How GIS is Used to Meet OMB Circular A-16 Requirements

John Reitsma – BLM Land & Resources Project Office

SWUG Conference

Oct 21, 2004

The Purpose of A-16

- Many governmental agencies are funded by the OMB for mapping efforts…

OMB Circular A-16

http://www.whitehouse.gov/omb/circulars/a016/print/a016_rev.html

- The purpose of the Circular was "**to ensure that surveying and mapping activities may be directed toward meeting the needs of federal and state agencies and the general public, and will be performed expeditiously, without duplication of effort**."

A-16 History

- Originally issued by the President's Office of Management & Budget (OMB) in **1953** to coordinate topographic mapping activities, National Atlas, Geodetic Control Surveys and International Boundaries.

- A 1967 revision placed responsibility for coordination of mapmaking and surveying to the Dept. of Interior, Dept. of Commerce, and Dept. of State.

- A 1990 revision included "geographically referenced **digital** data".

- August 19, 2002 revision incorporated Executive Order 12906 to recognize the implementation of the National Spatial Data Infrastructure (**NSDI**) and the authority of the Federal Geographic Data Committee (**FGDC**) for NSDI coordination.

A-16 Outlines the Provisions of the National Spatial Data Infrastructure

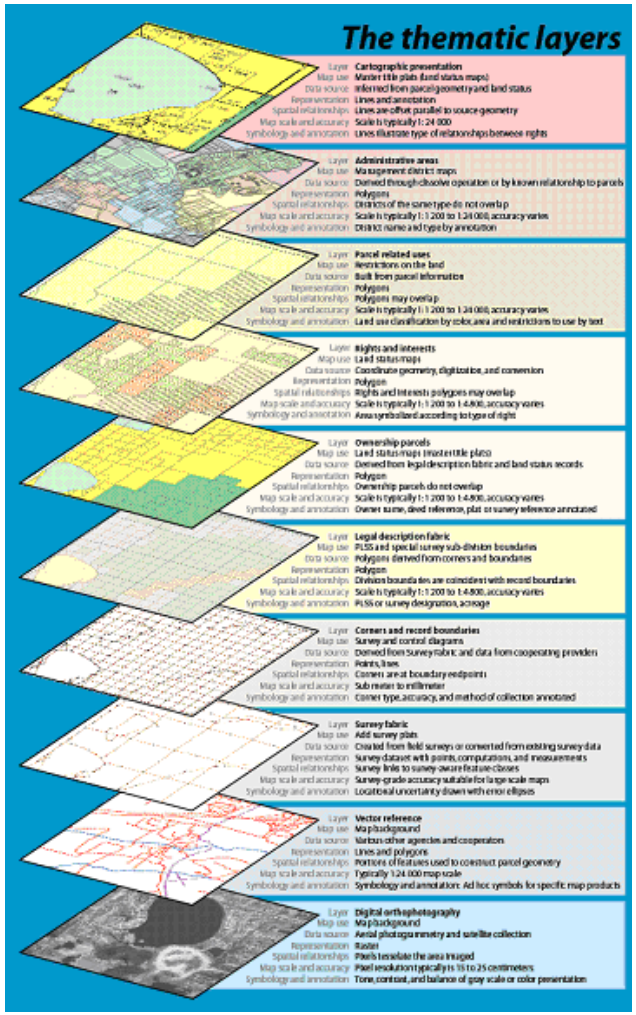
- Data Themes
- Metadata
- National Spatial Data Clearinghouse
- Standards
- Partnerships

Questions People Have Regarding Federally Produced Spatial Data

- Who is the data steward for a particular spatial data theme.
- What data layers are available from the government to the public?
- Where does one go to find Spatial Data?
- When (and how) was the data collected?
- How can I view and use the data?

A-16 Describes Specific Framework Data Layers and Assigns Agency Responsibility

- Geodetic Control
- Cadastral
- Governmental Units
- Transportation
- Elevation and Bathymetry
- Hydrography
- Orthoimagery
  - Plus 27 others…



Meeting A-16 Requirements

- Take **responsibility** for your assigned data layer.
- Work with your **partners** to move toward **standardization** & **interoperability**.
- Document with **METADATA**!
- Make your data **accessible** through a spatial data clearinghouse.

Demonstration

- The National Integrated Land System (NILS) is serving the Bureau of Land Management's assigned spatial data layers in compliance with OMB A-16 Requirements.

http://www.geocommunicator.gov

NILS Spatial Data Layers

- Land Survey Information
- Federal Land Stewardship
- Land & Mineral Use Records

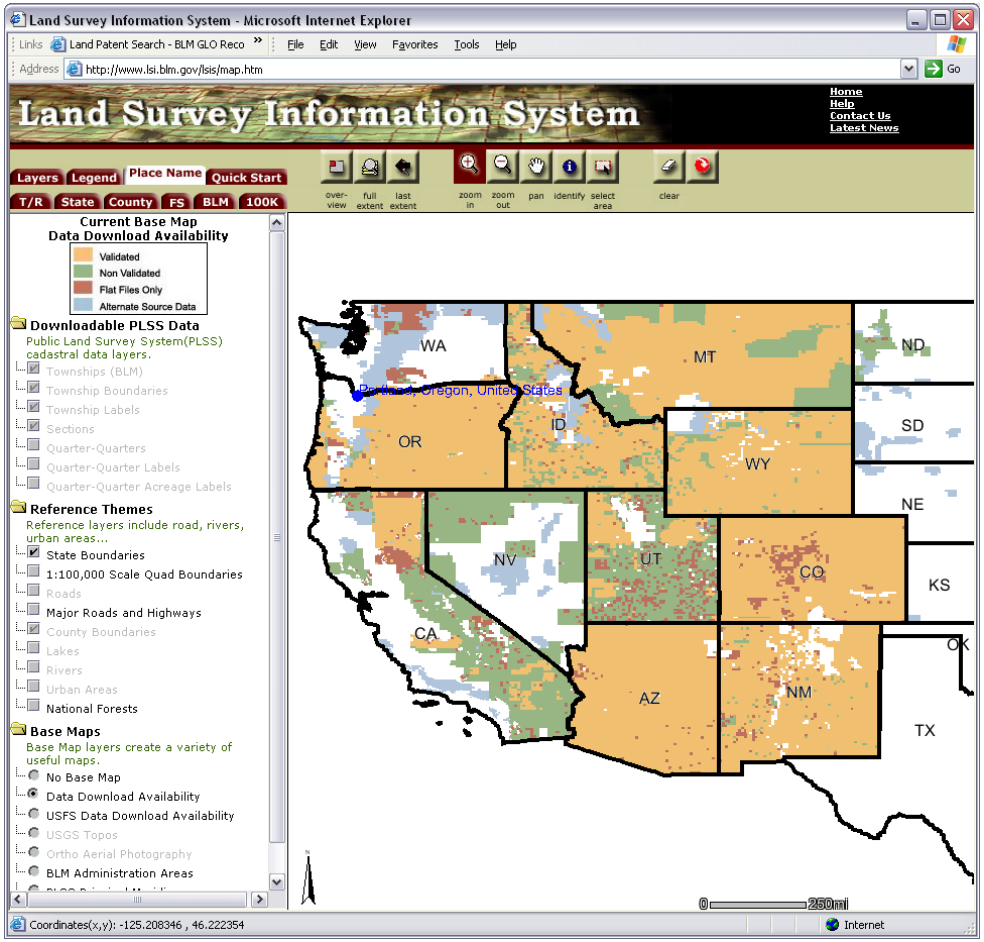
Serving National Spatial Data Layers for the BLM as directed by OMB Circular A-16

http://www.whitehouse.gov/omb/circulars/a016/a016_rev.html

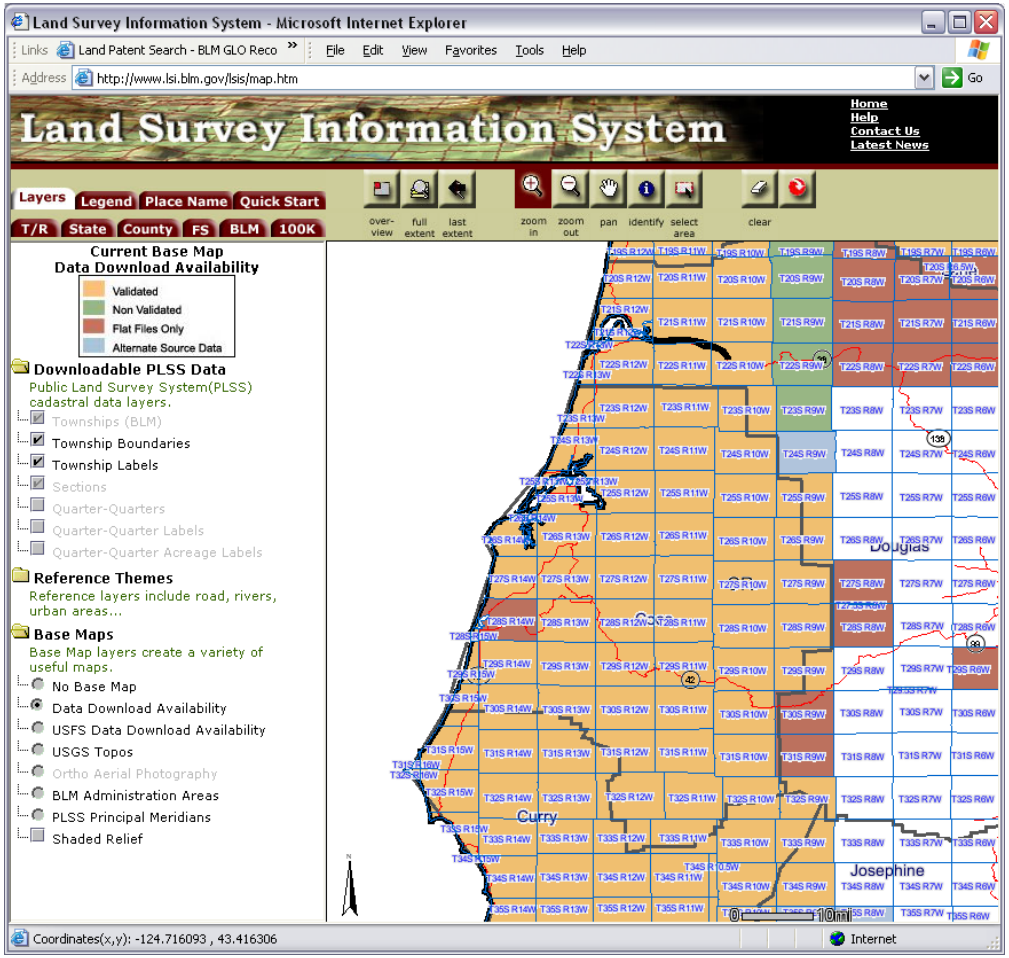
GeoCommunicator: The Portal to NILS Spatial Data

Land Survey Information

- A Seamless Multi-Purpose Cadastre

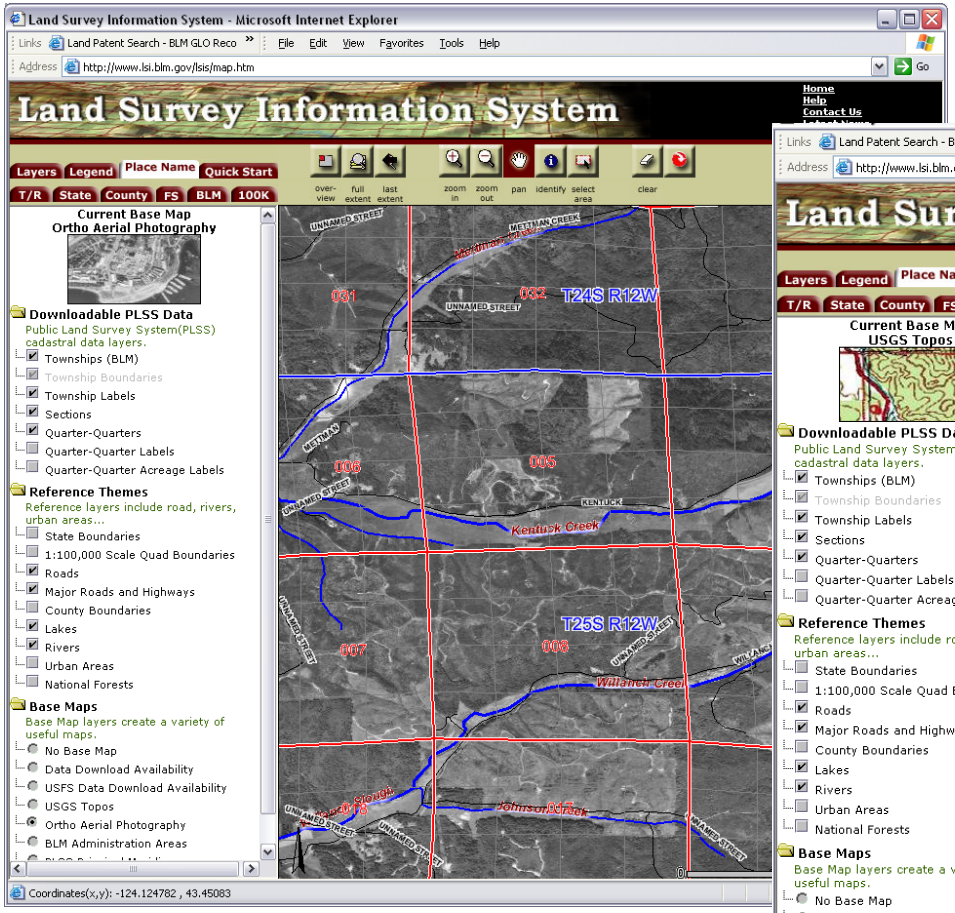


Data is delivered 3 ways…



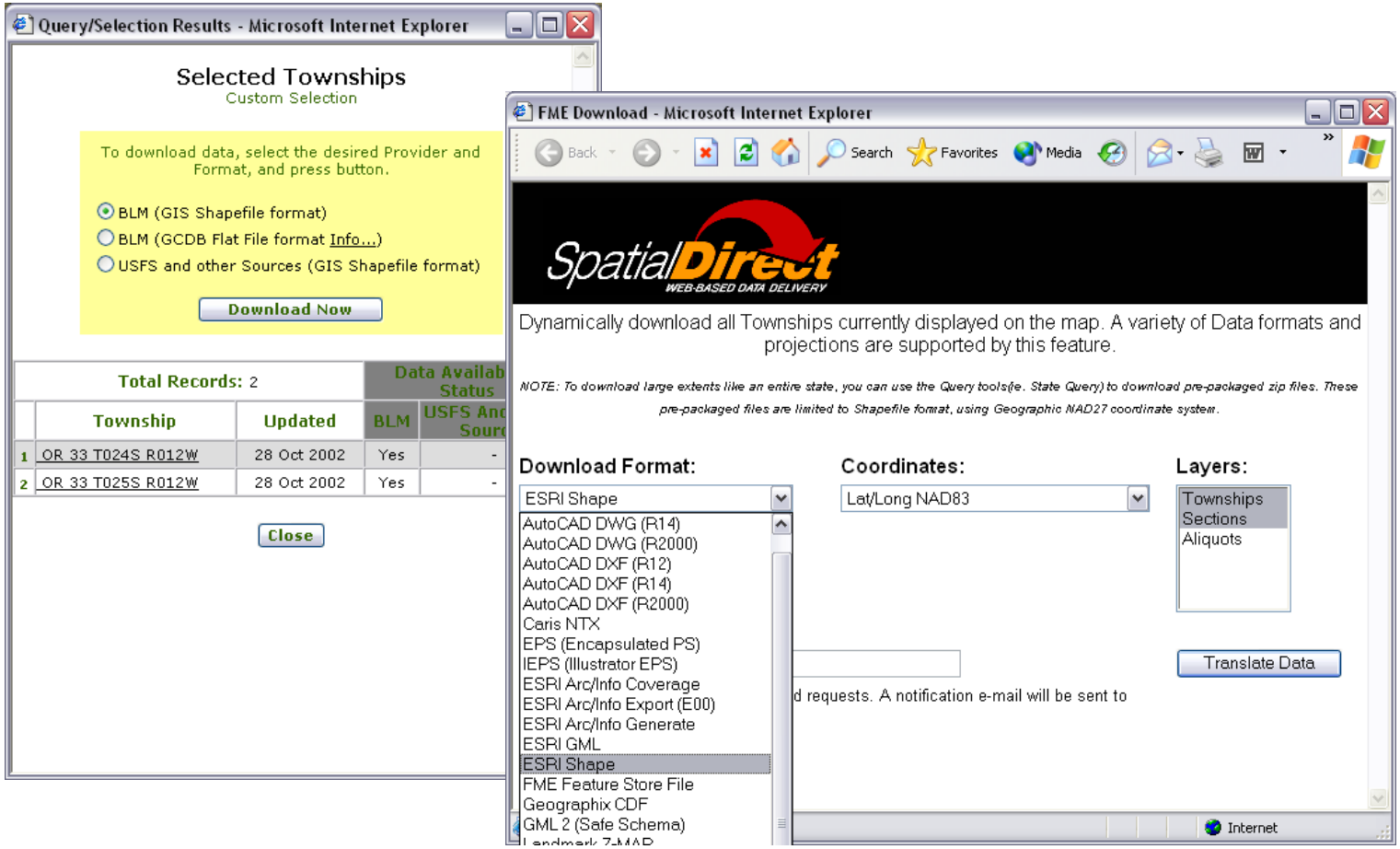
1

- Viewable from the web interface



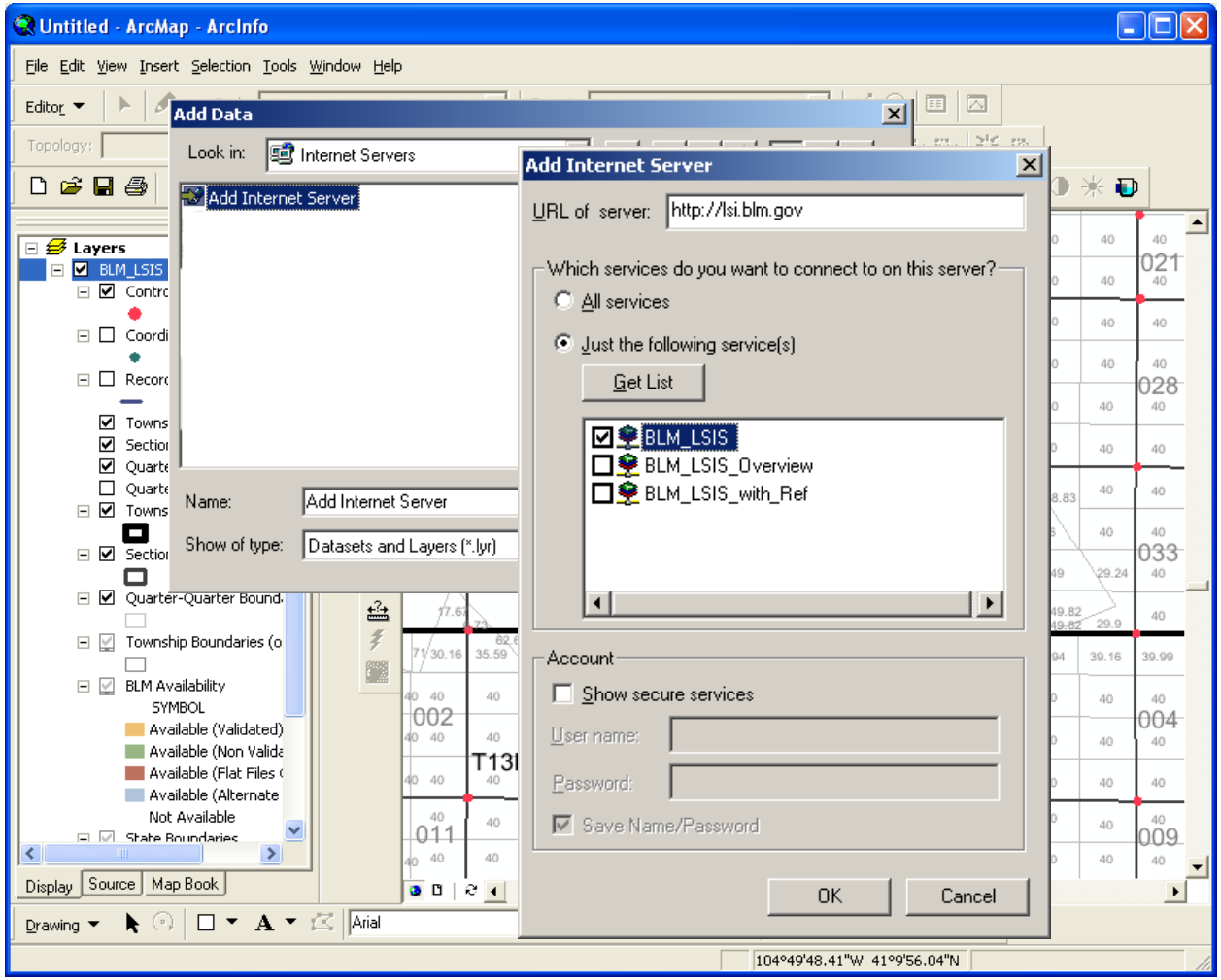
2

- Downloadable as Shapefiles



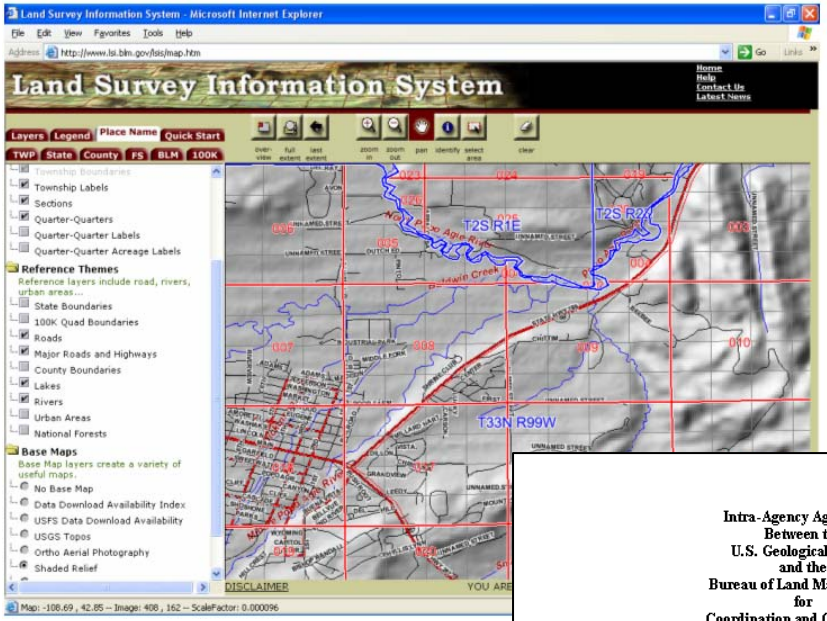
3

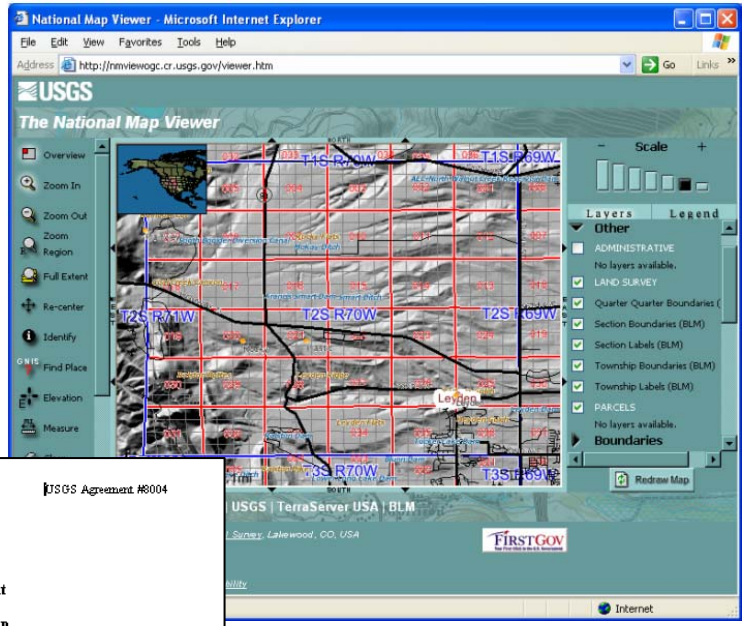
- Accessible as a streaming ArcIMS layer



Part of the National Map

- BLM & USGS sharing data resources





USGS Agreement #8004

Intra-Agency Agreement
Between the
U.S. Geological Survey
and the
Bureau of Land Management
for
Coordination and Cooperation
Pertaining to *The National Map*
and the
National Integrated Land System

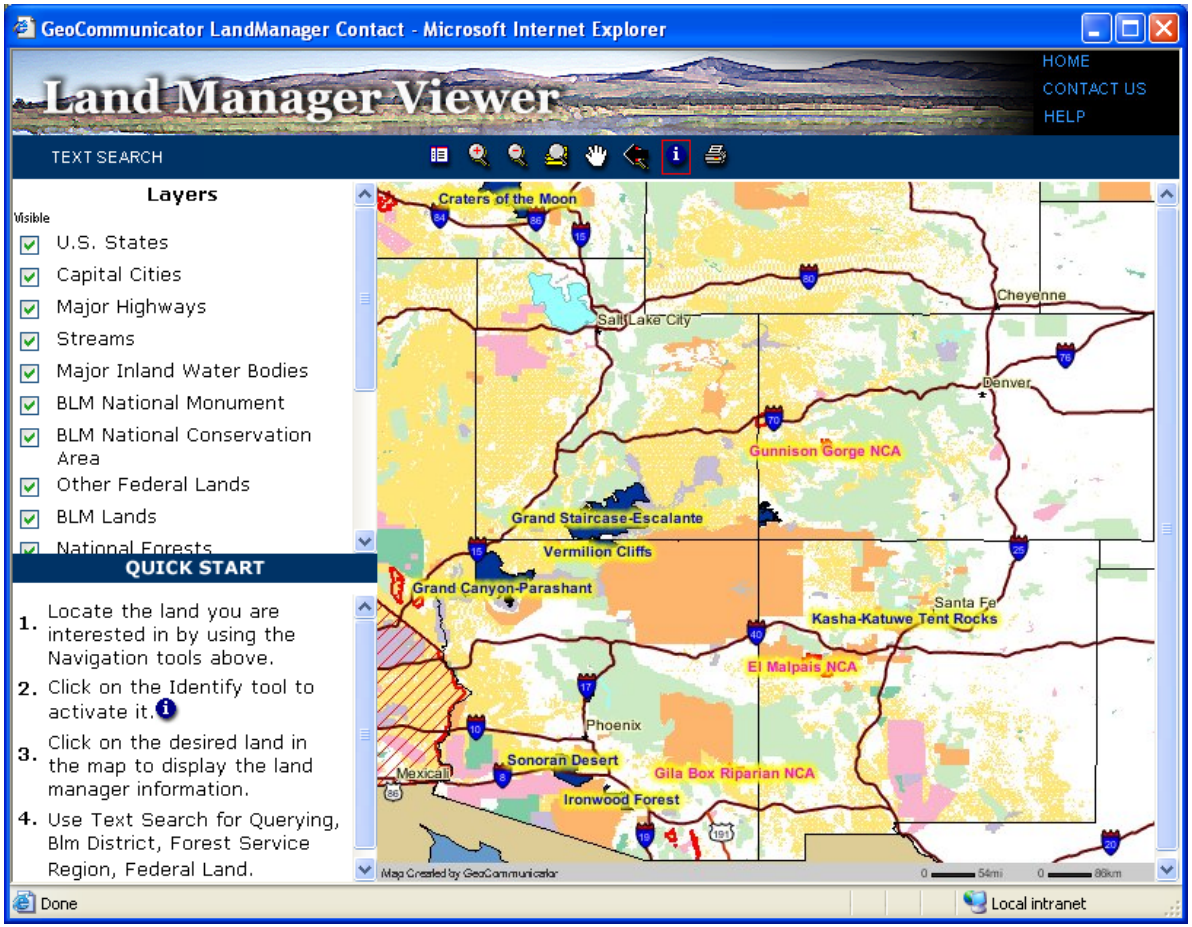
I. Purpose

The purpose of this agreement is to leverage the U.S. Geological Survey (USGS) and Bureau of Land Management (BLM) investments in geospatial data that are contained in *The National Map* and the National Integrated Land System (NILS). This agreement describes key technical considerations that need to be coordinated in order to maintain a mutually beneficial relationship.

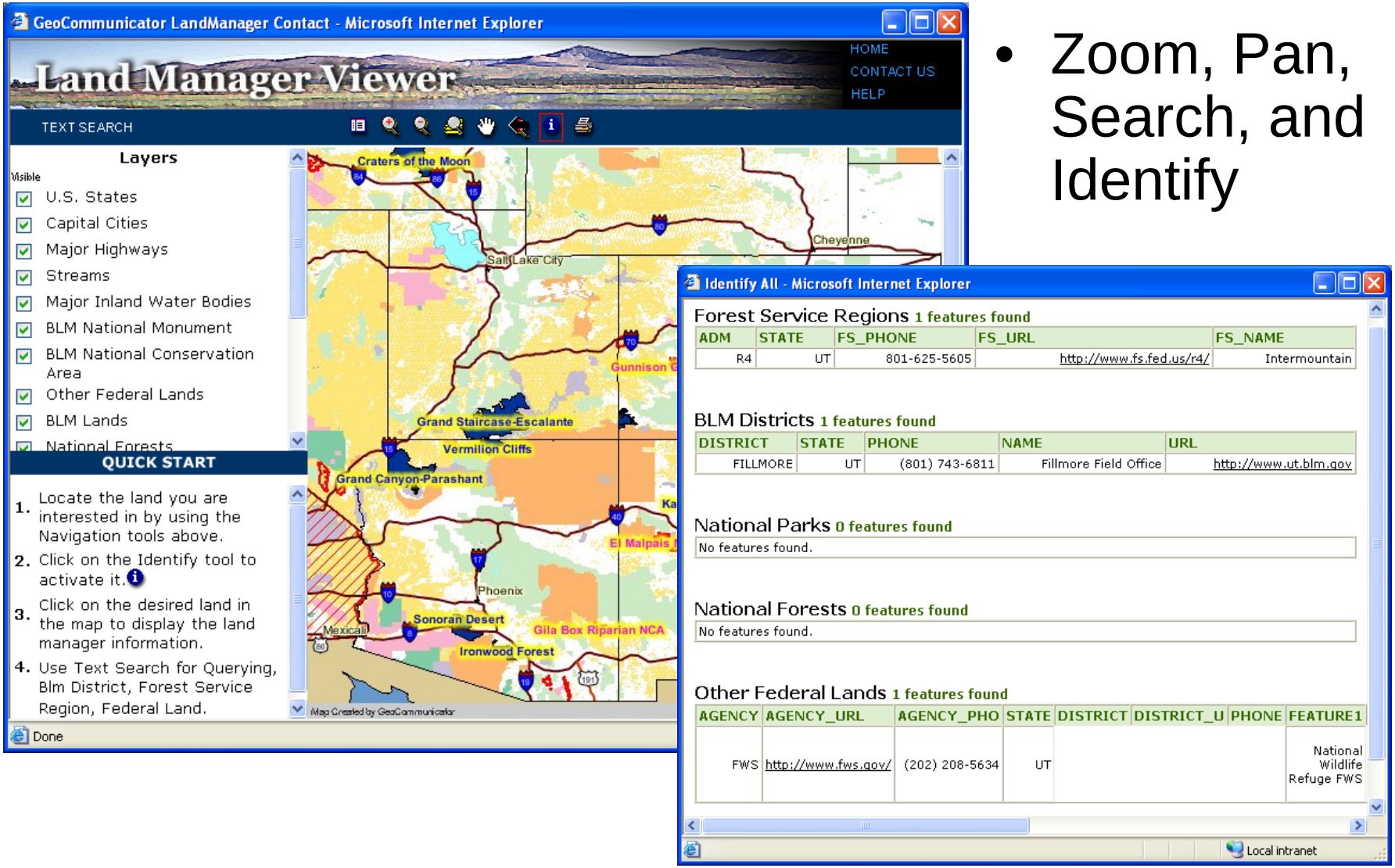
GeoCommunicator: Federal Land Stewardship

Land Manager Viewer

- Displays Surface Land Management Agency



Land Browser Interface

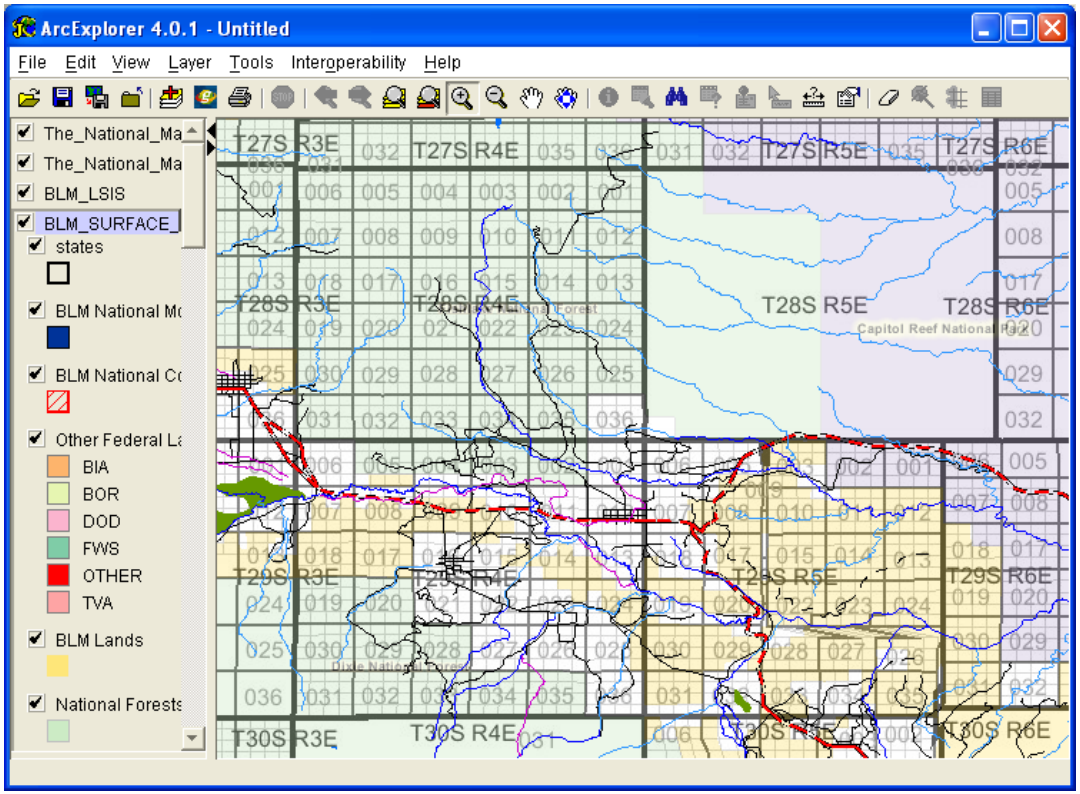


- Zoom, Pan, Search, and Identify

Integrate with other data layers through Desktop or Mobile GIS

- Add data from the internet with the URL:

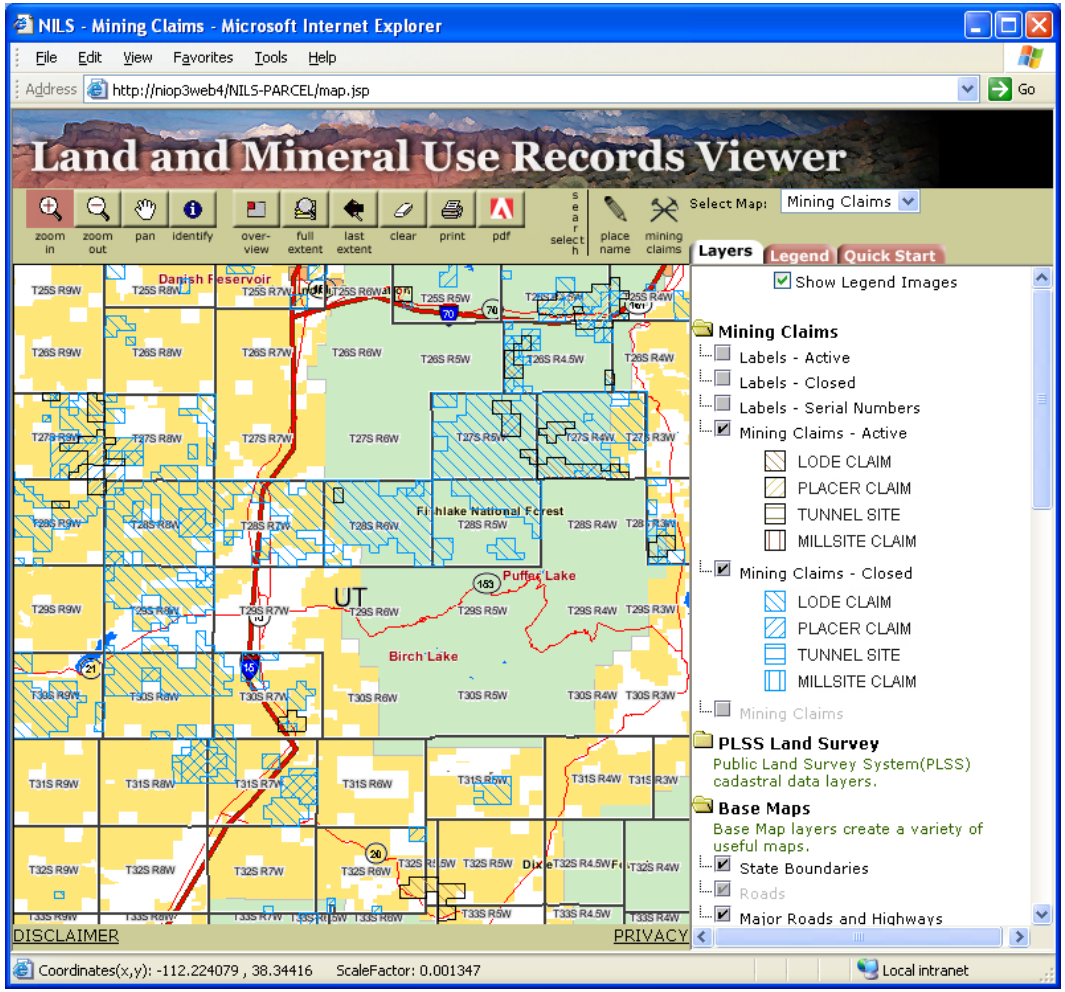
http://lsi.blm.gov



GeoCommunicator: Land & Mineral Use Records

Land & Mineral Use Records Viewer

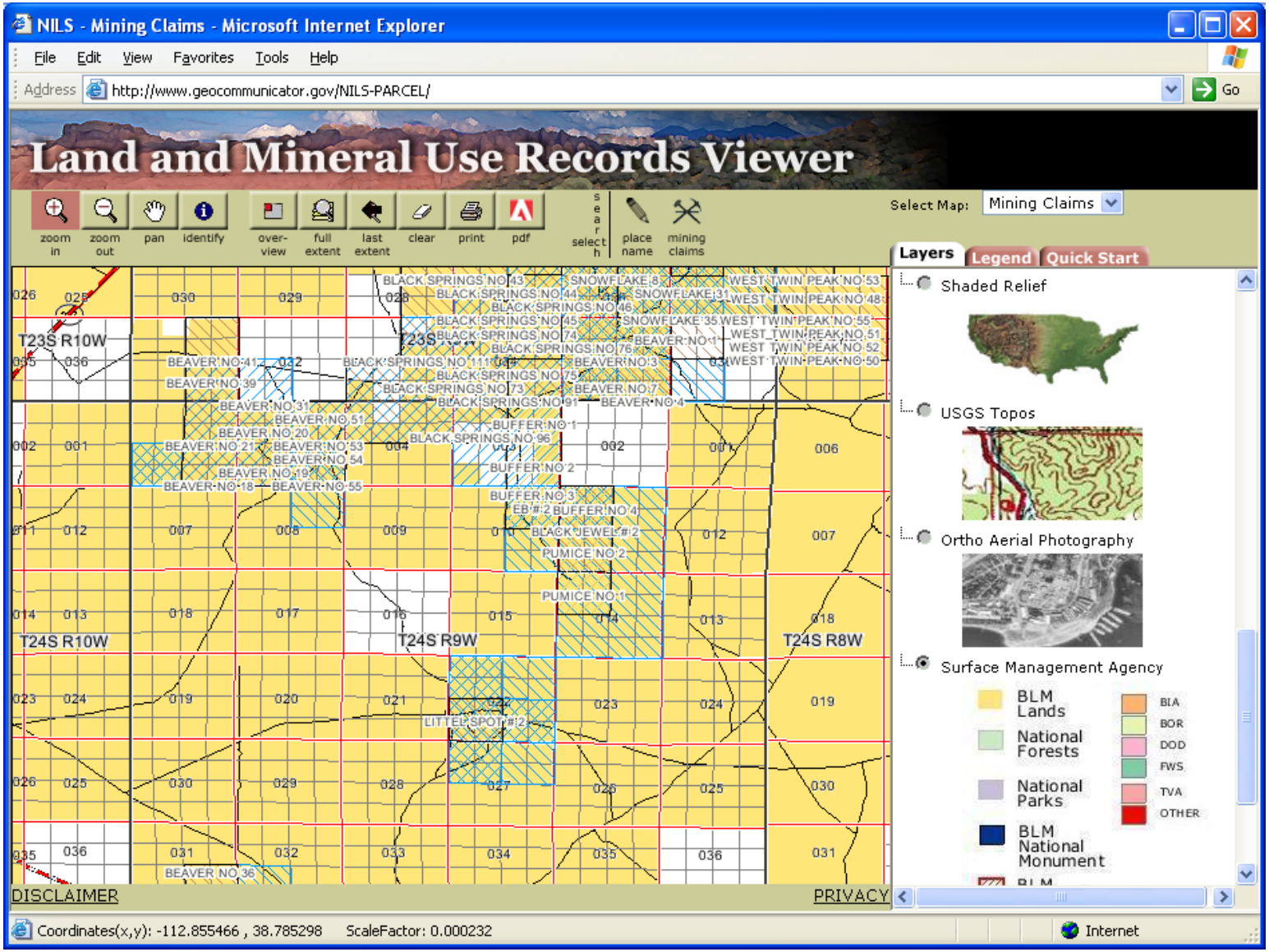
- Mining claims - Oil & Gas leases



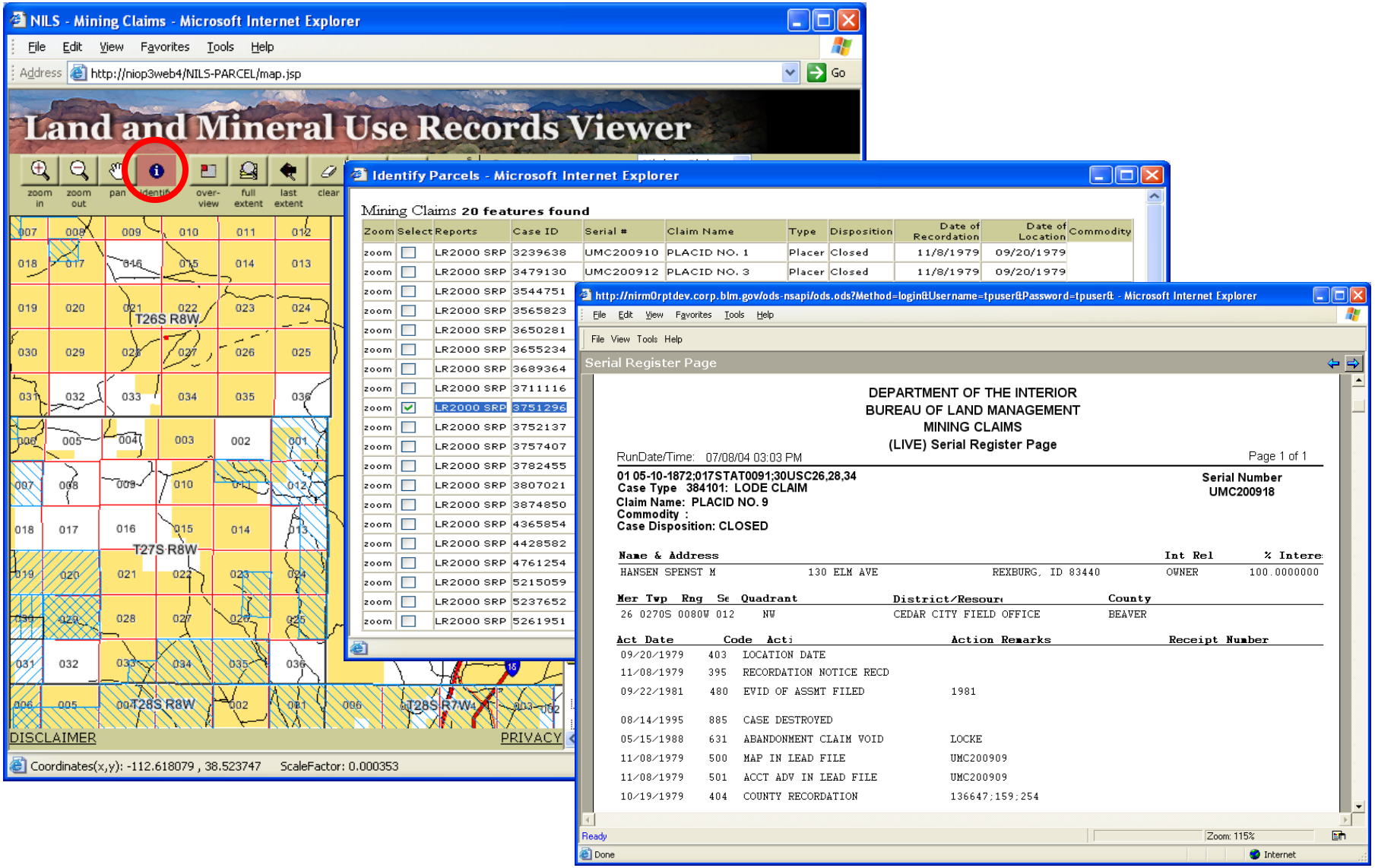
NILS Mining Claims

- Display claims by type
- Display active or closed claims
- Label with claim name or serial number
- Display with reference themes:
  - survey, roads, topographic map, orthophoto
- Links directly to LR2000 reports

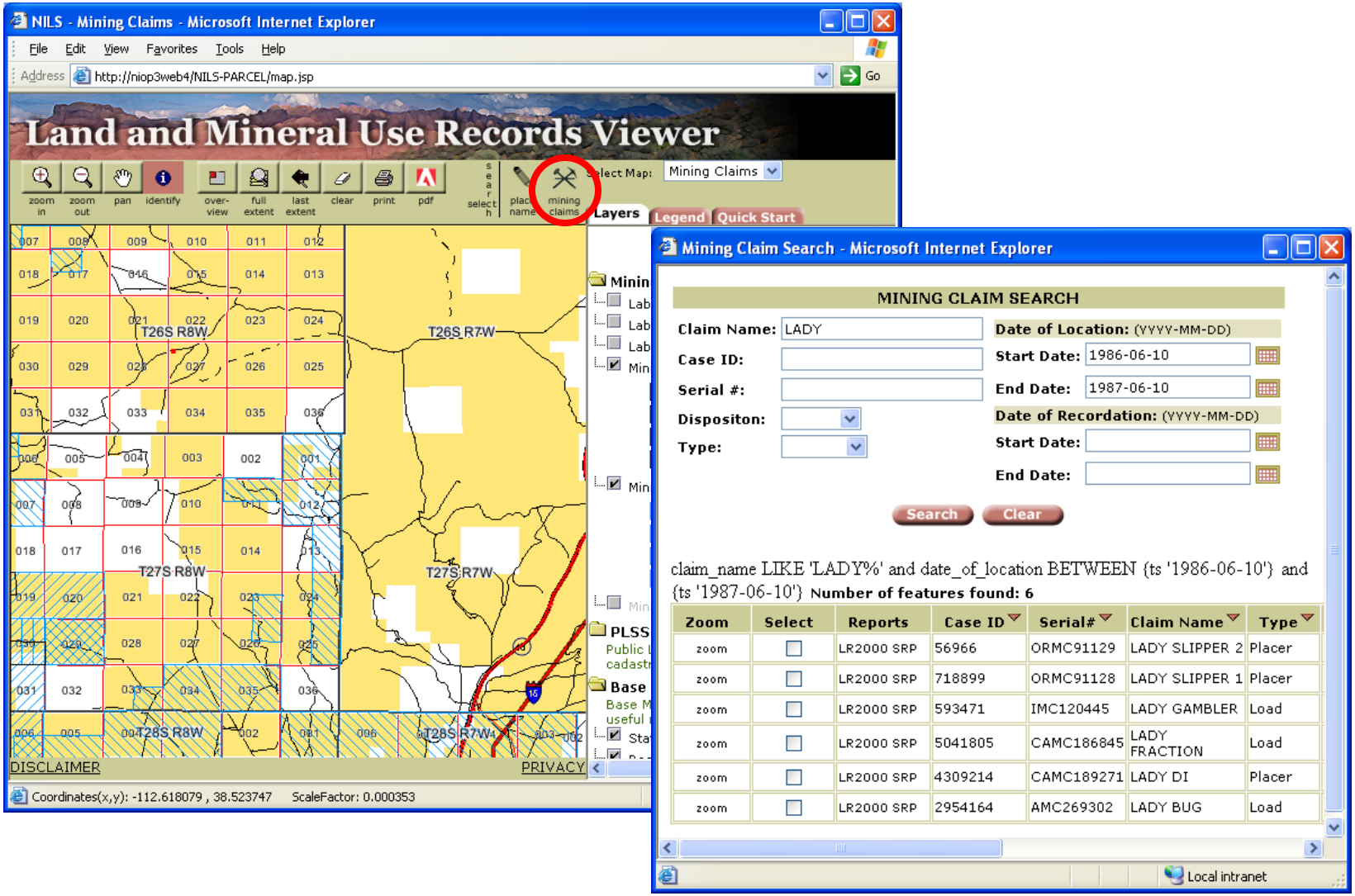
View Land Records in Context with Other Spatial Reference Themes



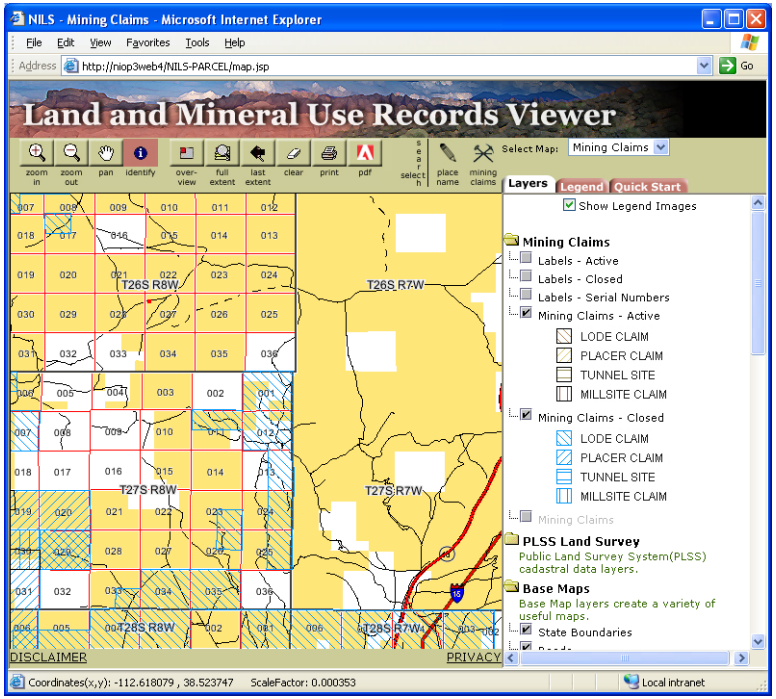
Links with LR2000

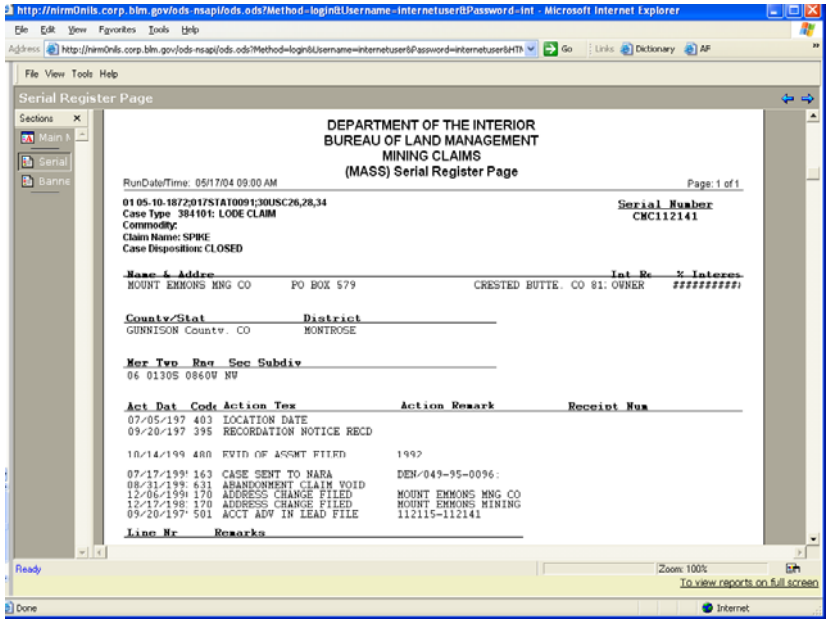


Allows Searching…

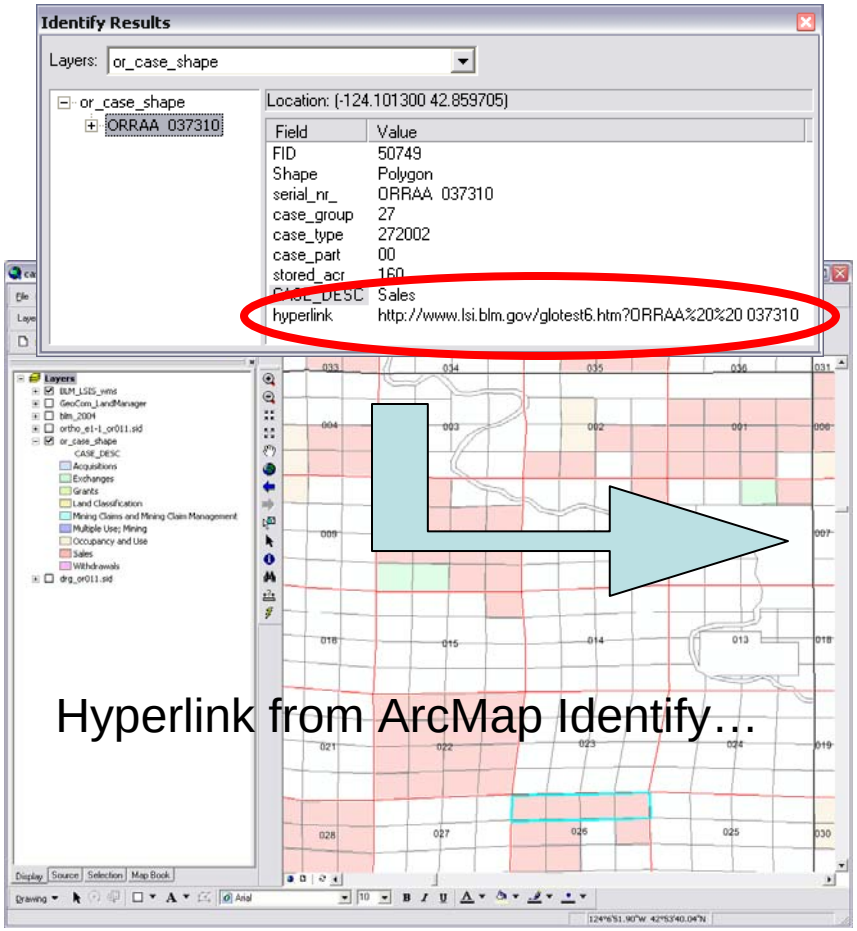


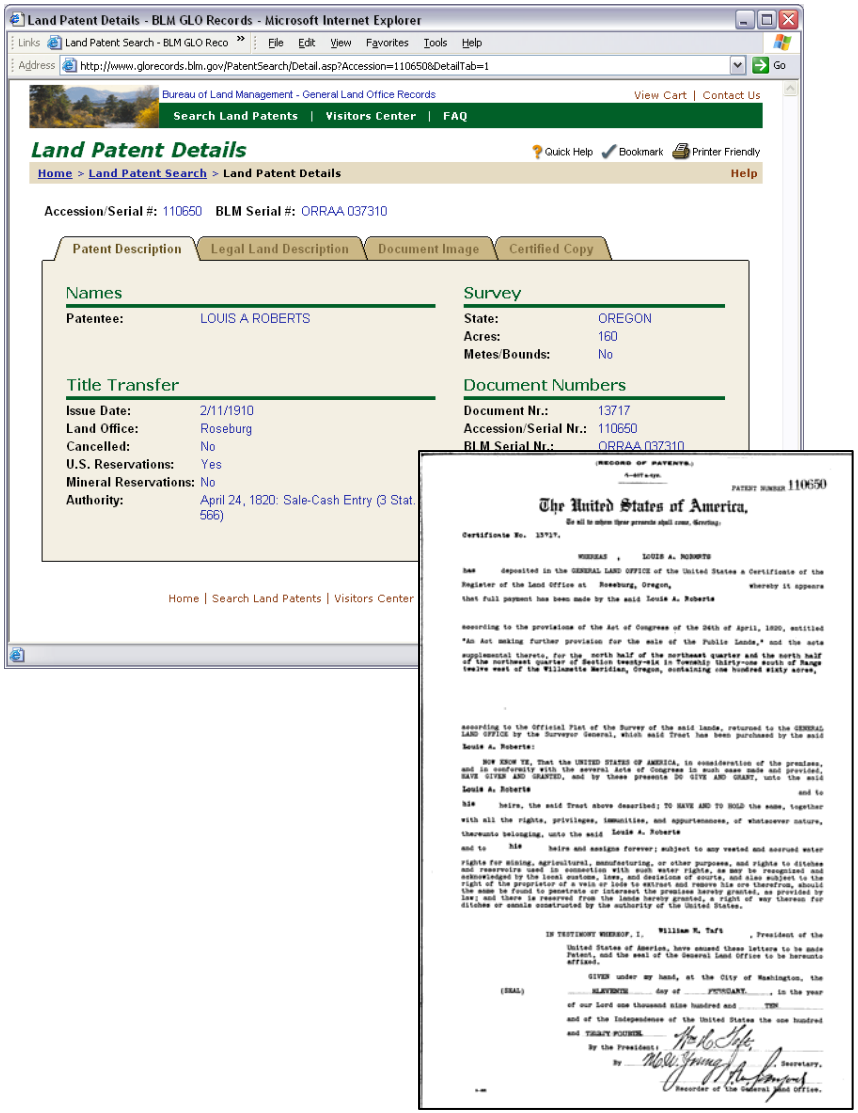
Direct Link with LR2000





Integration with other Land Record Systems





Serving Spatial Data through Web Services

- Access to a wide range of spatial data
- Minimize client storage requirements
- Minimize data maintenance/processing
- Minimize client software requirements
- Provide central point of distribution
  - Always accessing the most current data
  - Information is accessible from anywhere
  - Source is always known

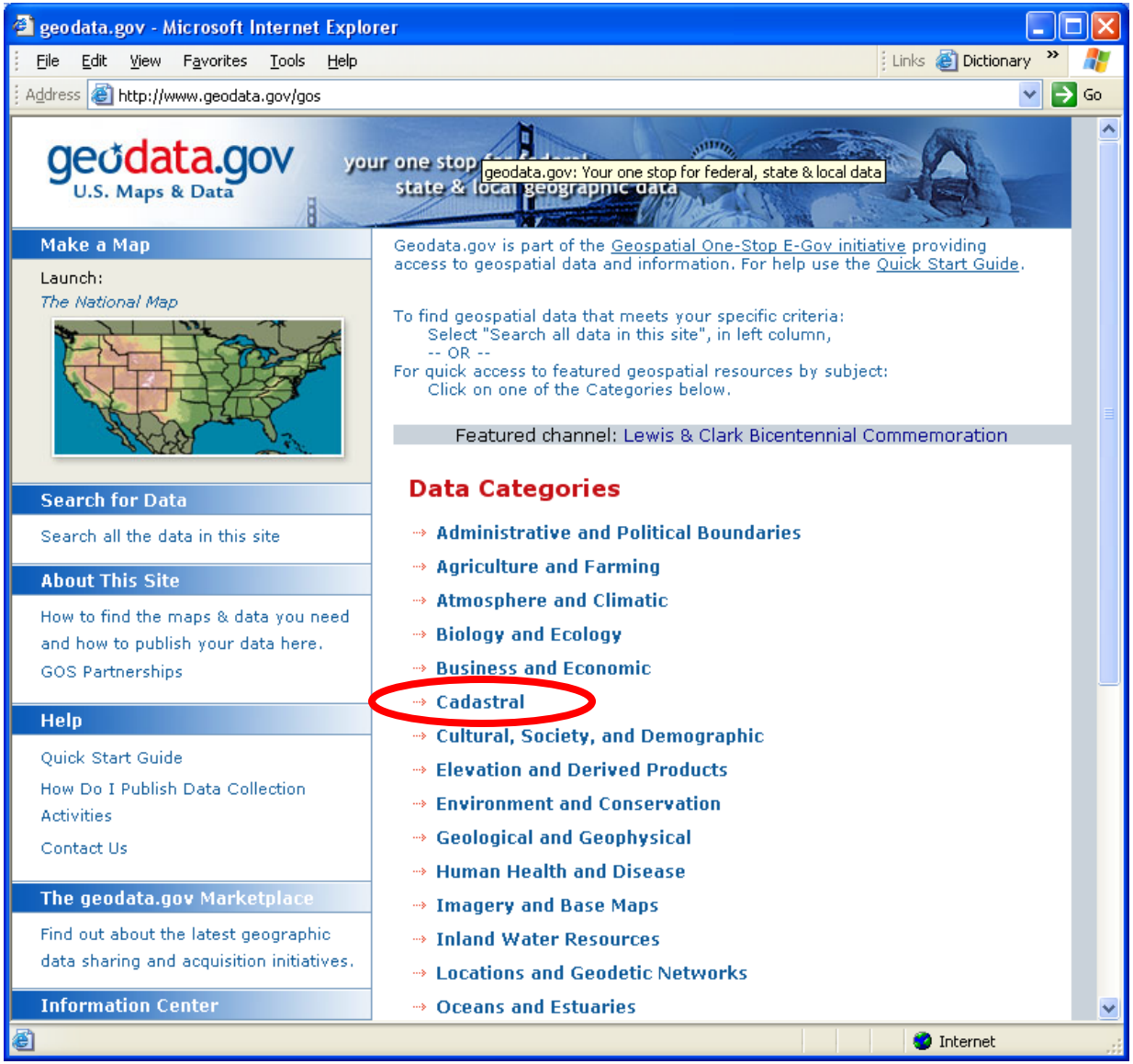
To Find More Streaming Services…

- Search: http://www.geodata.gov

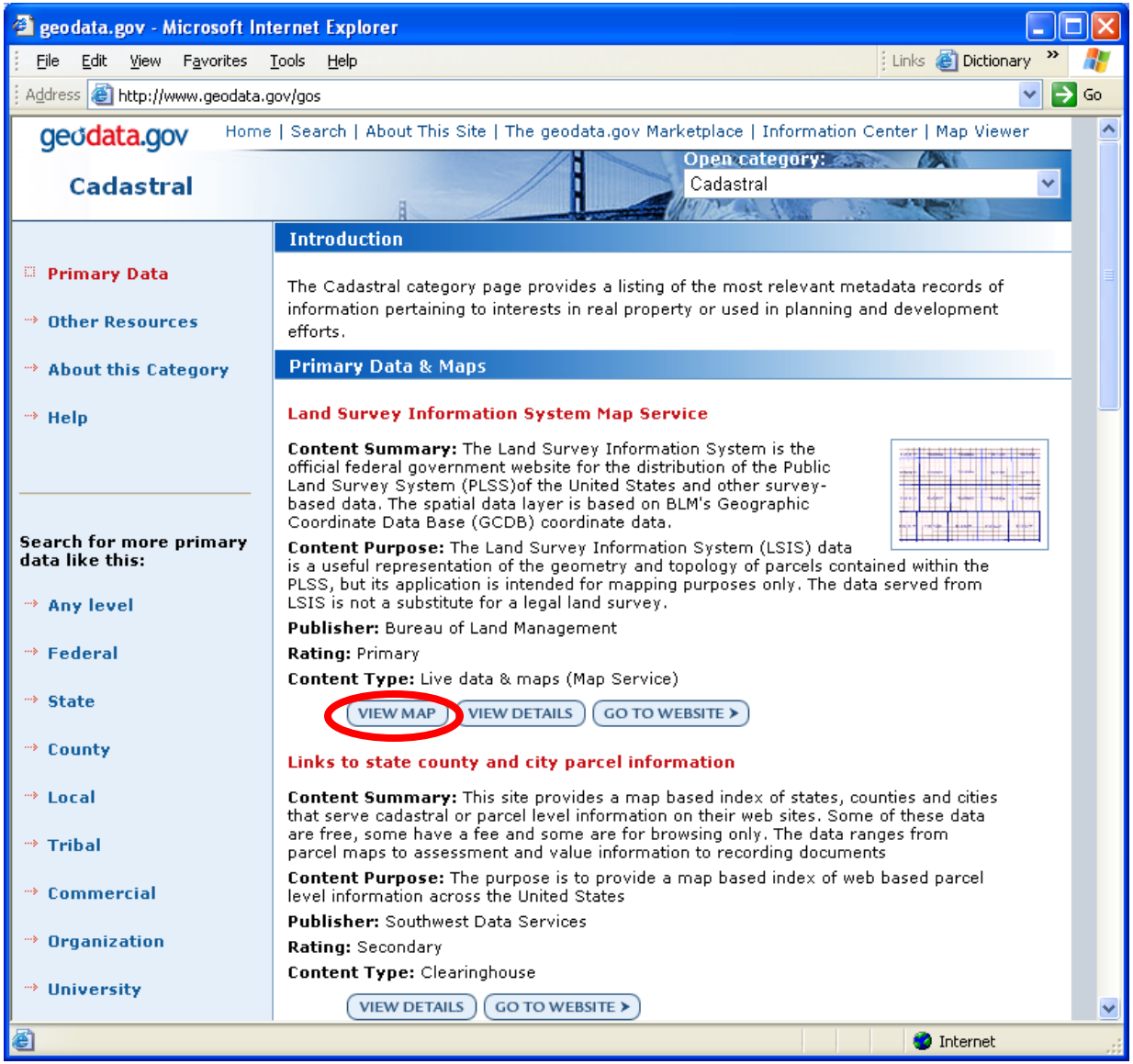
Geodata.gov

- Part of the Geospatial One-Stop E-Gov initiative providing access to Federal, State, and Local geospatial data and information.

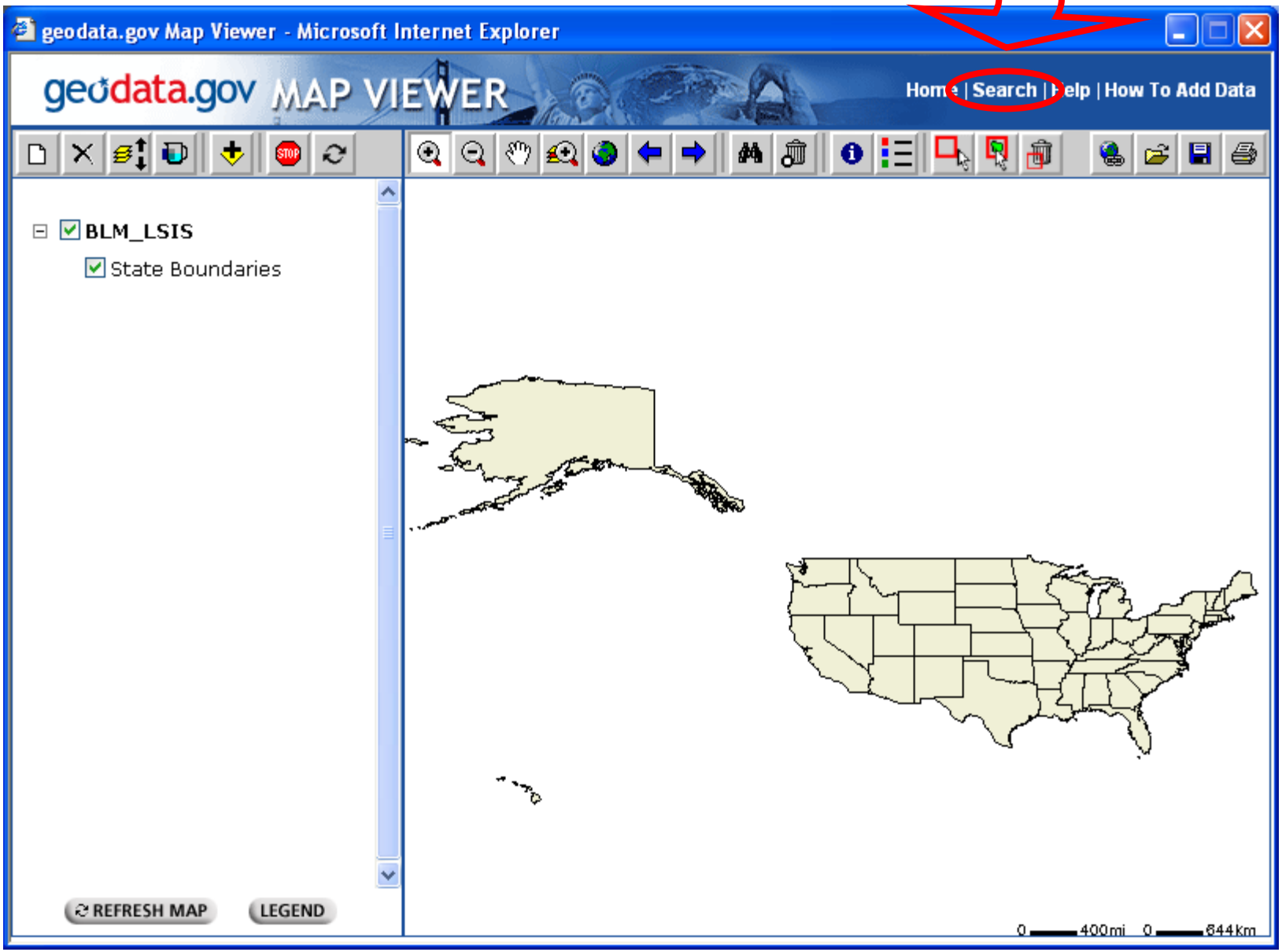
Point browser to http://www.geodata.gov and choose the “Cadastral” data category.



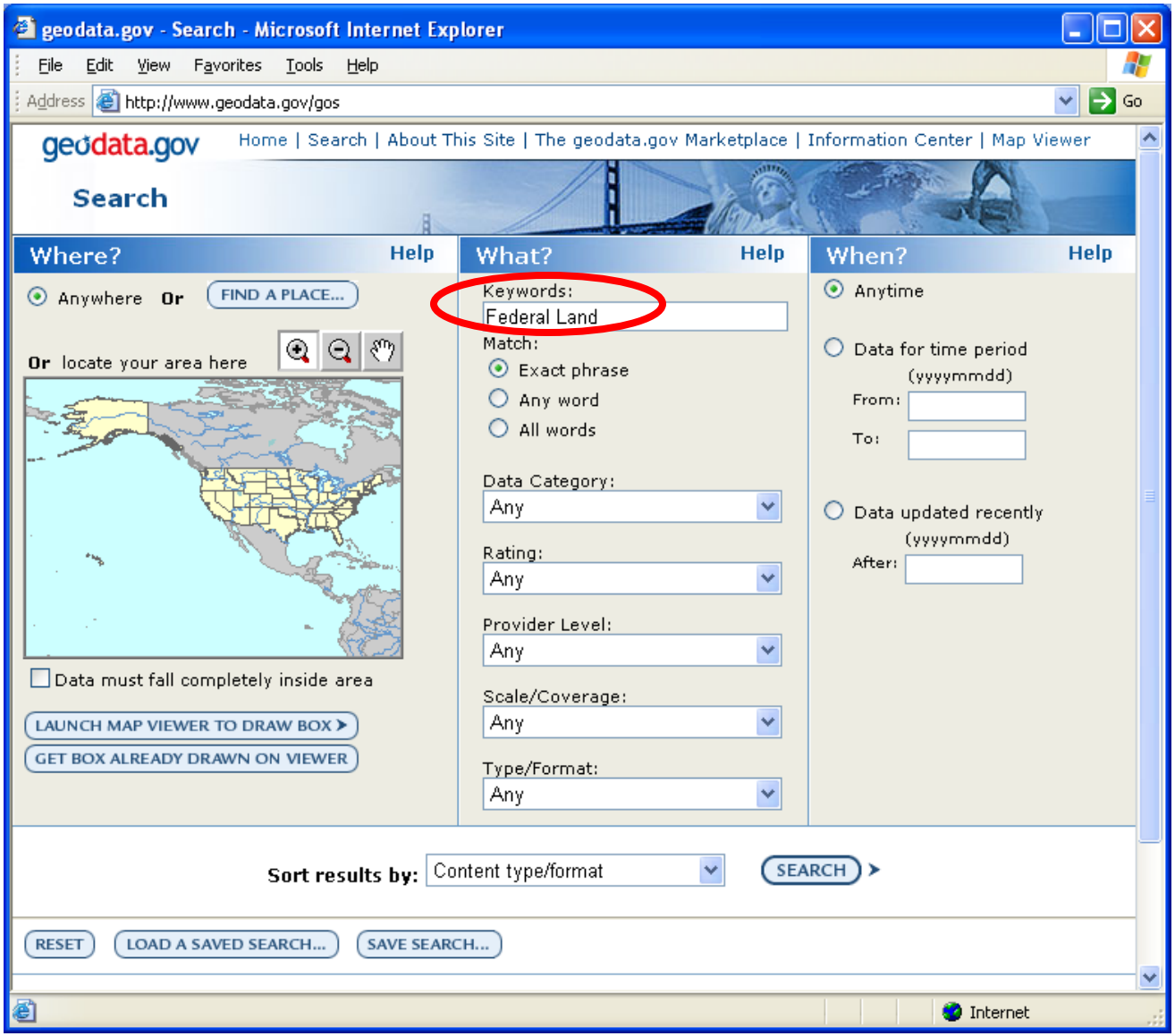
From the Cadastral data listing, locate the “Land Survey Information System Map Service” and click on the “VIEW MAP” button.



