—MINING AND RECLAMATION PLANS—

Existing Utah No. 2 Underground Coal Mine

SCOFIELD-CLEAR CREEK AREA

Carbon County, Utah

Prepared by Valley Camp of Utah, Inc.—Clear Creek, Utah—

MINING APPLICATION
NO. ACT007/014

Date: 6/27/77

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

NOTICE OF INTENTION TO COMMENCE MINING OPERATIONS
(See Rule M of General Rules and Regulations)

1. Name of Applicant or Company Valley Camp of Utah, Inc.
Corporation (XXX) Partnership ( ) Individual ( )

2. Address Scofield Route, Helper, Utah 84526
Permanent Temporary

3. Name and title of Person representing Company Robert Steele Vice Pres. Gen. Manager

4. Address Scofield Route, Helper, Utah 84526 Office Phone 801-448-9413

5. Location of Operation CARBON County Sec. 8 & 17 T. 13-S R. 7-E

6. Name of Mine Utah No.2 Mine

7. Mineral to be mined:

				Mining Method:
(XXX)	Coal	( )	Flagstone	Room and Pillar
( )	Copper	( )	Gravel	
( )	Manganese	( )	Shale	
( )	Iron Ore	( )	Uranium	
( )	Phosphate	( )	Gilsonite	
( )	Potash	( )	Bituminous Sandstone	
( )	Fluorspar	( )	Tungsten	
( )	Other (Specify)			

8. Have you or any Person, Partnership or Corporation associated with you received an approved Notice of Intention to Commence Mining Operations by the State of Utah for operations other than described herein?
(XXX) Yes ( ) No
If yes, list all approval numbers now under surety:

Act 007-001

9. Owner/Owners of record of the surface area within the land to be affected:

Helen and Nick Marakis Address 789E. 8th No., Price Utah 84501

Address

Address

10. Owner/Owners of record of minerals to be mined:

Kanawha and Hocking	Address	700 Westgate Towers Cleveland, Ohio 44116
Katherine J. Theos	Address	Meeker, Colorado
	Address	
	Address	

11. Owner/Owners of record of all other minerals within any part of the land affected:

N/A	Address	
	Address	
	Address	
	Address	

11a. Have the above owners been notified in writing?
(XX) Yes ( ) No

12. Source of Operator's legal right to enter and conduct operations on land to be covered by the Notice Contract with Owners

13. Approximate acreage to be disturbed:

Mining operation area (include operations, storage, and disposal area): 2.93 acres +

Access Road or Haulageway: 2.23 acres +

Drainage System: 2.34 acres =

Total Acres: 7.50 acres

14. Give the names and post office addresses of every principal Executive, Officer, Partner, (or Person performing a similar function) of Applicant:

	Name	Title	Address
a.	Note: Attached sheet.		
b.			
c.			
d.			

15. Has Applicant, any Subsidiary or Affiliate or any Person, Partnership, Association, Trust or Corporation controlled by or under common control with Applicant, or any Person required to be identified by Item 14, ever had an approval of a Notice of Intention withdrawn or has surety relating thereto ever been forfeited? Yes ( ) No (XX)

If yes, explain:

STATE OF Utah

COUNTY OF Carbon

I, Robert J. Steele, having been duly sworn depose and attest that all of the representations contained in the foregoing application are true to the best of my knowledge; that I am authorized to complete and file this application on behalf of the applicant and this application has been executed as required by law.

Signed: Robert J. Steele

Taken, subscribed and sworn to before me the undersigned authority in my said county, this 30th day of June, 1977.

Notary Public: Donald Gualano
Helper, Utah

My Commission Expires: MY COMMISSION EXPIRES 5-11-81

ATTACHMENT - Item No. 14
MR FORM 1

CORPORATION OFFICERS

Herbert S. Richey	President	700 Westgate Tower	Cleveland, Ohio 44116
Alvey B. Rushton	Executive Vice President	700 Westgate Tower	Cleveland, Ohio 44116
Herbert L. Hilton	Vice President	700 Westgate Tower	Cleveland, Ohio 44116
Roger A. Markle	Vice President	P. O. Box 507	Clear Creek, Utah 84517
Lloyd B. Thompson	Secretary	700 Westgate Tower	Cleveland, Ohio 44116
David E. Lung	Asst. Secretary	700 Westgate Tower	Cleveland, Ohio 44116
Richard K. Sager	Asst. Secretary	141 East First South	Salt Lake City, Utah 84111
William H. West	Asst. Secretary	700 Westgate Tower	Cleveland, Ohio 44116
Robert W. Homan	Treasurer	700 Westgate Tower	Cleveland, Ohio 44116
Thomas M. Kostelnik	Asst. Treasurer	700 Westgate Tower	Cleveland, Ohio 44116
E. P. Sepsi	Controller	700 Westgate Tower	Cleveland, Ohio 44116

DIRECTORS

Herbert L. Hilton	700 Westgate Tower	Cleveland, Ohio 44116
Robert W. Homan	700 Westgate Tower	Cleveland, Ohio 44116
Herbert S. Richey	700 Westgate Tower	Cleveland, Ohio 44116
Alvey B. Rushton	700 Westgate Tower	Cleveland, Ohio 44116

PREFACE

This report describes in detail, mining and reclamation plans for the operation and development of an underground coal mine in the Scofield-Clear Creek area of east-central Utah. This mine is identified as the Utah No.2 Mine.

The plans are prepared for submittal to the State of Utah and to the Regional Mining Supervisor, U.S. Geological Survey, Salt Lake City, Utah, since proposed operations will include some mining of federal lands.

This report is authorized by Valley Camp of Utah, Inc., and Kanawha Hocking Coal & Coke Co., subsidiary companies of the Valley Camp Coal Co., 700 Westgate Tower, Cleveland, Ohio. Kanawha and Hocking controls the leasehold and Valley Camp of Utah, Inc., operates the mine.

Valley Camp of Utah Inc.

Robert J. Steele
Vice Pres. General Manager
June, 1977

ACKNOWLEDGEMENTS

These mining and reclamation plans were prepared by Dan W. Guy, Division Engineer, Valley Camp of Utah, Inc., along with Trevor Whiteside, Mine Engineer, Robert Fox, Surveyor, and Fred Jensen, Engineer Aide.

Much of the technical information in the report is credited to the Kanawha & Hocking EAR/Part 43 Technical Examination prepared by the Bureau of Land Management.

Considerable geologic information for the report was provided by Sanders Associates, Inc., of Kaysville, Utah.

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MINING AND RECLAMATION PLAN

FOR

UTAH NO. 2 MINE

INTRODUCTION

General Information

Description of Existing Area

The Utah No. 2 Mine is located south of Scofield, Utah in the area known as Pleasant Valley--a mountainous region in Central Utah (Figure 1). Pleasant Valley is a down-dropped structural feature (Pleasant Valley Graben) lying between two north-northwest trending faults. This area lies on the Wasatch Plateau, near its juncture with the Book Cliffs, in a region characterized by numerous north-south trending faults.

The steepest slopes in the area are about 60 per cent. Elevations range from 8,000 to over 9,000 feet above sea level. The area is characterized by steep rounded hills covered by shrubs, brush, and/or trees, having very little bedrock outcrops. (See topographic map-Figure 2)

One perennial stream, Mud Creek (or Pleasant Valley Creek) flows adjacent to the mine site. In addition, there are two intermittent channels passing through the lease area. Some springs are found in the mine (and lease) area, but no data is available on them. The two intermittent channels

O.K.

are steep and rocky, with vegetative cover on the adjacent slopes and channel bottom. There is little evidence of flooding or erosion; water flows only during periods of spring runoff or peak precipitation. Because of the brief nature of their flow, neither channel offers habitat for aquatic organisims.

Mud Creek flows some 12 miles from its headwaters into Scofield Reservoir. The mine site is located about eight miles from the headwaters and four miles above the mouth of Scofield Reservoir. The majority of perennial tributaries enter Mud Creek above the mine site.

Headwaters are situated near the 10,000 foot elevation level; the mouth of Scofield Reservoir is at about 7,000 foot elevation. Precipitation is mostly from snow and ranges from 12 to 30 inches per year. As a result, stream flows vary seasonally, with maximum flows from the spring snow melt usually occuring during the month of May. Flows of 1.5 to 10 cubic feet per second have been reported on Mud Creek.

Access to the mine is gained via paved State Highway 96; surface access to the lease area is by a poor county road and some dozer trails on private land. The Denver-Rio Grande Railroad spur has been reactivated from the main line north some 16 miles to about three-quarters mile south of the mine site. Coal is loaded at the mine site and hauled to the main line for shipping to the market areas. (See location maps-Figure 1)

The nearest population center is Scofield, Utah, with a population estimated at 70-75 people located about two miles north of the mine site. Clear Creek, Utah is located some four and one-half miles south of the mine, and has a full-time residency of about 20 people, and a part-time residency capability of about 100-120 people. Houses in Clear Creek are

private owned, but the land is owned by Valley Camp. The only other residential area near the mine site and lease area is the Alpine School District, located about one-quarter mile due west of the mine portals. The Alpine School District has one full-time resident family (caretaker) and may house 50-60 students for short periods at various times throughout the year.

Recreational facilities for camping and boating exist along Scofield Reservoir some five miles north of the mine site. The Alpine School District is classed primarily as a training center; however, certain forms of recreation are provided for the students, such as hiking, volleyball, bird watching, etc.

The Utah No. 2 Mine and Belina No. 1 Mine are the only active mines in the Clear Creek area at the present time. A number of abandoned mines exist in the general area. Those close enough to be of interest are: the Utah No. 1 Mine, three-quarter miles directly south of the Utah No. 2 Mine; The Gibson Mine, one-half mile north of Utah No. 2 Mine; The Union Pacific Mine, two miles north; and the Columbine Mine, some two and one-half miles north of the Utah No. 2 Mine. The only one of these mines contained within the projected Utah No. 2 Mine plan is the Gibson Mine. This mine was encountered in our 3rd West Section. After drilling ahead and draining the old works, it was connected with our entries, and mapped (See Enclosure I).

The specific mine site is located in the SE$\frac{1}{4}$, SE$\frac{1}{4}$ of Section 8, Township 13 South, Range 7 East SLBM. Bath house, warehouse, shop and mine office facilities are located in the above described mine site. (Portal elevations lie at 7860 feet above sea level.)

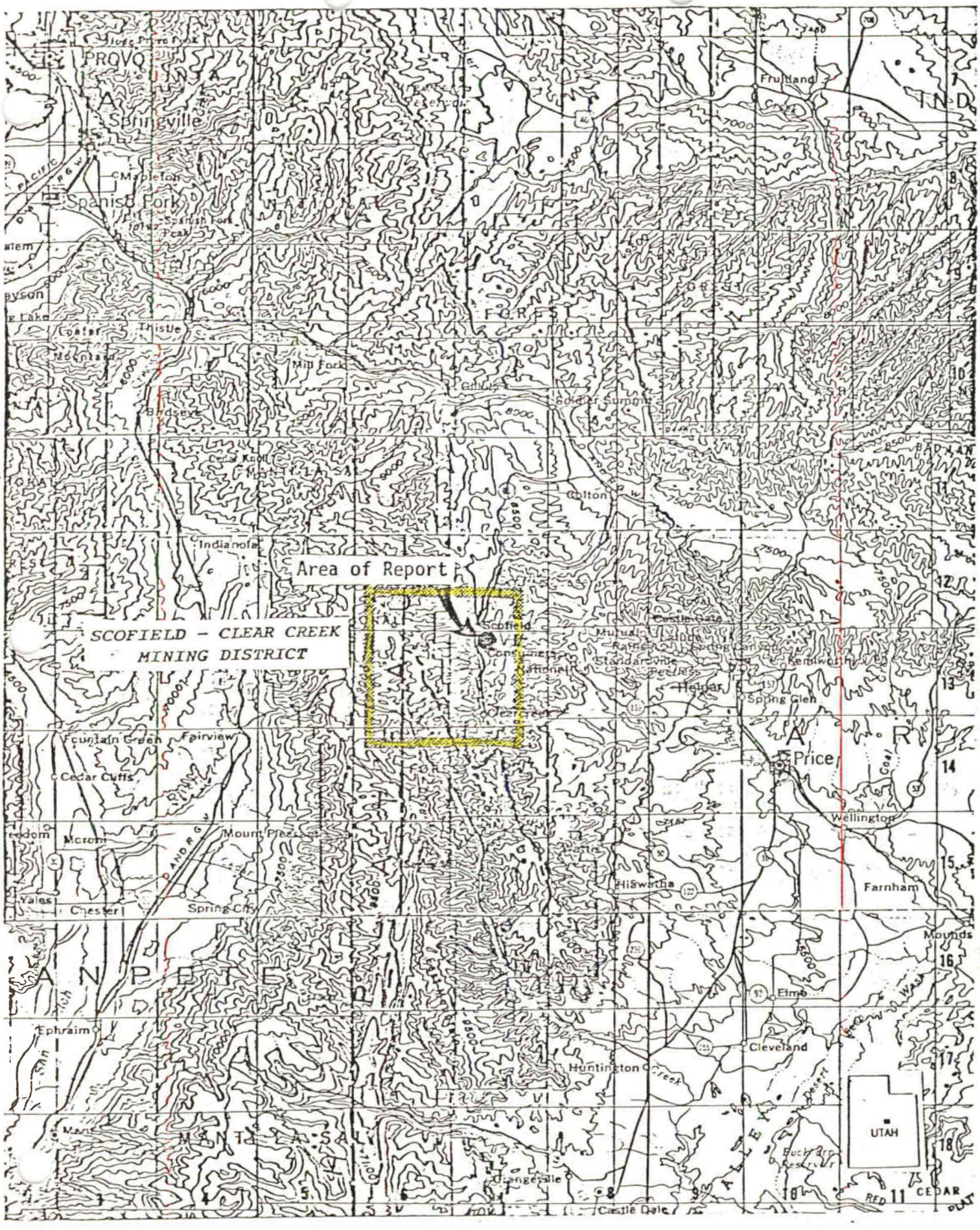

Figure 1
LOCATION MAP

10 0 10 20 30 40 Miles

TOPOGRAPHIC MAP

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Scale 1:62,500

Figure 2

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General Description of Lands Involved

Private coal lands and federal coal lease lands are involved in the proposed mining. Private coal lands involved are: NE¼ Section 8; E½,SE¼ Section 8; W½,SW¼ Section 9; and the NW¼,NW¼ Section 9, all within Township 13 South, Range 7 East, SLBM. Federal lease coal lands involved are: E½,SW¼ and the SW¼,NW¼ Section 9, Township 13 South, Range 7 East, SLBM. Figure 3 shows the coal ownership, and Figure 4 shows the surface ownership of the area. The mining plan is shown on Enclosure I.

