



Public Notice

**U S Army Corps
of Engineers**
Huntington District

In reply refer to Public Notice No. 200501187 (corrected) Issuance Date: February 10, 2006
Stream: Pine Creek Closing Date: March 12, 2006

Please address all comments and inquiries to:
U.S. Army Corps of Engineers, Huntington District
ATTN: CELRH-OR-F Public Notice No. (*reference above*)
502 Eighth Street
Huntington, West Virginia 25701-2070 Phone: (304) 399-5710

CORRECTION TO PUBLIC NOTICE

PUBLIC NOTICE: The purpose of this public notice is to inform you of changes to a proposal for work in which you might be interested, which was previously advertised via Public Notice No. 200501187. The previously issued public notice includes administrative errors with respect to impacts to waters of the U.S. This corrected public notice supersedes the previously issued public notice. 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. This notice serves as the Corps' request to the West Virginia Department of Environmental Protection to act on Section 401 Water Quality Certification for the following application.

APPLICANT: Coal Mac, Inc. dba Phoenix Coal Mac Mining, Inc.
P.O. Box 436
Williamson, West Virginia 25661

LOCATION: The proposed project site is depicted on the Barnabus, West Virginia U.S. Geological Survey Quadrangles within the watersheds of Pine Creek and Left Fork of Pine Creek and Middle Fork of Elk Creek in the Lee District of Mingo County and Island District of Logan County, West Virginia as shown on the attached Drawing 1 titled "Location Map." The proposed project covers approximately 601.00 surface acres and would result in direct and indirect effects on unnamed tributaries of Pine Creek, unnamed tributaries of Left Fork of Pine Creek and an unnamed tributary of Middle Fork of Elk Creek. The unnamed tributaries of Left Fork of Pine Creek are all tributaries of Island Creek, which ultimately flows into the Guyandot River, a navigable (Section 10) water of the United States. The unnamed tributary of Middle Fork of Elk Creek is a tributary of Pigeon Creek, which ultimately flows into the Tug Fork, a navigable (Section 10) water of the United States.

DESCRIPTION OF THE PROPOSED WORK: The applicant proposes to place dredged and fill material into approximately 13,297 linear feet (1.8 acres) of waters of the U.S. in conjunction with the construction, operation and reclamation of the Phoenix No. 5 Surface Mine. The proposed operation would involve the construction of four valley fills (2 through 4 and 6) and four associated drainage control structures (2 through 4 and 6) and the extension of one existing valley fill (Valley Fill 1). The construction of the proposed valley fills and extension of an existing valley fill and previously construction of existing Valley Fill 1 would result in the permanent discharge of dredged and fill material into 3,198 linear feet (0.30 acre) of ephemeral streams and 7,661 linear feet (1.14 acres) of intermittent streams for a total permanent stream impact of 10,859 linear feet (1.45 acres). Valley Fills 1, 2, 3, 4 and 6 would drain contributing watersheds of ranging from 72.80 to 178.60 acres. Adverse effects on the aquatic environment associated with this proposed activity would be permanent in nature. The construction of the proposed flow attenuation devices, check dams and existing Pond 1 (this pond is an existing structure in 276 linear feet (0.04 acre) of intermittent stream in the 2nd left unnamed tributary of Pine Creek) would result in the temporary discharge of dredged and fill material into 2,438 linear feet (0.36 acre) of intermittent streams. Adverse effects on the aquatic environment associated with these proposed activities would be temporary in nature. The individual impacts to waters of the U.S. as a result of the proposed activities are attached to this public notice under Attachments 21 and 22.

The proposed activity would result in disturbances to 601.00 acres of surface area, including 425.50 acres of mineral removal, to facilitate the recovery of nearly 6.9 million tons of coal reserves from the Kittanning, Upper Five-Block, Five-Block, Lower Five-Block, Upper Stockton, Lower Stockton, Stockton B, Coalburg, and associated rider seams. The proposed mineral removal operations would be conducted using the mountaintop and contour surface mining methods and would generate approximately 79.5 million cubic yards of overburden material. Nearly 55.8 million tons of this material would be placed back upon the highwalls created by the mining process or on an adjacent surface mine permit area (referred to as the Holden 22 Surface Mine). The remaining excess overburden material, in the amount of nearly 23.7 million cubic yards, would be placed in the proposed valley fills. The applicant's Surface Mine Application (S-5027-01) was approved by the West Virginia Department of Environmental Protection pursuant to the Surface Mining Control and Reclamation Act of 1977 on January 21, 2005. The proposed project would be accomplished over a period of 4.5 years. Details regarding the phases can be found in Section N of the applicant's Surface Mining Application on file at the WVDEP. According to the applicant, the purpose of the project is to recover bituminous coal reserves from the Kittanning, Upper Five-Block, Five-Block, Lower Five-Block, Upper Stockton, Lower Stockton, Stockton B, Coalburg, and associated rider seams. Plans for the proposed Phoenix No. 5 Surface Mine are attached to this public notice.

ALTERNATIVE ANALYSIS: This project is not considered to be water dependent; therefore, the applicant is required to show that other less damaging practicable alternatives are not available that would achieve the applicant's goal. No permit will be issued until our review of the alternative analysis clearly shows that upland alternatives are not available to achieve the applicant's goal.

MITIGATION PLAN: The applicant has not submitted a compensatory mitigation plan (CMP) to compensate for the proposed permanent and temporary impacts to waters of the U.S. regulated by the Department of the Army, Corps of Engineers.

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. A copy of this public notice will be sent to the SHPO for their review. Additional comments concerning archeological sensitivity of a project area should be based upon collected data.

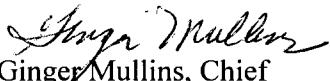
ENDANGERED/THREATENED SPECIES REVIEW: Two federally listed endangered species, the Indiana bat (*Myotis sodalis*) and Virginia big-eared bat (*Corynorhinus townsendii virginianus*) may occur within the proposed project area. A mist net survey was completed by Environmental Solutions & Innovations, Inc. in August 2003. The survey efforts did not capture any federally listed endangered bats. Additionally, the proposed project area was surveyed for the presence of old, open abandoned mine portals that could provide year-around habitat for the Virginia big eared bat or hibernaculum for the Indiana bat. No such features were identified within the project area. The mist net survey associated with this proposed project remains valid until May 15, 2006. Therefore, the applicant will be required to conduct a new bat mist net survey between May 15 and August 15 using the mist net protocol outlined in the draft Indiana bat Recovery Plan or restrict timber removal operations between November 15 and March 31. If the latter option is chosen, an analysis of the post-project Indiana bat summer habitat must be performed within a two-mile radius of the center point of the project area. If the U.S. Fish and Wildlife Service (USFWS) determines the extent of disturbance is not significant to affect the Indiana bat, the project may proceed with seasonal restrictions. Conversely, if the USFWS determines the extent of disturbance is significant and would likely adversely affect the Indiana bat, a mist net survey can be conducted to determine if the Indiana bats are present. This public notice serves as a request to the USFWS for any additional information they may have on whether any listed or proposed to be listed endangered or threatened species may be present in the area which would be affected by the activity, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended).

PUBLIC INTEREST REVIEW AND COMMENT: 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 interests may be adversely affected by the activity. This application will be reviewed in accordance with 33 CFR 320-331, the Regulatory Program of the U. S. Army Corps of Engineers (USACE), 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.

Interested parties are invited to state any objections they may have to the proposed work. 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. 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 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. For accuracy and completeness of the administrative 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 comments received will be considered by the Corps of Engineers 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.

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 Mrs. Teresa Spagna, 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 names and addresses of those who submit comments in response to this public notice become part of our administrative record and, as such, are available to the public under provisions of the Freedom of Information Act. Thank you for your interest in our nation's water resources. If you have any questions concerning this public notice, please call Mrs. Teresa Spagna of the South Regulatory Section at 304-399-5710.



Ginger Mullins, Chief
Regulatory Branch

(W)

Attachment No. 21

The types of material being discharged are:

Durable, non-toxic overburden material from mining operations permanently placed in proposed valley fills and temporarily placed in conjunction with construction of associated sediment control structures.

Permanent Fill Material (In-stream)

Structure ID	Stream Name	Perennial/Intermittent (cyds.)	Ephemeral (cyds.)	Total (cyds.)
Valley Fill No. 1*	2nd Left Unnamed Tributary of Pine Creek upstream of the Left Fork	344.93 43*	-- 42*	344.93 85*
	1st Left Unnamed Tributary of 2nd Left Unnamed Tributary of Pine Creek upstream of the Left Fork	--	19.92	19.92
Total – Valley Fill No. 1*		387.93	61.92	449.85
Valley Fill No. 2	1st Left Unnamed Tributary of Pine Creek upstream of the Left Fork	331.41	3.61	335.02
Total – Valley Fill No. 2		331.41	3.61	335.02
Valley Fill No. 3	4th Right Unnamed Tributary of the Left Fork of Pine Creek	250.75	31.88	282.63
Total – Valley Fill No. 3		250.75	31.88	282.63
Valley Fill No. 4	6th Right Unnamed Tributary of the Left Fork of Pine Creek	75.32	0.98	76.30
	1st Right Unnamed Tributary of the 6th Right Unnamed Tributary of the Left Fork of Pine Creek	--	19.23	19.23
	2nd Right Unnamed Tributary of the 6th Right Unnamed Tributary of the Left Fork of Pine Creek	--	1.05	1.05
Total – Valley Fill No. 4		75.32	21.26	96.58
Valley Fill No. 6	4th Left Unnamed Tributary of the Middle Fork of Elk Creek	179.80	32.30	212.10
Total – Valley Fill No. 6		179.80	32.30	212.10
Total – Permanent Fill Material		1225.21	150.97	1376.18

*Estimated volume of material placed in waters of the U.S. associated with existing Valley Fill No. 1.

