



Special Publication, No. 4

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# Carbonate-Hosted Lead-Zinc Deposits

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*75th Anniversary Volume*

Editor

D.F. Sangster

SOCIETY OF ECONOMIC GEOLOGISTS, INC.

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Carbonate-Hosted Lead-Zinc Deposits  
75th Anniversary Volume

D.F. Sangster, Editor

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# INTRODUCTION

The papers included in this volume were originally presented orally or as posters at the Society of Economic Geologists International Field Conference on Carbonate-Hosted Lead-Zinc Deposits, held in St. Louis, Missouri, June 3–6, 1995. The concept for this conference was first aired at the conclusion of an SEG field trip to the East Tennessee MVT district in October, 1992. Response was both instantaneous and extraordinarily positive; several participants came forward immediately and volunteered to help organize either the conference or the field trips. At almost the same time, and quite fortuitously, SEG received offers from Australia and Ireland to organize field trips to carbonate-hosted lead-zinc deposits in those countries. As the expression goes, it didn't take a rocket scientist to suggest that all three proposals be combined into a single mega-event. And so it came about that, in less than three years and in celebration of its 75th Anniversary, SEG organized a six-week field conference in 1995 beginning May 13–19 in Ireland, then reconvening June 3–6 in St Louis, MO, and again in Australia June 15–23. Although the Australian portion had to be cancelled, field guidebooks were successfully published for all three venues.

Fifty-eight manuscripts were submitted and, after passing two peer reviews, fifty were accepted for publication. Papers are presented in groups ranging from district and thematic overviews to specialized research topics. An extra effort was made to include carbonate-hosted deposits other than the obvious Mississippi Valley-type and, to this end, we can claim moderate success.

The Editor and Editorial Board of this volume owe a debt of gratitude to the many people who helped produce it in a timely fashion. We include here those authors who turned in their manuscripts at the St Louis meeting (thereby permitting the review process to begin almost immediately), the nearly 100 reviewers who conscientiously responded to our requests for a rapid "turn around" of their reviews, and, finally, the authors themselves for their diligence in maintaining the momentum, for heeding our page limitations, and, because of the requirements for camera-ready copy, accepted the Editor's requests to reduce their diagrams and photos to our specifications before submitting final copy of their manuscript.

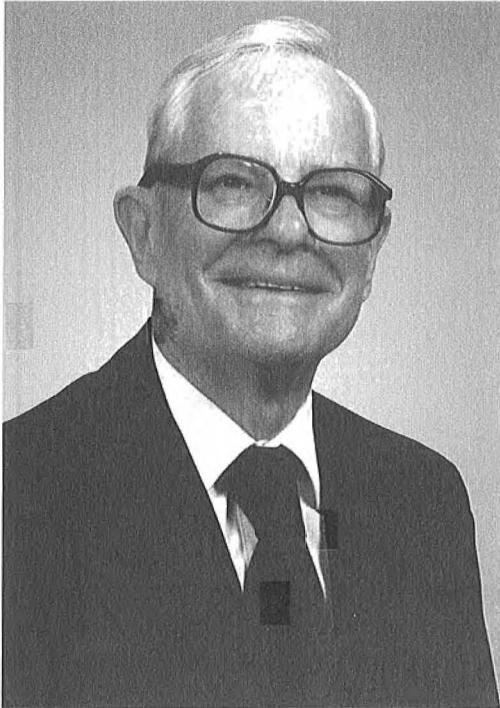
The Editor reserves special thanks to his Editorial Board members on whom fell the thankless job of finding reviewers and prodding authors to make revisions and return the finished product; to Ray Coveney, Chairman of the SEG Publications Committee, who provided wise counsel and guidance when it was needed; to Debora Turner for patience and wisdom in translating 50 computer discs to a common format; to Pat Sheahan, who doubled-checked the manuscripts for typos, missing references, etc.; to John Thoms, SEG Executive Director for sharing with the Editor his several years' experience in editorial activities; and to David Pratt for accepting the onerous job of final layout. The Geological Survey of Canada graciously allowed the Editor the use of its facilities during preparation of this volume.

The volume itself is dedicated to Ernie Ohle, a renowned and respected practitioner in the field of MVT deposits, whose publications and oral presentations have been both an inspiration and a guide to those of us who entered the arena at a later date. As an example, we include in this volume, as a Special Contribution, Ernie's delightful summary of the events leading to the discovery of the southeast Missouri lead district.



D.F. SANGSTER  
Editor  
December 17, 1996

# DEDICATION TO E.L. OHLE



This Special Publication on Carbonate-Hosted Lead-Zinc Deposits is respectfully, and with gratitude, dedicated to Ernest (“Ernie”) L. Ohle. As the Editor, Editorial Board members, and many, if not all, authors of this volume can confirm, Ernie Ohle has made significant contributions to earth sciences in four main areas: as a teacher, as an exploration geologist, as a geoscientist, and through his active participation in SEG activities. His conscientious desire to pass along his extensive knowledge of mineral deposits has resulted in a continuous association with universities as either an adjunct or visiting professor. Moreover, his teaching was not confined to academia—it extended into his mineral exploration responsibilities with St. Joe Lead, Copper Range Company, and Hanna Mining Company. For example, one of his colleagues stated simply that “...Ernie educated an entire generation of Hanna geologists”.

His careful attention to the geological details of mineral deposits resulted in not only more accurate reserve estimates of existing deposits (“Evaluation of iron deposits”, 1972, *Economic Geology*, v. 67, p. 953–964) but new discoveries as well (Indian Creek and New Lead Belt). As a responsible geoscientist, Ernie shared his knowledge, experience, and observations of Mississippi Valley-type lead-zinc deposits in a series of review papers which appealed to, and served, academics and applied geologists alike. We will probably never know the full impact of his MVT publications within the mineral industry but, in the world of MVT research, his thought-provoking articles have not only been used by the teaching profession to educate generations of mineral deposits scientists, they have been referenced in support of successful grant applications and thus, indirectly, have led to new research initiatives in this important base metal deposit-type.

Ernie augmented his professional contributions through his many activities in the Society of Economic Geologists. An SEG member since his graduation from Harvard in 1950, Ernie’s activities included serving on numerous committees, as SEG President (1974), and as Thayer Lindsley lecturer in 1987–88. In 1987, at his suggestion, the SEG Council instituted a grant program to enable teachers of economic geology at smaller earth science departments to attend annual SEG meetings. The grant was seen as a means of transferring the science of economic geology to students and was eventually named the Ernest L. Ohle Grant Program. The same year he was the first recipient of the Ralph W. Marsden Award conferred in recognition of his outstanding service to the Society. In addition to his Society contributions, Ernie also became involved in the Society of Economic Geologists Foundation (SEGF), a principal funding source for many, if not most, SEG activities. He served as SEGF President from 1980–83, 1986–90, and 1992–93. From 1992–95 he also chaired the Foundation’s McKinstry Committee and its expanded successor, the Special Grants Committee. He is a major contributor to the SEG 75th Anniversary History Volume.

Although all-too-brief, this summary of Ernest Ohle’s contributions and achievements amply demonstrates a full and original professional career in earth sciences. This Special Publication, therefore, is a celebration not only of SEG’s 75th Anniversary but of Ernie Ohle’s professional career and the Society proudly dedicates this volume to one of its outstanding members.

—D.F. SANGSTER

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