

# GEOSCIENCE WISCONSIN

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## **CARBONATE DIAGENESIS AND DOLOMITIZATION OF THE LOWER ORDOVICIAN PRAIRIE DU CHIEN GROUP**

*George L. Smith and J. Antonio Simo*

## **COMPLEX BRECCIATION HISTORY ASSOCIATED WITH EVAPORITE AND CARBONATE DISSOLUTION IN THE LOWER ORDOVICIAN ONEOTA FORMATION (PRAIRIE DU CHIEN GROUP) NEAR SPRING GREEN, WISCONSIN**

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## **RADON EMANATION FROM SOIL OF KENOSHA, RACINE AND WAUKESHA COUNTIES, SOUTHEASTERN WISCONSIN**

*Nancy S. Kochis and Steven W. Leavitt*



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*The Survey conducts earth-science surveys, field studies, and research. We provide objective scientific information about the geology, mineral resources, water resources, soil, climate, and biology of Wisconsin. We collect, interpret, disseminate, and archive natural resource information. We communicate the results of our activities through publications, technical talks, and responses to inquiries from the public. These activities support informed decision-making by government, industry, business, and individual citizens of Wisconsin.*

**PREFACE** v

**CARBONATE DIAGENESIS AND DOLOMITIZATION OF THE LOWER ORDOVICIAN PRAIRIE DU CHIEN GROUP 1**

*George L. Smith and J. Antonio Simo*

**COMPLEX BRECCIATION HISTORY ASSOCIATED WITH EVAPORITE AND CARBONATE DISSOLUTION IN THE LOWER ORDOVICIAN ONEOTA FORMATION (PRAIRIE DU CHIEN GROUP) NEAR SPRING GREEN, WISCONSIN 17**

*George L. Smith*

**AUTHIGENIC SILICA FABRICS ASSOCIATED WITH CAMBRO-ORDOVICIAN UNCONFORMITIES IN THE UPPER MIDWEST 25**

*George L. Smith, Robert H. Dott, Jr., and Charles W. Byers*

**PROPOSED REFERENCE SECTIONS AND CORRELATION OF UPPER SILURIAN AND DEVONIAN STRATA, EASTERN WISCONSIN 37**

*Charles W. Rovey II*

**GRAVITY SIGNATURE OF THE WAUKESHA FAULT, SOUTHEASTERN WISCONSIN 47**

*Keith A. Sverdrup, William F. Kean, Sharon Herb, Susan A. Brukardt, and Ronald J. Friedel*

**RADON EMANATION FROM SOIL OF KENOSHA, RACINE AND WAUKESHA COUNTIES, SOUTHEASTERN WISCONSIN 55**

*Nancy S. Kochis and Steven W. Leavitt*

## PREFACE

*Geoscience Wisconsin* is a serial that addresses itself to the geology of Wisconsin—geology in the broadest sense to include rock and rock as related to soil, water, climate, environment, and so forth. It is intended to present timely information from knowledgeable sources and make it accessible via scientific review and publication for the benefit of private citizens, government, scientists, and industry.

Manuscripts are invited from scientists in academic, government, and industrial fields. Once a manuscript has been reviewed and accepted, the authors will submit a revised copy of the paper, and the Wisconsin Geological and Natural History Survey will publish the paper as funds and time permit, distribute copies at nominal cost, and maintain the publication as a part of the Survey list of publications. This will help to insure that results of research are not lost in the archival system of large libraries or lost in the musty drawers of an open file.

This collection of papers from academic colleagues represents a cross section of Wisconsin geology.

Smith, with three papers that include colleagues Simo, Dott and Byers, presents analysis of various textures and mineralogy of the Prairie du Chien Formation in southwestern Wisconsin. His analysis constrains mechanisms for the formation of dolomite, associated breccia, and development of hard ground. Understanding these relations will help in deciphering mineralization history in the Upper Mississippi Valley Zinc-Lead District of southwestern Wisconsin and utility of the Prairie du Chien for construction material and aquifer understanding.

Rovey reexamined available drillcore and some newly acquired core to make revisions to the Devonian strata in Milwaukee and adjacent counties. Since the original description of Devonian units in the past century, urbanization has covered almost all exposures. His analysis refines our understanding and permits correlation to equivalent units in Michigan and Illinois.

Sverdrup, Kean, Herb, Brukardt, and Friedel analyzed gravity data in Waukesha County to document the position and amount of throw on the Waukesha Fault. Their controversial interpretation of the data suggest that the Waukesha Fault is not vertical at depth (as has been assumed for many years), but is rather a listric fault, dipping about 10° to 20° to the southeast, with a throw of 600 m.

Kochis and Leavitt undertook a radiometric analysis of soils and surficial material in southeastern Wisconsin. Their analysis suggests that physical parameters, such as porosity and permeability, are the significant factors in radon migration and entry into homes.

We encourage submission of manuscripts relating to Wisconsin geology. Special consideration will be given to papers which deal with timely topics, present new ideas, and have regional or statewide implications.

M.G. Mudrey, Jr.  
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