

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

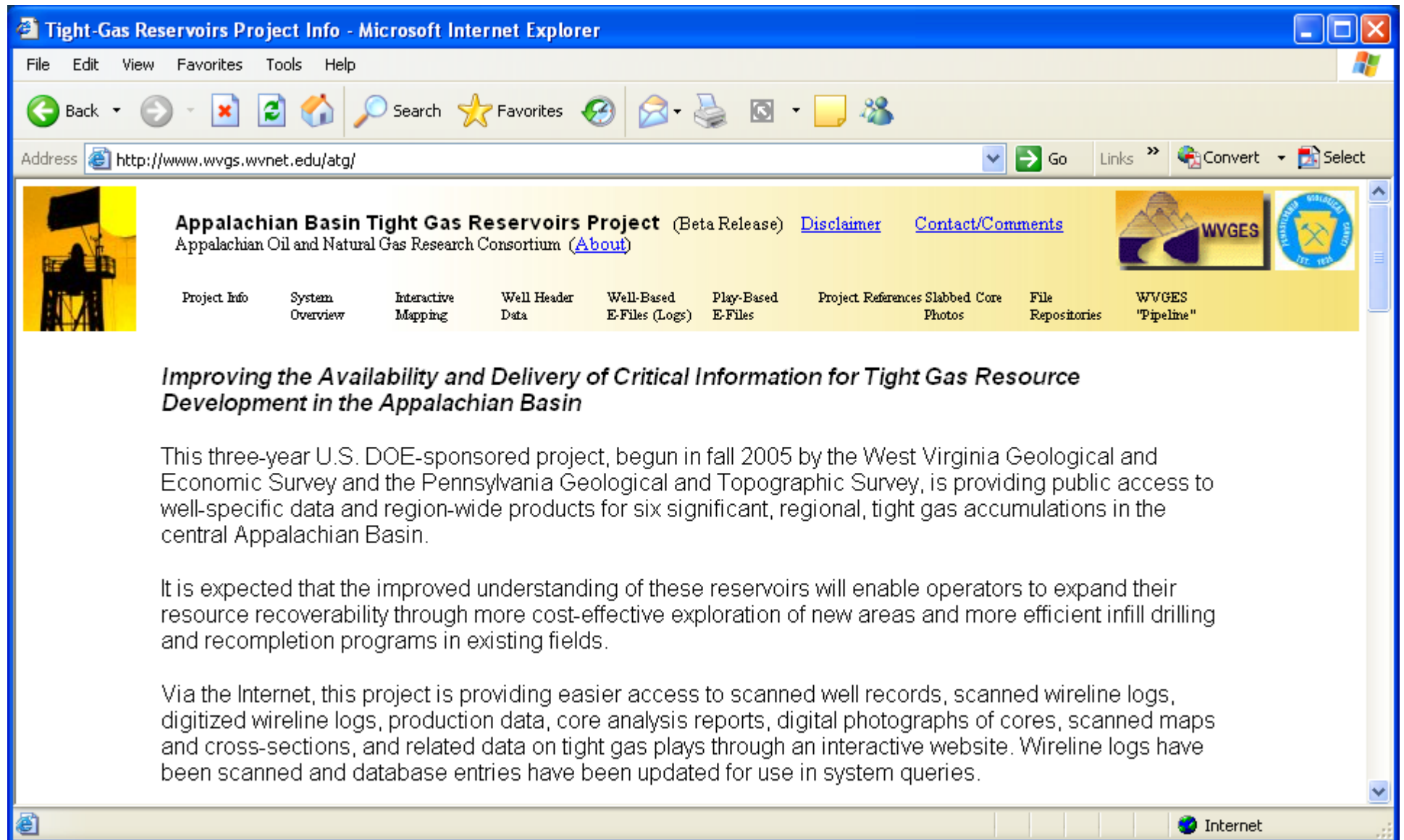


Figure B-1. The Appalachian Basin Tight Gas Reservoirs Project is formally titled, "Improving the Availability and Delivery of Critical Information for Tight Gas Resource Development in the Appalachian Basin". The goal is to provide public access to well-specific and regional data for six tight or low-permeability gas plays to improve the understanding and recoverability of those resources.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

The screenshot shows a web browser window titled "Appalachian Basin Tight Gas Reservoirs Project System Overview - Microsoft Internet Explorer". The address bar displays "http://www.wvgs.wvnet.edu/atg/SystemOverview.aspx". The page content includes a navigation bar with the following links: Project Info, System Overview, Interactive Mapping, Well Header Data, Well-Based E-Files (Logs), Play-Based E-Files, Project References, Slabbed Core Photos, File Repositories, and WVGES "Pipeline". The main text describes the project's purpose and provides detailed information about the Interactive Mapping and Well Header Data applications.

Appalachian Basin Tight Gas Reservoirs Project (Beta Release) [Disclaimer](#) [Contact/Comments](#)
Appalachian Oil and Natural Gas Research Consortium ([About](#))

[Project Info](#) [System Overview](#) [Interactive Mapping](#) [Well Header Data](#) [Well-Based E-Files \(Logs\)](#) [Play-Based E-Files](#) [Project References](#) [Slabbed Core Photos](#) [File Repositories](#) [WVGES "Pipeline"](#)

The Appalachian Basin Tight Gas Reservoirs Project provides a collection of tools/applications to give the user the ability to search and gather information about gas and oil wells in West Virginia and Pennsylvania. Data have been organized by play for the following plays: Berea/Murrysville, Venango, Bradford, Elk, Medina"Clinton" and Tuscarora. The data have been provided by the geological surveys of these states.

Interactive Mapping: The Appalachian Basin Tight Gas interactive mapping system provides access to layers and documents categorized by play. Each play contains well, cross-section, and map layers. A number of tools are available for exploring the layers including the zoom, identify, query, buffer, and data extraction tools. And, supplemental information may be obtained for the well layers by using hyperlinks. Supplemental information includes well-based header data and, for selected wells: scanned logs, digitized logs, and core/sample data. Well layers were generated from data obtained from the West Virginia and Pennsylvania geological surveys; cross-section and map layers, for the most part, were obtained from **The Atlas of Major Appalachian Gas Plays**. In addition to the play-based layers, play-based documents may be accessed through the system. These documents include such items as charts, diagrams, and reports.

Well Header Data: ([Detailed Help](#)) This application allows the user to query oil and gas header records in our system through the given fields on the form. The query options include a combination of numeric, character, pull-down and checkbox searches. Once the user enters selection criteria and hits the search button, the matching header records are then returned. **You must select a "Play" and enter/select at least one other condition for the application to run.** If errors are made in your selection, error messages will appear in red to help you correct the problem. The returned records will also provide a link to other applicable information that might be available. More detailed help on this application can be found [here](#).

Figure B-2. The "System Overview" section provides basic information about each of the applications available through the Appalachian Basin Tight Gas Reservoirs Project. The applications are shown on the navigation bar and include: Interactive Mapping, Well Header Data search, Well-Based E-Files search, Play-Based E-Files search, Project References search, Slabbed Core Photos access, File Repositories access, and WVGES "Pipeline".

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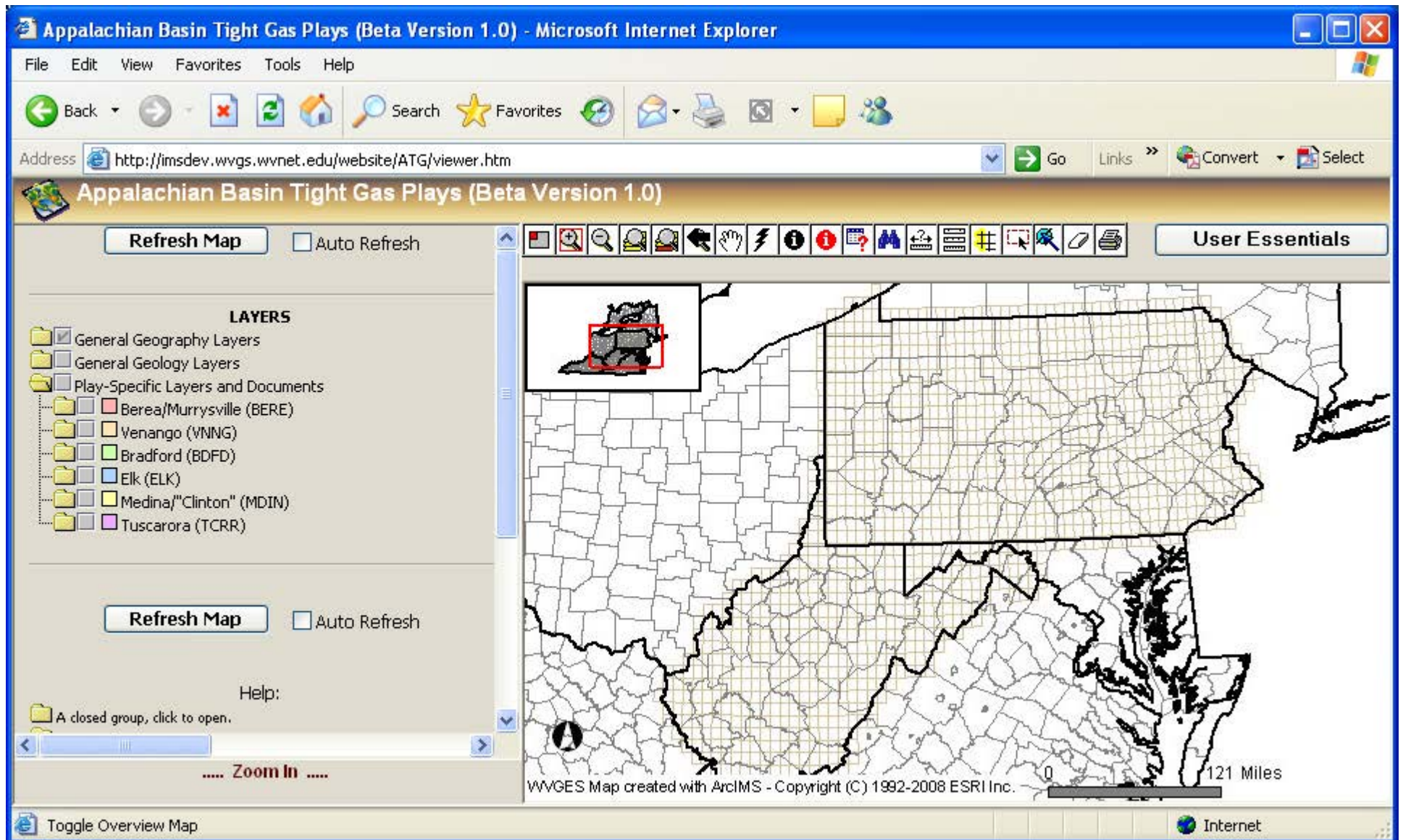


