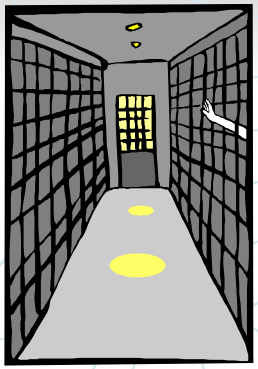
Return
to
Contents

Kentucky's Mine Map Information System

Martin County Coal Slurry Spill -October 11, 2000

Quecreek Mine Inundation -July 24, 2002



Who Holds and Maintains Kentucky Mine Map Information?

Kentucky Department of Mines and Minerals

Kentucky Department of Surface Mining and Reclamation Enforcement

Kentucky Revenue Cabinet

Office of Surface Mining

MSHA

Kentucky Geological Survey

Kentucky Department of Mines and Minerals

Most complete collection of large-scale underground mine maps

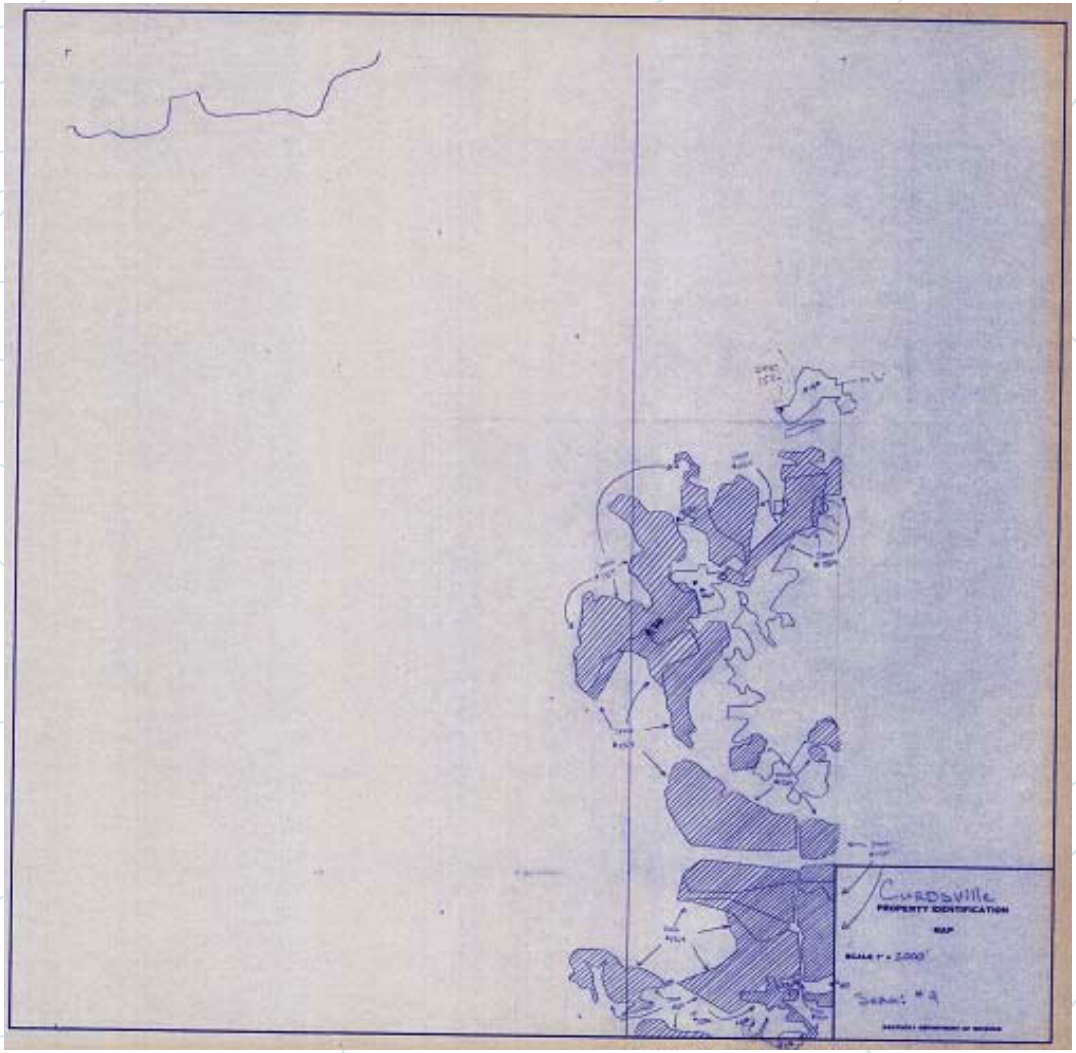
Over 30,000 distinct mines
Each with annual maps

Identified by unique State File Number

Kentucky Department of Mines and Minerals

1:24,000 Mine Outline
Mylar Overlays

Original base for
Revenue Cabinet
GIS



Kentucky Department of Mines and Minerals

Mine Map Database

Seagate ActiveX Viewer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media

Address http://minemaps.ky.gov/Minereports/SimpleADOMSSQL.ASP?FileNum=18438 Go Links

200% 1 of 1

Preview

Mines and Minerals Annu

MINE NAME	COMPANY NAME	ADDRESS	CITY	STATE	ZIP
STATE FILE NO	18438				
COUNTY: PIKE					
NO 1					
SLEEPY HOLLOW	MISTY MOUNTAIN MINING IN	P O BOX 100	JONANCY	KY	4153
1	SISTER BEAR MINING INC	P O BOX 100	JONANCY	KY	4153
SLEEPY HOLLOW	MISTY MOUNTAIN MINING IN	P O BOX 100	JONANCY	KY	4153
	GRACE MINING INC	P O BOX 520	VIRGIE	KY	4157

Annual Report_TTX.AD_CITY (String)

