What the heck is AIPG all about and what is it doing for me?

The importance of AIPG and how you benefit

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Stantec

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Questions to be asked and answered

First, the **BIG** questions:
• Who are today’s geologists?
• Why does AIPG exist?
• Why does it still exist when there is state licensing of geologists?
• Why do we need any regulation of geologists?

And then, the **AIPG and me** questions:
• What does AIPG do?
• How is it different from my state geological society or any other geological organization?
• What does AIPG provide to me to help me in my career?

Big finish:
• Upcoming AIPG events!
Who are the geologists of today?

Almost 400,000 geologists employed in the US in 2017

Source: Chris Keane, American Geosciences Institute

Monthly geoscience employment

- Fewer than 250,000 geoscientists employed in July 2022

Source: Chris Keane, American Geosciences Institute
Employment Sectors

Employment Sectors of Bachelor's Graduates, 2020-21

- Mining (6%)
- Oil & Gas (6%)
- Prof Services (16%)
- Construction (9%)
- Research Institute (3%)
- Utilities (3%)
- Food Service (3%)
- Mgmt (3%)
- Finance (3%)
- Waste Mgmt (6%)
- 4YC (12%)
- Federal (16%)
- State (6%)

Employment Sectors of Master's Graduates, 2020-21

- Mining (18%)
- Oil & Gas (6%)
- Prof Services (6%)
- Waste Mgmt (6%)
- 4YC (6%)
- Federal (12%)
- Local Gov (6%)
- Research Institute (6%)
- Health Care (6%)
- State (24%)

Source: Chris Keane, American Geosciences Institute
Why do we need any regulation of geologists?

The rise of state licensure of professions

- Licensing started after there were high-profile building failures in the early 20th century
- Engineering and architecture were the first professions to be regulated
- The “Big 5” Professions: Architects, Engineers, Geologists, Landscape Architects, and Surveyors
- Arizona was a leader:
  - 1921: Engineers, architects, land surveyors and assayers
  - 1956: Geologists
Do we still need government regulations for technical professions?

- Licensing is in place to protect the health, safety and welfare of the public
- Billions of public funds are spent on projects that require geologic input
- Technical licensure boards have a mechanism to evaluate baseline competency and to respond to complaints against registrants (financial penalty, training requirements, working with a PG, suspension or revocation of license). These mechanisms support an acceptable standard of practice
- AIPG strongly supports the need for government licensing to protect the health, safety and welfare of the public
US States with Licensure

• Most states are requiring a state-specific professional license
• Licensing programs typically under a state board
• Most states require verification of education and experience, plus successful exams under ASBOG
Why was AIPG formed?

• Response to long-term problems of poor quality and fraud

• The catalyst:
  • Non-geologists writing bad reports and acting as experts in the oil fields of southern Illinois
  • Illinois Secretary of State suggested that geologists find a way to certify true geologists from the fakes

• Founded in 1963 to promote the profession of geology and to provide certification for geologists as a vehicle for establishing a standard of excellence for the profession

• No prior organization focused on professionalism

• Very few states had licensure of geologists when AIPG was formed

Fraud and quality issues haven’t been eliminated since the establishment of licensure and certification, but there is a mechanism to find a qualified geologist!
Why do both licensure and certification programs exist?

Differences and commonalities

• Licensure
  • Permission from government to practice
  • Administered under the state’s statutes and rules
  • No federal program
  • Purpose is primarily to protect the health, safety and welfare of the public
  • Establishes standards for minimum competency (education, experience and examination)
  • Works in conjunction with ASBOG

• Certification
  • Granted by a professional organization (such as AIPG)
  • Voluntary demonstration of meeting an established standard
  • Professional organization establishes standards for minimum competency (education, experience and peer review)
  • No examination program
  • Recognition internationally
  • Organization may have additional goals such as advocacy for the profession of geology and can lobby government

Common Goals
• Demonstrate minimum competency
• Promote ethical behavior
• Ensure resiliency of infrastructure
• Promote a sustainable economy
• Promote responsible use of natural resources
• Promote environmental protection

Support of licensure boards by AIPG is critical
Why do I need to belong to AIPG if I am a PG?

