The Global Practice of a Geoscientist Professional

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American Institute of Professional Geologists, 2023 President
Stantec

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Questions to be asked and answered

First, the **BIG** questions:

• Why this topic?
• Who are today’s geologists?
• What is the definition of a “professional” geologist?
• What is state licensing and why do we need any regulation of geologists?
• What is professional certification and why would I need to be certified?
• What is the role of AIPG?
• What does AIPG provide to me to help me in my career?
Why this topic?

• Global environmental challenges
• Demand for geologists and expertise outside of North America
• Geologist traits
• The impacts related to project work
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%)
- Finance (3%)
- Food Service (3%)
- Mgmt (3%)
- Waste Mgmt (6%)
- 4YC (12%)
- Federal (16%)
- State (6%)

Employment Sectors of Master's Graduates, 2020-21

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

Source: Chris Keane, American Geosciences Institute
What defines a professional geologist?

- Qualifications, competence and ethics
- Qualified ≠ Competent
- Ethics ≠ Morals
- Obligations and practices

The specifics change based on the jurisdiction and organization
Government licensure of professionals

- Licensing started after high-profile building failures
- Engineering and architecture first regulated
- The “Big 5” Professions: Architects, Engineers, Geologists, Landscape Architects, and Surveyors
- Geologists first licensed in Arizona in 1956
Why have government licensing for geologists?

• 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 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 of Geologists

• Association of State Boards of Geology (ASBOG)
• Most states require verification of education and experience, plus successful exams under ASBOG
Why was AIPG formed?

• Founded in 1963
  • Promote the profession of geology
  • Provide certification for geologists as a standard of excellence for the profession
• Response to long-term problems of poor quality and fraud
• No prior organization focused on professionalism
• Very few states had licensure of geologists when AIPG was formed
Why both licensure and certification?

<table>
<thead>
<tr>
<th>Licensure</th>
<th>Certification</th>
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<tbody>
<tr>
<td>• Permission from government to practice</td>
<td>• Granted by a professional organization</td>
</tr>
<tr>
<td>• Administered under the state’s statutes and rules</td>
<td>• Voluntary</td>
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<tr>
<td>• No federal program</td>
<td>• Professional organization establishes standards</td>
</tr>
<tr>
<td>• Purpose is primarily to protect the health, safety and welfare of the</td>
<td>• Recognition internationally</td>
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<tr>
<td>public</td>
<td>• Organization may have additional goals</td>
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<tr>
<td>• Establishes standards for minimum competency</td>
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<tr>
<td>• Works in conjunction with ASBOG</td>
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Support of licensure boards by AIPG is critical
Why do I need to belong to AIPG if I am a PG?

<table>
<thead>
<tr>
<th>RESPONSIBLE PARTY</th>
<th>GOVERNMENT AGENCY</th>
<th>PROFESSIONAL ORGANIZATION</th>
<th>UNIVERSITIES AND COLLEGES</th>
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<tbody>
<tr>
<td>International recognition</td>
<td></td>
<td>√</td>
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<tr>
<td>Write the ASBOG exam questions</td>
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<td>√</td>
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<tr>
<td>Serve as members of licensing boards</td>
<td></td>
<td>√</td>
<td>√</td>
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<tr>
<td>Provide classes with CEUs</td>
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<td>√</td>
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<tr>
<td>Provide student career development</td>
<td></td>
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<td>√</td>
</tr>
<tr>
<td>Advocate for geologic interests</td>
<td></td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>License geologists</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Certify geologists</td>
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<td></td>
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<tr>
<td>Provide professional development</td>
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<td>√</td>
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<td>Provide field trips and networking</td>
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</table>
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
- 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 membership categories

• Student Adjunct
• Early career professional
• Professional member
• Certified Professional Geologist
• Emeritus
• Associate Adjunct
How does AIPG certify a professional geologist?

**CPG requirements:**

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

**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
- Verification from employers
- Applicant fills out form, which is confirmed by verifier

**Sponsorship**
- Verification of reputation and ethics
Global practice supported by AIPG

- Members in 45 countries
- Collaboration internationally
  - 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 support students?

• Mentorship program pairs students with AIPG members
• Webinars
  • What do working geologists do?
  • Interview skills and tips
  • CV/resume tips
• Full-day student career workshop annually with practice interviews and speed networking with professionals
• Scholarships (undergraduate and graduate)
• Poster competition
• Free membership
• Free resume posting
• Contacts, contacts, contacts
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 technical sessions
  - SME/AIPG: Geological Review of Critical Minerals
  - SME/AIPG: Pure Geology: Discoveries from Geologic Exploration Programs
- Separate AIPG lunch
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.**

**CPG has helped take my career to the next level.**

**AIPG has increased my credibility and value to my employers.**

**I think the opportunity to have access to professionals in the field has made a large impact.**

**It has been one of the best organizations I have belonged to in my career.**

**I found mentorship, passionate people and support!**

**I found my career path by talking to AIPG members who took the time to answer my questions.**

**...the professional network I have developed is invaluable...**

**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 projects I have been working on...**

**AIPG is well respected in the environmental and geological professions. My clients know that my credentials are not phony and that I am a competent professional.**

**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.”**
Thank you
AIPG wants to hear from you

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