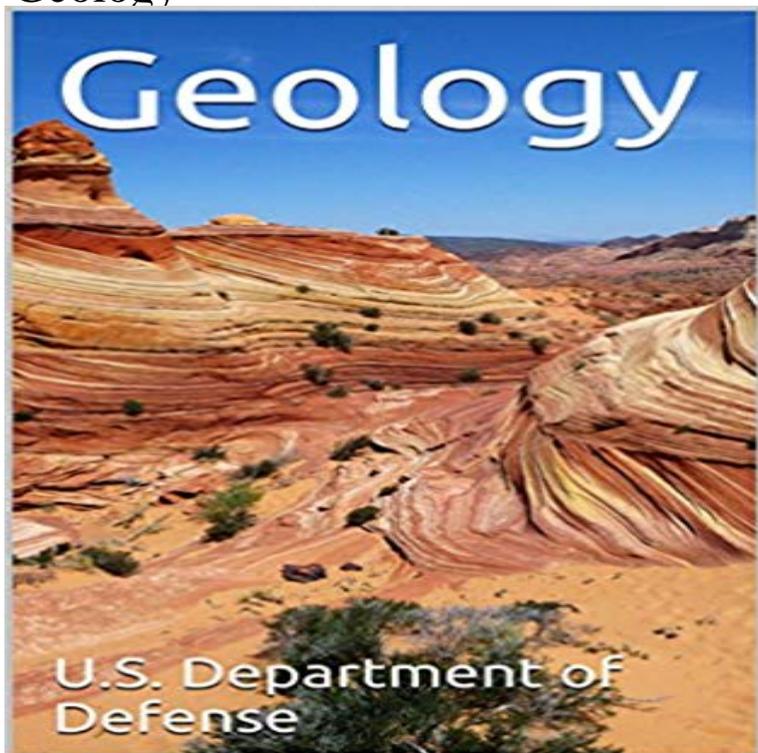


Geology



The purpose of this manual is to relate the science of geology to military engineering. It is to be used for both reference and training. The manual is not intended to make geologists out of military engineers, but rather to present some of the geologic principles required for the correct solutions of many military engineering problems. It includes a survey of basic geologic materials, features, and processes. It further describes the geologic factors that affect the properties and occurrence of natural construction materials, the construction of dams, tunnels, roads, airfields, and bridges, the location of water supplies, and terrain evaluation. Geology is the science which deals with the substance, structure, and origin of the earth. It is the application of chemistry, physics, and biology* with their related sciences, to the study of the earth. The formation and alteration of rocks are the result of chemical, physical, and biological phenomena; the behavior of gases, water, and molten and solid rock on and below the surface of the earth is principally a physical phenomenon; the occurrence of animal and plant remains in rocks is a biological phenomenon. Geology also overlaps such other sciences as astronomy, climatology, geography, hydrology, oceanography, and pedology. The relationship is especially close between pedology (soil science or soil mechanics) and geology since soil is the product of the mechanical breakdown and chemical alteration of rocks and rock particles. In military operations, the geologist can translate geologic information into concepts which can be used readily and effectively in conjunction with combat and engineering needs. Combat units, for example, benefit from geologic information in the evaluation of the trafficability of soils, the estimation of the fordability of streams, and the availability of concealment and cover. Engineering units would use geologic

information in the location and use of construction materials, the location of ground-water supplies, the siting of roads and airfields, the evaluation of the suitability of foundations, the proper location of excavations, and the evaluation of possible sites for under-ground installations. Military commanders should incorporate geologic information with other pertinent data when planning military operations. Since it is impossible to predict its ultimate military value, available geologic information should be included as standing operating procedure. During operations, the actual geologic conditions encountered should be continuously observed to verify or modify the preliminary estimate. Information so obtained may have an important bearing on adjacent or future projects.

Scriptural geologists (or Mosaic geologists) were a heterogeneous group of writers in the early nineteenth century, who claimed the primacy of literalistic biblicalThe following outline is provided as an overview of and topical guide to geology: Geology one of the Earth sciences is the study of the Earth, with the generalGeology (from the Ancient Greek *gē*, i.e. earth and *-logia*, i.e. study of, discourse) is an earth science concerned with the solid Earth, the rocks of which it is composed, and the processes by which they change over time.Exploration comes after more than a dozen fissures recently opened miles to the east of the crater, spewing lava. Published: . Hawaii's KilaueaGeology definition, the science that deals with the dynamics and physical history of the earth, the rocks of which it is composed, and the physical, chemical, andGeology is the study of the earth, its processes, its materials, its life, and how Professor of Geology and Mineralogy (1843) specialization in Geochemistry.See Tweets about #geology on Twitter. See what people are saying and join the conversation.Geology means, literally, the study of the Earth. Explore this section to understand the structure of the Earth and its surface features, what causes earthquakesGeology definition is - a science that deals with the history of the earth and its life especially as recorded in rocks. How to use geology in a sentence. - 11 min - Uploaded by Bozeman Science003 - Geology In this video Paul Andersen explains how rock is formed and changed on the - 7 minWalter Alvarez introduces geology and discusses how the physical features of Earth can tell us Welcome to the home page of the Geology Discipline of the U.S. Geological Survey. Inside you will find links to our science programs, real time hazardA geologist is a scientist who studies the solid and liquid matter that constitutes the Earth as well as the processes that shape it. Geologists usually study geology, although backgrounds in physics, chemistry, biology, and other sciences are also useful.