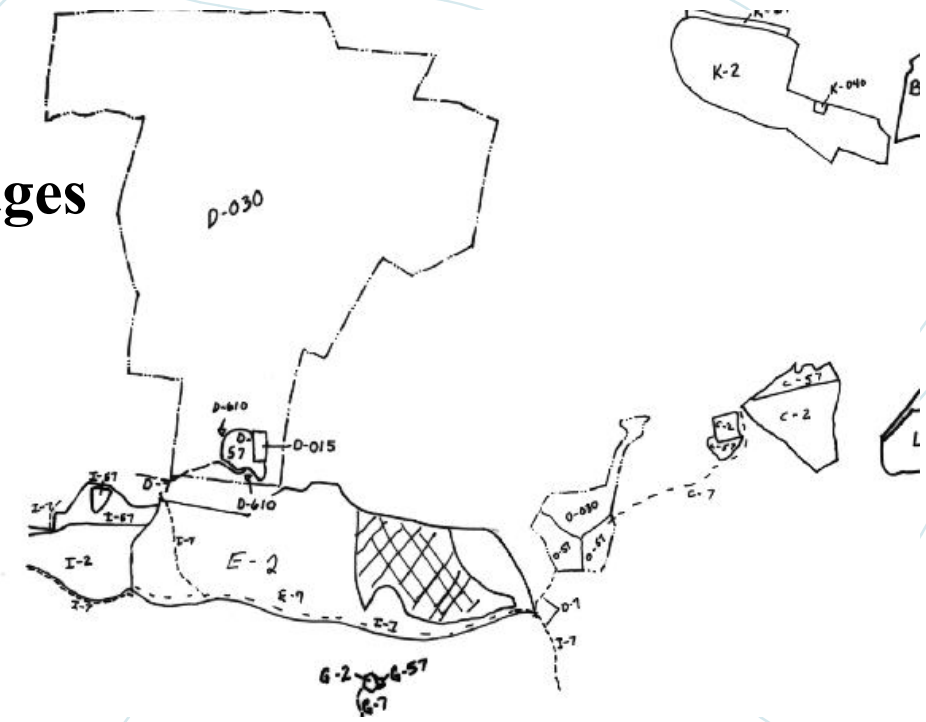
Done Internet

Kentucky Department for Surface Mining and Reclamation Enforcement DSMRE

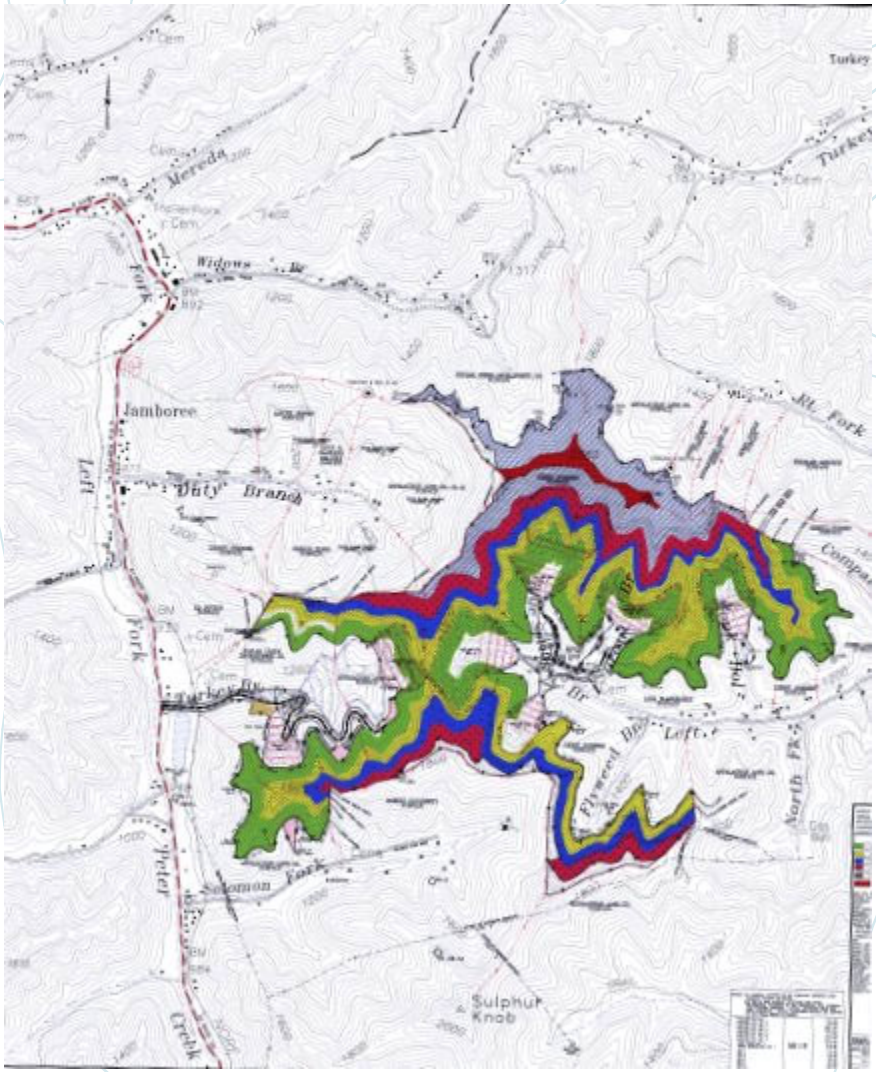
1:24,000 Permit Boundary Overlays

2000 quadrangle sheets

Scanned, georeferenced images



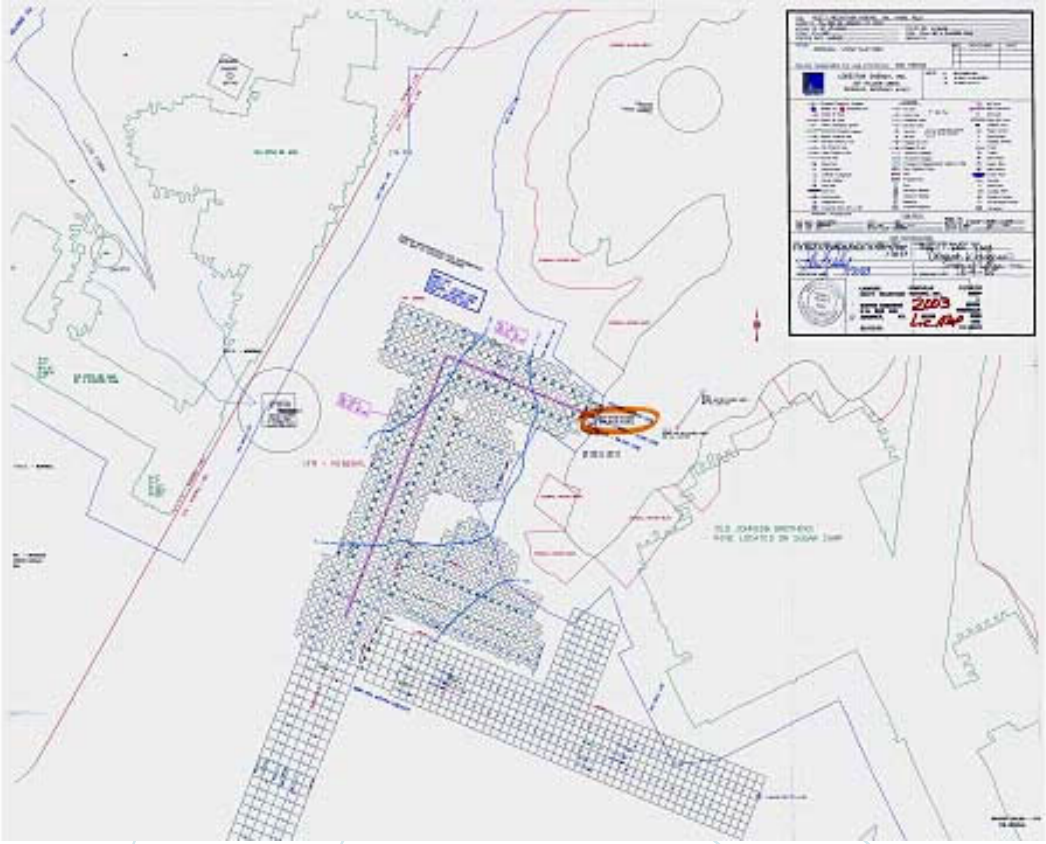
Kentucky Department of Surface Mining and Reclamation Enforcement