Current land use in the area is primarily mining and grazing. There is some residential and commercial use of lands along Scofield Reservoir, some five miles to the north. Other surface use is primarily for deer, upland game birds, and other wildlife habitat. Recreation values exist for hiking, sight-seeing, fishing and hunting in the general area. Adjacent areas have been mined for coal, and it is expected that other mines will be opened in the general area. No other unique land use exists on the adjoining areas.

Climate

The area lies in an annual precipitation belt of 20 to 25 inches.

The climate of the region is typical of alpine areas in this part of the state. The summer season is generally short with maximum temperature readings in the low 80's and low summer readings in the low 40's. Fall and spring seasons are generally erratic in nature with snow falling as early as September and as late as early June. Winters are often severe, with temperatures below minus 30 degrees occuring at times. Generally, the major snow falls occur in the months of January, February, and March.

L.AH NO.2 MINE AREA
COAL OWNERSHIP MAP

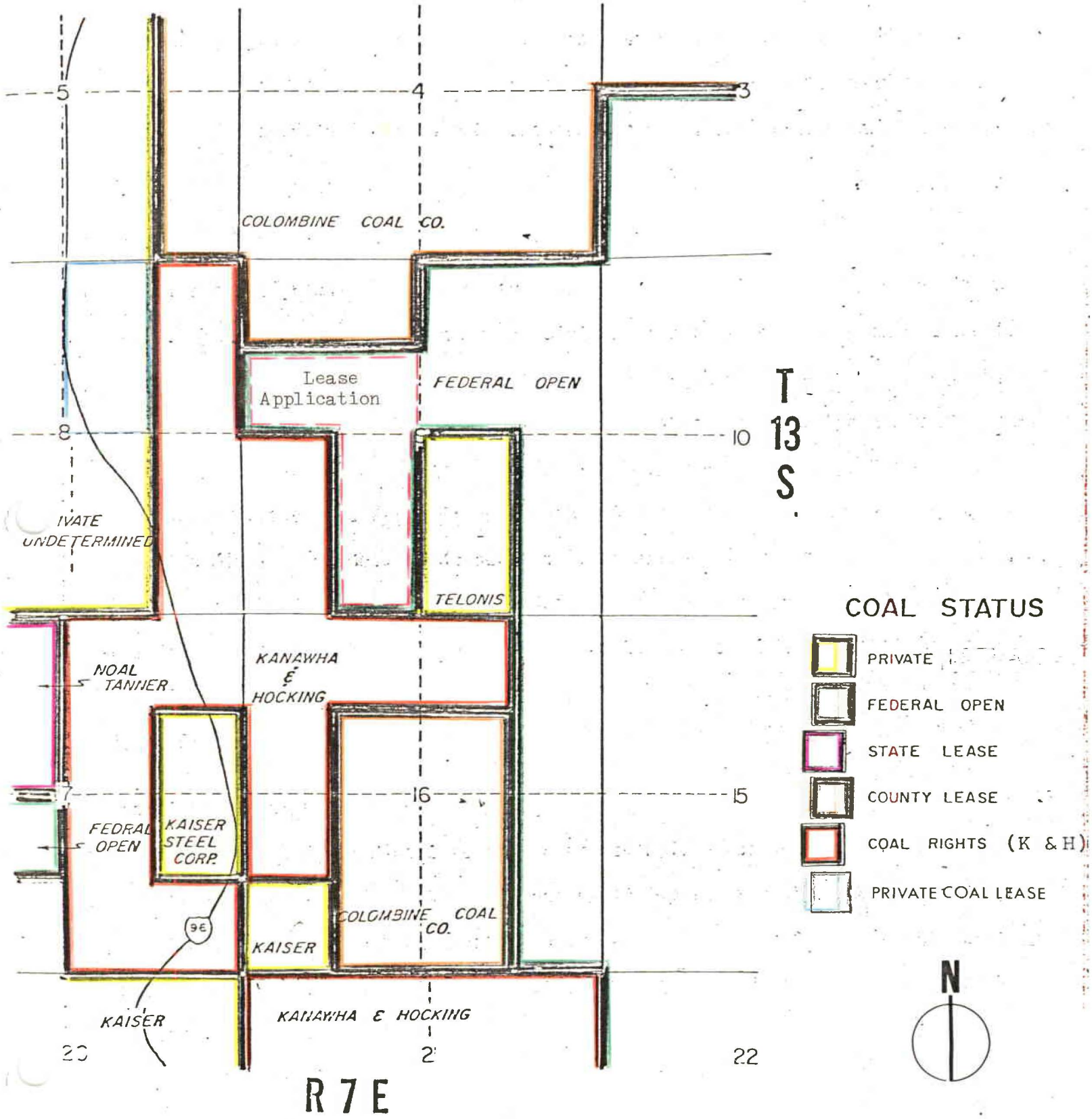
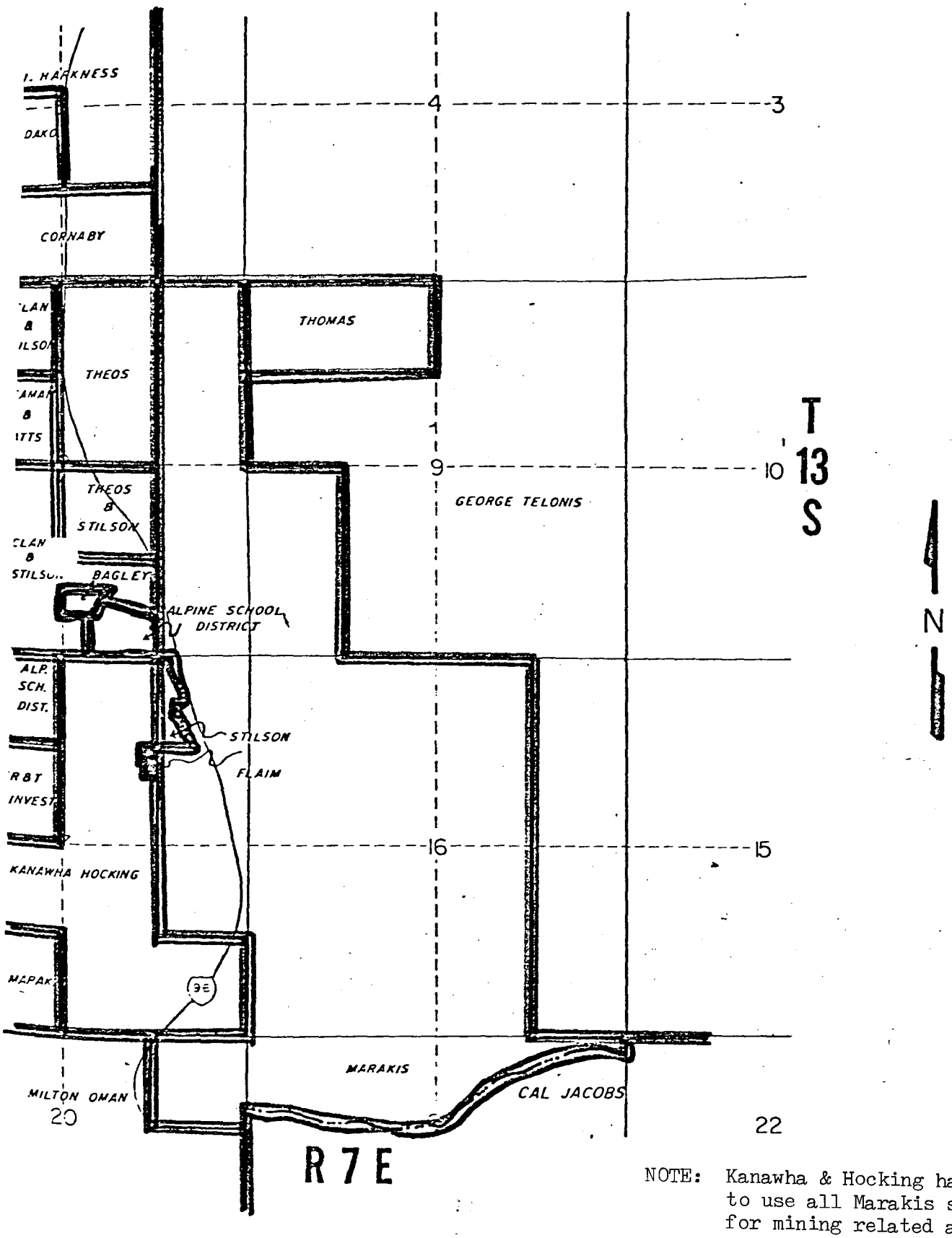


Figure 3

UTAH NO.2 MINE AREA

SURFACE OWNERSHIP MAP



NOTE: Kanawha & Hocking has right to use all Marakis surface. for mining related activities.

Figure 4

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Examinations of the records kept at a weather recording station near the Scofield Dam showed the winter daily snow falls to range generally between two to eight inches. Maximum daily snow falls were recorded in excess of one foot. The average annual snowpack water equivalent is 10 inches.

The average frost-free season in the area extends from June 2 to September 11, a period of 135 days

Flora and Fauna

Two major plant communities are found within the area. A mixed conifer community is found on the north facing slopes and a mountain brush community is found on the balance of the area.

Mixed Conifer Community - The conifers found in the area are Douglas fir (*Pseudotsuga menziesii* Var. glauca) and lesser amounts of subalpine fir (*Abies lasiocarpa*). These species are confined to the north slopes. The Douglas fir and subalpine fir occupy the mountain stony loam soils along the north slopes above the 5,500 foot elevation zone. The timber stands are on slopes exceeding 60 per cent. Quaking Aspen (*Populus tremuloides*) is also often found in association with the Douglas and subalpine fir.

Douglas fir is considered to be the climax species in this region of the Rocky Mountains. The timber is not considered to be of commercial value, due primarily to (1) accessibility of the timber, (2) the size of the timber, (3) the lack of a viable timber market within a reasonable distance, (4) inadequate logging technology in the immediate area, (5) low volume of overall marketable timber, and (6) slow tree regeneration.

Major shrub species found within the mixed conifer community includes true Mountain Mahogany (*Cercocarpus montanus*), Serviceberry (*Amelanchier alnifolia*), and Snowberry (*Synphoricarpus oriophilus*).

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Mountain Brush Community - The major browse species within this community are big sagebrush (Artemisia tridentata), gambel oak (Quercus gambeili), Mountain Mahogany (Cercocarpus montanus), Curlleaf Mahogany (Cercocarpus ledifolius), Snowberry (Symphoricarpos oreophilus), Antelope bitterbrush (Purshia tridentata), and Serviceberry (Amelanchier alnifolia).

The major grass species found in this community are:

Agropyron spicatum - bluebunch wheatgrass

Agropyron subsecundum - bearded wheatgrass

Agropyron trachycaulum - slender wheatgrass

Agropyron smithii - western wheatgrass

Poa ampla - big bluegrass

Poa pratensis - Kentcuky bluegrass

Sitanion hystrix - squirrel tail

Oryzopsis hymenoides - Indian ricegrass

The major forb species found in this community are:

Lupinus alpestris - mountain lupine

Salsola kali tenuifolia - Russian thistle

Achillea lanulosa - western yarrow

Hackelia foribunds - stickseed

Aster engelmanni - Engelmann aster

Calochortus nuttallii - segolily

The range condition is good with an estimated total ground cover of 60 per cent. There is no data available on livestock utilization or on range carrying capacities.

Fire Incidence - The general area of the application has no known incidence of major fires.

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Livestock and Range Improvements - The area of the application is used for grazing of sheep during the summer. There is no BLM surface ownership in the area herefore. There are no BLM constructed range improvements, but there are some privately constructed fences.

Fish and Wildlife - Fish Mud Creek has been assigned the catalog # II.K.20b by the Utah Department of Wildlife Resources. Under their rating system, the stream was given the following values for the section between Scofield Reservoir and Finn Creek, which includes the area adjacent to the site:

Esthetics - 4 pts.
Availability - 6 pts.
Productivity - 8 pts.
Total - 18 pts.

This point total would classify Mud Creek as a Class III stream.

During surveys conducted in 1968, DWR personnel indicated the stream had only a poor population of game fish which was in poor condition, with poor natural propagation. Flows were rated adequate, although production of bottom organisms was poor. In general, the flow, cover, and temperature regimes were adequate for game fish use, but the food supply and reproduction were low.

Four species of fish were found in the stream:

Salmo gairdneri - Rainbow

Salmo clarki - Cutthroat

Rhinichthys osculus - Speckled Dace

Catostomus platyrhynchus - Mountain sucker

Only cutthroat were found above a cement abutment near Greens Canyon. Populations were sparse, but fish up to 15 inches were taken.

Wildlife (Terrestrial) Deer and elk are the major species present.

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They inhabit the general area during the summer and fall months. There are approximately 700 elk and 3,500 deer that utilize the general area during this period (J. Bates--Utah Division of Wildlife Resources).

A small herd of moose (approximately 39) was released in this area in the winter of 1973.

Other wildlife species found in the area are snowshoe hares, cottontail rabbits, blue grouse, ruffled grouse, sage grouse, bear, mountain lion, bobcats, coyotes, and small mammals such as marmots, tree squirrels, and ground squirrels. Some species of raptors can be found in the area yearlong.

Threatened or Endangered Species - The American Peregrine falcon is an occasional visitor to this area. There are no other threatened or endangered species known to migrate through or inhabit the general area.

Archaeological and Historical Considerations

Indians of the Fremont Culture were known to inhabit east central Utah. The age of the Fremont Culture is not precisely known, but has been estimated as beginning in the 400 A.D. to 950 A.D. time span and probably vanished about 1300 A.D.

Several sites related to the Fremont Culture have been found and explored in the cliff and desert areas of eastern Utah. There have been no such sites found in the area and the chances of locating such sites are not considered good.

Sites of historic importance related to non-Indian occupation of the area are principally related to early mining operations.

