

# WVOMHS&T



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GIS Technician

WVOMHST

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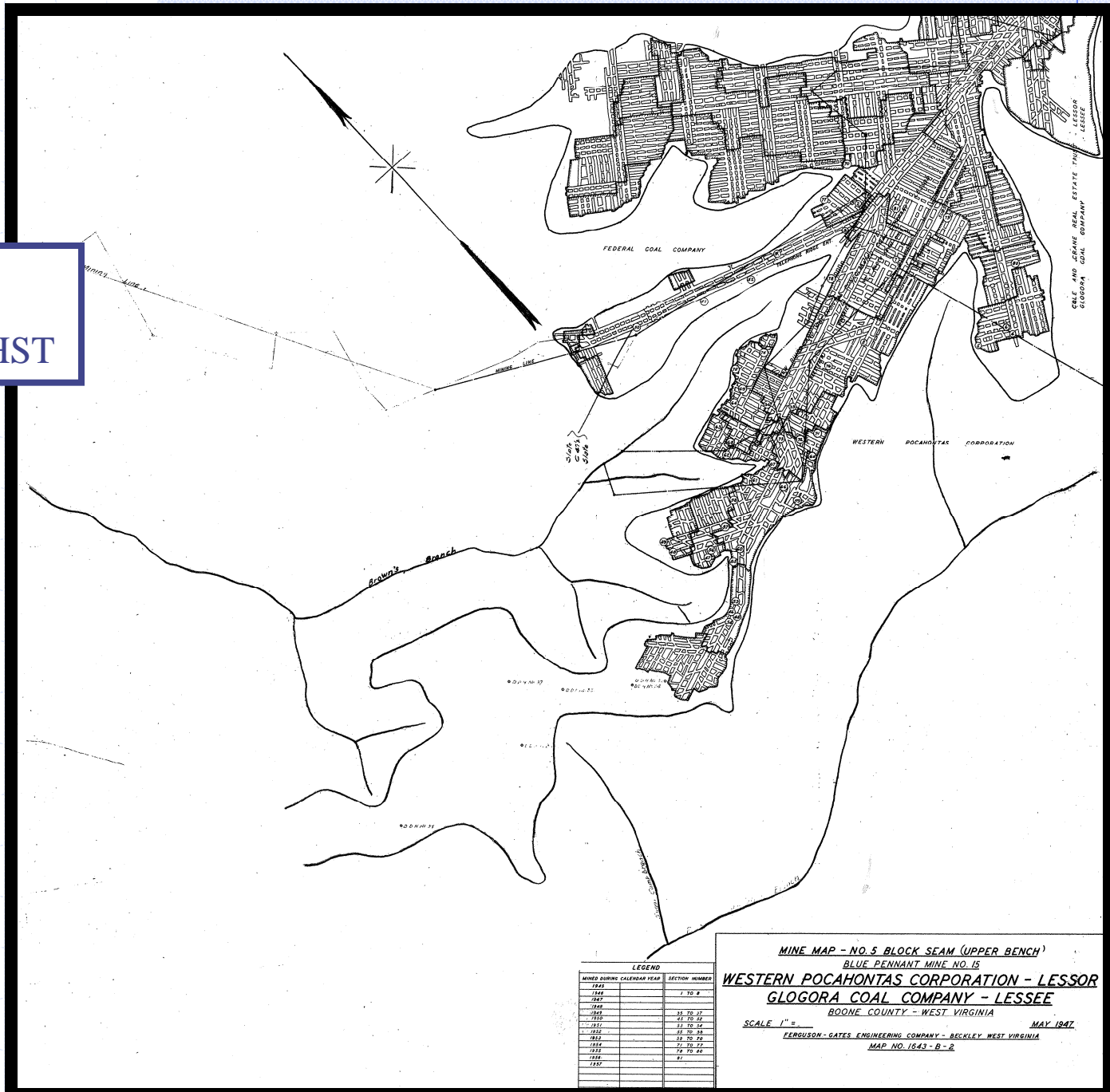


# How to Georeference Mine Maps with Poorly Referenced Coordinate Systems

A description of the procedures and sources used by WVOMHS&T to identify and geolocate mineworks found on abandoned mine maps.

•Search OSM

•Search WVOMHST



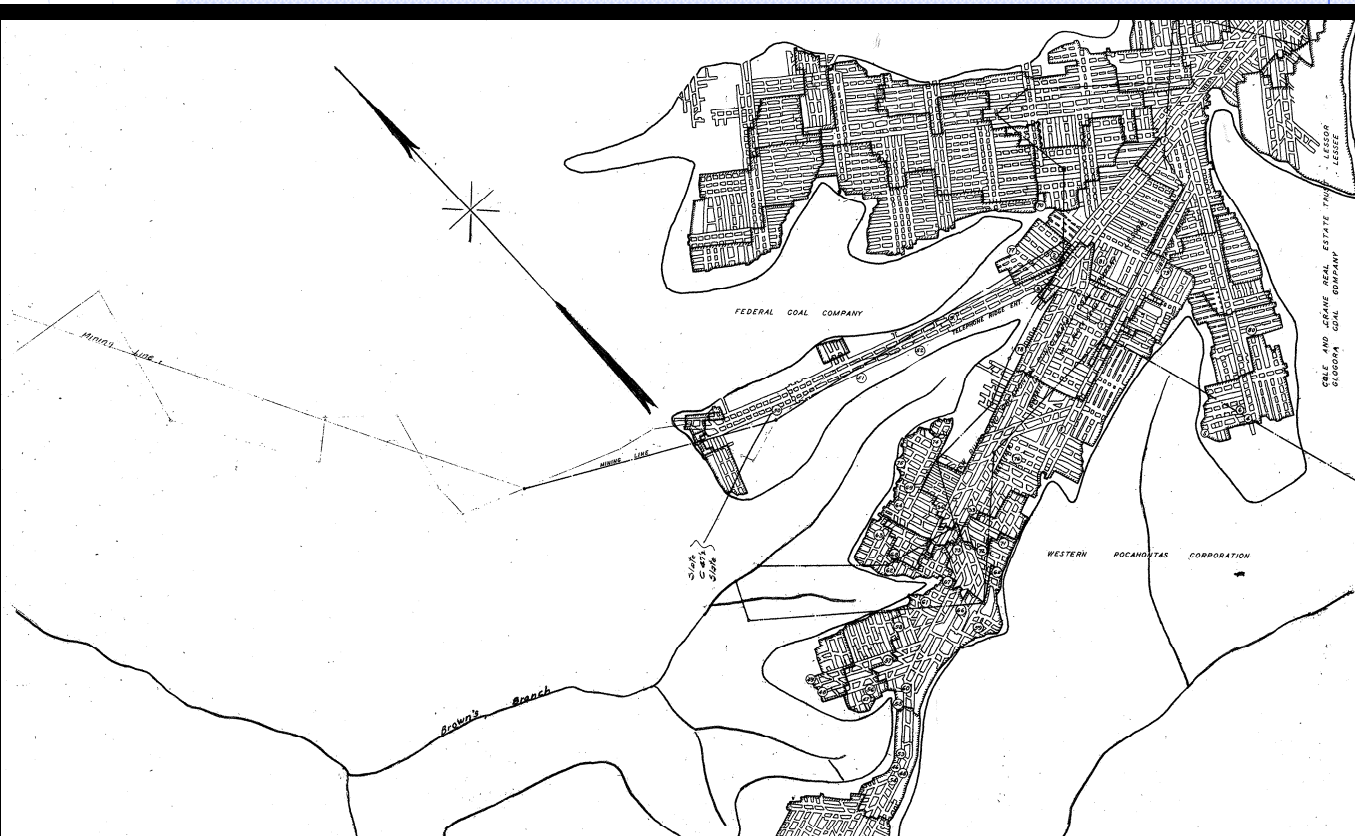
# OSM Database of Abandoned Mine Maps

- ◆ U.T.M.
- ◆ Latitude
- ◆ Longitude
- ◆ State
- ◆ County
- ◆ Quadrangle
- ◆ Document Number
- ◆ Company Name
- ◆ Mine Name
- ◆ Mine Type
- ◆ Bed Name
- ◆ Commodity
- ◆ Year
- ◆ Notes

# WVOMHS&T Database of Abandoned Mine Maps

- Latitude
- Longitude
- State
- County
- Quadrangle
- Tracking Number
- Document Number
- Company Name
- Mine Name
- Mine Type
- Reported Seam
- Commodity
- Scale
- Text Fields
- State ID
- Federal ID

•Search OSM



MINE MAP - NO. 5 BLOCK SEAM (UPPER BENCH)

BLUE PENNANT MINE NO. 15

WESTERN POCAHONTAS CORPORATION - LESSOR

GLOGORA COAL COMPANY - LESSEE

BOONE COUNTY - WEST VIRGINIA

SCALE 1" =

MAY 1947

FERGUSON - GATES ENGINEERING COMPANY - BECKLEY WEST VIRGINIA

MAP NO. 1643 - B - 2

- Search OSM
- Query “Blue Pennant”
- Record Document Numbers
- View Tiff’s

C	D	E	F	G	H	I	J
5156	54	47 MCDOWELL	ANAWALT	306136	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5157	54	47 MCDOWELL	ANAWALT	328787	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5158	54	19 FAYETTE	UNKNOWN QUADRANGLE	349911	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5159	54	19 FAYETTE	SUMMERSVILLE DAM	368710	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5160	54	5 BOONE	SUMMERSVILLE DAM	374905	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5161	54	5 BOONE	MAN	374893	BLUE HAT NO 15-A	UNDERGROUND	BLUE HAT COALS INC
5162	54	5 BOONE	MAN	366893	BLUE HAT NO. 15-A	UNDERGROUND	BLUE HAT COALS INC
5163	54	5 BOONE	MAN	367030	BLUE HAT NO. 15-A	UNDERGROUND	BLUE HAT COALS INC.
5164	54	5 BOONE	WELCH	385301	BLUE HAVEN ENERGY MINE NO. 3	UNDERGROUND	BLUE HAVEN ENERGY, INC.
5165	54	5 BOONE	DAVY	330349	BLUE JAY	UNDERGROUND	BLUE JAY COAL CO
5166	54	5 BOONE	UNKNOWN QUADRANGLE	334336	BLUE JAY	UNKNOWN	BLUE JAY LUMBE
5167	54	39 KANAWHA	DAVY			UNDERGROUND	BLUE JAY COAL COMPANY
5168	54	39 KANAWHA	UNKNOWN			UNDERGROUND	BLUE JAY LUMBER CO
5169	54	25 GREENBRIER	LITTLE BIR			UNDERGROUND	BLUE LICK COAL CO
5170	54	33 HARRISON	ANAWALT			COMBINATION	BLUE MOUNTAIN MINING CO INC
5171	54	1 BARBOUR	ANAWALT			COMBINATION	BLUE MOUNTAIN MINING COMPANY INC
5172	54	33 HARRISON	ANAWALT			COMBINATION	BLUE MOUNTAIN MINING CO INC
5173	54	91 TAYLOR	ANAWALT			COMBINATION	BLUE MOUNTAIN MINING COMPANY INC
5174	54	25 GREENBRIER	ANAWALT			COMBINATION	BLUE MTN MNG CO INC
5175	54	19 FAYETTE	UNKNOWN QUADRANGLE	333726	BLUE OAK NO 2 PROPOSED	COMBINATION	BLUE OAK COAL
5176	54	25 GREENBRIER	UNKNOWN QUADRANGLE	333726	BLUE OAK NO 2 PROPOSED	COMBINATION	PITSENBARGER D H
5177	54	91 TAYLOR	UNKNOWN QUADRANGLE	307206	BLUE PENNANT #12	UNDERGROUND	GLOGORA COAL CO
5178	54	47 MCDOWELL	WHITESVILLE	339516	BLUE PENNANT NO 13	UNDERGROUND	GLOGORA COAL CO INC
5179	54	47 MCDOWELL	UNKNOWN QUADRANGLE	336291	BLUE PENNANT NO 15	UNDERGROUND	GLOGORA COAL CO
5180	54	47 MCDOWELL	UNKNOWN QUADRANGLE	339516	BLUE PENNANT NO 15	UNKNOWN	UNKNOWN
5181	54	19 FAYETTE	WHITESVILLE	339519	BLUE PENNANT NO 15 & 16	COMBINATION	GLOGORA COAL CO
5182	54	19 FAYETTE	UNKNOWN QUADRANGLE	321958	BLUE PENNANT NO 16	UNDERGROUND	GLOGORA COAL CO
5183	54	19 FAYETTE	UNKNOWN QUADRANGLE	341332	BLUE PENNANT NO 16	COMBINATION	GLOGORA COAL CO
5184	54	47 MCDOWELL	UNKNOWN QUADRANGLE	338426	BLUE RIBBON	UNKNOWN	UNKNOWN
5185	54	47 MCDOWELL	UNKNOWN QUADRANGLE	338426	BLUE RIBBON NO 1	UNKNOWN	UNKNOWN
5186	54	47 MCDOWELL	UNKNOWN QUADRANGLE	328965	BLUE RIDGE	UNDERGROUND	BLUE RIDGE COAL CO
5187	54	47 MCDOWELL	CLARKSBURG	343659	BLUE RIDGE	UNDERGROUND	BLUE RIDGE COAL CO
5188	54	47 MCDOWELL	AUDRA	347993	BLUE RIDGE	UNDERGROUND	DAVIS RICHARD R COAL CO
5189	54	47 MCDOWELL	SHINNSTON	304626	BLUE RIDGE	UNDERGROUND	V & H COAL CO
5190	54	47 MCDOWELL	GRAFTON	306126	BLUE RIDGE #2	UNDERGROUND	BLUE RIDGE COAL CO
5191	54	47 MCDOWELL	DUO	321807	BLUE RIDGE NO 1	UNDERGROUND	BLUE RIDGE COAL CO
5192	54	47 MCDOWELL	UNKNOWN QUADRANGLE	336805	BLUE RIDGE NO 1	UNKNOWN	UNKNOWN
5193	54	47 MCDOWELL	UNKNOWN QUADRANGLE	315761	BLUE RIDGE NO 2	UNDERGROUND	BLUE RIDGE COAL CO
5194	54	47 MCDOWELL	ROSEMONT	319091	BLUE RIDGE NO 4	UNDERGROUND	BLUE RIDGE COAL CO
5195	54	47 MCDOWELL	DAVY	347897	BLUE RIDGE NO 76-2	UNDERGROUND	BLUE RIDGE COAL CO
5196	54	47 MCDOWELL	DAVY	349972	BLUE RIDGE NO 76-2	UNDERGROUND	BLUE RIDGE COAL CO
5197	54	47 MCDOWELL	DAVY	374890	BLUE RIDGE NO 76-2 PLAN	UNDERGROUND	BLUE RIDGE COAL CO
5198	54	47 MCDOWELL	MEADOW CREEK	315888	BLUE RIDGE NO 8	UNDERGROUND	BLUE RIDGE COAL CO
5199	54	47 MCDOWELL	THURMOND	315763	BLUE RIDGE NOS 1 AND 2	UNDERGROUND	BLUE RIDGE COAL CO

