

# Methods of Predictive Metallogeny: A Symposium

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## Introduction

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The Committee of Provincial Geologists perceived the need for more open discussion of methods of predictive metallogeny and, accordingly, asked the Mineral Deposit Division of GAC whether it would co-sponsor a panel discussion on the subject. As a result, we (Sutherland Brown and Leech) became co-chairmen, invited the panel members and organized the session at the Joint Annual Meeting at Winnipeg 1982. Various provincial surveys provided funds to facilitate travel for Russian and American speakers. The written papers were reviewed by the co-chairmen, and G.B. Leech prepared an edited condensation of the discussion from tapes prepared under the auspices of Winnipeg '82.

Predictive metallogeny has two principal but diverse applications:

1. exploration planning and target identification (industry)

2. resource appraisals and the protection of mineral lands (government)

The discovery of deeply buried mineral deposits that we will need in the future will require better predictive metallogeny to augment what will clearly be remote signals from geophysics and geochemistry before deep drilling can be undertaken with any confidence. Governments need regional and local resource appraisals for economic planning and land use decisions. The end product of predictive studies will differ for these two users. The papers and discussion presented here clearly reveal these two aspects.

The chairmen wished to have speakers representing a diversity of approaches and wished to stimulate discussion. We invited four speakers:

Dr. D.F. Sangster, to give a historical review of the Canadian experience

Dr. D.V. Rundquist, to discuss Soviet methods

Dr. DeVerle Harris, to give a quantitative approach

Dr. George Mannard, to give an industry point of view

In order to stimulate discussion, we asked J.D. Boldy and R.J. Cathro to come prepared to comment on the papers from the point of view of Precambrian Shield and Cordilleran experience. Much valuable discussion between audience and speakers ensued. Unfortunately, Dr. Rundquist's authorized paper is not illustrated with the specific examples he discussed.

George Mannard died suddenly, three months after the Symposium. The chairmen and sponsors wish to acknowledge his ready acceptance of his role in this symposium, which was typical of his life of dedication to geoscience and to the study of mineral deposits.