



**US Army Corps
of Engineers**
Huntington District

Public Notice

In reply refer to:	Issuance Date:
Public Notice No. 200400864	August 25, 2004
Stream:	Expiration Date:
Grapevine Creek	September 24, 2004
Address comments to:	US Army Corps of Engineers, Huntington District 602 Eighth Street ATTN: CELRHE Huntington, West Virginia 25701-2070

PUBLIC NOTICE: The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

REGULATORY PROGRAM: Since its early history, the U.S. Army Corps of Engineers (Corps) has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the Corps Regulatory Program.

SECTION 10: The Corps is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate all work or structures in or affecting the course, condition or capacity of navigable waters of the United States (U.S.). The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

SECTION 404: The Corps is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the discharge of dredged and fill material into all waters of the United States, including wetlands. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

TO WHOM IT MAY CONCERN: The following application has been submitted for a Department of the Army Permit under the provisions of Section 404 of the Clean Water Act (CWA). This notice also serves as the Corps of Engineers' request to the West Virginia Department of Environmental Protection to act on Section 401 Water Quality Certification for the following application.

APPLICANT: Little Boyd Coal Company, Inc.
Post Office Box 368
Edgerton, West Virginia 25672

LOCATION: The project site is located on the south side of County Road 49-3, approximately 2.4 miles east of its intersection with WV Route 49 near Edgerton, in southwestern Mingo County, West Virginia. Portions of Grapevine Creek, and several unnamed tributaries to the Tug Fork and Sand Branch are located within the project site. The location and limits of the project site are depicted on **Figures 1 & 2** titled "**General Location Map**" and "**Permit Area**".

DESCRIPTION OF THE PROPOSED WORK: The applicant proposes to discharge dredged and/or fill material into waters of the United States (U. S.), in conjunction with the construction and operation of the Grapevine South Surface Mine. The purpose of the proposed project is to recover approximately 2,016,711 tons of bituminous coal from the Williamson, Upper Cedar Grove, Lower Cedar Grove, and Alma coal seams. The project site is approximately 388.76 surface acres in size. As part of this operation, the applicant proposes to construct three permanent valley fills, four temporary sediment ponds, one permanent haulroad fill, and one temporary haul road crossing. The entire project area has been notably disturbed in the past as a result of contour surface, deep and auger mining and logging activities. These activities have occurred primarily in the 1930's and 1940's before the implementation of the Surface Coal Mining Reclamation Act of 1977 (SMCRA).

Construction of the proposed project would result in the discharge of dredged and/or fill material into approximately 11,752 linear feet (1.09 acres) of streams, all of which are waters of U. S. This total includes direct adverse impacts to approximately 100 linear feet (0.04 acre) of perennial stream, approximately 8,271 linear feet (0.81 acre) of intermittent stream, and approximately 3,381 linear feet (0.24) of ephemeral stream. No indirect impacts to waters of the U. S. are proposed as part of this project. **Table A** provides a breakdown of proposed adverse impacts relative to duration, stream type, and proposed activity. All proposed valley fills are located in areas with contributing watersheds which range in size from 83.9 acres to 149.7 acres as detailed in **Table B**. The West Virginia Department of Environmental Protection (WVDEP) has reviewed and approved the Surface Mining Permit application for this project (S-5019-01) pursuant to the SMCRA.

The applicant's proposed operation would affect 388.76 acres of surface area, including 262.63 acres of mineral removal to facilitate the recovery of approximately 2,016,711 tons of bituminous coal. Mineral extraction would be accomplished utilizing contour, mountaintop, and highwall /auger mining techniques. The proposed operation would generate nearly 30,776,689 cubic yards of overburden (including the 25% swell factor) of which approximately 11,583,499 cubic yards would be placed within mined areas as backfill. The remaining approximate 19,192,181 cubic yards of excess overburden would be placed in the proposed valley fills as detailed in **Tables C and D**.

As part of the mining process, a mine bench would be excavated along the coal seam. Overburden material blasted from areas above the coal seams typically swells and increases in volume. As a result of this swelling, the entire volume of overburden cannot be safely returned to the excavated mine bench. Consequently, the applicant is proposing to construct three valley fills to accommodate the excess overburden that could not be safely placed on the mine bench. The overburden that would be placed in waters of the U. S. would consist of sandstone and shale from formations in the Kanawha Group of the Pennsylvania Period. Overburden from these formations typically contains an overall abundance of calcium carbonate equivalent material. The presence of large amounts of calcium carbonate has been confirmed through the Acid Base Accounting (ABA) analysis performed as part of the evaluation of potential impacts associated

with this proposed project. It is expected the presence of excess calcium carbonate equivalent material in the overburden would act as a pH buffer. The presence of these materials would likely cause the resulting discharges to be alkaline in nature. It is further predicted the development of acid mine drainage from the proposed valley fills would not occur.

The proposed project would be accomplished in four general phases over a period of approximately 4.5 years as depicted upon **Figures 3 through 7 titled “Phase Map”**. **Figures 3 through 6** depict proposed phase configurations. **Figure 7** depicts the map legend and tables applicable to proposed work depicted on **Figures 3 through 6**. The mining phases, as described in the approved WVDEP SMCRA permit, address only the mineral removal and reclamation components of the proposed project. These phases do not address the timing of proposed project elements including those associated with adverse impacts to waters of the U. S. or restoration measures. Consequently, the phases identified in the approved WVDEP SMCRA permit differ slightly from those presented in this section. These differences are described below.

