STATE OF WEST VIRGINIA

PRELIMINARY PERFORMANCE
REVIEW OF THE

GEOLOGICAL AND ECONOMIC SURVEY

The Survey is Accomplishing its Mission, but Should Reinstate its Recordkeeping of Requests for Information

Performance Evaluation and Research Division
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January, 1996

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Antonio E. Jones, Ph.D.
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January 6, 1996

The Honorable A. Keith Wagner
State Senate
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The Honorable Joe Martin
House of Delegates
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Gentlemen:

Pursuant to the West Virginia Sunset Law, we are transmitting this Preliminary Performance Review of the **Geological and Economic Survey**, which will be reported to the Joint Committee on Government Operations on Saturday, January 6, 1996. The issues covered herein is "The Survey is Accomplishing its Mission, but Should Reinstate its Recordkeeping of Requests for Information."

Sincerely,

Antonio E. Jones

AEJ/wsc

Enclosure

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Executive Summary

The West Virginia Geological and Economic Survey was created to serve as an information center for the people and government of the state. It was designed to respond to requests for information and to conduct studies and issue reports on the subject of the geology of the state, with special emphasis on the natural geological resources which can be exploited for the economic benefit of West Virginia.

The Performance Evaluation and Research Division has determined that the Survey is satisfactorily accomplishing this mission. The review has encountered only minor areas of concern which can be easily remedied and do not reflect poor performance on the part of the Survey.

Issue Area 1: The Geological Survey is a major contributor to the development of the statewide Geographic Information System.

The Survey is working in cooperation with the Tax and Revenue Department to establish a data base available on the "internet" which provides information on the coal reserves existing beneath tracts of property. The Tax and Revenue Department will use this information to tax land based on the value of these reserves. This will be part of the overall statewide Geographic Information System (GIS). The Survey's contribution is one of the first steps in the implementation of the GIS, which will ultimately draw information from many separate state entities.

Issue Area 2: The Geological Survey has completed a mapping project of the "orphaned" oil and gas wells throughout the state.

The Survey was contracted by the Division of Environment Protection to provide the locations of the approximately 50,000 "orphaned" wells in the state. These are defined as wells which have reported no production since 1984. The DEP will use this information to determine which of these wells pose an environmental threat. This was a five year project, and included the study of documents of up to 100 years old or more.

Issue Area 3: The Geological Survey provides answers to many requests for information, and should therefore re-establish a system of keeping records of the types of requests, the sources of the requests and the amount of reimbursement for the work involved.

The Survey responds to nearly 10,000 requests for information a year. The Survey personnel stated that in the past more complete records were kept concerning the types of requests that came to the Survey. However, the practice was discontinued for the reason that no purpose for this information could be found. The Audit Team believes that this kind of record keeping could be extremely helpful in determining the effectiveness of the Survey. By

being able to exhibit the volume of requests the Survey could demonstrate the degree of impact it is having on the state. **By keeping record of the entities from whom the requests come, the Survey could determine which sectors of the public have the greatest need of certain types of information, and could assure that it is serving these sectors sufficiently.** Finally, by keeping records of the fees involved in these transactions, the Survey could demonstrate the degree of appropriateness of its fee structure, and could prevent the possibility of questions concerning the proper use of this income.

Recommendation 1

The Geological and Economic Survey should reestablish a system of record keeping concerning the types of requests for information it receives annually. This record should include the entity making the request and the amount, if any, of money received in reimbursement. The Survey should consider including this information in its annual report.

Issue Area 4: The Geological Survey will continue to use internal policy to protect proprietary information that is being collected for the GIS system.

Some of the information about the reserves of coal that is being provided to the Tax and Revenue Department through the Survey is of proprietary nature. For this reason there is a degree of reluctance on the part of the coal companies to freely provide this information to the Geological Survey for fear that it could be released under freedom of information statutes. The director of the Survey has indicated that it may be possible to allay these fears through the continued use of internal policy. The GES would like to continue to approach the problem through these means first, and if the coal industry still feels uncomfortable with the lack of statutory protection of such information, statutory changes might then be considered.

PURPOSE AND AUTHORITY FOR THE PRELIMINARY REVIEW

This review of the Geological and Economic Survey (GES) was conducted in accordance with the West Virginia Sunset Law, Chapter 4, Article 10, Section 11 of the *West Virginia Code* as amended. Preliminary performance reviews are intended to assist the Joint Committee on Government Operations in making one of five recommendations. These recommendations include:

- The department, agency or board be terminated as scheduled;
- The department, agency or board be continued and reestablished;
- The department, agency or board be continued and reestablished, but the statutes governing it be amended in specific ways to correct ineffective or discriminatory practices or procedures, burdensome rules and regulations, lack of protection of the public interest, overlapping of jurisdiction with other governmental entities, unwarranted exercise of authority either in law or in fact or any other deficiencies;
- A performance audit be performed on a department, agency or board on which a preliminary review has been completed; or
- The department, agency or board be continued for a period of time not to exceed one year for the purpose of completing a full performance audit.

SCOPE AND METHODOLOGY

A preliminary performance review is defined in Chapter 4, Article 10 , Section 3 of the *West Virginia Code*, as amended, is to determine the goals and objectives of a department, agency, or board and to determine the extent to which plan of a department, agency, board has met or is meeting those goals and objectives. The criteria for a preliminary performance review set forth in Chapter 4, Article 10, Section 11 of the *West Virginia Code*, as amended, enable the determination of the following:

- If the board or agency was created to solve a problem or provide a service;
- If the problem has been solved or the service has been provided;
- The extent to which past board or agency activities and accomplishments, current projects and operations, and planned activities and goals for the future are or have been effective;
- The extent to which there would be significant and discernible adverse effects on the public, health, safety or welfare if the board or agency were abolished;
- Whether or not the board or agency operates in a sound fiscal manner.

The time period covered by the preliminary review included the years 1990 through 1995. Information about the GES was obtained through: interviews with GES personnel and personnel

of state agencies which interact with the GES and through reviewing various documents. The information was used to assist in the identification of risks and the development of an audit program.

Mission of the Geological and Economic Survey

The Geological and Economic Review was created in 1897 by the Legislature. The enabling legislation for the Survey is found in Chapter 29, Article 2, Section 4 of the West Virginia Code. The survey is led by a director appointed by the governor. The director is to be " a geologist of established reputation". The director is authorized to set fees for the recovery of costs incurred in performing geological analyses. Such fees are to be deposited in a special fund in the state treasury known as the Geological and Analytical Services Fund. The legislature appropriates these funds for the survey.

The statute charges the Survey with five specific objectives:

(1) An examination of the geological formations of the state, with special reference to their economic products, namely: building stones and other constructive materials and resources, clays, ores and other mineral substances and fuels, the prevention of their waste, and the utilization of by-products.

