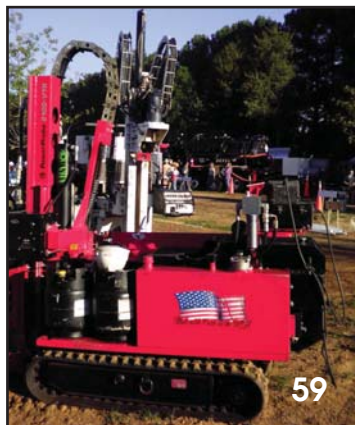


## Inside This Student Issue



### FEATURES

- |   |    |
|---|----|
| AIPG National Scholarship Program   | 3  |
| AIPG Booth at GSA Convention-Denver   | 4  |
| Elementary Student Asks About Geology and the Ice Age<br><i>Benjamin Lui</i>  | 6  |
| Students: Gazing Darkly Into the Future-Career,<br>Life and Everything<br><i>David M. Abbott, CPG-04570</i>                 | 10 |
| Here and There!<br><i>James N. Adu, MEM-1311</i>  | 11 |
| Education and Training of Geologists; Is Field Camp<br>Still Relevant?<br><i>Peter H. Dohms, CPG-07141</i>                  | 12 |
| Request for Nominations for Honors and Awards   | 15 |
| Entering the Geoscience Working Community: Best Practices<br>and What to Expect<br><i>Dr. Richard B. Schultz, CPG-10188</i> | 16 |
| Summer Job with the National Park Service<br><i>Jason J. Testin, SA-1814</i>  | 18 |
| Energy Futures and Geoscience Education<br><i>Michael Urban, MEM-1910, and Bill Hoyt, CPG-07015,</i>                        | 20 |
| Bedrock Identification Methods at Contaminated Sites<br><i>Thomas J. O'Brien, CPG-07370</i>                                 | 43 |
| Geologists are Natural Technologists<br><i>Ronald J. Bowers, CPG-07841</i>  | 46 |
| Geologists and Environmental Consulting<br><i>Dr. James F. Howard, CPG-02536</i>  | 51 |

ON THE COVER -A new snow fall blankets the exploration project site located in Moffat County, Colorado as the drilling crew prepares the rig for a day of coring. The drilling program was conducted in an area containing extensive surface and underground resources of coal. The project was continuous for almost two years and up to eight drill rigs were contracted to complete the work which extended through the winter months. Winter drilling brings an array of issues that need to be addressed with specific protocols to assure a safe and efficient operation. Water management, difficult access, icy ground, frozen core, pumps and equipment all produce challenges when the temperature drops below freezing. Photo by Alex Papp, CPG-09615.

PRESIDENT - Samuel Gowan, CPG  
Alpha Geoscience, Inc.  
O: (518) 348-6995  
sgowan@alphageoscience.com

PRESIDENT-ELECT - Barbara H. Murphy, CPG  
Clear Creek Associates  
O: (480) 659-7131  
bmurphy@clearcreekassociates.com

PAST-PRESIDENT - Michael D. Lawless, CPG  
Draper Aden Associates  
O: (540) 552-0444  
mlawless@daa.com

VICE PRESIDENT - J. Foster Sawyer, CPG  
SD School of Mines and Technology  
O: (605) 394-2462  
foster.sawyer@sdsmt.edu

SECRETARY - Adam W. Heft, CPG  
Parsons Brinckerhoff  
O: (517) 886-7400  
heft@pbworld.com

TREASURER - Robert W. Gaddis, CPG  
Newfield Exploration Mid-Continent, Inc.  
O: (918) 732-1651  
BGgeoconsult@aol.com

EDITOR - Robert A. Stewart, CPG  
Arcadis US, Inc.  
O: (860) 533-9901  
bob.stewart@arcadis-us.com

ADVISORY BOARD REPRESENTATIVES  
James F. Howard, CPG  
C: (270) 925-6636  
jfhoward89@hotmail.com

Helen V. Madeksho-Hickman, CPG  
HSA Engineers and Scientists  
O: (561) 688-9008  
mswaterwitch@bellsouth.net

John M. Stewart, CPG  
Kleinfelder Southeast  
O: (336) 668-0093  
JMStewart@kleinfelder.com

Ronald J. Wallace CPG  
State of Georgia  
O: (404) 362-2589  
ronald\_wallace@dnr.state.ga.us

#### NATIONAL HEADQUARTERS

12000 N. Washington St., Suite 285  
Thornton, CO 80241  
7:30 AM - 4:30 PM MDT; M-F  
(303) 412-6205 • Fax (303) 253-9220  
aipg@aipg.org • www.aipg.org