Phase I depicted on **Figure 3** would begin with the construction of the main haulroad to access the mineral removal and operational area. A life of mine (LOM) crossing would be installed in Grapevine Creek to provide access across a perennial reach of Grapevine Creek. Excavation and construction of the haulroad would progress from Grapevine Creek to the mine site. Excess spoil generated by haulroad excavation would be placed in the proposed Haulroad Fill. Pond No. 11 would be installed to control the sediment from the Haulroad Fill area. During this phase the proposed haulroad crossing activities would temporarily adversely impact approximately 100 linear feet of a perennial reach of Grapevine Creek. Construction of Pond No. 11 would result in temporary adverse impacts to approximately 200 linear feet of an intermittent unnamed tributary of Grapevine Creek. Additionally, the Haulroad Fill proposed to be constructed during this phase would permanently adversely impact approximately 1,100 linear feet of an intermittent unnamed tributary of Grapevine Creek. Phase I would correspond to the initial portion of Phase I as presented in the approved WVDEP SMCRA permit. Phase I of the approved WVDEP SMCRA permit allows for the disturbance of approximately 104.14 acres associated with mining activities, approximately 3.55 acres associated with reclamation activities, and approximately 100.59 acres proposed to remain unreclaimed at the end of the phase. A major portion of the unreclaimed area would consist of the haulroad proposed to remain in use through the LOM.

The applicant proposes to initiate mineral removal activities during Phase II as depicted on **Figure 4**. Two proposed valley fills, Valley Fill 1 and Valley Fill 2, would be constructed during this phase to accommodate excess overburden generated in the mineral removal area. Upon completion of construction of Pond No. 2 the applicant proposes to commence construction of Valley Fill 1 and Valley Fill 2. Work associated with this phase would result in temporary adverse impacts to approximately 422 linear feet of intermittent stream, and permanent adverse impacts to approximately 2,868 linear feet of intermittent stream. During this phase permanent

adverse impacts to approximately 691 linear feet of ephemeral are also proposed. The applicant proposes to initiate stream restoration activities in and along an approximately 3,800-linear foot perennial reach of Grapevine Creek. Phase II would correspond to the remainder of Phase I as presented in the approved WVDEP SMCRA permit.

During Phase III depicted on **Figure 5** the applicant proposes to continue mineral removal activities. Upon completion of proposed Pond Nos. 1 and 1A, the applicant would initiate the construction of Valley Fill 3 to accommodate additional excess overburden generated in the mineral removal area. Construction of Pond Nos. 1 and 1A would result in temporary adverse impacts to approximately 700 linear feet of intermittent stream. Additionally, construction of Valley Fill 3 would result in permanent adverse impacts to approximately 3,381 linear feet of intermittent stream and approximately 2,300 linear feet of ephemeral stream. During this phase the applicant also proposes to restore an approximately 4,281 linear foot perennial reach of Grapevine Creek. Upon completion of proposed Valley Fill 1 and Valley Fill 2 additional mitigation activities would be performed on approximately 1,200 linear feet of ephemeral stream proposed to be reconstructed. Phase III would correspond to a portion of Phase II as presented in the approved WVDEP SMCRA permit. Phase II of the approved WVDEP SMCRA permit allows for the disturbance of approximately 155.31 acres associated with mining activities, approximately 67.06 acres associated with reclamation activities, and approximately 176.27 acres (188.84 acres if ancillary areas would be included) proposed to remain unreclaimed at the end of the phase.

The applicant proposes to complete mineral removal activities, final regrading work, and reclamation of project during Phase IV as depicted on **Figure 6**. No additional adverse impacts to waters of the U. S. are proposed during this phase. Upon completion of Valley Fill 3, the applicant proposes to reconstruct approximately 1,970 linear feet of ephemeral stream. As allowed by WVDEP SMCRA permit release process, sediment control ponds would be removed and streams would be reconstructed and through Pond Nos. 1, 1A, 2, and 11. This work would result in the restoration of approximately 1,022 linear feet of intermittent stream. Upon completion of final reclamation is on the proposed haulroad, the crossing at Grapevine Creek would be removed in its entirety and the approximately 10-linear foot perennial reach of Grapevine creek would be restored through the reclaimed area. Phase IV would correspond to Phases III, IV and V as presented in the approved WVDEP SMCRA permit. Phases III, IV and V of the approved WVDEP SMCRA permit allow for proposed mining disturbance to continue on an additional acreage of approximately 129.31. The applicant would complete reclamation activities on approximately 318.15 additional acres. At the end of this phase all acreage would be reclaimed.

The applicant retained the services of Compliance Monitoring Laboratories, Inc. to conduct a macroinvertebrate study. As part of this study benthic conditions were monitored at five study locations, including an unnamed tributary of Conley Fork of Grapevine Creek, Sand Branch, an unnamed tributary of the Tug Fork, and Scarberry Branch. Based on the habitat assessment score calculated for each stream reach as part of this study, the applicant's consultant has

classified four of the study sites as suboptimal and one site as optimal. Proposed valley fills would occur in streams classified as suboptimal. The four suboptimal study sites are located within stream reaches which appear to be notably influenced by extensive mining activities that occurred prior to implementation of current surface mining regulations. Typically these pre-law operations were not restored in a manner that minimized adverse impacts to streams and overall water quality. Areas of abandoned highwalls and unstabilized spoil piles contributed to increased sediment loads and associated adverse water quality effects. In addition to mining activities, these areas have been influenced in the past by extensive logging activities. Stream conditions in these four study areas were determined by the applicant's consultant to be suboptimal primarily based on high degrees of sedimentation and embeddedness.

The applicant has prepared an analysis of practicable alternatives, which is summarized below. This analysis includes the evaluation of five alternatives, including the "No Action" alternative and four "Action" alternatives. Under the no action alternative proposed work in waters of the U. S. and the proposed mining project would not be undertaken. Due to the extent and location of waters of the U. S., in addition to the terrain in the vicinity of the project site, areas of adequate size and slope, sufficient to accommodate the overburden generated, are not available. Therefore under the "No Action" scenario, the project would not proceed. Further the "No Action" alternative would not meet the project basic purpose of recovering bituminous coal.

The four "Action" alternatives considered include the following: Action Alternative No. 1 Utilizing existing mining benches as spoil disposal areas; Action Alternative No. 2 Underground mining; Action Alternative No. 3 Auger mining, and Action Alternative No. 4 (the applicant's preferred alternative).