(2) An examination of the physical features of the state with reference to their practical bearing upon the occupations of the people, the industrial development and the material prosperity of the several portions of the state, having due regard for their varying resources, conditions and needs.

(3) The preparation of special geological and economic maps to illustrate the resources of the state.

(4) The preparation of special reports, with necessary illustrations and maps, which shall embrace both a general and detailed description of the geology and natural resources of the state.

(5) The consideration of such other scientific and economic questions as in the judgement of the director shall be deemed of value to the people of the state.

The director may enter into cooperative agreements, grants and contracts and establish accounts for such purposes.

In addition, the director is to submit written annual reports to the legislature, showing the progress and condition of the Survey. Any of these regular or special reports are to distributed or sold by the director, using the moneys obtained to defray the costs of publication. Any surplus materials left after the completion of a project is to be distributed to the educational institutions of the state.

Issue Area 1: The Geological Survey is a Major Contributor to the Development of the Statewide Geographic Information Survey.

One of the largest projects that the Geological Survey has undertaken is the currently ongoing development of a Geological Information System (GIS). The Geological Survey is one of several state entities that is currently involved in the implementation of this system. It will encompass many sources of information which will be accessible in various forms, including the "internet". The Geological Survey is engaged in a part of the overall system. The Survey's system is presently being designed specifically for use by the Tax and Revenue Department. The Tax and Revenue Department plans to use the system to assess the value of coal beds existing under all property in the state, and will use this information to tax the properties which contain coal seams of value. This part of the GIS system is being developed by the Geological Survey in cooperation with the Tax and Revenue Department and West Virginia University.

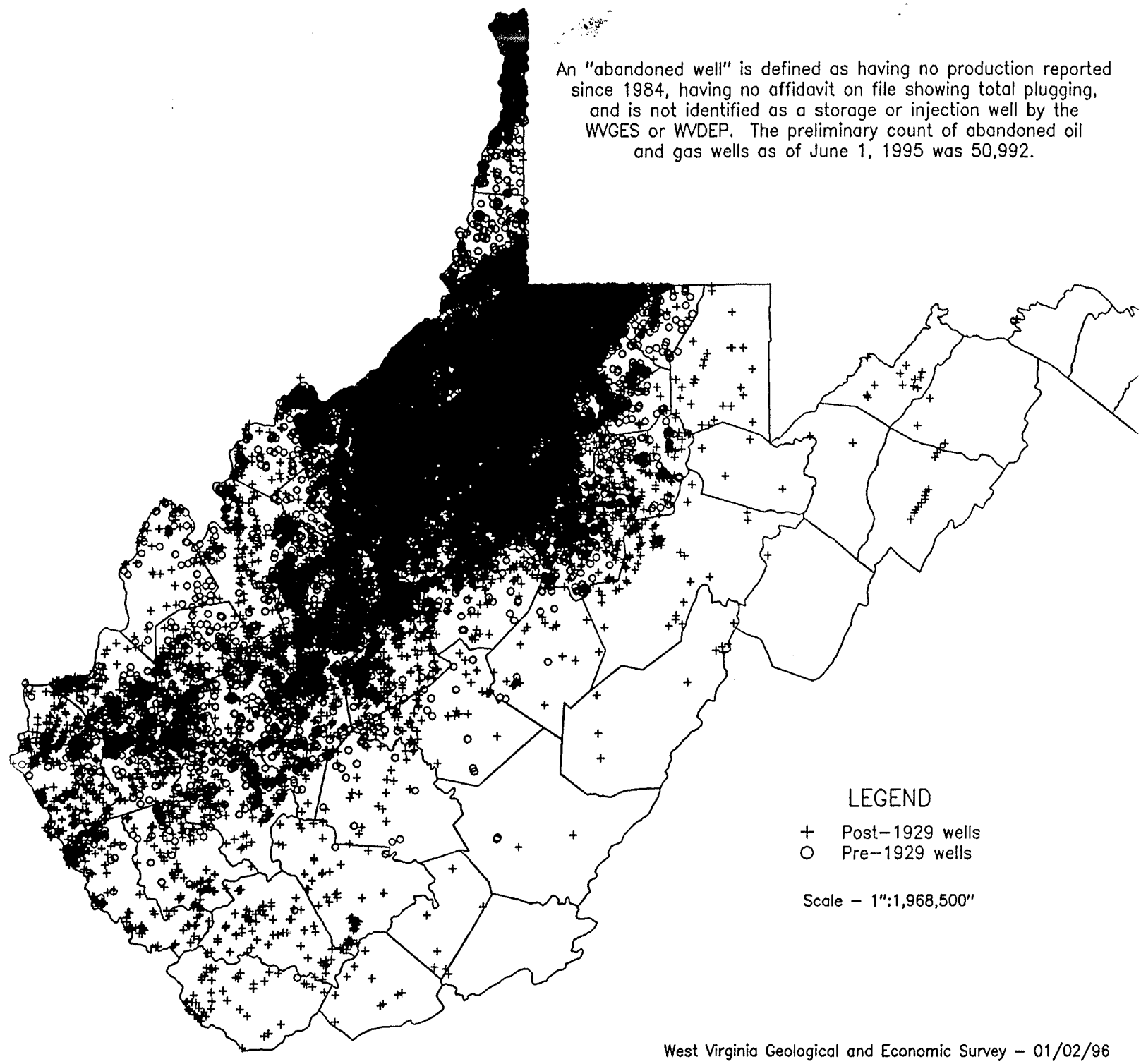
The potential of the GIS system is much greater than this one specific use. Such systems can be used as data banks available to large numbers of agencies or individuals. Practically every agency of the state of West Virginia could conceivably have a need for the kind of information that the GIS would be able to produce. However, the GIS is still in its infant stages. Possibilities for all of these uses are still in the future. The State GIS Coordinator has estimated that it will be up to five years before all of the necessary elements will be in place for the GIS to begin attaining its full potential. The Geological Survey is one of the first stations on the GIS system to be developed. To date this participation is still in the implementation stage.

Issue Area 2: The Geological Survey has Completed a Mapping Pproject of the "Orphaned" Oil and Gas Wells Throughout the State.

Another major project that the Geological Survey has recently completed was the process of locating the "orphaned" oil and gas wells throughout the state. An orphaned well is one that has not produced oil or gas since 1984. Using existing documents, some over 100 years old, the Survey provided the locations of about 50,000 of these wells. This information was provided to the Division of Environmental Protection (DEP), and was the result of five years of work. The information will be used by the DEP to physically locate these wells, and determine if they pose any dangers to the environment. In addition, the information of the locations of these wells can be used by mining and construction companies to avoid accidentally disturbing these wells during operations.