Development Phases

History of Aquisition and Land Status

The coal land presently used for mining in the Utah No. 2 has passed through many hands, and is presently owned by Kanawha & Hocking Coal & Coke Co., a wholly owned subsidiary of Valley Camp Coal Co. While Kanawha & Hocking Coal & Coke Co. does not own the surface in this area, a stipulation on the deed to coal ownership allows for any mining related surface use on the area covered by the deed. This area is shown on the coal ownership map, Figure 3. In addition, 80 acres of coal land and related surface use have been purchased from Katherine Theos-- this land is the W$\frac{1}{2}$, NE$\frac{1}{4}$ Section 8, township 13 South, Range 7 East, SLBM, also shown in Figure 3.

Additional acreage may one day be obtained from the Columbine Property; however, fault locations and legal problems with the Columbine Property may prevent this possibility.

The only federal lease coal projected to be involved in the present mine plan is the 120 acres presently under application. This land is designated on Figure 3 and Enclosure I. No other leases are held in this area.

Exploration of the coal reserve in the mine area has been entirely on the private coal lands. All drill holes to date are shown on Enclosure II. Many questions still remain to be answered on the faulting to the north & east of Utah No. 2, and it is anticipated that some further drilling will be done in search of those answers. Drilling on both private and federal lease land would be preferred to obtain the necessary information.

Mining began in the Clear Creek area with the opening of the Utah No. 1 Mine in 1878. Since that time, numerous mines have opened and closed, as mentioned previously. The Utah No. 2 Mine and Belina No. 1 Mine are the only mines presently

operating in the en. .e area.

Utah No. 2 Mine Outlook

The Utah No. 2 Mine is currently producing at a rate of 800 tons per day, or 200,000 tons per year with a five day work week and a total work force of 87 people. At this, or a slightly decreased level of production, the existing mine life is anticipated to be about 4 months. It is to shut down the operation in September or October 1977, pending evaluation of rock slopes and other economic factors. There is some consideration being given to the possibility of reaching the coal east of the Scofield Fault through rock tunnels. If this idea became feasible, it could add as much as 20,000,000 tons of recoverable coal to the Utah Mine Block, effecting a large increase in the mine life.

Nature and Extent of Deposit

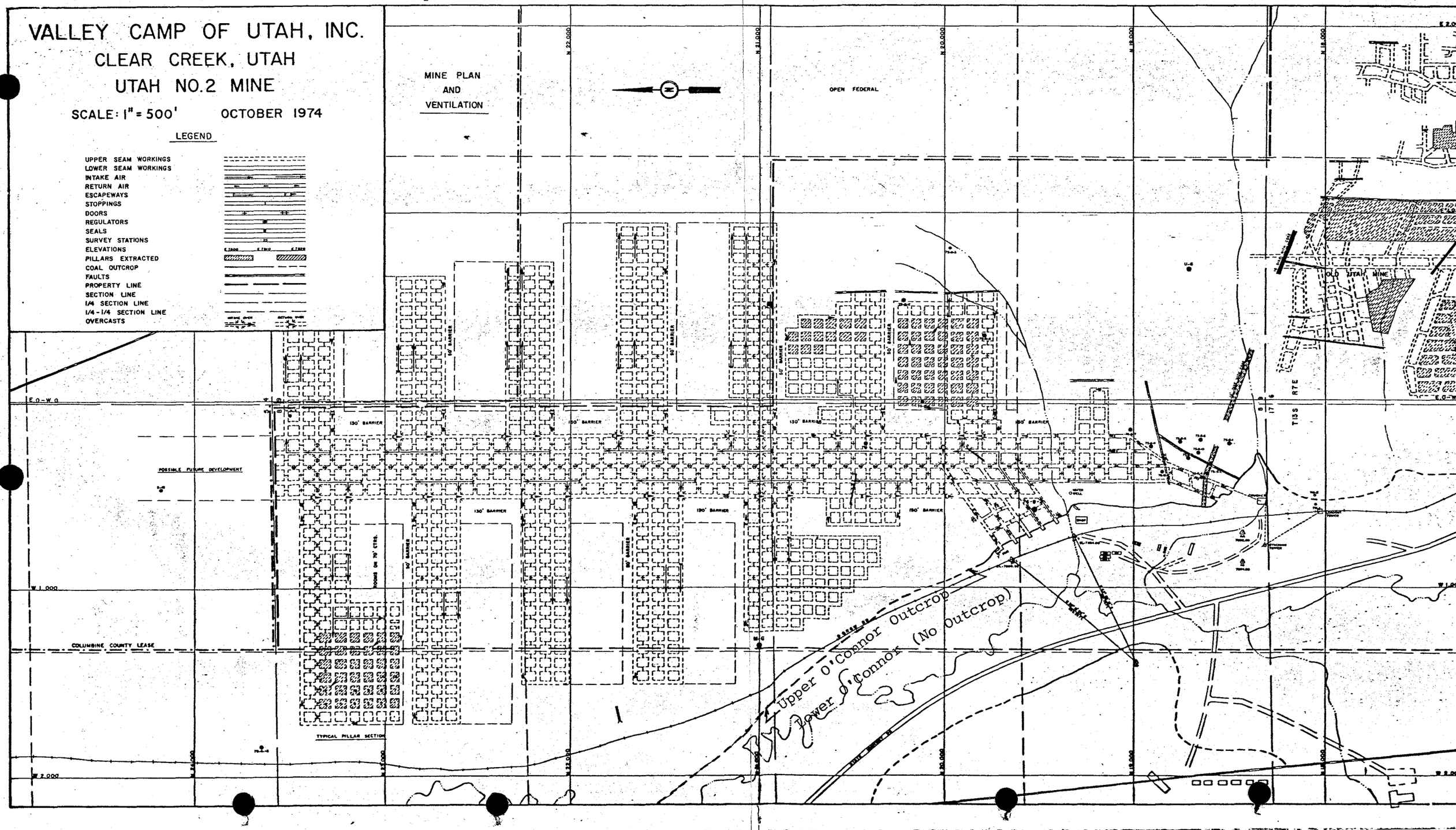
A detailed geologic map of the area with drill hole locations is included as Enclosure II. Plan and section views of the deposit are shown as Plates 1 and 2.

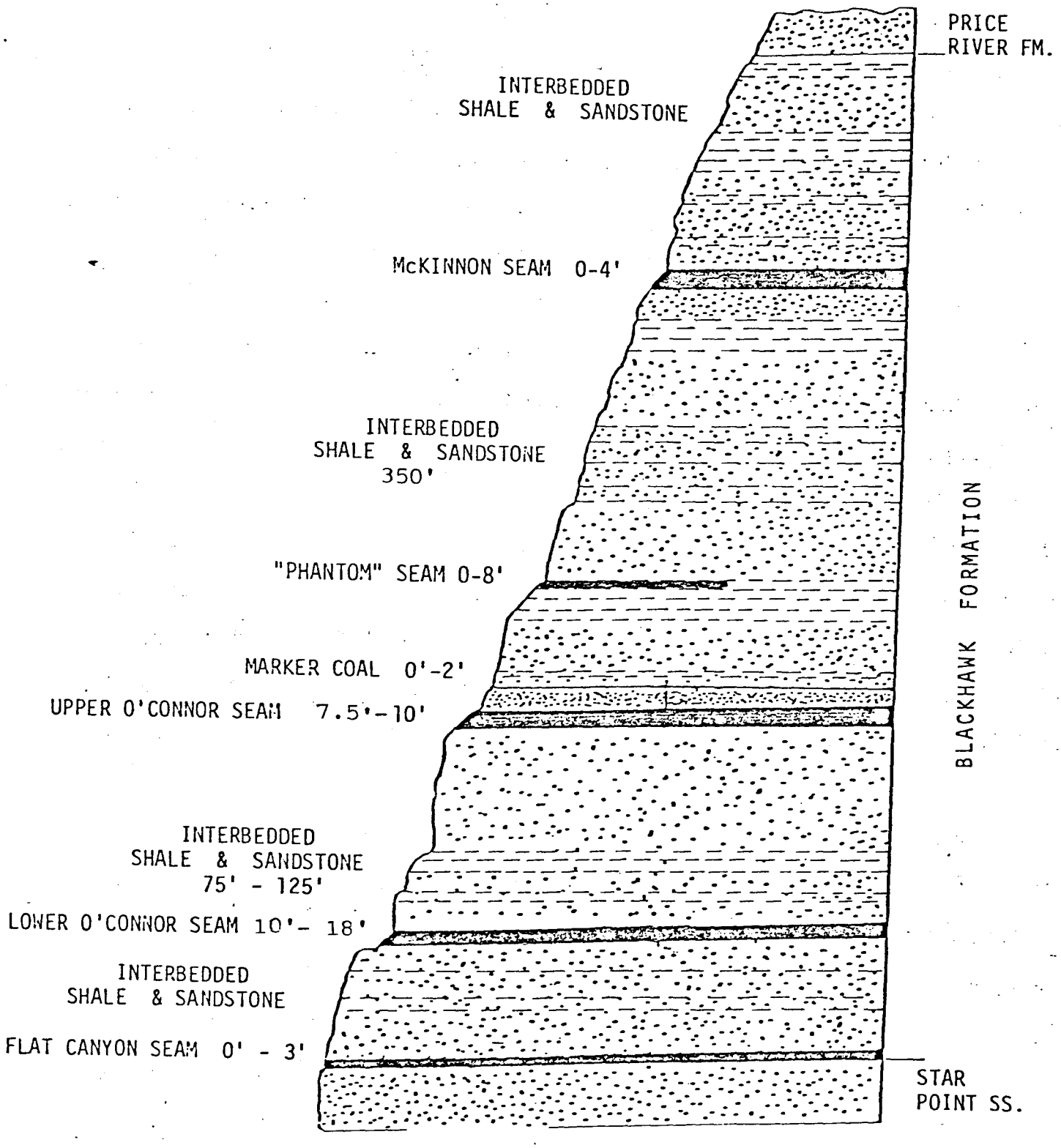
Topography

The holdings of Kanawha & Hocking Coal & Coke Co., lie; for the most part, in a down-dropped block of land (Pleasnat Valley Graben) between two north-northwest trending faults. The area lied on the Wasatch Plateau, near its juncture with the Book Cliffs, in a region characterized by numerous north - south trending faults.

The steepest slopes in the area are about 60 per cent. Elevations range from 8,000 to over 9,000 feet above sea level. The area is characterized by steep rounded hills covered by shrubs, brush or trees, and having little bedrock outcrop. Figure 2 is the topographic quadrangle which covers the area.

Plate 1 - Plan View of Deposit





GENERALIZED STRATIGRAPHIC COLUMN
UTAH NO. 2 MINE AREA

Plate 2

OK

Soils

The soils in the area belong to the Castle Valley-Kenilworth Association and are identified as (1) mountain loam, (2) mountain stony loam, and (3) mountain loam (oakbrush) types. The soils are generally shallow, calcareous, well-drained and are gently sloping to steep. Water holding capacity of the soils is considered to be good with the exception of the mountain stony loam.

Geology

The major formation in the area is the Black Hawk Formation, of Upper Cretaceous age. The Black Hawk Formation consists of sandstone, mudstone, carbonaceous shale and coal. It is the chief coal-producing formation in Utah.

Both the Upper and Lower O'Connor seams will be mined by Kanawa & Hocking Coal & Coke Co.; however, the present mining is in the Upper O'Connor Seam only. The Upper is about 7.5 feet thick, and the Lower is about 17 feet thick. It is possible, though, that the Lower O'Connor Seam may be eroded away in places.

West of the area, the Starpoint Sandstone, also of Upper Cretaceous age, crops out. The Starpoint is chiefly interbedded light-colored sandstone and grey marine shale, and is stratigraphically below the Black Hawk Formation.

Coal has been a major resource for several decades in the area. Mines have been operating there since the late 1800's. However, coal is not the only economic mineral resource. The Clear Creek gas field is west and south of the area. It has been producing since 1952, out of the Ferron Sandstone member of the Mancos Shale. There are over 15 producing wells in the field. Gordon Creek Field, about eight miles south-east of the mine, is also a designated

ok

oil and gas field, but there has been no production from it. Joe's Valley Field, about 15 miles southwest of the mine is producing gas from the Ferron and Dakota Sandstones.

An area classified by the U.S. Geological Survey as potentially valuable for geothermal steam lies about ten miles to the west of the mine site in Townships 13, 14, 15 South, Range 5 East.

Toxic Materials and Geological Hazards

There are no particularly toxic materials naturally occurring in either the mineral deposits or the overburden.

Other potential geologic hazards being considered are mine drainage (ground water) and subsidence.

The mine drainage is being cleaned by a series of three filtering ponds on the surface. Application for an EPA Discharge Permit has been made, and we are awaiting their decision. Water quality of the effluent is being monitored, and results show an effluent within the present EPA Standards. This particular aquifer is not known to supply any springs, seeps or wells, and therefore, the drainage should have no effect on any of the above.

Subsidence is a potential problem with any underground workings, and is also being considered. The maximum cover over the operation will be about 800 feet. Some subsidence can be expected, but it is unlikely that present land use will be affected. Likely types of subsidence may be some tension fracturing, compression, buckling, and/or minor slumping. Types and patterns of subsidence depend upon the mine geometry, strength of the rock, thickness and configuration of the overburden, and the method and per cent of coal extractions.

Survey stations over the potentially affected area will be tied to stations outside the area of mining. In this manner, we can monitor any movement of the subsidence stations relative to the control stations. If and when such movement should become excessive, we shall re-evaluate our mining plans and make necessary changes to prevent further subsidence. It is our intention to design our mine with the thought of maximum recovery and minimum subsidence in mining; however, no one can say with certainty how much subsidence will occur or how much subsidence can be tolerated. As part of our reclamation plan, any dangerous or unsightly effects of subsidence will be minimized through reclamation of the affected area.

There is no unusual landslide hazard present although much of the area is characterized by steep, wooded slopes. Some soil creep or wasting may occur, but traces of these movements and other scars are relatively quickly lost due to the good revegetation potential of the area.

General Economics of Resource

The Utah No. 2 Mine has a low sulfur-high BTU coal, typical of many Western coals, whose quality is being sought by many coal burning facilities. The combination of these qualities along with the present (and anticipated) increase for power generation help assure a good economic outlook for the mine. This coal is used almost entirely by power plants in the Western United States. Shipments are by unit train from the mine site.