Under Action Alternative 1, the applicant would place all excess spoils on existing pre-law mining benches. Under this scenario, no valley fills would be constructed. This alternative was considered but was rejected by the applicant because the existing benches would not provide sufficient space needed to store the volumes of material that would be generated during the mining process. Further, the existing benches are situated approximately 90 feet higher in elevation than the lowest seam proposed to be mined. Therefore, the transportation of material associated with this option would be logistically difficult, likely cost prohibitive, and therefore, impracticable.

Under Action Alternative No. 2 coal reserves would be extracted by means of underground mining. The project proposes to recover coal from four different coal seams, the Williamson, Upper Cedar Grove, Lower Cedar Grove, and Alma coal seams. While it is logistically feasible to underground mine reserves located within the Williamson and Alma seams, underground mining of these seams would generate a quality of coal that would require the construction of a coal preparation and refuse facility. The applicant believes the costs associated with the construction of such a facility would render the entire project economically infeasible. It is also highly probable the construction of such facilities would require the filling of waters of the

U. S. Further, an evaluation of the Upper and Lower Cedar Grove coal seams has revealed these seams are not suitable for underground mining as a result of prior underground mining activities and associated subsidence. Based on these factors, the applicant believes Action Alternative No. 2 to be impracticable.

Under Action Alternative No. 3, the applicant would recover coal reserves solely through auger mining. To perform this method of mining, it would be necessary to construct an access road of sufficient size to accommodate the auger machine, trucks, and loading operations. This type of operation would also require the construction of a surface cut along the contour, which would generate considerable amounts of spoil material. Consequently, this type of operation would require the construction of at least one valley fill and would result in a recovery rate predicted to be approximately 65% lower than the recovery rate associated with the applicant's preferred alternative.

Under Action Alternative No. 4 (the applicant's preferred alternative), the applicant would extract coal by means of a combination of surface mining and highwall /auger mining techniques. Several constraints affect the manner in which surface mining activities may be accomplished. These constraints include the extent and location of waters of the U. S., the nature of the topography in the project area, and the swell factor associated with the overburden. As a result of these factors, in addition to the selection of a mining method that would maximize the amount of coal that could be recovered, the applicant proposes to construct three valley fills and associated sediment ponds, one haulroad fill, and one haulroad crossing. In process of evaluating on-site alternatives, the applicant explored the option of expanding the size of several existing valley fills located on applicant-owned property. However, the applicant believes transportation of materials to these other valley fills would be impracticable due to logistical and financial reasons. The applicant also explored the alternative of further reducing the size of proposed adverse impacts to waters of the U. S. and determined the proposed project represents the minimum amount of waters of the U. S. disturbance needed to safely accomplish the proposed project. The applicant believes the proposed project has been designed to maximize the amount of spoil proposed to be placed back upon the contour mining operation, which would serve to minimize the footprint of work in waters of the U. S. No variance from Approximate Original Contour is proposed as part of this project.

MITIGATION PLAN: To compensate for permanent and temporary adverse impacts to waters of the U. S. associated with the proposed project, the applicant developed a compensatory mitigation plan, which includes the following elements: restoration of an approximately 8,181-linear foot previously degraded perennial reach of Grapevine Creek, restoration of a 100-linear foot perennial reach of Grapevine Creek, proposed to be impacted as a result of the haulroad crossing, restoration of approximately 1,322 linear feet of intermittent stream associated with the proposed sediment ponds, and restoration of approximately 2,400 linear feet of ephemeral stream associated with portions of the three proposed valley fills. Restoration of an approximately 8,181-linear foot perennial reach of Grapevine Creek is proposed as mitigation to compensate for adverse impacts to approximately 6,949 linear feet of intermittent stream associated with the proposed

valley and haulroad fills. **Figure 3** depicts the geographic relationship between the proposed impact sites and the proposed restoration and enhancement sites. Proposed mitigation activities associated with this project would interface with other mitigation work previously approved as part of a Section 404 permit authorizing activities at an adjacent mining operation. Geographic linkage of mitigation areas supports an overall watershed approach to mitigation projects and would provide enhanced benefits for an impaired reach of Grapevine Creek.

Restoration activities would occur in conjunction with the removal of the three sediment ponds proposed as part of this project. It is estimated that approximately 1,322 linear feet of streams proposed to be adversely impacted as a result of sediment pond construction would be restored approximately 5 years after final reclamation of the project. These restoration activities would involve the removal of sediment ponds, re-grading of the entire area, re-establishment of stream channels designed to convey the bankfull event, and installation of a variety of structures to improve habitat and water quality.

To address a portion of the adverse impacts associated with the construction of the three valley fills and haulroad fill, the applicant proposes to construct approximately 4,370 linear feet of ephemeral stream proposed to be constructed along the perimeters of the proposed valley fills. These replacement streams are proposed to be constructed as D-50 size rock riprap lined "V" ditches designed to sufficiently convey flows, transport sediment, control high energy. Further these streams have been designed to mimic pre-mining conditions of ephemeral streams to the extent practicable.

The applicant also proposed to perform restoration work on the approximately 8,181-linear foot perennial reach of Grapevine Creek in two phases. **Figures 4, 5, and 6** depict the locations extent of work that would be performed during each phase. These restoration activities would include: removal of the temporary haulroad crossing proposed to be installed as part of this proposed project; installation of Cross Vanes and J hooks to enhance vertical and horizontal stability; construction of riffles, runs, pools, and glides; installation of approximately 250 linear feet of gabion to prevent further undercutting of County Road 49/2; and construction of a stable low water crossing within a severely eroded reach of Grapevine Creek.