- Your CPG provides a professional credential
- Your CPG gives you recognition outside of the US
- Geologists need to support AIPG so AIPG can support the profession of geology:
  - Advocacy for the profession
  - Support of the exam development
  - Continuing education programs
  - Workshops for soft skills and technical training
  - Technical and professional development
  - Engagement with the public about geosciences
  - Publications and technical information sharing
  - Outreach to industry, academic, governmental and non-governmental entities
  - Participation in ASBOG and on licensing boards
  - Support of the licensing boards
  - Mentoring for students, ECPs and working professionals
  - Field trips and social events with colleagues
  - As one member said, “I wouldn’t have my PGs if it were not for AIPG”

<table>
<thead>
<tr>
<th>Who does what?</th>
<th>Government Agencies</th>
<th>Professional Organizations</th>
<th>Universities and Colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write the ASBOG exam questions</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Proctor the ASBOG exams</td>
<td>✓</td>
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<tr>
<td>Serve as members of licensing boards</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Provide classes for CEUs</td>
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<tr>
<td>Provide student career days</td>
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<tr>
<td>Lobby for geologic interests</td>
<td></td>
<td>✓</td>
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<tr>
<td>License geologists</td>
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<td>Certify geologists</td>
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<td>Provide professional development classes</td>
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<tr>
<td>Provide field trips</td>
<td>✓</td>
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Strong connections between the professional organizations, educational institutions and government agencies
What does AIPG provide that my state license doesn’t?

For geologists working in the US

- State licenses don’t transfer beyond state borders
- Clients in states without licensure ask about credentials
- States rely on organizations, especially AIPG, to support the technical boards with geologist board members and to advocate for the board when de-licensing is proposed
- States rely on professional organizations to provide training

For geologists working internationally

- AIPG is recognized internationally
- AIPG CPG status is recognized as “Qualified Person” for public disclosure for mining companies
  - Australian Joint Ore Reserves Committee (JORC)
  - Canadian National Instrument 43-101
  - US Securities and Exchange Commission SK-1300
- AIPG has agreements with to obtain reciprocal recognition:
  - Alaska
  - American Association of Petroleum Geologists
  - European Federation of Geologists
  - Geological Society of London
  - Institute of Geologists of Ireland
AIPG has proven history and distinguished reputation

• Members in 45 countries
• Collaboration internationally on issues pertaining to geologists
  • Committee for Mineral Reserves International Reporting Standards (CRIRSCO)
  • Global Geoscience Professionalism Group (founding member)
  • Australian Institute of Geoscientists
  • Geological Society of South Africa
  • Geoscience Council of Namibia
  • West African Institute of Mining, Metallurgy and Petroleum
  • Geoscientists Canada
  • American Geosciences Institute
  • GeoAnsata (Brazil)
  • International Raw Materials Observatory

Celebrating AIPG’s 60th anniversary in 2023
How does AIPG certify a professional geologist?

**CPG requirements:**

**Documentation of a qualified, experienced and ethical professional**

- **Education**
  - Baccalaureate or higher degree in a geological science (minimum of 36 semester hours/54 quarter hours)
  - Transcripts from all schools attended as supporting documentation

- **Experience**
  - Verification from employers
  - Minimum 8 years or 96 months of professional experience
  - Credit for additional advanced degree (1 year for MS and 2 more for PhD)
  - Need to show that experience is of “professional” level, with increasing responsibility and not technician work (at least 3 years)
  - Verification from employers to be submitted as supporting documents
  - Applicant is responsible for filling out information regarding the work and then transmitting the form to the verifier, who reviews, confirms accuracy and submits the completed form to AIPG

- **Sponsorship**
  - Verification of reputation and ethics
Certification Programs for Geologists

- Certification through AIPG since 1963
- Other licensing and certification options:
  - Society for Mining, Metallurgy & Exploration (SME)
  - Australasian Institute of Mining and Metallurgy
  - Australian Institute of Geoscientists
  - Institute of Materials, Minerals and Mining
  - Institute of Geologists of Ireland
  - European Federation of Geologists
  - Mining and Metallurgical Society of America
  - Southern African Institute of Mining and Metallurgy
  - South African Council for Natural Scientific Professions
  - Comisión Calificadora de Competencias en Recursos y Reservas Mineras (Chilean Mining Commission)
- Most provinces in Canada
What other membership categories are available within AIPG?