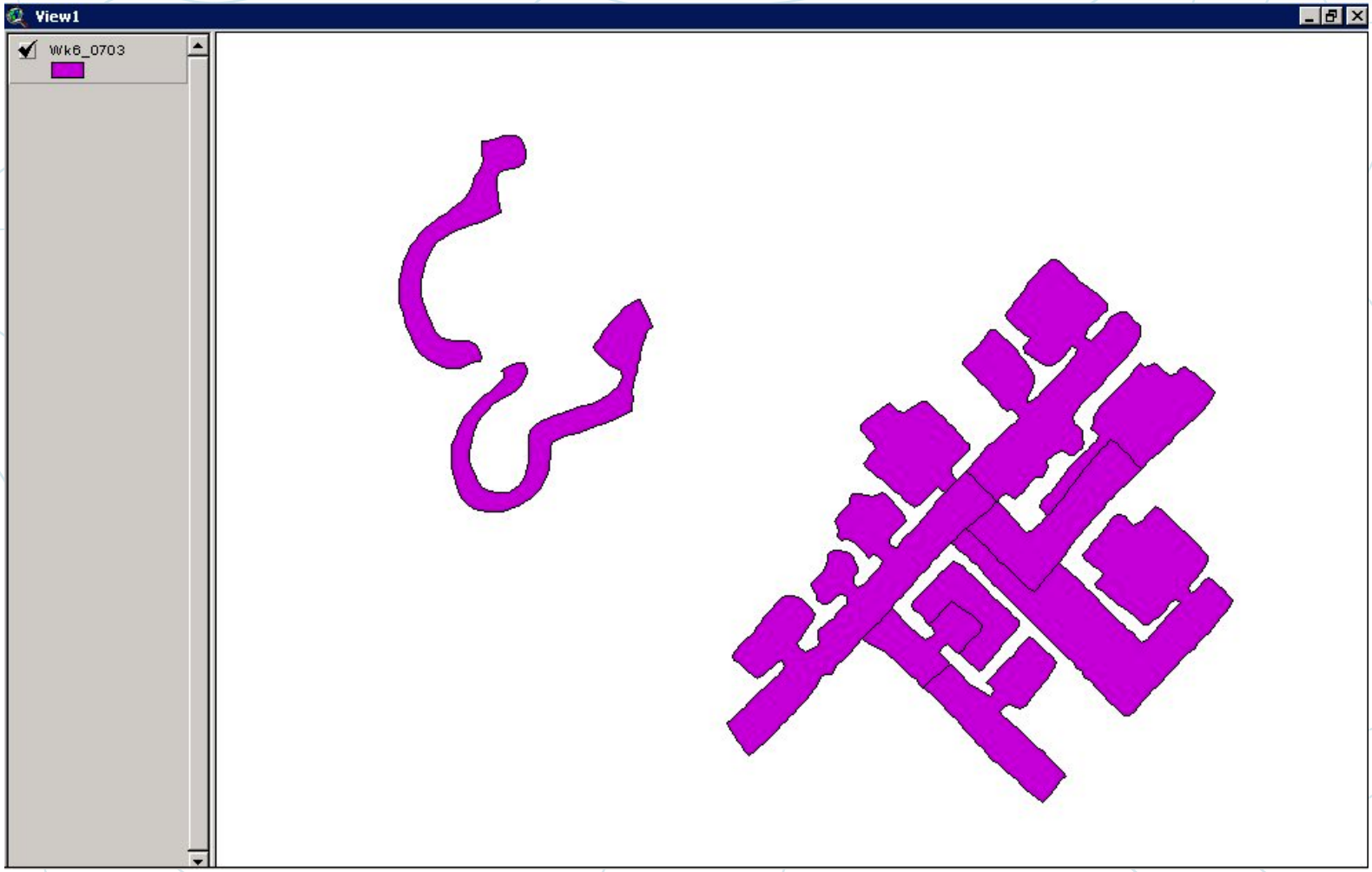
Mining and Reclamation Plan (MRP) maps are required to be submitted with any permit application for a coal mining operation in KY. These maps indicate where mining will occur.

