



**Lawrence J. Drew** was born in Astoria, New York, and grew up in Lempster, New Hampshire. He attended Towle High School in Newport, eight miles north of Lempster. He went on to the University of New Hampshire where he graduated with a BSc Degree in Geology and Chemistry. Following graduation, he was accepted in the Graduate School at Pennsylvania State University in what was then the Department of Mineralogy and Petrology. Interestingly enough, his acceptance letter was signed by one John C. Griffiths. More interesting was his first encounter with "Griff" who always insisted on being addressed that way. Griff asked Larry what he would like to be. Larry said, "A mineral deposit geochemist." Griff then took a piece of paper on which he drew a Venn diagram, pointed to it, and

said that mathematical geology was the future, not that other "stuff." Larry's future was sealed.

Larry took his MSc and PhD in Mineralogy and Statistics at Penn State and completed his graduate work in 1966. He worked for a time at the research laboratory at the Cities Service Oil Company in Tulsa, Oklahoma, but his primary goal was to become a research geologist at the United States Geological Survey. The long-awaited call came on June 8, 1972, and he joined a new branch at the USGS that was being formed to study assessment methods to estimate the quantity and quality of the nation's undiscovered mineral and mineral-fuel resources. It has been in this capacity that Larry has expended his efforts and carried out his research for the past 28 years and which, has interestingly enough, earned him recognition as much as a teacher as that of a research scientist.

Larry has published over 100 scientific papers, written two books, has conducted workshops throughout the world, and been invited on numerous occasions to be the keynote speaker at national and international meetings and conferences. To better understand his role as a teacher, one needs to revisit an interview of Griff by Larry in one his Directions columns that he wrote for the journal Nonrenewable Resources. In the interview, Larry asks Griff to remember a homily that Griff used to instruct students on how to gauge what kind of contribution they have made with a piece of research they had completed and presented at a professional meeting. "You mean my admonition about watching your audience for feedback," Griff responds. Larry says, "I think you used to call it 'wisdom'." Griff answers, "Watch your audience, and, if they clap politely, you have done nothing. If they hoot and howl, you are headed in the right direction. If they crucify you, you have found the truth." Larry has made effective use of Griff's homily in his writings and in his appearances before an audience.

The qualities of Larry as a teacher are found in his writings. In his first book, "Oil and Gas Forecasting", Larry leads the reader through the process of forecasting oil and gas discovery rates and the associated task of determining the distributional form of oil and gas field size distributions. The reader is exposed to Larry's recollections based on more than twenty

years as a witness and a participant in this field. In the process, the reader becomes the student much as Larry was the student when Griff as Professor led Larry away from determinism and toward statistical empiricism.

In his second book, "Undiscovered Petroleum and Mineral Resources," Larry describes the confrontations played out in the marketplace of ideas where political-economic-environmental forces vie for influence over the use of land, most often public land. In the foreword, Professor DeVerle Harris, himself the 1993 William C. Krumbein Medalist, points out that the reader is given a "close up and personal" view of the development of methodology and the strident controversies that arose over specific assessments and assessment methodology. As Harris points out, "what makes this book unique is that it is also a candid 'inside' view of the personalities and thoughts of those involved in the development and implementation of petroleum- and mineral-resource assessment." Larry instills in the reader a view of the evolution of ideas and methods as a real-life drama involving individuals, as well as technical issues. What better way for a student to become educated about a robust, highly quantified, active field of research.

The greatest measure of Larry Drew as teacher devolves from the columns that he wrote for the journal Nonrenewable Resources. Over the course of seven years, Larry contributed 25 columns on topics that touched on aspects of nonrenewable resources. Whether it was the "Plight of the Quarryman," "The 1997 Climate Conference in Kyoto," "The Dematerialization of Society," "Land Ethics," "Irresistible Holes in the Ground," "Why We Do Resource Assessment," "Who Has the Best Ideas?", or even, as mentioned earlier, "An Interview with John Cedric Griffiths," Larry brought to the reader fresh insight into the issues and the challenges that confront our society. It is in keeping with the tradition that Griff instilled in his students which was to question authority, to challenge existing dogma, and to apply new, geomathematical approaches to current geological problems. Larry, it is with pleasure that we salute you as the 2000 Griffiths Award winner; we urge you to continue your efforts to educate the future generation of mathematical geologists in the same spirit as did your predecessors.

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