Attachment No. 21 (continued)

Temporary Fill Material (In-stream)

Structure ID	Stream Name	Perennial/Intermittent (cyds.)	Ephemeral (cyds.)	Total (cyds.)
Pond No. 1 (Existing)	2 nd Unnamed Left Tributary of Pine Creek of the Left Fork	31*	--	31*
Total – Pond No. 1		31	--	31
Pond No. 2	1st Left Unnamed Tributary of Pine Creek upstream of the Left Fork	123.73	--	123.73
Total – Pond No. 2		123.73	--	123.73
Pond No. 3	4th Right Unnamed Tributary of the Left Fork of Pine Creek	71.95	--	71.95
Total – Pond No. 3		71.95	--	71.95
Pond No. 4	6th Right Unnamed Tributary of the Left Fork of Pine Creek	27.68	--	27.68
Total – Pond No. 4		27.68	--	27.68
Pond No. 6	4th Left Unnamed Tributary of the Middle Fork of Elk Creek	49.28	--	49.28
Total – Pond No. 6		49.25	--	49.28
Total – Temporary Fill Material		322.19	--	322.19

*Estimated volume of material placed within waters of the U.S. associated with existing Pond No. 1

Attachment 2Q

Mining Activity	Stream Location	Permitting Stream Impact			Permitting Stream Impact		
		Linear Feet	Acres	Sediment Classification (E, I or P) or Open Waters	Linear Feet	Acres	Stream Classification (E, I or P) or Open Waters
Valley Fill No. 1*	2nd Left Unnamed Tributary of Pine Creek upstream of the Left Fork	3,261 1,566	0.4755 0.166	I E	--	--	--
Valley Fill No. 1	1 st Left Unnamed Tributary of 2 nd Left Unnamed Tributary of Pine Creek upstream of the Left Fork	300	0.0195	E	--	--	--
Valley Fill No. 2	1 st Left Unnamed Tributary of Pine Creek upstream of the Left Fork	1,080 100	0.2417 0.0103	I E	--	--	--
Valley Fill No. 3	4 th Right Unnamed Tributary of the Left Fork of Pine Creek	912 340	0.1484 0.0410	I E	--	--	--
Valley Fill No. 4	6 th Right Unnamed Tributary of the Left Fork of Pine Creek	1,299 92	0.1325 0.0029	I E	--	--	--
Valley Fill No. 4	1 st Right Unnamed Tributary of the 6 th Right Unnamed Tributary of the Left Fork of Pine Creek	300	0.0224	E	--	--	--
Valley Fill No. 4	2 nd Right Unnamed Tributary of the 6 th Right Unnamed Tributary of the Left Fork of Pine Creek	100	0.0046	E	--	--	--
Valley Fill No. 6	4 th Left Unnamed Tributary of the Middle Fork of Elk Creek	1,109 400	0.1443 0.0373	I E	--	--	--

2						
Area associated with flow attenuation devices – check dams (Valley Fill No. 1)**	2 nd Left Unnamed Tributary of Pine Creek upstream of the Left Fork	--	--	--	939	0.1396
Area associated with Pond No. 2 Construction	1 st Left Unnamed Tributary of Pine Creek upstream of the Left Fork	--	--	--	430	0.0858
Area associated with Pond No. 3 Construction	4 th Right Unnamed Tributary of the Left Fork of Pine Creek	--	--	--	271	0.0470
Area associated with Pond No. 4 Construction	6 th Right Unnamed Tributary of the Left Fork of Pine Creek	--	--	--	335	0.0312
Area associated with Pond No. 6 Construction	4 th Left Unnamed Tributary of the Middle Fork of Elk Creek	--	--	--	463	0.0523
Total – By Stream Classification	7,661 2,798	1,1438 0.3049	I E	2,438 --	0.3561 --	I E
Total – Stream Impacts	10,859	1,4487		2,438	0.3561	

Enhemera

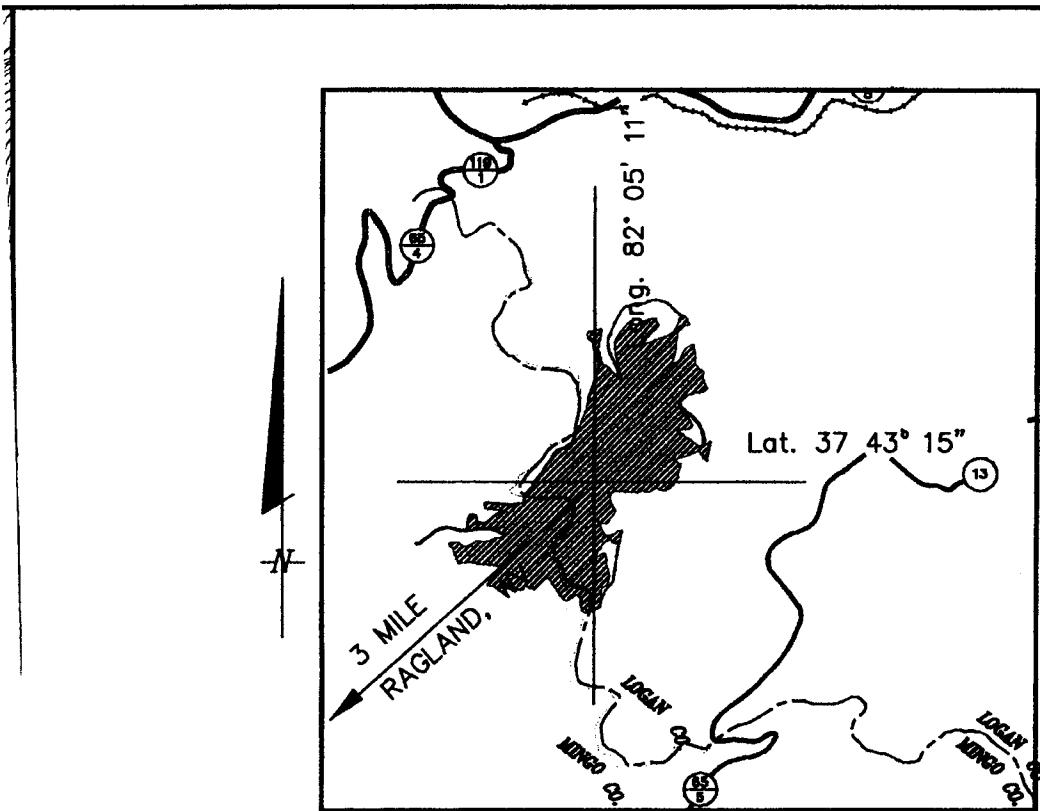
Epileptic Intermittant

- Interventions

P – Perennial

* Total includes impacts proposed for extension of Valley Fill 1 and impacts associated with existing Valley Fill 1.

**** Total includes impacts associated with existing Pond 1 and flow attenuation devices/check dams (Valley Fill 1).



NOTE:

State Plane Coordinate System is NAD 83.

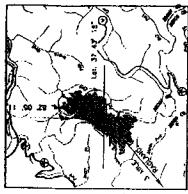
LOCATION MAP

Mingo & Logan Counties General Highway Map
Barnabas Quadrangle

Receiving Stream: Left Fork of Pine Creek and Pine Creek
of Island Creek of the Guyandotte River:

Unnamed tributary of Middle Fork of Elk Creek
of Pigeon Creek of Tug Fork

Scale: 1" = 1 Mile



NOTE: State Plane Coordinate System in NAD 83.

LOCATION MAP

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

LEGEND

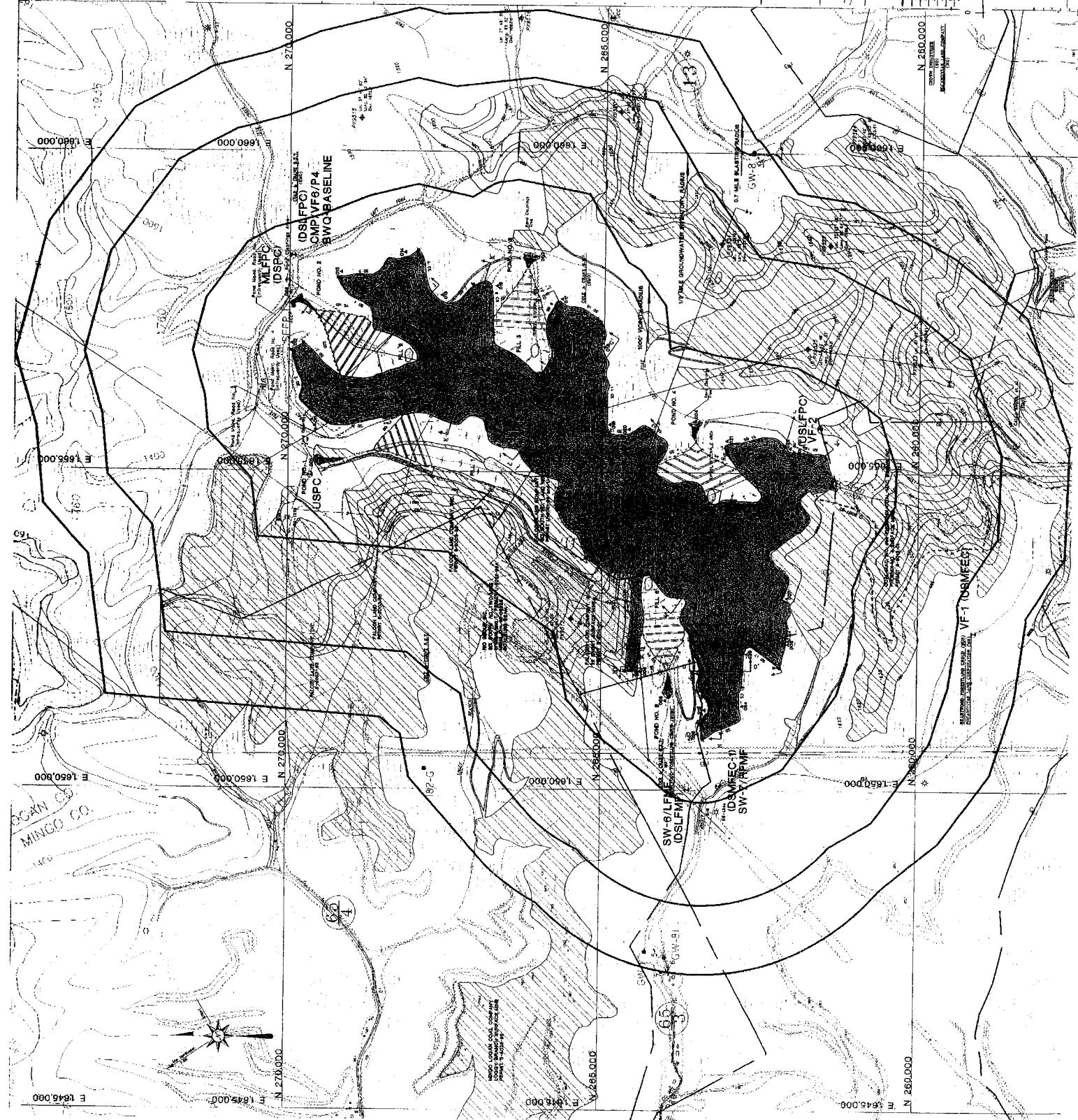
- Chryseobacterium
- Other genera

SURFACE WHIRLIG. COULEURS & MUSIQUES ADOBE

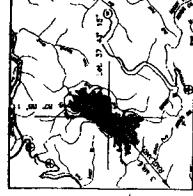
Some Blasting Step for 1/2 mile and .7 miles blasting limits.

