

POSITION DESCRIPTION						
1. Position Number			2. Explanation (show any positions replaced)			
3. Reason for Submission <input type="checkbox"/> New <input type="checkbox"/> Redescription <input type="checkbox"/> Reestablishment <input type="checkbox"/> Standardized PD <input type="checkbox"/> Other						
4. Service <input type="checkbox"/> HQ <input type="checkbox"/> Field	5. Subject to Identical Addition (IA) Action <input type="checkbox"/> Yes (multiple use) <input type="checkbox"/> No (single incumbent)					
6. Position Specifications Subject to Random Drug Testing <input type="checkbox"/> Yes <input type="checkbox"/> No Subject to Medical Standards/Surveillance <input type="checkbox"/> Yes <input type="checkbox"/> No Telework Suitable <input type="checkbox"/> Yes <input type="checkbox"/> No Fire Position <input type="checkbox"/> Yes <input type="checkbox"/> No Law Enforcement Position <input type="checkbox"/> Yes <input type="checkbox"/> No		7. Financial Statement Required <input type="checkbox"/> Executive Personnel-OGE-278 <input type="checkbox"/> Employment and Financial Interest-OGE-450 <input type="checkbox"/> None required		10. Position Sensitivity and Risk Designation <u>Non-Sensitive</u> <input type="checkbox"/> Non-Sensitive: Low-Risk <u>Public Trust</u> <input type="checkbox"/> Non-Sensitive: Moderate-Risk <input type="checkbox"/> Non-Sensitive: High-Risk <u>National Security</u> <input type="checkbox"/> Noncritical-Sensitive: Moderate-Risk <input type="checkbox"/> Noncritical-Sensitive: High-Risk <input type="checkbox"/> Critical-Sensitive: High-Risk <input type="checkbox"/> Special Sensitive: High-Risk		
		8. Miscellaneous Functional Code: -- BUS: --	9. Full Performance Level Pay Plan: Grade:			
11. Position is <input type="checkbox"/> 2-Supervisory <input type="checkbox"/> 4-Supervisor (CSRA) <input type="checkbox"/> 5-Management Official <input type="checkbox"/> 6-Leader: Type I <input type="checkbox"/> 7-Leader: Type II <input type="checkbox"/> 8-Non-Supervisory		12. Position Status <input type="checkbox"/> Competitive <input type="checkbox"/> SES <input type="checkbox"/> Excepted (specify in remarks) <input type="checkbox"/> SL/ST		15. Fair Labor Standards Act <input type="checkbox"/> Exempt <input type="checkbox"/> Nonexempt		
	13. Duty Station	14. Employing Office Location	16. Cybersecurity Code #1: #2: -- #3: --			
18. Classified/Graded by	Official Title of Position		Pay Plan	Occupational Code	Grade	Initial Date
a. Department, Bureau, or Office						
b. Second Level Review			--		--	
19. Organizational Title of Position (if different from, or in addition to, official title)			20. Name of Employee (if vacant, specify)			
21. Department, Agency, or Establishment U.S. Department of the Interior			c. Third Subdivision			
a. Bureau/First Subdivision			d. Fourth Subdivision			
b. Second Subdivision			e. Fifth Subdivision			
22. Supervisory Certification. I certify that this is an accurate statement of the major duties and responsibilities of this position and its organizational relationships and that the position is necessary to carry out Government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes relating to, but not limited to: FLSA determinations; position sensitivity and requirements; and appointment/payment of public funds. False or misleading statements may constitute violations of such statutes or their implementing regulations.						
a. Typed Name and Title of Immediate Supervisor			b. Typed Name and Title of Higher-Level Supervisor or Manager (optional)			
Signature		Date	Signature		Date	
23. Classification/Job Grading Certification. I certify that this position has been classified/graded as required by Title 5, U.S. Code, in conformance with standards published by the U.S. Office of Personnel Management or, if no published standards apply directly, consistently with the most applicable published standards.			24. Position Classification Standards Used in Classifying/Grading Position			
Typed Name and Title of Official Taking Action						
Signature		Date				
25. Position Review	Initials	Date	Initials	Date	Information for Employees. The standards, and information on their application, are available in the personnel office. The classification of the position may be reviewed and corrected by the agency or the U.S. Office of Personnel Management. Information on classification/job grading appeals, and complaints on exemption from FLSA, is available from the personnel office or the U.S. Office of Personnel Management.	
a. Supervisor						
b. Classifier						
26. Remarks						

**DOI Standard PD
PD# DN01500**

Classification: Geologist, GS-1350-09

Introduction

This position performs scientific work exercising independent judgment in support of an operating subdivision of a Bureau/Office. Position performs a range of professional duties supporting investigations and scientific projects and programs. Performs professional activities and coordination in one or more subdisciplines of geology: Geomorphology, Sedimentology, Stratigraphy and Geochronology, Sedimentary/Igneous/Metamorphic Petrology, Structural Geology, Economic and/or Mining Geology, Petroleum Geology, Engineering Geology, Paleontology, Geochemistry, or Volcanology. The position performs a range of geologic studies that typically involves application of conventional methods with clear precedents or may work on investigations requiring application of less established technologies when working in support of a larger project led by a senior scientist.