Figure B-3. One of the highlights of the Appalachian Basin Tight Gas Plays Project applications is the interactive mapping system. The system provides access to well data, cross sections, maps, and documents organized by play. In addition, a number of base layers are available to provide context.

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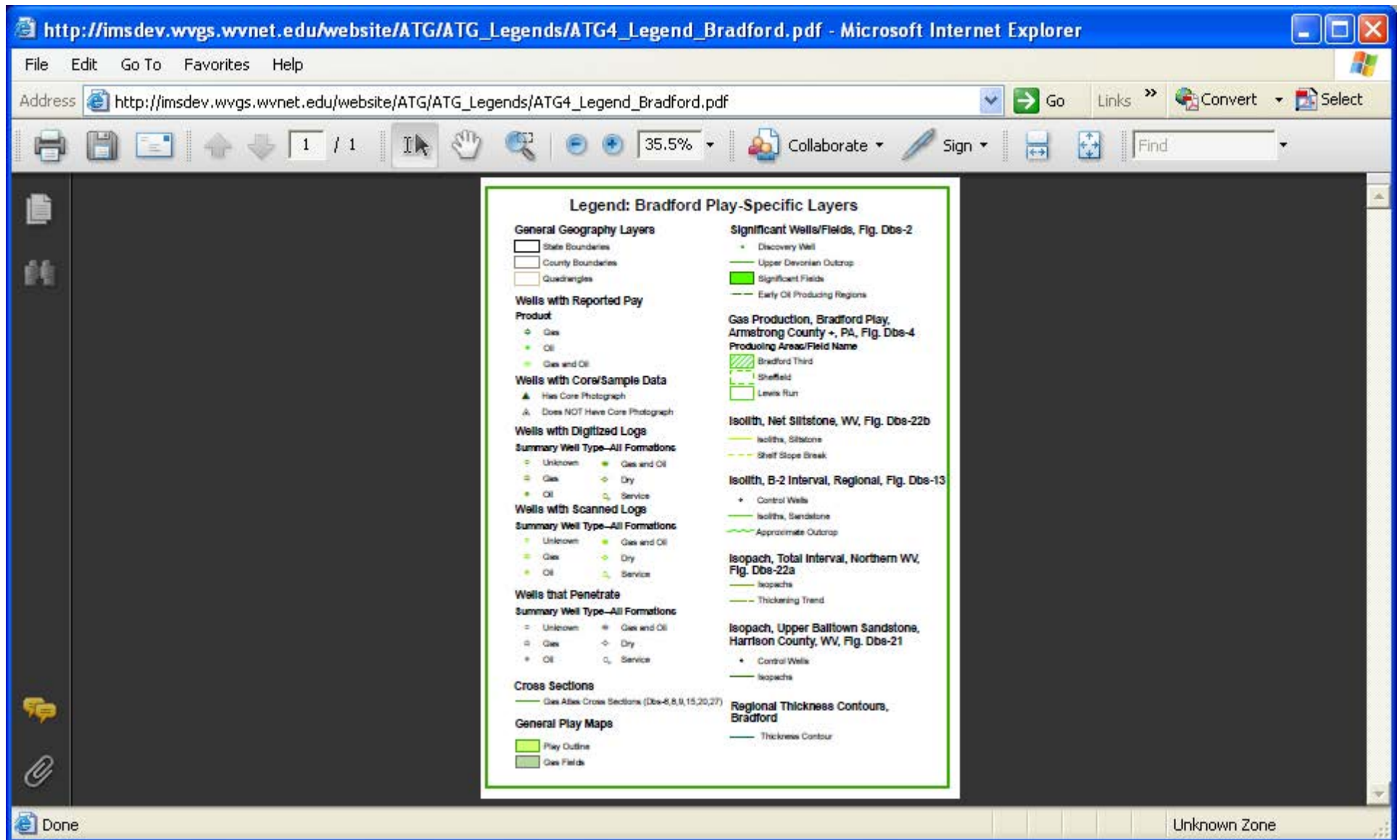


Figure B-4. A detailed legend is available for each major category associated with the interactive mapping system. This particular example shows the legend for the Bradford play-specific layers. Other legends include general geography and geology, the Berea play-specific layers, the Venango play-specific layers, the Elk play-specific layers, the Medina play-specific layers and the Tuscarora play-specific layers.

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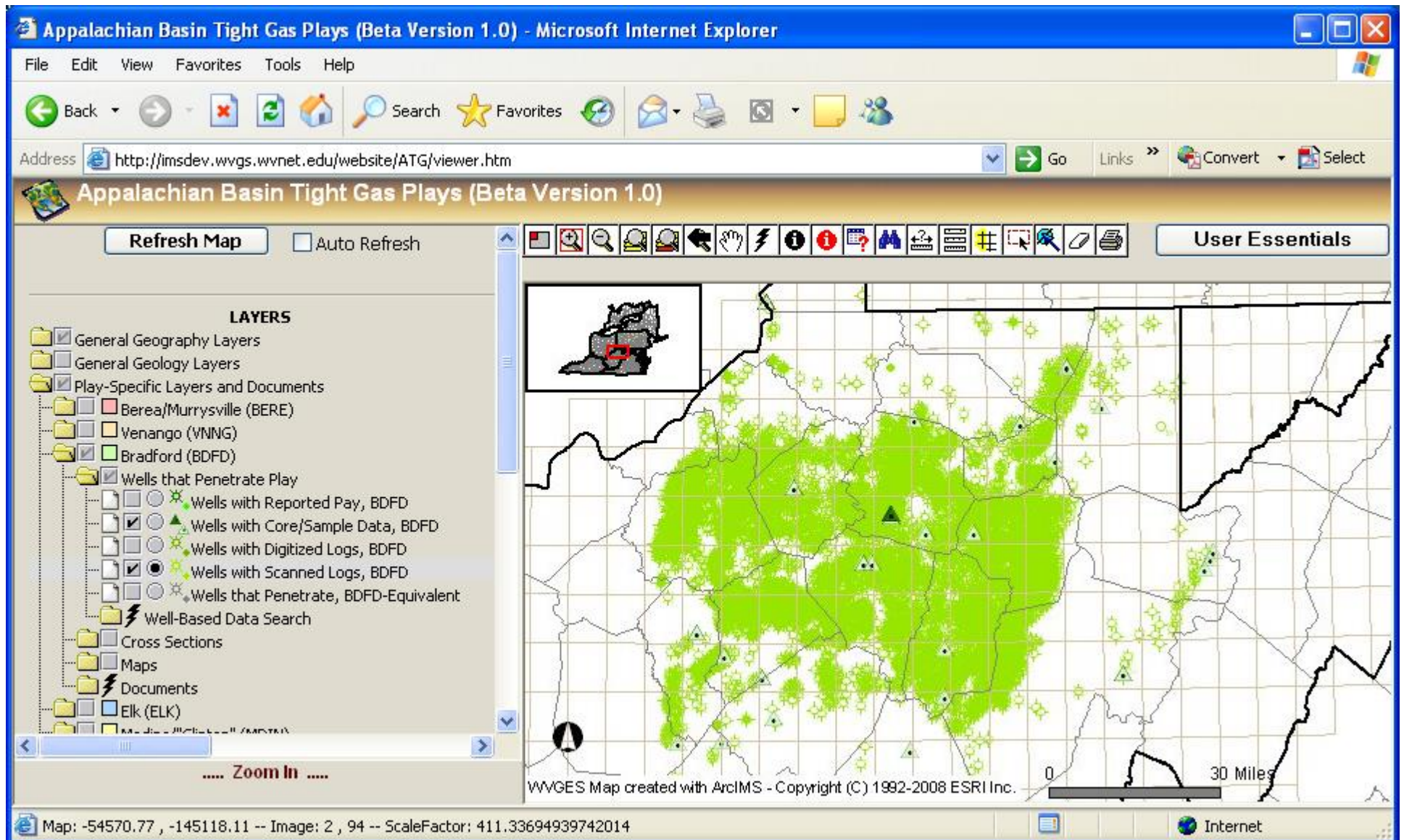


Figure B-5. Well-based data are available through the interactive mapping system. Five different well-based layers are available for each play. This map shows wells with core/sample data and wells with scanned logs for the Bradford Play in West Virginia.

