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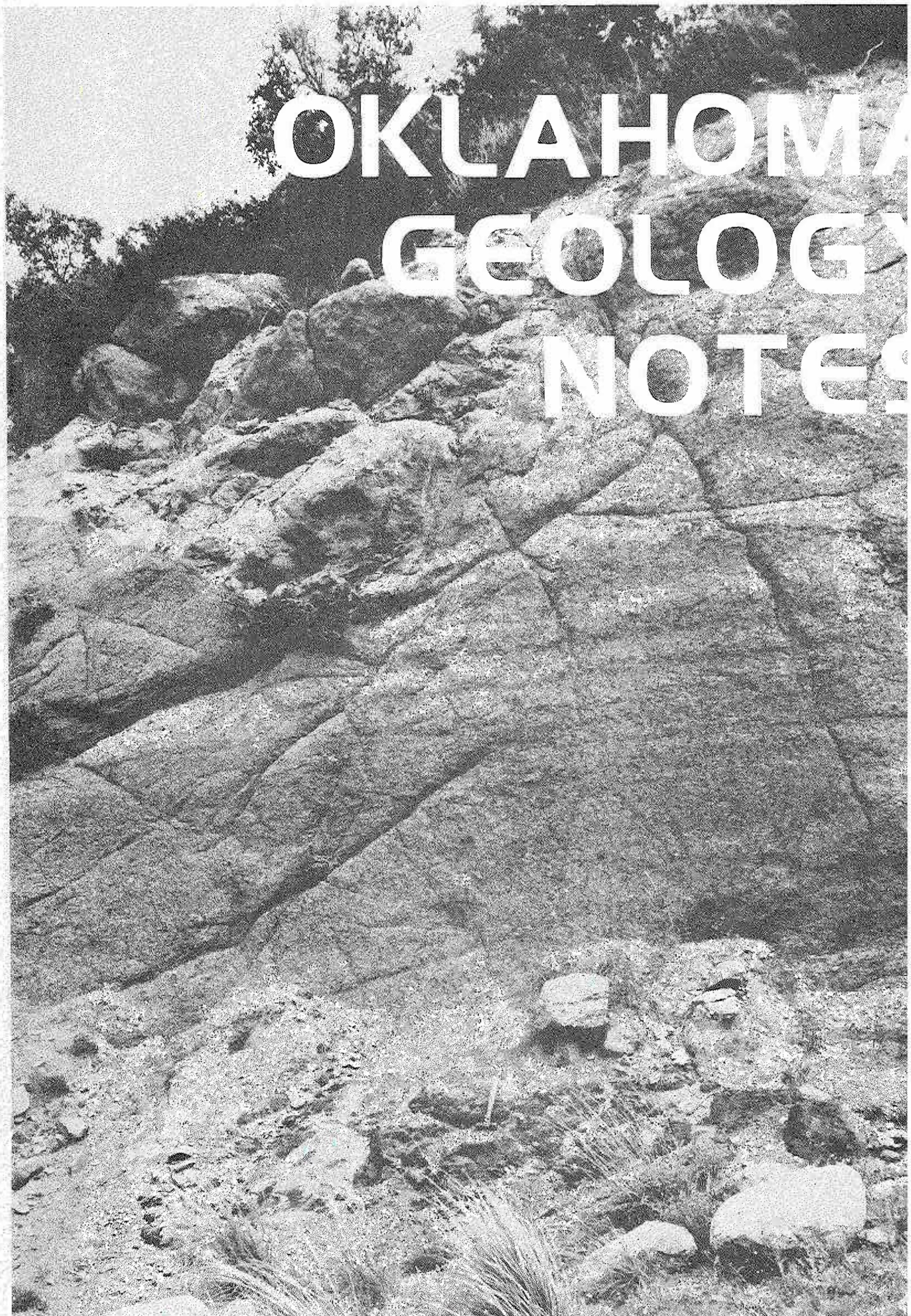

