

ANNUAL REPORT

The Geological Survey of Wyoming

July 1, 1972 to June 30, 1973

Prepared by

Dr. Daniel N. Miller, Jr.
State Geologist and Executive Director

August 1973
Laramie, Wyoming

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THE GEOLOGICAL SURVEY OF WYOMING

INTRODUCTION

The Wyoming Geological Survey is a State agency established in 1933 in conjunction with the Department of Geology, University of Wyoming, at Laramie.

In 1969 the Legislature approved a reorganizational plan setting forth eleven objectives commensurate with the State's increasing need for public services (Wyoming Compiled Statutes 9-264.1 to 9-264.10). It further provided for a full-time State Geologist and Director, independent of the University, and made provision for the Director, with the consent of an Advisory Board, to establish policy in the public interest and appoint such other employees as are necessary.

Reorganization was accomplished, and public services and Survey activities have expanded in an effort to keep pace with new industrial developments and other needs of the State.

Overall Objective

Wyoming's Geological Survey is responsible for gathering, interpreting, and distributing large volumes of information on the geology and mineral resources of the State. Its principle objective is to supply the kinds of maps and information that are needed in response to the thousands of inquiries from state and federal agencies, the petroleum and mineral industries, and the public at large.

Because of the broad scope and complexity of the overall objective, the Survey's aim is more easily understood as attempting to provide:

Services

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

By maintaining current public files and records on the geology and mineral resources of the State.

By providing advice and consulting services to other State agencies regarding problems that involve geology.

Investigations

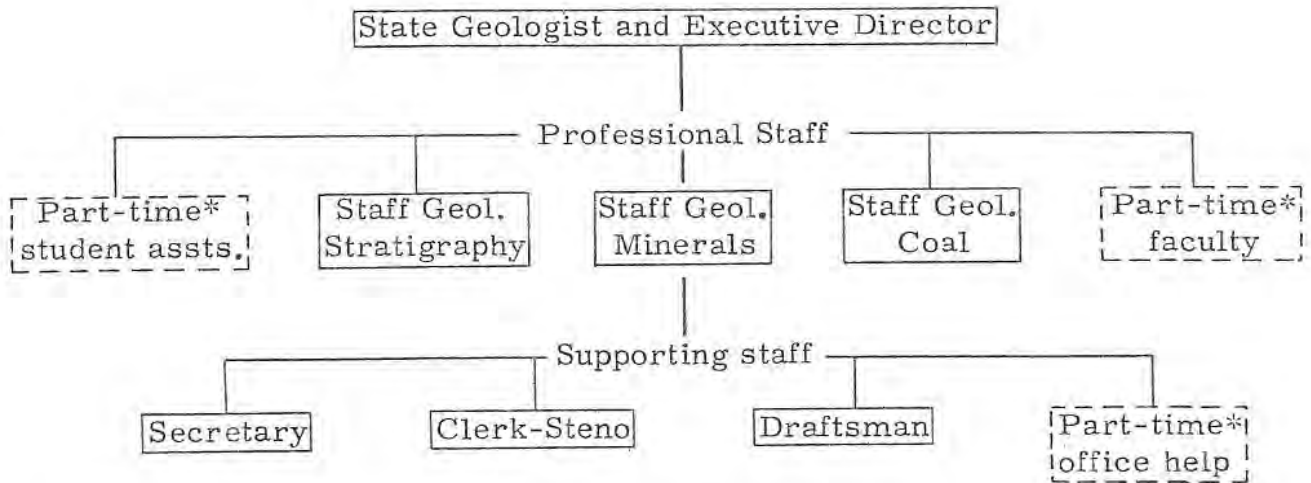
By conducting field and laboratory studies on the geology and mineral resources of the State, and investigating problems and other practical matters of geology that relate to Wyoming's communities and people.

By contracting with state and federal agencies, and industrial organizations on cooperative projects of mutual concern.

Publications

By compiling and publishing timely geological reports, maps, and books, and other forms of information about the State, for the benefit of the public, other state and federal agencies, and the minerals industry.