Major Duties (Accounts for the minimum of 25% of work time)

Methods and Procedures: Applies a variety complex yet conventional methods to the preparation and analysis of field/remote sensing observations and/or laboratory samples. Methods employed may include scanning electron microscopy; laser diffraction; bathymetry, real time kinematic GPS, lidar and other scanning techniques. Methods may also include geologic and geomorphic field mapping, both detailed and reconnaissance; subsurface investigations such as drilling, trenching or other excavations; analysis of orbital and aerial remote sensing data; stratigraphic and soil profile descriptions; and utilization of radioisotope and relative dating techniques. Methods employed are standard for the profession.

Data Collection/Analysis/Synthesis: The scientist applies a full range of standard geologic and/or geochemical techniques to acquire data and samples. Makes geological observations, computations, and measurements. Areas of investigation vary depending on particular assignment; examples may include geomorphology, paleo seismology, planetary sciences, paleontology, paleoclimatology, sedimentology, limnology, resource assessments, geologic mapping, structural assessments and specifications, and safety assessments related to new or existing structures such as dams, depth of water tables and other types of conditions which impact projects. Works with data sets published by various State, federal, and/or International entities. Synthesizes data using a range of standard techniques.

Geologic Interpretation: Analyzes and interprets geological and geophysical data and carries out investigations. Investigations may involve but are not limited to: reservoir identification and classification, well log analysis, seismic and other geophysical data interpretation, surficial and subsurface mapping, developing geologic cross sections, reserves and resource estimation, conservation of resources, lease sale evaluations for fair market value determination, and discharge analyses. Analyses often require integration several data sets. Utilizes and is proficient in data interpretation software and various PC-based software applications in order to adequately evaluate geologic-related projects, make determinations, and for the purpose of inputting, displaying, and organizing geological, geochemical, geophysical and/or engineering data for retrieval and evaluation.

Reporting/Documenting: Personally prepares or contributes to technically authoritative reports on geologic and related studies that convey a range of standard geologic, geomorphic, geochemical, biological, and/or hydrologic information. Audiences for reports may be academic researchers, government entities, commercial concerns, cooperating entities, or other users of government data and

reports. Reports typically contribute to broader investigations that may form the basis for bureau or cooperator decision-making efforts. May assist in the development or editing of geologic maps for digital or print publication.

Communication of Findings: Communicates findings in a variety of formats and settings. Makes oral presentations of technical documentation at professional meetings, coordination, or other technical briefings. May makes presentations to officials in circumstances where technical information must be presented in a way that is comprehensible to non-technical personnel. Topics communicated may be technical, safety and emergency management oriented, address permitting and compliance issues, or other purposes of interest to the Bureau, DOI, cooperating agencies, federal contractors, or the general public and commercial concerns.

Other Duties (Cannot account for more than 75% of work time)

- **Project Management:** Participates in the development of project plans that outline the scope, schedule, and/or budget of assigned projects. May contribute information related to permitting, data acquisition and procurement, maintenance, permit compliance, and acquisition; managing changes to the project plans; identifying and addressing issues prior to adverse impacts to the schedule and/or budget; and participating on technical teams.
- **Contracting Officer's Representative:** Works with Contracting Officer to implement and administer a variety of assigned contracts, including construction contracts, service or supply contracts, P.L. 93-638 Indian Self Determination and Education Assistance Act as amended contracts/agreements, and interagency agreements. Initiates timely actions and technically monitors the contract/agreement to ensure that they are carried out to completion as outlined in the contract/agreement. Researches the background on problems, identifies and devises courses of action in coordination with the Contracting Officer and prepares recommendations for decision by management.
- **Compliance:** Provides support in connection with regulatory program oversight and resolution of geology related issues as they are encountered. This may include participating in review of lands unsuitable for mining petitions.
- **Database Management:** Uses relational databases to maintain geologic data for conducting operational and planning analyses. Participates in geologic data collection systems directly and/or in coordination with other government agencies and non-Federal sources. Ensures necessary data is collected, transmitted, downloaded, decoded, and received for its intended purpose.
- **Participation in Conferences/Representation at Technical Meetings:** Participates on technical work groups or teams. May collaborate on teams external to the organization, including meeting with external stakeholders and partners.

Performs other duties as assigned.