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The screenshot displays the 'Appalachian Basin Tight Gas Plays (Beta Version 1.0)' web application running in Microsoft Internet Explorer. The main window shows a map of the Appalachian Basin with various well locations marked. A 'LAYERS' panel on the left lists several layers, including 'Wells that Penetrate Play' and 'Wells with Scanned Logs, BDFD'. A 'User Essentials' panel is visible on the right. A pop-up window titled 'http://imsdev.wvgs.wvnet.edu - Query/Selection Results - Microsoft Internet Explorer' displays a table of well data.

Rec	FID	objectid	api	COUNTYNAME	PERMIT	OPERNM	CO_NUM	FARM	WELL_NUM	MINERAL	ELEV	DATUMTR
1	9153	61357764	4710100076	Webster	76	Allegheny Land and Mineral Co.	A-1156	Nally-Dobson			1650	Ground Level

Figure B-6. Attribute data and additional data can be obtained for each well shown on the map by using the identify (i) tools. The black i tool shows data for the active layer while the red i tool shows data for all of the layers that are visible on the map. Additional data may be obtained by clicking on the API number which links the user to various materials including, for instance, any digitized or scanned logs.

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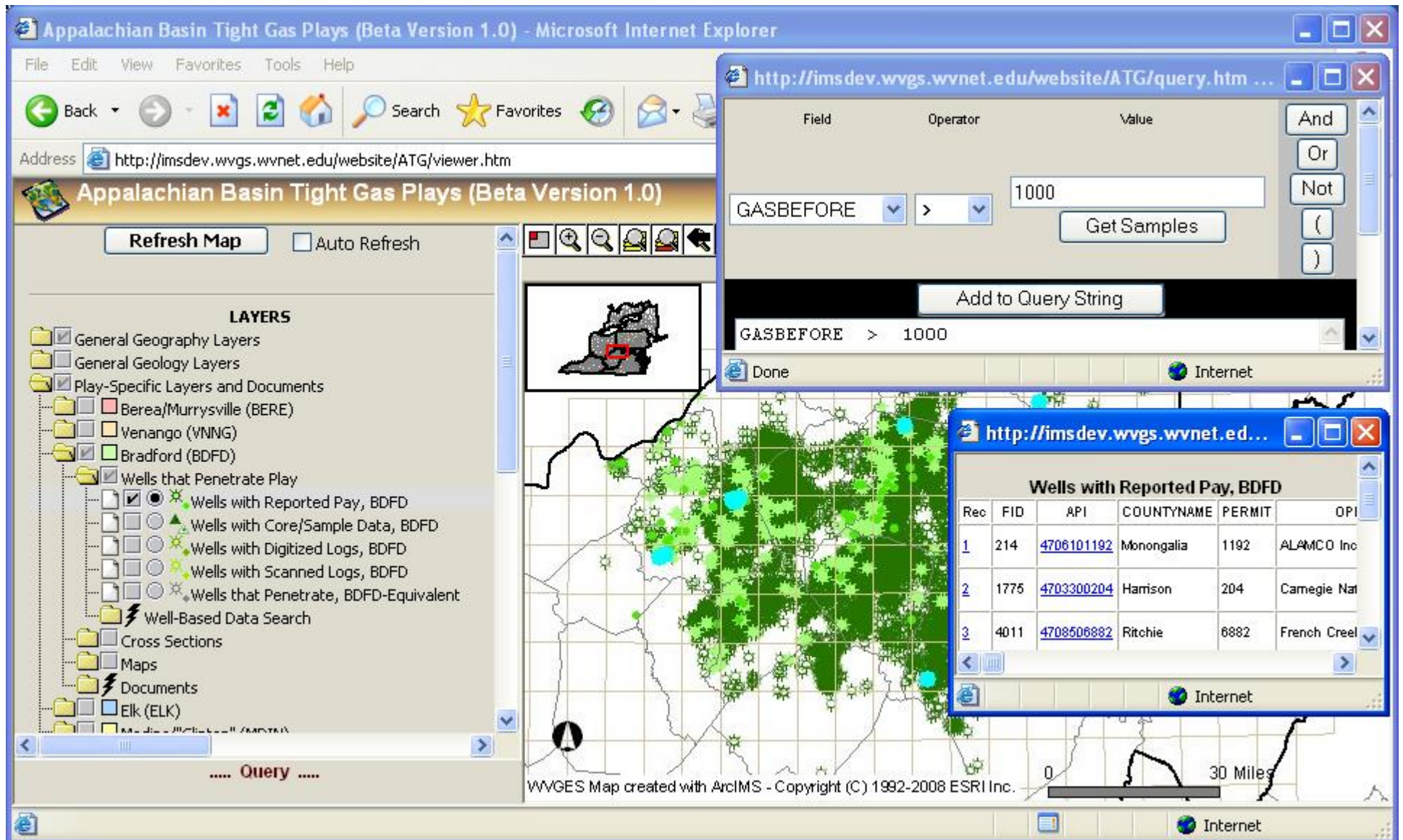


Figure B-7. Queries can be performed on the well data. In this example, all wells that have a gas volume before treatment greater than 1000 MCF (thousand cubic feet) are highlighted in light blue on the map. In addition, well-based attribute data can be displayed for all of the wells that meet the query criterion or criteria.

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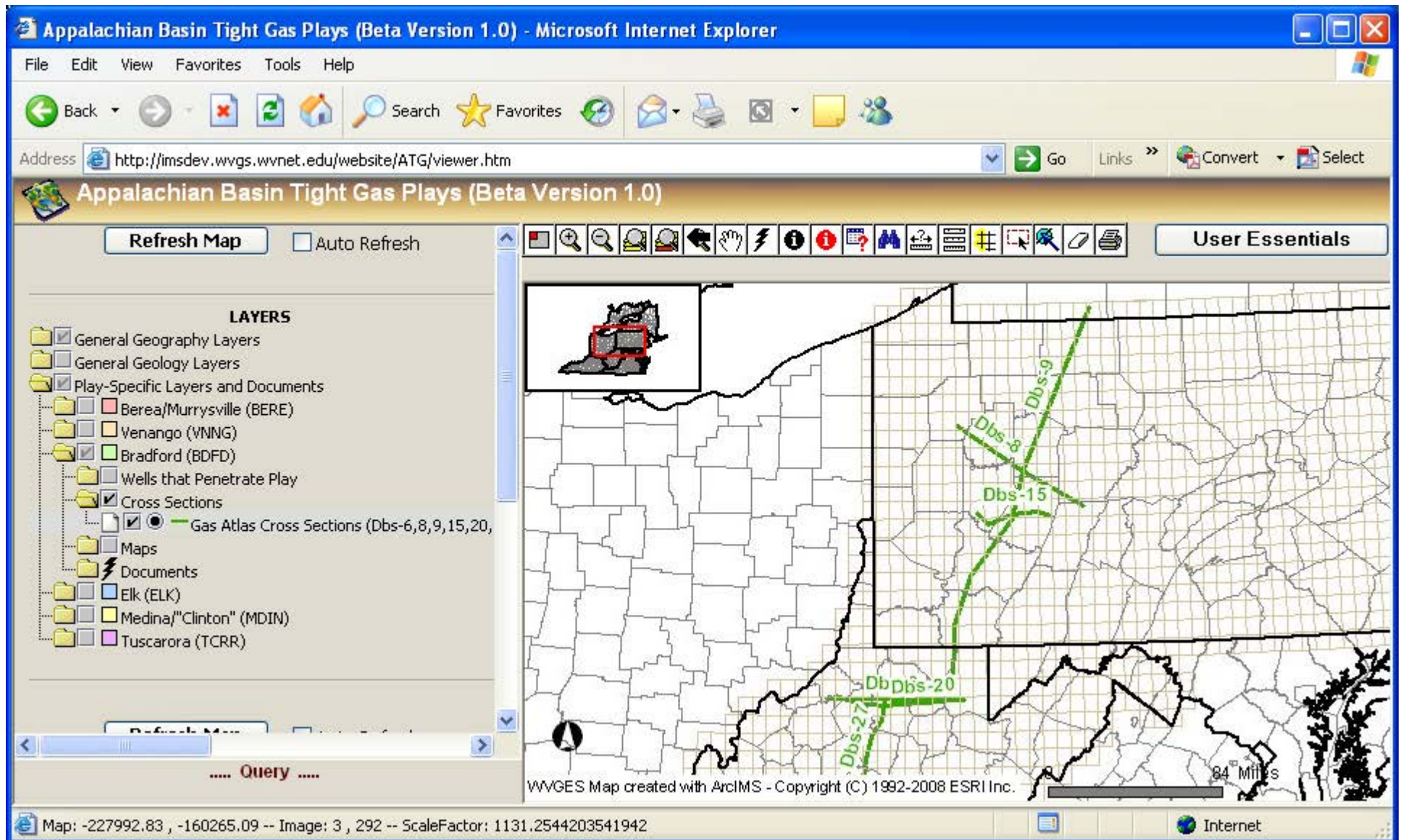


Figure B-8. Cross-sections lines and corresponding images are available for each of the tight gas plays. This example shows the cross-section lines that are available for the Bradford Play in Pennsylvania and West Virginia.

