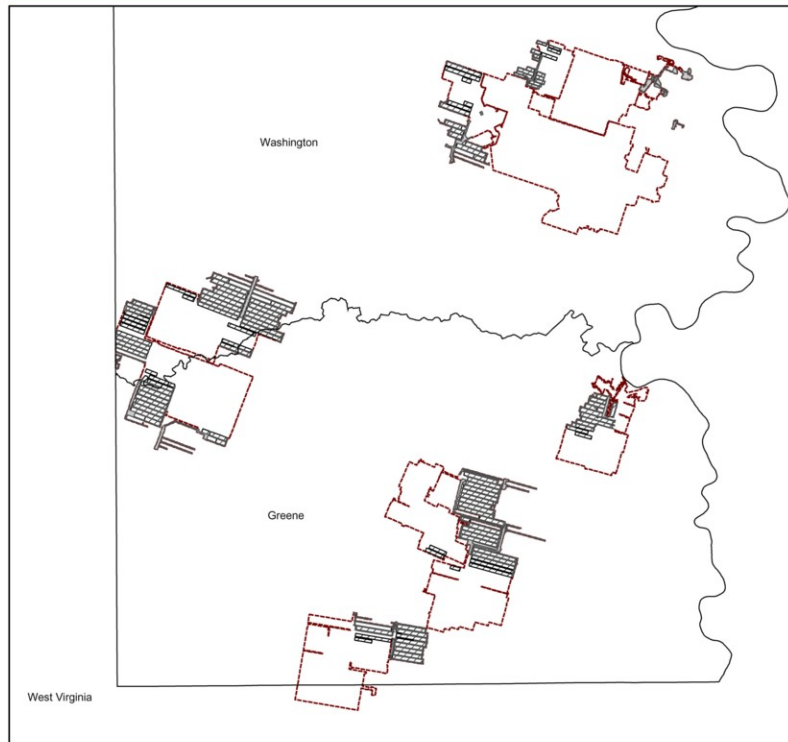


Longwall Mining Overview

Section I

Plate 1



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

Prepared For:
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Kathleen A. McGinty, Secretary

Prepared By:
California University
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R. S. Ulevich

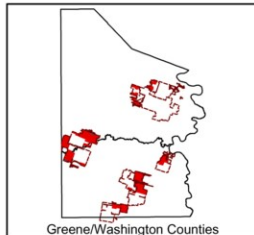


Miles
0 2.5 5 10

Kilometers
0 5 10 20

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

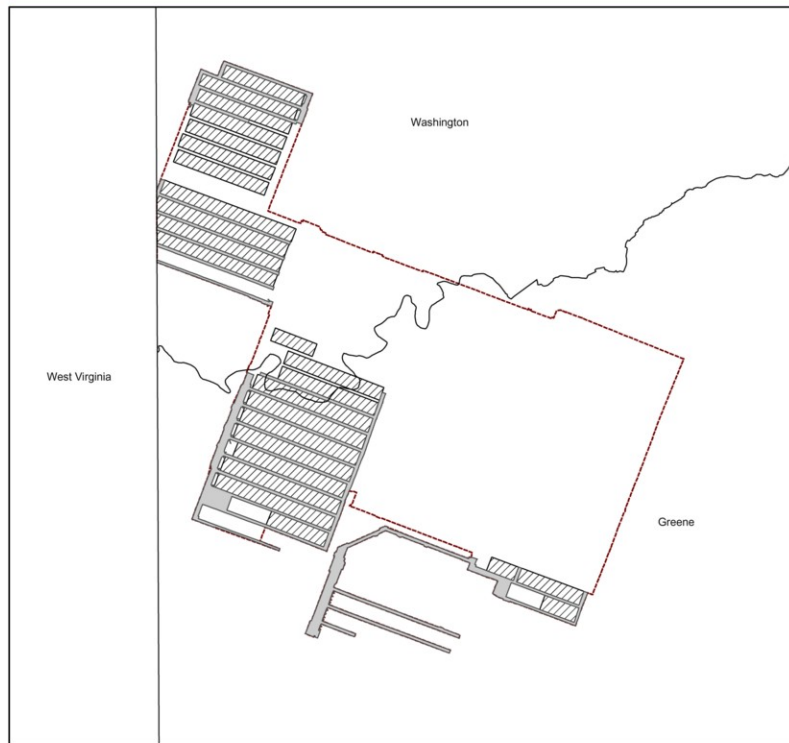
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Bailey: Mining during Study Period

Section I

Plate 2



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

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California University
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R. S. Ulevich

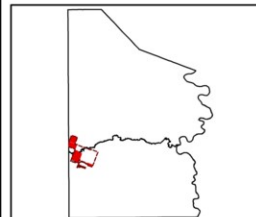


Miles
0 0.5 1 2

Kilometers
0 1 2 4

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

August 2004

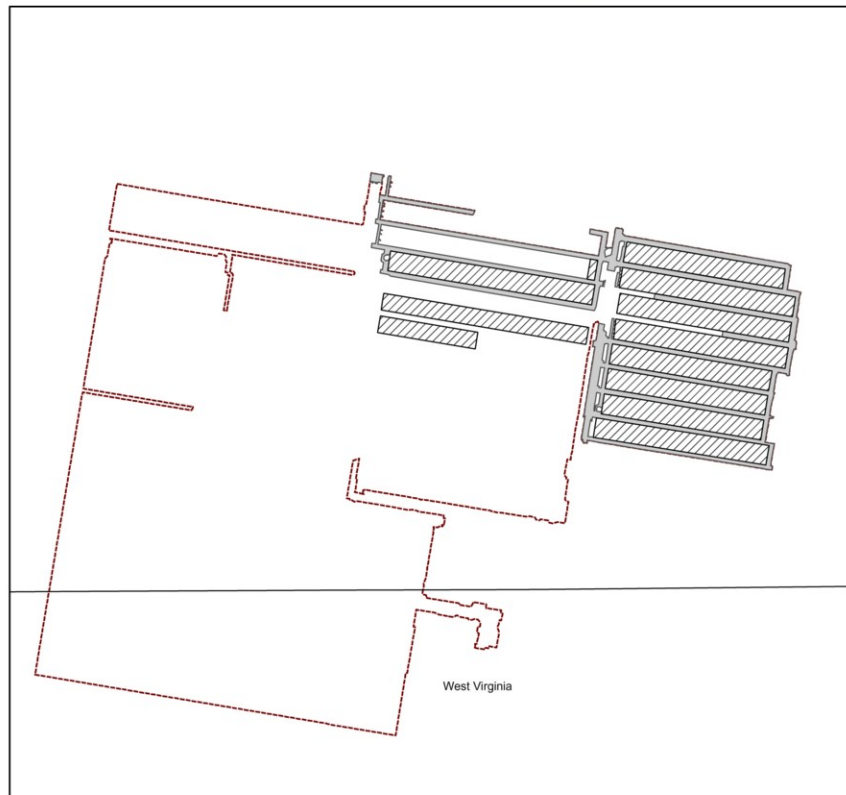


Greene/Washington Counties

Blacksville2: Mining during Study Period

Section I

Plate 3



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

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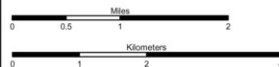