**Find** [?] [X]

Find what:

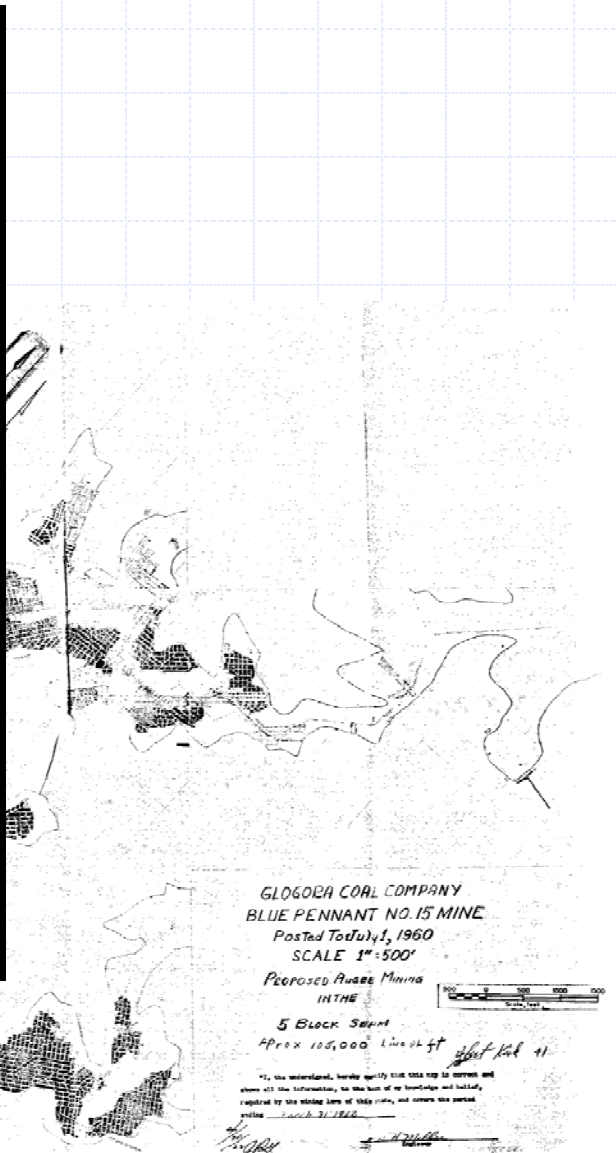
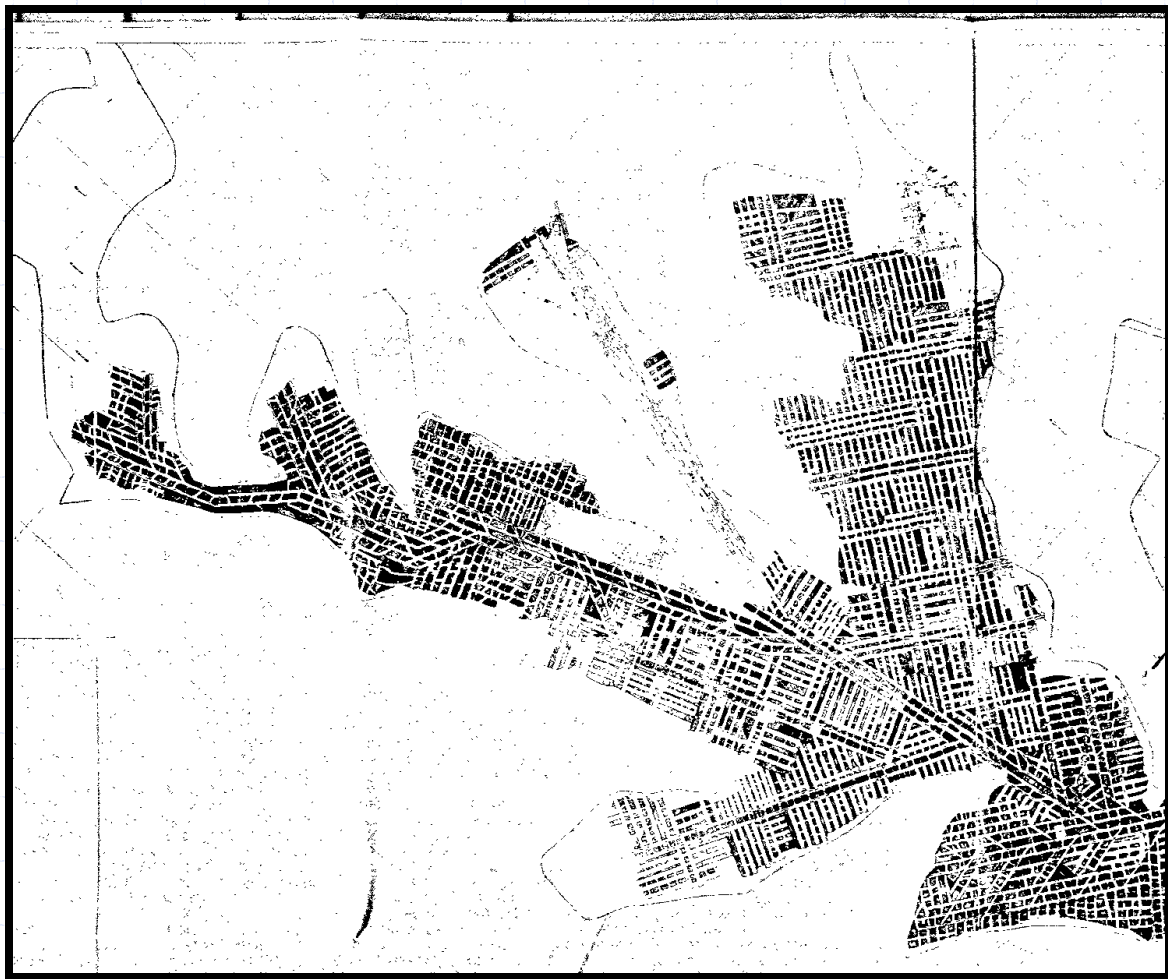
Search:   Match case

Look in:   Find entire cells only

Find Next

Close

Replace...



GLOGORA COAL COMPANY  
 BLUE PENNANT NO. 15 MINE  
 Posted To July 4, 1960  
 SCALE 1"=500'  
 Proposed Waste Mining  
 IN THE



5 Block Square  
 Approx 100,000 Linear ft

*Sheet No. 11*

"I, the undersigned, hereby certify that this map is correct and shows all the information, to the best of my knowledge and belief, required by the Mining Laws of 1935, and covers the period ending March 31, 1960.

*[Signature]*

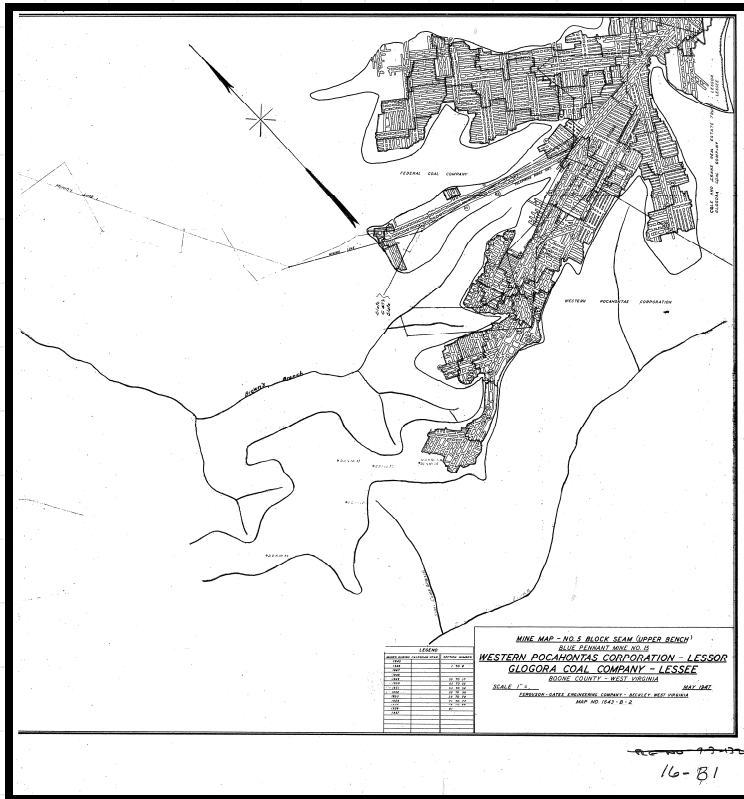
WVDM 03104 416 30X 339519



# Recap

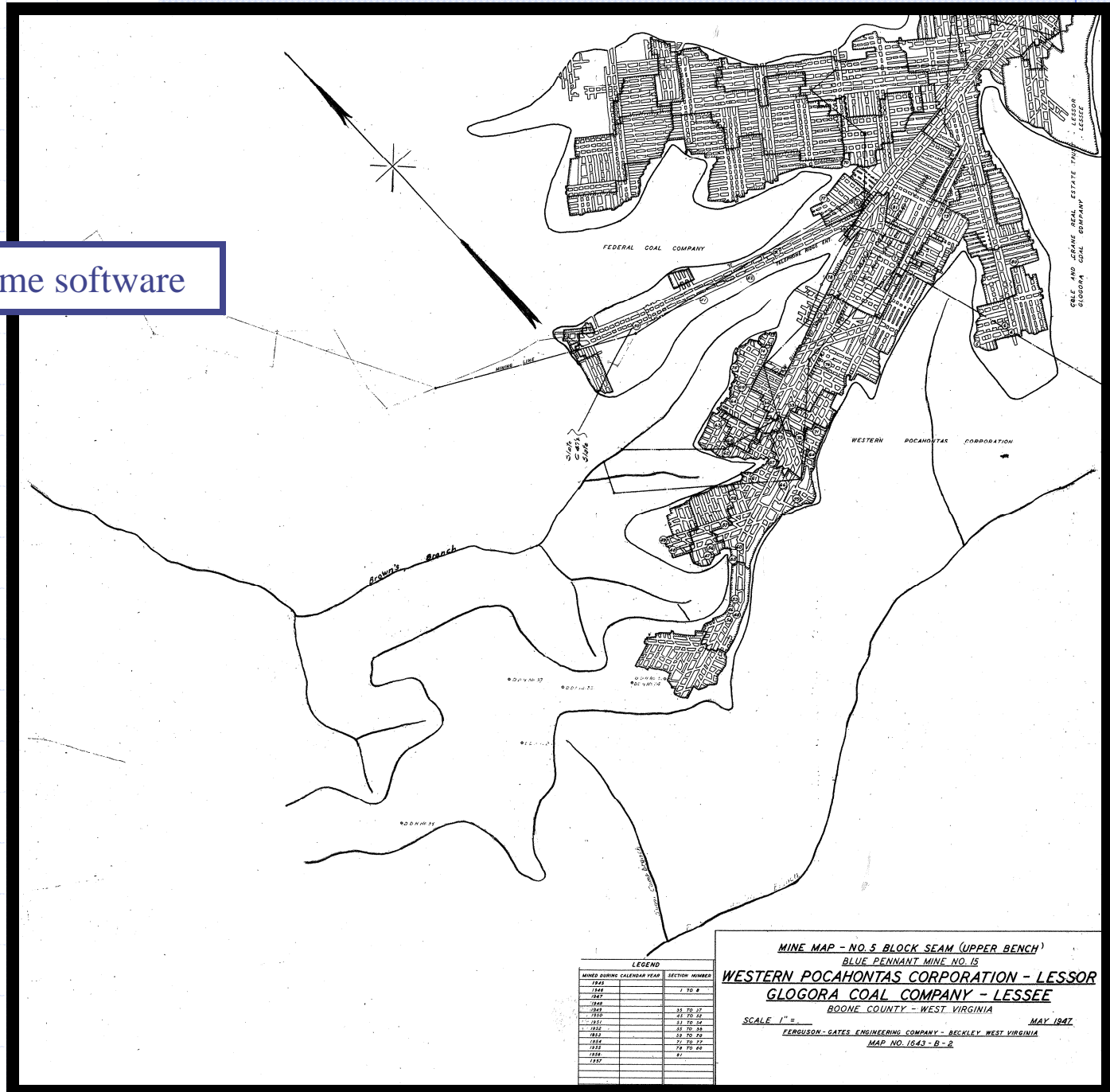
- ◆ Search OSM
- ◆ Search WVOMHST
- ◆ Record document numbers
- ◆ View images
- ◆ Determine value of map