Present mine reserves are million tons owned by Kanawa & Hocking Coal & Coke Co. Mining costs under the proposed plan are estimated to be about $15 per ton. Mine life is estimated to be 1 year or less; however this figure and the reserve figure could change considerably with aquisition of the ajacent coal lands east of the Utah No. 2 Mine and Scofield Fault. These figures also depend upon the decision to mine the lower seam.

ok

PROPOSED MINING PLAN

Development Drilling Program

At the present time, no drilling of the federal coal land is anticipated. We may do some drilling on private land (and private coal) in the future; however, particular sites have not been selected at this time. All drill sites are located, built and reclaimed in such a way as to maximize information while minimizing destruction. Whether on federal or private land, we will attempt to use existing access as much as possible, modern methods, minimum time, proper depth, logging and/or coring, capable equipment, and reclamation procedures to replace the site to as nearly a natural condition as possible.

Proposed Mining Methods

Topsoil Handling

If any topsoil need be disturbed, it shall be scraped by a bulldozer or removed by a backhoe and piled in an undisturbed area, protected from erosion. When possible, this topsoil shall be replaced onto the disturbed area and replanted with native vegetation. It shall be replaced in such a way as to maximize its stability and minimize erosion.

Overburden Handling

It is not anticipated that any major overburden handling will be necessary, since all proposed mining will be underground.

Mining Methods

The mining method employed at the Utah No. 2 Mine is a panel type room and pillar system. In this system, a set of main entries (5 entries) are being

driven to the north, approximately bisecting the deposit. Panels with four entries are then driven off either or both sides of the mains to a boundary determined by outcrop, property, or faults. Rooms are then driven off the panel entries and the pillars are recovered as the panel retreats toward the main entries. Adequate barrier pillars are left along the main entries, and the panels are sealed directly after retreat to minimize fire and noxious gas potentials.

Coal is mined by continuous miners and hauled to a feeder-breaker by cable shuttle cars. The feeder-breaker discharges coal onto a conveyor belt which carries it out of the mine. Once at the surface, the coal is screened/crushed and stockpiled for loading into a unit train. This system of operation from face to unit train is expected to be used throughout the life of the mine.

Mining Sequence

Plates 3 through 6 describe the mining sequence and Enclosure III shows the anticipated 1 year advance of the mine.

Disposal Methods

Since this coal is not cleaned, no disposal methods are anticipated for tailing, etc. Some rock may fall in the mine, but this is normally cleaned up and stored within the mine itself. If a fall of rock and coal should occur, it may be cleaned up and brought outside. In this case, it will be removed to a designated dump site near the mine site where it shall be covered with dirt to prevent fire. Ultimately, this area will be contoured and planted.

Mine Plant Facilities

Mine plant facilities and location are shown on Enclosure IV. The coal

SUBJECT VENTILATION OF 5-E RY SYSTEM

DRAWN BY

CALLEY CAMP OF UTAH
P.O. BOX 507 CLEAR CREEK, UTAH 84517

SCALE

DRAWING NO.

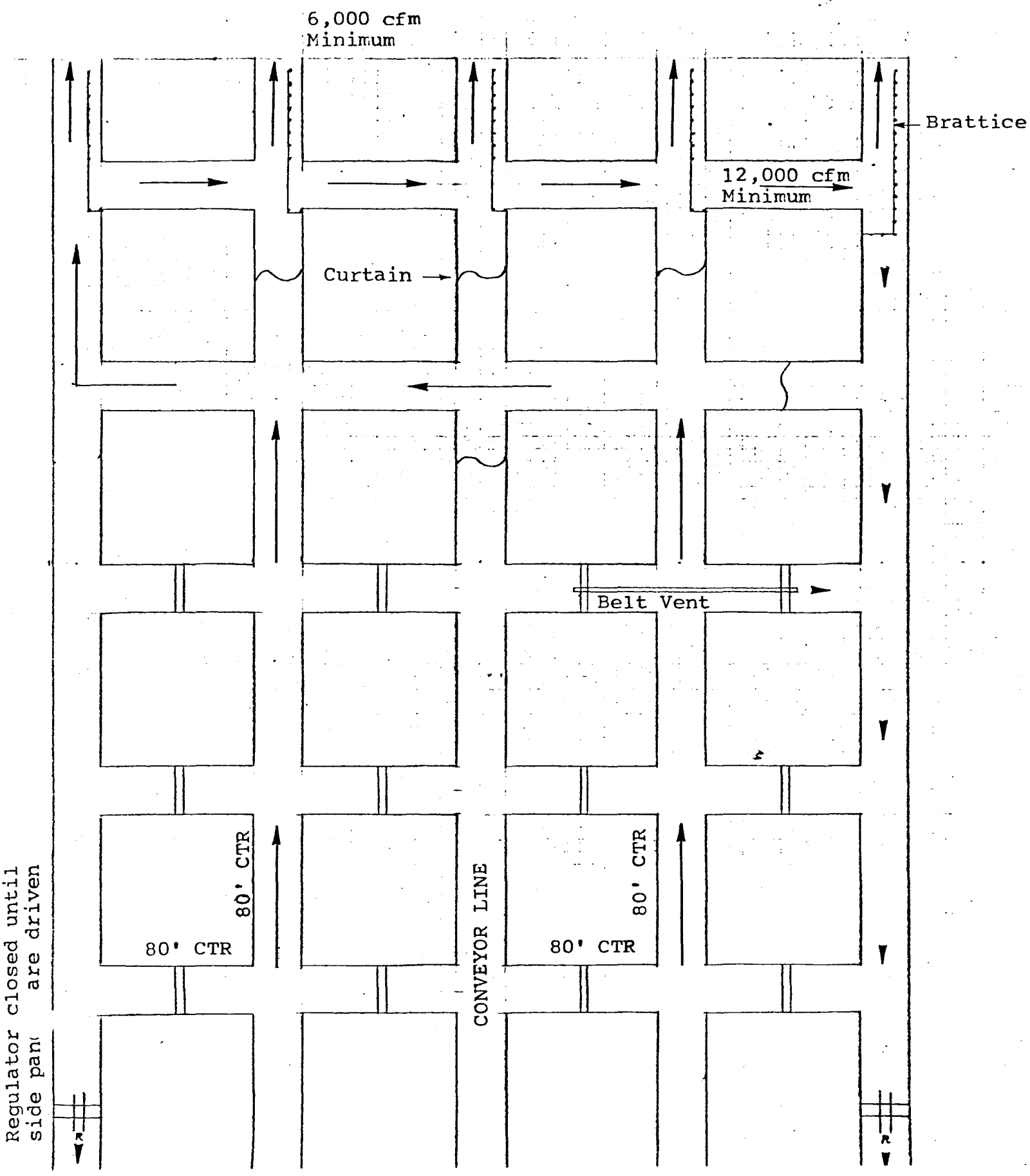
This system of ventilation used only when driving the 5 entries

PLATE 3

LEGEND

Intake →

Return ►

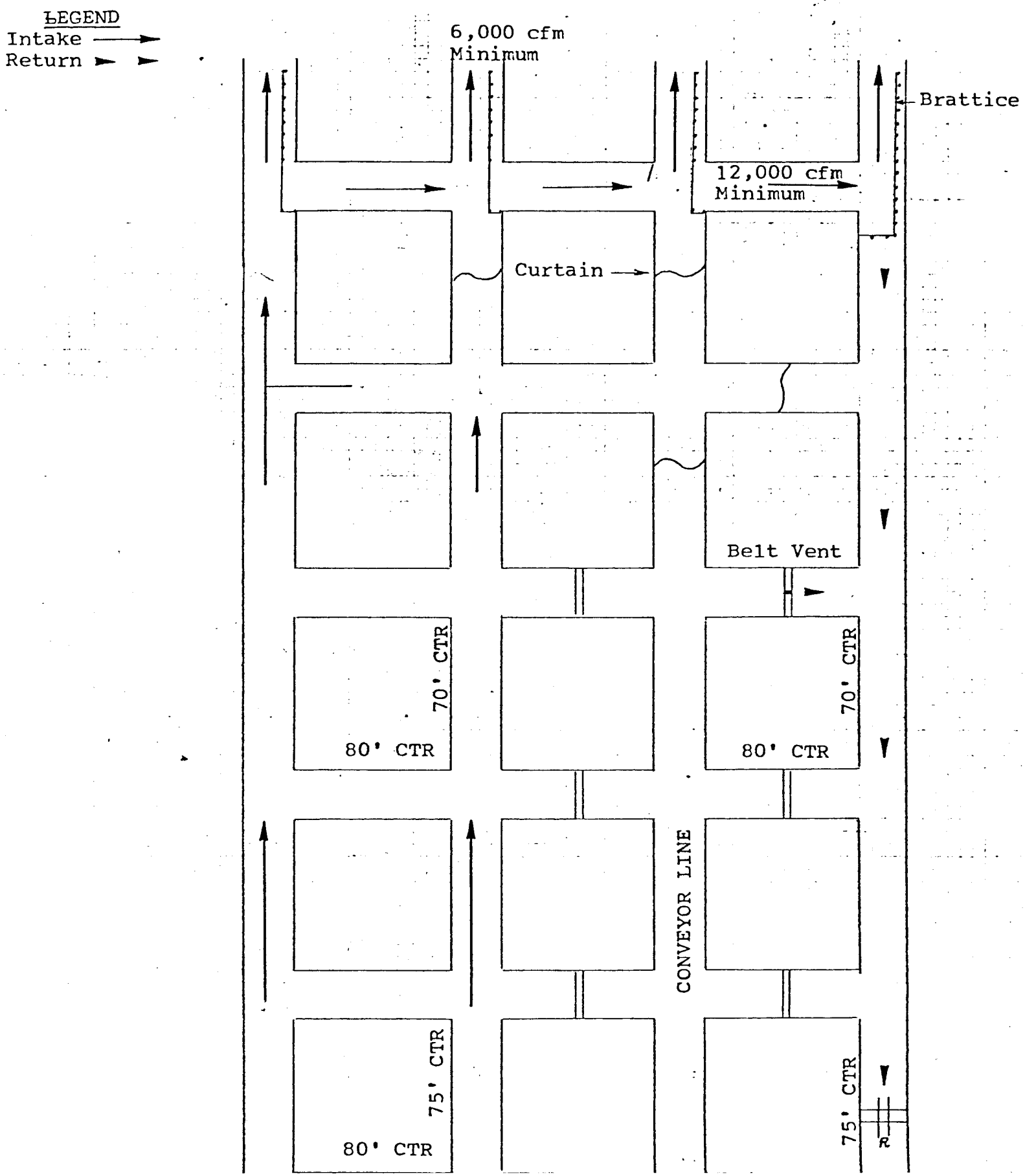


SUBJECT VENTILATION OF 4 E RY SYSTEM
DRAWN BY

STELLEY CAMP OF UTAH
P.O. BOX 507 CLEAR CREEK, UTAH 84517

SCALE
DRAWING NO.

PLATE 4

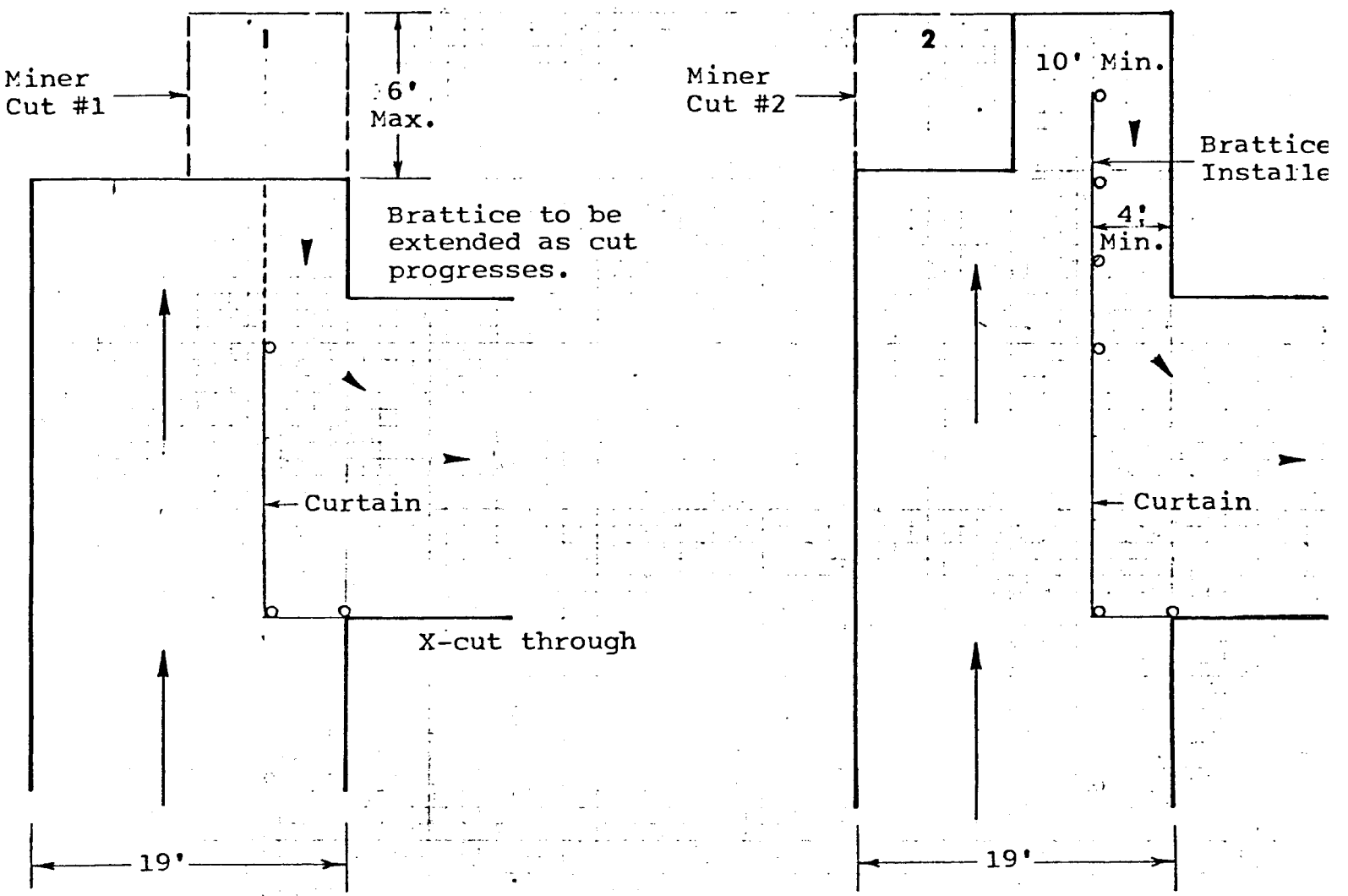


SUBJECT MINING CYCLE
DRAWN BY D.GUY

VALLEY CAMP OF UTAH
P.O. BOX 507 CLEAR CREEK, UTAH 84517

SCALE 1" = 10'
DRAWING NO.