The Survey provided the DEP with the location, drilling date, last known operator and name of property for each well. The director of the DEP Office of Oil and Gas has stated that the information provided by the Survey has been complete and accurate, and that the DEP is satisfied with the accuracy and scope of the study.

PRELIMINARY MAP OF ABANDONED OIL AND GAS WELLS IN WEST VIRGINIA



Issue Area 3: The Geological Survey Provides Answers to Many Requests for Information, and Should Therefore Re-establish a System of Keeping Records of the Type of Request, the Source of the Request and the Amount of Reimbursement for the Work Involved.

The Geological Survey serves as a source of information to the state's coal, oil and gas industries. These companies may request information concerning the reserves of fossil fuels, or for many industry specific information needs. Representatives of both the West Virginia Coal Association and the West Virginia Oil and Gas Association have stated that the Survey has been of high value to these industries and have expressed confidence in the ability and expertise of its staff.

In addition, many private citizens come to the Survey for a wide variety of needs. These range from school children asking for information for school projects to requests for aerial photographs of property to simple purchases of maps or charts. Publications of studies by the Survey are also available. The Survey responds to nearly 10,000 such requests in a year's time. To provide greater accessibility, the Survey has established a toll free number for such requests. The personnel of the Survey provide speakers to schools, colleges and other groups on a variety of academic subjects related to geology.[1]

The Survey personnel stated that in the past more complete records were kept concerning the types of requests that came to the Survey. However, the practice was discontinued for the reason that no purpose for this information could be found. The Audit Team believes that this kind of record keeping could be extremely helpful in determining the effectiveness of the Survey. By being able to exhibit the volume of requests the Survey could demonstrate the degree of impact it is having on the state. **By keeping record of the entities from whom the requests come, the Survey could determine which sectors of the public have the greatest need of certain types of information, and could assure that it is serving these sectors sufficiently.** Finally, by keeping records of the fees involved in these transactions, the Survey could demonstrate the degree of appropriateness of its fee structure, and could prevent the possibility of questions concerning the proper use of this income.

Recommendation 1

The Geological and Economic Survey should reestablish a system of record keeping concerning the types of requests for information it receives annually. This record should include the entity making the request and the amount, if any, of money received in reimbursement. The Survey should consider including this information in its annual report.

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[1]Another accomplishment in which the Survey has involved over the past few years has been RockCamp. This is a program funded by the National Science Foundation designed to train teachers in the latest earth science information and teaching techniques. To date over 170 West Virginia teachers have participated.

Issue Area 4: The Geological Survey will continue to use internal policy to protect proprietary information that is being collected for the GIS system.

The review uncovered an area of concern which the Survey will deal with through internal policy. This area of concern is that some of the information about the reserves of coal that is being provided to the Tax and Revenue Department in conjunction with the mapping project for the GIS is of proprietary nature. That is, the information concerns the reserves of resources that a company possesses, and the coal companies are concerned that this information could be used by competitors. For this reason there is a degree of reluctance on the part of the coal companies to freely provide this information to the Geological Survey for fear that it could be released under freedom of information statutes. The director of the Survey has indicated that currently these fears are addressed through an internal policy of defining such information as proprietary and protected form the freedom of information regulations. The GES would like to continue to approach the problem through these means. However, the lack of statutory protection of this kind of information may continue to be a concern to the coal industry. If this continues to create reluctance on the part of the industry, then statutory changes could be considered. For the present, the Survey would like to allow the internal policy to take its effect, and to determine the full impact of that effect before statutory amendments are considered. However, the Legislature should be made aware that this issue exists, and that in the near future it may be called on to address the issue through legislation. Further information of the Survey's views and policies can be found in Appendix B.

Conclusion

This preliminary review of the Geological and Economic Survey has determined that the GES is meeting the goals assigned to it by the enabling legislation. Other agencies and private sector entities have indicated satisfaction with the information and services provided by the GES. The Survey has demonstrated that it is an effective arm of the state government by its valuable contributions to the Geographic Information System planning, by its assistance to the DEP in the "orphaned" well project and by its response to numerous informational needs throughout the state.

The conclusion of the review is that the Geological and Economic Survey has only minor areas of concern to be presented to the legislature. The issue of private information is an area which may be addressed internally by the Survey, as the director has expressed a desire to do. The legislature should be informed as to the status of this issue in the future, and may wish to address it through legislation if internal methods by the Survey do not sufficiently satisfy the coal industry.

Appendix A

GES Response to Performance Review

Issue Area 1

No recommendation is provided for the Geological and Economic Survey to improve the effectiveness of the Geographic Information System project, authorized under H. B. 2222.

Background: The Survey was created in 1897 by the Legislature. The enabling legislation for the Survey found in §29-2-5 of the West Virginia Code provided that the Survey be charged with the preparation of geological and economic maps to illustrate the resources of the state. The Survey is now involved in the development of the State Geographical Information System and has been recognized as the appropriate agency to act as coordinator and fiscal agent for the mineral lands mapping portion of the project.

Current Practice: As West Virginia's mapping agency, the Survey now coordinates the electronic GIS mapping project under H. B. 2222 and memorandums of agreement between the Survey and WVU and the Survey and the Tax Department. Survey geologists and computer scientists are working to develop coal bed layers for inclusion in the GIS system from past mapping and current information and data. Additionally, the GIS State Coordinator, as an independent Survey employee, works to coordinate the entire statewide GIS project effort among all the stakeholders ensuring the project develops in a methodical, effective and inclusive manner, avoiding duplication, while maximizing the benefits and results for West Virginia.

Survey Recommendation: The Survey recommends that the State GIS Coordinator position be permanently established to ensure that the State's Geographical System maintains its future viability and strength, that it is properly updated and modernized and that it remains an effective tool for West Virginia's development. To effect this long term role beyond the current project, the position of State Coordinator, with his/her staff, should be permanently established as part of the Survey's staff to bring the full unbiased benefit of the Survey's historic role in mapping and the recognized computer expertise to the State Coordinator's disposal, and to provide for proper oversight of the State Coordinator's activities and fiscal accounting.

Issue Area 3

(No comment by the Survey on Issue Area 2)

The recommendation provides for the Geological and Economic Survey to re-establish a system of record keeping by source-type for the information requests received. The record should include the entity making the request and the amount, if any, of money received in reimbursement and be reported annually.

Background: The Survey responds to approximately 10,000 requests per year. These requests originate from private citizens, government (all levels with different agencies represented), industry (consultants, oil and gas companies and coal companies) and education (K-12 public/private schools, colleges and universities). The Survey receives requests for information and sales of products via telephone (commercial number and/or 800-WVGEOLOgy), fax, during events (meetings, lectures, etc.) and walk in visitors.