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R. S. Ulewicz



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

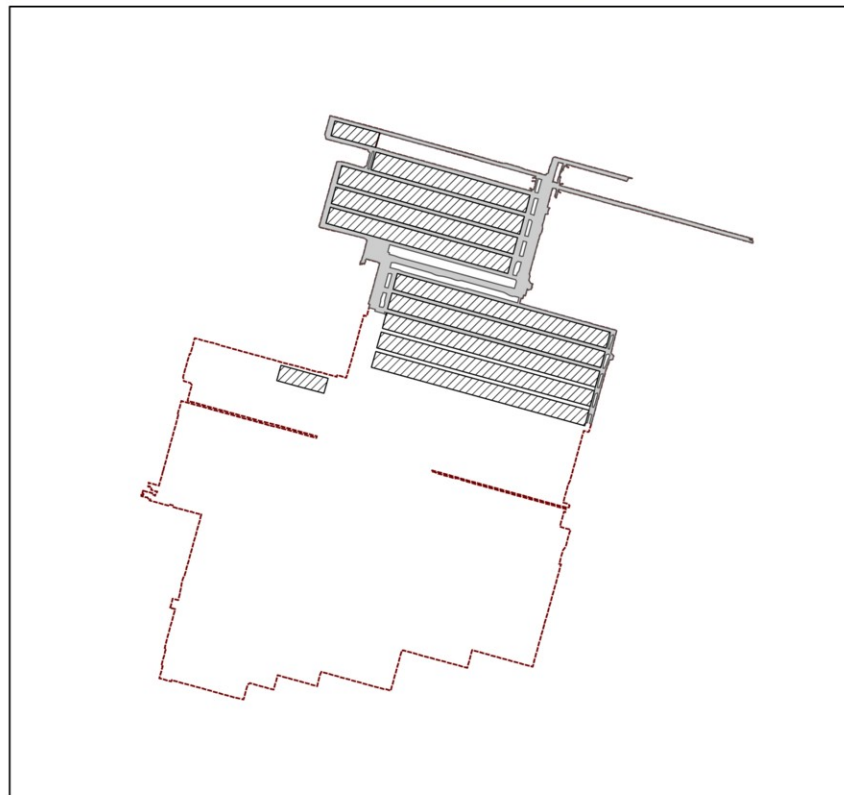
August 2004



Cumberland: Mining during Study Period

Section I

Plate 4



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

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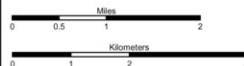


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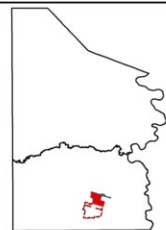


B. L. Franek
R. S. Ulevich



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

August 2004



Greene/Washington Counties

Dilworth: Mining during Study Period

Section I

Plate 5



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

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R. S. Ulevich



Miles
0 0.25 0.5 1

Kilometers
0 0.5 1 2

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

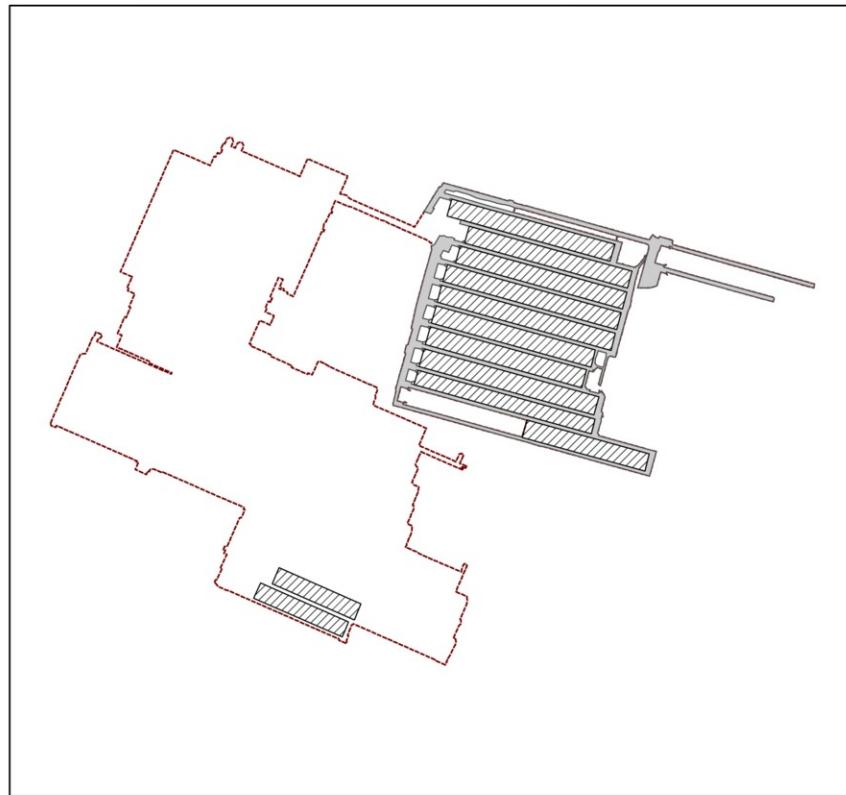
August 2004



Emerald: Mining during Study Period

Section I

Plate 6



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

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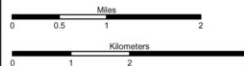