Kentucky Department of Surface Mining and Reclamation Enforcement

Annual underground maps required since 1998

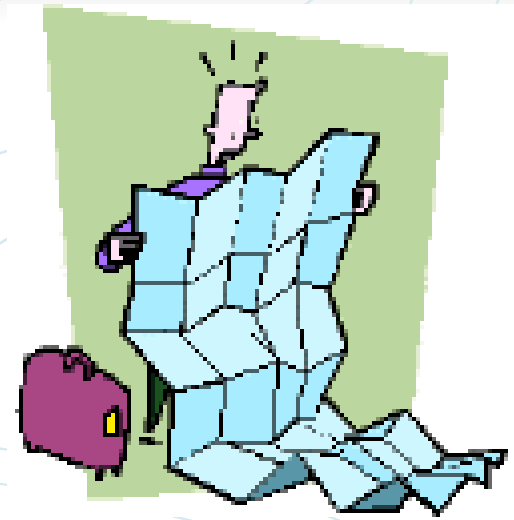


Kentucky Revenue Cabinet



Digital GIS of mine polygons
Over 60 layers by coal bed

Year 2001 Obstacles

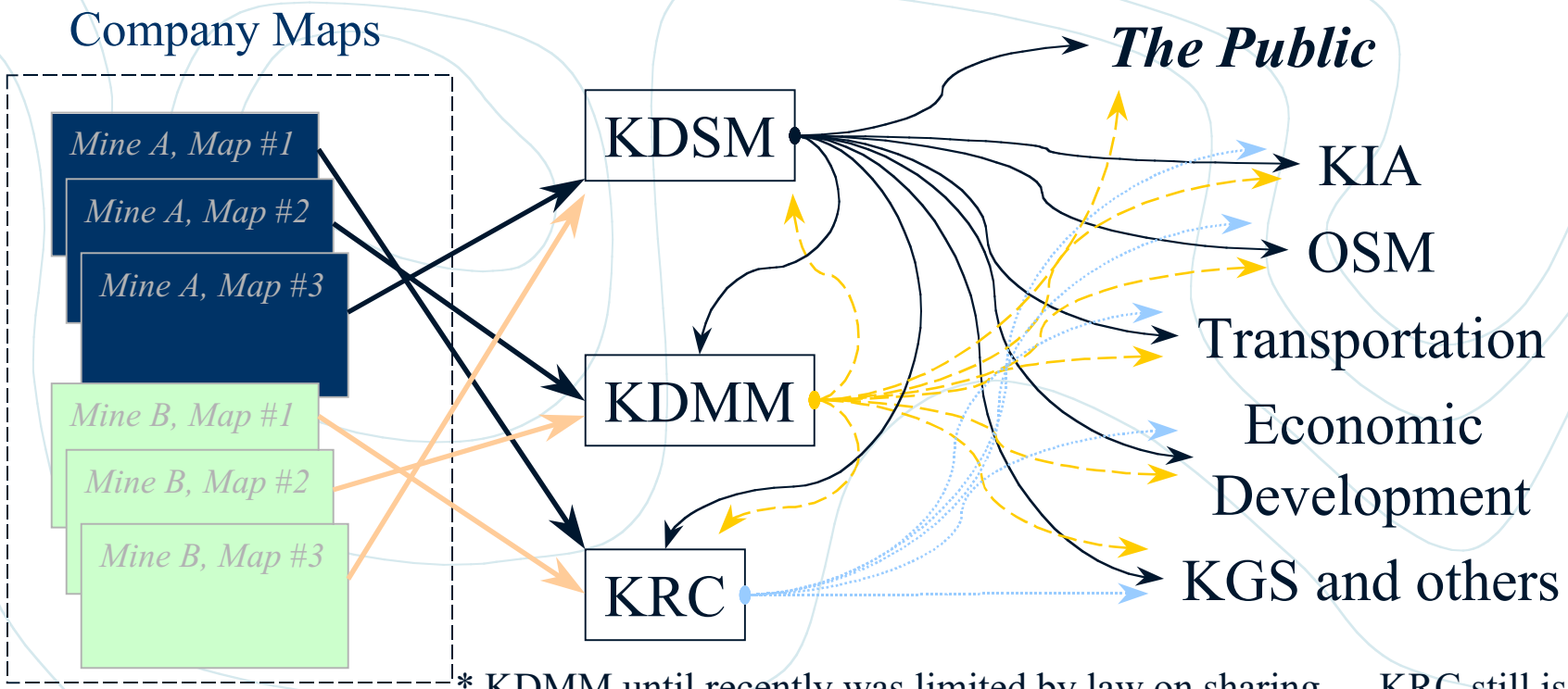


- Maps and data are not entirely in digital format

- Legal restrictions-
  - Mines and Minerals active maps [KRS 352.480]
  - KRC confidentiality restrictions [KRS 131.190 and KRS 131.081(15), KRS 131.355]

Current Information Flow

Companies must file separate maps. Agencies' needs are similar, but companies may not be reporting the same information to all agencies and agencies are currently limited in information sharing.



* KDMM until recently was limited by law on sharing…. KRC still is.