ORGANIZATIONAL CHART WYOMING GEOLOGICAL SURVEY
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(*Seven full-time and fifteen part-time positions authorized)

The Survey staff shown above occupy 1900 square feet of office, drafting room, and library space, and 800 square feet of storage space, in the Geology Building and a World War II steel Butler Hut, with storage space in the Cowboy Dorm. This is essentially the same space allocated for Survey use since 1955 when there was a staff of four.

Relationships with Other Agencies

Although the Geological Survey is separate from the University, it occupies space and cooperates closely with the University Department of Geology and the U.S. Geological Survey. The Survey shares certain work facilities, the library, analytical equipment, and personnel, and enters into contractual arrangements with both organizations on projects of common interest.

The Survey also enters into cooperative agreements with the U.S. Bureau of Mines, and regarding the publication of special maps and reports, with Wyoming's Department of Economic Planning and Development.

In addition, the Survey provides geological advice, and consulting services to all other state agencies and offices requesting assistance.

ACCOMPLISHMENTS OF PROGRAMS

Since 1969, and reorganization of the Survey's activities, an effort has been made to speed up the public services aspect of the operation with emphasis on publication of reports and maps dealing with the surface and near surface geology of the State. Approximately 85% of the Survey's total effort is now directed toward compiling and interpreting new information, and performing services for the people of Wyoming, State agencies, communities, and industry. At present the Survey is processing more than 300 inquiries each month and the rate continues to accelerate due to increasing interest in Wyoming's mineral resources, and to growing public concern regarding land use and development.

Figures 1, 2, and 3, illustrate the type of publications that have been completed and the progress that has been made in the last few years.



Fig.1 Types of publications completed by the Survey.

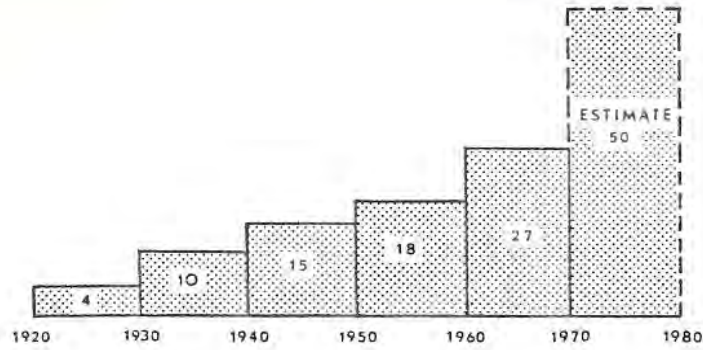


Fig. 2 Number of projects completed and published per decade.