Current Practice: The Survey records requests on a monthly basis in two ways: (1) number of service requests for information filled by each section, e.g. coal section, oil and gas section, computer section,etc. and (2) the specific service provided, e.g. a publication sale, map sale, etc. These are tallied each month and reported as a total to the Commissioner of the Bureau of Commerce.

Each service request that has a charge, under the Survey's policy of passing some of the cost of business to those utilizing the service and benefitting therefrom, is tracked on the Survey Public Request form (rev 9/90). The form lists the specific service, its fee, and the category of the request. Annually, a summary of service fees and publication/map sales is included in the Survey's annual report showing sources of funding.

Survey Intention: Pursuant to this recommendation, the Survey will re-establish a procedure to track service requests using categories of public, industry government and educational and report monthly in that format. The practice of reporting service-generated income will be continued as now in effect.

Issue Area 4

The recommendation provides for the Geological and Economic Survey to initially address protection of proprietary information collected for the GIS system through the use of an internal policy, rather than specific amendments to the code.

Background: The Survey had, until the commencement of the GIS project, considered that all documents, databases, reports, papers, files, maps, records and the like in the Survey's possession, regardless of how acquired, describing geological information or occurrences as completely in the public record. This previously acquired has been and always will be available for inspection under the freedom of information act of the West Virginia Legislature.

Upon commencement of the GIS project in 1994, improved access to additional coal and oil and gas information not otherwise available to the state, but yet important for improved mapping and scientific understanding of the coal beds and oil and gas resources became obvious. Past experience has shown that access to such coal and oil and gas information from companies is best served if acquired in a cooperative way, and that an appropriate internal policy of protection of proprietary information would improve the accessibility of such information. Upon review of the statute, the trade secret exclusion will be used to protect such geological information that will improve the Survey's scientific understanding of its coal and oil and gas resources.

Current Practice: The Survey provides access to, copies of, and inspection opportunities for all documents, maps, etc. in its custody as provided by law. Appropriate charges are invoiced for data analysis, copies of records, reports, etc. under the Survey's policy of passing some of the cost of business to those utilizing the service or benefitting therefrom.

Survey Intention: Pursuant to this recommendation, the Survey will continue to implement an internal policy to hold certain coal and oil and gas records as proprietary.

Appendix B

Proprietary Information
West Virginia Geological and Economic Survey

General Survey Background

The West Virginia Geological and Economic Survey was created in 1897 by the Legislature. The enabling legislation for the Survey found in Chapter 29, Article 2, Section 5 of the West Virginia Code provided that the Survey shall have five objects: to wit, in part,

- Examine geological formations of the State,
- Examine physical features of the State,
- Prepare special geological and economic maps to illustrate resources,
- Prepare special reports which embrace both a general and detailed description of the geology and natural resources,
- Consider such other scientific and economic questions

Thus, the mission of the Geological Survey is a broad charge to carry out investigations of the geological formations and physical features of the State, with particular emphasis on their economic implications, and to prepare special reports and maps dealing with the State's geology and natural resources. As West Virginia's principal agency concerned with applied geological science, the Survey continues to provide the State's citizens with timely and accurate reports, maps, and research on West Virginia's mineral resources.

The ability of Survey geologists to accomplish this mission often relies on the voluntary sharing of geologic information held by the mineral and energy industries in West Virginia. Generally, geological information collected from all sources is amassed together, interpreted by Survey geologists, and used to derive maps, figures, geologic models, resource estimates, reports and other products for public use. The geologic data collected from industry is not necessarily the end product but is used to generate end products.

Survey Internal Proprietary Information Policy

The Survey's responsibility is to make every effort to collect sufficient information to produce accurate coal bed, oil and gas, and mineral resource maps, primarily at 1:24,000 scale. The Survey has gathered such geological information for nearly 100 years without a *legal requirement for industry to submit geologic information to the Survey*. Presently, as in the past, Survey geologists solicit the voluntary sharing of geologic information from the industry. Our experience has shown that industry is reluctant to share geological source documents without assurances such documents can be held from scrutiny by anyone other than Survey personnel.

The Survey's internal policy is that information such as documents, maps, papers, data, etc., that are provided to the Survey for the purpose of use in developing public products that show the State's economic geology, are considered by the Survey as a trade secret. This is particularly appropriate if such material is being used by the provider for the purpose of locating minerals having commercial value. This is consistent with the exemptions provided in the Freedom of Information act, State code 29B-1-4, Exemptions.

Considerable information has been collected prior to the promulgation of this Survey internal proprietary policy and will remain in the public domain. Likewise, any geological information and derivative products developed by Survey personnel is, and will remain, in the public record.

Coal Section

The Survey's ability to accurately map coal beds in West Virginia under the Coal Bed Mapping Project, part of the larger Mineral Lands Mapping Program (the GIS program), depends on the ability to gain access to geological source documents generated by, and held by the coal industry and other entities. Specific examples of geological source documents of interest include, but are not limited to:

1. Logs of core holes recorded by geologists, drillers and/or other personnel, including the locations and surface elevations of the core holes.
2. Downhole geophysical logs
3. Descriptive logs of surface exposures of coal and rock
4. Chemical analyses and laboratory tests of coal and rock

Proprietary Policy Promulgated

In order to foster better cooperation with industry in the Coal Bed Mapping Project, the Coal Section promulgated the Survey policy (attachment A). This policy holds geological source documents, such as 1-4 described above, proprietary under the trade secret exemption provided by the Freedom of Information Act.

Providing proprietary exemption status for geological source documents described above will not ensure the willingness of the coal industry, or others to provide us with the information, but it will increase the likelihood of cooperation. However, the coal bed maps and digital products derived from such geological source documents *will be public record.*

Current Proprietary Coal Bed Data Holdings

Since promulgation of the proprietary policy on August 16, 1995, the Coal Section has collected approximately 24 core logs which the contributing company asked to be held as proprietary.

The Coal Section has also sent out approximately 36 form letters to large mineral and fee land owners in Fayette County, (FY96 target mapping area for the Coal Bed Mapping project) soliciting geological data. In those letters (e.g. attachment B), the Coal Section has offered the prospective contributors the option of submitting data as proprietary or non-proprietary.

Additionally, numerous phone contacts with companies operating in and around Fayette county soliciting geologic information under the same Survey proprietary policy guidelines have been made. (One company has agreed to submit data on a proprietary basis, pending release from their lessee. Another company has also agreed to contribute data, although the terms of their cooperation are not yet clear.)

In the compilation of data for the enhancement of West Virginia portion of the U. S. Department of Energy's Tertiary Oil Recovery Information System (TORIS) database, some (about 2 dozen) core analyses and production data were obtained (see Attachment E) under the Survey internal policy outlined in Attachment F.

