

EXPLANATION

- BEDDED ROCKS**
- Unconsolidated materials**
(Alluvium, talus, landslide debris, conglomerate, glacial moraine, glacial outwash, and glacial-lake silt and clay)
- Older Quaternary alluvium or Tertiary continental deposits**
(Gravel, sand, and silt, cemented and deeply weathered)
- UNCONFORMITY**
- Basaltic lavas and tuffs**
- UNCONFORMITY**
- Conglomerate, sandstone, and siltstone**
(Thickness highly variable in area of map. Contains pieces of lignitized wood, and thin beds of coal)
- UNCONFORMITY**
- Matanuska formation**
(Shale, siltstone, and arkosic sandstone)
- UNCONFORMITY**
- Nelchina limestone and associated beds**
(Fetid, sandy, clastic limestone, quartzose sandstone, feldspathic sandstone, and channel conglomerate. Includes a conformably overlying shale unit of unknown thickness)
- UNCONFORMITY**
- Quintna and Naknek formations undifferentiated**
(Siltstone and shale with some quartzose sandstone beds and thick conglomerate lenses)
- Chintna formation**
(Siltstone and shale with numerous limestone concretions)
- UNCONFORMITY**
- Sandstone**
(Sandstone with shelly layers equivalent to the upper part of the Tuxedni formation)
- Sandstone**
(Arkosic sandstone equivalent to the lower part of the Tuxedni formation. Includes a thin unit of shale conformably overlying the sandstone)
- LOCAL UNCONFORMITY**
- Talkeetna formation**
(Pyroclastics, flows, and tuffaceous sediments, principally marine but in part of fresh-water origin)
- Siltstone, claystone, and mudstone**
- PROBABLE UNCONFORMITY**
- Undifferentiated Carboniferous (?) rocks**
(Argillites and siliceous sediments, considerably altered)
- INTRUSIVE ROCKS**
- Intrusive rocks of Tertiary age**
(Dikes and sills of basic composition north of the Glenn Highway; porphyritic plugs of intermediate composition and a few dikes of basic composition south of the Glenn Highway)
- Granitic intrusives**
(Mainly quartz diorite)

Fault, dashed where inferred from field evidence, dotted where inferred from aerial photographs, based on inferences unsupported by field evidence or concealed by Quaternary deposits.

Contact, dashed where inferred from field evidence or representing indefinite contacts, gradational contacts or indefinite boundaries of surficial deposits, dotted where inferred from aerial photographs, based on inferences unsupported by field evidence or concealed by Quaternary deposits.

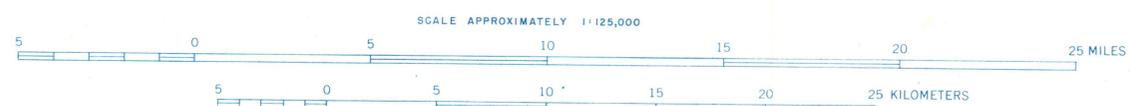
Strike and dip of beds

Anticlines, showing trace of axial plane

Syncline, showing trace of axial plane

FIG. 3. GEOLOGIC MAP OF THE NELCHINA AREA AND THE SOUTHWESTERN PART OF THE COPPER RIVER BASIN, ALASKA

Geology by Theodore Chapin, 1914,
John R. Williams, Ralph W. Inlay,
and Arthur Grantz, 1952



CONTOUR INTERVAL 200 FEET
DATUM IS MEAN SEA LEVEL

Note: This map is preliminary and has not been edited or reviewed for conformity with U. S. Geological Survey standards and nomenclature.

Compiled from U. S. Geological Survey Bulletin 665 by Theodore Chapin, 1914; from observations of bedrock geology made by John R. Williams in 1952 while studying the surficial geology of the southwestern part of the Copper River basin; and from observations of bedrock geology made by Ralph W. Inlay and Arthur Grantz in 1952 while studying the paleontology and stratigraphy of the Nelchina area.

Approved with
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ANCHORAGE, ALASKA
EST. 1947

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