Disturbed areas associated with all mitigation areas would be seeded and planted with a mix of native and non-native plant species. The applicant proposes to establish a restrictive covenant that would encompass approximately 2,670 linear feet of constructed and restored stream and a 50-foot (total) wide riparian area associated with Valley Fill No. 3 and Sediment Ponds 1 and 1A. This area represents approximately 5.98 acres. The applicant also proposes to establish a restrictive covenant that would encompass approximately 1,200 linear feet of constructed and restored stream and a 50-foot (total) wide riparian area associated with Valley Fill 1 and 2 and Sediment Pond No. 2, approximately 1,400 linear feet of constructed and restored stream and a 50-foot (total) wide riparian area associated with the proposed Haulroad Fill and Sediment Pond No. 11, and approximately 8,081 linear feet of constructed and restored stream and a 50-foot (total) wide, where restrictions caused by utility, railway and road construction allow establishment of a

riparian area. These areas would represent approximately 1.79 acres, approximately 1.83 acres, and approximately 9.28 acres, respectively. No other restored or enhanced areas are proposed to be protected as part of this mitigation plan.

WATER QUALITY CERTIFICATION: A Section 401 Water Quality Certification is required for this project. It is the applicant's responsibility to obtain certification from the West Virginia Department of Environmental Protection.

HISTORIC AND CULTURAL RESOURCES: The National Register of Historic Places (NRHP) has been consulted and it has been determined there are no properties currently listed on the register that are in the area affected by the project. Further, through the WVDEP Article III permit process, the applicant previously submitted information regarding the proposed project to the West Virginia Division of Culture and History. In two letters dated October 1, 2002, and February 24, 2004, the West Virginia Division of Culture and History concluded no known historical, architectural, or archeological sites listed in or eligible for inclusion in the NRHP would be affected by the proposed project.

ENDANGERED/THREATENED SPECIES REVIEW: The U.S. Fish and Wildlife Service's latest published version of endangered and threatened species has been reviewed to determine if any endangered or threatened species may occur in the project area. The proposed project would be located in a county where the endangered Indiana bat (*Myotis sodalis*) is known to occur. The applicant conducted a bat mist net survey to determine presence or probable absence of the Indiana bat. Three mist net sites were selected and surveyed. A total of six nets were used at the three sites. Site No. 1 was surveyed during the evenings of August 10 and August 11, 2003, and Site Nos. 2 and 3 were sampled during the evenings of August 12 and August 13, 2004. No Indiana bats were captured during this survey. Our initial review indicates the proposed work would have no effect on federally-listed endangered or threatened species. This public notice serves as a request to the U.S. Fish and Wildlife Service to provide any additional information the agency may have on the extent to which the proposed project would affect any listed or proposed to be listed endangered or threatened species, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended).

PUBLIC INTEREST REVIEW AND COMMENT: This application will be reviewed in accordance with 33 CFR 320-331, the Regulatory Program of the U. S. Army Corps of Engineers, and other pertinent laws, regulations, and executive orders. Our evaluation will also follow the guidelines published by the U. S. Environmental Protection Agency pursuant to Section 404(b)(1) of the CWA. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered including the cumulative effects thereof; of those are conservation,

economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act.

Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. Written statements on these factors received in this office on or before the expiration date of this public notice will become a part of the record and will be considered in the final determination. A permit will be granted unless its issuance is found to be contrary to the public interest.

SOLICITATION OF COMMENTS: The public notice is being distributed to all known interested persons in order to assist in developing fact upon which a decision by the District Engineer may be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition. Any person who has an interest that may be adversely affected by the issuance of a permit may request a public hearing. The request must be submitted in writing to the District Engineer on or before the expiration date of this notice and must clearly set forth the interest which may be adversely affected and the manner in which the interest may be adversely affected by the activity.

CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach this office on or before the close of the comment period listed on page one of this Public Notice. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to Ms. Jennifer Walker, Project Manager, South Regulatory Section, CELRH OR-FS; U. S. Army Corps of Engineers Huntington District; 502 Eighth Street; Huntington, West Virginia 25701-2070.

Please note that names and addresses of those who submit comments in response to this public notice may be made publicly available. Thank you for your interest in our nation's water resources. If you have any questions concerning this public notice, please call Ms. Jennifer Walker of the South Regulatory Section at 304-399-6956.


Ginger Mullins, Chief
Regulatory Branch

(W)

Table A
Little Boyd Coal Co, Inc.
Grapevine South Surface Mine
Waters of the U. S. Impact Summary

Proposed Impact	Permanent Perennial		Permanent Intermittent		Permanent Ephemeral		Temporary Perennial		Temporary Intermittent		Temporary Ephemeral	
	feet	acres	Feet	Acres	feet	acres	feet	acres	feet	acres	feet	acres
Valley Fill No. 1	0	0	1,100	0.107	681	0.062	0	0	0	0	0	0
Pond No. 2	0	0	0	0	0	0	0	0	422	0.059	0	0
Valley Fill No. 2	0	0	1,768	0.205	0	0	0	0	0	0	0	0
Valley Fill No. 3	0	0	3,381	0.233	2,300	0.137	0	0	0	0	0	0
Pond Nos. 1 & 1A	0	0	0	0	0	0	0	0	700	0.060	0	0
Haulroad Fill	0	0	700	0.102	400	0.043	0	0	0	0	0	0
Pond No. 11	0	0	0	0	0	0	0	0	200	0.036	0	0
Haulroad Crossing	0	0	0	0	0	0	100	0.038	0	0	0	0
Total		0	6,949	0.647	3,381	0.242	100	0.038	1,322	0.155	0	0

Table B
Little Boyd Coal Co, Inc.
Grapevine South Surface Mine
Affected Drainage Areas

Disposal Site	Drainage Area Fill Toe (acres)
Valley Fill 1	83.9
Valley Fill 2	83.9
Valley Fill 3	149.7
Haulroad Fill	63.13

Table C
Little Boyd Coal Co, Inc.
Grapevine South Surface Mine
Total Fill Volume Valley/Haulroad Fill Disposal Sites

Disposal Site	Fill Volume Cubic Yards
Valley Fill 1	110.04
Valley Fill 2	205.28
Valley Fill 3	169.69
Haulroad Fill	424.24
Total	909.25