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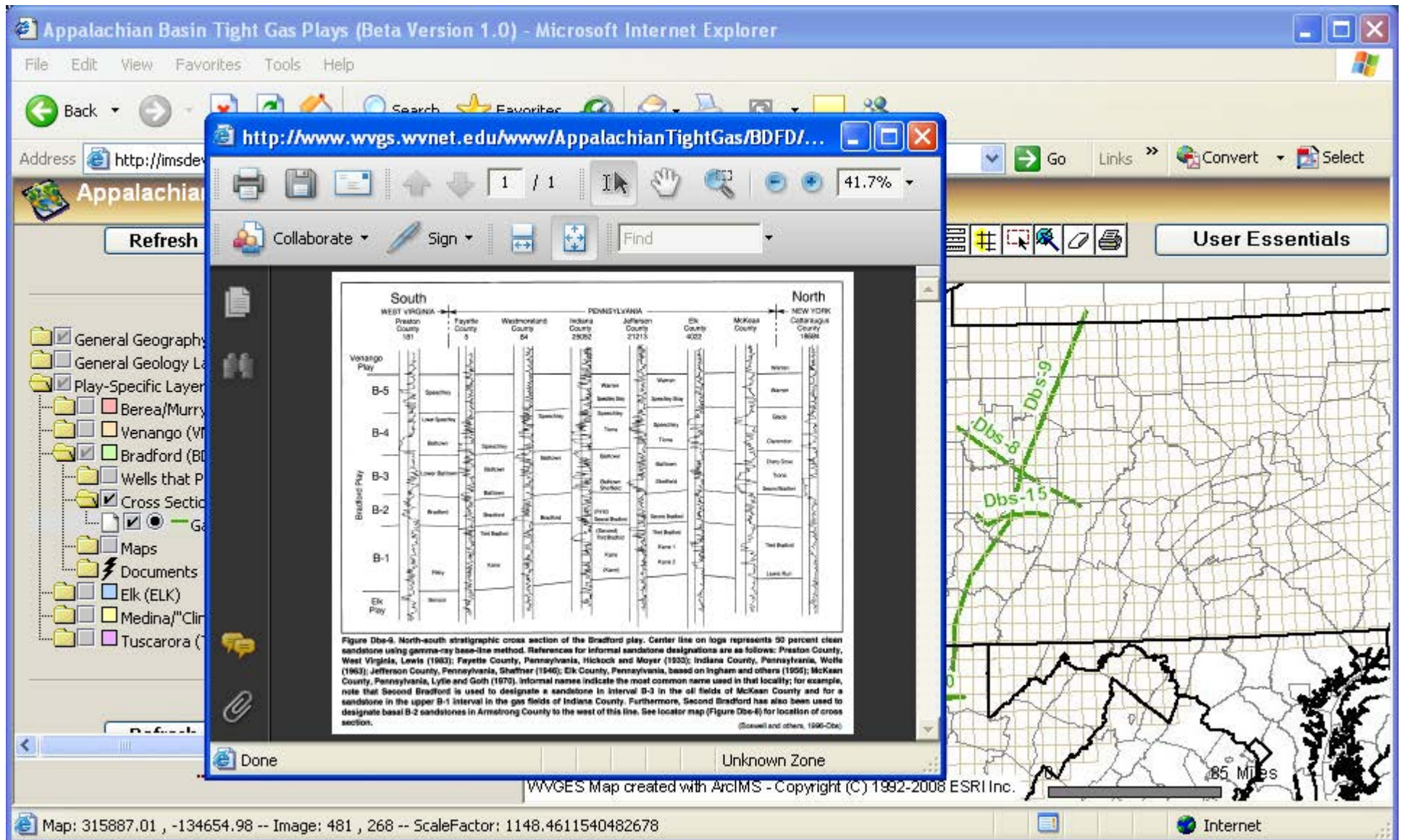


Figure B-9. Cross-sections are accessed by making the cross-section layer active and then by clicking on one of the cross-section lines with the hyperlink tool (lightening bolt). The cross-section image is then displayed in a new window.

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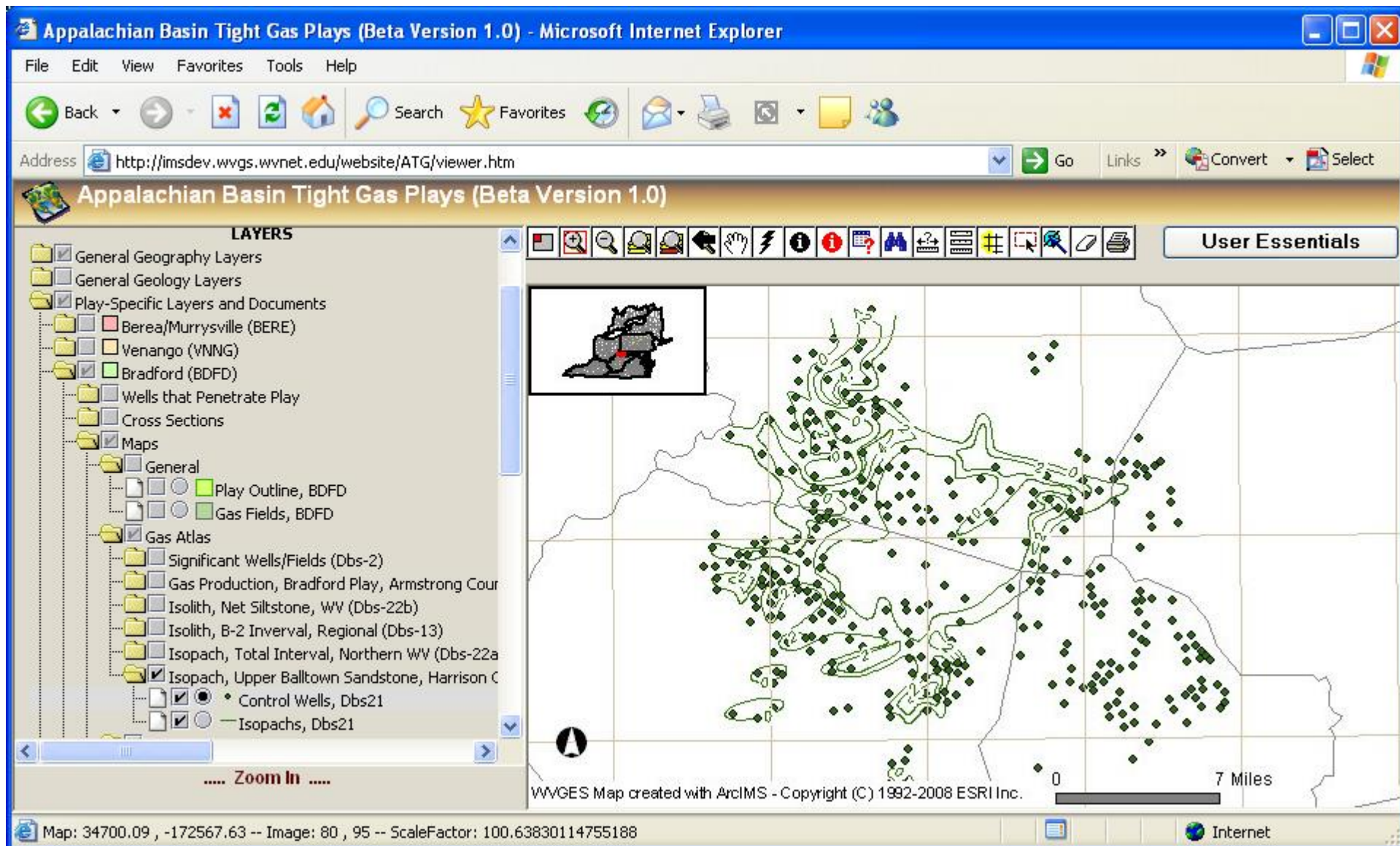


Figure B-10. Various types of maps are available from the interactive mapping system. This example shows one of the maps associated with the Bradford Play. Specifically, the example is an isopach map of the upper Balltown sandstone in Harrison County, West Virginia.