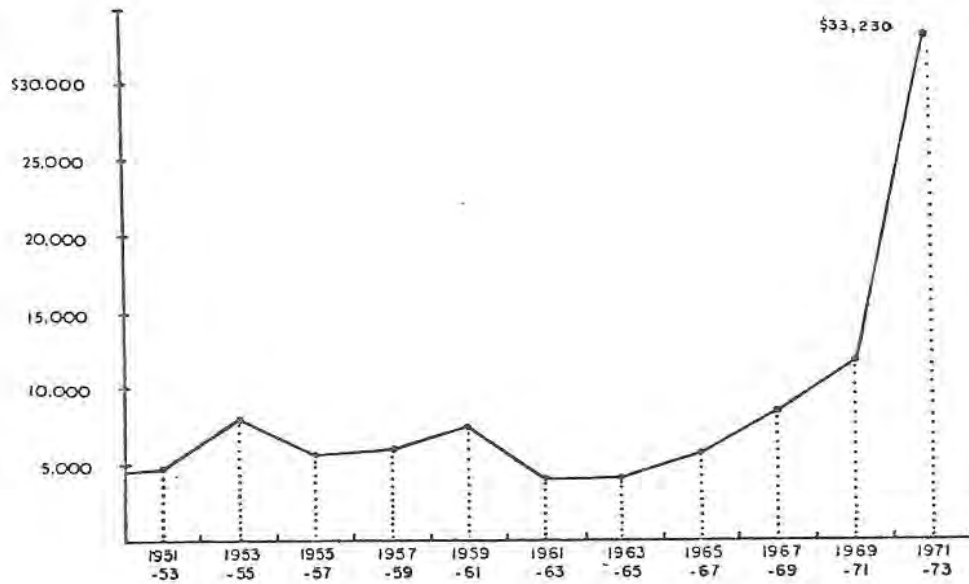


Fig. 3 Biennial value of geological publications sold by the Survey.

Another Survey aim has been to upgrade and develop a more comprehensive public records section to facilitate direct use by other State agencies and the minerals industry geologists. The present, limited work space prohibits development of an adequate records section, but much progress has been made that has resulted in a substantial savings in staff time.

The "County Resource Series" studies, a long term project begun in 1971 is progressing well. Sweetwater County, the first of this map series, will be published in 1973. Similar investigations will be conducted on each of Wyoming's 23 counties as time and finances allow. The U.S. Bureau of Mines has agreed to underwrite the part-time salaries of several University students to help expedite the program.

Capital Expenditures

There were no capital expenditures involved with these projects in 1972-73.

There is a pressing need for the Survey to acquire additional staff, work space, laboratory facilities, and equipment, in order to obtain the kinds of information and data that are needed by the State.

Having considered all practical alternatives, it is the recommendation of the Geological Survey Advisory Board that an addition to be built on to the east wing of the Geology Building to house the Survey. (See Figs. 4 and 5)

Architectural planning should begin in 1973 to design a structure of about 20,000 net square feet at an estimated cost of \$750,000 that should be ready for occupancy in 1976.

Wyoming can and will benefit from this initial investment if planning is begun in 1973. With Legislative approval of planning funds, the Survey will be able to move forward to acquire financial support through contributions from industry, and grants from the Federal government toward construction and purchase of specialized equipment for installation in the new building by 1976.

If approval of the planning appropriation is delayed, there will be a corresponding delay in the Survey's ability to acquire supplemental outside funding, as well as delay in acquiring basic data, information and maps, that will be needed by the State in the near future. In addition, the final cost of construction can be expected to increase at a minimum rate of 5% per year; or approximately \$57,400 if the delay were extended until the 1975-77 biennium, as explained in the following section.