Table D
Little Boyd Coal Co, Inc.
Grapevine South Surface Mine
Acreage Valley/Haulroad Fill Disposal Sites

Disposal Site	Fill Surface Acreage
Valley Fill 1	21.64
Valley Fill 2	16.81
Valley Fill 3	73.17
Haulroad Fill	3.55
Total	115.17

Table E
Little Boyd Coal Co, Inc.
Grapevine South Surface Mine
Acreege Sediment Control Ponds

Sediment Control Ponds	Surface Acreage
Pond No. 1 & 1A	0.77
Pond No. 2	0.91
Pond No. 11	0.42
Total	2.10

Table F
Little Boyd Coal Co, Inc.
Grapevine South Surface Mine
Mining and Reclamation Schedule

PHASE	MINING*			RECLAMATION			UNRECLAIMED
	START	END	ACRES	START	END	ACRES	ACRES
1	1-03	7-03	104.14	1-03	7-03	3.55	100.59
2	7-03	1-06	155.30	7-03	1-06	67.06	176.27
3	1-06	7-06	43.33	1-06	7-06	45.40	171.98
4	7-06	7-07	85.98	7-06	7-07	77.86	180.06
5	7-07	1-08	0.00	7-07	1-08	194.89	0.00

* Considers regraded and unseeded area as disturbed. Start and End times are in months.

LITTLE BOYD COAL CO., INC.

P.O. Box 941
Phelps, KY 41553

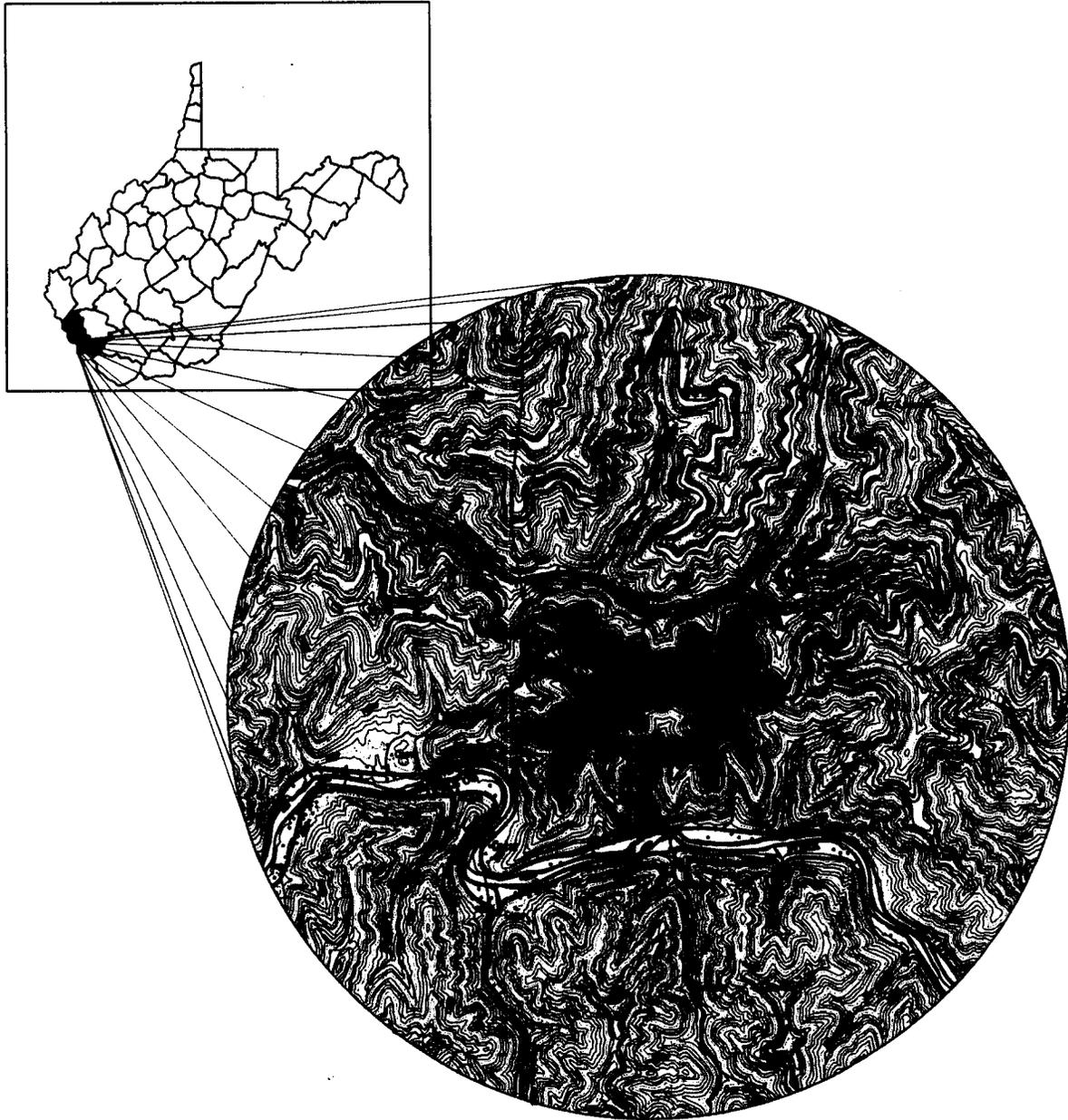
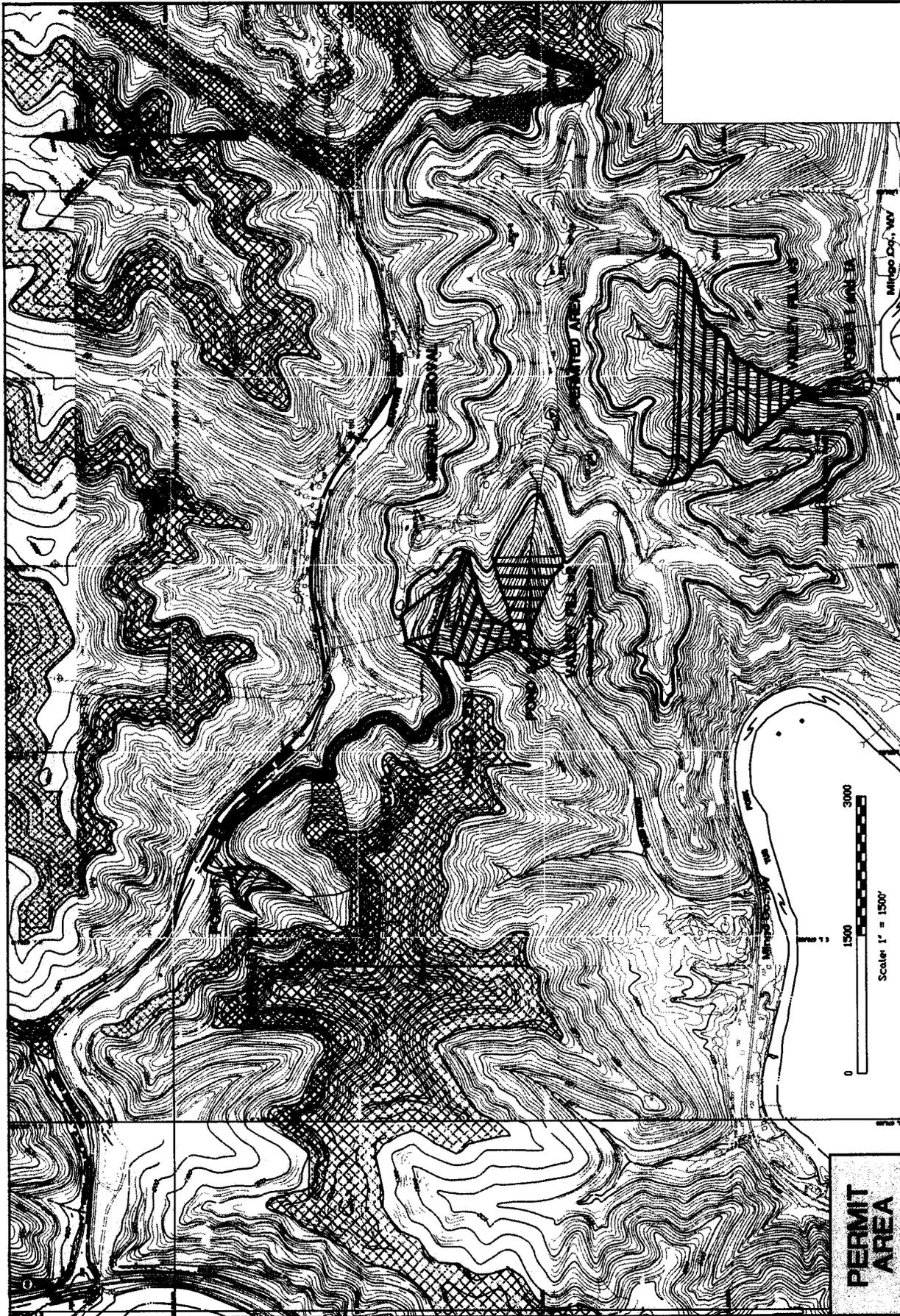