# What if there are no results from a database query?



C	D	E	F	G	H	I	J
5138	54	47 MCDOWELL	DAVY	306136	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5139	54	47 MCDOWELL	DAVY	326787	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5140	54	19 FAYETTE	UNKNOWN QUADRANGLE	349911	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5141	54	19 FAYETTE	SUMMERSVILLE DAM	368710	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5142	54	19 FAYETTE	SUMMERSVILLE DAM	374905	BLUE FLAME NO 1	UNDERGROUND	BLUE FLAME COAL CO
5143	54	45 LOGAN	MAN	374903	BLUE HAT NO 15-A	UNDERGROUND	BLUE HAT COALS INC
5144	54	45 LOGAN	MAN	366693	BLUE HAT NO 15-A	UNDERGROUND	BLUE HAT COALS INC
5145	54	45 LOGAN	MAN	367030	BLUE HAT NO 15-A	UNDERGROUND	BLUE HAT COALS INC
5146	54	81 RALEIGH	UNKNOWN QUADRANGLE	385301	BLUE HAVEN ENERGY MINE NO. 3	UNDERGROUND	BLUE HAVEN ENERGY, INC.
5147	54	47 MCDOWELL	DAVY	303549	BLUE JAY	UNDERGROUND	BLUE JAY COAL CO
5148	54	81 RALEIGH	UNKNOWN QUADRANGLE	303549	BLUE JAY	UNKNOWN	BLUE JAY LUMBER
5149	54	47 MCDOWELL	DAVY	303549	BLUE JAY	UNDERGROUND	BLUE JAY COAL COMPANY
5150	54	81 RALEIGH	UNKNOWN			UNDERGROUND	BLUE JAY LUMBER CO
5151	54	7 BRAXTON	LITTLE BIR			UNDERGROUND	BLUE LICK COAL CO
5152	54	47 MCDOWELL	ANAWALT			COMBINATION	BLUE MOUNTAIN MINING CO INC
5153	54	47 MCDOWELL	ANAWALT			COMBINATION	BLUE MOUNTAIN MINING COMPANY INC
5154	54	47 MCDOWELL	ANAWALT			COMBINATION	BLUE MOUNTAIN MINING CO INC
5155	54	47 MCDOWELL	ANAWALT			COMBINATION	BLUE MOUNTAIN MINING COMPANY INC
5156	54	47 MCDOWELL	ANAWALT			COMBINATION	BLUE MTH MNG CO INC
5157	54	47 MCDOWELL	ANAWALT			COMBINATION	BLUE MTH COAL CO INC
5158	54	19 FAYETTE	UNKNOWN QUADRANGLE	353726	BLUE PENNANT NO 2	COMBINATION	BLUE OAK COAL
5159	54	19 FAYETTE	UNKNOWN QUADRANGLE	333726	BLUE PENNANT NO 2	COMBINATION	PITTSBURGER D H
5160	54	5 BOONE	UNKNOWN QUADRANGLE	307206	BLUE PENNANT #12	UNDERGROUND	GLOGORA COAL CO
5161	54	5 BOONE	WHITESVILLE	339516	BLUE PENNANT NO 13	UNDERGROUND	GLOGORA COAL CO INC
5162	54	5 BOONE	UNKNOWN QUADRANGLE	339516	BLUE PENNANT NO 15	UNDERGROUND	GLOGORA COAL CO
5163	54	5 BOONE	UNKNOWN QUADRANGLE	339516	BLUE PENNANT NO 15	UNKNOWN	UNKNOWN
5164	54	5 BOONE	WHITESVILLE	339516	BLUE PENNANT NO 15 & 16	COMBINATION	GLOGORA COAL CO
5165	54	5 BOONE	UNKNOWN QUADRANGLE	31958	BLUE PENNANT NO 16	UNDERGROUND	GLOGORA COAL CO
5166	54	5 BOONE	UNKNOWN QUADRANGLE	441332	BLUE PENNANT NO 16	COMBINATION	GLOGORA COAL CO
5167	54	39 KANAWHA	UNKNOWN QUADRANGLE	338426	BLUE RIBBON	UNKNOWN	UNKNOWN
5168	54	39 KANAWHA	UNKNOWN QUADRANGLE	338426	BLUE RIBBON NO 1	UNKNOWN	UNKNOWN
5169	54	25 GREENBRIER	UNKNOWN QUADRANGLE	328965	BLUE RIDGE	UNDERGROUND	BLUE RIDGE COAL CO
5170	54	33 HARRISON	CLARKSBURG	343659	BLUE RIDGE	UNDERGROUND	BLUE RIDGE COAL CO
5171	54	1 BARBOUR	AUDRA	347993	BLUE RIDGE	UNDERGROUND	DAVIS RICHARD R COAL CO
5172	54	33 HARRISON	SHINSTON	304626	BLUE RIDGE	UNDERGROUND	V & H COAL CO
5173	54	91 TAYLOR	GRANT	309126	BLUE RIDGE #2	UNDERGROUND	BLUE RIDGE COAL CO
5174	54	25 GREENBRIER	DUO	321807	BLUE RIDGE NO 1	UNDERGROUND	BLUE RIDGE COAL CO
5175	54	19 FAYETTE	UNKNOWN QUADRANGLE	336805	BLUE RIDGE NO 1	UNKNOWN	UNKNOWN
5176	54	25 GREENBRIER	UNKNOWN QUADRANGLE	315781	BLUE RIDGE NO 2	UNDERGROUND	BLUE RIDGE COAL CO
5177	54	91 TAYLOR	HEMMENT	319091	BLUE RIDGE NO 4	UNDERGROUND	BLUE RIDGE COAL CO
5178	54	47 MCDOWELL	DAVY	347897	BLUE RIDGE NO 76-2	UNDERGROUND	BLUE RIDGE COAL CO
5179	54	47 MCDOWELL	DAVY	349972	BLUE RIDGE NO 76-2	UNDERGROUND	BLUE RIDGE COAL CO
5180	54	47 MCDOWELL	DAVY	374900	BLUE RIDGE NO 76-2 PLAN	UNDERGROUND	BLUE RIDGE COAL CO
5181	54	19 FAYETTE	MEADOW CREEK	315888	BLUE RIDGE NO 8	UNDERGROUND	BLUE RIDGE COAL CO
5182	54	19 FAYETTE	THURMOND	315763	BLUE RIDGE NOS 1 AND 2	UNDERGROUND	BLUE RIDGE COAL CO

•Search in DeLorme software

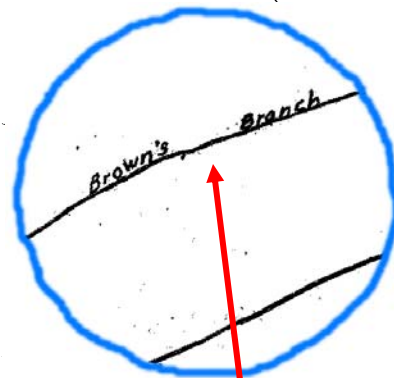


# DeLorme Xmap 4.5, 3-D Topoquad Data Set, and Street Atlas 2005



- Add Datasets
- QuickSearch Find
- Measure
- Split Screen
- Create Routes
- 2-D and 3-D terrain with shaded relief
- Land Cover/Use and Elevation Contours
- GPS Receiver
- Image Registration

- Search DeLorme software
- Record County Name
- Look at streams
- Notice coal contours



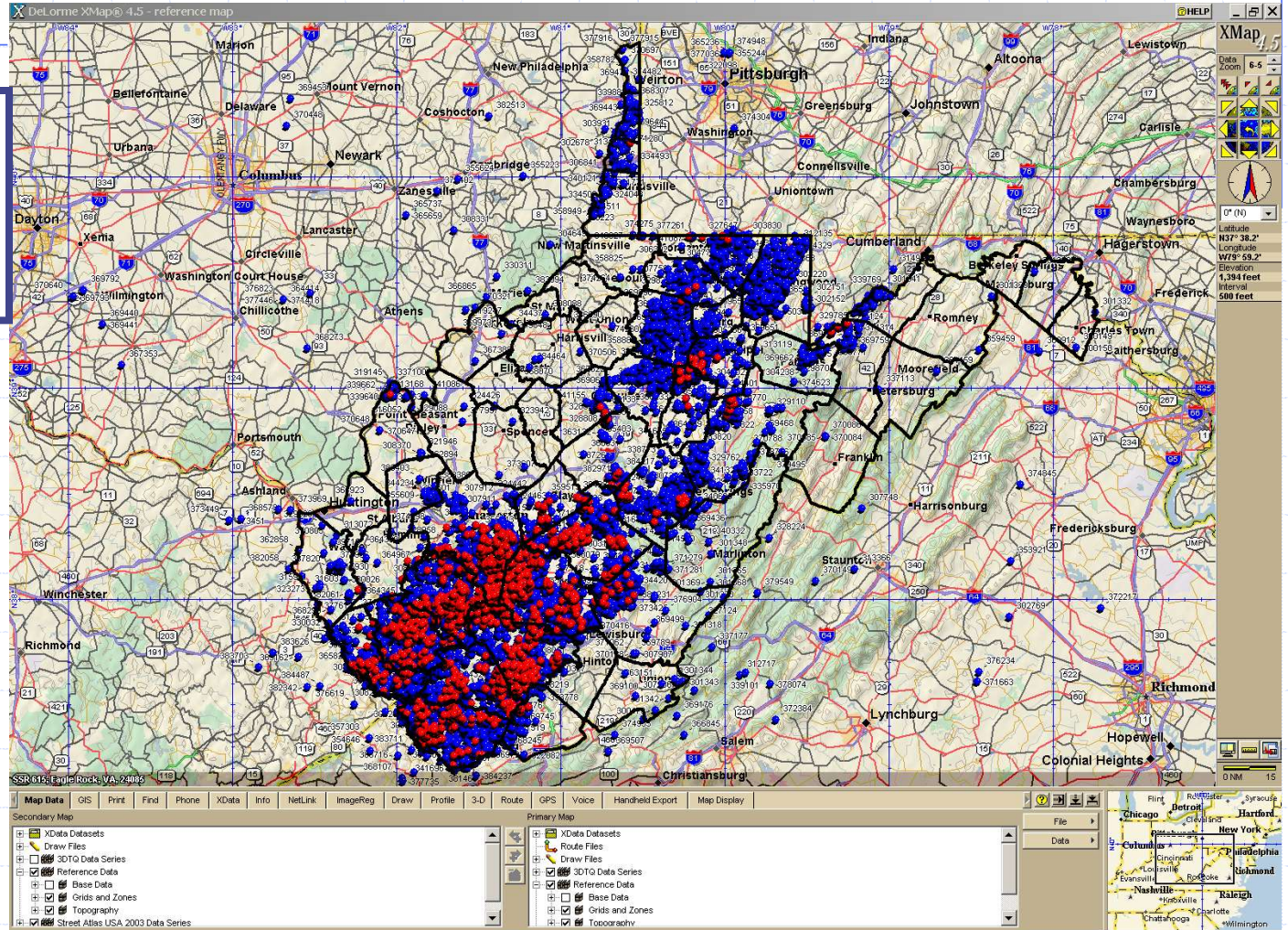
MINE MAP - NO. 5 BLOCK SEAM (UPPER BENCH)  
BLUE PENNANT MINE NO. 15  
WESTERN POCAHONTAS CORPORATION - LESSOR  
GLOGORA COAL COMPANY - LESSEE  
BOONE COUNTY - WEST VIRGINIA

SCALE 1" = \_\_\_\_\_ MAY 1947

FERGUSON - GATES ENGINEERING COMPANY - BECKLEY WEST VIRGINIA  
MAP NO. 1643 - B - 2

# Point Data Representing Abandoned Mine Locations

OSM points  
WVOMHST  
points



- Points can be queried by document numbers.
- Place Names can be queried.
- Streams and Landmarks can be queried.