Cover Picture

RAGGEDY MOUNTAIN GABBRO GROUP WICHITA MOUNTAINS

The Cambrian(?) Raggedy Mountain Gabbro Group, as formally designated by Ham, Denison, and Merritt (1964, OGS Bulletin 95), includes two distinctly different units. The older of these is called the Glen Mountains layered complex and consists of several zones of cumulate rocks, which are mostly gabbroic anorthosites. The younger is represented by several types of biotite-bearing gabbro as explained by Hunter (1967, in OGS Guidebook, with Stone, editor) and by Powell and Fischer (1976, in OGS Guidebook). Quarrying for road material in the NE¼ sec. 14, T. 4 N., R. 17 W., Kiowa County, has yielded beautiful exposures that document relative ages of these two mafic units.

The photograph shows a scarp face with biotite-gabbro intruding a lighter anorthositic member of the layered complex, which is seen as a V-shaped mass at top. The contact is knife sharp throughout the exposure. Near the contact in several places (but not in the photograph) are small inclusions of anorthosite in biotite-gabbro confirming the intrusive relations.

At the bottom of the scarp, the hammer (length 14 inches) is resting on a darker, subhorizontal dike in the biotite-gabbro of what is called "intrusion breccia" or "mixed rock." This dike, related to the Cold Springs "granite," consists of mafic and silicic phases each reflecting later separate intrusive events.

—M. Charles Gilbert

Editorial staff: William D. Rose, Elizabeth A. Ham, Judy A. Russell.

Oklahoma Geology Notes is published bimonthly by the Oklahoma Geological Survey. It contains short technical articles, mineral-industry and petroleum news and statistics, an annual bibliography of Oklahoma geology, reviews, and announcements of general pertinence to Oklahoma geology. Single copies, seventy-five cents; yearly subscription, $4.00. All subscription orders should be sent to the address on the front cover.

Short articles on aspects of Oklahoma geology are welcome from contributors. A set of guidelines will be forwarded on request.

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INDEX

(Numbers refer to entries in bibliography)

Midcontinent Section of SEPM Being Formed

A Midcontinent Section of the Society of Economic Paleontologists and Mineralogists is being formed. The section will encompass Oklahoma, the Texas Panhandle, Kansas, Nebraska, Iowa, Missouri, Arkansas, Kentucky, and Tennessee. This is the only region in the continental United States that currently has no SEPM section.

The purpose of the section will be to promote the science of geology in the Midcontinent region through research in paleontology, sedimentary petrology, stratigraphy, and sedimentology. The Midcontinent Section will provide opportunities to hear technical papers, have field trips, and allow dissemination of new ideas and research being conducted in stratigraphy and paleontology. The section will be affiliated with The American Association of Petroleum Geologists and other geological organizations in the area. Section representatives will coordinate meetings and programs of the local state groups with the SEPM section council.

Anyone interested in helping form the SEPM Midcontinent Section or willing to participate once the section is formed should contact Dr. Mary E. Hileman, Anadarko Production Co., 100 Park Avenue Building, Suite 300, Oklahoma City, Oklahoma 73102.

OGS Takes Charge of Geophysical Observatory

The Oklahoma Geophysical Observatory, formerly The University of Oklahoma Earth Sciences Observatory, was transferred by The University of Oklahoma to the Oklahoma Geological Survey on July 1 of this year. The Observatory was built in 1961 by Jersey Production Research Co. near Leonard, Oklahoma, south of Tulsa. In 1964 Jersey Research was consolidated into a Humble Oil and Refining Co. (now Exxon) research affiliate in Houston, Texas. In April 1965 Humble donated the Observatory to The University of Oklahoma.

The Observatory is situated on 160 acres of land that was acquired in 1973–74 through the efforts of several members of The University of Oklahoma School of Geology and Geophysics Alumni Advisory Council and aided by a Sarkeys Foundation grant. Robert L. DuBois was director of the Observatory from 1967 to 1978.