Figure 1 of 7

DATE: 08/02/04	CAD BY: <i>B. Miles</i>
FILENAME: server\delta\cam	PROJECT: 04048

Grapevine South Surface Mine
General Location Map
USACE Project No. 2004-00864





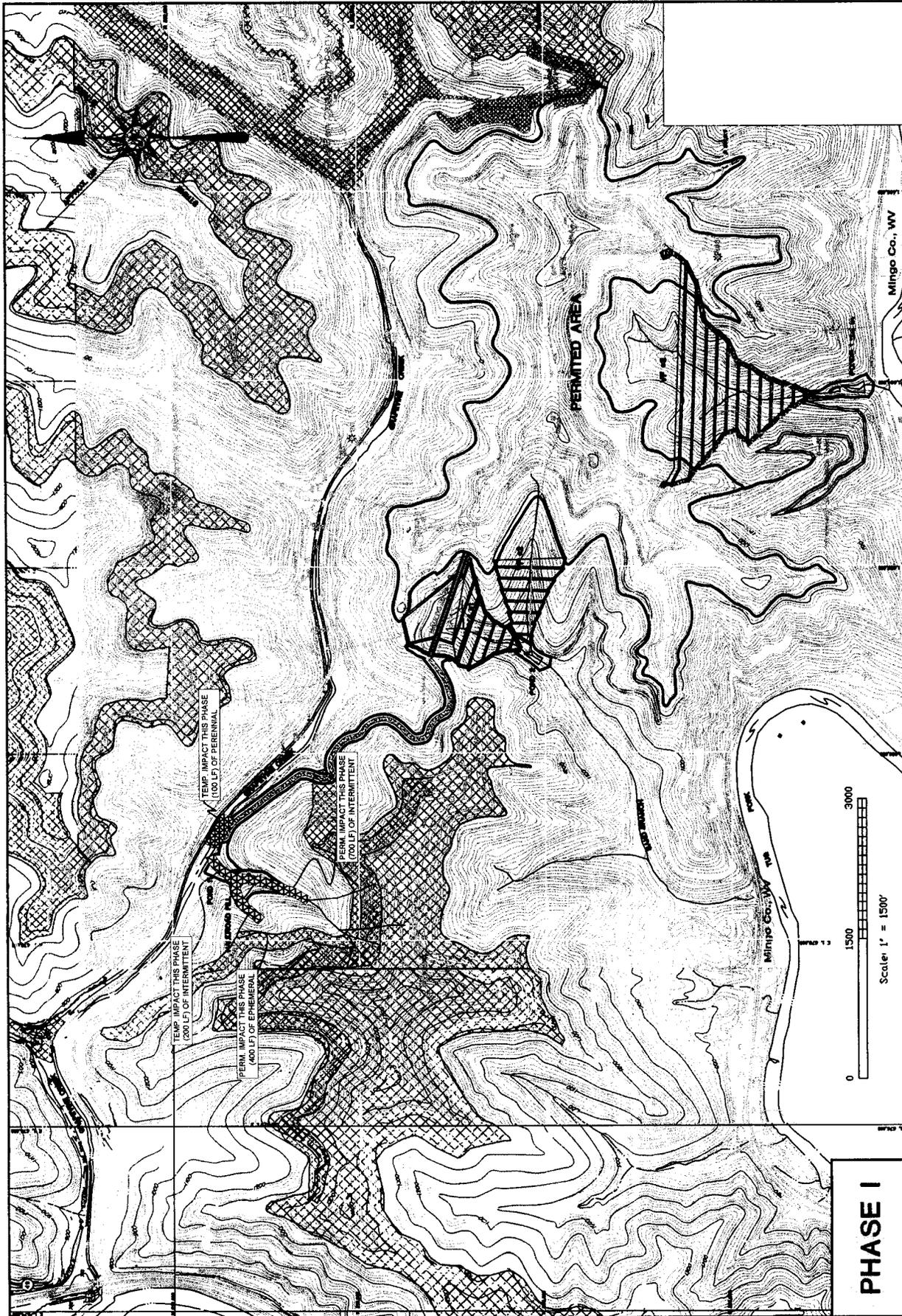
Grapevine South Surface Mine
 Mineral Removal & Permit Area
 USACE Project No. 2004-00864

