

PRELIMINARY REPORT OF THE ACTIVITIES OF THE STATE GEOLOGIST'S OFFICE
AND THE GEOLOGICAL SURVEY OF WYOMING FOR THE FIVE-YEAR PERIOD FROM
MARCH 1, 1933 TO FEBRUARY 18, 1938

A more detailed report is in process of completion.

The office of the State Geologist and The Geological Survey of Wyoming was set up in the Department of Geology of the University of Wyoming on March 1, 1933. S. H. Knight assumed the position of State Geologist, without salary, upon that date.

The following is a preliminary summary of the total expenditures and services rendered by the State Geologist and The Geological Survey since its establishment at the University.

Expenditures from Budget Appropriations

1933-34 Expenditures.....	\$ 7,472.34
1935-36 Expenditures.....	8,729.61
1937 to February 1, 1938 Expenditures.....	2,960.97
Total Budget Expenditures for the five-year period.....	\$19,162.92

Expenditures from relief agencies in connection with drought relief and underground water studies (Estimated).	1,000.00
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\$21,162.92

Services Rendered for the Five-year Period

March 1, 1933 to February 18, 1938

Administration of office and laboratories.

Number of letters written, chiefly answers to inquiries on mineral resources.....	3,347
Personal interviews, office callers, estimated.....	500
Number of free determinations of minerals, rocks and fossils submitted by outside parties (approximately).	625
Number of determinations of collections of minerals, rocks and fossils made by Survey parties.....	900
Number of chemical analyses.....	25
Number of petrographic descriptions (formal reports).....	3

Examinations of Well Cuttings.

Numerous examinations of well cuttings with the individual sets of cuttings representing from a few feet to several thousand feet of hole.

Water Services.- A considerable portion of the Geological Survey resources were expended in underground water studies during the drought period 1934-1936. Our entire resources were engaged from June 1, 1934 to September 1, 1934 in assisting the drought relief program. Several score of drought relief projects were reported upon to the Chief Engineer of the State E.R.A. Most of this work was financed from the Survey budget.

Extensive surveys have been made at the request of cities and towns including Cheyenne, Laramie, Sheridan, Lusk, Newcastle and Lovell. Requests for geological information on several large dam sites were met and compre-

hensive reports were made to irrigation districts. Regional studies of the underground water resources were made of the Crow Creek, Lodgepole Creek and Niobrara River Valleys.

The following are the reports which have been issued on water services:

Wheatland Development Company Reservoir Sites, 1933.

Geological Report on Coyote Creek Dam Site, Uinta County, Wyoming, 1934.

Geological Report on the Horseshoe Creek Diversion, 1934.

Geological Report on the Upper Sunshine Basin Dam Site, Park County, Wyoming, 1935.

The Municipal Water Supply of Newcastle, Wyoming, 1934.

Geological Report on the Anchor Dam Site and Reservoir, Hot Springs County, Wyoming, 1935.

Geological Report on the Underground Water Resources of the Colter District, Washakie County, Wyoming 1934.

Report on the Underground Water Possibilities of the Egbert-Pine Bluffs Region, 1936.

Report on the Underground Water Resources of the Crow Creek Valley, Wyoming, 1937.

Geologic Report of Well Sites on the T. J. Joyce Ranch, 1935.

Report on the Lovell Water Well, 1935.

Geology of the LaPrele Dam Site, Converse County, Wyoming, 1936.

Report on the Geology of the Laramie Municipal Water Supply, 1937.

The Municipal Water Supply of Newcastle, Weston County, Wyoming, 1937.

Report on the Underground Water Resources of the Niobrara River Valley, Niobrara County, Wyoming, 1937.

Geological Report on the proposed Twin Lakes Dam and Reservoir Sites, Sheridan County, Wyoming, 1936.

The office has advised numerous farmers and ranchmen on questions pertaining to depth, probable yield and quality of water at proposed well locations.

Economic Reports.-

- Beckwith, R. H., Asbestos and Chromite Deposits of Wyoming. Field work completed. Mms. in preparation.
- Knight, S. H. and Gilbert, S., The Geological Occurrence, Chemical Composition and Optical Properties of a New Uranium Mineral. Printed, 1937.
- Knight, S. H., The Saline Lake Deposits of Wyoming. Part I, The Downey Soda Lakes. Mms. 7 pp., two maps. Published in mimeographed form, 1934.
- Knight, S. H., The Saline Lake Deposits of Wyoming. Part II, The Rock Creek Lakes. Mms. 10 pp., two maps. Unpublished.
- Knight, S. H., The Saline Lake Deposits of Wyoming. Part III, Reconnaissance Investigations and Maps of Several Soda Deposits in Natrona County. No reports published.
- Love, J. D., Geological Report on the Anderson Mine, Tin Cup District, Fremont County, Wyoming. 1935.
- Love, J. D., Notes on the Buffalo Basin Oil Structure, Sweetwater County, Wyoming, 1935.
- Love, J. D., Report on a Coal Seam located in the NW $\frac{1}{4}$ Sec. 22, T. 16 N., R. 77 W.
- Beckwith, R. H., Notes on Casper Mountain Chromite Deposit.
- Love, Report on the Geology of the Muscovite and Lignite Mining Claims.
- Knight, S. H., Mineral Resources of Wyoming.
- Love, J. D., Geological Report on Peterson Bentonite Deposit, Weston County, Wyoming, 1935.
- Knight, S. H., Summary Report on the Occurrences of Phosphate, Potash, Coal, Oil and Gas in Southwestern Wyoming, 1937.
- Beckwith, R. H., Vermiculite Deposits in Wyoming.

