What is Geology?
Definition of Geology:
“Geology is the study of the Earth, the materials of which it is made, the structure of those materials, and the processes acting upon them. It includes the study of organisms that have inhabited our planet. An important part of geology is the study of how Earth’s materials, structures, processes and organisms have changed over time”.

Geology.com, 2016,

http://geology.com/articles/what-is-geology.shtml
What Do Geologists Do?
“Geologists work to understand the history of our planet. The better they can understand Earth’s history the better they can foresee how events and processes of the past might influence the future.”

Geology.com, 2016,
http://geology.com/articles/what-is-geology.shtml
# Geoscience Sub-disciplines and Geoscience Professions

Source: [http://www.asbog.org/](http://www.asbog.org/)

<table>
<thead>
<tr>
<th>Sub-discipline</th>
<th>Research – Academic/Geological Surveys</th>
<th>Environmental Geology</th>
<th>Engineering Geology</th>
<th>Economic Geology (minerals)</th>
<th>Energy Resources (oil &amp; gas, coal, uranium)</th>
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Why Professional Registration?

- Protection of the Public
- Prevent Unqualified Persons from Practicing Geoscience
- Equal Status with Engineering Professions
Protection of the Public

- "The possibility of an error that will cause a loss of life or property"

- "The higher costs of supervision"

- "The costs of repeating incorrect and incomplete work"

- "Lower cost/benefit ratios brought about by an inability to do efficient work"

Association of State Boards of Geology (ASBOG)(2016)
Prevent Unqualified Persons from Practicing Geology

- Geologic training and professional experience unique for persons who work with earth materials.

- Engineers are not geologists, but can be registered as geologists if qualified.

ASBOG (2016)
Under certain conditions as specified by statute or regulation.

Example - Wyoming Department of Environmental Quality.

Professional Geologist (Wyoming) may sign certain applications, work plans, and reports applications for projects that involve groundwater and soil remediation.
Varies from state to state

Colorado - No Registration of Geoscientists

However, "Colorado Revised Statutes...require that geologic reports be prepared or authorized by a professional geologist.”
"is a person who is a graduate of an institution of higher education which is accredited by a regional or national accrediting agency, with a minimum of thirty semester (forty-five quarter) hours of undergraduate or graduate work in a field of geology and whose post baccalaureate training has been in the field of geology with a specific record of an additional five years of geological experience to include no more than two years of graduate work" (Colorado Revised Statutes 34-1-201).
Wyoming Registration

Wyoming State Board of Professional Geologists (WSBPG)

Wyoming Geologists Practice Act

Wyoming Statutes 33-41-101 Through 33-41-121, Amended July 1997

WSBPG (2016)
Legal Definitions Under the Wyoming Statute

- "Geologist" means a person who is a graduate of an institution of higher education that is accredited by a regional or national accrediting agency, with a minimum of thirty (30) semester or forty-five (45) quarter hours of course work in geology.

- "Professional geologist" means a geologist who has met the academic and experience qualifications established by the board and has been licensed by the board.

- "Geologist-in-training" means a geologist who is a candidate for licensure who meets all other requirements for licensure as stated in this act except length of experience.
"Geology" means the science which treats of the earth in general, the earth's processes and its history, investigation of the earth's crust and the rocks and other materials which compose it, and the applied science of utilizing knowledge of the earth's history, processes, constituent rocks, minerals, liquids, gases and other materials for the use of mankind.

"Practice of geology" means the performance of geological services or work such as consultation, investigation, evaluation, planning, preparation of geologic reports and maps and inspection of geological work.
“Practice of geology before the public" means the performance of geological services or work including consultation, investigation, evaluation, planning, preparation of geologic reports and maps, the inspection of geological work and the responsible supervision of geological services or work, the performance of which is relevant to public welfare or the safeguard of life, health, property and the environment, unless exempt under this act.
Basic Requirements for Registration in Wyoming

- "Minimum education as defined under the statute; Bachelors Degree in Geology or required hours of course work as defined."

- "Certification as a geologist-in-training."

- "Successful completion of the board's examinations."

- "A specific record of four (4) years of active professional practice in geologic work of a character satisfactory to the board, indicating the applicant is competent to be placed in responsible charge of the work."
"Submission of written endorsements from peers attesting to the applicant's professional competency, the number and form of which shall be determined by rule and regulation of the board."
Certification

What is it?

How does it differ from professional registration?
To be a Certified Professional Geologist (CPG) by AIPG:

- Academic requirements
- Verify professional experience, references
- Applicants must commit to a code of ethics
Benefits of AIPG Certification:

- Enhanced job opportunities
- Recognition as a geoscience professional
- Where there is no state registration, establishes credentials as a geologist
Benefits of AIPG Certification, continued:

The Canadian Council of Professional Geoscientists (CCPG) accepts CPG title holders as “qualified persons” with the Canadian Securities Administration. The Canadian Securities Administration recognizes AIPG CPG title holders as qualified for the purposes of National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities and National Instruments 43-101 Mining Resource and Reserve Reporting. 

AIPG (2016)
AIPG Levels of Membership

- Certified Professional Geologist – Applicants for certification have a bachelor’s degree or higher in the geological sciences plus 8 years of professional geological work experience. CPG shall affirm adherence to applicable professional and ethical standards.

- Professional Member – Applicants must have attained a degree in the geological science and affirm adherence to applicable professional and ethical standards.

- Young Professional Member – Applicants must apply during the first three years upon earning a baccalaureate.

- Student – Applicants must be currently enrolled in a geological science degree program.

- Associate – Applicants must have an avocational or general interest in the geological sciences. AIPG (2016)
Certified Petroleum Geologist

American Association of Petroleum Geologists (AAPG)

Basic Requirements:

- Academic record
- Work experience
- Length of membership
- Personal references attesting to character and ability

AAPG (2016)
Benefits:

- Professional Credibility to employers and public
- Opportunities to improve professional skills
- Input on government and industry issues
Summary

Professional Registration

- Governmental Entities
  - Provide protection to the public
  - Competent professionals conducting work before the public
- Ethical Standards
Certification

- Provided by Private Organizations
- Recognition as a geological professional
- Involvement in government and industry issues
- Commitment to ethical standards
Information Sources

Association State Boards of Geology (ASBOG)
http://www.asbog.org/index.html

American Institute of Professional Geologists (AIPG)
http://www.aipg.org/membership/policies.htm

American Association of Petroleum Geologists
http://www.aapg.org/

Wyoming Board of Professional Geologists.
http://wbpg.wy.gov/