PLATE 5



LEGEND

Intake Air →

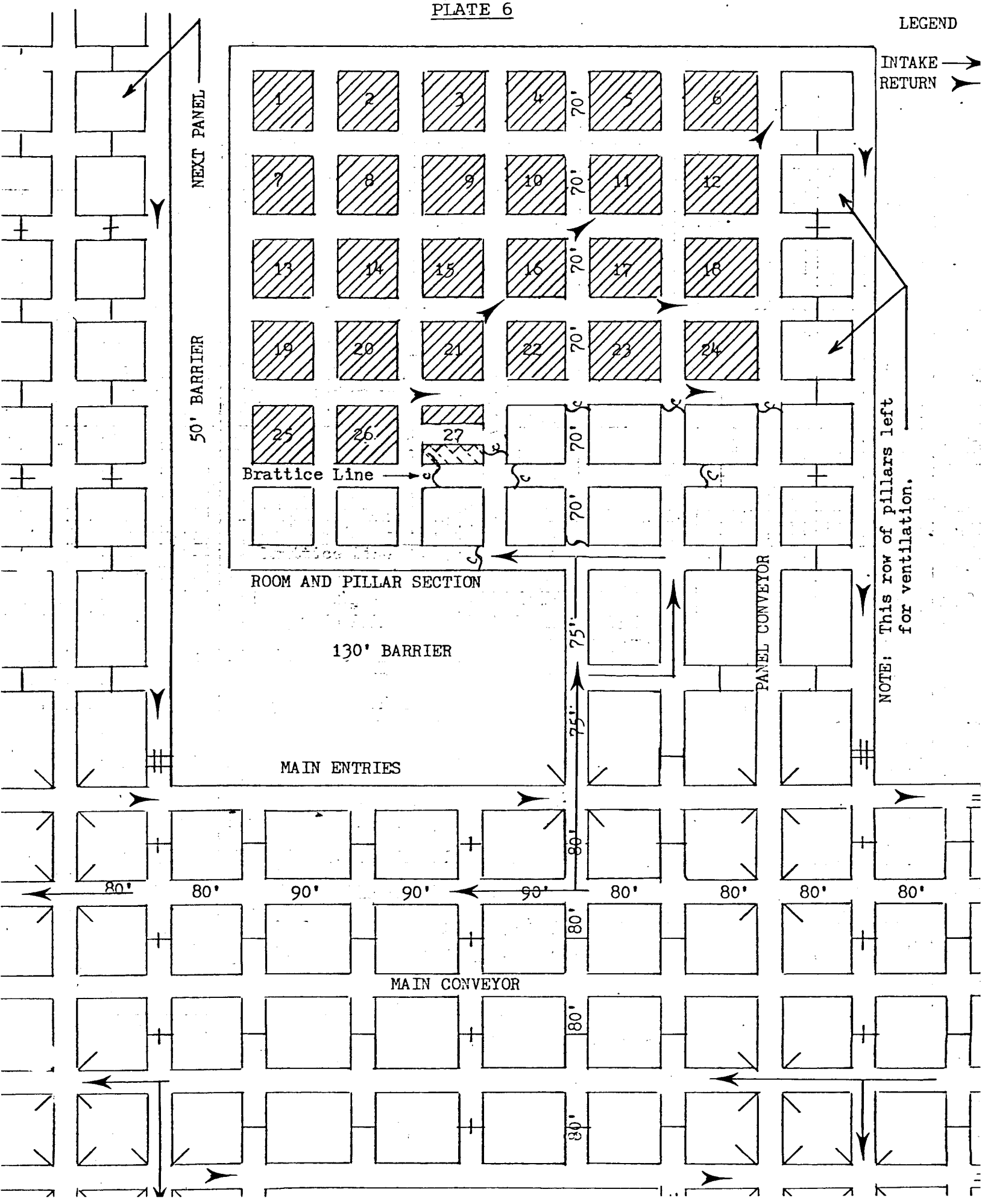
Return Air ► ►

Notes:

1. Brattice shall be maintained to within 12' of face.
2. Maximum sump cut of miner shall be 6'.

SUBJECT PANEL AND PILLAR VENTILATION VALLEY CAMP OF UTAH SCALE
DRAWN BY P.O. BOX 507 CLEAR CREEK, UTAH 84517 DRAWING NO.

PLATE 6



OK

is kept totally enclosed until discharge onto the stockpile to minimize dust. Since the coal is wet(8 per cent to 10 per cent moisture) the stockpile presents very little dust problem. Noise and dust is minimized by all machines being enclosed. Drainage in the affected area is controlled by surface ditches which carry any polluted water to settling ponds (no discharge) or to the filtering ponds as shown in Enclosure IV and Plate 7. Upon termination of these facilities, all permanent structures will be removed, and the land restored to as nearly a natural state as is economically possible.

Coal Extraction

The Utah No. 2 Mine is presently mining in the Upper O'Connor Seam. This seam will average 9 feet in thickness; however, mining height ranges from 7.5 feet to 8.0 feet. The strata above our coal is a laminated sandy shale to shale with coal streaks, and has a definite tendancy to air slack and fall when exposed. We leave about 18 inches of top coal to keep this condition from occurring in all main entries. If conditions permit, extraction of the total seam may occur in the pillars. Resin bolting is also used throughout the mine at the present time.

The Upper O'Connor Seam is the uppermost mineable bed in the area. The Lower O'Connor Seam is some 110 feet to 120 feet below, and will run 10 feet to 18 feet in thickness. The upper bed is being mined first. This allows for release of pressure by caving of the upper bed. The present plan for the mine columnizes the lower workings directly beneath the upper workings, except in the area beneath the old Utah No. 1 Mine, where this would be impossible.

ok

Pollution Control

Pollution control methods have been discussed above with the mine plant facilities; however, some further information shall be given here. Dust, air and noise pollution are held to a minimum by plant and equipment design. Water pollution shall be prevented by surface drainage control and holding ponds as shown on Enclosure IV. Mine drainage is run through the filtering ponds, where settling and filtering of the water takes place prior to discharge. These ponds are working quite efficiently, and as previously noted, we have applied for an EPA discharge permit based on their performance. Details of the ponds and water quality of the effluent are shown in Plates 7 through 11 and Table 1.

Abandonment

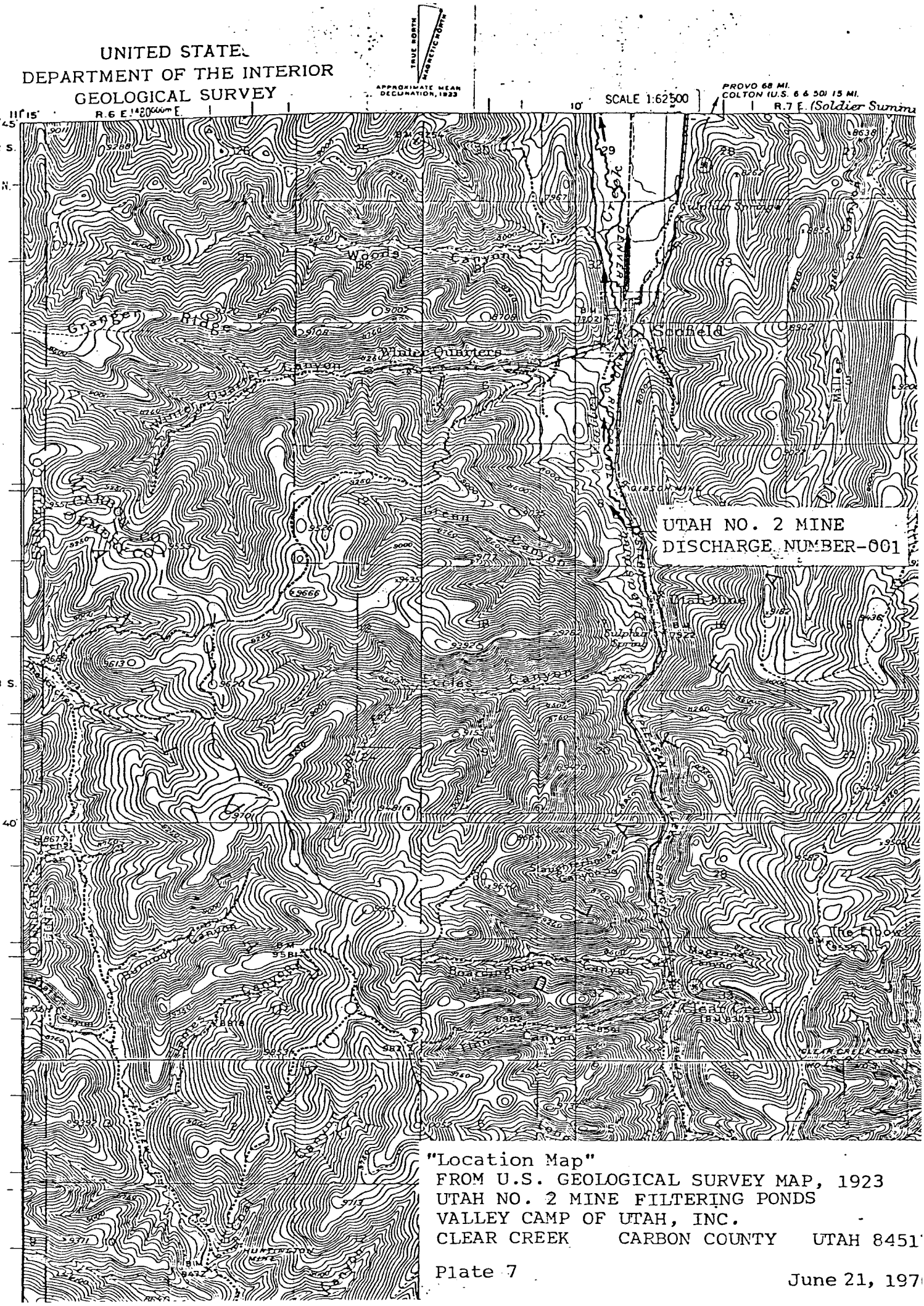
Removal of Surface Structures

Upon completion of the use of facilities at Utah No. 2 Mine all surface structures shall be dismantled and removed from the property. This will include cleanup and removal of all debris associated with the operation.

Sealing of Mine

When final mining is completed, all mine portals shall be sealed in accordance with MESA requirements. In addition, all removable portal shells shall be recovered, if possible. Concrete walls and portals shall be left if removal presents a danger to workmen; however, these and the exposed outcrop shall be covered with fill dirt which shall slope back to the highwall. When the use of roads is finished, the entire portal and mine site area shall be contoured, terraced and planted in accordance with the reclamation plan.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



"Location Map"
FROM U.S. GEOLOGICAL SURVEY MAP, 1923
UTAH NO. 2 MINE FILTERING PONDS
VALLEY CAMP OF UTAH, INC.
CLEAR CREEK CARBON COUNTY UTAH 8451