The other proprietary data the Oil and Gas Section has had and could conceivably obtain in the future are logs, cores or cuttings from exploratory wells. Industry convention is to have these data not become publicly available immediately upon receipt, but rather after one or two years.

Policy Implications

The Gas Atlas project will result in two major products: publication of the Atlas itself, a tool useful for operators making decision about future exploration and drilling in West Virginia; the second Gas Atlas project product is a database of field and pool data for thousands of gas fields and gas pools in the Appalachian basin. The database contains about 3500 records for the West Virginia fields and pools.

The individual well data used in the Reservoir Heterogeneity project have not been made publicly available; rather, reports containing maps and cross-sections characterizing the oil fields have been published. These studies enhance understanding of West Virginia oil fields, and perhaps will lead to future enhanced oil recovery projects in these and other similar oil fields.

These data from TORIS were summarized at the field and reservoir level. This TORIS database is used by the U.S. Department of Energy to make decisions about future research funding.

These three recent research projects have been funded by the US Department of Energy as subcontracts to West Virginia Geological and Economic Survey from the Appalachian Oil and Natural Gas Research Consortium at West Virginia University. The inability to assure operators that individual well data would not be made public would have severely hampered our efforts to produce the comprehensive and publicly useful products. The Oil and Gas Section needs to continue to have this ability as it pursues future research projects and funding opportunities.

Advance access to the logs, cores and cuttings from exploratory wells has given the Survey and therefore the public additional information not otherwise available for analysis. This information is immediately available for development of the reports and maps that are part of the Survey's legislative objects.

Loss of the opportunity to acquire data of these types, simply because initially the donor would wish to have them held as proprietary for a finite and brief period, would impinge on the Oil and Gas Section's capability to serve the public.

Summary

Past experience has shown that access to coal, oil and gas, and mineral information from companies is best served if acquired in a cooperative way, and that an appropriate internal policy of protection of proprietary information such as data, maps, etc. would improve the Survey's accessibility of such key information. Upon review of the current statute, the trade secret exclusion will be used to protect such geological information that will improve the Survey's scientific understanding of all its mineral resources,

particularly coal and oil and gas.

The acceptance of information as proprietary under the Survey's internal policy is on a case by case basis and such information must be useful to the development of publicly available products, including Geographical Information System (GIS) electronic layers. The use of the interim policy is measured. Whenever the public interest is best served and the access to such information improves the ability of Survey geologists to develop a better public product, such as a map or report, the State Geologist has authorized the appropriate Sections to accept and account for proprietary information. This policy is consistent with the Freedom of Information act and accession of proprietary information thus far has been of a benefit to the State.

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West Virginia
Geological and Economic Survey

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Gaston Caperton
Governor

Larry D. Woodfork
Director and State Geologist

August 16, 1995

Mr. Nick Fedorko
Head, Coal Section
West Virginia Geological Survey
P.O. Box 879
Morgantown, WV 26507-0879

Dear Mr. Fedorko:

The West Virginia Code, Chapter 29B, the Freedom of Information Act, paragraph 29B-1-4(1) provides for exemption of trade-secrets from public inspection and record. Survey owned geological source documents currently on file, whether Survey-generated or acquired from other sources, are considered public records and available for inspection.

Effective this date, as Survey policy, I authorize the Coal Section to acquire and hold company-developed, proprietary geological source documents, as trade secrets. These records must be fully available for the Survey's use in the development of public products, as maps, reports, and digital materials. After ten (10) years, all material will be reviewed for its status as public record or proprietory record under Chapter 29B.

You are directed to develop necessary procedures for the Survey to accept proprietary material. You must also establish a separate filing system, which organizes, holds, and protects such material. You are requested to formulate a policy to prevent inappropriate disclosure. Each piece must be marked and serialized in a uniquely identifiable way to indicate its confidentiality. Trade secret maps, logs, analyses, etc. are only available to those staff members who need to know.

Modifications to this Survey policy will be only in writing with my approval. If you have further questions, please contact Carl J. Smith, Deputy Director.

Sincerely yours,

Larry D. Woodfork
State Geologist and Director

ATTACHMENT A

Dear ;

The West Virginia Geological and Economic Survey has been called upon by the Legislature and Governor to create a Geographic Information System (GIS)-based inventory of coal in West Virginia. We will produce the following 1:24,000 scale maps for important coal beds and convert them to GIS layers:

- Structural contour and outcrop maps,
- Surface and underground mined area maps,
- Coal isopach maps.

The Coal Bed Mapping Project, as we call the effort, is part of the Mineral Lands Mapping Program, a cooperative effort with WV Department of Tax and Revenue, and the WV University Department of Geology and Geography. The coal bed GIS layers we produce will be used by Special Property Appraisals personnel of the WV Department of Tax and Revenue. We at WVGES see significant future added value of a coal GIS available for use by industry, government, and private citizens.

Our goal is to produce the most accurate coal bed maps possible at 1:24,000 scale. In order to accomplish our goal we need the cooperation of industry to contribute geologic data, such as core records, geophysical logs, prospect information, and old mine maps. Geological source documents, such as core logs, geophysical logs, and prospect data can be kept confidential as trade secrets, as provided for by West Virginia Code, Chapter 29B, Freedom of Information Act, paragraph 29B-1-4(1), Exemptions. However, maps generated from the data, as described above, will be open to inspection by the public at large.

We currently are mapping Fayette County, WV and immediately contiguous quadrangles. Any geological data in the current study area you are willing to donate to our program, either on a confidential or nonconfidential basis, would be much appreciated.

The Survey and the State of West Virginia appreciate your cooperation in this matter. I look forward to hearing from you in the near future. If, in the interim, you have any further questions, do not hesitate to call.

Sincerely,

Nick Fedorko
Head, Coal Programs

d:\admin\cbmp\datareq\coaldat2 11/14/95

ATTACHMENT B

THE ATLAS OF MAJOR APPALACHIAN GAS PLAYS

BEA PART OF

A PROJECT OF THE APPALACHIAN OIL AND NATURAL GAS RESEARCH CONSORTIUM

Funded by the U.S. Department of Energy
Cooperative Agreement DE-FC21-91MC281

NATIONAL RESEARCH CENTER FOR COAL AND ENERGY

P.O. Box 6064
617 North Spruce Street
Morgantown, WV 26506-6064

Information from the Appalachian Oil and Natural Gas Research Consortium:
A comprehensive research program of new technologies for the oil and natural gas industry in the Appalachian region.