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B. L. Franek
R. S. Ulevich



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

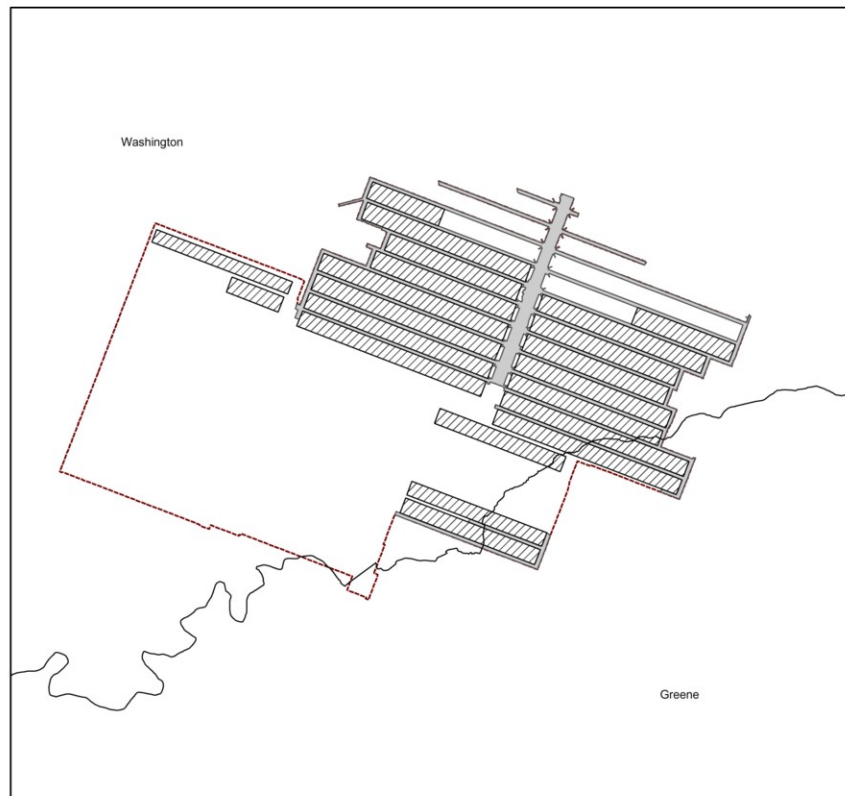
August 2004



Enlow Fork: Mining during Study Period

Section I

Plate 7



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

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R. S. Ulevich

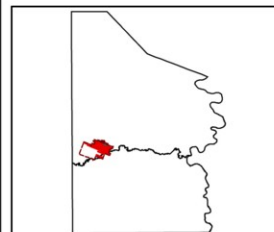


Miles
0 0.5 1 2

Kilometers
0 1 2 4

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

August 2004



Greene/Washington Counties

High Quality: Mining during Study Period

Section I

Plate 8



Legend



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R. S. Ulevich

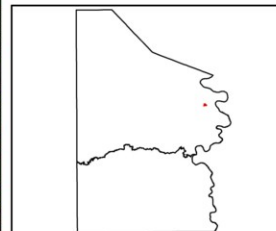


Miles
0 0.125 0.25 0.5

Kilometers
0 0.25 0.5 1

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection
USGS Monongahela, Pennsylvania
7.5 minute Quadrangle

August 2004

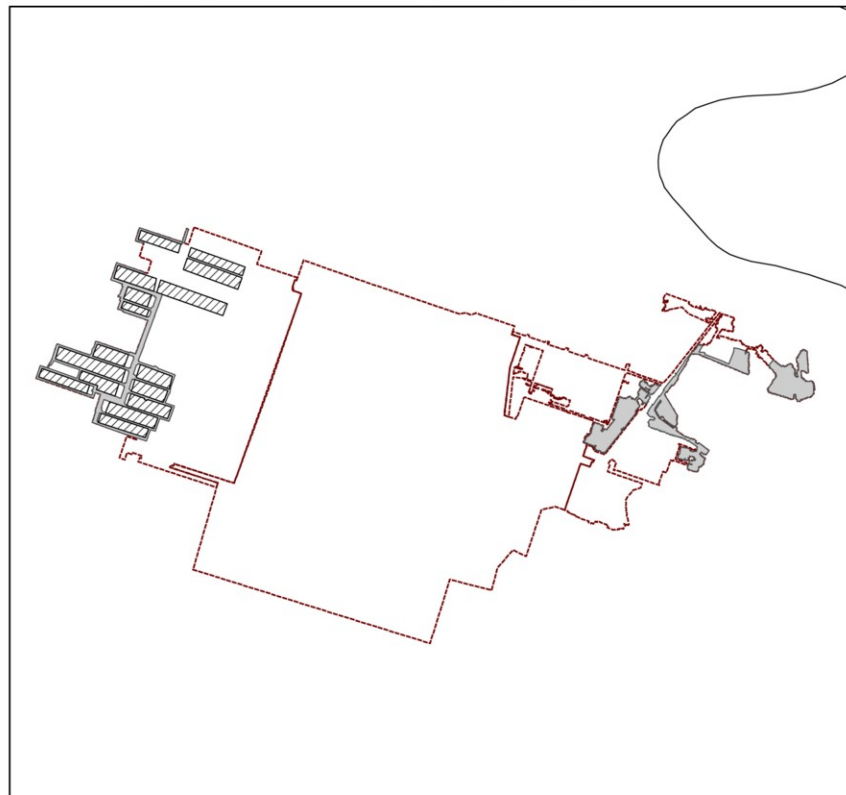


Greene/Washington Counties

Maple Creek: Mining during Study Period

Section I

Plate 9



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

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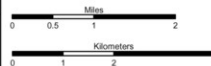