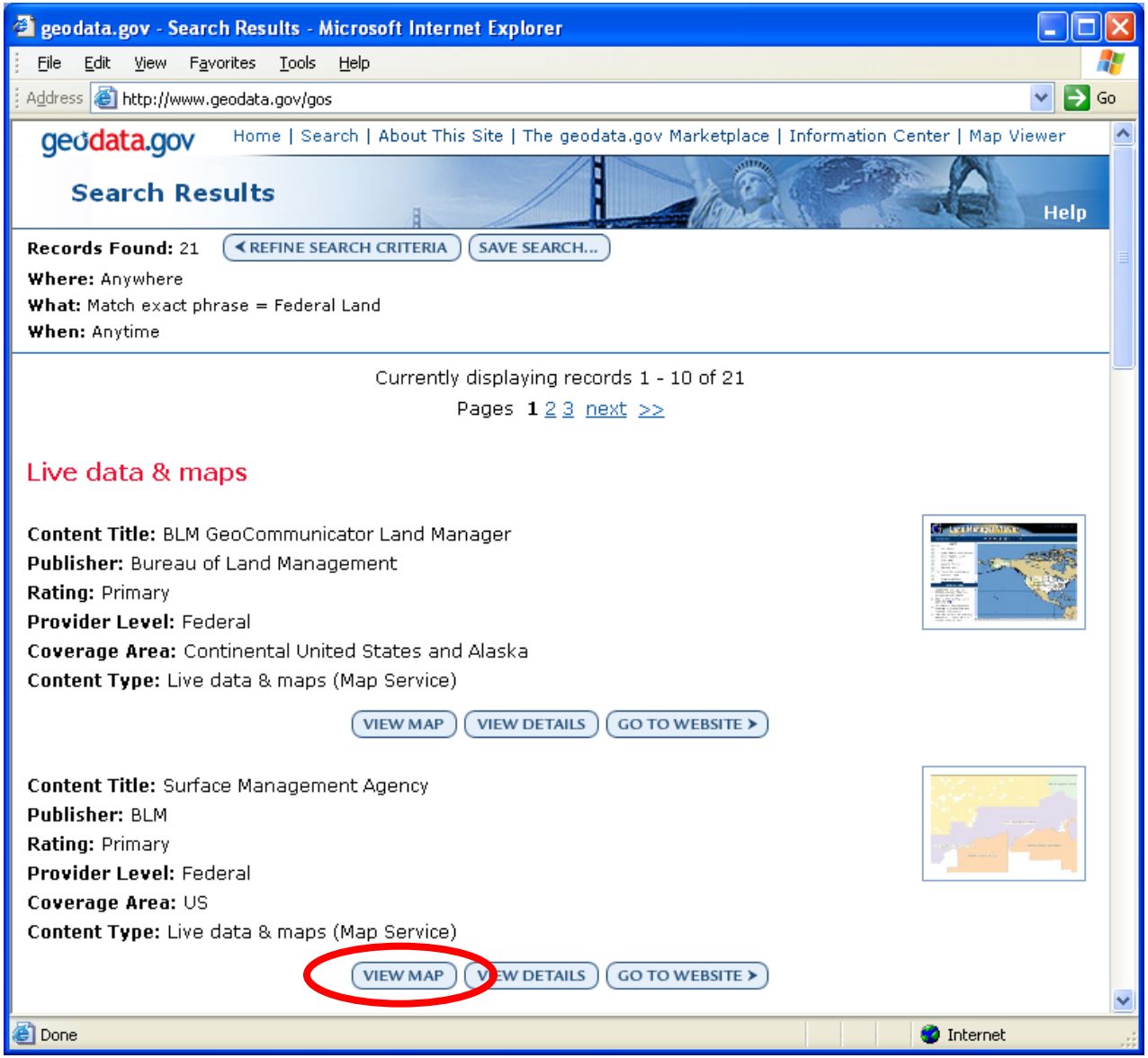
Search for additional layers to add…



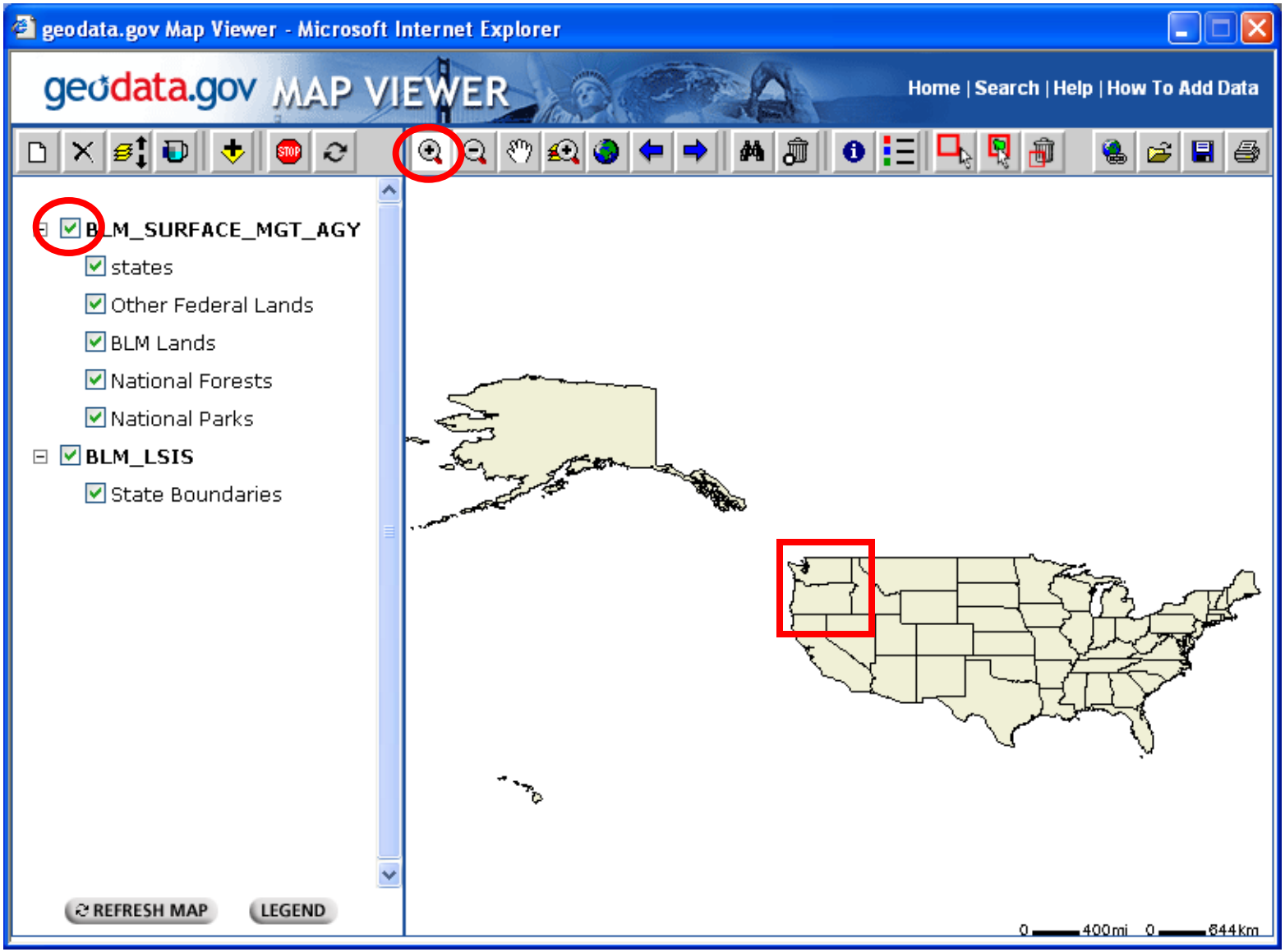
Search for “Federal Land”…



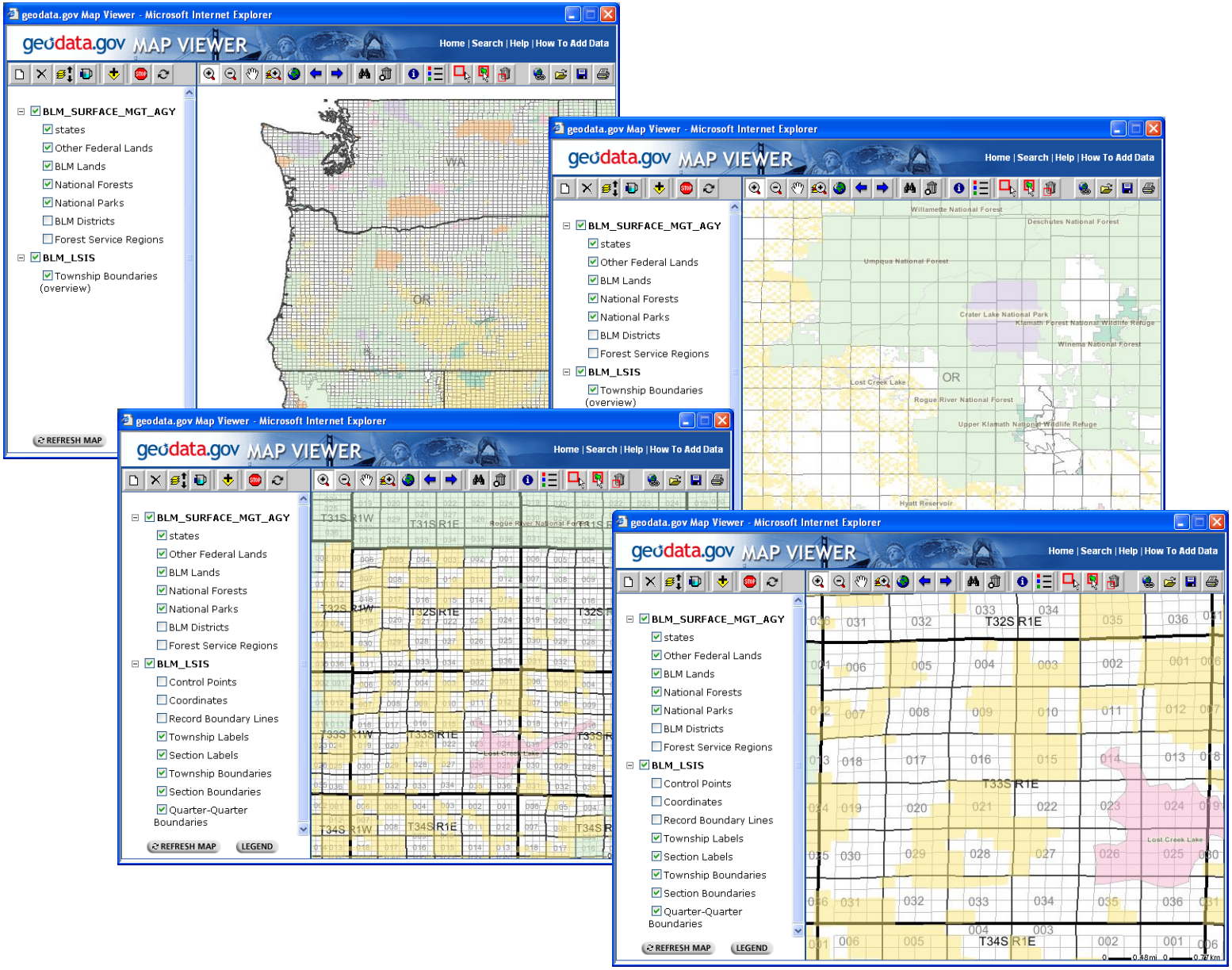
Locate “Surface Management Agency” from the Search Results list and click on “VIEW MAP”



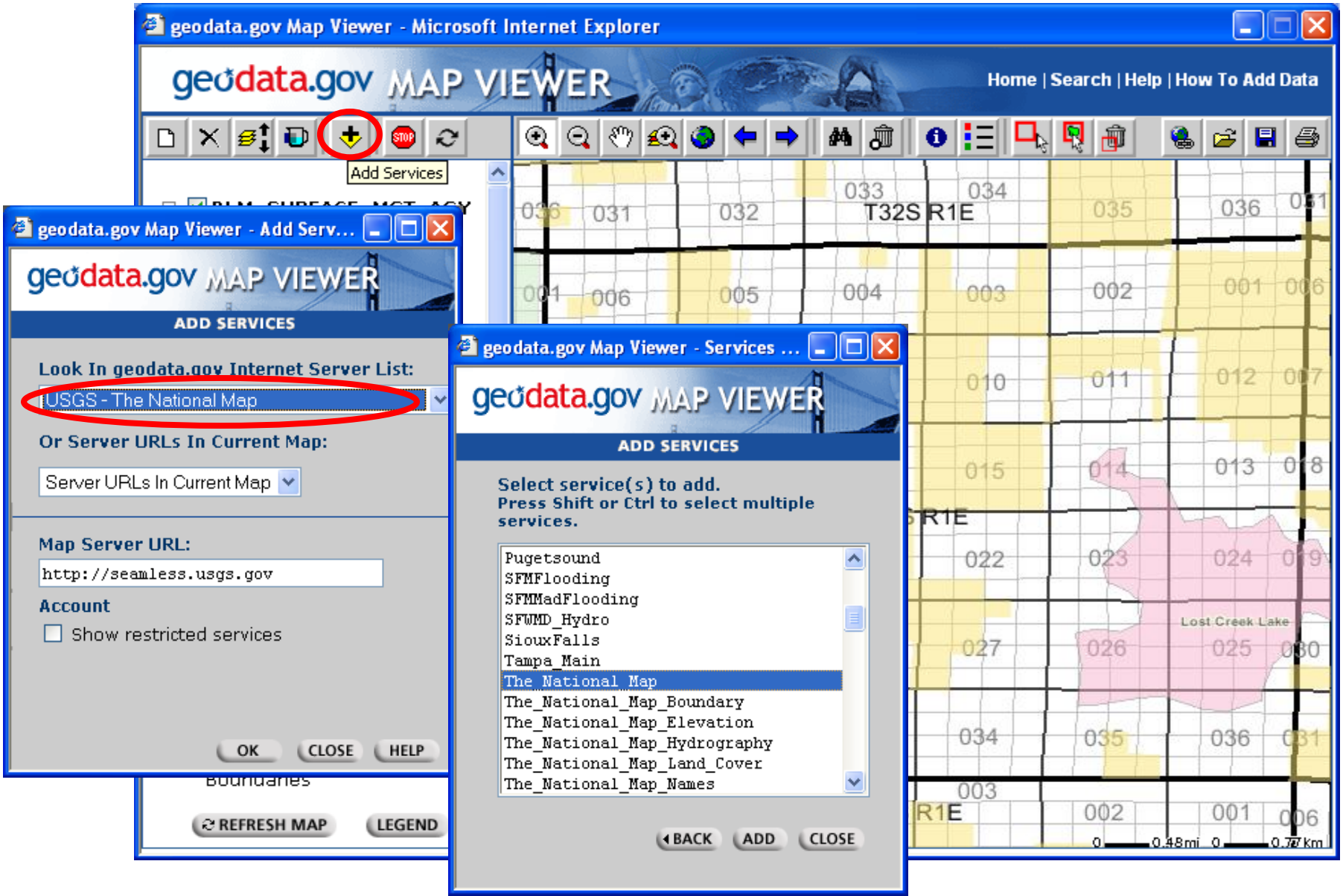
Make the new layer visible by clicking the empty box next to the BLM_SURFACE_MGT_AGY title in the map legend then zoom in for a closer look using the Zoom In tool.



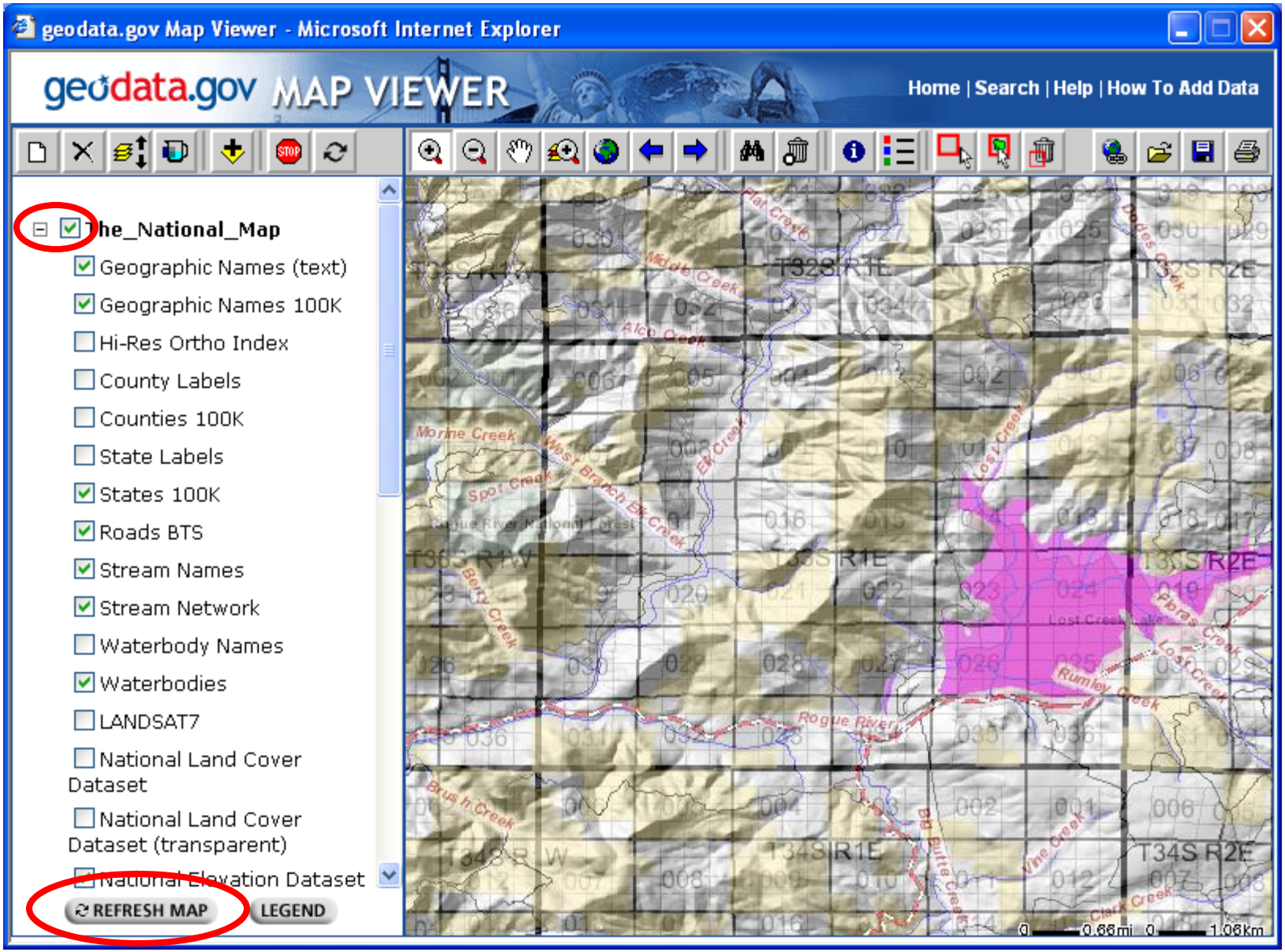
As you zoom further in, increasing levels of detail emerge.



Additional layers can be added through the “Add Services” button. Choose “USGS - The National Map” from the Internet Server List pulldown. Select “The_National_Map” from the list of services.



Check the visibility boxes of added layers and click the “REFRESH MAP” button.



www.geocommunicator.gov

Questions?

- Contact:

John Reitsma

GIS Coordinator

BLM Land & Resources Project Office

(303) 236-1984

jreitsma@blm.gov

Stuff

- Map too big for scanner? Possible solution:

http://www.tawbaware.com/ptasmblr.htm

- TerraServer access within the ArcViews:

Search http://arcscripts.esri.com for “terraserver”

- WPA maps:

Please e-mail any info to: mldunn@osmre.gov

- Correction:

Prior talk might have misled resolution of ACes:

→ Sloppy care - >2,500 “dpi”

→ Regular care - > 12,700 “dpi”

→ Best care - > 25,400 “dpi”

- ArcGIS 9.1 now shipping!

Mine Map Clearinghouse?

Topics for Discussion and Decision

Mike Dunn, OSM
IMCC UG Map Workshop
June, 2005

Definition*

Clearinghouse: A distributed network of data producers, managers, and users linked electronically, such as over the Internet. Through the Clearinghouse, users can use a single interface to search and access metadata and/or data for the themes they seek. The Clearinghouse includes the sites across the country where the metadata and data are stored, usually at the site of the producer or intermediary.

*OMB Circular A-16, Revised - http://www.whitehouse.gov/omb/circulars/a016/a016_rev.html

A-16R “Layers” – Appendix E

Baseline (Maritime): DOC, NOAA, and MMS
Biological Resources: USGS
Cadastral: BLM
Cadastral (Offshore): MMS
Climate: USDA, NRCS, and NOAA
Cultural and Demographic Statistics: DOC and Census
Cultural Resources: NPS
Digital Ortho Imagery: USGS
Earth Cover: USGS
Elevation Bathymetric: NOAA and USACE
Elevation Terrestrial: USGS
Buildings and Facilities: GSA
Federal Land Ownership Status: BLM
Flood Hazards: FEMA
Geodetic Control: NOAA
Geographic Names: USGS
Geologic: DOI, USGS
Governmental Units: DOC and USCB
Housing: HUD
Hydrography: DOI, USGS
International Boundaries: State
Law Enforcement Statistics: Justice
Marine Boundaries: NOAA and MMS
Offshore Minerals: MMS
Outer Continental Shelf Submerged Lands: MMS
Public Health: HHS
Public Land Conveyance (patent) Records: BLM
Shoreline: NOAA
Soils: NRCS
Transportation: DOT
Transportation (Marine): USACE
Vegetation: USFS
Watershed Boundaries: USGS and NRCS
Wetlands: FWS

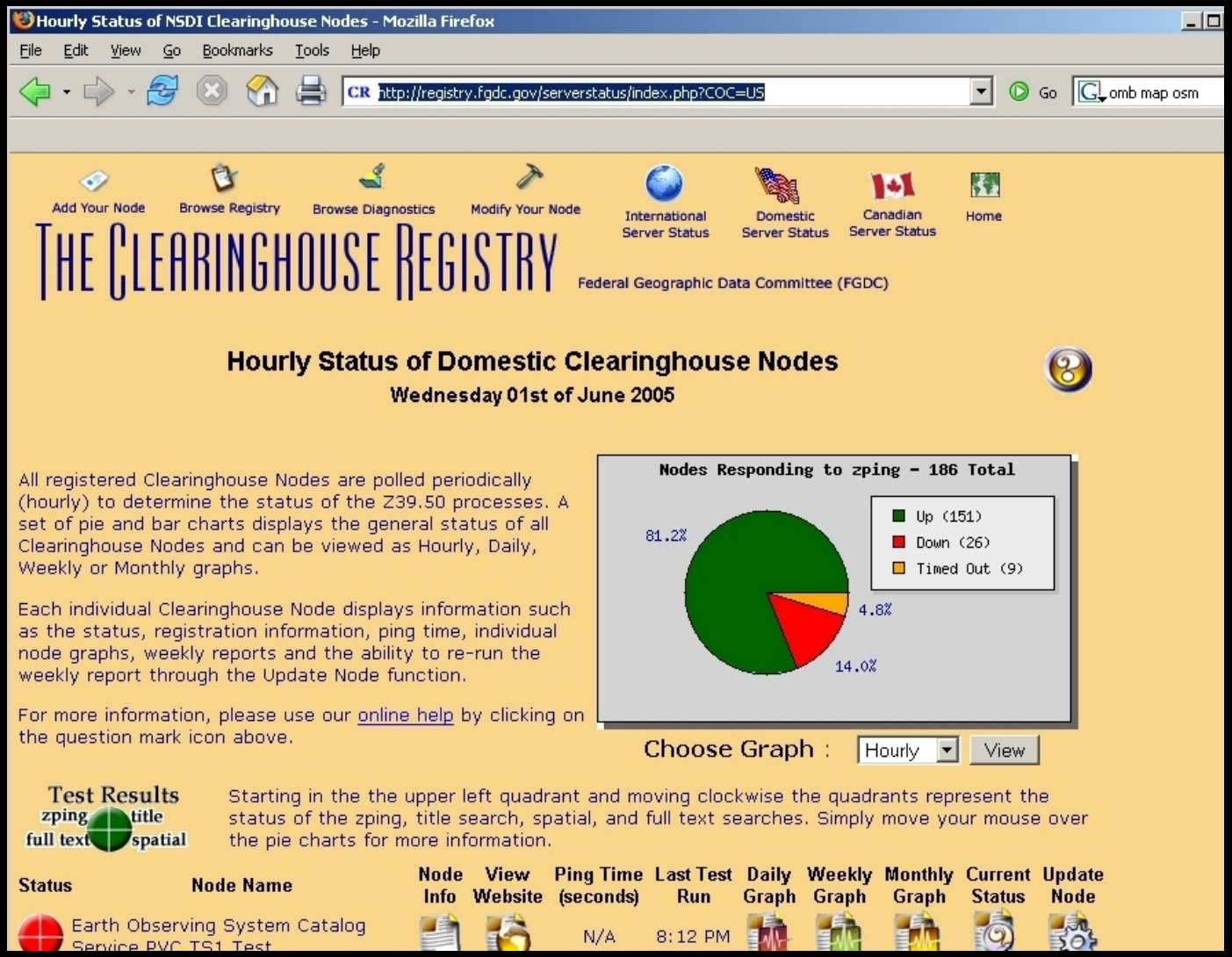
NO MINES, MSHA, or OSM!

But Wait...

- “Lead Agency responsibilities and new data themes may be added or altered by recommendation of the FGDC and concurrence by the OMB.”

- “Federal agencies will promote and fully utilize partnerships that promote cost-effective data collection, documentation, maintenance, distribution, and preservation strategies, and that leverage federal and other resources. New collaborative efforts and partnerships are encouraged.”

Some Clearinghouses*



* http://registry.fgdc.gov/

FYI – The Bad News!

5. Does Circular A-16 apply to my agency?

"This Circular applies to your agency if it collects, produces, acquires, maintains, distributes, uses, or preserves analog (e.g., paper maps) or digital spatial data to fulfill your mission, either directly or through a relationship with other organizations. Such organizations include, but are not limited to, State and local governments, tribes, academia, federal government business partners and contractors, and citizens."

6. What types of data activities does the Circular apply to?

a. All spatial data and geographic information systems activities - financed directly or indirectly, in whole or in part, by federal funds.

Clearinghouse

Some Pros

- “One-stop” gateway to repositories, permitting, AML, H&S
- Faster, better, easier Customer service
- PR and education
- Reduce data duplication
- “Spread the load”

Some Cons

- Projections and data differences
- “Publishing” differences
- The cursed *Metadata*
- Staff and $$$
- Cobell, etc.

OSM's Prototyping

- March/April 2005 – TIPS IMS server for National Map:
  - Active Western Mines – vector and raster
  - WPA and large UG mine – geotiff
- April/June 2005 – AR in-house IMS server:
  - Streetmap
  - WPA
  - Footprint polys
  - AMLIS and FRP points

First Impressions

- MS IIS too clunky – use Apache
- Need Big Iron and Big Pipes
- National Map requirement for Geographic instead of Planar distorts
- NAD27/NAD83 offset pretty severe
- This could work!

Federal Framework and Some Help

- FGDC
- NSDI
- GOS
- Geodata.gov
- National Map

- BLM

Mine Map Clearinghouse?

We might not have a choice

Geospatial One-Stop Version 2

geodata.gov
U.S. Maps & Data

What is Geospatial One-Stop?

- E-Government Initiative
  - The geographic component of the President's Management Agenda
  - OMB oversees the E-Government Initiatives
- Department of Interior serves as the Managing Partner for Geospatial One-Stop
- One of the ways the National Geospatial Programs Office brings increased visibility and implementation of the NSDI.

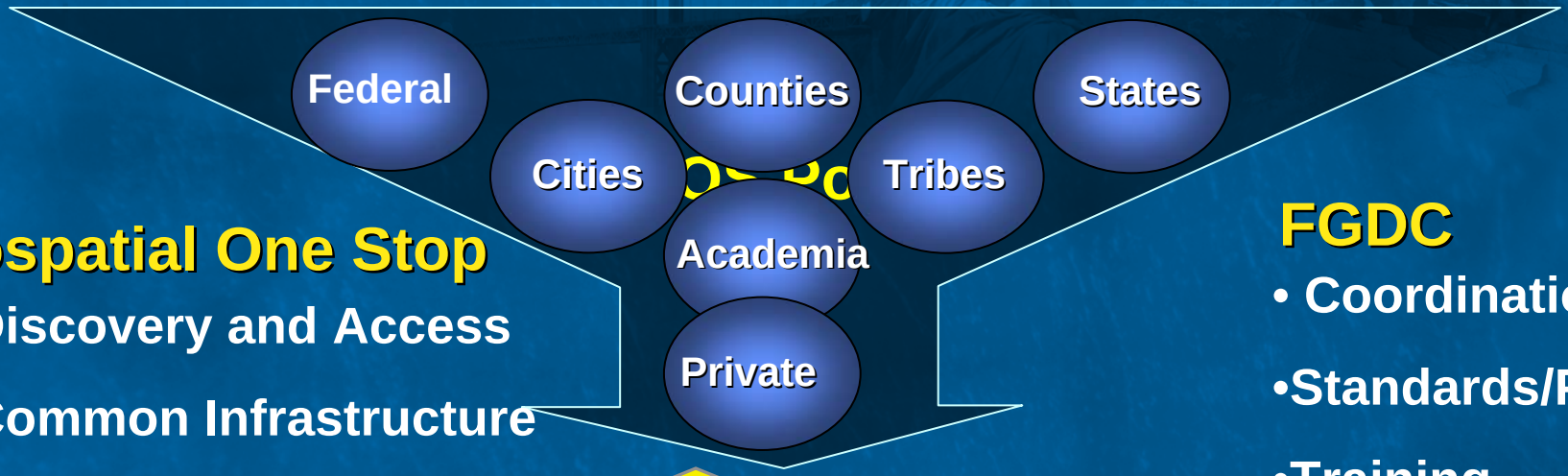
Geospatial One Stop

Purpose of the project:

- Making it:
  - Easier
  - Faster
  - Less expensive

For all levels of government and the public to access geospatial information.

Leading the Development of Partnerships to Build the NSDI



Geospatial One Stop

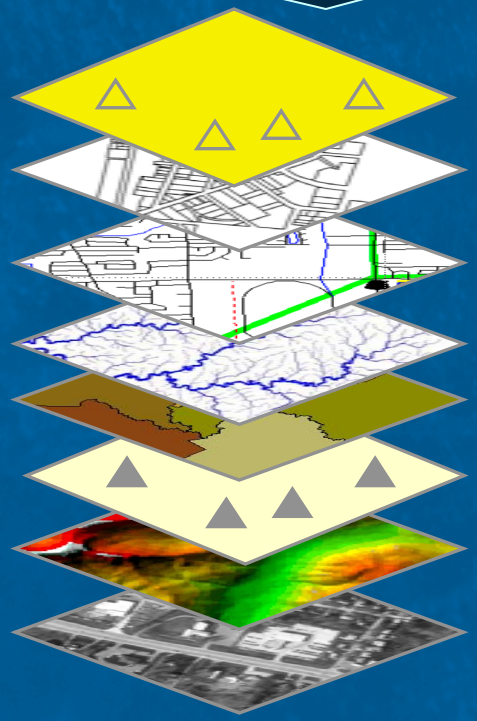
- Discovery and Access
- Common Infrastructure
- Harvesting

FGDC

- Coordination
- Standards/Policy
- Training

The National Map

- Integrated Content
- Seamless Base
- Map Products
- Framework Focus

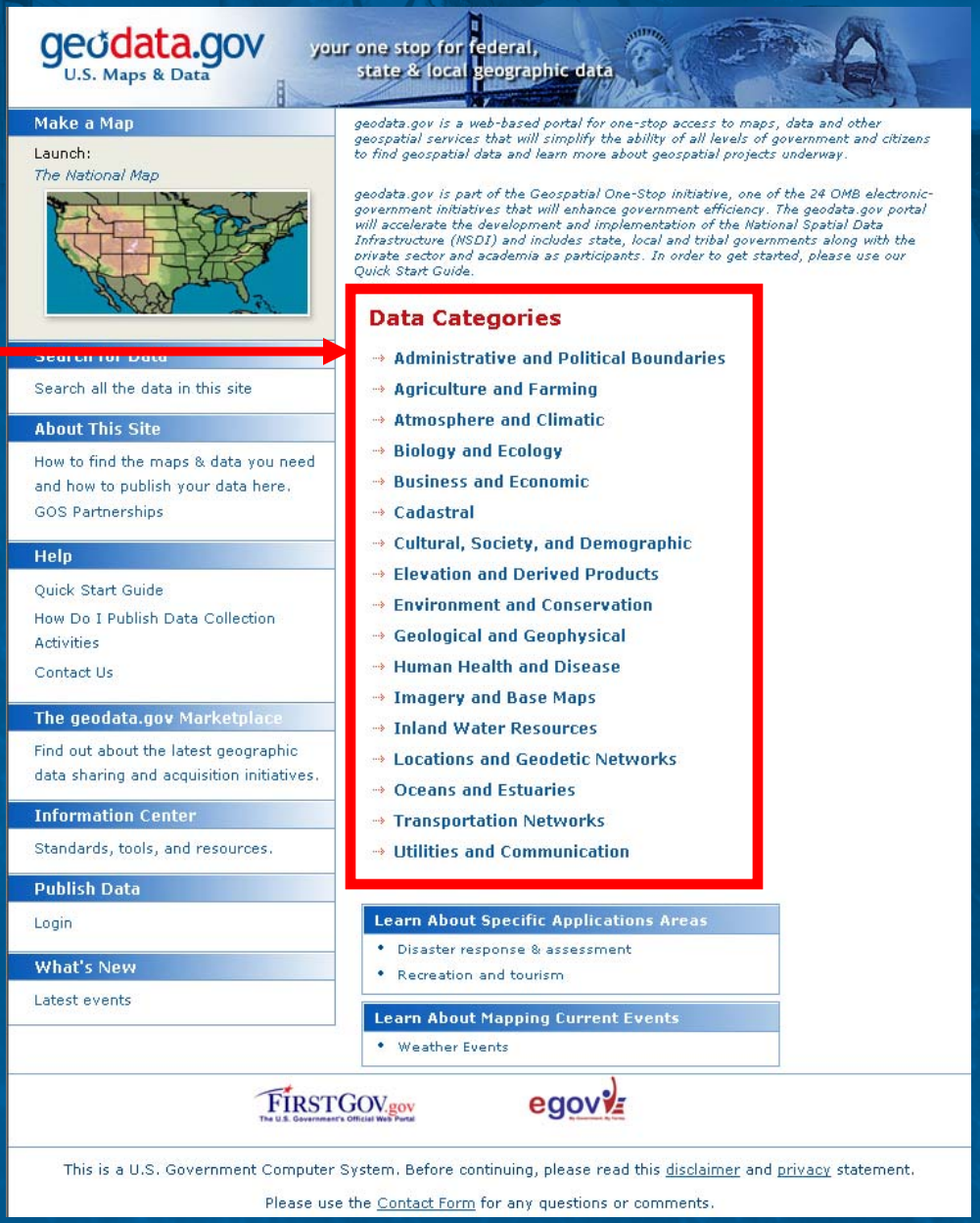


Geospatial One-Stop

- Primary Use
  - Discovery and access to geospatial resources (data, applications, web sites)
- Primary Goal
  - Reduce redundant investments and facilitate cost sharing

1. Search for Featured Data in Categories

Quick access to Content (2 clicks)



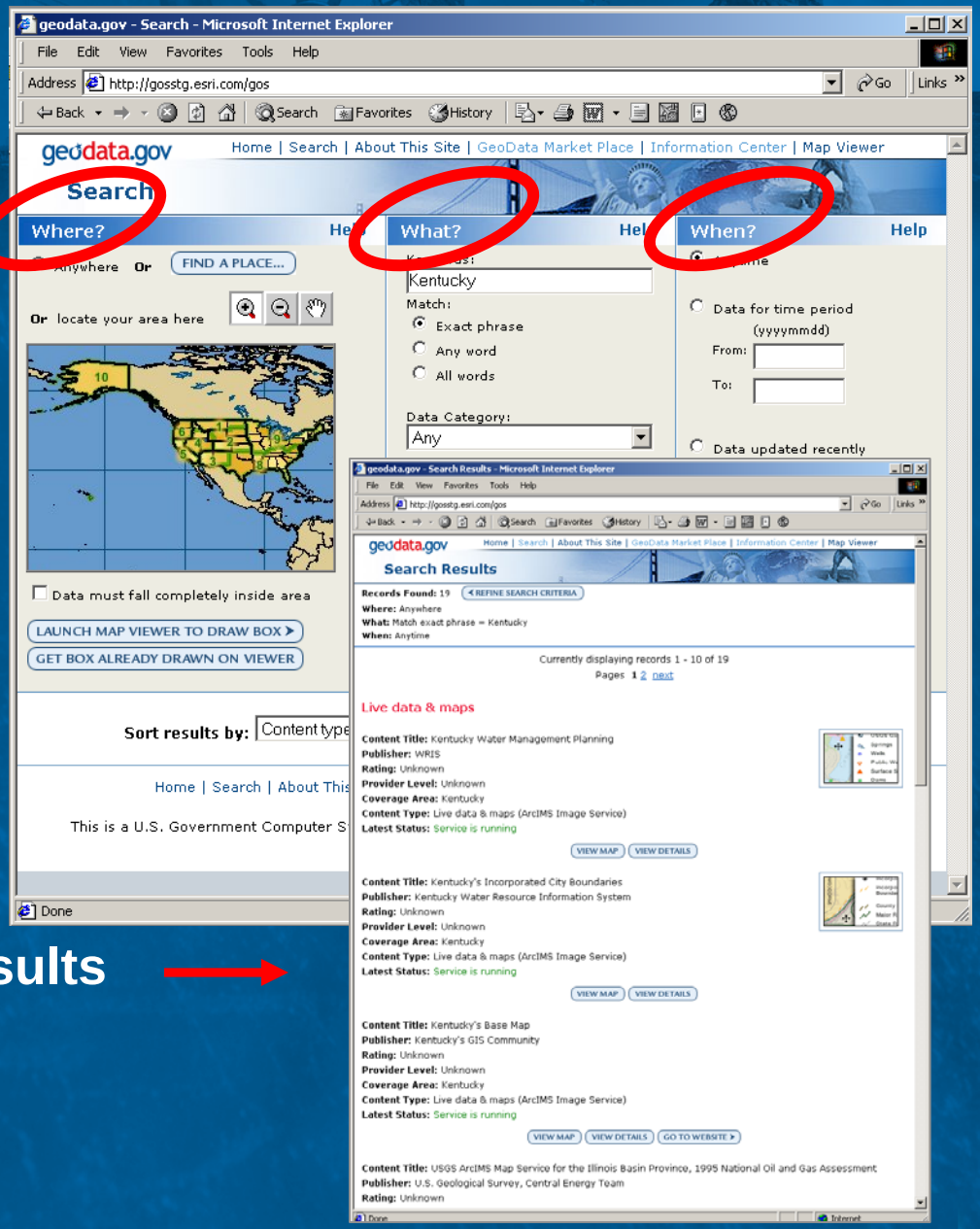
2.Detailed Search for Data

Three search criteria are available for input:

1. Where?

2. What?

3. When?

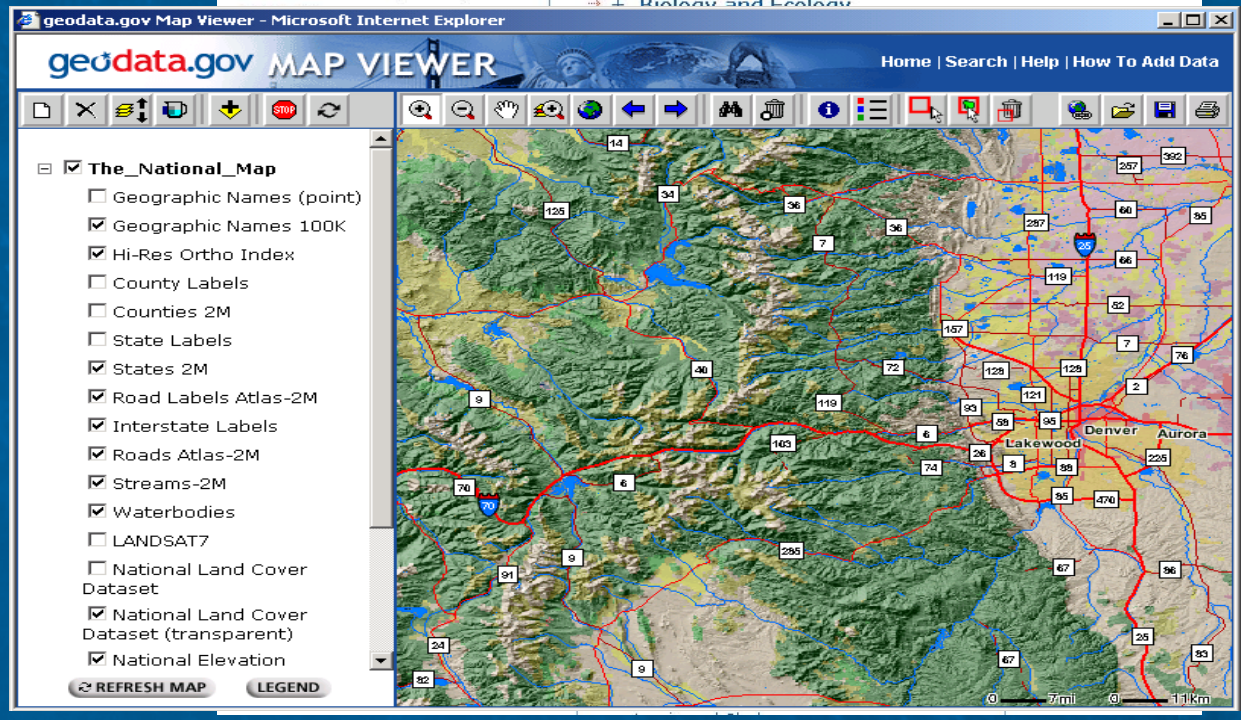


Search Results

View Data

View The National Map and:

- Browse other datasets
- Query map data
- Interact with multiple WMS and IMS services
  - overlay maps services
  - set transparency levels
  - save maps for later use



Select Data Category of Interest

geodata.gov
U.S. Maps & Data

your one stop for federal, state & local geographic data

Make a Map

Launch:
The National Map

Search for Data

Search all the data in this site

About This Site

How to find the maps & data you need and how to publish your data here.
GOS Partnerships

Help

Quick Start Guide
How Do I Publish Data Collection Activities
Contact Us

The geodata.gov Marketplace

Find out about the latest geographic data sharing and acquisition initiatives.

Information Center

Standards, tools, and resources.

Publish Data

Login

What's New

Latest events

geodata.gov is a web-based portal for one-stop access to maps, data and other geospatial services that will simplify the ability of all levels of government and citizens to find geospatial data and learn more about geospatial projects underway.

geodata.gov is part of the Geospatial One-Stop initiative, one of the 24 OMB electronic-government initiatives that will enhance government efficiency. The geodata.gov portal will accelerate the development and implementation of the National Spatial Data Infrastructure (NSDI) and includes state, local and tribal governments along with the private sector and academia as participants. In order to get started, please use our Quick Start Guide.

Data Categories

- Administrative and Political Boundaries
- Agriculture and Farming
- Atmosphere and Climatic
- Biology and Ecology
- Business and Economic
- Cadastral
- Cultural, Society, and Demographic
- Elevation and Derived Products
- Environment and Conservation
- Geological and Geophysical
- Human Health and Disease
- Imagery and Base Maps
- Inland Water Resources
- Locations and Geodetic Networks
- Oceans and Estuaries
- Transportation Networks
- Utilities and Communication

Learn About Specific Applications Areas

- Disaster response & assessment
- Recreation and tourism

Learn About Mapping Current Events

- Weather Events

FIRSTGOV.gov The U.S. Government's Official Web Portal

egov

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Please use the Contact Form for any questions or comments.

geodata.gov

Home | Search | About This Site | The geodata.gov Marketplace | Information Center | Map Viewer

Cadastral

Open category: Cadastral

- Primary Data
- Other Resources
- About this Category
- Help

Search for more primary data like this:

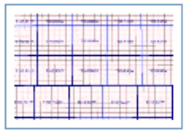
- Any level
- Federal
- State
- County
- Local
- Tribal
- Commercial
- Organization
- University

Introduction

The Cadastral category page provides a listing of the most relevant metadata records of information pertaining to interests in real property or used in planning and development efforts.

Primary Data & Maps

Land Survey Information System Map Service



Content Summary: The Land Survey Information spatial data layer is based on BLM's Geographic Coordinate Data Base (GCDB) coordinate data. The locations of Public Land Survey System (PLSS) corners, as represented in geographic coordinate pairs, were derived from a variety of source documents, which include U.S. General Land Office and BLM survey plats/notes, as well as survey data obtained from other U.S. Government agencies, private sector survey firms, and local governments.

Content Purpose: The Land Survey Information System (LSIS) data is a useful representation of the geometry and topology of parcels contained within the PLSS, but its application is intended for mapping purposes only. The GCDB data served from LSIS is not a substitute for a legal land survey.

Publisher: Bureau of Land Management

Rating: Unknown

Content Type: Live data & maps (ArcIMS Image Service)

VIEW MAP | VIEW DETAILS

GeoCommunicator

Content Summary: GeoCommunicator is a Geography Network channel focused on data and activities for users and data providers with a common interest in land management in the United States.

Content Purpose: GeoCommunicator uses the Internet to deliver maps, geographic activities, map services, planned surveys, and potential cost sharing partners to individual user browsers and desktops, allowing data providers, service providers and users throughout the United States to share land-based information.