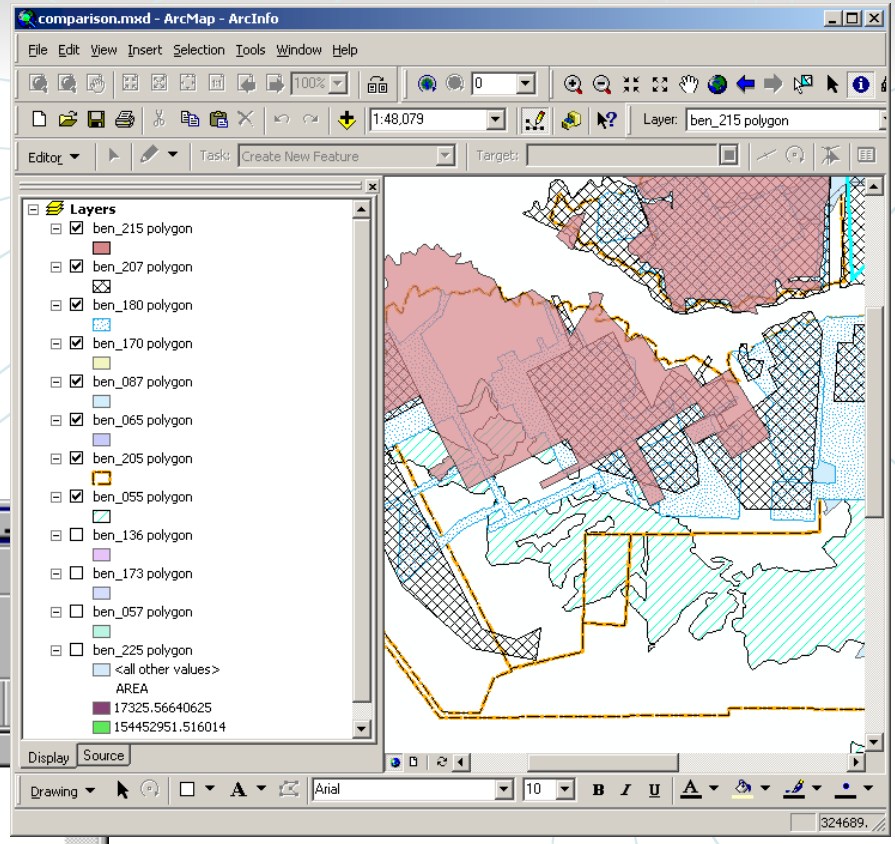
Kentucky Mine Map Initiative

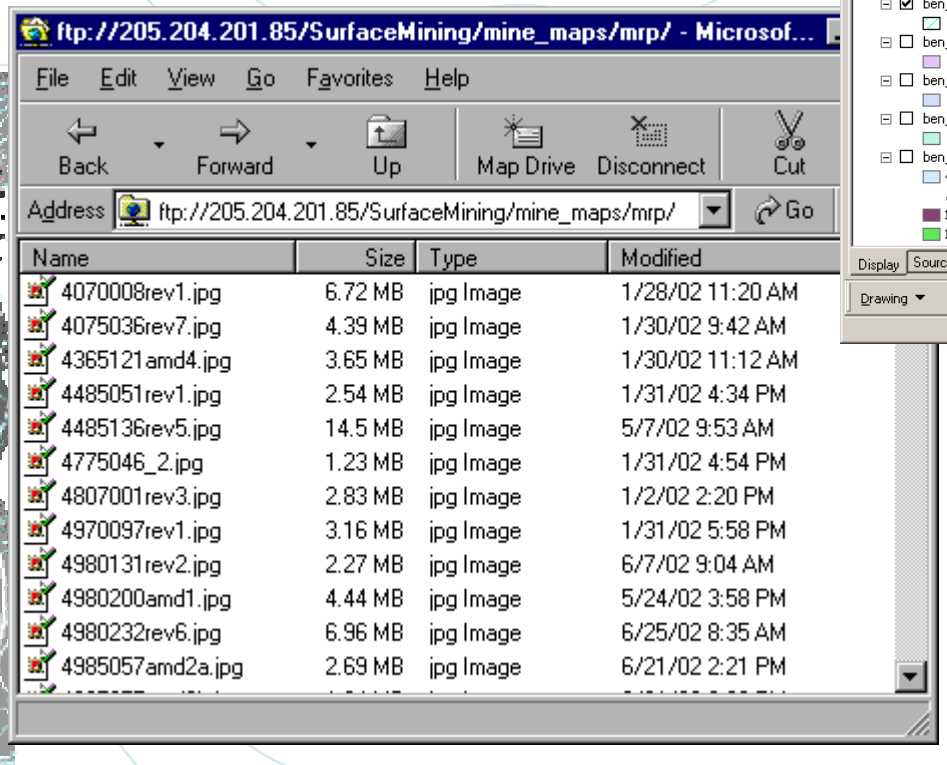
- State and Federal Agencies originally met in September 2001
- Legal and Technical teams were established
- Initial emphasis placed on legal impediments
- Technical development by regular meetings overseen by

Cabinet for Natural Resources

Proposed System

- Develop an ArcIMS web site to display available coal mine related data



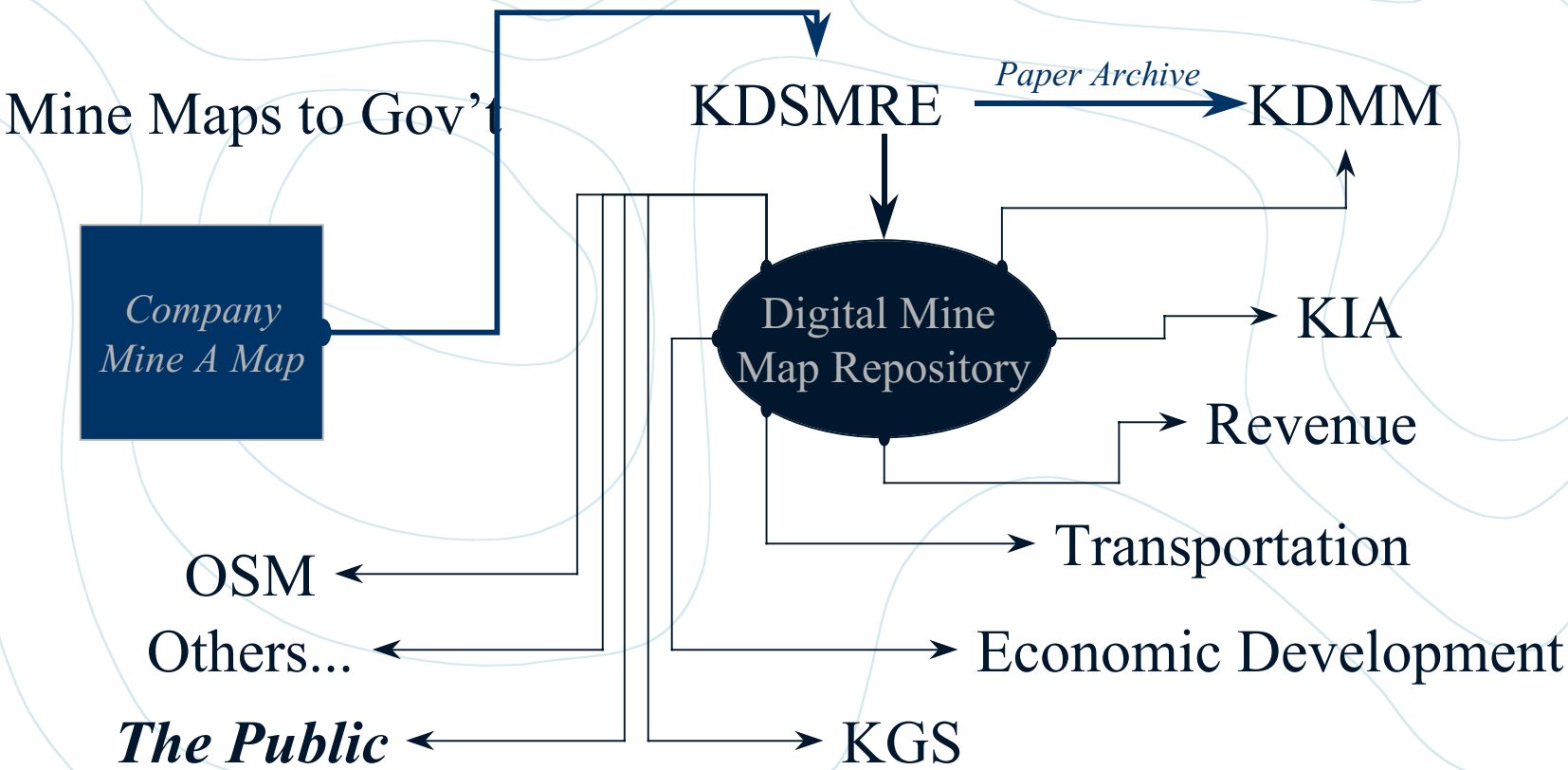


- Establish an FTP site for downloading electronic coal mine related data

Future Information Flow

Companies will file *one* map shared by all agencies. This will...