The screenshot shows a software interface with a menu bar at the top containing: Map Data, GIS, Print, Find, Phone, XData, Info, NetLink, ImageReg, Draw, Profile, 3-D, Route, GPS, Voice, Handheld Export, and Map Display. Below the menu bar, there are several search-related buttons: QuickSearch, Advanced, and Radar. The 'Advanced' search panel is active, showing search criteria: 'Find: Name' (dropdown), 'Within World' (dropdown), 'Name: 339519' (text input), 'State: WV' (dropdown), and 'Country: United States' (dropdown). There are also checkboxes for 'MapTags' (checked) and 'MapTags' (unchecked). A 'Search' button and a 'Results' button are located at the bottom of the search panel.

# DeLorme zooms to point of interest.

The screenshot displays the DeLorme XMap 4.5 interface. The main map area shows a topographic map with contour lines and various features. A search results table is visible at the bottom, listing search results for 'Whitesville, WV'.

Name	City/Town	State/Admin	ZIP C...	US County	Category	Coordinate	Source
339519	Whitesville	WV (West Virginia)	25209	Boone County	XData (Blue Dot) - C:\	N37° 56' 53.00", W81° 36'	C:\DeLorme Docs\Datasets
4-Wheel Dr	West Union	WV (West Virginia)	26456	Doddridge County	Trail (Recreational Lan...		Global Index



Adjusting the azimuth may be helpful.

The image displays the DeLorme XMap 4.5 software interface. The main window shows a topographic map with contour lines, roads, and various landmarks. A red vertical line is drawn across the map. The map title is "DeLorme XMap® 4.5 - reference map".

On the right side, there is a vertical toolbar with several icons for navigation and map manipulation. Below the toolbar is a compass rose and a list of azimuth options: 0° (N), 45° (NE), 90° (E), 135° (SE), 180° (S), and 225° (SW). The current azimuth is set to 0° (N). Below the list, the scale is indicated as "50 feet".

The zoomed-in view on the right shows a section of the map with a red vertical line. The map shows contour lines, a road, and a "Gas Well" label. The map title in the zoomed view is "XMap 4.5". The zoom level is "13-2". The map shows a "Gas Well" label and a "JEER" label. The map shows a "Gas Well" label and a "JEER" label. The map shows a "Gas Well" label and a "JEER" label.

The software interface includes a menu bar at the top with options: Map Data, GIS, Print, Find, Phone, XData, Info, NetLink, ImageReg, Draw, Profile, 3-D, Route, GPS, Voice, Handheld Export, Map Display. Below the menu bar are two panels: "Secondary Map" and "Primary Map".

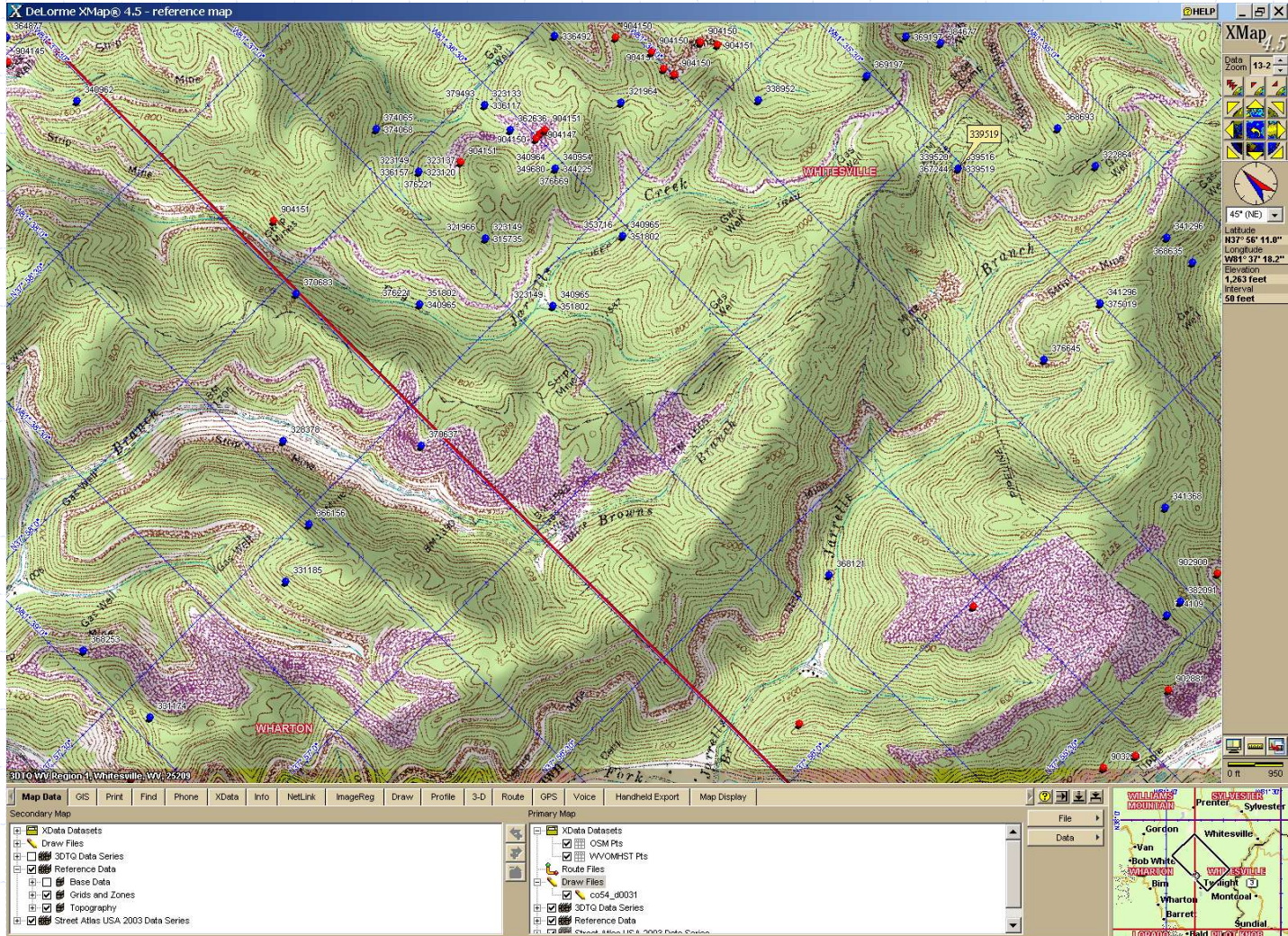
The "Secondary Map" panel contains the following items:

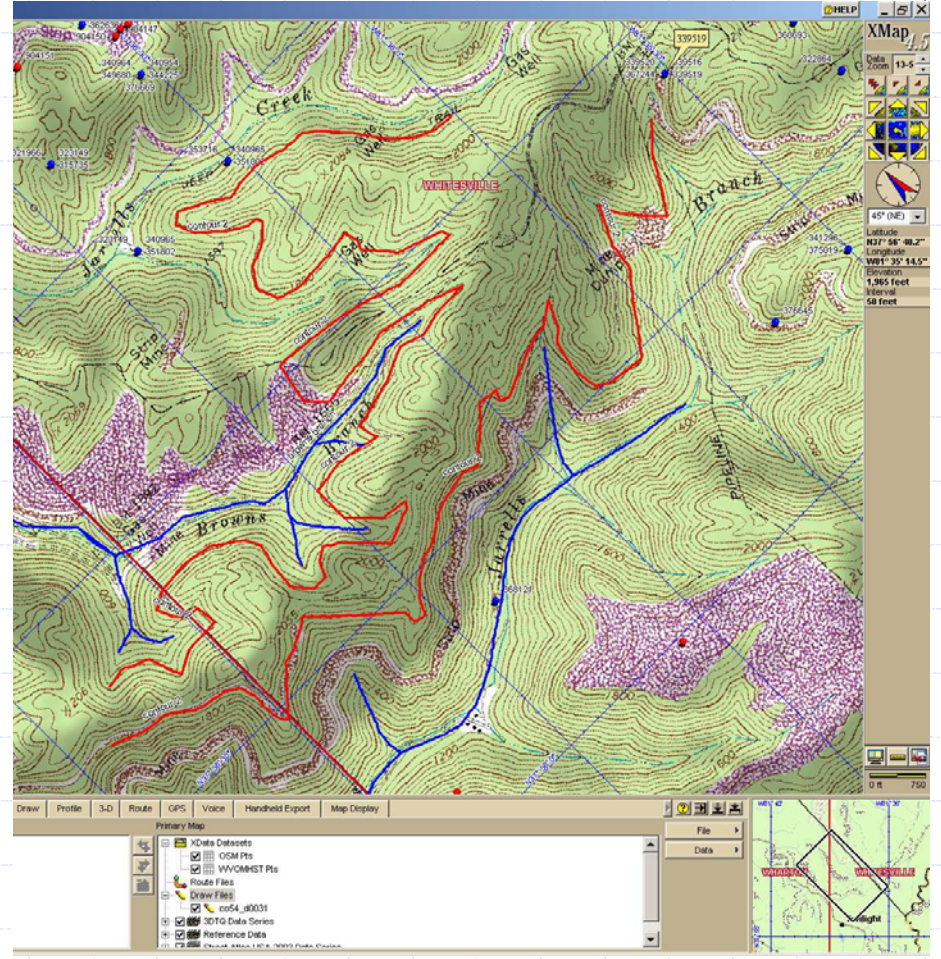
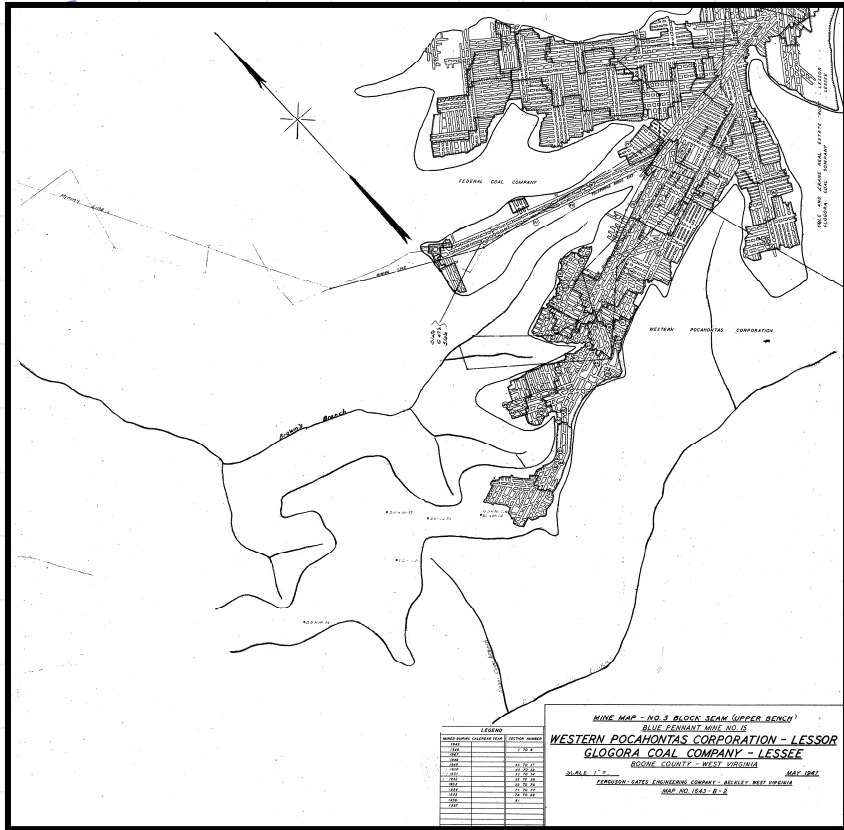
- XData Datasets
- Draw Files
- 3DTG Data Series
- Reference Data
- Base Data
- Grids and Zones
- Topography
- Street Atlas USA 2003 Data Series

The "Primary Map" panel contains the following items:

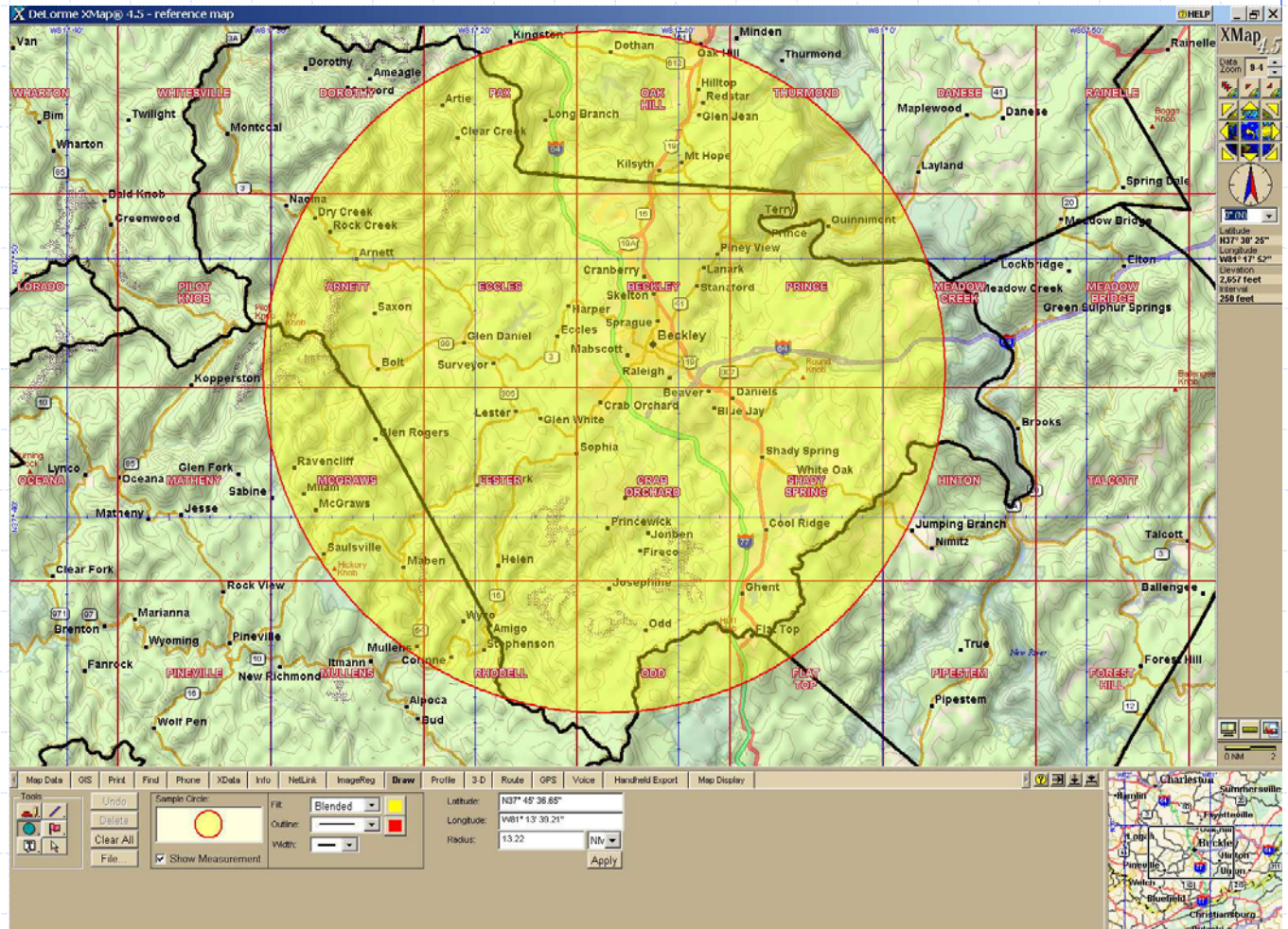
- XData Datasets
- OSM Pts
- VVOMHST Pts
- Route Files
- Draw Files
- c054\_00031
- 3DTG Data Series
- Reference Data

# Verify location using ground control points and planimetrics.





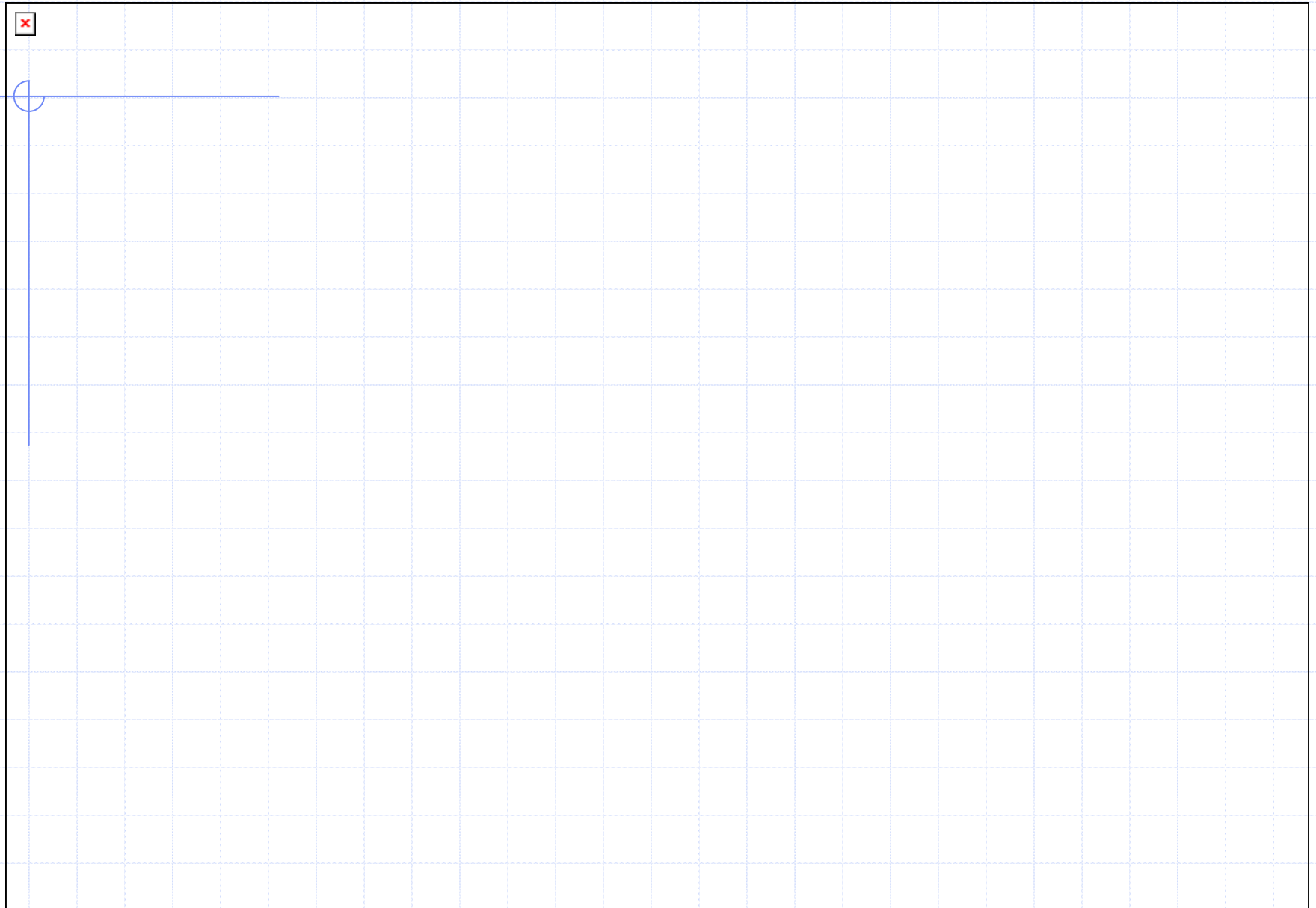
# Using Image Registration in DeLorme

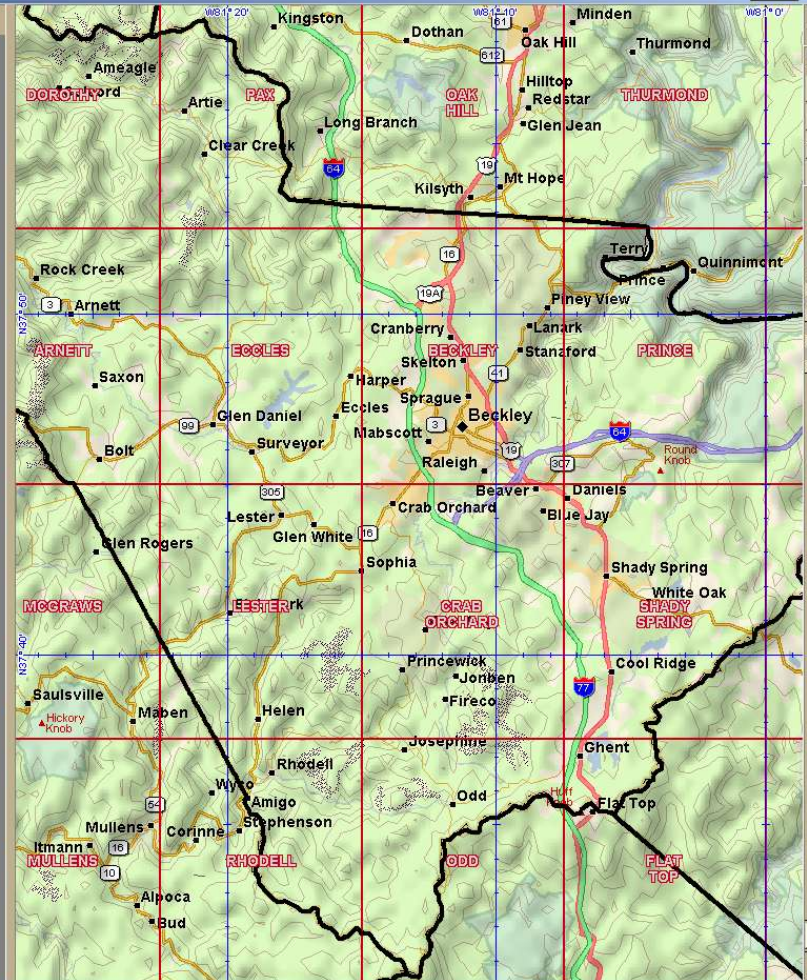
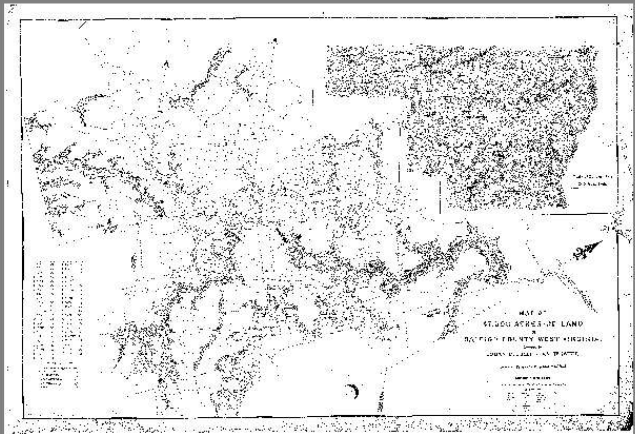


When researching any one archive, mineworks may be clustered within a given area.

Occasionally a small scale “Rosetta Stone” map may be useful to help locate mineworks.

# Small Scale "Rosetta Stone" Tract Map





**XMap 4.5**

Data Zoom 9-4

Latitude N37° 44' 22"

Longitude W81° 25' 37"

Elevation 2,756 feet

Interval 250 feet

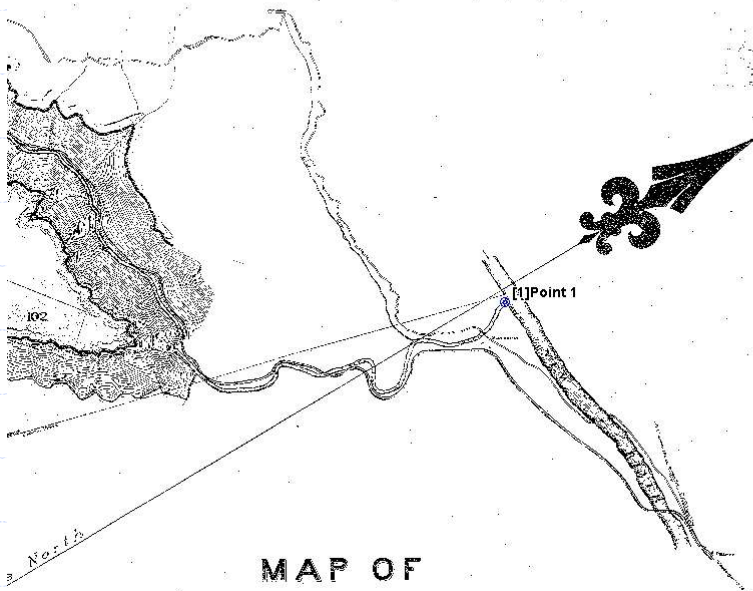
WorkFile	Point	Label	ImageX	ImageY	Latitude	Longitude
Register	*					
Create Data						

Rotation: 0.0° Data Resolution: 0.00 ft/pixel

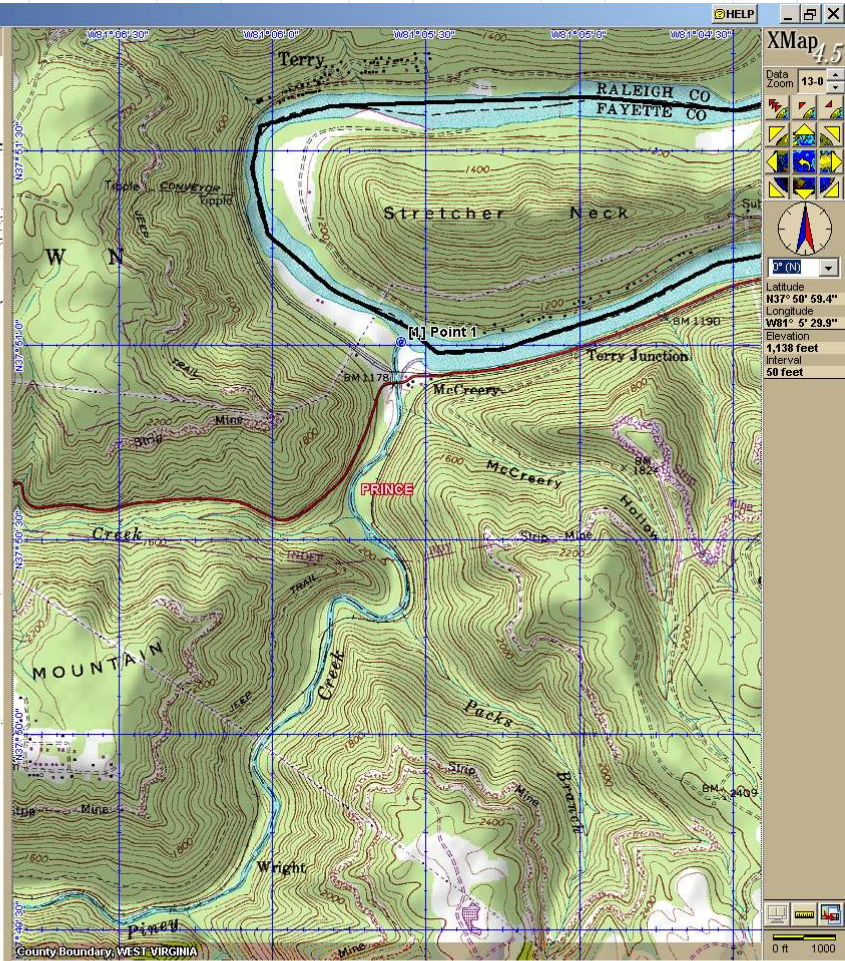
To register an image to the map, use the select tool to place a point on the secondary map and a corresponding point on the primary map. If you do not know the rotation and data resolution of the image, place a second point on both maps.