PHOENIX NO. 6 SURFACE MINE
PERMIT NO. B-6027-01
NPDES NO. WY01020692

ATTACHMENT X
Exhibit 1-A
upwards of
Forraine Conventina Sonina et al



20f16



NOTE: State Plane Coordinate System is NAD 83.

N 27

E 1660,000

N 26

E 1660,000

N 25

E 1660,000

N 24

E 1660,000

N 23

E 1660,000

N 22

E 1660,000

N 21

E 1660,000

N 20

E 1660,000

N 19

E 1660,000

N 18

E 1660,000

N 17

E 1660,000

N 16

E 1660,000

N 15

E 1660,000

N 14

E 1660,000

N 13

E 1660,000

N 12

E 1660,000

N 11

E 1660,000

N 10

E 1660,000

N 9

E 1660,000

N 8

E 1660,000

N 7

E 1660,000

N 6

E 1660,000

N 5

E 1660,000

N 4

E 1660,000

N 3

E 1660,000

N 2

E 1660,000

N 1

E 1660,000

N 0

E 1660,000

N -1

E 1660,000

N -2

E 1660,000

N -3

E 1660,000

N -4

E 1660,000

N -5

E 1660,000

N -6

E 1660,000

N -7

E 1660,000

N -8

E 1660,000

N -9

E 1660,000

N -10

E 1660,000

N -11

E 1660,000

N -12

E 1660,000

N -13

E 1660,000

N -14

E 1660,000

N -15

E 1660,000

N -16

E 1660,000

N -17

E 1660,000

N -18

E 1660,000

N -19

E 1660,000

N -20

E 1660,000

N -21

E 1660,000

N -22

E 1660,000

N -23

E 1660,000

N -24

E 1660,000

N -25

E 1660,000

N -26

E 1660,000

N -27

E 1660,000

N -28

E 1660,000

N -29

E 1660,000

N -30

E 1660,000

N -31

E 1660,000

N -32

E 1660,000

N -33

E 1660,000

N -34

E 1660,000

N -35

E 1660,000

N -36

E 1660,000

N -37

E 1660,000

N -38

E 1660,000

N -39

E 1660,000

N -40

E 1660,000

N -41

E 1660,000

N -42

E 1660,000

N -43

E 1660,000

N -44

E 1660,000

N -45

E 1660,000

N -46

E 1660,000

N -47

E 1660,000

N -48

E 1660,000

N -49

E 1660,000

N -50

E 1660,000

N -51

E 1660,000

N -52

E 1660,000

N -53

E 1660,000

N -54

E 1660,000

N -55

E 1660,000

N -56

E 1660,000

N -57

E 1660,000

N -58

E 1660,000

N -59

E 1660,000

N -60

E 1660,000

N -61

E 1660,000

N -62

E 1660,000

N -63

E 1660,000

N -64

E 1660,000

N -65

E 1660,000

N -66

E 1660,000

N -67

E 1660,000

N -68

E 1660,000

N -69

E 1660,000

N -70

E 1660,000

N -71

E 1660,000

N -72

E 1660,000

N -73

E 1660,000

N -74

E 1660,000

N -75

E 1660,000

N -76

E 1660,000

N -77

E 1660,000

N -78

E 1660,000

N -79

E 1660,000

N -80

E 1660,000

N -81

E 1660,000

N -82

E 1660,000

N -83

E 1660,000

N -84

E 1660,000

N -85

E 1660,000

N -86

E 1660,000

N -87

E 1660,000

N -88

E 1660,000

N -89

E 1660,000

N -90

E 1660,000

N -91

E 1660,000

N -92

E 1660,000

N -93

E 1660,000

N -94

E 1660,000

N -95

E 1660,000

N -96

E 1660,000

N -97

E 1660,000

N -98

E 1660,000

N -99

E 1660,000

N -100

E 1660,000

N -101

E 1660,000

N -102

E 1660,000

N -103

E 1660,000

N -104

E 1660,000

N -105

E 1660,000

N -106

E 1660,000

N -107

E 1660,000

N -108

E 1660,000

N -109

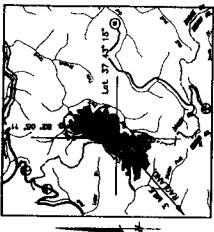
E 1660,000

N -110

E 1660,000

N -111

E



NOTE: State Plane Coordinate System is NAD 83.

Loc

LOCATION MAP

Mingo & Lagoon Counties, General Highway Map
 Bemont Quadrangle
 Labeling Streams:
 Left Fork of Pine Creek and Pine Creek
 Island Creek of the Guyandot River
 Unnamed tributary of Middle Fork of Elk Creek
 Middle Fork
 Right Fork
 Left Fork
 Middle Fork
 Right Fork

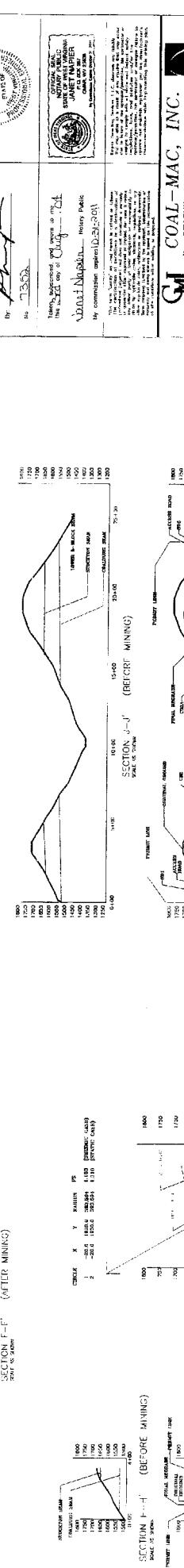
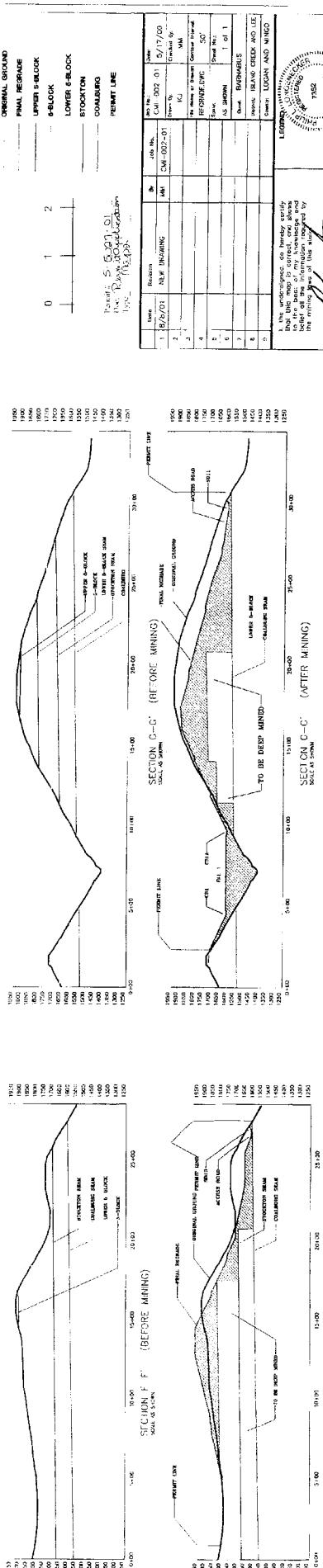
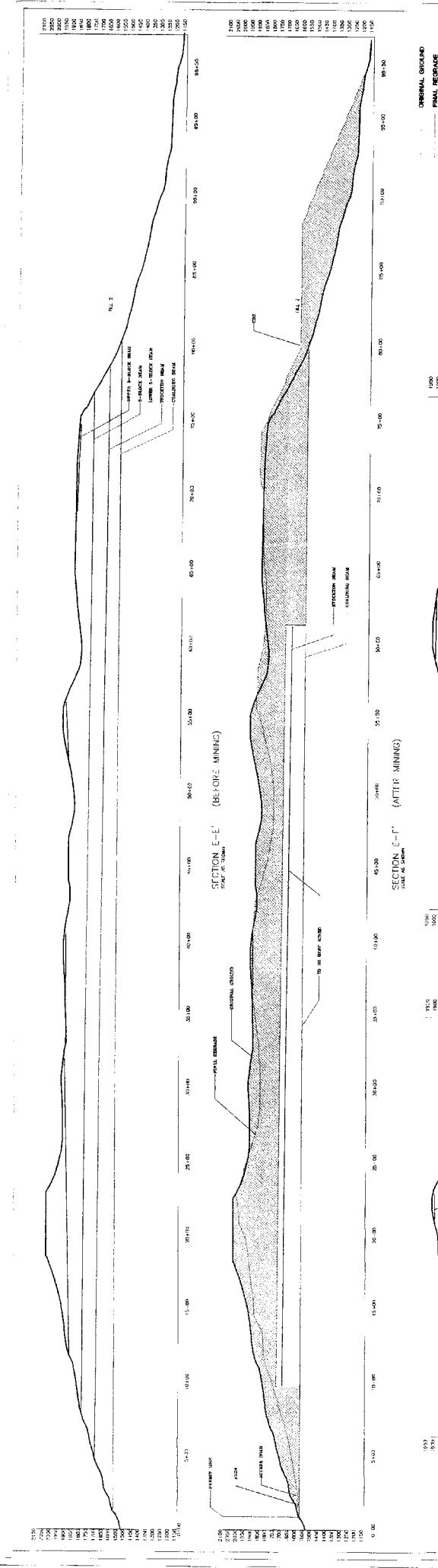
Legend

- DISTURBED AREA
DRAUGHT STRUCTURE
INTERMITTENT STREAM
INTERMITTENT STREAM
SPRINGHEAD STREAM
HIGH VOLTAGE LINES
GAS WELL & LINER
STRUCTURE / OVERLAP
GROUNDWATER MOVEMENT

**PHOENIX NO. 8 SURFACE MINE
STREAM DELINEATION MAP**

NPDES NO. WV10200892
PERMIT NO. S-5027-01





F:304_752.9507 Email:empire@xsv.net

Volume Report Fill 2 TOP OF FILL 05/07/2003 08:54

Comparing GRID file: C:\scdcs\DATA\PHOENIX-5PD\09.grd

and GRID file: C:\scdcs\DATA\FILL2-TOP_OF_FILL.grd

Grid corner locations: 1619187.61, 261092.30 to 6550587.67, 210992.30 Grid corner locations:

Grid resolution X: 104, Y: 99 Grid cell size: X: 100.00, Y: 100.00

Area in Cut : 10,996.1 S.F. 0.25 Acres

Area in Fill : 10,996.1 S.F. 0.25 Acres

Total inclusion area: 1,320.25 S.F., 30.31 Acres

Cut to Fill ratio: 0.00

Average Cut Depth: 1.96 Average Fill Depth: 95.46

Average Cut Depth: 1.96 Average Fill Depth: 95.46

Cut (Acre) / Area (acres) : 152.32 54

Fill (Acre) / Area (acres) : 21.51 6.6 C.Y.