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R. S. Ulevich



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

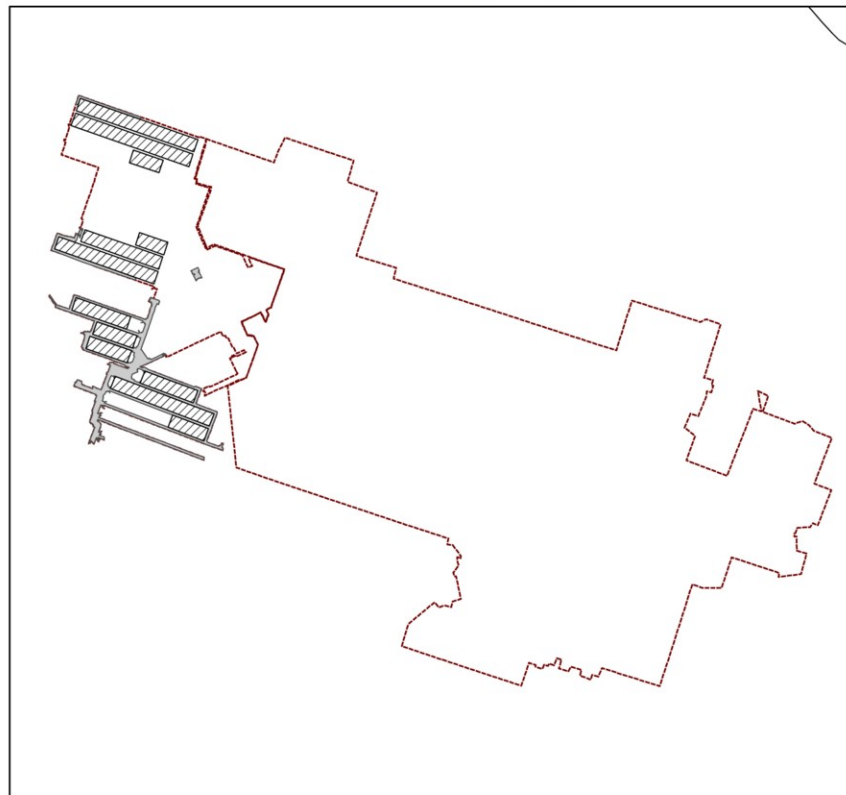
August 2004



Mine 84: Mining during Study Period

Section I

Plate 10



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

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R. S. Ulevich

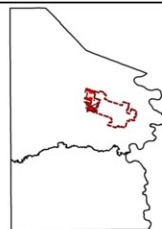


Miles
0 0.5 1 2

Kilometers
0 1 2 4

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

August 2004



Greene/Washington Counties

Shoemaker: Mining during Study Period

Section I

Plate 11



Legend

- Longwall Panels
- Room-and-Pillar
- Mining Extent

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R. S. Ulevich



Miles
0 0.125 0.25 0.5

Kilometers
0 0.125 0.25 0.5

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

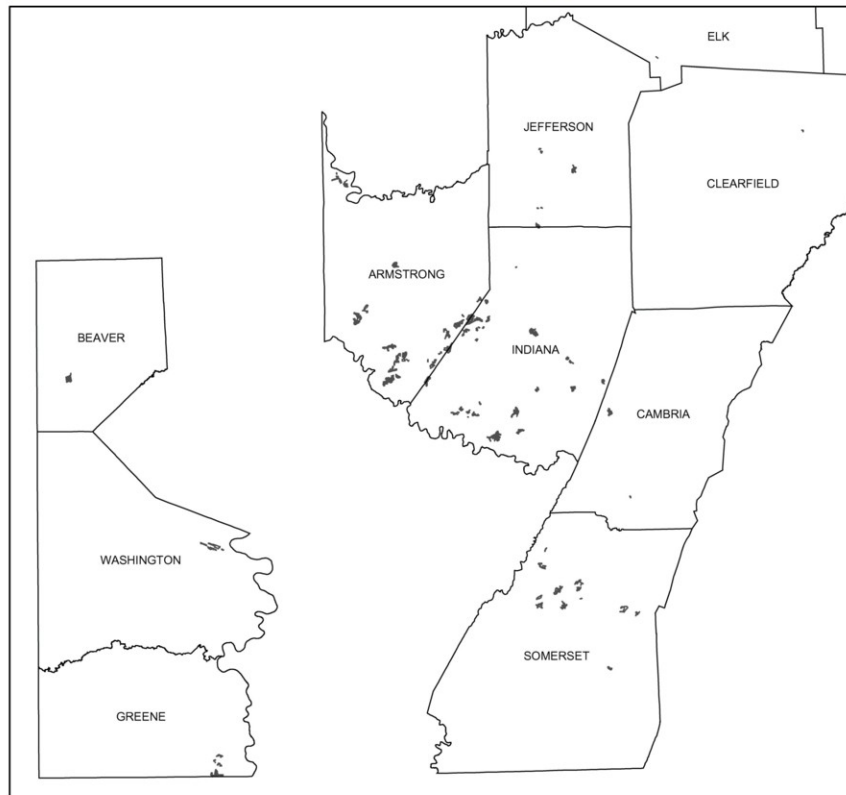
August 2004



Room and Pillar/Retreat Mining: Overview

Section I

Plate 12



Legend

-  Room-and-Pillar
-  Retreat

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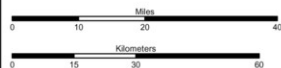
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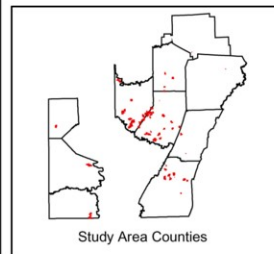
B. L. Franek
R. S. Ulevich

N
2



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

August 2004



Armstrong County: Room-and-Pillar/Retreat Mining

Section I

Plate 13



Legend



Room-and-Pillar



Retreat

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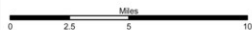
Edward G. Rendell, Governor
Kathleen A. McGinty, Secretary

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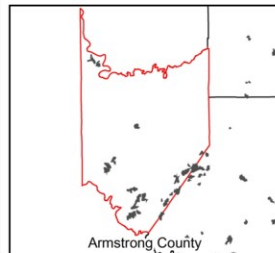
B. L. Franek
R. S. Ulevich