Magnity 25%



MAP OF  
47,000 ACRES OF LAND  
IN  
RALEIGH COUNTY, WEST VIRGINIA.  
Owned by



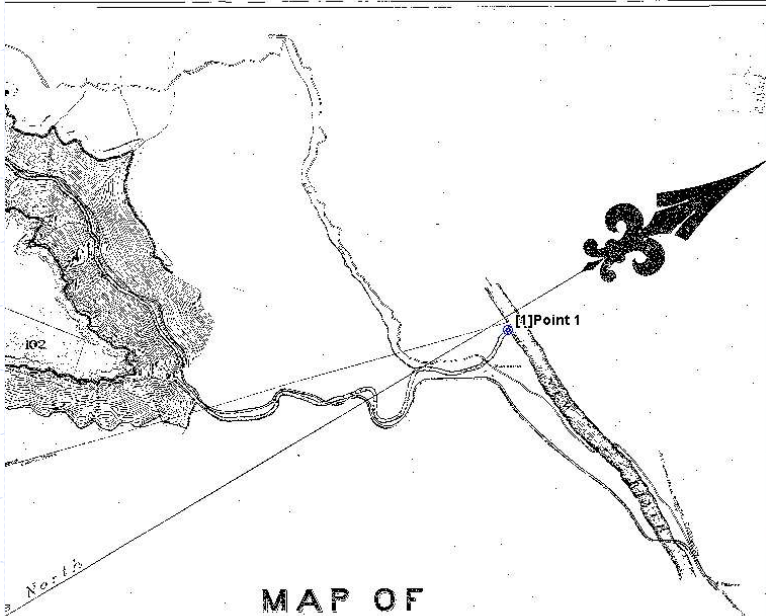
Map Data GIS Print Find Phone XData Info NetLink **ImageReg** Draw Profile 3-D Route GPS Voice

WorkFile **Register**

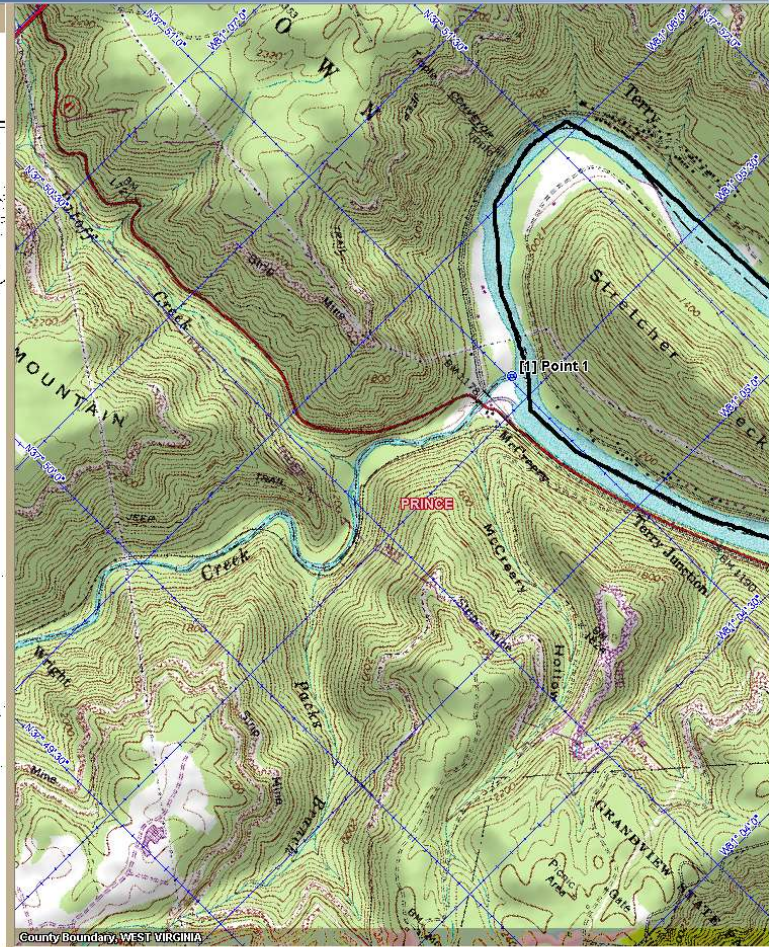
Rotation: 0.0° Data Resolution: 0.00 ft/pixel

To register an image to the map, use the select tool to place a point on the secondary map and a corresponding point on the primary map. If you do not know the rotation and data resolution of the image, place a second point on both maps.





MAP OF  
47,000 ACRES OF LAND  
IN  
BECKLEY COUNTY, WEST VIRGINIA.  
Owned by



WorkFile	Point	Label	ImageX	ImageY	Latitude	Longitude
Register	*					
Create Data						

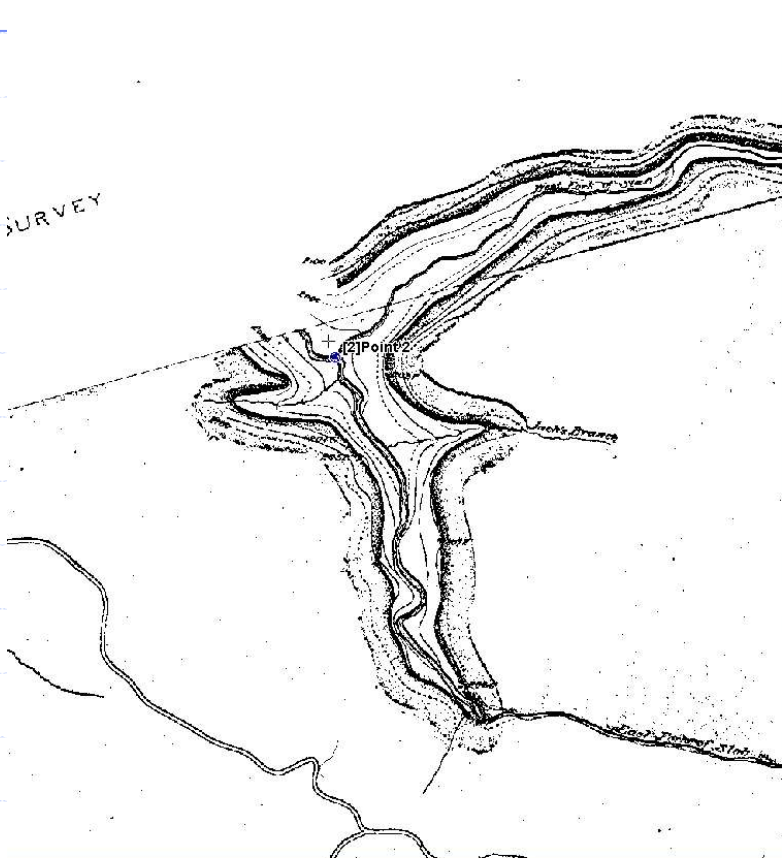
Rotation: 0.0° Data Resolution: 0.00 ft/pixel

To register an image to the map, use the select tool to place a point on the secondary map and a corresponding point on the primary map. If you do not know the rotation and data resolution of the image, place a second point on both maps.





Magnify 77%



XMap 4.5

Data Zoom 13-6

315° (N)

Latitude N37° 41' 12.4"

Longitude W81° 20' 1.6"

Elevation 1,824 feet

Interval 50 feet

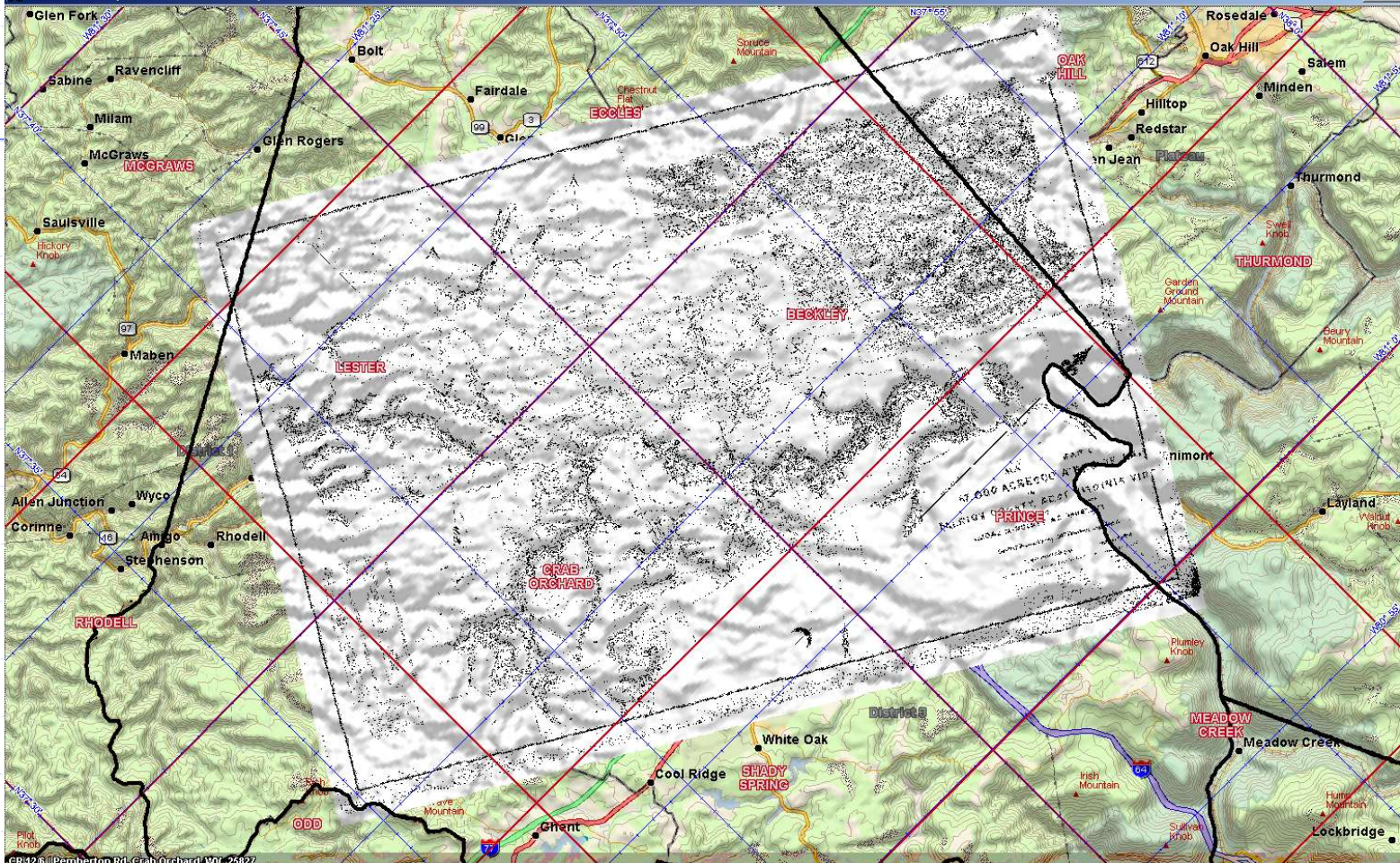
Map Data GIS Print Find Phone XData Info NetLink **ImageReg** Draw Profile 3-D Route GPS Voice Handheld Export Map Display

WorkFile	Point	Label	ImageX	ImageY	Latitude	Longitude
Register	?	Point:2	1744	2466	N37° 41' 12.215"	W81° 19' 50.484"
Create Data	X					

Rotation: 59.1° Data Resolution: 7.56 ft/pixel

To register an image to the map, use the select tool to place a point on the secondary map and a corresponding point on the primary map. If you do not know the rotation and data resolution of the image, place a second point on both maps.