Fill volume : 122,561.91 CY.

Fill volume : 122,561.91 CY.

Cut volume : 86,176.00 cubic ft, 319.00 cu.yd.

Fill volume : 116,633.45 cubic ft, 431,345.720 cubic yards

Volume Report Fill 2 07/31/2001 Comparing GRID file: C:\SC14\DATA\Phoenix-5PD\09.grd

and GRID file: C:\scdcs\DATA\FILL2-TOP_OF_FILL.grd

Grid corner locations: 1619057.62, 260472.30 to 16597.62, 210992.30 Grid corner locations:

Grid resolution X: 106, Y: 108 Grid cell size: X: 100.00, Y: 100.00

Area in Cut : 26,804.66 sq ft, 0.662 acres

Area in Fill : 10,536.98 sq ft, 23.730 acres

Total inclusion area: 103,676.5313 sq ft, 23.79 acres

Cut to Fill ratio: 0.00

Average Cut Depth: 112.67

Cut (C.Y.) / Area (acres) : 13.54

Fill (C.Y.) / Area (acres) : 18' 29.09

Fill volume : 116,118.00 cubic ft, 319.00 cu.yd.

Fill volume : 116,633.45 cubic ft, 431,345.720 cubic yards

VOLUME 4,313,457 CUBIC YARDS

DRAINAGE AREA POND TOE 2.2 ACRES

DRAINAGE AREA FILL TOE 73.2 ACRES

LENGTH (POND TOE) TO (FILL TOE) .384 FT

LENGTH (ECOTRINT) 26.7 FT

TOE LAT 37° 24' 07"

TOE LON 82° 04' 32"

ELEV. 1,180 FT

TOP OF FILL LAT 37° 43' 51"

LON 82° 04' 41"

ELEV. 1,620 FT

ORIGINAL GROUND

BEDROCK

FINAL SURFACE

FAILURE PLANE

BACKSTACK

RIP-RAP

PURPLE CORNER

COALBURG

MARSH

ORIGINAL GROUND

BEDROCK

FINAL SURFACE

FAILURE PLANE

BACKSTACK

RIP-RAP

PURPLE CORNER

COALBURG

MARSH

ORIGINAL GROUND

BEDROCK

FINAL SURFACE

FAILURE PLANE

BACKSTACK

RIP-RAP

PURPLE CORNER

COALBURG

MARSH

ORIGINAL GROUND

BEDROCK

FINAL SURFACE

FAILURE PLANE

BACKSTACK

RIP-RAP

PURPLE CORNER

COALBURG

MARSH

ORIGINAL GROUND

BEDROCK

FINAL SURFACE

FAILURE PLANE

BACKSTACK

RIP-RAP

PURPLE CORNER

COALBURG

MARSH

ORIGINAL GROUND

BEDROCK

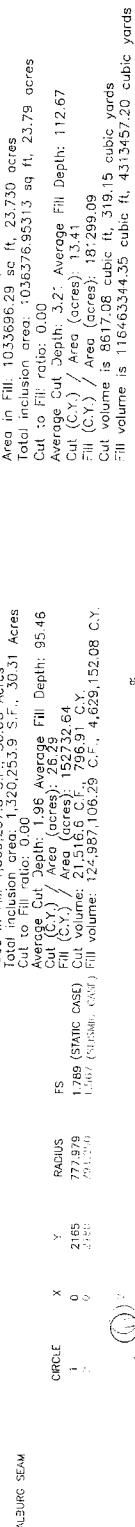
FINAL SURFACE

FAILURE PLANE

BACKSTACK

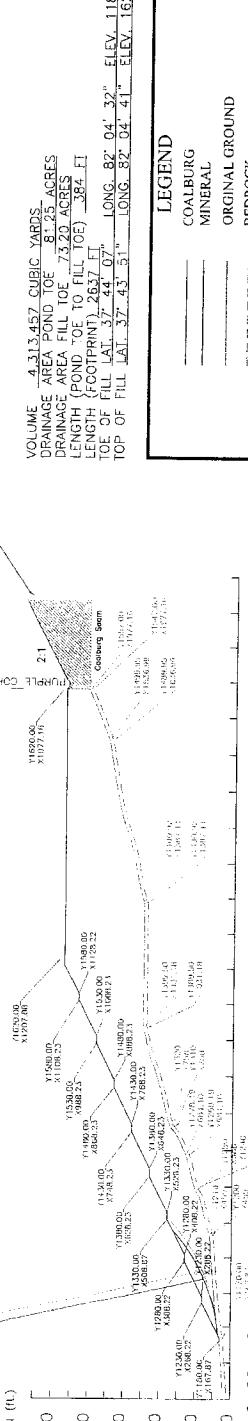
RIP-RAP

PURPLE CORNER



PLAN

SCALE: 1" - 400'



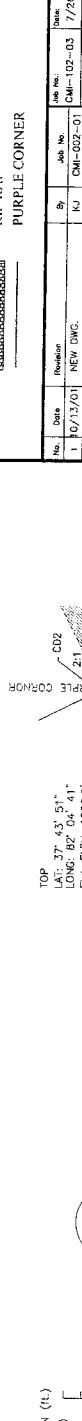
PLAN

SCALE: 1" - 400'



PLAN

SCALE: 1" - 400'



PLAN

SCALE: 1" - 400'



PLAN

SCALE: 1" - 400'



PLAN

SCALE: 1" - 400'



PLAN

SCALE: 1" - 400'



PLAN

SCALE: 1" - 400'



PLAN

SCALE: 1" - 400'



PLAN

SCALE: 1" - 400'

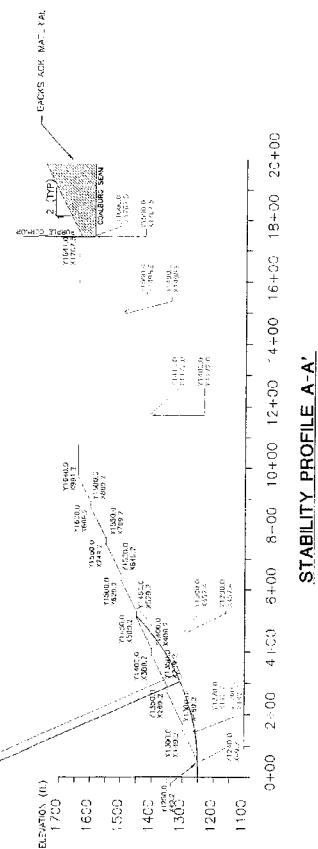


PLAN

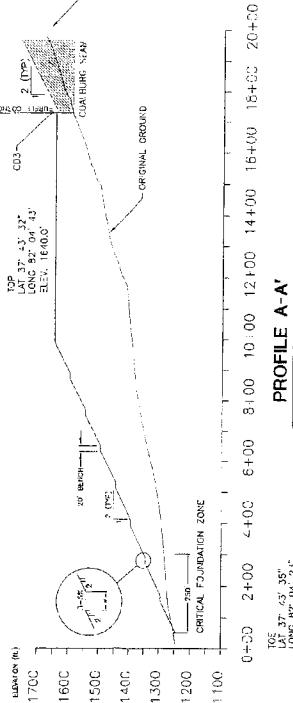
SCALE: 1" - 400'

Volume Report
FILL 3. PAPER CORNFB 27/31/2001
Sampling Grid file: C:\USERS\PHOTO\SPD\99-93590
Grid file: C:\USERS\PHOTO\SPD\99-93590
Grid corner locations:
Grid tessellation: X=0.00 Y=0.00
Area in Cell = 0.00 m²
Area in Cell = 30.00 m²
Area in Cell = 91.84 m²
Total area in cell = 91.84 m²
Cut to Area = 0.00 m²
Average Cut Depth = 1.3384
Cut (C.Y.) / Area (square) = 0.00
Cut (C.Y.) / Area (cubic) = 13.3556347
Cut volume = 0.00 cubic ft.
Cut volume = 10.3591727 cubic ft.
Full volume = 10.3591727 cubic ft.
Full volume = 0.00 cubic ft.

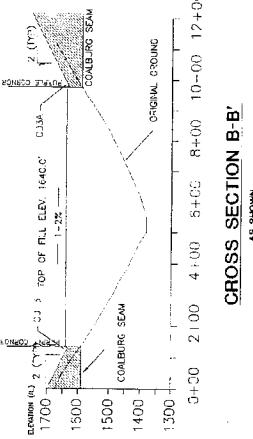
CIRCLE	X	Y	RADIUS	SEG
3	25	1950	6393742	1, 2, 3, 4, 5, 6, 7, 8
2	25	1900	6393742	1, 2, 3, 4, 5, 6, 7, 8



STABILITY PROFILE A-A'



PROFILE A-A'



CROSS SECTION B-B'

PLAN

LEGEND	
COAL BURG	
MINERAL	
ORIGINAL GROUND	
BEDROCK	
FINAL SURFACE	
FAILURE PLANE	
BACKSTACK	
RIP-SAP	

RECEIVED MAY 20 2017	
INDUSTRIAL INSPECTION NO. 5 SURFACE MINE	
<u>NEOPOLIS CO. INC.</u> 5-5027-01	
<u>NEOPOLIS CO. INC.</u> WV12020002	
FILL No.	3
UP SPEAKER BY	
<i>Empire Consulting Services LLC</i>	
TODS Inc., 1000 Main Street, Louisville, KY 40201	
Project #: 00000000000000000000000000000000	

Penn. S. 5287-91
Dec. 12, 1991 Appendix

9 of 16

Volume Report, FILL #4, TOP OF FILL NO. 4, 05/08/2003, GB#02
 Corrington Grid, fig. C, coordinates: X=133.007 Y=515.002 Z=105.3' FTLL grid
 one GRID line, Crosses 05/08/2003 Top of Fill.
 Grid requirement: 100% C.R. 1.5% Soil shear, A=130.500, G=57.0350, F=160.00
 Area required: 100% C.R. 1.5% Soil shear, A=130.500, G=57.0350, F=160.00
 Total inclusion: 9.05' x 1.5% = 13.57' Acres
 Cut to Fill: 10.05' x 1.5% = 15.08' Acres
 Average Cut Depth: 60.02'
 Cut Volume: 60.02' x 13.57' = 813.30 cu.yd.
 Cut volume: 60.02' x 19.30 cu.yd. = 1,168.22 cu.yd.
 Cut volume: 60.02' x 19.30 cu.yd. = 1,168.22 cu.yd.