- Reduce reporting workload on companies
- Ensure agencies share common understanding about mine location/extent.
- Quicken access needed mine information.



Phased Development

- **Phase 1:** Prototype online ArcIMS with mine outlines and 2002 active mine scans
- **Phase 2:** ArcIMS customization and enhanced database connectivity
- **Phase 3-n:** Complete scanning and add links to related information

Successes!

- Technical and Legal teams have accomplished their tasks
- SB 165 passed allowing maps to be released
- MOAs allow Revenue Cabinet to share data with other agencies
- KRC, KDMM, and KDSMRE are scanning and verifying maps
- Phase I ArcIMS ready to announce

www.minemaps.ky.gov

Search KY: ? Options

KY Mine Mapping Information System

Home

Benefits

History

Project Team

Our Customers

Feedback/Links

Click here to access the internet mine map and FTP applications

Welcome to the Kentucky Mine Mapping Information System Home Page

Purpose

This web site was developed by a collaboration of Commonwealth and Federal agencies to provide online access to maps showing locations of coal mines in Kentucky.

Information Available

This Website provides Internet access to view and download (1) all known mined out areas (polygons) digitized by the Kentucky Revenue Cabinet (2) individual Mine reports from the Mines and Minerals database, and (3) Scanned images of Engineering drawings (mine maps) for year-end 2002 (2003 reporting year) active mines.

On-Line Internet mapping

There are two ways to access this information (1) an on-line Internet map for viewing and download and (2) a directly accessible FTP download site.

You have a choice of two on-line map services. The first map service is restricted to polygons derived from 2002 active mining and each of these polygons has a scanned image of the engineering drawings submitted for reporting year 2003 in addition to the mine report. The second map service shows known mined out extents and is organized by coal seam. You can access mine reports from many of these polygons.

Kentucky Mine Mapping Information System

Internet Mine Map Application
(Search Page)

Home	Benefits	History	Project Team	Our Customers	Feedback / Links

Important Note: The mined out area polygons were derived from mine engineering drawings/maps, submitted to the Kentucky Revenue Cabinet and the Kentucky Department for Mines and Minerals. These polygons were digitized from varying source materials at differing scales and stored at 1:24,000 scale . The accuracy of the source maps has not been verified. These data therefore would not exceed the current National Map Standard for 1:24,000 scale maps which states that they are accurate to within +/- 40 feet horizontally (from a well defined location). These data should not be considered complete and should not be used as the sole basis for any determination. These data do not constitute all coal mining voids nor does it show naturally occurring voids or other underground mining voids (e.g. stone quarries). These data are being made available as a reference and as a first resource in determining mine voids in Kentucky and any determination made from this data should be confirmed or denied by either examining the archive maps at the Kentucky Department for Mines and Minerals or by doing local geotechnical investigations.

The following Search options are available to assist you in finding your area of interest:

Active Coal Mine Areas

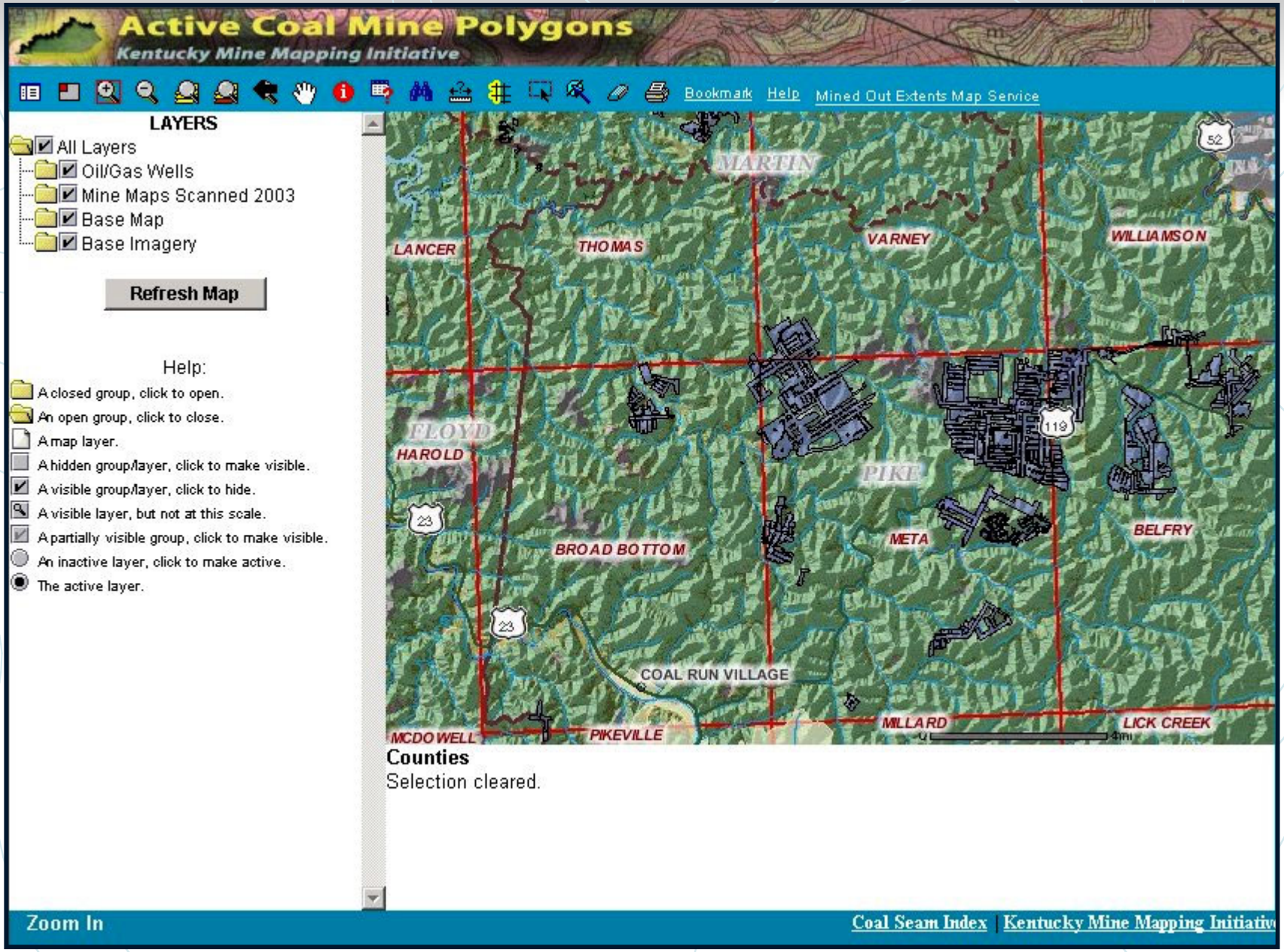
For access to an on-line map of currently active mining, as of reporting year 2003, choose one of the following search methods.
Note: Each of these polygons is linked to a corresponding Mine report and scanned image of the engineering drawings (map) for the mine.

