

TASK ANALYSIS 2005: A Study of the Practice of Geology In the United States and Canada

Jack L. Warner, Ph.D.
Steven P. Warner, Ph.D.

TEST, Inc.

The National Association of State Boards of Geology (ASBOG[®]) conducts task analysis surveys of the profession every five years. The task analysis research defines the practice of geology by identifying the tasks that are performed by practicing geologists. The results are used to create test blueprints for the ASBOG[®] Exams. The test blueprints list the geologic tasks and the number of questions for each task to be included in the Fundamentals of Geology (FG) and the Practice of Geology (PG) Exams. Test blueprints are based on the importance of the geologic tasks to practicing members of the geologic profession. The results form the basis for the exams until there is need to update the research to keep abreast of advances or changes in the practice of the profession.

The Task Analysis 2005 Questionnaire included 46 tasks distributed across eight content domains. The questionnaire also addressed 13 ethical issues that geologists encounter in the practice of the profession, and incorporated questions about respondents' background characteristics and practice demographics. A total of 7,270 questionnaires were mailed (USA total = 5,600; Canada = 1,670).

A total of 2,795 were completed and returned in the USA ($2,795 / 5,600 = 50\%$ return rate). Six hundred and eighty-seven questionnaires were completed in Canada ($687 / 1,670 = 41\%$ return rate). The high return rates increase the likelihood that the respondents represent professional geologists and geoscientists across the USA and Canada.

A vast majority of respondents in the USA (68%) indicated that their primary area of practice was in Hydrogeology and Environmental Chemistry. By contrast, only 19% of Canadian geoscientists indicated this was their primary area of practice. Thirty-seven percent of the Canadian geoscientists indicated their primary area of practice was in Economic Geology and Energy Resources compared to only nine percent of USA geologists.

ASBOG[®] has conducted task analysis research studies in 1995, 2000, and 2005. The results from all three studies indicate a high degree of consistency in the practice of geology throughout the USA. This provides a sound basis for developing examinations that are fair to candidates from all regions of the country.

The Task Analysis 2005 results will be implemented with FG and PG Examinations in October 2005. The FG Examination will be structured around academic knowledge, will contain 130 items, and be administered in four hours. The PG Examination will concentrate on the practical application of geological principles. It will consist of 100 items and be administered over four hours.