# Geology

Purpose: This collection supports the teaching and research functions of the Department of Geology leading to degrees through the doctoral level. Graduate specialties are mineral deposits, mineralogy-petrology-geochemistry, sedimentology-stratigraphy-paleontology, ground water-hydrogeology, tectonics and volcanology, and structural geology. The department also participates in the interdepartmental program leading to the degree of MS in Geological Engineering. Certain subjects are taught in cooperation with the University of Idaho. Areas of the subject are of interest to the students and faculty of other departments such as Civil and Environmental Engineering, Anthropology, Program in Environmental Science and Regional Planning, Plant Sciences, and Chemistry.

## General Collection Guidelines:

Languages: English materials are collected most heavily, with more selective acquisition of materials in French, German, Russian, and Spanish, and other European languages. When English translations are available, they are generally favored over the original. Materials in the various Asian and Middle Eastern languages may be purchased to fill special needs.

Chronological Guidelines: Generally there are no limitations; all geologic periods are of interest.

Geographical Guidelines: Coverage is worldwide but emphasis is on the Western Hemisphere with special concern for the Pacific Northwest.

Treatment of the Subject: Basic works on field studies are widely sought as are titles on such techniques as experimental geochemistry and remote sensing. Selective acquisition is made of upper and lower division textbooks, popular materials and legal treatments.

Types of Material: Acquisition is primarily in the form of monographs and serials. Field trip guidebooks, published in association with earth-science meetings, U.S., regional and state geological survey publications are acquired comprehensively. Other types of material routinely acquired are U.S. and state government documents, proceedings/transactions of geological congresses and institutes, theses and dissertations from other universities on the geology of Washington and the Pacific Northwest, and directories. Any suitable format may be collected. Acquisition of U.S. Geological Survey series maps (e.g.,topo-topographical quadrangle maps) is comprehensive, and other map materials, such as atlases, sheet and wall maps, road maps, globes and aerial photographs are represented selectively. Types of materials excluded are manuscripts, photographs (other than aerial for mapping), road logs unless an integral part of a guidebook, well logs, and core samples.

Date of Publication: Emphasis is on the acquisition of material published since 1960 except for the fields of evolution, paleontology, and stratigraphy for which date is immaterial. Acquisition of earlier publications is made to complete important sets and serials, to replace valuable standard materials when lost or worn, and to strengthen a developing research area. In purchasing retrospective materials no preference is given to original printings or editions as opposed to reprints. Microform reproductions are acquired as last resort only.

Other General Considerations: There are several collection policies related to the field of geology. See also: Engineering: Biological Systems; Anthropology; Engineering: Civil and Environmental; Environmental Science and Regional Planning; Physics; and Plant Sciences.

## Observations and Qualifications by Subject with Collection Level:

Paleontology: D/ B

Includes vertebrate and invertebrate paleontology and such specialties as paleocology and paleobotany.

Stratigraphy: C(1) / B

Includes biostratigraphy (especially conodont and foram biostratigraphy), lithostratigraphy, and seismic stratigraphy.

Structural Geology and Geotectonics: C(1) / B

Micro and macro structural analysis; plate interactions.

Petrology: C(1) / B

Includes igneous, metamorphic, and sedimentary.

Sedimentology: C(1) / B

Clastic and nonclastic (emphasis on carbonates).

Volcanology: C(1) / B

Volcanic and volcaniclastic processes, deposits and chemical evolution.

Mineralogy: C(1) / B

Includes optical crystallography, crystal chemistry and physics, clay mineralogy (particularly illites).

Geochemistry: C(1) / B

Includes exploration, isotope geology, ore genesis.

Geophysics: C(1) / B

Includes paleomagnetism (seismic reflection and refraction), deep and shallow crustal structures; borehole geophysics, seismology.

Hydrology: C(1) / B

Surface and subsurface groundwater flow, hydrogeochemistry, saturated and unsaturated flow, numerical modeling of groundwater flow, contaminant transport.

Marine Geology: D / C(1)

Closely related to marine biology and ocean dynamics.

See also:

Biological Sciences;

Engineering: Biological Systems

Economic Geology: C(2) / B

Includes mining geology, important specialties in stable isotope geochemistry and skarns. Petroleum geology and geothermal energy.

Environmental Geology: C(1) / B

Includes coastal and estuarine studies.

See also:

Engineering: Civil and Environmental;

Environmental Science and Regional Planning

Soils: C(1) / B

Physical and chemical properties, location and profiles, and genesis of soils.

See also:

Plant Sciences;

Engineering: Biological Systems;

Engineering: Mechanical and Materials;

Environmental Science and Regional Planning

Remote Sensing: C(1) / B

Remotely sensed Earth and planetary features identified with various techniques including multispectral scanners, radar imagery, thermal infrared, vidicon and camera systems; Applies to broad spectrum of geologic disciplines, e.g., structural, petrology, economic.

Paleoclimatology and Paleometeorology: C(1) / B

Modern meteorology.

For Atmospheric Science, see:

Engineering: Civil and Environmental

Paleontology and Paleobotany and Paleozoology: C(1) / B

Betty Galbraith

Spring 2004