THE NEED FOR OUTSIDE HELP AND COOPERATION

The gas atlas project is a massive undertaking. Information is scattered among libraries, universities, government agencies, and private industry files throughout the Appalachian basin and the U.S. Often, data are not publicly accessible. The ultimate use of the atlas depends on the quantity and quality of the data included.

The AONGRC needs the cooperation of industry and other members of the geological community. For information on how you can help, contact:

Doug Patchen
WVU National Research Center for Coal and Energy / P.O. Box 6064 / Morgantown, WV 26506-6064 / Phone: (304) 293-2867

Brandon C. Nuttall
Kentucky Geological Survey / University of Kentucky / 228 Mining and Mineral Resources Bldg. / Lexington, KY 40506-0107 / Phone: (606) 257-5500

Ronald Rea
Ohio Geological Survey / 4383 Fountain Square Drive / Columbus, OH 43224-1362 / Phone: (614) 265-6583

John Harper
Pennsylvania Geological Survey / 400 Waterfront Dr. / Pittsburgh, PA 15222-4745 / Phone: (412) 442-4235

Katharine Lee Avary
West Virginia Geological Survey / P.O. Box 879 / Morgantown, WV 26507-0879 / Phone: (304) 594-2331

ATTACHMENT C

WHAT IS THE GAS ATLAS?

The Appalachian Oil and Natural Gas Research Consortium (AONGRC) is compiling an *Atlas of Major Appalachian Basin Gas Plays* and an associated database. The project is funded by the U.S. Department of Energy (DOE) through the National Research Center for Coal and Energy, with completion scheduled for September 1994.

The gas atlas will describe and illustrate the geology of major gas plays in the Appalachian basin. A map, showing the location of all gas fields in a play, and a table of reservoir data will be included with each play description. Gas reservoirs in the basin have been assigned to plays based on lithology, depositional system, trap type and age.

The book will contain information compiled from eight states. The geological surveys in Kentucky, Ohio, Pennsylvania, and West Virginia, along with the geology and geography and the petroleum engineering departments at West Virginia University, will perform the work. The AONGRC will hire consultants to perform work in Maryland, New York, Tennessee, and Virginia.

INVESTIGATION OBJECTIVES

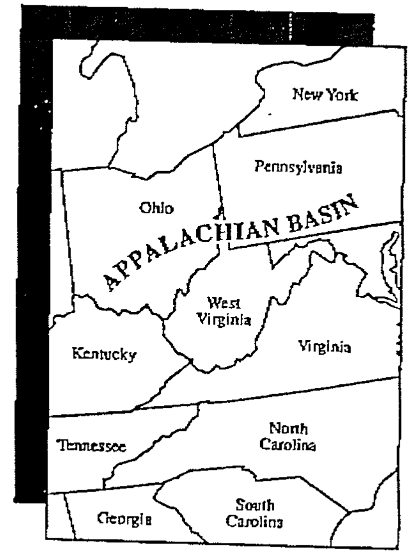
The main objectives of this project are to:

- Define major gas plays based on lithology, depositional environment, trap type, and age.
- Determine, define, and map all pools in each play.
- Conduct a literature search for published data, maps, cross sections, decline curves, seismic profiles, and pertinent, geological information.
- Collect basic reservoir data, information on specific reservoir parameters, fluid and gas properties, and volumetric data.

While some data may be collected from private companies on individual wells, atlas information will be field or play aggregates. No privately held information will be publicly released without owner consent.

WHAT IS THE PURPOSE?

Data will be collected for natural gas reservoirs in the Appalachian basin as part of the gas atlas project. This compendium will provide a basic framework for formulating exploration and development stratgies within the basin that are consistent with the goals of the DOE's "Gas Research Implementation Plan." The atlas will appeal to companies unfamiliar with the region, as well as operators with extensive exploration and production experience in the basin.



MAJOR GAS PLAYS

Gas plays have been grouped into 12 categories based on depositional systems and reservoir trap type. Each play may include numerous pay names, depending on geographical distribution, reservoir age, and historical significance.
The 12 groups are:

1. Fluvial-deltaic sandstones
2. Nearshore sandstones
3. Shallow marine shelf sandstones
4. Turbidite sandstone and siltstone plays
5. Transgressive sandstones
6. Shallow marine shelf carbonates
7. Reefs and carbonate bars
8. Updip permeability pinchouts
9. Unconformities
10. Paleokarst
11. Fractured reservoirs
12. High amplitude folds

West Virginia
Geological and Economic Survey

P.O. Box 879
Morgantown, WV 26507-0879
Phone (304) 594-2331
FAX (304) 594-2575

Gaston Caperton
Governor

Larry D. Woodfork
Director and State Geologist

IN REPLY REFER TO:
OG/12550/0317/239/93

August 27, 1993

Dear

As I mentioned when we talked on the phone today, we are in the process of gathering data for the Atlas of Major Appalachian Gas Plays. The enclosed pamphlet briefly describes the atlas project. We're attempting to collect representative data from all of West Virginia's gas reservoirs and compile it on a field and play basis. All individual well data can be held confidential; the final published atlas will contain only summaries by field and pool.

I enclose a copy of our data collection sheet. I've highlighted the data elements we are trying to collect from operators. We'd like to obtain whatever data you can provide with as little interruption as possible for Cabot employees.

What would be the best way to request data? We could provide either a paper listing, a tape or a diskette of individual wells, identified by API number, or lease name, or however would be the easiest for the way your data are stored.

I believe that with all the data we are compiling, the result will be an atlas that everyone in the Appalachian Basin oil and gas industry can take pride in and find useful.

Please call if you have any questions. Thank you for giving this request your consideration.

Sincerely,

Katharine Lee Avary
Petroleum Geologist and Ass't Head,
Oil and Gas Section

KLA/js

Enclosure

ATTACHMENT D

IMPROVE THE TORIS DATABASE FOR MAJOR APPALACHIAN OIL FIELDS

A PROJECT OF THE APPALACHIAN OIL AND NATURAL GAS RESEARCH CONSORTIUM

Funded by the U.S. Department of Energy
Cooperative Agreement DE-FC21-91MC28138

NATIONAL RESEARCH CENTER FOR COAL AND ENERGY
West Virginia University

P.O. Box 6064
617 North Spruce Street
Morgantown, WV 26506-6064

Information from the Appalachian Oil and Natural Gas Research Consortium:
A comprehensive research program of new technologies for the oil and natural gas industry in the Appalachian region.

THE NEED FOR HELP AND COOPERATION

The improvement of the TORIS database project is a massive undertaking. Data on old oil reservoirs is scattered among libraries, universities, government agencies, and private industry files throughout the Appalachian basin. Usually these data are not publicly accessible. The ultimate success and usefulness of the TORIS entries will depend on how much high-quality data can be generated and collected.