CIRCLE	X	Y	RADIUS	FS
1	283.5.6	133.007	1.63'	(STATIC LOAD)
2	140	133.007	1.63'	(STATIC LOAD)

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

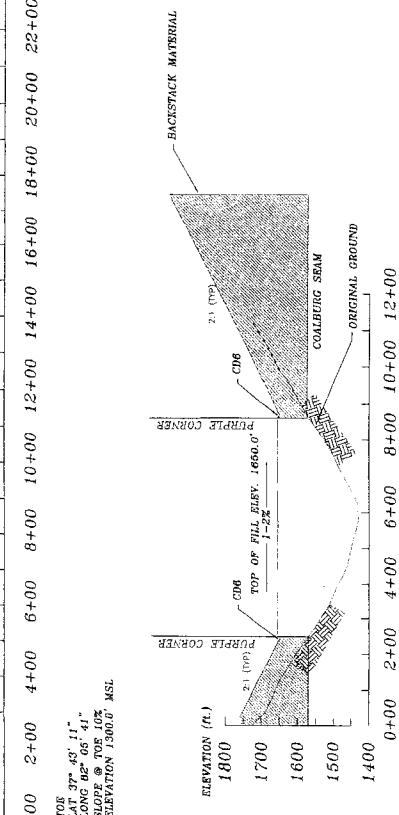
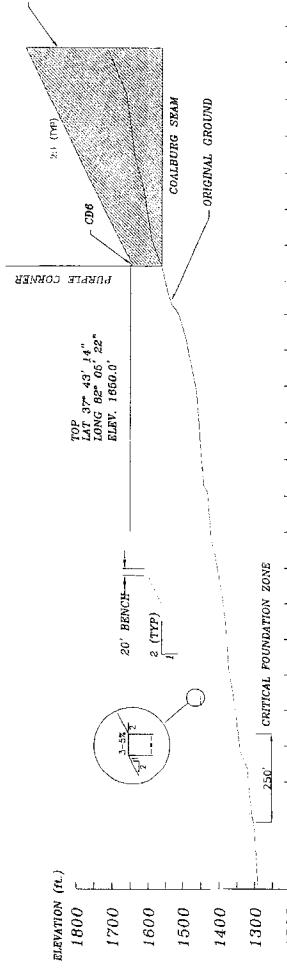
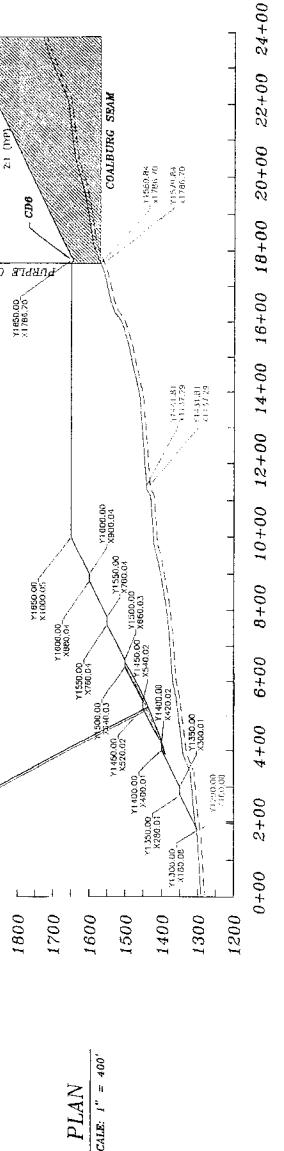
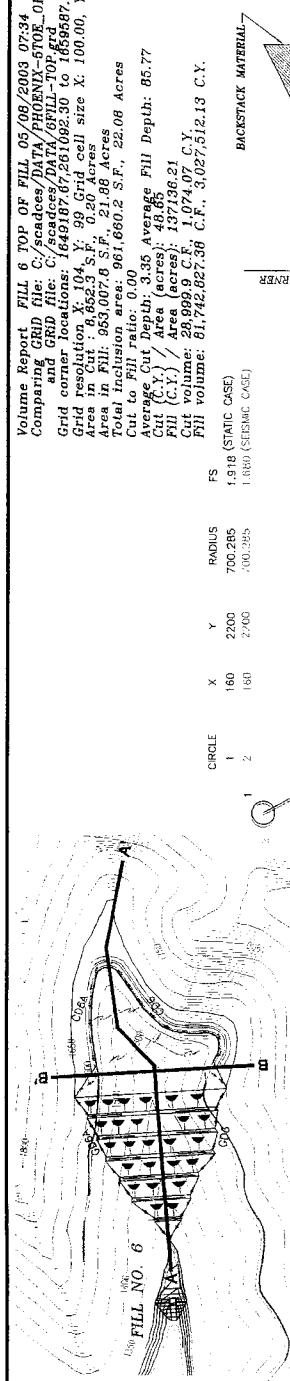
273

274

275

276

277



Volume Report FILL 6 PURPLE CORNER 05/08/2003 07:30
 Composing GRID file: C:/scadecis/DATA/PHOENIX-5TO8_OF_FILL.grd
 and GRID file: C:/scadecis/DATA/FILL6-REDESIGN.grd
 Grid corner locations: 1649187.57261092.30 to 1656587.67270992.30
 Grid resolution X: 104, Y: 99 Grid cell size X: 100.00, Y: 100.00
 Area in Cut: 3,898.7 S.F., 0.0 Acres
 Area in Fill: 174,860.9 S.F., 16.53 Acres
 Total inclusion area: 723,847.7 S.F., 16.62 Acres
 Cut to Fill Depth: 0.00 Average Fill Depth: 103.16
 Average Cut Depth: 3.26 Average Fill Depth: 103.16
 Cut (C.Y.) / Area (acres): 20.29
 Fill (C.Y.) / Area (acres): 12,687.2 C.F. 469.90 C.Y.
 Cut volume: 74,287.598 66.63 C.F. 2,751.302 54. C.Y.
 Fill volume: 74,287.598 66.63 C.F. 2,751.302 54. C.Y.

VOLUME - 2,761,393 CUBIC YARDS
DRAINAGE AREA POND TO F.E. 100.66 ACRES
DRAINAGE AREA FILL TO F.E. 100.26 ACRES
LENGTH (POND TO FILL TOP) 462 FT
LENGTH (FOOTPRINT) 1618 FT
TOE OF FILL LAT. 3° 43' 11" LONG. 82° 05' 41" ELEV. 1300 FT
TOP OF FILL LAT. 3° 43' 14" LONG. 82° 05' 22" ELEV. 1650 FT

The diagram illustrates a geological cross-section with the following layers from top to bottom:

- LEGEND**
- COALBURG**: Represented by a solid black line.
- MINERAL**: Represented by a dashed line.
- ORIGINAL GROUND**: Represented by a dotted line.
- BEDROCK**: Represented by a long-dashed line.
- FINAL SURFACE**: Represented by a short-dashed line.
- FAILURE PLANE**: Represented by a line with diagonal hatching.
- BACKSTACK**: Represented by a line with vertical hatching.

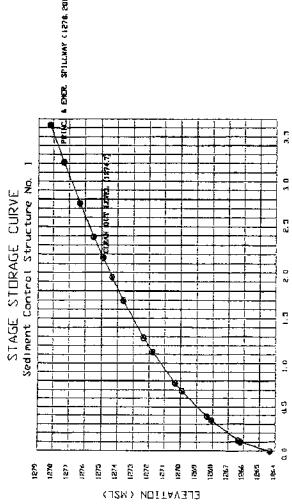
PURPLE CORNER						
No.	Date	Description	By	Job No.	Date	Entered By
1	1-6/3-06	NEW DING	KJ	CIN-002-01	7/26/01	
2	4/2/03	CORRECTIONS	RIP	CIN-102-03		
3						
4						
5						
6						
7						
8						
9						

By: *[Signature]* No. *1-3-5-2*

PURPLE CORNER
LAW OFFICES OF
ROBERT MURKIN, JR.
ATTORNEY AT LAW
1000 BROADWAY
SUITE 1000
DENVER, COLORADO 80203
(303) 296-1111

<p>THE GREAT SEAL OF THE STATE OF WEST VIRGINIA JAMES D. WEAVER, GOVERNOR CHARLES E. DUNCAN, SECRETARY OF STATE</p> <p><i>[Handwritten note: "I am enclosing my copy to you in the hope that you will accept it as a gift. I am enclosing my copy to you in the hope that you will accept it as a gift."]</i></p> <p><i>[Signature: "John Napier, Notary Public, W. Va. commission number 103-34-11"]</i></p>	<p>COAL-MAC, INC. dba PHOENIX COAL-MAC MINING, INC.</p> <p>P. O. Box 436 16220 West Taylor Avenue WHEELING, West Virginia 26037</p> <p>PHOENIX NO. S-1027-01 PERMIT NO. S-1027-01 NPIES No. WV1027-0892</p> <p>FULL, No. 6</p>
---	---

Empire Consulting Services, L.L.C.