Publisher: Bureau of Land Management

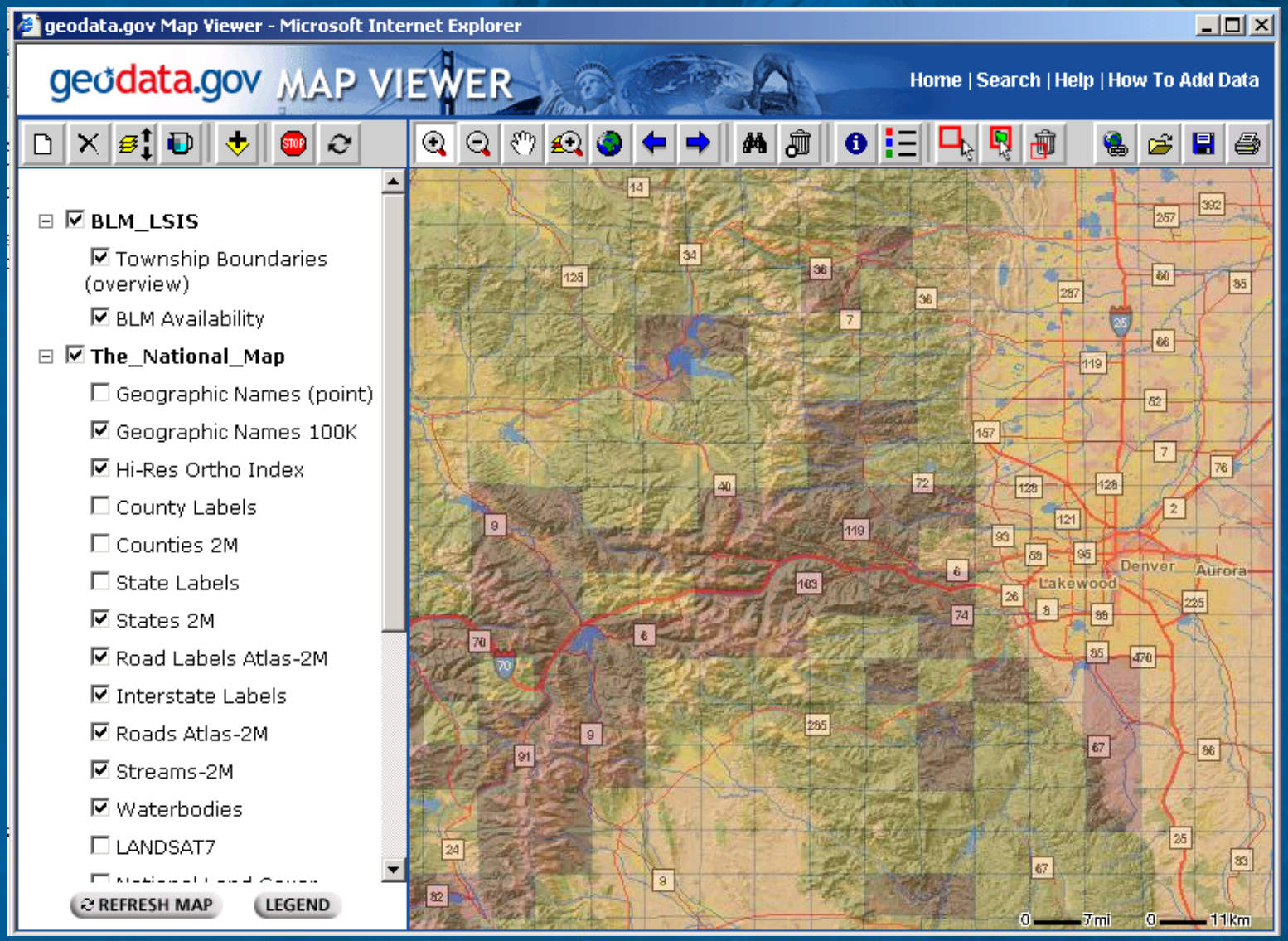
Rating: Primary

Content Type: Live data & maps (ArcIMS Feature Service)

VIEW DETAILS | GO TO WEBSITE ➤

Digital Offshore Cadastre

BLM Data Overlaid on TNM



Indian Ocean Disaster Channel

geodata.gov - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media

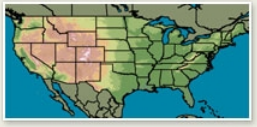
geodata.gov U.S. Maps & Data

your one stop for federal, state & local geographic data

Make a Map

Launch:

The National Map



Search for Data

Search all the data in this site

About This Site

How to find the maps & data you need and how to publish your data here.

GOS Partnerships

Help

Quick Start Guide

Contact Us

The geodata.gov Marketplace

Find out about the latest geographic data sharing and acquisition initiatives.

Information Center

Standards, tools, and resources.

Publish Data

GOS/NSDI Metadata Publishing Guidance

How to Register Your Data/Collection

Login

What's New

Latest events

Geodata.gov is part of the Geospatial One-Stop E-Gov initiative p
access to geospatial data and information. For help use the Quick

To find geospatial data that meets your specific criteria:
Select "Search all data in this site", in left column,
-- OR --
For quick access to featured geospatial resources by subject:
Click on one of the Categories or Sub-Categories below.
Click '+' sign to see sub-categories.

Indian Ocean Disaster

Data Categories

- Administrative and Political Boundaries
- + Agriculture and Farming
- Atmosphere and Climatic
- + Biology and Ecology
- Business and Economic
- Cadastral
- + Cultural, Society, and Demographic
- + Elevation and Derived Products
- + Environment and Conservation
- Geological and Geophysical
- Human Health and Disease
- + Imagery and Base Maps
- + Inland Water Resources
- Locations and Geodetic Networks
- Oceans and Estuaries
- Transportation Networks
- Utilities and Communication

Learn About Specific Applications Areas

- Recreation and Tourism
- + State and Local GIS

Done

Click to access

geodata.gov

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Indian Ocean Disaster

---Indian Ocean Disaster

- What is new?
- Live Data and Maps
- Imagery
- In Country Resources
- Downloadable Maps
- Tools
- Emergency Resources
- Other Resources
- News
- About this Category
- Help

Introduction

This page provides links to web sites, resources, and maps relevant to the recent earthquake, tsunami, and disaster recovery efforts in the Indian Ocean region. Users worldwide are encouraged to post Live Data and Maps, Downloadable Data, Resources, and Maps related to the Indian Ocean Disaster on geodata.gov.

Go to main channel: Natural Disaster Events

January 26, 2005

Humanitarian Information Centre (HIC) Sumatra

Content Summary: The HIC is a common service to the humanitarian community working in Sumatra and the surrounding countries. The HIC is managed by the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), and operates in co-ordination with a number of partners including the UN Joint Logistics Cell (UNJLC), the UK Department For International Development (DFID), USAID's Office of Foreign Disaster Assistance (OFDA) and ECHO Humanitarian Aid (European Commission).

GO TO WEBSITE ➤

European Commission / Directorate General / Joint Research Centre

Content Summary: This web site is a joint effort of the JRC and its partners to support humanitarian aid and reconstruction, to report the major findings and lessons learnt and to provide complementary information on the Tsunami.

GO TO WEBSITE ➤

January 24, 2005

Cornelll University

Content Summary: The following Internet Map Server pages are provided in support of the Tsunami reconnaissance efforts in Sri Lanka. This research was primarily supported by Cornell University, and the Earthquake Engineering Research Centers Program of the National Science Foundation, under award number EEC-9701471 to the Multidisciplinary Center for Earthquake Engineering Research.

GO TO WEBSITE ➤

International Water Management Institute

What We Learned from the Prototype

Five Important Insights

- Usability
  - Improve user experience
  - Support multiple audiences
- Performance
  - Achieve sub-second responses
- Interoperability
  - Support evolving standards (Portals, OGC, etc.)
  - Support data download
- Functionality
  - Channels worked – “two clicks to content”
  - Marketplace community
- New technologies…

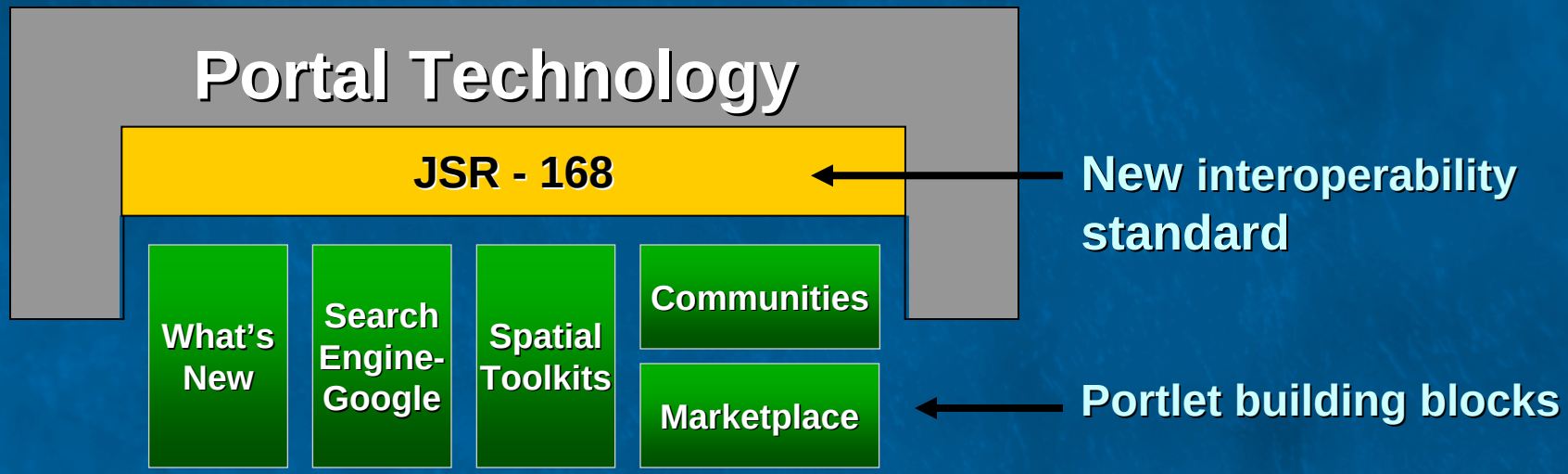
Version 2

geodata.gov
U.S. Maps & Data

Team Members

- ESRI - **Spatial**
- Google **– Search Engine**
- IBM **– Portal**
- Safe Software **–Interoperability & Standards**
- Image Matters **– Interoperability & Standards**
- Northrop Grumman **– Interoperability & Standards**
- SNVC **– Security, Certification & Accreditation**
- Dataline **– Portlets**
- UC San Diego Supercomputer Center **– Usability/Portlets**

New Enabling Technologies



What this Means…

GIS Centric → Web Standard

Specialized Search → Google-like

Uniform View → Personalized

Home Page

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/_s.7_0_A/7_0_223/.cmd/ad/.ar/sa.ZoomToBoomark/.c/6_0_18M/.ce/7_0_6NU/.p/5_0_5IC/.d/1#7_0_6NU Go

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Welcome marten ! (Log out)

Home | Search | Maps | Communities | Marketplace | Tools | Help Center

Welcome to Geodata.gov

Welcome!

Find out how to **publish** and **share** your geographic data, maps, web sites, or documents

Sign-up with Geodata.gov to personalize your experience, save favorite searches and maps

Search Results

Google Refine Search: Go

Advanced

Community Channels

- Special Interest
- Data Categories
- Location-Based
- GOS2

My Maps

- Make a Map
- Colorado Census
- Colorado Map

My Searches

- Advanced Search
- California Fires
- Colorado Elevation Data Sets
- Homeland Security - CO State Docs
- Precision Ag

My Alerts

My Geography

Select a saved area: Denver, CO Find...

Thornton, Westminster, Arvada, Colorado, Denver, Aurora, Lakewood, Huston Park

© 2005 ESRI, GDT

ZOOM IN / ZOOM OUT

Clear Markers

Save area: Save

What's new on geodata.gov

- The USGS National Geospatial Programs Office (NGPO) establishes 6 multi-agency teams to develop a comprehensive plan of action.
- GOS catalog now contains citations for research reports and thematic maps, including numbered series begun as early as 1882. Click here for more information about this content or contact Bob Pierce.
- DHS announces FY05 HLS Grant Program. GIS specific grant guidelines:
  - DHS Office of Domestic Preparedness Web Site
  - FY05 HLS Grant Program Intro
  - FY05 HLS Grant Program Guides & Application Kit

Local intranet

Start Conta... 2 Int... 2 Mic... 9:40 AM

Warning: Applet Window

Search

.....with Geographic Search Tips

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/_s.7_0_A/7_0_PF/.cmd/ad/.ar/sa.GOSSearchResults.REFINE_SEARCH_ACTION/.ps/X/.c/6_0_FQ/.ce/7_0_49N/.p/5_0_3DF/.d/0#7_0_4 Go

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Search Results

Google Refine Search: denver flood Go Advanced

Did you mean 'flood' in the spatial extent of Denver, Colorado, United States
Did you mean 'flood' in the spatial extent of Denver, Alabama, United States
Did you mean 'flood' in the spatial extent of Denver, Arkansas, United States
Did you mean 'flood' in the spatial extent of Denver, Florida, United States
Did you mean 'flood' in the spatial extent of Denver, Georgia, United States
Did you mean 'denver' in the spatial extent of Flood, Virginia, United States
Did you mean 'denver' in the spatial extent of Floods Chapel, North Carolina, United States
Did you mean 'denver' in the spatial extent of Floodway, Arkansas, United States
Did you mean 'denver' in the spatial extent of Floodwood, Michigan, United States
Did you mean 'denver' in the spatial extent of Floodwood, Minnesota, United States

Performed Search: **"denver flood"**
retrieved **90** Metadata Result records in **0.078** seconds.

All | Live Data & Maps | Downloadable | Offline | Documents | Applications | Geographic Services | Clearinghouses | Planned Acquisitions

Metadata Results

Content Title: Potential flood hazard; North Avenue area, Denver Federal Center, Lakewood, Colorado
Abstract: Potential flood hazard; North Avenue area, Denver Federal Center, Lakewood, Colorado, Report Number: 75-45 , USGS Series: Open-File Report
Content Type: Document

View Metadata

Content Title: Map showing flood-prone areas, greater Denver area, Front Range Urban Corridor, Colorado
Abstract: Map showing flood-prone areas, greater Denver area, Front Range Urban Corridor, Colorado, Report Number: 856-D , USGS Series: IMAP - Various series names
Content Type: Document

Local intranet

Start Conta... 2 Int... 2 Mic... 9:41 AM

Warning: Applet Window

Maps

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/.cmd/cs/.ce/7_0_A/.s/7_0_PB/_s.7_0_A/7_0_PB

Go

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Home | Search | Maps | Communities | Marketplace | Tools | Help Center

Maps

Quick Links

Click here to Launch Map Viewer

Or select a Popular Map:

- The National Map
- The National Atlas
- HUD E-Maps
- NGA VMAP
- USGS National Elevation Dataset
- USGS Reference
- World Wildlife Fund - World Threats
- World Basemap
- State of Utah AGRC
- City and County of Denver
- City and County of Honolulu
- GEOMAC

Using the Map Viewer

Use the Map Viewer to access hundreds of Internet map services available through Geodata.gov or other mapping sites:

- Display one or multiple map services in a single map view.
- Set transparency of map services for overlaying multiple images.
- Turn on/off map layers within a map service.
- Find places anywhere in the world to navigate map.
- Find street addresses in the United States to navigate map.
- Identify attribute information about features in a map service.
- Print or Save your map for future use.

About the Map Viewer

- With the Geodata.gov Map Viewer, you can create beautiful, informative maps.
- Launch the Map Viewer, or simply click on a popular map from the Quick Links below.

Done

Local intranet

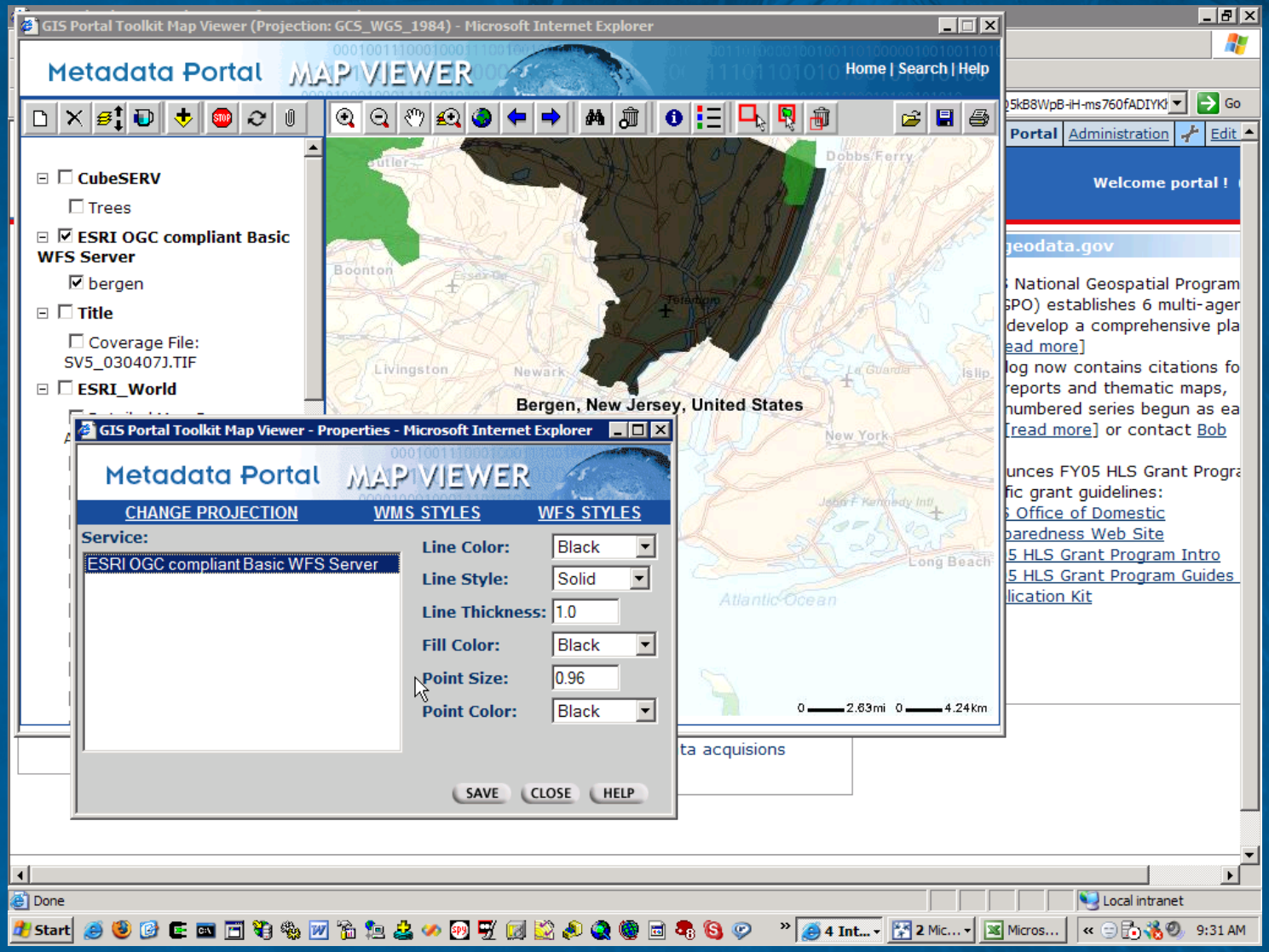
Start

Conta... | 2 Int... | 2 Mic...

9:50 AM

Warning: Applet Window

Map Viewer


GIS Portal Toolkit Map Viewer (Projection: GCS_WGS_1984) - Microsoft Internet Explorer
Metadata Portal
MAP VIEWER
Home | Search | Help
CubeSERV
Trees
ESRI OGC compliant Basic WFS Server
bergen
Title
Coverage File: SV5_030407J.TIF
ESRI_World
Bergen, New Jersey, United States
GIS Portal Toolkit Map Viewer - Properties - Microsoft Internet Explorer
CHANGE PROJECTION
WMS STYLES
WFS STYLES
Service:
ESRI OGC compliant Basic WFS Server
Line Color: Black
Line Style: Solid
Line Thickness: 1.0
Fill Color: Black
Point Size: 0.96
Point Color: Black
SAVE
CLOSE
HELP
Portal
Administration
Edit
Welcome portal !
geodata.gov
Go
Done
Local intranet
Start
9:31 AM

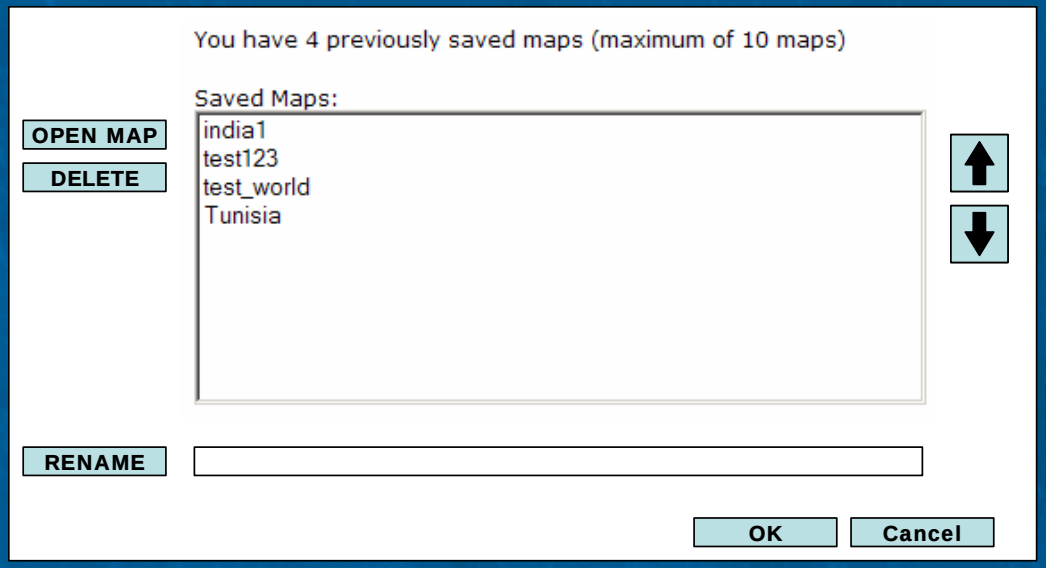
Map Viewer

- Browser-based map viewer that can combine data services from one or more GIS data sources
- Provides extensive functionality for
  - map navigation
  - printing
  - selection queries
  - data exploration
  - direct use of online Web services
  - fusing multiple services into a single map

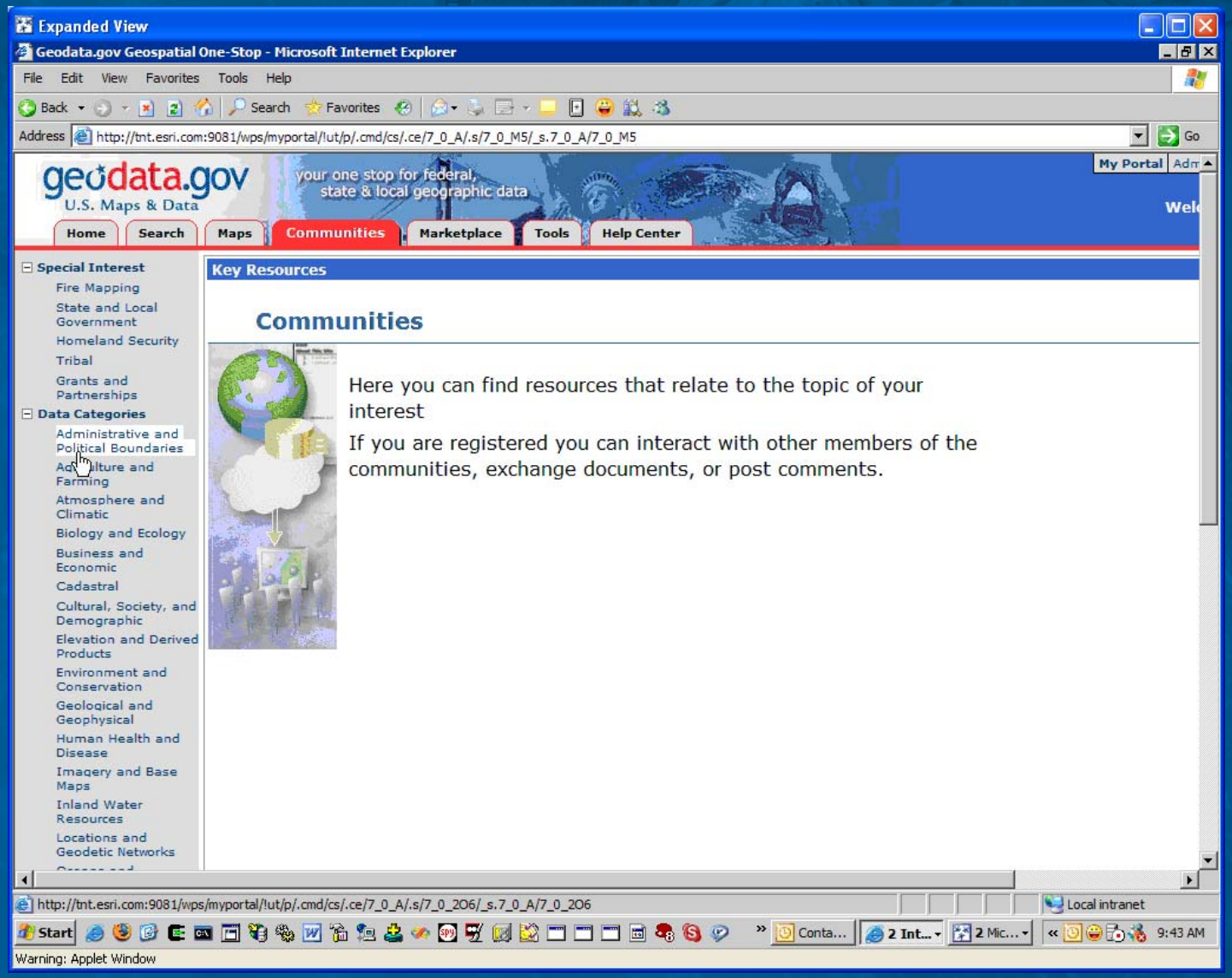
My Maps Portlet

View Mode

Edit Mode



Communities



Communities

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/.cmd/cs/.ce/7_0_A/.s/7_0_2O6/_s.7_0_A/7_0_2O6

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Welcome marten ! (Log out)

Home | Search | Maps | Communities | Marketplace | Tools | Help Center

- Special Interest
  - Fire Mapping
  - State and Local Government
  - Homeland Security
  - Tribal
  - Grants and Partnerships
- Data Categories
  - Administrative and Political Boundaries
  - Agriculture and Farming
  - Atmosphere and Climatic
  - Biology and Ecology
  - Business and Economic
  - Cadastral
  - Cultural, Society, and Demographic
  - Elevation and Derived Products
  - Environment and Conservation
  - Geological and Geophysical
  - Human Health and Disease
  - Imagery and Base Maps
  - Inland Water Resources
  - Locations and Geodetic Networks
  - Oceans and Estuaries

Data Admin Key Resources

Administrative and Political Boundaries

Introduction

The Administrative and Political Boundaries channel provides a listing of the most relevant metadata records and website links related to political and administrative boundaries and their corresponding information.

Featured Live Data

U.S. Census Bureau

Content Summary: The preeminent collector and provider of timely, relevant, and quality data about the people and economy of the United States. Large collection of census data available on-line, mostly in pdf format. Also, search their catalog for cd-rom's, diskettes, tapes, maps and publications. Some are available on-line, or for free, otherwise there is a nominal charge.

Content Purpose: To provide the best mix of timeliness, relevancy, quality, and cost for the data the collected and services provided.

Publisher: U.S. Census Bureau

Content Type: Clearinghouse

VIEW DETAILS | GO TO WEBSITE

Digital Offshore Cadastre

Content Summary: The MMS is making its existing cadastre data available at http://www.mms.gov/ld/Maps.htm. These data will include digital images of MMS data at the regional, planning area, Official Protraction Diagram (OPD), and Supplemental Official OCS Block Diagram (SOBD) levels and digital spatial data in Arc/Info export and Arc/View shape format at the regional or planning area levels.

Local intranet

Start | Conta... | 2 Int... | 2 Mic... | 9:45 AM

Warning: Applet Window

Communities

Expanded View

IBM WebSphere Portal - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites

Address http://goscode:9081/wps/portal/!ut/p/vp/18_0_35/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN4538wfJgFjOnvqRaCIe6CIe5hARDxe4iAVUxA0uYgkV8YaLOEFFAvV9PfJzU_W99QPC Go

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Log in | New User? | Sign up

Home | Search | Maps | Communities | Marketplace | My Tools | Help Center

- Special Interest
  - Fire Mapping
  - Recreation and Tourism
  - Homeland Security
  - Lewis and Clark
  - Natural Disaster
  - Marine
- Data Categories
  - Administrative and Political
  - Agriculture and Farming
  - Atmosphere and Climate
  - Biology and Ecology
  - Business and Economic
  - Cadastral (Real Estate)
  - Cultural and Demographic
  - Elevation
  - Environmental
  - Geology
  - Human Health and Disease
  - Imagery and Base Maps
  - Inland Water Resources
  - Locations and Geodesy
  - Oceans and Estuaries
  - Transportation Networks
  - Utilities and Communication
- Location-Based
  - Alaska
  - Washington, DC
  - Westchester County, NY

GOS Culture, Society and Demographic

Demographic | Archeology and Anthropology | Built Environment | American Indian/Alaskan Native | About this

Introduction

The Cultural, Society, and Demographic Channel provides a listing of the most relevant metadata records and website links containing social, cultural, or demographic information. As this is a broad based category please note that the information is divided into several subchannels for organizational purposes.

Live Data and Maps

Geographic Names Information System

Content Summary: The Geographic Names Information System (GNIS), developed by the USGS in cooperation with the U.S. Board on Geographic Names (BGN), contains information about almost 2 million physical and cultural geographic features in the United States and its territories. The Federally recognized name of each feature described in the data base is identified, and references are made to a feature's location by State, county, and geographic coordinates.

GO TO WEBSITE

FedStats - MapStats

Content Summary: MapStats provides statistics by State, county, Federal judicial district or congressional district

GO TO WEBSITE

http://goscode:9081/wps/portal/!ut/p/vp/18_0_35/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN453NwXJgFjOnvqRaCIe6CIe5hARDxe4iAVUxA0uY Local intranet

Start 3 Inter... 2 Micro... Microsoft... 10:51 AM

Warning: Applet Window

Communities

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/.cmd/cps/.c/6_0_1OI/.ce/7_0_2ON/.ps/N/_s.7_0_A/7_0_2OG#7_0_2ON

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Home | Search | Maps | Communities | Marketplace | Tools | Help Center

Special Interest
- Fire Mapping
- State and Local Government
- Homeland Security
- Tribal
- Grants and Partnerships

Data Categories
- Administrative and Political Boundaries
- Agriculture and Farming
- Atmosphere and Climatic
- Biology and Ecology
- Business and Economic
- Cadastral
- Cultural, Society, and Demographic
- Elevation and Derived Products
- Environment and Conservation
- Geological and Geophysical
- Human Health and Disease
- Imagery and Base Maps
- Inland Water Resources
- Locations and Geodetic Networks
- Oceans and Estuaries

Community Resources

Fire Mapping Community

The Fire Mapping community page is a platform for people involved in fire prevention and mapping to come together and exchange ideas and information. This page also contains internet links to selected Web sites that provide contextual and background information applicable to fire prevention and preparedness.

Fire Information
- National Interagency Fire Center
- Fire Events
- 2003 California Fire Assessments

Fire Prevention
- FirePALS
- Smokey Bear
- Sparky the Fire Dog

Weather

Disaster Assistance

Join This Community

Document Manager

Fire Mapping Forum

Calendar

iNotes Web Access. Calendar One Month — Login | Preferences | Help

New | Refresh | Print

http://tnt.esri.com:9081/wps/myportal/!ut/p/.cmd/cs/.ce/7_0_A/.s/7_0_2QQ/_s.7_0_A/7_0_2QQ — Local intranet

Start | Conta... | 2 Int... | 2 Mic... | 9:44 AM

Warning: Applet Window

Communities

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/.cmd/cps/.c/6_0_1OI/.ce/7_0_2OO/.ps/M/_s.7_0_A/7_0_2OG#7_0_2OO

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Home | Search | Maps | Communities | Marketplace | Tools | Help Center

Special Interest

- Fire Mapping
- State and Local Government
- Homeland Security
- Tribal
- Grants and Partnerships

Data Categories

- Administrative and Political Boundaries
- Agriculture and Farming
- Atmosphere and Climatic
- Biology and Ecology
- Business and Economic
- Cadastral
- Cultural, Society, and Demographic
- Elevation and Derived Products
- Environment and Conservation
- Geological and Geophysical
- Human Health and Disease
- Imagery and Base Maps
- Inland Water Resources
- Locations and Geodetic Networks
- Oceans and Estuaries

Community Resources

Join This Community

Document Manager

New Folder | New Document | Upload Document | Move Document | Copy Document | Download Document

Search in: All folders Current folder

Document Manager

- Locked Documents
- Fire Maps
- Fire Evacuation Planning
- Fuel Reduction
- Vegetation Mortality
- Fire Emergency Planning
- Emergency Routes

Fire Mapping Forum

You are here: Community Forums > Fire Mapping

Hot Topic | NEW! New Topic | Waiting for Reply | Answered Questions

Fire Prevention and Preparedness hide this forum top

Local intranet

Start Conta... 2 Int... 2 Mic... 9:42 AM

Warning: Applet Window

Communities

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/.cmd/cps/.c/6_0_1OI/.ce/7_0_2OK/.ps/M/_s.7_0_A/7_0_2OG#7_0_2OK

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Home | Search | Maps | Communities | Marketplace | Tools | Help Center

- Special Interest
  - Fire Mapping
  - State and Local Government
  - Homeland Security
  - Tribal
  - Grants and Partnerships
- Data Categories
  - Administrative and Political Boundaries
  - Agriculture and Farming
  - Atmosphere and Climatic
  - Biology and Ecology
  - Business and Economic
  - Cadastral
  - Cultural, Society, and Demographic
  - Elevation and Derived Products
  - Environment and Conservation
  - Geological and Geophysical
  - Human Health and Disease
  - Imagery and Base Maps
  - Inland Water Resources
  - Locations and Geodetic Networks
  - Oceans and Estuaries

Community Resources

Join This Community

Document Manager

Fire Mapping Forum

You are here: Community Forums > Fire Mapping

Hot Topic | NEW! New Topic | Waiting for Reply | Answered Questions

Fire Prevention and Preparedness hide this forum top

Status	Thread Subject	Replies	Last Activity
	City of LA Preliminary Plan	5	12/9/2004

Fire Data hide these 3 threads top

Status	Thread Subject	Replies	Last Activity
NEW!	Damage Assessment	0	12/13/2004
	Where can I find fire perimeter data for the ...	11	11/30/2004
	San Bernardino, CA Fire Burn History	1	11/24/2004

Calendar

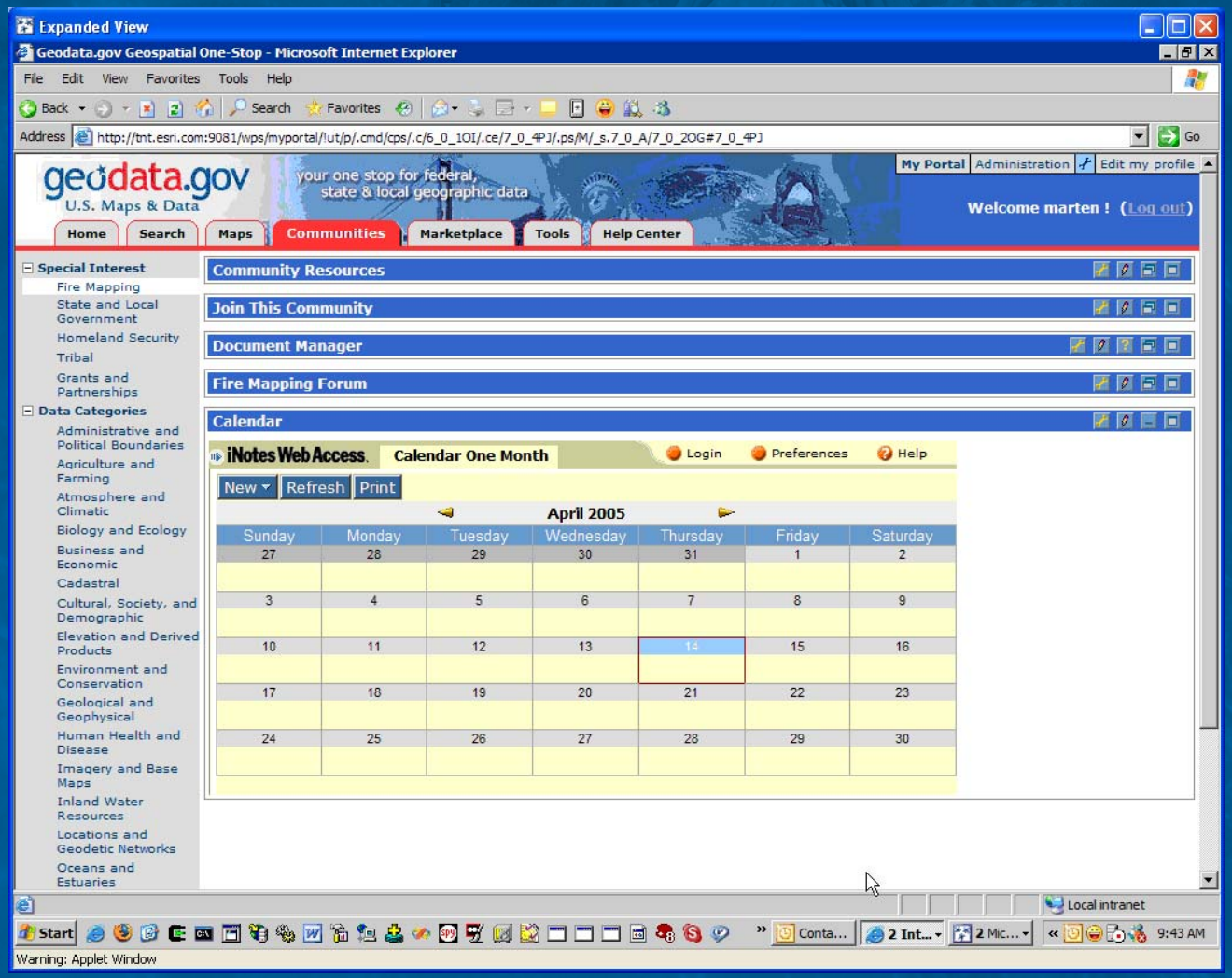
iNotes Web Access. Calendar One Month | Login | Preferences | Help

Local intranet

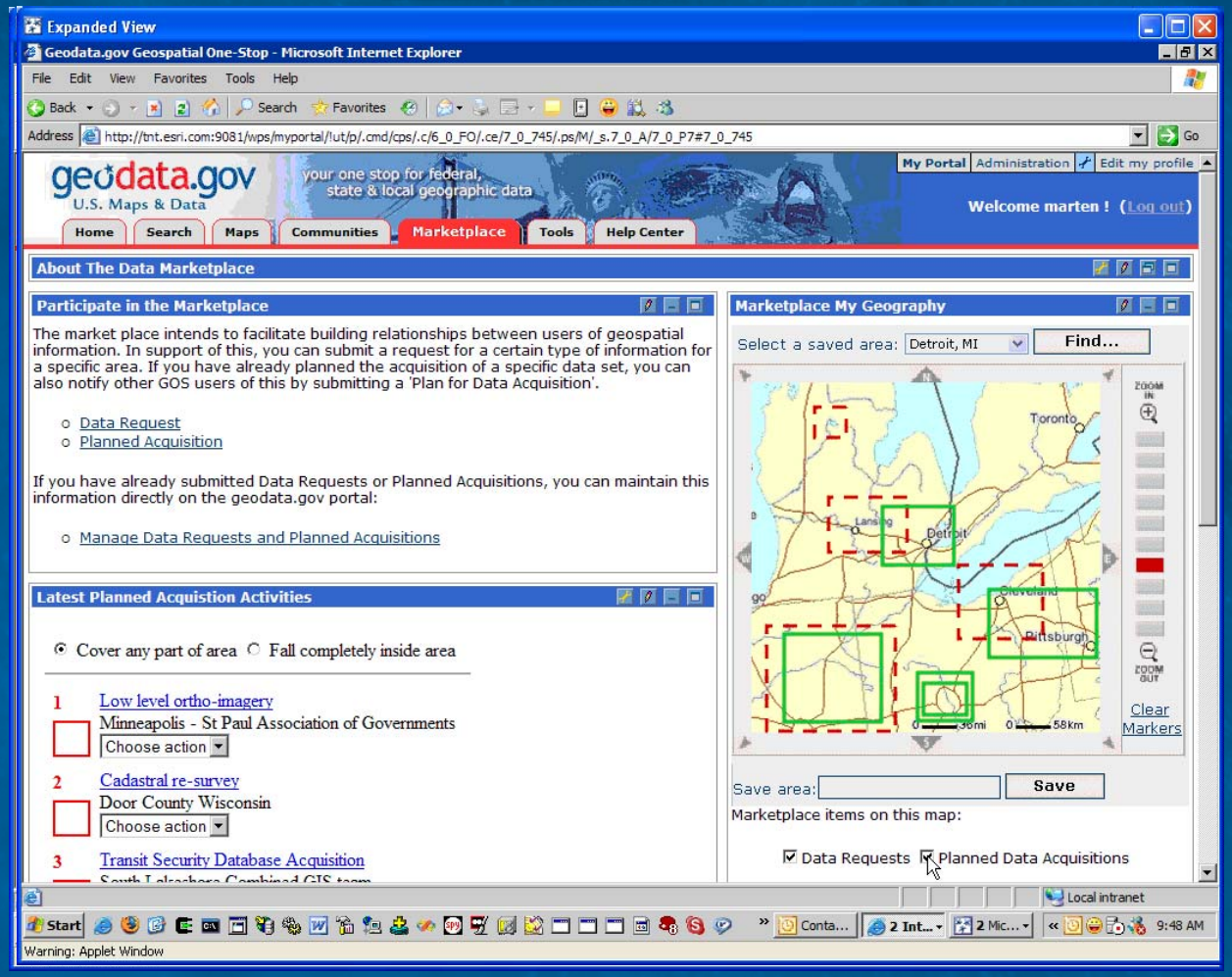
Start | Conta... | 2 Int... | 2 Mic... | 9:43 AM