Search by Map	Search by County (Eastern Coal Field)	Search by County (Western Coal Field)	Search by 7.5 ' Quadrangle
Choose an area...	Choose a County...	Choose a County...	Choose a 7.5' Quad...

Known Mined Out Areas by Coal Seam

For access to an on-line map of all historic known mined out areas, organized by coal seam, choose one of the following search methods. Note: a mine report for the Mines and Minerals database is available for approximately 12,000 of the 43,000 polygons.

Search by Map	Search by County (Eastern Coal Field)	Search by County (Western Coal Field)	Search by 7.5 ' Quadrangle


Active Coal Mine Polygons
Kentucky Mine Mapping Initiative
Bookmark
Help
Mined Out Extents Map Service
LAYERS
All Layers
Oil/Gas Wells
Mine Maps Scanned 2003
Base Map
Base Imagery
Refresh Map
Help:
A closed group, click to open.
An open group, click to close.
A map layer.
A hidden group/layer, click to make visible.
A visible group/layer, click to hide.
A visible layer, but not at this scale.
A partially visible group, click to make visible.
An inactive layer, click to make active.
The active layer.
MARTIN
LANCER
THOMAS
VARNEY
WILLIAMSON
FLOYD
HAROLD
PIKE
BROAD BOTTOM
META
BELFRY
COAL RUN VILLAGE
MCDOWELL
PIKEVILLE
MILLARD
LICK CREEK
52
119
23
Counties
Selection cleared.
Zoom In
Coal Seam Index
Kentucky Mine Mapping Initiativ

Known Mined Out Extents by Coal Seam

Kentucky Mine Mapping Initiative

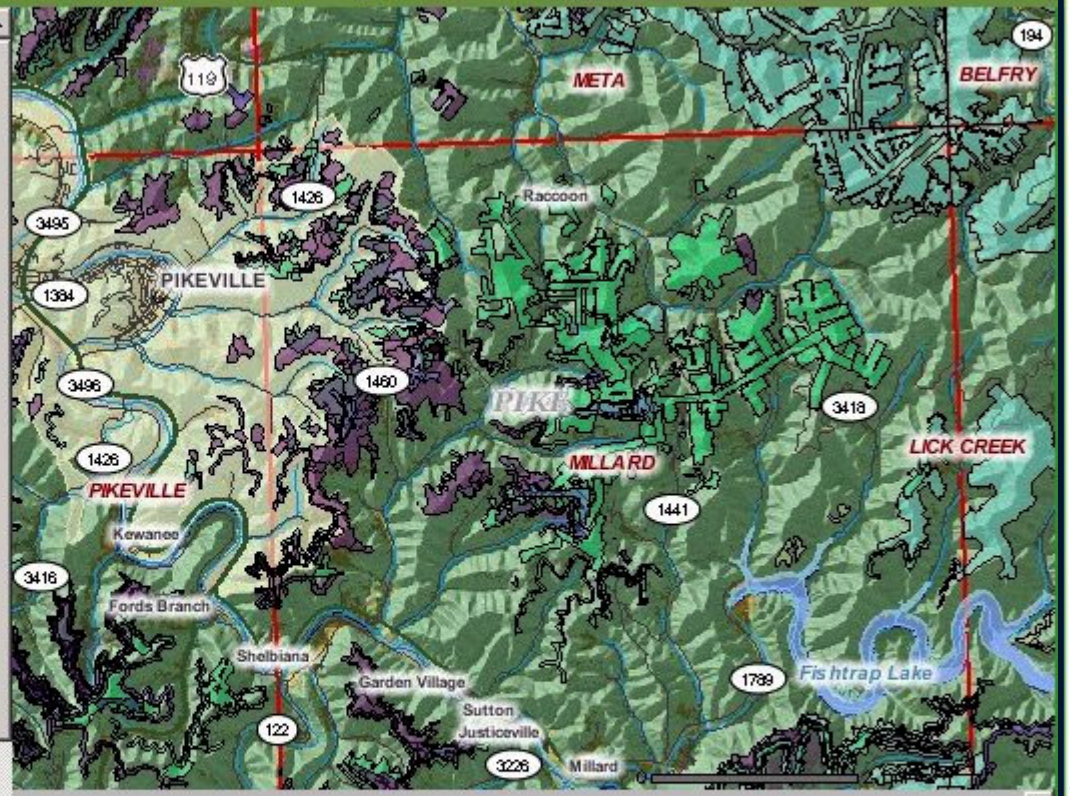
Bookmark Help Active Coal Mine Map Service

LAYERS

- All Layers
  - Oil/Gas Wells
  - Eastern Coal seams
  - Western Coal seams
  - Base Map
    - Incorporated Cities
    - Populated Places (GNI
    - Major Roads
    - State Roads
    - Local Roads
    - Time Zone Boundary
    - NHD (100k)
    - NHD (24k)
    - Ohio River
    - Lakes/Reservoirs
    - City Boundaries
    - Quad Boundaries
    - Counties
  - Base Imagery
    - Shaded Relief
    - LANDCOVER
    - SPOT 10 Meter
    - KRGs
    - Ortholmagery

Refresh Map

Help:

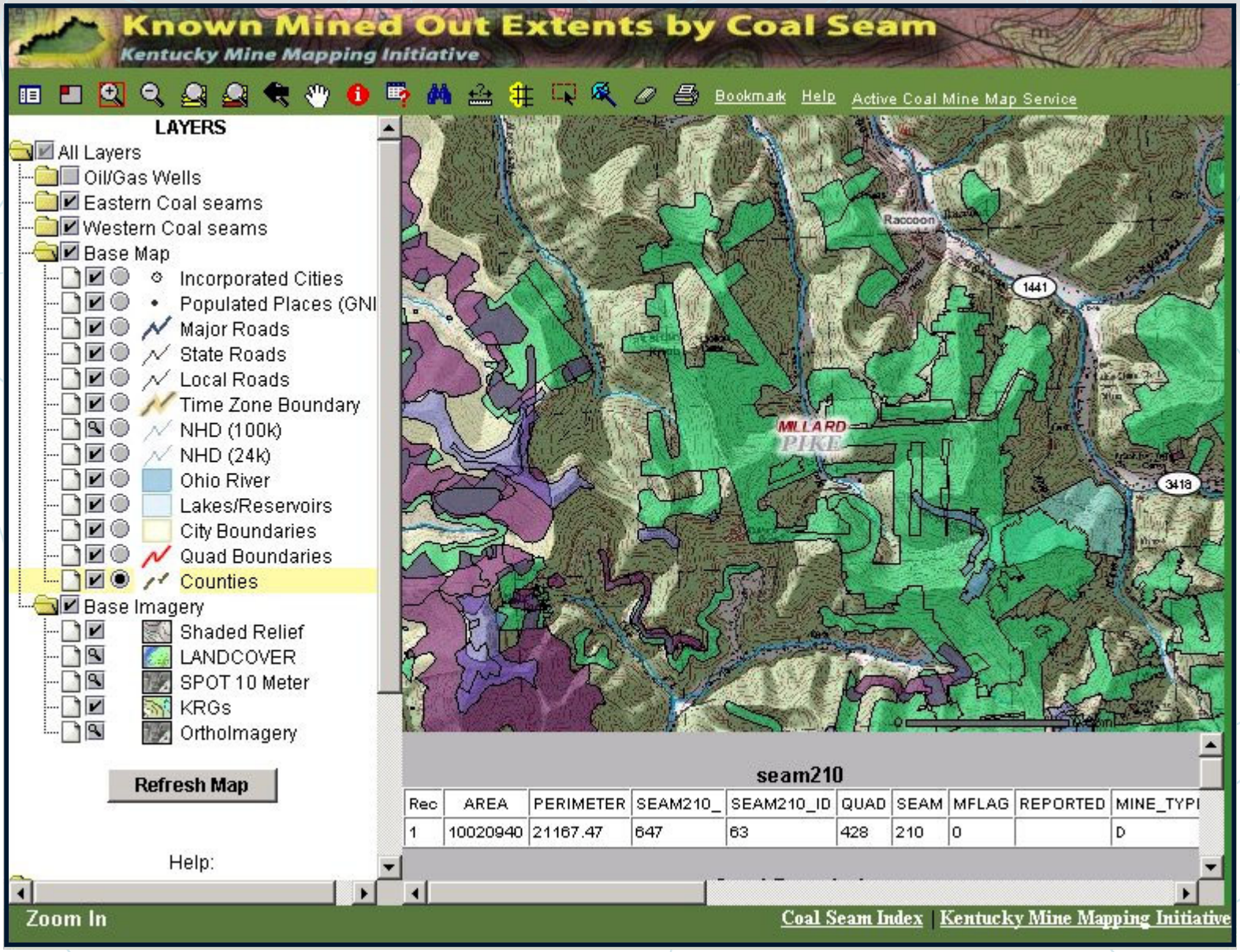


seam210

Rec	AREA	PERIMETER	SEAM210_	SEAM210_ID	QUAD	SEAM	MFLAG	REPORTED	MINE_TYPI
1	10020940	21167.47	647	63	428	210	0		D

ID Visible Features

Coal Seam Index | Kentucky Mine Mapping Initiativ


Known Mined Out Extents by Coal Seam
Kentucky Mine Mapping Initiative
Bookmark
Help
Active Coal Mine Map Service
LAYERS
All Layers
Oil/Gas Wells
Eastern Coal seams
Western Coal seams
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Ohio River
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City Boundaries
Quad Boundaries
Counties
Base Imagery
Shaded Relief
LANDCOVER
SPOT 10 Meter
KRGs
OrthoImagery
Refresh Map
Help:
Raccoon
1441
MILLARD
PIKE
3418
seam210
Rec | AREA | PERIMETER | SEAM210_ | SEAM210_ID | QUAD | SEAM | MFLAG | REPORTED | MINE_TYPI
1 | 10020940 | 21167.47 | 647 | 63 | 428 | 210 | 0 | | D
Zoom In
Coal Seam Index | Kentucky Mine Mapping Initiative

Available Documents

You have "identified" the polygon for Kentucky State File number 18083.
The State File Number is a unique number assigned by the Department of Mines and Minerals to all coal mines licensed by KDMM in Kentucky.

Detailed mine reports are available for most, but not all file numbers. If a report is available you may view it by clicking on the link provided below. You may print a copy of the report locally by using the print button provided (not the browser print feature).

Detailed scanned images of engineering mine drawings are available for mines active during 2002. These maps are those submitted to Kentucky Department of Mines and Minerals for the 2003 reporting year. The maps are incorporated into "Zip" files and include an associated "world" file, which provides geographic reference. Some "Zip" containers include multiple maps for the same File Number. If maps are available for this File number you may access them by clicking on the link provided below.

Data Reporting for this State File Number is currently unavailable.

"Click" to View Mine Image

Version 1.4.3 September 23, 2003

Kentucky Mine Mapping Information System - FTP Download Page - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media

Address http://www.minemaps.ky.gov/ftpdownload.htm Go Links

Kentucky Mine Mapping Information System

FTP Download Page

Home	Benefits	History	Project Team	Our Customers	Feedback / Links

For direct access to the FTP site to download East and West coalfield polygons and scanned Engineering Drawings (Mine Maps) choose one of the following. Note that you will need to know the State File Number to download the correct Engineering Drawings.

Eastern Coal Field Seams (Zipped Shapefiles - 25.5mb)	Western Coal Field Seams (Zipped Shapefiles - 3.25mb)	2003 Scanned Mine Maps (.tif images with world files)	

Internet

Next Phases

- Continue Scanning Final and Last Maps
- Link All Mine Outlines to Image Files and Database
- Customise ArcIMS Functionality
- Secure Ongoing Funding for Development and Maintenance

Estimated Development Time and Costs

- **Shared Project Manager** - $100,000 annually
- **ArcIMS Site** – Startup costs $50,000 – paid
  Annual Ongoing costs of operation $35,000
- Annual cost of additional **software development** $50,000
- Cost of annually **scanning** maps and back-file conversion of last map for every mine: $90,000 includes 2 geo-processors
- Est. time for **scanning all paper maps** – 2 years if outsourced
  Cost: $500,000 – 1,000,000 (does not have to be done to provide for a complete mine detail coverage)