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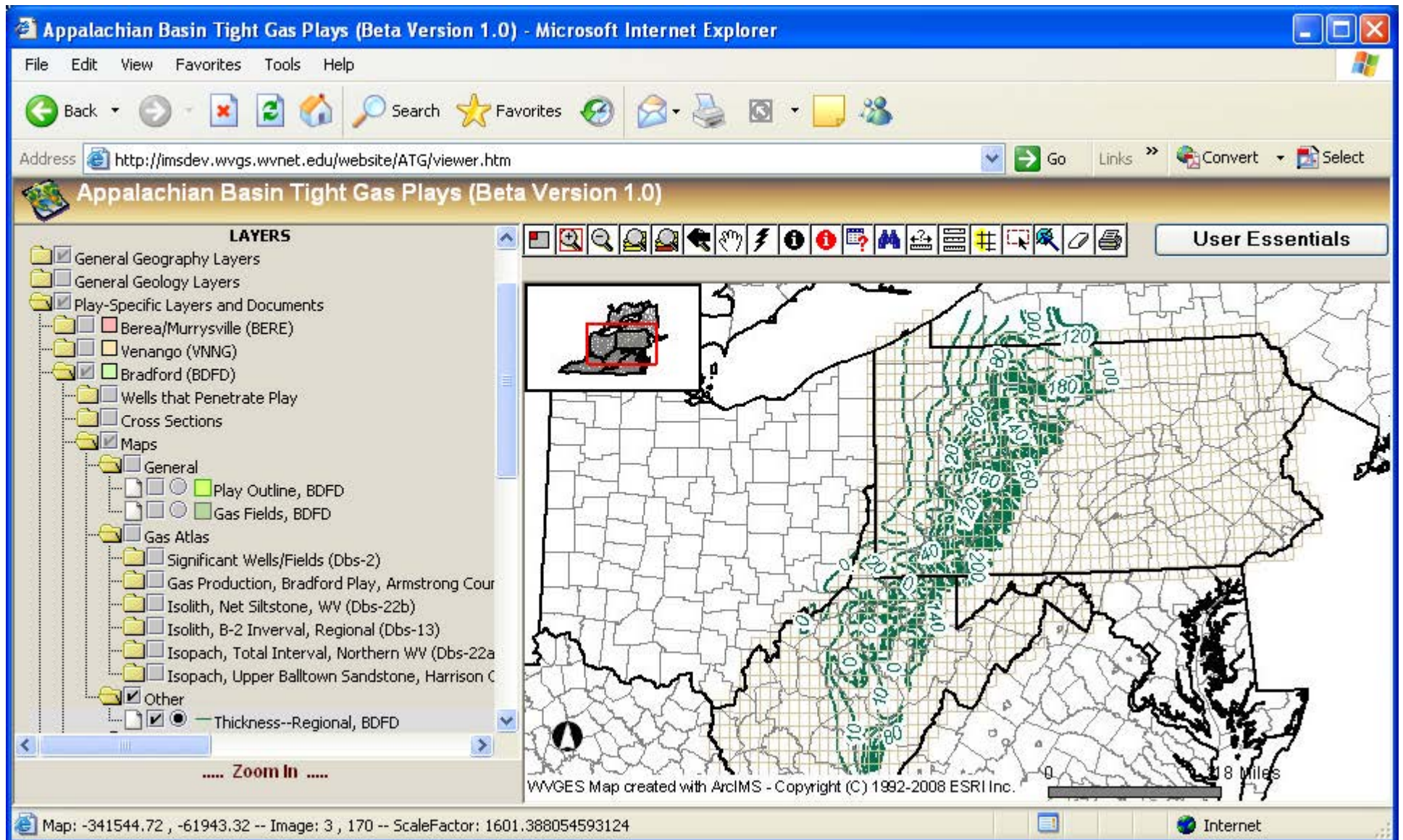


Figure B-11. This example shows yet another map associated with the Bradford Play. Specifically, the example shows a regional thickness map in Pennsylvania and West Virginia.

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The screenshot shows a Microsoft Internet Explorer browser window displaying the 'Oil & Gas Well Header Data Search' application. The address bar shows the URL: <http://www.wvgs.wvnet.edu/atg/OGDataSearch.aspx>. The page title is 'Appalachian Basin Tight Gas Reservoirs Project (Beta Release)'. The navigation menu includes links for 'Disclaimer' and 'Contact/Comments'. The main content area features a search form with the following fields and options:

- Play Penetration: **Bradford** (Selection Required)
- County: **Harrison (33)**
- 7.5 Minute Quad: [Empty]
- Type of Log: **Induction**
- Log Bottom (ft) >= [Empty]
- has Scanned Log(s):
- has Digitized Log(s):
- has Sample Desc Scan:
- has Slabbed Core Photo(s):
- Results/Page: **100**
- Order By: **API**
- API #: [Empty]
- Total Depth(ft) >= [Empty]
- Completion Year = [Empty]
- Operator (contains): [Empty] (minimum 3 characters if searching)
- Farm Name (contains): [Empty] (minimum 3 characters if searching)
- Field Name (contains): [Empty] (minimum 3 characters if searching)
- Deepest Formation (contains): [Empty] (minimum 3 characters if searching)
- Well Type: [Empty]

Buttons for 'Search' and 'Reset' are located at the bottom left of the search form. A blue informational message states: 'Please enter or select criteria to perform database search. The application uses an "and" operator between search fields. Searches will not be performed if the required field criteria is not met. Error messages are indicated in RED. [More Help](#)'

Figure B-12. Well header data are accessible through a search page. Several criteria are available to enable a user to create a collection of well data based on their specific interests or needs (please see above). Well header data includes well-specific data such as surface owner, operator name, total depth, and deepest formation.

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The screenshot displays the 'Oil & Gas Well Header Data Search' application in a Microsoft Internet Explorer browser. The address bar shows the URL: <http://www.wvgs.wvnet.edu/atg/OGDataSearch.aspx>. The search interface includes several filters:

- has Scanned Log(s):
- has Digitized Log(s):
- has Sample Desc Scan:
- has Slabbed Core Photo(s):
- Field Name (contains): (minimum 3 characters if searching)
- Deepest Formation (contains): (minimum 3 characters if searching)
- Well Type:
- Results/Page: 100
- Order By: API

Buttons for 'Search' and 'Reset' are located below the filters. A message states: "Please enter or select criteria to perform database search. The application uses an \"and\" operator between search fields. Searches will not be performed if the required field criteria is not met. Error messages are indicated in RED. [More Help](#)".

Below the search area, it indicates "25 Records Found, showing page 1 of 1 at 100 records per page" and includes an "Export To Excel" button.

API #	BERE	VNNG	BDFD	ELK	MDIN	TCRR	Pipeline	ELogs	DLogs	Core photo	Sample Desc	County	7.5 Quad	DD Lat	DD Long	Logs	Log Btm	Ep#	Comp Year	Well Type
4703300527	Y	Y	Y	Y			All Data	Elog				Harrison	West Milford	39.233164	-80.444617	D,GR,I,C	7310	1	1970	Dry w/ Gas S
4703300623	Y	Y	Y	Y			All Data	Elog				Harrison	West Milford	39.19977	-80.473613	GR,D,I,C	4684	1	1972	Gas
4703300623	Y	Y	Y	Y			All Data	Elog				Harrison	West Milford	39.19977	-80.473613	GR,D,I,C	4684	2	2001	Gas
4703300779	Y	Y	Y	Y			All Data	Elog				Harrison	West Milford	39.214731	-80.469327	GR,D,I,C,*	4684	1	1974	Gas
4703300779	Y	Y	Y	Y			All Data	Elog				Harrison	West Milford	39.214731	-80.469327	GR,D,I,C,*	4684	2	2000	Gas
4703300785	Y	Y	Y	Y			All Data	Elog				Harrison	West Milford	39.219956	-80.464296	D,GR,C,*	4734	1	1974	Gas
4703300862	Y	Y	Y	Y			All Data	Elog	DLog	Cores		Harrison	West Milford	39.206737	-80.441263	GR,D,N,I,C,*	4650	1	1974	Gas
4703300862	Y	Y	Y	Y			All Data	Elog	DLog	Cores		Harrison	West Milford	39.206737	-80.441263	GR,D,N,I,C,*	4650	2	1987	Gas
4703300862	Y	Y	Y	Y			All Data	Elog	DLog	Cores		Harrison	West Milford	39.206737	-80.441263	GR,D,N,I,C,*	4650	3	2002	Gas
4703300921	Y	Y	Y	Y			All Data	Elog				Harrison	West Milford	39.198319	-80.491129	GR,D,I,C	4764	1	1975	Oil and Gas

Figure B-13. The well header data search provides access to a wealth of well-based data. In addition, links to other sources of data are provided. Search results can be exported to Excel.

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The screenshot shows a Microsoft Internet Explorer browser window titled "Well-Based E-File search, view and download - Microsoft Internet Explorer". The address bar contains the URL: <http://www.wvgs.wvnet.edu/atg/EfileViewer.aspx?api=4703300862&FILETYPE=ELOG>. The main content area is divided into two sections. The left section contains search filters: "Play Penetration:" (dropdown), "API #:" (text input with "4703300862"), "Data Type:" (dropdown with "Scanned Log(s)"), "County:" (dropdown), "Results/Page:" (dropdown with "25"), and "Order By:" (dropdown with "API"). Below these are "Search", "Reset", and "Export To Excel" buttons. The right section displays a preview of a scanned log, showing a vertical strip of a log image with a scroll bar on the right.

10 Records Found, showing page 1 of 1 at 25 records per page

View	API #	BERE	VNNG	BDPD	ELK	MDIN	TCRR	County	File Type
4703300862pqo1.tif	4703300862	Y	Y	Y	Y			Harrison	Scanned Log(s)
4703300862pqo2.tif	4703300862	Y	Y	Y	Y			Harrison	Scanned Log(s)
4703300862bqpo1.tif	4703300862	Y	Y	Y	Y			Harrison	Scanned Log(s)
4703300862bqpo2.tif	4703300862	Y	Y	Y	Y			Harrison	Scanned Log(s)
4703300862dnqcp.tif	4703300862	Y	Y	Y	Y			Harrison	Scanned Log(s)
4703300862q1.tif	4703300862	Y	Y	Y	Y			Harrison	Scanned Log(s)

Figure B-14. A link to scanned logs is one of the link types available from the well header data search result. Scanned logs and other electronic documents can be searched, viewed, or downloaded. A scanned log for well 4703300862 is shown in the viewer on the right-hand side of the page. Users should be able to scroll down through the log image, zoom in, and zoom out.