Figure 2 of 7

DATE:	08/02/04	CAD BY:	B.Mills
FILENAME:	SEC_VET_1.dwg	PROJECT:	04018

LITTLE BOYD COAL CO., INC.
 P.O. Box 941
 Phelps, KY 41663

**PERMIT
 AREA**



PHASE I

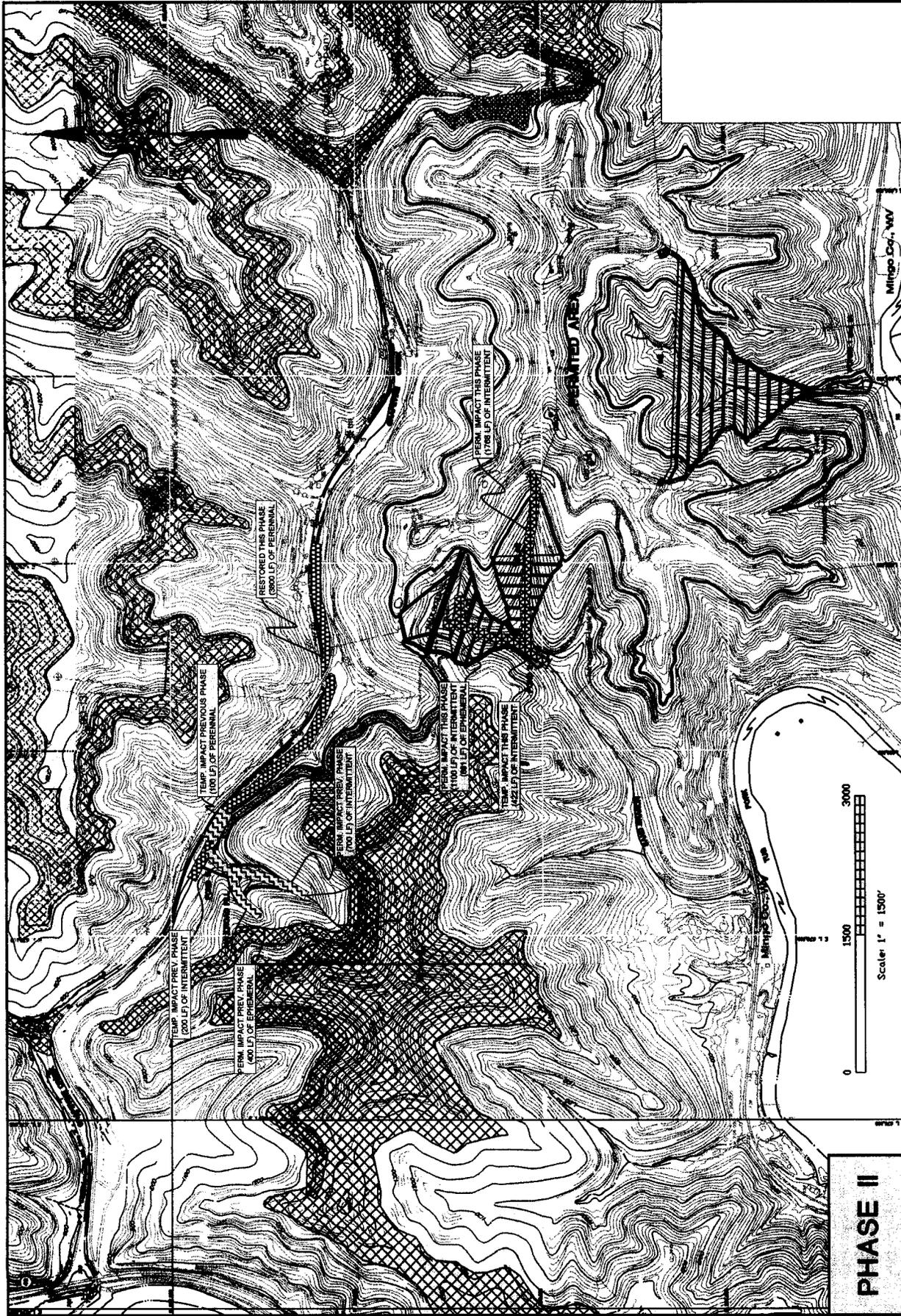
LITTLE BOYD COAL CO., INC.
 P.O. Box 941
 Phelps, KY 41663

