

ANNUAL REPORT  
The Geological Survey of Wyoming  
July 1, 1973 to June 30, 1974

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# THE GEOLOGICAL SURVEY OF WYOMING

## INTRODUCTION

The Wyoming Geological Survey is a State agency on the University of Wyoming campus, established in 1933 and reorganized by the Legislature in 1969 (Wyo. Comp. Statutes 9-264.1 to 9-264.10). The Survey operates under eleven objectives in an effort to provide information and public services which involves gathering, interpreting, and distributing large volumes of information on the geology and mineral resources of the State.

Since 1969, the Survey has increased its activities in an effort to keep pace with new mineral development and with problems related to potentially impacted areas involving Wyoming's communities and people. Its principal objective is to supply the kinds of reports, maps, and data that are needed to respond to thousands of inquiries from state and federal agencies, the petroleum and mineral industries, and the public at large.

The overall objectives and activities of the Survey are summarized as follows:

### Services

By providing advice and consulting services to other State agencies, boards, commissions and elected officials on geological matters as requested.

By answering public inquiries on the geology of the State and assisting industry in locating technical and scientific information.

By maintaining comprehensive and current libraries, files, and records of geologic data for use by the general public and industry.

### Investigations

By conducting field and laboratory studies on the geology and mineral resources of the State, and investigating problems and other practical matters of geology that relate to Wyoming's communities and people.

By arranging cooperative investigations with other state and federal agencies on problems of mutual concern.

### Publications

By publishing timely reports, maps, books, and other tables, graphs, and charts in an effort to make the results of the investigations known to other agencies, the minerals industry, and the public.

## ORGANIZATION AND ACTIVITIES (1973-74)

Figure 1 shows the staff organization of the Survey during the past year which consists of four geologists and a small supporting staff. One additional geologist, one secretary, and one draftsman are needed, and have been requested in the 1975-77 Biennium Budget Request on form 01-C-2. During 1973-74 the Survey tried to make-do with part-time help in these positions, but the results were less than satisfactory.

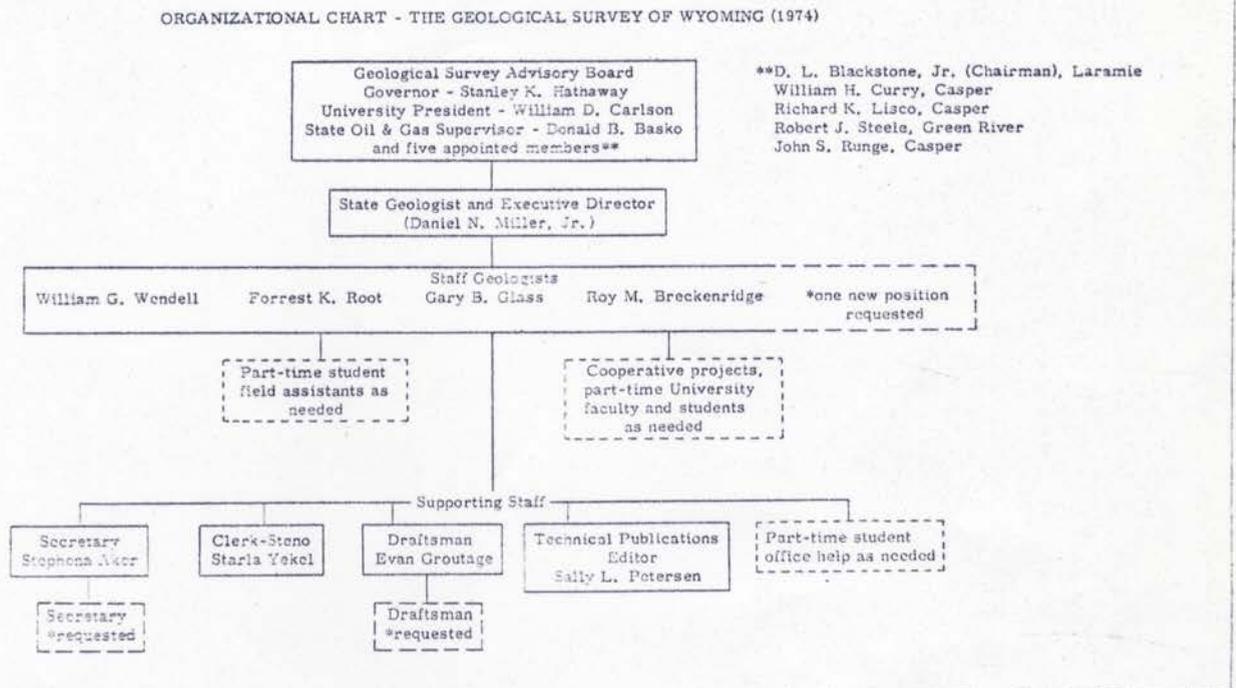


Figure 1

The Survey is still attempting to function in the same work space allocated for its use in 1955 when there was a staff of four. A new building addition is being planned, and if construction is approved by the Legislature in 1975, the Survey will have additional work space and facilities by the end of 1976.