The AONGRC needs the help and cooperation of industry and members of the geological community. For information on how you can help, contact:

Doug Patchen
WVU National Research Center for Coal and Energy / P.O. Box 6064 / Morgantown, WV 26506-6064/ Phone: (304) 293-2867

Brandon C. Nuttall
Kentucky Geological Survey / 228 Mining and Mineral Resources Bldg. / Lexington, KY 40506-0107 / Phone: (606) 257-5500

Mark Baranoski or Larry Wickstrom
Ohio Geological Survey / 4383 Fountain Square Drive / Columbus, OH 43224-1362 / Phone: (614) 265-6586

Kathy Flaherty
Pennsylvania Geological Survey / 400 Waterfront Drive / Pittsburgh, PA 15222-4745 / Phone: (412) 442-4287

Katharine Lee Avary
West Virginia Geological Survey / P.O. Box 879 / Morgantown, WV 26507-0879 / Phone: (304) 594-2331

ATTACHMENT E

WHAT IS THE TORIS ENHANCEMENT PROJECT?

The Appalachian Oil and Natural Gas Research Consortium (AONGRC) is cooperating with the Bartlesville Project Office in enhancing Appalachian oil field data in DOE's Tertiary Oil Recovery Information System (TORIS). This database originally was created by the National Petroleum Council (NPC) for its 1984 reassessment of the nation's enhanced oil recovery potential. Nationwide, the NPC chose to include only those fields with greater than 50 million barrels of original oil in place (OOIP). Although some smaller Appalachian oil fields were included, many fields with greater than 50 million OOIP were excluded. The Appalachian basin as a whole falls far below the NPC's objective of having 70 percent representation in TORIS. In fact, Appalachian oil fields currently in TORIS represent less than 25 percent of the basin's OOIP.

To address this regional deficiency, AONGRC has undertaken a three-year, DOE-funded project to increase the coverage of oil reservoirs in the Appalachian basin and to validate data for Appalachian reservoirs currently in TORIS. Coverage will be increased to the 80 percent OOIP level in each of the oil producing states (Kentucky, New York, Ohio, Pennsylvania, Virginia and West Virginia).

[illegible]

The main objectives of this project are to:

- Determine which oil fields should be included in TORIS, based on field size, current TORIS status, and obtaining complete stratigraphic and oil play coverage;
- Assess the data currently in TORIS to determine which data fields should be corrected and what new data can be added; and
- Collect data from survey files and industry, as well as developing new reservoir data from cores, logs, and survey oil and gas databases.

Whereas some data will be collected from companies on an individual well basis, oil information will be reported to DOE in a machine-readable database organized by average oil field parameters. No privately held information will be publicly released without owner consent.

WHAT TYPES OF DATA ARE INCLUDED IN TORIS?

Data elements currently in TORIS for U.S. oil fields can be divided into: original reservoir conditions (OOIP, area, thickness, porosity, initial saturations and pressure, temperature, etc.); current conditions (residual oil saturation, current oil formation volume factor, current producing GOR, current pressure); fluid data (oil gravity and viscosity, water salinity); geologic information (lithology, depth, dip); production data (cumulative production and year of latest data, well spacing, number of producing and injection wells, cumulative injection volumes); and reservoir performance data (sweep efficiency, recovery efficiency).

The number of fields represented in TORIS for the Appalachian states.

WHAT ARE THE PRODUCTS OF THIS PROJECT?

Topical reports will be prepared and submitted to DOE describing our efforts in determining which oil fields to include in TORIS, determining inaccuracies and discrepancies between data currently in TORIS and other data, and data missing from TORIS that can be collected with the assistance of industry.

A magnetic tape containing all oil field data will be submitted to DOE at the end of the project, along with a final report. No oil atlas similar to the gas atlas will be prepared. However, the major oil plays will be determined, and oil fields will be presented in the final report by major plays. These plays will be consistent with categories currently being used by the DOE in its continuing program to fund research targeting a group of depositionally similar reservoirs (a reservoir class).

West Virginia
Geological and Economic Survey

P.O. Box 879
Morgantown, WV 26507-0879
Phone (304) 594-2331
FAX (304) 594-2575

Gaston Caperton
Governor

Larry D. Woodfork
Director and State Geologist

September 7, 1995

Ms. K. Lee Avary
Assistant Head, Oil & Gas Section
West Virginia Geological Survey
P.O. Box 879
Morgantown, WV 26507-0879

Dear Ms. Avary:

The West Virginia Code, Chapter 29B, the Freedom of Information Act, paragraph 29B-1-4(1) provides for exemption of trade-secrets from public inspection and record. Survey owned geological source documents currently on file, whether Survey-generated or acquired from other sources, are considered public records and available for inspection.

Effective this date, as Survey policy, I authorize the Oil and Gas Section to acquire and hold company-developed, proprietary geological source documents, as trade secrets. These records must be fully available for the Survey's use in the development of public products, as maps, reports, and digital materials. After ten (10) years, all material will be reviewed for its status as public record or proprietory record under Chapter 29B.

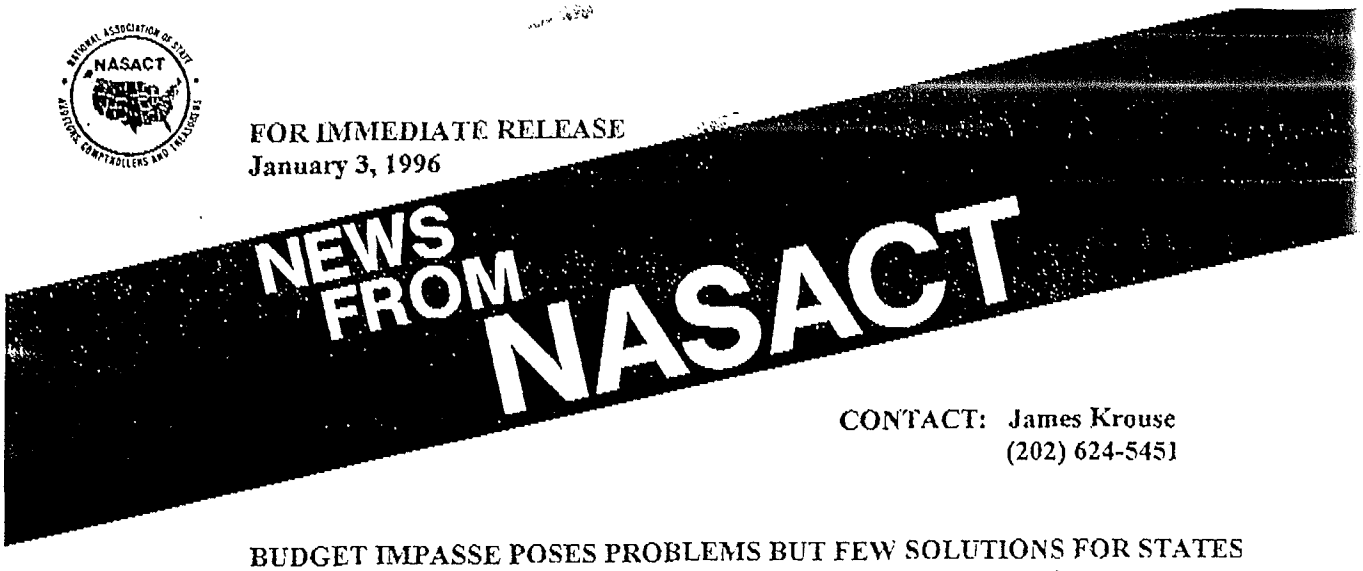
You are directed to develop necessary procedures for the Survey to accept proprietary material. You must also establish a separate filing system, which organizes, holds, and protects such material. You are requested to formulate a policy to prevent inappropriate disclosure. Each piece must be marked and serialized in a uniquely identifiable way to indicate its confidentiality. Trade secret maps, logs, analyses, etc. are only available to those staff members who need to know.

