thereof) of the surficial material. Hidden Valley can not "reserve the right" to use the topsoil

MEMORANDUM
ACT/015/022
February 4, 1980
Page Three

and surficial material for any purpose which they deem appropriate. Likewise, the responsibility for determining which soils will be stockpiled and which soils will not does not lie with Hidden Valley. These are Division decisions and responsibilities based upon plans and data submitted by Hidden Valley, which have not been provided to date. Will there be a stockpile of surficial material in the refuse disposal area which will exist for the life of the operation? What does Hidden Valley consider to be temporary? Will Hidden Valley implement any drainage and erosion control procedures for the stockpiles other than vegetation, or while the vegetation is becoming established? Using the topsoil and surficial material as fill material or for other purposes is not acceptable unless Hidden Valley can demonstrate with technical data and laboratory analyses that the proposed use(s) will not result in the loss or degradation of this material as a revegetation medium, and specific plans for its use, protection, and recoverability are submitted, along with specific steps to be taken to meet the reclamation requirements upon termination of the operation. Soil analysis results, as well as data regarding the amount of topsoil and surficial material available is needed.

KMT/te

A. Mine Plan

1. *An amendment is needed stating which seam(s) will be mined and how mining development will progress, along with proposed time frames.*

Three mineable seams exist at Hidden Valley Mine. They have been designated as the A, B, and C Seams in ascending order. Preliminary plans call for the systematic mining of all three seams. Multiple seam mining will be accomplished by the extraction of the upper seam preceding the lower seam.

The proposed mine layout and projected five-year development for the B and C Seams are shown in Figures 1 and 2 respectively. The proposed mine layout for the A Seam is identical to that of the B Seam.

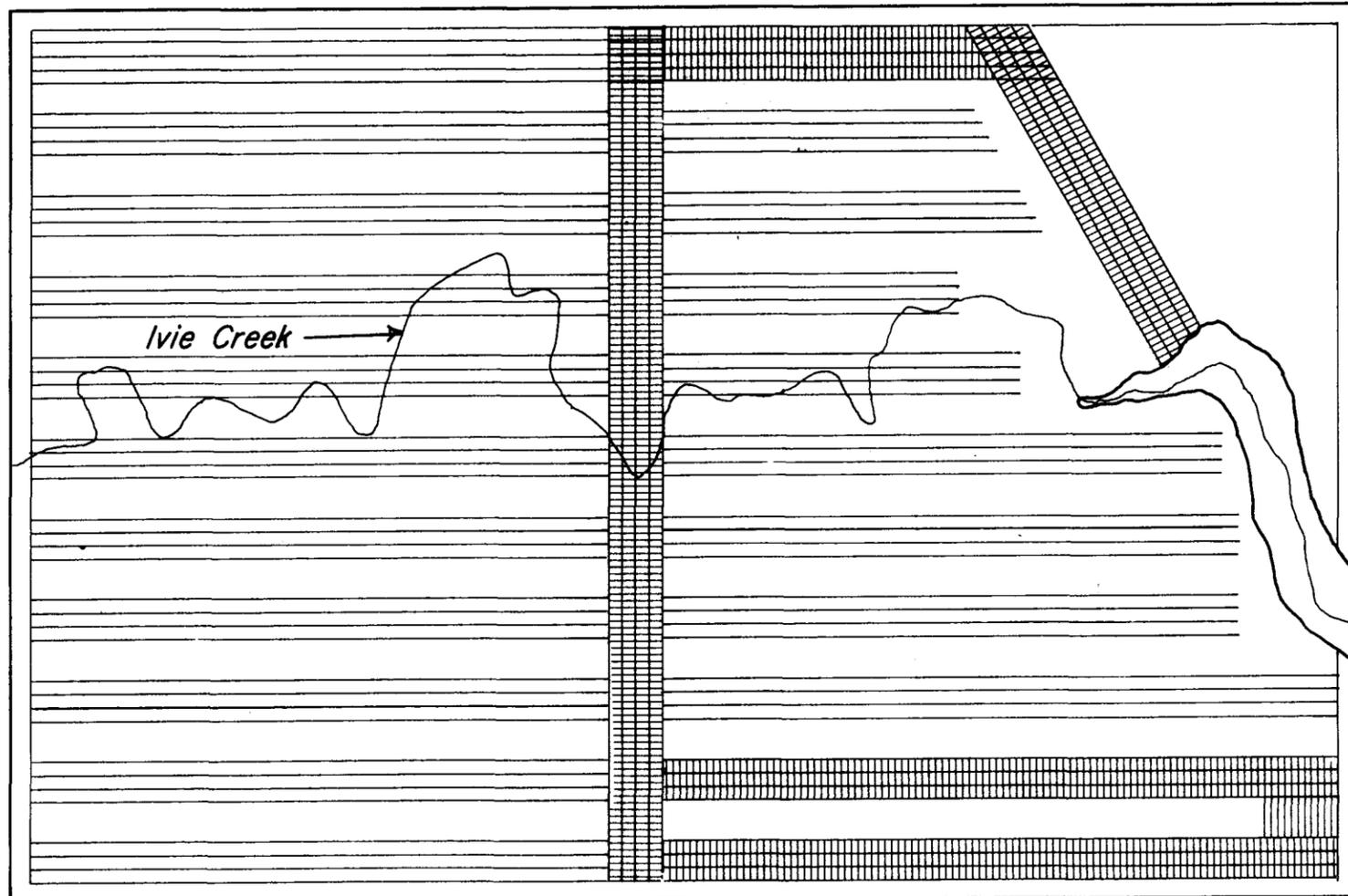
Since the C Seam is mineable only on the western half of the property, initial development will begin in the B Seam. The C Seam will then become accessible via the B Seam development and a rock slope as indicated in Figure 2.

