

## Buried Geological, Geochemical, Geophysical, Hydrogeological, and Hydrochemical Data Need to be Published for the Benefit of Professional Geologists Worldwide

Michael D Campbell\*

Senior Principal and Chief Geologist and Chief Hydrogeologist, *I2M Consulting, LLC*, Houston, Texas, USA

**\*Corresponding author:**

**Michael D. Campbell**

Senior Principal and Chief Geologist and

Chief Hydrogeologist

I2M Consulting, LLC

Houston, Texas

USA

Tel: 713-248-1708

E-mail: mdc@i2mconsulting.com

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The *International Journal of Earth Science and Geology* (IJEG) is one of the new open-access journals in the world today and the publisher has invited me to join their editorial board. They have also asked me to prepare an editorial dealing with my expectations for the journal and for those prospective authors who have the technical background and the data that would be of interest to geologists around the world. And, I am pleased to do so.

First, for my background, I have been a professional geologist and hydrogeologist with degrees from the Ohio State University (1966) and Rice University (1976), and have served both the mining and environmental industries as an employee and later as a consultant for more than 50 years ([more](#)).

I have been made a Fellow of the Geological Society of America (GSA), a Fellow and Chartered Geologist of the Geological Society of London (GSL), a Fellow of the Australian Institute of Geoscientists (AIG), a European Geologist of the European Federation of Geologists (EFG), and designated a Registered Member of the Society of Economic Geologists (SEG). I also hold professional licenses in the states of Texas, Louisiana, Mississippi, Washington, Wyoming, and Alaska, as well as holding national certifications as a Certified Professional Geologist in the American Institute of Professional Geologists (AIPG), and as a Certified Professional Hydrogeologist in the American Institute of Hydrology (AIH).

I have been appointed to a number of editorial boards over the years, i.e., *Journal of Groundwater*, *International Journal of Environmental Forensics*, and others. I have also published a number of papers, presentations, and reports on a range of subjects ([more](#)).

In mid-1973, the late, great Professor John J.W. Rogers, then Chairman of the Geology Department, Rice University, nominated me to receive the Eleanor and Mills Bennett Fellowship to come to Rice University as a senior graduate student to bring diversity to his geology department. I had just spent 10 years in industry working on mineral exploration and environmental projects in Australia and the U.S., and had just published a major textbook by McGraw-Hill entitled: *Water Well Technology*. He decided that my presence in directing early EPA projects on groundwater development and other projects involving mineral exploration would expose the graduate students and staff to perspectives beyond pure geological research that Rice was well known for in world-wide applications of basic geological and applied geological research for that needed in the developing environmental field and geological research in support of mineral exploration and mining.

During my research a few years earlier on my first text, just before Dr. Rogers recruited me to come Rice University, I noticed a lack of transition from academic research to applied (for industrial needs). I emphasized the need to close this gap in an editorial in the journal *Ground Water* in late 1973, setting out one of my objectives while at Rice ([here](#)).

Second, I soon realized that the geosciences and engineering had compartmentalized over the years and that one specialization within one sub-field did not communicate much with the other, which created blind areas in both fields. This was one of the principal objectives that Dr. Rogers had in mind when he encouraged me to come to Rice. I also realized at the time, and it has been re-enforced many times since, that geoscience research for Masters and Ph.D. Programs is seldom published with the end-user in mind (for professional geoscientists employed by industry or government), only for use by their fellow geoscientists in the various sub-fields of geological research.

The major exception is that a few universities have funding from the major oil and gas companies that provide a pipeline for future employees and geological research for oil and gas exploration around the world. Other fields in geoscience have little such support by industry, although the American Institute of Professional Geologists (AIPG) and other national professional societies attempt to make those connections. In Texas, I serve as Vice President, Eastern Texas for the Texas Section of AIPG and one of my responsibilities is to encourage those in academia to help close the gap between academic research and industrial needs via publications and presentations at local professional society meetings and conferences ([more](#)).