FACTORS 1 - KNOWLEDGE REQUIRED BY THE POSITION FL1—6 950 points

Position requires knowledge of geology and related physical sciences such as geophysics, oceanography, physics, volcanology, hydrology, or chemistry to conduct, interpret, and document complex but conventional scientific investigations. Areas of specialization may include: geomorphology; structural geology; sedimentary, igneous or metamorphic petrology; planetary geology; economic or mining geology; engineering geology; paleoclimatology; paleontology; geochemistry; geochronology; soil science; volcanology; geodesy; and resource assessments for petroleum, geothermal, mineral exploration, and engineering geologic analysis of infrastructure and geotechnical investigations.

Knowledge of a range of geologic concepts, principles, and exploration methods applicable to investigate and characterize geologic conditions associated with routine problems, that may involve a range of standard geologic, engineering, hydrologic, biologic, chemical, man-made or other environmental conditions. Problems encountered demand skills sufficient to apply standard practices, approaches, and techniques. For positions responsible for construction support, knowledge of documentation of geologic conditions related to construction activities and foundation treatment if required.

Knowledge of data collection methods, data management, computer sciences and programming language(s) as they relate to the field of geology. Skill in computer systems and hardware platforms, sufficient to interface field, remote sensing, and laboratory instrumentation with computers for data acquisition and processing is required. Knowledge of mathematics, statistical sampling and statistical modeling techniques applied to geophysical, physical, and/or geochemical processes. Knowledge of risk assessments techniques applied to one or more areas of geology, which may include methods of assessing economic risk, environmental risk, dam safety risk.

Knowledge of geological, geochemical, engineering geology, and instrumentation, electronics, and communications as related to the acquisition, recording, transmission, storage, and analysis of geological data.

Knowledge of a range of data analysis methods applied to geosciences, incorporating such techniques as remote sensing, field mapping and modeling, geochronology, coherence filtering, depth migration, and geochemical characterization. Ability to apply standard statistical models to large data sets and analyze data consistent with scientific and statistical principles.

Ability to plan, organize, acquire, and analyze data to document geologic processes. Ability to plan, organize, and analyze a variety of geologic data to interpret, map, and predict a variety of hazards within the area of geoscience.

FACTOR 2 - SUPERVISORY CONTROLS

FL2-3 275 points

The incumbent works with the supervisor or designated senior staff to outline projects, problems, or investigations discussing objectives, plans, priorities, and deadlines. The incumbent refers controversial or unusual problems not covered by precedent to the supervisor or senior staff for assistance.

Work is reviewed for conformity with policy and guidance, effectiveness of the overall approach used, technical soundness, and accomplishment of objectives. Methods employed are reviewed on new or unusual assignments.

FACTOR 3 – GUIDELINES

FL3-3 275 points

Guidelines consist of bureau, agency, and government-wide policy, regulations, and operating procedures; industry technical standards, technical reports, and published and unpublished scientific reports. Guidelines also include technical documentation related to mapping and visualization systems, instrumentation, geologic characterization, statistical and chemical modeling software, and computers. Guidelines and precedents are available addressing preferred approaches and resolution to commonly encountered problems.

The scientist uses judgment to research, select, and interpret existing precedents and guidelines to apply to specific problems or issues encountered.

FACTOR 4 – COMPLEXITY

FL4-3 points 150

Work consists of a range of duties requiring the employee to apply different, unrelated processes, methods, technologies, and analytical techniques to a range of complex, standard geological problems, or investigations.

The decision regarding what needs to be done requires analysis of the issues involved in the assignment. The employee must select an appropriate course of action from many available alternatives.

The scientist applies versatility and judgment to identify and interpret conditions, understand interrelationships between different elements of the investigation or project, and evaluate the effectiveness of proposed plans of action.

FACTOR 5 - SCOPE AND EFFECT

FL5-3 150 points

Work of the position involves investigating and analyzing a variety of conventional geological and/or geotechnical problems or issues using or adapting a broad range of standard techniques. The analyses, maps and other products are used complete projects and investigations and to inform decision making.

Work of the position affects the agency creditability with internal and external customers, the design and safe operation of structures, the adequacy and effectiveness of studies and services, or the well-being of the general public in the immediate area serviced.

FACTOR 6 & 7 – NATURE AND PURPOSE OF CONTACTS

FL6-2 & 7-2 75 points

Contacts are with technical, administrative, and scientific personnel within and outside the immediate organization. Positions involved in disaster response may have contact with emergency responders and land managers. Position may require contact with the media or general public in emergency response situations.

The purpose of contacts is to provide technical direction and coordination of work related to projects, monitoring networks, and geosciences investigations. Contacts are typically cooperative and working toward mutual goals.

FACTOR 8 - PHYSICAL DEMANDS

FL8-1 or 8-2 5 or 20 points

8-1 Some work of the position takes place mostly in an office or laboratory setting. No special physical effort is required.