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Well-Based E-File search, view and download - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.wvgs.wvnet.edu/atg/EfileViewer.aspx>

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Project Info System Overview Interactive Mapping Well Header Data Well-Based E-Files (Logs) Play-Based E-Files Project References Slabbed Core Photos File Repositories WVGS Pipeline

Well-Based E-File search, view and download

 (Includes Well Logs)

This application allows you to search, view, and download electronic files. For help with this application [click here](#).

Play Penetration:

API #:

Data Type:

County:

Results/Page:

Order By:

DISCLAIMER REGARDING THE RELEASE OF DATA

The West Virginia Geological and Economic Survey (WVGS) and Topographic and Geologic Survey (PGS) make basic data computerized databases on mineral resources under the...

1. We believe the data in the Appalachian Basin Tight Gas Reservoirs application have been generated and assembled with accuracy and precision for the purposes for which they are intended. In this context, "data" refer to numerical and textual data (such as .las files), digital images (such as digital photographs), wireline logs, and spatial data (such as shapefiles). Some other sources and the two agencies accept no responsibility for the accuracy, precision, or completeness of the data.

Figure B-15. Well-based e-files or documents (*as opposed to well header data*) are accessible through a search page. Several search criteria are available including play, API number, data type, and county. Well-based files would include such items as well plats, completion reports, scanned logs, core photographs, and core and sample descriptions.

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The screenshot shows a Microsoft Internet Explorer browser window titled "Well-Based E-File search, view and download - Microsoft Internet Explorer". The address bar displays "http://www.wvgs.wvnet.edu/atg/EfileViewer.aspx". The page content includes a search interface on the left and a large photograph of a core sample on the right.

The search interface on the left contains several dropdown menus and a button:

- Dropdown menu: "dford" (selected)
- Dropdown menu: "e Photo(s)" (selected)
- Dropdown menu: "rison (33)" (selected)
- Dropdown menu: "set" (selected)
- Button: "Export To Excel"

Below the search interface, it indicates "page 1 of 2 at 25 records per page". A table displays search results:

API #	BERE	VNNG	BDFD	ELK	MDIN	TCRR	County	File Type
4703300862	Y	Y	Y	Y			Harrison	Core Photo(s)
4703300862	Y	Y	Y	Y			Harrison	Core Photo(s)
4703300862	Y	Y	Y	Y			Harrison	Core Photo(s)
4703300862	Y	Y	Y	Y			Harrison	Core Photo(s)
4703300862	Y	Y	Y	Y			Harrison	Core Photo(s)

The large photograph on the right shows a dark, layered core sample. A white label with the number "3410" is attached to the top. To the right of the core, a yellow ruler is visible, with a label that reads "47-4 WV #11 Cor".

Figure B-16. The well-based e-file search provides basic data about and access to documents about a particular well. For example, as shown here, a core photograph for well 4703300862.

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Play-Based E-File search - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.wvgs.wvnet.edu/atg/LSDocs.aspx> Go Links Convert Select

Appalachian Basin Tight Gas Reservoirs Project (Beta Release) [Disclaimer](#) [Contact/Comments](#)
Appalachian Oil and Natural Gas Research Consortium ([About](#))

Project Info System Overview Interactive Mapping Well Header Data Well-Based E-Files (Logs) Play-Based E-Files Project References Slabbed Core Photos File Repositories WVGES "Pipeline"

Play-Based E-File search

Play Category:

Data Type:

Author (like):

Results/Page:

Order By:

Done Internet

Figure B-17. Play-based e-files are accessible through a search page. Several search criteria are available including play category, data type, and author. Play-based files would include such items as abstracts, reports, cross sections, and maps.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

The screenshot shows a Microsoft Internet Explorer browser window displaying the 'Play-Based E-File search' page. The address bar shows the URL: <http://www.wvgs.wvnet.edu/atg/LSDocs.aspx>. The page header includes the project name 'Appalachian Basin Tight Gas Reservoirs Project (Beta Release)' and navigation links for 'Disclaimer' and 'Contact/Comments'. A menu bar contains various options: Project Info, System Overview, Interactive Mapping, Well Header Data, Well-Based E-Files (Logs), Play-Based E-Files, Project References Slabbed Core Photos, File Repositories, and WVGES 'Pipeline'. The main content area features search filters: 'Play Category' set to 'Bradford', 'Data Type' set to 'Stratigraphy', and an empty 'Author (like)' field. Below these are 'Results/Page' set to 25 and 'Order By' set to 'Data Type'. There are 'Search', 'Reset', and 'Export To Excel' buttons. The search results show 4 records found, displaying page 1 of 1 at 25 records per page. The results are presented in a table with columns for Details, Play Category, Data Type, Year, Author, and File Name.

Details	Play Category	Data Type	Year	Author	File Name
Details	Bradford	Stratigraphy	1996-Dbs	Boswell, R.M., Thomas, B.W., Hussing, R.B., Murin, T.M., and Donaldson, A.C.	BDFD_strd_Boswell_1996_p71_figDbs-3.pdf
Details	Bradford	Stratigraphy	1996-Dbs	Boswell, R.M., Thomas, B.W., Hussing, R.B., Murin, T.M., and Donaldson, A.C.	BDFD_strd_Boswell_1996_p72_figDbs-5.pdf
Details	Bradford	Stratigraphy	1996-Dbs	Boswell, R.M., Thomas, B.W., Hussing, R.B., Murin, T.M., and Donaldson, A.C.	BDFD_strd_Boswell_1996_p72_figDbs-7.pdf
Details	Bradford	Stratigraphy	1996-Dbs	Boswell, R.M., Thomas, B.W., Hussing, R.B., Murin, T.M., and Donaldson, A.C.	BDFD_strd_Boswell_1996_p75_figDbs-23.pdf

Figure B-18. The play-based e-file search provides basic data about and access to documents about a particular play.

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Play-Based E-File details, view and download - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://www.wvgs.wvnet.edu/atg/LSDocsDetails.aspx?filename=BDFD_strd_Boswell_1996_p71_figDbs-3.pdf Go Links Convert Select

Full Reference Info

Author: Boswell, R.M., Thomas, B.W., Hussing, R.B., Murin, T.M., and Donaldson, A.C.

Year: 1996-Dbs

Title: Play Dbs: Upper Devonian Bradford sandstones and siltstones

Publication: in Roen, J.B., and Walker, B.J., eds., *The Atlas of Major Appalachian Gas Plays*

Publisher: West Virginia Geological and Economic Survey

Volume #: Volume V-25

Page(s): p. 70-76

E:

West

Greenbrier Limestone

Big Inj

Wei San

Sunbury Shale Berea Sandstone

MISSISSIPPIAN DEVONIAN

Cleveland Member of Ohio Shale

Huron Member of Ohio Shale

Rhinestreet Shale Member of West Falls Formation

Dunkirk Shale Member Equivalent

Warren Shale

Tully Limestone

Black Shale

Done Internet

Figure B-19. A specific play-based document can be accessed by clicking on the “Details” link given the play-based e-files search result (see previous figure). The document is then shown in a viewer on the right-hand side of the Web browser page. The user should be able to change the size of the image, scroll, zoom in, and zoom out. Along with the image, full reference information and scanned document information is given.

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The screenshot shows a Microsoft Internet Explorer browser window titled "Project Reference search - Microsoft Internet Explorer". The address bar contains the URL "http://www.wvgs.wvnet.edu/ATG/LSRefs.aspx". The main content area is titled "Project Reference search" and features several search filters:

- Play Category: Devonian-General (dropdown menu)
- Year: (text input field)
- Author (like): Filer (text input field)
- Title (like): (text input field)
- Results/Page: 25 (dropdown menu)
- Order By: Author (dropdown menu)

Below the filters are buttons for "Search", "Reset", and "Export To Excel". The search results indicate "6 Records Found, showing page 1 of 1 at 25 records per page". The results are presented in a table with the following columns: Details, Play, Author(s), Year, and Title.

