The Geological Survey is making a geologic map of the United States, which is being issued in parts. Each folio includes a topographic map and geologic maps of a small area of country, together with explanatory and descriptive texts.

THE TOPOGRAPHIC MAP.

The features represented on the topographic map are of three distinct kinds: (1) inequalities of surface, called reliefs, as plains, plateaus, valleys, hills, and mountains; (2) distribution of water, called drainage, as streams, lakes, and swamps; and (3) the works of man, called roads, as railroads, boundaries, villages, and cities.

Relief—All elevations are measured from mean sea level. The heights of many points are accurately determined, and those which are most important are given on the map in figures. It is desirable, however, to give the elevation of all parts of the area mapped, to delineate the outline or form of all slopes, and to indicate that grade or steepness.

This is done by lines each of which is drawn through points of equal elevation above mean sea level, the altitudinal interval represented by the space between lines being the same throughout each map. These lines are called contour lines and the uniform altitudinal space between two such contours is called the contour interval. Contours and elevations are printed in brown.

The manner in which contours express elevation, for a given contour interval, is shown in the following sketch and corresponding contour map (fig. 1).

2. Contours define the forms of slopes. Since contours are continuous horizontal lines, they wind around smooth surfaces, wind into all recessant angles of ravines, and project in passing about prominences. These relations of curves and angles to forms of the landscape can be traced in the map and sketch.

Relief is sometimes the approximate grade of any slope. The altitudinal space between two contours is the same, whether they lie along a cliff or upon a gentle slope; but to raise a given height on a gentle slope one must go farther than on a steep slope, and therefore contours are flat apart on gentle slopes and near together on steep ones.

For a flat or gently undulating country a small contour interval is used; for a steep or mountainous country a large interval is necessary. The smallest interval used on the atlas sheets of the Geological Survey is 5 feet. This is the critical point in determining the smallest interval used on the atlas sheets of the Geological Survey is 5 feet. This is the critical point in determining the smallest interval used on the atlas sheets of the Geological Survey is 5 feet. This is the critical point in determining the smallest interval used on the atlas sheets of the Geological Survey is 5 feet. This is the critical point in determining the smallest interval used on the atlas sheets of the Geological Survey is 5 feet. This is the critical point in determining the smallest interval used on the atlas sheets of the Geological Survey is 5 feet. This is the critical point in determining the smallest interval used on the atlas sheets of the Geological Survey is 5 feet. This is the critical point in determining the smallest interval used on the atlas sheets of the Geological Survey is 5 feet.
As sedimentary deposits or strata accumulate the
younger rest on those that are older, and the
relative ages of the deposits can be determined by
observing their positions. This relationship holds
even in regions of intense disturbance; in such
regions sometimes the beds have been reversed, and it
is often difficult to determine their relative ages
from their positions: then, fourth, or the remnant
and imprint of plants and animals, indicate which of
the layers is older or younger.

Stratified rocks often contain the remains or
imprints of plants and animals which, at the time
when the strata were deposited, lived in the sea or were
buried in sediments on the land. Such rocks are called
fossiliferous. By employing fossils it has been found
that the life of each period of the earth's history was a
great contrast different from that of other periods. Only
the simplest kinds of marine life existed when the oldest
fossiliferous rocks were deposited. From time to time more
complex kinds developed, and as the simpler kinds lived
now and in modified forms into a general system.

It is often difficult or impossible to determine the
age of an igneous formation, but the relative age of
such a formation can sometimes be ascertained by
observing whether an associated sedimentary
deposition is known to have occurred since; these
are characteristic of igneous formations.

The patterns of parallel straight lines are used to
represent sedimentary strata in the sea or on land.
Dots and circles represent alluvial, glacial, and eolian formations.

Patterns composed of parallel straight lines are used to
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# Published Geologic Folios

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* Order by number.
* Payment must be made by money order or in cash.
* These folios are out of print.

* Geologists drawing the location of the area covered by any of the above folios, as well as instructions concerning topographic maps and other publications of the Geological Survey, may be had on application to the Director, United States Geological Survey, Washington, D. C.