All production at Hidden Valley Mine will be accomplished by use of the room-and-pillar mining method and continuous miners. A maximum production level of 500,000 tons per year is expected. With present reserves this production level will allow mining operations to continue for forty years.

B. Subsidence Control and Monitoring Plan

1. *Clarification is needed on why the estimate for the angle of draw for subsidence of 25 degrees from the vertical was used in determining the subsidence buffer zone for Ivie Creek.*

Aerial photographs of the Hidden Valley Mine site and surrounding areas have shown that



HIDDEN VALLEY MINE
 PROPOSED MINE LAYOUT
B-SEAM



- Projected Five-Year Development

REVISIONS		
NO.	DATE	BY
1.		
2		
3		

SCALE: 1"=1000'

DRAWN BY DGS DATE 12-20-79



Soldier Creek Coal Company

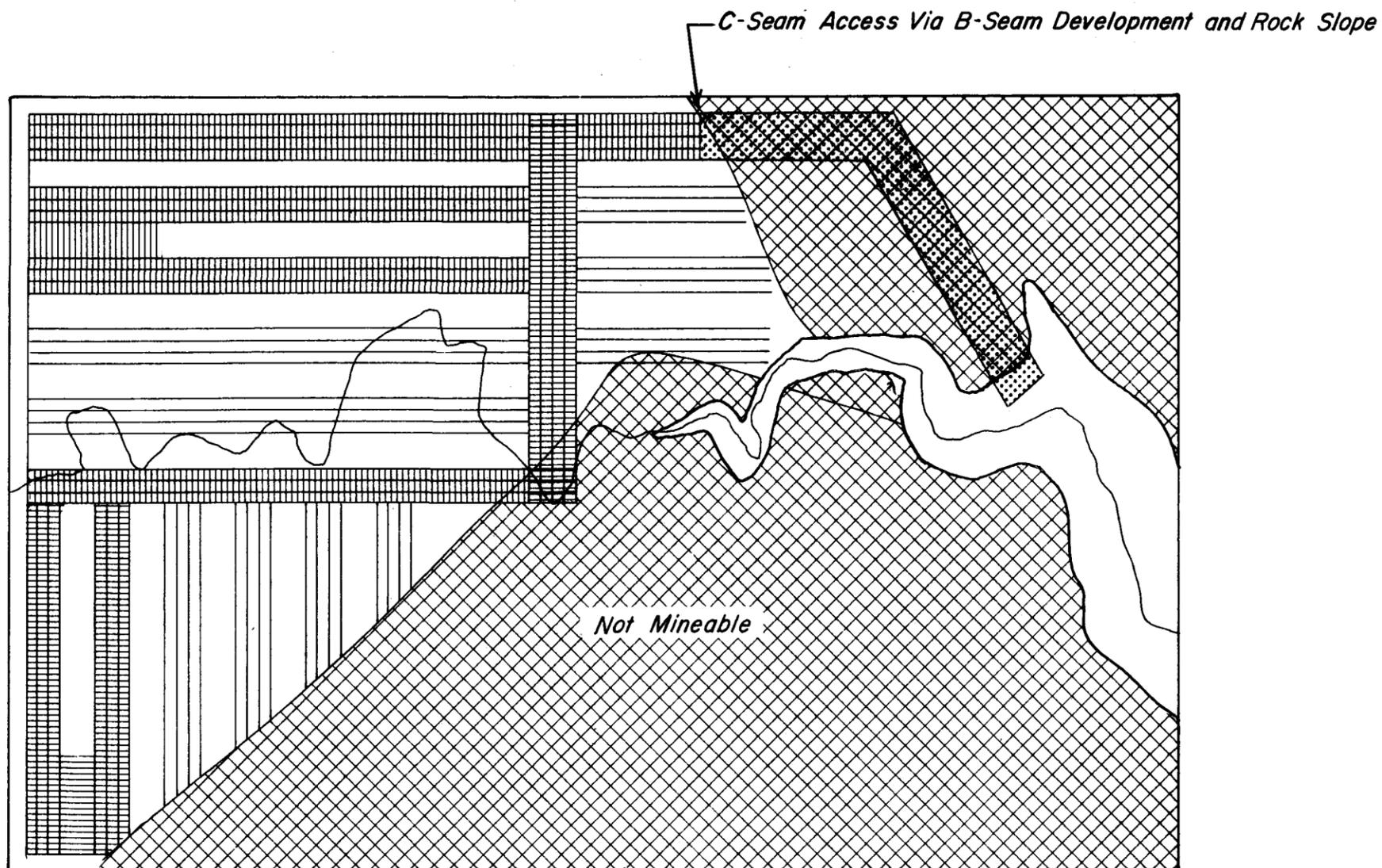
HIDDEN VALLEY MINE

TITLE: Proposed Mine Layout B-Seam

DRAWING NO. B-007

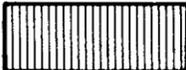
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Figure 1.
 pg. 2



**HIDDEN VALLEY MINE
PROPOSED MINE LAYOUT
C-SEAM**



 - Projected Five-Year Development

REVISIONS			 Soldier Creek Coal Company			
NO.	DATE	BY				
1.			HIDDEN VALLEY MINE			
2.						
3.						
SCALE: 1" = 1000'			TITLE: Proposed Mine Layout C-Seam			
DRAWN BY: DGS		DATE: 6-4-80	CHECKED:	DATE:	APPROVED:	DATE:

DRAWING NO. B-018

Figure 2.
pg. 3

the geologic structure is highly fractured or jointed. The orientation of the predominant fracture system strikes approximately N 30° E. Field observations have also indicated that the jointing attitude ranges from vertical to slightly inclined from the vertical. The angle of draw is highly dependent on faulting or fracture planes. Therefore, the actual angle of draw at Hidden Valley Mine is estimated to be considerably less than 25 degrees. However, it was determined that 25 degrees would be more suitable for protection of surface areas by providing an adequate factor of safety.

2. *No monitoring points are indicated within the area to be subsided. A narrative is required describing the proposed subsidence control and monitoring plan, as well as the location of the monitoring points within the mine plan area.*

The proposed subsidence control plan was submitted in the amendments dated December 21, 1979. As indicated in Appendix A' of the amendments, designated surface areas will be protected by maintaining a subsidence control buffer zone. This buffer zone is determined by projecting downward and outward at an angle of 25 degrees from the vertical until reaching the seam level. Pillars in this projected area will be left in place and no secondary mining will be allowed.

The proposed subsidence monitoring at Hidden Valley Mine will utilize standard photogrammetric methods. These methods can determine accurate elevations by coordinating aerial photography with surface control points. Spot elevations at specified intervals can be determined for the entire mine plan area. These elevations can be redetermined at anytime and therefore monitor any subsidence which may occur.

Initial photogrammetric work has been completed by ENH Mapping Inc., Salt Lake City, Utah. According to ENH, subsidence monitoring does not require permanent control points within the property boundary. This is due to the limited size and configuration of the property. Therefore, all subsidence control points have been located outside the perimeter as indicated in Appendix A' of the December 21, 1979, amendments.