Activities and Survey operations have expanded during the past year due to the increased activities of Wyoming's mineral industries (Figure 2). There has also been an increase in public concern regarding development of energy producing minerals and the impact on Wyoming communities.

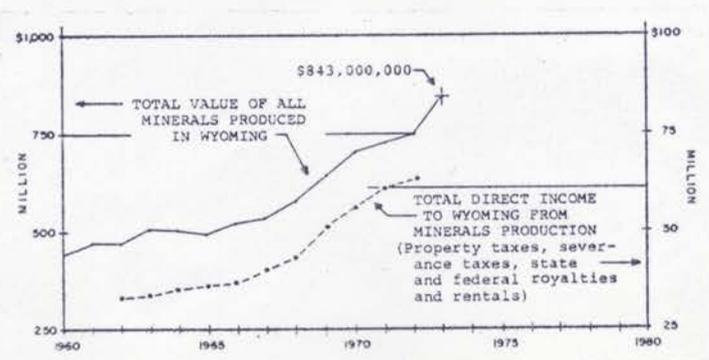


Figure 2

The Survey is working as rapidly as possible on the County Resource Series investigations which includes preparation of nine separate maps for each county. Sweetwater County was completed in 1973 and information on Campbell, Johnson and Sheridan Counties is now being compiled.

In addition, the Survey has entered into cooperative working arrangements with the U.S. Bureau of Mines and Wyoming's Department of Economic Planning and Development on selected mineral and coal analysis studies. The Survey also purchased new equipment and is making increased use of remotely sensed data from NASA and high-altitude photography.

Figures 3, 4, and 5 show the number and type of programs completed and published by the Survey as well as the income from the sale of the publications.

NUMBER OF SURVEY PROJECTS COMPLETED AND PUBLISHED PER DECADE

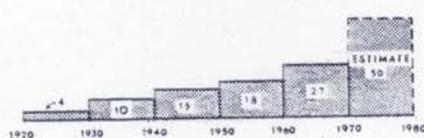


Figure 3

CONTENT OF SURVEY PUBLICATIONS (1911 TO 1974)

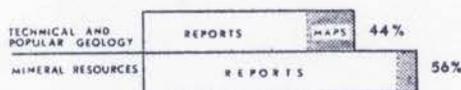


Figure 4

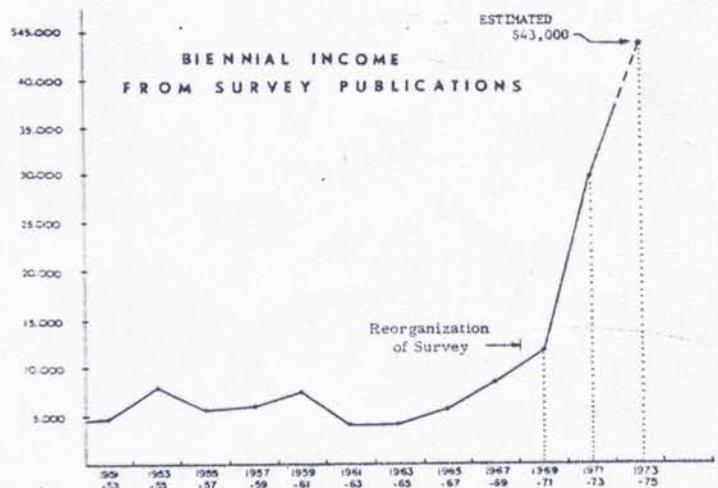


Figure 5

#### Relationships with Other Agencies (1973-74)

Although the Survey is separate from the University, it occupies space and works closely with the Department of Geology, sharing salaries of part-time employees and laboratory equipment, as well as the library facilities and files.

The Survey also has cooperative working agreements with DEPAD, the U.S. Geological Survey, the U.S. Bureau of Mines, and responds to requests from other state and federal agencies when assistance is needed. During the past year federal funds amounting to \$21,990 were provided to the State to assist these studies.