EXECUTIVE DIRECTOR - William J. Siok, CPG - wsiok@aipg.org  
ASSISTANT DIRECTOR - Wendy J. Davidson - wjd@aipg.org  
PROFESSIONAL SERVICES MGR - Cathy L. Duran - cld@aipg.org  
MEMBERSHIP SERVICES MGR - Vickie L. Hill - vlh@aipg.org  
OFFICE ASSISTANT - Cristie J. Valero - cjv@aipg.org  
ADMINISTRATIVE ASSISTANT - Dianna de Cordoba - ddc@aipg.org

#### LIFE AND HEALTH INSURANCE

GeoCare Benefits Insurance Plan  
Phone: 800-337-3140 or 602-870-4121  
http://www.geocarebenefits.com/  
E-mail: geocarebenefits@aqia.com

#### AUTO AND HOME INSURANCE

Liberty Mutual  
Phone: 800-524-9400  
http://www.libertymutual.com/lm/aipg

#### SUPPLEMENTAL INSURANCE

AFLAC  
Phone (303) 674-1808  
http://www.aflac.com

#### PROFESSIONAL & GENERAL LIABILITY INSURANCE

The Wright Group  
Phone (800) 322-9773 (303) 863-7788  
http://www.thewrightgroupinc.com

#### ALAMO RENTAL CAR -

(800) 354-2322 - Member #BY-706768

#### AVIS RENTAL CAR -

(800) 831-8000 - Member AWD #T00300

#### BUDGET RENTAL CAR -

(800) 455-2848 - Member BCD #Z663100

## DEPARTMENTS

- 23 Editor's Corner
- 25 Test Your Knowledge
- 26 President's Message
- 27 In Memory
- 27 Student Chapters
- 28 Test Your Knowledge Answers
- 29 Executive Director's Column
- 30 Professional Ethics and Practices
- 33 Letter to the Editor
- 34 Hydrothink
- 35 Student's Voice
- 36 Student's Voice (2)
- 38 Professional Services Directory
- 40 AIPG Student Application
- 41 New Applicants and Members
- 42 Members in the News
- 54 AIPG Membership Application
- 55 Student Chapter News
- 56 Section News
- 61 AIPG Store

**AIPG Publication Policy, October 4, 2010.** AIPG encourages submission of articles and editorials for publication in *TPG* on topic related to the science and profession of geology. Submittals shall be of interest to the members of AIPG, other professional geologists, and others interested in the earth sciences. Articles and editorials may be noted as follows at the discretion of the Editor, "The opinions, positions and conclusions presented herein are those of the author and do not necessarily reflect the opinions, positions or conclusions of the American Institute of Professional Geologists." All materials submitted for publication, including author opinions contained therein, shall include accurate and appropriate references. The Editor has the authority to solicit, edit, accept, or reject articles and editorials and other written material for publication. The Executive Committee has the authority if it so chooses to act on any particular case to support or overrule actions of the Editor regarding the solicitation, editing, acceptance, or rejection of any particular article, editorial, or other written material for publication.

American Institute of Professional Geologists (AIPG) is the only national organization that certifies the competence and ethical conduct of geological scientists in all branches of the science. It adheres to the principles of professional responsibility and public service, and is the ombudsman for the geological profession. It was founded in 1963 to promote the profession of geology and to provide certification for geologists to establish a standard of excellence for the profession. Since then, more than 10,000 individuals have demonstrated their commitment to the highest levels of competence and ethical conduct and been certified by AIPG.

The mission of the American Institute of Professional Geologists (AIPG) is to be an effective advocate for the profession of geology and to serve its members through activities and programs that support continuing professional development and promote high standards of ethical conduct.



*The Professional Geologist* (USPS 590-810 and ISSN 0279-0521) is published bi-monthly by the American Institute of Professional Geologists, 12000 N. Washington St., Suite 285, Thornton, CO 80241-3134. Periodicals Postage Paid at Denver, Colorado and additional mailing offices.

POSTMASTER: Send address changes to *The Professional Geologist*, AIPG, 12000 N. Washington St., Suite 285, Thornton, CO 80241

Subscriptions for all Members and Adjuncts in good standing are included in annual membership dues. Subscription prices are \$20.00 a year for Members' additional subscriptions and \$30.00 a year for non-members for 6 issues (for postage outside of the U.S. add \$10.00). Single copy price is \$4.00 for Members and \$6.00 for non-members. Claims for non-receipt or for damaged copies are honored for three months.

Entire contents copyright 2011 by *The Professional Geologist*. Original material may be reprinted with permission. Deadline for articles and advertisements is six weeks preceding publication. Advertising rates available upon request. Opinions and views expressed by the authors are their own and do not necessarily reflect those of the American Institute of Professional Geologists, its staff, or its advertisers.

Printed in U.S.A. by Modern Litho-Print Company in Jefferson City, Missouri.

For AIPG news and activities go to [www.aipg.org](http://www.aipg.org).