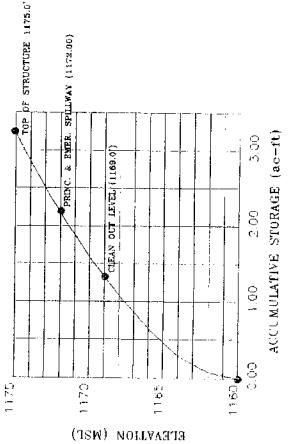


STORAGE VOLUME, CUMULATIVE

Sediment Control Structure No. 1

ELV	WHD	LOCAT	AVG.	INTEN	EXTRN	AVG.	INTEN	EXTRN	AVG.	INTEN	EXTRN
(FT)	(AC)	(FT)	(AC)	(AC)	(AC)	(AC)	(AC)	(AC)	(AC)	(AC)	(AC)
1200.25	N/A	N/A	0.0000	0.0000	1.00	0.0000	0.0000	1.00	0.0000	0.0000	1.00
1200.20	N/A	N/A	0.1044	0.1044	1.00	0.0100	0.0100	1.00	0.0100	0.0100	1.00
1200.15	N/A	N/A	0.1520	0.1520	1.00	0.0150	0.0150	1.00	0.0150	0.0150	1.00
1200.10	N/A	N/A	0.1979	0.1979	1.00	0.0200	0.0200	1.00	0.0200	0.0200	1.00
1200.04	N/A	N/A	0.2355	0.2355	1.00	0.0250	0.0250	1.00	0.0250	0.0250	1.00
1200.00	N/A	N/A	0.2600	0.2600	1.00	0.0300	0.0300	1.00	0.0300	0.0300	1.00
1200.14	N/A	N/A	0.2800	0.2800	1.00	0.0350	0.0350	1.00	0.0350	0.0350	1.00
1200.17	N/A	N/A	0.2916	0.2916	1.00	0.0400	0.0400	1.00	0.0400	0.0400	1.00
1200.24	N/A	N/A	0.3020	0.3020	1.00	0.0450	0.0450	1.00	0.0450	0.0450	1.00
1200.28	N/A	N/A	0.3050	0.3050	1.00	0.0500	0.0500	1.00	0.0500	0.0500	1.00
1200.34	N/A	N/A	0.3077	0.3077	1.00	0.0550	0.0550	1.00	0.0550	0.0550	1.00
1200.40	N/A	N/A	0.3100	0.3100	1.00	0.0600	0.0600	1.00	0.0600	0.0600	1.00
1200.46	N/A	N/A	0.3125	0.3125	1.00	0.0650	0.0650	1.00	0.0650	0.0650	1.00
1200.51	N/A	N/A	0.3145	0.3145	1.00	0.0700	0.0700	1.00	0.0700	0.0700	1.00
1200.56	N/A	N/A	0.3164	0.3164	1.00	0.0750	0.0750	1.00	0.0750	0.0750	1.00
1200.61	N/A	N/A	0.3182	0.3182	1.00	0.0800	0.0800	1.00	0.0800	0.0800	1.00
1200.66	N/A	N/A	0.3200	0.3200	1.00	0.0850	0.0850	1.00	0.0850	0.0850	1.00
1200.71	N/A	N/A	0.3218	0.3218	1.00	0.0900	0.0900	1.00	0.0900	0.0900	1.00
1200.76	N/A	N/A	0.3235	0.3235	1.00	0.0950	0.0950	1.00	0.0950	0.0950	1.00
1200.81	N/A	N/A	0.3251	0.3251	1.00	0.1000	0.1000	1.00	0.1000	0.1000	1.00
1200.86	N/A	N/A	0.3267	0.3267	1.00	0.1050	0.1050	1.00	0.1050	0.1050	1.00
1200.91	N/A	N/A	0.3281	0.3281	1.00	0.1100	0.1100	1.00	0.1100	0.1100	1.00
1200.96	N/A	N/A	0.3295	0.3295	1.00	0.1150	0.1150	1.00	0.1150	0.1150	1.00
1201.01	N/A	N/A	0.3308	0.3308	1.00	0.1200	0.1200	1.00	0.1200	0.1200	1.00
1201.06	N/A	N/A	0.3321	0.3321	1.00	0.1250	0.1250	1.00	0.1250	0.1250	1.00
1201.11	N/A	N/A	0.3333	0.3333	1.00	0.1300	0.1300	1.00	0.1300	0.1300	1.00
1201.16	N/A	N/A	0.3345	0.3345	1.00	0.1350	0.1350	1.00	0.1350	0.1350	1.00
1201.21	N/A	N/A	0.3356	0.3356	1.00	0.1400	0.1400	1.00	0.1400	0.1400	1.00
1201.26	N/A	N/A	0.3367	0.3367	1.00	0.1450	0.1450	1.00	0.1450	0.1450	1.00
1201.31	N/A	N/A	0.3377	0.3377	1.00	0.1500	0.1500	1.00	0.1500	0.1500	1.00
1201.36	N/A	N/A	0.3387	0.3387	1.00	0.1550	0.1550	1.00	0.1550	0.1550	1.00
1201.41	N/A	N/A	0.3396	0.3396	1.00	0.1600	0.1600	1.00	0.1600	0.1600	1.00
1201.46	N/A	N/A	0.3404	0.3404	1.00	0.1650	0.1650	1.00	0.1650	0.1650	1.00
1201.51	N/A	N/A	0.3412	0.3412	1.00	0.1700	0.1700	1.00	0.1700	0.1700	1.00
1201.56	N/A	N/A	0.3419	0.3419	1.00	0.1750	0.1750	1.00	0.1750	0.1750	1.00
1201.61	N/A	N/A	0.3426	0.3426	1.00	0.1800	0.1800	1.00	0.1800	0.1800	1.00
1201.66	N/A	N/A	0.3432	0.3432	1.00	0.1850	0.1850	1.00	0.1850	0.1850	1.00
1201.71	N/A	N/A	0.3438	0.3438	1.00	0.1900	0.1900	1.00	0.1900	0.1900	1.00
1201.76	N/A	N/A	0.3443	0.3443	1.00	0.1950	0.1950	1.00	0.1950	0.1950	1.00
1201.81	N/A	N/A	0.3448	0.3448	1.00	0.2000	0.2000	1.00	0.2000	0.2000	1.00
1201.86	N/A	N/A	0.3452	0.3452	1.00	0.2050	0.2050	1.00	0.2050	0.2050	1.00
1201.91	N/A	N/A	0.3456	0.3456	1.00	0.2100	0.2100	1.00	0.2100	0.2100	1.00
1201.96	N/A	N/A	0.3459	0.3459	1.00	0.2150	0.2150	1.00	0.2150	0.2150	1.00
1202.01	N/A	N/A	0.3462	0.3462	1.00	0.2200	0.2200	1.00	0.2200	0.2200	1.00
1202.06	N/A	N/A	0.3464	0.3464	1.00	0.2250	0.2250	1.00	0.2250	0.2250	1.00
1202.11	N/A	N/A	0.3466	0.3466	1.00	0.2300	0.2300	1.00	0.2300	0.2300	1.00
1202.16	N/A	N/A	0.3468	0.3468	1.00	0.2350	0.2350	1.00	0.2350	0.2350	1.00
1202.21	N/A	N/A	0.3470	0.3470	1.00	0.2400	0.2400	1.00	0.2400	0.2400	1.00
1202.26	N/A	N/A	0.3471	0.3471	1.00	0.2450	0.2450	1.00	0.2450	0.2450	1.00
1202.31	N/A	N/A	0.3472	0.3472	1.00	0.2500	0.2500	1.00	0.2500	0.2500	1.00
1202.36	N/A	N/A	0.3473	0.3473	1.00	0.2550	0.2550	1.00	0.2550	0.2550	1.00
1202.41	N/A	N/A	0.3474	0.3474	1.00	0.2600	0.2600	1.00	0.2600	0.2600	1.00
1202.46	N/A	N/A	0.3475	0.3475	1.00	0.2650	0.2650	1.00	0.2650	0.2650	1.00
1202.51	N/A	N/A	0.3476	0.3476	1.00	0.2700	0.2700	1.00	0.2700	0.2700	1.00
1202.56	N/A	N/A	0.3477	0.3477	1.00	0.2750	0.2750	1.00	0.2750	0.2750	1.00
1202.61	N/A	N/A	0.3478	0.3478	1.00	0.2800	0.2800	1.00	0.2800	0.2800	1.00
1202.66	N/A	N/A	0.3479	0.3479	1.00	0.2850	0.2850	1.00	0.2850	0.2850	1.00
1202.71	N/A	N/A	0.3480	0.3480	1.00	0.2900	0.2900	1.00	0.2900	0.2900	1.00
1202.76	N/A	N/A	0.3481	0.3481	1.00	0.2950	0.2950	1.00	0.2950	0.2950	1.00
1202.81	N/A	N/A	0.3482	0.3482	1.00	0.3000	0.3000	1.00	0.3000	0.3000	1.00
1202.86	N/A	N/A	0.3483	0.3483	1.00	0.3050	0.3050	1.00	0.3050	0.3050	1.00
1202.91	N/A	N/A	0.3484	0.3484	1.00	0.3100	0.3100	1.00	0.3100	0.3100	1.00
1202.96	N/A	N/A	0.3485	0.3485	1.00	0.3150	0.3150	1.00	0.3150	0.3150	1.00
1203.01	N/A	N/A	0.3486	0.3486	1.00	0.3200	0.3200	1.00	0.3200	0.3200	1.00
1203.06	N/A	N/A	0.3487	0.3487	1.00	0.3250	0.3250	1.00	0.3250	0.3250	1.00
1203.11	N/A	N/A	0.3488	0.3488	1.00	0.3300	0.3300	1.00	0.3300	0.3300	1.00
1203.16	N/A	N/A	0.3489	0.3489	1.00	0.3350	0.3350	1.00	0.3350	0.3350	1.00
1203.21	N/A	N/A	0.3490	0.3490	1.00	0.3400	0.3400	1.00	0.3400	0.3400	1.00
1203.26	N/A	N/A	0.3491	0.3491	1.00	0.3450	0.3450	1.00	0.3450	0.3450	1.00
1203.31	N/A	N/A	0.3492	0.3492	1.00	0.3500	0.3500	1.00	0.3500	0.3500	1.00
1203.36	N/A	N/A	0.3493	0.3493	1.00	0.3550	0.3550	1.00	0.3550	0.3550	1.00
1203.41	N/A	N/A	0.3494	0.3494	1.00	0.3600	0.3600	1.00	0.3600	0.3600	1.00
1203.46	N/A	N/A	0.3495	0.3495	1.00	0.3650	0.3650	1.00	0.3650	0.3650	1.00
1203.51	N/A	N/A	0.3496	0.3496	1.00	0.3700	0.3700	1.00	0.3700	0.3700	1.00
1203.56	N/A	N/A	0.3497	0.3497	1.00	0.3750	0.3750	1.00	0.3750	0.3750	1.00
1203.61	N/A	N/A	0.3498	0.3498	1.00	0.3800	0.3800	1.00	0.3800	0.3800	1.00
1203.66	N/A	N/A	0.3499	0.3499	1.00	0.3850	0.3850	1.00	0.3850	0.3850	1.00
1203.71	N/A	N/A	0.3500	0.3500	1.00	0.3900	0.3900	1.00	0.3900	0.3900	1.00
1203.76	N/A	N/A	0.3501	0.3501	1.00	0.3950	0.3950	1.00	0.3950	0.3950	1.00
1203.81	N/A	N/A	0.3502	0.3502	1.00	0.4000	0.4000	1.00	0.4000	0.4000	1.00
1203.86	N/A	N/A	0.3503	0.3503	1.00	0.4050	0.4050	1.00	0.4050	0.4050	1.00
1203.91	N/A	N/A	0.3504	0.3504	1.00	0.4100	0.4100	1.00	0.4100	0.4100	1.00
1203.96	N/A	N/A	0.3505	0.3505	1.00	0.4150	0.4150	1.00	0.4150	0.4150	1.00
1204.01	N/A	N/A	0.3506	0.3506	1.00	0.4200	0.4200	1.00	0.4200	0.4200	1.00
1204.06	N/A	N/A	0.3507	0.3507	1.00	0.4250	0.4250	1.00	0.4250	0.4250	1.00
1204.11	N/A	N/A	0.3508	0.3508	1.00	0.4300	0.4300	1.00	0.4300	0.4300	1.00
1204.16	N/A	N/A	0.3509	0.3509	1.00	0.4350	0.4350	1.00	0.4350	0.4350	1.00
1204.21	N/A	N/A	0.3510	0.3510	1.00	0.440					