Warning: Applet Window

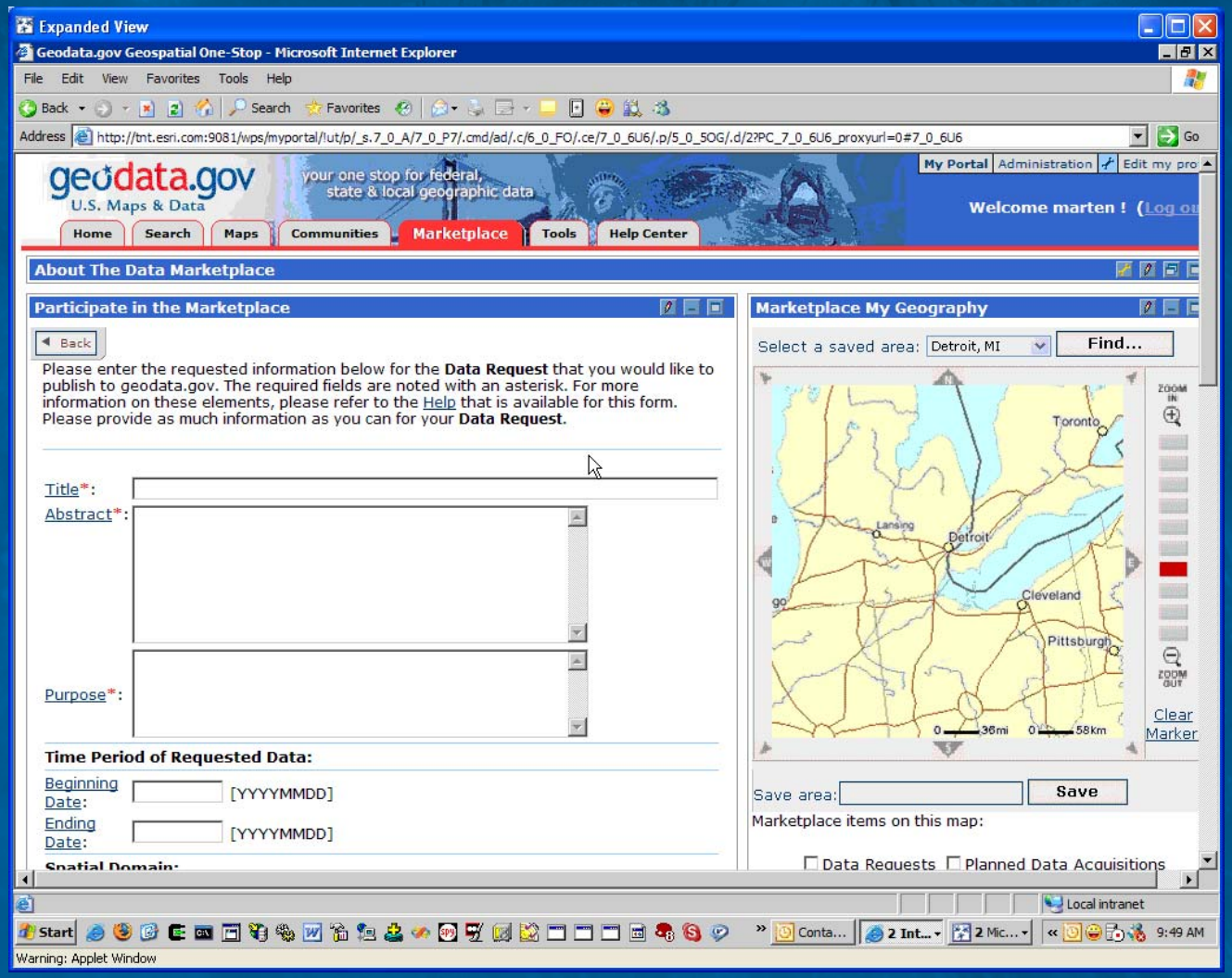
Communities



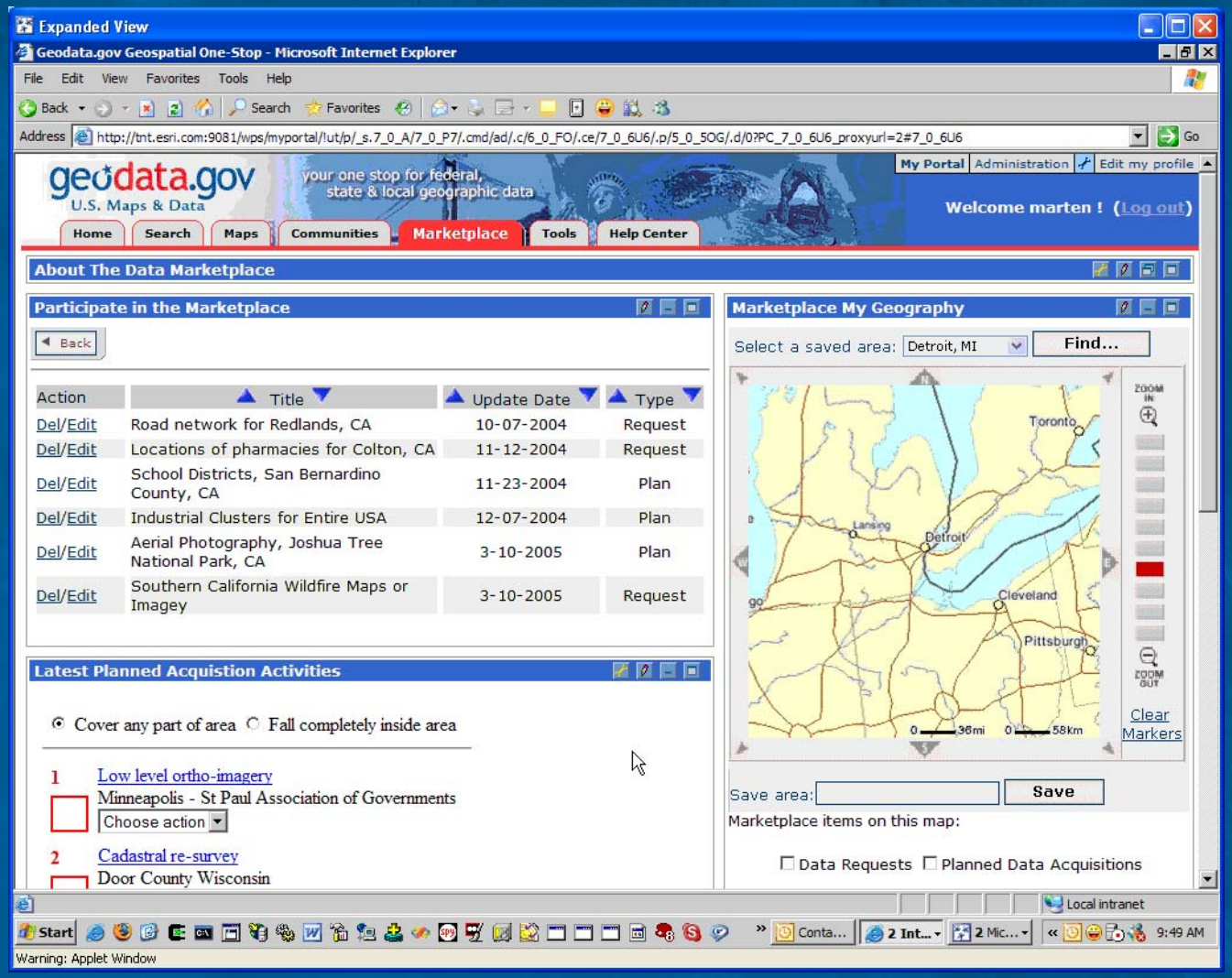
Partnership Marketplace



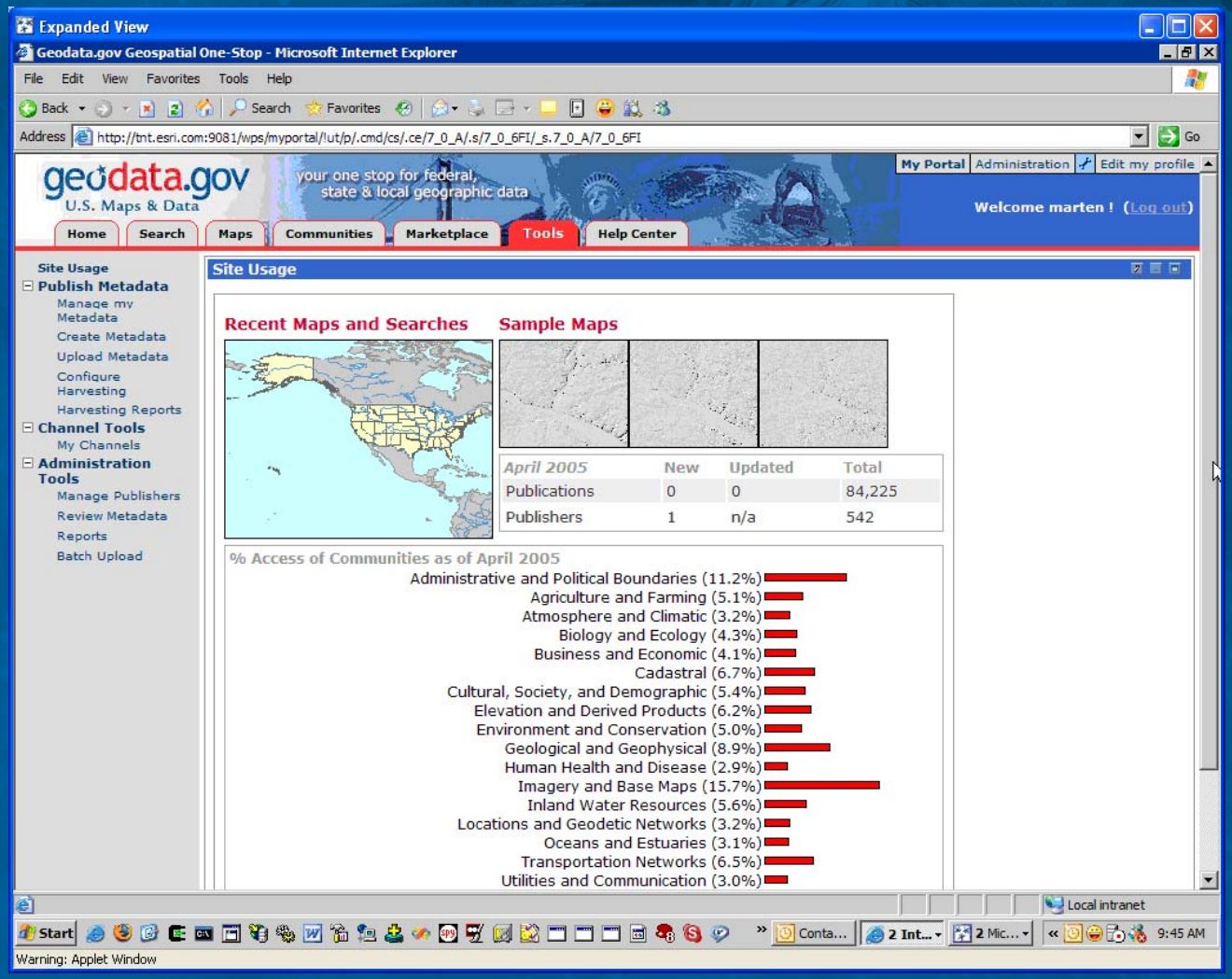
Partnership Marketplace



Partnership Marketplace



Tools - Statistics



Tools - Metadata

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/.cmd/cs/.ce/7_0_A/.s/7_0_6G2/_s.7_0_A/7_0_6G2

geodata.gov U.S. Maps & Data — your one stop for federal, state & local geographic data

My Portal | Administration | Edit my profile

Welcome marten ! (Log out)

Home | Search | Maps | Communities | Marketplace | Tools | Help Center

- Site Usage
- Publish Metadata
  - Manage my Metadata
  - Create Metadata
  - Upload Metadata
  - Configure Harvesting
  - Harvesting Reports
- Channel Tools
  - My Channels
- Administration Tools
  - Manage Publishers
  - Review Metadata
  - Reports
  - Batch Upload

Manage My Metadata

Dataset name

Metadata owner | Folder

Dataset uuid | Status: Posted

Updated date between: 11-24-2004 and 12-08-2004 (mm-dd-yyyy) Go

For selected records: Set as Incomplete OK | Transfer!

Action	DOCUUID	Dataset Name	Owner	Folder	Update
Del/View	{0140824a-1dd2-11b2-ad9e-c04bf54cbc66}	Bailey's ecoregions of the world	geodata	geodata	10-07-2
Del/View	{00daa402-1dd2-11b2-ad9e-c04bf54cbc66}	Demographic and Economic Mapping System	geodata	geodata	10-07-2
Del/View	{00daa90c-1dd2-11b2-ad9e-c04bf54cbc66}	Digital Boundary Files and Layers	geodata	geodata	10-07-2
Del/View	{00daa6d2-1dd2-11b2-ad9e-c04bf54cbc66}	Industrial Clusters	geodata	geodata	10-07-2
		New Jersey River Action Team			

Done | Local intranet

Start | Conta... | 2 Int... | 2 Mic... | 9:45 AM

Warning: Applet Window

Tools - Harvesting

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/.cmd/cs/.ce/7_0_A/.s/7_0_6GE/_s.7_0_A/7_0_6GE

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  - Reports
  - Batch Upload

Configure Harvesting

Harvesting Registration

For more information on metadata harvesting click About Harvesting

Protocol: ◉ CS-W ○ ArcIMS ○ Z39.50 ○ OAI-PMH ○ Web Accessible Folder

Primary Geographic Scope of Collection: Select a Primary Geographic Scope of Collection

Host: Port:

Database Name:

Geodata.gov will categorize your metadata based on the metadata theme keyword. Each metadata may be assigned to one of the 19 topic category in the ISO 19115. The ISO topic category can be inserted directly in the metadata as one of the theme keywords or you can also provide a look up table that will translate theme keyword in your metadata with an ISO topic category. An ISO topic category will be assigned for any first match of theme keyword found in the lookup table and the metadata. Click HERE to see an example of a theme lookup table.

Please select the method to provide the theme keyword:

◉ Already inserted in the metadata ○ Look-up table

How often do you want this repository harvested:

◉ Once every month ○ Twice every month ○ Once every week ○ Only once ○ Skip harvesting

Done | Local intranet

Start | Conta... | 2 Int... | 2 Mic... | 9:45 AM

Warning: Applet Window

Tools - Reports

Expanded View

Geodata.gov Geospatial One-Stop - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://tnt.esri.com:9081/wps/myportal/!ut/p/.cmd/cs/.ce/7_0_A/.s/7_0_6KS/_s.7_0_A/7_0_6KS

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- Administration Tools
  - Manage Publishers
  - Review Metadata
  - Reports
  - Batch Upload

Link Report

geodata.gov Link Report

Error: Access Forbidden (403)

Name	Type	URL	Admin
Vermont Public Lands	Other Documents	Test	Edit
Vermont E911_Emergency Service Zone	Other Documents	Test	Edit
Vermont Geodetic Control Monuments	Other Documents	Test	Edit

Harvesting Reports

Username	Organization	Protocol	URL
jcalkins	John's Z39.50 Catalog	Z39.50	http://www.example.com
mhogeweg	Geospatial Service and Technology Center	ArcIMS	http://www.example.com/aims
creece	USGS EROS Data Center	WAF	http://clearinghouse3.fgdc.gov/FrameworkS
mccre004	U.S Census Bureau	Z39.50	aries.geo.census.gov:81:CenData
kbene	Earth Data Analysis Center, University of New Mexico	WAF	http://gos.unm.edu/metadata
DonnaMRoy	US Geological Survey, National Biological Information Infrastructure	WAF	http://mercury.ornl.gov/metadata/nbii/xml/
msdis	Missouri Spatial Data Information Service	WAF	ftp://msdis.missouri.edu/pub/metadata_gos

Privacy | Policies | FOIA | DOI | USGS | Firstgov | Contact Us | FAQ

Done — Local intranet

Start — Conta... — 2 Int... — 2 Mic... — 9:46 AM

Warning: Applet Window

Help Center

Expanded View

IBM WebSphere Portal - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites

Address http://goscode:9081/wps/portal/!ut/p/vp/18_0_35/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN453CwLJgFjOnvqRaCIecBFfj_zcVH1v_QD9gtzQiHJHRUUAlH5qfQ!!/delta/base64xml Go

geodata.gov
U.S. Maps & Data

your one stop for federal, state & local geographic data

Home | Search | Maps | Communities | Marketplace | My Tools | Help Center

- Welcome
  - About Geodata.gov
  - Login Help
  - Quick Start Guide
- Geospatial One-Stop Program
  - GOS Overview
  - GOS Partnerships
  - Board of Directors
- Standards and Best Practices
  - Data Standards
  - GOS Standards
  - Metadata Standards
  - Data Models
  - Additional Resources
- Publishing Data
  - How to Register your Data
  - Creating and Publishing Metadata
- Getting More Help
  - FAQ - Frequently Asked Questions
  - Contact Information
- Accessibility
  - geodata.gov and Accessibility
- Disclaimer
  - geodata.gov Disclaimer

GOS Help About

The geodata.gov Web site allows you to view data categories and current events, access a wide variety of geographic data, save your search criteria, apply a subscription service to selected areas, view metadata, interact with map servic

Data Categories:

Web pages that help you dscover and access a wide variety of geographic information for a particular data theme or da

Current Events or Application Topics:

Web pages that help you discover and access a wide variety of geographic information for a special aplication area or c

Search Page:

The Search page enables you to discover and access a wide variety of geographic information within geodata.gov. This provided by government, commercial, and noncommercial organizations, includes map images, map services, geographic activities, spatial solutions, clearinghouses, and land references.

Performing a Search:

To find content, you can set a search area by place name or you can use the Map Viewer to define your search. Once established, you can set your search criteria based on content type, such as map service, geographic datasets, activiti keywords or date ranges. The results of the search are displayed along with metadata and if appropriate a map.

Save Your Search Criteria:

You may save your search criteria and/or a search result by selecting the Save Search button in the search results win are stored in your geodata.gov profile, and are accessible once you log in to your account.

Done | Local intranet

Start | 3 Inter... | 2 Micro... | Microsoft... | 10:33 AM

Warning: Applet Window

Deployment Options

New architecture enables some interesting deployment options …

Hosting

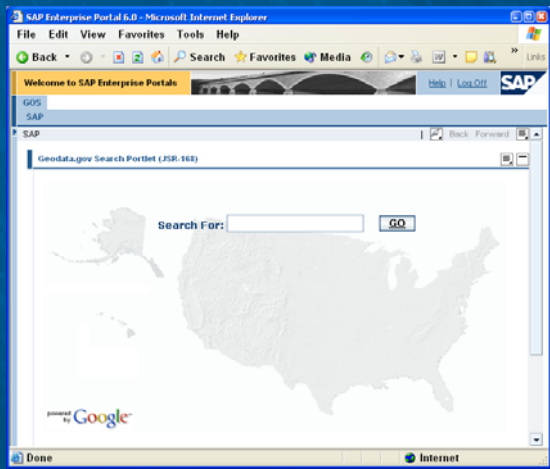
JSP

Sharing

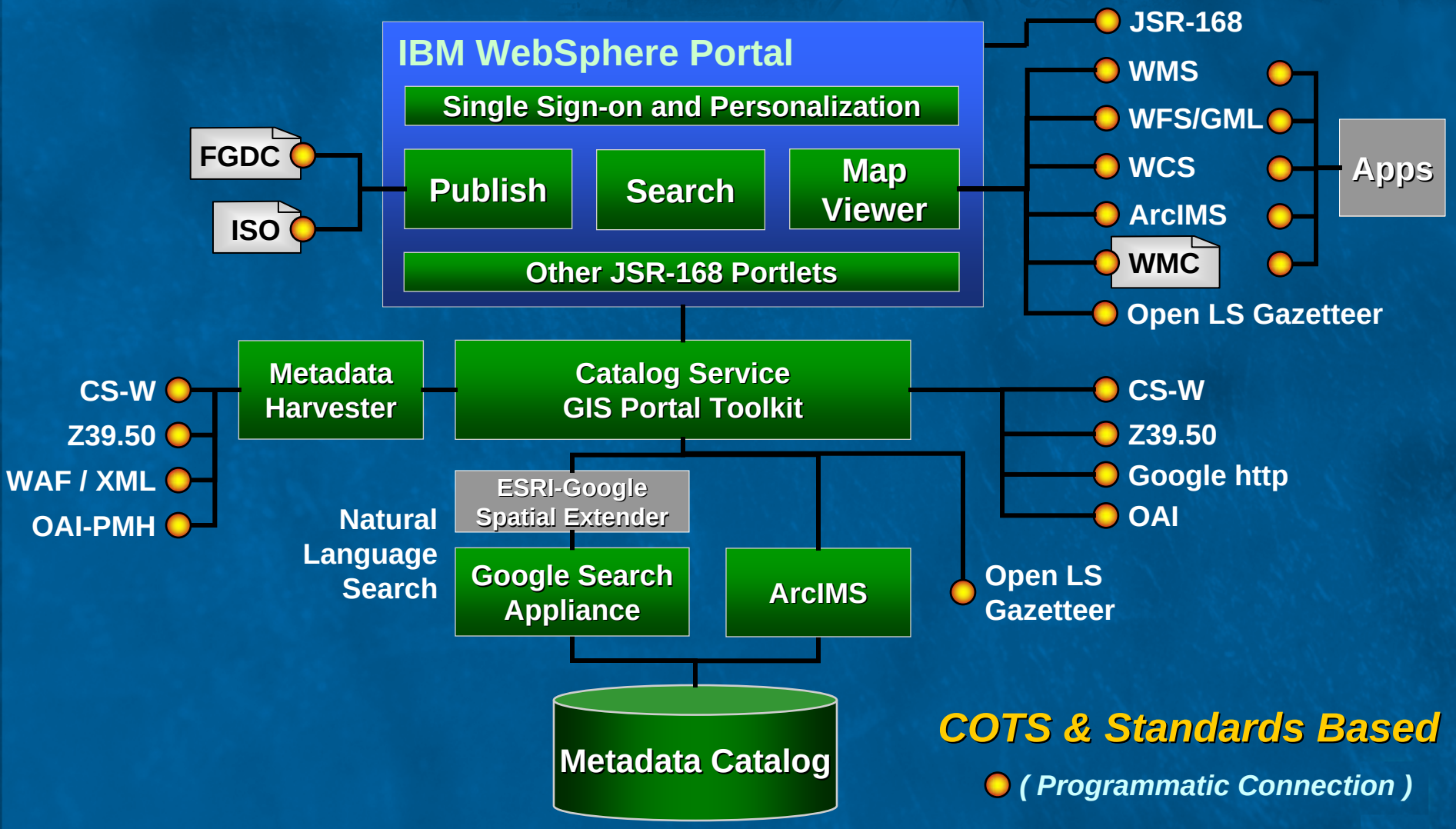
http Connect to Catalog Service

Portal Framework

Deploy JSR168 portlets
(IBM, SAP, BEA, Plumtree)



Transformational Architecture



Version 2 Will

- Open up GOS to more users, or "just google it"
- Dramatically grow the GOS network
- Expands channels to living communities for collaboration, sharing, networking
- Create an interactive Marketplace for cost sharing and partnerships
- Integrate GIS resources through Interoperability

Summary

- Google means fast and easy searches
- IBM brings on-line communities and wide dissemination of GOS
- New Marketplace will enable partnerships and result in cost savings
- Greater Integration with *The National Map*
- A wide variety of deployment options

Coming soon to a theater near you early this summer…..

Publish !

…and Get Involved with Building the NSDI

Lend your expertise and help:

- Make your data discoverable
- Make accessing information easier or more “customer-friendly” .
- Highlight value of geospatial information to carry out the business of government.
- Provide visibility for the ways that governments use geospatial information to meet their missions.

Liaison Involvement

Use geodata.gov as partnership building tool…..

- **Encourage and provide assistance in Publishing Data (especially map services)**
- **Publish planned acquisitions – establish your regional Partnership Marketplace**
- **Help expand channels to living communities for collaboration, sharing, networking**
- **Provide feedback on design improvements and capabilities needs**
- **Look for innovative ways to deploy GOS and TNM capabilities with your partners.**

Questions

www.geodata.gov

An Update on OSM's Underground Mine Map Initiative

John R. Craynon, P.E.
Chief, Division of Regulatory Support
Office of Surface Mining
Washington, DC

Issues of concern

- Getting maps into digital format
- Managing data and data standards
- Georeferencing and GIS issues
- Availability of maps and liability for use

Summary of OSM Initiative

- GOAL: Making as many accurate UG mine maps available to as many customers as possible
- Includes and builds on ongoing State and Federal efforts
- Builds on TIPS and other OSM/State partnerships
- Focused on delivering the needed product and capacity building
- Serves AML, regulatory and health and safety goals

Details of the Initiative

- Identification of best practices and creation of voluntary standards (this workshop)
- Establishment of underground mine mapping centers of expertise (including NMMR)
- Acquisition of underground mine maps
- Development of distributed “structure” to provide maps over the internet

Current Status

- 2005 Benchmarking workshop related to best practices/standards (this meeting)
- Working with lessors/States on liability issues
- Development of geo-referencing class (TIPS)
- Integration with NMMR 5-year plan
- FY ’06 Budget proposal
  - Funding building of State capability and additional resources for NMMR
  - Approximately $500,000 in FY ’06 budget

Key Points to Consider

- Cooperation and coordination is necessary
- Understanding the current status and best practices are keys to identifying future needs
- Funding to improve map availability and quality is necessary
- Benefits outweigh costs…working to quantify

Potential potholes

- Available funding and resources may limit scope
  - Current resource request a “drop in the bucket” compared to total need of perhaps $30-40 million
  - Bad timing for new initiatives
- Other priorities within OSM (e.g., AML reauthorization)
- Window of opportunity may be closing (long time since Quecreek)

Future efforts

- Continued cooperation with the States and others to use/develop the best available tools
- Rallying continued support and new funding resources
- Capability building among States and NMMR
- Addressing existing mine maps and availability of those maps
- Development of a coordinated plan

OFFICE OF SURFACE MINING

NATIONAL MINE MAP REPOSITORY (NMMR)

What's OSM Doing?

- NMMR Five-Year Plan
- National Mine Map Initiative

NMMR KEY STRATEGIES

- Preserve Our Collection
- Grow Our Collection
- Expand Customer Base
- Achieve Highest Standards Of Quality
- Deliver NMMR Products And Services Efficiently
- Expand Staff And Empower Employees To Improve The NMMR

PRESERVE COLLECTION

- DUPLICATE INVENTORY
  - ★FILM
  - ★DIGITAL
- SECURE FIREPROOF CABINETS
- OFFSITE BACKUP STORAGE
  - ★NARA Evaluation

PRESERVE COLLECTION

- 133,000—70% coal

GROW COLLECTION

- IDENTIFY AND COPY PRIVATE MAP COLLECTIONS
- EXPAND RELATIONSHIPS
  - ★BACKUP STATE COLLECTIONS
  - ★INSTITUTIONALIZE ARCHIVAL OF MSHA CLOSURE MAPS
  - ★ELECTRONIC PERMITTING?

6,674 maps in the VPI CONSOL Collection

Eliminate the Backlog

MSHA MINE MAPS RECEIVED BY DISTRICT

DISTRICT	***NUMBER OF MAPS***
1 (W-B, PA)	421
2 (Hunker, PA)	1725
3 (Morgantown, WV)	279
4 (Mt. Hope, WV)	2379
5 (Norton, VA)	2661
6 (Pikeville, KY)	2984
7 (Barbourville, KY)	2129
8 (Vincennes, IN)	185
9 (Denver, CO)	92
10 (Madisonville, KY)	8
11 (Birmingham, AL)	0
TOTAL	12,863

EXPAND CUSTOMER BASE

- I.D. CUSTOMER NEEDS
- PROMOTE NMMR
  - ★TECH TRANSFER
  - ★WEB
  - ★OTHER

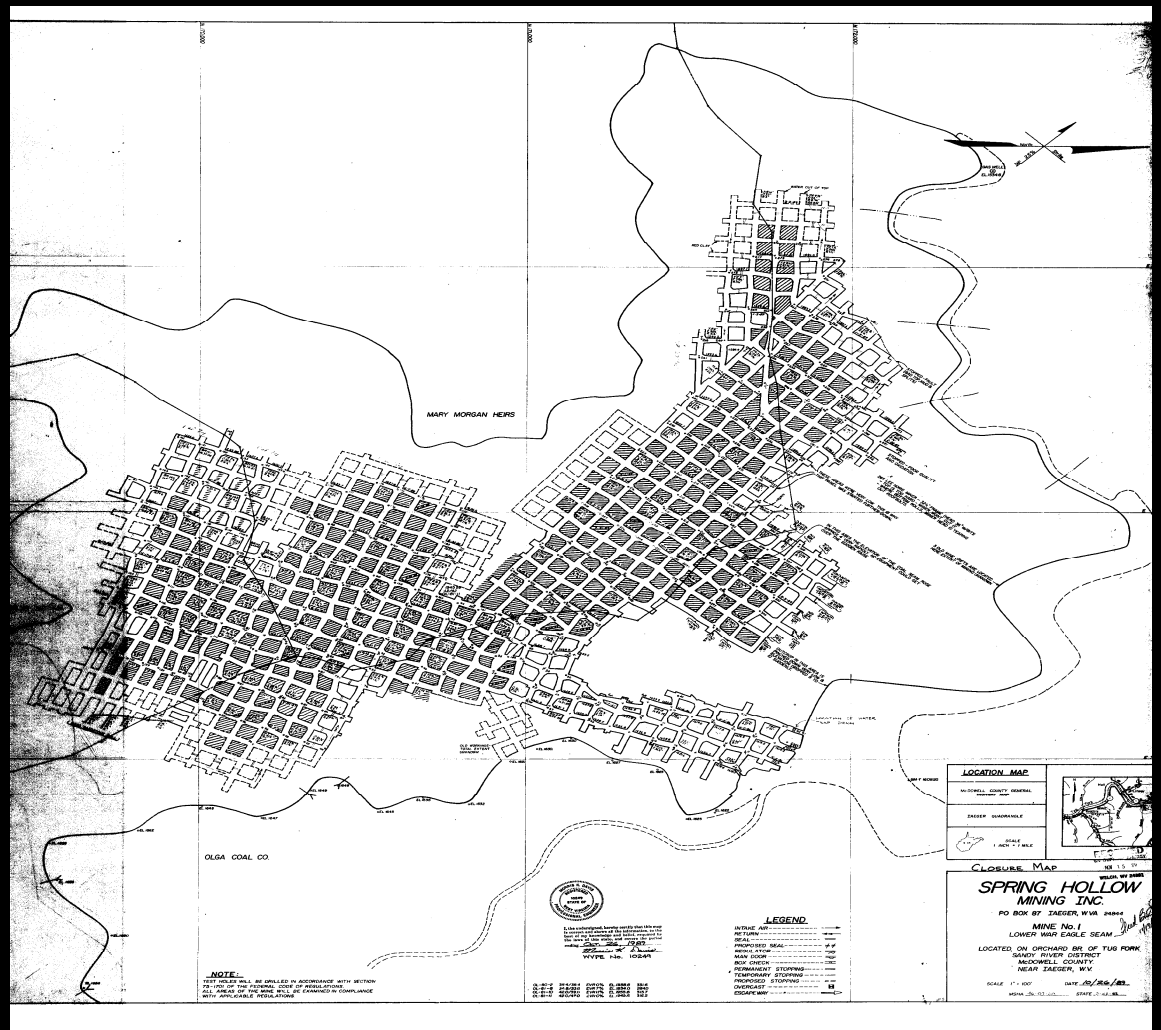
HIGHEST QUALITY STANDARDS

- SECURE RESOURCES FOR:
  - ★MICROGRAPHIC RECORDS
  - ★DIGITAL FILES

To scan or not to scan…

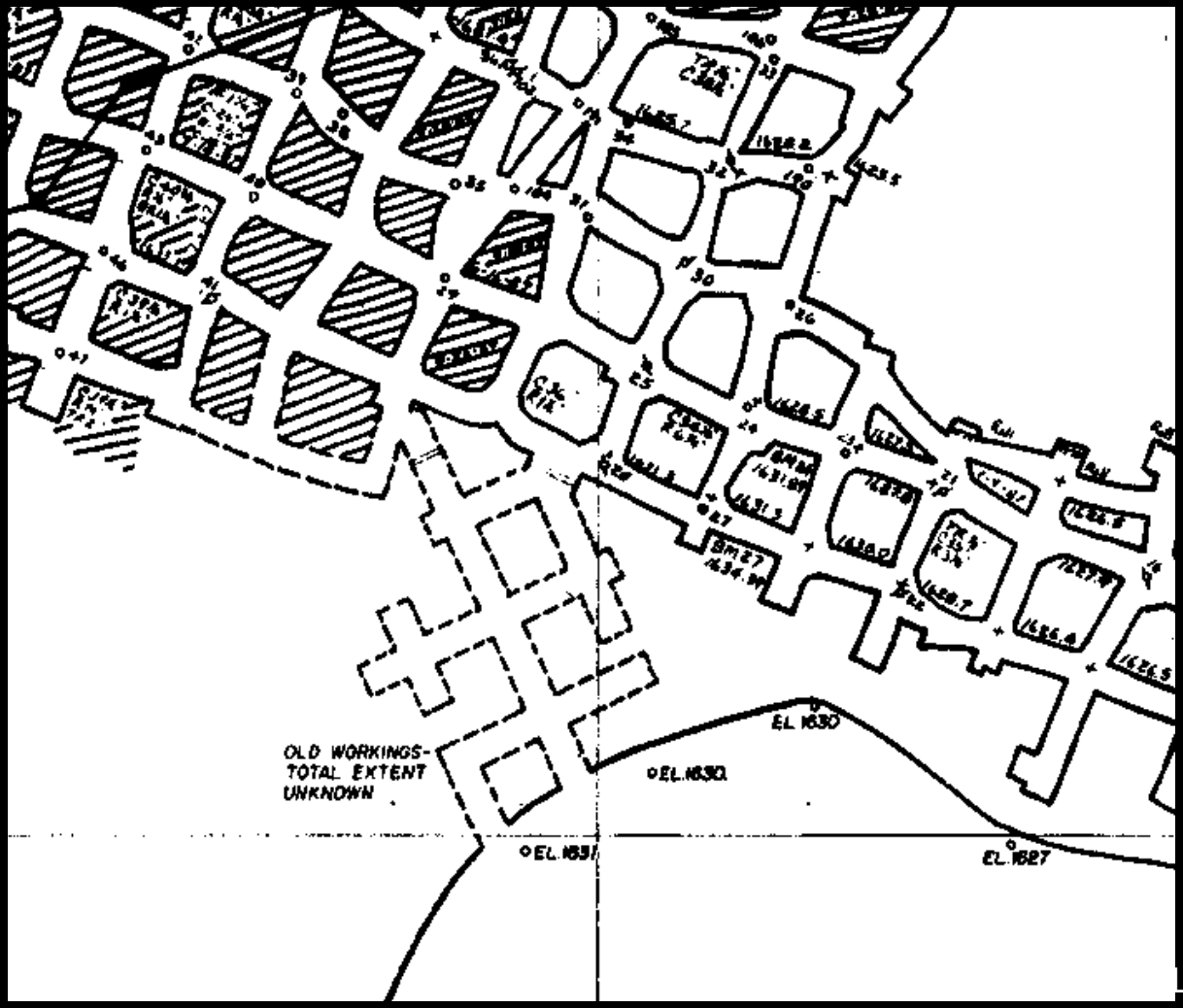
That is the question?

