

# What Can I do with a Degree in Geology?

Careers in the Geosciences

By Lisa Kayvon  
2011

# What Does a Geologist Do?

- Research
- Mapping
- Laboratory testing
- Report Writing
- Outreach
- Time outdoors



# Specialized Fields

- Environmental Geology
- Engineering Geology
- Petroleum Geology
- Economic Geology
- Oceanography
- Field Geology
- Hydrogeology
- Seismology
- Science Writing and Editing
- Environmental Law
- Education

# Environmental Geology

- Water and soil testing
- Pollution assessment and remediation
- Pre-construction research



# Engineering Geology



- Work with engineers and contractors on planning and construction
- Rock and soil strength and stability testing



# Petroleum Geology

- Field reconnaissance to search for potential sites
- Testing sites for presence/abundance of petroleum
- Oversee extraction drilling operations



# Economic Geology



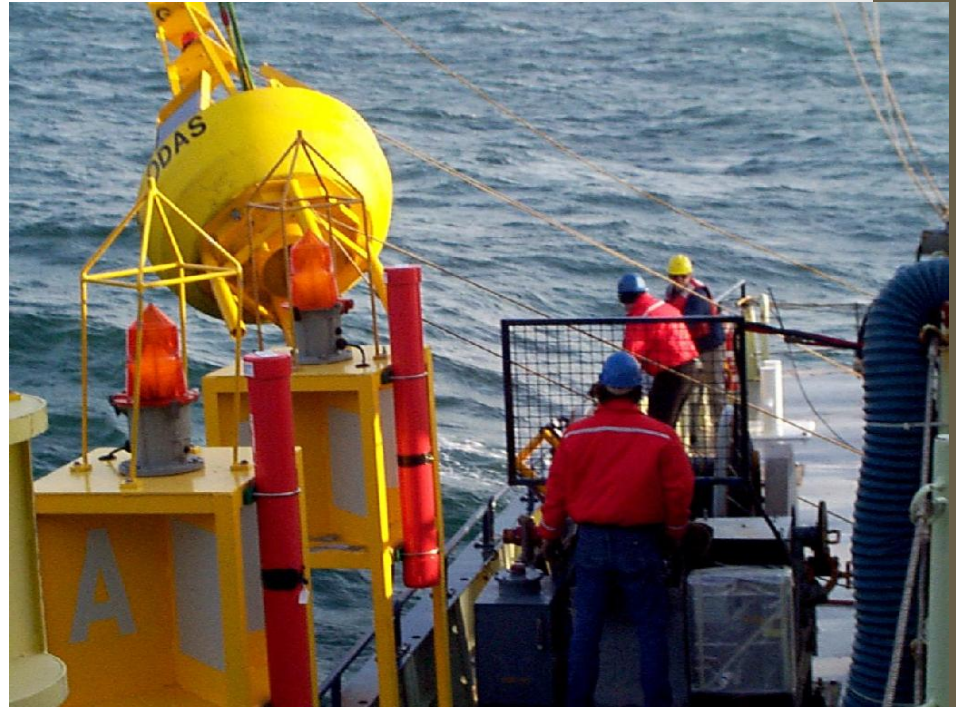
- Search and mine for economically viable resources – metals, minerals...





# Oceanography

- Study ocean floor, geology, sediments, water, biology, ect.





# Field Geology



- Make maps
- Monitor geologic activity
- Interpret geologic histories



# Hydrogeology

- Monitor and assess surface and groundwater movement.
- Make recommendations for water wells and rights.



# Seismology



- Study earthquakes and hazards associated with them.
- Create earthquake hazard maps for construction and planning.



# Volcanology

- Study and monitor volcanic activity
- Utilize remote-sensing technology
- Predict volcanic hazards





# Science Writing and Editing



- Research and write scientific articles
- Edit other's articles for scientific journals.

# Environmental Law

- Study and litigate aspects of human impacts on environment



# Education

- 7-8<sup>th</sup> grade science
- High school Earth sciences
- College



# Who Hires Geologists?

- Federal Government
  - United States Geological Survey
  - National Parks
- State and Local Governments
  - Department of Water Resources
  - City offices
- Large Corporations
  - Exxon/Mobil
  - Shell Oil
  - Law Firms
  - Geotechnical Engineering Firms
- Many Small, Private Consulting Companies
- Independent Consultants – work for yourself!



# Salary and Job Outlook

- Average starting salary = \$50,000-60,000 in San Diego (salary.com)
- Average professional salary = \$150,000-160,000 (salary.com)
- Up to \$200,000 or more in certain professions
- Salaries rising yearly
- Aging workforce = New positions!

YEARS EXPER	2002	2003	2004	2005	2006	2007	2008	2009	2010
0-2	\$ 65,000	\$ 65,600	\$ 67,800	\$ 74,400	\$ 82,200	\$ 82,800	\$ 83,600	\$ 87,600	\$ 93,000
3-5	71,200	67,700	75,600	81,300	89,600	107,800	108,000	105,600	102,300
6-9	78,300	75,700	78,800	95,400	98,500	121,100	118,400	121,700	127,800
10-14	96,600	91,900	107,500	114,400	111,500	119,800	121,900	123,500	139,100
15-19	102,500	102,500	116,000	119,600	141,000	151,600	139,400	150,800	151,000
20-24	113,900	118,100	112,800	139,000	155,000	167,400	176,800	180,300	191,000
25+	126,900	125,100	128,300	134,100	149,900	162,800	171,700	186,800	206,300

# Where Do I Go From Here?

- Palomar's Course Program/Offerings
  - AA in Geology
    - 35-38 credits
    - General Geology, Dinosaurs and Earth History, Geology of National Parks, Oceanography, Astronomy, Physics, Chemistry...
  - Transfer courses for lower-division coursework
    - General Geology, Dinosaurs and Earth History, Physics, Chemistry, Calculus
- 4-year University for B.S.
  - Local Schools: SDSU, UCSD
  - Many CSUs, UCs, and private colleges throughout state
  - [Geology.com/colleges](http://Geology.com/colleges) for 600+ throughout US
- Graduate Schools
  - M.S. needed for Petroleum, some education jobs
  - PhD needed for most college, research positions

# Geology as a Major