Areal and Stratigraphical Studies.- Basic studies pertaining to the geology of Wyoming.

Summary of Reports

Number of printed pages of reports.....	181
Number of mimeographed pages of reports.....	421
Number of typewritten pages in completed unpublished reports.....	436
Estimated number of typewritten pages of reports in preparation.....	400
Total pages.....	1,438

Number of Square Miles Surveyed

Number of square miles in completed maps.....	2,882
Number of square miles mapped, maps in process of completion (approximately).....	600
Total square miles mapped.....	<u>3,482</u>

Following are the titles, number of pages, area of maps, of printed, mimeographed, typewritten and incompleted reports:

- Beckwith, R. H., Geological Structure of the Southwest Margin of the Laramie Basin, Wyoming. Mms. 50 pp., map 140 square miles. Report not published.
- Buehner, J. H., Geology of an Area North of the Sierra Madre, Carbon County, Wyoming. Mms. 37 pp., map 335 square miles. Report completed but not published.
- Ferren, J. E., The Geology of the Southwestern Part of the Shirley Mountains, Carbon County, Wyoming. Mms. 43 pp., map 145 square miles. Report completed but not published.
- Giddings, J. H., The Geology of a portion of the Laramie Basin lying North of Como Anticline, Wyoming. Mms. 45 pp., map 272 square miles. Report completed but not published.
- Hand, Darby, Stratigraphy of the Mississippian Rocks of Southeastern Wyoming. Field work completed. Mms. in preparation.
- Harrison, John W., Pennsylvanian Stratigraphy of the Laramie Range, Southeastern Wyoming. Field work completed. Mms. in preparation.
- Jenkins, Page T., The Geology of a Portion of the East Side of the Laramie Range in Albany County, Wyoming. Field work completed. 250 square miles mapped. Mms. in preparation.
- Isberg, John T., The Geology of a Portion of East-Central Carbon County, North and West of Elk Mountain, Wyoming. Mms. 62 pp. map 250 square miles. Report completed but not published.
- Knight, S. H., The Late Cretaceous Early Tertiary History of the Laramie, Basin Area, Wyoming. Mms. in preparation.
- Knight, S. H., and Beath, O. A., The Occurrence of Selenium and Seleniferous Vegetation in Wyoming. Published in cooperation with the University of Wyoming Agricultural Experiment Station, Bulletin 221. Geological Portion 27 pp. Printed.
- Konkel, Philip, The Geology of the Northeast Portion of the Laramie Basin, Little Medicine District, Wyoming. Mms. 59 pp., map 600 square miles. Report completed but not published.

- Love, David, The Geology of the Western End of the Owl Creek Mountains, Wyoming. Mms. 35 pp., map 75 square miles. Report printed in mimeographed form.
- Love, David, Geology of a Portion of the Upper Wind River Basin, Fremont County, Wyoming. Field work completed. Approximately 300 square miles surveyed. Map and Mms. in preparation.
- Miller, Maxwell, Cambrian Trilobites of Northwestern Wyoming. Mms. 44 pages. Report printed.
- Miller, Maxwell, Cambrian Stratigraphy of Northwestern Wyoming. Mms. 33 pages. Report printed.
- Morgan, Arthur M., The Stratigraphy of the Dakota Group of Central Wyoming. Field work completed. Mms. in preparation.
- Nace, Raymond L., Summary of the Late Cretaceous and Early Tertiary Stratigraphy of Wyoming. Mms. 271 pp. Published in mimeographed form.
- Nace, Raymond L., Geology of the Northwest Portion of the Red Desert, Sweetwater and Fremont Counties, Wyoming. Field work completed. Map 115 square miles completed. Mms. in preparation.
- Neely, Joseph, Geology of the North End of the Medicine Bow Mountains, Carbon County, Wyoming. Mms. 15 pp. map 260 square miles. Published in mimeographed form.
- Neely, Joseph, Stratigraphy of the Sundance Formation and Related Jurassic Rocks in Wyoming and their Petroleum Aspect. Mms. 55 pp. Report printed.
- Peterson, Arthur F., Geology of the Shirley Basin and Bates Hole Regions, Carbon and Natrona Counties, Wyoming. Mms. 72 pp. map 556 square miles. Report completed but not published.
- Shoemaker, Richard, Geology of the Shirley and S mince Mountain Area, Carbon County, Wyoming. Mms. 68 pp., map 292 square miles. Report completed but not published.
- Thomas, H. D., Frontier-Niobrara Contact in Laramie Basin, Wyoming. Mms. 8 pp., Report printed.
- Thomas, H. D., and Miller, A. K., The Casper Formation and its Cephalod Fauna. Mms. 24 pp., Report printed.

Bibliographies.- The reports descriptive of the mineral resources of Wyoming. Complete bibliographies of reports descriptive of the following mineral resources have been made: Asbestos, Bentonite, Coal, Chromite, Gold, Oil and Gas, Phosphate, Potash, Saline Deposits, Sulphur.

These bibliographies have been mimeographed and copies sent to all interested parties.

Library Service.- The Geological Survey library has been materially strengthened and it is available at all times to interested parties.