STAGE STORAGE CURVE

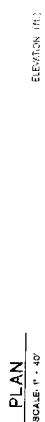
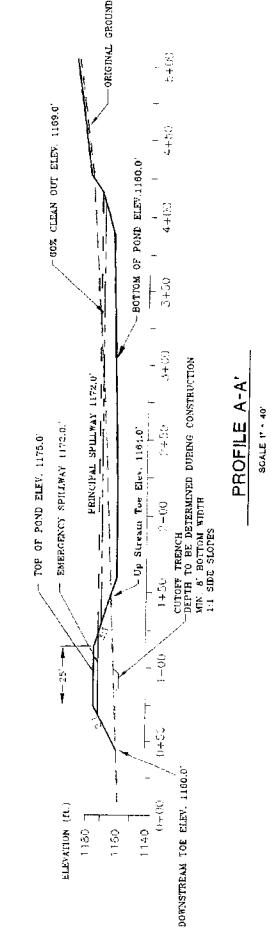


STORAGE VOLUME COMPUTATIONS

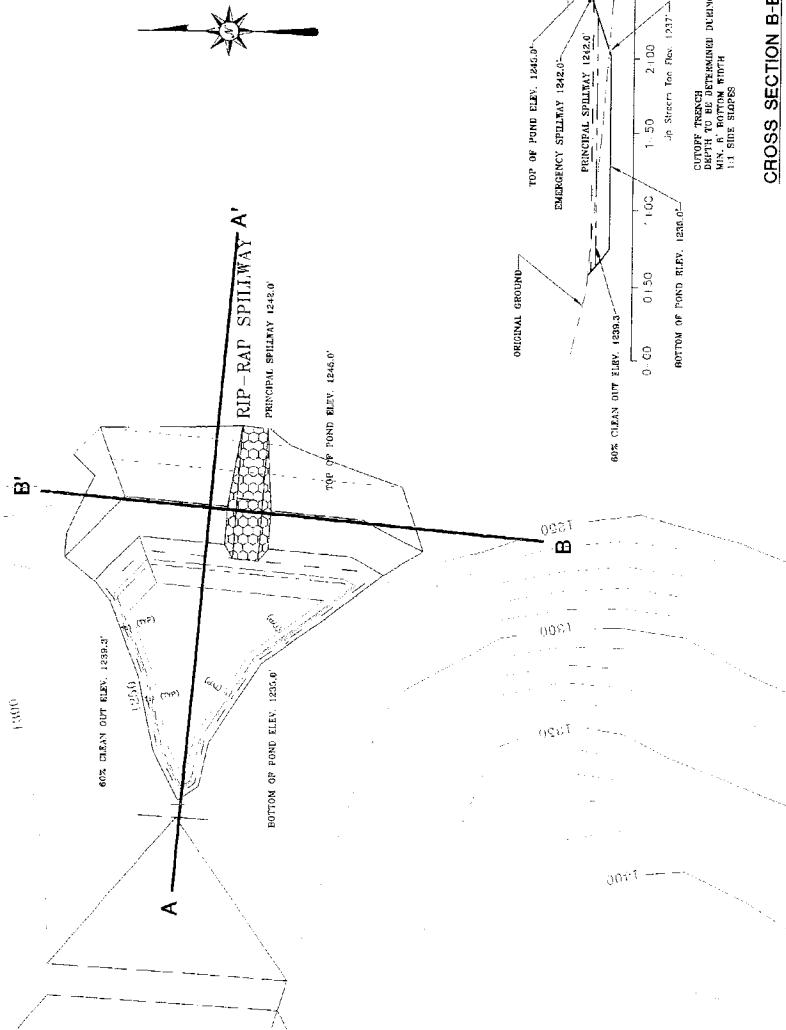
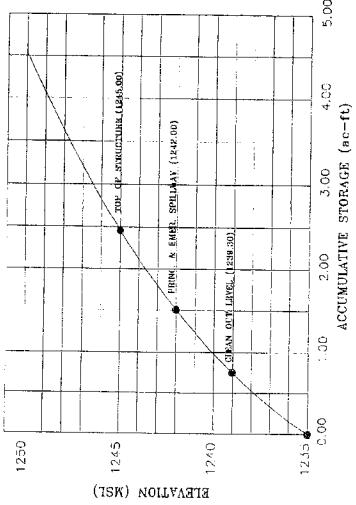
FEY	WIDTH (ft.)	LENGTH (ft.)	ACC. AREA (sq.)	INTEGRAL (cu. ft.)	STORAGE (cu. ft.)	ACC. STORAGE (cu. ft.)
1165.00	N/A	0.0274	0.0422	2,68	0.0543	0.0543
1162.00	N/A	0.0559	0.1341	2,50	0.2047	0.2047
1159.00	N/A	0.1512	0.3542	2,50	0.4419	0.4419
1156.00	N/A	0.1933	0.5155	2,50	0.66	0.66
1153.00	N/A	0.2356	0.6767	2,50	0.8831	0.8831
1150.00	N/A	0.2778	0.7947	2,68	1.1003	1.1003
1147.00	N/A	0.3117	0.7983	2,68	1.2745	1.2745

SEDIMENT STORAGE REQUIRED 1.75 AC-FT.

SEDIMENT STORAGE PROPOSED 2.17 AC-FT.



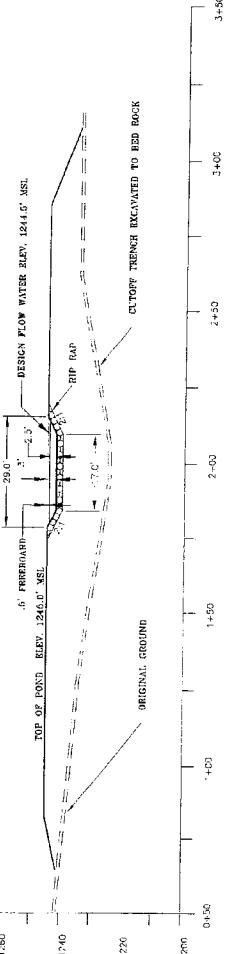
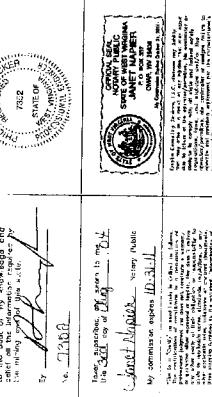
STAGE STORAGE CURVE



STORAGE VOLUME COMPUTATIONS

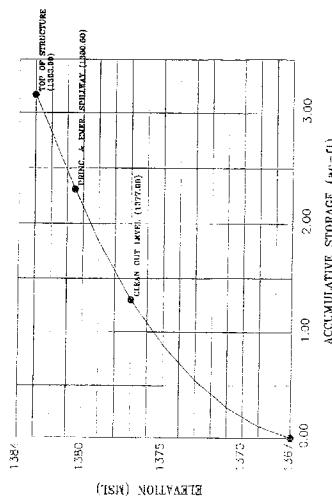
ELEY	WIDTH (mm)	LENGHTH (mm)	AREAS (cm^2)	AVG. AREA (cm^2)	INTERVAL (m)		STORAGE (m^3)	ACC. STORAGE (m^3)
					0-12.5	12.5-25		
1.0	12.5-25.00	Y/A	C 0.127	0.54*	1.05	0.541	0.1541	0.00
1.0	25.00-37.50	Y/A	C 0.154	0.78*	1.05	0.766	0.3093	2.00
1.0	37.50-50.00	Y/A	C 0.183	0.798	1.05	0.766	0.2281	3.00
1.0	50.00-62.50	Y/A	C 0.213	0.519	1.05	0.1975	0.2281	3.00
1.0	62.50-75.00	Y/A	C 0.243	0.324	1.05	0.2578	0.4544	4.00
1.0	75.00-87.50	Y/A	C 0.273	0.242	1.05	0.2578	0.5775	5.00
1.0	87.50-100.00	Y/A	C 0.303	0.163	1.05	0.2578	0.6906	6.00
1.0	100.00-112.50	Y/A	C 0.333	0.103	1.05	0.2578	0.7935	7.00
1.0	112.50-125.00	Y/A	C 0.363	0.063	1.05	0.2578	0.8855	8.00
1.0	125.00-137.50	Y/A	C 0.393	0.043	1.05	0.2578	0.9675	9.00
1.0	137.50-150.00	Y/A	C 0.423	0.023	1.05	0.2578	1.0395	10.00
1.0	150.00-162.50	Y/A	C 0.453	0.013	1.05	0.2578	1.1015	11.00
1.0	162.50-175.00	Y/A	C 0.483	0.003	1.05	0.2578	1.1635	12.00
1.0	175.00-187.50	Y/A	C 0.513	-	1.05	0.2578	1.2255	13.00
1.0	187.50-200.00	Y/A	C 0.543	-	1.05	0.2578	1.2875	14.00

