

IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES ▼
HUMAN RESOURCES ENTERPRISE
GEOLOGIST 2

DEFINITION

Under immediate to general supervision, performs professional technical field and laboratory work in evaluating the geologic characteristics of earth materials; interprets geology, builds geologic databases, and provides geologic information to clients; performs related work as required.

The Work Examples and Competencies listed are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

WORK EXAMPLES

Performs geologic field work in one or more geologic areas to study, analyze, and define the geological features of Iowa; gathers data and specimens; studies surrounding terrain to identify geologic features; studies specimens using physical and chemical tests; records the results in the prescribed format.

Prepares technical reports on stratigraphy, water resources, mineral resources, or other geologic areas and topics to disseminate information to agency staff, governmental agencies, private industry, and/or the general public; gathers and organizes data and assembles the collected information into the proper format.

Constructs maps, graphs, charts, and cross sections to illustrate geologic features of Iowa and surrounding regions by compiling data on geologic features, water resources, mineral deposits, etc.; sorts, analyzes, and synthesizes data.

Assists/develops methods and procedures for gathering specimens, analyzing specimens, etc., to improve field work techniques and study collected data by reviewing and evaluating existing procedures and methods, determining desired outcome, establishing the best working method, and comparing the new methods to the existing ones to determine the best procedures.

Maintains permanent survey files containing stratigraphic logs, photographs, microfilms, slides, maps, and/or charts to provide easy access to all existing data dealing with the geology of Iowa; collects materials from various sources; classifies it as to type, area covered, and features discussed; files it in its proper place; makes necessary identification labels; retrieves material when requested.

Uses/maintains a variety of field and laboratory equipment to study the geological features of Iowa, research the geological history of Iowa, and determine potential water and/or mineral resources; follows proper procedures for use of the equipment; keeps all equipment in good working order (cleaning and making minor repairs and adjustments), referring it to others when necessary for major repairs.

Constructs stratigraphic log charts which identify geologic characteristics of rock units in Iowa; studies well cuttings, core samples, or outcrops; identifies the major rock types and their depths and thicknesses; labels major geologic time units and rock formation names; provides locational data.

Responds to written and telephone requests from other government agencies, industrial officials, or the general public for information pertaining to the geology of Iowa to assist them with problems or questions they may encounter and to interpret, clarify, or review and comment on studies conducted by other state or private agencies; performs necessary research and provides requested information either orally or in writing.

Directs the work of part-time or full-time entry-level geologists in order to accomplish assigned work projects; trains them in geological techniques, procedures, and safety guidelines; assigns and reviews work, etc.

Proofreads geologic manuscripts prepared by staff geologists to assure completeness, accuracy, and clarity; reviews the manuscripts for content and structure; edits; writes any comments or suggestions for the use of the staff geologist who wrote the manuscript.

COMPETENCIES REQUIRED

Knowledge of the current principles, practices, literature, and trends in professional and technical field and laboratory geology.

Knowledge of modern methods, materials, procedures, and equipment used in geological field and laboratory work.

Knowledge of statistical and numerical methods used to analyze and determine the accuracy and appropriateness of data.

Knowledge of the employing agency's programs, policies, and regulations as they affect geological projects and programs, budget and purchasing, field studies, recordkeeping, etc.

Knowledge of the general principles and practices of public relations.

Knowledge of the programs and areas of responsibility of other local, state, and federal agencies dealing with the conservation and management of natural resources.

Knowledge of computer software for analyzing research data and writing reports.

Knowledge of the operation, maintenance, and safe use of specialized geological field and laboratory equipment.

Ability to form logical, reasonable conclusions and make sound recommendations based on available geological research data.

Ability to interact with representatives of other governmental agencies, private industry, and the general public to convey and solicit information, and coordinate activities.

Ability to perform physical labor out of doors under adverse weather conditions.

Ability to obtain necessary data from scientific and technical documents, reports, and other reference materials to document proposals or theories, seek out alternate procedures, etc.

Ability to apply personal ethical standards such as honesty, responsibility, and trustworthiness, required to be a productive employee.

Ability to train others so that they understand work procedures, methods, and expectations or standards and are able to properly carry out the work in question.

Ability to express ideas effectively, both orally and in writing to present written technical reports to others, make oral presentations to a variety of groups, and write technical reports for publication in professional journals.

Displays high standards of ethical conduct. Exhibits honesty and integrity. Refrains from theft-related, dishonest or unethical behavior.

Works and communicates with internal and external clients and customers to meet their needs in a polite, courteous, and cooperative manner. Committed to quality service.

Displays a high level of initiative, effort and commitment towards completing assignments efficiently. Works with minimal supervision. Demonstrates responsible behavior and attention to detail.

Responds appropriately to supervision. Makes an effort to follow policy and cooperate with supervisors.

Aligns behavior with the needs, priorities and goals of the organization.

Encourages and facilitates cooperation, pride, trust, and group identity. Fosters commitment and team spirit.

Expresses information to individuals or groups effectively, taking into account the audience and nature of the information. Listens to others and responds appropriately.

EDUCATION, EXPERIENCE, AND SPECIAL REQUIREMENTS

Graduation from an accredited four-year college or university with major course work in geology, physical geography, or a closely related geological science;

OR

graduation from an accredited college or university with major course work in a natural science, computer science, math or engineering field and two years of full-time professional experience in an earth science related position including groundwater, soils, environmental geology, geographic information systems or other related earth science specialty.

Effective Date: 11/97 CSH