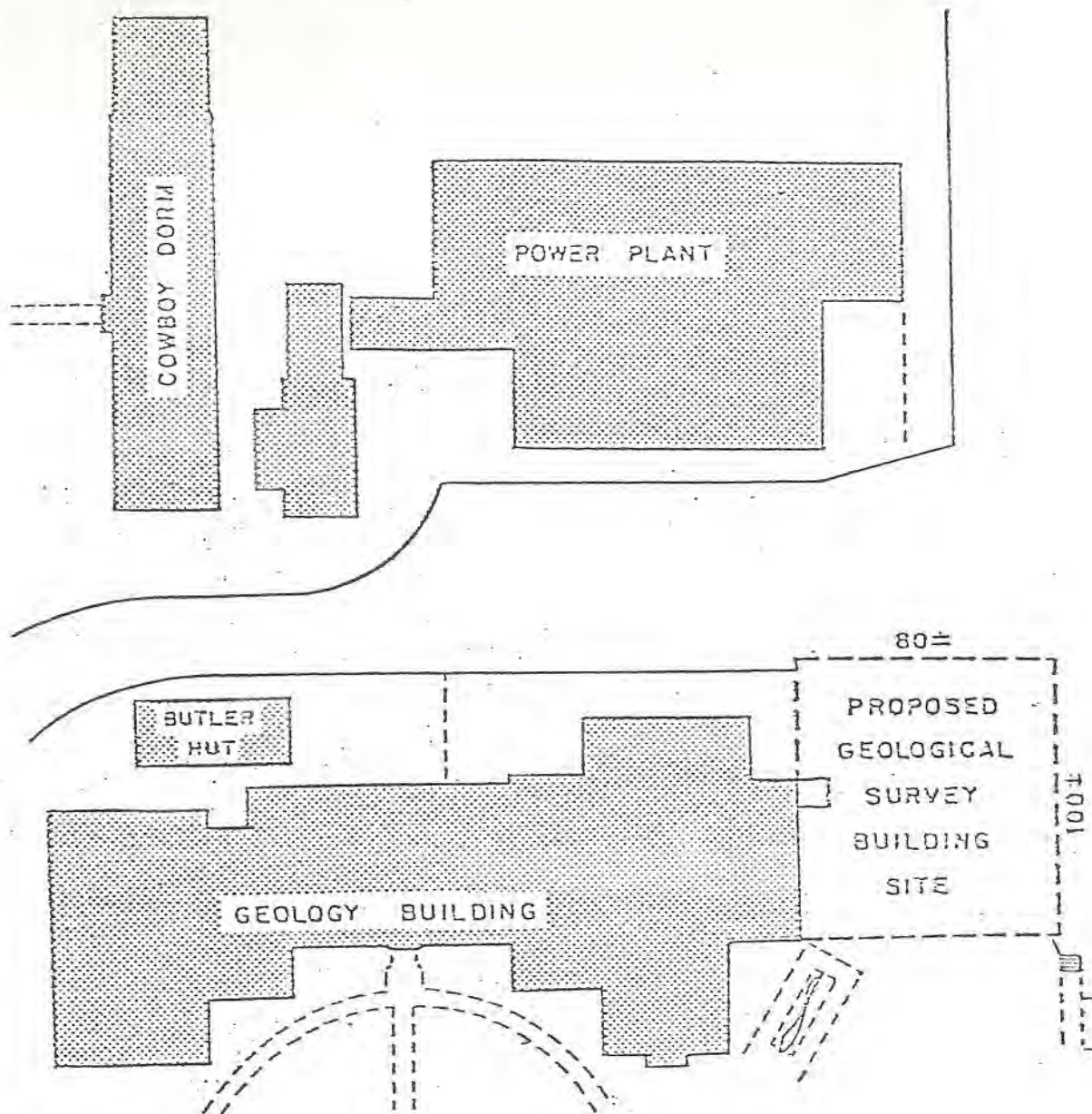


Fig. 4 Building site approved for construction by the University of Wyoming Board of Trustees August 4, 1972.

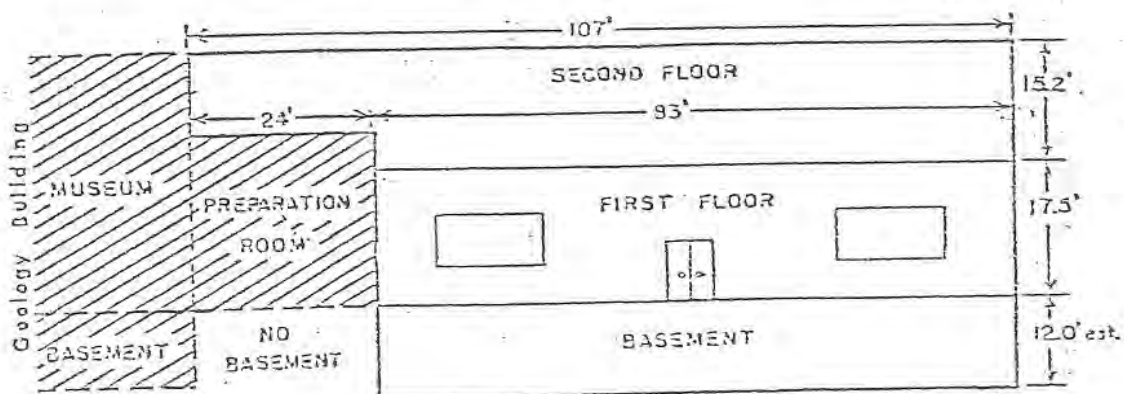


Fig. 5 Diagrammatic front view of Geological Survey Building addition in relation to the Geology Building on the left.