Resolution, Resolution, Resolution

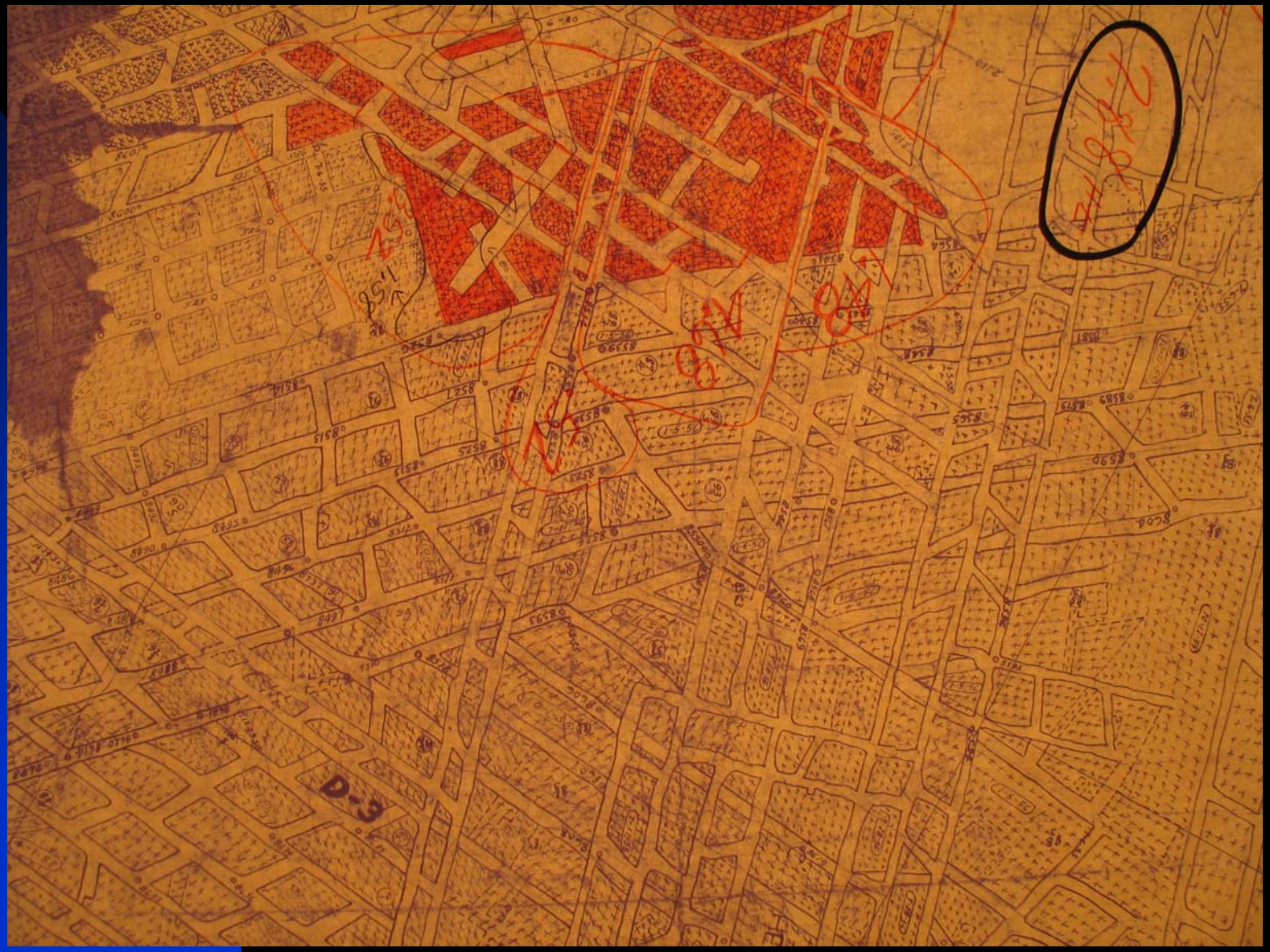


Micrographics

Resolution, Resolution, Resolution



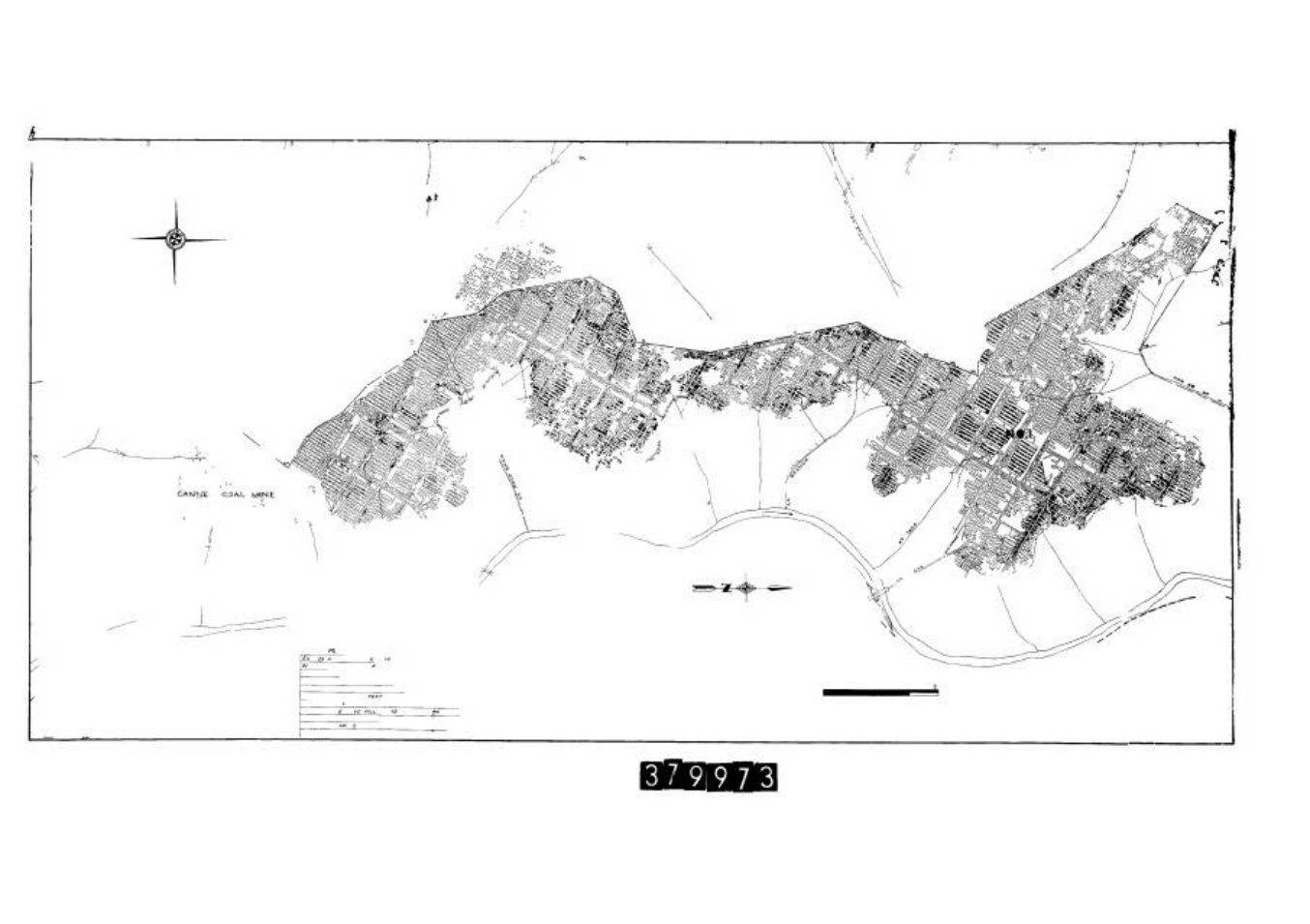
Resolution IS the solution!



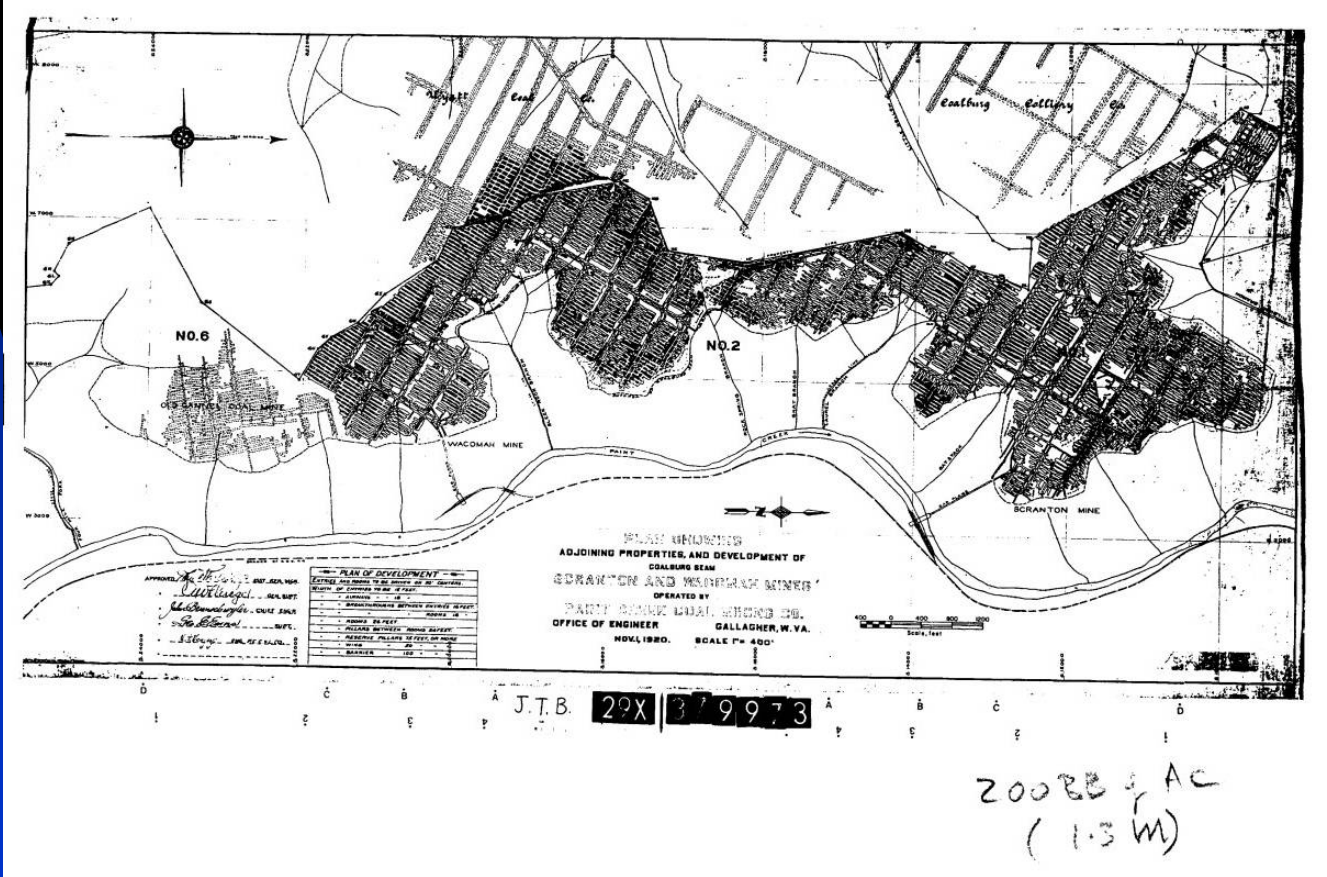
DIGITAL DILEMMA

- Aperture Card
  - 400 dpi
  - 500-1000 year life
- Scan of 24” x 36” or 36” x 48” map
  - 200 dpi
  - 35-50 MB
  - Digital lifespan uncertain

400 dpi Aperture Card Scan



Aperture Card print @ 200dpi



DELIVER PRODUCTS AND SERVICES EFFICENTLY

- IMPROVE ONSITE CUSTOMER SERVICE
- MOVE TO WEB AVAILABILITY

INCREASE STAFFING; EMPOWER EMPLOYEES TO IMPROVE NMMR

- EMPLOYEE TRAINING
- EMPLOYEE RECRUITMENT

OSM MINE MAP INITIATIVE GOALS

- DEVELOP VOLUNTARY BEST PRACTICES FOR ARCHIVING MINE MAPS
- CREATE CENTERS OF EXCELLENCE
- FACILITATE EXPANDED ACQUISITION OF MINE MAPS
- WIDEN DISTRIBUTION OF MAP PRODUCTS TO CUSTOMERS
- $$$$$$$!!!!!

CENTER OF EXCELLENCE

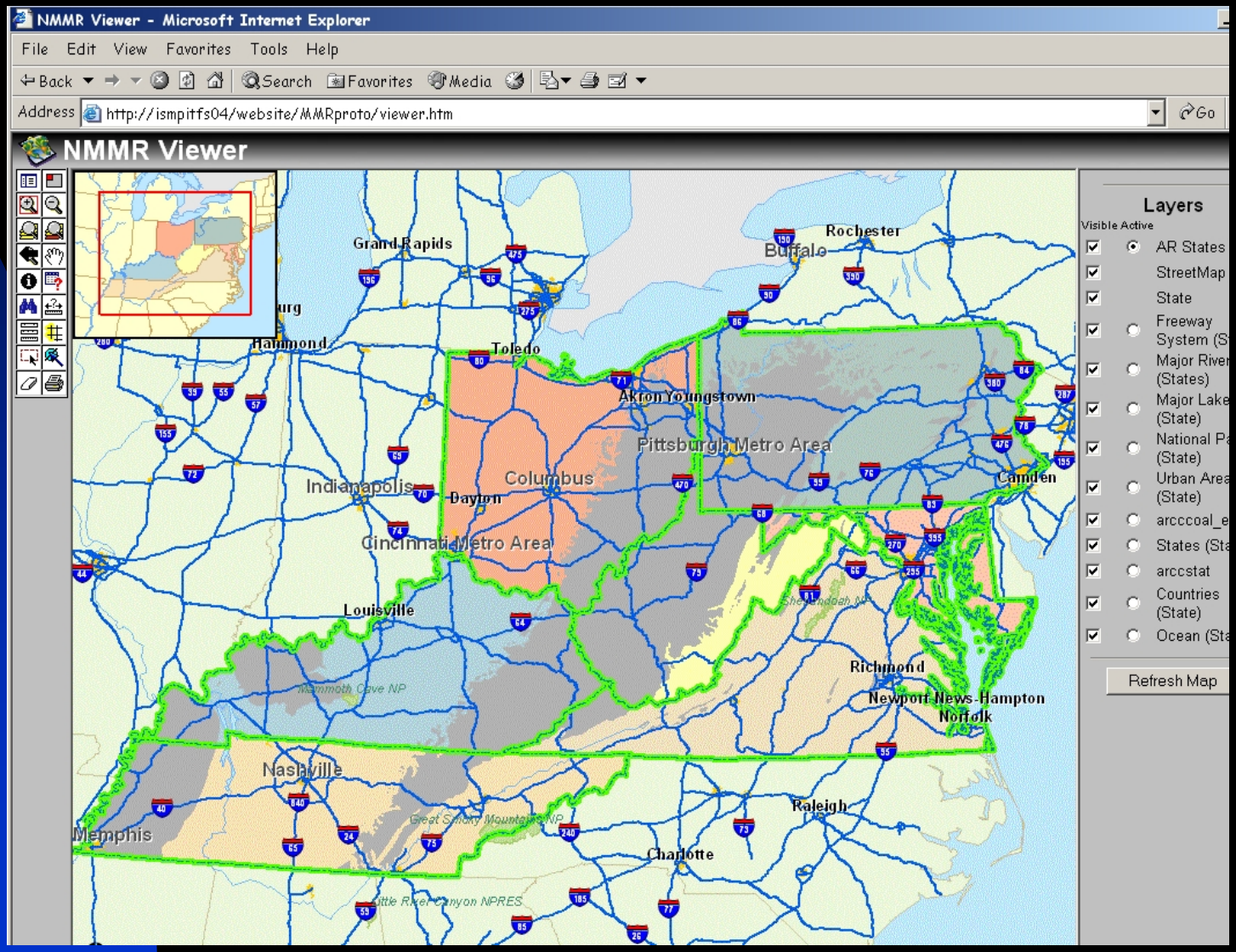
- PURCHASE STATE OF THE ART PHOTOGRAPHIC EQUIPMENT
- UPDATE DIGITAL SCANNING CAPABILITIES
- EXPAND RELATIONS WITH STATES
- DEVELOP INTERACTIVE WEB SITE

Obsolete?

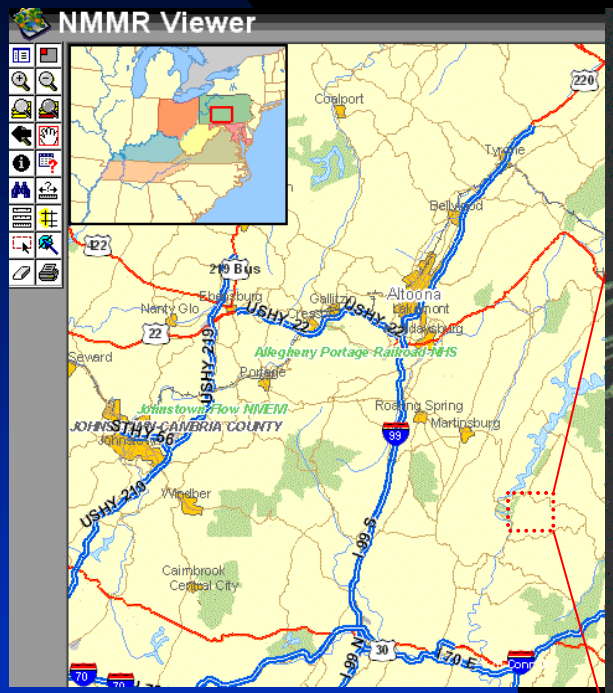
WEB-BASED NMMR GIS PROTYPE

- Expand public access to NMMR documents
  - Reduce NMMR employee assistance required from the public
  - Increase time devoted to processing documents
- Provide one site for access to all NMMR and associated digital data
  - In-house (NMMR, AML)
  - Leverage State Web services/data

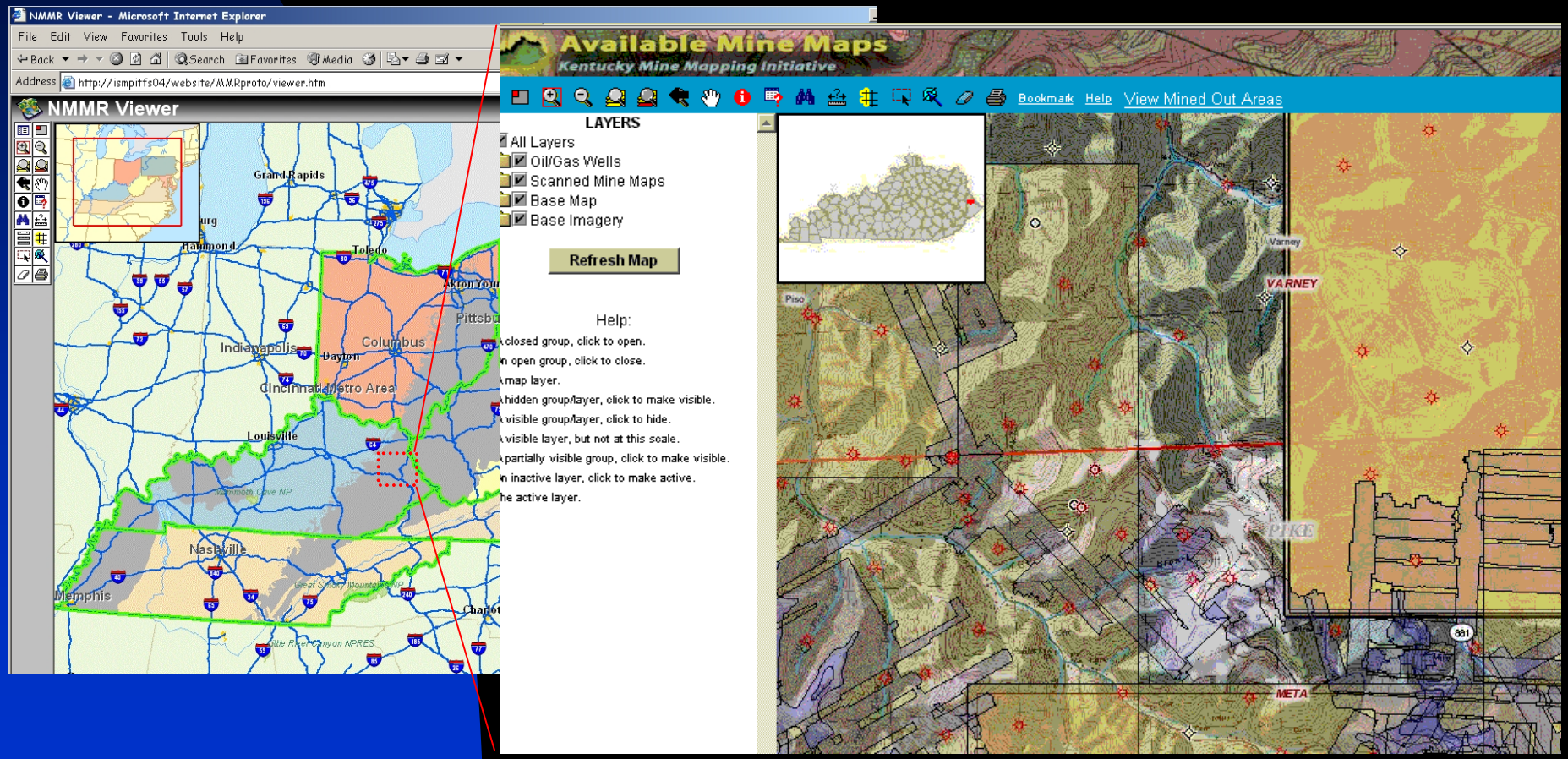
WEB-BASED NMMR GIS PROTYPE



WEB BASED NMMR GIS PROTYPE



- ArcIMS web services provide easy integration across Web Applications
- OSM and States can “share” data services, incorporating them in their respective applications



AutoCAD ® drawings: Security Issues

West Virginia Office of Miner's Health, Safety and Training

June 2, 2005

AutoCAD ®: the defacto mining industry standard

Advantages:

- Maps are comprised of layers that can be easily manipulated
- 95%+ of the mining industry
- Compatible with most popular GIS applications
- Maps are high precision

Disadvantages:

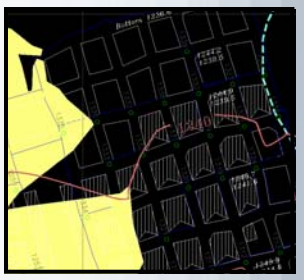
- Maps are comprised of layers that can be easily manipulated

Definitions

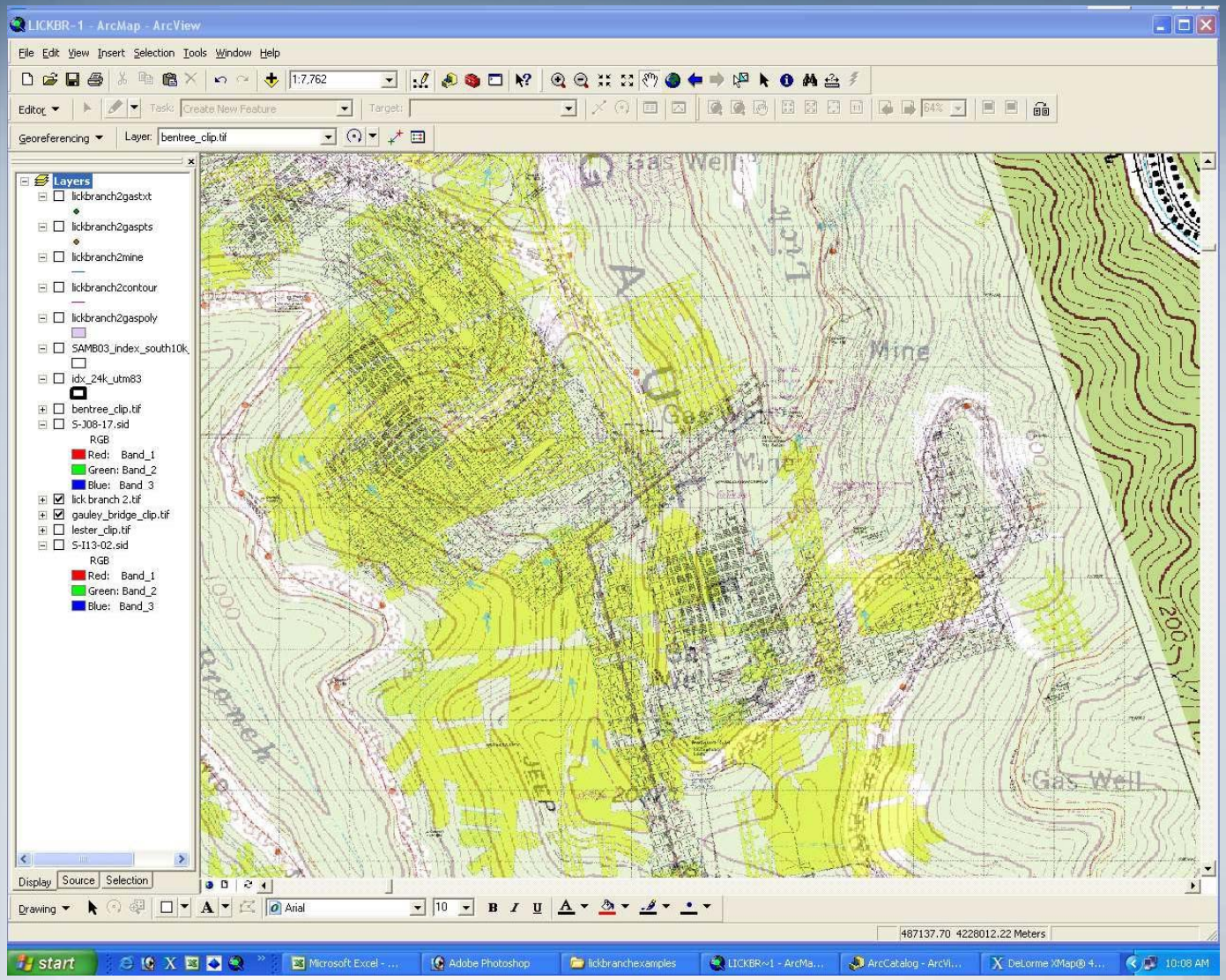
- **Raster Maps:**
  - Digital data -- picture comprised of pixels
  - Examples: .PDF, .TIF, .JPG

- **Vector Maps:**
  - Digital data – drawing comprised of lines
  - Examples: .DGN, .DXF, .DWG

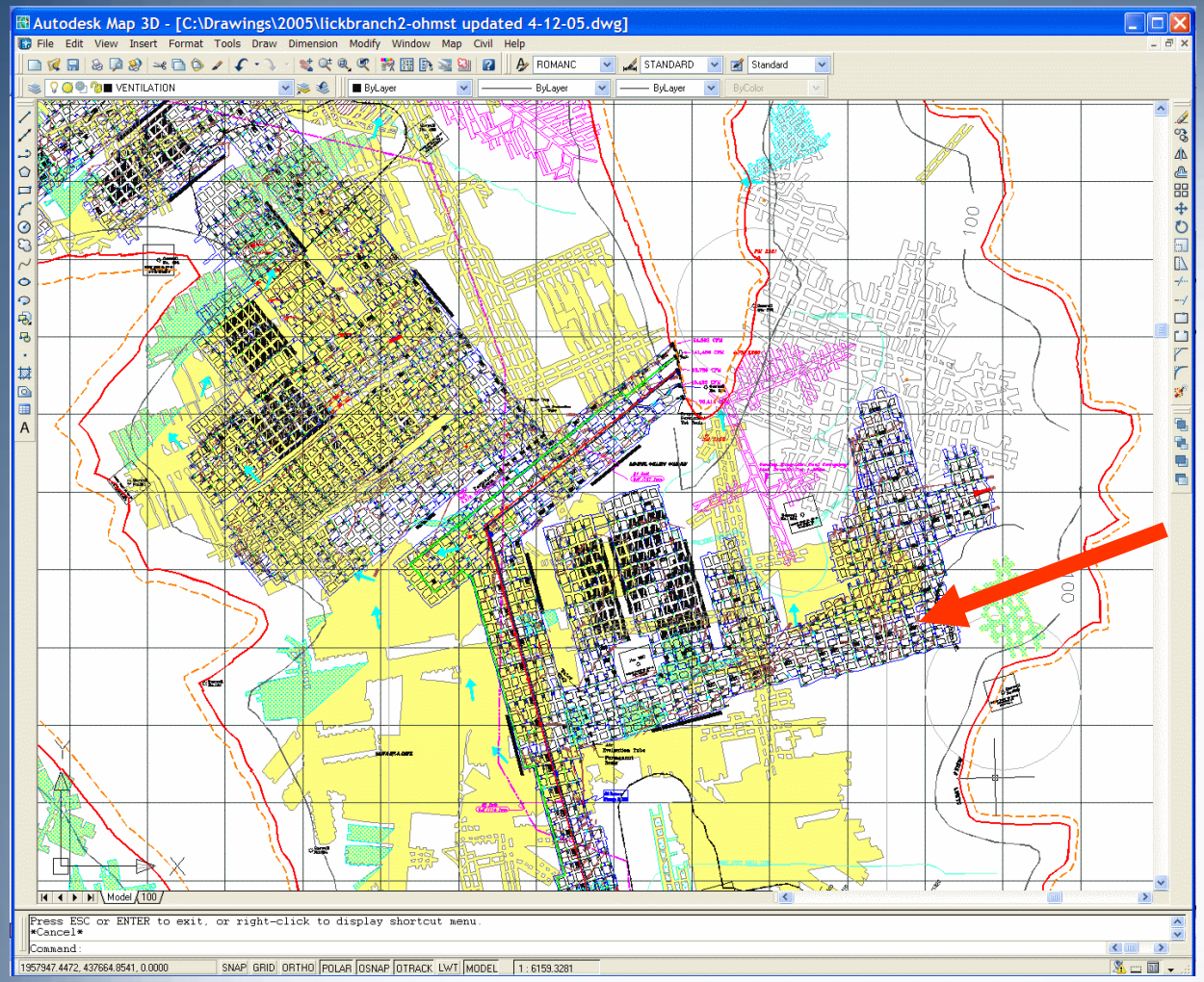
- **Hybrid Maps:**
  - Digital data – drawing comprised of both raster and vector elements
  - Examples: .PRJ, .DGN, .DWG



Using Scanned Paper Maps

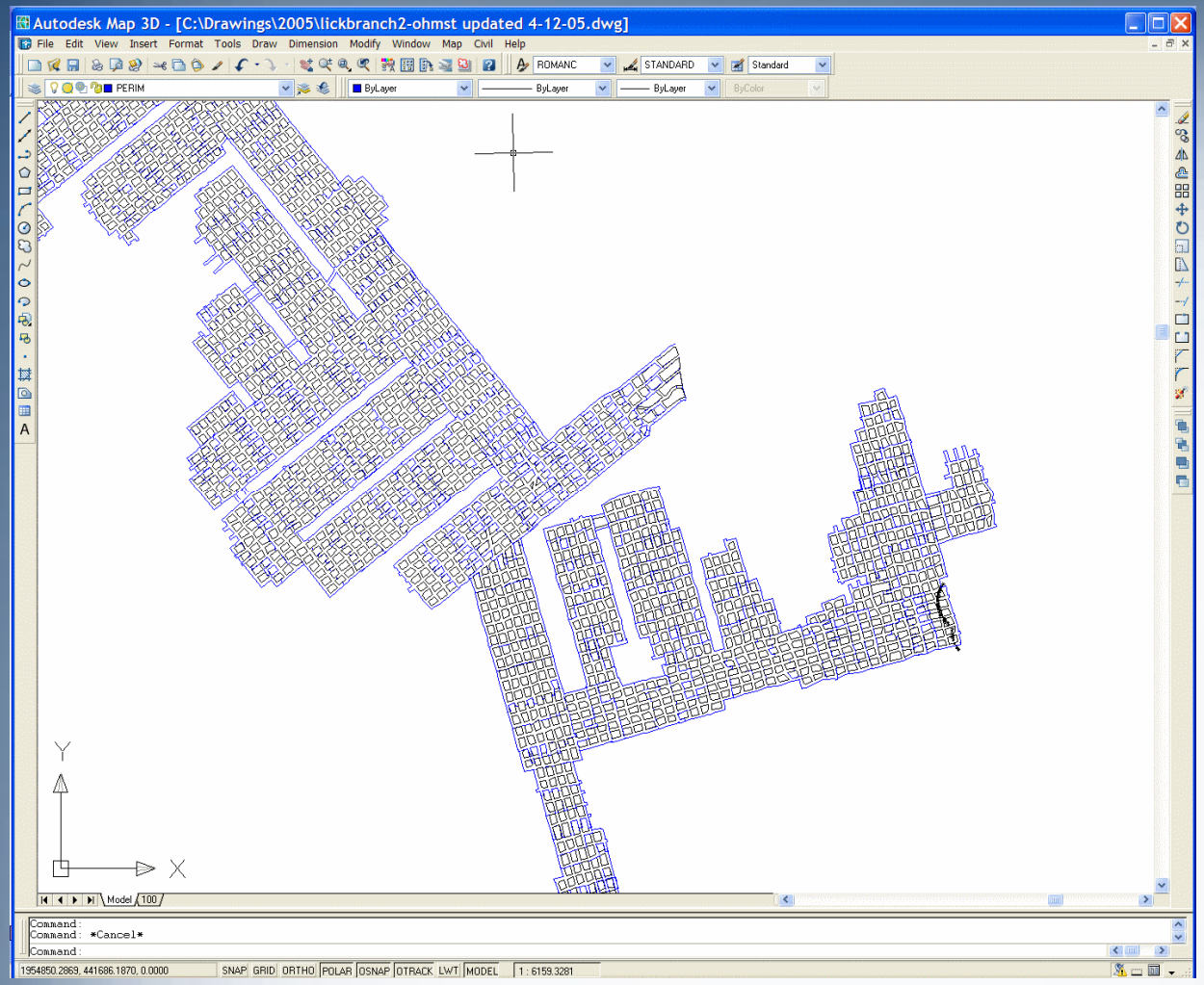


Using Layered .DWG Data



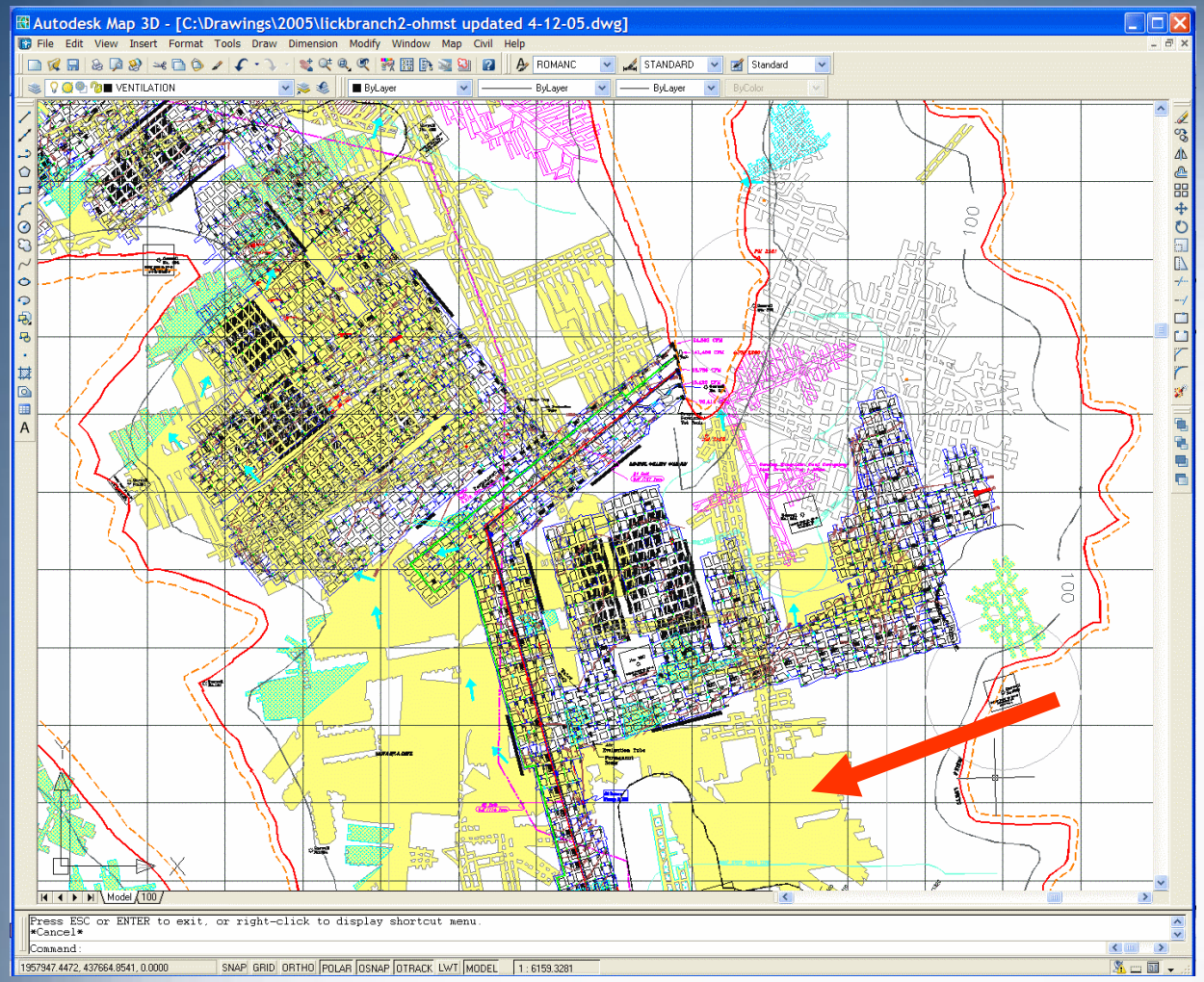
Data is kept in layers which can be turned on and off.

Using Layered .DWG Data



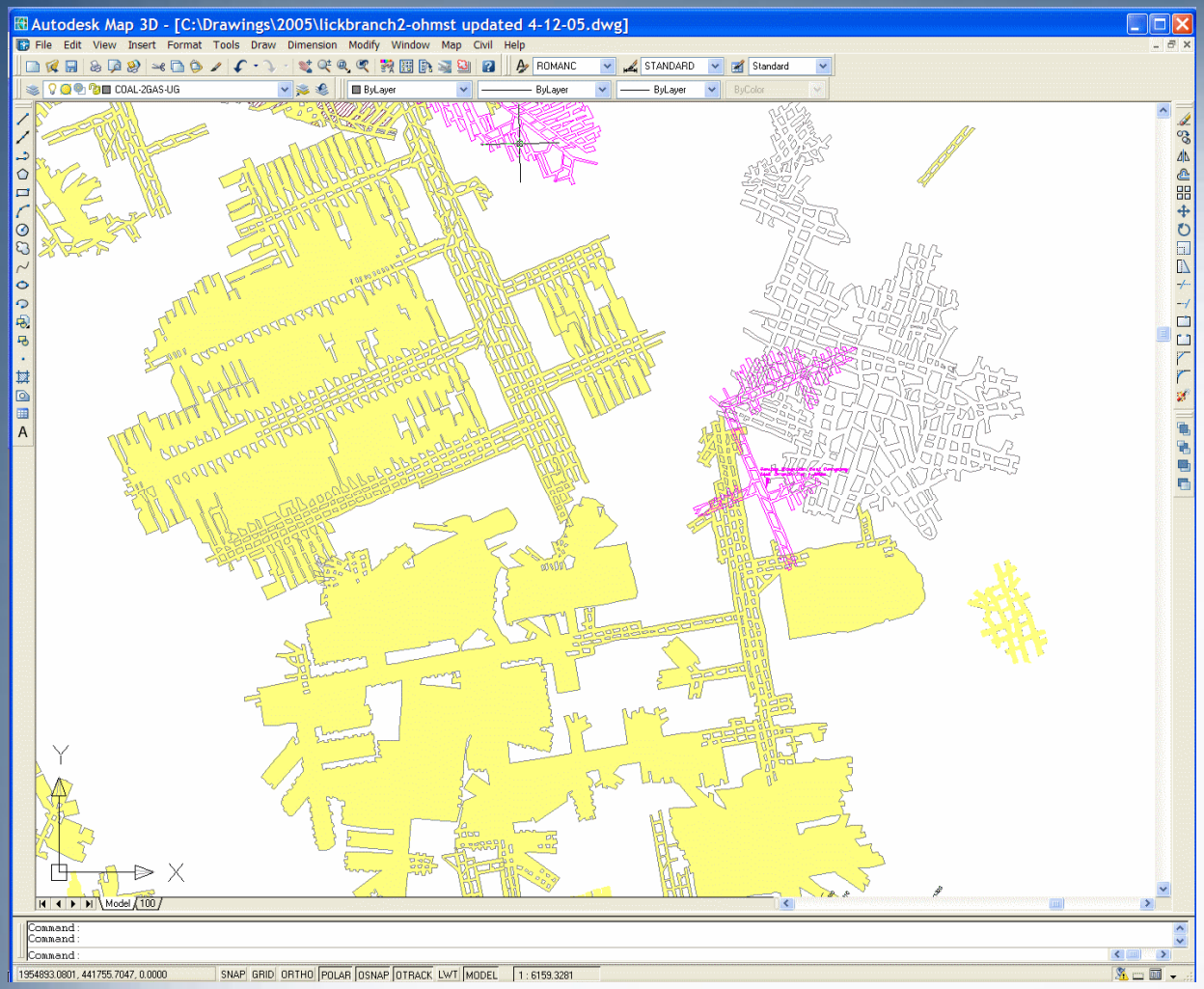
Active mine works.