Plate 7

June 21, 197

SUBJECT
DRAWN BY

VALLEY CAMP OF UTAH
P.O. BOX 507 CLEAR CREEK, UTAH 84517

SCALE 1"=40'
DRAWING NO. 1 of 4

FILTERING PONDS

VALLEY CAMP OF UTAH, INC.
UTAH NO.2 MINE FILTERING PONDS
DISCHARGE #001

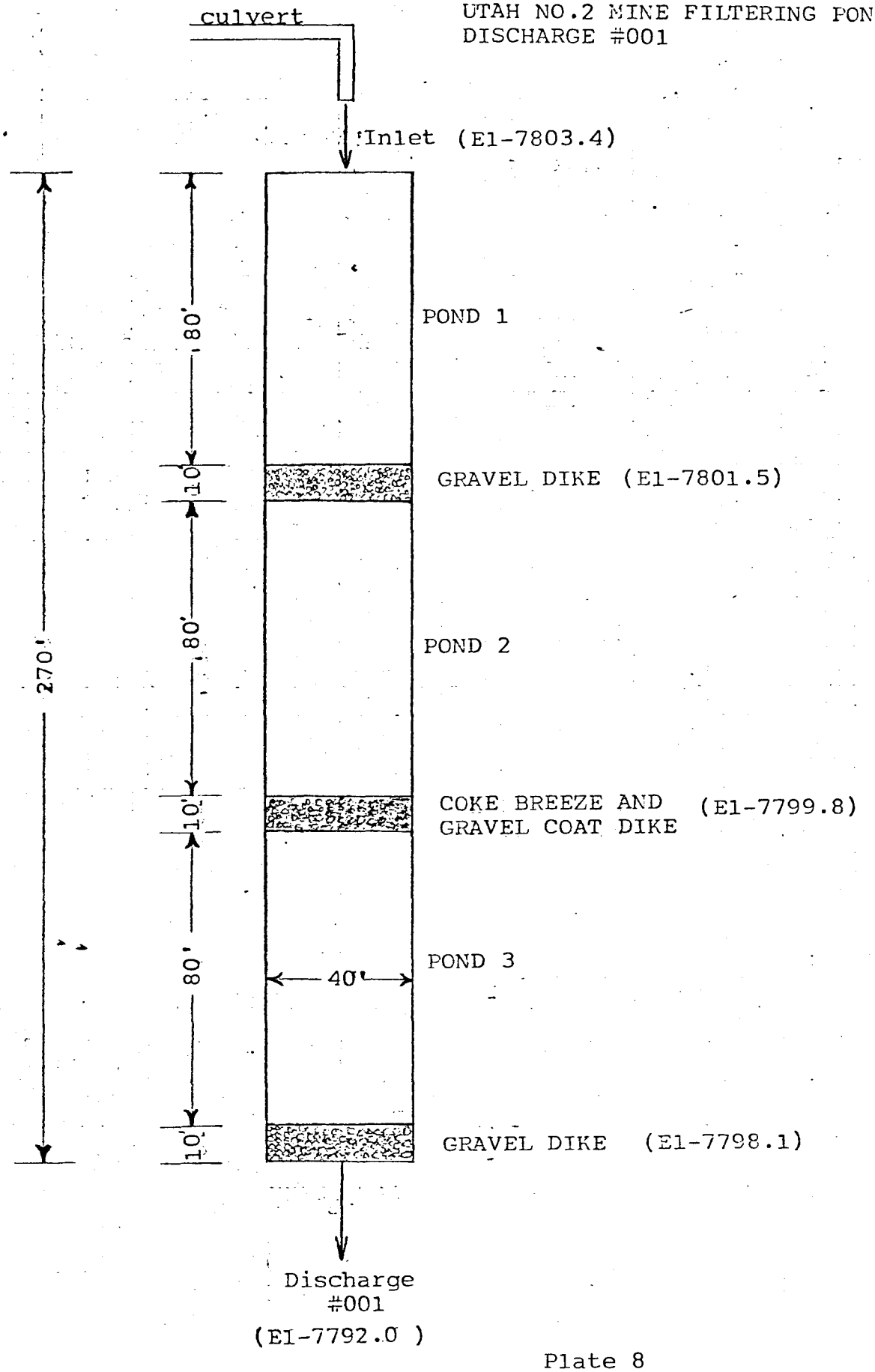
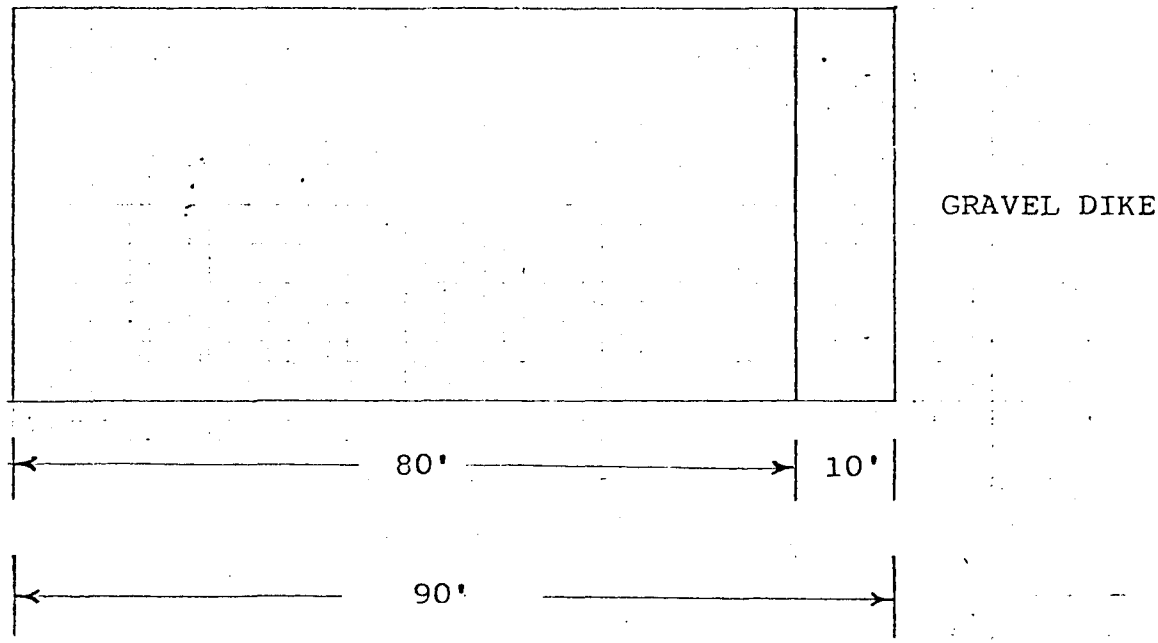
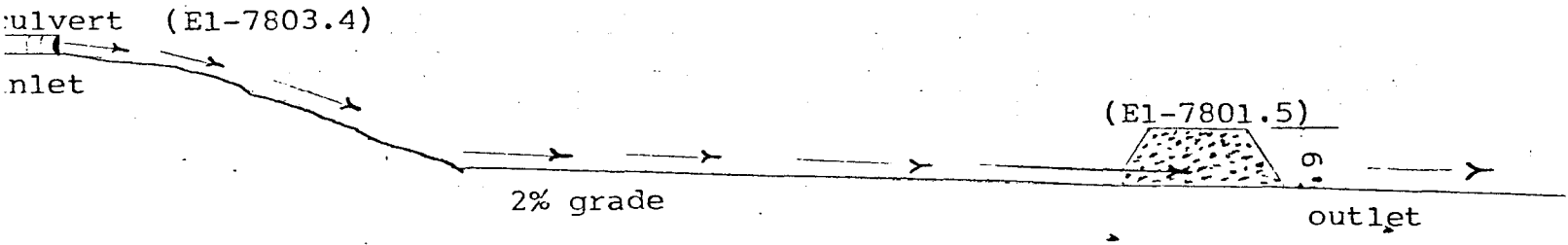


Plate 8

FILTERING POND NO.1

VALLEY CAMP OF UTAH,INC.
UTAH NO.2 MINE FILTERING PONDS
DISCHARGE #001





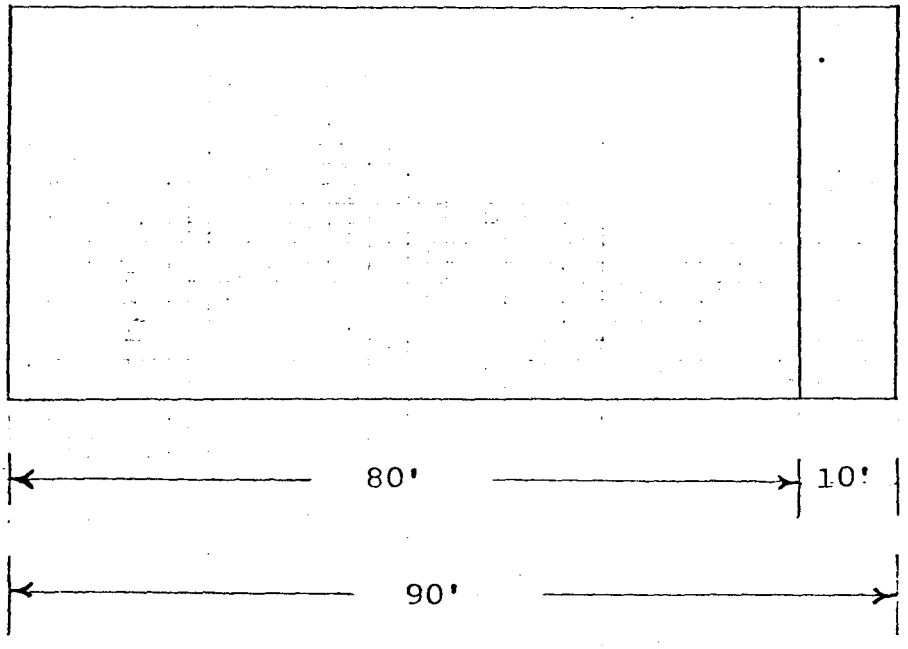
SUBJECT
DRAWN BY

VALLEY CAMP OF UTAH
P.O. BOX 507 CLEAR CREEK, UTAH 84517

SCALE 1"=20'
DRAWING NO. 3 of 4

FILTERING POND NO.2

VALLEY CAMP OF UTAH,INC.
UTAH NO.2 MINE FILTERING PONDS
DISCHARGE #001



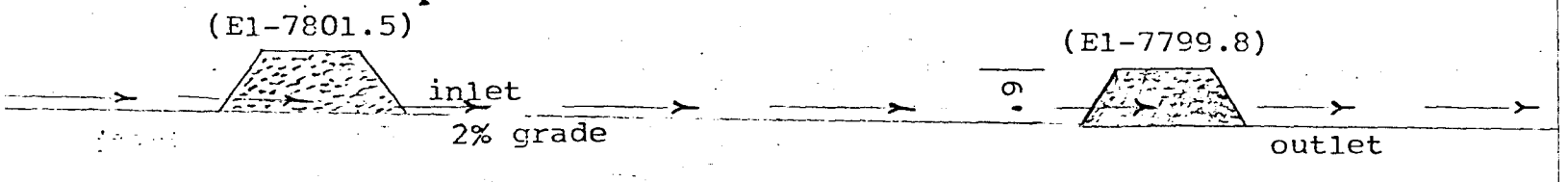


Plate 10

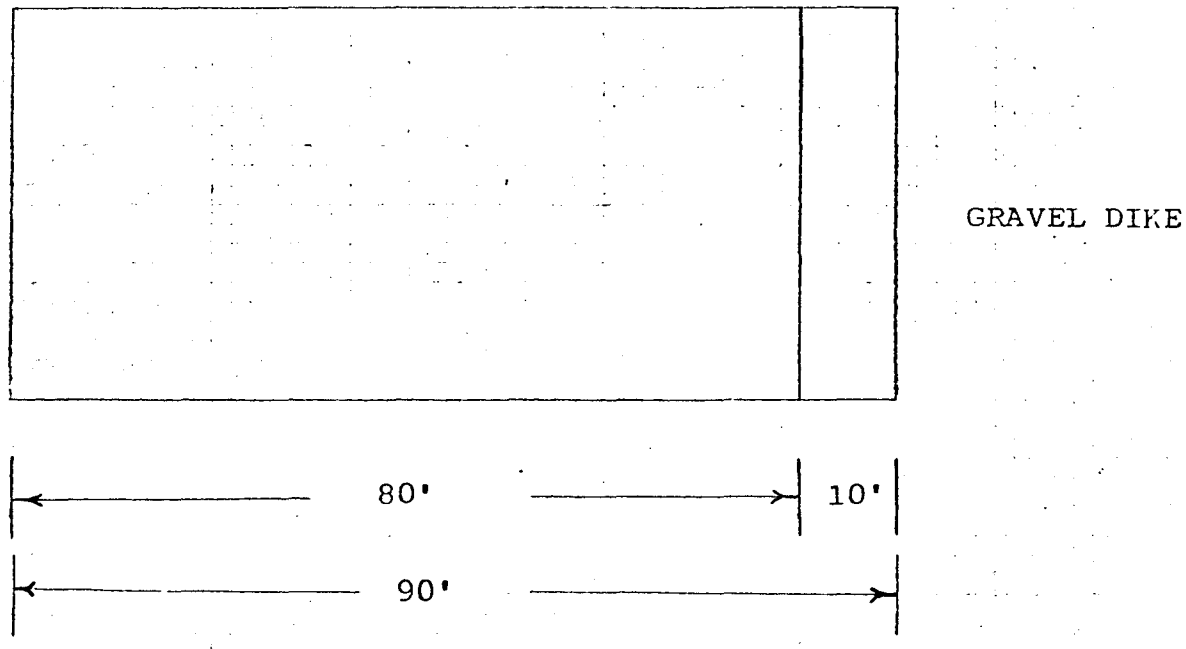
SUBJECT
DRAWN BY

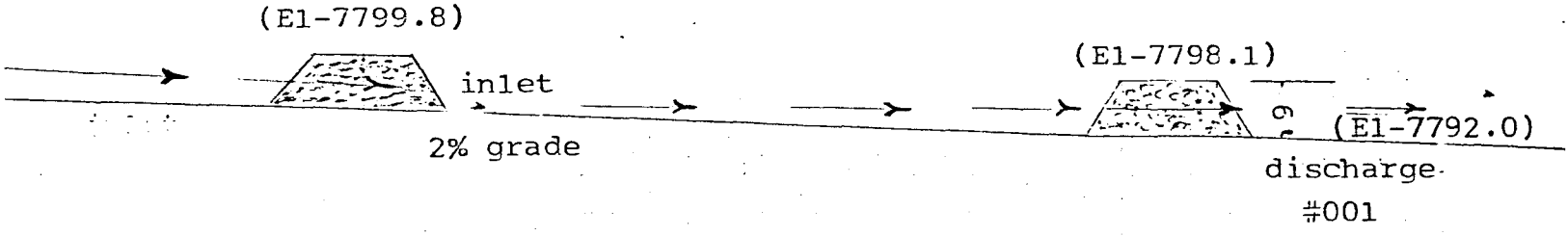
VALLEY CAMP OF UTAH
P.O. BOX 507 CLEAR CREEK, UTAH 84517

SCALE 1"=20'
DRAWING NO. 4 of 4

FILTERING POND NO.3

VALLEY CAMP OF UTAH,INC.
UTAH NO.2 MINE FILTERING PONDS
DISCHARGE #001





DISCHARGE SERIAL NUMBER

001

FOR AGENCY USE

17. Description of Intake and Discharge

For each of the parameters listed below, enter in the appropriate box the value or code letter answer called for.(see instructions)

In addition, enter the parameter name and code and all required values for any of the following parameters if they were checked in Item 16; ammonia, cyanide, aluminum, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual).

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Flow* Gallons per day 00056	864,000	N/A	864,000	864,000	864,000	1/45	4	G
pH Units 00400	7.64	N/A		7.5	7.8	1/45	4	G
Temperature (winter) °F 74028	38.3°	N/A	43.7°	43.7°	43.7°	1/45	3	G
Temperature (summer) °F 74027	51.8	N/A	51.8	51.8	51.8	1/45	1	G
Biochemical Oxygen Demand (BOD 5-day) mg/l 00310	7.0	N/A	5.0	5.0	5.0	1/45	1	G
Chemical Oxygen Demand (COD) mg/l 00340	16.0	N/A	9.4	4.8	14.0	1/45	3	G
Total Suspended (nonfilterable) Solids mg/l 00530	388.47	N/A	37.9	3.0	63.0	1/45	4	G
Specific Conductance micromhos/cm at 25° C 00095	993.3	N/A		790	920	1/45	4	G
Settleable Matter (residue) ml/l 00545	< 0.1	N/A	< 0.1	< 0.1	< 0.1	1/45	1	G

*Other discharges sharing intake flow (serial numbers).(see instructions)

EPA Form 7550-23 (7-73)

Table 1

ANCILLARY INFORMATION

Power System

Power is brought to the mine site from the existing main power line running south to Clear Creek. Power comes into the Utah No. 2 Mine sub-station at 44,000 volts, and is stepped down to 4,160 volts for primary power to the mine. Continuous miners operate on 950 volts, and the other mine equipment operates on 480 volts.

Water Requirements

Surface and Ground Water

Ground water yields (from mining) are estimated at 300 gallons per minute at the present time. This water is made in the northernmost faces as they advance, and is pumped to a main sump by small face pumps. A large pump (and auxillary) then pump the water out of the mine and into the treatment facility.

Potable Water Supply

The potable water supply for Utah No. 2 Mine is from a well located east of the mine shop. This well was drilled in 1974 and is making an estimated 50 gallons per minutes. An additional well has been drilled some 200 feet east of the original, and is also making approximately 50 gallons per minute. The new well will replace the older one while some grouting work is being done. Once repaired the older well will act only as a back-up for the newer well. The wells feed into a 10,000 gallon holding tank, which in turn feeds both the surface and underground water systems, including fire protection systems.