Details	Play	Author(s)	Year	Title
Details	Devonian-General	Dennison, J.M., Filer, J.K., and Rossbach, T.J.	1996	Devonian strata of southeastern West Virginia and adjacent Virginia
Details	Devonian-General	Filer, J.K.	1985	Oil and gas report and maps of Pleasants, Wood, and Ritchie counties, West Virginia
Details	Devonian-General	Filer, J.K.	1988	Chronostratigraphy and facies of the Upper Devonian clastic wedge, West Virginia
Details	Devonian-General	Filer, J.K.	1994	High frequency eustatic and siliciclastic sedimentation cycles in a foreland basin, Upper Devonian, Appalachia
Details	Devonian-General	Filer, J.K.	2002	Late Frasnian sedimentation cycles in the Appalachian basin – possible evidence for high frequency eustatic
Details	Devonian-General	Filer, J.K.	2003	Stratigraphic evidence for a late Devonian possible back-bulge in the Appalachian basin, United States

Figure B-20. Project references are available through a search page. Search criteria include play, year, author, and title.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

The screenshot shows a Microsoft Internet Explorer browser window displaying the 'Appalachian Basin Tight Gas Reservoirs Project' details page. The address bar shows the URL: <http://www.wvgs.wvnet.edu/ATG/LSRefsDetails.aspx?referenceid=2653>. The page header includes the project name, '(Beta Release)', and links for 'Disclaimer' and 'Contact/Comments'. A navigation menu below the header lists various project components: Project Info, System Overview, Interactive Mapping, Well Header Data, Well-Based E-Files (Logs), Play-Based E-Files, Project References Slabbed Core Photos, File Repositories, and WVGES 'Pipeline'. The main content area is titled 'Project Reference Details and related Play-Based E-Files' and provides metadata for a selected document:

- Play Category: Devonian-General
- Author: Filer, J.K.
- Year: 1985
- Title: Oil and gas report and maps of Pleasants, Wood, and Ritchie counties, West Virginia
- Publication:
 - Publisher: West Virginia Geological and Economic Survey
 - Volume #: Bulletin B-11A
 - Page(s): 87 p.
 - Etc:

Below the metadata, it states '2 Play-Based E-File(s) found for this reference' and displays a table of results:

Details	File Name	Play Category	Data Type	Year	Author
Details	DVNN_xsec_Filer_1985_p12_fig5.pdf	Devonian-General	Cross Section	1985	Filer, J.K.
Details	GNRL_mapo_Filer_1985_p81_fig31.pdf	General	Map(s)	1985	Filer, J.K.

Figure B-21. The links from the project reference search provide additional details about the document that was selected.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

Play-Based E-File details, view and download - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://www.wvgs.wvnet.edu/ATG/LSDocsDetails.aspx?filename=GNRL_mapo_Filer_1985_p81_fig31.pdf Go Links Convert Select

Project Info System Overview Interactive Mapping Well Header Data Well-Based E-Files (Logs) Play-Based E-Files Project References Slabbed Core Photos File Repositories WVGES "Pipeline"

Play-Based E-File details, view and download

Scanned Document Info

- File Name: GNRL_mapo_Filer_1985_p81_fig31.pdf
- Play Category: General
- Data Type: Map(s)
- Author: Filer, J.K.
- Year: 1985
- API:
- Description: Geothermal gradient map

Full Reference Info

- Author: Filer, J.K.
- Year: 1985
- Title: Oil and gas report and maps of Pleasants, Wood, and Ritchie counties, West Virginia
- Publication:
- Publisher: West Virginia Geological and Economic Survey
- Volume #: Bulletin B-11A
- Page(s): 87 p.

Find

1 / 1 96.1%

KEY

- > 100 BOFD IP
- > 1000 MCFOFD IP
- > 100 BOFD IP, 1000 MCFOFD

ANTICLINAL AXIS
SYNCLINAL AXIS
THRUST FAULT (TEETH ON UP THROWN SIDE)
GEOTHERMAL GRADIENT 1"=100 FT
(0.25 CONTOUR INTERVAL)

PODDRIDGE CO.
W. VIRG.

39° 15'

Internet

Figure B-22. Finally, links provide access to individual project reference documents that have been scanned. This example provides a scanned image of a geothermal gradient map from a West Virginia Geological & Economic Survey (WVGES) publication.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

Slabbed Core Photograph Listing by Well (API#) - Microsoft Internet Explorer

Address: <http://www.wvgs.wvnet.edu/atg/CoresList.aspx>

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Slabbed Core Photograph Listing by Well (API#)

This is a complete listing of wells for which we have photographs of slabbed cores in the given plays. To view photos, select the number per page desired for viewing and hit the "View" link for that well.

Images per page:

API #	Play	# Images	Link
4700501093	BERE	29	View
4700701140	VNNG	29	View
4701500513	TCRR	50	View
4701701843	VNNG	25	View
4703300862	BDFD	12	View
4703300862	ELK_	15	View

Play Translations	
BERE	Berea
VNNG	Venango
BDFD	Bradford
ELK_	Elk
TCRR	Tuscarora

Figure B-23. Photographs for slabbed cores are available for about a dozen wells. Access to the photographs is available in a number of places in the Appalachian Basin Tight Gas Reservoirs Project system, including through a table of links.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

WVGES Slabbed Core Photo Viewer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.wvgs.wvnet.edu/ATG/CoreViewer.aspx?RO=4&PN=1&api=4703300862> Go Links Convert Select

Project Info System Overview Interactive Mapping Well Header Data Well-Based E-Files (Logs) Play-Based E-Files Project References Slabbed Core Photos File Repositories WVGES "Pipeline"

WVGES Slabbed Core Photo Viewer

API: 4703300862
Farm Name & Company #: W W Wolfe 11861
Operator: Consolidated Gas Supply Corp.
Core Interval(s) Photographed (in feet below surface datum): 3410-3420 and 4498-4534 *Please note that photographed interval(s) may not exactly match the core interval (s).

If you want a larger image, click on image.

[Next >>](#) 27 images found, displaying images 1 - 4, 4 records per page, showing page: 1 of 7

3410 47-033-00862 W.W. Wolfe #11861 Consol Gas Supply

3411 47-033-00862 W.W. Wolfe #11861 Consol Gas Supply

3412 47-033-00862 W.W. Wolfe #11861 Consol Gas Supply

3413 47-033-00862 W.W. Wolfe #11861 Consol Gas Supply

Internet

Figure B-24. Numerous photographs are typically available for any given well. The photographs are shown here in depth order with four images per page.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

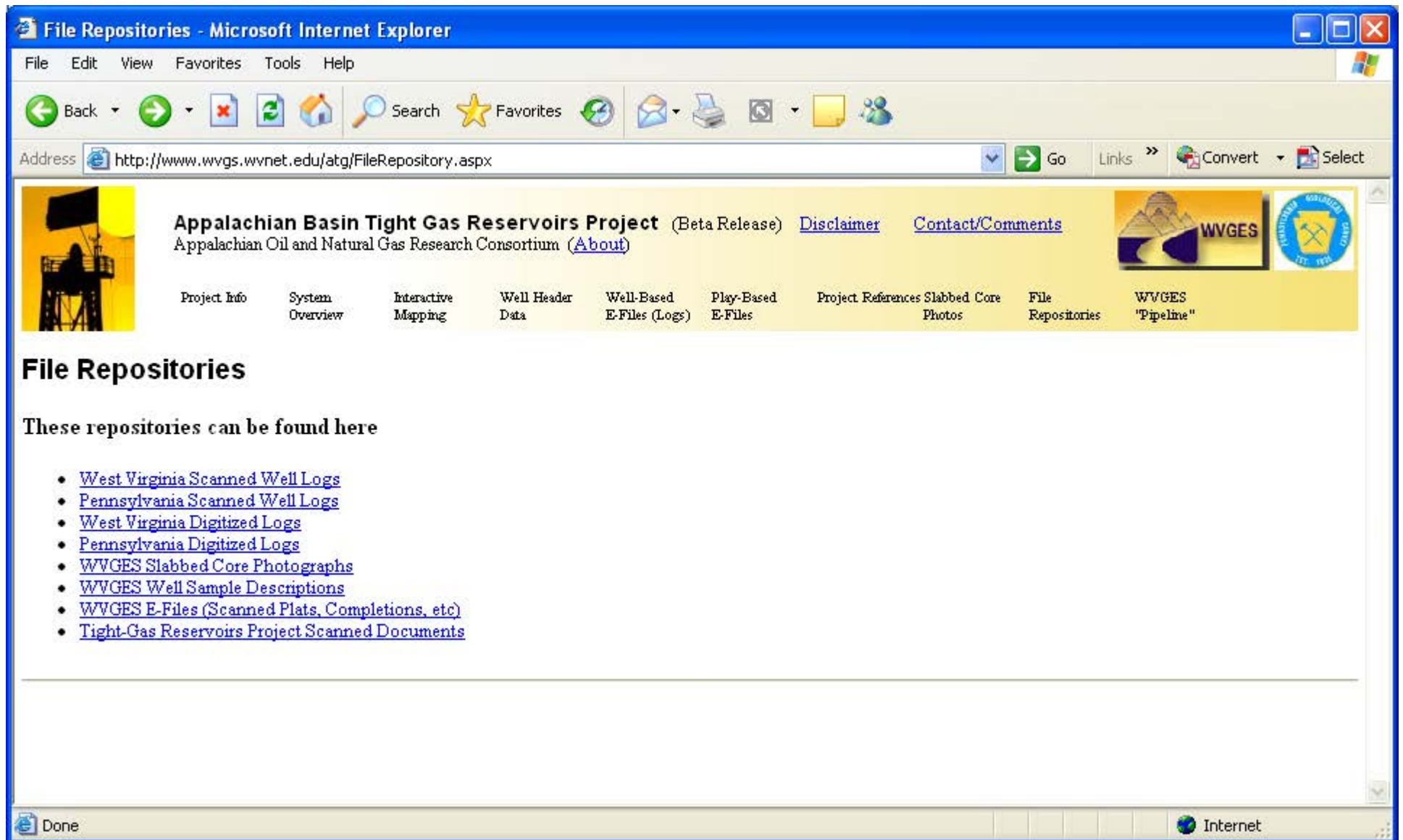


Figure B-25. Data can be accessed in various ways. For those who have already determined what they need, the "File Repository" section provides easy access to downloadable files. Data are organized by county within each data type.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

WVGES O&G Record Reporting System - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.wvgs.wvnet.edu/oginfo/pipeline/pipeline2.asp> Go Links Convert Select

"Pipeline"

Select County: (033) Harrison Select datatypes: (Check All)

Enter Permit #: 862

Location Production Plugging
 Owner/Completion Stratigraphy Sample
 Pay/Show/Water Logs

[Get Data](#) [Reset](#)

[Table Descriptions](#)
[County Code Translations](#)
[Permit-Numbering Series](#)
[Usage Notes](#)
[Contact Information](#)
[Disclaimer](#)
[WVGES Main](#)
["Pipeline-Plus" New](#)

Please try our new ["Pipeline-Plus"](#). This system allows you to search oil & gas well header information and link directly to "Pipeline" plus other new features.