**XMap 4.5**

Data Zoom 10.1

315° (NW)

Latitude 43° 43' 42"

Longitude W81° 13' 53"

Elevation 2,464 feet

Interval 100 feet

0 NM 1

GR126 Pemberton Rd, Crab Orchard, WV, 25827

- Map Data
- GIS
- Print
- Find
- Phone
- XData
- Info
- NetLink
- ImageReg
- Draw
- Profile
- 3-D
- Route
- GPS
- Voice
- Handheld Export
- Map Display

Secondary Map

- XData Datasets
  - OSM Pts
  - WVOMHST Pts
- Draw Files
  - 3DTQ Data Series
  - ImageData Series
  - Reference Data
  - Base Data
  - Grids and Zones
  - Topography

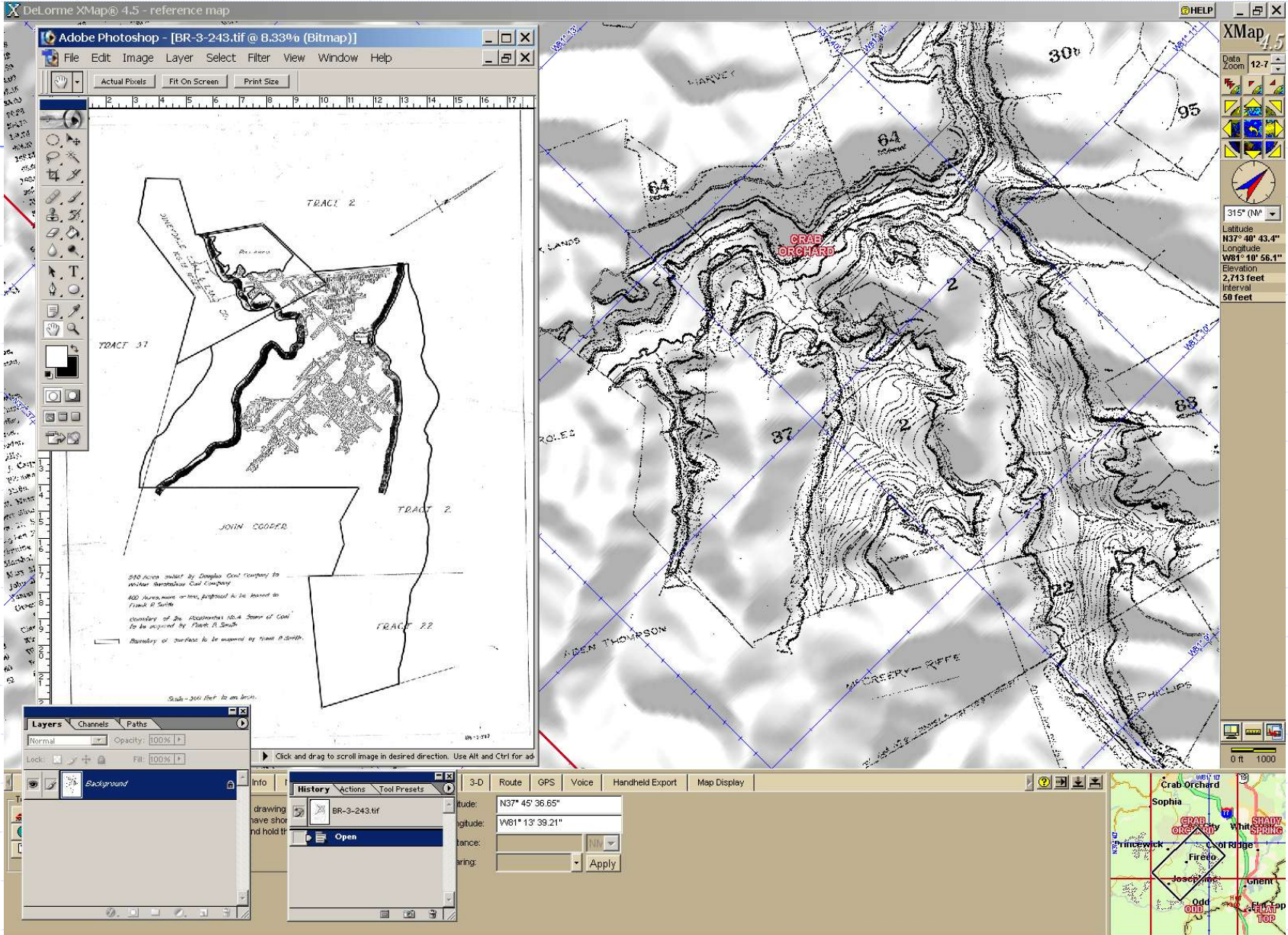
Primary Map

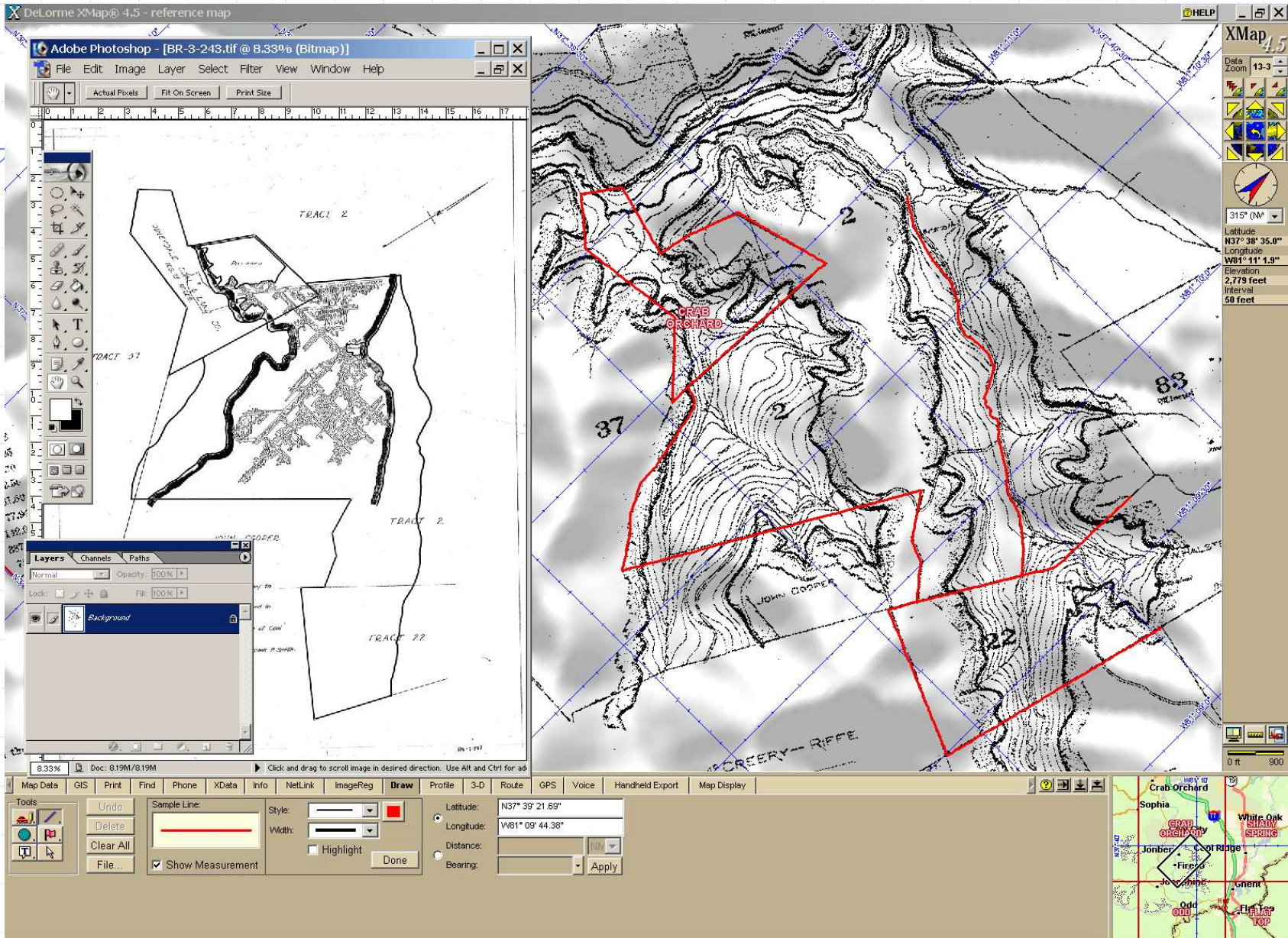
- XData Datasets
- Route Files
- Draw Files
  - co54\_d0031
- 3DTQ Data Series
- ImageData Series
- UserImageData
- BR-5Connection
- Reference Data
- Street Atlas USA 2003 Data Series

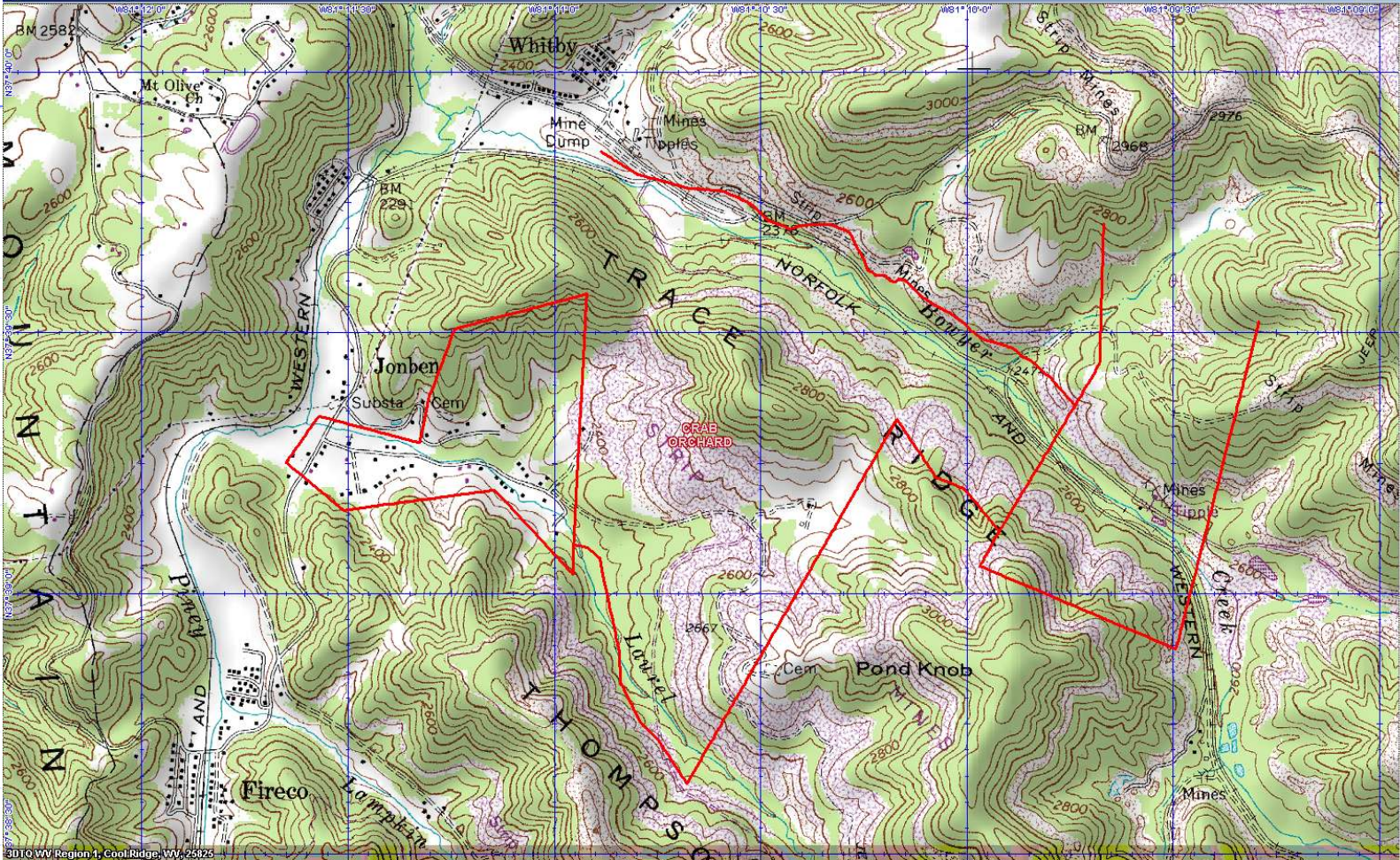
File

Data

Inset map showing regional context with cities like Charleston, Summersville, Fayetteville, Logan, Beckley, Hinton, Union, Pineville, Welch, Bluefield, Christiansburg, and Putaski.