Modifications to this Survey policy will be only in writing with my approval. If you have further questions, please contact Carl J. Smith, Deputy Director.

Sincerely yours,

Larry D. Woodfork
State Geologist and Director

ATTACHMENT F



FOR IMMEDIATE RELEASE
January 3, 1996

CONTACT: James Krouse
(202) 624-5451

BUDGET IMPASSE POSES PROBLEMS BUT FEW SOLUTIONS FOR STATES ADMINISTERING FEDERAL BENEFIT PROGRAMS

In the eleventh hour of the budget impasse between Congress and the Administration, increasing concern has been expressed by various state officials as to the ramifications for states administering federal benefit programs. Federal agencies currently affected by the shutdown include: Health and Human Services, Housing and Urban Development, Education, Commerce, Interior, Justice, Labor, Environmental Protection Agency, State Department, and the Veterans Administration. In general, therefore, these agencies may not have adequate staffing and/or resources to respond to (or meet) state Federal funds requests. There are some noteworthy exceptions and sidebars, including:

- Payment mechanisms for HHS are operational because the Payments Management System was designated as "Essential" in the respective Appropriation bill.

- According to HHS officials, Forty percent of each states' second quarter funding for Medicaid and Title IV Welfare is currently available. Because the Appropriation for these programs has not passed, the source of these funds is unclear.

- According to U.S. Treasury officials, states are expected to adhere to CMIA negotiated funding mechanisms. If a state alters agreed upon funding techniques, the state risks being found in "non-compliance" with the requirements of CMIA. Treasury has requested that federal agencies (specifically HHS) closely monitor state funds draws.

- Also according to Treasury officials, states will accrue interest on any funds advanced to administer Federal programs.

A list of federal agency contacts (compiled by U.S. Treasury) is attached. These individuals should be available to answer state specific questions regarding the administration and circumstances surrounding the respective federal benefit programs. The NASACT Washington office will continue to monitor and report on developments.

The National Association of State Auditors, Comptrollers and Treasurers (NASACT) is comprised exclusively of over 130 statewide officeholders and has served state fiscal officers for over 70 years. NASACT, 2401 Regency Road, Suite 302, Lexington, Kentucky 40503, Telephone (606) 276-1147, FAX (606) 278-0507, and 444 N. Capitol Street, Washington, DC 20001, Telephone (202) 624-5451, FAX (202) 624-5473.

FEDERAL GOVERNMENT SHUTDOWN CONTACTS

1.	Health and Human Services	
	- First Contact -- Public Affairs Office	(202) 690-7850
	- Second Contact -- Ed Martin	(202) 690-8048
2.	Housing and Urban Development	
	- Wally Garner	(202) 708-0654
3.	Department of Veterans Affairs	
	- John Gartner	(202) 273-5528
4.	Department of Labor	
	- First Contact -- Tony Amadeo	(202) 219-8184
	- Second Contact -- Michael Griffin	(202) 219-8184
5.	Department of Education	
	- Jeanette Johnson	(202) 401-2093
6.	Environmental Protection Agency	
	- Joe Dillon	(202) 260-5113
7.	Department of Commerce	
	- Maria Eisel	(202) 427-3240
8.	Department of Justice	
	- Accounting Division	(202) 307-5909
9.	Federal Emergency Management Agency	
	- Bruce Redcay	(202) 646-3043

Policy Implications

The coal industry has been generating geological data in WV for over 100 years. It is imperative that Survey geologists create *accurate* maps of coal beds at 1:24,000 scale under the Coal Bed Mapping Project. In order to make accurate maps, Survey geologists have to gain access to geologic source documents, as described, held in industrial files. Creation of coal bed maps and GIS coverages will be an extremely valuable asset to the State and its citizenry in the future. The initial focus is on providing the Department of Tax and Revenue, partners in the Mineral Lands Mapping Program, with the coal bed GIS coverages for use in their mineral lands taxation program. However, other users and uses will include:

- agencies involved in the amelioration of abandoned mine lands problems such as mine subsidence and acid mine drainage,
- agencies involved in the regulation of the coal industry,
- the public, to determine need for mine subsidence insurance or the evaluation of a home or business purchase,
- planners and developers,
- economic forecasters,
- electric power generation industry, coal industry, and others.

Oil and Gas Section

In the course of three research projects recently conducted by the Oil and Gas Section, the section has collected data on a proprietary basis. Most of the proprietary data is production data, on individual wells. This policy has benefited West Virginia because individual well production data were not required to be reported to the regulatory agency for oil and gas wells (the West Virginia Division of Environmental Protection, Office of Oil and Gas) until 1978. Probably over 100,000 wells were drilled and in production prior to the beginning of production reporting.

Proprietary Policy Promulgated

In the course of compiling data for the Atlas of Major Appalachian Gas Reservoirs, (see Attachment C)the Oil and Gas Section needed to obtain as much monthly, annual, and cumulative production data as possible, for years prior to 1978. The Oil and Gas Section contacted a number of major operators of wells in West Virginia(see sample request, Attachment D), requesting such production data.

Current Proprietary Oil and Gas Holdings

The Oil and Gas Section held that data from individual wells from public scrutiny, as a trade secret, but yet such data is used extensively in the Survey's compilations of data summarized by oil and gas field (collected production data for a few thousand wells).

In addition to the data for the Gas Atlas, the Oil and Gas Section obtained a couple of thousand individual well production histories and a couple of dozen core analyses for our study of two oil fields as part of our Reservoir Heterogeneity project.