The Oklahoma Geophysical Observatory operates seven seismometers, three long period and four short period, which have been installed in a vault detached from the main building. Seismic responses are recorded on 11 paper-drum recorders; 16 seismograms are recorded on film. The seismological data are routinely sent to the National Earthquake Information Center at Boulder, Colorado, for inclusion in its earthquake reports and to the International Seismological Center at Newbury, England, for listing in its monthly bulletin. The Observatory maintains a statewide volunteer-operated semipermanent network of seven seismograph stations located throughout Oklahoma. In addition to the seismological studies, the Observatory records a number of other geophysical parameters, such as gravity, earth currents, the earth's magnetic field, and the atmosphere's vertical electric field, along with meteorological observations.

The Oklahoma Geophysical Observatory's activities will be directed by James L. Lawson, Jr., a geophysicist with the Observatory since 1970, and by Paul H. Foster, supervisor and electrical engineer with the Observatory since 1961. Kristie Binney and Shirley Jackson will continue to assist in the record labeling and cataloging.

Boron-10 Plant Begins Production

A $14 million plant and laboratory were constructed at Quapaw and Miami in northeastern Oklahoma by Eagle-Picher Industries. The plant at Quapaw was built primarily to supply boron-10 to the U.S. Department of Energy for use in defense-related purposes. Miami is the location of Eagle-Picher's Quality Control Laboratory, where the final product is milled, graded, tested, and packaged for shipment.

Boron-10 is a nonradioactive isotope that occurs naturally in boron and is an effective neutron absorber. The process at Quapaw extracts the boron-10 from a gaseous compound of boron and reduces it to a metallic powder.

The combined operation is one of only four such facilities in the world and the only one located in the United States. When full production is reached, employment is expected to exceed 300.

Uranium Program Announced for Oklahoma

The involvement of the Oklahoma Geological Survey in the effort to assess the nation's domestic supply of uranium was announced in a previous issue of *Oklahoma Geology Notes* (v. 38, no. 2, April 1978, p. 65–66). The program, referred to as the National Uranium Resource Evaluation (NURE) program, is funded by a grant from Bendix Field Engineering Corp. and the U.S. Department of Energy (DOE). Bendix and DOE have recently announced other subcontractors that will assess uranium potential on $1° \times 2°$ (scale, 1:250,000) quadrangles of Oklahoma or lands adjacent to Oklahoma.

A total of seven quadrangles to be assessed are wholly or partly in Oklahoma, and another seven quadrangles are adjacent to the State (fig. 1.) The subcontractors working on these 14 quadrangles are:

Subcontractor	*Quadrangles*
Bendix Field Engineering Corp. Grand Junction, Colorado	Ardmore, La Junta, Plainview
Consulting Professionals, Inc. Santa Fe, New Mexico	Dalhart
Geological Services of Tulsa, Inc. Tulsa, Oklahoma	Joplin, Oklahoma City
Oklahoma Geological Survey Norman, Oklahoma	Clinton, Enid
Oklahoma State University Stillwater, Oklahoma	Lawton
Texas Bureau of Economic Geology Austin, Texas	Amarillo, Sherman, Wichita Falls
Wichita State University Wichita, Kansas	Pratt, Wichita