C. Sediment Pond Design

1. Details concerning the decant structures, seepage, collars, oil skimmers, trash racks, keyway cuts for embankments, etc. have not yet been submitted. This information is required.

The sedimentation pond plans have been approved by the Division. This is in accordance to your letter dated June 2, 1980.

D. Refuse Disposal Plan Topsoil Protection

1. Pre-mining and post-mining profiles of the refuse disposal areas should be submitted.

See Figures 3 and 4.

D.2.-E.3. Soils Information

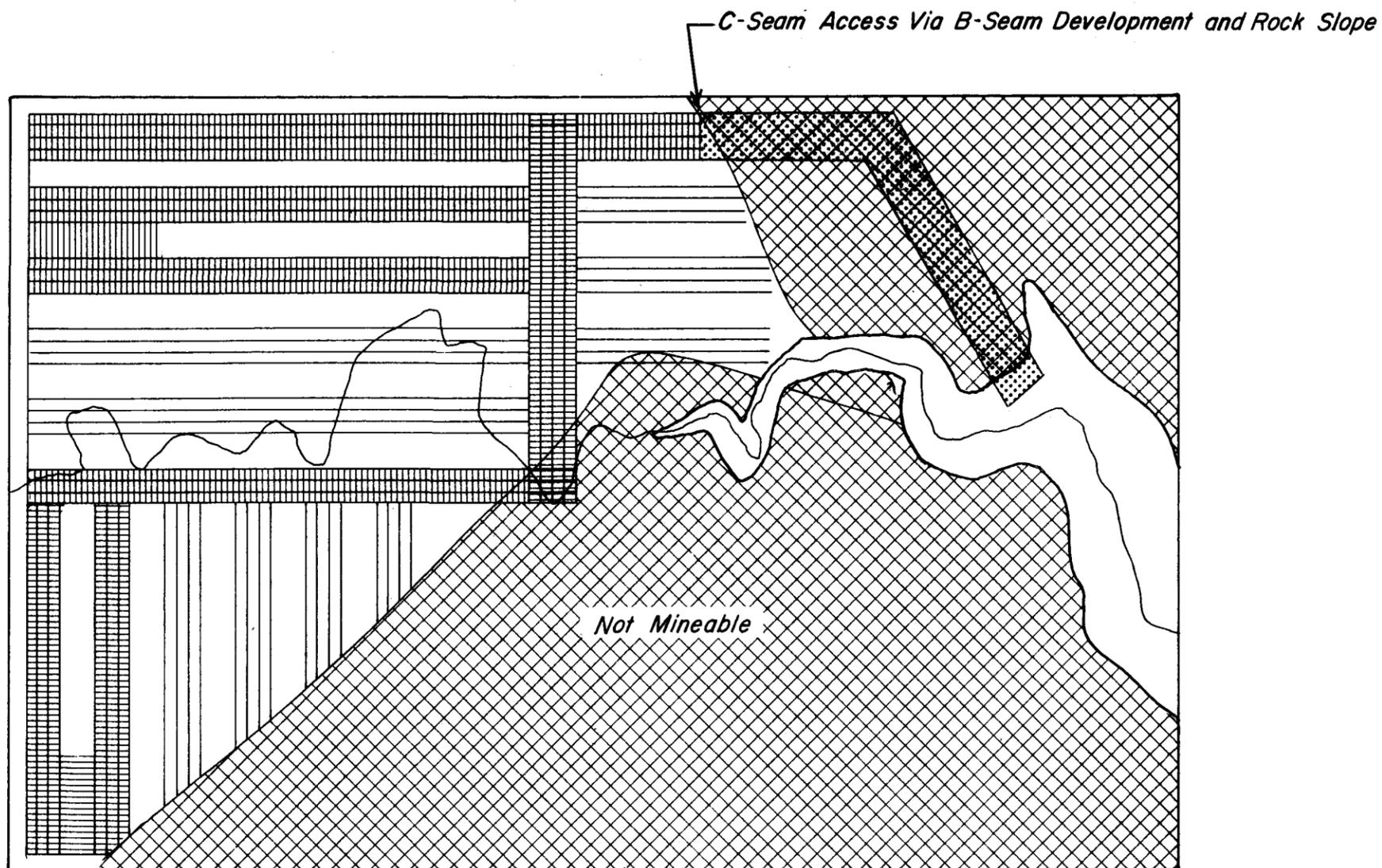
1. The following comments are intended to answer the specific questions of D.2. thru E.3., as well as to present a general soils removal and protection plan for Hidden Valley Mine.