OR

8-2 During emergency response periods, training of personnel on new equipment, or field work, the scientist may be expected to hike distances of several kilometers over uneven terrain while carrying equipment. Field work may require working in remote field sites with limited to no services.

Field work may require the use of proper personal protective gear, working in dusty, hot, humid, and extreme cold environments, occasional off-road driving of 4-wheel drive vehicles, traveling to remote field sites in helicopters or small fixed wing planes, and/or boats. Lifting of equipment and objects weighing up to 50 pounds may be necessary.

FACTOR 9 - WORK ENVIRONMENT

FL9-1 or 9-2 5 or 20 points

9-1 Some work takes place in office or laboratory settings with adequate heat, light, and ventilation.

Office conditions do not require special safety precautions; field conditions may include extreme heat or cold, rain or snow, and hazardous conditions such as exposure to extreme temperature, noxious or toxic gasses, ice, or flooding.

OR

9-2 Field work may involve encounters with dangerous fauna and flora, and other wilderness dangers. International field work may be conducted in culturally hostile areas.

Geology position with duties that involve subsurface investigation require geologists to work near drill rigs and heavy equipment. Geology positions with duties that involve construction support require geologists to work near heavy equipment and construction hazards. Some work is carried out in proximity to explosives.

Total Points and Grade Conversion

Total Points = 1885 to 1915

Point Range = 1855-2100

Grade = GS-9

Other Significant Facts

Incumbent may be required to have certification as a Contracting Officer's Technical Representative (COTR) or Contracting Officer's Representative (COR) depending on bureau/office requirements.

EVALUATION STATEMENT

STANDARDS APPLIED

Job Family Standard (JFS) for Professional Work in the Physical Science Group, GS-1300 December 1997; JFS for Work in the Engineering and Architecture Group, 0800, November 2008; Introduction to the Position Classification Standards, revised 8/09

SERIES AND TITLE DETERMINATION

The 1300 JFS defines the Geologist series as work requiring application of knowledge of the principles and techniques of geology and related sciences in the investigation, measurement, analysis, evaluation, and interpretation of geologic data, and chemical, biological, and physical phenomena related to the structure, composition, and physical properties of the earth and its atmosphere. Like work described in the standard, positions covered by this standard PD perform a broad range of geological studies and provide technical review and oversight of tasks or programs related to sedimentary, metamorphic, and (or) igneous petrography, geology, mineralogy, structural and framework geology, resources assessments and other areas related to physical properties of the earth or other planets. The title for such positions is Geologist.

GRADE LEVEL DETERMINATION

The 1300 JFS is a narrative standard. When applying narrative standards each position is placed at the grade with the descriptive material that best represents the overall work of the position.

The GS-07 level is the level of advanced trainee positions in the physical sciences. At this level, trainees perform a variety of technical tasks, such as selecting samples, interpolating missing data, uncovering clear discrepancies, solving minor problems, and performing scientific analyses in support of projects assigned to higher level scientists. Advanced trainees exercise judgment in locating and selecting the most appropriate guides and references to apply, make routine decisions, and refer situations requiring deviation to the supervisor or a higher graded specialist. Work of this position exceeds the GS-07 level.

The GS-09 level is the first full professional level in the 1350 Geology series. The most obvious GS-9 work assignment is independent responsibility for applying established technology in routine ways to well-defined, moderate sized physical science projects, but GS-9's might also work in support of larger projects using less established technology. GS-9 scientists plan and carry out routine work. They select and make minor adaptations to procedures and accepted practices and handle unexpected conditions arising in the normal course of the work. For recurring assignments, GS-9 scientists are responsible for organizing the work, following prescribed methods and guidelines, and recognizing conditions and results that may affect the findings. Work of this position is consistent with descriptions at the GS-09 level.

By comparison, GS-9 scientists perform assignments that have fewer variables and produce relatively obvious results and conclusions than GS-11 scientists. A GS-11 Geologist may, for example, lead or independently perform a multi-year study to assess the occurrence of an important industrial ore as part of a comprehensive land assessment project. Studies background data, analyzes and resolves conflicts in archival information, and locates and obtains substantive unrecorded data from sources such as mine owners and state officials. GS-11 scientists conduct projects, investigations, or evaluations of

considerable scope that require application of a broad range of standard procedures, processes, and analyses.

Note: The 1300 JFS does not provided detailed descriptions and illustrations in the field of geology that fit many aspects of the work covered by this PD. As such, the 0800 JFS grading criteria was used to confirm grade level. The score derived from application of the 0800 JFS ranges from 1885 to 1915 which equates to the GS-09 level on the grade conversion table.

FINAL CLASSIFICATION

Position classifies as GS-1350-09, Geologist