ABSTRACT
THE GEOLOGY OF THE INGOT - ROUND MOUNTAIN AREA
SHASTA COUNTY, CALIFORNIA

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Spring 1975

The area mapped for this report covers about 30 square miles between
the two small towns of Ingot and Round Mountain, east of Redding, California.

In this area are rocks of three geologic provinces, including nine
formations that range from Triassic to Pliocene age.

The structure of the Triassic rocks is clearly marked by the Hosselekus
Limestone. A dominant anticline with an axis in the form of a fishhook
occupies the central portion of the area. Within the enclosed area of the
fishhook is a generally synclinal area occupied by rocks younger than the
limestone. On the outward side of the fishhook is a somewhat duplicate
set of lesser folds that roughly parallel it. On the east they end in a
homocline, whereas on the west they are complicated by a thrust fault that
truncates them. Here older silicic volcanicogenic rocks are thrust over
mostly marine sedimentary rocks. Both the axial planes of the major folds
and thrust faults dip generally southwestward, opposite to most of the
structure of the Klamath Mountains. One interesting turbidite, previously
identified as such, occupies the base of the Triassic marine Modin
Formation. For several reasons related to the identification of this
turbidite, consideration should be given to including the Brock Shale as the
basal member of the Modin Formation. The Nevadan orogeny deformed the
Triassic rocks. Unconformably overlying these rocks are several deeply-
eroded, relatively-undeformed formations, the oldest of which is the Upper
Cretaceous marine Chico Formation. In part of the map area, unconformable
continental sedimentary rocks of the Eocene Montgomery Creek Formation are exposed; they show a change from a fluvial to a swampy-deltaic environment. A slight unconformity separates them from Pliocene volcanogenic rocks found above them in parts of the map area. The Tuscan Formation forms the bulk of the Pliocene rocks, which include tuffs, volcanogenic mudflows, fluvial deposits, and lava flows.