• Professional member (a baccalaureate degree)
• Early career professional (a baccalaureate degree; applies to members during the first 5 years after earning bachelor or higher degree). Category has discounted membership dues
• Emeritus (65 years or older, no longer actively engaged in practice of geology)
• Student Adjunct
• Associate Adjunct (no educational requirements)
What does AIPG do?

- AIPG provides professional development and training opportunities (more to follow on that topic)
- AIPG interacts with other geologic organizations on government policy issues
  - American Geological Institute (AIPG is a key member)
  - American Association of State Geologists
  - Position statements (such as the recent submittal to BLM on definition of land use)
  - Federal lead and support to state sections
- AIPG representatives participate on boards and committees for other organizations
- AIPG supports licensing of geologists and is the go-to organization when licensing is threatened
- AIPG ethics code is a model for other organizations (we are very happy to have others model their codes on the AIPG ethics code)
- Publication with peer-reviewed papers
- Supports the section activities
- Collaborates with other organizations (informally and with Memorandum of Understanding agreements)
- Provides mentoring and professional development activities focused on student and ECP members
- Annual student/ECP workshop during the annual conference
- Attends various conferences during the year (generally with a booth)
- Supplies invited speakers for a variety of topics
- Supplies Subject Matter Experts for testimonies

Member statement: My first company made AIPG membership/CPG certification a pre-condition for my employment. I believe both parties benefited. I was able to do things as part of Section activities that were very different from my normal job responsibilities and things that made me a better geologist.
Opportunities for involvement with AIPG

• Webinars
  • Professional development themes (free)
  • Technical series with CEUs (small fee for AIPG members)
  • Technical topics (free)
• National meeting with workshops, field trips and technical talks
• Publication with peer-reviewed papers
• Section activities with field trips, webinars and in-person meetings
• Advocacy
  • State and federal levels
  • Support of licensing of geologists
  • Participation of CPGs on boards and committees
Upcoming collaborative events

**AIPG/SME collaboration**

- SME annual conference February 2024 in Phoenix
- Three AIPG field trips
  - ASARCO Ray mine
  - Capstone Pinto Valley mine
  - Subsidence features (earth fissures) in Phoenix Basin
- Two AIPG sessions
  - SME/AIPG: Geological Review of Critical Minerals
  - SME/AIPG: Pure Geology: Discoveries from Geologic Exploration Programs
What do our members say about AIPG?

I wanted to thank you for awarding me a $1,500 AIPG National Undergraduate Scholarship. I am deeply appreciative of your support, and I look forward to staying connected with the AIPG throughout my student and professional career.

I've made some very valuable business connections with fellow geologists—undergraduate and graduate—through AIPG. The professional network I have developed is invaluable. CPG has helped take my career to the next level. It has been one of the best organizations I have belonged to in my career. It has been one of the best field trips and associated conferences I have attended with AIPG. Having membership in the AIPG not only shows academic achievement and experience, but it also shows that the member has professional acumen and integrity that goes with being a member in itself.

AIPG has increased my credibility and value to my employers. AIPG is well respected in the environmental and geological professions. My clients know that my credentials are not phony and that I am competent professional.

I think the opportunity to have access to professionals in my field has made a large impact. AIPG has helped take my career to the next level. I've made some very valuable business connections with fellow geologists. The span of ages and knowledge is incredible and everyone is approachable. No egos here. It was the best educational event of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. It has been one of the best educational events of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. I've made some very valuable business connections with fellow geologists. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. It has been one of the best educational events of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. It has been one of the best educational events of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. It has been one of the best educational events of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. It has been one of the best educational events of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. It has been one of the best educational events of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on.

I found my career path by talking to AIPG members who took the time to answer my questions. Some of the best field trips and associated conferences I have attended with AIPG have been with AIPG. National meetings are a great opportunity to meet people that you have only communicated with or heard about. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. It has been the best educational event of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. It has been one of the best educational events of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on. It has been the best educational event of the year. The span of ages and knowledge is incredible and everyone is approachable. No egos here. Presenting at the national meeting was a great learning opportunity that helped me polish up my presentation skills and to highlight some of the key project I have been working on.
Thank you
AIPG wants to hear from you

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