Ford Chemical
LABORATORY, INC.
Bacteriological and Chemical Analysis
40 WEST LOUISE AVENUE
SALT LAKE CITY, UTAH 84115
PHONE 485-5761

Date: October 10, 1974

Name: Smith Engineering
Address: P.O. Box 377
Kaysville, UT 84037

CERTIFICATE OF ANALYSIS

74-3818

Sample: Well Water labeled Utah #2 Mine at Clear Creek, Utah, for Valley Camp of Utah received on September 25, 1974.

T dity	22.0	JTU	Fluoride as F	0.17	mg/l
Conductivity	905.0	umhos/cm	Total Hardness as $CaCO_3$	368.0	mg/l
pH	7.50		Iron (Total) as Fe	0.30	mg/l
Total Dissolved Solids at 180° C.	625.0	mg/l	Iron (Filtered) as Fe	0.26	mg/l
Alkalinity as $CaCO_3$	358.0	mg/l	Lead as Pb	<0.001	mg/l
Aluminum as Al	0.02	mg/l	Magnesium as Mg	31.20	mg/l
Arsenic as As	<0.01	mg/l	Manganese as Mn	0.04	mg/l
Bicarbonate as HCO_3	433.80	mg/l	Mercury as Hg	<0.001	mg/l
Barium as Ba	<0.01	mg/l	Nitrate as NO_3—N	0.65	mg/l
Boron as B	<0.01	mg/l	Phosphate as PO_4	0.22	mg/l
Cadmium as Cd	<0.001	mg/l	Potassium as K	4.25	mg/l
Calcium as Ca	95.2	mg/l	Selenium as Se	<0.01	mg/l
Carbonate as CO_3	<0.01	mg/l	Silica as SiO_2	2.32	mg/l
Chloride as Cl	8.0	mg/l	Silver as Ag	<0.001	mg/l
Chromium as Cr (Hex)	<0.01	mg/l	Sulfate as SO_4	38.0	mg/l
Cyanide as Cn	<0.01	mg/l	Sodium as Na	16.0	mg/l
Copper as Cu	<0.01	mg/l	Zinc as Zn	0.14	mg/l

Ford Chemical Laboratory, Inc.

Table 2

Ford Chemical LABORATORY

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE
SALT LAKE CITY, UTAH 84115

Presumptive		Confirmed (BGL BB)					Fecal at 44.5° C.				
24	48	24	48	24	48	T	24	48	24	48	T
/3	/3	/	/	/	/	/3	/	/	/	/	/3
/3	/3	/	/	/	/	/3	/	/	/	/	/3
/3	/3	/	/	/	/	/3	/	/	/	/	/3
/3	/3	/	/	/	/	/3	/	/	/	/	/3
/3	/3	/	/	/	/	/3	/	/	/	/	/3
/3	/3	/	/	/	/	/3	/	/	/	/	/3
/3	/3	/	/	/	/	/3	/	/	/	/	/3
/3	/3	/	/	/	/	/3	/	/	/	/	/3

Coliform Results /100 ml. MPN Fecal Results /100 ml.

Volume ml.		10	10	10	10	10
Presumptive	24 hr.	—	—	—	—	—
	48 hr.	—	—	—	—	—
Confirmed	24 hr.					
	48 hr.					

SATISFACTORY ☒ Coliform

WATER SAMPLE FOR BACTERIOLOGIC EXAMINATION

Water Sample No. 1800
Name Smith Engineering
Address P.O. Box 377, Kaysville
Date of Collection 9-24-74 Time 7 p

Chlorinated ☐ Unchlorinated ☒

Residual _____ ppm.

Source Ut. #2 Mine Well
Sampling Point hosebib/N. hydrant
Sample Collected By Sid Smith
Submitted By Sid Smith

EXAMINE FOR:
- Coliform in 10 ml. volume ☒
- M.P.N. Coliforms ☐
- Fecal Coliform ☐
- Standard plate count ☐ /ml.

Date Received September 24, 1974

Date Reported September 27, 1974

Ford Chemical

Table 2

Water quality is shown on Table 2. Water quantity used is approximately 220,000 gallons per month. All water rights and use are filed with the State Engineer.

Sanitary Waste Disposal

Sanitary waste disposal is by a septic tank/drainfield system, approved by the Utah Health Department. At the present time, the system contains two 1750 gallon septic tanks flowing to 3000 square feet of drainfield.

Industrial Water Supply

Industrial water supply is from the above-mentioned well. Water shares in the area were acquired with the coal properties, and consist of Industrial and Stockwatering rights of early priority, and a great deal of water in Scofield Reservoir.

Personnel Requirements

Construction Stage

All major construction is finished on the property.

Mining Stage

Presently 104 people are employed at Valley Camp of Utah, Inc.

Employee Types

Of the above 104, 87 are employed at the Utah No. 2 Mine with 62 of those being listed as underground workers and 25 as General Office or Management. The remaing 17 people are charged to the Belina #1 operation.

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Hiring Practices

Hiring is done partially on a basis of experience; however, no discrimination is used in hiring anyone for those jobs for which they qualify. The labor market is mainly miners with past experience and young men seeking a first-time job in the coal industry.

Service Employment

The Office of Employment Security in Price, is involved in some placement of mining personnel; however, most hiring is handled through the company.

Social Services and Economics

Annual Employment

Annual employment at the Utah No. 2 Mine averaged 70 for 1975. The payroll for the same year was around $750,000.

Capital Expenditures

Approximately 2.75 million dollars have been invested in the Utah No. 2 Mine improvements to date.

Service and Support Industries

Coal mining at Utah No. 2 Mine provides fuel for various power plants, and helps support many mining equipment and supply companies.

Annual Taxes

No figure on annual taxes is available at this time.

OK

Housing Availability

Most of the employees at Utah No. 2 Mine live in the Price-Helper area some 40 road miles from the mine site. Only a few miners live in Clear Creek and Scofield. The company has no plans for enlarging its town of Clear Creek or for providing employee housing in any way; however, Scofield and/or private housing districts will surely grow as a result of the increased mining activity.

Service Availability

The Utah No. 2 Mine is protected by adequate fire systems, has its own water supply and sewage system, and an ambulance available on the property at all times. The general area has few available services. The nearest hospital, medical, schools or library services that are available to residents of the area are in Price and Helper.

Community Attitudes

Community attitudes are generally good, probably due to the fact that the communities were built on previous mining booms, and rejuvination of the mining is an economic "shot in the arm" for an otherwise depressed area.

Economic Effect

The opening of the Utah No. 2 Mine has helped the local economy as mentioned above, and adds to income levels and revenues of the area. The increased mining and recreational activity in the area have created a long needed program of land use planning and pollution control.

National Effect

The coal from this mine is helping to fill the growing national need for low-sulfur high-BTU coal so necessary for coal-fired power plants. In

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addition to the aforementioned data, please refer to Table 3 for Socio-Economic Data for Carbon, Emery and Sanpete Counties.

Health and Safety

Fire Control

Fire breaks and clearing are maintained around all facilities at the mine. Fire hydrants (with adequate water supply) are installed at strategic locations on the surface. All fire fighting equipment required by law, or needed otherwise, will be properly maintained within the mine. All buildings are equipped with proper fire extinguishers. Fire control measures required by MESA will be strictly adhered to.

Dust Control

Coal dust supression and control in mining sections are maintained in accordance with health and safety laws. All conveyor transfer points have sprays or are enclosed. All surface coal handling systems and conveyors are enclosed to minimize dust. A baghouse is installed in the crusher building to trap float dust from screening and crushing.

Waste and Refuse Disposal

Waste and refuse is placed in a sanitary fill area south of Clear Creek, Utah. A new sanitary fill area may be constructed northeast of Clear Creek if additional room is needed.

General Mine Safety (Underground Mine)

Roof control for the Utah No. 2 Mine can be varied from conventional, to full bolting, with cross-barring and/or spot bolting as needed. At the present time, full resin bolting is employed in all main entries and

SOCIO-ECONOMIC DATA - CARBON, EMERY AND SANPETE COUNTIES

POPULATION	CARBON COUNTY	EMERY COUNTY	SANPETE COUNTY
1973 Estimate	17,000	6,800	11,900
Density/Square Miles	11.6	1.5	6.9
EMPLOYMENT STATUS			
Total Civilian Work Force	6,020	3,090	5,280
Total Employment	5,810	2,720	4,700
Mining	1,030	640	10
Contract Construction	150	710	370
Agriculture	110	230	680
Manufacturing	250	50	1,120
Wholesale & Retail Trade	1,160	245	410
COUNTY FINANCES			
Assessed Valuation in Millions	35.1	23.1	16.1
Tax Rate Mills/Hundred	66.51	52.597	63.30
Bonded Indebtedness - Dollars 1/1/1974	525,000	217,000	None

Table 3

OK

cross-cuts. Conventional (timber) support is used when possible in the room and pillar areas. Only the MESA approved roof control plan is employed here.

Ventilation is accomplished by a seven foot exhausting Joy Axivane fan with 12 blades. Air is taken into the mine by two entries on one side of the slope. Upon reaching the north-south entries, a split of intake air is taken down each side of the belt entry. This air is then further split to allow intake into the panels from either side. The air in the panels ventilates working faces, sweeps the cave area, and returns back to the main entries and then to the fan. Ventilation is shown by symbols on the mining plan, Enclosure I. All ventilation is in accordance with a MESA approved Ventilation, Methane and Dust Control Plan.

Face haulage is by cable-reel shuttle car to feeder-breaker. From the feeder-breaker, all coal is loaded onto and hauled out of the mine by conveyor. Thirty-six inch conveyors are used in the panels, feeding onto a 42 inch main line conveyor out of the mine.

The proposed mining plan for the Lower O'Connor seam is shown in Enclosure V. Basic mining plan, roof control and ventilation are projected to be the same as for the upper seam.

PROPOSED RECLAMATION PLAN

General Description and Statement of Purpose

Reclamation at the Utah No. 2 Mine will be directed toward minimizing the overall effect of coal mining in an alpine environment. This will be accomplished by careful planning to limit the disturbed area, and by attempting to restore as much of the disturbed area as possible to its original state. Only roads needed for continuing access are kept open. All temporary roads

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are to be re-graded and seeded. This practice has been followed to date, and will continue.

Reclamation Techniques

Scheduled Disturbing Activities

No major land disturbing activities are scheduled at this time; however, some unscheduled disturbance may occur with drilling, drainage control, etc. The general practice here is to reclaim the land as soon as possible and re-seed the reclaimed area. If the work is performed in the winter, reclamation will usually have to wait until spring. Planting will be done upon reclamation, with further planting in the fall for problem areas. This allows the winter snows to hold the seeds in place, and appears to work well for areas that remain barren after early planting.

Planned Reclamation Schedule

The ultimate reclamation schedule for the mine is to begin immediately after complete shutdown, removal, and cleanup of all facilities. Land uses prior to and at the time of this application are for livestock grazing and range for deer and elk. Land uses expected after reclamation will be the same--livestock grazing and range for deer and elk.

Reclaimed Land Forms

Reclaimed land forms will be similar to the present land form, with the exception of elimination of roads and contouring of present road cuts. The existing highwalls will be slightly flattened and planted by blowing techniques. There will be no water impoundments upon completion of reclamation. (Plate 12)

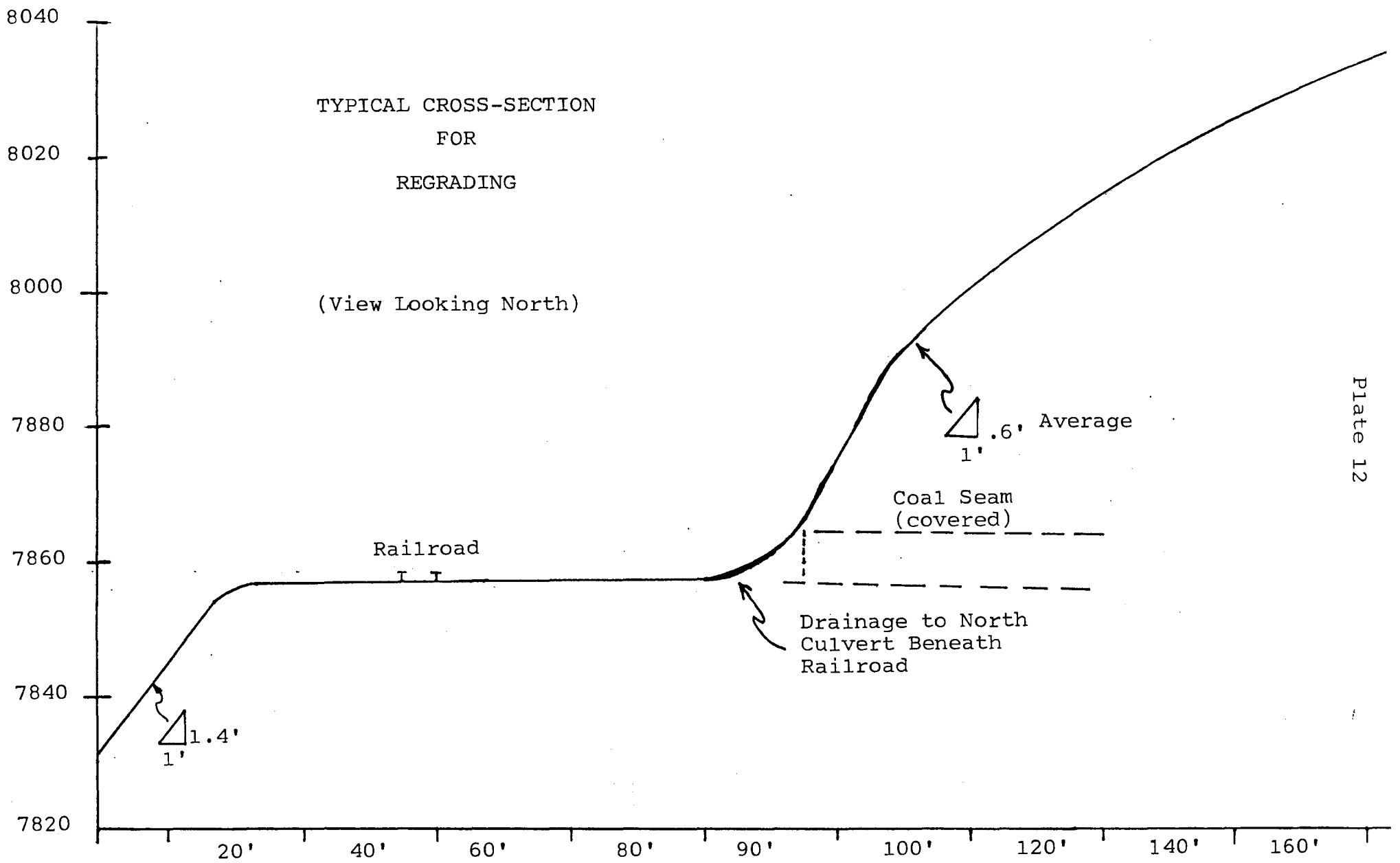
TYPICAL CROSS-SECTION
FOR
REGRADING
(View Looking North)
8040
8020
8000
7880
7860
7840
7820
Railroad
1.4'
1'
.6'
1'
Average
Coal Seam
(covered)
Drainage to North
Culvert Beneath
Railroad
20'
40'
60'
80'
90'
100'
120'
140'
160'

Plate 12

Reclamation Techniques

Topsoil Removal

Topsoil is scraped from an area by bulldozer, grader or backhoe and piled in an undisturbed area, protected from erosion. Upon reclaiming an area, six inches minimum of topsoil will be replaced and contoured. This area will then be reseeded at 13 pounds per acre.

lb - 2,904 ft²

Land Form Shaping

Land form shaping and stabilization will be done by equipment capable of performing the work--bulldozers, motor graders, backhoe, etc. Erosion prevention is accomplished by terracing and/or contour furrowing of reclaimed areas.