N
2



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

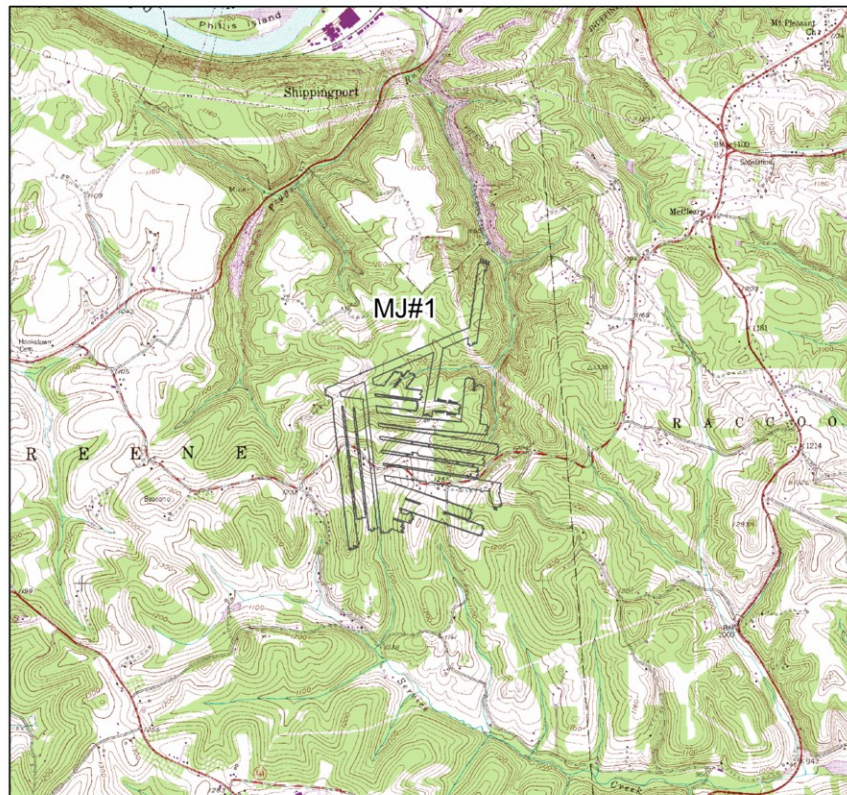
August 2004



Beaver County: Room-and-Pillar Mining

Section I

Plate 14



Legend



Room-and-Pillar

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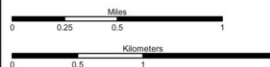
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B. L. Frank
R. S. Ulevich

N
2



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection
USGS Hookstown, Pennsylvania
7.5 minute Quadrangle

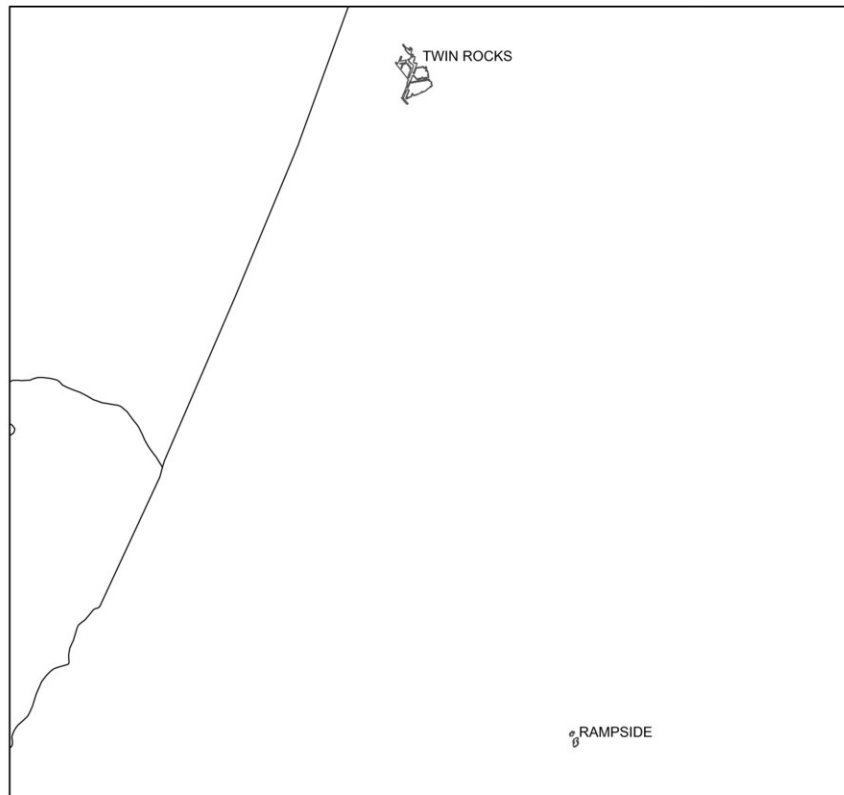
August 2004



Cambria County: Room-and-Pillar Mining

Section I

Plate 15



Legend



Room-and-Pillar

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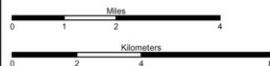
Edward G. Rendell, Governor
Kathleen A. McGinty, Secretary

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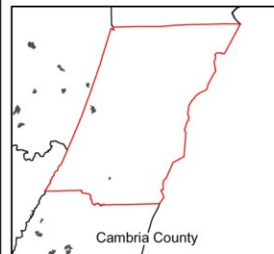
B. L. Franek
R. S. Ulevich

N
2



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

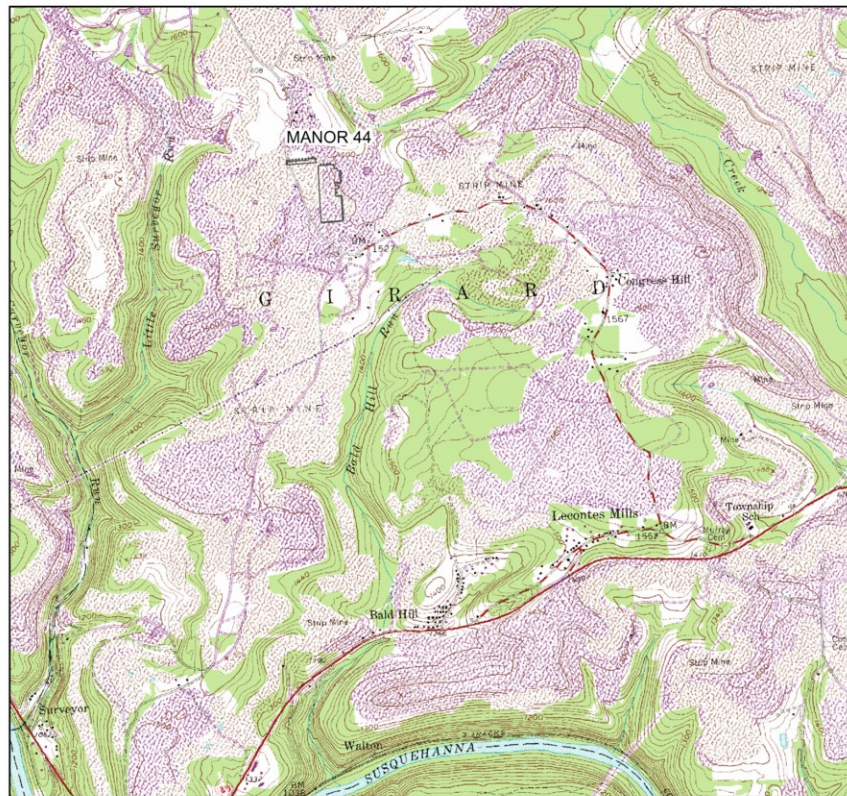
August 2004



Clearfield County: Room-and-Pillar Mining

Section I

Plate 16



Legend



Room-and-Pillar

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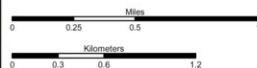
Edward G. Rendell, Governor
Kathleen A. McGinty, Secretary