Refuse Disposal Area

Several soil samples have been taken within the refuse disposal area as indicated in Figure 3. Analyses of these samples presented in Table 1, indicate that the soil revegetation potential is generally favorable. Lime and pH are normal with potassium being adequate in all profiles. The sodium adsorption ratio is basically low for all samples. Low phosphorus values and soluble salts, especially in subsoils, may create moderate problems. The accumulation of salts may affect sensitive plants in dry periods. However, it is believed that many species would not be seriously affected.

Depths of surficial material within the refuse disposal area vary from less than 6 inches to greater than 60 inches. The deepest soils exist in the northern portion of the disposal area. Soils then become increasingly thinner towards the southern boundary.

Soils in the northern portion have formed in alluvium that washed from shale and sandstone. Surficial material in alluvial deposits is generally deep with soil extending to depths in excess of 60 inches. These soils tend to



**HIDDEN VALLEY MINE
PROPOSED MINE LAYOUT
C-SEAM**

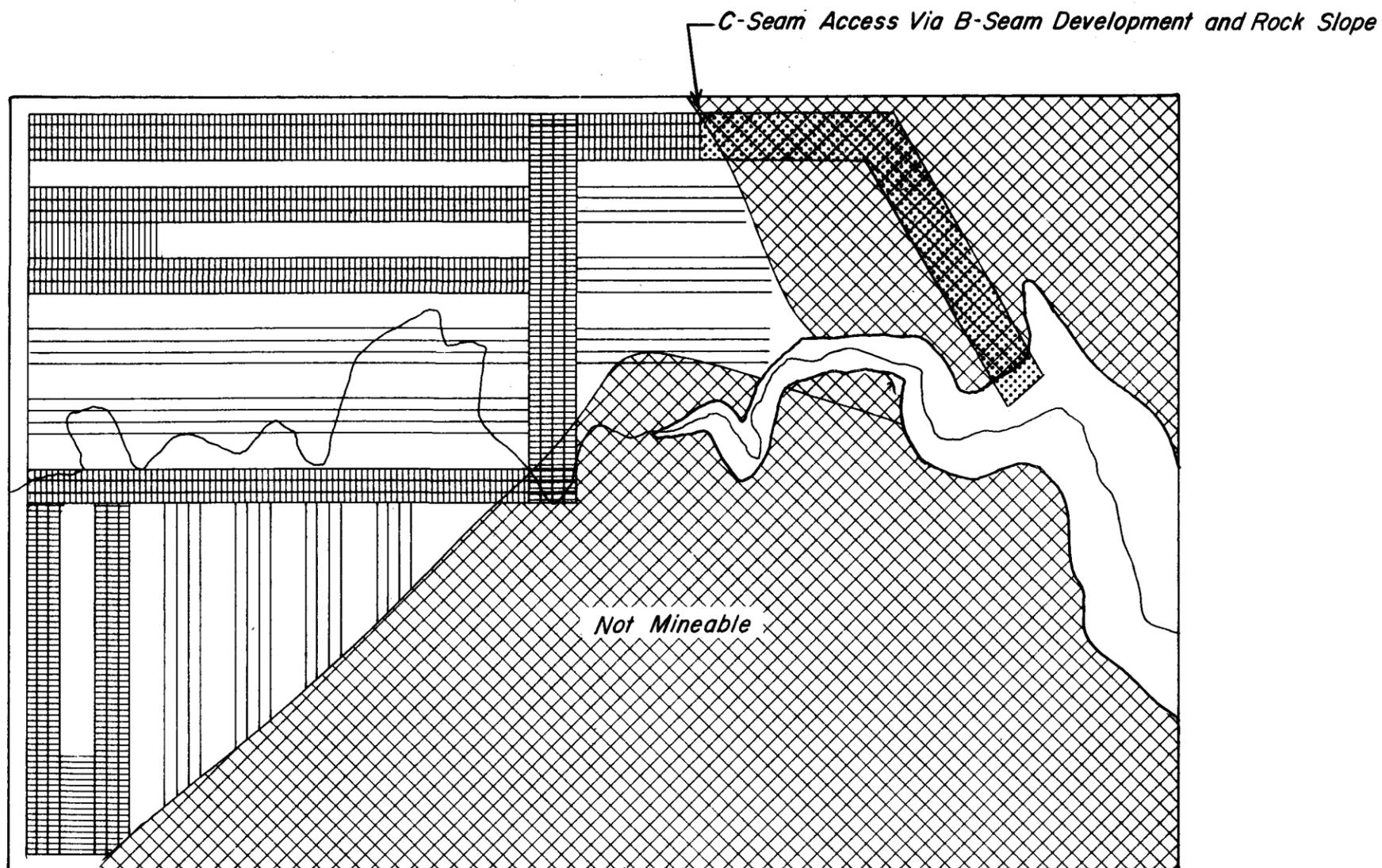


 - Projected Five-Year Development

REVISIONS			 Soldier Creek Coal Company			
NO.	DATE	BY				
1.			HIDDEN VALLEY MINE			
2.						
3.						
SCALE: 1" = 1000'			TITLE: Proposed Mine Layout C-Seam			
DRAWN BY: DGS		DATE: 6-4-80	CHECKED:	DATE:	APPROVED:	DATE:

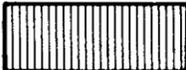
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Figure 2.
pg. 3



**HIDDEN VALLEY MINE
PROPOSED MINE LAYOUT
C-SEAM**

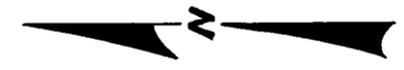
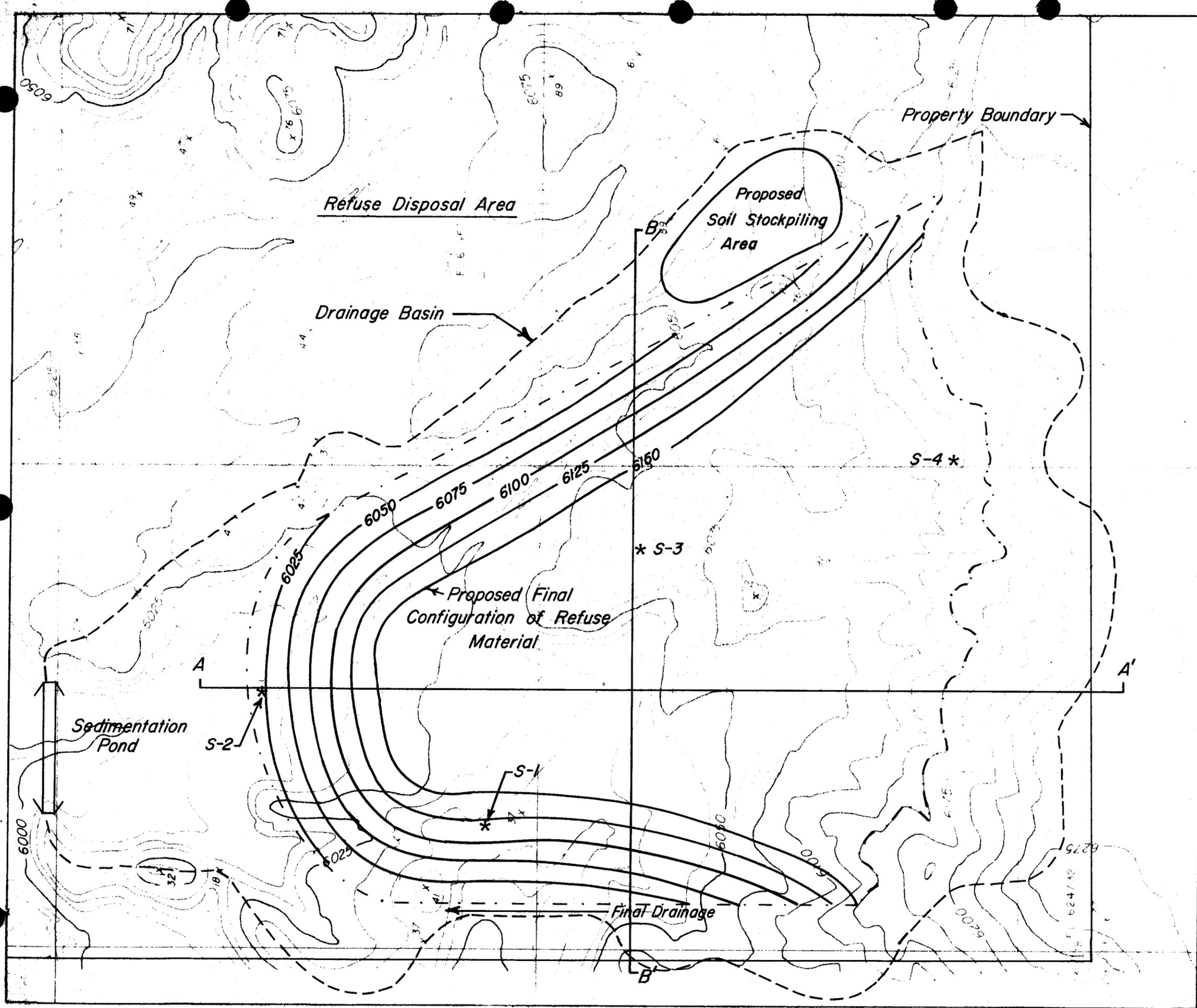