## ACCOMPLISHMENTS OF PROGRAMS

Since 1969 the main thrust of the Survey has been to expedite the public service aspect of the operation with emphasis on publication of reports and maps. About 70% of the Survey's effort is presently directed toward this end. During 1973-74 the Survey processed about 325 inquiries each month and the rate continues to increase due in part to interest in Wyoming's mineral resources, and in part to growing public concern regarding land use and environmental questions. Figure 5 illustrates the dramatic increase in interest in these subjects as measured by the sale of geologic publications which has more than quadrupled since 1969. (See List of Recent Publications - Appendix "A").

## PROBLEM AREAS AND RECOMMENDATIONS

The most serious problem affecting Survey operations in the performance of its responsibilities, is the restricted space in which the staff must work, and the lack of laboratory facilities and equipment. Steps were initiated in 1973 through a Legislative appropriation of \$50,000 to complete plans for a new Wyoming Geological Survey Building on the University campus. The Survey employed the firm of Henry Therkildsen, AIA, Architect of Casper, Wyoming, to complete working drawings and cost estimates. (See Appendix A of the Survey's Biennium Budget Request)

### Request for Capital Expenditure Appropriation 1975-77

The Wyoming Geological Survey has requested that the Legislature authorize construction of this new building addition and approve an overall expenditure of \$930,212 as outlined below.

<u>Biennium</u>	<u>Appropriation</u>	<u>Use</u>
1975-77	\$848,137	Capital outlay to cover construction, interior built-in furnishings, exterior on-site improvements, architectural, administrative and legal fees.
	41,575	Portable office and laboratory furnishings and equipment, not considered part of the building. Of this amount \$10,212 will be contributed by the minerals industry of the State.
	40,500	A reserve contingency account established as a safeguard against unknown expenses that could develop. If unused, it will be returned to the General Fund.
Total	<u>\$930,212</u>	

Total appropriation requested from the General Fund . . . \$920,000  
 Total funding available from the minerals industry . . . \$ 10,212

Wyoming can and will benefit from this capital expenditure in terms of expanded public services that the Survey will be able to provide, and in terms of evaluation of the State's mineral resources and inventories of State owned land. The additional work space and facilities will also allow the Survey to enter into larger, long-term cooperative working agreements with the U.S. Geological Survey and U.S. Bureau of Mines, and provide the State with new equipment and salaries for additional part-time University students.

A special detailed report has been prepared by the Survey that describes the justification for the new building and the anticipated costs. Copies will be distributed to the Legislative Appropriations Committee. Additional copies are available to Legislators upon request from the Director, Wyoming Geological Survey Laramie.

## APPENDIX "A"

### List of Recent Publications (1973-74)

- |           |  |
|-----------|--|
| CRS-2     | Sweetwater County, Wyoming: Geologic Map Atlas and Summary of Economic Mineral Resources   |
| Bull. 54  | Fossils of Wyoming (Second Edition)  |
| P. R. 12  | The Phosphoria and Goose Egg Formations in Wyoming   |
| P. R. 13  | Structural Geology of the Eastern Half of the Morgan Quadrangle, the Strouss Hill Quadrangle, and the James Lake Quadrangle, Albany and Carbon Counties, Wyoming |
| Sp. Publ. | Directory of Sources of Information on Wyoming Geology   |
| Bull. 55  | Traveler's Guide to Wyoming (Second Edition)   |
| Bull. 57  | Bibliography of Wyoming Geology 1945-1949  |
| Bull. 58  | Bibliography of Wyoming Coal   |
| R. I. 9   | Analyses of Rock and Stream Sediment Samples, Teton Corridor and Contiguous Areas, Teton County, Northwestern Wyoming  |
| Sp. Publ. | Mineral and Mining Laws of Wyoming (Second Edition)  |
| Sp. Publ. | University of Wyoming theses list (updated)  |
| Sp. Publ. | Bibliography of Graduate Theses and Dissertations on the Geology of Wyoming (updated)  |
| Sp. Publ. | Publications List (revised and updated)  |

### Other Publications in Progress

- |           |  |
|-----------|--|
| Bull. 59  | Caves of Wyoming   |
| P. R. 14  | Geology of Silver Crown Mining District, Wyoming                                       |
| R. I. 10  | Applied Geology and Archaeology: The Holocene History of Wyoming                       |
| CRS-3     | Campbell County, Wyoming: Geologic Map Atlas and Summary of Economic Mineral Resources |
| R. I.     | Structural Geology and Volcanic Petrology of the Rattlesnake Hills, Wyoming            |
| Sp. Publ. | Style Book for the Wyoming Geological Survey Publications                              |