Topsoil Replacement

Topsoil replacement shall be accomplished by loading, dumping and grading with a motor grader whenever possible. Larger or smaller equipment may be used as conditions dictate. Soil conditioning or fertilizing is not expected to be necessary due to the high grade mountain topsoil of the area.

Planting

As mentioned above, planting will occur shortly after replacement of topsoil. The Forest Service suggests the following mixture of grasses to be used in reclamation of this area:

3#	Smooth Brome	3#	Timothy
2#	Orchard Grass	1#	Kentucky Blue
1#	Meadow Foxtail	2#	Intermediate Wheatgrass
1#	Ranger Alfalfa		

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We will use 13 pounds of this seed per acre of disturbed land. In addition, sagebrush seed (if available) may be used to replant areas of sagebrush disturbances. Hydroseeding will be used when possible, with a minimum of 50 per cent ground cover.

In an alpine environment such as that around Utah No. 2 Mine, grasses tend to grow very well in spite of the freezing temperatures in the winter. Lands reclaimed to date are showing a good deal of growth since last fall.

Supplemental Watering

Due to the alpine environment and subsequent high rate of snow and rains, it is not anticipated that irrigation or supplemental water will be necessary for plant growth.

Water Impoundment

Water impoundment and monitoring shall be as previously mentioned with respect to the settling ponds and small surface holding ponds for drainage. No other water impoundments or introduction of aquatic species is anticipated. Water quality monitoring of the filtering ponds will continue at the rate requested by the EPA and/or the Mining Supervisor.

Consultants' Reports

Research Results

Unfortunately, reclamation in the Clear Creek area is a fairly new concept; as a result, the reclamation at Utah No. 2 Mine is sort of a pioneer effort. The grass mixtures were suggested by the U.S. Forest Service and basic reclamation techniques were suggested by Sanders Associates, Inc. of Kaysville, both based on past experience. To our knowledge, no long-range studies have been performed in this area on mine reclamation.

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Continuing Research

Since Utah No. 2 Mine represents first effort at reclamation, we intend to follow up our projects to date, and use those results as a basis for, or to improve other reclamation projects.

Reclamation Cost Estimate

An estimate of the cost of reclamation is as follows:

Grading and Placement of Topsoil per Acre	$1210.00 ?
Hydroseeding per Acre	600.00
Total Cost per Acre	$1810.00

Costs are based on today's prices.

OTHER INFORMATION

Alternate Mining

The mining plans submitted in this report represent the future of this property based on presently available data. Certain problems are certain to be encountered in carrying out these plans, mainly water and faulting. It was mentioned earlier that a large coal deposit lies to the east of our mine across the Scofield Fault. A unique situation exists here--the fault encountered in our east entries is a downthrow of approximately 130 feet, plus or minus, some 300 feet to 500 feet east, the Scofield Fault upthrows the seam 350 feet to 500 feet. The effective displacement of the seam is therefore less than previously anticipated, creating a possibility for us to reach the seams of our mine via 1000 feet to 1200 feet rock slopes. A tentative estimate of the reserve in this area is 50 million tons in place with 25 million tons recoverable. Of this total, some 13.5 million tons is estimated to be U.S. Government coal. This area appears to be dry from drilling data, and such

a potential reserve could add 40 to 50 years to our present projected mine life. We are considering such a possibility, and felt you should be informed at this time. A preliminary mine layout of the area is included as Enclosure VI. This layout would be basically the same for either seam.

Any comments or suggestions concerning such a possibility would be greatly appreciated.

Additional Comments

The following list of comments may repeat many of the above statements; however, these are attached to assure compliance of this report with the new Federal Register for the Department of the Interior.

Persons responsible for the operations.

Mr. Robert J. Steele
Vice President - General Manager
Scofield Route
Helper, Utah 84526

Mr. Dan W. Guy
Division Mining Engineer
Scofield Route
Helper, Utah 84526

Both persons can be contacted by calling the following numbers: 801-448-9413 or 801-448-9420.

Surface Owners.

Helen and Nick Marakis
Katherine J. Theos
George Telonis
Earl Thomas

Valley Camp of Utah, Inc., Columbine, George Telonis and the United States own the subsurface coal.

Section 211.4 General Obligations

(1) Coal mining operations shall be conducted so as to ensure the extraction of the coal resource to the maximum extent possible.

If you review our mining plan and equipment list, you will note that we will maximize coal extraction and have purchased equipment that is technically sound for the mining plan. We feel that future environmental disturbance through the operation of mining will be minimized with the present mining plan.

(2) The operator shall take all action necessary to minimize waste and damage to any remaining coal-bearing formation and other mineral resources.

We will take action to minimize waste and damage to any remaining coal-bearing formation and other resources by using the modern technology which is available at the present time.

(3) The operator shall take such action as may be needed to minimize, control or prevent (1) soil erosion; (2) pollution of air; (3) pollution of surface or ground water; (4) serious diminution of the normal flow of water; (5) adverse impact upon fish and wildlife, especially threatened or endangered species, and their habitat; (6) permanent damage to vegetative growth, crops or timber; (7) creation of unsafe or hazardous conditions; (8) damage to improvements, whether owned by the United States, its permittees, licensees, lessees, or by others; (9) damage to the recreational, cultural, scientific, historical, and known or suspected archaeological and paleontological values of the land; and (10) adverse impact upon adjacent land uses.

The company will take action as may be needed to minimize, control or prevent the items mentioned above. The company will follow all regulations by both State and Federal agencies governing the above-mentioned items.

(4) The operator shall, when and as required by the Mining Supervisor, monitor water quality to establish data necessary to determine procedures which may be required to minimize, control or avoid water pollution.

At the present time Vaughn Hansen Associates, a consulting firm in Salt Lake City, is sampling the drainage in the area to determine water quality. To minimize water pollution, settling ponds have been constructed at the mine site. The company has filed a permit with the EPA to discharge mine water into the drainage.

(5) The operator shall promptly report to the Mining Supervisor accidents threatening damage to the mine, the lands or the resources or accidents which could cause air or water pollution, along with corrective actions initiated.

The company will notify the Mining Supervisor by telephone accidents threatening damage to the mine, the lands or the resources or accidents which could cause air or water pollution. Within 30 days after such accidents, the company will submit a detailed report to the Mining Supervisor of any damage caused by such accidents and any corrective actions taken.

Section 211.40 Operating and Reclamation Standards

(1) The operator shall reclaim affected lands pursuant to his approved plan.

The company will follow the reclamation plan in reclaiming the affected land.

(2) The operator shall replace overburden and waste materials in the mined area by backfilling (compacting, where necessary, to ensure stability or to prevent leaching of toxic material) grading or other means, so as to cover all acid-forming or other toxic material, eliminate highwalls and spoil piles and restore the approximate original contour.

The section deals with strip mines. The Utah No. 2 Mine is an underground mine and is not required to comply with this section.

(3) The operator shall stabilize and protect all surface areas, including spoil piles, affected by the coal mining and reclamation operation, to effectively control slides, erosion, subsidence, and attendant air and water pollution.

The company will stabilize all slopes around the surface facilities which are not required for fire protection.

(4) The operator shall utilize water impoundments, water retention facilities, dams, or settling ponds only pursuant to an approved plan.

The settling ponds used at the mine are adequate for its intended purpose and the quality and quantity of impounded water.

The ponds are designed and will be maintained in accordance with sound engineering standards and practices and applicable with Federal and State laws and regulations.

The final grade will provide adequate safety and access for proposed or reasonably anticipated water users.

The ponds will not have a significant adverse impact on the water resources utilized by adjacent surrounding landowners for agricultural, industrial, recreational or domestic use.

No mine or processing waste will be used in the construction of the settling ponds.

(6) The operator shall cover or plug all auger mine holes with noncombustible and, where necessary to minimize, control or prevent harmful drainage, impervious material.

This is an underground mine and no auger mining will be used.

(7) The operator shall utilize the best practicable commercially available technology to minimize, control or prevent disturbances of the prevailing quality, quantity, and flow of water in surface and ground water systems, and of the prevailing erosion and deposition conditions at the mine site and in affected offsite areas, both during and after coal mining operations and reclamation.

All necessary precaution will be used to control or prevent acid or toxic drainage from entering the surface water. No water of this nature is anticipated, based on past experience in the area.

Construction of the surface facilities has been done in such a manner as to minimize, control, or prevent suspended solids from increasing above the natural level.

The company will protect the quality, quantity, and flow, including depth of flow, of both upstream and downstream surface and ground water resources.

(8) The operator shall treat or dispose of all rubbish and noxious substances in a manner designed to minimize, control, or prevent air and water pollution and the hazards of ignition and combustion.

All rubbish and noxious substance will be taken to the land fill dump which is located at Clear Creek, Utah. No substance which can cause an ignition will be hauled to the dump.

(9) The operator shall not conduct excavation, drilling, or blasting operations within 200 feet of an active or abandoned underground mine.

No surface blasting will occur around the mining area.

(10) To prevent personal injury or damage to public and private property, the operator shall use explosives only in accordance with all applicable and State laws.

No surface blasting will occur with the mining activities. During construction, blasting may occur and regulations of both the Federal and the State will be followed.

The blasting during construction will be governed by the physical conditions of the site.

(11) The operator shall design to applicable standards, construct, maintain, and, when no longer necessary and unless otherwise authorized in an approved plan, remove all roads, pipelines, powerlines and similar utility access facilities and associated bridges, culverts, and ditches, into and across the site of operations, in a manner that will minimize, control, or prevent erosion and siltation, fugitive dust, pollution of water, damage to fish or wildlife or their habitat and public or private property.

The company will comply with the above-mentioned items.

(12) Roads shall not be surfaced with any acid or toxic producing material.

The access road to the mine site will not be surfaced with any acid or toxic producing material. Naturally occuring material will be used.

The access road is built on private property and follows standard engineering practice for road design and State of Utah standard specifications for road construction.

(13) The operator shall, except where other reclamation based upon post mining land use and not required revegetation pursuant to the requirements of this section is expressly provided for in an approved plan, establish on regraded area and all other affected lands a diverse vegetative cover, native to the area and capable of regeneration and plant succession, at least equal in density and permanence to the natural vegetation.

The seed requirements for revegetation of the area were recommended by the U.S. Forest Service.

(14) The operator shall allow public access to and upon Federal lands subject to his lease, permit, or license for all lawful and proper purposes.

The public will not be denied access to any Federal lands on existing public roads.

The active operations will be regulated against public access, vehicular traffic and wildlife or livestock grazing in order to protect the public, wildlife and livestock. Once the reclamation work has been started this will also be protected.

(15) Coal storage areas shall be designed and maintained so as to eliminate fire hazards from spontaneous combustion and other accidental ignition. If a coal seam exposed by surface mining or an accumulation of slack coal or combustible waste becomes ignited during the term of a lease, the operator shall immediately take all necessary steps to extinguish the fire.

If any combustible is accidentally ignited, immediate steps will be taken to extinguish the fire.

(16) Upon completion or temporary or permanent abandonment of mining operations in all or any part of a strip pit, the face of the coal shall be covered with noncombustible material that will effectively protect the coal bed from becoming ignited.

Although this is an underground mine, some coal outcrops. This outcrop will be covered with noncombustible material that will effectively protect the coal bed from ignition.

(17) The driving of any underground openings by auger or other methods from any strip pit shall not be undertaken.

This is not applicable to the Utah No. 2 Mine.

(f) The anticipated starting and termination dates of each phase of the mining operation and number of acres of land to be affected.

The starting date was October, 1974, and the approximate termination date is sometime in 1988.

The anticipated number of acres to be affected is to be 20 acres.

(g) The steps to be taken to comply with all applicable air and water quality laws and regulations.

The standards set by the State and Federal air and water quality have been followed.

(h) The measures for ensuring the maximum practicable recovery of the mineral resource.

Refer to page 16 of this Mining and Reclamation Plan.

(i) Logs and analyses of overburden samples of each stratum from a number of drill holes sufficient to obtain a representative sample of the overburden overlying the coal and the stratum immediately below the coal to be mined.

This mine is an underground mine. There have been no analysis run of the over or underlying stratas.

(j) The hydrology of the area, including quantity and quality of water in surface and ground water systems, water levels and water table measurements data regarding dissolved and suspended solids under seasonal flow conditions, and an assessment of the probable impacts of the anticipated mining operation upon the hydrology of the area.

The U.S.G.S. conducted a hydrology test of the area.

There will be no probable impact of the anticipated mining operation upon the hydrology of the area.

(k) Plans for protecting oil, gas, and water wells as well as oil, gas, and underground water resources, when encountered.

Subpart R - Miscellaneous 75.1700 Oil and gas wells of the Code of Federal Regulations Title 30 Mineral Resources July 1, 1975 MESA will be the guidelines used. The water well as well as underground water will be protected according to standard engineering practices.

(l) Any justification for not recovering any coal deposits that may be determentally affected in terms of future recovery by the coal development operations proposed.

The mining plans do not call for any such attempts of this nature.