The total cost of constructing and furnishing a Survey building cannot be determined until preliminary architectural planning can be completed. Judging from similar buildings recently constructed on the University campus, and based on a number of estimates, the plan would be as follows:

<u>Biennium</u>	<u>Appropriation</u>	<u>Use</u>
1973-75	\$ 50,000	Preliminary architectural drawings and design, engineering and legal fees; to be completed in 1974
1975-77	*\$ 750,000	Final planning, construction costs, and administrative fees; including necessary laboratory utilities, interior furnishing and equipment; to be completed by 1976

* The \$750,000 estimate is based on 1970-71 construction costs of similar buildings in the State with allowances made for inflationary increases, plus administration and equipment and interior furnishings as illustrated in the following example.

Construction costs of 20,000 sq. ft. building in 1972	\$560,000
Construction costs compounded at 5% ** annually to 1976	\$680,683
Plus interior furnishings, necessary equipment and final administrative expenses to 1976	<u>69,317</u>
Final total project cost in 1976	\$750,000

** Projected escalated building costs are based on information available from the University Architect's office which suggests a minimum of 5% per year.

A special report has been prepared by the Survey that describes the need and justification for a Survey Building, cost allocation and timing. Copies have been distributed to all legislators and additional copies are available upon request from the Director.

Problem Areas

The most serious conditions affecting the Survey's operation and performance of its duties is the restricted space in which the staff must work and the lack of adequate facilities and equipment.

Present space and facilities limit the Survey's capability to perform the kinds of laboratory investigations that are needed now and which will become even more important in the future. Of the 2700 square feet presently occupied, only 1900 is actually suitable for work space; the remaining 800 square feet is storage. Renovation of the present space is impractical and no other expansion space is available.

As Survey services increase to cope with the problems and meet the needs of the State, the following facilities will be required:

1. A public records section where visitors may consult the files for information on Wyoming's geological and mineral resource data.
2. A mail processing room, and adjoining facility for handling over-the-counter sales of publications to the public. During the past year the Survey distributed, by mail and over-the-counter, more than 5500 reports of its investigations, and 4000 maps. The volume of requests increases at the rate of 15 to 20% each year.
3. Additional work and office space for the professional and supporting staff members that will be required during the next few years. (See Table 1).
4. Chemical and testing laboratories. At present the Survey has no laboratories in which to prepare and examine ore, rock, and mineral specimens and no equipment capable of providing basic analytical data. These facilities are needed now and will become even more necessary in the future.
5. Additional library and file space to handle many thousands of electrical logs, maps, and aerial photographs used regularly by the staff and the public. These files continue to grow substantially each month. The volume already exceeds available space by a considerable margin.
6. Additional drafting and map reproduction facilities. The present space is completely inadequate for the volume and type of work that must be done and is a serious limiting factor on the Survey's overall productivity.

7. Increased storage space for a large volume of Survey publications stock, cores and samples, and office records.

By 1983 the Survey will require a minimum of 13 full-time staff members, about 5 part-time students and office help, and be prepared to accommodate at least 2 visiting geologists engaged in cooperative project assignments.

Table 1 shows a projected organizational chart of staff requirements to 1983 and illustrates the need for additional work space.

TABLE I

	<u>1973</u>	<u>1975</u>	<u>1977</u>	<u>1979</u>	<u>1981</u>	<u>1983</u>
State Geologist and Director	1	1	1	1	1	1
Assistant Director	0	1	1	1	1	1
Staff Geologists	3	4	5	5	5	5
Secretaries and Clerk-stenos	2	2	3	3	3	4
Draftsmen and Publications						
Editor	1	2	2	2	2	2
Part-time technical and office help	4	5	5	5	5	5
Visiting personnel	<u>0</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>2</u>
Totals	11	15	18	19	19	20