Figure 3 of 7

DATE:	07/29/04	CAD BY:	B. Miller
FILENAME:	server_delta.dwg	PROJECT:	04018

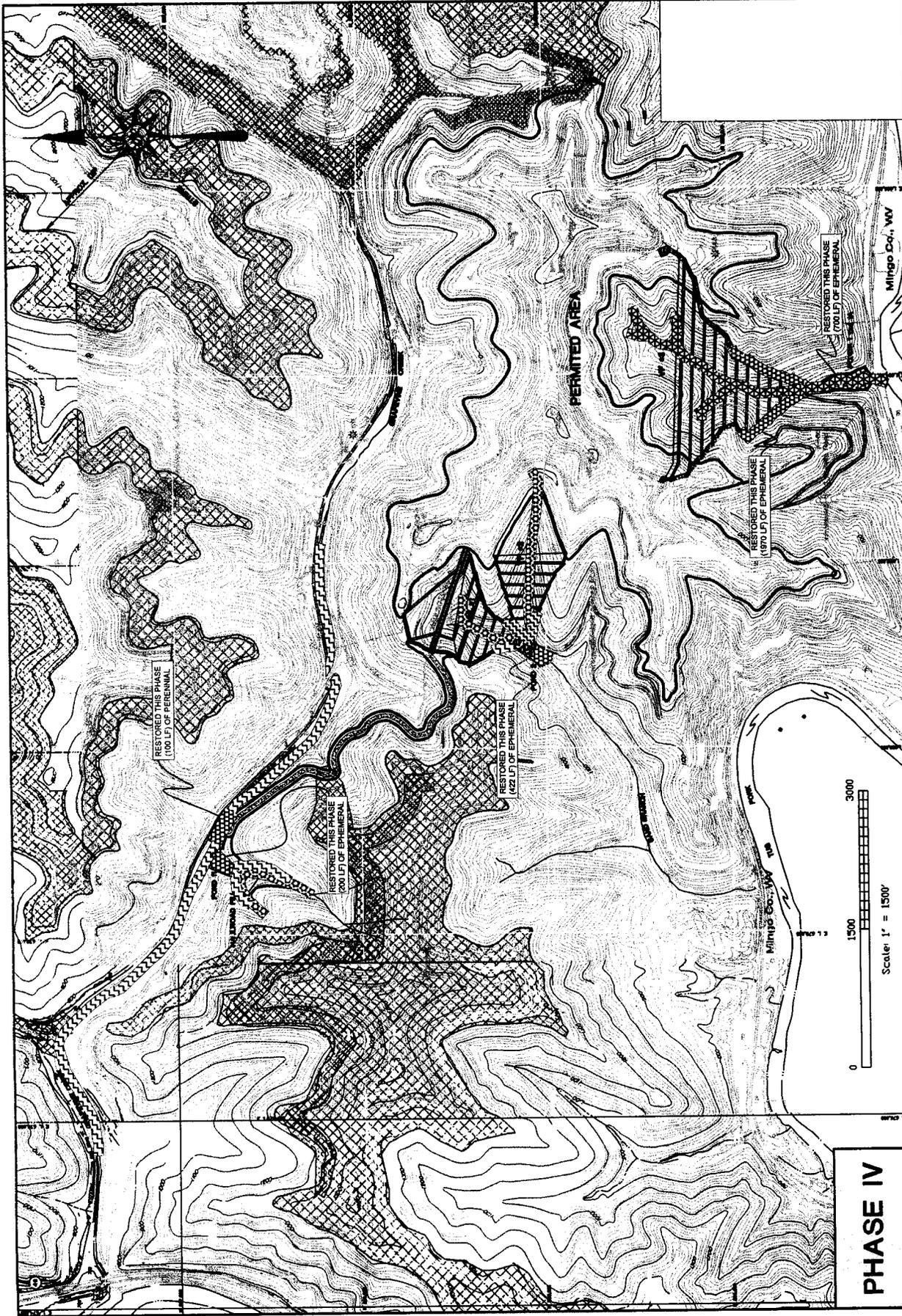
Grapevine South Surface Mine
 Phase Map
 Impacted & Restored Streams
 USACE Project No. 2004-00864





PHASE II

Grapevine South Surface Mine Phase Map Impacted & Restored Streams USACE Project No. 2004-00864	
Figure 4 of 7	
DATE: 07/29/04 FILENAME: SEP-VET_VBE15A.CAD SET: VET_VBE15A.CAD	CAD BY: <i>RM</i> PROJECT: 04018
LITTLE BOYD COAL CO., INC. P.O. Box 941 Phelps, KY 41668	



PHASE IV

LITTLE BOYD COAL CO., INC.
 P.O. Box 941
 Phelps, KY 41653

Figure 6 of 7

DATE: 07/29/04	CAD BY: <i>B. Miles</i>
FILENAME: server\delta\can	PROJECT: 04018

Grapevine South Surface Mine
 Phase Map
 Impacted & Restored Streams
 USACE Project No. 2004-00864



MAP LEGEND

-  Impacted This Phase
-  Restored This Phase
-  Impacted Previous Phase
-  Restored Previous Phase

PHASE	IMPACTED						RESTORED		
	EPHEMERAL		INTERMITTENT		PERENNIAL		EPH	INT	PER
	TEMP.	PERM.	TEMP.	PERM.	TEMP.	PERM.			
I	0	400	200	700	100	0	0	0	0
II	0	681	422	2868	0	0	0	0	3800
III	0	2300	700	3381	0	0	2400	0	4281
IV	0	0	0	0	0	0	1970	0	100
TOTAL	0	3381	1322	6949	100	0	4370	0	8181

MAP KEY

LITTLE BOYD COAL CO., INC.
P.O. Box 941
Pheps, KY 41663

Figure 7 of 7

DATE:	07/29/04	CAD BY:	Bills
FILENAME:	SFC-VCT_0815a.dwg	PROJECT:	04018

Grapevine South Surface Mine
Phase Map
Impacted & Restored Streams
USACE Project No. 2004-00864

