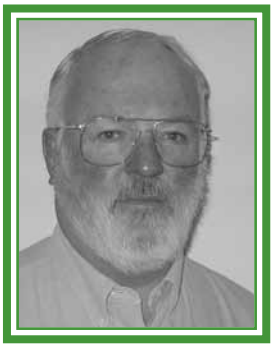

**Compiled by David M. Abbott, Jr., CPG-04570,
2266 Forest Street, Denver, CO 80207-3831,
303-394-0321, fax 303-394-0543, dmageol@msn.com**

Topical Index-Table of Contents to the Professional Ethics and Practices Columns

A topically based Index-Table of Contents, "pe&p index.xls" covering columns, articles, and letters to the editor that have been referred to in the PE&P columns in Excel format is on the AIPG web site in the Ethics section. This Index-Table of Contents is updated as each issue of the TPG is published. You can use it to find those items addressing a particular area of concern. Suggestions for improvements should be sent to David Abbott, dmageol@msn.com

Getting a Job—Resumes, Networking, and Interviews

One of my main efforts for this *TPG* issue was assembling the team, drafting, and editing the "Getting a Job—Resumes, Networking, and Interviews" article found elsewhere in this issue. During the Rapid City Annual Meeting, **Stephanie Jarvis**, SA-1495 and our excellent Student's Voice columnist, wrote asking about help with her resume and job hunting in general. Her timing was fortuitous because I was able to discuss her request with a number of people at the meeting, most of whom contributed to the article. The article contains our general answers for the benefit of everyone who is seeking a first job or a new one, but especially for students. In addition to the information in this article, you are urged to download and read *Reflections on a Geological Career, http://aipg.org/publications,* which has good advice for those who have already begun their geoscience careers and are thinking about advancement or a new position.

Earthquake Predictions and a Triumph of Scientific Illiteracy in an Italian Court

I assume many of you read one of the articles covering the October 22, 2012 conviction of six scientists and a government bureaucrat to six years in jail for manslaughter for their failure to predict the 2009 earthquake that left more than 300 people dead in L'Aquila, Italy. The men stood accused of "inexact, incomplete, and contradictory" information about the risks posed by tremors during the weeks preceding the April 6, 2009 earthquake. All seven men were members of the "National Commission on the Forecast and Prevention of Major Risks." The court was apparently swayed by the emotional testimony of victims' relatives that was allowed.

Guiseppe Artuso, an Italian geologist, noted on a LinkedIn post on the AIPG forum that at the moment, we don't know the reasoning behind the court's decision. However, Italian law states, "Anyone announcing disasters, accidents or non-existent dangers, raises alarm at the authorities, or with institutions or persons exercising a public service, will be punished with imprisonment of up to six months" (Art. 658 C.P.). Failure to give an alarm when warranted can also be prosecuted. As Artuso remarks, "In Italy, the scientists are between hammer and anvil." He also observes that those prosecuted were members of The Great Risks Commission, which the government formed to make such predictions, and the Commission did not predict that earthquakes preceding the April 6, 2009 foreshadowed a major quake.

One can only hope that the Italian appellate process, which apparently can take years, throws these convictions out. Just how the emotional testimony of relatives of the victims is relevant to the question of whether earthquakes can be predicted is a mystery known only to the L'Aquila court. I'm sure no one doubts the emotional and physical losses of the residents of L'Aquila but it isn't expert testimony about earthquake prediction. I hope no such court case would occur in the US but with the apparently increasing scientific illiteracy as demonstrated by the number of people who believe that dinosaurs and humans coexisted, I wonder. Certainly the plaintiff's bar seems to advocate the position that "My client was injured and so someone else (the chosen defendant) should pay" regardless of the client's responsibility for the injury or the plaintiff's contribution thereto.

Weather forecasters correctly predicted that Superstorm Sandy would cause major damage and disruption in the northeast, and particularly on the New Jersey shore, once the storm track became clear. Nevertheless people died and massive destruction occurred. Would things have been worse if the forecasts hadn't been made and disseminated? Probably. If the forecasts had been wrong, would some be calling criminal prosecution of the weather forecasters? Instead, the power companies are being blamed for not getting power restored faster.