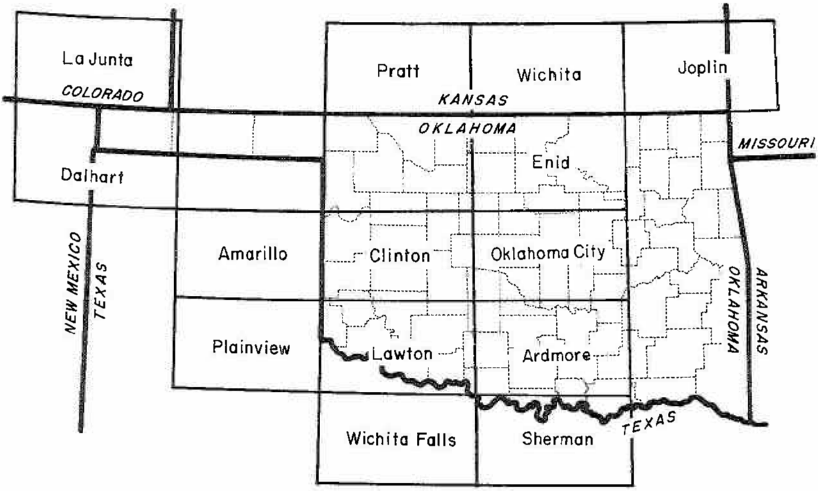

Figure 1. Locations and names of 1° × 2° quadrangles in and adjacent to Oklahoma that are being studied under the NURE program.

Recent Theses Released by OSU

The following M.S. theses have been released by the Department of Geology of Oklahoma State University and are on file at the OSU Library:

Geology and Geochemistry of Uranium in Morrison Formation, Oklahoma Panhandle and Northeastern New Mexico, by Marvin Milton Abbott.

Geochemical and Petrologic Characteristics of Selected Freshwater Limestones, by Jim Richard Armstrong.

Geology of the Hartshorne Coal, McCurtain and Lafayette Quadrangles, Haskell and Le Flore Counties, Oklahoma, by Lee Edward Catalano.

The Geothermal Gradient in Sedimentary Rocks in Oklahoma, by Paul Kwong-Shun Cheung.

The Physical Stratigraphy of the Avant Limestone Member, Iola Formation, Osage County, Oklahoma, by Joey Dwayne Davidson.

Genesis and Trend of the Lowermost Unit of the Vamoosa Formation (Gypsy Sandstone), by Gary Wayne Ford.

Structural Contour Map of Oklahoma on the Pennsylvanian Wapanucka Limestone, Oswego Limestone, Base of Hoxbar Group, and Checkerboard Limestone, by Richard Dale Fritz.

Leonardian, Wolfcampian, and Virgilian Arkosic Facies, Wichita Uplift–Anadarko Basin, by Charles Allan Hansen.

Petroleum Geology of the Misener Sandstone in Parts of Payne and Lincoln Counties, Oklahoma, by James Paul Kochick.

Petrography and Geochemistry of the Butterly Dolomite and Associated Sphalerite Mineralization of the Turner Prospect, in the Arbuckle Mountains, Oklahoma, by Peter Val Kranak.

Petrography and Geochemistry of Lower Permian Cornstones in Southwestern Oklahoma, by John Ako Kwang.

Distribution, Depositional Environment, and Reservoir Properties of the Pennsylvanian Cottage Grove Sandstone, South Gage Field, Oklahoma, by Danny Joe Towns.

Lithostratigraphy of Missourian Shelf-Basinal Strata, Beaver County, Oklahoma, by Steven Dale Lane.

Some Aspects of the Petrology and Geochemistry of Selected Freshwater Carbonates, by William Richard Trent.

Reservoir Trends, Depositional Environments, and Petroleum Geology of Cherokee Sandstones, T. 11–13 N., R. 4–5 E., by Nicholas Paul Verish.

New AAPG Executive Committee Begins Term

Robert D. Gunn, independent oil operator from Wichita Falls, Texas, assumed the presidency of The American Association of Petroleum Geologists on July 1. Joining the executive committee as president-elect is John D. Haun, professor of geology at the Colorado School of Mines in Golden and president of Barlow and Haun, Inc.

Other new officers are Thomas D. Barber, with Michel T. Halbouty in Houston, vice-president, and George B. Pichel, with Union Oil Co. of California in Los Angeles, treasurer. John J. Amoruso, an independent geologist from Houston, began his second year as secretary, and John W. Shelton, professor of geology at Oklahoma State University in Stillwater, is winding up his final year as editor.

The Tulsa-based association, for many years the largest scientific body of geologists in the world, recently attained a new record of 20,000 members.

OKLAHOMA GEOLOGY NOTES

Volume 38 August 1978 Number 4

Page