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R. S. Ulevich

N
2



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection
USGS Leontes Mills, Pennsylvania
7.5 minute Quadrangle

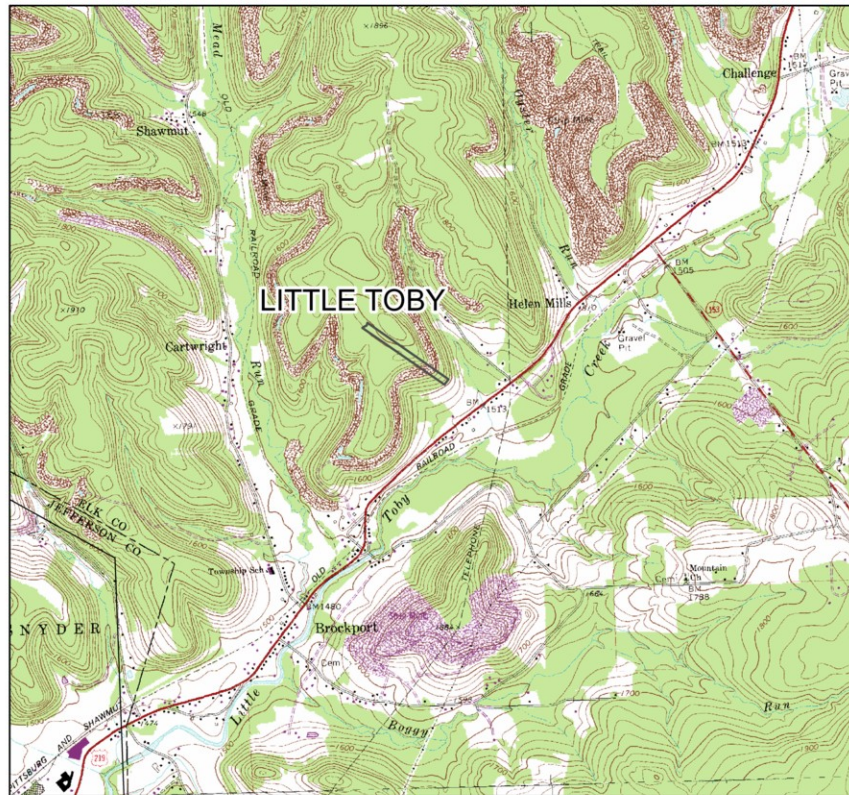
August 2004



Elk County: Room-and-Pillar Mining

Section I

Plate 17



Legend



Room-and-Pillar

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R. S. Ulevich

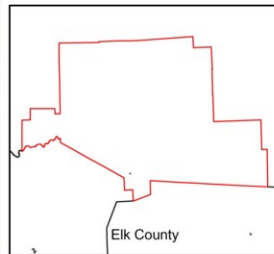
N
2

0 0.25 0.5 1
Miles

0 0.25 0.5 1
Kilometers

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection
USGS Brandy Camp, Pennsylvania
7.5 minute Quadrangle

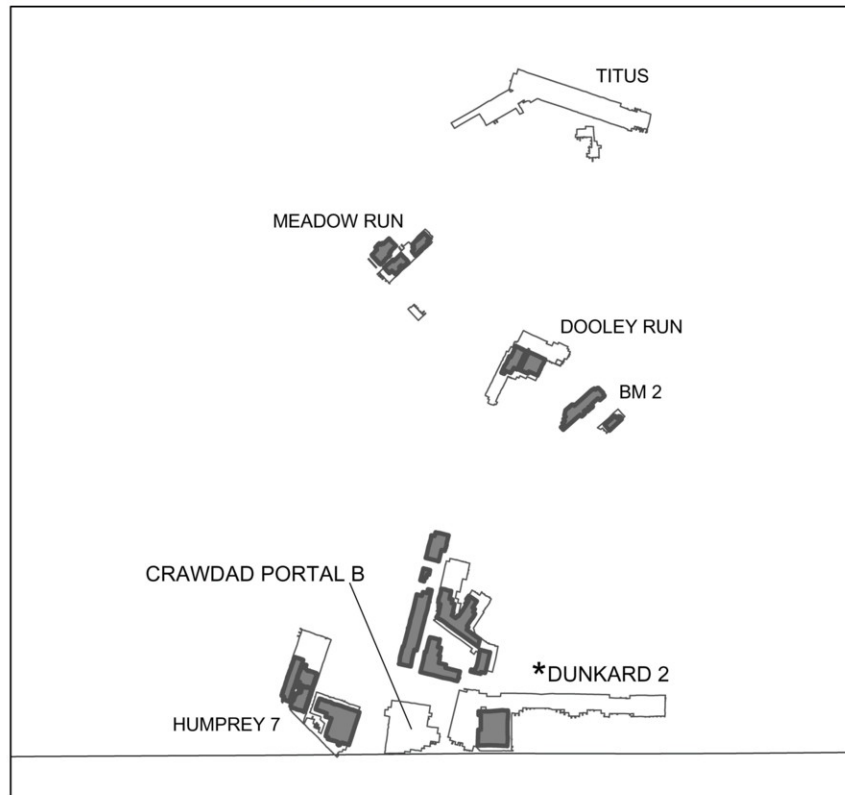
August 2004



Greene County: Room-and-Pillar/Retreat Mining

Section I

Plate 18



Legend



Room-and-Pillar



Retreat

* Designates a "Full Retreat" Mine

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B. L. Franek
R. S. Ulevich

N
2

Miles
0 0.25 0.5 1

Kilometers
0 0.5 1 2

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection
* Designates a "Full Retreat" Mine