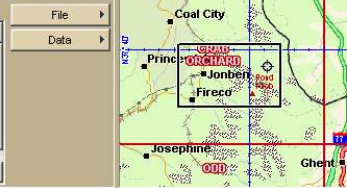




0° (N)  
Latitude N37° 39' 34.0"  
Longitude W81° 9' 21.2"  
Elevation 2,900 feet  
Interval 50 feet

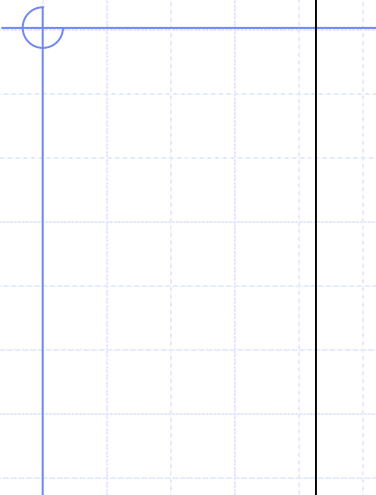
- Secondary Map
- XData Datasets
    - OSM Pts
    - WVOMHST Pts
  - Draw Files
  - 3DTQ Data Series
  - ImageData Series
  - Reference Data
  - Base Data
  - Grids and Zones
  - Topography

- Primary Map
- XData Datasets
  - Route Files
  - Draw Files
    - co54\_d0031
  - 3DTQ Data Series
  - ImageData Series
  - UserImageData
  - BR-Scconnection
  - Reference Data
  - Street Atlas USA 2003 Data Series



# Using A Local Coordinate System for Multi-Sheet Maps

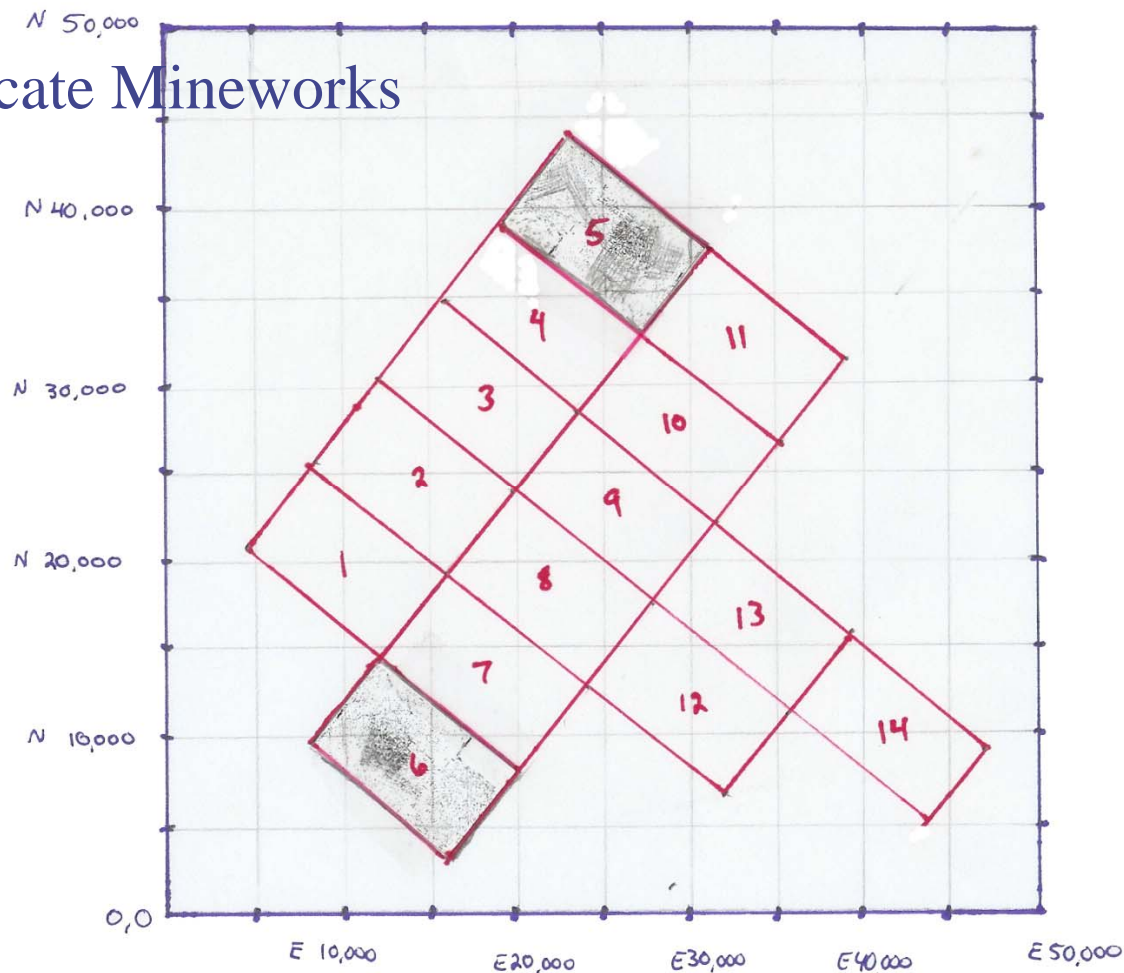
- Determine placement of sheets



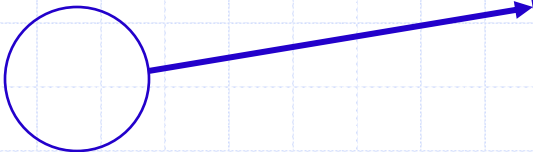
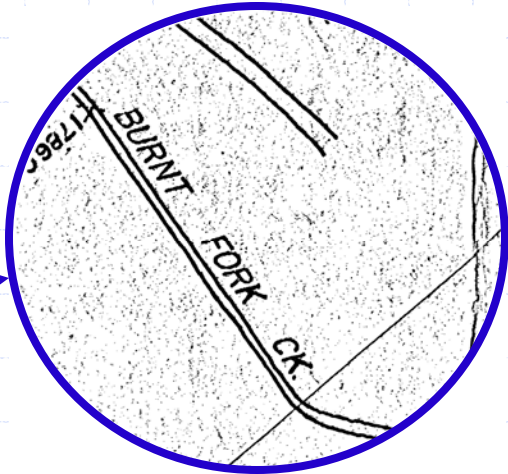
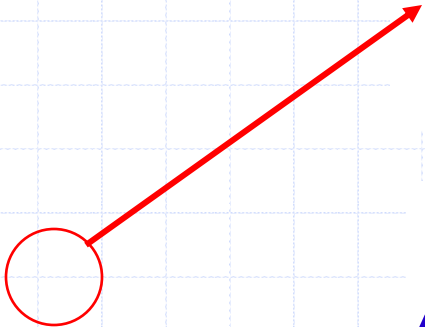
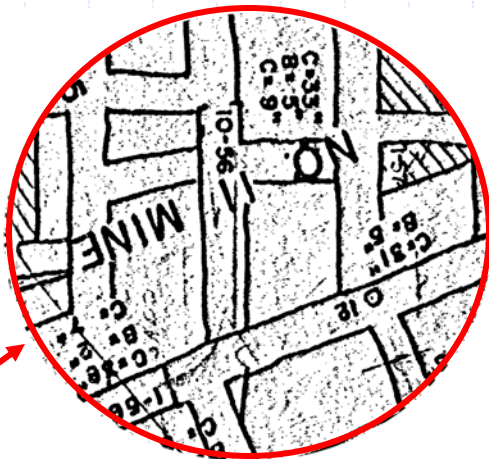
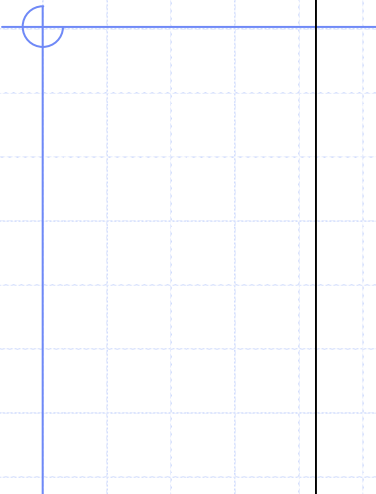
# Using A Local Coordinate System for Multi-Sheet Maps

- Determine placement of sheets

- Locate Mineworks

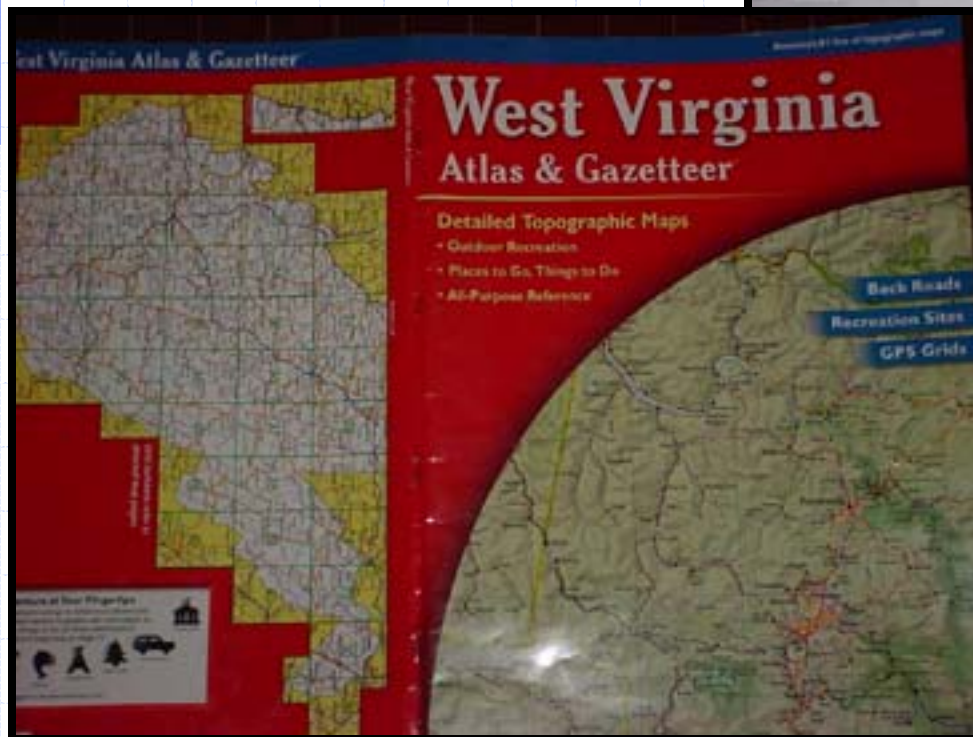
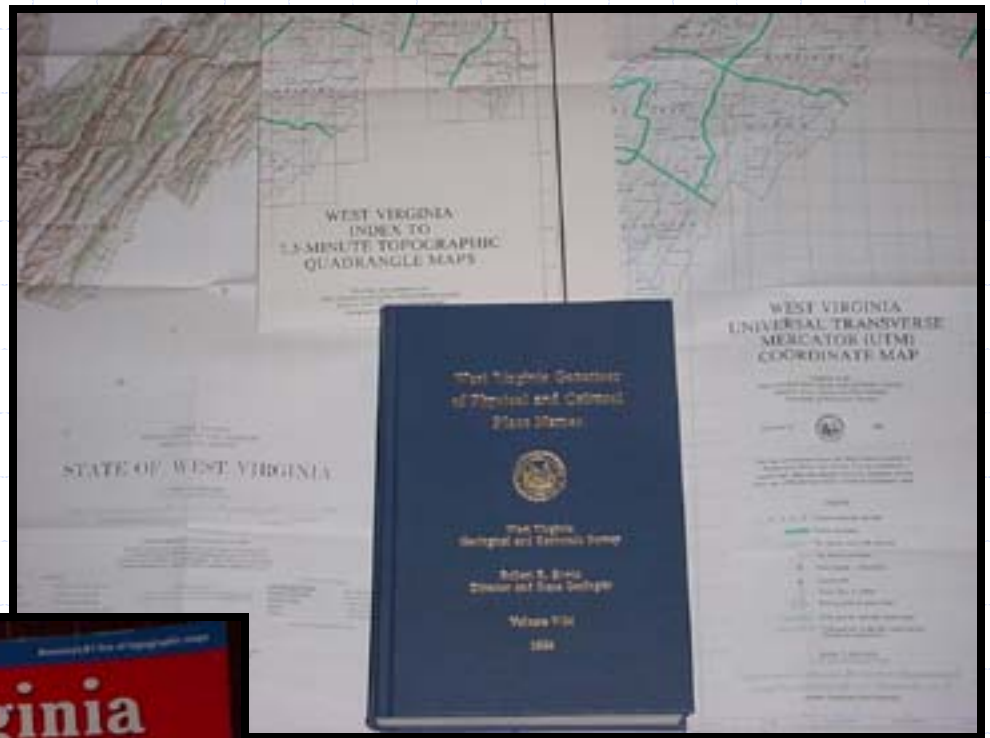






# WV Gazetteer

WVGES 1986



DeLorme Atlas &  
Gazetteer

# WVGES Gazetteer yields two results.

Burnt Fork of Slab Fork of Guyandotte  
River of Ohio River

Raleigh County

Lester Quad

UTM's 469140 E

4170300 N

Burnt Creek of Smokey Branch of  
Shades of Death Creek of Glade  
Creek of Manns Creek of New  
River

Fayette County

Danese Quad

UTM's 506800 E

4198720 N

A QuickSearch Find using the UTM's in DeLorme places the mineworks on Burnt Fork of Slab Fork.



UTM UPS  
17S  
0467140  
4166390  
Elevation  
1,903 feet  
Interval  
50 feet



Map Data GIS Print Find Phone XData Info NetLink ImageReg Draw Profile 3-D Route GPS Voice Handheld Export Map Display

QuickSearch One Advanced result for:

Advanced 17s, 469140, 4170300

Radar New Search  
 MapTags Go To

Category	*Coordinate	City/Town	State/Admin	ZIP C...	US County	Nearest Street Address	Source
@ Referen...	17S 0469140 4170300	Slab Fork	WV (West Virginia)	25920	Raleigh County		US ZIP Code Polygons (DeLorme) (Vo



# WVOMHS&T



Jay Holden Deal

GIS Technician

WVOMHST

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