But for many of those students who graduate and take on university teaching and research endeavors, the trend of dead-end research continues, leaving much research gathering dust in university libraries, and now being covered up by digital filing systems available only to those familiar with the particular systems. But this is not the only way geoscience research is left behind in the libraries; it is also buried in the file cabinets and databanks online of geological consulting companies, mining companies, and government research agencies and promptly forgotten.

Third, the vast number of reports residing in the files represents a loss of valuable information to the world of geoscience. But much of the problem could be solved by professional geoscientists making the effort to use this buried information for publishing in papers. Of course confidential issues would have to be addressed but this can usually be managed by removing sensitive information, leaving only the data and their significance to consider in a paper for publishing. But therein brings on an issue related to the academics mentioned above. They publish papers among themselves in major journals of the geoscience world using state-of-the-art laboratory equipment and data analysis methods at the developing edge of the geoscience. This is fitting and proper for pure research as a foundation for building the sub-fields involved. But for the needs of the field geologist involved in day-to-day applied projects in environmental or mineral exploration, such data (i.e., laboratory results, outcrops sampling, etc.) are of a more practical use to characterize or report on field-related conditions in various areas of interest.

The reports based on these data are part of the lost information mentioned above that get buried in files and never see the light of day, as in a published paper that will forever live

in the digital world. If these reports were to be rendered for publication as widely available papers on the Internet, this would help close the gap between the research produced by academics and that needed by those in industry for years to come. But the data are also not the same; one set is garnered with great pains in getting precision and accuracy down into deep decimal points, whereas industrial efforts are useful when only two decimal places will do. Papers on field conditions are also more often perceived as being useful because they apply to specific issues, not for moving the frontiers of science forward, which then filters down to industry only if discovered by the professional geoscientist working in industry.

Lastly, I look to the new IJESG to encourage the professional geologists, geochemists, etc., to produce manuscripts out of data from previous industrial and government projects. Based on budget limitations, their data sets may not be as complete as in academic work, unless they publish their previous academic work, but there will often be valuable information that would otherwise remain buried in the files. Over the years, I have endeavored to widely distribute interdisciplinary geoscience information in many forms, through my own publications, and through encouraging others to publish. For example, there will be two papers published in the first volume of the IJESG. One covers the research in Arkansas and Oklahoma I conducted while at Rice University during 1975-76, and the other is based on a project in Alaska just after I left Rice for industry. I employed a number of my associates at Rice to assist in the field work, sampling and mapping during two summers in 1978-79, then for follow-up field work and lab work in the early 1980s.

More recently, I have published a number of papers based on other projects in another new, open-access journal. These include a paper on [Vietnamese gold and silver properties](#), a paper on [groundwater impacted by rural water softening practices in Ohio](#), a paper on [media bias against uranium mining](#), a paper on [growth faulting and subsidence in Houston, Texas](#), a review paper on [Russian-owned uranium properties, U.S. and in the world](#), and a paper on [siderite \(this journal\)](#), and [others](#). My group also developed the [I2M Web Portal](#), which provides reviews of relevant geoscience publications throughout the world as technical papers and associated news media. The I2M Web Portal is used by our clients, staff, associates, and the geoscience community as an on-line file cabinet of digital files (reports, papers, etc.) available by Internet around the world.

If this new Journal is to be able to draw from a sector of the geoscience field not previously considered, the editorial flow of the manuscript submissions would need to be simplified to avoid taking the time of an otherwise busy professional industry geoscientist, but still meeting the needs for clarity and accuracy needed in such papers. The turn-around time from submission, revision, and publication would need to be minimized, as opposed to the major journals that often require years of "in publication" time for overtime editorial handling. As a member of the Editorial Board of the *International Journal of Earth Science and Geology*, I will do what I can to move interesting manuscripts along. At the same time, I will endeavor to help establish the quality of the geosciences appearing in this new Journal.