SEDIMENT STORAGE REQUIRED	1.35
SEDIMENT STORAGE PROPOSED	1.51



14 of 16

STAGE STORAGE CURVE



STORAGE VOLUME COMPUTATIONS

SL.	DEPTH (ft)	LEVEE (ft)	ACFT (cu ft)	ACFT (cu m)	STORAGE VOLUME (cu m)
1	0.00	N/A	0.000	0.000	0.000
2	0.10	N/A	0.0798	0.0004	2.00
3	0.20	N/A	0.1596	0.0009	4.00
4	0.30	N/A	0.2394	0.0014	6.00
5	0.40	N/A	0.3192	0.0019	8.00
6	0.50	N/A	0.3990	0.0024	10.00
7	0.60	N/A	0.4788	0.0029	12.00
8	0.70	N/A	0.5586	0.0034	14.00
9	0.80	N/A	0.6384	0.0039	16.00
10	0.90	N/A	0.7182	0.0044	18.00
11	1.00	N/A	0.7980	0.0049	20.00
12	1.10	N/A	0.8778	0.0054	22.00
13	1.20	N/A	0.9576	0.0059	24.00
14	1.30	N/A	1.0374	0.0064	26.00
15	1.40	N/A	1.1172	0.0069	28.00
16	1.50	N/A	1.1970	0.0074	30.00
17	1.60	N/A	1.2768	0.0079	32.00
18	1.70	N/A	1.3566	0.0084	34.00
19	1.80	N/A	1.4364	0.0089	36.00
20	1.90	N/A	1.5162	0.0094	38.00
21	2.00	N/A	1.5960	0.0099	40.00
22	2.10	N/A	1.6758	0.0104	42.00
23	2.20	N/A	1.7556	0.0109	44.00
24	2.30	N/A	1.8354	0.0114	46.00
25	2.40	N/A	1.9152	0.0119	48.00
26	2.50	N/A	1.9950	0.0124	50.00
27	2.60	N/A	2.0748	0.0129	52.00
28	2.70	N/A	2.1546	0.0134	54.00
29	2.80	N/A	2.2344	0.0139	56.00
30	2.90	N/A	2.3142	0.0144	58.00
31	3.00	N/A	2.3940	0.0149	60.00

SEDIMENT REQUIRED 2.00 AC-PT

SEDIMENT PROPOSED 2.31 AC-PT

SL.	Depth (ft)	Bottom (ft)	Top (ft)	Area (sq ft)	Volume (cu ft)	Volume (cu m)
1	0.0	1.00	1.00	1000	1000	0.000
2	0.1	1.01	1.01	1000	100	0.000
3	0.2	1.02	1.02	1000	200	0.000
4	0.3	1.03	1.03	1000	300	0.000
5	0.4	1.04	1.04	1000	400	0.000
6	0.5	1.05	1.05	1000	500	0.000
7	0.6	1.06	1.06	1000	600	0.000
8	0.7	1.07	1.07	1000	700	0.000
9	0.8	1.08	1.08	1000	800	0.000
10	0.9	1.09	1.09	1000	900	0.000
11	1.0	1.10	1.10	1000	1000	0.000



COAL-MAC, INC.
d/b/a PHOENIX COAL-MAC MINING, INC.

PHOENIX NO. 5 SURFACE MINE
PERMIT NO. S-5027-01
NEEDS, AZ 85355
POND NO. 4

Empire Consulting Services, L.L.C.



TOP OF POND ELEV. 1387.0'

TOP OF POND ELEV. 1387.0'

TOP - RAP SPILLWAY
TOP OR SPILLWAY ELEV. 1387.0'

INLET SPILLWAY 1387.0'

EMERGENCY SPILLWAY 1387.0'

TOP OF POND ELEV. 1387.0'

ORIGINAL GROUND

PLAN VIEW

SCALE 1:400

A-A'

B-B'

C-C'

D-D'

E-E'

F-F'

G-G'

H-H'

I-I'

J-J'

K-K'

L-L'

M-M'

N-N'

O-O'

P-P'

Q-Q'

R-R'

S-S'

T-T'

U-U'

V-V'

W-W'

X-X'

Y-Y'

Z-Z'

AA'

BB'

CC'

DD'

EE'

FF'

GG'

HH'

II'

JJ'

KK'

LL'

MM'

NN'

OO'

PP'

QQ'

RR'

SS'

TT'

UU'

VV'

WW'

XX'

YY'

ZZ'

AA'

BB'

CC'

DD'

EE'

FF'

GG'

HH'

II'

JJ'

KK'

LL'

MM'

NN'

OO'

PP'

QQ'

RR'

SS'

TT'

UU'

VV'

WW'

XX'

YY'

ZZ'

AA'

BB'

CC'

DD'

EE'

FF'

GG'

HH'

II'

JJ'

KK'

LL'

MM'

NN'

OO'

PP'

QQ'

RR'

SS'

TT'

UU'

VV'

WW'

XX'

YY'

ZZ'

AA'

BB'

CC'

DD'

EE'

FF'

GG'

HH'

II'

JJ'

KK'

LL'

MM'

NN'

OO'

PP'

QQ'

RR'

SS'

TT'

UU'

VV'

WW'

XX'

YY'

ZZ'

AA'

BB'

CC'

DD'

EE'

FF'

GG'

HH'

II'

JJ'

KK'

LL'

MM'

NN'

OO'

PP'

QQ'

RR'

SS'

TT'

UU'

VV'

WW'

XX'

YY'

ZZ'

AA'

BB'

CC'

DD'

EE'

FF'

GG'

HH'

II'

JJ'

KK'

LL'

MM'

NN'

OO'

PP'

QQ'

RR'

SS'

TT'

UU'

VV'

WW'

XX'

YY'

ZZ'

AA'

BB'

CC'

DD'

EE'

FF'

GG'

HH'

II'

JJ'

KK'

LL'

MM'

NN'

OO'

PP'

QQ'

RR'

SS'

TT'

UU'

VV'

WW'

XX'

YY'

ZZ'

AA'

BB'

CC'

DD'

EE'

FF'

GG'

HH'

II'

JJ'

KK'

LL'

MM'

NN'

OO'

PP'

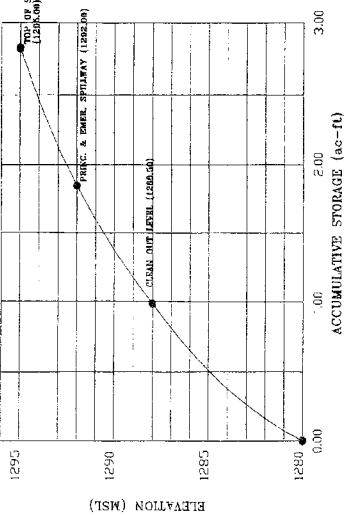
QQ'

RR'

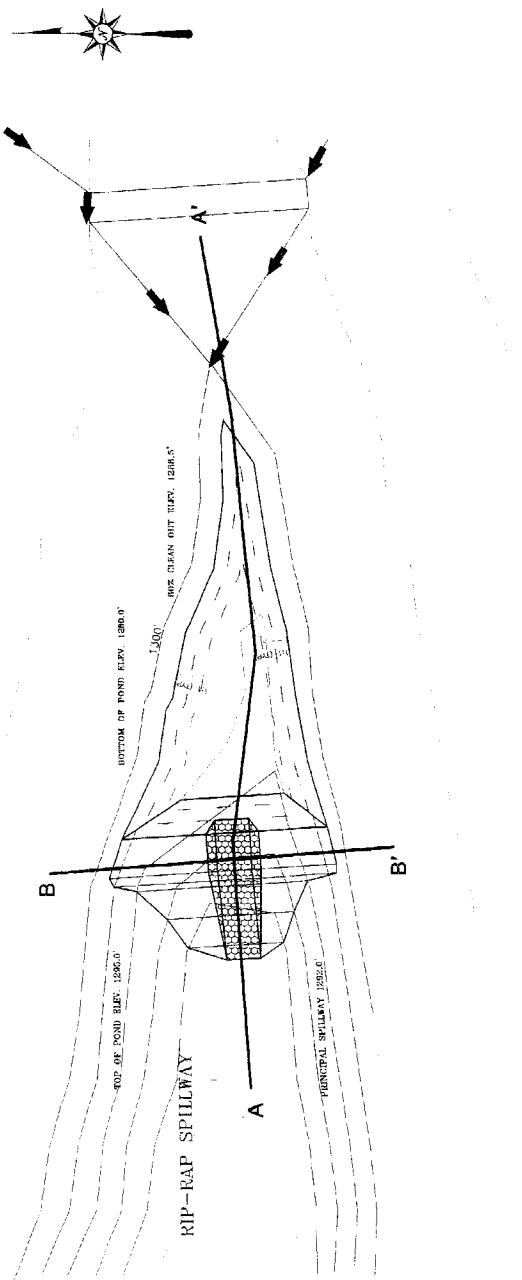
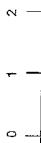
SS'

TT'

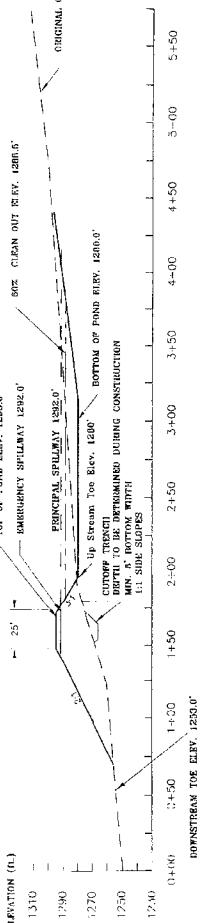
STAGE STORAGE CURVE



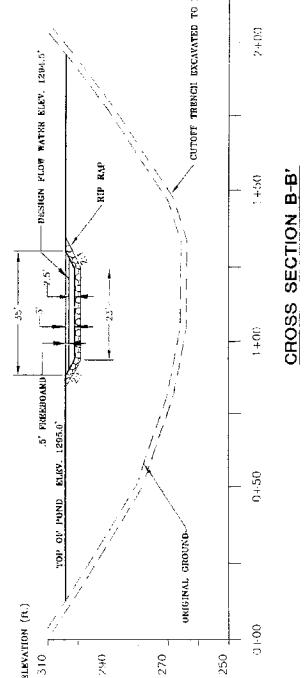
SEDIMENT REQUIRED 1.33 AC-FT
SEDIMENT PROPOSED 1.84 AC-FT



PLAN VIEW



PROFILE VIEW A-A'



CROSS SECTION B-B'