[Usage Notes](#)

DISCLAIMER REGARDING THE RELEASE OF DATA AND USER REQUIREMENTS

The West Virginia Geological and Economic Survey (WVGES) makes basic data available to the public from its computerized databases on mineral resources under the following conditions:

1. We believe the data in the WVGES computer databases to have been generated and assembled with a high degree of professionalism, accuracy, and precision for the purposes for which they were originally intended. In this context, "data" refer to numerical and textual data (such as in the "pipeline" application), digital data (such as .las files), digital images (such as digital photographs), scanned records (such as completion reports), and spatial data (such as shapefiles). Some data have been compiled from other sources and the WVGES accepts no responsibility for any inaccuracies in

Internet

Figure B-26. "Pipeline" provides access to all of the well data that the West Virginia Geological & Economic Survey (WVGES) has for West Virginia wells. County, permit number, and the type of data can be selected.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application

WVGES O&G Record Reporting System - Microsoft Internet Explorer

Address: <http://www.wvgs.wvnet.edu/oginfo/pipeline/pipeline2.asp>

WVGES "Pipeline"

Select County: (033) Harrison | Select datatypes: (Check All)

Enter Permit #: 862 | Location | Production | Plugging

Owner/Completion | Stratigraphy | Sample

Pay/Show/Water | Logs

[Get Data](#) | [Reset](#)

WV Geological & Economic Survey: **Well: County = 33 Permit = 862** | Report Time: Tuesday, December 02, 2008 5:14:05 PM

Location Information:

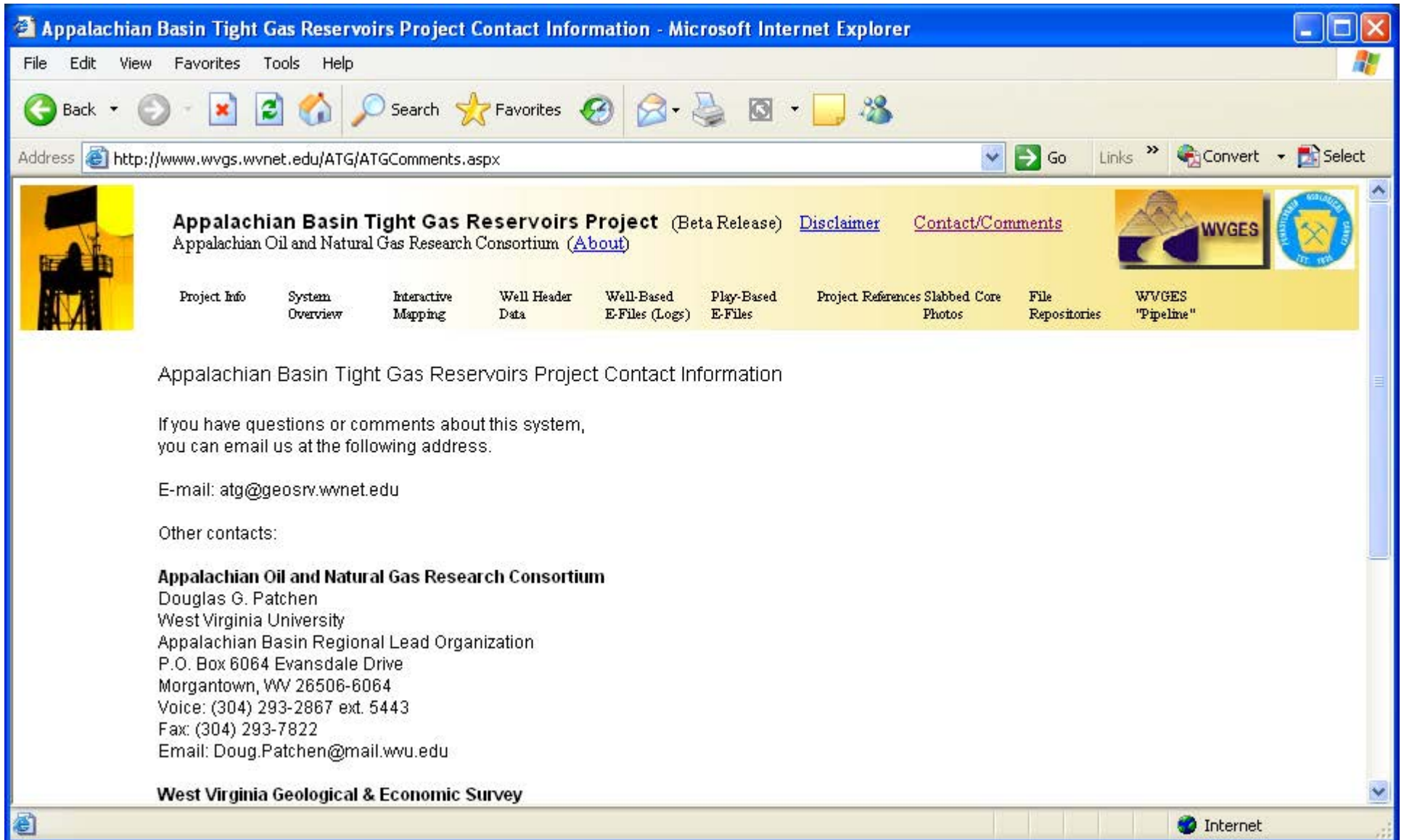
API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LOH_DD	UTME	UTMH
4703300862	Harrison	862	unknown	West Milford	Weston	39.206737	-80.441263	548242.3	4339659.1

Production Gas Information:

API	OPERATOR	PRD_YEAR	ANNU_GAS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4703300862	Consolidated Gas Supply Corp.	1979	10413	990	651	955	880	995	797	902	997	592	1107	943	604
4703300862	Consolidated Gas Supply Corp.	1980	8890	0	835	805	884	803	864	546	963	0	1108	1102	980
4703300862	Consolidated Gas Supply Corp.	1981	9912	866	798	753	867	811	895	881	664	1035	787	716	839
4703300862	Consolidated Gas Supply Corp.	1982	8616	585	675	738	826	223	176	1415	945	923	720	706	684
4703300862	Consolidated Gas Supply Corp.	1983	8073	718	720	758	695	729	676	729	717	774	320	0	1237
4703300862	Consolidated Gas Transmission Corp.	1984	7544	614	673	795	521	818	686	530	0	880	802	686	539
4703300862	Consolidated Gas Transmission Corp.	1985	7530	673	656	609	602	709	552	624	653	618	648	470	546
4703300862	Consolidated Gas Transmission Corp.	1986	6825	673	535	510	634	573	475	632	540	630	545	471	607
4703300862	Consolidated Gas Transmission Corp.	1987	12735	489	828	802	746	666	135	3024	1495	1379	1141	1035	995
4703300862	Consolidated Gas Transmission Corp.	1988	13650	906	883	865	821	783	1151	1910	1609	1311	1221	1159	1031
4703300862	Consolidated Gas Transmission Corp.	1989	9693	934	706	752	413	414	52	1430	1407	1148	863	652	922

Figure B-27. "Pipeline" results can show all of the data that the West Virginia Geological & Economic Survey has for a particular well. In this example, location and production data were selected for well 4703300862.

Appendix B - Appalachian Basin Tight Gas Reservoirs: Screen Shots of the Web-Based Application



The screenshot shows a Microsoft Internet Explorer browser window displaying the website for the Appalachian Basin Tight Gas Reservoirs Project. The address bar shows the URL: <http://www.wvgs.wvnet.edu/ATG/ATGComments.aspx>. The page features a navigation menu with links for [Disclaimer](#) and [Contact/Comments](#). A secondary menu includes links for [Project Info](#), [System Overview](#), [Interactive Mapping](#), [Well Header Data](#), [Well-Based E-Files \(Logs\)](#), [Play-Based E-Files](#), [Project References](#), [Slabbed Core Photos](#), [File Repositories](#), and [WVGES "Pipeline"](#). The main content area is titled "Appalachian Basin Tight Gas Reservoirs Project Contact Information" and provides contact details for the Appalachian Oil and Natural Gas Research Consortium (AONGRC) and the West Virginia Geological & Economic Survey (WVGES).

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Appalachian Basin Tight Gas Reservoirs Project Contact Information

If you have questions or comments about this system, you can email us at the following address.

E-mail: atg@geosrv.wvnet.edu

Other contacts:

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Fax: (304) 293-7822
Email: Doug.Patchen@mail.wvu.edu

West Virginia Geological & Economic Survey

Figure B-28. Contact information has been provided for the Appalachian Oil and Natural Gas Research Consortium (AONGRC), the West Virginia Geological & Economic Survey (WVGES) and the Pennsylvania Geological Survey (PGS). The project was funded through AONGRC while WVGES and PGS completed the work including data gathering and application development.