I remember attending a session at the 1982 AIPG Annual Meeting in Pasadena, CA that discussed the impacts on Los Angeles and San Francisco of major earthquakes and the ability of relief personnel and supplies to reach the stricken areas. An interesting topic assumed that major earthquakes could be accurately predicted some years in the future and assessed the consequences of such predictive ability. Certainly people and readily moveable valuables could be evacuated. But would building and renovation activity cease? When would earthquake insurance policies be terminated? These are interesting questions to ponder.

North Pole, South Pole: the Epic Quest to Solve the Great Mystery of the Earth's Magnetism

North Pole, South Pole: the Epic Quest to Solve the Great Mystery of the Earth's Magnetism, by Gillian Turner, 2010, 2011, The Experiment LLC, New York, 271 p., covers a broad swath of history from the legend of the Greek shepherd, Magnes, for whom magnetism is named, through the 1995 effort to model the Earth's magnetohydrodynamic dynamo in the Earth's liquid outer core using a Cray C90 computer and 2,000 hours of computing time. The model was able to generate spontaneous self-reversal of polarity, on a randomly occurring basis for the geomagnetic time scale, and more recent efforts to understand the magnetic fields of other planets and the Sun.

Turner's book describes the study of magnetism and the various efforts to use declination and magnetic inclination as a possible method of determining longitude and the studies of electricity and magnetism in the 18th and 19th centuries. Early on it was recognized that the geomagnetic pole was not quite coincident with the Earth's axial pole and repeated measurements of declination at the same places over the years demonstrated that the declination changed continually. Following World War II, the deployment of magnetometer surveys over the ocean basins led to the delineation of the linear magnetic anomalies, which combined with increasing data on magnetic reversals led to convincing proof of the plate tectonics theory. The physicists explored the questions of the causes of the Earth's magnetic field, why it varies in intensity and pole position over time, and why does the field randomly reverse. These questions are not finally answered but much has been learned.

North Pole, South Pole is a fairly quick, enjoyable read and is one most geoscientists should enjoy. For those of us who lived through the plate tectonics revolution, the names of the principal contributors bring back fond memories of a very exciting time in the history of geoscience. As noted, this book is for the general audience. It contains a glossary for the general reader and a list of selected additional reading including William Glen's excellent *The Road to Jaramillo: critical years of the revolution in Earth Science*, Stanford Univ. Press, 1982, a book I've enjoyed reading and re-reading.

AGI Statement on the Conviction of Italian Seismologists

Alexandria, VA - On October 22, 2012, in L'Aquila, Italy, six seismologists and one Italian government official were convicted of manslaughter and sentenced to six years in prison. The seismologists and official had been on trial for not adequately warning the public about the danger of a potential earthquake prior to the L'Aquila earthquake in April 2009 that killed 309 people. Central to the question of manslaughter was whether there was a direct link between the reassuring statements of the commission on which the defendants served and the deaths from the earthquake.

Scientists are frequently called on to serve direct public needs, as indeed they should be. The American Geosciences Institute (AGI) believes that this is an appropriate role for earth scientists to undertake when the question is in their area of expertise, just as a medical doctor may be expected to assist in a medical emergency. Likewise, just as that medical doctor can assume protection from liability as long as standard and accepted procedures were followed at the scene of the emergency, AGI believes that scientists should be allowed to present their best recommendations without fear of retribution. This case, while complicated, puts scientists worldwide on alert that they may be attacked if, in hindsight, their best recommendations fell short of serving the public good. AGI feels that this is bad for science, and bad for the public good.

In a blogpost *(http://www.earthmagazine.org/article/hazardous-living-italian-seismologis ts-tragically-convicted-manslaughter)* on EARTH Magazine's web site, Dr. Thomas Jordan, the 2012 winner of AGI's Outstanding Contribution to the Public Understanding of the Geosciences Award and Director of the Southern California Earthquake Center (SCEC), told EARTH Magazine, "This won't help those of us who are trying to improve how risks from natural hazards are communicated between scientists and the public."

AGI believes the best approach to mitigating the effects of future earthquakes is to advance education, public awareness, and preparedness initiatives such as SCEC's ShakeOut earthquake drills. When these initiatives are paired with robust natural hazards research and development efforts and continued use of observational, analytical, and monitoring tools, we can begin to reduce the significant toll natural hazards have on society. Scientists must be allowed to communicate their findings through carefully defined relationships between appropriate scientists and those public officials responsible for civil protection, without fear of retribution when those findings are the result of best practices at the time.