 - Projected Five-Year Development

REVISIONS			 Soldier Creek Coal Company			
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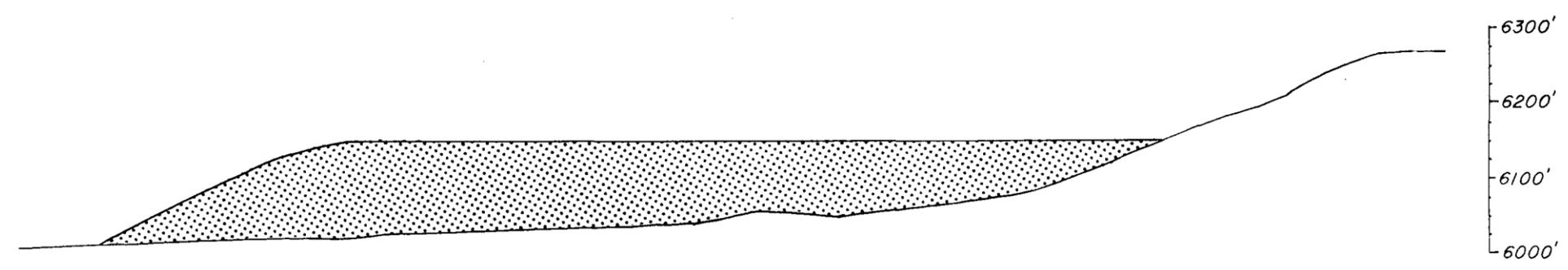
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Figure 2.
pg. 3

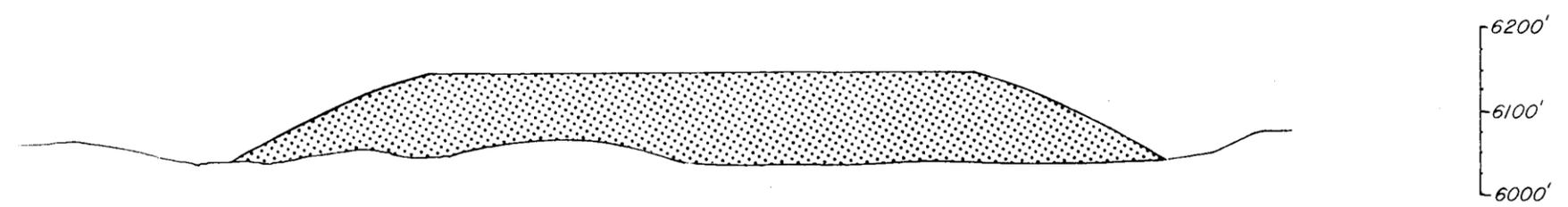


*--Soil Sample Location

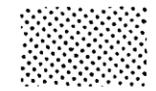
Refuse Disposal Area



CROSS SECTION A-A'



CROSS SECTION B-B'



- PROPOSED FINAL CONFIGURATION OF REFUSE MATERIAL

REVISIONS		
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1.		
2		
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Soldier Creek Coal Company

HIDDEN VALLEY MINE

SCALE: 1" = 200'
 DRAWN BY DGS
 DATE 7-31-80

TITLE: CROSS SECTIONS - PROPOSED REFUSE DISPOSAL
 CHECKED _____ DATE _____
 APPROVED _____ DATE _____

DRAWING NO. B-017
 Figure 4.
 pg. 7

SOIL ANALYSES*

HIDDEN VALLEY MINE

Table 1.