Using Layered .DWG Data



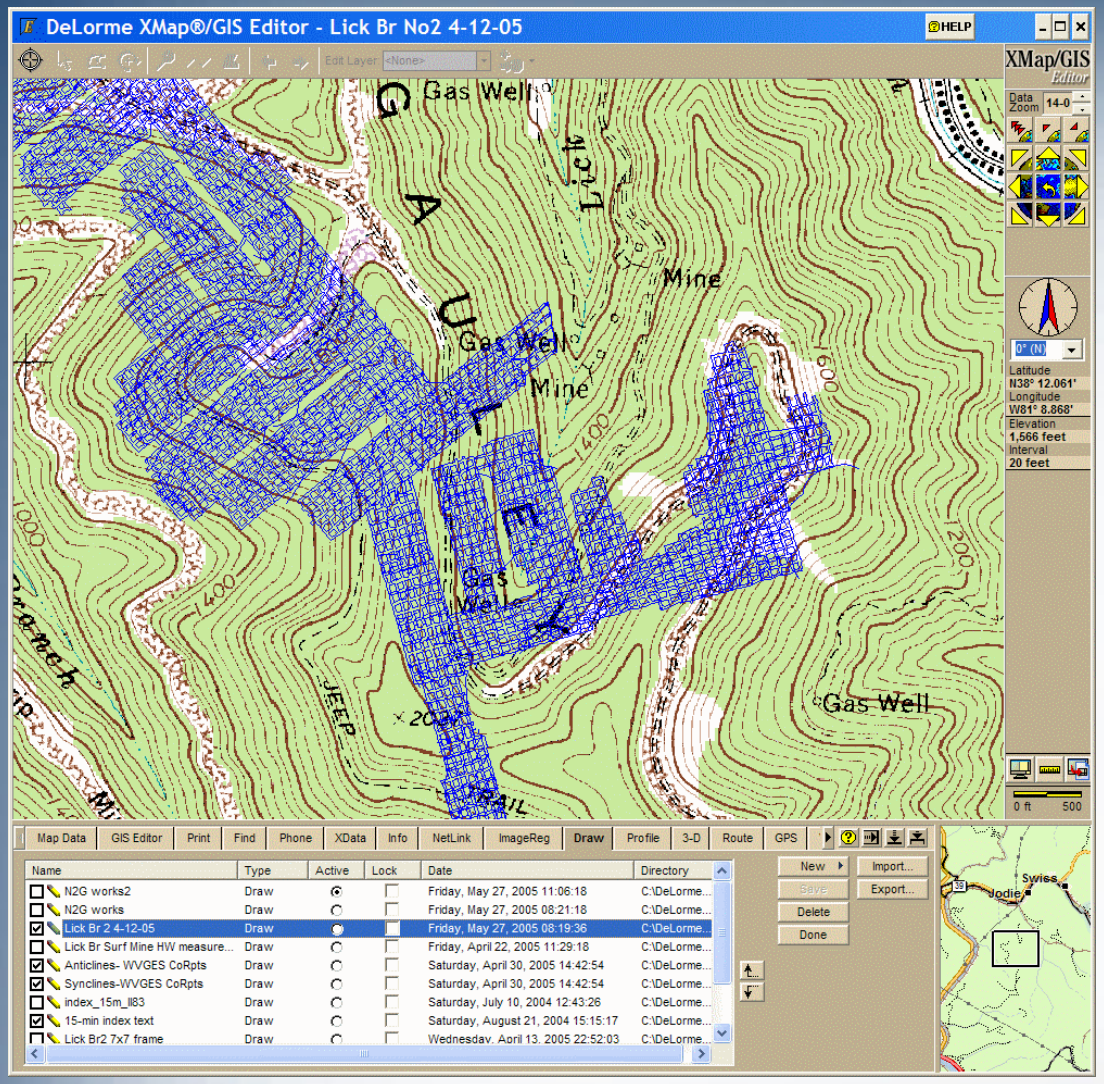
Raster data and vector data are layerable.

Using Layered .DWG Data



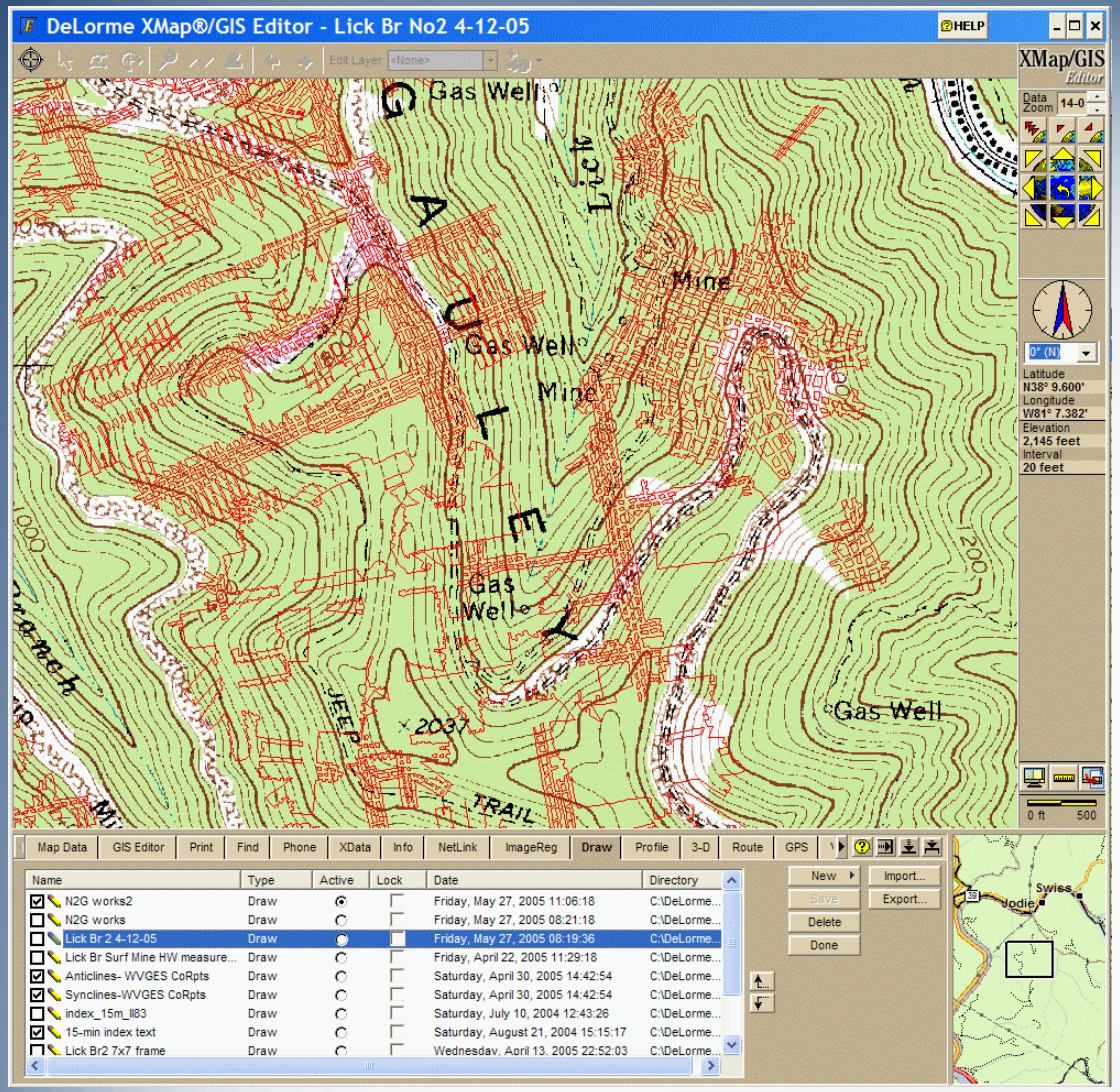
Overlying mined-out seam

Importing .DWG Data into GIS



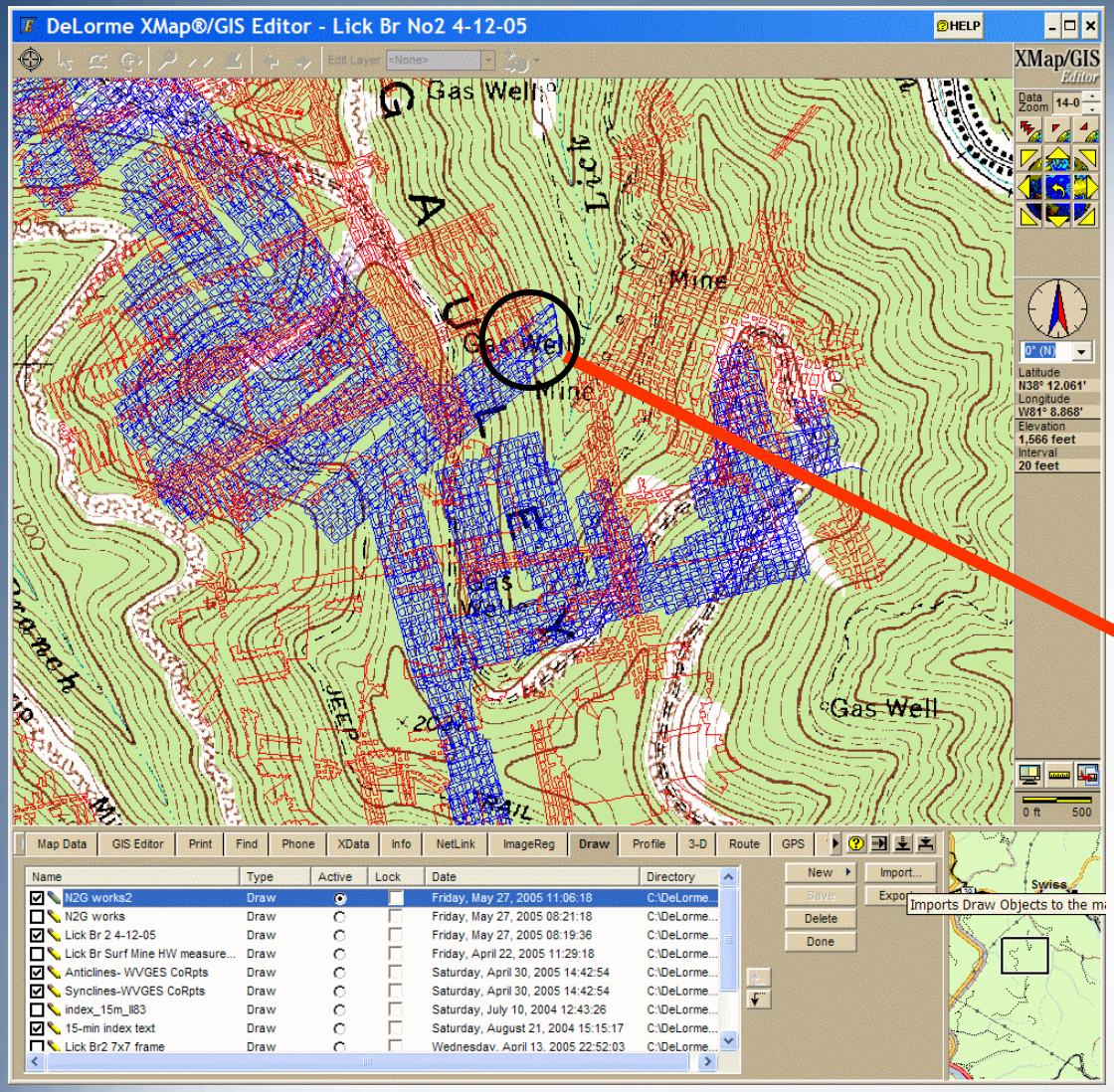
Active Lower Seam brought Into GIS

Importing .DWG Data into GIS

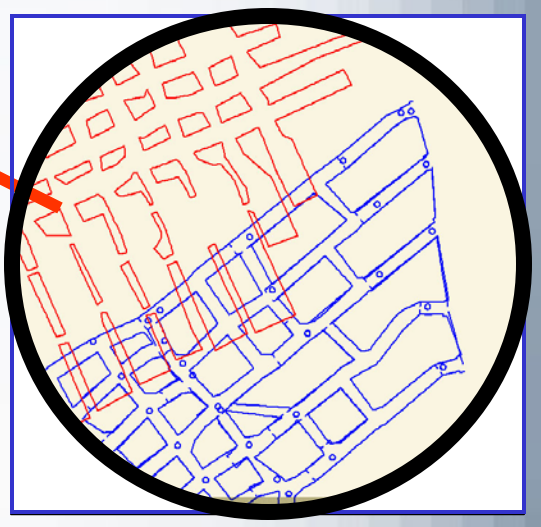


Mined-out Upper Seam brought into GIS

Importing .DWG Data into GIS



Upper Seam
and
Lower Seam
superimposed



.DWG drawings are easy to alter

Digital vector drawings present special security and drawing integrity concerns that raster drawings do not.

Main Advantage:

- Maps are comprised of layers that can be easily manipulated

Main Disadvantage:

- Maps are comprised of layers that can be easily manipulated

Distributing .DWG Files

The “Dark Side”. . .

- Proprietary information can be stolen at the push of a button
- Hidden layers can be viewed an misconstrued
- Engineering consultants lose leverage for payment
- Like hanging out one’s dirty laundry

Possible Solutions

?

Possible Solutions

- Create new drawing w/o proprietary layers

Possible Solutions

- Create new drawing w/o proprietary layers
- DWF files

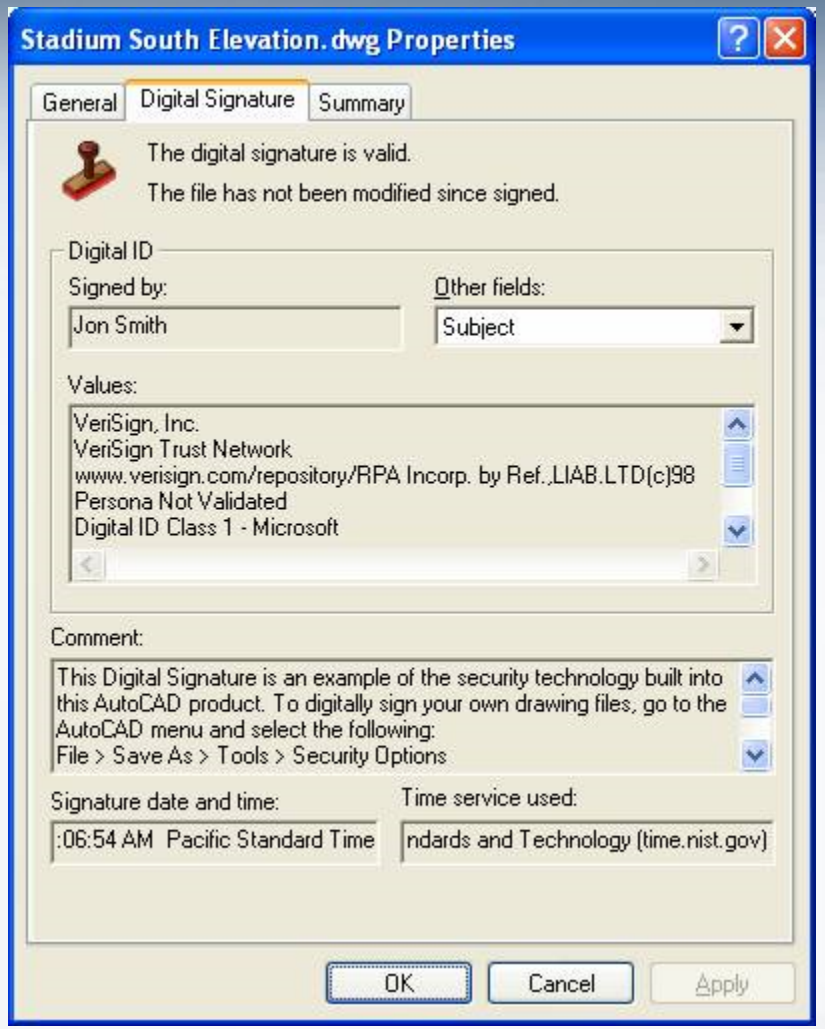
Possible Solutions

- Create new drawing w/o proprietary layers
- DWF files
- Third-party lock software: CadLock, etc.

Possible Solutions

- Create new drawing w/o proprietary layers
- DWF files
- Third-party lock software: CadLock, etc.
- Digital signature

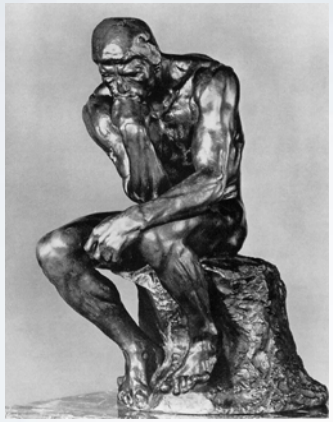
Digital signatures



Possible Solutions

- Create new drawing w/o proprietary layers
- DWF files
- Third-party Lock software: CadLock, etc.
- Digital signature
- FOIA exemption

Food for Thought



- DWG drawings are a powerful source of map data
- 2-edged sword
- Agencies must strictly limit distribution
- FOIA exemption recommended

Slide 1: Hello and good morning. My name is Rosemary Schulze. **I work for the NY Geological Survey and came on board this project as well as started working with the NYS DEC in July of 2004.**

Slide 2: I learned then that there are 6 underground mines still operating in NY and the rest have ceased operations and/or have been abandoned. These abandoned underground mines pose a threat to cave-ins causing tremendous damage to land, homes, and people. If the locations of these underground mines were more apparent, then actions could be taken to prevent **excessive damage** from occurring. **We had some data collected, but there was never a plan to put it all together. This is where the 3 Phase Project came into play. The first phase was to create a database that includes all of the underground mines with specific information on their locations and descriptions. The second phase would be to locate and scan existing mine maps, digitize these images, and create an up-to-date map of the locations of these mines. And finally phase 3, make this information available to the public through our government agencies and the internet.**

Slide 3: **So we started with basically nothing,** I did the research and created a database in Microsoft Access. In it 11 commodities are covered by 24 fields of information, 255 mines are listed. …(go into names, location given by, descriptions, etc.)…

Slide 4: Any resources that had information I recorded on this table of references for future use.

Slide 5: This is a form view of 1 record, Retsof mine, aka AKZO Nobel Inc mine, a salt mine in Livingston co. …(mine info, scans, pictures, map)…

Slide 6: The museum has a mapping program called Petra. When I finished collecting the data for all 11 commodities, I decided to have a little fun! I imported the lats and longs into the program and created this.

Slide 7: Here is a closer view of the mines of Western NY, here you can see all of the gypsum and salt mines. **There are subsidence issues with some of these mines.**

Slide 8: Here is a close-up of the mines of our Adirondack Region, **again there subsidence issues with mines here, particularly the iron mines.**

Slide 9: And here are the Southern NY mines.

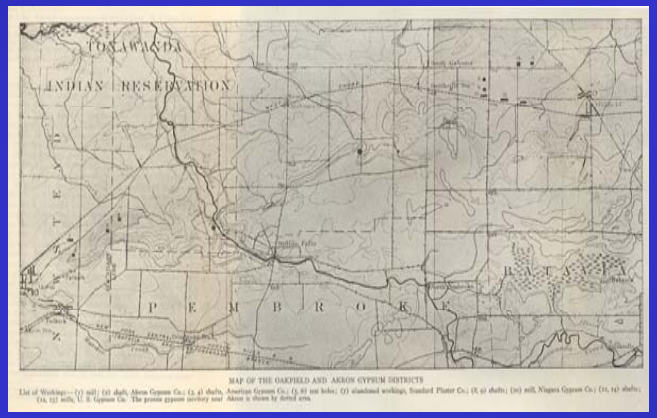
Slide 10: In February of this year, OSM gave us access to their Mine Map Repository NY Maps Index Database as well as about 1200 images of mine maps. I hyper-linked those images to this database. **Here you can see a map of the inner workings of Retsof mine while it was still operating.** This is another useful source of information for the mine mapping project, thanks to OSM.

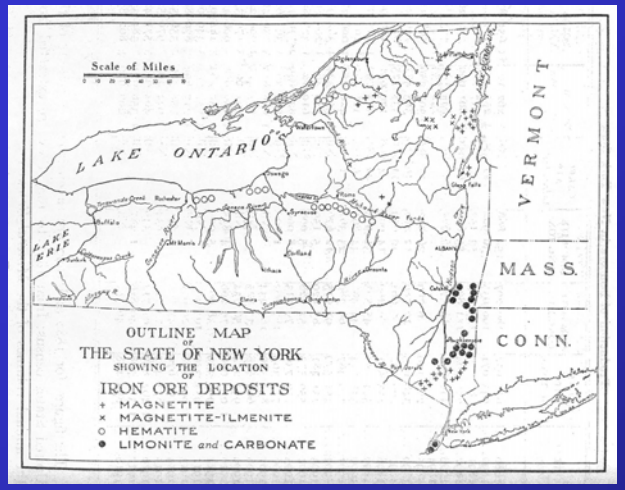
Slide 11: **Because we only received a third of the funding that was requested, Phase 1 is all that could be completed at this time. With additional funding, this project can move forward into Phase 2- we would like to merge the 2 databases together, our database and OSM's database. Create an up-to-date map of the locations of these mines in NYS using the databases. We would like to geo-reference abandoned underground mines. And by visiting historical societies and museums and contacting successor companies, we could acquire most recent mine maps. In anticipation of future funding to continue the project, we recently purchased a large flat bed scanner with NYS DEC funds. With it we could scan the existing mine maps we would acquire. These scanned images could then be digitized and used in making the up-to-date map of mine locations.**

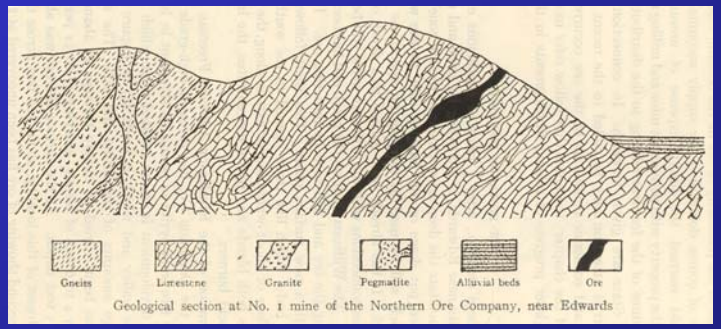
Slide 12: **And finally, Phase 3- Make all of this information available to the public! This is the NYS DEC Division of Mineral Resources website, on it we could post all of information pertaining to abandoned underground mines so that the public is aware of the possible dangers in their surroundings.**
All of these actions need to be taken in order to ensure the safety of the land, homes, and people all over New York State, **however unless funds become available, this project will not be able to continue beyond Phase 1.**
Thank you for your time and having us here.

Underground Mine Mapping in New York State

New York Geological Survey/NYSM
New York State Department of Environmental Conservation







Background of Underground Mine Mapping Project

- Six mines still operating
- Abandoned mines cause damage to land, homes, and people
- Had some data, but no plan to put it together
- 3 Phase Project
  - -Phase 1: Create database
  - -Phase 2: Locate and scan existing mine maps
    - Digitize scanned images
    - Create up-to-date map of the mine locations
  - -Phase 3: Make information available to the public

Status of Underground Mines in New York

Still Operating

- Crushed Stone(Granitic gneiss):
  - 1- Dutchess County
- Salt:
  - 1- Livingston County
  - 1- Tompkins County
- Talc:
  - 1- St Lawrence County
- Wollastonite:
  - 1- Lewis County
- Zinc:
  - 1- St Lawrence County

All Closed

Arsenic	Natural Cement
Graphite	Gypsum
Iron	Lead
Pyrite	

Database in Microsoft Access -Datasheet View

- 12 commodities
- 24 fields
- 256 mines

ID	Com2
Name	Comments
Name2	Year opened
Company	Year closed
County	Owner(s)
Township	Description
Quad	Production Data
Lat	Elevation
Long	Waste
Location	Maps
Type	Scanned images
Commodity	Cross-sections

Microsoft Access - [Underground Mines : Table]

File Edit View Insert Format Records Tools Window Help

ID	Name	Name2	Company	County	Townsl	Quac	Lat	Long	Location	Type	Com	Com2	Comments	Y op	Y clo	Ow	Description	Productior	Ele	W	Map	Scar	Crc
SLT01	LEHIGH SA		Lehigh Mi	Genese	LeRoy	Staffc	42.95	-78.0	2.5 m S c	Unde	Salt		In July 189	betwe	before	Leh					Y	☑	☑
SLT02	Retsof mine	AKZO-N	AKZO-No	Livingst	York	Leice	42.83	-77.8	at Retsof	Unde	Salt		Retsof mine	1885	1996	Emp	bottomed at 1	90% for roc			Y	☑	☑
SLT03	Mine at Grei		Greigsvill	Livingst					at Greigs	Unde	Salt		In July 189	betwe	before	Gre	the portion of				Y	☐	☐
SLT04	FULLER SH	apart of	Internatior	Livingst	York	Leice	42.82	-77.8	1 m S of	Unde	Salt		new plant c	1921	close	Rets	the portion of	1 million tor				☐	☑
SLT05	LIVONIA SA		Livonia Sa	Livingst	Livonia	Livon	42.78	-77.6	S of Livor	Unde	Salt		In July 189	betwe	before	Livc	the portion of				Y	☑	☑
SLT06	STERLING	Mine ar	Sterling S	Livingst	Leiceste	Gene	42.78	-77.8	at Cuyler	Unde	Salt		closed after	1906	1930	Ster	the portion of				Y	☑	☑
SLT07	Cargill Inc. r	CAYUG	Cargill Inc	Tompkii	Lansing	Ludlc	42.52	-76.5	at Portlan	Unde	Salt		has not bee	1917	still o	Roc	2000' vertical	rock salt			Y	☑	☑
SLT08	SENECA LA		MORTON	Yates	Milo	Dunc	42.58	-76.9		Unde	Salt				close						0	☐	☐
TLC01	Carbola Che	Natural	Carbola C	Lewis	Diana	Natur	44.06	-75.4	1.5 m NE	Unde	Talc	WOLL	Clark Miner	1911	1949	St. L	MINE OPENI	15,000 to 3	890			☐	☐
TLC02	Newton Hill			St. Lawr	Fowler	Edwa	44.31	-75.2	NE of Tal	Unde	Talc		in 1942, Jol	1880	1890	W.F	LENGTH:350		780			☐	☐
TLC03	Reynolds Ta		Reynolds	St. Lawr					NE of Tal	Unde	Talc		open pit acc	1955	1956							☐	☐
TLC04	Uniform Fibr	Winterg	Uniform F	St. Lawr	Edward	Edwa	44.30	-75.3	@ and S	Unde	Talc		deposit in th	1911	June	Unit	SHAFT: verti	the product	610		(Y)	☐	☐
TLC05	United State	U.S. Ta	Internatior	St. Lawr	Edward	Edwa	44.30	-75.3	@ and S	Unde	Talc		based on a	1900	1947	U.S		15,000 tons	755		(Y)	☑	☐
TLC06	Loomis #1 n	Woodc		St. Lawr	Fowler	Gouv	44.25	-75.3	E of Sylvi	Unde	Talc		W.H. Loom	1919	1954	W.H	mining is carr		670		(Y)	☐	☐
TLC07	Dominion C		Dominion	St. Lawr	Fowler	Gouv	44.25	-75.4	E of Sylvi	Unde	Talc	Zinc			before		results of exp		710			☐	☐
TLC08	Arnold mine		Internatior	St. Lawr	Fowler	Gouv	44.26	-75.3	SE of Fov	Unde	Talc		W.H. Loom	1880	1954	Unic	OPENING: 3		650		(Y)	☐	☐
TLC09	Johnson mir			St. Lawr	Fowler	Edwa	44.27	-75.3	SE of Fov	Unde	Talc				before		SHAFT: form		630			☐	☐
TLC10	WIGHT MIN		Internatior	St. Lawr	Fowler	Gouv	44.26	-75.3	SE of Fov	Unde	Talc	LEAD		1870	close		LENGTH: 25		660		(Y)	☐	☐
TLC11	WALLACE M			St. Lawr	Edward	Edwa	44.31	-75.3		Unde	Talc				before							☐	☐

Record: 218 of 256

Datasheet View

Database
-Table of References

Microsoft Access - [References : Table]

File Edit View Insert Format Records Tools Window Help

ID	Name	Reference1	Reference2	Reference3	Reference4	Reference5	Reference6	Reference7
SLT01	LEHIGH SALT SHAFT	Previous Database	Hartnagel, C.A., and E	Newland, David H.,	Alling, Harold L., 1			
SLT02	AKZO-Nobel Inc. mine	Previous Database	Hartnagel, C.A., and E	Newland, David H.,	Newland, D.H. and	Sterling Salt at Rets	Alling, Harold L., 1	
SLT03	Mine at Greigsville	Hartnagel, C.A., and	Newland, David H., 1	Alling, Harold L., 192				
SLT04	FULLER SHAFT	Previous Database	Sterling Salt at Retsof	Newland, David H.,				
SLT05	LIVONIA SALT SHAFT	Previous Database	Hartnagel, C.A., and E	Newland, David H.,	Alling, Harold L., 1			
SLT06	STERLING SALT SHAFT	Previous Database	Hartnagel, C.A., and E	Newland, David H.,	Alling, Harold L., 1			
SLT07	Cargill Inc. mine	Previous Database	Hartnagel, C.A., and E	Newland, David H.,	Hartnagel, C.A., ar	Alling, Harold L., 19		
SLT08	SENECA LAKE MINE	Previous Database						
TLC01	Carbola Chemical Co. mi	Newland, D.H. & Har	Newland, David H, 19	Engel, Albert and Ed	Previous Database	Childester, A.H., En	Ladoo, R.B., 1920,	Minerals Year
TLC02	Newton Hill mine	Engel, A.E.J., 1962,						
TLC03	Reynolds Talc Co. mine	Kaufman, Alvin and C	Minerals Yearbook, 1					
TLC04	Uniform Fibrous Talc Co.	Newland, David H, 19	Cushing, H.P. and Ne	Previous Database				
TLC05	United States mine	Cushing, H.P. and N	Newland, D.H. & Hart	Previous Database	Brinsmade, Rober			
TLC06	Loomis #1 mine	Newland, D.H. & Har	Brown, J.S. and Enge	Kaufman, Alvin and	Minerals Yearbook			
TLC07	Dominion Co. mine	Newland, David H, 19	Cushing, H.P. and Ne	Previous Database				
TLC08	Arnold mine	Newland, D.H. & Har	Newland, David H, 19	Cushing, H.P. and N	Previous Database	Kaufman, Alvin and		
TLC09	Johnson mine	Newland, D.H. & Har	Previous Database	Brinsmade, R.B., 19				
TLC10	WIGHT MINE	Previous Database	Newland, David H, 19					
TLC11	WALLACE MINE	Previous Database						

Record: 218 of 256

Datasheet View

NUM

Database - Form View

Underground Mines

ID SLT02

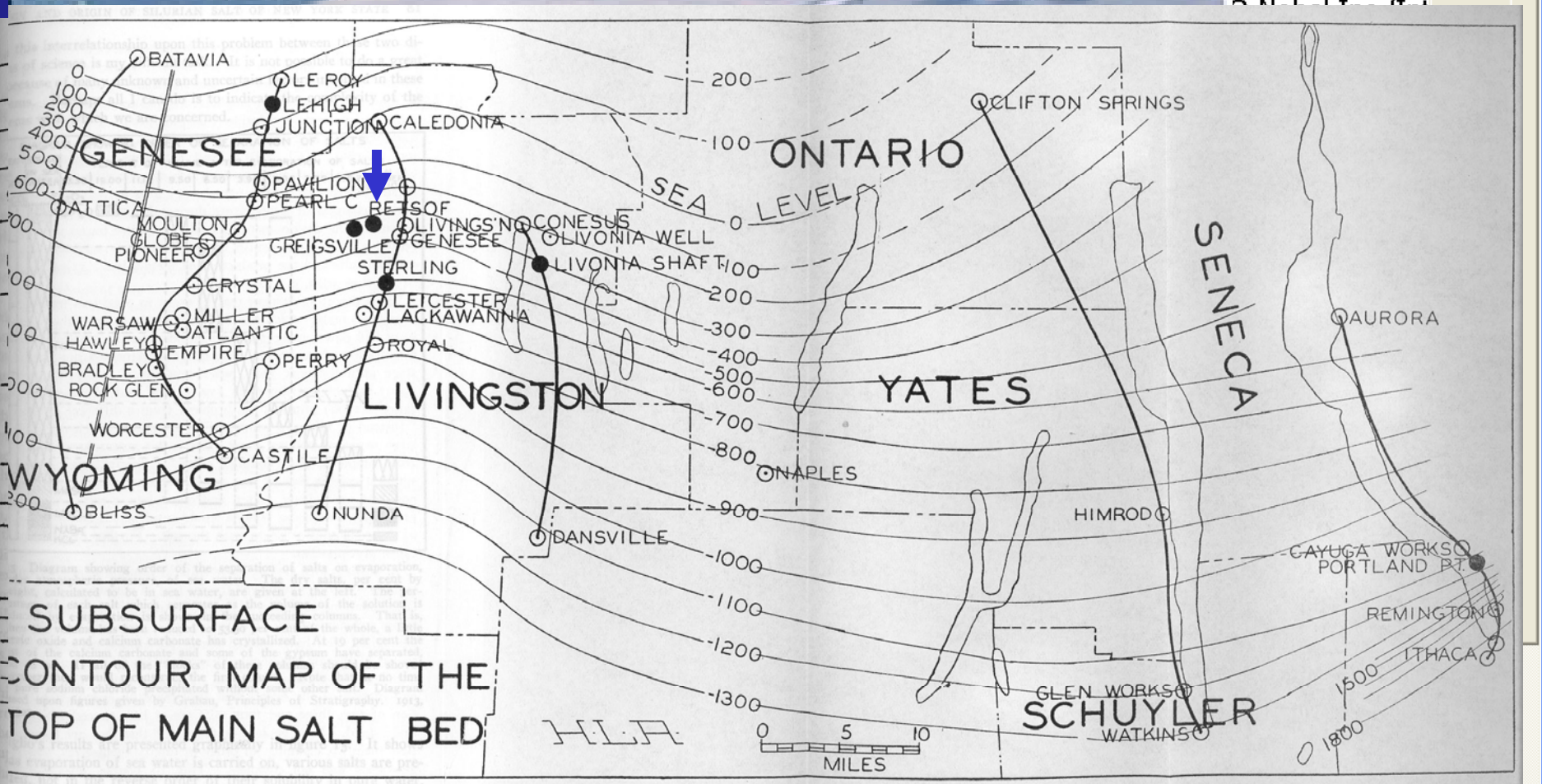


Fig. 14 Map of the New York State salt field showing tentative subsurface contouring of the top of the main salt bed. Constructed from the geologic cross sections which are indicated by the heavy lines passing through the wells. The shafts are shown by black circles, the wells by circles and dots. This map differs considerably from a similar one published by Merrill in 1893, as he drew his contours 610' below the top of the Onondaga limestone, as an "average" position for the salt. The many departures from this figure show that his method has many disadvantages. The present map used the position of the salt as found. Contour interval, 100 feet; reference plane, sea level. The Clarendon-Linden fault is shown interrupting the contours on western margin of the map.

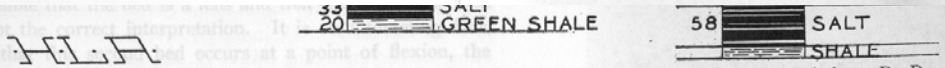


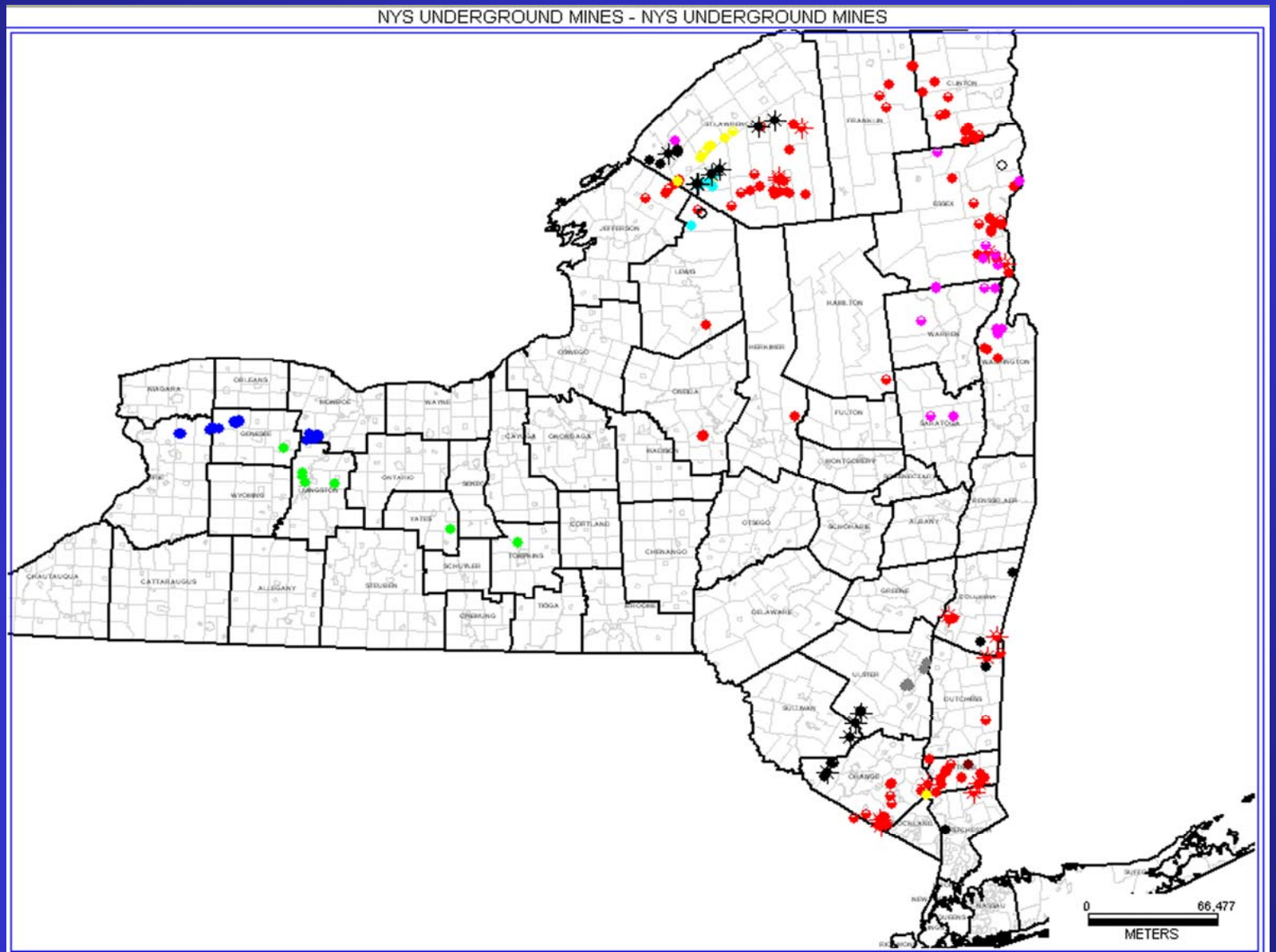
Fig. 6 Diagrammatic representation of the records of the Livonia, Lehigh and Retsof shafts. Data secured from D. Dana Luther and John M. Clarke as given in New York State Museum Report 47. Modified by Ruedemann, Hartnagel, Chadwick and myself. The three sections have been arranged with the base of the Onondaga limestone at the same level. Note that correlation from the Oriskany sandstone upwards is wholly satisfactory while attempts in the Camillus are impracticable.