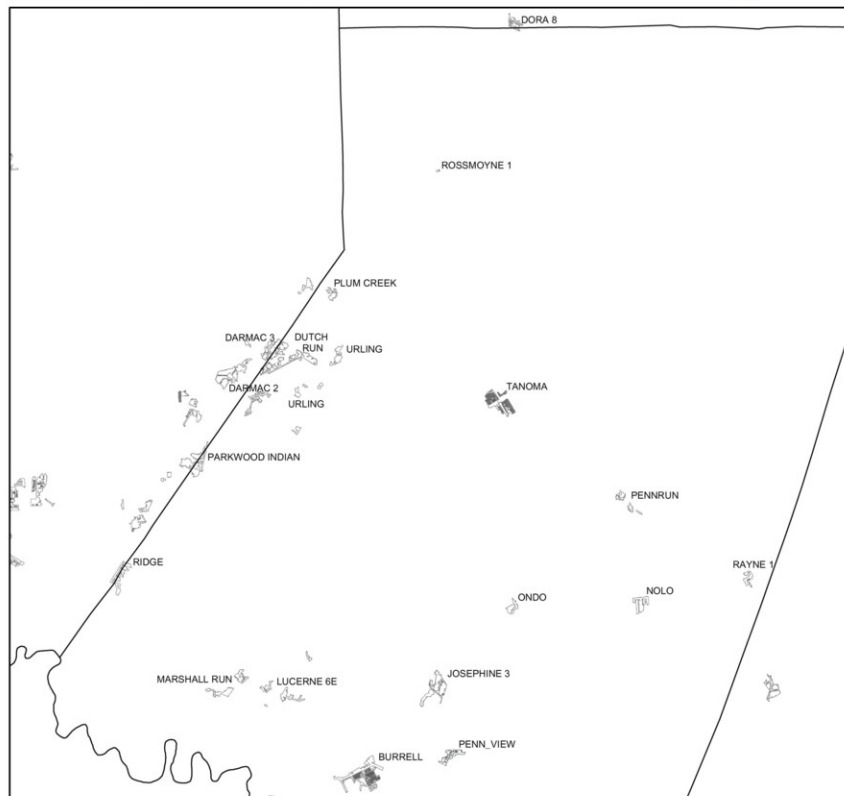
August 2004



Indiana County: Room-and-Pillar/Retreat Mining

Section I

Plate 19



Legend



Room-and-Pillar



Retreat

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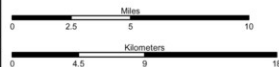
Edward G. Rendell, Governor
Kathleen A. McGinty, Secretary

Prepared By:
California University
of Pennsylvania



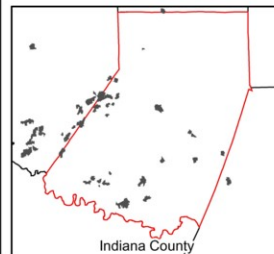
B. L. Franek
R. S. Ulevich

N
2



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

August 2004



Jefferson County: Room-and-Pillar Mining

Section I

Plate 20

RAMSEYTOWN

SANDY LANDS

DORA 6

DORA 8

Legend



Room-and-Pillar

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R. S. Ulevich

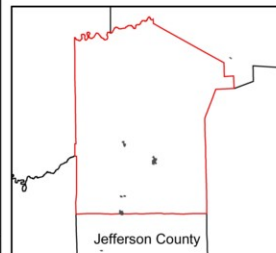
N
2

Miles
0 0.5 1 2

Kilometers
0 1 2 4

Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

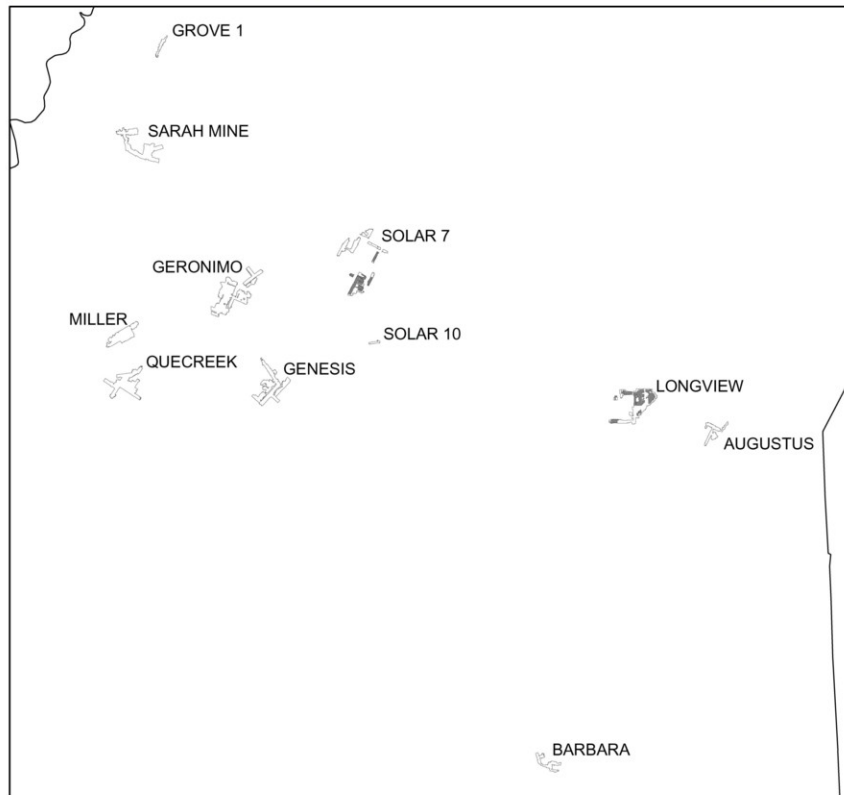
August 2004



Somerset County: Room-and-Pillar/Retreat Mining

Section I

Plate 21



Legend



Room-and-Pillar



Retreat

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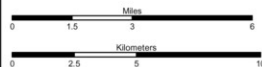
Edward G. Rendell, Governor
Kathleen A. McGinty, Secretary

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California University
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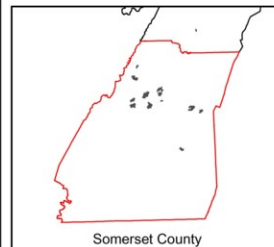
B. L. Franek
R. S. Ulevich