SAMPLE	DEPTH	SOIL TEXTURE (Estimated)	LIME	pH	SOLUBLE SALTS EC _e	PHOSPHORUS ppm P	POTASSIUM ppm K	SODIUM ADSORPTION RATIO
<u>Refuse Disposal Area</u>								
S-1	Surface	Silty Clay Loam	++	8.0	2.2	4.7	300	5.0
S-2	Surface	Clay Loam	++	7.9	3.0	3.7	168	0.5
S-2	2 Feet	Clay Loam	++	7.7	4.7	1.8	63	3.2
S-3	Surface	Sandy Loam	++	8.3	0.6	3.2	168	0.8
S-3	3 Feet	Loamy Sand	++	8.1	4.5	0.0	45	1.4
S-4	Surface	Silty Clay Loam	++	7.7	2.9	2.5	190	0.5
S-4	2 Feet	Silty Clay Loam	++	8.4	12.0	0.3	90	0.3
<u>Surface Facility Area</u>								
SF-1	Surface	Sandy Loam	++	8.1	0.7	2.1	121	0.3
<u>Portal Area</u>								
PA-1	Surface	Sandy Loam	++	8.5	0.3	4.3	200	0.8

*All soil analyses were performed by the Soil Testing Laboratory at Utah State University.

thin rapidly towards the low hills where slightly weathered shale bedrock is generally found at a depth of less than 18 inches. This continues until reaching the moderately steep hills at the southern boundary of the disposal area. These hills consist mainly of actively eroding shale outcrops with minimum surficial material.

It is proposed that prior to initiating any development within the refuse disposal area, that a 6-inch layer of surface soil be removed, segregated, and designated as topsoil. This is in accordance to 30 CFR 817.22 (c). This amount will be removed to the extent possible using conventional equipment. Topsoil removed will be stockpiled and stabilized in a designated area until required for reclamation (see Figure 3).

The initial area required for refuse deposition will be limited. As additional area is required, topsoil removal will be coordinated as closely as possible with reclamation, thus eliminating additional stockpiling.

It is proposed that subsoil within the refuse disposal area also be removed. This is to facilitate the covering of the refuse material with a minimum of 2 feet of non-toxic and non-combustible material. Removal of subsoil will be site specific depending on the amount available. Generally speaking, the average thickness of subsoil removed will be approximately 2 feet.

Surface Facility Area

Soils within the surface facility area are in the Castle Valley series. Typically these soils are very shallow with sandstone bedrock at a depth of about 10 inches. Sandstone outcrop is common and may account for as much as 40% of the surface area.

It is proposed that prior to initiating any development within the surface facility area, that surface soil be removed, segregated, and designated as topsoil. A 6-inch layer of surface soil, where present, will be removed. If less than 6 inches of soil is available, all unconsolidated material will be removed. All soil will be removed to the extent possible using conventional equipment. Topsoil will be stockpiled and stabilized in a designated area until required for reclamation.

Stockpile Stabilization and Protection

All soil removed and designated as topsoil will be either stockpiled or promptly redistributed on graded areas. Stockpiled soil will be placed in an area designated specifically for that purpose. Measures will be taken to minimize compaction, wind and water erosion, and contamination. Stabilization will be accomplished by establishing an effective vegetative cover.

All stockpiled topsoil will be seeded during the first available autumn season following removal. A seed mixture approved by the Division will be broadcast and harrowed into the soil. Supplemental watering, mulch, fertilizer, and other soil amendments will not be applied. It is believed that an effective vegetative cover can be established without the use of such amendments. The Intermountain Forest and Range Experiment Station test plots, near Hidden Valley Mine, have demonstrated excellent plant growth on similar soils without the use of such amendments.

Additional stockpile stabilization, while vegetation is becoming established, is believed unnecessary. Areas which were previously disturbed during exploration work do not show significant soil losses due to erosion. Selectively placing stockpiles in areas which are protected from wind and natural drainage will provide adequate erosion protection while vegetation is becoming established.