Maps

CHARLON W0775254

256

New York State Underground Mines -In mapping program

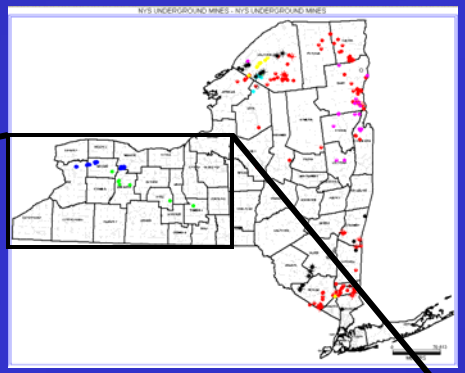


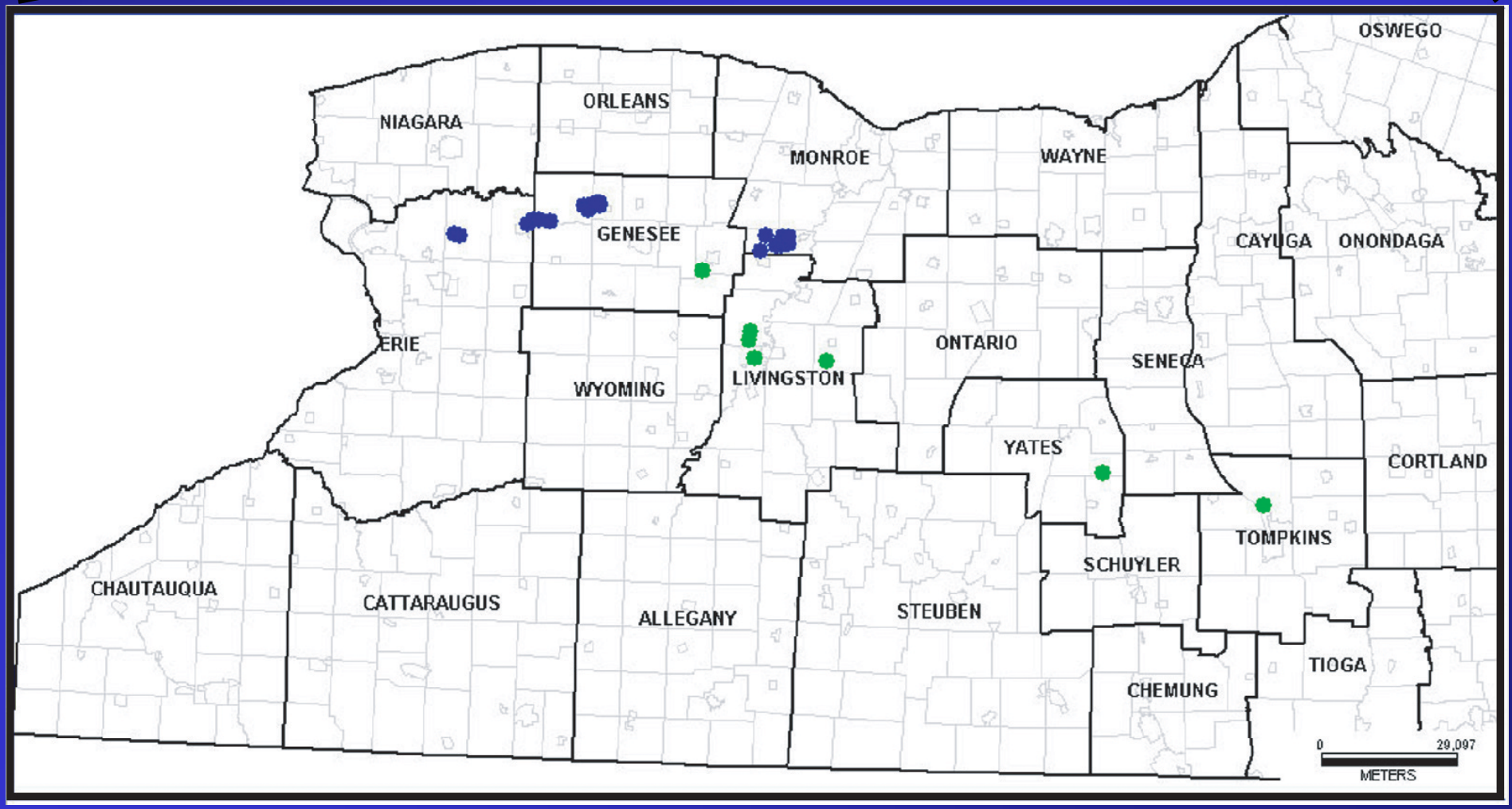
Mines of Western New York

Symbols key

-Gypsum mines (underground)

-Salt mines (underground)

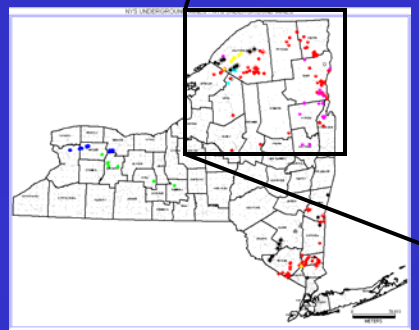


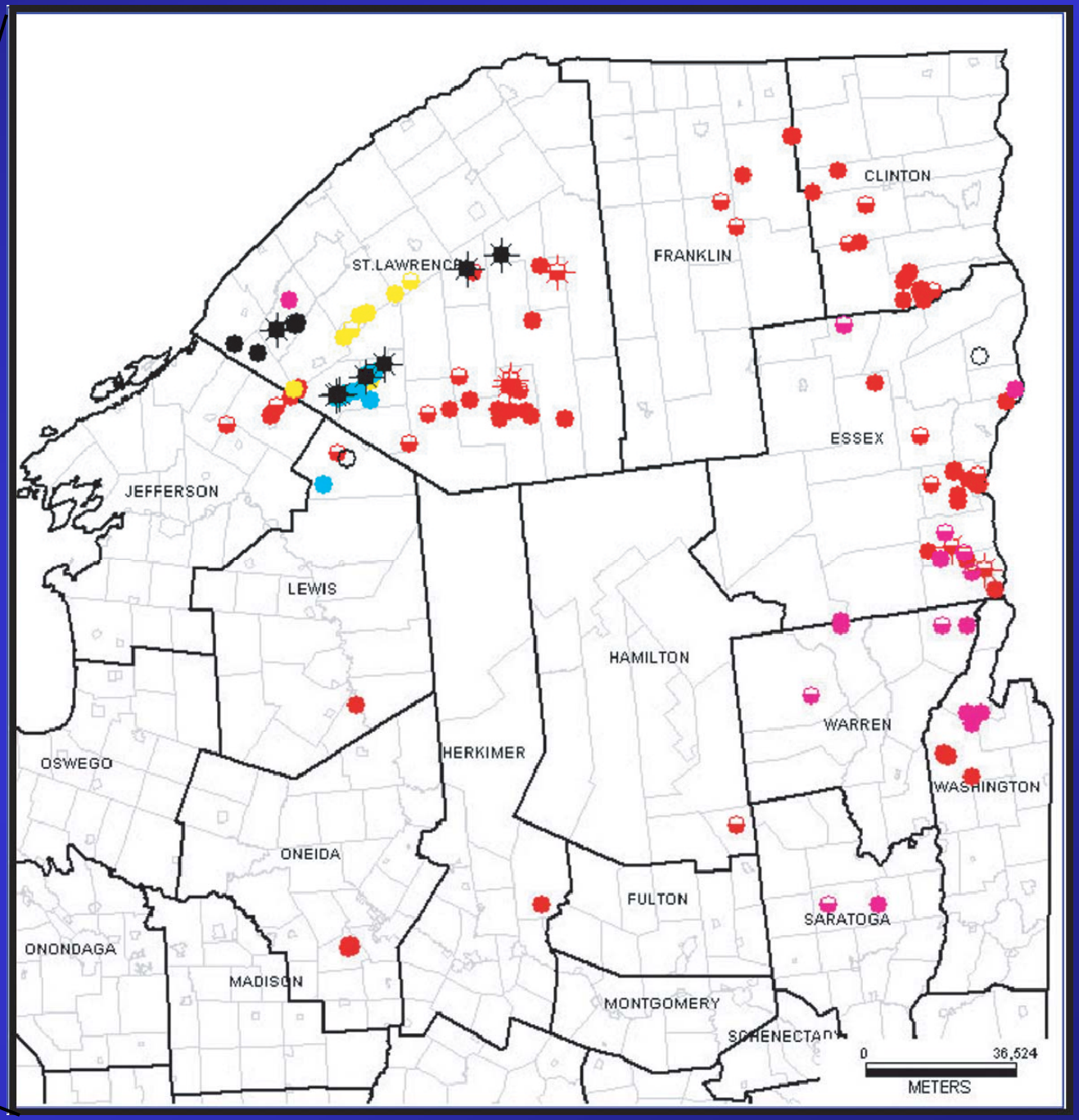


Mines of the Adirondack Region

Symbols key

- -Graphite mines (underground)
- -Graphite mines (surface/underground)
- -Iron mines (underground)
- -Iron mines (surface/underground)
- -Iron mines (unknown)
- -Lead mines (underground)
- -Lead mines (surface/underground)
- -Pyrite mines (underground)
- -Pyrite mines (surface/underground)
- -Talc mines (underground)
- -Wollastonite mines (underground)
- -Zinc mines (underground)

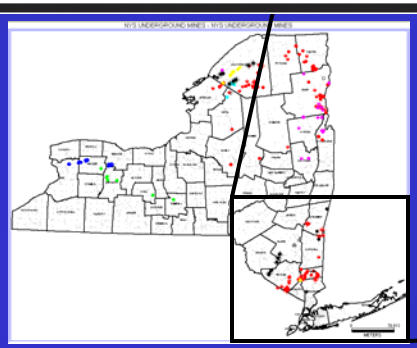


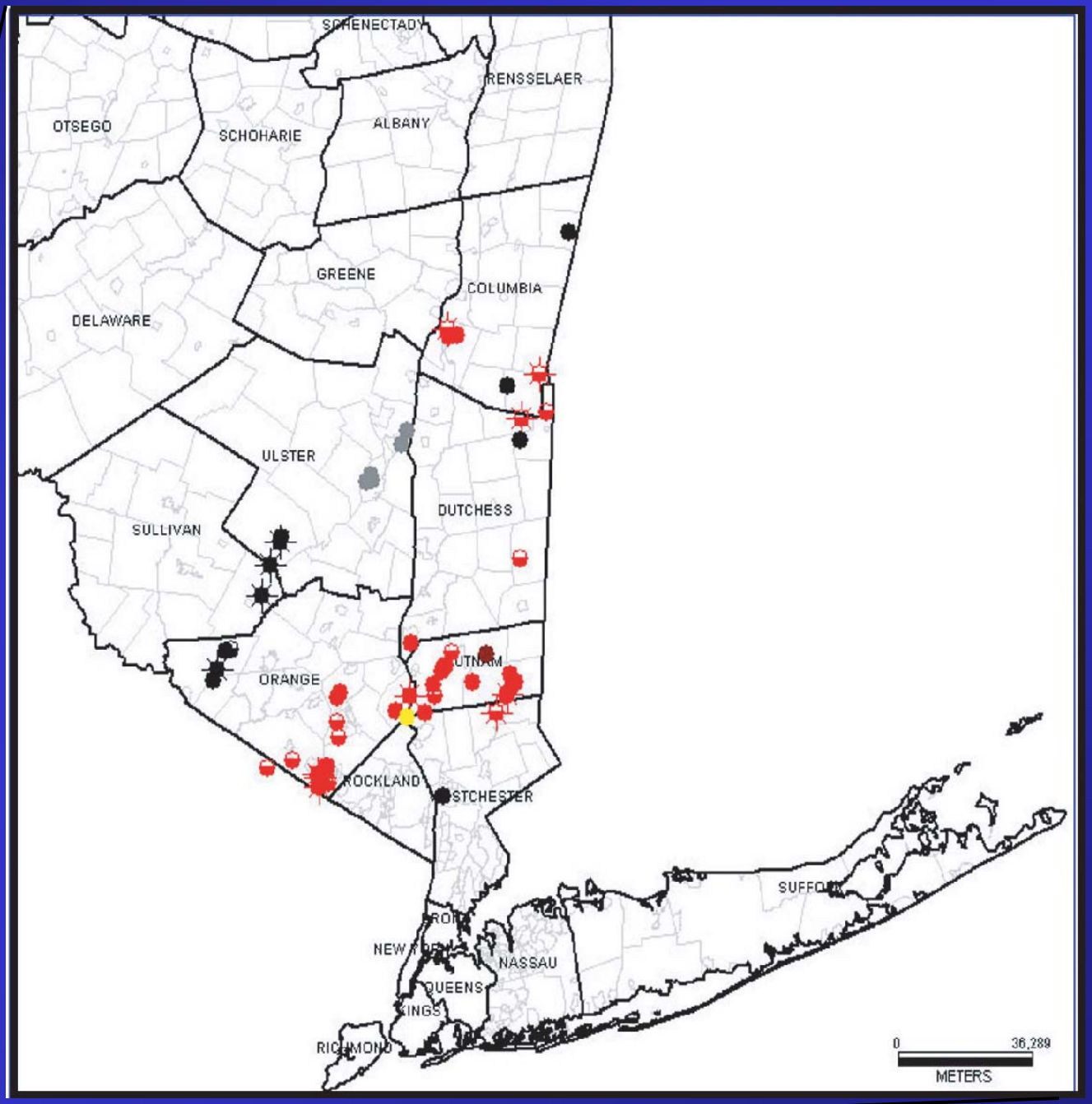


Mines of Southern New York

Symbols key

- -Arsenic mines (underground)
- -Natural Cement mines (underground)
- -Iron mines (underground)
- -Iron mines (surface/underground)
- -Iron mines (unknown)
- -Lead mines (underground)
- -Lead mines (surface/underground)
- -Pyrite mines (underground)
- -Pyrite mines (surface/underground)
- -Zinc mines (underground)





OSM Mine Map Repository NY Maps Index Database

Microsoft Access - [New York Min

File Edit View Insert Format Records

Mine name	Sta	Field	Notes
RETSOF	NY3	2	EST AT
RETSOF MINE	NY3	2	AT RETS
REXFORD DE	NY3	1	PRIVATE
ROCK POND M	NY3	1	PRIVATE
ROGERS M FA	NY3	1	PRIVATE
ROSE HAUPT	NY3	1	
ROSE ROCK C	NY3	1	PRIVATE
ROSS PIT	NY3	1	ADIRON
ROSS PROSP	NY3	1	PRIVATE
ROWLAND GF	NY3	1	PRIVATE
RUBY MOUNT	NY3	1	PRIVATE
RUSSIA STAT	NY3	1	
RUSSIA STAT	NY3	1	
RUSSIA STAT	NY3	1	
RUSSIA STAT	NY3	1	
RUSSIA STAT	NY3	1	
SACANDAGA C	NY3	1	STATE F
SALISBURY S	NY3	1	

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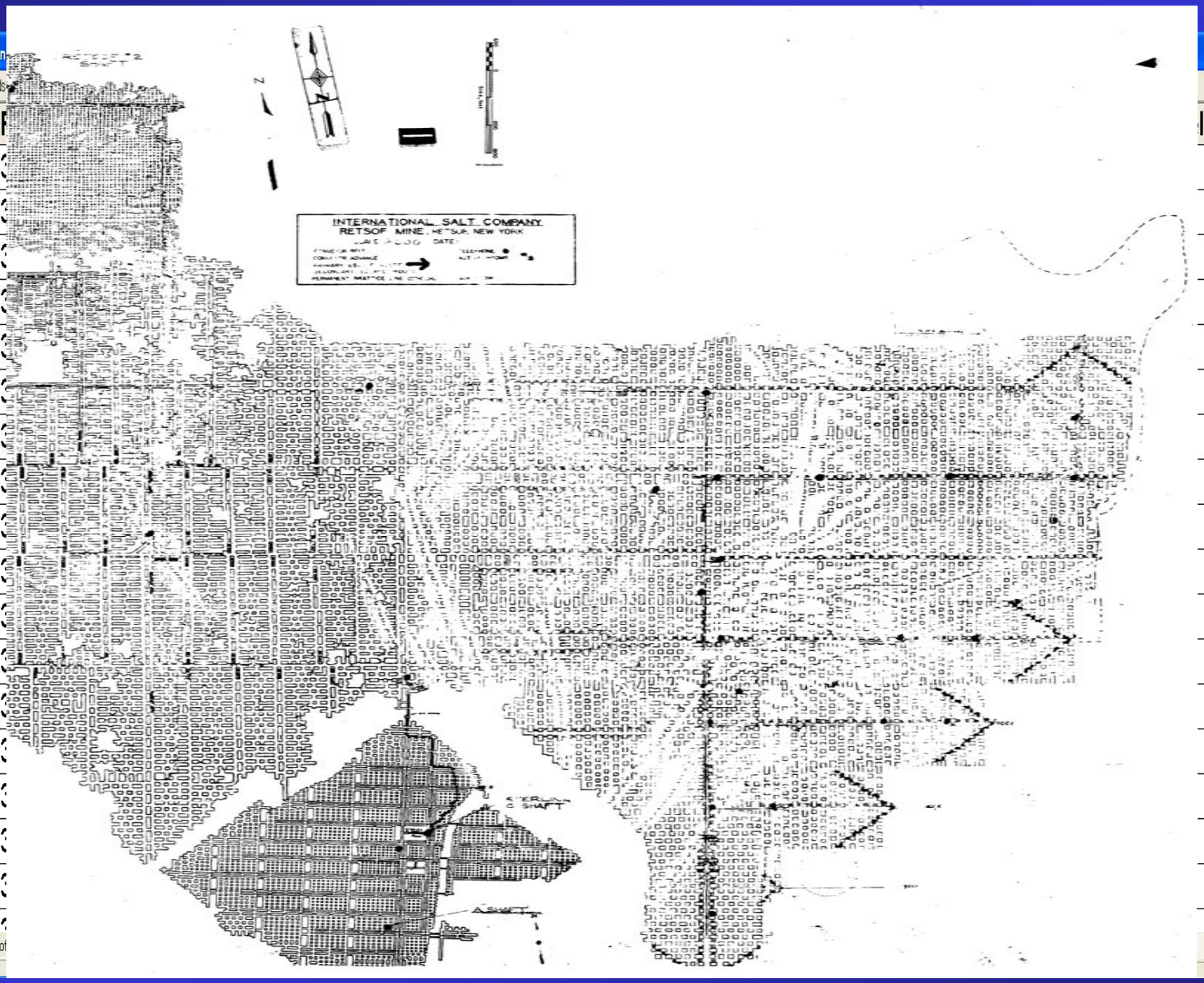
Datasheet View



NUM

Future Work

Phase 2:

- Merge 2 databases
- Create an up-to-date map of mine locations
- Geo-reference abandoned underground mines
- Acquire most recent mine maps

Large flat-bed scanner purchased with NYS DEC funds

- Scan existing mine maps
- Scanned map images

  -digitized

  -used in making up-to-date map of mine locations

Phase 3:

- Make information available to the public through NYS DEC website

These actions need to be taken to ensure the safety of the land, homes and people all over New York State! Unless funds become available, this project will not be able to continue.

UNDERGROUND MINES IN NEW YORK

INTRODUCTION

The following is a brief summary of currently operating and historic underground mines in New York. The purpose of compiling such a list is to indicate where underground cavities exist that are not obvious from the surface. Many of the mines listed here are developed along the lines of an underground mine as is most commonly envisioned. That is, a vertical shaft with drifts extending laterally from the shaft at various depths. However, some of the mines noted below are largely open pits with have shafts or drifts extending downward from the bottom. Others are adits driven into hillsides either alone or associated with open pit mines. This list is compiled from Luedeke, E.M., Wrucke, C.T., and Graham, J.A., 1959, *Mineral occurrences of New York State with selected references to each locality*: USGS Bull. 1072-F, pp. 385-444 and sources cited therein. Only the major geologic literature was consulted to assemble the data in this document. It is likely that there are additional small underground mines in New York that would be revealed by searching deeper into gray literature such as county gazetteers and historical society reports.

BACKGROUND

There are currently seven underground mines operating in New York. These are: USG Corp. gypsum mine at Oakfield, AKZO-Nobel Inc. salt mine at Retsof, Cargill Inc. salt mine at Portland Point, Zinc Corp. of America zinc mines at Balmat and Pierrepont, Gouverneur Talc Co. Inc. talc mine at Balmat and wollastonite mine at Lake Bonaparte. These mines vary greatly in character. Some follow mining plans that are extremely regular. Others are highly irregular in that the mine plan basically follows the ore bodies wherever they go. These operating mines vary in depth below the surface from roughly 75 feet to approximately 3000 feet. The footprints of these mines ranges from a few acres to thousands of acres. In addition to these underground openings, cavities created by solution mining of NaCl brines and cavities (in salt) created for the underground storage of natural gas also exist. Some of these cavities are very large, measured in the billions of cubic feet.

In order to understand the scope of underground mining in New York, a short description of typical mines for each commodity listed below is given here. Underground graphite mines usually extended from surface workings. The drifts 10 to 15 feet high followed the ore-bearing rock at shallow to moderately steep angles. Stopes were sometimes driven off the drifts. The workings generally did not reach more than 1000 to 1200 feet from the surface and, depending on the dip of the ore, may not have been more than a few tens of feet to a few hundred feet below the surface. All graphite mining ceased in New York by the early 1920's

Gypsum is recovered from relatively shallow (60-75') mines that vary from 2000 to 6000 feet wide and may extend five or more miles from the mine shaft. These tend to be rather regularly spaced room and pillar mines with the rooms being rather low. Depending on the thickness of the ore zone, the rooms may be only 3.5 to 4 feet in height. One company still mines crude gypsum in

New York although as recently as the mid-1970's other companies also operated mines here.

Iron mining for any of several different ore minerals ceased in New York in the middle of the '70's. Since at least four ore minerals were sought for iron over a period three centuries, the types of mines developed to extract these minerals varied considerably from one another. Hematite mines in Oneida County were shallow with low roofs and not very extensive laterally. Iron carbonate mines in Columbia County were much larger although not more than tens to a few hundred feet underground. Limonite mines in Columbia and Dutchess Counties were generally offshoots of open pit mines. These never exceeded a few hundred feet in depth. Magnetite mines in southeastern New York were deeper and more irregular. Some of these bottomed in excess of 600 feet. Magnetite mines in the Adirondacks were the most extensive iron mines in the state. These were convolute mines that followed the occurrence of the ore through the rock. Some of these mines reached 2000 feet in depth.

Lead mining for this metal itself rather than as a by- or co-product of other mining operations did not require deep mines. A few underground lead mines were attempted that were almost immediate economic failures. These mines had 10 to 20 foot diameter shafts to depths of 60 to 100 feet with short (100') drifts at one or more levels. These mines did not survive past the late 19th century.

Natural cement rock was quarried underground in New York until the mid-1960's. The mines generally began as quarries and then followed the dip of the rock underground at moderate angles. The mines were 800 to 1000 feet wide and extended underground for perhaps 1000 feet. At the maximum extent of the mine, the working level would have been up to a few hundred feet below the surface.

Pyrite mining *per se* as opposed to pyrite recovery as a by-product was carried out in a few, shallow underground mines. The shafts of these mines were likely to be inclined to follow the ore and reached only 200 to 300 feet. The strike length of the ore was generally under 1000 feet so these were not extensive mines. Pyrite mining began in the late 1800's and ceased in 1921.

Rock salt mining, rather than solution mining, was and is carried on in mines that varied in size from a few hundred to greater than 6000 acres of open underground space. Although salt occurs in layers ranging from inches to a few tens of feet, it is the thicker, cleaner salt beds that are mining targets. Two companies currently mine salt in New York. The working levels of these two mines are roughly 1100 and 2800 feet below the surface. These and older rock salt mines were relatively regular room and pillar mines with a roof height of 10 to 15 feet. In addition to the aforementioned two salt mining companies, two others recover salt solely via solution mining methods.

Underground talc mines are of irregular configuration extending to depths of 2000 to 3000 feet. One company currently mines talc in New York in this manner. The mine is located in a region of complex geology and mining proceeds following the ore body. Drifts are 10 to 20 feet wide and stopes may reach heights in greater than 100 feet.

Two small underground wollastonite mines exist in New York. One is basically a room and pillar mine following the ore underground from an open pit at a moderate angle. The other is more of a development incline which may eventually be used as a haulageway for a more extensive underground mine. In neither case does the mine extend more that 200 feet underground with open spaces underground measuring in the tens of feet in all directions.

Two underground zinc mines are operating at this time in New York. Both have very irregular mine plans due to the complexity of the geologic setting of the ore bodies. One mine is nearly 800 feet at maximum depth and the other is slightly in excess of 3000 feet deep. Drifts are 10 to 20 feet wide and high. Stopes may extend up to 100 feet high and perhaps half of that in width. Older, now defunct, zinc mines in southeastern New York were much smaller in scale. These were simple shafts and drift mines that followed veins of ore to depths of several hundred feet.

LIST OF MINES

ARSENIC

Putnam County
Pine Pond mine, north of Kent Cliffs

GRAPHITE

Essex County
Lead Hill mines, 3 miles northwest of Ticonderoga
Mines of the Crown Point Graphite Co., 2.5 miles southwest of Ironville
Split Rock prospect, 8 miles northeast of Westport

Saratoga County
Graphite Products Corporation mine, 4 miles north of Saratoga Springs

Warren County
Lakeside mine, at Hague
Rowland mine, 1 mile southwest of Johnsburg
International Graphite Co. mine, 3 miles northwest of Pottersville
American mine, at Graphite

Washington County
Hooper Brothers mine, 4 miles northwest of Whitehall
Adirondack Mining & Milling Co. mines, 4 miles west of Whitehall
Champlain Graphite Co. mine, 3.5 miles west of Whitehall

GYPSUM

Erie County
Atlas Gypsum Corp. mine, 1 mile southwest of Clarence Center
National Gypsum Co. mine, immediately west to Atlas mine, southwest of Clarence Center
Certain-teed Products Corp. mine, 1 mile northwest of Akron

Genesee County
Mine in the Tonawanda reservation, 2.5 miles southwest of Alabama Station
Mines of US Gypsum Co., 1 mile west of Oakfield
Mines of Niagara Gypsum Co., 1 mile west of US Gypsum
Mines of Oakfield Plaster Mfg. Co., 2.5 miles west of Oakfield
Mine of Phoenix Gypsum Co., at Wheatfield Station

Ontario County
Mine, east of Victor village
Mine of Federal Gypsum Co., 2 miles northwest of Victor.

IRON

Clinton County
Palmer Hill mines, 2 miles north of Ausable Forks
Arnold Hill mines, 5 miles north of Ausable Forks
Bowen & Signor mine, 1.5 miles east of Clayburg
Clayburg mine, at Clayburg
Lyon Mountain (or Chateaugay) mines, at Lyon Mountain village
Mine 81, 1 mile northeast of Standish

Columbia County
Burden mines, at Burden
Weed mine, 2.5 miles southeast of Copake

Dutchess County
Mt. Riga mine, at Mount Riga

Essex
Hammondsville mines, 4 miles west of Ironville
Skiff mine, 4 miles west of Ironville
Mineville mines, at Mineville
Gates mine, 1 mile south of New Russia
Splitrock mine, 3.5 miles southeast of Wollonsburg
Mt. Defiance mine, at Ticonderoga

Franklin County
Bannerhouse mine, 2 miles southeast of Chateaugay village

Herkimer County
Salisbury mine, 2.5 miles north of Salisbury Center

Jefferson County
Shirtliff mine, 3 miles southeast of Theresa
Dickson mine, 2.5 northeast of Antwerp
Old Sterling mine, 2 miles southwest of Spragueville
Keene mine, at Spragueville

Lewis County
Port Leyden mine, at Port Leyden

Oneida County
Franklin mine, at Clinton
Borst mine, at Clinton

Orange County
Warwick Group, Raymer mine, 2 miles southeast of Warwick
Forest of Dean mine, 3.5 miles southeast of Highland Falls
Bull mine, 4.5 miles northwest of Highland Falls
Tower mine, 2 miles west of Highland Falls
Weatherby and Rattlesnake mines, 5.5 miles southwest of Highland Falls
Clove mine, 1 miles south of Monroe
Scott Group of mines, 3.5 miles northwest of Tuxedo Park

Putnam County
Todd mine, 1.5 miles west of Putnam Valley
Croft mine, 2 miles north of Putnam Valley
Brewster mines, at Brewster
Tilley Foster mine, 2 miles northwest of Brewster
Mahopac mine, 7 miles west of Brewster
Croton mine, 1 mile northeast of Croton Falls
Sunk (or Stuart) mine, 4.5 miles southwest of Kent Cliffs
Canopus (or Nelson) mine, 3 miles southeast of Cold Spring

St. Lawrence County
Caledonia mine, 1.5 northeast of Spragueville
Clifton mine, 2.5 miles south of Clarksboro

Washington County

Fort Ann mines (4), 5 miles northwest of Fort Ann

LEAD

Columbia County
Ancram mines, 2.5 miles southeast of Ancram
Mine, at Canaan

Dutchess County
Mines, at Shekomeko

St. Lawrence County
Victoria mine, 1.5 miles south of Rossie

Westchester County
Sparta mine, at Ossining

NATURAL CEMENT

Ulster County
Mine, at East Kingston
Mine, at Rondout
Mine, at Quicklocks
Mine, at Rocklocks
Mine, at Binnewater
Mine, at Lawrenceville
Mine, at Rosendale

PYRITE

Putnam county
Phillips mine, at Anthony's Nose, Phillipstown

St. Lawrence County
Caledonia mine, 1.5 miles northeast of Spragueville
Stella mine, 1.5 miles northeast of Herman

SALT

Genesse County
Mine, 2.5 miles south of Leroy
Wells, at Leroy
Wells, at Pavilion

Livingston County
Mine and well, at Cuylerville
AKZO-Nobel Inc. mine, at Retsof
Mine, at Greigsville
Mine and wells, south of Livonia
Wells, at Mt. Morris
Wells, at Piffard
Wells, at York
Wells, at Lakeville
Well, Lackawanna, between Moscow and Mt. Morris

Onondaga County
Wells, at Tully

Schuyler County
Wells, at Watkins Glen
Wells, at Salt Point

Tompkins County
Wells, at Meyers
Wells, at Ludlowville
Wells, at Ithaca
Cargill Inc. mine, at Portland Point
Well, 2.5 miles north of Ithaca

Wyoming County
Wells, 1 mile south of Wyoming
Wells, at Warsaw
Wells, at Rock Glen, 3 miles south of Warsaw
Wells, at Silver Spring
Wells, at Castile
Wells, at Bliss
Wells, at Gainsville
Wells, at Pearl Creek
Wells, at Saltvale, between Wyoming and Warsaw
Wells, at Perry
Well, 2 miles south of Warsaw

TALC

Lewis County
Mine (Carbola Chemical Co.), 1.5 miles northeast of Natural Bridge

St. Lawrence County
Newton Hill mine, northeast of Talcville
International Talc Co. #3,4 and 5 mines, northeast of Talcville
Reynolds Talc Co. mine, northeast of Talcville
Uniform Fibrous Talc Co. mine (Wintergreen mine), at and southwest of Talcville
United States mine, at and southwest of Talcville
International Talc Co. #2 1/2 mine, at and southwest of Talcville
Loomis #1 mine (Woodcock mine), east of Sylvia Lake
Gouverneur Talc Co. mine, east of Sylvia Lake
Dominion Co. mine, east of Sylvia Lake
Arnold mine, southeast of Fowler
Wight mine, southeast of Fowler
Johnson mine, southeast of Fowler

WOLLASTONITE

Essex County
NYCO, Inc. mine, 2 miles southwest of Willsboro

Jefferson County
Gouverneur Talc Co., Valentine mine, 4 miles west of Harrisville

ZINC

Orange County
Guymard mine, 3.5 miles southwest of Otisville

St. Lawrence County
Hyatt mine, 0.5 miles southwest of Talcville
Edwards mine, at Edwards
Zinc Corporation of America, Inc. #2, 3 and 4 mines, at Balmat
Zinc Corporation of America, Inc. mine, at Pierrepont

Sullivan County
Shawangunk (or Summitville) mine, at Summitville

Ulster County
Ellenville mines, at Ellenville
Spring Glen mine, at Ellenville

WMK, NYSGS, 10/2/94

Pennsylvania Mine mapping Initiative

Pa DEP is a large organization with maps of abandoned mines located in 5 geographically separate areas. A plan was developed to enable each DEP office to have adequate equipment and manpower to complete the process of scanning and preserving digital images of these maps.

Program was started with 2 public forums requesting that mine maps be cataloged and copies made for archival purposes. This resulted in numerous maps being made available that were in public and private hands. We still continue to receive calls from individuals or companies wanting to provide copies of mine maps to us.

Recognize the importance of **cataloging** all of the known maps. DEP put together a group to work through the process of combining the individual databases into one combined database. The PHUMMIS is currently in the development stages and should be completed before the end of this year. We are looking forward to hearing what others have done to catalog their mine maps.

Ability to Scan Maps
Plan focused on providing necessary equipment based upon each office's needs.

Computers

- 5 Graphic Workstations
- 4 Wide format scanners 54"
- 1 Flat bed scanner
- 4 1.6 TB IBM Servers
- Plotters or copiers
- Software
- 1 Digital Camera for very large maps

Set up a standards Committee

Developed the MRM standards for scanning maps

Maps too large for the scanners

In the process of developing a partnership with a local university that is setting up a digital lab. DEP will assist in purchasing a high-resolution digital camera in exchange for digital images of maps too large for us to scan.

Since October when the new equipment was purchased:

Scanned 2,562 maps
Received 1,532 maps and cataloged them

Pa Annual Report on Mining Activities

Links actual data to a particular map
25 years available on the web and a site listing all of the locations that annual reports can be found.

Acknowledgements:

Joe Taranto	California DMO (Manager of Technical Services)
Kim Snyder	Wilkes-Barre BAMR
Dave Williams	Pottsville DMS
Robin Lighty	Harrisburg BMR

http://www.dep.state.pa.us/dep/deputate/minres/bmr/historicalminingreports/index.html

MCC Mining Compact Commission

Underground Mine Mapping – Benchmarking Workshop

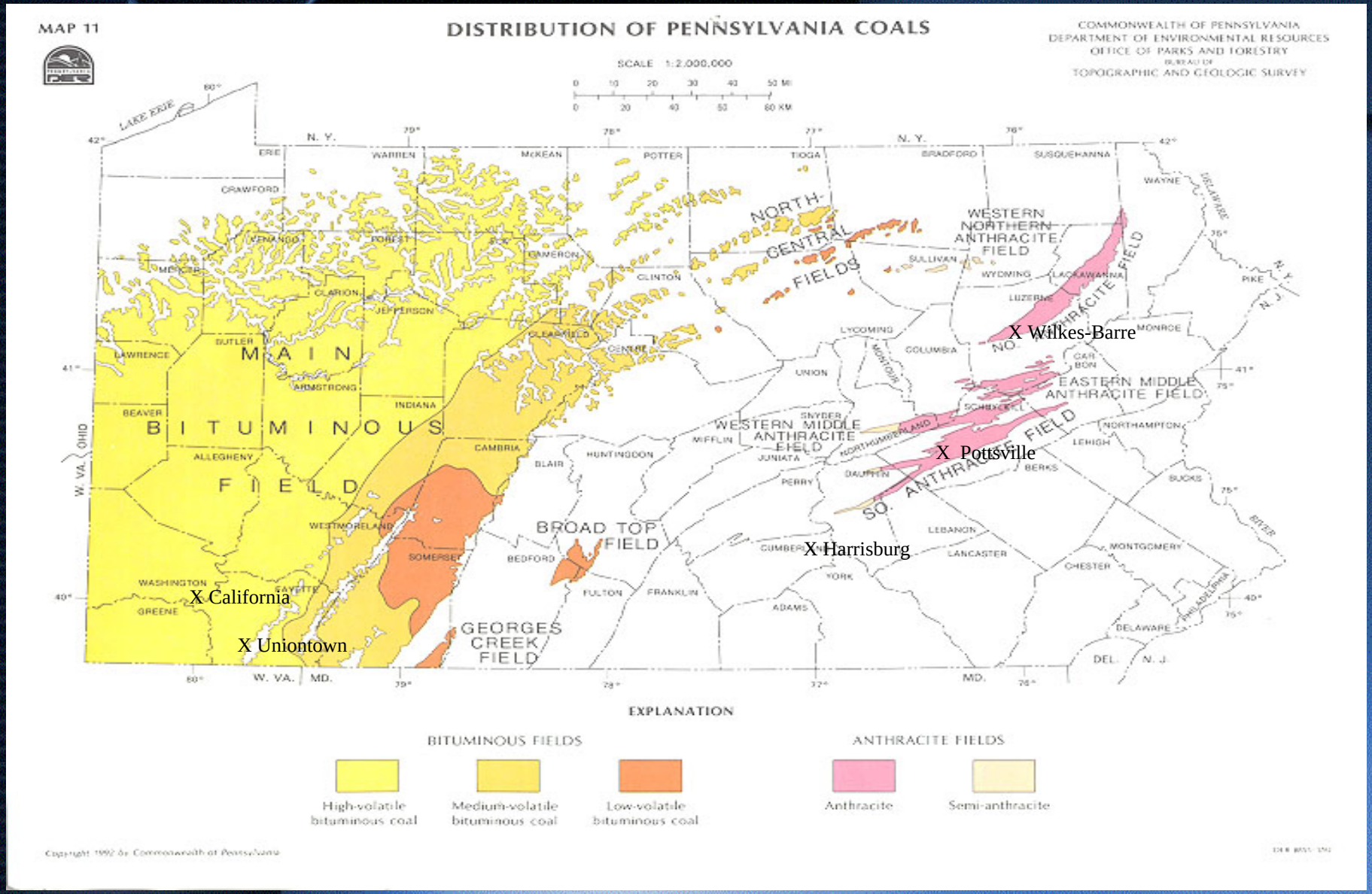
Pittsburgh, Pennsylvania

Bench-Marking Workshop

Pennsylvania's Initiative on Preservation of Maps of Abandoned Mines

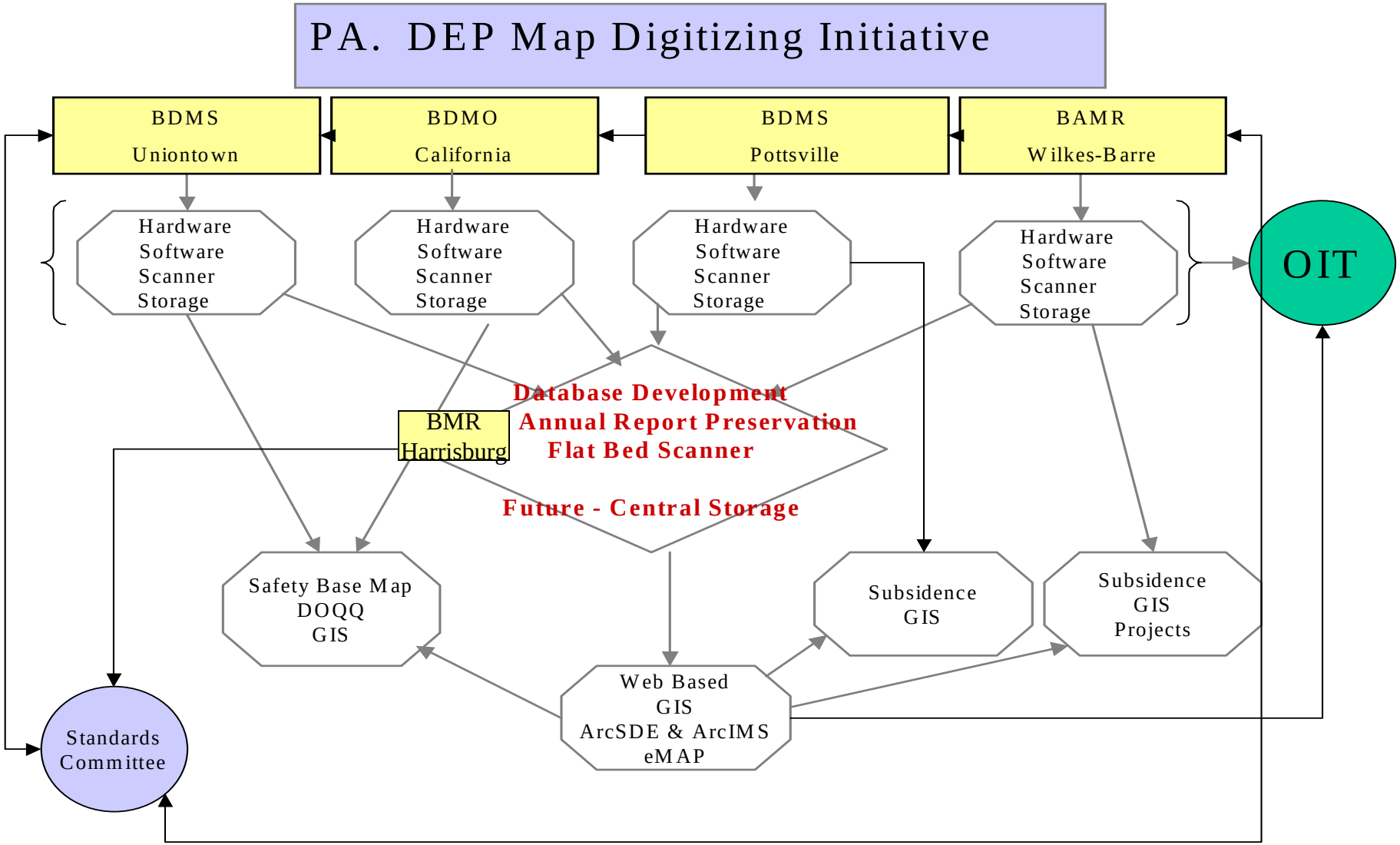
PA DEP Mine Mapping Initiative

Bench-Marking Workshop



PA DEP Mine Mapping Initiative

Bench-Marking Workshop



Bench-Marking Workshop

Vidar Atlas SP 54 Color Scanners

Fujifilm Quattro Flatbed Scanner

3 HP Plotters
and 2 Gestetner Digital Copiers

1.6 Terabyte IBM Servers

High Resolution Digital Camera

Bench-Marking Workshop

Combined Database PHUMMIS

Development stages

Data conversion

Very Large Mine Maps

Digital photography to provide digital images of these maps

Working on an MOU where DEP will purchase camera in exchange for digital images of large maps

Pa. Annual Reports

- 25 Years in digital format
- Site lists various locations where annual reports can be found
- On the web

Bench-Marking Workshop

Geo-referencing of Maps

Working on Standards

Is it Ground-Hog or Pheasant Hunting?

Make sure your target is well known by all who can use your data.

Maps Scanned with new Equipment

2,562 maps scanned October to date

Added 1,532 maps to inventory

Bench-Marking Workshop

Project Leaders

Joe Taranto Calif. DMO

Kim Snyder Wilkes-Barre

Dave Williams Pottsville DMS

Robin Lighty Harrisburg BMR

Questions

Thank You

OFFICE OF SURFACE MINING
Class Roster
Course: OSM-UGMM - Underground Mine Mapping

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OFFICE OF SURFACE MINING
Class Roster
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OFFICE OF SURFACE MINING
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