N
2



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection

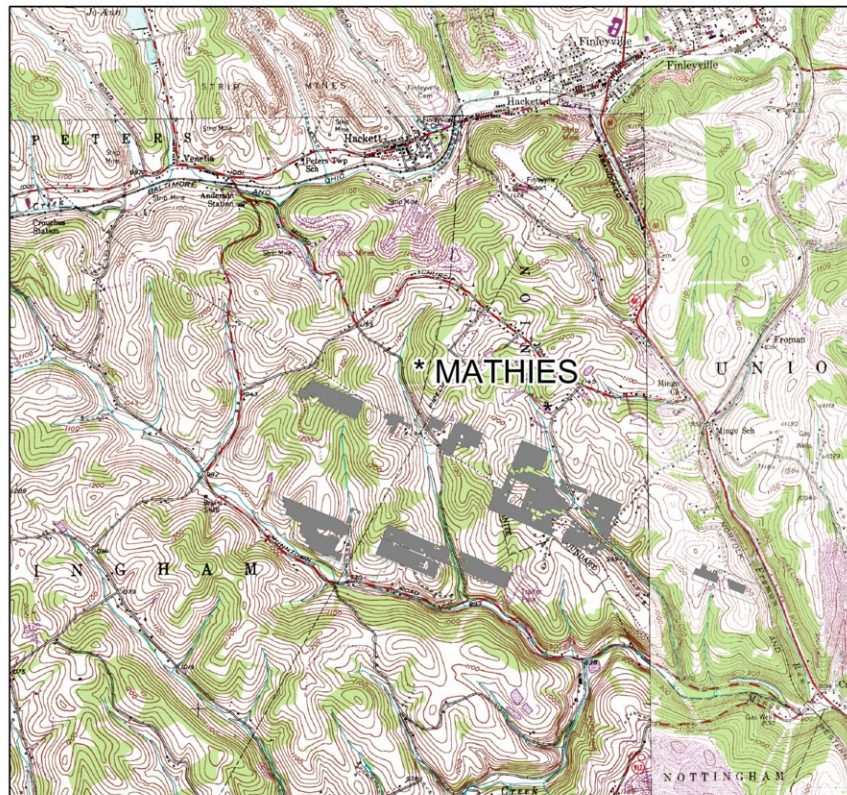
August 2004



Washington County: Room-and-Pillar/Retreat Mining

Section I

Plate 22



Legend

- Room-and-Pillar
- Retreat

* Designates a "Full Retreat" Mine

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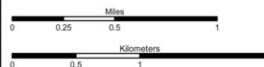
Edward G. Rendell, Governor
Kathleen A. McGinty, Secretary

Prepared By:
California University
of Pennsylvania



B. L. Franek
R. S. Ulevich

N
2



Data adapted from:
Pennsylvania Spatial Data Access
Pennsylvania Department of Environmental Protection
USGS Bridgeville, Glassport, Hackett, and
Monongahela, Pennsylvania
7.5 minute Quadrangles
* Designates a "Full Retreat" Mine
August 2004



<i>Longwall Mine</i>	<i>Reported Land Damages</i>	<i>Reported Structure Damages</i>	<i>Reported Water Losses</i>	<i>Reported Stream Impacts</i>	<i>Other Reported Impacts</i>	<i>Total Reported Damages</i>	<i>Claims Filed</i>	<i>Orders Per Mine</i>	<i>Room & Pillar Acreage</i>	<i>Long Wall Panel Acreage</i>	<i>Retreat Mining Acreage</i>	<i>Total Mining Acreage</i>	<i>Number of Wetlands</i>	<i>Wetlands Identified by NWI</i>	<i>Wetlands Identified by Mine Permit/Map</i>	<i>Total Wetland Acreage</i>	<i>Number of Wetlands Affected</i>	<i>Original Permit Date Issuance</i>	<i>Miles of Roads Undermined</i>	<i>Miles of Township Roads Undermined</i>	<i>Miles of State Roads Undermined</i>	<i>Miles of Streams Undermined</i>	<i>Miles of Pipeline Undermined</i>	<i>Miles of Electric Undermined</i>
BAILEY DEEP MINE	4	41	36	9	1	91	14	2	1527.44	4322.14	0	5849.58	5	5	3	3.24	0	8/28/1985	25.89	16.61	9.28	20.18	10.83	0
BLACKSVILLE 2 MINE	3	38	37	1	0	79	13	2	779.37	2019.91	0	2799.28	10	10	7	3.03	0	2/27/1986	13.4	10.57	2.83	10.12	6.75	1.81
CUMBERLAND MINE	4	16	30	3	0	54	9	3	984.96	2327.65	0	3312.61	6	5	3	4.52	1	8/20/1986	10.39	8.53	1.86	10.14	12.53	0.645
DILWORTH DEEP MINE	2	18	27	1	1	49	18	10	520.88	1410.47	0	1931.35	6	6	0	6.31	0	8/13/1986	8.51	5.72	2.79	6.47	1.48	0
EMERALD DEEP MINE	7	25	45	1	3	82	12	3	1031.32	2366.67	0	3397.99	10	11	8	6.21	1	7/9/1986	12.28	7.03	5.25	10.78	20.86	2.15
ENLOW FORK MINE	7	34	60	3	0	104	27	2	1465.72	4676.23	0	6141.95	21	21	0	26.33	0	5/9/1986	25.13	17.55	7.58	25.87	3.61	2.87
HIGH QUALITY MINE	0	1	0	0	0	1	0	3	49.46	0	0	49.46	unknown	0	0	1.24	0	1994	0.359	0.174	0.185	0.2	0.077	0
MAPLE CREEK MINE	18	67	103	4	0	196	92	34	744.66	799.54	0	1544.2	12	12	5	10.41	0	8/20/1986	8.27	5.96	2.31	4.09	1.54	1.23
MINE 84	3	49	44	1	0	97	44	9	660.36	1732.88	0	2393.24	15	15	6	16.55	0	3/30/1987	13.55	8.65	4.9	8.54	3.84	1.45
SHOEMAKER MINE	0	0	0	0	0	0	0	1	39.55	48.67	0	88.22	0	0	0	0	0	5/27/1999	0.829	0.609	0.22	0.56	0.896	0

